ISSN 0020-8671

ACKNOWLEDGEMENTS

The Centre gratefully acknowledges the financial support of the following agencies:

MEMBERS

The National Science Foundation of the United States. (Grant No. EAR-0548649).
The Royal Society of London.
The Geological Survey of Canada, Dept. of Natural Resources.
The University of Bergen, Norway.
National Defence Research Establishment, Sweden.
The Royal Netherlands Meteorological Institute.
The Seismological Institute, National Observatory of Athens, Greece.
Russian Academy of Sciences.
Institute of Geological and Nuclear Sciences Ltd., New Zealand.
Geological Survey of Denmark and Greenland (GEUS)
India Meteorological Department.
Geophysical Institute of Israel.
The Institute for Meteorology, Portugal.
The Swiss Academy of Sciences.
GeoForschungsZentrum Potsdam, Germany.
The Japan Meteorological Agency.
Institut National des Sciences de l'Univers, France.
Geoscience Australia.
Bundesanstalt fur Geowissenschaften und Rohstoffe, Germany.
The University of Helsinki, Finland.
Academy of Sciences of the Czech Republic.
Bundesministerium fur Bildung, Wissenschaft und Kultur, Austria.
The Hungarian Academy of Sciences.
Council for Geoscience, South Africa.
Instituto Geografico Nacional, Spain.
The Icelandic Meteorological Office.
China Earthquake Administration.
NTNF/NORSAR, Norway.
Dublin Institute for Advanced Studies, Ireland.
Environmental Agency of Slovenia.
Observatoire Royal de Belgique.
Natural Resources Authority, Jordan.
Incorporated Research Institutions for Seismology, U.S.A.
Institute of Geophysics, National University of Mexico.
National Earthquake Information Center, U.S. Geological Survey, U.S.A.
Geological Survey Department, Cyprus.
National Institute for Earth Physics, Romania.
Istituto Nazionale di Geofisica e Vulcanologia, Italy.
Seismology Research Centre, Australia.
British Geological Survey, U.K.
University of Texas at Austin, U.S.A.
LDG, Bruyeres-le-Chatel, France.
Korea Meteorological Administration.
Institute of Earth Sciences, Academia Sinica, Chinese Taipei.
Kandilli Observatory and Earthquake Research Institute, Turkey.
OGS, Trieste, Italy.
NRIAG, Cairo, Egypt.
University of the West Indies, Jamaica.
Institute of Geophysics, Polish Academy of Sciences.
Uppsala Universitet, Sweden.
Geological Research Authority of Sudan.
AWE Blacknest
University of West Indies, Trinidad and Tobago
Iraqi Meteorological Organization and Seismology
Japan Agency for Marine-Earth Science and Technology, Japan.
Earthquake Research Institute, University of Tokyo, Japan.
Puerto Rico Seismic Network, University of Puerto Rico, U.S.A.

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

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Printed in Wales by Cambrian Printers, Aberystwyth

Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

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

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

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

*ISCJB **01** 00:10:56.9±1.7, 0°.7S±0°.5×16°.5W±0°.2, h10km, mb3.6/6, Error ellipse: s-maj=74.3km s-min=17.3km az=154.6*
*IDC **01** 00:10:57.3±2.0, 0°.59S×16°.60W, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.6/27, mbtmp3.7/7, ML4.1/1, Error ellipse: s-maj=89.2km s-min=25.6km az=149.0*
*NEIC **01** 00:10:58.1±1.0, 0°.76S×16°.46W, h10km, Error ellipse: s-maj=45.4km s-min=14.1km az=151.0*

ISC 01 00:10:58.9±1.8, 0°.6S±0°.5×16°.5W±0°.2, h10km, n10, σ0°.77/9, mb3.6/6, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	**13.68**	**58**	Pn	**Pn**	**00 14 12.4**	**-0.8**
	0.9nm,0.3s,baz=231,slow=14,SNR=13						
DBIC	**Dimbokro**	**13.68**	**58**	*e*Pn	**Pn**	**00 14 12.8**	**-0.4**
TOA0	**Torodi Ar. Sit**	**22.63**	**52**	*e*P	**P**	**00 16 00.2**	**0.0**
TORD	**Torodi Ar. Bea**	**22.63**	**52**	P	**P**	**00 15 59.9**	**-0.3**
	2.7nm,0.8s,mb3.7,baz=244,slow=11,SNR=19						
LPAZ	**La Paz**	**53.20**	**250**	P	**P**	**00 20 17.6**	**-0.3**
	0.5nm,0.6s,mb3.6,baz=93,slow=7.1,SNR=3.7						
GERES	**GERESS Array B**	**55.73**	**24**	P	**P**	**00 20 35.6**	**-0.1**
	0.2nm,0.5s,mb3.5,baz=206,slow=6.5,SNR=2.8						
BRTR	**Keskin Array B**	**60.82**	**43**	P	**P**	**00 21 13.7**	**+2.2**
	0.4nm,0.8s,mb3.6,baz=235,slow=5.1,SNR=3.3						
FINES	**FINESS Array B**	**69.84**	**20**	P	**P**	**00 22 09.3**	**-0.2**
	0.8nm,1.0s,mb3.6,baz=212,slow=6.8,SNR=4.2						
YKA	**Yellowknife Ar**	**94.29**	**333**	P	**P**	**00 24 18.0**	**-0.3**
	0.2nm,0.5s,mb3.8,baz=85,slow=5.7,SNR=4.3						
ASAR	**Alice Springs**	**142.46**	**132**	PKP	PKPdf	00 30 31.8	-1.2
	0.3nm,0.4s,baz=223,slow=2.2,SNR=6.3						

KRSC 01 00:14:49.2±1.4, 49°.65N×156°.50E, h5km±5km, ML3.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**1.36**	**334**	*e*P	Pn	00 15 15.3	+0.4
ALID				*i* S	Sb	00 15 34.4	+1.5
MIPR	**Malaya Ipel'ka**	**2.63**	**3**	*e*P	Pn	00 15 33.8	+1.5
PET	**Petropavlovsk**	**3.64**	**21**	P	Pn	00 15 49.3	+3.2
PET				*i* S	Sn	00 16 32.7	+3.3
SPN	**Mys Shipunski**	**4.10**	**31**	P	Pn	00 15 54.7	+2.3
SPN				*i* S	Sn	00 16 43.0	+2.3
GNL	**Ganaly**	**4.15**	**12**	P	Pn	00 15 55.0	+1.9
MKZ	**Mys Kozlova**	**5.88**	**31**	*e*P	Pn	00 16 18.5	+1.7
KBTR	**Krutoberegovo**	**7.59**	**28**	*e*P	Pn	00 16 42.0	+1.6

KRSC 01 00:16:52.7±0.6, 51°.58N×159°.53E, h19km±18km, ML3.8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	**Gorelyy**	**1.32**	**318**	*e*P	Pn	00 17 18.0	+1.9
GRL				*i* S	Sn	00 17 36.4	+3.2
PET	**Petropavlovsk**	**1.54**	**340**	P	Pn	00 17 19.9	+0.8
PET				*i* S	Sn	00 17 39.3	+0.7
SPN	**Mys Shipunski**	**1.55**	**11**	*e*P	Pn	00 17 20.7	+1.5
SPN				*i* S	Sn	00 17 41.6	+2.8
NLC	**Nalytchevo**	**1.60**	**356**	P	Pn	00 17 19.8	-0.1
NLC				*i* S	Sn	00 17 39.7	-0.3
SDLR	**Sedlovina**	**1.75**	**347**	*e*P	Pn	00 17 22.3	+0.4
AVH	**Avacha**	**1.76**	**344**	*e*P	Pn	00 17 24.1	+2.0
MIPR	**Malaya Ipel'ka**	**1.85**	**293**	*e*P	Pn	00 17 24.7	+1.3
MIPR				*e*S	Sn	00 17 48.1	+1.9
GNL	**Ganaly**	**2.33**	**336**	*e*P	Pn	00 17 32.0	+2.1
KII	**Karymskiy**	**2.46**	**359**	P	Pn	00 17 34.0	+2.3
ALID	**Alaid**	**2.60**	**256**	*e*P	Pn	00 17 34.0	+0.3
ALID				*i* S	Sn	00 18 04.8	+0.1
KMNR	**Kamenistaya**	**4.21**	**5**	P	Pn	00 17 56.4	+0.7

*ISCJB **01** 00:31:12.8±0.3, 54°.83S±0°.05×1°.0E±0°.1, h10km, mb4.9/35, MS4.9/30, Error ellipse: s-maj=10.1km s-min=7.0km az=13.2*
*IDC **01** 00:31:13.1±0.4, 54°.80S×1°.04E, h0km, mb4.7/21, mb1 4.8/21, mb1mx4.7/23, mbtmp4.7/21, MS4.8/12, Ms1 4.8/12, ms1mx4.6/20, Error ellipse: s-maj=16.8km s-min=12.7km az=126.0*
*NEIC **01** 00:31:14.9±0.3, 54°.82S×0°.98E, h10km, mb5.2/19, MS4.9/17, MW5.5, Error ellipse: s-maj=12.7km s-min=9.4km az=132.0*
*GCMT **01** 00:31:18.6±0.1, 54°.91S×1°.59E, h24km, MW5.5, Moment Tensor Solution. s68,c113; s34,c36; Moment tensor: Scale 10^{17}Nm; M_{rr}-0.25±.05; $M_{\theta\theta}$2.47±.04; $M_{\phi\phi}$-2.22±.04; $M_{r\theta}$-0.18±.06; $M_{r\phi}$-0.29±.03; $M_{\theta\phi}$0.35±.06; Best double couple: $M_0$2.40000×10^{17} NP1:ϕ_s229.00000°, δ80.00000°, λ-176.00000°. NP2:ϕ_s138.00000°, δ86.00000°, λ-10.00000°. Principal axes: T 2.5000, Plg4.0000°, Azm184.0000°; N -0.2100, Plg80.0000°, Azm297.0000°; P -2.3000, Plg10.0000°, Azm93.0000°; Data Used: II IU IC G CN. Surface waves: sta=104, comp=199, per= 50.*

ISC 01 00:31:14.6±0.3, 54°.86S±0°.05×1°.0E±0°.1, h10km, n104, σ1°.10/57, mb4.9/35, MS4.9/30, 1C-3D, Bouvet Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**16.37**	**191**	*e*Pn	**Pn**	**00 35 04.1**	**0.0**
VNA1				*e*		00 35 08.0	
VNA2	**Neumayer--Watz**	**16.55**	**190**	*e*Pn	**Pn**	**00 35 05.8**	**-0.5**
VNA2				*e*		00 35 12.2	
MAIT	**Maitri**	**16.66**	**168**	*i*P	**Pn**	**00 35 06.7**	**-1.0**
MAIT				*e*S	Sn	00 37 51.3	-21
SYO	**Syowa Base**	**22.48**	**144**	||*e*P	**P**	**00 36 11.6**	**-1.9**
SYO	**Syowa Base**	**22.48**	**144**	||*i*P	**P**	**00 36 15.2**	**+1.7**
SUR	**Sutherland**	**26.47**	**40**	P	**P**	**00 36 51.4**	**-0.2**
	27nm,1.0s,mb4.7,baz=200,slow=8.4,SNR=4.4						
SUR				LR	LR	00 44 11.1	
	comp=Z,1μm,21.0s,MS4.4,baz=198,slow=30						
SUR	**Sutherland**	**26.47**	**40**	*e*P	**P**	**00 36 51.7**	**+0.1**
	90nm,1.2s,mb5.2						
SUR				LR	LR		
	comp=Z,2μm,19.0s,MS4.6						
MAW	**Mawson**	**30.89**	**139**	P	**P**	**00 37 31.4**	**+0.7**
	comp=Z,10nm,0.8s,mb4.7,baz=269,slow=11,SNR=12						
MAW				LR	LR	00 47 25.7	
	comp=Z,1μm,19.4s,MS4.6,baz=272,slow=31						
MAW	**Mawson**	**30.89**	**139**	*e*P	**P**	**00 37 31.8**	**+1.2**
	comp=Z,5.4nm,1.1s,mb4.3						
MAW				LR	LR		
	comp=Z,2μm,21.0s,MS4.8						
BOSA	**Boshof**	**31.54**	**44**	P	**P**	**00 37 35.5**	**-1.2**
	comp=Z,41nm,1.0s,mb5.2,baz=214,slow=7.4,SNR=16						
BOSA	**Boshof**	**31.54**	**44**	*e*P	**P**	**00 37 35.8**	**-0.9**
	comp=Z,46nm,1.0s,mb5.3						
BOSA				LR	LR		
	comp=Z,900nm,21.0s,MS4.4						
LBTB	**Lobatse**	**34.90**	**41**	P	**P**	**00 38 05.0**	**-1.1**
	comp=Z,19nm,0.8s,mb5.1,baz=222,slow=11,SNR=18						
LBTB	**Lobatse**	**34.90**	**41**	*e*P	**P**	**00 38 05.0**	**-1.1**
	comp=Z,28nm,0.9s,mb5.2						
QSPA	**South Pole Qui**	**35.38**	**180**	P	**P**	**00 38 10.0**	**+0.3**
	comp=Z,12nm,0.9s,mb4.8,baz=222,slow=4.6,SNR=54						
QSPA	**South Pole Qui**	**35.38**	**180**	*e*P	**P**	**00 38 09.9**	**+0.3**
	comp=Z,54nm,1.0s,mb5.4						
QSPA				LR	LR		
	comp=Z,3μm,22.0s,MS5.0						
TSUM	**Tsumeb**	**37.77**	**26**	P	**P**	**00 38 30.1**	**-0.5**
	comp=Z,19nm,1.0s,mb4.8,baz=178,slow=9.7,SNR=15						
TSUM	**Tsumeb**	**37.77**	**26**	P	**P**	**00 38 30.1**	**-0.5**
TSUM				LR	LR		
	comp=Z,2μm,19.0s,MS4.8						
USHA	**Ushuaia**	**38.48**	**241**	P	**P**	**00 38 37.0**	**+0.7**
	comp=Z,22nm,1.1s,mb4.8,baz=115,slow=12,SNR=3.8						
LSZ	**Lusaka**	**44.76**	**39**	P	**P**	**00 39 27.0**	**-1.1**
	comp=Z,21nm,1.0s,mb4.9,baz=194,slow=8.8,SNR=16						
LSZ				LR	LR	00 55 16.1	
	comp=Z,2μm,18.4s,MS5.0,baz=204,slow=32						
LSZ	**Lusaka**	**44.76**	**39**	*e*P	**P**	**00 39 27.1**	**-1.0**
	comp=Z,20nm,1.0s,mb4.9						
LSZ				LR	LR		
	comp=Z,1μm,20.0s,MS4.9						
LPA	**La Plata**	**44.78**	**271**	*de*P	**P**	**00 39 27.0**	**-1.1**
TRQA	**Tornquist**	**44.93**	**265**	*e*P	**P**	**00 39 29.1**	**-0.2**
	comp=Z,92nm,1.2s,mb5.5						
SBA	**Scott Base**	**47.26**	**176**	*e*P	**P**	**00 39 48.0**	**+0.9**
	comp=Z,27nm,1.0s,mb5.1						
PLCA	**Paso Flores**	**48.00**	**256**	P	**P**	**00 39 53.3**	**0.0**
	comp=Z,2.3nm,0.8s,mb4.2,baz=149,slow=11,SNR=4.5						
PLCA				LR	LR	00 57 39.6	
	comp=Z,958nm,19.2s,MS4.8,baz=116,slow=33						
PLCA	**Paso Flores**	**48.00**	**256**	*e*P	**P**	**00 39 53.1**	**-0.2**
	comp=Z,16nm,1.0s,mb5.0						
PLCA				LR	LR		
	comp=Z,1μm,21.0s,MS4.8						
OPO	**Ambohidratompo**	**50.34**	**63**	P	**P**	**00 40 11.1**	**-0.4**
	comp=Z,1.3nm,1.0s,mb3.9,baz=237,slow=7.8,SNR=2.0						
CPUP	**Villa Florida**	**50.79**	**280**	P	**P**	**00 40 13.4**	**-1.4**
	comp=Z,8.1nm,0.9s,mb4.6,baz=128,slow=7.0,SNR=13						
CPUP				LR	LR	00 58 43.3	
	comp=Z,310nm,21.3s,MS4.3,baz=131,slow=32						
CPUP	**Villa Florida**	**50.79**	**280**	*e*P	**P**	**00 40 13.9**	**-1.0**
	comp=Z,15nm,0.8s,mb5.0						
LCO	**Las Campanas**	**56.47**	**266**	*e*P	**P**	**00 40 56.2**	**-0.3**
	comp=Z,25nm,1.1s,mb5.2						
LIC	**Lamto**	**61.07**	**353**	*e*P	**P**	**00 41 27.8**	**-0.7**
	comp=Z,116nm,1.1s,mb5.9						
KMBO	**Kilima Mbogo**	**61.17**	**42**	*e*P	**P**	**00 41 32.2**	**+3.0**
	comp=Z,14nm,1.4s,mb4.9						
KIC	**Kosan Boka**	**61.19**	**353**	*e*P	**P**	**00 41 31.9**	**+2.7**
	comp=Z,86nm,1.7s,mb5.6						
TIC	**Toumodi**	**61.49**	**353**	*e*P	**P**	**00 41 30.6**	**-0.7**
	comp=Z,69nm,1.0s,mb5.8						
DBIC	**Dimbokro**	**61.50**	**353**	P	**P**	**00 41 30.6**	**-0.7**
	comp=Z,8.4nm,0.8s,mb4.9,baz=163,slow=10,SNR=7.9						
DBIC				LR	LR	01 01 40.6	
	comp=Z,760nm,20.6s,MS4.8,baz=138,slow=30						
DBIC	**Dimbokro**	**61.50**	**353**	*e*P	**P**	**00 41 30.7**	**-0.7**
	comp=Z,29nm,1.0s,mb5.4						
DBIC				LR	LR		
	comp=Z,976nm,20.0s,MS5.0						
LPAZ	**La Paz**	**64.85**	**277**	P	**P**	**00 41 53.9**	**+0.2**
	comp=Z,5.8nm,0.9s,mb4.6,baz=125,slow=6.0,SNR=21						
LPAZ				LR	LR	01 08 09.2	
	comp=Z,418nm,19.3s,MS4.6,baz=127,slow=34						
LPAZ	**La Paz**	**64.85**	**277**	*e*P	**P**	**00 41 53.8**	**+0.1**
	comp=Z,40nm,1.3s,mb5.3						
LPAZ				LR	LR		
	comp=Z,650nm,22.0s,MS4.8						
TOA0	**Torodi Ar. Sit**	**67.74**	**1**	*e*P	**P**	**00 42 11.2**	**-0.9**
TORD	**Torodi Ar. Bea**	**67.74**	**1**	P	**P**	**00 42 10.7**	**-1.3**
	comp=Z,6.0nm,0.8s,mb4.7,baz=176,slow=6.9,SNR=13						
TORD				LR	LR	01 06 46.5	
	comp=Z,1μm,19.4s,MS5.1,baz=180,slow=32						
TAM	**Tamanrasset**	**77.43**	**4**	*e*P	**P**	**00 43 09.0**	**-0.6**
	comp=Z,9.8nm,1.3s,mb4.6						
TAM				LR	LR		
	comp=Z,522nm,19.0s,MS4.9						
RPZ	**Rata Peaks**	**81.43**	**173**	P	**P**	**00 43 32.2**	**+0.8**
	comp=Z,13nm,1.1s,mb4.8,baz=195,slow=5.3,SNR=4.2						
OTAV	**Otavalo**	**84.14**	**279**	*e*P	**P**	**00 43 47.0**	**+1.2**
	comp=Z,58nm,1.4s,mb5.5						
OTAV				LR	LR		
	comp=Z,597nm,19.0s,MS5.0						
ROSC	**El Rosal**	**85.58**	**285**	LR	LR	01 20 49.9	
	comp=Z,1μm,18.0s,MS5.3,baz=286,slow=35						
SDV	**Santo Domingo**	**86.88**	**290**	*e*P	**P**	**00 43 59.8**	**+0.4**
SDV				LR	LR		
	comp=Z,354nm,21.0s,MS4.8						
URZ	**Urewera**	**87.19**	**177**	P	**P**	**00 44 00.2**	**-0.5**
	comp=Z,4.8nm,0.8s,mb4.8,baz=154,slow=5.3,SNR=3.9						
STKA	**Stephens Creek**	**87.20**	**147**	P	**P**	**00 43 59.8**	**-1.0**
	comp=Z,6.0nm,0.9s,mb4.8,baz=176,slow=4.4,SNR=6.6						
STKA	**Stephens Creek**	**87.20**	**147**	*e*P	**P**	**00 44 00.0**	**-0.8**
	comp=Z,2.8nm,1.0s,mb4.5						
EIL	**Elat**	**89.10**	**29**	P	**P**	**00 44 12.4**	**+2.9**
	comp=Z,12nm,0.9s,mb5.2,baz=180,slow=4.6,SNR=4.9						
KEST	**Kesra**	**90.51**	**7**	P	**P**	**00 44 18.2**	**+2.2**
	comp=Z,1.0nm,0.7s,mb4.2,baz=275,slow=2.7,SNR=3.5						
KEST				LR	LR	01 21 46.3	
	comp=Z,238nm,19.1s,MS4.6,baz=212,slow=34						
ASAR	**Alice Springs**	**92.01**	**138**	P	**P**	**00 44 22.4**	**-1.1**
	comp=Z,4.9nm,0.9s,mb4.8,baz=204,slow=4.8,SNR=18						
ASF	**Jabal al Asfar**	**92.01**	**30**	P	**P**	**00 44 26.7**	**+3.6**
	comp=Z,4.5nm,0.9s,mb4.8,baz=99,slow=3.8,SNR=6.1						
IDI	**Anoyia**	**92.10**	**19**	P	**P**	**00 44 25.1**	**+1.7**
	comp=Z,6.5nm,0.9s,mb5.0,baz=203,slow=8.7,SNR=2.2						
MMAI	**Mount Meron Ar**	**92.38**	**28**	P	**P**	**00 44 24.6**	**-0.1**
	comp=Z,0.2nm,0.4s,mb3.8,baz=240,slow=2.8,SNR=3.3						
MMAI				LR	LR	01 23 07.0	
	comp=Z,844nm,19.4s,MS5.2,baz=135,slow=34						
CEL	**Celeste**	**93.62**	**12**	*e*P	**P**	**00 44 31.0**	**+0.7**
	comp=Z,9.2nm,1.0s,mb5.2						
CEL				LR	LR		
	comp=Z,572nm,20.0s,MS5.0						
RKT	**Rikitea**	**93.69**	**220**	*e*LR	LR	01 14 35.4	
	comp=Z,440nm,37.8s						
ESDC	**Sonseca Array**	**94.26**	**356**	P	**P**	**00 44 37.2**	**+4.0**
	comp=Z,2.2nm,0.9s,mb4.6,baz=180,slow=4.5,SNR=5.2						
ESDC				LR	LR	01 20 54.6	
	comp=Z,530nm,21.0s,MS5.0,baz=335,slow=32						
ESDC	**Sonseca Array**	**94.26**	**356**	P	**P**	**00 44 37.2**	**+4.0**
ESDC				LR	LR	01 20 54.6	
WRAB	**Tennant Creek**	**95.55**	**137**	PFAKE		00 44 50.0	+10
WRAB				LR	LR		
	comp=Z,384nm,19.0s,MS4.9						
BRTR	**Keskin Array B**	**98.27**	**25**	P	**P**	**00 44 52.8**	**+1.4**
	comp=Z,3.5nm,0.8s,mb4.9,baz=178,slow=7.1,SNR=20						
BRTR				PP	PP	00 48 52.2	+0.4
	comp=Z,1.1nm,0.9s,baz=182,slow=8.4,SNR=5.7						
BR131	**Keskin Array S**	**98.27**	**25**	*e*P	**P**	**00 44 53.9**	**+2.4**
	comp=Z,3.2nm,0.9s,mb4.8						
BR131				LR	LR		
	comp=Z,378nm,20.0s,MS4.9						
DZM	**Mont Dzumac**	**102.37**	**166**	*e*LR	LR	01 18 39.8	
	comp=Z,1μm,23.3s						
PPT	**Papeete**	**103.64**	**209**	*e*SS	SS	01 04 15.8	-0.4
	comp=Z,566nm,28.2s						
PPT				*e*LR	LR	01 19 14.0	
	comp=Z,621nm,24.5s						
GERES	**GERESS Array B**	**103.88**	**9**	PP	PP	00 49 38.2	+4.1
	comp=Z,0.6nm,0.8s,baz=166,slow=8.7,SNR=4.4						
GRF	**Grafenberg Arr**	**104.53**	**7**	*e*PP	PP	00 49 37.4	-1.5
CLL	**Collm**	**106.27**	**8**	*e*(PS)		00 59 12.0	
CLL				*e*SS	SS	01 05 18.0	+24
AKASG	**Malin Array Be**	**107.80**	**18**	PP	PP	00 50 03.4	+0.4
	comp=Z,0.2nm,0.3s,baz=202,slow=7.6,SNR=4.5						
TAOE	**Nuku Hiva Isla**	**108.69**	**221**	*e*LR	LR	01 21 48.8	
	comp=Z,405nm,32.8s						
CMAR	**Chiang Mai Arr**	**109.41**	**85**	PP	PP	00 50 16.6	+1.6
	comp=Z,0.4nm,0.3s,baz=218,slow=5.7,SNR=4.3						
OBN	**Obninsk**	**113.42**	**21**	PFAKE		00 50 00.0	+8.7
OBN				LR	LR		
	comp=Z,321nm,21.0s,MS4.9						
KMI	**Kunming**	**116.80**	**84**	PKP	PKPdf	00 50 00.7	+1.9
FINES	**FINESS Array B**	**117.64**	**13**	PKP	PKPdf	00 49 59.2	0.0
	comp=Z,1.0nm,0.9s,baz=132,slow=5.8,SNR=2.9						
FINES				PKKPbc	PKKPbc	01 00 22.4	+1.4
	comp=Z,0.8nm,0.7s,baz=46,slow=5.5,SNR=4.1						
GYA	**Guiyang**	**120.08**	**86**	Pdif	Pdif	00 46 30.2	+1.0
GYA				PKP	PKPdf	00 50 06.8	+1.7
GYA				PP	PP	00 51 36.4	+6.1
GYA				PKS		00 53 41.0	
GYA				SKKS	SKKSac	00 58 27.0	-2.8
GYA				SS	SS	01 07 59.4	+2.4
GYA				AMB	AMB		
	comp=Z,140nm,7.8s						
GYA				LR	LR		
	comp=N,320nm,20.8s,MS5.1						
GYA				LR	LR		
	comp=E,280nm,21.4s,MS5.1						
GYA				LR	LR		
	comp=Z,290nm,22.0s,MS4.9						
TXAR	**Lajitas Array**	**121.72**	**277**	PKP	PKPdf	00 50 08.9	+0.7
	comp=Z,0.5nm,0.8s,baz=151,slow=3.4,SNR=7.2						
TXAR				PKKPab	PKKPab	01 00 11.3	+4.6
	comp=Z,0.3nm,0.7s,baz=292,slow=2.6,SNR=3.6						
CD2	**Chengdu**	**121.77**	**80**	*e*PKP	PKPdf	00 50 08.5	+0.3
CD2				sPKP		00 50 16.2	
CD2				PP	PP	00 51 47.3	+5.4
CD2				PKS		00 53 43.9	
CD2				SKS	SKSdf	00 57 15.4	-4.6
CD2				SKKS	SKKSac	00 58 35.3	-5.3
CD2				AMB	AMB		
	comp=Z,180nm,10.2s						
CD2				LR	LR		
	comp=N,180nm,18.2s						
CD2				LR	LR		
	comp=Z,210nm,16.4s,MS4.9						
BVAR	**Borovoye Array**	**121.81**	**42**	PKP	PKPdf	00 50 08.6	+1.1
	comp=Z,1.7nm,0.8s,baz=210,slow=1.2,SNR=6.7						
BVAR				PKKPbc	PKKPbc	01 00 07.3	+1.9
	comp=Z,0.4nm,0.2s,baz=70,slow=1.7,SNR=4.1						
MKAR	**Makanchi Array**	**122.17**	**53**	PKP	PKPdf	00 50 08.7	+0.2
	comp=Z,1.8nm,0.9s,baz=258,slow=1.1,SNR=8.6						
WMQ	**Urumqi**	**122.59**	**59**	*e*PKP	PKPdf	00 50 11.6	+2.3
SCHQ	**Schefferville**	**122.65**	**320**	PKP	PKPdf	00 50 10.9	+1.8
	comp=Z,1.4nm,0.6s,baz=308,slow=5.8,SNR=3.6						
ARCES	**ARCESS Array B**	**125.36**	**10**	PKP	PKPdf	00 50 15.5	+1.7
	comp=Z,5.0nm,0.9s,baz=270,slow=1.0,SNR=14						
ARCES	**ARCESS Array B**	**125.36**	**10**	PKP	PKPdf	00 50 15.5	+1.7
LZH	**Lanzhou**	**125.61**	**76**	PKP	PKPdf	00 50 13.5	-1.9
LZH				sPKP		00 50 25.8	
LZH				SKKS	SKKSac	00 58 58.5	-6.6
LZH				SS	SS	01 09 05.6	-1.6
LZH				AMB	AMB		
	comp=Z,160nm,6.2s						
LZH				LR	LR		
	comp=E,460nm,17.9s						
LZH				LR	LR		
	comp=Z,650nm,18.8s,MS5.3						
GTA	**Gaotai**	**125.75**	**71**	*e*PKP	PKPdf	00 50 18.7	+3.1
GTA				PKS		00 53 55.5	
GTA				SKS	SKSdf	00 57 29.7	+2.7
GTA				SKKS	SKKSac	00 59 05.4	-0.4
GTA				SS	SS	01 09 08.7	-0.3
GTA				AMB	AMB		
	comp=Z,130nm,8.0s						
GTA				LR	LR		
	comp=N,190nm,22.6s,MS4.9						
GTA				LR	LR		
	comp=E,220nm,18.4s,MS4.9						
GTA				LR	LR		
	comp=Z,220nm,17.5s,MS4.9						
ANMO	**Albuquerque**	**127.45**	**279**	PFAKE		00 50 30.0	+11
ANMO				LR	LR		
	comp=Z,312nm,21.0s,MS5.0						
ECSD	**EROS Data Cent**	**128.16**	**294**	*e*PKPdf	PKPdf	00 50 21.4	+1.3
ZALV	**Zalesovo Beam**	**128.40**	**49**	PKP	PKPdf	00 50 21.2	+1.1
	comp=Z,0.5nm,0.3s,baz=211,slow=2.6,SNR=4.9						
SUMG	**Summit**	**130.06**	**346**	*i* P	PKPdf	00 50 34.8	+12
	comp=Z,8.4nm,1.1s						
NJ2	**Nanjing**	**131.30**	**91**	*e*PKP	PKPdf	00 50 23.5	-2.9
NJ2				sPKP		00 50 36.6	
NJ2				PP	PP	00 52 46.0	+1.0
NJ2				AMB	AMB		
	comp=Z,150nm,5.8s						
NJ2				LR	LR		
	comp=N,350nm,19.2s,MS5.2						
NJ2				LR	LR		
	comp=E,370nm,22.8s,MS5.2						
NJ2				LR	LR		
	comp=Z,330nm,18.4s,MS5.1						
HHC	**Hu-ho-hao-te**	**133.27**	**77**	*e*PKP	PKPdf	00 50 30.8	+1.0
HHC				PP	PP	00 53 02.3	+4.6
HHC				PKS		00 54 05.9	
HHC				SKS	SKSdf	00 57 40.5	-0.2
HHC				SKKS	SKKSac	00 59 53.1	+0.6
HHC				SS	SS	01 10 45.0	+3.4
HHC				LR	LR		
	comp=N,180nm,27.4s,MS4.8						
HHC				LR	LR		
	comp=E,220nm,29.7s,MS4.8						
HHC				LR	LR		
	comp=Z,110nm,28.5s,MS4.4						
PDAR	**Pinedale Array**	**134.57**	**285**	PKP	PKPdf	00 50 33.1	+0.9
	comp=Z,0.6nm,0.8s,baz=116,slow=3.4,SNR=6.6						
PDAR				PP	PP	00 53 08.4	+2.5
	comp=Z,0.3nm,0.7s,baz=95,slow=10,SNR=2.5						
SONM	**Songino Array**	**134.92**	**67**	PKP	PKPdf	00 50 34.0	+1.3
	comp=Z,0.9nm,0.8s,baz=212,slow=1.5,SNR=6.4						
BJI	**Beijing**	**135.35**	**81**	PKP	PKPdf	00 50 34.8	+1.1
BJI				SS	SS	01 11 07.6	+0.9
BJI				LR	LR		
	comp=N,250nm,11.8s,MS5.3						
BJI				LR	LR		
	comp=E,220nm,12.5s,MS5.3						
BJI				LR	LR		
	comp=Z,170nm,20.9s						
TPAW	**Teton Pass**	**135.81**	**284**	*e*PKPdf	PKPdf	00 50 37.5	+3.1
NVAR	**Mina Array Bea**	**136.68**	**274**	PKPkKP		00 50 26.8	
	comp=Z,0.2nm,0.3s,baz=174,slow=1.7,SNR=2.5						
NVAR				PKP	PKPdf	00 50 38.0	+1.7
	comp=Z,0.5nm,0.6s,baz=150,slow=4.2,SNR=3.6						
CHMT	**Chamberlain Mo**	**139.20**	**287**	*e*PKPdf	PKPdf	00 50 42.5	+1.9
CN2	**Changchun**	**143.07**	**84**	*e*PKP	PKPdf	00 50 51.0	+3.3
CN2				PP	PP	00 54 05.2	+6.7
RES	**Resolute Bay**	**143.37**	**334**	*e*PKPdf	PKPdf	00 50 46.6	-0.6
JCW	**Jim Creek**	**144.77**	**283**	*e*PKPdf	PKPdf	00 50 49.1	-1.4
NLWA	**Neilton Lookou**	**145.43**	**281**	*e*PKPdf	PKPdf	00 50 51.5	-0.2
MAJO	**Matsushiro**	**145.61**	**104**	*e*PKPdf	PKPdf	00 50 53.9	+1.5
MAT	**Matsushiro**	**145.61**	**104**	PKP	PKPdf	00 50 52.1	-0.3
MJAR	**Matsushiro Arr**	**145.61**	**104**	PKPbc	PKPbc

ISC 01 01:29:49.4±0.3,38°.45N±0°.02×23°.56E±0°.02,h13km±3km, n106,σ0°51/152,9C,Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PTL	Penteli	0.47	149	⇑iPb			Pg	01 29 59.0	+0.3
PTL				eSb			Sg	01 30 05.2	+0.3
PTL	Penteli	0.47	149	⇑iPB			Pg	01 29 59.0	+0.3
PTL				eSB			Sg	01 30 05.2	+0.3
PTL	Penteli	0.47	149	⇑iPb			Pg	01 29 59.0	+0.3
PTL				eSb			Sg	01 30 05.2	+0.3
LKR	Lokris	0.48	294	ePb			Pg	01 29 58.3	-0.6
LKR	Lokris	0.48	294	P			Pg	01 29 58.2	-0.7
LKR				S			Sg	01 30 05.4	0.0
LKR	Lokris	0.48	294	ePB			Pg	01 29 58.3	-0.6
LKR	Lokris	0.48	294	ePb			Pg	01 29 58.3	-0.6
LKR				S			Sg	01 30 05.4	0.0
ATAL	Atalanti	0.49	299	P			Pg	01 29 58.4	-0.6
ATAL				S			Sg	01 30 05.6	+0.1
ATAL	Atalanti	0.49	299	P			Pg	01 29 58.4	-0.6
ATAL				S			Sg	01 30 05.6	+0.1
ATH	Athens Observa	0.50	166	⇑iPb			Pg	01 29 59.4	+0.2
ATH				eSb			Sg	01 30 06.1	+0.3
ATH	Athens Observa	0.50	166	⇑iPB			Pg	01 29 59.4	+0.2
ATH				eSB			Sg	01 30 06.1	+0.3
ATH	Athens Observa	0.50	166	⇑iPb			Pg	01 29 59.4	+0.2
ATH				eSb			Sg	01 30 06.1	+0.3
ATHU	Athens Univers	0.52	160	P			Pg	01 29 59.7	+0.1
ATHU				S			Sg	01 30 06.6	+0.2
ATHU	Athens Univers	0.52	160	P			Pg	01 29 59.7	+0.1
ATHU				S			Sg	01 30 06.6	+0.2
VLY	Voula,Athens	0.63	163	⇑iPn			Pg	01 30 01.7	+0.1
VLY	Voula,Athens	0.63	163	⇑iPN			Pg	01 30 01.7	+0.1
VLY	Voula,Athens	0.63	163	⇑iPn			Pg	01 30 01.7	+0.1
LTK	Loutraki	0.64	228	P			Pg	01 30 01.1	-0.7
LTK				S			Sg	01 30 10.5	+0.3
LTK	Loutraki	0.64	228	ePN			Pg	01 30 01.2	-0.6
LTK				eSN			Sg	01 30 10.9	+0.7
LTK	Loutraki	0.64	228	P			Pg	01 30 01.1	-0.7
LTK				S			Sg	01 30 10.5	+0.3
NAIG	Nisos Aigina	0.70	185	ePn			Pg	01 30 02.7	-0.3
NAIG	Nisos Aigina	0.70	185	ePN			Pg	01 30 02.7	-0.3
NAIG	Nisos Aigina	0.70	185	ePn			Pg	01 30 02.7	-0.3
AOS	Alonnisos	0.76	19	P			Pg	01 30 04.0	-0.1
AOS				S			Sg	01 30 15.1	+1.1
AOS	Alonnisos	0.76	19	P			Pg	01 30 04.0	-0.1
AOS				S			Sg	01 30 15.1	+1.1
DSF	Desfina	0.81	267	P			Pg	01 30 04.1	-1.1
DSF				S			Sg	01 30 16.4	+0.5
DSF	Desfina	0.81	267	P			Pg	01 30 04.1	-1.1
DSF				S			Sg	01 30 16.4	+0.5
NEO	Neokhori	0.89	343	ePn			Pg	01 30 06.7	0.0
NEO				eSn			Sg	01 30 18.7	+0.4
NEO	Neokhori	0.89	343	ePN			Pg	01 30 06.7	0.0
NEO				eSN			Sg	01 30 18.7	+0.4
NEO	Neokhori	0.89	343	ePn			Pg	01 30 06.7	0.0
NEO				eSn			Sg	01 30 18.7	+0.4
XOR	Xorichti	0.96	342	P			Pg	01 30 07.6	-0.3
XOR				S			Sg	01 30 20.8	+0.4
XOR	Xorichti	0.96	342	P			Pg	01 30 07.6	-0.3
XOR				S			Sg	01 30 20.8	+0.4
GUR	Goura	1.09	242	P			Pb	01 30 09.5	-0.7
GUR				S			Sg	01 30 24.8	+0.1
GUR	Goura	1.09	242	ePN			Pb	01 30 09.5	-0.7
GUR	Goura	1.09	242	P			Pb	01 30 09.5	-0.7
GUR				S			Sg	01 30 24.8	+0.1
AGG	Agios Georgios	1.12	301	ePn			Pn	01 30 09.8	-1.0
AGG				eSn			Sn	01 30 26.4	+0.3
AGG	Agios Georgios	1.12	301	P			Pb	01 30 09.9	-0.7
AGG				S			Sb	01 30 26.0	+0.9
AGG	Agios Georgios	1.12	301	ePN			Pn	01 30 09.8	-1.0
AGG				eSN			Sn	01 30 26.4	+0.3
AGG	Agios Georgios	1.12	301	P			Pb	01 30 09.9	-0.7
AGG				S			Sb	01 30 26.0	+0.9
AGG				eSn			Sn	01 30 26.4	+0.3
KALE	Kalithea	1.12	267	P			Pb	01 30 09.7	-0.9
KALE				S			Sb	01 30 26.0	+0.9
KALE	Kalithea	1.12	267	P			Pb	01 30 09.7	-0.9
KALE				S			Sb	01 30 26.0	+0.9
LAKA	Lakka	1.26	261	P			Pn	01 30 12.3	-0.5
LAKA				S			Sb	01 30 29.3	0.0
LAKA	Lakka	1.26	261	P			Pn	01 30 12.3	-0.5
LAKA				S			Sb	01 30 29.3	0.0
EFP	Efpalio	1.30	269	P			Pn	01 30 12.8	-0.5
EFP				S			Sn	01 30 31.6	+1.0
EFP	Efpalio	1.30	269	ePN			Pn	01 30 12.6	-0.7
EFP				eSN			Sn	01 30 31.6	+1.0
EFP	Efpalio	1.30	269	P			Pn	01 30 12.8	-0.5
EFP				S			Sn	01 30 31.6	+1.0
VLX	Vlachokerasia	1.43	221	P			Pn	01 30 14.9	-0.2
VLX				S			Sn	01 30 33.8	0.0
VLX	Vlachokerasia	1.43	221	ePN			Pn	01 30 15.2	+0.1
VLX				eSN			Sn	01 30 34.2	+0.4
VLX	Vlachokerasia	1.43	221	P			Pn	01 30 14.9	-0.2
VLX	Vlachokerasia	1.43	221	ePn			Pn	01 30 15.2	+0.1
VLX				S			Sn	01 30 33.8	0.0
VLX				eSn			Sn	01 30 34.2	+0.4
EVR	Evrytania	1.45	289	ePn			Pn	01 30 16.0	+0.7
EVR	Evrytania	1.45	289	ePN			Pn	01 30 16.0	+0.7
EVR	Evrytania	1.45	289	ePn			Pn	01 30 16.0	+0.7
PAIG	Paliouri	1.47	3	P			Pn	01 30 15.4	-0.3
PAIG	Paliouri	1.47	3	P			Pn	01 30 15.4	-0.3
THL	Klokotos Trika	1.64	313	P			Pn	01 30 17.8	-0.2
THL				S			Sn	01 30 38.5	-0.4
THL	Klokotos Trika	1.64	313	ePN			Pn	01 30 18.0	0.0
THL	Klokotos Trika	1.64	313	P			Pn	01 30 17.8	-0.2
THL				S			Sn	01 30 38.5	-0.4
RLS	Riolos of Patr	1.70	257	P			Pg	01 30 22.2	+0.2
RLS	Riolos of Patr	1.70	257	P			Pg	01 30 22.2	+0.2
VLI	Veliai	1.80	196	ePb			Pn	01 30 19.9	-0.3
VLI	Veliai	1.80	196	ePB			Pn	01 30 19.9	-0.3
ITM	Ithomi	1.82	226	ePn			Pn	01 30 21.2	+0.8
ITM	Ithomi	1.82	226	P			Pn	01 30 20.3	-0.1
ITM	Ithomi	1.82	226	ePN			Pn	01 30 21.2	+0.8
ITM	Ithomi	1.82	226	P			Pn	01 30 20.3	-0.1
ITM	Ithomi	1.82	226	ePn			Pn	01 30 21.2	+0.8
LIT	Litokhoron	1.84	333	P			Pn	01 30 20.4	-0.4
LIT				S			Sn	01 30 44.7	+0.7
LIT	Litokhoron	1.84	333	P			Pn	01 30 20.4	-0.4
LIT				S			Sn	01 30 44.7	+0.7
OUR	Ouranopolis	1.91	10	P			Pn	01 30 21.1	-0.5
OUR	Ouranopolis	1.91	10	P			Pn	01 30 21.1	-0.5
LIA	Limnos Island	1.91	41	ePn			Pn	01 30 21.8	+0.1
LIA	Limnos Island	1.91	41	P			Pn	01 30 21.5	-0.2
LIA	Limnos Island	1.91	41	ePN			Pn	01 30 21.8	+0.1
LIA	Limnos Island	1.91	41	P			Pn	01 30 21.5	-0.2
LIA	Limnos Island	1.91	41	ePn			Pn	01 30 21.8	+0.1
PLG	Polygyros	1.92	357	ePn			Pn	01 30 21.3	-0.5
PLG	Polygyros	1.92	357	P			Pn	01 30 21.5	-0.3
PLG	Polygyros	1.92	357	ePN			Pn	01 30 21.3	-0.5
PLG	Polygyros	1.92	357	P			Pn	01 30 21.5	-0.3
CHOS	Chios island	1.96	91	P			Pn	01 30 22.7	+0.4
CHOS	Chios island	1.96	91	P			Pn	01 30 22.7	+0.4
APE	Apeiranthos	2.08	131	ePn			Pn	01 30 24.0	-0.1
APE	Apeiranthos	2.08	131	P			Pn	01 30 23.9	-0.2
APE	Apeiranthos	2.08	131	ePN			Pn	01 30 24.0	-0.1
APE	Apeiranthos	2.08	131	ePn			Pn	01 30 24.0	-0.1
KYTH	Kithira	2.21	191	ePn			Pn	01 30 25.9	+0.1
KYTH	Kithira	2.21	191	ePN			Pn	01 30 25.9	+0.1
KYTH	Kithira	2.21	191	ePn			Pn	01 30 25.9	+0.1
THR1	Thera Island	2.57	143	P			Pn	01 30 30.8	0.0
THR1	Thera Island	2.57	143	P			Pn	01 30 30.8	0.0
SRS	Serrai	2.66	0	P			Pn	01 30 31.9	-0.1
SRS	Serrai	2.66	0	P			Pn	01 30 31.9	-0.1
SMG	Samos	2.69	105	ePn			Pn	01 30 32.7	+0.3
SMG	Samos	2.69	105	ePN			Pn	01 30 32.7	+0.3
SMG	Samos	2.69	105	ePn			Pn	01 30 32.7	+0.3
KNT	Kendrikon	2.75	349	P			Pn	01 30 33.9	+0.6
KNT	Kendrikon	2.75	349	P			Pn	01 30 33.9	+0.6
NVR	Nevrokopi	2.90	4	P			Pn	01 30 35.9	+0.6
NVR	Nevrokopi	2.90	4	P			Pn	01 30 35.9	+0.6
RDO	Rodhopi	3.09	29	ePn			Pn	01 30 37.3	-0.6
RDO	Rodhopi	3.09	29	P			Pn	01 30 37.4	-0.5
RDO	Rodhopi	3.09	29	ePN			Pn	01 30 37.3	-0.6
RDO	Rodhopi	3.09	29	P			Pn	01 30 37.4	-0.5
ALN	Alexandroupoli	3.10	37	P			Pn	01 30 37.4	-0.7
ALN	Alexandroupoli	3.10	37	P			Pn	01 30 37.4	-0.7

IDC 01 01:36:09.4±3.1,15°.89S×173°.97W,h114km±24km, mb3.8/6,mb1 4.1/7,mb1mx3.8/17,mbtmp3.8/7,Error ellipse: s-maj=113.2km s-min=18.2km az=148.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.89	47	P			Pn	01 36 54.3	+0.1
	58nm,0.3s,baz=59,slow=1.7,SNR=49								
AFI				S			Sn	01 37 25.5	-3.0
	100nm,0.3s,baz=210,slow=23,SNR=11								
STKA	Stephens Creek	43.32	240	P			P	01 44 00.5	+0.4
	1.4nm,0.4s,baz=97,slow=8.1,SNR=3.2								
ASAR	Alice Springs	49.44	252	P			P	01 44 47.8	-0.4
	14nm,0.5s,baz=87,slow=7.8,SNR=98								
YBH	Yreka Blue Hor	74.32	37	P			P	01 47 35.1	+0.7
	1.5nm,0.5s,baz=222,slow=7.7,SNR=4.1								
NVAR	Mina Array Bea	75.06	42	P			P	01 47 38.9	+0.2
	0.5nm,0.5s,baz=232,slow=9.5,SNR=4.3								
TXAR	Lajitas Array	81.34	56	P			P	01 48 14.1	+0.5
	0.3nm,0.6s,baz=220,slow=7.8,SNR=6.2								
PDAR	Pinedale Array	82.99	42	P			P	01 48 21.6	-0.3
	0.9nm,0.7s,baz=247,slow=2.4,SNR=7.7								
BRTR	Keskin Array B	146.18	320	PKPbc			PKPbc	01 55 36.7	0.0
	0.8nm,0.8s,baz=111,slow=2.8,SNR=6.8								
GERES	GERESS Array B	146.54	351	PKPbc			PKPbc	01 55 36.6	-0.7
	0.1nm,0.4s,baz=90,slow=2.0,SNR=2.9								

*SZGRF **01** 01:36:24.2,22°.30S×178°.85W,h33km,South of Fiji Islands*
*IDC **01** 01:37:25.3±1.7,22°.03S×179°.24W,h564km±16km,mb3.5/6, mb1 3.7/8,mb1mx3.4/16,mbtmp3.6/8,Error ellipse: s-maj=25.3km s-min=16.8km az=120.0*
*ISCJB **01** 01:37:25.3±0.8,22°.05±0°.1×179°.3W±0°.1,h581km±13km, mb4.1/15,Error ellipse: s-maj=19.9km s-min=11.5km az=39.8*
*NEIC **01** 01:37:26.3±0.8,22°.02S×179°.32W,h578km±8km,mb4.3/8, Error ellipse: s-maj=15.7km s-min=10.4km az=121.0*

ISC 01 01:37:26.3±1.0,22°.1S±0°.1×179°.3W±0°.1,h574km±13km, n88,σ1°01/29,mb4.1/15,2C,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.95	330	eP			P	01 38 58.6	+1.3
AFI	Afiamalu	10.82	43	P			P	01 39 52.0	-1.0
	4.4nm,0.3s,baz=228,slow=12,SNR=2.6								
AFI				S			S	01 41 48.6	-5.0
	0.9nm,0.3s,baz=38,slow=19,SNR=2.4								
AFI	Afiamalu	10.82	43	P			P	01 39 52.0	-1.0
AFI				S			S	01 41 48.6	-5.0
URZ	Urewera	16.45	190	P			P	01 40 46.6	-2.1
	2.5nm,0.3s,baz=335,slow=3.4,SNR=18								
URZ				S			S	01 43 26.6	-7.0
	0.4nm,0.3s,baz=349,slow=16,SNR=6.0								
URZ	Urewera	16.45	190	eP			P	01 40 47.7	-0.9
	11nm,0.5s								
URZ				S			S	01 43 26.6	-7.0
CNB	Canberra Magne	30.34	237	eP			P	01 42 53.6	+1.3
CTA	Charters Tower	32.14	267	PcP			PcP	01 45 39.4	+0.2
	2.1nm,0.5s,baz=104,slow=8.3,SNR=4.6								
TOO	Toolangi	33.99	235	eP			P	01 43 23.8	+0.6
STKA	Stephens Creek	36.01	246	P			P	01 43 40.4	+0.3
	5.2nm,0.6s,mb4.3,baz=87,slow=9.1,SNR=13								
BBOO	Buckleboo	40.76	245	eP			P	01 44 18.0	-0.4
	4.0nm,0.4s,mb4.3								
ASAR	Alice Springs	42.98	258	P			P	01 44 35.6	-0.3
	4.4nm,0.8s,mb4.1,baz=102,slow=7.7,SNR=44								
ASAR				PcP			PcP	01 46 13.2	0.0
	1.7nm,0.6s,baz=106,slow=3.5,SNR=7.8								
ASAR				S			S	01 50 14.1	-6.4
	1.0nm,0.9s,baz=97,slow=16,SNR=6.4								
WRAB	Tennant Creek	43.17	264	eP			P	01 44 36.3	-1.2
	2.7nm,0.8s,mb3.8								
FORT	Forrest	47.56	248	eP			P	01 45 09.1	-1.7
	16nm,0.6s,mb4.7								
FORT	Forrest	47.56	248	eP			P	01 45 09.6	-1.2
	23nm,0.7s,mb4.8								
KLBR	Kellerberrin	56.29	246	eP			P	01 46 12.7	-0.7
	9.2nm,0.8s,mb4.1								
MBWA	Marble Bar	56.32	259	eP			P	01 46 12.9	-0.9
MBWA	Marble Bar	56.32	259	eP			P	01 46 12.7	-1.1
	8.5nm,0.5s,mb4.2								
CASY	Casey	62.04	206	eP			P	01 46 51.2	+0.1
	6.9nm,0.9s,mb3.9								
QSPA	South Pole Qui	68.03	180	eP			P	01 47 30.3	+1.8
	14nm,1.1s,mb4.3								
MJAR	Matsushiro Arr	70.73	325	P			P	01 47 44.8	-0.4
	0.8nm,0.5s,mb3.5,baz=138,slow=5.8,SNR=3.9								
KSM	Kuching	72.41	279	eP			P	01 47 55.2	-0.4
	5.6nm,0.6s,mb4.3								
PETK	Petropavlovsk-	77.45	346	P			P	01 48 22.5	-0.2
	3.3nm,0.7s,mb3.9,baz=104,slow=6.3,SNR=3.8								
MAW	Mawson	79.69	200	P			P	01 48 35.3	+0.8
	3.4nm,0.7s,mb3.8,baz=114,slow=7.9,SNR=7.1								
CMAR	Chiang Mai Arr	89.47	290	P			P	01 49 24.7	+1.4
	2.4nm,0.8s,mb4.1,baz=144,slow=3.4,SNR=14								
CHTO	Chiang Mai	89.61	290	eP			P	01 49 25.2	+1.3
	3.1nm,0.6s,mb4.3								
MK31	Makanchi Array	111.35	313	ePKP			PKiKP	01 54 53.8	-1.7
MKAR	Makanchi Array	111.35	313	PKiKP			PKiKP	01 54 54.7	-0.8
	0.2nm,0.2s,baz=63,slow=0.6,SNR=3.7								
BVAR	Borovoye Array	119.45	319	PKP			PKPdf	01 55 09.8	-1.0
	1.6nm,0.4s,baz=123,slow=2.6,SNR=10								
ARU	Arti	125.75	325	ePKPdf			PKPdf	01 55 22.4	-0.4
ARCES	ARCESS Array B	130.20	349	PKP			PKPdf	01 55 30.2	-0.7
	1.3nm,0.5s,baz=19,slow=1.2,SNR=19								
ARCES				SKPbc			SKPbc	01 58 00.8	-0.1
	1.6nm,0.8s,baz=48,slow=1.8,SNR=4.7								
ARCES	ARCESS Array B	130.20	349	PKP			PKPdf	01 55 30.2	-0.7
ARCES				SKPbc			SKPbc	01 58 00.8	-0.1
LSZ	Lusaka	134.14	218	PKP			PKPdf	01 55 41.7	+1.7
	1.5nm,0.5s,baz=217,slow=5.1,SNR=5.6								
FINES	FINESS Array B	136.88	342	PKhKP				01 55 32.9	
	0.3nm,0.4s,baz=64,slow=4.4,SNR=5.4								
FINES				PKP			PKPdf	01 55 42.5	-1.1
	0.7nm,0.5s,baz=72,slow=4.5,SNR=10								
FINES				SKPbc			SKPbc	01 58 22.5	-0.6
	1.1nm,1.0s,baz=11,slow=3.9,SNR=4.4								
FINES	FINESS Array B	136.88	342	PKP				01 55 32.9	
FINES				PKP			PKPdf	01 55 42.5	-1.1
FINES				SKPbc			SKPbc	01 58 22.5	-0.6
NOA	NORSAR Array B	140.35	352	PKhKP				01 55 44.3	
	0.3nm,0.6s,baz=35,slow=5.0,SNR=4.0								
NOA	NORSAR Array B	140.35	352	PKP				01 55 44.3	
AKASG	Malin Array Be	143.73	329	PKP			PKPdf	01 55 54.4	-1.9
	3.2nm,0.4s,baz=43,slow=4.3,SNR=24								
AKASG	Malin Array Be	143.73	329	PKP			PKPdf	01 55 54.4	-1.9
AKBB	Malin Array Si	143.73	329	ePKPdf			PKPdf	01 55 54.7	-1.6
BR131	Keskin Array S	146.92	310	ePKPbc			PKPbc	01 56 04.4	-0.6
BRTR	Keskin Array B	146.92	310	PKPbc			PKPbc	01 56 04.6	-0.4
	1.9nm,0.6s,baz=135,slow=4.8,SNR=15								
BSEG	Bad Segeberg	147.33	349	ePKPbc			PKPbc	01 56 05.6	0.0
BSEG	Bad Segeberg	147.33	349	ePKPbc			PKPbc	01 56 05.6	0.0
KWP	Kalwaria Pacla	147.43	333	ePKPbc			PKPbc	01 56 05.7	-0.3
MMAI	Mount Meron Ar	147.46	297	PKPbc			PKPbc	01 56 07.2	+0.6
	3.7nm,0.5s,baz=78,slow=4.7,SNR=13								
BUR08	Bucovina Ar. S	147.75	328	ePKPbc			PKPbc	01 56 07.5	+0.6
KOLS	Kolonicke sedl	148.15	333	eP			PKPbc	01 56 08.6	+0.7
KOLS	Kolonicke sedl	148.15	333	ePKP			PKPbc	01 56 08.6	+0.7
STHS	Stebnicka Huta	148.20	334	eP			PKPbc	01 56 08.7	+0.7
STHS	Stebnicka Huta	148.20	334	ePKP			PKPbc	01 56 08.7	+0.7
CSS	Prodhromos	148.69	301	ePKPbc			PKPbc	01 56 08.9	-0.8
NRDL	Niedersach Rie	148.75	349	ePKPbc			PKPbc	01 56 09.4	+0.2
UPC	Upice	149.15	341	ePKPbc			PKPbc	01 56 10.9	+0.6
DPC	Dobruska-Polom	149.19	340	ePKPbc			PKPbc	01 56 11.2	+0.8
KECS	Kecovo	149.24	334	eP			PKPbc	01 56 11.7	+1.1
KECS	Kecovo	149.24	334	ePKP			PKPbc	01 56 11.7	+1.1
CLL	Collm	149.25	345	ePKPbc			PKPbc	01 56 10.5	0.0
CLL	Collm	149.25	345	⇑iPKP			PKPbc	01 56 10.6	+0.1
CLL				*i*				01 56 17.3	
CLL	Collm	149.25	345	⇑iPKPbc			PKPbc	01 56 10.6	+0.1
	comp=Z,10.0nm,0.9s								
CLL				*i* PKPab			PKPab	01 56 17.3	-0.2
	comp=Z,3.0nm,0.6s								
MORC	Moravsky Berou	149.29	338	ePKPbc			PKPbc	01 56 10.8	+0.1
CLZ	Clausthal	149.32	348	ePKPbc			PKPbc	01 56 11.1	+0.4
CLZ	Clausthal	149.32	348	ePKPbc			PKPbc	01 56 11.1	+0.4
BRG	Berggiesshubel	149.41	343	ePKPbc			PKPbc	01 56 11.2	+0.3
BRG	Berggiesshubel	149.41	343	*i* PKP			PKPbc	01 56 10.9	0.0
	comp=Z,7.5nm,0.6s								
PVCC	Panska Ves	149.56	342	ePKPbc			PKPbc	01 56 11.8	+0.5
VYHS	Vyhne	149.89	336	eP			PKPbc	01 56 12.4	+0.3
VYHS	Vyhne	149.89	336	ePKP			PKPbc	01 56 12.4	+0.3
KOLL	Kolacno	149.98	336	eP			PKPbc	01 56 12.9	+0.6
KOLL	Kolacno	149.98	336	ePKP			PKPbc	01 56 12.9	+0.6
PRU	Pruhonice	150.05	342	ePKPbc			PKPbc	01 56 13.1	+0.7
MOX	Moxa	150.20	346	ePKP			PKPbc	01 56 12.9	+0.1
	comp=Z,5.0nm,0.7s								
MOX	Moxa	150.20	346	ePKPbc			PKPbc	01 56 12.6	-0.2
TANN	Tannenbergstha	150.21	345	ePKPbc			PKPbc	01 56 13.2	+0.4
UBBA	Unterbreizbach	150.37	348	ePKPbc			PKPbc	01 56 13.0	-0.1
TREC	Trest	150.38	340	ePKPbc			PKPbc	01 56 13.4	+0.2
NKC	Novy Kostel	150.38	345	ePKPbc			PKPbc	01 56 13.6	+0.4
ROTZ	Rotzenmuhle	150.87	345	ePKPbc			PKPbc	01 56 14.6	+0.3
KHC	Kasperske Hory	151.09	342	ePKPbc			PKPbc	01 56 15.1	+0.2
GRA1	Grafenberg Arr	151.18	346	ePKPbc			PKPbc	01 56 14.9	-0.1
GRF	Grafenberg Arr	151.18	346	ePKPbc			PKPbc	01 56 14.9	-0.1
GRF	Grafenberg Arr	151.18	346	ePKP			PKPbc	01 56 14.9	-0.1
TNS	Taunus Mts	151.22	350	ePKPbc			PKPbc	01 56 15.2	+0.1
TNS	Taunus Mts	151.22	350	ePKPbc			PKPbc	01 56 15.2	+0.1
GEC2	GERESS Array S	151.32	342	ePKPbc			PKPbc	01 56 15.4	0.0
GEC2	GERESS Array S	151.32	342	ePKPbc			PKPbc	01 56 15.4	0.0
GERES	GERESS Array B	151.32	342	PKPbc			PKPbc	01 56 15.2	-0.2
	comp=Z,1.1nm,0.4s,baz=29,slow=2.2,SNR=17								
GERES				PKPab			PKPab	01 56 26.3	+0.1
	comp=Z,0.4nm,0.6s,baz=54,slow=2.5,SNR=3.8								
TORD	Torodi Ar. Bea	171.09	186	PKP			PKPdf	01 56 28.8	-1.2
	comp=Z,0.9nm,0.8s,baz=291,slow=1.5,SNR=6.1								
TORD				PKPab			PKPab	01 57 53.1	-0.2
	comp=Z,1.3nm,0.8s,baz=163,slow=4.9,SNR=9.9								
TORD	Torodi Ar. Bea	171.09	186	PKP			PKPdf	01 56 28.8	-1.3
TORD				PKPab			PKPab	01 57 53.1	-0.2

OTT 01 01:40:03.7±1.2,78°.71N×103°.32W,h18km,ML3.8/8, 10km southeast from Isachsen, Nu Sverdrup Seismic Zone.,Queen Elizabeth Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EUNU	Eureka	3.40	59	PN			Pn	01 40 56.2	+0.5
EUNU				SN			Sn	01 41 33.3	-2.1
EUNU				Trac				01 41 37.5	
	comp=Z,26nm,0.8s								
RES	Resolute Bay	4.48	150	PN			Pn	01 41 11.4	+0.8
RES				SN			Sn	01 42 00.6	-1.5
RES				Trac				01 42 08.9	
	comp=Z,7.9nm,0.2s								
CB31	Cambridge Bay	9.65	184	PN			Pn	01 42 21.4	0.0
CB31				SN			Sn	01 44 05.0	-4.1
CB31				Trac				01 44 10.1	
	comp=Z,12nm,0.2s								
GIFN	Gifford Fjord,	10.42	135	PN			Pn	01 42 30.4	-1.4
GIFN				SN			Sn	01 44 18.4	-9.5
GIFN				Trac				01 44 35.3	
	comp=Z,3.7nm,0.5s								
AP3N	Apex site 3 Nu	10.55	141	PN			Pn

SGCP	**Mt. Cagua**	**2.00 161**	*e*P	**Pn**	**01 57 56.9**	**+1.5**
TAW	**Tawu**	**2.24 349**	*e*P	**Pn**	**01 57 57.8**	**-1.0**
	baz=356					
APYP	**Conner**	**2.28 183**	*e*P	**Pn**	**01 58 01.6**	**+2.4**
EAST	**Anshuo**	**2.28 348**	*e*P	**Pn**	**01 57 58.3**	**-0.9**
	baz=355					
SCZT	**Fangliau**	**2.32 343**	⇑P	**Pn**	**01 57 59.5**	**-0.4**
	baz=351					
TWP	**Hsiaoliuchiu**	**2.38 337**	⇑P	**Pn**	**01 58 00.7**	**0.0**
	baz=346					
CVP	**Callao Caves**	**2.47 170**	*i* P	**Pn**	**01 58 02.1**	**+0.2**
CVP			*i* S	**Sn**	**01 58 32.2**	**+1.2**
ECL	**Taimali**	**2.47 351**	*e*P	**Pn**	**01 57 59.7**	**-2.2**
	baz=357					
ABRA	**Dolores**	**2.56 194**	*e*P	**Pn**	**01 58 04.8**	**+1.6**
TTN	**Taitung**	**2.60 355**	*e*P	**Pn**	**01 58 03.6**	**-0.1**
KAU	**Kaohsiung**	**2.60 338**	*e*P	**Pn**	**01 58 01.7**	**-2.1**
	baz=346					
TWG	**Pinlang**	**2.67 354**	*e*Pn	**Pn**	**01 58 03.4**	**-1.4**
TWG	**Pinlang**	**2.67 354**	*e*P	**Pn**	**01 58 02.9**	**-1.9**
	baz=359					
SSD	**Sandimen**	**2.68 345**	*e*P	**Pn**	**01 58 04.2**	**-0.6**
	baz=352					
SGLT	**Jiouru**	**2.69 342**	*e*P	**Pn**	**01 58 05.5**	**+0.5**
	baz=350					
TWM1	**Shoushan**	**2.81 342**	*e*P	**Pn**	**01 58 07.0**	**+0.4**
	baz=349					
CHKT	**Chengkung**	**2.94 360**	*e*P	**Pn**	**01 58 08.0**	**-0.4**
	baz=4.0					
CHKT			*e*S	**Sn**	**01 58 45.4**	**+2.9**
	baz=4.0					
SGST	**Jiashian**	**3.01 346**	*e*P	**Pn**	**01 58 09.1**	**-0.3**
	baz=352					
ELDTW	**Lidau**	**3.04 354**	*e*P	**Pn**	**01 58 09.7**	**-0.1**
	baz=358					
CHN3	**Shinhua**	**3.06 342**	*e*P	**Pn**	**01 58 10.2**	**+0.2**
	baz=349					
TAI1	**Yung-k'ang**	**3.07 340**	*e*P	**Pn**	**01 58 07.9**	**-2.2**
	baz=347					
CHN1	**Nanshi**	**3.12 346**	⇑P	**Pn**	**01 58 10.5**	**-0.4**
	baz=351					
WTP	**Ta-pu**	**3.16 347**	P	**Pn**	**01 58 11.1**	**-0.4**
	baz=353					
TWF1	**Yuli**	**3.19 359**	*e*P	**Pn**	**01 58 11.2**	**-0.6**
	baz=2.0					
SCLT	**Jiali**	**3.21 340**	*e*P	**Pn**	**01 58 11.2**	**-0.8**
	baz=347					
TWK	**Hsinying**	**3.21 345**	*e*P	**Pn**	**01 58 10.4**	**-1.7**
	baz=351					
TPUB	**Ta-pu**	**3.21 348**	*e*Pn	**Pn**	**01 58 11.5**	**-0.7**
CAUP	**Cauayan**	**3.21 172**	*e*P	**Pn**	**01 58 15.9**	**+3.7**
PALP	**Palanan**	**3.23 162**	*e*P	**Pn**	**01 58 15.8**	**+3.5**
YULB	**Yu-li**	**3.23 359**	*e*Pn	**Pn**	**01 58 13.0**	**+0.6**
EHY	**Hungye**	**3.34 359**	*e*P	**Pn**	**01 58 14.0**	**+0.1**
	baz=3.0					
YUS	**Yu-Shan**	**3.35 353**	*e*P	**Pn**	**01 58 14.3**	**+0.3**
	baz=358					
CHN8	**Yiju**	**3.36 341**	*e*P	**Pn**	**01 58 13.7**	**-0.4**
	baz=348					
ALS	**Alishan**	**3.39 351**	*e*P	**Pn**	**01 58 14.8**	**+0.2**
	baz=356					
CHY	**Chiayi**	**3.45 345**	*e*P	**Pn**	**01 58 14.6**	**-0.8**
	baz=351					
CHY			*e*S	**Sn**	**01 58 54.6**	**-0.4**
	baz=351					
WDGT	**Dungji**	**3.48 333**	⇑P	**Pn**	**01 58 14.1**	**-1.8**
	baz=340					
CHN5	**Tsauling**	**3.49 350**	*e*P	**Pn**	**01 58 15.7**	**-0.3**
	baz=354					
TEGC	**Jichi Village**	**3.55 3**	*e*P	**Pn**	**01 58 20.2**	**+3.5**
	baz=5.0					
WGK	**Gukeng**	**3.60 348**	*e*P	**Pn**	**01 58 15.5**	**-2.0**
	baz=353					
WSF	**Szhu**	**3.63 343**	*e*P	**Pn**	**01 58 17.0**	**-0.9**
	baz=348					
SSLB	**Suanglung**	**3.64 354**	*e*Pn	**Pn**	**01 58 18.8**	**+0.7**
SSLB			*e*Sn	**Sn**	**01 59 04.7**	**+4.8**
ESL	**Shilin**	**3.65 1**	*e*P	**Pn**	**01 58 17.9**	**-0.3**
	baz=4.0					
ESL			*e*S	**Sn**	**01 59 06.2**	**+6.1**
	baz=4.0					
ESF	**Shoufeng Towns**	**3.71 2**	*e*P	**Pn**	**01 58 24.2**	**+5.2**
	baz=5.0					
SMLT	**Sun Moon Lake**	**3.74 353**	*e*P	**Pn**	**01 58 19.5**	**+0.1**
	baz=357					
WNT	**Mingjian**	**3.77 350**	*e*P	**Pn**	**01 58 19.9**	**+0.1**
	baz=355					
TYC	**Yuchr**	**3.77 353**	⇓P	**Pn**	**01 58 19.8**	**0.0**
	baz=357					
PNG	**Penghu**	**3.80 334**	*e*P	**Pn**	**01 58 17.5**	**-2.7**
	baz=340					
PNG			*e*S	**Sn**	**01 58 59.2**	**-4.5**
	baz=340					
HWA	**Hwalien**	**3.82 3**	*e*P	**Pn**	**01 58 22.0**	**+1.6**
	baz=6.0					
BCPH	**Baguio City Da**	**3.82 191**	⇑*i*P	**Pn**	**01 58 29.5**	**+9.0**
WTCT	**Ta-ch'eng**	**3.83 345**	*e*P	**Pn**	**01 58 19.7**	**-1.0**
	baz=350					
TWD	**Chiawan**	**3.92 3**	*e*P	**Pn**	**01 58 22.4**	**+0.5**
	baz=5.0					
TWD			*e*S	**Sn**	**01 59 08.3**	**+1.6**
	baz=5.0					
WHF	**Hehuan Shan**	**3.98 359**	*e*P	**Pn**	**01 58 24.1**	**+1.4**
	baz=2.0					
BOLP	**Bolinao**	**3.99 201**	*e*P	**Pn**	**01 58 24.4**	**+1.5**
NACB	**Ninganchiao**	**4.01 3**	*e*Pn	**Pn**	**01 58 23.2**	**0.0**
NACB			*e*Sn	**Sn**	**01 59 10.1**	**+1.1**
TCU	**Taichung**	**4.03 351**	*e*P	**Pn**	**01 58 24.1**	**+0.7**
	baz=355					
TWT	**Tachien**	**4.09 358**	*e*P	**Pn**	**01 58 25.6**	**+1.4**
TWQ1	**Liyutan**	**4.22 353**	*e*P	**Pn**	**01 58 25.0**	**-1.0**
	baz=356					
NNS	**Nan Shan**	**4.27 0**	*e*P	**Pn**	**01 58 27.9**	**+1.2**
	baz=3.0					
ENA	**Nanau**	**4.27 5**	*e*P	**Pn**	**01 58 27.8**	**+1.0**
	baz=7.0					
NSY	**Sanyi**	**4.29 353**	*e*P	**Pn**	**01 58 27.4**	**+0.5**
	baz=356					
BALP	**Baler**	**4.39 177**	*e*P	**Pn**	**01 58 30.5**	**+2.2**
TWC	**Suao**	**4.46 6**	P	**Pn**	**01 58 30.8**	**+1.4**
	baz=7.0					
TWC			*e*S	**Sn**	**01 59 23.6**	**+3.5**
	baz=7.0					
ENTT	**Nioudou**	**4.47 2**	*e*P	**Pn**	**01 58 29.9**	**+0.3**
	baz=4.0					
NSTT	**Nanjuang**	**4.47 356**	*e*P	**Pn**	**01 58 29.2**	**-0.3**
	baz=359					
HATJ	**Hateruma jima**	**4.50 30**	P	**Pn**	**01 58 30.3**	**+0.5**
HATJ			S	**Sn**	**01 59 20.8**	**-0.2**
YHNB	**Yeheng**	**4.50 0**	*e*Pn	**Pn**	**01 58 31.6**	**+1.7**
YHNB			*e*Sn	**Sn**	**01 59 22.5**	**+1.4**
NSK	**Sanguang**	**4.51 360**	*e*P	**Pn**	**01 58 31.5**	**+1.5**
	baz=2.0					
NSK			*e*S	**Sn**	**01 59 27.4**	**+6.2**
	baz=2.0					
YOJ	**Yonaguni jima**	**4.55 19**	P	**Pn**	**01 58 31.1**	**+0.5**
YOJ			S	**Sn**	**01 59 24.4**	**+2.0**
YOJ	**Yonaguni jima**	**4.55 19**	*e*P	**Pn**	**01 58 31.2**	**+0.6**
	baz=19					
YOJ			*e*S	**Sn**	**01 59 22.9**	**+0.5**
	baz=19					
TWE	**Neicheng**	**4.56 3**	*e*P	**Pn**	**01 58 32.1**	**+1.4**
	baz=5.0					
PCPH	**Palayan**	**4.57 183**	⇑*i*P	**Pn**	**01 58 32.7**	**+1.9**
PCPH			*i* S	**Sn**	**01 59 23.1**	**+0.3**
ILA	**Ilan**	**4.61 4**	*e*P	**Pn**	**01 58 34.9**	**+3.6**
	baz=6.0					
IRIF	**Iriomote-Funau**	**4.71 27**	⇓P	**Pn**	**01 58 33.4**	**+0.7**
IRIF			S	**Sn**	**01 59 26.5**	**+0.4**
JKRS	**Kuro-shima**	**4.75 31**	⇓P	**Pn**	**01 58 33.9**	**+0.6**
JKRS			S	**Sn**	**01 59 27.1**	**-0.1**
NCU	**National Centr**	**4.80 358**	*e*P	**Pn**	**01 58 37.1**	**+3.1**
TATO	**Taipei**	**4.81 1**	*e*Pn	**Pn**	**01 58 35.5**	**+1.5**
TATO			*e*Sn	**Sn**	**01 59 30.4**	**+1.8**
TWA	**Mucha**	**4.81 2**	*e*P	**Pn**	**01 58 37.4**	**+3.2**
	baz=4.0					
TAP1	**Taipei**	**4.87 2**	*e*P	**Pn**	**01 58 36.6**	**+1.7**
	baz=4.0					
TAP1			*e*S	**Sn**	**01 59 33.2**	**+3.0**
	baz=4.0					
TWB1	**Santiao Chiao**	**4.87 7**	*e*P	**Pn**	**01 58 36.4**	**+1.5**
	baz=8.0					
TWB1			*e*S	**Sn**	**01 59 36.7**	**+6.5**
	baz=8.0					
NWF	**Wu-fen Shan**	**4.92 4**	*e*P	**Pn**	**01 58 37.8**	**+2.2**
	baz=6.0					
NWF			*e*S	**Sn**	**01 59 37.5**	**+6.2**
	baz=6.0					
JIJ	**Ishigaki jima**	**4.92 31**	⇓P	**Pn**	**01 58 35.6**	**0.0**
JIJ			S	**Sn**	**01 59 31.2**	**-0.2**
KNM	**Kinmen**	**5.04 328**	⇑P	**Pn**	**01 58 36.0**	**-1.4**
	baz=331					
KNM			*e*S	**Sn**	**01 59 30.9**	**-3.6**
	baz=331					
TWY	**Chenhua**	**5.11 2**	*e*P	**Pn**	**01 58 40.7**	**+2.5**
	baz=4.0					
POLP	**Polilio Island**	**5.42 174**	*e*P	**Pn**	**01 58 44.7**	**+2.3**
QZH	**Quanzhou**	**5.42 332**	⇑*i*Pn	**Pn**	**01 58 41.4**	**-1.1**
QZH			Sn	**Sn**	**01 59 38.6**	**-5.1**
QZH			smax			
	comp=N,6μm,0.8s					
QZH			smax			
	comp=E,6μm,0.8s					
QZH			LR	LR		
	comp=N,495μm,15.1s					
QZH			LR	LR		
	comp=E,441μm,17.0s					
QZH			LR	LR		
	comp=Z,719μm,22.4s					
JTJ	**Tarama**	**5.43 34**	P	**Pn**	**01 58 42.7**	**+0.1**
JTJ			S	**Sn**	**01 59 40.9**	**-3.1**
PCYT	**Pengchaiyu**	**5.50 7**	P	**Pn**	**01 58 45.0**	**+1.5**
	baz=8.0					
JMJ	**Miyako jima 2**	**5.89 37**	P	**Pn**	**01 58 49.0**	**0.0**
JMJ			S	**Sn**	**01 59 56.8**	**+1.4**
JMJ	**Miyako jima 2**	**5.89 37**	*e*P	**Pn**	**01 58 47.0**	**-2.0**
	baz=36					
JOGS	**Gusukube**	**5.92 38**	P	**Pn**	**01 58 49.7**	**+0.4**
JOGS			S	**Sn**	**01 59 56.6**	**+0.6**
TGY	**Tagaytay City**	**6.03 184**	Pn	**Pn**	**01 58 53.1**	**+2.2**
	comp=Z,62nm,0.3s,baz=348,slow=5.3,SNR=44					
TGY	**Tagaytay City**	**6.03 184**	⇑*i*P	**Pn**	**01 58 56.1**	**+5.2**
TGY			*i* S	**Sn**	**02 00 05.4**	**+6.7**
GQP	**Guinayangan**	**6.29 170**	⇑*e*P	**Pn**	**01 58 56.3**	**+1.8**
BOAC	**Boac**	**6.67 176**	*e*P	**Pn**	**01 59 01.4**	**+1.7**
AUQP	**San Andres**	**6.90 169**	*e*P	**Pn**	**01 59 09.6**	**+6.7**
PVCP	**Virac**	**7.04 157**	*e*P	**Pn**	**01 59 08.2**	**+3.5**
HKC	**Hong Kong Obse**	**7.05 289**	⇓*i*P	**Pn**	**01 59 00.0**	**-4.9**
SJMP	**San Jose**	**7.65 182**	*e*P	**Pn**	**01 59 15.4**	**+2.3**
OTRP	**Odiongan**	**7.77 175**	*e*P	**Pn**	**01 59 18.6**	**+3.8**
JKE	**Kume jima 2**	**7.91 38**	P	**Pn**	**01 59 16.0**	**-0.7**
JKE			S	**Sn**	**02 00 44.8**	**-0.3**
GZH	**Guangzhou**	**8.02 293**	P	**Pn**	**01 59 15.1**	**-3.1**
GZH			S	**Sn**	**02 00 41.9**	**-5.9**
GZH			LR	LR		
	comp=N,166μm,15.3s					
GZH			LR	LR		
	comp=E,234μm,16.3s					
GZH			LR	LR		
	comp=Z,418μm,16.5s					
BUSP	**Coron**	**8.18 188**	*e*P	**Pn**	**01 59 21.6**	**+1.3**
CNP	**Cataraman**	**8.22 157**	*e*P	**Pn**	**01 59 25.2**	**+4.2**
JJT2	**Tamagusuku 2**	**8.37 43**	P	**Pn**	**01 59 23.8**	**+0.9**
JJT2			S	**Sn**	**02 00 56.2**	**-0.1**
NAH1	**Naha**	**8.37 43**	P	**Pn**	**01 59 23.5**	**+0.5**
NAH1			S	**Sn**	**02 00 55.6**	**-0.8**
JAGN	**Aguni-jima**	**8.38 39**	P	**Pn**	**01 59 24.5**	**+1.4**
JAGN			S	**Sn**	**02 00 56.9**	**+0.4**
ENPP	**El Nido**	**9.09 192**	*e*P	**Pn**	**01 59 33.1**	**+0.3**
JIH	**Iheya**	**9.14 40**	P	**Pn**	**01 59 32.3**	**-1.3**
JIH			S	**Sn**	**02 01 13.7**	**-1.6**
JOW	**Kunigami**	**9.19 42**	P	**Pn**	**01 59 33.4**	**-0.8**
JOW			S	**Sn**	**02 01 14.6**	**-1.8**
JOW	**Kunigami**	**9.19 42**	Pn	**Pn**	**01 59 33.6**	**-0.6**
	comp=Z,199nm,0.3s,baz=238,slow=10,SNR=120					
JOW			Sn	**Sn**	**02 01 15.8**	**-0.6**
	baz=31,slow=19					
JOW			LR	LR	02 03 09.0	
	comp=Z,155μm,21.0s,baz=227,slow=38					
JOW	**Kunigami**	**9.19 42**	Pn	**Pn**	**01 59 33.6**	**-0.6**
JOW			Sn	**Sn**	**02 01 15.8**	**-0.7**
JOW			LR	LR	02 03 09.0	
CUYO	**Cuyo Island**	**9.25 182**	*e*P	**Pn**	**01 59 38.5**	**+3.4**
GUIM	**Jordan**	**9.54 173**	*e*P	**Pn**	**01 59 43.8**	**+4.7**
JTK	**Tokunoshima**	**10.29 41**	P	**Pn**	**01 59 47.7**	**-1.6**
JTK			S	**Sn**	**02 01 41.1**	**-2.3**
JMZ	**Minamidaito 2**	**10.68 56**	P	**Pn**	**01 59 51.6**	**-3.1**
JMZ			S	**Sn**	**02 01 49.6**	**-3.6**
SSE	**Sheshan**	**10.90 359**	P	**Pn**	**01 59 58.5**	**+0.8**
SSE			S	**Sn**	**02 02 01.2**	**+2.6**
SSE			pmax	pmax		
	comp=Z,99nm,1.0s					
SSE			pmax	pmax		
	comp=Z,3μm,10.2s					
SSE			LR	LR		
	comp=N,70μm,17.3s					
SSE			LR	LR		
	comp=E,92μm,17.3s					
SSE			LR	LR		
	comp=Z,91μm,16.6s					
QIZ	**Qiongzhong**	**10.92 266**	P	**Pn**	**01 59 55.8**	**-2.2**
QIZ			S	**Sn**	**02 01 56.2**	**-2.9**
QIZ			LR	LR		
	comp=N,96μm,15.1s					
QIZ			LR	LR		
	comp=E,57μm,15.9s					
QIZ			LR	LR		
	comp=Z,169μm,18.0s					
QIZ	**Qiongzhong**	**10.92 266**	*e*Pn	**Pn**	**01 59 55.4**	**-2.6**
	comp=Z,892nm,0.9s					
QIZ			*e*Sn	**Sn**	**02 01 52.1**	**-7.0**
JAM	**Amami Oshima**	**11.13 41**	P	**Pn**	**01 59 59.5**	**-1.4**
JAM			S	**Sn**	**02 02 02.0**	**-2.2**
NJ2	**Nanjing**	**12.07 350**	*e*P	**Pn**	**02 00 13.6**	**0.0**
NJ2			pP		02 00 20.6	
NJ2			PP		02 00 22.7	
NJ2			sP		02 00 23.8	
NJ2			S	**Sn**	**02 02 28.5**	**+1.4**
NJ2			pmax	pmax		
	comp=Z,70nm,0.8s					
NJ2			pmax	pmax		
	comp=Z,2μm,6.3s					
NJ2			LR	LR		
	comp=N,136μm,20.0s					
NJ2			LR	LR		
	comp=E,82μm,15.1s					
NJ2			LR	LR		
	comp=Z,173μm,19.5s					
WHN	**Wuhan**	**12.14 330**	P	**Pn**	**02 00 13.5**	**-1.1**
WHN			S	**Sn**	**02 02 22.0**	**-6.8**
WHN			LR	LR		
	comp=N,362μm,14.4s					
WHN			LR	LR		
	comp=E,248μm,13.7s					
WHN			LR	LR		
	comp=Z,420μm,15.2s					
JNN	**Nakanoshima**	**12.35 37**	P	**Pn**	**02 00 16.9**	**-0.6**
DAV	**Davao City (W)**	**13.62 162**	Pn	**Pn**	**02 00 39.3**	**+4.3**
	comp=Z,41nm,0.3s,baz=43,slow=12,SNR=10					
DAV			LR	LR	02 06 10.5	
	comp=Z,178μm,22.0s,baz=337,slow=39					
DAV	**Davao City (W)**	**13.62 162**	*e*Pn	**Pn**	**02 00 39.8**	**+4.7**
ENH	**Enshi**	**14.73 316**	*e*Pn	**Pn**	**02 00 49.9**	**-0.1**
	comp=Z,4.5nm,1.1s					
KKM	**Kota Kinabalu**	**14.89 200**	P	**Pn**	**02 00 51.8**	**-0.4**
KKM	**Kota Kinabalu**	**14.89 200**	*e*Pn	**Pn**	**02 00 52.4**	**+0.2**
	comp=Z,1μm,1.1s					
GYA	**Guiyang**	**14.89 298**	⇓*i*P	**Pn**	**02 00 49.1**	**-3.1**
GYA			pP	pP	02 00 56.8	-9.4
GYA			PP		02 01 03.8	
GYA			S	**Sn**	**02 03 38.6**	**+2.5**
GYA			SS		02 03 56.0	
GYA			pmax	pmax		
	comp=Z,510nm,1.0s					
GYA			pmax	pmax		
	comp=Z,10μm,8.1s					
GYA			LR	LR		
	comp=N,49μm,15.0s					
GYA			LR	LR		
	comp=E,101μm,16.8s					
GYA			LR	LR		
	comp=Z,143μm,15.0s					
SDKM	**Sandakan**	**14.98 196**	P	**Pn**	**02 00 52.8**	**-0.6**
MYLDM	**Lahad Datu**	**15.14 191**	P	**Pn**	**02 00 54.3**	**-1.2**
TSM	**Tawau**	**16.12 193**	P	**Pn**	**02 01 07.8**	**-0.4**
UBT	**Ubonrachathani**	**16.32 255**	⇓P	**Pn**	**02 01 12.0**	**+1.2**
	comp=Z,729nm,0.8s					
TIA	**Tai'an**	**16.43 348**	⇑P	**Pn**	**02 01 13.0**	**+0.9**
TIA			pmax	pmax		
	comp=Z,820nm,1.0s					
TIA			pmax	pmax		
	comp=Z,8μm,8.0s					
TIA			LR	LR		
	comp=N,59μm,12.0s					
TIA			LR	LR		
	comp=E,34μm,12.0s					
XAN	**Xi'an**	**17.71 324**	P	**Pn**	**02 01 27.9**	**-0.1**
XAN			pP	pP	02 01 32.7	-4.7
XAN			sP	sP	02 01 36.3	-5.3
XAN			PP		02 01 42.5	
XAN			S	**Sn**	**02 04 41.4**	**-2.9**
XAN			sS	sS	02 04 49.8	-15
XAN			SS		02 05 05.0	
XAN			pmax	pmax		
	comp=Z,130nm,1.5s					
XAN			pmax	pmax		
	comp=Z,6μm,8.1s					
XAN			LR	LR		
	comp=N,101μm,13.8s					
XAN			LR	LR		
	comp=E,37μm,15.0s					
XAN			LR	LR		
	comp=Z,44μm,13.8s					
INCN	**Inchon**	**17.87 14**	*e*P	**Pn**	**02 01 29.9**	**-0.1**
	comp=Z,794nm,1.2s					
INCN	**Inchon**	**17.87 14**	Pn	**Pn**	**02 01 30.4**	**+0.4**
	SNR=51					
INCN			Pn	**Pn**	**02 01 30.4**	**+0.4**
	SNR=51					
KMI	**Kunming**	**17.89 290**	P	**Pn**	**02 01 30.1**	**-0.3**
KMI			pP	pP	02 01 36.4	-3.1
KMI			sP	sP	02 01 39.5	-4.3
KMI			PP		02 01 45.8	
KMI			S	**Sn**	**02 04 46.4**	**-2.6**
KMI			sS	sS	02 04 55.9	-13
KMI			SS		02 05 10.3	
KMI			pmax	pmax		
	comp=Z,390nm,1.7s					
KMI			pmax	pmax		
	comp=Z,18μm,5.8s					
KMI			LR	LR		
	comp=N,75μm,17.5s					
KMI			LR	LR		
	comp=E,119μm,14.6s					
KMI			LR	LR		
	comp=Z,134μm,15.1s					
KKTK	**Khon Kaen**	**18.02 261**	⇓P	**Pn**	**02 01 32.5**	**+0.5**
	comp=Z,3μm,0.8s					
KSRS	**Korea Array**	**18.16 17**	P	**Pn**	**02 01 33.4**	**-0.2**
	comp=Z,15nm,0.3s,baz=201,slow=12,SNR=262					
KSRS			S	**Sn**	**02 04 59.0**	**+3.7**
	baz=204,slow=21,SNR=2.8					
KSRS			PcP	PcP	02 06 06.3	+0.4
	baz=200,slow=2.1,SNR=4.4					
KSRS			ScP	ScP	02 09 38.1	-0.8
	comp=Z,0.3nm,0.3s,baz=181,slow=2.4,SNR=7.1					
KSRS			LR	LR	02 09 45.2	
	comp=Z,31μm,19.2s,baz=200,slow=41					
KSRS			PKiKP	PKiKP	02 13 56.3	-1.0
	comp=Z,0.1nm,0.3s,baz=171,slow=1.2,SNR=7.0					
KSRS	**Korea Array**	**18.16 17**	P	**Pn**	**02 01 33.4**	**-0.2**
KSRS			S	**Sn**	**02 04 59.0**	**+3.6**
KSRS			pmax	pmax		
	comp=Z,15nm,0.3s					
KSRS			MLR	MLR		
	comp=Z,31μm,19.2s					
BTM	**Bintulu**	**18.68 207**	P	**Pn**	**02 01 39.6**	**-0.5**
DL2	**Dalian**	**18.70 1**	⇑*i*P	**Pn**	**02 01 40.0**	**0.0**
DL2			S	**Sn**	**02 05 09.3**	**+1.1**
DL2			pmax	pmax		
	comp=Z,180nm,0.8s					
DL2			pmax	pmax		
	comp=Z,4μm,9.4s					
DL2			LR	LR		
	comp=E,48μm,18.2s					
DL2			LR	LR		
	comp=Z,38μm,16.3s					
JWY	**Kouya**	**18.85 39**	P	**Pn**	**02 01 44.9**	**+2.9**
CD2	**Chengdu**	**19.14 308**	⇓*i*P	**Pn**	**02 01 43.6**	**-1.9**
CD2			pP	pP	02 01 49.6	-3.7
CD2			sP	sP	02 01 53.8	-3.7
CD2			PP		02 02 00.2	
CD2			S	**Sn**	**02 05 11.2**	**-7.9**
CD2			sS	sS	02 05 20.7	-13
CD2			SS		02 05 36.7	
CD2			pmax	pmax		
	comp=Z,120nm,0.8s					
CD2			pmax	pmax		
	comp=Z,34μm,6.0s					
CD2			LR	LR		
	comp=N,168μm,15.5s					
CD2			LR	LR		
	comp=E,209μm,17.8s					
CD2			LR	LR		
	comp=Z,236μm,17.8s					
TIY	**Taiyuan**	**19.15 338**	*e*P	**Pn**	**02 01 46.9**	**+1.3**
TIY			pP	pP	02 01 55.2	+1.9
TIY			PP		02 02 05.9	
TIY			PcP	PcP	02 06 06.8	-0.8
TIY			pmax	pmax		
	comp=Z,18μm,5.6s					
TIY			LR	LR		
	comp=N,139μm,14.0s					
TIY			LR	LR		
	comp=E,61μm,15.3s					
TIY			LR	LR		
	comp=Z,146μm,14.8s					
JWT	**Wachi**	**19.50 36**	P	**Pn**	**02 01 51.0**	**+1.3**
SBUM	**Sibu**	**19.73 208**	P	**Pn**	**02 01 50.1**	**-2.5**
CBIJ	**Chichi jima**	**20.27 66**	P	**P**	**02 01 57.2**	**+0.4**
	comp=Z,459nm,0.6s,baz=283,slow=5.1,SNR=16					
CBIJ			S	**S**	**02 05 46.5**	**+4.0**
	comp=Z,77nm,0.7s,baz=164,slow=20,SNR=4.8					
CBIJ			LR	LR	02 08 05.8	
	comp=Z,51μm,19.7s,MS5.9,baz=110,slow=32					
BJT	**Baijiatuau**	**20.30 348**	*e*P	**P**	**02 01 57.6**	**+0.6**
BJT			*e*S	**S**	**02 05 45.1**	**+2.2**
BJT			pmax	pmax		
	comp=Z,2μm,0.8s					
BJT			MLR	MLR		
	comp=Z,97μm,20.0s					
BJT	**Baijiatuau**	**20.30 348**	*e*P	**P**	**02 01 57.6**	**+0.6**
	comp=Z,2μm,0.8s					
BJT			*e*S	**S**	**02 05 45.1**	**+2.2**
BJT			LR	LR		
	comp=Z,97μm,20.0s,MS6.2					
BJI	**Beijing**	**20.32 348**	P	**P**	**02 01 57.8**	**+0.6**
BJI			pP		02 02 04.3	
BJI			sP	sP	02 02 07.1	-3.2
BJI			S	**S**	**02 05 41.9**	**-1.4**
BJI			pmax	pmax		
	comp=Z,2μm,1.0s					
BJI			pmax	pmax		
	comp=Z,10μm,3.9s					
BJI			LR	LR		
	comp=N,78μm,19.4s,MS6.2					
BJI			LR	LR		
	comp=E,46μm,17.9s,MS6.2					
BJI			LR	LR		
	comp=Z,75μm,22.3s,MS6.0					
JGM	**Miyama**	**20.55 38**	P	**P**	**02 02 01.8**	**+2.1**
NST	**Nakhon Sawan**	**20.69 261**	⇓P	**P**	**02 02 02.1**	**+0.7**
	comp=Z,625nm,1.0s					
JHJ	**Hachijo jima 2**	**20.88 48**	P	**P**	**02 02 05.0**	**+1.6**
	comp=Z,885nm,0.8s,baz=251,slow=6.3,SNR=8.5					
JHJ			LR	LR	02 08 20.3	
	comp=Z,40μm,19.8s,MS5.8,baz=254,slow=31					
JNY	**Yasuok**	**20.99 40**	P	**P**	**02 02 06.5**	**+2.0**
SHZ3	**Shizuoka 3**	**21.01 42**	P	**P**	**02 02 06.9**	**+2.1**
CHG	**Chiang Mai**	**21.18 270**	⇓P	**P**	**02 02 07.6**	**+0.8**
	comp=Z,62nm,1.4s,mb4.8					
CHTO	**Chiang Mai**	**21.18 270**	*e*P	**P**	**02 02 07.3**	**+0.5**
CHTO			*e*		02 06 12.7	
CHTO			pmax	pmax		
	comp=Z,1μm,1.4s,mb6.0					
CHTO			MLR	MLR

CM31	**Chiang Mai Arr**	**21.23 269**	*e*P	**P**	**02 02 08.3 +1.0**
	comp=Z,127nm,0.8s,mb5.3				
CM31			*e*PcP	PcP	02 06 12.3 +0.5
CM31			LR	LR	
	comp=Z,54μm,20.0s,MS5.9				
CMAR	**Chiang Mai Arr**	**21.23 269**	P	**P**	**02 02 08.1 +0.8**
	comp=Z,255nm,1.2s,mb5.4,baz=75,slow=8.2,SNR=254				
CMAR			PcP	PcP	02 06 12.4 +0.7
	comp=Z,24nm,0.7s,baz=44,slow=0.8,SNR=12				
CMAR			ScP	ScP	02 09 45.9 -0.4
	comp=Z,4.2nm,0.8s,baz=81,slow=1.4,SNR=4.5				
CMAR			LR	LR	02 10 18.6
	comp=Z,66μm,21.2s,MS6.0,baz=79,slow=36				
CMAR			P3KPbc		02 36 08.8
	comp=Z,2.0nm,0.5s,baz=264,slow=5.3,SNR=13				
CMAR			PKP2ab		02 40 03.9
	comp=Z,0.9nm,0.3s,baz=278,slow=3.9,SNR=4.1				
CMAR	**Chiang Mai Arr**	**21.23 269**	P	**P**	**02 02 08.1 +0.8**
CMAR					02 06 12.5
CMAR	**Chiang Mai Arr**	**21.23 269**	P	**P**	**02 02 08.1 +0.8**
CMAR			PcP	PcP	02 06 12.4 +0.7
CMAR			ScP	ScP	02 09 45.9 -0.4
CMAR			LR	LR	02 10 18.6
BDT	**Bhumibol Dam**	**21.38 266**	⇑P	**P**	**02 02 09.8 +0.9**
	comp=Z,149nm,1.1s,mb5.2				
KSM	**Kuching**	**21.48 212**	P	**P**	**02 02 10.0 0.0**
KSM	**Kuching**	**21.48 212**	*e*P	**P**	**02 02 09.4 -0.6**
	comp=Z,847nm,0.8s,mb6.1				
KSM			*e*ScP	ScP	02 09 47.9 +0.9
KSM			LR	LR	
	comp=Z,48μm,20.0s,MS5.9				
SNY	**Shenyang**	**21.69 4**	⇑P	**P**	**02 02 10.2 -1.8**
SNY			PP		02 02 35.3
SNY			S	**S**	**02 06 10.7 +0.5**
SNY			sS	sS	02 06 21.3 -3.1
SNY			pmax	pmax	
	comp=Z,200nm,1.0s,mb5.5				
SNY			pmax	pmax	
	comp=Z,4μm,10.6s				
SNY			LR	LR	
	comp=N,18μm,15.5s,MS6.2				
SNY			LR	LR	
	comp=E,79μm,20.0s,MS6.2				
SNY			LR	LR	
	comp=Z,23μm,13.7s				
MAJO	**Matsushiro**	**22.00 39**	*e*P	**P**	**02 02 15.0 -0.3**
MAJO			*e*S	**S**	**02 06 16.8 +0.5**
MAJO			pmax	pmax	
	comp=Z,1μm,1.4s,mb6.1				
MAJO			MLR	MLR	
	comp=Z,27μm,19.0s,MS5.7				
MAJO	**Matsushiro**	**22.00 39**	*e*P	**P**	**02 02 15.0 -0.4**
	comp=Z,1μm,1.4s,mb6.1				
MAJO			*e*S	**S**	**02 06 16.8 +0.5**
MAJO			*e*ScP	ScP	02 09 48.0 0.0
MAJO			LR	LR	
	comp=Z,27μm,19.0s,MS5.7				
MAT	**Matsushiro**	**22.00 39**	P	**P**	**02 02 14.7 -0.6**
MAT			S	**S**	**02 06 21.2 +4.9**
MJAR	**Matsushiro Arr**	**22.00 39**	P	**P**	**02 02 16.0 +0.7**
	comp=Z,90nm,1.0s,mb5.2,baz=227,slow=8.1,SNR=118				
MJAR			ScP	ScP	02 09 48.1 +0.2
	comp=Z,15nm,0.9s,baz=218,slow=2.8,SNR=9.2				
MJAR			P3KPbc		02 36 02.3
	comp=Z,4.0nm,0.8s,baz=56,slow=3.5,SNR=12				
MJAR	**Matsushiro Arr**	**22.00 39**	P	**P**	**02 02 16.0 +0.7**
MJAR			ScP	ScP	02 09 48.1 +0.2
NNT	**Nongplab**	**22.06 253**	P	**P**	**02 02 17.3 +1.1**
LZH	**Lanzhou**	**22.10 320**	⇑P	**P**	**02 02 17.8 +1.3**
LZH			pP		02 02 27.3
LZH			PP		02 02 43.8
LZH			S	**S**	**02 06 18.0 -0.4**
LZH			sS	sS	02 06 25.6 -7.0
LZH			SS		02 06 53.1
LZH			pmax	pmax	
	comp=Z,2μm,1.5s,mb6.3				
LZH			pmax	pmax	
	comp=Z,5μm,5.3s				
LZH			LR	LR	
	comp=E,111μm,15.1s				
LZH			LR	LR	
	comp=Z,131μm,16.3s,MS6.4				
HHC	**Hu-ho-hao-te**	**22.27 340**	*e*P	**P**	**02 02 19.2 +1.1**
HHC			pP		02 02 26.2
HHC			sP	sP	02 02 29.6 -1.7
HHC			PP		02 02 46.8
HHC			PcP	PcP	02 06 14.7 +1.3
HHC			S	**S**	**02 06 19.2 -2.2**
HHC			sS	sS	02 06 30.1 -5.6
HHC			ScP	ScP	02 09 49.4 +0.9
HHC			PcS	PcS	02 09 52.3 +0.3
HHC			pmax	pmax	
	comp=Z,390nm,1.4s,mb5.6				
HHC			pmax	pmax	
	comp=Z,13μm,5.0s				
HHC			LR	LR	
	comp=N,120μm,15.8s,MS6.5				
HHC			LR	LR	
	comp=E,80μm,18.2s,MS6.5				
HHC			LR	LR	
	comp=Z,122μm,14.9s,MS6.5				
BTO	**Baotou**	**22.58 337**	*e*P	**P**	**02 02 21.9 +0.4**
BTO			S	**S**	**02 06 29.7 +2.4**
BTO			LR	LR	
	comp=N,22μm,14.7s,MS5.9				
BTO			LR	LR	
	comp=E,26μm,13.7s,MS5.9				
KTGM	**Kuala Trenggan**	**23.05 233**	P	**P**	**02 02 26.8 +0.1**
GUMO	**Guam**	**23.40 103**	P	**P**	**02 02 31.9 +1.5**
	comp=E,1μm,1.2s,mb6.3,baz=230,slow=2.9,SNR=20				
GUMO			LR	LR	02 11 29.8
	comp=E,64μm,19.3s,MS6.1,baz=101,slow=36				
GUMO	**Guam**	**23.40 103**	*e*P	**P**	**02 02 31.3 +1.0**
GUMO			pmax	pmax	
	comp=Z,2μm,1.4s,mb6.4				
GUMO			MLR	MLR	
	comp=Z,63μm,19.0s,MS6.1				
GUMO	**Guam**	**23.40 103**	*e*P	**P**	**02 02 31.3 +1.0**
	comp=Z,2μm,1.4s,mb6.4				
GUMO			LR	LR	
	comp=Z,63μm,19.0s,MS6.1				
CN2	**Changchun**	**23.83 7**	*e*P	**P**	**02 02 32.2 -1.8**
CN2			*e*pP		02 02 39.2
CN2			PcP	PcP	02 06 18.0 +1.4
CN2			*e*S	**S**	**02 06 44.6 -3.0**
CN2			ScP	ScP	02 09 52.1 -0.5
CN2			LR	LR	
	comp=N,64μm,17.0s,MS6.3				
CN2			LR	LR	
	comp=E,59μm,17.0s,MS6.3				
CN2			LR	LR	
	comp=Z,62μm,19.0s,MS6.1				
SNG	**Songkhla**	**23.89 240**	P	**P**	**02 02 34.0 -0.9**
	comp=Z,380nm,1.1s,mb5.7				
VLA	**Vladivostok**	**24.55 19***d*	*i*P	**P**	**02 02 40.4 -0.2**
VLA			*e*S	**S**	**02 06 59.7 +0.5**
VLA			pmax	pmax	
	comp=Z,1μm,1.7s,mb6.1				
VLA			MLR	MLR	
	comp=Z,28μm,14.3s,MS5.9				
KULM	**Kulim**	**24.98 237**	P	**P**	**02 02 45.5 +0.7**
KULM	**Kulim**	**24.98 237**	⇓*i*P	**P**	**02 02 44.3 -0.6**
	comp=Z,308nm,1.1s,mb5.8				
KULM			*e*PcP	PcP	02 06 19.5 -0.2
KULM			*e*ScP	ScP	02 09 55.8 -0.5
KULM			LR	LR	
	comp=Z,40μm,19.0s,MS6.0				
MYKOM	**Kota Tinggi**	**25.02 225**	P	**P**	**02 02 45.2 +0.1**
KAPI	**Kappang**	**25.05 184**	P	**P**	**02 02 44.6 -0.8**
	comp=Z,3μm,0.7s,mb6.9,SNR=51				
KAPI	**Kappang**	**25.05 184**	P	**P**	**02 02 44.5 -0.9**
	comp=Z,173nm,0.7s,mb5.7,baz=5.6,slow=3.2,SNR=48				
KAPI			ScP	ScP	02 09 55.8 -0.6
	comp=Z,23nm,0.7s,baz=272,slow=5.3,SNR=4.4				
KAPI			LR	LR	02 12 51.0
	comp=Z,27μm,21.7s,MS5.7,baz=5.7,slow=37				
KAPI	**Kappang**	**25.05 184**	*e*P	**P**	**02 02 44.2 -1.2**
	comp=Z,2μm,1.9s,mb6.4				
KAPI			*e*ScP	ScP	02 09 55.6 -0.9
KAPI			LR	LR	
	comp=Z,29μm,22.0s,MS5.7				
KAPI	**Kappang**	**25.05 184**	P	**P**	**02 02 45.2 -0.2**
	SNR=33				
KAPI			P		02 02 45.2
	SNR=33				
IPM	**Ipoh**	**25.20 235**	P	**P**	**02 02 47.8 +1.0**
KGM	**Kluang**	**25.21 227**	P	**P**	**02 02 47.0 +0.1**
MDJ	**Mudanjiang**	**25.34 14**	P	**P**	**02 02 47.5 -0.3**
MDJ			pP	pP	02 02 55.8 -1.5
MDJ			sP	sP	02 02 59.8 -1.5
MDJ			PcP	PcP	02 06 17.0 -2.9
MDJ			S	**S**	**02 07 14.8 +3.0**
MDJ			pmax	pmax	
	comp=Z,160nm,1.1s,mb5.5				
MDJ			pmax	pmax	
	comp=Z,2μm,10.4s				
MDJ			LR	LR	
	comp=N,43μm,19.0s,MS6.2				
MDJ			LR	LR	
	comp=E,54μm,18.7s,MS6.2				
MDJ			LR	LR	
	comp=Z,55μm,16.9s,MS6.2				
MDJ	**Mudanjiang**	**25.34 14**	*e*P	**P**	**02 02 46.8 -0.9**
	comp=Z,451nm,1.1s,mb5.9				
MDJ			LR	LR	
	comp=Z,49μm,19.0s,MS6.0				
FRIM	**Kepong**	**25.56 231**	P	**P**	**02 02 50.6 +0.6**
GTA	**Gaotai**	**26.69 321**	⇓P	**P**	**02 03 00.8 +0.8**
GTA			pP	pP	02 03 08.1 -1.5
GTA			sP	sP	02 03 11.1 -2.5
GTA			PP		02 03 47.8
GTA			PcP	PcP	02 06 27.9 +4.8
GTA			S	**S**	**02 07 34.3 +1.1**
GTA			sS	sS	02 07 47.4 -1.6
GTA			ScP	ScP	02 10 03.5 +2.7
GTA			PcS	PcS	02 10 06.0 +1.7
GTA			ScS	ScS	02 13 54.1 +2.8
GTA			pmax	pmax	
	comp=Z,180nm,1.9s,mb5.3				
GTA			pmax	pmax	
	comp=Z,6μm,6.5s				
GTA			LR	LR	
	comp=N,51μm,17.3s,MS6.3				
GTA			LR	LR	
	comp=E,53μm,20.5s,MS6.3				
GTA			LR	LR	
	comp=Z,56μm,16.7s,MS6.2				
SHL	**Shillong**	**27.67 287**	⇓*i*P	**P**	**02 03 10.0 +1.0**
SHL			*e*S	**S**	**02 07 51.5 +2.5**
PSI	**Prapat**	**27.88 235**	P	**P**	**02 03 10.7 -0.2**
	comp=Z,82nm,0.7s,mb5.5,baz=28,slow=6.3,SNR=95				
PSI			PcP	PcP	02 06 26.8 +0.4
	comp=Z,64nm,1.0s,baz=270,slow=2.0,SNR=5.7				
PSI			ScP	ScP	02 10 03.9 -1.0
	comp=Z,31nm,1.0s,baz=270,slow=3.3,SNR=6.9				
PSI			LR	LR	02 14 41.8
	comp=Z,40μm,18.5s,MS6.0,baz=244,slow=37				
PSI	**Prapat**	**27.88 235**	P	**P**	**02 03 10.7 -0.2**
PSI					02 06 26.8
PSI	**Prapat**	**27.88 235**	P	**P**	**02 03 10.7 -0.2**
PSI			PcP	PcP	02 06 26.8 +0.4
PSI			ScP	ScP	02 10 03.9 -1.0
PSI			LR	LR	02 14 41.8
ERM	**Erimo**	**28.54 35**	P	**P**	**02 03 20.5 +3.9**
	comp=Z,926nm,1.0s,mb6.5,SNR=7.0				
ERM	**Erimo**	**28.54 35**	*e*P	**P**	**02 03 18.1 +1.5**
ERM			pmax	pmax	
	comp=Z,355nm,1.3s,mb5.9				
ERM			MLR	MLR	
	comp=Z,23μm,22.0s,MS5.7				
ERM	**Erimo**	**28.54 35**	*e*P	**P**	**02 03 18.1 +1.5**
	comp=Z,356nm,1.3s,mb5.9				
ERM			LR	LR	
	comp=Z,23μm,22.0s,MS5.7				
LSA	**Lhasa**	**28.94 295**	P	**P**	**02 03 22.2 +1.9**
LSA			pP	pP	02 03 32.8 +2.9
LSA			S	**S**	**02 08 12.2 +3.3**
LSA			pmax	pmax	
	comp=Z,170nm,1.6s,mb5.5				
LSA			LR	LR	
	comp=N,11μm,14.0s,MS6.1				
LSA			LR	LR	
	comp=E,30μm,15.0s,MS6.1				
LSA			LR	LR	
	comp=Z,33μm,15.0s,MS6.1				
LSA	**Lhasa**	**28.94 295**	*e*P	**P**	**02 03 21.6 +1.3**
LSA			*e*		02 06 29.4
LSA			pmax	pmax	
	comp=Z,149nm,0.9s,mb5.7				
LSA			MLR	MLR	
	comp=Z,20μm,20.0s,MS5.7				
LSA	**Lhasa**	**28.94 295**	*e*P	**P**	**02 03 21.6 +1.3**
	comp=Z,148nm,0.9s,mb5.7				
LSA			*e*PcP	PcP	02 06 29.4 +0.6
LSA			*e*ScP	ScP	02 10 07.3 -0.6
LSA			LR	LR	
	comp=Z,20μm,20.0s,MS5.7				
HIA	**Hailar**	**29.08 358**	*e*P	**P**	**02 03 20.1 -1.2**
HIA			*e*		02 06 29.2
HIA			pmax	pmax	
	comp=Z,258nm,1.0s				
HIA			MLR	MLR	
	comp=Z,47μm,21.0s				
HIA	**Hailar**	**29.08 358**	*e*P	**P**	**02 03 20.1 -1.1**
	comp=Z,258nm,1.0s,mb5.9				
HIA			*e*PcP	PcP	02 06 29.2 +0.5
HIA			*e*ScP	ScP	02 10 09.6 +1.6
HIA			LR	LR	
	comp=Z,47μm,21.0s,MS6.1				
ASAJ	**Asahikawa**	**29.73 32**	P	**P**	**02 03 27.2 +0.1**
	comp=Z,115nm,0.8s,mb5.7,baz=240,slow=14,SNR=48				
ASAJ			ScP	ScP	02 10 12.4 +2.3
	comp=Z,49nm,1.2s,baz=249,slow=11,SNR=4.3				
ASAJ	**Asahikawa**	**29.73 32**	P	**P**	**02 03 27.3 +0.2**
ASAJ					02 10 12.5
ASAJ			pmax	pmax	
	comp=Z,115nm,0.8s				
ASAJ			pmax	pmax	
	comp=N,49nm,1.2s				
ULN	**Ulaanbaatar**	**29.99 341**	*e*P	**P**	**02 03 30.6 +1.3**
ULN			*e*		02 06 31.7
ULN			pmax	pmax	
	comp=Z,2μm,2.1s,mb6.5				
ULN			MLR	MLR	
	comp=Z,80μm,21.0s,MS6.3				
ULN	**Ulaanbaatar**	**29.99 341**	*e*P	**P**	**02 03 30.6 +1.3**
	comp=Z,2μm,2.1s,mb6.5				
ULN			*e*PcP	PcP	02 06 31.7 +0.6
ULN			*e*ScP	ScP	02 10 12.8 +1.9
ULN			LR	LR	
	comp=Z,80μm,21.0s,MS6.3				
ULN	**Ulaanbaatar**	**29.99 341**	P	**P**	**02 03 29.9 +0.6**
	SNR=348				
ULN			P		02 03 29.9
	SNR=348				
SONM	**Songino Array**	**30.17 340**	P	**P**	**02 03 31.9 +1.0**
	comp=Z,47nm,0.6s,mb5.4,baz=159,slow=8.0,SNR=152				
SONM			PcP	PcP	02 06 32.2 +0.7
	comp=Z,48nm,1.1s,baz=144,slow=2.8,SNR=4.0				
SONM			ScP	ScP	02 10 12.0 +0.5
	comp=Z,26nm,1.1s,baz=178,slow=1.3,SNR=6.0				
SONM			LR	LR	02 16 49.8
	comp=Z,76μm,21.3s,MS6.3,baz=151,slow=39				
SONM			P3KPbc		02 35 27.7
	comp=Z,1.4nm,0.7s,baz=328,slow=5.3,SNR=10				
SONM	**Songino Array**	**30.17 340**	P	**P**	**02 03 31.9 +1.0**
SONM					02 06 32.2
SONM					02 10 12.0
SONM	**Songino Array**	**30.17 340**	P	**P**	**02 03 31.9 +1.0**
SONM			PcP	PcP	02 06 32.2 +0.7
SONM			ScP	ScP	02 10 12.0 +0.5
SONM			LR	LR	02 16 49.8
SONM			*e*		02 35 27.7
KLR	**Kul'dur**	**30.18 14**κ	*i*P	**P**	**02 03 27.0 -4.1**
KLR			*e*S	**S**	**02 08 20.0 -8.0**
KLR			pmax	pmax	
	comp=E,760nm,1.8s				
KLR			pmax	pmax	
	comp=Z,1μm,1.8s,mb6.4				
KLR			pmax	pmax	
	comp=Z,3μm,10.5s				
KLR			MLR	MLR	
	comp=Z,67μm,14.0s,MS6.4				
JTKR	**Abashiri--Toko**	**30.29 33**	P	**P**	**02 03 32.7 +0.6**
HABR	**Khabarovsk**	**30.34 18***ce*	P	**P**	**02 03 30.9 -1.5**
HABR			*e**PP	pP	02 03 40.0 -2.0
HABR			*e**SP	sP	02 03 44.3 -1.8
HABR			*e*		02 04 28.6
HABR			*e*		02 06 30.3
HABR			*e*S	**S**	**02 08 29.3 -1.1**
HABR			*e**SS	sS	02 08 45.0 -1.3
HABR			*e*		02 10 13.8
HABR			*e*		02 14 05.9
HABR			pmax	pmax	
	comp=Z,251nm,0.9s,mb6.0				
HABR			pmax	pmax	
	comp=Z,625nm,1.8s,mb6.0				
HABR			pmax	pmax	
	comp=N,95nm,1.0s				
HABR			pmax	pmax	
	comp=E,223nm,0.9s				
HABR			MLR	MLR	
	comp=E,17μm,15.0s,MS5.9				
HABR			MLR	MLR	
	comp=Z,29μm,18.0s,MS6.0				
HABR			MLR	MLR	
	comp=N,16μm,16.0s,MS5.9				
YUK	**Yuzh-Kuril'sk**	**31.37 35**	*e*P	**P**	**02 03 45.0 +3.4**
YUK			*e*PPP		02 05 03.3
YUK			*i* S	**S**	**02 08 49.0 +2.3**
YUK			pmax	pmax	
	comp=N,360nm,0.5s				
YUK			pmax	pmax	
	comp=E,320nm,0.5s				
YUK			pmax	pmax	
	comp=Z,380nm,0.5s,mb6.5				
YUK			pmax	pmax	
	comp=N,4μm,2.0s				
YUK			pmax	pmax	
	comp=E,2μm,2.0s				
YUK			smax		
	comp=N,6μm,3.0s				
YUK			smax		
	comp=E,2μm,3.0s				
YUK			MLR	MLR	
	comp=N,25μm,20.0s,MS6.1				
YUK			MLR	MLR	
	comp=E,34μm,22.0s,MS6.1				
YSS	**Yuzh-Sakhalins**	**31.92 28***ce*	P	**P**	**02 03 46.0 -0.4**
YSS			*e**SP	sP	02 03 57.0 -3.1
YSS			*e*		02 04 45.9
YSS			*e*PPP		02 05 03.9
YSS			*e*		02 06 36.9
YSS			*e*S	**S**	**02 08 53.0 -2.3**
YSS			*e*		02 09 13.0
YSS			pmax	pmax	
	comp=Z,680nm,1.1s,mb6.4				
YSS			pmax	pmax	
	comp=E,370nm,1.0s				
YSS			MLR	MLR	
	comp=N,14μm,18.0s,MS5.9				
YSS			MLR	MLR	
	comp=E,15μm,18.0s,MS5.9				
YSS			MLR	MLR	
	comp=Z,17μm,18.0s,MS5.8				
YSS	**Yuzh-Sakhalins**	**31.92 28**	*e*P	**P**	**02 03 46.7 +0.3**
	comp=Z,3μm,1.9s,mb6.8				
YSS			LR	LR	
	comp=Z,10μm,22.0s,MS5.4				
CIT	**Chita**	**32.39 351**	*e*P	**P**	**02 03 51.8 +1.3**
CIT			*e*		02 05 03.9
CIT			*e*		02 06 39.2
CIT			*e*		02 08 59.9
CIT			*e*		02 09 17.8
CIT			*e*		02 14 18.9
CIT			pmax	pmax	
	comp=Z,2μm,1.9s,mb6.5				
KUR	**Kuril'sk**	**33.23 35**	⇑*i*P	**P**	**02 03 57.9 0.0**
KUR			*e*S	**S**	**02 09 17.0 +1.3**
KUR			pmax	pmax	
	comp=N,280nm,1.0s				
KUR			pmax	pmax	
	comp=E,190nm,1.0s				
KUR			pmax	pmax	
	comp=Z,940nm,1.0s,mb6.7				
KUR			smax		
	comp=N,610nm,1.5s				
KUR			smax		
	comp=E,490nm,1.5s				
KUR			smax		
	comp=E,5μm,7.0s				
GUN	**Gumba**	**33.23 290**	*e*P	**P**	**02 03 58.7 +0.5**
	comp=E,331nm,0.7s,mb6.4				
ZAK	**Zakamensk**	**33.40 339**	⇑*i*P	**P**	**02 04 00.6 +1.3**
ZAK			*e*		02 06 43.4
ZAK			pmax	pmax	
	comp=Z,117nm,1.8s,mb5.5				
PKI	**Pulchoki**	**33.62 290**	*e*P	**P**	**02 04 01.3 -0.2**
	comp=Z,305nm,1.0s,mb6.2				
PKI	**Pulchoki**	**33.62 290**	*e*P	**P**	**02 04 02.4 +0.9**
PKI			pmax	pmax	
	comp=Z,235nm,0.7s,mb6.2				
PKI	**Pulchoki**	**33.62 290**	*e*P	**P**	**02 04 02.4 +0.9**
	comp=Z,235nm,0.7s,mb6.2				
PKIN	**Phulchoki**	**33.63 290**	*e*P	**P**	**02 04 02.4 +0.8**
	comp=Z,235nm,0.7s,mb6.2				
KKN	**Kakani**	**33.75 290**	*e*P	**P**	**02 04 02.5 -0.2**
	comp=Z,192nm,0.8s,mb6.1				
KKN	**Kakani**	**33.75 290**	*e*P	**P**	**02 04 02.5 -0.2**
KKN			pmax	pmax	
	comp=Z,192nm,0.8s,mb6.1				
DMN	**Daman**	**33.89 290**	*e*P	**P**	**02 04 03.8 -0.1**
	comp=Z,489nm,1.0s,mb6.4				
TLY	**Talaya**	**34.40 340**	P	**P**	**02 04 09.9 +2.0**
	comp=Z,1μm,1.6s,mb6.5,SNR=80				
TLY	**Talaya**	**34.40 340***c*	*i*P	**P**	**02 04 08.5 +0.6**
TLY			*e*		02 05 27.2
TLY			*e*PPP		02 05 46.0
TLY			*e*S	**S**	**02 09 30.3 -3.3**
TLY			*e*SSS		02 12 09.8
TLY			pmax	pmax	
	comp=Z,277nm,1.2s,mb6.1				
TLY			MLR	MLR	
	comp=Z,41μm,15.0s,MS6.3				
TLY	**Talaya**	**34.40 340**	*e*P	**P**	**02 04 09.0 +1.0**
	comp=Z,1μm,2.0s,mb6.4				
TLY			*e*ScP	ScP	02 10 27.1 +1.3
TLY			LR	LR	
	comp=Z,58μm,22.0s,MS6.3				
TLY	**Talaya**	**34.40 340**	P	**P**	**02 04 09.0 +1.1**
	SNR=243				
TLY			P		02 04 09.0
	SNR=243				
KAKA	**Kakadu**	**34.42 161**	*e*P	**P**	**02 04 06.0 -2.5**
	comp=Z,63nm,0.5s,mb5.8				
KAKA			*e*PCP	PcP	02 06 45.0 +1.3
KAKA	**Kakadu**	**34.42 161**	*e*P	**P**	**02 04 07.0 -1.5**
	comp=Z,282nm,0.7s,mb6.3				
KAKA			*e*PcP	PcP	02 06 44.8 +1.0
IRK	**Irkutsk**	**34.69 341**	*e*P	**P**	**02 04 12.8 +2.3**
IRK			*e*S	**S**	**02 09 42.1 +4.0**
IRK			pmax	pmax	
	comp=Z,882nm,1.7s,mb6.4				
MOY	**Mondy**	**35.27 338**	*e*P	**P**	**02 04 17.5 +2.0**
MOY			pmax	pmax	
	comp=Z,1μm,2.7s,mb6.4				
VIS	**Vishakhapatnam**	**36.02 273**	*i* P	**P**	**02 04 21.5 -0.8**
VIS			*i* x	x	02 10 02.3
WMQ	**Urumqi**	**36.66 318**	P	**P**	**02 04 29.0 +1.5**
WMQ			pP	pP	02 04 35.0 -2.2
WMQ			sP	sP	02 04 38.0 -3.2
WMQ			PP	PP	02 05 54.0 +2.7
WMQ			S	**S**	**02 10 11.0 +2.5**
WMQ			SS	SS	02 12 37.0 -12
WMQ			pmax	pmax	
	comp=Z,170nm,1.0s,mb5.8				
WMQ			pmax	pmax	
	comp=Z,5μm,4.0s				
WMQ			LR	LR	
	comp=N,51μm,16.0s,MS6.5				
WMQ			LR	LR	
	comp=E,26μm,16.0s,MS6.5				
WMQ			LR	LR	
	comp=Z,37μm,16.0s,MS6.3				
CLNS	**Chul'man**	**36.73 3**	*e*P	**P**	**02 04 26.7 -1.2**
CLNS			*e**PP	pP	02 04 35.6 -2.0
CLNS			*e*		02 06 51.0
CLNS			*e*S	**S**	**02 10 03.6 -5.6**
CLNS			pmax	pmax	
	comp=Z,117nm,1.2s,mb5.6				
CLNS			pmax	pmax	
	comp=N,111nm,1.3s				
CLNS			pmax	pmax	
	comp=E,48nm,1.1s				
CLNS			smax		
	comp=E,2μm,15.1s				

CLNS smax
comp=N,1μm,14.9s
CLNS MLR MLR
comp=E,8μm,12.0s,MS6.0
CLNS MLR MLR
comp=N,16μm,15.0s,MS6.0
CLNS MLR MLR
comp=Z,14μm,14.0s,MS5.9
BOD Bodaibo 38.01 354 *e*P **P 02 04 36.3 -2.4**
BOD pmax pmax
comp=Z,95nm,1.7s,mb5.2
FITZ Fitzroy Crossi 38.24 173 *e*P **P 02 04 39.1 -2.0**
comp=Z,86nm,0.5s,mb5.7
FITZ *e*PCP PcP 02 06 55.8 +0.7
FITZ *e*S **S 02 10 28.5 -4.3**
FITZ Fitzroy Crossi 38.24 173 *e*P **P 02 04 39.8 -1.2**
comp=Z,241nm,1.2s,mb5.8
JBP Jabalpur 38.49 282⇓ *i*P **P 02 04 42.5 -0.8**
JBP *e*S **S 02 10 37.0 +0.1**
NGP Nagpur 39.53 279 *e*PKP **P 02 04 48.7 -3.3**
NGP *ex* x 02 04 52.2
comp=Z,722nm,1.9s
NGP *ex* x 02 10 47.0
COEN Coen 40.11 146 *e*P **P 02 04 55.8 -0.9**
comp=Z,540nm,0.8s,mb6.3
COEN *e*PcP PcP 02 07 01.7 +0.7
COEN *e*ScP ScP 02 10 47.1 -0.7
COCO West Island 40.19 219 P **P 02 04 57.8 +0.3**
comp=Z,2μm,1.5s,mb6.7,SNR=6.1
COCO West Island 40.19 219 *i* P **P 02 04 57.7 +0.2**
COCO West Island 40.19 219 *e*P **P 02 04 57.3 -0.2**
comp=Z,1μm,1.5s,mb6.4
COCO LR LR
comp=Z,11μm,19.0s,MS5.7
COCO West Island 40.19 219 P **P 02 04 58.2 +0.7**
SNR=6.1
COCO P 02 04 58.2
SNR=6.1
DDI Dehra Dun 40.26 293 *e*PKP **P 02 04 57.0 -1.0**
DDI *ex* x 02 10 45.0
HYB Hyderabad 40.55 274 *i* P **P 02 05 00.0 -0.5**
comp=Z,200nm,1.0s,mb5.7
HYB *e*PP PP 02 06 34.0 -0.2
HYB *e*S **S 02 11 08.0 +0.2**
HYB *e*SS SS 02 14 20.0 +12
HYB LR LR 02 26 50.0
comp=Z,35nm,20.0s
BHPL Bhopal 40.84 283 *e*PKP **P 02 05 02.4 -0.4**
BHPL AMb AMB 02 05 06.3
comp=Z,518nm,1.7s,mb5.9
NDI New Delhi 40.91 291 *ex* x 02 10 47.0
SKR Severo-Kuril's 40.95 34 *e*P **P 02 05 01.2 -2.1**
SKR *e* 02 06 36.0
SKR *e*PPP 02 07 17.0
SKR *e*S **S 02 04 48.7 -0.9**
SKR *e*SSS 02 14 08.0
SKR *e* 02 15 03.0
SKR pmax pmax
comp=Z,490nm,1.0s,mb6.1
SKR pmax pmax
comp=N,90nm,0.7s
SKR pmax pmax
comp=E,130nm,0.7s
SKR pmax pmax
comp=E,2μm,4.0s
SKR pmax pmax
comp=Z,3μm,4.0s
SKR smax
comp=E,6μm,18.0s
SKR smax
comp=N,6μm,16.0s
SKR MLR MLR
comp=N,12μm,18.0s,MS5.8
SKR MLR MLR
comp=Z,12μm,18.0s,MS5.8
SKR MLR MLR
comp=E,6μm,20.0s,MS5.8
MBWA Marble Bar 41.08 182 *e*P **P 02 05 03.1 -1.6**
comp=E,199nm,0.9s,mb5.7
MBWA LR LR
comp=Z,11μm,21.0s,MS5.7
MBWA Marble Bar 41.08 182 P **P 02 05 04.2 -0.5**
SNR=15
MBWA P 02 05 04.2
SNR=15
SMLA Simla 41.09 295 *ex* **P 02 05 03.9 -0.9**
SMLA AMb AMB 02 05 08.1
comp=Z,750nm,2.8s,mb5.8
PALK Pallekele 41.41 258 LR LR 02 23 40.0
comp=Z,22μm,18.9s,MS6.0,baz=60,slow=38
PALK Pallekele 41.41 258 *i* P **P 02 05 08.3 +0.7**
PALK Pallekele 41.41 258 *e*P **P 02 05 07.8 +0.3**
comp=Z,277nm,1.5s,mb5.7
PALK Pallekele 41.41 258 P **P 02 05 08.5 +0.9**
SNR=6.4
PALK P 02 05 08.5
SNR=6.4
PALK Pallekele 41.41 258 P **P 02 05 08.0 +0.4**
comp=Z,447nm,1.7s,mb5.8,SNR=9.2
MK31 Makanchi Array 41.42 319 *e*P **P 02 05 08.5 +1.2**
MKAR Makanchi Array 41.42 319 P **P 02 05 08.4 +1.1**
comp=Z,201nm,0.7s,mb5.8,baz=105,slow=8.8,SNR=295
MKAR PcP PcP 02 07 05.2 +0.4
comp=Z,89nm,1.0s,baz=88,slow=4.2,SNR=4.4
MKAR ScP ScP 02 10 50.9 -1.7
comp=Z,8.8nm,0.9s,baz=131,slow=5.5,SNR=4.2
MKAR LR LR 02 24 34.3
comp=Z,33μm,18.8s,MS6.2,baz=109,slow=39
MKAR Makanchi Array 41.42 319 *ce*P **P 02 05 08.3 +1.0**
MKAR pmax pmax
comp=Z,201nm,0.7s
MKAR Makanchi Array 41.42 319 P **P 02 05 08.4 +1.1**
MKAR PcP PcP 02 07 05.2 +0.4
MKAR ScP ScP 02 10 50.9 -1.7
MKAR LR LR 02 24 34.3
BHK Bhakra 41.75 295 *e*PKP **P 02 05 08.2 -2.0**
BHK *ex* x 02 05 33.0
WRAB Tennant Creek 41.81 162 P **P 02 05 09.0 -1.7**
comp=Z,3μm,0.5s,mb7.1
WRAB Tennant Creek 41.81 162 *e*P **P 02 05 09.1 -1.6**
WRAB *e*S **S 02 11 20.6 -5.7**
WRAB pmax pmax
comp=Z,393nm,0.8s,mb6.1
WRAB MLR MLR
comp=Z,8μm,19.0s,MS5.6
WRAB Tennant Creek 41.81 162 *e*P **P 02 05 09.1 -1.6**
comp=Z,240nm,0.8s,mb5.9
WRAB *e*S **S 02 11 20.6 -5.7**
WRAB LR LR
comp=Z,19μm,19.0s,MS6.0
DLH Dalhousie 42.23 297 *ex* **P 02 05 06.2 -7.9**
DLH *ex* x 02 05 33.0
YAK Yakutsk 42.25 6 *e*P **P 02 05 12.3 -1.5**
YAK *e**PP pP 02 05 19.5 -4.1
YAK *e* 02 07 02.7
YAK *e* 02 07 24.3
YAK *e*S **S 02 11 26.6 -5.2**
YAK *e**SS sS 02 11 47.0 -1.0
YAK *e* 02 15 11.4
YAK pmax pmax
comp=Z,268nm,1.3s,mb5.7
YAK pmax pmax
comp=E,24nm,0.9s
YAK pmax pmax
comp=N,185nm,1.5s
YAK smax
comp=N,2μm,2.7s
YAK smax
comp=E,739nm,2.3s
YAK MLR MLR
comp=Z,38μm,17.0s,MS6.3
YAK MLR MLR
comp=N,29μm,17.0s,MS6.3
YAK MLR MLR
comp=E,13μm,15.0s,MS6.3
YAK Yakutsk 42.25 6 *e*P **P 02 05 12.5 -1.3**
comp=E,313nm,0.7s,mb6.0
YAK *e*ScP ScP 02 10 55.9 +0.4
YAK *e*S **S 02 11 28.1 -3.7**
YAK LR LR
comp=Z,32μm,19.0s,MS6.2
THN Thein Dam 42.43 296 *e*PKP **P 02 05 14.1 -1.6**
THN *ex* x 02 10 53.0
WAKE Wake Island 42.54 83 *e*P **P 02 05 17.2 +0.5**
comp=Z,434nm,1.0s,mb6.1
WAKE LR LR
comp=Z,38μm,22.0s,MS6.2
PETK Petropavlovsk- 43.15 31 P **P 02 05 21.0 -0.3**
comp=Z,80nm,0.8s,mb5.5,baz=213,slow=3.1,SNR=92
PETK ScP ScP 02 11 02.4 +3.1
comp=Z,17nm,1.1s,baz=163,slow=1.5,SNR=4.6
PETK LR LR 02 27 16.7
comp=Z,10μm,18.6s,MS5.7,baz=230,slow=42
AJM Ajmer 43.19 288 *e*PKP **P 02 05 21.4 -0.6**
AJM AMb AMB 02 05 27.2
comp=Z,279nm,0.9s,mb6.0
KSH Kashi 43.34 307 P **P 02 05 26.6 +3.6**
KSH S **S 02 11 52.5 +4.0**
KSH LR LR
comp=N,52μm,15.5s,MS6.7
KSH LR LR
comp=E,37μm,14.2s,MS6.7
KSH Kashi 43.34 307⇓ *i*P **P 02 05 26.5 +3.5**
KSH pP pP 02 05 33.5 +0.7
KSH sP sP 02 05 36.6 -0.2
KSH PP PP 02 07 09.1 +5.1
KSH PcP PcP 02 07 14.4 +3.0
KSH ScP ScP 02 11 02.8 +2.4
KSH PcS PcS 02 11 05.8 +1.9
KSH S **S 02 11 53.8 +5.3**
KSH sS sS 02 12 06.5 +1.8
KSH ScS ScS 02 15 21.1 +0.5
KSH pmax pmax
comp=Z,230nm,1.4s,mb5.7
KSH pmax pmax
comp=Z,4μm,3.7s
KSH LR LR
comp=N,22μm,15.1s,MS6.4
KSH LR LR
comp=E,24μm,14.6s,MS6.4
KSH LR LR
comp=Z,27μm,13.9s,MS6.3
PET Petropavlovsk 43.58 32α *i*P **P 02 05 24.3 -0.4**
PET *e* 02 07 08.2
PET *e*S **S 02 11 50.2 -1.4**
PET *e*SS SS 02 14 56.4 -11
PET pmax pmax
comp=Z,535nm,1.6s,mb6.0
PET pmax pmax
comp=Z,2μm,16.6s
PET pmax pmax
comp=Z,3μm,17.7s
PET smax
comp=N,5μm,24.1s
PET smax
comp=N,4μm,23.5s
PET MLR MLR
comp=Z,17μm,21.0s,MS5.9
PET MLR MLR
comp=Z,13μm,19.0s
PET Petropavlovsk 43.58 32 *e*P **P 02 05 24.8 +0.1**
comp=Z,934nm,1.4s,mb6.3
PET *e*ScP ScP 02 11 01.1 0.0
PET LR LR
comp=Z,15μm,21.0s,MS5.9
AAA Alma-Ata 43.62 312 *i* P **P 02 05 27.7 +2.5**
AAA pmax pmax
comp=Z,6μm,6.1s
AAA MLR MLR
comp=Z,65μm,19.0s,MS6.6
ZAA0 Zalesovo Array 43.75 329 *e*P **P 02 05 26.3 +0.2**
ZAA0 *e*ScP ScP 02 11 03.0 +1.3
ZALV Zalesovo Beam 43.75 329 P **P 02 05 26.6 +0.5**
comp=Z,227nm,0.8s,mb5.9,baz=119,slow=7.1,SNR=318
ZALV ScP ScP 02 11 03.4 +1.6
comp=Z,16nm,0.9s,baz=101,slow=3.0,SNR=4.3
ZALV LR LR 02 25 07.2
comp=Z,31μm,18.6s,MS6.2,baz=130,slow=38
ZALV PKPPKP 02 37 15.1
comp=Z,1.2nm,0.4s,baz=270,slow=1.4,SNR=6.0
ULHL Ulahol 43.82 311 P **P 02 05 28.8 +2.0**
SNR=90
TRD Trivandrum 44.42 261⇑ *e*PKP **P 02 05 42.0 +10**
TRD *e*S **S 02 12 21.0 +16**
TKM2 Tokmak 2 44.46 311 P **P 02 05 33.8 +1.8**
SNR=101
TKM2 Tokmak 2 44.46 311 *e*P **P 02 05 33.7 +1.7**
TKM2 pmax pmax
comp=Z,586nm,1.5s,mb6.1
TKM2 MLR MLR
comp=Z,87μm,19.0s,MS6.7
TKM2 Tokmak 2 44.46 311 *e*P **P 02 05 33.7 +1.7**
comp=Z,586nm,1.5s,mb6.1
TKM2 LR LR
comp=Z,87μm,19.0s,MS6.7
KZA Kyzart 44.48 310 P **P 02 05 34.8 +2.6**
SNR=184
KAD Karad 44.67 275 *e*PKP **P 02 05 33.4 -0.6**
KAD AMb AMB 02 05 37.1
comp=Z,376nm,1.2s,mb6.1
POO Poona 44.75 276 *e*PKP **P 02 05 34.8 +0.2**
POO AMb AMB 02 05 39.6
comp=Z,759nm,1.7s,mb6.2
KBK Karagaybulak 44.85 311 P **P 02 05 37.2 +2.1**
SNR=72
NVS Novosibirsk 45.03 330⇑ *i*P **P 02 05 37.2 +0.9**
NVS *i* 02 07 23.6
NVS *i* S **S 02 12 13.2 +0.5**
NVS *i* SS SS 02 15 24.6 -11
NVS pmax pmax
comp=Z,2μm,2.2s,mb6.5
NVS pmax pmax
comp=N,1μm,2.1s
NVS pmax pmax
comp=E,1μm,2.1s
NVS pmax pmax
comp=Z,930nm,2.2s,mb6.2
NVS pmax pmax
comp=N,525nm,2.5s
NVS pmax pmax
comp=E,783nm,2.3s
NVS smax
comp=N,560nm,2.3s
NVS smax
comp=E,970nm,1.9s
UCH Uchtor 45.05 310 P **P 02 05 39.3 +2.6**
SNR=208
UCH Uchtor 45.05 310 *e*P **P 02 05 38.9 +2.2**
comp=E,434nm,1.3s,mb6.1
UCH *e*ScP ScP 02 11 09.8 +2.5
UCH LR LR
comp=Z,79μm,19.0s,MS6.7
CHMS Chumysh 45.08 311 P **P 02 05 38.3 +1.4**
SNR=57
FRU Bishkek 45.13 311⇓ *i*P **P 02 05 38.0 +0.7**
FRU *e*S **S 02 12 20.0 +5.4**
FRU pmax pmax
comp=Z,2μm,2.8s,mb6.4
FRU MLR MLR
comp=E,91μm,17.0s
AAK Ala-Archa 45.17 311 P **P 02 05 39.6 +2.0**
comp=E,425nm,1.7s,mb6.0,SNR=64
AAK Ala-Archa 45.17 311 P **P 02 05 39.5 +1.9**
SNR=27
AAK Ala-Archa 45.17 311 P **P 02 05 39.4 +1.8**
comp=E,15nm,0.7s,mb5.0,baz=105,slow=6.8,SNR=38
AAK PcP PcP 02 07 19.1 +1.6
comp=E,23nm,0.8s,baz=122,slow=5.0,SNR=3.6
AAK LR LR 02 27 14.1
comp=E,116μm,19.2s,MS6.8,baz=81,slow=40
AAK Ala-Archa 45.17 311 *d i*P **P 02 05 39.2 +1.6**
AAK pmax pmax
comp=Z,146nm,2.5s,mb5.4
AAK MLR MLR
comp=Z,52μm,17.0s,MS6.5
AAK Ala-Archa 45.17 311 *e*P **P 02 05 39.0 +1.4**
comp=Z,152nm,1.2s,mb5.7
AAK *e*ScP ScP 02 11 09.7 +1.8
AAK LR LR
comp=Z,110μm,19.0s,MS6.8
AAK Ala-Archa 45.17 311 P **P 02 05 39.7 +2.1**
SNR=120
AAK P 02 05 39.7
SNR=120
ASAR Alice Springs 45.23 164 P **P 02 05 37.5 -0.7**
comp=Z,128nm,0.4s,mb6.1,baz=344,slow=6.7,SNR=619
ASAR ScP ScP 02 11 08.2 0.0
comp=Z,17nm,0.9s,baz=343,slow=3.8,SNR=4.9
ASAR S **S 02 12 13.4 -2.7**
comp=Z,21nm,0.8s,baz=351,slow=14,SNR=11
ASAR PKPPKP 02 37 10.2
comp=Z,2.7nm,1.1s,baz=137,slow=2.8,SNR=5.4
ASAR PKP2ab 02 38 21.5
comp=Z,4.2nm,1.1s,baz=152,slow=4.3,SNR=4.7
ASAR P4KPbc 02 43 29.5
comp=Z,1.5nm,1.0s,baz=349,slow=4.6,SNR=7.5
ASAR Alice Springs 45.23 164 P **P 02 05 37.5 -0.7**
ASAR S **S 02 12 13.4 -2.8**
ASAR Alice Springs 45.23 164 P **P 02 05 37.5 -0.7**
ASAR ScP ScP 02 11 08.2 0.0
ASAR S **S 02 12 13.4 -2.7**
ASAR P'P' 02 37 10.2
ASAR P'P'ab 02 38 21.5
USP Ospenovka 45.33 311 P **P 02 05 40.2 +1.4**
SNR=54
KURK Kurchatov 45.34 323 P **P 02 05 39.9 +1.1**
comp=Z,1μm,1.1s,mb6.7
KURK Kurchatov 45.34 323 P **P 02 05 39.7 +0.9**
comp=Z,158nm,0.7s,mb5.9,baz=142,slow=6.4,SNR=163
KURK ScP ScP 02 11 13.1 +4.7
comp=Z,8.3nm,0.8s,baz=119,slow=3.4,SNR=4.7
KURK LR LR 02 25 49.4
comp=Z,22μm,19.2s,MS6.1,baz=85,slow=38
KURK PKPPKP 02 37 10.3
comp=Z,2.4nm,0.9s,baz=244,slow=3.0,SNR=6.4
KURK Kurchatov 45.34 323 *e*P **P 02 05 39.6 +0.8**
KURK pmax pmax
comp=Z,753nm,1.4s,mb6.3
KURK MLR MLR
comp=Z,28μm,21.0s,MS6.2
KURK Kurchatov 45.34 323 *e*P **P 02 05 39.6 +0.8**
comp=Z,753nm,1.4s,mb6.3
KURK LR LR
comp=Z,28μm,21.0s,MS6.2
KURK Kurchatov 45.34 323 P **P 02 05 39.9 +1.1**
SNR=301
KURK P 02 05 39.9
SNR=301
GOA Goa 45.39 272⇓ *i*P **P 02 05 39.0 -0.7**
GOA *i* x x 02 12 20.5
AML Almayashu 45.62 310 P **P 02 05 43.6 +2.4**
SNR=102
AML Almayashu 45.62 310 *e*P **P 02 05 42.9 +1.7**
comp=Z,237nm,1.1s,mb6.0
AML *e*PcP PcP 02 07 21.0 +1.8
AML *e*ScP ScP 02 11 11.6 +1.9
AML LR LR
comp=Z,52μm,21.0s,MS6.5
EKS2 Erkin-Say 45.69 310 P **P 02 05 43.5 +1.8**
SNR=42
EKS2 Erkin-Say 45.69 310 *e*P **P 02 05 43.0 +1.3**
comp=Z,163nm,1.3s,mb5.8
EKS2 *e*PcP PcP 02 07 20.2 +0.9
EKS2 LR LR
comp=Z,108μm,19.0s,MS6.8
CTA Charters Tower 46.83 147 *e*P **P 02 05 50.3 -0.5**
comp=Z,240nm,0.8s,mb6.2
CTA *e*PCP PcP 02 07 25.0 +1.4
CTA *e*S **S 02 12 39.8 +0.6**
CTAO Charters Tower 46.83 147 *e*P **P 02 05 50.4 -0.4**
CTAO *e* 02 07 24.9
CTAO pmax pmax
comp=Z,322nm,0.9s,mb6.2
CTAO MLR MLR
comp=Z,35μm,22.0s,MS6.3
CTAO Charters Tower 46.83 147 *e*P **P 02 05 50.4 -0.5**
comp=Z,322nm,0.9s,mb6.2
CTAO *e*PcP PcP 02 07 24.9 +1.2
CTAO LR LR
comp=Z,35μm,22.0s,MS6.3
HNR Honiara 48.01 124 PFAKE 02 06 10.0 +10
HNR LR LR
comp=Z,19μm,20.0s,MS6.1
KBL Kabul 48.15 299 *e*P **P 02 06 02.2 +1.1**
KBL pmax pmax
comp=Z,231nm,1.1s,mb6.1
KBL Kabul 48.15 299 *e*P **P 02 06 02.2 +1.2**
comp=Z,231nm,1.1s,mb6.1
QUE Quetta 49.86 293 *e*P **P 02 06 06.0 -8.3**
QUE *e*S **S 02 13 20.0 -2.2**
BVAR Borovoye Array 50.94 323 P **P 02 06 22.9 +0.9**
comp=Z,62nm,0.7s,mb5.6,baz=111,slow=8.1,SNR=134
BVAR PcP PcP 02 07 38.8 +0.8
comp=Z,71nm,0.7s,baz=117,slow=1.7,SNR=8.2
BVAR ScP ScP 02 11 32.9 +0.9
comp=Z,28nm,1.0s,baz=104,slow=4.7,SNR=7.8
BVAR LR LR 02 29 13.4
comp=Z,23μm,20.2s,MS6.2,baz=110,slow=38
BVAR PKPPKP 02 37 05.4
comp=Z,2.5nm,1.0s,baz=270,slow=7.4,SNR=4.6
BVAR P4KPbc 02 43 52.2
comp=Z,2.2nm,0.7s,baz=104,slow=6.3,SNR=12
BVAR Borovoye Array 50.94 323 P **P 02 06 22.9 +0.9**
BVAR 02 07 38.8
BVAR Borovoye Array 50.94 323 P **P 02 06 22.9 +0.9**
BVAR PcP PcP 02 07 38.8 +0.8
BVAR ScP ScP 02 11 32.9 +0.9
BVAR LR LR 02 29 13.4
BVAR P'P' 02 37 05.4
BRVK Borovoye 51.01 323 P **P 02 06 23.9 +1.3**
comp=Z,2μm,1.1s,mb6.9
BRVK Borovoye 51.01 323 *d i*P **P 02 06 23.6 +1.0**
BRVK pmax pmax
comp=Z,861nm,2.5s,mb6.2
BRVK MLR MLR
comp=Z,16μm,14.0s,MS6.2
BRVK Borovoye 51.01 323 *e*P **P 02 06 23.7 +1.1**
comp=Z,311nm,1.0s,mb6.2
BRVK *e*ScP ScP 02 11 33.7 +1.4
BRVK LR LR
comp=Z,23μm,20.0s,MS6.2
BRVK Borovoye 51.01 323 P **P 02 06 23.9 +1.3**
SNR=243
BRVK P 02 06 23.9
SNR=243
FORT Forrest 51.04 173 *e*P **P 02 06 22.5 -0.5**
comp=Z,1μm,0.7s,mb6.9
FORT *e*S **S 02 13 34.4 -3.8**
FORT Forrest 51.04 173 *e*P **P 02 06 22.7 -0.2**
comp=Z,1μm,0.8s,mb6.9
KLBR Kellerberrin 51.56 184 *e*P **P 02 06 25.9 -1.0**
comp=Z,265nm,0.7s,mb6.3
TIXI Tiksi 51.70 3 *i* P **P 02 06 25.8 -1.6**
TIXI *e* 02 08 23.7
TIXI *e*S **S 02 13 41.8 -4.6**
TIXI *e* 02 16 09.7
TIXI pmax pmax
comp=Z,391nm,5.1s
TIXI pmax pmax
comp=E,65nm,1.9s
TIXI pmax pmax
comp=N,287nm,2.0s
TIXI pmax pmax
comp=Z,530nm,1.5s,mb6.2
TIXI smax
comp=N,1μm,8.1s
TIXI smax
comp=E,1μm,9.8s
TIXI MLR MLR
comp=E,8μm,15.0s,MS6.4
TIXI MLR MLR
comp=Z,42μm,20.0s,MS6.5
TIXI MLR MLR
comp=N,27μm,18.0s,MS6.4
TIXI Tiksi 51.70 3 *e*P **P 02 06 25.9 -1.5**
comp=N,954nm,1.7s,mb6.5
TIXI *e*ScP ScP 02 11 34.2 -0.7
TIXI *e*S **S 02 13 39.5 -6.9**
TIXI LR LR
comp=Z,40μm,19.0s,MS6.5
SMY Shemya 51.84 38 *e*P **P 02 06 31.6 +2.8**
SMY pmax pmax
comp=Z,1μm,1.7s,mb6.6
SMY MLR MLR
comp=Z,6μm,21.0s,MS5.6
SMY Shemya 51.84 38 *e*P **P 02 06 31.6 +2.8**
comp=Z,1μm,1.7s,mb6.6
SMY LR LR
comp=Z,6μm,21.0s,MS5.6
NWAO Narrogin (SRO) 52.92 184 *e*P **P 02 06 36.3 -0.7**
NWAO pmax pmax
comp=Z,341nm,0.9s
NWAO MLR MLR
comp=Z,4μm,19.0s
NWAO Narrogin (SRO) 52.92 184 *e*P **P 02 06 36.2 -0.7**
comp=Z,341nm,0.9s,mb6.3
NWAO LR LR
comp=Z,4μm,19.0s,MS5.4

NWAO	**Narrogin (SRO)**	**52.92 184**	P	**P**	**02 06 37.1 +0.2**
	SNR=16				
NWAO			P		02 06 37.1
	SNR=16				
EIDS	**Eidsvold**	**53.67 146**	*e*P	**P**	**02 06 42.3 -0.3**
	comp=Z,199nm,0.8s,mb6.1				
STKA	**Stephens Creek**	**55.24 159**	*e*P	**P**	**02 06 53.1 -0.8**
	comp=Z,80nm,0.6s,mb5.9				
STKA			*e*S	**S**	**02 14 30.0 -5.3**
STKA	**Stephens Creek**	**55.24 159**	P	**P**	**02 06 53.3 -0.6**
	comp=Z,76nm,0.7s,mb5.8,baz=338,slow=7.2,SNR=68				
STKA			S	**S**	**02 14 33.2 -2.2**
	comp=Z,9.0nm,1.0s,baz=52,slow=20,SNR=3.5				
STKA			LR	LR	02 31 46.4
	comp=Z,12μm,21.0s,MS6.0,baz=336,slow=37				
STKA			P4KPbc		02 44 11.9
	comp=Z,2.8nm,0.8s,baz=5.0,slow=4.7,SNR=5.6				
STKA	**Stephens Creek**	**55.24 159**	*e*P	**P**	**02 06 53.1 -0.8**
	comp=Z,151nm,1.8s,mb5.7				
DGAR	**Diego Garcia**	**55.36 245**	PFAKE		02 07 00.0 +4.9
DGAR			LR	LR	
	comp=Z,10μm,20.0s,MS5.9				
MIDW	**Midway**	**55.96 69**	*e*P	**P**	**02 06 59.2 -0.2**
	comp=Z,951nm,1.1s,mb6.7				
MIDW			LR	LR	
	comp=Z,13μm,20.0s,MS6.0				
ABKAR	**Akbulak array**	**56.42 316**	*e*P	**P**	**02 07 03.0 +0.8**
	comp=Z,0.1nm,1.5s				
ABKT	**Ailbek**	**57.05 303**	P	**P**	**02 07 08.0 +1.1**
	comp=Z,784nm,1.2s,mb6.6				
SVE	**Sverdlovsk**	**57.42 325⇑**	*e*P	**P**	**02 07 10.0 +0.8**
SVE			*e*		02 07 57.7
SVE			*e*		02 09 20.2
SVE			*e*S	**S**	**02 15 05.4 +1.7**
SVE			*e*		02 16 52.0
SVE			*e*SS	SS	02 18 53.7 +0.3
SVE			pmax	pmax	
	comp=Z,742nm,1.4s,mb6.5				
SVE			pmax	pmax	
	comp=Z,1μm,8.1s				
SVE			MLR	MLR	
	comp=Z,37μm,19.0s,MS6.5				
AKTK	**Aktyubinsk**	**57.81 318**	P	**P**	**02 07 12.8 +0.7**
AKTK			LR	LR	02 33 50.7
AKTK			P'P'		02 36 56.9
AKTO	**Aktyubinsk**	**57.81 318**	P	**P**	**02 07 12.8 +0.7**
	comp=Z,82nm,1.0s,mb5.7,baz=98,slow=7.5,SNR=106				
AKTO			LR	LR	02 33 50.7
	comp=Z,31μm,19.0s,MS6.4,baz=106,slow=38				
AKTO			PKPPKP		02 36 56.9
	comp=Z,1.5nm,0.8s,baz=313,slow=4.8,SNR=5.9				
ARMA	**Armidale**	**58.09 149⇑**	*i*P	**P**	**02 07 14.5 +0.3**
ARMA			*e*S	**S**	**02 15 15.7 +2.6**
ARMA	**Armidale**	**58.09 149**	*e*P	**P**	**02 07 15.2 +1.0**
	comp=Z,2μm,2.5s,mb6.6				
ARU	**Arti**	**58.45 325**	P	**P**	**02 07 16.9 +0.5**
	comp=Z,2μm,1.4s,mb6.9				
ARU	**Arti**	**58.45 325*d***	*i*P	**P**	**02 07 16.5 +0.1**
ARU			*e*		02 08 05.9
ARU			*e*		02 09 26.7
ARU			S	**S**	**02 15 18.9 +1.6**
ARU			SSS		02 16 53.6
ARU			SSS		02 21 34.3
ARU			pmax	pmax	
	comp=Z,962nm,2.5s,mb6.4				
ARU			pmax	pmax	
	comp=Z,881nm,7.5s				
ARU			smax		
	comp=N,7μm,16.0s				
ARU			MLR	MLR	
	comp=Z,43μm,16.0s,MS6.7				
ARU	**Arti**	**58.45 325**	*e*P	**P**	**02 07 16.6 +0.2**
	comp=Z,202nm,0.7s,mb6.3				
ARU			*e*S	**S**	**02 15 18.9 +1.6**
ARU			LR	LR	
	comp=Z,22μm,22.0s,MS6.2				
HATD	**Hatta, Dubai**	**59.97 288**	P	**P**	**02 07 28.6 +1.1**
	SNR=30				
SOKR	**Solikamsk**	**60.00 328*c***	*i*P	**P**	**02 07 27.8 +0.7**
SOKR					02 09 49.2
SOKR			PPP		02 11 13.2
SOKR			S	**S**	**02 15 36.7 -0.5**
SOKR			pmax	pmax	
	comp=Z,610nm,2.0s,mb6.3				
SOKR			MLR	MLR	
	comp=Z,79μm,18.0s,MS6.9				
NAZ	**Nazwa, Dubai**	**60.36 288**	P	**P**	**02 07 30.9 +0.8**
	SNR=27				
FAQ	**Al Faqa, Dubai**	**60.46 288**	P	**P**	**02 07 31.3 +0.4**
	SNR=16				
ASUD	**Al Ashush, Dub**	**60.72 288**	P	**P**	**02 07 33.8 +1.2**
	SNR=33				
RIV	**Riverview**	**60.72 152**	*e*P	**P**	**02 07 34.7 +2.4**
DZM	**Mont Dzumac**	**60.82 131**	*e*P	**P**	**02 07 32.9 -0.3**
	comp=Z,175nm,1.4s,mb6.0				
DZM			*e*S	**S**	**02 15 46.4 -2.3**
DZM			*e*LR	LR	02 25 31.9
	comp=Z,30μm,30.2s				
DZM			*e*LR	LR	02 25 31.9
	comp=Z,49μm,22.8s				
DZM	**Mont Dzumac**	**60.82 131**	*e*P	**P**	**02 07 33.1 -0.1**
DZM	**Mont Dzumac**	**60.82 131**	*e*P	**P**	**02 07 33.6 +0.4**
	comp=Z,54nm,0.6s,mb5.8				
CNB	**Canberra Magne**	**61.22 154⇑**	*i*P	**P**	**02 07 36.2 +0.5**
CNB			*e*S	**S**	**02 15 58.6 +5.3**
TOO	**Toolangi**	**61.74 158⇑**	*i*P	**P**	**02 07 39.8 +0.7**
TOO			*e*S	**S**	**02 16 06.1 +6.3**
GAMB	**Gambell**	**61.95 28**	*e*P	**P**	**02 07 40.2 0.0**
	comp=Z,348nm,1.3s,mb6.3				
NIKO	**Nikolski**	**62.02 40**	*e*P	**P**	**02 07 40.1 -0.8**
	comp=Z,425nm,1.0s,mb6.5				
IZEF	**Zefreh**	**62.11 297**	*e*P	**P**	**02 07 42.3 +0.4**
UNV	**Unalaska Valle**	**63.47 39**	*e*P	**P**	**02 07 48.8 -1.8**
	comp=Z,110nm,0.7s,mb6.1				
FUNA	**Funafuti**	**63.61 111**	PFAKE		02 08 00.0 +7.9
FUNA			LR	LR	
	comp=Z,22μm,22.0s,MS6.3				
TNA	**Tin City**	**63.86 26**	*e*P	**P**	**02 07 53.6 +0.6**
	comp=Z,123nm,0.9s,mb5.9				
AKUT	**Akutan**	**63.91 39**	*e*P	**P**	**02 07 54.3 +0.9**
	comp=Z,273nm,1.3s,mb6.1				
AKUT			LR	LR	
	comp=Z,5μm,21.0s,MS5.7				
MAK	**Makhachkala**	**64.90 309**	*e*P	**P**	**02 07 58.9 -1.3**
MAK			*i*		02 08 31.4
MAK			*e*		02 10 24.4
MAK			*e*S	**S**	**02 16 39.1 -0.3**
MAK			*i*		02 17 52.2
MAK			*e*SS	SS	02 20 58.1 +7.0
MAK			pmax	pmax	
	comp=Z,367nm,1.5s,mb6.2				
MAK			pmax	pmax	
	comp=Z,2μm,2.5s,mb6.8				
MAK			pmax	pmax	
	comp=E,570nm,2.0s				
MAK			pmax	pmax	
	comp=N,420nm,2.2s				
MAK			smax		
	comp=N,9μm,6.9s				
MAK			smax		
	comp=E,9μm,6.6s				
MAK			MLR	MLR	
	comp=N,27μm,14.0s,MS6.7				
MAK			MLR	MLR	
	comp=Z,19μm,13.0s,MS6.5				
MAK			MLR	MLR	
	comp=E,26μm,14.0s,MS6.7				
JOHN	**Johnston Islan**	**65.22 80**	*e*P	**P**	**02 08 01.5 -1.1**
	comp=E,214nm,0.6s,mb6.3				
JOHN			LR	LR	
	comp=Z,19μm,21.0s,MS6.3				
FALS	**False Pass**	**65.29 38**	*e*P	**P**	**02 08 00.5 -2.0**
	comp=Z,561nm,1.4s,mb6.4				
QRN	**Al-Qurain**	**66.50 293**	*e*P	**P**	**02 08 09.7 -1.0**
QRN			AMb	AMB	02 08 13.8
	comp=Z,478nm,1.5s,mb6.3				
KBD	**Kabd**	**66.61 294**	*e*P	**P**	**02 08 11.0 -0.5**
KBD			AMb	AMB	02 08 14.5
	comp=Z,316nm,1.4s,mb6.2				
MOO	**Moorlands**	**66.68 159**	*e*P	**P**	**02 08 13.4 +2.0**
MOO			*e*S	S	02 17 02.2 +1.4
RDF	**Al-Radifah**	**66.78 294**	*e*P	**P**	**02 08 11.9 -0.6**
RDF			AMb	AMB	02 08 15.5
	comp=Z,656nm,1.5s,mb6.5				
MIB	**Mutribah**	**66.80 295**	*e*P	**P**	**02 08 11.7 -0.9**
MIB			AMb	AMB	02 08 15.4
	comp=Z,368nm,1.6s,mb6.2				
SDPT	**Sand Point**	**66.97 37**	*e*P	**P**	**02 08 11.6 -1.6**
	comp=Z,215nm,0.8s,mb6.2				
SDPT			LR	LR	
	comp=Z,5μm,20.0s,MS5.7				
NAY	**Al-Naaiem**	**66.98 294**	*e*P	**P**	**02 08 12.6 -1.3**
TAU	**Tasmania Unive**	**67.14 160**	P	**P**	**02 08 16.5 +2.2**
	comp=Z,2μm,1.7s,mb6.8,SNR=22				
TAU	**Tasmania Unive**	**67.14 160**	*e*P	**P**	**02 08 16.6 +2.3**
TAU			pmax	pmax	
	comp=Z,469nm,1.2s,mb6.4				
TAU			MLR	MLR	
	comp=Z,12μm,22.0s,MS6.1				
TAU	**Tasmania Unive**	**67.14 160**	*e*P	**P**	**02 08 16.6 +2.3**
	comp=Z,204nm,1.2s,mb6.0				
TAU			LR	LR	
	comp=Z,21μm,22.0s,MS6.3				
MSVF	**Nonsavu**	**67.15 120**	P	**P**	**02 08 16.0 +1.0**
	comp=Z,2μm,0.8s,mb7.2,SNR=35				
MSVF	**Nonsavu**	**67.15 120**	*e*P	**P**	**02 08 16.5 +1.6**
	comp=Z,370nm,0.9s,mb6.4				
MSVF			LR	LR	
	comp=Z,22μm,22.0s,MS6.3				
MSVF	**Nonsavu**	**67.15 120**	P	**P**	**02 08 16.0 +1.0**
	comp=Z,439nm,0.6s,mb6.7,SNR=35				
GNI	**Garni**	**67.27 306**	PKPPKP		02 36 40.0
	comp=Z,1.8nm,0.3s,baz=154,slow=22,SNR=3.1				
GNI			LR	LR	02 42 51.1
	comp=Z,15μm,18.2s,MS6.2,baz=80,slow=40				
GNI	**Garni**	**67.27 306*d***	*i*P	**P**	**02 08 17.2 +1.8**
GNI			pmax	pmax	
	comp=Z,511nm,1.7s				
GNI			MLR	MLR	
	comp=Z,15μm,18.0s				
GNI	**Garni**	**67.27 306**	*e*P	**P**	**02 08 17.1 +1.7**
	comp=Z,778nm,1.6s,mb6.5				
GNI			LR	LR	
	comp=Z,17μm,19.0s,MS6.3				
GNI	**Garni**	**67.27 306**	P	**P**	**02 08 17.6 +2.1**
	SNR=120				
GNI			P		02 08 17.6
	SNR=120				
ZEI	**Tsey**	**67.56 309**	*e*P	**P**	**02 08 18.1 +0.9**
ZEI			pmax	pmax	
	comp=Z,222nm,1.0s,mb6.2				
ZEI			pmax	pmax	
	comp=N,78nm,0.9s				
ZEI			pmax	pmax	
	comp=E,218nm,1.0s				
CHGN	**Chignik**	**68.08 36**	*e*P	**P**	**02 08 18.9 -1.3**
DYDN	**Diyadin**	**68.16 306**	*i*P	**P**	**02 08 20.9 -0.2**
VRHR	**Novokhopersk**	**68.21 318**	*e*P	**P**	**02 08 21.6 +0.5**
VRHR			*e**SP	sP	02 08 33.9 -1.4
VRHR			*e*		02 10 49.0
VRHR			*e*S	S	02 17 16.7 -2.5
VRHR			pmax	pmax	
	comp=Z,370nm,1.2s,mb6.3				
VRHR			pmax	pmax	
	comp=N,20nm,0.6s				
VRHR			pmax	pmax	
	comp=E,270nm,1.3s				
VRHR			pmax	pmax	
	comp=Z,400nm,2.5s,mb6.0				
VRHR			pmax	pmax	
	comp=N,140nm,1.1s				
VRHR			pmax	pmax	
	comp=E,230nm,2.3s				
VRHR			smax		
	comp=N,3μm,4.1s				
VRHR			smax		
	comp=Z,810nm,3.7s				
VRHR			smax		
	comp=E,3μm,4.1s				
VRHR			MLR	MLR	
	comp=Z,10μm,17.0s,MS6.1				
VRHR			MLR	MLR	
	comp=N,7μm,15.0s,MS6.2				
VRHR			MLR	MLR	
	comp=E,7μm,16.0s,MS6.2				
KIV	**Kislovodsk**	**68.29 310**	P	**P**	**02 08 22.8 +1.0**
	comp=E,2μm,1.1s,mb7.0				
KIV	**Kislovodsk**	**68.29 310*d***	*i*P	**P**	**02 08 23.0 +1.2**
KIV			*e*		02 08 48.3
KIV			*e*PPP		02 12 33.1
KIV			*e*S	S	02 17 23.8 +3.4
KIV			*e*SS	SS	02 21 45.7 +2.1
KIV			pmax	pmax	
	comp=Z,341nm,1.0s,mb6.3				
KIV			pmax	pmax	
	comp=Z,1μm,4.8s				
KIV			MLR	MLR	
	comp=Z,24μm,18.0s,MS6.5				
KIV	**Kislovodsk**	**68.29 310**	*e*P	**P**	**02 08 22.9 +1.1**
	comp=Z,368nm,1.0s,mb6.4				
KIV			LR	LR	
	comp=Z,25μm,19.0s,MS6.5				
KIV	**Kislovodsk**	**68.29 310**	P	**P**	**02 08 23.2 +1.5**
	SNR=171				
KIV			P		02 08 23.2
	SNR=171				
HAKT	**HAKKARI**	**68.45 303**	*i*P	**P**	**02 08 21.9 -1.0**
TTA	**Tatalina**	**68.92 29**	*e*P	**P**	**02 08 25.4 +0.1**
MSL	**Mosul**	**69.11 302**	*e*P	**P**	**02 08 27.0 -0.1**
MSL			*e*S	S	02 17 33.0 +2.5
MSEY	**Mahe Island**	**69.22 257**	*e*P	**P**	**02 08 27.9 -0.2**
MSEY			pmax	pmax	
	comp=Z,367nm,1.6s,mb6.1				
MSEY			MLR	MLR	
	comp=Z,7μm,19.0s,MS5.9				
MSEY	**Mahe Island**	**69.22 257**	*e*P	**P**	**02 08 27.9 -0.2**
	comp=Z,367nm,1.6s,mb6.1				
MSEY			LR	LR	
	comp=Z,7μm,19.0s,MS5.9				
MSEY	**Mahe Island**	**69.22 257**	P	**P**	**02 08 28.4 +0.3**
	SNR=7.5				
MSEY			P		02 08 28.4
	SNR=7.5				
ARTV	**Artvin**	**69.23 307**	*i*P	**P**	**02 08 28.5 +0.8**
SVW2	**Sparrevohn**	**69.24 31**	*e*P	**P**	**02 08 28.1 +0.8**
DAGI	**Agillar**	**69.26 307**	*i*P	**P**	**02 08 26.3 -1.6**
DDEM	**Demirkent**	**69.41 307**	*i*P	**P**	**02 08 28.5 -0.3**
HOMI	**Horasan**	**69.43 306**	*i*P	**P**	**02 08 29.6 +0.6**
VOR	**Voronezh**	**69.65 319⇑**	*i*P	**P**	**02 08 29.0 -1.1**
VOR			*e*S	S	02 17 34.0 -2.2
VOR			pmax	pmax	
	comp=Z,860nm,2.4s,mb6.2				
VORD	**Divnogorie**	**69.69 318**	*e*P	**P**	**02 08 29.8 -0.5**
VORD			*e*		02 11 05.6
VORD			*e*S	S	02 17 34.6 -2.1
VORD			*e*SS	SS	02 22 01.7 -3.1
VORD			pmax	pmax	
	comp=Z,100nm,1.6s,mb5.5				
VORD			pmax	pmax	
	comp=N,50nm,0.6s				
VORD			pmax	pmax	
	comp=E,90nm,0.8s				
VORD			pmax	pmax	
	comp=Z,560nm,3.3s				
VORD			pmax	pmax	
	comp=N,190nm,2.5s				
VORD			pmax	pmax	
	comp=E,710nm,3.2s				
VORD			smax		
	comp=N,2μm,4.8s				
VORD			smax		
	comp=Z,60nm,2.1s				
VORD			smax		
	comp=E,220nm,2.3s				
VORD			MLR	MLR	
	comp=E,7μm,17.0s,MS6.1				
VORD			MLR	MLR	
	comp=Z,15μm,17.0s,MS6.3				
VORD			MLR	MLR	
	comp=N,3μm,13.0s,MS6.1				
VSR	**Storozhevoye**	**69.74 318*d***	*i*P	**P**	**02 08 30.2 -0.4**
VSR			*e**SP	sP	02 08 43.9 -0.9
VSR			*e*		02 11 05.3
VSR			*e*S	S	02 17 36.0 -1.3
VSR			pmax	pmax	
	comp=Z,260nm,1.0s,mb6.1				
VSR			pmax	pmax	
	comp=N,20nm,1.4s				
VSR			pmax	pmax	
	comp=E,30nm,0.8s				
VSR			pmax	pmax	
	comp=Z,640nm,3.0s				
VSR			pmax	pmax	
	comp=N,370nm,3.8s				
VSR			pmax	pmax	
	comp=E,750nm,4.0s				
VSR			smax		
	comp=E,2μm,5.9s				
VSR			smax		
	comp=Z,40nm,5.2s				
VSR			smax		
	comp=N,790nm,4.0s				
VSR			MLR	MLR	
	comp=Z,13μm,14.0s,MS6.3				
VSR			MLR	MLR	
	comp=N,6μm,16.0s,MS6.2				
VSR			MLR	MLR	
	comp=E,9μm,16.0s,MS6.2				
ERZM	**Erzurum**	**69.87 306**	*i*P	**P**	**02 08 28.5 -3.1**
MOS	**Moscow**	**70.11 323**	*e*P	**P**	**02 08 28.7 -4.1**
MOS			*e*		02 08 52.9
MOS			*e*		02 11 04.0
MOS			*e*PPP		02 12 53.6
MOS			*i*S	S	02 17 38.5 -2.9
MOS			*e*		02 18 26.3
MOS			pmax	pmax	
	comp=Z,1μm,2.0s,mb6.4				
MOS			pmax	pmax	
	comp=Z,4μm,2.6s,mb6.9				
MOS			smax		
	comp=N,5μm,5.5s				
MOS			MLR	MLR	
	comp=E,16μm,16.0s				
MOS			MLR	MLR	
	comp=Z,21μm,17.0s,MS6.5				
LVZ	**Lovozero**	**70.29 336**	P	**P**	**02 08 35.6 +1.9**
	comp=Z,796nm,2.1s,mb6.3,SNR=27				
LVZ	**Lovozero**	**70.29 336*c***	*i*P	**P**	**02 08 34.2 +0.5**
LVZ			pmax	pmax	
	comp=Z,461nm,1.9s,mb6.1				
LVZ			MLR	MLR	
	comp=Z,17μm,17.0s,MS6.4				
LVZ	**Lovozero**	**70.29 336**	PFAKE		02 08 40.0 +6.3
LVZ			LR	LR	
	comp=Z,17μm,19.0s,MS6.3				
SOC	**Sochi**	**70.47 310*d***	*i*P	**P**	**02 08 35.3 0.0**
SOC			*e**PP	pP	02 08 43.9 -1.7
SOC			*e**SP	sP	02 08 49.5 0.0
SOC			*e*		02 11 11.5
SOC			*e*PPP		02 12 53.8
SOC			*i*S	S	02 17 44.4 -1.7
SOC			*e*		02 18 36.6
SOC			pmax	pmax	
	comp=Z,532nm,1.0s,mb6.4				
CHUM	**Lake Minchumin**	**70.50 28**	*e*P	**P**	**02 08 36.1 +1.0**
	comp=Z,245nm,0.9s,mb6.1				
PPLA	**Purkeypile**	**70.67 29**	*e*P	**P**	**02 08 36.3 +0.2**
	comp=Z,207nm,1.0s,mb6.0				
RSO	**Redoubt South**	**70.68 32**	*e*P	**P**	**02 08 36.5 +0.3**
OBN	**Obninsk**	**70.78 323**	P	**P**	**02 08 37.4 +0.5**
	comp=Z,2μm,1.5s,mb6.8,SNR=69				
OBN	**Obninsk**	**70.78 323⇑**	*e*P	**P**	**02 08 36.7 -0.2**
OBN			*e*		02 11 21.5
OBN			*i*S	S	02 17 50.7 +1.3
OBN			pmax	pmax	
	comp=Z,679nm,1.6s,mb6.3				
OBN			MLR	MLR	
	comp=Z,18μm,16.0s,MS6.4				
OBN	**Obninsk**	**70.78 323**	*e*P	**P**	**02 08 36.7 -0.2**
	comp=Z,455nm,1.2s,mb6.3				
OBN			LR	LR	
	comp=Z,25μm,20.0s,MS6.5				
APA	**Apatity**	**70.79 336⇓**	*i*P	**P**	**02 08 37.0 +0.2**
APA			*i*		02 08 54.0
APA			*i*		02 11 14.0
APA			*i*PPP		02 13 01.0
APA			*i*S	S	02 17 50.0 +0.9
APA			pmax	pmax	
	comp=Z,460nm,1.4s,mb6.2				
APA			MLR	MLR	
	comp=Z,27μm,20.0s,MS6.5				
OHAK	**Old Harbor**	**70.80 35**	*e*P	**P**	**02 08 36.3 -0.7**
	comp=Z,437nm,1.2s,mb6.3				
OHAK			LR	LR	
	comp=Z,8μm,20.0s,MS6.0				
COLD	**Coldfoot**	**71.01 24**	*e*P	**P**	**02 08 38.7 +0.6**
	comp=Z,141nm,1.0s,mb5.8				
BPAW	**Bear Paw Mtn.**	**71.06 28**	*e*P	**P**	**02 08 38.4 0.0**
	comp=Z,490nm,1.2s,mb6.3				
BPAW			*e*S	S	02 17 53.1 +0.9
KDAK	**Kodiak Island**	**71.11 34**	P	**P**	**02 08 38.0 -0.9**
	comp=Z,2μm,1.2s,mb7.0,SNR=22				
KDAK	**Kodiak Island**	**71.11 34**	*i*P	**P**	**02 08 38.5 -0.4**
KDAK	**Kodiak Island**	**71.11 34**	*e*P	**P**	**02 08 38.6 -0.2**
	comp=Z,578nm,1.2s,mb6.4				
KDAK			LR	LR	
	comp=Z,9μm,20.0s,MS6.0				
KTH	**Kantishna Hill**	**71.16 28**	*e*P	**P**	**02 08 39.4 +0.4**
	comp=Z,43nm,0.4s,mb5.7				
DIYA	**Diyarbakir**	**71.18 304**	*i*P	**P**	**02 08 38.4 -1.4**
ANN	**Anapa**	**71.88 312*d***	*i*P	**P**	**02 08 43.5 -0.3**
ANN			*e*		02 11 24.0
ANN			*e*PPP		02 13 02.9
ANN			*i*S	S	02 18 00.1 -2.3
ANN			*e*SS	SS	02 22 39.8 +1.1
ANN			pmax	pmax	
	comp=Z,1μm,2.4s,mb6.3				
ANN			MLR	MLR	
	comp=Z,18μm,21.0s,MS6.3				
ELZG	**Elazig**	**71.94 305**	*i*P	**P**	**02 08 43.8 -0.5**
GRSN	**GIRESUNGRSN**	**72.01 308**	*i*P	**P**	**02 08 40.5 -4.1**
RC01	**Rabbit Creek A**	**72.06 31**	*e*P	**P**	**02 08 43.8 -0.7**
	comp=Z,117nm,1.0s,mb5.8				
PMR	**Palmer**	**72.26 30**	*e*P	**P**	**02 08 44.5 -1.2**
PMR			pmax	pmax	
	comp=Z,260nm,1.2s,mb6.0				
PMR			MLR	MLR	
	comp=Z,6μm,17.0s,MS5.9				
PMR	**Palmer**	**72.26 30**	*e*P	**P**	**02 08 44.5 -1.2**
	comp=Z,260nm,1.2s,mb6.0				
PMR			LR	LR	
	comp=Z,6μm,17.0s,MS5.9				
COLA	**College**	**72.29 27**	*e*P	**P**	**02 08 45.6 -0.3**
COLA			pmax	pmax	
	comp=Z,119nm,1.0s,mb5.8				
COLA			MLR	MLR	
	comp=Z,6μm,20.0s,MS5.9				
COLA	**College**	**72.29 27**	*e*P	**P**	**02 08 45.6 -0.3**
	comp=Z,119nm,1.0s,mb5.8				
COLA			LR	LR	
	comp=Z,6μm,20.0s,MS5.9				
JOF	**Joensuu**	**72.30 331**	*e*p	**P**	**02 08 45.7 -0.3**
	comp=Z,160nm,1.0s,mb5.9				
JOF	**Joensuu**	**72.30 331**	*e*p	**P**	**02 08 45.7 -0.3**
	comp=Z,160nm,1.0s,mb5.9				
SEW	**Seward**	**72.36 32**	*e*P	**P**	**02 08 45.8 -0.6**
	comp=Z,464nm,1.3s,mb6.2				
LBOS		**72.52 279⇓**	*e*P	**P**	**02 08 48.9 +0.8**
LBOS			AMb	AMB	02 08 49.6
	comp=Z,117nm,0.6s,mb6.0				
ATAB	**Bozova**	**72.69 304**	*i*P	**P**	**02 08 48.2 -0.6**
KEV	**Kevo**	**72.78 339**	*e*P	**P**	**02 08 48.5 -0.2**
KEV			pmax	pmax	
	comp=Z,115nm,0.7s,mb5.9				
KEV	**Kevo**	**72.78 339**	*e*p	**P**	**02 08 48.5 -0.2**
	comp=Z,115nm,0.7s,mb5.9				
KEV	**Kevo**	**72.78 339**	*e*p	**P**	**02 08 48.5 -0.2**
	comp=Z,115nm,0.7s,mb5.9				
AKCD	**Akcadag**	**72.80 305**	*i*P	**P**	**02 08 49.3 -0.2**
DHBB	**Dhamar BB**	**73.11 280⇓**	*e*P	**P**	**02 08 52.5 +0.8**
DHBB			AMb	AMB	02 08 54.4
	comp=Z,1μm,1.8s,mb6.5				
ERBA	**Erbaa**	**73.18 308**	*i*P	**P**	**02 08 51.5 -0.1**
GZT	**Gaziantep**	**73.28 304**	*i*P	**P**	**02 08 50.4 -1.9**
ARCES	**ARCESS Array B**	**73.34 339**	P	**P**	**02 08 52.8 +0.8**
	comp=Z,155nm,1.0s,mb5.9,baz=71,slow=6.5,SNR=170				
PUL	**Pulkovo**	**73.35 328*d***	*i*P	**P**	**02 08 53.7 +1.5**
PUL			pmax	pmax	
	comp=Z,1μm,2.5s,mb6.3				
PUL			MLR	MLR	
	comp=Z,62μm,15.0s,MS7.0				
SPITS	**Spitsbergen Ar**	**73.45 348**	P	**P**	**02 08 52.9 +0.3**
	comp=Z,131nm,0.8s,mb5.9,baz=92,slow=9.5,SNR=100				
SPITS			LR	LR	02 46 22.0
	comp=Z,29μm,18.6s,MS6.6,baz=45,slow=40				
SPB4	**Spitsbergen Ar**	**73.45 348**	*e*P	**P**	**02 08 53.4 +0.8**
PAX	**Paxson**	**73.69 28**	*e*P	**P**	**02 08 53.6 -0.5**
PAX			pmax	pmax	
	comp=Z,13nm,1.0s,mb4.8				

PAX Paxson 73.69 28 *eP* **P 02 08 53.6 -0.5**
comp=Z,13nm,1.0s,mb4.8
TRBA At Turbah 73.76 278⇓*eP* **P 02 08 56.2 +0.7**
TRBA AMb AMB 02 08 57.5
comp=Z,249nm,1.2s,mb6.0
AFI Afiamalu 73.93 112 *eP* **P 02 08 56.7 +0.4**
AFI pmax pmax
comp=Z,346nm,1.3s,mb6.1
AFI MLR MLR
comp=Z,9μm,22.0s,MS6.0
AFI Afiamalu 73.93 112 *eP* **P 02 08 56.7 +0.4**
comp=Z,346nm,1.3s,mb6.1
AFI LR LR
comp=Z,9μm,22.0s,MS6.0
DIV Divide 73.94 30 *eP* **P 02 08 55.8 +0.1**
comp=Z,450nm,1.2s,mb6.3
BJO Bjornoya 73.95 344⇑*iP* **P 02 08 56.0 +0.5**
BJO *e*PP PP 02 11 40.7 +0.4
BJO *e*S S 02 18 24.5 -0.5
BJO AMS AMS 02 47 55.2
comp=Z,18μm,14.0s,MS6.5
BJO1 Bjornoya 74.00 344⇑*iP* **P 02 08 56.0 +0.2**
BJO1 LR LR
comp=Z,18μm,14.0s,MS6.5
HSP Hornsund 74.00 347 *eP* **P 02 08 56.4 +0.6**
KBS Kingsbay 74.01 349⇑*iP* **P 02 08 55.7 -0.1**
KBS AMb AMB 02 08 58.8
comp=Z,167nm,3.4s
KBS *e*S S 02 18 27.1 +1.6
KBS AMS AMS 02 45 18.4
comp=Z,33μm,22.7s,MS6.6
KBS Kingsbay 74.01 349*c iP* **P 02 08 55.7 -0.1**
KBS pmax pmax
comp=Z,323nm,2.5s,mb5.8
KBS Kingsbay 74.01 349 *eP* **P 02 08 56.3 +0.5**
comp=Z,97nm,1.0s,mb5.7
KBS LR LR
comp=Z,38μm,20.0s,MS6.7
OUZ Omahuta 74.06 138 *eP* **P 02 08 58.3 +1.6**
comp=Z,168nm,1.2s,mb5.8
SIM Simferopol' 74.16 312*deP* **P 02 08 58.9 +1.6**
SIM *e* 02 11 50.0
SIM *e*S S 02 18 30.0 +1.7
SIM *e*PS 02 19 06.0
SIM pmax pmax
comp=Z,646nm,2.3s,mb6.2
SIM pmax pmax
comp=Z,197nm,0.9s,mb6.0
KTK1 Kautokeino 74.25 338 *eP* **P 02 08 58.3 +0.9**
KTK1 *e*S S 02 18 28.8 +0.3
MENT Mentasta 74.47 28 *eP* **P 02 08 59.2 +0.5**
MENT *e*S S 02 18 31.7 +0.5
COBT Iskenderun 74.50 304 *i P* **P 02 08 59.1 -0.3**
KIP Kipapa 74.51 73*ceP* **P 02 09 00.7 +1.0**
KIP Kipapa 74.51 73 *eP* **P 02 09 00.2 +0.5**
comp=Z,223nm,0.6s,mb6.3
KIP LR LR
comp=Z,13μm,20.0s,MS6.2
BMRM Bremner River 74.53 30 *eP* **P 02 08 59.2 +0.1**
comp=Z,211nm,0.8s,mb6.1
HON Honolulu 74.55 73 *eP* **P 02 09 01.9 +1.9**
CTKT Corum 74.65 308 *i P* **P 02 08 58.0 -2.2**
KAF Kangasniemi 74.74 331 *eP* **P 02 09 00.0 -0.3**
KAF pmax pmax
comp=Z,185nm,0.9s,mb6.0
KAF Kangasniemi 74.74 331 *ep* **P 02 09 00.0 -0.3**
comp=Z,185nm,0.9s,mb6.0,baz=73,slow=5.4
KAF Kangasniemi 74.74 331 *ep* **P 02 09 00.0 -0.3**
comp=Z,185nm,0.9s,mb6.0,baz=73,slow=5.4
FKH Fakeheh 74.93 301 *eP* **P 02 09 03.0 +1.0**
FINES FINESS Array B 75.01 330 P **P 02 09 02.4 +0.5**
comp=Z,128nm,0.9s,mb5.9,baz=81,slow=6.0,SNR=264
FINES PKPPKP 02 36 27.6
comp=Z,2.4nm,1.0s,baz=298,slow=4.1,SNR=5.4
FINES LR LR 02 45 11.7
comp=Z,36μm,18.3s,MS6.7,baz=77,slow=38
AVNT Avonos 75.04 306 *i P* **P 02 09 01.3 -1.2**
ASF Jabal al Asfar 75.04 299 LR LR 02 46 02.6
comp=Z,10μm,21.9s,MS6.1,baz=80,slow=39
EGAK Eagle 75.11 26 *eP* **P 02 09 01.9 -0.5**
comp=Z,187nm,0.9s,mb6.0
EGAK *e*S S 02 18 39.4 +1.2
EGAK LR LR
comp=Z,7μm,21.0s,MS6.0
CDAG Cicekdag 75.20 307 *i P* **P 02 08 59.1 -4.3**
HWQ Hawqa 75.28 301 *eP* **P 02 09 04.7 +0.7**
ILGA Ilgaz 75.34 309 *i P* **P 02 09 02.4 -1.8**
VSU Vasula 75.44 327*d iP* **P 02 09 04.6 +0.2**
VSU pmax pmax
comp=Z,563nm,0.9s,mb6.5
VSU MLR MLR
comp=Z,70μm,19.0s,MS7.0
ATD Arta Tunnel 75.45 277 LR LR 02 46 03.0
comp=Z,6μm,18.5s,MS5.9,baz=57,slow=39
GULE Gulek 75.46 305 *i P* **P 02 09 01.3 -3.7**
TRO Tromso 75.53 339 *eP* **P 02 09 05.1 +0.3**
TRO AMb AMB 02 09 07.9
comp=Z,418nm,2.8s,mb5.9
TRO *e*S S 02 18 44.8 +2.0
TRO *e*SS SS 02 23 36.9 +3.7
TRO AMS AMS 02 48 25.7
comp=Z,18μm,15.9s,MS6.5
TRO Tromso 75.53 339 *eP* **P 02 09 05.1 +0.4**
TRO pmax pmax
comp=Z,418nm,2.8s,mb5.9
TRO MLR MLR
comp=Z,18μm,15.9s,MS6.5
TRO Tromso 75.53 339 *eP* **P 02 09 05.1 +0.3**
comp=Z,418nm,2.8s,mb5.9
TRO LR LR
comp=Z,18μm,15.9s,MS6.5
RCY Rachaya 75.59 301 *eP* **P 02 09 06.5 +0.7**
BHL Bhannes 75.61 301 *eP* **P 02 09 06.5 +0.6**
ELDT Eldivan 75.69 308 *i P* **P 02 09 04.6 -1.6**
BR131 Keskin Array S 75.72 307 *eP* **P 02 09 06.6 +0.1**
comp=Z,17nm,0.5s,mb5.2
BR131 LR LR
comp=Z,7μm,20.0s,MS5.9
BRTR Keskin Array B 75.72 307 P **P 02 09 06.5 +0.1**
comp=Z,20nm,0.6s,mb5.3,baz=134,slow=3.7,SNR=129
BRTR PKPPKP 02 36 25.9
comp=Z,0.8nm,0.9s,baz=190,slow=4.5,SNR=4.4
BRTR LR LR 02 48 05.1
comp=Z,7μm,20.0s,MS6.0,baz=249,slow=40
MICGM Minsk 75.83 323⇑*iP* **P 02 09 06.0 -0.7**
MNK Minsk 75.86 323⇑*iP* **P 02 09 06.0 -0.9**
MNK *e*S S 02 18 42.0 -4.9
MNK *e*SS SS 02 23 40.0 +1.2
MNK pmax pmax
comp=Z,2μm,1.0s,mb6.9
MNK pmax pmax
comp=N,460nm,1.6s
MNK pmax pmax
comp=E,1μm,1.6s
MNK MLR MLR
comp=Z,38μm,18.0s,MS6.8
MNK MLR MLR
comp=E,32μm,19.0s
AKASG Malin Array Be 76.00 319 P **P 02 09 07.3 -0.5**
comp=E,75nm,0.8s,mb5.7,baz=63,slow=5.6,SNR=126
AKASG S S 02 18 53.4 +4.7
comp=E,0.2nm,0.3s,baz=68,slow=10,SNR=4.6
AKASG PKPPKP 02 36 21.5
comp=E,0.2nm,0.4s,baz=259,slow=3.0,SNR=5.2
AKASG LR LR 02 44 48.0
comp=E,16μm,19.4s,MS6.3,baz=75,slow=37
AKASG Malin Array Be 76.00 319 P **P 02 09 07.3 -0.5**
AKASG S S 02 18 53.4 +4.8
AKASG Malin Array Be 76.00 319 P **P 02 09 07.3 -0.5**
AKASG S S 02 18 53.4 +4.7
AKASG P'P' 02 36 21.5
AKASG LR LR 02 44 48.0
AKBB Malin Array Si 76.00 319 *eP* **P 02 09 07.3 -0.5**
DAWY Dawson 76.04 27 *eP* **P 02 09 07.6 -0.2**
MMAI Mount Meron Ar 76.04 300 P **P 02 09 09.4 +1.0**
comp=E,11nm,0.7s,mb4.9,baz=67,slow=6.4,SNR=34
MMAI LR LR 02 48 25.5
comp=E,12μm,19.6s,MS6.2,baz=65,slow=40
BBAL Bala 76.15 307 *i P* **P 02 09 09.0 +0.1**
RER Riviere de l'E 76.17 241 *eP* **P 02 09 09.0 -0.2**
comp=E,78nm,0.9s,mb5.6
RER LR LR
comp=Z,8μm,20.0s,MS6.0
IDID Didziasalis 76.26 324 *eP* **P 02 09 10.3 +1.1**
IDID AMB AMB 02 09 13.2
comp=Z,202nm,1.2s,mb5.9
NACGM Naroch 76.35 324 *eP* **P 02 09 09.0 -0.6**
RAO Raoul Island 76.39 128 PFAKE 02 09 20.0 +10
RAO LR LR
comp=Z,7μm,20.0s,MS6.0
IZAR Zarasai 76.41 325 *eP* **P 02 09 11.3 +1.3**
IZAR AMB AMB 02 09 14.1
comp=Z,170nm,1.4s,mb5.8
ISAL Salakas 76.53 324 *eP* **P 02 09 11.8 +1.1**
ISAL AMB AMB 02 09 14.8
comp=Z,132nm,1.4s,mb5.7
IIGN Ignalina 76.53 324 *eP* **P 02 09 11.9 +1.2**
IIGN AMB AMB 02 09 14.9
comp=Z,149nm,1.4s,mb5.7
INK Inuvik 76.89 22 P **P 02 09 12.3 -0.2**
comp=Z,44nm,0.9s,mb5.4,baz=305,slow=6.2,SNR=48
INK S S 02 18 56.4 -1.3
comp=Z,7.4nm,1.1s,baz=304,slow=21,SNR=38
INK PKPPKP 02 36 22.4
comp=Z,2.4nm,1.1s,baz=152,slow=5.1,SNR=3.5
INK Inuvik 76.89 22 *eP* **P 02 09 11.5 -1.0**
INK pmax pmax
comp=Z,133nm,0.8s
INK Inuvik 76.89 22 *eP* **P 02 09 11.5 -1.0**
comp=Z,133nm,0.8s,mb5.9
CSS Prodhromos 77.19 303 *eP* **P 02 09 14.5 -0.3**
comp=Z,250nm,0.9s,mb6.1
CSS LR LR
comp=Z,13μm,21.0s,MS6.2
CSS Prodhromos 77.19 303 P **P 02 09 14.2 -0.6**
POHA Pohakuloa 77.21 74 *eP* **P 02 09 16.2 +1.0**
comp=Z,497nm,1.2s,mb6.3
POHA LR LR
comp=Z,7μm,21.0s,MS5.9
KIS Kishinev 77.23 315⇑*iP* **P 02 09 13.0 -1.8**
comp=Z,800nm,2.0s,mb6.3
KIS *e*pP pP 02 09 46.0 +21
KIS Kishinev 77.23 315 *e*PP PP 02 12 08.0 -0.7
KIS Kishinev 77.23 315 *e*PPP 02 14 15.0
KIS Kishinev 77.23 315 *e*PsP PKiKP 02 15 00.0 +4.1
KIS *i* S S 02 18 56.0 -6.2
comp=Z,1μm,3.0s
KIS Kishinev 77.23 315*c iP* **P 02 09 13.0 -1.8**
KIS *e* 02 12 08.0
KIS *i* S S 02 18 56.0 -6.2
KIS *i* PS 02 19 30.0
KIS pmax pmax
comp=Z,80nm,2.0s,mb5.3
KIS pmax pmax
comp=N,30nm,2.5s
KIS pmax pmax
comp=E,900nm,2.5s
KIS pmax pmax
comp=Z,2μm,4.0s
KIS pmax pmax
comp=N,600nm,2.0s
KIS pmax pmax
comp=E,2μm,3.0s
KIS smax
comp=N,1μm,3.0s
KIS smax
comp=N,3μm,10.0s
KIS Kishinev 77.23 315 P **P 02 09 16.7 +1.9**
KHU Kahuku 77.28 74 *eP* **P 02 09 16.8 +1.2**
EIL Elat 77.31 297 LR LR 02 47 22.6
comp=N,15μm,21.5s,MS6.3,baz=69,slow=39
PNL Peninsula 77.38 31 *eP* **P 02 09 16.0 +0.7**
comp=N,217nm,1.0s,mb6.0
STEI Steigen 77.39 338 *eP* **P 02 09 16.3 +1.0**
STEI AMb AMB 02 09 18.3
comp=Z,521nm,1.0s,mb6.4
HENT Hendek 77.46 309 *i P* **P 02 09 11.2 -5.1**
ALE Alert 77.51 0 P **P 02 09 15.7 -0.1**
comp=Z,488nm,1.4s,mb6.2,SNR=35
PUH Pauahi 77.60 74 *eP* **P 02 09 18.8 +1.4**
GAZI Gazipasa 77.64 304 *i P* **P 02 09 14.4 -2.9**
TLCR 77.73 314⇑*P* **P 02 09 17.8 +0.1**
TLCR 77.73 314⇑*iP* **P 02 09 17.8 +0.1**
LEOM Leova 77.76 315⇑*P* **P 02 09 17.8 0.0**
LEOM Leova 77.76 315⇑*iP* **P 02 09 17.8 0.0**
LOF Lofoten 77.90 339 *eP* **P 02 09 20.7 +2.6**
LOF AMb AMB 02 09 23.1
comp=Z,463nm,1.3s,mb6.2
LOF Lofoten 77.90 339 *eP* **P 02 09 20.7 +2.6**
comp=Z,463nm,1.3s,mb6.2
HYT Haines Junctio 77.90 29 *eP* **P 02 09 21.1 +2.9**
BOLV Bolvadin 78.00 307 *i P* **P 02 09 18.8 -0.5**
IAS Iasi 78.00 316 P **P 02 09 21.0 +1.9**
IAS Iasi 78.00 316 *i P* **P 02 09 21.0 +1.9**
BORA Eskisehir 78.05 308 *i P* **P 02 09 15.5 -4.0**
URZ Urewera 78.16 138 *eP* **P 02 09 19.7 -0.2**
comp=Z,56nm,0.7s,mb5.6
RPZ Rata Peaks 78.17 146 *eP* **P 02 09 20.8 +0.9**
comp=Z,236nm,1.1s,mb6.0
CFR Carcaliu 78.20 314⇑*P* **P 02 09 21.3 +1.1**
CFR Carcaliu 78.20 314 P **P 02 09 21.0 +0.7**
CFR Carcaliu 78.20 314⇑*iP* **P 02 09 21.3 +1.1**
TIRR Tirgusor 78.21 313 *P* **P 02 09 20.6 +0.3**
TIRR Tirgusor 78.21 313⇓*iP* **P 02 09 20.4 +0.1**
MOR8 Moi Rana 78.36 337 *eP* **P 02 09 20.0 -0.8**
MOR8 AMb AMB 02 09 22.6
comp=Z,383nm,2.8s,mb5.8
MOR8 Moi Rana 78.36 337 *eP* **P 02 09 20.0 -0.8**
comp=Z,383nm,2.8s,mb5.8
DESE Dese 78.57 278 *eP* **P 02 09 24.8 +2.0**
DESE *e*S S 02 19 23.0 +5.3
ISP Isparta 78.58 306 P **P 02 09 22.4 -0.1**
ISP Isparta 78.58 306 P **P 02 09 21.9 -0.6**
ISP Isparta 78.58 306⇓*iP* **P 02 09 21.9 -0.6**
SNZO South Karori 78.61 142 PFAKE 02 09 30.0 +7.6
SNZO LR LR
comp=Z,8μm,20.0s,MS6.1
SUW Suwalki 78.61 323 *eP* **P 02 09 22.4 0.0**
SUW *e*S S 02 19 14.6 -2.2
SUW LMZ 02 47 10.9
comp=Z,20μm,20.8s
SUW Suwalki 78.61 323⇓*eP* **P 02 09 22.4 0.0**
SUW *e*S S 02 19 14.6 -2.2
KHZ Kahutara 78.66 143 *eP* **P 02 09 21.5 -1.2**
comp=Z,134nm,0.8s,mb5.9
STOK Stokkvaagen 78.82 337 *eP* **P 02 09 23.3 +0.1**
STOK *e*S S 02 19 19.0 +0.4
AMRR Amara 78.91 313⇑*iP* **P 02 09 25.0 +0.8**
VRI Vrincioaia 78.94 315⇓*P* **P 02 09 25.2 +0.9**
VRI Vrincioaia 78.94 315 P **P 02 09 25.1 +0.8**
VRI Vrincioaia 78.94 315⇓*iP* **P 02 09 25.2 +0.9**
PLOR Plostina 79.00 315 P **P 02 09 25.7 +1.1**
PLOR Plostina 79.00 315⇓*iP* **P 02 09 25.3 +0.7**
ELBA Catalca 79.16 310 *i P* **P 02 09 24.3 -1.4**
PRD Provadia 79.28 312 *i P* **P 02 09 26.9 +0.7**
SKAG Skagway 79.40 30 *eP* **P 02 09 26.8 +0.3**
comp=Z,166nm,1.0s,mb5.9
SKAG *e*S S 02 19 27.1 +2.2
SKAG LR LR
comp=Z,7μm,19.0s,MS6.0
BURAR Bucovina Array 79.40 317⇓*P* **P 02 09 27.4 +0.6**
BURAR Bucovina Array 79.40 317⇓*iP* **P 02 09 27.4 +0.6**
BUR08 Bucovina Ar. S 79.40 317 *eP* **P 02 09 27.4 +0.6**
LVV L'vov 79.45 319 *eP* **P 02 09 26.8 -0.2**
LVV *e* 02 12 30.3
LVV *e*S S 02 19 30.2 +4.3
LVV *e*PS 02 20 14.2
LVV *e*SS SS 02 24 32.0 -1.1
LVV pmax pmax
comp=Z,500nm,8.0s
GOLH Golhisar 79.48 306 *i P* **P 02 09 25.4 -2.1**
DEMI Demirci 79.58 308 *i P* **P 02 09 26.5 -1.5**
DURS Dursunbey 79.59 308 *i P* **P 02 09 26.5 -1.5**
DNZL Cakiroluk 79.73 306 *i P* **P 02 09 25.4 -3.4**
AKAS Kas 79.74 305 *i P* **P 02 09 27.6 -1.3**
NSS Namsos 79.99 336⇑*iP* **P 02 09 28.6 -1.1**
NSS AMb AMB 02 09 31.5
comp=Z,273nm,2.3s,mb5.8
NSS *e*PP PP 02 12 31.4 +0.2
NSS *e*S S 02 19 30.6 -0.5
NSS *e*SS SS 02 24 42.1 +1.6
NSS AMS AMS 02 48 17.0
comp=Z,20μm,18.9s,MS6.5
NSS Namsos 79.99 336⇑*iP* **P 02 09 28.6 -1.1**
comp=Z,273nm,2.3s,mb5.8
NSS LR LR
comp=Z,20μm,18.9s,MS6.5
JMB Yambol 80.08 312 P **P 02 09 32.6 +2.0**
JMB Yambol 80.08 312 P **P 02 09 32.6 +2.0**
JMB Yambol 80.08 312 *i P* **P 02 09 31.6 +1.0**
BALY Balya 80.18 309 *i P* **P 02 09 29.7 -1.4**
SZH Strazhica 80.28 312 *i P* **P 02 09 31.9 +0.2**
SIT Sitka 80.29 33 *eP* **P 02 09 31.8 +0.4**
SIT pmax pmax
comp=Z,400nm,1.3s,mb6.2
SIT MLR MLR
comp=Z,4μm,18.0s,MS5.8
SIT Sitka 80.29 33 *eP* **P 02 09 31.8 +0.4**
comp=Z,400nm,1.3s,mb6.2
SIT LR LR
comp=Z,4μm,18.0s,MS5.8
AKHS Akhisar 80.30 308 *i P* **P 02 09 29.7 -2.1**
KWP Kalwaria Pacla 80.32 319 *eP* **P 02 09 32.4 +0.7**
KWP *e*PcP PcP 02 09 34.5 -4.3
KWP *e*pP pP 02 09 40.8 -1.5
KWP *e*S S 02 19 33.8 -1.3
KWP *e*SKSac SKSac 02 19 43.5 -3.7
KWP LMZ 02 47 17.9
comp=Z,21μm,21.4s
KWP Kalwaria Pacla 80.32 319⇓*eP* **P 02 09 32.4 +0.7**
KWP *e**PP pP 02 09 40.8 -1.4
KWP *e*S S 02 19 33.8 -1.3
KWP Kalwaria Pacla 80.32 319⇓*eP* **P 02 09 32.4 +0.7**
KWP *e*PcP PcP 02 09 34.5 -4.3
KWP *e*pP pP 02 09 40.8 -1.4
KWP *e*S S 02 19 33.8 -1.3
KWP *e*SKSac SKSac 02 19 43.5 -3.6
KWP Kalwaria Pacla 80.32 319⇓*iP* **P 02 09 32.3 +0.6**
DAG Danmarks Havn 80.36 351*j iP* **P 02 09 31.0 -0.5**
DAG pmax pmax
comp=Z,85nm,1.3s,mb5.5
DAG Danmarks Havn 80.36 351 *i P* **P 02 09 31.0 -0.5**
comp=Z,85nm,1.3s,mb5.5
DAG Danmarks Havn 80.36 351*j iP* **P 02 09 31.0 -0.5**
comp=Z,85nm,1.3s,mb5.5
MDB Medias 80.41 316 P **P 02 09 34.6 +2.3**
WAR Warsaw 80.43 322 *eP* **P 02 09 33.0 +0.8**
WAR *e*PcP PcP 02 09 34.7 -4.5
WAR *e*S S 02 19 34.8 -1.3
WAR LMZ 02 48 40.6
comp=Z,34μm,18.6s
WAR LME 02 48 47.1
comp=Z,31μm,18.3s
WAR Warsaw 80.43 322 *eP* **P 02 09 33.0 +0.7**
WAR *e*PcP PcP 02 09 34.7 -4.5
WAR *e*S S 02 19 34.8 -1.3
WAR LR LR
comp=Z,34μm,18.6s,MS6.7
BMR Baia Mare 80.48 317⇑*P* **P 02 09 33.5 +0.9**
BMR Baia Mare 80.48 317 P **P 02 09 33.8 +1.2**
BMR Baia Mare 80.48 317⇑*iP* **P 02 09 33.5 +0.9**
AYDN Tasoluk 80.62 307 *i P* **P 02 09 33.0 -0.6**
KOLS Kolonicke sedl 80.83 319 *eP* **P 02 09 34.8 +0.3**
KOLS *e*S S 02 19 37.1 -3.3
KOLS pmax pmax
comp=Z,45nm,0.9s,mb5.4
KOLS MLR MLR
comp=Z,17μm,20.1s,MS6.4
KOLS Kolonicke sedl 80.83 319 *eP* **P 02 09 34.8 +0.3**
comp=Z,45nm,0.9s,mb5.4
KOLS *e*S S 02 19 37.1 -3.3
KOLS *e*SS SS 02 25 18.1 +24
KOLS LR LR
comp=Z,17μm,20.1s,MS6.4
KOLS Kolonicke sedl 80.83 319 *eP* **P 02 09 34.8 +0.3**
ARG Arkhangelos 80.89 305 P **P 02 09 34.4 -0.7**
ARG Arkhangelos 80.89 305 P **P 02 09 34.4 -0.7**
ARG Arkhangelos 80.89 305 *eP* **P 02 09 34.9 -0.1**
UZH Uzhgorod 80.92 318⇑*iP* **P 02 09 35.3 +0.3**
UZH *e* pP 02 09 45.7 +0.2
UZH *e* 02 12 45.3
UZH *e*S S 02 19 41.7 +0.3
UZH *e*PS 02 20 35.0
UZH *e*SS SS 02 25 02.1 +7.0
TRPA Tarpa 80.94 318⇓*iP* **P 02 09 35.4 +0.3**
DIM Dimitrovgrad 80.95 311 P **P 02 09 35.6 +0.3**
ALN Alexandroupoli 80.96 310 P **P 02 09 34.8 -0.5**
ALN Alexandroupoli 80.96 310 P **P 02 09 34.8 -0.5**
ALN Alexandroupoli 80.96 310 *eP* **P 02 09 35.3 0.0**
AYVA Ayvalik 80.99 308 *i P* **P 02 09 33.0 -2.5**
XMAS Kiritimati 81.02 91 *eP* **P 02 09 37.0 +0.8**
comp=Z,368nm,1.1s,mb6.2
XMAS LR LR
comp=Z,10μm,20.0s,MS6.2
BLCB Balcova 81.03 308 P **P 02 09 35.7 -0.1**
BLCB Balcova 81.03 308 P **P 02 09 35.7 -0.1**
GCAM G?zelcaml? 81.10 307 *i P* **P 02 09 33.0 -3.1**
KDZ Kurdzhali 81.16 311 *i P* **P 02 09 36.7 +0.3**
RDO Rodhopi 81.24 311 P **P 02 09 36.3 -0.5**
RDO Rodhopi 81.24 311 P **P 02 09 36.3 -0.5**
RDO Rodhopi 81.24 311 *eP* **P 02 09 36.8 0.0**
DRGR 81.28 317 P **P 02 09 37.6 +0.7**
DRGR 81.28 317⇓*iP* **P 02 09 37.6 +0.7**
STHS Stebnicka Huta 81.29 319 *i P* **P 02 09 38.0 +1.1**
STHS pmax pmax
comp=Z,59nm,1.1s,mb5.4
STHS Stebnicka Huta 81.29 319 *i P* **P 02 09 38.0 +1.1**
comp=Z,59nm,1.1s,mb5.4
STHS Stebnicka Huta 81.29 319 *i P* **P 02 09 38.0 +1.1**
PRK Paraskevi 81.32 309 P **P 02 09 37.0 -0.3**
PRK Paraskevi 81.32 309 P **P 02 09 37.0 -0.3**
PRK Paraskevi 81.32 309 *eP* **P 02 09 37.0 -0.3**
SMG Samos 81.39 307 *eP* **P 02 09 37.5 -0.2**
DEV Deva 81.47 316⇑*P* **P 02 09 39.2 +1.3**
DEV Deva 81.47 316⇑*iP* **P 02 09 39.2 +1.3**
NIS1 Nisyros Isl. 81.49 306 P **P 02 09 37.2 -1.1**
PLD Plovdiv 81.52 312 P **P 02 09 38.3 0.0**
PLD Plovdiv 81.52 312 P **P 02 09 38.3 0.0**
PLD Plovdiv 81.52 312 *i P* **P 02 09 38.4 +0.1**
SIGR SIGRI 81.64 309 P **P 02 09 38.6 -0.4**
SIGR SIGRI 81.64 309 P **P 02 09 38.6 -0.4**
PGB Panagyurishte 81.74 312 *i P* **P 02 09 40.0 +0.5**
CHOS Chios island 81.76 308 P **P 02 09 39.1 -0.5**
CHOS Chios island 81.76 308 *eP* **P 02 09 39.7 +0.1**
KARP Karpathos 81.84 305 *eP* **P 02 09 40.0 -0.1**
NB2 NORSAR Subarra 81.86 333 P **P 02 09 39.9 +0.2**
comp=Z,454nm,1.4s,mb6.2,baz=61,slow=5.6
NOA NORSAR Array B 81.86 333 P **P 02 09 39.5 -0.3**
comp=Z,104nm,0.9s,mb5.8,baz=64,slow=5.2,SNR=207
NOA PKKPbc PKKPbc 02 28 11.1 -0.7
comp=Z,2.9nm,0.7s,baz=249,slow=2.3,SNR=10.0
NOA LR LR 02 49 37.4
comp=Z,37μm,18.6s,MS6.8,baz=60,slow=38
NOA NORSAR Array B 81.86 333 P **P 02 09 39.5 -0.3**
NOA PKKPbc PKKPbc 02 28 11.1 -0.7
NOA LR LR 02 49 37.4
OJC Ojcow 81.88 321 *eP* **P 02 09 39.7 -0.3**
OJC *e*sP sP 02 09 49.2 -5.1
OJC *e*PP PP 02 12 41.3 -5.9
OJC *e*S S 02 19 48.7 -2.5
OJC L 02 53 00.4
comp=Z,16nm,18.5s
OJC Ojcow 81.88 321 *eP* **P 02 09 39.7 -0.3**
OJC *e**SP sP 02 09 49.2 -5.1
OJC *e*S S 02 19 48.7 -2.5
OJC MLR MLR
comp=Z,16μm,18.5s,MS6.4
LIA Limnos Island 81.90 309 P **P 02 09 39.6 -0.8**
LIA Limnos Island 81.90 309 P **P 02 09 39.6 -0.8**
LIA Limnos Island 81.90 309 *eP* **P 02 09 39.8 -0.6**
KAVA Kavala 82.02 311 P **P 02 09 41.6 +0.6**
CRAG Craig 82.04 34 *eP* **P 02 09 40.6 -0.2**
comp=Z,210nm,2.0s,mb5.7
CRAG LR LR
comp=Z,5μm,18.0s,MS6.0
KECS Kecovo 82.09 319 *eP* **P 02 09 41.9 +0.7**
KECS pmax pmax
comp=Z,130nm,1.8s,mb5.6
KECS Kecovo 82.09 319 *eP* **P 02 09 41.9 +0.7**
comp=Z,130nm,1.8s,mb5.6
KECS Kecovo 82.09 319 *eP* **P 02 09 41.9 +0.7**
NAO01 NORSAR Array S 82.10 332 *eP* **P 02 09 40.6 -0.3**
comp=Z,75nm,0.9s,mb5.6
NAO01 LR LR
comp=Z,37μm,19.0s,MS6.8
GKP Gorka Klasztor 82.19 324 *eP* **P 02 09 41.9 +0.3**
GKP *e*PcP PcP 02 09 43.9 -3.0
GKP *e*S S 02 19 55.3 +1.0
GKP *e*SKSac SKSac 02 19 56.4 -3.3
GKP Gorka Klasztor 82.19 324⇓*eP* **P 02 09 41.9 +0.3**
GKP *e*PcP PcP 02 09 43.9 -3.0
GKP *e*S S 02 19 55.3 +1.0

GKP eSKSac SKSac 02 19 56.3 -3.4
OPO Ambohidratompo 82.27 247 P P **02 09 42.1 -0.5**
comp=Z,24nm,0.7s,mb5.2,baz=62,slow=5.1,SNR=30
DOMB Dombas 82.31 334 eP P **02 09 42.4 +0.4**
DOMB AMb AMB 02 09 45.1
comp=Z,352nm,2.2s,mb5.9
DOMB Dombas 82.31 334 eP P **02 09 42.4 +0.4**
comp=Z,352nm,2.2s,mb5.9
DLBC Dease Lake 82.33 30 P P **02 09 42.8 +0.6**
comp=Z,53nm,0.9s,mb5.5,baz=284,slow=4.2,SNR=44
DLBC Dease Lake 82.33 30 eP P **02 09 42.7 +0.5**
NVR Nevrokopi 82.36 311 eP P **02 09 42.4 -0.3**
MMB Musomiste 82.38 311 i P P **02 09 42.4 -0.4**
VTS Vitosha 82.39 312 P P **02 09 43.6 +0.7**
VTS Vitosha 82.39 312 P P **02 09 43.6 +0.7**
VTS Vitosha 82.39 312 i P P **02 09 43.7 +0.8**
ABPO Ambohimpanom 82.42 247 eP P **02 09 43.3 0.0**
ABPO pmax pmax
comp=Z,96nm,1.1s,mb5.6
ABPO Ambohimpanom 82.42 247 eP P **02 09 43.3 0.0**
comp=Z,96nm,1.1s,mb5.6
APE Apeiranthos 82.59 307 ⇑P P **02 09 42.7 -1.3**
APE Apeiranthos 82.59 307 P P **02 09 44.2 +0.2**
APE Apeiranthos 82.59 307 P P **02 09 40.5 -3.5**
APE Apeiranthos 82.59 307 ⇑iP P **02 09 42.7 -1.3**
APE Apeiranthos 82.59 307 eP P **02 09 42.9 -1.1**
OSL Oslo 82.59 332 eP P **02 09 43.8 +0.3**
OSL AMB AMB 02 09 46.5
comp=Z,354nm,2.1s,mb6.0
RES Resolute Bay 82.60 9 P P **02 09 42.5 -0.8**
comp=Z,41nm,0.8s,mb5.5,baz=302,slow=6.0,SNR=74
RES Resolute Bay 82.60 9 eP P **02 09 42.5 -0.9**
RES pmax pmax
comp=Z,225nm,1.0s,mb6.2
RES Resolute Bay 82.60 9 eP P **02 09 42.5 -0.9**
comp=Z,225nm,1.0s,mb6.2
TIM Timisoara 82.62 316 P P **02 09 45.5 +1.5**
OUR Ouranopolis 82.62 310 P P **02 09 43.2 -0.9**
OUR Ouranopolis 82.62 310 P P **02 09 43.2 -0.9**
SRS Serrai 82.63 311 P P **02 09 43.2 -1.0**
SRS Serrai 82.63 311 P P **02 09 43.2 -1.0**
MOL Molde 82.66 335 ⇑iP P **02 09 44.5 +0.6**
MOL AMb AMB 02 09 47.8
comp=Z,512nm,2.1s,mb6.2
MOL ePP PP 02 12 54.7 +1.4
MOL eS S 02 19 58.9 0.0
MOL eSS SS 02 25 23.7 +3.4
MOL AMS AMS 02 50 17.1
comp=Z,43µm,21.6s,MS6.8
MOL Molde 82.66 335 iP P **02 09 44.5 +0.6**
comp=Z,512nm,2.1s,mb6.2
MOL LR LR
comp=Z,43µm,21.6s,MS6.8
PSZ Piszkesteto 82.67 318 ⇓P P **02 09 44.7 +0.5**
PSZ Piszkesteto 82.67 318 P P **02 09 44.8 +0.6**
PSZ Piszkesteto 82.67 318 ⇓eP P **02 09 44.8 +0.6**
PSZ Piszkesteto 82.67 318 ⇓iP P **02 09 44.7 +0.5**
BSD Bornholm Skovb 82.69 326 iP P **02 09 44.5 +0.4**
BSD i S S 02 19 56.9 -2.4
BSD pmax pmax
comp=Z,220nm,1.1s,mb6.1
BSD MLR MLR
comp=Z,41µm,17.0s,MS6.9
BSD Bornholm Skovb 82.69 326 ⇑iP P **02 09 44.5 +0.4**
comp=Z,218nm,1.1s,mb6.1
BSD i S S 02 19 56.9 -2.4
BSD Bornholm Skovb 82.69 326 ⇑iP P **02 09 44.5 +0.4**
comp=Z,218nm,1.1s,mb6.1
BSD i S S 02 19 56.9 -2.4
BSD
comp=Z,41µm,17.0s
ZKR Zakros 82.71 305 P P **02 09 44.3 -0.4**
ZKR Zakros 82.71 305 P P **02 09 44.3 -0.4**
LIKS Likavka 82.73 320 eP P **02 09 47.5 +3.0**
LIKS pmax pmax
comp=Z,237nm,1.8s,mb5.9
LIKS Likavka 82.73 320 eP P **02 09 47.5 +3.0**
comp=Z,237nm,1.8s,mb5.9
LIKS Likavka 82.73 320 eP P **02 09 47.5 +3.0**
KKB Krupnik 82.73 312 i P P **02 09 44.6 -0.1**
PAF Port-aux-Franc 82.74 211 PFAKE 02 09 50.0 +5.7
PAF LR LR
comp=Z,4µm,19.0s,MS5.8
JMIC Jan Mayen 82.76 345 eP P **02 09 46.3 +2.1**
JMIC eSKS 02 20 04.1
JMIC e 02 20 05.8
JMIC Jan Mayen 82.76 345 P P **02 09 45.6 +1.4**
comp=Z,534nm,1.0s,mb6.5,baz=97,slow=9.1,SNR=9.3
THR1 Thera Island 82.87 306 P P **02 09 44.2 -1.3**
RAC Raciborz 82.88 321 eP P **02 09 46.5 +1.2**
RAC eS S 02 20 02.0 +0.5
RAC MLR MLR
comp=N,16µm,18.0s,MS6.5
RAC MLR MLR
comp=E,11µm,20.0s,MS6.5
RAC MLR MLR
comp=Z,11µm,18.0s,MS6.3
RAC Raciborz 82.88 321 eP P **02 09 46.5 +1.2**
RAC eS S 02 20 02.0 +0.5
RAC LR LR
comp=Z,11µm,18.0s,MS6.3
THR4 Thira Island, 82.89 306 P P **02 09 45.0 -0.6**
THR4 Thira Island, 82.89 306 P P **02 09 45.0 -0.6**
SOH Sokhos 82.91 311 P P **02 09 44.7 -0.9**
SOH Sokhos 82.91 311 P P **02 09 44.7 -0.9**
SOH Sokhos 82.91 311 eP P **02 09 44.6 -1.0**
THR3 Thira Island, 82.91 306 P P **02 09 46.0 +0.3**
THR3 Thira Island, 82.91 306 P P **02 09 46.0 +0.3**
PAIG Paliouri 82.98 310 P P **02 09 45.1 -0.9**
PAIG Paliouri 82.98 310 P P **02 09 45.1 -0.9**
PLG Polygyros 83.00 310 P P **02 09 45.3 -0.8**
PLG Polygyros 83.00 310 P P **02 09 45.3 -0.8**
PLG Polygyros 83.00 310 eP P **02 09 45.3 -0.8**
OKC Ostrava-Krasne 83.01 321 eP P **02 09 46.3 +0.4**
OKC eS S 02 20 02.0 -0.8
OKC MLR MLR
comp=Z,14µm,21.0s,MS6.3
OKC Ostrava-Krasne 83.01 321 eP P **02 09 46.3 +0.4**
OKC eSKS 02 20 02.0
OKC AMS AMS 02 50 00.0
comp=Z,14µm,21.0s
AOS Alonnisos 83.10 309 P P **02 09 44.7 -1.9**
AOS Alonnisos 83.10 309 P P **02 09 44.7 -1.9**
VYHS Vyhne 83.11 319 i P P **02 09 47.2 +0.7**
VYHS e 02 13 01.1
VYHS eS S 02 20 02.5 -1.4
VYHS pmax pmax
comp=Z,246nm,1.4s,mb6.0
VYHS MLR MLR
comp=Z,12µm,19.6s,MS6.3
VYHS Vyhne 83.11 319 i P P **02 09 47.2 +0.7**
comp=Z,246nm,1.4s,mb6.0
VYHS ePP PP 02 13 01.1 +3.8
VYHS eS S 02 20 02.5 -1.4
VYHS eSS SS 02 25 55.7 +28
VYHS LR LR
comp=Z,12µm,19.6s,MS6.3
VYHS Vyhne 83.11 319 i P P **02 09 47.2 +0.7**
VYHS ePP PP 02 13 01.1 +3.8
VYHS eS S 02 20 02.5 -1.4
VYHS eSS SS 02 25 55.7 +28
KNT Kendrikon 83.11 311 P P **02 09 45.9 -0.7**
KNT Kendrikon 83.11 311 P P **02 09 45.9 -0.7**
NPS Neapolis 83.13 305 eP P **02 09 45.9 -1.0**
HORT Hortiatis 83.17 311 P P **02 09 45.9 -1.0**
HORT Hortiatis 83.17 311 P P **02 09 45.9 -1.0**
KONO Kongsberg 83.22 332 ⇑iP P **02 09 46.5 -0.3**
KONO AMb AMB 02 09 50.1
comp=Z,339nm,2.3s,mb6.0
KONO eS S 02 20 05.5 +0.8
KONO AMS AMS 02 49 52.9
comp=Z,28µm,15.5s,MS6.7
KONO Kongsberg 83.22 332 eP P **02 09 46.5 -0.3**
KONO pmax pmax
comp=Z,1µm,2.1s,mb6.5
KONO MLR MLR
comp=Z,21µm,20.0s,MS6.5
KONO Kongsberg 83.22 332 eP P **02 09 46.5 -0.3**
comp=Z,1µm,2.1s,mb6.5
KONO LR LR
comp=Z,21µm,20.0s,MS6.5
THE Thessaloniki 83.25 311 P P **02 09 46.1 -1.3**
THE Thessaloniki 83.25 311 P P **02 09 46.1 -1.3**

LAST Lasithi 83.27 305 P P **02 09 47.3 -0.3**
LAST Lasithi 83.27 305 P P **02 09 47.3 -0.3**
VAY Valandovo 83.28 311 P P **02 09 46.6 -0.9**
VAY Valandovo 83.28 311 ⇓iP P **02 09 46.7 -0.9**
VAY i S S 02 20 05.7 -0.3
VAY Valandovo 83.28 311 P P **02 09 46.6 -0.9**
KOLL Kolacno 83.34 319 eP P **02 09 48.8 +1.1**
KOLL Kolacno 83.34 319 eP P **02 09 48.8 +1.1**
BUD Budapest 83.38 318 ⇓eP P **02 09 48.3 +0.4**
MORC Moravsky Berou 83.39 321 P P **02 09 48.8 +0.9**
MORC Moravsky Berou 83.39 321 ⇓iP P **02 09 48.6 +0.7**
STIP Stip 83.42 312 ⇓iP P **02 09 47.3 -0.9**
STIP i S S 02 20 12.9 +5.5
STIP Stip 83.42 312 P P **02 09 47.1 -1.1**
PTL Penteli 83.50 308 eP P **02 09 47.9 -0.8**
NEO Neokhori 83.53 309 eP P **02 09 47.9 -0.9**
XOR Xorichti 83.53 309 P P **02 09 46.8 -2.0**
XOR Xorichti 83.53 309 P P **02 09 46.8 -2.0**
ATHU Athens Univers 83.59 308 P P **02 09 46.8 -2.4**
VLY Voula,Athens 83.62 308 eP P **02 09 47.3 -2.0**
ATH Athens Observa 83.63 308 P P **02 09 46.8 -2.6**
ATH Athens Observa 83.63 308 eP P **02 09 48.2 -1.2**
IDI Anoyia 83.68 305 eP P **02 09 50.0 +0.3**
KSP Ksiaz 83.69 322 eP P **02 09 50.4 +1.0**
KSP ePcP PcP 02 09 52.4 -1.2
KSP eS S 02 20 05.3 -4.5
KSP eSKSac SKSac 02 20 12.5 +2.7
KSP LMZ 02 50 44.9
comp=Z,34µm,18.6s
KSP Ksiaz 83.69 322 ⇓iP P **02 09 50.3 +0.9**
KSP e 02 13 03.5
KSP eS S 02 20 07.6 -2.1
KSP MLR MLR
comp=Z,45µm,17.9s,MS6.9
KSP Ksiaz 83.69 322 ⇓iP P **02 09 50.3 +0.9**
KSP ePP PP 02 13 03.5 +1.4
KSP eS S 02 20 07.6 -2.1
KSP eSS SS 02 25 30.0 -6.2
KSP LR LR
comp=Z,45µm,17.9s,MS6.9
COP Copenhagen 83.71 327 ⇑iP P **02 09 50.3 +0.9**
COP i 02 10 05.0
COP i 02 20 09.0
COP i S S 02 20 10.6 +0.9
COP MLR MLR
comp=Z,18µm,17.0s,MS6.5
COP Copenhagen 83.71 327 ⇑iP P **02 09 50.3 +0.9**
COP i 02 10 05.0
COP i 02 20 09.0
COP i S S 02 20 10.6 +0.9
COP
comp=Z,18µm,17.0s
RGN Rugen 83.76 326 eP P **02 09 51.3 +1.6**
comp=Z,297nm,0.9s,mb6.4
LIT Litokhoron 83.78 310 P P **02 09 49.0 -1.1**
LIT Litokhoron 83.78 310 P P **02 09 49.0 -1.1**
LIT Litokhoron 83.78 310 eP P **02 09 48.9 -1.2**
SIVA Sivas 83.83 305 P P **02 09 50.1 -0.4**
SIVA Sivas 83.83 305 P P **02 09 50.1 -0.4**
SKO Skopje 83.84 312 P P **02 09 50.8 +0.4**
SKO Skopje 83.84 312 ⇓iP P **02 09 51.1 +0.8**
SKO i S S 02 20 13.7 +2.1
SKO Skopje 83.84 312 P P **02 09 50.8 +0.4**
DPC Dobruska-Polom 83.88 322 eP P **02 09 51.4 +1.0**
DPC e 02 13 06.1
DPC eS S 02 20 11.7 +0.1
DPC eSS SS 02 25 43.2 +4.3
DPC MLR MLR
comp=Z,26µm,17.1s,MS6.7
DPC Dobruska-Polom 83.88 322 eP P **02 09 51.4 +1.0**
DPC ePP PP 02 13 06.1 +2.5
DPC eSKS 02 20 11.7
DPC eSS SS 02 25 43.2 +4.3
DPC ex x 02 30 02.8
DPC ePKPPKP 02 36 10.1
DPC ex x 02 39 33.1
DPC AMS AMS 02 50 50.0
comp=Z,26µm,17.1s
ATAL Atalanti 83.89 309 P P **02 09 48.0 -2.7**
LKR Lokris 83.92 309 P P **02 09 48.3 -2.6**
LKR Lokris 83.92 309 P P **02 09 48.3 -2.6**
LKR Lokris 83.92 309 eP P **02 09 48.8 -2.1**
SMOL Smolenice 83.96 320 eP P **02 09 52.1 +1.3**
SMOL Smolenice 83.96 320 eP P **02 09 52.1 +1.3**
UPC Upice 84.00 322 eP P **02 09 51.8 +0.8**
UPC eS S 02 20 12.5 -0.3
UPC Upice 84.00 322 eP P **02 09 51.8 +0.8**
UPC eSKS 02 20 12.5
UPC ex x 02 39 30.2
UPC AMS AMS 02 50 50.0
DIVS Divibare 84.04 315 P P **02 09 49.8 -1.5**
PKSM Moragy 84.11 317 ⇓P P **02 09 51.9 +0.2**
PKSM Moragy 84.11 317 P P **02 09 52.0 +0.3**
PKSM Moragy 84.11 317 ⇓iP P **02 09 51.9 +0.2**
VRAC Vranov 84.14 320 ⇓P P **02 09 52.8 +1.0**
VRAC Vranov 84.14 320 P P **02 09 52.9 +1.1**
VRAC Vranov 84.14 320 ⇓iP P **02 09 52.8 +1.0**
VAM Vamos 84.17 305 eP P **02 09 52.1 -0.1**
LTK Loutraki 84.17 308 P P **02 09 48.8 -3.3**
FOO Floro 84.18 334 ⇑iP P **02 09 49.7 -2.0**
FOO AMb AMB 02 09 53.9
comp=Z,390nm,2.7s,mb6.0
FOO ePP PP 02 13 06.5 +0.8
FOO eSKS 02 20 10.6
FOO eSS SS 02 25 42.0 -0.6
FOO AMS AMS 02 51 20.5
comp=Z,43µm,16.2s,MS6.9
FOO Floro 84.18 334 ⇑iP P **02 09 49.7 -2.0**
comp=Z,390nm,2.7s,mb6.1
FOO LR LR
comp=Z,43µm,16.2s,MS6.9
KRUS Krusevo 84.19 312 ⇓iP P **02 09 50.7 -1.5**
KRUS i S S 02 20 09.4 -5.8
KZN Kozani 84.22 311 P P **02 09 51.0 -1.3**
KZN Kozani 84.22 311 P P **02 09 51.0 -1.3**
KZN Kozani 84.22 311 eP P **02 09 51.2 -1.1**
BIA Bitola 84.27 312 P P **02 09 50.7 -1.9**
BIA Bitola 84.27 312 iP P **02 09 50.8 -1.8**
BIA i S S 02 20 15.3 -0.6
BIA Bitola 84.27 312 P P **02 09 50.7 -1.9**
AGG Agios Georgios 84.28 309 P P **02 09 50.4 -2.3**
AGG Agios Georgios 84.28 309 P P **02 09 50.4 -2.3**
AGG Agios Georgios 84.28 309 eP P **02 09 50.6 -2.1**
ZST Bratislava 84.29 319 eP P **02 09 53.9 +1.4**
ZST eS S 02 20 16.3 +0.5
ZST pmax pmax
comp=Z,73nm,1.0s,mb5.8
ZST MLR MLR
comp=Z,12µm,18.6s,MS6.3
ZST Bratislava 84.29 319 eP P **02 09 53.9 +1.4**
comp=Z,73nm,1.0s,mb5.8
ZST eS S 02 20 16.3 +0.5
ZST eSS SS 02 25 58.6 +14
ZST LR LR
comp=Z,12µm,18.6s,MS6.3
ZST Bratislava 84.29 319 eP P **02 09 53.9 +1.4**
THL Klokotos Trika 84.31 310 P P **02 09 49.7 -3.1**
THL Klokotos Trika 84.31 310 eP P **02 09 50.3 -2.5**
FNA Florina 84.32 311 P P **02 09 52.4 -0.4**
FNA Florina 84.32 311 P P **02 09 52.4 -0.4**
DSF Desfina 84.36 309 P P **02 09 51.5 -1.6**
KARN Karanos 84.38 306 P P **02 09 52.1 -1.2**
KARN Karanos 84.38 306 eP P **02 09 52.3 -1.0**
RUE Ruedersdorf 84.42 324 eP P **02 09 53.8 +0.7**
comp=Z,708nm,1.1s,mb6.7
GVD Gavdhos 84.45 305 eP P **02 09 53.4 -0.2**
comp=Z,566nm,0.9s,mb6.7
GVD Gavdhos 84.45 305 P P **02 09 52.5 -1.1**
IVA Berane 84.56 314 ⇓iPKP P **02 09 54.4 +0.4**
IVA Berane 84.56 314 ⇓iPKP P **02 09 54.4 +0.4**
SUE Sulen 84.58 334 eP P **02 09 54.2 +0.5**
SUE AMb AMB 02 09 56.9
comp=Z,392nm,1.6s,mb6.3
SUE Sulen 84.58 334 eP P **02 09 54.2 +0.5**
comp=Z,392nm,1.6s,mb6.3
OHR Ohrid 84.61 312 P P **02 09 52.7 -1.6**
OHR Ohrid 84.61 312 iP P **02 09 52.8 -1.5**
OHR Ohrid 84.61 312 P P **02 09 52.7 -1.6**
PVY Plav 84.62 313 ⇓iPKP P **02 09 54.3 0.0**
PVY Plav 84.62 313 ⇓iPKP P **02 09 54.3 0.0**
BCI Bajram Curri 84.64 313 ePN P **02 09 54.6 +0.2**

KALE Kalithea 84.65 309 P P **02 09 53.2 -1.3**
VLI Veliai 84.66 307 eP P **02 09 52.2 -2.4**
GUR Goura 84.66 308 P P **02 09 51.8 -2.8**
GUR Goura 84.66 308 eP P **02 09 52.6 -2.0**
EVR Evrytania 84.70 309 eP P **02 09 55.5 +0.7**
BER Bergen 84.70 333 eP P **02 09 54.0 -0.4**
BER ⇑iP 02 09 54.3
BER AMb AMB 02 09 57.6
comp=Z,368nm,2.6s,mb6.1
BER eSKS 02 20 14.0
BER AMS AMS 02 51 21.1
comp=Z,45µm,16.0s,MS7.0
BER Bergen 84.70 333 ⇑iP P **02 09 54.3 -0.1**
BER pmax pmax
comp=Z,368nm,2.6s,mb6.0
BER MLR MLR
comp=Z,45µm,16.0s,MS7.0
BER Bergen 84.70 333 ⇑iP P **02 09 54.3 -0.1**
comp=Z,368nm,2.6s,mb6.0
BER LR LR
comp=Z,45µm,16.0s,MS7.0
ASK Askoy 84.71 333 eP P **02 09 53.9 -0.5**
BLS5 Blasjo 84.73 332 eP P **02 09 55.3 +0.8**
PLE Pljevlja 84.73 314 ⇓iPKP P **02 09 55.6 +0.7**
PLE Pljevlja 84.73 314 ⇓iP P **02 09 55.6 +0.7**
PLE Pljevlja 84.73 314 ⇓iPKP P **02 09 55.6 +0.8**
KBN Korca 84.80 311 ePN P **02 09 54.4 -0.8**
EFP Efpalio 84.80 309 P P **02 09 52.5 -2.8**
EFP Efpalio 84.80 309 eP P **02 09 55.2 -0.1**
TREC Trest 84.81 321 eP P **02 09 55.8 +0.7**
TREC e 02 13 15.1
TREC eS S 02 20 19.1 -1.9
TREC eSS SS 02 25 56.0 +3.3
TREC MLR MLR
comp=Z,17µm,21.7s,MS6.4
TREC Trest 84.81 321 eP P **02 09 55.8 +0.7**
TREC ePP PP 02 13 15.1 +3.9
TREC eSKS 02 20 19.1
TREC eSS SS 02 25 56.0 +3.3
TREC ePKPPKP 02 36 12.3
TREC ex x 02 39 29.3
TREC AMS AMS 02 51 40.0
comp=Z,17µm,21.7s
LAKA Lakka 84.82 309 P P **02 09 54.0 -1.4**
PVCC Panska Ves 84.82 322 eP P **02 09 56.1 +0.9**
PVCC e 02 13 13.3
PVCC eS S 02 20 19.1 -1.9
PVCC eSS SS 02 25 55.9 +3.1
PVCC MLR MLR
comp=Z,22µm,17.8s,MS6.6
PVCC Panska Ves 84.82 322 eP P **02 09 56.1 +0.9**
PVCC ePP PP 02 13 13.3 +2.0
PVCC eSKS 02 20 19.1
PVCC eSS SS 02 25 55.9 +3.1
PVCC ePKPPKP 02 36 12.9
PVCC AMS AMS 02 51 20.0
comp=Z,22µm,17.8s
SOP Sopron 84.83 319 ⇓eP P **02 09 55.7 +0.4**
VLX Vlachokerasia 84.84 308 P P **02 09 53.5 -2.0**
VLX Vlachokerasia 84.84 308 eP P **02 09 54.5 -1.0**
KMBO Kilima Mbogo 84.86 267 LR LR 02 46 35.3
comp=Z,10µm,20.1s,MS6.2,baz=356,slow=35
KMBO Kilima Mbogo 84.86 267 eP P **02 09 57.1 +1.0**
KMBO pmax pmax
comp=Z,275nm,1.4s
KMBO MLR MLR
comp=Z,9µm,21.0s
KMBO Kilima Mbogo 84.86 267 eP P **02 09 57.1 +1.0**
comp=Z,275nm,1.4s,mb6.2
KMBO LR LR
comp=Z,9µm,21.0s,MS6.2
KMBO Kilima Mbogo 84.86 267 P P **02 09 57.5 +1.4**
SNR=56
KMBO P 02 09 57.5
SNR=56
PUK Puka 84.88 313 ePN P **02 09 56.1 +0.4**
UPR University Cam 84.94 309 P P **02 09 55.5 -0.5**
SNART Snartemo 84.95 331 eP P **02 09 56.1 +0.5**
SNART AMb AMB 02 09 58.6
comp=Z,276nm,1.6s,mb6.1
MUD Monsted U'grnd 84.97 329 i P P **02 09 56.2 +0.4**
MUD i S S 02 20 17.1 -5.1
MUD pmax pmax
comp=Z,260nm,1.0s,mb6.3
MUD MLR MLR
comp=Z,48µm,18.0s,MS6.9
MUD Monsted U'grnd 84.97 329 i P P **02 09 56.2 +0.4**
comp=Z,260nm,1.0s,mb6.3
MUD i S S 02 20 17.1 -5.1
MUD Monsted U'grnd 84.97 329 i P P **02 09 56.2 +0.4**
comp=Z,260nm,1.0s,mb6.3
MUD i S S 02 20 17.1 -5.1
MUD
comp=Z,48µm,18.0s
BRG Berggiesshubel 85.03 323 eP P **02 09 56.2 0.0**
comp=Z,394nm,1.2s,mb6.4
BRG eS S 02 20 21.4 -1.7
BRG Berggiesshubel 85.03 323 i P P **02 09 56.7 +0.5**
comp=Z,394nm,1.2s,mb6.4
BRG i pP 02 10 07.8 +1.0
BRG comp=Z,165nm,1.0s
BRG i 02 10 14.3
BRG comp=Z,224nm,1.2s
BRG PP PP 02 13 17.0 +4.1
BRG S S 02 20 21.0 -2.1
BRG PS 02 21 18.0
BRG SS SS 02 26 01.0 +5.1
BRG ePKPPKP 02 26 11.0
BRG comp=Z,5.3nm,1.3s
BRG comp=N,17µm,21.2s
BRG comp=E,18µm,19.3s
BRG comp=Z,25µm,21.1s
BRG Berggiesshubel 85.03 323 i P P **02 09 56.7 +0.5**
BRG 02 13 17.0
BRG S S 02 20 21.0 -2.1
BRG PS 02 21 18.0
BRG SS SS 02 26 01.0 +5.1
BRG pmax pmax
comp=Z,236nm,1.2s,mb6.2
BRG MLR MLR
comp=Z,15µm,21.1s,MS6.3
BRG Berggiesshubel 85.03 323 i P P **02 09 56.7 +0.5**
comp=Z,236nm,1.2s,mb6.2
BRG i pP 02 10 07.8 +1.0
BRG i 02 10 14.3
BRG PP PP 02 13 17.0 +4.1
BRG S S 02 20 21.0 -2.1
BRG PS 02 21 18.0
BRG SS SS 02 26 01.0 +5.1
BRG e 02 30 52.0
BRG LR LR
comp=Z,15µm,21.1s,MS6.3
PRU Pruhonice 85.07 322 eP P **02 09 57.6 +1.2**
PRU e 02 13 17.5
PRU eS S 02 20 21.0 -2.5
PRU eSS SS 02 25 57.5 +1.0
PRU MLR MLR
comp=Z,22µm,17.8s,MS6.6
PRU Pruhonice 85.07 322 eP P **02 09 57.6 +1.2**
PRU ePP PP 02 13 17.5 +4.2
PRU eSKS 02 20 21.0
PRU eSS SS 02 25 57.5 +1.0
PRU ex x 02 30 19.0
PRU ex x 02 39 30.4
PRU AMS AMS 02 51 30.0
comp=Z,22µm,17.8s
PRA Prague 85.10 322 P P **02 09 57.0 +0.4**
PRA S S 02 20 26.0 +2.2
PRA SS SS 02 26 00.0 +3.1
PRA AMS AMS 02 51 50.0
UPM Unac-Piva 85.11 314 ePKP P **02 09 56.6 -0.1**
UPM Unac-Piva 85.11 314 ePKP P **02 09 56.7 -0.1**
CONA Conrad Observa 85.16 319 i P P **02 09 57.7 +0.9**
comp=Z,326nm,1.3s,mb6.3,SNR=207
TIR Tirane 85.17 312 eP P **02 09 56.6 -0.5**
TIR pmax pmax
comp=Z,573nm,1.1s,mb6.6
TIR MLR MLR
comp=Z,11µm,21.0s,MS6.2
TIR Tirane 85.17 312 eP P **02 09 56.6 -0.5**
comp=Z,573nm,1.1s,mb6.6

TIR LR LR
comp=Z,11µm,21.0s,MS6.2
TIR Tirane 85.17 312 P **P 02 09 56.4 -0.7**
TIR Tirane 85.17 312 *e*P **P 02 09 57.6 +0.5**
TTG Podgorica 85.17 313 ⇓*i*PKP **P 02 09 56.8 -0.3**
NKY Niksic 85.20 314 ⇓*i*PKP **P 02 09 56.9 -0.3**
NKY Niksic 85.20 314 ⇓*i*P **P 02 09 57.0 -0.2**
NKY Niksic 85.20 314 ⇓*i*PKP **P 02 09 57.0 -0.2**
ITM Ithomi 85.25 308 P **P 02 09 56.1 -1.5**
ITM Ithomi 85.25 308 P **P 02 09 56.1 -1.5**
ITM Ithomi 85.25 308 *e*P **P 02 09 56.3 -1.3**
RLS Riolos of Patr 85.26 309 *e*P **P 02 09 57.0 -0.6**
STAV Stavanger 85.31 332 *e*P **P 02 09 57.5 0.0**
STAV AMb AMB 02 10 00.2
comp=Z,339nm,2.5s,mb6.0
STAV Stavanger 85.31 332 *e*P **P 02 09 57.5 0.0**
comp=Z,339nm,2.5s,mb6.0
ULC Ulcinj 85.36 313 ⇓*i*PKP **P 02 09 57.4 -0.6**
ULC Ulcinj 85.36 313 ⇓*i*P **P 02 09 57.5 -0.5**
ULC Ulcinj 85.36 313 ⇓*i*PKP **P 02 09 57.5 -0.6**
KMY Karmoy 85.36 332 ⇑*i*P **P 02 09 58.3 +0.6**
KMY AMb AMB 02 10 00.7
comp=Z,383nm,2.6s,mb6.1
KMY *e*pP pP 02 10 08.5 +0.3
KMY Karmoy 85.36 332 ⇑*i*P **P 02 09 58.3 +0.6**
comp=Z,383nm,2.6s,mb6.1
CLL Collm 85.37 323 *e*P **P 02 09 57.4 -0.5**
comp=Z,350nm,1.1s,mb6.4
CLL *e*PP PP 02 13 19.3 +3.6
CLL *e*S S 02 20 24.5 -1.9
CLL Collm 85.37 323 *i*P **P 02 09 58.2 +0.3**
CLL *e*S S 02 20 20.0 -6.4
CLL pmax pmax
comp=Z,348nm,1.1s,mb6.4
CLL MLR MLR
comp=Z,28µm,21.4s,MS6.6
CLL Collm 85.37 323 *i*P **P 02 09 58.2 +0.3**
comp=Z,348nm,1.1s,mb6.4
CLL *e*pP pP 02 10 09.0 +0.5
CLL *e* 02 10 14.0
CLL *e*PP PP 02 13 19.0 +3.3
CLL *e*PPP 02 15 08.0
CLL *e*S S 02 20 20.0 -6.4
comp=N,2µm,20.6s
CLL *e*S S 02 20 20.0 -6.4
comp=E,7µm,23.7s
CLL *e*PS 02 21 30.0
CLL *e*SS SS 02 26 15.0 +14
CLL *i* PKKPbc PKKPbc 02 28 03.4 0.0
comp=Z,7.0nm,1.1s
CLL *i* sPKKPbc 02 28 17.7
CLL *e*(SSS) 02 30 18.0
CLL *e*SSSS 02 32 36.0
CLL *e*PKPPKPdf 02 36 08.0
CLL LmH 02 51 00.0
comp=N,19µm,20.5s
CLL LmH 02 51 00.0
comp=E,18µm,20.7s
CLL LmH 02 51 00.0
comp=Z,28µm,21.4s
BUM Brajici-Budva 85.47 313 ⇓*i*PKP **P 02 09 57.9 -0.7**
BUM Brajici-Budva 85.47 313 ⇓*i*PKP **P 02 09 58.0 -0.6**
BRY Bratogost 85.47 314 ⇓*i*PKP **P 02 09 56.9 -1.7**
BRY Bratogost 85.47 314 ⇓*i*P **P 02 09 56.9 -1.7**
BRY Bratogost 85.47 314 ⇓*i*PKP **P 02 09 56.9 -1.6**
PYL PYLOS 85.49 308 P **P 02 09 56.1 -2.7**
IGT Igoumenitsa 85.53 310 P **P 02 09 57.6 -1.3**
IGT Igoumenitsa 85.53 310 P **P 02 09 57.6 -1.3**
KOGS Kog 85.53 318 *i*P **P 02 09 58.9 +0.1**
KOGS *e*PP PP 02 13 19.1 +1.9
KOGS *e*S S 02 20 19.4 -8.8
BSEG Bad Segeberg 85.61 326 *e*P **P 02 09 59.1 +0.1**
comp=Z,501nm,1.1s,mb6.7
BSEG *e*PP PP 02 13 20.3 +2.8
BSEG *e*S S 02 20 28.1 -0.6
BSEG *e*SS SS 02 25 59.5 -4.7
SRN Sarande 85.63 311 *e*PN **P 02 09 58.6 -0.9**
ARSA Arzberg 85.65 319 *i*P **P 02 09 59.7 +0.3**
comp=Z,176nm,1.4s,mb6.1,SNR=76
HCY Herceg Novi 85.68 314 ⇓*i*PKP **P 02 09 56.1 -3.5**
HCY Herceg Novi 85.68 314 ⇓*i*P **P 02 09 56.2 -3.4**
HCY Herceg Novi 85.68 314 ⇓*i*PKP **P 02 09 56.1 -3.5**
KFL Anninata 85.74 309 P **P 02 09 59.0 -1.0**
KEK Kerkira 85.84 311 P **P 02 09 59.3 -1.2**
KEK Kerkira 85.84 311 P **P 02 09 59.3 -1.2**
KEK Kerkira 85.84 311 *e*P **P 02 09 59.2 -1.3**
VLS Valsamata 85.86 309 P **P 02 09 56.2 -4.4**
VLS Valsamata 85.86 309 P **P 02 09 56.2 -4.4**
VLS Valsamata 85.86 309 *e*P **P 02 09 59.1 -1.5**
SISC Sisak 85.86 317 P **P 02 10 01.7 +1.3**
SISC Sisak 85.86 317 *i*P **P 02 10 01.7 +1.3**
KHC Kasperske Hory 86.01 321 *e*P **P 02 10 01.9 +0.8**
KHC *e* pP 02 10 12.0 +0.3
KHC *e* 02 13 23.8
KHC *e*S S 02 20 25.2 -7.6
KHC *e*SS SS 02 26 14.8 +4.5
KHC MLR MLR
comp=Z,19µm,17.4s,MS6.6
KHC Kasperske Hory 86.01 321 *e*P **P 02 10 01.4 +0.3**
comp=Z,171nm,1.4s,mb6.1
KHC Kasperske Hory 86.01 321 *e*P **P 02 10 01.9 +0.8**
KHC *e*pP pP 02 10 12.0 +0.3
KHC *e*PP PP 02 13 23.8 +2.9
KHC *e*SKS 02 20 25.2
KHC *e*SS SS 02 26 14.8 +4.5
KHC *e*x x 02 30 13.0
KHC *e*PKPPKP 02 36 07.4
KHC *e*x x 02 39 27.6
KHC AMS AMS 02 52 10.0
comp=Z,19µm,17.4s
SCO Scoresbysund 86.03 348 *i*P **P 02 10 01.7 +0.9**
SCO *i* 02 13 20.8
SCO *i*S S 02 20 24.9 -7.3
SCO pmax pmax
comp=Z,54nm,1.1s,mb5.7
SCO MLR MLR
comp=Z,16µm,21.0s,MS6.4
SCO Scoresbysund 86.03 348 *i*P **P 02 10 01.7 +0.9**
comp=Z,54nm,1.1s,mb5.7
SCO *i* 02 13 20.8
SCO *i*S S 02 20 24.9 -7.3
SCO LR LR
comp=Z,16µm,21.0s,MS6.4
SCO Scoresbysund 86.03 348 *i*P **P 02 10 01.7 +0.9**
comp=Z,54nm,1.1s,mb5.7
SCO *i* 02 13 20.8
SCO *i*S S 02 20 24.9 -7.3
SCO
comp=Z,16µm,21.0s
STON Ston 86.05 314 P **P 02 10 00.6 -0.9**
STON Ston 86.05 314 *i*P **P 02 10 00.6 -0.9**
GEC2 GERESS Array S 86.06 321 *e*P **P 02 10 01.3 -0.1**
comp=Z,241nm,1.4s,mb6.2
GEC2 *e*PP PP 02 13 24.8 +3.4
GEC2 *e*S S 02 20 34.1 +0.8
GEC2 *e*SS SS 02 26 14.8 +3.7
GEC2 GERESS Array S 86.06 321 *e*P **P 02 10 01.3 -0.1**
GEC2 *e* 02 13 24.8
GEC2 *e*S S 02 20 34.1 +0.8
GEC2 *e*SS SS 02 26 14.8 +3.7
GEC2 pmax pmax
comp=Z,241nm,1.4s,mb6.2
GERES GERESS Array B 86.06 321 P **P 02 10 01.2 -0.2**
comp=Z,66nm,1.0s,mb5.8,baz=60,slow=4.7,SNR=180
GERES PKKPbc PKKPbc 02 28 02.6 +1.0
comp=Z,0.7nm,0.7s,baz=250,slow=2.7,SNR=4.5
GERES PKPPKP 02 36 08.6
comp=Z,1.1nm,1.0s,baz=222,slow=1.8,SNR=6.5
GERES LR LR 02 53 33.4
comp=Z,19µm,18.9s,MS6.5,baz=66,slow=39
GERES GERESS Array B 86.06 321 P **P 02 10 01.2 -0.2**
GERES PKKPbc PKKPbc 02 28 02.6 +1.0
GERES P'P' 02 36 08.6
GERES LR LR 02 53 33.4

TANN Tannenbergstha 86.08 323 *e*P **P 02 10 01.4 0.0**
comp=Z,431nm,2.0s,mb6.3
TANN *e*S S 02 20 32.8 -0.6
BBB Bella Bella 86.16 35 P **P 02 10 01.3 -0.4**
comp=Z,29nm,1.1s,mb5.4,baz=265,slow=6.4,SNR=8.1
BBB PP PP 02 13 24.9 +2.9
comp=Z,11nm,0.9s,baz=346,slow=3.4,SNR=3.1
BBB Bella Bella 86.16 35 P **P 02 10 01.3 -0.4**
BBB PP PP 02 13 24.9 +2.9
MOA Molln 86.16 320 *i*P **P 02 10 02.6 +0.7**
comp=Z,247nm,1.3s,mb6.3,SNR=137
PERS Pernice 86.16 318 *i*P **P 02 10 02.0 +0.1**
PERS *e*S S 02 20 24.3 -10
PERS *e* 02 20 33.8
NKC Novy Kostel 86.17 322 *e*P **P 02 10 02.6 +0.7**
NKC *e* 02 13 24.9
NKC *e*S S 02 20 25.9 -8.4
NKC *e*SS SS 02 26 16.0 +3.4
NKC MLR MLR
comp=Z,24µm,17.9s,MS6.6
NKC Novy Kostel 86.17 322 *e*P **P 02 10 02.6 +0.7**
NKC *e*PP PP 02 13 24.9 +2.7
NKC *e*SKS 02 20 25.9
NKC *e*SS SS 02 26 16.0 +3.4
NKC *e*x x 02 30 40.3
NKC *e*PKPPKP 02 36 10.0
NKC *e*x x 02 39 32.9
NKC AMS AMS 02 52 30.0
comp=Z,24µm,17.9s
SOKA Soboth 86.20 319 ⇓*i*P **P 02 10 02.2 +0.1**
comp=Z,144nm,1.1s,mb6.1
NRDL Niedersach Rie 86.41 325 *e*P **P 02 10 03.2 +0.2**
comp=Z,439nm,1.4s,mb6.5
NRDL *e*S S 02 20 36.9 +0.3
WET Wettzell 86.42 321 *e*P **P 02 10 03.3 +0.2**
comp=Z,314nm,1.8s,mb6.2
WET *e*pP pP 02 10 17.7 +4.0
WET *e*PP PP 02 13 27.1 +2.9
WET *e*S S 02 20 37.4 +0.7
WET *e*SS SS 02 26 18.5 +2.2
WET Wettzell 86.42 321 *e*P **P 02 10 03.3 +0.2**
WET *e**PP pP 02 10 17.7 +4.0
WET *e* 02 13 27.1
WET *e*S S 02 20 37.4 +0.7
WET *e*SS SS 02 26 18.5 +2.2
WET pmax pmax
comp=Z,314nm,1.8s,mb6.2
MOX Moxa 86.45 323 *e*P **P 02 10 03.3 0.0**
comp=Z,642nm,2.4s,mb6.4
MOX *e* 02 13 21.0
MOX *e*S S 02 20 27.0 -10
MOX *e*SS SS 02 26 25.0 +8.3
MOX
comp=Z,24µm,23.0s
MOX Moxa 86.45 323 *e*P **P 02 10 03.3 0.0**
comp=Z,642nm,2.4s,mb6.4
MOX *e* 02 13 21.0
MOX *e*S S 02 20 27.0 -10
MOX *e*SS SS 02 26 25.0 +8.3
MOX
comp=Z,24µm,23.0s
MOX Moxa 86.45 323 *e*P **P 02 10 03.1 -0.2**
comp=Z,273nm,1.6s,mb6.2
MOX *e*pP pP 02 10 19.9 +6.1
MOX *e*S S 02 20 36.7 -0.4
MOX *e*SS SS 02 26 15.9 -0.8
SUMG Summit 86.52 354 *e*P **P 02 10 03.6 +0.5**
comp=Z,350nm,1.1s,mb6.5
SUMG *e*PP PP 02 13 24.3 0.0
SUMG Summit 86.52 354 ⇑*i*P **P 02 10 02.3 -0.9**
comp=Z,192nm,1.0s,mb6.3
SUMG *i*S S 02 20 27.9 -9.0
ROTZ Rotzenmuhle 86.52 322 *e*P **P 02 10 04.0 +0.4**
comp=Z,708nm,2.3s,mb6.5
ROTZ *e*pP pP 02 10 20.7 +6.5
ROTZ *e*PP PP 02 13 26.5 +1.5
ROTZ *e*S S 02 20 38.6 +0.8
ROTZ *e*SS SS 02 26 19.5 +1.7
CASY Casey 86.55 184 *e*P **P 02 10 02.8 -0.3**
CASY *e*S S 02 20 34.8 -2.1
CASY Casey 86.55 184 *e*P **P 02 10 03.2 +0.1**
comp=Z,120nm,1.2s,mb6.0
CASY LR LR
comp=Z,4µm,22.0s,MS5.8
BOJS Bojanci 86.56 317 *e*P **P 02 10 04.4 +0.5**
BOJS *e* 02 10 19.7
BOJS *e*PP PP 02 13 28.5 +3.0
OBKA Obir 86.57 319 ⇓*i*P **P 02 10 04.0 +0.1**
comp=Z,134nm,1.4s,mb6.0,SNR=40
CLZ Clausthal 86.58 325 *e*P **P 02 10 04.0 +0.1**
comp=Z,489nm,1.6s,mb6.5
CLZ *e*S S 02 20 37.3 -0.9
CLZ Clausthal 86.58 325 *e*P **P 02 10 04.0 +0.1**
CLZ *e*S S 02 20 37.3 -0.9
CLZ pmax pmax
comp=Z,489nm,1.6s,mb6.5
YKA Yellowknife Ar 86.61 23 P **P 02 10 03.0 -0.8**
comp=Z,53nm,0.7s,mb5.9,baz=309,slow=4.5,SNR=197
YKA S S 02 20 24.7 -13
comp=Z,1.3nm,1.0s,baz=328,slow=5.8,SNR=3.3
YKA PKKPbc PKKPbc 02 27 57.5 -3.3
comp=Z,2.1nm,0.6s,baz=111,slow=3.2,SNR=4.6
YKA PKPPKP 02 36 02.3
comp=Z,1.2nm,0.8s,baz=130,slow=2.2,SNR=8.3
YKA LR LR 02 53 29.2
comp=Z,706nm,21.1s,MS5.0,baz=0.0,slow=39
YKA Yellowknife Ar 86.61 23 P **P 02 10 03.0 -0.8**
YKA S S 02 20 24.8 -13
YKA Yellowknife Ar 86.61 23 P **P 02 10 03.0 -0.8**
YKA S S 02 20 24.8 -13
YKA PKKPbc PKKPbc 02 27 57.5 -3.3
YKA P'P' 02 36 02.4
YKA LR LR 02 53 29.2
SCTE Santa Cesarea 86.64 311 *e*P **P 02 10 04.7 +0.3**
LJU Ljubljana 86.79 318 *e*P **P 02 10 05.2 +0.2**
LJU *e* 02 10 20.2
LJU *e* 02 13 29.5
LJU *e*S S 02 20 28.3 -12
LJU Ljubljana 86.79 318 *e*P **P 02 10 05.2 +0.2**
LJU *e* 02 10 20.2
LJU *e* 02 11 31.7
LJU *e*PP PP 02 13 29.5 +2.2
LJU *e*S S 02 20 28.3 -12
KBA Koelnbreinsper 87.06 319 ⇓*i*P **P 02 10 06.2 -0.1**
comp=Z,54nm,0.8s,mb5.9,SNR=32
MYKA Terra Mystica 87.08 319 ⇓*i*P **P 02 10 05.8 -0.6**
comp=Z,52nm,1.3s,mb5.6
RJOB Jochberg 87.10 320 *e*P **P 02 10 06.7 +0.2**
comp=Z,92nm,1.1s,mb5.9
RJOB *e*S S 02 20 42.8 -0.6
RJOB *e*SS SS 02 26 29.5 +3.1
KNDS Knezji Dol 87.10 318 *i*P **P 02 10 06.8 +0.2**
GRA1 Grafenberg Arr 87.12 322 *e*P **P 02 10 06.8 +0.2**
comp=Z,984nm,2.4s,mb6.6
GRA1 *e*PP PP 02 13 30.6 +0.7
GRA1 *e*S S 02 20 44.3 +0.7
GRA1 *e*SS SS 02 26 30.9 +4.3
GRA1 *e*P'P' 02 36 02.1
GRA1 LR LR
comp=Z,28µm,19.2s,MS6.7
GRF Grafenberg Arr 87.12 322 *e*P **P 02 10 06.8 +0.2**
comp=Z,984nm,2.4s,mb6.6
GRF *e*PP PP 02 13 30.6 +0.7
GRF *e*S S 02 20 44.3 +0.7
GRF *e*SS SS 02 26 30.9 +4.3
GRF *e*PKPPKPdf 02 36 02.1
GRF *e*L 02 53 34.0
comp=Z,28µm,19.2s
GRF Grafenberg Arr 87.12 322 *e*P **P 02 10 06.8 +0.2**
GRF *e* 02 13 30.6
GRF *e*S S 02 20 44.3 +0.7
GRF *e*SS SS 02 26 30.9 +4.3
GRF pmax pmax
comp=Z,984nm,2.4s,mb6.6
GRF MLR MLR
comp=Z,28µm,19.2s,MS6.7
GRF Grafenberg Arr 87.12 322 *e*P **P 02 10 06.8 +0.2**
GRF *e**PP pP 02 10 22.7 +5.6
GRF *e* 02 13 30.6
GRF *e*S S 02 20 44.3 +0.7
GRF *e*SS SS 02 26 30.9 +4.3
GRF pmax pmax
comp=Z,984nm,2.4s,mb6.6

GRF Grafenberg Arr 87.12 322 *e*P **P 02 10 06.8 +0.2**
comp=Z,984nm,2.4s,mb6.6
GRF *e*pP pP 02 10 22.7 +5.6
GRF *e*PP PP 02 13 30.6 +0.7
GRF *e*S S 02 20 44.3 +0.7
GRF *e*SS SS 02 26 30.9 +4.3
VOY Vojsko 87.19 318 *e*P **P 02 10 07.0 0.0**
VOY *e* pP 02 10 18.8 +1.3
VOY *e* 02 10 55.2
CADS Cadrg 87.20 319 *e*P **P 02 10 05.9 -1.1**
NVLJ Novalja 87.21 317 P **P 02 10 07.2 +0.1**
NVLJ Novalja 87.21 317 *i*P **P 02 10 07.2 +0.1**
UBBA Unterbreizbach 87.28 324 *e*P **P 02 10 06.9 -0.4**
comp=Z,292nm,2.0s,mb6.2
UBBA *e*pP pP 02 10 22.5 +4.6
UBBA *e*S S 02 20 43.7 -1.3
UBBA *e*SS SS 02 26 27.0 -1.7
RAR Rarotonga 87.35 114 PFAKE 02 10 20.0 +12
RAR LR LR
comp=Z,7µm,20.0s,MS6.1
PTCC Patocco-Chiusa 87.36 319 P **P 02 10 07.1 -0.7**
comp=Z,112nm,1.5s,mb5.9
TRI Trieste 87.41 318 *e*P **P 02 10 08.4 +0.3**
TRI pmax pmax
comp=Z,188nm,1.4s,mb6.1
TRI MLR MLR
comp=Z,9µm,22.0s,MS6.2
TRI Trieste 87.41 318 *e*P **P 02 10 08.4 +0.3**
comp=Z,188nm,1.4s,mb6.1
TRI LR LR
comp=Z,9µm,22.0s,MS6.2
LRW Lerwick 87.51 335 *e*P **P 02 10 07.7 -0.5**
LRW AMb AMB 02 10 10.3
comp=Z,125nm,3.3s
LRW AMS AMS 02 54 17.6
comp=Z,25µm,14.5s,MS6.8
LRW Lerwick 87.51 335 P **P 02 10 07.7 -0.5**
LRW AMb AMB 02 10 10.3
comp=Z,125nm,3.3s
LRW AMS AMS 02 54 17.6
comp=Z,25µm,14.5s
WAL1 Walls 87.61 335 ⇑*e*P **P 02 10 09.2 +0.5**
WAL1 Walls 87.61 335 P **P 02 10 09.2 +0.5**
DRV Dumont d'Urvil 87.67 173 P **P 02 10 14.0 +5.4**
DRV Dumont d'Urvil 87.67 173 PP PP 02 13 38.0 +3.4
DRV S S 02 20 39.0 -8.8
DRV SS SS 02 26 15.0 -20
DRV L 02 33 00.0
ABTA Abfaltersbach 87.72 319 ⇓*i*P **P 02 10 08.6 -0.9**
comp=Z,56nm,0.9s,mb5.8,SNR=48
IBBN Ibbenburen 87.76 326 *e*P **P 02 10 09.2 -0.3**
comp=Z,351nm,1.4s,mb6.4
IBBN *e*pP pP 02 10 24.7 +4.6
IBBN *e*S S 02 20 48.3 -1.2
IBBN *e*SS SS 02 26 37.2 +1.6
FUR Furstenfeldbru 87.81 321 *e*P **P 02 10 10.0 +0.1**
comp=Z,220nm,1.1s,mb6.3
FUR *e*PP PP 02 13 36.7 +1.3
FUR *e*S S 02 20 50.2 0.0
FUR *e*SS SS 02 26 35.9 -0.8
FUR Furstenfeldbru 87.81 321 *e*P **P 02 10 10.0 +0.1**
FUR *e* 02 13 36.7
FUR *e*S S 02 20 50.2 0.0
FUR *e*SS SS 02 26 35.9 -0.8
FUR pmax pmax
comp=Z,220nm,1.1s,mb6.3
RGNG Rignano Grg 87.98 314 P **P 02 10 10.3 -0.5**
WTTA Wattenberg 88.02 320 *i*P **P 02 10 10.8 -0.1**
comp=Z,120nm,1.0s,mb6.1,SNR=66
WATA Walderalm 88.02 320 ⇓*i*P **P 02 10 10.5 -0.4**
comp=Z,62nm,1.0s,mb5.8,SNR=43
WIT Witteveen 88.06 327 *e*P **P 02 10 12.0 +1.0**
comp=Z,638nm,1.1s,mb6.8
TIP Timpagrande 88.21 311 *e*P **P 02 10 12.0 0.0**
comp=Z,223nm,1.4s,mb6.2
TIP LR LR
comp=Z,9µm,19.0s,MS6.2
MOTA Moosalm 88.30 320 ⇓*i*P **P 02 10 11.9 -0.3**
comp=Z,63nm,0.9s,mb5.9,SNR=59
SOFL Sornfelli, Far 88.42 338 *e*P **P 02 10 13.0 +0.6**
SOFL AMS AMS 02 52 52.0
comp=Z,13µm,21.2s,MS6.3
SOFL Sornfelli, Far 88.42 338 P **P 02 10 13.0 +0.6**
SOFL AMS AMS 02 52 52.0
comp=Z,13µm,21.2s
TNS Taunus Mts 88.43 324 *e*P **P 02 10 12.9 +0.1**
comp=Z,175nm,1.2s,mb6.2
TNS *e*PP PP 02 13 39.9 -0.5
TNS *e*S S 02 20 55.1 -1.0
TNS *e*SS SS 02 26 48.3 +2.7
TNS Taunus Mts 88.43 324 *e*P **P 02 10 12.9 +0.1**
TNS *e* 02 13 39.9
TNS *e*S S 02 20 55.1 -1.0
TNS *e*SS SS 02 26 48.3 +2.7
TNS pmax pmax
comp=Z,175nm,1.2s,mb6.2
RETA Reutte 88.44 321 ⇓*i*P **P 02 10 12.6 -0.3**
comp=Z,34nm,1.0s,mb5.5,SNR=34
WTSB Winterswijk 88.44 326 *e*P **P 02 10 12.7 -0.1**
comp=Z,162nm,1.4s,mb6.1
BUG Bochum--Univer 88.46 325 *e*P **P 02 10 12.5 -0.4**
comp=Z,211nm,1.2s,mb6.2
BUG *e*S S 02 20 56.6 +0.3
BUG *e*SS SS 02 26 46.4 +0.5
TOD Tromm 88.54 323 *e*P **P 02 10 13.8 +0.5**
FETA Feichten 88.68 320 *i*P **P 02 10 14.2 +0.2**
comp=Z,92nm,1.0s,mb6.1,SNR=52
STU Stuttgart 88.73 322 *e*P **P 02 10 14.0 -0.2**
comp=Z,105nm,1.3s,mb6.0
STU *e*PP PP 02 13 44.4 +1.6
STU *e*S S 02 20 58.0 -1.0
STU Stuttgart 88.73 322 *e*P **P 02 10 14.5 +0.3**
STU pmax pmax
comp=Z,73nm,1.1s,mb5.9
STU Stuttgart 88.73 322 *e*P **P 02 10 14.5 +0.3**
comp=Z,73nm,1.1s,mb5.9
CING Cingoli 88.82 316 P **P 02 10 15.2 +0.4**
MIDA Miranda 88.89 314 P **P 02 10 14.9 -0.2**
MIR Mirnyy 89.02 191 ⇑*i*P **P 02 10 15.2 +0.2**
MIR *i* 02 10 29.0
MIR *e* 02 13 42.0
MIR *e*S SKSac 02 20 43.0 +1.3
MIR pmax pmax
comp=Z,114nm,1.6s,mb6.0
MIR pmax pmax
comp=Z,1µm,7.0s
MIR smax
comp=N,1µm,9.0s
MIR smax
comp=E,1µm,6.0s
MIR MLR MLR
comp=N,1µm,18.0s,MS5.6
MIR MLR MLR
comp=E,2µm,18.0s,MS5.6
MIR MLR MLR
comp=Z,2µm,18.0s,MS5.7
DAVA Damuels 89.06 321 *i*P **P 02 10 16.1 +0.3**
comp=Z,85nm,1.1s,mb6.0,SNR=28
KTD Kalmit 89.09 323 *e*P **P 02 10 16.6 +0.7**
ABH Alteburg 89.11 324 *e*P **P 02 10 16.6 +0.6**
AQU L'Aquila 89.14 315 ⇓P **P 02 10 16.6 +0.3**
AQU L'Aquila 89.14 315 P **P 02 10 17.1 +0.8**
AQU L'Aquila 89.14 315 ⇓*i*P **P 02 10 16.6 +0.3**
BRMO Bormio 89.15 320 P **P 02 10 16.6 +0.3**
CEL Celeste 89.21 311 *e*P **P 02 10 17.0 +0.3**
comp=Z,370nm,1.2s,mb6.6
CEL LR LR
comp=Z,10µm,22.0s,MS6.2
MABI Malga Bissina 89.27 319 P **P 02 10 16.9 +0.1**
SPAK Spaichingen-Ko 89.30 322 *e*P **P 02 10 17.2 +0.3**
MURB Monte Urbino 89.31 316 P **P 02 10 18.0 +0.9**
LANF Langenberg 89.42 323 *e*P **P 02 10 18.1 +0.6**
BFO Black Forest 89.45 322 P **P 02 10 17.9 +0.3**
comp=Z,180nm,1.3s,mb6.2,SNR=20
BFO Black Forest 89.45 322 *e*P **P 02 10 17.0 -0.6**
comp=Z,90nm,1.4s,mb5.9
BFO *e*pP pP 02 10 32.6 +4.4
BFO *e*PP PP 02 13 50.0 +1.5
BFO *e*S S 02 21 03.9 -1.8
BFO *e*SS SS 02 27 06.0 +5.5
BFO Black Forest 89.45 322 *e*P **P 02 10 17.0 -0.6**
BFO *e**PP pP 02 10 32.6 +4.4
BFO *e* 02 13 50.0
BFO *e*S S 02 21 03.9 -1.8

BFO eSS SS 02 27 06.0 +5.5
BFO pmax pmax
comp=Z,90nm,1.4s,mb5.9
RUP Ruppelstein 89.47 324 eP **P 02 10 18.3 +0.6**
HGN Heimansgroeve 89.53 325⇓eP **P 02 10 17.4 -0.5**
comp=Z,133nm,1.2s,mb6.1
HGN Heimansgroeve 89.53 325 ePP PP 02 13 50.3 +1.2
ORE Reay 89.54 335 eP **P 02 10 18.0 +0.2**
ORE Reay 89.54 335 P **P 02 10 18.0 +0.2**
MEM Membach 89.57 325 P **P 02 10 18.0 -0.1**
comp=Z,80nm,1.6s,mb5.8
MEM PP PP 02 13 50.7 +1.3
CERT Cerreto 89.60 315 P **P 02 10 17.6 -0.9**
BEBN Eben Emael 89.65 325 P **P 02 10 19.1 +0.5**
BEBN PP PP 02 13 51.7 +1.6
FNVD Fontana Vidola 89.79 318 P **P 02 10 20.9 +1.6**
VENT Ventotene 89.83 314 P **P 02 10 19.7 +0.1**
FELD Feldberg im Sc 89.87 322 eP **P 02 10 19.8 +0.2**
WLF Walferdange 89.99 324 P **P 02 10 20.6 +0.4**
comp=Z,206nm,1.3s,mb6.3
WLF PP PP 02 13 54.1 +1.4
WLF Walferdange 89.99 324 eP **P 02 10 20.1 0.0**
WLF eS S 02 21 10.2 -0.5
WLF Walferdange 89.99 324 eP **P 02 10 20.6 +0.5**
WLF pmax pmax
comp=Z,317nm,1.1s,mb6.6
WLF MLR MLR
comp=Z,26µm,19.0s,MS6.7
WLF Walferdange 89.99 324 eP **P 02 10 20.6 +0.5**
comp=Z,318nm,1.1s,mb6.6
WLF LR LR
comp=Z,26µm,19.0s,MS6.7
CSNT Castellina Chi 90.01 317 P **P 02 10 19.7 -0.6**
CDF Champ du Feu 90.01 323 eP **P 02 10 20.2 -0.1**
comp=Z,458nm,1.5s,mb6.3
CDF Champ du Feu 90.01 323 eP **P 02 10 20.2 -0.1**
CDF pmax pmax
comp=Z,229nm,1.5s,mb6.3
CDF Champ du Feu 90.01 323 eP **P 02 10 20.2 -0.1**
comp=Z,229nm,1.5s,mb6.3
BCLA Clavier 90.06 325 P **P 02 10 20.7 +0.3**
comp=Z,84nm,1.6s,mb5.8
BCLA PP PP 02 13 50.7 -2.5
ECH Echery 90.18 322 eP **P 02 10 21.3 +0.2**
ECH Echery 90.18 322 eP **P 02 10 20.4 -0.7**
ECH pmax pmax
comp=Z,63nm,1.1s,mb5.9
ECH MLR MLR
comp=Z,24µm,19.0s,MS6.7
ECH Echery 90.18 322 eP **P 02 10 20.4 -0.7**
comp=Z,63nm,1.1s,mb5.9
ECH LR LR
comp=Z,24µm,19.0s,MS6.7
TOLF Tolfa 90.20 315 P **P 02 10 20.8 -0.5**
VLC Villacollemand 90.26 318 eP **P 02 10 21.2 -0.3**
comp=Z,262nm,1.1s,mb6.5
VLC ePP PP 02 13 56.6 +1.5
VLC LR LR
comp=Z,15µm,22.0s,MS6.4
UCC Uccle 90.36 326 P **P 02 10 21.6 -0.2**
UCC PP PP 02 13 55.4 -0.2
BBS Basel-Blauen 90.37 322 eP **P 02 10 22.0 +0.1**
MOF Molkenrain 90.39 322 eP **P 02 10 22.2 +0.2**
VAI Varese 90.42 320 P **P 02 10 21.5 -0.7**
VAI pmax pmax
comp=Z,157nm,1.1s,mb6.2
VAI Varese 90.42 320 P **P 02 10 21.5 -0.7**
comp=Z,157nm,1.1s,mb6.2
OBC Olympics--Boni 90.47 38 P **P 02 10 25.1 +2.7**
GIVF Givet 90.48 325 eP **P 02 10 22.3 -0.1**
comp=Z,344nm,1.3s,mb6.2
GIVF Givet 90.48 325 eP **P 02 10 22.3 -0.1**
GIVF pmax pmax
comp=Z,172nm,1.3s,mb6.2
GIVF Givet 90.48 325 eP **P 02 10 22.3 -0.1**
comp=Z,172nm,1.3s,mb6.2
PGC Sidney 90.50 37 eP **P 02 10 23.9 +1.3**
comp=Z,4.1nm,0.9s,mb4.8
HVZN Vizzini 90.52 310 P **P 02 10 22.7 -0.2**
BOB Bobbio (Coli) 90.55 319 P **P 02 10 23.4 +0.6**
SNF Seneffe 90.55 325 P **P 02 10 22.7 0.0**
comp=Z,49nm,1.7s,mb5.6
SNF PP PP 02 13 57.8 +0.5
HINF Hinteralfeld 90.56 322 eP **P 02 10 22.3 -0.5**
comp=Z,250nm,1.5s,mb6.0
HINF Hinteralfeld 90.56 322 eP **P 02 10 22.3 -0.5**
HINF pmax pmax
comp=Z,125nm,1.5s,mb6.0
HINF Hinteralfeld 90.56 322 eP **P 02 10 22.3 -0.5**
comp=Z,125nm,1.5s,mb6.0
MAON Monte Argentar 90.60 316 P **P 02 10 23.1 0.0**
DOU Dourbes 90.61 325 P **P 02 10 22.9 -0.2**
comp=Z,42nm,1.1s,mb5.7
DOU PP PP 02 13 58.9 +1.2
BORG Borgarnes 90.65 345 P 02 10 32.0 +9.1
comp=Z,1µm,0.6s,SNR=6.3
BORG Borgarnes 90.65 345 PFAKE 02 10 30.0 +7.1
BORG LR LR
comp=Z,15µm,20.0s,MS6.4
ESY Stoneypath 90.73 332⇑eP **P 02 10 23.9 +0.5**
ESY Stoneypath 90.73 332 P **P 02 10 23.9 +0.5**
HAU Haudompre 90.76 323 eP **P 02 10 23.2 -0.5**
comp=Z,73nm,0.9s,mb5.7
HAU eMLR MLR
comp=Z,37µm,21.0s,MS6.5
HAU Haudompre 90.76 323 eP **P 02 10 23.2 -0.5**
HAU pmax pmax
comp=Z,37nm,0.9s,mb5.7
HAU MLR MLR
comp=Z,37µm,21.0s,MS6.8
HAU Haudompre 90.76 323 eP **P 02 10 23.2 -0.5**
comp=Z,37nm,0.9s,mb5.7
HAU LR LR
comp=Z,37µm,21.0s,MS6.8
LOMF Lomont 90.82 322 eP **P 02 10 24.4 +0.4**
BAIF Baives 90.84 325 eP **P 02 10 24.0 -0.1**
comp=Z,222nm,1.3s,mb6.0
BAIF Baives 90.84 325 eP **P 02 10 24.0 -0.1**
BAIF pmax pmax
comp=Z,111nm,1.3s,mb6.0
BAIF Baives 90.84 325 eP **P 02 10 24.0 -0.1**
comp=Z,111nm,1.3s,mb6.0
KAC Achnashellach 90.84 334 eP **P 02 10 23.8 -0.2**
KAC Achnashellach 90.84 334 P **P 02 10 23.8 -0.2**
THEF They Montfort 90.84 323 eP **P 02 10 24.3 +0.2**
EBH Black Hill 90.91 333 eP **P 02 10 24.6 +0.4**
EBH Black Hill 90.91 333 P **P 02 10 24.6 +0.4**
NLWA Neilton Lookou 90.92 38⇓P **P 02 10 23.9 -0.6**
baz=91,SNR=15
NLWA Neilton Lookou 90.92 38 eP **P 02 10 25.5 +1.0**
comp=Z,85nm,1.2s,mb6.0
NLWA ePP PP 02 13 56.8 -3.5
NLWA LR LR
comp=Z,4µm,19.0s,MS5.9
EDI Edinburgh 90.97 332 eP **P 02 10 24.6 +0.1**
EDI AMb AMB 02 10 27.0
comp=Z,120nm,2.5s,mb5.8
EDI e 02 14 00.1
EDI AMS AMS 02 55 10.2
comp=Z,28µm,18.7s,MS6.7
EDI Edinburgh 90.97 332 P **P 02 10 24.6 +0.1**
EDI AMb AMB 02 10 27.0
comp=Z,120nm,2.5s,mb5.8
EDI 02 14 00.1
EDI AMS AMS 02 55 10.2
comp=Z,28µm,18.7s
EBL Broad Law 91.01 332 eP **P 02 10 25.4 +0.7**
EBL Broad Law 91.01 332 P **P 02 10 25.4 +0.7**
A05A Maple Falls 91.08 36⇓P **P 02 10 24.3 -0.9**
baz=91
KSB Sheil Bridge 91.09 334 eP **P 02 10 24.6 -0.5**
KSB Sheil Bridge 91.09 334 P **P 02 10 24.6 -0.5**
KPL Plockton 91.09 334 eP **P 02 10 24.4 -0.7**
KPL AMb AMB 02 10 27.5
comp=Z,108nm,1.6s,mb5.9
KPL e 02 14 02.1
KPL AMS AMS 02 55 49.5
comp=Z,18µm,16.8s,MS6.6
KPL Plockton 91.09 334 P **P 02 10 24.4 -0.7**
KPL AMb AMB 02 10 27.5
comp=Z,108nm,1.6s,mb5.9
KPL 02 14 02.1
KPL AMS AMS 02 55 49.5
comp=Z,18µm,16.8s
EAU Auchinoon 91.14 332 eP **P 02 10 25.4 +0.1**

EAU Auchinoon 91.14 332 P **P 02 10 25.4 +0.1**
XAL Allendale 91.21 331 eP **P 02 10 25.5 -0.2**
XAL Allendale 91.21 331 P **P 02 10 25.5 -0.2**
MEZF Maizieres J'vi 91.22 323 eP **P 02 10 26.0 +0.1**
comp=Z,543nm,1.4s,mb6.4
MEZF Maizieres J'vi 91.22 323 eP **P 02 10 26.0 +0.1**
comp=Z,543nm,1.4s,mb6.7
WDD Wield Dalam 91.23 309 eP **P 02 10 24.7 -1.5**
comp=Z,109nm,1.1s,mb6.1
WDD LR LR
comp=Z,4µm,21.0s,MS5.8
EAB Aberfoyle 91.30 333 eP **P 02 10 26.1 0.0**
EAB Aberfoyle 91.30 333 P **P 02 10 26.1 0.0**
ESK Eskdalemuir 91.37 332 P **P 02 10 27.0 +0.6**
comp=Z,424nm,1.1s,mb6.7,SNR=9.7
ESK Eskdalemuir 91.37 332 eP **P 02 10 26.3 -0.1**
ESK AMb AMB 02 10 29.0
comp=Z,140nm,3.1s
ESK AMS AMS 02 56 26.3
comp=Z,22µm,17.7s,MS6.7
ESK Eskdalemuir 91.37 332 P **P 02 10 26.3 -0.1**
ESK AMb AMB 02 10 29.0
comp=Z,140nm,3.1s
ESK AMS AMS 02 56 26.3
comp=Z,22µm,17.7s
ESK Eskdalemuir 91.37 332 eP **P 02 10 27.2 +0.8**
ESK pmax pmax
comp=Z,95nm,1.1s,mb6.0
ESK MLR MLR
comp=Z,24µm,19.0s,MS6.7
ESK Eskdalemuir 91.37 332 eP **P 02 10 27.2 +0.8**
comp=Z,95nm,1.1s,mb6.0
ESK LR LR
comp=Z,24µm,19.0s,MS6.7
ECK Cauldkaine Hil 91.42 332⇑eP **P 02 10 26.7 0.0**
ECK Cauldkaine Hil 91.42 332 P **P 02 10 26.7 0.0**
GNW Green Mountain 91.44 38 eP **P 02 10 27.9 +1.1**
comp=Z,31nm,1.1s,mb5.5
OG01 Vacheresse 91.44 321 eP **P 02 10 27.5 +0.6**
KAR1 Arisaig 91.44 334 eP **P 02 10 26.7 0.0**
KAR1 Arisaig 91.44 334 P **P 02 10 26.7 0.0**
QLNO Quiliano 91.45 319 P **P 02 10 26.4 -0.6**
HPK Haverah Park 91.50 330 eP **P 02 10 27.1 +0.1**
HPK AMb AMB 02 10 29.5
comp=Z,119nm,2.9s,mb5.7
HPK AMS AMS 02 57 14.9
comp=Z,29µm,15.2s,MS6.8
HPK Haverah Park 91.50 330 P **P 02 10 27.1 +0.1**
HPK AMb AMB 02 10 29.5
comp=Z,119nm,2.9s,mb5.7
HPK AMS AMS 02 57 14.9
comp=Z,29µm,15.2s
E03A Lebam 91.55 39⇓P **P 02 10 27.1 -0.3**
baz=91,SNR=17
JCW Jim Creek 91.61 37 eP **P 02 10 28.8 +1.2**
PGBU Glenifferbraes 91.61 333 eP **P 02 10 27.4 -0.1**
PGBU AMb AMB 02 10 30.1
comp=Z,127nm,2.1s,mb5.9
PGBU AMS AMS 02 55 29.6
comp=Z,28µm,18.5s,MS6.7
PGBU Glenifferbraes 91.61 333 P **P 02 10 27.4 -0.1**
PGBU AMb AMB 02 10 30.1
comp=Z,127nm,2.1s,mb5.9
PGBU AMS AMS 02 55 29.6
comp=Z,28µm,18.5s
CABF La Chapelle 91.64 321 eP **P 02 10 27.9 0.0**
comp=Z,85nm,1.1s,mb5.7
CABF La Chapelle 91.64 321 eP **P 02 10 27.9 0.0**
CABF pmax pmax
comp=Z,42nm,1.1s,mb5.7
CABF La Chapelle 91.64 321 eP **P 02 10 27.9 0.0**
comp=Z,42nm,1.1s,mb5.7
MENF Mencas 91.65 326 eP **P 02 10 27.9 +0.1**
RPW Rockport 91.70 36 eP **P 02 10 28.8 +0.7**
LPG La Plagne 91.83 320 eP **P 02 10 29.3 +0.5**
comp=Z,221nm,0.9s,mb6.2
LPG La Plagne 91.83 320 eP **P 02 10 29.3 +0.5**
LPG pmax pmax
comp=Z,111nm,0.9s,mb6.2
LPG La Plagne 91.83 320 eP **P 02 10 29.3 +0.5**
comp=Z,111nm,0.9s,mb6.2
LPL La Plagne 91.83 320 eP **P 02 10 29.2 +0.4**
comp=Z,333nm,1.2s,mb6.2
LPL La Plagne 91.83 320 eP **P 02 10 29.2 +0.4**
LPL pmax pmax
comp=Z,167nm,1.2s,mb6.2
LPL La Plagne 91.83 320 eP **P 02 10 29.2 +0.4**
comp=Z,167nm,1.2s,mb6.2
TFO1 Folkestone 91.86 327 eP **P 02 10 28.9 +0.2**
TFO1 AMS AMS 02 56 21.7
comp=Z,30µm,17.4s,MS6.8
TFO1 Folkestone 91.86 327 P **P 02 10 28.9 +0.2**
TFO1 AMS AMS 02 56 21.7
comp=Z,30µm,17.4s
LHO Holmfirth 91.86 330⇑eP **P 02 10 28.5 -0.2**
LHO Holmfirth 91.86 330 P **P 02 10 28.5 -0.2**
F03A Seaside 91.87 39⇑P **P 02 10 28.6 -0.4**
baz=92,SNR=13
PGF Pioggiola 91.92 317 eP **P 02 10 29.6 +0.3**
comp=Z,867nm,1.1s,mb6.7
PGF Pioggiola 91.92 317 eP **P 02 10 29.6 +0.3**
PGF pmax pmax
comp=Z,434nm,1.1s,mb6.7
PGF Pioggiola 91.92 317 eP **P 02 10 29.6 +0.3**
comp=Z,434nm,1.1s,mb6.7
IMI Imperia 91.94 318 P **P 02 10 29.4 +0.1**
GCD Castle Douglas 91.98 332 eP **P 02 10 29.2 -0.1**
GCD Castle Douglas 91.98 332 P **P 02 10 29.2 -0.1**
A07A Ashnola River, 91.99 35⇑P **P 02 10 28.8 -0.6**
baz=92
XDE Dent Fell 92.01 331 eP **P 02 10 28.4 -1.0**
XDE Dent Fell 92.01 331 P **P 02 10 28.4 -1.0**
CWF Charnwood Fore 92.10 329⇑eP **P 02 10 28.9 -0.9**
CWF AMb AMB 02 10 31.8
comp=Z,91nm,2.9s,mb5.6
CWF e 02 14 08.0
CWF AMS AMS 02 56 29.1
comp=Z,31µm,16.3s,MS6.8
CWF Charnwood Fore 92.10 329 P **P 02 10 28.9 -0.9**
CWF AMb AMB 02 10 31.8
comp=Z,91nm,2.9s,mb5.6
CWF 02 14 08.0
CWF AMS AMS 02 56 29.1
comp=Z,31µm,16.3s
BNI Bardonecchia 92.10 320 eP **P 02 10 30.1 +0.1**
BNI e 02 14 07.1
BNI pmax pmax
comp=Z,142nm,1.2s,mb6.2
BNI MLR MLR
comp=Z,34µm,21.0s,MS6.8
BNI Bardonecchia 92.10 320 eP **P 02 10 30.1 +0.1**
comp=Z,142nm,1.2s,mb6.2
BNI ePP PP 02 14 07.1 -2.5
BNI LR LR
comp=Z,34µm,21.0s,MS6.8
SAOF Saorge 92.11 319 eP **P 02 10 30.7 +0.6**
D05A Enumclaw 92.12 38⇑P **P 02 10 29.7 -0.3**
baz=92
HEBO Mount Hebo 92.13 40 eP **P 02 10 31.4 +1.2**
comp=Z,80nm,0.9s,mb6.0
AUTN L'Aution 92.19 319 eP **P 02 10 32.4 +1.9**
MBDF Montbardon 92.22 320 eP **P 02 10 30.0 -0.6**
comp=Z,137nm,1.1s,mb5.9
MBDF Montbardon 92.22 320 eP **P 02 10 30.0 -0.6**
MBDF pmax pmax
comp=Z,68nm,1.1s,mb5.9
MBDF Montbardon 92.22 320 eP **P 02 10 30.0 -0.6**
comp=Z,68nm,1.1s,mb5.9
SBF Sospel 92.25 319 eP **P 02 10 30.5 -0.3**
comp=Z,409nm,1.0s,mb6.4
SBF Sospel 92.25 319 eP **P 02 10 30.5 -0.3**
SBF pmax pmax
comp=Z,205nm,1.0s,mb6.4
SBF Sospel 92.25 319 eP **P 02 10 30.5 -0.3**
comp=Z,205nm,1.0s,mb6.4
TOUF Mont Tournerai 92.29 319 eP **P 02 10 31.5 +0.6**
LUCF Luceram 92.29 319 eP **P 02 10 31.3 +0.4**
STNC Stoke 92.31 330 eP **P 02 10 30.1 -0.8**
STNC Stoke 92.31 330 P **P 02 10 30.1 -0.8**
SURF Saint Ours 92.32 319 eP **P 02 10 31.7 +0.7**
GAL1 Galloway 92.32 332 eP **P 02 10 30.4 -0.4**
GAL1 AMb AMB 02 10 33.2
comp=Z,98nm,3.0s
GAL1 AMS AMS 02 57 02.0
comp=Z,22µm,16.8s,MS6.7

GAL1 Galloway 92.32 332 P **P 02 10 30.4 -0.4**
GAL1 AMb AMB 02 10 33.2
comp=Z,98nm,3.0s
GAL1 AMS AMS 02 57 02.0
comp=Z,22µm,16.8s
GDM Grand'Maison 92.36 320 eP **P 02 10 32.2 +1.0**
MVIF Mont Vial 92.41 319 eP **P 02 10 31.9 +0.4**
LON Longmire 92.46 38 eP **P 02 10 32.0 +0.4**
LON pmax pmax
comp=Z,27nm,1.0s,mb5.5
LON Longmire 92.46 38 eP **P 02 10 32.0 +0.3**
comp=Z,27nm,1.0s,mb5.5
LON ePP PP 02 14 02.4 -10
F04A Amboy 92.55 39⇓P **P 02 10 31.5 -0.6**
baz=92,SNR=13
GRN Grenoble 92.57 320 eP **P 02 10 33.0 +0.8**
LOR Lormes 92.57 323 eP **P 02 10 31.7 -0.5**
comp=Z,272nm,1.2s,mb6.2
LOR eMLR MLR
comp=Z,31µm,18.8s,MS6.5
LOR Lormes 92.57 323 eP **P 02 10 31.7 -0.5**
LOR pmax pmax
comp=Z,136nm,1.2s,mb6.2
LOR MLR MLR
comp=Z,31µm,18.8s,MS6.8
LOR Lormes 92.57 323 eP **P 02 10 31.7 -0.5**
comp=Z,136nm,1.2s,mb6.2
LOR LR LR
comp=Z,31µm,18.8s,MS6.8
GIM North Isle of 92.59 332 eP **P 02 10 31.2 -0.9**
GIM North Isle of 92.59 332 P **P 02 10 31.2 -0.9**
MPOR Mary's Peak 92.62 40 P **P 02 10 33.1 +0.6**
CALN Calern 92.65 319 eP **P 02 10 33.3 +0.7**
ORIF Oris-en-Rattie 92.66 320 eP **P 02 10 32.6 0.0**
comp=Z,601nm,1.9s,mb6.4
ORIF eMLR MLR
comp=Z,22µm,21.5s,MS6.3
ORIF Oris-en-Rattie 92.66 320 eP **P 02 10 32.6 0.0**
ORIF pmax pmax
comp=Z,300nm,1.9s,mb6.4
ORIF Oris-en-Rattie 92.66 320 eP **P 02 10 32.6 0.0**
comp=Z,300nm,1.9s,mb6.4
COR Corvallis 92.73 40 eP **P 02 10 33.6 +0.6**
COR pmax pmax
comp=Z,111nm,0.9s,mb6.3
COR MLR MLR
comp=Z,4µm,21.0s,MS5.8
COR Corvallis 92.73 40 eP **P 02 10 33.5 +0.6**
comp=Z,111nm,0.9s,mb6.3
COR LR LR
comp=Z,4µm,21.0s,MS5.8
ETW Entiat 92.83 37 eP **P 02 10 34.2 +0.9**
SSF Saint Saulge 92.89 323 eP **P 02 10 33.3 -0.3**
comp=Z,171nm,1.1s,mb6.1
SSF Saint Saulge 92.89 323 eP **P 02 10 33.3 -0.3**
SSF pmax pmax
comp=Z,85nm,1.1s,mb6.1
SSF Saint Saulge 92.89 323 eP **P 02 10 33.3 -0.3**
comp=Z,85nm,1.1s,mb6.1
FRF La Foret Royal 92.90 319 eP **P 02 10 33.5 -0.2**
comp=Z,522nm,1.5s,mb6.4
FRF La Foret Royal 92.90 319 eP **P 02 10 33.5 -0.2**
FRF pmax pmax
comp=Z,261nm,1.5s,mb6.4
FRF La Foret Royal 92.90 319 eP **P 02 10 33.5 -0.2**
comp=Z,261nm,1.5s,mb6.4
G04A Mulino 92.90 39⇑P **P 02 10 33.6 -0.1**
baz=93,SNR=11
SFJD Kangerlussuaq 92.91 357 eP **P 02 10 32.8 -0.5**
SFJD *i* 02 14 11.4
SFJD *i* S SKSac 02 21 01.8 -2.7
SFJD pmax pmax
comp=Z,56nm,1.0s,mb6.0
SFJD MLR MLR
comp=Z,6µm,19.0s,MS6.1
SFJD Kangerlussuaq 92.91 357 eP **P 02 10 32.3 -1.0**
comp=Z,55nm,1.4s,mb5.8
SFJD ePP PP 02 14 12.4 -2.8
SFJD LR LR
comp=Z,6µm,19.0s,MS6.0
SFJD Kangerlussuaq 92.91 357 *i* P **P 02 10 32.8 -0.5**
comp=Z,56nm,1.0s,mb6.0
SFJD *i* 02 14 11.4
SFJD *i* S S 02 21 01.8 -35
SFJD
comp=Z,6µm,19.0s
SMF Signal de Mont 92.92 322 eP **P 02 10 33.5 -0.3**
comp=Z,321nm,1.2s,mb6.3
SMF Signal de Mont 92.92 322 eP **P 02 10 33.5 -0.3**
SMF pmax pmax
comp=Z,161nm,1.2s,mb6.3
SMF Signal de Mont 92.92 322 eP **P 02 10 33.5 -0.3**
comp=Z,160nm,1.2s,mb6.3
B08A Colville Reser 92.95 36⇑P **P 02 10 33.0 -0.9**
baz=93,SNR=17
HLM1 Long Mynd 92.99 330 eP **P 02 10 33.5 -0.4**
HLM1 Long Mynd 92.99 330 P **P 02 10 33.5 -0.4**
EDM Edmonton 93.02 29 eP **P 02 10 34.2 +0.1**
EDM e 02 14 15.0
SWN1 Swindon 93.09 328 eP **P 02 10 34.1 -0.4**
SWN1 AMb AMB 02 10 35.0
comp=Z,127nm,2.9s,mb5.8
SWN1 AMS AMS 02 56 26.2
comp=Z,23µm,18.0s,MS6.7
SWN1 Swindon 93.09 328 P **P 02 10 34.1 -0.4**
SWN1 AMb AMB 02 10 35.0
comp=Z,127nm,2.9s,mb5.8
SWN1 AMS AMS 02 56 26.2
comp=Z,23µm,18.0s
LMR La Mourre 93.10 318 eP **P 02 10 34.6 -0.1**
comp=Z,579nm,1.5s,mb6.5
LMR La Mourre 93.10 318 eP **P 02 10 34.6 -0.1**
LMR pmax pmax
comp=Z,289nm,1.5s,mb6.5
LMR La Mourre 93.10 318 eP **P 02 10 34.6 -0.1**
comp=Z,289nm,1.5s,mb6.5
AVF Avril sur Loir 93.12 323 eP **P 02 10 34.3 -0.4**
comp=Z,263nm,1.1s,mb6.3
AVF Avril sur Loir 93.12 323 eP **P 02 10 34.3 -0.4**
AVF pmax pmax
comp=Z,131nm,1.1s,mb6.3
AVF Avril sur Loir 93.12 323 eP **P 02 10 34.3 -0.4**
comp=Z,131nm,1.1s,mb6.3
VSL Villasalto 93.17 314 eP **P 02 10 36.0 +0.9**
comp=Z,85nm,1.3s,mb6.0
VSL LR LR
comp=Z,6µm,20.0s,MS6.0
OCF Saint Nazaire 93.19 320 eP **P 02 10 35.8 +0.8**
OG26 St.-Nazaire-De 93.19 320 eP **P 02 10 35.8 +0.8**
WLF1 Llynfaes 93.20 331 eP **P 02 10 34.5 -0.4**
WLF1 AMb AMB 02 10 37.4
comp=Z,388nm,3.1s
WLF1 AMS AMS 02 58 13.1
comp=Z,90µm,14.5s
WLF1 Llynfaes 93.20 331 P **P 02 10 34.5 -0.4**
WLF1 AMb AMB 02 10 37.4
comp=Z,388nm,3.1s
WLF1 AMS AMS 02 58 13.1
comp=Z,90µm,14.5s
HYF Humbligny 93.26 323 eP **P 02 10 35.6 +0.3**
SSB Saint Sauveur 93.26 321 eP **P 02 10 35.8 +0.4**
SSB Saint Sauveur 93.26 321 eP **P 02 10 35.3 -0.1**
SSB e 02 14 16.8
SSB pmax pmax
comp=Z,39nm,1.1s,mb5.8
SSB MLR MLR
comp=Z,10µm,20.0s,MS6.2
SSB Saint Sauveur 93.26 321 eP **P 02 10 35.3 -0.1**
comp=Z,39nm,1.1s,mb5.8
SSB ePP PP 02 14 16.8 -1.9
SSB LR LR
comp=Z,10µm,20.0s,MS6.2
GMM Mts of Mourne 93.28 332 eP **P 02 10 35.1 -0.2**
GMM Mts of Mourne 93.28 332 P **P 02 10 35.1 -0.2**
HOOD Mount Hood Mea 93.33 39 eP **P 02 10 36.5 +0.8**
comp=Z,248nm,1.2s,mb6.5
SMRF Simiane la Rot 93.34 319 eP **P 02 10 35.9 +0.1**
comp=Z,190nm,1.4s,mb6.0
SMRF Simiane la Rot 93.34 319 eP **P 02 10 35.9 +0.1**
comp=Z,190nm,1.4s,mb6.3
H04A Detroit Lake 93.36 40⇑P **P 02 10 35.5 -0.3**
baz=93,SNR=16
VIVF Saint-Julien-l 93.42 320 eP **P 02 10 35.8 -0.3**
comp=Z,120nm,1.1s,mb6.0
VIVF Saint-Julien-l 93.42 320 eP **P 02 10 35.8 -0.3**
VIVF pmax pmax

comp=Z,60nm,1.1s,mb5.9
VIVF Saint-Julien-I 93.42 320 *e*P **P 02 10 35.8 -0.3**
comp=Z,60nm,1.1s,mb5.9
PLDF La Plantade 93.43 322 *e*P **P 02 10 37.9 +1.8**
HTR Trewern Hill 93.45 329⇑*e*P **P 02 10 36.0 -0.1**
HTR Trewern Hill 93.45 329 P **P 02 10 36.0 -0.1**
HGH Gray Hill 93.51 329 *e*P **P 02 10 35.4 -0.9**
HGH Gray Hill 93.51 329 P **P 02 10 35.4 -0.9**
BGF Bois d'Agland 93.54 323 *e*P **P 02 10 36.3 -0.4**
comp=Z,127nm,1.1s,mb6.0
BGF Bois d'Agland 93.54 323 *e*P **P 02 10 36.3 -0.4**
BGF pmax pmax
comp=Z,64nm,1.1s,mb6.0
BGF Bois d'Agland 93.54 323 *e*P **P 02 10 36.3 -0.4**
comp=Z,64nm,1.1s,mb6.0
B09A Rice 93.56 35 ⇑P **P 02 10 36.2 -0.4**
baz=93,SNR=8.0
COLF Collangettes 93.63 321 *e*P **P 02 10 37.7 +0.6**
AGO Saint Agoulin 93.66 322 *e*P **P 02 10 39.1 +1.9**
OD2 Odessa Site #2 93.85 36 *e*P **P 02 10 38.5 +0.5**
comp=Z,41nm,1.0s,mb5.8
OD2 *e*PP PP 02 14 18.9 -4.4
PYM Petit Puy Mans 93.90 322 *e*P **P 02 10 40.1 +1.8**
DMUB Kingscourt 93.92 332 *e*P **P 02 10 38.1 -0.1**
DMUB *e* 02 14 24.4
D08A Wollman Farm, 93.93 37 ⇓P **P 02 10 37.0 -1.4**
baz=94,SNR=5.4
RSW Rattlesnake Hi 93.93 37 *e*P **P 02 10 38.6 +0.2**
comp=Z,9.9nm,0.6s,mb5.4
WRD Warden 93.95 37 P **P 02 10 38.8 +0.3**
HAWA Hanford 93.96 37 *e*P **P 02 10 40.0 +1.4**
comp=Z,26nm,0.9s,mb5.7
HAWA LR LR
comp=Z,3μm,20.0s,MS5.8
G06A Carlson Farm, 93.97 39 ⇓P **P 02 10 38.2 -0.5**
baz=94
HUMO Hull Mountain 93.99 42 *e*P **P 02 10 39.4 +0.6**
comp=Z,38nm,1.0s,mb5.8
HUMO *e*PP PP 02 14 24.9 +0.4
HUMO LR LR
comp=Z,4μm,20.0s,MS5.9
LDF La Druitiere 94.00 325 *e*P **P 02 10 38.0 -0.7**
comp=Z,79nm,1.1s,mb5.8
LDF La Druitiere 94.00 325 *e*P **P 02 10 38.0 -0.7**
LDF pmax pmax
comp=Z,39nm,1.1s,mb5.8
LDF La Druitiere 94.00 325 *e*P **P 02 10 38.0 -0.7**
comp=Z,39nm,1.1s,mb5.8
LBL Lubilhac 94.05 321 *e*P **P 02 10 41.0 +2.0**
TCF Toulx Ste Croi 94.06 323 *e*P **P 02 10 38.9 -0.1**
comp=Z,201nm,1.1s,mb6.1
TCF Toulx Ste Croi 94.06 323 *e*P **P 02 10 38.9 -0.1**
TCF pmax pmax
comp=Z,100nm,1.1s,mb6.2
TCF Toulx Ste Croi 94.06 323 *e*P **P 02 10 38.9 -0.1**
comp=Z,100nm,1.1s,mb6.2
FLN La Foliniere 94.09 326 *e*P **P 02 10 38.3 -0.8**
comp=Z,55nm,1.1s,mb5.6
FLN *e*MLR MLR
comp=Z,41μm,18.0s,MS6.6
FLN La Foliniere 94.09 326 *e*P **P 02 10 38.3 -0.8**
FLN pmax pmax
comp=Z,27nm,1.1s,mb5.6
FLN MLR MLR
comp=Z,41μm,18.0s,MS6.9
FLN La Foliniere 94.09 326 *e*P **P 02 10 38.3 -0.8**
comp=Z,28nm,1.1s,mb5.6
FLN LR LR
comp=Z,41μm,18.0s,MS6.9
DSB Dublin 94.13 332 *e*P **P 02 10 38.5 -0.7**
comp=Z,48nm,1.3s,mb5.8
DSB *e*PP PP 02 14 24.0 -1.1
A11A Hall Mountain, 94.19 34 ⇓P **P 02 10 38.9 -0.7**
baz=94,SNR=20
NEW Newport 94.21 35 *e*P **P 02 10 40.0 +0.3**
NEW pmax pmax
comp=Z,45nm,1.0s
NEW MLR MLR
comp=Z,4μm,20.0s
NEW Newport 94.21 35 *e*P **P 02 10 40.0 +0.3**
comp=Z,45nm,1.0s,mb5.9
NEW LR LR
comp=Z,4μm,20.0s,MS5.9
LASF Ste Croix 94.33 320 *e*P **P 02 10 40.3 0.0**
comp=Z,101nm,1.1s,mb5.9
HEX Exmoor 94.35 329⇑*e*P **P 02 10 39.4 -0.8**
HEX Exmoor 94.35 329 P **P 02 10 39.4 -0.8**
FRNF Fournols 94.37 322 *e*P **P 02 10 41.7 +1.2**
VIPM Ingram Point 94.39 39 P **P 02 10 41.5 +0.9**
DCN Croghan 94.46 332 *e*P **P 02 10 40.4 -0.3**
DCN *e* 02 14 27.5
B11A Sandpoint 94.51 34 ⇓P **P 02 10 40.0 -1.1**
baz=94,SNR=7.0
GRR Gorron 94.52 326 *e*P **P 02 10 40.4 -0.7**
comp=Z,106nm,1.4s,mb5.8
GRR Gorron 94.52 326 *e*P **P 02 10 40.4 -0.7**
GRR pmax pmax
comp=Z,53nm,1.4s,mb5.8
GRR Gorron 94.52 326 *e*P **P 02 10 40.4 -0.7**
comp=Z,53nm,1.4s,mb5.8
YBH Yreka Blue Hor 94.61 42 P **P 02 10 42.1 +0.5**
comp=Z,22nm,1.1s,mb5.5,baz=295,slow=0.6,SNR=17
YBH PP PP 02 14 37.8 +8.5
comp=Z,13nm,1.0s,baz=298,slow=3.7,SNR=6.9
YBH Yreka Blue Hor 94.61 42 *e*P **P 02 10 42.1 +0.5**
YBH *e* 02 14 33.1
YBH pmax pmax
comp=Z,46nm,1.2s
YBH MLR MLR
comp=Z,3μm,20.0s
YBH Yreka Blue Hor 94.61 42 *e*P **P 02 10 42.0 +0.4**
comp=Z,46nm,1.2s,mb5.8
YBH *e*PP PP 02 14 33.1 +3.8
YBH LR LR
comp=Z,3μm,20.0s,MS5.8
HTL Hartland 94.73 329 *e*P **P 02 10 41.9 -0.1**
HTL AMb AMB 02 10 44.1
comp=Z,65nm,3.2s
HTL Hartland 94.73 329 P **P 02 10 41.9 -0.1**
HTL AMb AMB 02 10 44.1
comp=Z,65nm,3.2s
DYA Yadsworthy 94.82 328 *e*P **P 02 10 40.9 -1.5**
DYA AMb AMB 02 10 45.3
comp=Z,43nm,2.7s,mb5.4
DYA *e* 02 14 28.1
DYA AMS AMS 02 58 30.4
comp=Z,24μm,16.1s,MS6.8
DYA Yadsworthy 94.82 328 P **P 02 10 40.9 -1.5**
DYA AMb AMB 02 10 45.3
comp=Z,43nm,2.7s,mb5.4
DYA 02 14 28.1
DYA AMS AMS 02 58 30.4
comp=Z,24μm,16.1s
CAF Calviac 94.92 322 *e*P **P 02 10 43.2 +0.2**
comp=Z,105nm,1.3s,mb5.8
CAF Calviac 94.92 322 *e*P **P 02 10 43.2 +0.2**
CAF pmax pmax
comp=Z,52nm,1.3s,mb5.8
CAF Calviac 94.92 322 *e*P **P 02 10 43.2 +0.2**
comp=Z,52nm,1.3s,mb5.8
G08A Pilot Rock 94.92 38 ⇓P **P 02 10 42.5 -0.5**
baz=95
LNOR Lincton Mounta 94.97 37 *e*P **P 02 10 43.5 +0.3**
LNOR pmax pmax
comp=Z,12nm,1.2s,mb5.2
LNOR Lincton Mounta 94.97 37 *e*P **P 02 10 43.5 +0.2**
comp=Z,24nm,1.2s,mb5.5
RJF Les Rejaudoux 95.02 322 *e*P **P 02 10 43.8 +0.3**
comp=Z,338nm,1.2s,mb6.3
RJF *e*MLR MLR
comp=Z,19μm,18.8s,MS6.3
RJF Les Rejaudoux 95.02 322 *e*P **P 02 10 43.8 +0.3**
RJF pmax pmax
comp=Z,169nm,1.2s,mb6.3
RJF MLR MLR
comp=Z,19μm,18.8s,MS6.6
RJF Les Rejaudoux 95.02 322 *e*P **P 02 10 43.8 +0.3**
comp=Z,169nm,1.2s,mb6.3
RJF LR LR
comp=Z,19μm,18.8s,MS6.6
KEST Kesra 95.03 311 P **P 02 10 44.5 +0.8**
comp=Z,11nm,1.1s,mb5.2,baz=323,slow=1.9,SNR=14
PPT Papeete 95.04 107 *e*PP PP 02 14 26.2 -7.7
comp=Z,1μm,27.2s
PPT *e*SP SP 02 23 11.6 -2.0
comp=Z,9μm,27.5s
PPT *e*SS SS 02 28 22.2 -1.1
comp=Z,5μm,28.5s
PPT *e*LR LR 02 41 08.1
comp=Z,23μm,25.5s,baz=292
PPT Papeete 95.04 107 LR LR 02 45 23.3
comp=Z,5μm,20.3s,MS6.0,baz=264,slow=30
PPT Papeete 95.04 107 *e*PP PP 02 14 26.2 -7.7
PPT *e*SP SP 02 23 11.6 -2.0
PPT *e*SS SS 02 28 22.2 -1.1
MFF Saint Martin d 95.20 324 *e*P **P 02 10 44.1 -0.2**
comp=Z,228nm,1.3s,mb6.2
MFF Saint Martin d 95.20 324 *e*P **P 02 10 44.1 -0.2**
MFF pmax pmax
comp=Z,114nm,1.3s,mb6.1
MFF Saint Martin d 95.20 324 *e*P **P 02 10 44.1 -0.2**
comp=Z,114nm,1.3s,mb6.1
K05A Summer Lake 95.21 41 ⇑P **P 02 10 44.2 -0.1**
baz=95,SNR=44
K05A ⇓PKKPab 02 28 11.0
baz=95
A13A Flathead Natio 95.22 33 ⇓P **P 02 10 43.9 -0.4**
baz=95
E10A Myers Farm, Un 95.27 36 ⇓P **P 02 10 44.3 -0.3**
baz=95,SNR=6.0
I07A Izee 95.29 39 ⇑P **P 02 10 44.4 -0.3**
baz=95,SNR=18
WDC Whiskeytown Da 95.33 43 *e*P **P 02 10 45.1 +0.1**
WDC pmax pmax
comp=Z,32nm,1.0s,mb5.7
WDC MLR MLR
comp=Z,4μm,20.0s,MS5.8
WDC Whiskeytown Da 95.33 43 *e*P **P 02 10 45.1 +0.1**
comp=Z,32nm,1.0s,mb5.7
WDC LR LR
comp=Z,4μm,20.0s,MS5.8
D11A Klaveano Farm, 95.36 35 ⇓P **P 02 10 44.3 -0.7**
baz=95,SNR=23
WALA Waterton Lakes 95.40 33 *e*P **P 02 10 46.0 +0.9**
comp=Z,2.9nm,1.2s
WALA *e*PP PP 02 14 32.0 -3.2
SGMF Saint Gilles 95.50 326 *e*P **P 02 10 44.8 -0.8**
comp=Z,102nm,1.2s,mb5.8
SGMF Saint Gilles 95.50 326 *e*P **P 02 10 44.8 -0.8**
SGMF pmax pmax
comp=Z,51nm,1.2s,mb5.8
SGMF Saint Gilles 95.50 326 *e*P **P 02 10 44.8 -0.8**
comp=Z,51nm,1.2s,mb5.8
H08A Prairie City 95.53 39 ⇑P **P 02 10 45.1 -0.7**
baz=95,SNR=14
B13A Whitefish 95.54 34 ⇑P **P 02 10 44.7 -1.1**
baz=95,SNR=22
CCA1 Carnmenellis 95.61 329 *e* SP 02 23 13.9 -3.9
CCA1 AMS AMS 02 58 46.4
comp=Z,20μm,16.7s,MS6.7
LFF La Frestale 95.68 322 *e*P **P 02 10 46.7 +0.2**
comp=Z,207nm,1.6s,mb6.0
LFF La Frestale 95.68 322 *e*P **P 02 10 46.7 +0.2**
LFF pmax pmax
comp=Z,104nm,1.6s,mb6.0
LFF La Frestale 95.68 322 *e*P **P 02 10 46.7 +0.2**
comp=Z,104nm,1.6s,mb6.0
BSMT Bassoo Peak 95.70 34 *e*P **P 02 10 47.4 +0.9**
comp=Z,17nm,0.9s,mb5.5
BSMT *e*PP PP 02 14 33.0 -4.5
A14A Double T Ranch 95.70 33 ⇑P **P 02 10 45.3 -1.2**
baz=96,SNR=35
PMOR Pomariorio Ree 95.72 104 *e*P **P 02 10 48.8 +1.6**
comp=Z,137nm,1.0s,mb6.3
MTLF Montolieu 95.73 320 *e*P **P 02 10 46.5 -0.2**
comp=Z,62nm,1.0s,mb5.7
MTLF Montolieu 95.73 320 *e*P **P 02 10 46.5 -0.2**
MTLF pmax pmax
comp=Z,31nm,1.0s,mb5.7
MTLF Montolieu 95.73 320 *e*P **P 02 10 46.5 -0.2**
comp=Z,31nm,1.0s,mb5.7
HOPS Hopland 95.81 45 PFAKE 02 11 00.0 +13
HOPS LR LR
comp=Z,7μm,20.0s,MS6.2
ROSF Rostrenen 95.82 327 *e*P **P 02 10 46.2 -0.8**
comp=Z,86nm,1.2s,mb5.8
ROSF Rostrenen 95.82 327 *e*P **P 02 10 46.2 -0.8**
ROSF pmax pmax
comp=Z,43nm,1.2s,mb5.8
ROSF Rostrenen 95.82 327 *e*P **P 02 10 46.2 -0.8**
comp=Z,43nm,1.2s,mb5.8
E11A Bogner Ranch, 95.85 36 ⇑P **P 02 10 46.0 -1.2**
baz=96,SNR=10
D12A Red Ives Fores 95.89 35 ⇑P **P 02 10 46.3 -1.1**
baz=96
C13A Hot Springs 95.92 34 ⇑P **P 02 10 46.8 -0.7**
baz=96,SNR=16
LBCM Butte Creek Ri 95.95 43 P **P 02 10 47.9 +0.1**
FILF Fillols 95.96 319 *e*P **P 02 10 48.3 +0.5**
G10A Bishop Farm, J 95.97 37 ⇑P **P 02 10 47.1 -0.7**
baz=96,SNR=24
QUIF Quistinic 96.03 326 *e*P **P 02 10 46.9 -1.1**
comp=Z,44nm,1.0s,mb5.5
QUIF Quistinic 96.03 326 *e*P **P 02 10 46.9 -1.1**
QUIF pmax pmax
comp=Z,22nm,1.0s,mb5.5
QUIF Quistinic 96.03 326 *e*P **P 02 10 46.9 -1.1**
comp=Z,22nm,1.0s,mb5.5
MOD Modoc 96.03 41 *e*P **P 02 10 48.5 +0.3**
comp=Z,23nm,0.9s,mb5.6
MOD *e*PP PP 02 14 39.0 -1.3
MOD LR LR
comp=Z,2μm,19.0s,MS5.7
H09A Durkee 96.03 38 ⇓P **P 02 10 47.9 -0.2**
baz=96,SNR=7.3
JTMT Jette 96.03 34 *e*P **P 02 10 48.4 +0.4**
comp=Z,31nm,1.2s,mb5.6
JTMT *e*PP PP 02 14 38.9 -1.2
A15A Johnson Ranch, 96.05 32 ⇑P **P 02 10 47.7 -0.4**
baz=96
YBMT Yellow Bay 96.10 34 *e*P **P 02 10 50.4 +2.1**
comp=Z,15nm,1.1s,mb5.3
YBMT *e*PP PP 02 14 40.5 -0.1
FCC Fort Churchill 96.12 18 *e*P **P 02 10 47.4 -0.8**
comp=Z,0.6nm,0.9s
FCC *e*PP PP 02 14 37.7 -2.7
F11A Grangeville 96.16 36 ⇓P **P 02 10 47.5 -1.2**
baz=96,SNR=5.8
E12A Beaver Dam Sad 96.17 36 ⇓P **P 02 10 47.8 -0.8**
baz=96,SNR=11
B14A Marquette Ranc 96.17 33 ⇑P **P 02 10 48.1 -0.6**
baz=96,SNR=22
BST Brest 96.25 327 *e*P **P 02 10 48.6 -0.4**
C14A Swan Lake 96.30 34 ⇑P **P 02 10 47.8 -1.4**
baz=96
J08A Circle Bar Ran 96.32 39 ⇑P **P 02 10 48.9 -0.5**
baz=96,SNR=15
J08A ⇑PKKPab 02 28 07.4
baz=96
SWMT Swartz Lake 96.33 34 *e*P **P 02 10 50.7 +1.3**
comp=Z,12nm,0.9s,mb5.3
SWMT *e*PP PP 02 14 41.9 -0.5
VALF Valcebollere 96.38 319 *e*P **P 02 10 50.4 +0.7**
MCCM Marconi Confer 96.39 46 PFAKE 02 11 00.0 +10
MCCM LR LR
comp=Z,5μm,20.0s,MS6.0
G11A Walters Elk Ra 96.39 37 ⇓P **P 02 10 48.7 -1.0**
baz=96,SNR=12
I09A Lost Marbles R 96.39 39 ⇓P **P 02 10 47.9 -1.8**
baz=96
B15A Bradely Ranch, 96.56 33 ⇑P **P 02 10 49.3 -1.1**
baz=96,SNR=8.9
H10A Noah's Angus R 96.61 38 ⇓P **P 02 10 49.6 -1.1**
baz=96,SNR=32
H10A ⇑PKKPab 02 28 04.8
baz=96
F12A Elk City 96.74 36 ⇑P **P 02 10 50.2 -1.1**
baz=96,SNR=13
FFC Flin Flon 96.75 24 P **P 02 10 50.9 -0.2**
comp=Z,156nm,0.8s,mb6.5,SNR=5.2
FFC Flin Flon 96.75 24 *i* P **P 02 10 51.2 +0.1**
FFC Flin Flon 96.75 24 *e*P **P 02 10 49.8 -1.3**
comp=Z,39nm,1.1s,mb5.8
FFC LR LR
comp=Z,6μm,20.0s,MS6.1
WVOR Wild Horse Val 96.75 40 *e*P **P 02 10 51.9 +0.5**
WVOR *e* 02 14 41.9
WVOR pmax pmax
comp=Z,34nm,1.2s,mb5.7
WVOR MLR MLR
comp=Z,4μm,20.0s,MS5.9
WVOR Wild Horse Val 96.75 40 *e*P **P 02 10 51.9 +0.5**
comp=Z,34nm,1.2s,mb5.7
WVOR *e*PP PP 02 14 41.9 -4.0
WVOR LR LR
comp=Z,4μm,20.0s,MS5.9
J09A Fry Pan Ranch, 96.75 39 ⇓P **P 02 10 51.0 -0.4**
baz=97,SNR=38
J09A ⇓PKKPab 02 28 06.8
baz=97
SLMT Seeley Lake 96.77 34 *e*P **P 02 10 50.7 -0.6**
comp=Z,53nm,1.2s,mb5.8
SLMT *e*PP PP 02 14 42.5 -3.3
MSO Missoula 96.79 35 *e*P **P 02 10 51.8 +0.4**
comp=Z,15nm,1.1s,mb5.3
MSO *e*PP PP 02 14 43.8 -2.2
MSO LR LR
comp=Z,4μm,19.0s,MS5.9
D14A Greenough 96.86 34 ⇑P **P 02 10 50.8 -0.9**
baz=97,SNR=9.1
D14A ⇓PKKPab 02 28 05.5
baz=97
C15A Salmond Ranch, 96.89 33 ⇑P **P 02 10 50.9 -1.0**
baz=97,SNR=12
H11A Donnelly 96.96 37 ⇓P **P 02 10 51.1 -1.2**
baz=97,SNR=9.5
EPF Esparros 97.03 321 *e*P **P 02 10 51.7 -0.9**
comp=Z,56nm,1.4s,mb5.5
EPF Esparros 97.03 321 *e*P **P 02 10 51.7 -0.9**
EPF pmax pmax
comp=Z,28nm,1.4s,mb5.5
EPF Esparros 97.03 321 *e*P **P 02 10 51.7 -0.9**
comp=Z,28nm,1.4s,mb5.5
A17A Triple J Farms 97.08 32 ⇑P **P 02 10 51.2 -1.6**
baz=97,SNR=8.0
G12A Big Creek, Yel 97.09 37 ⇑P **P 02 10 52.4 -0.5**
baz=97,SNR=16
G12A ⇑PKKPab 02 28 04.0
baz=97
CHMT Chamberlain Mo 97.10 34 *e*P **P 02 10 53.0 +0.1**
comp=Z,14nm,1.3s,mb5.2
CHMT *e*PP PP 02 14 46.8 -1.6
RESF Ens 97.16 321 *e*P **P 02 10 54.2 +1.0**
F13A Darby 97.23 36 ⇓PKKPab 02 28 04.7
baz=97
E14A Clinton 97.29 35 ⇓P **P 02 10 52.9 -0.8**
baz=97,SNR=8.5
E14A ⇑PKKPab 02 28 00.4
baz=97
VIEF Viey 97.30 321 *e*P **P 02 10 55.6 +1.7**
C16A Fuhringer Ranc 97.31 33 ⇓P **P 02 10 52.7 -1.1**
baz=97,SNR=9.3
MAW Mawson 97.36 199 *e*P **P 02 10 53.5 +0.1**
comp=Z,5.5nm,0.8s,mb5.0
MAW *e*S 02 21 22.5
MAW Mawson 97.36 199 P **P 02 10 54.0 +0.6**
comp=Z,6.1nm,0.8s,mb5.1,baz=74,slow=8.2,SNR=9.3
MAW LR LR 02 53 49.2
comp=Z,3μm,19.1s,MS5.8,baz=50,slow=35
MAW Mawson 97.36 199 P **P 02 10 54.0 +0.6**
MAW LR LR 02 53 49.2
I11A Placerville 97.47 38 ⇑P **P 02 10 53.1 -1.5**
baz=97,SNR=9.4
B17A L&G Farms, Che 97.47 32 ⇑P **P 02 10 53.1 -1.5**
baz=97,SNR=12
A18A Metzger Ranch, 97.52 31 ⇓P **P 02 10 53.5 -1.2**
baz=97
K10A MacKenzie Ranc 97.61 39 ⇑P **P 02 10 54.0 -1.2**
baz=97,SNR=10
ETSF Etsaut 97.64 321 *e*P **P 02 10 55.6 +0.2**
comp=Z,35nm,1.0s,mb5.5
ETSF Etsaut 97.64 321 *e*P **P 02 10 55.6 +0.2**
ETSF pmax pmax
comp=Z,18nm,1.0s,mb5.6
ETSF Etsaut 97.64 321 *e*P **P 02 10 55.6 +0.2**
comp=Z,18nm,1.0s,mb5.5
H12A Diamond D Ranc 97.71 37 ⇓P **P 02 10 54.3 -1.4**
baz=98,SNR=13
F14A Wisdom 97.74 35 ⇓P **P 02 10 55.0 -0.8**
baz=98
E15A Deer Lodge 97.74 34 ⇑P **P 02 10 55.2 -0.5**
baz=98,SNR=7.0
WCN Washoe City 97.82 43 ⇓P **P 02 10 55.1 -1.2**
baz=98
SJPF Ste Jean 97.90 321 *e*P **P 02 10 57.0 +0.4**
comp=Z,50nm,1.1s,mb5.7
SJPF Ste Jean 97.90 321 *e*P **P 02 10 57.0 +0.4**
SJPF pmax pmax
comp=Z,25nm,1.1s,mb5.7
SJPF Ste Jean 97.90 321 *e*P **P 02 10 57.0 +0.4**
comp=Z,25nm,1.1s,mb5.7
B18A Beardsley Farm 97.91 32 ⇑P **P 02 10 55.3 -1.2**
baz=98
B18A ⇑PKKPab 02 28 01.0
baz=98
I12A Atlanta 98.01 38 ⇓P **P 02 10 55.8 -1.3**
baz=98
I12A ⇓PKKPab 02 27 57.8
baz=98
H13A Challis 98.03 37 ⇑P **P 02 10 55.9 -1.2**
baz=98,SNR=12
H13A ⇑PKKPdf PKKPdf 02 27 58.3 +26
baz=98
LSZ Lusaka 98.05 257 P **P 02 10 56.9 -0.8**
comp=Z,16nm,0.9s,mb5.5,baz=67,slow=4.3,SNR=22
LSZ PP PP 02 14 57.8 +0.7
comp=Z,7.8nm,1.1s,baz=64,slow=5.8,SNR=4.4
LSZ LR LR 02 53 09.5
comp=Z,17μm,19.7s,MS6.5,baz=68,slow=34
LSZ Lusaka 98.05 257 P **P 02 10 56.9 -0.8**
LSZ 02 14 57.8
LSZ pmax pmax
comp=Z,16nm,0.9s,mb5.5
LSZ pmax pmax
comp=Z,8.0nm,1.1s,mb5.2
LSZ MLR MLR
comp=Z,17μm,19.7s,MS6.5
LSZ Lusaka 98.05 257 *e*P **P 02 10 56.7 -1.0**
comp=Z,4.7nm,0.8s,mb5.1
LSZ *e*PP PP 02 14 56.1 -1.1
LSZ LR LR
comp=Z,16μm,20.0s,MS6.5
LSZ Lusaka 98.05 257 P **P 02 10 57.8 +0.1**
SNR=6.6
LSZ P 02 10 57.8
SNR=6.6
SAO San Andreas Ge 98.08 46 PFAKE 02 11 10.0 +12
SAO LR LR
comp=Z,5μm,19.0s,MS6.0
CMB Columbia Colle 98.11 45 *e*P **P 02 10 57.3 -0.3**
CMB *e* 02 14 56.2
CMB pmax pmax
comp=Z,34nm,1.0s,mb5.8
CMB MLR MLR
comp=Z,5μm,20.0s,MS6.0
CMB Columbia Colle 98.11 45 *e*P **P 02 10 57.3 -0.3**
comp=Z,34nm,1.0s,mb5.8
CMB *e*PP PP 02 14 56.2 -0.3
CMB LR LR
comp=Z,5μm,20.0s,MS6.0
K11A Parker Ranch, 98.11 39 ⇓P **P 02 10 56.0 -1.5**
baz=98
EGMT Eagleton 98.17 32 *e*P **P 02 10 58.5 +0.8**
comp=Z,17nm,0.8s,mb5.6
EGMT LR LR
comp=Z,5μm,22.0s,MS6.0
E16A East Helena 98.18 34 ⇓P **P 02 10 56.6 -1.2**
baz=98
E16A ⇑PKKPab 02 27 56.4
baz=98
LRM Limekiln Ridge 98.23 35 *e*P **P 02 10 59.5 +1.5**
comp=Z,53nm,0.8s,mb6.1
L10A Juniper Basin 98.26 40 ⇑P **P 02 10 56.6 -1.7**
baz=98,SNR=8.8
L10A ⇓PKKPab 02 27 57.2
baz=98
D17A Six Diamond Ra 98.28 33 ⇑P **P 02 10 56.7 -1.5**
baz=98,SNR=8.2
J12A Stokes Ranch, 98.36 38 ⇓P **P 02 10 57.5 -1.1**
baz=98,SNR=8.5
J12A ⇑PKKPab 02 27 57.5
baz=98
DLMT Dillon 98.44 35 *e*P **P 02 10 59.9 +0.9**
comp=Z,18nm,0.9s,mb5.6
DLMT *e*PP PP 02 14 57.0 -1.7
H14A Leadore 98.50 36 ⇓P **P 02 10 58.2 -1.0**
baz=98
I13A Wildhorse Cree 98.52 37 ⇑P **P 02 10 58.1 -1.2**
baz=98,SNR=24
I13A ⇓PKKPab 02 27 57.3

	baz=98							
M10A	**I.L. Ranch, Tu**	**98.55**	**40**	⇑P		**P**	**02 10 58.3**	**-1.2**
	baz=98,SNR=7.2							
M10A				⇓PKKPab			02 27 56.8	
	baz=98							
HLID	**Hailey**	**98.56**	**37**	⇑P		**P**	**02 10 58.3**	**-1.2**
	baz=98,SNR=29							
HLID				⇓PKKPab			02 27 57.0	
	baz=98							
HLID	**Hailey**	**98.56**	**37**	*e*P		**P**	**02 10 59.5**	**-0.1**
	comp=Z,18nm,1.0s,mb5.5							
HLID				*e*PP	PP		02 14 59.3	-0.4
HLID				LR	LR			
	comp=Z,4μm,20.0s,MS5.9							
G15A	**Dillon**	**98.63**	**35**	⇑P		**P**	**02 10 58.9**	**-0.9**
	baz=98,SNR=18							
L11A	**Cat Creek Ranc**	**98.64**	**39**	⇓P		**P**	**02 10 58.3**	**-1.6**
	baz=98,SNR=12							
MCMT	**McKenzie Canyo**	**98.65**	**36**	*e*P		**P**	**02 11 00.8**	**+1.0**
	comp=Z,3.0nm,0.8s,mb4.9							
E17A	**Martinsdale**	**98.65**	**34**	⇓P		**P**	**02 10 59.0**	**-0.8**
	baz=98,SNR=8.2							
E17A				⇑PKKPab			02 27 55.0	
	baz=98							
BMN	**Battle Mountai**	**98.78**	**41**	*e*P		**P**	**02 11 02.2**	**+1.6**
BMN				*e*			02 14 59.4	
BMN				pmax	pmax			
	comp=Z,7.0nm,1.1s,mb5.1							
BMN				MLR	MLR			
	comp=Z,4μm,20.0s,MS5.9							
BMN	**Battle Mountai**	**98.78**	**41**	*e*P		**P**	**02 11 02.2**	**+1.6**
	comp=Z,7.4nm,1.1s,mb5.1							
BMN				*e*PP	PP		02 14 59.4	-2.1
BMN				LR	LR			
	comp=Z,4μm,20.0s,MS5.9							
BOZ	**Bozeman (W)**	**98.78**	**35**	⇓P		**P**	**02 10 59.4**	**-1.1**
	baz=99							
BOZ	**Bozeman (W)**	**98.78**	**35**	*e*P		**P**	**02 11 01.6**	**+1.2**
BOZ				*e*			02 15 00.3	
BOZ				pmax	pmax			
	comp=Z,9.0nm,1.2s,mb5.2							
BOZ				MLR	MLR			
	comp=Z,5μm,20.0s,MS6.0							
BOZ	**Bozeman (W)**	**98.78**	**35**	*e*P		**P**	**02 11 01.6**	**+1.2**
	comp=Z,8.9nm,1.2s,mb5.2							
BOZ				*e*PP	PP		02 15 00.3	-1.0
BOZ				LR	LR			
	comp=Z,5μm,20.0s,MS6.0							
J13A	**Cove Ranch, Pi**	**98.80**	**37**	⇓P		**P**	**02 10 60.0**	**-0.7**
	baz=99,SNR=18							
J13A				⇓PKKPab			02 27 54.0	
	baz=99							
K12A	**Draper Farm, C**	**98.85**	**38**	⇓PKKPab			02 27 54.5	
	baz=99							
I14A	**Mackay**	**98.88**	**37**	⇑P		**P**	**02 11 00.2**	**-0.8**
	baz=99,SNR=5.4							
I14A				⇓PKKPab			02 27 55.0	
	baz=99							
G16A	**Moss Hill, Enn**	**98.96**	**35**	⇓P		**P**	**02 11 00.2**	**-1.0**
	baz=99							
M11A	**Holland Ranch,**	**99.06**	**40**	⇓PKKPab			02 27 54.6	
	baz=99							
E18A	**Harlowton**	**99.07**	**33**	⇓P		**P**	**02 11 00.7**	**-1.0**
	baz=99,SNR=11							
F17A	**Fitzpatrick Pl**	**99.12**	**34**	⇓P		**P**	**02 11 00.7**	**-1.3**
	baz=99							
J14A	**Carey**	**99.22**	**37**	⇓P		**P**	**02 11 01.3**	**-1.1**
	baz=99							
J14A				⇓PKKPab			02 27 52.6	
	baz=99							
NVAR	**Mina Array Bea**	**99.25**	**43**	P		**P**	**02 11 03.4**	**+0.7**
	comp=Z,21nm,1.1s,mb5.6,baz=280,slow=4.0,SNR=47							
NVAR				PP	PP		02 15 06.5	+1.4
	comp=Z,6.3nm,1.0s,baz=290,slow=4.5,SNR=4.2							
NVAR				PKKPbc	PKKPbc		02 27 29.2	+1.7
	comp=Z,0.9nm,0.7s,baz=147,slow=3.0,SNR=6.0							
NVAR	**Mina Array Bea**	**99.25**	**43**	P		**P**	**02 11 03.4**	**+0.7**
NVAR				PP	PP		02 15 06.5	+1.3
NVAR				PKKPbc	PKKPbc		02 27 29.2	+1.7
O10A	**Cortez Mining,**	**99.30**	**41**	⇑P		**P**	**02 11 01.6**	**-1.3**
	baz=99,SNR=8.7							
K13A	**Stover Farm, H**	**99.32**	**38**	⇑PKKPab			02 27 52.7	
	baz=99							
M12A	**Wells**	**99.59**	**39**	⇑P		Pdif	02 11 03.2	-0.7
	baz=99,SNR=11							
M12A				⇓PKKPab			02 27 51.9	
	baz=99							
F18A	**Big Timber**	**99.61**	**33**	⇑PKKPab			02 27 50.6	
	baz=99							
L13A	**Double Diamond**	**99.75**	**38**	⇓PKKPab			02 27 49.3	
	baz=100							
J15A	**Blackfoot**	**99.79**	**37**	⇑PKKPab			02 27 50.5	
	baz=100							
SMMC	**Simmler**	**99.86**	**47**	⇓P		Pdif	02 11 04.8	-0.2
	baz=100							
N12A	**Clover Valley,**	**99.86**	**40**	⇓P		Pdif	02 11 04.6	-0.5
	baz=100							
N12A				⇓PKKPab			02 27 50.8	
	baz=100							
N12A	**Clover Valley,**	**99.86**	**40**	*e*P		Pdif	02 11 05.8	+0.6
	comp=Z,16nm,1.1s							
N12A				*e*PP	PP		02 15 06.9	-2.8
K14A	**Jones Ranch, D**	**99.91**	**38**	⇓PKKPab			02 27 49.6	
	baz=100							
O11A	**Cowboy Ranch,**	**99.92**	**41**	⇓P		Pdif	02 11 04.1	-1.3
	baz=100							
O11A				⇓PKKPab			02 27 50.2	
	baz=100							
YFT	**Old Faithful**	**99.99**	**35**	*e*Pdif		Pdif	02 11 07.2	+1.6
	comp=Z,25nm,1.1s							
YFT				*e*PP	PP		02 15 11.1	+0.6
M13A	**Montello**	**100.07**	**39**	*e*Pdif		Pdif	02 11 07.6	+1.5
	comp=Z,11nm,1.1s							
M13A				*e*PP	PP		02 15 11.2	0.0
TPH	**Tonopah**	**100.14**	**43**	PFAKE			02 11 20.0	+14
TPH				LR	LR			
	comp=Z,4μm,20.0s,MS6.0							
LKWY	**Lake**	**100.15**	**35**	*e*P		Pdif	02 11 07.9	+1.5
LKWY				pmax	pmax			
	comp=Z,14nm,0.9s							
LKWY				MLR	MLR			
	comp=Z,9μm,21.0s,MS6.3							
LKWY	**Lake**	**100.15**	**35**	*e*Pdif		Pdif	02 11 07.9	+1.6
	comp=Z,14nm,0.9s							
LKWY				LR	LR			
	comp=Z,9μm,21.0s,MS6.3							
H17A	**Grant Village**	**100.16**	**35**	⇓P		Pdif	02 11 06.0	-0.5
	baz=100							
VES	**Vestal, Richgr**	**100.19**	**46**	⇓P		Pdif	02 11 05.1	-1.4
	baz=100							
K15A	**Arbon**	**100.19**	**37**	⇓PKKPab			02 27 48.7	
	baz=100							
L14A	**Malta**	**100.19**	**38**	⇓P		Pdif	02 11 05.7	-0.9
	baz=100,SNR=6.3							
P11A	**Circle Ranch,**	**100.20**	**41**	⇑PKKPab			02 27 49.3	
	baz=100							
Q10A	**Clear Creek Ra**	**100.23**	**42**	⇑P		Pdif	02 11 06.3	-0.5
	baz=100							
IMW	**Indian Meadow**	**100.29**	**36**	*e*Pdif		Pdif	02 11 08.9	+1.9
	comp=Z,11nm,0.9s							
IMW				*e*PP	PP		02 15 12.9	+0.1
N13A	**Wendover, West**	**100.36**	**39**	*e*Pdif		Pdif	02 11 08.2	+0.9
	comp=Z,16nm,0.9s							
RLMT	**Red Lodge**	**100.37**	**34**	⇓PKKPab			02 27 47.9	
	baz=100							
RLMT	**Red Lodge**	**100.37**	**34**	*e*Pdif		Pdif	02 11 09.5	+2.1
	comp=Z,14nm,1.1s							
RLMT				*e*PP	PP		02 15 05.8	-7.6
RLMT				LR	LR			
	comp=Z,7μm,20.0s,MS6.2							
O12A	**Currie**	**100.39**	**40**	⇑P		Pdif	02 11 06.9	-0.6
	baz=100,SNR=20							
M14A	**Sheep Mountain**	**100.46**	**39**	⇑P		Pdif	02 11 06.9	-0.9
	baz=100,SNR=5.7							
M14A				⇑PKKPab			02 27 47.6	
	baz=100							
DGMT	**Dagmar**	**100.50**	**29**	PFAKE			02 11 20.0	+12
DGMT				LR	LR			
	comp=Z,4μm,19.0s,MS6.0							
TPAW	**Teton Pass**	**100.55**	**36**	*e*Pdif		Pdif	02 11 10.9	+2.7
	comp=Z,10.0nm,1.1s							
TPAW				*e*PP	PP		02 15 09.1	-5.8
HVU	**Hansel Valley**	**100.62**	**38**	*e*P		Pdif	02 11 08.5	0.0
HVU				*e*			02 15 15.5	
HVU				pmax	pmax			
	comp=Z,8.0nm,0.8s							
HVU	**Hansel Valley**	**100.62**	**38**	*e*Pdif		Pdif	02 11 08.5	0.0
	comp=Z,8.4nm,0.8s							
HVU				*e*PP	PP		02 15 15.5	+0.1
S10A	**Tonopah Range,**	**100.64**	**43**	⇑P		Pdif	02 11 07.9	-0.6
	baz=100,SNR=11							
LOHW	**Long Hollow**	**100.66**	**36**	*e*Pdif		Pdif	02 11 09.5	+0.8
	comp=Z,8.8nm,1.2s							
LOHW				*e*PP	PP		02 15 14.2	-1.5
Q11A	**Duckwater**	**100.69**	**42**	⇓PKKPab			02 27 47.0	
	baz=100							
REDW	**Red Top Meadow**	**100.69**	**36**	*e*Pdif		Pdif	02 11 08.9	+0.1
	comp=Z,11nm,1.3s							
REDW				*e*PP	PP		02 15 13.0	-2.8
L15A	**Malad City**	**100.70**	**38**	⇑PKKPab			02 27 45.7	
	baz=100							
ARVC	**Arvin**	**100.76**	**46**	⇓PKKPab			02 27 45.4	
	baz=101							
P12A	**McGill**	**100.78**	**41**	⇓P		Pdif	02 11 08.9	-0.3
	baz=101,SNR=10							
LAO	**LASA Array**	**100.83**	**31**	*e*Pdif		Pdif	02 11 09.5	+0.1
	comp=Z,8.8nm,0.9s							
LAO				*e*PP	PP		02 15 10.3	-6.4
LAO				LR	LR			
	comp=Z,6μm,19.0s,MS6.1							
TAOE	**Nuku Hiva Isla**	**100.91**	**95**	*e*Pdif		Pdif	02 11 11.8	+2.0
	comp=Z,600nm,26.9s							
TAOE	**Nuku Hiva Isla**	**100.91**	**95**	*e*PP		PP	02 15 14.0	-5.0
	comp=Z,1μm,27.6s							
TAOE	**Nuku Hiva Isla**	**100.91**	**95**	*e*PS		PS	02 24 23.4	+1.9
	comp=Z,8μm,28.2s							
TAOE				*e*SS		SS	02 29 33.1	-13
	comp=Z,6μm,29.2s							
TAOE				*e*LR		LR	02 44 05.8	
	comp=Z,18μm,22.0s,baz=298							
TAOE	**Nuku Hiva Isla**	**100.91**	**95**	*e*Pdif		Pdif	02 11 11.8	+2.0
TAOE				*e*PP	PP		02 15 14.0	-5.0
TAOE				*e*PS	PS		02 24 23.4	+1.9
TAOE				*e*SS	SS		02 29 33.1	-13
DAC	**Darwin (Calif)**	**100.94**	**45**	PFAKE			02 11 20.0	+10
DAC				LR	LR			
	comp=Z,5μm,20.0s,MS6.0							
AHID	**Auburn Hatcher**	**100.94**	**37**	PFAKE			02 11 20.0	+10
AHID				LR	LR			
	comp=Z,7μm,20.0s,MS6.2							
N14A	**Grayback Hills**	**100.97**	**39**	⇑P		Pdif	02 11 09.3	-0.7
	baz=101							
N14A				⇑PKKPab			02 27 45.5	
	baz=101							
BGU	**Big Grassy Mou**	**101.01**	**39**	*e*Pdif		Pdif	02 11 12.4	+2.2
	comp=Z,10nm,1.3s							
M15A	**Larsen Ranch,**	**101.01**	**38**	⇓PKKPab			02 27 44.7	
	baz=101							
R11A	**Troy Canyon, C**	**101.03**	**42**	⇑P		Pdif	02 11 09.6	-0.7
	baz=101							
R11A				⇑PKKPab			02 27 45.2	
	baz=101							
Q12A	**Willow Creek R**	**101.08**	**41**	⇓PKKPab			02 27 45.0	
	baz=101							
MPMC	**Manual Prospec**	**101.13**	**45**	⇓P		Pdif	02 11 10.1	-0.7
	baz=101,SNR=7.4							
MPMC				⇑PKKPab			02 27 44.2	
	baz=101							
SBA	**Scott Base**	**101.23**	**171**	PFAKE			02 11 20.0	+8.8
SBA				LR	LR			
	comp=Z,3μm,21.0s,MS5.8							
L16A	**Fish Haven**	**101.24**	**37**	⇑PKKPab			02 27 43.0	
	baz=101							
J18A	**Kendall Valley**	**101.25**	**36**	⇓PKKPab			02 27 43.2	
	baz=101							
P13A	**Bates Ranch, G**	**101.33**	**41**	⇑P		Pdif	02 11 11.0	-0.6
	baz=101,SNR=7.1							
P13A				⇓PKKPab			02 27 44.4	
	baz=101							
N15A	**Stansbury Isla**	**101.33**	**39**	⇑PKKPab			02 27 44.8	
	baz=101							
S11A	**Rachel**	**101.34**	**43**	⇓P		Pdif	02 11 10.3	-1.4
	baz=101							
HWUT	**Hardware Ranch**	**101.43**	**38**	*e*Pdif		Pdif	02 11 13.9	+1.8
	comp=Z,13nm,0.9s							
HWUT				LR	LR			
	comp=Z,4μm,20.0s,MS5.9							
EDW2	**Edwards Air Fo**	**101.46**	**46**	⇓P		Pdif	02 11 11.0	-1.2
	baz=101							
L17A	**Cokeville**	**101.50**	**37**	⇑PKKPab			02 27 42.8	
	baz=101							
DUG	**Dugway**	**101.60**	**39**	⇓PKKPab			02 27 42.2	
	baz=101							
DUG	**Dugway**	**101.60**	**39**	*e*P		Pdif	02 11 14.3	+1.5
DUG				*e*			02 15 21.9	
DUG				pmax	pmax			
	comp=Z,17nm,1.1s							
DUG				MLR	MLR			
	comp=Z,5μm,21.0s,MS6.0							
DUG	**Dugway**	**101.60**	**39**	*e*Pdif		Pdif	02 11 14.2	+1.4
	comp=Z,17nm,1.1s							
DUG				*e*PP	PP		02 15 21.9	-0.9
DUG				LR	LR			
	comp=Z,5μm,21.0s,MS6.0							
K18A	**Toltan Ranch,**	**101.62**	**36**	⇑PKKPab			02 27 42.1	
	baz=101							
ESDC	**Sonseca Array**	**101.64**	**320**	P		Pdif	02 11 13.9	+0.9
	comp=Z,1.6nm,0.9s,baz=46,slow=3.6,SNR=8.8							
ESDC				PP	PP		02 15 21.9	-1.2
	comp=Z,7.6nm,1.1s,baz=51,slow=8.7,SNR=4.2							
ESDC				PKKP	PKKPbc		02 27 23.9	+3.2
	comp=Z,0.6nm,0.5s,baz=249,slow=2.5,SNR=4.7							
Q13A	**Wheeler Ranch,**	**101.64**	**41**	⇑PKKPab			02 27 42.8	
	baz=101							
R12A	**Pony Springs,**	**101.65**	**42**	⇓PKKPab			02 27 42.2	
	baz=102							
U10A	**Ash Meadows, A**	**101.69**	**44**	⇓PKKPab			02 27 42.7	
	baz=102							
BW06	**Boulder Array**	**101.80**	**36**	⇓PKKPab			02 27 40.3	
	baz=102							
BW06	**Boulder Array**	**101.80**	**36**	*e*Pdif		Pdif	02 11 13.6	-0.1
	comp=Z,7.8nm,1.3s							
BW06				LR	LR			
	comp=Z,5μm,20.0s,MS6.0							
PDAR	**Pinedale Array**	**101.80**	**36**	P		Pdif	02 11 16.3	+2.6
	comp=Z,1.7nm,0.9s,baz=132,slow=0.3,SNR=8.6							
PDAR				PP	PP		02 15 18.6	-5.5
	comp=Z,3.9nm,1.0s,baz=335,slow=6.6,SNR=4.2							
PDAR				PKKPbc	PKKPbc		02 27 18.8	-1.6
	comp=Z,1.6nm,0.8s,baz=130,slow=2.6,SNR=8.1							
P14A	**Drum Mountains**	**101.82**	**40**	P		Pdif	02 11 13.3	-0.6
	baz=102,SNR=6.1							
P14A				⇑PKKPab			02 27 41.6	
	baz=102							
T11A	**Corn Creek, Al**	**101.92**	**43**	⇓P		Pdif	02 11 13.6	-0.7
	baz=102							
T11A				⇑PKKPab			02 27 41.6	
	baz=102							
PAB	**San Pablo**	**101.95**	**320**	PFAKE			02 11 20.0	+5.6
PAB				LR	LR			
	comp=Z,11μm,19.0s,MS6.4							
N16A	**Rees Ranch, Co**	**101.97**	**38**	⇑PKKPab			02 27 41.0	
	baz=102							
GSC	**Goldstone**	**102.02**	**45**	⇓P		Pdif	02 11 14.2	-0.5
	baz=102,SNR=6.7							
GSC	**Goldstone**	**102.02**	**45**	*e*P		Pdif	02 11 14.7	0.0
GSC				pmax	pmax			
	comp=Z,8.0nm,0.9s							
GSC	**Goldstone**	**102.02**	**45**	*e*Pdif		Pdif	02 11 14.7	0.0
	comp=Z,8.3nm,0.9s							
GSC				*e*PP	PP		02 15 20.6	-5.6
M17A	**Scullys Gap (B**	**102.03**	**37**	⇑PKKPab			02 27 39.8	
	baz=102							
Q14A	**Sevier Lake (B**	**102.07**	**41**	⇑P		Pdif	02 11 14.2	-0.7
	baz=102,SNR=10							
Q14A				⇓PKKPab			02 27 40.0	
	baz=102							
L18A	**Fontenelle, Gr**	**102.09**	**37**	⇓PKKPab			02 27 38.9	
	baz=102							
R13A	**O'Grain Ranch,**	**102.14**	**42**	⇑PKKPab			02 27 40.2	
	baz=102							
K19A	**Absolon Red Bu**	**102.15**	**35**	⇑PKKPab			02 27 39.0	
	baz=102							
L19A	**Farson**	**102.35**	**36**	⇑PKKPab			02 27 39.2	
	baz=102							
DAU	**Daniels Canyon**	**102.38**	**38**	*e*P		Pdif	02 11 18.4	+2.1
DAU				pmax	pmax			
	comp=Z,10.0nm,0.8s							
DAU	**Daniels Canyon**	**102.38**	**38**	*e*Pdif		Pdif	02 11 18.4	+2.1
	comp=Z,9.7nm,0.8s							
DAU				*e*PP	PP		02 15 18.6	-10
MPU	**Maple Canyon**	**102.41**	**39**	*e*Pdif		Pdif	02 11 16.4	-0.1
MPU				*e*PP	PP		02 15 27.4	-1.5
MVO	**Moncorvo**	**102.48**	**323**	*e*PP		PP	02 15 31.2	+1.8
MVO				*e*SKSac	SKSac		02 21 56.5	+2.0
MVO				*e*SS	SS		02 30 21.9	+17
MVO	**Moncorvo**	**102.48**	**323**	*e*LQ			02 47 52.5	
MVO				*e*LR	LR		02 53 20.5	
	comp=Z,20μm,18.0s							
K20A	**Yellowstone Ra**	**102.53**	**35**	⇑PKKPab			02 27 37.9	
	baz=102							
ULM	**Lac du Bonnet**	**102.57**	**23**	P		Pdif	02 11 17.1	0.0
	comp=Z,3.0nm,0.6s,baz=338,slow=3.3,SNR=3.8							
ULM				PP	PP		02 15 30.4	+0.7
	comp=Z,8.8nm,1.0s,baz=335,slow=6.8,SNR=6.1							
ULM				PKKPbc	PKKPbc		02 27 16.1	-2.3
	comp=Z,3.7nm,0.6s,baz=48,slow=2.2,SNR=4.1							
ULM	**Lac du Bonnet**	**102.57**	**23**	*e*Pdif		Pdif	02 11 17.1	0.0
	comp=Z,4.4nm,0.9s							
ULM				LR	LR			
	comp=Z,8μm,20.0s,MS6.2							
S13A	**Holt Ranch, En**	**102.58**	**42**	⇓PKKPab			02 27 38.7	
	baz=102							
Q15A	**Fillmore**	**102.61**	**40**	⇑PKKPab			02 27 37.8	
	baz=102							
HEC	**Hector,Ludlow**	**102.61**	**45**	⇓P		Pdif	02 11 16.2	-1.1
	baz=102							
HEC				⇓PKKPab			02 27 38.2	
	baz=102							
V11A	**Goodsprings**	**102.62**	**44**	⇑PKKPab			02 27 37.7	
	baz=102							
O17A	**Robinson Place**	**102.82**	**38**	⇓PKKPab			02 27 35.8	
	baz=103							
M19A	**Rock Springs**	**102.86**	**36**	⇓PKKPab			02 27 35.3	
	baz=103							
T13A	**Saint George**	**102.89**	**42**	⇑PKKPab			02 27 37.3	
	baz=103							
CCUT	**Cedar City**	**102.91**	**42**	*e*Pdif		Pdif	02 11 19.9	+1.3
	comp=Z,2.7nm,0.9s							
CCUT				*e*PP	PP		02 15 26.2	-6.5
MVU	**Marysvale**	**103.02**	**40**	PFAKE			02 11 30.0	+11
MVU				LR	LR			
	comp=Z,4μm,21.0s,MS5.9							
MSU	**Marysvale**	**103.04**	**40**	*e*P		Pdif	02 11 18.8	-0.4
MSU				pmax	pmax			
	comp=Z,11nm,1.2s							
MSU	**Marysvale**	**103.04**	**40**	*e*Pdif		Pdif	02 11 18.8	-0.4
	comp=Z,11nm,1.2s							
GMRC	**Granite Mounta**	**103.09**	**45**	⇓PKKPab			02 27 36.3	
	baz=103							
PFO	**Pinyon Flat Ob**	**103.23**	**47**	⇓P		Pdif	02 11 19.5	-0.6
	baz=103							
PFO	**Pinyon Flat Ob**	**103.23**	**47**	*e*P		Pdif	02 11 21.6	+1.5
PFO				*e*			02 15 33.7	
PFO				pmax	pmax			
	comp=Z,19nm,1.0s							
PFO				MLR	MLR			
	comp=Z,2μm,22.0s,MS5.6							
PFO	**Pinyon Flat Ob**	**103.23**	**47**	*e*Pdif		Pdif	02 11 21.6	+1.5
	comp=Z,12nm,1.0s							
PFO				*e*PP	PP		02 15 33.7	-1.7
PFO				LR	LR			
	comp=Z,5μm,22.0s,MS6.0							
MTE	**Manteigas**	**103.28**	**322**	PFAKE			02 11 30.0	+10
MTE				LR	LR			
	comp=Z,18μm,19.0s,MS6.6							
MTE	**Manteigas**	**103.28**	**322**	*e*PP		PP	02 15 37.0	+1.6
MTE				*e*SKSac	SKSac		02 21 58.6	+0.4
MTE				*e*SS	SS		02 30 24.3	+8.2
MTE	**Manteigas**	**103.28**	**322**	*e*LQ			02 48 42.0	
MTE				*e*LR	LR		02 52 33.9	
	comp=Z,20μm,18.0s							
LBTB	**Lobatse**	**103.28**	**248**	Pdiff		Pdif	02 11 22.7	+2.4
	comp=Z,6.5nm,1.2s,baz=107,slow=5.0,SNR=4.9							
LBTB	**Lobatse**	**103.28**	**248**	P		Pdif	02 11 22.7	+2.4
LBTB				pmax	pmax			
	comp=Z,7.0nm,1.2s							
LBTB	**Lobatse**	**103.28**	**248**	*e*Pdif		Pdif	02 11 21.2	+0.9
LBTB				LR	LR			
	comp=Z,13μm,20.0s,MS6.5							
T14A	**Hurricane**	**103.38**	**42**	⇓PKKPab			02 27 34.5	
	baz=103							
P18A	**Preston Nutter**	**103.48**	**39**	⇓PKKPab	PKKPab		02 27 34.6	-2.5
	baz=103							
L21A	**Rawlins**	**103.53**	**35**	⇑PKKPdf	PKKPab		02 27 35.3	-1.7
	baz=103							
V13A	**Grand Canyon W**	**103.55**	**43**	⇓PKKPdf	PKKPab		02 27 33.8	-2.9
	baz=103							
R16A	**Teasdale**	**103.61**	**40**	⇓P		Pdif	02 11 21.3	-0.4
	baz=103,SNR=9.9							
SRU	**San Rafael**	**103.65**	**39**	⇑P		Pdif	02 11 22.2	+0.3
	baz=103							
SRU				⇓PKiKP	PKiKP		02 15 39.7	-0.8
	baz=103							
SRU				⇓PKKPdf	PKKPdf		02 27 13.9	-8.7
	baz=103							
SRU				⇓PKKPab	PKKPab		02 27 33.5	-2.9
	baz=103							
SRU	**San Rafael**	**103.65**	**39**	*e*P		Pdif	02 11 22.9	+0.9
SRU				*e*			02 15 38.8	
SRU				pmax	pmax			
	comp=Z,8.0nm,0.7s							
SRU	**San Rafael**	**103.65**	**39**	*e*Pdif		Pdif	02 11 22.9	+0.9
	comp=Z,8.1nm,0.7s							
SRU				*e*PP	PP		02 15 38.8	+0.6
O19A	**Miners Draw (B**	**103.68**	**37**	⇓PKKPbc	PKKPbc		02 27 14.7	0.0
	baz=104							
U14A	**Mt Trumbull**	**103.72**	**43**	⇓PKKPab	PKKPab		02 27 33.4	-2.6
	baz=104							
RSSD	**Black Hills**	**103.74**	**32**	*e*P		Pdif	02 11 23.5	+1.1
RSSD				pmax	pmax			
	comp=Z,3.0nm,0.6s							
RSSD				MLR	MLR			
	comp=Z,4μm,19.0s,MS6.0							
RSSD	**Black Hills**	**103.74**	**32**	*e*Pdif		Pdif	02 11 23.5	+1.1
	comp=Z,2.8nm,0.6s							
RSSD				*e*PP	PP		02 15 32.4	-6.2
RSSD				LR	LR			
	comp=Z,4μm,19.0s,MS6.0							
M21A	**Separation Pea**	**103.78**	**35**	⇓PKKPab	PKKPab		02 27 33.2	-2.7
	baz=104							
IRM	**Iron Mountain**	**103.79**	**45**	⇓PKKPbc	PKKPbc		02 27 15.0	+0.7
	baz=104							

PBAR eLR LR 02 53 19.6
comp=Z,9μm,16.0s
Q19A Hogan Spring (104.49 39 ⇑PKKPab PKKPab 02 27 30.1 -2.5
baz=104
R18A Canyonlands Na 104.49 39 ⇓PKKPbc PKKPbc 02 27 13.4 +1.1
baz=104
BOSA Boshof 104.54 245 Pdiff Pdif 02 11 25.5 -0.5
comp=Z,3.1nm,1.0s,baz=124,slow=3.6,SNR=3.5
BOSA PKiKP PKiKP 02 15 43.0 +0.7
comp=Z,4.6nm,1.0s,baz=76,slow=4.2,SNR=3.3
BOSA PKKPbc PKKPbc 02 27 12.9 +0.9
comp=Z,4.8nm,0.8s,baz=250,slow=4.1,SNR=7.0
GLA Glamis 104.66 46 ⇓PKKPdf PKKPdf 02 27 27.1 +6.4
baz=104
V15A Kaibab Nationa 104.73 43 ⇑PKKPdf PKKPdf 02 27 29.2 +8.6
baz=104
EVO Evora 104.78 321 ePP PP 02 15 49.5 +2.9
N22A Wattenberg Ran 104.83 36 ⇓PKKPbc PKKPbc 02 27 11.2 -0.1
baz=105
T17A Navajo Res., N 104.84 41 ⇓PKKPbc PKKPbc 02 27 11.2 0.0
baz=105
EVOP Sao Brissos 104.85 321 eP Pdif 02 11 28.9 +1.6
EVOP ePP PP 02 15 48.2 +1.1
EVOP eS SKSac 02 22 06.3 +0.8
EVOP eSS SS 02 30 40.6 +2.8
EVOP eSS SS 02 30 40.6 +2.8
EVOP AMS AMS 02 58 50.2
comp=E,10μm,20.0s
EVOP Sao Brissos 104.85 321 eP Pdif 02 11 28.9 +1.6
EVOP e 02 15 48.3
EVOP eS SKSac 02 22 06.3 +0.8
EVOP eSS SS 02 30 40.6 +2.9
Y13A Salome 104.88 45 ⇑PKKPab PKKPab 02 27 26.9 -3.8
baz=105
S18A Hurst Farm, Bl 104.89 40 ⇓PKKPdf PKKPdf 02 27 28.4 +8.1
baz=105
R19A Curley Farm, L 104.93 39 ⇑PKKPbc PKKPbc 02 27 09.7 -1.2
baz=105
SCHQ Schefferville 105.00 5 Pdiff Pdif 02 11 29.1 +1.2
comp=E,2.3nm,0.9s,baz=0.0,slow=6.1,SNR=3.5
SCHQ PKiKP PKiKP 02 15 44.1 +1.6
comp=E,7.2nm,0.9s,baz=16,slow=7.6,SNR=4.8
SCHQ PKKPbc PKKPbc 02 27 09.8 -1.6
comp=E,2.4nm,0.7s,baz=309,slow=5.2,SNR=5.0
SCHQ Schefferville 105.00 5 Pdif Pdif 02 11 29.1 +1.2
SCHQ ePKP PKiKP 02 15 43.3 +0.8
SCHQ LR LR
comp=Z,10μm,20.0s,MS6.4
SFS San Fernando 105.03 319 PFAKE 02 15 50.0 +6.9
SFS LR LR
comp=Z,25μm,19.0s,MS6.8
Q20A Ridgley Place, 105.06 38 ⇑PKKPab PKKPab 02 27 26.2 -3.9
baz=105
PV04 Paradox Valley 105.08 39 ePdif Pdif 02 11 29.2 +0.9
PV04 ePP PP 02 15 47.3 -1.5
X14A Yava 105.10 44 ⇑PKKPab PKKPab 02 27 26.7 -3.1
baz=105
EGRO El Granado 105.12 320 P PKiKP 02 15 49.7 +6.4
PMAFR Mafra 105.24 322 eSKSac SKSac 02 22 09.8 +2.5
PMAFR Mafra 105.24 322 eLQ 02 49 20.7
PMAFR eLR LR 02 54 41.9
comp=Z,18μm,18.0s
T18A Mexican Hat 105.32 40 ⇓PKKPab PKKPab 02 27 26.3 -2.6
baz=105
LIS Lisbon 105.32 322 eP Pdif 02 11 28.5 -0.9
LIS ePP PP 02 15 51.7 +1.1
LIS eS SKSac 02 22 08.8 +1.1
LIS eSS SS 02 30 46.6 +2.5
LIS eSS SS 02 30 47.0 +2.8
LIS AMS AMS 03 01 37.4
comp=E,13μm,15.7s
LIS Lisbon 105.32 322 eP Pdif 02 11 28.5 -0.9
LIS e 02 15 51.7
LIS eS SKSac 02 22 08.8 +1.1
LIS eSS SS 02 30 46.7 +2.5
PVAQ Vaqueiros 105.35 320 ePP PP 02 15 51.7 +0.9
PVAQ eSKSac SKSac 02 22 10.3 +2.5
PVAQ Vaqueiros 105.35 320 eLQ 02 50 17.1
PVAQ eLR LR 02 56 18.2
comp=E,12μm,18.0s
Y14A Wickenburg 105.35 44 ⇓PKKPab PKKPab 02 27 26.2 -2.4
baz=105
S19A Harvey Farm, M 105.36 39 ⇑PKKPbc PKKPbc 02 27 10.2 +0.5
baz=105
S19A ⇓PKKPab PKKPab 02 27 26.1 -2.6
baz=105
PCVE Castro Verde 105.39 320 ePP PP 02 15 54.0 +2.8
PCVE eSKSac SKSac 02 22 12.5 +4.5
PCVE Castro Verde 105.39 320 eLQ 02 49 38.6
PCVE eLR LR 02 58 00.9
comp=E,15μm,20.0s
WUAZ Wupatki 105.42 42 ePKP PKiKP 02 15 44.4 +0.5
WUAZ LR LR
comp=Z,4μm,22.0s,MS5.9
PV01 Paradox Valley 105.44 39 ePdif Pdif 02 11 32.5 +2.6
comp=Z,669nm,1.1s
PV01 ePP PP 02 15 50.0 -1.6
X15A Humboldt 105.52 44 ⇑PKKPbc PKKPbc 02 27 09.0 0.0
baz=105
X15A ⇑PKKPab PKKPab 02 27 25.2 -2.7
baz=105
R20A Redvale 105.52 39 ⇑PKKPbc PKKPbc 02 27 09.1 0.0
baz=105
113A Mohawk Valley, 105.55 46 ⇑PKKPbc PKKPbc 02 27 08.3 -0.6
baz=105
Q21A Lamborn Mesa, 105.55 38 ⇓PKKPbc PKKPbc 02 27 08.9 -0.2
baz=105
PBDV Barranco-do-Ve 105.58 320 ePP PP 02 15 53.8 +1.2
PBDV eSKSac SKSac 02 22 12.7 +3.8
PBDV Barranco-do-Ve 105.58 320 eLR LR 02 56 24.5
comp=Z,15μm,18.0s
W16A Flagstaff 105.59 43 ⇓PKKPab PKKPab 02 27 24.8 -2.8
baz=105
SMCO Snowmass 105.66 37 ePdif Pdif 02 11 32.1 +1.2
SMCO ePP PP 02 15 53.8 +0.7
Z14A Wintersburg 105.74 45 ⇑PKKPab PKKPab 02 27 24.4 -2.5
baz=106
Y15A Casa Rosa Ranc 105.78 44 ⇑PKKPab PKKPab 02 27 23.9 -2.8
baz=106
U18A Rough Rock, Ch 105.79 41 ⇓PKKPab PKKPab 02 27 24.6 -2.2
baz=106
Q22A Crested Butte, 105.91 37 ⇓PKKPab PKKPab 02 27 24.3 -2.0
baz=106
MORF Marmelete 105.97 321 eP Pdif 02 11 33.8 +1.5
MORF e 02 15 56.2
MORF eS SKSac 02 22 11.0 +0.4
MORF eSS SS 02 30 54.8 +1.7
MORF Marmelete 105.97 321 ePP PP 02 15 58.5 +3.1
MORF eSKSac SKSac 02 22 14.4 +3.8
MORF Marmelete 105.97 321 eLQ 02 51 31.6
MORF eLR LR 02 55 09.3
comp=Z,12μm,20.0s
ISCO Idaho Springs 105.99 36 PFAKE 02 16 00.0 +15
ISCO LR LR
comp=Z,4μm,22.0s,MS5.9
T19A Beclabito 106.03 40 ⇓PKKPab PKKPab 02 27 23.4 -2.3
baz=106
X16A Lo Mia Camp, P 106.07 43 ⇑PKKPab PKKPab 02 27 22.9 -2.6
baz=106
EYMN Ely 106.09 22 PFAKE 02 15 50.0 +5.2
EYMN LR LR
comp=Z,7μm,20.0s,MS6.2
MVCO Mesa Verde 106.10 39 ⇑PKKPab PKKPab 02 27 23.1 -2.3
baz=106
MVCO Mesa Verde 106.10 39 ePKP PKiKP 02 15 45.8 +0.7
MVCO ePP PP 02 15 55.8 -0.6
MVCO LR LR
comp=Z,4μm,20.0s,MS6.0
114A Black Gap (USA 106.15 45 ⇓PKKPab PKKPab 02 27 21.8 -3.3
baz=106
PFVI Vila Bisbo 106.19 321 eSKSac SKSac 02 22 13.5 +1.9
PFVI Vila Bisbo 106.19 321 eLQ 02 50 11.3
PFVI eLR LR 02 55 53.4
comp=Z,15μm,18.0s
S21A Coal Bank Pass 106.22 39 ⇓PKKPbc PKKPbc 02 27 07.2 +0.1
baz=106
S21A ⇓PKKPab PKKPab 02 27 23.0 -1.9
baz=106
MDT Midelt 106.27 315 PKKPab PKKPab 02 27 23.8 -0.7
comp=Z,5.1nm,1.1s,baz=247,slow=6.4,SNR=6.2
Y16A Circle Bar Ran 106.38 44 ⇑PKKPab PKKPab 02 27 21.6 -2.5
baz=106
X17A Forest Lakes 106.53 43 ⇓PKKPab PKKPab 02 27 20.5 -2.9
baz=106
115A Sonoran Desert 106.62 45 ⇓PKKPab PKKPab 02 27 20.3 -2.7
baz=106
U20A Newcomb 106.64 40 ⇑PKKPab PKKPab 02 27 22.0 -1.0
baz=106
Y17A Roosevelt 106.91 44 ⇑PKKPab PKKPab 02 27 18.9 -2.8
baz=107
RTC Rabat Centre 107.01 317 PFAKE 02 16 00.0 +13
RTC LR LR
comp=Z,7μm,20.0s,MS6.2
OGNE Ogallala 107.07 33 PFAKE 02 16 00.0 +13
OGNE LR LR
comp=Z,6μm,20.0s,MS6.1
U21A Nageezi 107.12 40 ⇑PKKPab PKKPab 02 27 18.2 -2.6
baz=107
Y18A Canyon Day Jun 107.38 43 ⇑PKKPab PKKPab 02 27 17.7 -1.9
baz=107
Z17A San Carlos Hig 107.40 44 ⇓PKKPab PKKPab 02 27 17.1 -2.4
baz=107
SDCO Great Sand Dun 107.49 37 ePKP PKiKP 02 15 49.5 +1.9
SDCO ePP PP 02 16 09.2 +2.7
SDCO LR LR
comp=Z,4μm,20.0s,MS5.9
ECSD EROS Data Cent 107.51 28 ePKP PKiKP 02 15 48.3 +0.8
ECSD LR LR
comp=Z,6μm,19.0s,MS6.2
U22A Llaves 107.64 39 ⇓PKKPab PKKPab 02 27 17.4 -1.2
baz=107
117A Oracle 107.68 44 ⇑PKKPab PKKPab 02 27 15.7 -2.6
baz=108
Y19A Nutrioso 107.76 42 ⇑PKKPab PKKPab 02 27 16.3 -1.6
baz=108
TUC Tucson 107.82 45 eP Pdif 02 11 41.0 +0.5
TUC e 02 16 05.6
TUC pmax pmax
comp=Z,5.0nm,1.1s
TUC MLR MLR
comp=Z,5μm,22.0s,MS6.0
TUC Tucson 107.82 45 ePdif Pdif 02 11 41.0 +0.6
comp=Z,5.3nm,1.1s
TUC ePP PP 02 16 05.5 -3.7
TUC LR LR
comp=Z,5μm,22.0s,MS6.0
V22A San Miguel Ran 107.92 40 ⇑PKKPab PKKPab 02 27 15.5 -1.8
baz=108
217A Green Valley 108.13 45 ⇓PKKPab PKKPab 02 27 13.4 -2.8
baz=108
118A Homack Ranch, 108.14 44 ⇑PKKPab PKKPab 02 27 13.7 -2.5
baz=108
Y20A Horse Springs, 108.35 42 ⇑PKKPab PKKPab 02 27 13.0 -2.4
baz=108
X21A Alamocita Cree 108.36 41 ⇑PKKPab PKKPab 02 27 13.2 -2.2
baz=108
119A Ashpeak Ranch, 108.50 43 ⇓PKKPab PKKPab 02 27 12.2 -2.4
baz=108
218A Dragoon 108.52 44 ⇑PKKPab PKKPab 02 27 12.0 -2.5
baz=108
T25A Trinidad 108.53 37 ⇑PKKPab PKKPab 02 27 12.4 -2.3
baz=108
Y21A Point of Rocks 108.72 41 ⇑PKKPab PKKPab 02 27 11.4 -2.3
baz=108
Z20A Nine Sixteen R 108.73 43 ⇓PKKPbc PKKPbc 02 26 58.9 -0.2
baz=108
Z20A ⇑PKKPab PKKPab 02 27 11.0 -2.6
baz=108
LAZ Ladron 108.79 41 ePKP PKiKP 02 15 51.6 +1.4
LAZ ePP PP 02 16 15.8 -0.3
ANMO Albuquerque 108.84 40 eP Pdif 02 11 45.8 +0.8
ANMO pmax pmax
comp=Z,6.0nm,1.4s
ANMO MLR MLR
comp=Z,5μm,21.0s
ANMO Albuquerque 108.84 40 ePdif Pdif 02 11 45.8 +0.8
comp=Z,1.5nm,1.4s
ANMO ePKP PKiKP 02 15 50.7 +0.5
ANMO LR LR
comp=Z,5μm,21.0s,MS6.0
TSUM Tsumeb 108.88 256 PKiKP PKiKP 02 15 51.5 +0.9
comp=Z,7.9nm,1.1s,baz=153,slow=5.1,SNR=4.2
TSUM PKKP PKKPab 02 27 13.3 +2.7
comp=Z,10nm,1.1s,baz=282,slow=3.3,SNR=5.6
TSUM Tsumeb 108.88 256 PKPdf PKiKP 02 15 51.5 +0.9
TSUM PKKP PKKPab 02 27 13.3 +2.7
TSUM LR LR
comp=Z,8μm,20.0s,MS6.3
W23A Werner Place, 108.88 40 ⇑PKKPab PKKPab 02 27 11.0 -2.0
baz=109
318A Bisbee 108.89 45 ⇓PKKPab PKKPab 02 27 10.1 -2.7
baz=109
219A White Tail Can 109.02 44 ⇑PKKPab PKKPab 02 27 10.1 -2.2
baz=109
U25A Circle Dot Ran 109.05 38 ⇓PKKPbc PKKPbc 02 26 57.0 -1.2
baz=109
120A U Bar Ranch, L 109.07 43 ⇓PKKPab PKKPab 02 27 09.9 -2.2
baz=109
SUR Sutherland 109.16 242 PFAKE 02 16 00.0 +9.2
SUR LR LR
comp=Z,6μm,20.0s,MS6.2
V25A Rancho No Teng 109.32 38 ⇑PKKPbc PKKPbc 02 26 56.9 -0.4
baz=109
319A Douglas 109.40 45 ⇑PKKPab PKKPab 02 27 07.1 -3.5
baz=109
U26A Atchley Ranch, 109.43 37 ⇑PKKPab PKKPab 02 27 08.0 -2.6
baz=109
220A Playas Peak, P 109.55 44 ⇑PKKPab PKKPab 02 27 07.5 -2.5
baz=109
121A Cookes Peak, D 109.62 43 ⇑PKKPab PKKPab 02 27 07.1 -2.6
baz=109
RKT Rikitea 109.75 108 ePdif Pdif 02 11 51.6 +2.5
comp=Z,413nm,30.8s
RKT Rikitea 109.75 108 ePP PP 02 16 22.2 -2.2
comp=Z,1μm,29.5s
RKT eSKSac SKSac 02 22 27.0 -0.2
comp=Z,2μm,30.5s
RKT Rikitea 109.75 108 ePS PS 02 25 53.1 -0.1
comp=Z,6μm,33.0s
RKT eSS SS 02 31 48.0 +1.4
comp=Z,3μm,32.8s
RKT eLR LR 02 48 01.2
comp=Z,13μm,23.2s,baz=292
RKT Rikitea 109.75 108 eP Pdif 02 11 51.6 +2.5
RKT e 02 16 22.2
RKT e 02 22 27.0
RKT eSS SS 02 31 48.0 +1.4
RKT Rikitea 109.75 108 ePdif Pdif 02 11 51.6 +2.5
RKT ePP PP 02 16 22.2 -2.2
RKT eSKSac SKSac 02 22 27.0 -0.2
RKT ePS PS 02 25 53.1 -0.1
RKT eSS SS 02 31 48.0 +1.4
Y23A Lovelace Mesa, 109.77 41 ⇑PKKPab PKKPab 02 27 07.1 -1.9
baz=110
V26A Tequesquite Ra 109.83 38 ⇓PKKPbc PKKPbc 02 26 54.7 -1.0
baz=110
V26A ⇓PKKPab PKKPab 02 27 06.1 -2.7
baz=110
CBKS Cedar Bluff 109.84 33 PFAKE 02 16 00.0 +8.0
CBKS LR LR
comp=Z,6μm,20.0s,MS6.2
W25A X Bar L Ranch, 109.84 39 ⇓PKKPbc PKKPbc 02 26 53.5 -2.2
baz=110
320A Kipp Ranch, An 109.92 44 ⇑PKKPab PKKPab 02 27 06.5 -1.8
baz=110
QSPA South Pole Qui 109.96 180 Pdiff Pdif 02 11 54.9 +4.9
comp=Z,1.0nm,0.7s,baz=294,slow=2.2,SNR=5.8
QSPA PKiKP PKiKP 02 15 51.3 +0.3
comp=Z,10nm,0.7s,baz=322,slow=1.3,SNR=11
QSPA South Pole Qui 109.96 180 Pdif Pdif 02 11 54.9 +4.9
QSPA ePKP PKiKP 02 15 51.6 +0.6
QSPA LR LR
comp=Z,5μm,20.0s,MS6.1
221A Mesquite Ranch 109.97 43 ⇑PKKPab PKKPab 02 27 05.9 -2.2
baz=110
222A Williams Famil 110.34 43 ⇑PKKPab PKKPab 02 27 04.3 -2.2
baz=110
SCIA State Center 110.46 27 PFAKE 02 16 00.0 +6.9
SCIA LR LR
comp=Z,5μm,19.0s,MS6.1
Z24A Sheeppen Canyo 110.60 41 ⇑P PKiKP 02 15 52.9 -0.7
baz=110
Z24A ⇑PKKPab PKKPab 02 27 03.1 -2.3
baz=110
X26A CR and CF Fran 110.69 39 ⇓PKKPab PKKPab 02 27 03.0 -2.0
baz=110
W27A Bowe Ranch, En 110.77 38 ⇑P PKiKP 02 15 54.1 +0.2
baz=111
W27A ⇑PKKPab PKKPab 02 27 01.8 -2.9
baz=111
JFWS Jewell Farm 110.82 24 ePKIKP PKiKP 02 15 53.3 -0.5
JFWS MLR MLR
comp=Z,6μm,20.0s,MS6.2
124A Stringfield Ra 110.97 41 ⇓PKKPab PKKPab 02 27 01.2 -2.5
baz=111
GLMI Grayling 111.13 20 PFAKE 02 16 00.0 +5.7
GLMI LR LR
comp=Z,7μm,19.0s,MS6.3
KSU1 Kansas State U 111.17 31 ePKP PKiKP 02 15 53.9 -0.7
KSU1 ePP PP 02 16 32.5 -0.6
KSU1 LR LR
comp=Z,4μm,19.0s,MS6.0
224A Cornudas Mount 111.35 42 ⇓PKKPab PKKPab 02 26 59.1 -2.9
baz=111
Z26A Caprock 111.48 40 ⇓PKKPab PKKPab 02 26 59.3 -2.2
baz=111
125A Gardner Draw, 111.49 41 ⇓PKKPab PKKPab 02 26 58.7 -2.7
baz=111
Y27A Causey 111.54 39 ⇑PKKPab PKKPab 02 26 59.4 -1.8
baz=111
AMTX Amarillo 111.69 37 PFAKE 02 16 10.0 +14
AMTX LR LR
comp=Z,6μm,20.0s,MS6.2
MNTX Cornudas Mount 111.70 42 ePKP PKiKP 02 15 54.8 -0.9
MNTX LR LR
comp=Z,4μm,20.0s,MS6.0
MSTX Muleshoe 111.71 39 ⇓PKKPab PKKPab 02 26 58.4 -2.1
baz=112
225A Deer Hill, Car 111.77 41 ⇓PKKPab PKKPab 02 26 57.6 -2.5
baz=112
324A Moseley Ranch, 111.81 42 ⇓PKKPab PKKPab 02 26 56.7 -3.3
baz=112
126A Clayton Basin, 111.89 40 ⇓PKKPab PKKPab 02 26 57.3 -2.3
baz=112
Z27A Tatum 111.91 39 ⇓PKKPab PKKPab 02 26 56.9 -2.7
baz=112
GDL2 Guadalupe Moun 111.99 41 ePKP PKiKP 02 15 56.4 +0.1
TOA0 Torodi Ar. Sit 112.07 294 ePKP PKiKP 02 15 56.0 -0.9
TOA0 ePP PP 02 16 39.8 -1.0
TORD Torodi Ar. Bea 112.07 294 Pdiff Pdif 02 12 03.0 +3.6
comp=Z,0.4nm,1.0s,baz=53,slow=3.0,SNR=3.9
TORD PKiKP PKiKP 02 15 56.5 -0.3
comp=Z,11nm,0.7s,baz=52,slow=1.5,SNR=30
TORD PKKPbc PKKPbc 02 26 48.8 +0.9
comp=Z,1.3nm,0.4s,baz=261,slow=2.1,SNR=17
TORD PKKPab PKKPab 02 26 57.2 -0.9
comp=Z,18nm,0.8s,baz=253,slow=4.0,SNR=20
325A Bean Ranch, Si 112.18 42 ⇓P PKiKP 02 15 55.4 -1.3
baz=112
325A ⇑PKKPab PKKPab 02 26 56.1 -2.2
baz=112
CLNB Carlsbad 112.24 41 ePKP PKiKP 02 15 57.5 +0.7
226A Malaga, Loving 112.25 41 ⇓P PKiKP 02 15 56.1 -0.6
baz=112
226A ⇓PKKPab PKKPab 02 26 56.1 -2.0
baz=112
425A Indio Mountain 112.56 42 ⇓PKKPab PKKPab 02 26 54.5 -2.1
baz=112
SADO Sadowa 112.74 16 PKKPbc PKKPbc 02 26 44.7 -1.8
comp=Z,2.8nm,0.5s,baz=36,slow=1.6,SNR=3.9
326A Caldwell Ranch 112.83 41 ⇑PKKPab PKKPab 02 26 53.6 -1.9
baz=113
HDIL Hopedale 113.20 25 PFAKE 02 16 10.0 +12
HDIL LR LR
comp=Z,7μm,20.0s,MS6.2
426A McDonald Obser 113.24 42 ⇑PKKPab PKKPab 02 26 51.9 -1.7
baz=113
WMOK Wichita Mounta 113.40 35 ePKIKP PKiKP 02 15 57.8 -1.1
WMOK e 02 16 47.8
WMOK MLR MLR
comp=Z,5μm,19.0s,MS6.1
328A Wristen Ranch, 113.51 41 ⇑P PKiKP 02 15 58.7 -0.5
baz=113
328A ⇓PKKPab PKKPab 02 26 50.1 -2.4
baz=113
427A Hayter Ranch, 113.51 41 ⇑P PKiKP 02 15 58.4 -0.8
baz=113
526A Mary Lane Ranc 113.62 42 ⇑PKKPab PKKPab 02 26 49.5 -2.4
baz=113
AAM Ann Arbor 113.70 20 PFAKE 02 16 10.0 +11
AAM LR LR
comp=Z,8μm,20.0s,MS6.3
527A Woodward Ranch113.86 42 ⇑P PKiKP 02 15 59.2 -0.8
baz=114
527A ⇓PKKPab PKKPab 02 26 47.9 -2.9
baz=114
LONY Lake Ozonia 113.92 12 PFAKE 02 16 10.0 +10
LONY LR LR
comp=Z,6μm,19.0s,MS6.2
626A Big Bend Ranch 113.94 43 ⇑P PKiKP 02 15 59.6 -0.5
baz=114
626A ⇑PKKPab PKKPab 02 26 48.0 -2.5
baz=114
428A Kincaid Ranch, 114.04 41 ⇓P PKiKP 02 15 59.8 -0.5
baz=114
428A ⇓PKKPab PKKPab 02 26 47.8 -2.2
baz=114
PKME Peaks-Kenny Pk 114.19 8 PFAKE 02 16 10.0 +10
PKME LR LR
comp=Z,8μm,19.0s,MS6.3
TXAR Lajitas Array 114.38 43 Pdiff Pdif 02 12 14.2 +4.5
comp=Z,0.6nm,0.7s,baz=309,slow=3.8,SNR=7.6
TXAR PKP PKiKP 02 16 00.8 -0.1
comp=Z,4.4nm,0.7s,baz=240,slow=0.8,SNR=16
TXAR PP PP 02 17 00.1 +3.7
comp=Z,8.5nm,1.0s,baz=313,slow=7.8,SNR=5.1
TXAR PKKPbc PKKPbc 02 26 40.0 -0.4
comp=Z,1.1nm,0.9s,baz=142,slow=5.3,SNR=4.8
TXAR PKKPab PKKPab 02 26 46.3 -2.2
comp=Z,4.1nm,0.7s,baz=138,slow=7.3,SNR=20
TXAR PKPPKP 02 35 18.0
comp=Z,0.8nm,1.1s,baz=166,slow=2.6,SNR=3.9
TXAR Lajitas Array 114.38 43 P Pdif 02 12 14.2 +4.5
TXAR 02 16 00.8
TXAR 02 17 00.1
TXAR 02 26 40.1
TXAR Lajitas Array 114.38 43 Pdif Pdif 02 12 14.2 +4.5
TXAR PKP PKiKP 02 16 00.8 -0.1
TXAR PP PP 02 17 00.1 +3.7
TXAR PKKPbc PKKPbc 02 26 40.0 -0.4
TXAR PKKPab PKKPab 02 26 46.3 -2.2
TXAR P'P' 02 35 18.0
627A Terlingua Ranc 114.48 42 ⇑P PKiKP 02 16 00.2 -0.9
baz=114
627A ⇑PKKPab PKKPab 02 26 45.2 -2.9
baz=114
CCM Cathedral Cave 114.49 28 ePKIKP PKiKP 02 16 00.4 -0.5
CCM e 02 16 56.0
CCM MLR MLR
comp=Z,6μm,20.0s,MS6.2
CMLA Cha da Macela 114.52 332 PFAKE 02 16 10.0 +9.0
CMLA LR LR
comp=Z,6μm,20.0s,MS6.2
NCB Newcomb 114.62 12 PFAKE 02 16 10.0 +9.0
NCB LR LR
comp=Z,6μm,22.0s,MS6.2
628A Black Gap, Mar 114.77 42 ⇓P PKiKP 02 16 01.2 -0.5
baz=115
628A ⇑PKKPab PKKPab 02 26 44.7 -2.1
baz=115
LBNH Lisbon 114.78 10 PFAKE 02 16 10.0 +8.7
LBNH LR LR
comp=Z,6μm,20.0s,MS6.2
FVM French Village 114.91 27 ePKIKP PKiKP 02 16 00.9 -0.8
ERPA Erie 114.98 17 PFAKE 02 16 10.0 +8.3
ERPA LR LR
comp=Z,7μm,20.0s,MS6.3
OLIL Olney 115.24 25 ePKPdf PKiKP 02 16 02.4 +0.1
NVL N'lazarevskaya 115.29 200 ⇓/PKIKP PKPdf 02 16 02.1 +0.8
NVL e*PP 02 16 07.7
NVL e*SP 02 16 15.1
NVL e 02 19 32.7
NVL eSP 02 27 49.9
NVL eSS SS 02 33 07.2 +10
NVL pmax pmax
comp=Z,25nm,1.1s
MAIT Maitri 115.32 200 ePKPab PKiKP 02 16 01.8 +0.4
BLO Bloomington 115.47 24 ePKIKP PKPdf 02 16 02.5 -0.3
SIUC Southern Illin 115.65 27 ePKPdf PKPdf 02 16 03.2 +0.1
ACSO Alum Creek Sta 115.79 21 ePKPdf PKPdf 02 16 03.3 0.0
ACSO LR LR
comp=Z,6μm,20.0s,MS6.2
BINY Binghamton 115.93 14 ePKPdf PKPdf 02 16 03.9 +0.3
BINY LR LR
comp=Z,9μm,19.0s,MS6.4
JCT Junction City 115.96 39 ePKIKP PKPdf 02 16 03.1 -0.9
JCT e 02 17 07.6
JCT MLR MLR

comp=Z,7μm,21.0s,MS6.2
MIAR Mount Ida 116.26 32 *e*PKIKP PKPdf 02 16 05.0 +0.6
MIAR MLR MLR
comp=Z,5μm,19.0s,MS6.1
WCI Wyandotte Cave 116.38 24 *e*PKIKP PKPdf 02 16 03.7 -0.9
WCI MLR MLR
comp=Z,7μm,21.0s,MS6.3
UALR University of 116.68 31 *e*PKPdf PKPdf 02 16 05.5 +0.2
GNAR Gosnell 116.77 28 *e*PKPdf PKPdf 02 16 06.0 +0.6
SSPA Standing Stone 116.93 16 *e*PKPdf PKPdf 02 16 04.5 -1.1
SSPA LR LR
comp=Z,6μm,20.0s,MS6.2
MCWV Mont Chateau 117.29 18 *e*PKPdf PKPdf 02 16 05.3 -0.9
MCWV LR LR
comp=Z,8μm,20.0s,MS6.3
WVT Waverly 117.58 26 *e*PKIKP PKPdf 02 16 05.2 -1.7
WVT MLR MLR
comp=Z,7μm,20.0s,MS6.3
PLAL Pickwick Lake 118.45 27 *e*PKPdf PKPdf 02 16 06.7 -1.9
PLAL *e*PP PP 02 17 22.2 -2.1
PLAL LR LR
comp=Z,8μm,22.0s,MS6.3
HKT Hockley 118.65 37 *e*PKIKP PKPdf 02 16 08.9 -0.2
HKT *e* 02 17 27.5
HKT MLR MLR
comp=Z,7μm,22.0s,MS6.3
TZTN Tazewell 118.89 23 *e*PKPdf PKPdf 02 16 09.4 -0.1
KVTX Kingsville 119.24 40 PFAKE 02 16 20.0 +10
KVTX LR LR
comp=Z,5μm,20.0s,MS6.2
ELN Prospectdale 119.24 20 *e*PKPdf PKPdf 02 16 09.7 -0.4
CBN Corbin 119.35 17 PFAKE 02 16 20.0 +10
CBN LR LR
comp=Z,10μm,20.0s,MS6.4
BLA Blacksburg 119.36 20 *e*PKIKP PKPdf 02 16 09.3 -1.0
BLA MLR MLR
comp=Z,8μm,19.0s,MS6.4
CPCT Cooper Cave 119.50 24 *e*PKPdf PKPdf 02 16 09.6 -1.0
TKL Tuckaleechee C 119.60 23 *e*PKIKP PKPdf 02 16 09.7 -1.1
VBMS Vicksburg 119.64 31 PFAKE 02 16 20.0 +9.0
VBMS LR LR
comp=Z,6μm,21.0s,MS6.2
LRAL Lakeview Retre 120.58 28 *e*PKPdf PKPdf 02 16 11.6 -1.2
LRAL LR LR
comp=Z,5μm,19.0s,MS6.2
DBIC Dimbokro 120.80 291 PKP PKPdf 02 16 13.1 -0.5
comp=Z,31nm,0.9s,baz=40,slow=2.5,SNR=25
DBIC PP PP 02 17 42.6 +0.7
comp=Z,24nm,1.1s,baz=44,slow=6.6,SNR=4.9
DBIC PKKPab PKKPab 02 26 21.3 +1.7
comp=Z,6.3nm,0.9s,baz=215,slow=4.6,SNR=4.3
DBIC Dimbokro 120.80 291 PKIKP PKPdf 02 16 13.1 -0.6
DBIC 02 17 42.7
DBIC pmax pmax
comp=Z,31nm,0.9s
DBIC pmax pmax
comp=Z,24nm,1.1s
DBIC Dimbokro 120.80 291 *e*PKPdf PKPdf 02 16 12.8 -0.8
DBIC LR LR
comp=Z,9μm,21.0s,MS6.4
KIC Kosan Boka 120.84 291 *e*P PKPdf 02 16 12.8 -1.0
comp=Z,91nm,0.7s
TIC Toumodi 120.96 291 *e*P PKPdf 02 16 14.0 0.0
comp=Z,65nm,0.7s
LIC Lamto 121.16 291 *e*P PKPdf 02 16 14.4 0.0
comp=Z,109nm,0.7s
LIC Lamto 121.16 291 *e*PKIKP PKPdf 02 16 14.2 -0.2
comp=Z,67nm,0.7s
LIC *e*MLR MLR
comp=Z,12μm,22.8s,MS6.2
LIC Lamto 121.16 291 *e*PKPdf PKPdf 02 16 14.2 -0.2
LIC LR LR
comp=Z,6μm,22.8s,MS6.2
GOGA Godfrey 121.70 24 *e*PKIKP PKPdf 02 16 15.0 +0.1
GOGA MLR MLR
comp=Z,8μm,19.0s,MS6.4
JSC Jenkinsville 121.74 22 *e*PKIKP PKPdf 02 16 15.1 +0.1
CNNC Cliffs of the 121.96 19 PFAKE 02 16 30.0 +15
CNNC LR LR
comp=Z,9μm,20.0s,MS6.4
BRAL Brewton 122.27 29 *e*PKPdf PKPdf 02 16 17.0 +0.9
BRAL LR LR
comp=Z,6μm,22.0s,MS6.2
COW Cow Castle Cre 122.75 22 *e*PKPdf PKPdf 02 16 17.6 +0.6
NHSC New Hope 123.19 22 PFAKE 02 16 30.0 +12
NHSC LR LR
comp=Z,6μm,21.0s,MS6.2
DWPF Disney 127.20 25 *e*PKPdf PKPdf 02 16 26.4 +0.7
DWPF LR LR
comp=Z,9μm,21.0s,MS6.4
BBSR BB Station 127.46 6 PFAKE 02 16 40.0 +14
BBSR LR LR
comp=Z,4μm,19.0s,MS6.2
SHEL Horse Pasture 129.71 266 PFAKE 02 16 40.0 +9.4
SHEL LR LR
comp=Z,5μm,20.0s,MS6.2
TEIG Tepich 130.48 38 PFAKE 02 16 40.0 +8.0
TEIG LR LR
comp=Z,6μm,21.0s,MS6.2
RPN Rapa Nui 133.28 109 PFAKE 02 16 50.0 +13
RPN LR LR
comp=Z,5μm,20.0s,MS6.2
PMSA Palmer Station 135.25 177 PFAKE 02 16 50.0 +10
PMSA LR LR
comp=Z,6μm,22.0s,MS6.3
TGUH Tegucigalpa,Un 135.85 42 PFAKE 02 16 50.0 +7.8
TGUH LR LR
comp=Z,4μm,21.0s,MS6.1
GRTK Grand Turk 136.83 17 PFAKE 02 16 50.0 +6.1
GRTK LR LR
comp=Z,4μm,19.0s,MS6.1
GTBY Guantanamo Bay 137.03 23 PFAKE 02 16 50.0 +5.7
GTBY LR LR
comp=Z,4μm,21.0s,MS6.2
MTDJ Mount Denham 137.59 27 PFAKE 02 17 00.0 +15
MTDJ LR LR
comp=Z,6μm,21.0s,MS6.3
SDDR Presa de Saban 139.18 18 *e*PKPpre PKPpre 02 16 40.4
SDDR LR LR
comp=Z,6μm,20.0s,MS6.3
JTS JuntasAbangare 140.17 43 PKhKP PKPpre 02 16 46.7
comp=Z,4.7nm,0.5s,baz=343,slow=5.7,SNR=4.7
JTS SKiKP 02 20 26.1
comp=Z,13nm,0.8s,baz=335,slow=6.0,SNR=6.2
JTS JuntasAbangare 140.17 43 *e*PKHKP PKPpre 02 16 44.0
JTS *e* 02 16 51.0
JTS MLR MLR
comp=Z,3μm,20.0s
JTS JuntasAbangare 140.17 43 *e*PKPpre PKPpre 02 16 44.0
JTS *e*PKPdf PKPdf 02 16 51.0 +0.7
JTS *e*SKP 02 20 22.3
JTS LR LR
comp=Z,3μm,20.0s,MS6.1
CBYP Canovanas 141.17 11 *e*PKPdf PKPdf 02 16 50.6 -1.3
MTP Monte Pirata 141.39 11 *e*PKPpre PKPpre 02 16 47.3
MTP *e*SKP 02 20 28.4
ICM Isla Caja Muer 141.41 12 *e*PKPdf PKPdf 02 16 51.4 -1.0
ANWB Willy Bob 142.29 5 PFAKE 02 17 00.0 +6.1
ANWB LR LR
comp=Z,4μm,22.0s,MS6.2
PAYG Puerto Ayora 143.49 62 PFAKE 02 17 10.0 +14
PAYG LR LR
comp=Z,3μm,20.0s,MS6.1
BCIP Isla Barro Col 144.16 38 *e*PKPdf PKPdf 02 16 54.8 -2.6
BCIP LR LR
comp=Z,4μm,21.0s,MS6.1
USHA Ushuaia 144.58 170 PKP PKPdf 02 16 56.7 0.0
comp=Z,94nm,0.7s,baz=200,slow=1.3,SNR=33
FDF Fort de France 145.25 4 *e*PKPbc PKPbc 02 16 58.3 -0.5
FDF *e*SKPdf SKPdf 02 20 32.4 +1.3
FDF *e*SKPbc SKPbc 02 20 37.4 +1.0
FDF LR LR
comp=Z,5μm,21.0s,MS6.2
SLB Belfond 146.16 4 *e*P PKPdf 02 17 03.6 +2.8
SSV Crater Summit 146.64 5 *e*P PKPdf 02 17 03.0 +1.5
SVV Soufriere Volc 146.65 5 *e*P PKPdf 02 17 14.3 +13
BHS Barnard House 146.68 4 *e*P PKPbc 02 17 05.1 +1.9
FCV Fort Charlotte 146.81 5 *e*P PKPbc 02 17 04.6 +1.0
BBGH Gun Hill 146.91 2 PFAKE 02 17 10.0 +8.0
BBGH LR LR
comp=Z,11μm,22.0s,MS6.6
GRW Mount Saint Ca 147.76 6 *e*P PKPbc 02 17 07.3 +1.0
GRGR Grenville 147.79 6 *e*PKPbc PKPbc 02 17 06.3 0.0
GRGR LR LR
comp=Z,4μm,21.0s,MS6.2

TPR Prospect 148.79 4 *e*P PKPbc 02 17 08.4 -0.6
BOT Bacolet 148.82 4 *e*P PKPab 02 17 12.0 -0.8
SDV Santo Domingo 148.82 23 PKP PKPdf 02 17 05.0 -0.2
comp=Z,131nm,1.1s,baz=76,slow=1.1,SNR=64
SDV PKPbc PKPbc 02 17 09.5 +0.4
comp=Z,115nm,1.0s,baz=303,slow=5.1,SNR=26
SDV Santo Domingo 148.82 23 *e*PKPdf PKPdf 02 17 05.0 -0.3
SDV LR LR
comp=Z,2μm,21.0s,MS5.9
TCE Chacachacare 149.20 6 *e*P PKPdf 02 17 07.7 +1.9
TRN Trinidad (W) 149.28 5 *e*PKHKP PKPbc 02 17 08.4 -1.8
PCRV Puerto La Cruz 149.29 12 PKP PKPdf 02 17 05.6 -0.3
comp=Z,29nm,0.5s,baz=240,slow=3.8,SNR=13
PCRV PKPbc PKPbc 02 17 08.7 -1.6
comp=Z,35nm,0.6s,baz=344,slow=6.9,SNR=24
TBH Brigand Hill 149.47 5 *e*PKP2 PKPab 02 17 13.1 -2.3
TPP Pointe-a-Pierr 149.60 5 *e*PKHKP PKPbc 02 17 08.7 -2.3
ROSC El Rosal 150.75 33 PKP PKPdf 02 17 10.1 +1.8
comp=Z,66nm,1.1s,baz=227,slow=2.3,SNR=30
ROSC PKPbc PKPbc 02 17 15.2 +1.4
comp=Z,62nm,0.9s,baz=297,slow=4.5,SNR=22
ROSC El Rosal 150.75 33 *e*PKPdf PKPdf 02 17 09.3 +1.0
ROSC *e*PKPbc PKPbc 02 17 15.1 +1.2
OTAV Otavalo 151.94 46 *e*PKPdf PKPdf 02 17 11.5 +1.4
OTAV LR LR
comp=Z,4μm,21.0s,MS6.1
RCBR Riachuelo 153.73 300 *e*PKPdf PKPdf 02 17 12.9 +0.3
RCBR *e*PKPbc PKPbc 02 17 20.7 +0.1
RCBR LR LR
comp=Z,7μm,21.0s,MS6.4
ATAH Atahualpa 156.88 59 PKP PKPdf 02 17 19.9 +2.9
comp=Z,47nm,1.2s,baz=248,slow=1.7,SNR=23
ATAH PKPab PKPab 02 17 48.1 +1.3
comp=Z,59nm,1.0s,baz=329,slow=7.7,SNR=8.1
ATAH PP PP 02 21 25.9 +1.0
comp=Z,7.8nm,0.9s,baz=298,slow=5.5,SNR=3.8
PLCA Paso Flores 157.09 156 PKP PKPdf 02 17 17.4 +1.0
comp=Z,12nm,1.0s,baz=200,slow=4.0,SNR=15
PLCA PKPab PKPab 02 17 47.9 +1.1
comp=Z,59nm,1.1s,baz=216,slow=6.0,SNR=4.8
PLCA Paso Flores 157.09 156 *e*PKPdf PKPdf 02 17 17.3 +0.9
PLCA *e*PKPbc PKPdf 02 17 28.2 +12
PLCA *e*PKPab PKPab 02 17 48.0 +1.1
PLCA LR LR
comp=Z,5μm,20.0s,MS6.3
NNA Nana 160.72 68 PKP PKPdf 02 17 22.4 +1.0
comp=Z,51nm,1.0s,baz=270,slow=1.2,SNR=7.3
NNA Nana 160.72 68 *e*PKPdf PKPdf 02 17 22.3 +0.9
NNA LR LR
comp=Z,5μm,20.0s
TRQA Tornquist 161.92 171 *e*PKPdf PKPdf 02 17 22.7 +0.7
TRQA *e*PKPab PKPab 02 18 08.2 +0.4
TRQA LR LR
comp=Z,7μm,19.0s
CFAA Coronel Fontan 165.69 145 PKP PKPdf 02 17 26.5 +0.8
comp=Z,8.4nm,1.1s,baz=262,slow=2.3,SNR=47
CFAA PKPab PKPab 02 18 25.9 +1.1
comp=Z,2.2nm,0.7s,baz=206,slow=3.4,SNR=8.3
CFAA PP PP 02 22 15.2 +4.0
comp=Z,0.4nm,0.8s,baz=211,slow=3.3,SNR=3.3
CFAA Coronel Fontan 165.69 145 PKP PKPdf 02 17 26.5 +0.8
CFAA PKPab PKPab 02 18 25.9 +1.1
CFAA PP PP 02 22 15.2 +4.0
LCO Las Campanas 165.92 131 *e*PKPdf PKPdf 02 17 27.8 +1.8
LCO *e*PKPab PKPab 02 18 28.0 +2.1
LCO LR LR
comp=Z,5μm,21.0s
ARE Arequipa 167.25 75 *e*P PKPdf 02 17 31.0 +3.7
LPAZ La Paz 170.19 69 PKP PKPdf 02 17 30.9 +1.7
comp=Z,81nm,1.2s,baz=25,slow=3.2,SNR=49
LPAZ PKPab PKPab 02 18 47.0 +1.9
comp=Z,13nm,0.6s,baz=5.5,slow=16,SNR=9.0
LPAZ PP PP 02 22 36.4 +0.9
comp=Z,15nm,1.2s,baz=30,slow=2.7,SNR=4.4
LPAZ La Paz 170.19 69 *e*PKPdf PKPdf 02 17 30.4 +1.2
LPAZ *e*PKPab PKPab 02 18 46.6 +1.5
LPAZ *e*PP PP 02 22 34.1 -1.3
LPAZ LR LR
comp=Z,5μm,20.0s
CPUP Villa Florida 173.73 191 PKP PKPdf 02 17 31.1 +0.5
comp=Z,15nm,1.0s,baz=61,slow=1.4,SNR=20
CPUP PKPab PKPab 02 19 01.8 +1.6
comp=Z,7.8nm,0.7s,baz=112,slow=4.9,SNR=7.7
CPUP Villa Florida 173.73 191 *e*PKPdf PKPdf 02 17 30.3 -0.3
CPUP *e*PKPab PKPab 02 19 01.7 +1.5
CPUP LR LR
comp=Z,1μm,19.0s

*CSEM **01** 01:57:32.4, 63°.91N×21°.17W, h6km, ML3.5, After REY*
REY 01 01:57:32.4, 63°.91N×21°.17W, h6km, ML3.5, ML3.2, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBJA	**Bjarnastaoir**	**0.07**	**302**	P	Pg	01 57 34.3	+0.2
IBJA				S	Sg	01 57 35.8	+0.5
ISOL	**Solvholt**	**0.10**	**78**	P	Pg	01 57 34.6	0.0
ISOL				S	Sg	01 57 36.2	+0.2
IKRO	**Krokur**	**0.19**	**6**	P	Pg	01 57 36.3	+0.1
IKRO				S	Sg	01 57 39.4	+0.6
ISAN	**Sandskeio**	**0.23**	**310**	P	Pg	01 57 37.1	+0.2
ISAN				S	Sg	01 57 40.8	+0.8
IVOS	**Vogsosar**	**0.24**	**257**	P	Pg	01 57 37.2	0.0
IVOS				S	Sg	01 57 41.1	+0.7
IASM	**Asmuli**	**0.26**	**107**	P	Pg	01 57 37.4	0.0
IASM				S	Sg	01 57 41.2	+0.5
IHEI	**Heioarbar**	**0.29**	**354**	P	Pg	01 57 38.1	0.0
IHEI				S	Sg	01 57 42.5	+0.5
IKAS	**Kald??rsel**	**0.32**	**291**	P	Pg	01 57 38.7	0.0
IKAS				S	Sg	01 57 43.7	+0.8
ISAU	**Saurbar**	**0.34**	**76**	P	Pg	01 57 38.8	-0.2
ISAU				S	Sg	01 57 43.8	+0.3
IKRI	**Krysuvik**	**0.40**	**266**	P	Pg	01 57 39.8	-0.4
IKRI				S	Sg	01 57 45.6	+0.1
IKUD	**Kuludalsa**	**0.52**	**323**	P	Pg	01 57 41.5	-0.9
IKUD				S	Sg	01 57 49.0	-0.1
IHAU	**Haukadalur**	**0.53**	**83**	P	Pg	01 57 42.1	-0.5
IHAU				S	Sg	01 57 49.6	0.0
IVOG	**Vogar**	**0.55**	**277**	P	Pg	01 57 42.2	-0.7
IVOG				S	Sg	01 57 50.1	+0.1
IGYG	**Gygjarholskot**	**0.56**	**48**	P	Pg	01 57 42.6	-0.6
IGYG				S	Sg	01 57 50.3	-0.1
IGRV	**Grindav??k**	**0.57**	**265**	P	Pg	01 57 42.6	-0.8
IGRV				S	Sg	01 57 50.5	-0.3
IVES	**Vestmannaeyjar**	**0.61**	**140**	P	Pg	01 57 43.6	-0.5
IVES				S	Sg	01 57 52.2	+0.2
IMID	**Miomork**	**0.62**	**113**	P	Pg	01 57 43.6	-0.7
IMID				S	Sg	01 57 52.3	-0.1
INYL	**Nylenda**	**0.70**	**276**	P	Pg	01 57 44.5	-1.3
INYL				S	Sg	01 57 54.4	-0.4
IASB	**`sbjarnarst**	**0.84**	**355**	P	Pg	01 57 47.2	-1.4
IASB				S	Sg	01 57 58.8	-0.8
IESK	**Eystri-Skogar**	**0.85**	**116**	P	Pg	01 57 47.4	-1.4
IESK				S	Sg	01 57 59.0	-0.8
IVAT	**Vatnsfell**	**1.03**	**73**	P	Pg	01 57 50.4	-1.7
IVAT				S	Sg	01 58 04.4	-1.0
IHVO	**Lagu-Hvolar**	**1.10**	**109**	P	Pg	01 57 51.3	-2.2
IHVO				S	Sg	01 58 06.3	-1.4
ISNB	**Snabyli**	**1.14**	**98**	P	Pg	01 57 52.0	-2.2
ISNB				S	Sg	01 58 07.3	-1.6
IHVE	**Hveravellir**	**1.19**	**35**	P	Pg	01 57 52.6	-2.6
IHVE				S	Sg	01 58 08.6	-2.0
ISKR	**Skrokkalda**	**1.38**	**60**	P	Pn	01 57 56.1	-2.0
IKAL	**Kalfafell**	**1.54**	**87**	P	Pn	01 57 58.5	-1.8

*ISCJB **01** 01:58:31.0±0.5, 10°.84N±0°.02×62°.20W±0°.02, h97km±5km, Error ellipse: s-maj=4.5km s-min=3.2km az=137.8*
*TRN **01** 01:58:33.7, 10°.90N×62°.04W, h94km, MD3.6*
*FUNV **01** 01:58:33.3, 10°.85N×62°.17W, h90km, MW3.5*
*NEIC **01** 01:58:33.6, 10°.89N×62°.04W, h95km, MD3.6(TRN), After TRN.*
ISC 01 01:58:31.8±0.5, 10°.84N±0°.02×62°.19W±0°.02, h94km±5km, n45, σ1°.14/84, 8C-3D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.19**	**188**	↑*i*P	**Pn**	**01 58 46.1**	**+0.9**
GUIV				*e*S	**Sn**	**01 58 55.1**	**-0.2**
TCE	**Chacachacare**	**0.46**	**108**	*e*P	**Pn**	**01 58 47.9**	**+1.2**
TCE				*e*S	**Sn**	**01 58 57.7**	**-0.1**
TCE	**Chacachacare**	**0.46**	**108**	*e*P	**Pn**	**01 58 47.9**	**+1.2**
TCE				*e*S	**Sn**	**01 58 57.7**	**-0.1**
TRN	**Trinidad (W)**	**0.80**	**104**	↑*i*P	**Pn**	**01 58 50.7**	**+1.1**
TRN				*e*S	**Sn**	**01 59 02.2**	**-0.9**
TRN	**Trinidad (W)**	**0.80**	**104**	↑*i*P	**Pn**	**01 58 50.7**	**+1.1**
TRN				*e*S	**Sn**	**01 59 02.2**	**-0.9**
TPP	**Pointe-a-Pierr**	**0.90**	**125**	*e*P	**Pn**	**01 58 52.5**	**+1.9**
TPP				*e*S	**Sn**	**01 59 05.0**	**+0.2**
TPP	**Pointe-a-Pierr**	**0.90**	**125**	*e*P	**Pn**	**01 58 52.5**	**+1.9**
TPP				*e*S	**Sn**	**01 59 05.0**	**+0.2**
GUNV	**Guanoco**	**1.00**	**228**	↓*i*P	**Pn**	**01 58 53.8**	**+2.0**
GUNV				*e*S	**Sn**	**01 59 07.7**	**+0.9**
CRUV	**Carupano**	**1.04**	**261**	*e*P	**Pn**	**01 58 53.1**	**+0.9**
CRUV				*e*S	**Sn**	**01 59 07.8**	**+0.2**
ITEV	**Isla Los Testi**	**1.05**	**299**	↑*e*P	**Pn**	**01 58 53.3**	**+0.9**
ITEV				*e*S	**Sn**	**01 59 07.6**	**-0.3**
TBH	**Brigand Hill**	**1.16**	**108**	*e*P	**Pn**	**01 58 54.6**	**+1.0**
TBH				*e*S	**Sn**	**01 59 09.3**	**-0.9**
TBH	**Brigand Hill**	**1.16**	**108**	*e*P	**Pn**	**01 58 54.6**	**+1.0**
TBH				*e*S	**Sn**	**01 59 09.3**	**-0.9**
GRGR	**Grenville**	**1.39**	**22**	*e*Pn	**Pn**	**01 58 56.2**	**-0.2**
GRGR				*e*Sn	**Sn**	**01 59 14.1**	**-0.8**
GRW	**Mount Saint Ca**	**1.41**	**22**	*e*P	**Pn**	**01 58 57.6**	**+0.9**
GRW				*e*S	**Sn**	**01 59 14.3**	**-1.2**
GRW	**Mount Saint Ca**	**1.41**	**22**	*e*P	**Pn**	**01 58 57.6**	**+0.9**
GRW	**Mount Saint Ca**	**1.41**	**22**	*e*	Px	01 59 09.9	
GRW				*e*S	**Sn**	**01 59 14.3**	**-1.2**
TPR	**Prospect**	**1.43**	**76**	↑*e*P	**Pn**	**01 58 57.4**	**+0.5**
TPR				*e*S	**Sn**	**01 59 14.8**	**-1.1**
TPR	**Prospect**	**1.43**	**76**	↑*e*P	**Pn**	**01 58 57.4**	**+0.5**
TPR				*e*S	**Sn**	**01 59 14.8**	**-1.1**
GRHS	**Sauteurs**	**1.48**	**21**	*e*P	**Pn**	**01 58 58.7**	**+1.2**
GRHS				*e*S	**Sn**	**01 59 16.6**	**-0.3**
GRHS	**Sauteurs**	**1.48**	**21**	*e*P	**Pn**	**01 58 58.7**	**+1.2**
GRHS				*e*S	**Sn**	**01 59 16.6**	**-0.3**
BOT	**Bacolet**	**1.48**	**77**	*e*P	**Pn**	**01 58 57.8**	**+0.3**
BOT				*e*S	**Sn**	**01 59 15.4**	**-1.7**
BOT	**Bacolet**	**1.48**	**77**	*e*P	**Pn**	**01 58 57.8**	**+0.3**
BOT				*e*S	**Sn**	**01 59 15.4**	**-1.7**
GRIC	**Isle de Caille**	**1.56**	**22**	*e*P	**Pn**	**01 58 59.6**	**+1.1**
GRIC				*e*S	**Sn**	**01 59 19.0**	**+0.4**
GRSS	**Sisters**	**1.56**	**21**	*e*P	**Pn**	**01 58 59.7**	**+1.2**
GRSS				*e*S	**Sn**	**01 59 19.4**	**+0.7**
GRSS	**Sisters**	**1.56**	**21**	*e*P	**Pn**	**01 58 59.7**	**+1.2**
GRSS				*e*S	**Sn**	**01 59 18.2**	**-0.5**
TOSP	**Speyside**	**1.69**	**74**	*e*P	**Pn**	**01 58 59.3**	**-0.8**
TOSP				*e*S	**Sn**	**01 59 19.3**	**-2.4**
ORIV	**Oritupano**	**2.13**	**214**	↓*i*P	**Pn**	**01 59 07.4**	**+1.6**
ORIV				*e*S	**Sn**	**01 59 31.5**	**-0.3**
PCRV	**Puerto La Cruz**	**2.49**	**255**	*e*P	**Pn**	**01 59 11.5**	**+0.9**
PCRV				*e*S	**Sn**	**01 59 38.6**	**-1.8**
IBAV	**Isla La Blanqu**	**2.53**	**293**	↑*e*P	**Pn**	**01 59 12.2**	**+1.0**
IBAV				*e*S	**Sn**	**01 59 40.4**	**-1.0**
SVB	**Belmont**	**2.59**	**21**	*e*P	**Pn**	**01 59 12.3**	**+0.5**
SVB				*e*S	**Sn**	**01 59 43.7**	**+1.0**
SVB	**Belmont**	**2.59**	**21**	*e*P	**Pn**	**01 59 12.3**	**+0.5**
SVB				*e*S	**Sn**	**01 59 43.7**	**+1.0**
SSV	**Crater Summit**	**2.66**	**22**	*e*P	**Pn**	**01 59 11.1**	**-1.8**
SSV				*e*S	**Sn**	**01 59 44.9**	**+0.5**
SSV	**Crater Summit**	**2.66**	**22**	*e*P	**Pn**	**01 59 13.4**	**+0.6**
SSV				*e*S	**Sn**	**01 59 42.7**	**-1.7**
RIOV	**Rio Grande**	**2.78**	**172**	*e*P	**Pn**	**01 59 15.3**	**+0.8**
RIOV				*e*S	**Sn**	**01 59 46.5**	**-0.8**
MCLT	**Moule a Chique**	**3.10**	**23**	*e*P	**Pn**	**01 59 18.6**	**-0.2**
MCLT				*e*S	**Sn**	**01 59 52.3**	**-2.7**
PRGV	**PARIAGUAN**	**3.18**	**230**	*e*P	**Pn**	**01 59 20.6**	**+0.8**
PRGV				*e*S	**Sn**	**01 59 55.2**	**-1.7**
GURV	**El Guri**	**3.19**	**196**	↓*e*P	**Pn**	**01 59 20.5**	**+0.6**
CUPV	**Cœpira**	**3.62**	**258**	↑*e*P	**Pn**	**01 59 26.8**	**+1.1**
CUPV				*e*S	**Sn**	**02 00 05.6**	**-1.9**
BIRV	**Birongo**	**4.02**	**265**	*e*P	**Pn**	**01 59 32.5**	**+1.3**
BIRV				*e*S	**Sn**	**02 00 15.1**	**-2.2**
MERV	**Las Mercedes**	**4.34**	**249**	*e*P	**Pn**	**01 59 35.5**	**+0.1**
MERV				*e*S	**Sn**	**02 00 22.0**	**-3.0**
LUEV	**Luepa**	**5.02**	**172**	*e*P	**Pn**	**01 59 43.5**	**-1.2**
LUEV				*e*S	**Sn**	**02 00 38.1**	**-3.4**
CAOV	**Caicara del Or**	**5.37**	**230**	*e*P	**Pn**	**01 59 49.4**	**-0.1**
CAOV				*e*S	**Sn**	**02 00 46.5**	**-3.5**
TURV	**Turiamo**	**5.56**	**267**	*e*P	**Pn**	**01 59 52.8**	**+0.7**
BAUV	**El Baul**	**6.06**	**252**	*e*P	**Pn**	**01 59 58.2**	**-0.7**
TEPV	**Terepaima**	**6.94**	**263**	*e*S	**Sn**	**02 01 22.5**	**-5.9**

*CSEM **01** 02:07:55.4, 63°.91N×21°.17W, h5km, ML3.8, After REY*
REY 01 02:07:55.4, 63°.91N×21°.17W, h5km, ML3.8, ML3.7, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBJA	**Bjarnastaoir**	**0.07**	**302**	P	Pg	02 07 57.2	+0.2
IBJA				S	Sg	02 07 58.7	+0.5
ISOL	**Solvholt**	**0.10**	**78**	P	Pg	02 07 57.5	0.0
ISOL				S	Sg	02 07 59.3	+0.4
IKRO	**Krokur**	**0.19**	**6**	P	Pg	02 07 59.3	+0.1
IKRO				S	Sg	02 08 02.5	+0.7
ISAN	**Sandskeio**	**0.23**	**310**	P	Pg	02 08 00.0	+0.1
ISAN				S	Sg	02 08 03.9	+0.9
IVOS	**Vogsosar**	**0.24**	**257**	P	Pg	02 08 00.1	-0.1
IVOS				S	Sg	02 08 04.0	+0.6
IASM	**Asmuli**	**0.26**	**107**	P	Pg	02 08 00.3	0.0
IASM				S	Sg	02 08 04.2	+0.5
IHEI	**Heioarbar**	**0.29**	**354**	P	Pg	02 08 01.1	0.0
IHEI				S	Sg	02 08 05.6	+0.6
IKAS	**Kald??rsel**	**0.32**	**291**	P	Pg	02 08 01.6	-0.1
IKAS				S	Sg	02 08 06.8	+0.9
ISAU	**Saurbar**	**0.34**	**76**	P	Pg	02 08 01.7	-0.3
ISAU				S	Sg	02 08 06.9	+0.5
IKRI	**Krysuvik**	**0.40**	**266**	P	Pg	02 08 02.8	-0.4
IKRI				S	Sg	02 08 08.6	+0.2
IKUD	**Kuludalsa**	**0.52**	**323**	P	Pg	02 08 04.5	-0.9
IKUD				S	Sg	02 08 12.2	+0.1
IHAU	**Haukadalur**	**0.53**	**83**	P	Pg	02 08 05.0	-0.6
IHAU				S	Sg	02 08 12.7	+0.1
IVOG	**Vogar**	**0.55**	**277**	P	Pg	02 08 05.2	-0.7
IVOG				S	Sg	02 08 13.3	+0.3
IGYG	**Gygjarholskot**	**0.56**	**48**	P	Pg	02 08 05.5	-0.7
IGYG				S	Sg	02 08 13.4	-0.1
IGRV	**Grindav??k**	**0.57**	**266**	P	Pg	02 08 05.5	-0.9
IGRV				S	Sg	02 08 13.7	-0.1
IVES	**Vestmannaeyjar**	**0.61**	**140**	P	Pg	02 08 06.5	-0.6
IVES				S	Sg	02 08 15.2	+0.2
IMID	**Miomork**	**0.62**	**113**	P	Pg	02 08 06.6	-0.7
IMID				S	Sg	02 08 15.2	-0.1
INYL	**Nylenda**	**0.70**	**276**	P	Pg	02 08 07.4	-1.4
INYL				S	Sg	02 08 17.2	-0.6
IASB	**`sbjarnarst**	**0.85**	**355**	P	Pg	02 08 10.1	-1.5
IASB				S	Sg	02 08 21.9	-0.7
IESK	**Eystri-Skogar**	**0.85**	**116**	P	Pg	02 08 10.3	-1.5
IESK				S	Sg	02 08 21.9	-0.9
IVAT	**Vatnsfell**	**1.03**	**73**	P	Pg	02 08 13.3	-1.8
IVAT				S	Sg	02 08 27.4	-1.0
IHVO	**Lagu-Hvolar**	**1.10**	**109**	P	Pg	02 08 14.4	-2.1
IHVO				S	Sg	02 08 29.3	-1.4
ISNB	**Snabyli**	**1.14**	**98**	P	Pg	02 08 14.9	-2.3
ISNB				S	Sg	02 08 30.4	-1.5
IHVE	**Hveravellir**	**1.19**	**35**	P	Pg	02 08 15.5	-2.7
ISKR	**Skrokkalda**	**1.38**	**60**	P	Pn	02 08 19.1	-2.1

*IDC **01** 02:14:26.4±0.7, 20°.09N×121°.35E, h0km, mb4.0/14, mb1 4.1/16, mb1mx4.0/26, mbtmp4.0/16, ML4.0/2, Error ellipse: s-maj=27.9km s-min=15.0km az=72.0*
*ISCJB **01** 02:14:27.3±3.1, 20°.08N±0°.07×121°.4E±0°.1, h18km±23km, mb4.0/18, Error ellipse: s-maj=18.5km s-min=11.6km az=166.8*
*NEIC **01** 02:14:29.8±2.0, 20°.12N×121°.38E, h21km±15km, mb3.9/3, Error ellipse

JOW Sn **Sn** **02 18 19.1 -5.0**
0.7nm,0.3s,baz=111,slow=19,SNR=2.3
KSRS Korea Array 18.19 17 P **Pn** **02 18 40.9 -0.1**
0.3nm,0.3s,baz=197,slow=11,SNR=6.9
CMAR Chiang Mai Arr 21.25 269 P **P** **02 19 15.2 +0.5**
1.0nm,0.4s,mb3.5,baz=71,slow=8.3,SNR=4.1
KSM Kuching 21.46 212 *eP* **P** **02 19 17.6 +0.5**
4.7nm,0.8s,mb3.9
SONM Songino Array 30.20 340 P **P** **02 20 39.0 +0.4**
0.6nm,0.4s,mb3.7,baz=147,slow=9.0,SNR=3.7
MK31 Makanchi Array 41.45 319 *eP* **P** **02 22 15.3 +0.3**
MKAR Makanchi Array 41.45 319 P **P** **02 22 15.4 +0.4**
2.5nm,0.5s,mb4.1,baz=107,slow=9.7,SNR=16
ZALV Zalesovo Beam 43.79 329 P **P** **02 22 33.0 -0.8**
2.9nm,0.6s,mb4.2,baz=119,slow=7.1,SNR=9.9
TKM2 Tokmak 2 44.49 311 *eP* **P** **02 22 40.0 +0.3**
2.4nm,0.9s,mb3.9
ASAR Alice Springs 45.20 164 P **P** **02 22 44.6 -0.8**
4.7nm,0.6s,mb4.5,baz=348,slow=7.1,SNR=66
KURK Kurchatov 45.37 323 P **P** **02 22 46.5 -0.1**
2.7nm,0.6s,mb4.3,baz=116,slow=7.5,SNR=13
KURK Kurchatov 45.37 323 P **P** **02 22 46.5 -0.1**
BVAR Borovoye Array 50.97 323 P **P** **02 23 29.9 +0.1**
0.6nm,0.5s,mb3.8,baz=88,slow=16,SNR=3.8
FORT Forrest 51.01 173 *eP* **P** **02 23 29.9 -0.3**
18nm,0.7s,mb5.1
NWAO Narrogin (SRO) 52.89 184 P **P** **02 23 43.9 -0.4**
2.3nm,0.6s,mb4.3,baz=324,slow=8.7,SNR=3.5
STKA Stephens Creek 55.21 159 P **P** **02 24 01.5 +0.3**
1.8nm,0.6s,mb4.3,baz=342,slow=5.5,SNR=5.7
STKA Stephens Creek 55.21 159 P **P** **02 24 01.5 +0.3**
ABKAR Abkulak array 56.45 316 *eP* **P** **02 24 09.8 -0.2**
0.4nm,0.6s,mb3.6
ARCES ARCESS Array B 73.37 339 P **P** **02 26 00.7 +1.0**
0.8nm,0.7s,mb3.8,baz=107,slow=4.1,SNR=4.0
FINES FINESS Array B 75.05 330 P **P** **02 26 09.0 -0.7**
0.7nm,0.8s,mb3.6,baz=40,slow=7.0,SNR=5.5
BRTR Keskin Array B 75.75 307 P **P** **02 26 14.0 -0.2**
0.4nm,0.5s,mb3.6,baz=86,slow=2.2,SNR=3.4
BRTR Keskin Array B 75.75 307 P **P** **02 26 14.0 -0.2**
NOA NORSAR Array B 81.90 333 P **P** **02 26 46.8 -0.7**
0.5nm,0.8s,mb3.5,baz=69,slow=5.0,SNR=2.3
YKA Yellowknife Ar 86.63 23 P **P** **02 27 12.3 +0.8**
0.3nm,0.5s,mb3.7,baz=314,slow=4.7,SNR=3.7

*IDC **01** 02:18:02.8±1.0,20°.03N×121°.43E,h0km,mb3.8/11, mb1 4.0/13,mb1mx3.8/25,mbtmp3.9/13,ML3.9/2,Error ellipse: s-maj=28.4km s-min=22.7km az=68.0*
*MAN **01** 02:18:06,20°.24N×121°.65E,h75km,mb4.7,ML3.6,MS3.5*
*NEIC **01** 02:18:07.8±0.6,19°.93N×121°.42E,h35km,mb3.9/1,Error ellipse: s-maj=15.0km s-min=9.8km az=90.0*
*ISCJB **01** 02:18:09.2±0.5,20°.11N±0°.04×121°.60E±0°.10,h64km±6km, mb3.8/12,Error ellipse: s-maj=15.2km s-min=6.1km az=175.8*

ISC 01 02:18:10.5±0.5,20°.10N±0°.04×121°.62E±0°.10,h61km±6km, n28,σ0s91/31,mb3.8/12,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBP	**Basco**	**0.47**	**43**	*eP*	**Pn**	**02 18 20.6**	**-1.6**
BBP				*eS*	**Sn**	**02 18 36.7**	**+5.9**
APYP	**Conner**	**2.25**	**189**	*eP*	**Pn**	**02 18 44.4**	**-1.0**
APYP				*eS*	**Sn**	**02 19 13.6**	**+1.6**
CVP	**Callao Caves**	**2.39**	**175**	*eP*	**Pn**	**02 18 47.2**	**0.0**
TWG	**Pinlang**	**2.76**	**350**	*ePn*	**Pn**	**02 18 53.6**	**+1.3**
YULB	**Yu-li**	**3.29**	**355**	*ePn*	**Pn**	**02 19 00.7**	**+1.0**
TPUB	**Ta-pu**	**3.32**	**344**	*ePn*	**Pn**	**02 18 57.7**	**-2.3**
SSLB	**Suanglung**	**3.73**	**351**	*ePn*	**Pn**	**02 19 05.8**	**+0.3**
BALP	**Baler**	**4.33**	**181**	*eP*	**Pn**	**02 19 14.1**	**+0.3**
YHNB	**Yeheng**	**4.56**	**357**	*ePn*	**Pn**	**02 19 17.5**	**+0.6**
QZH	**Quanzhou**	**5.58**	**330**	*ePn*	**Pn**	**02 19 39.6**	**+8.7**
QZH				Sn	**Sn**	**02 20 34.5**	**+0.9**
QZH				smax			
	comp=N,100nm,0.5s						
QZH				smax			
	comp=E,120nm,0.6s						
JOW	**Kunigami**	**9.07**	**41**	Pn	**Pn**	**02 20 18.4**	**-0.3**
	comp=E,3.3nm,0.3s,baz=336,slow=29,SNR=6.3						
KSRS	**Korea Array**	**18.15**	**16**	P	**Pn**	**02 22 18.4**	**+0.3**
	comp=E,0.2nm,0.3s,baz=197,slow=11,SNR=4.3						
CMAR	**Chiang Mai Arr**	**21.46**	**269**	P	**P**	**02 22 52.7**	**-1.3**
	comp=E,1.4nm,0.4s,mb3.6,baz=62,slow=7.3,SNR=7.5						
MK31	**Makanchi Array**	**41.61**	**319**	*eP*	**P**	**02 25 52.1**	**-0.4**
MKAR	**Makanchi Array**	**41.61**	**319**	P	**P**	**02 25 52.4**	**-0.1**
	comp=E,1.1nm,0.5s,mb3.8,baz=107,slow=10,SNR=8.1						
WRAB	**Tennant Creek**	**41.69**	**162**	*eP*	**P**	**02 25 53.1**	**-0.3**
	comp=E,1.4nm,0.5s,mb3.9						
ZAA0	**Zalesovo Array**	**43.92**	**329**	*eP*	**P**	**02 26 09.8**	**-1.2**
ZALV	**Zalesovo Beam**	**43.92**	**329**	P	**P**	**02 26 10.3**	**-0.7**
	comp=E,2.4nm,0.8s,mb4.0,baz=116,slow=6.8,SNR=6.2						
ZALV	**Zalesovo Beam**	**43.92**	**329**	P	**P**	**02 26 10.3**	**-0.7**
ASAR	**Alice Springs**	**45.12**	**164**	P	**P**	**02 26 20.9**	**0.0**
	comp=E,0.7nm,0.3s,mb3.9,baz=344,slow=6.8,SNR=11						
KURK	**Kurchatov**	**45.52**	**323**	P	**P**	**02 26 23.6**	**-0.2**
	comp=E,2.0nm,0.8s,mb4.1,baz=120,slow=7.5,SNR=9.4						
BVAR	**Borovoye Array**	**51.12**	**323**	P	**P**	**02 27 06.9**	**-0.1**
	comp=E,0.6nm,0.5s,mb3.8,baz=106,slow=7.0,SNR=3.1						
ARCES	**ARCESS Array B**	**73.47**	**339**	P	**P**	**02 29 37.0**	**+0.9**
	comp=E,0.9nm,0.8s,mb3.7,baz=72,slow=9.7,SNR=2.6						
FINES	**FINESS Array B**	**75.17**	**330**	P	**P**	**02 29 47.0**	**+0.9**
	comp=E,0.5nm,0.6s,mb3.6,baz=25,slow=5.0,SNR=3.6						
BRTR	**Keskin Array B**	**75.94**	**307**	P	**P**	**02 29 50.2**	**-0.7**
	comp=E,0.4nm,0.4s,mb3.7,baz=92,slow=2.3,SNR=3.4						
BRTR	**Keskin Array B**	**75.94**	**307**	P	**P**	**02 29 50.2**	**-0.7**
NOA	**NORSAR Array B**	**82.02**	**333**	P	**P**	**02 30 23.7**	**0.0**
	comp=E,0.6nm,0.8s,mb3.6,baz=64,slow=5.2,SNR=2.8						
YKA	**Yellowknife Ar**	**86.57**	**23**	P	**P**	**02 30 48.2**	**+1.4**
	comp=E,0.5nm,0.7s,mb3.9,baz=311,slow=4.9,SNR=3.4						

*IDC **01** 02:18:17.7±0.6,20°.11N×121°.36E,h0km,mb4.1/22, mb1 4.3/24,mb1mx4.2/30,mbtmp4.2/24,ML4.6/2,Error ellipse: s-maj=18.7km s-min=14.5km az=79.0*
*NEIC **01** 02:18:22.9±0.3,20°.11N×121°.43E,h35km,mb4.3/6,Error ellipse: s-maj=7.0km s-min=5.3km az=92.0*
*ISCJB **01** 02:18:23.9±0.8,20°.23N±0°.05×121°.51E±0°.06,h59km±7km, mb4.1/27,Error ellipse: s-maj=10.0km s-min=6.5km az=30.6*
*JMA **01** 02:18:27.1±0.3,20°.55N×121°.27E,h127km,M4.1*

ISC 01 02:18:25.6±0.7,20°.23N±0°.05×121°.46E±0°.06,h57km±7km, n57,σ0s80/65,mb4.1/27,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**2.60**	**352**	*ePn*	**Pn**	**02 19 04.2**	**-1.0**
YULB	**Yu-li**	**3.15**	**357**	*ePn*	**Pn**	**02 19 12.8**	**+0.1**
TPUB	**Ta-pu**	**3.15**	**346**	*ePn*	**Pn**	**02 19 10.2**	**-2.5**
SSLB	**Suanglung**	**3.57**	**353**	*ePn*	**Pn**	**02 19 21.6**	**+3.2**
NACB	**Ninganchiao**	**3.92**	**2**	*ePn*	**Pn**	**02 19 22.4**	**-0.9**
HATJ	**Hateruma jima**	**4.38**	**29**	P	**Pn**	**02 19 30.3**	**+0.7**
HATJ				S	**Sn**	**02 20 18.7**	**-0.7**
YOJ	**Yonaguni jima**	**4.45**	**19**	P	**Pn**	**02 19 30.3**	**-0.2**
YOJ				S	**Sn**	**02 20 19.9**	**-1.1**
BALP	**Baler**	**4.47**	**179**	*eS*	**Pn**	**02 19 31.7**	**+0.9**
IRIF	**Iriomote-Funau**	**4.59**	**27**	P	**Pn**	**02 19 32.9**	**+0.4**
IRIF				S	**Sn**	**02 20 24.6**	**0.0**
JKRS	**Kuro-shima**	**4.63**	**30**	P	**Pn**	**02 19 34.3**	**+1.2**
JKRS				S	**Sn**	**02 20 25.1**	**-0.5**
JIJ	**Ishigaki jima**	**4.80**	**31**	P	**Pn**	**02 19 35.7**	**+0.3**
JIJ				S	**Sn**	**02 20 29.1**	**-0.7**
JTJ	**Tarama**	**5.32**	**34**	P	**Pn**	**02 19 42.8**	**+0.4**
JTJ				S	**Sn**	**02 20 41.6**	**-0.7**
JMJ	**Miyako jima 2**	**5.78**	**37**	P	**Pn**	**02 19 50.3**	**+1.6**
JOGS	**Gusukube**	**5.80**	**38**	P	**Pn**	**02 19 50.1**	**+1.1**
JOGS				S	**Sn**	**02 20 54.6**	**+0.4**
JKE	**Kume jima 2**	**7.79**	**38**	P	**Pn**	**02 20 17.3**	**+0.9**
JKE				S	**Sn**	**02 21 42.1**	**-1.1**
JAGN	**Aguni-jima**	**8.26**	**39**	P	**Pn**	**02 20 23.9**	**+1.2**
JIH	**Iheya**	**9.02**	**40**	P	**Pn**	**02 20 33.0**	**-0.2**
JOW	**Kunigami**	**9.07**	**42**	P	**Pn**	**02 20 33.3**	**-0.5**
JOW	**Kunigami**	**9.07**	**42**	Pn	**Pn**	**02 20 33.4**	**-0.5**
	20nm,0.3s,baz=189,slow=17,SNR=16						
JOW				Sn	**Sn**	**02 22 06.6**	**-7.8**
	1.5nm,0.3s,baz=128,slow=19,SNR=2.1						
JTK	**Tokunoshima**	**10.17**	**41**	P	**Pn**	**02 20 48.1**	**-0.7**
KSRS	**Korea Array**	**18.06**	**17**	P	**Pn**	**02 22 32.5**	**+0.1**
	1.1nm,0.3s,baz=196,slow=11,SNR=15						
CHTO	**Chiang Mai**	**21.27**	**270**	*eP*	**P**	**02 23 07.5**	**+0.2**
CMAR	**Chiang Mai Arr**	**21.32**	**269**	P	**P**	**02 23 06.9**	**-0.9**
	0.9nm,0.5s,mb3.3,baz=70,slow=8.0,SNR=5.1						
MJAR	**Matsushiro Arr**	**21.88**	**39**	P	**P**	**02 23 14.6**	**+0.9**
	1.9nm,0.8s,mb3.6,baz=230,slow=7.3,SNR=6.8						
ASAJ	**Asahikawa**	**29.62**	**32**	P	**P**	**02 24 25.9**	**+0.5**
	2.3nm,0.3s,mb4.4,baz=171,slow=12,SNR=3.0						
SONM	**Songino Array**	**30.12**	**340**	P	**P**	**02 24 29.8**	**0.0**
	1.0nm,0.5s,mb3.8,baz=154,slow=9.8,SNR=5.9						
MK31	**Makanchi Array**	**41.41**	**319**	*eP*	**P**	**02 26 06.0**	**-0.3**
MKAR	**Makanchi Array**	**41.41**	**319**	P	**P**	**02 26 06.4**	**+0.1**
	1.5nm,0.5s,mb3.9,baz=102,slow=11,SNR=9.3						
WRAB	**Tennant Creek**	**41.87**	**162**	*eP*	**P**	**02 26 07.8**	**-2.5**
	7.5nm,0.9s,mb4.3						
PETK	**Petropavlovsk-**	**43.04**	**31**	P	**P**	**02 26 20.1**	**+0.6**
	3.8nm,0.9s,mb4.1,baz=242,slow=8.2,SNR=9.4						
ZAA0	**Zalesovo Array**	**43.72**	**329**	*eP*	**P**	**02 26 24.9**	**0.0**
ZALV	**Zalesovo Beam**	**43.72**	**329**	P	**P**	**02 26 24.9**	**-0.1**
	1.8nm,0.5s,mb4.0,baz=117,slow=9.1,SNR=7.9						
UCH	**Uchtor**	**45.06**	**310**	*eP*	**P**	**02 26 37.1**	**+1.2**
	2.9nm,1.2s,mb4.0						
ASAR	**Alice Springs**	**45.29**	**164**	P	**P**	**02 26 36.6**	**-1.1**
	3.2nm,0.4s,mb4.5,baz=346,slow=6.8,SNR=25						
KURK	**Kurchatov**	**45.32**	**323**	P	**P**	**02 26 38.1**	**+0.4**
	3.7nm,0.6s,mb4.4,baz=116,slow=7.5,SNR=17						
KURK	**Kurchatov**	**45.32**	**323**	*eP*	**P**	**02 26 38.2**	**+0.4**
	1.9nm,0.6s,mb4.1						
BVAR	**Borovoye Array**	**50.92**	**323**	P	**P**	**02 27 21.8**	**+0.9**
	1.3nm,0.5s,mb4.1,baz=104,slow=7.1,SNR=5.6						
BVAR				PcP	PcP	02 28 36.6	0.0
	2.2nm,0.6s,baz=98,slow=4.5,SNR=5.3						
TIXI	**Tiksi**	**51.61**	**3**	*eP*	**P**	**02 27 25.2**	**-0.6**
	2.9nm,0.6s,mb4.4						
NWAO	**Narrogin (SRO)**	**53.01**	**184**	P	**P**	**02 27 35.4**	**-1.3**
	3.7nm,0.5s,mb4.5,baz=3.7,slow=7.8,SNR=7.8						
STKA	**Stephens Creek**	**55.29**	**159**	P	**P**	**02 27 52.6**	**-0.7**
	1.9nm,0.6s,mb4.3,baz=0.1,slow=5.5,SNR=5.8						
ABKAR	**Abkulak array**	**56.41**	**316**	*eP*	**P**	**02 28 01.5**	**+0.3**
	1.1nm,0.5s,mb4.1						
AKTK	**Aktyubinsk**	**57.80**	**317**	P	**P**	**02 28 11.0**	**0.0**
AKTO	**Aktyubinsk**	**57.80**	**317**	P	**P**	**02 28 11.0**	**0.0**
	0.9nm,0.5s,mb4.1,baz=87,slow=11,SNR=5.0						
ARCES	**ARCESS Array B**	**73.29**	**339**	P	**P**	**02 29 51.2**	**+0.6**
	1.1nm,0.5s,mb4.0,baz=81,slow=7.6,SNR=8.5						
ARCES	**ARCESS Array B**	**73.29**	**339**	P	**P**	**02 29 51.2**	**+0.6**
FINES	**FINESS Array B**	**74.98**	**330**	P	**P**	**02 30 00.9**	**+0.3**
	2.5nm,0.7s,mb4.3,baz=38,slow=7.5,SNR=12						
BRTR	**Keskin Array B**	**75.73**	**307**	P	**P**	**02 30 05.4**	**+0.1**
	0.5nm,0.4s,mb3.8,baz=107,slow=3.9,SNR=5.6						
AKASG	**Malin Array Be**	**75.99**	**319**	P	**P**	**02 30 06.1**	**-0.4**
	0.6nm,0.5s,mb3.8,baz=55,slow=5.6,SNR=4.0						
INK	**Inuvik**	**76.78**	**22**	*eP*	**P**	**02 30 10.9**	**+0.2**
	5.8nm,1.3s,mb4.3						
NB2	**NORSAR Subarra**	**81.83**	**333**	P	**P**	**02 30 37.9**	**-0.4**
	comp=Z,0.9nm,0.6s,mb3.9,baz=61,slow=5.6						
NOA	**NORSAR Array B**	**81.83**	**333**	P	**P**	**02 30 38.2**	**0.0**
	comp=Z,1.3nm,0.7s,mb4.0,baz=63,slow=5.3,SNR=7.7						
RES	**Resolute Bay**	**82.50**	**9**	P	**P**	**02 30 41.8**	**+0.1**
	comp=Z,0.9nm,0.7s,mb3.9,baz=315,slow=3.3,SNR=6.0						
IDI	**Anoyia**	**83.69**	**305**	P	**P**	**02 30 48.1**	**-0.4**
	comp=Z,2.1nm,0.6s,mb4.4,baz=338,slow=11,SNR=3.3						
CLL	**Collm**	**85.35**	**323**	P	**P**	**02 30 56.7**	**+0.1**
CLL				*e*		02 31 04.0	
GERES	**GERESS Array B**	**86.05**	**321**	P	**P**	**02 31 00.5**	**+0.4**
	comp=Z,0.5nm,0.5s,mb4.0,baz=59,slow=6.4,SNR=5.0						
YKA	**Yellowknife Ar**	**86.50**	**23**	P	**P**	**02 31 02.6**	**+0.6**
	comp=Z,0.9nm,0.6s,mb4.2,baz=309,slow=4.7,SNR=9.1						
TXAR	**Lajitas Array**	**114.27**	**43**	PKP	PKiKP	02 37 00.6	+1.3
	comp=Z,0.1nm,0.3s,baz=161,slow=1.4,SNR=3.6						

IDC 01 02:25:03.4±1.4,20°.04N×121°.38E,h0km,mb3.7/3, mb1 3.8/5,mb1mx3.5/25,mbtmp3.8/5,ML3.9/2,Error ellipse: s-maj=44.3km s-min=25.5km az=75.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOW	**Kunigami**	**9.26**	**42**	Pn	Pn	02 27 18.4	+0.3
	3.8nm,0.3s,baz=187,slow=22,SNR=6.4						
KSRS	**Korea Array**	**18.26**	**17**	P	Pn	02 29 17.8	-0.4
	0.2nm,0.3s,baz=196,slow=11,SNR=4.2						
ZALV	**Zalesovo Beam**	**43.85**	**329**	P	P	02 33 10.5	-0.7
	0.4nm,0.5s,baz=107,slow=4.8,SNR=2.5						
ASAR	**Alice Springs**	**45.13**	**164**	P	P	02 33 21.6	0.0
	0.8nm,0.7s,baz=338,slow=8.7,SNR=6.7						
KURK	**Kurchatov**	**45.43**	**323**	P	P	02 33 24.4	+0.5
	0.3nm,0.2s,baz=122,slow=6.9,SNR=2.7						

*ISCJB **01** 02:38:37.9±0.6,36°.93N±0°.03×4°.76E±0°.05,h10km,Error ellipse: s-maj=6.1km s-min=4.5km az=31.9*
*CRAAG **01** 02:38:38.5,36°.73N×4°.63E,Ml3.2*
*CSEM **01** 02:38:40.9±0.9,36°.98N×4°.79E,h10km,ML2.9/4,Error ellipse: s-maj=19.9km s-min=10.3km az=149.0*
*LDG **01** 02:38:40.3±0.2,36°.79N×4°.48E,h10km,Ml2.9/8,Error ellipse: s-maj=5.3km s-min=3.3km az=138.0*
*MDD **01** 02:38:40.9±0.6,36°.70N×4°.61E,h0km,mb4.0/11,Error ellipse: s-maj=7.3km s-min=5.1km az=92.0,PRIMO*
*NEIC **01** 02:38:42.0,36°.78N×4°.57E,h0km,MG4.0(MDD),After MDD.*

ISC 01 02:38:39.5±0.6,36°.84N±0°.03×4°.71E±0°.04,h10km,n101, σ1s60/157,3D,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKF	**Akfadou**	**0.24**	**209**	P	**Pg**	**02 38 41.7**	**-2.6**
AKF	**Akfadou**	**0.24**	**209**	P	**Pg**	**02 38 41.7**	**-2.6**
AKF	**Akfadou**	**0.24**	**209**	P	**Pg**	**02 38 41.7**	**-2.6**
DFRA	**Djebel Bou Aff**	**0.98**	**107**	P	**Pg**	**02 39 00.1**	**+1.7**
DFRA	**Djebel Bou Aff**	**0.98**	**107**	P	**Pg**	**02 39 00.1**	**+1.7**
DFRA	**Djebel Bou Aff**	**0.98**	**107**	P	**Pg**	**02 39 00.1**	**+1.7**
AKET	**Djebel Ketaf**	**1.04**	**220**	P	**Pg**	**02 38 58.3**	**-1.1**
AKET	**Djebel Ketaf**	**1.04**	**220**	P	**Pg**	**02 38 58.3**	**-1.1**
AKET	**Djebel Ketaf**	**1.04**	**220**	P	**Pg**	**02 38 58.3**	**-1.1**
ADJB	**Djebel Djouab**	**1.23**	**237**	P	**Pn**	**02 39 01.2**	**-1.5**
ADJB	**Djebel Djouab**	**1.23**	**237**	P	**Pn**	**02 39 01.2**	**-1.5**
ADJB	**Djebel Djouab**	**1.23**	**237**	P	**Pn**	**02 39 01.2**	**-1.5**
ABA	**Alger-Bouzarea**	**1.34**	**269**	P	**Pn**	**02 39 04.9**	**+0.6**
ABA	**Alger-Bouzarea**	**1.34**	**269**	P	**Pn**	**02 39 04.9**	**+0.6**
ABA	**Alger-Bouzarea**	**1.34**	**269**	P	**Pn**	**02 39 04.9**	**+0.6**
EMHD	**Djebel Mahouad**	**1.55**	**246**	P	**Pn**	**02 39 05.5**	**-1.6**
EMHD	**Djebel Mahouad**	**1.55**	**246**	P	**Pn**	**02 39 05.5**	**-1.6**
EMHD	**Djebel Mahouad**	**1.55**	**246**	P	**Pn**	**02 39 05.5**	**-1.6**
ETOS	**Mallorca**	**3.28**	**334**	P	**Pn**	**02 39 33.5**	**+2.7**
ETOS				S	**Sn**	**02 40 09.2**	**-0.7**
ETOS	**Mallorca**	**3.28**	**334**	P	**Pn**	**02 39 33.5**	**+2.7**
	11nm,0.4s,SNR=16						
ETOS				S	**Sn**	**02 40 11.1**	**+1.2**
	1.9nm,0.3s,SNR=7.9						
ETOS	**Mallorca**	**3.28**	**334**	P	**Pn**	**02 39 33.5**	**+2.7**
	11nm,0.4s,SNR=16						
ETOS				S	**Sn**	**02 40 11.1**	**+1.2**
	1.9nm,0.3s,SNR=7.9						
ETOS	**Mallorca**	**3.28**	**334**	P	**Pn**	**02 39 33.5**	**+2.6**
	11nm,0.4s,SNR=16						
EIBI	**Ibiza**	**3.44**	**310**	P	**Pn**	**02 39 35.2**	**+2.1**
EIBI				S	**Sn**	**02 40 14.2**	**+0.3**
EIBI	**Ibiza**	**3.44**	**310**	P	**Pn**	**02 39 35.2**	**+2.1**
	2.4nm,0.2s,SNR=12						
EIBI				S	**Sn**	**02 40 14.2**	**+0.3**
	2.9nm,0.2s,SNR=7.9					

ETSF	Etsaut	7.28	328	*e*Pn	Pn	02 40 23.5	-2.3
SBF	Sospel	7.31	16	*e*Pn	Pn	02 40 26.1	-0.2
SBF				*e*Sn	Sn	02 41 45.9	-3.4
	2.7nm,0.3s						
SBF	Sospel	7.31	16	*e*Pn	Pn	02 40 26.1	-0.2
SBF				*e*Sn	Sn	02 41 45.9	-3.4
	1.4nm,0.3s						
LFF	La Frestale	8.63	341	*e*Pn	Pn	02 40 42.5	-1.8
LFF				*e*P		02 40 47.9	
LFF	La Frestale	8.63	341	*e*Pn	Pn	02 40 42.5	-1.8
RJF	Les Rejaudoux	8.79	345	*e*Pn	Pn	02 40 45.0	-1.5
RJF				*e*P		02 40 50.5	
RJF	Les Rejaudoux	8.79	345	*e*Pn	Pn	02 40 45.0	-1.5
MFF	Saint Martin d	10.40	341	*e*Pn	Pn	02 41 06.7	-1.9
MFF				*e*P		02 41 12.2	
MFF	Saint Martin d	10.40	341	*e*Pn	Pn	02 41 06.7	-1.9

MAN 01 02:42:06,20.18N×121.34E,h27km,mb4.1,ML2.9,MS2.6,
Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBP	Basco	0.65	66	*e*P	Pb	02 42 20.0	+1.3
BBP				*e*S	Sb	02 42 30.7	+3.4
APYP	Conner	2.31	182	*e*P	Pn	02 42 43.7	+1.4
APYP				*e*S	Sn	02 43 07.6	-2.2
CVP	Callao Caves	2.51	169	*e*S	Pn	02 42 44.1	-0.9
BALP	Baler	4.42	177	*e*P	Pn	02 43 13.9	+2.5

*IDC **01** 02:51:37.7±1.0,20.04N×121.47E,h0km,mb3.7/10, mb1 3.8/12,mb1mx3.7/25,mbtmp3.8/12,ML3.8/2,Error ellipse: s-maj=28.9km s-min=21.8km az=70.0*
*NEIC **01** 02:51:39.3±1.1,19.49N×121.70E,h35km,mb3.9/2,Error ellipse: s-maj=22.4km s-min=11.5km az=125.0*
*ISCJB **01** 02:51:39.2±2.6,19.6N±0.2×121.9E±0.2,h59km±16km, mb3.7/12,Error ellipse: s-maj=33.8km s-min=19.2km az=140.4*

ISC 01 02:51:41.2±2.3,19.6N±0.2×121.8E±0.2,h55km±15km,n19, σ0.77/19,mb3.7/12,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	Pinlang	3.27	349	*e*Pn	Pn	02 52 29.6	-0.3
YULB	Yu-li	3.79	353	*e*Pn	Pn	02 52 37.4	+0.2
SSLB	Suanglung	4.23	350	*e*Pn	Pn	02 52 42.9	-0.2
YHNB	Yeheng	5.05	356	*e*Pn	Pn	02 52 55.6	+1.1
	34nm,0.6s						
JOW	Kunigami	9.35	39	Pn	Pn	02 53 53.1	-0.1
	3.4nm,0.3s,baz=184,slow=15,SNR=7.5						
KSRS	Korea Array	18.58	16	P	Pn	02 55 53.2	-1.3
	0.2nm,0.3s,baz=200,slow=11,SNR=4.8						
CMAR	Chiang Mai Arr	21.61	271	P	P	02 56 27.9	+1.0
	0.9nm,0.4s,mb3.5,baz=79,slow=9.3,SNR=4.0						
KULM	Kulim	25.01	238	*e*P	P	02 56 59.3	-1.0
	7.3nm,1.0s,mb4.2						
SONM	Songino Array	30.81	340	P	P	02 57 52.3	+0.6
	0.2nm,0.3s,mb3.4,baz=178,slow=10,SNR=2.8						
MK31	Makanchi Array	42.08	319	*e*P	P	02 59 27.0	-0.6
MKAR	Makanchi Array	42.08	319	P	P	02 59 27.4	-0.2
	1.1nm,0.5s,mb3.8,baz=108,slow=11,SNR=9.9						
ZALV	Zalesovo Beam	44.41	329	P	P	02 59 45.6	-0.8
	1.3nm,0.6s,mb3.8,baz=112,slow=7.0,SNR=5.8						
ASAR	Alice Springs	44.60	164	P	P	02 59 56.2	+8.0
	0.5nm,0.4s,mb3.7,baz=346,slow=6.8,SNR=13						
KURK	Kurchatov	46.00	323	P	P	02 59 58.6	-0.4
	1.5nm,0.7s,mb4.0,baz=120,slow=7.6,SNR=13						
BVAR	Borovoye Array	51.60	323	P	P	03 00 42.0	+0.1
	0.5nm,0.7s,mb3.6,baz=148,slow=8.5,SNR=3.5						
ABKAR	Akbulak array	57.07	317	*e*P	P	03 01 21.8	+0.1
	0.2nm,0.3s,mb3.6						
FINES	FINESS Array B	75.67	330	P	P	03 03 20.3	-0.1
	0.5nm,0.7s,mb3.5,baz=70,slow=8.0,SNR=3.0						
NOA	NORSAR Array B	82.52	333	P	P	03 03 58.0	+0.2
	0.6nm,0.8s,mb3.7,baz=61,slow=5.2,SNR=3.0						
YKA	Yellowknife Ar	86.96	23	P	P	03 04 23.0	+2.9
	0.2nm,0.6s,mb3.5,baz=311,slow=4.7,SNR=3.0						

IDC 01 03:04:11.1±4.0,3.91S×152.58E,h0km,mb3.9/6,
mb1 4.0/6,mb1mx3.8/15,mbtmp3.9/6,Error ellipse:
s-maj=121.3km s-min=34.3km az=104.0,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	26.67	221	P	P	03 09 52.1	+0.2
	1.1nm,1.0s,baz=51,slow=8.7,SNR=6.0						
CMAR	Chiang Mai Arr	57.30	295	P	P	03 14 01.3	+0.1
	0.5nm,0.3s,baz=122,slow=4.4,SNR=4.6						
SONM	Songino Array	65.46	328	P	P	03 14 56.3	+0.4
	0.3nm,0.6s,baz=134,slow=6.2,SNR=3.1						
MKAR	Makanchi Array	79.51	319	P	P	03 16 19.0	-0.8
	0.7nm,0.8s,baz=103,slow=6.5,SNR=2.4						
ZALV	Zalesovo Beam	80.29	326	P	P	03 16 24.9	+1.1
	0.9nm,0.6s,baz=90,slow=3.6,SNR=3.4						
BVAR	Borovoye Array	88.40	323	P	P	03 17 04.5	-0.5
	1.2nm,0.8s,baz=94,slow=5.9,SNR=3.7						

CASC 01 03:04:54.7±1.4,7.97N×82.46W,h18km±8km,MD3.7,
3C-1D,South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	Volcan	0.85	344⇑	*i*P	Pb	03 05 10.2	-0.8
BRU2				*e*S	Sb	03 05 23.1	+1.1
ACR	Cerro Adams	0.97	314⇑	*e*P	Pb	03 05 11.2	-1.8
CNI	Changuinola	1.44	358⇓	*i*P	Pn	03 05 20.2	+0.3
BAR1		1.52	326⇓	*e*P	Pn	03 05 20.4	-0.6
BUS	Buena Vista	2.03	321	*e*P	Pn	03 05 27.9	-0.2
URSC	Urasca	2.26	325	*e*P	Pn	03 05 31.3	0.0
URSC				*e*S	Sn	03 05 59.9	+1.2
CGA2	Cerro Gallo 2	2.84	316	*e*P	Pn	03 05 40.0	+0.8

*BJI **01** 03:05:35.7,36.15N×21.16E,h30km,mB5.2/5,mb4.8/14, Ms4.9/4,Ms7.4/5.4*
*IDC **01** 03:05:35.3±0.6,35.97N×21.80E,h0km,mb4.2/21, mb1 4.2/30,mb1mx4.2/42,mbtmp4.2/30,ML3.6/3,MS3.4/1, Ms1 3.4/1,ms1mx3.3/49,Error ellipse: s-maj=13.1km s-min=11.5km az=157.0*
*NEIC **01** 03:05:37.2,35.87N×21.57E,h23km,mb4.1/60, ML4.2(ATH),After ATH.*
*ATH **01** 03:05:37.2,35.87N×21.57E,h23km,MD4.3/19,ML4.2*
*CSEM **01** 03:05:38.6±0.1,35.90N×21.64E,h20km,mb4.4/39,Error ellipse: s-maj=3.4km s-min=2.5km az=14.0*
*MOS **01** 03:05:38.9±1.1,36.02N×21.67E,h33km,mb4.3/22,Error ellipse: s-maj=5.0km s-min=2.9km az=109.7*
*THE **01** 03:05:39.8,35.95N×21.74E,h14km±4km,ML4.7/3,Error ellipse: s-maj=4.8km s-min=1.2km az=218.0*
*ISCJB **01** 03:05:39.3±0.3,35.97N±0.02×21.63E±0.02,h42km±3km, mb4.3/72,MS4.8/3,Error ellipse: s-maj=3.3km s-min=2.2km az=13.7*
*TEH **01** 03:05:40.0,35.98N×21.65E,h35km*
*PDG **01** 03:05:41.7±0.2,36.36N×21.54E,h10km±11km,ML4.3/10, Error ellipse: s-maj=268.2km s-min=91.4km az=90.0*
*HLW **01** 03:05:41.8,36.00N×22.46E,h40km±27km,Md4.3,Ml4.2*
*PRU **01** 03:05:44.4,36.75N×22.46E,h0km,M4.1*

ISC 01 03:05:40.8±0.2,35.94N±0.02×21.63E±0.02,h41km±2km, h32km±4.8km:pP-P,n738,σ1.14/804,mb4.3/72,MS4.8/3, 17C-17D,Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.96	5	P	Pn	03 05 56.6	-1.2
PYL				S	Sn	03 06 11.4	+1.1
PYL	PYLOS	0.96	5	*e*PN	Pn	03 05 56.6	-1.2
PYL				*e*SN	Sn	03 06 11.5	+1.2
PYL	PYLOS	0.96	5	P	Pn	03 05 56.6	-1.2
PYL				S	Sn	03 06 11.4	+1.1
KYTH	Kithira	1.19	73	*e*Pn	Pn	03 06 01.3	+0.4
KYTH				*e*Sn	Sn	03 06 18.5	+2.6
KYTH	Kithira	1.19	73	*e*PN	Pn	03 06 01.3	+0.4
KYTH				*e*SN	Sn	03 06 18.5	+2.6
KYTH	Kithira	1.19	73	*e*Pn	Pn	03 06 01.3	+0.4
KYTH				*e*Sn	Sn	03 06 18.5	+2.6
ITM	Ithomi	1.26	11	*e*Pn	Pn	03 06 02.5	+0.5
ITM				*e*Sn	Sn	03 06 20.7	+3.0
ITM	Ithomi	1.26	11	P	Pn	03 06 01.9	-0.1
ITM				S	Sn	03 06 19.2	+1.5
ITM				*e*Sn	Sn	03 06 20.7	+3.0
ITM	Ithomi	1.26	11	*e*PN	Pn	03 06 02.5	+0.5
ITM				*e*SN	Sn	03 06 20.7	+3.0
ITM	Ithomi	1.26	11	P	Pn	03 06 01.9	-0.1
ITM				S	Sn	03 06 19.2	+1.5
ITM				*e*Sn	Sn	03 06 20.7	+3.0
VLI	Veliai	1.31	53	*e*Pn	Pn	03 06 03.8	+1.2
VLI				*e*Sn	Sn	03 06 22.5	+3.6
VLI	Veliai	1.31	53	*e*PN	Pn	03 06 03.8	+1.2
VLI				*e*SN	Sn	03 06 22.5	+3.6
VLI	Veliai	1.31	53	*e*Pn	Pn	03 06 03.8	+1.2
VLI				*e*Sn	Sn	03 06 22.5	+3.6
VLX	Vlachokerasia	1.55	23	P	Pn	03 06 06.6	+0.7
VLX				S	Sn	03 06 27.3	+2.5
VLX	Vlachokerasia	1.55	23	*e*PN	Pn	03 06 06.9	+1.0
VLX				*e*SN	Sn	03 06 28.1	+3.3
VLX	Vlachokerasia	1.55	23	P	Pn	03 06 06.6	+0.7
VLX	Vlachokerasia	1.55	23	*e*Pn	Pn	03 06 06.9	+1.0
VLX				*e*Sn	Sn	03 06 28.1	+3.3
KARN	Karanos	1.94	105	P	Pn	03 06 11.6	+0.4
KARN	Karanos	1.94	105	*e*PN	Pn	03 06 11.6	+0.4
KARN				*e*SN	Sn	03 06 36.5	+2.2
KARN	Karanos	1.94	105	P	Pn	03 06 11.6	+0.4
KARN				*e*Sn	Sn	03 06 36.5	+2.2
GUR	Goura	2.08	16	P	Pn	03 06 14.2	+1.1
GUR	Goura	2.08	16	*e*PB	Pn	03 06 14.8	+1.7
GUR	Goura	2.08	16	P	Pn	03 06 14.2	+1.1
GUR	Goura	2.08	16	*e*Pb	Pn	03 06 14.8	+1.7
RLS	Riolos of Patr	2.12	356	*e*Pb	Pn	03 06 14.6	+0.9
RLS	Riolos of Patr	2.12	356	*e*PB	Pn	03 06 14.6	+0.9
RLS	Riolos of Patr	2.12	356	*e*Pb	Pn	03 06 14.6	+0.9
VAM	Vamos	2.16	103	*e*PB	Pn	03 06 14.2	0.0
KFL	Anninata	2.27	343	P	Pn	03 06 17.1	+1.3
KFL				S	Sn	03 06 45.0	+2.5
GVD	Gavdhos	2.29	118	*e*Pn	Pn	03 06 16.0	0.0
GVD	Gavdhos	2.29	118	*e*PN	Pn	03 06 16.0	0.0
GVD	Gavdhos	2.29	118	*e*Pn	Pn	03 06 16.0	0.0
LAKA	Lakka	2.31	7	P	Pn	03 06 17.9	+1.5
LAKA				S	Sn	03 06 46.5	+2.9
LAKA	Lakka	2.31	7	P	Pn	03 06 17.9	+1.5
LTK	Loutraki	2.34	27	P	Pn	03 06 17.1	+0.3
LTK				S	Sn	03 06 44.3	0.0
LTK	Loutraki	2.34	27	*e*PN	Pn	03 06 17.6	+0.8
LTK	Loutraki	2.34	27	P	Pn	03 06 17.1	+0.3
LTK	Loutraki	2.34	27	*e*Pn	Pn	03 06 17.6	+0.8
LTK				S	Sn	03 06 44.3	0.0
UPR	University Cam	2.34	3	*e*PB	Pn	03 06 18.2	+1.4
UPR	University Cam	2.34	3	*e*Pb	Pn	03 06 18.2	+1.4
NAIG	Nisos Aigina	2.35	39	*e*Pn	Pn	03 06 17.8	+0.9
NAIG	Nisos Aigina	2.35	39	*e*PN	Pn	03 06 17.8	+0.9
NAIG	Nisos Aigina	2.35	39	*e*Pn	Pn	03 06 17.8	+0.9
VLS	Valsamata	2.38	340	P	Pn	03 06 18.1	+0.7
VLS				S	Sn	03 06 47.5	+2.1
VLS	Valsamata	2.38	340	*e*PN	Pn	03 06 17.9	+0.5
VLS	Valsamata	2.38	340	*e*Pn	Pn	03 06 17.9	+0.5
VLS				S	Sn	03 06 47.5	+2.1
KALE	Kalithea	2.48	9	P	Pn	03 06 20.3	+1.6
KALE	Kalithea	2.48	9	P	Pn	03 06 20.3	+1.6
EFP	Efpalio	2.49	5	P	Pn	03 06 20.5	+1.6
EFP	Efpalio	2.49	5	*e*PN	Pn	03 06 20.1	+1.2
EFP	Efpalio	2.49	5	*e*Pn	Pn	03 06 20.1	+1.2
EFP	Efpalio	2.49	5	P	Pn	03 06 20.5	+1.6
DSF	Desfina	2.57	16	P	Pn	03 06 20.8	+0.9
DSF	Desfina	2.57	16	P	Pn	03 06 20.8	+0.9
VLY	Voula,Athens	2.58	42	*e*Pn	Pn	03 06 20.7	+0.6
VLY	Voula,Athens	2.58	42	*e*PN	Pn	03 06 20.7	+0.6
VLY	Voula,Athens	2.58	42	*e*Pn	Pn	03 06 20.7	+0.6
ATH	Athens Observa	2.63	39	*e*PB	Pn	03 06 22.5	+1.8
ATH	Athens Observa	2.63	39	*e*Pb	Pn	03 06 22.5	+1.8
ATHU	Athens Univers	2.66	40	P	Pn	03 06 20.9	-0.3
ATHU	Athens Univers	2.66	40	P	Pn	03 06 20.9	-0.3
IDI	Anoyia	2.73	103	Pn	Pn	03 06 21.4	-0.7
	7.6nm,0.3s,baz=282,slow=14,SNR=88						
IDI				LR	LR	03 06 54.6	
	comp=Z,615nm,18.8s,baz=132,slow=30						
IDI	Anoyia	2.73	103	*e*PN	Pn	03 06 22.4	+0.2
IDI	Anoyia	2.73	103	*e*Pn	Pn	03 06 22.4	+0.2
SIVA	Sivas	2.75	109	P	Pn	03 06 21.5	-0.9
SIVA	Sivas	2.75	109	P	Pn	03 06 21.5	-0.9
PTL	Penteli	2.76	40	*e*Pn	Pn	03 06 22.6	0.0
PTL	Penteli	2.76	40	*e*PN	Pn	03 06 22.6	0.0
PTL	Penteli	2.76	40	*e*Pn	Pn	03 06 22.6	0.0
LKR	Lokris	2.92	22	*e*Pn	Pn	03 06 25.4	+0.7
LKR	Lokris	2.92	22	P	Pn	03 06 24.8	+0.1
LKR	Lokris	2.92	22	*e*PN	Pn	03 06 25.4	+0.7
LKR	Lokris	2.92	22	P	Pn	03 06 24.8	+0.1
LKR	Lokris	2.92	22	*e*Pn	Pn	03 06 25.4	+0.7
ATAL	Atalanti	2.96	22	P	Pn	03 06 25.6	+0.3
ATAL	Atalanti	2.96	22	P	Pn	03 06 25.6	+0.3
EVR	Evrytania	2.98	3	*e*Pn	Pn	03 06 27.0	+1.5
EVR	Evrytania	2.98	3	*e*PN	Pn	03 06 27.0	+1.5
EVR	Evrytania	2.98	3	*e*Pn	Pn	03 06 27.0	+1.5
THR5	Thira Island,	3.04	80	P	Pn	03 06 25.8	-0.6
THR5	Thira Island,	3.04	80	P	Pn	03 06 25.8	-0.6
THR3	Thira Island,	3.09	80	P	Pn	03 06 26.6	-0.4
THR3	Thira Island,	3.09	80	P	Pn	03 06 26.6	-0.4
THR1	Thera Island	3.13	81	P	Pn	03 06 26.9	-0.7
THR1	Thera Island	3.13	81	P	Pn	03 06 26.9	-0.7
AGG	Agios Georgios	3.13	10	P	Pn	03 06 28.9	+1.3
AGG				S	Sn	03 07 05.7	+2.0
AGG	Agios Georgios	3.13	10	*e*PN	Pn	03 06 29.1	+1.5
AGG	Agios Georgios	3.13	10	P	Pn	03 06 28.9	+1.3
LAST	Lasithi	3.23	103	P	Pn	03 06 29.2	+0.2
LAST	Lasithi	3.23	103	P	Pn	03 06 29.2	+0.2
NPS	Neapolis	3.31	101	*e*PN	Pn	03 06 31.0	+0.9
NPS	Neapolis	3.31	101	*e*PN	Pn	03 06 30.5	+0.4
NPS	Neapolis	3.31	101	*e*Pn	Pn	03 06 30.5	+0.4
APE	Apeiranthos	3.34	69	P	Pn	03 06 29.8	-0.7
APE	Apeiranthos	3.34	69	*e*PN	Pn	03 06 32.0	+1.5
APE	Apeiranthos	3.34	69	P	Pn	03 06 29.8	-0.7
APE	Apeiranthos	3.34	69	*e*Pn	Pn	03 06 32.0	+1.5
NEO	Neokhori	3.59	20	*e*Pn	Pn	03 06 35.4	+1.4
NEO	Neokhori	3.59	20	*e*PN	Pn	03 06 35.4	+1.4
NEO	Neokhori	3.59	20	*e*Pn	Pn	03 06 35.4	+1.4
THL	Klokotos Trika	3.63	5	P	Pn	03 06 35.5	+1.0
THL	Klokotos Trika	3.63	5	*e*PN	Pn	03 06 35.4	+0.9
THL	Klokotos Trika	3.63	5	*e*Pn	Pn	03 06 35.4	+0.9
XOR	Xorichti	3.64	19	P	Pn	03 06 34.5	-0.1
XOR	Xorichti	3.64	19	P	Pn	03 06 34.5	-0.1
AOS	Alonnisos	3.69	28	P	Pn	03 06 34.3	-1.0
AOS	Alonnisos	3.69	28	P	Pn	03 06 34.3	-1.0
IGT	Igoumenitsa	3.73	344	P	Pn	03 06 35.9	0.0
IGT	Igoumenitsa	3.73	344	P	Pn	03 06 35.9	0.0
JAN	Janina	3.76	351	*e*PN	Pn	03 06 37.5	+1.2
JAN	Janina	3.76	351	*e*Pn	Pn	03 06 37.5	+1.2
ZKR	Zakros	3.83	101	P	Pn	03 06 37.6	+0.4
ZKR	Zakros	3.83	101	P	Pn	03 06 37.6	+0.4
MEV	Metsovon	3.85	355	P	Pn	03 06 39.9	+2.3
MEV	Metsovon	3.85	355	P	Pn	03 06 39.9	+2.3
KEK	Kerkira	4.04	339	*e*Pn	Pn	03 06 40.5	+0.4
KEK	Kerkira	4.04	339	*e*PN	Pn	03 06 40.5	+0.4
KEK	Kerkira	4.04	339	*e*Pn	Pn	03 06 40.5	+0.4
SRN	Sarande	4.14	342	*e*PN	Sn	03 07 22.0	-6.6
LIT	Litokhoron	4.21	9	P	Pn	03 06 43.0	+0.5
LIT	Litokhoron	4.21	9	P	Pn	03 06 43.0	+0.5
CHOS	Chios island	4.30	54	P	Pn	03 06 42.9	-0.7
CHOS	Chios island	4.30	54	P	Pn	03 06 42.9	-0.7
PAIG	Paliouri	4.30	22	P	Pn	03 06 44.2	+0.5
PAIG	Paliouri	4.30	22	P	Pn	03 06 44.2	+0.5
LTBQ	Tobruq	4.31	153	*e*P	Pn	03 06 44.9	+1.0
	SNR=43						
KZN	Kozani	4.36	1	P	Pn	03 06 45.9	+1.4
KZN	Kozani	4.36	1	*e*PN	Pn	03 06 45.5	+1.0
KZN	Kozani	4.36	1	*e*Pn	Pn	03 06 45.5	+1.0
KZN	Kozani	4.36	1	P	Pn	03 06 45.9	+1.4
KARP	Karpathos	4.51	93	*e*Pn	Pn	03 06 47.4	+0.8
KARP	Karpathos	4.51	93	*e*PN	Pn	03 06 47.4	+0.8
KARP	Karpathos	4.51	93	*e*Pn	Pn	03 06 47.4	+0.8
SMG	Samos	4.54	66	*e*Pn	Pn	03 06 48.5	+1.6
SMG	Samos	4.54	66	*e*PN	Pn	03 06 48.5	+1.6
SMG	Samos	4.54	66	*e*Pn	Pn	03 06 48.5	+1.6
PLG	Polygyros	4.65	17	P	Pn	03 06 48.8	+0.3
PLG	Polygyros	4.65	17	*e*PN	Pn	03 06 50.0	+1.5
PLG	Polygyros	4.65	17	P	Pn	03 06 48.8	+0.3
PLG	Polygyros	4.65	17	*e*Pn	Pn	03 06 50.0	+1.5
OUR	Ouranopolis	4.76	22	P	Pn	03 06 49.8	-0.3
OUR	Ouranopolis	4.76	22	P	Pn	03 06 49.8	-0.3
HORT	Hortiatis	4.79	14	P	Pn	03 06 50.6	+0.1
HORT	Hortiatis	4.79	14	P	Pn	03 06 50.6	+0.1
FNA	Florina	4.84	358	P	Pn	03 06 51.5	+0.4
FNA	Florina	4.84	358	P	Pn	03 06 51.5	+0.4
LIA	Limnos Island	4.85	34	P	Pn	03 06 50.8	-0.4
LIA	Limnos Island	4.85	34	P	Pn	03 06 50.8	-0.4
DAT	Datca	4.87	79	*e*P	Pn	03 06 50.0	-1.4
DAT	Datca	4.87	79	*e*P	Pn	03 06 50.0	-1.5
SOI	Samo	4.95	297	Pn	Pn	03 06 52.1	-0.4
SOI				Sn	Sn	03 07 42.7	-5.8
SOI	Samo	4.95	297	P	Pn	03 06 52.1	-0.4
BLCB	Balcova	4.96	59	*e*Pn	Pn	03 06 52.3	-0.5
BLCB	Balcova	4.96	59	*e*P	Pn	03 06 52.3	-0.5
TIP	Timpagrande	5.04	311	*e*Pn	Pn	03 06 53.3	-0.6
TIP				*e*Sn	Sn	03 07 43.3	-7.6
TIP	Timpagrande	5.04	311	*e*Pn	Pn	03 06 53.3	-0.6
GRI	Girifalco	5.05	306	P	Pn	03 06 53.4	-0.6
GRI				pmax	pmax		
	comp=Z,282nm,1.0s						
GRI	Girifalco	5.05	306	Pn	Pn	03 06 53.4	-0.6
	comp=Z,282nm,1.0s						
GRI	Girifalco	5.05	306	P	Pn	03 06 53.4	-0.6
	comp=Z,282nm,1.0s						
SOH	Sokhos	5.06	15	P	Pn	03 06 55.1	+1.0
SOH	Sokhos	5.06	15	P	Pn	03 06 55.1	+1.0
BIA	Bitola	5.08	357	*i* Pn	Pn	03 06 54.4	0.0
BIA				*i* Sn	Sn	03 07 51.4	-0.4
BIA	Bitola	5.08	357	P	Pn	03 06 54.6	+0.2
BIA	Bitola	5.08	357	P	Pn	03 06 54.6	+0.2
IZM	Izmir	5.12	60	*e*P	Pn	03 06 55.0	+0.1
MLSB	Milas	5.12	73	*e*P	Pn	03 06 53.9	-1.2
MLSB	Milas	5.12	73	*e*P	Pn	03 06 53.9	-1.1
CEL	Celeste	5.14	299	*e*Pn	Pn	03 06 54.7	-0.5
	comp=Z,123nm,0.7s						
CEL				*e*Sn	Sn	03 07 48.6	-4.6
CEL	Celeste	5.14	299	*e*Pn	Pn	03 06 54.7	-0.5
	comp=Z,123nm,0.7s						
CEL				*e*Sn	Sn	03 07 48.7	-4.5
MTTG	Motta San Giov	5.18	295	Pn	Pn	03 06 55.3	-0.5
	comp=Z,274nm,0.6s						
MTTG	Motta San Giov	5.18	295	Pn	Pn	03 06 55.3	-0.5
	comp=Z,274nm,0.6s						
OHR	Ohrid	5.21	353	*i* Pn	Pn	03 06 56.1	-0.1
OHR				*i* Sn	Sn	03 07 54.4	-0.5
SCLL	Scilla	5.26	298	Pn	Pn	03 06 56.6	-0.3
	comp=Z,30nm,0.3s						
SCLL	Scilla	5.26	298	Pn	Pn	03 06 56.6	-0.3
	comp=Z,30nm,0.3s						
ARG	Arkhangelos	5.27	85	P	Pn	03 06 56.5	-0.5
ARG	Arkhangelos	5.27	85	*e*PN	Pn	03 06 58.5	+1.5
ARG	Arkhangelos	5.27	85	P	Pn	03 06 56.5	-0.5
ARG	Arkhangelos	5.27	85	*e*Pn	Pn	03 06 58.5	+1.5
AYDN	Tasoluk	5.30	69	*i* P	Pn	03 06 56.6	-0.8
AYDN	Tasoluk	5.30	69	*i* P	Pn	03 06 56.7	-0.7
KNT	Kendrikon	5.31	10	P	Pn	03 06 57.8	+0.3
KNT	Kendrikon	5.31	10	P	Pn	03 06 57.8	+0.3
AGST	Augusta-Monte	5.32	286	Pn	Pn	03 06 55.3	-2.4
	comp=Z,136nm,0.7s						
AGST	Augusta-Monte	5.32	286	Pn	Pn	03 06 55.3	-2.4
	comp=Z,136nm,0.7s						
HAVL	Avola	5.34	283	Pn	Pn	03 06 56.9	-1.1
	comp=Z,335nm,0.3s						
HAVL	Avola	5.34	283	Pn	Pn	03 06 56.9	-1.1
	comp=Z,335nm,0.3s						
SLUM		5.34	145	P	Pn	03 06 55.9	-2.2
	baz=152						
SLUM				AMP		03 07 00.0	
	comp=N,190μm,0.8s,logA/T=5.4,baz=152						
SLUM				S	Sn	03 07 52.0	-6.3
	baz=152						
SLUM		5.34	145	P	Pn	03 06 55.9	-2.2
SLUM				S	Sn	03 07 52.0	-6.3
EZN	Ezine	5.37	42	*e*P	Pn	03 07 01.6	+3.2
EZN	Ezine	5.37	42	*e*P	Pn	03 07 01.6	+3.2
SRS	Serrai	5.39	16	P	Pn	03 06 58.9	+0.2
SRS	Serrai	5.39	16	P	Pn	03 06 58.9	+0.2
SSY	Sortino	5.42	285	Pn	Pn	03 06 57.8	-1.2
	comp=N,211nm,0.5s						
SSY	Sortino	5.42	285	Pn	Pn	03 06 57.8	-1.

GOLH	Golhisar	6.51	76	*i* P	Pn	03 07 14.1	+0.1
GOLH	Golhisar	6.51	76	*i* P	Pn	03 07 14.1	+0.1
BCI	Bajram Curri	6.53	350	*e*PN	Pn	03 07 14.0	-0.3
BCI	Bajram Curri	6.53	350	*e*Pn	Pn	03 07 14.0	-0.3
FAVR	Favara	6.54	284	Pn	Pn	03 07 15.5	+1.0
	comp=Z,45nm,0.6s						
FAVR	Favara	6.54	284	Pn	Pn	03 07 15.5	+1.0
	comp=Z,45nm,0.6s						
DST	Dursunbey	6.63	54	*e*P	Pn	03 07 19.9	+4.2
HMAT	Matruh	6.64	135	P	Pn	03 07 12.3	-3.6
	baz=140						
HMAT				S	Sn	03 08 20.3	-10
	baz=140						
HMAT	Matruh	6.64	135	P	Pn	03 07 12.3	-3.6
HMAT				S	Sn	03 08 20.3	-10
BUM	Brajici-Budva	6.70	342	⇓*i*Pn	Pn	03 07 16.8	+0.2
BUM				*e*Sn	Sn	03 08 26.8	-4.8
BUM	Brajici-Budva	6.70	342	⇓*i*Pn	Pn	03 07 16.8	+0.2
ELL	Elmali	6.73	81	*e*P	Pn	03 07 16.6	-0.5
ELL	Elmali	6.73	81	*e*P	Pn	03 07 16.6	-0.4
KHL	Karahalli	6.74	67	*e*P	Pn	03 07 17.9	+0.8
KHL	Karahalli	6.74	67	*e*P	Pn	03 07 17.9	+0.7
PDG	Podgorica	6.74	345	⇑*i*Pn	Pn	03 07 16.0	-1.1
TTG	Podgorica	6.74	345	⇑*i*Pn	Pn	03 07 16.0	-1.1
TTG				*e*Sn	Sn	03 08 28.1	-4.5
TTG	Podgorica	6.74	345	*i* P	Pn	03 07 16.0	-1.1
VTS	Vitosha	6.76	10	P	Pn	03 07 18.1	+0.7
VTS	Vitosha	6.76	10	P	Pn	03 07 18.1	+0.7
PVY	Plav	6.77	350	⇓*i*Pn	Pn	03 07 17.2	-0.4
PVY				*e*Sn	Sn	03 08 28.4	-5.0
PVY	Plav	6.77	350	⇓*i*Pn	Pn	03 07 17.2	-0.4
SGO	Sicignano	6.79	315	P	Pn	03 07 18.4	+0.6
SGO				pmax	pmax		
	comp=Z,39nm,0.3s						
SGO	Sicignano	6.79	315	Pn	Pn	03 07 18.4	+0.6
	comp=Z,39nm,0.3s						
SGO	Sicignano	6.79	315	P	Pn	03 07 18.4	+0.6
	comp=Z,39nm,0.3s						
BARS	Barje	6.87	1	⇑*i*Pn	Pn	03 07 18.0	-1.0
HCY	Herceg Novi	6.94	340	⇑*i*Pn	Pn	03 07 20.2	+0.3
HCY				*e*Sn	Sn	03 08 32.8	-4.7
HCY	Herceg Novi	6.94	340	⇑*i*Pn	Pn	03 07 20.2	+0.3
BEY	Berane	7.05	350	⇑*i*Pn	Pn	03 07 20.9	-0.6
IVA	Berane	7.05	350	⇑*i*Pn	Pn	03 07 20.9	-0.6
IVA				*e*Sn	Sn	03 08 35.4	-4.9
IVA	Berane	7.05	350	⇑*i*Pn	Pn	03 07 20.9	-0.6
NKY	Niksic	7.16	344	⇓*i*Pn	Pn	03 07 22.0	-0.9
NKY				*e*Sn	Sn	03 08 38.4	-4.6
NKY	Niksic	7.16	344	⇓*i*Pn	Pn	03 07 22.0	-0.9
MS1	Monte Sant'Ang	7.27	324	*e*Pn	Pn	03 07 25.2	+0.8
FG5	Orsara di Pugl	7.30	319	P	Pn	03 07 25.1	+0.3
FG5				pmax	pmax		
	comp=Z,68nm,0.6s						
FG5	Orsara di Pugl	7.30	319	Pn	Pn	03 07 25.1	+0.3
	comp=Z,68nm,0.6s						
FG5	Orsara di Pugl	7.30	319	P	Pn	03 07 25.1	+0.3
	comp=Z,68nm,0.6s						
ANTB	Antalya	7.34	80	*e*P	Pn	03 07 24.1	-1.3
ANTB	Antalya	7.34	80	*e*P	Pn	03 07 24.1	-1.3
BRY	Bratogost	7.35	342	⇓*i*Pn	Pn	03 07 25.3	-0.3
BRY				*e*Sn	Sn	03 08 42.3	-5.3
BRY	Bratogost	7.35	342	⇓*i*Pn	Pn	03 07 25.3	-0.3
MRB1	Monte Rocchett	7.35	317	Pn	Pn	03 07 26.3	+0.7
	comp=Z,108nm,0.7s						
MRB1	Monte Rocchett	7.35	317	Pn	Pn	03 07 26.3	+0.7
	comp=Z,108nm,0.7s						
BCK	Bucak	7.36	75	*e*P	Pn	03 07 25.7	+0.1
BCK	Bucak	7.36	75	*e*P	Pn	03 07 25.7	+0.1
SWA2		7.41	153	P	Pn	03 07 24.8	-1.6
	baz=158						
SWA2				AMP		03 09 00.0	
	comp=N,180µm,0.9s,logA/T=5.3,baz=158						
SWA2		7.41	153	P	Pn	03 07 24.8	-1.7
RGNG	Rignano Grg	7.42	322	Pn	Pn	03 07 25.2	-1.3
RGNG	Rignano Grg	7.42	322	Pn	Pn	03 07 25.2	-1.3
ALT	Altintas	7.42	63	*e*P	Pn	03 07 27.1	+0.6
ALT	Altintas	7.42	63	*e*P	Pn	03 07 27.1	+0.6
NISS		7.46	2	*e*Pn	Pn	03 07 24.9	-2.1
UPM	Unac-Piva	7.55	345	*e*Pn	Pn	03 07 28.2	-0.1
UPM				*e*Sn	Sn	03 08 47.6	-5.0
UPM	Unac-Piva	7.55	345	*e*Pn	Pn	03 07 28.2	-0.1
STON	Ston	7.56	337	*e*Pn	Pn	03 07 27.0	-1.4
STON				Sn	Sn	03 08 44.5	-8.3
STON	Ston	7.56	337	*e*Pn	Pn	03 07 27.0	-1.4
SHUT	Suhut-Afyon	7.58	67	*e*P	Pn	03 07 29.6	+0.9
SHUT	Suhut-Afyon	7.58	67	*e*P	Pn	03 07 29.6	+0.9
PLE	Pljevlja	7.58	348	⇑*i*Pn	Pn	03 07 27.9	-0.8
PLE				*e*Sn	Sn	03 08 47.7	-5.6
PLE	Pljevlja	7.58	348	⇑*i*Pn	Pn	03 07 27.9	-0.8
GRUS	Gruza	7.97	355	⇓*i*Pn	Pn	03 07 31.9	-2.1
BBLS	Lazići	8.10	348	*e*Pn	Pn	03 07 33.5	-2.3
LZLA	Zalla	8.13	206	*e*P	Pn	03 07 35.1	-1.2
	SNR=41						
RNI2	Rionero Sannit	8.20	317	Pn	Pn	03 07 38.4	+1.3
	comp=N,59nm,1.0s						
RNI2	Rionero Sannit	8.20	317	Pn	Pn	03 07 38.4	+1.3
	comp=N,59nm,1.0s						
DIVS	Divibare	8.25	352	⇓*i*Pn	Pn	03 07 35.8	-2.0
TRUS	Trudelj	8.33	354	*e*Pn	Pn	03 07 38.2	-0.7
LSHF	Shwairf	8.58	228	*e*P	Pn	03 07 41.4	-1.1
	SNR=41						
GAZI	Gazipasa	8.65	85	*i* P	Pn	03 07 38.2	-5.3
AQU	L'Aquila	9.05	318	*e*P	Pn	03 07 50.2	+1.4
AQU	L'Aquila	9.05	318	*e*P	Pn	03 07 50.2	+1.4
NRCA	Norcia	9.53	319	Pn	Pn	03 07 56.5	+1.1
	comp=N,4.7nm,0.6s						
NRCA	Norcia	9.53	319	Pn	Pn	03 07 56.5	+1.1
	comp=N,4.7nm,0.6s						
CSS	Prodhromos	9.60	92	*e*Pn	Pn	03 07 52.9	-3.5
	comp=N,16nm,0.7s						
CSS				*e*Sn	Sn	03 09 30.4	-12
AWBH		9.78	139	P	Pn	03 07 56.0	-2.9
	baz=142						
AWBH		9.78	139	P	Pn	03 07 56.0	-2.9
KEST	Kesra	9.98	272	Pn	Pn	03 08 01.2	-0.4
	comp=N,0.2nm,0.3s,baz=13,slow=5.3,SNR=9.8						
KEST				Sn	Sn	03 09 46.7	-5.5
	comp=N,0.1nm,0.3s,baz=312,slow=14,SNR=2.3						
NVLJ	Novalja	10.04	331	*e*Pn	Pn	03 08 01.4	-1.0
NVLJ				Sn	Sn	03 09 44.3	-9.3
NVLJ	Novalja	10.04	331	*e*Pn	Pn	03 08 01.3	-1.1
MLR	Muntele Rosu	10.09	18	Pn	Pn	03 08 04.5	+1.5
	comp=N,0.2nm,0.3s,baz=166,slow=11,SNR=9.5						
MLR	Muntele Rosu	10.09	18	P	Pn	03 08 04.5	+1.5
BR131	Keskin Array S	10.22	65	*e*Pn	Pn	03 08 07.4	+2.5
BR131	Keskin Array S	10.22	65	*e*Pn	Pn	03 08 07.4	+2.5
BRTR	Keskin Array B	10.22	65	Pn	Pn	03 08 06.0	+1.1
	comp=N,0.3nm,0.3s,baz=252,slow=14,SNR=50						
BRTR	Keskin Array B	10.22	65	P	Pn	03 08 06.0	+1.1
HSAF	As Saff	10.46	124	P	Pn	03 08 04.1	-4.1
	baz=127						
HSAF	As Saff	10.46	124	P	Pn	03 08 04.1	-4.1
PKSM	Moragy	10.51	349	⇓*e*P	Pn	03 08 06.3	-2.5
GLL	Jalalah	10.59	124	P	Pn	03 08 06.2	-3.8
	baz=126						
GLL	Jalalah	10.59	124	P	Pn	03 08 06.1	-3.9
AMAG	Maghara	11.03	115	P	Pn	03 08 11.2	-4.8
	baz=117						
AMAG	Maghara	11.03	115	P	Pn	03 08 11.2	-4.8
RSH		11.25	113	P	Pn	03 08 14.1	-4.9
BUD	Budapest	11.70	351	⇑*e*P	Pn	03 08 22.3	-2.7
MMAI	Mount Meron Ar	11.73	100	Pn	Pn	03 08 20.7	-4.9
	comp=N,1.3nm,0.3s,baz=276,slow=11,SNR=6.7						
MMAI				Sn	Sn	03 10 27.9	-7.4
	comp=N,2.3nm,0.3s,baz=334,slow=22,SNR=4.7						
SOKA	Soboth	11.82	337	⇑*i*Pn	Pn	03 08 24.8	-1.9
SOKA				⇑*i*Sn	Sn	03 10 24.7	-12
SOKA	Soboth	11.82	337	Pn	Pn	03 08 24.8	-1.8
BUR08	Bucovina Ar. S	11.99	12	*e*Pn	Pn	03 08 29.2	+0.2
BUR08	Bucovina Ar. S	11.99	12	*e*Pn	Pn	03 08 29.2	+0.1
PSZ	Piszkesteto	12.04	354	*e*P	Pn	03 08 27.3	-2.4
PSZ	Piszkesteto	12.04	354	⇓*e*P	Pn	03 08 27.0	-2.7
PSZ	Piszkesteto	12.04	354	*e*P	Pn	03 08 27.3	-2.4
KECS	Kecovo	12.56	356	*e*P	Pn	03 08 36.7	-0.2
KECS	Kecovo	12.56	356	*e*PN	Pn	03 08 36.7	-0.2
KECS	Kecovo	12.56	356	*e*P	Pn	03 08 36.7	-0.2
VYHS	Vyhne	12.72	352	*e*Pn	Pn	03 08 36.7	-2.2
VYHS				*e*Sn	Sn	03 10 49.4	-10
VYHS	Vyhne	12.72	352	*e*PN	Pn	03 08 36.7	-2.2
VYHS	Vyhne	12.72	352	*e*SN	Sn	03 10 49.4	-10
VYHS	Vyhne	12.72	352	*e*P	Pn	03 08 36.7	-2.2
EIL	Elat	12.82	115	Pn	Pn	03 08 36.4	-4.1
	comp=N,1.0nm,0.3s,baz=324,slow=12,SNR=13						
EIL				Sn	Sn	03 10 52.4	-10
	comp=N,0.9nm,0.3s,baz=318,slow=20,SNR=5.4						
EIL	Elat	12.82	115	Pn	Pn	03 08 36.4	-4.1
EIL				Sn	Sn	03 10 52.4	-10
KOLS	Kolonicke sedl	13.00	2	*e*Pn	Pn	03 08 42.3	-0.4
KOLS				*e*		03 08 55.4	
KOLS				*e*Sn	Sn	03 10 50.8	-15
KOLS	Kolonicke sedl	13.00	2	*e*PN	Pn	03 08 42.3	-0.4
KOLS				*es*PN		03 08 55.4	
KOLS	Kolonicke sedl	13.00	2	*e*SN	Sn	03 10 50.8	-15
KOLS	Kolonicke sedl	13.00	2	*e*P	Pn	03 08 42.3	-0.4
MOA	Molln	13.10	330	⇓*i*Pn	Pn	03 08 42.8	-1.3
MOA				⇑*i*Sn	Sn	03 11 00.8	-7.6
MOA	Molln	13.10	338	Pn	Pn	03 08 42.8	-1.3
ASF	Jabal al Asfar	13.20	102	Pn	Pn	03 08 41.9	-3.8
	comp=N,0.4nm,0.3s,baz=132,slow=15,SNR=4.7						
STHS	Stebnicka Huta	13.47	359	*e*P	Px	03 08 59.9	
FRF	La Foret Royal	13.80	308	*e*P	Pn	03 08 52.2	-1.6
	comp=N,21nm,1.1s						
FRF	La Foret Royal	13.80	308	*e*P	Pn	03 08 52.2	-1.6
FRF				pmax	pmax		
	comp=Z,11nm,1.1s						
FRF	La Foret Royal	13.80	308	*e*P	Pn	03 08 52.2	-1.6
	comp=Z,11nm,1.1s						
VRAC	Vranov	13.86	346	Pn	Pn	03 08 52.0	-2.5
	comp=Z,0.2nm,0.3s,baz=180,slow=6.8,SNR=2.3						
DAVOX	Davos/Dischmat	13.95	325	Pn	Pn	03 08 57.8	+2.0
	comp=Z,0.3nm,0.3s,baz=154,slow=16,SNR=6.8						
DAVOX	Davos/Dischmat	13.95	325	Pn	Pn	03 08 57.8	+2.0
OKC	Ostrava-Krasne	14.12	351	*e*P	Pn	03 09 06.6	+8.5
OKC	Ostrava-Krasne	14.12	351	*e*P	Pn	03 09 06.6	+8.5
OKC	Ostrava-Krasne	14.12	351	*e*P	Pn	03 09 06.6	+8.5
MORC	Moravsky Berou	14.15	349	*e*P	Pn	03 08 58.2	-0.3
MORC	Moravsky Berou	14.15	349	*e*Pn	Pn	03 08 58.2	-0.3
GERES	GERESS Array B	14.15	338	Pn	Pn	03 08 57.6	-1.0
	comp=Z,0.1nm,0.3s,baz=155,slow=13,SNR=15						
GERES				Sn	Sn	03 11 23.0	-11
	comp=Z,0.2nm,0.3s,baz=154,slow=22,SNR=4.3						
GERES	GERESS Array B	14.15	338	Pn	Pn	03 08 57.6	-0.9
MBDF	Montbardon	14.32	312	*e*P	Pn	03 09 02.6	+1.8
	comp=Z,16nm,0.8s						
MBDF	Montbardon	14.32	312	*e*P	Pn	03 09 02.6	+1.8
MBDF				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MBDF	Montbardon	14.32	312	*e*P	Pn	03 09 02.6	+1.8
	comp=Z,7.9nm,0.8s						
KHC	Kasperske Hory	14.45	338	*e*P	Pn	03 09 00.4	-2.1
KHC				*e*S	Sn	03 11 31.7	-10
KHC	Kasperske Hory	14.45	338	*e*P	Pn	03 09 00.4	-2.1
KHC				*e*S	Sn	03 11 31.7	-10
BNI	Bardonecchia	14.55	313	*e*P	Pn	03 09 03.1	-0.9
BNI	Bardonecchia	14.55	313	*e*Pn	Pn	03 09 03.1	-0.9
SMRF	Simiane la Rot	14.68	308	*e*P	Pn	03 09 05.4	-0.3
LPG	La Plagne	14.76	315	*e*P	Pn	03 09 08.0	+1.3
DPC	Dobruska-Polom	14.91	347	*e*P	Pn	03 09 16.1	+7.4
DPC	Dobruska-Polom	14.91	347	*e*P	Pn	03 09 16.1	+7.4
DPC	Dobruska-Polom	14.91	347	*e*P	Pn	03 09 16.1	+7.4
PRU	Pruhonice	14.96	342	*e*P	Pn	03 09 18.8	+9.5
PRU	Pruhonice	14.96	342	*e*P	Pn	03 09 18.8	+9.5
GRA1	Grafenberg Arr	15.70	334	*e*P	Pn	03 09 17.0	-2.0
	comp=Z,5.0nm,1.2s						
GRF	Grafenberg Arr	15.70	334	*e*P	Pn	03 09 17.0	-2.0
	comp=Z,5.0nm,1.2s						
GRF	Grafenberg Arr	15.70	334	*e*P	Pn	03 09 17.0	-2.0
GRF				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GRF	Grafenberg Arr	15.70	334	*e*P	Pn	03 09 17.0	-2.0
GRF				pmax	pmax		
	comp=Z,5.0nm,1.2s						
AKASG	Malin Array Be	15.74	18	Pn	Pn	03 09 17.7	-1.8
	comp=Z,2.5nm,0.3s,baz=209,slow=9.8,SNR=7.8						
AKASG	Malin Array Be	15.74	18	Pn	Pn	03 09 17.7	-1.8
AKBB	Malin Array Si	15.74	18	*e*P	Pn	03 09 15.9	-3.6
STU	Stuttgart	15.75	328	*e*P	Pn	03 09 18.8	-0.8
STU	Stuttgart	15.75	328	*e*Pn	Pn	03 09 18.8	-0.8
NKC	Novy Kostel	15.77	338	*e*P	Pn	03 09 25.7	+5.9
NKC	Novy Kostel	15.77	338	*e*P	Pn	03 09 25.7	+5.9
NKC	Novy Kostel	15.77	338	*e*P	Pn	03 09 25.7	+5.9
CABF	La Chapelle	15.79	317	*e*P	Pn	03 09 18.1	-2.0
	comp=Z,16nm,1.1s						
CABF	La Chapelle	15.79	317	*e*P	Pn	03 09 18.1	-2.0
CABF				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CABF	La Chapelle	15.79	317	*e*P	Pn	03 09 18.1	-2.0
	comp=Z,8.1nm,1.1s						
BFO	Black Forest	15.80	326	*i* P	Pn	03 09 20.0	-0.3
HINF	Hinteralfeld	16.15	322	*e*P	Pn	03 09 24.5	-0.2
	comp=Z,7.8nm,0.7s						
HINF	Hinteralfeld	16.15	322	*e*P	Pn	03 09 24.5	-0.2
HINF				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HINF	Hinteralfeld	16.15	322	*e*P	Pn	03 09 24.5	-0.2
	comp=Z,3.9nm,0.7s						
ECH	Echery	16.27	323	*e*P	Pn	03 09 26.4	+0.1
ECH				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ECH	Echery	16.27	323	*e*Pn	Pn	03 09 26.4	+0.1
	comp=Z,6.2nm,1.0s						
ECH	Echery	16.27	323	*e*Pn	Pn	03 09 26.4	+0.1
	comp=Z,6.2nm,1.0s						
CDF	Champ du Feu	16.35	324	*e*P	Pn	03 09 28.4	+1.1
	comp=Z,32nm,1.0s						
CDF	Champ du Feu	16.35	324	*e*P	Pn	03 09 28.4	+1.1
CDF				pmax	pmax		
	comp=Z,16nm,1.0s						
CDF	Champ du Feu	16.35	324	*e*P	Pn	03 09 28.4	+1.1
	comp=Z,16nm,1.0s						
CDF	Champ du Feu	16.35	324	*e*P	Pn	03 09 28.4	+1.1
	comp=Z,16nm,1.0s						
MOX	Moxa	16.39	337	*e*(P)	Pn	03 09 33.7	+6.1
MOX	Moxa	16.39	337	*e*(P)	Pn	03 09 33.7	+6.1
HAU	Haudompre	16.53	322	*e*P	Pn	03 09 29.7	+0.2
	comp=Z,30nm,0.8s						
HAU	Haudompre	16.53	322	*e*P	Pn	03 09 29.7	+0.2
HAU				pmax	pmax		
	comp=Z,15nm,0.8s						
HAU	Haudompre	16.53	322	*e*P	Pn	03 09 29.7	+0.2
	comp=Z,15nm,0.8s						
HAU	Haudompre	16.53	322	*e*P	Pn	03 09 29.7	+0.2
	comp=Z,15nm,0.8s						
CLL	Collm	16.57	341	*e*P	Pn	03 09 30.0	+0.1
CLL				*e*		03 09 41.0	
CLL	Collm	16.57	341	*e*P	Pn	03 09 30.0	+0.1
CLL				*e*PP		03 09 41.0	
CLL				*es*PP		03 09 45.0	
CLL				*e*		03 09 59.0	
CLL	Collm	16.57	341	*e*P	Pn	03 09 30.0	+0.1
SMF	Signal de Mont	17.08	314	*e*P	Pn	03 09 36.8	+0.4
	comp=Z,12nm,1.1s						
SMF	Signal de Mont	17.08	314	*e*P	Pn	03 09 36.8	+0.4
SMF				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SMF	Signal de Mont	17.08	314	*e*P	Pn	03 09 36.8	+0.4
	comp=Z,5.8nm,1.1s						
SMF	Signal de Mont	17.08	314	*e*P	Pn	03 09 36.8	+0.4
	comp=Z,5.8nm,1.1s						
LOR	Lormes	17.41	316	*e*P	Pn	03 09 39.5	-1.0
	comp=Z,15nm,1.1s						
LOR	Lormes	17.41	316	*e*P	Pn	03 09 39.5	-1.0
LOR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
LOR	Lormes	17.41	316	*e*P	Pn	03 09 39.5	-1.0
	comp=Z,7.4nm,1.1s						
LOR	Lormes	17.41	316	*e*P	Pn	03 09 39.5	-1.0
	comp=Z,7.4nm,1.1s						
AVF	Avril sur Loir	17.44	314	*e*P	Pn	03 09 40.2	-0.7
	comp=Z,13nm,1.2s						
AVF	Avril sur Loir	17.44	314	*e*P	Pn	03 09 40.2	-0.7
AVF				pmax	pmax		
	comp=Z,7.0nm,1.2s						
AVF	Avril sur Loir	17.44	314	*e*P	Pn	03 09 40.2	-0.7
	comp=Z,6.5nm,1.2s						
AVF	Avril sur Loir	17.44	314	*e*P	Pn	03 09 40.2	-0.7
	comp=Z,6.5nm,1.2s						
SSF	Saint Saulge	17.50	315	*e*P	Pn	03 09 41.8	+0.2
	comp=Z,11nm,1.1s						
SSF	Saint Saulge	17.50	315	*e*P	Pn	03 09 41.8	+0.2
SSF				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SSF	Saint Saulge	17.50	315	*e*P	Pn	03 09 41.8	+0.2
	comp=Z,5.4nm,1.1s						
SSF	Saint Saulge	17.50	315	*e*P	Pn	03 09 41.8	+0.2
	comp=Z,5.4nm,1.1s						
MEZF	Maizieres J'vi	17.51	321	*e*P	Pn	03 09 42.9	+1.1
	comp=Z,12nm,0.6s						
MEZF	Maizieres J'vi	17.51	321	*e*P	Pn	03 09 42.9	+1.1
	comp=Z,12nm,0.6s						
MEZF	Maizieres J'vi	17.51	321	*e*P	Pn	03 09 42.9	+1.1
	comp=Z,5.8nm,0.6s						
BGF	Bois d'Agland	17.62	313	*e*P	Pn	03 09 41.6	-1.5
	comp=Z,11nm,0.9s						
BGF	Bois d'Agland	17.62	313	*e*P	Pn	03 09 41.6	-1.5
BGF				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BGF	Bois d'Agland	17.62	313	*e*P	Pn	03 09 41.6	-1.5
	comp=Z,5.4nm,0.9s						
WLF	Walferdange	17.76	325	*e*P	Pn	03 09 43.6	-1.2
WLF	Walferdange	17.76	325	*e*Pn	Pn	03 09 43.5	-1.3
TCF	Toulx Ste Croi	17.87	311	*e*P	Pn	03 09 45.8	-0.4
	comp=Z,9.2nm,1.0s						
TCF	Toulx Ste Croi	17.87	311	*e*P	Pn	03 09 45.8	-0.4
TCF				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TCF	Toulx Ste Croi	17.87	311	*e*P	Pn	03 09 45.8	-0.4
	comp=Z,4.6nm,1.0s						
TCF	Toulx Ste Croi	17.87	311	*e*P	Pn	03 09 45.8	-0.4
	comp=Z,4.6nm,1.0s						
EBIE	Bielsa	17.92	299	P	Pn	03 09 46.8	0.0
	comp=Z,1.9nm,0.6s						
EBIE	Bielsa	17.92	299	P	Pn	03 09 46.8	0.0
	comp=Z,1.9nm,0.6s						
KIV	Kislovodsk	17.99	57	*e*P	Pn	03 09 48.0	+0.4
KIV				pmax	pmax		
	comp=Z,11nm,0.9s						
KIV	Kislovodsk	17.99	57	*e*Pn	Pn	03 09 47.9	+0.2
	comp=Z,16nm,0.9s						
KIV	Kislovodsk	17.99	57	*e*P	Pn	03 09 48.0	+0.4
	comp=Z,11nm,0.9s						
SUW	Suwalki	18.11	3	*e*P	Pn	03 09 46.9	-2.1
SUW				pmax	pmax		
	comp=Z,40nm,0.9s						
SUW	Suwalki	18.11	3	*e*Pn	Pn	03 09 46.9	-2.1
	comp=Z,40nm,0.9s						
SUW	Suwalki	18.11	3	*e*P	Pn	03 09 46.9	-2.1
	comp=Z,40nm,0.9s						
LFF	La Frestale	18.23	306	*e*P	Pn	03 09 52.3	+1.7
	comp=Z,14nm,0.9s						
LFF	La Frestale	18.23	306	*e*P	Pn	03 09 52.3	+1.7
LFF				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LFF	La Frestale	18.23	306	*e*P	Pn	03 09 52.3	+1.7
	comp=Z,7.2nm,0.9s						
LFF	La Frestale	18.23	306	*e*P	Pn	03 09 52.3	+1.7
	comp=Z,7.2nm,0.9s						
ETSF	Etsaut	18.47	299	*e*P	Pn	03 09 55.4	+1.9
ETSF	Etsaut	18.47	299	*e*P	Pn	03 09 55.4	+1.9
ZEI	Tsey	18.49	62	*e*P	Pn	03 09 53.9	+0.1
ZEI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ZEI	Tsey	18.49	62	*e*P	Pn	03 09 53.9	+0.1
	comp=Z,9.0nm,1.0s						
GNI	Garni	18.67	70	P	Pn	03 09 54.8	-1.1
	comp=Z,1.3nm,0.3s,baz=137,slow=7.0,SNR=8.4						
GNI	Garni	18.67	70	*c i*P	Pn	03 09 55.9	0.0
GNI				pmax	pmax		
	comp=Z,19nm,1.0s						
GNI	Garni	18.67	70	*e*P	Pn	03 09 56.4	+0.4
	comp=Z,13nm,0.7s						
GNI	Garni	18.67	70	*i* P	Pn	03 09 55.9	0.0
	comp=Z,19nm,1.0s						
GIVF	Givet	18.68	324	*e*P	Pn	03 09 58.1	+2.1
	comp=Z,43nm,1.3s						
GIVF	Givet	18.68	324	*e*P	Pn	03 09 58.1	+2.1
GIVF				pmax	pmax		
	comp=Z,22nm,1.3s						
GIVF	Givet	18.68	324	*e*P	Pn	03 09 58.1	+2.1
	comp=Z,22nm,1.3s						
GIVF	Givet	18.68	324	*e*P	Pn	03 09 58.1	+2.1
	comp=Z,22nm,1.3s						
BAIF	Baives	18.95	324	*e*P	Pn	03 09 59.2	0.0

FLN La Foliniere 20.68 315 *eP* **P 03 10 18.4 +1.3**
FLN pmax pmax
comp=Z,6.0nm,0.7s
FLN La Foliniere 20.68 315 *eP* **P 03 10 18.4 +1.3**
comp=Z,5.8nm,0.7s
FLN La Foliniere 20.68 315 *eP* **P 03 10 18.4 +1.3**
comp=Z,5.8nm,0.7s
GRR Gorron 20.71 314 *eP* **P 03 10 20.5 +3.0**
comp=Z,22nm,0.9s
GRR Gorron 20.71 314 *eP* **P 03 10 20.5 +3.0**
GRR pmax pmax
comp=Z,11nm,0.9s
GRR Gorron 20.71 314 *eP* **P 03 10 20.5 +3.0**
comp=Z,11nm,0.9s
GUD Guadarrama 20.75 291 P **P 03 10 19.3 +1.3**
GUD pmax pmax
comp=Z,21nm,0.7s
GUD Guadarrama 20.75 291 P **P 03 10 19.3 +1.3**
comp=Z,21nm,0.7s
GUD Guadarrama 20.75 291 P **P 03 10 19.3 +1.3**
comp=Z,21nm,0.7s
PAB San Pablo 20.83 288 *eP* **P 03 10 19.2 +0.3**
PAB pmax pmax
comp=Z,11nm,0.8s
PAB San Pablo 20.83 288 *eP* **P 03 10 19.2 +0.3**
comp=Z,11nm,0.8s
PAB San Pablo 20.83 288 *eP* **P 03 10 19.2 +0.3**
comp=Z,11nm,0.8s
VRHR Novokhopersk 20.87 37 *eP* **P 03 10 19.1 -0.1**
VRHR pmax pmax
comp=Z,40nm,0.4s
VRHR pmax pmax
comp=N,30nm,0.8s
VRHR pmax pmax
comp=E,30nm,0.9s
VRHR Novokhopersk 20.87 37 *eP* **P 03 10 19.1 -0.1**
comp=E,30nm,0.8s
EADA Adamuz 21.02 284 P **P 03 10 20.5 -0.4**
comp=E,5.7nm,1.0s,mb3.9
EADA Adamuz 21.02 284 P **P 03 10 20.5 -0.4**
comp=E,5.7nm,1.0s,mb3.9
EMIJ Mijas 21.29 280 P **P 03 10 24.7 +0.9**
comp=E,8.3nm,0.9s,mb4.1
EMIJ Mijas 21.29 280 P **P 03 10 24.7 +0.9**
comp=E,8.3nm,0.9s,mb4.1
SGMF Saint Gilles 21.66 312 *eP* **P 03 10 28.0 +0.3**
comp=E,24nm,1.0s,mb4.3
SGMF Saint Gilles 21.66 312 *eP* **P 03 10 28.0 +0.3**
SGMF pmax pmax
comp=Z,12nm,1.0s,mb4.3
SGMF Saint Gilles 21.66 312 *eP* **P 03 10 28.0 +0.3**
comp=Z,12nm,1.0s,mb4.3
SGMF Saint Gilles 21.66 312 *eP* **P 03 10 28.0 +0.3**
comp=Z,12nm,1.0s,mb4.3
OBN Obninsk 21.76 24⇓ *eP* **P 03 10 27.1 -1.6**
OBN *eS* **S 03 14 21.7 -5.2**
OBN pmax pmax
comp=Z,23nm,1.0s,mb4.6
OBN MLR MLR
comp=Z,1μm,17.0s,MS4.4
OBN Obninsk 21.76 24 *eP* **P 03 10 27.2 -1.5**
comp=Z,24nm,0.8s,mb4.7
OBN Obninsk 21.76 24 *eP* **P 03 10 27.2 -1.5**
comp=Z,24nm,0.8s,mb4.7
MDT Midelt 21.86 269 P **P 03 10 31.2 +1.2**
comp=Z,8.2nm,0.9s,mb4.2,baz=89,slow=11,SNR=16
MDT Midelt 21.86 269 P **P 03 10 31.2 +1.2**
ZFT Errachidia 21.87 267 *i P* **P 03 10 32.0 +1.9**
EARI Arriondas 21.88 298 P **P 03 10 30.0 -0.1**
comp=Z,8.2nm,0.8s,mb4.2
EARI Arriondas 21.88 298 P **P 03 10 30.0 -0.1**
comp=Z,8.2nm,0.8s,mb4.2
QUIF Quistinic 21.89 311 *eP* **P 03 10 30.4 +0.3**
comp=Z,29nm,0.9s,mb4.4
QUIF Quistinic 21.89 311 *eP* **P 03 10 30.4 +0.3**
QUIF pmax pmax
comp=Z,14nm,0.9s,mb4.4
QUIF Quistinic 21.89 311 *eP* **P 03 10 30.4 +0.3**
comp=Z,14nm,0.9s,mb4.4
QUIF Quistinic 21.89 311 *eP* **P 03 10 30.4 +0.3**
comp=Z,14nm,0.9s,mb4.4
ESPR Espera 22.12 281 P **P 03 10 31.5 -1.2**
comp=Z,7.4nm,1.0s,mb4.1
ESPR Espera 22.12 281 P **P 03 10 31.5 -1.2**
comp=Z,7.4nm,1.0s,mb4.1
ROSF Rostrenen 22.13 312 *eP* **P 03 10 33.0 +0.3**
comp=Z,35nm,1.0s,mb4.4
ROSF Rostrenen 22.13 312 *eP* **P 03 10 33.0 +0.3**
ROSF pmax pmax
comp=Z,18nm,1.0s,mb4.5
ROSF Rostrenen 22.13 312 *eP* **P 03 10 33.0 +0.3**
comp=Z,18nm,1.0s,mb4.4
ROSF Rostrenen 22.13 312 *eP* **P 03 10 33.0 +0.3**
comp=Z,18nm,1.0s,mb4.4
MIF Mishlifen 22.21 271 *eP* **P 03 10 36.0 +2.3**
RSA Sarsar 22.38 275 *i P* **P 03 10 37.0 +1.5**
MIB Mutribah 22.41 98 *eP* **P 03 10 34.4 -1.4**
MIB AMb AMB 03 10 35.9
comp=Z,100nm,0.8s,mb5.3
MIB Mutribah 22.41 98 *eP* **P 03 10 34.4 -1.4**
comp=Z,100nm,0.8s,mb5.3
NAY Al-Naaiem 22.55 100 *eP* **P 03 10 35.9 -1.5**
NAY AMb AMB 03 10 48.8
comp=Z,35nm,1.0s,mb4.8
NAY Al-Naaiem 22.55 100 *eP* **P 03 10 35.9 -1.4**
comp=Z,35nm,1.0s,mb4.7
EMIN Mina Concepcio 22.69 283 P **P 03 10 37.9 -0.8**
comp=Z,3.1nm,0.7s,mb3.9
EMIN Mina Concepcio 22.69 283 P **P 03 10 37.9 -0.9**
comp=Z,3.1nm,0.7s,mb3.9
ECAL Calabor 22.81 294 P **P 03 10 40.0 +0.1**
comp=Z,5.9nm,0.7s,mb4.1
ECAL Calabor 22.81 294 P **P 03 10 40.0 +0.1**
comp=Z,5.9nm,0.7s,mb4.1
EBAD Badajoz 22.91 286 P **P 03 10 40.1 -0.9**
comp=Z,7.7nm,0.8s,mb4.2
EBAD Badajoz 22.91 286 P **P 03 10 40.1 -0.9**
comp=Z,7.7nm,0.8s,mb4.2
RDF Al-Radifah 22.93 100 *eP* **P 03 10 39.8 -1.5**
RDF AMb AMB 03 10 47.0
comp=Z,32nm,1.5s,mb4.5
RDF Al-Radifah 22.93 100 *eP* **P 03 10 39.8 -1.5**
comp=Z,32nm,1.5s,mb4.5
PBAR Barrancos 22.95 284 *eP* **P 03 10 42.2 +0.7**
comp=Z,16nm,2.0s,mb4.1
PBAR Barrancos 22.95 284 *eP* **P 03 10 42.2 +0.7**
comp=Z,16nm,2.0s,mb4.1
MVO Moncorvo 22.96 292 P **P 03 10 40.6 -1.0**
MVO Moncorvo 22.96 292 *eP* **P 03 10 41.8 +0.2**
comp=Z,36nm,0.7s,mb4.9
MVO Moncorvo 22.96 292 *eP* **P 03 10 41.8 +0.2**
comp=Z,36nm,0.7s,mb4.9
IRAZ Razeghan 22.97 83 *eP* **P 03 10 42.6 +0.9**
IRAZ Razeghan 22.97 83 *eP* **P 03 10 42.6 +0.9**
KIB El Ksiba 23.09 270 *i P* **P 03 10 44.0 +1.0**
PMRV Marv??o 23.19 287 *eP* **P 03 10 43.1 -0.9**
comp=Z,20nm,1.8s,mb4.2
PMRV Marv??o 23.19 287 *eP* **P 03 10 43.1 -0.9**
comp=Z,20nm,1.8s,mb4.2
MTE Manteigas 23.31 290 *eP* **P 03 10 45.0 -0.3**
comp=Z,26nm,1.8s,mb4.4
PESTR Estremoz 23.35 286 *eP* **P 03 10 45.2 -0.5**
comp=Z,22nm,1.6s,mb4.3
PESTR Estremoz 23.35 286 *eP* **P 03 10 45.2 -0.5**
comp=Z,22nm,1.6s,mb4.3
IMHD Mahdasht 23.52 82 *eP* **P 03 10 46.2 -1.0**
IMHD Mahdasht 23.52 82 *eP* **P 03 10 46.2 -1.0**
EVO Evora 23.70 285 *eP* **P 03 10 47.1 -1.8**
comp=Z,18nm,1.2s,mb4.4
EVO Evora 23.70 285 *eP* **P 03 10 47.1 -1.8**
comp=Z,18nm,1.2s,mb4.4
PBDV Barranco-do-Ve 23.73 282 *eP* **P 03 10 50.6 +1.4**
comp=Z,26nm,1.7s,mb4.4
PBDV Barranco-do-Ve 23.73 282 *eP* **P 03 10 50.6 +1.4**
comp=Z,26nm,1.7s,mb4.4
PCVE Castro Verde 23.78 283 *eP* **P 03 10 50.0 +0.4**
comp=Z,24nm,1.2s,mb4.5
PCVE Castro Verde 23.78 283 *eP* **P 03 10 50.0 +0.4**
comp=Z,24nm,1.2s,mb4.5
IPIR Pirpir 24.35 89 *eP* **P 03 10 55.8 +1.0**
IPIR Pirpir 24.35 89 *eP* **P 03 10 55.8 +1.0**
IDMV Damavand 24.63 82 *eP* **P 03 10 57.2 -0.2**
IDMV Damavand 24.63 82 *eP* **P 03 10 57.2 -0.2**
IKLH Kolahrood 24.74 87 *eP* **P 03 10 56.7 -1.7**
IKLH Kolahrood 24.74 87 *eP* **P 03 10 56.7 -1.7**
HFS Hagfors 24.75 350 P **P 03 10 57.8 -0.4**
comp=Z,3.2nm,0.5s,mb4.1,baz=153,slow=10.0,SNR=37
HFS Hagfors 24.75 350 P **P 03 10 57.8 -0.4**
comp=Z,1.2nm,0.9s,mb3.8,baz=29,slow=12,SNR=4.5
ISFB Sefidab 25.03 85 *eP* **P 03 11 00.7 -0.4**
ISFB Sefidab 25.03 85 *eP* **P 03 11 00.7 -0.4**
IZEF Zefreh 25.45 88 *eP* **P 03 11 05.4 +0.5**
IZEF Zefreh 25.45 88 *eP* **P 03 11 05.4 +0.5**
ISHM Shahmirzad 25.60 81 *eP* **P 03 11 06.6 +0.4**
ISHM Shahmirzad 25.60 81 *eP* **P 03 11 06.6 +0.4**
FINES FINESS Array B 25.68 5 P **P 03 11 06.0 -0.6**
comp=Z,2.3nm,0.7s,mb3.8,baz=162,slow=9.0,SNR=16
FINES FINESS Array B 25.68 5 P **P 03 11 06.0 -0.7**
EKA Eskdalemuir Ar 25.78 327 P **P 03 11 08.2 +0.6**
comp=Z,3.4nm,0.9s,mb3.9,baz=130,slow=8.7,SNR=11
EKA Eskdalemuir Ar 25.78 327 P **P 03 11 08.2 +0.6**
ESK Eskdalemuir 25.79 326 *eP* **P 03 11 08.2 +0.5**
ESK pmax pmax
comp=Z,5.0nm,0.6s,mb4.2
ESK Eskdalemuir 25.79 326 *eP* **P 03 11 08.2 +0.5**
comp=Z,4.5nm,0.6s,mb4.2
ESK Eskdalemuir 25.79 326 *eP* **P 03 11 08.2 +0.5**
comp=Z,4.5nm,0.6s,mb4.2
NAO01 NORSAR Array S 25.86 348 *eP* **P 03 11 07.5 -0.7**
comp=Z,4.1nm,0.6s,mb4.1
NAO01 NORSAR Array S 25.86 348 *eP* **P 03 11 07.5 -0.7**
comp=Z,4.1nm,0.6s,mb4.1
NB2 NORSAR Subarra 25.99 348 P **P 03 11 09.3 -0.1**
comp=Z,3.9nm,0.9s,mb3.9,baz=160,slow=10
NB2 NORSAR Subarra 25.99 348 P **P 03 11 09.3 -0.1**
comp=Z,3.9nm,0.9s,mb3.9,baz=160,slow=9.9,SNR=0.9
NOA NORSAR Array B 25.99 348 P **P 03 11 09.6 +0.1**
comp=Z,1.5nm,0.6s,mb3.7,baz=156,slow=9.0,SNR=11
NOA NORSAR Array B 25.99 348 P **P 03 11 09.6 +0.2**
KAF Kangasniemi 26.36 5 *ep* **P 03 11 11.3 -1.5**
comp=Z,4.5nm,0.8s,mb4.0
KAF Kangasniemi 26.36 5 *ep* **P 03 11 11.3 -1.5**
comp=Z,4.5nm,0.8s,mb4.0
KAF Kangasniemi 26.36 5 *eP* **P 03 11 11.3 -1.5**
IPAR Pars 27.00 94 *eP* **P 03 11 20.0 +1.1**
IPAR Pars 27.00 94 *eP* **P 03 11 20.0 +1.1**
IMOK Mouk 27.03 96 *eP* **P 03 11 19.4 +0.2**
IMOK Mouk 27.03 96 *eP* **P 03 11 19.4 +0.2**
ISRV Sarvestan 27.22 95 *eP* **P 03 11 20.9 0.0**
ISRV Sarvestan 27.22 95 *eP* **P 03 11 20.9 0.0**
JOF Joensuu 27.67 10 *ep* **P 03 11 22.9 -1.6**
comp=Z,1.7nm,0.4s,mb4.0
JOF Joensuu 27.67 10 *ep* **P 03 11 22.9 -1.6**
comp=Z,1.7nm,0.4s,mb4.0
JOF Joensuu 27.67 10 *eP* **P 03 11 22.9 -1.6**
IMEH Mehriz 27.75 90 *eP* **P 03 11 25.8 +0.2**
IMEH Mehriz 27.75 90 *eP* **P 03 11 25.8 +0.2**
TOA0 Torodi Ar. Sit 28.93 223 *eP* **P 03 11 37.2 +1.0**
TOA0 Torodi Ar. Sit 28.93 223 *eP* **P 03 11 37.2 +1.0**
TORD Torodi Ar. Bea 28.93 223 P **P 03 11 37.3 +1.1**
comp=Z,8.9nm,0.7s,mb4.6,baz=37,slow=9.7,SNR=86
AKTK Aktyubinsk 29.89 50 P **P 03 11 43.2 -1.2**
AKTK Aktyubinsk 29.89 50 P **P 03 11 43.2 -1.2**
AKTO Aktyubinsk 29.89 50 P **P 03 11 43.2 -1.2**
comp=Z,1.0nm,0.4s,mb3.9,baz=248,slow=8.8,SNR=6.7
ABKAR Akbulak array 30.84 52 *eP* **P 03 11 51.4 -1.4**
comp=Z,1.4nm,0.6s,mb4.0
ABKAR Akbulak array 30.84 52 *eP* **P 03 11 51.3 -1.5**
comp=Z,1.4nm,0.6s,mb4.0
ARU Arti 32.20 39 *d i P* **P 03 12 03.6 -1.1**
ARU *e* 03 13 07.2
ARU S **S 03 17 15.4 +0.8**
ARU SS SS 03 19 01.5 -32
ARU pmax pmax
comp=Z,5.0nm,1.0s,mb4.3
ARU Arti 32.20 39 *eP* **P 03 12 03.8 -0.9**
comp=Z,4.2nm,0.8s,mb4.3
ARU Arti 32.20 39 *eP* **P 03 12 03.8 -0.9**
comp=Z,4.2nm,0.8s,mb4.3
SVE Sverdlovsk 33.41 39 *eP* **P 03 12 13.9 -1.3**
SVE Sverdlovsk 33.41 39 *eP* **P 03 12 13.9 -1.3**
ARCES ARCESS Array B 33.72 2 P **P 03 12 17.3 -0.5**
comp=Z,2.3nm,0.5s,mb4.3,baz=185,slow=8.9,SNR=31
ARCES ARCESS Array B 33.72 2 P **P 03 12 17.3 -0.6**
ARCES ARCESS Array B 33.72 2 P **P 03 12 17.3 -0.5**
KEV Kevo 34.00 3 *ep* **P 03 12 19.4 -0.9**
comp=Z,5.8nm,0.8s,mb4.6
KEV Kevo 34.00 3 *ep* **P 03 12 19.4 -0.9**
comp=Z,5.8nm,0.8s,mb4.6
KEV Kevo 34.00 3 *eP* **P 03 12 19.4 -0.9**
BRVK Borovoye 37.86 48⇑ *eP* **P 03 12 53.1 -0.4**
BRVK pmax pmax
comp=Z,3.0nm,1.2s,mb3.9
BRVK Borovoye 37.86 48 *eP* **P 03 12 52.2 -1.3**
comp=Z,4.6nm,1.0s,mb4.2
BRVK Borovoye 37.86 48 *eP* **P 03 12 53.1 -0.4**
comp=Z,3.0nm,1.2s,mb3.9
DBIC Dimbokro 37.92 226 P **P 03 12 55.6 +1.3**
comp=Z,11nm,0.8s,mb4.6,baz=23,slow=9.9,SNR=11
DBIC Dimbokro 37.92 226 *eP* **P 03 12 55.0 +0.7**
DBIC pmax pmax
comp=Z,10.0nm,0.8s
DBIC Dimbokro 37.92 226 *eP* **P 03 12 55.0 +0.6**
comp=Z,9.7nm,0.8s,mb4.6
DBIC Dimbokro 37.92 226 *eP* **P 03 12 55.0 +0.7**
comp=Z,9.7nm,0.8s,mb4.6
BVAR Borovoye Array 37.92 48 P **P 03 12 53.5 -0.5**
comp=Z,0.9nm,0.6s,mb3.7,baz=263,slow=7.3,SNR=7.5
BVAR Borovoye Array 37.92 48 P **P 03 12 53.5 -0.5**
TIC Toumodi 38.03 226 *eP* **P 03 12 56.1 +0.8**
comp=Z,28nm,0.9s,mb5.0
KIC Kosan Boka 38.10 226 *eP* **P 03 12 56.5 +0.6**
comp=Z,47nm,1.2s,mb5.1
LIC Lamto 38.37 226 *eP* **P 03 12 59.1 +0.9**
comp=Z,48nm,0.8s,mb5.3
LIC Lamto 38.37 226 *eP* **P 03 12 59.0 +0.8**
comp=Z,31nm,0.8s,mb4.8
LIC Lamto 38.37 226 *eP* **P 03 12 59.0 +0.8**
comp=Z,16nm,0.8s,mb4.8
LIC Lamto 38.37 226 *eP* **P 03 12 59.0 +0.8**
comp=Z,16nm,0.8s,mb4.8
BBTS Babate 40.14 248 P **P 03 13 14.8 +1.9**
comp=Z,13nm,1.0s,mb4.6,baz=109,slow=2.9,SNR=4.5
BBTS Babate 40.14 248 P **P 03 13 14.9 +2.0**
EKS2 Erkin-Say 40.37 64 *eP* **P 03 13 14.8 +0.3**
comp=Z,5.0nm,0.7s,mb4.3
EKS2 Erkin-Say 40.37 64 *eP* **P 03 13 14.9 +0.3**
comp=Z,5.0nm,0.7s,mb4.3
AAK Ala-Archa 40.90 64 *eP* **P 03 13 19.0 +0.1**
AAK pmax pmax
comp=Z,3.0nm,0.9s,mb3.9
AAK Ala-Archa 40.90 64 *eP* **P 03 13 19.0 0.0**
comp=Z,2.9nm,0.9s,mb3.9
AAK Ala-Archa 40.90 64 *eP* **P 03 13 19.0 +0.1**
comp=Z,2.9nm,0.9s,mb3.9
UCH Uchtor 40.98 65 *eP* **P 03 13 19.6 0.0**
comp=Z,1.8nm,0.8s,mb3.8
UCH Uchtor 40.98 65 *eP* **P 03 13 19.6 0.0**
comp=Z,1.8nm,0.8s,mb3.8
TKM2 Tokmak 2 41.66 63 *eP* **P 03 13 24.4 -0.8**
TKM2 pmax pmax
comp=Z,2.0nm,0.7s,mb3.9
TKM2 Tokmak 2 41.66 63 *eP* **P 03 13 24.4 -0.8**
comp=Z,1.6nm,0.7s,mb3.8
TKM2 Tokmak 2 41.66 63 *eP* **P 03 13 24.4 -0.8**
comp=Z,1.6nm,0.7s,mb3.8
SPITS Spitsbergen Ar 42.41 358 P **P 03 13 31.3 +0.5**
comp=Z,2.9nm,0.7s,mb4.0,baz=145,slow=10,SNR=7.4
SPITS Spitsbergen Ar 42.41 358 P **P 03 13 31.3 +0.5**
KURK Kurchatov 42.94 51 *eP* **P 03 13 32.2 -3.3**
KURK pmax pmax
comp=Z,1.0nm,0.6s,mb3.7
KURK Kurchatov 42.94 51 *eP* **P 03 13 32.2 -3.2**
comp=Z,1.2nm,0.6s,mb3.8
NVS Novosibirsk 45.58 45 *i P* **P 03 13 55.5 -1.1**
NVS pmax pmax
comp=N,3.0nm,1.0s
NVS pmax pmax
comp=E,4.0nm,1.0s
NVS pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
NVS Novosibirsk 45.58 45 *i P* **P 03 13 55.5 -1.1**
MK31 Makanchi Array 45.75 57 *eP* **P 03 13 57.6 -0.4**
MK31 Makanchi Array 45.75 57 *eP* **P 03 13 57.6 -0.4**
MKAR Makanchi Array 45.75 57 P **P 03 13 57.8 -0.3**
comp=Z,3.0nm,0.5s,mb4.5,baz=282,slow=6.7,SNR=28
ZALV Zalesovo Beam 46.55 47 P **P 03 14 02.9 -1.3**
comp=Z,3.8nm,0.6s,mb4.5,baz=270,slow=8.7,SNR=17
ZALV Zalesovo Beam 46.55 47 P **P 03 14 02.9 -1.3**
ZALV Zalesovo Beam 46.55 47 P **P 03 14 02.9 -1.3**
WMQ Urumqi 50.10 60 *eP* **P 03 14 33.0 +1.3**
WMQ pmax pmax
comp=Z,14nm,1.0s,mb5.0
LSZ Lusaka 51.31 172 P **P 03 14 41.8 +0.8**
comp=Z,1.2nm,0.9s,mb3.8,baz=29,slow=12,SNR=4.5
LSZ Lusaka 51.31 172 P **P 03 14 41.8 +0.8**
LSZ pmax pmax
comp=Z,1.0nm,0.9s,mb3.8
LSZ Lusaka 51.31 172 *eP* **P 03 14 42.9 +1.9**
comp=Z,1.8nm,0.6s,mb4.2
LSZ Lusaka 51.31 172 P **P 03 14 41.8 +0.8**
comp=Z,1.0nm,0.9s,mb3.8
GTA Gaotai 60.12 61 *eP* **P 03 15 44.3 +0.2**
GTA pP pP 03 15 55.1 -0.8
GTA sP sP 03 15 58.6 -2.0
GTA pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
SCHQ Schefferville 60.72 318 P **P 03 15 48.6 +0.8**
comp=Z,0.8nm,0.4s,mb4.2,baz=71,slow=16,SNR=5.5
SCHQ Schefferville 60.72 318 P **P 03 15 48.7 +0.8**
SONM Songino Array 61.20 50 P **P 03 15 51.1 -0.2**
comp=Z,2.0nm,0.9s,mb4.2,baz=283,slow=7.4,SNR=13
SONM Songino Array 61.20 50 P **P 03 15 51.1 -0.2**
ULN Ulaanbaatar 61.60 50 *eP* **P 03 15 54.8 +0.8**
ULN Ulaanbaatar 61.60 50 *eP* **P 03 15 53.5 -0.5**
comp=Z,2.8nm,0.9s,mb4.4
ULN Ulaanbaatar 61.60 50 *eP* **P 03 15 54.8 +0.8**
RES Resolute Bay 62.16 344 *eP* **P 03 15 58.1 +0.7**
RES pmax pmax
comp=Z,3.0nm,1.1s,mb4.3
RES Resolute Bay 62.16 344 *eP* **P 03 15 58.1 +0.7**
comp=Z,3.3nm,1.1s,mb4.4
RES Resolute Bay 62.16 344 *eP* **P 03 15 58.1 +0.7**
comp=Z,3.3nm,1.1s,mb4.4
BOSA Boshof 64.30 176 *eP* **P 03 16 15.2 +3.3**
BOSA pmax pmax
comp=Z,29nm,1.6s,mb5.1
BOSA Boshof 64.30 176 *eP* **P 03 16 15.2 +3.3**
comp=Z,29nm,1.6s,mb5.1
BOSA Boshof 64.30 176 *eP* **P 03 16 15.2 +3.3**
comp=Z,29nm,1.6s,mb5.1
LZH Lanzhou 64.42 63 *eP* **P 03 16 15.0 +2.1**
LZH pP pP 03 16 20.0 -4.9
LZH sP sP 03 16 22.5 -7.1
LZH pmax pmax
comp=Z,13nm,1.0s,mb4.9
CD2 Chengdu 66.78 68 *eP* **P 03 16 28.8 +0.5**
CD2 pP pP 03 16 39.0 -1.2
CD2 sP sP 03 16 43.2 -1.7
CD2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
CD2 pmax pmax
comp=Z,30nm,4.8s
HHC Hu-ho-hao-te 67.58 55 *eP* **P 03 16 33.5 +0.4**
HHC pP pP 03 16 43.8 -1.3
HHC sP sP 03 16 47.7 -2.1
HHC PcP PcP 03 17 01.0 +0.9
HHC PP PP 03 19 03.9 +1.8
HHC ScP 03 21 00.5
HHC PcS 03 21 04.7
HHC S S 03 25 25.5 -1.5
HHC sS sS 03 25 42.5 -4.4
HHC ScS ScS 03 26 25.5 -2.8
HHC SS SS 03 29 47.5 0.0
HHC pmax pmax
comp=Z,570nm,7.0s
HHC LR LR
comp=N,530nm,22.6s,MS4.9
HHC LR LR
comp=E,610nm,25.0s,MS4.9
HHC LR LR
comp=Z,500nm,25.0s,MS4.6
KMI Kunming 68.88 74 P **P 03 16 43.3 +1.8**
KMI pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
XAN Xi'an 69.06 63 P **P 03 16 43.6 +1.1**
XAN pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
CMAR Chiang Mai Arr 69.33 82 P **P 03 16 44.4 0.0**
comp=Z,1.0nm,0.5s,mb4.0,baz=301,slow=8.6,SNR=7.5
CMAR Chiang Mai Arr 69.33 82 P **P 03 16 44.4 0.0**
BJI Beijing 71.03 54 P **P 03 16 53.5 -1.0**
BJI S S 03 26 04.1 -3.6
BJI SS SS 03 30 39.1 -1.6
BJI pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
BJI pmax pmax
comp=Z,470nm,10.6s
BJI LR LR
comp=N,350nm,14.5s,MS5.2
BJI LR LR
comp=E,770nm,13.8s,MS5.2
BJI LR LR
comp=Z,310nm,22.3s
GYA Guiyang 71.22 71 P **P 03 16 55.8 -0.1**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
FCC Fort Churchill 71.63 330 *eP* **P 03 16 55.5 -2.2**
comp=Z,0.2nm,1.2s
CN2 Changchun 74.77 47 *eP* **P 03 17 17.0 +0.4**
YKA Yellowknife Ar 75.80 341 P **P 03 17 22.7 +0.6**
comp=Z,0.4nm,0.5s,mb3.6,baz=34,slow=5.2,SNR=4.7
YKA Yellowknife Ar 75.80 341 P **P 03 17 22.7 +0.6**
YKA Yellowknife Ar 75.80 341 P **P 03 17 22.8 +0.7**
KULM Kulim 78.03 92 *eP* **P 03 17 35.2 -0.3**
comp=Z,6.3nm,0.8s,mb4.6
KULM Kulim 78.03 92 *eP* **P 03 17 35.2 -0.3**
comp=Z,6.3nm,0.8s,mb4.6
PSI Prapat 78.07 95 P **P 03 17 35.6 -0.1**
comp=Z,3.5nm,0.7s,mb4.4,baz=329,slow=1.6,SNR=5.6
KSRS Korea Array 80.06 51 P **P 03 17 46.6 +0.4**
comp=Z,2.4nm,0.6s,mb4.3,baz=311,slow=4.8,SNR=12
KSRS Korea Array 80.06 51 P **P 03 17 46.7 +0.4**
KSRS pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
KSRS Korea Array 80.06 51 P **P 03 17 46.7 +0.4**
comp=Z,2.0nm,0.6s,mb4.2
ASAR Alice Springs 121.01 98 PKP PKPdf 03 24 28.5 -0.7
comp=Z,0.4nm,0.7s,baz=331,slow=1.7,SNR=6.1

MAN 01 03:07:27,20.06N×121.18E,h1km,mb4.5,ML3.4,MS3.3, 1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBP	**Basco**	**0.83**	**62**	*eP*	Pg	03 07 44.3	+1.3
BBP				*eS*	Sg	03 07 51.7	-2.2
PIP	**Pasuquin**	**1.80**	**197**	*i P*	Pn	03 08 00.1	+0.9
APYP	**Conner**	**2.18**	**178**	*eP*	Pn	03 08 06.6	+2.2
APYP				*eS*	Sn	03 08 34.1	+2.0
BALP	**Baler**	**4.31**	**175**	*eP*	Pn	03 08 36.9	+3.2

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*ISCJB **01** 03:23:55.6±0.7,31°.63N±0°.03×104°.13E±0°.03,h12km±4km, mb4.4/81,MS4.3/3,Error ellipse: s-maj=5.1km s-min=4.1km az=24.0*
*IDC **01** 03:23:55.5±0.6,31°.70N×104°.20E,h0km,mb4.2/23, mb1 4.3/25,mb1mx4.2/36,mbtmp4.2/25,ML4.2/1,Error ellipse: s-maj=21.0km s-min=13.3km az=49.0*
*BJI **01** 03:23:56.9,31°.59N×104°.22E,h16km,mB5.0/10,mb4.4/27, ML4.3/19,Ms4.3/23,Ms7 4.1/20*
*NEIC **01** 03:23:57.4±0.2,31°.72N×104°.19E,h10km,mb4.6/46,Error ellipse: s-maj=5.5km s-min=4.6km az=56.0*
*MOS **01** 03:23:58.5±0.8,31°.66N×104°.19E,h33km,mb4.7/40,Error ellipse: s-maj=9.8km s-min=5.0km az=120.4*
*SZGRF **01** 03:24:08.9,32°.10N×102°.40E,h34km,mb4.8,Sichuan, China*

ISC 01 03:23:57.3±0.7,31°.58N±0°.03×104°.13E±0°.03,h11km±4km, n222,σ1§06/238,mb4.4/81,MS4.3/3,7C-3D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.74**	**206**	*i P*	**Pg**	**03 24 11.4**	**-0.3**
CD2				Sg	**Sg**	**03 24 22.4**	**+1.0**
CD2				smax			
	comp=N,14μm,0.7s						
CD2				smax			
	comp=E,23μm,1.0s						
LZH	**Lanzhou**	**4.50**	**357**	Pn	**Pn**	**03 25 11.0**	**+5.7**
LZH				Pg	**Pg**	**03 25 22.5**	**-0.9**
LZH				Sn	**Sn**	**03 25 59.4**	**+1.9**
LZH				Sg	**Sg**	**03 26 24.5**	**+2.8**
LZH				smax			
	comp=N,180nm,0.8s						
LZH				smax			
	comp=E,280nm,1.0s						

LZH LR LR
comp=E,2µm,5.6s
LZH LR LR
comp=Z,3µm,6.5s
XAN Xi'an 4.72 57 Pn **Pn 03 25 09.0 +0.7**
XAN Pg **Pg 03 25 23.9 -3.7**
XAN Sn **Sn 03 26 08.0 +5.1**
XAN Sg **Sg 03 26 26.9 -1.8**
XAN smax
comp=N,700nm,1.1s
XAN smax
comp=E,410nm,1.0s
XAN LR LR
comp=N,650nm,9.6s
XAN LR LR
comp=E,270nm,10.4s
XAN LR LR
comp=Z,510nm,10.8s
ENH Enshi 4.78 104 *e*Pn **Pn 03 25 11.2 +2.1**
ENH *e*Sg **Sg 03 26 29.9 -0.9**
GYA Guiyang 5.57 156 Pn **Pn 03 25 21.5 +1.5**
KMI Kunming 6.55 191 Pn **Pn 03 25 35.5 +2.0**
KMI Sn **Sn 03 26 45.8 -2.4**
KMI Sg **Sg 03 27 19.4 -8.2**
KMI smax
comp=N,66nm,1.4s
KMI smax
comp=E,90nm,1.4s
KMI LR LR
comp=N,690nm,11.1s
KMI LR LR
comp=E,760nm,9.6s
GTA Gaotai 8.56 337 *e*P **Pn 03 26 06.2 +5.1**
GTA pP 03 26 10.5
GTA sP 03 26 13.5
GTA pmax pmax
comp=Z,2.0nm,0.9s
WHN Wuhan 8.82 94 P **Pn 03 26 06.0 +1.3**
WHN S **Sn 03 27 42.1 -2.0**
WHN LR LR
comp=Z,2µm,10.0s
HHC Hu-ho-hao-te 11.02 31 *e*P **Pn 03 26 35.8 +1.1**
HHC pP 03 26 39.0
HHC sP 03 26 41.9
HHC PP 03 26 44.3
HHC S **Sn 03 28 37.3 -0.6**
HHC SS 03 28 51.0
HHC PcS PcS 03 36 07.8 +1.4
HHC ScS ScS 03 39 40.6 +0.3
HHC pmax pmax
comp=Z,8.0nm,0.9s
HHC LR LR
comp=N,370nm,10.7s
HHC LR LR
comp=E,870nm,10.1s
HHC LR LR
comp=Z,950nm,10.9s
LSA Lhasa 11.34 264 P **Pn 03 26 41.3 +2.1**
LSA pmax pmax
comp=Z,10.0nm,0.8s
LSA Lhasa 11.34 264 *e*P **Pn 03 26 41.9 +2.8**
LSA pmax pmax
comp=Z,14nm,0.6s
LSA Lhasa 11.34 264 *e*Pn **Pn 03 26 41.9 +2.7**
comp=Z,14nm,0.6s
BJI Beijing 12.90 46 P **Pn 03 26 59.4 -1.1**
BJI pmax pmax
comp=Z,13nm,0.6s
BJI pmax pmax
comp=Z,820nm,9.2s
BJI LR LR
comp=N,2µm,19.7s
BJI LR LR
comp=E,790nm,18.4s
BJI LR LR
comp=Z,800nm,25.3s
QIZ Qiongzhong 13.52 156 P **Pn 03 27 11.5 +2.5**
QIZ S **Sn 03 29 45.0 +5.7**
QIZ pmax pmax
comp=Z,7.0nm,1.8s
QIZ LR LR
comp=N,780nm,17.1s
QIZ LR LR
comp=Z,860nm,21.1s
CHG Chiang Mai 13.55 201 P **Pn 03 27 19.3 +10**
CHTO Chiang Mai 13.55 201 *e*P **Pn 03 27 12.7 +3.3**
CHTO pmax pmax
comp=Z,6.0nm,0.8s
CHTO Chiang Mai 13.55 201 *e*Pn **Pn 03 27 12.7 +3.3**
comp=Z,6.5nm,0.8s
CMAR Chiang Mai Arr 13.89 201 Pn **Pn 03 27 16.1 +2.1**
comp=Z,0.4nm,0.3s,baz=13,slow=12,SNR=15
TAPN Taplejung 14.91 258 *e*P **Pn 03 27 26.4 -1.6**
comp=Z,47nm,1.0s
BDT Bhumibol Dam 15.02 199 ⇑P **Pn 03 27 36.0 +6.6**
ODAN Odare 15.35 256 *e*P **Pn 03 27 30.9 -2.9**
comp=Z,68nm,1.1s
RAMN Ramite 15.98 258 *e*P **Pn 03 27 39.0 -3.0**
GUN Gumba 16.27 262 *e*P **Pn 03 27 43.4 -2.3**
comp=Z,76nm,0.8s
SONM Songino Array 16.32 5 Pn **Pn 03 27 45.6 -0.7**
baz=190,slow=11,SNR=6.2
ULN Ulaanbaatar 16.41 7 *e*P **Pn 03 27 46.8 -0.6**
ULN pmax pmax
comp=Z,3.0nm,0.8s
ULN Ulaanbaatar 16.41 7 *e*Pn **Pn 03 27 46.8 -0.6**
comp=Z,2.8nm,0.8s
PKI Pulchoki 16.77 261 *e*P **Pn 03 27 49.5 -2.6**
comp=Z,93nm,1.1s
PKI Pulchoki 16.77 261 *e*P **Pn 03 27 49.6 -2.5**
PKI pmax pmax
comp=Z,62nm,0.7s
PKI Pulchoki 16.77 261 *e*P **Pn 03 27 49.6 -2.5**
comp=Z,62nm,0.7s
PKIN Phulchoki 16.78 261 *e*P **Pn 03 27 49.6 -2.6**
comp=Z,62nm,0.7s
KKN Kakani 16.81 262 *e*P **Pn 03 27 50.0 -2.6**
comp=Z,31nm,0.5s
KKN Kakani 16.81 262 *e*P **Pn 03 27 50.0 -2.6**
KKN pmax pmax
comp=Z,31nm,0.5s
DMN Daman 17.01 261 *e*P **Pn 03 27 52.6 -2.6**
comp=Z,63nm,0.8s
WMQ Urumqi 17.80 318 *e*P **Pn 03 28 05.0 +0.1**
WMQ pmax pmax
comp=Z,15nm,1.0s
ZAK Zakamensk 18.79 358 *e*P **Pn 03 28 18.1 +1.2**
ZAK pmax pmax
comp=Z,3.0nm,1.3s
KSRS Korea Array 20.43 67 P **P 03 28 34.5 0.0**
comp=Z,10nm,0.8s,baz=257,slow=10,SNR=28
KSRS Korea Array 20.43 67 P **P 03 28 34.5 0.0**
KSRS pmax pmax
comp=Z,10.0nm,0.8s
IRK Irkutsk 20.64 0 *e*P **P 03 28 38.7 +2.1**
IRK pmax pmax
comp=Z,21nm,0.7s
CN2 Changchun 20.75 48 ⇑P **P 03 28 39.3 +1.5**
CN2 *e*pP 03 28 43.8
CN2 *e*sP sP 03 28 46.8 +4.2
CN2 *e*S **S 03 32 24.7 -4.5**
CN2 pmax pmax
comp=Z,60nm,0.7s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,600nm,15.0s,MS4.2
CN2 LR LR
comp=E,600nm,15.0s,MS4.2
CN2 LR LR
comp=Z,600nm,13.0s,MS4.2
JOSI Joshimath 21.07 274 *e*PKP **P 03 28 41.5 0.0**
KLP Kalpa 22.04 277 *e*PKP **P 03 28 51.7 -0.1**
KLP AMb AMB 03 28 58.6
comp=Z,20nm,0.9s,mb4.6
DDI Dehra Dun 22.39 274 *e*PKP **P 03 28 56.0 +0.5**
MK31 Makanchi Array 22.64 318 *e*P **P 03 28 58.4 +0.4**
MKAR Makanchi Array 22.64 318 P **P 03 28 58.8 +0.7**
comp=Z,15nm,0.9s,mb4.4,baz=113,slow=12,SNR=52
SMLA Simla 23.02 276 *e*PKP **P 03 29 02.1 -0.1**
AGRA Agra 23.20 266 *e*PKP **P 03 29 02.7 -1.5**
AGRA AMb AMB 03 29 03.4
comp=Z,42nm,0.2s
BISR Bishrakh 23.27 269 *e*PKP **P 03 29 05.0 +0.1**
NDI New Delhi 23.44 270 *e*PKP **P 03 29 05.0 -1.7**

SONA Sohna 23.66 269 *e*PKP **P 03 29 07.7 -1.1**
SONA AMb AMB 03 29 09.3
comp=Z,27nm,0.8s,mb4.7
KSH Kashi 24.17 297 *e*P **P 03 29 16.7 +3.3**
KSH pP 03 29 20.9
KSH sP sP 03 29 23.7 +5.4
KSH PP 03 29 52.3
KSH PcP PcP 03 32 56.6 +2.6
KSH S **S 03 33 33.1 +1.8**
KSH sS sS 03 33 40.1 +3.0
KSH SS 03 34 27.2
KSH ScP ScP 03 36 33.7 +1.2
KSH PcS PcS 03 36 35.5 +1.8
KSH ScS ScS 03 40 20.0 +0.3
KSH pmax pmax
comp=Z,5.0nm,0.8s,mb4.0
KSH LR LR
comp=N,560nm,16.3s,MS4.3
KSH LR LR
comp=E,410nm,13.8s,MS4.3
KSH LR LR
comp=Z,210nm,7.0s
ULHL Ulahol 24.61 303 P **P 03 29 18.7 +1.4**
SNR=13
NGP Nagpur 24.70 251 *ex* x 03 29 11.8
KHET Khetri 24.79 269 *e*PKP **P 03 29 18.7 -0.5**
TKM2 Tokmak 2 25.26 305 P **P 03 29 24.5 +1.2**
SNR=11
TKM2 Tokmak 2 25.26 305 *e*P **P 03 29 24.3 +1.0**
TKM2 pmax pmax
comp=Z,7.0nm,0.8s,mb4.2
TKM2 Tokmak 2 25.26 305 *e*P **P 03 29 24.3 +1.0**
comp=Z,7.1nm,0.8s,mb4.2
KZA Kyzart 25.27 303 P **P 03 29 25.5 +2.1**
SNR=29
KBK Karagaybulak 25.64 304 P **P 03 29 28.6 +1.8**
SNR=12
UCH Uchtor 25.84 303 P **P 03 29 30.6 +2.0**
SNR=24
UCH Uchtor 25.84 303 *e*P **P 03 29 30.3 +1.8**
comp=Z,17nm,0.9s,mb4.6
AAK Ala-Archa 25.96 304 P **P 03 29 30.6 +1.0**
comp=Z,3.7nm,0.6s,mb4.1,baz=94,slow=6.6,SNR=13
AAK Ala-Archa 25.96 304⇓ *e*P **P 03 29 31.0 +1.4**
AAK pmax pmax
comp=Z,4.0nm,0.8s,mb4.0
AAK Ala-Archa 25.96 304 *e*P **P 03 29 30.7 +1.1**
comp=Z,7.0nm,0.8s,mb4.2
USP Ospenovka 26.13 305 P **P 03 29 34.9 +3.7**
SNR=9.3
ZAA0 Zalesovo Array 26.30 334 *e*P **P 03 29 32.5 -0.1**
ZALV Zalesovo Beam 26.30 334 P **P 03 29 33.0 +0.4**
comp=Z,11nm,0.7s,mb4.5,baz=132,slow=9.6,SNR=43
AML Almayashu 26.41 302 P **P 03 29 35.6 +1.9**
SNR=8.0
AML Almayashu 26.41 302 *e*P **P 03 29 35.1 +1.4**
comp=Z,9.8nm,0.9s,mb4.3
EKS2 Erkin-Say 26.48 303 *e*P **P 03 29 34.8 +0.4**
comp=Z,2.4nm,0.8s,mb3.8
KURK Kurchatov 26.88 323 P **P 03 29 38.1 +0.2**
comp=Z,10nm,0.9s,mb4.4,baz=131,slow=9.1,SNR=53
KURK Kurchatov 26.88 323 *e*P **P 03 29 37.8 0.0**
KURK pmax pmax
comp=Z,11nm,0.9s,mb4.4
KURK Kurchatov 26.88 323 *e*P **P 03 29 37.8 -0.1**
comp=Z,11nm,0.9s,mb4.4
KLR Kul'dur 27.21 42 *e*P **P 03 29 44.8 +3.9**
MAJO Matsushiro 28.57 71 *e*P **P 03 29 52.3 -0.8**
MAJO pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
MAJO Matsushiro 28.57 71 *e*P **P 03 29 52.3 -0.8**
comp=Z,2.8nm,0.6s,mb4.2
MAT Matsushiro 28.57 71 P **P 03 29 52.5 -0.6**
MJAR Matsushiro Arr 28.57 71 P **P 03 29 52.4 -0.7**
comp=Z,1.3nm,0.6s,mb3.8,baz=278,slow=11,SNR=7.2
PSI Prapat 29.05 191 P **P 03 30 01.3 +3.8**
comp=Z,3.5nm,0.5s,mb4.3,baz=332,slow=10,SNR=5.7
KBL Kabul 29.47 285 *e*P **P 03 30 01.8 +0.6**
KBL pmax pmax
comp=Z,5.0nm,0.5s,mb4.5
KBL Kabul 29.47 285 *e*P **P 03 30 01.8 +0.6**
comp=Z,4.6nm,0.5s,mb4.5
BVAR Borovoye Array 32.43 321 P **P 03 30 27.7 +0.6**
comp=Z,2.5nm,0.6s,mb4.2,baz=113,slow=9.8,SNR=18
BRVK Borovoye 32.51 321 *c i*P **P 03 30 28.0 +0.3**
BRVK pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
BRVK Borovoye 32.51 321 *e*P **P 03 30 27.8 +0.1**
comp=Z,4.2nm,0.8s,mb4.4
ABKAR Akbulak array 37.38 311 *e*P **P 03 31 09.6 -0.2**
comp=Z,5.4nm,0.9s,mb4.4
AKTK Aktyubinsk 38.83 313 P **P 03 31 22.1 +0.1**
AKTO Aktyubinsk 38.83 313 P **P 03 31 22.1 +0.1**
comp=Z,2.6nm,0.7s,mb4.0,baz=120,slow=8.2,SNR=9.3
SVE Sverdlovsk 39.13 323⇓ *e*P **P 03 31 25.1 +0.7**
SVE pmax pmax
comp=Z,19nm,1.1s,mb4.7
ARU Arti 40.07 322 *c i*P **P 03 31 32.6 +0.3**
ARU S **S 03 37 37.7 -0.2**
ARU SS SS 03 40 31.7 -3.4
ARU pmax pmax
comp=Z,21nm,1.0s,mb4.8
ARU Arti 40.07 322 *e*P **P 03 31 32.1 -0.1**
comp=Z,20nm,1.0s,mb4.8
KIV Kislovodsk 49.07 303 *e*P **P 03 32 44.8 +0.4**
KIV pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
KIV Kislovodsk 49.07 303 *e*P **P 03 32 45.4 +1.0**
comp=Z,3.7nm,0.4s,mb4.8
VRHR Novokhopersk 49.24 312 *e*P **P 03 32 45.1 -0.4**
VRHR pmax pmax
comp=Z,9.0nm,0.5s,mb5.1
VRHR pmax pmax
comp=N,10.0nm,0.9s
VRHR pmax pmax
comp=E,6.0nm,0.4s
VSR Storozhevoye 50.78 313 *e*P **P 03 32 56.7 -0.5**
VSR pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
VSR pmax pmax
comp=N,3.0nm,1.1s
VSR pmax pmax
comp=E,6.0nm,0.8s
OBN Obninsk 52.14 318⇑ *e*P **P 03 33 06.5 -0.8**
OBN *e* 03 35 11.0
OBN *e*S **S 03 40 29.6 -1.7**
OBN pmax pmax
comp=Z,18nm,1.7s,mb4.7
OBN MLR MLR
comp=Z,400nm,16.0s,MS4.5
JOF Joensuu 54.64 328 *ep* **P 03 33 24.8 -0.8**
comp=Z,4.2nm,0.8s,mb4.5
JOF Joensuu 54.64 328 *ep* **P 03 33 24.8 -0.8**
comp=Z,4.2nm,0.8s,mb4.5
ASF Jabal al Asfar 56.20 290 P **P 03 33 38.0 +0.6**
comp=Z,1.9nm,0.8s,mb4.2,baz=1,2,slow=6.1,SNR=4.8
KEV Kevo 56.30 336 *ep* **P 03 33 36.1 -1.4**
comp=Z,4.4nm,0.9s,mb4.5
KEV Kevo 56.30 336 *ep* **P 03 33 36.1 -1.4**
comp=Z,4.4nm,0.9s,mb4.5
BRTR Keskin Array B 56.53 299 P **P 03 33 38.5 -1.1**
comp=Z,0.7nm,0.7s,mb3.8,baz=46,slow=5.3,SNR=4.6
BRTR Keskin Array B 56.53 299 *ce*P **P 03 33 39.5 0.0**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
ARCES ARCESS Array B 56.83 336 P **P 03 33 39.4 -1.9**
comp=Z,1.8nm,0.7s,mb4.2,baz=72,slow=8.0,SNR=9.0
KAF Kangasniemi 57.00 327 *ep* **P 03 33 41.4 -1.1**
comp=Z,3.5nm,0.7s,mb4.5
KAF Kangasniemi 57.00 327 *ep* **P 03 33 41.4 -1.1**
comp=Z,3.5nm,0.7s,mb4.5
AKASG Malin Array Be 57.08 313 P **P 03 33 41.5 -1.8**
comp=Z,3.6nm,0.7s,mb4.5,baz=70,slow=6.5,SNR=11
AKASG Malin Array Be 57.08 313 P **P 03 33 41.5 -1.8**
AKBB Malin Array Si 57.08 313 *e*P **P 03 33 42.4 -0.8**
FINES FINESS Array B 57.18 326 P **P 03 33 43.6 -0.2**
comp=Z,4.6nm,0.8s,mb4.6,baz=94,slow=8.4,SNR=25
VSU Vasula 57.23 322 *c i*P **P 03 33 43.7 -0.5**
VSU pmax pmax
comp=Z,15nm,0.9s,mb5.0
IDID Didziasalis 57.72 319 *e*P **P 03 33 48.1 +0.4**
IDID AMB AMB 03 33 49.1
comp=Z,4.8nm,0.9s,mb4.5
IDID *e*ScP ScP 03 39 02.8 +22
IZAR Zarasai 57.92 319 *e*P **P 03 33 49.8 +0.7**
IZAR AMB AMB 03 33 51.0

comp=Z,5.7nm,0.7s,mb4.7
IIGN Ignalina 58.00 319 *e*P **P 03 33 50.2 +0.5**
IIGN AMB AMB 03 33 51.2
comp=Z,6.4nm,0.9s,mb4.7
ISAL Salakas 58.02 319 *e*P **P 03 33 49.9 +0.1**
ISAL AMB AMB 03 33 51.2
comp=Z,4.3nm,0.9s,mb4.5
WRAB Tennant Creek 58.85 146 *e*P **P 03 33 56.5 +0.5**
WRAB pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
WRAB Tennant Creek 58.85 146 *e*P **P 03 33 56.5 +0.5**
comp=Z,4.7nm,0.7s,mb4.6
MLR Muntele Rosu 60.44 308 P **P 03 34 05.7 -1.1**
comp=Z,1.8nm,0.8s,mb4.2,baz=103,slow=6.1
KWP Kalwaria Pacla 61.40 313 *e*P **P 03 34 12.7 -0.5**
KWP pmax pmax
comp=Z,18nm,1.0s,mb5.2
KWP Kalwaria Pacla 61.40 313 *e*P **P 03 34 12.7 -0.5**
comp=Z,18nm,1.0s,mb5.2
KOLS Kolonicke sedl 61.87 312 *e*P **P 03 34 16.5 +0.1**
KOLS pmax pmax
comp=Z,2.0nm,1.0s,mb4.2
KOLS Kolonicke sedl 61.87 312 *e*P **P 03 34 16.5 +0.1**
comp=Z,2.2nm,1.0s,mb4.2
KOLS *e* 03 37 45.5
KOLS Kolonicke sedl 61.87 312 *e*P **P 03 34 16.5 +0.1**
KOLS *e* 03 37 45.5
ASAR Alice Springs 61.89 149 P **P 03 34 16.9 +0.2**
comp=Z,0.7nm,0.6s,mb4.0,baz=332,slow=6.7,SNR=14
STHS Stebnicka Huta 62.38 313 *e*P **P 03 34 20.2 +0.4**
STHS pmax pmax
comp=Z,3.0nm,1.0s,mb4.4
STHS Stebnicka Huta 62.38 313 *e*P **P 03 34 20.2 +0.4**
comp=Z,2.6nm,1.0s,mb4.3
STHS *e* 03 37 52.9
STHS Stebnicka Huta 62.38 313 *e*P **P 03 34 20.2 +0.4**
STHS *e* 03 37 52.9
OJC Ojcow 63.03 314 *e*P **P 03 34 23.3 -0.8**
KECS Kecovo 63.13 312 *e*P **P 03 34 24.2 -0.6**
KECS pmax pmax
comp=Z,2.0nm,1.1s,mb4.2
KECS Kecovo 63.13 312 *e*P **P 03 34 24.2 -0.6**
comp=Z,1.8nm,1.1s,mb4.1
KECS Kecovo 63.13 312 *e*P **P 03 34 24.2 -0.6**
HFS Hagfors 63.39 326 P **P 03 34 25.7 -0.6**
comp=Z,2.9nm,0.8s,mb4.5,baz=99,slow=7.7,SNR=14
OKC Ostrava-Krasne 64.16 314 *e*P **P 03 34 31.7 +0.1**
OKC Ostrava-Krasne 64.16 314 *e*P **P 03 34 31.7 +0.1**
VYHS Vyhne 64.17 313 *e*P **P 03 34 31.8 +0.1**
VYHS *e* 03 34 40.6
VYHS pmax pmax
comp=Z,2.0nm,1.2s,mb4.0
VYHS Vyhne 64.17 313 *e*P **P 03 34 31.8 +0.1**
comp=Z,2.4nm,1.2s,mb4.1
VYHS *e* 03 34 40.6
VYHS Vyhne 64.17 313 *e*P **P 03 34 31.8 +0.1**
VYHS *e* 03 34 40.6
NB2 NORSAR Subarra 64.27 327 P **P 03 34 30.9 -1.2**
comp=Z,5.2nm,1.0s,mb4.5,baz=72,slow=6.9
NOA NORSAR Array B 64.27 327 P **P 03 34 31.2 -0.9**
comp=Z,3.0nm,0.9s,mb4.3,baz=72,slow=6.5,SNR=11
KOLL Kolacno 64.42 313 *e*P **P 03 34 34.1 +0.8**
KOLL Kolacno 64.42 313 *e*P **P 03 34 34.1 +0.8**
MORC Moravsky Berou 64.55 314 *e*P **P 03 34 34.1 0.0**
MORC pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
MORC Moravsky Berou 64.55 314 *e*P **P 03 34 34.1 -0.1**
comp=Z,2.6nm,0.9s,mb4.3
DPC Dobruska-Polom 65.10 315 *e*P **P 03 34 37.8 +0.1**
DPC Dobruska-Polom 65.10 315 *e*P **P 03 34 37.8 +0.1**
UPC Upice 65.23 315 *e*P **P 03 34 38.9 +0.3**
UPC Upice 65.23 315 *e*P **P 03 34 38.9 +0.3**
VRAC Vranov 65.29 314 P **P 03 34 39.5 +0.5**
comp=Z,1.8nm,0.5s,mb4.4,baz=87,slow=6.4,SNR=5.7
TREC Trest 65.97 314 *e*P **P 03 34 43.7 +0.3**
TREC Trest 65.97 314 *e*P **P 03 34 43.7 +0.3**
PVCC Panska Ves 66.09 316 *e*P **P 03 34 44.9 +0.8**
PVCC Panska Ves 66.09 316 *e*P **P 03 34 44.9 +0.8**
PRU Pruhonice 66.30 315 *e*P **P 03 34 46.0 +0.6**
PRU Pruhonice 66.30 315 *e*P **P 03 34 46.0 +0.6**
BRG Berggiesshubel 66.33 316 *e*P **P 03 34 45.1 -0.6**
comp=Z,5.0nm,0.8s,mb4.6
BRG Berggiesshubel 66.33 316 *e*P **P 03 34 45.3 -0.4**
comp=Z,5.2nm,0.8s,mb4.6
CLL Collm 66.72 317 *e*P **P 03 34 47.0 -1.2**
comp=Z,4.0nm,1.1s,mb4.4
CLL Collm 66.72 317 *i*P **P 03 34 47.8 -0.4**
CLL pmax pmax
comp=Z,4.0nm,1.1s,mb4.4
CLL Collm 66.72 317 *i*P **P 03 34 47.8 -0.4**
comp=Z,4.0nm,1.1s,mb4.4
CLL Collm 66.72 317 *i*P **P 03 34 47.8 -0.4**
comp=Z,4.0nm,1.1s,mb4.4
CLL *e*PP PP 03 37 12.0 -2.7
COLD Coldfoot 67.02 24 *e*P **P 03 34 49.5 -0.3**
comp=Z,3.9nm,1.1s,mb4.3
KHC Kasperske Hory 67.20 315 *e*P **P 03 34 50.7 -0.5**
KHC Kasperske Hory 67.20 315 *e*P **P 03 34 50.7 -0.5**
GEC2 GERESS Array S 67.23 314 *e*P **P 03 34 51.1 -0.3**
comp=Z,5.0nm,1.2s,mb4.4
GEC2 GERESS Array S 67.23 314 *e*P **P 03 34 51.1 -0.3**
GEC2 pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
GERES GERESS Array B 67.23 314 P **P 03 34 51.6 +0.2**
comp=Z,2.5nm,0.9s,mb4.2,baz=76,slow=5.6,SNR=20
BSEG Bad Segeberg 67.25 320 *e*P **P 03 34 51.9 +0.5**
comp=Z,11nm,0.9s,mb4.9
TANN Tannenbergstha 67.38 316 *e*P **P 03 34 52.1 -0.2**
comp=Z,3.0nm,0.9s,mb4.3
NKC Novy Kostel 67.46 316 *e*P **P 03 34 52.8 0.0**
NKC Novy Kostel 67.46 316 *e*P **P 03 34 52.8 0.0**
WET Wettzell 67.62 315 *e*P **P 03 34 54.0 +0.1**
comp=Z,4.0nm,1.2s,mb4.3
WET Wettzell 67.62 315 *e*P **P 03 34 54.0 +0.1**
WET pmax pmax
comp=Z,4.0nm,1.2s,mb4.3
ROTZ Rotzenmuhle 67.78 316 *e*P **P 03 34 55.1 +0.2**
comp=Z,6.0nm,0.9s,mb4.6
MOX Moxa 67.79 317 *e*P **P 03 34 54.6 -0.3**
comp=Z,3.0nm,1.1s,mb4.2
NRDL Niedersach Rie 67.93 319 *e*P **P 03 34 56.4 +0.6**
comp=Z,9.0nm,1.2s,mb4.7
CLZ Clausthal 68.04 318 *e*P **P 03 34 56.3 -0.1**
comp=Z,8.0nm,0.9s,mb4.8
CLZ Clausthal 68.04 318 *e*P **P 03 34 56.3 -0.1**
CLZ pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
RJOB Jochberg 68.22 313 *e*P **P 03 34 57.8 +0.1**
comp=Z,5.0nm,1.4s,mb4.3
GRA1 Grafenberg Arr 68.40 316 *e*P **P 03 34 58.7 -0.1**
comp=Z,12nm,0.9s,mb4.9
GRA1 *e*pP pP 03 35 08.5 +6.0
GRF Grafenberg Arr 68.40 316 *e*P **P 03 34 58.7 -0.1**
comp=Z,12nm,0.9s,mb4.9
GRF *e*pP pP 03 35 08.5 +6.0
GRF Grafenberg Arr 68.40 316 *e*P **P 03 34 58.7 -0.1**
GRF *e**PP pP 03 35 08.5 +6.0
GRF pmax pmax
comp=Z,12nm,0.9s,mb4.9
FUR Furstenfeldbru 68.98 314 *e*P **P 03 35 02.9 +0.5**
comp=Z,18nm,1.0s,mb5.0
FUR Furstenfeldbru 68.98 314 *e*P **P 03 35 02.9 +0.5**
FUR pmax pmax
comp=Z,18nm,1.0s,mb5.0
COLA College 68.99 26 *e*P **P 03 35 01.8 -0.4**
COLA pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
COLA College 68.99 26 *e*P **P 03 35 01.8 -0.4**
comp=Z,3.0nm,0.9s,mb4.2
TNS Taunus Mts 69.81 317 *e*P **P 03 35 07.8 +0.3**
comp=Z,4.0nm,0.6s,mb4.5
TNS Taunus Mts 69.81 317 *e*P **P 03 35 07.8 +0.3**
TNS pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
STU Stuttgart 69.99 315 *e*P **P 03 35 08.4 -0.2**
comp=Z,6.0nm,0.9s,mb4.5
STU Stuttgart 69.99 315 *e*P **P 03 35 08.6 0.0**
STU pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
STU Stuttgart 69.99 315 *e*P **P 03 35 08.6 -0.1**
comp=Z,5.1nm,0.7s,mb4.6
AQU L'Aquila 70.02 308 *e*P **P 03 35 09.5 +0.6**
AQU pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
AQU L'Aquila 70.02 308 *e*P **P 03 35 09.5 +0.5**

comp=Z,4.3nm,0.8s,mb4.4
DAVOX **Davos/Dischmat 70.42 313** P **P** 03 35 11.1 -0.3
comp=Z,4.9nm,0.7s,mb4.5,baz=133,slow=3.0,SNR=7.8
BFO **Black Forest 70.70 315** *e*P **P** 03 35 12.7 -0.3
comp=Z,6.0nm,1.0s,mb4.5
BFO **Black Forest 70.70 315** *e*P **P** 03 35 12.7 -0.3
BFO pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
KMBO **Kilima Mbogo 71.04 256** *e*P **P** 03 35 15.4 -0.2
KMBO pmax pmax
comp=Z,2.0nm,0.8s
KMBO **Kilima Mbogo 71.04 256** *e*P **P** 03 35 15.4 -0.2
comp=Z,2.1nm,0.8s,mb4.1
CDF **Champ du Feu 71.29 316** *e*P **P** 03 35 15.9 -0.7
comp=Z,12nm,1.1s,mb4.5
CDF **Champ du Feu 71.29 316** *e*P **P** 03 35 15.9 -0.7
CDF pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
CDF **Champ du Feu 71.29 316** *e*P **P** 03 35 15.9 -0.7
comp=Z,5.9nm,1.1s,mb4.4
WLF **Walferdange 71.39 317** *e*P **P** 03 35 17.6 +0.4
comp=Z,8.1nm,1.2s,mb4.5
WLF **Walferdange 71.39 317** *e*P **P** 03 35 17.9 +0.8
comp=Z,13nm,1.0s,mb4.8
WLF **Walferdange 71.39 317** *e*P **P** 03 35 17.6 +0.5
WLF pmax pmax
comp=Z,12nm,1.0s,mb4.8
WLF **Walferdange 71.39 317** *e*P **P** 03 35 17.6 +0.5
comp=Z,12nm,1.0s,mb4.8
INK **Inuvik 71.70 19** *e*P **P** 03 35 18.5 -0.2
INK pmax pmax
comp=Z,2.0nm,0.8s
INK **Inuvik 71.70 19** *e*P **P** 03 35 18.5 -0.2
comp=Z,2.4nm,0.8s,mb4.2
STKA **Stephens Creek 72.39 147** P **P** 03 35 23.5 +0.2
comp=Z,0.9nm,0.5s,mb4.0,baz=333,slow=9.0,SNR=2.9
STKA **Stephens Creek 72.39 147** *e*P **P** 03 35 24.6 +1.4
LPG **La Plagne 72.94 313** *e*P **P** 03 35 26.7 +0.2
comp=Z,21nm,0.8s,mb4.8
LPG **La Plagne 72.94 313** *e*P **P** 03 35 26.7 +0.2
LPG pmax pmax
comp=Z,11nm,0.8s,mb4.8
LPG **La Plagne 72.94 313** *e*P **P** 03 35 26.7 +0.2
comp=Z,11nm,0.8s,mb4.8
LPL **La Plagne 72.94 313** *e*P **P** 03 35 26.7 +0.2
comp=Z,16nm,0.8s,mb4.7
LPL **La Plagne 72.94 313** *e*P **P** 03 35 26.7 +0.2
LPL pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
LPL **La Plagne 72.94 313** *e*P **P** 03 35 26.7 +0.2
comp=Z,7.8nm,0.8s,mb4.7
BNI **Bardonecchia 73.19 313** *e*P **P** 03 35 28.1 +0.1
BNI pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
BNI **Bardonecchia 73.19 313** *e*P **P** 03 35 28.1 0.0
comp=Z,5.3nm,1.0s,mb4.4
SMF **Signal de Mont 74.17 315** *e*P **P** 03 35 33.0 -0.8
comp=Z,21nm,1.1s,mb4.7
SMF **Signal de Mont 74.17 315** *e*P **P** 03 35 33.0 -0.8
SMF pmax pmax
comp=Z,11nm,1.1s,mb4.7
SMF **Signal de Mont 74.17 315** *e*P **P** 03 35 33.0 -0.8
comp=Z,11nm,1.1s,mb4.7
TCF **Toulx Ste Croi 75.33 315** *e*P **P** 03 35 39.9 -0.6
comp=Z,7.8nm,1.0s,mb4.3
TCF **Toulx Ste Croi 75.33 315** *e*P **P** 03 35 39.9 -0.6
TCF pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
TCF **Toulx Ste Croi 75.33 315** *e*P **P** 03 35 39.9 -0.6
comp=Z,3.9nm,1.0s,mb4.3
YKA **Yellowknife Ar 81.23 17** P **P** 03 36 12.6 -0.1
comp=Z,0.2nm,0.5s,mb3.3,baz=322,slow=3.9,SNR=4.3
YKA **Yellowknife Ar 81.23 17** P **P** 03 36 12.6 -0.2

PRU ***01*** *03:35:19.7, 41°.16N×28°.95E, h0km, M4.1*
DDA ***01*** *03:35:23.6, 40°.16N×26°.92E, h7km±3km, Md3.9, Ml4.2*
ISCJB ***01*** *03:35:23.7±0.3, 40°.17N±0°.01×26°.90E±0°.01, h9km±2km, mb4.0/43, Error ellipse: s-maj=2.0km s-min=1.8km az=17.5*
MOS ***01*** *03:35:23.4±1.3, 40°.19N×27°.00E, h10km, mb4.4/17, Error ellipse: s-maj=4.3km s-min=3.2km az=110.2*
ISK ***01*** *03:35:23.8, 40°.18N×26°.92E, h10km, ML4.4*
IDC ***01*** *03:35:23.4±0.6, 40°.19N×26°.88E, h0km, mb3.8/19, mb1 3.9/26, mb1mx3.9/34, mbtmp3.8/26, ML3.7/8, MS3.9/1, Ms1 3.9/1, ms1mx3.1/38, Error ellipse: s-maj=11.1km s-min=10.3km az=79.0*
ATH ***01*** *03:35:23.0, 40°.17N×26°.99E, h25km, MD4.2/18, ML3.9*
NEIC ***01*** *03:35:24.0, 40°.21N×26°.93E, h8km, mb4.1/44, ML4.3(ISK), ML3.9(ATH), After ISK.*
CSEM ***01*** *03:35:24.0±0.1, 40°.16N×26°.91E, h2km, mb4.3/19, Error ellipse: s-maj=2.2km s-min=1.9km az=1.0*
THE ***01*** *03:35:25.2, 40°.15N×26°.85E, h7km±2km, ML4.8/8, Error ellipse: s-maj=2.3km s-min=0.8km az=70.0*

ISC 01 03:35:24.5±0.3, 40°.15N±0°.01×26°.92E±0°.01, h4km±2km, n597, σ1§14/662, mb4.0/44, 14C-13D, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LPK	**Lapseki**	**0.25**	**332**	PG			**Pg**	03 35 29.2	-0.1
LPK	**Lapseki**	**0.25**	**332**	*i* Pg			**Pg**	03 35 29.2	-0.1
EZN	**Ezine**	**0.56**	**234**	PG			**Pg**	03 35 35.4	+0.2
EZN	**Ezine**	**0.56**	**234**	*i* Pg			**Pg**	03 35 35.4	+0.2
RKY	**Sarkoy-Tekirda**	**0.57**	**20**	PG			**Pg**	03 35 34.9	-0.6
RKY				SG			**Sg**	03 35 43.0	+0.2
RKY	**Sarkoy-Tekirda**	**0.57**	**20**	*i* Pg			**Pg**	03 35 34.9	-0.5
RKY				*i* Sg			**Sg**	03 35 43.1	+0.2
SART	**Tekirdag**	**0.57**	**21**	*i* P			**Pg**	03 35 34.8	-0.7
SART				*i* S			**Sg**	03 35 43.0	+0.1
SART	**Tekirdag**	**0.57**	**21**	*i* P			**Pg**	03 35 34.8	-0.7
SART				*i* S			**Sg**	03 35 43.0	+0.1
BALY	**Balya**	**0.68**	**127**	*i* P			**Pg**	03 35 37.4	-0.1
BALY				*i* S			**Sg**	03 35 47.0	+0.6
BALY	**Balya**	**0.68**	**127**	*i* P			**Pg**	03 35 37.4	-0.1
BALY				*i* S			**Sg**	03 35 47.0	+0.7
BOZC	**Bozcaada**	**0.73**	**245**	*i* P			**Pg**	03 35 38.1	-0.4
BOZC				*i* S			**Sg**	03 35 48.3	+0.3
EDC	**Edincik**	**0.75**	**75**	*e*PG			**Pg**	03 35 38.5	-0.4
EDC	**Edincik**	**0.75**	**75**	*e*Pg			**Pg**	03 35 38.5	-0.4
GADA	**Gvkgeada**	**0.78**	**273**	*e*PG			**Pg**	03 35 39.5	+0.1
GADA	**Gvkgeada**	**0.78**	**273**	*e*Pg			**Pg**	03 35 39.6	+0.2
BNT	**Bandirma**	**0.80**	**75**	*e*PG			**Pg**	03 35 38.8	-0.9
ENEZ	**Enez**	**0.82**	**315**	*e*PG			**Pg**	03 35 39.9	-0.3
ENEZ				*e*SG			**Sg**	03 35 51.1	+0.1
ENEZ	**Enez**	**0.82**	**315**	*e*Pg			**Pg**	03 35 39.9	-0.4
ENEZ				*e*Sg			**Sg**	03 35 51.1	+0.1
AYVA	**Ayvalik**	**0.86**	**192**	*i* P			**Pg**	03 35 40.7	-0.3
AYVA				*i* S			**Sg**	03 35 51.9	-0.2
AYVA	**Ayvalik**	**0.86**	**192**	*i* P			**Pg**	03 35 40.7	-0.3
AYVA				*i* S			**Sg**	03 35 51.9	-0.2
BALB	**Balikesir**	**0.90**	**124**	*e*PG			**Pg**	03 35 41.7	0.0
BALB	**Balikesir**	**0.90**	**124**	*e*Pg			**Pg**	03 35 41.7	0.0
TKR	**Tekirdag**	**0.96**	**29**	*e*PG			**Pg**	03 35 42.3	-0.6
TKR	**Tekirdag**	**0.96**	**29**	*e*Pg			**Pg**	03 35 42.3	-0.6
ALN	**Alexandroupoli**	**1.00**	**319**	P			**Pg**	03 35 42.6	-1.0
ALN				S			**Sg**	03 35 55.8	-0.7
ALN	**Alexandroupoli**	**1.00**	**319**	*e*PN			**Pg**	03 35 42.6	-1.0
ALN				*e*SN			**Sg**	03 35 56.5	0.0
ALN	**Alexandroupoli**	**1.00**	**319**	*e*Pn			**Pg**	03 35 42.6	-1.0
ALN				S			**Sg**	03 35 55.8	-0.7
ALN				*e*Sn			**Sg**	03 35 56.5	0.0
PRK	**Paraskevi**	**1.03**	**209**	P			**Pg**	03 35 43.8	-0.5
PRK				S			**Sg**	03 35 58.8	+1.2
PRK	**Paraskevi**	**1.03**	**209**	*e*PN			**Pg**	03 35 43.7	-0.6
PRK				*e*SN			**Sg**	03 35 58.8	+1.2
PRK	**Paraskevi**	**1.03**	**209**	P			**Pg**	03 35 43.8	-0.5
PRK				*e*Sn			**Sg**	03 35 58.8	+1.2
KCT	**Karacabey**	**1.11**	**84**	*e*PN			**Pn**	03 35 45.5	-1.2
KCT	**Karacabey**	**1.11**	**84**	*e*Pn			**Pg**	03 35 45.5	-0.2
CRLT	**Corlu**	**1.16**	**32**	*e*PN			**Pn**	03 35 46.4	-1.0
CRLT	**Corlu**	**1.16**	**32**	*e*Pn			**Pn**	03 35 46.4	-1.0
SIGR	**SIGRI**	**1.25**	**221**	P			**Pg**	03 35 47.5	-0.8
SIGR				S			**Sg**	03 36 05.1	+0.6
SIGR	**SIGRI**	**1.25**	**221**	P			**Pg**	03 35 47.5	-0.8
SIGR				S			**Sg**	03 36 05.1	+0.6
DURS	**Dursunbey**	**1.32**	**114**	*i* P			**Pn**	03 35 49.3	-0.4
DURS				*i* S			**Sg**	03 36 06.7	-0.1
DURS	**Dursunbey**	**1.32**	**114**	*i* P			**Pn**	03 35 49.3	-0.3
DURS				*i* S			**Sg**	03 36 06.7	-0.2
LIA	**Limnos Island**	**1.35**	**260**	*e*Pn			**Pn**	03 35 49.5	-0.6
LIA				*e*Sn			**Sn**	03 36 08.6	+0.1
LIA	**Limnos Island**	**1.35**	**260**	*e*PN			**Pn**	03 35 49.5	-0.6
LIA				S			**Sg**	03 36 08.3	+0.3
LIA	**Limnos Island**	**1.35**	**260**	*e*PN			**Pn**	03 35 49.5	-0.6
LIA				*e*SN			**Sn**	03 36 08.6	+0.1
LIA	**Limnos Island**	**1.35**	**260**	*e*Pn			**Pn**	03 35 49.5	-0.6
LIA				S			**Sg**	03 36 08.3	+0.3
LIA				*e*Sn			**Sn**	03 36 08.6	+0.1
RDO	**Rodhopi**	**1.44**	**314**	*e*Pn			**Pn**	03 35 50.3	-1.0
RDO				*e*Sn			**Sn**	03 36 09.3	-1.4
RDO	**Rodhopi**	**1.44**	**314**	P			**Pn**	03 35 50.3	-1.0
RDO				S			**Sb**	03 36 09.8	-0.8
RDO	**Rodhopi**	**1.44**	**314**	*e*PN			**Pn**	03 35 50.3	-1.0
RDO				*e*SN			**Sn**	03 36 09.3	-1.4
RDO	**Rodhopi**	**1.44**	**314**	*e*Pn			**Pn**	03 35 50.3	-1.0
AKHS	**Akhisar**	**1.45**	**151**	*i* P			**Pn**	03 35 50.6	-0.8
AKHS				*i* S			**Sb**	03 36 11.3	+0.6
AKHS	**Akhisar**	**1.45**	**151**	*i* P			**Pn**	03 35 50.6	-0.8
AKHS				*i* S			**Sb**	03 36 11.3	+0.6
AKS	**Akhisar**	**1.45**	**151**	*e*PN			**Pn**	03 35 51.5	+0.1
AKS	**Akhisar**	**1.45**	**151**	*e*Pn			**Pn**	03 35 51.5	+0.1
SLVT	**Silivri**	**1.46**	**42**	*e*PN			**Pn**	03 35 50.6	-0.9
SLVT	**Silivri**	**1.46**	**42**	*e*Pn			**Pn**	03 35 50.6	-0.9
CTKS	**Kestanelik-??a**	**1.62**	**48**	*e*PN			**Pn**	03 35 52.9	-1.0
CTKS	**Kestanelik-??a**	**1.62**	**48**	*e*Pn			**Pn**	03 35 52.9	-0.9
CTYL	**Yal??k??y-??at**	**1.68**	**38**	*e*PN			**Pn**	03 35 54.0	-0.6
CTYL	**Yal??k??y-??at**	**1.68**	**38**	*e*Pn			**Pn**	03 35 54.0	-0.6
EDRB	**Edirne**	**1.70**	**356**	*e*PN			**Pn**	03 35 54.2	-0.7
EDRB	**Edirne**	**1.70**	**356**	*e*Pn			**Pn**	03 35 54.2	-0.6
BGKT	**Bogazkoy**	**1.75**	**53**	*e*PN			**Pn**	03 35 54.4	-1.1
BGKT	**Bogazkoy**	**1.75**	**53**	*e*Pn			**Pn**	03 35 54.4	-1.1
GEMT	**Gemlik**	**1.76**	**80**	*e*PN			**Pn**	03 35 55.2	-0.5
GEMT	**Gemlik**	**1.76**	**80**	*e*Pn			**Pn**	03 35 55.2	-0.5
BLCB	**Balcova**	**1.77**	**177**	*e*PN			**Pn**	03 35 55.4	-0.3
BLCB	**Balcova**	**1.77**	**177**	P			**Pn**	03 35 55.3	-0.5
BLCB				S			**Sn**	03 36 18.6	-0.1
BLCB	**Balcova**	**1.77**	**177**	*e*Pn			**Pn**	03 35 55.4	-0.4
BLCB				S			**Sn**	03 36 18.6	-0.1
IZM	**Izmir**	**1.77**	**171**	*e*PN			**Pn**	03 35 55.8	-0.1
IZM	**Izmir**	**1.77**	**171**	*e*Pn			**Pn**	03 35 55.8	0.0
ISK	**Istanbul-Kandi**	**1.87**	**60**	*e*PN			**Pn**	03 35 56.9	-0.3
ISK	**Istanbul-Kandi**	**1.87**	**60**	*e*Pn			**Pn**	03 35 56.9	-0.3
CHOS	**Chios island**	**1.89**	**201**	P			**Pn**	03 35 56.4	-1.0
CHOS				S			**Sn**	03 36 21.1	-0.5
CHOS	**Chios island**	**1.89**	**201**	*e*PN			**Pn**	03 35 56.3	-1.1
CHOS				*e*SN			**Sn**	03 36 20.7	-0.9
CHOS	**Chios island**	**1.89**	**201**	P			**Pn**	03 35 56.4	-1.0
CHOS				*e*Sn			**Sn**	03 36 20.7	-0.9
CHOS				S			**Sn**	03 36 21.1	-0.5
YLV	**Yalova**	**1.92**	**77**	*e*PN			**Pn**	03 35 57.0	-0.9
YLV	**Yalova**	**1.92**	**77**	*e*Pn			**Pn**	03 35 57.0	-0.9
KLYT	**Kilyos**	**1.96**	**55**	*e*PN			**Pn**	03 35 57.4	-1.0
KLYT	**Kilyos**	**1.96**	**55**	*e*Pn			**Pn**	03 35 57.4	-1.0
KAVA	**Kavala**	**2.02**	**296**	P			**Pn**	03 35 58.1	-1.1
KAVA				S			**Sn**	03 36 22.9	-1.9
KAVA	**Kavala**	**2.02**	**296**	P			**Pn**	03 35 58.1	-1.1
KAVA				S			**Sn**	03 36 22.9	-1.9
KULA	**Kula-Manisa**	**2.12**	**140**	*e*PN			**Pn**	03 36 00.9	+0.2
KULA	**Kula-Manisa**	**2.12**	**140**	*e*Pn			**Pn**	03 36 00.9	+0.2
ADVT	**Abdulvahap**	**2.18**	**82**	*e*PN			**Pn**	03 36 01.1	-0.3
ADVT	**Abdulvahap**	**2.18**	**82**	*e*Pn			**Pn**	03 36 01.1	-0.3
OUR	**Ouranopolis**	**2.25**	**276**	P			**Pn**	03 36 01.1	-1.4
OUR	**Ouranopolis**	**2.25**	**276**	P			**Pn**	03 36 01.1	-1.4
SILT	**Sile**	**2.30**	**63**	*e*PN			**Pn**	03 36 02.7	-0.5
SILT	**Sile**	**2.30**	**63**	*e*Pn			**Pn**	03 36 02.7	-0.5
JMB	**Yambol**	**2.33**	**354**	P			**Pn**	03 36 03.1	-0.4
JMB	**Yambol**	**2.33**	**354**	P			**Pn**	03 36 03.1	-0.4
SMG	**Samos**	**2.44**	**181**	*e*Pn			**Pn**	03 36 03.8	-1.2
SMG	**Samos**	**2.44**	**181**	*e*PN			**Pn**	03 36 03.8	-1.2
SMG	**Samos**	**2.44**	**181**	*e*Pn			**Pn**	03 36 03.8	-1.2
PAIG	**Paliouri**	**2.49**	**266**	P			**Pn**	03 36 04.7	-1.1
PAIG	**Paliouri**	**2.49**	**266**	P			**Pn**	03 36 04.7	-1.1
AOS	**Alonnisos**	**2.54**	**248**	P			**Pn**	03 36 05.7	-0.7
AOS	**Alonnisos**	**2.54**	**248**	P			**Pn**	03 36 05.7	-0.7
PLD	**Plovdiv**	**2.57**	**320**	P			**Pn**	03 36 06.3	-0.5
PLD	**Plovdiv**	**2.57**	**320**	P			**Pn**	03 36 06.3	-0.5
NVR	**Nevrokopi**	**2.61**	**298**	*e*Pn			**Pn**	03 36 06.6	-0.8
NVR	**Nevrokopi**	**2.61**	**298**	*e*PN			**Pn**	03 36 06.6	-0.8
NVR	**Nevrokopi**	**2.61**	**298**	*e*Pn			**Pn**	03 36 06.6	-0.8
PLG	**Polygyros**	**2.66**	**276**	P			**Pn**	03 36 07.4	-0.7
PLG	**Polygyros**	**2.66**	**276**	*e*PN			**Pn**	03 36 07.4	-0.7
PLG	**Polygyros**	**2.66**	**276**	*e*Pn			**Pn**	03 36 07.4	-0.7
ALT	**Altintas**	**2.70**	**113**	*e*PN			**Pn**	03 36 09.2	+0.6
ALT	**Altintas**	**2.70**	**113**	*e*Pn			**Pn**	03 36 09.2	+0.6
SRS	**Serrai**	**2.71**	**292**	P			**Pn**	03 36 07.8	-0.9
SRS	**Serrai**	**2.71**	**292**	P			**Pn**	03 36 07.8	-0.9
GULT	**Gulveren**	**2.77**	**83**	*e*PN			**Pn**	03 36 10.0	+0.4
GULT	**Gulveren**	**2.77**	**83**	*e*Pn			**Pn**	03 36 10.0	+0.5
SOH	**Sokhos**	**2.80**	**285**	P			**Pn**	03 36 09.2	-0.7
SOH	**Sokhos**	**2.80**	**285**	*e*PN			**Pn**	03 36 09.3	-0.6
SOH	**Sokhos**	**2.80**	**285**	*e*Pn			**Pn**	03 36 09.3	-0.6
MLSB	**Milas**	**2.93**	**166**	*e*PN			**Pn**	03 36 12.4	+0.6
MLSB	**Milas**	**2.93**	**166**	*e*Pn			**Pn**	03 36 12.4	+0.6
HORT	**Hortiatis**	**2.95**	**280**	P			**Pn**	03 36 11.3	-0.7
HORT				S			**Sn**	03 36 45.9	-1.9
HORT	**Hortiatis**	**2.95**	**280**	P			**Pn**	03 36 11.3	-0.7
HORT				S			**Sn**	03 36 45.9	-1.9
NEO	**Neokhori**	**2.97**	**255**	*e*Pn			**Pn**	03 36 11.4	-0.9
NEO	**Neokhori**	**2.97**	**255**	*e*PN			**Pn**	03 36 11.4	-0.9
NEO	**Neokhori**	**2.97**	**255**	*e*Pn			**Pn**	03 36 11.4	-0.9
XOR	**Xorichti**	**2.98**	**256**	P			**Pn**	03 36 11.4	-1.0
XOR				S			**Sn**	03 36 45.7	-2.8
XOR	**Xorichti**	**2.98**	**256**	P			**Pn**	03 36 11.4	-1.0
XOR				S			**Sn**	03 36 45.7	-2.8
ESKT	**Eskisehir**	**3.09**	**101**	*e*PN			**Pn**	03 36 14.2	+0.1
ESKT	**Eskisehir**	**3.09**	**101**	*e*Pn			**Pn**	03 36 14.2	+0.2
PTL	**Penteli**	**3.17**	**229**	*e*Pn			**Pn**	03 36 14.3	-0.8
PTL	**Penteli**	**3.17**	**229**	*e*PN			**Pn**	03 36 14.3	-0.8
PTL	**Penteli**	**3.17**	**229**	*e*Pn			**Pn**	03 36 14.3	-0.8
YER	**Yerkesik**	**3.20**	**160**	*e*PN			**Pn**	03 36 15.1	-0.3
YER	**Yerkesik**	**3.20**	**160**	*e*Pn			**Pn**	03 36 15.1	-0.3
KNT	**Kendrikon**	**3.22**	**290**	P			**Pn**	03 36 15.4	-0.3
SHUT	**Suhut-Afyon**	**3.24**	**118**	*e*PN			**Pn**	03 36 17.1	+1.1
SHUT	**Suhut-Afyon**	**3.24**	**118**	*e*Pn			**Pn**	03 36 17.1	+1.1
APE	**Apeiranthos**	**3.26**	**200**	P			**Pn**	03 36 15.1	-1.3
APE	**Apeiranthos**	**3.26**	**200**	⇑*i*P			**Pn**	03 36 15.0	-1.4
APE	**Apeiranthos**	**3.26**	**200**	*e*PN			**Pn**	03 36 15.5	-0.9
APE	**Apeiranthos**	**3.26**	**200**	P			**Pn**	03 36 15.1	-1.3
APE	**Apeiranthos**	**3.26**	**200**	*e*Pn			**Pn**	03 36 15.5	-0.9
MDU	**Mudurnu**	**3.30**	**83**	*e*PN			**Pn**	03 36 17.3	+0.5
MDU	**Mudurnu**	**3.30**	**83**	*e*Pn			**Pn**	03 36 17.3	+0.4
ATH	**Athens Observa**	**3.31**	**230**	*e*PN			**Pn**	03 36 16.3	-0.7
ATH	**Athens Observa**	**3.31**	**230**	*e*Pn			**Pn**	03 36 16.3	-0.7
VLY	**Voula,Athens**	**3.34**	**228**	*e*Pn			**Pn**	03 36 16.7	-0.8
VLY	**Voula,Athens**	**3.34**	**228**	*e*PN			**Pn**	03 36 16.7	-0.8
VLY	**Voula,Athens**	**3.34**	**228**	*e*Pn			**Pn**	03 36 16.7	-0.8
ATAL	**Atalanti**	**3.35**	**245**	P			**Pn**	03 36 16.6	-0.9
LKR	**Lokris**	**3.38**	**245**	*e*Pn			**Pn**	03 36 17.5	-0.5
LKR	**Lokris**	**3.38**	**245**	P			**Pn**	03 36 17.1	-0.9
LKR	**Lokris**	**3.38**	**245**	*e*PN			**Pn**	03 36 17.5	-0.5
LIT	**Litokhoron**	**3.39**	**271**	P			**Pn**	03 36 17.3	-0.8
LIT	**Litokhoron**	**3.39**	**271**	*e*PN			**Pn**	03 36 17.6	-0.5
LIT	**Litokhoron**	**3.39**	**271**	P			**Pn**	03 36 17.3	-0.8
LIT	**Litokhoron**	**3.39**	**271**	*e*Pn			**Pn**	03 36 17.6	-0.5
DAT	**Datca**	**3.46**	**171**	*e*PN			**Pn**	03 36 19.1	+0.1
DAT	**Datca**	**3.46**	**171**	*e*Pn			**Pn**	03 36 19.2	+0.2
VAY	**Valandovo**	**3.50**	**291**	*i* Pn			**Pn**	03 36 19.1	-0.5
VAY				*i* Sn			**Sg**	03 37 14.1	-2.9
NAIG	**Nisos Aigina**	**3.58**	**229**	*e*Pn			**Pn**	03 36 20.6	-0.2
NAIG	**Nisos Aigina**	**3.58**	**229**	*e*PN			**Pn**	03 36 20.6	-0.2
GLHS	**Glhisar (BURDU**	**3.61**	**145**	*e*PN			**Pn**	03 36 21.9	+0.8
GLHS	**Glhisar (BURDU**	**3.61**	**145**	*e*Pn			**Pn**	03 36 21.9	+0.8
SVRH	**Sivrihisar-ESK**	**3.62**	**100**	*e*PN			**Pn**	03 36 21.3	+0.1
SVRH	**Sivrihisar-ESK**	**3.62**	**100**	*e*Pn			**Pn**	03 36 21.3	+0.1
KDZE	**Karadeniz Ereo**	**3.63**	**70**	*e*PN			**Pn**	03 36 22.1	+0.7
KDZE	**Karadeniz Ereo**	**3.63**	**70**	*e*Pn			**Pn**	03 36 22.1	+0.7
ISP	**Isparta**	**3.65**	**128**	*e*Pn			**Pn**	03 36 21.5	-0.1
ISP				*e*Sg			**Sg**	03 37 26.0	+4.4
ISP	**Isparta**	**3.65**	**128**	P			**Pn**	03 36 21.7	+0.1
VTS	**Vitosha**	**3.70**	**312**	P			**Pn**	03 36 22.5	+0.1
VTS	**Vitosha**	**3.70**	**312**	P			**Pn**	03 36 22.3	-0.1
VTS	**Vitosha**	**3.70**	**312**	P			**Pn**	03 36 22.5	+0.1
AGG	**Agios Georgios**	**3.72**	**254**	P			**Pn**	03 36 22.2	-0.4
AGG	**Agios Georgios**	**3.72**	**254**	*e*PN			**Pn**	03 36 22.8	+0.2
AGG	**Agios Georgios**	**3.72**	**254**	P			**Pn**	03 36 22.2	-0.4
AGG	**Agios Georgios**	**3.72**	**254**	*e*Pn			**Pn**	03 36 22.8	+0.2
LTK	**Loutraki**	**3.74**	**237**	P			**Pn**	03 36 22.0	-0.9
LTK	**Loutraki**	**3.74**	**237**	*e*PN			**Pn**	03 36 22.7	-0.2
LTK	**Loutraki**	**3.74**	**237**	P			**Pn**	03 36 22.0	-0.9
LTK	**Loutraki**	**3.74**	**237**	*e*Pn			**Pn**	03 36 22.7	-0.2
THL	**Klokotos Trika**	**3.82**	**263**	P			**Pn**	03 36 23.6	-0.4
THL	**Klokotos Trika**	**3.82**	**263**	*e*PN			**Pn**	03 36 23.7	-0.3
THL	**Klokotos Trika**	**3.82**	**263**	P			**Pn**	03 36 23.6	-0.4
DSF	**Desfina**	**3.82**	**244**	P			**Pn**	03 36 23.4	-0.7
DSF	**Desfina**	**3.82**	**244**	P			**Pn**	03 36 23.4	-0.7
STIP	**Stip**	**3.90**	**295**	*i* Pn			**Pn**	03 36 25.0	-0.1
STIP				*i* Sn			**Sg**	03 37 25.5	-4.2
FETY	**Fethiye**	**3.90**	**153**	*e*PN			**Pn**	03 36 25.6	+0.4
FETY	**Fethiye**	**3.90**	**153**	*e*Pn			**Pn**	03 36 25.6	+0.5
BCK	**Bucak**	**3.93**	**132**	*e*PN			**Pn**	03 36 26.1	+0.6
BCK	**Bucak**	**3.93**	**132**	*e*Pn			**Pn**	03 36 26.1	+0.6
KZN	**Kozani**	**3.94**	**274**	P			**Pn**	03 36 25.5	-0.2
KZN	**Kozani**	**3.94**	**274**	*e*PN			**Pn**	03 36 25.7	0.0
KZN	**Kozani**	**3.94**	**274**	P			**Pn**	03 36 25.5	-0.2
THR1	**Thera Island**	**3.95**	**197**	P			**Pn**	03 36 24.3	-1.4
THR1	**Thera Island**	**3.95**	**197**	P			**Pn**	03 36 24.3	-1.4
ARG	**Arkhangelos**	**4.04**	**166**	*e*PN			**Pn**	03 36 26.5	-0.6
ARG	**Arkhangelos**	**4.04**	**166**	*e*Pn			**Pn**	03 36 26.5	-0.6
KALE	**Kalithea**	**4.10**	**246**	P			**Pn**	03 36 27.7	-0.2
KALE	**Kalithea**	**4.10**	**246**	P			**Pn**	03 36 27.7	-0.2
ELL	**Elmali**	**4.13**	**144**	*e*PN			**Pn**	03 36 30.2	+1.9
ELL	**Elmali**	**4.13**	**144**	*e*Pn			**Pn**	03 36 30.2	+1.9
EVR	**Evrytania**	**4.14**	**254**	*e*Pn			**Pn**	03 36 28.5	+0.1
EVR	**Evrytania**	**4.14**	**254**	*e*PN			**Pn**	03 36 28.5	+0.1
EVR	**Evrytania**	**4.14**	**254**	*e*Pn			**Pn**	03 36 28.5	+0.1
GUR	**Goura**	**4.19**	**240**	P			**Pn**	03 36 28.8	-0.3
GUR	**Goura**	**4.19

SEV	**Sevastopol'**	6.65	47	eP	Pn	03 37 01.8	-1.1
	comp=E,14nm,0.3s						
YAL	**Yalta**	6.89	49	eP	Pn	03 37 05.0	-1.2
YAL				eS	Sn	03 38 18.2	-6.9
YAL				pmax	pmax		
	comp=Z,60nm,0.6s						
YAL				smax			
	comp=N,34nm,0.7s						
YAL				smax			
	comp=E,39nm,0.8s						
YAL	**Yalta**	6.89	49	eP	Pn	03 37 05.0	-1.2
	comp=E,60nm,0.6s						
KIS	**Kishinev**	6.98	11	eP	Pn	03 37 06.0	-1.4
KIS				eS	Sn	03 38 23.0	-4.2
KIS				i Li		03 38 53.0	
KIS				i LQ		03 39 41.0	
KIS	**Kishinev**	6.98	11	eP	Pn	03 37 06.0	-1.4
KIS				eS	Sn	03 38 23.0	-4.2
KIS	**Kishinev**	6.98	11	eP	Pn	03 37 06.0	-1.4
ALU	**Alushta**	7.15	48	eP	Pn	03 37 09.8	0.0
ALU				eS	Sn	03 38 24.9	-6.5
ALU				pmax	pmax		
	comp=Z,8.0nm,0.3s						
ALU				smax			
	comp=E,156nm,0.8s						
ALU	**Alushta**	7.15	48	eP	Pn	03 37 09.8	0.0
	comp=E,8.0nm,0.3s						
SIM	**Simferopol'**	7.16	46	eP	Pn	03 37 10.6	+0.8
SIM				eS	Sn	03 38 26.3	-5.2
SIM				pmax	pmax		
	comp=Z,38nm,0.8s						
SIM				smax			
	comp=E,55nm,0.7s						
SIM				smax			
	comp=N,169nm,0.9s						
SIM	**Simferopol'**	7.16	46	eP	Pn	03 37 10.6	+0.8
	comp=N,38nm,0.8s						
CSS	**Prodhromos**	7.26	133	ePn	Pn	03 37 12.5	+1.1
	comp=N,9.8nm,0.7s						
CSS	**Prodhromos**	7.26	133	ePn	Pn	03 37 12.5	+1.2
	comp=N,9.8nm,0.7s						
DRGR		7.31	337	⇓P	Pn	03 37 11.4	-0.5
DRGR		7.31	337	⇓iP	Pn	03 37 11.4	-0.5
DRGR		7.31	337	P	Pn	03 37 11.4	-0.5
STON	**Ston**	7.43	294	P	Pn	03 37 14.3	+0.7
STON	**Ston**	7.43	294	i P	Pn	03 37 14.3	+0.7
BURAR	**Bucovina Array**	7.56	351	⇓P	Pn	03 37 16.4	+1.1
BURAR	**Bucovina Array**	7.56	351	P	Pn	03 37 17.1	+1.7
BURAR	**Bucovina Array**	7.56	351	⇓iP	Pn	03 37 16.4	+1.1
BURAR	**Bucovina Array**	7.56	351	P	Pn	03 37 17.1	+1.8
BUR08	**Bucovina Ar. S**	7.59	351	ePn	Pn	03 37 16.8	+1.0
BUR08	**Bucovina Ar. S**	7.59	351	ePn	Pn	03 37 16.8	+1.0
SUDU	**Sudak**	7.62	49	⇓iP	Pn	03 37 15.1	-1.1
SUDU				pmax	pmax		
	comp=Z,34nm,0.4s						
SUDU	**Sudak**	7.62	49	i P	Pn	03 37 15.1	-1.1
	comp=Z,34nm,0.4s						
TIP	**Timpagrande**	7.90	266	ePn	Pn	03 37 20.4	+0.5
	comp=Z,16nm,0.9s						
TIP	**Timpagrande**	7.90	266	ePn	Pn	03 37 20.4	+0.4
	comp=Z,16nm,0.9s						
PKSM	**Moragy**	8.55	318	P	Pn	03 37 28.0	-1.0
PKSM	**Moragy**	8.55	318	⇑iP	Pn	03 37 27.5	-1.5
PKSM	**Moragy**	8.55	318	P	Pn	03 37 28.0	-1.0
SOI	**Samo**	8.70	260	P	Pn	03 37 31.0	+0.1
SOI	**Samo**	8.70	260	Pn	Pn	03 37 31.0	+0.1
RGNG	**Rignano Grg**	8.71	284	Pn	Pn	03 37 30.5	-0.7
RGNG	**Rignano Grg**	8.71	284	Pn	Pn	03 37 30.5	-0.7
CEL	**Celeste**	8.76	261	ePn	Pn	03 37 32.9	+1.0
	comp=Z,30nm,0.9s						
CEL				eSn	Sn	03 39 09.7	-1.3
CEL	**Celeste**	8.76	261	ePn	Pn	03 37 32.9	+1.0
	comp=Z,30nm,0.9s						
CEL				eSn	Sn	03 39 09.7	-1.4
ANN	**Anapa**	9.05	56	eP	Pn	03 37 30.9	-4.9
ANN				eS	Sn	03 39 12.4	-5.7
ANN				pmax	pmax		
	comp=Z,24nm,0.7s						
PSZ	**Piszkesteto**	9.26	329	eP	Pn	03 37 37.7	-1.0
PSZ				e		03 39 21.9	
PSZ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PSZ	**Piszkesteto**	9.26	329	ePn	Pn	03 37 37.7	-0.9
	comp=Z,5.8nm,0.8s						
PSZ				eSn	Sn	03 39 21.9	-1.4
PSZ	**Piszkesteto**	9.26	329	ePn	Pn	03 37 37.7	-1.0
	comp=Z,5.8nm,0.8s						
PSZ				eSn	Sn	03 39 21.9	-1.3
KECS	**Kecovo**	9.52	333	ePn	Pn	03 37 38.7	-3.4
KECS				e		03 37 45.8	
KECS	**Kecovo**	9.52	333	ePN	Pn	03 37 38.7	-3.4
KECS				e		03 37 45.8	
SGG	**Gregorio Mates**	9.59	281	Pn	Pn	03 37 43.7	+0.5
	comp=Z,17nm,0.5s						
SGG	**Gregorio Mates**	9.59	281	Pn	Pn	03 37 43.7	+0.5
	comp=Z,17nm,0.5s						
MMAI	**Mount Meron Ar**	9.86	134	Pn	Pn	03 37 45.0	-1.9
	comp=Z,1.5nm,0.3s,baz=316,slow=13,SNR=7.8						
KWP	**Kalwaria Pacla**	9.94	344	eP	Pn	03 37 49.8	+1.9
KWP				pmax	pmax		
	comp=Z,7μm,0.9s						
KWP	**Kalwaria Pacla**	9.94	344	ePn	Pn	03 37 49.8	+1.9
	comp=Z,7μm,0.9s						
KWP	**Kalwaria Pacla**	9.94	344	ePn	Pn	03 37 49.8	+1.9
	comp=Z,7μm,0.9s						
NVLJ	**Novalja**	9.94	300	i P	Pn	03 37 45.9	-2.1
SDI	**San Donato**	10.04	283	P	Pn	03 37 50.8	+1.4
SDI				pmax	pmax		
	comp=Z,2.0nm,0.4s						
SDI	**San Donato**	10.04	283	Pn	Pn	03 37 50.8	+1.4
	comp=Z,2.0nm,0.4s						
SDI	**San Donato**	10.04	283	Pn	Pn	03 37 50.8	+1.4
	comp=Z,2.0nm,0.4s						
VYHS	**Vyhne**	10.15	328	ePn	Pn	03 37 49.1	-1.7
VYHS				eSn	Sn	03 39 40.2	-4.7
VYHS	**Vyhne**	10.15	328	ePn	Pn	03 37 49.1	-1.7
WDD	**Wield Dalam**	10.67	250	ePn	Pn	03 37 58.1	+0.1
	comp=Z,84nm,0.8s						
WDD	**Wield Dalam**	10.67	250	ePn	Pn	03 37 58.1	+0.1
	comp=Z,84nm,0.8s						
AKASG	**Malin Array Be**	10.67	8	Pn	Pn	03 37 56.1	-1.9
	comp=Z,1.4nm,0.3s,baz=200,slow=12,SNR=6.2						
AKASG				Sn	Sn	03 39 51.6	-6.2
	comp=Z,1.8nm,0.3s,baz=174,slow=21,SNR=4.8						
AKASG	**Malin Array Be**	10.67	8	Pn	Pn	03 37 56.1	-1.9
AKBB	**Malin Array Si**	10.67	8	eP	Pn	03 37 59.8	+1.8
AKBB	**Malin Array Si**	10.67	8	ePn	Pn	03 37 59.8	+1.8
ZST	**Bratislava**	10.69	322	ePn	Pn	03 37 58.0	-0.2
ZST				e		03 38 04.6	
ZST	**Bratislava**	10.69	322	ePn	Pn	03 37 58.0	-0.2
NRCA	**Norcia**	10.70	289	Pn	Pn	03 37 58.5	+0.2
NRCA	**Norcia**	10.70	289	Pn	Pn	03 37 58.5	+0.2
ASF	**Jabal al Asfar**	11.33	132	Pn	Pn	03 38 10.4	+3.4
	comp=Z,0.1nm,0.3s,baz=181,slow=3.5,SNR=5.5						
OKC	**Ostrava-Krasne**	11.49	330	eP	Px	03 38 27.0	
MORC	**Moravsky Berou**	11.68	329	eP	Pn	03 38 11.6	-0.2
MORC	**Moravsky Berou**	11.68	329	ePn	Pn	03 38 11.6	-0.2
EIL	**Elat**	12.36	145	Pn	Pn	03 38 19.1	-2.0
	comp=Z,0.8nm,0.3s,baz=334,slow=12,SNR=4.1						
EIL	**Elat**	12.36	145	Pn	Pn	03 38 19.1	-2.0
DPC	**Dobruska-Polom**	12.62	327	eP	Pn	03 38 25.1	+0.5
DPC	**Dobruska-Polom**	12.62	327	eP	Pn	03 38 25.1	+0.5
DPC	**Dobruska-Polom**	12.62	327	eP	Pn	03 38 25.1	+0.5
GERES	**GERESS Array B**	12.81	317	Pn	Pn	03 38 26.0	-1.2
	comp=Z,0.1nm,0.3s,baz=119,slow=14,SNR=5.4						
GERES	**GERESS Array B**	12.81	317	Pn	Pn	03 38 26.0	-1.2
KHC	**Kasperske Hory**	13.05	318	eP	Pn	03 38 30.2	-0.3
KHC	**Kasperske Hory**	13.05	318	eP	Pn	03 38 30.2	-0.3
KHC	**Kasperske Hory**	13.05	318	eP	Pn	03 38 30.2	-0.3
GNI	**Garni**	13.64	84	LR	LR	03 45 18.6	
	comp=Z,508nm,20.6s,baz=263,slow=44						
GNI	**Garni**	13.64	84	eP	Px	03 38 50.1	
PGF	**Pioggiola**	13.67	286	eP	Pn	03 38 38.6	-0.4
	comp=Z,36nm,1.3s						
PGF	**Pioggiola**	13.67	286	eP	Pn	03 38 38.6	-0.4
PGF				pmax	pmax		
	comp=Z,18nm,1.3s						
PGF	**Pioggiola**	13.67	286	eP	Pn	03 38 38.6	-0.4
	comp=Z,18nm,1.3s						
PGF	**Pioggiola**	13.67	286	eP	Pn	03 38 38.6	-0.4
	comp=Z,18nm,1.3s						
VSR	**Storozhevoye**	13.97	34	eP	Pn	03 38 42.9	-0.1
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VSR				pmax	pmax		
	comp=N,10.0nm,0.8s						
VSR				pmax	pmax		
	comp=E,10.0nm,1.2s						
VSR	**Storozhevoye**	13.97	34	eP	Pn	03 38 42.9	-0.1
	comp=E,10.0nm,0.8s						
DAVOX	**Davos/Dischmat**	14.02	304	Pn	Pn	03 38 44.2	+0.4
	comp=E,0.2nm,0.3s,baz=135,slow=10.0,SNR=2.8						
DAVOX	**Davos/Dischmat**	14.02	304	Pn	Pn	03 38 44.2	+0.5
GRA1	**Grafenberg Arr**	14.62	316	ePn	Pn	03 38 57.5	+5.6
GRA1	**Grafenberg Arr**	14.62	316	eP	Pn	03 38 57.5	+5.6
GRF	**Grafenberg Arr**	14.62	316	ePn	Pn	03 38 57.5	+5.6
GRF	**Grafenberg Arr**	14.62	316	eP	Pn	03 38 57.5	+5.6
CLL	**Collm**	14.76	324	P	Pn	03 39 00.0	+6.2
CLL	**Collm**	14.76	324	P	Pn	03 39 00.0	+6.2
SBF	**Sospel**	14.95	291	eP	Pn	03 38 58.4	+2.0
	comp=E,86nm,1.2s						
SBF	**Sospel**	14.95	291	eP	Pn	03 38 58.4	+2.0
SBF				pmax	pmax		
	comp=Z,43nm,1.2s						
SBF	**Sospel**	14.95	291	eP	Pn	03 38 58.4	+2.0
	comp=Z,43nm,1.2s						
VRHR	**Novokhopersk**	14.99	38	eP	Pn	03 39 03.1	+6.2
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
VRHR				pmax	pmax		
	comp=N,10.0nm,0.7s						
VRHR				pmax	pmax		
	comp=E,9.0nm,0.6s						
VRHR	**Novokhopersk**	14.99	38	eP	Pn	03 39 03.1	+6.2
	comp=E,10.0nm,0.7s						
MBDF	**Montbardon**	15.55	294	eP	Pn	03 39 06.0	+1.6
	comp=E,13nm,0.8s						
MBDF	**Montbardon**	15.55	294	eP	Pn	03 39 06.0	+1.6
MBDF				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MBDF	**Montbardon**	15.55	294	eP	Pn	03 39 06.0	+1.6
	comp=Z,6.6nm,0.8s						
BFO	**Black Forest**	15.60	308	eP	Pn	03 39 05.5	+0.5
BFO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BFO	**Black Forest**	15.60	308	ePn	Pn	03 39 05.5	+0.5
	comp=Z,4.4nm,0.9s						
BFO	**Black Forest**	15.60	308	ePn	Pn	03 39 05.5	+0.5
	comp=Z,4.3nm,0.9s						
BNI	**Bardonecchia**	15.68	295	eP	Pn	03 39 06.6	+0.6
BNI	**Bardonecchia**	15.68	295	ePn	Pn	03 39 06.6	+0.6
LPG	**La Plagne**	15.72	296	eP	Pn	03 39 08.9	+2.4
	comp=Z,15nm,1.0s						
LPG	**La Plagne**	15.72	296	eP	Pn	03 39 08.9	+2.4
LPG				pmax	pmax		
	comp=Z,7.0nm,1.0s						
LPG	**La Plagne**	15.72	296	eP	Pn	03 39 08.9	+2.4
	comp=Z,7.3nm,1.0s						
LPG	**La Plagne**	15.72	296	eP	Pn	03 39 08.9	+2.4
	comp=Z,7.3nm,1.0s						
ORIF	**Oris-en-Rattie**	16.21	294	eP	Pn	03 39 14.1	+1.2
	comp=Z,18nm,1.2s						
ORIF	**Oris-en-Rattie**	16.21	294	eP	Pn	03 39 14.1	+1.2
ORIF				pmax	pmax		
	comp=Z,9.0nm,1.2s						
ORIF	**Oris-en-Rattie**	16.21	294	eP	Pn	03 39 14.1	+1.2
	comp=Z,9.3nm,1.2s						
ORIF	**Oris-en-Rattie**	16.21	294	eP	Pn	03 39 14.1	+1.2
	comp=Z,9.2nm,1.2s						
ECH	**Echery**	16.27	306	eP	Pn	03 39 15.8	+2.1
ECH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ECH	**Echery**	16.27	306	ePn	Pn	03 39 15.8	+2.1
	comp=Z,4.9nm,0.9s						
ECH	**Echery**	16.27	306	ePn	Pn	03 39 15.8	+2.1
	comp=Z,4.9nm,0.9s						
CDF	**Champ du Feu**	16.28	307	eP	Pn	03 39 18.1	+4.4
	comp=Z,19nm,1.0s						
CDF	**Champ du Feu**	16.28	307	eP	Pn	03 39 18.1	+4.4
CDF				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CDF	**Champ du Feu**	16.28	307	eP	Pn	03 39 18.1	+4.4
	comp=Z,9.4nm,1.0s						
CDF	**Champ du Feu**	16.28	307	eP	Pn	03 39 18.1	+4.4
	comp=Z,9.4nm,1.0s						
SMRF	**Simiane la Rot**	16.29	291	eP	Pn	03 39 15.7	+1.7
SMRF	**Simiane la Rot**	16.29	291	eP	Pn	03 39 15.7	+1.7
OBN	**Obninsk**	16.30	20⇑	eP	Pn	03 39 12.2	-1.8
OBN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,400nm,16.0s						
HINF	**Hinteralfeld**	16.32	305	eP	Pn	03 39 16.2	+1.9
HINF	**Hinteralfeld**	16.32	305	eP	Pn	03 39 16.2	+1.9
CABF	**La Chapelle**	16.44	300	eP	Pn	03 39 18.4	+2.6
CABF	**La Chapelle**	16.44	300	eP	Pn	03 39 18.4	+2.6
HAU	**Haudompre**	16.70	305	eP	Pn	03 39 21.1	+1.9
HAU	**Haudompre**	16.70	305	eP	Pn	03 39 21.1	+1.9
LASF	**Ste Croix**	17.54	290	eP	Pn	03 39 32.6	+2.9
LASF	**Ste Croix**	17.54	290	eP	Pn	03 39 32.6	+2.9
MEZF	**Maizieres J'vi**	17.69	305	eP	Pn	03 39 35.4	+3.9
	comp=Z,12nm,1.1s						
MEZF	**Maizieres J'vi**	17.69	305	eP	Pn	03 39 35.4	+3.9
	comp=Z,12nm,1.1s						
SMF	**Signal de Mont**	17.95	299	eP	Pn	03 39 38.5	+3.8
	comp=Z,5.3nm,0.7s						
SMF	**Signal de Mont**	17.95	299	eP	Pn	03 39 38.5	+3.8
SMF				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SMF	**Signal de Mont**	17.95	299	eP	Pn	03 39 38.5	+3.8
	comp=Z,2.7nm,0.7s						
LOR	**Lormes**	18.08	301	eP	Pn	03 39 37.6	+1.2
	comp=Z,8.7nm,1.1s						
LOR	**Lormes**	18.08	301	eP	Pn	03 39 37.6	+1.2
LOR				pmax	pmax		
	comp=Z,4.0nm,1.1s						
LOR	**Lormes**	18.08	301	eP	Pn	03 39 37.6	+1.2
	comp=Z,4.3nm,1.1s						
LOR	**Lormes**	18.08	301	eP	Pn	03 39 37.6	+1.2
	comp=Z,4.3nm,1.1s						
SSF	**Saint Saulge**	18.27	300	eP	Pn	03 39 41.7	+3.1
	comp=Z,7.9nm,1.0s						
SSF	**Saint Saulge**	18.27	300	eP	Pn	03 39 41.7	+3.1
SSF				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SSF	**Saint Saulge**	18.27	300	eP	Pn	03 39 41.7	+3.1
	comp=Z,4.0nm,1.0s						
AVF	**Avril sur Loir**	18.31 299		eP	Pn	03 39 41.4	+2.3
	comp=Z,17nm,1.1s						
AVF	**Avril sur Loir**	18.31 299		eP	Pn	03 39 41.4	+2.3
AVF				pmax	pmax		
	comp=Z,9.0nm,1.1s						
AVF	**Avril sur Loir**	18.31 299		eP	Pn	03 39 41.4	+2.3
	comp=Z,8.6nm,1.1s						
AVF	**Avril sur Loir**	18.31 299		eP	Pn	03 39 41.4	+2.3
	comp=Z,8.6nm,1.1s						
VSU	**Vasula**	18.33 360		i P	Pn	03 39 36.4	-2.9
VSU				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BGF	**Bois d'Agland**	18.60 298		eP	Pn	03 39 45.2	+2.5
	comp=Z,12nm,1.0s						
BGF	**Bois d'Agland**	18.60 298		eP	Pn	03 39 45.2	+2.5
BGF				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BGF	**Bois d'Agland**	18.60 298		eP	Pn	03 39 45.2	+2.5
	comp=Z,6.1nm,1.0s						
MTLF	**Montolieu**	18.68 288		eP	Pn	03 39 45.6	+1.8
	comp=Z,21nm,1.2s						
MTLF	**Montolieu**	18.68 288		eP	Pn	03 39 45.6	+1.8
MTLF				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MTLF	**Montolieu**	18.68 288		eP	Pn	03 39 45.6	+1.8
	comp=Z,10nm,1.2s						
MTLF	**Montolieu**	18.68 288		eP	Pn	03 39 45.6	+1.8
	comp=Z,10nm,1.2s						
BAIF	**Baives**	18.77 309		eP	Pn	03 39 46.8	+2.0
	comp=Z,12nm,1.2s						
BAIF	**Baives**	18.77 309		eP	Pn	03 39 46.8	+2.0
BAIF				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BAIF	**Baives**	18.77 309		eP	Pn	03 39 46.8	+2.0
	comp=Z,5.8nm,1.2s						
CAF	**Calviac**	18.89 293		eP	Pn	03 39 47.9	+1.6
	comp=Z,10nm,1.0s						
CAF	**Calviac**	18.89 293		eP	Pn	03 39 47.9	+1.6
CAF				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CAF	**Calviac**	18.89 293		eP	Pn	03 39 47.9	+1.6
	comp=Z,5.3nm,1.0s						
CAF	**Calviac**	18.89 293		eP	Pn	03 39 47.9	+1.6
	comp=Z,5.2nm,1.0s						
TCF	**Toulx Ste Croi**	18.98 297		eP	Pn	03 39 49.3	+1.9
	comp=Z,8.6nm,1.0s						
TCF	**Toulx Ste Croi**	18.98 297		eP	Pn	03 39 49.3	+1.9
TCF				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TCF	**Toulx Ste Croi**	18.98 297		eP	Pn	03 39 49.3	+1.9
	comp=Z,4.3nm,1.0s						
RJF	**Les Rejaudoux**	19.32 294		eP	Pn	03 39 53.3	+1.8
	comp=Z,4.5nm,0.8s						
RJF	**Les Rejaudoux**	19.32 294		eP	Pn	03 39 53.3	+1.8
RJF				pmax	pmax		
	comp=Z,2.0nm,0.8s						
RJF	**Les Rejaudoux**	19.32 294		eP	Pn	03 39 53.3	+1.8
	comp=Z,2.3nm,0.8s						
CSOR	**Sort**	19.49 285		P	Pn	03 39 54.5	+1.0
	comp=Z,14nm,1.0s						
CSOR	**Sort**	19.49 285		P	Pn	03 39 54.5	+1.0
	comp=Z,14nm,1.0s						
EPOB	**Poblet**	19.59 282		P	Pn	03 39 53.2	-1.6
	comp=Z,12nm,0.8s						
EPOB	**Poblet**	19.59 282		P	Pn	03 39 53.2	-1.6
	comp=Z,12nm,0.8s						
LFF	**La Frestale**	19.83 293		eP	Pn	03 39 58.5	+0.9
	comp=Z,9.6nm,0.8s						
LFF	**La Frestale**	19.83 293		eP	Pn	03 39 58.5	+0.9
LFF				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LFF	**La Frestale**	19.83 293		eP	Pn	03 39 58.5	+0.9
	comp=Z,4.8nm,0.8s						
EPF	**Esparros**	20.06 287		eP	P	03 40 00.2	+1.7
	comp=Z,11nm,1.0s						
EPF	**Esparros**	20.06 287		eP	P	03 40 00.2	+1.7
EPF				pmax	pmax		
	comp=Z,5.0nm,1.0s						
EPF	**Esparros**	20.06 287		eP	P	03 40 00.2	+1.7
	comp=Z,5.4nm,1.0s						
EPF	**Esparros**	20.06 287		eP	P	03 40 00.2	+1.7
	comp=Z,5.4nm,1.0s						
EBIE	**Bielsa**	20.21 286		P	P	03 40 01.7	+1.6
	comp=Z,11nm,0.6s						
EBIE	**Bielsa**	20.21 286		P	P	03 40 01.7	+1.5
	comp=Z,11nm,0.6s						
MFF	**Saint Martin d**	20.64 297		eP	P	03 40 05.7	+0.9
	comp=Z,17nm,1.2s						
MFF	**Saint Martin d**	20.64 297		eP	P	03 40 05.7	+0.9
MFF				pmax	pmax		
	comp=Z,9.0nm,1.2s						
MFF	**Saint Martin d**	20.64 297		eP	P	03 40 05.7	+0.9
	comp=Z,8.6nm,1.2s						
MFF	**Saint Martin d**	20.64 297		eP	P	03 40 05.7	+0.9
	comp=Z,8.6nm,1.2s						
ESAC	**San Caprasio**	20.72 283		P	P	03 40 07.3	+1.6
	comp=Z,26nm,0.6s						
ESAC	**San Caprasio**	20.72 283		P	P	03 40 07.3	+1.6
	comp=Z,26nm,0.6s						
ETSF	**Etsaut**	20.72 287		eP	P	03 40 07.3	+1.6
	comp=Z,19nm,0.8s						
ETSF	**Etsaut**	20.72 287		eP	P	03 40 07.3	+1.6
ETSF				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ETSF	**Etsaut**	20.72 287		eP	P	03 40 07.3	+1.6
	comp=Z,9.4nm,0.8s						
ETSF	**Etsaut**	20.72 287		eP	P	03 40 07.3	+1.6
	comp=Z,9.4nm,0.8s						
EMOS	**Mosqueruela**	20.88 279		P	P	03 40 09.2	+1.8
	comp=Z,15nm,0.9s						
EMOS	**Mosqueruela**	20.88 279		P	P	03 40 09.2	+1.8
	comp=Z,15nm,0.9s						
LDF	**La Druitiere**	21.00 303		eP	P	03 40 09.5	+0.8
	comp=Z,38nm,1.0s,mb4.4						
LDF	**La Druitiere**	21.00 303		eP	P	03 40 09.5	+0.8
LDF				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.4						
LDF	**La Druitiere**	21.00 303		eP	P	03 40 09.5	+0.8
	comp=Z,19nm,1.0s,mb4.4						
LDF	**La Druitiere**	21.00 303		eP	P	03 40 09.5	+0.8
	comp=Z,19nm,1.0s,mb4.4						
SJPF	**Ste Jean**	21.20 287		eP	P	03 40 13.0	+2.1
	comp=Z,21nm,0.7s,mb4.3						
SJPF	**Ste Jean**	21.20 287		eP	P	03 40 13.0	+2.1
SJPF				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.3						
SJPF	**Ste Jean**	21.20 287		eP	P	03 40 13.0	+2.1
	comp=Z,11nm,0.7s,mb4.3						
SJPF	**Ste Jean**	21.20 287		eP	P	03 40 13.0	+2.1
	comp=Z,11nm,0.7s,mb4.3						
FLN	**La Foliniere**	21.28 303		eP	P	03 40 12.3	+0.6
	comp=Z,28nm,1.1s,mb4.2						
FLN	**La Foliniere**	21.28 303		eP	P	03 40 12.3	+0.6
FLN				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.2						
FLN	**La Foliniere**	21.28 303		eP	P	03 40 12.3	+0.6
	comp=Z,14nm,1.1s,mb4.2						
FLN	**La Foliniere**	21.28 303		eP	P	03 40 12.3	+0.6
	comp=Z,14nm,1.1s,mb4.2						
FINES	**FINESS Array B**	21.32 359		P	P	03 40 10.8	-1.3
	comp=Z,1.5nm,0.7s,mb3.4,baz=153,slow=13,SNR=8.0						
FINES	**FINESS Array B**	21.32 359		P	P	03 40 10.8	-1.3
GRR	**Gorron**	21.44 302		eP	P	03 40 14.4	+1.0
	comp=Z,49nm,1.1s,mb4.4						
GRR	**Gorron**	21.44 302		eP	P	03 40 14.4	+1.0
GRR				pmax	pmax		
	comp=Z,24nm,1.1s,mb4.4						
GRR	**Gorron**	21.44 302		eP	P	03 40 14.4	+1.0
	comp=Z,24nm,1.1s,mb4.5						
GRR	**Gorron**	21.44 302		eP	P	03 40 14.4	+1.0
	comp=Z,24nm,1.1s,mb4.4						
HFS	**Hagfors**	21.64 342		P	P	03 40 13.2	-2.3
	comp=Z,0.8

EKA	**Eskdalemuir Ar**	**25.03**	**317**	P	**P**	**03 40 48.4**	**-0.9**
	comp=Z,2.6nm,0.8s,mb3.8,baz=117,slow=9.6,SNR=8.7						
EKA	**Eskdalemuir Ar**	**25.03**	**317**	P	**P**	**03 40 48.4**	**-0.9**
EMIJ	**Mijas**	**25.04**	**272**	P	**P**	**03 40 48.5**	**-1.1**
	comp=Z,17nm,1.1s,mb4.5						
EMIJ	**Mijas**	**25.04**	**272**	P	**P**	**03 40 48.5**	**-1.1**
	comp=Z,17nm,1.1s,mb4.5						
TAM	**Tamanrasset**	**25.04**	**233**	*e*P	**P**	**03 40 52.3**	**+2.6**
	comp=Z,1.7nm,0.9s,mb3.6						
EPON	**Pontenova**	**25.51**	**288**	P	**P**	**03 40 56.2**	**+2.3**
	comp=Z,16nm,0.7s,mb4.7						
MVO	**Moncorvo**	**25.68**	**283**	P	**P**	**03 40 57.8**	**+2.4**
MVO	**Moncorvo**	**25.68**	**283**	*e*P	**P**	**03 40 57.3**	**+1.9**
	comp=Z,24nm,1.5s,mb4.5						
MVO	**Moncorvo**	**25.68**	**283**	*e*P	**P**	**03 40 57.3**	**+1.9**
	comp=Z,24nm,1.5s,mb4.5						
ESPR	**Espera**	**25.77**	**273**	P	**P**	**03 41 00.5**	**+4.3**
	comp=Z,13nm,0.8s,mb4.5						
EMIN	**Mina Concepcio**	**26.14**	**276**	P	**P**	**03 41 03.5**	**+3.9**
	comp=Z,18nm,1.1s,mb4.5						
MTE	**Manteigas**	**26.20**	**282**	*e*P	**P**	**03 40 59.7**	**-0.4**
	comp=Z,31nm,1.4s,mb4.6						
MTE	**Manteigas**	**26.20**	**282**	*e*P	**P**	**03 40 59.7**	**-0.4**
	comp=Z,31nm,1.4s,mb4.6						
MDT	**Midelt**	**26.29**	**264**	P	**P**	**03 41 03.3**	**+2.3**
	comp=Z,2.3nm,0.8s,mb3.8,baz=64,slow=6.7,SNR=5.5						
ARU	**Arti**	**26.29**	**41**	*d i*P	**P**	**03 41 01.8**	**+1.1**
ARU				*e*		03 41 42.5	
ARU				S	**S**	**03 45 39.3**	**+5.5**
ARU				SS		03 46 38.1	
ARU				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.2						
ARU	**Arti**	**26.29**	**41**	*e*P	**P**	**03 41 02.0**	**+1.2**
	comp=Z,11nm,1.1s,mb4.3						
ARU	**Arti**	**26.29**	**41**	*i* P	**P**	**03 41 01.8**	**+1.1**
	comp=Z,9.0nm,1.0s,mb4.2						
BRVK	**Borovoye**	**31.96**	**52**	*e*P	**P**	**03 41 49.9**	**-1.3**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
BRVK	**Borovoye**	**31.96**	**52**	*e*P	**P**	**03 41 49.9**	**-1.2**
	comp=Z,1.7nm,0.7s,mb4.0						
BRVK	**Borovoye**	**31.96**	**52**	*e*P	**P**	**03 41 49.9**	**-1.3**
	comp=Z,1.7nm,0.7s,mb4.0						
BVAR	**Borovoye Array**	**32.02**	**52**	P	**P**	**03 41 52.2**	**+0.5**
	comp=Z,0.8nm,0.8s,mb3.6,baz=262,slow=3.0,SNR=4.8						
BVAR	**Borovoye Array**	**32.02**	**52**	P	**P**	**03 41 52.2**	**+0.5**
TORD	**Torodi Ar. Bea**	**34.85**	**227**	P	**P**	**03 42 16.4**	**-0.4**
	comp=Z,0.5nm,0.7s,mb3.5,baz=32,slow=7.6,SNR=6.8						
KURK	**Kurchatov**	**37.08**	**56**	P	**P**	**03 42 34.1**	**-1.5**
	comp=Z,1.1nm,0.4s,mb4.1,baz=281,slow=8.9,SNR=10.0						
KURK	**Kurchatov**	**37.08**	**56**	P	**P**	**03 42 34.1**	**-1.4**
NVS	**Novosibirsk**	**39.66**	**49**	*e*P	**P**	**03 42 57.0**	**-0.2**
NVS				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
NVS				pmax	pmax		
	comp=N,4.0nm,1.0s						
NVS				pmax	pmax		
	comp=E,6.0nm,1.0s						
NVS	**Novosibirsk**	**39.66**	**49**	*e*P	**P**	**03 42 57.0**	**-0.2**
	comp=E,9.0nm,1.0s,mb4.5						
MK31	**Makanchi Array**	**40.01**	**62**	*e*P	**P**	**03 42 59.8**	**-0.4**
MK31	**Makanchi Array**	**40.01**	**62**	*e*P	**P**	**03 42 59.8**	**-0.4**
MKAR	**Makanchi Array**	**40.01**	**62**	P	**P**	**03 43 00.4**	**+0.2**
	comp=E,1.0nm,0.6s,mb3.7,baz=288,slow=6.2,SNR=8.0						
ZAA0	**Zalesovo Array**	**40.64**	**50**	*e*P	**P**	**03 43 04.8**	**-0.5**
ZAA0	**Zalesovo Array**	**40.64**	**50**	*e*P	**P**	**03 43 04.8**	**-0.5**
ZALV	**Zalesovo Beam**	**40.64**	**50**	P	**P**	**03 43 05.4**	**+0.1**
	comp=E,5.3nm,0.6s,mb4.3,baz=272,slow=9.2,SNR=22						
ZALV	**Zalesovo Beam**	**40.64**	**50**	P	**P**	**03 43 05.4**	**+0.1**
DBIC	**Dimbokro**	**43.83**	**229**	P	**P**	**03 43 32.4**	**+0.7**
	comp=E,4.5nm,0.9s,mb4.2,baz=351,slow=7.7,SNR=4.4						
DBIC	**Dimbokro**	**43.83**	**229**	P	**P**	**03 43 32.4**	**+0.7**
ZAK	**Zakamensk**	**52.48**	**52**	*e*P	**P**	**03 44 36.3**	**-1.9**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.9						
ZAK	**Zakamensk**	**52.48**	**52**	*e*P	**P**	**03 44 36.3**	**-1.9**
	comp=Z,2.0nm,1.2s,mb3.9						
SONM	**Songino Array**	**55.33**	**54**	P	**P**	**03 44 59.2**	**+0.1**
	comp=Z,1.1nm,0.5s,mb4.1,baz=286,slow=8.7,SNR=12						
SONM	**Songino Array**	**55.33**	**54**	P	**P**	**03 44 59.2**	**+0.2**
ULN	**Ulaanbaatar**	**55.72**	**53**	*e*P	**P**	**03 45 02.6**	**+0.7**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
ULN	**Ulaanbaatar**	**55.72**	**53**	*e*P	**P**	**03 45 02.6**	**+0.7**
	comp=Z,1.6nm,0.5s,mb4.3						
ULN	**Ulaanbaatar**	**55.72**	**53**	*e*P	**P**	**03 45 02.6**	**+0.7**
	comp=Z,1.5nm,0.5s,mb4.3						
CMAR	**Chiang Mai Arr**	**64.75**	**87**	P	**P**	**03 46 03.1**	**-1.0**
	comp=Z,0.9nm,0.3s,mb4.2,baz=307,slow=8.7,SNR=6.3						
CMAR	**Chiang Mai Arr**	**64.75**	**87**	P	**P**	**03 46 03.1**	**-1.0**
YKA	**Yellowknife Ar**	**73.13**	**342**	P	**P**	**03 46 53.2**	**-2.4**
	comp=Z,0.3nm,0.8s,mb3.3,baz=38,slow=5.7,SNR=2.9						
YKA	**Yellowknife Ar**	**73.13**	**342**	P	**P**	**03 46 53.2**	**-2.4**
KSRS	**Korea Array**	**74.19**	**54**	P	**P**	**03 47 01.6**	**-0.7**
	comp=Z,2.9nm,0.9s,mb4.2,baz=299,slow=4.7,SNR=6.3						
KSRS	**Korea Array**	**74.19**	**54**	P	**P**	**03 47 01.6**	**-0.7**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
PDAR	**Pinedale Array**	**88.55**	**330**	P	**P**	**03 48 17.2**	**-1.1**
	comp=Z,0.4nm,0.6s,mb3.9,baz=88,slow=3.1,SNR=3.3						
NVAR	**Mina Array Bea**	**95.56**	**333**	P	**P**	**03 48 49.4**	**-1.4**
	comp=Z,0.3nm,0.6s,mb3.9,baz=42,slow=11,SNR=2.5						
TXAR	**Lajitas Array**	**97.03**	**318**	P	**P**	**03 48 57.3**	**-0.3**
	comp=Z,0.3nm,0.9s,mb3.7,baz=108,slow=2.9,SNR=3.7						

CSEM ***01*** *03:37:07.0,38°.86N×30°.24W,h5km,ML2.6,After PDA*
PDA 01 03:37:07.0±1.1,38°.86N×30°.24W,h5km,MD3.5,ML2.6,
Error ellipse: s-maj=33.5km s-min=8.7km az=18.0,
Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCED	**Cedros**	**1.23**	**100**	*e*P	Pg	03 37 26.1	-4.4
PCED				*e*S	Sg	03 37 40.5	-6.0
PCED				A		03 37 43.3	
	73nm,0.3s						
PCED	**Cedros**	**1.23**	**100**	*e*P	Pg	03 37 26.1	-4.4
PCED				*e*S	Sg	03 37 40.5	-6.0
CALA	**Caldeira**	**1.24**	**103**	*e*P	Pg	03 37 26.0	-4.7
CALA	**Caldeira**	**1.24**	**103**	*e*P	Pg	03 37 26.0	-4.7
HOR	**Horta**	**1.31**	**104**	*e*P	Pn	03 37 26.7	-5.2
HOR				*e*S	Sg	03 37 42.2	-6.8
HOR	**Horta**	**1.31**	**104**	*e*P	Pn	03 37 26.7	-5.2
HOR				*e*S	Sg	03 37 42.2	-6.8
PCAN	**Candelaria**	**1.43**	**105**	*e*P	Pn	03 37 28.6	-5.0
PCAN				*e*S	Sb	03 37 44.7	-8.0
PCAN				A		03 37 49.5	
	46nm,0.3s						
PCAN	**Candelaria**	**1.43**	**105**	*e*P	Pn	03 37 28.6	-5.0
PCAN				*e*S	Sb	03 37 44.7	-8.0
PICO	**Pico**	**1.47**	**104**	*e*P	Pn	03 37 30.0	-4.1
PICO				*e*S	Sn	03 37 46.5	-7.2
PICO	**Pico**	**1.47**	**104**	*e*P	Pn	03 37 30.0	-4.1
PICO				*e*S	Sn	03 37 46.5	-7.2
ROSA	**Rosais**	**1.57**	**94**	*e*P	Pn	03 37 30.8	-4.7
ROSA	**Rosais**	**1.57**	**94**	*e*P	Pn	03 37 30.8	-4.7
PMAN	**Manadas**	**1.70**	**97**	*e*P	Pn	03 37 32.4	-4.9
PMAN				*e*S	Sn	03 37 51.3	-8.1
PMAN				A		03 37 58.4	
	8.4nm,0.3s						
PMAN	**Manadas**	**1.70**	**97**	*e*P	Pn	03 37 32.4	-4.9
PMAN				*e*S	Sn	03 37 51.3	-8.1
PID	**Ribeirinha**	**1.71**	**103**	*e*P	Pn	03 37 42.0	+4.5

IDC ***01*** *03:41:31.4±0.7,20°.06N×121°.33E,h0km,mb4.2/19,*
mb1 4.4/21,mb1mx4.3/28,mbtmp4.3/21,ML4.4/2,MS4.0/3,
Ms1 4.0/3,ms1mx3.4/34,Error ellipse: s-maj=20.5km
s-min=15.8km az=68.0
BJI ***01*** *03:41:36.4,20°.52N×121°.41E,h19km,mB4.7/4,mb4.0/9,*
ML3.9/1,Ms7 4.0/1
MAN ***01*** *03:41:36,20°.15N×121°.30E,h30km,mb5.3,ML4.2,MS4.5*
NEIC ***01*** *03:41:36.6±0.5,20°.03N×121°.38E,h35km±5km,mb4.5/27,*
Error ellipse: s-maj=5.9km s-min=4.4km az=99.0
ISCJB ***01*** *03:41:36.2±0.4,20°.11N±0°.02×121°.47E±0°.04,h47km±4km,*
mb4.4/56,MS4.2/2,Error ellipse: s-maj=6.8km
s-min=2.8km az=11.5
JMA ***01*** *03:41:38.8±0.4,20°.26N×121°.54E,h143km,M4.1*
ISC 01 03:41:37.8±0.3,20°.12N±0°.02×121°.41E±0°.04,h43km±3km,
n113,σ0s87/124,mb4.4/56,MS4.2/2,1C-1D,Philippine
Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBP	**Basco**	**0.61**	**58**	*e*P	**Pn**	**03 41 50.3**	**+0.2**
BBP				*e*S	**Sn**	**03 42 00.5**	**+1.6**
PIP	**Pasuquin**	**1.93**	**203**	‖*i*P	**Pn**	**03 42 05.8**	**-2.4**
SGCP	**Mt. Cagua**	**1.96**	**162**	*e*P	**Pn**	**03 42 09.3**	**+0.8**
APYP	**Conner**	**2.25**	**184**	*e*P	**Pn**	**03 42 13.2**	**+0.7**
APYP				*e*S	**Sn**	**03 42 39.5**	**+0.5**
ABRA	**Dolores**	**2.54**	**195**	*e*P	**Pn**	**03 42 16.4**	**-0.1**
ABRA				*e*S	**Sn**	**03 42 45.8**	**-0.5**
TWG	**Pinlang**	**2.71**	**353**	*e*Pn	**Pn**	**03 42 19.0**	**+0.2**
CAUP	**Cauayan**	**3.18**	**173**	*e*P	**Pn**	**03 42 27.5**	**+2.2**
CAUP				*e*S	**Sn**	**03 43 20.3**	**+18**
PALP	**Palanan**	**3.18**	**162**	*e*P	**Pn**	**03 42 26.4**	**+1.0**
PALP				*e*S	**Sn**	**03 42 58.9**	**-3.1**
TPUB	**Ta-pu**	**3.25**	**347**	*e*Pn	**Pn**	**03 42 25.6**	**-0.7**
YULB	**Yu-li**	**3.26**	**358**	*e*Pn	**Pn**	**03 42 27.5**	**+1.1**
SSLB	**Suanglung**	**3.68**	**353**	*e*Pn	**Pn**	**03 42 32.3**	**+0.1**
BOLP	**Bolinao**	**3.98**	**201**	*e*P	**Pn**	**03 42 36.6**	**+0.3**
BOLP				*e*S	**Sn**	**03 43 20.8**	**-0.9**
NACB	**Ninganchiao**	**4.04**	**2**	*e*Pn	**Pn**	**03 42 36.8**	**-0.4**
NACB				*e*Sn	**Sn**	**03 43 23.4**	**+0.2**
BALP	**Baler**	**4.35**	**178**	*e*P	**Pn**	**03 42 42.6**	**+1.2**
BALP				*e*S	**Sn**	**03 43 30.9**	**-0.1**
HATJ	**Hateruma jima**	**4.50**	**29**	P	**Pn**	**03 42 44.3**	**+0.8**
HATJ				*e*S	**Sn**	**03 43 33.9**	**-0.7**
YHNB	**Yeheng**	**4.53**	**360**	*e*Pn	**Pn**	**03 42 44.9**	**+1.1**
YHNB				*e*Sn	**Sn**	**03 43 31.0**	**-4.4**
YOJ	**Yonaguni jima**	**4.57**	**19**	P	**Pn**	**03 42 44.9**	**+0.5**
YOJ				*e*S	**Sn**	**03 43 36.5**	**+0.2**
IRIF	**Iriomote-Funau**	**4.71**	**27**	P	**Pn**	**03 42 46.5**	**+0.1**
IRIF				*e*S	**Sn**	**03 43 39.6**	**-0.2**
JKRS	**Kuro-shima**	**4.75**	**30**	P	**Pn**	**03 42 47.4**	**+0.5**
JKRS				*e*S	**Sn**	**03 43 40.0**	**-0.8**
TATO	**Taipei**	**4.84**	**1**	*e*Pn	**Pn**	**03 42 48.7**	**+0.7**
JIJ	**Ishigaki jima**	**4.93**	**30**	P	**Pn**	**03 42 48.9**	**-0.4**
JIJ				*e*S	**Sn**	**03 43 42.9**	**-2.1**
JTJ	**Tarama**	**5.43**	**33**	P	**Pn**	**03 42 56.2**	**-0.1**
JTJ				*e*S	**Sn**	**03 43 56.4**	**-1.1**
QZH	**Quanzhou**	**5.47**	**332**	Pn	**Pn**	**03 42 53.7**	**-3.0**
QZH				Sn	**Sn**	**03 43 50.2**	**-8.1**
QZH				smax			
	comp=N,130nm,0.8s						
QZH				smax			
	comp=E,140nm,0.6s						
QZH				LR	LR		
	comp=Z,2μm,13.2s						
JMJ	**Miyako jima 2**	**5.89**	**37**	*e*S	**Sn**	**03 44 09.2**	**+0.4**
JOW	**Kunigami**	**9.18**	**42**	Pn	**Pn**	**03 43 47.0**	**-0.6**
	comp=Z,12nm,0.3s,baz=188,slow=14,SNR=12						
JOW				Sn	**Sn**	**03 45 27.8**	**-1.9**
	comp=Z,1.8nm,0.3s,baz=246,slow=20,SNR=2.5						
QIZ	**Qiongzhong**	**10.96**	**266**	*e*Pn	**Pn**	**03 44 07.8**	**-4.3**
	comp=Z,24nm,0.8s						
DAV	**Davao City (W)**	**13.58**	**162**	LR	LR	03 50 39.7	
	comp=Z,237nm,20.7s,baz=354,slow=40						
KKM	**Kota Kinabalu**	**14.87**	**201**	*e*Pn	**Pn**	**03 45 04.5**	**-0.8**
XAN	**Xi'an**	**17.75**	**324**	P	**Pn**	**03 45 41.0**	**-0.7**
XAN				pmax	pmax		
	comp=Z,3.0nm,1.4s						
XAN				pmax	pmax		
	comp=Z,64nm,11.1s						
KSRS	**Korea Array**	**18.18**	**17**	P	**Pn**	**03 45 46.9**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=194,slow=11,SNR=21						
CHTO	**Chiang Mai**	**21.23**	**270**	*e*P	**P**	**03 46 19.4**	**-0.7**
	comp=Z,18nm,1.1s,mb4.3						
CMAR	**Chiang Mai Arr**	**21.27**	**269**	P	**P**	**03 46 19.4**	**-1.2**
	comp=Z,2.3nm,0.5s,mb3.8,baz=68,slow=8.5,SNR=18						
KSM	**Kuching**	**21.48**	**212**	*e*P	**P**	**03 46 22.2**	**-0.6**
	comp=Z,17nm,1.2s,mb4.3						
MAJO	**Matsushiro**	**22.00**	**38**	*e*P	**P**	**03 46 27.6**	**-0.6**
	comp=Z,3.2nm,0.4s,mb4.1						
MJAR	**Matsushiro Arr**	**22.00**	**38**	P	**P**	**03 46 28.5**	**+0.3**
	comp=Z,1.2nm,0.4s,mb3.6,baz=229,slow=8.0,SNR=11						
LZH	**Lanzhou**	**22.15**	**320**	P	**P**	**03 46 30.8**	**+0.9**
LZH				pP		03 46 35.5	
LZH				sP	sP	03 46 38.2	-7.8
LZH				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.3						
KAPI	**Kappang**	**25.02**	**184**	LR	LR	03 57 38.8	
	comp=Z,343nm,18.6s,MS3.9,baz=182,slow=39						
ASAJ	**Asahikawa**	**29.74**	**32**	P	**P**	**03 47 40.8**	**+0.9**
	comp=Z,7.4nm,0.8s,mb4.5,baz=247,slow=7.7,SNR=7.7						
ULN	**Ulaanbaatar**	**30.03**	**341**	*e*P	**P**	**03 47 44.3**	**+1.8**
	comp=Z,2.6nm,0.8s,mb4.0						
SONM	**Songino Array**	**30.21**	**340**	P	**P**	**03 47 44.5**	**+0.4**
	comp=Z,1.3nm,0.5s,mb3.9,baz=159,slow=11,SNR=7.9						
YSS	**Yuzh-Sakhalins**	**31.93**	**28**	*e*P	**P**	**03 47 59.5**	**+0.2**
	comp=Z,19nm,0.8s,mb5.0						
COEN	**Coen**	**40.06**	**146**	*e*P	**P**	**03 49 07.4**	**-1.6**
	comp=Z,59nm,1.0s,mb5.3						
MBWA	**Marble Bar**	**41.05**	**182**	*e*P	**P**	**03 49 15.5**	**-1.6**
	comp=Z,6.9nm,0.7s,mb4.4						
MK31	**Makanchi Array**	**41.47**	**319**	*e*P	**P**	**03 49 21.3**	**+1.0**
MKAR	**Makanchi Array**	**41.47**	**319**	P	**P**	**03 49 21.4**	**+1.0**
	comp=Z,2.2nm,0.7s,mb3.9,baz=110,slow=9.8,SNR=13						
WRAB	**Tennant Creek**	**41.77**	**162**	*e*P	**P**	**03 49 21.2**	**-1.9**
	comp=Z,20nm,0.7s,mb4.9						
ZAA0	**Zalesovo Array**	**43.80**	**329**	*e*P	**P**	**03 49 39.0**	**-0.2**
ZALV	**Zalesovo Beam**	**43.80**	**329**	P	**P**	**03 49 39.2**	**+0.1**
	comp=Z,1.9nm,0.5s,mb4.0,baz=115,slow=7.9,SNR=11						
ZALV	**Zalesovo Beam**	**43.80**	**329**	P	**P**	**03 49 39.2**	**+0.1**
TKM2	**Tokmak 2**	**44.51**	**311**	*e*P	**P**	**03 49 45.5**	**+0.5**
	comp=Z,2.6nm,0.9s,mb4.1						
UCH	**Uchtor**	**45.10**	**310**	*e*P	**P**	**03 49 50.9**	**+1.2**
	comp=Z,7.6nm,1.1s,mb4.4						
ASAR	**Alice Springs**	**45.19**	**164**	P	**P**	**03 49 50.0**	**-0.5**
	comp=Z,12nm,0.6s,mb4.9,baz=346,slow=6.9,SNR=165						
KURK	**Kurchatov**	**45.39**	**323**	P	**P**	**03 49 52.4**	**+0.5**
	comp=Z,3.4nm,0.6s,mb4.4,baz=120,slow=7.4,SNR=16						
KURK	**Kurchatov**	**45.39**	**323**	*e*P	**P**	**03 49 51.7**	**-0.2**
	comp=Z,7.1nm,1.1s,mb4.4						
CTA	**Charters Tower**	**46.78**	**147**	*e*P	**P**	**03 50 03.3**	**+0.2**
	comp=Z,6.2nm,1.0s,mb4.5						
CTAO	**Charters Tower**	**46.78**	**147**	*e*P	**P**	**03 50 02.9**	**-0.2**
	comp=Z,8.2nm,0.9s,mb4.7						
BVAR	**Borovoye Array**	**50.99**	**323**	P	**P**	**03 50 35.7**	**+0.7**
	comp=Z,1.1nm,0.5s,mb4.0,baz=101,slow=8.1,SNR=7.4						
BVAR				PcP	PcP	03 51 50.3	-0.4
	comp=Z,2.7nm,0.6s,baz=100,slow=4.5,SNR=9.4						
FORT	**Forrest**	**51.00**	**173**	*e*P	**P**	**03 50 35.3**	**0.0**
	comp=Z,52nm,0.6s						
FORT	**Forrest**	**51.00**	**173**	*e*P	**P**	**03 50 35.0**	**-0.4**
	comp=Z,59nm,0.6s						
BRVK	**Borovoye**	**51.06**	**323**	*e*P	**P**	**03 50 35.9**	**+0.3**
	comp=Z,8.0nm,1.0s,mb4.6						
KLBR	**Kellerberrin**	**51.53**	**184**	*e*P	**P**	**03 50 38.3**	**-1.0**
	comp=Z,6.1nm,0.5s,mb4.8						
TIXI	**Tiksi**	**51.73**	**3**	*e*P	**P**	**03 50 38.9**	**-1.4**
	comp=Z,3.4nm,0.6s,mb4.5						
NWAO	**Narrogin (SRO)**	**52.89**	**184**	*e*P	**P**	**03 50 48.9**	**-0.5**
	comp=Z,68nm,0.6s,mb5.8						
RMQ	**Roma**	**53.38**	**149**	*e*P	**P**	**03 50 52.8**	**-0.3**
	comp=Z,15nm,0.9s,mb4.9						
EIDS	**Eidsvold**	**53.63**	**146**	*e*P	**P**	**03 50 54.9**	**0.0**
BBOO	**Buckleboo**	**54.46**	**165**	*e*P	**P**	**03 51 01.0**	**+0.2**
	comp=Z,7.6nm,0.6s,mb4.8						
STKA	**Stephens Creek**	**55.20**	**159**	*e*P	**P**	**03 51 06.1**	**-0.1**
	comp=Z,5.8nm,0.9s,mb4.6						
STKA	**Stephens Creek**	**55.20**	**159**	P	**P**	**03 51 06.6**	**+0.4**
	comp=Z,5.7nm,0.7s,mb4.7,baz=341,slow=7.1,SNR=27						
CMSA	**Cobar Meteorol**	**56.39**	**155**	*e*P	**P**	**03 51 15.8**	**+1.0**
ABKAR	**Akbulak array**	**56.47**	**316**	*e*P	**P**	**03 51 15.2**	**-0.1**
	comp=Z,3.1nm,0.8s,mb4.4						
ARU	**Arti**	**58.50**	**325**	*e*P	**P**	**03 51 30.1**	**+0.7**
	comp=Z,4.7nm,0.7s,mb4.6						
YNG	**Young**	**59.90**	**154**	*e*P	**P**	**03 51 39.9**	**+0.6**
	comp=Z,6.1nm,0.7s,mb4.7						
CNB	**Canberra Magne**	**61.17**	**154**	*e*P	**P**	**03 51 48.9**	**+1.0**
TOO	**Toolangi**	**61.70**	**158**	*e*P	**P**	**03 51 52.8**	**+1.4**
TTA	**Tatalina**	**68.93**	**29**	*e*P	**P**	**03 52 38.5**	**+0.6**
	comp=Z,7.4nm,0.6s,mb4.8						
CHUM	**Lake Minchumin**	**70.51**	**28**	*e*P	**P**	**03 52 48.9**	**+1.2**
	comp=Z,4.0nm,0.5s,mb4.6						
PPLA	**Purkeypile**	**70.67**	**29**	*e*P	**P**	**03 52 49.7**	**+1.0**
	comp=Z,14nm,1.3s,mb4.7						
BPAW	**Bear Paw Mtn.**	**71.07**	**28**	*e*P	**P**	**03 52 51.7**	**+0.6**
	comp=Z,3.1nm,0.5s,mb4.5						
COLA	**College**	**72.30**	**27**	*e*P	**P**	**03 52 58.4**	**-0.1**
	comp=Z,2.2nm,0.6s,mb4.3						
JOF	**Joensuu**	**72.35**	**331**	*e*p	**P**	**03 52 58.1**	**-0.7**
	comp=Z,1.4nm,0.4s,mb4.2						
JOF	**Joensuu**	**72.35**	**331**	*e*p	**P**	**03 52 58.1**	**-0.7**
	comp=Z,1.4nm,0.4s,mb4.2						
KEV	**Kevo**	**72.82**	**339**	*e*p	**P**	**03 53 00.6**	**-0.9**
	comp=Z,2.9nm,0.5s,mb4.5						
KEV	**Kevo**	**72.82**	**339**	*e*p	**P**	**03 53 00.6**	**-0.9**
	comp=Z,2.9nm,0.5s,mb4.5						
ARCES	**ARCESS Array B**	**73.38**	**339**	P	**P**	**03 53 04.7**	**-0.1**
	comp=Z,2.1nm,0.6s,mb4.2,baz=67,slow=9.3,SNR=21						
SPITS	**Spitsbergen Ar**	**73.49**	**348**	LR	LR	04 27 59.9	
	comp=Z,354nm,21.4s,MS4.6,baz=240,slow=38						
KAF	**Kangasniemi**	**74.79**	**331**	*e*p	**P**	**03 53 10.0**	**-3.1**
	comp=Z,1.5nm,0.5s,mb4.2						
KAF	**Kangasniemi**	**74.79**	**331**	*e*p	**P**	**03 53 10.0**	**-3.1**
	comp=Z,1.5nm,0.5s,mb4.2						
FINES	**FINESS Array B**	**75.06**	**330**	P	**P**	**03 53 14.8**	**+0.1**
	comp=Z,2.2nm,0.5s,mb4.3,baz=50,slow=6.4,SNR=26						
EGAK	**Eagle**	**75.12**	**26**	*e*P	**P**	**03 53 14.9**	**-0.1**
	comp=Z,4.1nm,0.7s,mb4.5						
BRTR	**Keskin Array B**	**75.77**	**307**	P	**P**	**03 53 19.4**	**+0.2**
	comp=Z,0.4nm,0.5s,mb3.6,baz=150,slow=5.9,SNR=5.0						
AKASG	**Malin Array Be**	**76.05**	**319**	P	**P**	**03 53 19.2**	**-1.4**
	comp=Z,1.7nm,0.7s,mb4.1,baz=62,slow=6.2,SNR=3.7						
DAWY	**Dawson**	**76.05**	**27**	*e*P	**P**	**03 53 20.4**	**+0.1**
INK	**Inuvik**	**76.91**	**22**	*e*P	**P**	**03 53 24.5**	**-0.6**
	comp=Z,2.0nm,0.7s,mb4.2						
KWP	**Kalwaria Pacla**	**80.37**	**319**	*e*P	**P**	**03 53 44.9**	**+0.3**
	comp=Z,4.4nm,0.7s,mb4.5						
DAG	**Danmarks Havn**	**80.40**	**351**	⇑*i*P	**P**	**03 53 44.0**	**-0.2**
	comp=Z,2.7nm,0.7s,mb4.3						
HFS	**Hagfors**	**81.21**	**331**	P	**P**	**03 53 48.3**	**-0.5**
	comp=Z,1.7nm,0.5s,mb4.3,baz=111,slow=7.0,SNR=25						
NB2	**NORSAR Subarra**	**81.91**	**333**	P	**P**	**03 53 51.8**	**-0.7**
	comp=Z,1.7nm,0.7s,mb4.1,baz=62,slow=5.3						
NOA	**NORSAR Array B**	**81.91**	**333**	P	**P**	**03 53 52.0**	**-0.5**
	comp=Z,1.8nm,0.8s,mb4.1,baz=63,slow=5.1,SNR=10						
RES	**Resolute Bay**	**82.63**	**9**	*e*P	**P**	**03 53 56.1**	**+0.1**
	comp=Z,3.6nm,0.8s,mb4.5						
VYHS	**Vyhne**	**83.16**	**319**	*e*P	**P**	**03 54 00.5**	**+1.2**
	comp=Z,2.6nm,1.3s,mb4.1						
VYHS				*e*		03 54 07.4	
VYHS	**Vyhne**	**83.16**	**319**	*e*P	**P**	**03 54 00.5**	**+1.2**
VYHS				*e*PCP	PcP	03 54 07.4	+3.6
MORC	**Moravsky Berou**	**83.44**	**321**	*e*P	**P**	**03 54 00.7**	**0.0**
	comp=Z,1.4nm,0.8s,mb4.0						
DPC	**Dobruska-Polom**	**83.93**	**322**	*e*P	**P**	**03 54 03.8**	**+0.6**
BRG	**Berggiesshubel**	**85.08**	**323**	*e*P	**P**	**03 54 09.2**	**+0.2**
	comp=Z,2.8nm,0.8s,mb4.5						
PRU	**Pruhonice**	**85.12**	**322**	*e

comp=E,50nm,0.6s
KUR smax
comp=Z,70nm,0.6s
YSS Yuzh-Sakhalins 11.70 253 αeP N **Pn 03 56 45.1 +2.9**
YSS MLR MLR
comp=Z,500nm,15.0s
YSS MLR MLR
comp=E,900nm,17.0s
YSS Yuzh-Sakhalins 11.70 253 eP n **Pn 03 56 41.9 -0.3**
comp=E,25nm,0.8s
ASAJ Asahikawa 13.43 242 P **Pn 03 57 05.3 -0.4**
comp=E,2.2nm,0.3s,baz=68,slow=15,SNR=20
ASAJ LR LR 04 02 10.9
comp=E,578nm,18.6s,baz=186,slow=37
ASAJ Asahikawa 13.43 242 PN **Pn 03 57 05.4 -0.3**
ASAJ pmax pmax
comp=Z,2.0nm,0.3s
ASAJ MLR MLR
comp=Z,579nm,18.6s
KLR Kul'dur 17.59 273 eP **Pn 03 57 58.2 -1.1**
KLR pmax pmax
comp=E,100nm,1.4s
KLR pmax pmax
comp=Z,67nm,1.4s
YAK Yakutsk 18.98 314 eP **Pn 03 58 13.5 -2.6**
YAK pmax pmax
comp=Z,104nm,0.9s
YAK pmax pmax
comp=E,44nm,1.3s
YAK pmax pmax
comp=N,24nm,1.3s
YAK MLR MLR
comp=E,648nm,14.0s
YAK MLR MLR
comp=Z,842nm,14.0s
YAK MLR MLR
comp=N,426nm,13.0s
YAK Yakutsk 18.98 314 eP n **Pn 03 58 14.4 -1.7**
comp=N,115nm,0.7s
VLA Vladivostok 20.25 256 eP **P 03 58 25.3 -3.7**
VLA pmax pmax
comp=Z,38nm,1.1s
VLA MLR MLR
comp=Z,500nm,16.2s,MS4.0
MDJ Mudanjiang 20.86 262 P **P 03 58 33.4 -2.1**
MDJ pP 03 58 43.4
MDJ sP sP 03 58 48.7 -4.5
MDJ S **S 04 02 19.9 -5.3**
MDJ sS sS 04 02 36.4 -7.4
MDJ ScP ScP 04 06 18.3 +3.9
MDJ pmax pmax
comp=Z,21nm,0.8s
MDJ pmax pmax
comp=Z,210nm,4.5s
MDJ LR LR
comp=N,560nm,15.4s,MS4.3
MDJ LR LR
comp=E,840nm,15.7s,MS4.3
MDJ LR LR
comp=Z,1μm,15.7s,MS4.3
MDJ Mudanjiang 20.86 262 eP **P 03 58 33.4 -2.1**
comp=Z,15nm,0.7s
MAJO Matsushiro 21.23 233 eP **P 03 58 39.6 0.0**
MAJO pmax pmax
comp=Z,41nm,1.0s,mb4.7
MAJO Matsushiro 21.23 233 eP **P 03 58 39.6 0.0**
comp=Z,41nm,1.0s,mb4.7
MJAR Matsushiro Arr 21.23 233 P **P 03 58 39.9 +0.3**
comp=Z,18nm,0.9s,mb4.4,baz=32,slow=9.3,SNR=56
MJAR LR LR 04 07 30.7
comp=Z,494nm,20.9s,MS3.9,baz=65,slow=38
MJAR Matsushiro Arr 21.23 233 P **P 03 58 39.9 +0.3**
MJAR LR LR 04 07 30.7
TNA Tin City 21.71 38 eP **P 03 58 48.2 +3.7**
comp=Z,22nm,1.2s,mb4.5
CN2 Changchun 23.83 264 eP **P 03 59 06.5 +0.2**
CN2 epP 03 59 18.0
CN2 eS **S 04 03 15.0 -3.5**
CN2 pmax pmax
comp=Z,20nm,0.7s,mb4.7
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,600nm,14.0s,MS4.3
CN2 LR LR
comp=E,500nm,14.0s,MS4.3
CN2 LR LR
comp=Z,800nm,19.0s,MS4.2
TIXI Tiksi 24.14 337 eP **P 03 59 08.3 -0.6**
TIXI eS **S 04 03 27.1 +4.1**
TIXI pmax pmax
comp=Z,38nm,0.7s,mb4.9
TIXI MLR MLR
comp=Z,622nm,12.0s,MS4.3
TIXI Tiksi 24.14 337 eP **P 03 59 07.4 -1.5**
comp=Z,38nm,0.6s,mb5.0
HIA Hailar 25.00 280 eP **P 03 59 16.0 -0.9**
HIA pmax pmax
comp=Z,58nm,0.9s
HIA Hailar 25.00 280 eP **P 03 59 16.0 -0.9**
comp=Z,58nm,0.9s,mb5.1
TTA Tatalina 26.12 47 eP **P 03 59 26.0 -1.0**
TTA epP pP 03 59 40.2 +0.6
KSRS Korea Array 26.17 249 P **P 03 59 28.3 +0.7**
comp=Z,7.2nm,0.7s,mb4.3,baz=45,slow=9.3,SNR=25
KSRS Korea Array 26.17 249 P **P 03 59 28.3 +0.7**
KSRS pmax pmax
comp=Z,7.0nm,0.7s,mb4.3
BPAW Bear Paw Mtn. 28.44 45 eP **P 03 59 46.3 -1.4**
comp=Z,4.2nm,0.9s,mb4.1
KTH Kantishna Hill 28.45 46 eP **P 03 59 48.9 +1.1**
comp=Z,18nm,1.3s,mb4.5
COLA College 29.81 43 eP **P 03 59 57.7 -2.1**
COLA pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
COLA College 29.81 43 eP **P 03 59 57.7 -2.2**
comp=Z,2.7nm,0.6s,mb4.2
BJI Beijing 31.67 266 P **P 04 00 16.5 0.0**
BJI S **S 04 05 20.2 -2.0**
BJI pmax pmax
comp=Z,8.0nm,0.6s,mb4.7
BJI pmax pmax
comp=Z,290nm,9.5s
BJI LR LR
comp=N,930nm,15.8s,MS4.6
BJI LR LR
comp=E,410nm,15.3s,MS4.6
BJI LR LR
comp=Z,480nm,21.7s
EGAK Eagle 32.67 43 eP **P 04 00 22.2 -2.8**
comp=Z,6.9nm,0.7s,mb4.7
ULN Ulaanbaatar 33.28 284 c iP **P 04 00 30.2 -0.3**
ULN Ulaanbaatar 33.28 284 eP **P 04 00 30.0 -0.4**
comp=Z,7.0nm,1.0s,mb4.5
DAWY Dawson 33.52 44 eP **P 04 00 30.3 -2.1**
SONM Songino Array 33.69 285 P **P 04 00 33.7 -0.3**
comp=Z,3.0nm,0.7s,mb4.3,baz=53,slow=7.0,SNR=19
SONM PcP PcP 04 03 12.7 0.0
comp=Z,1.3nm,0.7s,baz=71,slow=1.3,SNR=4.6
TLY Talaya 33.71 292 eP **P 04 00 34.2 0.0**
TLY pmax pmax
comp=Z,11nm,1.2s,mb4.7
TLY Talaya 33.71 292 eP **P 04 00 34.2 0.0**
comp=Z,11nm,1.2s,mb4.7
HHC Hu-ho-hao-te 34.07 271 eP **P 04 00 38.0 +0.6**
HHC pP pP 04 00 50.2 -0.1
HHC PP PP 04 01 52.7 -2.4
HHC PcP PcP 04 03 15.4 +1.5
HHC S **S 04 05 59.2 -0.3**
HHC sS sS 04 06 19.3 -1.8
HHC ScP ScP 04 06 55.8 +1.4
HHC PcS PcS 04 07 00.1 +0.1
HHC SS SS 04 08 08.1 -20
HHC ScS ScS 04 10 56.1 -0.4
HHC pmax pmax
comp=Z,15nm,0.9s,mb4.9
HHC pmax pmax
comp=Z,220nm,5.6s
HHC LR LR
comp=N,410nm,15.5s,MS4.7
HHC LR LR
comp=E,890nm,14.3s,MS4.7
HHC LR LR
comp=Z,910nm,14.6s,MS4.6
ZAK Zakamensk 34.44 290 eP **P 04 00 38.9 -1.6**
ZAK pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
HYT Haines Junctio 35.01 50 eP **P 04 00 51.8 +6.5**
MOY Mondy 35.24 293 eP **P 04 00 48.0 +0.6**
MOY pmax pmax
comp=Z,21nm,1.6s,mb4.8
INK Inuvik 35.34 36 P **P 04 00 47.1 -1.0**
comp=Z,4.9nm,0.8s,mb4.5,baz=279,slow=6.7,SNR=14
INK Inuvik 35.34 36 eP **P 04 00 46.8 -1.3**
INK pmax pmax
comp=Z,6.0nm,0.9s
INK Inuvik 35.34 36 eP **P 04 00 46.8 -1.3**
comp=Z,5.7nm,0.9s,mb4.5
WHN Wuhan 39.04 255 eP **P 04 01 18.9 -0.9**
LZH Lanzhou 41.77 270 eP **P 04 01 42.4 +0.1**
LZH pP pP 04 01 48.0 -7.5
LZH sP sP 04 01 50.0 -11
LZH PP PP 04 03 22.0 +2.6
LZH eS **S 04 07 55.4 -0.6**
LZH sS sS 04 08 15.0 -3.0
LZH SS SS 04 10 56.1 -6.8
LZH pmax pmax
comp=Z,25nm,1.0s,mb4.8
LZH pmax pmax
comp=Z,89nm,4.0s
LZH LR LR
comp=E,770nm,15.2s
LZH LR LR
comp=Z,1μm,16.2s,MS4.8
ENH Enshi 42.18 259 eP **P 04 01 45.2 -0.6**
comp=Z,26nm,0.8s,mb4.9
GTA Gaotai 42.21 277 eP **P 04 01 46.2 +0.3**
GTA pP pP 04 01 53.7 -5.3
GTA sP sP 04 01 57.5 -7.3
GTA pmax pmax
comp=Z,6.0nm,1.0s,mb4.2
ZAA0 Zalesovo Array 43.07 304 eP **P 04 01 50.3 -2.3**
ZALV Zalesovo Beam 43.07 304 P **P 04 01 50.9 -1.8**
comp=Z,3.6nm,0.7s,mb4.2,baz=56,slow=7.7,SNR=20
ZALV PcP PcP 04 03 41.8 0.0
comp=Z,2.5nm,0.8s,baz=49,slow=4.4,SNR=6.3
NVS Novosibirsk 43.45 305 i P **P 04 01 54.2 -1.6**
NVS pmax pmax
comp=N,10.0nm,1.1s
NVS pmax pmax
comp=Z,28nm,1.1s,mb4.9
NVS pmax pmax
comp=E,21nm,1.3s
YKA Yellowknife Ar 44.60 41 P **P 04 02 03.3 -1.5**
comp=E,1.7nm,0.7s,mb4.0,baz=301,slow=8.1,SNR=18
RES Resolute Bay 44.85 21 P **P 04 02 05.7 -1.0**
comp=E,3.7nm,0.7s,mb4.3,baz=296,slow=4.9,SNR=14
RES Resolute Bay 44.85 21 P **P 04 02 05.7 -1.0**
RES pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
RES Resolute Bay 44.85 21 eP **P 04 02 06.0 -0.7**
comp=Z,4.7nm,0.8s,mb4.4
CD2 Chengdu 45.27 265 eP **P 04 02 11.0 +0.5**
CD2 pP pP 04 02 23.4 -0.4
CD2 pmax pmax
comp=Z,10.0nm,0.9s,mb4.7
CD2 pmax pmax
comp=Z,20nm,4.8s
GYA Guiyang 46.64 258 ⇑ iP **P 04 02 21.6 +0.2**
GYA pP pP 04 02 35.4 +0.7
GYA PcP PcP 04 03 57.9 +3.4
GYA PP PP 04 04 12.0 +0.5
GYA ScP ScP 04 07 45.3 +1.6
GYA PcS PcS 04 07 51.2 +1.7
GYA S **S 04 09 06.8 -0.2**
GYA SS SS 04 12 27.3 -6.1
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.0
GYA pmax pmax
comp=Z,120nm,4.5s
GYA LR LR
comp=N,540nm,16.8s,MS4.7
GYA LR LR
comp=E,530nm,17.4s,MS4.7
GYA LR LR
comp=Z,670nm,16.9s,MS4.7
WMQ Urumqi 46.91 290 eP **P 04 02 25.0 +1.7**
WMQ pmax pmax
comp=Z,16nm,1.0s,mb4.9
KURK Kurchatov 48.00 302 eP **P 04 02 30.3 -1.4**
KURK pmax pmax
comp=Z,27nm,0.9s,mb5.3
KURK Kurchatov 48.00 302 eP **P 04 02 30.3 -1.3**
comp=Z,27nm,0.9s,mb5.3
KBS Kingsbay 48.20 352 c iP **P 04 02 32.9 +0.1**
KBS pmax pmax
comp=Z,28nm,1.0s,mb5.2
KBS Kingsbay 48.20 352 eP **P 04 02 33.5 +0.7**
comp=Z,25nm,0.9s,mb5.2
MK31 Makanchi Array 48.26 296 eP **P 04 02 32.8 -0.9**
MKAR Makanchi Array 48.26 296 P **P 04 02 32.8 -1.0**
comp=Z,1.2nm,0.4s,mb4.3,baz=52,slow=8.1,SNR=13
SPB4 Spitsbergen Ar 48.43 350 eP **P 04 02 34.9 +0.2**
KMI Kunming 50.02 260 P **P 04 02 49.9 +2.5**
KMI pmax pmax
comp=Z,23nm,1.1s,mb5.1
BVAR Borovoye Array 50.82 309 P **P 04 02 51.8 -1.3**
comp=Z,13nm,0.6s,mb5.0,baz=54,slow=8.2,SNR=62
BRVK Borovoye 50.85 309 c iP **P 04 02 52.0 -1.4**
BRVK Borovoye 50.85 309 eP **P 04 02 51.9 -1.5**
comp=Z,19nm,0.7s,mb5.1
DAG Danmarks Havn 51.81 359 ⇓ iP **P 04 03 00.2 0.0**
DAG pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
DAG Danmarks Havn 51.81 359 ⇓ iP **P 04 03 00.2 0.0**
comp=Z,9.0nm,1.0s,mb4.7
BSMT Bassoo Peak 52.60 58 eP **P 04 03 07.2 +0.7**
BSMT epP pP 04 03 24.2 +4.2
SVE Sverdlovsk 52.92 317 ⇑ eP **P 04 03 08.0 -0.7**
SVE pmax pmax
comp=Z,20nm,1.1s,mb5.0
SVE MLR MLR
comp=Z,744nm,15.0s,MS4.9
MOD Modoc 53.34 67 eP **P 04 03 13.1 +1.1**
comp=Z,4.1nm,0.8s,mb4.4
LVZ Lovozero 53.78 337 ceP **P 04 03 15.0 +0.2**
LVZ pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
KEV Kevo 53.97 341 eP **P 04 03 15.1 -1.1**
KEV pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
KEV Kevo 53.97 341 eP **P 04 03 15.4 -0.9**
comp=Z,7.4nm,0.8s,mb4.7
KEV Kevo 53.97 341 ep **P 04 03 15.1 -1.1**
comp=Z,7.1nm,0.7s,mb4.7
KEV Kevo 53.97 341 ep **P 04 03 15.1 -1.1**
comp=Z,7.1nm,0.7s,mb4.7
ARU Arti 54.05 318 c iP **P 04 03 15.4 -1.6**
ARU e 04 05 20.1
ARU PPP 04 06 35.0
ARU S **S 04 10 48.9 -0.3**
ARU pmax pmax
comp=Z,22nm,1.2s,mb5.0
ARU MLR MLR
comp=Z,557nm,16.0s,MS4.7
ARU Arti 54.05 318 eP **P 04 03 15.1 -1.9**
comp=Z,26nm,1.3s,mb5.0
APA Apatity 54.34 337 ⇓ iP **P 04 03 18.0 -0.9**
APA pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
APA MLR MLR
comp=Z,400nm,17.0s,MS4.5
TKM2 Tokmak 2 54.39 296 eP **P 04 03 19.2 -0.5**
TKM2 pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
TKM2 Tokmak 2 54.39 296 eP **P 04 03 19.2 -0.4**
comp=Z,3.4nm,0.8s,mb4.3
ARCES ARCESS Array B 54.45 342 P **P 04 03 19.1 -0.6**
comp=Z,12nm,0.8s,mb4.9,baz=34,slow=9.2,SNR=36
FCC Fort Churchill 54.95 38 eP **P 04 03 22.2 -1.2**
comp=Z,0.2nm,0.8s
AAK Ala-Archa 55.19 297 ⇓ eP **P 04 03 25.3 -0.2**
AAK pmax pmax
comp=Z,6.0nm,1.7s,mb4.3
AAK Ala-Archa 55.19 297 eP **P 04 03 25.0 -0.5**
comp=Z,4.0nm,0.6s,mb4.6
SUMG Summit 55.43 6 eP **P 04 03 26.8 +0.1**
SUMG Summit 55.43 6 i P **P 04 03 26.4 -0.3**
comp=Z,5.9nm,1.0s,mb4.6
TRO Tromso 55.56 344 ⇑ iP **P 04 03 27.2 -0.5**
TRO AMB AMB 04 03 28.4
comp=Z,21nm,1.5s,mb5.0
TRO epP pP 04 03 39.5 -1.8
EKS2 Erkin-Say 55.58 297 eP **P 04 03 27.7 -0.5**
comp=Z,4.7nm,0.7s,mb4.6
BOZ Bozeman (W) 55.69 58 eP **P 04 03 36.5 +7.6**
BOZ pmax pmax
comp=Z,8.0nm,1.5s,mb4.5
BOZ Bozeman (W) 55.69 58 eP **P 04 03 36.5 +7.6**
comp=Z,7.7nm,1.5s,mb4.5
SHL Shillong 56.42 270 ePKP **P 04 03 35.0 +0.5**
NVAR Mina Array Bea 56.78 69 P **P 04 03 36.0 -0.8**
comp=Z,0.3nm,0.5s,baz=295,slow=8.8,SNR=5.0
CHTO Chiang Mai 57.06 258 eP **P 04 03 40.2 +1.1**
CHTO pmax pmax
comp=Z,14nm,0.8s,mb5.0
CHTO Chiang Mai 57.06 258 eP **P 04 03 40.2 +1.1**
comp=Z,14nm,0.8s,mb5.0
M13A Montello 57.16 63 eP **P 04 03 46.0 +6.5**
CMAR Chiang Mai Arr 57.33 258 P **P 04 03 41.7 +0.7**
comp=Z,5.9nm,0.8s,mb4.7,baz=29,slow=8.0,SNR=4.3
TAPN Taplejung 57.74 274 eP **P 04 03 43.7 -0.1**
comp=Z,33nm,0.7s,mb5.5
ABKAR Akbulak array 58.28 311 eP **P 04 03 45.7 -1.5**
comp=Z,7.1nm,0.8s,mb4.8
ODAN Odare 58.29 274 eP **P 04 03 48.5 +0.9**
comp=Z,19nm,0.6s,mb5.3
AKTK Aktyubinsk 58.35 313 P **P 04 03 45.7 -2.0**
AKTO Aktyubinsk 58.35 313 P **P 04 03 45.7 -2.0**
baz=66,slow=11
GUN Gumba 58.48 276 eP **P 04 03 48.6 -0.3**
comp=Z,16nm,0.4s,mb5.4
JOF Joensuu 58.60 335 ep **P 04 03 48.4 -0.9**
comp=Z,6.4nm,0.7s,mb4.8
JOF Joensuu 58.60 335 ep **P 04 03 48.4 -0.9**
comp=Z,6.4nm,0.7s,mb4.8
DUG Dugway 58.70 64 eP **P 04 03 50.6 +0.3**
DUG pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
DUG Dugway 58.70 64 eP **P 04 03 50.6 +0.3**
comp=Z,2.3nm,0.8s,mb4.3
RAMN Ramite 58.71 275 eP **P 04 03 50.3 -0.3**
comp=Z,42nm,0.5s,mb5.7
BW06 Boulder Array 58.72 59 eP **P 04 03 50.9 +0.5**
comp=Z,3.3nm,0.9s,mb4.4
PDAR Pinedale Array 58.72 59 P **P 04 03 51.0 +0.5**
comp=Z,0.9nm,0.8s,mb3.9,baz=312,slow=5.6,SNR=7.3
KKN Kakani 58.93 276 eP **P 04 03 51.9 -0.2**
comp=Z,37nm,0.6s,mb5.6
PKI Pulchoki 59.01 276 eP **P 04 03 52.4 -0.2**
comp=Z,18nm,0.5s,mb5.3
DMN Daman 59.17 276 eP **P 04 03 53.7 0.0**
comp=Z,44nm,0.8s,mb5.6
MOR8 Moi Rana 59.43 344 ⇑ iP **P 04 03 53.1 -1.9**
MOR8 AMb AMB 04 03 54.4
comp=Z,15nm,0.9s,mb5.0
MOR8 epP pP 04 04 04.3 -4.4
MOR8 Moi Rana 59.43 344 ⇑ iP **P 04 03 53.1 -1.9**
comp=Z,15nm,0.9s,mb5.0
JOSI Joshimath 60.48 283 ⇓ ePKP **P 04 04 02.2 -0.5**
KAF Kangasniemi 60.56 337 ep **P 04 04 01.5 -1.2**
comp=Z,8.3nm,0.5s,mb5.1
KAF Kangasniemi 60.56 337 ep **P 04 04 01.5 -1.2**
comp=Z,8.3nm,0.5s,mb5.1
RSSD Black Hills 60.67 55 eP **P 04 04 03.8 0.0**
RSSD pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
RSSD Black Hills 60.67 55 eP **P 04 04 03.8 0.0**
comp=Z,3.6nm,0.7s,mb4.6
SRU San Rafael 60.73 63 eP **P 04 04 04.6 +0.4**
SRU pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
SRU San Rafael 60.73 63 eP **P 04 04 04.6 +0.4**
comp=Z,4.1nm,0.8s,mb4.6
FINES FINESS Array B 61.19 336 P **P 04 04 06.6 -0.4**
comp=Z,9.6nm,0.7s,mb5.1,baz=35,slow=7.9,SNR=50
NSS Namsos 61.36 345 eP **P 04 04 06.8 -1.4**
NSS epP pP 04 04 20.2 -1.7
SMLA Simla 61.52 285 ex **P 04 04 07.8 -1.9**
SMCO Snowmass 62.63 61 eP **P 04 04 17.1 0.0**
comp=Z,2.4nm,0.8s,mb4.4
BISR Bishrakh 63.18 283 ex x 04 04 11.5
OBN Obninsk 63.40 327 ⇓ iP **P 04 04 22.7 +0.8**
OBN eS **S 04 12 47.0 -3.4**
OBN pmax pmax
comp=Z,21nm,1.7s,mb5.0
OBN MLR MLR
comp=Z,400nm,15.0s,MS4.7
VSU Vasula 63.58 334 c iP **P 04 04 22.4 -0.6**
VSU pmax pmax
comp=Z,21nm,0.6s,mb5.3
SONA Sohna 63.63 283 ePKP **P 04 04 23.0 -0.8**
KBL Kabul 63.86 293 eP **P 04 04 23.8 -1.5**
KBL pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
KBL Kabul 63.86 293 eP **P 04 04 23.8 -1.4**
comp=Z,5.2nm,0.7s,mb4.7
DOMB Dombas 64.16 345 eP **P 04 04 26.6 -0.2**
KHET Khetri 64.53 284 ePKP **P 04 04 29.0 -0.7**
KSM Kuching 64.56 236 eP **P 04 04 31.1 +1.0**
comp=Z,10nm,0.9s,mb4.9
NB2 NORSAR Subarra 64.74 343 P **P 04 04 30.2 -0.4**
comp=Z,11nm,0.8s,mb5.0,baz=21,slow=6.9
NOA NORSAR Array B 64.74 343 P **P 04 04 30.3 -0.2**
comp=Z,9.9nm,0.7s,mb4.9,baz=21,slow=6.6,SNR=63
VRHR Novokhopersk 64.80 322 eP **P 04 04 29.6 -1.5**
VRHR pmax pmax
comp=Z,6.0nm,0.4s,mb5.0
VRHR pmax pmax
comp=N,7.0nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.6s
NAO01 NORSAR Array S 64.98 343 eP **P 04 04 31.2 -1.0**
comp=E,3.1nm,0.6s,mb4.5
HYA Hoyanger 65.44 346 eP **P 04 04 35.9 +0.8**
VSR Storozhevoye 65.63 323 eP **P 04 04 35.8 -0.7**
VSR pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
VSR pmax pmax
comp=N,7.0nm,0.9s
VSR pmax pmax
comp=E,7.0nm,0.9s
VORD Divnogorie 65.78 323 eP **P 04 04 36.9 -0.6**
VORD pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.6s
LAZ Ladron 65.99 65 eP **P 04 04 39.5 +0.3**
IZAR Zarasai 66.06 333 eP **P 04 04 39.2 0.0**
IZAR AMB AMB 04 04 39.7
comp=Z,5.9nm,0.7s,mb4.7
ASK Askoy 66.24 346 eP **P 04 04 39.9 -0.4**
ISAL Salakas 66.25 333 eP **P 04 04 40.4 -0.1**
ISAL AMB AMB 04 04 41.9
comp=Z,6.2nm,1.0s,mb4.6
IDID Didziasalis 66.30 333 eP **P 04 04 40.7 -0.1**
IDID AMB AMB 04 04 42.2
comp=Z,9.0nm,0.9s,mb4.8
BER Bergen 66.32 346 eP **P 04 04 40.2 -0.6**
BER epP pP 04 04 52.2 -2.5
AJM Ajmer 66.40 283 ePKP **P 04 04 41.6 -0.2**
IIGN Ignalina 66.41 333 eP **P 04 04 41.6 +0.1**
IIGN AMB AMB 04 04 42.5
comp=Z,14nm,0.7s,mb5.1
IIGN epP pP 04 04 52.4 -3.0
BLS5 Blasjo 67.06 345 eP **P 04 04 47.3 +1.7**
BHPL Bhopal 67.09 279 ePKP **P 04 04 45.9 -0.3**
SCHQ Schefferville 67.17 27 P **P 04 04 44.7 -1.6**
comp=Z,2.5nm,0.5s,mb4.5,baz=302,slow=5.9,SNR=10
KMY Karmoy 67.45 346 eP **P 04 04 48.5 +0.5**
NGP Nagpur 67.64 276 ex **P 04 04 45.4 -4.4**
SUW Suwalki 68.44 334 eP **P 04 04 54.0 -0.3**
SUW pmax pmax
comp=Z,47nm,1.1s,mb5.4
SUW Suwalki 68.44 334 eP **P 04 04 54.0 -0.3**
comp=Z,47nm,1.1s,mb5.4
MNTX Cornudas Mount 68.98 65 eP **P 04 04 57.7 -0.3**
comp=Z,4.1nm,1.3s,mb4.2
MUD Monsted U'grnd 69.42 343 i P **P 04 04 59.5 -0.8**
MUD pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
MUD Monsted U'grnd 69.42 343 i P **P 04 04 59.5 -0.8**
comp=Z,9.4nm,1.0s,mb4.7
AKASG Malin Array Be 69.53 329 P **P 04 05 00.4 -0.7**
comp=Z,24nm,0.7s,mb5.3,baz=30,slow=5.9,SNR=64
AKBB Malin Array Si 69.53 329 eP **P 04 05 00.1 -1.0**

PSI Prapat 69.72 248 P **P** **04 05 03.1 +0.3**
comp=Z,3.8nm,0.7s,mb4.4,baz=12,slow=23,SNR=4.1
ZEI Tsey 70.50 315 *eP* **P** **04 05 01.2 -6.0**
ZEI pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
HYB Hyderabad 70.74 274 *i* P **P** **04 05 10.0 +1.0**
BSEG Bad Segeberg 71.58 341 *eP* **P** **04 05 13.5 0.0**
comp=Z,23nm,1.5s,mb4.9
TXAR Lajitas Array 71.73 66 P **P** **04 05 14.5 -0.4**
comp=Z,0.9nm,0.6s,mb3.9,baz=299,slow=4.7,SNR=16
LVV L'vov 71.92 331 *eP* **P** **04 05 15.1 -0.5**
LVV MLR MLR
comp=Z,400nm,18.0s,MS4.7
LVV MLR MLR
comp=N,400nm,19.0s,MS4.8
LVV MLR MLR
comp=E,300nm,19.0s,MS4.8
GNI Garni 72.22 313 *ceP* **P** **04 05 20.1 +2.5**
GNI pmax pmax
comp=Z,6.0nm,0.7s
ESK Eskdalemuir 72.37 350 *eP* **P** **04 05 18.0 -0.2**
ESK pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
ESK Eskdalemuir 72.37 350 *eP* **P** **04 05 18.0 -0.2**
comp=Z,7.7nm,0.7s,mb4.7
KWP Kalwaria Pacla 72.48 332 *eP* **P** **04 05 19.1 +0.1**
comp=Z,85nm,1.1s,mb5.6
KWP Kalwaria Pacla 72.48 332⇑ *iP* **P** **04 05 19.6 +0.6**
OJC Ojcow 72.77 334 *eP* **P** **04 05 20.3 -0.4**
OJC *e* pP 04 05 31.5 -3.3
OJC Ojcow 72.77 334⇑ *iP* **P** **04 05 20.3 -0.4**
OJC *e* pP 04 05 31.5 -3.3
POO Poona 72.81 278 *e*PKP **P** **04 05 21.5 +0.1**
POO AMb AMB 04 05 22.4
comp=Z,21nm,0.9s,mb5.1
KIS Kishinev 72.86 327 *eP* **P** **04 05 18.0 -3.3**
KIS LRM 04 37 36.0
comp=Z,300nm,15.0s
KIS Kishinev 72.86 327 *eP* **P** **04 05 18.0 -3.3**
KIS MLR MLR
comp=Z,300nm,5.0s
KIS MLR MLR
comp=Z,300nm,16.0s,MS4.7
NRDL Niedersach Rie 72.98 341 *eP* **P** **04 05 22.0 +0.1**
comp=Z,5.0nm,1.1s,mb4.4
STHS Stebnicka Huta 73.09 333 *eP* **P** **04 05 23.7 +1.1**
STHS *e* pP 04 05 35.4 -1.3
STHS pmax pmax
comp=Z,15nm,1.1s,mb4.8
STHS Stebnicka Huta 73.09 333 *eP* **P** **04 05 23.7 +1.1**
comp=Z,15nm,1.1s,mb4.8
STHS *e*PP pP 04 05 35.4 -1.3
STHS Stebnicka Huta 73.09 333 *eP* **P** **04 05 23.7 +1.1**
STHS *e*pP pP 04 05 35.3 -1.4
KSP Ksiaz 73.11 336 *eP* **P** **04 05 22.3 -0.4**
KSP *e**PP pP 04 05 34.2 -2.6
KOLS Kolonicke sedl 73.23 332 *eP* **P** **04 05 23.8 +0.4**
KOLS *e*SP 04 05 44.4
KOLS pmax pmax
comp=Z,15nm,1.2s,mb4.8
KOLS Kolonicke sedl 73.23 332 *eP* **P** **04 05 23.8 +0.4**
comp=Z,15nm,1.2s,mb4.8
KOLS *e*PP pP 04 05 35.2 -2.4
KOLS *e*SP 04 05 44.4
KOLS Kolonicke sedl 73.23 332 *eP* **P** **04 05 23.8 +0.4**
KOLS *e*pP pP 04 05 35.2 -2.4
KOLS *e*sP sP 04 05 44.4 +1.3
CLL Collm 73.47 339 *eP* **P** **04 05 24.4 -0.4**
comp=Z,10.0nm,1.0s,mb4.7
CLL Collm 73.47 339⇑ *iP* **P** **04 05 24.6 -0.2**
CLL *i* pP 04 05 34.0 -4.9
CLL *i **SP sP 04 05 42.5 -2.0
CLL pmax pmax
comp=Z,11nm,1.0s,mb4.7
CLL Collm 73.47 339⇑ *iP* **P** **04 05 24.6 -0.2**
comp=Z,11nm,1.0s,mb4.7
CLL *i* pP 04 05 34.0 -4.9
CLL *i* pP pP 04 05 38.0 -0.9
CLL *i* sP sP 04 05 42.5 -2.0
CLL Collm 73.47 339⇑ *iP* **P** **04 05 24.6 -0.2**
comp=Z,11nm,1.0s,mb4.7
CLL *i* pP 04 05 34.0 -4.9
CLL *i* pP pP 04 05 38.0 -0.9
CLL *i* sP sP 04 05 42.5 -2.0
BUR08 Bucovina Ar. S 73.48 329 *eP* **P** **04 05 24.7 -0.3**
UPC Upice 73.49 336 *eP* **P** **04 05 25.4 +0.4**
UPC *e**PP pP 04 05 36.5 -2.6
UPC Upice 73.49 336 *eP* **P** **04 05 25.4 +0.4**
UPC *e*pP pP 04 05 36.5 -2.6
UZH Uzhgorod 73.49 332⇑ *iP* **P** **04 05 25.1 +0.1**
UZH *e* pP 04 05 35.5 -3.6
BURAR Bucovina Array 73.50 329⇑ P **P** **04 05 25.2 +0.1**
BURAR Bucovina Array 73.50 329⇑ *iP* **P** **04 05 25.2 +0.1**
KAD Karad 73.53 277 *e*PKP **P** **04 05 25.7 0.0**
CLZ Clausthal 73.54 340 *eP* **P** **04 05 25.7 +0.5**
comp=Z,15nm,1.1s,mb4.8
CLZ Clausthal 73.54 340 *eP* **P** **04 05 25.7 +0.5**
CLZ pmax pmax
comp=Z,15nm,1.1s,mb4.8
DPC Dobruska-Polom 73.56 336 *eP* **P** **04 05 25.9 +0.5**
DPC *e**PP pP 04 05 36.7 -2.8
DPC Dobruska-Polom 73.56 336 *eP* **P** **04 05 25.9 +0.5**
DPC *e*pP pP 04 05 36.7 -2.8
OKC Ostrava-Krasne 73.56 335 *eP* **P** **04 05 26.0 +0.6**
OKC *e**PP pP 04 05 36.7 -2.8
OKC Ostrava-Krasne 73.56 335 *eP* **P** **04 05 26.0 +0.6**
OKC *e*pP pP 04 05 36.7 -2.8
IBBN Ibbenburen 73.62 342 *eP* **P** **04 05 25.9 +0.2**
comp=Z,10.0nm,0.9s,mb4.8
BRG Berggiesshubel 73.65 338 *eP* **P** **04 05 25.6 -0.3**
comp=Z,4.0nm,0.9s,mb4.3
BRG Berggiesshubel 73.65 338 *eP* **P** **04 05 25.8 -0.1**
comp=Z,4.3nm,1.1s,mb4.3
MORC Moravsky Berou 73.77 335 *eP* **P** **04 05 27.0 +0.4**
MORC *e**PP pP 04 05 38.5 -2.3
MORC pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
MORC Moravsky Berou 73.77 335 *eP* **P** **04 05 27.0 +0.3**
comp=Z,8.6nm,0.8s,mb4.7
MORC *e*pP pP 04 05 38.5 -2.2
MORC Moravsky Berou 73.77 335⇑ *iP* **P** **04 05 27.0 +0.4**
PVCC Panska Ves 73.83 337 *eP* **P** **04 05 27.1 +0.2**
PVCC *e**PP pP 04 05 39.7 -1.3
PVCC Panska Ves 73.83 337 *eP* **P** **04 05 27.1 +0.2**
PVCC *e*pP pP 04 05 39.7 -1.3
TRPA Tarpa 73.87 331⇑ *iP* **P** **04 05 27.7 +0.5**
BMR Baia Mare 73.99 331 P **P** **04 05 29.0 +1.1**
WTSB Winterswijk 74.12 343⇑ *eP* **P** **04 05 28.9 +0.2**
comp=Z,11nm,1.0s,mb4.7
KECS Kecovo 74.15 333 *eP* **P** **04 05 29.2 +0.3**
KECS *e* pP 04 05 41.0 -2.0
KECS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
KECS Kecovo 74.15 333 *eP* **P** **04 05 29.2 +0.3**
comp=Z,4.4nm,1.0s,mb4.3
KECS *e*PP pP 04 05 41.0 -2.0
KECS Kecovo 74.15 333 *eP* **P** **04 05 29.2 +0.3**
KECS *e*pP pP 04 05 41.0 -2.0
PRU Pruhonice 74.33 337 *eP* **P** **04 05 30.7 +0.8**
PRU *e**PP pP 04 05 39.7 -4.3
PRU Pruhonice 74.33 337 *eP* **P** **04 05 30.7 +0.8**
PRU *e*pP pP 04 05 39.7 -4.3
MOX Moxa 74.40 339 *eP* **P** **04 05 30.7 +0.4**
comp=Z,9.0nm,1.3s,mb4.5
MOX Moxa 74.40 339 *eP* **P** **04 05 30.7 +0.4**
comp=Z,9.0nm,1.3s,mb4.5
MOX Moxa 74.40 339 *eP* **P** **04 05 30.3 0.0**
comp=Z,8.0nm,1.3s,mb4.5
TLCR 74.44 326⇓ P **P** **04 05 30.7 +0.1**
TLCR 74.44 326⇓ *iP* **P** **04 05 30.7 +0.1**
VRAC Vranov 74.45 336⇑ P **P** **04 05 31.3 +0.7**
VRAC Vranov 74.45 336 P **P** **04 05 31.7 +1.1**
VRAC Vranov 74.45 336⇑ *iP* **P** **04 05 31.3 +0.7**
BUG Bochum--Univer 74.54 342 *eP* **P** **04 05 31.0 -0.1**
comp=Z,9.0nm,1.0s,mb4.7
WRAB Tennant Creek 74.55 204 *eP* **P** **04 05 30.3 -1.1**
WRAB pmax pmax
comp=Z,15nm,1.1s,mb4.8
WRAB Tennant Creek 74.55 204 *eP* **P** **04 05 30.3 -1.0**
comp=Z,15nm,1.1s,mb4.8
VRI Vrincioaia 74.56 328 P **P** **04 05 31.8 +0.5**
VRI Vrincioaia 74.56 328⇓ *iP* **P** **04 05 31.8 +0.5**
NKC Novy Kostel 74.60 339 *eP* **P** **04 05 32.0 +0.6**
NKC *e**PP pP 04 05 43.3 -2.3
NKC Novy Kostel 74.60 339 *eP* **P** **04 05 32.0 +0.6**
NKC *e*pP pP 04 05 43.3 -2.3
PLOR Plostina 74.60 328⇑ P **P** **04 05 32.1 +0.6**
PLOR Plostina 74.60 328⇑ *iP* **P** **04 05 32.1 +0.6**
VYHS Vyhne 74.60 334 *eP* **P** **04 05 32.1 +0.6**
VYHS *e* pP 04 05 43.7 -1.9
VYHS pmax pmax
comp=Z,26nm,2.1s,mb4.8
VYHS Vyhne 74.60 334 *eP* **P** **04 05 32.1 +0.6**
comp=Z,26nm,2.1s,mb4.8
VYHS *e*PcP PcP 04 05 43.7 -1.9
VYHS Vyhne 74.60 334 *eP* **P** **04 05 32.1 +0.6**
VYHS *e*pP pP 04 05 43.7 -1.9
KOLL Kolacno 74.64 334 *eP* **P** **04 05 32.5 +0.8**
KOLL *e* pP 04 05 44.9 -1.0
KOLL Kolacno 74.64 334 *eP* **P** **04 05 32.5 +0.8**
KOLL *e*pP pP 04 05 44.9 -1.0
CFR Carcaliu 74.68 326⇓ P **P** **04 05 32.0 0.0**
CFR Carcaliu 74.68 326⇓ *iP* **P** **04 05 32.0 0.0**
TREC Trest 74.74 336 *eP* **P** **04 05 32.7 +0.4**
TREC *e**PP pP 04 05 43.5 -2.9
TREC Trest 74.74 336 *eP* **P** **04 05 32.7 +0.4**
TREC *e*pP pP 04 05 43.5 -2.9
PSZ Piszkesteto 74.83 333 *eP* **P** **04 05 32.9 +0.1**
PSZ pmax pmax
comp=Z,11nm,0.9s,mb4.8
PSZ Piszkesteto 74.83 333 *eP* **P** **04 05 32.9 +0.1**
comp=Z,11nm,0.9s,mb4.8
PSZ Piszkesteto 74.83 333⇑ *eP* **P** **04 05 33.5 +0.7**
PSZ Piszkesteto 74.83 333⇑ *iP* **P** **04 05 34.4 +1.6**
DRGR 75.02 331⇓ P **P** **04 05 34.1 +0.2**
DRGR 75.02 331 P **P** **04 05 34.7 +0.8**
DRGR 75.02 331⇓ *iP* **P** **04 05 34.1 +0.2**
ROTZ Rotzenmuhle 75.09 339 *eP* **P** **04 05 34.8 +0.5**
comp=Z,6.0nm,1.1s,mb4.4
TIRR Tirgusor 75.22 326⇑ P **P** **04 05 35.1 0.0**
TIRR Tirgusor 75.22 326 *eP* **P** **04 05 34.5 -0.6**
comp=Z,23nm,0.8s,mb5.2
TIRR Tirgusor 75.22 326⇑ *iP* **P** **04 05 35.1 0.0**
ZST Bratislava 75.34 335 *eP* **P** **04 05 37.1 +1.4**
ZST *e* pP 04 05 48.8 -1.1
ZST pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
ZST Bratislava 75.34 335 *eP* **P** **04 05 37.1 +1.4**
comp=Z,6.4nm,0.8s,mb4.6
ZST *e*PP pP 04 05 48.8 -1.1
ZST Bratislava 75.34 335 *eP* **P** **04 05 37.1 +1.4**
ZST *e*pP pP 04 05 48.8 -1.1
KHC Kasperske Hory 75.36 337 *eP* **P** **04 05 36.4 +0.5**
KHC *e**PP pP 04 05 44.5 -5.5
KHC Kasperske Hory 75.36 337 *eP* **P** **04 05 36.2 +0.3**
comp=Z,10.0nm,0.9s,mb4.8
KHC Kasperske Hory 75.36 337 *eP* **P** **04 05 36.4 +0.5**
KHC *e*pP pP 04 05 44.5 -5.5
GRA1 Grafenberg Arr 75.38 339 *eP* **P** **04 05 36.3 +0.4**
comp=Z,18nm,1.1s,mb4.9
GRF Grafenberg Arr 75.38 339 *eP* **P** **04 05 36.3 +0.4**
comp=Z,18nm,1.1s,mb4.9
GRF Grafenberg Arr 75.38 339 *eP* **P** **04 05 36.3 +0.4**
GRF pmax pmax
comp=Z,18nm,1.1s,mb4.9
GRF Grafenberg Arr 75.38 339 *eP* **P** **04 05 36.3 +0.4**
comp=Z,18nm,1.1s,mb4.9
HGN Heimansgroeve 75.44 343⇑ *eP* **P** **04 05 36.2 0.0**
comp=Z,10nm,0.8s,mb4.8
TNS Taunus Mts 75.47 341 *eP* **P** **04 05 36.8 +0.4**
comp=Z,9.0nm,0.9s,mb4.7
TNS Taunus Mts 75.47 341 *eP* **P** **04 05 36.8 +0.4**
TNS pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
BUD Budapest 75.47 333⇑ *eP* **P** **04 05 37.5 +1.0**
WET Wettzell 75.52 338 *eP* **P** **04 05 37.2 +0.5**
comp=Z,11nm,1.2s,mb4.7
WET Wettzell 75.52 338 *eP* **P** **04 05 37.2 +0.5**
WET pmax pmax
comp=Z,11nm,1.2s,mb4.7
MEM Membach 75.57 343 P **P** **04 05 37.6 +0.6**
comp=Z,12nm,0.9s,mb4.8
MEM AP pP 04 05 48.4 -2.8
GEC2 GERESS Array S 75.60 337 *eP* **P** **04 05 37.2 0.0**
comp=Z,4.0nm,0.8s,mb4.4
GEC2 GERESS Array S 75.60 337 *eP* **P** **04 05 37.2 0.0**
GEC2 pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
GERES GERESS Array B 75.60 337 P **P** **04 05 37.5 +0.3**
comp=Z,2.8nm,0.7s,mb4.3,baz=34,slow=5.4,SNR=33
UCC Uccle 75.68 344 P **P** **04 05 39.6 +1.9**
BCLA Clavier 75.88 343 P **P** **04 05 37.8 -1.0**
BCLA AP pP 04 05 49.7 -3.3
CONA Conrad Observa 75.91 336 *iP* **P** **04 05 40.1 +1.1**
comp=Z,8.4nm,1.0s,mb4.6,SNR=6.4
SOP Sopron 75.96 335⇑ *eP* **P** **04 05 40.3 +1.0**
PSN Preselentsi 75.97 326 *iP* **P** **04 05 39.0 -0.4**
SNF Seneffe 75.97 344 P **P** **04 05 39.6 +0.3**
SNF AP pP 04 05 50.5 -3.1
TOD Tromm 75.98 341 *eP* **P** **04 05 39.7 +0.3**
GIVF Givet 76.27 343 *eP* **P** **04 05 41.0 0.0**
MENF Mencas 76.28 345 *eP* **P** **04 05 43.7 +2.6**
DOU Dourbes 76.32 343 P **P** **04 05 42.1 +0.8**
comp=Z,4.1nm,1.1s,mb4.3
DOU AP pP 04 05 54.1 -1.3
MOA Molln 76.39 337⇓ *iP* **P** **04 05 42.1 +0.4**
comp=Z,4.1nm,0.8s,mb4.4
BAIF Baives 76.42 344 *eP* **P** **04 05 42.0 +0.1**
comp=Z,18nm,1.1s,mb4.6
BAIF Baives 76.42 344 *eP* **P** **04 05 42.0 +0.1**
BAIF pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
BAIF Baives 76.42 344 *eP* **P** **04 05 42.0 +0.1**
comp=Z,8.8nm,1.1s,mb4.6
WLF Walferdange 76.45 342 P **P** **04 05 44.4 +2.4**
WLF AP pP 04 05 54.0 -2.3
VBMS Vicksburg 76.59 55 *e*pP pP 04 05 56.1 -1.2
ARSA Arzberg 76.63 335⇑ *iP* **P** **04 05 43.9 +0.8**
comp=Z,5.2nm,0.9s,mb4.5,SNR=5.1
STU Stuttgart 76.69 340 *eP* **P** **04 05 43.6 +0.2**
comp=Z,8.0nm,1.1s,mb4.6
LANF Langenberg 76.78 341 *eP* **P** **04 05 44.5 +0.6**
LANF Langenberg 76.78 341 *eP* **P** **04 05 44.2 +0.3**
RJOB Jochberg 76.85 337 *eP* **P** **04 05 44.9 +0.6**
comp=Z,6.0nm,1.0s,mb4.5
SZH Strazhica 77.12 327 *iP* **P** **04 05 45.0 -0.9**
PALK Pallekele 77.17 265 *eP* **P** **04 05 46.5 -0.1**
PALK pmax pmax
comp=Z,21nm,0.9s,mb5.1
PALK Pallekele 77.17 265 *eP* **P** **04 05 46.5 -0.2**
comp=Z,21nm,0.9s,mb5.1
SOKA Soboth 77.28 336⇑ *iP* **P** **04 05 47.4 +0.6**
comp=Z,10nm,1.1s,mb4.7
BFO Black Forest 77.29 341 *eP* **P** **04 05 47.0 +0.2**
comp=Z,8.0nm,0.9s,mb4.7
BFO Black Forest 77.29 341 *eP* **P** **04 05 47.0 +0.2**
BFO pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
KBA Koelnbreinsper 77.33 337 *iP* **P** **04 05 48.4 +1.3**
comp=Z,38nm,0.8s,mb5.3,SNR=17
BR131 Keskin Array S 77.34 320 *eP* **P** **04 05 47.3 +0.1**
comp=Z,8.3nm,0.8s,mb4.7
BRTR Keskin Array B 77.34 320 P **P** **04 05 47.5 +0.2**
comp=Z,14nm,1.0s,mb4.8,baz=47,slow=4.1,SNR=68
GROS Grobnik 77.36 335 *eP* **P** **04 05 47.5 +0.3**
SPAK Spaichingen-Ko 77.41 340 *eP* **P** **04 05 45.6 -1.9**
CDF Champ du Feu 77.43 341 *eP* **P** **04 05 47.7 +0.2**
comp=Z,16nm,0.9s,mb4.7
CDF Champ du Feu 77.43 341 *eP* **P** **04 05 47.7 +0.2**
CDF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
CDF Champ du Feu 77.43 341 *eP* **P** **04 05 47.7 +0.2**
comp=Z,8.2nm,0.9s,mb4.7
ZAVS Zavodnje 77.51 335 *eP* **P** **04 05 48.3 +0.3**
OBKA Obir 77.56 336⇑ *iP* **P** **04 05 48.8 +0.5**
comp=Z,8.8nm,1.1s,mb4.6
WTTA Wattenberg 77.57 338⇑ *iP* **P** **04 05 49.3 +1.0**
comp=Z,14nm,1.1s,mb4.8
MOTA Moosalm 77.62 338⇑ *iP* **P** **04 05 49.1 +0.5**
comp=Z,12nm,1.0s,mb4.8
ECH Echery 77.64 341 *eP* **P** **04 05 49.1 +0.4**
ECH Echery 77.64 341 *eP* **P** **04 05 48.4 -0.3**
ECH pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
ECH Echery 77.64 341 *eP* **P** **04 05 48.4 -0.3**
comp=Z,9.0nm,0.9s,mb4.7
MEZF Maizieres J'vi 77.77 343 *eP* **P** **04 05 49.8 +0.3**
comp=Z,23nm,0.9s,mb4.8
MEZF Maizieres J'vi 77.77 343 *eP* **P** **04 05 49.8 +0.3**
comp=Z,23nm,0.9s,mb5.1
FELD Feldberg im Sc 77.79 341 *eP* **P** **04 05 49.7 +0.1**
ABTA Abfaltersbach 77.85 337⇑ *iP* **P** **04 05 49.7 -0.2**
comp=Z,14nm,1.0s,mb4.8,SNR=10
THEF They Montfort 77.86 342 *eP* **P** **04 05 50.7 +0.8**
THEF They Montfort 77.86 342 *eP* **P** **04 05 50.3 +0.4**
PTCC Patocco-Chiusa 77.96 337 P **P** **04 05 50.6 0.0**
MOF Molkenrain 77.99 341 *eP* **P** **04 05 50.6 -0.1**
HAU Haudompre 78.00 342 *eP* **P** **04 05 50.7 0.0**
comp=Z,12nm,0.8s,mb4.6
HAU Haudompre 78.00 342 *eP* **P** **04 05 50.7 0.0**
HAU pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
HAU Haudompre 78.00 342 *eP* **P** **04 05 50.7 0.0**
comp=Z,5.8nm,0.8s,mb4.6
HINF Hinteralfeld 78.08 341 *eP* **P** **04 05 51.0 -0.2**
comp=Z,8.7nm,0.9s,mb4.4
HINF Hinteralfeld 78.08 341 *eP* **P** **04 05 51.0 -0.2**
HINF pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
HINF Hinteralfeld 78.08 341 *eP* **P** **04 05 51.0 -0.2**
comp=Z,4.3nm,0.9s,mb4.4
ASAR Alice Springs 78.23 204 P **P** **04 05 51.7 -0.5**
comp=Z,1.4nm,0.8s,mb4.0,baz=15,slow=5.4,SNR=17
BOJS Bojanci 78.31 335 *iP* **P** **04 05 52.6 +0.1**
APPI Appiano 78.40 338 P **P** **04 05 52.8 -0.2**
FLN La Foliniere 78.43 346 *eP* **P** **04 05 52.9 -0.2**
comp=Z,17nm,0.9s,mb4.7
FLN La Foliniere 78.43 346 *eP* **P** **04 05 52.9 -0.2**
FLN pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
FLN La Foliniere 78.43 346 *eP* **P** **04 05 52.9 -0.2**
comp=Z,8.4nm,0.9s,mb4.7
LDF La Druitiere 78.55 346 *eP* **P** **04 05 53.8 +0.1**
comp=Z,18nm,1.1s,mb4.6
LDF La Druitiere 78.55 346 *eP* **P** **04 05 53.8 +0.1**
LDF pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
LDF La Druitiere 78.55 346 *eP* **P** **04 05 53.8 +0.1**
comp=Z,8.8nm,1.1s,mb4.6
VTS Vitosha 78.63 328 *iP* **P** **04 05 54.3 0.0**
GRR Gorron 78.85 347 *eP* **P** **04 05 55.5 +0.1**
comp=Z,18nm,0.9s,mb4.7
GRR Gorron 78.85 347 *eP* **P** **04 05 55.5 +0.1**
GRR pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
GRR Gorron 78.85 347 *eP* **P** **04 05 55.5 +0.1**
comp=Z,9.3nm,0.9s,mb4.7
LOR Lormes 79.17 343 *eP* **P** **04 05 57.2 0.0**
comp=Z,15nm,0.7s,mb4.7
LOR Lormes 79.17 343 *eP* **P** **04 05 57.2 0.0**
LOR pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
LOR Lormes 79.17 343 *eP* **P** **04 05 57.2 0.0**
comp=Z,7.4nm,0.7s,mb4.7
SGMF Saint Gilles 79.22 348 *eP* **P** **04 05 57.3 -0.2**
comp=Z,12nm,0.8s,mb4.6
SGMF Saint Gilles 79.22 348 *eP* **P** **04 05 57.3 -0.2**
SGMF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
SGMF Saint Gilles 79.22 348 *eP* **P** **04 05 57.3 -0.2**
comp=Z,6.1nm,0.8s,mb4.6
ROSF Rostrenen 79.23 348 *eP* **P** **04 05 58.2 +0.7**
comp=Z,37nm,1.3s,mb4.9
ROSF Rostrenen 79.23 348 *eP* **P** **04 05 58.2 +0.7**
ROSF pmax pmax
comp=Z,18nm,1.3s,mb4.8
ROSF Rostrenen 79.23 348 *eP* **P** **04 05 58.2 +0.7**
comp=Z,18nm,1.3s,mb4.8
MMB Musomiste 79.35 328 *eP* **P** **04 05 57.2 -1.1**
CABF La Chapelle 79.39 341 *eP* **P** **04 05 58.6 +0.2**
comp=Z,24nm,1.3s,mb4.7
CABF La Chapelle 79.39 341 *eP* **P** **04 05 58.6 +0.2**
CABF pmax pmax
comp=Z,12nm,1.3s,mb4.7
CABF La Chapelle 79.39 341 *eP* **P** **04 05 58.6 +0.2**
comp=Z,12nm,1.3s,mb4.7
HYF Humbligny 79.39 344 *eP* **P** **04 05 58.9 +0.5**
SSF Saint Saulge 79.44 343 *eP* **P** **04 05 58.7 0.0**
comp=Z,13nm,0.7s,mb4.6
SSF Saint Saulge 79.44 343 *eP* **P** **04 05 58.7 0.0**
SSF pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
SSF Saint Saulge 79.44 343 *eP* **P** **04 05 58.7 0.0**
comp=Z,6.4nm,0.7s,mb4.7
QUIF Quistinic 79.63 348 *eP* **P** **04 05 59.4 -0.3**
comp=Z,29nm,1.1s,mb4.8
QUIF Quistinic 79.63 348 *eP* **P** **04 05 59.4 -0.3**
QUIF pmax pmax
comp=Z,14nm,1.1s,mb4.8
QUIF Quistinic 79.63 348 *eP* **P** **04 05 59.4 -0.3**
comp=Z,14nm,1.1s,mb4.8
AVF Avril sur Loir 79.73 343 *eP* **P** **04 06 00.4 +0.2**
comp=Z,24nm,0.9s,mb4.8
AVF Avril sur Loir 79.73 343 *eP* **P** **04 06 00.4 +0.2**
AVF pmax pmax
comp=Z,12nm,0.9s,mb4.8
AVF Avril sur Loir 79.73 343 *eP* **P** **04 06 00.4 +0.2**
comp=Z,12nm,0.9s,mb4.8
SMF Signal de Mont 79.78 343 *eP* **P** **04 06 00.7 +0.2**
comp=Z,19nm,1.1s,mb4.6
SMF Signal de Mont 79.78 343 *eP* **P** **04 06 00.7 +0.2**
SMF pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
SMF Signal de Mont 79.78 343 *eP* **P** **04 06 00.7 +0.2**
comp=Z,9.3nm,1.1s,mb4.6
BGF Bois d'Agland 80.04 344 *eP* **P** **04 06 02.1 +0.2**
comp=Z,13nm,0.8s,mb4.6
BGF Bois d'Agland 80.04 344 *eP* **P** **04 06 02.1 +0.2**
BGF pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
BGF Bois d'Agland 80.04 344 *eP* **P** **04 06 02.1 +0.2**
comp=Z,6.5nm,0.8s,mb4.6
LPL La Plagne 80.30 341 *eP* **P** **04 06 04.3 +0.9**
comp=Z,20nm,0.9s,mb4.7
LPL La Plagne 80.30 341 *eP* **P** **04 06 04.3 +0.9**
LPL pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
LPL La Plagne 80.30 341 *eP* **P** **04 06 04.3 +0.9**
comp=Z,9.9nm,0.9s,mb4.7
LPG La Plagne 80.32 341 *eP* **P** **04 06 04.4 +0.9**
comp=Z,18nm,0.9s,mb4.7
LPG La Plagne 80.32 341 *eP* **P** **04 06 04.4 +0.9**
LPG pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
LPG La Plagne 80.32 341 *eP* **P** **04 06 04.4 +0.9**
comp=Z,9.1nm,0.9s,mb4.7
TCF Toulx Ste Croi 80.41 344 *eP* **P** **04 06 04.5 +0.6**
comp=Z,16nm,0.9s,mb4.7
TCF Toulx Ste Croi 80.41 344 *eP* **P** **04 06 04.5 +0.6**
TCF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
TCF Toulx Ste Croi 80.41 344 *eP* **P** **04 06 04.5 +0.6**
comp=Z,8.0nm,0.9s,mb4.7
PLDF La Plantade 80.47 343 *eP* **P** **04 06 06.5 +2.2**
PLDF La Plantade 80.47 343 *eP* **P** **04 06 06.8 +2.5**
AGO Saint Agoulin 80.48 343 *eP* **P** **04 06 06.5 +2.2**
AGO Saint Agoulin 80.48 343 *eP* **P** **04 06 06.2 +1.9**
MFF Saint Martin d 80.49 346 *eP* **P** **04 06 04.8 +0.4**
comp=Z,10nm,0.8s,mb4.5
MFF Saint Martin d 80.49 346 *eP* **P** **04 06 04.8 +0.4**
MFF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
MFF Saint Martin d 80.49 346 *eP* **P** **04 06 04.8 +0.4**
comp=Z,5.2nm,0.8s,mb4.5
FSSB Fossombrone 80.64 336 P **P** **04 06 07.6 +2.4**
BNI Bardonecchia 80.76 341 *eP* **P** **04 06 05.4 -0.4**
BNI pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
BNI Bardonecchia 80.76 341 *eP* **P** **04 06 05.4 -0.4**
comp=Z,5.1nm,0.8s,mb4.5
PYM Petit Puy Mans 80.79 343 *eP* **P** **04 06 08.2 +2.2**
PYM Petit Puy Mans 80.79 343 *eP* **P** **04 06 08.7 +2.7**
SNTG Esanatoglia 81.20 336 P **P** **04 06 07.8 +0.6**
comp=Z,15nm,1.0s,mb4.9
VIVF Saint-Julien-I 81.35 342 *eP* **P** **04 06 09.0 0.0**
comp=Z,8.7nm,0.8s,mb4.5
VIVF Saint-Julien-I 81.35 342 *eP* **P** **04 06 09.0 0.0**
VIVF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
VIVF Saint-Julien-I 81.35 342 *eP* **P** **04 06 09.0 0.0**
comp=Z,4.3nm,0.8s,mb4.4
NRCA Norcia 81.36 335 P **P** **04 06 09.9 +0.8**
comp=Z,38nm,0.9s,mb5.3

TERO	**Teramo**	**81.43 335**	P	**P**	**04 06 09.8**	**+0.4**
	comp=Z,14nm,0.8s,mb5.0					
RJF	**Les Rejaudoux**	**81.48 344**	*e*P	**P**	**04 06 10.1**	**+0.4**
	comp=Z,21nm,1.0s,mb4.7					
RJF	**Les Rejaudoux**	**81.48 344**	*e*P	**P**	**04 06 10.1**	**+0.4**
RJF			pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7					
RJF	**Les Rejaudoux**	**81.48 344**	*e*P	**P**	**04 06 10.1**	**+0.4**
	comp=Z,10nm,1.0s,mb4.7					
MGAB	**Montegabbione**	**81.54 336**	P	**P**	**04 06 10.3**	**+0.3**
	comp=Z,10nm,0.7s,mb4.9					
CSS	**Prodhromos**	**81.54 318**	*e*P	**P**	**04 06 09.0**	**-1.1**
	comp=Z,19nm,1.0s,mb5.0					
AQU	**L'Aquila**	**81.73 335**	*e*P	**P**	**04 06 11.3**	**+0.2**
AQU			pmax	pmax		
	comp=Z,35nm,1.1s,mb5.2					
AQU	**L'Aquila**	**81.73 335**	*e*P	**P**	**04 06 11.2**	**+0.2**
	comp=Z,35nm,1.1s,mb5.2					
AQU	**L'Aquila**	**81.73 335**	⇑*i*P	**P**	**04 06 12.8**	**+1.8**
CAF	**Calviac**	**81.76 344**	*e*P	**P**	**04 06 11.7**	**+0.6**
	comp=Z,14nm,0.8s,mb4.6					
CAF	**Calviac**	**81.76 344**	*e*P	**P**	**04 06 11.7**	**+0.6**
CAF			pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6					
CAF	**Calviac**	**81.76 344**	*e*P	**P**	**04 06 11.7**	**+0.6**
	comp=Z,6.8nm,0.8s,mb4.6					
RGNG	**Rignano Grg**	**81.78 333**	P	**P**	**04 06 12.2**	**+0.9**
FIAM	**Fiamignano**	**81.89 335**	P	**P**	**04 06 12.4**	**+0.5**
	comp=Z,19nm,0.9s,mb5.0					
LFF	**La Frestale**	**81.97 345**	*e*P	**P**	**04 06 12.7**	**+0.5**
	comp=Z,27nm,1.0s,mb4.8					
LFF	**La Frestale**	**81.97 345**	*e*P	**P**	**04 06 12.7**	**+0.5**
LFF			pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8					
LFF	**La Frestale**	**81.97 345**	*e*P	**P**	**04 06 12.7**	**+0.5**
	comp=Z,13nm,1.0s,mb4.8					
CIGN	**Sant'Elia a Pi**	**81.98 334**	P	**P**	**04 06 12.3**	**-0.1**
SDI	**San Donato**	**82.23 335**	P	**P**	**04 06 13.8**	**+0.1**
LASF	**Ste Croix**	**82.25 342**	*e*P	**P**	**04 06 13.5**	**-0.2**
	comp=Z,19nm,1.1s,mb4.7					
MMAI	**Mount Meron Ar**	**82.32 315**	P	**P**	**04 06 14.9**	**+0.6**
	comp=Z,9.5nm,0.5s,mb5.0,baz=35,slow=7.4,SNR=23					
TIP	**Timpagrande**	**83.75 332**	*e*P	**P**	**04 06 22.9**	**+1.3**
	comp=Z,18nm,1.1s,mb5.1					
EPF	**Esparros**	**83.89 345**	*e*P	**P**	**04 06 22.1**	**-0.1**
	comp=Z,9.0nm,0.9s,mb4.6					
EPF	**Esparros**	**83.89 345**	*e*P	**P**	**04 06 22.1**	**-0.1**
EPF			pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6					
EPF	**Esparros**	**83.89 345**	*e*P	**P**	**04 06 22.1**	**-0.1**
	comp=Z,4.5nm,0.9s,mb4.6					
SJPF	**Ste Jean**	**84.06 346**	*e*P	**P**	**04 06 22.8**	**-0.3**
	comp=Z,23nm,1.2s,mb4.9					
SJPF	**Ste Jean**	**84.06 346**	*e*P	**P**	**04 06 22.8**	**-0.3**
SJPF			pmax	pmax		
	comp=Z,12nm,1.2s,mb4.9					
SJPF	**Ste Jean**	**84.06 346**	*e*P	**P**	**04 06 22.8**	**-0.3**
	comp=Z,12nm,1.2s,mb4.9					
WDD	**Wield Dalam**	**87.47 332**	*e*P	**P**	**04 06 41.6**	**+1.5**
	comp=Z,54nm,0.9s					
ESDC	**Sonseca Array**	**87.83 347**	P	**P**	**04 06 40.7**	**-1.1**
	comp=Z,0.8nm,0.7s,mb4.1,baz=11,slow=4.5,SNR=6.9					
KEST	**Kesra**	**89.02 336**	P	**P**	**04 06 48.8**	**+1.4**
	comp=Z,4.6nm,0.8s,mb4.9,baz=67,slow=7.7,SNR=16					
CART	**Cartagena**	**89.42 344**	*e*P	**P**	**04 06 49.1**	**-0.2**
	comp=Z,37nm,0.9s,mb5.7					
PLCA	**Paso Flores**	**144.55 92**	PKP	PKPdf	04 13 26.3	-2.0
	comp=Z,1.1nm,0.7s,baz=321,slow=6.5,SNR=3.5					

*NEIC **01** 04:23:42.8±3.4, 5°.91S×130°.50E, h96km±32km, Error ellipse: s-maj=29.8km s-min=25.4km az=197.0*
*ISCJB **01** 04:23:42.7±0.6, 5°.98S±0°.05×130°.58E±0°.07, h107km±12km, mb3.8/2, Error ellipse: s-maj=12.6km s-min=6.9km az=147.2*
*DJA **01** 04:23:49, 5°.38S×130°.92E, h110km, MLv4.6/3*
*IDC **01** 04:23:58.1±6.5, 6°.23S×130°.38E, h246km±70km, mb3.5/2, mb1 3.6/3, mb1mx3.1/15, mbtmp3.5/3, Error ellipse: s-maj=136.8km s-min=18.4km az=71.0*

ISC 01 04:23:43.7±0.6, 5°.99S±0°.05×130°.57E±0°.06, h98km±12km, n19, σ1°.30/32, mb3.8/2, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**2.18**	**81**	P	**Pn**	**04 24 20.2**	**+1.6**
TLE				S	**Sn**	**04 24 44.2**	**-1.1**
MSAI	**Masohi**	**3.10**	**328**	P	**Pn**	**04 24 33.0**	**+2.2**
MSAI				S	**Sn**	**04 25 06.3**	**-0.8**
NLAI	**Namlea**	**4.41**	**308**	P	**Pn**	**04 24 56.9**	**+8.4**
NLAI				S	**Sn**	**04 25 46.1**	**+7.3**
SWI	**Sorong**	**5.14**	**8**	P	**Pn**	**04 24 56.1**	**-2.3**
SWI				S	**Sn**	**04 25 48.6**	**-7.9**
LBMI	**Labuha**	**6.14**	**330**	P	**Pn**	**04 25 12.6**	**+0.6**
KAKA	**Kakadu** 69nm,0.3s	**6.92**	**165**	*e*P	**Pn**	**04 25 24.2**	**+1.6**
KAKA				*e*S	**Sn**	**04 26 38.8**	**-1.1**
KAKA	**Kakadu** 168nm,0.3s	**6.92**	**165**	*e*Pn	**Pn**	**04 25 24.1**	**+1.4**
KAKA				*e*Sn	**Sn**	**04 26 38.2**	**-1.7**
KNA	**Kununurra** 84nm,0.3s	**9.86**	**190**	*e*P	**Pn**	**04 26 03.7**	**+1.2**
KNA				*e*S	**Sn**	**04 27 47.2**	**-4.1**
FITZ	**Fitzroy Crossi** 19nm,0.2s	**12.96**	**201**	*e*P	**Pn**	**04 26 42.6**	**-1.6**
FITZ				*e*S	**Sn**	**04 28 57.8**	**-9.0**
FITZ	**Fitzroy Crossi** 11nm,0.4s	**12.96**	**201**	*e*Pn	**Pn**	**04 26 42.9**	**-1.3**
FITZ				*e*Sn	**Sn**	**04 29 01.4**	**-5.4**
WRAB	**Tennant Creek** 15nm,0.6s	**14.33**	**166**	*e*Pn	**Pn**	**04 27 02.0**	**-0.1**
WRAB				*e*Sn	**Sn**	**04 29 29.7**	**-10**
COEN	**Coen**	**14.71**	**123**	*e*P	**Pn**	**04 27 06.2**	**-0.8**
COEN				*e*S	**Sn**	**04 29 34.8**	**-14**
COEN	**Coen** 33nm,0.4s	**14.71**	**123**	*e*Pn	**Pn**	**04 27 06.6**	**-0.4**
COEN				*e*Sn	**Sn**	**04 29 37.0**	**-12**
ASAR	**Alice Springs** 2.1nm,0.3s,baz=349,slow=9.2,SNR=75	**17.86**	**170**	P	**Pn**	**04 27 47.2**	**+1.3**
ASAR				S	**S**	**04 30 58.5**	**-6.8**
MTSU	**Mount Surprise** 51nm,1.4s	**18.04**	**133**	*e*P	**Pn**	**04 27 49.6**	**+1.4**
STKA	**Stephens Creek** 0.9nm,0.3s,mb3.8	**27.74**	**160**	*e*P	**P**	**04 29 23.7**	**+0.6**
STKA	**Stephens Creek** 1.1nm,0.3s,mb3.8,baz=329,slow=8.3,SNR=9.6	**27.74**	**160**	P	**P**	**04 29 22.9**	**-0.1**
MKAR	**Makanchi Array** 0.9nm,0.5s,mb3.8,baz=111,slow=8.2,SNR=7.3	**67.70**	**326**	P	**P**	**04 34 29.5**	**-1.0**
MKAR	**Makanchi Array**	**67.70**	**326**	P	**P**	**04 34 29.5**	**-1.0**

MEX 01 04:35:46.6±0.5, 14°.44N×92°.51W, h53km±8km, MD4.2, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.52**	**27**	*i*P	Pn	04 35 56.5	-1.8
THIG				*i*S	Sn	04 36 05.3	-1.5
PCIG		**1.43**	**332**	*e*P	Pn	04 36 08.8	-1.4
PCIG				*i*S	Sn	04 36 25.7	-2.3
CCIG	**Comitan**	**1.87**	**11**	*e*P	Pn	04 36 14.9	-1.3
CCIG				*i*S	Sn	04 36 36.5	-2.1
SCX	**San Cristobal**	**2.29**	**357**	*i*P	Pn	04 36 21.5	-0.4
SCX				*i*S	Sn	04 36 46.2	-2.7
TGIG		**2.40**	**346**	*e*P	Pn	04 36 22.1	-1.3
TGIG				*i*S	Sn	04 36 49.9	-1.7
HUIG	**Huatulco**	**3.72**	**291**	*i*P	Pn	04 36 41.6	0.0
HUIG				*i*S	Sn	04 37 22.5	-1.6
VHO	**Vista Hermosa**	**4.83**	**303**	*i*P	Pn	04 36 55.8	-1.1
VHO				*i*S	Sn	04 37 50.7	-0.9
PNIG	**Pinotepa**	**5.75**	**290**	*e*P	Pn	04 37 10.2	+0.7
PNIG				*i*S	Sn	04 38 13.7	-0.4

*ISCJB **01** 04:47:37.9±0.6, 10°.99N±0°.04×87°.59W±0°.04, h39km±5km, mb4.1/45, MS4.2/2, Error ellipse: s-maj=8.7km s-min=3.1km az=40.0*
*CASC **01** 04:47:38.2±1.8, 10°.98N×87°.61W, h37km±999km, MD4.3, ML4.3, mb4.2(NEIC)*
*IDC **01** 04:47:40.0±1.6, 10°.98N×87°.50W, h49km±14km, mb3.8/15, mb1 4.0/19, mb1mx3.9/27, mbtmp3.8/19, ML3.7/4, MS2.9/1, Ms1 2.9/1, ms1mx2.6/32, Error ellipse: s-maj=22.0km s-min=9.7km az=39.0*

*NEIC **01** 04:47:40.4±1.2, 11°.04N×87°.48W, h47km±10km, mb4.2/34, Error ellipse: s-maj=15.2km s-min=6.3km az=225.0*

ISC 01 04:47:39.8±0.5, 11°.09N±0°.04×87°.51W±0°.04, h36km±5km, n210, σ0°.92/219, mb4.1/45, MS4.2/2, 58C-41D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**1.41**	**40**	*e*P	**Pn**	**04 48 03.5**	**+0.5**
CRUN	**El Crucero**	**1.48**	**53**	*e*P	**Pn**	**04 48 05.0**	**+1.0**
CSAN		**1.52**	**44**	*e*P	**Pn**	**04 48 04.8**	**+0.2**
MIRN	**Miramar**	**1.56**	**30**	*e*P	**Pn**	**04 48 05.4**	**+0.4**
TICN	**Ticuantepe**	**1.57**	**53**	*e*P	**Pn**	**04 48 05.8**	**+0.6**
XAVN	**Gruta Xavier**	**1.57**	**48**	*e*P	**Pn**	**04 48 05.5**	**+0.3**
MASN	**Masaya**	**1.60**	**56**	*e*P	**Pn**	**04 48 06.0**	**+0.2**
APYN	**Apoyeque**	**1.61**	**45**	*e*P	**Pn**	**04 48 06.2**	**+0.4**
CNGN	**Cerro Negro**	**1.61**	**30**	*e*P	**Pn**	**04 48 06.1**	**+0.2**
CNGN				*e*S	**Sn**	**04 48 23.9**	**-1.5**
CNGN				AML	AML	04 48 31.4	
	comp=N,3μm,0.5s						
MOMN	**Momotombo**	**1.62**	**36**	*e*P	**Pn**	**04 48 06.7**	**+0.7**
MGAN	**Managua**	**1.63**	**50**	*e*P	**Pn**	**04 48 06.3**	**+0.3**
MGAN				*e*S	**Sn**	**04 48 30.5**	**+4.8**
APON	**Apoyo**	**1.64**	**60**	*e*P	**Pn**	**04 48 07.2**	**+1.0**
SSN	**San Juan del S**	**1.64**	**82**	*e*P	**Pn**	**04 48 06.1**	**-0.1**
TELN	**Telica**	**1.65**	**24**	*e*P	**Pn**	**04 48 06.9**	**+0.6**
HUEN		**1.81**	**46**	*e*P	**Pn**	**04 48 08.8**	**+0.3**
CONN	**Concepcion**	**1.91**	**75**	*e*P	**Pn**	**04 48 10.2**	**+0.3**
NY14	**Universidad de**	**1.99**	**102**	⇑*i*P	**Pn**	**04 48 10.9**	**-0.1**
NY14				*i*S	**Sn**	**04 48 36.2**	**+1.4**
GBS3	**Finca Las Im¨¡**	**2.04**	**98**	*i*P	**Pn**	**04 48 11.3**	**-0.4**
LAPC	**Finca la Perla**	**2.07**	**99**	⇑*i*P	**Pn**	**04 48 11.6**	**-0.5**
LAPC				*i*S	**Sn**	**04 48 36.9**	**+0.3**
VCR	**Vista de Mar**	**2.08**	**117**	⇑*e*P	**Pn**	**04 48 10.5**	**-1.8**
BUEV	**Buena Vista**	**2.09**	**98**	*i*P	**Pn**	**04 48 12.1**	**-0.2**
GB1A	**Borinquen Arri**	**2.09**	**97**	*i*P	**Pn**	**04 48 12.4**	**0.0**
A495	**El Viejo**	**2.13**	**109**	⇑*i*P	**Pn**	**04 48 12.0**	**-1.0**
GPS1	**Guardaparques**	**2.15**	**98**	⇑*i*P	**Pn**	**04 48 12.9**	**-0.2**
GPS2	**Hotel Rinc¨‡n**	**2.15**	**99**	⇑*i*P	**Pn**	**04 48 13.0**	**-0.2**
GPS2				*i*S	**Sn**	**04 48 39.7**	**+1.1**
CNCH	**Conchagua**	**2.20**	**352**	*e*P	**Pn**	**04 48 13.3**	**-0.6**
CNCH				*e*S	**Sn**	**04 48 37.4**	**-2.5**
LIM1	**Limonal**	**2.25**	**100**	⇑*i*P	**Pn**	**04 48 14.4**	**-0.2**
LIM1				*i*S	**Sn**	**04 48 42.1**	**+0.9**
COLC	**Colonia**	**2.31**	**100**	*i*P	**Pn**	**04 48 15.3**	**-0.1**
CUI	**Cuipilapa**	**2.35**	**100**	*i*P	**Pn**	**04 48 15.8**	**-0.1**
VSM	**San Miguel**	**2.44**	**342**	*e*P	**Pn**	**04 48 18.9**	**+1.6**
BLLM	**Bellamira**	**2.44**	**343**	*e*P	**Pn**	**04 48 16.2**	**-1.1**
JTS	**JuntasAbangare**	**2.64**	**107**	P	**Pn**	**04 48 19.3**	**-0.6**
	comp=N,35nm,0.3s,baz=305,slow=20,SNR=147						
JTS				S	**Sn**	**04 48 50.6**	**-0.1**
	comp=N,111nm,0.3s,baz=306,slow=20,SNR=15						
JTS				LR	LR	04 49 23.0	
	comp=N,231nm,20.9s,baz=117,slow=40						
JTS	**JuntasAbangare**	**2.64**	**107**	*e*Pn	**Pn**	**04 48 19.1**	**-0.9**
JTS				*e*Sn	**Sn**	**04 48 51.6**	**+0.9**
JTS	**JuntasAbangare**	**2.64**	**107**	*e*P	**Pn**	**04 48 18.9**	**-1.0**
JCR	**Jicaral**	**2.66**	**117**	⇑*e*P	**Pn**	**04 48 19.3**	**-0.9**
JCR				*e*S	**Sn**	**04 48 50.4**	**-1.0**
CAHU	**Cacacuatique**	**2.75**	**346**	*e*P	**Pn**	**04 48 21.2**	**-0.3**
CAHU				*e*S	**Sn**	**04 48 51.5**	**-2.0**
SNVI	**San Vicente**	**2.82**	**333**	*e*P	**Pn**	**04 48 22.2**	**-0.3**
TGUH	**Tegucigalpa,Un**	**2.96**	**4**	*e*Pn	**Pn**	**04 48 24.4**	**+0.1**
TGUH	**Tegucigalpa,Un**	**2.96**	**4**	*e*P	**Pn**	**04 48 24.6**	**+0.2**
TGUH				AML	AML	04 49 03.0	
	comp=N,3μm,0.7s						
BOQS	**Boqueron**	**3.15**	**327**	*e*P	**Pn**	**04 48 25.6**	**-1.3**
BOQS				*e*S	**Sn**	**04 49 00.7**	**-2.6**
CGA2	**Cerro Gallo 2**	**3.18**	**109**	⇑*e*P	**Pn**	**04 48 27.6**	**+0.3**
CGA2				*e*S	**Sn**	**04 49 03.2**	**-0.9**
SBLS	**San Blas**	**3.42**	**323**	*e*P	**Pn**	**04 48 29.8**	**-1.0**
LAJ	**Bijagual**	**3.55**	**110**	*e*P	**Pn**	**04 48 27.7**	**-4.8**
SJS	**Escuela Geolog**	**3.59**	**108**	*e*P	**Pn**	**04 48 35.5**	**+2.5**
QCR	**Quepos**	**3.69**	**116**	⇓*e*P	**Pn**	**04 48 33.9**	**-0.5**
QCR				*e*S	**Sn**	**04 49 15.3**	**-1.3**
URSC	**Urasca**	**3.88**	**108**	*e*P	**Pn**	**04 48 38.2**	**+1.2**
URSC				*e*S	**Sn**	**04 49 25.1**	**+3.8**
BUS	**Buena Vista**	**4.00**	**112**	⇓*e*P	**Pn**	**04 48 39.7**	**+1.1**
BUS				*e*S	**Sn**	**04 49 25.1**	**+0.9**
BAR1		**4.52**	**114**	⇑*e*P	**Pn**	**04 48 46.5**	**+0.6**
BAR1				*e*S	**Sn**	**04 49 35.6**	**-1.7**
APG	**El Apazote**	**4.84**	**324**	P	**Pn**	**04 48 51.1**	**+0.9**
	comp=N,1.3nm,0.3s,baz=84,slow=12,SNR=8.9						
ACR	**Cerro Adams**	**4.92**	**119**	*e*P	**Pn**	**04 48 51.7**	**+0.4**
ACR				*e*S	**Sn**	**04 49 44.1**	**-2.9**
BCIP	**Isla Barro Col**	**7.79**	**103**	*e*Pn	**Pn**	**04 49 31.7**	**+0.8**
	comp=N,15nm,0.6s						
BCIP	**Isla Barro Col**	**7.79**	**103**	*e*P	**Pn**	**04 49 31.6**	**+0.8**
CMIG	**Matias Romero**	**9.31**	**311**	P	**Pn**	**04 49 51.1**	**-0.5**
	comp=N,1.0nm,0.3s,baz=106,slow=13,SNR=15						
ROSC	**El Rosal**	**14.44**	**114**	*e*Pn	**Pn**	**04 51 03.6**	**+1.8**
SDV	**Santo Domingo**	**16.77**	**96**	P	**Pn**	**04 51 32.7**	**+0.6**
	comp=N,0.2nm,0.3s,baz=309,slow=5.4,SNR=7.4						
SDV	**Santo Domingo**	**16.77**	**96**	*e*Pn	**Pn**	**04 51 33.5**	**+1.4**
	comp=N,6.6nm,0.6s						
HKT	**Hockley**	**20.30**	**339**	*e*P	**P**	**04 52 12.3**	**-0.4**
	comp=N,10nm,1.3s						
LRAL	**Lakeview Retre**	**21.85**	**1**	*e*P	**P**	**04 52 29.0**	**-0.3**
	comp=N,5.0nm,0.8s,mb4.0						
JCT	**Junction City**	**22.42**	**331**	*e*P	**P**	**04 52 34.4**	**-1.1**
	comp=N,4.3nm,0.8s,mb3.9						
PCRV	**Puerto La Cruz**	**22.50**	**90**	P	**P**	**04 52 37.6**	**+1.1**
	comp=N,7.6nm,0.5s,mb4.4,baz=263,slow=4.6,SNR=16						
GOGA	**Godfrey**	**22.53**	**9**	*e*P	**P**	**04 52 37.2**	**+0.7**
	comp=N,8.5nm,0.9s,mb4.2						
628A	**Black Gap, Mar** baz=23	**23.25**	**324**	⇑P	**P**	**04 52 43.4**	**-0.9**
627A	**Terlingua Ranc** baz=24,SNR=6.5	**23.52**	**323**	P	**P**	**04 52 46.5**	**-0.4**
TXAR	**Lajitas Array**	**23.60**	**323**	P	**P**	**04 52 47.5**	**0.0**
	comp=N,1.6nm,0.8s,mb3.5,baz=136,slow=9.5,SNR=14						
JSC	**Jenkinsville**	**23.78**	**13**	*e*P	**P**	**04 52 48.8**	**-0.4**
MIAR	**Mount Ida**	**24.00**	**348**	*e*P	**P**	**04 52 50.2**	**-0.9**
	comp=N,9.5nm,0.8s,mb4.3						
626A	**Big Bend Ranch** baz=24	**24.04**	**322**	⇑P	**P**	**04 52 51.5**	**-0.1**
428A	**Kincaid Ranch,** baz=24	**24.09**	**326**	⇓P	**P**	**04 52 52.5**	**+0.4**
CPCT	**Cooper Cave**	**24.40**	**6**	*e*P	**P**	**04 52 56.9**	**+2.1**
TKL	**Tuckaleechee C**	**24.69**	**7**	P	**P**	**04 52 58.4**	**+0.8**
	comp=N,9.9nm,1.0s,mb4.3,baz=176,slow=10,SNR=9.8						
TKL	**Tuckaleechee C**	**24.69**	**7**	*e*P	**P**	**04 52 58.1**	**+0.6**
326A	**Caldwell Ranch** baz=25	**25.25**	**325**	⇑P	**P**	**04 53 03.1**	**+0.4**
WMOK	**Wichita Mounta**	**25.69**	**338**	*e*P	**P**	**04 53 05.9**	**-0.6**
	comp=N,4.5nm,1.0s,mb4.0						
324A	**Moseley Ranch,** baz=26	**26.20**	**323**	⇑P	**P**	**04 53 10.5**	**-0.8**
MNTX	**Cornudas Mount**	**26.33**	**324**	*e*P	**P**	**04 53 12.7**	**+0.3**
	comp=N,1.0nm,0.8s,mb3.4						
MSTX	**Muleshoe** baz=27	**26.71**	**331**	⇓P	**P**	**04 53 14.3**	**-1.5**
Z26A	**Caprock** baz=27	**26.76**	**328**	⇑P	**P**	**04 53 15.6**	**-0.6**
Y27A	**Causey** baz=27,SNR=5.7	**26.83**	**330**	⇓P	**P**	**04 53 16.0**	**-0.9**
AMTX	**Amarillo**	**26.98**	**334**	*e*P	**P**	**04 53 18.1**	**-0.1**
	comp=N,20nm,1.0s,mb4.6						
CCM	**Cathedral Cave**	**27.06**	**354**	*e*P	**P**	**04 53 18.5**	**-0.4**
	comp=N,8.2nm,1.3s,mb4.1						
124A	**Stringfield Ra** baz=27	**27.11**	**325**	⇑P	**P**	**04 53 18.1**	**-1.4**
Y25A	**Mesa, Roswell** baz=28	**27.64**	**328**	⇑P	**P**	**04 53 24.4**	**+0.3**
X26A	**CR and CF Fran** baz=28	**27.69**	**330**	⇓P	**P**	**04 53 24.8**	**+0.2**
320A	**Kipp Ranch, An** baz=28	**28.00**	**319**	⇓P	**P**	**04 53 27.4**	**-0.1**
220A	**Playas Peak, P** baz=28,SNR=6.3	**28.38**	**320**	⇑P	**P**	**04 53 30.7**	**-0.1**
219A	**White Tail Can** baz=29	**28.91**	**319**	⇑P	**P**	**04 53 35.6**	**+0.1**
V25A	**Rancho No Teng** baz=29	**29.11**	**331**	⇓P	**P**	**04 53 37.3**	**0.0**
Y20A	**Horse Springs,** baz=30	**29.67**	**323**	⇓P	**P**	**04 53 43.5**	**+1.3**
X21A	**Alamocita Cree** baz=30	**29.71**	**325**	⇓P	**P**	**04 53 43.5**	**+0.9**
Z17A	**San Carlos Hig** baz=31	**30.53**	**320**	⇑P	**P**	**04 53 49.6**	**-0.2**
X19A	**St. Johns** baz=31	**30.57**	**323**	⇑P	**P**	**04 53 50.3**	**+0.1**
Y18A	**Canyon Day Jun** baz=31	**30.57**	**321**	⇑P	**P**	**04 53 50.8**	**+0.5**
Z16A	**Peralta Trail,** baz=31	**31.17**	**319**	⇑P	**P**	**04 53 56.1**	**+0.7**
X17A	**Forest Lakes** baz=32	**31.43**	**321**	⇓P	**P**	**04 53 58.6**	**+0.9**
114A	**Black Gap (USA** baz=32	**31.76**	**317**	⇓P	**P**	**04 54 01.8**	**+1.1**
X16A	**Lo Mia Camp, P** baz=32,SNR=6.6	**31.87**	**321**	⇓P	**P**	**04 54 01.8**	**+0.1**
V17A	**Tonalea, Kykot** baz=32,SNR=5.6	**32.29**	**323**	⇑P	**P**	**04 54 05.9**	**+0.6**
X15A	**Humboldt** baz=32	**32.42**	**320**	⇓P	**P**	**04 54 07.1**	**+0.7**
WUAZ	**Wupatki** baz=33	**32.56**	**322**	⇓P	**P**	**04 54 08.5**	**+0.8**
WUAZ	**Wupatki** comp=N,7.6nm,1.2s,mb4.5	**32.56**	**322**	*e*P	**P**	**04 54 10.1**	**+2.4**
S19A	**Harvey Farm, M** baz=33	**32.88**	**327**	⇑P	**P**	**04 54 11.7**	**+1.3**
V15A	**Kaibab Nationa** baz=33,SNR=8.3	**33.25**	**322**	⇑P	**P**	**04 54 14.2**	**+0.6**
T17A	**Navajo Res., N** baz=33	**33.25**	**325**	⇑P	**P**	**04 54 14.4**	**+0.7**
LPAZ	**La Paz** comp=N,1.8nm,0.8s,mb4.0,baz=327,slow=8.9,SNR=6.5	**33.28**	**144**	P	**P**	**04 54 12.4**	**-1.7**
LPAZ	**La Paz** comp=N,2.3nm,0.9s,mb4.1	**33.28**	**144**	*e*P	**P**	**04 54 13.4**	**-0.8**
W14A	**Seligman** baz=34	**33.41**	**320**	⇓P	**P**	**04 54 15.9**	**+0.7**
ECSD	**EROS Data Cent** comp=N,4.9nm,1.1s,mb4.3	**33.47**	**348**	*e*P	**P**	**04 54 13.4**	**-2.0**
X13A	**Yucca** baz=34	**33.51**	**319**	⇑P	**P**	**04 54 16.8**	**+0.9**
V14A	**Boquillas Ranc** baz=34,SNR=8.3	**33.70**	**321**	⇓P	**P**	**04 54 18.0**	**+0.4**
U15A	**North Rim** baz=34	**33.72**	**322**	⇑P	**P**	**04 54 18.9**	**+1.1**
W13A	**Hualapai Mount** baz=34,SNR=7.1	**33.85**	**319**	⇓P	**P**	**04 54 19.8**	**+0.9**
U14A	**Mt Trumbull** baz=34,SNR=5.7	**34.25**	**322**	⇑P	**P**	**04 54 23.5**	**+1.1**
V13A	**Grand Canyon W** baz=34,SNR=7.0	**34.39**	**320**	⇑P	**P**	**04 54 23.8**	**+0.2**
N20A	**Spence Gulch,** baz=35	**34.82**	**332**	⇑P	**P**	**04 54 28.0**	**+0.7**
V12A	**Nelson** baz=35,SNR=7.5	**34.86**	**319**	⇑P	**P**	**04 54 28.6**	**+0.9**
T13A	**Saint George** baz=35	**35.09**	**322**	⇑P	**P**	**04 54 29.7**	**+0.1**
CCUT	**Cedar City** comp=N,4.6nm,1.4s,mb4.2	**35.11**	**323**	*e*P	**P**	**04 54 32.7**	**+2.9**
S13A	**Holt Ranch, En** baz=36,SNR=5.3	**35.43**	**323**	⇑P	**P**	**04 54 32.5**	**-0.1**
O17A	**Robinson Place** baz=36	**35.53**	**329**	⇓P	**P**	**04 54 33.9**	**+0.5**
RRX	**Edison Barstow** baz=36	**35.78**	**316**	⇓P	**P**	**04 54 35.7**	**0.0**
RSSD	**Black Hills** comp=N,1.7nm,0.8s,mb4.0	**35.87**	**340**	*e*P	**P**	**04 54 36.5**	**+0.2**
O16A	**Springville** baz=36	**35.94**	**328**	⇓P	**P**	**04 54 37.6**	**+0.7**
DUG	**Dugway** comp=N,1.0nm,0.8s,mb3.7	**36.62**	**327**	*e*P	**P**	**04 54 44.0**	**+1.3**
BW06	**Boulder Array** comp=N,1.5nm,1.0s,mb3.8	**36.94**	**333**	*e*P	**P**	**04 54 45.0**	**-0.5**
PDAR	**Pinedale Array** comp=N,1.0nm,1.0s,mb3.6,baz=120,slow=9.0,SNR=5.4	**36.94**	**333**	P	**P**	**04 54 45.0**	**-0.4**
PDAR				PcP	PcP	04 57 05.8	-0.5
	comp=N,0.7nm,0.8s,baz=124,slow=4.8,SNR=4.0						
HWUT	**Hardware Ranch** comp=N,3.8nm,1.0s,mb4.2	**37.00**	**329**	*e*P	**P**	**04 54 46.9**	**+0.9**
K18A	**Toltan Ranch,** baz=37,SNR=6.5	**37.06**	**332**	⇑P	**P**	**04 54 46.1**	**-0.4**
L16A	**Fish Haven** baz=37	**37.24**	**330**	⇑P	**P**	**04 54 47.6**	**-0.4**
S10A	**Tonopah Range,** baz=37,SNR=7.0	**37.31**	**321**	⇓P	**P**	**04 54 49.4**	**+0.8**
Q11A	**Duckwater** baz=37	**37.32**	**323**	⇑P	**P**	**04 54 49.6**	**+0.9**
M15A	**Laren Ranch,** baz=38	**37.34**	**329**	⇓P	**P**	**04 54 49.0**	**+0.1**
R10A	**Warm Springs** baz=38	**37.36**	**321**	⇑P	**P**	**04 54 50.0**	**+1.0**
J18A	**Kendall Valley** baz=38,SNR=6.5	**37.50**	**333**	⇑P	**P**	**04 54 49.5**	**-0.6**
L15A	**Malad City** baz=38	**37.71**	**329**	⇑P	**P**	**04 54 52.1**	**+0.1**
AGMN	**Agassiz Nation** comp=N,3.9nm,0.8s,mb4.2	**37.74**	**351**	*

baz=42
MSO Missoula 42.06 333 *e*P **P** 04 55 27.9 -0.1
comp=N,5.3nm,1.3s,mb4.0
G11A Walters Elk Ra 42.11 330 ⇓P **P** 04 55 27.6 -0.8
baz=42
A17A Triple J Farms 42.39 337 ⇑P **P** 04 55 29.6 -1.1
baz=42
G10A Bishop Farm, J 42.46 329 ⇓P **P** 04 55 30.5 -0.8
baz=43
E12A Beaver Dam Sad 42.50 331 ⇓P **P** 04 55 31.2 -0.4
baz=43
B15A Bradely Ranch, 42.62 335 ⇓P **P** 04 55 31.8 -0.7
baz=43
A15A Johnson Ranch, 43.21 336 ⇑P **P** 04 55 37.2 -0.2
baz=43
A14A Double T Ranch 43.49 335 ⇓P **P** 04 55 39.6 0.0
baz=44,SNR=6.0
H04A Detroit Lake 44.78 325 ⇓P **P** 04 55 49.9 -0.1
baz=45
SCHQ Schefferville 46.59 16 P **P** 04 56 01.9 -2.2
comp=N,2.5nm,0.5s,mb4.4,baz=212,slow=5.2,SNR=12
SCHQ PcP PcP 04 57 37.3 -0.4
comp=N,1.8nm,0.5s,baz=179,slow=4.3,SNR=3.6
CPUP Villa Florida 47.38 142 P **P** 04 56 07.9 -2.8
comp=N,1.6nm,0.7s,mb4.0,baz=312,slow=15,SNR=5.5
PLCA Paso Flores 53.89 164 P **P** 04 56 57.3 -2.3
comp=N,4.7nm,0.9s,mb4.4,baz=351,slow=8.9,SNR=9.3
PLCA Paso Flores 53.89 164 *e*P **P** 04 56 57.5 -2.0
comp=N,3.9nm,0.7s,mb4.5
YKA Yellowknife Ar 54.90 345 P **P** 04 57 05.2 -1.4
comp=N,1.3nm,0.8s,mb4.0,baz=140,slow=7.6,SNR=24
YKA PcP PcP 04 58 07.8 -0.4
comp=N,1.2nm,0.8s,baz=144,slow=4.2,SNR=11
YKA Yellowknife Ar 54.90 345 P **P** 04 57 05.2 -1.4
YKA PcP PcP 04 58 07.8 -0.5
DLBC Dease Lake 57.11 335 *e*P **P** 04 57 23.6 +1.1
INK Inuvik 64.48 343 *e*P **P** 04 58 12.4 0.0
EGAK Eagle 65.04 338 *e*P **P** 04 58 16.2 0.0
KTH Kantishna Hill 68.43 334 *e*P **P** 04 58 37.0 -0.8
comp=N,9.6nm,1.0s,mb4.8
BPAW Bear Paw Mtn. 68.64 335 *e*P **P** 04 58 38.6 -0.5
comp=N,9.8nm,1.0s,mb4.7
COLD Coldfoot 69.43 338 *e*P **P** 04 58 44.4 +0.5
comp=N,7.7nm,1.0s,mb4.6
COLD *e*pP pP 04 58 52.7 -2.3
ESDC Sonseca Array 78.08 52 P **P** 04 59 34.2 -0.9
comp=N,0.1nm,0.4s,mb3.1,baz=287,slow=6.1,SNR=3.2
DBIC Dimbokro 81.56 85 P **P** 04 59 54.0 -0.6
comp=N,3.3nm,0.9s,mb4.3,baz=5.6,slow=2.6,SNR=3.2
NOA NORSAR Array B 84.58 29 P **P** 05 00 07.2 -2.1
comp=N,0.2nm,0.6s,mb3.5,baz=222,slow=9.9,SNR=2.3
TORD Torodi Ar. Bea 86.77 77 P **P** 05 00 19.3 -1.7
comp=N,0.4nm,0.6s,mb3.8,baz=299,slow=4.7,SNR=4.1
TIXI Tiksi 93.96 349 *e*P **P** 05 00 52.9 -0.7
comp=N,1.1nm,0.3s,mb4.8
TIXI *e*pP pP 05 01 00.7 -4.3
TKM2 Tokmak 2 124.08 15 *e*PKPdf PKPdf 05 06 35.3 +0.6
BJI Beijing 124.59 338 PKP PKPdf 05 06 35.2 -0.6
BJI SS SS 05 25 11.0 -0.8
BJI LR LR
comp=Z,39nm,27.2s,MS3.9
HHC Hu-ho-hao-te 125.40 342 *e*PKP PKPdf 05 06 33.9 -3.4
HHC PP PP 05 08 27.9 +1.1
HHC PKS 05 10 09.0
HHC SKS SKSdf 05 13 41.1 -5.5
HHC SKKS SKKSac 05 15 15.9 -7.7
HHC SS SS 05 25 20.1 -1.7
HHC AMB AMB
comp=Z,170nm,6.8s
HHC LR LR
comp=Z,110nm,26.2s,MS4.4
COEN Coen 130.51 261 *e*PKPdf PKPdf 05 06 48.4 +0.7
LZH Lanzhou 131.87 348 *e*PKP PKPdf 05 06 50.0 +0.2
LZH sPKP 05 07 05.2
CD2 Chengdu 136.86 346 *e*PKP PKPdf 05 06 58.9 -0.4
ASAR Alice Springs 138.69 247 PKhKP 05 06 50.7
comp=Z,0.2nm,0.4s,baz=107,slow=2.6,SNR=4.3
ASAR PKP PKPdf 05 07 00.6 -2.3
comp=Z,0.7nm,0.6s,baz=117,slow=2.1,SNR=7.4
CMAR Chiang Mai Arr 149.96 348 PKPbc PKPbc 05 07 24.8 -2.6
comp=Z,1.3nm,0.5s,baz=349,slow=3.5,SNR=8.9
MBWA Marble Bar 152.02 246 *e*PKPbc PKPbc 05 07 29.8 -2.4

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*IDC **01** 05:05:46.1±1.0,29.°05N×50.°34E, h0km, mb3.9/10, mb1 3.8/11,mb1mx3.6/25,mbtmp3.8/11,ML3.1/1,MS3.4/1, Ms1 3.4/1,ms1mx2.6/38, Error ellipse: s-maj=29.8km s-min=16.1km az=140.0*
*ISCJB **01** 05:05:48.4±0.4,29.°16N±0.°04×50.°36E±0.°03, h10km, mb3.7/11, Error ellipse: s-maj=6.0km s-min=3.5km az=10.0*
*CSEM **01** 05:05:51.1±0.3,29.°17N×50.°32E, h20km, ML3.6, Error ellipse: s-maj=10.9km s-min=6.4km az=166.0*
*TEH **01** 05:05:51.6,29.°14N×50.°32E, h20km*
*NEIC **01** 05:05:56.1,29.°77N×50.°75E, h9km, mb3.4/1, ML3.5(THR), MN3.6(TEH), After THR.*
*THR **01** 05:05:56.4±0.4,29.°77N×50.°75E, h12km±7km, ML3.5*
*SGS **01** 05:05:59.7,29.°79N×50.°76E, h10km*
ISC 01 05:05:49.8±0.4,29.°12N±0.°04×50.°33E±0.°03, h10km, n76, σ1§27/84, mb3.7/11, 1C, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMOK	**Mouk**	**2.09**	**92**	*e*Pn	**Pn**	**05 06 25.7**	**+0.9**
IMOK				*e*Sg	**Sg**	**05 06 57.1**	**+0.2**
IMOK				*e*		05 07 03.3	
comp=Z,4μm,0.3s							
IMOK	**Mouk**	**2.09**	**92**	*e*Pn	**Pn**	**05 06 25.7**	**+0.9**
IMOK				*e*Sg	**Sg**	**05 06 57.1**	**+0.2**
QRN	**Al-Qurain**	**2.15**	**260**	*e*P	**Pn**	**05 06 26.0**	**+0.3**
KFJS		**2.30**	**247**	P	**Pn**	**05 06 27.9**	**+0.1**
KFJS		**2.30**	**247**	P	**Pn**	**05 06 27.9**	**+0.2**
KBD	**Kabd**	**2.31**	**272**	*e*P	**Pn**	**05 06 28.2**	**+0.3**
KBD				AML	AML	05 07 07.6	
comp=Z,69nm,0.5s							
KBD	**Kabd**	**2.31**	**272**	*e*P	**Pn**	**05 06 28.2**	**+0.3**
UMR	**Umm Al-Rimmam**	**2.32**	**281**	*e*P	**Pn**	**05 06 27.9**	**-0.1**
UMR	**Umm Al-Rimmam**	**2.32**	**281**	*e*P	**Pn**	**05 06 28.0**	**-0.1**
RDF	**Al-Radifah**	**2.44**	**266**	*e*P	**Pn**	**05 06 30.4**	**+0.7**
RDF	**Al-Radifah**	**2.44**	**266**	*e*P	**Pn**	**05 06 30.4**	**+0.7**
ISRV	**Sarvestan**	**2.44**	**83**	*e*Pn	**Pn**	**05 06 30.5**	**+0.7**
ISRV				*e*		05 07 25.9	
comp=Z,2μm,0.3s							
ISRV	**Sarvestan**	**2.44**	**83**	*e*Pn	**Pn**	**05 06 30.5**	**+0.7**
IPAR	**Pars**	**2.48**	**73**	*e*Pn	**Pn**	**05 06 31.4**	**+1.2**
IPAR				*e*		05 07 43.8	
comp=Z,2μm,0.4s							
IPAR	**Pars**	**2.48**	**73**	*e*Pn	**Pn**	**05 06 31.4**	**+1.2**
GHIR	**Ghir-Karzin**	**2.48**	**109**	*e*Pn	**Pg**	**05 06 38.0**	**+0.7**
GHIR				Sn	**Sg**	**05 07 09.0**	**-0.4**
GHIR	**Ghir-Karzin**	**2.48**	**109**	*e*Pn	**Pg**	**05 06 38.4**	**+1.1**
GHIR				Sn	**Sg**	**05 07 09.0**	**-0.5**
GHIR				AML	AML	05 07 29.2	
comp=N,162nm,0.6s							
GHIR	**Ghir-Karzin**	**2.48**	**109**	*e*Pn	**Pg**	**05 06 38.0**	**+0.7**
GHIR				Sn	**Sg**	**05 07 09.0**	**-0.4**
MIB	**Mutribah**	**2.70**	**285**	*e*P	**Pn**	**05 06 33.1**	**-0.1**
MIB				AML	AML	05 07 19.2	
comp=Z,100nm,0.5s							
MIB	**Mutribah**	**2.70**	**285**	*e*P	**Pn**	**05 06 33.1**	**-0.1**
NAY	**Al-Naaiem**	**2.70**	**273**	*e*P	**Pn**	**05 06 33.5**	**+0.2**
NAY				AML	AML	05 07 17.3	
comp=Z,34nm,0.6s							
NAY	**Al-Naaiem**	**2.70**	**273**	*e*P	**Pn**	**05 06 33.5**	**+0.2**
IPIR	**Pirpir**	**3.58**	**8**	*e*Pn	**Pn**	**05 06 46.6**	**+1.2**
IPIR				*e*		05 07 51.8	
comp=Z,810nm,0.3s							
IPIR	**Pirpir**	**3.58**	**8**	*e*Pn	**Pn**	**05 06 46.6**	**+1.2**
IGAR	**Gharneh**	**3.58**	**24**	*e*Pn	**Pn**	**05 06 45.5**	**+0.1**
IGAR				*e*		05 06 48.1	
comp=Z,912nm,0.1s							
IZEF	**Zefreh**	**4.13**	**24**	*e*Pn	**Pn**	**05 06 53.1**	**+0.1**
IZEF				*e*		05 06 54.6	
comp=Z,649nm,0.1s							
IZEF	**Zefreh**	**4.13**	**24**	*e*Pn	**Pn**	**05 06 53.1**	**+0.1**
IKLH	**Kolahrood**	**4.32**	**14**	*e*Pn	**Pn**	**05 06 55.8**	**+0.3**
IKLH				*e*		05 07 50.5	
comp=Z,485nm,0.2s							
IKLH	**Kolahrood**	**4.32**	**14**	*e*Pn	**Pn**	**05 06 55.8**	**+0.3**
IMEH	**Mehriz**	**4.34**	**58**	*e*Pn	**Pn**	**05 06 56.5**	**+0.7**
IMEH				*e*		05 06 58.7	
comp=Z,1μm,0.2s							
IMEH	**Mehriz**	**4.34**	**58**	*e*Pn	**Pn**	**05 06 56.5**	**+0.7**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ICHK	**Chekchek**	**4.69**	**47**	*e*Pn	**Pn**	**05 07 00.6**	**0.0**
ICHK				*e*		05 07 26.2	
comp=Z,320nm,0.3s							
ICHK	**Chekchek**	**4.69**	**47**	*e*Pn	**Pn**	**05 07 00.6**	**0.0**
BTHS		**5.08**	**175**	P	**Pn**	**05 07 07.7**	**+1.7**
BTHS		**5.08**	**175**	P	**Pn**	**05 07 07.7**	**+1.7**
IBAF	**Bafgh**	**5.15**	**60**	*e*	**Pn**	**05 07 08.2**	**+1.2**
comp=Z,313nm,0.3s							
IBAF				⇑*e*Pn	**Pn**	**05 07 07.5**	**+0.6**
ASAO	**Ashtian**	**5.41**	**357**	*e*Pn	**Pn**	**05 07 10.0**	**-0.6**
ASAO	**Ashtian**	**5.41**	**357**	*e*Pn	**Pn**	**05 07 10.9**	**+0.3**
ASAO				AML	AML	05 08 13.2	
comp=N,33nm,0.6s							
ASAO	**Ashtian**	**5.41**	**357**	*e*Pn	**Pn**	**05 07 10.9**	**+0.3**
KRBR	**Kerman**	**5.67**	**80**	*e*Pn	**Pn**	**05 07 16.0**	**+1.9**
KRBR	**Kerman**	**5.67**	**80**	*e*Pn	**Pn**	**05 07 16.8**	**+2.7**
KRBR				AML	AML	05 08 25.4	
comp=N,29nm,0.6s							
KRBR				AML	AML	05 08 27.3	
comp=E,26nm,0.4s							
KRBR	**Kerman**	**5.67**	**80**	*e*Pn	**Pn**	**05 07 16.8**	**+2.7**
IDHR	**Dehrash**	**6.49**	**330**	*e*Sn	**Sn**	**05 08 34.2**	**-5.3**
IDHR				*e*		05 08 51.3	
comp=E,537nm,0.1s							
IDHR	**Dehrash**	**6.49**	**330**	*e*Sn	**Sn**	**05 08 34.2**	**-5.3**
BHD	**Baghdad**	**6.56**	**311**	*e*Pn	**Pn**	**05 07 28.0**	**+1.7**
BHD				*e*Sn	**Sn**	**05 08 44.0**	**+2.8**
BHD	**Baghdad**	**6.56**	**311**	*e*Pn	**Pn**	**05 07 28.0**	**+1.7**
BHD				*e*Sn	**Sn**	**05 08 44.0**	**+2.8**
DAMV	**Damavand**	**6.63**	**12**	*e*Pn	**Pn**	**05 07 26.0**	**-1.3**
DAMV	**Damavand**	**6.63**	**12**	*e*Pn	**Pn**	**05 07 26.8**	**-0.6**
DAMV	**Damavand**	**6.63**	**12**	*e*Pn	**Pn**	**05 07 26.8**	**-0.5**
IANJ	**Anjilo**	**7.01**	**25**	*e*	**Pn**	**05 07 33.6**	**+1.1**
comp=Z,93nm,0.1s							
MSL	**Mosul**	**9.46**	**322**	*e*Pn	**Pn**	**05 08 08.0**	**+1.9**
MSL				*e*Sn	**Sn**	**05 09 55.0**	**+2.4**
EIL	**Elat**	**13.42**	**276**	LR	LR	05 15 11.9	
comp=Z,155nm,18.2s,baz=274,slow=42							
BRTR	**Keskin Array B**	**17.33**	**312**	P	**Pn**	**05 09 50.3**	**-1.5**
comp=Z,0.1nm,0.3s,baz=135,slow=13,SNR=2.5							
BRTR	**Keskin Array B**	**17.33**	**312**	P	**Pn**	**05 09 50.3**	**-1.5**
ABKAR	**Akbulak array**	**21.41**	**17**	*e*P	**P**	**05 10 36.0**	**-1.6**
comp=Z,0.9nm,0.4s,mb3.5							
ABKAR	**Akbulak array**	**21.41**	**17**	*e*P	**P**	**05 10 36.0**	**-1.6**
comp=Z,0.9nm,0.4s,mb3.5							
AKASG	**Malin Array Be**	**26.78**	**329**	P	**P**	**05 11 27.4**	**-2.3**
comp=Z,0.2nm,0.2s,mb3.2,baz=254,slow=5.3,SNR=3.2							
AKASG	**Malin Array Be**	**26.78**	**329**	P	**P**	**05 11 27.4**	**-2.3**
BVAR	**Borovoye Array**	**28.07**	**26**	P	**P**	**05 11 39.2**	**-2.1**
comp=Z,1.1nm,0.6s,mb3.7,baz=220,slow=9.1,SNR=7.4							
BVAR	**Borovoye Array**	**28.07**	**26**	P	**P**	**05 11 39.2**	**-2.1**
KURK	**Kurchatov**	**30.28**	**37**	P	**P**	**05 11 58.5**	**-2.4**
comp=Z,0.7nm,0.6s,mb3.5,baz=238,slow=9.0,SNR=5.2							
KURK	**Kurchatov**	**30.28**	**37**	P	**P**	**05 11 58.5**	**-2.4**
MKAR	**Makanchi Array**	**30.48**	**46**	P	**P**	**05 12 01.6**	**-1.1**
comp=Z,0.3nm,0.2s,mb3.6,baz=238,slow=8.3,SNR=2.9							
MKAR	**Makanchi Array**	**30.48**	**46**	P	**P**	**05 12 01.6**	**-1.1**
KMBO	**Kilima Mbogo**	**32.58**	**205**	P	**P**	**05 12 17.4**	**-4.0**
comp=Z,64nm,0.4s,baz=90,slow=16,SNR=3.8							
ZALV	**Zalesovo Beam**	**35.23**	**35**	P	**P**	**05 12 43.2**	**-0.9**
comp=Z,0.7nm,0.3s,mb4.1,baz=249,slow=8.6,SNR=7.8							
ZALV	**Zalesovo Beam**	**35.23**	**35**	P	**P**	**05 12 43.2**	**-0.9**
FINES	**FINESS Array B**	**36.10**	**340**	P	**P**	**05 12 49.0**	**-2.6**
comp=Z,0.5nm,0.6s,mb3.6,baz=130,slow=18,SNR=3.4							
FINES	**FINESS Array B**	**36.10**	**340**	P	**P**	**05 12 49.0**	**-2.5**
SONM	**Songino Array**	**46.61**	**50**	P	**P**	**05 14 16.5**	**-1.5**
comp=Z,0.3nm,0.3s,mb3.7,baz=267,slow=5.8,SNR=3.2							
SONM	**Songino Array**	**46.61**	**50**	P	**P**	**05 14 16.5**	**-1.5**
TORD	**Torodi Ar. Bea**	**47.73**	**261**	P	**P**	**05 14 25.8**	**-1.3**
comp=Z,2.4nm,0.7s,mb4.3,baz=56,slow=7.6,SNR=18							
DBIC	**Dimbokro**	**56.49**	**258**	P	**P**	**05 15 31.3**	**-1.2**
comp=Z,5.0nm,0.6s,mb4.7,baz=46,slow=8.9,SNR=8.3							
DBIC	**Dimbokro**	**56.49**	**258**	P	**P**	**05 15 31.3**	**-1.2**
DBIC	**Dimbokro**	**56.49**	**258**	P	**P**	**05 15 31.3**	**-1.1**
YKA	**Yellowknife Ar**	**87.91**	**353**	P	**P**	**05 18 37.7**	**-1.7**
comp=Z,0.1nm,0.6s,mb3.2,baz=7.6,slow=5.5,SNR=2.9							

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*ISCJB **01** 05:20:08.5±0.6,31.°61N±0.°04×104.°17E±0.°08, h10km, mb3.3/4, Error ellipse: s-maj=10.2km s-min=5.2km az=15.6*
*IDC **01** 05:20:11.4±2.0,31.°93N×104.°28E, h0km, mb3.4/5, mb1 3.6/7, mb1mx3.4/28, mbtmp3.5/7, ML3.8/2, Error ellipse: s-maj=40.4km s-min=31.3km az=19.0*
*NEIC **01** 05:20:12.6±0.7,31.°93N×104.°32E, h10km, Error ellipse: s-maj=14.7km s-min=10.5km az=69.0*
*BJI **01** 05:20:12.5,31.°76N×104.°13E, h10km, ML3.4/8*
ISC 01 05:20:10.3±0.5,31.°55N±0.°04×104.°23E±0.°06, h10km, n14, σ1§18/19, mb3.3/4, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.75**	**212**	⇑*i*Pg	**Pg**	**05 20 23.8**	**-1.0**
CD2				Sg	**Sg**	**05 20 34.4**	**-0.2**
CD2				smax			
comp=N,3μm,0.8s							
CD2				smax			
comp=E,2μm,0.6s							
LZH	**Lanzhou**	**4.54**	**356**	Pg	**Pg**	**05 21 36.1**	**-1.1**
LZH				Sg	**Sg**	**05 22 37.7**	**+1.7**
LZH				smax			
comp=N,66nm,0.9s							
LZH				smax			
comp=E,100nm,1.0s							
LZH				LR	LR		
comp=E,330nm,7.2s							
LZH				LR	LR		
comp=Z,350nm,7.7s							
XAN	**Xi'an**	**4.67**	**57**	Pn	**Pn**	**05 21 22.1**	**+1.2**
XAN				Pg	**Pg**	**05 21 38.6**	**-1.2**
XAN				Sn	**Sn**	**05 22 20.6**	**+5.5**
XAN				Sg	**Sg**	**05 22 38.8**	**-1.5**
XAN				smax			
comp=N,62nm,0.6s							
XAN				smax			
comp=E,33nm,0.7s							
ENH	**Enshi**	**4.70**	**104**	*e*Pn	**Pn**	**05 21 24.1**	**+2.8**
GYA	**Guiyang**	**5.50**	**157**	Pg	**Pg**	**05 21 55.9**	**+0.2**
CMAR	**Chiang Mai Arr**	**13.88**	**201**	Pn	**Pn**	**05 23 34.5**	**+7.4**
comp=E,0.3nm,0.3s,baz=7.9,slow=8.9,SNR=5.0							
SONM	**Songino Array**	**16.35**	**5**	Pn	**Pn**	**05 23 56.8**	**-3.1**
comp=E,0.2nm,0.3s,baz=249,slow=31,SNR=3.0							
SONM	**Songino Array**	**16.35**	**5**	Pn	**Pn**	**05 23 56.8**	**-3.1**
KSRS	**Korea Array**	**20.38**	**67**	P	**P**	**05 24 47.8**	**+0.7**
comp=E,0.4nm,0.4s,baz=269,slow=11,SNR=4.1							
MKAR	**Makanchi Array**	**22.71**	**318**	P	**P**	**05 25 11.5**	**-0.6**
comp=E,0.9nm,0.7s,mb3.3,baz=112,slow=13,SNR=6.2							
ZALV	**Zalesovo Beam**	**26.37**	**334**	P	**P**	**05 25 46.8**	**+0.3**
comp=E,0.3nm,0.3s,mb3.3,baz=126,slow=7.4,SNR=2.9							
ZALV	**Zalesovo Beam**	**26.37**	**334**	P	**P**	**05 25 46.8**	**+0.3**
KURK	**Kurchatov**	**26.96**	**323**	P	**P**	**05 25 52.4**	**+0.6**
comp=E,0.2nm,0.3s,mb3.1,baz=126,slow=9.5,SNR=3.9							
YKA	**Yellowknife Ar**	**81.24**	**17**	P	**P**	**05 32 26.5**	**+0.4**
comp=E,0.3nm,0.5s,mb3.5,baz=329,slow=5.4,SNR=7.2							

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*ATH **01** 05:42:35.6,38.°45N×23.°52E, h16km±3km, ML3.0*
*THE **01** 05:42:35.7,38.°45N×23.°53E, h2km±3km, ML3.2/8, Error ellipse: s-maj=3.5km s-min=0.5km az=344.0*
*NEIC **01** 05:42:35.6,38.°45N×23.°52E, h16km, ML3.0(ATH), After ATH.*
*CSEM **01** 05:42:35.4±0.2,38.°45N×23.°56E, h19km, ML3.0, Error ellipse: s-maj=4.5km s-min=3.3km az=67.0*
*ISCJB **01** 05:42:35.8±0.9,38.°43N±0.°02×23.°59E±0.°04, h15km±7km, Error ellipse: s-maj=5.1km s-min=3.4km az=158.8*
ISC 01 05:42:35.4±0.5,38.°46N±0.°02×23.°56E±0.°04, h17km±3km, n43, σ0§81/79, 6C, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTL	**Penteli**	**0.47**	**150**	⇑*i*Pb	**Pb**	**05 42 45.2**	**0.0**
PTL				*e*Sb	**Sb**	**05 42 51.5**	**-0.4**
PTL	**Penteli**	**0.47**	**150**	⇑*i*PB	**Pb**	**05 42 45.2**	**0.0**
PTL				*e*SB	**Sb**	**05 42 51.5**	**-0.4**
PTL	**Penteli**	**0.47**	**150**	⇑*i*Pb	**Pb**	**05 42 45.2**	**0.0**
PTL				*e*Sb	**Sb**	**05 42 51.5**	**-0.4**
LKR	**Lokris**	**0.48**	**294**	*e*Pb	**Pg**	**05 42 44.3**	**-0.8**
LKR				*e*Sb	**Sb**	**05 42 51.6**	**-0.6**
LKR	**Lokris**	**0.48**	**294**	P	**Pg**	**05 42 44.3**	**-0.8**
LKR				S	**Sg**	**05 42 51.7**	**+0.1**
LKR	**Lokris**	**0.48**	**294**	*e*PB	**Pg**	**05 42 44.3**	**-0.8**
LKR				*e*SB	**Sb**	**05 42 51.6**	**-0.6**
LKR	**Lokris**	**0.48**	**294**	P	**Pg**	**05 42 44.3**	**-0.8**
LKR				S	**Sg**	**05 42 51.7**	**+0.1**
ATAL	**Atalanti**	**0.48**	**299**	P	**Pg**	**05 42 44.5**	**-0.6**
ATAL				S	**Sg**	**05 42 51.2**	**-0.5**
ATAL	**Atalanti**	**0.48**	**299**	P	**Pg**	**05 42 44.5**	**-0.6**
ATAL				S	**Sg**	**05 42 51.2**	**-0.5**
ATH	**Athens Observa**	**0.50**	**166**	*e*Pn	**Pg**	**05 42 45.6**	**+0.2**
ATH				*e*Sn	**Sg**	**05 42 52.5**	**+0.4**
ATH	**Athens Observa**	**0.50**	**166**	*e*PN	**Pg**	**05 42 45.6**	**+0.2**
ATH				*e*SN	**Sg**	**05 42 52.5**	**+0.4**
ATH	**Athens Observa**	**0.50**	**166**	*e*Pn	**Pg**	**05 42 45.6**	**+0.2**
ATHU	**Athens Univers**	**0.52**	**160**	P	**Pg**	**05 42 45.9**	**+0.1**
ATHU				S	**Sg**	**05 42 52.9**	**+0.1**
ATHU	**Athens Univers**	**0.52**	**160**	P	**Pg**	**05 42 45.9**	**+0.1**
ATHU				S	**Sg**	**05 42 52.9**	**+0.1**
VLY	**Voula,Athens**	**0.63**	**163**	⇑*i*Pn	**Pn**	**05 42 47.9**	**-1.6**
VLY				*e*Sn	**Sg**	**05 42 56.8**	**+0.5**
VLY	**Voula,Athens**	**0.63**	**163**	⇑*i*PN	**Pn**	**05 42 47.9**	**-1.6**
VLY				*e*SN	**Sg**	**05 42 56.8**	**+0.5**
VLY	**Voula,Athens**	**0.63**	**163**	⇑*i*Pn	**Pn**	**05 42 47.9**	**-1.6**
LTK	**Loutraki**	**0.64**	**227**	P	**Pg**	**05 42 47.2**	**-0.8**
LTK				S	**Sg**	**05 42 56.4**	**-0.1**
LTK	**Loutraki**	**0.64**	**227**	*e*PB	**Pb**	**05 42 47.3**	**-0.8**
LTK				*e*SN	**Sg**	**05 42 56.8**	**+0.3**
LTK	**Loutraki**	**0.64**	**227**	P	**Pg**	**05 42 47.2**	**-0.8**
LTK				S	**Sg**	**05 42 56.4**	**-0.1**
NAIG	**Nisos Aigina**	**0.70**	**185**	*e*Pn	**Pn**	**05 42 49.0**	**-1.5**
NAIG				*e*Sn	**Sg**	**05 42 59.0**	**+0.6**
NAIG	**Nisos Aigina**	**0.70**	**185**	*e*PN	**Pn**	**05 42 49.0**	**-1.5**
NAIG				*e*SN	**Sg**	**05 42 59.0**	**+0.6**
NAIG	**Nisos Aigina**	**0.70**	**185**	*e*Pn	**Pn**	**05 42 49.0**	**-1.5**
NAIG				*e*Sn	**Sg**	**05 42 59.0**	**+0.6**
AOS	**Alonnisos**	**0.75**	**19**	P	**Pg**	**05 42 50.0**	**-0.1**
AOS				S	**Sg**	**05 43 01.7**	**+1.6**
AOS	**Alonnisos**	**0.75**	**19**	P	**Pg**	**05 42 50.0**	**-0.1**
AOS				S	**Sg**	**05 43 01.7**	**+1.6**
DSF	**Desfina**	**0.82**	**267**	P	**Pb**	**05 42 50.3**	**-0.8**
DSF				S	**Sb**	**05 43 02.5**	**+0.7**
DSF	**Desfina**	**0.82**	**267**	P	**Pb**	**05 42 50.3**	**-0.8**
DSF				S	**Sb**	**05 43 02.5**	**+0.7**
NEO	**Neokhori**	**0.89**	**343**	*e*Pn	**Pn**	**05 42 52.8**	**-0.3**
NEO				*e*Sn	**Sn**	**05 43 04.7**	**-0.8**
NEO	**Neokhori**	**0.89**	**343**	*e*PN	**Pn**	**05 42 52.8**	**-0.3**
NEO				*e*SN	**Sn**	**05 43 04.7**	**-0.8**
NEO	**Neokhori**	**0.89**	**343**	*e*Pn	**Pn**	**05 42 52.8**	**-0.3**
NEO				*e*Sn	**Sn**	**05 43 04.7**	**-0.8**
XOR	**Xorichti**	**0.95**	**342**	P	**Pb**	**05 42 53.6**	**+0.2**
XOR				S	**Sb**	**05 43 06.8**	**+1.1**
XOR	**Xorichti**	**0.95**	**342**	P	**Pb**	**05 42 53.6**	**+0.2**
XOR				S	**Sb**	**05 43 06.8**	**+1.1**
GUR	**Goura**	**1.09**	**242**	P	**Pb**	**05 42 55.7**	**-0.1**
GUR				S	**Sn**	**05 43 10.6**	**0.0**
GUR	**Goura**	**1.09**	**242**	*e*PN	**Pn**	**05 42 55.9**	**0.0**
GUR				*e*SN	**Sn**	**05 43 10.6**	**0.0**
GUR	**Goura**	**1.09**	**242**	*e*Pn	**Pn**	**05 42 55.9**	**0.0**
GUR				S	**Sn**	**05 43 10.6**	**0.0**
AGG	**Agios Georgios**	**1.12**	**301**	P	**Pb**	**05 42 56.5**	**+0.3**
AGG	**Agios Georgios**	**1.12**	**301**	P	**Pb**	**05 42 56.5**	**+0.3**
KALE	**Kalithea**	**1.12**	**267**	P	**Pb**	**05 42 55.8**	**-0.5**
KALE				S	**Sb**	**05 43 12.1**	**+1.5**
KALE	**Kalithea**	**1.12**	**267**	P	**Pb**	**05 42 55.8**	**-0.5**
KALE				S	**Sb**	**05 43 12.1**	**+1.5**
VLX	**Vlachokerasia**	**1.44**	**221**	P	**Pn**	**05 43 01.4**	**+0.8**
VLX	**Vlachokerasia**	**1.44**	**221**	*e*PN	**Pn**	**05 43 01.7**	**+1.1**
VLX				*e*SN	**Sn**	**05 43 21.7**	**+2.7**
VLX	**Vlachokerasia**	**1.44**	**221**	P	**Pn**	**05 43 01.4**	**+0.8**
VLX	**Vlachokerasia**	**1.44**	**221**	*e*Pn	**Pn**	**05 43 01.7**	**+1.1**

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*IDC **01** 05:43:11.6±2.5,54.°42N×86.°91E, h0km, mb1 3.6/3, mb1mx3.2/28, mbtmp3.6/3, ML3.1/3, Error ellipse: s-maj=21.1km s-min=14.3km az=57.0*
*NNC **01** 05:43:16.8±6.3,53.°68N×87.°05E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=51.5km s-min=32.1km az=69.0*
ISC 01 05:43:16.2±2.0,54.°24N±0.°08×86.°8E±0.°2, h10km, n10, σ1§04/16, 8C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.19**	**257**	Pg	**Pg**	**05 43 35.4**	**-3.8**
4.3nm,0.3s,baz=66,slow=16,SNR=38							
ZALV				Lg		05 43 55.6	
7.9nm,0.3s,baz=70,slow=31,SNR=24							
KURK	**Kurchatov**	**6.11**	**238**	⇑Pn	**Pn**	**05 44 46.2**	**-0.2**
5.4nm,0.8s							

```
LZH                                  smax
     comp=E,680nm,0.5s
LZH                                  LR      LR
     comp=N,1μm,5.6s
LZH                                  LR      LR
     comp=Z,2μm,6.2s
ENH  Enshi          4.02 123 ePn     Pg      05 50 55.4 -0.4
ENH                      eSn         Sg      05 51 49.4 +1.6
GYA  Guiyang        6.12 171 Pn      Pn      05 51 14.0 +4.6
WHN  Wuhan          7.73 103 P       Pn      05 51 30.7 -0.7
WHN                          S       Sn      05 53 00.4 +1.4
GTA  Gaotai         8.31 327 eP      Pn      05 51 38.7 -0.7
GTA                          pP              05 51 43.4
GTA                          sP              05 51 46.5
GTA                          pmax    pmax
     comp=Z,2.0nm,0.6s
CMAR Chiang Mai Arr 15.24 205 Pn      Pn      05 53 20.7 +6.6
     comp=Z,0.5nm,0.3s,baz=190,slow=4.6,SNR=3.3
SONM Songino Array  15.30   2 Pn      Pn      05 53 13.2 -1.6
     comp=Z,0.1nm,0.3s,baz=185,slow=16,SNR=2.5
KSRS Korea Array    18.93  69 P       Pn      05 53 57.7 -2.7
     comp=Z,0.2nm,0.3s,baz=254,slow=9.1,SNR=7.3
MKAR Makanchi Array 22.80 315 P       P       05 54 41.9 +0.4
     comp=Z,1.2nm,0.6s,mb3.5,baz=110,slow=13,SNR=9.1
MKAR Makanchi Array 22.80 315 P       P       05 54 41.9 +0.4
ZALV Zalesovo Beam  26.04 331 P       P       05 55 12.5 +0.5
     comp=Z,0.7nm,0.5s,mb3.5,baz=128,slow=12,SNR=4.0
ZALV Zalesovo Beam  26.04 331 P       P       05 55 12.5 +0.5
KURK Kurchatov      26.91 320 P       P       05 55 20.7 +0.7
     comp=Z,0.7nm,0.7s,mb3.3,baz=124,slow=11,SNR=4.2
KURK Kurchatov      26.91 320 P       P       05 55 20.7 +0.7
MJAR Matsuhiro Arr  27.09  72 P       P       05 55 18.8 -2.9
     comp=Z,0.5nm,0.3s,mb3.6,baz=272,slow=8.4,SNR=7.0
ABKAR Akbulak array 37.70 310 eP      P       05 56 54.7 +0.3
     comp=Z,1.1nm,0.6s,mb3.8
ARCES ARCESS Array B 56.49 335 P      P       05 59 20.1 -0.5
     comp=Z,2.1nm,1.1s,mb4.1,baz=64,slow=8.5,SNR=8.1
FINES FINESS Array B 57.10 326 P      P       05 59 25.5 +0.5
     comp=Z,1.4nm,0.6s,mb4.2,baz=95,slow=8.0,SNR=17
BRTR Keskin Array B 57.15 299 P       P       05 59 26.2 +0.4
     comp=Z,0.2nm,0.5s,mb3.4,baz=78,slow=12,SNR=3.7
AKASG Malin Array Be 57.34 313 P      P       05 59 26.2 -0.7
     comp=Z,0.8nm,0.5s,mb4.0,baz=67,slow=7.7,SNR=4.9
ASAR Alice Springs  62.08 151 P       P       06 00 02.0 +2.2
     comp=Z,0.8nm,0.4s,mb4.2,baz=334,slow=6.5,SNR=29
NB2  NORSAR Subarra 64.14 327 P       P       06 00 12.9 -0.2
     comp=Z,0.9nm,0.7s,mb3.9,baz=72,slow=6.9
NOA  NORSAR Array B 64.14 327 P       P       06 00 13.3 +0.2
     comp=Z,1.3nm,0.8s,mb4.0,baz=70,slow=6.6,SNR=4.5
YKA  Yellowknife Ar 79.95  18 P       P       06 01 46.2 -1.6
     comp=Z,0.3nm,0.8s,mb3.2,baz=328,slow=5.8,SNR=2.8
```

MEX 01 05:52:00.3±0.7, 17°.05N×96°.81W, h63km±4km, MD4.1, Oaxaca

```
Code Station Name        Δ°   AZ°  Phase ID                Time     Res
                                   Op      ISC             h m s    ISC
VHO  Vista Hermosa      0.07  69  iP      Pn              05 52 08.6 -1.1
VHO                               iS      Sn              05 52 14.9 -1.5
OXX  Oaxaca             0.09  66  iP      Pn              05 52 08.9 -0.7
OXX                               iS      Sn              05 52 14.5 -1.9
PNIG Pinotepa           1.42 243  iP      Pn              05 52 22.5 -1.6
PNIG                              iS      Sn              05 52 40.0 -1.9
HUIG Huatulco           1.44 152  ePn     Pn              05 52 23.4 -0.8
HUIG                              iS      Sn              05 52 40.5 -1.6
TPIG Tehuac#an          1.47 339  iP      Pn              05 52 24.2 -0.4
TPIG                              iS      Sn              05 52 41.3 -1.6
TUIG Tuzandepetl        2.48  66  iP      Pn              05 52 36.3 -2.0
TUIG                              iS      Sn              05 53 05.1 -2.3
ACX  Acapulco           2.98 267  iP      Pn              05 52 43.4 -1.8
ACX                               iS      Sn              05 53 16.9 -3.0
CAIG El Cayaco          3.31 271  iP      Pn              05 52 48.7 -1.0
CAIG                              iS      Sn              05 53 25.7 -2.1
TGIG                    3.54  94  ePn     Pn              05 52 51.8 -1.0
TGIG                              iS      Sn              05 53 30.8 -2.6
PCIG                    3.69 111  ePn     Pn              05 52 54.0 -0.9
PCIG                              iS      Sn              05 53 35.1 -2.1
ZIIG Zihuatanejo        4.49 278  iP      Pn              05 53 05.6 -0.2
ZIIG                              iS      Sn              05 53 56.2 -0.4
CCIG Comitan            4.54  99  ePn     Pn              05 53 06.7 +0.2
CCIG                              iS      Sn              05 53 57.4 -0.6
```

*ISCJB **01** 06:17:28.8±0.7, 20°.13S±0°.05×69°.1W±0°.1, h104km±9km, mb3.3/2, Error ellipse: s-maj=22.0km s-min=7.7km az=170.4*
*GUC **01** 06:17:30.4±0.8, 20°.16S×69°.24W, h93km±8km, ML3.8*
*IDC **01** 06:17:32.8±2.9, 20°.24S×68°.88W, h125km±26km, mb3.1/3, mb1 3.2/5, mb1mx3.1/17, mbtmp3.0/5, Error ellipse: s-maj=43.9km s-min=24.8km az=83.0*

ISC 01 06:17:29.7±0.7, 20.12S±0°.05×69.1W±0°.1, h98km±9km, n10, σ1°09/15, mb3.3/2, 2C-2D, Northern Chile

```
Code Station Name        Δ°   AZ°  Phase ID                Time     Res
                                   Op      ISC             h m s    ISC
PB01 Plate Boundary     1.00 202 ↑iP     Pn              06 17 49.4 -0.5
PB01                              iS      Sn              06 18 04.1 -1.0
PB01                              AML     AML             06 18 04.8
     comp=E,6μm,0.2s
MNMC Miæe Miæ           1.09 334 ↓iP     Pn              06 17 51.9 +0.8
MNMC                              iS      Sn              06 18 08.6 +1.5
MNMC                              AML     AML             06 18 11.5
     comp=E,4μm,0.1s
PSGC Pisagua            1.11 298 ↑iP     Pn              06 17 50.3 -0.9
PSGC                              iS      Sn              06 18 05.8 -1.5
PSGC                              AML     AML             06 18 07.7
     comp=E,2μm,0.2s
PB04 Plate Boundary     2.17 190 ↓iP     Pn              06 18 07.5 +3.1
PB04                              iS      Sn              06 18 35.0 +4.0
PB04                              AML     AML             06 18 41.9
     comp=E,361nm,0.4s
PECH Pedro de Valdi     2.53 193  eP     Pn              06 18 09.7 +0.5
PECH                              iS      Sn              06 18 40.4 +0.9
PECH                              AML     AML             06 18 45.8
     comp=E,589nm,0.3s
LPAZ La Paz             3.91  14  P      Pn              06 18 33.1 +5.3
     comp=E,0.7nm,0.3s,baz=187,slow=8.2,SNR=40
CPUP Villa Florida     12.45 122  P      Pn              06 20 22.2 -1.2
     comp=E,0.1nm,0.3s,baz=303,slow=16,SNR=3.4
PLCA Paso Flores       20.59 183  P      P               06 22 00.8  0.0
     comp=E,0.9nm,0.6s,baz=21,slow=9.6,SNR=3.6
TORD Torodi Ar. Bea    77.05  71  P      P               06 29 12.0 -0.7
     comp=E,0.2nm,0.4s,mb3.2,baz=258,slow=5.1,SNR=7.1
YKA  Yellowknife Ar    89.83 341  P      P               06 30 17.5 +0.5
     comp=E,0.2nm,0.5s,mb3.5,baz=131,slow=4.7,SNR=7.0
```

*BJI **01** 06:24:35.9, 79°.60N×3°.30E, h10km, mB4.8/12, mb4.7/18, Ms4.7/11, Ms7 4.3/10*
*ISCJB **01** 06:24:35.9±0.1, 79°.58N±0°.02×2°.8E±0°.1, h10km, mb4.4/110, MS3.8/44, Error ellipse: s-maj=4.4km s-min=2.4km az=137.5*
*GCMT **01** 06:24:36.9±0.3, 79°.58N×2°.89E, h13km±1km, MW4.8, Moment Tensor Solution. s17,c19; s63,c88; Moment tensor: Scale 10^{16}Nm; M_{rr}-2.09±.18; $M_{\theta\theta}$0.13±.12; $M_{\phi\phi}$1.97±.12; $M_{r\theta}$-0.66±.40; $M_{\theta\phi}$0.35±.08; $M_{\phi r}$0.41±.25; Best double couple: $M_0$2.20000×10^{16} NP1:ϕ_s26.00000°, δ43.00000°, λ-65.00000°. NP2:ϕ_s174.00000°, δ51.00000°, λ-112.00000°. Principal axes: T 2.0600, Plg4.0000°, Azm279.0000°; N 0.2800, Plg17.0000°, Azm188.0000°; P -2.3300, Plg73.0000°, Azm23.0000°; Data Used: II IU CN IC G.*
*MOS **01** 06:24:36.1±0.8, 79°.49N×2°.93E, h10km, mb4.6/50 Error ellipse: s-maj=38.0km s-min=4.3km az=92.7*
*CSEM **01** 06:24:36.3±0.1, 79°.55N×3°.15E, h2km, mb4.5/80, Ms3.3, Mw4.8, Error ellipse: s-maj=4.6km s-min=3.1km az=44.0*
*IDC **01** 06:24:36.2±0.4, 79°.61N×3°.15E, h0km, mb4.1/23, mb1 4.3/28, mb1mx4.2/36, mbtmp4.2/28, ML3.8/4, MS3.8/29, Ms1 3.8/29, ms1mx3.8/31, Error ellipse: s-maj=12.9km s-min=9.7km az=33.0*
*BER **01** 06:24:36.7±1.9, 79°.81N×4°.32E, h10km, MD3.6, ML3.3, ML3.2(NAO)*
*NEIC **01** 06:24:38.0±0.2, 79°.55N×3°.35E, h10km, mb4.5/60, Error ellipse: s-maj=5.4km s-min=3.4km az=48.0*
*NAO **01** 06:24:38.0±3.6, 79°.64N×5°.00E, ML3.2*
*BGS **01** 06:24:38.0±2.4, 79°.55N×3°.35E, h10km, mb4.5*
*SZGRF **01** 06:25:31.3, 73°.98N×5°.55E, h33km, mb4.4, Greenland Sea*

ISC 01 06:24:38.0±0.1, 79°.55N±0°.02×2°.9E±0°.1, h10km, (h13km±1.2km:pP-P), n539, σ0°92/552, mb4.4/110, MS3.8/44, 50C-48D, Greenland Sea

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Code Station Name        Δ°   AZ°  Phase ID                Time     Res
                                   Op      ISC             h m s    ISC
KBS  Kingsbay           1.82 106      Pg      Pn              06 25 04.3 -5.0
KBS                                   Lg                      06 25 23.9
KBS  Kingsbay           1.82 106 ↑iP     Pn              06 25 04.1 -5.2
KBS                               eS      Sn              06 25 23.3 -9.0
KBS                               AML     AML             06 25 34.5
     comp=Z,890nm,0.7s
KBS  Kingsbay           1.82 106c iP     Pn              06 25 04.2 -5.1
KBS  Kingsbay           1.82 106  ePn    Pn              06 25 04.3 -5.0
KBS  Kingsbay           1.82 106  i P    Pn              06 25 04.2 -5.1
KBS                               eS      Sn              06 25 23.3 -9.0
     comp=Z,890nm,0.7s,SNR=50
SPB4 Spitsbergen Ar     2.96 111 ePn     Pn              06 25 20.9 -3.9
SPB4 Spitsbergen Ar     2.96 111 ePn     Pn              06 25 20.9 -4.0
SPA0 Spitsbergen Ar     2.96 111 Pn      Pn              06 25 20.9 -4.0
     baz=316,slow=11
SPA0                              Sn      Sn              06 25 53.1 -7.3
SPA0 Spitsbergen Ar     2.96 111 Pn      Pn              06 25 20.9 -4.0
     baz=316,slow=10,SNR=999
SPA0                              Sn      Sn              06 25 53.1 -7.3
SPITS Spitsbergen Ar    2.96 111 Pn      Pn              06 25 21.0 -4.0
     baz=319,slow=7.1,SNR=3857
SPITS                             LR      LR              06 26 35.7
     comp=Z,4μm,19.3s,baz=310,slow=41
SPITS Spitsbergen Ar    2.96 111 Pn      Pn              06 25 21.0 -3.9
HSP  Hornsund           3.63 128 ePn     Pn              06 25 30.3 -3.9
HSP                               eSn     Sn              06 26 08.1 -8.9
DAG  Danmarks Havn      5.20 249 ↓iP     Pn              06 25 53.6 -2.1
DAG                               i                       06 26 49.3
DAG                               pmax    pmax
     comp=Z,38nm,0.5s
DAG  Danmarks Havn      5.20 249 ↓iP     Pn              06 25 53.6 -2.1
     comp=Z,38nm,0.5s
DAG                               i                       06 26 49.3
HOPEN Hopen             5.49 112 eP      Pn              06 25 54.4 -5.3
HOPEN                             eS      Sn              06 26 51.9 -11
BJO1 Bjornoya           6.21 136 eP      Pn              06 26 07.0 -2.5
BJO1                              eS      Sn              06 27 13.1 -7.4
BJO1 Bjornoya           6.21 136 eP      Pn              06 26 07.0 -2.5
BJO  Bjornoya           6.23 136 eP      Pn              06 26 07.0 -2.8
BJO                               eS      Sn              06 27 13.1 -7.9
BJO                               AML     AML             06 27 18.6
     comp=Z,20nm,0.2s
JNW  Jan Mayen West     9.01 204 eP      Pn              06 26 46.4 -1.4
JNW                               eS      Sn              06 28 23.4 -5.7
JNW                               AML     AML             06 28 26.4
     comp=Z,48nm,0.5s
JNW  Jan Mayen West     9.01 204 eP      Pn              06 26 46.5 -1.3
JNW                               eS      Sn              06 28 23.4 -5.7
JNW  Jan Mayen West     9.01 204 eP      Pn              06 26 46.4 -1.4
     SNR=47
JNE  Jan Mayen East     9.04 204 eP      Pn              06 26 47.2 -1.0
JNE  Jan Mayen East     9.04 204 eP      Pn              06 26 47.3 -0.9
JNE  Jan Mayen East     9.04 204 eP      Pn              06 26 47.2 -1.0
     SNR=47
JMIC Jan Mayen          9.05 204 Pn      Pn              06 26 47.0 -1.5
     comp=Z,33nm,0.3s,baz=332,slow=3.5,SNR=12
JMIC                              Sn      Sn              06 28 25.6 -4.7
     comp=Z,7.4nm,0.3s,baz=157,slow=11,SNR=8.4
JMIC                              LR      LR              06 29 29.0
     comp=Z,174nm,20.7s,baz=342,slow=32
JMIC Jan Mayen          9.05 204 Pn      Pn              06 26 47.0 -1.5
JMI  Jan Mayen          9.13 205 eP      Pn              06 26 48.3 -1.1
JMI  Jan Mayen          9.13 205 eP      Pn              06 26 48.3 -1.2
     SNR=47
SCO  Scoresbysund       10.98 228 eP     Pn              06 27 12.7 -2.1
SCO  Scoresbysund       10.98 228 i P    Pn              06 27 12.7 -2.1
SCO                               i S     Sn              06 29 10.2 -7.2
SCO  Scoresbysund       10.98 228 eP     Pn              06 27 12.7 -2.1
KEV  Kevo               11.57 135 eP     Pn              06 27 20.5 -2.4
KEV                               pmax    pmax
     comp=Z,11nm,0.6s
KEV  Kevo               11.57 135 ePn    Pn              06 27 20.5 -2.3
     comp=Z,11nm,0.6s
KEV  Kevo               11.57 135 ePn    Pn              06 27 20.5 -2.4
     comp=Z,11nm,0.6s
ARA0 ARCESS Array S     11.59 138 Pn     Pn              06 27 20.3 -2.8
     baz=349,slow=12
ARA0                              Sn      Sn              06 29 21.4 -11
     baz=349,slow=22
ARA0 ARCESS Array S     11.59 138 Pn     Pn              06 27 20.3 -2.8
     baz=349,slow=12,SNR=5.5
ARCES ARCESS Array B    11.59 138 Pn     Pn              06 27 20.4 -2.6
     comp=Z,0.9nm,0.3s,baz=348,slow=12,SNR=22
ARCES                             Sn      Sn              06 29 20.0 -12
     comp=Z,0.3nm,0.3s,baz=342,slow=22,SNR=3.4
ARCES ARCESS Array B    11.59 138 Pn     Pn              06 27 20.5 -2.6
SUMG Summit             11.81 256 ePn    Pn              06 27 23.3 -2.8
SUMG                              eSn     Sn              06 29 26.8 -11
SUMG Summit             11.81 256 i P    Pn              06 27 23.2 -2.9
SUMG                              i S     Sn              06 29 29.1 -8.6
KTK1 Kautokeino         11.82 142 ePn    Pn              06 27 25.8 -0.5
KTK1 Kautokeino         11.82 142 ePn    Pn              06 27 25.8 -0.4
     SNR=50
APA  Apatity            14.48 129 ↓iP    Pn              06 27 58.5 -4.1
APA                               e                       06 30 34.5
APA                               pmax    pmax
     comp=Z,10.0nm,0.6s
BORG Borgarnes          16.35 219 LR     LR              06 34 11.6
     comp=Z,71nm,18.7s,baz=317,slow=35
JOF  Joensuu            18.63 137 ep     Pn              06 28 52.7 -2.8
     comp=Z,9.5nm,0.7s
JOF  Joensuu            18.63 137 ep     Pn              06 28 52.7 -2.8
     comp=Z,9.5nm,0.7s
JOF  Joensuu            18.63 137 eP     Pn              06 28 52.7 -2.8
     comp=Z,9.5nm,0.7s
SFJD Kangerlussuaq      18.78 259 P      Pn              06 28 53.0 -4.3
     comp=Z,6.4nm,0.3s,baz=6.4,slow=11,SNR=20
SFJD                              LR      LR              06 36 38.0
     comp=Z,745nm,18.9s,baz=11,slow=38
SFJD Kangerlussuaq      18.78 259 P      Pn              06 28 53.0 -4.3
SFJD                              pmax    pmax
     comp=Z,6.0nm,0.3s
SFJD                              MLR     MLR
     comp=Z,745nm,18.9s
SFJD Kangerlussuaq      18.78 259 eP     Pn              06 28 52.6 -4.7
     comp=Z,24nm,0.6s
SFJD                              eSn     Sn              06 32 12.5 -14
SFJD Kangerlussuaq      18.78 259 i P    Pn              06 28 52.0 -5.3
SFJD                              i S     Sn              06 32 11.1 -16
NB2  NORSAR Subarra     18.78 167 P      Pn              06 28 56.5 -0.8
     comp=Z,20nm,1.4s,baz=356,slow=11
NB2  NORSAR Subarra     18.78 167 P      Pn              06 28 57.6 +0.3
     baz=356,slow=11
NB2  NORSAR Subarra     18.78 167 P      Pn              06 28 56.5 -0.8
     comp=Z,20nm,1.4s,baz=356,slow=11,SNR=0.2
NOA  NORSAR Array B     18.78 167 P      Pn              06 28 55.8 -1.5
     comp=Z,0.2nm,0.3s,baz=352,slow=12,SNR=8.3
NOA                               LR      LR              06 34 53.5
     comp=Z,196nm,21.7s,baz=355,slow=33
NOA  NORSAR Array B     18.78 167 P      Pn              06 28 55.8 -1.5
KAF  Kangasniemi        18.83 145 ep     Pn              06 28 58.1 +0.1
     comp=Z,9.7nm,1.0s
KAF  Kangasniemi        18.83 145 ep     Pn              06 28 58.1 +0.1
     comp=Z,9.7nm,1.0s
KAF  Kangasniemi        18.83 145 eP     Pn              06 28 58.1 +0.1
     comp=Z,9.7nm,1.0s
NAO01 NORSAR Array S    18.96 168 ePn    Pn              06 28 58.9 -0.6
NAO01 NORSAR Array S    18.96 168 ePn    Pn              06 28 58.9 -0.6
FIA0 FINESS Array S     19.46 145 P      Pn              06 29 04.0 -1.6
     baz=342,slow=9.3
FIA0 FINESS Array S     19.46 145 P      Pn              06 29 04.0 -1.6
     baz=342,slow=8.8,SNR=4.3
FINES FINESS Array B    19.46 145 P      Pn              06 29 03.9 -1.7
     comp=Z,0.8nm,0.3s,baz=352,slow=10,SNR=61
FINES                             LR      LR              06 36 17.4
     comp=Z,313nm,21.9s,baz=203,slow=36
FINES FINESS Array B    19.46 145 P      Pn              06 29 03.8 -1.8
RAF  Rauma              19.47 152 eP     Pn              06 29 03.4 -2.2
     SNR=29
RES  Resolute Bay       19.73 309 P      Pn              06 29 04.2 -4.4
     comp=Z,2.3nm,0.3s,baz=44,slow=12,SNR=98
RES                               LR      LR              06 36 39.4
     comp=Z,564nm,18.3s,baz=46,slow=37
RES  Resolute Bay       19.73 309 eP     Pn              06 29 04.6 -4.0
RES                               pmax    pmax
     comp=Z,14nm,0.6s
RES  Resolute Bay       19.73 309 eP     Pn              06 29 04.6 -4.0
     comp=Z,14nm,0.6s
HFS  Hagfors            19.80 164 P      Pn              06 29 07.2 -2.3
     baz=11,slow=10
HFS  Hagfors            19.80 164 P      Pn              06 29 07.9 -1.6
     comp=Z,0.4nm,0.3s,baz=3.8,slow=8.9,SNR=17
HFS                               LR      LR              06 35 36.7
     comp=Z,290nm,20.5s,baz=345,slow=33
HFS  Hagfors            19.80 164 P      Pn              06 29 07.9 -1.6
KONO Kongsberg          20.11 170 eP     P               06 29 11.5 +0.1
KONO                              pmax    pmax
     comp=Z,28nm,1.4s
KONO Kongsberg          20.11 170 eP     P               06 29 11.5 +0.1
     comp=Z,28nm,1.4s
KONO Kongsberg          20.11 170 eP     P               06 29 11.5 +0.1
     comp=Z,28nm,1.4s
MEF  Metsahovi          20.50 148 eP     P               06 29 15.8 +0.1
     SNR=151
VSU  Vasula             22.46 146c iP    P               06 29 35.7 -1.0
VSU                               pmax    pmax
     comp=Z,144nm,1.2s,mb5.3
VSU  Vasula             22.46 146 eP     P               06 29 35.7 -1.0
     comp=Z,202nm,1.4s,mb5.4,SNR=151
SLIT Slitere, Latvi     22.87 153 eP     P               06 29 41.4 +0.4
     comp=Z,610nm,1.7s,SNR=147
EBH  Black Hill         23.51 189 eP     P               06 29 48.0 +0.2
EBH  Black Hill         23.51 189 P      P               06 29 48.0 +0.2
EBH  Black Hill         23.51 189 eP     P               06 29 48.0 +0.3
EAB  Aberfoyle          23.59 190 eP     P               06 29 48.6  0.0
EAB                               AMb     AMB             06 29 50.2
     comp=Z,37nm,1.7s,mb4.5
EAB  Aberfoyle          23.59 190 P      P               06 29 48.6  0.0
EAB                               AMb     AMB             06 29 50.2
     comp=Z,37nm,1.7s,mb4.5
EAB  Aberfoyle          23.59 190 eP     P               06 29 48.6 +0.1
     comp=Z,37nm,1.7s,mb4.5
ESY  Stoneypath         23.81 188 eP     P               06 29 50.2 -0.4
ESY                               AMb     AMB             06 29 51.2
     comp=Z,51nm,2.6s,mb4.5
ESY  Stoneypath         23.81 188 P      P               06 29 50.2 -0.4
ESY                               AMb     AMB             06 29 51.2
     comp=Z,51nm,2.6s,mb4.5
ESY  Stoneypath         23.81 188 eP     P               06 29 50.2 -0.4
     comp=Z,51nm,2.6s,mb4.5
EDI  Edinburgh          23.82 188 eP     P               06 29 50.4 -0.3
EDI                               AMb     AMB             06 29 54.4
     comp=Z,23nm,1.8s,mb4.3
EDI  Edinburgh          23.82 188 P      P               06 29 50.4 -0.3
EDI                               AMb     AMB             06 29 54.4
     comp=Z,23nm,1.8s,mb4.3
EDI  Edinburgh          23.82 188 eP     P               06 29 50.4 -0.3
     comp=Z,23nm,1.8s,mb4.3
EAU  Auchinoon          23.91 189 eP     P               06 29 51.9 +0.4
EAU  Auchinoon          23.91 189 P      P               06 29 51.9 +0.4
EAU  Auchinoon          23.91 189 eP     P               06 29 51.8 +0.4
EBL  Broad Law          23.97 188 eP     P               06 29 52.7 +0.7
EBL  Broad Law          23.97 188 P      P               06 29 52.7 +0.7
EBL  Broad Law          23.97 188 eP     P               06 29 52.7 +0.7
EKA  Eskdalemuir Ar     24.41 188 P      P               06 29 56.9 +0.9
     comp=Z,2.5nm,0.6s,mb3.8,baz=358,slow=7.9,SNR=12
EKA  Eskdalemuir Ar     24.41 188 P      P               06 29 56.9 +0.9
FRB  Frobisher Bay      24.97 273 P      P               06 30 02.4 +1.4
     comp=Z,7.1nm,0.6s,mb4.4,baz=18,slow=9.9,SNR=17
FRB                               LR      LR              06 40 27.3
     comp=Z,386nm,18.4s,MS3.9,baz=233,slow=38
FRB  Frobisher Bay      24.97 273 P      P               06 30 02.4 +1.3
FRB                               LR      LR              06 40 27.3
FRB  Frobisher Bay      24.97 273 P      P               06 30 02.4 +1.3
IZAR Zarasai            25.09 148 eP     P               06 30 01.9 -0.3
IZAR                              AMB     AMB             06 30 05.2
     comp=Z,16nm,0.9s,mb4.5
IZAR Zarasai            25.09 148 eP     P               06 30 01.9 -0.3
     comp=Z,16nm,0.9s,mb4.5,SNR=33
XDE  Dent Fell          25.25 189 eP     P               06 30 03.9 +0.2
XDE  Dent Fell          25.25 189 P      P               06 30 03.9 +0.2
XDE  Dent Fell          25.25 189 eP     P               06 30 03.9 +0.2
ISAL Salakas            25.25 148 eP     P               06 30 03.5 -0.2
ISAL                              AMB     AMB             06 30 05.7
     comp=Z,12nm,1.1s,mb4.3
ISAL Salakas            25.25 148 eP     P               06 30 03.5 -0.2
     comp=Z,12nm,1.1s,mb4.3,SNR=33
IIGN Ignalina           25.48 148 eP     P               06 30 05.5 -0.3
IIGN                              AMB     AMB             06 30 07.9
     comp=Z,11nm,1.0s,mb4.3
IIGN Ignalina           25.48 148 eP     P               06 30 05.5 -0.2
     comp=Z,11nm,1.0s,mb4.3,SNR=28
IDID Didziasalis        25.57 148 eP     P               06 30 06.8 +0.3
IDID                              AMB     AMB             06 30 09.1
     comp=Z,14nm,1.1s,mb4.4
IDID Didziasalis        25.57 148 eP     P               06 30 06.8 +0.3
     comp=Z,14nm,1.1s,mb4.4,SNR=28
SOKR Solikamsk          25.71 108 ↑iP    P               06 30 08.1 +0.3
SOKR                              pmax    pmax
     comp=Z,20nm,1.2s,mb4.5
SOKR                              MLR     MLR
     comp=Z,380nm,19.0s,MS3.9
SOKR Solikamsk          25.71 108 i P    P               06 30 08.1 +0.3
     comp=Z,380nm,19.0s
TIXI Tiksi              26.03  36 eP     P               06 30 09.8 -0.8
TIXI                              pmax    pmax
     comp=Z,6.0nm,1.4s,mb3.9
TIXI Tiksi              26.03  36 eP     P               06 30 10.9 +0.3
     comp=Z,2.7nm,0.8s,mb3.8
TIXI Tiksi              26.03  36 eP     P               06 30 09.8 -0.8
     comp=Z,6.0nm,1.4s,mb3.9
SUW  Suwalki            26.53 153 eP     P               06 30 14.5 -0.8
SUW                               pmax    pmax
     comp=Z,24nm,1.0s,mb4.7
SUW  Suwalki            26.53 153 eP     P               06 30 14.5 -0.8
     comp=Z,24nm,1.0s,mb4.7
SUW  Suwalki            26.53 153 eP     P               06 30 14.5 -0.8
     comp=Z,24nm,1.0s,mb4.7
OBN  Obninsk            26.88 135 ↑eP    P               06 30 17.8 -0.6
OBN                               e                       06 31 00.5
OBN                               eS      S               06 34 55.0 +0.4
OBN                               pmax    pmax
     comp=Z,35nm,1.7s,mb4.6
OBN                               MLR     MLR
     comp=Z,300nm,23.0s,MS3.8
OBN  Obninsk            26.88 135 eP     P               06 30 17.8 -0.6
     comp=Z,35nm,1.7s,mb4.6
OBN                               eS      S               06 34 55.0 +0.4
CLL  Collm              28.58 167 eP     P               06 30 33.6  0.0
     comp=Z,7.0nm,1.2s,mb4.3
CLL  Collm              28.58 167 eP     P               06 30 33.0 -0.6
CLL                               e                       06 30 41.0
CLL                               pmax    pmax
     comp=Z,7.0nm,1.2s,mb4.3
CLL                               MLR     MLR
     comp=Z,200nm,19.6s,MS3.7
CLL  Collm              28.58 167 eP     P               06 30 33.0 -0.6
     comp=Z,7.0nm,1.2s,mb4.3
CLL                               e                       06 30 41.0
CLL                               LR      LR
     comp=Z,200nm,19.6s,MS3.7
CLL  Collm              28.58 167 eP     P               06 30 33.0 -0.6
     comp=Z,7.0nm,1.2s,mb4.3
CLL                               esP     sP              06 30 41.0 +3.1
CLL                               eSS     SS              06 36 30.0  -52
CLL  Collm              28.58 167 eP     P               06 30 33.0 -0.6
     comp=Z,7.0nm,1.2s,mb4.3
SVE  Sverdlovsk         28.98 106 ↓eP    P               06 30 37.2 +0.1
SVE                               eS      S               06 35 35.5 +7.9
SVE                               pmax    pmax
     comp=Z,15nm,1.1s,mb4.6
SVE                               MLR     MLR
     comp=Z,517nm,17.0s,MS4.2
SVE  Sverdlovsk         28.98 106 eP     P               06 30 37.2 +0.1
     comp=Z,15nm,1.1s,mb4.6
ARU  Arti               29.00 109d iP    P               06 30 37.3  0.0
ARU                               ePPP                    06 31 35.1
ARU                               S       S               06 35 30.0 +2.2
ARU                               SS      SS              06 36 51.6  -39
ARU                               pmax    pmax
     comp=Z,18nm,1.7s,mb4.5
ARU                               MLR     MLR
     comp=Z,374nm,18.0s,MS4.0
ARU  Arti               29.00 109 eP     P               06 30 37.1 -0.2
     comp=Z,6.9nm,0.7s,mb4.5
ARU  Arti               29.00 109 eP     P               06 30 37.1 -0.2
     comp=Z,6.8nm,0.7s,mb4.5
ARU                               S       S               06 35 30.0 +2.2
     comp=Z,374nm,18.0s
BRG  Berggiesshubel     29.06 165 eP     P               06 30 38.1 +0.2
     comp=Z,11nm,1.3s,mb4.4
BRG  Berggiesshubel     29.06 165 eP     P               06 30 38.2 +0.4
     comp=Z,11nm,1.3s,mb4.4
BRG
     comp=N,137nm,17.3s
BRG
```

comp=E,67nm,24.1s
BRG
comp=Z,185nm,12.5s
BRG Berggiesshubel 29.06 165 *e*P **P 06 30 38.3 +0.4**
MOX Moxa 29.19 169 *e*P **P 06 30 39.9 +0.9**
comp=Z,8.0nm,1.3s,mb4.3
MOX Moxa 29.19 169 *e*P **P 06 30 39.9 +0.9**
comp=Z,8.0nm,1.3s,mb4.3
MOX Moxa 29.19 169 *e*P **P 06 30 39.6 +0.6**
comp=Z,6.0nm,1.1s,mb4.2
PVCC Panska Ves 29.43 165 AMS AMS 06 41 10.0
comp=Z,200nm,23.0s
TANN Tannenbergstha 29.45 167 *e*P **P 06 30 42.1 +0.7**
comp=Z,12nm,1.4s,mb4.4
BAIF Baives 29.62 178 *e*P **P 06 30 43.1 +0.2**
BAIF Baives 29.62 178 *e*P **P 06 30 43.1 +0.2**
NKC Novy Kostel 29.63 167 *e*P **P 06 30 43.5 +0.5**
NKC Novy Kostel 29.63 167 *e*P **P 06 30 43.5 +0.5**
NKC AMS AMS 06 42 00.0
NKC Novy Kostel 29.63 167 *e*P **P 06 30 43.5 +0.5**
DPC Dobruska-Polom 29.70 162 *e*P **P 06 30 44.5 +1.0**
DPC MLR MLR
comp=Z,100nm,23.9s,MS3.4
DPC Dobruska-Polom 29.70 162 *e*P **P 06 30 44.5 +1.0**
DPC AMS AMS 06 40 50.0
comp=Z,100nm,23.9s
DPC Dobruska-Polom 29.70 162 P **P 06 30 44.5 +1.0**
PRU Pruhonice 29.97 165 *e*P **P 06 30 47.4 +1.5**
PRU MLR MLR
comp=Z,200nm,17.2s,MS3.8
PRU Pruhonice 29.97 165 *e*P **P 06 30 47.4 +1.5**
PRU AMS AMS 06 41 50.0
comp=Z,200nm,17.2s
PRU Pruhonice 29.97 165 *e*P **P 06 30 47.4 +1.5**
comp=Z,200nm,17.2s
OJC Ojcow 30.04 158 *e*P **P 06 30 46.3 -0.3**
OJC Ojcow 30.04 158 *e*P **P 06 30 46.3 -0.3**
ROTZ Rotzenmuhle 30.09 168 *e*P **P 06 30 47.6 +0.6**
comp=Z,6.0nm,1.1s,mb4.2
GRA1 Grafenberg Arr 30.13 169 *e*P **P 06 30 48.0 +0.7**
comp=Z,15nm,1.3s,mb4.6
GRA1 Grafenberg Arr 30.13 169 *e*P **P 06 30 48.0 +0.7**
comp=Z,15nm,1.3s,mb4.6
GRF Grafenberg Arr 30.13 169 *e*P **P 06 30 48.0 +0.7**
comp=Z,15nm,1.3s,mb4.6
GRF Grafenberg Arr 30.13 169 *e*P **P 06 30 48.0 +0.7**
GRF pmax pmax
comp=Z,15nm,1.3s,mb4.6
GRF Grafenberg Arr 30.13 169 *e*P **P 06 30 48.0 +0.7**
GRF pmax pmax
comp=Z,15nm,1.3s,mb4.6
GRF Grafenberg Arr 30.13 169 *e*P **P 06 30 48.0 +0.7**
comp=Z,15nm,1.3s,mb4.6
GRF Grafenberg Arr 30.13 169 *e*P **P 06 30 48.0 +0.7**
comp=Z,15nm,1.3s,mb4.6
INK Inuvik 30.27 329 *e*P **P 06 30 47.7 -0.8**
INK pmax pmax
comp=Z,8.0nm,1.5s
INK Inuvik 30.27 329 *e*P **P 06 30 47.7 -0.8**
comp=Z,8.2nm,1.5s,mb4.2
INK Inuvik 30.27 329 *e*P **P 06 30 47.7 -0.8**
comp=Z,8.0nm,1.5s,mb4.2
OKC Ostrava-Krasne 30.32 160 *e*P **P 06 30 49.3 +0.3**
OKC MLR MLR
comp=Z,200nm,22.4s,MS3.7
OKC Ostrava-Krasne 30.32 160 *e*P **P 06 30 49.3 +0.3**
OKC AMS AMS 06 41 40.0
comp=Z,200nm,22.4s
OKC Ostrava-Krasne 30.32 160 *e*P **P 06 30 49.3 +0.3**
comp=Z,200nm,22.4s
MORC Moravsky Berou 30.34 161 *e*P **P 06 30 49.6 +0.4**
MORC pmax pmax
comp=Z,9.0nm,1.1s,mb4.4
MORC Moravsky Berou 30.34 161 *e*P **P 06 30 49.6 +0.3**
comp=Z,9.3nm,1.1s,mb4.4
MORC Moravsky Berou 30.34 161 *e*P **P 06 30 49.6 +0.4**
comp=Z,9.0nm,1.1s,mb4.4
AKASG Malin Array Be 30.37 146 P **P 06 30 47.5 -2.0**
comp=Z,2.5nm,0.6s,mb4.1,baz=343,slow=9.0,SNR=10.0
AKASG LR LR 06 42 58.1
comp=Z,220nm,20.6s,MS3.8,baz=355,slow=36
AKASG Malin Array Be 30.37 146 P **P 06 30 47.5 -2.0**
AKBB Malin Array Si 30.37 146 *e*P **P 06 30 48.6 -0.9**
AKBB Malin Array Si 30.37 146 *e*P **P 06 30 48.6 -0.9**
TREC Trest 30.71 164 *e*P **P 06 30 53.5 +1.0**
TREC MLR MLR
comp=Z,200nm,22.6s,MS3.7
TREC Trest 30.71 164 *e*P **P 06 30 53.5 +1.0**
TREC AMS AMS 06 41 20.0
comp=Z,200nm,22.6s
TREC Trest 30.71 164 *e*P **P 06 30 53.5 +1.0**
comp=Z,200nm,22.6s
WET Wettzell 30.74 167 *e*P **P 06 30 53.7 +1.0**
comp=Z,6.0nm,1.4s,mb4.2
WET Wettzell 30.74 167 *e*P **P 06 30 53.7 +1.0**
WET pmax pmax
comp=Z,6.0nm,1.4s,mb4.2
WET Wettzell 30.74 167 *e*P **P 06 30 53.7 +1.0**
comp=Z,6.0nm,1.4s,mb4.2
WET Wettzell 30.74 167 *e*P **P 06 30 53.7 +1.0**
comp=Z,6.0nm,1.4s,mb4.2
VRAC Vranov 30.75 162 P **P 06 30 54.2 +1.3**
comp=Z,2.8nm,0.3s,mb4.6,baz=353,slow=8.1,SNR=16
VRAC LR LR 06 42 16.9
comp=Z,167nm,20.5s,MS3.7,baz=1.2,slow=34
VRAC Vranov 30.75 162 *e*P **P 06 30 53.5 +0.6**
KHC Kasperske Hory 30.78 166 *e*P **P 06 30 54.2 +1.1**
KHC MLR MLR
comp=Z,100nm,19.3s,MS3.5
KHC Kasperske Hory 30.78 166 *e*P **P 06 30 54.2 +1.1**
KHC AMS AMS 06 42 30.0
comp=Z,100nm,19.3s
KHC Kasperske Hory 30.78 166 *e*P **P 06 30 54.2 +1.1**
comp=Z,100nm,19.3s
FLN La Foliniere 30.94 184 *e*P **P 06 30 54.1 -0.4**
comp=Z,7.0nm,0.9s,mb4.2
FLN *e*MLR MLR
comp=Z,69nm,19.0s,MS3.0
FLN La Foliniere 30.94 184 *e*P **P 06 30 54.1 -0.4**
FLN pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
FLN MLR MLR
comp=Z,70nm,19.0s,MS3.3
FLN La Foliniere 30.94 184 *e*P **P 06 30 54.1 -0.4**
comp=Z,3.5nm,0.9s,mb4.2
FLN LR LR
comp=Z,70nm,19.0s,MS3.3
FLN La Foliniere 30.94 184 *e*P **P 06 30 54.1 -0.4**
comp=Z,3.5nm,0.9s,mb4.2
STHS Stebnicka Huta 30.94 156 *e*P **P 06 30 56.1 +1.5**
STHS *e* 06 31 04.3
STHS pmax pmax
comp=Z,10.0nm,0.9s,mb4.7
STHS Stebnicka Huta 30.94 156 *e*P **P 06 30 56.1 +1.5**
comp=Z,10nm,0.9s,mb4.7
STHS *e* 06 31 04.3
STHS Stebnicka Huta 30.94 156 *e*P **P 06 30 56.1 +1.5**
STHS *e* 06 31 04.3
STHS Stebnicka Huta 30.94 156 *e*P **P 06 30 56.1 +1.5**
comp=Z,10.0nm,0.9s,mb4.7
VSR Storozhevoye 31.03 134 *e*P **P 06 30 54.5 -0.8**
VSR pmax pmax
comp=Z,7.0nm,0.5s,mb4.8
VSR pmax pmax
comp=N,5.0nm,0.6s
VSR pmax pmax
comp=E,3.0nm,0.7s
VSR Storozhevoye 31.03 134 *e*P **P 06 30 54.5 -0.8**
comp=E,5.0nm,0.6s,mb4.5
GEC2 GERESS Array S 31.07 166 *e*P **P 06 30 56.7 +1.0**
comp=Z,12nm,1.3s,mb4.6
GEC2 GERESS Array S 31.07 166 *e*P **P 06 30 56.7 +1.0**
GEC2 pmax pmax
comp=Z,12nm,1.3s,mb4.6
GEC2 GERESS Array S 31.07 166 *e*P **P 06 30 56.7 +1.0**
comp=Z,12nm,1.3s,mb4.6
GEC2 GERESS Array S 31.07 166 *e*P **P 06 30 56.7 +1.0**
comp=Z,12nm,1.3s,mb4.6
GERES GERESS Array B 31.07 166 P **P 06 30 56.4 +0.7**
comp=Z,2.6nm,1.0s,mb4.0,baz=12,slow=7.4,SNR=18
GERES LR LR 06 43 09.8
comp=Z,118nm,18.1s,MS3.6,baz=0.3,slow=36
GERES GERESS Array B 31.07 166 P **P 06 30 56.4 +0.7**
LDF La Druitiere 31.10 184 *e*P **P 06 30 55.7 -0.2**
comp=Z,4.8nm,0.7s,mb4.1
LDF La Druitiere 31.10 184 *e*P **P 06 30 55.7 -0.2**
LDF pmax pmax
comp=Z,2.0nm,0.7s,mb4.1
LDF La Druitiere 31.10 184 *e*P **P 06 30 55.7 -0.2**
comp=Z,2.4nm,0.7s,mb4.1
LDF La Druitiere 31.10 184 *e*P **P 06 30 55.7 -0.2**
comp=Z,2.4nm,0.7s,mb4.1
MEZF Maizieres J'vi 31.18 177 *e*P **P 06 30 57.2 +0.5**
MEZF Maizieres J'vi 31.18 177 *e*P **P 06 30 57.2 +0.5**
CDF Champ du Feu 31.30 174 *e*P **P 06 30 58.2 +0.5**
comp=Z,12nm,1.3s,mb4.3
CDF Champ du Feu 31.30 174 *e*P **P 06 30 58.2 +0.5**
CDF pmax pmax
comp=Z,6.0nm,1.3s,mb4.3
CDF Champ du Feu 31.30 174 *e*P **P 06 30 58.2 +0.5**
comp=Z,6.0nm,1.3s,mb4.3
CDF Champ du Feu 31.30 174 *e*P **P 06 30 58.2 +0.5**
comp=Z,6.0nm,1.3s,mb4.3
GRR Gorron 31.32 185 *e*P **P 06 30 57.2 -0.6**
GRR Gorron 31.32 185 *e*P **P 06 30 57.2 -0.6**
BFO Black Forest 31.41 173 *e*P **P 06 30 59.3 +0.7**
comp=Z,15nm,2.1s,mb4.5
BFO Black Forest 31.41 173 *e*P **P 06 30 59.3 +0.7**
BFO pmax pmax
comp=Z,15nm,2.1s,mb4.5
BFO Black Forest 31.41 173 *e*P **P 06 30 59.3 +0.7**
comp=Z,15nm,2.1s,mb4.5
BFO Black Forest 31.41 173 *e*P **P 06 30 59.3 +0.7**
comp=Z,15nm,2.1s,mb4.5
SGMF Saint Gilles 31.48 187 *e*P **P 06 31 00.0 +0.7**
SGMF Saint Gilles 31.48 187 *e*P **P 06 31 00.0 +0.7**
KOLS Kolonicke sedl 31.50 155 *e*P **P 06 31 00.3 +0.8**
KOLS pmax pmax
comp=Z,12nm,1.3s,mb4.6
KOLS Kolonicke sedl 31.50 155 *e*P **P 06 31 00.3 +0.8**
comp=Z,12nm,1.3s,mb4.6
KOLS *e* 06 31 15.2
KOLS Kolonicke sedl 31.50 155 *e*P **P 06 31 00.3 +0.8**
KOLS *e* 06 31 15.2
KOLS Kolonicke sedl 31.50 155 *e*P **P 06 31 00.3 +0.8**
comp=Z,12nm,1.3s,mb4.6
HAU Haudompre 31.70 176 *e*P **P 06 31 01.6 +0.4**
comp=Z,11nm,0.9s,mb4.4
HAU *e*MLR MLR
comp=Z,107nm,17.0s,MS3.3
HAU Haudompre 31.70 176 *e*P **P 06 31 01.6 +0.4**
HAU pmax pmax
comp=Z,5.0nm,0.9s,mb4.3
HAU MLR MLR
comp=Z,110nm,17.0s,MS3.6
HAU Haudompre 31.70 176 *e*P **P 06 31 01.6 +0.4**
comp=Z,5.4nm,0.9s,mb4.4
HAU LR LR
comp=Z,110nm,17.0s,MS3.6
HAU Haudompre 31.70 176 *e*P **P 06 31 01.6 +0.4**
comp=Z,5.4nm,0.9s,mb4.4
VYHS Vyhne 31.70 160 *e*P **P 06 31 02.0 +0.8**
VYHS pmax pmax
comp=Z,8.0nm,1.5s,mb4.3
VYHS Vyhne 31.70 160 *e*P **P 06 31 02.0 +0.8**
comp=Z,7.8nm,1.5s,mb4.3
VYHS *e* 06 31 12.2
VYHS Vyhne 31.70 160 *e*P **P 06 31 02.0 +0.8**
VYHS *e* 06 31 12.2
VYHS Vyhne 31.70 160 *e*P **P 06 31 02.0 +0.8**
comp=Z,8.0nm,1.5s,mb4.3
KECS Kecovo 31.82 158 *e*P **P 06 31 02.8 +0.5**
KECS pmax pmax
comp=Z,3.0nm,0.9s,mb4.1
KECS Kecovo 31.82 158 *e*P **P 06 31 02.8 +0.5**
comp=Z,3.2nm,0.9s,mb4.2
KECS Kecovo 31.82 158 *e*P **P 06 31 02.8 +0.5**
KECS Kecovo 31.82 158 *e*P **P 06 31 02.8 +0.5**
comp=Z,3.0nm,0.9s,mb4.1
ZST Bratislava 31.89 162 *e*P **P 06 31 04.7 +1.8**
ZST pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
ZST Bratislava 31.89 162 *e*P **P 06 31 04.7 +1.8**
comp=Z,6.6nm,0.8s,mb4.5
ZST Bratislava 31.89 162 *e*P **P 06 31 04.7 +1.8**
ZST Bratislava 31.89 162 *e*P **P 06 31 04.7 +1.8**
comp=Z,7.0nm,0.8s,mb4.5
RJOB Jochberg 32.14 167 *e*P **P 06 31 06.5 +1.4**
comp=Z,3.0nm,1.0s,mb4.1
TRPA Tapa 32.32 155‖*e*P **P 06 31 07.6 +0.9**
PSZ Piszkesteto 32.34 158 *e*P **P 06 31 07.7 +0.9**
PSZ pmax pmax
comp=Z,13nm,1.2s,mb4.6
PSZ Piszkesteto 32.34 158 *e*P **P 06 31 07.7 +0.8**
comp=Z,13nm,1.2s,mb4.6
PSZ Piszkesteto 32.34 158‖*e*P **P 06 31 07.8 +1.0**
PSZ Piszkesteto 32.34 158 *e*P **P 06 31 07.7 +0.9**
comp=Z,13nm,1.2s,mb4.6
SOP Sopron 32.37 163‖*e*P **P 06 31 08.1 +1.0**
SOP Sopron 32.37 163‖*e*P **P 06 31 08.1 +1.0**
LOR Lormes 32.41 179 *e*P **P 06 31 07.3 -0.2**
comp=Z,5.0nm,0.8s,mb4.1
LOR *e*MLR MLR
comp=Z,70nm,18.2s,MS3.1
LOR Lormes 32.41 179 *e*P **P 06 31 07.3 -0.2**
LOR pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
LOR MLR MLR
comp=Z,70nm,18.3s,MS3.4
LOR Lormes 32.41 179 *e*P **P 06 31 07.3 -0.2**
comp=Z,2.5nm,0.8s,mb4.1
LOR LR LR
comp=Z,70nm,18.3s,MS3.4
LOR Lormes 32.41 179 *e*P **P 06 31 07.3 -0.2**
comp=Z,2.5nm,0.8s,mb4.1
SSF Saint Saulge 32.62 179 *e*P **P 06 31 09.2 -0.1**
SSF Saint Saulge 32.62 179 *e*P **P 06 31 09.2 -0.1**
BUD Budapest 32.72 160‖*e*P **P 06 31 11.8 +1.7**
BUD Budapest 32.72 160‖*e*P **P 06 31 11.8 +1.7**
AVF Avril sur Loir 32.89 179 *e*P **P 06 31 11.5 -0.1**
comp=Z,21nm,1.3s,mb4.6
AVF Avril sur Loir 32.89 179 *e*P **P 06 31 11.5 -0.1**
AVF pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
AVF Avril sur Loir 32.89 179 *e*P **P 06 31 11.5 -0.1**
comp=Z,10nm,1.3s,mb4.6
AVF Avril sur Loir 32.89 179 *e*P **P 06 31 11.5 -0.1**
comp=Z,10nm,1.3s,mb4.6
SCHQ Schefferville 33.01 265 LR LR 06 45 13.0
comp=Z,316nm,18.0s,MS4.1,baz=5.9,slow=37
BUR08 Bucovina Ar. S 33.02 152 *e*P **P 06 31 12.7 -0.1**
BUR08 Bucovina Ar. S 33.02 152 *e*P **P 06 31 12.7 -0.1**
SMF Signal de Mont 33.03 179 *e*P **P 06 31 12.8 -0.1**
SMF Signal de Mont 33.03 179 *e*P **P 06 31 12.8 -0.1**
CABF La Chapelle 33.09 176 *e*P **P 06 31 13.8 +0.4**
CABF La Chapelle 33.09 176 *e*P **P 06 31 13.8 +0.4**
MFF Saint Martin d 33.09 184 *e*P **P 06 31 13.3 -0.1**
MFF Saint Martin d 33.09 184 *e*P **P 06 31 13.3 -0.1**
BGF Bois d'Agland 33.12 180 *e*P **P 06 31 13.8 +0.1**
comp=Z,26nm,1.1s,mb4.8
BGF Bois d'Agland 33.12 180 *e*P **P 06 31 13.8 +0.1**
BGF pmax pmax
comp=Z,13nm,1.1s,mb4.8
BGF Bois d'Agland 33.12 180 *e*P **P 06 31 13.8 +0.1**
comp=Z,13nm,1.1s,mb4.8
BGF Bois d'Agland 33.12 180 *e*P **P 06 31 13.8 +0.1**
comp=Z,13nm,1.1s,mb4.8
TCF Toulx Ste Croi 33.39 181 *e*P **P 06 31 16.0 0.0**
comp=Z,11nm,0.9s,mb4.5
TCF Toulx Ste Croi 33.39 181 *e*P **P 06 31 16.0 0.0**
TCF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
TCF Toulx Ste Croi 33.39 181 *e*P **P 06 31 16.0 0.0**
comp=Z,5.3nm,0.9s,mb4.5
TCF Toulx Ste Croi 33.39 181 *e*P **P 06 31 16.0 0.0**
comp=Z,5.3nm,0.9s,mb4.5
YKA Yellowknife Ar 33.72 312 P **P 06 31 17.9 -0.8**
comp=Z,0.2nm,0.7s,baz=5.4,slow=9.5,SNR=6.0
YKA PcP PcP 06 33 57.9 +0.1
comp=Z,0.7nm,0.7s,baz=6.8,slow=2.6,SNR=8.8
YKA LR LR 06 44 55.2
comp=Z,34nm,19.3s,MS3.1,baz=110,slow=36
YKA Yellowknife Ar 33.72 312 P **P 06 31 17.9 -0.9**
YKA 06 33 57.9
YKA Yellowknife Ar 33.72 312 P **P 06 31 17.9 -0.8**
YKA PcP PcP 06 33 57.9 +0.1
YKA LR LR 06 44 55.2
YKA Yellowknife Ar 33.72 312 P **P 06 31 17.9 -0.9**
YKA Yellowknife Ar 33.72 312 PcP PcP 06 33 57.9 +0.1
PKSM Moragy 33.96 160‖*e*P **P 06 31 21.4 +0.4**
FCC Fort Churchill 34.14 293 *e*P **P 06 31 23.7 +1.3**
comp=Z,0.1nm,0.9s
FCC Fort Churchill 34.14 293 *e*P **P 06 31 23.7 +1.3**
LPL La Plagne 34.19 175 *e*P **P 06 31 24.2 +1.2**
comp=Z,8.2nm,0.8s,mb4.4
LPL La Plagne 34.19 175 *e*P **P 06 31 24.2 +1.2**
LPL pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
LPL La Plagne 34.19 175 *e*P **P 06 31 24.2 +1.2**
comp=Z,4.1nm,0.8s,mb4.4
LPG La Plagne 34.21 175 *e*P **P 06 31 23.7 +0.5**
comp=Z,19nm,1.3s,mb4.6
LPG La Plagne 34.21 175 *e*P **P 06 31 23.7 +0.5**
LPG pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
LPG La Plagne 34.21 175 *e*P **P 06 31 23.7 +0.5**
comp=Z,9.4nm,1.3s,mb4.6
BRVK Borovoye 34.29 98 *ce*P **P 06 31 24.7 +0.9**
BRVK pmax pmax
comp=Z,9.0nm,1.7s,mb4.4
BRVK Borovoye 34.29 98 *e*P **P 06 31 24.7 +0.9**
comp=Z,9.0nm,1.7s,mb4.4
BVAR Borovoye Array 34.34 98 P **P 06 31 24.8 +0.6**
comp=Z,2.5nm,0.6s,mb4.3,baz=336,slow=6.8,SNR=10
BVAR LR LR 06 48 19.5
comp=Z,548nm,19.0s,MS4.3,baz=347,slow=42
BVAR Borovoye Array 34.34 98 P **P 06 31 24.8 +0.6**
RJF Les Rejaudoux 34.38 182 *e*P **P 06 31 24.6 0.0**
comp=Z,16nm,1.0s,mb4.6
RJF *e*MLR MLR
comp=Z,82nm,19.2s,MS3.2
RJF Les Rejaudoux 34.38 182 *e*P **P 06 31 24.6 0.0**
RJF pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
RJF MLR MLR
comp=Z,80nm,19.3s,MS3.5
RJF Les Rejaudoux 34.38 182 *e*P **P 06 31 24.6 0.0**
comp=Z,7.8nm,1.0s,mb4.6
RJF LR LR
comp=Z,80nm,19.3s,MS3.5
RJF Les Rejaudoux 34.38 182 *e*P **P 06 31 24.6 0.0**
comp=Z,7.8nm,1.0s,mb4.6
ORIF Oris-en-Rattie 34.78 176 *e*P **P 06 31 28.6 +0.5**
comp=Z,5.5nm,0.7s,mb4.3
ORIF *e*MLR MLR
comp=Z,100nm,19.5s,MS3.3
ORIF Oris-en-Rattie 34.78 176 *e*P **P 06 31 28.6 +0.5**
ORIF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
ORIF Oris-en-Rattie 34.78 176 *e*P **P 06 31 28.6 +0.5**
comp=Z,2.8nm,0.7s,mb4.3
VIVF Saint-Julien-l 34.83 178 *e*P **P 06 31 29.1 +0.6**
VIVF Saint-Julien-l 34.83 178 *e*P **P 06 31 29.1 +0.6**
SBF Sospel 35.86 174 *e*P **P 06 31 38.3 +0.9**
comp=Z,38nm,0.8s,mb5.1
SBF Sospel 35.86 174 *e*P **P 06 31 38.3 +0.9**
SBF pmax pmax
comp=Z,19nm,0.8s,mb5.1
SBF Sospel 35.86 174 *e*P **P 06 31 38.3 +0.9**
comp=Z,19nm,0.8s,mb5.1
SBF Sospel 35.86 174 *e*P **P 06 31 38.3 +0.9**
comp=Z,19nm,0.8s,mb5.1
ZALV Zalesovo Beam 36.09 84 P **P 06 31 38.3 -0.9**
comp=Z,0.6nm,0.5s,mb3.8,baz=330,slow=8.7,SNR=5.2
ZALV LR LR 06 51 05.8
comp=Z,179nm,18.1s,MS3.9,baz=21,slow=44
ABKAR Akbulak array 36.13 111 *e*P **P 06 31 39.5 -0.1**
comp=Z,1.9nm,0.8s,mb4.1
ABKAR Akbulak array 36.13 111 *e*P **P 06 31 39.5 -0.1**
comp=Z,1.9nm,0.8s,mb4.1
EPF Esparros 36.66 183 *e*P **P 06 31 44.3 +0.1**
comp=Z,48nm,1.4s,mb4.8
EPF Esparros 36.66 183 *e*P **P 06 31 44.3 +0.1**
EPF pmax pmax
comp=Z,24nm,1.4s,mb4.8
EPF Esparros 36.66 183 *e*P **P 06 31 44.3 +0.1**
comp=Z,24nm,1.4s,mb4.8
EPF Esparros 36.66 183 *e*P **P 06 31 44.3 +0.1**
comp=Z,24nm,1.4s,mb4.8
HYT Haines Junctio 37.98 329 *e*P **P 06 31 57.5 +2.3**
HYT Haines Junctio 37.98 329 *e*P **P 06 31 57.5 +2.3**
KURK Kurchatov 38.05 91 *e*P **P 06 31 56.1 +0.2**
KURK pmax pmax
comp=Z,11nm,1.0s,mb4.5
KURK Kurchatov 38.05 91 *e*P **P 06 31 56.1 +0.1**
comp=Z,11nm,1.0s,mb4.5
KURK Kurchatov 38.05 91 *e*P **P 06 31 56.1 +0.2**
comp=Z,11nm,1.0s,mb4.5
KIV Kislovodsk 38.62 132 *e*P **P 06 32 01.7 +0.9**
KIV *e*S **S 06 37 57.4 +0.7**
KIV pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
KIV MLR MLR
comp=Z,80nm,16.0s,MS3.6
KIV Kislovodsk 38.62 132 *e*P **P 06 32 01.7 +0.9**
comp=Z,4.0nm,0.7s,mb4.3
KIV *e*S **S 06 37 57.4 +0.7**
comp=Z,80nm,16.0s
ZEI Tsey 39.95 131 *e*P **P 06 32 11.8 -0.1**
ZEI pmax pmax
comp=Z,8.0nm,1.4s,mb4.3
ZEI Tsey 39.95 131 *e*P **P 06 32 11.8 -0.1**
comp=Z,8.0nm,1.4s,mb4.3
ESDC Sonseca Array 40.09 188 P **P 06 32 13.4 +0.4**
comp=Z,1.2nm,0.7s,mb3.7,baz=3.6,slow=8.1,SNR=7.2
ESDC Sonseca Array 40.09 188 P **P 06 32 13.4 +0.3**
TIP Timpagrande 40.86 163 *e*P **P 06 32 20.7 +1.2**
comp=Z,16nm,1.3s,mb4.5
TIP Timpagrande 40.86 163 *e*P **P 06 32 20.7 +1.2**
comp=Z,16nm,1.3s,mb4.5
MOY Mondy 41.14 70 *e*P **P 06 32 22.3 +0.7**
MOY Mondy 41.14 70 *e*P **P 06 32 22.3 +0.7**
EVO Evora 41.36 193 *e*P **P 06 32 23.2 -0.4**
comp=Z,36nm,1.4s,mb4.5
EVO *e*MLR MLR
comp=Z,60nm,21.2s,MS3.1
EVOP Sao Brissos 41.37 193 *e*P **P 06 32 23.2 -0.5**
comp=Z,18nm,1.4s,mb4.5
BR131 Keskin Array S 41.69 144 *e*P **P 06 32 26.8 +0.5**
BR131 Keskin Array S 41.69 144 *e*P **P 06 32 26.8 +0.5**
BRTR Keskin Array B 41.69 144 P **P 06 32 27.4 +1.1**
comp=Z,3.1nm,0.8s,mb4.0,baz=349,slow=5.7,SNR=20
BRTR LR LR 06 51 10.8
comp=Z,69nm,18.5s,MS3.6,baz=324,slow=38
BRTR Keskin Array B 41.69 144 *ce*P **P 06 32 27.3 +1.0**
BRTR pmax pmax
comp=Z,3.0nm,0.7s
BRTR Keskin Array B 41.69 144 *e*P **P 06 32 27.3 +1.0**
comp=Z,3.0nm,0.7s,mb4.0
MKAR Makanchi Array 42.49 89 P **P 06 32 32.7 -0.1**
comp=Z,2.3nm,0.6s,mb4.0,baz=353,slow=7.4,SNR=20
MKAR Makanchi Array 42.49 89 P **P 06 32 32.7 -0.1**
ULM Lac du Bonnet 42.60 290 LR LR 06 50 27.7
comp=Z,416nm,19.3s,MS4.3,baz=247,slow=36
KEST Kesra 44.02 172 LR LR 06 49 56.5
comp=Z,29nm,18.6s,MS3.2,baz=269,slow=34
EYMN Ely 44.07 285 *e*P **P 06 32 45.7 +0.3**
comp=Z,5.9nm,0.9s,mb4.3
EYMN Ely 44.07 285 *e*P **P 06 32 45.7 +0.3**
comp=Z,5.9nm,0.9s,mb4.3
AGMN Agassiz Nation 44.49 290 *e*P **P 06 32 49.0 +0.2**
comp=Z,4.5nm,1.0s,mb4.2
AGMN Agassiz Nation 44.49 290 *e*P **P 06 32 49.0 +0.2**
comp=Z,4.5nm,1.0s,mb4.2
TKM2 Tokmak 2 45.02 97 *e*P **P 06 32 54.5 +1.4**
TKM2 pmax pmax
comp=Z,5.0nm,1.0s,mb4.3
TKM2 Tokmak 2 45.02 97 *e*P **P 06 32 54.5 +1.4**
comp=Z,4.6nm,1.0s,mb4.3
TKM2 Tokmak 2 45.02 97 *e*P **P 06 32 54.5 +1.4**
comp=Z,5.0nm,1.0s,mb4.3
AAK Ala-Archa 45.10 99 *ce*P **P 06 32 53.8 +0.1**
AAK pmax pmax
comp=Z,3.0nm,1.2s,mb4.0
AAK Ala-Archa 45.10 99 *e*P **P 06 32 54.4 +0.7**
comp=Z,5.1nm,1.1s,mb4.3
AAK Ala-Archa 45.10 99 *e*P **P 06 32 53.8 +0.1**
comp=Z,3.0nm,1.2s,mb4.0
AML Almayashu 45.44 100 *e*P **P 06 32 58.4 +2.0**
comp=Z,4.0nm,0.7s,mb4.4
AML Almayashu 45.44 100 *e*P **P 06 32 58.4 +1.9**
comp=Z,4.0nm,0.7s,mb4.4
UCH Uchtor 45.49 99 *e*P **P 06 32 58.5 +1.7**
comp=Z,4.4nm,0.9s,mb4.3
UCH Uchtor 45.49 99 *e*P **P 06 32 58.5 +1.6**
comp=Z,4.3nm,0.9s,mb4.3
SONM Songino Array 45.75 66 P **P 06 32 58.1 -0.8**
comp=Z,1.1nm,0.7s,mb3.9,baz=342,slow=7.2,SNR=7.4
SONM LR LR 06 54 34.5

comp=Z,179nm,19.6s,MS4.0,baz=116,slow=39
SONM Songino Array 45.75 66 P **P 06 32 58.1 -0.8**
ULN Ulaanbaatar 45.83 66 *c*eP **P 06 32 59.9 +0.4**
ULN Ulaanbaatar 45.83 66 *e*P **P 06 32 59.2 -0.3**
comp=Z,4.6nm,0.8s,mb4.5
ULN Ulaanbaatar 45.83 66 *e*P **P 06 32 59.2 -0.3**
comp=Z,4.6nm,0.8s,mb4.5
WMQ Urumqi 46.35 85 *e*P **P 06 33 05.0 +1.4**
WMQ pmax pmax
comp=Z,15nm,1.0s,mb4.9
PETK Petropavlovsk- 46.78 21 LR LR 06 50 53.1
comp=Z,33nm,21.4s,MS3.3,baz=221,slow=34
MDT Midelt 46.95 189 P **P 06 33 09.0 +0.6**
comp=Z,6.3nm,1.3s,mb4.4,baz=17,slow=6.5,SNR=4.9
LAO LASA Array 47.77 299 *e*P **P 06 33 15.9 +1.2**
comp=Z,6.8nm,0.9s,mb4.7
LAO LASA Array 47.77 299 *e*P **P 06 33 15.9 +1.2**
comp=Z,6.8nm,0.9s,mb4.7
BSMT Bassoo Peak 47.95 307 *e*P **P 06 33 16.7 +0.6**
comp=Z,3.8nm,0.9s,mb4.4
BSMT Bassoo Peak 47.95 307 *e*P **P 06 33 16.7 +0.6**
comp=Z,3.8nm,0.9s,mb4.4
D16A Dana Ranch, Ca 48.27 303 ⇑P **P 06 33 18.7 +0.1**
baz=48
MMAI Mount Meron Ar 48.52 143 LR LR 06 58 17.0
comp=Z,52nm,18.1s,MS3.5,baz=300,slow=42
HRY Holter Researc 48.63 304 *e*P **P 06 33 22.1 +0.8**
HRY Holter Researc 48.63 304 *e*P **P 06 33 22.1 +0.8**
MSO Missoula 48.83 305 *e*P **P 06 33 23.7 +0.9**
comp=Z,2.4nm,0.9s,mb4.2
MSO Missoula 48.83 305 *e*P **P 06 33 23.7 +0.9**
comp=Z,2.4nm,0.9s,mb4.2
D11A Klaveano Farm, 48.97 308 ⇑P **P 06 33 23.9 0.0**
baz=49
ECSD EROS Data Cent 49.04 289 *e*P **P 06 33 25.1 +0.7**
comp=Z,9.1nm,0.9s,mb4.8
ECSD EROS Data Cent 49.04 289 *e*P **P 06 33 25.1 +0.6**
comp=Z,9.1nm,0.9s,mb4.8
E13A Victor 49.24 306 ⇑P **P 06 33 26.2 +0.2**
baz=49
LRM Limekiln Ridge 49.59 304 *e*P **P 06 33 29.1 +0.4**
comp=Z,4.8nm,0.6s,mb4.7
LRM Limekiln Ridge 49.59 304 *e*P **P 06 33 29.1 +0.5**
comp=Z,4.8nm,0.6s,mb4.7
MCMT McKenzie Canyo 50.62 304 *e*P **P 06 33 37.8 +1.3**
comp=Z,1.3nm,1.0s,mb3.8
MCMT McKenzie Canyo 50.62 304 *e*P **P 06 33 37.8 +1.3**
comp=Z,1.3nm,1.0s,mb3.8
H13A Challis 51.09 305 ⇑P **P 06 33 39.9 -0.1**
baz=51
H12A Diamond D Ranc 51.19 306 ⇓P **P 06 33 40.3 -0.5**
baz=51
IMW Indian Meadow 51.24 302 *e*P **P 06 33 43.1 +2.0**
comp=Z,6.8nm,1.3s,mb4.4
IMW Indian Meadow 51.24 302 *e*P **P 06 33 43.1 +2.0**
comp=Z,6.8nm,1.3s,mb4.4
BLO Bloomington 51.68 278 *e*P **P 06 33 44.3 -0.2**
BLO pmax pmax
comp=Z,11nm,0.6s,mb5.0
BLO Bloomington 51.68 278 *e*P **P 06 33 44.3 -0.2**
comp=Z,10nm,0.6s,mb4.9
BLO Bloomington 51.68 278 *e*P **P 06 33 44.3 -0.2**
comp=Z,11nm,0.6s,mb5.0
I13A Wildhorse Cree 51.70 305 ⇓P **P 06 33 44.4 -0.2**
baz=52
J15A Blackfoot 51.95 303 ⇑P **P 06 33 45.9 -0.6**
baz=52
K20A Yellowstone Ra 52.04 299 ⇓P **P 06 33 46.2 -0.9**
baz=52
BW06 Boulder Array 52.12 300 ⇑P **P 06 33 46.5 -1.3**
baz=52
BW06 Boulder Array 52.12 300 *e*P **P 06 33 48.3 +0.5**
comp=Z,8.7nm,1.5s,mb4.5
BW06 Boulder Array 52.12 300 *e*P **P 06 33 48.3 +0.5**
comp=Z,8.7nm,1.5s,mb4.5
PDAR Pinedale Array 52.12 300 P **P 06 33 47.4 -0.4**
comp=Z,1.0nm,1.0s,mb3.7,baz=27,slow=3.6,SNR=7.7
PDAR LR LR 06 56 39.3
comp=Z,134nm,19.7s,MS4.0,baz=19,slow=37
PDAR Pinedale Array 52.12 300 P **P 06 33 47.4 -0.4**
L21A Rawlins 52.56 298 ⇓P **P 06 33 50.4 -0.6**
baz=52
CN2 Changchun 52.63 50 *e*P **P 06 33 49.6 -1.9**
CN2 *e*S **S 06 41 11.9 -6.4**
CN2 LR LR
comp=N,200nm,14.0s,MS4.5
CN2 LR LR
comp=E,200nm,14.0s,MS4.5
K15A Arbon 52.66 303 ⇓P **P 06 33 51.0 -0.8**
baz=52
L19A Farson 52.74 300 ⇓P **P 06 33 51.0 -1.3**
baz=53
GTA Gaotai 52.80 75 *e*P **P 06 33 52.8 0.0**
GTA pP pP 06 33 57.1 +1.1
GTA sP sP 06 34 00.7 +3.5
GTA PP PP 06 35 52.5 +0.7
GTA S **S 06 41 19.2 -1.6**
GTA sS sS 06 41 28.2 +2.2
GTA SS SS 06 44 57.7 -1.1
GTA pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
GTA pmax pmax
comp=Z,59nm,5.7s
GTA LR LR
comp=N,410nm,23.7s,MS4.7
GTA LR LR
comp=E,630nm,24.9s,MS4.7
GTA LR LR
comp=Z,120nm,22.5s,MS3.9
M21A Separation Pea 52.91 298 ⇑P **P 06 33 52.0 -1.6**
baz=53
K11A Parker Ranch, 53.11 306 ⇓P **P 06 33 54.3 -0.7**
baz=53
MIB Mutribah 53.18 130 *e*P **P 06 33 55.2 -0.5**
MIB AMb AMB 06 33 58.4
comp=Z,32nm,0.9s,mb5.3
MIB Mutribah 53.18 130 *e*P **P 06 33 55.2 -0.5**
comp=Z,32nm,0.9s,mb5.2
L15A Malad City 53.31 303 ⇑P **P 06 33 56.5 0.0**
baz=53
HHC Hu-ho-hao-te 53.40 64 *e*P **P 06 33 57.5 +0.3**
HHC pP pP 06 34 02.0 +1.6
HHC sP sP 06 34 04.4 +2.8
HHC PcP PcP 06 35 05.5 +1.2
HHC PP PP 06 35 59.1 +1.9
HHC ScP ScP 06 39 01.0 -0.5
HHC PcS PcS 06 39 02.8 -0.4
HHC S **S 06 41 26.3 -2.6**
HHC ScS ScS 06 43 43.8 -2.4
HHC SS SS 06 45 05.3 -2.8
HHC pmax pmax
comp=Z,16nm,1.0s,mb4.9
HHC pmax pmax
comp=Z,72nm,6.2s
HHC LR LR
comp=N,240nm,17.8s,MS4.7
HHC LR LR
comp=E,560nm,16.6s,MS4.7
HHC LR LR
comp=Z,260nm,19.0s,MS4.3
UMR Umm Al-Rimmam 53.48 130 *e*P **P 06 33 56.8 -1.1**
UMR AMb AMB 06 34 00.2
comp=Z,45nm,0.9s,mb5.4
UMR Umm Al-Rimmam 53.48 130 *e*P **P 06 33 56.8 -1.1**
comp=Z,45nm,0.9s,mb5.4
NAY Al-Naaiem 53.71 131 *e*P **P 06 33 59.1 -0.5**
NAY AMb AMB 06 34 00.3
comp=Z,8.3nm,1.3s,mb4.5
NAY Al-Naaiem 53.71 131 *e*P **P 06 33 59.1 -0.5**
comp=Z,8.0nm,1.3s,mb4.5
N21A Black Mountain 53.76 298 ⇑P **P 06 33 58.5 -1.4**
baz=54
N20A Spence Gulch, 53.81 299 ⇑P **P 06 33 59.5 -0.7**
baz=54
O20A White River Ci 54.48 299 ⇑P **P 06 34 05.8 +0.6**
baz=54,SNR=14
TKL Tuckaleechee C 54.59 274 P **P 06 34 05.7 -0.3**
comp=Z,5.1nm,0.7s,mb4.7,baz=91,slow=3.9,SNR=12
TKL Tuckaleechee C 54.59 274 P **P 06 34 05.7 -0.3**
TKL Tuckaleechee C 54.59 274 P **P 06 34 05.7 -0.3**
O17A Robinson Place 54.82 301 ⇑P **P 06 34 07.6 0.0**
baz=55
BJI Beijing 54.93 59 P **P 06 34 06.8 -1.6**
BJI S **S 06 41 47.3 -2.2**
BJI SS SS 06 45 31.5 -0.7
BJI pmax pmax
comp=Z,8.0nm,0.5s,mb5.0
BJI pmax pmax
comp=Z,50nm,3.6s
BJI LR LR
comp=N,160nm,16.6s,MS4.6
BJI LR LR
comp=E,350nm,13.7s,MS4.6
BJI LR LR
comp=Z,110nm,19.2s
P19A Cripple Cowboy 55.09 299 ⇑P **P 06 34 09.2 -0.4**
baz=55
P20A De Beque 55.13 298 ⇓P **P 06 34 09.6 -0.2**
baz=55,SNR=5.4
SMCO Snowmass 55.22 297 *e*P **P 06 34 11.5 +1.0**
comp=Z,5.5nm,0.9s,mb4.6
SMCO Snowmass 55.22 297 *e*P **P 06 34 11.5 +1.0**
comp=Z,5.4nm,0.9s,mb4.6
Q21A Lamborn Mesa, 55.65 298 ⇑P **P 06 34 14.0 +0.4**
baz=56
R22A Saguache, Gunn 56.11 297 ⇑P **P 06 34 16.8 -0.1**
baz=56
Q16A Castle Valley 56.14 301 ⇑P **P 06 34 16.9 -0.2**
baz=56,SNR=6.6
PV04 Paradox Valley 56.29 299 *e*P **P 06 34 19.8 +1.6**
PV04 Paradox Valley 56.29 299 *e*P **P 06 34 19.8 +1.6**
SDCO Great Sand Dun 56.37 295 *e*P **P 06 34 19.4 +0.7**
SDCO Great Sand Dun 56.37 295 *e*P **P 06 34 19.5 +0.7**
R20A Redvale 56.41 298 ⇑P **P 06 34 19.3 +0.3**
baz=56,SNR=5.6
R19A Curley Farm, L 56.45 299 ⇓P **P 06 34 19.3 0.0**
baz=56,SNR=7.2
PV01 Paradox Valley 56.49 298 *e*P **P 06 34 20.8 +1.2**
comp=Z,795nm,0.9s
PV01 Paradox Valley 56.49 298 *e*P **P 06 34 20.8 +1.2**
comp=Z,795nm,0.9s
R17A Hanksville Air 56.55 300 ⇑P **P 06 34 19.0 -1.1**
baz=56,SNR=5.1
MSU Marysvale 56.69 302 *e*P **P 06 34 23.0 +2.0**
MSU Marysvale 56.69 302 *e*P **P 06 34 23.0 +2.0**
LZH Lanzhou 56.74 72 *e*P **P 06 34 30.8 +9.4**
LZH pP pP 06 34 34.0 +9.4
LZH sP sP 06 34 37.0 +11
LZH PP PP 06 36 38.0 +11
LZH pmax pmax
comp=Z,14nm,1.0s,mb5.0
LZH pmax pmax
comp=Z,52nm,4.3s
LZH LR LR
comp=E,210nm,10.5s
LZH LR LR
comp=Z,420nm,12.0s,MS4.8
Q11A Duckwater 56.90 305 ⇓P **P 06 34 22.3 -0.2**
baz=57
S19A Harvey Farm, M 56.96 299 ⇓P **P 06 34 23.0 +0.1**
baz=57,SNR=13
Q10A Clear Creek Ra 57.03 306 ⇑P **P 06 34 22.4 -1.0**
baz=57
S18A Hurst Farm, Bl 57.15 300 ⇓P **P 06 34 24.5 +0.2**
baz=57,SNR=7.0
R13A O'Grain Ranch, 57.29 303 ⇑P **P 06 34 24.6 -0.7**
baz=57
S17A Black Ridge (B 57.34 300 ⇓P **P 06 34 25.6 0.0**
baz=57,SNR=6.9
R11A Troy Canyon, C 57.37 305 ⇑P **P 06 34 25.7 -0.2**
baz=57
MVCO Mesa Verde 57.38 298 *e*P **P 06 34 26.8 +0.9**
MVCO Mesa Verde 57.38 298 *e*P **P 06 34 26.8 +0.8**
MIAR Mount Ida 57.44 283 *e*P **P 06 34 26.4 0.0**
MIAR pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
MIAR Mount Ida 57.44 283 *e*P **P 06 34 26.4 0.0**
comp=Z,3.9nm,0.6s,mb4.6
MIAR Mount Ida 57.44 283 *e*P **P 06 34 26.4 0.0**
comp=Z,4.0nm,0.6s,mb4.6
R10A Warm Springs 57.54 305 ⇓P **P 06 34 26.7 -0.4**
baz=57
S15A Panguitch 57.54 302 ⇓P **P 06 34 26.1 -1.0**
baz=57
T18A Mexican Hat 57.68 299 ⇓P **P 06 34 26.7 -1.3**
baz=58,SNR=5.8
NVAR Mina Array Bea 57.70 307 P **P 06 34 28.1 0.0**
comp=Z,0.8nm,0.9s,mb3.8,baz=16,slow=4.8,SNR=4.5
NVAR Mina Array Bea 57.70 307 P **P 06 34 28.1 0.0**
U23A El Rito 57.87 296 ⇓P **P 06 34 28.8 -0.6**
baz=58
U22A Llaves 57.93 296 ⇓P **P 06 34 29.0 -0.8**
baz=58
S10A Tonopah Range, 57.94 306 ⇓P **P 06 34 29.4 -0.4**
baz=58
V25A Rancho No Teng 58.09 294 ⇓P **P 06 34 30.2 -0.7**
baz=58
WMOK Wichita Mounta 58.17 288 *e*P **P 06 34 31.6 +0.1**
WMOK pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
WMOK Wichita Mounta 58.17 288 *e*P **P 06 34 31.6 +0.1**
comp=Z,3.4nm,0.8s,mb4.4
WMOK Wichita Mounta 58.17 288 *e*P **P 06 34 31.6 +0.1**
comp=Z,3.0nm,0.8s,mb4.4
T15A Red Dirt Ranch 58.19 302 ⇑P **P 06 34 29.9 -1.6**
baz=58,SNR=5.8
V22A San Miguel Ran 58.39 296 ⇓P **P 06 34 33.3 +0.3**
baz=58,SNR=8.3
W24A Lazy 6 Ranch, 58.83 295 ⇑P **P 06 34 35.9 -0.2**
baz=59
KSRS Korea Array 59.21 49 P **P 06 34 38.1 -0.6**
comp=Z,5.7nm,0.8s,mb4.7,baz=123,slow=38,SNR=8.4
KSRS LR LR 06 59 46.5
comp=Z,40nm,20.8s,MS3.5,baz=218,slow=36
KSRS Korea Array 59.21 49 P **P 06 34 38.1 -0.6**
KSRS pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
KSRS MLR MLR
comp=Z,41nm,20.8s,MS3.5
KSRS Korea Array 59.21 49 P **P 06 34 38.1 -0.6**
comp=Z,41nm,20.8s
ANMO Albuquerque 59.26 296 P **P 06 34 39.8 +0.7**
comp=Z,0.9nm,0.8s,mb3.9,baz=30,slow=7.7,SNR=6.0
ANMO Albuquerque 59.26 296 *c*eP **P 06 34 40.1 +1.0**
ANMO pmax pmax
comp=Z,8.0nm,2.5s
ANMO Albuquerque 59.26 296 P **P 06 34 39.8 +0.7**
V17A Tonalea, Kykot 59.30 300 ⇑P **P 06 34 39.9 +0.5**
baz=59
V15A Kaibab Nationa 59.33 301 ⇓P **P 06 34 39.1 -0.5**
baz=59,SNR=5.2
WUAZ Wupatki 59.50 300 ⇑P **P 06 34 41.3 +0.5**
baz=59
WUAZ Wupatki 59.50 300 *e*P **P 06 34 41.8 +1.1**
WUAZ Wupatki 59.50 300 *e*P **P 06 34 41.8 +1.1**
V13A Grand Canyon W 59.58 303 ⇑P **P 06 34 41.3 0.0**
baz=59
MSTX Muleshoe 59.60 292 ⇑P **P 06 34 41.5 +0.1**
baz=60
V14A Boquillas Ranc 59.66 302 ⇑P **P 06 34 42.0 +0.2**
baz=60,SNR=6.4
MPMC Manual Prospec 59.90 306 ⇓P **P 06 34 43.8 +0.3**
baz=60
Y25A Mesa, Roswell 59.97 294 ⇑P **P 06 34 43.1 -0.9**
baz=60
X20A Quemado 59.99 297 ⇑P **P 06 34 43.1 -1.1**
baz=60
W14A Seligman 60.06 302 ⇓P **P 06 34 43.7 -0.9**
baz=60
Y24A Capitan 60.09 294 ⇑P **P 06 34 44.7 -0.2**
baz=60
X19A St. Johns 60.23 298 ⇓P **P 06 34 45.9 +0.1**
baz=60
Z27A Tatum 60.32 292 ⇓P **P 06 34 45.4 -1.0**
baz=60,SNR=6.6
Z26A Caprock 60.49 293 ⇓P **P 06 34 47.5 0.0**
baz=60
Z24A Sheeppen Canyo 60.66 294 ⇑P **P 06 34 48.7 0.0**
baz=60
CPRX Cap Rock 60.70 293 *e*P **P 06 34 50.3 +1.3**
comp=Z,24nm,0.7s,mb5.4
CPRX Cap Rock 60.70 293 *e*P **P 06 34 50.3 +1.3**
comp=Z,24nm,0.7s,mb5.4
125A Gardner Draw, 61.20 293 ⇑P **P 06 34 53.1 +0.7**
baz=61
124A Stringfield Ra 61.29 294 ⇓P **P 06 34 52.9 -0.1**
baz=61,SNR=7.3
MJAR Matsushiro Arr 61.43 40 P **P 06 34 53.7 -0.1**
comp=Z,2.8nm,1.1s,mb4.3,baz=353,slow=7.2,SNR=5.9
MJAR Matsushiro Arr 61.43 40 P **P 06 34 53.7 -0.2**
MJAR Matsushiro Arr 61.43 40 P **P 06 34 53.7 -0.2**
GDL2 Guadalupe Moun 61.60 293 *e*P **P 06 34 53.1 -2.0**
226A Malaga, Loving 61.69 293 ⇓P **P 06 34 56.0 +0.3**
baz=62
CD2 Chengdu 61.78 73 *e*P **P 06 34 56.9 +0.6**
CD2 pP pP 06 35 01.5 +2.0
CD2 sP sP 06 35 03.9 +3.2
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.2
CD2 pmax pmax
comp=Z,30nm,6.2s
328A Wristen Ranch, 62.14 291 ⇑P **P 06 34 58.8 0.0**
baz=62
MNTX Cornudas Mount 62.26 294 *e*P **P 06 35 00.2 +0.7**
comp=Z,1.0nm,0.8s,mb4.0
MNTX Cornudas Mount 62.26 294 *e*P **P 06 35 00.2 +0.6**
comp=Z,1.0nm,0.8s,mb4.0
117A Oracle 62.28 299 ⇓P **P 06 34 59.9 +0.2**
baz=62
115A Sonoran Desert 62.39 300 ⇑P **P 06 35 00.4 0.0**
baz=62
326A Caldwell Ranch 62.40 292 ⇓P **P 06 35 01.2 +0.7**
baz=62
JCT Junction City 62.50 288 *e*P **P 06 35 01.9 +0.7**
JCT pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
JCT Junction City 62.50 288 *e*P **P 06 35 01.9 +0.7**
comp=Z,4.2nm,0.7s,mb4.7
JCT Junction City 62.50 288 *e*P **P 06 35 01.9 +0.7**
comp=Z,4.0nm,0.7s,mb4.7
TUC Tucson 62.55 299 *e*P **P 06 35 02.6 +1.2**
TUC pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
TUC Tucson 62.55 299 *e*P **P 06 35 02.6 +1.2**
comp=Z,2.3nm,0.8s,mb4.4
TUC Tucson 62.55 299 *e*P **P 06 35 02.6 +1.2**
comp=Z,2.0nm,0.8s,mb4.3
220A Playas Peak, P 62.58 297 ⇑P **P 06 35 00.8 -0.9**
baz=62,SNR=5.6
219A White Tail Can 62.60 298 ⇓P **P 06 35 02.6 +0.7**
baz=62
428A Kincaid Ranch, 62.76 291 ⇓P **P 06 35 02.4 -0.5**
baz=63
427A Hayter Ranch, 62.76 292 ⇓P **P 06 35 03.7 +0.8**
baz=63
426A McDonald Obser 63.04 292 ⇓P **P 06 35 05.0 +0.2**
baz=63
217A Green Valley 63.08 299 ⇓P **P 06 35 04.9 0.0**
baz=63
425A Indio Mountain 63.09 293 ⇓P **P 06 35 05.5 +0.4**
baz=63
527A Woodward Ranch 63.48 292 ⇓P **P 06 35 06.7 -1.0**
baz=63
628A Black Gap, Mar 64.00 291 ⇓P **P 06 35 09.9 -1.3**
baz=64
TXAR Lajitas Array 64.28 292 P **P 06 35 12.8 -0.1**
comp=Z,0.9nm,0.6s,mb4.0,baz=40,slow=5.0,SNR=18
TXAR LR LR 07 03 56.8
comp=Z,260nm,18.4s,MS4.5,baz=190,slow=37
TXAR Lajitas Array 64.28 292 P **P 06 35 12.8 -0.1**
TXAR LR LR 07 03 56.8
TXAR Lajitas Array 64.28 292 P **P 06 35 12.9 -0.1**
TORD Torodi Ar. Bea 66.42 181 P **P 06 35 26.6 -0.4**
comp=Z,3.7nm,1.0s,mb4.4,baz=358,slow=4.8,SNR=16
TORD LR LR 07 07 07.3
comp=Z,51nm,19.5s,MS3.8,baz=320,slow=38
GYA Guiyang 66.63 71 P **P 06 35 29.0 +0.8**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
KMI Kunming 67.25 76 P **P 06 35 33.4 +1.3**
KMI pP pP 06 35 36.3 +0.9
KMI PP PP 06 38 02.6 +2.7
KMI S S 06 44 25.8 -0.9
KMI SS SS 06 48 45.3 -0.1
KMI pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
KMI LR LR
comp=N,120nm,23.1s,MS4.5
KMI LR LR
comp=E,240nm,18.3s,MS4.5
KMI LR LR
comp=Z,140nm,27.9s
DBIC Dimbokro 72.96 188 LR LR 07 11 31.2
comp=Z,56nm,18.3s,MS3.9,baz=301,slow=39
CMAR Chiang Mai Arr 73.08 81 P **P 06 36 07.2 -0.8**
comp=Z,2.3nm,0.7s,mb4.2,baz=344,slow=7.0,SNR=14
CMAR LR LR 07 13 26.1
comp=Z,73nm,18.7s,MS4.0,baz=342,slow=40
CMAR Chiang Mai Arr 73.08 81 *c*eP **P 06 36 07.1 -0.8**
CMAR pmax pmax
comp=Z,2.0nm,0.7s
CMAR Chiang Mai Arr 73.08 81 *e*P **P 06 36 07.1 -0.8**
comp=Z,2.0nm,0.7s,mb4.2
SDV Santo Domingo 78.34 255 P **P 06 36 39.2 +1.2**
comp=Z,2.1nm,0.6s,mb4.2,baz=58,slow=4.7,SNR=7.3
SDV Santo Domingo 78.34 255 P **P 06 36 39.2 +1.2**
ROSC El Rosal 82.93 258 LR LR 07 13 11.3
comp=Z,81nm,18.5s,MS4.1,baz=23,slow=35
ASAR Alice Springs 120.16 53 PKP PKPdf 06 43 26.4 -1.9
comp=Z,0.6nm,0.8s,baz=38,slow=0.9,SNR=5.4
ASAR Alice Springs 120.16 53 PKIKP PKPdf 06 43 26.4 -1.8
ASAR pmax pmax
comp=Z,1.0nm,0.9s
PLCA Paso Flores 126.83 245 PKP PKPdf 06 43 39.3 -1.1
comp=Z,1.0nm,0.9s,baz=0.0,slow=1.0,SNR=3.3
PLCA Paso Flores 126.83 245 PKIKP PKPdf 06 43 39.3 -1.1
PLCA pmax pmax
comp=Z,1.0nm,0.9s
MAW Mawson 150.83 137 PKPbc PKPbc 06 44 28.0 -0.4
comp=Z,1.3nm,0.3s,baz=266,slow=7.0,SNR=4.1
MAW Mawson 150.83 137 PKIKP PKPbc 06 44 28.0 -0.4
MAW pmax pmax
comp=Z,1.0nm,0.3s

THE ***01*** *06:27:38.5, 39.°16N×25.°79E, h7km±1km, ML2.5/4, Error ellipse: s-maj=1.4km s-min=0.4km az=62.0*
CSEM ***01*** *06:27:38.5±0.2, 39.°15N×25.°77E, h2km, ML2.5/4, Error ellipse: s-maj=5.5km s-min=3.5km az=63.0*
ISCJB ***01*** *06:27:38.1±0.8, 39.°15N±0.°03×25.°76E±0.°06, h2km±8km, Error ellipse: s-maj=7.3km s-min=5.1km az=171.0*
DDA ***01*** *06:27:40.0, 39.°24N×25.°89E, h8km±2km, Md2.7*
ISC 01 06:27:38.9±0.8, 39.°16N±0.°03×25.°78E±0.°06, h4km±7km, n13, σ0.°64/26, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.08**	**47**	P	**Pg**	**06 27 40.4**	**-0.2**
SIGR				S	**Sg**	**06 27 42.0**	**+0.3**
SIGR	**SIGRI**	**0.08**	**47**	P	**Pg**	**06 27 40.4**	**-0.2**
SIGR				S	**Sg**	**06 27 42.0**	**+0.3**
PRK	**Paraskevi**	**0.39**	**77**	P	**Pg**	**06 27 45.8**	**-0.6**
PRK				S	**Sg**	**06 27 51.7**	**+0.2**
PRK	**Paraskevi**	**0.39**	**77**	P	**Pg**	**06 27 45.8**	**-0.6**
PRK				S	**Sg**	**06 27 51.7**	**+0.2**
BOZC	**Bozcaada**	**0.71**	**17**	*i* P	**Pg**	**06 27 51.6**	**-1.0**
BOZC				*i* S	**Sg**	**06 28 02.3**	**+0.5**
CHOS	**Chios island**	**0.80**	**164**	P	**Pg**	**06 27 53.3**	**-0.9**
CHOS				S	**Sg**	**06 28 05.4**	**+0.8**
CHOS	**Chios island**	**0.80**	**164**	P	**Pg**	**06 27 53.3**	**-0.9**
CHOS				S	**Sg**	**06 28 05.4**	**+0.8**
LIA	**Limnos Island**	**0.87**	**328**	P	**Pg**	**06 27 55.0**	**-0.6**
LIA				S	**Sg**	**06 28 07.9**	**+1.0**
LIA	**Limnos Island**	**0.87**	**328**	P	**Pg**	**06 27 55.0**	**-0.6**
LIA				S	**Sg**	**06 28 07.9**	**+1.0**
URLA	**Izmir**	**1.02**	**141**	*i* P	**Pg**	**06 27 57.8**	**-0.6**
URLA				*i* S	**Sg**	**06 28 12.3**	**+0.7**
URLA	**Izmir**	**1.02**	**141**	*i* P	**Pg**	**06 27 57.8**	**-0.6**
URLA				*i* S	**Sg**	**06 28 12.3**	**+0.7**
BALY	**Balya**	**1.54**	**67**	*i* P	**Pn**	**06 28 07.5**	**+0.6**
BALY				*i* S	**Sn**	**06 28 27.2**	**-0.1**
BALY	**Balya**	**1.54**	**67**	*i* P	**Pn**	**06 28 07.5**	**+0.5**
BALY				*i* S	**Sn**	**06 28 27.2**	**-0.2**

ISK ***01*** *06:32:16.6, 39.°56N×38.°56E, h18km, MD2.7*
DDA ***01*** *06:32:16.7, 39.°55N×38.°61E, h7km±3km, Md2.9*
ISCJB ***01*** *06:32:16.7±0.7, 39.°57N±0.°02×38.°61E±0.°06, h8km±7km, Error ellipse: s-maj=8.1km s-min=4.0km az=9.9*
CSEM ***01*** *06:32:17.0±0.2, 39.°57N×38.°60E, h10km, MD2.9, Error ellipse: s-maj=5.1km s-min=3.9km az=93.0*
ISC 01 06:32:17.3±0.7, 39.°57N±0.°03×38.°58E±0.°06, h11km±6km, n25, σ0.°82/43, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEMA	**Kemaliye**	**0.31**	**193**	*i* P	**Pg**	**06 32 23.2**	**-0.3**
KEMA				*i* S	**Sg**	**06 32 27.5**	**-0.2**

KEMA	**Kemaliye**	**0.31**	**193**	*i* P		**Pg**	**06 32 23.2**	**-0.3**
KEMA				*i* S		**Sg**	**06 32 27.5**	**-0.2**
EZC	**Erzincan**	**0.62**	**73**	*e*PN		**Pg**	**06 32 29.6**	**+0.2**
DARE	**Darende-Malaty**	**0.86**	**225**	*e*PN		**Pg**	**06 32 40.3**	**+6.4**
DARE				*e*SN		**Sg**	**06 32 57.7**	**+13**
DARE	**Darende-Malaty**	**0.86**	**225**	*e*Pn		**Pg**	**06 32 40.3**	**+6.4**
PTK	**Pertek**	**0.92**	**137**	*e*PG		**Pg**	**06 32 34.9**	**-0.2**
PTK				*e*SG		**Sg**	**06 32 48.4**	**+1.2**
PTK	**Pertek**	**0.92**	**137**	*e*Pg		**Pg**	**06 32 34.9**	**-0.2**
PTK				*e*Sg		**Sg**	**06 32 48.4**	**+1.3**
ELZG	**Elazig**	**1.11**	**164**	*i* P		**Pg**	**06 32 37.8**	**-0.9**
ELZG				*i* S		**Sg**	**06 32 53.2**	**0.0**
ELZG	**Elazig**	**1.11**	**164**	*i* P		**Pg**	**06 32 37.8**	**-0.9**
ELZG				*i* S		**Sg**	**06 32 53.2**	**0.0**
GUMT	**Gumushane**	**1.13**	**38**	*e*PN		**Pg**	**06 32 38.5**	**-0.5**
GUMT				*e*SN		**Sg**	**06 32 53.9**	**+0.3**
GUMT	**Gumushane**	**1.13**	**38**	*e*Pn		**Pg**	**06 32 38.5**	**-0.4**
GUMT				*e*Sn		**Sg**	**06 32 53.9**	**+0.3**
MYA	**Malataya**	**1.25**	**186**	*e*PN		**Pn**	**06 32 39.5**	**-1.1**
MYA				*e*SN		**Sn**	**06 32 56.3**	**-1.0**
MYA	**Malataya**	**1.25**	**186**	*e*Pn		**Pn**	**06 32 39.5**	**-1.1**
SVSK	**Karacayir**	**1.27**	**286**	*e*PN		**Pn**	**06 32 40.1**	**-0.8**
SVSK				*e*SN		**Sn**	**06 32 56.8**	**-1.1**
SVSK	**Karacayir**	**1.27**	**286**	*e*Pn		**Pn**	**06 32 40.1**	**-0.8**
SVSK				*e*Sn		**Sn**	**06 32 56.8**	**-1.1**
SVRC	**Sivrice-ELAZID**	**1.32**	**154**	*e*PN		**Pn**	**06 32 40.9**	**-0.6**
SVRC	**Sivrice-ELAZID**	**1.32**	**154**	*e*Pn		**Pn**	**06 32 40.9**	**-0.6**
ESPY	**Espiye-Giresun**	**1.35**	**5**	*e*PN		**Pn**	**06 32 41.9**	**-0.1**
ESPY	**Espiye-Giresun**	**1.35**	**5**	*e*Pn		**Pn**	**06 32 41.9**	**-0.1**
AKCD	**Akcadag**	**1.37**	**202**	*i* P		**Pn**	**06 32 42.7**	**+0.4**
AKCD				*i* S		**Sb**	**06 33 01.3**	**+0.9**
AKCD	**Akcadag**	**1.37**	**202**	*i* P		**Pn**	**06 32 42.7**	**+0.4**
AKCD				*i* S		**Sb**	**06 33 01.3**	**+0.9**
GRSN	**GIRESUNGRSN**	**1.38**	**350**	*i* P		**Pn**	**06 32 43.0**	**+0.7**
GRSN				*i* S		**Sb**	**06 33 00.7**	**+0.2**
GRSN	**GIRESUNGRSN**	**1.38**	**350**	*i* P		**Pn**	**06 32 43.0**	**+0.7**
GRSN				*i* S		**Sb**	**06 33 00.7**	**+0.2**
PINB	**Pinarbasi**	**1.92**	**243**	*i* P		**Pn**	**06 32 51.1**	**+1.3**
PINB				*i* S		**Sn**	**06 33 16.9**	**+3.1**
PINB	**Pinarbasi**	**1.92**	**243**	*i* P		**Pn**	**06 32 51.1**	**+1.4**
PINB				*i* S		**Sn**	**06 33 16.9**	**+3.1**

*IDC **01** 06:45:51.1±0.7, 58°.99S×25°.33W, h0km, mb4.2/5, mb1 4.2/5, mb1mx3.9/16, mbtmp4.1/5, MS3.4/1, Ms1 3.3/1, ms1mx3.0/14, Error ellipse: s-maj=30.0km s-min=25.3km az=56.0*
*ISCJB **01** 06:45:51.6±1.0, 59°.0S±0°.2×25°.5W±0°.4, h10km, mb4.0/6, Error ellipse: s-maj=31.1km s-min=19.5km az=139.1*
*NEIC **01** 06:45:56.1±0.5, 58°.95S×25°.25W, h35km, mb4.2/1, Error ellipse: s-maj=25.1km s-min=18.0km az=214.0*

ISC 01 06:45:53.4±1.0, 59°.0S±0°.2×25°.4W±0°.4, h10km, n18, σ0°.96/7, mb4.0/6, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QSPA	**South Pole Qui**	**31.25**	**180**	P	**P**	**06 52 13.4**	**+0.8**
	3.0nm,0.6s,mb4.3,baz=210,slow=3.8,SNR=41						
TRQA	**Tornquist**	**31.41**	**296**	*e*P	**P**	**06 52 14.3**	**-0.1**
	2.5nm,0.7s,mb4.2						
TRQA				*e*PP	PP	06 53 25.1	-0.1
PLCA	**Paso Flores**	**33.53**	**283**	P	**P**	**06 52 34.0**	**+1.1**
	1.4nm,0.8s,mb3.9,baz=152,slow=10,SNR=3.9						
PLCA				LR	LR	07 04 17.0	
	comp=Z,61nm,21.3s,baz=209,slow=33						
PLCA	**Paso Flores**	**33.53**	**283**	P	**P**	**06 52 34.0**	**+1.1**
PLCA				LR	LR	07 04 17.0	
CFAA	**Coronel Fontan**	**39.63**	**295**	P	**P**	**06 53 23.9**	**-1.1**
	0.6nm,0.7s,mb3.5,baz=156,slow=7.8,SNR=17						
TORD	**Torodi Ar. Bea**	**75.19**	**27**	P	**P**	**06 57 36.5**	**+0.7**
	3.0nm,0.6s,mb4.4,baz=196,slow=6.3,SNR=31						
ASAR	**Alice Springs**	**95.89**	**161**	P	**P**	**06 59 18.7**	**-1.4**
	0.4nm,0.8s,mb3.9,baz=183,slow=4.5,SNR=13						
NVAR	**Mina Array Bea**	**123.38**	**290**	PKP	PKPdf	07 04 47.9	-1.9
	0.3nm,0.6s,baz=124,slow=2.4,SNR=2.9						
FINES	**FINESS Array B**	**126.54**	**28**	PKP	PKPdf	07 04 53.2	-1.8
	0.6nm,0.5s,baz=151,slow=4.4,SNR=8.0						
FINES	**FINESS Array B**	**126.54**	**28**	PKP	PKPdf	07 04 53.2	-1.8
ARCES	**ARCESS Array B**	**133.32**	**22**	PKP	PKPdf	07 05 04.7	-3.1
	1.5nm,0.8s,baz=180,slow=0.7,SNR=6.4						
BVAR	**Borovoye Array**	**135.51**	**59**	PKP	PKPdf	07 05 09.6	-2.7
	0.4nm,0.5s,baz=226,slow=3.8,SNR=2.6						
YKA	**Yellowknife Ar**	**138.97**	**315**	PKP	PKPdf	07 05 17.4	-1.0
	2.3nm,0.6s,baz=127,slow=2.4,SNR=60						
YKA	**Yellowknife Ar**	**138.97**	**315**	PKP	PKPdf	07 05 17.4	-1.0
ZALV	**Zalesovo Beam**	**142.74**	**66**	PKhKP		07 05 18.8	
	1.0nm,0.4s,baz=11,slow=2.9,SNR=5.5						
ZALV				PKP	PKPdf	07 05 25.5	0.0
	0.5nm,0.3s,baz=151,slow=3.3,SNR=3.5						
ZALV	**Zalesovo Beam**	**142.74**	**66**	PKP	PKPdf	07 05 25.5	0.0
INK	**Inuvik**	**148.66**	**317**	PKPbc	PKPbc	07 05 38.1	-0.8
	3.4nm,0.7s,baz=88,slow=2.6,SNR=15						
SONM	**Songino Array**	**149.85**	**90**	PKPbc	PKPbc	07 05 41.3	-1.2
	0.8nm,0.6s,baz=257,slow=3.0,SNR=7.0						

MAN 01 06:49:13, 14°.70N×123°.25E, h20km, mb4.6, ML3.5, MS3.4, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GQP	**Guinayangan**	**1.11**	**225**	*e*P	Pn	06 49 32.8	-0.6
GQP				*e*S	Sb	06 49 48.1	+0.6
POLP	**Polilio Island**	**1.27**	**271**	*e*P	Pn	06 49 34.8	-0.7
POLP				*e*S	Sn	06 49 53.3	+1.3
PVCP	**Virac**	**1.41**	**141**	*e*P	Pn	06 49 36.9	-0.5
PVCP				*e*S	Sn	06 49 55.4	-0.1
AUQP	**San Andres**	**1.48**	**202**	*e*P	Pn	06 49 42.3	+3.9
BOAC	**Boac**	**1.84**	**228**	*e*P	Pn	06 49 46.4	+3.0
BOAC				*e*S	Sn	06 50 10.1	+4.0
CNP	**Cataraman**	**2.58**	**148**	*e*P	Pn	06 49 56.0	+2.4
CAUP	**Cauayan**	**2.62**	**329**	*e*P	Pn	06 49 54.3	+0.1
CAUP				*e*S	Sn	06 50 16.1	-9.3
APYP	**Conner**	**3.69**	**329**	*e*P	Pn	06 50 10.2	+1.3

CASC 01 07:25:32.2±1.6, 8°.34N×82°.95W, h14km, MD3.7, 1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.38**	**325**	*e*S	Sg	07 25 42.3	-2.8
BRU2	**Volcan**	**0.52**	**29**	⇓*i*P	Pg	07 25 42.3	-0.1
BRU2				*e*S	Sg	07 25 50.9	+1.6
BAR1		**0.97**	**338**	*e*P	Pb	07 25 48.3	-2.4
CNI	**Changuinola**	**1.15**	**22**	*e*P	Pb	07 25 52.9	-1.0
BUS	**Buena Vista**	**1.45**	**326**	*e*P	Pn	07 25 57.9	-0.1
URSC	**Urasca**	**1.70**	**331**	*e*P	Pn	07 26 00.2	-1.2
CGA2	**Cerro Gallo 2**	**2.24**	**318**	*e*S	Sn	07 26 38.9	+2.5

*ROM **01** 07:28:46.1±0.6, 42°.55N×16°.41E, h10km, Md2.6/3, MI2.2/2, Error ellipse: s-maj=18.0km s-min=5.5km az=120.0*
*CSEM **01** 07:28:47.1±1.4, 42°.60N×16°.01E, h10km, MD2.6/3, Error ellipse: s-maj=37.3km s-min=7.3km az=133.0*

ISC 01 07:28:46.9±2.6, 42°.6N±0°.1×16°.0E±0°.2, h10km, n8, σ0°.77/16, Adriatic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGRT	**San Giovanni R**	**0.90**	**192**	Pg	**Pg**	**07 29 03.8**	**-0.4**
SGRT				Sg	**Sg**	**07 29 16.3**	**+0.4**
	50nm,0.3s						
SGRT	**San Giovanni R**	**0.90**	**192**	Pg	**Pg**	**07 29 03.8**	**-0.4**
SGRT				Sg	**Sg**	**07 29 16.3**	**+0.4**
	50nm,0.3s						
MSAG	**Monte S. Angel**	**0.93**	**184**	Pg	**Pg**	**07 29 03.1**	**-1.6**
MSAG				Sg	**Sg**	**07 29 16.3**	**-0.4**
	72nm,0.4s						
MSAG	**Monte S. Angel**	**0.93**	**184**	Pg	**Pg**	**07 29 03.1**	**-1.6**
MSAG				Sg	**Sg**	**07 29 16.3**	**-0.4**
	72nm,0.4s						
RGNG	**Rignano Grg**	**1.01**	**198**	Pg	**Pg**	**07 29 06.4**	**+0.2**
RGNG				Sg	**Sg**	**07 29 20.6**	**+1.2**
RGNG	**Rignano Grg**	**1.01**	**198**	Pg	**Pg**	**07 29 06.4**	**+0.2**
RGNG				Sg	**Sg**	**07 29 20.6**	**+1.2**
STON	**Ston**	**1.28**	**79**	*e*Pg	**Pg**	**07 29 12.0**	**+0.6**
STON				Sg	**Sg**	**07 29 28.1**	**0.0**
STON	**Ston**	**1.28**	**79**	*e*Pg	**Pg**	**07 29 12.0**	**+0.6**
STON				Sg	**Sg**	**07 29 28.0**	**0.0**

CASC 01 07:33:59.3±1.7, 8°.41N×83°.04W, h16km, MD3.6, 1C-3D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.27**	**332**	*e*P	Pg	07 34 04.2	-1.0
ACR				*e*S	Sg	07 34 08.5	-0.7
BRU2	**Volcan**	**0.51**	**42**	⇓*i*P	Pg	07 34 09.2	-0.4
BRU2				*e*S	Sg	07 34 17.4	+0.9
BAR1		**0.87**	**342**	*e*P	Pb	07 34 14.6	-1.3
BAR1				*e*S	Sb	07 34 27.7	+0.4
CNI	**Changuinola**	**1.12**	**27**	⇑*e*P	Pb	07 34 19.4	-0.9
BUS	**Buena Vista**	**1.34**	**328**	⇓*e*P	Pn	07 34 22.8	-0.5
QCR	**Quepos**	**1.50**	**312**	*e*P	Pn	07 34 25.7	+0.2
URSC	**Urasca**	**1.59**	**333**	*e*P	Pn	07 34 27.1	+0.4
LAJ	**Bijagual**	**1.79**	**324**	*e*P	Pn	07 34 32.8	+3.2
CGA2	**Cerro Gallo 2**	**2.13**	**319**	*e*P	Pn	07 34 34.7	+0.5

*ISCJB **01** 07:38:54.8±0.9, 10°.22N±0°.03×91°.53E±0°.03, h2km±5km, mb4.7/99, MS3.8/39, Error ellipse: s-maj=5.2km s-min=3.9km az=34.7*
*IDC **01** 07:38:56.1±0.4, 10°.22N×91°.60E, h0km, mb4.4/27, mb1 4.5/30, mb1mx4.5/33, mbtmp4.4/30, ML4.3/3, MS3.7/23, Ms1 3.7/23, ms1mx3.5/38, Error ellipse: s-maj=14.2km s-min=10.1km az=57.0*
*BJI **01** 07:38:57.4, 10°.07N×91°.55E, h29km, mB4.9/31, mb4.9/43, Ms4.4/32, Ms7 4.1/30*
*NEIC **01** 07:38:59.6±0.2, 10°.23N×91°.57E, mb4.8/57, Error ellipse: s-maj=5.9km s-min=3.7km az=49.0*
*MOS **01** 07:38:59.5±1.0, 10°.26N×91°.58E, h33km, mb5.0/44, Error ellipse: s-maj=9.4km s-min=5.1km az=114.8*
*SZGRF **01** 07:39:04.2, 10°.78N×91°.44E, h21km, mb4.6, Andaman Islands, India, region*

ISC 01 07:38:58.8±1.0, 10°.25N±0°.03×91°.52E±0°.03, h14km±6km, h22km±4km: pP-P, n293, σ0°.98/283, mb4.7/99, MS3.8/39, 11C-2D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**1.85**	**41**	*e*PKP	x	07 40 34.1	
PBA				*e*S	x	07 40 43.3	
NNT	**Nongplab**	**8.38**	**73**	P	**Pn**	**07 41 02.5**	**+2.6**
SNG	**Songkhla**	**9.50**	**108**	P	**Pn**	**07 41 17.0**	**+1.8**
	100nm,0.8s						
BDT	**Bhumibol Dam**	**10.06**	**45**	P	**Pn**	**07 41 23.0**	**+0.1**
KULM	**Kulim**	**10.30**	**118**	P	**Pn**	**07 41 27.7**	**+1.5**
KULM	**Kulim**	**10.30**	**118**	*e*Pn	**Pn**	**07 41 24.9**	**-1.3**
	46nm,0.8s						
PSI	**Prapat**	**10.43**	**135**	Pn	**Pn**	**07 41 25.9**	**-2.1**
	1.5nm,0.3s,baz=301,slow=11,SNR=5.9						
PSI				Sn	**Sn**	**07 43 26.4**	**+1.7**
	0.7nm,0.3s,baz=214,slow=23,SNR=2.7						
PSI				LR	LR	07 46 28.9	
	comp=Z,357nm,19.0s,baz=303,slow=43						
PSI	**Prapat**	**10.43**	**135**	P	**Pn**	**07 41 25.9**	**-2.1**
PSI						07 43 26.5	
PSI	**Prapat**	**10.43**	**135**	Pn	**Pn**	**07 41 25.9**	**-2.1**
PSI				Sn	**Sn**	**07 43 26.4**	**+1.7**
PSI				LR	LR	07 46 28.9	
CMAR	**Chiang Mai Arr**	**10.88**	**41**	Pn	**Pn**	**07 41 33.2**	**-0.9**
	0.9nm,0.3s,baz=313,slow=13,SNR=9.3						
CMAR				Sn	**Sn**	**07 43 37.0**	**+1.4**
	baz=233,slow=38,SNR=2.0						
VIS	**Vishakhapatnam**	**10.88**	**314**	*i* P	**Pn**	**07 41 33.6**	**-0.5**
VIS				*i* S	**Sn**	**07 43 24.6**	**-11**
IPM	**Ipoh**	**11.03**	**121**	P	**Pn**	**07 41 35.5**	**-0.7**
PALK	**Pallekele**	**11.09**	**255**	Pn	**Pn**	**07 41 37.4**	**+0.3**
	2.2nm,0.3s,baz=70,slow=13,SNR=7.7						
PALK				LR	LR	07 45 16.9	
	comp=Z,751nm,20.9s,baz=74,slow=34						
PALK	**Pallekele**	**11.09**	**255**	*e*P	**Pn**	**07 41 37.4**	**+0.4**
PALK				pmax	pmax		
	comp=Z,28nm,0.7s						
PALK	**Pallekele**	**11.09**	**255**	*e*Pn	**Pn**	**07 41 37.4**	**+0.4**
	comp=Z,28nm,0.7s						
PALK				*e*Sn	**Sn**	**07 43 34.4**	**-6.5**
CHG	**Chiang Mai**	**11.14**	**39**	⇓P	**Pn**	**07 41 38.6**	**+0.9**
	comp=Z,15nm,1.0s						
CHTO	**Chiang Mai**	**11.14**	**39**	*e*P	**Pn**	**07 41 37.8**	**+0.1**
MDRS	**Chennai**	**11.39**	**285**	*e*x	x	07 42 12.1	
MDRS				AMb	AMB	07 43 31.8	
	comp=Z,1μm,0.2s						
FRIM	**Kepong**	**12.21**	**124**	P	**Pn**	**07 41 53.9**	**+1.5**
HYB	**Hyderabad**	**14.46**	**301**	*i* P	**Pn**	**07 42 22.0**	**-1.1**
HYB				*e*S	**Sn**	**07 45 10.0**	**+6.6**
BOK	**Bokaro**	**14.51**	**339**	*e*PKP	**Pn**	**07 42 22.5**	**-1.2**
MYKOM	**Kota Tinggi**	**14.86**	**124**	P	**Pn**	**07 42 25.5**	**-3.1**
SHL	**Shillong**	**15.24**	**1**	*e*PKP	**Pn**	**07 42 31.5**	**-2.1**
SHL				*e*x	x	07 45 08.0	
NGP	**Nagpur**	**16.16**	**314**	*e*PKP	**Pn**	**07 42 44.8**	**-0.8**
NGP				*e*x	x	07 45 30.0	
ODAN	**Odare**	**16.98**	**347**	*e*P	**Pn**	**07 42 55.2**	**-0.7**
	comp=Z,55nm,0.7s						
RAMN	**Ramite**	**17.25**	**345**	*e*P	**Pn**	**07 42 58.9**	**-0.4**
	comp=Z,78nm,0.6s						
TAPN	**Taplejung**	**17.39**	**349**	*e*P	**Pn**	**07 43 00.6**	**-0.4**
	comp=Z,71nm,0.9s						
PKI	**Pulchoki**	**18.17**	**342**	*e*P	**Pn**	**07 43 10.7**	**0.0**
	comp=Z,62nm,0.7s						
PKI	**Pulchoki**	**18.17**	**342**	*e*P	**Pn**	**07 43 10.7**	**0.0**
PKI				pmax	pmax		
	comp=Z,62nm,0.7s						
PKIN	**Phulchoki**	**18.18**	**342**	*e*P	**Pn**	**07 43 10.6**	**-0.2**
KAD	**Karad**	**18.23**	**295**	*e*PKP	**Pn**	**07 43 12.1**	**+0.5**
KMI	**Kunming**	**18.23**	**34**	P	**Pn**	**07 43 12.8**	**+1.3**
KMI				pP	pP	07 43 18.7	+3.0
KMI				sP	sP	07 43 22.6	+5.0
KMI				PP		07 43 30.5	
KMI				S	**Sn**	**07 46 34.7**	**-0.3**
KMI				sS	sS	07 46 43.6	-2.9
KMI				SS		07 46 59.3	
KMI				pmax	pmax		
	comp=Z,36nm,0.9s						
KMI				pmax	pmax		
	comp=Z,160nm,4.5s						
KMI				LR	LR		
	comp=N,280nm,15.5s						
KMI				LR	LR		
	comp=E,290nm,12.1s						
KMI				LR	LR		
	comp=Z,280nm,12.9s						
DMN	**Daman**	**18.30**	**342**	*e*P	**Pn**	**07 43 11.7**	**-0.6**
	comp=Z,115nm,0.8s						
GUN	**Gumba**	**18.36**	**344**	*e*P	**Pn**	**07 43 13.1**	**+0.1**
	comp=Z,141nm,0.9s						
KKN	**Kakani**	**18.41**	**342**	*e*P	**Pn**	**07 43 13.0**	**-0.7**
BHPL	**Bhopal**	**18.66**	**316**	*e*PKP	**Pn**	**07 43 16.0**	**-0.8**
POO	**Poona**	**18.98**	**298**	*e*PKP	**Pn**	**07 43 21.0**	**+0.4**
POO				AMb	AMB	07 43 28.6	
	comp=Z,56nm,1.1s						
QIZ	**Qiongzhong**	**19.75**	**62**	P	**Pn**	**07 43 29.5**	**-0.3**
QIZ				sP	sP	07 43 36.7	+2.5
QIZ				S	**Sn**	**07 47 07.9**	**-3.7**
QIZ				sS	sS	07 47 19.6	+2.4
QIZ				pmax	pmax		
	comp=Z,21nm,1.1s						
QIZ				LR	LR		
	comp=N,320nm,15.6s						
QIZ				LR	LR		
	comp=Z,370nm,14.7s						
KSM	**Kuching**	**20.61**	**114**	P	**P**	**07 43 39.3**	**+1.6**
KSM	**Kuching**	**20.61**	**114**	*e*Pn	**P**	**07 43 37.1**	**-0.6**
	comp=Z,25nm,0.9s						
GYA	**Guiyang**	**21.57**	**40**	⇑*i*P	**P**	**07 43 47.9**	**-0.1**
GYA				pP		07 43 56.0	
GYA				PP		07 44 15.8	
GYA				S	**S**	**07 47 44.2**	**-2.5**
GYA				PcP	PcP	07 47 52.3	+2.1
GYA				SS		07 48 20.0	
GYA				ScP	ScP	07 51 26.8	-0.2
GYA				pmax	pmax		
	comp=Z,50nm,0.9s,mb4.9						
GYA				pmax	pmax		
	comp=Z,140nm,5.8s						
GYA				LR	LR		
	comp=N,510nm,16.8s,MS4.2						
GYA				LR	LR		
	comp=E,480nm,15.9s,MS4.2						
GYA				LR	LR		
	comp=Z,530nm,10.2s						
SBUM	**Sibu**	**21.97**	**109**	P	**P**	**07 43 52.6**	**+0.1**
AJM	**Ajmer**	**22.70**	**318**	*e*PKP	**P**	**07 44 01.8**	**+1.8**
AJM				AMb	AMB	07 44 09.3	
	comp=Z,50nm,1.0s,mb4.9						
NDI	**New Delhi**	**22.72**	**326**	*e*PKP	**P**	**07 44 01.0**	**+0.7**
CD2	**Chengdu**	**23.50**	**27**	⇑*i*P	**P**	**07 44 06.8**	**-1.7**
CD2				pP		07 44 13.8	
CD2				sP	sP	07 44 16.9	+2.5
CD2				PP		07 44 38.1	
CD2				S	**S**	**07 48 16.2**	**-5.3**
CD2				sS	sS	07 48 27.7	-0.9
CD2				SS		07 49 04.9	
CD2				pmax	pmax		
	comp=Z,130nm,0.9s,mb5.4						
CD2				pmax	pmax		
	comp=Z,310nm,4.8s						
CD2				LR	LR		
	comp=N,210nm,13.0s						
CD2				LR	LR		
	comp=Z,590nm,9.5s						
DDI	**Dehra Dun**	**23.59**	**330**	*e*x	**P**	**07 44 05.6**	**-3.7**
SMLA	**Simla**	**24.68**	**329**	*e*PKP	**P**	**07 44 20.4**	**+1.1**
SMLA				*e*PKP		07 44 20.5	
KKM	**Kota Kinabalu**	**24.80**	**98**	P	**P**	**07 44 22.6**	**+2.1**
KKM	**Kota Kinabalu**	**24.80**	**98**	*e*P	**P**	**07 44 21.2**	**+0.7**
	comp=Z,16nm,0.8s,mb4.6						
LZH	**Lanzhou**	**28.05**	**22**	P	**P**	**07 44 50.4**	**+0.7**
LZH				pP	pP	07 44 56.9	+2.9
LZH				sP	sP	07 45 00.1	+4.3
LZH				PP		07 45 40.7	
LZH				S	**S**	**07 49 33.4**	**-0.5**
LZH				SS		07 50 57.0	
LZH				pmax	pmax		
	comp=Z,56nm,1.3s,mb5.0						
LZH				pmax	pmax		
	comp=Z,310nm,6.0s						
LZH				LR	LR		
	comp=N,1μm,14.4s						
LZH				LR	LR		
	comp=Z,2μm,15.4s,MS4.8						
XAN	**Xi'an**	**28.55**	**31**	P	**P**	**07 44 52.6**	**-1.6**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
XAN				pmax	pmax		
	comp=Z,15nm,5.7s						
WHN	**Wuhan**	**29.31**	**43**	P	**P**	**07 44 52.0**	**-9.0**
WHN				S	S	07 49 31.4	-22
WHN				LR	LR		
	comp=Z,690nm,13.4s,MS4.5						
GTA	**Gaotai**	**29.97**	**13**	*e*P	**P**	**07 45 07.7**	**+1.0**
GTA				pP	pP	07 45 13.1	+2.1
GTA				sP	sP	07 45 16.2	+3.4
GTA				PcP	PcP	07 48 10.3	+1.3
GTA				S	**S**	**07 50 03.8**	**-0.2**
GTA				sS	sS	07 50 13.4	+2.2
GTA				SS	SS	07 51 38.1	-34
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.2						
GTA				pmax	pmax		
	comp=Z,85nm,6.9s						
GTA				LR	LR		
	comp=N,240nm,20.4s,MS4.1						
GTA				LR	LR		
	comp=E,370nm,20.7s,MS4.1						
GTA				LR	LR		
	comp=Z,79nm,15.9s,MS3.5						
KBL	**Kabul**	**31.73**	**323**	*e*P	**P**	**07 45 23.3**	**+1.0**
KBL				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.9						
KBL	**Kabul**	**31.73**	**323**	*e*P	**P**	**07 45 23.3**	**+1.0**
	comp=Z,12nm,0.7s,mb4.8						
KAPI	**Kappang**	**31.95**	**117**	P	**P**	**07 45 22.6**	**-1.8**
	comp=Z,7.8nm,0.5s,mb4.8,baz=312,slow=5.0,SNR=4.5						
KAPI	**Kappang**	**31.95**	**117**	*e*P	**P**	**07 45 23.4**	**-1.0**
	comp=Z,23nm,0.9s,mb5.0						
KAPI				*e*pP	pP	07 45 30.2	+1.4
KSH	**Kashi**	**32.27**	**337**	⇓*i*P	**P**	**07 45 26.4**	**-0.6**
KSH				pP	pP	07 45 32.3	+0.9
KSH				sP	sP	07 45 35.3	+2.2
KSH				PP	PP	07 46 32.7	-7.3
KSH				PcP	PcP	07 48 16.0	+0.8
KSH				S	**S**	**07 50 35.7**	**-4.4**
KSH				ScP	ScP	07 51 57.3	-1.3
KSH				PcS	PcS	07 51 59.5	-0.5
KSH				ScS	ScS	07 55 54.4	-3.1
KSH				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
KSH				pmax	pmax		
	comp=Z,60nm,3.5s						
KSH				LR	LR		
	comp=N,350nm,13.2s						
KSH				LR	LR		
	comp=E,130nm,9.7s						
KSH				LR	LR		
	comp=Z,91nm,4.9s						
NJ2	**Nanjing**	**33.30**	**45**	*e*P	**P**	**07 45 36.4**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
WMQ	**Urumqi**	**33.61**	**355**	P	**P**	**07 45 40.0**	**+1.4**
WMQ				sP	sP	07 45 49.0	+4.2
WMQ				PP	PP	07 46 53.0	-1.8
WMQ				S	**S**	**07 51 01.0**	**+0.2**
WMQ				sS	sS	07 51 11.0	+3.0
WMQ				ScP	ScP	07 52 03.0	-0.2
WMQ				SS	SS	07 53 06.0	-20
WMQ				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.0						
WMQ				LR	LR		
	comp=N,47nm,15.0s,MS3.7						
WMQ				LR	LR		
	comp=E,100nm,16.0s,MS3.7						
WMQ				LR	LR		
	comp=Z,60nm,15.0s,MS3.4						
KZA	**Kyzart**	**34.77**	**339**	P	**P**	**07 45 50.3**	**+1.6**
	SNR=8.0						
UCH	**Uchtor**	**35.17**	**338**	P	**P**	**07 45 53.8**	**+1.6**
	SNR=7.3						
UCH	**Uchtor**	**35.17**	**338**	*e*P	**P**

AAK Ala-Archa 35.53 338 P **P** **07 45 56.4 +1.1**
comp=Z,3.3nm,0.5s,mb4.5,baz=148,slow=5.0,SNR=21
AAK LR LR 08 04 11.0
comp=Z,100nm,18.7s,MS3.6,baz=346,slow=43
AAK Ala-Archa 35.53 338 *ce*P **P** **07 45 56.8 +1.5**
AAK pmax pmax
comp=Z,11nm,1.2s,mb4.7
AAK Ala-Archa 35.53 338 *e*P **P** **07 45 57.0 +1.7**
comp=Z,11nm,0.8s,mb4.8
CHMS Chumysh 35.76 339 P **P** **07 45 58.5 +1.3**
SNR=5.3
EKS2 Erkin-Say 35.82 337 P **P** **07 45 59.7 +2.0**
SNR=7.2
EKS2 Erkin-Say 35.82 337 *e*P **P** **07 45 59.6 +1.8**
EKS2 *e**PP pP 07 46 06.1 +3.9
EKS2 pmax pmax
comp=Z,13nm,0.7s,mb5.0
EKS2 Erkin-Say 35.82 337 *e*P **P** **07 45 59.6 +1.8**
comp=Z,13nm,0.7s,mb5.0
EKS2 *e*pP pP 07 46 06.0 +3.9
USP Ospenovka 36.08 339 P **P** **07 46 01.2 +1.2**
SNR=17
BJI Beijing 36.87 32 P **P** **07 46 07.4 +0.6**
BJI S **S** **07 51 52.4 +1.4**
BJI pmax pmax
comp=Z,48nm,0.8s,mb5.4
BJI pmax pmax
comp=Z,50nm,3.7s
BJI LR LR
comp=N,220nm,19.9s,MS4.1
BJI LR LR
comp=E,210nm,19.2s,MS4.1
BJI LR LR
comp=Z,94nm,22.7s,MS3.5
MKAR Makanchi Array 37.26 350 P **P** **07 46 10.3 +0.4**
comp=Z,7.0nm,0.7s,mb4.6,baz=160,slow=7.7,SNR=48
MKAR PcP PcP 07 48 28.8 -0.7
comp=Z,2.8nm,0.6s,baz=173,slow=2.1,SNR=5.4
MKAR Makanchi Array 37.26 350 P **P** **07 46 10.3 +0.4**
MKAR PcP PcP 07 48 28.8 -0.7
SONM Songino Array 39.51 16 P **P** **07 46 29.5 +0.6**
comp=Z,9.5nm,0.8s,mb4.6,baz=198,slow=8.6,SNR=60
SONM PcP PcP 07 48 37.2 +0.7
comp=Z,2.1nm,0.7s,baz=196,slow=4.0,SNR=4.2
SONM LR LR 08 05 21.7
comp=Z,70nm,20.9s,MS3.5,baz=253,slow=40
SONM Songino Array 39.51 16 P **P** **07 46 29.5 +0.6**
SONM 07 48 37.2
ULN Ulaanbaatar 39.72 16 *ce*P **P** **07 46 31.0 +0.4**
ULN Ulaanbaatar 39.72 16 *e*P **P** **07 46 30.8 +0.1**
comp=Z,8.9nm,1.0s,mb4.5
ZAK Zakamensk 41.18 11 *e*P **P** **07 46 43.0 +0.3**
ZAK *e* 07 48 39.9
ZAK pmax pmax
comp=Z,4.0nm,1.9s,mb3.7
KURK Kurchatov 41.73 348 P **P** **07 46 47.0 -0.2**
comp=Z,6.7nm,0.9s,mb4.3,baz=172,slow=7.8,SNR=43
KURK PcP PcP 07 48 42.4 -1.1
comp=Z,3.2nm,0.7s,baz=157,slow=2.7,SNR=8.5
KURK LR LR 08 05 51.5
comp=Z,59nm,18.7s,MS3.5,baz=165,slow=39
KURK Kurchatov 41.73 348 *e*P **P** **07 46 47.6 +0.4**
KURK pmax pmax
comp=Z,12nm,1.1s,mb4.4
KURK Kurchatov 41.73 348 *e*P **P** **07 46 47.6 +0.5**
comp=Z,12nm,1.1s,mb4.5
MBWA Marble Bar 41.74 138 *e*P **P** **07 46 47.0 -0.6**
MBWA *e*pP pP 07 46 53.3 +1.2
KSRS Korea Array 42.49 44 P **P** **07 46 52.0 -1.6**
comp=Z,3.1nm,0.6s,mb4.1,baz=240,slow=8.6,SNR=12
KSRS LR LR 08 08 27.7
comp=Z,99nm,18.2s,MS3.7,baz=325,slow=42
TLY Talaya 42.49 11 *e*P **P** **07 46 54.5 +1.1**
TLY pmax pmax
comp=Z,6.0nm,1.4s,mb4.0
TLY MLR MLR
comp=Z,94nm,22.0s,MS3.6
FITZ Fitzroy Crossi 43.91 130 *e*P **P** **07 47 04.2 -1.1**
comp=Z,5.7nm,0.7s,mb4.4
FITZ Fitzroy Crossi 43.91 130 P **P** **07 47 02.9 -2.5**
comp=Z,7.5nm,0.7s,mb4.5,baz=303,slow=4.6,SNR=12
FITZ Fitzroy Crossi 43.91 130 *e*P **P** **07 47 04.2 -1.2**
comp=Z,7.0nm,0.7s,mb4.5
ZAA0 Zalesovo Array 43.91 354 *e*P **P** **07 47 04.7 -0.2**
ZAA0 *e*pP pP 07 47 11.6 +2.3
ZALV Zalesovo Beam 43.91 354 P **P** **07 47 05.0 +0.2**
comp=Z,5.4nm,0.6s,mb4.5,baz=170,slow=9.0,SNR=30
ZALV LR LR 08 08 45.1
comp=Z,46nm,18.8s,MS3.4,baz=216,slow=41
CN2 Changchun 44.50 35 ⇑P **P** **07 47 09.8 0.0**
CN2 *e*pP pP 07 47 15.8 +1.6
CN2 *e*sP sP 07 47 18.7 +2.7
CN2 ScP ScP 07 52 42.7 -2.3
CN2 *e*S **S** **07 53 44.2 -0.5**
CN2 pmax pmax
comp=Z,20nm,0.9s,mb5.0
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,15.0s,MS4.3
CN2 LR LR
comp=E,200nm,15.0s,MS4.3
NVS Novosibirsk 44.96 353 *e*P **P** **07 47 13.4 +0.2**
BVAR Borovoye Array 45.94 342 P **P** **07 47 21.0 0.0**
comp=E,3.7nm,0.8s,mb4.4,baz=148,slow=8.6,SNR=14
BVAR PcP PcP 07 48 56.3 -1.5
comp=E,2.3nm,0.7s,baz=152,slow=6.7,SNR=4.6
BVAR PP PP 07 49 04.7 -4.1
comp=E,3.7nm,0.7s,baz=175,slow=9.6,SNR=5.5
BVAR LR LR 08 10 31.1
comp=E,87nm,18.3s,MS3.7,baz=166,slow=41
BVAR Borovoye Array 45.94 342 P **P** **07 47 21.0 0.0**
BVAR 07 48 56.3
BVAR 07 49 04.7
BRVK Borovoye 46.00 342 *ce*P **P** **07 47 21.8 +0.3**
BRVK pmax pmax
comp=Z,11nm,1.7s,mb4.5
BRVK Borovoye 46.00 342 *e*P **P** **07 47 21.6 +0.1**
comp=Z,7.0nm,0.6s,mb4.8
ABKAR Akbulak array 46.93 332 *e*P **P** **07 47 29.7 +0.8**
comp=Z,14nm,0.8s,mb4.9
ABKAR *e*pP pP 07 47 35.9 +2.6
ABKAR *e*sP sP 07 47 39.0 +3.9
MDJ Mudanjiang 47.38 37 P **P** **07 47 32.9 +0.4**
MDJ pP pP 07 47 39.2 +2.2
MDJ sP sP 07 47 41.7 +3.0
MDJ PP PP 07 49 23.6 -0.2
MDJ S **S** **07 54 26.5 +0.4**
MDJ pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
MDJ pmax pmax
comp=Z,82nm,3.7s
MDJ LR LR
comp=N,46nm,20.4s,MS3.6
MDJ LR LR
comp=E,40nm,16.4s,MS3.6
MDJ LR LR
comp=Z,43nm,21.8s
NWAO Narrogin (SRO) 49.44 151 P **P** **07 47 47.6 -0.9**
comp=Z,18nm,0.6s,mb5.3,baz=319,slow=14,SNR=14
NWAO PP PP 07 49 40.6 -2.3
comp=Z,4.2nm,0.9s,baz=165,slow=23,SNR=3.1
NWAO Narrogin (SRO) 49.44 151 *e*P **P** **07 47 47.6 -0.9**
NWAO pmax pmax
comp=Z,22nm,0.9s
NWAO Narrogin (SRO) 49.44 151 *e*P **P** **07 47 47.6 -0.9**
comp=Z,22nm,0.9s,mb5.2
MAT Matsushiro 49.57 50 P **P** **07 47 49.0 -0.5**
MJAR Matsushiro Arr 49.57 50 P **P** **07 47 49.8 +0.3**
comp=Z,2.6nm,0.8s,mb4.3,baz=230,slow=7.1,SNR=13
MJAR PcP PcP 07 49 11.2 0.0
comp=Z,2.3nm,0.7s,baz=234,slow=2.3,SNR=6.5
MJAR LR LR 08 11 28.3
comp=Z,127nm,18.8s,MS4.0,baz=220,slow=39
MJAR Matsushiro Arr 49.57 50 P **P** **07 47 49.8 +0.3**
MJAR 07 49 11.2
GNI Garni 50.94 314 P **P** **07 48 01.9 +2.1**
comp=Z,4.5nm,0.5s,mb4.7,baz=252,slow=6.5,SNR=6.9
GNI Garni 50.94 314 *ce*P **P** **07 47 59.8 0.0**
GNI pmax pmax
comp=Z,29nm,1.2s
GNI Garni 50.94 314 *e*P **P** **07 48 01.7 +2.0**
comp=Z,36nm,1.1s,mb5.2
WRAB Tennant Creek 51.74 125 *e*P **P** **07 48 05.7 -0.4**
WRAB pmax pmax
comp=Z,30nm,0.7s,mb5.3
WRAB Tennant Creek 51.74 125 *e*P **P** **07 48 05.7 -0.3**
comp=Z,30nm,0.7s,mb5.3
SVE Sverdlovsk 52.27 339 ⇑P **P** **07 48 10.5 +1.1**
SVE pmax pmax
comp=Z,37nm,0.7s,mb5.4
OPO Ambohidratompo 52.27 237 P **P** **07 48 11.5 +1.5**
comp=Z,0.9nm,0.7s,mb3.8,baz=211,slow=13,SNR=2.0
ZEI Tsey 52.55 317 *e*P **P** **07 48 12.7 +0.9**
ZEI pmax pmax
comp=Z,16nm,0.9s,mb5.0
HABR Khabarovsk 52.64 35 *e*P **P** **07 48 09.7 -2.7**
HABR *e* 07 50 09.2
HABR PPP 07 51 13.0
HABR S **S** **07 55 35.9 -3.5**
HABR *e**SS sS 07 55 52.5 +5.7
HABR *e* 07 57 57.1
HABR SS SS 07 59 15.8 -2.0
HABR pmax pmax
comp=N,3.0nm,0.8s
HABR pmax pmax
comp=Z,11nm,1.2s,mb4.7
HABR pmax pmax
comp=E,9.0nm,0.8s
HABR MLR MLR
comp=Z,48nm,22.0s,MS3.5
ARU Arti 52.72 338 *c i*P **P** **07 48 12.9 +0.1**
ARU *e* 07 50 09.9
ARU S **S** **07 55 41.1 +1.0**
ARU SS SS 07 59 15.7 -3.0
ARU pmax pmax
comp=Z,25nm,1.7s,mb4.9
ARU Arti 52.72 338 *e*P **P** **07 48 13.0 +0.3**
comp=Z,12nm,0.8s,mb4.9
ARU *e*pP pP 07 48 19.3 +2.0
ASAR Alice Springs 53.41 130 P **P** **07 48 18.1 -0.3**
comp=Z,7.4nm,0.6s,mb4.8,baz=307,slow=7.1,SNR=137
ASAR PcP PcP 07 49 25.8 +0.1
comp=Z,2.8nm,0.7s,baz=310,slow=4.1,SNR=5.9
FORT Forrest 53.80 141 *e*P **P** **07 48 20.7 -0.4**
comp=Z,11nm,0.8s,mb4.8
KIV Kislovodsk 53.83 318 *e*P **P** **07 48 22.2 +1.0**
KIV pmax pmax
comp=Z,38nm,0.7s,mb5.4
KIV MLR MLR
comp=Z,38nm,16.0s,MS3.5
KIV Kislovodsk 53.83 318 *e*P **P** **07 48 22.1 +0.9**
comp=Z,41nm,0.8s,mb5.4
ASAJ Asahikawa 55.39 43 LR LR 08 13 44.1
comp=Z,28nm,21.9s,MS3.3,baz=200,slow=38
MMAI Mount Meron Ar 56.16 303 P **P** **07 48 40.1 +1.9**
comp=Z,1.7nm,0.5s,mb4.4,baz=262,slow=40,SNR=3.7
MMAI LR LR 08 15 55.9
comp=Z,96nm,18.5s,MS3.9,baz=125,slow=40
YSS Yuzh-Sakhalins 56.57 40 *e*P **P** **07 48 38.1 -2.8**
VRHR Novokhopersk 57.52 325 *e*P **P** **07 48 47.0 -0.6**
VRHR pmax pmax
comp=N,30nm,1.0s
VRHR pmax pmax
comp=Z,20nm,1.0s,mb5.1
VRHR pmax pmax
comp=E,10.0nm,1.2s
YAK Yakutsk 58.62 20 *e*P **P** **07 48 53.3 -1.8**
YAK pmax pmax
comp=Z,18nm,1.1s,mb5.0
YAK pmax pmax
comp=N,7.0nm,1.1s
YAK pmax pmax
comp=E,5.0nm,1.4s
BRTR Keskin Array B 58.93 310 P **P** **07 48 56.9 -0.8**
comp=E,4.0nm,0.7s,mb4.5,baz=127,slow=7.6,SNR=19
BRTR LR LR 08 16 21.9
comp=E,22nm,19.3s,MS3.3,baz=211,slow=38
BR131 Keskin Array S 58.93 310 *e*P **P** **07 48 56.9 -0.7**
VSR Storozhevoye 58.97 324 *e*P **P** **07 48 57.0 -0.7**
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
VSR pmax pmax
comp=N,6.0nm,1.1s
VSR pmax pmax
comp=E,10.0nm,0.5s
BBOO Buckleboo 60.30 137 *e*P **P** **07 49 06.7 -0.4**
comp=E,4.9nm,0.6s,mb4.7
ISP Isparta 60.93 308 *e*P **P** **07 49 11.7 +0.2**
ISP *e**PP pP 07 49 18.3 +2.2
ISP pmax pmax
comp=Z,9.0nm,0.6s,mb5.1
ISP Isparta 60.93 308 *e*P **P** **07 49 11.7 +0.2**
comp=Z,9.4nm,0.6s,mb5.1
ISP *e*pP pP 07 49 18.3 +2.3
CTA Charters Tower 61.72 119 *e*P **P** **07 49 17.4 +0.4**
comp=Z,11nm,0.9s,mb5.0
CTAO Charters Tower 61.72 119 *e*P **P** **07 49 16.4 -0.6**
OBN Obninsk 62.00 328 ⇑*e*P **P** **07 49 18.4 0.0**
OBN *e* 07 51 35.0
OBN *e*S **S** **07 57 42.0 -0.3**
OBN pmax pmax
comp=Z,35nm,1.7s,mb5.2
STKA Stephens Creek 63.61 133 *e*P **P** **07 49 29.7 +0.3**
comp=Z,7.9nm,0.6s,mb4.9
STKA Stephens Creek 63.61 133 P **P** **07 49 27.6 -1.8**
comp=Z,12nm,0.7s,mb5.0,baz=319,slow=6.4,SNR=21
STKA LR LR 08 21 06.2
comp=Z,49nm,20.2s,MS3.7,baz=24,slow=40
STKA Stephens Creek 63.61 133 *e*P **P** **07 49 29.7 +0.3**
STKA *e**PP pP 07 49 35.5 +1.5
STKA pmax pmax
comp=Z,2.0nm,0.6s
STKA Stephens Creek 63.61 133 *e*P **P** **07 49 29.7 +0.2**
comp=Z,2.1nm,0.6s,mb4.3
STKA *e*pP pP 07 49 35.5 +1.5
AKASG Malin Array Be 64.70 321 P **P** **07 49 34.6 -1.7**
comp=Z,1.3nm,0.7s,mb4.1,baz=88,slow=5.4,SNR=6.1
AKASG Malin Array Be 64.70 321 *i*P **P** **07 49 34.5 -1.8**
AKASG pmax pmax
comp=Z,1.0nm,0.7s
TIXI Tiksi 65.45 12 *e*P **P** **07 49 39.8 -1.0**
TIXI pmax pmax
comp=Z,22nm,1.5s,mb5.0
TIXI Tiksi 65.45 12 *e*P **P** **07 49 39.9 -0.9**
comp=Z,19nm,1.1s,mb5.0
CMSA Cobar Meteorol 66.42 131 *e*P **P** **07 49 48.3 +0.5**
BUR08 Bucovina Ar. S 66.58 318 *e*P **P** **07 49 48.9 +0.4**
BUR08 *e*pP pP 07 49 55.3 +2.2
JOF Joensuu 67.61 335 *e*p **P** **07 49 53.6 -1.1**
comp=Z,12nm,0.7s,mb5.0
JOF Joensuu 67.61 335 *e*p **P** **07 49 53.6 -1.1**
comp=Z,12nm,0.7s,mb5.0
PETK Petropavlovsk- 67.63 37 LR LR 08 25 01.8
comp=Z,42nm,18.7s,MS3.7,baz=82,slow=41
APA Apatity 68.73 340 ⇑*e*P **P** **07 50 00.0 -1.7**
APA MLR MLR
comp=Z,200nm,22.0s,MS4.3
FINES FINESS Array B 69.42 332 P **P** **07 50 05.7 -0.4**
comp=Z,2.4nm,0.6s,mb4.3,baz=104,slow=8.0,SNR=15
KAF Kangasniemi 69.51 333 *e*p **P** **07 50 04.7 -2.0**
comp=Z,4.5nm,0.9s,mb4.4
KAF Kangasniemi 69.51 333 *e*p **P** **07 50 04.7 -2.0**
comp=Z,4.5nm,0.9s,mb4.4
ARMA Armidale 70.45 127 *e*P **P** **07 50 13.9 +0.9**
OJC Ojcow 70.50 320 *e*P **P** **07 50 12.0 -1.0**
ARCES ARCESS Array B 72.17 340 P **P** **07 50 21.2 -1.5**
comp=Z,4.2nm,1.0s,mb4.3,baz=95,slow=5.3,SNR=14
CEL Celeste 72.46 307 *e*P **P** **07 50 25.0 -0.1**
comp=Z,19nm,0.8s,mb5.1
DPC Dobruska-Polom 72.73 320 *e*P **P** **07 50 26.5 +0.1**
DPC Dobruska-Polom 72.73 320 *e*P **P** **07 50 26.5 +0.1**
PRU Pruhonice 73.85 319 *e*P **P** **07 50 32.8 -0.2**
PRU Pruhonice 73.85 319 *e*P **P** **07 50 32.8 -0.2**
BRG Berggiesshubel 74.28 320 *e*P **P** **07 50 35.3 -0.2**
comp=Z,2.3nm,1.0s,mb4.0
BRG *e* pP 07 50 41.4 +1.2
comp=Z,1.0nm,0.6s
GEC2 GERESS Array S 74.34 318 *e*P **P** **07 50 36.0 +0.1**
comp=Z,8.0nm,1.5s,mb4.4
GEC2 GERESS Array S 74.34 318 *e*P **P** **07 50 36.0 +0.1**
GEC2 pmax pmax
comp=Z,8.0nm,1.5s,mb4.4
GERES GERESS Array B 74.34 318 P **P** **07 50 35.8 -0.2**
comp=Z,1.4nm,0.8s,mb4.0,baz=90,slow=6.7,SNR=16
KHC Kasperske Hory 74.44 318 *e*P **P** **07 50 35.6 -0.9**
KHC Kasperske Hory 74.44 318 *e*P **P** **07 50 35.6 -0.9**
BOSA Boshof 74.68 237 P **P** **07 50 38.5 +0.3**
comp=Z,5.6nm,0.8s,mb4.6,baz=96,slow=9.9,SNR=7.7
BOSA LR LR 08 18 59.5
comp=Z,64nm,21.6s,MS3.9,baz=150,slow=32
WET Wettzell 74.89 318 *e*P **P** **07 50 38.7 -0.4**
comp=Z,3.0nm,1.0s,mb4.2
WET Wettzell 74.89 318 *e*P **P** **07 50 38.7 -0.4**
WET pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
CLL Collm 74.90 320 P **P** **07 50 44.0 +4.9**
CLL Collm 74.90 320 *ep*P pP 07 50 44.0 +0.2
HFS Hagfors 75.11 330 LR LR 08 28 00.5
comp=Z,70nm,20.8s,MS3.9,baz=358,slow=39
TANN Tannenbergstha 75.20 319 *e*P **P** **07 50 40.3 -0.6**
comp=Z,8.0nm,1.6s,mb4.6
ROTZ Rotzenmuhle 75.35 319 *e*P **P** **07 50 42.2 +0.5**
comp=Z,3.0nm,0.5s,mb4.5
GRA1 Grafenberg Arr 75.99 319 *e*P **P** **07 50 45.6 +0.2**
comp=Z,10.0nm,1.1s,mb4.7
GRA1 *e*pP pP 07 50 51.5 +1.4
GRF Grafenberg Arr 75.99 319 *e*P **P** **07 50 45.6 +0.2**
comp=Z,10.0nm,1.1s,mb4.7
GRF *e*pP pP 07 50 51.5 +1.4
GRF Grafenberg Arr 75.99 319 *e*P **P** **07 50 45.6 +0.2**
GRF *e**PP pP 07 50 51.5 +1.4
GRF pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
GRF Grafenberg Arr 75.99 319 *e*P **P** **07 50 45.6 +0.2**
GRF *e**PP pP 07 50 51.5 +1.4
GRF pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
NOA NORSAR Array B 76.41 330 P **P** **07 50 46.6 -0.9**
comp=Z,1.0nm,0.7s,mb3.9,baz=94,slow=5.7,SNR=6.3
NOA LR LR 08 27 34.2
comp=Z,52nm,21.6s,MS3.8,baz=90,slow=38
NOA NORSAR Array B 76.41 330 P **P** **07 50 46.6 -0.9**
NOA LR LR 08 27 34.1
CLZ Clausthal 76.55 321 *e*P **P** **07 50 48.3 -0.2**
comp=Z,5.0nm,0.8s,mb4.5
CLZ Clausthal 76.55 321 *e*P **P** **07 50 48.3 -0.2**
CLZ pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
BSEG Bad Segeberg 76.61 323 *e*P **P** **07 50 49.1 +0.2**
comp=Z,8.0nm,0.6s,mb4.8
SPITS Spitsbergen Ar 77.00 348 LR LR 08 29 27.2
comp=Z,65nm,18.9s,MS4.0,baz=140,slow=39
SPB4 Spitsbergen Ar 77.00 348 *e*P **P** **07 50 50.9 +0.3**
SPB4 *e*pP pP 07 50 57.6 +2.2
KEST Kesra 77.77 304 P **P** **07 50 55.0 -0.8**
comp=Z,3.2nm,0.8s,mb4.3,baz=247,slow=2.7,SNR=9.7
CDF Champ du Feu 78.61 317 *e*P **P** **07 50 59.4 -0.7**
comp=Z,17nm,1.2s,mb4.5
CDF Champ du Feu 78.61 317 *e*P **P** **07 50 59.4 -0.7**
CDF pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
CDF Champ du Feu 78.61 317 *e*P **P** **07 50 59.4 -0.7**
comp=Z,8.7nm,1.2s,mb4.6
SBF Sospel 78.73 313 *e*P **P** **07 51 00.2 -0.7**
LPG La Plagne 79.12 315 *e*P **P** **07 51 02.9 -0.1**
comp=Z,10.0nm,0.7s,mb4.5
LPG La Plagne 79.12 315 *e*P **P** **07 51 02.9 -0.1**
LPG pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
LPG La Plagne 79.12 315 *e*P **P** **07 51 02.9 -0.1**
comp=Z,5.0nm,0.7s,mb4.5
LPL La Plagne 79.13 315 *e*P **P** **07 51 02.9 -0.2**
comp=Z,16nm,0.8s,mb4.7
LPL La Plagne 79.13 315 *e*P **P** **07 51 02.9 -0.2**
LPL pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
LPL La Plagne 79.13 315 *e*P **P** **07 51 02.9 -0.2**
comp=Z,8.1nm,0.8s,mb4.7
HAU Haudompre 79.25 317 *e*P **P** **07 51 02.8 -0.8**
comp=Z,8.9nm,0.7s,mb4.5
HAU *e*MLR MLR
comp=Z,36nm,18.0s,MS3.5
HAU Haudompre 79.25 317 *e*P **P** **07 51 02.8 -0.8**
HAU pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
HAU MLR MLR
comp=Z,40nm,18.0s,MS3.8
HAU Haudompre 79.25 317 *e*P **P** **07 51 02.8 -0.8**
comp=Z,4.4nm,0.7s,mb4.5
HAU LR LR
comp=Z,40nm,18.0s,MS3.8
CABF La Chapelle 79.51 316 *e*P **P** **07 51 04.9 -0.2**
comp=Z,11nm,0.8s,mb4.5
CABF La Chapelle 79.51 316 *e*P **P** **07 51 04.9 -0.2**
CABF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
CABF La Chapelle 79.51 316 *e*P **P** **07 51 04.9 -0.2**
comp=Z,5.3nm,0.8s,mb4.5
ORIF Oris-en-Rattie 79.77 314 *e*P **P** **07 51 07.3 +0.7**
comp=Z,17nm,1.0s,mb4.6
ORIF *e*MLR MLR
comp=Z,47nm,21.8s,MS3.5
ORIF Oris-en-Rattie 79.77 314 *e*P **P** **07 51 07.3 +0.7**
ORIF pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
ORIF Oris-en-Rattie 79.77 314 *e*P **P** **07 51 07.3 +0.7**
comp=Z,8.4nm,1.0s,mb4.6
MEZF Maizieres J'vi 80.08 318 *e*P **P** **07 51 07.5 -0.6**
comp=Z,5.8nm,0.6s,mb4.4
MEZF Maizieres J'vi 80.08 318 *e*P **P** **07 51 07.5 -0.6**
comp=Z,5.8nm,0.6s,mb4.7
GIVF Givet 80.11 319 *e*P **P** **07 51 07.8 -0.5**
MAW Mawson 80.34 191 P **P** **07 51 09.2 +0.2**
comp=Z,3.6nm,0.8s,mb4.4,baz=9.5,slow=6.9,SNR=5.7
BAIF Baives 80.51 319 *e*P **P** **07 51 10.1 -0.3**
comp=Z,9.0nm,0.8s,mb4.5
BAIF Baives 80.51 319 *e*P **P** **07 51 10.1 -0.3**
BAIF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
BAIF Baives 80.51 319 *e*P **P** **07 51 10.1 -0.3**
comp=Z,4.5nm,0.8s,mb4.5
VIVF Saint-Julien-l 80.63 314 *e*P **P** **07 51 11.0 -0.2**
comp=Z,16nm,0.8s,mb4.7
VIVF Saint-Julien-l 80.63 314 *e*P **P** **07 51 11.0 -0.2**
VIVF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
VIVF Saint-Julien-l 80.63 314 *e*P **P** **07 51 11.0 -0.2**
comp=Z,8.3nm,0.8s,mb4.7
LOR Lormes 80.98 316 *e*P **P** **07 51 12.3 -0.7**
comp=Z,14nm,1.0s,mb4.5
LOR *e*MLR MLR
comp=Z,46nm,18.5s,MS3.6
LOR Lormes 80.98 316 *e*P **P** **07 51 12.3 -0.7**
LOR pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
LOR MLR MLR
comp=Z,50nm,18.5s,MS3.9
LOR Lormes 80.98 316 *e*P **P** **07 51 12.3 -0.7**
comp=Z,6.9nm,1.0s,mb4.5
LOR LR LR
comp=Z,50nm,18.5s,MS3.9
SMF Signal de Mont 81.05 316 *e*P **P** **07 51 12.7 -0.7**
comp=Z,8.1nm,0.7s,mb4.5
SMF Signal de Mont 81.05 316 *e*P **P** **07 51 12.7 -0.7**
SMF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
SMF Signal de Mont 81.05 316 *e*P **P** **07 51 12.7 -0.7**
comp=Z,4.1nm,0.7s,mb4.5
SSF Saint Saulge 81.24 316 *e*P **P** **07 51 13.8 -0.6**
LASF Ste Croix 81.29 313 *e*P **P** **07 51 14.8 +0.1**
comp=Z,26nm,1.0s,mb4.8
AVF Avril sur Loir 81.37 316 *e*P **P** **07 51 14.4 -0.7**
comp=Z,9.7nm,0.9s,mb4.4
AVF Avril sur Loir 81.37 316 *e*P **P** **07 51 14.4 -0.7**
AVF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
AVF Avril sur Loir 81.37 316 *e*P **P** **07 51 14.4 -0.7**
comp=Z,4.8nm,0.9s,mb4.4
BGF Bois d'Agland 81.74 316 *e*P **P** **07 51 17.0 -0.1**
comp=Z,6.9nm,0.7s,mb4.4
BGF Bois d'Agland 81.74 316 *e*P **P** **07 51 17.0 -0.1**
BGF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
BGF Bois d'Agland 81.74 316 *e*P **P** **07 51 17.0 -0.1**
comp=Z,3.5nm,0.7s,mb4.4
TCF Toulx Ste Croi 82.21 316 *e*P **P** **07 51 19.5 0.0**
TAM Tamanrasset 82.44 292 *e*P **P** **07 51 23.2 +2.0**
TAM pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
TAM Tamanrasset 82.44 292 *e*P **P** **07 51 23.2 +2.0**
comp=Z,6.6nm,0.8s,mb4.6
CAF Calviac 82.47 314 *e*P **P** **07 51 21.0 +0.1**
comp=Z,19nm,1.1s,mb4.6
CAF Calviac 82.47 314 *e*P **P** **07 51 21.0 +0.1**
CAF pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
CAF Calviac 82.47 314 *e*P **P** **07 51 21.0 +0.1**
comp=Z,9.6nm,1.1s,mb4.6

MTLF	**Montolieu**	**82.55 313**	*e*P	**P**	**07 51 21.3**	**-0.1**
	comp=Z,15nm,0.8s,mb4.8					
MTLF	**Montolieu**	**82.55 313**	*e*P	**P**	**07 51 21.3**	**-0.1**
MTLF			pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8					
MTLF	**Montolieu**	**82.55 313**	*e*P	**P**	**07 51 21.3**	**-0.1**
	comp=Z,7.6nm,0.8s,mb4.8					
RJF	**Les Rejaudoux**	**82.81 315**	*e*P	**P**	**07 51 22.7**	**0.0**
RJF			*e*MLR	MLR		
	comp=Z,39nm,18.0s,MS3.5					
RJF	**Les Rejaudoux**	**82.81 315**	*e*P	**P**	**07 51 22.7**	**0.0**
RJF			LR	LR		
	comp=Z,40nm,18.0s,MS3.8					
LDF	**La Druitiere**	**83.49 318**	*e*P	**P**	**07 51 25.6**	**-0.5**
	comp=Z,7.9nm,0.7s,mb4.5					
LDF	**La Druitiere**	**83.49 318**	*e*P	**P**	**07 51 25.6**	**-0.5**
LDF			pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6					
LDF	**La Druitiere**	**83.49 318**	*e*P	**P**	**07 51 25.6**	**-0.5**
	comp=Z,4.0nm,0.7s,mb4.6					
JMIC	**Jan Mayen**	**83.64 341**	LR	LR	08 30 14.1	
	comp=Z,31nm,19.1s,MS3.7,baz=217,slow=37					
FLN	**La Foliniere**	**83.70 318**	*e*P	**P**	**07 51 26.6**	**-0.6**
	comp=Z,11nm,0.9s,mb4.7					
FLN			*e*MLR	MLR		
	comp=Z,40nm,21.0s,MS3.5					
FLN	**La Foliniere**	**83.70 318**	*e*P	**P**	**07 51 26.6**	**-0.6**
FLN			pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.7					
FLN			MLR	MLR		
	comp=Z,40nm,21.0s,MS3.8					
FLN	**La Foliniere**	**83.70 318**	*e*P	**P**	**07 51 26.6**	**-0.6**
	comp=Z,5.7nm,0.9s,mb4.7					
FLN			LR	LR		
	comp=Z,40nm,21.0s,MS3.8					
MFF	**Saint Martin d**	**83.78 316**	*e*P	**P**	**07 51 27.2**	**-0.5**
	comp=Z,10.0nm,0.7s,mb4.7					
MFF	**Saint Martin d**	**83.78 316**	*e*P	**P**	**07 51 27.2**	**-0.5**
MFF			pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.8					
MFF	**Saint Martin d**	**83.78 316**	*e*P	**P**	**07 51 27.2**	**-0.5**
	comp=Z,5.0nm,0.7s,mb4.8					
SGMF	**Saint Gilles**	**85.14 318**	*e*P	**P**	**07 51 34.1**	**-0.4**
QUIF	**Quistinic**	**85.60 318**	*e*P	**P**	**07 51 36.0**	**-0.8**
TOA0	**Torodi Ar. Sit**	**87.54 283**	*e*P	**P**	**07 51 48.1**	**+1.1**
TOA0			*e*pP	pP	07 51 54.3	+2.6
TORD	**Torodi Ar. Bea**	**87.54 283**	P	**P**	**07 51 47.0**	**0.0**
	comp=Z,1.9nm,0.7s,mb4.5,baz=86,slow=4.6,SNR=16					
TORD			LR	LR	08 32 27.2	
	comp=Z,66nm,20.9s,MS4.0,baz=80,slow=37					
ESDC	**Sonseca Array**	**87.72 310**	P	**P**	**07 51 47.8**	**+0.4**
	comp=Z,0.8nm,0.6s,mb4.2,baz=64,slow=4.0,SNR=7.0					
BORG	**Borgarnes**	**90.25 337**	LR	LR	08 36 49.0	
	comp=Z,38nm,20.3s,MS3.8,baz=168,slow=38					
TTA	**Tatalina**	**90.86 25**	*e*P	**P**	**07 52 03.0**	**+1.4**
SUMG	**Summit**	**91.26 347**	*e*P	**P**	**07 52 04.4**	**+1.1**
SUMG			*e**PP	pP	07 52 10.6	+2.5
SUMG			pmax	pmax		
	comp=Z,7.0nm,0.9s					
SUMG	**Summit**	**91.26 347**	*e*P	**P**	**07 52 04.4**	**+1.1**
	comp=Z,7.3nm,0.9s,mb5.0					
SUMG			*e*pP	pP	07 52 10.6	+2.5
SVW2	**Sparrevohn**	**91.81 27**	*e*P	**P**	**07 52 08.0**	**+1.9**
BPAW	**Bear Paw Mtn.**	**92.34 23**	*e*P	**P**	**07 52 08.7**	**+0.3**
	comp=Z,2.5nm,0.6s,mb4.7					
BPAW			*e*pP	pP	07 52 15.6	+2.4
DBIC	**Dimbokro**	**95.06 278**	LR	LR	08 37 04.4	
	comp=Z,56nm,19.4s,MS4.0,baz=156,slow=37					
RES	**Resolute Bay**	**95.14 2**	LR	LR	08 38 45.1	
	comp=Z,36nm,19.3s,MS3.9,baz=73,slow=38					
INK	**Inuvik**	**95.42 15**	*e*P	**P**	**07 52 21.9**	**-0.7**
INK			pmax	pmax		
	comp=Z,7.0nm,1.4s					
INK	**Inuvik**	**95.42 15**	*e*P	**P**	**07 52 21.9**	**-0.7**
	comp=Z,6.9nm,1.4s,mb4.9					
HUMO	**Hull Mountain**	**118.68 28**	*e*PKPdf	PKPdf	07 57 47.8	+1.1
LAO	**LASA Array**	**121.14 14**	*e*PKPdf	PKPdf	07 57 52.3	+0.9
LAO			*ep*PKPdf	pPKPdf	07 57 58.8	+2.6
YMR	**Madison River**	**121.68 19**	*e*PKPdf	PKPdf	07 57 51.6	-0.8
RLMT	**Red Lodge**	**121.78 17**	*e*PKPdf	PKPdf	07 57 53.0	+0.4
N12A	**Clover Valley,**	**123.55 24**	*e*PKPdf	PKPdf	07 57 56.9	+0.8
PDAR	**Pinedale Array**	**123.83 19**	PKP	PKPdf	07 57 56.9	+0.2
	comp=Z,0.9nm,0.7s,baz=11,slow=1.5,SNR=8.2					
NVAR	**Mina Array Bea**	**124.15 28**	PKP	PKPdf	07 57 58.0	+0.6
	comp=Z,1.4nm,0.6s,baz=298,slow=2.1,SNR=14					
DUG	**Dugway**	**124.99 23**	*e*PKIKP	PKPdf	07 57 59.4	+0.5
DUG			*e*		07 58 06.3	
ECSD	**EROS Data Cent**	**125.77 7**	*e*PKPdf	PKPdf	07 57 59.8	-0.5
ECSD			*ep*PKPdf	pPKPdf	07 58 06.9	+1.7
MSU	**Marysvale**	**126.69 23**	*e*PKIKP	PKPdf	07 58 03.9	+1.7
MIAR	**Mount Ida**	**135.19 6**	*e*PKIKP	PKPdf	07 58 18.3	-0.2
MNTX	**Cornudas Mount**	**135.26 21**	*e*PKPdf	PKPdf	07 58 18.4	-0.3
TXAR	**Lajitas Array**	**138.01 20**	PKP	PKPdf	07 58 24.5	+0.7
	comp=Z,0.8nm,0.6s,baz=96,slow=1.0,SNR=9.6					
TXAR	**Lajitas Array**	**138.01 20**	PKP	PKPdf	07 58 24.5	+0.7
JCT	**Junction City**	**138.07 15**	*e*PKIKP	PKPdf	07 58 23.0	-0.9
PLCA	**Paso Flores**	**145.74 205**	PKPbc	PKPbc	07 58 38.6	+1.0
	comp=Z,9.8nm,0.8s,baz=146,slow=3.8,SNR=20					
PLCA	**Paso Flores**	**145.74 205**	*e*PKPbc	PKPbc	07 58 38.5	+0.9
SDDR	**Presa de Saban**	**146.37 330**	*e*PKPbc	PKPbc	07 58 40.4	+0.3
CPUP	**Villa Florida**	**146.50 237**	PKPbc	PKPbc	07 58 39.7	-0.6
	comp=Z,5.4nm,0.8s,baz=84,slow=6.0,SNR=13					
LPAZ	**La Paz**	**159.31 251**	PKP	PKPdf	07 58 58.5	+0.8
	comp=Z,0.8nm,0.6s,baz=44,slow=1.3,SNR=4.6					
LPAZ			PKPab	PKPab	07 59 36.4	+1.3
	comp=Z,1.6nm,0.9s,baz=120,slow=2.3,SNR=4.2					

MEX 01 07:45:44.5±1.2, 16°.31N×90°.69W, h63km±65km, MD4.2, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**1.39**	**269**	*e*P	Pn	07 46 05.8	-2.0
CCIG				*i* S	Sn	07 46 24.4	-0.8
SCX	**San Cristobal**	**1.91**	**283**	*i* P	Pn	07 46 14.3	-0.5
SCX				*i* S	Sn	07 46 36.5	-1.3
THIG		**2.06**	**228**	*e*P	Pn	07 46 15.9	-1.0
THIG				*i* S	Sn	07 46 39.1	-2.5
TGIG		**2.38**	**282**	*e*P	Pn	07 46 20.5	-0.6
TGIG				*i* S	Sn	07 46 45.9	-3.3
PCIG		**2.50**	**256**	*i* P	Pn	07 46 21.9	-0.9
PCIG				*i* S	Sn	07 46 51.6	-0.7
VHO	**Vista Hermosa**	**5.84**	**278**	*i* P	Pn	07 47 11.1	+2.5
VHO				*i* S	Sn	07 48 13.8	-0.3
PNIG	**Pinotepa**	**7.14**	**272**	*i* P	Pn	07 47 27.4	+1.0
PNIG				*i* S	Sn	07 48 46.6	+0.6

*IDC **01** 07:54:41.3±1.1, 32°.14N×104°.77E, h0km, mb3.7/8, mb1 3.8/10, mb1mx3.6/27, mbtmp3.6/10, ML3.7/2, Error ellipse: s-maj=46.5km s-min=21.1km az=63.0*
*NEIC **01** 07:54:43.9±0.6, 32°.16N×104°.48E, h10km, mb3.5/1, Error ellipse: s-maj=17.2km s-min=10.9km az=64.0*
*BJI **01** 07:54:45.1, 32°.04N×104°.68E, h16km, ML3.5/13, Ms3.4/3, Ms7 3.2/3*

ISC 01 07:54:43.3±0.8, 32°.18N±0°.04×104°.62E±0°.05, h9km±6km, n18, σ0§95/25, mb3.6/9, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.46**	**211**	⇑*i* P*g*	**Pg**	**07 55 09.4**	**-2.0**
CD2				Sg	**Sg**	**07 55 30.6**	**+0.2**
CD2				smax			
	comp=N,3μm,1.1s						
CD2				smax			
	comp=E,3μm,0.7s						
LZH	**Lanzhou**	**3.95**	**351**	Pg	**Pg**	**07 55 59.1**	**+0.1**
LZH				Sn	**Sn**	**07 56 35.7**	**+5.2**
LZH				Sg	**Sg**	**07 56 50.2**	**0.0**
LZH				smax			
	comp=N,160nm,0.5s						
LZH				smax			
	comp=E,230nm,0.6s						
LZH				LR	LR		
	comp=E,470nm,6.2s						
LZH				LR	LR		
	comp=Z,720nm,8.6s						
XAN	**Xi'an**	**4.06**	**62**	Pn	**Pn**	**07 55 45.4**	**-0.1**
XAN				Pg	**Pg**	**07 56 01.4**	**+0.4**
XAN				Sn	**Sn**	**07 56 31.9**	**-1.2**
XAN				Sg	**Sg**	**07 56 52.5**	**-1.1**
XAN				smax			
	comp=N,140nm,0.6s						
XAN				smax			
	comp=E,60nm,0.8s						
ENH	**Enshi**	**4.58**	**113**	Pn	**Pn**	**07 55 56.5**	**+3.8**
ENH				*e*Sg	**Sg**	**07 57 12.7**	**+2.4**
GYA	**Guiyang**	**5.97**	**162**	Pn	**Pn**	**07 56 15.4**	**+3.6**
CMAR	**Chiang Mai Arr**	**14.59**	**202**	Pn	**Pn**	**07 58 09.6**	**-0.3**
	comp=E,0.3nm,0.3s,baz=221,slow=15,SNR=2.7						
SONM	**Songino Array**	**15.70**	**4**	Pn	**Pn**	**07 58 24.9**	**+0.4**
	comp=E,0.1nm,0.3s,baz=333,slow=45,SNR=2.6						
MKAR	**Makanchi Array**	**22.48**	**317**	P	**P**	**07 59 44.0**	**+1.3**
	comp=E,0.8nm,0.7s,mb3.2,baz=104,slow=10,SNR=5.7						
MKAR	**Makanchi Array**	**22.48**	**317**	P	**P**	**07 59 44.0**	**+1.3**
ZALV	**Zalesovo Beam**	**25.96**	**333**	P	**P**	**08 00 16.8**	**+0.9**
	comp=E,1.6nm,0.5s,mb3.8,baz=139,slow=9.9,SNR=8.0						
KURK	**Kurchatov**	**26.67**	**322**	P	**P**	**08 00 22.5**	**+0.2**
	comp=E,0.6nm,0.7s,mb3.3,baz=127,slow=7.6,SNR=5.5						
ABKAR	**Akbulak array**	**37.30**	**311**	*e*P	**P**	**08 01 56.0**	**+0.5**
	comp=E,0.3nm,0.4s,mb3.5						
ARCES	**ARCESS Array B**	**56.47**	**336**	P	**P**	**08 04 25.1**	**+0.1**
	comp=E,0.5nm,0.4s,mb3.9,baz=83,slow=7.4,SNR=13						
FINES	**FINESS Array B**	**56.93**	**326**	P	**P**	**08 04 28.5**	**+0.1**
	comp=E,0.6nm,0.4s,mb3.9,baz=75,slow=6.7,SNR=9.1						
FINES	**FINESS Array B**	**56.93**	**326**	P	**P**	**08 04 28.5**	**+0.1**
ASAR	**Alice Springs**	**62.18**	**150**	P	**P**	**08 05 04.1**	**-0.9**
	comp=E,0.3nm,0.4s,mb3.7,baz=334,slow=7.0,SNR=6.7						
NOA	**NORSAR Array B**	**64.00**	**327**	P	**P**	**08 05 15.9**	**-0.8**
	comp=E,0.7nm,0.8s,mb3.8,baz=72,slow=6.6,SNR=3.7						
YKA	**Yellowknife Ar**	**80.54**	**17**	P	**P**	**08 06 55.1**	**-0.4**
	comp=E,0.3nm,0.6s,mb3.4,baz=328,slow=5.2,SNR=8.9						

*IDC **01** 08:15:18.0±8.2, 35°.54N×142°.32E, h0km, mb3.6/3, mb1 3.5/4, mb1mx3.3/26, mbtmp3.5/4, ML3.3/1, Error ellipse: s-maj=215.2km s-min=56.5km az=1.0*
*JMA **01** 08:15:26.6±0.2, 36°.30N×141°.77E, h77km±4km, M2.9*
*ISCJB **01** 08:15:26.8±1.0, 36°.30N±0°.06×141°.92E±0°.09, h33km, mb3.5/3, Error ellipse: s-maj=11.1km s-min=7.6km az=17.0*

ISC 01 08:15:27.8±1.1, 36°.30N±0°.06×141°.90E±0°.10, h35km, n17, σ1§02/21, mb3.5/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.03**	**235**	P	**Pn**	**08 15 45.0**	**-0.8**
CHOJ				*e*S	**Sn**	**08 15 59.8**	**+0.8**
JHO	**Hitachi**	**1.12**	**287**	P	**Pn**	**08 15 45.7**	**-1.3**
JHO				*e*S	**Sn**	**08 16 00.1**	**-1.1**
ONAJ	**Iwakimizuishiy**	**1.20**	**313**	P	**Pn**	**08 15 46.6**	**-1.5**
JFK	**Kawauchi**	**1.35**	**323**	P	**Pn**	**08 15 49.2**	**-1.0**
JFT	**Otama**	**1.75**	**315**	P	**Pn**	**08 15 55.6**	**-0.1**
BSO1	**Boso 1**	**1.80**	**205**	P	**Pn**	**08 15 56.2**	**-0.2**
JMM	**Marumori**	**1.80**	**331**	P	**Pn**	**08 15 56.5**	**+0.1**
BSO3	**Boso 3**	**1.87**	**218**	P	**Pn**	**08 15 56.7**	**-0.7**
JAG	**Ashikaga**	**1.98**	**274**	P	**Pn**	**08 15 58.0**	**-0.9**
JFY	**Yanaizu**	**2.08**	**303**	P	**Pn**	**08 16 00.5**	**+0.2**
JRY	**Ryogami san**	**2.44**	**264**	P	**Pn**	**08 16 04.1**	**-1.1**
JMK	**Ichinoseki**	**2.71**	**349**	P	**Pn**	**08 16 08.9**	**+0.1**
MJAR	**Matsushiro Arr**	**2.99**	**276**	Pn	**Pn**	**08 16 13.5**	**+0.8**
	2.7nm,0.3s,baz=107,slow=8.9,SNR=18						
MJAR				Sn	**Sn**	**08 16 54.5**	**+7.1**
	2.3nm,0.3s,baz=310,slow=33,SNR=6.1						
MAT	**Matsushiro**	**2.99**	**276**	P	**Pn**	**08 16 13.3**	**+0.6**
MAT				*e*S	**Sn**	**08 16 49.4**	**+2.0**
SONM	**Songino Array**	**28.53**	**305**	P	**P**	**08 21 21.7**	**+1.8**
	0.6nm,0.8s,mb3.4,baz=98,slow=11,SNR=5.0						
ZALV	**Zalesovo Beam**	**42.70**	**313**	P	**P**	**08 23 22.7**	**+1.6**
	0.4nm,0.5s,mb3.4,baz=54,slow=7.3,SNR=2.6						
KURK	**Kurchatov**	**46.70**	**309**	P	**P**	**08 23 54.0**	**+1.1**
	0.6nm,0.6s,mb3.7,baz=84,slow=8.0,SNR=3.3						

*ISCJB **01** 08:32:35.2±1.8, 6°.6N±0°.1×127°.3E±0°.1, h63km±15km, mb3.9/12, Error ellipse: s-maj=26.0km s-min=13.0km az=146.3*
*IDC **01** 08:32:36.5±6.3, 6°.49N×127°.17E, h59km±53km, mb3.6/9, mb1 3.7/9, mb1mx3.5/22, mbtmp3.6/9, MS3.5/2, Ms1 3.4/2, ms1mx2.6/26, Error ellipse: s-maj=68.2km s-min=16.4km az=64.0*
*MAN **01** 08:32:40, 6°.50N×126°.71E, h8km, mb4.9, ML3.8, MS3.8*
*NEIC **01** 08:32:43.4±1.5, 6°.30N×126°.17E, h100km±10km, mb3.7/2, Error ellipse: s-maj=73.2km s-min=10.2km az=69.0*

ISC 01 08:32:36.1±1.9, 6°.6N±0°.1×127°.2E±0°.2, h55km±16km, n23, σ0§87/27, mb3.9/12, MS3.4/2, 2C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.06**	**292**	*e*P	**Pn**	**08 32 52.7**	**-2.0**
MATI				*e*S	**Sn**	**08 33 03.8**	**-4.7**
DAV	**Davao City (W)**	**1.73**	**288**	P	**Pn**	**08 33 03.5**	**-0.4**
	219nm,0.3s,baz=278,slow=1.2,SNR=18						
DAV				S	**Sn**	**08 33 24.3**	**-0.6**
	93nm,0.3s,baz=72,slow=20,SNR=4.6						
DAV	**Davao City (W)**	**1.73**	**288**	P	**Pn**	**08 33 03.5**	**-0.4**
DAV				S	**Sn**	**08 33 24.3**	**-0.6**
DMPH	**Davao City--Mi**	**1.81**	**287**	⇑*i* P	**Pn**	**08 33 04.8**	**0.0**
DMPH				*i* S	Sn	08 33 46.5	+20
KCP	**Kidapawan**	**2.19**	**282**	⇑*i* P	**Pn**	**08 33 11.1**	**+1.0**
KCP				*i* S	**Sn**	**08 33 37.2**	**+1.1**
GSPH	**General Santos**	**2.33**	**259**	⇓*i* P	**Pn**	**08 33 07.0**	**-5.0**
BUKP	**Musuan**	**2.54**	**302**	*e*P	**Pn**	**08 33 15.9**	**+1.0**
BUKP				*e*S	**Sn**	**08 33 43.6**	**-1.0**
CGP	**Cagayan de Oro**	**3.16**	**307**	*e*P	**Pn**	**08 33 24.5**	**+1.1**
MSLP	**Maasin**	**4.28**	**327**	*e*P	**Pn**	**08 33 44.0**	**+5.3**
JOW	**Kunigami**	**20.20**	**3**	LR	LR	08 43 26.7	
	comp=Z,92nm,21.0s,MS3.1,baz=230,slow=32						
FITZ	**Fitzroy Crossi**	**24.54**	**184**	P	**P**	**08 37 50.6**	**-0.2**
	1.9nm,0.8s,mb3.7,baz=17,slow=14,SNR=4.7						
WRAB	**Tennant Creek**	**27.23**	**165**	*e*P	**P**	**08 38 18.9**	**+3.8**
	1.5nm,0.7s,mb3.6						
ASAR	**Alice Springs**	**30.72**	**168**	P	**P**	**08 38 45.5**	**-0.5**
	0.3nm,0.6s,mb3.3,baz=340,slow=7.3,SNR=10						
STKA	**Stephens Creek**	**40.59**	**161**	P	**P**	**08 40 14.8**	**+4.4**
	1.8nm,0.8s,mb3.8,baz=339,slow=6.5,SNR=5.1						
STKA				LR	LR	08 57 53.2	
	comp=Z,81nm,18.9s,MS3.6,baz=204,slow=37						
MKAR	**Makanchi Array**	**55.57**	**324**	P	**P**	**08 42 06.4**	**+0.4**
	1.3nm,0.5s,mb4.3,baz=108,slow=8.8,SNR=8.8						
ZALV	**Zalesovo Beam**	**58.34**	**332**	P	**P**	**08 42 25.6**	**+0.2**
	0.4nm,0.4s,mb3.8,baz=108,slow=4.7,SNR=2.5						
KURK	**Kurchatov**	**59.67**	**326**	P	**P**	**08 42 34.6**	**-0.1**
	1.5nm,0.6s,mb4.2,baz=124,slow=6.4,SNR=10						
BVAR	**Borovoye Array**	**65.27**	**326**	P	**P**	**08 43 12.1**	**0.0**
	0.9nm,0.5s,mb4.0,baz=114,slow=7.3,SNR=7.7						
ABKAR	**Akbulak array**	**70.32**	**320**	*e*P	**P**	**08 43 43.6**	**-0.3**
	0.8nm,0.6s,mb3.8						
AKTK	**Aktyubinsk**	**71.80**	**321**	P	**P**	**08 43 52.0**	**-0.9**
AKTO	**Aktyubinsk**	**71.80**	**321**	P	**P**	**08 43 52.0**	**-0.8**
	0.9nm,0.6s,mb3.9,baz=88,slow=12,SNR=5.0						
ARCES	**ARCESS Array B**	**88.00**	**340**	P	**P**	**08 45 19.9**	**0.0**
	1.8nm,1.1s,mb4.2,baz=89,slow=5.6,SNR=4.1						
FINES	**FINESS Array B**	**89.61**	**332**	P	**P**	**08 45 29.1**	**+1.4**
	0.6nm,0.8s,mb4.0,baz=97,slow=9.1,SNR=2.7						

IDC 01 08:35:29.5±2.2, 53°.70N×86°.96E, h0km, mb1 3.0/2, mb1mx2.8/27, mbtmp3.0/2, ML2.5/2, Error ellipse: s-maj=21.2km s-min=7.5km az=98.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.29**	**282**	Pg	Pg	08 35 52.3	-1.9
	0.8nm,0.3s,baz=100,slow=17,SNR=12						
ZALV				Lg		08 36 10.7	
	1.3nm,0.3s,baz=104,slow=27,SNR=15						
ZALV				Rg		08 36 19.3	
	7.2nm,0.8s,baz=93,slow=30,SNR=16						
KURK	**Kurchatov**	**5.93**	**243**	Pn	Pn	08 37 01.1	+2.7
	0.0nm,0.3s,baz=60,slow=14,SNR=8.9						
KURK				Lg		08 38 42.0	
	0.0nm,0.3s,baz=63,slow=31,SNR=7.8						
MKAR	**Makanchi Array**	**7.53**	**205**	Pn	Pn	08 37 21.7	+1.3
	0.1nm,0.3s,baz=22,slow=13,SNR=3.7						
MKAR				Lg		08 39 27.9	
	0.1nm,0.3s,baz=28,slow=31,SNR=4.5						

*MOS **01** 09:03:31.7±1.5, 51°.09N×159°.75E, h28km, mb4.3/3, Error ellipse: s-maj=33.2km s-min=8.1km az=96.0*
*KRSC **01** 09:03:36.5±0.9, 51°.59N×159°.76E, h10km±10km, ML4.4*
*ISCJB **01** 09:03:36.8±1.1, 51°.41N±0°.07×159°.86E±0°.10, h49km±8km, mb4.0/12, Error ellipse: s-maj=11.7km s-min=9.1km az=146.0*
*NEIC **01** 09:03:50.0±1.5, 52°.00N×157°.83E, h89km±8km, mb4.4/4, Error ellipse: s-maj=26.4km s-min=12.8km az=127.0*
*IDC **01** 09:03:52.3±1.9, 52°.24N×157°.34E, h86km±12km, mb3.5/10, mb1 3.6/10, mb1mx3.4/26, mbtmp3.5/10, MS3.1/1, Ms1 3.1/1, ms1mx2.5/27, Error ellipse: s-maj=32.0km s-min=24.7km az=159.0*

ISC 01 09:03:38.2±1.1, 51°.43N±0°.07×159°.84E±0°.10, h42km±9km, n37, σ1§01/44, mb4.0/12, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	**Gorelyy**	**1.57**	**317**	P	**Pn**	**09 04 03.5**	**0.0**
GRL				*i* S	**Sn**	**09 04 23.0**	**+0.4**
SPN	**Mys Shipunski**	**1.68**	**4**	*e*P	**Pn**	**09 04 06.2**	**+1.2**
SPN				*i* S	**Sn**	**09 04 28.2**	**+3.0**
PET	**Petropavlovsk**	**1.76**	**336**	*e*PN	**Pn**	**09 04 04.9**	**-1.2**
PET				*e*S	**Sn**	**09 04 26.8**	**-0.4**
PET				pmax	pmax		
	comp=Z,32nm,0.5s						
PET				smax			
	comp=N,743nm,0.4s						
PET				smax			
	comp=N,10.0nm,0.4s						
PET				MLR	MLR		
	comp=Z,5μm,11.7s						
PET				MLR	MLR		
	comp=Z,6μm,11.9s						
PET	**Petropavlovsk**	**1.76**	**336**	*e*P	**Pn**	**09 04 05.2**	**-0.9**
PET				*i* S	**Sn**	**09 04 26.3**	**-0.9**
NLC	**Nalytchevo**	**1.77**	**350**	*e*P	**Pn**	**09 04 05.5**	**-0.8**
NLC				*i* S	**Sn**	**09 04 26.6**	**-1.0**
SDLR	**Sedlovina**	**1.94**	**343**	*e*P	**Pn**	**09 04 07.8**	**-0.8**
AVH	**Avacha**	**1.96**	**340**	*e*P	**Pn**	**09 04 08.6**	**-0.3**
MIPR	**Malaya Ipel'ka**	**2.09**	**295**	*e*P	**Pn**	**09 04 10.5**	**-0.2**
MIPR				*i* S	**Sn**	**09 04 35.3**	**-0.2**
PEA0B	**Petropavlovsk-**	**2.14**	**323**	*e*Pn	**Pn**	**09 04 11.1**	**-0.1**
PEA0B				*e*Sn	**Sn**	**09 04 37.3**	**+0.8**
PETK	**Petropavlovsk-**	**2.14**	**323**	P	**Pn**	**09 04 10.9**	**-0.4**
	comp=Z,96nm,0.3s,baz=123,slow=17,SNR=313						
PETK				S	**Sn**	**09 04 37.6**	**+1.1**
	comp=Z,22nm,0.3s,baz=125,slow=18,SNR=4.4						
GNL	**Ganaly**	**2.55**	**334**	*e*P	**Pn**	**09 04 16.8**	**-0.1**
ALID	**Alaid**	**2.76**	**260**	*e*P	**Pn**	**09 04 19.6**	**-0.2**
MKZ	**Mys Kozlova**	**3.33**	**19**	*e*P	**Pn**	**09 04 27.2**	**-0.5**
MKZ				*i* S	**Sn**	**09 05 03.3**	**-2.7**
KMNR	**Kamenistaya**	**4.34**	**3**	*e*P	**Pn**	**09 04 42.5**	**+1.0**
BZGR	**Bezymyannyi-Gr**	**4.55**	**6**	P	**Pn**	**09 04 46.3**	**+1.9**
KPT	**Kopyto**	**4.55**	**3**	P	**Pn**	**09 04 44.8**	**+0.4**
MJAR	**Matsushiro Arr**	**21.42**	**234**	P	**P**	**09 08 24.1**	**+1.8**
	comp=Z,1.0nm,0.7s,mb3.3,baz=34,slow=10,SNR=4.7						
MJAR				LR	LR	09 17 23.5	
	comp=Z,49nm,18.9s,baz=160,slow=39						
TIXI	**Tiksi**	**24.54**	**337**	*e*P	**P**	**09 08 52.7**	**-0.6**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.9						
TIXI	**Tiksi**	**24.54**	**337**	*e*P	**P**	**09 08 52.3**	**-1.0**
	comp=Z,3.2nm,0.6s,mb4.0						
INCN	**Inchon**	**27.23**	**252**	*e*P	**P**	**09 09 15.8**	**-2.2**
	comp=Z,14nm,0.4s,mb4.8						
PAX	**Paxson**	**30.80**	**47**	*e*P	pP	09 10 01.8	+1.0
	comp=Z,6.4nm,0.5s						
ZALV	**Zalesovo Beam**	**43.56**	**304**	P	**P**	**09 11 33.6**	**-3.9**
	comp=Z,0.3nm,0.3s,mb3.5,baz=94,slow=5.8,SNR=2.5						
KURK	**Kurchatov**	**48.50**	**303**	*e*P	**P**	**09 12 11.6**	**-4.7**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
KURK	**Kurchatov**	**48.50**	**303**	*e*P	**P**	**09 12 11.6**	**-4.7**
	comp=Z,1.9nm,0.6s,mb4.3						
SPB4	**Spitsbergen Ar**	**48.76**	**351**	*e*P	**P**	**09 12 17.9**	**-0.1**
BVAR	**Borovoye Array**	**51.31**	**309**	P	**P**	**09 12 36.0**	**-1.6**
	comp=Z,1.3nm,0.6s,mb4.1,baz=57,slow=9.0,SNR=8.0						
ARCES	**ARCESS Array B**	**54.83**	**342**	P	**P**	**09 13 03.3**	**0.0**
	comp=Z,1.4nm,0.9s,mb4.0,baz=8.9,slow=8.6,SNR=5.3						
FINES	**FINESS Array B**	**61.59**	**337**	P	**P**	**09 13 50.8**	**+0.2**
	comp=Z,1.2nm,0.6s,mb4.2,baz=43,slow=8.6,SNR=8.5						
NB2	**NORSAR Subarra**	**65.10

SPN	**Mys Shipunski**	**1.53**	**18**	*e*P	**Pn**	**09 24 54.7 +1.9**
AVH	**Avacha**	**1.64**	**350**	*i* P	**Pn**	**09 24 56.2 +1.8**
SDLR	**Sedlovina**	**1.64**	**353**	*i* P	**Pn**	**09 24 55.1 +0.7**
MIPR	**Malaya Ipel'ka**	**1.65**	**293**	*i* P	**Pn**	**09 24 57.9 +3.4**
PEA0B	**Petropavlovsk-**	**1.73**	**328**	*e*Pn	**Pn**	**09 24 58.4 +2.8**
PEA0B				*e*Sn	**Sn**	**09 25 26.8 +10**
PETK	**Petropavlovsk-**	**1.73**	**328**	P	**Pn**	**09 24 57.6 +2.0**
	comp=Z,2μm,0.3s,baz=123,slow=12,SNR=2604					
PETK				S	**Sn**	**09 25 25.8 +9.2**
	comp=Z,522nm,0.3s,baz=121,slow=20,SNR=4.9					
PETK				LR	LR	09 25 45.3
	comp=Z,33μm,18.4s,baz=1.8,slow=45					
PETK	**Petropavlovsk-**	**1.73**	**328**	P	**Pn**	**09 24 57.6 +2.0**
PETK				S	**Sn**	**09 25 25.8 +9.2**
PETK				LR	LR	09 25 45.3
SKR	**Severo-Kuril's**	**2.19**	**245**	*e*PN	**Pn**	**09 25 01.2 -0.7**
SKR				*e*S	**Sn**	**09 25 29.0 +1.2**
SKR				pmax	pmax	
	comp=N,570nm,0.5s					
SKR				pmax	pmax	
	comp=E,770nm,0.5s					
SKR				pmax	pmax	
	comp=Z,1μm,0.5s					
SKR				smax		
	comp=N,55μm,2.0s					
SKR				smax		
	comp=E,30μm,2.0s					
SKR				MLR	MLR	
	comp=N,48μm,12.0s					
SKR				MLR	MLR	
	comp=E,56μm,12.0s					
SKR				MLR	MLR	
	comp=Z,45μm,12.0s					
GNL	**Ganaly**	**2.19**	**340**	*i* P	**Pn**	**09 25 04.4 +2.5**
KII	**Karymskiy**	**2.39**	**3**	*e*P	**Pn**	**09 25 06.2 +1.5**
ALID	**Alaid**	**2.44**	**253**	*i* P	**Pn**	**09 25 07.3 +2.0**
ALID				*i* S	**Sn**	**09 25 35.6 +1.5**
KMNR	**Kamenistaya**	**4.15**	**8**	*e*P	**Pn**	**09 25 31.0 +2.1**
KMNR				*e*S	**Sn**	**09 26 17.4 +1.1**
BZMR	**Bezymyannaya**	**4.35**	**9**	*e*P	**Pn**	**09 25 33.4 +1.8**
KPT	**Kopyto**	**4.36**	**7**	*e*P	**Pn**	**09 25 33.3 +1.6**
KPT				*e*S	**Sn**	**09 26 20.7 -0.7**
KOZ	**Kozyrevsk**	**4.43**	**5**	*e*P	**Pn**	**09 25 34.5 +1.8**
KOZ				*e*S	**Sn**	**09 26 22.7 -0.4**
KOZR	**Kozyr**	**4.44**	**5**	PN	**Pn**	**09 25 34.5 +1.7**
ZLN	**Zelenaya**	**4.47**	**11**	*e*P	**Pn**	**09 25 34.7 +1.5**
KRSR	**Krestovskiy**	**4.64**	**9**	*e*P	**Pn**	**09 25 36.4 +0.8**
KRSR				*e*S	**Sn**	**09 26 26.9 -1.4**
SRDR	**Sredinnyy**	**4.68**	**3**	*e*P	**Pn**	**09 25 37.7 +1.6**
KLY	**Klyuchi**	**4.74**	**10**	*e*P	**Pn**	**09 25 38.6 +1.6**
KLY				*e*S	**Sn**	**09 26 30.4 -0.4**
SRKR	**Sorokina**	**5.14**	**12**	*e*P	**Pn**	**09 25 43.8 +1.4**
UGL	**Uglegorsk**	**11.26**	**263**	*e*PN	**Pn**	**09 27 11.5 +5.2**
UGL				*e*		09 29 24.0
UGL				pmax	pmax	
	comp=N,400nm,4.0s					
UGL				pmax	pmax	
	comp=E,1μm,4.0s					
UGL				pmax	pmax	
	comp=Z,269nm,1.0s					
UGL				MLR	MLR	
	comp=N,8μm,16.0s					
UGL				MLR	MLR	
	comp=E,4μm,16.0s					
YSS	**Yuzh-Sakhalins**	**11.73**	**253**	*ce*PN	**Pn**	**09 27 16.0 +3.3**
YSS				*e**PP		09 27 34.0
YSS				*e*		09 27 51.0
YSS				*e*S	**Sn**	**09 29 25.0 +2.5**
YSS				MLR	MLR	
	comp=E,2μm,15.0s					
YSS				MLR	MLR	
	comp=Z,4μm,15.0s					
YSS	**Yuzh-Sakhalins**	**11.73**	**253**	*e*Pn	**Pn**	**09 27 20.0 +7.3**
YUK	**Yuzh-Kuril'sk**	**11.77**	**235**	*e*PN	**Pn**	**09 27 21.5 +8.3**
YUK				*e*S	**Sn**	**09 29 39.5 +16**
YUK				smax		
	comp=N,190nm,0.5s					
YUK				smax		
	comp=E,110nm,0.5s					
YUK				smax		
	comp=E,2μm,1.0s					
YUK				MLR	MLR	
	comp=N,9μm,17.0s					
YUK				MLR	MLR	
	comp=E,14μm,17.0s					
ASAJ	**Asahikawa**	**13.45**	**242**	P	**Pn**	**09 27 37.6 +1.4**
	comp=E,1.2nm,0.3s,baz=51,slow=11,SNR=18					
ASAJ	**Asahikawa**	**13.45**	**242**	PN	**Pn**	**09 27 37.6 +1.4**
ASAJ				pmax	pmax	
	comp=Z,1.0nm,0.3s					
ERM	**Erimo**	**14.59**	**235**	*e*P	**Pn**	**09 27 51.5 -0.4**
HABR	**Khabarovsk**	**15.82**	**268**	*de*P	**Pn**	**09 28 09.6 +1.6**
HABR				S	**Sn**	**09 31 02.7 +0.5**
HABR				pmax	pmax	
	comp=E,91nm,1.6s					
HABR				pmax	pmax	
	comp=Z,113nm,1.5s					
HABR				pmax	pmax	
	comp=N,53nm,1.7s					
HABR				MLR	MLR	
	comp=N,5μm,19.0s					
HABR				MLR	MLR	
	comp=Z,8μm,18.0s					
HABR				MLR	MLR	
	comp=E,6μm,16.0s					
KLR	**Kul'dur**	**17.63**	**273**	*e*P	**Pn**	**09 28 30.2 -0.5**
KLR				*e*S	**Sn**	**09 31 49.0 +3.1**
KLR				pmax	pmax	
	comp=E,250nm,1.6s					
KLR				pmax	pmax	
	comp=Z,180nm,1.6s					
KLR				pmax	pmax	
	comp=E,800nm,9.0s					
KLR				pmax	pmax	
	comp=Z,2μm,9.0s					
KLR				MLR	MLR	
	comp=E,3μm,13.0s					
KLR				MLR	MLR	
	comp=Z,11μm,13.0s					
YAK	**Yakutsk**	**19.03**	**315**	*e*P	**Pn**	**09 28 45.6 -2.0**
YAK				pmax	pmax	
	comp=E,98nm,0.9s					
YAK				pmax	pmax	
	comp=N,51nm,1.3s					
YAK				pmax	pmax	
	comp=Z,297nm,0.9s					
YAK				MLR	MLR	
	comp=E,3μm,14.0s					
YAK				MLR	MLR	
	comp=Z,5μm,14.0s					
YAK				MLR	MLR	
	comp=N,3μm,15.0s					
YAK	**Yakutsk**	**19.03**	**315**	*e*P	**Pn**	**09 28 45.9 -1.8**
	comp=N,318nm,0.8s					
GAMB	**Gambell**	**19.49**	**40**	*e*P	**Pn**	**09 28 50.3 -2.8**
	comp=N,26nm,1.1s					
VLA	**Vladivostok**	**20.28**	**256**	*e*P	**P**	**09 28 57.7 -2.9**
VLA				*e**PP		09 29 06.4
VLA				S	**S**	**09 32 37.0 -9.2**
VLA				pmax	pmax	
	comp=Z,71nm,1.1s					
VLA				MLR	MLR	
	comp=Z,4μm,20.0s,MS4.7					
CLNS	**Chul'man**	**20.57**	**298**	*e*P	**P**	**09 29 03.5 -0.1**
CLNS				*e*		09 29 18.7
CLNS				*e*S	**S**	**09 32 46.2 -5.5**
CLNS				*e*		09 33 23.6
CLNS				*e*SS		09 33 28.0
CLNS				pmax	pmax	
	comp=Z,48nm,1.0s					
CLNS				pmax	pmax	
	comp=E,35nm,1.0s					
CLNS				pmax	pmax	
	comp=N,42nm,1.0s					
CLNS				pmax	pmax	
	comp=Z,49nm,1.0s					
CLNS				pmax	pmax	
	comp=N,48nm,1.0s					
CLNS				pmax	pmax	
	comp=E,48nm,1.1s					
CLNS				smax		
	comp=N,101nm,12.5s					
CLNS				smax		
	comp=E,250nm,11.4s					
CLNS				MLR	MLR	
	comp=N,810nm,13.0s,MS4.7					
CLNS				MLR	MLR	
	comp=E,2μm,14.0s,MS4.7					
CLNS				MLR	MLR	
	comp=Z,3μm,14.0s,MS4.7					
UNV	**Unalaska Valle**	**20.75**	**70**	*e*P	**P**	**09 29 03.5 -2.0**
	comp=Z,53nm,1.2s					
MDJ	**Mudanjiang**	**20.89**	**262**	P	**P**	**09 29 05.7 -1.4**
MDJ				pP		09 29 13.7
MDJ				sP	sP	09 29 17.8 -1.6
MDJ				S	**S**	**09 32 55.0 -3.2**
MDJ				pmax	pmax	
	comp=Z,53nm,0.8s					
MDJ				LR	LR	
	comp=N,3μm,15.1s,MS5.0					
MDJ				LR	LR	
	comp=E,3μm,15.1s,MS5.0					
MDJ				LR	LR	
	comp=E,6μm,16.3s,MS5.0					
MDJ	**Mudanjiang**	**20.89**	**262**	*e*P	**P**	**09 29 05.8 -1.3**
	comp=Z,69nm,0.9s					
MDJ				*e*		09 29 18.7
MAJO	**Matsushiro**	**21.24**	**233**	*e*P	**P**	**09 29 11.4 +0.4**
MAJO				pmax	pmax	
	comp=Z,87nm,0.8s,mb5.1					
MAJO	**Matsushiro**	**21.24**	**233**	*e*P	**P**	**09 29 11.4 +0.4**
	comp=Z,87nm,0.8s,mb5.1					
MAT	**Matsushiro**	**21.24**	**233**	P	**P**	**09 29 11.3 +0.3**
MAT				S	**S**	**09 33 14.0 +8.7**
MJAR	**Matsushiro Arr**	**21.24**	**233**	P	**P**	**09 29 11.6 +0.6**
	comp=Z,41nm,0.9s,mb4.7,baz=28,slow=10.0,SNR=116					
MJAR				LR	LR	09 38 03.3
	comp=Z,3μm,20.6s,MS4.7,baz=55,slow=38					
TNA	**Tin City**	**21.71**	**38**	*e*P	**P**	**09 29 15.1 -0.7**
	comp=Z,80nm,1.1s,mb5.1					
CN2	**Changchun**	**23.87**	**264**	*e*P	**P**	**09 29 36.1 -2.1**
CN2				*ep*P		09 29 45.7
CN2				PP		09 30 12.7
CN2				*e*S	**S**	**09 33 55.9 +3.9**
CN2				pmax	pmax	
	comp=Z,30nm,0.8s,mb4.8					
CN2				pmax	pmax	
	comp=Z,200nm,5.0s					
CN2				LR	LR	
	comp=N,2μm,16.0s,MS5.0					
CN2				LR	LR	
	comp=E,3μm,16.0s,MS5.0					
CN2				LR	LR	
	comp=Z,4μm,18.0s,MS4.9					
TIXI	**Tiksi**	**24.18**	**337**	*e*P	**P**	**09 29 39.4 -1.4**
TIXI				*e*S	**S**	**09 33 59.4 +2.7**
TIXI				pmax	pmax	
	comp=Z,91nm,1.0s,mb5.2					
TIXI				MLR	MLR	
	comp=Z,4μm,17.0s,MS5.0					
TIXI	**Tiksi**	**24.18**	**337**	*e*P	**P**	**09 29 39.9 -0.9**
	comp=Z,114nm,0.8s,mb5.3					
HIA	**Hailar**	**25.04**	**280**	*e*P	**P**	**09 29 47.9 -0.9**
HIA				pmax	pmax	
	comp=Z,140nm,0.8s					
HIA	**Hailar**	**25.04**	**280**	*e*P	**P**	**09 29 47.9 -0.9**
	comp=Z,140nm,0.8s,mb5.5					
SNY	**Shenyang**	**26.09**	**262**	⇑P	**P**	**09 29 56.7 -1.7**
SNY				S	**S**	**09 34 24.8 -2.8**
SNY				LR	LR	
	comp=N,4μm,15.6s,MS5.2					
SNY				LR	LR	
	comp=E,4μm,16.2s,MS5.2					
SNY				LR	LR	
	comp=Z,6μm,15.7s,MS5.2					
TTA	**Tatalina**	**26.11**	**47**	*e*P	**P**	**09 29 58.6 +0.2**
KSRS	**Korea Array**	**26.20**	**249**	P	**P**	**09 30 00.3 +1.0**
	comp=Z,19nm,0.8s,mb4.7,baz=44,slow=9.4,SNR=64					
KSRS				LR	LR	09 41 18.4
	comp=Z,2μm,18.1s,MS4.7,baz=60,slow=38					
KSRS	**Korea Array**	**26.20**	**249**	P	**P**	**09 30 00.4 +1.0**
KSRS				pmax	pmax	
	comp=Z,19nm,0.8s,mb4.7					
KSRS				MLR	MLR	
	comp=Z,2μm,18.1s,MS4.7					
SVW2	**Sparrevohn**	**26.23**	**51**	*e*P	**P**	**09 29 59.1 -0.4**
SVW2				*e*		09 30 11.8
BOD	**Bodaibo**	**26.41**	**301**	*e*P	**P**	**09 29 59.7 -1.4**
BOD				pmax	pmax	
	comp=Z,30nm,1.2s,mb4.7					
INCN	**Inchon**	**26.93**	**251**	*e*P	**P**	**09 30 06.8 +0.7**
	comp=Z,20nm,0.7s,mb4.8					
INCN				*e*		09 30 23.7
CBIJ	**Chichi jima**	**27.70**	**214**	LR	LR	09 39 43.8
	comp=Z,720nm,20.0s,MS4.2,baz=340,slow=33					
CHUM	**Lake Minchumin**	**27.84**	**45**	*e*P	**P**	**09 30 13.6 -0.3**
	comp=Z,9.6nm,0.8s,mb4.5					
BPAW	**Bear Paw Mtn.**	**28.43**	**45**	*e*P	**P**	**09 30 18.2 -0.9**
	comp=Z,12nm,0.9s,mb4.5					
KTH	**Kantishna Hill**	**28.44**	**46**	*e*P	**P**	**09 30 18.7 -0.5**
	comp=Z,55nm,1.5s,mb5.0					
COLD	**Coldfoot**	**29.01**	**38**	*e*P	**P**	**09 30 22.7 -1.6**
	comp=Z,9.2nm,0.9s,mb4.5					
COLA	**College**	**29.81**	**43**	*e*P	**P**	**09 30 30.0 -1.3**
COLA				*e*	pP	09 30 40.1 -0.2
COLA				pmax	pmax	
	comp=Z,17nm,0.8s,mb4.8					
COLA	**College**	**29.81**	**43**	*e*P	**P**	**09 30 30.0 -1.3**
	comp=Z,17nm,0.8s,mb4.8					
COLA				*e*	pP	09 30 40.1 -0.2
BMRM	**Bremner River**	**31.57**	**51**	*e*P	**P**	**09 30 51.4 +4.5**
	comp=Z,31nm,0.9s,mb5.1					
EGAK	**Eagle**	**32.67**	**43**	*e*P	**P**	**09 30 54.7 -1.8**
	comp=Z,28nm,0.8s,mb5.2					
IRK	**Irkutsk**	**33.19**	**293**	*e*P	**P**	**09 31 00.8 -0.4**
IRK				pmax	pmax	
	comp=Z,30nm,2.2s,mb4.8					
ULN	**Ulaanbaatar**	**33.32**	**284**	*ce*P	**P**	**09 31 02.3 -0.1**
ULN	**Ulaanbaatar**	**33.32**	**284**	*e*P	**P**	**09 31 02.0 -0.4**
	comp=Z,13nm,0.9s,mb4.9					
ULN	**Ulaanbaatar**	**33.32**	**284**	P	**P**	**09 31 02.3 -0.1**
	SNR=10.0					
ULN				P		09 31 02.3
	SNR=10.0					
DAWY	**Dawson**	**33.51**	**44**	*e*P	**P**	**09 31 03.0 -0.9**
DAWY				*ep*P	pP	09 31 11.1 -1.9
SONM	**Songino Array**	**33.73**	**285**	P	**P**	**09 31 05.9 0.0**
	comp=Z,7.1nm,0.8s,mb4.7,baz=54,slow=6.6,SNR=28					
SONM				PcP	PcP	09 33 44.6 -0.2
	comp=Z,3.6nm,0.9s,baz=136,slow=2.9,SNR=4.2					
SONM				LR	LR	09 46 23.9
	comp=Z,5μm,18.4s,MS5.3,baz=62,slow=39					
SONM	**Songino Array**	**33.73**	**285**	P	**P**	**09 31 05.9 -0.1**
SONM						09 33 44.6
TLY	**Talaya**	**33.76**	**292**	P	**P**	**09 31 06.4 +0.2**
	comp=Z,113nm,1.0s,mb5.8,SNR=9.5					
TLY	**Talaya**	**33.76**	**292**	*e*P	**P**	**09 31 03.0 -3.2**
TLY				*e*		09 32 26.2
TLY				*e*S	**S**	**09 36 19.2 -8.3**
TLY				pmax	pmax	
	comp=Z,32nm,1.2s,mb5.1					
TLY				MLR	MLR	
	comp=Z,1μm,14.0s,MS4.8					
TLY	**Talaya**	**33.76**	**292**	*e*P	**P**	**09 31 06.7 +0.6**
	comp=Z,30nm,1.3s,mb5.1					
TLY	**Talaya**	**33.76**	**292**	P	**P**	**09 31 07.1 +1.0**
	SNR=15					
TLY				P		09 31 07.1
	SNR=15					
HHC	**Hu-ho-hao-te**	**34.11**	**271**	*e*P	**P**	**09 31 09.5 +0.2**
HHC				pP	pP	09 31 19.2 +0.8
HHC				sP	sP	09 31 23.0 +0.9
HHC				PP	PP	09 32 23.6 -3.1
HHC				PcP	PcP	09 33 47.9 +1.9
HHC				S	**S**	**09 36 30.8 -2.3**
HHC				sS	sS	09 36 48.2 +0.2
HHC				ScP	ScP	09 37 28.7 +0.3
HHC				PcS	PcS	09 37 31.9 -0.2
HHC				SS	SS	09 38 39.7 -21
HHC				ScS	ScS	09 41 28.5 -2.0
HHC				pmax	pmax	
	comp=Z,12nm,1.1s,mb4.7					
HHC				pmax	pmax	
	comp=Z,91nm,5.1s					
HHC				LR	LR	
	comp=N,2μm,14.0s,MS5.2					
HHC				LR	LR	
	comp=E,2μm,13.3s,MS5.2					
HHC				LR	LR	
	comp=Z,4μm,13.4s,MS5.3					
PNL	**Peninsula**	**34.37**	**52**	*e*P	**P**	**09 31 13.0 +1.7**
	comp=Z,22nm,0.9s,mb5.1					
PNL				*ep*P	pP	09 31 28.2 +7.8
ZAK	**Zakamensk**	**34.49**	**290**	*e*P	**P**	**09 31 12.5 0.0**
ZAK				pmax	pmax	
	comp=Z,24nm,1.3s,mb5.0					
HYT	**Haines Junctio**	**35.00**	**50**	*e*P	**P**	**09 31 18.9 +2.1**
MOY	**Mondy**	**35.29**	**294**	*e*P	**P**	**09 31 19.7 +0.3**
NJ2	**Nanjing**	**35.30**	**252**	*e*P	**P**	**09 31 20.8 +1.1**
NJ2				pP	pP	09 31 29.6 +0.8
NJ2				sP	sP	09 31 33.0 +0.5
NJ2				PP	PP	09 32 38.8 -1.2
NJ2				S	**S**	**09 36 51.0 -0.6**
NJ2				sS	sS	09 37 08.5 +2.0
NJ2				pmax	pmax	
	comp=Z,30nm,0.6s,mb5.4					
NJ2				pmax	pmax	
	comp=Z,150nm,7.2s					
NJ2				LR	LR	
	comp=N,2μm,17.2s,MS5.0					
NJ2				LR	LR	
	comp=E,950nm,16.0s,MS5.0					
NJ2				LR	LR	
	comp=Z,2μm,17.1s,MS5.0					
INK	**Inuvik**	**35.34**	**36**	P	**P**	**09 31 19.1 -0.6**
	comp=Z,18nm,0.9s,mb5.0,baz=286,slow=7.7,SNR=70					
INK	**Inuvik**	**35.34**	**36**	P	**P**	**09 31 19.1 -0.6**
INK				pmax	pmax	
	comp=Z,18nm,0.9s					
INK	**Inuvik**	**35.34**	**36**	*e*P	**P**	**09 31 18.9 -0.8**
	comp=Z,18nm,0.8s,mb5.0					
SKAG	**Skagway**	**36.41**	**51**	*e*P	**P**	**09 31 29.1 +0.2**
	comp=Z,37nm,1.0s,mb5.3					
SKAG				*ep*P	pP	09 31 40.1 +2.1
SIT	**Sitka**	**37.20**	**55**	*e*P	**P**	**09 31 36.5 +0.9**
SIT				*e**PP	pP	09 31 47.9 +3.2
SIT				pmax	pmax	
	comp=Z,21nm,1.0s,mb4.9					
SIT	**Sitka**	**37.20**	**55**	*e*P	**P**	**09 31 36.5 +0.9**
	comp=Z,21nm,1.0s,mb4.9					
SIT				*ep*P	pP	09 31 47.9 +3.2
WHN	**Wuhan**	**39.07**	**255**	P	**P**	**09 31 51.6 -0.1**
WHN				LR	LR	
	comp=N,5μm,18.3s					
WHN				LR	LR	
	comp=E,950nm,7.6s					
WHN				LR	LR	
	comp=Z,3μm,16.2s,MS5.2					
DLBC	**Dease Lake**	**39.35**	**52**	*e*P	**P**	**09 31 54.5 +0.8**
DLBC				*ep*P	pP	09 32 07.2 +4.4
YHNB	**Yeheng**	**39.45**	**241**	*e*P	**P**	**09 31 58.0 +3.1**
	comp=Z,15nm,0.9s,mb4.7					
XAN	**Xi'an**	**39.98**	**264**	P	**P**	**09 31 58.6 -0.6**
XAN				pP	pP	09 32 03.8 -4.6
XAN				pmax	pmax	
	comp=Z,4.0nm,1.1s,mb4.1					
SSLB	**Suanglung**	**40.38**	**241**	*e*P	**P**	**09 32 03.9 +1.2**
	comp=Z,14nm,0.8s,mb4.7					
YULB	**Yu-li**	**40.51**	**240**	*e*P	**P**	**09 32 07.2 +3.5**
	comp=Z,16nm,0.7s,mb4.8					
QZH	**Quanzhou**	**40.78**	**245**	P	**P**	**09 32 07.9 +2.0**
QZH				S	**S**	**09 38 14.6 0.0**
QZH				LR	LR	
	comp=N,2μm,17.6s					
QZH				LR	LR	
	comp=E,1μm,11.4s					
QZH				LR	LR	
	comp=Z,2μm,14.1s,MS5.1					
TPUB	**Ta-pu**	**40.95**	**241**	*e*P	**P**	**09 32 08.2 +0.9**
	comp=Z,15nm,0.6s,mb4.8					
TPUB				*ep*P	pP	09 32 22.1 +5.6
TWG	**Pinlang**	**41.09**	**240**	*e*P	**P**	**09 32 11.8 +3.3**
	comp=Z,29nm,0.3s,mb5.4					
LZH	**Lanzhou**	**41.81**	**270**	P	**P**	**09 32 13.9 -0.4**
LZH				pP	pP	09 32 22.0 -1.5
LZH				sP	sP	09 32 26.5 -0.7
LZH				PP	PP	09 33 53.8 +2.7
LZH				S	**S**	**09 38 28.0 -1.6**
LZH				sS	sS	09 38 44.0 -0.8
LZH				SS	SS	09 41 27.9 -8.1
LZH				pmax	pmax	
	comp=Z,40nm,1.0s,mb5.0					
LZH				pmax	pmax	
	comp=Z,280nm,4.0s					
LZH				LR	LR	
	comp=E,4μm,15.0s					
LZH				LR	LR	
	comp=Z,4μm,16.0s,MS5.4					
ENH	**Enshi**	**42.21**	**259**	*e*P	**P**	**09 32 17.4 -0.2**
	comp=Z,56nm,0.7s,mb5.3					
GTA	**Gaotai**	**42.25**	**277**	P	**P**	**09 32 18.0 +0.2**
GTA				pP	pP	09 32 27.1 +0.1
GTA				sP	sP	09 32 31.6 +0.8
GTA				PP	PP	09 33 59.8 +4.0
GTA				PcP	PcP	09 34 11.7 +0.4
GTA				S	**S**	**09 38 36.1 0.0**
GTA				sS	sS	09 38 52.9 +1.6
GTA				SS	SS	09 41 38.8 -5.8
GTA				pmax	pmax	
	comp=Z,22nm,1.2s,mb4.7					
GTA				pmax	pmax	
	comp=Z,150nm,5.4s					
GTA				LR	LR	
	comp=N,2μm,16.2s,MS5.3					
GTA				LR	LR	
	comp=E,2μm,15.0s,MS5.3					
GTA				LR	LR	
	comp=Z,3μm,15.0s,MS5.3					
ZAA0	**Zalesovo Array**	**43.12**	**304**	*e*P	**P**	**09 32 22.4 -2.3**
ZALV	**Zalesovo Beam**	**43.12**	**304**	P	**P**	**09 32 22.9 -1.8**
	comp=Z,10nm,0.8s,mb4.6,baz=55,slow=6.9,SNR=36					
ZALV				PcP	PcP	09 34 12.6 -1.3
	comp=Z,6.2nm,0.9s,baz=49,slow=4.5,SNR=6.8					
ZALV				LR	LR	09 51 46.2
	comp=Z,2μm,18.6s,MS5.0,baz=51,slow=38					
ZALV	**Zalesovo Beam**	**43.12**	**304**	P	**P**	**09 32 22.9 -1.8**
ZALV						09 34 12.6
ZALV	**Zalesovo Beam**	**43.12**	**304**	P	**P**	**09 32 22.9 -1.8**
ZALV				PcP	PcP	09 34 12.6 -1.4
ZALV				LR	LR	09 51 46.2
NVS	**Novosibirsk**	**43.50**	**305**	⇑*i*P	**P**	**09 32 26.3 -1.5**
NVS				*e*S	**S**	**09 38 49.6 -4.6**
NVS				*e*SSS		09 42 25.4
NVS				pmax	pmax	
	comp=N,40nm,1.7s					
NVS				pmax	pmax	
	comp=Z,118nm,1.7s,mb5.3					
NVS				pmax	pmax	
	comp=E,77nm,1.5s					
NVS				smax		
	comp=N,14nm,2.3s					
NVS				smax		
	comp=E,33nm,1.9s					
ALE	**Alert**	**44.42**	**7**	P	**P**	**09 32 34.2 -0.7**
	comp=E,165nm,0.6s,mb5.9,SNR=18					
YKA	**Yellowknife Ar**	**44.59**	**41**	P	**P**	**09 32 35.1 -1.3**
	comp=E,5.9nm,0.9s,mb4.4,baz=298,slow=8.2,SNR=45					
YKA				LR	LR	09 54 08.7
	comp=E,75nm,20.0s,baz=190,slow=40					
RES	**Resolute Bay**	**44.86**	**21**	LR	LR	09 52 37.4
	comp=E,578nm,21.7s,MS4.5,baz=133,slow=38					
RES	**Resolute Bay**	**44.86**	**21**	*e*P	**P**	**09 32 37.7 -0.7**
RES				*e**PP	pP	09 32 48.1 +0.4
CD2	**Chengdu**	**45.30**	**265**	P	**P**	**09 32 42.7 +0.2**
CD2				pP	pP	09 32 52.6 +0.9
CD2				sP	sP	09 32 56.8 +1.4
CD2				PP	PP	09 34 28.7 +0.1
CD2				PcS	PcS	09 38 15.5 -0.3
CD2				S	**S**	**09 39 19.7 -1.1**
CD2				sS	sS	09 39 36.1 0.0
CD2				SS	SS	09 42 33.7 -11
CD2				pmax	pmax	
	comp=Z,20nm,0.6s,mb5.1					
CD2				pmax	pmax	
	comp=Z,60nm,4.2s					
CD2				LR	LR	
	comp=N,1μm,20.2s,MS5.0					
CD2				LR	LR	
	comp=E,1μm,17.8s,MS5.0					
CD2				LR	LR	
	comp=Z,1μm,19.0s,MS4.9					
GYA	**Guiyang**	**46.67**	**258**	⇑*i*P	**P**	**09 32 53.5 +0.2**
GYA				pP	pP	09 33 03.2 +0.6
GYA				sP	sP	09 33 08.4 +2.1
GYA				PcP	PcP	09 34 29.8 +3.2
GYA				PP	PP	09 34 44.9 +1.8

GYA ScP ScP 09 38 18.7 +1.0
GYA S **S** **09 39 40.8 +0.2**
GYA sS sS 09 39 56.0 +0.1
GYA SS SS 09 42 59.9 -6.9
GYA pmax pmax
comp=Z,50nm,1.0s,mb5.4
GYA pmax pmax
comp=Z,130nm,5.2s
GYA LR LR
comp=N,530nm,16.4s,MS4.8
GYA LR LR
comp=E,640nm,15.8s,MS4.8
GYA LR LR
comp=Z,720nm,15.4s,MS4.7
WMQ Urumqi 46.95 290 P **P** **09 32 56.0 +0.7**
WMQ pP pP 09 33 06.0 +1.4
WMQ sP sP 09 33 10.0 +1.7
WMQ PP PP 09 34 46.0 +0.3
WMQ S **S** **09 39 44.0 -0.3**
WMQ ScS ScS 09 42 45.0 -2.0
WMQ SS SS 09 43 05.0 -5.7
WMQ pmax pmax
comp=Z,64nm,1.0s,mb5.5
WMQ pmax pmax
comp=Z,160nm,4.0s
WMQ LR LR
comp=N,1μm,16.0s,MS5.1
WMQ LR LR
comp=E,1μm,16.0s,MS5.1
WMQ LR LR
comp=Z,2μm,16.0s,MS5.1
KURK Kurchatov 48.05 303 P **P** **09 33 02.3 -1.4**
comp=Z,473nm,0.9s,mb6.5,SNR=44
KURK Kurchatov 48.05 303 *e*P **P** **09 33 02.3 -1.4**
KURK pmax pmax
comp=Z,66nm,0.8s,mb5.7
KURK Kurchatov 48.05 303 *e*P **P** **09 33 02.3 -1.5**
comp=Z,66nm,0.8s,mb5.7
KURK Kurchatov 48.05 303 P **P** **09 33 02.6 -1.2**
KURK SNR=30 P 09 33 02.6
SNR=30
KBS Kingsbay 48.23 352⇑*i*P **P** **09 33 05.1 +0.3**
KBS *e*S **S** **09 40 02.0 +0.4**
KBS AMS AMS 09 53 16.3
comp=Z,626nm,22.2s,MS4.5
KBS Kingsbay 48.23 352*ce*P **P** **09 33 05.7 +0.9**
KBS pmax pmax
comp=Z,91nm,1.0s,mb5.8
KBS Kingsbay 48.23 352 *e*P **P** **09 33 04.8 +0.1**
comp=Z,68nm,0.9s,mb5.7
MKAR Makanchi Array 48.31 296 P **P** **09 33 04.5 -1.2**
comp=Z,5.0nm,0.6s,mb4.7,baz=53,slow=8.4,SNR=41
MKAR Makanchi Array 48.31 296*ce*P **P** **09 33 04.5 -1.3**
MKAR pmax pmax
comp=Z,5.0nm,0.6s
SPB4 Spitsbergen Ar 48.47 350 *e*P **P** **09 33 06.8 +0.2**
KMI Kunming 50.05 260 P **P** **09 33 19.9 +0.5**
KMI pP pP 09 33 29.8 +1.1
KMI sP sP 09 33 33.4 +1.0
KMI PcP PcP 09 34 37.9 -0.9
KMI PP PP 09 35 16.4 +2.0
KMI ScP ScP 09 38 33.0 +1.0
KMI PcS PcS 09 38 36.5 +0.5
KMI S **S** **09 40 27.8 -0.5**
KMI sS sS 09 40 41.7 -2.0
KMI ScS ScS 09 43 07.0 -1.3
KMI SS SS 09 43 56.8 -4.6
KMI pmax pmax
comp=Z,36nm,1.4s,mb5.2
KMI LR LR
comp=N,1μm,16.8s,MS5.2
KMI LR LR
comp=E,990nm,15.8s,MS5.2
KMI LR LR
comp=Z,2μm,15.8s,MS5.1
EDM Edmonton 50.07 52 *e*P **P** **09 33 17.9 -1.2**
EDM *e**PP pP 09 33 29.1 +0.6
QIZ Qiongzhong 50.42 249 P **P** **09 33 23.8 +1.6**
QIZ pP pP 09 33 31.6 +0.1
QIZ sP sP 09 33 35.2 0.0
QIZ PP PP 09 35 22.7 +4.9
QIZ S **S** **09 40 33.6 +0.1**
QIZ sS sS 09 40 50.4 +1.5
QIZ pmax pmax
comp=Z,31nm,1.2s,mb5.2
QIZ pmax pmax
comp=Z,220nm,6.4s
QIZ LR LR
comp=N,1μm,15.1s
QIZ LR LR
comp=Z,1μm,16.6s,MS5.0
QIZ Qiongzhong 50.42 249 *e*P **P** **09 33 24.1 +1.9**
comp=Z,69nm,1.2s,mb5.6
BVAR Borovoye Array 50.87 309 P **P** **09 33 23.6 -1.6**
comp=Z,28nm,0.6s,mb5.4,baz=55,slow=8.0,SNR=184
BRVK Borovoye 50.90 309 P **P** **09 33 23.1 -2.3**
comp=Z,348nm,0.7s,SNR=30
BRVK Borovoye 50.90 309*ce*P **P** **09 33 23.8 -1.6**
BRVK pmax pmax
comp=Z,51nm,0.8s,mb5.5
BRVK Borovoye 50.90 309 *e*P **P** **09 33 23.6 -1.8**
comp=Z,49nm,0.8s,mb5.5
BRVK Borovoye 50.90 309 P **P** **09 33 24.2 -1.3**
BRVK SNR=18 P 09 33 24.2
SNR=18
A11A Hall Mountain, 51.08 57⇑P **P** **09 33 27.2 +0.4**
baz=51
HUMO Hull Mountain 51.34 68 *e*P **P** **09 33 31.5 +2.6**
comp=Z,11nm,1.1s,mb4.7
DAG Danmarks Havn 51.84 359⇓*e*P **P** **09 33 31.6 -0.6**
DAG pmax pmax
comp=Z,22nm,0.8s,mb5.1
DAG Danmarks Havn 51.84 359⇓*i*P **P** **09 33 31.6 -0.6**
comp=Z,22nm,0.8s,mb5.2
YBH Yreka Blue Hor 52.04 68 LR LR 09 52 44.9
comp=Z,358nm,19.5s,MS4.4,baz=310,slow=33
YBH Yreka Blue Hor 52.04 68 *e*P **P** **09 33 36.0 +1.9**
YBH *e**PP pP 09 33 43.8 +0.3
YBH pmax pmax
comp=Z,9.0nm,1.0s
YBH Yreka Blue Hor 52.04 68 *e*P **P** **09 33 36.0 +1.9**
comp=Z,9.3nm,1.0s,mb4.7
YBH *e*pP pP 09 33 43.8 +0.3
WALA Waterton Lakes 52.30 56 *e*P **P** **09 33 37.4 +1.5**
comp=Z,1.5nm,1.4s
WALA *e*pP pP 09 33 45.8 +0.5
WALA *e*sP sP 09 33 53.4 +4.5
DAV Davao City (W) 52.38 224 LR LR 09 51 04.5
comp=Z,4μm,21.6s,MS5.4,baz=132,slow=30
B13A Whitefish 52.43 57⇓P **P** **09 33 36.0 -0.9**
baz=52
BSMT Bassoo Peak 52.59 58 *e*P **P** **09 33 37.8 -0.3**
comp=Z,14nm,0.8s,mb5.0
BSMT *e*pP pP 09 33 49.1 +1.6
SOKR Solikamsk 52.77 321⇑*i*P **P** **09 33 38.1 -1.1**
SOKR pmax pmax
comp=Z,20nm,1.0s,mb5.0
SOKR MLR MLR
comp=Z,2μm,16.0s,MS5.3
G10A Bishop Farm, J 52.94 62⇓P **P** **09 33 40.0 -0.7**
baz=53,SNR=7.7
A15A Johnson Ranch, 52.95 56⇓P **P** **09 33 39.1 -1.6**
baz=53
SVE Sverdlovsk 52.97 317⇑*e*P **P** **09 33 40.1 -0.6**
SVE *e* 09 35 44.3
SVE pmax pmax
comp=Z,42nm,1.2s,mb5.2
SVE MLR MLR
comp=Z,4μm,16.0s,MS5.5
YBMT Yellow Bay 52.99 57 *e*P **P** **09 33 43.8 +2.7**
comp=Z,7.3nm,0.8s,mb4.7
C14A Swan Lake 53.19 57⇓P **P** **09 33 41.9 -0.6**
baz=53
SWMT Swartz Lake 53.22 58 *e*P **P** **09 33 44.8 +2.0**
comp=Z,8.0nm,0.9s,mb4.7
MOD Modoc 53.31 67 *e*P **P** **09 33 44.8 +1.3**
comp=Z,37nm,1.1s,mb5.2
MOD *e*pP pP 09 33 53.6 +0.7
MOD *e*sP sP 09 34 00.9 +4.3
B15A Bradely Ranch, 53.46 56⇓P **P** **09 33 42.8 -1.7**
baz=53
SLMT Seeley Lake 53.65 58 *e*P **P** **09 33 47.2 +1.3**
comp=Z,9.4nm,0.8s,mb4.8
SLMT *e*pP pP 09 33 57.0 +1.6

MSO Missoula 53.68 58 *e*P **P** **09 33 46.6 +0.5**
comp=Z,10.0nm,1.2s,mb4.6
D14A Greenough 53.75 58⇑P **P** **09 33 45.4 -1.2**
baz=54
C15A Salmond Ranch, 53.78 57⇓P **P** **09 33 46.1 -0.7**
baz=54
LVZ Lovozero 53.82 337 P **P** **09 33 46.8 -0.1**
comp=Z,208nm,0.9s,mb6.1,SNR=6.5
LVZ Lovozero 53.82 337*ce*P **P** **09 33 46.8 -0.1**
LVZ pmax pmax
comp=Z,22nm,0.7s,mb5.2
J09A Fry Pan Ranch, 53.83 64⇑P **P** **09 33 47.1 -0.2**
baz=54,SNR=8.3
WVOR Wild Horse Val 53.92 65 *e*P **P** **09 33 48.7 +0.8**
WVOR *e**PP pP 09 33 58.1 +0.7
WVOR pmax pmax
comp=Z,26nm,1.1s,mb5.1
WVOR Wild Horse Val 53.92 65 *e*P **P** **09 33 48.7 +0.8**
comp=Z,26nm,1.1s,mb5.1
WVOR *e*pP pP 09 33 58.1 +0.7
H11A Donnelly 53.92 61⇓P **P** **09 33 46.8 -1.2**
baz=54,SNR=9.4
LSA Lhasa 53.98 274 P **P** **09 33 49.8 +1.2**
LSA LR LR
comp=N,690nm,14.0s,MS5.2
LSA LR LR
comp=E,1μm,13.0s,MS5.2
LSA LR LR
comp=Z,2μm,14.0s,MS5.3
LSA Lhasa 53.98 274 *e*P **P** **09 33 50.1 +1.5**
LSA pmax pmax
comp=Z,18nm,0.7s,mb5.1
LSA Lhasa 53.98 274 *e*P **P** **09 33 50.1 +1.5**
comp=Z,18nm,0.7s,mb5.1
KEV Kevo 54.01 341 *e*P **P** **09 33 48.6 +0.4**
KEV pmax pmax
comp=Z,21nm,0.9s,mb5.1
KEV Kevo 54.01 341 *e*P **P** **09 33 47.0 -1.2**
comp=Z,19nm,0.8s,mb5.1
KEV Kevo 54.01 341 *e*p **P** **09 33 48.6 +0.4**
comp=Z,21nm,0.9s,mb5.1
KEV Kevo 54.01 341 *e*p **P** **09 33 48.6 +0.4**
comp=Z,21nm,0.9s,mb5.1
A17A Triple J Farms 54.01 55⇓P **P** **09 33 47.1 -1.4**
baz=54
ARU Arti 54.10 318 P **P** **09 33 47.2 -1.8**
comp=Z,205nm,0.5s,mb6.3,SNR=12
ARU Arti 54.10 318*c i*P **P** **09 33 47.2 -1.8**
ARU *e* 09 34 53.7
ARU *e* 09 35 47.3
ARU S **S** **09 41 18.3 -4.8**
ARU pmax pmax
comp=Z,61nm,1.7s,mb5.2
ARU MLR MLR
comp=Z,2μm,15.0s,MS5.4
ARU Arti 54.10 318 *e*P **P** **09 33 47.3 -1.7**
comp=Z,15nm,0.5s,mb5.2
E14A Clinton 54.18 58⇑P **P** **09 33 48.3 -1.5**
baz=54
APA Apatity 54.38 337⇑*i*P **P** **09 33 50.3 -0.6**
APA pmax pmax
comp=Z,14nm,0.7s,mb5.0
APA MLR MLR
comp=Z,3μm,17.0s,MS5.4
FFC Flin Flon 54.42 45 *i*P **P** **09 33 51.6 +0.2**
FFC Flin Flon 54.42 45 *e*P **P** **09 33 50.4 -1.0**
comp=Z,5.9nm,0.8s,mb4.6
TKM2 Tokmak 2 54.44 296 P **P** **09 33 51.1 -0.6**
SNR=6.3
TKM2 Tokmak 2 54.44 296 *e*P **P** **09 33 51.1 -0.6**
TKM2 pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
TKM2 Tokmak 2 54.44 296 *e*P **P** **09 33 51.1 -0.7**
comp=Z,4.7nm,0.8s,mb4.5
ARCES ARCESS Array B 54.49 342 P **P** **09 33 51.2 -0.5**
comp=Z,39nm,0.9s,mb5.4,baz=32,slow=7.6,SNR=94
ARCES ARCESS Array B 54.49 342 P **P** **09 33 51.2 -0.5**
ULHL Ulahol 54.52 295 P **P** **09 33 46.9 -5.4**
SNR=8.8
E15A Deer Lodge 54.63 58⇓P **P** **09 33 52.0 -1.1**
baz=54
G13A Cobalt 54.64 60⇑P **P** **09 33 52.9 -0.2**
baz=54
K10A MacKenzie Ranc 54.69 64⇑P **P** **09 33 52.9 -0.6**
baz=54
USP Ospenovka 54.83 297 P **P** **09 33 54.4 -0.1**
SNR=12
FCC Fort Churchill 54.94 38 *e*P **P** **09 33 54.2 -1.0**
comp=Z,0.4nm,0.6s
H13A Challis 54.97 61⇓P **P** **09 33 55.9 +0.4**
baz=55
KBK Karagaybulak 54.97 296 P **P** **09 33 55.1 -0.5**
SNR=6.8
E16A East Helena 55.06 57⇑P **P** **09 33 55.5 -0.7**
baz=55
EGMT Eagleton 55.09 55 *e*P **P** **09 34 00.1 +3.8**
comp=Z,28nm,1.4s,mb5.1
EGMT *e*pP pP 09 34 05.9 +0.1
LRM Limekiln Ridge 55.12 58 *e*P **P** **09 33 59.2 +2.7**
comp=Z,33nm,1.0s,mb5.3
LRM *e*pP pP 09 34 07.4 +1.4
K11A Parker Ranch, 55.16 63⇑P **P** **09 33 56.9 -0.1**
baz=55,SNR=6.9
D17A Six Diamond Ra 55.18 56⇑P **P** **09 33 56.5 -0.5**
baz=55
KZA Kyzart 55.18 296 P **P** **09 33 57.8 +0.7**
SNR=5.8
AAK Ala-Archa 55.24 297 P **P** **09 33 57.5 0.0**
comp=Z,72nm,0.9s,mb5.7,SNR=5.7
AAK Ala-Archa 55.24 297 P **P** **09 33 57.5 -0.1**
SNR=7.8
AAK Ala-Archa 55.24 297*ce*P **P** **09 33 57.2 -0.3**
AAK pmax pmax
comp=Z,14nm,1.7s,mb4.7
AAK Ala-Archa 55.24 297 *e*P **P** **09 33 56.8 -0.8**
comp=Z,6.5nm,0.7s,mb4.8
AAK Ala-Archa 55.24 297 P **P** **09 33 57.2 -0.4**
SNR=9.5
AAK P 09 33 57.2
SNR=9.5
WCN Washoe City 55.33 69⇓P **P** **09 33 58.5 +0.3**
baz=55
J12A Stokes Ranch, 55.36 62⇑P **P** **09 33 58.3 -0.1**
baz=55,SNR=6.3
KTK1 Kautokeino 55.37 342 *e*P **P** **09 33 57.6 -0.4**
L10A Juniper Basin 55.37 64⇑P **P** **09 33 58.6 +0.2**
baz=55,SNR=6.4
H14A Leadore 55.41 60⇓P **P** **09 33 58.3 -0.5**
baz=55
SUMG Summit 55.45 6 *e*P **P** **09 33 58.9 +0.3**
comp=Z,49nm,0.9s,mb5.5
SUMG Summit 55.45 6⇑*i*P **P** **09 33 58.8 +0.2**
comp=Z,43nm,0.9s,mb5.5
SUMG *i*S **S** **09 41 47.1 +6.2**
I13A Wildhorse Cree 55.47 61⇑P **P** **09 33 58.9 -0.2**
baz=55,SNR=9.1
UCH Uchtor 55.50 296 *e*P **P** **09 33 58.4 -1.0**
comp=Z,3.3nm,0.9s,mb4.4
UCH *e*PcP PcP 09 34 59.9 +0.8
G15A Dillon 55.52 59⇓P **P** **09 33 59.2 -0.4**
baz=55
E17A Martinsdale 55.54 57⇑P **P** **09 33 58.9 -0.7**
baz=55
MCMT McKenzie Canyo 55.55 60 *e*P **P** **09 34 02.8 +3.1**
comp=Z,2.3nm,0.9s,mb4.2
MCMT *e*pP pP 09 34 10.3 +1.1
TRO Tromso 55.60 344⇑*i*P **P** **09 33 59.2 -0.5**
TRO *e*S **S** **09 41 48.0 +5.1**
TRO AMS AMS 10 04 05.2
comp=Z,741nm,22.3s,MS4.7
EKS2 Erkin-Say 55.62 297 P **P** **09 33 59.9 -0.4**
SNR=12
EKS2 Erkin-Say 55.62 297 *e*P **P** **09 33 59.7 -0.6**
comp=Z,11nm,0.8s,mb5.0
BOZ Bozeman (W) 55.67 58⇑P **P** **09 34 00.0 -0.5**
baz=55
BOZ Bozeman (W) 55.67 58 *e*P **P** **09 34 01.2 +0.7**
BOZ *e**PP pP 09 34 11.5 +1.5
BOZ pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
BOZ Bozeman (W) 55.67 58 *e*P **P** **09 34 01.2 +0.6**
comp=Z,6.0nm,0.8s,mb4.7
BOZ *e*pP pP 09 34 11.5 +1.5
L11A Cat Creek Ranc 55.71 64⇓P **P** **09 34 00.6 -0.3**
baz=56,SNR=7.0
J13A Cove Ranch, Pi 55.77 62⇑P **P** **09 34 01.2 -0.1**
baz=56,SNR=7.3

H15A Lima 55.80 60 P **P** **09 34 00.5 -1.1**
baz=56
I14A Mackay 55.82 61⇓P **P** **09 34 00.8 -0.8**
baz=56,SNR=9.9
G16A Moss Hill, Enn 55.85 59⇓P **P** **09 34 00.8 -1.0**
baz=56
K12A Draper Farm, C 55.88 63⇓P **P** **09 34 01.9 -0.2**
baz=56,SNR=6.8
E18A Harlowton 55.96 56⇑P **P** **09 34 01.6 -1.0**
baz=56
F17A Fitzpatrick Pl 56.01 57⇓P **P** **09 34 02.1 -0.9**
baz=56
AML Almayashu 56.02 297 P **P** **09 34 03.6 +0.5**
SNR=6.2
AML Almayashu 56.02 297 *e*P **P** **09 34 03.0 -0.1**
comp=Z,12nm,1.1s,mb4.8
L12A House Creek Ra 56.14 63⇑P **P** **09 34 04.2 +0.2**
baz=56,SNR=6.6
M11A Holland Ranch, 56.18 64⇓P **P** **09 34 04.4 +0.2**
baz=56
J14A Carey 56.18 61⇑P **P** **09 34 04.4 +0.1**
baz=56,SNR=7.5
KSH Kashi 56.47 293 *e*P **P** **09 34 09.5 +3.1**
KSH pP pP 09 34 19.2 +3.4
KSH PcP PcP 09 35 05.7 +2.8
KSH PP PP 09 36 16.1 +4.2
KSH ScP ScP 09 39 01.1 +1.3
KSH PcS PcS 09 39 04.9 +1.4
KSH S **S** **09 41 55.7 +0.5**
KSH ScS ScS 09 43 52.2 -0.8
KSH SS SS 09 45 43.3 +1.2
KSH pmax pmax
comp=Z,12nm,1.1s,mb4.8
KSH pmax pmax
comp=Z,120nm,3.6s
KSH LR LR
comp=N,400nm,11.7s,MS5.0
KSH LR LR
comp=E,630nm,12.5s,MS5.0
KSH LR LR
comp=Z,820nm,12.3s,MS5.0
H16A Russell Place, 56.49 59⇓P **P** **09 34 06.2 -0.2**
baz=56
F18A Big Timber 56.50 57⇓P **P** **09 34 05.9 -0.6**
baz=56
GCMT Greycliff 56.60 57 *e*P **P** **09 34 10.8 +3.6**
comp=Z,11nm,1.1s,mb4.8
KKTK Khon Kaen 56.66 253 P **P** **09 34 09.5 +1.6**
YMR Madison River 56.67 59 *e*P **P** **09 34 10.7 +3.0**
comp=Z,37nm,1.4s,mb5.2
YMR *e*pP pP 09 34 18.8 +1.7
M12A Wells 56.68 64⇑P **P** **09 34 08.4 +0.6**
baz=56,SNR=6.2
J15A Blackfoot 56.72 61⇑P **P** **09 34 07.7 -0.4**
baz=56
NVAR Mina Array Bea 56.75 69 P **P** **09 34 08.1 -0.3**
comp=Z,0.4nm,0.5s,baz=292,slow=7.4,SNR=4.7
L13A Double Diamond 56.77 63⇓P **P** **09 34 08.0 -0.4**
baz=56,SNR=6.6
YFT Old Faithful 56.88 59 *e*P **P** **09 34 12.5 +3.3**
comp=Z,10nm,0.7s,mb5.0
YFT *e*pP pP 09 34 20.2 +1.5
K14A Jones Ranch, D 56.89 62⇓P **P** **09 34 09.2 -0.1**
baz=57
N12A Clover Valley, 56.99 64⇓P **P** **09 34 09.9 -0.2**
baz=57
N12A Clover Valley, 56.99 64 *e*P **P** **09 34 12.5 +2.5**
comp=Z,20nm,1.2s,mb5.0
N12A *e*pP pP 09 34 21.0 +1.5
P10A Eureka 57.01 66⇓P **P** **09 34 10.4 +0.2**
baz=57
LKWY Lake 57.04 58 *e*P **P** **09 34 11.3 +1.0**
LKWY *e**PP pP 09 34 18.5 -1.3
LKWY pmax pmax
comp=Z,24nm,1.2s,mb5.1
LKWY Lake 57.04 58 *e*P **P** **09 34 11.3 +1.0**
comp=Z,24nm,1.2s,mb5.1
LKWY *e*pP pP 09 34 18.5 -1.3
CHG Chiang Mai 57.09 258⇑P **P** **09 34 12.3 +1.3**
comp=Z,55nm,1.0s,mb5.5
CHTO Chiang Mai 57.09 258 *e*P **P** **09 34 12.2 +1.2**
CHTO *e**PP pP 09 34 23.8 +3.3
CHTO pmax pmax
comp=Z,45nm,0.8s,mb5.5
CHTO Chiang Mai 57.09 258 *e*P **P** **09 34 12.2 +1.2**
comp=Z,45nm,0.8s,mb5.5
CHTO *e*pP pP 09 34 23.8 +3.3
CHTO Chiang Mai 57.09 258 P **P** **09 34 12.6 +1.6**
SNR=26
CHTO P 09 34 12.6
SNR=26
M13A Montello 57.13 63 *e*P **P** **09 34 12.9 +1.9**
comp=Z,11nm,1.0s,mb4.8
M13A *e*pP pP 09 34 20.2 -0.3
K15A Arbon 57.15 61⇑P **P** **09 34 10.8 -0.3**
baz=57
L14A Malta 57.20 62⇓P **P** **09 34 10.8 -0.7**
baz=57,SNR=6.5
IMW Indian Meadow 57.20 59 *e*P **P** **09 34 12.7 +1.2**
comp=Z,4.5nm,0.6s,mb4.7
IMW *e*pP pP 09 34 23.1 +2.1
RLMT Red Lodge 57.26 57⇑P **P** **09 34 11.4 -0.5**
baz=57
RLMT Red Lodge 57.26 57 *e*P **P** **09 34 12.4 +0.5**
comp=Z,65nm,1.6s,mb5.4
RLMT *e*pP pP 09 34 22.7 +1.3
CM31 Chiang Mai Arr 57.36 258 *e*P **P** **09 34 14.2 +1.3**
comp=Z,19nm,0.7s,mb5.2
CM31 *e*pP pP 09 34 23.3 +0.9
CM31 *e*sP sP 09 34 26.7 +0.6
CMAR Chiang Mai Arr 57.36 258 P **P** **09 34 14.4 +1.5**
comp=Z,11nm,0.8s,mb4.9,baz=26,slow=7.2,SNR=67
N13A Wendover, West 57.45 64 *e*P **P** **09 34 16.9 +3.6**
comp=Z,16nm,0.9s,mb5.0
N13A *e*pP pP 09 34 24.2 +1.4
TPAW Teton Pass 57.46 60 *e*P **P** **09 34 13.7 +0.4**
comp=Z,24nm,1.3s,mb5.1
O12A Currie 57.55 65⇓P **P** **09 34 14.2 +0.3**
baz=57,SNR=6.1
DGMT Dagmar 57.56 52 *e*P **P** **09 34 15.4 +1.4**
comp=Z,8.2nm,0.9s,mb4.8
DGMT *e*pP pP 09 34 24.1 +0.7
LOHW Long Hollow 57.57 59 *e*P **P** **09 34 13.4 -0.6**
comp=Z,30nm,1.5s,mb5.1
LOHW *e*pP pP 09 34 25.2 +1.7
REDW Red Top Meadow 57.60 60 *e*P **P** **09 34 15.4 +1.1**
comp=Z,41nm,1.4s,mb5.3
REDW *e*pP pP 09 34 25.0 +1.2
HVU Hansel Valley 57.62 62 *e*P **P** **09 34 16.3 +1.8**
HVU *e**PP pP 09 34 25.9 +1.9
HVU pmax pmax
comp=Z,11nm,1.1s,mb4.8
HVU Hansel Valley 57.62 62 *e*P **P** **09 34 16.3 +1.8**
comp=Z,10nm,1.1s,mb4.8
HVU *e*pP pP 09 34 25.9 +1.9
LAO LASA Array 57.77 54 *e*P **P** **09 34 15.5 +0.1**
comp=Z,16nm,0.9s,mb5.0
LAO *e*pP pP 09 34 25.8 +0.9
TAPN Taplejung 57.78 274 *e*P **P** **09 34 16.0 +0.2**
comp=Z,103nm,0.9s,mb5.9
Q11A Duckwater 57.99 67⇓P **P** **09 34 18.0 +0.9**
baz=58
R10A Warm Springs 58.00 67⇑P **P** **09 34 17.7 +0.5**
baz=58
VES Vestal, Richgr 58.05 71⇑P **P** **09 34 17.9 +0.3**
baz=58
J18A Kendall Valley 58.15 59⇑P **P** **09 34 18.0 -0.2**
baz=58
SCO Scoresbysund 58.17 0 *i*P **P** **09 34 26.3 +8.4**
SCO pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
SCO MLR MLR
comp=Z,440nm,18.0s,MS4.6
SCO Scoresbysund 58.17 0 *i*P **P** **09 34 26.3 +8.4**
comp=Z,8.0nm,1.0s,mb4.7
SCO
comp=Z,440nm,18.0s
L16A Fish Haven 58.20 61⇓P **P** **09 34 18.6 +0.1**
baz=58
BDT Bhumibol Dam 58.26 257 P **P** **09 34 21.0 +1.8**
ABKAR Akbulak array 58.32 311 *e*P **P** **09 34 18.1 -1.2**
comp=Z,23nm,0.9s,mb5.2
ODAN Odare 58.33 274 *e*P **P** **09 34 19.6 -0.1**
comp=Z,39nm,0.7s,mb5.5
Q12A Willow Creek R 58.33 66⇑P **P** **09 34 19.5 0.0**
baz=58

N15A **Stansbury Isla** 58.37 63 ⇓P P 09 34 19.0 -0.7
baz=58
R11A **Troy Canyon, C** 58.37 67 ⇑P P 09 34 20.4 +0.6
baz=58,SNR=6.6
HWUT **Hardware Ranch** 58.41 62 eP P 09 34 21.6 +1.6
comp=Z,14nm,1.0s,mb4.9
HWUT epP pP 09 34 29.4 0.0
P13A **Bates Ranch, G** 58.51 65 ⇑P P 09 34 21.2 +0.4
baz=58,SNR=5.3
GUN **Gumba** 58.52 276 eP P 09 34 21.0 +0.1
comp=Z,65nm,0.8s,mb5.7
JOF **Joensuu** 58.65 335 ep P 09 34 20.6 -0.7
comp=Z,20nm,0.9s,mb5.2
JOF **Joensuu** 58.65 335 ep P 09 34 20.6 -0.7
comp=Z,20nm,0.9s,mb5.2
DUG **Dugway** 58.68 64 ⇑P P 09 34 21.6 -0.3
baz=58
DUG **Dugway** 58.68 64 eP P 09 34 22.8 +0.9
DUG e*PP pP 09 34 30.8 -0.6
DUG pmax pmax
comp=Z,17nm,1.2s,mb5.0
DUG **Dugway** 58.68 64 eP P 09 34 22.8 +0.9
comp=Z,17nm,1.2s,mb4.9
DUG epP pP 09 34 30.8 -0.6
BW06 **Boulder Array** 58.70 59 eP P 09 34 21.3 -0.7
comp=Z,11nm,0.8s,mb4.9
PDAR **Pinedale Array** 58.70 59 P P 09 34 21.8 -0.3
comp=Z,3.6nm,0.9s,mb4.4,baz=332,slow=5.0,SNR=23
NOQ **North Oquirrh** 58.75 63 eP P 09 34 26.2 +3.8
comp=Z,14nm,0.8s,mb5.0
NOQ epP pP 09 34 33.1 +1.2
RAMN **Ramite** 58.76 275 eP P 09 34 22.8 +0.2
comp=Z,162nm,0.8s,mb6.1
S11A **Rachel** 58.76 68 ⇓P P 09 34 23.3 +0.8
baz=58
NST **Nakhon Sawan** 58.78 255 P P 09 34 24.4 +1.5
Q13A **Wheeler Ranch,** 58.85 65 ⇑P P 09 34 23.3 +0.1
baz=59,SNR=6.2
R12A **Pony Springs,** 58.95 66 ⇑P P 09 34 24.2 +0.4
baz=59,SNR=6.6
P14A **Drum Mountains** 58.95 64 ⇑P P 09 34 24.0 +0.2
baz=59,SNR=5.8
KKN **Kakani** 58.97 277 eP P 09 34 24.4 +0.3
comp=Z,45nm,0.5s,mb5.8
M17A **Scullys Gap (B** 58.99 61 ⇑P P 09 34 24.2 +0.2
baz=59
L18A **Fontenelle, Gr** 59.02 60 ⇓P P 09 34 24.6 +0.4
baz=59
K19A **Absolon Red Bu** 59.04 59 ⇓P P 09 34 24.5 +0.1
baz=59
PKI **Pulchoki** 59.05 276 eP P 09 34 25.0 +0.3
comp=Z,42nm,0.6s,mb5.6
PKI **Pulchoki** 59.05 276 eP P 09 34 25.6 +0.9
comp=Z,74nm,0.7s,mb5.8
PKIN **Phulchoki** 59.05 276 eP P 09 34 25.6 +0.9
comp=Z,74nm,0.7s,mb5.8
JLU **Jordanelle** 59.16 62 eP P 09 34 26.6 +1.3
comp=Z,3.8nm,0.9s,mb4.4
DMN **Daman** 59.21 276 eP P 09 34 26.4 +0.6
comp=Z,114nm,0.8s,mb5.9
Q14A **Sevier Lake (B** 59.25 65 ⇑P P 09 34 25.7 -0.2
baz=59,SNR=7.3
NLU **North Lily Min** 59.26 63 eP P 09 34 27.1 +1.2
comp=Z,8.4nm,0.8s,mb4.8
NLU epP pP 09 34 37.1 +1.7
S12A **Delamar Landin** 59.30 67 ⇓P P 09 34 26.3 0.0
baz=59,SNR=5.9
T11A **Corn Creek, Al** 59.34 68 ⇓P P 09 34 26.6 +0.1
baz=59,SNR=7.7
O16A **Springville** 59.40 63 ⇑P P 09 34 26.4 -0.5
baz=59
MPU **Maple Canyon** 59.46 63 eP P 09 34 28.9 +1.6
comp=Z,8.6nm,0.8s,mb4.8
MPU epP pP 09 34 38.1 +1.2
MOR8 **Moi Rana** 59.47 344 eP P 09 34 24.9 -2.0
MOR8 AMb AMB 09 34 26.7
comp=Z,60nm,1.4s,mb5.4
MOR8 **Moi Rana** 59.47 344 eP P 09 34 24.9 -2.0
comp=Z,60nm,1.4s,mb5.4
SFJD **Kangerlussuaq** 59.54 13 eP P 09 34 26.6 -0.9
SFJD pmax pmax
comp=Z,11nm,0.8s,mb4.9
SFJD MLR MLR
comp=Z,880nm,18.0s,MS4.9
SFJD **Kangerlussuaq** 59.54 13 i P P 09 34 26.6 -0.9
comp=Z,11nm,0.8s,mb4.9
SFJD
comp=Z,880nm,18.0s
Q15A **Fillmore** 59.74 64 ⇑P P 09 34 29.0 -0.3
baz=60,SNR=6.0
U11A **Corn Creek** 59.81 68 ⇓P P 09 34 30.3 +0.4
baz=60
ARUT **Antelope Range** 59.98 66 eP P 09 34 34.8 +3.8
ARUT e*PP pP 09 34 41.6 +1.1
ARUT pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
ARUT **Antelope Range** 59.98 66 eP P 09 34 34.8 +3.8
comp=Z,9.4nm,1.0s,mb4.8
ARUT epP pP 09 34 41.6 +1.1
O18A **Roosevelt** 60.18 62 ⇑P P 09 34 32.2 -0.1
baz=60
CCUT **Cedar City** 60.19 66 eP P 09 34 34.7 +2.3
comp=Z,6.8nm,0.9s,mb4.7
CCUT epP pP 09 34 43.1 +1.1
TMUT **Trail Mountain** 60.19 63 eP P 09 34 33.9 +1.5
comp=Z,11nm,0.8s,mb5.0
TMUT epP pP 09 34 42.7 +0.8
MSU **Marysvale** 60.20 65 eP P 09 34 35.4 +3.0
MSU pmax pmax
comp=Z,10.0nm,1.3s,mb4.7
MSU **Marysvale** 60.20 65 eP P 09 34 35.4 +3.0
comp=Z,10nm,1.3s,mb4.7
ULM **Lac du Bonnet** 60.20 46 P P 09 34 31.8 -0.4
comp=Z,3.5nm,0.5s,mb4.6,baz=319,slow=5.1,SNR=4.4
ULM **Lac du Bonnet** 60.20 46 eP P 09 34 31.0 -1.3
comp=Z,5.1nm,0.6s,mb4.7
T13A **Saint George** 60.25 67 ⇓P P 09 34 33.1 +0.3
baz=60
P17A **Butcher Ranch,** 60.33 63 ⇑P P 09 34 33.3 0.0
baz=60
JOSI **Joshimath** 60.52 283 ePKP P 09 34 34.7 -0.1
KAF **Kangasniemi** 60.60 337 ep P 09 34 33.8 -1.0
comp=Z,24nm,0.6s,mb5.5,baz=33,slow=6.2
KAF **Kangasniemi** 60.60 337 ep P 09 34 33.8 -1.0
comp=Z,24nm,0.6s,mb5.5,baz=33,slow=6.2
KLP **Kalpa** 60.62 285 ePKP P 09 34 35.3 -0.2
KLP AMb AMB 09 34 36.3
comp=Z,18nm,0.8s,mb5.2
U13A **Pakoon Wash** 60.64 68 ⇑P P 09 34 35.8 +0.3
baz=60,SNR=7.5
RSSD **Black Hills** 60.66 55 eP P 09 34 35.0 -0.5
RSSD e*PP pP 09 34 46.1 +1.1
RSSD pmax pmax
comp=Z,24nm,0.8s,mb5.4
RSSD **Black Hills** 60.66 55 eP P 09 34 35.0 -0.5
comp=Z,24nm,0.8s,mb5.4
RSSD epP pP 09 34 46.1 +1.1
S15A **Panguitch** 60.67 65 ⇑P P 09 34 35.4 -0.3
baz=60
SRU **San Rafael** 60.70 63 ⇑P P 09 34 35.7 -0.2
baz=60
SRU **San Rafael** 60.70 63 eP P 09 34 36.5 +0.6
SRU e*PP pP 09 34 44.7 -0.7
SRU pmax pmax
comp=Z,13nm,0.8s,mb5.1
SRU **San Rafael** 60.70 63 eP P 09 34 36.5 +0.6
comp=Z,13nm,0.8s,mb5.1
SRU epP pP 09 34 44.7 -0.7
RWWY **Rawlins** 60.71 59 eP P 09 34 37.6 +1.7
comp=Z,35nm,1.6s,mb5.2
RWWY epP pP 09 34 46.0 +0.6
N20A **Spence Gulch,** 60.74 60 ⇑P P 09 34 35.6 -0.5
baz=60
R16A **Teasdale** 60.75 64 ⇓P P 09 34 36.1 0.0
baz=60,SNR=6.6
L22A **Ellis Ranch, M** 60.88 58 ⇓P P 09 34 36.1 -0.9
baz=61
V13A **Grand Canyon W** 61.02 68 ⇓P P 09 34 37.6 -0.5
baz=61,SNR=8.5
U14A **Mt Trumbull** 61.09 67 ⇓P P 09 34 38.2 -0.3
baz=61,SNR=6.9
T15A **Red Dirt Ranch** 61.12 66 ⇓P P 09 34 38.9 +0.2
baz=61,SNR=5.7
FINES **FINESS Array B** 61.23 336 P P 09 34 38.8 -0.3
comp=Z,27nm,0.8s,mb5.5,baz=30,slow=8.8,SNR=127
FINES LR LR 10 05 16.3
comp=Z,2μm,18.7s,MS5.3,baz=136,slow=40

Q19A **Hogan Spring (** 61.51 62 ⇓P P 09 34 40.5 -0.9
baz=61
SMLA **Simla** 61.56 285 ex P 09 34 39.6 -2.2
R18A **Canyonlands Na** 61.56 63 ⇓P P 09 34 41.2 -0.5
baz=61
S17A **Black Ridge (B** 61.58 65 ⇑P P 09 34 41.4 -0.4
baz=61
P20A **De Beque** 61.61 61 ⇓P P 09 34 41.4 -0.6
baz=61
AGMN **Agassiz Nation** 61.63 47 eP P 09 34 41.3 -0.7
comp=Z,6.1nm,0.8s,mb4.8
V14A **Boquillas Ranc** 61.68 68 ⇓P P 09 34 43.0 +0.5
baz=62,SNR=6.7
N22A **Wattenberg Ran** 61.73 59 ⇓P P 09 34 43.3 +0.4
baz=62
R19A **Curley Farm, L** 61.98 63 ⇓P P 09 34 44.0 -0.5
baz=62
W14A **Seligman** 61.99 68 ⇓P P 09 34 46.1 +1.5
baz=62,SNR=5.6
S18A **Hurst Farm, Bl** 62.00 64 ⇓P P 09 34 44.8 +0.1
baz=62
X13A **Yucca** 62.00 69 ⇓P P 09 34 45.1 +0.4
baz=62,SNR=6.7
T17A **Navajo Res., N** 62.03 65 ⇑P P 09 34 45.2 +0.3
baz=62
V15A **Kaibab Nationa** 62.09 67 ⇓P P 09 34 45.1 -0.2
baz=62,SNR=7.0
PV04 **Paradox Valley** 62.11 63 eP P 09 34 46.4 +1.1
PV04 epP pP 09 34 55.3 +0.4
S19A **Harvey Farm, M** 62.44 63 ⇑P P 09 34 48.0 +0.4
baz=62
T18A **Mexican Hat** 62.46 64 ⇑P P 09 34 47.7 0.0
baz=62,SNR=5.6
PV01 **Paradox Valley** 62.48 63 eP P 09 34 49.5 +1.6
comp=Z,464nm,0.8s
Q21A **Lamborn Mesa,** 62.53 62 ⇓P P 09 34 47.9 -0.3
baz=62
MOS **Moscow** 62.58 327 eP P 09 34 45.8 -2.4
MOS e 09 35 26.9
MOS e 09 37 04.3
MOS pmax pmax
comp=Z,77nm,1.0s,mb5.8
MOS MLR MLR
comp=Z,2μm,18.0s,MS5.4
KKR **Kurukshetra** 62.60 284 ex x 09 35 52.1
SMCO **Snowmass** 62.61 61 eP P 09 34 50.1 +1.4
comp=Z,8.6nm,0.9s,mb4.9
WUAZ **Wupatki** 62.76 67 eP P 09 34 51.7 +2.0
comp=Z,19nm,1.2s,mb5.1
ISCO **Idaho Springs** 62.90 60 eP P 09 34 50.9 +0.3
ISCO e*PP pP 09 35 01.3 +1.1
ISCO pmax pmax
comp=Z,30nm,1.3s,mb5.3
ISCO **Idaho Springs** 62.90 60 eP P 09 34 50.9 +0.3
comp=Z,30nm,1.3s,mb5.3
ISCO epP pP 09 35 01.2 +1.0
ISCO esP sP 09 35 06.0 +2.2
X15A **Humboldt** 63.00 68 ⇓P P 09 34 52.0 +0.6
baz=63,SNR=6.2
V17A **Tonalea, Kykot** 63.02 66 ⇑P P 09 34 51.7 +0.2
baz=63
Z13A **Yuma Proving G** 63.09 70 ⇑P P 09 34 53.0 +1.0
baz=63
MVCO **Mesa Verde** 63.17 63 ⇑P P 09 34 52.9 +0.4
baz=63
MVCO **Mesa Verde** 63.17 63 eP P 09 34 53.5 +1.0
comp=Z,7.5nm,0.8s,mb4.9
MVCO epP pP 09 35 01.2 -0.8
BISR **Bishrakh** 63.23 283 ex x 09 35 08.6
R22A **Saguache, Gunn** 63.41 61 ⇓P P 09 34 53.5 -0.5
baz=63
U19A **Dine' College,** 63.44 65 ⇑P P 09 34 55.0 +0.7
baz=63
OBN **Obninsk** 63.44 327⇑eP P 09 34 52.9 -1.1
OBN eS S 09 43 25.8 +1.4
OBN pmax pmax
comp=Z,76nm,1.7s,mb5.5
OBN **Obninsk** 63.44 327 eP P 09 34 53.4 -0.6
comp=Z,25nm,0.9s,mb5.3
V18A **Ganado** 63.44 65 ⇑P P 09 34 54.4 +0.1
baz=63,SNR=5.3
X16A **Lo Mia Camp, P** 63.51 67 ⇓P P 09 34 54.7 0.0
baz=63,SNR=6.6
VSU **Vasula** 63.62 334c iP P 09 34 54.5 -0.6
SONA **Sohna** 63.67 283 ex x 09 34 54.1
SONA AMb AMB 09 34 56.3
comp=Z,12nm,0.6s,mb5.1
EYMN **Ely** 63.85 45 eP P 09 34 55.8 -1.0
comp=Z,7.4nm,0.6s,mb4.9
114A **Black Gap (USA** 63.87 70 ⇓P P 09 34 57.4 +0.3
baz=64,SNR=6.0
AGRA **Agra** 63.89 281 ePKP P 09 34 56.2 -1.1
AGRA AMb AMB 09 34 57.0
comp=Z,31nm,0.4s,mb5.7
KBL **Kabul** 63.90 293 eP P 09 34 55.7 -1.6
KBL pmax pmax
comp=Z,14nm,0.8s,mb5.0
KBL **Kabul** 63.90 293 eP P 09 34 55.7 -1.7
comp=Z,14nm,0.8s,mb5.0
X17A **Forest Lakes** 63.93 67 ⇑P P 09 34 57.3 -0.2
baz=64
T22A **Edith** 64.20 63 ⇓P P 09 34 59.4 +0.2
baz=64
U21A **Nageezi** 64.21 63 ⇑P P 09 34 59.4 +0.1
baz=64
X18A **Snowflake** 64.28 66 ⇓P P 09 34 60.0 +0.1
baz=64,SNR=5.5
115A **Sonoran Desert** 64.28 69 ⇓P P 09 34 59.5 -0.4
baz=64,SNR=5.6
Z16A **Peralta Trail,** 64.29 68 ⇑P P 09 34 59.6 -0.3
baz=64,SNR=5.2
Y17A **Roosevelt** 64.37 68 ⇑P P 09 35 00.2 -0.2
baz=64,SNR=6.3
SDCO **Great Sand Dun** 64.44 61 eP P 09 35 02.5 +1.7
comp=Z,14nm,1.4s,mb4.8
KHET **Khetri** 64.58 284 ePKP P 09 35 01.0 -0.8
KHET AMb AMB 09 35 01.7
comp=Z,11nm,0.7s,mb5.0
KSM **Kuching** 64.58 237 eP P 09 35 03.3 +1.3
comp=Z,25nm,0.9s,mb5.2
KSM epP pP 09 35 13.1 +1.5
ECSD **EROS Data Cent** 64.64 51 eP P 09 35 01.3 -0.7
comp=Z,11nm,0.8s,mb5.0
ECSD epP pP 09 35 11.1 -0.5
ECSD e 09 35 19.8
U22A **Llaves** 64.69 63 ⇓P P 09 35 02.7 +0.2
baz=64
116A **Eloy** 64.69 69 ⇓P P 09 35 03.5 +1.0
baz=64
X19A **St. Johns** 64.73 66 ⇓P P 09 35 02.8 0.0
baz=64
NB2 **NORSAR Subarra** 64.78 343 P P 09 35 02.5 -0.1
comp=Z,42nm,0.8s,mb5.5,baz=21,slow=6.9
NOA **NORSAR Array B** 64.78 343 P P 09 35 02.2 -0.4
comp=Z,32nm,0.8s,mb5.4,baz=21,slow=6.5,SNR=133
NOA LR LR 10 08 39.2
comp=Z,324nm,18.1s,MS4.6,baz=35,slow=41
Y18A **Canyon Day Jun** 64.78 67 ⇓P P 09 35 03.2 +0.2
baz=65
VRHR **Novokhopersk** 64.84 322 eP P 09 35 01.7 -1.5
VRHR pmax pmax
comp=Z,20nm,0.5s,mb5.4
VRHR pmax pmax
comp=N,30nm,0.7s
VRHR pmax pmax
comp=E,50nm,0.8s
VRHR MLR MLR
comp=E,1μm,17.0s,MS5.4
VRHR MLR MLR
comp=Z,2μm,17.0s,MS5.4
VRHR MLR MLR
comp=N,2μm,20.0s,MS5.4
NAO01 **NORSAR Array S** 65.02 344 eP P 09 35 04.1 -0.1
comp=N,16nm,0.8s,mb5.1
NAO01 epP pP 09 35 16.2 +2.5
U23A **El Rito** 65.09 63 ⇓P P 09 35 04.5 -0.5
baz=65
Y19A **Nutrioso** 65.09 66 ⇑P P 09 35 05.4 +0.3
baz=65
X20A **Quemado** 65.10 65 ⇓P P 09 35 05.6 +0.5
baz=65
TUC **Tucson** 65.41 69 eP P 09 35 08.1 +0.9
TUC e*PP pP 09 35 15.7 -1.1
TUC pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
TUC **Tucson** 65.41 69 eP P 09 35 08.1 +0.9
comp=Z,5.5nm,1.2s,mb4.5
TUC epP pP 09 35 15.7 -1.1
T25A **Trinidad** 65.48 61 ⇑P P 09 35 07.4 -0.2
baz=65
HYA **Hoyanger** 65.48 346 eP P 09 35 08.4 +1.3
HYA AMb AMB 09 35 10.3
comp=Z,44nm,1.1s,mb5.4
HYA **Hoyanger** 65.48 346 eP P 09 35 08.4 +1.3
comp=Z,44nm,1.1s,mb5.4
X21A **Alamocita Cree** 65.57 65 ⇑P P 09 35 08.7 +0.4
baz=65
Y20A **Horse Springs,** 65.63 66 ⇓P P 09 35 08.9 +0.3
baz=65
118A **Homack Ranch,** 65.64 68 ⇓P P 09 35 08.7 0.0
baz=65
VSR **Storozhevoye** 65.68 323 eP P 09 35 07.3 -1.3
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
VSR pmax pmax
comp=N,20nm,1.1s
VSR pmax pmax
comp=E,10.0nm,1.4s
VSR MLR MLR
comp=N,2μm,17.0s,MS5.5
VSR MLR MLR
comp=Z,3μm,17.0s,MS5.6
VSR MLR MLR
comp=E,2μm,19.0s,MS5.5
OSL **Oslo** 65.89 343 eP P 09 35 09.8 -0.1
ANMO **Albuquerque** 65.95 64ceP P 09 35 11.6 +1.0
ANMO **Albuquerque** 65.95 64 eP P 09 35 09.9 -0.8
ANMO epP pP 09 35 20.5 +0.3
LAZ **Ladron** 65.97 65 eP P 09 35 12.3 +1.5
comp=E,4.7nm,1.1s,mb4.4
LAZ epP pP 09 35 21.5 +1.2
U25A **Circle Dot Ran** 66.02 61 ⇓P P 09 35 10.8 -0.3
baz=66
218A **Dragoon** 66.08 68 ⇓P P 09 35 12.4 +0.9
baz=66,SNR=5.4
IZAR **Zarasai** 66.10 333 eP P 09 35 11.0 -0.3
IZAR AMB AMB 09 35 12.2
comp=Z,20nm,0.8s,mb5.2
ISAL **Salakas** 66.29 333 eP P 09 35 12.3 -0.2
ISAL AMB AMB 09 35 13.7
comp=Z,20nm,1.1s,mb5.1
IDID **Didziasalis** 66.34 333 eP P 09 35 12.8 -0.1
IDID AMB AMB 09 35 13.9
comp=Z,28nm,0.9s,mb5.3
BER **Bergen** 66.36 346 eP P 09 35 13.4 +0.6
BER eS S 09 44 00.8 +0.8
BER AMS AMS 10 11 05.3
comp=Z,687nm,14.6s,MS5.0
KONO **Kongsberg** 66.36 344 eP P 09 35 13.1 +0.2
KONO eS S 09 44 00.1 0.0
KONO **Kongsberg** 66.36 344 eP P 09 35 12.9 0.0
KONO e*PP pP 09 35 24.2 +1.7
KONO pmax pmax
comp=Z,37nm,1.1s,mb5.3
KONO **Kongsberg** 66.36 344 eP P 09 35 12.9 0.0
comp=Z,37nm,1.1s,mb5.3
KONO epP pP 09 35 24.2 +1.7
Y22A **Socorro** 66.41 65 ⇑P P 09 35 13.9 +0.4
baz=66
AJM **Ajmer** 66.44 283 ePKP P 09 35 13.3 -0.6
AJM AMb AMB 09 35 14.2
comp=Z,22nm,0.7s,mb5.3
IIGN **Ignalina** 66.46 333 eP P 09 35 13.6 0.0
IIGN AMB AMB 09 35 14.7
comp=Z,39nm,1.0s,mb5.4
Z21A **St. Cloud Mine** 66.47 66 ⇑P P 09 35 14.6 +0.6
baz=66
120A **U Bar Ranch, L** 66.47 67 ⇓P P 09 35 14.5 +0.4
baz=66
318A **Bisbee** 66.50 69 ⇓P P 09 35 15.4 +1.2
baz=66
219A **White Tail Can** 66.52 68 ⇑P P 09 35 15.5 +1.2
baz=66,SNR=6.7
MICGM **Minsk** 66.71 332⇑eP P 09 35 13.0 -2.2
MNK **Minsk** 66.73 332⇑eP P 09 35 13.0 -2.3
MNK pmax pmax
comp=Z,360nm,1.0s
MNK MLR MLR
comp=Z,6μm,13.0s,MS6.0
KULM **Kulim** 66.73 248 eP P 09 35 17.1 +1.2
comp=Z,22nm,1.1s,mb5.1
V26A **Tequesquite Ra** 66.80 61 ⇑P P 09 35 16.5 +0.4
baz=67
W25A **X Bar L Ranch,** 66.86 62 ⇓P P 09 35 15.8 -0.6
baz=67
Y23A **Lovelace Mesa,** 66.92 64 ⇓P P 09 35 17.1 +0.2
baz=67
319A **Douglas** 66.96 68 ⇑P P 09 35 17.1 -0.1
baz=67
220A **Playas Peak, P** 67.01 67 ⇑P P 09 35 17.6 +0.1
baz=67
BLS5 **Blasjo** 67.10 345 eP P 09 35 17.9 +0.3
BHPL **Bhopal** 67.13 279 ePKP P 09 35 17.8 -0.5
BHPL AMb AMB 09 35 19.3
comp=Z,78nm,0.7s,mb5.8
SCHQ **Schefferville** 67.18 27 P P 09 35 17.4 -0.8
comp=Z,7.5nm,0.9s,mb4.7,baz=6.2,slow=8.1,SNR=17
SCHQ **Schefferville** 67.18 27 eP P 09 35 16.7 -1.4
comp=Z,13nm,0.8s,mb5.0
SCHQ epP pP 09 35 26.0 -1.8
Y24A **Capitan** 67.27 64 ⇑P P 09 35 19.1 0.0
baz=67
ABKT **Ailbek** 67.42 303 P P 09 35 20.7 +0.7
comp=Z,106nm,0.9s,mb5.9,SNR=5.3
SCIA **State Center** 67.65 50 eP P 09 35 20.9 -0.5
comp=Z,54nm,0.7s,mb5.7
SCIA epP pP 09 35 30.4 -0.6
NGP **Nagpur** 67.68 276 ex x 09 35 17.6
NGP AMb AMB 09 35 18.4
comp=Z,34nm,1.3s,mb5.2
Y25A **Mesa, Roswell** 67.69 63 ⇓P P 09 35 21.4 -0.3
baz=68
X26A **CR and CF Fran** 67.71 62 ⇑P P 09 35 21.4 -0.5
baz=68
Z24A **Sheeppen Canyo** 67.75 64 ⇓P P 09 35 22.6 +0.5
baz=68
SNART **Snartemo** 68.01 345 eP P 09 35 23.9 +0.5
X27A **F and S Farms,** 68.03 62 ⇑P P 09 35 24.3 +0.4
baz=68
KSU1 **Kansas State U** 68.12 54 eP P 09 35 22.2 -2.2
comp=Z,17nm,0.8s,mb5.1
KSU1 epP pP 09 35 32.5 -1.5
Z25A **Roswell** 68.15 64 ⇑P P 09 35 24.7 0.0
baz=68
KAKA **Kakadu** 68.18 208 eP P 09 35 24.4 -0.5
comp=Z,16nm,1.0s,mb5.0
KAKA **Kakadu** 68.18 208 eP P 09 35 24.2 -0.7
JASL **Jaisalmer** 68.37 286 ePKP P 09 35 25.5 -0.6
JASL AMb AMB 09 35 26.8
comp=Z,21nm,0.4s,mb5.5
SUW **Suwalki** 68.48 334 eP P 09 35 25.4 -0.9
SUW LMZ 10 08 38.3
comp=Z,1μm,19.4s
SUW **Suwalki** 68.48 334 eP P 09 35 26.1 -0.3
SUW pmax pmax
comp=Z,110nm,1.0s,mb5.8
SUW **Suwalki** 68.48 334 eP P 09 35 26.1 -0.3
comp=Z,110nm,1.0s,mb5.8
Y27A **Causey** 68.57 62 ⇓P P 09 35 26.2 -1.0
baz=68
Z26A **Caprock** 68.57 63 ⇓P P 09 35 27.0 -0.2
baz=68
224A **Cornudas Mount** 68.59 65 ⇓P P 09 35 27.3 -0.2
baz=68
125A **Gardner Draw,** 68.65 64 ⇑P P 09 35 27.2 -0.6
baz=68
MSTX **Muleshoe** 68.72 62 ⇑P P 09 35 27.6 -0.6
baz=68
MAK **Makhachkala** 68.78 313 eP P 09 35 26.8 -1.6
MAK eS S 09 44 31.4 +1.8
MAK pmax pmax
comp=Z,29nm,0.3s,mb5.7
MAK MLR MLR
comp=Z,3μm,14.0s,MS5.7
MNTX **Cornudas Mount** 68.95 65 eP P 09 35 30.8 +1.1
comp=Z,9.2nm,1.2s,mb4.6
Z27A **Tatum** 68.96 63 ⇓P P 09 35 28.9 -0.8
baz=69
225A **Deer Hill, Car** 68.96 65 ⇓P P 09 35 29.7 0.0
baz=69
ORE **Reay** 69.28 351⇑eP P 09 35 30.7 -0.6
ORE **Reay** 69.28 351 P P 09 35 30.7 -0.6
127A **Arkansas Junct** 69.36 63 ⇑P P 09 35 31.5 -0.7

baz=69
226A Malaga, Loving 69.41 64 ⇑P P 09 35 32.4 -0.1
baz=69
MUD Monsted U'grnd 69.46 343⇑ iP P 09 35 32.9 +0.5
MUD pmax pmax
comp=Z,28nm,0.9s,mb5.2
MUD MLR MLR
comp=Z,1µm,17.0s,MS5.2
MUD Monsted U'grnd 69.46 343⇑ iP P 09 35 32.9 +0.5
comp=Z,28nm,0.9s,mb5.2
MUD
comp=Z,1µm,17.0s
BSD Bornholm Skovb 69.54 339 i P P 09 35 29.9 -3.0
BSD pmax pmax
comp=Z,19nm,0.9s,mb5.0
BSD MLR MLR
comp=Z,1µm,18.0s,MS5.1
BSD Bornholm Skovb 69.54 339 i P P 09 35 29.9 -3.0
comp=Z,19nm,0.9s,mb5.0
BSD
comp=Z,1µm,18.0s
COP Copenhagen 69.54 341⇑ iP P 09 35 33.3 +0.4
COP pmax pmax
comp=Z,29nm,0.8s,mb5.3
COP MLR MLR
comp=Z,440nm,18.0s,MS4.8
COP Copenhagen 69.54 341⇑ iP P 09 35 33.3 +0.4
comp=Z,29nm,0.8s,mb5.2
COP
comp=Z,440nm,18.0s
AKASG Malin Array Be 69.57 329 P P 09 35 32.3 -0.9
comp=Z,63nm,0.8s,mb5.6,baz=30,slow=6.1,SNR=147
AKASG LR LR 10 10 17.7
comp=Z,689nm,18.1s,MS4.9,baz=25,slow=40
AKBB Malin Array Si 69.57 329 eP P 09 35 32.4 -0.8
425A Indio Mountain 69.86 66 ⇓P P 09 35 35.4 +0.1
baz=70
326A Caldwell Ranch 70.03 65 ⇑P P 09 35 35.9 -0.4
baz=70
KIV Kislovodsk 70.12 317 eP P 09 35 36.6 -0.1
KIV eS S 09 44 42.1 -3.3
KIV pmax pmax
comp=Z,11nm,0.9s,mb4.8
KIV MLR MLR
comp=Z,1µm,18.0s,MS5.3
KIV Kislovodsk 70.12 317 eP P 09 35 37.6 +0.9
comp=Z,11nm,0.7s,mb4.9
KIV Kislovodsk 70.12 317 P P 09 35 35.7 -1.0
SNR=6.2
KIV P 09 35 35.7
SNR=6.2
WMOK Wichita Mounta 70.30 59 eP P 09 35 36.8 -1.1
WMOK e*PP pP 09 35 47.2 -0.4
WMOK pmax pmax
comp=Z,13nm,0.8s,mb4.9
WMOK Wichita Mounta 70.30 59 eP P 09 35 36.8 -1.2
comp=Z,13nm,0.8s,mb4.9
WMOK epP pP 09 35 47.2 -0.4
KAC Achnashellach 70.47 351 eP P 09 35 38.1 -0.5
KAC Achnashellach 70.47 351 P P 09 35 38.1 -0.5
426A McDonald Obser 70.49 65 ⇓P P 09 35 38.4 -0.8
baz=70
ZEI Tsey 70.55 315 eP P 09 35 37.6 -1.7
ZEI pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
HDIL Hopedale 70.56 49 eP P 09 35 38.1 -1.3
comp=Z,22nm,0.7s,mb5.2
WAR Warsaw 70.65 334 eP P 09 35 40.6 +0.8
WAR Warsaw 70.65 334 eP P 09 35 40.6 +0.8
KPL Plockton 70.66 351 eP P 09 35 38.2 -1.5
KPL AMb AMB 09 35 43.1
comp=Z,28nm,3.6s
KPL Plockton 70.66 351 P P 09 35 38.2 -1.5
KPL AMb AMB 09 35 43.1
comp=Z,28nm,3.6s
GKP Gorka Klasztor 70.69 337 eP P 09 35 40.1 +0.1
GKP LMZ 10 10 56.3
comp=Z,2µm,18.7s
GKP Gorka Klasztor 70.69 337⇑ eP P 09 35 40.1 +0.1
KSB Sheil Bridge 70.77 351⇑ eP P 09 35 40.3 -0.1
KSB Sheil Bridge 70.77 351 P P 09 35 40.3 -0.1
HYB Hyderabad 70.78 274 i P P 09 35 41.0 -0.1
ONI Oni 70.89 315 P P 09 35 41.3 -0.1
KEH Kehvi 70.90 315 P P 09 35 40.7 -0.8
526A Mary Lane Ranc 70.91 66 ⇑P P 09 35 42.0 +0.3
baz=71
KAR1 Arisaig 71.09 351⇑ eP P 09 35 41.9 -0.5
KAR1 Arisaig 71.09 351 P P 09 35 41.9 -0.5
428A Kincaid Ranch, 71.20 64 ⇓P P 09 35 43.3 -0.2
baz=71
626A Big Bend Ranch 71.27 66 ⇓P P 09 35 44.1 +0.1
baz=71
EBH Black Hill 71.52 350 eP P 09 35 44.6 -0.3
EBH Black Hill 71.52 350 P P 09 35 44.6 -0.3
CCM Cathedral Cave 71.59 52 eP P 09 35 47.7 +2.0
CCM pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
CCM Cathedral Cave 71.59 52 eP P 09 35 47.6 +1.9
comp=Z,9.6nm,0.9s,mb4.7
ANN Anapa 71.60 320 eP P 09 35 44.3 -1.4
ANN eS S 09 45 00.7 -1.8
ANN pmax pmax
comp=Z,28nm,0.9s,mb5.2
BSEG Bad Segeberg 71.61 341 eP P 09 35 46.1 +0.5
comp=Z,30nm,1.0s,mb5.2
EAB Aberfoyle 71.67 350 eP P 09 35 44.9 -0.9
EAB Aberfoyle 71.67 350 P P 09 35 44.9 -0.9
SOC Sochi 71.68 318c iP P 09 35 44.9 -1.2
SOC e*PP pP 09 36 01.8 +6.0
SOC e 09 38 22.3
SOC eS S 09 44 57.3 -6.2
SOC eSS SS 09 49 43.7 +5.4
SOC eSSS 09 52 50.0
SOC pmax pmax
comp=Z,69nm,0.9s,mb5.6
TXAR Lajitas Array 71.70 66 P P 09 35 45.6 -0.9
comp=Z,0.9nm,0.5s,baz=299,slow=4.4,SNR=16
TXAR LR LR 10 08 53.9
comp=Z,118nm,18.5s,baz=250,slow=37
AAM Ann Arbor 71.71 44 eP P 09 35 45.7 -0.7
AAM pmax pmax
comp=Z,23nm,1.0s,mb5.1
AAM Ann Arbor 71.71 44 eP P 09 35 45.7 -0.7
comp=Z,22nm,1.0s,mb5.0
ESY Stoneypath 71.74 349 eP P 09 35 45.9 -0.4
ESY Stoneypath 71.74 349 P P 09 35 45.9 -0.4
627A Terlingua Ranc 71.77 66 ⇑P P 09 35 47.2 +0.3
baz=72
EAU Auchinoon 71.91 350 eP P 09 35 46.7 -0.6
EAU Auchinoon 71.91 350 P P 09 35 46.7 -0.6
LVV L'vov 71.96 331 eP P 09 35 47.1 -0.6
LVV eS S 09 45 04.1 -2.4
LVV MLR MLR
comp=N,2µm,19.0s,MS5.5
LVV MLR MLR
comp=E,2µm,19.0s,MS5.5
LVV MLR MLR
comp=Z,2µm,19.0s,MS5.5
628A Black Gap, Mar 72.03 65 ⇑P P 09 35 48.7 +0.2
baz=72
FVM French Village 72.05 51 eP P 09 35 47.2 -1.3
FVM e*PP pP 09 35 57.0 -1.2
FVM pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
FVM French Village 72.05 51 eP P 09 35 47.2 -1.3
comp=Z,9.5nm,0.8s,mb4.8
FVM epP pP 09 35 57.0 -1.2
RUE Ruedersdorf 72.24 339 eP P 09 35 49.4 0.0
comp=Z,22nm,0.6s,mb5.3
GNI Garni 72.27 313 LR LR 10 12 04.7
comp=Z,1µm,18.1s,MS5.3,baz=200,slow=40
GNI Garni 72.27 313c eP P 09 35 51.1 +1.3
GNI pmax pmax
comp=Z,28nm,1.7s
GNI Garni 72.27 313 eP P 09 35 50.5 +0.7
comp=Z,5.5nm,0.6s,mb4.7
GNI Garni 72.27 313 P P 09 35 51.1 +1.3
SNR=5.9
GNI P 09 35 51.1
SNR=5.9
CTA Charters Tower 72.33 193 eP P 09 35 48.2 -1.9
comp=Z,4.8nm,0.8s,mb4.5
ESK Eskdalemuir 72.40 350 P P 09 35 50.8 +0.5
comp=Z,158nm,0.7s,mb6.0,SNR=5.6
ESK Eskdalemuir 72.40 350 eP P 09 35 49.8 -0.5
ESK AMb AMB 09 35 53.1
comp=Z,24nm,0.9s,mb5.1
ESK Eskdalemuir 72.40 350 P P 09 35 49.8 -0.5
ESK AMb AMB 09 35 53.1
comp=Z,24nm,0.9s,mb5.1
ESK Eskdalemuir 72.40 350 eP P 09 35 49.9 -0.4
ESK pmax pmax
comp=Z,22nm,0.8s,mb5.1
ESK Eskdalemuir 72.40 350 eP P 09 35 49.9 -0.4
comp=Z,22nm,0.8s,mb5.2
KWP Kalwaria Pacla 72.52 332 eP P 09 35 51.5 +0.5
KWP LMZ 10 11 36.2
comp=Z,2µm,17.5s
KWP Kalwaria Pacla 72.52 332 eP P 09 35 51.5 +0.4
comp=Z,367nm,1.1s,mb6.2
KWP Kalwaria Pacla 72.52 332⇑ iP P 09 35 51.6 +0.5
ECK Cauldkaine Hil 72.53 349 eP P 09 35 50.5 -0.5
ECK Cauldkaine Hil 72.53 349 P P 09 35 50.5 -0.5
XAL Allendale 72.73 349 eP P 09 35 51.8 -0.4
XAL Allendale 72.73 349 P P 09 35 51.8 -0.4
SIM Simferopol' 72.76 323c eP P 09 35 53.5 +0.9
SIM pmax pmax
comp=Z,33nm,0.8s,mb5.3
SIM MLR MLR
comp=Z,3µm,16.4s,MS5.7
OJC Ojcow 72.81 334 eP P 09 35 52.2 -0.6
OJC epP pP 09 36 03.8 +1.3
SIUC Southern Illin 72.84 51 eP P 09 35 52.6 -0.6
comp=Z,13nm,0.8s,mb4.9
POO Poona 72.86 278 ePKP P 09 35 53.1 -0.5
KIS Kishinev 72.91 327⇑ iP P 09 35 50.0 -3.4
comp=Z,300nm,1.0s,mb6.2
KIS LRM 10 11 45.0
comp=Z,1µm,16.0s
KIS Kishinev 72.91 327c iP P 09 35 50.0 -3.4
KIS e 09 45 10.0
KIS e 09 46 06.0
KIS pmax pmax
comp=Z,30nm,1.0s,mb5.2
KIS MLR MLR
comp=Z,2µm,16.0s,MS5.4
KIS MLR MLR
comp=N,400nm,14.0s,MS5.3
KIS MLR MLR
comp=E,1µm,15.0s,MS5.3
KIS MLR MLR
comp=Z,1µm,16.0s
JCT Junction City 73.00 62 eP P 09 35 53.8 -0.4
JCT e*PP pP 09 36 03.9 -0.1
JCT pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
JCT Junction City 73.00 62 eP P 09 35 53.8 -0.4
comp=Z,2.9nm,1.0s,mb4.2
JCT epP pP 09 36 03.9 0.0
GAL1 Galloway 73.01 350 eP P 09 35 53.0 -0.9
GAL1 AMb AMB 09 36 04.7
comp=Z,20nm,1.1s,mb4.9
GAL1 Galloway 73.01 350 P P 09 35 53.0 -0.9
GAL1 AMb AMB 09 36 04.7
comp=Z,20nm,1.1s,mb4.9
NRDL Niedersach Rie 73.02 341 eP P 09 35 54.0 0.0
comp=Z,22nm,1.0s,mb5.0
STHS Stebnicka Huta 73.14 333 eP P 09 35 55.8 +1.1
STHS pmax pmax
comp=Z,40nm,0.9s,mb5.3
STHS Stebnicka Huta 73.14 333 eP P 09 35 55.8 +1.1
comp=Z,40nm,0.9s,mb5.3
STHS Stebnicka Huta 73.14 333 eP P 09 35 55.8 +1.1
KSP Ksiaz 73.16 336 eP P 09 35 55.0 +0.2
KSP LMZ 10 12 21.8
comp=Z,2µm,18.9s
KSP Ksiaz 73.16 336⇑ iP P 09 35 54.9 +0.1
KSP epP pP 09 36 01.6 -2.9
MIAR Mount Ida 73.17 55 eP P 09 35 53.7 -1.5
MIAR e*PP pP 09 36 04.5 -0.4
MIAR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
MIAR Mount Ida 73.17 55 eP P 09 35 53.7 -1.5
comp=Z,9.9nm,0.8s,mb4.8
MIAR epP pP 09 36 04.5 -0.4
XDE Dent Fell 73.23 350 eP P 09 35 54.6 -0.6
XDE Dent Fell 73.23 350 P P 09 35 54.6 -0.6
KOLS Kolonicke sedl 73.27 332 eP P 09 35 55.9 +0.4
KOLS e pP 09 36 03.9 -1.4
KOLS pmax pmax
comp=Z,45nm,1.0s,mb5.3
KOLS MLR MLR
comp=Z,1µm,17.8s,MS5.3
KOLS Kolonicke sedl 73.27 332 eP P 09 35 55.9 +0.4
comp=Z,45nm,1.0s,mb5.3
KOLS ePP pP 09 36 03.9 -1.4
KOLS LR LR
comp=Z,1µm,17.8s,MS5.3
KOLS Kolonicke sedl 73.27 332 eP P 09 35 55.9 +0.4
KOLS epP pP 09 36 03.9 -1.4
WIT Witteveen 73.38 343⇑ eP P 09 35 57.5 +1.4
comp=Z,256nm,1.3s,mb6.0
USIN University of 73.39 49 eP P 09 35 55.1 -1.3
comp=Z,17nm,0.8s,mb5.0
USIN epP pP 09 36 05.3 -0.9
PARMO Parma 73.42 52 eP P 09 35 59.0 +2.4
PARMO epP pP 09 36 05.8 -0.6
CLL Collm 73.51 339 eP P 09 35 56.5 -0.4
comp=Z,28nm,0.9s,mb5.2
CLL Collm 73.51 339⇑ iP P 09 35 56.5 -0.4
CLL i pP 09 36 05.0 -1.6
CLL i 09 36 08.5
CLL eS S 09 45 27.0 +2.9
CLL pmax pmax
comp=Z,28nm,0.9s,mb5.2
CLL MLR MLR
comp=Z,1µm,18.2s,MS5.1
CLL Collm 73.51 339⇑ iP P 09 35 56.5 -0.4
comp=Z,28nm,0.9s,mb5.2
CLL i pP 09 36 05.0 -1.6
CLL i 09 36 08.5
CLL eS S 09 45 27.0 +2.9
CLL LR LR
comp=Z,1µm,18.2s,MS5.1
CLL Collm 73.51 339⇑ iP P 09 35 56.5 -0.4
comp=Z,28nm,0.9s,mb5.2
CLL i pP pP 09 36 05.0 -1.6
CLL i sP sP 09 36 09.2 -1.0
CLL e(PcP) PcP 09 36 12.0 -0.8
CLL ePP PP 09 38 42.0 +1.8
CLL ePPP 09 40 36.0
CLL eS S 09 45 27.0 +2.9
CLL ePS 09 46 09.0
CLL e(SS) 09 51 00.0
CLL eSSS 09 53 48.0
CLL e 09 54 36.0
BUR08 Bucovina Ar. S 73.53 330 eP P 09 35 57.5 +0.4
UPC Upice 73.53 337 eP P 09 35 57.3 +0.2
UPC e*PP pP 09 36 04.6 -2.2
UPC Upice 73.53 337 eP P 09 35 57.3 +0.2
UPC epP pP 09 36 04.6 -2.2
UZH Uzhgorod 73.54 332 eP P 09 35 57.0 -0.1
UZH eS S 09 45 23.0 -1.5
UZH MLR MLR
comp=Z,1µm,17.0s,MS5.2
HPK Haverah Park 73.55 348 eP P 09 35 57.2 +0.1
HPK AMb AMB 09 36 00.4
comp=Z,35nm,0.9s,mb5.3
HPK Haverah Park 73.55 348 P P 09 35 57.2 +0.1
HPK AMb AMB 09 36 00.4
comp=Z,35nm,0.9s,mb5.3
LEOM Leova 73.56 327 ⇓iP P 09 35 57.7 +0.4
LEOM Leova 73.56 327 ⇓iP P 09 35 57.7 +0.4
KAD Karad 73.58 277 ePKP P 09 35 57.7 -0.1
CLZ Clausthal 73.58 340 eP P 09 35 57.9 +0.6
comp=Z,41nm,1.1s,mb5.3
CLZ Clausthal 73.58 340 eP P 09 35 57.9 +0.6
CLZ pmax pmax
comp=Z,41nm,1.1s,mb5.3
DPC Dobruska-Polom 73.60 336 eP P 09 35 57.8 +0.3
DPC e*PP pP 09 36 05.2 -2.0
DPC eS S 09 45 34.1 +8.9
DPC MLR MLR
comp=Z,1µm,15.4s,MS5.2
DPC Dobruska-Polom 73.60 336 eP P 09 35 57.8 +0.3
DPC epP pP 09 36 05.2 -2.0
DPC eS S 09 45 34.1 +8.9
DPC AMS AMS 10 13 50.0
comp=Z,1µm,15.4s
OKC Ostrava-Krasne 73.60 335 eP P 09 35 57.9 +0.4
OKC e*PP pP 09 36 04.7 -2.5
OKC MLR MLR
comp=Z,900nm,15.1s,MS5.2
OKC Ostrava-Krasne 73.60 335 eP P 09 35 57.9 +0.4
OKC epP pP 09 36 04.7 -2.5
OKC eS S 09 45 36.2 +11
OKC AMS AMS 10 13 10.0
comp=Z,900nm,15.1s
IBBN Ibbenburen 73.66 342 eP P 09 35 58.0 +0.2
comp=Z,32nm,1.0s,mb5.2
IBBN esP sP 09 36 10.3 -0.8
ACSO Alum Creek Sta 73.69 45 eP P 09 35 56.5 -1.7
comp=Z,10nm,1.0s,mb4.7
ACSO epP pP 09 36 07.5 -0.3
BRG Berggiesshubel 73.69 338 eP P 09 35 57.7 -0.3
comp=Z,19nm,1.1s,mb4.9
BRG Berggiesshubel 73.69 338 i P P 09 35 57.4 -0.6
comp=Z,19nm,1.1s,mb4.9
BRG i 09 36 09.0
comp=Z,22nm,1.2s
BRG PP PP 09 38 38.0 -3.8
BRG S S 09 45 31.0 +4.8
BRG ePKPPKP 10 03 36.4
comp=Z,7.7nm,1.0s
BRG
comp=N,1µm,14.1s
BRG
comp=E,574nm,15.0s
BRG
comp=Z,2µm,14.6s
BRG Berggiesshubel 73.69 338 i P P 09 35 57.4 -0.6
BRG i 09 36 09.0
BRG 09 38 38.0
BRG S S 09 45 31.0 +4.8
BRG Berggiesshubel 73.69 338 i P P 09 35 57.4 -0.6
BRG i 09 36 09.0
BRG PP PP 09 38 38.0 -3.8
BRG S S 09 45 31.0 +4.8
BRG eP'P' 10 03 36.4
WCI Wyandotte Cave 73.82 48 eP P 09 35 56.9 -2.0
WCI pmax pmax
comp=Z,13nm,0.8s,mb4.9
WCI Wyandotte Cave 73.82 48 eP P 09 35 56.9 -2.1
comp=Z,13nm,0.8s,mb4.9
MORC Moravsky Berou 73.82 335 P P 09 35 59.3 +0.6
MORC Moravsky Berou 73.82 335 eP P 09 35 59.0 +0.2
comp=Z,15nm,0.8s,mb5.0
MORC Moravsky Berou 73.82 335⇑ iP P 09 35 59.2 +0.5
PVCC Panska Ves 73.87 337 eP P 09 35 59.6 +0.6
PVCC e*PP pP 09 36 06.3 -2.4
PVCC MLR MLR
comp=Z,2µm,14.3s,MS5.6
PVCC Panska Ves 73.87 337 eP P 09 35 59.6 +0.6
PVCC epP pP 09 36 06.3 -2.4
PVCC AMS AMS 10 13 50.0
comp=Z,2µm,14.3s
TRPA Tarpa 73.91 331⇓ iP P 09 35 59.7 +0.4
LHO Holmfirth 73.98 348⇑ eP P 09 35 58.7 -0.9
LHO Holmfirth 73.98 348 P P 09 35 58.7 -0.9
BMR Baia Mare 74.03 331 P P 09 36 01.1 +1.1
WTSB Winterswijk 74.16 343⇑ eP P 09 36 01.0 +0.3
comp=Z,33nm,0.6s,mb5.4
KECS Kecovo 74.19 333 eP P 09 36 01.4 +0.4
KECS e pP 09 36 08.7 -2.0
KECS pmax pmax
comp=Z,19nm,1.3s,mb4.9
KECS Kecovo 74.19 333 eP P 09 36 01.4 +0.4
comp=Z,19nm,1.3s,mb4.9
KECS ePP pP 09 36 08.7 -2.0
KECS Kecovo 74.19 333 eP P 09 36 01.4 +0.4
KECS epP pP 09 36 08.7 -2.0
PRU Pruhonice 74.38 337 eP P 09 36 02.9 +0.9
PRU e*PP pP 09 36 09.9 -1.8
PRU eS S 09 45 39.3 +5.4
PRU MLR MLR
comp=Z,2µm,14.0s,MS5.6
PRU Pruhonice 74.38 337 eP P 09 36 02.9 +0.9
PRU epP pP 09 36 09.9 -1.8
PRU eS S 09 45 39.3 +5.4
PRU AMS AMS 10 14 10.0
comp=Z,2µm,14.0s
MOX Moxa 74.44 339 eP P 09 36 02.5 +0.2
comp=Z,34nm,1.6s,mb5.0
MOX
comp=Z,300nm,19.0s
MOX Moxa 74.44 339 eP P 09 36 02.5 +0.2
comp=Z,34nm,1.6s,mb5.0
MOX
comp=Z,300nm,19.0s
MOX Moxa 74.44 339 eP P 09 36 02.4 +0.1
comp=Z,19nm,1.0s,mb5.0
TANN Tannenbergstha 74.46 339 eP P 09 36 02.8 +0.3
comp=Z,122nm,2.5s,mb5.4
TLCR 74.49 326 ⇓P P 09 36 02.9 +0.2
TLCR 74.49 326 ⇓iP P 09 36 02.9 +0.2
VRAC Vranov 74.49 336 ⇓P P 09 36 03.6 +0.9
VRAC Vranov 74.49 336 P P 09 36 03.5 +0.8
VRAC Vranov 74.49 336 ⇓iP P 09 36 03.6 +0.9
WRAB Tennant Creek 74.54 204 P P 09 36 02.0 -1.1
comp=Z,176nm,0.9s,mb6.0,SNR=9.9
WRAB Tennant Creek 74.54 204 eP P 09 36 02.5 -0.6
WRAB pmax pmax
comp=Z,27nm,0.9s,mb5.2
WRAB Tennant Creek 74.54 204 eP P 09 36 02.5 -0.6
comp=Z,27nm,0.9s,mb5.2
BUG Bochum--Univer 74.58 342 eP P 09 36 03.2 +0.1
comp=Z,33nm,1.1s,mb5.2
VRI Vrincioaia 74.60 328 ⇑P P 09 36 03.6 +0.2
VRI Vrincioaia 74.60 328 P P 09 36 03.4 0.0
VRI Vrincioaia 74.60 328⇑ iP P 09 36 03.6 +0.2
UBBA Unterbreizbach 74.62 340 eP P 09 36 03.5 +0.1
comp=Z,28nm,1.6s,mb4.9
NKC Novy Kostel 74.64 339 eP P 09 36 03.8 +0.3
NKC e*PP pP 09 36 09.7 -3.5
NKC eS S 09 45 28.1 -8.7
NKC MLR MLR
comp=Z,1µm,15.3s,MS5.3
NKC Novy Kostel 74.64 339 eP P 09 36 03.8 +0.3
NKC epP pP 09 36 09.7 -3.5
NKC eS S 09 45 28.1 -8.7
NKC AMS AMS 10 14 20.0
comp=Z,1µm,15.3s
PLOR Plostina 74.64 328 ⇓P P 09 36 04.3 +0.7
PLOR Plostina 74.64 328 ⇓iP P 09 36 04.3 +0.7
VYHS Vyhne 74.64 334 eP P 09 36 04.2 +0.6
VYHS e pP 09 36 11.7 -1.6
VYHS eS S 09 45 45.9 +8.9
VYHS pmax pmax
comp=Z,70nm,2.0s,mb5.2
VYHS MLR MLR
comp=Z,600nm,19.8s,MS4.9
VYHS Vyhne 74.64 334 eP P 09 36 04.2 +0.6
comp=Z,70nm,2.0s,mb5.2
VYHS ePP pP 09 36 11.7 -1.6
VYHS eS S 09 45 45.9 +8.9
VYHS LR LR
comp=Z,600nm,19.8s,MS4.9
VYHS Vyhne 74.64 334 eP P 09 36 04.2 +0.6
VYHS epP pP 09 36 11.7 -1.6
VYHS eS S 09 45 45.9 +8.9
CWF Charnwood Fore 74.70 348 eP P 09 36 04.1 +0.3
CWF AMb AMB 09 36 04.1
comp=Z,24nm,1.8s,mb4.8
CWF Charnwood Fore 74.70 348 P P 09 36 04.1 +0.3
CWF AMb AMB 09 36 04.1
comp=Z,24nm,1.8s,mb4.8
CFR Carcaliu 74.73 326 P P 09 36 04.3 +0.2
DSB Dublin 74.78 351 eP P 09 36 03.5 -0.8
comp=Z,19nm,0.9s,mb5.0
WVT Waverly 74.78 51 eP P 09 36 02.9 -1.7
WVT e*PP pP 09 36 12.9 -1.4
WVT pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
WVT Waverly 74.78 51 eP P 09 36 02.9 -1.7
comp=Z,6.5nm,0.8s,mb4.6
WVT epP pP 09 36 12.9 -1.4
TREC Trest 74.79 336 eP P 09 36 04.7 +0.3
TREC e*PP pP 09 36 11.7 -2.4
TREC MLR MLR
comp=Z,1µm,14.1s,MS5.3
TREC Trest 74.79 336 eP P 09 36 04.7 +0.3
TREC epP pP 09 36 11.7 -2.4
TREC AMS AMS 10 14 50.0
comp=Z,1µm,14.1s

PSZ **Piszkesteto 74.87 333** ⇓P **P 09 36 06.0 +1.1**
PSZ **Piszkesteto 74.87 333** eP **P 09 36 05.5 +0.6**
comp=Z,60nm,1.4s,mb5.3
PSZ **Piszkesteto 74.87 333**⇑eP **P 09 36 05.7 +0.8**
PSZ **Piszkesteto 74.87 333** ⇓iP **P 09 36 06.0 +1.1**
SMOL **Smolenice 75.00 335** eP **P 09 36 07.4 +1.7**
SMOL e pP 09 36 15.4 0.0
SMOL **Smolenice 75.00 335** eP **P 09 36 07.4 +1.7**
SMOL epP pP 09 36 15.4 0.0
DRGR **75.06 331** P **P 09 36 06.1 +0.1**
DRGR **75.06 331** ⇑iP **P 09 36 06.0 0.0**
HLM1 **Long Mynd 75.11 349** eP **P 09 36 05.4 -0.8**
HLM1 **Long Mynd 75.11 349** P **P 09 36 05.4 -0.8**
ROTZ **Rotzenmuhle 75.13 339** eP **P 09 36 06.9 +0.6**
comp=Z,25nm,1.2s,mb5.0
TIRR **Tirgusor 75.26 326** ⇓P **P 09 36 07.5 +0.3**
TIRR **Tirgusor 75.26 326** eP **P 09 36 06.7 -0.5**
comp=Z,66nm,0.8s,mb5.6
TIRR **Tirgusor 75.26 326** ⇓iP **P 09 36 07.5 +0.3**
ZST **Bratislava 75.38 335** eP **P 09 36 09.3 +1.5**
ZST e pP 09 36 17.9 +0.3
ZST pmax pmax
comp=Z,15nm,0.8s,mb5.0
ZST MLR MLR
comp=Z,800nm,17.0s,MS5.1
ZST **Bratislava 75.38 335** eP **P 09 36 09.3 +1.5**
comp=Z,15nm,0.8s,mb5.0
ZST ePP pP 09 36 17.9 +0.3
ZST LR LR
comp=Z,800nm,17.0s,MS5.1
ZST **Bratislava 75.38 335** eP **P 09 36 09.3 +1.5**
ZST epP pP 09 36 17.9 +0.3
FITZ **Fitzroy Crossi 75.40 213** eP **P 09 36 08.0 -0.2**
comp=Z,20nm,0.9s,mb5.0
KHC **Kasperske Hory 75.40 337** eP **P 09 36 08.2 +0.3**
KHC e*PP pP 09 36 15.6 -2.1
KHC e 09 36 21.0
KHC eS S 09 45 49.9 +4.5
KHC MLR MLR
comp=Z,3µm,14.6s,MS5.7
KHC **Kasperske Hory 75.40 337** eP **P 09 36 08.0 0.0**
comp=Z,25nm,0.8s,mb5.2
KHC epP pP 09 36 21.1 +3.4
KHC **Kasperske Hory 75.40 337** eP **P 09 36 08.2 +0.3**
KHC epP pP 09 36 15.6 -2.1
KHC ex x 09 36 21.0
KHC eS S 09 45 49.9 +4.5
KHC ex x 09 51 36.1
KHC AMS AMS 10 14 50.0
comp=Z,3µm,14.6s
GRA1 **Grafenberg Arr 75.42 339** eP **P 09 36 08.7 +0.7**
comp=Z,92nm,1.4s,mb5.5
GRA1 esP sP 09 36 20.7 -0.7
GRA1 ePKPbc 10 03 34.5
GRA1 LR LR
comp=Z,900nm,18.3s,MS5.1
GRF **Grafenberg Arr 75.42 339** eP **P 09 36 08.7 +0.7**
comp=Z,92nm,1.4s,mb5.5
GRF esP sP 09 36 20.7 -0.7
GRF eL 10 14 27.2
comp=Z,862nm,18.3s
GRF **Grafenberg Arr 75.42 339** eP **P 09 36 08.7 +0.7**
GRF e*SP sP 09 36 20.7 -0.7
GRF pmax pmax
comp=Z,92nm,1.4s,mb5.5
GRF MLR MLR
comp=Z,900nm,18.3s,MS5.1
HGN **Heimansgroeve 75.47 343**⇑iP **P 09 36 08.4 +0.1**
comp=Z,46nm,1.2s,mb5.3
BEBN **Eben Emael 75.49 343** P **P 09 36 08.7 +0.3**
comp=Z,14nm,1.2s,mb4.8
TNS **Taunus Mts 75.51 341** eP **P 09 36 08.9 +0.4**
comp=Z,27nm,0.9s,mb5.2
TNS **Taunus Mts 75.51 341** eP **P 09 36 08.9 +0.4**
TNS pmax pmax
comp=Z,27nm,0.9s,mb5.2
BUD **Budapest 75.51 333**⇑eP **P 09 36 09.4 +0.8**
CVD **Cernavoda 75.52 326** ⇓P **P 09 36 09.1 +0.4**
CVD **Cernavoda 75.52 326** ⇓iP **P 09 36 09.1 +0.4**
MCWV **Mont Chateau 75.52 43** eP **P 09 36 07.9 -0.9**
comp=Z,12nm,1.1s,mb4.7
SSPA **Standing Stone 75.52 41** eP **P 09 36 07.0 -1.8**
comp=Z,14nm,0.9s,mb4.9
WET **Wettzell 75.56 338** eP **P 09 36 09.4 +0.6**
comp=Z,28nm,1.0s,mb5.2
WET esP sP 09 36 21.5 -0.7
WET **Wettzell 75.56 338** eP **P 09 36 09.4 +0.6**
WET e*SP sP 09 36 21.5 -0.7
WET pmax pmax
comp=Z,28nm,1.0s,mb5.2
PLAL **Pickwick Lake 75.58 51** eP **P 09 36 07.0 -2.2**
comp=Z,6.2nm,0.8s,mb4.6
PLAL epP pP 09 36 17.6 -1.4
HTR **Trewern Hill 75.59 349**⇑eP **P 09 36 07.9 -1.1**
HTR **Trewern Hill 75.59 349** P **P 09 36 07.9 -1.1**
MEM **Membach 75.61 343** P **P 09 36 09.9 +0.8**
comp=Z,41nm,1.1s,mb5.3
GEC2 **GERESS Array S 75.64 337** eP **P 09 36 09.4 +0.1**
comp=Z,16nm,0.9s,mb5.0
GEC2 **GERESS Array S 75.64 337** eP **P 09 36 09.4 +0.1**
GEC2 pmax pmax
comp=Z,16nm,0.9s,mb5.0
GERES **GERESS Array B 75.64 337** P **P 09 36 09.1 -0.2**
comp=Z,9.9nm,0.8s,mb4.8,baz=35,slow=4.9,SNR=98
GERES LR LR 10 14 17.5
comp=Z,1µm,18.3s,MS5.2,baz=18,slow=40
UCC **Uccle 75.72 344** P **P 09 36 10.0 +0.3**
BCLA **Clavier 75.92 343** P **P 09 36 10.9 +0.1**
comp=Z,16nm,1.1s,mb4.8
CONA **Conrad Observa 75.95 336** iP **P 09 36 11.9 +0.8**
comp=Z,25nm,0.9s,mb5.1,SNR=25
SWN1 **Swindon 75.96 348** eP **P 09 36 11.3 +0.2**
SWN1 AMb AMB 09 36 14.5
comp=Z,105nm,0.9s,mb5.8
SWN1 **Swindon 75.96 348** P **P 09 36 11.3 +0.2**
SWN1 AMb AMB 09 36 14.5
comp=Z,105nm,0.9s,mb5.8
HGH **Gray Hill 75.97 349**⇑eP **P 09 36 10.7 -0.5**
HGH **Gray Hill 75.97 349** P **P 09 36 10.7 -0.5**
SOP **Sopron 76.00 335**⇑eP **P 09 36 12.3 +0.9**
ABH **Alteburg 76.01 342** eP **P 09 36 11.4 0.0**
SNF **Seneffe 76.01 344** P **P 09 36 11.4 0.0**
comp=Z,11nm,1.6s,mb4.5
TOD **Tromm 76.02 341** eP **P 09 36 11.6 +0.2**
PSN **Preselentsi 76.02 326** iP **P 09 36 11.4 -0.2**
MSL **Mosul 76.06 312** eP **P 09 36 12.0 +0.1**
RUP **Ruppelstein 76.28 342** eP **P 09 36 13.2 +0.3**
GIVF **Givet 76.31 343** eP **P 09 36 13.0 -0.1**
comp=Z,68nm,1.0s,mb5.2
GIVF **Givet 76.31 343** eP **P 09 36 13.0 -0.1**
GIVF pmax pmax
comp=Z,34nm,1.0s,mb5.2
GIVF **Givet 76.31 343** eP **P 09 36 13.0 -0.1**
comp=Z,34nm,1.0s,mb5.2
MENF **Mencas 76.32 345** eP **P 09 36 15.2 +2.1**
DOU **Dourbes 76.36 344** P **P 09 36 13.7 +0.3**
comp=Z,8.4nm,1.1s,mb4.6
MOA **Molln 76.43 337**⇑iP **P 09 36 14.2 +0.4**
comp=Z,18nm,1.0s,mb5.0,SNR=21
BAIF **Baives 76.46 344** eP **P 09 36 13.9 0.0**
comp=Z,30nm,0.9s,mb4.9
BAIF **Baives 76.46 344** eP **P 09 36 13.9 0.0**
BAIF pmax pmax
comp=Z,15nm,0.9s,mb4.9
BAIF **Baives 76.46 344** eP **P 09 36 13.9 0.0**
comp=Z,15nm,0.9s,mb4.9
WLF **Walferdange 76.49 342** P **P 09 36 15.1 +1.0**
comp=Z,22nm,1.6s,mb4.8
WLF **Walferdange 76.49 342** eP **P 09 36 14.6 +0.5**
comp=Z,98nm,2.2s,mb5.3
WLF **Walferdange 76.49 342** eP **P 09 36 14.8 +0.7**
WLF pmax pmax
comp=Z,23nm,1.1s,mb5.0
WLF **Walferdange 76.49 342** eP **P 09 36 14.8 +0.7**
comp=Z,23nm,1.1s,mb5.0
ARSA **Arzberg 76.67 336**⇑iP **P 09 36 15.9 +0.7**
comp=Z,20nm,1.0s,mb5.0,SNR=20
PRD **Provadia 76.72 326** iP **P 09 36 15.2 -0.3**
STU **Stuttgart 76.73 340** eP **P 09 36 15.7 +0.2**
comp=Z,27nm,1.1s,mb5.1
STU **Stuttgart 76.73 340** eP **P 09 36 15.7 +0.2**
STU pmax pmax
comp=Z,32nm,1.0s,mb5.2
STU **Stuttgart 76.73 340** eP **P 09 36 15.7 +0.3**
comp=Z,32nm,1.0s,mb5.2

PKSM **Moragy 76.78 333** P **P 09 36 16.0 +0.2**
PKSM **Moragy 76.78 333**⇑iP **P 09 36 15.3 -0.5**
HTL **Hartland 76.80 350** eP **P 09 36 15.0 -0.9**
HTL AMb AMB 09 36 20.4
comp=Z,24nm,2.3s,mb4.7
HTL **Hartland 76.80 350** P **P 09 36 15.0 -0.9**
HTL AMb AMB 09 36 20.4
comp=Z,24nm,2.3s,mb4.7
LANF **Langenberg 76.82 341** eP **P 09 36 16.4 +0.4**
FUR **Furstenfeldbru 76.84 339** eP **P 09 36 16.5 +0.3**
comp=Z,34nm,1.0s,mb5.2
FUR **Furstenfeldbru 76.84 339** eP **P 09 36 16.5 +0.3**
FUR pmax pmax
comp=Z,34nm,1.0s,mb5.2
RJOB **Jochberg 76.89 337** eP **P 09 36 17.0 +0.6**
comp=Z,18nm,1.1s,mb4.9
CPCT **Cooper Cave 76.90 49** eP **P 09 36 15.3 -1.4**
SZH **Strazhica 77.16 327** iP **P 09 36 17.5 -0.5**
PALK **Pallekele 77.21 266** iP **P 09 36 20.4 +1.7**
PALK **Pallekele 77.21 266** eP **P 09 36 19.3 +0.6**
comp=Z,33nm,0.9s,mb5.3
KOGS **Kog 77.22 335** eP **P 09 36 18.4 +0.1**
DYA **Yadsworthy 77.29 349** eP **P 09 36 17.8 -0.8**
DYA AMb AMB 09 36 24.2
comp=Z,30nm,0.8s,mb5.3
DYA **Yadsworthy 77.29 349** P **P 09 36 17.8 -0.8**
DYA AMb AMB 09 36 24.2
comp=Z,30nm,0.8s,mb5.3
SOKA **Soboth 77.33 336**⇑iP **P 09 36 19.4 +0.5**
comp=Z,32nm,1.0s,mb5.2
BFO **Black Forest 77.33 341** P **P 09 36 19.7 +0.8**
comp=Z,83nm,1.0s,mb5.6,SNR=8.1
BFO **Black Forest 77.33 341** eP **P 09 36 19.1 +0.2**
comp=Z,17nm,1.1s,mb4.9
BFO **Black Forest 77.33 341** iP **P 09 36 19.4 +0.5**
PERS **Pernice 77.34 336** eP **P 09 36 19.4 +0.4**
KBA **Koelnbreinsper 77.38 337**⇑iP **P 09 36 20.2 +1.1**
comp=Z,119nm,1.0s,mb5.8,SNR=71
BR131 **Keskin Array S 77.39 320** eP **P 09 36 19.5 +0.2**
comp=Z,30nm,0.9s,mb5.2
BRTR **Keskin Array B 77.39 320** P **P 09 36 19.4 +0.1**
comp=Z,34nm,0.9s,mb5.3,baz=46,slow=3.6,SNR=179
GROS **Grobnik 77.41 335** iP **P 09 36 19.6 +0.2**
PVL **Pavlikeni 77.41 327** eP **P 09 36 19.8 +0.4**
SPAK **Spaichingen-Ko 77.45 340** eP **P 09 36 19.9 +0.3**
CDF **Champ du Feu 77.47 341** eP **P 09 36 19.7 +0.1**
comp=Z,68nm,1.1s,mb5.2
CDF **Champ du Feu 77.47 341** eP **P 09 36 19.7 +0.1**
CDF pmax pmax
comp=Z,34nm,1.1s,mb5.2
CDF **Champ du Feu 77.47 341** eP **P 09 36 19.7 +0.1**
comp=Z,34nm,1.1s,mb5.2
WATA **Walderalm 77.56 338**⇑iP **P 09 36 20.9 +0.8**
comp=Z,15nm,0.8s,mb5.0,SNR=8,7
RETA **Reutte 77.60 339**⇑iP **P 09 36 20.7 +0.3**
comp=Z,24nm,1.2s,mb5.0,SNR=13
OBKA **Obir 77.61 336**⇑iP **P 09 36 20.9 +0.4**
comp=Z,22nm,1.0s,mb5.0,SNR=9.5
WTTA **Wattenberg 77.61 338** ⇓iP **P 09 36 21.2 +0.7**
comp=Z,47nm,1.1s,mb5.3,SNR=16
JMB **Yambol 77.65 326** P **P 09 36 21.2 +0.4**
JMB **Yambol 77.65 326** iP **P 09 36 21.6 +0.8**
MOTA **Moosalm 77.66 338**⇑iP **P 09 36 21.4 +0.6**
comp=Z,38nm,1.0s,mb5.3,SNR=19
ECH **Echery 77.68 341** eP **P 09 36 20.7 -0.1**
ECH pmax pmax
comp=Z,22nm,1.0s,mb5.0
ECH **Echery 77.68 341** eP **P 09 36 20.7 -0.1**
comp=Z,22nm,1.0s,mb5.0
LRAL **Lakeview Retre 77.68 52** eP **P 09 36 19.8 -1.3**
comp=Z,3.6nm,0.7s,mb4.4
MYKA **Terra Mystica 77.72 337**⇑iP **P 09 36 21.3 +0.2**
comp=Z,17nm,1.1s,mb4.9
MEZF **Maizieres J'vi 77.81 343** eP **P 09 36 21.9 +0.4**
comp=Z,85nm,1.1s,mb5.3
MEZF **Maizieres J'vi 77.81 343** eP **P 09 36 21.9 +0.4**
comp=Z,85nm,1.1s,mb5.6
FELD **Feldberg im Sc 77.83 341** eP **P 09 36 21.6 -0.1**
ABTA **Abfaltersbach 77.89 337**⇑iP **P 09 36 22.2 +0.2**
comp=Z,43nm,1.0s,mb5.3,SNR=24
THEF **They Montfort 77.90 342** eP **P 09 36 22.4 +0.4**
DAVA **Damuels 77.99 339**⇑iP **P 09 36 22.9 +0.3**
comp=Z,28nm,1.1s,mb5.1,SNR=13
MOF **Molkenrain 78.03 341** eP **P 09 36 22.7 -0.1**
HAU **Haudompre 78.04 342** eP **P 09 36 22.8 0.0**
comp=Z,38nm,0.9s,mb5.0
HAU eMLR MLR
comp=Z,984nm,17.5s,MS4.9
HAU **Haudompre 78.04 342** eP **P 09 36 22.8 0.0**
HAU pmax pmax
comp=Z,19nm,0.9s,mb5.0
HAU MLR MLR
comp=Z,980nm,17.5s,MS5.2
HAU **Haudompre 78.04 342** eP **P 09 36 22.8 0.0**
comp=Z,19nm,0.9s,mb5.0
HAU LR LR
comp=Z,980nm,17.5s,MS5.2
LJU **Ljubljana 78.04 336** eP **P 09 36 22.6 -0.3**
FETA **Feichten 78.05 339** ⇓iP **P 09 36 23.7 +0.8**
comp=Z,31nm,1.0s,mb5.2,SNR=20
CADS **Cadrg 78.07 336** eP **P 09 36 22.4 -0.7**
CADS e 09 36 34.9
SISC **Sisak 78.09 334** P **P 09 36 24.0 +0.9**
HINF **Hinteralfeld 78.12 341** eP **P 09 36 23.0 -0.3**
comp=Z,26nm,1.0s,mb4.8
HINF **Hinteralfeld 78.12 341** eP **P 09 36 23.0 -0.3**
HINF pmax pmax
comp=Z,13nm,1.0s,mb4.8
HINF **Hinteralfeld 78.12 341** eP **P 09 36 23.0 -0.3**
comp=Z,13nm,1.0s,mb4.8
VOY **Vojsko 78.22 336** eP **P 09 36 24.6 +0.7**
ASAR **Alice Springs 78.22 204** P **P 09 36 24.2 +0.2**
comp=Z,5.8nm,0.9s,mb4.5,baz=15,slow=5.4,SNR=44
JSA **Saint Aubin 78.29 348** eP **P 09 36 24.7 +0.5**
JSA **Saint Aubin 78.29 348** P **P 09 36 24.7 +0.5**
DIVS **Divibare 78.32 331** P **P 09 36 23.8 -0.6**
BBS **Basel-Blauen 78.32 341** eP **P 09 36 24.5 +0.1**
BOJS **Bojanci 78.36 335** eP **P 09 36 24.6 -0.1**
DIM **Dimitrovgrad 78.38 327** iP **P 09 36 25.0 +0.2**
PGB **Panagyurishte 78.39 328** eP **P 09 36 24.7 -0.2**
FLN **La Foliniere 78.47 346** eP **P 09 36 24.9 -0.3**
comp=Z,70nm,1.1s,mb5.2
FLN eMLR MLR
comp=Z,847nm,17.0s,MS4.8
FLN **La Foliniere 78.47 346** eP **P 09 36 24.9 -0.3**
FLN pmax pmax
comp=Z,35nm,1.1s,mb5.2
FLN MLR MLR
comp=Z,850nm,17.0s,MS5.1
FLN **La Foliniere 78.47 346** eP **P 09 36 24.9 -0.3**
comp=Z,35nm,1.1s,mb5.2
FLN LR LR
comp=Z,850nm,17.0s,MS5.1
HATD **Hatta, Dubai 78.56 295** P **P 09 36 26.2 +0.1**
SNR=5.3
KNDS **Knezji Dol 78.56 336** eP **P 09 36 25.7 -0.1**
LOMF **Lomont 78.57 341** eP **P 09 36 26.1 +0.3**
LDF **La Druitiere 78.58 346** eP **P 09 36 25.6 -0.2**
comp=Z,55nm,1.1s,mb5.1
LDF **La Druitiere 78.58 346** eP **P 09 36 25.6 -0.2**
LDF pmax pmax
comp=Z,28nm,1.1s,mb5.1
LDF **La Druitiere 78.58 346** eP **P 09 36 25.6 -0.2**
comp=Z,28nm,1.1s,mb5.1
PLD **Plovdiv 78.61 327** P **P 09 36 25.7 -0.4**
PLD **Plovdiv 78.61 327** iP **P 09 36 25.4 -0.7**
BRMO **Bormio 78.64 339** P **P 09 36 27.3 +1.1**
VTS **Vitosha 78.67 328** P **P 09 36 26.1 -0.3**
VTS **Vitosha 78.67 328** eP **P 09 36 26.1 -0.3**
NAZ **Nazwa, Dubai 78.69 296** P **P 09 36 27.0 +0.1**
SNR=5.2
KDZ **Kurdzhali 78.77 327** iP **P 09 36 27.1 +0.1**
GRR **Gorron 78.89 347** eP **P 09 36 27.4 -0.1**
comp=Z,78nm,1.0s,mb5.3
GRR **Gorron 78.89 347** eP **P 09 36 27.4 -0.1**
GRR pmax pmax
comp=Z,39nm,1.0s,mb5.3
GRR **Gorron 78.89 347** eP **P 09 36 27.4 -0.1**
comp=Z,39nm,1.0s,mb5.3
RDO **Rodhopi 79.18 326** P **P 09 36 29.4 +0.2**
LOR **Lormes 79.21 343** eP **P 09 36 29.3 0.0**
comp=Z,118nm,1.1s,mb5.4
LOR eMLR MLR
comp=Z,765nm,17.2s,MS4.8
LOR **Lormes 79.21 343** eP **P 09 36 29.3 0.0**

LOR pmax pmax
comp=Z,59nm,1.1s,mb5.4
LOR MLR MLR
comp=Z,760nm,17.3s,MS5.1
LOR **Lormes 79.21 343** eP **P 09 36 29.3 0.0**
comp=Z,59nm,1.1s,mb5.4
LOR LR LR
comp=Z,760nm,17.3s,MS5.1
ALN **Alexandroupoli 79.22 326** P **P 09 36 29.2 -0.3**
SGMF **Saint Gilles 79.26 348** eP **P 09 36 29.4 -0.1**
comp=Z,62nm,1.0s,mb5.2
SGMF **Saint Gilles 79.26 348** eP **P 09 36 29.4 -0.1**
SGMF pmax pmax
comp=Z,31nm,1.0s,mb5.2
SGMF **Saint Gilles 79.26 348** eP **P 09 36 29.4 -0.1**
comp=Z,31nm,1.0s,mb5.2
ROSF **Rostrenen 79.27 348** eP **P 09 36 29.5 -0.1**
comp=Z,58nm,1.0s,mb5.2
ROSF **Rostrenen 79.27 348** eP **P 09 36 29.5 -0.1**
ROSF pmax pmax
comp=Z,29nm,1.0s,mb5.2
ROSF **Rostrenen 79.27 348** eP **P 09 36 29.5 -0.1**
comp=Z,29nm,1.0s,mb5.2
NVLJ **Novalja 79.33 335** P **P 09 36 28.5 -1.5**
MIB **Mutribah 79.34 305** eP **P 09 36 29.6 -0.7**
MIB AMb AMB 09 36 31.0
comp=Z,237nm,1.0s,mb6.1
UMR **Umm Al-Rimmam 79.35 304** eP **P 09 36 29.4 -1.0**
UMR AMb AMB 09 36 31.0
comp=Z,114nm,1.0s,mb5.8
KKB **Krupnik 79.36 328** eP **P 09 36 29.9 -0.3**
MMB **Musomiste 79.40 328** eP **P 09 36 30.2 -0.2**
CABF **La Chapelle 79.42 342** eP **P 09 36 30.8 +0.3**
comp=Z,45nm,1.0s,mb5.0
CABF **La Chapelle 79.42 342** eP **P 09 36 30.8 +0.3**
CABF pmax pmax
comp=Z,23nm,1.0s,mb5.1
CABF **La Chapelle 79.42 342** eP **P 09 36 30.8 +0.3**
comp=Z,23nm,1.0s,mb5.0
HYF **Humbligny 79.43 344** eP **P 09 36 30.9 +0.4**
SSF **Saint Saulge 79.48 343** eP **P 09 36 30.7 0.0**
comp=Z,34nm,0.9s,mb5.0
SSF **Saint Saulge 79.48 343** eP **P 09 36 30.7 0.0**
SSF pmax pmax
comp=Z,17nm,0.9s,mb5.0
SSF **Saint Saulge 79.48 343** eP **P 09 36 30.7 0.0**
comp=Z,17nm,0.9s,mb5.0
VAI **Varese 79.58 339** P **P 09 36 30.9 -0.4**
VAI pmax pmax
comp=Z,53nm,1.2s,mb5.3
VAI **Varese 79.58 339** P **P 09 36 30.9 -0.4**
comp=Z,53nm,1.2s,mb5.3
KAVA **Kavala 79.66 327** P **P 09 36 30.9 -1.0**
KBD **Kabd 79.66 304** eP **P 09 36 31.2 -0.9**
KBD AMb AMB 09 36 33.0
comp=Z,89nm,0.7s,mb5.8
QUIF **Quistinic 79.67 348** eP **P 09 36 31.5 -0.3**
comp=Z,37nm,1.1s,mb4.9
QUIF **Quistinic 79.67 348** eP **P 09 36 31.5 -0.3**
QUIF pmax pmax
comp=Z,18nm,1.1s,mb4.9
QUIF **Quistinic 79.67 348** eP **P 09 36 31.5 -0.3**
comp=Z,18nm,1.1s,mb4.9
AVF **Avril sur Loir 79.77 343** eP **P 09 36 32.4 +0.1**
comp=Z,90nm,1.1s,mb5.3
AVF **Avril sur Loir 79.77 343** eP **P 09 36 32.4 +0.1**
AVF pmax pmax
comp=Z,45nm,1.1s,mb5.3
AVF **Avril sur Loir 79.77 343** eP **P 09 36 32.4 +0.1**
comp=Z,45nm,1.1s,mb5.3
SKO **Skopje 79.80 329** eP **P 09 36 30.9 -1.7**
STIP **Stip 79.81 329** eP **P 09 36 31.6 -1.0**
SMF **Signal de Mont 79.82 343** eP **P 09 36 32.7 +0.1**
comp=Z,68nm,1.1s,mb5.2
SMF **Signal de Mont 79.82 343** eP **P 09 36 32.7 +0.1**
SMF pmax pmax
comp=Z,34nm,1.1s,mb5.2
SMF **Signal de Mont 79.82 343** eP **P 09 36 32.7 +0.1**
comp=Z,34nm,1.1s,mb5.2
NAY **Al-Naaiem 79.84 305** eP **P 09 36 32.2 -0.8**
NAY AMb AMB 09 36 33.6
comp=Z,94nm,0.9s,mb5.7
SRS **Serrai 79.87 328** P **P 09 36 30.8 -2.2**
QRN **Al-Qurain 79.89 304** eP **P 09 36 32.8 -0.6**
QRN AMb AMB 09 36 33.8
comp=Z,153nm,0.7s,mb6.0
RDF **Al-Radifah 79.94 304** eP **P 09 36 33.1 -0.5**
RDF AMb AMB 09 36 34.7
comp=Z,307nm,1.0s,mb6.2
VAY **Valandovo 80.02 328** eP **P 09 36 32.6 -1.2**
VAY **Valandovo 80.02 328** P **P 09 36 33.3 -0.5**
BGF **Bois d'Agland 80.08 344** eP **P 09 36 34.2 +0.2**
comp=Z,25nm,0.7s,mb5.0
BGF **Bois d'Agland 80.08 344** eP **P 09 36 34.2 +0.2**
BGF pmax pmax
comp=Z,12nm,0.7s,mb4.9
BGF **Bois d'Agland 80.08 344** eP **P 09 36 34.2 +0.2**
comp=Z,12nm,0.7s,mb5.0
SOH **Sokhos 80.21 328** P **P 09 36 33.4 -1.4**
ISP **Isparta 80.26 321** eP **P 09 36 35.3 +0.1**
ISP pmax pmax
comp=Z,55nm,1.3s,mb5.3
ISP **Isparta 80.26 321** eP **P 09 36 35.3 +0.1**
comp=Z,55nm,1.3s,mb5.3
ISP **Isparta 80.26 321** P **P 09 36 34.6 -0.6**
ISP **Isparta 80.26 321** ⇓iP **P 09 36 34.4 -0.8**
LPL **La Plagne 80.34 341** eP **P 09 36 36.5 +1.0**
comp=Z,83nm,1.1s,mb5.3
LPL **La Plagne 80.34 341** eP **P 09 36 36.5 +1.0**
LPL pmax pmax
comp=Z,41nm,1.1s,mb5.3
LPL **La Plagne 80.34 341** eP **P 09 36 36.5 +1.0**
comp=Z,41nm,1.1s,mb5.3
LPG **La Plagne 80.36 341** eP **P 09 36 36.7 +1.2**
comp=Z,98nm,1.1s,mb5.3
LPG **La Plagne 80.36 341** eP **P 09 36 36.7 +1.2**
LPG pmax pmax
comp=Z,49nm,1.1s,mb5.3
LPG **La Plagne 80.36 341** eP **P 09 36 36.7 +1.2**
comp=Z,49nm,1.1s,mb5.3
KRUS **Krusevo 80.40 329** eP **P 09 36 34.7 -1.1**
LIA **Limnos Island 80.41 326** P **P 09 36 36.0 +0.1**
LIA **Limnos Island 80.41 326** eP **P 09 36 34.9 -1.0**
OUR **Ouranopolis 80.44 327** P **P 09 36 33.8 -2.3**
TCF **Toulx Ste Croi 80.45 344** eP **P 09 36 36.3 +0.3**
comp=Z,45nm,0.9s,mb5.1
TCF **Toulx Ste Croi 80.45 344** eP **P 09 36 36.3 +0.3**
TCF pmax pmax
comp=Z,23nm,0.9s,mb5.1
TCF **Toulx Ste Croi 80.45 344** eP **P 09 36 36.3 +0.3**
comp=Z,22nm,0.9s,mb5.1
HORT **Hortiatis 80.50 328** P **P 09 36 35.2 -1.2**
PLDF **La Plantade 80.51 343** eP **P 09 36 38.3 +1.9**
AGO **Saint Agoulin 80.52 343** eP **P 09 36 38.3 +1.9**
MFF **Saint Martin d 80.53 346** eP **P 09 36 36.7 +0.3**
comp=Z,54nm,1.1s,mb5.1
MFF **Saint Martin d 80.53 346** eP **P 09 36 36.7 +0.3**
MFF pmax pmax
comp=Z,27nm,1.1s,mb5.1
MFF **Saint Martin d 80.53 346** eP **P 09 36 36.7 +0.3**
comp=Z,27nm,1.1s,mb5.1
PLG **Polygyros 80.58 327** P **P 09 36 36.0 -0.8**
OHR **Ohrid 80.78 329** eP **P 09 36 36.7 -1.2**
BNI **Bardonecchia 80.80 341** eP **P 09 36 39.1 +1.2**
BNI pmax pmax
comp=Z,33nm,1.0s,mb5.2
BNI **Bardonecchia 80.80 341** eP **P 09 36 39.1 +1.2**
comp=Z,33nm,1.0s,mb5.2
PYM **Petit Puy Mans 80.83 343** eP **P 09 36 39.9 +1.8**
TIR **Tirane 80.86 330** eP **P 09 36 38.3 0.0**
TIR pmax pmax
comp=Z,72nm,0.9s,mb5.6
TIR **Tirane 80.86 330** eP **P 09 36 38.3 0.0**
comp=Z,72nm,0.9s,mb5.6
TIR **Tirane 80.86 330** P **P 09 36 38.3 0.0**
FNA **Florina 80.89 329** P **P 09 36 38.0 -0.5**
PAIG **Paliouri 80.90 327** P **P 09 36 35.9 -2.7**
COLF **Collangettes 80.93 343** eP **P 09 36 39.3 +0.7**
COLF **Collangettes 80.93 343** eP **P 09 36 39.6 +1.0**
CRE **Caprese Michel 80.96 337** P **P 09 36 39.3 +0.5**
SSB **Saint Sauveur 81.00 342** eP **P 09 36 39.5 +0.5**
SSB **Saint Sauveur 81.00 342** eP **P 09 36 39.7 +0.7**
SSB e*PP pP 09 36 48.8 0.0
SSB pmax pmax
comp=Z,26nm,1.0s,mb5.1

SSB Saint Sauveur 81.00 342 *eP* **P 09 36 39.7 +0.7**
comp=Z,26nm,1.0s,mb5.1
SSB *ep*P pP 09 36 48.8 -0.1
ORIF Oris-en-Rattie 81.09 341 *eP* **P 09 36 39.3 -0.2**
comp=Z,49nm,0.9s,mb5.2
ORIF *e*MLR MLR
comp=Z,964nm,17.0s,MS4.9
ORIF Oris-en-Rattie 81.09 341 *eP* **P 09 36 39.3 -0.2**
ORIF pmax pmax
comp=Z,25nm,0.9s,mb5.1
ORIF Oris-en-Rattie 81.09 341 *eP* **P 09 36 39.3 -0.2**
comp=Z,24nm,0.9s,mb5.1
MBDF Montbardon 81.09 341 *eP* **P 09 36 40.0 +0.5**
comp=Z,36nm,0.9s,mb5.0
MBDF Montbardon 81.09 341 *eP* **P 09 36 40.0 +0.5**
MBDF pmax pmax
comp=Z,18nm,0.9s,mb5.0
MBDF Montbardon 81.09 341 *eP* **P 09 36 40.0 +0.5**
comp=Z,18nm,0.9s,mb5.0
LIT Litokhoron 81.15 328 P **P 09 36 38.0 -1.9**
FRNF Fournols 81.26 344 *eP* **P 09 36 41.2 +0.8**
LBL Lubilhac 81.29 343 *eP* **P 09 36 42.5 +2.0**
VIVF Saint-Julien-I 81.39 342 *eP* **P 09 36 41.7 +0.7**
comp=Z,72nm,1.2s,mb5.2
VIVF Saint-Julien-I 81.39 342 *eP* **P 09 36 41.7 +0.7**
VIVF pmax pmax
comp=Z,36nm,1.2s,mb5.2
VIVF Saint-Julien-I 81.39 342 *eP* **P 09 36 41.7 +0.7**
comp=Z,36nm,1.2s,mb5.2
CHOS Chios Island 81.44 325 *eP* **P 09 36 40.5 -1.0**
RJF Les Rejaudoux 81.52 344 *eP* **P 09 36 42.1 +0.3**
comp=Z,93nm,1.3s,mb5.2
RJF *e*MLR MLR
comp=Z,859nm,18.5s,MS4.8
RJF Les Rejaudoux 81.52 344 *eP* **P 09 36 42.1 +0.3**
RJF pmax pmax
comp=Z,47nm,1.3s,mb5.3
RJF MLR MLR
comp=Z,860nm,18.5s,MS5.1
RJF Les Rejaudoux 81.52 344 *eP* **P 09 36 42.1 +0.3**
comp=Z,46nm,1.3s,mb5.2
RJF LR LR
comp=Z,860nm,18.5s,MS5.1
XOR Xorichti 81.57 327 P **P 09 36 39.9 -2.2**
CSS Prodhromos 81.59 318 *eP* **P 09 36 41.3 -1.0**
comp=Z,63nm,1.1s,mb5.5
CSS Prodhromos 81.59 318 P **P 09 36 40.8 -1.5**
SAOF Saorge 81.63 340 *eP* **P 09 36 41.8 -0.6**
AUTN L'Aution 81.65 340 *eP* **P 09 36 45.3 +2.8**
TOUF Mont Tournerai 81.67 340 *eP* **P 09 36 42.5 -0.1**
SBF Sospel 81.78 340 *eP* **P 09 36 42.9 -0.2**
comp=Z,38nm,0.7s,mb5.1
SBF Sospel 81.78 340 *eP* **P 09 36 42.9 -0.2**
SBF pmax pmax
comp=Z,19nm,0.7s,mb5.1
SBF Sospel 81.78 340 *eP* **P 09 36 42.9 -0.2**
comp=Z,19nm,0.7s,mb5.1
AQU L'Aquila 81.78 335 P **P 09 36 44.6 +1.4**
AQU L'Aquila 81.78 335 *eP* **P 09 36 44.4 +1.2**
comp=Z,71nm,1.0s,mb5.5
THL Klokotos Trika 81.79 328 P **P 09 36 41.4 -1.9**
CAF Calviac 81.80 344 *eP* **P 09 36 44.1 +0.9**
comp=Z,94nm,1.1s,mb5.3
CAF Calviac 81.80 344 *eP* **P 09 36 44.1 +0.9**
CAF pmax pmax
comp=Z,47nm,1.1s,mb5.3
CAF Calviac 81.80 344 *eP* **P 09 36 44.1 +0.9**
comp=Z,47nm,1.1s,mb5.3
RGNG Rignano Grg 81.82 333 P **P 09 36 43.7 +0.3**
REVF Revere 81.91 340 *eP* **P 09 36 43.4 -0.4**
LFF La Frestale 82.01 345 *eP* **P 09 36 44.9 +0.6**
comp=Z,118nm,1.1s,mb5.4
LFF La Frestale 82.01 345 *eP* **P 09 36 44.9 +0.6**
LFF pmax pmax
comp=Z,59nm,1.1s,mb5.4
LFF La Frestale 82.01 345 *eP* **P 09 36 44.9 +0.6**
comp=Z,59nm,1.1s,mb5.4
SMRF Simiane la Rot 82.06 341 *eP* **P 09 36 45.3 +0.7**
comp=Z,26nm,0.9s,mb4.8
SMRF Simiane la Rot 82.06 341 *eP* **P 09 36 45.3 +0.7**
comp=Z,26nm,0.9s,mb5.2
PPT Papeete 82.08 131 *eS* S 09 47 00.1 +2.8
comp=Z,446nm,29.2s
PPT *e*LR LR 10 02 34.4
comp=Z,808nm,23.5s,baz=333
AGG Agios Georgios 82.17 327 P **P 09 36 42.0 -3.3**
FRF La Foret Royal 82.23 340 *eP* **P 09 36 44.6 -0.9**
comp=Z,105nm,1.5s,mb5.2
FRF La Foret Royal 82.23 340 *eP* **P 09 36 44.6 -0.9**
FRF pmax pmax
comp=Z,53nm,1.5s,mb5.2
FRF La Foret Royal 82.23 340 *eP* **P 09 36 44.6 -0.9**
comp=Z,52nm,1.5s,mb5.2
MTCE Montecelio 82.26 335 P **P 09 36 45.2 -0.5**
LKR Lokris 82.28 327 P **P 09 36 43.6 -2.3**
LKR Lokris 82.28 327 *eP* **P 09 36 44.5 -1.4**
LASF Ste Croix 82.29 342 *eP* **P 09 36 45.6 -0.2**
comp=Z,52nm,1.2s,mb5.0
IGT Igoumenitsa 82.36 329 P **P 09 36 45.2 -1.1**
MMAI Mount Meron Ar 82.36 315 P **P 09 36 46.9 +0.4**
comp=Z,23nm,0.5s,mb5.3,baz=40,slow=6.8,SNR=42
TOLF Tolfa 82.41 336 P **P 09 36 46.4 -0.1**
LMR La Mourre 82.48 340 *eP* **P 09 36 46.7 -0.1**
comp=Z,67nm,1.1s,mb5.2
LMR La Mourre 82.48 340 *eP* **P 09 36 46.7 -0.1**
LMR pmax pmax
comp=Z,33nm,1.1s,mb5.2
LMR La Mourre 82.48 340 *eP* **P 09 36 46.7 -0.1**
comp=Z,33nm,1.1s,mb5.2
MRB1 Monte Rocchett 82.50 334 P **P 09 36 48.3 +1.3**
ARG Arkhangelos 82.59 322 *eP* **P 09 36 45.1 -2.4**
RFI Roccamonfina 82.61 334 P **P 09 36 48.4 +0.9**
comp=Z,13nm,1.1s,mb4.9
DSF Desfina 82.66 327 P **P 09 36 46.0 -1.8**
PGF Pioggiola 82.68 338 *eP* **P 09 36 47.6 -0.3**
comp=Z,75nm,1.3s,mb5.2
PGF Pioggiola 82.68 338 *eP* **P 09 36 47.6 -0.3**
PGF pmax pmax
comp=Z,37nm,1.3s,mb5.2
PGF Pioggiola 82.68 338 *eP* **P 09 36 47.6 -0.3**
comp=Z,37nm,1.3s,mb5.3
KALE Kalithea 82.81 327 P **P 09 36 47.5 -1.1**
EFP Efpalio 82.85 328 P **P 09 36 48.6 -0.2**
LAKA Lakka 83.00 327 P **P 09 36 48.4 -1.2**
GUR Goura 83.15 327 P **P 09 36 50.0 -0.4**
MGR Morigerati 83.25 333 P **P 09 36 49.8 -1.1**
MTLF Montolieu 83.31 343 *eP* **P 09 36 50.5 -0.6**
comp=Z,42nm,1.1s,mb5.1
MTLF Montolieu 83.31 343 *eP* **P 09 36 50.5 -0.6**
MTLF pmax pmax
comp=Z,21nm,1.1s,mb5.1
MTLF Montolieu 83.31 343 *eP* **P 09 36 50.5 -0.6**
comp=Z,21nm,1.1s,mb5.1
KARP Karpathos 83.55 322 *eP* **P 09 36 51.0 -1.5**
TIP Timpagrande 83.79 332 *eP* **P 09 36 54.1 +0.5**
comp=Z,52nm,1.1s,mb5.6
TIP *e*pP pP 09 37 10.4 +6.9
MLS Moulis 83.88 344 *eP* **P 09 36 52.3 -1.7**
EPF Esparros 83.93 345 *eP* **P 09 36 54.2 -0.1**
comp=Z,35nm,1.0s,mb5.1
EPF Esparros 83.93 345 *eP* **P 09 36 54.2 -0.1**
EPF pmax pmax
comp=Z,17nm,1.0s,mb5.1
EPF Esparros 83.93 345 *eP* **P 09 36 54.2 -0.1**
comp=Z,18nm,1.0s,mb5.1
ITM Ithomi 83.97 327 P **P 09 36 52.2 -2.4**
SJPF Ste Jean 84.10 346 *eP* **P 09 36 54.9 -0.3**
comp=Z,29nm,1.0s,mb5.1
SJPF Ste Jean 84.10 346 *eP* **P 09 36 54.9 -0.3**
SJPF pmax pmax
comp=Z,15nm,1.0s,mb5.1
SJPF Ste Jean 84.10 346 *eP* **P 09 36 54.9 -0.3**
comp=Z,15nm,1.0s,mb5.1
ZKR Zakros 84.29 323 P **P 09 36 54.6 -1.7**
ZKR Zakros 84.29 323 *eP* **P 09 36 55.9 -0.4**
NPS Neapolis 84.38 323 *eP* **P 09 36 53.9 -2.8**
KYTH Kithira 84.40 326 *eP* **P 09 36 55.8 -1.0**
LAST Lasithi 84.52 324 P **P 09 36 55.9 -1.6**
LAST Lasithi 84.52 324 *eP* **P 09 36 56.6 -0.9**
STKA Stephens Creek 84.61 195 *eP* **P 09 36 56.3 -1.3**
comp=Z,4.0nm,0.9s,mb4.5
STKA Stephens Creek 84.61 195 P **P 09 36 57.7 +0.1**
comp=Z,2.8nm,0.9s,mb4.4,baz=341,slow=9.5,SNR=5.9
STKA Stephens Creek 84.61 195 P **P 09 36 57.7 +0.1**
IDI Anoyia 84.62 324 *eP* **P 09 36 56.0 -2.0**

XRY Khrisi 84.69 323 *eP* **P 09 36 58.8 +0.5**
VAM Vamos 84.77 325 *eP* **P 09 36 58.3 -0.4**
KARN Karanos 84.88 325 P **P 09 36 57.4 -1.8**
KARN Karanos 84.88 325 *eP* **P 09 36 58.7 -0.5**
CEL Celeste 84.89 332 *eP* **P 09 36 59.0 -0.2**
comp=Z,14nm,0.8s,mb5.1
SIVA Sivas 84.89 324 *eP* **P 09 36 59.2 -0.1**
PBRG Braganca 86.12 350 *eP* **P 09 37 09.7 +4.4**
comp=Z,24nm,1.3s,mb5.3
PCAB Cabril 86.36 350 *eP* **P 09 37 13.2 +6.7**
comp=Z,34nm,1.4s,mb5.4
FORT Forrest 86.53 207 *eP* **P 09 37 10.5 +3.3**
comp=Z,16nm,0.8s,mb5.3
PVRL Vila Real 86.75 350 *eP* **P 09 37 12.9 +4.5**
comp=Z,34nm,1.3s,mb5.4
MVO Moncorvo 86.79 350 *eP* **P 09 37 12.4 +3.8**
comp=Z,31nm,0.9s,mb5.5
WDD Wield Dalam 87.52 332 *eP* **P 09 37 14.6 +2.4**
comp=Z,138nm,0.8s
ESDC Sonseca Array 87.87 347 P **P 09 37 12.9 -0.9**
comp=Z,1.8nm,0.7s,mb4.4,baz=3.0,slow=4.6,SNR=13
ESLA Sonseca Array 87.87 347 *eP* **P 09 37 16.6 +2.7**
comp=Z,5.3nm,1.1s,mb4.7
PCBR Castelo Branco 88.15 350 *eP* **P 09 37 20.9 +5.7**
comp=Z,11nm,1.1s,mb5.0
KEST Kesra 89.06 336 P **P 09 37 20.8 +1.2**
comp=Z,14nm,0.9s,mb5.3,baz=296,slow=1.7,SNR=32
KEST LR LR 10 24 06.4
comp=Z,180nm,18.6s,MS4.5,baz=302,slow=40
RKT Rikitea 94.03 123 *eS* S 09 48 47.1 -3.6
comp=Z,255nm,36.2s
RKT *e*LR LR 10 08 10.7
comp=Z,841nm,22.8s,baz=321
TORD Torodi Ar. Bea 112.58 336 Pdiff Pdif 09 39 05.1 -0.6
comp=Z,0.5nm,1.0s,baz=158,slow=24,SNR=3.2
LPAZ La Paz 128.56 65 PKP PKPdf 09 43 30.7 -0.8
comp=Z,1.4nm,0.9s,baz=335,slow=6.5,SNR=4.5
BOSA Boshof 138.85 286 PKP PKPdf 09 43 52.1 +1.6
comp=Z,1.9nm,0.8s,baz=155,slow=5.0,SNR=3.2
QSPA South Pole Qui 141.40 180 *e*PKPpre PKPpre 09 43 47.3
QSPA *e*PKPdf PKPdf 09 43 54.2 +0.6
CPUP Villa Florida 142.58 62 PKP PKPdf 09 43 56.9 -0.4
comp=Z,0.4nm,0.4s,baz=255,slow=11,SNR=3.3
PLCA Paso Flores 144.51 92 PKP PKPdf 09 43 58.5 -1.7
comp=Z,3.7nm,1.0s,baz=288,slow=1.3,SNR=3.9
PLCA Paso Flores 144.51 92 PKP PKPdf 09 43 58.5 -1.7
MAIT Maitri 155.80 206 *e*PKPdif PKPab 09 44 43.5 -0.3

IDC 01 09:32:35.2±1.3, 59°.23S×26°.05W, h0km, mb4.4/2, mb1 4.3/2, mb1mx3.8/13, mbtmp4.3/2, Error ellipse: s-maj=95.2km s-min=48.5km az=101.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**75.55**	**28**	P	P	09 44 21.3	0.0
	3.7nm,0.6s,baz=199,slow=6.8,SNR=34						
ASAR	**Alice Springs**	**95.77**	**162**	P	P	09 46 02.9	-0.1
	0.5nm,1.0s,baz=176,slow=4.6,SNR=5.5						
FINES	**FINESS Array B**	**126.90**	**28**	PKP	PKPdf	09 51 39.0	-0.2
	1.0nm,0.7s,baz=278,slow=2.1,SNR=6.5						
ARCES	**ARCESS Array B**	**133.66**	**22**	PKP	PKPdf	09 51 51.6	-0.2
	1.3nm,1.0s,baz=204,slow=2.4,SNR=6.1						
YKA	**Yellowknife Ar**	**138.90**	**315**	PKP	PKPdf	09 52 02.2	+0.5
	0.8nm,0.6s,baz=127,slow=2.4,SNR=17						
INK	**Inuvik**	**148.60**	**317**	PKPbc	PKPbc	09 52 21.4	-0.8
	1.5nm,0.7s,baz=129,slow=2.9,SNR=7.5						

*MOS **01** 09:36:54.1±1.6, 51°.64N×159°.11E, h9km, mb4.4/7, Error ellipse: s-maj=17.2km s-min=7.5km az=86.3*
*NEIC **01** 09:36:58.9±1.0, 51°.56N×159°.26E, h35km, mb4.3/4, Error ellipse: s-maj=18.4km s-min=16.9km az=157.0*
*KRSC **01** 09:36:58.4±1.0, 51°.69N×159°.56E, h13km±13km, ML4.4*
*ISCJB **01** 09:36:58.3±0.9, 51°.53N±0°.05×159°.50E±0°.08, h51km±6km, mb4.1/21, Error ellipse: s-maj=11.1km s-min=5.4km az=136.3*
*IDC **01** 09:37:03.9±2.8, 51°.83N×159°.19E, h71km±21km, mb3.5/14, mb1 3.7/14, mb1mx3.6/26, mbtmp3.5/14, Error ellipse: s-maj=26.9km s-min=16.2km az=161.0*
ISC 01 09:36:59.9±0.9, 51°.55N±0°.05×159°.44E±0°.08, h48km±6km, n56, σ1°19/70, mb4.1/21, 5C, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	**Gorelyy**	**1.31**	**320**	P	**Pn**	**09 37 21.7**	**0.0**
GRL				*i* S	**Sn**	**09 37 38.7**	**+0.6**
PET	**Petropavlovsk**	**1.55**	**342**	⇑*i*PN	**Pn**	**09 37 23.3**	**-1.7**
PET	**Petropavlovsk**	**1.55**	**342**	*e*P	**Pn**	**09 37 24.3**	**-0.7**
PET				*i* S	**Sn**	**09 37 43.2**	**-0.8**
PET	**Petropavlovsk**	**1.55**	**342**	*e*Pn	**Pn**	**09 37 23.8**	**-1.3**
PET				*e*Sn	**Sn**	**09 37 46.7**	**+2.8**
SPN	**Mys Shipunski**	**1.59**	**13**	*e*P	**Pn**	**09 37 25.7**	**+0.1**
SPN				*i* S	**Sn**	**09 37 45.6**	**+0.7**
SDLR	**Sedlovina**	**1.76**	**349**	*e*P	**Pn**	**09 37 27.6**	**-0.3**
SDLR				*i* S	**Sn**	**09 37 48.9**	**-0.2**
MIPR	**Malaya Ipel'ka**	**1.81**	**295**	*e*P	**Pn**	**09 37 29.3**	**+0.7**
MIPR				*i* S	**Sn**	**09 37 51.6**	**+1.2**
PEA0B	**Petropavlovsk-**	**1.89**	**326**	*e*Pn	**Pn**	**09 37 29.7**	**+0.1**
PEA0B				*e*Sn	**Sn**	**09 37 57.6**	**+5.4**
PETK	**Petropavlovsk-**	**1.89**	**326**	P	**Pn**	**09 37 30.0**	**+0.3**
	47nm,0.3s,baz=122,slow=16,SNR=159						
PETK				S	**Sn**	**09 37 58.0**	**+5.7**
	8.8nm,0.3s,baz=322,slow=9.4,SNR=4.7						
SKR	**Severo-Kuril's**	**2.27**	**249**	*e*PN	**Pn**	**09 37 32.8**	**-2.0**
SKR				*e*S	**Sn**	**09 38 01.2**	**-0.3**
SKR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
SKR				smax			
	comp=N,11nm,1.0s						
SKR				smax			
	comp=E,15nm,0.5s						
GNL	**Ganaly**	**2.33**	**338**	*e*P	**Pn**	**09 37 37.3**	**+1.6**
GNL				*e*S	**Sn**	**09 38 05.9**	**+2.8**
KII	**Karymskiy**	**2.49**	**0**	*e*P	**Pn**	**09 37 36.7**	**-1.2**
KII				*i* S	**Sn**	**09 38 04.6**	**-2.4**
ALID	**Alaid**	**2.54**	**256**	*e*P	**Pn**	**09 37 38.7**	**+0.1**
ALID				*i* S	**Sn**	**09 38 08.0**	**-0.2**
MKZ	**Mys Kozlova**	**3.31**	**24**	*e*P	**Pn**	**09 37 46.1**	**-3.0**
MKZ				*i* S	**Sn**	**09 38 20.5**	**-6.7**
KMNR	**Kamenistaya**	**4.24**	**6**	P	**Pn**	**09 38 02.9**	**+1.1**
KPT	**Kopyto**	**4.45**	**6**	P	**Pn**	**09 38 04.4**	**-0.3**
ZLN	**Zelenaya**	**4.55**	**10**	P	**Pn**	**09 38 07.2**	**+1.1**
KRSR	**Krestovskiy**	**4.72**	**8**	P	**Pn**	**09 38 09.5**	**+1.0**
SRDR	**Sredinnyy**	**4.78**	**2**	P	**Pn**	**09 38 08.9**	**-0.3**
KBTR	**Krutoberegovo**	**5.08**	**22**	*e*P	**Pn**	**09 38 11.6**	**-1.7**
KBTR				*i* S	**Sn**	**09 39 05.9**	**-4.6**
SRKR	**Sorokina**	**5.21**	**11**	P	**Pn**	**09 38 14.6**	**-0.6**
YAK	**Yakutsk**	**19.20**	**315**	*e*P	**Pn**	**09 41 16.9**	**-3.7**
YAK				pmax	pmax		
	comp=Z,20nm,0.7s						
YAK	**Yakutsk**	**19.20**	**315**	*e*P	**Pn**	**09 41 16.9**	**-3.7**
	comp=Z,20nm,0.7s						
MJAR	**Matsushiro Arr**	**21.29**	**233**	P	**P**	**09 41 43.6**	**+1.4**
	comp=Z,3.5nm,1.0s,mb3.6,baz=24,slow=10,SNR=7.6						
TIXI	**Tiksi**	**24.33**	**337**	*e*P	**P**	**09 42 11.8**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.0						
TIXI	**Tiksi**	**24.33**	**337**	*e*P	**P**	**09 42 11.3**	**-1.3**
INK	**Inuvik**	**35.34**	**36**	P	**P**	**09 43 50.4**	**+0.3**
	comp=Z,1.1nm,0.8s,mb3.8,baz=266,slow=9.7,SNR=4.1						
INK	**Inuvik**	**35.34**	**36**	*e*P	**P**	**09 43 50.6**	**+0.5**
INK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
INK	**Inuvik**	**35.34**	**36**	*e*P	**P**	**09 43 50.6**	**+0.5**
	comp=Z,1.5nm,0.8s,mb4.0						
YKA	**Yellowknife Ar**	**44.58**	**41**	P	**P**	**09 45 07.8**	**+1.1**
	comp=Z,0.5nm,1.0s,mb3.3,baz=296,slow=6.2,SNR=3.2						
KURK	**Kurchatov**	**48.22**	**303**	*e*P	**P**	**09 45 33.6**	**-1.7**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
KURK	**Kurchatov**	**48.22**	**303**	*e*P	**P**	**09 45 33.6**	**-1.7**
	comp=Z,4.9nm,1.0s,mb4.5						
KBS	**Kingsbay**	**48.35**	**352**	*ce*P	**P**	**09 45 37.9**	**+1.9**
KBS				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
MKAR	**Makanchi Array**	**48.47**	**297**	P	**P**	**09 45 36.4**	**-1.0**
	comp=Z,0.3nm,0.2s,mb3.9,baz=28,slow=6.5,SNR=2.8						
BVAR	**Borovoye Array**	**51.04**	**309**	P	**P**	**09 45 55.1**	**-1.6**
	comp=Z,1.4nm,0.6s,mb4.1,baz=61,slow=7.0,SNR=9.0						
BRVK	**Borovoye**	**51.07**	**309**	*ce*P	**P**	**09 45 56.2**	**-0.8**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
BRVK	**Borovoye**	**51.07**	**309**	*e*P	**P**	**09 45 55.0**	**-2.0**
	comp=Z,1.5nm,0.6s,mb4.1						
ARCES	**ARCESS Array B**	**54.63**	**342**	P	**P**	**09 46 20.7**	**-2.3**
	comp=Z,3.5nm,1.0s,mb4.3,baz=46,slow=6.9,SNR=6.3						
ARCES	**ARCESS Array B**	**54.63**	**342**	P	**P**	**09 46 20.7**	**-2.3**
CMAR	**Chiang Mai Arr**	**57.48**	**258**	P	**P**	**09 46 46.1**	**+2.2**
	comp=Z,0.6nm,0.3s,mb4.0,baz=11,slow=5.7,SNR=4.4						
PDAR	**Pinedale Array**	**58.64**	**60**	P	**P**	**09 46 54.0**	**+2.2**
	comp=Z,0.4nm,0.9s,mb3.5,baz=299,slow=3.7,SNR=2.9						
FINES	**FINESS Array B**	**61.38**	**337**	P	**P**	**09 47 09.8**	**-0.5**
	comp=Z,1.2nm,0.7s,mb4.1,baz=56,slow=12,SNR=5.8						
NB2	**NORSAR Subarra**	**64.91**	**344**	P	**P**	**09 47 33.4**	**-0.3**
	comp=Z,1.0nm,0.7s,mb4.0,baz=24,slow=6.5						
NOA	**NORSAR Array B**	**64.91**	**344**	P	**P**	**09 47 33.9**	**+0.2**
	comp=Z,1.7nm,0.8s,mb4.1,baz=22,slow=6.5,SNR=7.3						
AKASG	**Malin Array Be**	**69.73**	**329**	P	**P**	**09 48 03.6**	**-0.7**
	comp=Z,3.7nm,0.7s,mb4.4,baz=29,slow=6.1,SNR=10						
AKASG	**Malin Array Be**	**69.73**	**329**	*ce*P	**P**	**09 48 03.7**	**-0.6**
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TXAR	**Lajitas Array**	**71.62**	**66**	P	**P**	**09 48 17.2**	**+1.0**
	comp=Z,0.2nm,0.7s,mb3.2,baz=115,slow=8.4,SNR=2.9						
CLL	**Collm**	**73.65**	**339**	*e*P	**P**	**09 48 28.0**	**+0.1**
BUR08	**Bucovina Ar. S**	**73.69**	**330**	*e*P	**P**	**09 48 28.4**	**+0.2**
GERES	**GERESS Array B**	**75.79**	**337**	P	**P**	**09 48 40.4**	**+0.1**
	comp=Z,0.2nm,0.4s,mb3.4,baz=20,slow=4.3,SNR=5.5						
BRTR	**Keskin Array B**	**77.55**	**320**	P	**P**	**09 48 51.0**	**+0.6**
	comp=Z,1.6nm,0.9s,mb4.0,baz=36,slow=3.2,SNR=9.5						
BRTR	**Keskin Array B**	**77.55**	**320**	*ce*P	**P**	**09 48 51.0**	**+0.6**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MIB	**Mutribah**	**79.51**	**305**	*e*P	**P**	**09 49 00.8**	**-0.5**
MIB				AMb	AMB	09 49 02.0	
	comp=Z,11nm,1.0s,mb4.7						
NAY	**Al-Naaiem**	**80.01**	**305**	*e*P	**P**	**09 49 03.0**	**-1.1**
NAY				AMb	AMB	09 49 04.7	
	comp=Z,7.6nm,1.1s,mb4.5						
RDF	**Al-Radifah**	**80.11**	**304**	*e*P	**P**	**09 49 04.2**	**-0.4**
RDF				AMb	AMB	09 49 06.3	
	comp=Z,23nm,1.2s,mb5.0						
COCO	**West Island**	**83.28**	**241**	*i* P	**P**	**09 49 23.4**	**+2.1**

MAN 01 09:38:04, 7°.95N×122°.31E, h32km, mb4.0, ML2.8, MS2.4, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPIL	**Ipil**	**0.30**	**123**	*e*P	Pb	09 38 13.4	+1.7
IPIL				*e*S	Sb	09 38 19.2	+2.3
ZMPH	**Zamboanga City**	**1.02**	**194**	⇑*i*P	Pn	09 38 22.4	+0.2
ZMPH				*i* S	Sn	09 38 36.2	+0.8
PAGZ	**Pagadian**	**1.06**	**96**	*e*P	Pn	09 38 24.3	+1.6
PAGZ				*e*S	Sn	09 38 34.5	-1.9
GUIM	**Jordan**	**2.67**	**6**	*e*P	Pn	09 38 45.7	+0.9

*IDC **01** 09:40:36.2±0.9, 32°.71S×73°.23W, h0km, mb3.9/5, mb1 4.1/8, mb1mx4.0/14, mbtmp3.8/8, ML3.7/3, MS3.0/1, Ms1 2.9/1, ms1mx2.4/18, Error ellipse: s-maj=28.7km s-min=22.5km az=29.0*
*NEIC **01** 09:40:39.9, 32°.90S×73°.09W, h19km, ML4.1(GUC), After GUC.*
*GUC **01** 09:40:39.9±0.7, 32°.90S×73°.09W, h19km±3km, MD4.1, ML4.2*
*ISCJB **01** 09:40:39.3±0.6, 32°.79S±0°.04×73°.24W±0°.04, h33km, mb3.9/5, Error ellipse: s-maj=5.8km s-min=4.8km az=41.1*
ISC 01 09:40:39.8±1.6, 32°.79S±0°.04×73°.20W±0°.05, h24km±13km, n34, σ0°77/52, mb3.9/5, 13C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHA	**Instituto Hidr**	**1.33**	**101**	⇑*i*P	**Pn**	**09 41 01.1**	**-1.8**
IHA				*i* S	**Sn**	**09 41 16.9**	**-3.1**
LNV	**Longovilo**	**1.90**	**128**	⇑*i*P	**Pn**	**09 41 09.8**	**-0.8**
LNV				*i* S	**Sn**	**09 41 32.4**	**-1.4**
TACH	**Talagante**	**2.08**	**115**	*e*P	**Pn**	**09 41 12.7**	**-0.5**
TACH				*i* S	**Sn**	**09 41 37.6**	**-0.8**
PEL	**Peldehue**	**2.15**	**100**	⇓*i*P	**Pn**	**09 41 13.6**	**-0.5**
PEL				*i* S	**Sn**	**09 41 39.8**	**-0.1**
PEL				AML	AML	09 41 41.0	
	comp=E,5μm,0.3s						
SAN	**Santiago**	**2.23**	**108**	⇑*i*P	**Pn**	**09 41 15.2**	**-0.1**
SAN				*i* S	**Sn**	**09 41 42.2**	**+0.2**
SAN	**Santiago**	**2.23**	**108**	⇑*i*P	**Pn**	**09 41 15.2**	**-0.1**
SAN				*i* S	**Sn**	**09 41 42.2**	**+0.2**
SAN				AML	AML	09 41 46.2	
	comp=E,2μm,0.8s						
ANTU	**Antumapu**	**2.29**	**111**	⇑*i*P	**Pn**	**09 41 16.2**	**+0.1**
ANTU				*i* S	**Sn**	**09 41 44.1**	**+0.6**
ANTU	**Antumapu**	**2.29**	**111**	⇑*i*P	**Pn**	**09 41 16.2**	**+0.1**
ANTU				*i* S	**Sn**	**09 41 44.1**	**+0.6**
ANTU				AML	AML	09 41 45.4	
	comp=N,1μm,0.4s						
CLCH	**Cerro Calan**	**2.32**	**106**	⇑*i*P	**Pn**	**09 41 16.9**	**+0.5**
CLCH				*i* S	**Sn**	**09 41 44.5**	**+0.3**
CLCH	**Cerro Calan**	**2.32**	**106**	⇑*i*P	**Pn**	**09 41 16.9**	**+0.5**
CLCH				*i* S	**Sn**	**09 41 44.5**	**+0.3**
CLCH				AML	AML	09 41 47.9	
	comp=N,1μm,0.5s						
FSR	**Penalolen**	**2.35**	**108**	*e*P	**Pn**	**09 41 16.9**	**0.0**
FSR				*i* S	**Sn**	**09 41 45.2**	**+0.3**
PCH	**Pirque**	**2.40**	**111**	*e*P	**Pn**	**09 41 17.9**	**+0.3**
PCH				*i* S	**Sn**	**09 41 46.8**	**+0.6**
CHCH	**Chadas Angostu**	**2.42**	**119**	⇑*i*P	**Pn**	**09 41 17.6**	**-0.2**
CHCH				*i* S	**Sn**	**09 41 47.0**	**+0.2**
FCH	**Farellones**	**2.50**	**103**	⇑*i*P	**Pn**	**09 41 19.2**	**+0.2**
FCH				*i* S	**Sn**	**09 41 49.4**	**+0.7**
CACH	**El Canelo**	**2.55**	**122**	⇑*i*P	**Pn**	**09 41 20.2**	**+0.6**
CACH				*i* S	**Sn**	**09 41 50.9**	**+1.1**
NICH	**Los Niches**	**2.75**	**144**	*e*P	**Pn**	**09 41 22.8**	**+0.4**
NICH				*i* S	**Sn**	**09 41 54.6**	**-0.3**
TALC	**Talca**	**2.91**	**154**	⇑*i*P	**Pn**	**09 41 24.7**	**+0.2**
TALC				*i* S	**Sn**	**09 41 58.0**	**-0.8**
TALC	**Talca**	**2.91**	**154**	⇑*i*P	**Pn**	**09 41 24.7**	**+0.2**
TALC				*i* S	**Sn**	**09 41 58.0**	**-0.8**
TALC				AML	AML	09 42 02.8	
	comp=E,1μm,0.4s						
CCHI	**Chillan**	**3.92**	**167**	*i* P	**Pn**	**09 41 39.2**	**+0.8**
CCHI				*i* S	**Sn**	**09 42 22.6**	**-1.0**
CFAA	**Coronel Fontan**	**4.37**	**76**	Pn	**Pn**	**09 41 45.2**	**+0.5**
	comp=E,0.6nm,0.3s,baz=243,slow=11,SNR=57						
CFAA				Sn	**Sn**	**09 42 35.5**	**+0.7**
	comp=E,2.2nm,0.3

NEIC 01 09:42:26.0,59°.27N×152°.35W,h64km,ML2.9(AEIC),**1C, After AEIC.,Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUL	**Augustine Lava**	**0.57**	**282**	P	Pn	09 42 38.6	-0.4
AUL				S	Sn	09 42 49.1	+0.6
RSO	**Redoubt South**	**1.21**	**351**	*e*Pn	Pn	09 42 46.0	-0.9
RSO				*e*Sn	Sn	09 43 01.5	-1.1
KDAK	**Kodiak Island**	**1.50**	**185**	*ce*P	Pn	09 42 49.9	-0.8
KDAK	**Kodiak Island**	**1.50**	**185**	P	Pn	09 42 50.1	-0.6
KDAK				S	Sn	09 43 09.8	+0.5
SLKM	**Skilak Lake**	**1.64**	**40**	P	Pn	09 42 52.0	-0.6
SEW	**Seward**	**1.69**	**59**	P	Pn	09 42 52.1	-1.2
OHAK	**Old Harbor**	**2.11**	**194**	P	Pn	09 42 58.0	-1.1
FIB	**Fire Island**	**2.19**	**29**	P	Pn	09 43 00.1	0.0
RC01	**Rabbit Creek A**	**2.24**	**34**	P	Pn	09 43 00.5	-0.2
RC01				S	Sn	09 43 27.0	-0.3
SVW2	**Sparrevohn**	**2.44**	**320**	P	Pn	09 43 02.0	-1.5
SKT	**Skwentna**	**2.75**	**8**	P	Pn	09 43 06.9	-0.7
PMR	**Palmer**	**2.82**	**33**	P	Pn	09 43 07.5	-1.2
PMR				S	Sn	09 43 39.6	-1.8
KNK	**Knik Glacier**	**2.89**	**40**	P	Pn	09 43 08.7	-0.9
SML	**Sawmill**	**3.23**	**36**	P	Pn	09 43 13.1	-1.1
EYAK	**Cordova Ski Ar**	**3.56**	**66**	P	Pn	09 43 17.1	-1.7
PPLA	**Purkeypile**	**3.64**	**1**	P	Pn	09 43 19.7	-0.1
DIV	**Divide**	**3.78**	**58**	P	Pn	09 43 20.9	-0.8
TT01	**Tatalina**	**4.06**	**336**	P	Pn	09 43 24.2	-1.3
TTA	**Tatalina**	**4.08**	**336**	P	Pn	09 43 25.0	-0.7
BMRM	**Bremner River**	**4.23**	**63**	P	Pn	09 43 26.5	-1.4
KTH	**Kantishna Hill**	**4.35**	**8**	P	Pn	09 43 28.4	-1.1
CHUM	**Lake Minchumin**	**4.63**	**0**	P	Pn	09 43 32.5	-0.8
BPAW	**Bear Paw Mtn.**	**4.89**	**7**	P	Pn	09 43 35.2	-1.6
COLA	**College**	**6.00**	**19**	P	Pn	09 43 50.9	-1.2
IL1	**Eielson Array**	**6.09**	**23**	P	Pn	09 43 52.1	-1.1
PNL	**Peninsula**	**6.62**	**81**	P	Pn	09 43 59.3	-1.1
IM3	**Indian Mountai**	**6.77**	**355**	P	Pn	09 44 01.4	-1.2

BJI ***01*** *09:42:24.2,5°.23S×129°.89E,h10km,mB5.6/30,mb5.2/57, Ms5.0/41,Ms7 4.7/38*
IDC ***01*** *09:42:30.4±0.3,4°.62S×129°.51E,h0km,mb5.1/26, mb1 5.1/29,mb1mx5.1/31,mbtmp5.1/29,ML5.3/2,MS4.7/17, Ms1 4.7/17,ms1mx4.5/26,Error ellipse: s-maj=15.6km s-min=9.6km az=69.0*
NEIC ***01*** *09:42:32.2±0.1,4°.58S×129°.53E,h10km,mb5.5/77, MS4.9/91,Error ellipse: s-maj=5.3km s-min=3.7km az=60.0*
NEIC Felt [III] in the Kepulauan Banda.
ISCJB ***01*** *09:42:32.7±0.8,4°.59S±0°.02×129°.62E±0°.03,h26km±5km, mb5.4/140,MS4.8/125,Error ellipse: s-maj=4.9km s-min=3.7km az=147.2*
MOS ***01*** *09:42:33.6±1.7,4°.55S×129°.61E,h33km,mb5.6/42, MS4.7/23,Error ellipse: s-maj=10.3km s-min=5.5km az=109.0*
DJA ***01*** *09:42:34,4°.44S×129°.82E,h15km,Mw5.6/45*
GCMT ***01*** *09:42:35.5±0.1,4°.54S×129°.65E,h12km,MW5.4,Moment Tensor Solution. s69,c104; s94,c176; Moment tensor: Scale 10^17^Nm; M_{rr}-0.54±.02; $M_{\theta\theta}$-0.79±.02; $M_{\phi\phi}$1.33±.02; $M_{r\theta}$0.25±.06; $M_{\theta\phi}$0.85±.02; $M_{\phi r}$0.36±.06; Best double couple: $M_0$1.40000×10^17^ NP1:ϕ_s334.00000°,δ73.00000°, λ-178.00000°. NP2:ϕ_s243.00000°,δ88.00000°, λ-17.00000°. Principal axes: T 1.7100, Plg11.0000°, Azm290.0000°; N -0.6000, Plg73.0000°, Azm58.0000°; P -1.1200, Plg13.0000°, Azm197.0000°; Data Used: II IU IC CN G.*

ISC 01 09:42:36.4±0.4,4°.58S±0°.03×129°.62E±0°.03,h40km±3km, **h13**km±3.7km:**pP-P,n654,σ1§00/370,mb5.4/140,MS4.8/125, 76C-72D,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**1.67**	**302**	P	**Pn**	**09 42 59.1**	**-4.1**
NLAI	**Namlea**	**2.84**	**298**	P	**Pn**	**09 43 19.2**	**-0.1**
TLE	**Tual**	**3.28**	**109**	P	**Pn**	**09 43 26.0**	**+0.7**
SWI	**Sorong**	**4.04**	**24**	P	**Pn**	**09 43 34.7**	**-1.0**
TNTI	**Ternate**	**5.77**	**337**	P	**Pn**	**09 43 58.8**	**-0.8**
	1.7nm7μm365nm,1.2s						
KDI	**Kendari**	**7.01**	**275**	P	**Pn**	**09 44 16.9**	**+0.3**
	0.6nm3μm92nm,2.1s						
MNI	**Manado**	**7.65**	**321**	P	**Pn**	**09 44 25.3**	**-0.1**
	1.9nm5μm554nm,1.1s						
LUWI	**Luwuk**	**7.69**	**297**	P	**Pn**	**09 44 26.5**	**+0.6**
	3.1nm854nm,1.5s						
MMRI	**Maumere**	**8.37**	**241**	P	**Pn**	**09 44 40.6**	**+5.4**
	9μm561nm,1.2s						
KAKA	**Kakadu**	**8.55**	**161**	*e*P	**Pn**	**09 44 34.4**	**-3.3**
	95nm,0.6s						
KAKA	**Kakadu**	**8.55**	**161**	*e*Pn	**Pn**	**09 44 34.7**	**-3.0**
	249nm,0.6s						
KAKA	**Kakadu**	**8.55**	**161**	P	**Pn**	**09 44 35.3**	**-2.4**
	2μm244nm,0.6s						
APSI	**Ampana**	**8.75**	**294**	P	**Pn**	**09 44 40.9**	**+0.4**
	1μm,1.3s						
MRSI	**Marisa**	**9.17**	**303**	P	**Pn**	**09 44 46.6**	**+0.4**
	4μm285nm,1.4s						
SMPI	**Sarmi**	**9.43**	**74**	P	**Pn**	**09 44 48.5**	**-1.4**
	3μm236nm,1.5s						
KAPI	**Kappang**	**9.84**	**267**	Pn	**Pn**	**09 44 55.2**	**-0.3**
	342nm,1.5s,SNR=8.3						
KAPI	**Kappang**	**9.84**	**267**	Pn	**Pn**	**09 44 51.1**	**-4.4**
	0.2nm,0.3s,baz=144,slow=18,SNR=1.8						
KAPI				Sn	**Sn**	**09 46 43.2**	**-1.5**
	baz=35,slow=23,SNR=1.9						
KAPI				LR	LR	09 48 28.2	
	comp=Z,15μm,21.2s,baz=94,slow=37						
KAPI	**Kappang**	**9.84**	**267**	*e*Pn	**Pn**	**09 44 55.6**	**+0.1**
KAPI				Sn	**Sn**	**09 46 43.2**	**-1.5**
KAPI				LR	LR	09 48 28.2	
KAPI	**Kappang**	**9.84**	**267**	P	**Pn**	**09 44 55.7**	**+0.2**
	841nm44nm,1.6s						
TTSI	**Tana Toraja**	**9.90**	**278**	P	**Pn**	**09 44 58.9**	**+2.7**
	3μm177nm,1.1s						
JAY	**Jayapura**	**11.25**	**80**	P	**Pn**	**09 45 15.4**	**+0.6**
	7μm96nm,1.1s						
DAV	**Davao City (W)**	**12.25**	**341**	Pn	**Pn**	**09 45 25.6**	**-2.8**
	33nm,0.3s,baz=237,slow=10,SNR=1.8						
DAV				Sn	**Sn**	**09 47 47.6**	**+3.8**
	11nm,0.3s,baz=243,slow=21,SNR=1.7						
DAV	**Davao City (W)**	**12.25**	**341**	Pn	**Pn**	**09 45 25.6**	**-2.8**
DAV				Sn	**Sn**	**09 47 47.6**	**+3.8**
DAV	**Davao City (W)**	**12.25**	**341**	‖*e*P	**Pn**	**09 45 28.2**	**-0.2**
DMPH	**Davao City--Mi**	**12.29**	**340**	*e*P	**Pn**	**09 45 28.3**	**-0.6**
BUKP	**Musuan**	**13.18**	**340**	*e*P	**Pn**	**09 45 42.3**	**+1.2**
KBKI	**Kotabaru**	**13.48**	**275**	P	**Pn**	**09 45 47.9**	**+2.7**
	3μm119nm,1.3s						
FITZ	**Fitzroy Crossi**	**13.99**	**196**	*e*P	**Pn**	**09 45 45.6**	**-6.6**
	94nm,1.1s						
FITZ	**Fitzroy Crossi**	**13.99**	**196**	Pn	**Pn**	**09 45 46.3**	**-5.9**
	2.8nm,0.3s,baz=29,slow=9.1,SNR=40						
FITZ				Sn	**Sn**	**09 48 21.7**	**-4.6**
	1.2nm,0.3s,baz=87,slow=9.6,SNR=3.4						
FITZ	**Fitzroy Crossi**	**13.99**	**196**	*e*Pn	**Pn**	**09 45 46.0**	**-6.2**
	78nm,1.0s						
FITZ	**Fitzroy Crossi**	**13.99**	**196**	P	**Pn**	**09 45 46.6**	**-5.6**
KHKI	**Kahang-Kahang**	**14.42**	**254**	P	**Pn**	**09 46 04.9**	**+6.8**
	4μm305nm,1.4s						
SRBI	**Singaraja**	**14.73**	**256**	P	**Pn**	**09 46 09.8**	**+7.5**
	5μm410nm,1.2s						
MYLDM	**Lahad Datu**	**14.74**	**311**	P	**Pn**	**09 46 02.7**	**+0.3**
MYLDM	**Lahad Datu**	**14.74**	**311**	P	**Pn**	**09 46 03.9**	**+1.6**
	5μm203nm,1.5s						
BBKI	**Banjar Baru**	**14.78**	**274**	P	**Pn**	**09 46 06.2**	**+3.3**
	766nm,1.5s						
IGBI	**Denpasar**	**14.98**	**253**	P	**Pn**	**09 46 14.1**	**+8.6**
MSLP	**Maasin**	**15.36**	**342**	*e*P	**Pn**	**09 46 10.1**	**-0.5**
ABJI	**Asem Bagus**	**15.62**	**257**	P	**Pn**	**09 46 20.9**	**+7.0**
KMMI	**Kalianget**	**15.76**	**260**	P	**Pn**	**09 46 22.5**	**+6.8**
	8μm458nm,1.1s						
WRAB	**Tennant Creek**	**15.95**	**164**	Pn	**Pn**	**09 46 13.0**	**-5.0**
	1μm,1.2s,SNR=18						
WRAB	**Tennant Creek**	**15.95**	**164**	*e*P	**Pn**	**09 46 12.7**	**-5.3**
WRAB				pmax	pmax		
	comp=Z,324nm,1.2s						
WRAB	**Tennant Creek**	**15.95**	**164**	*e*P	**Pn**	**09 46 12.7**	**-5.3**
	comp=Z,324nm,1.2s						
WRAB	**Tennant Creek**	**15.95**	**164**	P	**Pn**	**09 46 13.0**	**-5.0**
	comp=Z,3μmcomp=Z,252nm,1.8s						
SDKM	**Sandakan**	**16.03**	**309**	P	**Pn**	**09 46 19.6**	**+0.4**
COEN	**Coen**	**16.29**	**126**	*e*P	**Pn**	**09 46 17.8**	**-4.7**
	comp=Z,3μm,1.5s						
COEN				*e*S	S	09 49 06.9	-27
COEN	**Coen**	**16.29**	**126**	P	**Pn**	**09 46 18.1**	**-4.4**
	comp=Z,9μmcomp=Z,643nm,1.6s						
GMJI	**Gumukmas**	**16.48**	**256**	P	**Pn**	**09 46 29.3**	**+4.4**
	comp=Z,4μmcomp=Z,187nm,1.1s						
KKM	**Kota Kinabalu**	**17.04**	**308**	P	**Pn**	**09 46 32.4**	**+0.5**
KKM	**Kota Kinabalu**	**17.04**	**308**	*e*P	**Pn**	**09 46 31.6**	**-0.3**
	comp=Z,1μm,2.0s						
KKM	**Kota Kinabalu**	**17.04**	**308**	P	**Pn**	**09 46 31.7**	**-0.2**
	comp=Z,4μmcomp=Z,261nm,1.6s						
KDM	**Kudat**	**17.12**	**312**	P	**Pn**	**09 46 33.3**	**+0.4**
GRJI	**Gresik**	**17.21**	**261**	P	**Pn**	**09 46 38.9**	**+4.9**
	comp=Z,697nm,1.8s						
BATP	**Bataraza**	**17.76**	**318**	*e*P	**Pn**	**09 46 42.6**	**+1.8**
SJI	**Sawahan**	**18.02**	**259**	P	**Pn**	**09 46 46.1**	**+2.1**
	comp=Z,7μmcomp=Z,385nm,1.8s						
PWJI	**Pagerwojo**	**18.03**	**258**	P	**Pn**	**09 46 45.2**	**+1.1**
	comp=Z,3μmcomp=Z,204nm,1.3s						
BTM	**Bintulu**	**18.24**	**295**	P	**Pn**	**09 46 47.2**	**+0.6**
NGJI	**Ngawi**	**18.27**	**260**	P	**Pn**	**09 46 50.1**	**+3.1**
	comp=Z,418nm,1.4s						
ENPP	**El Nido**	**18.67**	**327**	*e*P	**Pn**	**09 46 52.0**	**+0.1**
PCJI	**Pacitan**	**18.67**	**258**	P	**Pn**	**09 46 53.9**	**+2.0**
STKI	**Sintang**	**18.70**	**284**	P	**Pn**	**09 46 53.3**	**+1.0**
	comp=Z,68nm,1.3s						
SBUM	**Sibu**	**18.73**	**292**	P	**Pn**	**09 46 52.8**	**+0.1**
SBUM	**Sibu**	**18.73**	**292**	P	**Pn**	**09 46 52.8**	**+0.1**
SBUM	**Sibu**	**18.73**	**292**	P	**Pn**	**09 46 53.3**	**+0.6**
	comp=Z,3μmcomp=Z,117nm,2.1s						
PVCP	**Virac**	**18.85**	**343**	*e*P	**Pn**	**09 46 53.6**	**-0.4**
MBWA	**Marble Bar**	**19.08**	**209**	*e*P	**Pn**	**09 46 52.9**	**-3.8**
	comp=Z,95nm,1.3s						
MBWA	**Marble Bar**	**19.08**	**209**	P	**Pn**	**09 46 55.0**	**-1.7**
	comp=Z,3μmcomp=Z,84nm,2.5s						
SMRI	**Semarang**	**19.24**	**262**	P	**Pn**	**09 47 00.2**	**+1.5**
	comp=Z,7μmcomp=Z,404nm,1.9s						
UGM	**Wanagama**	**19.27**	**259**	P	pP	09 47 09.7	+1.9
ASAR	**Alice Springs**	**19.42**	**168**	P	**Pn**	**09 46 58.1**	**-2.7**
	comp=Z,5.3nm,0.3s,baz=348,slow=9.2,SNR=429						
ASAR				S	**S**	**09 50 30.4**	**-6.6**
	baz=356,slow=25,SNR=3.0						
KSM	**Kuching**	**20.21**	**287**	P	**P**	**09 47 08.9**	**+0.8**
KSM	**Kuching**	**20.21**	**287**	*e*P	**P**	**09 47 07.2**	**-0.9**
	comp=Z,134nm,1.1s						
KSM				LR	LR		
	comp=Z,2μm,19.0s,MS4.5						
KSM	**Kuching**	**20.21**	**287**	P	**P**	**09 47 08.1**	**0.0**
	comp=Z,3μmcomp=Z,134nm,1.9s						
LUBP	**Lubang**	**20.43**	**333**	*e*P	**P**	**09 47 11.0**	**+0.6**
TGY	**Tagaytay City**	**20.46**	**335**	P	**P**	**09 47 09.9**	**-0.9**
	comp=Z,112nm,0.3s,baz=217,slow=9.9,SNR=9.7						
TPI	**Tanjungpandan**	**21.99**	**274**	P	**P**	**09 47 33.7**	**+6.3**
	comp=Z,1μmcomp=Z,66nm,1.8s,mb4.8						
LEM	**Lembang**	**22.00**	**263**	P	**P**	**09 47 29.5**	**+2.0**
	comp=Z,3μmcomp=Z,199nm,1.6s,mb5.3						
CTA	**Charters Tower**	**22.36**	**135**	*e*P	**P**	**09 47 29.9**	**-1.3**
	comp=Z,59nm,0.9s,mb5.0						
CTA				*e*S	**S**	**09 51 33.9**	**-1.1**
CTA	**Charters Tower**	**22.36**	**135**	P	**P**	**09 47 30.9**	**-0.3**
	comp=Z,42nm,0.8s,mb4.9,baz=314,slow=12,SNR=29						
CTA				S	**S**	**09 51 42.2**	**+7.2**
	comp=Z,7.9nm,0.8s,baz=76,slow=13,SNR=3.3						
CTAO	**Charters Tower**	**22.36**	**135**	*e*P	**P**	**09 47 30.0**	**-1.2**
CTAO				pmax	pmax		
	comp=Z,219nm,1.3s,mb5.4						
CTAO				MLR	MLR		
	comp=Z,3μm,22.0s,MS4.7						
CTAO	**Charters Tower**	**22.36**	**135**	*e*P	**P**	**09 47 30.0**	**-1.2**
	comp=Z,219nm,1.3s,mb5.4						
CTAO				LR	LR		
	comp=Z,3μm,22.0s,MS4.7						
CTAO	**Charters Tower**	**22.36**	**135**	P	**P**	**09 47 30.8**	**-0.4**
	comp=Z,2μmcomp=Z,150nm,1.2s,mb5.3						
CAUP	**Cauayan**	**22.73**	**340**	*e*P	**P**	**09 47 35.9**	**+0.9**
CBJI	**Citeko**	**22.74**	**264**	P	**P**	**09 47 39.8**	**+4.6**
	comp=Z,602nm,0.3s,mb6.5						
DBJI	**Dramaga**	**22.84**	**264**	P	**P**	**09 47 39.9**	**+3.5**
	comp=Z,5μmcomp=Z,139nm,1.6s,mb5.1						
BOLP	**Bolinao**	**22.93**	**335**	*e*P	**P**	**09 47 37.0**	**-0.2**
GUMO	**Guam**	**23.56**	**40**	P	**P**	**09 47 42.2**	**-1.3**
	comp=Z,291nm,1.1s,mb5.6,baz=173,slow=12,SNR=7.2						
GUMO				LR	LR	09 56 37.4	
	comp=Z,1μm,18.9s,MS4.3,baz=220,slow=36						
GUMO	**Guam**	**23.56**	**40**	P	**P**	**09 47 42.2**	**-1.3**
GUMO				pmax	pmax		
	comp=Z,291nm,1.1s,mb5.6						
GUMO				MLR	MLR		
	comp=Z,1μm,18.9s,MS4.3						
GUMO	**Guam**	**23.56**	**40**	*e*P	**P**	**09 47 43.1**	**-0.4**
	comp=Z,420nm,1.1s,mb5.8						
GUMO	**Guam**	**23.56**	**40**	P	**P**	**09 47 43.1**	**-0.4**
	comp=Z,411nm,1.2s,mb5.7						
APYP	**Conner**	**23.78**	**340**	*e*P	**P**	**09 47 44.5**	**-1.0**
CGJI	**Cibinong**	**23.90**	**264**	P	**P**	**09 47 51.2**	**+4.5**
MDSI	**Maura Dua**	**25.36**	**269**	P	**P**	**09 47 58.7**	**-1.4**
	comp=Z,23nm,1.9s,mb4.4						
FORT	**Forrest**	**26.11**	**183**	*e*P	**P**	**09 48 05.3**	**-1.3**
	comp=Z,73nm,0.7s,mb5.3						
FORT	**Forrest**	**26.11**	**183**	*e*P	**P**	**09 48 06.5**	**-0.1**
	comp=Z,144nm,1.0s,mb5.5						
MYKOM	**Kota Tinggi**	**26.51**	**283**	P	**P**	**09 48 10.6**	**+0.1**
MYKOM	**Kota Tinggi**	**26.51**	**283**	P	**P**	**09 48 11.4**	**+0.9**
MYKOM	**Kota Tinggi**	**26.51**	**283**	P	**P**	**09 48 11.3**	**+0.8**
	comp=Z,1μmcomp=Z,40nm,1.5s,mb4.7						
KGM	**Kluang**	**27.08**	**283**	P	**P**	**09 48 15.7**	**+0.1**
KTGM	**Kuala Trenggan**	**28.22**	**290**	P	**P**	**09 48 25.8**	**0.0**
YULB	**Yu-li**	**28.96**	**344**	*e*P	**P**	**09 48 33.1**	**+0.9**
	comp=Z,38nm,1.4s,mb4.9						
FRIM	**Kepong**	**29.03**	**285**	P	**P**	**09 48 32.6**	**-0.4**
TPUB	**Ta-pu**	**29.06**	**343**	*e*P	**P**	**09 48 34.2**	**+1.1**
	comp=Z,96nm,1.3s,mb5.4						
KLBR	**Kellerberrin**	**29.09**	**201**	*e*P	**P**	**09 48 32.5**	**-0.8**
	comp=Z,166nm,1.4s,mb5.6						
STKA	**Stephens Creek**	**29.39**	**159**	*e*P	**P**	**09 48 34.6**	**-1.4**
	comp=Z,28nm,1.5s,mb4.8						
STKA				*e*S	**S**	**09 53 26.8**	**-0.3**
STKA	**Stephens Creek**	**29.39**	**159**	P	**P**	**09 48 36.0**	**+0.1**
	comp=Z,14nm,0.8s,mb4.7,baz=330,slow=8.7,SNR=29						
STKA				PP	PP	09 49 27.4	-15
	comp=Z,8.7nm,0.6s,baz=358,slow=12,SNR=3.9						
STKA	**Stephens Creek**	**29.39**	**159**	*e*P	**P**	**09 48 35.5**	**-0.5**
	comp=Z,29nm,1.6s,mb4.8						
SSLB	**Suanglung**	**29.43**	**344**	*e*P	**P**	**09 48 34.6**	**-1.7**
	comp=Z,101nm,1.1s,mb5.5						
IPM	**Ipoh**	**29.95**	**287**	P	**P**	**09 48 40.8**	**-0.3**
IPM	**Ipoh**	**29.95**	**287**	P	**P**	**09 48 40.8**	**-0.3**
IPM	**Ipoh**	**29.95**	**287**	P	**P**	**09 48 40.7**	**-0.4**
	comp=Z,674nmcomp=Z,44nm,1.1s,mb5.1						
HNR	**Honiara**	**30.47**	**101**	*e*P	**P**	**09 48 45.9**	**+0.1**
HNR				pmax	pmax		
	comp=Z,333nm,1.1s,mb6.0						
HNR				MLR	MLR		
	comp=Z,2μm,21.0s,MS4.7						
HNR	**Honiara**	**30.47**	**101**	*e*P	**P**	**09 48 45.9**	**+0.1**
	comp=Z,333nm,1.1s,mb6.0						
HNR				LR	LR		
	comp=Z,2μm,21.0s,MS4.7						
MNSI	**Mandailing Nat**	**30.48**	**279**	P	**P**	**09 48 54.7**	**+8.8**
	comp=Z,1μmcomp=Z,19nm,1.4s,mb4.6						
NWAO	**Narrogin (SRO)**	**30.49**	**201**	P	**P**	**09 48 44.9**	**-0.8**
	comp=Z,38nm,1.0s,mb5.1,baz=18,slow=9.6,SNR=8.1						
NWAO	**Narrogin (SRO)**	**30.49**	**201**	P	**P**	**09 48 44.9**	**-0.7**
NWAO				pmax	pmax		
	comp=Z,38nm,1.0s						
NWAO	**Narrogin (SRO)**	**30.49**	**201**	*e*P	**P**	**09 48 45.2**	**-0.4**
	comp=Z,36nm,1.0s,mb5.1						
QIZ	**Qiongzhong**	**30.49**	**321**	P	**P**	**09 48 45.2**	**-0.6**
QIZ				sP	sP	09 48 50.5	-11
QIZ				S	**S**	**09 53 45.4**	**+0.8**
QIZ				pmax	pmax		
	comp=Z,49nm,1.6s,mb5.0						
QIZ				pmax	pmax		
	comp=Z,380nm,7.5s						
QIZ				LR	LR		
	comp=N,1μm,15.7s						
QIZ				LR	LR		
	comp=Z,1μm,17.0s,MS4.7						
QIZ	**Qiongzhong**	**30.49**	**321**	*e*P	**P**	**09 48 44.8**	**-1.0**
	comp=Z,170nm,1.6s,mb5.5						
KULM	**Kulim**	**30.55**	**288**	P	**P**	**09 48 46.1**	**-0.3**
KULM	**Kulim**	**30.55**	**288**	*e*P	**P**	**09 48 45.4**	**-1.1**
	comp=Z,67nm,1.3s,mb5.3						
KULM				LR	LR		
	comp=Z,2μm,19.0s,MS4.7						
KULM	**Kulim**	**30.55**	**288**	P	**P**	**09 48 45.8**	**-0.6**
	comp=Z,1μmcomp=Z,37nm,1.3s,mb5.1						
JOW	**Kunigami**	**31.25**	**358**	P	**P**	**09 48 53.0**	**+0.6**
	comp=Z,57nm,0.8s,mb5.4,baz=181,slow=4.9,SNR=5.8						
JOW				LR	LR	10 01 15.2	
	comp=Z,1μm,20.2s,MS4.5,baz=183,slow=36						
UBT	**Ubonrachathani**	**31.33**	**309**	‖P	**P**	**09 48 54.0**	**+0.7**
PSI	**Prapat**	**31.53**	**283**	P	**P**	**09 48 53.8**	**-1.3**
	comp=Z,5.0nm,0.6s,mb4.6,baz=136,slow=4.9,SNR=9.2						
PSI				LR	LR	10 04 00.1	
	comp=Z,3μm,18.3s,MS5.0,baz=132,slow=41						
ARMA	**Armidale**	**33.04**	**144**	*e*P	**P**	**09 49 08.8**	**+0.7**
ARMA				*e*S	**S**	**09 54 23.5**	**-0.8**
ARMA	**Armidale**	**33.04**	**144**	*e*P	**P**	**09 49 09.7**	**+1.6**
	comp=Z,345nm,1.8s,mb6.0						
COCO	**West Island**	**33.27**	**255**	PFAKE		09 49 20.0	+10
COCO				LR	LR		
	comp=Z,1μm,19.0s,MS4.7						
KKTK	**Khon Kaen**	**33.68**	**309**	P	**P**	**09 49 13.5**	**-0.3**
CBIJ	**Chichi jima**	**33.75**	**20**	LR	LR	10 00 42.0	
	comp=Z,1μm,19.9s,MS4.6,baz=164,slow=32						
RIV	**Riverview**	**35.34**	**148**	*e*P	**P**	**09 49 30.4**	**+2.4**
NST	**Nakhon Sawan**	**35.45**	**305**	P	**P**	**09 49 29.5**	**+0.3**
CNB	**Canberra Magne**	**35.62**	**152**	*e*P	**P**	**09 49 31.1**	**+0.7**
TOO	**Toolangi**	**35.90**	**158**	*e*P	**P**	**09 49 35.2**	**+2.4**
SSE	**Sheshan**	**36.37**	**348**	P	**P**	**09 49 36.5**	**-0.4**
SSE				pmax	pmax		
	comp=Z,47nm,1.2s,mb5.3						
SSE				pmax	pmax		
	comp=Z,530nm,11.8s						
BDT	**Bhumibol Dam**	**37.21**	**306**	P	**P**	**09 49 44.0**	**-0.2**
	comp=Z,53nm,1.0s,mb5.3						
NJ2	**Nanjing**	**37.84**	**345**	*e*P	**P**	**09 49 49.8**	**+0.5**
NJ2				pP	pP	09 49 53.3	-7.2
NJ2				sP	sP	09 49 55.6	-10
NJ2				PP	PP	09 51 21.4	+5.0
NJ2				S	**S**	**09 55 39.0**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,70nm,1.2s,mb5.3						
NJ2				pmax	pmax		
	comp=Z,520nm,5.0s						
NJ2				LR	LR		
	comp=N,580nm,21.2s						
NJ2				LR	LR		
	comp=E,450nm,15.3s						
NJ2				LR	LR		
	comp=Z,790nm,12.0s						
WHN	**Wuhan**	**37.85**	**338**	‖P	**P**	**09 49 50.0**	**+0.5**
WHN				pmax	pmax		
	comp=Z,240nm,1.5s,mb5.7						
CM31	**Chiang Mai Arr**	**37.92**	**308**	*e*P	**P**	**09 49 51.4**	**+1.2**
	comp=Z,130nm,1.3s,mb5.5						
CM31				LR	LR		
	comp=Z,1μm,20.0s,MS4.7						
CMAR	**Chiang Mai Arr**	**37.92**	**308**	P	**P**	**09 49 49.8**	**-0.5**
	comp=Z,29nm,0.8s,mb5.1,baz=136,slow=6.6,SNR=108						
CMAR				LR	LR	10 03 20.7	
	comp=Z,2μm,21.1s,MS4.8,baz=298,slow=33						
CMAR	**Chiang Mai Arr**	**37.92**	**308**	P	**P**	**09 49 49.8**	**-0.5**
CMAR				LR	LR	10 03 20.7	
GYA	**Guiyang**	**38.02**	**325**	⇑*i*P	**P**	**09 49 50.0**	**-1.0**
GYA				PP	PP	09 51 23.0	+4.5
GYA				PcP	PcP	09 52 07.8	+1.8
GYA				S	**S**	**09 55 46.0**	**+5.2**
GYA				SS	SS	09 58 23.3	-5.1
GYA				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.2						
GYA				pmax	pmax		
	comp=Z,180nm,5.3s						
GYA				LR	LR		
	comp=N,3μm,16.4s,MS5.2						
GYA				LR	LR		
	comp=E,2μm,15.8s,MS5.2						
GYA				LR	LR		
	comp=Z,3μm,15.4s,MS5.2						
CHTO	**Chiang Mai**	**38.12**	**308**	*e*P	**P**	**09 49 51.4**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,86nm,0.9s,mb5.5						
CHTO				MLR	MLR		
	comp=Z,2μm,19.0s,MS4.9						
CHTO	**Chiang Mai**	**38.12**	**308**	*e*P	**P**	**09 49 51.4**	**-0.5**
	comp=Z,86nm,0.9s,mb5.5						
CHTO				LR	LR		
	comp=Z,2μm,19.0s,MS4.9						
CHTO	**Chiang

comp=Z,105nm,1.1s
BJT Baijiatuau 46.07 346 *e*P P **09 50 56.1 -0.3**
comp=Z,105nm,1.1s,mb5.7
BJI Beijing 46.09 346 P P **09 50 55.9 -0.6**
BJI S S **09 57 43.6 +4.2**
BJI pmax pmax
comp=Z,65nm,1.3s,mb5.4
BJI pmax pmax
comp=Z,610nm,6.0s
BJI LR LR
comp=N,380nm,17.4s,MS4.6
BJI LR LR
comp=E,450nm,16.4s,MS4.6
BJI LR LR
comp=Z,350nm,20.9s,MS4.3
SNY Shenyang 46.51 354 ⇓P P **09 50 59.8 0.0**
SNY pmax pmax
comp=Z,25nm,1.5s,mb4.9
AGT Agartala 46.88 309 *ex* x 09 50 57.0
LZH Lanzhou 47.10 331 ⇓P P **09 51 05.3 +0.7**
LZH pP pP 09 51 10.0 -6.0
LZH sP sP 09 51 12.3 -8.5
LZH PP PP 09 52 55.3 -0.5
LZH S S **09 57 56.0 +1.9**
LZH pmax pmax
comp=Z,190nm,1.4s,mb5.8
LZH pmax pmax
comp=Z,1μm,6.6s
LZH LR LR
comp=E,3μm,14.4s
LZH LR LR
comp=Z,4μm,15.8s,MS5.5
SHL Shillong 47.31 311 *e*PKP P **09 51 06.3 -0.1**
VLA Vladivostok 47.52 2 *e*P P **09 51 08.0 +0.4**
VLA *e* 09 51 13.1
VLA *e*S S **09 58 01.8 +2.0**
VLA pmax pmax
comp=Z,84nm,1.5s,mb5.5
VLA MLR MLR
comp=Z,500nm,15.0s,MS4.6
ERM Erimo 47.98 14 PFAKE 09 51 20.0 +8.7
ERM LR LR
comp=Z,1μm,19.0s,MS4.9
HHC Hu-ho-hao-te 48.14 342 *e*P P **09 51 12.2 -0.3**
HHC pP pP 09 51 16.7 -7.3
HHC sP sP 09 51 19.3 -9.4
HHC PcP PcP 09 52 39.0 -0.6
HHC PP PP 09 53 04.4 -0.7
HHC PcS PcS 09 56 33.3 -2.0
HHC S S **09 58 11.2 +2.6**
HHC ScS ScS 10 01 03.0 +0.6
HHC SS SS 10 01 36.4 -2.0
HHC pmax pmax
comp=Z,17nm,1.0s,mb5.0
HHC pmax pmax
comp=Z,1μm,6.0s
HHC LR LR
comp=N,540nm,17.8s,MS4.8
HHC LR LR
comp=E,820nm,16.7s,MS4.8
HHC LR LR
comp=Z,570nm,20.2s,MS4.5
CN2 Changchun 48.30 356 ⇑P P **09 51 14.2 +0.5**
CN2 *e*pP pP 09 51 18.7 -6.5
CN2 PcP PcP 09 52 40.5 +0.4
CN2 *e*S S **09 58 14.0 +3.2**
CN2 SS SS 10 01 38.9 -2.1
CN2 pmax pmax
comp=Z,20nm,1.4s,mb5.0
CN2 LR LR
comp=N,500nm,15.0s,MS4.7
CN2 LR LR
comp=E,300nm,15.0s,MS4.7
CN2 LR LR
comp=Z,500nm,16.0s,MS4.6
MDJ Mudanjiang 48.97 360 P P **09 51 19.3 +0.5**
MDJ pP pP 09 51 22.5 -7.8
MDJ sP sP 09 51 23.7 -11
MDJ PP PP 09 53 13.4 +0.7
MDJ S S **09 58 24.6 +4.4**
MDJ ScS ScS 10 01 08.0 +0.2
MDJ SS SS 10 01 52.6 +0.9
MDJ pmax pmax
comp=Z,31nm,1.7s,mb5.1
MDJ pmax pmax
comp=Z,430nm,6.4s
MDJ LR LR
comp=N,380nm,21.0s
MDJ LR LR
comp=E,390nm,14.8s
MDJ LR LR
comp=Z,600nm,18.4s,MS4.6
MDJ Mudanjiang 48.97 360 *e*P P **09 51 19.6 +0.7**
comp=Z,51nm,1.3s,mb5.4
FUNA Funafuti 49.38 97 PFAKE 09 51 40.0 +17
FUNA LR LR
comp=Z,3μm,20.0s,MS5.3
ASAJ Asahikawa 49.86 12 P P **09 51 26.5 +0.9**
comp=Z,25nm,1.0s,mb5.2,baz=259,slow=17,SNR=9.1
ASAJ LR LR 10 09 41.6
comp=Z,691nm,20.6s,MS4.6,baz=75,slow=33
LSA Lhasa 50.21 315 P P **09 51 28.3 -0.3**
LSA Lhasa 50.21 315 *e*P P **09 51 29.7 +1.1**
LSA pmax pmax
comp=Z,91nm,1.3s,mb5.7
LSA Lhasa 50.21 315 *e*P P **09 51 29.7 +1.1**
comp=Z,91nm,1.3s,mb5.7
PALK Pallekele 50.21 283 LR LR 10 11 11.4
comp=Z,664nm,21.3s,MS4.6,baz=261,slow=34
OUZ Omahuta 50.74 133 *e*P P **09 51 33.2 +0.6**
comp=Z,104nm,1.7s,mb5.5
ODAN Odare 51.41 310 *e*P P **09 51 36.9 -0.7**
comp=Z,207nm,1.1s,mb6.0
TAPN Taplejung 51.42 311 *e*P P **09 51 37.0 -0.7**
GTA Gaotai 51.68 331 ⇓P P **09 51 39.6 +0.1**
GTA pP pP 09 51 44.2 -6.9
GTA sP sP 09 51 47.1 -8.7
GTA S S **09 59 02.2 +4.0**
GTA sS sS 09 59 10.3 -7.1
GTA SS SS 10 02 38.7 +3.5
GTA pmax pmax
comp=Z,40nm,1.6s,mb5.1
GTA pmax pmax
comp=Z,2μm,5.4s
GTA LR LR
comp=N,320nm,13.2s,MS4.8
GTA LR LR
comp=E,590nm,15.9s,MS4.8
GTA LR LR
comp=Z,940nm,16.2s,MS4.9
RAMN Ramite 52.06 309 *e*P P **09 51 41.7 -0.8**
comp=Z,642nm,1.4s,mb6.4
YSS Yuzh-Sakhalins 52.61 11 *e*P P **09 51 45.0 -1.2**
YSS Yuzh-Sakhalins 52.61 11 *e*P P **09 51 45.7 -0.4**
comp=Z,30nm,1.0s,mb5.2
HABR Khabarovsk 53.04 5 *cc*eP P **09 51 49.0 -0.3**
HABR *e**PP pP 09 51 57.8 -3.2
HABR *e**SP sP 09 52 01.9 -3.8
HABR *e* 09 52 55.5
HABR *e* 09 53 48.2
HABR PPP 09 54 54.9
HABR *e*S S **09 59 18.5 +2.1**
HABR *e**SS sS 09 59 34.0 -1.7
HABR SS SS 10 02 58.8 +2.5
HABR pmax pmax
comp=Z,88nm,1.7s,mb5.4
HABR pmax pmax
comp=E,65nm,1.7s
HABR pmax pmax
comp=N,42nm,1.7s
HABR MLR MLR
comp=Z,288nm,17.0s,MS4.4
GUN Gumba 53.10 310 *e*P P **09 51 49.2 -1.0**
comp=Z,146nm,0.7s,mb6.0
PKI Pulchoki 53.29 309 *e*P P **09 51 50.2 -1.4**
comp=Z,300nm,1.6s,mb6.0
PKI Pulchoki 53.29 309 *e*P P **09 51 50.7 -0.9**
PKI pmax pmax
comp=Z,41nm,0.7s,mb5.5
PKI Pulchoki 53.29 309 *e*P P **09 51 50.7 -0.9**
comp=Z,41nm,0.7s,mb5.5
PKIN Phulchoki 53.30 309 *e*P P **09 51 50.7 -1.0**
comp=Z,41nm,0.7s,mb5.5
RPZ Rata Peaks 53.38 143 P P **09 51 51.7 -0.3**
comp=Z,36nm,1.3s,mb5.2,baz=27,slow=9.9,SNR=4.7
RPZ LR LR 10 12 57.0
comp=Z,480nm,19.6s,MS4.6,baz=306,slow=34
KKN Kakani 53.49 310 *e*P P **09 51 51.6 -1.5**
comp=Z,168nm,1.2s,mb5.8
KKN Kakani 53.49 310 *e*P P **09 51 51.6 -1.5**
KKN pmax pmax
comp=Z,168nm,1.2s,mb5.8
DMN Daman 53.54 309 *e*P P **09 51 52.2 -1.2**
comp=Z,179nm,1.1s,mb5.9
URZ Urewera 54.61 135 P P **09 52 01.0 -0.1**
comp=Z,4.1nm,0.4s,mb4.8,baz=301,slow=2.2,SNR=5.5
URZ LR LR 10 12 20.0
comp=Z,523nm,19.7s,MS4.6,baz=102,slow=33
URZ Urewera 54.61 135 *e*P P **09 52 02.2 +1.1**
comp=Z,23nm,1.1s,mb5.1
HYB Hyderabad 54.94 295 *i* P P **09 52 02.0 -1.8**
ULN Ulaanbaatar 55.86 342 *cc*eP P **09 52 10.3 +0.5**
ULN Ulaanbaatar 55.86 342 *e*P P **09 52 10.0 +0.1**
comp=Z,121nm,1.4s,mb5.7
ULN Ulaanbaatar 55.86 342 P P **09 52 10.2 +0.4**
comp=Z,1μmcomp=Z,59nm,2.1s,mb5.2
SONM Songino Array 56.04 341 P P **09 52 11.6 +0.5**
comp=Z,41nm,1.2s,mb5.3,baz=164,slow=7.2,SNR=80
SONM LR LR 10 17 29.7
comp=Z,714nm,21.9s,MS4.7,baz=158,slow=38
DGAR Diego Garcia 56.89 264 PFAKE 09 52 30.0 +12
DGAR LR LR
comp=Z,1μm,20.0s,MS5.1
BHPL Bhopal 57.93 301 *e*PKP P **09 52 23.6 -1.4**
CIT Chita 58.02 348 *e*P P **09 52 25.8 +0.7**
CIT *e* 09 52 40.3
AFI Afiamalu 58.45 103 PFAKE 09 52 40.0 +11
AFI LR LR
comp=Z,1μm,21.0s,MS5.0
KAD Karad 58.88 293 *e*PKP P **09 52 30.3 -1.4**
AGRA Agra 59.05 305 *e*PKP P **09 52 30.6 -2.1**
AGRA AMb AMB 09 52 31.1
comp=Z,38nm,0.3s,mb6.0
JOSI Joshimath 59.21 310 *e*PKP P **09 52 33.1 -0.6**
ZAK Zakamensk 59.27 341 ⇑*i*P P **09 52 33.6 -0.2**
ZAK pmax pmax
comp=Z,34nm,1.4s,mb5.2
POO Poona 59.53 294 *e*PKP P **09 52 35.7 -0.6**
POO AMb AMB 09 52 40.4
comp=Z,44nm,1.1s,mb5.4
BISR Bishrakh 60.00 307 *e*PKP P **09 52 37.4 -1.9**
SONA Sohna 60.16 306 *e*PKP P **09 52 38.5 -1.9**
SONA AMb AMB 09 52 43.3
comp=Z,65nm,1.0s,mb5.6
NDI New Delhi 60.23 307 *ex* P **09 52 37.0 -3.9**
DDI Dehra Dun 60.26 309 *ex* P **09 52 38.0 -3.1**
TLY Talaya 60.27 342 P P **09 52 41.0 +0.4**
comp=Z,127nm,1.0s,mb5.9,SNR=12
TLY Talaya 60.27 342 *e*P P **09 52 41.4 +0.8**
TLY pmax pmax
comp=Z,45nm,1.4s,mb5.3
TLY Talaya 60.27 342 *e*P P **09 52 41.0 +0.3**
comp=Z,41nm,1.3s,mb5.3
IRK Irkutsk 60.56 342 *e*P P **09 52 43.1 +0.4**
IRK pmax pmax
comp=Z,100nm,1.7s,mb5.7
KLP Kalpa 60.65 310 *e*PKP P **09 52 43.5 -0.2**
KLP AMb AMB 09 52 52.1
comp=Z,75nm,1.5s,mb5.6
KKR Kurukshetra 61.08 308 *e*PKP P **09 52 46.0 -0.6**
KHET Khetri 61.12 305 *e*PKP P **09 52 45.2 -1.7**
MOY Mondy 61.12 340 *e*P P **09 52 47.0 +0.5**
MOY pmax pmax
comp=Z,165nm,2.0s,mb5.8
WMQ Urumqi 61.17 326 P P **09 52 47.0 0.0**
WMQ sP sP 09 52 54.0 -9.4
WMQ PP PP 09 55 03.0 +0.9
WMQ S S **10 01 04.0 +0.3**
WMQ ScS ScS 10 02 34.0 -1.1
WMQ pmax pmax
comp=Z,56nm,1.2s,mb5.6
WMQ pmax pmax
comp=Z,100nm,6.0s
WMQ LR LR
comp=N,1μm,17.0s,MS5.1
WMQ LR LR
comp=E,540nm,16.0s,MS5.1
WMQ LR LR
comp=Z,370nm,16.0s,MS4.6
CLNS Chul'man 61.33 357 *e*P P **09 52 46.4 -1.3**
CLNS *e**PP pP 09 52 57.4 -2.2
CLNS *e* 09 55 00.6
CLNS *e*S S **10 01 05.3 +0.1**
CLNS pmax pmax
comp=Z,50nm,1.6s,mb5.4
CLNS pmax pmax
comp=E,7.0nm,1.6s
CLNS pmax pmax
comp=N,48nm,1.7s
CLNS pmax pmax
comp=Z,12nm,1.4s,mb4.8
CLNS pmax pmax
comp=N,24nm,1.4s
CLNS pmax pmax
comp=E,7.0nm,1.5s
CLNS smax
comp=E,142nm,14.2s
CLNS smax
comp=N,198nm,11.6s
CLNS MLR MLR
comp=E,222nm,14.0s,MS4.5
CLNS MLR MLR
comp=Z,176nm,14.0s,MS4.4
CLNS MLR MLR
comp=N,118nm,12.0s,MS4.5
AJM Ajmer 61.47 303 *e*PKP P **09 52 48.3 -1.0**
PEA0B Petropavlovsk- 62.16 19 *e*P P **09 52 54.4 +1.0**
PETK Petropavlovsk- 62.16 19 P P **09 52 54.5 +1.1**
comp=N,27nm,0.8s,mb5.4,baz=193,slow=4.6,SNR=30
PETK LR LR 10 15 18.6
comp=N,379nm,19.6s,MS4.6,baz=205,slow=32
PET Petropavlovsk 62.40 19 *e*P P **09 52 54.3 -0.7**
PET *e*S S **10 01 19.4 +0.5**
PET pmax pmax
comp=Z,90nm,1.3s,mb5.7
PET MLR MLR
comp=Z,600nm,12.0s,MS5.0
PET MLR MLR
comp=Z,500nm,13.0s
PET Petropavlovsk 62.40 19 *e*P P **09 52 54.8 -0.3**
comp=Z,162nm,1.4s,mb6.0
CASY Casey 63.02 189 *e*P P **09 52 59.1 +0.1**
CASY Casey 63.02 189 *e*P P **09 53 00.4 +1.4**
comp=Z,96nm,1.5s,mb5.7
CASY LR LR
comp=Z,849nm,21.0s,MS4.9
BOD Bodaibo 63.46 351 *e*P P **09 53 02.2 +0.2**
BOD pmax pmax
comp=Z,36nm,1.6s,mb5.2
JOHN Johnston Islan 63.73 69 PFAKE 09 53 20.0 +15
JOHN LR LR
comp=Z,945nm,19.0s,MS5.0
JASL Jaisalmer 64.76 302 *e*PKP P **09 53 10.0 -1.2**
JASL AMb AMB 09 53 15.9
comp=Z,71nm,0.8s,mb5.7
KSH Kashi 65.99 317 *e*P P **09 53 19.1 +0.2**
KSH pP pP 09 53 23.3 -7.5
KSH sP sP 09 53 25.6 -10
KSH PcP PcP 09 53 49.6 +0.3
KSH PP PP 09 55 45.6 +1.0
KSH ScP 09 57 50.8
KSH PcS 09 57 52.6
KSH S S 10 02 03.6 -0.3
KSH ScS ScS 10 03 10.4 -1.7
KSH pmax pmax
comp=Z,22nm,1.3s,mb5.0
KSH LR LR
comp=N,360nm,11.5s,MS5.0
KSH LR LR
comp=E,380nm,10.5s,MS5.0
KSH LR LR
comp=Z,240nm,11.1s,MS4.7
MKAR Makanchi Array 66.01 326 P P **09 53 18.7 -0.1**
comp=Z,7.8nm,0.5s,mb5.0,baz=112,slow=9.3,SNR=66
YAK Yakutsk 66.42 0 *e*P P **09 53 20.7 -0.4**
YAK *e**PP pP 09 53 30.3 -2.8
YAK *e* 09 53 47.1
YAK *e*S S 10 02 11.7 +3.5
YAK pmax pmax
comp=Z,64nm,1.4s,mb5.5
YAK pmax pmax
comp=N,33nm,1.4s
YAK pmax pmax
comp=E,3.0nm,1.2s
YAK smax
comp=N,211nm,5.8s
YAK smax
comp=E,596nm,5.1s
YAK MLR MLR
comp=N,281nm,17.0s,MS4.6
YAK MLR MLR
comp=Z,333nm,17.0s,MS4.6
YAK MLR MLR
comp=E,179nm,21.0s,MS4.6
YAK Yakutsk 66.42 0 *e*P P **09 53 21.9 +0.7**
comp=E,78nm,1.0s,mb5.7
MIR Mirnyy 66.86 195 ⇑*i*P P **09 53 26.0 +2.0**
MIR pmax pmax
comp=Z,101nm,1.4s,mb5.7
KZA Kyzart 67.70 319 P P **09 53 30.7 +1.0**
SNR=20
TKM2 Tokmak 2 67.89 320 P P **09 53 31.1 +0.2**
SNR=15
TKM2 Tokmak 2 67.89 320 *e*P P **09 53 30.5 -0.4**
TKM2 pmax pmax
comp=Z,26nm,1.2s,mb5.1
TKM2 Tokmak 2 67.89 320 *e*P P **09 53 30.5 -0.4**
comp=Z,26nm,1.2s,mb5.1
UCH Uchtor 68.25 319 P P **09 53 34.1 +0.9**
SNR=27
UCH Uchtor 68.25 319 *e*P P **09 53 33.5 +0.3**
comp=Z,34nm,1.3s,mb5.2
AAK Ala-Archa 68.46 319 P P **09 53 34.7 +0.2**
comp=Z,116nm,1.3s,mb5.8,SNR=11
AAK Ala-Archa 68.46 319 P P **09 53 34.4 0.0**
SNR=8.1
AAK Ala-Archa 68.46 319 P P **09 53 34.2 -0.3**
comp=Z,1.7nm,0.5s,mb4.4,baz=114,slow=6.2
AAK Ala-Archa 68.46 319 *cc*eP P **09 53 34.7 +0.2**
AAK pmax pmax
comp=Z,26nm,1.7s,mb5.0
AAK Ala-Archa 68.46 319 *e*P P **09 53 34.6 +0.1**
comp=Z,55nm,1.4s,mb5.4
AAK LR LR
comp=Z,515nm,19.0s,MS4.8
AAK Ala-Archa 68.46 319 P P **09 53 34.6 +0.1**
comp=Z,95nmcomp=Z,5.7nm,1.5s,mb4.4
FRU Bishkek 68.48 320 *e*P P **09 53 33.0 -1.6**
AML Almayashu 68.75 319 P P **09 53 37.0 +0.7**
SNR=20
AML Almayashu 68.75 319 *e*P P **09 53 36.5 +0.2**
comp=Z,74nm,1.4s,mb5.4
AML LR LR
comp=Z,484nm,22.0s,MS4.7
USP Ospenovka 68.76 320 P P **09 53 35.7 -0.6**
SNR=18
KBL Kabul 68.93 310 *e*P P **09 53 37.1 -0.5**
KBL pmax pmax
comp=Z,31nm,1.2s,mb5.1
KBL Kabul 68.93 310 *e*P P **09 53 37.1 -0.4**
comp=Z,31nm,1.2s,mb5.1
EKS2 Erkin-Say 68.94 319 P P **09 53 37.9 +0.4**
SNR=14
EKS2 Erkin-Say 68.94 319 *e*P P **09 53 37.3 -0.1**
comp=Z,31nm,1.2s,mb5.1
EKS2 LR LR
comp=Z,674nm,22.0s,MS4.8
ZAA0 Zalesovo Array 69.26 334 *e*P P **09 53 38.4 -0.8**
ZALV Zalesovo Beam 69.26 334 P P **09 53 38.4 -0.8**
comp=Z,37nm,1.0s,mb5.2,baz=108,slow=4.8,SNR=32
KURK Kurchatov 70.27 328 P P **09 53 45.2 -0.3**
comp=Z,422nm,1.1s,mb6.3,SNR=17
KURK Kurchatov 70.27 328 P P **09 53 44.4 -1.0**
comp=Z,24nm,1.0s,mb5.1,baz=128,slow=5.6,SNR=3.4
KURK Kurchatov 70.27 328 P P **09 53 44.4 -1.1**
KURK pmax pmax
comp=Z,24nm,1.0s,mb5.1
KURK Kurchatov 70.27 328 *e*P P **09 53 44.9 -0.6**
comp=Z,100nm,1.1s,mb5.7
KURK LR LR
comp=Z,365nm,19.0s,MS4.7
NVS Novosibirsk 70.54 334 ⇑*i*P P **09 53 46.6 -0.4**
NVS *i* 09 54 06.6
NVS *e*PPP 09 58 05.8
NVS *i* S S 10 02 59.6 +2.1
NVS pmax pmax
comp=Z,144nm,1.7s,mb5.6
NVS pmax pmax
comp=N,116nm,1.8s
NVS pmax pmax
comp=E,105nm,1.8s
NVS smax
comp=N,46nm,2.1s
NVS smax
comp=E,67nm,2.1s
SBA Scott Base 75.77 172 *e*P P **09 54 17.9 +0.3**
BVAR Borovoye Array 75.82 328 P P **09 54 18.2 -0.1**
comp=E,82nm,1.3s,mb5.4,baz=131,slow=6.1,SNR=65
BVAR LR LR 10 30 25.7
comp=E,352nm,19.7s,MS4.7,baz=214,slow=38
BRVK Borovoye 75.90 328 P P **09 54 18.1 -0.6**
comp=E,247nm,1.2s,mb6.0,SNR=16
BRVK Borovoye 75.90 328 *cc*eP P **09 54 18.5 -0.2**
BRVK pmax pmax
comp=Z,113nm,1.7s,mb5.5
BRVK Borovoye 75.90 328 *e*P P **09 54 18.7 0.0**
comp=Z,90nm,1.3s,mb5.5
BRVK LR LR
comp=Z,455nm,21.0s,MS4.8
TIXI Tiksi 76.08 360 *d i*P P **09 54 19.0 -0.4**
TIXI *e* 09 57 09.4
TIXI *e*S S 10 03 59.9 +0.2
TIXI *e* 10 04 28.0
TIXI pmax pmax
comp=Z,50nm,1.7s,mb5.2
TIXI MLR MLR
comp=Z,568nm,20.0s,MS4.9
TIXI Tiksi 76.08 360 *e*P P **09 54 19.2 -0.2**
comp=Z,52nm,1.4s,mb5.3
NIKO Nikolski 77.04 33 *e*P P **09 54 24.6 -0.6**
comp=Z,248nm,1.7s,mb5.9
MAW Mawson 77.06 201 *e*P P **09 54 26.3 +1.3**
comp=Z,32nm,1.3s,mb5.1
MAW Mawson 77.06 201 P P **09 54 25.8 +0.7**
comp=Z,44nm,1.2s,mb5.3,baz=71,slow=7.9,SNR=30
MAW LR LR 10 27 48.8
comp=Z,554nm,19.7s,MS4.9,baz=75,slow=35
MAW Mawson 77.06 201 P P **09 54 25.8 +0.8**
MAW pmax pmax
comp=Z,45nm,1.2s
MAW MLR MLR
comp=Z,554nm,19.7s
MAW Mawson 77.06 201 *e*P P **09 54 26.1 +1.1**
comp=Z,24nm,1.4s,mb4.9
ABKT Ailbek 78.37 310 P P **09 54 33.4 +0.5**
comp=Z,165nm,1.3s,mb5.8,SNR=9.9
UNV Unalaska Valle 78.69 33 *e*P P **09 54 35.2 +0.9**
comp=Z,80nm,1.2s,mb5.5
IBAF Bafgh 78.91 303 *e*P P **09 54 35.4 -0.6**
AKUT Akutan 79.20 33 *e*P P **09 54 37.9 +0.8**
comp=Z,230nm,1.5s,mb5.9
PPT Papeete 79.88 107 *e*LR LR 10 19 34.5
comp=Z,2μm,34.8s
ABKAR Akbulak array 80.39 321 *e*P P **09 54 43.2 -0.4**
comp=Z,54nm,1.3s,mb5.3
ISRV Sarvestan 80.54 301 *e*P P **09 54 44.7 -0.3**
IPAR Pars 80.68 301 *e*P P **09 54 45.1 -0.6**
FALS False Pass 80.74 33 *e*P P **09 54 45.2 -0.3**
comp=Z,104nm,1.2s,mb5.6
GAMB Gambell 80.84 23 *e*P P **09 54 46.9 +1.1**
comp=Z,73nm,1.3s,mb5.5
ABPO Ambohimpanom 81.34 252 PFAKE 09 55 00.0 +11
ABPO LR LR
comp=Z,610nm,19.0s,MS5.0
OPO Ambohidratompo 81.39 252 P P **09 54 50.3 +0.6**
comp=Z,2.7nm,0.8s,mb4.2,baz=23,slow=5.0,SNR=5.3
OPO PKKPbc PKKPbc 10 13 22.7 -1.3
comp=Z,1.3nm,0.3s,baz=306,slow=1.2,SNR=8.7
IGAR Gharneh 82.00 303 *e*P P **09 54 51.5 -1.1**
SDPT Sand Point 82.50 33 *e*P P **09 54 55.3 +0.6**
comp=Z,636nm,1.6s,mb6.3
SVE Sverdlovsk 82.51 329 ⇑*e*P P **09 54 54.8 +0.1**
SVE pmax pmax
comp=Z,62nm,1.6s,mb5.4
IDMV Damavand 82.60 307 *e*P P **09 54 55.2 -0.5**
IVRN Varamin 82.74 306 *e*P P **09 54 50.8 -5.6**
IVRN *e*P 09 54 55.9

TNA **Tin City** 83.12 22 *e*P P 09 54 58.9 +1.1
comp=Z,49nm,1.2s,mb5.4
IR3 **Iran Long-Peri** 83.39 306 *e*P P 09 54 59.6 -0.2
ARU **Arti** 83.46 328 P P 09 54 59.0 -0.7
comp=Z,146nm,1.7s,mb5.7,SNR=16
ARU **Arti** 83.46 328*c i*P P 09 54 58.5 -1.2
ARU *e* 09 58 07.2
ARU S S 10 05 17.4 -0.7
ARU pmax pmax
comp=Z,68nm,1.7s,mb5.4
ARU **Arti** 83.46 328 *e*P P 09 54 58.8 -0.8
comp=Z,194nm,2.0s,mb5.8
ARU LR LR
comp=Z,342nm,19.0s,MS4.7
QRN **Al-Qurain** 84.93 299 *e*P P 09 55 06.8 -1.0
QRN AMb AMB 09 55 17.0
comp=Z,138nm,2.2s,mb5.7
UMR **Umm Al-Rimmam** 85.21 300 *e*P P 09 55 08.2 -1.0
UMR AMb AMB 09 55 19.6
comp=Z,84nm,2.1s,mb5.5
RDF **Al-Radifah** 85.27 299 *e*P P 09 55 08.7 -0.8
RDF AMb AMB 09 55 18.9
comp=Z,98nm,2.1s,mb5.6
SOKR **Solikamsk** 85.32 331*d i*P P 09 55 09.1 +0.1
SOKR pmax pmax
comp=Z,30nm,1.3s,mb5.3
QSPA **South Pole Qui** 85.38 180 P P 09 55 07.6 -1.4
comp=Z,9.5nm,0.9s,mb4.9,baz=323,slow=2.2,SNR=22
QSPA **South Pole Qui** 85.38 180 *e*P P 09 55 08.6 -0.4
MIB **Mutribah** 85.57 300 *e*P P 09 55 10.4 -0.6
MIB AMb AMB 09 55 12.0
comp=Z,100nm,1.4s,mb5.9
NAY **Al-Naaiem** 85.58 300 *e*P P 09 55 10.2 -0.8
NAY AMb AMB 09 55 11.5
comp=Z,56nm,0.8s,mb5.8
SYO **Syowa Base** 85.77 201 ⇊*i*P P 09 55 11.0 -0.1
SYO **Syowa Base** 85.77 201 ⇊*i*PcP PcP 09 55 14.0 +0.1
SVW2 **Sparrevohn** 86.69 28 *e*P P 09 55 17.0 +1.2
OHAK **Old Harbor** 86.87 32 *e*P P 09 55 17.4 +0.7
comp=Z,133nm,1.3s,mb6.0
TTA **Tatalina** 87.00 26 *e*P P 09 55 18.0 +0.8
TTA pmax pmax
comp=Z,105nm,1.3s,mb5.9
TTA **Tatalina** 87.00 26 *e*P P 09 55 18.0 +0.8
comp=Z,105nm,1.3s,mb5.9
KDAK **Kodiak Island** 87.37 32*c*eP P 09 55 20.8 +1.7
RSO **Redoubt South** 87.88 29 *e*P P 09 55 20.6 -0.9
PPLA **Purkeypile** 88.68 27 *e*P P 09 55 25.7 +0.4
comp=Z,35nm,1.4s,mb5.5
DGRG **David-gareji** 88.69 312 P P 09 55 26.5 +0.7
CHUM **Lake Minchumin** 88.84 26 *e*P P 09 55 26.8 +0.8
comp=Z,22nm,0.7s,mb5.6
GNI **Garni** 89.01 310*c*eP P 09 55 29.0 +1.7
GNI pmax pmax
comp=Z,34nm,2.5s
GNI **Garni** 89.01 310 *e*P P 09 55 28.6 +1.2
comp=Z,20nm,0.9s,mb5.4
GNI LR LR
comp=Z,246nm,19.0s,MS4.7
MTA **Mtatsminda** 89.15 312 P P 09 55 30.1 +2.2
TBLG **Delisi** 89.20 312 *e*P P 09 55 29.3 +1.1
TBLG **Delisi** 89.20 312 P P 09 55 29.3 +1.1
KTH **Kantishna Hill** 89.38 26 *e*P P 09 55 28.8 +0.3
comp=Z,27nm,1.2s,mb5.5
RC01 **Rabbit Creek A** 89.46 29 *e*P P 09 55 29.1 +0.1
comp=Z,85nm,1.3s,mb5.9
BPAW **Bear Paw Mtn.** 89.46 26 *e*P P 09 55 28.3 -0.6
comp=Z,18nm,1.3s,mb5.2
TAOE **Nuku Hiva Isla** 89.53 99 *e*LR LR 10 23 58.4
comp=Z,966nm,32.2s
PMR **Palmer** 89.83 28 *e*P P 09 55 30.7 0.0
PMR pmax pmax
comp=Z,36nm,1.3s,mb5.5
PMR **Palmer** 89.83 28 *e*P P 09 55 30.7 0.0
comp=Z,36nm,1.3s,mb5.5
MSL **Mosul** 89.88 306 *e*PP PP 09 59 02.0 -2.6
MSL *e*SKS 10 05 55.0
MSL *e*S S 10 06 14.0 -7.2
MSL **Mosul** 89.88 306 *e*P P 09 55 32.0 +0.5
ZEI **Tsey** 89.93 313 *e*P P 09 55 31.3 -0.3
ZEI pmax pmax
comp=Z,16nm,1.0s,mb5.3
ONI **Oni** 90.24 313 P P 09 55 33.0 0.0
COLD **Coldfoot** 90.39 23 *e*P P 09 55 33.4 +0.2
comp=Z,13nm,0.7s,mb5.4
KIV **Kislovodsk** 90.93 314 *e*P P 09 55 35.7 -0.5
KIV pmax pmax
comp=Z,9.0nm,1.1s,mb5.0
KIV **Kislovodsk** 90.93 314 PFAKE 09 55 50.0 +14
KIV LR LR
comp=Z,227nm,19.0s,MS4.6
COLA **College** 90.94 25 *e*P P 09 55 35.1 -0.6
COLA pmax pmax
comp=Z,15nm,1.3s,mb5.2
COLA MLR MLR
comp=Z,312nm,20.0s,MS4.7
COLA **College** 90.94 25 *e*P P 09 55 35.1 -0.6
comp=Z,15nm,1.3s,mb5.2
COLA LR LR
comp=Z,312nm,20.0s,MS4.7
DIV **Divide** 91.37 29 *e*P P 09 55 39.2 +1.4
comp=Z,44nm,1.2s,mb5.7
PAX **Paxson** 91.73 27 *e*P P 09 55 40.7 +1.2
PAX pmax pmax
comp=Z,42nm,1.2s,mb5.6
PAX **Paxson** 91.73 27 *e*P P 09 55 40.7 +1.2
comp=Z,42nm,1.2s,mb5.6
BMRM **Bremner River** 91.91 29 *e*P P 09 55 40.5 +0.2
comp=Z,27nm,1.1s,mb5.5
KMBO **Kilima Mbogo** 92.27 269 *e*P P 09 55 43.5 +0.4
KMBO pmax pmax
comp=Z,7.0nm,1.2s
KMBO **Kilima Mbogo** 92.27 269 *e*P P 09 55 43.5 +0.4
comp=Z,6.9nm,1.2s,mb4.9
MENT **Mentasta** 92.52 27 *e*P P 09 55 43.5 +0.4
RKT **Rikitea** 93.18 113 *e*LR LR 10 25 47.6
comp=Z,469nm,34.8s
EGAK **Eagle** 93.77 25 *e*P P 09 55 49.3 +0.4
comp=Z,19nm,1.1s,mb5.4
EGAK LR LR
comp=Z,228nm,20.0s,MS4.6
DAWY **Dawson** 94.52 26 *e*P P 09 55 52.7 +0.4
MAIT **Maitri** 94.57 197 *e*P P 09 55 54.0 +1.5
MOS **Moscow** 94.88 325 *e*P P 09 55 51.2 -2.9
OBN **Obninsk** 95.47 325⇈*e*P P 09 55 56.9 0.0
OBN *e* 09 59 45.1
OBN *e*SS SS 10 13 50.1 +11
OBN pmax pmax
comp=Z,39nm,1.9s,mb5.5
MMAI **Mount Meron Ar** 96.00 303 P P 09 55 59.2 -0.6
comp=Z,0.4nm,0.3s,mb4.3,baz=138,slow=10,SNR=3.9
LVZ **Lovozero** 96.09 338 PFAKE 09 56 10.0 +11
LVZ LR LR
comp=Z,313nm,20.0s,MS4.8
INK **Inuvik** 96.77 22 *e*P P 09 56 01.5 -1.0
INK pmax pmax
comp=Z,43nm,1.3s
INK **Inuvik** 96.77 22 *e*P P 09 56 01.5 -1.0
comp=Z,43nm,1.3s,mb5.7
BR131 **Keskin Array S** 97.50 309 *e*P P 09 56 06.1 -0.3
comp=Z,1.7nm,0.8s,mb4.6
BR131 LR LR
comp=Z,229nm,20.0s,MS4.7
BRTR **Keskin Array B** 97.50 309 P P 09 56 05.7 -0.8
comp=Z,2.2nm,0.9s,mb4.7,baz=106,slow=4.4,SNR=8.5
BRTR **Keskin Array B** 97.50 309*c*eP P 09 56 05.6 -0.9
BRTR pmax pmax
comp=Z,2.0nm,0.9s
CSS **Prodhromos** 97.75 305 PFAKE 09 56 20.0 +12
CSS LR LR
comp=Z,299nm,21.0s,MS4.8
KEV **Kevo** 98.63 340 PFAKE 09 56 20.0 +9.2
KEV LR LR
comp=Z,475nm,21.0s,MS5.0
ARCES **ARCESS Array B** 99.19 340 P P 09 56 11.7 -1.6
comp=Z,2.7nm,0.8s,mb4.8,baz=74,slow=4.3,SNR=10
ARCES PKKPbc PKKPbc 10 12 38.3 -2.7
comp=Z,2.0nm,1.1s,baz=303,slow=5.1,SNR=3.8
KBS **Kingsbay** 99.63 350 PFAKE 09 56 30.0 +14
KBS LR LR
comp=Z,301nm,19.0s,MS4.8
ISP **Isparta** 99.97 307 PFAKE 09 56 30.0 +13
ISP LR LR
comp=Z,262nm,19.0s,MS4.8
AKASG **Malin Array Be** 100.11 321 P Pdif 09 56 19.1 +1.4
comp=Z,0.8nm,0.6s,baz=78,slow=3.8,SNR=2.6
AKASG PP PP 10 00 26.3 +2.6
comp=Z,0.2nm,0.3s,baz=65,slow=6.8,SNR=4.9
AKASG **Malin Array Be** 100.11 321 P Pdif 09 56 19.1 +1.4
AKASG PP PP 10 00 26.3 +2.6
BOSA **Boshof** 100.35 240 PFAKE 09 56 30.0 +11
BOSA LR LR
comp=Z,451nm,19.0s,MS5.0
FINES **FINESS Array B** 100.47 332 P Pdif 09 56 17.6 -1.8
comp=Z,1.2nm,0.8s,baz=57,slow=7.0,SNR=5.2
BUR08 **Bucovina Ar. S** 103.08 318 *e*Pdif Pdif 09 56 30.1 -0.9
KWP **Kalwaria Pacla** 104.41 320 PFAKE 09 56 50.0 +13
KWP LR LR
comp=Z,285nm,21.0s,MS4.8
COR **Corvallis** 105.34 45 PFAKE 10 01 10.0 +15
COR LR LR
comp=Z,291nm,19.0s,MS4.8
YKA **Yellowknife Ar** 105.75 26 Pdiff Pdif 09 56 42.9 +0.1
comp=Z,0.6nm,0.6s,baz=296,slow=4.8,SNR=7.4
YKA PKIKP PKiKP 10 00 55.9 +0.6
comp=Z,0.9nm,0.7s,baz=297,slow=1.7,SNR=15
YKA PKKPbc PKKPbc 10 12 18.8 -2.7
comp=Z,0.9nm,0.8s,baz=107,slow=3.1,SNR=9.6
YKA **Yellowknife Ar** 105.75 26 Pdif Pdif 09 56 42.9 +0.1
YKA PKPdf PKiKP 10 00 55.9 +0.6
YKA PKKPbc PKKPbc 10 12 18.8 -2.7
HUMO **Hull Mountain** 105.89 47 PFAKE 10 01 10.0 +14
HUMO LR LR
comp=Z,328nm,21.0s,MS4.8
HOPS **Hopland** 106.31 51 PFAKE 10 01 10.0 +13
HOPS LR LR
comp=Z,439nm,22.0s,MS5.0
NOA **NORSAR Array B** 107.46 333 Pdiff Pdif 09 56 48.9 -1.5
comp=Z,0.2nm,0.5s,baz=76,slow=4.0,SNR=2.2
HAWA **Hanford** 107.62 43 PFAKE 10 01 10.0 +11
HAWA LR LR
comp=Z,226nm,19.0s,MS4.8
CMB **Columbia Colle** 108.53 52 PFAKE 10 01 10.0 +8.8
CMB LR LR
comp=Z,302nm,20.0s,MS4.9
CLL **Collm** 110.00 323 *e*Pdif Pdif 09 57 04.0 +2.3
CLL *i* 10 00 50.2
CLL *i* 10 01 27.0
CLL *e*PP PP 10 01 35.0 -1.8
CLL LR LR
comp=Z,200nm,21.7s,MS4.7
CLL **Collm** 110.00 323 *e*(Pdif) 09 57 04.0
CLL *i* 10 00 50.2
CLL *i* 10 01 27.0
comp=Z,7.0nm,1.3s
CLL *e*PP PP 10 01 35.0 -1.8
comp=Z,11nm,1.6s
CLL *e*(SKKPdf) 10 16 02.0
CLL LmV 10 53 00.0
comp=Z,200nm,21.7s
NVAR **Mina Array Bea** 110.08 51 PKiKP PKiKP 10 01 04.9 +0.8
comp=Z,0.3nm,0.6s,baz=251,slow=2.8,SNR=2.6
NVAR PP PP 10 01 34.0 -3.9
comp=Z,1.5nm,1.0s,baz=276,slow=5.0,SNR=5.9
GERES **GERESS Array B** 110.32 321 PKiKP PKiKP 10 01 04.6 +0.3
comp=Z,0.5nm,0.5s,baz=54,slow=1.3,SNR=8.2
GERES PP PP 10 01 34.7 -4.5
comp=Z,0.4nm,0.8s,baz=72,slow=6.2,SNR=4.4
BMN **Battle Mountai** 110.52 49 PFAKE 10 01 20.0 +15
BMN LR LR
comp=Z,309nm,22.0s,MS4.8
SWMT **Swartz Lake** 111.01 41 *e*PKPdf PKiKP 10 01 06.5 +0.8
DAC **Darwin (Calif)** 111.02 53 PFAKE 10 01 20.0 +14
DAC LR LR
comp=Z,330nm,19.0s,MS4.9
B14A **Marquette Ranc** 111.22 40 ⇑PKiKP PKiKP 10 01 06.1 +0.2
baz=111
MSO **Missoula** 111.25 41 *e*PKPdf PKiKP 10 01 07.5 +1.5
H12A **Diamond D Ranc** 111.26 44 ⇓PKiKP PKiKP 10 01 06.8 +0.6
baz=111
CEL **Celeste** 111.38 309 PFAKE 10 01 20.0 +13
CEL LR LR
comp=Z,255nm,19.0s,MS4.8
SLMT **Seeley Lake** 111.42 41 *e*PKPdf PKiKP 10 01 07.8 +1.4
J12A **Stokes Ranch,** 111.42 45 ⇓PKiKP PKiKP 10 01 06.4 -0.1
baz=112
H13A **Challis** 111.67 44 ⇓PKiKP PKiKP 10 01 06.8 -0.2
baz=112
CHMT **Chamberlain Mo** 111.67 41 *e*PKPdf PKiKP 10 01 07.5 +0.6
B15A **Bradely Ranch,** 111.69 39 ⇑PKiKP PKiKP 10 01 07.2 +0.4
baz=112
HLID **Hailey** 111.82 45 *e*PKPdf PKiKP 10 01 08.7 +1.5
C15A **Salmond Ranch,** 111.83 40 ⇓PKiKP PKiKP 10 01 05.6 -1.6
baz=112
ELK **Elko** 111.92 48 PFAKE 10 01 20.0 +12
ELK LR LR
comp=Z,337nm,20.0s,MS4.9
Q11A **Duckwater** 112.03 50 ⇑PKiKP PKiKP 10 01 07.5 -0.3
baz=112
J13A **Cove Ranch, Pi** 112.03 45 ⇓PKiKP PKiKP 10 01 08.9 +1.3
baz=112
N12A **Clover Valley,** 112.04 48 *e*PKPdf PKiKP 10 01 09.2 +1.4
N12A *e*PP PP 10 01 52.2 +0.4
AQU **L'Aquila** 112.31 314 PFAKE 10 01 20.0 +12
AQU LR LR
comp=Z,263nm,22.0s,MS4.8
MCMT **McKenzie Canyo** 112.56 43 *e*PKPdf PKiKP 10 01 10.1 +1.4
MCMT *e*PP PP 10 01 55.4 +0.1
DLMT **Dillon** 112.57 42 *e*PKPdf PKiKP 10 01 10.6 +2.0
A17A **Triple J Farms** 112.65 38 ⇓PKiKP PKiKP 10 01 08.8 +0.2
baz=113
G15A **Dillon** 112.70 43 ⇑PKiKP PKiKP 10 01 08.2 -0.7
baz=113
T11A **Corn Creek, Al** 112.71 52 ⇑PKiKP PKiKP 10 01 08.5 -0.6
baz=113
D16A **Dana Ranch, Ca** 112.75 41 ⇓PKiKP PKiKP 10 01 09.6 +0.7
baz=113
B17A **L&G Farms, Che** 112.81 39 ⇑PKiKP PKiKP 10 01 09.1 +0.1
baz=113
F16A **Kennard Place,** 113.09 42 ⇓PKiKP PKiKP 10 01 10.6 +1.0
baz=113
BOZ **Bozeman (W)** 113.13 42 PFAKE 10 01 20.0 +10
BOZ LR LR
comp=Z,185nm,20.0s,MS4.7
A18A **Metzger Ranch,** 113.18 38 ⇓PKiKP PKiKP 10 01 09.7 0.0
baz=113
J15A **Blackfoot** 113.25 44 ⇑PKiKP PKiKP 10 01 10.6 +0.6
baz=113
D17A **Six Diamond Ra** 113.26 40 ⇓PKiKP PKiKP 10 01 10.1 +0.2
baz=113
E17A **Martinsdale** 113.38 41 ⇓PKiKP PKiKP 10 01 10.8 +0.6
baz=113
N14A **Grayback Hills** 113.41 47 ⇓PKiKP PKiKP 10 01 11.1 +0.7
baz=113
B18A **Beardsley Farm** 113.41 39 ⇑PKiKP PKiKP 10 01 10.7 +0.6
baz=113
EGMT **Eagleton** 113.56 39 ⇓PKiKP PKiKP 10 01 10.9 +0.5
baz=114
EGMT **Eagleton** 113.56 39 *e*PKPdf PKiKP 10 01 11.0 +0.5
EGMT LR LR
comp=Z,303nm,21.0s,MS4.9
L15A **Malad City** 113.68 46 ⇑PKiKP PKiKP 10 01 11.4 +0.5
baz=114
F17A **Fitzpatrick Pl** 113.69 41 ⇓PKiKP PKiKP 10 01 11.3 +0.5
baz=114
I16A **Newdale** 113.77 44 ⇑PKiKP PKiKP 10 01 12.8 +1.8
baz=114
P14A **Drum Mountains** 113.81 49 ⇓PKiKP PKiKP 10 01 11.7 +0.5
baz=114
DUG **Dugway** 113.85 48 PFAKE 10 01 20.0 +8.8
DUG LR LR
comp=Z,207nm,21.0s,MS4.7
BFO **Black Forest** 113.86 321 PFAKE 10 01 20.0 +9.0
BFO LR LR
comp=Z,230nm,21.0s,MS4.8
YMR **Madison River** 113.88 43 *e*PKPdf PKiKP 10 01 14.1 +2.9
E18A **Harlowton** 113.96 41 ⇓PKiKP PKiKP 10 01 12.5 +1.2
baz=114
V13A **Grand Canyon W** 113.97 53 ⇑PKiKP PKiKP 10 01 11.9 +0.3
baz=114
YFT **Old Faithful** 114.04 43 *e*PKPdf PKiKP 10 01 13.2 +1.7
IMW **Indian Meadow** 114.14 44 *e*PKPdf PKiKP 10 01 13.6 +1.9
W13A **Hualapai Mount** 114.21 54 ⇓PKiKP PKiKP 10 01 12.2 +0.1
baz=114
TPAW **Teton Pass** 114.26 44 *e*PKPdf PKiKP 10 01 14.7 +2.8
LKWY **Lake** 114.30 43 PFAKE 10 01 20.0 +8.0
LKWY LR LR
comp=Z,345nm,21.0s,MS4.9
F18A **Big Timber** 114.31 41 ⇑PKiKP PKiKP 10 01 12.0 +0.1
baz=114
REDW **Red Top Meadow** 114.37 44 *e*PKPdf PKiKP 10 01 13.7 +1.5
AHID **Auburn Hatcher** 114.37 45 PFAKE 10 01 20.0 +7.8
AHID LR LR
comp=Z,226nm,21.0s,MS4.8
HWUT **Hardware Ranch** 114.38 46 *e*PKPdf PKiKP 10 01 13.1 +0.8
HWUT LR LR
comp=Z,291nm,22.0s,MS4.8
GCMT **Greycliff** 114.39 41 *e*PKPdf PKiKP 10 01 12.8 +0.7
SNOW **Snow King Moun** 114.40 44 *e*PKPdf PKiKP 10 01 15.0 +2.8
T14A **Hurricane** 114.41 51 ⇑PKiKP PKiKP 10 01 13.5 +1.1
baz=114
LOHW **Long Hollow** 114.46 44 *e*PKPdf PKiKP 10 01 13.7 +1.4
J17A **Brown Place, J** 114.46 44 ⇓PKiKP PKiKP 10 01 13.4 +1.1
baz=114
ECH **Echery** 114.63 322 PFAKE 10 01 20.0 +7.5
ECH LR LR
comp=Z,198nm,20.0s,MS4.7
MSU **Marysvale** 114.76 50 *e*PKIKP PKiKP 10 01 13.7 +0.7
MPU **Maple Canyon** 114.77 48 *e*PKPdf PKiKP 10 01 14.8 +1.8
RLMT **Red Lodge** 114.88 42 *e*PKPdf PKiKP 10 01 14.8 +1.7
T15A **Red Dirt Ranch** 114.97 51 ⇑PKiKP PKiKP 10 01 14.7 +1.2
baz=115
HINF **Hinteralfeld** 114.97 321 *e*PKIKP PKiKP 10 01 12.0 -1.1
J18A **Kendall Valley** 114.99 44 ⇓PKiKP PKiKP 10 01 14.0 +0.7
baz=115
M17A **Scullys Gap (B** 115.06 46 ⇓PKiKP PKiKP 10 01 14.1 +0.6
baz=115
FFC **Flin Flon** 115.07 30*c i*PKIKP PKiKP 10 01 16.1 +3.0
FFC **Flin Flon** 115.07 30 *e*PKPdf PKiKP 10 01 13.8 +0.6
FFC LR LR
comp=Z,225nm,19.0s,MS4.8
K18A **Toltan Ranch,** 115.16 45 ⇑PKiKP PKiKP 10 01 13.4 -0.3
baz=115
U15A **North Rim** 115.18 52 ⇓PKiKP PKiKP 10 01 13.8 -0.1
baz=115
HAU **Haudompre** 115.21 322 *e*PKIKP PKiKP 10 01 12.7 -0.9
L18A **Fontenelle, Gr** 115.38 45 ⇑PKiKP PKiKP 10 01 14.1 -0.1
baz=115
V15A **Kaibab Nationa** 115.41 52 ⇓PKiKP PKiKP 10 01 15.0 +0.6
baz=116
BW06 **Boulder Array** 115.45 44 ⇑PKiKP PKiKP 10 01 13.5 -0.7
baz=116
BW06 **Boulder Array** 115.45 44 PFAKE 10 01 30.0 +16
BW06 LR LR
comp=Z,250nm,21.0s,MS4.8
PDAR **Pinedale Array** 115.45 44 PKP PKPdf 10 01 14.8 +0.6
comp=Z,6.0nm,1.3s,baz=211,slow=2.6,SNR=7.6
PDAR PKKPbc PKKPbc 10 11 49.8 +0.5
comp=Z,0.7nm,0.9s,baz=105,slow=2.3,SNR=6.9
BAIF **Baives** 115.65 324 *e*PKIKP PKPdf 10 01 13.8 -0.6
X15A **Humboldt** 115.66 54 ⇑PKiKP PKiKP 10 01 15.0 +0.1
baz=116
Y15A **Casa Rosa Ranc** 115.70 55 ⇑PKiKP PKiKP 10 01 15.0 0.0
baz=116
SRU **San Rafael** 115.84 49 ⇑PKiKP PKiKP 10 01 14.3 -0.8
baz=116
R17A **Hanksville Air** 115.89 49 ⇓PKiKP PKiKP 10 01 15.3 +0.1
baz=116
O18A **Roosevelt** 115.89 47 ⇑PKiKP PKiKP 10 01 15.3 +0.1
baz=116
LPG **La Plagne** 115.90 319 *e*PKIKP PKPdf 10 01 14.6 -0.4
comp=Z,6.7nm,0.8s
LPL **La Plagne** 115.91 319 *e*PKIKP PKPdf 10 01 14.5 -0.5
CABF **La Chapelle** 115.91 320 *e*PKIKP PKPdf 10 01 14.4 -0.6
comp=Z,11nm,1.0s
K19A **Absolon Red Bu** 115.93 44 ⇓PKiKP PKiKP 10 01 15.1 0.0
baz=116
BNI **Bardonecchia** 116.11 319 PFAKE 10 01 30.0 +15
BNI LR LR
comp=Z,335nm,22.0s,MS4.9
WUAZ **Wupatki** 116.12 53 ⇑PKiKP PKiKP 10 01 14.6 -1.1
baz=116
WUAZ **Wupatki** 116.12 53 *e*PKPdf PKPdf 10 01 17.0 +1.2
T17A **Navajo Res., N** 116.19 51 ⇑PKiKP PKiKP 10 01 15.9 0.0
baz=116
LAO **LASA Array** 116.28 39 *e*PKPdf PKPdf 10 01 17.3 +1.5
LAO LR LR
comp=Z,330nm,21.0s,MS4.9
FCC **Fort Churchill** 116.31 24 *e*PKIKP PKPdf 10 01 15.1 -0.3
X16A **Lo Mia Camp, P** 116.32 54 ⇓PKiKP PKiKP 10 01 16.5 +0.3
baz=116
BORG **Borgarnes** 116.45 347 PFAKE 10 01 30.0 +15
BORG LR LR
comp=Z,434nm,21.0s,MS5.0
R18A **Canyonlands Na** 116.52 49 ⇓PKiKP PKiKP 10 01 16.9 +0.5
baz=117
O19A **Miners Draw (B** 116.53 47 ⇑PKiKP PKiKP 10 01 16.5 +0.1
baz=117
L20A **Wamsutter** 116.55 45 ⇑PKiKP PKiKP 10 01 17.2 +0.8
baz=117
S18A **Hurst Farm, Bl** 116.63 50 ⇓PKiKP PKiKP 10 01 16.7 0.0
baz=117
ORIF **Oris-en-Rattie** 116.69 319 *e*PKIKP PKPdf 10 01 15.7 -0.9
DGMT **Dagmar** 116.80 37 PFAKE 10 01 30.0 +13
DGMT LR LR
comp=Z,284nm,19.0s,MS4.9
Q19A **Hogan Spring (** 116.83 48 ⇓PKiKP PKiKP 10 01 17.0 -0.1
baz=117
P19A **Cripple Cowboy** 116.84 48 ⇓PKiKP PKiKP 10 01 16.4 -0.6
baz=117
T18A **Mexican Hat** 116.88 51 ⇓PKiKP PKiKP 10 01 16.1 -1.1
baz=117
ESK **Eskdalemuir** 116.90 332 PFAKE 10 01 30.0 +13
ESK LR LR
comp=Z,259nm,21.0s,MS4.8
LOR **Lormes** 117.05 322 *e*PKIKP PKPdf 10 01 16.4 -0.8
V18A **Ganado** 117.20 52 ⇑PKiKP PKiKP 10 01 17.5 -0.4
baz=117
O20A **White River Ci** 117.22 47 ⇑PKiKP PKiKP 10 01 18.5 +0.8
baz=117
L21A **Rawlins** 117.25 45 ⇓PKiKP PKiKP 10 01 17.5 -0.2
baz=117
S19A **Harvey Farm, M** 117.27 50 ⇑PKiKP PKiKP 10 01 19.3 +1.4
baz=117
117A **Oracle** 117.31 56 ⇓PKiKP PKiKP 10 01 18.9 +0.8
baz=117
P20A **De Beque** 117.31 48 ⇓PKiKP PKiKP 10 01 19.3 +1.4
baz=117
SMF **Signal de Mont** 117.32 321 *e*PKIKP PKPdf 10 01 16.8 -0.9
TUC **Tucson** 117.33 56 *e*PKIKP PKPdf 10 01 19.4 +1.2
SSF **Saint Saulge** 117.36 322 *e*PKIKP PKPdf 10 01 17.1 -0.7
comp=Z,16nm,1.2s
M21A **Separation Pea** 117.37 45 ⇓PKiKP PKiKP 10 01 18.6 +0.6
baz=117
217A **Green Valley** 117.42 57 ⇓PKiKP PKiKP 10 01 20.2 +1.8
baz=118
RWWY **Rawlins** 117.45 45 *e*PKPdf PKPdf 10 01 19.5 +1.4
N21A **Black Mountain** 117.54 46 ⇑PKiKP PKiKP 10 01 18.5 +0.2
baz=118
Q20A **Ridgley Place,** 117.55 48 ⇑PKiKP PKiKP 10 01 18.7 +0.3
baz=118
AVF **Avril sur Loir** 117.56 321 *e*PKIKP PKPdf 10 01 17.0 -1.2
PV01 **Paradox Valley** 117.59 49 *e*PKPdf PKPdf 10 01 20.5 +2.0
L22A **Ellis Ranch, M** 117.88 44 ⇑PKiKP PKiKP 10 01 19.7 +0.8
baz=118
MVCO **Mesa Verde** 117.91 50 ⇑PKiKP PKiKP 10 01 19.4 +0.2
baz=118
MVCO **Mesa Verde** 117.91 50 *e*PKPdf PKPdf 10 01 20.9 +1.8
MVCO *e*PP PP 10 02 32.8 -0.5
118A **Homack Ranch,** 117.92 55 ⇑PKiKP PKiKP 10 01 19.8 +0.4
baz=118
BGF **Bois d'Agland** 117.98 321 *e*PKIKP PKPdf 10 01 18.5 -0.5
comp=Z,37nm,1.2s
Q21A **Lamborn Mesa,** 118.12 48 ⇓PKiKP PKiKP 10 01 19.8 +0.2
baz=118
U20A **Newcomb** 118.13 51 ⇑PKiKP PKiKP 10 01 19.8 +0.2
baz=118
Y19A **Nutrioso** 118.19 54 ⇑PKiKP PKiKP 10 01 19.1 -0.7
baz=118
N22A **Wattenberg Ran** 118.29 46 ⇑PKiKP PKiKP 10 01 19.7 -0.1
baz=118
SMCO **Snowmass** 118.46 48 *e*PKPdf PKPdf 10 01 22.4 +2.2
TCF **Toulx Ste Croi** 118.49 321 *e*PKIKP PKPdf 10 01 19.3 -0.7
comp=Z,16nm,1.1s
X20A **Quemado** 118.64 53 ⇑PKiKP PKiKP 10 01 20.9 +0.2
baz=119
219A **White Tail Can** 118.66 56 ⇓PKiKP PKiKP 10 01 20.7 -0.1
baz=119
RSSD **Black Hills** 118.72 41 *e*PKIKP PKPdf 10 01 21.1 +0.6
319A **Douglas** 118.78 57 ⇑PKiKP PKiKP 10 01 22.2 +1.2
baz=119
Y20A **Horse Springs,** 118.91 54 ⇑PKiKP PKiKP 10 01 21.2 0.0
baz=119
Z20A **Nine Sixteen R** 118.94 55 ⇓PKiKP PKiKP 10 01 22.3 +1.0
baz=119
T22A **Edith** 119.19 50 ⇓PKiKP PKiKP 10 01 21.7 0.0
baz=119
X21A **Alamocita Cree** 119.24 53 ⇑PKiKP PKiKP 10 01 22.2 +0.3
baz=119

ISCO	Idaho Springs	119.24	46	ePKIKP	PKPdf	10 01 22.9	+1.3
ISCO				MLR	MLR		
	comp=Z,289nm,22.0s,MS4.9						
220A	Playas Peak, P	119.28	56	⇓PKiKP	PKiKP	10 01 21.9	-0.1
	baz=119						
U22A	Llaves	119.42	51	⇓PKiKP	PKiKP	10 01 22.1	0.0
	baz=120						
320A	Kipp Ranch, An	119.42	57	⇓PKiKP	PKiKP	10 01 22.1	-0.2
	baz=120						
121A	Cookes Peak, D	119.74	55	⇓PKiKP	PKiKP	10 01 22.6	-0.3
	baz=120						
LAZ	Ladron	119.76	53	ePKPdf	PKPdf	10 01 25.4	+2.6
MFF	Saint Martin d	119.81	322	ePKIKP	PKPdf	10 01 21.6	-0.9
	comp=Z,39nm,1.2s						
U23A	El Rito	119.94	50	⇑PKiKP	PKiKP	10 01 23.5	+0.3
	baz=120						
SDCO	Great Sand Dun	120.01	49	ePKPdf	PKPdf	10 01 24.2	+1.0
Y22A	Socorro	120.03	53	⇓PKiKP	PKiKP	10 01 23.4	0.0
	baz=120						
ANMO	Albuquerque	120.14	52c	iPKIKP	PKPdf	10 01 23.5	0.0
ANMO				pmax	pmax		
	comp=Z,12nm,1.7s						
ANMO	Albuquerque	120.14	52	ePKPdf	PKPdf	10 01 25.3	+1.8
ANMO				LR	LR		
	comp=Z,240nm,21.0s,MS4.8						
Z22A	Elephant Butte	120.22	54	⇑PKiKP	PKiKP	10 01 23.6	-0.2
	baz=120						
BNM	Barren Site	120.24	53	ePKPdf	PKPdf	10 01 25.0	+1.3
X23A	Hourglass Bar	120.47	52	⇓PKiKP	PKiKP	10 01 24.3	0.0
	baz=120						
ULM	Lac du Bonnet	120.62	32	PKP	PKPdf	10 01 24.4	+0.4
	comp=Z,5.2nm,0.8s,baz=319,slow=2.2,SNR=6.0						
ULM	Lac du Bonnet	120.62	32	ePKPdf	PKPdf	10 01 24.3	+0.3
Y23A	Lovelace Mesa,	120.76	53	⇓PKiKP	PKiKP	10 01 24.8	0.0
	baz=121						
W24A	Lazy 6 Ranch,	120.89	51	⇓PKiKP	PKiKP	10 01 25.3	+0.2
	baz=121						
T25A	Trinidad	121.03	49	⇑PKiKP	PKiKP	10 01 25.8	+0.5
	baz=121						
Y24A	Capitan	121.25	53	⇑PKiKP	PKiKP	10 01 25.7	-0.1
	baz=121						
U25A	Circle Dot Ran	121.28	50	⇑PKiKP	PKiKP	10 01 26.7	+0.9
	baz=121						
V25A	Rancho No Teng	121.31	51	⇑PKiKP	PKiKP	10 01 25.6	-0.2
	baz=121						
OGNE	Ogallala	121.35	44	ePKPdf	PKPdf	10 01 26.9	+1.3
Z24A	Sheeppen Canyo	121.48	54	⇓PKiKP	PKiKP	10 01 26.0	-0.3
	baz=122						
124A	Stringfield Ra	121.59	54	⇑PKiKP	PKiKP	10 01 26.5	0.0
	baz=122						
W25A	X Bar L Ranch,	121.62	51	⇑PKiKP	PKiKP	10 01 25.0	-1.5
	baz=122						
224A	Cornudas Mount	121.71	55	⇑PKiKP	PKiKP	10 01 27.3	+0.6
	baz=122						
AGMN	Agassiz Nation	121.72	34	ePKPdf	PKPdf	10 01 25.8	-0.3
AGMN				ePP	PP	10 02 55.6	-3.2
U26A	Atchley Ranch,	121.79	50	⇑PKiKP	PKiKP	10 01 26.9	+0.1
	baz=122						
Y25A	Mesa, Roswell	121.84	53	⇓PKiKP	PKiKP	10 01 26.6	-0.4
	baz=122						
MNTX	Cornudas Mount	121.92	55	ePKPdf	PKPdf	10 01 28.1	+1.1
MNTX				LR	LR		
	comp=Z,260nm,21.0s,MS4.9						
V26A	Tequesquite Ra	121.96	50	⇓PKiKP	PKiKP	10 01 26.7	-0.5
	baz=122						
Z25A	Roswell	122.02	53	⇑PKiKP	PKiKP	10 01 27.1	-0.2
	baz=122						
125A	Gardner Draw,	122.25	54	⇑PKiKP	PKiKP	10 01 27.6	-0.2
	baz=122						
225A	Deer Hill, Car	122.27	55	⇑PKiKP	PKiKP	10 01 27.0	-0.8
	baz=122						
X26A	CR and CF Fran	122.34	52	⇓PKiKP	PKiKP	10 01 25.7	-2.2
	baz=122						
325A	Bean Ranch, Si	122.35	56	⇓PKiKP	PKiKP	10 01 26.1	-2.0
	baz=122,SNR=10						
425A	Indio Mountain	122.50	56	⇑PKiKP	PKiKP	10 01 29.3	+0.9
	baz=122						
W27A	Bowe Ranch, En	122.76	51	⇑PKiKP	PKiKP	10 01 27.7	-1.0
	baz=123						
226A	Malaga, Loving	122.87	55	⇓PKiKP	PKiKP	10 01 29.0	-0.1
	baz=123						
Y27A	Causey	123.06	52	⇑PKiKP	PKiKP	10 01 29.9	+0.5
	baz=123						
TAM	Tamanrasset	123.11	294	ePKIKP	PKPdf	10 01 31.4	+1.9
326A	Caldwell Ranch	123.18	55	⇑PKiKP	PKiKP	10 01 29.7	0.0
	baz=123						
Z27A	Tatum	123.20	53	⇓PKiKP	PKiKP	10 01 30.2	+0.5
	baz=123						
MSTX	Muleshoe	123.34	52	⇓PKiKP	PKiKP	10 01 30.2	+0.3
	baz=123						
526A	Mary Lane Ranc	123.44	57	⇓PKiKP	PKiKP	10 01 30.3	+0.1
	baz=124						
626A	Big Bend Ranch	123.54	57	⇓PKiKP	PKiKP	10 01 31.1	+0.6
	baz=124						
ECSD	EROS Data Cent	123.67	39	ePKPdf	PKPdf	10 01 29.4	-0.6
ECSD				LR	LR		
	comp=Z,232nm,20.0s,MS4.8						
427A	Hayter Ranch,	123.79	56	⇓PKiKP	PKiKP	10 01 30.9	-0.1
	baz=124						
527A	Woodward Ranch	123.81	57	⇓PKiKP	PKiKP	10 01 30.2	-0.7
	baz=124						
CBKS	Cedar Bluff	123.83	46	ePKIKP	PKPdf	10 01 30.6	+0.1
CBKS				MLR	MLR		
	comp=Z,281nm,20.0s,MS4.9						
AMTX	Amarillo	123.89	51	PFAKE		10 01 40.0	+9.3
AMTX				LR	LR		
	comp=Z,241nm,19.0s,MS4.9						
TXAR	Lajitas Array	123.99	58	PKP	PKPdf	10 01 31.8	+0.8
	comp=Z,1.2nm,0.8s,baz=253,slow=2.1,SNR=12						
328A	Wristen Ranch,	124.12	55	⇑PKiKP	PKiKP	10 01 32.0	+0.5
	baz=124						
627A	Terlingua Ranc	124.19	57	⇓PKiKP	PKiKP	10 01 32.1	+0.3
	baz=124						
EYMN	Ely	124.31	32	ePKPdf	PKPdf	10 01 31.1	+0.1
EYMN				LR	LR		
	comp=Z,317nm,22.0s,MS4.9						
428A	Kincaid Ranch,	124.42	56	⇓PKiKP	PKiKP	10 01 31.8	-0.3
	baz=124						
528A	Cox Ranch, San	124.49	56	⇓PKiKP	PKiKP	10 01 31.5	-0.8
	baz=124						
628A	Black Gap, Mar	124.60	57	⇑PKiKP	PKiKP	10 01 31.5	-1.1
	baz=125						
ESDC	Sonseca Array	125.51	317	PKP	PKPdf	10 01 33.7	0.0
	comp=Z,0.3nm,0.5s,baz=356,slow=5.1,SNR=4.8						
ESDC				PP	PP	10 03 24.4	-0.2
	comp=Z,1.0nm,0.9s,baz=46,slow=6.2,SNR=4.2						
ESLA	Sonseca Array	125.51	317	PFAKE		10 01 50.0	+16
ESLA				LR	LR		
	comp=Z,1μm,19.0s,MS5.5						
KSU1	Kansas State U	125.90	44	ePKPdf	PKPdf	10 01 35.0	+0.6
WMOK	Wichita Mounta	126.16	50	ePKIKP	PKPdf	10 01 35.7	+0.6
SCIA	State Center	126.76	39	ePKPdf	PKPdf	10 01 36.5	+0.6
JCT	Junction City	126.86	55	ePKIKP	PKPdf	10 01 37.4	+0.9
JCT				MLR	MLR		
	comp=Z,233nm,20.0s,MS4.9						
TOA0	Torodi Ar. Sit	127.93	283	ePKPdf	PKPdf	10 01 39.5	+0.5
TORD	Torodi Ar. Bea	127.93	283	PKP	PKPdf	10 01 38.5	-0.4
	comp=Z,10nm,1.0s,baz=82,slow=1.1,SNR=21						
JFWS	Jewell Farm	128.01	37	ePKIKP	PKPdf	10 01 38.0	-0.4
JFWS				MLR	MLR		
	comp=Z,255nm,19.0s,MS4.9						
SCHQ	Schefferville	128.15	12	PKP	PKPdf	10 01 39.4	+1.1
	comp=Z,7.3nm,1.1s,baz=61,slow=5.7,SNR=4.2						
GLMI	Grayling	129.95	31	ePKPdf	PKPdf	10 01 42.3	+0.3
GLMI				LR	LR		
	comp=Z,321nm,22.0s,MS5.0						
HDIL	Hopedale	129.97	39	ePKPdf	PKPdf	10 01 42.0	-0.2
HDIL				LR	LR		
	comp=Z,323nm,21.0s,MS5.0						
CCM	Cathedral Cave	130.07	42	ePKIKP	PKPdf	10 01 43.0	+0.6
CCM				MLR	MLR		
	comp=Z,240nm,20.0s,MS4.9						
MIAR	Mount Ida	130.14	48	ePKIKP	PKPdf	10 01 43.3	+0.6
MIAR				e		10 03 58.5	
MIAR	Mount Ida	130.14	48	ePKPdf	PKPdf	10 01 43.3	+0.6
MIAR				ePP	PP	10 03 58.5	+3.1
MIAR				eSKPdf	SKPdf	10 05 10.7	-4.3
HKT	Hockley	130.26	54	ePKPdf	PKPdf	10 01 44.4	+1.4
HKT				eSKPbc	SKPbc	10 05 09.2	+6.2
HKT				LR	LR		
	comp=Z,284nm,19.0s,MS5.0						
NATX	Nacogdoches	130.50	51	ePKPdf	PKPdf	10 01 44.6	+1.2
NATX				eSKPbc	SKPbc	10 05 08.4	+4.5
FVM	French Village	130.66	42	ePKPdf	PKPdf	10 01 43.5	-0.1
FVM				ePP	PP	10 03 53.4	-5.1
FVM				eSKPbc	SKPbc	10 05 07.9	+3.6
UALR	University of	130.93	47	ePKPdf	PKPdf	10 01 45.2	+1.1
PLCA	Paso Flores	131.27	160	PKP	PKPdf	10 01 46.4	+1.8
	comp=Z,9.3nm,1.2s,baz=218,slow=4.5,SNR=6.7						
PLCA	Paso Flores	131.27	160	PKP	PKPdf	10 01 46.4	+1.8
SIUC	Southern Illin	131.61	42	ePKPdf	PKPdf	10 01 44.1	-1.3
SIUC				eSKPbc	SKPbc	10 05 12.1	+4.2
OLIL	Olney	131.77	40	ePKPdf	PKPdf	10 01 46.5	+0.9
PARMO	Parma	131.82	43	ePKPdf	PKPdf	10 01 48.1	+2.4
AAM	Ann Arbor	132.18	33	PFAKE		10 02 00.0	+14
AAM				LR	LR		
	comp=Z,349nm,20.0s,MS5.1						
BLO	Bloomington	132.50	38	ePKIKP	PKPdf	10 01 48.1	+1.1
WCI	Wyandotte Cave	133.21	39	ePKIKP	PKPdf	10 01 50.6	+2.2
WVT	Waverly	133.41	43	ePKIKP	PKPdf	10 01 49.4	+0.6
PLAL	Pickwick Lake	133.86	44	ePKPdf	PKPdf	10 01 50.6	+0.9
ACSO	Alum Creek Sta	133.94	35	ePKPdf	PKPdf	10 01 51.0	+1.3
ACSO				LR	LR		
	comp=Z,289nm,22.0s,MS5.0						
ERPA	Erie	134.25	31	PFAKE		10 02 00.0	+10
ERPA				LR	LR		
	comp=Z,156nm,21.0s,MS4.7						
KIC	Kosan Boka	134.54	274	eP	PKPdf	10 01 50.3	-1.3
	comp=Z,72nm,1.6s						
DBIC	Dimbokro	134.66	275	PKP	PKPdf	10 01 51.2	-0.5
	comp=Z,6.8nm,0.9s,baz=170,slow=3.9,SNR=4.4						
DBIC	Dimbokro	134.66	275	ePKPdf	PKPdf	10 01 51.3	-0.5
DBIC				LR	LR		
	comp=Z,461nm,20.0s,MS5.2						
TIC	Toumodi	134.82	275	eP	PKPdf	10 01 52.1	0.0
	comp=Z,3.8nm,0.2s						
LIC	Lamto	134.83	274	eP	PKPdf	10 01 53.4	+1.3
	comp=Z,37nm,1.1s						
LRAL	Lakeview Retre	135.65	46	ePKPdf	PKPdf	10 01 55.1	+2.0
LRAL				LR	LR		
	comp=Z,360nm,20.0s,MS5.1						
MCWV	Mont Chateau	136.09	33	PFAKE		10 02 10.0	+16
MCWV				LR	LR		
	comp=Z,459nm,19.0s,MS5.2						
BINY	Binghamton	136.14	28	ePKPdf	PKPdf	10 01 55.4	+1.7
BINY				LR	LR		
	comp=Z,340nm,21.0s,MS5.0						
LBNH	Lisbon	136.18	22	PFAKE		10 02 10.0	+16
LBNH				LR	LR		
	comp=Z,267nm,20.0s,MS5.0						
TKL	Tuckaleechee C	136.37	41	ePKIKP	PKPdf	10 01 56.5	+2.1
BRAL	Brewton	136.64	48	PFAKE		10 02 10.0	+15
BRAL				LR	LR		
	comp=Z,288nm,19.0s,MS5.0						
ELN	Prospectdale	137.24	36	ePKPdf	PKPdf	10 02 00.9	+5.0
BLA	Blacksburg	137.45	36	PFAKE		10 02 10.0	+14
BLA				LR	LR		
	comp=Z,303nm,19.0s,MS5.0						
GOGA	Godfrey	137.91	43	PFAKE		10 02 10.0	+13
GOGA				LR	LR		
	comp=Z,375nm,21.0s,MS5.1						
CBN	Corbin	138.47	33	PFAKE		10 02 10.0	+12
CBN				LR	LR		
	comp=Z,418nm,21.0s,MS5.2						
DWPF	Disney	142.33	48	PFAKE		10 02 20.0	+15
DWPF				LR	LR		
	comp=Z,258nm,20.0s,MS5.0						
JTS	JuntasAbangare	145.27	79	ePKIKP	PKPdf	10 02 11.5	+0.6
JTS				MLR	MLR		
	comp=Z,430nm,19.0s						
CPUP	Villa Florida	148.55	168	PKPbc	PKPbc	10 02 19.0	-0.7
	comp=Z,38nm,1.1s,baz=210,slow=2.4,SNR=24						
CPUP	Villa Florida	148.55	168	PKPbc	PKPbc	10 02 19.0	-0.7
NNA	Nana	148.97	122	PKPbc	PKPbc	10 02 19.0	-2.2
	comp=Z,19nm,0.9s,baz=293,slow=2.2,SNR=5.5						
NNA	Nana	148.97	122	ePKPdf	PKPdf	10 02 18.4	+1.3
BBSR	BB Station	149.27	24	ePKPbc	PKPbc	10 02 21.4	0.0
BBSR				LR	LR		
	comp=Z,269nm,20.0s,MS5.0						
ATAH	Atahualpa	149.72	112	PKPbc	PKPbc	10 02 23.6	+0.6
	comp=Z,19nm,1.0s,baz=170,slow=3.4,SNR=8.7						
ATAH				PKPab	PKPab	10 02 30.1	+1.8
	comp=Z,69nm,1.2s,baz=206,slow=5.7,SNR=11						
BCIP	Isla Barro Col	150.41	80	ePKPdf	PKPdf	10 02 20.7	+1.2
BCIP				ePKPbc	PKPbc	10 02 25.6	+0.9
BCIP				LR	LR		
	comp=Z,373nm,22.0s,MS5.1						
GTBY	Guantanamo Bay	151.49	56	PFAKE		10 02 30.0	+9.1
GTBY				LR	LR		
	comp=Z,229nm,19.0s,MS5.0						
OTAV	Otavalo	151.63	98	ePKPdf	PKPdf	10 02 23.1	+1.8
LPAZ	La Paz	152.83	140	PKP	PKPdf	10 02 24.9	+1.9
	comp=Z,4.1nm,0.9s,baz=26,slow=1.2,SNR=13						
LPAZ				PKPbc	PKPbc	10 02 32.2	+2.0
	comp=Z,7.5nm,0.5s,baz=142,slow=3.5,SNR=24						
LPAZ				PKPab	PKPab	10 02 40.0	-1.1
	comp=Z,11nm,1.1s,baz=240,slow=2.9,SNR=5.5						
LPAZ	La Paz	152.83	140	PKIKP	PKPdf	10 02 24.9	+1.9
LPAZ						10 02 32.2	
LPAZ						10 02 40.0	
LPAZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
LPAZ				pmax	pmax		
	comp=Z,11nm,1.1s						
LPAZ	La Paz	152.83	140	ePKPdf	PKPdf	10 02 25.3	+2.3
GRTK	Grand Turk	153.76	48	PFAKE		10 02 40.0	+16
GRTK				LR	LR		
	comp=Z,311nm,20.0s,MS5.1						
ROSC	El Rosal	156.13	88	PKP	PKPdf	10 02 29.5	+1.7
	comp=Z,3.4nm,0.6s,baz=113,slow=18,SNR=6.8						
ROSC				PKPab	PKPab	10 02 56.5	+1.1
	comp=Z,2.2nm,0.3s,baz=100,slow=23,SNR=7.0						
ROSC	El Rosal	156.13	88	ePKPdf	PKPdf	10 02 29.6	+1.8
SDV	Santo Domingo	159.44	77	ePKPdf	PKPdf	10 02 31.9	+0.1
ANWB	Willy Bob	162.85	40	PFAKE		10 02 50.0	+15
ANWB				LR	LR		
	comp=Z,285nm,22.0s						
FDF	Fort de France	165.36	46	PFAKE		10 02 50.0	+12
FDF				LR	LR		
	comp=Z,366nm,22.0s						
GRGR	Grenville	166.56	55	PFAKE		10 02 50.0	+11
GRGR				LR	LR		
	comp=Z,257nm,20.0s						

*IDC **01** 09:43:42.6±0.5, 18°.71S×172°.74W, h0km, mb4.8/17, mb1 4.9/17, mb1mx4.8/24, mbtmp4.7/17, ML5.9/1, MS3.9/2, Ms1 3.9/2, ms1mx3.2/28, Error ellipse: s-maj=19.4km s-min=10.9km az=126.0*

*ISCJB **01** 09:43:45.8±0.2, 18°.54S±0°.08×172°.90W±0°.06, h32km, mb4.9/60, MS4.7/4, Error ellipse: s-maj=13.1km s-min=4.3km az=149.0*

*NEIC **01** 09:43:48.0±0.2, 18°.28S×172°.99W, mb4.8/41, Error ellipse: s-maj=12.3km s-min=5.3km az=141.0*

ISC 01 09:43:45.2±3.9, 18°.56S±0°.07×172°.85W±0°.06, h17km±24km, h34km±.6km; pP-P, n350, c0°.55/322, mb4.9/60, MS4.7/4, 124C-91D, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	4.74	13	Pn	Pn	09 44 52.0	-3.9
	41nm,0.3s,baz=134,slow=1.1,SNR=38						
AFI				Sn	Sn	09 45 41.2	-9.4
	196nm,0.3s,baz=325,slow=22,SNR=12						
AFI				LR	LR	09 46 39.4	
	comp=Z,842nm,20.7s,baz=196,slow=36						
AFI	Afiamalu	4.74	13	ePn	Pn	09 44 51.9	-4.0
AFI				eSn	Sn	09 45 42.3	-8.3
MSVF	Nonsavu	8.69	274	ePn	Pn	09 45 57.5	+7.3
	94nm,0.8s						
RAO	Raoul Island	11.60	203	Pn	Pn	09 46 29.3	-0.7
	80nm,0.3s,baz=72,slow=20,SNR=6.3						
RAO				Sn	Sn	09 48 30.9	-8.3
	86nm,0.3s,baz=75,slow=21,SNR=9.4						
RAR	Rarotonga	12.58	104	ePn	Pn	09 46 39.8	-3.8
	55nm,0.6s						
DZM	Mont Dzumac	19.73	256	eP	Pn	09 48 15.7	+0.1
	253nm,1.2s						
DZM				eLR	LR	09 53 04.8	
	1μm,25.1s						
DZM	Mont Dzumac	19.73	256	eP	Pn	09 48 15.7	+0.1
	92nm,0.8s						
NOUC	Port Laguerre	19.86	256	eP	Pn	09 48 17.5	+0.3
OUZ	Omahuta	20.49	213	eP	P	09 48 25.5	+3.2
	148nm,1.0s						
URZ	Urewera	21.49	202	P	P	09 48 33.5	+0.4
	82nm,0.6s,mb5.2,baz=356,slow=6.7,SNR=29						
URZ				S	S	09 52 29.9	-0.8
	23nm,0.7s,baz=127,slow=18,SNR=8.1						
URZ	Urewera	21.49	202	eP	P	09 48 35.0	+1.9
	91nm,0.7s,mb5.2						
PPT	Papeete	22.15	91	eLR	LR	09 53 42.5	
	2μm,26.5s						
PPT	Papeete	22.15	91	LR	LR	09 54 56.2	
	comp=Z,557nm,18.1s,MS4.0,baz=290,slow=31						
SNZO	South Karori	25.05	203	eP	P	09 49 13.4	+4.9
	59nm,0.7s,mb5.2						
KHZ	Kahutara	26.44	203	eP	P	09 49 25.4	+4.2
	25nm,0.5s,mb5.0						
RPZ	Rata Peaks	28.50	205	P	P	09 49 39.3	-0.3
	4.0nm,0.8s,mb4.2,baz=115,slow=14,SNR=2.4						
RPZ	Rata Peaks	28.50	205	eP	P	09 49 47.9	+8.2
	59nm,0.5s,mb5.6						
ODZ	Otahua Downs	29.78	204	eP	P	09 49 57.8	+6.9
	13nm,0.7s,mb4.8						
TAOE	Nuku Hiva Isla	33.15	78	eLR	LR	09 58 40.0	
	889nm,28.6s						
EIDS	Eidsvold	34.05	252	eP	P	09 50 27.3	-1.4
	42nm,1.1s,mb5.3						
ARMA	Armidale	34.27	243	eP	P	09 50 30.5	-0.1
ARMA	Armidale	34.27	243	eP	P	09 50 30.1	-0.5
	40nm,0.8s,mb5.4						
RKT	Rikitea	35.62	104	eLR	LR	10 00 01.1	
	871nm,26.8s						
CNB	Canberra Magne	37.32	236	eP	P	09 50 57.0	+0.3
CTA	Charters Tower	38.55	261	eP	P	09 51 06.4	-0.9
	62nm,0.4s,mb5.7						
CTA	Charters Tower	38.55	261	P	P	09 51 06.5	-0.7
	92nm,0.5s,mb5.8,baz=91,slow=10.0,SNR=54						
CTAO	Charters Tower	38.55	261	eP	P	09 51 06.0	-1.3
	97nm,0.6s,mb5.7						
CMSA	Cobar Meteorol	39.49	243	eP	P	09 51 14.7	-0.3
COEN	Coen	42.38	269	eP	P	09 51 38.2	-0.8
	235nm,0.7s,mb5.9						
COEN				epP	pP	09 51 48.8	+4.5
STKA	Stephens Creek	42.99	243	P	P	09 51 44.4	+0.6
	40nm,1.0s,mb5.1,baz=85,slow=10,SNR=5.2						
STKA	Stephens Creek	42.99	243	eP	P	09 51 43.7	-0.1
WRAB	Tennant Creek	49.69	259	eP	P	09 52 35.3	-1.3
	56nm,0.8s,mb5.7						
WRAB				epP	pP	09 52 44.8	+2.8
ASAR	Alice Springs	49.70	254	P	P	09 52 36.5	-0.1
	78nm,0.8s,mb5.8,baz=88,slow=8.5,SNR=66						
KAKA	Kakadu	52.84	268	eP	P	09 52 59.6	-0.7
	57nm,0.9s,mb5.5						
KAKA	Kakadu	52.84	268	eP	P	09 52 59.8	-0.5
FORT	Forrest	54.51	245	eP	P	09 53 12.2	-0.2
	35nm,0.9s,mb5.4						
FORT	Forrest	54.51	245	eP	P	09 53 12.4	+0.1
	80nm,1.0s,mb5.7						
KNA	Kununurra	55.65	263	eP	P	09 53 20.7	-0.1
	40nm,0.6s,mb5.6						
FITZ	Fitzroy Crossi	58.12	260	eP	P	09 53 37.6	-0.7
	12nm,0.4s,mb5.3						
FITZ	Fitzroy Crossi	58.12	260	P	P	09 53 38.8	+0.5
	8.3nm,0.5s,mb5.0,baz=114,slow=6.4,SNR=9.1						
FITZ	Fitzroy Crossi	58.12	260	eP	P	09 53 39.0	+0.7
	11nm,0.7s,mb5.0						
MBWA	Marble Bar	63.03	255	eP	P	09 54 11.3	-0.5
	11nm,0.8s,mb5.0						
KLBR	Kellerberrin	63.26	243	eP	P	09 54 12.6	-0.6
	31nm,1.0s,mb5.4						
NWAO	Narrogin (SRO)	63.56	242	P	P	09 54 15.9	+0.8
	5.6nm,0.7s,mb4.7,baz=107,slow=10,SNR=11						
NWAO	Narrogin (SRO)	63.56	242	eP	P	09 54 15.8	+0.7
	19nm,1.0s,mb5.1						
NWAO				epP	pP	09 54 25.3	+4.6
CASY	Casey	67.78	205	eP	P	09 54 42.7	+1.0
	8.2nm,0.9s,mb4.8						
CASY				epP	pP	09 54 53.1	+5.8
MJAR	Matsushiro Arr	71.69	320	P	P	09 55 07.0	+0.8
	4.6nm,0.9s,mb4.4,baz=159,slow=6.1,SNR=6.8						
MAT	Matsushiro	71.69	320	P	P	09 55 06.4	+0.2
MAT				eS	S	10 04 16.0	-9.4
VES	Vestal, Richgr	74.27	43	⇓P	P	09 55 21.2	-0.4
	baz=74						
MONP	Monument Peak	74.32	47	⇑P	P	09 55 22.4	+0.5
	baz=74						
EDW2	Edwards Air Fo	74.41	44	⇓P	P	09 55 22.8	+0.4
	baz=74						
ISA	Isabella	74.56	43	⇓P	P	09 55 23.4	+0.1
	baz=75						
ISA	Isabella	74.56	43	eP	P	09 55 23.2	0.0
	6.3nm,1.0s,mb4.5						
PFO	Pinyon Flat Ob	74.70	46	⇓P	P	09 55 24.3	+0.1
	baz=75						
CMB	Columbia Colle	74.80	40	eP	P	09 55 24.5	-0.1
	3.7nm,0.9s,mb4.3						
CMB				epP	pP	09 55 35.5	+5.3
BELC	Belle Mtn. Jos	75.24	46	⇓P	P	09 55 26.7	-0.5
	baz=75						
CWC	Cottonwood Cre	75.28	43	⇑P	P	09 55 27.5	+0.1
	baz=75						
BC3	Big Chuckawall	75.42	47	⇓P	P	09 55 28.6	+0.3
	baz=76						
MPMC	Manual Prospec	75.44	44	P	P	09 55 29.0	+0.7
	baz=76,SNR=10.0						
GSC	Goldstone	75.44	45	⇓P	P	09 55 28.5	+0.1
	baz=76						
HEC	Hector,Ludlow	75.49	45	⇓P	P	09 55 28.0	-0.6
	baz=76						
MLAC	Mammoth Lakes	75.52	42	⇑P	P	09 55 28.4	-0.4
	baz=76						
YBH	Yreka Blue Hor	75.81	36	P	P	09 55 30.3

baz=78,SNR=7.1
U13A Pakoon Wash 77.97 45 P P 09 55 43.4 +0.7
baz=78,SNR=10
TUC Tucson 78.00 50 eP P 09 55 43.0 +0.1
2.6nm,0.8s,mb4.2
KSM Kuching 78.00 276 eP P 09 55 44.4 +1.1
17nm,0.8s,mb5.0
KSM epP pP 09 55 55.2 +6.3
R11A Troy Canyon, C 78.01 43 P P 09 55 43.2 +0.4
baz=78,SNR=6.9
S12A Delamar Landin 78.06 44 ⇑P P 09 55 43.1 +0.1
baz=78,SNR=7.5
Z16A Peralta Trail, 78.07 49 P P 09 55 43.8 +0.6
baz=78,SNR=6.5
X15A Humboldt 78.11 47 ⇓P P 09 55 43.5 +0.1
baz=78,SNR=8.3
V14A Boquillas Ranc 78.12 46 ⇓P P 09 55 43.3 -0.2
baz=78,SNR=8.6
318A Bisbee 78.14 51 ⇓P P 09 55 43.3 -0.3
baz=78
117A Oracle 78.17 50 ⇑P P 09 55 43.9 +0.2
baz=78
P10A Eureka 78.19 41 ⇑P P 09 55 43.5 -0.3
baz=78
Q11A Duckwater 78.25 42 ⇑P P 09 55 44.0 -0.1
baz=78,SNR=10
Y16A Circle Bar Ran 78.32 48 ⇓P P 09 55 44.8 +0.2
baz=78,SNR=7.0
T13A Saint George 78.35 44 ⇓P P 09 55 44.9 +0.2
baz=78,SNR=8.4
U14A Mt Trumbull 78.50 45 ⇓P P 09 55 46.2 +0.6
baz=79,SNR=10
WVOR Wild Horse Val 78.58 38 eP P 09 55 45.6 -0.3
4.5nm,1.2s,mb4.3
R12A Pony Springs, 78.62 43 ⇓P P 09 55 46.3 +0.1
baz=79,SNR=12
X16A Lo Mia Camp, P 78.62 48 ⇓P P 09 55 46.8 +0.6
baz=79,SNR=9.9
319A Douglas 78.63 51 ⇓P P 09 55 46.4 +0.1
baz=79
Y17A Roosevelt 78.67 49 ⇓P P 09 55 46.8 +0.2
baz=79
S13A Holt Ranch, En 78.69 44 ⇑P P 09 55 46.9 +0.4
baz=79,SNR=6.1
118A Homack Ranch, 78.76 50 ⇓P P 09 55 47.7 +0.7
baz=79
KSRS Korea Array 78.78 316 P P 09 55 49.1 +2.1
4.3nm,0.8s,mb4.4,baz=132,slow=5.9,SNR=13
V15A Kaibab Nationa 78.86 46 ⇓P P 09 55 48.1 +0.5
baz=79,SNR=7.7
Q12A Willow Creek R 78.89 42 ⇑P P 09 55 46.9 -0.7
baz=79,SNR=7.4
219A White Tail Can 78.95 51 ⇑P P 09 55 48.0 -0.2
baz=79,SNR=6.4
R13A O'Grain Ranch, 78.96 43 ⇑P P 09 55 47.6 -0.4
baz=79
O11A Cowboy Ranch, 79.00 41 ⇑P P 09 55 48.1 -0.1
baz=79,SNR=7.9
X17A Forest Lakes 79.03 48 ⇓P P 09 55 49.3 +0.8
baz=79,SNR=5.7
ARUT Antelope Range 79.08 44 eP P 09 55 49.4 +0.7
2.5nm,0.8s,mb4.2
P12A McGill 79.09 42 ⇑P P 09 55 49.0 +0.3
baz=79
U15A North Rim 79.11 46 ⇑P P 09 55 49.4 +0.5
baz=79,SNR=8.9
I07A Izee 79.12 36 ⇓P P 09 55 48.8 +0.1
baz=79
S14A Cedar City 79.25 44 ⇑P P 09 55 50.0 +0.4
baz=79
J08A Circle Bar Ran 79.25 37 ⇑P P 09 55 49.4 -0.1
baz=79
M10A I.L. Ranch, Tu 79.27 39 ⇑P P 09 55 50.0 +0.3
baz=79,SNR=6.1
Y18A Canyon Day Jun 79.29 49 ⇓P P 09 55 49.8 -0.2
baz=79,SNR=7.8
Q13A Wheeler Ranch, 79.36 43 ⇑P P 09 55 50.1 -0.1
baz=79,SNR=6.4
T15A Red Dirt Ranch 79.37 45 ⇑P P 09 55 50.6 +0.3
baz=79,SNR=12
220A Playas Peak, P 79.45 51 ⇓P P 09 55 50.7 -0.1
baz=80,SNR=7.6
P13A Bates Ranch, G 79.64 42 ⇑P P 09 55 51.9 +0.1
baz=80
L10A Juniper Basin 79.64 39 ⇓P P 09 55 51.3 -0.4
baz=80,SNR=7.9
J09A Fry Pan Ranch, 79.66 37 ⇑P P 09 55 51.6 -0.1
baz=80,SNR=5.6
V17A Tonalea, Kykot 79.71 47 ⇓P P 09 55 51.9 -0.3
baz=80
X18A Snowflake 79.73 48 ⇓P P 09 55 52.4 0.0
baz=80
S15A Panguitch 79.74 45 ⇓P P 09 55 52.9 +0.7
baz=80,SNR=8.6
N12A Clover Valley, 79.80 41 ⇓P P 09 55 52.5 -0.1
baz=80
D05A Enumclaw 79.81 33 ⇑P P 09 55 52.9 +0.5
baz=80
K10A MacKenzie Ranc 79.83 38 ⇑P P 09 55 52.7 0.0
baz=80,SNR=7.3
Q14A Sevier Lake (B 79.86 43 P P 09 55 53.4 +0.5
baz=80,SNR=11
T16A Glen Canyon Da 79.94 46 ⇑P P 09 55 53.2 -0.2
baz=80
Y19A Nutrioso 79.94 49 ⇑P P 09 55 54.5 +1.0
baz=80,SNR=7.8
Z20A Nine Sixteen R 80.00 50 ⇑P P 09 55 53.8 -0.1
baz=80,SNR=6.8
I09A Lost Marbles R 80.05 37 ⇑P P 09 55 53.7 -0.1
baz=80
R15A Junction 80.08 44 ⇑P P 09 55 54.3 +0.1
baz=80
L11A Cat Creek Ranc 80.13 39 P P 09 55 54.6 +0.3
baz=80,SNR=8.2
X19A St. Johns 80.15 49 ⇑P P 09 55 55.0 +0.3
baz=80,SNR=5.9
M12A Wells 80.20 40 ⇓P P 09 55 54.4 -0.3
baz=80,SNR=5.4
121A Cookes Peak, D 80.30 51 ⇑P P 09 55 55.7 +0.2
baz=80
U17A Shonto 80.31 46 ⇓P P 09 55 55.4 0.0
baz=80
MSU Marysvale 80.31 44 eP P 09 55 56.1 +0.7
9.9nm,1.2s,mb4.6
MSU epP pP 09 56 07.1 +6.1
K11A Parker Ranch, 80.32 39 ⇑P P 09 55 55.1 -0.2
baz=80,SNR=5.5
P14A Drum Mountains 80.33 43 P P 09 55 55.9 +0.4
baz=80,SNR=8.1
V18A Ganado 80.35 47 P P 09 55 56.7 +1.0
baz=80,SNR=6.7
T17A Navajo Res., N 80.42 46 P P 09 55 56.8 +0.8
baz=80,SNR=5.9
Q15A Fillmore 80.45 43 ⇓P P 09 55 56.3 +0.2
baz=80
H09A Durkee 80.52 36 ⇑P P 09 55 56.4 0.0
baz=81
Y20A Horse Springs, 80.55 50 ⇓P P 09 55 57.4 +0.6
baz=81,SNR=8.4
L12A House Creek Ra 80.56 40 ⇑P P 09 55 57.0 +0.3
baz=81
M13A Montello 80.63 41 ⇑P P 09 55 57.3 +0.2
baz=81
R16A Teasdale 80.65 44 ⇑P P 09 55 57.7 +0.5
baz=81
S17A Black Ridge (B 80.76 45 ⇓P P 09 55 57.8 0.0
baz=81
U18A Rough Rock, Ch 80.76 47 ⇑P P 09 55 57.5 -0.4
baz=81
Z21A St. Cloud Mine 80.77 50 P P 09 55 59.3 +1.4
baz=81,SNR=7.9
X20A Quemado 80.78 49 ⇑P P 09 55 58.9 +0.9
baz=81,SNR=6.9
DUG Dugway 80.83 42 ⇓P P 09 55 58.1 0.0
baz=81
H10A Noah's Angus R 80.99 37 ⇑P P 09 55 58.3 -0.5
baz=81,SNR=6.6
I11A Placerville 81.04 38 ⇓P P 09 55 59.2 +0.1
baz=81
T18A Mexican Hat 81.13 46 ⇑P P 09 56 00.3 +0.5
baz=81,SNR=17
J12A Stokes Ranch, 81.15 39 ⇓P P 09 56 00.1 +0.3
baz=81,SNR=5.3
U19A Dine' College, 81.16 47 ⇑P P 09 56 00.6 +0.7
baz=81,SNR=8.3
Q16A Castle Valley 81.19 44 ⇑P P 09 55 59.7 -0.4
baz=81
M14A Sheep Mountain 81.22 41 ⇑P P 09 56 00.0 -0.1
baz=81,SNR=6.0
R17A Hanksville Air 81.23 45 ⇑P P 09 56 00.5 +0.2
baz=81,SNR=7.4
X21A Alamocita Cree 81.24 49 ⇑P P 09 56 00.7 +0.3
baz=81
Z22A Elephant Butte 81.26 51 ⇓P P 09 56 00.7 +0.2
baz=81,SNR=6.7
S18A Hurst Farm, Bl 81.33 46 ⇑P P 09 56 01.2 +0.3
baz=81
K13A Stover Farm, H 81.42 40 ⇑P P 09 56 00.7 -0.4
baz=82
I12A Atlanta 81.45 38 ⇑P P 09 56 00.7 -0.6
baz=82,SNR=5.4
H11A Donnelly 81.48 37 ⇑P P 09 56 00.9 -0.5
baz=82
324A Moseley Ranch, 81.50 53 ⇓P P 09 56 01.8 -0.1
baz=82,SNR=5.7
T19A Beclabito 81.56 47 ⇑P P 09 56 01.7 -0.4
baz=82,SNR=5.9
425A Indio Mountain 81.58 54 ⇑P P 09 56 03.0 +0.6
baz=82,SNR=9.1
Y22A Socorro 81.58 50 ⇓P P 09 56 02.3 0.0
baz=82
O16A Springville 81.67 43 ⇑P P 09 56 03.5 +0.9
baz=82
626A Big Bend Ranch 81.68 55 ⇓P P 09 56 03.5 +0.6
baz=82,SNR=10
MNTX Cornudas Mount 81.70 53 eP P 09 56 02.8 -0.1
12nm,1.8s,mb4.5
SRU San Rafael 81.72 44 ⇑P P 09 56 02.8 -0.1
baz=82,SNR=6.2
HLID Hailey 81.74 39 ⇓P P 09 56 02.6 -0.3
baz=82,SNR=5.3
G11A Walters Elk Ra 81.75 36 ⇓P P 09 56 02.3 -0.5
baz=82
R18A Canyonlands Na 81.76 45 P P 09 56 03.5 +0.4
baz=82,SNR=8.0
224A Cornudas Mount 81.77 52 ⇓P P 09 56 02.9 -0.4
baz=82,SNR=8.1
P17A Butcher Ranch, 81.77 44 ⇑P P 09 56 03.2 0.0
baz=82
J13A Cove Ranch, Pi 81.79 39 ⇓P P 09 56 03.2 +0.1
baz=82
325A Bean Ranch, Si 81.86 53 ⇑P P 09 56 03.9 +0.1
baz=82,SNR=9.5
K14A Jones Ranch, D 81.91 40 ⇑P P 09 56 04.1 +0.3
baz=82
526A Mary Lane Ranc 81.94 55 ⇓P P 09 56 03.2 -1.0
baz=82,SNR=6.6
S19A Harvey Farm, M 81.95 46 ⇑P P 09 56 04.2 +0.1
baz=82,SNR=7.9
TXAR Lajitas Array 81.95 56 P P 09 56 05.0 +0.7
4.9nm,1.1s,mb4.4,baz=218,slow=7.8,SNR=30
TXAR Lajitas Array 81.95 56 P P 09 56 05.0 +0.7
Q18A Rafter H Ranch 81.98 44 ⇑P P 09 56 03.5 -0.7
baz=82,SNR=5.2
H12A Diamond D Ranc 82.06 38 ⇓P P 09 56 04.4 -0.1
baz=82
L15A Malad City 82.09 41 ⇑P P 09 56 04.3 -0.5
baz=82
124A Stringfield Ra 82.11 52 ⇑P P 09 56 03.9 -1.2
baz=82
G12A Big Creek, Yel 82.12 37 ⇓P P 09 56 04.8 0.0
baz=82
J14A Carey 82.14 39 ⇑P P 09 56 05.4 +0.4
baz=82,SNR=5.9
R19A Curley Farm, L 82.14 45 ⇑P P 09 56 05.4 +0.3
baz=82,SNR=11
O17A Robinson Place 82.16 43 ⇑P P 09 56 05.7 +0.6
baz=82,SNR=9.9
P18A Preston Nutter 82.18 44 ⇓P P 09 56 05.7 +0.4
baz=82
M16A Huntsville 82.19 42 ⇑P P 09 56 05.4 +0.1
baz=82
627A Terlingua Ranc 82.22 56 ⇑P P 09 56 05.1 -0.6
baz=82,SNR=12
Y23A Lovelace Mesa, 82.25 50 ⇓P P 09 56 05.7 0.0
baz=82
426A McDonald Obser 82.26 54 ⇓P P 09 56 06.0 +0.1
baz=82,SNR=13
U21A Nageezi 82.31 48 ⇓P P 09 56 06.3 +0.3
baz=82
225A Deer Hill, Car 82.31 53 ⇑P P 09 56 06.0 -0.1
baz=82,SNR=6.9
PV10 Paradox Valley 82.33 45 eP P 09 56 06.1 -0.1
104nm,0.9s,mb5.8
527A Woodward Ranch 82.35 55 ⇑P P 09 56 05.7 -0.7
baz=82,SNR=7.4
HWUT Hardware Ranch 82.39 42 eP P 09 56 05.5 -0.8
2.4nm,1.0s,mb4.1
H13A Challis 82.41 38 ⇓P P 09 56 06.4 +0.1
baz=82
PV04 Paradox Valley 82.43 45 eP P 09 56 06.7 +0.1
ANMO Albuquerque 82.44 49 eP P 09 56 07.1 +0.3
4.0nm,1.1s,mb4.3
Q19A Hogan Spring (82.48 45 ⇑P P 09 56 06.9 0.0
baz=82,SNR=8.3
NJ2 Nanjing 82.48 307 eP P 09 56 05.2 -1.9
NJ2 pmax pmax
comp=Z,30nm,0.6s,mb5.4
PV01 Paradox Valley 82.53 46 eP P 09 56 07.4 +0.2
comp=Z,706nm,1.0s
F12A Elk City 82.53 37 ⇓P P 09 56 06.5 -0.5
baz=83,SNR=6.2
326A Caldwell Ranch 82.59 54 ⇑P P 09 56 07.4 -0.3
baz=83
628A Black Gap, Mar 82.62 56 ⇓P P 09 56 07.6 -0.2
baz=83
L16A Fish Haven 82.69 41 ⇓P P 09 56 07.4 -0.5
baz=83
Y24A Capitan 82.70 51 ⇓P P 09 56 08.0 -0.1
baz=83,SNR=9.2
GDL2 Guadalupe Moun 82.70 53 eP P 09 56 09.5 +1.3
comp=Z,12nm,1.3s,mb4.8
W23A Werner Place, 82.76 49 ⇓P P 09 56 08.5 0.0
baz=83
427A Hayter Ranch, 82.83 54 ⇓P P 09 56 08.8 -0.1
baz=83,SNR=11
S21A Coal Bank Pass 82.83 46 ⇑P P 09 56 08.3 -0.4
baz=83
226A Malaga, Loving 82.83 53 ⇓P P 09 56 08.9 +0.1
baz=83,SNR=5.2
J15A Blackfoot 82.84 40 ⇑P P 09 56 08.5 -0.1
baz=83
M17A Scullys Gap (B 82.89 42 ⇓P P 09 56 08.2 -0.7
baz=83
Z25A Roswell 82.93 52 ⇑P P 09 56 09.1 -0.2
baz=83
H14A Leonore 82.96 38 ⇓P P 09 56 08.9 -0.3
baz=83,SNR=6.1
528A Cox Ranch, San 83.00 55 ⇓P P 09 56 09.1 -0.7
baz=83,SNR=6.2
P19A Cripple Cowboy 83.02 44 ⇓P P 09 56 09.8 +0.1
baz=83,SNR=5.7
T22A Edith 83.12 47 ⇑P P 09 56 10.1 -0.2
baz=83
126A Clayton Basin, 83.16 52 ⇑P P 09 56 10.1 -0.5
baz=83
Y25A Mesa, Roswell 83.24 51 ⇓P P 09 56 11.2 +0.2
baz=83
M18A Lyman 83.24 42 ⇑P P 09 56 10.6 -0.1
baz=83
O19A Miners Draw (B 83.27 44 ⇑P P 09 56 10.6 -0.3
baz=83
W24A Lazy 6 Ranch, 83.32 50 ⇓P P 09 56 10.6 -0.7
baz=83
P20A De Beque 83.34 45 ⇑P P 09 56 11.4 0.0
baz=83,SNR=7.3
MCMT McKenzie Canyo 83.39 38 eP P 09 56 11.4 -0.1
comp=Z,3.5nm,1.1s,mb4.3
MCMT epP pP 09 56 21.4 +4.3
MCMT esP sP 09 56 27.7 +8.6
CPRX Cap Rock 83.45 52 eP P 09 56 12.6 +0.6
comp=Z,8.8nm,0.7s,mb4.9
Z26A Caprock 83.47 52 ⇑P P 09 56 12.5 +0.3
baz=84,SNR=8.5
328A Wristen Ranch, 83.52 54 ⇑P P 09 56 11.8 -0.6
baz=84
L18A Fontenelle, Gr 83.53 42 ⇓P P 09 56 11.7 -0.5
baz=84
B11A Sandpoint 83.53 34 ⇑P P 09 56 11.3 -0.8
baz=84
N19A John Jarvie Ra 83.54 43 ⇓P P 09 56 11.7 -0.6
baz=84
Q21A Lamborn Mesa, 83.56 46 ⇑P P 09 56 12.5 0.0
baz=84
I16A Newdale 83.67 40 ⇑P P 09 56 13.3 +0.3
baz=84,SNR=6.8
O20A White River Ci 83.76 44 ⇑P P 09 56 13.3 -0.2
baz=84
D13A Huson 83.76 36 ⇑P P 09 56 12.4 -0.9
baz=84
REDW Red Top Meadow 83.78 40 eP P 09 56 13.8 +0.3
comp=Z,6.2nm,1.3s,mb4.6
G15A Dillon 83.79 38 ⇑P P 09 56 13.3 -0.1
baz=84,SNR=11
TPAW Teton Pass 83.79 40 eP P 09 56 13.2 -0.4
comp=Z,6.1nm,1.1s,mb4.6
R22A Saguache, Gunn 83.82 46 ⇓P P 09 56 14.2 +0.4
baz=84,SNR=6.9
CN2 Changchun 83.83 320 eP P 09 56 14.3 +0.5
DLMT Dillon 83.84 38 eP P 09 56 14.0 +0.3
comp=Z,5.3nm,1.2s,mb4.5
J17A Brown Place, J 83.87 40 ⇓P P 09 56 14.2 +0.3
baz=84,SNR=5.5
SNOW Snow King Moun 83.90 40 eP P 09 56 14.2 +0.2
comp=Z,4.8nm,1.1s,mb4.5
K18A Toltan Ranch, 83.90 41 ⇓P P 09 56 13.9 -0.2
baz=84,SNR=10
E14A Clinton 83.92 37 ⇑P P 09 56 13.8 -0.3
baz=84
IMW Indian Meadow 84.02 40 eP P 09 56 14.6 -0.1
comp=Z,6.8nm,1.2s,mb4.7
Q22A Crested Butte, 84.02 46 ⇑P P 09 56 15.2 +0.4
baz=84
L19A Farson 84.05 42 ⇑P P 09 56 14.9 0.0
baz=84,SNR=8.9
Z27A Tatum 84.06 52 ⇑P P 09 56 15.0 -0.1
baz=84
N20A Spence Gulch, 84.10 44 ⇓P P 09 56 15.3 +0.1
baz=84,SNR=7.0
SMCO Snowmass 84.13 45 eP P 09 56 15.9 +0.5
comp=Z,8.1nm,1.2s,mb4.7
F15A Butte 84.16 38 ⇑P P 09 56 15.0 -0.3
baz=84
V25A Rancho No Teng 84.18 49 ⇑P P 09 56 15.6 -0.2
baz=84
J18A Kendall Valley 84.22 41 ⇑P P 09 56 15.6 -0.1
baz=84,SNR=18
G16A Moss Hill, Enn 84.23 38 ⇓P P 09 56 15.1 -0.6
baz=84,SNR=5.9
BW06 Boulder Array 84.27 41 ⇑P P 09 56 15.5 -0.5
baz=84,SNR=8.6
H16A Russell Place, 84.27 39 ⇓P P 09 56 16.3 +0.3
baz=84,SNR=11
PDAR Pinedale Array 84.27 41 P P 09 56 15.8 -0.2
comp=Z,4.1nm,0.8s,mb4.6,baz=223,slow=2.7,SNR=32
D14A Greenough 84.29 36 ⇑P P 09 56 14.8 -1.2
baz=84
Y27A Causey 84.36 52 ⇑P P 09 56 15.4 -1.3
baz=84,SNR=5.4
SDCO Great Sand Dun 84.45 47 eP P 09 56 16.9 -0.1
comp=Z,7.7nm,1.7s,mb4.6
M20A Sweetwater, Wa 84.48 43 ⇓P P 09 56 17.2 +0.1
baz=84
N21A Black Mountain 84.55 44 ⇓P P 09 56 17.7 +0.2
baz=85,SNR=7.3
BOZ Bozeman (W) 84.56 38 ⇑P P 09 56 17.0 -0.4
baz=85,SNR=8.2
U25A Circle Dot Ran 84.59 49 ⇑P P 09 56 17.8 0.0
baz=85
I18A Diamond G Ranc 84.60 40 ⇑P P 09 56 17.6 -0.1
baz=85
L20A Wamsutter 84.65 43 ⇓P P 09 56 17.6 -0.3
baz=85,SNR=6.2
MSTX Muleshoe 84.69 52 ⇑P P 09 56 18.0 -0.3
baz=85,SNR=6.2
K19A Absolon Red Bu 84.75 42 ⇓P P 09 56 17.0 -1.4
baz=85
V26A Tequesquite Ra 84.76 50 ⇓P P 09 56 17.7 -1.0
baz=85
D15A Lincoln 84.82 37 ⇓P P 09 56 17.8 -0.8
baz=85
W27A Bowe Ranch, En 84.96 51 ⇓P P 09 56 19.3 -0.3
baz=85
K20A Yellowstone Ra 84.98 42 ⇓P P 09 56 18.9 -0.7
baz=85
E16A East Helena 85.02 37 ⇑P P 09 56 18.6 -1.1
baz=85
U26A Atchley Ranch, 85.07 49 ⇑P P 09 56 20.0 -0.2
baz=85,SNR=5.2
B14A Marquette Ranc 85.15 35 ⇑P P 09 56 19.4 -0.9
baz=85
COLA College 85.36 10 eP P 09 56 19.9 -1.1
comp=Z,6.1nm,0.8s,mb4.8
COLA epP pP 09 56 29.4 +2.7
D16A Dana Ranch, Ca 85.37 37 ⇑P P 09 56 20.8 -0.6
baz=85
F18A Big Timber 85.83 39 ⇑P P 09 56 23.9 +0.2
baz=86
L22A Ellis Ranch, M 85.89 43 ⇑P P 09 56 24.4 +0.3
baz=86
D17A Six Diamond Ra 85.93 37 ⇓P P 09 56 24.2 0.0
baz=86
PLCA Paso Flores 87.01 132 P P 09 56 29.2 -0.6
comp=Z,1.8nm,0.9s,mb4.3,baz=204,slow=12,SNR=3.5
PLCA Paso Flores 87.01 132 PKIKP P 09 56 29.3 -0.6
PLCA pmax pmax
comp=Z,2.0nm,0.9s
RSSD Black Hills 88.43 42 eP P 09 56 35.6 -0.8
comp=Z,1.5nm,0.6s,mb4.4
PSI Prapat 89.20 273 P P 09 56 41.2 +0.5
comp=Z,12nm,0.8s,mb5.2,baz=203,slow=8.0,SNR=11
GYA Guiyang 89.98 298 P P 09 56 44.0 -0.1
GYA pP pP 09 56 54.2 +4.4
GYA sP sP 09 56 59.8 +8.0
GYA PP PP 10 00 18.3 +0.9
GYA SKS 10 07 10.5
GYA SS SS 10 13 31.2 -4.1
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,90nm,5.2s
GYA LR LR
comp=N,420nm,20.9s,MS5.0
GYA LR LR
comp=E,360nm,21.6s,MS5.0
GYA LR LR
comp=Z,410nm,22.4s,MS4.8
JTS JuntasAbangare 91.26 80 P P 09 56 50.7 +0.3
comp=Z,12nm,0.8s,mb5.2,baz=336,slow=8.1,SNR=12
JTS JuntasAbangare 91.26 80 eP P 09 56 51.1 +0.7
comp=Z,16nm,0.9s,mb5.3
HHC Hu-ho-hao-te 91.55 313 eP P 09 56 53.4 +2.3
HHC pP pP 09 57 04.0 +7.3
HHC sP sP 09 57 07.9 +9.1
HHC PP PP 10 00 35.2 +5.7
HHC SKS 10 07 21.5
HHC S S 10 07 49.0 -1.3
HHC sS sS 10 08 06.4 +6.7
HHC pmax pmax
comp=Z,12nm,1.0s,mb5.2
HHC pmax pmax
comp=Z,360nm,6.5s
HHC LR LR
comp=N,160nm,20.2s,MS4.7
HHC LR LR
comp=E,210nm,20.2s,MS4.7
HHC LR LR
comp=Z,230nm,20.2s,MS4.6
YKA Yellowknife Ar 92.78 23 P P 09 56 56.0 -0.2
comp=Z,0.3nm,0.8s,mb3.8,baz=237,slow=5.3,SNR=4.7
YKA Yellowknife Ar 92.78 23 P P 09 56 56.0 -0.2
KMI Kunming 92.86 295 P P 09 56 57.7 +0.2
KMI pmax pmax
comp=Z,31nm,1.9s,mb5.4
CMAR Chiang Mai Arr 94.09 288 P P 09 57 05.7 +2.4
comp=Z,1.9nm,0.7s,mb4.7,baz=110,slow=2.4,SNR=7.8
LZH Lanzhou 95.51 306 eP P 09 57 13.0 +3.6
LZH pP pP 09 57 22.8 +7.7
LZH sP sP 09 57 27.0 +10
LZH PP PP 10 01 07.0 +6.3
LZH pmax pmax
comp=Z,21nm,1.5s,mb5.3
LZH pmax pmax
comp=Z,110nm,5.0s
LZH LR LR
comp=N,240nm,14.6s
LZH LR LR
comp=Z,450nm,15.9s,MS5.0
WMQ Urumqi 109.33 311 eP Pdif 09 58 13.0 +2.1
CAM4 Nova Friburgo 116.63 128 (P) PKPdf 10 02 31.7 +2.5
CAM4 i 10 02 39.7
CAM4 i 10 02 50.0
CAM4 i 10 03 08.4

KMBO	Kilima Mbogo	144.52	240	ePKPdf	PKPdf	10 03 22.0	+0.2
CLL	Collm	147.00	353	ePKPbc	PKPbc	10 03 26.9	+0.1
	comp=Z,4.0nm,0.8s						
CLL				epPKPbc	pPKPbc	10 03 35.0	+2.4
CLL				epPKPab	pPKPab	10 03 37.0	+3.0
CLL				esPKiKP		10 03 44.0	
CLL				e		10 03 52.0	
BUR08	Bucovina Ar. S	147.46	337	ePKPab	PKPab	10 03 29.1	-1.0
BCLA	Clavier	148.18	2	APKPbc		10 03 41.7	
DOU	Dourbes	148.47	3	APKPbc		10 03 41.4	
GIVF	Givet	148.48	3	ePKP1	PKPbc	10 03 30.5	-0.3
BAIF	Baives	148.49	4	ePKP1	PKPbc	10 03 30.8	-0.1
	comp=Z,111nm,1.0s						
GRF	Grafenberg Arr	148.77	355	ePKPbc	PKPbc	10 03 34.5	+2.9
BR131	Keskin Array S	148.89	318	ePKPbc	PKPbc	10 03 33.2	+1.0
BRTR	Keskin Array B	148.89	318	PKPbc	PKPbc	10 03 32.2	0.0
	comp=Z,1.6nm,0.8s,baz=114,slow=1.5,SNR=5.1						
KHC	Kasperske Hory	149.07	352	ePKPbc	PKPbc	10 03 32.6	+0.3
KHC	Kasperske Hory	149.07	352	ePKP	PKPdf	10 03 25.5	-2.8
KHC				ex	x	10 03 33.0	
FLN	La Foliniere	149.25	10	ePKP1	PKPbc	10 03 32.1	-0.7
	comp=Z,25nm,1.1s						
GERES	GERESS Array B	149.33	351	PKPbc	PKPbc	10 03 33.6	+0.5
	comp=Z,0.4nm,0.6s,baz=36,slow=2.5,SNR=3.8						
LDF	La Druitiere	149.47	10	ePKP1	PKPbc	10 03 32.6	-0.8
	comp=Z,37nm,1.3s						
MEZF	Maizieres J'vi	150.09	3	ePKP1	PKPbc	10 03 34.9	0.0
CDF	Champ du Feu	150.23	360	ePKP1	PKPbc	10 03 35.0	-0.2
BFO	Black Forest	150.29	358	ePKPbc	PKPbc	10 03 35.0	-0.4
HAU	Haudompre	150.63	1	ePKP1	PKPbc	10 03 35.9	-0.3
	comp=Z,17nm,1.0s						
MMAI	Mount Meron Ar	150.88	305	PKPbc	PKPbc	10 03 39.9	+2.6
	comp=Z,0.7nm,0.2s,baz=121,slow=9.9,SNR=3.5						
MMAI				PKPab	PKPab	10 03 47.0	+2.4
	comp=Z,3.4nm,0.5s,baz=84,slow=3.4,SNR=7.4						
LOR	Lormes	151.25	5	ePKP1	PKPbc	10 03 37.4	-0.3
	comp=Z,18nm,1.1s						
SSF	Saint Saulge	151.42	5	ePKP1	PKPbc	10 03 37.9	-0.2
	comp=Z,16nm,0.8s						
AVF	Avril sur Loir	151.68	6	ePKP1	PKPbc	10 03 38.1	-0.6
	comp=Z,12nm,1.0s						
BGF	Bois d'Agland	151.86	6	ePKP1	PKPbc	10 03 38.7	-0.4
ESDC	Sonseca Array	156.87	22	PKPab	PKPab	10 04 09.9	+0.3
	comp=Z,0.2nm,0.4s,baz=22,slow=4.8,SNR=4.7						
TORD	Torodi Ar. Bea	172.48	135	PKPab	PKPab	10 05 19.3	+0.5
	comp=Z,1.4nm,0.8s,baz=258,slow=2.9,SNR=7.1						

*IDC **01** 09:45:24.3±0.8, 4°.62S×129°.36E, h0km, mb4.5/13, mb1 4.7/14, mb1mx4.5/22, mbtmp4.6/14, ML4.7/1, MS4.7/2, Ms1 4.7/2, ms1mx3.6/25, Error ellipse: s-maj=29.8km s-min=18.8km az=71.0*
*NEIC **01** 09:45:25.8±0.5, 4°.70S×129°.39E, h10km, mb4.7/6, Error ellipse: s-maj=15.8km s-min=9.9km az=53.0*

ISC 01 09:45:24.9±6.4, 4°.68S±0°.09×129°.40E±0°.10, h4km±41km, n33, σ1§22/31, mb4.5/16, MS4.8/2, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	Kappang	9.62	268	Pn	Pn	09 47 41.7	-2.5
WRAB	Tennant Creek	15.91	163	P	Pn	09 49 07.7	-2.0
KKM	Kota Kinabalu	16.93	309	eP	Pn	09 49 25.8	+3.0
ASAR	Alice Springs	19.37	167	P	Pn	09 49 54.4	+1.7
	2.3nm,0.3s,baz=348,slow=11,SNR=8.5						
KSM	Kuching	20.03	287	eP	P	09 50 01.9	+2.9
	34nm,1.2s						
CTA	Charters Tower	22.45	134	P	P	09 50 25.7	+0.7
	38nm,1.1s,mb4.7,baz=319,slow=11,SNR=3.8						
CTA	Charters Tower	22.45	134	P	P	09 50 25.7	+0.7
CTAO	Charters Tower	22.45	134	eP	P	09 50 25.0	0.0
	28nm,0.9s,mb4.7						
PSI	Prapat	31.34	283	P	P	09 51 48.0	+1.2
	7.3nm,0.8s,mb4.5,baz=145,slow=3.6,SNR=3.7						
CMAR	Chiang Mai Arr	37.81	308	P	P	09 52 41.6	-1.0
	1.0nm,0.3s,mb4.0,baz=115,slow=12,SNR=2.9						
CHTO	Chiang Mai	38.01	309	eP	P	09 52 44.9	+0.5
MJAR	Matsushiro Arr	41.83	11	P	P	09 53 15.5	-0.3
	3.6nm,0.9s,mb4.0,baz=189,slow=10,SNR=4.5						
MAJO	Matsushiro	41.83	11	eP	P	09 53 15.3	-0.5
	10nm,0.9s,mb4.5						
MAT	Matsushiro	41.83	11	P	P	09 53 13.8	-2.1
KSRS	Korea Array	41.94	358	P	P	09 53 18.0	+1.3
	0.8nm,0.8s,mb3.4,baz=186,slow=9.3,SNR=2.9						
ULN	Ulaanbaatar	55.89	342	eP	P	09 55 04.9	+1.2
SONM	Songino Array	56.06	342	P	P	09 55 04.7	-0.3
	10nm,1.1s,mb4.8,baz=163,slow=6.7,SNR=5.0						
AFI	Afiamalu	58.65	103	LR	LR	10 16 42.5	
	comp=Z,779nm,18.7s,MS4.9,baz=271,slow=32						
PETK	Petropavlovsk-	62.33	19	P	P	09 55 47.9	-0.4
	7.8nm,0.8s,mb4.9,baz=153,slow=4.5,SNR=4.7						
MKAR	Makanchi Array	65.97	327	P	P	09 56 12.8	+0.6
	3.2nm,0.7s,mb4.5,baz=115,slow=8.2,SNR=3.6						
AML	Almayashu	68.68	319	eP	P	09 56 28.5	-1.1
ZAA0	Zalesovo Array	69.25	334	eP	P	09 56 32.8	-0.1
ZALV	Zalesovo Beam	69.25	334	P	P	09 56 32.7	-0.2
	5.0nm,0.9s,mb4.5,baz=97,slow=3.4,SNR=4.1						
KURK	Kurchatov	70.24	328	P	P	09 56 37.9	-1.1
	8.0nm,0.8s,mb4.7,baz=126,slow=5.2,SNR=4.2						
KURK	Kurchatov	70.24	328	eP	P	09 56 38.2	-0.8
	28nm,1.0s,mb5.2						
BVAR	Borovoye Array	75.79	328	P	P	09 57 10.6	-1.3
	4.8nm,0.9s,mb4.4,baz=124,slow=7.4,SNR=4.2						
BRVK	Borovoye	75.86	328	eP	P	09 57 08.8	-3.5
ABKAR	Akbulak array	80.33	322	eP	P	09 57 37.1	-0.1
OPO	Ambohidratompo	81.15	252	P	P	09 57 41.8	-0.5
	5.5nm,1.3s,mb4.3,baz=128,slow=8.9,SNR=3.1						
QSPA	South Pole Qui	85.28	180	P	P	09 58 02.6	+0.2
	2.9nm,0.8s,mb4.4,baz=252,slow=6.3,SNR=3.5						
CHUM	Lake Minchumin	89.04	26	eP	P	09 58 22.3	+1.5
	4.5nm,0.7s,mb4.9						
COLD	Coldfoot	90.57	23	eP	P	09 58 29.0	+1.1
	4.2nm,0.8s,mb4.8						
AKASG	Malin Array Be	100.05	321	LR	LR	10 50 15.9	
	comp=Z,255nm,20.7s,MS4.7,baz=50,slow=39						

*IDC **01** 09:53:28.8±2.0, 31°.65N×103°.65E, h0km, mb3.8/6, mb1 3.8/8, mb1mx3.6/27, mbtmp3.8/8, ML2.9/1, Error ellipse: s-maj=38.4km s-min=30.8km az=17.0*
*NEIC **01** 09:53:29.7±0.5, 31°.62N×103°.77E, h10km, mb4.5/1, Error ellipse: s-maj=12.1km s-min=7.8km az=63.0*
*BJI **01** 09:53:30.5, 31°.22N×103°.50E, h19km, ML3.8/14, Ms3.7/3, Ms7 3.7/3*

ISC 01 09:53:27.5±1.1, 31°.31N±0°.04×103°.58E±0°.07, h4km±8km, n19, σ1§19/26, mb3.8/5, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.43	159	⇑iPg	Pg	09 53 34.6	-1.2
CD2				Sg	Sg	09 53 41.9	+0.5
CD2				smax			
	comp=N,14μm,0.7s						
CD2				smax			
	comp=E,13μm,0.8s						
LZH	Lanzhou	4.77	3	Pg	Pg	09 55 00.8	+1.9
LZH				Sg	Sg	09 56 00.1	-0.6
LZH				smax			
	comp=N,140nm,0.6s						
LZH				smax			
	comp=E,140nm,0.7s						
LZH				LR	LR		
	comp=E,650nm,4.2s						
LZH				LR	LR		
	comp=Z,900nm,5.6s						
ENH	Enshi	5.19	100	ePn	Pn	09 54 46.2	+0.3
	comp=Z,18nm,0.5s						
ENH				ePg	Pg	09 55 08.4	+1.5
ENH				eSg	Sg	09 56 12.0	-2.1
XAN	Xi'an	5.26	57	Pn	Pn	09 54 48.8	+1.9
XAN				Pg	Pg	09 55 01.3	-7.0
XAN				Sn	Sn	09 55 53.9	+6.0
XAN				Sg	Sg	09 56 09.6	-6.9
XAN				smax			
	comp=N,220nm,0.9s						
XAN				smax			
	comp=E,77nm,1.0s						
XAN				LR	LR		
	comp=N,720nm,17.2s						
XAN				LR	LR		
	comp=E,170nm,11.5s						
XAN				LR	LR		
	comp=Z,200nm,14.6s						
GYA	Guiyang	5.54	150	Pn	Pn	09 54 56.5	+5.8
KMI	Kunming	6.21	187	Pn	Pn	09 54 59.3	-0.7
KMI				Sn	Sn	09 56 06.2	-5.2
KMI				smax			
	comp=N,41nm,1.3s						
KMI				smax			
	comp=E,46nm,1.4s						
CMAR	Chiang Mai Arr	13.47	199	Pn	Pn	09 56 45.9	+6.4
	baz=13,slow=13,SNR=3.2						
SONM	Songino Array	16.64	7	Pn	Pn	09 57 19.2	-2.3
	comp=E,0.0nm,0.3s,baz=103,slow=26,SNR=3.0						
KSRS	Korea Array	20.97	66	P	P	09 58 11.2	-0.5
	comp=E,2.7nm,0.7s,baz=261,slow=10.0,SNR=12						
MKAR	Makanchi Array	22.53	319	P	P	09 58 28.0	-0.2
	comp=E,4.0nm,0.9s,mb3.9,baz=117,slow=12,SNR=5.1						
ZAA0	Zalesovo Array	26.34	335	eP	P	09 59 03.7	-0.6
ZALV	Zalesovo Beam	26.34	335	P	P	09 59 03.7	-0.6
	comp=E,1.2nm,0.5s,mb3.7,baz=141,slow=9.3,SNR=2.7						
KURK	Kurchatov	26.81	324	P	P	09 59 07.5	-1.1
	comp=E,3.0nm,0.8s,mb3.9,baz=128,slow=9.2,SNR=3.8						
KURK	Kurchatov	26.81	324	eP	P	09 59 08.6	0.0
	comp=E,19nm,1.5s,mb4.4						
BVAR	Borovoye Array	32.35	322	P	P	09 59 58.4	+0.7
	comp=E,0.6nm,0.5s,mb3.6,baz=118,slow=8.3,SNR=3.5						
FINES	FINESS Array B	57.15	326	P	P	10 03 15.3	+0.4
	comp=E,0.4nm,0.5s,mb3.7,baz=0.0,slow=1.9,SNR=2.8						
FINES	FINESS Array B	57.15	326	P	P	10 03 15.3	+0.3
WRAB	Tennant Creek	58.89	146	eP	P	10 03 29.6	+1.9
DRV	Dumont d'Urvil	101.54	166	R		10 12 00.0	
DRV				L		10 59 00.0	
DRV				R		11 03 00.0	

*BJI **01** 09:54:30.9, 43°.23S×122°.27E, h10km, mB5.3/3, mb4.9/11*
*IDC **01** 09:54:33.0±0.6, 43°.10S×121°.52E, h0km, mb4.5/13, mb1 4.6/15, mb1mx4.6/17, mbtmp4.5/15, ML4.1/2, Error ellipse: s-maj=26.4km s-min=14.9km az=109.0*
*ISCJB **01** 09:54:33.3±0.4, 42°.91S±0°.06×121°.33E±0°.09, h10km, mb4.6/24, Error ellipse: s-maj=9.6km s-min=8.0km az=178.7*
*NEIC **01** 09:54:34.5±0.2, 43°.08S×121°.44E, h10km, mb4.9/10, Error ellipse: s-maj=13.1km s-min=8.4km az=101.0*

ISC 01 09:54:34.9±0.4, 42°.99S±0°.06×121°.37E±0°.09, h10km, n174, σ1§10/46, mb4.6/24, 41C-39D, South of Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKGY	Rocky Gully	9.04	336	eP	Pn	09 56 43.9	-1.4
	291nm,0.2s						
NWAO	Narrogin (SRO)	10.56	341	eP	Pn	09 57 05.0	-1.1
	646nm,0.3s						
NWAO				eS	Sn	09 58 56.2	-8.2
NWAO	Narrogin (SRO)	10.56	341	Pn	Pn	09 57 05.4	-0.7
	28nm,0.3s,baz=148,slow=10,SNR=200						
NWAO				Sn	Sn	09 58 55.2	-9.2
	2.8nm,0.3s,baz=77,slow=20,SNR=2.7						
NWAO	Narrogin (SRO)	10.56	341	ePn	Pn	09 57 05.4	-0.8
KLBR	Kellerberrin	11.73	345	eP	Pn	09 57 21.5	-0.7
	53nm,0.6s						
MORW	Morawa	14.54	341	eP	Pn	09 57 57.6	-2.9
MORW				eS	Sn	10 00 30.2	-12
MEEK	Meekatharra	16.46	351	eP	Pn	09 58 22.3	-3.6
MOO	Moorlands	18.96	97	eP	Pn	09 58 57.4	+0.6
TOO	Toolangi	19.16	82	eP	Pn	09 58 59.1	0.0
STKA	Stephens Creek	19.47	62	eP	Pn	09 59 02.5	-0.4
	10nm,0.9s						
STKA	Stephens Creek	19.47	62	P	Pn	09 59 01.2	-1.7
	0.5nm,0.3s,baz=188,slow=12,SNR=8.6						
STKA	Stephens Creek	19.47	62	eP	Pn	09 59 01.8	-1.1
	3.2nm,1.0s						
GIRL	Giralia	21.14	341	eP	P	09 59 24.1	+4.2
	346nm,0.9s,mb5.7						
MBWA	Marble Bar	21.81	356	eP	P	09 59 28.6	+1.5
	19nm,1.1s,mb4.4						
ASAR	Alice Springs	21.88	32	P	P	09 59 27.7	-0.2
	9.1nm,0.9s,mb4.2,baz=204,slow=9.6,SNR=31						
ASAR				PcP	PcP	10 03 25.8	-1.4
	0.8nm,0.5s,baz=205,slow=2.1,SNR=13						
CMSA	Cobar Meteorol	22.40	67	eP	P	09 59 33.4	0.0
CASY	Casey	24.10	191	eP	P	09 59 48.5	-1.7
	30nm,1.4s,mb4.5						
FITZ	Fitzroy Crossi	25.07	10	P	P	10 00 01.4	+2.0
	12nm,1.0s,mb4.4,baz=184,slow=12,SNR=5.5						
WRAB	Tennant Creek	25.45	29	eP	P	10 00 01.6	-1.2
	4.7nm,0.7s,mb4.1						
CTA	Charters Tower	30.95	50	PcP	PcP	10 03 47.9	-0.4
	1.8nm,0.4s,baz=256,slow=5.1,SNR=3.0						
KAKA	Kakadu	31.65	21	eP	P	10 00 59.1	+0.9
MAW	Mawson	39.25	211	P	P	10 02 02.1	-0.9
	4.3nm,0.9s,mb4.2,baz=89,slow=7.1,SNR=6.0						
MAW				PcP	PcP	10 04 10.2	-1.5
	3.5nm,0.8s,baz=60,slow=3.4,SNR=5.6						
MAW	Mawson	39.25	211	eP	P	10 02 02.5	-0.5
	1.6nm,1.1s,mb3.7						
MAW				PcP	PcP	10 04 10.2	-1.5
QSPA	South Pole Qui	47.14	180	P	P	10 03 05.9	-0.7
	14nm,0.9s,mb4.9,baz=342,slow=3.1,SNR=37						
QSPA				PcP	PcP	10 04 38.0	0.0
	4.9nm,0.9s,baz=301,slow=1.5,SNR=5.4						
QSPA	South Pole Qui	47.14	180	eP	P	10 03 05.7	-0.9
	16nm,0.8s,mb5.0						
QSPA				PcP	PcP	10 04 38.0	0.0
CMAR	Chiang Mai Arr	64.53	336	P	P	10 05 13.1	+1.2
	1.1nm,0.3s,mb4.4,baz=174,slow=6.7,SNR=11						
OPO	Ambohidratompo	66.12	266	P	P	10 05 23.7	+1.3
	1.3nm,0.7s,mb4.1,baz=114,slow=9.8,SNR=4.3						
BOSA	Boshof	75.23	245	P	P	10 06 18.1	+0.3
	3.0nm,0.7s,mb4.3,baz=145,slow=12,SNR=4.6						
LBTB	Lobatse	77.37	248	P	P	10 06 30.3	+0.3
	3.0nm,0.8s,mb4.3,baz=171,slow=12,SNR=5.4						
LBTB	Lobatse	77.37	248	eP	P	10 06 28.6	-1.5
	4.2nm,0.8s,mb4.4						
LSA	Lhasa	77.48	333	eP	P	10 06 31.8	+1.5
	7.3nm,0.5s,mb4.9						
XAN	Xi'an	77.49	349	P	P	10 06 31.2	+0.9
XAN				pP	pP	10 06 40.4	+6.8
XAN				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.2						
KSRS	Korea Array	80.28	5	P	P	10 06 46.3	+0.8
	comp=Z,1.9nm,0.9s,mb4.0,baz=185,slow=4.6,SNR=6.5						
MJAR	Matsushiro Arr	80.62	14	P	P	10 06 47.0	-0.4
	comp=Z,3.4nm,1.0s,mb4.2,baz=183,slow=7.1,SNR=9.5						
LSZ	Lusaka	82.03	257	eP	P	10 06 56.2	+0.8
	comp=Z,30nm,1.3s,mb5.1						
GTA	Gaotai	84.31	343	eP	P	10 07 07.6	+1.1
GTA				pP	pP	10 07 12.0	+2.2
GTA				sP	sP	10 07 15.1	+4.1
GTA				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.2						
CN2	Changchun	86.48	3	eP	P	10 07 15.4	-1.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb5.1						
KBL	Kabul	90.75	319	eP	P	10 07 38.8	+1.0
	comp=Z,20nm,1.2s,mb5.3						
ULN	Ulaanbaatar	91.34	350	eP	P	10 07 41.1	+1.0
	comp=Z,7.4nm,1.1s,mb4.9						
SONM	Songino Array	91.40	350	P	P	10 07 40.4	0.0
	comp=Z,3.4nm,0.9s,mb4.7,baz=167,slow=4.5,SNR=19						
MKAR	Makanchi Array	95.86	334	P	P	10 08 00.5	-0.5
	comp=Z,0.3nm,0.2s,mb4.3,baz=145,slow=6.7,SNR=6.0						
MKAR	Makanchi Array	95.86	334	P	P	10 08 00.5	-0.5
PLCA	Paso Flores	95.97	171	P	P	10 08 01.5	-0.5
	comp=Z,3.1nm,1.0s,mb4.7,baz=183,slow=7.3,SNR=4.7						
PLCA	Paso Flores	95.97	171	eP	P	10 08 01.9	-0.1
	comp=Z,13nm,1.8s,mb5.1						
KURK	Kurchatov	100.47	334	P	Pdif	10 08 21.8	-0.5
	comp=Z,0.3nm,0.4s,baz=154,slow=3.4,SNR=3.4						
TORD	Torodi Ar. Bea	120.49	259	PKP	PKPdf	10 13 26.4	-0.5
	comp=Z,1.2nm,0.6s,baz=75,slow=1.3,SNR=16						
FINES	FINESS Array B	128.92	322	PKP	PKPdf	10 13 41.8	+0.2
	comp=Z,2.2nm,0.6s,baz=92,slow=2.6,SNR=16						
GERES	GERESS Array B	131.08	303	PKP	PKPdf	10 13 46.7	+0.6
	comp=Z,0.8nm,0.8s,baz=101,slow=1.4,SNR=6.7						
ARCES	ARCESS Array B	131.47	332	PKP	PKPdf	10 13 46.2	0.0
	comp=Z,0.7nm,0.5s,baz=120,slow=1.7,SNR=8.1						
CLL	Collm	132.37	306	ePKPdf	PKPdf	10 13 49.0	+0.5
OTAV	Otavalo	133.88	152	eP	PKPdf	10 13 53.6	+1.0
NVAR	Mina Array Bea	135.36	75	PKP	PKPdf	10 13 56.0	+1.5
	comp=Z,0.6nm,0.3s,baz=207,slow=3.2,SNR=8.2						
NVAR	Mina Array Bea	135.36	75	PKP	PKPdf	10 13 56.0	+1.5
NOA	NORSAR Array B	135.77	319	PKP	PKPdf	10 13 55.9	+1.4
	comp=Z,0.7nm,0.9s,baz=108,slow=2.1,SNR=3.1						
Q11A	Duckwater	137.41	75	⇑PKiKP	PKiKP	10 13 59.7	-0.5
	baz=138						
X14A	Yava	137.47	83	⇑PKiKP	PKiKP	10 13 60.0	-0.5
	baz=138						
W14A	Seligman	137.67	82	⇓PKiKP	PKiKP	10 14 00.9	+0.1
	baz=138						
J09A	Fry Pan Ranch,	137.68	68	⇑PKiKP	PKiKP	10 14 00.8	+0.2
	baz=138						
F08A	Pendleton	137.81	65	⇑PKiKP	PKiKP	10 14 01.0	+0.2
	baz=138						
V14A	Boquillas Ranc	137.85	81	⇑PKiKP	PKiKP	10 14 00.9	-0.3
	baz=138						
T13A	Saint George	137.89	79	⇑PKiKP	PKiKP	10 14 01.0	-0.2
	baz=138						
R12A	Pony Springs,	137.94	77	⇑PKiKP	PKiKP	10 14 01.2	-0.1
	baz=138						
X15A	Humboldt	137.95	83	⇓PKiKP	PKiKP	10 14 00.8	-0.7
	baz=138						
K10A	MacKenzie Ranc	138.08	70	⇓PKiKP	PKiKP	10 14 00.8	-0.7
	baz=138						
117A	Oracle	138.12	86	⇑PKiKP	PKiKP	10 14 00.9	-0.9
	baz=138						
U14A	Mt Trumbull	138.15	80	⇓PKiKP	PKiKP	10 14 01.6	-0.2
	baz=138						
S13A	Holt Ranch, En	138.16	78	⇑PKiKP	PKiKP	10 14 01.3	-0.5
	baz=138						
R13A	O'Grain Ranch,	138.34	77	⇑PKiKP	PKiKP	10 14 01.8	-0.3
	baz=138						
X16A	Lo Mia Camp, P	138.50	84	⇓PKiKP	PKiKP	10 14 02.0	-0.6
	baz=139						
319A	Douglas	138.59	89	⇓PKiKP	PKiKP	10 14 02.5	-0.3
	baz=139						
V15A	Kaibab Nationa	138.61	81	⇑PKiKP	PKiKP	10 14 01.5	-1.2
	baz=139						
L11A	Cat Creek Ranc	138.63	71	⇓PKiKP	PKiKP	10 14 02.1	-0.5
	baz=139						
U15A	North Rim	138.79	80	⇓PKiKP	PKiKP	10 14 02.9	-0.2
	baz=139						
M12A	Wells	138.94	72	⇑PKiKP	PKiKP	10 14 02.9	-0.4
	baz=139						
T15A	Red Dirt Ranch	138.99	80	⇓PKiKP	PKiKP	10 14 02.9	-0.6
	baz=139						
WUAZ	Wupatki	139.05	82	ePKPdf	PKPdf	10 14 01.8	+0.3
K12A	Draper Farm, C	139.39	71	⇓PKiKP	PKiKP	10 14 04.2	+0.1
	baz=140						
220A	Playas Peak, P	139.41	89	⇑PKiKP	PKiKP	10 14 03.5	-1.0
	baz=139						
M13A	Montello	139.45	73	⇑PKiKP	PKiKP	10 14 04.7	+0.4
	baz=140						
V17A	Tonalea, Kykot	139.52	82	⇑PKiKP	PKiKP	10 14 04.1	-0.5
	baz=140						
MSU	Marysvale	139.76	78	ePKPdf	PKPdf	10 13 58.8	-3.8
D11A	Klaveano Farm,	139.80	64	⇓PKiKP	PKiKP	10 14 05.1	+0.3
	baz=140						
L13A	Double Diamond	139.86	72	⇓PKiKP	PKiKP	10 14 05.0	-0.1
	baz=140						
Y19A	Nutrioso	139.88	86	⇑PKiKP	PKiKP	10 14 04.8	-0.6
	baz=140						
Z20A	Nine Sixteen R	139.96	87	⇑PKiKP	PKiKP	10 14 05.0	-0.6
	baz=140						
T17A	Navajo Res., N	140.12	80	⇓PKiKP	PKiKP	10 14 05.4	-0.4
	baz=140						
121A	Cookes Peak, D	140.26	88	⇓PKiKP	PKiKP	10 14 05.6	-0.7
	baz=140						
Y20A	Horse Springs,	140.50	86	⇑PKiKP	PKiKP	10 14 06.2	-0.4
	baz=140						
K14A	Jones Ranch, D	140.56	71	⇓PKiKP	PKiKP	10 14 06.9	+0.4
	baz=141						
P16A	Fountain Green	140.56	76	⇓PKiKP	PKiKP	10 14 06.5	-0.1
	baz=141						
G13A	Cobalt	140.64	67	⇓PKiKP	PKiKP	10 14 06.7	+0.1
	baz=141						
626A	Big Bend Ranch	141.40	95	⇑PKPdf	PKPdf	10 14 04.7	-1.2
	baz=141						
SWMT	Swartz Lake	141.46	64	ePKPdf	PKPdf	10 14 04.3	-1.1
P18A	Preston Nutter	141.58	77	⇑PKPdf	PKPdf	10 14 05.6	-0.3
	baz=142						
TXAR	Lajitas Array	141.62	96	PKhKP		10 13 59.6	
	comp=Z,0.8nm,0.5s,baz=210,slow=5.3,SNR=14						
TXAR				PKP	PKPdf	10 14 06.4	+0.1
	comp=Z,2.2nm,0.9s,baz=203,slow=3.9,SNR=12						
LAZ	Ladron	141.63	86	ePKPdf	PKPdf	10 14 07.3	+1.1
MVCO	Mesa Verde	141.88	81	ePKPdf	PKPdf	10 14 06.5	0.0
BNM	Barren Site	141.89	87	ePKPdf	PKPdf	10 14 07.0	+0.4
ANMO	Albuquerque	142.38	86	ePKPdf	PKPdf	10 14 03.4	-4.1
YKA	Yellowknife Ar	142.40	39	PKhKP		10 14 01.6	
	comp=Z,1.4nm,0.6s,baz=278,slow=3.2,SNR=24						
YKA	Yellowknife Ar	142.40	39	PKP		10 14 01.6	
IMW	Indian Meadow	142.54	70	ePKPdf	PKPdf	10 14 04.8	-2.7
BOZ	Bozeman (W)	142.56	67	ePKPdf	PKPdf	10 14 05.7	-1.8
GDL2	Guadalupe Moun	142.61	91	ePKPdf	PKPdf	10 14 03.8	-4.2
O19A	Miners Draw (B	142.63	76	⇓PKPdf	PK

RWWY	Rawlins	144.46	75	ePKPdf	PKPdf	10 14 10.0	-0.9
A18A	Metzger Ranch, baz=145	144.47	62	⇓PKPdf	PKPdf	10 14 08.9	-1.7
U25A	Circle Dot Ran baz=145	144.52	85	⇓PKPdf	PKPdf	10 14 10.5	-0.7
T25A	Trinidad baz=145	144.82	84	⇓PKPdf	PKPdf	10 14 10.5	-1.2
W27A	Bowe Ranch, En baz=145	144.92	88	⇑PKPdf	PKPdf	10 14 10.8	-1.1
ISCO	Idaho Springs	144.97	79	ePKPdf	PKPdf	10 14 12.5	+0.7
U26A	Atchley Ranch, baz=145	145.00	85	⇑PKPdf	PKPdf	10 14 11.2	-0.8
JCT	Junction City	145.06	97	ePKPdf	PKPdf	10 14 11.4	-0.9
L22A	Ellis Ranch, M baz=145	145.12	75	⇑PKPdf	PKPdf	10 14 11.4	-0.6
PHWY	Pilot Hill	145.59	76	ePKPdf	PKPdf	10 14 14.1	+1.3
AMTX	Amarillo	145.86	89	ePKPdf	PKPdf	10 14 14.7	+1.2
LAO	LASA Array	146.45	67	ePKPdf	PKPdf	10 14 14.9	+0.7
RSSD	Black Hills	147.39	72	ePKPbc	PKPbc	10 14 18.4	+0.1
HKT	Hockley	147.64	101	ePKPbc	PKPbc	10 14 19.4	0.0
WMOK	Wichita Mounta	147.92	91	ePKPdf	PKPdf	10 14 17.2	+0.2
WMOK				ePKPbc	PKPbc	10 14 20.5	+0.4
OGNE	Ogallala	147.93	79	ePKPbc	PKPbc	10 14 20.5	+0.7
DGMT	Dagmar	148.10	64	ePKPbc	PKPbc	10 14 20.4	+0.3
SUMG	Summit	148.79	348	ePKPbc	PKPbc	10 14 21.9	+0.7
SUMG	Summit comp=Z,13nm,1.0s	148.79	348	*i* P	PKPbc	10 14 22.6	+1.4
CBKS	Cedar Bluff	148.88	84	ePKPdf	PKPdf	10 14 17.4	-1.1
CBKS				ePKPbc	PKPbc	10 14 22.8	+0.4
FFC	Flin Flon	149.65	52	ePKPbc	PKPbc	10 14 23.8	0.0
KSU1	Kansas State U	151.26	85	ePKPdf	PKPdf	10 14 22.8	+0.6
KSU1				ePKPbc	PKPbc	10 14 28.7	+0.6
ECSD	EROS Data Cent	152.53	75	ePKPdf	PKPdf	10 14 23.4	-0.5
ECSD				ePKPbc	PKPbc	10 14 30.1	-0.8
ECSD				ePKPab	PKPab	10 14 39.3	-2.1
FCC	Fort Churchill	153.04	42	ePKPbc	PKPbc	10 14 30.5	-1.0
FCC				ePKPab	PKPab	10 14 42.4	-0.6
ULM	Lac du Bonnet comp=Z,2.7nm,0.4s,baz=292,slow=3.8,SNR=4.5	153.62	61	PKPbc	PKPbc	10 14 32.0	-1.1
SCIA	State Center	154.56	81	ePKPbc	PKPbc	10 14 35.7	+0.4

KRSC 01 09:56:29.6±0.8, 51°.62N×159°.48E, h11km±10km, ML3.9, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	Gorelyy	1.27	318	eP	Pn	09 56 54.4	+1.1
GRL				*i* S	Sb	09 57 12.6	+2.6
PET	Petropavlovsk	1.50	340	eP	Pn	09 56 56.9	+0.6
PET				*i* S	Sn	09 57 16.8	+1.0
SPN	Mys Shipunski	1.52	12	P	Pn	09 56 56.4	-0.2
SPN				*i* S	Sn	09 57 16.3	-0.1
SDLR	Sedlovina	1.70	348	P	Pn	09 56 59.9	+0.7
SDLR				*i* S	Sn	09 57 21.9	+1.0
AVH	Avacha	1.71	345	P	Pn	09 57 00.6	+1.3
MIPR	Malaya Ipel'ka	1.81	292	*i* P	Pn	09 57 02.0	+1.4
MIPR				eS	Sn	09 57 25.1	+1.6
GNL	Ganaly	2.28	336	eP	Pn	09 57 09.4	+2.3
ALID	Alaid	2.58	255	eP	Pn	09 57 11.3	0.0
ALID				eS	Sn	09 57 41.8	-0.8
KMNR	Kamenistaya	4.17	6	P	Pn	09 57 34.9	+1.8

*IDC **01** 10:09:59.7±0.8, 4°.66S×129°.39E, h0km, mb3.9/8, mb1 4.1/10, mb1mx4.0/18, mbtmp4.0/10, ML4.1/2, Error ellipse: s-maj=47.0km s-min=16.0km az=66.0*
*NEIC **01** 10:10:01.0±0.6, 4°.71S×129°.43E, h10km, mb4.3/5, Error ellipse: s-maj=23.0km s-min=9.1km az=62.0*
ISC 01 10:09:59.7±4.4, 4°.72S±0°.07×129°.4E±0°.2, h1km±28km, n23, σ1§01/25, mb4.0/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu 8.2nm,0.4s	8.49	159	eP	Pn	10 12 05.0	+1.2
KAKA	Kakadu	8.49	159	ePn	Pn	10 12 04.5	+0.7
KAKA				eSn	Sn	10 13 36.0	-4.4
FITZ	Fitzroy Crossi 5.8nm,0.5s	13.80	195	eP	Pn	10 13 16.0	-0.5
FITZ	Fitzroy Crossi 0.4nm,0.3s,baz=14,slow=23,SNR=7.6	13.80	195	Pn	Pn	10 13 16.2	-0.3
WRAB	Tennant Creek 12nm,0.9s	15.87	163	eP	Pn	10 13 42.6	-1.8
COEN	Coen	16.39	125	eP	Pn	10 13 47.5	-3.7
COEN	Coen 79nm,0.8s	16.39	125	eP	Pn	10 13 49.2	-1.9
ASAR	Alice Springs 1.2nm,0.3s,baz=351,slow=12,SNR=72	19.33	167	P	Pn	10 14 28.7	+1.2
ASAR				S	Sn	10 18 04.3	-0.6
	0.0nm,0.3s,baz=345,slow=20,SNR=2.9						
CTA	Charters Tower 5.5nm,0.9s,mb4.0	22.42	134	eP	P	10 15 00.2	+0.3
CTA	Charters Tower 5.3nm,0.7s,mb4.1,baz=312,slow=8.7,SNR=8.1	22.42	134	P	P	10 15 00.2	+0.2
CTA	Charters Tower	22.42	134	P	P	10 15 00.2	+0.2
CTAO	Charters Tower 18nm,1.3s,mb4.3	22.42	134	eP	P	10 15 00.7	+0.7
STKA	Stephens Creek 3.1nm,0.8s,mb4.2	29.34	158	eP	P	10 16 05.8	+1.7
STKA	Stephens Creek 4.2nm,0.8s,mb4.3,baz=322,slow=5.6,SNR=8.3	29.34	158	P	P	10 16 04.8	+0.8
STKA	Stephens Creek 0.8nm,0.8s,mb3.6	29.34	158	eP	P	10 16 06.0	+1.9
YNG	Young 6.3nm,0.8s,mb4.6	34.31	151	eP	P	10 16 51.0	+3.2
CMAR	Chiang Mai Arr 0.6nm,0.4s,mb3.7,baz=150,slow=7.3,SNR=4.8	37.84	308	P	P	10 17 17.8	-0.4
KSRS	Korea Array 0.7nm,0.7s,mb3.5,baz=182,slow=7.5,SNR=3.4	41.98	358	P	P	10 17 51.7	-0.7
SONM	Songino Array 0.7nm,0.5s,mb3.9,baz=155,slow=8.0,SNR=6.4	56.10	342	P	P	10 19 40.5	0.0
MKAR	Makanchi Array 0.4nm,0.4s,mb4.0,baz=106,slow=8.9,SNR=4.0	66.00	327	P	P	10 20 47.9	+0.1
ZALV	Zalesovo Beam 0.5nm,0.3s,mb4.2,baz=114,slow=3.7,SNR=5.7	69.29	334	P	P	10 21 09.1	+0.7
KURK	Kurchatov 4.8nm,1.0s,mb4.6	70.27	328	eP	P	10 21 14.5	0.0
BVAR	Borovoye Array 0.4nm,0.5s,mb3.8,baz=104,slow=6.1,SNR=4.0	75.83	328	P	P	10 21 47.1	-0.3

*IDC **01** 10:16:10.6±0.5, 4°.54S×129°.61E, h0km, mb4.3/12, mb1 4.5/13, mb1mx4.4/18, mbtmp4.4/13, ML4.4/1, MS3.6/2, Ms1 3.6/2, ms1mx2.8/27, Error ellipse: s-maj=28.3km s-min=13.1km az=74.0*
*NEIC **01** 10:16:11.6±0.3, 4°.62S×129°.61E, h10km, mb4.6/20, Error ellipse: s-maj=11.4km s-min=6.7km az=67.0*
NEIC Felt [III] in the Kepulauan Banda.
*ISCJB **01** 10:16:14.9±0.7, 4°.62S±0°.04×129°.65E±0°.06, h47km±7km, mb4.6/38, MS4.4/3, Error ellipse: s-maj=10.3km s-min=6.0km az=153.1*
*BJI **01** 10:16:15.9, 3°.82S×129°.66E, h10km, mB5.0/10, mb4.7/18, Ms4.6/8, Ms7 4.4/8*
*DJA **01** 10:16:16, 4°.63S×129°.68E, h43km, MLv4.3/7*
ISC 01 10:16:16.4±0.6, 4°.62S±0°.04×129°.68E±0°.06, h43km±6km, h9km±4.1km:pP-P, n82, σ1§13/76, mb4.6/38, MS4.4/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	Masohi	1.47	329	P	Pn	10 16 39.4	-1.0
AAI	Ambon	1.75	302	P	Pn	10 16 43.7	-0.5
NLAI	Namlea	2.92	298	P	Pn	10 17 02.5	+2.2
TLE	Tual	3.21	109	P	Pn	10 17 06.5	+2.2
SWI	Sorong	4.05	23	P	Pn	10 17 15.7	-0.1
LBMI	Labuha	4.51	331	P	Pn	10 17 22.8	+0.6
LUWI	Luwuk 0.6nm2μm191nm,1.2s	7.76	297	P	Pn	10 18 06.3	-0.5
KAKA	Kakadu 20nm,0.6s	8.49	161	eP	Pn	10 18 15.3	-1.6
KAKA	Kakadu 64nm,0.6s	8.49	161	ePn	Pn	10 18 15.0	-1.9
KAKA	Kakadu 426nm54nm,0.7s	8.49	161	P	Pn	10 18 15.9	-1.0
APSI	Ampana 2μm186nm,1.2s	8.83	294	P	Pn	10 18 21.4	-0.1
MRSI	Marisa 43nm,0.9s	9.24	303	P	Pn	10 18 28.8	+1.6
KAPI	Kappang 0.5nm,0.3s,baz=29,slow=19,SNR=2.1	9.90	267	Pn	Pn	10 18 30.6	-5.6
KAPI	comp=Z,482nm,21.5s,baz=109,slow=37			LR	LR	10 22 18.6	
FITZ	Fitzroy Crossi 18nm,0.7s	13.97	196	eP	Pn	10 19 26.6	-5.3
FITZ	Fitzroy Crossi 0.5nm,0.3s,baz=21,slow=8.5,SNR=9.9	13.97	196	Pn	Pn	10 19 26.8	-5.0
FITZ				LR	LR	10 25 42.8	
	comp=Z,189nm,19.9s,baz=28,slow=41						
FITZ	Fitzroy Crossi	13.97	196	ePn	Pn	10 19 27.2	-4.7
WRAB	Tennant Creek 80nm,1.5s	15.89	164	eP	Pn	10 19 52.9	-4.2
COEN	Coen 296nm,1.1s	16.22	126	eP	Pn	10 19 58.6	-2.7
COEN	Coen	16.22	126	P	Pn	10 19 59.0	-2.4
KKM	Kota Kinabalu 67nm,1.4s	17.11	308	eP	Pn	10 20 11.5	-1.1
MBWA	Marble Bar 16nm,0.9s	19.07	210	eP	Pn	10 20 36.0	-0.5
ASAR	Alice Springs 1.0nm,0.3s,baz=349,slow=10,SNR=105	19.37	168	P	Pn	10 20 38.9	-1.1
ASAR				PcP	PcP	10 24 59.8	+0.3
	0.1nm,0.3s,baz=358,slow=3.2,SNR=4.8						
KSM	Kuching 17nm,1.1s	20.28	287	eP	P	10 20 47.7	-0.9
CTA	Charters Tower 17nm,0.9s,mb4.5	22.29	135	eP	P	10 21 10.4	+0.3
CTA	Charters Tower 26nm,1.0s,mb4.6,baz=323,slow=12,SNR=22	22.29	135	P	P	10 21 11.1	+0.9
CTA	Charters Tower	22.29	135	P	P	10 21 11.1	+0.9
CTAO	Charters Tower 23nm,0.9s,mb4.6	22.29	135	eP	P	10 21 10.6	+0.4
FORT	Forrest 14nm,0.8s,mb4.6	26.07	183	eP	P	10 21 46.7	+0.8
FORT	Forrest 20nm,0.8s,mb4.7	26.07	183	eP	P	10 21 46.1	+0.2
KLBR	Kellerberrin 22nm,1.0s,mb4.8	29.08	201	eP	P	10 22 13.3	+0.4
STKA	Stephens Creek 4.9nm,0.8s,mb4.3	29.33	159	eP	P	10 22 15.9	+0.8
STKA	Stephens Creek 4.7nm,0.6s,mb4.4,baz=330,slow=7.7,SNR=13	29.33	159	P	P	10 22 15.4	+0.3
STKA	Stephens Creek 1.5nm,0.8s,mb3.8	29.33	159	eP	P	10 22 15.3	+0.2
NWAO	Narrogin (SRO) 9.5nm,0.9s,mb4.5,baz=3.0,slow=6.6,SNR=5.4	30.47	201	P	P	10 22 26.2	+1.0
YNG	Young 11nm,0.8s,mb4.8	34.27	152	eP	P	10 22 58.7	+0.3
CNB	Canberra Magne	35.55	152	eP	P	10 23 11.4	+1.9
TOO	Toolangi	35.84	158	eP	P	10 23 14.7	+2.7
NJ2	Nanjing	37.89	345	eP	P	10 23 28.2	-1.2
NJ2				pmax	pmax		
	comp=Z,30nm,0.6s,mb5.2						
CMAR	Chiang Mai Arr comp=Z,6.3nm,0.9s,mb4.3,baz=138,slow=7.7,SNR=34	37.99	308	P	P	10 23 30.5	0.0
CMAR				PcP	PcP	10 25 47.6	+2.0
	comp=Z,0.5nm,0.4s,baz=172,slow=1.8,SNR=4.8						
GYA	Guiyang	38.09	325	P	P	10 23 33.2	+2.0
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.5						
CHTO	Chiang Mai comp=Z,14nm,0.9s,mb4.7	38.19	308	eP	P	10 23 32.1	-0.1
KMI	Kunming	39.49	320	P	P	10 23 44.7	+1.8
KMI				pP	pP	10 23 48.7	-6.1
KMI				sP	sP	10 23 50.5	-9.4
KMI				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.4						
MAJO	Matsushiro comp=Z,6.9nm,0.9s,mb4.3	41.71	10	eP	P	10 24 00.3	-0.8
MAT	Matsushiro	41.71	10	P	P	10 23 59.8	-1.3
MJAR	Matsushiro Arr comp=Z,4.9nm,0.9s,mb4.1,baz=186,slow=9.6,SNR=15	41.71	10	P	P	10 23 59.2	-1.9
MJAR				PcP	PcP	10 25 57.9	+0.8
	comp=Z,0.5nm,0.4s,baz=173,slow=3.7,SNR=4.9						
KSRS	Korea Array comp=Z,1.7nm,1.0s,mb3.6,baz=194,slow=8.5,SNR=5.2	41.88	358	P	P	10 24 01.7	-0.8
CD2	Chengdu	43.14	327	eP	P	10 24 13.4	+0.6
CD2				pP	pP	10 24 18.0	-6.8
CD2				sP	sP	10 24 20.8	-9.1
CD2				PP	PP	10 25 56.2	+2.5
CD2				S	S	10 30 39.3	+3.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
CD2				pmax	pmax		
	comp=Z,30nm,5.2s						
CD2				LR	LR		
	comp=N,210nm,12.8s						
CD2				LR	LR		
	comp=Z,350nm,13.2s,MS4.4						
XAN	Xi'an	43.16	335	P	P	10 24 11.5	-1.4
XAN				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.0						
BJI	Beijing	46.14	346	P	P	10 24 38.2	+1.6
BJI				S	S	10 31 25.7	+6.1
BJI				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.1						
BJI				pmax	pmax		
	comp=Z,250nm,11.5s						
BJI				LR	LR		
	comp=N,570nm,24.6s,MS4.5						
BJI				LR	LR		
	comp=E,340nm,24.8s,MS4.5						
BJI				LR	LR		
	comp=Z,260nm,29.4s,MS4.0						
LZH	Lanzhou	47.17	331	eP	P	10 24 45.0	+0.3
LZH				pP	pP	10 24 49.5	-7.3
LZH				sP	sP	10 24 52.5	-9.4
LZH				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.1						
LZH				pmax	pmax		
	comp=Z,190nm,5.7s						
HHC	Hu-ho-hao-te	48.19	342	eP	P	10 24 55.0	+2.4
HHC				pP	pP	10 24 59.5	-5.2
HHC				sP	sP	10 25 02.0	-7.8
HHC				PcP	PcP	10 26 21.7	+2.3
HHC				PP	PP	10 26 47.1	+1.8
HHC				ScP	ScP	10 30 15.2	+4.5
HHC				PcS	PcS	10 30 16.4	+1.3
HHC				S	S	10 31 55.0	+6.2
HHC				ScS	ScS	10 34 45.1	+3.1
HHC				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.0						
HHC				pmax	pmax		
	comp=Z,130nm,5.1s						
HHC				LR	LR		
	comp=N,170nm,17.8s,MS4.5						
HHC				LR	LR		
	comp=E,370nm,17.8s,MS4.5						
HHC				LR	LR		
	comp=Z,280nm,16.6s,MS4.3						
CN2	Changchun	48.34	356	eP	P	10 24 56.2	+2.5
GTA	Gaotai	51.75	331	eP	P	10 25 19.4	-0.2
GTA				pP	pP	10 25 24.0	-7.8
GTA				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.5						
ULN	Ulaanbaatar comp=Z,5.0nm,0.9s,mb4.5	55.91	342	eP	P	10 25 50.2	+0.4
SONM	Songino Array	56.09	341	P	P	10 25 51.2	+0.1
	comp=Z,3.1nm,1.0s,mb4.3,baz=159,slow=7.3,SNR=17						
WMQ	Urumqi	61.24	326	eP	P	10 26 27.0	0.0
PETK	Petropavlovsk- comp=Z,2.0nm,0.8s,mb4.3,baz=211,slow=4.3,SNR=5.0	62.17	19	P	P	10 26 35.0	+1.9
CASY	Casey comp=Z,7.9nm,1.2s,mb4.7	63.00	189	eP	P	10 26 38.7	+0.3
MKAR	Makanchi Array comp=Z,1.2nm,0.5s,mb4.2,baz=113,slow=8.3,SNR=12	66.07	326	P	P	10 26 58.6	-0.2
ZALV	Zalesovo Beam comp=Z,0.6nm,0.3s,mb4.0,baz=116,slow=6.8,SNR=9.8	69.32	334	P	P	10 27 18.4	-0.7
KURK	Kurchatov comp=Z,9.4nm,1.1s,mb4.6	70.33	328	eP	P	10 27 25.2	-0.3
BVAR	Borovoye Array comp=Z,1.4nm,0.7s,mb4.0,baz=131,slow=6.1,SNR=11	75.89	328	P	P	10 27 57.8	-0.4
BRVK	Borovoye comp=Z,5.5nm,0.9s,mb4.5	75.96	328	eP	P	10 27 58.3	-0.4
MAW	Mawson comp=Z,6.3nm,1.1s,mb4.4,baz=44,slow=6.8,SNR=6.0	77.04	201	P	P	10 28 04.4	-0.2
MAW	Mawson comp=Z,3.8nm,1.5s,mb4.1	77.04	201	eP	P	10 28 04.4	-0.2
ABKAR	Akbulak array comp=Z,8.2nm,1.2s,mb4.5	80.46	321	eP	P	10 28 23.3	-0.3
ARU	Arti comp=Z,3.7nm,0.8s,mb4.6	83.53	328	eP	P	10 28 38.9	-0.7
RDF	Al-Radifah	85.34	299	eP	P	10 28 48.1	-1.4
RDF				AMb	AMB	10 28 51.4	
	comp=Z,18nm,1.2s,mb5.1						
QSPA	South Pole Qui comp=Z,9.3nm,1.3s,mb4.8	85.35	180	eP	P	10 28 47.6	-0.8
MIB	Mutribah	85.65	300	eP	P	10 28 50.1	-0.8
MIB				AMb	AMB	10 28 52.7	
	comp=Z,27nm,1.1s,mb5.4						
NAY	Al-Naaiem	85.66	300	eP	P	10 28 49.9	-1.1
NAY				AMb	AMB	10 28 52.6	
	comp=Z,14nm,1.0s,mb5.2						
COLD	Coldfoot comp=Z,3.2nm,0.9s,mb4.7	90.40	23	eP	P	10 29 12.7	-0.1
INK	Inuvik comp=Z,7.0nm,1.3s,mb4.9	96.78	22	eP	P	10 29 41.5	-0.6
PDAR	Pinedale Array comp=Z,0.9nm,1.1s,baz=191,slow=0.8,SNR=5.3	115.44	44	PKP	PKPdf	10 34 55.4	+1.6
MNTX	Cornudas Mount	121.90	55	ePKPdf	PKPdf	10 35 07.2	+0.6
TXAR	Lajitas Array comp=Z,0.5nm,0.9s,baz=241,slow=1.9,SNR=5.4	123.95	58	PKP	PKPdf	10 35 12.1	+1.5
JCT	Junction City	126.83	55	ePKPdf	PKPdf	10 35 16.8	+0.8
TORD	Torodi Ar. Bea comp=Z,2.0nm,1.0s,baz=74,slow=2.0,SNR=8.9	128.00	283	PKP	PKPdf	10 35 19.8	+1.2
JTS	JuntasAbangare	145.22	79	ePKPdf	PKPdf	10 35 51.2	+0.8
CPUP	Villa Florida comp=Z,2.1nm,0.9s,baz=207,slow=4.5,SNR=3.1	148.50	168	PKP	PKPdf	10 35 54.2	-1.4
CPUP				PKPbc	PKPbc	10 36 00.5	+1.3
	comp=Z,2.5nm,0.6s,baz=207,slow=3.9,SNR=8.0						
LPAZ	La Paz comp=Z,1.4nm,0.9s,baz=236,slow=6.9,SNR=4.0	152.76	140	PKP	PKPdf	10 36 04.2	+1.7
LPAZ				PKPbc	PKPbc	10 36 12.1	+2.5
	comp=Z,5.0nm,1.0s,baz=220,slow=3.1,SNR=10						
LPAZ	La Paz	152.76	140	ePKPdf	PKPdf	10 36 05.9	+3.5
LPAZ				ePKPbc	PKPbc	10 36 11.9	+2.3

IDC 01 10:28:18.9±1.4, 4°.52S×129°.44E, h0km, mb3.6/5, mb1 3.8/7, mb1mx3.6/19, mbtmp3.7/7, ML3.5/2, Error ellipse: s-maj=78.4km s-min=20.7km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi 0.1nm,0.3s,baz=352,slow=18,SNR=3.0	14.00	195	Pn	Pn	10 31 38.3	-0.3
ASAR	Alice Springs 0.3nm,0.3s,baz=351,slow=10,SNR=19	19.52	168	P	Pn	10 32 48.2	-0.8
STKA	Stephens Creek 1.2nm,0.9s,baz=325,slow=12,SNR=3.7	29.51	159	P	P	10 34 25.0	0.0
CMAR	Chiang Mai Arr 0.6nm,0.5s,baz=149,slow=8.4,SNR=4.9	37.74	308	P	P	10 35 37.2	+0.5
SONM	Songino Array 0.2nm,0.3s,baz=170,slow=9.0,SNR=3.9	55.92	341	P	P	10 37 59.4	+0.8
MKAR	Makanchi Array 0.2nm,0.3s,baz=126,slow=6.2,SNR=3.4	65.86	326	P	P	10 39 05.8	-0.5
KURK	Kurchatov 0.4nm,0.6s,baz=130,slow=5.3,SNR=3.5	70.12	328	P	P	10 39 32.5	-0.5

*BJI **01** 10:33:22.0, 4°.99S×129°.95E, h10km, mB5.6/40, mb5.5/65, Ms5.0/59, Ms7 4.7/54*
*IDC **01** 10:33:26.7±0.3, 4°.56S×129°.54E, h0km, mb5.6/25, mb1 5.6/27, mb1mx5.5/29, mbtmp5.6/27, ML5.2/2, MS4.8/15, Ms1 4.8/15, ms1mx4.6/23, Error ellipse: s-maj=17.4km s-min=10.7km az=64.0*
*NEIC **01** 10:33:28.3±0.1, 4°.57S×129°.50E, h10km, mb5.8/105, MS5.1/130, Error ellipse: s-maj=4.8km s-min=3.0km az=56.0*
NEIC Felt [IV] on Pulau Banda Besar.
*ISCJB **01** 10:33:30.4±0.5, 4°.55S±0°.02×129°.62E±0°.02, h36km±4km, mb5.7/177, MS5.0/172, Error ellipse: s-maj=4.3km s-min=3.4km az=137.6*
*MOS **01** 10:33:31.2±0.9, 4°.40S×129°.41E, h33km, mb5.9/59, MS4.9/40, Error ellipse: s-maj=10.5km s-min=5.7km az=108.7*
*GCMT **01** 10:33:31.4±0.1, 4°.55S×129°.66E, h12km, MW5.4, Moment Tensor Solution. s78,c127; s24,c25; Moment tensor: Scale 10^{17}Nm; M_{rr}-0.36±.02; $M_{\theta\theta}$-1.09±.02; $M_{\phi\phi}$1.45±.02; $M_{r\theta}$0.35±.06; $M_{\theta\phi}$1.27±.02; $M_{r\phi}$0.24±.06; Best double couple: $M_0$1.80000×10^{17} NP1:ϕ_s337.00000°, δ77.00000°, λ-179.00000°. NP2:ϕ_s247.00000°, δ89.00000°, λ-13.00000°. Principal axes: T 2.0300, Plg8.0000°, Azm293.0000°; N -0.3700, Plg77.0000°, Azm61.0000°; P -1.6600, Plg10.0000°, Azm201.0000°; Data Used: II IU IC CN G. Surface waves: sta=107, comp=209, per= 50.*
*DJA **01** 10:33:33, 4°.37S×129°.77E, h44km, Mw5.9/48*
ISC 01 10:33:33.1±0.4, 4°.54S±0°.02×129°.63E±0°.02, h43km±3km, h16km±3.1km:pP-P, n1101, σ1§12/468, mb5.7/177, MS5.0/172, 185C-171D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	Masohi	1.38	329	P	Pn	10 33 53.4	-2.5
AAI	Ambon	1.66	301	P	Pn	10 33 56.0	-3.8
NLAI	Namlea	2.84	297	P	Pn	10 34 15.7	-0.2
TLE	Tual	3.28	110	P	Pn	10 34 22.0	0.0
SWI	Sorong	4.00	24	P	Pn	10 34 30.8	-1.1
LBMI	Labuha	4.42	331	P	Pn	10 34 36.5	-1.2
TNTI	Ternate 2.7nm724nm,1.3s	5.74	337	P	Pn	10 34 54.9	-0.9
KDI	Kendari 0.9nm3μm132nm,1.4s	7.01	274	P	Pn	10 35 12.6	-0.7
MNI	Manado 3.1nm8μm815nm,0.5s	7.63	321	P	Pn	10 35 22.2	+0.4
LUWI	Luwuk 5.5nm1μm,1.2s	7.68	297	P	Pn	10 35 22.3	-0.2
MMRI	Maumere 10μm850nm,1.4s	8.39	241	P	Pn	10 35 33.9	+1.7
KAKA	Kakadu 350nm,0.6s	8.58	161⇑	*i*P	Pn	10 35 31.4	-3.4
KAKA	Kakadu 1μm,0.8s	8.58	161	ePn	Pn	10 35 31.3	-3.5
KAKA	Kakadu 7μm858nm,0.8s	8.58	161	P	Pn	10 35 31.9	-2.9
APSI	Ampana 3μm,1.2s	8.75	294	P	Pn	10 35 38.0	+0.9
SGSI	Sangihe 391nm,1.3s	9.14	333	P	Pn	10 35 39.5	-3.0
MRSI	Marisa 5μm518nm,1.1s	9.16	303	P	Pn	10 35 42.8	+0.1
SMPI	Sarmi 4μm467nm,1.2s	9.41	75	P	Pn	10 35 44.1	-2.1
KAPI	Kappang 645nm,1.1s,SNR=14	9.86	267	Pn	Pn	10 35 52.8	+0.5
KAPI	Kappang 4.1nm,0.3s,baz=103,slow=4.8,SNR=18	9.86	267	Pn	Pn	10 35 51.6	-0.7
KAPI				Sn	Sn	10 37 43.8	+2.1
	0.8nm,0.3s,baz=90,slow=19,SNR=2.2						
KAPI				LR	LR	10 39 24.8	
	comp=Z,21μm,20.7s,baz=96,slow=37						
KAPI	Kappang	9.86	267	ePn	Pn	10 35 52.1	-0.1
KAPI	Kappang SNR=8.1	9.86	267	Pn	Pn	10 35 53.2	+0.9
KAPI				Pn	Pn	10 35 53.2	+0.9
	SNR=8.1						
KAPI	Kappang 1μm75nm,1.2s	9.86	267	P	Pn	10 35 52.4	+0.1
TTSI	Tana Toraja 5μm238nm,2.1s	9.90	278	P	Pn	10 35 55.6	+2.7
WSI	Waingapu 1μm,1.1s	10.57	241	P	Pn	10 36 08.0	+6.0
JAY	Jayapura 234nm,1.0s	11.24	80	P	Pn	10 36 11.7	+0.5
MMPI	Merauke 1μm,0.8s	11.37	111	P	Pn	10 36 15.2	+2.1
DAV	Davao City (W) 21nm,0.3s,baz=94,slow=15,SNR=2.8	12.22	341	P

BBKI Banjar Baru 14.79 274 P **Pn 10 37 02.7 +3.1**
1μm,1.4s
DNP Denpasar 14.90 253 P **Pn 10 37 07.7 +6.7**
837nm,1.3s
IGBI Denpasar 15.00 253 P **Pn 10 37 08.8 +6.5**
10μm1μm,1.0s
MSLP Maasin 15.33 342 *e*P **Pn 10 37 05.7 -1.0**
NBBI Negara 15.39 255 P **Pn 10 37 15.9 +8.5**
BYJI Banyuwangi 15.61 256 P **Pn 10 37 17.1 +6.9**
ABJI Asem Bagus 15.64 257 P **Pn 10 37 16.4 +5.7**
815nm,1.5s
KMMI Kalianget 15.78 260 P **Pn 10 37 16.3 +3.9**
2μm,1.4s
WRAB Tennant Creek 15.97 164 Pn **Pn 10 37 08.7 -6.2**
3μm,1.1s,SNR=9.9
WRAB Tennant Creek 15.97 164 *e*P **Pn 10 37 08.4 -6.5**
WRAB Tennant Creek 15.97 164 P **Pn 10 37 08.3 -6.6**
SDKM Sandakan 16.02 309 P **Pn 10 37 15.5 +0.1**
COEN Coen 16.31 126 *e*P **Pn 10 37 14.4 -4.8**
3μm,0.9s
COEN Coen 16.31 126 P **Pn 10 37 14.2 -4.9**
2μm,1.0s
GMJI Gumukmas 16.50 256 P **Pn 10 37 24.2 +2.6**
6μm434nm,1.4s
KKM Kota Kinabalu 17.03 308 P **Pn 10 37 28.4 +0.2**
KKM Kota Kinabalu 17.03 308 *e*P **Pn 10 37 26.6 -1.6**
1μm,1.4s
KKM Kota Kinabalu 17.03 308 P **Pn 10 37 28.0 -0.2**
8μm526nm,1.4s
KDM Kudat 17.11 312 P **Pn 10 37 29.3 +0.1**
GRJI Gresik 17.23 261 P **Pn 10 37 34.4 +3.7**
2μm,1.8s
CUYO Cuyo Island 17.53 331 *e*P **Pn 10 37 37.4 +3.0**
BATP Bataraza 17.74 318 *e*P **Pn 10 37 39.2 +2.2**
SJI Sawahan 18.04 259 P **Pn 10 37 44.4 +3.7**
PWJI Pagerwojo 18.05 258 P **Pn 10 37 41.6 +0.8**
BTM Bintulu 18.23 295 P **Pn 10 37 43.2 +0.2**
NGJI Ngawi 18.29 260 P **Pn 10 37 47.1 +3.4**
711nm,1.2s
OTRP Odiongan 18.42 336 *e*P **Pn 10 37 48.1 +2.9**
ENPP El Nido 18.65 327 *e*P **Pn 10 37 48.5 +0.4**
PCJI Pacitan 18.69 258 P **Pn 10 37 47.0 -1.6**
STKI Sintang 18.70 284 P **Pn 10 37 49.1 +0.3**
143nm,1.9s
SBUM Sibu 18.73 291 P **Pn 10 37 49.1 0.0**
SBUM Sibu 18.73 291 P **Pn 10 37 49.0 -0.1**
6μm270nm,1.3s
PVCP Virac 18.82 343 *e*P **Pn 10 37 49.9 -0.2**
SJMP San Jose 18.89 333 *e*P **Pn 10 37 51.0 0.0**
AUQP San Andres 19.04 339 *e*P **Pn 10 37 54.3 +1.5**
MBWA Marble Bar 19.11 209 *e*P **Pn 10 37 51.3 -2.3**
208nm,0.9s
MBWA Marble Bar 19.11 209 P **Pn 10 37 51.4 -2.2**
SNR=17
MBWA P 10 37 51.4
SNR=17
MBWA Marble Bar 19.11 209 P **Pn 10 37 51.3 -2.3**
5μm280nm,1.0s
SMRI Semarang 19.25 262 P **Pn 10 37 55.0 -0.4**
712nm,1.7s
UGM Wanagama 19.28 259 P **Pn 10 37 54.1 -1.6**
8μm657nm,1.5s
ASAR Alice Springs 19.46 168 P **Pn 10 37 53.9 -3.8**
5.8nm,0.3s,baz=347,slow=9.3,SNR=446
ASAR S **S 10 41 25.7 -8.2**
0.2nm,0.3s,baz=350,slow=25,SNR=3.6
ASAR PcP PcP 10 42 16.2 0.0
0.8nm,0.3s,baz=354,slow=2.7,SNR=7.0
ASAR PKiKP PKiKP 10 50 05.5 -0.7
0.1nm,0.3s,baz=340,slow=0.6,SNR=12
ASAR P3KPbc 11 12 21.2
0.1nm,0.3s,baz=181,slow=2.7,SNR=5.7
ASAR Alice Springs 19.46 168 P **Pn 10 37 53.9 -3.8**
ASAR S **S 10 41 25.7 -8.2**
ASAR Alice Springs 19.46 168 P **Pn 10 37 53.9 -3.8**
ASAR S **S 10 41 25.7 -8.2**
ASAR PcP PcP 10 42 16.2 0.0
BOAC Boac 19.48 337 *e*P **Pn 10 37 58.3 +0.3**
KSM Kuching 20.21 287 P **P 10 38 05.2 +0.7**
KSM Kuching 20.21 287 *e*P **P 10 38 04.1 -0.4**
433nm,1.3s
KSM *e*PcP PcP 10 42 18.7 +0.8
KSM LR LR
comp=Z,7μm,18.7s,MS5.0
KSM Kuching 20.21 287 P **P 10 38 04.4 -0.1**
comp=Z,5μmcomp=Z,285nm,1.3s
LUBP Lubang 20.41 333 *e*P **P 10 38 07.8 +1.2**
TGY Tagaytay City 20.43 335 P **P 10 38 07.9 +1.0**
comp=Z,251nm,0.6s,baz=148,slow=19,SNR=14
JCJI Jatiwangi 21.35 264 P **P 10 38 24.3 +7.5**
TPI Tanjungpandan 22.00 274 P **P 10 38 24.0 +0.2**
comp=Z,2μmcomp=Z,83nm,2.1s,mb4.8
LEM Lembang 22.02 263 P **P 10 38 24.3 +0.3**
comp=Z,6μmcomp=Z,451nm,1.3s,mb5.8
CTA Charters Tower 22.38 135 ⇑*i*P **P 10 38 26.8 -1.0**
comp=Z,177nm,0.9s,mb5.5
CTA *e*S **S 10 42 29.1 -2.5**
CTA Charters Tower 22.38 135 P **P 10 38 27.1 -0.7**
comp=Z,187nm,0.9s,mb5.5,baz=316,slow=12,SNR=143
CTA PcP PcP 10 42 22.8 +0.9
comp=Z,41nm,1.0s,baz=252,slow=6.4,SNR=3.7
CTA S **S 10 42 36.4 +4.8**
comp=Z,33nm,1.2s,baz=56,slow=19,SNR=3.1
CTA PKiKP PKiKP 10 50 07.8 +0.2
comp=Z,5.2nm,0.8s,baz=319,slow=9.3,SNR=3.8
CTA Charters Tower 22.38 135 P **P 10 38 27.1 -0.7**
CTA PcP PcP 10 42 22.8 +0.9
CTA S **S 10 42 36.4 +4.8**
CTAO Charters Tower 22.38 135 *e*P **P 10 38 27.1 -0.7**
CTAO pmax pmax
comp=Z,699nm,1.4s,mb5.9
CTAO MLR MLR
comp=Z,7μm,19.6s,MS5.1
CTAO Charters Tower 22.38 135 *e*P **P 10 38 27.1 -0.7**
comp=Z,699nm,1.4s,mb5.9
CTAO LR LR
comp=Z,7μm,19.6s,MS5.1
CTAO Charters Tower 22.38 135 P **P 10 38 27.1 -0.7**
comp=Z,4μmcomp=Z,378nm,1.0s,mb5.8
CAUP Cauayan 22.70 340 *e*P **P 10 38 32.5 +1.4**
CBJI Citeko 22.75 264 P **P 10 38 32.9 +1.1**
comp=Z,885nm,1.1s,mb6.1
DBJI Dramaga 22.86 264 P **P 10 38 34.1 +1.2**
comp=Z,6μmcomp=Z,264nm,1.8s,mb5.4
BOLP Bolinao 22.90 335 *e*P **P 10 38 32.9 -0.4**
GUMO Guam 23.52 40 P **P 10 38 36.5 -3.0**
comp=Z,259nm,1.1s,mb5.6
GUMO Guam 23.52 40 *e*P **P 10 38 38.5 -1.1**
GUMO pmax pmax
comp=Z,464nm,1.2s,mb5.8
GUMO Guam 23.52 40 *e*P **P 10 38 38.5 -1.1**
comp=Z,464nm,1.2s,mb5.8
GUMO Guam 23.52 40 P **P 10 38 39.4 -0.2**
comp=Z,9μmcomp=Z,467nm,2.2s,mb5.5
APYP Conner 23.75 340 *e*P **P 10 38 40.6 -0.9**
CGJI Cibinong 23.91 264 P **P 10 38 47.2 +4.0**
comp=Z,2μmcomp=Z,148nm,1.2s,mb5.3
KASI Kota Agung 25.05 267 P **P 10 38 51.9 -1.7**
comp=Z,55nm,1.1s,mb5.0
MDSI Maura Dua 25.37 269 P **P 10 38 53.9 -2.6**
comp=Z,1μmcomp=Z,30nm,1.1s,mb4.7
FORT Forrest 26.14 183 *e*P **P 10 39 02.1 -1.1**
comp=Z,105nm,0.8s,mb5.4
FORT Forrest 26.14 183 *e*P **P 10 39 02.7 -0.5**
comp=Z,226nm,1.0s,mb5.7
MYKOM Kota Tinggi 26.52 283 P **P 10 39 06.6 -0.3**
MYKOM Kota Tinggi 26.52 283 P **P 10 39 07.3 +0.4**
comp=Z,1μmcomp=Z,60nm,1.2s,mb5.0
KGM Kluang 27.09 283 P **P 10 39 12.4 +0.4**
KTGM Kuala Trenggan 28.22 290 P **P 10 39 21.8 -0.3**
YULB Yu-li 28.93 344 *e*P **P 10 39 28.5 +0.2**
comp=Z,59nm,1.2s,mb5.2
FRIM Kepong 29.03 285 P **P 10 39 29.3 0.0**
TPUB Ta-pu 29.03 343 *e*P **P 10 39 27.1 -2.1**
comp=Z,73nm,1.0s,mb5.4
TPUB *e*PcP PcP 10 42 38.1 +1.1
KLBR Kellerberrin 29.13 201 *e*P **P 10 39 27.5 -2.5**
comp=Z,442nm,1.1s,mb6.1
EIDS Eidsvold 29.20 137 *e*P **P 10 39 29.9 -0.8**
comp=Z,168nm,1.4s,mb5.6
PDSI Padang 29.35 276 P **P 10 39 34.2 +2.0**
comp=Z,53nm,1.1s,mb5.2
SSLB Suanglung 29.40 344 *e*P **P 10 39 30.5 -2.0**
comp=Z,102nm,1.3s,mb5.4
SSLB *e*PcP PcP 10 42 38.3 +0.4
STKA Stephens Creek 29.42 159 *e*P **P 10 39 31.4 -1.2**
comp=Z,93nm,0.9s,mb5.5
STKA *e*S **S 10 44 18.9 -4.8**
STKA Stephens Creek 29.42 159 P **P 10 39 31.8 -0.8**
comp=Z,105nm,0.8s,mb5.6,baz=331,slow=8.7,SNR=136
STKA Stephens Creek 29.42 159 *e*P **P 10 39 31.8 -0.8**
comp=Z,28nm,0.9s,mb5.0
NACB Ninganchiao 29.59 345 *e*P **P 10 39 32.7 -1.5**
comp=Z,73nm,1.2s,mb5.3
IPM Ipoh 29.95 287 P **P 10 39 37.5 0.0**
IPM Ipoh 29.95 287 P **P 10 39 36.6 -0.9**
comp=Z,1μmcomp=Z,179nm,1.1s,mb5.7
YHNB Yeheng 30.12 345 *e*P **P 10 39 37.3 -1.5**
comp=Z,103nm,1.2s,mb5.4
QIZ Qiongzhong 30.47 321 P **P 10 39 42.0 0.0**
QIZ sP sP 10 39 47.3 -12
QIZ S **S 10 44 44.2 +3.8**
QIZ pmax pmax
comp=Z,110nm,1.3s,mb5.4
QIZ pmax pmax
comp=Z,380nm,6.8s
QIZ LR LR
comp=N,1μm,15.3s
QIZ LR LR
comp=Z,2μm,19.5s,MS4.7
QIZ Qiongzhong 30.47 321 *e*P **P 10 39 41.0 -1.0**
comp=Z,159nm,1.2s,mb5.6
HNR Honiara 30.47 101 *e*P **P 10 39 40.6 -1.5**
HNR pmax pmax
comp=Z,830nm,1.1s,mb6.4
HNR MLR MLR
comp=Z,5μm,21.1s,MS5.1
HNR Honiara 30.47 101 *e*P **P 10 39 40.6 -1.5**
comp=Z,830nm,1.1s,mb6.4
HNR LR LR
comp=Z,5μm,21.1s,MS5.1
MNSI Mandailing Nat 30.49 279 P **P 10 39 43.2 +0.9**
comp=Z,37nm,1.4s,mb4.9
NWAO Narrogin (SRO) 30.52 201 P **P 10 39 42.0 -0.4**
comp=Z,152nm,1.0s,mb5.8,baz=25,slow=9.5,SNR=41
NWAO PcP PcP 10 42 41.5 +0.9
comp=Z,52nm,0.8s,baz=6.5,slow=4.1,SNR=5.3
NWAO Narrogin (SRO) 30.52 201 *e*P **P 10 39 42.1 -0.2**
NWAO *e* 10 42 41.1
NWAO pmax pmax
comp=Z,181nm,1.0s
NWAO Narrogin (SRO) 30.52 201 *e*P **P 10 39 42.1 -0.2**
comp=Z,181nm,1.0s,mb5.9
NWAO *e*PcP PcP 10 42 41.1 +0.5
NWAO Narrogin (SRO) 30.52 201 P **P 10 39 42.7 +0.3**
SNR=15
NWAO P 10 39 42.7
SNR=15
KULM Kulim 30.55 288 P **P 10 39 43.2 +0.4**
KULM Kulim 30.55 288 *e*P **P 10 39 41.5 -1.3**
comp=Z,132nm,1.3s,mb5.6
KULM *e*PcP PcP 10 42 41.5 +0.3
KULM LR LR
comp=Z,3μm,20.0s,MS4.9
KULM Kulim 30.55 288 P **P 10 39 41.7 -1.1**
comp=Z,865nmcomp=Z,85nm,1.3s,mb5.4
SNG Songkhla 31.21 292 P **P 10 39 48.0 -0.6**
comp=Z,140nm,0.7s,mb5.9
QZH Quanzhou 31.21 340 ⇑*i*P **P 10 39 48.5 +0.1**
QZH S **S 10 44 50.0 -1.9**
QZH pmax pmax
comp=Z,150nm,1.1s,mb5.7
QZH pmax pmax
comp=Z,1μm,5.3s
QZH LR LR
comp=N,3μm,16.4s
QZH LR LR
comp=E,1μm,10.3s
QZH LR LR
comp=Z,3μm,25.7s
JOW Kunigami 31.22 358 P **P 10 39 47.8 -0.6**
comp=Z,196nm,1.0s,mb5.9,baz=184,slow=7.6
JOW LR LR 10 52 11.1
comp=Z,2μm,19.6s,MS4.7,baz=175,slow=36
UBT Ubonrachathani 31.32 309 ⇓P **P 10 39 50.5 +1.0**
comp=Z,278nm,0.5s,mb6.3
PSI Prapat 31.54 283 P **P 10 39 49.7 -1.8**
comp=Z,21nm,0.8s,mb5.0,baz=95,slow=5.3,SNR=21
PSI PcP PcP 10 42 44.6 +0.9
comp=Z,12nm,0.6s,baz=200,slow=6.1,SNR=4.8
PSI LR LR 10 55 06.2
comp=Z,4μm,18.3s,MS5.1,baz=134,slow=41
PSI Prapat 31.54 283 P **P 10 39 49.7 -1.8**
PSI 10 42 44.6
GSI Gunungsitoli 32.55 280 P **P 10 39 59.8 -0.6**
comp=Z,58nm,1.4s,mb5.3
ARMA Armidale 33.06 144 *e*P **P 10 40 04.1 -0.6**
ARMA *e*S **S 10 45 19.9 -0.8**
ARMA Armidale 33.06 144 *e*P **P 10 40 04.8 +0.1**
comp=Z,463nm,1.8s,mb6.1
KKTK Khon Kaen 33.66 309 ⇑P **P 10 40 10.0 -0.1**
comp=Z,2μm,0.8s
CBIJ Chichi jima 33.71 20 LR LR 10 51 26.5
comp=Z,2μm,20.3s,MS4.8,baz=192,slow=32
NNT Nongplab 34.24 300 P **P 10 40 15.2 +0.1**
RIV Riverview 35.36 148 *e*P **P 10 40 25.7 +1.2**
NST Nakhon Sawan 35.44 305 ⇓P **P 10 40 25.8 +0.4**
comp=Z,150nm,1.1s,mb5.8
CNB Canberra Magne 35.64 152 *e*P **P 10 40 27.2 +0.2**
CNB *e*S **S 10 45 55.1 -5.3**
TOO Toolangi 35.93 158 ⇑*i*P **P 10 40 30.3 +0.9**
SSE Sheshan 36.34 348 P **P 10 40 33.0 0.0**
SSE pP pP 10 40 36.2 -8.6
SSE sP sP 10 40 37.4 -13
SSE S **S 10 46 16.2 +5.1**
SSE sS sS 10 46 21.3 -10
SSE pmax pmax
comp=Z,69nm,1.0s,mb5.5
SSE pmax pmax
comp=Z,280nm,4.5s
SSE LR LR
comp=N,610nm,20.4s,MS4.5
SSE LR LR
comp=E,500nm,20.4s,MS4.5
SSE LR LR
comp=Z,870nm,16.4s,MS4.6
BDT Bhumibol Dam 37.19 306 ⇓P **P 10 40 41.0 +0.6**
comp=Z,127nm,1.0s,mb5.7
NJ2 Nanjing 37.81 345 *e*P **P 10 40 46.2 +0.8**
NJ2 pP pP 10 40 50.2 -7.0
NJ2 sP sP 10 40 52.2 -10
NJ2 PP PP 10 42 15.5 +3.1
NJ2 S **S 10 46 34.0 +0.6**
NJ2 pmax pmax
comp=Z,160nm,1.2s,mb5.6
NJ2 pmax pmax
comp=Z,170nm,6.8s
NJ2 LR LR
comp=N,780nm,16.0s
NJ2 LR LR
comp=E,1μm,22.7s
NJ2 LR LR
comp=Z,780nm,19.2s,MS4.5
WHN Wuhan 37.83 338 ⇑P **P 10 40 46.0 +0.4**
WHN S **S 10 46 38.0 +4.3**
WHN pmax pmax
comp=Z,270nm,1.0s,mb5.9
WHN LR LR
comp=N,750nm,8.9s
WHN LR LR
comp=E,1μm,9.5s
WHN LR LR
comp=Z,2μm,18.6s,MS5.0
CM31 Chiang Mai Arr 37.91 308 *e*P **P 10 40 47.2 +0.8**
comp=Z,180nm,1.0s,mb5.8
CM31 *e*PcP PcP 10 43 04.2 +2.1
CM31 LR LR
comp=Z,2μm,20.0s,MS4.9
CMAR Chiang Mai Arr 37.91 308 P **P 10 40 46.8 +0.4**
comp=Z,93nm,0.9s,mb5.5,baz=139,slow=7.3,SNR=249
CMAR PcP PcP 10 43 03.2 +1.2
comp=Z,22nm,1.0s,baz=156,slow=2.2,SNR=7.2
CMAR PKiKP PKiKP 10 50 18.4 +0.5
comp=Z,0.6nm,0.4s,baz=226,slow=1.0,SNR=5.3
CMAR LR LR 10 56 53.8
comp=Z,2μm,20.8s,MS4.9,baz=299,slow=37
CMAR Chiang Mai Arr 37.91 308 *c*e*P **P 10 40 46.7 +0.3**
CMAR pmax pmax
comp=Z,93nm,0.9s
CMAR Chiang Mai Arr 37.91 308 P **P 10 40 46.8 +0.4**
CMAR PcP PcP 10 43 03.2 +1.2
GYA Guiyang 38.00 325 ⇑*i*P **P 10 40 47.3 +0.2**
GYA PP PP 10 42 20.0 +5.4
GYA S **S 10 46 42.5 +6.0**
GYA SS SS 10 49 19.0 -5.2
GYA pmax pmax
comp=Z,120nm,1.0s,mb5.6
GYA pmax pmax
comp=Z,530nm,4.9s
GYA LR LR
comp=N,4μm,15.5s,MS5.5
GYA LR LR
comp=E,4μm,15.2s,MS5.5
GYA LR LR
comp=Z,5μm,15.0s,MS5.5
CHTO Chiang Mai 38.11 308 *e*P **P 10 40 48.2 +0.1**
CHTO *e* 10 43 04.0
CHTO pmax pmax
comp=Z,292nm,1.0s,mb6.0
CHTO Chiang Mai 38.11 308 *e*P **P 10 40 48.2 +0.1**
comp=Z,292nm,1.0s,mb6.0
CHTO *e*PcP PcP 10 43 04.0 +1.4
CHTO Chiang Mai 38.11 308 P **P 10 40 48.8 +0.7**
SNR=156
CHTO P 10 40 48.8
SNR=156
CHTO Chiang Mai 38.11 308 P **P 10 40 48.1 0.0**
comp=Z,3μmcomp=Z,332nm,1.0s,mb6.0
JHJ Hachijo jima 2 38.67 14 LR LR 10 53 45.8
comp=Z,2μm,18.9s,MS5.0,baz=302,slow=32
KMI Kunming 39.40 320 P **P 10 41 00.2 +1.4**
KMI pP pP 10 41 03.3 -7.5
KMI sP sP 10 41 04.5 -11
KMI PP PP 10 42 34.6 +4.7
KMI PcP PcP 10 43 08.8 +2.2
KMI ScP ScP 10 46 56.3 +4.4
KMI PcS PcS 10 46 57.5 +0.9
KMI S **S 10 47 01.0 +3.4**
KMI SS SS 10 49 48.1 -4.9
KMI ScS ScS 10 51 04.7 +0.6
KMI pmax pmax
comp=Z,120nm,1.2s,mb5.5
KMI LR LR
comp=N,660nm,16.6s,MS4.8
KMI LR LR
comp=E,1μm,17.6s,MS4.8
KMI LR LR
comp=Z,980nm,19.6s,MS4.7
NOUC Port Laguerre 39.56 120 *e*P **P 10 40 58.0 -2.3**
ENH Enshi 39.62 332 *e*P **P 10 41 00.2 -0.4**
comp=Z,175nm,1.0s,mb5.7
ENH *e*PP PP 10 42 30.6 -1.8
ENH *e*PcP PcP 10 43 08.4 +1.2
DZM Mont Dzumac 39.67 119 *e*S **S 10 47 00.7 -1.2**
comp=Z,897nm,25.6s
DZM *e*LR LR 10 51 57.5
comp=Z,4μm,34.0s
MOO Moorlands 40.85 160 *e*P **P 10 41 11.8 +1.1**
MOO *e*S **S 10 47 21.1 +2.2**
TAU Tasmania Unive 41.31 160 P **P 10 41 16.1 +1.7**
comp=Z,466nm,1.2s,mb6.0,SNR=6.6
TAU Tasmania Unive 41.31 160 *e*P **P 10 41 15.5 +1.1**
TAU *e* 10 42 50.1
TAU pmax pmax
comp=Z,174nm,1.4s,mb5.5
TAU MLR MLR
comp=Z,4μm,21.0s,MS5.3
TAU Tasmania Unive 41.31 160 *e*P **P 10 41 15.5 +1.0**
comp=Z,174nm,1.4s,mb5.5
TAU *e*PP PP 10 42 50.1 -0.3
TAU LR LR
comp=Z,4μm,21.0s,MS5.3
MAJO Matsushiro 41.65 10 *e*P **P 10 41 16.0 -1.3**
MAJO *e* 10 43 14.3
MAJO pmax pmax
comp=Z,113nm,1.0s,mb5.5
MAJO MLR MLR
comp=Z,2μm,22.0s,MS4.9
MAJO Matsushiro 41.65 10 *e*P **P 10 41 16.0 -1.3**
comp=Z,113nm,1.0s,mb5.5
MAJO *e*PcP PcP 10 43 14.3 +0.7
MAJO LR LR
comp=Z,2μm,22.0s,MS4.9
MAT Matsushiro 41.65 10 P **P 10 41 16.0 -1.3**
MAT S **S 10 47 29.0 -1.9**
MJAR Matsushiro Arr 41.65 10 P **P 10 41 16.4 -0.9**
comp=Z,57nm,0.9s,mb5.2,baz=189,slow=10,SNR=121
MJAR PcP PcP 10 43 14.1 +0.5
comp=Z,17nm,0.9s,baz=182,slow=3.6,SNR=8.0
MJAR LR LR 10 57 50.4
comp=Z,721nm,19.7s,MS4.5,baz=190,slow=35
MJAR Matsushiro Arr 41.65 10 P **P 10 41 16.4 -0.9**
MJAR 10 43 14.1
KSRS Korea Array 41.81 358 P **P 10 41 18.7 +0.1**
comp=Z,34nm,1.1s,mb4.9,baz=179,slow=11,SNR=61
KSRS PcP PcP 10 43 14.0 -0.1
comp=Z,17nm,0.9s,baz=182,slow=2.6,SNR=12
KSRS LR LR 10 58 42.4
comp=Z,874nm,19.0s,MS4.7,baz=181,slow=36
KSRS Korea Array 41.81 358 P **P 10 41 18.7 +0.1**
KSRS 10 43 14.0
KSRS pmax pmax
comp=Z,34nm,1.1s,mb4.9
KSRS MLR MLR
comp=Z,874nm,19.0s,MS4.7
INCN Inchon 41.90 356 *e*P **P 10 41 20.2 +0.9**
comp=Z,188nm,1.1s,mb5.6
INCN Inchon 41.90 356 P **P 10 41 20.8 +1.5**
SNR=14
INCN P 10 41 20.8
SNR=14
TIA Tai'an 42.20 345 *e*P **P 10 41 21.3 -0.4**
CD2 Chengdu 43.05 327 ⇓*i*P **P 10 41 28.8 0.0**
CD2 pP pP 10 41 33.0 -7.8
CD2 sP sP 10 41 35.9 -10
CD2 PP PP 10 43 11.6 +2.2
CD2 PcS PcS 10 47 09.9 -0.9
CD2 S **S 10 47 54.7 +3.0**
CD2 SS SS 10 51 01.1 -4.2
CD2 ScS ScS 10 51 26.4 +0.4
CD2 pmax pmax
comp=Z,140nm,1.0s,mb5.7
CD2 pmax pmax
comp=Z,530nm,10.7s
CD2 LR LR
comp=N,1μm,21.4s
CD2 LR LR
comp=Z,870nm,21.4s,MS4.6
XAN Xi'an 43.07 335 P **P 10 41 28.0 -0.9**
XAN pP pP 10 41 38.4 -2.5
XAN PP PP 10 43 15.2 +5.6
XAN S **S 10 47 48.7 -3.2**
XAN SS SS 10 51 08.7 +3.1
XAN pmax pmax
comp=Z,42nm,1.2s,mb5.0
XAN LR LR
comp=N,790nm,29.2s
XAN LR LR
comp=E,440nm,36.1s
XAN LR LR
comp=Z,280nm,22.2s
WAKE Wake Island 43.45 56 *e*P **P 10 41 32.9 +0.7**
comp=Z,435nm,1.5s,mb6.0
WAKE LR LR
comp=Z,1μm,19.0s,MS4.9
DL2 Dalian 43.86 351 P **P 10 41 32.9 -2.2**
DL2 S **S 10 48 02.6 -0.7**
DL2 SS SS 10 51 13.2 -7.7
DL2 pmax pmax
comp=Z,20nm,1.2s,mb4.7
DL2 LR LR
comp=E,710nm,15.7s
DL2 LR LR
comp=Z,510nm,23.5s
BJT Baijiatuau 46.04 346 *e*P **P 10 41 52.5 0.0**
BJT pmax pmax
comp=Z,210nm,1.3s
BJT Baijiatuau 46.04 346 *e*P **P 10 41 52.5 +0.1**
comp=Z,210nm,1.3s,mb5.9
BJI Beijing 46.06 346 P **P 10 41 52.1 -0.5**
BJI S **S 10 48 35.7 +0.6**
BJI SS SS 10 51 52.9 -7.8
BJI pmax pmax
comp=Z,130nm,1.4s,mb5.7
BJI pmax pmax
comp=Z,320nm,3.5s
BJI LR LR

comp=N,700nm,15.1s,MS4.8
BJI LR LR
comp=E,640nm,15.6s,MS4.8
BJI LR LR
comp=Z,380nm,23.8s
SNY Shenyang 46.48 354 ⇓P **P 10 41 56.5 +0.6**
SNY pP pP 10 42 01.3 -6.7
SNY sP sP 10 42 03.5 -10
SNY PP PP 10 43 46.6 +0.9
SNY S **S 10 48 42.9 +1.9**
SNY sS sS 10 48 52.5 -8.7
SNY SS SS 10 52 08.1 +0.6
SNY pmax pmax
comp=Z,560nm,3.9s
SNY LR LR
comp=N,540nm,14.4s,MS5.0
SNY LR LR
comp=E,1μm,18.0s,MS5.0
SNY LR LR
comp=Z,630nm,21.2s,MS4.5
LZH Lanzhou 47.08 331 ⇑P **P 10 42 01.4 +0.7**
LZH pP pP 10 42 06.2 -6.6
LZH sP sP 10 42 09.5 -8.4
LZH PP PP 10 43 51.0 -0.9
LZH S **S 10 48 52.0 +2.2**
LZH sS sS 10 49 01.1 -9.0
LZH SS SS 10 52 13.4 -4.1
LZH pmax pmax
comp=Z,260nm,1.0s,mb6.1
LZH pmax pmax
comp=Z,680nm,4.0s
LZH LR LR
comp=N,3μm,14.0s
LZH LR LR
comp=Z,4μm,15.6s,MS5.5
SHL Shillong 47.30 311 *i* P **P 10 42 02.2 -0.4**
SHL *ex* x 10 47 29.2
VLA Vladivostok 47.48 2 *eP* **P 10 42 02.6 -1.1**
VLA *e* 10 43 57.0
VLA *eS* **S 10 48 55.0 -0.3**
VLA pmax pmax
comp=Z,107nm,1.4s,mb5.6
VLA MLR MLR
comp=Z,500nm,17.3s,MS4.5
ERM Erimo 47.95 14 PFAKE 10 42 20.0 +13
ERM LR LR
comp=Z,1μm,21.0s,MS4.9
HHC Hu-ho-hao-te 48.11 342 *eP* **P 10 42 08.6 0.0**
HHC pP pP 10 42 13.1 -7.7
HHC sP sP 10 42 15.6 -10
HHC PcP PcP 10 43 35.7 0.0
HHC PP PP 10 44 00.9 -0.3
HHC PcS PcS 10 47 29.7 -1.7
HHC S **S 10 49 07.0 +2.7**
HHC ScS ScS 10 51 59.2 +1.1
HHC SS SS 10 52 32.7 -1.3
HHC pmax pmax
comp=Z,35nm,1.0s,mb5.3
HHC pmax pmax
comp=Z,610nm,6.3s
HHC LR LR
comp=N,560nm,19.3s,MS4.8
HHC LR LR
comp=E,730nm,18.4s,MS4.8
HHC LR LR
comp=Z,810nm,23.5s
CN2 Changchun 48.27 356 ⇑P **P 10 42 09.4 -0.4**
CN2 *eP* pP 10 42 14.1 -7.8
CN2 PcP PcP 10 43 37.0 +0.8
CN2 *eS* **S 10 49 08.4 +2.0**
CN2 ScS ScS 10 51 59.3 +0.2
CN2 SS SS 10 52 34.1 -2.4
CN2 pmax pmax
comp=Z,60nm,1.3s,mb5.5
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,600nm,14.0s,MS4.8
CN2 LR LR
comp=E,500nm,14.0s,MS4.8
CN2 LR LR
comp=Z,500nm,19.0s,MS4.5
BTO Baotou 48.39 340 *eP* **P 10 42 09.1 -1.7**
MDJ Mudanjiang 48.94 360 P **P 10 42 15.3 +0.4**
MDJ pP pP 10 42 18.5 -8.6
MDJ sP sP 10 42 19.7 -12
MDJ PcP PcP 10 43 39.3 +0.7
MDJ PP PP 10 44 07.8 -0.9
MDJ S **S 10 49 22.9 +7.1**
MDJ pmax pmax
comp=Z,59nm,1.1s,mb5.5
MDJ pmax pmax
comp=Z,400nm,4.4s
MDJ LR LR
comp=N,380nm,21.8s,MS4.6
MDJ LR LR
comp=E,460nm,17.9s,MS4.6
MDJ LR LR
comp=Z,560nm,20.1s,MS4.5
MDJ Mudanjiang 48.94 360 *eP* **P 10 42 15.7 +0.8**
comp=Z,76nm,1.1s,mb5.6
MDJ *eP*cP PcP 10 43 39.7 +1.1
MSVF Nonsavu 49.13 109 P **P 10 42 18.0 +1.1**
comp=Z,734nm,1.2s,mb6.6,SNR=12
MSVF Nonsavu 49.13 109 *eP* **P 10 42 17.9 +1.1**
comp=Z,258nm,1.4s,mb6.1
MSVF LR LR
comp=Z,1μm,19.0s,MS5.0
FUNA Funafuti 49.38 97 PFAKE 10 42 30.0 +11
FUNA LR LR
comp=Z,8μm,21.0s,MS5.7
ASAJ Asahikawa 49.82 12 P **P 10 42 21.2 -0.5**
comp=Z,34nm,1.0s,mb5.3,baz=235,slow=12,SNR=11
ASAJ Asahikawa 49.82 12 P **P 10 42 21.2 -0.5**
ASAJ pmax pmax
comp=Z,34nm,1.0s
LSA Lhasa 50.19 315 P **P 10 42 25.5 +0.7**
LSA pP pP 10 42 33.4 -3.6
LSA pmax pmax
comp=Z,90nm,0.9s,mb5.8
LSA pmax pmax
comp=Z,150nm,5.0s
LSA LR LR
comp=N,560nm,36.0s,MS4.4
LSA LR LR
comp=E,450nm,38.0s,MS4.4
LSA LR LR
comp=Z,990nm,30.0s
LSA Lhasa 50.19 315 *eP* **P 10 42 25.6 +0.8**
LSA pmax pmax
comp=Z,72nm,0.8s,mb5.8
LSA Lhasa 50.19 315 *eP* **P 10 42 25.6 +0.8**
comp=Z,72nm,0.8s,mb5.8
VIS Vishakhapatnam 50.75 297 *eP*KP **P 10 42 28.3 -0.9**
OUZ Omahuta 50.76 133 *eP* **P 10 42 29.7 +0.8**
comp=Z,190nm,1.3s,mb5.9
BOK Bokaro 51.09 306 *eP*KP **P 10 42 30.6 -1.0**
ODAN Odare 51.39 310 *eP* **P 10 42 33.3 -0.6**
comp=Z,329nm,0.9s,mb6.2
TAPN Taplejung 51.40 311 *eP* **P 10 42 33.4 -0.5**
comp=Z,343nm,0.9s,mb6.3
GTA Gaotai 51.66 331 ⇑P **P 10 42 35.6 0.0**
GTA pP pP 10 42 40.4 -7.5
GTA sP sP 10 42 43.4 -10
GTA PcP PcP 10 43 49.5 +0.7
GTA PP PP 10 44 32.1 -1.5
GTA S **S 10 49 57.8 +3.9**
GTA sS sS 10 50 06.5 -7.8
GTA SS SS 10 53 33.9 +3.0
GTA pmax pmax
comp=Z,130nm,1.2s,mb5.7
GTA pmax pmax
comp=Z,310nm,4.5s
GTA LR LR
comp=N,640nm,20.1s,MS4.8
GTA LR LR
comp=E,550nm,19.5s,MS4.8
GTA LR LR
comp=Z,960nm,21.3s,MS4.8
RAMN Ramite 52.05 309 *eP* **P 10 42 38.4 -0.3**
comp=Z,719nm,0.9s,mb6.6
MDRS Chennai 52.07 290 *eP*KP **P 10 42 38.1 -1.0**
YSS Yuzh-Sakhalins 52.57 11 *eP* **P 10 42 41.9 -0.3**
YSS *e* pP 10 42 51.9 -2.6
YSS *e* 10 43 52.4
YSS *e* 10 44 46.0
YSS *eS* **S 10 50 10.0 +3.9**
YSS *e*PS 10 50 26.0
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.2
YSS pmax pmax
comp=Z,500nm,4.0s
YSS MLR MLR
comp=N,400nm,15.0s
YSS MLR MLR
comp=Z,400nm,15.0s,MS4.6
YSS Yuzh-Sakhalins 52.57 11 *eP* **P 10 42 42.2 0.0**
comp=Z,22nm,0.8s,mb5.2
YSS *e*PcP PcP 10 43 52.8 +0.8
JIRN Jiri 52.72 310 *eP* **P 10 42 43.7 0.0**
comp=Z,146nm,0.9s,mb5.9
HABR Khabarovsk 53.01 5 *ceP* **P 10 42 45.4 0.0**
HABR *e**PP pP 10 42 53.5 -4.2
HABR *e**SP sP 10 42 57.6 -5.2
HABR 10 43 50.2
HABR *e* 10 44 43.6
HABR *eS* **S 10 50 14.7 +2.7**
HABR *e**SS sS 10 50 29.8 -2.7
HABR pmax pmax
comp=Z,147nm,1.5s,mb5.7
HABR MLR MLR
comp=Z,298nm,16.0s,MS4.4
GUN Gumba 53.08 310 *eP* **P 10 42 45.8 -0.6**
comp=Z,387nm,0.8s,mb6.4
PKI Pulchoki 53.27 309 *eP* **P 10 42 46.8 -1.0**
comp=Z,237nm,1.0s,mb6.1
PKI Pulchoki 53.27 309 *eP* **P 10 42 47.2 -0.6**
comp=Z,90nm,0.7s,mb5.8
PKIN Phulchoki 53.28 309 *eP* **P 10 42 47.2 -0.7**
comp=Z,90nm,0.7s,mb5.8
RPZ Rata Peaks 53.40 143 *eP* **P 10 42 48.4 -0.1**
comp=Z,221nm,1.6s,mb5.8
KKN Kakani 53.48 310 *eP* **P 10 42 48.6 -0.7**
comp=Z,295nm,1.0s,mb6.2
DMN Daman 53.52 309 *eP* **P 10 42 48.9 -0.8**
comp=Z,399nm,1.0s,mb6.3
KHZ Kathmandu 54.22 141 *eP* **P 10 42 54.4 -0.1**
comp=Z,77nm,0.9s,mb5.6
HIA Hailar 54.27 352 *eP* **P 10 42 55.4 +0.7**
HIA *e* 10 43 59.4
HIA pmax pmax
comp=Z,26nm,1.0s
HIA Hailar 54.27 352 *eP* **P 10 42 55.4 +0.8**
comp=Z,26nm,1.0s,mb5.1
HIA *eP*cP PcP 10 43 59.4 +0.9
SNZO South Karori 54.40 139 *eP* **P 10 42 55.0 -0.9**
comp=Z,62nm,0.9s,mb5.5
SNZO LR LR
comp=Z,3μm,19.0s,MS5.4
URZ Urewera 54.63 135 *eP* **P 10 42 56.2 -1.4**
comp=Z,92nm,1.3s,mb5.7
HYB Hyderabad 54.93 295 *i* P **P 10 42 58.0 -2.0**
comp=Z,160nm,1.0s,mb6.0
RAO Raoul Island 55.31 123 PFAKE
RAO LR LR
comp=Z,2μm,22.0s,MS5.2
NGP Nagpur 55.76 299 *ex* x 10 43 00.8
ULN Ulaanbaatar 55.83 342 *ceP* **P 10 43 06.6 +0.7**
ULN Ulaanbaatar 55.83 342 *eP* **P 10 43 06.5 +0.5**
comp=Z,179nm,1.2s,mb6.0
ULN Ulaanbaatar 55.83 342 P **P 10 43 07.1 +1.2**
SNR=99
ULN P 10 43 07.1
SNR=99
ULN Ulaanbaatar 55.83 342 P **P 10 43 06.4 +0.5**
comp=Z,2μmcomp=Z,144nm,1.2s,mb5.9
SONM Songino Array 56.01 341 P **P 10 43 07.9 +0.6**
comp=Z,70nm,1.1s,mb5.6,baz=159,slow=6.9,SNR=236
SONM PKPPKP 11 13 06.5
comp=Z,1.2nm,1.0s,baz=336,slow=3.2,SNR=5.0
SONM PKP2bc 11 13 15.7
comp=Z,3.3nm,1.1s,baz=256,slow=2.1,SNR=6.1
SONM P4KPbc 11 20 23.3
comp=Z,0.2nm,0.4s,baz=160,slow=4.7,SNR=3.9
SONM Songino Array 56.01 341 P **P 10 43 07.9 +0.6**
SONM P'P' 11 13 06.5
SONM ⇑*e* 11 13 15.7
DGAR Diego Garcia 56.91 264 PFAKE 10 43 30.0 +16
DGAR LR LR
comp=Z,2μm,21.0s,MS5.2
BHPL Bhopal 57.92 301 *eP*KP **P 10 43 19.6 -1.7**
BHPL AMb AMB 10 43 23.6
comp=Z,181nm,1.6s,mb5.9
CIT Chita 57.99 348 *eP* **P 10 43 22.4 +1.2**
CIT *e* pP 10 43 33.6 0.0
CIT *e* 10 44 13.8
CIT *e* 10 51 24.0
CIT pmax pmax
comp=Z,358nm,2.6s,mb5.9
AFI Afiamalu 58.45 103 P **P 10 43 25.8 +0.7**
comp=Z,116nm,1.2s,mb5.8,baz=317,slow=6.9,SNR=8.8
AFI Afiamalu 58.45 103 P **P 10 43 25.8 +0.7**
AFI pmax pmax
comp=Z,116nm,1.3s,mb5.8
AFI Afiamalu 58.45 103 *eP* **P 10 43 25.9 +0.8**
comp=Z,235nm,1.4s,mb6.0
GOA Goa 58.72 291 *eP*KP **P 10 43 26.4 -0.5**
KAD Karad 58.88 293 *eP*KP **P 10 43 26.0 -2.0**
KAD AMb AMB 10 43 28.1
comp=Z,113nm,1.4s,mb5.7
ZAK Zakamensk 59.24 341 ⇓*eP* **P 10 43 30.0 +0.1**
ZAK pmax pmax
comp=Z,40nm,1.6s,mb5.2
POO Poona 59.53 294 *eP*KP **P 10 43 30.3 -2.2**
POO AMb AMB 10 43 32.6
comp=Z,107nm,1.3s,mb5.7
NDI New Delhi 60.22 307 *ex* **P 10 43 33.0 -4.1**
TLY Talaya 60.24 342 P **P 10 43 37.6 +0.9**
comp=Z,240nm,1.6s,mb6.0,SNR=9.7
TLY Talaya 60.24 342 *eP* **P 10 43 37.1 +0.4**
TLY *e* 10 45 57.9
TLY *eS* **S 10 51 51.3 +3.8**
TLY *e*SSS 10 58 10.8
TLY pmax pmax
comp=Z,91nm,1.4s,mb5.6
TLY Talaya 60.24 342 *eP* **P 10 43 37.8 +1.0**
comp=Z,118nm,1.5s,mb5.7
TLY Talaya 60.24 342 P **P 10 43 37.9 +1.2**
SNR=14
TLY P 10 43 37.9
SNR=14
DDI Dehra Dun 60.25 309 *eP*KP **P 10 43 37.8 +0.5**
DDI *ex* x 10 47 30.0
IRK Irkutsk 60.53 342 ⇑*i P* **P 10 43 39.3 +0.5**
IRK *eS* **S 10 51 56.8 +5.5**
IRK pmax pmax
comp=Z,150nm,2.6s,mb5.7
MOY Mondy 61.09 340 *eP* **P 10 43 43.5 +0.9**
MOY pmax pmax
comp=Z,232nm,2.4s,mb5.9
WMQ Urumqi 61.15 326 P **P 10 43 43.0 -0.1**
WMQ sP sP 10 43 50.0 -11
WMQ PP PP 10 46 00.0 +1.7
WMQ S **S 10 52 00.0 +0.5**
WMQ ScS ScS 10 53 30.0 -0.9
WMQ SS SS 10 56 01.0 +0.8
WMQ pmax pmax
comp=Z,120nm,1.2s,mb5.9
WMQ pmax pmax
comp=Z,850nm,6.0s
WMQ LR LR
comp=N,2μm,18.0s,MS5.3
WMQ LR LR
comp=E,650nm,17.0s,MS5.3
WMQ LR LR
comp=Z,490nm,16.0s,MS4.8
SMLA Simla 61.29 309 *eP*KP **P 10 43 42.6 -1.7**
SMLA *eP*KP 10 43 43.8
SMLA AMb AMB 10 43 44.8
comp=Z,353nm,0.8s,mb6.6
CLNS Chul'man 61.29 357 *eP* **P 10 43 44.5 +0.7**
CLNS *e**PP pP 10 43 54.4 -1.9
CLNS *e* 10 44 27.5
CLNS *e* 10 45 58.8
CLNS *eS* **S 10 51 59.8 -1.0**
CLNS pmax pmax
comp=E,12nm,1.0s
CLNS pmax pmax
comp=Z,65nm,1.5s,mb5.5
CLNS pmax pmax
comp=N,77nm,1.7s
CLNS pmax pmax
comp=Z,13nm,1.3s,mb4.9
CLNS pmax pmax
comp=N,28nm,1.7s
CLNS pmax pmax
comp=E,16nm,1.8s
CLNS smax
comp=N,109nm,11.3s
CLNS smax
comp=E,376nm,15.1s
CLNS MLR MLR
comp=Z,145nm,12.0s,MS4.3
CLNS MLR MLR
comp=E,133nm,17.0s,MS4.3
CLNS MLR MLR
comp=N,107nm,15.0s,MS4.3
AJM Ajmer 61.46 303 *eP*KP **P 10 43 43.3 -2.2**
AJM AMb AMB 10 43 47.8
comp=Z,105nm,1.4s,mb5.8
BHK Bhakra 61.99 309 *ex* **P 10 43 44.8 -4.3**
PEA0B Petropavlovsk- 62.12 19 *eP* **P 10 43 50.7 +1.2**
PETK Petropavlovsk- 62.12 19 P **P 10 43 50.3 +0.8**
comp=Z,62nm,0.9s,mb5.8,baz=190,slow=4.2,SNR=54
PETK LR LR 11 07 11.5
comp=Z,470nm,21.2s,MS4.6,baz=209,slow=33
PET Petropavlovsk 62.36 19 ⇓*i P* **P 10 43 52.1 +1.0**
PET *eS* **S 10 52 16.5 +2.0**
PET pmax pmax
comp=Z,123nm,1.2s,mb5.9
PET pmax pmax
comp=Z,300nm,16.1s
PET MLR MLR
comp=Z,400nm,21.0s,MS4.6
PET MLR MLR
comp=Z,500nm,18.0s
PET Petropavlovsk 62.36 19 *eP* **P 10 43 51.9 +0.8**
comp=Z,219nm,1.4s,mb6.1
DLH Dalhousie 62.82 310 *ex* x 10 43 44.3
THN Thein Dam 62.96 310 *ex* **P 10 43 52.5 -3.0**
CASY Casey 63.06 189 *eP* **P 10 43 55.7 +0.1**
CASY Casey 63.06 189 *eP* **P 10 43 55.8 +0.3**
comp=Z,205nm,1.5s,mb6.0
BOD Bodaibo 63.43 351 *eP* **P 10 43 58.4 +0.3**
BOD pmax pmax
comp=Z,69nm,1.4s,mb5.6
JOHN Johnston Islan 63.71 69 PFAKE 10 44 10.0 +9.2
JOHN LR LR
comp=Z,1μm,22.0s,MS5.1
KSH Kashi 65.97 317 ⇑*i P* **P 10 44 15.5 +0.4**
KSH pP pP 10 44 20.3 -7.4
KSH sP sP 10 44 22.5 -10
KSH PcP PcP 10 44 46.1 +0.6
KSH PP PP 10 46 43.1 +2.3
KSH ScP 10 48 47.4
KSH PcS 10 48 49.1
KSH S S 10 53 00.2 +0.5
KSH ScS ScS 10 54 07.5 -0.4
KSH pmax pmax
comp=Z,37nm,0.8s,mb5.5
KSH LR LR
comp=N,380nm,11.3s
KSH LR LR
comp=E,210nm,6.4s
KSH LR LR
comp=Z,160nm,5.4s
MKAR Makanchi Array 65.98 326 P **P 10 44 14.9 -0.1**
comp=Z,39nm,0.8s,mb5.5,baz=115,slow=8.1,SNR=174
MKAR PKP2bc 11 12 49.8
comp=Z,3.9nm,1.0s,baz=321,slow=3.1,SNR=7.5
MKAR PKP2ab 11 12 58.1
comp=Z,1.1nm,0.7s,baz=333,slow=1.4,SNR=5.6
MKAR Makanchi Array 65.98 326 P **P 10 44 14.9 -0.1**
MKAR ⇑*e* 11 12 49.8
MKAR P'P'ab 11 12 58.1
YAK Yakutsk 66.38 0 *eP* **P 10 44 17.0 -0.2**
YAK *e**PP pP 10 44 23.8 -6.1
YAK *e* 10 44 45.4
YAK *e* 10 46 44.1
YAK *eS* S 10 53 07.1 +3.3
YAK pmax pmax
comp=Z,63nm,0.7s,mb5.8
YAK pmax pmax
comp=N,48nm,1.4s
YAK pmax pmax
comp=E,11nm,0.9s
YAK pmax pmax
comp=Z,45nm,1.5s,mb5.3
YAK pmax pmax
comp=N,62nm,1.6s
YAK pmax pmax
comp=E,14nm,1.6s
YAK smax
comp=N,199nm,3.8s
YAK smax
comp=E,996nm,4.6s
YAK Yakutsk 66.38 0 *eP* **P 10 44 17.9 +0.7**
comp=E,118nm,0.8s,mb6.0
YAK LR LR
comp=Z,534nm,20.0s,MS4.8
MIR Mirnyy 66.90 195 ⇑*i P* **P 10 44 21.2 +0.7**
MIR pmax pmax
comp=Z,234nm,1.6s,mb6.0
MIR pmax pmax
comp=Z,303nm,1.4s,mb6.1
KZA Kyzart 67.68 319 P **P 10 44 26.8 +0.9**
SNR=46
TKM2 Tokmak 2 67.87 320 P **P 10 44 26.7 -0.3**
SNR=36
TKM2 Tokmak 2 67.87 320 *eP* **P 10 44 26.6 -0.5**
TKM2 pmax pmax
comp=Z,50nm,1.0s,mb5.5
TKM2 Tokmak 2 67.87 320 *eP* **P 10 44 26.6 -0.5**
comp=Z,50nm,1.0s,mb5.5
KBK Karagaybulak 68.16 320 P **P 10 44 29.8 +0.9**
SNR=20
UCH Uchtor 68.23 319 P **P 10 44 30.3 +0.9**
SNR=59
UCH Uchtor 68.23 319 *eP* **P 10 44 29.8 +0.5**
comp=Z,85nm,1.2s,mb5.7
AAK Ala-Archa 68.44 319 P **P 10 44 31.2 +0.6**
comp=Z,297nm,1.3s,mb6.2,SNR=18
AAK Ala-Archa 68.44 319 P **P 10 44 31.2 +0.6**
SNR=22
AAK Ala-Archa 68.44 319 P **P 10 44 31.3 +0.6**
comp=Z,3.9nm,0.4s,mb4.8,baz=140,slow=5.3,SNR=57
AAK PKP2bc 11 12 44.4
comp=Z,0.8nm,0.3s,baz=207,slow=11,SNR=3.2
AAK Ala-Archa 68.44 319 *eP* **P 10 44 31.0 +0.4**
AAK *e* 10 47 05.7
AAK pmax pmax
comp=Z,91nm,1.3s,mb5.7
AAK Ala-Archa 68.44 319 *eP* **P 10 44 30.9 +0.3**
comp=Z,91nm,1.3s,mb5.6
AAK *eP*P PP 10 47 05.7 +3.4
AAK Ala-Archa 68.44 319 P **P 10 44 31.2 +0.5**
SNR=58
AAK P 10 44 31.2
SNR=58
CHMS Chumysh 68.45 320 P **P 10 44 30.5 -0.2**
SNR=8.1
FRU Bishkek 68.46 320 *eP* **P 10 44 30.0 -0.7**
FRU pmax pmax
comp=Z,110nm,2.1s,mb5.5
AML Almayashu 68.73 319 P **P 10 44 33.2 +0.8**
SNR=73
AML Almayashu 68.73 319 *eP* **P 10 44 32.9 +0.4**
comp=Z,123nm,1.2s,mb5.7
USP Ospenovka 68.74 320 P **P 10 44 32.4 -0.1**
SNR=35
KBL Kabul 68.91 310 *eP* **P 10 44 33.1 -0.7**
KBL pmax pmax
comp=Z,97nm,1.1s,mb5.7
KBL Kabul 68.91 310 *eP* **P 10 44 33.1 -0.7**
comp=Z,97nm,1.1s,mb5.7
EKS2 Erkin-Say 68.92 319 P **P 10 44 34.2 +0.5**
SNR=43
EKS2 Erkin-Say 68.92 319 PFAKE 10 44 50.0 +16
EKS2 LR LR
comp=Z,605nm,20.0s,MS4.8
ZAA0 Zalesovo Array 69.23 334 *eP* **P 10 44 34.3 -1.0**
ZALV Zalesovo Beam 69.23 334 P **P 10 44 34.5 -0.8**
comp=Z,87nm,1.1s,mb5.6,baz=108,slow=4.8,SNR=148
ZALV PKP2bc 11 12 42.0
comp=Z,6.5nm,1.1s,baz=289,slow=4.5,SNR=8.1
ZALV LR LR 11 16 16.2

comp=Z,223nm,20.1s,MS4.4,baz=297,slow=37
ZALV Zalesovo Beam 69.23 334 P **P** **10 44 34.5 -0.8**
ZALV ⇑e 11 12 42.0
ZALV LR LR 11 16 16.2
KURK Kurchatov 70.24 328 P **P** **10 44 41.1 -0.5**
comp=Z,998nm,1.0s,mb6.7,SNR=65
KURK Kurchatov 70.24 328 P **P** **10 44 41.4 -0.2**
comp=Z,169nm,1.2s,mb5.9,baz=128,slow=5.7,SNR=82
KURK PP PP 10 47 16.2 -1.4
comp=Z,11nm,1.0s,baz=124,slow=8.6,SNR=4.2
KURK Kurchatov 70.24 328 P **P** **10 44 41.4 -0.2**
KURK 10 47 16.2
KURK pmax pmax
comp=Z,169nm,1.2s,mb5.8
KURK pmax pmax
comp=Z,11nm,1.0s,mb4.7
KURK Kurchatov 70.24 328 eP **P** **10 44 41.3 -0.3**
comp=Z,219nm,1.1s,mb6.0
KURK ePP PP 10 47 15.4 -2.2
KURK Kurchatov 70.24 328 P **P** **10 44 41.8 +0.2**
SNR=143
KURK P 10 44 41.8
SNR=143
NVS Novosibirsk 70.52 334⇓i P **P** **10 44 42.8 -0.4**
NVS eS S 10 53 53.1 -0.1
NVS pmax pmax
comp=N,166nm,1.5s
NVS pmax pmax
comp=E,140nm,1.5s
NVS pmax pmax
comp=Z,171nm,1.5s,mb5.8
NVS smax
comp=N,69nm,2.1s
NVS smax
comp=E,115nm,2.3s
XMAS Kiritimati 73.16 87 eP **P** **10 45 01.8 +1.8**
comp=E,217nm,1.3s,mb5.9
MSEY Mahe Island 73.87 266 PFAKE 10 45 20.0 +16
MSEY LR LR
comp=Z,1µm,21.0s,MS5.2
KIP Kipapa 75.35 67 PFAKE 10 45 20.0 +7.5
KIP LR LR
comp=Z,875nm,20.0s,MS5.1
BVAR Borovoye Array 75.80 328 P **P** **10 45 14.4 0.0**
comp=Z,112nm,1.2s,mb5.7,baz=130,slow=6.5,SNR=168
BVAR PP PP 10 48 04.1 -0.9
comp=Z,4.9nm,1.0s,baz=97,slow=6.0,SNR=3.2
BVAR PKPPKP 11 12 33.4
comp=Z,0.2nm,0.3s,baz=253,slow=1.5,SNR=3.3
BVAR Borovoye Array 75.80 328 eP sP 10 45 32.2 0.0
SBA Scott Base 75.80 172 eP **P** **10 45 15.3 +1.2**
SBA pmax pmax
comp=Z,220nm,1.8s,mb5.8
SBA MLR MLR
comp=Z,916nm,20.0s,MS5.1
SBA Scott Base 75.80 172 eP **P** **10 45 15.3 +1.2**
comp=Z,220nm,1.8s,mb5.8
SBA LR LR
comp=Z,916nm,20.0s,MS5.1
BRVK Borovoye 75.87 328 P **P** **10 45 15.4 +0.6**
comp=Z,593nm,1.5s,mb6.3,SNR=73
BRVK Borovoye 75.87 328ceP **P** **10 45 14.7 -0.1**
BRVK pmax pmax
comp=Z,184nm,1.2s,mb5.9
BRVK Borovoye 75.87 328 eP **P** **10 45 14.4 -0.4**
comp=Z,260nm,1.4s,mb6.0
BRVK Borovoye 75.87 328 P **P** **10 45 15.2 +0.4**
SNR=130
BRVK P 10 45 15.2
SNR=130
TIXI Tiksi 76.05 360 eP **P** **10 45 15.4 -0.1**
TIXI e 10 48 05.4
TIXI eS S 10 54 54.1 -1.2
TIXI pmax pmax
comp=Z,63nm,1.4s,mb5.3
TIXI MLR MLR
comp=Z,794nm,20.0s,MS5.0
TIXI Tiksi 76.05 360 eP **P** **10 45 14.7 -0.8**
comp=Z,79nm,1.4s,mb5.5
TIXI LR LR
comp=Z,935nm,22.0s,MS5.0
HATD Hatta, Dubai 77.03 297 P **P** **10 45 22.6 +0.6**
SNR=7.9
MAW Mawson 77.09 201 eP **P** **10 45 22.0 +0.5**
comp=Z,75nm,1.1s,mb5.5
MAW Mawson 77.09 201 LR LR 11 18 44.7
comp=Z,810nm,18.9s,MS5.1,baz=76,slow=35
MAW Mawson 77.09 201 eP **P** **10 45 21.5 0.0**
MAW pmax pmax
comp=Z,29nm,1.1s
MAW Mawson 77.09 201 eP **P** **10 45 21.5 0.0**
comp=Z,29nm,1.1s,mb5.1
POHA Pohakuloa 77.34 69 eP **P** **10 45 25.7 +1.8**
comp=Z,157nm,1.0s,mb5.9
NAZ Nazwa, Dubai 77.48 297 P **P** **10 45 24.8 +0.3**
SNR=8.8
FAQ Al Faqa, Dubai 77.49 296 P **P** **10 45 24.4 -0.2**
SNR=11
ASUD Al Ashush, Dub 77.71 296 P **P** **10 45 26.6 +0.8**
SNR=8.8
ABKT Ailbek 78.36 310 P **P** **10 45 29.1 0.0**
comp=Z,586nm,1.2s,mb6.4,SNR=26
AKUT Akutan 79.16 33 eP **P** **10 45 34.2 +1.0**
comp=Z,456nm,1.8s,mb6.1
PAE Paea 79.87 107 eP **P** **10 45 40.0 +2.1**
comp=Z,29nm,1.2s,mb5.1
PAE Paea 79.87 107 eP **P** **10 45 40.0 +2.1**
PAE pmax pmax
comp=Z,29nm,1.2s,mb5.1
PPT Papeete 79.88 107 eP **P** **10 45 40.2 +2.3**
comp=Z,88nm,1.3s,mb5.5
PPT eS S 10 55 40.2 +1.5
comp=Z,400nm,25.5s
PPT eLR LR 11 10 24.1
comp=Z,3µm,37.8s
PPT Papeete 79.88 107 P **P** **10 45 38.7 +0.8**
comp=Z,72nm,1.0s,mb5.5,baz=201,slow=4.9,SNR=4.1
PPT LR LR 11 17 39.3
comp=Z,439nm,18.6s,MS4.8,baz=280,slow=33
PPT Papeete 79.88 107 eP **P** **10 45 40.2 +2.3**
comp=Z,88nm,1.3s,mb5.5
PPT eS S 10 55 40.2 +1.5
TIAR Tiarei 80.10 107 eP **P** **10 45 41.8 +2.7**
comp=Z,153nm,1.3s,mb5.8
ABKAR Akbulak array 80.37 321 eP **P** **10 45 39.4 -0.5**
comp=Z,101nm,1.1s,mb5.7
FALS False Pass 80.71 33 eP **P** **10 45 41.9 +0.4**
comp=Z,123nm,1.0s,mb5.8
GAMB Gambell 80.80 23 eP **P** **10 45 42.7 +0.8**
comp=Z,136nm,1.4s,mb5.7
MEH Mehetia 81.31 107 eP **P** **10 45 47.9 +2.3**
comp=Z,325nm,1.3s,mb6.1
PMOR Pomariorio Ree 81.58 104 eP **P** **10 45 49.8 +2.7**
comp=Z,373nm,1.2s,mb6.2
ISHM Shahmirzad 81.63 307 eP **P** **10 45 47.0 +0.1**
AKTK Aktyubinsk 81.92 322 P **P** **10 45 48.0 -0.1**
AKTO Aktyubinsk 81.92 322 P **P** **10 45 48.0 -0.1**
comp=Z,70nm,1.1s,mb5.5,baz=102,slow=6.2,SNR=94
SDPT Sand Point 82.46 33 eP **P** **10 45 51.4 +0.6**
comp=Z,476nm,1.4s,mb6.2
SVE Sverdlovsk 82.49 329⇓eP **P** **10 45 50.7 -0.2**
SVE e 10 49 00.8
SVE eS S 10 56 07.0 +2.8
SVE eSS SS 11 01 30.2 +4.1
SVE pmax pmax
comp=Z,95nm,1.5s,mb5.5
TNA Tin City 83.09 22 eP **P** **10 45 54.9 +1.1**
comp=Z,66nm,1.0s,mb5.6
ARU Arti 83.44 328 P **P** **10 45 55.2 -0.6**
comp=Z,460nm,1.6s,mb6.3,SNR=20
ARU Arti 83.44 328c iP **P** **10 45 55.2 -0.6**
ARU e 10 49 06.8
ARU ePPP 10 51 03.3
ARU S S 10 56 14.6 +0.7
ARU SSS 11 05 00.9
ARU pmax pmax
comp=Z,197nm,1.7s,mb5.9
ARU Arti 83.44 328 eP **P** **10 45 55.4 -0.4**
comp=Z,221nm,1.5s,mb6.0
ARU ePP PP 10 49 08.4 +0.1
QRN Al-Qurain 84.92 299 eP **P** **10 46 02.8 -1.2**
QRN AMb AMB 10 46 06.4
comp=Z,275nm,1.9s,mb6.1
KBD Kabd 85.17 300 eP **P** **10 46 03.5 -1.8**
KBD AMb AMB 10 46 07.0
comp=Z,134nm,1.3s,mb5.9
UMR Umm Al-Rimmam 85.20 300 eP **P** **10 46 04.4 -1.0**
UMR AMb AMB 10 46 07.1
comp=Z,301nm,1.7s,mb6.2
RDF Al-Radifah 85.26 299 eP **P** **10 46 04.2 -1.6**
RDF AMb AMB 10 46 08.2
comp=Z,279nm,1.2s,mb6.2
SOKR Solikamsk 85.29 331d iP **P** **10 46 05.8 +0.6**
SOKR pmax pmax
comp=Z,50nm,1.1s,mb5.6
QSPA South Pole Qui 85.42 180 eP **P** **10 46 04.9 -0.6**
comp=Z,186nm,1.4s,mb6.0
QSPA LR LR
comp=Z,1µm,20.0s,MS5.3
MIB Mutribah 85.56 300 eP **P** **10 46 05.7 -1.5**
MIB AMb AMB 10 46 09.5
comp=Z,447nm,1.2s,mb6.6
NAY Al-Naaiem 85.57 300 eP **P** **10 46 05.7 -1.6**
NAY AMb AMB 10 46 08.7
comp=Z,231nm,1.4s,mb6.2
SYO Syowa Base 85.81 201⇓eP **P** **10 46 05.6 -2.0**
SVW2 Sparrevohn 86.66 28 eP **P** **10 46 13.4 +1.5**
OHAK Old Harbor 86.83 32 eP **P** **10 46 13.3 +0.5**
comp=Z,214nm,1.0s,mb6.3
TTA Tatalina 86.96 26 eP **P** **10 46 13.7 +0.4**
MAK Makhachkala 87.31 313 eP **P** **10 46 17.0 +1.5**
MAK e 10 49 34.9
MAK ePPP 10 51 30.6
MAK eS S 10 56 42.0 -11
MAK eSS SS 11 02 40.9 +3.0
MAK pmax pmax
comp=Z,237nm,1.4s,mb6.2
KDAK Kodiak Island 87.33 32 P **P** **10 46 16.0 +0.8**
comp=Z,1µm,1.0s,mb7.0,SNR=6.6
KDAK Kodiak Island 87.33 32ceP **P** **10 46 16.3 +1.1**
KDAK Kodiak Island 87.33 32 eP **P** **10 46 15.8 +0.6**
comp=Z,236nm,1.3s,mb6.3
RSO Redoubt South 87.84 29 eP **P** **10 46 17.9 +0.3**
BHD Baghdad 88.50 303 eP **P** **10 46 19.0 -2.4**
BHD eSKS 10 56 53.2
BHD eS S 10 57 50.0 +46
PPLA Purkeypile 88.65 27 eP **P** **10 46 21.5 +0.1**
comp=Z,54nm,1.3s,mb5.7
DGRG David-gareji 88.67 312 P **P** **10 46 23.3 +1.3**
DGRG David-gareji 88.67 312 P **P** **10 46 23.3 +1.3**
CHUM Lake Minchumin 88.81 26 eP **P** **10 46 22.9 +0.7**
comp=Z,88nm,0.9s,mb6.1
GNI Garni 88.99 310 P **P** **10 46 23.9 +0.4**
comp=Z,26nm,1.0s,mb5.5,baz=141,slow=12,SNR=18
GNI Garni 88.99 310ceP **P** **10 46 23.7 +0.2**
GNI pmax pmax
comp=Z,72nm,1.2s
GNI Garni 88.99 310 eP **P** **10 46 25.1 +1.6**
comp=Z,89nm,1.3s,mb5.9
GNI Garni 88.99 310 P **P** **10 46 25.3 +1.8**
SNR=20
GNI P 10 46 25.3
SNR=20
MTA Mtatsminda 89.14 312 P **P** **10 46 26.1 +1.9**
MTA Mtatsminda 89.14 312 P **P** **10 46 26.1 +1.9**
TBLG Delisi 89.18 312 eP **P** **10 46 24.9 +0.5**
TBLG Delisi 89.18 312 P **P** **10 46 24.9 +0.5**
TBLG Delisi 89.18 312 P **P** **10 46 24.9 +0.5**
KTH Kantishna Hill 89.35 26 eP **P** **10 46 24.4 -0.2**
comp=Z,52nm,1.0s,mb5.8
SEW Seward 89.39 30 eP **P** **10 46 25.0 +0.1**
comp=Z,76nm,1.0s,mb6.0
TAOE Nuku Hiva Isla 89.53 99 eLR LR 11 15 01.6
comp=Z,1µm,33.2s
GOR Gori 89.68 312 P **P** **10 46 28.7 +2.0**
GOR Gori 89.68 312 P **P** **10 46 28.7 +2.0**
PMR Palmer 89.80 28 eP **P** **10 46 26.7 -0.1**
PMR pmax pmax
comp=Z,58nm,1.0s,mb5.9
PMR Palmer 89.80 28 eP **P** **10 46 26.7 -0.1**
comp=Z,58nm,1.0s,mb5.9
KEH Kehvi 89.84 312 P **P** **10 46 26.8 -0.7**
KEH Kehvi 89.84 312 P **P** **10 46 26.8 -0.7**
ZEI Tsey 89.92 313 eP **P** **10 46 25.7 -2.1**
ZEI pmax pmax
comp=Z,74nm,1.3s,mb5.9
ZEI pmax pmax
comp=N,34nm,1.0s
ZEI pmax pmax
comp=E,70nm,1.0s
ONI Oni 90.23 313 P **P** **10 46 29.9 +0.6**
ONI Oni 90.23 313 P **P** **10 46 29.9 +0.7**
COLD Coldfoot 90.36 23 eP **P** **10 46 29.8 +0.5**
comp=E,50nm,0.9s,mb5.8
COLA College 90.90 25 eP **P** **10 46 30.9 -1.0**
COLA pmax pmax
comp=Z,23nm,1.0s,mb5.5
COLA College 90.90 25 eP **P** **10 46 30.9 -1.0**
comp=Z,23nm,1.0s,mb5.5
KIV Kislovodsk 90.92 314 eP **P** **10 46 32.1 -0.3**
KIV e 10 57 01.4
KIV pmax pmax
comp=Z,17nm,1.1s,mb5.3
KIV pmax pmax
comp=Z,50nm,5.3s
KIV MLR MLR
comp=Z,205nm,20.0s,MS4.6
KIV Kislovodsk 90.92 314 eP **P** **10 46 32.7 +0.2**
comp=Z,20nm,1.0s,mb5.4
KIV Kislovodsk 90.92 314 P **P** **10 46 32.9 +0.5**
SNR=7.7
KIV P 10 46 32.9
SNR=7.7
DIV Divide 91.33 29 eP **P** **10 46 34.7 +0.8**
comp=Z,87nm,1.2s,mb6.0
BMRM Bremner River 91.88 29 eP **P** **10 46 36.6 +0.2**
comp=Z,56nm,1.1s,mb5.8
KMBO Kilima Mbogo 92.28 269 eP **P** **10 46 40.3 +0.8**
KMBO pmax pmax
comp=Z,11nm,1.1s
KMBO MLR MLR
comp=Z,860nm,21.0s
KMBO Kilima Mbogo 92.28 269 eP **P** **10 46 40.3 +0.9**
comp=Z,11nm,1.1s,mb5.1
KMBO LR LR
comp=Z,860nm,21.0s,MS5.2
MENT Mentasta 92.48 27 eP **P** **10 46 40.2 +1.0**
RKT Rikitea 93.19 113 eLR LR 11 16 44.4
comp=Z,584nm,36.0s
EGAK Eagle 93.74 25 eP **P** **10 46 45.4 +0.4**
comp=Z,57nm,1.1s,mb5.9
VSR Storozhevoye 93.80 321 eP **P** **10 46 43.8 -1.8**
VSR pmax pmax
comp=Z,8.0nm,0.5s,mb5.4
VSR pmax pmax
comp=N,2.0nm,0.4s
VSR pmax pmax
comp=E,5.0nm,0.4s
DAWY Dawson 94.48 26 eP **P** **10 46 49.0 +0.6**
DAWY ePP pP 10 50 34.8 -1.5
NVL N'lazarevskaya 94.58 197 eP **P** **10 46 48.4 -0.4**
NVL e*PP pP 10 46 56.9 -5.0
NVL e*SP sP 10 47 02.9 -3.9
NVL ePPP 10 52 45.3
NVL eS SKSac 10 57 17.4 -3.0
NVL e 10 58 03.2
NVL pmax pmax
comp=Z,50nm,1.4s,mb5.8
NVL MLR MLR
comp=Z,973nm,18.0s,MS5.3
MAIT Maitri 94.60 197 eP **P** **10 46 49.3 +0.4**
ANN Anapa 94.73 314 eP **P** **10 46 48.1 -1.9**
ANN eS SKSac 10 57 20.6 -1.5
ANN pmax pmax
comp=Z,76nm,1.2s,mb6.0
MOS Moscow 94.85 325 eP **P** **10 46 48.7 -1.6**
MOS e 10 50 44.2
MOS pmax pmax
comp=Z,55nm,0.9s,mb6.0
OBN Obninsk 95.45 325⇑eP **P** **10 46 51.8 -1.2**
OBN e 10 50 38.7
OBN eS SKSac 10 57 23.8 -1.7
OBN eSS SS 11 04 28.6 -5.8
OBN pmax pmax
comp=Z,75nm,1.7s,mb5.8
OBN Obninsk 95.45 325 eP **P** **10 46 52.2 -0.8**
comp=Z,52nm,1.1s,mb5.9
MMAI Mount Meron Ar 95.99 303 P **P** **10 46 56.6 +0.5**
comp=Z,5.0nm,0.6s,mb5.2,baz=58,slow=6.2,SNR=13
MMAI LR LR 11 32 38.6
comp=Z,433nm,20.6s,MS4.9,baz=70,slow=37
LVZ Lovozero 96.06 338 P **P** **10 46 54.6 -0.9**
comp=Z,121nm,1.3s,mb6.2,SNR=5.5
LVZ Lovozero 96.06 338ceP **P** **10 46 55.2 -0.3**
LVZ pmax pmax
comp=Z,33nm,1.2s,mb5.6
LVZ Lovozero 96.06 338 PFAKE 10 47 10.0 +14
LVZ LR LR
comp=Z,371nm,20.0s,MS4.9
SKAG Skagway 96.45 31 eP **P** **10 46 58.4 +0.9**
comp=Z,31nm,1.4s,mb5.5
SIT Sitka 96.53 33 eP **P** **10 46 58.9 +1.0**
SIT pmax pmax
comp=Z,18nm,1.2s,mb5.4
SIT Sitka 96.53 33 eP **P** **10 46 58.9 +1.0**
comp=Z,18nm,1.2s,mb5.4
APA Apatity 96.55 337⇓i P **P** **10 46 57.0 -0.8**
APA pmax pmax
comp=Z,32nm,1.4s,mb5.6
APA MLR MLR
comp=Z,200nm,22.0s,MS4.5
INK Inuvik 96.73 22 P **P** **10 46 58.0 -0.5**
comp=Z,46nm,1.1s,mb5.8,baz=283,slow=4.7,SNR=99
INK Inuvik 96.73 22 eP **P** **10 46 57.7 -0.9**
INK pmax pmax
comp=Z,75nm,1.2s
INK Inuvik 96.73 22 eP **P** **10 46 57.7 -0.9**
comp=Z,75nm,1.2s,mb6.0
BR131 Keskin Array S 97.49 309 eP **P** **10 47 01.9 -0.8**
comp=Z,8.7nm,1.1s,mb5.1
BR131 ePP PP 10 50 57.4 -2.9
BRTR Keskin Array B 97.49 309 P **P** **10 47 01.3 -1.4**
comp=Z,12nm,1.1s,mb5.2,baz=127,slow=4.4,SNR=38
BRTR PP PP 10 50 57.1 -3.2
comp=Z,7.9nm,1.2s,baz=116,slow=5.6,SNR=7.3
BRTR PKKPbc PKKPbc 11 03 41.0 0.0
comp=Z,1.4nm,1.0s,baz=222,slow=3.0,SNR=6.7
BRTR PKPPKP 11 11 52.5
comp=Z,0.4nm,0.8s,baz=188,slow=0.9,SNR=5.1
BRTR LR LR 11 41 14.7
comp=Z,149nm,18.1s,MS4.5,baz=76,slow=42
BRTR Keskin Array B 97.49 309 P **P** **10 47 01.3 -1.4**
BRTR 10 50 57.2
CSS Prodhromos 97.74 305 eP **P** **10 47 03.0 -0.9**
comp=Z,13nm,1.0s,mb5.4
KEV Kevo 98.60 340 PFAKE 10 47 20.0 +13
KEV LR LR
comp=Z,543nm,20.0s,MS5.0
SPB4 Spitsbergen Ar 99.10 349 eP **P** **10 47 08.4 -0.7**
ARCES ARCESS Array B 99.16 340 P **P** **10 47 08.0 -1.4**
comp=Z,22nm,1.1s,mb5.6,baz=74,slow=4.4,SNR=39
ARCES ARCESS Array B 99.16 340 P **P** **10 47 08.0 -1.5**
DLBC Dease Lake 99.27 32 P **P** **10 47 08.9 -1.2**
comp=Z,4.6nm,1.1s,mb4.9,baz=236,slow=4.9,SNR=5.7
DLBC PKiKP PKiKP 10 51 41.4 +1.5
comp=Z,5.0nm,1.0s,baz=218,slow=8.9,SNR=4.0
DLBC Dease Lake 99.27 32 eP **P** **10 47 10.5 +0.3**
KBS Kingsbay 99.60 350 PFAKE 10 47 20.0 +8.2
KBS LR LR
comp=Z,365nm,19.0s,MS4.9
LSZ Lusaka 99.80 254 eP Pdif 10 47 12.8 +0.1
LSZ pmax pmax
comp=Z,23nm,1.4s,mb5.4
LSZ MLR MLR
comp=Z,639nm,20.0s,MS5.1
LSZ Lusaka 99.80 254 ePdif Pdif 10 47 12.8 +0.2
comp=Z,23nm,1.4s
LSZ LR LR
comp=Z,639nm,20.0s,MS5.1
AKASG Malin Array Be 100.09 321 P Pdif 10 47 12.1 -1.9
comp=Z,0.2nm,0.3s,baz=69,slow=4.3,SNR=9.1
AKASG Malin Array Be 100.09 321ceP Pdif 10 47 12.6 -1.4
BOSA Boshof 100.38 240 P Pdif 10 47 14.0 -1.2
comp=Z,4.7nm,1.0s,baz=94,slow=6.4,SNR=3.5
BOSA Boshof 100.38 240 P Pdif 10 47 14.0 -1.2
BOSA pmax pmax
comp=Z,5.0nm,1.0s
BOSA Boshof 100.38 240 ePdif Pdif 10 47 15.2 -0.1
comp=Z,42nm,1.7s
BOSA LR LR
comp=Z,448nm,20.0s,MS5.0
FINES FINESS Array B 100.44 332 P Pdif 10 47 13.2 -2.3
comp=Z,8.3nm,1.1s,baz=102,slow=6.2,SNR=17
FINES PP PP 10 51 21.5 -0.6
comp=Z,6.6nm,1.1s,baz=116,slow=6.3,SNR=6.1
FINES PKiKP PKiKP 10 51 42.2 +0.3
comp=Z,2.7nm,0.9s,baz=50,slow=2.2,SNR=3.0
FINES PKKPbc PKKPbc 11 03 31.3 -2.2
comp=Z,2.4nm,0.9s,baz=0.0,slow=4.3,SNR=6.6
FINES FINESS Array B 100.44 332 P Pdif 10 47 13.2 -2.3
FINES PP PP 10 51 21.5 -0.6
LBTB Lobatse 100.73 244 PFAKE 10 47 30.0 +13
LBTB LR LR
comp=Z,697nm,20.0s,MS5.2
BUR08 Bucovina Ar. S 103.06 318 ePdif Pdif 10 47 27.2 +0.1
BUR08 ePP PP 10 51 43.0 +0.8
SUW Suwalki 103.30 324 eP Pdif 10 47 27.6 -0.6
SUW Suwalki 103.30 324 eP Pdif 10 47 27.6 -0.6
SUR Sutherland 103.31 235 PFAKE 10 47 40.0 +12
SUR LR LR
comp=Z,971nm,21.0s,MS5.3
LVV L'vov 103.51 320 eP Pdif 10 47 29.0 -0.1
KWP Kalwaria Pacla 104.39 320 PFAKE 10 47 40.0 +7.0
KWP LR LR
comp=Z,365nm,20.0s,MS4.9
NLWA Neilton Lookou 104.48 42 ⇑PKiKP Pdif 10 47 34.9 +1.4
baz=105
NLWA Neilton Lookou 104.48 42 ePdif Pdif 10 47 35.0 +1.5
comp=Z,9.1nm,1.0s
NLWA LR LR
comp=Z,356nm,22.0s,MS4.9
KOLS Kolonicke sedl 104.79 319 eP Pdif 10 47 35.9 +1.1
KOLS e 10 51 51.5
KOLS Kolonicke sedl 104.79 319 PDIF Pdif 10 47 35.9 +1.1
KOLS Kolonicke sedl 104.79 319 ePKP PKiKP 10 51 51.5 +1.3
E03A Lebam 104.83 43 ⇑PKiKP Pdif 10 47 36.1 +1.1
baz=105
UZH Uzhgorod 104.83 319⇑i P Pdif 10 47 35.3 +0.3
COR Corvallis 105.31 45 PFAKE 10 52 00.0 +8.7
COR LR LR
comp=Z,424nm,20.0s,MS5.0
RES Resolute Bay 105.35 11 PKKPbc PKKPbc 11 03 16.0 -3.3
comp=Z,4.1nm,0.9s,baz=154,slow=4.1,SNR=5.8
RES Resolute Bay 105.35 11 eP Pdif 10 47 37.2 -0.1
RES pmax pmax
comp=Z,10.0nm,1.0s
RES Resolute Bay 105.35 11 ePdif Pdif 10 47 37.1 -0.2
comp=Z,10nm,1.0s
RES ePKPdf PKiKP 10 51 50.4 -0.2
STHS Stebnicka Huta 105.36 320 eP Pdif 10 47 39.3 +1.9
STHS Stebnicka Huta 105.36 320 PDIF Pdif 10 47 39.3 +1.9
YKA Yellowknife Ar 105.72 26 Pdiff Pdif 10 47 38.9 -0.1
comp=Z,1.7nm,0.8s,baz=296,slow=4.7,SNR=22
YKA PKiKP PKiKP 10 51 51.2 -0.3
comp=Z,5.6nm,0.8s,baz=297,slow=1.8,SNR=45
YKA PKKPbc PKKPbc 11 03 13.7 -4.1
comp=Z,6.6nm,0.8s,baz=106,slow=2.9,SNR=59
YKA Yellowknife Ar 105.72 26 Pdif Pdif 10 47 38.9 -0.1
YKA PKPdf PKiKP 10 51 51.2 -0.3
YKA PKKPbc PKKPbc 11 03 13.7 -4.1
HUMO Hull Mountain 105.86 47 ePdif Pdif 10 47 41.3 +1.7
comp=Z,7.0nm,1.3s
HUMO ePKPdf PKiKP 10 51 53.3 +0.9
HUMO LR LR
comp=Z,447nm,21.0s,MS5.0
KECS Kecovo 106.04 319 eP Pdif 10 47 41.4 +1.0
KECS e 10 52 02.0
KECS Kecovo 106.04 319 ePdif Pdif 10 47 41.4 +1.0
KECS ePP PP 10 52 02.0 -2.3
KECS e 10 52 18.5
KECS Kecovo 106.04 319 PDIF Pdif 10 47 41.4 +1.0
KECS ePP PP 10 52 02.0 -2.3
KECS e 10 52 18.5
YBH Yreka Blue Hor 106.17 48 eP Pdif 10 47 43.0 +2.0
YBH pmax pmax
comp=Z,11nm,1.2s
YBH MLR MLR
comp=Z,320nm,20.0s
YBH Yreka Blue Hor 106.17 48 ePdif Pdif 10 47 43.0 +2.0
comp=Z,11nm,1.2s
YBH LR LR
comp=Z,320nm,20.0s,MS4.9
HOPS Hopland 106.28 51 PFAKE 10 52 10.0 +17
HOPS LR LR
comp=Z,454nm,20.0s,MS5.0
WDC Whiskeytown Da 106.47 49 PFAKE 10 52 10.0 +16
WDC LR LR
comp=Z,478nm,22.0s,MS5.0

MCCM **Marconi Confer 106.54 52** PFAKE 10 52 10.0 +16
MCCM LR LR
comp=Z,696nm,19.0s,MS5.2
VYHS **Vyhne 107.11 319** *e*Pdif Pdif 10 47 45.8 +0.7
VYHS *e* 10 51 55.5
VYHS *e*PP PP 10 52 16.7 +4.6
VYHS **Vyhne 107.11 319** PDIF Pdif 10 47 45.8 +0.7
VYHS **Vyhne 107.11 319** *e*PKP PKiKP 10 51 55.5 +1.0
VYHS *e*PP PP 10 52 16.7 +4.6
VIPM **Ingram Point 107.22 45** P PKiKP 10 51 56.6 +1.8
OKC **Ostrava-Krasne 107.24 321** AMS AMS 11 40 10.0
comp=Z,200nm,20.0s
LBCM **Butte Creek Ri 107.32 49** P PKiKP 10 51 56.8 +1.6
NB2 **NORSAR Subarra107.43 333** P Pdif 10 47 44.6 -2.0
comp=Z,14nm,1.4s,baz=71,slow=4.4
NB2 **NORSAR Subarra107.43 333** P Pdif 10 47 44.6 -2.0
NB2 **NORSAR Subarra107.43 333** P Pdif 10 47 44.6 -2.0
NOA **NORSAR Array B 107.43 333** Pdiff Pdif 10 47 45.0 -1.6
comp=Z,3.5nm,1.0s,baz=68,slow=4.6,SNR=5.6
NOA PKiKP PKiKP 10 51 55.1 +0.3
comp=Z,2.7nm,1.0s,baz=61,slow=2.5,SNR=5.0
NOA PKKPbc PKKPbc 11 03 11.0 -1.5
comp=Z,2.2nm,0.9s,baz=65,slow=2.8,SNR=5.4
NOA **NORSAR Array B 107.43 333** Pdif Pdif 10 47 45.0 -1.6
NOA PKPdif PKiKP 10 51 55.0 +0.3
NOA PKKPbc PKKPbc 11 03 11.0 -1.5
HAWA **Hanford 107.59 43** PFAKE 10 52 10.0 +15
HAWA LR LR
comp=Z,312nm,19.0s,MS4.9
NAO01 **NORSAR Array S 107.66 333** PFAKE 10 52 10.0 +15
NAO01 LR LR
comp=Z,465nm,20.0s,MS5.0
SAO **San Andreas Ge 107.85 53** PFAKE 10 52 10.0 +14
SAO LR LR
comp=Z,353nm,20.0s,MS4.9
MOD **Modoc 107.92 47** *e*Pdif Pdif 10 47 50.4 +1.7
comp=Z,7.1nm,1.2s
MOD *e*PKPdf PKiKP 10 51 57.0 +0.8
KSP **Ksiaz 108.13 322** *e*P Pdif 10 47 49.9 +0.2
DPC **Dobruska-Polom 108.25 322** *e*PKP PKiKP 10 51 57.3 +0.7
DPC *e*PP PP 10 52 16.9 -3.5
DPC AMS AMS 11 41 00.0
comp=Z,300nm,22.6s
UPC **Upice 108.39 322** *e*PKP PKiKP 10 51 57.4 +0.6
UPC *e*PP PP 10 52 16.1 -5.4
CMB **Columbia Colle 108.50 51** *e*P Pdif 10 47 52.8 +1.5
CMB pmax pmax
comp=Z,8.0nm,1.1s
CMB MLR MLR
comp=Z,419nm,20.0s,MS5.0
CMB **Columbia Colle 108.50 51** *e*Pdif Pdif 10 47 52.8 +1.5
comp=Z,7.9nm,1.1s
CMB *e*PKPdf PKiKP 10 51 58.5 +1.0
CMB LR LR
comp=Z,419nm,20.0s,MS5.0
H08A **Prairie City 108.58 45** ⇑PKiKP PKiKP 10 51 58.0 +0.6
baz=109
KONO **Kongsberg 108.73 332** PFAKE 10 52 10.0 +13
KONO LR LR
comp=Z,335nm,20.0s,MS4.9
NEW **Newport 108.75 40** PFAKE 10 52 10.0 +12
NEW LR LR
comp=Z,462nm,21.0s,MS5.0
J08A **Circle Bar Ran 108.96 46** ⇑PKiKP PKiKP 10 51 58.7 +0.6
baz=109
WVOR **Wild Horse Val 109.04 47** *e*Pdif Pdif 10 47 55.4 +1.6
WVOR *e*PKPdf PKiKP 10 51 59.6 +1.3
WVOR LR LR
comp=Z,304nm,20.0s,MS4.9
TREC **Trest 109.05 321** AMS AMS 11 41 00.0
comp=Z,400nm,29.4s
TSUM **Tsumeb 109.14 248** *e*PKPdf PKiKP 10 51 59.8 +0.6
TSUM LR LR
comp=Z,725nm,21.0s,MS5.2
B11A **Sandpoint 109.19 40** ⇓PKiKP PKiKP 10 51 59.1 +0.7
baz=109
H09A **Durkee 109.25 44** ⇓PKiKP PKiKP 10 51 59.1 +0.5
baz=109
PVCC **Panska Ves 109.27 322** AMS AMS 11 41 20.0
comp=Z,300nm,27.3s
I09A **Lost Marbles R 109.35 45** ⇓PKiKP PKiKP 10 51 59.2 +0.3
baz=109
PRU **Pruhonice 109.45 322** *e*PKP PKiKP 10 51 54.5 -4.3
PRU *e*PP PP 10 52 22.0 -7.1
PRU AMS AMS 11 44 10.0
comp=Z,300nm,20.9s
J09A **Fry Pan Ranch, 109.48 46** ⇑PKiKP PKiKP 10 51 59.7 +0.6
baz=110
BRG **Berggiesshubel 109.55 323** *e*PDIF Pdif 10 47 55.5 -0.5
comp=Z,3.8nm,1.1s
BRG **Berggiesshubel 109.55 323** *i* PKP PKiKP 10 51 49.5 -10
comp=Z,6.2nm,1.3s
BRG
comp=N,274nm,23.3s
BRG
comp=E,200nm,25.0s
BRG
comp=Z,306nm,21.4s
D11A **Klaveano Farm, 109.58 42** ⇑PKiKP PKiKP 10 51 59.9 +0.8
baz=110
EDM **Edmonton 109.58 35** *e*Pdif Pdif 10 47 56.8 +0.7
EDM *e*PKPdf PKiKP 10 51 59.6 +0.6
E11A **Bogner Ranch, 109.84 42** ⇑PKiKP PKiKP 10 51 59.5 -0.2
baz=110
VES **Vestal, Richgr 109.87 54** ⇓PKiKP PKiKP 10 51 60.0 -0.1
baz=110
H10A **Noah's Angus R 109.91 44** ⇓PKiKP PKiKP 10 52 00.2 +0.3
baz=110
CLL **Collm 109.98 323** *e*P Pdif 10 47 58.0 +0.1
CLL *e* 10 52 33.0
CLL MLR MLR
comp=Z,300nm,18.6s,MS4.9
CLL **Collm 109.98 323** *e*Pdif Pdif 10 47 58.0 +0.1
CLL *e* 10 51 46.0
CLL *e*PKiKP PKiKP 10 51 58.0 -1.8
CLL *e* 10 52 20.0
CLL *e*PP PP 10 52 33.0 +0.1
comp=Z,11nm,1.4s
CLL *e*PKKPbc PKKPbc 11 03 03.0 -1.1
CLL *e*PKKPab PKKPab 11 03 15.0 +1.2
CLL *e*pSKKPbc 11 06 50.0
CLL *e*SS SS 11 08 18.0 +23
CLL *e*SSS 11 12 06.0
CLL *e* 11 18 48.0
CLL LmV 11 54 00.0
comp=Z,300nm,18.6s
F11A **Grangeville 109.99 43** ⇓PKiKP PKiKP 10 52 00.1 +0.1
baz=110
G11A **Walters Elk Ra 110.04 43** ⇓PKiKP PKiKP 10 52 00.9 +0.8
baz=110
NVAR **Mina Array Bea 110.05 51** Pdiff Pdif 10 48 00.5 +2.2
comp=Z,7.5nm,1.1s,baz=250,slow=6.6,SNR=10
NVAR PKiKP PKiKP 10 52 01.6 +1.3
comp=Z,2.1nm,0.8s,baz=250,slow=2.7,SNR=10
NVAR PP PP 10 52 30.4 -3.6
comp=Z,1.9nm,0.9s,baz=249,slow=4.1,SNR=5.3
NVAR PKKPbc PKKPbc 11 03 02.5 -1.0
comp=Z,2.0nm,0.8s,baz=130,slow=4.4,SNR=12
NVAR PKKPab PKKPab 11 03 14.6 +0.9
comp=Z,2.8nm,1.1s,baz=108,slow=6.4,SNR=6.1
D12A **Red Ives Fores 110.22 41** ⇑PKiKP PKiKP 10 52 00.8 +0.4
baz=110
K10A **MacKenzie Ranc 110.24 46** ⇑PKiKP PKiKP 10 52 01.8 +1.3
baz=110
A13A **Flathead Natio 110.30 39** ⇓PKiKP PKiKP 10 52 00.7 +0.2
baz=110
KHC **Kasperske Hory 110.30 321** *e*PKIKP PKiKP 10 52 00.9 +0.4
KHC *e* 10 52 34.7
KHC MLR MLR
comp=Z,300nm,17.2s,MS4.9
KHC **Kasperske Hory 110.30 321** *e*PKPdf PKiKP 10 52 01.1 +0.6
KHC **Kasperske Hory 110.30 321** *e*PKP PKiKP 10 52 00.9 +0.4
KHC *e*PP PP 10 52 34.7 -0.6
KHC AMS AMS 11 42 20.0
comp=Z,300nm,17.2s
GEC2 **GERESS Array S 110.30 321** *e*PKiKP PKiKP 10 52 00.5 0.0
GERES **GERESS Array B 110.30 321** Pdiff Pdif 10 47 59.4 0.0
comp=Z,0.3nm,0.8s,baz=48,slow=2.0,SNR=4.9
GERES PKiKP PKiKP 10 52 00.7 +0.2
comp=Z,2.9nm,0.8s,baz=70,slow=1.6,SNR=18
GERES PP PP 10 52 35.0 -0.3
comp=Z,3.3nm,1.2s,baz=90,slow=4.0,SNR=4.4
GERES PKKPbc PKKPbc 11 03 00.8 -2.1
comp=Z,0.8nm,0.9s,baz=256,slow=5.0,SNR=5.0
GERES PKKPab PKKPab 11 03 13.5 +1.1
comp=Z,0.7nm,1.0s,baz=176,slow=2.0,SNR=4.7
BSMT **Bassoo Peak 110.37 40** *e*PKPdf PKiKP 10 52 01.1 +0.4
H11A **Donnelly 110.39 44** ⇓PKiKP PKiKP 10 52 01.0 +0.2
baz=110
B13A **Whitefish 110.43 40** ⇓PKiKP PKiKP 10 52 00.9 +0.1
baz=110
BMN **Battle Mountai 110.48 49** PFAKE 10 52 10.0 +8.9
BMN LR LR
comp=Z,381nm,22.0s,MS4.9
C13A **Hot Springs 110.56 41** ⇓PKiKP PKiKP 10 52 01.4 +0.4
baz=111
WALA **Waterton Lakes 110.57 39** *e*PKPdf PKiKP 10 52 01.4 +0.4
F12A **Elk City 110.64 43** ⇓PKiKP PKiKP 10 52 01.9 +0.7
baz=111
NKC **Novy Kostel 110.66 322** AMS AMS 11 46 40.0
comp=Z,300nm,17.3s
L10A **Juniper Basin 110.68 47** ⇑PKiKP PKiKP 10 52 01.5 +0.1
baz=111
WET **Wettzell 110.73 321** *e*PKiKP PKiKP 10 52 01.8 +0.5
G12A **Big Creek, Yel 110.75 43** ⇓PKiKP PKiKP 10 52 02.1 +0.6
baz=111
D13A **Huson 110.80 41** ⇓PKiKP PKiKP 10 52 01.7 +0.2
baz=111
MFID **Camas Ranch 110.83 45** ⇑PKiKP PKiKP 10 52 02.2 +0.6
baz=111
K11A **Parker Ranch, 110.84 46** ⇓PKiKP PKiKP 10 52 02.2 +0.5
baz=111
EDW2 **Edwards Air Fo 110.91 54** ⇑PKiKP PKiKP 10 52 02.6 +0.6
baz=111
TPH **Tonopah 110.95 51** PFAKE 10 52 10.0 +7.9
TPH LR LR
comp=Z,332nm,22.0s,MS4.9
SWMT **Swartz Lake 110.98 41** *e*PKPdf PKiKP 10 52 02.5 +0.7
DAC **Darwin (Calif) 110.99 53** PFAKE 10 52 10.0 +7.8
DAC LR LR
comp=Z,475nm,20.0s,MS5.1
MOX **Moxa 111.02 323** *e*PKP PKiKP 10 52 03.1 +1.3
comp=Z,10.0nm,1.6s
MOX **Moxa 111.02 323** *e*PKP PKiKP 10 52 03.1 +1.3
comp=Z,10.0nm,1.6s
C14A **Swan Lake 111.07 40** ⇑PKiKP PKiKP 10 52 02.4 +0.5
baz=111
MPMC **Manual Prospec 111.11 53** ⇑PKiKP PKiKP 10 52 03.3 +0.9
baz=111
E13A **Victor 111.16 42** ⇑PKiKP PKiKP 10 52 02.9 +0.7
baz=111
L11A **Cat Creek Ranc 111.18 46** ⇓PKiKP PKiKP 10 52 02.4 0.0
baz=111
B14A **Marquette Ranc 111.19 40** ⇓PKiKP PKiKP 10 52 02.0 -0.2
baz=111
RJOB **Jochberg 111.21 320** *e*PKiKP PKiKP 10 52 02.0 -0.2
MSO **Missoula 111.21 41** *e*PKPdf PKiKP 10 52 02.8 +0.5
H12A **Diamond D Ranc 111.22 44** ⇑PKiKP PKiKP 10 52 03.1 +0.8
baz=111
I12A **Atlanta 111.23 45** ⇑PKiKP PKiKP 10 52 02.9 +0.5
baz=111
NRDL **Niedersach Rie 111.26 325** *e*PKiKP PKiKP 10 52 02.9 +0.7
M11A **Holland Ranch, 111.33 47** ⇓PKiKP PKiKP 10 52 03.0 +0.3
baz=111
GRB3 **Grafenberg Arr 111.33 322** *e*PKKPbc PKKPbc 11 02 57.7 -1.9
GRB3 *e*PKKPbab 11 03 08.6
A15A **Johnson Ranch, 111.34 39** ⇑PKiKP PKiKP 10 52 03.0 +0.6
baz=111
CLZ **Clausthal 111.34 324** *e*PKiKP PKiKP 10 52 03.2 +0.8
SLMT **Seeley Lake 111.39 41** *e*PKPdf PKiKP 10 52 03.1 +0.5
J12A **Stokes Ranch, 111.39 45** ⇑PKiKP PKiKP 10 52 03.7 +1.0
baz=112
D14A **Greenough 111.42 41** ⇓PKiKP PKiKP 10 52 03.0 +0.4
baz=112
Q10A **Clear Creek Ra 111.44 50** ⇓PKiKP PKiKP 10 52 03.3 +0.4
baz=112
S10A **Tonopah Range, 111.47 51** ⇓PKiKP PKiKP 10 52 04.0 +1.0
baz=112
GRF **Grafenberg Arr 111.58 322** *e*L 11 47 41.2
comp=Z,437nm,20.6s
E14A **Clinton 111.63 42** ⇓PKiKP PKiKP 10 52 03.9 +0.8
baz=112
H13A **Challis 111.64 44** ⇑PKiKP PKiKP 10 52 04.2 +1.1
baz=112
CHMT **Chamberlain Mo 111.64 41** *e*PKPdf PKiKP 10 52 03.8 +0.8
SUMG **Summit 111.65 356** *i* P PKiKP 10 52 04.3 +1.9
comp=Z,5.3nm,0.9s
B15A **Bradely Ranch, 111.66 39** ⇑PKiKP PKiKP 10 52 02.9 -0.1
baz=112
K12A **Draper Farm, C 111.68 46** ⇓PKiKP PKiKP 10 52 03.2 0.0
baz=112
L12A **House Creek Ra 111.72 46** ⇓PKiKP PKiKP 10 52 04.4 +1.0
baz=112
O11A **Cowboy Ranch, 111.72 49** ⇑PKiKP PKiKP 10 52 04.2 +0.7
baz=112
HLID **Hailey 111.79 45** ⇑PKiKP PKiKP 10 52 04.9 +1.4
baz=112
HLID **Hailey 111.79 45** *e*Pdif Pdif 10 48 07.5 +1.6
HLID *e*PKPdf PKiKP 10 52 05.2 +1.7
HLID LR LR
comp=Z,377nm,21.0s,MS5.0
GSC **Goldstone 111.79 54** *e*PKIKP PKiKP 10 52 05.6 +1.9
GSC *e* 10 52 45.0
C15A **Salmond Ranch, 111.80 40** ⇓PKiKP PKiKP 10 52 03.6 +0.2
baz=112
F14A **Wisdom 111.89 42** ⇑PKiKP PKiKP 10 52 05.1 +1.5
baz=112
I13A **Wildhorse Cree 111.91 44** ⇓PKiKP PKiKP 10 52 05.0 +1.3
baz=112
UBBA **Unterbreizbach 111.93 324** *e*PKiKP PKiKP 10 52 04.2 +0.7
U10A **Ash Meadows, A 111.97 53** ⇑PKiKP PKiKP 10 52 05.2 +1.1
baz=112
M12A **Wells 111.97 47** ⇑PKiKP PKiKP 10 52 05.0 +1.1
baz=112
J13A **Cove Ranch, Pi 112.00 45** ⇑PKiKP PKiKP 10 52 04.9 +1.1
baz=112
Q11A **Duckwater 112.00 50** ⇓PKiKP PKiKP 10 52 05.0 +1.0
baz=112
N12A **Clover Valley, 112.01 48** *e*PKPdf PKiKP 10 52 05.3 +1.4
FUR **Furstenfeldbru 112.05 321** *e*PKiKP PKiKP 10 52 04.3 +0.5
D15A **Lincoln 112.08 41** ⇓PKiKP PKiKP 10 52 04.6 +0.7
baz=112
R11A **Troy Canyon, C 112.16 50** ⇑PKiKP PKiKP 10 52 04.8 +0.5
baz=112
S11A **Rachel 112.18 51** ⇓PKiKP PKiKP 10 52 06.0 +1.6
baz=112
E15A **Deer Lodge 112.19 41** ⇑PKiKP PKiKP 10 52 04.9 +0.8
baz=112
H14A **Leadore 112.23 43** ⇑PKiKP PKiKP 10 52 05.4 +1.1
baz=112
K13A **Stover Farm, H 112.26 46** ⇓PKiKP PKiKP 10 52 04.8 +0.4
baz=112
C16A **Fuhringer Ranc 112.34 40** ⇑PKiKP PKiKP 10 52 04.0 -0.4
baz=112
I14A **Mackay 112.36 44** ⇑PKiKP PKiKP 10 52 05.6 +1.1
baz=112
O12A **Currie 112.37 48** ⇓PKiKP PKiKP 10 52 05.4 +0.7
baz=112
PFO **Pinyon Flat Ob 112.37 56** ⇓PKiKP PKiKP 10 52 05.8 +0.9
baz=112
F15A **Butte 112.46 42** ⇑PKiKP PKiKP 10 52 04.1 -0.6
baz=112
J14A **Carey 112.48 45** ⇓PKiKP PKiKP 10 52 05.4 +0.6
baz=113
LRM **Limekiln Ridge 112.50 42** *e*Pdif Pdif 10 48 10.8 +1.7
LRM *e*PKPdf PKiKP 10 52 06.2 +1.5
L13A **Double Diamond 112.50 46** ⇓PKiKP PKiKP 10 52 04.8 -0.1
baz=113
MCMT **McKenzie Canyo 112.52 43** *e*PKPdf PKiKP 10 52 06.7 +1.9
M13A **Montello 112.53 47** ⇓PKiKP PKiKP 10 52 06.1 +1.1
baz=113
M13A **Montello 112.53 47** *e*PKPdf PKiKP 10 52 05.5 +0.6
M13A *e*PP PP 10 52 50.7 -0.9
DLMT **Dillon 112.54 42** *e*PKPdf PKiKP 10 52 06.4 +1.5
A17A **Triple J Farms 112.61 38** ⇓PKiKP PKiKP 10 52 05.5 +0.6
baz=113
N13A **Wendover, West 112.63 48** ⇓PKiKP PKiKP 10 52 05.8 +0.6
baz=113
G15A **Dillon 112.67 43** ⇑PKiKP PKiKP 10 52 06.0 +0.9
baz=113
T11A **Corn Creek, Al 112.68 52** ⇑PKiKP PKiKP 10 52 06.9 +1.5
baz=113
BELC **Belle Mtn. Jos 112.68 55** ⇓PKiKP PKiKP 10 52 06.5 +1.1
baz=113
D16A **Dana Ranch, Ca 112.71 41** ⇓PKiKP PKiKP 10 52 05.8 +0.7
baz=113
B17A **L&G Farms, Che 112.78 39** ⇓PKiKP PKiKP 10 52 05.4 +0.2
baz=113
E16A **East Helena 112.79 41** ⇑PKiKP PKiKP 10 52 04.7 -0.6
baz=113
V11A **Goodsprings 112.79 53** ⇑PKiKP PKiKP 10 52 06.1 +0.5
baz=113
GMRC **Granite Mounta 112.81 54** ⇑PKiKP PKiKP 10 52 06.0 +0.4
baz=113
LCCM **Lewis and Clar 112.88 42** P PKiKP 10 52 07.1 +1.6
S12A **Delamar Landin 112.89 51** ⇑PKiKP PKiKP 10 52 05.3 -0.4
baz=113
R12A **Pony Springs, 112.92 50** ⇑PKiKP PKiKP 10 52 05.7 0.0
baz=113
K14A **Jones Ranch, D 112.94 46** ⇑PKiKP PKiKP 10 52 05.3 -0.4
baz=113
I15A **Monteview 113.01 44** ⇑PKiKP PKiKP 10 52 06.0 +0.2
baz=113
C17A **Wharram Farm, 113.02 40** ⇑PKiKP PKiKP 10 52 06.1 +0.4
baz=113
L14A **Malta 113.03 46** ⇓PKiKP PKiKP 10 52 06.9 +1.0
baz=113
SWSC **Sam W. Stewart 113.03 56** ⇑PKiKP PKiKP 10 52 07.1 +0.9
baz=113
F16A **Kennard Place, 113.06 42** ⇑PKiKP PKiKP 10 52 06.8 +1.0
baz=113
M14A **Sheep Mountain 113.09 47** ⇓PKiKP PKiKP 10 52 06.9 +0.9
baz=113
BOZ **Bozeman (W) 113.10 42** ⇓PKiKP PKiKP 10 52 07.0 +1.1
baz=113
BOZ **Bozeman (W) 113.10 42** *e*P Pdif 10 48 14.0 +2.2
BOZ *e* 10 52 07.1
P13A **Bates Ranch, G 113.11 49** ⇑PKiKP PKiKP 10 52 06.2 +0.1
baz=113
G16A **Moss Hill, Enn 113.11 42** ⇑PKiKP PKiKP 10 52 06.4 +0.5
baz=113
STU **Stuttgart 113.14 322** *e*PKiKP PKiKP 10 52 06.8 +0.9
A18A **Metzger Ranch, 113.15 38** ⇓PKiKP PKiKP 10 52 05.5 -0.4
baz=113
BC3 **Big Chuckawall 113.19 55** ⇑PKiKP PKiKP 10 52 06.4 0.0
baz=113
Q13A **Wheeler Ranch, 113.22 49** ⇑PKiKP PKiKP 10 52 06.9 +0.6
baz=113
J15A **Blackfoot 113.22 44** ⇑PKiKP PKiKP 10 52 08.0 +1.8
baz=113
D17A **Six Diamond Ra 113.23 40** ⇑PKiKP PKiKP 10 52 05.8 -0.3
baz=113
V12A **Nelson 113.28 53** ⇓PKiKP PKiKP 10 52 07.9 +1.4
baz=113
BUG **Bochum--Univer 113.28 325** *e*PKiKP PKiKP 10 52 07.0 +0.9
IRM **Iron Mountain 113.34 55** ⇑PKiKP PKiKP 10 52 07.9 +1.2
baz=114
W12A **Cal Nev Ari 113.35 54** ⇓PKiKP PKiKP 10 52 08.0 +1.3
baz=114
E17A **Martinsdale 113.35 41** ⇑PKiKP PKiKP 10 52 07.5 +1.1
baz=113
K15A **Arbon 113.36 45** ⇑PKiKP PKiKP 10 52 08.1 +1.7
baz=113
B18A **Beardsley Farm 113.38 39** ⇑PKiKP PKiKP 10 52 06.9 +0.6
baz=113
U12A **Valley of Fire 113.38 52** ⇑PKiKP PKiKP 10 52 08.2 +1.5
baz=114
EGMT **Eagleton 113.52 39** ⇑PKiKP PKiKP 10 52 07.6 +0.9
baz=114
EGMT **Eagleton 113.52 39** *e*PKPdf PKiKP 10 52 07.5 +0.9
EGMT LR LR
comp=Z,362nm,22.0s,MS4.9
L15A **Malad City 113.65 46** ⇓PKiKP PKiKP 10 52 07.6 +0.5
baz=114
S13A **Holt Ranch, En 113.66 51** ⇓PKiKP PKiKP 10 52 08.6 +1.4
baz=114
F17A **Fitzpatrick Pl 113.66 41** ⇓PKiKP PKiKP 10 52 08.1 +1.1
baz=114
I16A **Newdale 113.74 44** ⇑PKiKP PKiKP 10 52 09.1 +1.9
baz=114
T13A **Saint George 113.75 52** ⇑PKiKP PKiKP 10 52 08.3 +0.9
baz=114
Q14A **Sevier Lake (B 113.77 49** ⇑PKiKP PKiKP 10 52 08.1 +0.7
baz=114
P14A **Drum Mountains 113.78 49** ⇓PKiKP PKiKP 10 52 09.0 +1.6
baz=114
D18A **Linhart Farms, 113.78 40** ⇑PKiKP PKiKP 10 52 08.1 +0.9
baz=114
GLA **Glamis 113.81 56** ⇑PKiKP PKiKP 10 52 08.9 +1.3
baz=114
DUG **Dugway 113.82 48** ⇑PKiKP PKiKP 10 52 08.8 +1.3
baz=114
DUG **Dugway 113.82 48** *e*PKPdf PKiKP 10 52 08.9 +1.5
J16A **Bone 113.83 44** ⇑PKiKP PKiKP 10 52 08.3 +0.9
baz=114
U13A **Pakoon Wash 113.83 52** ⇑PKiKP PKiKP 10 52 08.6 +1.0
baz=114
BFO **Black Forest 113.84 321** *c i*PKIKP PKiKP 10 52 08.0 +0.8
YMR **Madison River 113.85 43** *e*PKPdf PKiKP 10 52 09.7 +2.3
E18A **Harlowton 113.93 41** ⇑PKiKP PKiKP 10 52 06.8 -0.7
baz=114
Y12C **Blythe 113.93 55** ⇑PKiKP PKiKP 10 52 08.5 +0.7
baz=114
V13A **Grand Canyon W 113.94 53** ⇑PKiKP PKiKP 10 52 08.2 +0.4
baz=114
K16A **Soda Springs 113.98 45** ⇑PKiKP PKiKP 10 52 08.6 +0.9
baz=114
YFT **Old Faithful 114.01 43** *e*PKPdf PKiKP 10 52 10.7 +3.1
RRI2 **Red Ridge 114.01 44** *e*PKPdf PKiKP 10 52 08.6 +0.9
DCID1 **Drake Creek 114.03 44** *e*PKPdf PKiKP 10 52 09.7 +2.0
112A **Yuma 114.11 56** ⇓PKiKP PKiKP 10 52 09.1 +0.9
baz=114
IMW **Indian Meadow 114.11 44** *e*PKPdf PKiKP 10 52 09.9 +2.0
S14A **Cedar City 114.15 51** ⇑PKiKP PKiKP 10 52 09.2 +1.0
baz=114
W13A **Hualapai Mount 114.18 54** ⇓PKiKP PKiKP 10 52 09.3 +1.0
baz=114
H17A **Grant Village 114.20 43** ⇓PKiKP PKiKP 10 52 09.7 +1.7
baz=114
NOQ **North Oquirrh 114.21 47** *e*PKPdf PKiKP 10 52 09.9 +1.7
TPAW **Teton Pass 114.23 44** *e*PKPdf PKiKP 10 52 10.0 +1.9
LKWY **Lake 114.27 43** *e*PKIKP PKiKP 10 52 10.7 +2.5
LKWY MLR MLR
comp=Z,395nm,19.0s,MS5.0
F18A **Big Timber 114.28 41** ⇑PKiKP PKiKP 10 52 09.6 +1.5
baz=114
L16A **Fish Haven 114.33 46** ⇑PKiKP PKiKP 10 52 08.5 +0.2
baz=114
X13A **Yucca 114.33 54** ⇑PKiKP PKiKP 10 52 09.7 +1.1
baz=114
REDW **Red Top Meadow 114.33 44** *e*PKPdf PKiKP 10 52 10.1 +1.8
HWUT **Hardware Ranch 114.35 46** *e*PKPdf PKiKP 10 52 09.1 +0.7
HWUT LR LR
comp=Z,302nm,20.0s,MS4.9
GCMT **Greycliff 114.35 41** *e*PKPdf PKiKP 10 52 09.7 +1.4
MEM **Membach 114.35 324** PKP PKiKP 10 52 09.1 +1.0
SNOW **Snow King Moun 114.37 44** *e*PKPdf PKiKP 10 52 10.2 +1.8
P15A **Leamington 114.38 48** ⇑PKiKP PKiKP 10 52 09.4 +0.8
baz=114
T14A **Hurricane 114.38 51** ⇑PKiKP PKiKP 10 52 08.3 -0.3
baz=114
LOHW **Long Hollow 114.43 44** *e*PKPdf PKiKP 10 52 09.5 +1.0
J17A **Brown Place, J 114.43 44** ⇓PKiKP PKiKP 10 52 09.7 +1.2
baz=114
Q15A **Fillmore 114.45 49** ⇓PKiKP PKiKP 10 52 09.1 +0.5
baz=114
U14A **Mt Trumbull 114.45 52** ⇓PKiKP PKiKP 10 52 08.1 -0.7
baz=114
CDF **Champ du Feu 114.46 322** *e*PKIKP PKiKP 10 52 07.2 -1.2
K17A **Gardner Place, 114.47 45** ⇓PKiKP PKiKP 10 52 08.7 +0.1
baz=114
WLF **Walferdange 114.65 323** PKP PKiKP 10 52 10.2 +1.5
WLF **Walferdange 114.65 323** *e*PKiKP PKiKP 10 52 10.1 +1.4
V14A **Boquillas Ranc 114.69 53** ⇑PKiKP PKiKP 10 52 10.5 +1.3
baz=115
L17A **Cokeville 114.70 45** ⇓PKiKP PKiKP 10 52 09.3 +0.2
baz=115
JLU **Jordanelle 114.71 47** *e*PKPdf PKiKP 10 52 10.5 +1.4
MSU **Marysvale 114.73 50** *e*P Pdif 10 48 21.1 +2.1
MSU *e* 10 52 11.0
MPU **Maple Canyon 114.74 48** *e*PKPdf PKiKP 10 52 10.7 +1.5
Z13A **Yuma Proving G 114.75 56** ⇓PKiKP PKiKP 10 52 10.3 +0.8
baz=115
O16A **Springville 114.78 48** ⇓PKiKP PKiKP 10 52 09.6 +0.3
baz=115
S15A **Panguitch 114.79 51** ⇓PKiKP PKiKP 10 52 10.6 +1.2
baz=115
W14A **Seligman 114.80 53** ⇓PKiKP PKiKP 10 52 10.3 +0.8
baz=115
P16A **Fountain Green 114.83 48** ⇑PKiKP PKiKP 10 52 10.2 +0.8
baz=115
BCLA **Clavier 114.84 324** PKP PKiKP 10 52 10.0 +0.9
RLMT **Red Lodge 114.84 42** ⇓PKiKP PKiKP 10 52 09.9 +0.7

baz=115
RLMT Red Lodge 114.84 42 *e*PKPdf PKiKP 10 52 10.8 +1.6
RLMT LR LR
comp=Z,408nm,21.0s,MS5.0
DAU Daniels Canyon 114.91 47 *e*PKIKP PKiKP 10 52 11.3 +1.8
T15A Red Dirt Ranch 114.94 51 ⇑PKiKP PKiKP 10 52 11.0 +1.3
baz=115
I18A Diamond G Ranc 114.94 44 ⇓PKiKP PKiKP 10 52 10.4 +0.9
HINF Hinteralfeld 114.95 321 *e*PKIKP PKiKP 10 52 08.2 -1.2
comp=Z,22nm,1.0s
J18A Kendall Valley 114.96 44 ⇓PKiKP PKiKP 10 52 09.8 +0.3
baz=115
M17A Scullys Gap (B 115.03 46 ⇑PKiKP PKiKP 10 52 10.1 +0.4
baz=115
FFC Flin Flon 115.04 30 *e*PKIKP PKiKP 10 52 09.5 +0.2
FFC MLR MLR
comp=Z,419nm,22.0s,MS5.0
N17A Moffit Pass 115.06 47 ⇓PKiKP PKiKP 10 52 11.2 +1.4
baz=115
X14A Yava 115.11 54 ⇓PKiKP PKiKP 10 52 10.9 +0.8
baz=115
K18A Toltan Ranch, 115.12 45 ⇑PKiKP PKiKP 10 52 10.8 +0.9
baz=115
Y14A Wickenburg 115.13 55 ⇑PKiKP PKiKP 10 52 10.3 +0.2
baz=115
U15A North Rim 115.15 52 ⇓PKiKP PKiKP 10 52 11.2 +1.1
baz=115
HAU Haudompre 115.19 322 *e*PKIKP PKiKP 10 52 08.9 -0.9
comp=Z,28nm,1.1s
HAU *e*MLR MLR
comp=Z,358nm,22.5s,MS4.6
HAU Haudompre 115.19 322 *e*PKPdf PKiKP 10 52 08.9 -0.9
HAU LR LR
comp=Z,360nm,22.5s,MS4.9
UCC Uccle 115.22 325 PKP PKiKP 10 52 10.7 +0.9
GIVF Givet 115.25 324 *e*PKIKP PKPdf 10 52 09.5 -0.4
comp=Z,20nm,1.0s
Z14A Wintersburg 115.30 55 ⇑PKiKP PKiKP 10 52 11.6 +1.1
baz=115
R16A Teasdale 115.31 50 ⇓PKiKP PKiKP 10 52 10.7 +0.3
baz=115
L18A Fontenelle, Gr 115.35 45 ⇓PKiKP PKiKP 10 52 11.6 +1.3
baz=115
O17A Robinson Place 115.35 47 ⇑PKiKP PKiKP 10 52 11.8 +1.4
baz=115
PGF Pioggiola 115.36 315 *e*PKIKP PKPdf 10 52 09.5 -0.8
comp=Z,70nm,1.4s
Q16A Castle Valley 115.38 49 ⇑PKiKP PKiKP 10 52 11.6 +1.1
baz=116
V15A Kaibab Nationa 115.38 52 ⇓PKiKP PKiKP 10 52 12.3 +1.7
baz=116
DOU Dourbes 115.39 324 PKP PKPdf 10 52 10.9 +0.8
SNF Seneffe 115.39 325 PKP PKPdf 10 52 10.9 +0.8
BW06 Boulder Array 115.42 44 ⇓PKiKP PKiKP 10 52 10.8 +0.4
baz=116
PDAR Pinedale Array 115.42 44 Pdiff Pdif 10 48 31.4 +9.2
comp=Z,1.2nm,1.0s,baz=270,slow=4.4,SNR=7.1
PDAR PKP PKPdf 10 52 11.2 +0.8
comp=Z,8.8nm,1.1s,baz=218,slow=1.7,SNR=36
PDAR PKKPbc PKKPbc 11 02 44.5 -1.1
comp=Z,3.8nm,0.9s,baz=106,slow=5.3,SNR=19
PDAR Pinedale Array 115.42 44 PKP PKPdf 10 52 11.2 +0.8
PDAR PKKPbc PKKPbc 11 02 44.5 -1.1
W15A Williams 115.46 53 ⇓PKiKP PKiKP 10 52 10.9 +0.2
baz=116
114A Black Gap (USA 115.47 56 ⇓PKiKP PKiKP 10 52 10.8 0.0
baz=116
M18A Lyman 115.47 46 ⇑PKiKP PKiKP 10 52 10.8 +0.2
baz=116
P17A Butcher Ranch, 115.55 48 ⇑PKiKP PKiKP 10 52 11.6 +0.8
baz=116
T16A Glen Canyon Da 115.62 51 ⇓PKiKP PKiKP 10 52 11.9 +0.9
baz=116
BAIF Baives 115.63 324 *e*PKIKP PKPdf 10 52 10.1 -0.5
comp=Z,14nm,1.0s
X15A Humboldt 115.64 54 ⇓PKiKP PKiKP 10 52 12.8 +1.7
baz=116
Y15A Casa Rosa Ranc 115.67 54 ⇑PKiKP PKiKP 10 52 12.1 +0.9
baz=116
214A Organ Pipe Nat 115.69 57 ⇑PKiKP PKiKP 10 52 11.6 +0.3
baz=116
L19A Farson 115.77 45 ⇓PKiKP PKiKP 10 52 11.4 +0.2
baz=116
SRU San Rafael 115.81 49 ⇓PKiKP PKiKP 10 52 12.4 +1.1
baz=116
SRU San Rafael 115.81 49 *e*PKPdf PKPdf 10 52 12.2 +0.9
R17A Hanksville Air 115.86 49 ⇑PKiKP PKiKP 10 52 12.2 +0.8
baz=116
O18A Roosevelt 115.86 47 ⇓PKiKP PKiKP 10 52 12.8 +1.4
baz=116
P18A Preston Nutter 115.87 48 ⇓PKiKP PKiKP 10 52 12.8 +1.3
baz=116
LPG La Plagne 115.88 319 *e*PKIKP PKPdf 10 52 10.9 -0.3
comp=Z,14nm,0.8s
LPL La Plagne 115.89 319 *e*PKIKP PKPdf 10 52 10.7 -0.6
comp=Z,25nm,0.9s
CABF La Chapelle 115.89 320 *e*PKIKP PKPdf 10 52 10.8 -0.4
comp=Z,31nm,1.0s
N18A Larsen Ranch, 115.89 46 ⇑PKiKP PKiKP 10 52 12.2 +0.8
baz=116
K19A Absolon Red Bu 115.90 44 ⇑PKiKP PKiKP 10 52 12.3 +0.9
baz=116
S17A Black Ridge (B 116.00 50 ⇓PKiKP PKiKP 10 52 12.6 +0.9
baz=116
115A Sonoran Desert 116.02 56 ⇑PKiKP PKiKP 10 52 13.5 +1.5
baz=116
W16A Flagstaff 116.06 53 ⇓PKiKP PKiKP 10 52 12.0 0.0
baz=116
WUAZ Wupatki 116.09 53 ⇓PKiKP PKiKP 10 52 12.7 +0.8
baz=116
WUAZ Wupatki 116.09 53 *e*PKPdf PKPdf 10 52 13.7 +1.7
WUAZ LR LR
comp=Z,398nm,21.0s,MS5.0
BNI Bardonecchia 116.09 319 PFAKE 10 52 20.0 +8.3
BNI LR LR
comp=Z,370nm,22.0s,MS5.0
M19A Rock Springs 116.10 46 ⇓PKiKP PKiKP 10 52 12.9 +1.1
baz=116
Q18A Rafter H Ranch 116.11 48 ⇓PKiKP PKiKP 10 52 12.2 +0.4
baz=116
MBDF Montbardon 116.15 318 *e*PKIKP PKPdf 10 52 11.4 -0.4
comp=Z,24nm,0.9s
T17A Navajo Res., N 116.17 51 ⇑PKiKP PKiKP 10 52 14.3 +2.2
baz=116
LAO LASA Array 116.25 39 *e*PKPdf PKPdf 10 52 13.3 +1.4
LAO LR LR
comp=Z,471nm,21.0s,MS5.1
FCC Fort Churchill 116.27 24 *e*PKIKP PKPdf 10 52 11.1 -0.5
N19A John Jarvie Ra 116.28 46 ⇓PKiKP PKiKP 10 52 13.1 +1.0
baz=116
X16A Lo Mia Camp, P 116.29 54 ⇓PKiKP PKiKP 10 52 13.7 +1.3
baz=116
K20A Yellowstone Ra 116.30 44 ⇑PKiKP PKiKP 10 52 12.8 +0.7
baz=116
U17A Shonto 116.38 51 ⇑PKiKP PKiKP 10 52 12.5 +0.1
baz=116
Y16A Circle Bar Ran 116.38 54 ⇑PKiKP PKiKP 10 52 13.6 +1.0
baz=116
116A Eloy 116.48 56 ⇓PKiKP PKiKP 10 52 12.9 +0.1
baz=117
R18A Canyonlands Na 116.49 49 ⇓PKiKP PKiKP 10 52 13.0 +0.4
baz=117
O19A Miners Draw (B 116.50 47 ⇑PKiKP PKiKP 10 52 13.3 +0.8
baz=117
L20A Wamsutter 116.52 45 ⇑PKiKP PKiKP 10 52 13.2 +0.6
baz=117
V17A Tonalea, Kykot 116.52 52 ⇑PKiKP PKiKP 10 52 13.3 +0.6
baz=117
Z16A Peralta Trail, 116.54 55 ⇑PKiKP PKiKP 10 52 13.3 +0.4
baz=117
S18A Hurst Farm, Bl 116.60 50 ⇓PKiKP PKiKP 10 52 13.2 +0.3
baz=117
FRF La Foret Royal 116.65 317 *e*PKIKP PKPdf 10 52 11.9 -0.9
comp=Z,68nm,1.3s
ORIF Oris-en-Rattie 116.67 319 *e*PKIKP PKPdf 10 52 12.2 -0.6
ORIF
comp=Z,12nm,0.8s
ORIF *e*MLR MLR
comp=Z,418nm,21.5s,MS4.7
DGMT Dagmar 116.76 37 ⇑PKiKP PKiKP 10 52 13.2 +0.3
baz=117
DGMT Dagmar 116.76 37 *e*PKPdf PKPdf 10 52 13.3 +0.5
DGMT LR LR
comp=Z,359nm,20.0s,MS5.0
M20A Sweetwater, Wa 116.80 45 ⇓PKiKP PKiKP 10 52 13.3 +0.2
baz=117
Q19A Hogan Spring (116.80 48 ⇑PKiKP PKiKP 10 52 13.6 +0.3
baz=117

P19A Cripple Cowboy 116.81 48 ⇑PKiKP PKiKP 10 52 13.3 +0.1
baz=117
216A Three Points, 116.81 56 ⇑PKiKP PKiKP 10 52 14.6 +1.1
baz=117
X17A Forest Lakes 116.82 54 ⇑PKiKP PKiKP 10 52 14.3 +0.9
baz=117
EKA Eskdalemuir Ar 116.84 332 PKKPbc PKKPbc 11 02 39.8 -1.3
comp=Z,2.7nm,1.0s,baz=249,slow=4.0,SNR=4.2
T18A Mexican Hat 116.85 51 ⇑PKiKP PKiKP 10 52 14.3 +0.9
baz=117
ESK Eskdalemuir 116.87 332 *i* PKIKP PKPdf 10 52 14.7 +1.9
ESK Eskdalemuir 116.87 332 PFAKE 10 52 20.0 +7.2
ESK LR LR
comp=Z,323nm,20.0s,MS4.9
Y17A Roosevelt 116.94 54 ⇓PKiKP PKiKP 10 52 13.6 -0.1
baz=117
N20A Spence Gulch, 116.95 46 ⇑PKiKP PKiKP 10 52 14.5 +1.0
baz=117
R19A Curley Farm, L 116.99 49 ⇑PKiKP PKiKP 10 52 14.6 +1.0
baz=117
LOR Lormes 117.03 322 *e*PKIKP PKPdf 10 52 12.7 -0.7
comp=Z,22nm,1.1s
LOR *e*MLR MLR
comp=Z,322nm,21.0s,MS4.6
LOR Lormes 117.03 322 *e*PKPdf PKPdf 10 52 12.7 -0.7
LOR LR LR
comp=Z,320nm,21.0s,MS4.9
U18A Rough Rock, Ch 117.04 51 ⇓PKiKP PKiKP 10 52 14.6 +0.8
baz=117
KEST Kesra 117.05 308 PKP PKPdf 10 52 14.2 +0.4
comp=Z,3.5nm,1.1s,baz=56,slow=3.6,SNR=4.5
KEST PP PP 10 53 19.7 -4.0
comp=Z,5.2nm,1.1s,baz=135,slow=1.4,SNR=4.5
V18A Ganado 117.18 52 ⇓PKiKP PKiKP 10 52 14.8 +0.8
baz=117
O20A White River Ci 117.19 47 ⇓PKiKP PKiKP 10 52 14.4 +0.5
baz=117
L21A Rawlins 117.22 45 ⇑PKiKP PKiKP 10 52 14.6 +0.6
baz=117
SMRF Simiane la Rot 117.22 318 *e*PKIKP PKPdf 10 52 13.4 -0.5
comp=Z,39nm,1.1s
PV04 Paradox Valley 117.23 49 *e*PKPdf PKPdf 10 52 13.9 -0.1
S19A Harvey Farm, M 117.24 50 ⇓PKiKP PKiKP 10 52 14.7 +0.6
baz=117
117A Oracle 117.28 56 ⇑PKiKP PKiKP 10 52 14.6 +0.2
baz=117
P20A De Beque 117.28 48 ⇓PKiKP PKiKP 10 52 15.2 +1.1
baz=117
TUC Tucson 117.30 56 *e*PKIKP PKPdf 10 52 15.8 +1.4
TUC *e* 10 53 25.5
TUC MLR MLR
comp=Z,383nm,20.0s,MS5.0
SMF Signal de Mont 117.30 321 *e*PKIKP PKPdf 10 52 13.1 -0.8
comp=Z,49nm,1.5s
Z17A San Carlos Hig 117.33 55 ⇓PKiKP PKiKP 10 52 15.0 +0.6
baz=117
SSF Saint Saulge 117.33 322 *e*PKIKP PKPdf 10 52 13.3 -0.7
comp=Z,40nm,1.0s
M21A Separation Pea 117.34 45 ⇓PKiKP PKiKP 10 52 14.6 +0.4
baz=117
217A Green Valley 117.39 57 ⇑PKiKP PKiKP 10 52 15.2 +0.6
baz=118
SSB Saint Sauveur 117.41 319 *e*PKIKP PKPdf 10 52 14.8 +0.6
RWWY Rawlins 117.42 45 *e*PKPdf PKPdf 10 52 15.2 +0.9
X18A Snowflake 117.46 53 ⇓PKiKP PKiKP 10 52 15.6 +1.0
baz=118
W18A Petrified Fore 117.48 53 ⇓PKiKP PKiKP 10 52 16.2 +1.6
baz=118
VIVF Saint-Julien-l 117.49 319 *e*PKIKP PKPdf 10 52 13.6 -0.8
comp=Z,25nm,1.1s
N21A Black Mountain 117.51 46 ⇓PKiKP PKiKP 10 52 15.4 +0.8
baz=118
Q20A Ridgley Place, 117.52 48 ⇓PKiKP PKiKP 10 52 15.3 +0.7
baz=118
AVF Avril sur Loir 117.55 321 *e*PKIKP PKPdf 10 52 13.4 -1.0
comp=Z,17nm,0.9s
PV01 Paradox Valley 117.56 49 *e*PKPdf PKPdf 10 52 16.2 +1.5
Y18A Canyon Day Jun 117.58 54 ⇑PKiKP PKiKP 10 52 15.2 +0.3
baz=118
T19A Beclabito 117.58 51 ⇓PKiKP PKiKP 10 52 15.1 +0.3
baz=118
U19A Dine' College, 117.59 51 ⇑PKiKP PKiKP 10 52 14.9 +0.1
baz=118
SFJD Kangerlussuaq 117.65 0 *i* PKIKP PKPdf 10 52 12.0 -2.0
SFJD pmax pmax
comp=Z,8.0nm,0.9s
SFJD Kangerlussuaq 117.65 0 *i* P PKPdf 10 52 12.0 -2.0
comp=Z,7.6nm,0.9s
R20A Redvale 117.69 49 ⇑PKiKP PKiKP 10 52 15.8 +0.8
baz=118
O21A Pagoda 117.73 47 ⇓PKiKP PKiKP 10 52 16.2 +1.2
baz=118
L22A Ellis Ranch, M 117.85 44 ⇓PKiKP PKiKP 10 52 16.4 +1.2
baz=118
V19A Window Rock 117.87 52 ⇓PKiKP PKiKP 10 52 16.4 +1.0
baz=118
MVCO Mesa Verde 117.88 50 ⇑PKiKP PKiKP 10 52 16.4 +1.0
baz=118
MVCO Mesa Verde 117.88 50 *e*PKPdf PKPdf 10 52 16.7 +1.4
MVCO LR LR
comp=Z,351nm,21.0s,MS5.0
118A Homack Ranch, 117.90 55 ⇓PKiKP PKiKP 10 52 16.8 +1.3
baz=118
BGF Bois d'Agland 117.96 321 *e*PKIKP PKPdf 10 52 14.7 -0.5
comp=Z,46nm,1.0s
218A Dragoon 117.98 56 ⇓PKiKP PKiKP 10 52 16.9 +1.2
baz=118
X19A St. Johns 118.01 53 ⇓PKiKP PKiKP 10 52 17.2 +1.5
baz=118
Q21A Lamborn Mesa, 118.09 48 ⇑PKiKP PKiKP 10 52 16.2 +0.5
baz=118
318A Bisbee 118.15 57 ⇑PKiKP PKiKP 10 52 15.4 -0.7
baz=118
Y19A Nutrioso 118.16 54 ⇑PKiKP PKiKP 10 52 16.6 +0.5
baz=118
N22A Wattenberg Ran 118.26 46 ⇑PKiKP PKiKP 10 52 16.1 +0.1
baz=118
S21A Coal Bank Pass 118.28 49 ⇓PKiKP PKiKP 10 52 17.4 +1.2
baz=118
V20A Brimhall 118.30 52 ⇑PKiKP PKiKP 10 52 17.2 +1.0
baz=118
LASF Ste Croix 118.33 318 *e*PKIKP PKPdf 10 52 15.3 -0.7
comp=Z,54nm,1.4s
119A Ashpeak Ranch, 118.41 55 ⇑PKiKP PKiKP 10 52 17.6 +1.1
baz=118
SMCO Snowmass 118.42 48 *e*PKPdf PKPdf 10 52 18.2 +1.9
TCF Toulx Ste Croi 118.47 321 *e*PKIKP PKPdf 10 52 15.6 -0.6
comp=Z,48nm,1.1s
Q22A Crested Butte, 118.57 48 ⇑PKiKP PKiKP 10 52 18.1 +1.4
baz=119
X20A Quemado 118.62 53 ⇓PKiKP PKiKP 10 52 17.9 +1.1
baz=119
219A White Tail Can 118.63 56 ⇑PKiKP PKiKP 10 52 17.3 +0.3
baz=119
T21A Navajo Lake 118.68 50 ⇓PKiKP PKiKP 10 52 17.8 +0.9
baz=119
RSSD Black Hills 118.68 41 *e*PKIKP PKPdf 10 52 16.8 +0.1
RSSD MLR MLR
comp=Z,426nm,19.0s,MS5.1
U21A Nageezi 118.75 51 ⇓PKiKP PKiKP 10 52 18.6 +1.5
baz=119
319A Douglas 118.75 57 ⇑PKiKP PKiKP 10 52 18.3 +1.1
baz=119
PHWY Pilot Hill 118.79 45 *e*PKPdf PKPdf 10 52 17.7 +0.7
LDF La Druitiere 118.82 324 *e*PKIKP PKPdf 10 52 16.1 -0.7
comp=Z,17nm,1.1s
Y20A Horse Springs, 118.88 54 ⇓PKiKP PKiKP 10 52 18.0 +0.6
baz=119
R22A Saguache, Gunn 118.89 49 ⇑PKiKP PKiKP 10 52 18.7 +1.4
baz=119
Z20A Nine Sixteen R 118.91 55 ⇓PKiKP PKiKP 10 52 18.1 +0.6
baz=119
FLN L Foliniere 118.94 325 *e*PKIKP PKPdf 10 52 16.3 -0.7
comp=Z,43nm,1.4s
FLN *e*MLR MLR
comp=Z,379nm,21.0s,MS4.7
FLN La Foliniere 118.94 325 *e*PKPdf PKPdf 10 52 16.3 -0.7
FLN LR LR
comp=Z,380nm,21.0s,MS5.0
V21A Milan 118.95 51 ⇓PKiKP PKiKP 10 52 18.3 +0.8
baz=119
120A U Bar Ranch, L 119.01 55 ⇑PKiKP PKiKP 10 52 18.6 +0.9
baz=119
W21A San Fidel 119.13 52 ⇑PKiKP PKiKP 10 52 19.2 +1.3
baz=119
CAF Calviac 119.15 320 *e*PKIKP PKPdf 10 52 17.2 -0.4
comp=Z,45nm,1.2s
T22A Edith 119.16 50 ⇓PKiKP PKiKP 10 52 19.1 +1.2

baz=119
X21A Alamocita Cree 119.21 53 ⇓PKiKP PKiKP 10 52 18.9 +0.9
baz=119
ISCO Idaho Springs 119.21 46 *e*PKIKP PKPdf 10 52 19.0 +1.2
ISCO MLR MLR
comp=Z,393nm,21.0s,MS5.0
220A Playas Peak, P 119.26 56 ⇓PKiKP PKiKP 10 52 18.8 +0.6
baz=119
RJF Les Rejaudoux 119.34 320 *e*PKIKP PKPdf 10 52 17.5 -0.4
comp=Z,101nm,1.7s
RJF *e*MLR MLR
comp=Z,311nm,22.5s,MS4.6
RJF Les Rejaudoux 119.34 320 *e*PKPdf PKPdf 10 52 17.5 -0.4
RJF LR LR
comp=Z,310nm,22.5s,MS4.9
GRR Gorron 119.35 324 *e*PKIKP PKPdf 10 52 17.1 -0.7
comp=Z,55nm,1.4s
U22A Llaves 119.39 51 ⇓PKiKP PKiKP 10 52 20.1 +1.7
baz=120
320A Kipp Ranch, An 119.39 57 ⇑PKiKP PKiKP 10 52 19.9 +1.4
baz=120
Y21A Point of Rocks 119.42 53 ⇓PKiKP PKiKP 10 52 20.4 +1.9
baz=120
V22A San Miguel Ran 119.48 51 ⇓PKiKP PKiKP 10 52 19.7 +1.2
baz=120
Z21A St. Cloud Mine 119.60 54 ⇓PKiKP PKiKP 10 52 19.8 +1.0
baz=120
121A Cooks Peak, D 119.71 55 ⇑PKiKP PKiKP 10 52 20.1 +1.0
baz=120
MTLF Montolieu 119.71 318 *e*PKIKP PKPdf 10 52 17.8 -0.9
comp=Z,36nm,1.1s
LAZ Ladron 119.73 53 *e*PKPdf PKPdf 10 52 20.8 +1.8
W22A Albuquerque 119.76 52 ⇓PKiKP PKiKP 10 52 20.8 +1.7
baz=120
MFF Saint Martin d 119.78 322 *e*PKIKP PKPdf 10 52 17.9 -0.8
comp=Z,39nm,1.0s
X22A Bernardo 119.81 53 ⇓PKiKP PKiKP 10 52 20.8 +1.6
baz=120
221A Mesquite Ranch 119.85 56 ⇓PKiKP PKiKP 10 52 21.1 +1.8
baz=120
U23A El Rito 119.91 50 ⇓PKiKP PKiKP 10 52 20.4 +1.0
baz=120
LENM Lemitar 119.93 53 *e*PKPdf PKPdf 10 52 21.1 +1.7
SDCO Great Sand Dun 119.98 49 *e*PKPdf PKPdf 10 52 20.7 +1.3
SDCO LR LR
comp=Z,397nm,20.0s,MS5.0
LFF La Frestale 119.99 320 *e*PKIKP PKPdf 10 52 18.8 -0.4
comp=Z,78nm,1.2s
Y22D IRIS PASSCAL I 120.00 53 ⇑PKiKP PKiKP 10 52 20.8 +1.2
baz=120
Y22A Socorro 120.00 53 ⇓PKiKP PKiKP 10 52 21.0 +1.4
baz=120
V23A Ortiz Mt. (NFS 120.09 51 ⇑PKiKP PKiKP 10 52 21.9 +2.1
baz=120
ANMO Albuquerque 120.11 52 *c i* PKIKP PKPdf 10 52 19.0 -0.7
ANMO pmax pmax
comp=Z,32nm,1.2s
ANMO Albuquerque 120.11 52 *e*PKPdf PKPdf 10 52 20.7 +1.0
ANMO LR LR
comp=Z,289nm,19.0s,MS4.9
Z22A Elephant Butte 120.19 54 ⇑PKiKP PKiKP 10 52 21.3 +1.3
baz=120
BNM Barren Site 120.21 53 *e*PKPdf PKPdf 10 52 21.6 +1.7
W23A Werner Place, 120.30 52 ⇓PKiKP PKiKP 10 52 21.7 +1.6
baz=120
122A Conniff Cattle 120.31 55 ⇓PKiKP PKiKP 10 52 20.9 +0.6
baz=120
222A Williams Famil 120.38 55 ⇓PKiKP PKiKP 10 52 20.9 +0.5
baz=120
SGMF Saint Gilles 120.39 325 *e*PKIKP PKPdf 10 52 18.9 -0.9
comp=Z,54nm,1.3s
X23A Hourglass Bar 120.44 52 ⇑PKiKP PKiKP 10 52 20.5 0.0
baz=120
U24A Moreno Valley 120.58 50 ⇓PKiKP PKiKP 10 52 21.7 +1.0
baz=121
ULM Lac du Bonnet 120.59 32 PKP PKPdf 10 52 19.7 -0.5
comp=Z,24nm,0.9s,baz=315,slow=3.0,SNR=19
ULM PKKPbc PKKPbc 11 02 25.5 -1.8
comp=Z,2.9nm,0.6s,baz=137,slow=6.6,SNR=3.0
ULM Lac du Bonnet 120.59 32 *e*PKPdf PKPdf 10 52 19.7 -0.4
ULM LR LR
comp=Z,547nm,22.0s,MS5.2
Y23A Lovelace Mesa, 120.73 53 ⇑PKiKP PKiKP 10 52 21.6 +0.6
baz=121
ROSF Rostrenen 120.76 325 *e*PKIKP PKPdf 10 52 19.7 -0.8
comp=Z,9.8nm,0.9s
Z23A Rita Site, Whi 120.78 54 ⇑PKiKP PKiKP 10 52 21.8 +0.6
baz=121
W24A Lazy 6 Ranch, 120.86 51 ⇑PKiKP PKiKP 10 52 22.4 +1.1
baz=121
QUIF Quistinic 120.92 325 *e*PKIKP PKPdf 10 52 20.0 -0.9
comp=Z,26nm,1.0s
223A Chaparral, Ant 120.96 55 ⇑PKiKP PKiKP 10 52 22.4 +0.8
baz=121
T25A Trinidad 121.00 49 ⇓PKiKP PKiKP 10 52 21.7 +0.2
baz=121
X24A Lazy VL Ranch, 121.03 52 ⇑PKiKP PKiKP 10 52 22.2 +0.6
baz=121
EPF Esparros 121.09 318 *e*PKIKP PKPdf 10 52 20.6 -0.7
comp=Z,20nm,1.1s
Y24A Capitan 121.22 53 ⇑PKiKP PKiKP 10 52 22.9 +0.9
baz=121
U25A Circle Dot Ran 121.25 50 ⇑PKiKP PKiKP 10 52 22.4 +0.4
baz=121
V25A Rancho No Teng 121.28 50 ⇓PKiKP PKiKP 10 52 22.7 +0.7
baz=121
OGNE Ogallala 121.32 44 *e*PKPdf PKPdf 10 52 22.0 +0.1
OGNE *e*PP PP 10 53 56.8 +4.0
Z24A Sheeppen Canyo 121.45 54 ⇑PKiKP PKiKP 10 52 23.6 +1.1
baz=122
124A Stringfield Ra 121.56 54 ⇑PKiKP PKiKP 10 52 24.0 +1.3
baz=122
W25A X Bar L Ranch, 121.59 51 ⇓PKiKP PKiKP 10 52 23.8 +1.1
baz=122
X25A Clemmons Ranch 121.65 52 ⇓PKiKP PKiKP 10 52 22.5 -0.3
baz=122
224A Cornudas Mount 121.68 55 ⇓PKiKP PKiKP 10 52 22.8 -0.1
baz=122
AGMN Agassiz Nation 121.68 34 *e*PKPdf PKPdf 10 52 21.9 -0.4
AGMN LR LR
comp=Z,546nm,20.0s,MS5.2
ETSF Etsaut 121.74 319 *e*PKIKP PKPdf 10 52 22.7 +0.1
comp=Z,46nm,1.2s
U26A Atchley Ranch, 121.76 50 ⇓PKiKP PKiKP 10 52 23.1 +0.1
baz=122
Y25A Mesa, Roswell 121.81 53 ⇑PKiKP PKiKP 10 52 23.2 +0.1
baz=122
324A Moseley Ranch, 121.88 56 ⇓PKiKP PKiKP 10 52 23.5 +0.1
baz=122
MNTX Cornudas Mount 121.90 55 *e*PKPdf PKPdf 10 52 23.8 +0.6
V26A Tequesquite Ra 121.93 50 ⇓PKiKP PKiKP 10 52 23.2 -0.1
baz=122
Z25A Roswell 121.99 53 ⇓PKiKP PKiKP 10 52 23.6 +0.1
baz=122
W26A Owens Ranch, T 122.17 51 ⇓PKiKP PKiKP 10 52 23.8 0.0
baz=122
125A Gardner Draw, 122.22 54 ⇑PKiKP PKiKP 10 52 24.8 +0.7
baz=122
225A Deer Hill, Car 122.24 55 ⇓PKiKP PKiKP 10 52 24.9 +0.8
baz=122
X26A CR and CF Fran 122.31 52 ⇑PKiKP PKiKP 10 52 24.2 0.0
baz=122
325A Bean Ranch, Si 122.32 56 ⇑PKiKP PKiKP 10 52 24.5 +0.3
baz=122
425A Indio Mountain 122.47 56 ⇓PKiKP PKiKP 10 52 24.6 0.0
baz=123
Y26A Elida 122.50 52 ⇑PKiKP PKiKP 10 52 24.4 -0.1
baz=123
Z26A Caprock 122.58 53 ⇑PKiKP PKiKP 10 52 24.5 -0.2
baz=123
GDL2 Guadalupe Moun 122.59 54 *e*PKPdf PKPdf 10 52 25.8 +1.2
W27A Bowe Ranch, En 122.73 51 ⇑PKiKP PKiKP 10 52 25.2 +0.2
baz=123
126A Clayton Basin, 122.73 54 ⇑PKiKP PKiKP 10 52 25.5 +0.5
baz=123
CPRX Cap Rock 122.74 53 *e*PKPdf PKPdf 10 52 25.6 +0.8
X27A F and S Farms, 122.84 51 ⇓PKiKP PKiKP 10 52 25.2 0.0
baz=123
226A Malaga, Loving 122.84 55 ⇓PKiKP PKiKP 10 52 25.8 +0.5
baz=123
CLNB Carlsbad 122.96 54 *e*PKPdf PKPdf 10 52 26.1 +0.8
Y27A Causey 123.03 52 ⇓PKiKP PKiKP 10 52 26.0 +0.4
baz=123
TAM Tamanrasset 123.10 294 *e*PKIKP PKPdf 10 52 27.9 +2.1
TAM MLR MLR
comp=Z,386nm,22.0s,MS5.0
326A Caldwell Ranch 123.15 55 ⇓PKiKP PKiKP 10 52 25.6 -0.2
baz=123

Z27A Tatum 123.17 53 ⇑PKiKP PKiKP 10 52 25.8 -0.1
baz=123
127A Arkansas Junct 123.26 54 ⇓PKiKP PKiKP 10 52 26.3 +0.2
baz=123
426A McDonald Obser 123.29 56 ⇓PKiKP PKiKP 10 52 26.2 0.0
baz=123
MSTX Muleshoe 123.31 52 ⇑PKiKP PKiKP 10 52 26.2 0.0
baz=123
526A Mary Lane Ranc 123.41 57 ⇓PKiKP PKiKP 10 52 26.7 +0.3
baz=124
626A Big Bend Ranch 123.51 57 ⇑PKiKP PKiKP 10 52 26.7 +0.1
baz=124
227A Bennet, Jal 123.51 54 ⇓PKiKP PKiKP 10 52 27.4 +0.9
baz=124
ECSD EROS Data Cent 123.64 39 *e*PKPdf PKPdf 10 52 26.2 0.0
ECSD LR LR
comp=Z,395nm,21.0s,MS5.0
427A Hayter Ranch, 123.76 56 ⇓PKiKP PKiKP 10 52 27.9 +0.7
baz=124
527A Woodward Ranch 123.78 57 ⇑PKiKP PKiKP 10 52 27.6 +0.4
baz=124
CBKS Cedar Bluff 123.80 46 *e*PKIKP PKPdf 10 52 27.5 +0.8
CBKS MLR MLR
comp=Z,439nm,20.0s,MS5.1
AMTX Amarillo 123.86 51 *e*PKPdf PKPdf 10 52 27.8 +0.9
AMTX LR LR
comp=Z,395nm,19.0s,MS5.1
TXAR Lajitas Array 123.96 58 PKP PKPdf 10 52 27.9 +0.7
comp=Z,9.2nm,0.9s,baz=204,slow=2.0,SNR=73
TXAR PKKPbc PKKPbc 11 02 13.7 0.0
comp=Z,0.9nm,0.9s,baz=120,slow=5.9,SNR=6.9
TXAR PKKP PKKPdf 11 02 55.2 +1.6
comp=Z,0.5nm,0.8s,baz=106,slow=4.4,SNR=3.7
TXAR SKKPbc 11 06 00.3
comp=Z,0.5nm,1.0s,baz=131,slow=5.1,SNR=3.5
TXAR Lajitas Array 123.96 58 PKP PKPdf 10 52 27.9 +0.7
TXAR PKKPbc PKKPbc 11 02 13.7 0.0
TXAR PKKP PKKPdf 11 02 55.2 +1.6
TXAR SKKPbc 11 06 00.3
328A Wristen Ranch, 124.09 55 ⇑PKiKP PKiKP 10 52 28.0 +0.2
baz=124
627A Terlingua Ranc 124.16 57 ⇓PKiKP PKiKP 10 52 28.3 +0.4
baz=124
EYMN Ely 124.27 32 *e*PKPdf PKPdf 10 52 27.4 +0.1
EYMN LR LR
comp=Z,313nm,21.0s,MS5.0
428A Kincaid Ranch, 124.39 56 ⇓PKiKP PKiKP 10 52 28.5 +0.2
baz=124
528A Cox Ranch, San 124.47 56 ⇓PKiKP PKiKP 10 52 28.7 +0.1
baz=125
628A Black Gap, Mar 124.57 57 ⇓PKiKP PKiKP 10 52 28.6 -0.2
baz=125
ESDC Sonseca Array 125.49 317 PKP PKPdf 10 52 28.2 -1.7
comp=Z,4.6nm,1.0s,baz=48,slow=1.9,SNR=18
ESDC PP PP 10 54 20.2 -0.7
comp=Z,4.2nm,1.1s,baz=66,slow=6.8,SNR=8.0
ESLA Sonseca Array 125.49 317 *e*PKPdf PKPdf 10 52 30.3 +0.4
ESLA *e*PP PP 10 54 21.4 +0.6
ESLA LR LR
comp=Z,1μm,19.0s,MS5.6
PAB San Pablo 125.81 317 *e*PKIKP PKPdf 10 52 31.2 +0.7
PAB *e* 10 54 24.2
PAB San Pablo 125.81 317 *e*PKPdf PKPdf 10 52 31.2 +0.7
PAB *e*PP PP 10 54 24.2 +1.2
PAB *e*SKPdf SKPdf 10 56 03.2 +0.6
KSU1 Kansas State U 125.87 44 *e*PKPdf PKPdf 10 52 31.3 +0.6
KSU1 LR LR
comp=Z,580nm,22.0s,MS5.2
WMOK Wichita Mounta 126.13 50 *e*PKIKP PKPdf 10 52 31.9 +0.6
WMOK MLR MLR
comp=Z,345nm,21.0s,MS5.0
SCIA State Center 126.72 39 *e*PKPdf PKPdf 10 52 33.0 +0.8
SCIA LR LR
comp=Z,340nm,22.0s,MS5.0
MVO Moncorvo 126.80 320 *e*PKPdf PKPdf 10 52 33.5 +1.2
JCT Junction City 126.83 55 *e*PKIKP PKPdf 10 52 33.4 +0.7
JCT MLR MLR
comp=Z,341nm,19.0s,MS5.0
PVRL Vila Real 127.18 320 *e*PKPdf PKPdf 10 52 34.9 +1.8
MTE Manteigas 127.53 319 PFAKE 10 52 50.0 +16
MTE LR LR
comp=Z,276nm,19.0s,MS5.0
MTE Manteigas 127.53 319 *e*PKPdf PKPdf 10 52 35.3 +1.5
PVIS Viseu 127.59 320 *e*PKPdf PKPdf 10 52 35.7 +1.8
PCBR Castelo Branco 127.77 318 *e*PKPdf PKPdf 10 52 36.0 +1.7
PMRV Marv??o 127.93 318 *e*PKPdf PKPdf 10 52 35.6 +1.0
TOA0 Torodi Ar. Sit 127.94 283 *e*PKPdf PKPdf 10 52 34.9 -0.3
TORD Torodi Ar. Bea 127.94 283 PKP PKPdf 10 52 34.6 -0.6
comp=Z,344nm,0.9s,baz=88,slow=2.2,SNR=121
TORD PKKPbc 11 01 57.9
comp=Z,2.4nm,1.0s,baz=286,slow=4.1,SNR=5.6
TORD PKKP 11 02 47.1
comp=Z,1.2nm,0.9s,baz=300,slow=4.8,SNR=3.8
JFWS Jewell Farm 127.98 37 *e*PKIKP PKPdf 10 52 34.6 0.0
JFWS MLR MLR
comp=Z,473nm,21.0s,MS5.2
SCHQ Schefferville 128.12 12 PKP PKPdf 10 52 34.7 +0.2
comp=Z,29nm,1.1s,baz=4.3,slow=4.8,SNR=13
SCHQ Schefferville 128.12 12 *e*PKPdf PKPdf 10 52 34.7 +0.3
PBAR Barrancos 128.31 316 *e*PKPdf PKPdf 10 52 37.1 +1.8
PESTR Estremoz 128.34 317 *e*PKPdf PKPdf 10 52 37.2 +1.8
PTOM Tomar 128.50 319 *e*PKPdf PKPdf 10 52 37.6 +1.9
SFS San Fernando 128.54 314 PFAKE 10 52 50.0 +14
SFS LR LR
comp=Z,643nm,21.0s,MS5.3
EVO Evora 128.80 317 *e*PKIKP PKPdf 10 52 37.0 +0.8
comp=Z,72nm,1.3s
EVO *e*MLR MLR
comp=Z,303nm,22.8s,MS4.6
EVO Evora 128.80 317 *e*PKPdf PKPdf 10 52 36.0 -0.2
PBEJ Beja 128.95 317 *e*PKPdf PKPdf 10 52 37.6 +1.0
PVAQ Vaqueiros 129.16 316 *e*PKPdf PKPdf 10 52 37.9 +0.9
PCVE Castro Verde 129.27 316 *e*PKPdf PKPdf 10 52 38.0 +0.8
KVTX Kingsville 129.34 58 PFAKE 10 52 50.0 +12
KVTX LR LR
comp=Z,394nm,19.0s,MS5.1
PBDV Barranco-do-Ve 129.38 316 *e*PKPdf PKPdf 10 52 39.5 +2.1
PMAFR Mafra 129.43 318 *e*PKPdf PKPdf 10 52 38.3 +0.9
MORF Marmelete 129.85 316 *e*PKPdf PKPdf 10 52 40.7 +2.4
GLMI Grayling 129.92 31 *e*PKPdf PKPdf 10 52 39.2 +1.0
GLMI LR LR
comp=Z,426nm,22.0s,MS5.1
HDIL Hopedale 129.93 39 *e*PKPdf PKPdf 10 52 38.1 -0.2
HDIL LR LR
comp=Z,458nm,20.0s,MS5.2
CCM Cathedral Cave 130.04 42 *e*PKHKP 10 52 26.0
CCM *e* 10 52 38.9
CCM MLR MLR
comp=Z,267nm,20.0s,MS4.9
CCM Cathedral Cave 130.04 42 *e*PKPpre 10 52 26.0
CCM *e*PKPdf PKPdf 10 52 38.9 +0.3
CCM *e*SKP 10 56 03.6
CCM LR LR
comp=Z,267nm,20.0s,MS4.9
PFVI Vila Bisbo 130.06 316 *e*PKPdf PKPdf 10 52 40.1 +1.4
MIAR Mount Ida 130.11 48 *e*PKHKP 10 52 24.1
MIAR *e* 10 52 39.7
MIAR MLR MLR
comp=Z,629nm,22.0s,MS5.3
RTC Rabat Centre 130.13 312 PFAKE 10 52 50.0 +11
RTC LR LR
comp=Z,302nm,20.0s,MS5.0
HKT Hockley 130.23 54 *e*PKIKP PKPdf 10 52 39.6 +0.4
HKT MLR MLR
comp=Z,461nm,20.0s,MS5.2
NATX Nacogdoches 130.47 51 *e*PKPdf PKPdf 10 52 40.7 +1.0
NATX LR LR
comp=Z,315nm,19.0s,MS5.0
FVM French Village 130.63 42 *e*PKIKP PKPdf 10 52 40.1 +0.3
UALR University of 130.90 47 *e*PKPdf PKPdf 10 52 41.0 +0.7
PLCA Paso Flores 131.30 160 PKP PKPdf 10 52 42.1 +1.1
comp=Z,32nm,1.2s,baz=226,slow=2.9,SNR=19
PLCA Paso Flores 131.30 160 PKIKP PKPdf 10 52 42.1 +1.1
PLCA pmax pmax
comp=Z,32nm,1.2s
PLCA Paso Flores 131.30 160 *e*PKPdf PKPdf 10 52 42.2 +1.3
PLCA LR LR
comp=Z,468nm,21.0s,MS5.2
SIUC Southern Illin 131.58 42 *e*PKPdf PKPdf 10 52 42.1 +0.6
HBAR Harrisburg 131.73 45 *e*PKPdf PKPdf 10 52 43.0 +1.1
OLIL Olney 131.74 40 *e*PKPdf PKPdf 10 52 42.6 +0.8
PARMO Parma 131.78 43 *e*PKPdf PKPdf 10 52 42.6 +0.6
GNAR Gosnell 131.97 44 *e*PKPpre 10 52 36.3
GNAR *e*PKPdf PKPdf 10 52 43.5 +1.2
AAM Ann Arbor 132.14 33 *e*PKIKP PKPdf 10 52 42.7 +0.2
AAM MLR MLR
comp=Z,473nm,22.0s,MS5.2
USIN University of 132.46 40 *e*PKPdf PKPdf 10 52 43.7 +0.5
BLO Bloomington 132.47 38 *e*PKHKP 10 52 33.6
BLO *e* 10 52 44.3
WCI Wyandotte Cave 133.18 39 *e*PKIKP PKPdf 10 52 37.3 -7.3
WCI *e* 10 52 45.7
WCI MLR MLR
comp=Z,461nm,22.0s,MS5.2
WVT Waverly 133.38 43 *e*PKIKP PKPdf 10 52 37.8 -7.2
WVT *e* 10 52 45.3
WVT MLR MLR
comp=Z,268nm,19.0s,MS5.0
VBMS Vicksburg 133.44 49 *e*PKPdf PKPdf 10 52 45.3 0.0
VBMS *e*PP PP 10 55 11.6 -1.4
VBMS *e*SKPab 10 56 17.2
VBMS LR LR
comp=Z,358nm,21.0s,MS5.1
PLAL Pickwick Lake 133.83 44 *e*PKPpre 10 52 39.6
PLAL *e*PKPdf PKPdf 10 52 44.8 -1.1
PLAL LR LR
comp=Z,369nm,20.0s,MS5.1
ACSO Alum Creek Sta 133.91 35 *e*PKPpre 10 52 39.2
ACSO *e*PKPdf PKPdf 10 52 46.0 +0.1
ACSO LR LR
comp=Z,344nm,20.0s,MS5.1
ERPA Erie 134.22 31 *e*PKPdf PKPdf 10 52 47.2 +0.8
ERPA LR LR
comp=Z,342nm,20.0s,MS5.1
KIC Kosan Boka 134.55 274 *e*PKP2 PKPdf 10 52 49.4 +1.6
comp=Z,87nm,1.2s
DBIC Dimbokro 134.67 275 PKP PKPdf 10 52 48.1 +0.1
comp=Z,29nm,1.0s,baz=68,slow=2.4,SNR=14
DBIC Dimbokro 134.67 275 PKIKP PKPdf 10 52 48.2 +0.2
DBIC pmax pmax
comp=Z,29nm,1.0s
DBIC Dimbokro 134.67 275 *e*PKPdf PKPdf 10 52 48.9 +0.9
DBIC LR LR
comp=Z,529nm,22.0s,MS5.2
LONY Lake Ozonia 134.78 24 *e*PKPdf PKPdf 10 52 47.4 +0.1
LONY LR LR
comp=Z,344nm,20.0s,MS5.1
TIC Toumodi 134.83 275 *e*PKP2 PKPdf 10 52 49.8 +1.5
comp=Z,73nm,1.1s
LIC Lamto 134.84 274 *e*PKP2 PKPdf 10 52 48.4 0.0
comp=Z,89nm,1.0s
LIC Lamto 134.84 274 *e*PKIKP PKPdf 10 52 48.4 0.0
comp=Z,69nm,1.0s
LIC *e*MLR MLR
comp=Z,632nm,22.5s,MS5.0
LIC Lamto 134.84 274 *e*PKPdf PKPdf 10 52 48.4 0.0
LIC LR LR
comp=Z,320nm,22.5s,MS5.0
NCB Newcomb 135.46 25 *e*PKPdf PKPdf 10 52 49.1 +0.4
NCB LR LR
comp=Z,422nm,22.0s,MS5.1
LRAL Lakeview Retre 135.62 46 *e*PKPpre 10 52 34.7
LRAL *e*PKPdf PKPdf 10 52 49.6 +0.3
LRAL LR LR
comp=Z,427nm,21.0s,MS5.2
TZTN Tazewell 135.94 39 *e*PKPdf PKPdf 10 52 50.2 +0.4
CPCT Cooper Cave 135.97 41 *e*PKPdf PKPdf 10 52 50.3 +0.4
MCWV Mont Chateau 136.05 33 *e*PKPpre 10 52 44.9
MCWV *e*PKPdf PKPdf 10 52 50.8 +0.9
MCWV LR LR
comp=Z,516nm,21.0s,MS5.2
BINY Binghamton 136.10 28 *e*PKPdf PKPdf 10 52 50.0 +0.1
BINY LR LR
comp=Z,367nm,20.0s,MS5.1
LBNH Lisbon 136.15 22 PFAKE 10 53 00.0 +10
LBNH LR LR
comp=Z,408nm,21.0s,MS5.1
PKME Peaks-Kenny Pk 136.19 19 PFAKE 10 53 00.0 +10
PKME LR LR
comp=Z,417nm,22.0s,MS5.1
TRQA Tornquist 136.27 167 PFAKE 10 53 00.0 +10
TRQA LR LR
comp=Z,489nm,21.0s,MS5.2
TKL Tuckaleechee C 136.34 40 *e*PKIKP PKPdf 10 52 50.8 +0.3
SSPA Standing Stone 136.38 31 *e*PKPdf PKPdf 10 52 50.7 +0.3
SSPA LR LR
comp=Z,335nm,21.0s,MS5.0
BRAL Brewton 136.61 48 *e*PKPdf PKPdf 10 52 53.0 +1.8
BRAL LR LR
comp=Z,324nm,20.0s,MS5.0
ELN Prospectdale 137.21 36 *e*PKPdf PKPdf 10 52 52.2 +0.1
BLA Blacksburg 137.42 36 *e*PKIKP PKPdf 10 52 52.8 +0.3
BLA MLR MLR
comp=Z,383nm,21.0s,MS5.1
GOGA Godfrey 137.87 43 *e*PKHKP 10 52 44.4
GOGA *e* 10 52 54.1
GOGA MLR MLR
comp=Z,389nm,21.0s,MS5.1
CBN Corbin 138.44 33 *e*PKPdf PKPdf 10 52 55.5 +1.1
CBN LR LR
comp=Z,494nm,22.0s,MS5.2
JSC Jenkinsville 138.81 40 *e*PKIKP PKPdf 10 52 57.1 +1.9
COW Cow Castle Cre 139.73 41 *e*PKPdf PKPdf 10 52 58.4 +1.6
TEIG Tepich 139.97 64 PFAKE 10 53 10.0 +12
TEIG LR LR
comp=Z,353nm,22.0s,MS5.1
NHSC New Hope 140.25 41 PFAKE 10 53 10.0 +12
NHSC LR LR
comp=Z,502nm,21.0s,MS5.2
CNNC Cliffs of the 140.25 36 PFAKE 10 53 10.0 +12
CNNC LR LR
comp=Z,744nm,21.0s,MS5.4
LCO Las Campanas 141.34 151 *e*PKPpre 10 52 56.1
LCO LR LR
comp=Z,296nm,20.0s,MS5.0
DWPF Disney 142.30 48 PFAKE 10 53 10.0 +8.4
DWPF LR LR
comp=Z,295nm,20.0s,MS5.0
TGUH Tegucigalpa,Un 142.43 73 *e*PKPdf PKPdf 10 53 02.7 +0.5
TGUH LR LR
comp=Z,246nm,21.0s,MS4.9
JTS JuntasAbangare 145.25 79 *e*PKIKP PKPdf 10 53 07.9 +0.7
JTS MLR MLR
comp=Z,316nm,20.0s
CPUP Villa Florida 148.58 168 PKP PKPdf 10 53 13.1 +0.6
comp=Z,120nm,1.0s,baz=151,slow=0.9,SNR=27
CPUP PKPbc PKPbc 10 53 16.0 -0.1
comp=Z,120nm,1.0s,baz=180,slow=3.0,SNR=78
NNA Nana 148.97 122 *e*PKPdf PKPdf 10 53 14.8 +1.4
NNA *e*PKPbc PKPbc 10 53 18.2 +0.7
NNA LR LR
comp=Z,528nm,20.0s,MS5.3
BBSR BB Station 149.24 24 *e*PKPdf PKPdf 10 53 14.3 +1.0
BBSR *e*PKPbc PKPbc 10 53 18.1 +0.5
BBSR *e*PKPab PKPab 10 53 22.5 +0.5
BBSR LR LR
comp=Z,237nm,20.0s,MS5.0
MTDJ Mount Denham 150.16 61 *e*PKPdf PKPdf 10 53 15.5 +0.4
MTDJ *e*PKPbc PKPbc 10 53 20.5 +0.3
MTDJ LR LR
comp=Z,336nm,20.0s,MS5.1
BCIP Isla Barro Col 150.40 79 *e*PKPdf PKPdf 10 53 15.7 +0.1
BCIP *e*PKPbc PKPbc 10 53 20.7 -0.2
BCIP LR LR
comp=Z,286nm,20.0s,MS5.1
GTBY Guantanamo Bay 151.46 56 *e*PKPbc PKPbc 10 53 23.2 0.0
GTBY LR LR
comp=Z,321nm,22.0s,MS5.1
OTAV Otavalo 151.63 98 *e*PKPdf PKPdf 10 53 19.0 +1.4
OTAV LR LR
comp=Z,232nm,20.0s,MS5.0
CAM4 Nova Friburgo 152.20 196 ⇑*i*P PKPdf 10 53 25.2 +7.0
CAM4 *i* 10 53 35.7
CAM4 *i* 10 53 48.7
CAM4 *i* 10 54 05.2
LPAZ La Paz 152.85 140 PKP PKPdf 10 53 20.4 +1.1
comp=Z,25nm,1.0s,baz=357,slow=0.8,SNR=64
LPAZ PKPbc PKPbc 10 53 28.2 +1.7
comp=Z,61nm,0.9s,baz=237,slow=1.0,SNR=41
LPAZ La Paz 152.85 140 PKIKP PKPdf 10 53 20.4 +1.1
LPAZ 10 53 28.2
LPAZ pmax pmax
comp=Z,25nm,1.0s
LPAZ La Paz 152.85 140 *e*PKPdf PKPdf 10 53 21.1 +1.8
LPAZ *e*PKPbc PKPbc 10 53 28.1 +1.7
LPAZ LR LR
comp=Z,308nm,20.0s,MS5.1
GRTK Grand Turk 153.73 48 PFAKE 10 53 30.0 +10
GRTK LR LR
comp=Z,329nm,20.0s,MS5.2
SDDR Presa de Saban 155.04 53 *e*PKPdf PKPdf 10 53 23.1 +0.8
SDDR LR LR
comp=Z,317nm,21.0s,MS5.1
ROSC El Rosal 156.12 88 PKP PKPdf 10 53 25.2 +1.3
comp=Z,22nm,0.9s,baz=257,slow=5.5,SNR=17
ROSC PKPab PKPab 10 53 54.2 +2.5
comp=Z,7.6nm,0.6s,baz=270,slow=20,SNR=7.5
ROSC El Rosal 156.12 88 *e*PKPdf PKPdf 10 53 25.4 +1.4
CRPR Cabo Rojo, PR 158.85 49 *e*PKPdf PKPdf 10 53 28.1 +0.9
CRPR *e*PKPab PKPab 10 54 04.4 +1.2
ICM Isla Caja Muer 159.36 49 *e*PKPdf PKPdf 10 53 28.1 +0.2
ICM *e*PKPab PKPab 10 54 05.5 +0.1
SDV Santo Domingo 159.42 77 *e*PKPdf PKPdf 10 53 28.4 +0.4
SDV *e*PKPab PKPab 10 54 06.5 +0.6
MTP Monte Pirata 159.95 47 *e*PKPdf PKPdf 10 53 28.3 -0.1
MTP *e*PKPab PKPab 10 54 07.8 -0.1
RCBR Riachuelo 162.26 235 PFAKE 10 53 40.0 +8.9
RCBR LR LR
comp=Z,384nm,19.0s
ANWB Willy Bob 162.82 40 PFAKE 10 53 40.0 +8.5
ANWB LR LR
comp=Z,305nm,20.0s
FDF Fort de France 165.33 46 PFAKE 10 53 50.0 +16
FDF LR LR
comp=Z,304nm,20.0s
GRGR Grenville 166.53 55 PFAKE 10 53 50.0 +15
GRGR LR LR
comp=Z,388nm,21.0s

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*ISCJB **01** 11:15:40.1±0.5, 36°.57N±0°.03×71°.07E±0°.06, h161km±8km, mb3.2/4, Error ellipse: s-maj=8.1km s-min=5.5km az=175.4*
*NEIC **01** 11:15:41.5±0.7, 36°.48N×71°.06E, h163km±9km, mb4.6/8, Error ellipse: s-maj=9.8km s-min=6.1km az=65.0*
*IDC **01** 11:15:42.3±5.3, 36°.83N×70°.56E, h147km±41km, mb3.0/4, mb1 3.1/9, mb1mx3.0/28, mbtmp3.0/9, MS3.5/1, Ms1 3.5/1, ms1mx3.1/13, Error ellipse: s-maj=55.2km s-min=28.8km az=150.0*
*NNC **01** 11:15:45.8±4.5, 37°.33N×70°.57E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=35.3km s-min=34.5km az=57.0*
ISC 01 11:15:41.2±0.5, **36°.55N**±0°.03×**71.10E**±0°.07, **h153**km±8km, **n27**, σ1s**04**/38, **mb3.2**/4, **2C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.62**	**221**	*e*Pn	**Pn**	**11 16 24.9**	**+1.0**
KBL				*e*Sn	**Sn**	**11 16 56.4**	**-0.4**
KSH	**Kashi**	**4.85**	**51**	Pn	**Pn**	**11 16 50.8**	**-1.8**
KSH				Sn	**Sn**	**11 17 40.7**	**-7.7**
KSH				smax			
	comp=N,94nm,0.3s						
KSH				smax			
	comp=E,62nm,0.2s						
EKS2	**Erkin-Say**	**6.44**	**18**	*e*Pn	**Pn**	**11 17 14.7**	**+1.0**
EKS2				*e*Sn	**Sn**	**11 18 24.9**	**-1.2**
KK31	**Karatay Array**	**6.56**	**356**	Pn	**Pn**	**11 17 15.8**	**+0.6**
	comp=E,1.3nm,0.3s,baz=172,slow=13,SNR=29						
KK31				Sn	**Sn**	**11 18 26.1**	**-3.0**
	comp=E,9.0nm,0.6s,baz=184,slow=19,SNR=20						
AAK	**Ala-Archa**	**6.61**	**22**	P	**Pn**	**11 17 17.3**	**+1.3**
	comp=E,0.0nm,0.3s,baz=174,slow=1.7,SNR=5.6						
AAK				S	**Sn**	**11 18 29.3**	**-1.0**
	comp=E,0.0nm,0.3s,baz=180,slow=10,SNR=9.9						
AAK				LR	LR	11 19 56.4	
	comp=E,469nm,21.3s,baz=101,slow=39						
AAK	**Ala-Archa**	**6.61**	**22**	*e*Pn	**Pn**	**11 17 17.1**	**+1.1**
AAK				*e*Sn	**Sn**	**11 18 30.4**	**+0.1**
TKM2	**Tokmak 2**	**7.24**	**27**	⇑Pn	**Pn**	**11 17 25.6**	**+1.3**
	comp=E,2.4nm,0.6s						
TKM2				⇓Sn	**Sn**	**11 18 45.9**	**+0.5**
	comp=E,4.5nm,1.0s						
TKM2	**Tokmak 2**	**7.24**	**27**	*e*Pn	**Pn**	**11 17 25.5**	**+1.2**
MKAR	**Makanchi Array**	**13.20**	**36**	P	**Pn**	**11 18 45.5**	**+2.9**
	comp=E,0.2nm,0.3s,baz=210,slow=7.0,SNR=8.0						
MKAR				S	**Sn**	**11 21 00.7**	**-7.9**
	comp=E,0.2nm,0.3s,baz=207,slow=28,SNR=2.8						
DMN	**Daman**	**14.83**	**123**	*e*P	**Pn**	**11 19 03.0**	**-0.4**
	comp=E,7.5nm,0.3s						
KKN	**Kakani**	**14.83**	**122**	*e*P	**Pn**	**11 19 02.2**	**-1.2**
	comp=E,28nm,0.6s						
PKI	**Pulchoki**	**15.06**	**122**	*e*P	**Pn**	**11 19 06.3**	**+0.1**
	comp=E,20nm,0.5s						
AB31	**Akbulak array**	**15.08**	**331**	Pn	**Pn**	**11 19 06.7**	**+0.5**
	comp=E,1.1nm,0.6s,baz=153,slow=12,SNR=21						
AB31				⇑Sn	**Sn**	**11 21 46.5**	**-7.2**
	comp=E,0.5nm,0.6s,baz=157,slow=22,SNR=4.3						
ABKAR	**Akbulak array**	**15.08**	**331**	*e*Pn	**Pn**	**11 19 06.4**	**+0.2**
KURK	**Kurchatov**	**15.15**	**19**	P	**Pn**	**11 19 03.8**	**-3.3**
	comp=E,0.0nm,0.3s,baz=210,slow=11,SNR=5.2						
KURK				S	**S**	**11 21 41.3**	**-15**
	comp=E,0.1nm,0.3s,baz=305,slow=28,SNR=5.1						
KURK	**Kurchatov**	**15.15**	**19**	*e*P	**Pn**	**11 19 08.9**	**+1.8**
	comp=E,1.9nm,0.8s						
KURK				S	**S**	**11 21 41.3**	**-15**
GUN	**Gumba**	**15.17**	**120**	*e*P	**Pn**	**11 19 06.8**	**-0.8**
	comp=E,8.6nm,0.4s						
JIRN	**Jiri**	**15.54**	**120**	*e*P	**Pn**	**11 19 12.1**	**0.0**
	comp=E,19nm,0.3s						
RAMN	**Ramite**	**16.27**	**122**	*e*P	**Pn**	**11 19 20.4**	**-0.7**
	comp=E,8.8nm,0.5s						
BVAR	**Borovoye Array**	**16.48**	**358**	P	**Pn**	**11 19 23.1**	**-0.2**
	comp=E,0.2nm,0.3s,baz=163,slow=10,SNR=5.2						
TAPN	**Taplejung**	**16.80**	**118**	*e*P	**Pn**	**11 19 28.7**	**+1.3**
	comp=E,10nm,0.4s						
ODAN	**Odare**	**16.87**	**120**	*e*P	**Pn**	**11 19 28.7**	**+0.4**
	comp=E,6.2nm,0.4s						
ZALV	**Zalesovo Beam**	**19.83**	**24**	P	**P**	**11 20 00.5**	**+0.7**
	comp=E,0.6nm,0.3s,baz=226,slow=11,SNR=9.0						
AKASG	**Malin Array Be**	**32.98**	**309**	P	**P**	**11 21 57.0**	**-4.2**
	comp=E,0.6nm,0.5s,mb3.5,baz=102,slow=8.6,SNR=3.4						
NOA	**NORSAR Array B**	**44.39**	**323**	P	**P**	**11 23 35.4**	**-0.6**
	comp=E,0.4nm,0.5s,mb3.3,baz=100,slow=7.9,SNR=2.7						
TORD	**Torodi Ar. Bea**	**65.80**	**269**	P	**P**	**11 26 09.2**	**-1.0**
	comp=E,0.1nm,0.6s,mb2.8,baz=62,slow=7.5,SNR=2.6						
YKA	**Yellowknife Ar**	**81.19**	**3**	P	**P**	**11 27 39.5**	**+0.3**
	comp=E,0.2nm,0.5s,mb3.0,baz=351,slow=5.2,SNR=3.0						

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*DDA **01** 11:16:31.6, 39°.71N×26°.35E, h7km±5km, Md3.1*
*ATH **01** 11:16:32.4, 39°.72N×26°.30E, h5km±2km, MD3.4/4*
*THE **01** 11:16:32.3, 39°.73N×26°.33E, h4km±1km, ML3.4/5, Error ellipse: s-maj=2.0km s-min=0.6km az=276.0*
*NEIC **01** 11:16:32.1, 39°.88N×26°.37E, h5km, MD3.4(ATH), MD3.1(ISK), After ISK.*
*ISK **01** 11:16:32.8, 39°.86N×26°.38E, h4km, MD3.2*
*ISCJB **01** 11:16:32.1±0.3, 39°.75N±0°.02×26°.33E±0°.02, h10km, Error ellipse: s-maj=2.8km s-min=2.4km az=3.3*
*CSEM **01** 11:16:32.0±0.1, 39°.75N×26°.34E, h2km, MD3.2, Error ellipse: s-maj=3.5km s-min=2.6km az=94.0*
ISC 01 11:16:32.1±0.3, **39°.75N**±0°.02×**26°.37E**±0°.03, **h1**km±4km, **n91**, σ0s**90**/136, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZN	**Ezine**	**0.09**	**337**	*e*PG	**Pg**	**11 16 34.6**	**+0.8**
EZN	**Ezine**	**0.09**	**337**	Pg	**Pg**	**11 16 33.5**	**-0.3**
EZN	**Ezine**	**0.09**	**337**	Pg	**Pg**	**11 16 33.5**	**-0.3**
BOZC	**Bozcaada**	**0.26**	**292**	*i* P	**Pg**	**11 16 37.3**	**+0.2**
BOZC				*i* S	**Sg**	**11 16 41.3**	**+0.9**
AYVA	**Ayvalik**	**0.50**	**150**	*i* P	**Pg**	**11 16 41.9**	**+0.2**
AYVA				*i* S	**Sg**	**11 16 48.5**	**+0.4**
AYVA	**Ayvalik**	**0.50**	**150**	*i* P	**Pg**	**11 16 41.9**	**+0.2**
AYVA				*i* S	**Sg**	**11 16 48.5**	**+0.3**
PRK	**Paraskevi**	**0.50**	**189**	*e*Pb	**Pg**	**11 16 41.8**	**+0.1**
PRK				*e*Sb	**Sg**	**11 16 49.1**	**+0.9**
PRK	**Paraskevi**	**0.50**	**189**	P	**Pg**	**11 16 41.5**	**-0.2**
PRK				S	**Sg**	**11 16 49.4**	**+1.2**
PRK	**Paraskevi**	**0.50**	**189**	*e*PB	**Pg**	**11 16 41.8**	**+0.1**
PRK				*e*SB	**Sg**	**11 16 49.1**	**+0.9**
PRK	**Paraskevi**	**0.50**	**189**	P	**Pg**	**11 16 41.5**	**-0.2**
PRK	**Paraskevi**	**0.50**	**189**	*e*Pb	**Pg**	**11 16 41.8**	**+0.1**
PRK				*e*Sb	**Sg**	**11 16 49.1**	**+0.9**
PRK				S	**Sg**	**11 16 49.4**	**+1.2**
GADA	**Gvkgeada**	**0.57**	**321**	*e*PG	**Pg**	**11 16 43.0**	**-0.1**
GADA				*e*SG	**Sg**	**11 16 50.7**	**+0.2**
GADA	**Gvkgeada**	**0.57**	**321**	Pg	**Pg**	**11 16 43.0**	**-0.1**
GADA				Sg	**Sg**	**11 16 51.0**	**+0.5**
GADA	**Gvkgeada**	**0.57**	**321**	*e*Pg	**Pg**	**11 16 43.0**	**0.0**
GADA				*e*Sg	**Sg**	**11 16 50.7**	**+0.2**
SIGR	**SIGRI**	**0.67**	**217**	P	**Pg**	**11 16 44.2**	**-0.6**

SIGR				S	Sg	11 16 53.4	0.0
SIGR	**SIGRI**	**0.67**	**217**	P	Pg	11 16 44.2	-0.6
SIGR				S	Sg	11 16 53.4	0.0
LPK	**Lapseki**	**0.69**	**26**	*e*PG	Pg	11 16 44.9	-0.5
LPK	**Lapseki**	**0.69**	**26**	Pg	Pg	11 16 44.5	-0.9
LPK	**Lapseki**	**0.69**	**26**	*e*Pg	Pg	11 16 44.9	-0.5
LIA	**Limnos Island**	**0.93**	**280**	*e*Pb	Pg	11 16 49.2	-0.6
LIA				*e*Sb	Sg	11 17 02.0	+0.2
LIA	**Limnos Island**	**0.93**	**280**	P	Pg	11 16 49.2	-0.6
LIA				S	Sg	11 17 03.1	+1.3
LIA	**Limnos Island**	**0.93**	**280**	*e*PB	Pg	11 16 49.2	-0.6
LIA				*e*SB	Sg	11 17 02.0	+0.2
LIA	**Limnos Island**	**0.93**	**280**	P	Pg	11 16 49.2	-0.6
LIA				*e*Sb	Sg	11 17 02.0	+0.2
LIA				S	Sg	11 17 03.1	+1.3
BALY	**Balya**	**0.96**	**90**	*i* P	Pg	11 16 50.8	+0.3
BALY				*i* S	Sg	11 17 03.5	+0.4
BALY	**Balya**	**0.96**	**90**	*i* P	Pg	11 16 50.8	+0.3
BALY				*i* S	Sg	11 17 03.5	+0.5
ENEZ	**Enez**	**1.00**	**351**	*e*PG	Pg	11 16 50.7	-0.6
ENEZ				*e*SG	Sg	11 17 03.5	-0.8
ENEZ	**Enez**	**1.00**	**351**	*e*Pg	Pg	11 16 50.7	-0.6
ENEZ				*e*Sg	Sg	11 17 03.5	-0.8
RKY	**Sarkoy-Tekirda**	**1.13**	**33**	*e*PG	Pg	11 16 53.1	-0.6
RKY				*e*SG	Sg	11 17 07.8	-0.5
RKY	**Sarkoy-Tekirda**	**1.13**	**33**	Pg	Pg	11 16 52.8	-0.9
RKY				Sg	Sg	11 17 07.8	-0.5
RKY	**Sarkoy-Tekirda**	**1.13**	**33**	*e*Pg	Pg	11 16 53.1	-0.6
RKY				*e*Sg	Sg	11 17 07.8	-0.5
SART	**Tekirdag**	**1.13**	**33**	*i* P	Pg	11 16 53.5	-0.2
SART				*i* S	Sg	11 17 08.6	+0.3
SART	**Tekirdag**	**1.13**	**33**	*i* P	Pg	11 16 53.5	-0.2
SART				*i* S	Sg	11 17 08.3	+0.3
BALB	**Balikesir**	**1.17**	**95**	Pn	Pn	11 16 54.8	-0.8
BALB	**Balikesir**	**1.17**	**95**	Pn	Pn	11 16 54.8	-0.8
ALN	**Alexandroupoli**	**1.18**	**348**	*e*Pb	Pb	11 16 54.9	-0.3
ALN				*e*Sb	Sb	11 17 11.4	+0.5
ALN	**Alexandroupoli**	**1.18**	**348**	P	Pg	11 16 54.6	0.0
ALN				S	Sg	11 17 11.0	+1.1
ALN	**Alexandroupoli**	**1.18**	**348**	*e*PB	Pb	11 16 54.9	-0.3
ALN				*e*SB	Sb	11 17 11.4	+0.5
ALN	**Alexandroupoli**	**1.18**	**348**	P	Pg	11 16 54.6	0.0
ALN	**Alexandroupoli**	**1.18**	**348**	*e*Pb	Pb	11 16 54.9	-0.3
ALN				S	Sg	11 17 11.0	+1.1
ALN				*e*Sb	Sb	11 17 11.4	+0.5
MFT	**Murefte**	**1.25**	**34**	*e*PN	Pn	11 16 55.5	-1.2
MFT				*e*SN	Sn	11 17 12.2	-2.0
MFT	**Murefte**	**1.25**	**34**	*e*Pn	Pn	11 16 55.5	-1.2
MFT				*e*Sn	Sn	11 17 12.2	-2.0
EDC	**Edincik**	**1.29**	**62**	*e*PN	Pn	11 16 56.9	-0.4
EDC				*e*SN	Sn	11 17 14.9	-0.4
EDC	**Edincik**	**1.29**	**62**	*e*Pn	Pn	11 16 56.9	-0.4
EDC				*e*Sn	Sn	11 17 14.9	-0.3
BNT	**Bandirma**	**1.34**	**62**	*e*PN	Pn	11 16 57.4	-0.4
BNT				*e*SN	Sn	11 17 15.8	-0.5
BNT	**Bandirma**	**1.34**	**62**	Pn	Pn	11 16 56.8	-1.1
CHOS	**Chios island**	**1.38**	**190**	P	Pn	11 16 56.6	-1.8
CHOS				S	Sg	11 17 16.1	-0.2
CHOS	**Chios island**	**1.38**	**190**	*e*PB	Pb	11 16 58.7	+0.1
CHOS				*e*SB	Sb	11 17 16.4	-0.3
CHOS	**Chios island**	**1.38**	**190**	P	Pn	11 16 56.6	-1.8
CHOS	**Chios island**	**1.38**	**190**	*e*Pb	Pb	11 16 58.7	+0.1
CHOS				S	Sg	11 17 16.1	-0.2
CHOS				*e*Sb	Sb	11 17 16.4	-0.3
URLA	**Izmir**	**1.40**	**173**	*i* P	Pn	11 16 56.4	-2.3
URLA				*i* S	Sg	11 17 16.1	-0.8
URLA	**Izmir**	**1.40**	**173**	*i* P	Pn	11 16 56.3	-2.3
URLA				*i* S	Sg	11 17 16.0	-0.9
AKHS	**Akhisar**	**1.42**	**127**	*i* P	Pn	11 16 57.0	-1.9
AKHS				*i* S	Sg	11 17 17.1	-0.4
AKHS	**Akhisar**	**1.42**	**127**	*i* P	Pn	11 16 57.0	-1.9
AKHS				*i* S	Sg	11 17 17.1	-0.5
TKR	**Tekirdag**	**1.53**	**35**	*e*PN	Pn	11 17 01.1	+0.6
TKR	**Tekirdag**	**1.53**	**35**	Pn	Pn	11 17 00.3	-0.2
TKR	**Tekirdag**	**1.53**	**35**	Pn	Pn	11 17 00.3	-0.2
RDO	**Rodhopi**	**1.54**	**336**	*e*Pg	Pg	11 17 00.5	-1.0
RDO	**Rodhopi**	**1.54**	**336**	*e*Pg	Pg	11 17 00.5	-1.0
DST	**Dursunbey**	**1.74**	**94**	*e*PN	Pn	11 17 05.0	+1.6
DST	**Dursunbey**	**1.74**	**94**	*e*Pn	Pn	11 17 05.1	+1.7
SLVT	**Silivri**	**2.04**	**43**	*e*PN	Pn	11 17 07.8	+0.3
SLVT	**Silivri**	**2.04**	**43**	*e*Pn	Pn	11 17 07.8	+0.2
SMG	**Samos**	**2.07**	**170**	*e*Pn	Pn	11 17 10.4	+2.5
SMG	**Samos**	**2.07**	**170**	*e*PN	Pn	11 17 10.4	+2.5
SMG	**Samos**	**2.07**	**170**	*e*Pn	Pn	11 17 10.4	+2.5
EDRB	**Edirne**	**2.12**	**8**	*e*PN	Pn	11 17 08.2	-0.4
EDRB	**Edirne**	**2.12**	**8**	Pn	Pn	11 17 08.3	-0.3
EDRB	**Edirne**	**2.12**	**8**	Pn	Pn	11 17 08.3	-0.3
CTKS	**Kestanelik-??a**	**2.21**	**47**	*e*PN	Pn	11 17 10.1	+0.3
CTKS	**Kestanelik-??a**	**2.21**	**47**	*e*Pn	Pn	11 17 10.1	+0.3
CTYL	**Yal??k??y-??at**	**2.26**	**40**	*e*PN	Pn	11 17 10.5	-0.1
CTYL	**Yal??k??y-??at**	**2.26**	**40**	*e*Pn	Pn	11 17 10.5	-0.1
GEMT	**Gemlik**	**2.27**	**71**	*e*PN	Pn	11 17 11.8	+1.2
GEMT	**Gemlik**	**2.27**	**71**	*e*Pn	Pn	11 17 11.9	+1.2
BGKT	**Bogazkoy**	**2.33**	**51**	*e*PN	Pn	11 17 11.9	+0.4
BGKT	**Bogazkoy**	**2.33**	**51**	Pn	Pn	11 17 11.9	+0.5
BGKT	**Bogazkoy**	**2.33**	**51**	*e*Pn	Pn	11 17 11.9	+0.4
ISK	**Istanbul-Kandi**	**2.44**	**56**	*e*PN	Pn	11 17 13.8	+0.8
ISK	**Istanbul-Kandi**	**2.44**	**56**	*e*Pn	Pn	11 17 13.8	+0.8
NVR	**Nevrokopi**	**2.49**	**311**	P	Pn	11 17 14.2	+0.4
NVR	**Nevrokopi**	**2.49**	**311**	P	Pn	11 17 14.2	+0.4
KLYT	**Kilyos**	**2.53**	**53**	*e*PN	Pn	11 17 15.0	+0.7
KLYT	**Kilyos**	**2.53**	**53**	*e*Pn	Pn	11 17 15.0	+0.7
ADVT	**Abdulvahap**	**2.67**	**74**	*e*PN	Pn	11 17 17.6	+1.3
ADVT	**Abdulvahap**	**2.67**	**74**	*e*Pn	Pn	11 17 17.6	+1.4
SILT	**Sile**	**2.87**	**60**	*e*PN	Pn	11 17 19.8	+0.9
SILT	**Sile**	**2.87**	**60**	*e*Pn	Pn	11 17 19.8	+0.9
ALT	**Altintas**	**2.98**	**102**	*e*PN	Pn	11 17 22.9	+2.4
ALT	**Altintas**	**2.98**	**102**	*e*Pn	Pn	11 17 22.9	+2.5
GULT	**Gulveren**	**3.25**	**77**	*e*PN	Pn	11 17 25.9	+1.6
GULT	**Gulveren**	**3.25**	**77**	*e*Pn	Pn	11 17 25.9	+1.7

MOS ***01*** *11:30:08.1±0.9,51°.15N×160°.06E,h18km,mb4.2/4, Error ellipse: s-maj=29.9km s-min=11.4km az=95.9*
ISCJB ***01*** *11:30:13.9±1.2,51°.42N±0°.06×159°.73E±0°.10, h45km±10km,mb3.8/6, Error ellipse: s-maj=12.3km s-min=6.9km az=40.8*
KRSC ***01*** *11:30:14.7±0.7,51°.65N×159°.60E,h12km±11km,ML4.1*
IDC ***01*** *11:30:33.5±1.1,53°.12N×158°.30E,h96km±8km,mb3.4/8, mb1 3.5/8,mb1mx3.2/25,mbtmp3.4/8, Error ellipse: s-maj=31.3km s-min=28.0km az=4.0*
ISC 01 11:30:15.4±1.2,51°.44N±0°.06×159°.7E±0°.1,h39km±10km, n27,σ0°85/34,mb3.8/6,1D,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	**Gorelyy**	**1.50**	**319**	*e*P	**Pn**	**11 30 39.0**	**-0.7**
GRL				*i* S	Sn	11 30 57.1	-0.9
PET	**Petropavlovsk**	**1.71**	**338**	⇓*i*PN	**Pn**	**11 30 42.5**	**-0.1**
PET				pmax	pmax		
	comp=Z,180nm,0.6s						
PET				MLR	MLR		
	comp=Z,400nm,15.0s						
PET				MLR	MLR		
	comp=Z,700nm,17.0s						
PET	**Petropavlovsk**	**1.71**	**338**	*e*P	**Pn**	**11 30 42.2**	**-0.4**
PET				*i* S	Sn	11 31 02.6	-0.6
SDLR	**Sedlovina**	**1.91**	**345**	P	Pn	11 30 45.4	+0.1
SDLR				*i* S	Sn	11 31 07.3	-0.7
MIPR	**Malaya Ipel'ka**	**2.00**	**296**	*i* P	Pn	11 30 47.3	+0.6
MIPR				*i* S	Sn	11 31 10.6	+0.1
PETK	**Petropavlovsk-**	**2.07**	**324**	P	Pn	11 30 48.9	+1.3
	comp=Z,69nm,0.3s,baz=113,slow=20,SNR=382						
PETK				S	Sn	11 31 15.7	+3.5
	comp=Z,25nm,0.3s,baz=103,slow=18,SNR=8.4						
PETK	**Petropavlovsk-**	**2.07**	**324**	PN	Pn	11 30 48.9	+1.3
PETK				S	Sn	11 31 15.7	+3.6
PETK				pmax	pmax		
	comp=Z,69nm,0.3s						
PETK				smax			
	comp=N,25nm,0.3s						
SKR	**Severo-Kuril's**	**2.38**	**253**	*e*PN	**Pn**	**11 30 50.6**	**-1.2**
SKR				*e*S	Sn	11 31 19.4	-0.4
SKR				pmax	pmax		
	comp=E,60nm,0.5s						
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
SKR				smax			
	comp=N,320nm,0.6s						
SKR				smax			
	comp=E,160nm,0.6s						
SKR				smax			
	comp=Z,100nm,0.6s						
GNL	**Ganaly**	**2.50**	**335**	*e*P	**Pn**	**11 30 54.5**	**+1.1**
GNL				*e*S	Sn	11 31 23.3	+0.7
ALID	**Alaid**	**2.67**	**259**	*e*P	**Pn**	**11 30 56.6**	**+0.8**
ALID				*e*S	Sn	11 31 27.0	+0.1
MKZ	**Mys Kozlova**	**3.35**	**21**	*e*P	**Pn**	**11 31 04.4**	**-0.8**
MKZ				*i* S	Sn	11 31 39.9	-3.8
KMNR	**Kamenistaya**	**4.33**	**4**	P	**Pn**	**11 31 20.1**	**+1.4**
KBTR	**Krutoberegovo**	**5.12**	**20**	*e*P	**Pn**	**11 31 29.0**	**-0.4**
YKA	**Yellowknife Ar**	**44.56**	**41**	P	**P**	**11 38 28.7**	**+5.8**
	comp=Z,0.3nm,0.8s,mb3.2,baz=291,slow=5.2,SNR=5.0						
BVAR	**Borovoye Array**	**51.23**	**309**	P	**P**	**11 39 13.3**	**-1.4**
	comp=Z,1.1nm,0.4s,mb4.1,baz=44,slow=6.4,SNR=6.6						
BVAR	**Borovoye Array**	**51.23**	**309**	P	**P**	**11 39 13.3**	**-1.4**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	**61.54**	**337**	P	**P**	**11 40 27.9**	**0.0**
	comp=Z,0.5nm,0.5s,mb3.9,baz=35,slow=10,SNR=6.0						
FINES	**FINESS Array B**	**61.54**	**337**	P	**P**	**11 40 27.9**	**0.0**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NB2	**NORSAR Subarra**	**65.06**	**344**	P	**P**	**11 40 51.5**	**+0.3**
	comp=Z,0.7nm,0.5s,mb4.0,baz=22,slow=6.9						
NOA	**NORSAR Array B**	**65.06**	**344**	P	**P**	**11 40 51.7**	**+0.5**
	comp=Z,0.9nm,0.7s,mb3.9,baz=20,slow=6.6,SNR=5.4						
NOA	**NORSAR Array B**	**65.06**	**344**	P	**P**	**11 40 51.7**	**+0.5**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**69.91**	**329**	P	**P**	**11 41 21.7**	**-0.2**
	comp=Z,0.4nm,0.3s,mb3.8,baz=28,slow=6.1,SNR=4.2						
TXAR	**Lajitas Array**	**71.52**	**66**	P	pP	11 41 45.0	+1.2
	comp=Z,0.1nm,0.5s,baz=303,slow=5.3,SNR=3.5						
TXAR	**Lajitas Array**	**71.52**	**66**	*e*P	sP	11 41 47.2	-1.0
BRTR	**Keskin Array B**	**77.74**	**320**	P	**P**	**11 42 08.7**	**+0.7**
	comp=Z,0.6nm,0.7s,mb3.6,baz=50,slow=3.9,SNR=4.9						
BRTR	**Keskin Array B**	**77.74**	**320**	*e*P	**P**	**11 42 09.0**	**+1.0**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**78.15**	**204**	P	sP	11 42 28.7	+2.3
	comp=Z,0.2nm,0.7s,baz=15,slow=5.6,SNR=3.6						

CSEM ***01*** *11:37:40.2,40°.42N×21°.84E,h12km,ML2.6/4, After THE THE* ***01*** *11:37:40.2,40°.42N×21°.84E,h12km±1km,ML2.6/4, Error ellipse: s-maj=2.3km s-min=0.4km az=241.0*
SKO ***01*** *11:37:40.2,40°.26N×21°.71E,h14km,M1.7,ML2.1*
ISCJB ***01*** *11:37:40.3±0.6,40°.43N±0°.04×21°.85E±0°.06,h8km±7km, Error ellipse: s-maj=9.3km s-min=4.4km az=149.2*
ISC 01 11:37:40.6±0.7,40°.35N±0°.04×21°.76E±0°.06,h18km±7km, n11,σ1°11/22,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZN	**Kozani**	**0.05**	**165**	P	**Pg**	**11 37 43.3**	**-0.5**
KZN				S	Sg	11 37 46.1	+0.2
KZN	**Kozani**	**0.05**	**165**	P	**Pg**	**11 37 43.3**	**-0.5**
KZN				S	Sg	11 37 46.1	+0.2
FNA	**Florina**	**0.52**	**326**	P	**Pg**	**11 37 50.0**	**-1.0**
FNA				S	Sg	11 37 57.2	-0.8
FNA	**Florina**	**0.52**	**326**	P	**Pg**	**11 37 50.0**	**-1.0**
FNA				S	Sg	11 37 57.2	-0.8
LIT	**Litokhoron**	**0.62**	**114**	P	**Pg**	**11 37 51.4**	**-1.4**
LIT				S	Sg	11 38 00.1	-0.9
LIT	**Litokhoron**	**0.62**	**114**	P	**Pg**	**11 37 51.4**	**-1.4**
LIT				S	Sg	11 38 00.1	-0.9
THL	**Klokotos Trika**	**0.81**	**166**	P	**Pg**	**11 37 56.8**	**+0.4**
THL				S	Sg	11 38 09.1	+2.0
THL	**Klokotos Trika**	**0.81**	**166**	P	**Pg**	**11 37 56.8**	**+0.4**
THL				S	Sg	11 38 09.1	+2.0
OHR	**Ohrid**	**1.05**	**317**	*e*Pg	**Pg**	**11 38 00.2**	**-0.8**
OHR				*e*Sg	Sg	11 38 15.4	+0.6
OHR				*e*Lg		11 38 18.4	
	comp=E,30nm,0.6s						
OHR				*e*Lg		11 38 21.1	
	comp=N,45nm,0.8s						
KRUS	**Krusevo**	**1.09**	**339**	*e*Pg	**Pg**	**11 38 00.8**	**-0.9**
KRUS				*e*Sg	Sg	11 38 18.2	+2.2
KRUS				*e*Lg		11 38 19.4	
	comp=E,7.2nm,0.6s						
KRUS				*e*Lg		11 38 20.9	
	comp=N,12nm,0.8s						
VAY	**Valandovo**	**1.15**	**32**	*e*Pn	**Pn**	**11 38 01.8**	**-0.1**
VAY				*e*Sg	Sg	11 38 19.6	+1.7
VAY				*e*Lg		11 38 20.9	
	comp=E,40nm,0.9s						
VAY				*e*Lg		11 38 27.1	
	comp=N,62nm,1.1s						

ISCJB ***01*** *11:50:01.7±0.7,8°.45N±0°.06×82°.99W±0°.03,h10km, mb3.6/6, Error ellipse: s-maj=8.9km s-min=3.6km az=13.6*
IDC ***01*** *11:50:02.4±3.1,8°.61N×83°.06W,h0km,mb3.7/6,mb1 4.0/8, mb1mx3.8/22,mbtmp3.8/8,ML3.5/1,MS3.2/1,Ms1 3.2/1, ms1mx2.6/33, Error ellipse: s-maj=101.4km s-min=16.2km az=30.0*
CASC ***01*** *11:50:02.6±2.6,8°.50N×82°.97W,h10km,MD4.3*
ISC 01 11:50:03.6±0.8,8°.55N±0°.08×82°.98W±0°.03,h10km,n35, σ1°33/45,mb3.6/6,3C-3D,Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.21**	**299**	⇑*e*P	**Pg**	**11 50 05.9**	**-2.1**
ACR				*e*S	Sg	11 50 10.3	-0.8
BRU2	**Volcan**	**0.37**	**49**	⇓*i*P	**Pg**	**11 50 10.9**	**0.0**
BRU2				*e*S	Sg	11 50 19.1	+3.2
BAR1		**0.76**	**334**	⇓*e*P	**Pg**	**11 50 16.4**	**-2.0**
CNI	**Changuinola**	**0.97**	**28**	*i* P	**Pg**	**11 50 21.2**	**-1.1**
BUS	**Buena Vista**	**1.26**	**322**	⇓*e*P	**Pn**	**11 50 24.4**	**-2.8**
LIO	**Limon**	**1.45**	**358**	*e*P	**Pn**	**11 50 27.9**	**-1.9**
QCR	**Quepos**	**1.46**	**307**	⇑*e*P	**Pn**	**11 50 26.9**	**-3.1**
QCR				*e*S	Sn	11 50 48.7	-0.5
URSC	**Urasca**	**1.50**	**328**	*e*P	**Pn**	**11 50 27.7**	**-2.9**
URSC				*e*S	Sn	11 50 50.7	+0.5
LAJ	**Bijagual**	**1.73**	**319**	*e*P	**Pn**	**11 50 34.4**	**+0.7**
CGA2	**Cerro Gallo 2**	**2.07**	**315**	*e*P	**Pn**	**11 50 37.2**	**-1.2**
JCR	**Jicaral**	**2.47**	**302**	*e*P	**Pn**	**11 50 42.0**	**-1.9**
JTS	**JuntasAbangare**	**2.61**	**312**	Pn	**Pn**	**11 50 43.9**	**-1.9**
	21nm,0.3s,baz=117,slow=9.9,SNR=65						
JTS				Pg	**Pg**	**11 50 46.7**	**-6.8**
	21nm,0.3s,baz=135,slow=12,SNR=112						
JTS				Sn	**Sn**	**11 51 16.8**	**-0.7**
	17nm,0.3s,baz=90,slow=20,SNR=9.9						
JTS				Lg		11 51 23.1	
	25nm,0.3s,baz=300,slow=22,SNR=9.9						
CHPA	**Chiripa**	**2.68**	**315**	*i* P	**Pn**	**11 50 48.8**	**+2.0**
CHPA				*i* S	Sn	11 51 29.8	+11
AMAS	**Alto Masis**	**2.85**	**316**	*i* P	**Pn**	**11 50 50.8**	**+1.6**
CUI	**Cuipilapa**	**3.01**	**314**	*i* P	**Pn**	**11 50 52.1**	**+0.9**
COLC	**Colonia**	**3.04**	**314**	*i* P	**Pn**	**11 50 52.5**	**+0.7**
MESS	**Mesas**	**3.08**	**315**	*i* P	**Pn**	**11 50 53.5**	**+1.1**
MESS				*i* S	Sn	11 51 32.3	+2.9
LIM1	**Limonal**	**3.10**	**314**	*i* P	**Pn**	**11 50 52.8**	**+0.3**
BCIP	**Isla Barro Col**	**3.16**	**79**	⇑*i*P	**Pn**	**11 50 54.2**	**+0.7**
BCIP				*e*S	Sn	11 51 31.3	0.0
GPS2	**Hotel Rinc^‡n**	**3.21**	**313**	*i* P	**Pn**	**11 50 54.9**	**+0.8**
GPS3	**Bodega del ICE**	**3.22**	**313**	*i* P	**Pn**	**11 50 54.7**	**+0.6**
GPS1	**Guardaparques**	**3.22**	**314**	*i* P	**Pn**	**11 50 54.8**	**+0.6**
NY14	**Universidad de**	**3.27**	**310**	*i* P	**Pn**	**11 50 55.1**	**+0.2**
LAPC	**Finca la Perla**	**3.27**	**313**	*i* P	**Pn**	**11 50 55.2**	**+0.2**
LAPC				*i* S	Sn	11 51 35.6	+1.7
GB1A	**Borinquen Arri**	**3.28**	**314**	*i* P	**Pn**	**11 50 55.9**	**+0.8**
GBS3	**Finca Las Im^¡**	**3.30**	**312**	*i* P	**Pn**	**11 50 56.6**	**+1.3**
UPIG		**3.43**	**82**	*e*P	**Pn**	**11 50 55.9**	**-1.3**
UPIG				*e*S	Sn	11 51 37.5	-0.4
APG	**El Apazote**	**9.74**	**312**	Pn	**Pn**	**11 52 24.6**	**+0.8**
	0.4nm,0.3s,baz=135,slow=19,SNR=7.6						
CMIG	**Matias Romero**	**14.38**	**307**	LR	LR	11 58 24.4	
	comp=Z,108nm,21.0s,baz=166,slow=35						
TXAR	**Lajitas Array**	**28.37**	**320**	P	**P**	**11 55 56.9**	**-1.2**
	0.1nm,0.6s,mb2.6,baz=152,slow=12,SNR=2.2						
ULM	**Lac du Bonnet**	**42.93**	**348**	P	**P**	**11 58 02.9**	**+0.4**
	2.2nm,0.5s,mb4.1,baz=172,slow=11,SNR=3.6						
NVAR	**Mina Array Bea**	**43.52**	**319**	P	**P**	**11 58 08.5**	**+1.1**
	1.3nm,0.9s,mb3.7,baz=137,slow=6.8,SNR=8.8						
YKA	**Yellowknife Ar**	**58.55**	**343**	P	**P**	**11 59 57.9**	**-2.2**
	1.3nm,0.9s,mb4.0,baz=136,slow=7.4,SNR=10						
ESDC	**Sonseca Array**	**76.15**	**51**	P	**P**	**12 01 54.1**	**+2.0**
	0.1nm,0.3s,mb3.2,baz=261,slow=6.4,SNR=4.2						
TORD	**Torodi Ar. Bea**	**82.94**	**78**	P	**P**	**12 02 29.9**	**+0.5**
	1.2nm,1.1s,mb3.8,baz=287,slow=3.6,SNR=3.5						

IDC ***01*** *12:01:05.4±0.9,23°.16S×114°.29W,h0km,mb3.6/6, mb1 4.0/6,mb1mx3.9/15,mbtmp3.6/6,MS4.0/3,Ms1 3.9/3, ms1mx3.4/17, Error ellipse: s-maj=38.2km s-min=26.1km az=41.0*
NEIC ***01*** *12:01:06.6±0.5,23°.24S×114°.60W,h10km,mb4.3/5, Error ellipse: s-maj=20.8km s-min=13.1km az=57.0*
ISC 01 12:01:06.4±2.7,23°.35±0°.4×114°.6W±0°.5,h10km,n30, σ0°76/14,mb3.9/10,MS4.1/2,Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**6.12**	**130**	LR	LR	12 04 24.4	
	comp=Z,811nm,18.9s,baz=175,slow=33						
PLCA	**Paso Flores**	**40.74**	**126**	LR	LR	12 21 22.5	
	comp=Z,212nm,21.2s,MS4.0,baz=270,slow=30						
CFAA	**Coronel Fontan**	**41.73**	**112**	P	**P**	**12 08 55.8**	**0.0**
	0.3nm,0.7s,mb3.0,baz=271,slow=5.6,SNR=5.3						
LPAZ	**La Paz**	**44.15**	**90**	P	**P**	**12 09 12.6**	**-3.0**
	0.7nm,0.9s,mb3.4,baz=233,slow=15,SNR=2.1						
LPAZ	**La Paz**	**44.15**	**90**	*e*P	**P**	**12 09 16.9**	**+1.3**
	7.1nm,1.4s,mb4.2						
TXAR	**Lajitas Array**	**53.38**	**12**	P	**P**	**12 10 26.3**	**+0.1**
	0.3nm,0.9s,mb3.2,baz=189,slow=7.5,SNR=4.1						
TXAR				PcP	PcP	12 11 34.4	+0.9
	0.5nm,1.0s,baz=180,slow=4.4,SNR=3.4						
JCT	**Junction City**	**55.33**	**16**	*e*P	**P**	**12 10 39.9**	**-0.5**
	8.8nm,1.0s,mb4.7						
NATX	**Nacogdoches**	**57.99**	**20**	*e*P	**P**	**12 11 06.6**	**+7.3**
	56nm,0.3s						
ARUT	**Antelope Range**	**60.77**	**1**	*e*P	**P**	**12 11 17.8**	**-0.6**
	2.3nm,0.9s,mb4.3						
SDCO	**Great Sand Dun**	**61.32**	**8**	*e*P	**P**	**12 11 23.2**	**+1.1**
	1.6nm,1.1s,mb4.1						
NVAR	**Mina Array Bea**	**61.50**	**357**	P	**P**	**12 11 24.2**	**+0.9**
	1.0nm,0.7s,mb4.1,baz=190,slow=10.0,SNR=9.3						
PDAR	**Pinedale Array**	**65.90**	**4**	P	**P**	**12 11 51.5**	**-0.8**
	0.7nm,0.8s,mb3.8,baz=157,slow=6.1,SNR=5.6						
HLID	**Hailey**	**66.53**	**0**	*e*P	**P**	**12 11 56.2**	**-0.1**
	1.7nm,1.0s,mb4.0						
DLBC	**Dease Lake**	**82.43**	**352**	*e*P	**P**	**12 13 28.7**	**+0.3**
YKA	**Yellowknife Ar**	**85.50**	**0**	P	**P**	**12 13 43.5**	**-0.5**
	1.1nm,0.9s,mb4.0,baz=180,slow=4.4,SNR=8.2						
YKA	**Yellowknife Ar**	**85.50**	**0**	P	**P**	**12 13 43.5**	**-0.5**
MAW	**Mawson**	**89.35**	**179**	LR	LR	12 52 40.4	
	comp=Z,89nm,20.4s,MS4.2,baz=119,slow=35						
LZH	**Lanzhou**	**144.46**	**300**	*e*P	PKPdf	12 20 43.0	-0.3
LZH				pP		12 20 48.3	
LZH				sP		12 20 50.0	
LZH				pmax	pmax		
	comp=Z,15nm,1.2s						
ZALV	**Zalesovo Beam**	**146.07**	**339**	PKPbc	PKPbc	12 20 45.6	-0.7
	comp=Z,0.8nm,0.6s,baz=27,slow=3.6,SNR=6.3						
ARU	**Arti**	**146.53**	**7**	*e*PKPdf	PKPdf	12 20 46.6	+0.5
GTA	**Gaotai**	**146.74**	**307**	*e*P	PKPdf	12 20 49.6	+2.5
GTA				pP		12 20 53.9	
GTA				sP		12 20 56.8	
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**148.31**	**268**	PKP	PKPdf	12 20 51.5	+1.3
	comp=Z,3.6nm,0.9s,baz=150,slow=0.7,SNR=8.2						
CMAR				PKPbc	PKPbc	12 20 55.2	+1.5
	comp=Z,

NVAR	Mina Array Bea	89.52	48	P	P	12 14 14.8	-0.2
	0.5nm,0.7s,mb3.8,baz=217,slow=9.2,SNR=4.4						
SONM	Songino Array	89.79	323	P	P	12 14 16.2	+0.2
	1.6nm,0.8s,mb4.2,baz=139,slow=4.8,SNR=8.3						
BBB	Bella Bella	90.84	33	LR	LR	12 51 39.8	
	comp=Z,94nm,18.5s,baz=58,slow=33						
ARCES	ARCESS Array B	127.64	345	PKP	PKPdf	12 20 20.4	-1.2
	1.6nm,1.0s,baz=45,slow=3.9,SNR=4.8						
ARCES	ARCESS Array B	127.64	345	PKP	PKPdf	12 20 20.4	-1.2
KECS	Kecovo	144.04	325	*e*PKP	PKPdf	12 20 50.8	-1.7
DPC	Dobruska-Polom	144.85	331	*e*PKP	PKPdf	12 20 52.9	-1.0
UPC	Upice	144.88	331	*e*PKP	PKPdf	12 20 53.0	-0.9
VYHS	Vyhne	144.89	327	*e*PKP	PKPdf	12 20 53.2	-0.8
BRG	Berggiesshubel	145.50	334	*e*PKPbc	PKPbc	12 20 54.2	-1.0
BRG	Berggiesshubel	145.50	334	*i* PKP	PKPdf	12 20 54.3	-0.6
	4.5nm,0.6s						
CLL	Collm	145.54	335	*e*PKPbc	PKPbc	12 20 54.5	-0.9
CLL	Collm	145.54	335	P	PKPdf	12 20 54.0	-1.0
CLL	Collm	145.54	335	*e*PKPbc	PKPdf	12 20 54.0	-1.0
	comp=Z,4.0nm,0.7s						
PRU	Pruhonice	145.90	332	*e*PKP	PKPdf	12 20 54.7	-1.0
EKA	Eskdalemuir Ar	145.99	353	PKPbc	PKPbc	12 20 55.4	-1.2
	comp=Z,1.4nm,0.6s,baz=349,slow=2.4,SNR=8.7						
CLZ	Clausthal	146.10	338	*e*PKPbc	PKPbc	12 20 56.8	-0.2
CLZ	Clausthal	146.10	338	*e*PKPbc	PKPbc	12 20 56.8	-0.2
CLZ	Clausthal	146.10	338	*e*PKPbc	PKPbc	12 20 56.8	-0.2
TANN	Tannenbergstha	146.45	334	*e*PKPbc	PKPbc	12 20 57.9	-0.2
WERD	Werda	146.49	334	*e*PKPbc	PKPbc	12 20 57.6	-0.6
PLN	Plauen	146.52	335	*e*PKPbc	PKPbc	12 20 58.0	-0.3
WERN	Wernitzgruen	146.59	334	*e*PKPbc	PKPbc	12 20 57.8	-0.7
KHC	Kasperske Hory	146.96	332	*e*PKP	PKPdf	12 20 59.3	+1.8
GEC2	GERESS Array S	147.12	331	*e*PKPbc	PKPbc	12 20 59.2	-0.9
GEC2	GERESS Array S	147.12	331	*e*PKPbc	PKPbc	12 20 59.2	-0.9
GERES	GERESS Array B	147.12	331	PKPbc	PKPbc	12 20 59.4	-0.7
	comp=Z,2.2nm,0.7s,baz=46,slow=3.9,SNR=13						
WET	Wettzell	147.25	332	*e*PKPbc	PKPbc	12 21 00.0	-0.4
DAVOX	Davos/Dischmat	150.36	332	PKPbc	PKPbc	12 21 07.9	-0.5
	comp=Z,3.8nm,0.4s,baz=34,slow=7.3,SNR=8.7						
TORD	Torodi Ar. Bea	166.37	234	PKPab	PKPab	12 22 21.9	-3.2
	comp=Z,0.3nm,0.8s,baz=134,slow=4.2,SNR=2.5						

DJA 01 12:05:08,1°.97N×126°.67E,h7km,MLv4.0/6,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.38	150	P	Pn	12 05 32.0	-1.7
TNTI				S	Sb	12 05 53.0	+1.0
MNI	Manado	1.90	254	P	Pn	12 05 40.8	-0.1
MNI				S	Sn	12 06 05.8	+0.7
SGSI	Sangihe	2.05	326	P	Pn	12 05 44.1	+1.2
SGSI				S	Sn	12 06 09.7	+0.9
LBMI	Labuha	2.72	162	P	Pn	12 05 52.0	-0.1
LUWI	Luwuk	4.91	233	P	Pn	12 06 23.7	+1.4
MRSI	Marisa	4.96	253	P	Pn	12 06 23.6	+0.7
NLAI	Namlea	5.19	175	P	Pn	12 06 25.8	-0.4
	0.2nm970nm35nm,0.9s						
APSI	Ampana	5.78	240	P	Pn	12 06 33.9	-0.3

GEN ***01*** *12:30:19.9,43°.53N×12°.91E,h8km,ML3.7*
ISCJB ***01*** *12:30:21.7±0.2,43°.56N±0°.02×12°.67E±0°.02,h60km±3km, Error ellipse: s-maj=2.6km s-min=2.3km az=152.1*
LDG ***01*** *12:30:22.2±0.1,43°.58N×12°.82E,h25km,Ml3.6/30,Error ellipse: s-maj=2.2km s-min=1.8km az=40.0*
CSEM ***01*** *12:30:22.3±0.1,43°.47N×12°.75E,h44km±2km,ML4.0/13, Error ellipse: s-maj=3.0km s-min=2.6km az=5.0*
ROM ***01*** *12:30:23.1±0.1,43°.49N×12°.69E,h37km±1km,Ml3.4/52, Error ellipse: s-maj=1.9km s-min=1.4km az=23.0*
NEIC ***01*** *12:30:23.1,43°.49N×12°.69E,h37km,ML3.6(LDG), ML3.4(ROM),ML3.0(STR),After ROM.*
NEIC Felt at Cagli, Sassoferrato and Urbino.
PRU ***01*** *12:30:24.0,43°.55N×12°.94E,h41km*
VIE ***01*** *12:30:24.1±0.5,43°.59N×12°.89E,h55km±26km,mb3.1/15, ML3.8/17,Error ellipse: s-maj=3.2km s-min=2.6km az=161.0 50 km SE of San Marino*
SZGRF ***01*** *12:30:25.0,43°.73N×12°.72E,h10km,mb3.9,Central Italy*
STR ***01*** *12:30:33.6±0.3,44°.09N×11°.85E,h25km,Ml3.8,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 01 12:30:23.1±0.2,43°.54N±0°.01×12°.69E±0°.02,h44km±3km, n293,σ1$19/418,14C-8D,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIEI	Pieia	0.11	268	Pg	Pn	12 30 29.1	-1.2
PIEI				Sg	Sn	12 30 34.4	-0.9
	34μm,0.2s						
PIEI	Pieia	0.11	268	Pg	Pn	12 30 29.1	-1.2
PIEI				Sg	Sn	12 30 34.4	-0.9
	34μm,0.2s						
FSSB	Fossombrone	0.17	23	Pg	Pn	12 30 30.0	-0.6
FSSB				Sg	Sn	12 30 35.9	+0.1
	44μm,0.3s						
FSSB	Fossombrone	0.17	23	Pg	Pn	12 30 30.0	-0.6
FSSB				Sg	Sn	12 30 35.9	+0.1
	44μm,0.3s						
ARVD	Arcevia	0.19	103	Pg	Pn	12 30 29.4	-1.3
ARVD				Sg	Sn	12 30 34.9	-1.2
	8μm,0.4s						
ARVD	Arcevia	0.19	103	Pg	Pn	12 30 29.4	-1.3
ARVD				Sg	Sn	12 30 34.9	-1.2
	8μm,0.4s						
MURB	Monte Urbino	0.30	204	Pg	Pn	12 30 30.7	-1.0
MURB				Sg	Sn	12 30 37.3	-0.5
	14μm,0.3s						
MURB	Monte Urbino	0.30	204	Pg	Pn	12 30 30.7	-1.0
MURB				Sg	Sn	12 30 37.3	-0.5
	14μm,0.3s						
BADI	Badiali	0.33	265	Pg	Pn	12 30 31.9	-0.1
BADI				Sg	Sn	12 30 39.5	+1.3
	12μm,0.6s						
BADI	Badiali	0.33	265	Pg	Pn	12 30 31.9	-0.1
BADI				Sg	Sn	12 30 39.5	+1.3
	12μm,0.6s						
SNTG	Esanatoglia	0.34	147	Pg	Pn	12 30 30.7	-1.4
SNTG	Esanatoglia	0.34	147	Pg	Pn	12 30 30.7	-1.4
CDCA	Citt' di Caste	0.34	256	Pg	Pn	12 30 32.0	-0.1
CDCA				Sg	Sn	12 30 39.3	+0.8
	4μm,0.6s						
CDCA	Citt' di Caste	0.34	256	Pg	Pn	12 30 32.0	-0.1
CDCA				Sg	Sn	12 30 39.3	+0.8
	4μm,0.6s						
PARC	Parchiule	0.34	288	Pg	Pn	12 30 32.0	-0.2
PARC				Sg	Sn	12 30 40.0	+1.4
	2μm,0.5s						
PARC	Parchiule	0.34	288	Pg	Pn	12 30 32.0	-0.2
PARC				Sg	Sn	12 30 40.0	+1.4
	2μm,0.5s						
CING	Cingoli	0.40	114	Pg	Pn	12 30 31.8	-1.0
CING				Sg	Sn	12 30 40.0	+0.3
	4μm,0.4s						
CING	Cingoli	0.40	114	Pg	Pn	12 30 31.8	-1.0
CING				Sg	Sn	12 30 40.0	+0.3
	4μm,0.4s						
RSM	Repubblica di	0.43	336	Pg	Pn	12 30 33.9	+0.8
	483nm,0.8s						
RSM	Repubblica di	0.43	336	Pg	Pn	12 30 33.9	+0.8
	483nm,0.8s						
SENI	Senigallia	0.43	67	Pg	Pn	12 30 33.8	+0.7
	6μm,0.8s						
SENI	Senigallia	0.43	67	Pg	Pn	12 30 33.8	+0.7
	6μm,0.8s						
ASS	Assisi	0.48	183	Pg	Pn	12 30 32.6	-1.1
	116nm,0.2s						
ASS	Assisi	0.48	183	Pg	Pn	12 30 32.6	-1.1
	116nm,0.2s						
CRE	Caprese Michel	0.54	279	Pg	Pn	12 30 35.1	+0.5
	873nm,0.5s						
CRE	Caprese Michel	0.54	279	Pg	Pn	12 30 35.1	+0.5
	873nm,0.5s						
CESI	CESI - Serrava	0.56	164	Pg	Pn	12 30 33.3	-1.5
CESI				Sg	Sn	12 30 42.5	-0.5
CESI	CESI - Serrava	0.56	164	Pg	Pn	12 30 33.3	-1.5
CESI				Sg	Sn	12 30 42.5	-0.5
CAFI	Castiglion Fio	0.57	248	Pg	Pn	12 30 34.8	-0.1
CAFI				Sg	Sn	12 30 44.0	+0.7
	3μm,0.6s						
CAFI	Castiglion Fio	0.57	248	Pg	Pn	12 30 34.8	-0.1
CAFI				Sg	Sn	12 30 44.0	+0.7
	3μm,0.6s						
FDMO	Fiordimonte	0.58	150	Pg	Pn	12 30 33.8	-1.3
FDMO				Sg	Sn	12 30 43.3	-0.3
	3μm,0.4s						
FDMO	Fiordimonte	0.58	150	Pg	Pn	12 30 33.8	-1.3
FDMO				Sg	Sn	12 30 43.3	-0.3
	3μm,0.4s						
AOI	Ancona	0.66	89	Pg	Pn	12 30 36.5	+0.4
AOI				Sg	Sn	12 30 47.1	+1.6
	2μm,0.5s						
AOI	Ancona	0.66	89	Pg	Pn	12 30 36.5	+0.4
ASQU	Asqua	0.70	292	Pg	Pn	12 30 37.4	+0.7
	1μm,0.5s						
ASQU	Asqua	0.70	292	Pg	Pn	12 30 37.4	+0.7
	1μm,0.5s						
SFI	Santa Sofia	0.71	301	Pg	Pn	12 30 37.9	+1.1
	1μm,0.5s						
SFI	Santa Sofia	0.71	301	Pg	Pn	12 30 37.9	+1.1
	1μm,0.5s						
MGAB	Montegabbione	0.76	214	Pg	Pn	12 30 37.1	-0.3
MGAB				Sg	Sn	12 30 47.7	0.0
	5μm,0.6s						
MGAB	Montegabbione	0.76	214	Pg	Pn	12 30 37.1	-0.3
MGAB				Sg	Sn	12 30 47.7	0.0
	5μm,0.6s						
NRCA	Norcia	0.77	156	Pg	Pn	12 30 36.7	-0.9
NRCA	Norcia	0.77	156	Pg	Pn	12 30 36.7	-0.9
SACS	San Casciano d	0.90	220	Pg	Pn	12 30 38.9	-0.4
SACS				Sg	Sn	12 30 51.4	+0.3
	674nm,0.4s						
VMG	Vicchio	0.93	297	Pg	Pn	12 30 41.5	+1.7
	494nm,0.5s						
VMG	Vicchio	0.93	297	Pg	Pn	12 30 41.5	+1.7
	494nm,0.5s						
OFFI	Offida	0.95	129	Pg	Pn	12 30 41.2	+1.2
	3μm,0.5s						
OFFI	Offida	0.95	129	Pg	Pn	12 30 41.2	+1.2
	3μm,0.5s						
CSNT	Castellina Chi	1.02	267	Pg	Pn	12 30 40.9	-0.1
	439nm,0.3s						
ARCI	Arcidosso	1.12	233	Pg	Pn	12 30 41.9	-0.5
	253nm,0.7s						
LATE	Laterza	1.13	215	Pg	Pn	12 30 41.9	-0.6
	105nm,0.4s						
CAMP	Campotosto	1.13	152	Pg	Pn	12 30 42.6	+0.1
	222nm,0.5s						
CAMP	Campotosto	1.13	152	Pg	Pn	12 30 42.6	+0.1
	222nm,0.5s						
TERO	Teramo	1.14	144	Pg	Pn	12 30 42.7	+0.2
	1μm,0.5s						
TERO	Teramo	1.14	144	Pg	Pn	12 30 42.7	+0.2
	1μm,0.5s						
TRTR	Tortoreto Alta	1.16	129	Pg	Pn	12 30 44.0	+1.2
	2μm,0.5s						
TRTR	Tortoreto Alta	1.16	129	Pg	Pn	12 30 44.0	+1.2
	2μm,0.5s						
CRMI	Carmignano	1.27	282	Pg	Pn	12 30 44.8	+0.4
	339nm,0.5s						
AQU	L'Aquila	1.30	156	Pg	Pn	12 30 45.6	+0.9
AQU	L'Aquila	1.30	156	*e*Pn	Pn	12 30 45.3	+0.5
AQU				*e*Sg	Sn	12 31 06.0	+5.2
AQU	L'Aquila	1.30	156	*e*Pn	Pn	12 30 45.3	+0.6
AQU	L'Aquila	1.30	156	Pg	Pn	12 30 45.6	+0.9
AQU				*e*Sg	Sn	12 31 06.0	+5.1
FNVD	Fontana Vidola	1.30	299	Pg	Pn	12 30 46.9	+2.2
	484nm,0.5s						
FIAM	Fiamignano	1.31	166	Pg	Pn	12 30 45.3	+0.4
	743nm,0.8s						
FIAM	Fiamignano	1.31	166	Pg	Pn	12 30 45.3	+0.4
	743nm,0.8s						
VCEL	Villa Celiera	1.42	143	Pg	Pn	12 30 47.0	+0.5
	971nm,0.5s						
VCEL	Villa Celiera	1.42	143	Pg	Pn	12 30 47.0	+0.5
	971nm,0.5s						
PZZT	Monte Pizzetto	1.45	295	Pg	Pn	12 30 47.3	+0.5
	323nm,0.3s						
MTCE	Montecelio	1.52	179	Pg	Pn	12 30 47.3	-0.5
	432nm,0.5s						
CASP	Castiglione de	1.53	241	Pg	Pn	12 30 47.0	-1.0
	399nm,0.3s						
TOLF	Tolfa	1.56	199	Pg	Pn	12 30 47.6	-0.8
	158nm,0.4s						
PII	Pisa	1.58	277	Pg	Pn	12 30 48.6	-0.1
	140nm,0.2s						
MAON	Monte Argentar	1.59	226	Pg	Pn	12 30 48.0	-0.8
	156nm,0.5s						
CERT	Cerreto	1.60	172	Pg	Pn	12 30 48.6	-0.4
	311nm,0.5s						
MAIM	Mastiano	1.64	284	Pg	Pn	12 30 49.8	+0.4
	265nm,0.3s						
MAIM	Mastiano	1.64	284	P	Pn	12 30 49.5	+0.1
INTR	Introdacqua	1.77	149	Pg	Pn	12 30 51.7	+0.5
	622nm,0.7s						
SARO	Sassorosso	1.78	292	P	Pn	12 30 51.5	+0.2
VLC	Villacollemand	1.78	291	Pg	Pn	12 30 51.8	+0.5
	127nm,0.4s						
VLC	Villacollemand	1.78	291	*e*Pn	Pn	12 30 51.9	+0.6
VLC				*e*Sg	Sn	12 31 18.9	+6.2
VLC	Villacollemand	1.78	291	*e*Pn	Pn	12 30 51.9	+0.6
VLC				*e*Sg	Sn	12 31 18.9	+6.2
RDP	Rocca di Papa	1.78	179	Pg	Pn	12 30 51.0	-0.4
	901nm,0.6s						
VVLD	Villa Vallelon	1.80	157	Pg	Pn	12 30 52.9	+1.2
	556nm,0.8s						
LPEL	Lama dei Pelig	1.85	143	Pg	Pn	12 30 52.5	+0.1
	371nm,0.9s						
NVLJ	Novalja	1.88	56	*i* Pn	Pn	12 30 52.6	-0.1
NVLJ				Sn	Sn	12 31 14.8	-0.3
NVLJ	Novalja	1.88	56	*i* Pn	Pn	12 30 52.6	-0.1
NVLJ				Sn	Sn	12 31 14.8	-0.3
VALM	Valbona	1.94	295	P	Pn	12 30 55.3	+1.7
POFI	Posta Fibreno	1.97	157	Pg	Pn	12 30 54.9	+0.9
	181nm,1.0s						
GIUL	Giuliano Di Ro	2.02	168	Pg	Pn	12 30 54.9	+0.2
	136nm,0.8s						
GRAM	Graiana	2.12	298	P	Pn	12 30 57.9	+1.9
FRES	Fresagrandinar	2.14	136	Pg	Pn	12 30 56.4	+0.1
	271nm,0.9s						
CERA	Filignano	2.17	153	Pg	Pn	12 30 57.7	+0.9
	212nm,0.9s						
SKDS	Skadanscina	2.22	25	*i* Pn	Pn	12 30 57.0	-0.4
SKDS				*e*Sn	Sn	12 31 21.7	-1.8
SKDS							
	comp=Z,110nm,0.1s						
CODM	Codolo	2.22	293	P	Pn	12 30 58.5	+1.1
TRI	Trieste	2.30	19	*e*Pn	Pn	12 30 57.8	-0.7
TRI	Trieste	2.30	19	*e*Pn	Pn	12 30 57.8	-0.7
VAGA	Valle Agricola	2.41	151	Pg	Pn	12 31 01.2	+1.2
	comp=Z,88nm,0.7s						
SC2M	Scurtabo	2.44	292	P	Pn	12 31 01.5	+1.1
SGG	Gregorio Mates	2.49	149	Pg	Pn	12 31 02.3	+1.2
	comp=Z,83nm,0.6s						
FG2	Serracapriola	2.52	133	Pg	Pn	12 31 01.9	+0.4
	comp=Z,83nm,0.3s						
SALO	Salr	2.59	324	Pg	Pn	12 31 03.6	+1.1
	comp=Z,376nm,0.9s						
VOY	Vojsko	2.63	19	*e*Pn	Pn	12 31 02.8	-0.3
VOY				*e*Sn	Sn	12 31 33.7	-0.1
VOY	Vojsko	2.63	19	*e*Pn	Pn	12 31 02.8	-0.3
VOY				*e*Sn	Sn	12 31 33.7	-0.1
MAGA	Magasa	2.67	327	Pg	Pn	12 31 04.2	+0.6
	comp=Z,477nm,0.5s						
LJU	Ljubljana	2.82	27	*e*Pn	Pn	12 31 06.5	+0.8
LJU				*e*		12 31 15.0	
LJU				*e*Sn	Sn	12 31 39.6	+1.1
PGF	Pioggiola	2.88	251	*e*Pn	Pn	12 31 06.9	+0.4
	SNR=1.0						
PGF				*e*Sn	Sn	12 31 38.7	-1.2
	comp=Z,64nm,0.4s,SNR=1.0						
PGF	Pioggiola	2.88	251	*e*Pn	Pn	12 31 06.9	+0.4
	SNR=1.0						
PGF				*e*Sn	Sn	12 31 38.7	-1.2
	comp=Z,32nm,0.4s,SNR=1.0						
MABI	Malga Bissina	2.95	329	Pg	Pn	12 31 08.3	+0.8
	comp=Z,83nm,0.2s						
FVI	Forni Avoltri	3.06	1	Pg	Pn	12 31 09.6	+0.7
MDI	Monti di Nese	3.08	317	Pg	Pn	12 31 10.0	+0.7
	comp=Z,84nm,0.3s						
PCP	Piancastagn	3.15	290	P	Pn	12 31 11.3	+1.1
ABTA	Abfaltersbach	3.21	358	⇑*i*Pn	Pn	12 31 12.3	+1.3
	SNR=18						
ABTA				⇑*i*Sn	Sn	12 31 48.8	+0.9
ABTA	Abfaltersbach	3.21	358	Pn	Pn	12 31 12.3	+1.3
	SNR=18						
ABTA				Sn	Sn	12 31 48.8	+0.9
OBKA	Obir	3.25	23	*e*Pn	Pn	12 31 11.5	0.0
OBKA	Obir	3.25	23	⇑*i*Pn	Pn	12 31 11.5	0.0
	SNR=13						
OBKA				⇑*i*Sn	Sn	12 31 48.9	0.0
OBKA	Obir	3.25	23	Pn	Pn	12 31 11.5	0.0
	SNR=13						
OBKA				Sn	Sn	12 31 48.9	0.0
BRMO	Bormio	3.36	332	Pg	Pn	12 31 14.9	+1.8
	comp=Z,40nm,0.5s						
ROTM	Rocchetta Tana	3.38	294	P	Pn	12 31 14.7	+1.3
RORO	Rocca Rossa	3.40	281	P	Pn	12 31 13.7	+0.2
RORO				S	Sn	12 31 51.0	-1.5
IMI	Imperia	3.50	278	P	Pn	12 31 16.6	+1.7
KBA	Koelnbreinsper	3.57	7	*e*Pn	Pn	12 31 17.2	+1.3
KBA	Koelnbreinsper	3.57	7	⇓*i*Pn	Pn	12 31 17.3	+1.4
	SNR=33						
KBA				⇓*i*Sn	Sn	12 31 56.8	0.0
KBA	Koelnbreinsper	3.57	7	Pn	Pn	12 31 17.3	+1.4
	SNR=33						
KBA				Sn	Sn	12 31 56.8	0.0
MONE	Monesi	3.61	280	P	Pn	12 31 16.6	+0.1
NEGI	Seborga	3.63	277	P	Pn	12 31 16.5	-0.2
VAI	Varese	3.64	311	Pg	Pn	12 31 17.5	+0.7
	comp=Z,23nm,0.2s						
RONM	Roccetta Nervi	3.71	277	P	Pn	12 31 18.3	+0.5
STON	Ston	3.72	99	*i* Pn	Pn	12 31 18.0	-0.1
STON				Sn	Sn	12 31 58.3	-2.3
STON	Ston	3.72	99	*i* Pn	Pn	12 31 17.9	-0.1
STON				Sn	Sn	12 31 58.3	-2.3
FETA	Feichten	3.75	339	⇓*i*Pn	Pn	12 31 20.0	+1.7
	SNR=19						
FETA				⇑*i*Sn	Sn	12 32 03.8	+2.6
FETA	Feichten	3.75	339	Pn	Pn	12 31 20.0	+1.7
	SNR=19						
FETA				Sn	Sn	12 32 03.8	+2.7
SAOF	Saorge	3.75	279	P	Pn	12 31 20.5	+2.2
SAOF				S	Sn	12 32 00.7	-0.5
SAOF	Saorge	3.75	279	P	Pn	12 31 20.5	+2.2
SAOF				S	Sn	12 32 00.7	-0.5
WTTA	Wattenberg	3.80	349	*e*Pn	Pn	12 31 21.2	+2.2
WTTA	Wattenberg	3.80	349	⇓*i*Pn	Pn	12 31 21.0	+2.0
	SNR=9.7						
WTTA				⇓*i*Sn	Sn	12 32 04.0	+1.6
WTTA	Wattenberg	3.80	349	Pn	Pn	12 31 21.0	+2.0
	SNR=9.7						
WTTA				Sn	Sn	12 32 04.0	+1.6
SBF	Sospel	3.82	277	*e*Pn	Pn	12 31 19.7	+0.3
	SNR=1.0						
SBF				*e*Sn	Sn	12 32 01.0	-2.1
	comp=Z,88nm,0.5s						
SBF	Sospel	3.82	277	*e*Pn	Pn	12 31 19.7	+0.3
	SNR=1.0						
SBF				*e*Sn	Sn	12 32 01.0	-2.1
	comp=Z,44nm,0.5s						
AUTN	L'Aution	3.84	279	P	Pn	12 31 21.8	+2.2
AUTN	L'Aution	3.84	279	P	Pn	12 31 21.8	+2.2
ENR	Entracque	3.87	282	P	Pn	12 31 21.9	+1.8
WATA	Walderalm	3.88	349	*i* Pn	Pn	12 31 22.6	+2.5
	SNR=25						
WATA				⇑*i*Sn	Sn	12 32 06.8	+2.5
WATA	Walderalm	3.88	349	Pn	Pn	12 31 22.6	+2.5
	SNR=25						
WATA				Sn	Sn	12 32 06.8	+2.5
LUCF	Luceram	3.89	277	P	Pn	12 31 22.4	+2.1
LUCF	Luceram	3.89	277	P	Pn	12 31 22.4	+2.1
MOTA	Moosalm	3.96	344	⇑*i*Pn	Pn	12 31 23.5	+2.2
	SNR=17						
MOTA				⇑*i*Sn	Sn	12 32 09.4	+2.9
MOTA	Moosalm	3.96	344	Pn	Pn	12 31 23.5	+2.2
	SNR=17						
MOTA				Sn	Sn	12 32 09.4	+2.9
TOUF	Mont Tournerai	3.97	279	P	Pn	12 31 23.7	+2.3
TOUF	Mont Tournerai	3.97	279	P	Pn	12 31 23.7	+2.3
MVIF	Mont Vial	4.03	277	P	Pn	12 31 25.9	+3.7
MVIF	Mont Vial	4.03	277	P	Pn	12 31 25.9	+3.7
TRAV	Traversella	4.05	301	P	Pn	12 31 21.9	-0.6
PZZ	Stroppo	4.13	285	P	Pn	12 31 24.4	+0.7
RETA	Reutte	4.17	342	*i* Pn	Pn	12 31 26.4	+2.2
	SNR=27						
RETA				⇓*i*Sn	Sn	12 32 13.6	+2.0
RETA	Reutte	4.17	342	Pn	Pn	12 31 26.4	+2.2
	SNR=27						
RETA				Sn	Sn	12 32 13.6	+2.0
RJOB	Jochberg	4.20	1	*e*Pn	Pn	12 31 26.1	+1.6
RSP	Reno Superiore	4.21	294	P	Pn	12 31 24.0	-0.7
ARSA	Arzberg	4.21	27	⇑*i*Pn	Pn	12 31 24.3	-0.4
	SNR=8.6						
ARSA				⇑*i*Sn	Sn	12 32 10.5	-2.1
ARSA	Arzberg	4.21	27	Pn	Pn	12 31 24.3	-0.4
	SNR=8.6						
ARSA				Sn	Sn	12 32 10.5	-2.1
DAVA	Damuels	4.24	333	*e*Pn	Pn	12 31 27.4	+2.3
DAVA	Damuels	4.24	333	⇑*e*Pn	Pn	12 31 27.2	+2.1
	SNR=9.8						
DAVA				⇑*i*Sn	Sn	12 32 15.6	+2.4
DAVA	Damuels	4.24	333	Pn	Pn	12 31 27.2	+2.1
	SNR=9.8						
DAVA				Sn	Sn	12 32 15.6	+2.4
FRF	La Foret Royal	4.39	272	*e*Pn	Pn	12 31 27.4	+0.2
	SNR=1.0						
FRF				*e*Sn	Sn	12 32 14.6	-2.5
	comp=Z,23nm,0.3s						
FRF	La Foret Royal	4.39	272	*e*Pn	Pn	12 31 27.4	+0.2
	SNR=1.0						
FRF				*e*Sn	Sn	12 32 14.6	-2.5
	comp=Z,11nm,0.3s						
MBDF	Montbardon	4.42	288	*e*Pn	Pn	12 31 27.3	-0.3
	SNR=1.0						
MBDF				*e*Sn	Sn	12 32 15.2	-2.6
	comp=Z,21nm,0.5s						
MBDF	Montbardon	4

	comp=Z,9.6nm,0.8s					
SPAK	**Spaichingen-Ko**	**5.32 330**	P	**Pn**	**12 31 40.4**	**+0.5**
SPAK			S	**Sn**	**12 32 36.4**	**-3.4**
SPAK	**Spaichingen-Ko**	**5.32 330**	P	**Pn**	**12 31 40.4**	**+0.5**
GEC2	**GERESS Array S**	**5.35 7**	*e*Pn	**Pn**	**12 31 40.8**	**+0.4**
GEC2			*e*Sn	**Sn**	**12 32 38.3**	**-2.4**
GEC2	**GERESS Array S**	**5.35 7**	*e*Pn	**Pn**	**12 31 40.8**	**+0.4**
BBS	**Basel-Blauen**	**5.35 319**	P	**Pn**	**12 31 41.3**	**+0.9**
BBS			S	**Sn**	**12 32 36.6**	**-4.1**
BBS	**Basel-Blauen**	**5.35 319**	P	**Pn**	**12 31 41.3**	**+0.9**
FELD	**Feldberg im Sc**	**5.44 325**	P	**Pn**	**12 31 42.1**	**+0.6**
FELD			S	**Sn**	**12 32 39.5**	**-3.3**
FELD	**Feldberg im Sc**	**5.44 325**	P	**Pn**	**12 31 42.1**	**+0.6**
ZST	**Bratislava**	**5.58 32**	*e*Pn	**Pn**	**12 31 43.8**	**+0.3**
ZST			*e*		12 31 51.6	
ZST			*e*Sn	**Sn**	**12 32 43.4**	**-2.9**
ZST	**Bratislava**	**5.58 32**	*e*PN	**Pn**	**12 31 43.8**	**+0.3**
ZST			*e*		12 31 51.6	
ZST	**Bratislava**	**5.58 32**	*e*SN	**Sn**	**12 32 43.4**	**-2.9**
ZST	**Bratislava**	**5.58 32**	*e*Pn	**Pn**	**12 31 43.8**	**+0.3**
CABF	**La Chapelle**	**5.59 306**	*e*Pn	**Pn**	**12 31 44.3**	**+0.6**
	SNR=1.0					
CABF			*e*Sn	**Sn**	**12 32 42.3**	**-4.3**
	comp=Z,14nm,0.5s					
CABF	**La Chapelle**	**5.59 306**	*e*Pn	**Pn**	**12 31 44.3**	**+0.6**
	SNR=1.0					
WET	**Wettzell**	**5.61 1**	*e*Pn	**Pn**	**12 31 43.7**	**-0.2**
WET			*e*Sn	**Sn**	**12 32 42.5**	**-4.4**
WET	**Wettzell**	**5.61 1**	*e*Pn	**Pn**	**12 31 43.7**	**-0.2**
LOMF	**Lomont**	**5.61 315**	P	**Pn**	**12 31 44.7**	**+0.7**
LOMF			S	**Sn**	**12 32 43.3**	**-3.8**
LOMF	**Lomont**	**5.61 315**	P	**Pn**	**12 31 44.7**	**+0.7**
KHC	**Kasperske Hory**	**5.63 6**	*e*Pn	**Pn**	**12 31 44.1**	**0.0**
	comp=Z,5.8nm,0.5s					
KHC			*e*Sn	**Sn**	**12 32 45.0**	**-2.3**
KHC	**Kasperske Hory**	**5.63 6**	*e*PN	**Pn**	**12 31 43.8**	**-0.3**
KHC			*e*x	x	12 31 53.0	
KHC			*e*SN	**Sn**	**12 32 44.4**	**-3.0**
KHC			*e*x	x	12 32 50.5	
KHC			*e*x	x	12 32 57.5	
KHC	**Kasperske Hory**	**5.63 6**	*e*Pn	**Pn**	**12 31 44.1**	**0.0**
	comp=Z,5.8nm,0.5s					
BFO	**Black Forest**	**5.67 329**	*e*Pn	**Pn**	**12 31 45.8**	**+1.0**
BFO	**Black Forest**	**5.67 329**	*e*Pn	**Pn**	**12 31 45.8**	**+1.0**
MOF	**Molkenrain**	**5.81 320**	P	**Pn**	**12 31 47.1**	**+0.5**
MOF			S	**Sn**	**12 32 48.5**	**-3.4**
MOF	**Molkenrain**	**5.81 320**	P	**Pn**	**12 31 47.1**	**+0.5**
VIVF	**Saint-Julien-l**	**5.91 286**	*e*Pn	**Pn**	**12 31 47.1**	**-1.0**
	SNR=1.0					
VIVF			*e*Sn	**Sn**	**12 32 50.6**	**-3.9**
	comp=Z,3.8nm,0.5s					
VIVF	**Saint-Julien-l**	**5.91 286**	*e*Pn	**Pn**	**12 31 47.1**	**-1.0**
	SNR=1.0					
HINF	**Hinteralfeld**	**5.92 318**	*e*Pn	**Pn**	**12 31 47.8**	**-0.3**
	SNR=1.0					
HINF			*e*Sn	**Sn**	**12 32 49.5**	**-5.0**
	comp=Z,96nm,0.6s,SNR=1.0					
HINF	**Hinteralfeld**	**5.92 318**	*e*Pn	**Pn**	**12 31 47.8**	**-0.3**
	SNR=1.0					
SMOL	**Smolenice**	**5.97 32**	*e*SN	**Sn**	**12 32 54.5**	**-1.3**
SMOL	**Smolenice**	**5.97 32**	*e*Sn	**Sn**	**12 32 54.5**	**-1.3**
ECH	**Echery**	**6.06 322**	P	**Pn**	**12 31 50.8**	**+0.7**
ECH			S	**Sn**	**12 32 55.5**	**-2.6**
ECH	**Echery**	**6.06 322**	*e*Pn	**Pn**	**12 31 50.2**	**+0.1**
	comp=Z,9.8nm,0.3s					
ECH			*e*Sn	**Sn**	**12 32 54.3**	**-3.9**
ECH	**Echery**	**6.06 322**	*e*Pn	**Pn**	**12 31 50.2**	**+0.1**
	comp=Z,9.8nm,0.3s					
ECH	**Echery**	**6.06 322**	P	**Pn**	**12 31 50.8**	**+0.7**
TREC	**Trest**	**6.07 18**	*e*PN	**Pn**	**12 31 49.7**	**-0.5**
TREC			*e*SN	**Sn**	**12 32 54.3**	**-4.0**
TREC	**Trest**	**6.07 18**	Pn	**Pn**	**12 31 49.7**	**-0.5**
CDF	**Champ du Feu**	**6.16 324**	*e*Pn	**Pn**	**12 31 51.7**	**+0.2**
	SNR=1.0					
CDF			*e*Sn	**Sn**	**12 32 55.1**	**-5.4**
	comp=Z,13nm,0.2s,SNR=1.0					
CDF	**Champ du Feu**	**6.16 324**	*e*Pn	**Pn**	**12 31 51.7**	**+0.2**
	SNR=1.0					
GRF	**Grafenberg Arr**	**6.24 351**	*e*Sn	**Sn**	**12 32 57.2**	**-5.2**
ROTZ	**Rotzenmuhle**	**6.24 357**	*e*Pn	**Pn**	**12 31 51.6**	**-0.9**
ROTZ			*e*Sn	**Sn**	**12 32 56.7**	**-5.7**
HAU	**Haudompre**	**6.29 317**	*e*Pn	**Pn**	**12 31 53.1**	**-0.2**
	SNR=1.0					
HAU			*e*Sn	**Sn**	**12 32 58.7**	**-5.1**
	comp=Z,83nm,0.5s					
HAU	**Haudompre**	**6.29 317**	*e*Pn	**Pn**	**12 31 53.1**	**-0.2**
	SNR=1.0					
VRAC	**Vranov**	**6.37 24**	*e*Pn	**Pn**	**12 31 52.9**	**-1.4**
LANF	**Langenberg**	**6.41 330**	P	**Pn**	**12 31 55.8**	**+1.0**
LANF	**Langenberg**	**6.41 330**	P	**Pn**	**12 31 55.8**	**+1.0**
LASF	**Ste Croix**	**6.41 278**	*e*Pn	**Pn**	**12 31 55.4**	**+0.4**
	SNR=1.0					
LASF			*e*Sn	**Sn**	**12 33 02.6**	**-4.2**
	comp=Z,2.1nm,0.3s					
LASF	**Ste Croix**	**6.41 278**	*e*Pn	**Pn**	**12 31 55.4**	**+0.4**
	SNR=1.0					
VYHS	**Vyhne**	**6.54 39**	*e*Pn	**Pn**	**12 31 56.6**	**-0.1**
VYHS			*e*Sn	**Sn**	**12 33 05.5**	**-4.5**
VYHS	**Vyhne**	**6.54 39**	*e*PN	**Pn**	**12 31 56.6**	**-0.1**
VYHS			*e*SN	**Sn**	**12 33 05.5**	**-4.5**
VYHS	**Vyhne**	**6.54 39**	*e*Pn	**Pn**	**12 31 56.6**	**-0.1**
PRU	**Pruhonice**	**6.57 10**	*e*PN	**Pn**	**12 31 57.3**	**+0.2**
PRU			*e*SN	**Sn**	**12 33 07.0**	**-3.7**
PRU	**Pruhonice**	**6.57 10**	Pn	**Pn**	**12 31 57.3**	**+0.2**
THEF	**They Montfort**	**6.62 317**	P	**Pn**	**12 31 58.3**	**+0.5**
THEF	**They Montfort**	**6.62 317**	P	**Pn**	**12 31 58.3**	**+0.5**
PSZ	**Piszkesteto**	**6.68 47**	*e*	**Pn**	**12 31 49.0**	**-10**
NKC	**Novy Kostel**	**6.70 359**	*e*PN	**Pn**	**12 31 59.2**	**+0.4**
NKC			*e*SN	**Sn**	**12 33 09.5**	**-4.2**
NKC	**Novy Kostel**	**6.70 359**	Pn	**Pn**	**12 31 59.2**	**+0.4**
TANN	**Tannenbergstha**	**6.88 359**	*e*Pn	**Pn**	**12 32 01.1**	**-0.2**
PLDF	**La Plantade**	**6.90 294**	P	**Pn**	**12 32 02.3**	**+0.7**
PLDF	**La Plantade**	**6.90 294**	P	**Pn**	**12 32 02.3**	**+0.7**
LBL	**Lubilhac**	**6.97 287**	P	**Pn**	**12 32 04.0**	**+1.4**
LBL	**Lubilhac**	**6.97 287**	P	**Pn**	**12 32 04.0**	**+1.4**
SMF	**Signal de Mont**	**6.99 299**	*e*Pn	**Pn**	**12 32 02.4**	**-0.4**
	SNR=1.0					
SMF			*e*Sn	**Sn**	**12 33 15.9**	**-5.0**
	comp=Z,32nm,0.6s					
SMF	**Signal de Mont**	**6.99 299**	*e*Pn	**Pn**	**12 32 02.4**	**-0.4**
	SNR=1.0					
SFTF	**Sexfontaines**	**7.09 314**	*e*Pn	**Pn**	**12 32 02.5**	**-1.7**
	baz=134					
SFTF			*e*Sn	**Sn**	**12 33 17.9**	**-5.5**
	comp=Z,17nm,0.4s					
SFTF	**Sexfontaines**	**7.09 314**	*e*Pn	**Pn**	**12 32 02.5**	**-1.7**
	baz=134					
PVCC	**Panska Ves**	**7.11 10**	*e*SN	**Sn**	**12 33 20.0**	**-3.8**
MOX	**Moxa**	**7.14 354**	*e*PN	**Pn**	**12 32 04.6**	**-0.3**
MOX			*e*SN	**Sn**	**12 33 19.0**	**-5.7**
MOX	**Moxa**	**7.14 354**	*e*PN	**Pn**	**12 32 04.6**	**-0.3**
MOX			*e*SN	**Sn**	**12 33 19.0**	**-5.7**
LOR	**Lormes**	**7.25 304**	*e*Pn	**Pn**	**12 32 05.2**	**-1.1**
	baz=127,SNR=1.0					
LOR			*e*Sn	**Sn**	**12 33 21.8**	**-5.4**
	comp=Z,12nm,0.4s					
LOR	**Lormes**	**7.25 304**	*e*Pn	**Pn**	**12 32 05.2**	**-1.1**
	baz=127,SNR=1.0					
DPC	**Dobruska-Polom**	**7.25 19**	*e*PN	**Pn**	**12 32 05.3**	**-1.1**
DPC			*e*SN	**Sn**	**12 33 20.9**	**-6.4**
DPC	**Dobruska-Polom**	**7.25 19**	Pn	**Pn**	**12 32 05.3**	**-1.1**
MEZF	**Maizieres J'vi**	**7.27 316**	*e*Pn	**Pn**	**12 32 05.0**	**-1.7**
	baz=132					
MEZF			*e*Sn	**Sn**	**12 33 22.1**	**-5.7**
	comp=Z,8.0nm,0.3s					
MEZF	**Maizieres J'vi**	**7.27 316**	*e*Pn	**Pn**	**12 32 05.0**	**-1.7**
	baz=132					
TNS	**Taunus Mts**	**7.29 338**	*e*Pn	**Pn**	**12 32 08.4**	**+1.5**
TNS	**Taunus Mts**	**7.29 338**	*e*Pn	**Pn**	**12 32 08.4**	**+1.5**
OKC	**Ostrava-Krasne**	**7.33 29**	*e*SN	**Sn**	**12 33 23.1**	**-6.2**
KECS	**Kecovo**	**7.34 45**	*e*Pn	**Pn**	**12 32 06.0**	**-1.6**
KECS	**Kecovo**	**7.34 45**	*e*PN	**Pn**	**12 32 06.0**	**-1.6**
AVF	**Avril sur Loir**	**7.36 299**	*e*Pn	**Pn**	**12 32 06.4**	**-1.4**
	SNR=1.0					
AVF			*e*Sn	**Sn**	**12 33 24.4**	**-5.5**
	comp=Z,5.7nm,0.5s					
AVF	**Avril sur Loir**	**7.36 299**	*e*Pn	**Pn**	**12 32 06.4**	**-1.4**
	SNR=1.0					
SSF	**Saint Saulge**	**7.37 302**	*e*Pn	**Pn**	**12 32 06.5**	**-1.5**
	SNR=1.0					
SSF			*e*Sn	**Sn**	**12 33 25.1**	**-5.2**
	comp=Z,3.7nm,0.3s					
SSF	**Saint Saulge**	**7.37 302**	*e*Pn	**Pn**	**12 32 06.5**	**-1.5**
	SNR=1.0					
BRG	**Berggiesshubel**	**7.39 6**	*e*Sn	**Sn**	**12 33 26.4**	**-4.2**
BGF	**Bois d'Agland**	**7.60 297**	*e*Pn	**Pn**	**12 32 10.0**	**-1.1**
	SNR=1.0					
BGF			*e*Sn	**Sn**	**12 33 30.3**	**-5.5**
	comp=Z,14nm,0.4s					
BGF	**Bois d'Agland**	**7.60 297**	*e*Pn	**Pn**	**12 32 10.0**	**-1.1**
	SNR=1.0					
MTLF	**Montolieu**	**7.63 272**	*e*Pn	**Pn**	**12 32 12.0**	**+0.4**
	SNR=1.0					
MTLF			*e*Sn	**Sn**	**12 33 31.4**	**-5.2**
	comp=Z,2.9nm,0.5s					
MTLF	**Montolieu**	**7.63 272**	*e*Pn	**Pn**	**12 32 12.0**	**+0.4**
	SNR=1.0					
CAF	**Calviac**	**7.76 284**	*e*Pn	**Pn**	**12 32 12.2**	**-1.2**
CAF	**Calviac**	**7.76 284**	*e*Pn	**Pn**	**12 32 12.2**	**-1.2**
CLL	**Collm**	**7.77 1**	*e*Pn	**Pn**	**12 32 13.0**	**-0.6**
CLL			*e*Sg	**Sn**	**12 33 58.0**	**+18**
CLL	**Collm**	**7.77 1**	*e*Pn	**Pn**	**12 32 13.0**	**-0.6**
CLL			*e*		12 32 17.0	
CLL			*e*Sn	**Sn**	**12 33 36.0**	**-4.2**
CLL			*e*Sg	Sn	12 34 37.0	+57
CLL			LV		12 37 00.0	
	comp=Z,100nm,20.9s					
CLL	**Collm**	**7.77 1**	*e*Pn	**Pn**	**12 32 13.0**	**-0.6**
TCF	**Toulx Ste Croi**	**7.93 294**	*e*Pn	**Pn**	**12 32 14.6**	**-1.1**
	SNR=1.0					
TCF			*e*Sn	**Sn**	**12 33 38.2**	**-5.8**
	comp=Z,4.8nm,0.5s,SNR=1.0					
TCF	**Toulx Ste Croi**	**7.93 294**	*e*Pn	**Pn**	**12 32 14.6**	**-1.1**
	SNR=1.0					
HYF	**Humbligny**	**7.99 301**	*e*Pn	**Pn**	**12 32 15.0**	**-1.6**
HYF			*e*Sn	**Sn**	**12 33 39.9**	**-5.7**
HYF	**Humbligny**	**7.99 301**	*e*Pn	**Pn**	**12 32 15.0**	**-1.6**
RJF	**Les Rejaudoux**	**8.19 286**	*e*Pn	**Pn**	**12 32 18.1**	**-1.2**
RJF	**Les Rejaudoux**	**8.19 286**	*e*Pn	**Pn**	**12 32 18.1**	**-1.2**
LFF	**La Frestale**	**8.69 283**	*e*Pn	**Pn**	**12 32 24.9**	**-1.3**
LFF	**La Frestale**	**8.69 283**	*e*Pn	**Pn**	**12 32 24.9**	**-1.3**
BAIF	**Baives**	**8.73 321**	*e*Pn	**Pn**	**12 32 25.1**	**-1.6**
BAIF			*e*Sn	**Sn**	**12 33 56.9**	**-6.8**
	comp=Z,2.1nm,0.4s					
BAIF	**Baives**	**8.73 321**	*e*Pn	**Pn**	**12 32 25.1**	**-1.6**
EPF	**Esparros**	**9.03 271**	*e*Pn	**Pn**	**12 32 29.7**	**-1.0**
EPF	**Esparros**	**9.03 271**	*e*Pn	**Pn**	**12 32 29.7**	**-1.0**
LDF	**La Druitiere**	**10.23 304**	*e*Pn	**Pn**	**12 32 45.7**	**-1.5**
LDF			*e*Sn	**Sn**	**12 34 33.1**	**-7.4**
	comp=Z,0.8nm,0.3s					
LDF	**La Druitiere**	**10.23 304**	*e*Pn	**Pn**	**12 32 45.7**	**-1.5**
FLN	**La Foliniere**	**10.52 304**	*e*Pn	**Pn**	**12 32 49.5**	**-1.7**
FLN			*e*Sn	**Sn**	**12 34 39.7**	**-7.8**
	comp=Z,1.3nm,0.4s					
FLN	**La Foliniere**	**10.52 304**	*e*Pn	**Pn**	**12 32 49.5**	**-1.7**

*ISCJB **01** 12:30:30.2±1.1, 18°.20S±0°.08×69°.66W±0°.09, h133km±9km, mb4.2/15, Error ellipse: s-maj=15.2km s-min=11.3km az=145.7*

*NEIC **01** 12:30:31.4±0.5, 18°.17S×69°.65W, mb4.4/6, Error ellipse: s-maj=17.0km s-min=10.4km az=60.0*

*IDC **01** 12:30:31.8±0.9, 18°.12S×69°.59W, h123km±6km, mb3.9/9, mb1 4.0/11, mb1mx3.9/18, mbtmp3.8/11, Error ellipse: s-maj=17.7km s-min=12.0km az=141.0*

ISC 01 12:30:31.8±1.1, 18°.20S±0°.07×69°.60W±0°.09, h129km±9km, h126km±2.1km; pP-P, n36, σ0s99/35, mb4.2/15, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**2.36**	**37**	P	**Pn**	**12 31 11.4**	**+1.2**
	50nm,0.3s,baz=232,slow=7.6,SNR=915						
LPAZ				S	**Sn**	**12 31 39.5**	**-0.3**
	13nm,0.3s,baz=248,slow=19,SNR=5.7						
LPAZ	**La Paz**	**2.36**	**37**	*e*Pn	**Pn**	**12 31 11.2**	**+1.0**
LPAZ				S	**Sn**	**12 31 39.5**	**-0.3**
NNA	**Nana**	**9.33**	**310**	P	**Pn**	**12 32 39.5**	**-3.8**
	3.1nm,0.3s,baz=132,slow=12,SNR=5.5						
NNA				S	**Sn**	**12 34 17.7**	**-8.8**
	2.5nm,0.3s,baz=155,slow=17,SNR=2.6						
NNA	**Nana**	**9.33**	**310**	*e*Pn	**Pn**	**12 32 39.4**	**-3.9**
NNA				S	**Sn**	**12 34 17.7**	**-8.8**
CFAA	**Coronel Fontan**	**13.40**	**175**	P	**Pn**	**12 33 35.6**	**-1.3**
	0.1nm,0.3s,baz=349,slow=13,SNR=13						
CFAA				S	**Sn**	**12 35 56.7**	**-8.1**
	0.1nm,0.3s,baz=287,slow=20,SNR=2.8						
CFAA	**Coronel Fontan**	**13.40**	**175**	P	**Pn**	**12 33 35.6**	**-1.3**
CFAA				S	**Sn**	**12 35 56.7**	**-8.1**
CPUP	**Villa Florida**	**13.94**	**128**	P	**Pn**	**12 33 44.5**	**+0.7**
	0.3nm,0.3s,baz=311,slow=11,SNR=4.2						
OTAV	**Otavalo**	**20.29**	**334**	*e*P	**P**	**12 34 59.5**	**+2.0**
	3.5nm,0.9s						
PLCA	**Paso Flores**	**22.47**	**182**	P	**P**	**12 35 22.5**	**+2.1**
	5.7nm,0.8s,mb4.1,baz=360,slow=12,SNR=12						
PLCA	**Paso Flores**	**22.47**	**182**	P	**P**	**12 35 22.5**	**+2.1**
WVT	**Waverly**	**56.72**	**342**	*e*P	**P**	**12 40 00.2**	**-1.8**
	2.5nm,0.5s,mb4.3						
MIAR	**Mount Ida**	**57.20**	**336**	*e*P	**P**	**12 40 05.6**	**+0.2**
	2.4nm,0.7s,mb4.1						
MIAR				*e*pP	pP	12 40 35.2	-0.9
TXAR	**Lajitas Array**	**57.57**	**325**	P	**P**	**12 40 07.9**	**-0.2**
	0.2nm,0.5s,mb3.2,baz=152,slow=8.4,SNR=4.7						
TXAR				pP	pP	12 40 36.6	-2.2
	0.5nm,0.7s,baz=148,slow=7.3,SNR=5.4						
SIUC	**Southern Illin**	**58.60**	**342**	*e*P	**P**	**12 40 14.5**	**-0.7**
	16nm,0.8s,mb4.9						
SDCO	**Great Sand Dun**	**65.09**	**329**	*e*P	**P**	**12 40 59.2**	**+0.6**
	1.1nm,0.6s,mb3.9						
SDCO				*e*pP	pP	12 41 30.1	+0.1
PV01	**Paradox Valley**	**66.93**	**327**	*e*P	**P**	**12 41 11.6**	**+1.3**
PV01				*e*pP	pP	12 41 43.8	+2.0
LIC	**Lamto**	**68.14**	**75**	*e*P	**P**	**12 41 17.4**	**-1.1**
	47nm,1.6s,mb5.0						
TIC	**Toumodi**	**68.30**	**75**	*e*P	**P**	**12 41 19.7**	**+0.2**
	47nm,0.2s						
KIC	**Kosan Boka**	**68.45**	**75**	*e*P	**P**	**12 41 20.1**	**-0.3**
	28nm,0.6s,mb5.2						
DBIC	**Dimbokro**	**68.46**	**75**	P	**P**	**12 41 20.5**	**0.0**
	13nm,0.6s,mb4.8,baz=228,slow=7.2,SNR=32						
DBIC	**Dimbokro**	**68.46**	**75**	*e*P	**P**	**12 41 20.0**	**-0.5**
	13nm,0.6s,mb4.8						
PDAR	**Pinedale Array**	**70.94**	**330**	P	**P**	**12 41 35.5**	**+0.4**
	0.5nm,0.6s,mb3.5,baz=119,slow=5.2,SNR=4.7						
ULM	**Lac du Bonnet**	**71.99**	**343**	P	**P**	**12 41 40.5**	**-0.7**
	3.8nm,0.4s,mb4.5,baz=152,slow=6.0,SNR=5.0						
NVAR	**Mina Array Bea**	**72.51**	**322**	P	**P**	**12 41 45.7**	**+1.1**
	0.6nm,0.7s,mb3.4,baz=168,slow=6.2,SNR=4.3						
NVAR				pP	pP	12 42 15.5	-1.0
	1.0nm,0.8s,baz=151,slow=6.0,SNR=5.3						
NVAR	**Mina Array Bea**	**72.51**	**322**	P	**P**	**12 41 45.7**	**+1.1**
NVAR				pP	pP	12 42 15.5	-1.0
TOA0	**Torodi Ar. Sit**	**76.89**	**71**	*e*P	**P**	**12 42 09.4**	**-0.8**
TORD	**Torodi Ar. Bea**	**76.89**	**71**	P	**P**	**12 42 09.7**	**-0.6**
	12nm,0.6s,mb4.7,baz=253,slow=5.4,SNR=41						
ESDC	**Sonseca Array**	**83.96**	**45**	P	**P**	**12 42 48.4**	**+0.8**
	0.4nm,0.5s,mb3.4,baz=244,slow=6.2,SNR=5.6						
YKA	**Yellowknife Ar**	**87.88**	**341**	P	**P**	**12 43 06.4**	**+0.2**
	1.2nm,0.5s,mb4.0,baz=134,slow=4.8,SNR=13						
YKA				pP	pP	12 43 38.6	-0.7
	2.8nm,0.7s,baz=137,slow=5.0,SNR=8.9						
ASAR	**Alice Springs**	**132.48**	**210**	PKP	PKPdf	12 49 32.9	+1.1
	0.5nm,0.6s,baz=137,slow=2.2,SNR=7.4						
ZALV	**Zalesovo Beam**	**139.22**	**23**	PKP	PKPdf	12 49 45.4	+2.1
	1.9nm,0.8s,baz=300,slow=3.2,SNR=5.2						
MKAR	**Makanchi Array**	**143.29**	**33**	PKhKP		12 49 48.9	
	0.3nm,0.4s,baz=298,slow=3.1,SNR=3.2						
MKAR				PKP	PKPdf	12 49 54.5	+3.8
	0.4nm,0.6s,baz=299,slow=3.0,SNR=3.0						
MJAR	**Matsushiro Arr**	**149.45**	**312**	PKPbc	PKPbc	12 50 07.5	+1.4
	1.5nm,0.6s,baz=65,slow=1.8,SNR=7.7						
MJAR	**Matsushiro Arr**	**149.45**	**312**	PKPbc	PKPbc	12 50 07.5	+1.4
SONM	**Songino Array**	**150.26**	**5**	PKPbc	PKPbc	12 50 08.9	+1.2
	0.5nm,0.5s,baz=325,slow=1.8,SNR=5.3						
SONM				PKPab	PKPab	12 50 15.5	+1.4
	1.6nm,0.5s,baz=343,slow=4.5,SNR=10						
SONM	**Songino Array**	**150.26**	**5**	PKPbc	PKPbc	12 50 08.9	+1.2
SONM				PKPab	PKPab	12 50 15.5	+1.3

*IDC **01** 12:38:30.6±1.6, 54°.73N×158°.93W, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.6/26, mbtmp3.6/7, MS3.2/2, Ms1 3.2/2, ms1mx2.7/28, Error ellipse: s-maj=89.5km s-min=22.5km az=24.0*

*NEIC **01** 12:38:33.4, 54°.87N×158°.32W, h20km, ML3.7(AEIC), After AEIC.*

*ISCJB **01** 12:38:36.4±1.6, 55°.0N±0°.1×158°.5W±0°.2, h50km±13km, mb3.6/7, MS3.2/2, Error ellipse: s-maj=25.1km s-min=15.2km az=171.8*

ISC 01 12:38:37.1±1.5, 55°.1N±0°.1×158°.5W±0°.1, h38km±13km, n14, σ0s92/14, mb3.6/7, MS3.2/2, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDPT	**Sand Point**	**1.15**	**285**	P	**Pn**	**12 38 56.4**	**-0.2**
SDPT				S	**Sn**	**12 39 14.9**	**+3.7**
CHGN	**Chignik**	**1.24**	**3**	P	**Pn**	**12 38 58.4**	**+0.6**
FALS	**False Pass**	**2.83**	**268**	P	**Pn**	**12 39 19.4**	**-0.3**
PMR	**Palmer**	**8.19**	**33**	*e*Pn	**Pn**	**12 40 32.2**	**-1.0**
	5.7nm,0.7s						
PETK	**Petropavlovsk-**	**25.44**	**284**	LR	LR	12 54 07.0	
	comp=Z,35nm,20.2s,MS2.9,baz=121,slow=37						
NVAR	**Mina Array Bea**	**31.65**	**105**	P	**P**	**12 44 57.4**	**+0.9**
	0.3nm,0.5s,mb3.4,baz=306,slow=7.7,SNR=3.9						
NVAR	**Mina Array Bea**	**31.65**	**105**	P	**P**	**12 44 57.4**	**+0.9**
TXAR	**Lajitas Array**	**46.55**	**100**	P	**P**	**12 47 00.8**	**-0.1**
	0.3nm,0.8s,mb3.3,baz=308,slow=5.5,SNR=4.5						
SONM	**Songino Array**	**55.23**	**305**	P	**P**	**12 48 06.2**	**+0.4**
	1.1nm,0.6s,mb4.0,baz=41,slow=7.1,SNR=9.7						
SONM				LR	LR	13 13 34.1	
	comp=Z,43nm,20.5s,MS3.5,baz=171,slow=38						
BVAR	**Borovoye Array**	**64.94**	**330**	P	**P**	**12 49 12.7**	**+0.4**
	0.4nm,0.6s,mb3.6,baz=11,slow=1.5,SNR=4.1						
MKAR	**Makanchi Array**	**66.31**	**319**	P	**P**	**12 49 20.0**	**-1.2**
	0.2nm,0.5s,mb3.4,baz=36,slow=6.2,SNR=3.6						
MKAR	**Makanchi Array**	**66.31**	**319**	P	**P**	**12 49 20.0**	**-1.2**
CMAR	**Chiang Mai Arr**	**82.01**	**291**	P	**P**	**12 50 51.6**	**-1.5**
	1.1nm,0.8s,mb3.9,baz=12,slow=5.1,SNR=8.0						
BRTR	**Keskin Array B**	**85.00**	**351**	P	**P**	**12 51 09.6**	**+1.3**
	0.4nm,0.6s,mb3.7,baz=354,slow=2.9,SNR=3.0						

IDC 01 12:59:52.7±1.8, 4°.63S×129°.66E, h0km, mb3.7/5, mb1 3.9/7, mb1mx3.7/17, mbtmp3.7/7, ML3.5/2, Error ellipse: s-maj=84.4km s-min=25.5km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**13.95**	**196**	Pn	Pn	13 03 10.0	-1.9
	0.1nm,0.3s,baz=42,slow=6.6,SNR=3.0						
ASAR	**Alice Springs**	**19.36**	**168**	P	Pn	13 04 20.9	-0.1
	0.4nm,0.3s,baz=351,slow=12,SNR=41						
CMAR	**Chiang Mai Arr**	**37.98**	**308**	P	P	13 07 13.2	+0.7
	0.4nm,0.7s,baz=140,slow=6.9,SNR=4.5						
SONM	**Songino Array**	**56.10**	**341**	P	P	13 09 33.9	+0.2
	0.5nm,0.7s,baz=167,slow=6.2,SNR=3.9						
MKAR	**Makanchi Array**	**66.07**	**326**	P	P	13 10 41.5	+0.1
	0.5nm,0.6s,baz=108,slow=8.3,SNR=5.0						
ZALV	**Zalesovo Beam**	**69.32**	**334**	P	P	13 11 01.6	-0.2
	0.5nm,0.6s,baz=104,slow=6.1,SNR=3.4						
BVAR	**Borovoye Array**	**75.89**	**328**	P	P	13 11 40.7	-0.3
	0.9nm,0.9s,baz=90,slow=3.0,SNR=4.1						

CASC 01 13:12:00.0±2.0, 8°.45N×83°.03W, h3km, MD3.7, 1C-2D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.24**	**327⇑**	*e*P	Pg	13 12 05.5	+0.8
ACR				*e*S	Sg	13 12 10.6	+2.7
BRU2	**Volcan**	**0.48**	**45⇓**	*i*P	Pg	13 12 10.5	+1.2
BRU2				*e*S	Sg	13 12 18.7	+

ETB	Estevan Point	1.25	74	⇑Pn	Pn	14 24 40.9	-0.7
MAYB	Maynard	1.57	29	⇓Pn	Pn	14 24 45.4	-0.6
HOLB	Holberg	1.61	5	⇑Pn	Pn	14 24 44.7	-1.8
WOSB	Woss	1.62	46	⇓Pn	Pn	14 24 46.9	+0.2
GDR	Gold River	1.69	63	⇓Pn	Pn	14 24 47.1	-0.6
PHC	Port Hardy	1.77	20	⇓Pn	Pn	14 24 48.0	-0.8
PHC				⇑Sn	Sn	14 25 12.4	+1.0
OZB	Mount Ozzard	1.89	91	P	Pn	14 24 48.3	-2.2
OZB	Mount Ozzard	1.89	91	Pn	Pn	14 24 48.1	-2.3
OZB				⇑Sn	Sn	14 25 13.9	-0.5
NCRB	Newcastle Ridg	2.03	47	⇑Pn	Pn	14 24 52.9	+0.6
NCRB				⇓Sn	Sn	14 25 22.0	+4.4
BMSB	Bamfield Mari	2.14	94	⇓Pn	Pn	14 24 51.5	-2.3
BMSB				⇓Sn	Sn	14 25 20.0	-0.5
CBB	Campbell River	2.19	62	⇑Pn	Pn	14 24 54.9	+0.3
CBB				⇓Sn	Sn	14 25 24.6	+2.9
ALB	Alberni	2.33	83	⇑Pn	Pn	14 24 55.5	-1.0
MGB	Mount Grey	2.42	90	⇑Pn	Pn	14 24 56.0	-1.7
MGB				⇓Sn	Sn	14 25 27.8	+0.5
PFB	Port Renfrew	2.64	99	⇑Pn	Pn	14 24 57.8	-2.9
BBB	Bella Bella	3.15	3	Pn	Pn	14 25 06.8	-0.9
	68nm,0.3s,baz=199,slow=12,SNR=570						
BBB				Sn	Sn	14 25 47.6	+2.3
	14nm,0.3s,baz=280,slow=23,SNR=7.2						
BBB				LR	LR	14 26 33.1	
	comp=Z,2μm,18.2s,baz=182,slow=42						
BBB	Bella Bella	3.15	3	Pn	Pn	14 25 06.8	-0.9
BBB				Sn	Sn	14 25 47.6	+2.3
BBB	Bella Bella	3.15	3	⇓Pn	Pn	14 25 06.8	-0.9
BBB				⇑Sn	Sn	14 25 45.2	-0.1
PGC	Sidney	3.27	95	ePn	Pn	14 25 07.3	-2.1
NLWA	Neilton Lookou	3.43	117	ePn	Pn	14 25 09.3	-2.3
MCW	Mount Constitu	3.67	94	P	Pn	14 25 13.9	-1.0
GNW	Green Mountain	3.98	110	ePn	Pn	14 25 16.7	-2.5
VDB	Vedder Mountai	4.12	88	P	Pn	14 25 20.4	-0.7
JCW	Jim Creek	4.35	99	P	Pn	14 25 23.2	-1.1
RPW	Rockport	4.57	95	P	Pn	14 25 26.4	-0.9
LON	Longmire	4.97	115	eP	Pn	14 25 32.3	-0.5
ETW	Entiat	5.55	102	eP	Pn	14 25 39.6	-1.1
	17nm,0.8s						
COR	Corvallis	5.65	140	eP	Pn	14 25 40.3	-1.8
	26nm,0.8s						
HUMO	Hull Mountain	7.46	148	eP	Pn	14 26 06.4	-0.6
	8.5nm,0.8s						
NEW	Newport	7.49	92	eP	Pn	14 26 06.5	-0.8
	5.5nm,0.5s						
LNOR	Lincton Mounta	7.53	111	eP	Pn	14 26 07.5	-0.5
	8.2nm,0.8s						
YBH	Yreka Blue Hor	8.32	149	Pn	Pn	14 26 18.5	-0.3
	0.3nm,0.3s,baz=336,slow=12,SNR=31						
YBH				LR	LR	14 29 09.8	
	comp=Z,947nm,18.5s,baz=330,slow=36						
YBH	Yreka Blue Hor	8.32	149	eP	Pn	14 26 18.6	-0.1
	17nm,0.9s						
BSMT	Bassoo Peak	9.11	92	eP	Pn	14 26 28.8	-0.7
	2.7nm,0.4s						
MOD	Modoc	9.11	139	eP	Pn	14 26 30.5	+1.0
	11nm,1.0s						
WDC	Whiskeytown Da	9.42	152	eP	Pn	14 26 33.2	-0.5
	46nm,1.4s						
DLBC	Dease Lake	9.46	355	Pn	Pn	14 26 36.6	+2.3
	0.4nm,0.3s,baz=183,slow=12,SNR=16						
DLBC				LR	LR	14 30 09.3	
	comp=Z,874nm,20.4s,baz=138,slow=37						
DLBC	Dease Lake	9.46	355	eP	Pn	14 26 36.6	+2.2
WVOR	Wild Horse Val	9.48	131	eP	Pn	14 26 35.5	+0.9
	14nm,1.0s						
WALA	Waterton Lakes	9.50	84	eP	Pn	14 26 35.2	+0.4
	0.2nm,0.8s						
SWMT	Swartz Lake	9.71	94	eP	Pn	14 26 37.0	-0.7
	3.9nm,0.6s						
SLMT	Seeley Lake	10.11	95	eP	Pn	14 26 42.1	-1.0
	4.7nm,0.5s						
EDM	Edmonton	10.32	60	eP	Pn	14 26 46.6	+0.5
CHMT	Chamberlain Mo	10.36	96	eP	Pn	14 26 45.9	-0.7
	4.0nm,0.9s						
HLID	Hailey	11.09	114	eP	Pn	14 26 56.6	-0.1
	5.6nm,0.9s						
SKAG	Skagway	11.20	341	eP	Pn	14 26 59.8	+1.8
	44nm,1.9s						
LRM	Limekiln Ridge	11.25	101	eP	Pn	14 26 58.7	-0.1
	27nm,0.9s						
DLMT	Dillon	11.34	103	eP	Pn	14 26 58.9	-1.2
	3.0nm,0.7s						
MCMT	McKenzie Canyo	11.41	106	eP	Pn	14 27 00.0	-1.0
	2.5nm,0.9s						
BOZ	Bozeman (W)	11.85	100	eP	Pn	14 27 06.2	-0.9
	4.2nm,1.0s						
EGMT	Eagleton	12.38	88	P	Pn	14 27 14.8	+0.5
	10nm,0.8s						
CMB	Columbia Colle	12.42	149	ePn	Pn	14 27 15.9	+1.0
	8.0nm,1.1s						
ELK	Elko	12.45	127	Pn	Pn	14 27 15.3	0.0
	0.1nm,0.3s,baz=332,slow=8.7,SNR=4.8						
ELK				LR	LR	14 32 43.0	
	comp=Z,290nm,18.8s,baz=307,slow=41						
N12A	Clover Valley,	12.48	126	P	Pn	14 27 16.9	+1.2
	16nm,1.2s						
M13A	Montello	12.61	122	eP	Pn	14 27 18.1	+0.7
	12nm,0.9s						
NVAR	Mina Array Bea	12.85	142	Pn	Pn	14 27 20.6	-0.2
	0.1nm,0.3s,baz=314,slow=12,SNR=16						
IMW	Indian Meadow	13.06	107	eP	Pn	14 27 25.1	+1.5
	14nm,1.0s						
HVU	Hansel Valley	13.13	118	P	Pn	14 27 25.9	+1.4
	5.0nm,1.3s						
TPAW	Teton Pass	13.26	108	eP	Pn	14 27 27.3	+1.1
	20nm,1.0s						
REDW	Red Top Meadow	13.38	109	ePn	Pn	14 27 29.0	+1.0
	13nm,1.1s						
LOHW	Long Hollow	13.41	107	eP	Pn	14 27 30.2	+1.9
	12nm,1.0s						
BGU	Big Grassy Mou	13.54	121	eP	Pn	14 27 31.6	+1.5
	9.1nm,1.0s						
RLMT	Red Lodge	13.59	100	eP	Pn	14 27 31.6	+0.9
	31nm,1.2s						
HWUT	Hardware Ranch	13.95	116	eP	Pn	14 27 37.8	+2.1
	7.7nm,1.1s						
DUG	Dugway	14.15	123	eP	Pn	14 27 40.5	+2.0
	12nm,1.2s						
PDAR	Pinedale Array	14.50	109	Pn	Pn	14 27 44.1	+0.9
	0.1nm,0.3s,baz=313,slow=14,SNR=20						
PDAR				LR	LR	14 33 38.4	
	comp=Z,662nm,20.5s,baz=311,slow=39						
JLU	Jordanelle	14.65	119	Pn	Pn	14 27 46.4	+1.1
	14nm,1.1s						
NLU	North Lily Min	14.73	122	eP	Pn	14 27 47.2	+0.8
	11nm,1.1s						
DAU	Daniels Canyon	14.88	119	P	Pn	14 27 49.7	+1.2
	22nm,1.2s						
LAO	LASA Array	15.04	91	eP	Pn	14 27 50.8	+0.3
	20nm,1.1s						
YKA	Yellowknife Ar	15.49	24	Pn	Pn	14 27 54.9	-1.5
	0.1nm,0.3s,baz=210,slow=13,SNR=14						
YKA				LR	LR	14 34 13.7	
	comp=Z,51nm,18.3s,baz=105,slow=38						
ARUT	Antelope Range	15.59	131	P	Pn	14 27 59.3	+1.5
	6.0nm,0.8s						
MSU	Marysvale	15.70	126	eP	Pn	14 28 01.7	+2.4
	10nm,1.1s						
CCUT	Cedar City	15.82	131	eP	Pn	14 28 04.4	+3.7
	19nm,1.6s						
DGMT	Dagmar	15.94	83	eP	Pn	14 28 01.9	-0.4
	27nm,0.9s						
GSC	Goldstone	16.16	144	eP	Pn	14 28 03.9	-1.3
	10nm,1.1s						
SRU	San Rafael	16.18	121	eP	Pn	14 28 07.0	+1.6
	13nm,1.0s						
DAWY	Dawson	16.20	342	eP	Pn	14 28 06.4	+0.9
PAX	Paxson	16.83	332	ePn	Pn	14 28 14.7	+1.1
	26nm,1.5s						
EGAK	Eagle	17.19	341	eP	Pn	14 28 18.8	+0.7
	67nm,1.8s						
FFC	Flin Flon	17.20	61	eP	Pn	14 28 21.2	+3.0
	64nm,0.8s						
RSSD	Black Hills	17.40	97	P	Pn	14 28 21.8	+1.0
	8.6nm,0.9s						
PV04	Paradox Valley	17.59	120	eP	Pn	14 28 23.9	+0.7
PHWY	Pilot Hill	17.86	107	eP	Pn	14 28 26.1	-0.5
	21nm,1.4s						
PV01	Paradox Valley	17.96	120	eP	Pn	14 28 27.8	0.0
	2μm,1.1s						
SMCO	Snowmass	18.20	115	eP	Pn	14 28 31.1	+0.4
	5.1nm,0.9s						
WUAZ	Wupatki	18.40	131	eP	Pn	14 28 32.0	-1.2
	6.0nm,0.9s						
ISCO	Idaho Springs	18.64	111	eP	Pn	14 28 35.5	-0.6
	5.0nm,1.0s						
MVCO	Mesa Verde	18.65	122	eP	Pn	14 28 35.7	-0.5
	23nm,1.0s						
COLA	College	18.95	334	eP	Pn	14 28 38.1	-1.6
	84nm,1.8s						
KTH	Kantishna Hill	19.02	328	eP	Pn	14 28 38.7	-1.8
	38nm,1.3s						
BPAW	Bear Paw Mtn.	19.39	329	eP	Pn	14 28 42.6	-2.4
	25nm,1.2s						
INK	Inuvik	19.49	354	P	Pn	14 28 44.0	-2.1
	0.1nm,0.3s,baz=166,slow=11,SNR=13						
INK				LR	LR	14 36 43.4	
	comp=Z,585nm,18.3s,baz=253,slow=38						
INK	Inuvik	19.49	354	eP	Pn	14 28 44.4	-1.7
	16nm,1.2s						
CHUM	Lake Minchumin	19.71	328	eP	Pn	14 28 47.0	-1.8
	39nm,1.2s						
SDCO	Great Sand Dun	20.01	116	eP	P	14 28 50.9	+0.1
	5.6nm,1.0s						
OGNE	Ogallala	20.23	104	eP	P	14 28 53.9	+0.7
	26nm,0.9s						
TTA	Tatalina	20.57	323	eP	P	14 28 58.1	+1.4
ULM	Lac du Bonnet	20.99	74	P	P	14 29 00.4	-0.9
	16nm,0.9s,baz=292,slow=11,SNR=7.9						
ULM				LR	LR	14 37 28.8	
	comp=Z,818nm,18.1s,MS4.2,baz=184,slow=38						
ULM	Lac du Bonnet	20.99	74	eP	P	14 29 01.4	+0.1
	20nm,0.8s						
TUC	Tucson	21.30	135	eP	P	14 29 02.7	-2.0
	12nm,1.3s,mb4.1						
COLD	Coldfoot	21.35	337	eP	P	14 29 04.8	-0.2
	36nm,1.6s,mb4.5						
AGMN	Agassiz Nation	21.40	80	eP	P	14 29 06.1	+0.4
	25nm,1.2s,mb4.4						
ANMO	Albuquerque	21.42	123	P	P	14 29 06.5	+0.4
	4.3nm,0.8s,mb3.8,baz=314,slow=9.0,SNR=13						
ANMO				LR	LR	14 37 02.3	
	comp=Z,106nm,19.9s,MS3.2,baz=142,slow=36						
ANMO	Albuquerque	21.42	123	eP	P	14 29 06.2	+0.1
	7.5nm,1.0s,mb4.0						
LAZ	Ladron	21.46	125	eP	P	14 29 05.7	-0.8
	11nm,1.6s,mb3.9						
LENM	Lemitar	21.73	125	eP	P	14 29 10.2	+0.8
	30nm,1.5s,mb4.5						
BNM	Barren Site	21.93	125	eP	P	14 29 11.8	+0.3
	12nm,1.1s,mb4.2						
FCC	Fort Churchill	22.18	51	eP	P	14 29 14.9	+0.9
	0.6nm,0.9s,mb3.0						
ECSD	EROS Data Cent	22.43	92	eP	P	14 29 16.1	-0.8
	8.5nm,0.8s,mb4.2						
AMTX	Amarillo	24.21	116	eP	P	14 29 34.4	-0.3
EYMN	Ely	24.31	78	eP	P	14 29 36.1	+0.6
	26nm,0.8s,mb4.7						
MNTX	Cornudas Mount	24.48	127	eP	P	14 29 37.2	0.0
	7.6nm,1.3s,mb4.0						
KSU1	Kansas State U	24.72	102	eP	P	14 29 40.0	+0.6
	17nm,0.9s,mb4.6						
SCIA	State Center	25.49	93	eP	P	14 29 47.3	+1.0
	14nm,0.7s,mb4.6						
WMOK	Wichita Mounta	26.05	112	eP	P	14 29 49.5	-1.9
	4.2nm,1.0s,mb3.9						
COWI	Conover	26.43	81	eP	P	14 29 58.0	+3.2
	11nm,0.9s,mb4.4						
JFWS	Jewell Farm	26.98	89	eP	P	14 30 00.2	+0.4
	30nm,1.1s,mb4.7						
TXAR	Lajitas Array	27.25	127	P	P	14 30 00.8	-1.5
	0.9nm,0.8s,mb3.4,baz=331,slow=7.4,SNR=11						
TXAR				PcP	PcP	14 33 21.4	-0.6
	0.3nm,0.6s,baz=232,slow=3.0,SNR=3.9						
TXAR				LR	LR	14 40 56.4	
	comp=Z,113nm,19.4s,MS3.5,baz=5.0,slow=37						
TXAR	Lajitas Array	27.25	127	P	P	14 30 00.8	-1.5
TXAR				PcP	PcP	14 33 21.4	-0.6
GAMB	Gambell	27.47	319	eP	P	14 30 05.3	+1.4
	5.0nm,1.0s,mb4.0						
CCM	Cathedral Cave	28.79	98	P	P	14 30 22.8	+6.9
	4.3nm,0.9s,mb4.2						
RES	Resolute Bay	29.33	17	P	P	14 30 20.3	-0.1
	2.3nm,0.7s,mb4.0,baz=240,slow=12,SNR=6.8						
RES				LR	LR	14 42 40.3	
	comp=Z,318nm,18.9s,MS4.0,baz=192,slow=38						
RES	Resolute Bay	29.33	17	eP	P	14 30 20.8	+0.3
	2.9nm,0.8s,mb4.1						
SCHQ	Schefferville	37.28	57	P	P	14 31 30.6	+0.8
	7.4nm,1.1s,mb4.5,baz=313,slow=5.4,SNR=3.9						
PETK	Petropavlovsk-	44.72	305	P	P	14 32 31.1	+0.1
	3.2nm,0.7s,mb4.2,baz=70,slow=13,SNR=5.4						
NB2	NORSAR Subarra	65.55	20	P	P	14 35 00.0	-1.2
	comp=Z,2.6nm,0.9s,mb4.3,baz=333,slow=6.5						
NOA	NORSAR Array B	65.55	20	P	P	14 35 00.1	-1.1
	comp=Z,1.3nm,0.8s,mb4.0,baz=331,slow=6.5,SNR=3.4						
FINES	FINES Array B	67.97	13	P	P	14 35 16.8	+0.1
	comp=Z,1.0nm,0.7s,mb4.0,baz=28,slow=8.6,SNR=4.2						
KSRS	Korea Array	70.62	305	P	P	14 35 35.2	+1.7
	comp=Z,0.7nm,0.7s,mb3.7,baz=68,slow=20,SNR=3.6						
SONM	Songino Array	72.50	325	P	P	14 35 44.6	-0.1
	comp=Z,1.6nm,0.9s,mb4.0,baz=35,slow=5.4,SNR=8.3						
ZALV	Zalesovo Beam	73.63	340	P	P	14 35 51.3	+0.1
	comp=Z,0.7nm,0.4s,mb3.9,baz=21,slow=6.3,SNR=4.7						
BJI	Beijing	74.61	314	P	P	14 35 55.7	-1.5
BJI				S	S	14 45 29.1	-3.6
BJI				SS	SS	14 50 14.2	-4.5
BJI				pmax	pmax		
	comp=Z,13nm,0.5s,mb5.1						
BJI				pmax	pmax		
	comp=Z,57nm,3.6s						
BJI				LR	LR		
	comp=N,1μm,17.6s						
BJI				LR	LR		
	comp=E,790nm,12.1s						
BJI				LR	LR		
	comp=Z,300nm,24.8s						
GRF	Grafenberg Arr	75.69	26	eP	P	14 36 07.4	+4.2
	comp=Z,6.0nm,1.4s,mb4.3						
BFO	Black Forest	76.04	28	eP	P	14 36 06.8	+1.5
	comp=Z,2.7nm,0.8s,mb4.2						
HHC	Hu-ho-hao-te	76.08	317	eP	P	14 36 05.9	+0.2
HHC				pP	pP	14 36 10.6	+1.6
HHC				sP	sP	14 36 12.9	+2.7
HHC				PcP	PcP	14 36 18.8	+0.9
HHC				PP	PP	14 38 57.6	+1.8
HHC				S	S	14 45 46.8	-2.2
HHC				sS	sS	14 45 54.0	-0.4
HHC				SKS		14 46 11.1	
HHC				ScS	ScS	14 46 16.2	-4.2
HHC				SS	SS	14 50 40.9	0.0
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
HHC				pmax	pmax		
	comp=Z,58nm,6.5s						
HHC				LR	LR		
	comp=N,860nm,22.6s,MS5.1						
HHC				LR	LR		
	comp=E,560nm,22.6s,MS5.1						
HHC				LR	LR		
	comp=Z,750nm,25.0s,MS4.9						
PRU	Pruhonice	76.33	24	eP	P	14 36 12.4	+5.5
DPC	Dobruska-Polom	76.46	22	eP	P	14 36 07.5	-0.1
DPC				epP	pP	14 36 13.5	+2.6
KHC	Kasperske Hory	76.86	25	eP	P	14 36 11.9	+2.0
	comp=Z,2.3nm,0.8s,mb4.2						
KHC	Kasperske Hory	76.86	25	eP	P	14 36 13.0	+3.1
BVAR	Borovoye Array	77.07	349	P	P	14 36 09.9	-1.2
	comp=Z,0.3nm,0.3s,mb3.6,baz=69,slow=7.9,SNR=3.4						
GERES	GERESS Array B	77.15	25	P	P	14 36 11.6	0.0
	comp=Z,1.5nm,0.8s,mb4.0,baz=350,slow=3.1,SNR=11						
AKASG	Malin Array Be	78.80	14	P	P	14 36 21.8	+1.1
	comp=Z,0.3nm,0.4s,mb3.6,baz=350,slow=5.0,SNR=3.8						
ESDC	Sonseca Array	78.94	40	P	P	14 36 21.8	+0.1
	comp=Z,0.8nm,0.7s,mb3.8,baz=324,slow=5.5,SNR=6.8						
MKAR	Makanchi Array	80.90	339	P	P	14 36 31.2	-0.9
	comp=Z,1.0nm,0.7s,mb3.9,baz=28,slow=5.5,SNR=9.3						
BUR08	Bucovina Ar. S	81.01	18	eP	P	14 36 38.3	+5.6
ABKAR	Akbulak array	81.82	355	eP	P	14 36 37.3	+0.3
	comp=Z,1.3nm,0.7s,mb4.0						
WMQ	Urumqi	82.27	335	eP	P	14 36 40.0	+0.6
LZH	Lanzhou	83.40	320	eP	P	14 36 42.5	-3.0
LZH				pP	pP	14 36 46.0	-2.8
LZH				sP	sP	14 36 47.5	-2.5
LZH				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
LPAZ	La Paz	84.04	123	P	P	14 36 50.7	+1.9
	comp=Z,1.5nm,0.6s,mb4.3,baz=348,slow=7.5,SNR=6.9						
LPAZ	La Paz	84.04	123	eP	P	14 36 51.0	+2.2
	comp=Z,2.9nm,0.9s,mb4.4						
TKM2	Tokmak 2	86.03	343	eP	P	14 36 59.3	+0.7
	comp=Z,2.5nm,0.7s,mb4.5						
CD2	Chengdu	87.84	317	eP	P	14 37 08.4	+0.8
CD2				pP	pP	14 37 13.2	+2.2
CD2				sP	sP	14 37 15.8	+3.6
CD2				pmax	pmax		
	comp=Z,30nm,5.2s						
KMI	Kunming	93.24	315	P	P	14 37 32.3	-0.6
KMI				pP	pP	14 37 35.2	-1.1
KMI				sP	sP	14 37 37.0	-0.4
CMAR	Chiang Mai Arr	100.75	315	P	Pdif	14 38 07.2	+0.4
	comp=Z,0.4nm,0.7s,baz=9.2,slow=7.9,SNR=5.5						

IDC ***01*** *14:30:59.3±0.4, 59°.52S×150°.19E, h0km, mb4.9/18, mb1 4.9/18, mb1mx4.9/19, mbtmp4.9/18, MS5.9/16, Ms1 5.9/16, ms1mx5.9/21, Error ellipse: s-maj=20.8km s-min=13.1km az=78.0*

ISCJB ***01*** *14:31:00.5±0.3, 59°.54S±0°.04×150°.0E±0°.1, h10km, mb5.6/48, MS6.2/248, Error ellipse: s-maj=8.4km s-min=5.2km az=13.1*

DJA ***01*** *14:31:03, 59°.39S×151°.25E, h5km, Mw6.2/48*

NEIC ***01*** *14:31:03.0±0.2, 59°.38S×149°.66E, h10km, mb5.8/40, MS6.3/201, MW6.5, MW6.5, Error ellipse: s-maj=9.1km s-min=7.9km az=92.0, Moment Tensor Solution. s36 Moment tensor: Scale 10^18 Nm; Mrr=0.07; Mθθ2.34; Mφφ-2.27; Mrθ-0.27; Mθφ-6.02; Mφr0.31; Best double couple: M0=6.50000×10^18 NP1:φs=350.00000°, δ88.00000°, λ3.00000°. NP2:φs=259.00000°, δ87.00000°, λ178.00000°. Principal axes: T 6.5100, Plg3.0000°, Azm214.0000°; N -0.0900, Plg86.0000°, Azm19.0000°; P -6.4100, Plg0.0000°, Azm124.0000°;*

BJI ***01*** *14:31:04.0, 59°.40S×149°.70E, h10km, mB6.0/17, mb5.7/14, Ms6.1/27, Ms7 5.9/24*

MOS ***01*** *14:31:06.8±1.1, 59°.20S×149°.45E, h10km, mb5.7/23, MS6.2/53, Error ellipse: s-maj=24.9km s-min=10.5km az=92.2*

GCMT ***01*** *14:31:10.6±0.1, 59°.82S×149°.97E, h12km, MW6.5, Moment Tensor Solution. s117,c270; s99,c232; Moment tensor: Scale 10^18 Nm; Mrr=0.08±.03; Mθθ4.26±.03; Mφφ-4.18±.03; Mrθ-0.19±.08; Mφθ-5.42±.03; Mφr0.08±.08; Best double couple: M0=6.90000×10^18 NP1:φs=341.00000°, δ89.00000°, λ1.00000°. NP2: φs=251.00000°, δ89.00000°, λ179.00000°. Principal axes: T 6.9200, Plg2.0000°, Azm206.0000°; N -0.0900, Plg88.0000°, Azm29.0000°; P -6.8300, Plg0.0000°, Azm296.0000°; Data Used: II IU CN IC G. Mantle waves from 111 sta. Surface waves: sta=107, comp=243, per=50.*

ISC 01 14:31:02.0±0.2, 59°.60S±0°.04×150°.1E±0°.1, h10km, (h19km±5.0km:pP-P), n756, σ1§18/163, mb5.6/48, MS6.2/248, 26C-12D, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
DRV	Dumont d'Urvil	8.41	208	P	P	Pn	14 33 09.0	+5.3
DRV					R		14 35 00.0	
TAU	Tasmania Unive	16.80	353	P	P	Pn	14 34 57.7	+0.7
	3μm,0.9s,SNR=16							
TAU	Tasmania Unive	16.80	353	eP	P	Pn	14 34 55.7	-1.3
TAU				pmax	pmax			
	comp=Z,554nm,1.0s							
TAU	Tasmania Unive	16.80	353	eP	P	Pn	14 34 55.7	-1.3
	comp=Z,554nm,1.0s							
MOO	Moorlands	17.27	353	eP	P	Pn	14 35 03.1	+0.1
MOO				eS	S	Sn	14 38 04.8	-10
CASY	Casey	18.89	233	eP	P	Pn	14 35 22.6	-0.1
CASY				eS	S	Sn	14 38 46.0	-7.8
CASY	Casey	18.89	233	eP	P	Pn	14 35 21.5	-1.2
	comp=Z,468nm,1.3s							
ODZ	Otahua Downs	19.13	50	eP	P	Pn	14 35 24.0	-1.7
	comp=Z,2μm,2.5s							
SBA	Scott Base	19.15	169	eP	P	Pn	14 35 21.5	-4.3
SBA				pmax	pmax			
	comp=Z,1μm,1.7s							
SBA	Scott Base	19.15	169	eP	P	Pn	14 35 21.5	-4.3
	comp=Z,1μm,1.7s							
RPZ	Rata Peaks	20.41	48	P	P	Pn	14 35 39.6	+0.7
	comp=Z,60nm,1.1s,baz=248,slow=13,SNR=6.6							
RPZ				LR	LR		14 41 56.7	
	comp=Z,49μm,19.7s,MS5.9,baz=196,slow=32							
RPZ	Rata Peaks	20.41	48	eP	P	Pn	14 35 39.6	+0.7
	comp=Z,621nm,1.5s							
TOO	Toolangi	22.24	350	eP	P	Pn	14 35 58.4	-0.2
TOO				eS	S	Sn	14 40 04.9	+1.7
KHZ	Kahutara	22.48	51	eP	P	Pn	14 36 01.6	+0.5
	comp=Z,215nm,1.3s,mb5.4							
SNZO	South Karori	23.88	51	PFAKE			14 36 30.0	+15
SNZO				LR	LR			
	comp=Z,77μm,20.0s,MS6.2							
CNB	Canberra Magne	24.30	359	eP	P	Pn	14 36 19.4	+0.1
CNB				eS	S	Pn	14 40 44.8	+6.7
RIV	Riverview	25.79	2	eP	P	Pn	14 36 36.9	+4.1
MIR	Mirnyy	25.87	230	⇑iP	P	Pn	14 36 34.0	+0.7
MIR				eS	S	Pn	14 41 08.0	+5.4
MIR				pmax	pmax			
	comp=Z,352nm,2.2s,mb5.5							
MIR				pmax	pmax			
	comp=Z,6μm,8.0s							
MIR				pmax	pmax			
	comp=E,5μm,12.0s							
MIR				pmax	pmax			
	comp=N,1μm,10.0s							
MIR				smax				
	comp=N,12μm,10.0s							
MIR				smax				
	comp=E,20μm,8.0s							
MIR				MLR	MLR			
	comp=N,29μm,14.0s,MS6.1							
MIR				MLR	MLR			
	comp=E,30μm,14.0s,MS6.1							
MIR				MLR	MLR			
	comp=Z,84μm,14.0s,MS6.4							
URZ	Urewera	27.44	51	P	P	Pn	14 36 46.5	-1.2
	comp=Z,18nm,0.8s,mb4.6,baz=238,slow=3.7,SNR=8.8							
URZ	

MAW LR LR 14 52 52.0
comp=Z,62µm,19.3s,MS6.4,baz=117,slow=36
MAW Mawson 36.40 220 *e*P **P 14 38 06.5 +0.6**
MAW pmax pmax
comp=Z,95nm,1.9s
MAW Mawson 36.40 220 *e*P **P 14 38 06.5 +0.6**
comp=Z,95nm,1.9s,mb5.4
RAO Raoul Island 37.31 50 LR LR 14 51 39.9
comp=Z,37µm,21.3s,MS6.2,baz=201,slow=33
RAO Raoul Island 37.31 50 PFAKE 14 38 30.0 +16
RAO LR LR
comp=Z,38µm,21.0s,MS6.2
ASAR Alice Springs 37.66 335 P **P 14 38 15.3 -1.7**
comp=Z,18nm,0.8s,mb4.9,baz=164,slow=8.9,SNR=113
DZM Mont Dzumac 39.26 24 *e*P **P 14 38 31.3 +0.8**
comp=Z,266nm,1.4s,mb5.8
DZM *e*S **S 14 44 31.5 +0.5**
comp=Z,11µm,27.8s
DZM *e*LQ 14 47 33.4
comp=Z,26µm,29.9s
DZM *e*LR LR 14 49 13.6
comp=Z,143µm,30.4s
CTA Charters Tower 39.56 354 *e*P **P 14 38 32.0 -1.0**
comp=Z,87nm,1.0s,mb5.4
CTA *e*S **S 14 44 37.1 +1.7**
CTA Charters Tower 39.56 354 P **P 14 38 32.0 -1.0**
comp=Z,18nm,0.7s,mb4.9,baz=179,slow=11,SNR=29
CTA LR LR 14 53 50.4
comp=Z,11µm,19.3s,MS5.7,baz=182,slow=35
CTAO Charters Tower 39.56 354 *e*P **P 14 38 32.3 -0.7**
CTAO pmax pmax
comp=Z,192nm,1.2s,mb5.7
CTAO MLR MLR
comp=Z,11µm,20.0s,MS5.7
CTAO Charters Tower 39.56 354 *e*P **P 14 38 32.3 -0.7**
comp=Z,192nm,1.2s,mb5.7
CTAO LR LR
comp=Z,11µm,20.0s,MS5.7
WRAB Tennant Creek 41.20 337 P **P 14 38 45.0 -1.6**
comp=Z,2µm,1.1s,mb6.5,SNR=15
WRAB Tennant Creek 41.20 337 *e*P **P 14 38 44.5 -2.1**
WRAB pmax pmax
comp=Z,399nm,1.2s,mb5.9
WRAB MLR MLR
comp=Z,11µm,22.0s,MS5.7
WRAB Tennant Creek 41.20 337 *e*P **P 14 38 44.5 -2.1**
comp=Z,398nm,1.2s,mb5.9
WRAB LR LR
comp=Z,11µm,22.0s,MS5.7
SYO Syowa Base 42.34 210‖ *e*P **P 14 38 51.8 -3.7**
SYO Syowa Base 42.34 210‖ *e*P **P 14 38 52.7 -2.8**
MBWA Marble Bar 44.05 317 *e*P **P 14 39 08.0 -1.7**
comp=Z,170nm,1.0s,mb5.7
MBWA LR LR
comp=Z,4µm,19.0s,MS5.3
FITZ Fitzroy Crossi 45.06 326 *e*P **P 14 39 17.0 -0.8**
comp=Z,113nm,1.0s,mb5.7
FITZ *e*S **S 14 45 59.4 +2.9**
FITZ Fitzroy Crossi 45.06 326 P **P 14 39 16.0 -1.8**
comp=Z,31nm,1.1s,mb5.0,baz=178,slow=7.2,SNR=18
FITZ LR LR 14 57 48.3
comp=Z,10µm,18.7s,MS5.8,baz=167,slow=36
FITZ Fitzroy Crossi 45.06 326 *e*P **P 14 39 16.8 -1.0**
comp=Z,171nm,1.2s,mb5.8
COEN Coen 45.85 351 *e*P **P 14 39 23.1 -1.0**
comp=Z,2µm,1.4s
MSVF Nonsavu 46.48 38 PFAKE 14 39 40.0 +11
MSVF LR LR
comp=Z,16µm,20.0s,MS6.0
NVL N'lazarevskaya 46.63 198 *c i*P **P 14 39 29.0 -0.7**
NVL *e**PP pP 14 39 38.3 +5.5
NVL *e**SP sP 14 39 42.2 +8.1
NVL *e* 14 41 09.0
NVL *e*PPP 14 42 12.0
NVL pmax pmax
comp=Z,270nm,0.9s,mb6.2
NVL MLR MLR
comp=Z,178µm,17.0s,MS7.1
MAIT Maitri 46.64 198⇑ *i*P **P 14 39 28.9 -0.8**
MAIT *e*PP PP 14 41 19.0 +0.2
MAIT *e*S **S 14 46 14.5 -3.8**
MAIT *e*E 14 49 59.6
KAKA Kakadu 48.60 337 *e*P **P 14 39 44.4 -1.2**
comp=Z,141nm,0.8s,mb6.0
KAKA Kakadu 48.60 337 *e*P **P 14 39 44.1 -1.4**
comp=Z,648nm,1.0s,mb6.6
VNA1 Neumayer--Stat 49.14 189 *e*P **P 14 39 47.1 -2.0**
HNR Honiara 50.62 13 *e*P **P 14 39 59.9 -1.0**
HNR pmax pmax
comp=Z,238nm,1.0s,mb6.1
HNR MLR MLR
comp=Z,11µm,20.0s,MS5.9
HNR Honiara 50.62 13 *e*P **P 14 39 59.9 -1.1**
comp=Z,238nm,1.0s,mb6.1
HNR LR LR
comp=Z,11µm,20.0s,MS5.9
RAR Rarotonga 52.15 65 PFAKE 14 40 30.0 +18
RAR LR LR
comp=Z,13µm,21.0s,MS6.0
PMSA Palmer Station 53.31 163 PFAKE 14 40 40.0 +20
PMSA LR LR
comp=Z,29µm,22.0s,MS6.3
AFI Afiamalu 53.56 48 PFAKE 14 40 40.0 +17
AFI LR LR
comp=Z,5µm,20.0s,MS5.6
FUNA Funafuti 55.52 36 PFAKE 14 40 50.0 +13
FUNA LR LR
comp=Z,17µm,20.0s,MS6.1
KAPI Kappang 59.19 324 P **P 14 41 03.8 +0.8**
comp=Z,766nm,1.2s,mb6.6,SNR=5.6
KAPI Kappang 59.19 324 P **P 14 41 01.7 -1.3**
comp=Z,58nm,1.0s,mb5.6,baz=220,slow=7.4,SNR=8.9
KAPI LR LR 15 03 49.1
comp=Z,5µm,20.4s,MS5.6,baz=178,slow=33
KAPI Kappang 59.19 324 *e*P **P 14 41 03.6 +0.7**
comp=Z,184nm,1.1s,mb6.0
KAPI LR LR
comp=Z,4µm,21.0s,MS5.5
PPT Papeete 60.12 73 *e*S **S 14 49 24.7 +2.2**
comp=Z,21µm,29.0s
PPT *e*SS SS 14 53 23.7 +4.5
comp=Z,6µm,28.2s
PPT *e*LQ 14 56 22.4
comp=Z,41µm,25.0s
PPT *e*LR LR 14 59 02.3
comp=Z,42µm,27.5s,baz=210
PPT Papeete 60.12 73 LR LR 15 00 09.4
comp=Z,9µm,21.8s,MS5.9,baz=222,slow=29
COCO West Island 61.42 297 PFAKE 14 41 30.0 +12
COCO LR LR
comp=Z,10µm,22.0s,MS5.9
RKT Rikitea 62.77 90 *e*S **S 14 50 01.9 +5.8**
comp=Z,25µm,31.5s
RKT *e*LQ 14 57 20.7
comp=Z,28µm,36.8s
RKT *e*LR LR 14 59 51.0
comp=Z,45µm,30.8s,baz=208
KSM Kuching 68.35 317 P **P 14 42 03.7 +0.4**
KSM Kuching 68.35 317 *e*P **P 14 42 02.1 -1.2**
comp=Z,265nm,1.4s,mb6.1
KSM LR LR
comp=Z,2µm,19.0s,MS5.4
TSM Tawau 68.58 325 P **P 14 42 06.6 +1.8**
SBUM Sibu 68.61 319 P **P 14 42 05.1 +0.2**
BTM Bintulu 69.02 320 P **P 14 42 09.1 +1.6**
MYLDM Lahad Datu 69.24 326 P **P 14 42 10.3 +1.4**
DAV Davao City (W) 69.26 334 PFAKE 14 42 20.0 +11
DAV LR LR
comp=Z,2µm,19.0s,MS5.3
SDKM Sandakan 70.05 325 P **P 14 42 15.0 +1.1**
KKM Kota Kinabalu 70.73 324 P **P 14 42 18.9 +0.9**
KKM Kota Kinabalu 70.73 324 P **P 14 42 18.4 +0.4**
comp=Z,141nm,1.3s,mb5.7
KKM LR LR
comp=Z,3µm,21.0s,MS5.5
MYKOM Kota Tinggi 71.03 310 P **P 14 42 20.7 +0.8**
KDM Kudat 71.37 325 P **P 14 42 22.8 +0.9**
KGM Kluang 71.44 310 P **P 14 42 22.8 +0.5**
RPN Rapa Nui 72.12 113 LR LR 15 07 09.9
comp=Z,10µm,18.6s,MS6.1,baz=41,slow=30
RPN Rapa Nui 72.12 113 PFAKE 14 42 40.0 +14
RPN LR LR
comp=Z,16µm,19.0s,MS6.3
TAOE Nuku Hiva Isla 72.23 77 *e*S S 14 51 51.6 +1.8
comp=Z,9µm,26.8s
TAOE *e*SS SS 14 56 28.6 +1.3
comp=Z,6µm,29.6s
TAOE *e*LR LR 15 04 24.4
comp=Z,18µm,28.0s,baz=226
GUMO Guam 73.05 355 P **P 14 42 30.1 -1.7**
comp=Z,49nm,0.8s,mb5.5,baz=60,slow=11,SNR=3.1
GUMO Guam 73.05 355 P **P 14 42 30.1 -1.7**
GUMO LR LR
comp=Z,3µm,19.0s,MS5.5
FRIM Kepong 73.22 309 P **P 14 42 34.1 +1.1**
XMAS Kiritimati 73.81 56 PFAKE 14 42 50.0 +14
XMAS LR LR
comp=Z,9µm,20.0s,MS6.0
PSI Prapat 73.92 306 P **P 14 42 35.0 -2.1**
comp=Z,1.7nm,0.5s,baz=183,slow=8.0,SNR=12
PSI Prapat 73.92 306 P **P 14 42 35.0 -2.1**
RER Riviere de l'E 74.14 255 *e*P **P 14 42 44.0 +5.6**
RER LR LR
comp=Z,8µm,20.0s,MS6.0
KTGM Kuala Trenggan 74.54 311 P **P 14 42 41.1 +0.4**
PLCA Paso Flores 74.56 149 P **P 14 42 40.1 -0.5**
comp=Z,8.5nm,0.8s,mb4.7,baz=192,slow=5.2,SNR=11
PLCA Paso Flores 74.56 149 *e*P **P 14 42 40.4 -0.2**
PLCA pmax pmax
comp=Z,542nm,2.1s
PLCA MLR MLR
comp=Z,21µm,22.0s
PLCA Paso Flores 74.56 149 *e*P **P 14 42 40.4 -0.2**
comp=Z,542nm,2.1s,mb6.1
PLCA LR LR
comp=Z,21µm,22.0s,MS6.4
IPM Ipoh 74.59 309 P **P 14 42 41.1 +0.1**
KULM Kulim 75.48 309 P **P 14 42 46.5 +0.4**
KULM Kulim 75.48 309 *e*P **P 14 42 45.3 -0.8**
comp=Z,243nm,1.4s,mb5.9
KULM LR LR
comp=Z,7µm,22.0s,MS5.9
GRM Grahamstown 76.39 226 *e*P **P 14 42 50.6 -0.5**
GRM AMS AMS 15 09 54.0
comp=Z,26µm,23.7s,MS6.5
SOE Somerset East 77.27 225 *e*P **P 14 42 55.6 -0.6**
SOE AMS AMS 15 10 35.6
comp=Z,23µm,22.9s,MS6.4
DGAR Diego Garcia 77.37 277 PFAKE 14 43 10.0 +13
DGAR LR LR
comp=Z,6µm,20.0s,MS5.9
ELIM Elim 77.57 220 *e*P **P 14 42 57.9 0.0**
KSD Kokstad 77.77 229 *e*P **P 14 43 05.9 +6.9**
KSD AMS AMS 15 12 06.6
comp=Z,56µm,20.4s,MS6.9
CCHI Chillan 78.02 147 *e*P **P 14 43 01.6 +1.3**
TRQA Tornquist 79.16 155 *e*P **P 14 43 04.3 -2.2**
comp=Z,478nm,2.2s,mb6.0
TRQA LR LR
comp=Z,16µm,20.0s,MS6.4
HVD Gariep Dam 79.19 226 *e*P **P 14 43 08.4 +1.5**
HVD AMS AMS 15 14 02.9
comp=Z,22µm,20.1s,MS6.5
SUR Sutherland 79.24 222 *e*P **P 14 43 13.9 +6.8**
comp=Z,328nm,1.5s,mb6.0
SUR LR LR
comp=Z,30µm,22.0s,MS6.6
SUR Sutherland 79.24 222 P **P 14 43 15.2 +8.1**
comp=Z,563nm,1.1s,mb6.4,SNR=6.6
WAKE Wake Island 79.76 16 PFAKE 14 43 20.0 +10
WAKE LR LR
comp=Z,5µm,22.0s,MS5.8
CVNA Calvinia 80.42 221 *e*P **P 14 43 19.9 +6.4**
CVNA AMS AMS 15 13 34.9
comp=Z,24µm,21.8s,MS6.5
SEK Senekal 80.45 229 *e*P **P 14 43 13.6 -0.1**
SEK AMS AMS 15 13 43.0
comp=Z,17µm,20.9s,MS6.4
PKA Prieska 81.03 225 *e*P **P 14 43 18.3 +1.5**
PKA AMS AMS 15 18 56.5
comp=Z,8µm,19.2s,MS6.1
BOSA Boshof 81.08 227 P **P 14 43 17.8 +0.8**
comp=Z,8.0nm,1.0s,mb4.6,baz=146,slow=5.2,SNR=4.8
BOSA LR LR 15 15 04.4
comp=Z,20µm,20.8s,MS6.4,baz=162,slow=33
BOSA Boshof 81.08 227 *e*P **P 14 43 17.7 +0.6**
BOSA pmax pmax
comp=Z,363nm,1.8s,mb6.0
BOSA MLR MLR
comp=Z,18µm,20.0s,MS6.4
BOSA Boshof 81.08 227 *e*P **P 14 43 17.7 +0.6**
comp=Z,363nm,1.8s,mb6.0
BOSA LR LR
comp=Z,18µm,20.0s,MS6.4
PRYS Parys 81.80 229 *e*P **P 14 43 20.4 -0.5**
PRYS AMS AMS 15 14 18.1
comp=Z,14µm,20.3s,MS6.3
ERPM east rand prop 81.98 230 *e*P **P 14 43 21.1 -0.8**
ERPM AMS AMS 15 23 02.1
comp=Z,11µm,18.6s,MS6.3
SWZ Schweizer 82.34 228 *e*P **P 14 43 24.0 +0.3**
SWZ AMS AMS 15 15 41.5
comp=Z,18µm,20.9s,MS6.4
NNT Nongplab 82.50 311 P pP 14 43 35.8 +8.0
KOMG Komaggas 82.72 220 *e*P **P 14 43 31.4 +5.7**
KOMG AMS AMS 15 15 02.3
comp=Z,15µm,21.8s,MS6.3
UPI Upington 82.76 224 *e*P **P 14 43 25.0 -0.9**
UPI AMS AMS 15 13 58.1
comp=Z,26µm,23.6s,MS6.5
JOHN Johnston Islan 82.84 39 PFAKE 14 43 40.0 +14
JOHN LR LR
comp=Z,6µm,21.0s,MS5.9
MOPA Mopani 83.24 234 *e*P **P 14 43 29.4 +0.9**
MOPA AMS AMS 15 17 02.4
comp=Z,17µm,18.8s,MS6.4
LBTB Lobatse 84.20 229 *e*P **P 14 43 32.9 -0.5**
LBTB pmax pmax
comp=Z,71nm,1.1s,mb5.7
LBTB MLR MLR
comp=Z,17µm,20.0s,MS6.4
LBTB Lobatse 84.20 229 *e*P **P 14 43 32.9 -0.5**
comp=Z,71nm,1.1s,mb5.7
LBTB LR LR
comp=Z,17µm,20.0s,MS6.4
TLL Tololo Astrono 84.41 145 *e*P **P 14 43 36.6 +2.2**
MSNA Messina 84.84 234 *e*P **P 14 43 37.2 +0.5**
MSNA AMS AMS 15 19 18.8
comp=Z,12µm,18.3s,MS6.3
QIZ Qiongzhong 84.93 322 P **P 14 43 37.7 +0.8**
QIZ sP sP 14 43 45.3 +3.9
QIZ S S 14 54 06.9 +1.6
QIZ sS sS 14 54 13.5 +2.7
QIZ pmax pmax
comp=Z,790nm,6.0s
QIZ LR LR
comp=N,2µm,25.1s,MS5.5
QIZ LR LR
comp=E,2µm,30.1s,MS5.5
NST Nakhon Sawan 85.16 312 P **P 14 43 39.5 +1.4**
LCO Las Campanas 85.53 145 P **P 14 43 42.4 +2.3**
comp=E,6.9nm,0.8s,mb4.9
LCO LR LR
comp=Z,9µm,21.0s,MS6.1
YULB Yu-li 86.00 334 *e*P **P 14 43 42.2 +0.1**
comp=Z,33nm,0.9s,mb5.6
PALK Pallekele 86.00 291 P **P 14 43 45.0 +2.6**
comp=Z,19nm,0.9s,mb5.3,baz=180,slow=8.4,SNR=4.8
PALK Pallekele 86.00 291 *e*P **P 14 43 44.0 +1.6**
PALK pmax pmax
comp=Z,146nm,1.5s,mb6.0
PALK Pallekele 86.00 291 *e*P **P 14 43 44.0 +1.6**
comp=Z,146nm,1.5s,mb6.0
TPUB Ta-pu 86.06 333 *e*P **P 14 43 36.1 -6.3**
comp=Z,151nm,1.4s,mb6.0
SSLB Suanglung 86.46 333 *e*P **P 14 43 43.2 -1.1**
comp=Z,34nm,0.8s,mb5.6
BDT Bhumibol Dam 87.03 312 P **P 14 43 47.0 -0.3**
comp=Z,29nm,1.0s,mb5.5
YHNB Yeheng 87.21 334 *e*P **P 14 43 51.2 +3.2**
comp=Z,40nm,1.0s,mb5.6
YHNB LR LR
comp=Z,2µm,21.0s,MS5.6
TATO Taipei 87.48 334 PFAKE 14 44 00.0 +11
TATO LR LR
comp=Z,1µm,19.0s,MS5.4
GZH Guangzhou 87.72 327 P **P 14 43 46.2 -4.3**
GZH S S 14 54 14.3 -18
GZH LR LR
comp=N,5µm,27.3s,MS5.8
GZH LR LR
comp=E,2µm,24.9s,MS5.8
GZH LR LR
comp=Z,13µm,31.0s
QZH Quanzhou 88.12 332⇑ *i*P **P 14 43 53.5 +1.1**
QZH SKS 14 54 20.0
QZH S S 14 54 36.0 -0.1
QZH SS SS 15 00 26.0 +0.6
QZH pmax pmax
comp=Z,130nm,1.1s,mb6.1
QZH LR LR
comp=N,11µm,28.8s
QZH LR LR
comp=E,2µm,15.0s
QZH LR LR
comp=Z,8µm,24.0s,MS6.1
CM31 Chiang Mai Arr 88.16 312 *e*P **P 14 43 53.6 +0.9**
comp=Z,88nm,1.4s,mb5.8
CM31 LR LR
comp=Z,5µm,22.0s,MS5.9
CMAR Chiang Mai Arr 88.16 312 P **P 14 43 51.6 -1.1**
comp=Z,3.0nm,0.8s,mb4.6,baz=181,slow=4.2,SNR=18
CMAR PP PP 14 47 18.3 -1.6
comp=Z,0.2nm,0.3s,baz=11,slow=20,SNR=4.5
CMAR LR LR 15 17 40.0
comp=Z,3µm,20.8s,MS5.7,baz=148,slow=32
CMAR Chiang Mai Arr 88.16 312 P **P 14 43 51.6 -1.1**
CMAR 14 47 18.3
MSEY Mahe Island 88.32 264 PFAKE 14 44 10.0 +16
MSEY LR LR
comp=Z,12µm,22.0s,MS6.3
CHG Chiang Mai 88.48 312 ⇑P **P 14 43 54.9 +0.7**
comp=Z,61nm,1.4s,mb5.6
CHTO Chiang Mai 88.48 312 *e*P **P 14 43 54.0 -0.2**
CHTO pmax pmax
comp=Z,44nm,1.0s,mb5.6
CHTO MLR MLR
comp=Z,4µm,22.0s,MS5.7
CHTO Chiang Mai 88.48 312 *e*P **P 14 43 54.0 -0.2**
comp=Z,44nm,1.0s,mb5.6
CHTO LR LR
comp=Z,4µm,22.0s,MS5.7
CHTO Chiang Mai 88.48 312 P **P 14 43 55.2 +1.0**
SNR=29
CHTO P 14 43 55.2
SNR=29
POHA Pohakuloa 90.61 50 PFAKE 14 44 20.0 +16
POHA LR LR
comp=Z,4µm,21.0s,MS5.8
KIP Kipapa 91.17 47 PFAKE 14 44 20.0 +13
KIP LR LR
comp=Z,3µm,21.0s,MS5.8
CPUP Villa Florida 91.46 156 P **P 14 44 06.6 -1.7**
comp=Z,5.0nm,0.8s,mb4.9,baz=170,slow=6.5,SNR=8.2
CPUP Villa Florida 91.46 156 P **P 14 44 06.6 -1.7**
CPUP LR LR
comp=Z,3µm,19.0s,MS5.8
MIDW Midway 91.53 28 PFAKE 14 44 20.0 +12
MIDW LR LR
comp=Z,4µm,21.0s,MS5.9
LSZ Lusaka 91.93 235 *e*P **P 14 44 10.3 -0.3**
LSZ pmax pmax
comp=Z,39nm,1.3s,mb5.6
LSZ MLR MLR
comp=Z,13µm,21.0s,MS6.3
LSZ Lusaka 91.93 235 *e*P **P 14 44 10.2 -0.3**
comp=Z,38nm,1.3s,mb5.6
LSZ LR LR
comp=Z,13µm,21.0s,MS6.3
TSUM Tsumeb 92.47 224 PFAKE 14 44 30.0 +17
TSUM LR LR
comp=Z,22µm,21.0s,MS6.6
GYA Guiyang 92.88 322⇑ *i*P **P 14 44 16.8 +2.3**
GYA PP PP 14 48 01.2 +3.8
GYA SKS 14 54 49.8
GYA S S 14 55 20.9 +1.1
GYA pmax pmax
comp=Z,40nm,1.0s,mb5.8
GYA pmax pmax
comp=Z,260nm,6.4s
GYA LR LR
comp=N,9µm,19.8s,MS6.4
GYA LR LR
comp=E,10µm,20.3s,MS6.4
GYA LR LR
comp=Z,8µm,21.4s,MS6.2
KMI Kunming 92.92 318 P **P 14 44 16.5 +1.8**
KMI pP pP 14 44 20.7 +2.6
KMI PP PP 14 48 02.7 +5.0
KMI SKS 14 54 50.1
KMI S S 14 55 17.2 -3.0
KMI LR LR
comp=N,5µm,27.2s,MS5.9
KMI LR LR
comp=E,4µm,28.6s,MS5.9
KMI LR LR
comp=Z,10µm,25.9s,MS6.1
SSE Sheshan 93.46 335 P **P 14 44 19.7 +2.6**
SSE PP PP 14 48 03.2 +1.2
SSE S S 14 55 27.4 +2.7
SSE sS sS 14 55 33.1 +2.8
SSE SS SS 15 01 44.4 +1.9
SSE pmax pmax
comp=Z,24nm,0.7s,mb5.7
SSE pmax pmax
comp=Z,230nm,7.0s
SSE LR LR
comp=N,2µm,20.0s,MS5.7
SSE LR LR
comp=E,2µm,20.0s,MS5.7
SSE LR LR
comp=Z,2µm,20.0s,MS5.5
WHN Wuhan 94.53 330 P sP 14 44 36.2 +10
WHN PP PP 14 48 24.8 +14
WHN SKS 14 55 00.5
WHN S S 14 55 34.7 +0.5
WHN SS SS 15 02 03.9 +6.1
WHN LR LR
comp=Z,11µm,31.1s,MS6.1
NJ2 Nanjing 94.89 334 *e*P **P 14 44 23.6 0.0**
NJ2 PP PP 14 48 14.9 +1.8
NJ2 pmax pmax
comp=Z,40nm,1.0s,mb5.8
NJ2 pmax pmax
comp=Z,170nm,4.6s
NJ2 LR LR
comp=N,1µm,26.9s
NJ2 LR LR
comp=E,540nm,21.4s
NJ2 LR LR
comp=Z,400nm,15.8s
HYB Hyderabad 95.86 294 *i* P **P 14 44 32.0 +3.6**
MJAR Matsushiro Arr 96.29 350 P **P 14 44 28.6 -1.3**
comp=Z,0.5nm,0.6s,baz=159,slow=6.3,SNR=2.9
MJAR PP PP 14 48 19.5 -4.4
comp=Z,1.6nm,1.0s,baz=178,slow=25,SNR=3.5
MJAR LR LR 15 24 21.4
comp=Z,1µm,21.4s,baz=155,slow=33
MJAR Matsushiro Arr 96.29 350 P **P 14 44 28.6 -1.3**
MJAR 14 48 19.5
MJAR Matsushiro Arr 96.29 350 P **P 14 44 28.6 -1.3**
MJAR PP PP 14 48 19.5 -4.4
MJAR LR LR 15 24 21.4
MAJO Matsushiro 96.29 350 PFAKE 14 44 40.0 +10
MAJO LR LR
comp=Z,2µm,20.0s,MS5.5
MAT Matsushiro 96.29 350 P **P 14 44 30.2 +0.3**
MAT S S 14 55 57.0 +7.9
CD2 Chengdu 97.93 321 P **P 14 44 42.1 +4.6**
CD2 pP pP 14 44 46.9 +6.1
CD2 sP sP 14 44 50.0 +8.0
CD2 PP PP 14 48 43.2 +6.6
CD2 SKS 14 55 17.9
CD2 S S 14 56 03.6 +0.1
CD2 sS sS 14 56 12.1 +3.0
CD2 LR LR
comp=N,5µm,26.8s,MS6.0
CD2 LR LR
comp=E,5µm,28.2s,MS6.0
CD2 LR LR
comp=Z,5µm,26.2s,MS5.9
LPAZ La Paz 98.28 143 P **P 14 44 40.4 +0.8**
comp=Z,2.5nm,0.8s,mb4.8,baz=179,slow=4.2,SNR=4.4
LPAZ LR LR 15 19 23.6
comp=Z,19µm,21.8s,MS6.6,baz=45,slow=30
LPAZ La Paz 98.28 143 *e*P **P 14 44 39.9 +0.3**
LPAZ pmax pmax

comp=Z,30nm,1.4s
LPAZ MLR MLR
LPAZ La Paz 98.28 143 *e*P **P 14 44 39.9 +0.4**
comp=Z,30nm,1.4s,mb5.6
LPAZ LR LR
comp=Z,20µm,22.0s,MS6.6
KSRS Korea Array 98.42 342 P **P 14 44 37.7 -1.8**
comp=Z,1.0nm,0.9s,baz=79,slow=25,SNR=2.6
KSRS LR LR 15 29 37.7
comp=Z,903nm,19.3s,baz=175,slow=36
INCN Inchon 98.65 341 PFAKE 14 44 50.0 +9.5
INCN LR LR
comp=Z,2µm,22.0s,MS5.5
NNA Nana 99.35 134 PFAKE 14 45 00.0 +16
NNA LR LR
comp=Z,11µm,22.0s,MS6.3
KMBO Kilima Mbogo 100.38 250 PFAKE 14 45 00.0 +11
KMBO LR LR
comp=Z,9µm,22.0s,MS6.2
DL2 Dalian 100.93 338 *e*P Pdif 14 45 00.2 +8.7
DL2 *e*PP PP 14 49 03.8 +4.4
DL2 S Sdif 14 56 26.7 -3.1
DL2 SS SS 15 03 34.5 +6.9
DL2 LR LR
comp=N,1µm,23.6s
DL2 LR LR
comp=Z,2µm,28.6s,MS5.4
ERM Erimo 101.41 355 PFAKE 14 45 00.0 +6.4
ERM LR LR
comp=Z,2µm,22.0s,MS5.5
SHEL Horse Pasture 102.18 204 PFAKE 14 45 10.0 +13
SHEL LR LR
comp=Z,54µm,21.0s,MS7.0
LZH Lanzhou 102.70 323 *e*P Pdif 14 45 02.5 +3.2
LZH pP 14 45 07.0
LZH PP PP 14 49 16.2 +3.5
LZH SKS 14 55 40.2
LZH S Sdif 14 56 42.5 -2.0
LZH sS 14 56 52.5
LZH pmax pmax
comp=Z,14nm,1.0s
LZH pmax pmax
comp=Z,60nm,4.0s
LZH LR LR
comp=N,4µm,18.6s
LZH LR LR
comp=Z,5µm,20.0s,MS6.0
BJI Beijing 103.15 334 P Pdif 14 45 02.4 +1.0
BJI SS SS 15 04 01.3 +2.9
BJI LR LR
comp=N,2µm,33.2s,MS5.5
BJI LR LR
comp=E,2µm,35.0s,MS5.5
BJI LR LR
comp=Z,3µm,39.4s,MS5.5
BTO Baotou 105.17 330 *e*P PKiKP 14 49 20.1 -3.5
YSS Yuzh-Sakhalins 106.36 355 PFAKE 14 49 40.0 +14
YSS LR LR
comp=Z,901nm,20.0s,MS5.3
HABR Khabarovsk 108.41 350 *e*P Pdif 14 45 22.7 -2.0
HABR PPP 14 52 08.7
HABR *e*PS PS 14 59 16.2 -1.9
HABR *e*SSS 15 09 07.0
OTAV Otavalo 109.91 127 PFAKE 14 49 50.0 +17
OTAV LR LR
comp=Z,17µm,21.0s,MS6.6
PET Petropavlovsk 112.48 6 PFAKE 14 49 50.0 +13
PET LR LR
comp=Z,3µm,22.0s,MS5.8
ULN Ulaanbaatar 112.71 330*c i*PKIKP PKiKP 14 49 36.3 -1.2
ULN Ulaanbaatar 112.71 330 PFAKE 14 49 50.0 +13
ULN LR LR
comp=Z,2µm,22.0s,MS5.6
SONM Songino Array 112.85 330 PKiKP PKiKP 14 49 38.9 +1.1
comp=Z,0.4nm,0.7s,baz=180,slow=2.9,SNR=2.7
SONM PKKP PKKPbc 15 00 43.0 +19
comp=Z,0.4nm,0.4s,baz=5.0,slow=3.4,SNR=3.7
RCBR Riachuelo 114.61 173 PFAKE 14 50 00.0 +18
RCBR LR LR
comp=Z,21µm,20.0s,MS6.7
WMQ Urumqi 115.04 315 *e*P PP 14 50 25.0 -17
KSH Kashi 115.96 304 *e*PKP PKPdf 14 49 44.7 +0.7
KSH PP PP 14 50 52.7 +3.7
KSH PKS 14 53 20.2
KSH SKS SKSdf 14 56 52.0 -3.7
KSH SKKS SKKSac 14 57 48.1 -0.9
KSH AMB AMB
comp=Z,160nm,6.4s
KSH LR LR
comp=N,1µm,14.2s,MS5.9
KSH LR LR
comp=E,2µm,16.0s,MS5.9
KSH LR LR
comp=Z,780nm,13.6s,MS5.5
ZAK Zakamensk 116.00 329 *e*PKIKP PKPdf 14 49 44.7 +1.0
ZAK *e* 14 56 25.0
ZAK pmax pmax
comp=Z,7.0nm,1.6s
JTS JuntasAbangare 116.10 116 PFAKE 14 50 00.0 +15
JTS LR LR
comp=Z,28µm,21.0s,MS6.8
TLY Talaya 117.09 330 *i* PKIKP PKPdf 14 49 53.5 +7.7
TLY pmax pmax
comp=Z,8.0nm,0.9s
TLY Talaya 117.09 330 *e*PKPdf PKPdf 14 49 51.1 +5.3
TLY LR LR
comp=Z,2µm,20.0s,MS5.6
TLY Talaya 117.09 330 PKPdf PKPdf 14 49 55.7 +10
SNR=5.6
BCIP Isla Barro Col 117.38 122 PFAKE 14 50 00.0 +12
BCIP LR LR
comp=Z,6µm,21.0s,MS6.2
IRK Irkutsk 117.44 330 *e*PKIKP PKPdf 14 49 52.8 +6.4
IRK pmax pmax
comp=Z,20nm,1.8s
MOY Mondy 117.78 328 *e*PKIKP PKPdf 14 49 58.3 +11
TGUH Tegucigalpa,Un 118.31 112 PFAKE 14 50 00.0 +11
TGUH LR LR
comp=Z,12µm,22.0s,MS6.5
UCH Uchtor 118.83 305 *e*PKPdf PKPdf 14 49 54.2 +4.7
UCH LR LR
comp=Z,3µm,22.0s,MS5.8
TKM2 Tokmak 2 118.95 306 *e*PKIKP PKPdf 14 49 53.6 +3.9
TKM2 MLR MLR
comp=Z,2µm,21.0s,MS5.8
AML Almayashu 119.09 304 *e*PKPdf PKPdf 14 49 51.4 +1.4
AML LR LR
comp=Z,2µm,22.0s,MS5.7
AAK Ala-Archa 119.17 305 PKP PKPdf 14 49 49.8 -0.3
comp=Z,1.0nm,0.3s,baz=235,slow=9.7,SNR=1.8
AAK Ala-Archa 119.17 305*c i*PKIKP PKPdf 14 49 50.1 0.0
AAK pmax pmax
comp=Z,8.0nm,1.7s
AAK Ala-Archa 119.17 305 PKP PKPdf 14 49 49.8 -0.3
AAK LR LR
comp=Z,2µm,22.0s,MS5.8
AAK Ala-Archa 119.17 305 PKPdf PKPdf 14 50 00.5 +10
SNR=7.3
EKS2 Erkin-Say 119.49 305 *e*PKPdf PKPdf 14 49 55.3 +4.6
EKS2 LR LR
comp=Z,2µm,22.0s,MS5.8
MKAR Makanchi Array 119.56 313 PKP PKPdf 14 49 49.8 -0.9
comp=Z,4.4nm,0.9s,baz=106,slow=2.6,SNR=6.4
MKAR PKKPbc PKKPbc 15 00 03.1 +2.3
comp=Z,0.2nm,0.4s,baz=23,slow=6.6,SNR=3.6
PFO Pinyon Flat Ob 120.02 74 PFAKE 14 50 10.0 +18
PFO LR LR
comp=Z,3µm,20.0s,MS5.9
SAO San Andreas Ge 120.16 68 PFAKE 14 50 10.0 +18
SAO LR LR
comp=Z,5µm,21.0s,MS6.2
MCCM Marconi Confer 120.60 66 PFAKE 14 50 10.0 +17
MCCM LR LR
comp=Z,5µm,20.0s,MS6.2
SDV Santo Domingo 120.88 131 PFAKE 14 50 10.0 +16
SDV LR LR
comp=Z,11µm,21.0s,MS6.5
HOPS Hopland 121.20 65 PFAKE 14 50 10.0 +16
HOPS LR LR
comp=Z,6µm,20.0s,MS6.2
DAC Darwin (Calif) 121.61 71 PFAKE 14 50 10.0 +15
DAC LR LR
comp=Z,14µm,20.0s,MS6.6
CMB Columbia Colle 121.68 68 PFAKE 14 50 10.0 +15
CMB LR LR
comp=Z,4µm,20.0s,MS6.1
TUC Tucson 121.78 80 *e*PKIKP PKPdf 14 49 58.6 +3.1
TUC MLR MLR
comp=Z,5µm,19.0s,MS6.2
YAK Yakutsk 122.31 349 *e*PKIKP PKPdf 14 50 01.5 +6.0
YAK pmax pmax
comp=Z,18nm,1.3s
YAK pmax pmax
comp=N,5.0nm,1.5s
YAK pmax pmax
comp=E,1.0nm,1.4s
YAK Yakutsk 122.31 349 PFAKE 14 50 10.0 +15
YAK LR LR
comp=Z,1µm,22.0s,MS5.5
WDC Whiskeytown Da 122.71 65 PFAKE 14 50 10.0 +13
WDC LR LR
comp=Z,4µm,22.0s,MS6.1
TXAR Lajitas Array 122.97 87 PKP PKPdf 14 49 56.0 -1.9
comp=Z,0.1nm,0.6s,baz=103,slow=3.9,SNR=2.8
TXAR PKKPbc PKKPbc 14 59 51.5 +3.9
comp=Z,1.2nm,0.8s,baz=51,slow=3.7,SNR=9.3
TXAR Lajitas Array 122.97 87 PKP PKPdf 14 49 56.0 -1.9
TXAR PKKPbc PKKPbc 14 59 51.5 +3.9
NVAR Mina Array Bea 122.99 69 PKP PKPdf 14 49 56.6 -0.9
comp=Z,0.4nm,0.7s,baz=181,slow=4.2,SNR=3.1
TEIG Tepich 123.14 107 PFAKE 14 50 10.0 +12
TEIG LR LR
comp=Z,11µm,21.0s,MS6.5
TPH Tonopah 123.22 70 PFAKE 14 50 10.0 +12
TPH LR LR
comp=Z,5µm,21.0s,MS6.2
LIC Lamto 123.45 210 *e*PKIKP PKPdf 14 50 04.2 +4.9
comp=Z,77nm,1.5s
KIC Kosan Boka 123.51 211 *e*PKIKP PKPdf 14 50 04.3 +4.9
comp=Z,47nm,1.2s
YBH Yreka Blue Hor 123.55 64 *e*PKIKP PKPdf 14 50 01.3 +2.8
YBH MLR MLR
comp=Z,4µm,19.0s
DBIC Dimbokro 123.84 210 PKP PKPdf 14 50 00.5 +0.4
comp=Z,6.3nm,0.9s,baz=101,slow=1.9,SNR=5.9
DBIC Dimbokro 123.84 210 PKP PKPdf 14 50 00.5 +0.4
DBIC LR LR
comp=Z,26µm,19.0s,MS6.9
TIC Toumodi 123.86 210 *e*PKIKP PKPdf 14 50 04.2 +4.1
comp=Z,13nm,0.2s
MNTX Cornudas Mount 124.00 84 *e*PKPdf PKPdf 14 49 58.8 -1.0
MNTX LR LR
comp=Z,9µm,19.0s,MS6.5
WUAZ Wupatki 124.05 77 PFAKE 14 50 10.0 +10
WUAZ LR LR
comp=Z,8µm,20.0s,MS6.4
HUMO Hull Mountain 124.13 63 *e*PKPdf PKPdf 14 49 59.2 -0.4
HUMO LR LR
comp=Z,4µm,19.0s,MS6.0
KURK Kurchatov 124.17 313 PKP PKPdf 14 49 58.5 -1.0
comp=Z,1.5nm,0.8s,baz=152,slow=1.6,SNR=6.2
KURK PP PP 14 51 49.8 +4.6
comp=Z,3.9nm,1.0s,baz=156,slow=4.5,SNR=3.7
KURK PKKPab PKKPab 14 59 48.0 +6.3
comp=Z,1.2nm,1.0s,baz=320,slow=4.1,SNR=3.5
KURK Kurchatov 124.17 313 PKPdf PKPdf 14 49 59.3 -0.1
KURK LR LR
comp=Z,3µm,19.0s,MS6.0
KURK Kurchatov 124.17 313 PKPdf PKPdf 14 49 59.7 +0.3
SNR=8.3
KURK PKPdf PKPdf 14 49 59.7 +0.3
SNR=8.3
KVTX Kingsville 124.45 94 PFAKE 14 50 10.0 +9.3
KVTX LR LR
comp=Z,24µm,19.0s,MS6.9
ZALV Zalesovo Beam 124.65 319 PKP PKPdf 14 49 58.8 -1.4
comp=Z,0.7nm,0.4s,baz=122,slow=1.9,SNR=2.2
ZALV PP PP 14 51 52.2 +3.8
comp=Z,7.9nm,1.0s,baz=110,slow=3.5,SNR=3.7
ZALV Zalesovo Beam 124.65 319 PKP PKPdf 14 49 58.8 -1.4
ZALV PP PP 14 51 52.2 +3.8
CCUT Cedar City 124.67 74 PKPdf PKPdf 14 50 04.3 +3.5
MOD Modoc 124.79 65 *e*PKPdf PKPdf 14 50 00.1 -0.8
MOD LR LR
comp=Z,5µm,20.0s,MS6.2
BMN Battle Mountai 125.08 69 PFAKE 14 50 10.0 +8.5
BMN LR LR
comp=Z,3µm,22.0s,MS6.0
LAZ Ladron 125.27 81 *e*PKPdf PKPdf 14 50 06.0 +3.9
BNM Barren Site 125.33 82 *e*PKPdf PKPdf 14 50 04.7 +2.5
KDAK Kodiak Island 125.46 34 PFAKE 14 50 10.0 +8.3
KDAK LR LR
comp=Z,7µm,22.0s,MS6.3
COR Corvallis 125.53 61 PFAKE 14 50 20.0 +18
COR LR LR
comp=Z,7µm,21.0s,MS6.3
BHD Baghdad 125.82 276 *e*PKP PKPdf 14 50 11.0 +7.8
BHD *e*PPP 14 53 22.0
BHD *e*SKKS SKSdf 14 57 36.0 +21
BHD *e*S(dif) 14 59 04.0
JCT Junction City 125.86 90 *e*PKIKP PKPdf 14 50 06.8 +3.4
JCT MLR MLR
comp=Z,4µm,19.0s,MS6.0
NVS Novosibirsk 125.91 319 *e*PKIKP PKPdf 14 50 02.9 +0.3
NVS *i* 14 52 07.1
NVS pmax pmax
comp=Z,31nm,1.8s
NVS pmax pmax
comp=N,4.0nm,1.1s
NVS pmax pmax
comp=E,4.0nm,1.6s
WVOR Wild Horse Val 125.98 66 *e*PKIKP PKPdf 14 50 01.3 -1.9
WVOR MLR MLR
comp=Z,5µm,20.0s,MS6.2
MVU Marysvale 125.98 74 PFAKE 14 50 20.0 +17
MVU LR LR
comp=Z,7µm,20.0s,MS6.3
MSU Marysvale 126.01 74 *e*PKIKP PKPdf 14 50 03.1 -0.3
ANMO Albuquerque 126.05 81*c i*PKIKP PKPdf 14 50 06.9 +3.3
ANMO pmax pmax
comp=Z,9.0nm,2.5s
ANMO Albuquerque 126.05 81 PFAKE 14 50 20.0 +16
ANMO LR LR
comp=Z,5µm,20.0s,MS6.2
ELK Elko 126.27 70 PFAKE 14 50 20.0 +16
ELK LR LR
comp=Z,6µm,20.0s,MS6.3
MTDJ Mount Denham 126.42 119 PFAKE 14 50 20.0 +15
MTDJ LR LR
comp=Z,8µm,19.0s,MS6.4
GAMB Gambell 126.44 20 PKPdf PKPdf 14 50 01.9 -1.4
N12A Clover Valley, 126.44 70 *e*PKPdf PKPdf 14 50 07.6 +3.5
MVCO Mesa Verde 126.80 78 *e*PKPdf PKPdf 14 50 02.7 -2.2
MVCO LR LR
comp=Z,7µm,20.0s,MS6.3
DUG Dugway 127.01 72 PKIKP PKPdf 14 50 04.6 -0.6
DUG MLR MLR
comp=Z,8µm,21.0s,MS6.3
GRGR Grenville 127.08 140 PFAKE 14 50 20.0 +14
GRGR LR LR
comp=Z,10µm,20.0s,MS6.5
TMUT Trail Mountain 127.09 74 *e*PKPdf PKPdf 14 50 11.7 +6.2
NLU North Lily Min 127.18 73 *e*PKPdf PKPdf 14 50 09.6 +4.0
M13A Montello 127.26 70 *e*PKPdf PKPdf 14 50 10.6 +4.9
SRU San Rafael 127.28 75 PKIKP PKPdf 14 50 06.6 +0.8
MPU Maple Canyon 127.44 73 *e*PKPdf PKPdf 14 50 11.0 +4.9
HKT Hockley 127.45 94 PKIKP PKPdf 14 50 09.1 +2.7
HKT MLR MLR
comp=Z,8µm,22.0s,MS6.3
NLWA Neilton Lookou 127.45 59 PFAKE 14 50 20.0 +14
NLWA LR LR
comp=Z,5µm,21.0s,MS6.2
BGU Big Grassy Mou 127.47 71 *e*PKPdf PKPdf 14 50 09.6 +3.5
PV04 Paradox Valley 127.52 77 *e*PKPdf PKPdf 14 50 06.3 +0.1
NOQ North Oquirrh 127.70 72 *e*PKPdf PKPdf 14 50 08.4 +1.9
LON Longmire 127.86 61 *e*PKIKP PKPdf 14 50 10.1 +3.5
DAU Daniels Canyon 127.93 73 *e*PKIKP PKPdf 14 50 11.0 +4.0
JLU Jordanelle 127.98 73 *e*PKPdf PKPdf 14 50 11.7 +4.6
SPUT South Promonto 128.04 72 PKPdf PKPdf 14 50 12.1 +5.0
TOA0 Torodi Ar. Sit 128.05 220 *e*PKPdf PKPdf 14 50 05.9 -2.1
TORD Torodi Ar. Bea 128.05 220 PKP PKPdf 14 50 06.2 -1.8
comp=Z,2.7nm,0.9s,baz=156,slow=0.7,SNR=9.0
AMTX Amarillo 128.41 85 PKPdf PKPdf 14 50 11.5 +3.4
AMTX LR LR
comp=Z,11µm,19.0s,MS6.6
RSW Rattlesnake Hi 128.58 62 *e*PKPdf PKPdf 14 50 11.1 +3.1
HAWA Hanford 128.61 62 PKPdf PKPdf 14 50 13.1 +5.0
HAWA LR LR
comp=Z,4µm,19.0s,MS6.1
HWUT Hardware Ranch 128.70 72 *e*PKPdf PKPdf 14 50 12.2 +3.8
HWUT LR LR
comp=Z,8µm,20.0s,MS6.4
BBGH Gun Hill 128.70 142 PFAKE 14 50 20.0 +11
BBGH LR LR
comp=Z,13µm,20.0s,MS6.6
SDCO Great Sand Dun 128.72 80 PKPdf PKPdf 14 50 08.2 -0.4
SDCO LR LR
comp=Z,6µm,19.0s,MS6.3
TNA Tin City 128.74 21 *e*PKPdf PKPdf 14 50 06.4 -1.3
HLID Hailey 128.82 68 *e*PKPdf PKPdf 14 50 09.0 +0.4
HLID LR LR
comp=Z,3µm,19.0s,MS6.0
MSL Mosul 128.92 277 *e*PKP PKPdf 14 50 12.0 +3.0
TTA Tatalina 128.95 28 *e*PKIKP PKPdf 14 50 13.9 +5.7
GTBY Guantanamo Bay 128.99 121 PFAKE 14 50 20.0 +10
GTBY LR LR
comp=Z,8µm,22.0s,MS6.4
SMCO Snowmass 129.09 77 *e*PKPdf PKPdf 14 50 09.3 +0.1
BVAR Borovoye Array 129.13 310 PKP PKPdf 14 50 09.2 +0.3
comp=Z,0.3nm,0.3s,baz=120,slow=44,SNR=3.3
BRVK Borovoye 129.19 310*c i*PKIKP PKPdf 14 50 09.7 +0.8
BRVK pmax pmax
comp=Z,34nm,1.7s
BRVK Borovoye 129.19 310 PKPdf PKPdf 14 50 13.1 +4.2
BRVK LR LR
comp=Z,3µm,20.0s,MS5.9
BRVK Borovoye 129.19 310 PKPdf PKPdf 14 50 14.9 +6.0
SNR=14
BRVK PKPdf PKPdf 14 50 14.9 +6.0
SNR=14
NATX Nacogdoches 129.50 93 PFAKE 14 50 20.0 +10
NATX LR LR
comp=Z,6µm,19.0s,MS6.3
PMR Palmer 129.61 33 *e*PKPdf PKPdf 14 50 11.6 +2.1
PMR *e*P 14 50 14.9
PMR LR LR
comp=Z,4µm,23.0s,MS6.0
FDF Fort de France 129.68 139 PFAKE 14 50 20.0 +8.9
FDF LR LR
comp=Z,8µm,20.0s,MS6.4
OD2 Odessa Site #2 129.73 62 PKPdf PKPdf 14 50 17.0 +6.9
WMOK Wichita Mounta 129.77 88 *e*PKIKP PKPdf 14 50 09.5 -1.2
WMOK MLR MLR
comp=Z,7µm,19.0s,MS6.4
SDDR Presa de Saban 129.77 126 PFAKE 14 50 20.0 +8.9
SDDR LR LR
comp=Z,8µm,21.0s,MS6.4
AHID Auburn Hatcher 129.80 71 PFAKE 14 50 20.0 +10
AHID LR LR
comp=Z,7µm,20.0s,MS6.4
PPLA Purkeypile 129.88 30 *e*PKPdf PKPdf 14 50 12.4 +2.4
ISCO Idaho Springs 130.24 78 *e*PKIKP PKPdf 14 50 12.8 +1.4
ISCO MLR MLR
comp=Z,10µm,20.0s,MS6.5
TPAW Teton Pass 130.42 71 *e*PKPdf PKPdf 14 50 16.2 +4.6
BW06 Boulder Array 130.55 72 PFAKE 14 50 30.0 +18
BW06 LR LR
comp=Z,8µm,19.0s,MS6.4
PDAR Pinedale Array 130.55 72 PKP PKPdf 14 50 11.7 -0.2
comp=Z,0.2nm,0.5s,baz=63,slow=0.2,SNR=2.6
ABKAR Akbulak array 130.62 300 *e*PKPdf PKPdf 14 50 13.5 +1.8
CHUM Lake Minchumin 130.66 30 *e*PKPdf PKPdf 14 50 13.3 +1.9
IMW Indian Meadow 130.73 70 PKPdf PKPdf 14 50 13.3 +1.2
KTH Kantishna Hill 130.74 30 *e*PKPdf PKPdf 14 50 14.1 +2.6
RWWY Rawlins 130.88 75 *e*PKPdf PKPdf 14 50 16.3 +3.7
GNI Garni 130.99 282 *i* PKIKP PKPdf 14 50 14.8 +2.0
GNI Garni 130.99 282 PFAKE 14 50 30.0 +17
GNI LR LR
comp=Z,5µm,21.0s,MS6.2
GNI Garni 130.99 282 PKPdf PKPdf 14 50 24.4 +12
SNR=8.1
SJG San Juan 131.02 132 PFAKE 14 50 30.0 +16
SJG LR LR
comp=Z,33µm,20.0s,MS7.0
DLMT Dillon 131.03 68 *e*PKPdf PKPdf 14 50 16.2 +3.5
NEW Newport 131.10 62 *e*PKIKP PKPdf 14 50 16.0 +3.3
NEW MLR MLR
comp=Z,6µm,21.0s
BPAW Bear Paw Mtn. 131.18 30 *e*PKPdf PKPdf 14 50 11.8 -0.6
CBYP Canovanas 131.28 132 *e*PKPdf PKPdf 14 50 19.9 +5.8
LRM Limekiln Ridge 131.44 68 PKPdf PKPdf 14 50 16.4 +2.9
PHWY Pilot Hill 131.45 77 *e*PKPdf PKPdf 14 50 15.0 +1.3
LKWY Lake 131.49 70 PFAKE 14 50 30.0 +16
LKWY LR LR
comp=Z,10µm,19.0s,MS6.5
MSO Missoula 131.49 66 *e*PKP PKPdf 14 50 16.9 +3.4
MSO LR LR
comp=Z,3µm,20.0s,MS6.0
DGRG David-gareji 131.66 283 P PKPdf 14 50 15.3 +1.3
BOZ Bozeman (W) 131.70 68 *e*PKIKP PKPdf 14 50 17.5 +3.5
BOZ MLR MLR
comp=Z,4µm,20.0s,MS6.1
MAK Makhachkala 131.74 286 *e*PKIKP PKPdf 14 50 27.0 +13
MAK *e*PS PS 15 02 48.8 +0.1
MAK MLR MLR
comp=Z,3µm,19.0s,MS6.0
TIXI Tiksi 131.79 351 *i* PKIKP PKPdf 14 50 13.3 0.0
TIXI *e* 14 52 33.0
TIXI *e*SS SS 15 10 07.4 -2.5
TIXI *e*SSS 15 14 57.8
TIXI pmax pmax
comp=Z,46nm,2.3s
TIXI Tiksi 131.79 351 PFAKE 14 50 30.0 +17
TIXI LR LR
comp=Z,1µm,20.0s,MS5.7
BSMT Bassoo Peak 131.85 64 *e*PKPdf PKPdf 14 50 17.4 +3.2
CHMT Chamberlain Mo 131.88 66 *e*PKPdf PKPdf 14 50 15.7 +1.4
VBMS Vicksburg 131.97 97 PFAKE 14 50 30.0 +15
VBMS LR LR
comp=Z,6µm,22.0s,MS6.3
SWMT Swartz Lake 131.97 65 *e*PKPdf PKPdf 14 50 18.6 +4.2
JTMT Jette 132.01 65 PKPdf PKPdf 14 50 17.7 +3.2
GRTK Grand Turk 132.09 124 PFAKE 14 50 30.0 +15
GRTK LR LR
comp=Z,8µm,21.0s,MS6.4
SKAG Skagway 132.18 42 *e*PKPdf PKPdf 14 50 16.4 +2.0
ANWB Willy Bob 132.20 137 PFAKE 14 50 30.0 +14
ANWB LR LR
comp=Z,5µm,20.0s,MS6.2
MIAR Mount Ida 132.26 92 *e*PKIKP PKPdf 14 50 18.2 +2.8
MIAR MLR MLR
comp=Z,7µm,21.0s,MS6.3
CBKS Cedar Bluff 132.44 83 PKIKP PKPdf 14 50 13.5 -2.1
CBKS MLR MLR
comp=Z,11µm,20.0s,MS6.6
RLMT Red Lodge 132.44 71 PKPdf PKPdf 14 50 17.0 +1.6
RLMT LR LR
comp=Z,5µm,19.0s,MS6.2
COLA College 132.61 31 *e*PKIKP PKPdf 14 50 19.3 +4.3
COLA MLR MLR
comp=Z,4µm,21.0s,MS6.2
BRAL Brewton 132.73 101 PFAKE 14 50 30.0 +14
BRAL LR LR
comp=Z,7µm,22.0s,MS6.3
GCMT Greycliff 132.74 70 *e*PKPdf PKPdf 14 50 22.7 +6.8
CSS Prodhromos 132.76 268 PFAKE 14 50 30.0 +14
CSS LR LR
comp=Z,4µm,20.0s,MS6.1
OGNE Ogallala 132.89 80 PKPdf PKPdf 14 50 20.3 +3.9
OGNE LR LR
comp=Z,5µm,20.0s,MS6.2
DWPF Disney 133.11 109 PFAKE 14 50 30.0 +13
DWPF LR LR
comp=Z,6µm,22.0s,MS6.2
WALA Waterton Lakes 133.13 64 *e*PKPdf PKPdf 14 50 17.8 +1.2
DLBC Dease Lake 133.27 45 PKPdf PKPdf 14 50 16.6 +0.2
ZEI Tsey 133.37 283 *e*PKHKP 14 50 03.0
ZEI pmax pmax
comp=Z,3.0nm,0.5s
KSU1 Kansas State U 134.24 86 PKPdf PKPdf 14 50 20.2 +1.2
KSU1 LR LR
comp=Z,9µm,20.0s,MS6.5
RSSD Black Hills 134.25 75 PFAKE 14 50 30.0 +11
RSSD LR LR
comp=Z,7µm,20.0s,MS6.4
EGMT Eagleton 134.31 67 PFAKE 14 50 30.0 +11
EGMT LR LR
comp=Z,4µm,19.0s,MS6.1
DAWY Dawson 134.34 35 *e*PKPdf PKPdf 14 50 18.0 -0.3
EGAK Eagle 134.36 34 PFAKE 14 50 30.0 +12
EGAK LR LR
comp=Z,3µm,21.0s,MS6.0
LRAL Lakeview Retre 134.39 99 PFAKE 14 50 30.0 +11

LRAL LR LR
comp=Z,7μm,22.0s,MS6.3
KIV Kislovodsk 134.84 284 *i* PKIKP PKPdf 14 50 19.4 -0.5
KIV *e* 14 57 26.0
KIV *e*PS PS 15 03 05.4 -10
KIV pmax pmax
comp=Z,18nm,1.0s
KIV MLR MLR
comp=Z,4μm,21.0s,MS6.1
KIV Kislovodsk 134.84 284 *e*PKPdf PKPdf 14 50 23.0 +3.1
KIV LR LR
comp=Z,4μm,22.0s,MS6.1
LAO LASA Array 135.04 71 *e*PKPdf PKPdf 14 50 23.3 +3.1
LAO LR LR
comp=Z,7μm,20.0s,MS6.4
PLAL Pickwick Lake 135.39 97 *e*PKPdf PKPdf 14 50 20.7 -0.5
PLAL LR LR
comp=Z,5μm,21.0s,MS6.2
TAM Tamanrasset 135.55 230 *e*PKIKP PKPdf 14 50 26.2 +4.3
TAM MLR MLR
comp=Z,13μm,20.0s,MS6.6
SVE Sverdlovsk 135.75 308 *e*PKIKP PKPdf 14 50 28.8 +7.6
SVE pmax pmax
comp=Z,39nm,1.8s
SOC Sochi 136.05 281 *i* PKIKP PKPdf 14 50 19.8 -2.4
CCM Cathedral Cave 136.17 91 PFAKE 14 50 40.0 +17
CCM LR LR
comp=Z,7μm,20.0s,MS6.4
BR131 Keskin Array S 136.26 272 *e*PKPdf PKPdf 14 50 26.1 +3.4
BR131 LR LR
comp=Z,3μm,21.0s,MS6.0
BRTR Keskin Array B 136.26 272 PKP PKPdf 14 50 20.5 -2.2
comp=Z,0.5nm,0.7s,baz=156,slow=6.4,SNR=4.5
ARU Arti 136.32 306 *i* PKIKP PKPdf 14 50 23.2 +0.9
ARU SS SS 15 11 03.5 -1.6
ARU Arti 136.32 306 PFAKE 14 50 30.0 +7.7
ARU LR LR
comp=Z,2μm,20.0s,MS5.9
ISP Isparta 136.41 268 PFAKE 14 50 40.0 +17
ISP LR LR
comp=Z,4μm,20.0s,MS6.2
WVT Waverly 136.42 96 *e*PKIKP PKPdf 14 50 21.7 -1.4
WVT MLR MLR
comp=Z,6μm,21.0s,MS6.3
GOGA Godfrey 136.46 103 PFAKE 14 50 40.0 +17
GOGA LR LR
comp=Z,6μm,21.0s,MS6.3
FVM French Village 136.53 92 *e*PKIKP PKPdf 14 50 26.8 +3.5
SIUC Southern Illin 136.94 93 *e*PKPdf PKPdf 14 50 27.5 +3.5
DGMT Dagmar 137.27 71 PFAKE 14 50 40.0 +16
DGMT LR LR
comp=Z,6μm,21.0s,MS6.3
CPCT Cooper Cave 137.55 100 *e*PKPdf PKPdf 14 50 25.9 +0.6
ECSD EROS Data Cent 137.66 81 PFAKE 14 50 40.0 +15
ECSD LR LR
comp=Z,9μm,19.0s,MS6.5
NHSC New Hope 137.83 106 PFAKE 14 50 40.0 +14
NHSC LR LR
comp=Z,7μm,21.0s,MS6.3
SCIA State Center 138.05 86 PFAKE 14 50 40.0 +14
SCIA LR LR
comp=Z,7μm,21.0s,MS6.4
ANN Anapa 138.06 280 *i* PKIKP PKPdf 14 50 29.3 +3.4
ANN *i* 14 53 17.9
ANN *e* 14 57 32.4
ANN *e*SS SS 15 11 19.6 -6.5
ANN pmax pmax
comp=Z,177nm,6.9s
ANN MLR MLR
comp=Z,3μm,20.0s,MS6.0
TKL Tuckaleechee C 138.09 100 PKIKP PKPdf 14 50 28.4 +2.2
WCI Wyandotte Cave 138.81 95 *e*PKIKP PKPdf 14 50 29.3 +1.8
WCI MLR MLR
comp=Z,7μm,22.0s,MS6.4
TZTN Tazewell 138.90 100 PKPdf PKPdf 14 50 29.7 +2.0
INK Inuvik 139.02 33 *e*PKHKP 14 50 21.5
HDIL Hopedale 139.05 90 PFAKE 14 50 40.0 +12
HDIL LR LR
comp=Z,8μm,21.0s,MS6.4
SOKR Solikamsk 139.10 309 *i* PKIKP PKPdf 14 50 37.1 +10
SOKR pmax pmax
comp=Z,30nm,1.5s
VLX Vlachokerasia 140.17 260 P PKPdf 14 50 37.1 +7.1
JFWS Jewell Farm 140.29 87 PFAKE 14 50 40.0 +10
JFWS LR LR
comp=Z,11μm,22.0s,MS6.5
VRHR Novokhopersk 140.32 290 *e*PKHKP 14 50 25.2
VRHR pmax pmax
comp=Z,20nm,1.6s
VRHR pmax pmax
comp=N,10.0nm,1.0s
VRHR pmax pmax
comp=E,10.0nm,0.5s
ELN Prospectdale 140.83 102 *e*PKPdf PKPdf 14 50 35.0 +3.8
BLA Blacksburg 140.98 102 *e*PKIKP PKPdf 14 50 30.5 -1.0
BLA MLR MLR
comp=Z,7μm,21.0s,MS6.4
ALN Alexandroupoli 141.00 267 P PKPdf 14 50 32.7 +1.3
LAKA Lakka 141.05 260 P PKPdf 14 50 35.2 +3.7
AGMN Agassiz Nation 141.22 77 *e*PKPpre 14 50 28.4
AGMN LR LR
comp=Z,10μm,20.0s,MS6.6
EFP Efpalio 141.23 261 P PKPdf 14 50 26.2 -5.7
XOR Xorichti 141.30 263 P PKPdf 14 50 37.0 +5.0
RDO Rodhopi 141.44 267 P PKPdf 14 50 36.3 +4.1
PAIG Paliouri 141.47 264 P PKPdf 14 50 40.9 +8.6
VSR Storozhevoye 141.57 289 *e*PKIKP PKPdf 14 50 31.2 -0.8
VSR pmax pmax
comp=Z,30nm,1.4s
VSR pmax pmax
comp=N,5.0nm,0.4s
VSR pmax pmax
comp=E,7.0nm,0.4s
YKA Yellowknife Ar 141.68 48 PKP PKPdf 14 50 29.4 -2.5
comp=E,1.6nm,0.8s,baz=233,slow=3.3,SNR=6.6
KAVA Kavala 141.85 266 P PKPdf 14 50 38.0 +5.1
KDZ Kurdzhali 141.88 267 *e*P PKPdf 14 50 35.8 +2.9
VOR Voronezh 141.89 290 PKIKP PKPdf 14 50 34.0 +1.4
VOR pmax pmax
comp=Z,200nm,1.8s
ACSO Alum Creek Sta 142.01 96 PFAKE 14 50 50.0 +17
ACSO LR LR
comp=Z,6μm,20.0s,MS6.4
TIRR Tirgusor 142.37 273 *e*PKIKP PKPdf 14 50 33.0 -0.7
TIRR Tirgusor 142.37 273 ⇓*i*P PKPdf 14 50 33.4 -0.3
FFC Flin Flon 142.41 65 *c i*PKIKP PKPdf 14 50 37.2 +3.8
FFC Flin Flon 142.41 65 *e*PKPdf PKPdf 14 50 36.1 +2.7
FFC LR LR
comp=Z,6μm,20.0s,MS6.3
ULM Lac du Bonnet 142.50 74 PKP PKPdf 14 50 30.7 -3.0
comp=Z,5.8nm,0.9s,baz=269,slow=4.2,SNR=3.9
ULM Lac du Bonnet 142.50 74 PKP PKPdf 14 50 30.7 -3.0
ULM LR LR
comp=Z,10μm,21.0s,MS6.6
PLD Plovdiv 142.57 267 P PKPdf 14 50 41.4 +7.3
MMB Musomiste 142.69 266 *e*P PKPdf 14 50 32.5 -1.9
KZN Kozani 142.72 262 P PKPdf 14 50 41.6 +7.1
SZH Strazhica 142.79 269 *e*P PKPdf 14 50 39.3 +4.8
WDD Wield Dalam 142.85 250 PFAKE 14 50 50.0 +15
WDD LR LR
comp=Z,10μm,21.0s,MS6.6
IGT Igoumenitsa 142.86 260 P PKPdf 14 50 23.1 -12
VAY Valandovo 143.08 264 *e*PKP PKPdf 14 50 34.1 -1.0
VAY Valandovo 143.08 264 P PKPdf 14 50 35.4 +0.3
COWI Conover 143.10 84 *e*PKPpre 14 50 29.4
COWI LR LR
comp=Z,8μm,20.0s,MS6.5
MCWV Mont Chateau 143.15 100 PFAKE 14 50 50.0 +15
MCWV LR LR
comp=Z,7μm,21.0s,MS6.4
EYMN Ely 143.16 80 *e*PKPpre 14 50 29.7
EYMN LR LR
comp=Z,10μm,19.0s,MS6.6
PGB Panagyurishte 143.17 267 *e*P PKPdf 14 50 38.5 +3.3
AAM Ann Arbor 143.20 94 PFAKE 14 50 50.0 +15
AAM LR LR
comp=Z,7μm,21.0s,MS6.4
KKB Krupnik 143.22 265 *e*P PKPdf 14 50 33.2 -2.1
CBN Corbin 143.26 104 PFAKE 14 50 50.0 +15
CBN LR LR
comp=Z,8μm,20.0s,MS6.5
FNA Florina 143.28 263 P PKPdf 14 50 34.7 -0.7
KBN Korca 143.46 262 *e*P PKPdf 14 50 36.9 +1.1
VTS Vitosha 143.68 266 P PKPdf 14 50 33.9 -2.2
VTS Vitosha 143.68 266 *i* P PKPdf 14 50 33.2 -2.9
KRUS Krusevo 143.78 263 *e*PKP PKPdf 14 50 33.4 -2.9
OHR Ohrid 143.81 262 *e*PKP PKPdf 14 50 35.0 -1.3
OHR Ohrid 143.81 262 P PKPdf 14 50 34.5 -1.9
KIS Kishinev 143.92 276 *e*PKIKP PKPdf 14 50 32.0 -4.3
KIS LRM 15 47 38.0
comp=Z,3μm,22.0s
KIS Kishinev 143.92 276 *i* PKHKP 14 50 32.0
KIS *i* 14 50 40.0
KIS *i* 14 50 53.0
CEL Celeste 144.08 254 *e*PKPpre 14 50 34.4
CEL LR LR
comp=Z,9μm,20.0s,MS6.5
SKO Skopje 144.13 264 *e*PKP PKPdf 14 50 34.6 -2.3
SKO Skopje 144.13 264 P PKPdf 14 50 37.3 +0.4
VAE Valguarnera 144.19 252 PKP PKPdf 14 50 35.1 -2.1
comp=Z,3.6nm,0.3s,baz=71,slow=19,SNR=3.3
VAE Valguarnera 144.19 252 PKP PKPdf 14 50 35.1 -2.1
VRI Vrincioaia 144.21 273 ⇑PKHKP 14 50 34.6
VRI Vrincioaia 144.21 273 ⇑*i*P PKPdf 14 50 34.6 -2.3
PLOR Plostina 144.24 273 ⇓PKIKP PKPdf 14 50 35.6 -1.3
PLOR Plostina 144.24 273 ⇓*i*P PKPdf 14 50 35.6 -1.3
BBSR BB Station 144.33 124 PFAKE 14 50 50.0 +12
BBSR LR LR
comp=Z,5μm,20.0s,MS6.3
MLR Muntele Rosu 144.35 272 PKP PKPdf 14 50 34.8 -2.3
comp=Z,19nm,0.7s,baz=124,slow=3.1,SNR=30
TIP Timpagrande 144.37 256 *e*PKPpre 14 50 35.2
TIP LR LR
comp=Z,8μm,19.0s,MS6.5
TIR Tirane 144.46 262 *e*PKIKP PKPdf 14 50 39.5 +2.0
TIR MLR MLR
comp=Z,7μm,21.0s,MS6.4
TIR Tirane 144.46 262 P PKPdf 14 50 38.9 +1.4
GLMI Grayling 144.51 90 *e*PKP PKPdf 14 50 39.2 +1.8
GLMI LR LR
comp=Z,9μm,20.0s,MS6.5
GIB Gibilmanna 144.78 252 PKIKP PKPdf 14 50 37.5 -0.7
SSPA Standing Stone 144.87 101 *e*PKP PKPdf 14 50 41.4 +3.2
SSPA LR LR
comp=Z,6μm,20.0s,MS6.4
ERPA Erie 144.92 97 *e*PKPdf PKPdf 14 50 38.9 +0.7
ERPA LR LR
comp=Z,9μm,19.0s,MS6.5
PUK Puka 144.96 263 *e*P PKPdf 14 50 38.3 0.0
MOS Moscow 145.06 294 *e*PKIKP PKPdf 14 50 36.5 -1.5
MOS pmax pmax
comp=Z,800nm,2.3s
MOS pmax pmax
comp=Z,296nm,1.5s
MOS MLR MLR
comp=Z,4μm,22.0s,MS6.1
BCI Bajram Curri 145.11 263 *e*P PKPdf 14 50 43.3 +4.7
KEST Kesra 145.17 244 PKPbc PKPbc 14 50 38.2 -0.3
comp=Z,20nm,1.1s,baz=189,slow=1.2,SNR=16
OBN Obninsk 145.20 293 ⇓*i*PKIKP PKPdf 14 50 37.0 -1.3
OBN *e* 14 53 56.1
OBN *e* 14 57 22.7
OBN pmax pmax
comp=Z,125nm,1.1s
OBN Obninsk 145.20 293 *e*PKPdf PKPdf 14 50 39.2 +0.9
OBN LR LR
comp=Z,5μm,22.0s,MS6.2
MGR Morigerati 145.70 256 PKP PKPdf 14 50 39.2 -0.5
USI Ustica 145.75 252 PKP PKPbc 14 50 44.1 +3.8
AKASG Malin Array Be 146.12 282 PKPbc PKPbc 14 50 38.5 -2.6
comp=Z,11nm,0.7s,baz=105,slow=2.6,SNR=24
AKBB Malin Array Si 146.12 282 *e*PKIKP PKPdf 14 50 40.2 +0.2
BURAR Bucovina Array 146.16 274 PKP2 PKPab 14 50 42.3 +0.4
DEV Deva 146.16 270 ⇓PKP2 PKPab 14 50 45.4 +3.4
DEV Deva 146.16 270 ⇓*i*P PKPab 14 50 45.4 +3.4
BUR08 Bucovina Ar. S 146.18 274 *e*PKP PKPdf 14 50 42.3 +2.1
DIVS Divibare 146.40 265 P PKPdf 14 50 42.4 +1.7
ABSA Djebel Ababsia 146.47 243 P PKPab 14 50 47.7 +4.2
CMAH Djebel Manchou 146.78 243 P PKPab 14 50 45.8 +1.1
RGNG Rignano Grg 146.85 258 PKP PKPbc 14 50 44.1 +0.7
DRGR 146.88 271 ⇓PKP2 PKPab 14 50 45.6 +0.8
DRGR 146.88 271 ⇓*i*P PKPab 14 50 45.6 +0.8
CASM Ain Smara 146.90 242 P PKPab 14 50 48.5 +3.4
CKFL Kef-Lekhel 146.91 242 P PKPab 14 50 49.7 +4.5
BINY Binghamton 146.99 101 *e*PKPbc PKPbc 14 50 46.5 +2.7
BINY LR LR
comp=Z,7μm,20.0s,MS6.4
BMR Baia Mare 147.07 273 PKP2 PKPab 14 50 46.5 +1.0
SET Setif 147.33 240 P PKPab 14 50 54.0 +7.1
DFRA Djebel Bou Aff 147.41 241 P PKPab 14 50 52.7 +5.6
MIDA Miranda 147.48 256 PKP PKPdf 14 50 44.8 +2.2
ATAF Djebel Tarf 147.55 238 P PKPab 14 50 53.1 +5.4
TRPA Tarpa 147.85 273 ⇓*i*P PKPdf 14 50 45.8 +2.8
AKET Djebel Ketaf 147.87 238 P PKPab 14 50 54.7 +5.7
AKF Akfadou 148.06 240 P PKPab 14 51 51.5 +1.8
ADJB Djebel Djouab 148.15 238 P PKPab 14 50 55.6 +5.5
LVV L'vov 148.18 276 *i* PKIKP PKPdf 14 50 46.0 +2.5
LVV *e*SS SS 15 13 58.0 +35
LVV MLR MLR
comp=Z,3μm,22.0s,MS6.0
VSL Villasalto 148.19 249 PFAKE 14 51 00.0 +16
VSL LR LR
comp=Z,9μm,20.0s,MS6.5
FCC Fort Churchill 148.26 63 *e*PKIKP PKPdf 14 50 44.7 +1.4
UZH Uzhgorod 148.30 273 *e*PKP2 PKPbc 14 50 47.0 -0.2
UZH *e* 14 54 14.7
UZH *e* 14 57 47.3
CERT Cerreto 148.34 255 PKP PKPbc 14 50 47.0 -0.5
MDT Midelt 148.37 223 PKPbc PKPbc 14 50 45.0 -2.9
comp=Z,6.6nm,1.0s,baz=152,slow=5.4,SNR=7.4
ETRT Tiaret 148.39 234 P PKPab 14 50 55.0 +3.9
EMHD Djebel Mahouad 148.39 237 P PKPab 14 50 51.0 -0.1
AQU L'Aquila 148.44 256 PKP2 PKPab 14 50 49.5 -1.6
AQU L'Aquila 148.44 256 *e*PKPbc PKPbc 14 50 51.4 +3.6
AQU LR LR
comp=Z,9μm,20.0s,MS6.6
KOLS Kolonicke sedl 148.51 274 *e*PKP PKPbc 14 50 48.3 +0.6
KOLS *e* 14 50 53.1
KOLS *e* 14 50 59.4
KOLS Kolonicke sedl 148.51 274 *e*PKP PKPbc 14 50 48.3 +0.6
KOLS *e* 14 50 53.1
KOLS *e* 14 50 59.4
PKSM Moragy 148.56 267 ⇑PKIKP PKPbc 14 50 47.4 -0.5
PKSM Moragy 148.56 267 P PKPbc 14 50 48.5 +0.6
PKSM Moragy 148.56 267 ⇑*i*P PKPbc 14 50 47.4 -0.5
OJGS Djebel Guires 148.72 233 P PKPab 14 50 52.0 -0.4
KWP Kalwaria Pacla 148.73 275 *e*PKP PKPbc 14 50 49.0 +0.8
KWP Kalwaria Pacla 148.73 275 *e*PKP2 PKPab 14 50 49.0 -3.1
KWP MLR MLR
comp=Z,8μm,21.0s,MS6.5
ABA Alger-Bouzarea 148.87 238 P PKPab 14 50 58.0 +5.0
EANR `Ain N'Sour 148.96 234 P PKPab 14 50 55.5 +2.1
MICGM Minsk 149.01 286 *e*PKP PKPdf 14 50 46.0 +1.3
MNK Minsk 149.04 286 *e*PKIKP PKPdf 14 50 46.0 +1.3
MNK *e* 14 54 30.0
MNK *e*SS SS 15 14 14.0 +42
PSZ Piszkesteto 149.06 270 *e*PKP2 PKPab 14 50 50.0 -3.5
PSZ MLR MLR
comp=Z,7μm,21.0s,MS6.4
PSZ Piszkesteto 149.06 270 ⇓*e*PKP PKPbc 14 50 49.7 +0.6
PSZ Piszkesteto 149.06 270 ⇓*i*P PKPdf 14 50 47.6 +2.6
EBNR Beni Rached 149.07 235 P PKPab 14 50 56.0 +2.2
KECS Kecovo 149.13 272 *e*PKP PKPbc 14 50 49.5 +0.2
KECS *e* 14 50 55.4
KECS Kecovo 149.13 272 *e*PKP PKPbc 14 50 49.5 +0.2
KECS *e* 14 50 55.4
NCB Newcomb 149.16 100 *e*PKPdf PKPbc 14 50 48.7 -0.8
NCB LR LR
comp=Z,7μm,21.0s,MS6.5
BUD Budapest 149.22 269 ⇓*e*PKP PKPbc 14 50 51.0 +1.5
OKGL Djebel Kef Gue 149.22 234 P PKPbc 14 50 52.0 +2.1
CING Cingoli 149.29 258 PKP PKPbc 14 50 49.1 -0.8
ODZI Dziouia 149.32 230 P PKPbc 14 50 54.0 +3.8
STHS Stebnicka Huta 149.34 274 *e*PKP PKPbc 14 50 51.6 +1.8
STHS *e* 14 50 55.3
STHS *e* 14 51 03.6
STHS *e* 14 51 12.3
STHS Stebnicka Huta 149.34 274 *e*PKP PKPbc 14 50 51.6 +1.8
STHS *e* 14 50 55.3
STHS *e* 14 51 03.6
STHS *e* 14 51 12.3
LONY Lake Ozonia 149.45 99 *e*PKPbc PKPbc 14 50 53.6 +3.4
LONY LR LR
comp=Z,8μm,21.0s,MS6.5
MAON Monte Argentar 149.61 254 PKP PKPbc 14 50 51.8 +1.1
NACGM Naroch 149.77 286 *e*PKP PKPdf 14 50 47.0 +1.1
BOJS Bojanci 149.78 263 *e*PKPdf PKPbc 14 50 51.6 +0.6
KOGS Kog 149.93 265 *e*PKPdf PKPbc 14 50 50.9 -0.4
OSPF L'Ospedale 149.97 251 PKP PKPbc 14 50 53.1 +1.5
VYHS Vyhne 149.97 270 *e*PKHKP PKPbc 14 50 50.9 -0.4
VYHS *e* 14 50 56.4
VYHS Vyhne 149.97 270 *e*PKP PKPbc 14 50 50.9 -0.4
VYHS *e* 14 50 56.4
VYHS *e* 14 51 02.5
VYHS Vyhne 149.97 270 *e*PKP PKPbc 14 50 50.9 -0.4
VYHS *e* 14 50 56.4
VYHS *e* 14 51 02.5
IDID Didziasalis 150.01 287 *e*P PKPbc 14 50 51.4 +0.2
RTC Rabat Centre 150.21 221 PFAKE 14 51 00.0 +13
RTC LR LR
comp=Z,28μm,19.0s,MS7.1
IIGN Ignalina 150.28 287 *e*P PKPbc 14 50 52.0 +0.2
CSNT Castellina Chi 150.31 256 PKP PKPbc 14 50 55.9 +3.6
ISAL Salakas 150.44 287 *e*P PKPbc 14 50 52.3 0.0
IZAR Zarasai 150.48 288 *e*P PKPbc 14 50 52.2 -0.1
LBNH Lisbon 150.50 102 PFAKE 14 51 00.0 +13
LBNH LR LR
comp=Z,11μm,20.0s,MS6.7
LJU Ljubljana 150.52 263 *e*PKPdf PKPbc 14 50 55.1 +2.4
OJC Ojcow 150.57 274 *e*PKPdf PKPbc 14 50 52.1 -0.6
OJC *e*PKPbc PKPab 14 50 57.4 -2.2
OJC *e*SKKac 15 01 25.3
OJC *e*SS SS 15 14 00.0 +11
OJC L 16 09 30.3
comp=Z,7.7nm,21.2s
OJC Ojcow 150.57 274 *e*PKIKP PKPbc 14 50 52.1 -0.6
OJC *e* 14 50 57.4
OJC Ojcow 150.57 274 *e*PKIKP PKPab 14 50 57.4 -2.2
OJC Ojcow 150.57 274 *e*PKPdf PKPbc 14 50 52.1 -0.6
OJC *e*PKPbc PKPab 14 50 57.4 -2.2
OJC *e*SKKSac SKKSac 15 01 25.3 +5.7
OJC *e*SS SS 15 14 00.0 +11
ZST Bratislava 150.66 268 *e*PKIKP PKPbc 14 50 58.0 +5.0
ZST *e* 14 51 04.1
ZST Bratislava 150.66 268 *e*PKP PKPbc 14 50 58.0 +5.0
ZST *e* 14 51 04.1
TRI Trieste 150.68 261 PKIKP PKPbc 14 50 57.5 +4.4
TRI MLR MLR
comp=Z,8μm,21.0s,MS6.5
SMOL Smolenice 150.70 269 *e*PKP PKPab 14 51 07.0 +6.8
SMOL Smolenice 150.70 269 *e*PKP PKPab 14 51 07.0 +6.8
SOKA Soboth 150.70 264 ⇑*i*PKPdf PKPbc 14 50 53.6 +0.4
comp=Z,93nm,1.2s
VOY Vojsko 150.84 262 *e*PKPdf PKPbc 14 50 52.8 -0.7
VOY *e* 14 51 00.8
VOY *e* 14 51 08.7
VOY *e* 14 51 15.7
FNVD Fontana Vidola 150.90 256 PKP PKPbc 14 50 53.7 0.0
SUW Suwalki 151.06 283 *e*PKP PKPbc 14 50 53.1 -0.6
SUW Suwalki 151.06 283 *e*PKPbc PKPbc 14 50 53.5 -0.2
CONA Conrad Observa 151.12 267 *i* PKPdf PKPbc 14 50 53.8 -0.3
comp=Z,54nm,1.2s,SNR=13
WAR Warsaw 151.15 278 *e*PKP PKPab 14 51 04.5 +2.6
OKC Ostrava-Krasne 151.17 272 *e*PKIKP PKPbc 14 50 53.3 -0.8
OKC MLR MLR
comp=Z,3μm,17.9s,MS6.2
OKC Ostrava-Krasne 151.17 272 *e*PKP PKPbc 14 50 53.3 -0.8
OKC *ex* x 15 04 54.0
OKC *e*SS SS 15 14 04.1 +8.0
OKC *e*SKSSKS 15 20 37.6
OKC *ex* x 15 36 26.3
OKC AMS AMS 16 16 50.0
comp=Z,3μm,17.9s
VLC Villacollemand 151.25 256 PFAKE 14 51 00.0 +11
VLC LR LR
comp=Z,8μm,20.0s,MS6.5
JOF Joensuu 151.34 303 *e*PKIKP PKPbc 14 50 56.2 +2.1
JOF pmax pmax
comp=Z,230nm,1.6s
JOF Joensuu 151.34 303 *e*pkp PKPbc 14 50 56.2 +2.1
comp=Z,230nm,1.6s
JOF Joensuu 151.34 303 *e*pkp PKPbc 14 50 56.2 +2.1
comp=Z,230nm,1.6s
PTCC Patocco-Chiusa 151.36 262 PKP PKPdf 14 50 50.8 +2.2
ERBM Eremo 151.43 256 PKP PKPab 14 51 04.8 +1.5
MORC Moravsky Berou 151.44 271 ⇑PKIKP PKPbc 14 50 54.4 -0.4
MORC Moravsky Berou 151.44 271 *e*PKPbc PKPbc 14 50 53.6 -1.2
MORC Moravsky Berou 151.44 271 ⇑*i*P PKPbc 14 50 54.4 -0.4
LVZ Lovozero 151.58 314 *c i*PKIKP PKPbc 14 50 55.3 +0.8
LVZ pmax pmax
comp=Z,23nm,1.2s
LVZ Lovozero 151.58 314 PFAKE 14 51 00.0 +12
LVZ LR LR
comp=Z,10μm,21.0s,MS6.6
VRAC Vranov 151.63 270 PKPbc PKPbc 14 50 53.0 -2.2
comp=Z,2.7nm,0.4s,baz=141,slow=4.5,SNR=12
VRAC Vranov 151.63 270 PKIKP PKPbc 14 50 54.3 -0.9
VRAC Vranov 151.63 270 ⇑*i*P PKPbc 14 50 53.8 -1.4
FUL Funchal 151.66 204 *e*PKPab PKPab 14 51 11.3 +6.7
PMAR Madeira 151.75 204 *e*PKPab PKPab 14 51 11.0 +6.1
KBA Koelnbreinsper 151.83 263 ⇑*i*PKPdf PKPdf 14 50 52.2 +2.9
comp=Z,63nm,1.1s,SNR=8.3
MOA Molln 151.87 265 *i* PKPdf PKPbc 14 50 54.8 -1.0
comp=Z,83nm,1.4s,SNR=7.2
PMPS Porto Santo 151.95 205 *e*PKPdf PKPbc 14 50 56.6 +0.1
TREC Trest 152.19 269 *e*PKIKP PKPbc 14 50 54.8 -1.7
TREC MLR MLR
comp=Z,6μm,18.9s,MS6.4
TREC Trest 152.19 269 *e*PKP PKPbc 14 50 54.8 -1.7
TREC *e*SS SS 15 14 15.4 +8.1
TREC *ex* x 15 20 05.0
TREC *ex* x 15 35 46.8
TREC AMS AMS 16 12 50.0
comp=Z,6μm,18.9s
SFS San Fernando 152.22 224 PFAKE 14 51 00.0 +10
SFS LR LR
comp=Z,39μm,20.0s,MS7.2
DPC Dobruska-Polom 152.42 271 *e*PKIKP PKPbc 14 50 54.8 -2.2
DPC MLR MLR
comp=Z,6μm,24.0s,MS6.3
DPC Dobruska-Polom 152.42 271 *e*PKP PKPbc 14 50 54.8 -2.2
DPC *ex* x 15 05 02.9
DPC *e*SS SS 15 14 19.1 +9.2
DPC *ex* x 15 20 01.0
DPC *ex* x 15 35 48.2
DPC AMS AMS 16 08 10.0
comp=Z,6μm,24.0s
RES Resolute Bay 152.53 31 *e*PKPbc PKPbc 14 50 52.8 -3.7
comp=Z,13nm,0.8s,baz=186,slow=2.0,SNR=12
RES Resolute Bay 152.53 31 *e*PKPdf PKPdf 14 50 51.6 +2.0
MABI Malga Bissina 152.54 259 PKP PKPbc 14 50 59.3 +1.9
PKME Peaks-Kenny Pk 152.54 104 *e*PKPbc PKPbc 14 51 01.1 +3.7
PKME LR LR
comp=Z,9μm,22.0s,MS6.5
AUTN L'Aution 152.58 252 PKP PKPbc 14 50 59.1 +1.6
MVIF Mont Vial 152.64 252 PKP PKPbc 14 51 00.6 +2.9
KSP Ksiaz 152.73 272 *e*PKP PKPbc 14 50 57.1 -0.6
KSP Ksiaz 152.73 272 *e*PKP PKPdf 14 50 51.5 +1.0
KSP *e*SKKS SKKSac 15 01 35.5 +4.2
KSP *e*SKSP 15 05 03.0
KSP *e*PPS 15 07 52.0
KSP *e*SS SS 15 14 06.0 -7.3
GEC2 GERESS Array S 152.81 266 *e*SS SS 15 14 20.1 +6.0
GEC2 GERESS Array S 152.81 266 *e*PKIKP PKPbc 14 50 59.0 +1.1
GERES GERESS Array B 152.81 266 PKP PKPdf 14 50 50.0 -0.7
comp=Z,1.6nm,0.9s,baz=193,slow=1.7,SNR=8.5
GERES PKPbc PKPbc 14 50 58.4 +0.5
comp=Z,5.8nm,0.8s,baz=158,slow=2.4,SNR=27
BRMO Bormio 152.91 259 PKP PKPbc 14 50 59.8 +1.6
KHC Kasperske Hory 153.05 267 *e*PKIKP PKPbc 14 50 59.1 +0.7
KHC *e*SS SS 15 14 20.4 +3.6
KHC MLR MLR
comp=Z,8μm,18.9s,MS6.5
KHC Kasperske Hory 153.05 267 *e*PKPbc PKPbc 14 50 59.4 +1.0
KHC Kasperske Hory 153.05 267 *e*PKP PKPbc 14 50 59.1 +0.7
KHC *ex* x 15 05 10.4
KHC *e*SS SS 15 14 20.4 +3.6
KHC *ex* x 15 19 47.2
KHC *ex* x 15 35 58.8
KHC AMS AMS 16 12 10.0
comp=Z,8μm,18.9s
FINES FINESS Array B 153.08 298 PKPbc PKPbc 14 50 56.5 -1.5
comp=Z,8.1nm,0.7s,baz=104,slow=6.1,SNR=15
PRU Pruhonice 153.10 269 *e*PKIKP PKPbc 14 50 55.5 -3.0
PRU MLR MLR
comp=Z,6μm,22.0s,MS6.4
PRU Pruhonice 153.10 269 *e*PKP PKPbc 14 50 55.5 -3.0
PRU *ex* x 15 05 10.0

PRU eSS SS 15 14 26.3 +9.0
PRU ex x 15 20 20.0
PRU ex x 15 35 53.7
PRU AMS AMS 16 09 50.0
comp=Z,6μm,22.0s
FETA Feichten 153.10 260⇑ *i* PKPdf PKPdf 14 50 52.0 +0.8
comp=Z,45nm,1.2s,SNR=5.6
PRA Prague 153.21 269 PKP PKPbc 14 50 56.0 -2.7
PRA SS SS 15 14 26.0 +7.5
PRA AMS AMS 15 59 20.0
KAF Kangasniemi 153.22 300 *e*PKIKP PKPbc 14 50 58.4 0.0
KAF pmax pmax
comp=Z,396nm,2.4s
KAF Kangasniemi 153.22 300 *e*pkp PKPbc 14 50 58.4 0.0
comp=Z,396nm,2.4s,baz=137,slow=1.1
KAF Kangasniemi 153.22 300 *e*pkp PKPbc 14 50 58.4 0.0
comp=Z,396nm,2.4s,baz=137,slow=1.1
DAVOX Davos/Dischmat 153.36 259 PKPbc PKPbc 14 50 58.5 -0.7
comp=Z,2.7nm,0.7s,baz=102,slow=7.6,SNR=5.0
PVCC Panska Ves 153.41 270 *e*PKIKP PKPbc 14 50 58.9 -0.3
PVCC MLR MLR
comp=Z,7μm,20.1s,MS6.5
PVCC Panska Ves 153.41 270 *e*PKP PKPbc 14 50 58.9 -0.3
PVCC *e*x x 15 05 12.3
PVCC *e*SS SS 15 14 30.0 +9.2
PVCC *e*SKSSKS 15 20 25.8
PVCC *e*x x 15 37 07.7
PVCC AMS AMS 16 15 50.0
comp=Z,7μm,20.1s
WET Wettzell 153.42 266 *e*SS SS 15 14 27.2 +6.4
PBDV Barranco-do-Ve 153.52 222 *e*PKPdf PKPdf 14 50 55.2 +3.0
PBDV Barranco-do-Ve 153.52 222 *e*PKPab PKPab 14 51 13.0 +0.7
FUR Furstenfeldbru 153.59 263 *e*SS SS 15 14 27.9 +5.2
PVAQ Vaqueiros 153.59 223 *e*PKPdf PKPbc 14 50 57.5 -2.5
PVAQ Vaqueiros 153.59 223 *e*PKPab PKPab 14 51 14.5 +1.9
PVAQ Vaqueiros 153.59 223 *e*SS SS 15 14 29.3 +7.2
PVAQ Vaqueiros 153.59 223 *e*LQ 15 39 33.2
PVAQ *e*LR LR 15 48 13.4
GKP Gorka Klasztor 153.64 277 *e*PKP PKPbc 14 51 00.7 +1.1
GKP Gorka Klasztor 153.64 277 *e*PKIKP PKPbc 14 51 00.6 +1.1
BNI Bardonecchia 153.72 253 *e*PKIKP PKPdf 14 50 53.8 +1.6
BNI MLR MLR
comp=Z,16μm,19.0s,MS6.9
PFVI Vila Bisbo 153.72 221 *e*PKPab PKPab 14 51 15.0 +1.8
MORF Marmelete 153.82 221 *e*PKIKP PKPdf 14 50 53.1 +0.5
MORF *e*SS SS 15 14 28.6 +4.0
MORF Marmelete 153.82 221 *e*PKPdf PKPdf 14 50 57.5 +4.9
PCVE Castro Verde 153.91 222 *e*PKPab PKPab 14 51 15.8 +1.9
BRG Berggiesshubel 153.94 270 *e*SS SS 15 14 34.7 +8.2
BRG Berggiesshubel 153.94 270 *e*PKP PKPbc 14 51 04.1 +3.8
comp=Z,12nm,1.2s
BRG *i* 14 51 14.4
comp=Z,39nm,1.5s
BRG *i* 15 01 46.0
BRG *i* 15 05 18.0
BRG *i* 15 07 56.0
BRG SS SS 15 14 28.0 +1.5
BRG
comp=N,2μm,21.2s
BRG
comp=E,6μm,18.4s
BRG
comp=Z,8μm,17.8s
PBAR Barrancos 154.05 225 *e*PKPdf PKPbc 14 51 03.6 +2.6
ROTZ Rotzenmuhle 154.15 266 *e*SS SS 15 14 36.2 +7.4
ESDC Sonseca Array 154.20 231 PKPbc PKPbc 14 51 00.1 -1.1
comp=Z,2.3nm,0.9s,baz=238,slow=0.8,SNR=9.0
ESLA Sonseca Array 154.20 231 *e*PKPdf PKPdf 14 50 56.0 +2.9
ESLA LR LR
comp=Z,47μm,19.0s,MS7.3
PBEJ Beja 154.21 223 *e*PKPdf PKPdf 14 50 57.5 +4.4
PAB San Pablo 154.24 230 *e*PKIKP PKPbc 14 51 07.0 +5.7
PAB MLR MLR
comp=Z,13μm,19.0s,MS6.8
NKC Novy Kostel 154.31 268 *e*PKIKP PKPdf 14 50 56.8 +4.0
NKC MLR MLR
comp=Z,6μm,17.3s,MS6.5
NKC Novy Kostel 154.31 268 *e*PKP PKPdf 14 50 56.8 +4.0
NKC *e*x x 15 05 17.3
NKC *e*SS SS 15 14 41.9 +11
NKC *e*x x 15 20 03.8
NKC *e*x x 15 36 30.7
NKC AMS AMS 16 13 00.0
comp=Z,6μm,17.3s
TANN Tannenbergstha 154.42 268 *e*SS SS 15 14 39.5 +7.8
GRA1 Grafenberg Arr 154.60 265 *e*PKPdf PKPdf 14 50 54.0 +0.8
GRA1 *e*SS SS 15 14 41.3 +7.6
GRA1 LR LR
comp=Z,12μm,21.4s,MS6.7
GRF Grafenberg Arr 154.60 265 *e*PKPdf PKPdf 14 50 54.0 +0.8
GRF *e*SS SS 15 14 41.3 +7.6
GRF *e*L 16 07 03.3
comp=Z,12μm,21.4s
KEV Kevo 154.65 317 *e*PKIKP PKPbc 14 51 02.1 +0.9
KEV pmax pmax
comp=Z,180nm,2.6s
KEV Kevo 154.65 317 PFAKE 14 51 00.0 +7.3
KEV LR LR
comp=Z,8μm,21.0s,MS6.5
KEV Kevo 154.65 317 *e*pkp PKPbc 14 51 02.1 +0.9
comp=Z,180nm,2.6s
KEV Kevo 154.65 317 *e*pkp PKPbc 14 51 02.1 +0.9
comp=Z,180nm,2.6s
CLL Collm 154.68 270 *e*SS SS 15 14 42.7 +8.2
CLL Collm 154.68 270 *e*PKIKP PKPdf 14 50 57.0 +3.7
CLL *e* 14 51 05.0
CLL *e* 14 54 56.0
CLL MLR MLR
comp=Z,7μm,20.1s,MS6.5
CLL Collm 154.68 270 *e*PKP PKPdf 14 50 57.0 +3.7
CLL *e*PKP PKPdf 14 51 05.0 +12
CLL *i* PKP PKPdf 14 51 22.2 +29
CLL *i* 14 51 27.7
CLL *e*PP PP 14 54 56.0 +2.8
CLL *e*SKS SKSdf 14 58 08.0 +8.7
CLL *e*SKKS SKKSac 15 01 45.0 +3.2
CLL LR LR
comp=Z,7μm,20.1s,MS6.5
CLL Collm 154.68 270 *e*(PKPdf) PKPdf 14 50 57.0 +3.7
CLL *e*PSKS 14 05 07.0
CLL *e*PPPPrev 14 07 27.0
CLL *e*PPS 14 08 05.0
CLL *e*PSPS 14 15 36.0
CLL *e*SSS 14 21 00.0
CLL *e* 14 21 36.0
CLL *e*SSSS 14 24 54.0
CLL *e* 14 51 02.0
CLL *e*PKPbc PKPbc 14 51 05.0 +3.2
comp=Z,19nm,1.3s
CLL *e* 14 51 09.0
CLL *i* (PKPab) PKPab 14 51 22.2 +5.3
comp=Z,96nm,2.0s
CLL *i* 14 51 27.7
CLL *i* 14 51 31.9
CLL *e*PP PP 14 54 56.0 +2.8
comp=Z,500nm,24.3s
CLL *e* 14 55 14.0
CLL *e* 14 55 28.0
CLL *e* 14 56 33.0
CLL *e*SKSdf SKSdf 14 58 08.0 +8.7
CLL *e*SKKSac SKKSac 15 01 45.0 +3.2
CLL *e*SKKSdf SKKSdf 15 06 37.0 +0.7
CLL *e*SS SS 15 14 42.0 +7.5
CLL Lm 16 13 00.0
comp=N,4μm,19.8s
CLL Lm 16 13 00.0
comp=E,6μm,18.9s
CLL Lm 16 13 00.0
comp=Z,7μm,20.1s
EVO Evora 154.71 223 *e*PKIKP PKPdf 14 50 55.1 +1.3
comp=Z,253nm,1.8s
EVO Evora 154.71 223 *e*PKPdf PKPbc 14 51 02.0 -0.4
EVO Evora 154.71 223 *e*PKPab PKPab 14 51 22.6 +5.3
EVOP Sao Brissos 154.75 223 *e*P PKPdf 14 50 55.1 +1.3
EVOP *e*SS SS 15 14 38.3 +3.7
EVOP AMS AMS 16 04 42.5
comp=Z,16μm,21.3s,MS6.8
EVOP Sao Brissos 154.75 223 *e*PKIKP PKPdf 14 50 55.1 +1.3
EVOP *e*SS SS 15 14 38.3 +3.7
SPAK Spaichingen-Ko 154.81 260 PKP PKPbc 14 51 01.9 -0.3
PESTR Estremoz 154.86 224 *e*PKPdf PKPdf 14 50 56.6 +2.6
PESTR Estremoz 154.86 224 *e*PKPab PKPab 14 51 23.3 +5.4
SSB Saint Sauveur 154.92 251 PFAKE 14 51 10.0 +16
SSB LR LR
comp=Z,7μm,19.0s,MS6.5
MOX Moxa 154.99 268 *e*PKP PKPdf 14 50 59.0 +5.3
comp=Z,58nm,1.9s
MOX *e*SS PKPbc 14 51 00.0 -2.5
MOX
comp=Z,7μm,19.0s
MOX Moxa 154.99 268 *e*PKP PKPdf 14 50 59.0 +5.3
comp=Z,58nm,1.9s
MOX *e*SS PKPbc 14 51 00.0 -2.5
MOX
comp=Z,7μm,19.0s
MOX Moxa 154.99 268 *e*SS SS 15 14 46.2 +8.3
BBS Basel-Blauen 155.01 258 PKIKP PKPdf 14 51 02.6 +8.7
STU Stuttgart 155.04 262 *e*SS SS 15 14 44.6 +6.2
FELD Feldberg im Sc 155.04 259 PKP PKPdf 14 51 02.6 +8.7
ARCES ARCESS Array B 155.15 316 PKPbc PKPdf 14 51 03.7 +10
comp=Z,4.1nm,0.8s,baz=162,slow=1.2,SNR=6.0
EPF Esparros 155.16 242 *e*PKIKP PKPdf 14 50 56.3 +2.1
comp=Z,30nm,1.3s
BFO Black Forest 155.19 260 *e*SS SS 15 14 45.7 +5.7
BFO Black Forest 155.19 260 *e*PKIKP PKPdf 14 51 05.6 +12
BFO MLR MLR
comp=Z,8μm,21.0s,MS6.5
LIS Lisbon 155.27 222 *e*P PKPdf 14 50 56.1 +1.6
LIS AMS AMS 15 59 57.9
comp=Z,17μm,15.5s,MS7.0
LOMF Lomont 155.27 257 PKP PKPdf 14 51 04.8 +11
PMRV Marv??o 155.29 225 *e*SS SS 15 14 51.2 +11
PMRV Marv??o 155.29 225 *e*LQ 15 40 08.4
PMRV *e*LR LR 15 43 58.6
comp=Z,14μm,18.8s
ETSF Etsaut 155.45 240 *e*PKIKP PKPdf 14 50 56.9 +2.3
MOF Molkenrain 155.46 258 PKP PKPdf 14 51 03.4 +8.9
LBL Lubilhac 155.50 249 PKP PKPdf 14 51 02.1 +7.5
PMAFR Mafra 155.53 222 *e*PKPab PKPab 14 51 26.1 +5.3
HINF Hinteralfeld 155.58 258 *e*PKIKP PKPdf 14 50 55.7 +1.1
PCBR Castelo Branco 155.68 226 *e*PKPdf PKPdf 14 51 06.5 +11
ECH Echery 155.69 259 PKIKP PKPdf 14 51 05.5 +11
ECH MLR MLR
comp=Z,12μm,19.0s,MS6.7
BSD Bornholm Skovb 155.76 279 *e*PKIKP PKPdf 14 51 00.8 +6.2
BSD Bornholm Skovb 155.76 279 *i* P PKPdf 14 51 00.8 +6.2
TOD Tromm 155.77 263 PKIKP PKPdf 14 51 02.9 +8.1
CAF Calviac 155.83 247 *e*PKIKP PKPdf 14 50 56.6 +1.5
LANF Langenberg 155.87 261 PKP PKPdf 14 51 02.6 +7.6
UBBA Unterbreizbach 155.91 266 *e*SS SS 15 14 56.0 +8.1
AGO Saint Agoulin 156.16 250 PKP PKPdf 14 51 03.0 +7.5
MTE Manteigas 156.20 226 PFAKE 14 51 10.0 +14
MTE LR LR
comp=Z,12μm,19.0s,MS6.8
MTE Manteigas 156.20 226 *e*PKPdf PKPdf 14 51 02.4 +6.7
MTE Manteigas 156.20 226 *e*SS SS 15 14 59.4 +9.0
MTE Manteigas 156.20 226 *e*LQ 15 34 57.8
MTE *e*LR LR 15 43 19.2
comp=Z,12μm,17.1s
SMF Signal de Mont 156.24 252 *e*PKIKP PKPdf 14 50 56.6 +1.0
THEF They Montfort 156.28 257 PKP PKPdf 14 51 04.1 +8.5
CLZ Clausthal 156.32 269 *e*SS SS 15 15 01.5 +9.2
TNS Taunus Mts 156.34 264 *e*SS SS 15 14 59.4 +6.9
RJF Les Rejaudoux 156.37 247 *e*PKIKP PKPdf 14 50 57.5 +1.7
LFF La Frestale 156.46 245 *e*PKIKP PKPdf 14 50 57.6 +1.7
AVF Avril sur Loir 156.58 252 *e*PKIKP PKPdf 14 50 57.0 +1.0
PVIS Viseu 156.60 226 *e*PKPdf PKPdf 14 51 06.8 +11
KBS Kingsbay 156.63 341 *e* PKPdf 14 51 01.2 +6.0
KBS *e*SS SS 15 15 01.4 +6.9
KBS Kingsbay 156.63 341 *e*PKIKP PKPdf 14 51 01.2 +6.0
KBS MLR MLR
comp=Z,5μm,20.0s,MS6.3
KBS Kingsbay 156.63 341 *e*P PKPdf 14 51 01.2 +6.0
KBS LR LR
comp=Z,5μm,20.0s,MS6.3
BGF Bois d'Agland 156.66 251 *e*PKIKP PKPdf 14 50 57.9 +1.8
MVO Moncorvo 156.67 228 *e*PKPdf PKPdf 14 51 08.0 +12
MVO Moncorvo 156.67 228 *e*SS SS 15 15 03.1 +7.6
MVO Moncorvo 156.67 228 *e*LQ 15 35 00.0
MVO *e*LR LR 15 44 29.1
comp=Z,12μm,20.5s
LOR Lormes 156.67 253 *e*PKIKP PKPdf 14 50 57.5 +1.4
SSF Saint Saulge 156.70 252 *e*PKIKP PKPdf 14 50 57.6 +1.5
comp=Z,61nm,1.7s
RUP Ruppelstein 156.71 261 PKIKP PKPdf 14 51 01.9 +5.8
TCF Toulx Ste Croi 156.77 249 *e*PKIKP PKPdf 14 50 57.9 +1.6
comp=Z,30nm,1.3s
NRDL Niedersach Rie 156.83 270 *e*SS SS 15 15 07.7 +10
MEZF Maizieres J'vi 156.93 257 *e*PKIKP PKPdf 14 50 58.1 +1.7
comp=Z,94nm,1.6s
PVRL Vila Real 157.02 227 *e*PKPab PKPab 14 51 29.6 +2.4
PBRG Braganca 157.11 229 *e*PKPab PKPab 14 51 29.4 +1.9
WLF Walferdange 157.14 260 APKPab 14 51 35.6
WLF Walferdange 157.14 260 *e*SS SS 15 15 07.1 +6.0
WLF Walferdange 157.14 260 PFAKE 14 51 10.0 +13
WLF LR LR
comp=Z,16μm,19.0s,MS6.9
COP Copenhagen 157.28 279 *e*PKIKP PKPdf 14 51 09.1 +13
COP Copenhagen 157.28 279 *i* P PKPdf 14 51 09.1 +13
TRO Tromso 157.46 317 *e*P PKPdf 14 51 03.6 +7.2
TRO Tromso 157.46 317 *e*PKIKP PKPdf 14 51 03.6 +7.2
TRO Tromso 157.46 317 *e*P PKPdf 14 51 03.6 +7.2
BSEG Bad Segeberg 157.49 273 *e*SS SS 15 15 15.6 +11
BUG Bochum--Univer 157.67 265 *e*SS SS 15 15 14.7 +8.0
IBBN Ibbenburen 157.92 267 *e*SS SS 15 15 17.5 +8.1
CMLA Cha da Macela 157.96 189 PFAKE 14 51 10.0 +12
CMLA LR LR
comp=Z,13μm,19.0s,MS6.8
BCLA Clavier 158.04 261 APKPbc 14 51 06.9
BCLA APKPab 14 51 38.9
MFF Saint Martin d 158.11 247 *e*PKIKP PKPdf 14 50 59.3 +1.4
DOU Dourbes 158.20 260 PKP PKPdf 14 51 02.1 +4.2
DOU PKPab PKPab 14 51 33.3 +1.3
BAIF Baives 158.37 259 *e*PKIKP PKPdf 14 50 59.5 +1.4
comp=Z,76nm,1.5s
HFS Hagfors 158.37 290 PKPab PKPab 14 51 32.4 -0.1
comp=Z,7.3nm,0.7s,baz=119,slow=5.2,SNR=16
MUD Monsted U'grnd 159.26 278 *e*PKIKP PKPdf 14 51 10.6 +12
MUD Monsted U'grnd 159.26 278 *i* P PKPdf 14 51 10.6 +12
LDF La Druitiere 159.52 251 *e*PKIKP PKPdf 14 51 00.3 +0.8
SCHQ Schefferville 159.66 87 PKP PKPdf 14 50 59.6 +0.1
comp=Z,1.5nm,0.9s,baz=238,slow=19,SNR=2.1
SCHQ Schefferville 159.66 87 PKP PKPdf 14 50 59.6 +0.1
SCHQ LR LR
comp=Z,21μm,20.0s,MS7.0
GRR Gorron 159.73 249 *e*PKIKP PKPdf 14 51 00.6 +0.8
comp=Z,125nm,1.8s
NB2 NORSAR Subarra 159.80 292 PKP PKPab 14 51 43.2 +4.5
baz=114,slow=4.3
NOA NORSAR Array B 159.80 292 PKP PKPdf 14 50 58.1 -1.3
comp=Z,0.3nm,0.5s,baz=207,slow=20,SNR=2.2
NOA PKPab PKPab 14 51 40.0 +1.3
comp=Z,2.9nm,0.8s,baz=100,slow=4.6,SNR=8.0
FLN La Foliniere 159.81 251 *e*PKIKP PKPdf 14 51 00.7 +0.8
comp=Z,143nm,1.9s
NAO01 NORSAR Array S 159.91 291 PFAKE 14 51 10.0 +10
NAO01 LR LR
comp=Z,8μm,22.0s,MS6.5
NSS Namsos 160.05 302 *e*P PKPab 14 51 43.2 +3.5
KONO Kongsberg 160.20 287 *e* PKPdf 14 51 08.0 +8.1
KONO Kongsberg 160.20 287 *e*PKIKP PKPdf 14 51 08.0 +8.1
KONO MLR MLR
comp=Z,11μm,20.0s
SGMF Saint Gilles 160.44 247 *e*PKIKP PKPdf 14 51 00.9 +0.3
QUIF Quistinic 160.47 245 *e*PKIKP PKPdf 14 51 01.3 +0.7
comp=Z,120nm,1.6s
ROSF Rostrenen 160.83 246 *e*PKIKP PKPdf 14 51 01.6 +0.6
comp=Z,86nm,1.8s
DAG Danmarks Havn 162.31 351⇑⇑ *e*PKIKP PKPdf 14 51 08.8 +7.0
DAG pmax pmax
comp=Z,2.0nm,0.7s
DAG Danmarks Havn 162.31 351⇑⇑ *i*P PKPdf 14 51 08.8 +7.0
comp=Z,2.1nm,0.7s
BER Bergen 162.46 288 *e* PKPdf 14 51 10.8 +8.6
BER *e*SS SS 15 16 00.9 +3.8
BER Bergen 162.46 288 *e*PKIKP PKPdf 14 51 10.9 +8.6
BER Bergen 162.46 288 *e*P PKPdf 14 51 10.8 +8.6
FOO Floro 162.83 292 *e*P PKPdf 14 51 12.9 +10
FOO AMS AMS 16 08 08.8
comp=Z,6μm,23.5s
FOO Floro 162.83 292 *e*P PKPdf 14 51 12.9 +10
FOO LR LR
comp=Z,6μm,23.5s
EKA Eskdalemuir Ar 165.02 265 PKPab PKPab 14 52 00.0 -1.8
comp=Z,1.7nm,1.0s,baz=116,slow=4.5,SNR=3.1
ESK Eskdalemuir 165.04 265 PFAKE 14 51 20.0 +15
ESK LR LR
comp=Z,19μm,20.0s
SUMG Summit 166.54 11 *i* P PKPdf 14 51 18.5 +13
SFJD Kangerlussuaq 168.16 43 *e*PKIKP PKPdf 14 51 16.2 +9.3
SFJD Kangerlussuaq 168.16 43 PFAKE 14 51 20.0 +13
SFJD LR LR
comp=Z,14μm,20.0s
SFJD Kangerlussuaq 168.16 43 *i* P PKPdf 14 51 16.2 +9.3
BORG Borgarnes 173.45 326 PFAKE 14 51 20.0 +10
BORG LR LR
comp=Z,10μm,19.0s

ISK ***01*** *14:59:24.6, 37°.33N×28°.19E, h5km, MD2.9*
DDA ***01*** *14:59:25.1, 37°.26N×28°.46E, h7km±4km, Md2.6*
CSEM ***01*** *14:59:26.6±0.4, 37°.26N×28°.18E, h10km, MD2.9, Error ellipse: s-maj=10.0km s-min=8.1km az=36.0*
ISCJB ***01*** *14:59:26.7±0.7, 37°.26N±0°.04×28°.22E±0°.05, h2km±10km, Error ellipse: s-maj=8.5km s-min=5.7km az=136.0*
ISC 01 14:59:27.1±0.6, 37°.26N±0°.04×28°.22E±0°.05, h5km±8km, n18, σ1.9 11/28, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.14**	**158**	*e*PG	**Pg**	**Pg**	**14 59 29.5**	**-0.4**
YER	**Yerkesik**	**0.14**	**158**	*e*Pg	**Pg**	**Pg**	**14 59 29.5**	**-0.4**
MLSB	**Milas**	**0.35**	**276**	*e*PG	**Pg**	**Pg**	**14 59 32.2**	**-1.8**
MLSB	**Milas**	**0.35**	**276**	*e*Pg	**Pg**	**Pg**	**14 59 32.2**	**-1.8**
AYDN	**Tasoluk**	**0.48**	**326**	*i* P	**Pg**	**Pg**	**14 59 36.9**	**+0.4**
AYDN				*i* S	**Sg**	**Sg**	**14 59 43.9**	**+1.2**
AYDN	**Tasoluk**	**0.48**	**326**	*i* P	**Pg**	**Pg**	**14 59 36.9**	**+0.5**
AYDN				*i* S	**Sg**	**Sg**	**14 59 43.9**	**+1.2**
TURN	**Turunc**	**0.49**	**141**	*i* P	**Pg**	**Pg**	**14 59 24.7**	**-12**
TURN				*i* S	**Sg**	**Sg**	**14 59 43.0**	**-0.1**
TURN	**Turunc**	**0.49**	**141**	*i* P	**Pg**	**Pg**	**14 59 24.7**	**-12**
TURN				*i* S	**Sg**	**Sg**	**14 59 43.0**	**-0.1**
BDRM	**Kayabasi**	**0.65**	**253**	*i* P	**Pg**	**Pg**	**14 59 29.2**	**-10**
BDRM				*i* S	**Sg**	**Sg**	**14 59 49.1**	**+1.1**
BDRM	**Kayabasi**	**0.65**	**253**	*i* P	**Pg**	**Pg**	**14 59 29.2**	**-10**
BDRM				*i* S	**Sg**	**Sg**	**14 59 49.2**	**+1.2**
DAT	**Datca**	**0.74**	**224**	*e*PG	**Pg**	**Pg**	**14 59 41.0**	**-0.3**
DAT	**Datca**	**0.74**	**224**	*e*Pg	**Pg**	**Pg**	**14 59 41.0**	**-0.3**
DNZL	**Cakiroluk**	**0.79**	**57**	*i* P	**Pg**	**Pg**	**14 59 42.5**	**+0.3**
DNZL				*i* S	**Sg**	**Sg**	**14 59 46.9**	**-5.5**
DNZL	**Cakiroluk**	**0.79**	**57**	*i* P	**Pg**	**Pg**	**14 59 42.5**	**+0.3**
DNZL				*i* S	**Sg**	**Sg**	**14 59 46.9**	**-5.5**
KULA	**Kula-Manisa**	**1.30**	**15**	*e*PN	**Pn**	**Pn**	**14 59 49.5**	**-2.4**
KULA	**Kula-Manisa**	**1.30**	**15**	*e*Pn	**Pn**	**Pn**	**14 59 49.5**	**-2.4**
ELL	**Elmali**	**1.45**	**110**	*e*PN	**Pn**	**Pn**	**14 59 53.9**	**0.0**
ELL				*e*SN	**Sn**	**Sn**	**15 00 14.9**	**+1.7**
ELL	**Elmali**	**1.45**	**110**	*e*Pn	**Pn**	**Pn**	**14 59 53.9**	**0.0**
ELL				*e*Sn	**Sn**	**Sn**	**15 00 14.9**	**+1.7**

IDC ***01*** *15:17:00.2±1.4, 8°.86S×76°.17W, h124km±15km, mb3.5/7, mb1 3.7/11, mb1mx3.6/21, mbtmp3.5/11, Error ellipse: s-maj=25.2km s-min=8.8km az=64.0*
ISCJB ***01*** *15:17:00.6±0.9, 8°.93S±0°.08×76°.3W±0°.1, h147km±11km, mb3.7/7, Error ellipse: s-maj=23.2km s-min=8.6km az=155.6*
NEIC ***01*** *15:17:02.0±0.8, 8°.90S×76°.15W, h142km±9km, mb4.3/1, Error ellipse: s-maj=15.2km s-min=8.7km az=66.0*
ISC 01 15:17:01.0±0.8, 8°.88S±0°.07×76°.3W±0°.1, h131km±11km, n19, σ0.9 93/20, mb3.7/7, Central Peru

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**2.82**	**311**	P	**Pn**	**Pn**	**15 17 45.4**	**0.0**
28nm,0.3s,baz=83,slow=5.9,SNR=97								
ATAH				S		**Sn**	**15 18 18.4**	**-1.2**
28nm,0.3s,baz=0.0,slow=17,SNR=8.9								
NNA	**Nana**	**3.15**	**191**	P	**Pn**	**Pn**	**15 17 50.6**	**+1.0**
10nm,0.3s,baz=349,slow=11,SNR=27								
NNA				S		**Sn**	**15 18 26.5**	**-0.6**
42nm,0.3s,baz=285,slow=16,SNR=12								
NNA	**Nana**	**3.15**	**191**	*e*Pn	**Pn**	**Pn**	**15 17 50.9**	**+1.3**
NNA				S		**Sn**	**15 18 26.5**	**-0.6**
OTAV	**Otavalo**	**9.31**	**346**	*e*Pn	**Pn**	**Pn**	**15 19 14.7**	**+2.4**
3.9nm,0.6s								
LPAZ	**La Paz**	**10.82**	**134**	P	**Pn**	**Pn**	**15 19 32.3**	**0.0**
0.1nm,0.3s,baz=321,slow=14,SNR=3.2								
SDV	**Santo Domingo**	**18.51**	**18**	P	**P**	**P**	**15 21 05.9**	**-1.5**
0.7nm,0.3s,baz=234,slow=5.0,SNR=6.1								
SDV	**Santo Domingo**	**18.51**	**18**	P	**P**	**P**	**15 21 07.4**	**0.0**
TXAR	**Lajitas Array**	**46.27**	**326**	P	**P**	**P**	**15 25 14.6**	**+1.1**
0.6nm,0.6s,mb3.4,baz=147,slow=8.7,SNR=9.9								
PDAR	**Pinedale Array**	**59.70**	**332**	P	**P**	**P**	**15 26 51.8**	**0.0**
0.4nm,0.5s,mb3.5,baz=125,slow=11,SNR=3.4								
NVAR	**Mina Array Bea**	**61.22**	**323**	P	**P**	**P**	**15 27 03.0**	**+0.8**
0.3nm,0.6s,mb3.3,baz=134,slow=7.8,SNR=3.9								
ULM	**Lac du Bonnet**	**61.31**	**346**	P	**P**	**P**	**15 27 01.6**	**-0.9**
4.1nm,0.6s,mb4.5,baz=157,slow=7.8,SNR=3.7								
ULM	**Lac du Bonnet**	**61.31**	**346**	*e*P	**P**	**P**	**15 27 02.3**	**-0.3**
DBIC	**Dimbokro**	**72.82**	**80**	P	**P**	**P**	**15 28 16.3**	**+0.2**
1.1nm,0.4s,mb3.9,baz=273,slow=12,SNR=3.4								
DBIC	**Dimbokro**	**72.82**	**80**	*e*P	**P**	**P**	**15 28 16.2**	**+0.1**
YKA	**Yellowknife Ar**	**77.05**	**343**	P	**P**	**P**	**15 28 38.8**	**-0.5**
0.5nm,0.6s,mb3.3,baz=141,slow=5.8,SNR=3.4								
TOA0	**Torodi Ar. Sit**	**80.42**	**75**	*e*P	**P**	**P**	**15 28 58.5**	**-0.2**
TORD	**Torodi Ar. Bea**	**80.42**	**75**	P	**P**	**P**	**15 28 57.6**	**-1.2**
1.1nm,0.6s,mb3.7,baz=254,slow=4.0,SNR=17								
ZALV	**Zalesovo Beam**	**132.54**	**15**	PKP		PKPdf	15 36 00.7	+0.7
0.4nm,0.5s,baz=298,slow=3.2,SNR=5.0								
ASAR	**Alice Springs**	**136.24**	**222**	PKP		PKPdf	15 36 07.8	-0.1
0.3nm,0.7s,baz=115,slow=1.6,SNR=4.6								

IDC ***01*** *15:31:33.6±0.4, 2°.28N×126°.81E, h0km, mb4.7/23, mb1 4.7/23, mb1mx4.7/24, mbtmp4.7/23, MS4.2/2, Ms1 4.2/2, ms1mx3.2/29, Error ellipse: s-maj=21.2km s-min=9.6km az=77.0*
BJI ***01*** *15:31:35.4, 1°.58N×127°.13E, h71km, mB5.3/20, mb4.9/39, Ms4.8/27, Ms7 4.7/25*
MOS ***01*** *15:31:36.8±1.1, 2°.28N×126°.81E, h33km, mb5.3/26, Error ellipse: s-maj=13.9km s-min=6.6km az=113.8*
ISCJB ***01*** *15:31:40.8±0.5, 2°.31N±0°.02×126°.90E±0°.04, h69km±4km, mb4.9/113, Error ellipse: s-maj=6.0km s-min=3.6km az=168.9*
NEIC ***01*** *15:31:42.5±0.9, 2°.24N×126°.83E, h71km±8km, mb5.0/40, Error ellipse: s-maj=8.2km s-min=4.6km az=68.0*
TEH ***01*** *15:31:42.0, 2°.27N×126°.90E, h60km*
DJA ***01*** *15:31:44, 2°.35N×126°.92E, h67km, mb5.0/45*
ISC 01 15:31:42.6±0.4, 2°.28N±0°.02×126°.90E±0°.04, h70km±3km, h65km±2.2km: pP-P, n278, σ1.9 22/276, mb4.9/113, 12C-6D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.56**	**163**	P	**Pn**	**Pn**	**15 32 06.7**	**-1.7**
SGSI	**Sangihe**	**1.96**	**316**	P	**Pn**	**Pn**	**15 32 11.7**	**-2.0**
MNI	**Manado**	**2.22**	**248**	P	**Pn**	**Pn**	**15 32 16.4**	**-0.8**
LBMI	**Labuha**	**2.96**	**168**	P	**Pn**	**Pn**	**15 32 28.3**	**+1.1**
GSPH	**General Santos**	**4.26**	**333**⇑	*e*P	**Pn**	**Pn**	**15 32 42.8**	**-2.2**
GSPH				*i* S	**Sn**	**Sn**	**15 33 28.2**	**-5.3**
MATI	**Mati**	**4.68**	**352**	*e*P	**Pn**	**Pn**	**15 32 51.4**	**+0.6**
DAV	**Davao City (W)**	**4.94**	**345**	Pn	**Pn**	**Pn**	**15 32 54.8**	**+0.4**
36nm,0.3s,baz=248,slow=16,SNR=2.7								
DAV				Sn		**Sn**	**15 33 59.1**	**+8.9**
62nm,0.3s,baz=147,slow=22,SNR=4.9								
DAV	**Davao City (W)**	**4.94**	**345**	*e*P	**Pn**	**Pn**	**15 32 55.7**	**+1.3**
DAV	**Davao City (W)**	**4.94**	**345**	P	**Pn**	**Pn**	**15 32 57.1**	**+2.7**
DMPH	**Davao City--Mi**	**4.97**	**344**⇑	*e*P	**Pn**	**Pn**	**15 32 57.2**	**+2.4**
KCP	**Kidapawan**	**5.04**	**339**⇓⇓	*e*P	**Pn**	**Pn**	**15 32 58.7**	**+3.1**
MRSI	**Marisa**	**5.27**	**250**	P	**Pn**	**Pn**	**15 32 59.8**	**+1.0**
2.2nm5μm716nm,0.6s								
LUWI	**Luwuk**	**5.28**	**231**	P	**Pn**	**Pn**	**15 33 01.1**	**+2.1**
3.9nm710nm,1.0s								
NLAI	**Namlea**	**5.48**	**178**	P	**Pn**	**Pn**	**15 33 02.5**	**+0.8**
0.7nm2μm98nm,0.9s								
NLAI				S		**Sn**	**15 34 08.1**	**+4.7**
0.7nm2μm98nm,0.9s								
CTBH	**Cotabato--PC H**	**5.58**	**332**⇓⇓	*i* P	**Pn**	**Pn**	**15 33 01.4**	**-1.7**
BUKP	**Musuan**	**5.86**	**342**	*e*P	**Pn**	**Pn**	**15 33 06.6**	**-0.3**
AAI	**Ambon**	**6.06**	**168**	P	**Pn**	**Pn**	**15 33 13.3**	**+3.6**
0.5nm166nm,0.8s								
APSI	**Ampana**	**6.13**	**239**	P	**Pn**	**P

MSLP	Maasin	8.07	346	eP	Pn	15 33 35.7 -1.4
TTSI	Tana Toraja	8.83	233	P	Pn	15 33 46.7 -0.9
	1µm114nm,1.2s					
MYLDM	Lahad Datu	8.87	289	P	Pn	15 33 49.3 +1.3
MYLDM	Lahad Datu	8.87	289	P	Pn	15 33 49.5 +1.5
	3µm332nm,0.8s					
TLE	Tual	9.79	143	P	Pn	15 33 58.8 -1.8
	187nm,1.7s					
KAPI	Kappang	10.17	225	LR	LR	15 37 29.4
	comp=Z,978nm,20.8s,baz=114,slow=35					
KAPI	Kappang	10.17	225	eP	Pn	15 34 04.6 -1.2
	26nm,0.7s					
CUYO	Cuyo Island	10.33	326	eP	Pn	15 34 06.7 -1.4
KDM	Kudat	11.04	295	P	Pn	15 34 19.2 +1.4
KKM	Kota Kinabalu	11.29	290	P	Pn	15 34 23.1 +1.8
KKM	Kota Kinabalu	11.29	290	eP	Pn	15 34 21.8 +0.6
	42nm,0.6s					
KKM	Kota Kinabalu	11.29	290	P	Pn	15 34 22.6 +1.4
	963nm73nm,1.0s					
ENPP	El Nido	11.56	320	eP	Pn	15 34 25.1 +0.3
PVCP	Virac	11.57	347	eP	Pn	15 34 25.8 +0.8
KBKI	Kotabaru	12.07	243	P	Pn	15 34 33.7 +1.9
	45nm,1.3s					
SMPI	Sarmi	12.54	110	P	Pn	15 34 42.0 +3.7
	68nm,1.0s					
JAY	Jayapura	14.60	109	P	Pn	15 35 11.6 +6.0
	76nm,0.9s					
SBUM	Sibu	14.67	271	P	Pn	15 35 09.9 +3.4
SBUM	Sibu	14.67	271	P	Pn	15 35 09.7 +3.2
SBUM	Sibu	14.67	271	P	Pn	15 35 09.8 +3.3
SBUM	Sibu	14.67	271	P	Pn	15 35 09.6 +3.1
	1µm84nm,1.2s					
SRBI	Singaraja	15.55	228	P	Pn	15 35 20.4 +2.6
	107nm,0.9s					
STKI	Sintang	15.57	262	P	Pn	15 35 22.1 +4.0
	5µm47nm,1.5s					
KAKA	Kakadu	15.87	160	eP	Pn	15 35 25.1 +3.2
	60nm,0.7s					
KAKA	Kakadu	15.87	160	eP	Pn	15 35 20.5 -1.4
	462nm,1.2s					
KAKA	Kakadu	15.87	160	P	Pn	15 35 25.2 +3.3
	1µm145nm,1.1s					
DNP	Denpasar	15.94	227	P	Pn	15 35 28.4 +5.6
	369nm,1.0s					
IGBI	Denpasar	16.09	227	P	Pn	15 35 29.6 +5.0
	358nm,0.8s					
ABJI	Asem Bagus	16.12	232	P	Pn	15 35 30.4 +5.4
	77nm,1.1s					
KSM	Kuching	16.60	268	P	Pn	15 35 31.7 +0.7
KSM	Kuching	16.60	268	eP	Pn	15 35 30.8 -0.3
	123nm,1.5s					
KSM	Kuching	16.60	268	P	Pn	15 35 31.7 +0.6
	45nm,1.6s					
GMJI	Gumukmas	17.02	232	P	Pn	15 35 39.8 +3.5
	88nm,1.0s					
PWJI	Pagerwojo	18.20	236	P	Pn	15 35 52.0 +1.3
	56nm,1.2s					
PCJI	Pacitan	18.82	236	P	Pn	15 35 57.6 -0.4
TPI	Tanjungpandan	19.88	256	P	Pn	15 36 08.0 -2.6
	32nm,1.1s					
FITZ	Fitzroy Crossi	20.29	183	eP	P	15 36 11.0 -1.8
	31nm,0.6s					
FITZ				eS	S	15 39 54.7 -1.8
FITZ	Fitzroy Crossi	20.29	183	P	P	15 36 12.1 -0.7
	14nm,0.7s,baz=24,slow=8.5,SNR=32					
FITZ				LR	LR	15 44 00.7
	comp=Z,928nm,20.0s,baz=158,slow=37					
FITZ	Fitzroy Crossi	20.29	183	eP	P	15 36 12.3 -0.4
	16nm,0.6s					
FITZ	Fitzroy Crossi	20.29	183	P	P	15 36 13.3 +0.5
	60nm,0.8s					
TWG	Pinlang	21.19	345	eP	P	15 36 18.6 -3.9
	42nm,0.6s,mb5.0					
LEM	Lembang	21.27	245	P	P	15 36 23.2 -0.2
	50nm,0.8s,mb4.9					
YULB	Yu-li	21.68	346	eP	P	15 36 23.8 -3.9
	16nm,0.3s,mb4.8					
TPUB	Ta-pu	21.77	344	eP	P	15 36 24.9 -3.7
	63nm,0.9s,mb5.0					
CBJI	Citeko	21.80	247	P	P	15 36 33.2 +4.1
	216nm,0.8s,mb5.5					
DBJI	Dramaga	21.95	246	P	P	15 36 33.2 +2.5
	51nm,0.7s,mb5.0					
SSLB	Suanglung	22.15	345	eP	P	15 36 30.1 -2.5
	40nm,0.8s,mb4.8					
COEN	Coen	22.81	135	eP	P	15 36 39.0 -0.8
COEN	Coen	22.81	135	eP	P	15 36 39.0 -0.8
	138nm,0.9s,mb5.3					
COEN	Coen	22.81	135	P	P	15 36 39.5 -0.3
	81nm,1.1s,mb5.0					
YHNB	Yeheng	22.89	347	eP	P	15 36 39.7 -0.8
	28nm,0.6s,mb4.8					
MYKOM	Kota Tinggi	23.04	269	P	P	15 36 39.9 -2.4
	19nm,0.9s,mb4.5					
WRAB	Tennant Creek	23.25	162	eP	P	15 36 42.4 -1.7
WRAB				pmax	pmax	
	comp=Z,67nm,0.8s,mb5.0					
WRAB	Tennant Creek	23.25	162	eP	P	15 36 42.4 -1.6
	comp=Z,67nm,0.8s,mb5.0					
WRAB	Tennant Creek	23.25	162	P	P	15 36 43.0 -1.1
	comp=Z,98nm,0.9s,mb5.2					
MDSI	Maura Dua	23.68	254	P	P	15 36 49.3 +1.2
	comp=Z,41nm,0.8s,mb4.8					
KASI	Kota Agung	23.68	251	P	P	15 36 49.8 +1.7
	comp=Z,127nm,0.9s,mb5.3					
KTGM	Kuala Trenggan	23.91	278	P	P	15 36 50.4 +0.2
LWLI	Liwa	23.94	252	P	P	15 36 52.4 +1.9
	comp=Z,3µmcomp=Z,120nm,0.8s,mb5.3					
MBWA	Marble Bar	24.32	196	eP	P	15 36 54.0 +0.2
	comp=Z,20nm,0.8s,mb4.5					
JOW	Kunigami	24.45	3	P	P	15 36 56.1 +1.1
	comp=Z,33nm,0.8s,mb4.7,baz=214,slow=8.9,SNR=6.4					
SDSI	Sungai Dareh	25.67	263	P	P	15 37 09.5 +3.3
	comp=Z,12nm,0.8s,mb4.4					
IPM	Ipoh	25.92	276	P	P	15 37 07.3 -1.2
	comp=Z,22nm,1.1s,mb4.5					
ASAR	Alice Springs	26.67	166	P	P	15 37 14.2 -0.9
	comp=Z,2.9nm,0.7s,mb3.9,baz=340,slow=6.4,SNR=54					
ASAR				PcP	PcP	15 40 38.4 +0.9
	comp=Z,3.6nm,0.7s,baz=355,slow=2.6,SNR=6.5					
ASAR				S	S	15 41 54.6 +9.1
	comp=Z,6.2nm,1.2s,baz=349,slow=19,SNR=5.3					
MNSI	Mandailing Nat	27.35	267	P	P	15 37 21.4 0.0
	comp=Z,17nm,0.9s,mb4.6					
PSI	Prapat	27.95	272	P	P	15 37 26.9 +0.1
	comp=Z,3.6nm,0.7s,mb4.0,baz=77,slow=4.3,SNR=6.2					
PSI	Prapat	27.95	272	P	P	15 37 26.9 +0.1
CTA	Charters Tower	29.23	140	eP	P	15 37 38.0 0.0
	comp=Z,9.1nm,0.9s,mb4.4					
CTA	Charters Tower	29.23	140	P	P	15 37 37.6 -0.4
	comp=Z,12nm,1.0s,mb4.5,baz=319,slow=12,SNR=10					
CTAO	Charters Tower	29.23	140	eP	P	15 37 37.6 -0.4
CTAO				pmax	pmax	
	comp=Z,16nm,0.9s,mb4.7					
CTAO	Charters Tower	29.23	140	eP	P	15 37 37.6 -0.4
	comp=Z,16nm,0.9s,mb4.7					
CTAO	Charters Tower	29.23	140	P	P	15 37 38.9 +0.9
	comp=Z,17nm,1.2s,mb4.5					
GSI	Gunungsitoli	29.33	269	P	P	15 37 36.9 -2.1
	comp=Z,25nm,0.8s,mb4.9					
MEEK	Meekatharra	29.84	195	eP	P	15 37 42.8 -0.5
WHN	Wuhan	30.53	338	eP	P	15 37 54.0 +4.6
NJ2	Nanjing	30.57	346	eP	P	15 37 51.2 +1.4
NJ2				pmax	pmax	
	comp=Z,10.0nm,0.5s,mb4.8					
GYA	Guiyang	30.91	323	P	P	15 37 55.2 +2.3
GYA				pP	pP	15 38 11.0 +1.4
GYA				sP	sP	15 38 20.6 +2.8
GYA				PP	PP	15 38 59.4 -4.5
GYA				PcP	PcP	15 40 49.7 +1.6
GYA				S	S	15 42 54.0 +1.8
GYA				sS	sS	15 43 23.6 +2.7
GYA				pmax	pmax	
	comp=Z,20nm,0.8s,mb4.9					
GYA				pmax	pmax	
	comp=Z,120nm,4.8s					
GYA				LR	LR	
	comp=N,450nm,16.8s					
GYA				LR	LR	
	comp=E,520nm,15.4s					
GYA				LR	LR	
	comp=Z,620nm,15.9s					
BDT	Bhumibol Dam	31.18	300	P	P	15 37 55.0 -0.3
CM31	Chiang Mai Arr	31.77	302	eP	P	15 37 59.7 -0.8
	comp=Z,8.5nm,0.6s,mb4.7					
CMAR	Chiang Mai Arr	31.77	302	P	P	15 37 59.9 -0.6
	comp=Z,9.1nm,0.7s,mb4.6,baz=121,slow=7.1,SNR=76					
CHG	Chiang Mai	31.93	303	‖P	P	15 38 01.1 -0.8
	comp=Z,37nm,0.6s,mb5.3					
CHTO	Chiang Mai	31.93	303	eP	P	15 38 01.0 -0.9
CHTO				pmax	pmax	
	comp=Z,24nm,0.6s,mb5.1					
CHTO	Chiang Mai	31.93	303	eP	P	15 38 01.0 -0.9
	comp=Z,24nm,0.6s,mb5.1					
CHTO	Chiang Mai	31.93	303	P	P	15 38 01.4 -0.5
	comp=Z,44nm,0.6s,mb5.3					
KMI	Kunming	32.53	316	P	P	15 38 08.2 +1.1
KMI				pmax	pmax	
	comp=Z,7.0nm,1.4s,mb4.3					
FORT	Forrest	32.89	178	eP	P	15 38 09.5 -0.6
	comp=Z,37nm,0.6s,mb5.4					
FORT	Forrest	32.89	178	eP	P	15 38 09.5 -0.6
	comp=Z,40nm,0.6s,mb5.4					
KMBL	Kambalda	33.79	188	eP	P	15 38 17.7 -0.3
	comp=Z,193nm,0.8s,mb6.0					
KLBR	Kellerberrin	34.78	194	eP	P	15 38 26.1 -0.4
	comp=Z,19nm,0.8s,mb5.0					
KSRS	Korea Array	35.02	1	P	P	15 38 29.3 +0.8
	comp=Z,8.3nm,0.5s,mb4.8,baz=178,slow=9.9,SNR=60					
KSRS				PcP	PcP	15 41 01.0 +1.7
	comp=Z,2.4nm,0.8s,baz=204,slow=2.2,SNR=5.7					
MAJO	Matsushiro	35.66	16	eP	P	15 38 32.4 -1.6
MAJO				pmax	pmax	
	comp=Z,26nm,0.9s,mb5.2					
MAJO	Matsushiro	35.66	16	eP	P	15 38 32.4 -1.6
	comp=Z,26nm,0.9s,mb5.2					
MAT	Matsushiro	35.66	16	P	P	15 38 32.5 -1.5
MJAR	Matsushiro Arr	35.66	16	P	P	15 38 32.9 -1.1
	comp=Z,9.1nm,0.8s,mb4.8,baz=196,slow=8.2,SNR=28					
MJAR	Matsushiro Arr	35.66	16	P	P	15 38 32.9 -1.1
CD2	Chengdu	35.92	325	eP	P	15 38 36.3 0.0
CD2				pP	pP	15 38 53.1 -0.1
CD2				sP	sP	15 39 01.3 -0.1
CD2				PP	PP	15 39 59.7 +0.5
CD2				S	S	15 44 10.0 +0.4
CD2				pmax	pmax	
	comp=Z,10.0nm,0.8s,mb4.8					
CD2				pmax	pmax	
	comp=Z,60nm,5.2s					
CD2				LR	LR	
	comp=N,2µm,16.4s					
CD2				LR	LR	
	comp=Z,1µm,20.2s					
EIDS	Eidsvold	36.11	141	eP	P	15 38 37.3 -0.8
	comp=Z,65nm,1.0s,mb5.5					
NWAO	Narrogin (SRO)	36.19	194	P	P	15 38 37.9 -0.7
	comp=Z,10nm,0.7s,mb4.9,baz=25,slow=10,SNR=11					
NWAO	Narrogin (SRO)	36.19	194	eP	P	15 38 37.9 -0.6
STKA	Stephens Creek	36.72	159	eP	P	15 38 42.4 -0.7
	comp=Z,42nm,0.8s,mb5.4					
STKA				e		15 41 05.0
STKA	Stephens Creek	36.72	159	P	P	15 38 42.8 -0.3
	comp=Z,53nm,0.8s,mb5.5,baz=333,slow=8.3,SNR=107					
STKA				PcP	PcP	15 41 05.4 +0.9
	comp=Z,8.6nm,0.7s,baz=351,slow=6.5,SNR=3.1					
STKA	Stephens Creek	36.72	159	eP	P	15 38 42.3 -0.8
	comp=Z,12nm,0.8s,mb4.9					
BJI	Beijing	38.83	347	P	P	15 39 01.6 +0.8
BJI				S	S	15 44 55.0 +1.4
BJI				SS	SS	15 47 52.4 +5.0
BJI				pmax	pmax	
	comp=Z,33nm,0.6s,mb5.3					
BJI				pmax	pmax	
	comp=Z,760nm,10.9s					
BJI				LR	LR	
	comp=N,750nm,17.4s					
BJI				LR	LR	
	comp=E,700nm,18.4s					
BJI				LR	LR	
	comp=Z,620nm,29.5s					
LZH	Lanzhou	39.84	330	eP	P	15 39 09.9 +0.6
LZH				pP	pP	15 39 28.1 +1.7
LZH				sP	sP	15 39 36.0 +1.5
LZH				PP	PP	15 40 46.5 +4.4
LZH				eS	S	15 45 11.0 +2.2
LZH				pmax	pmax	
	comp=Z,37nm,1.0s,mb5.2					
LZH				pmax	pmax	
	comp=Z,310nm,6.0s					
LZH				LR	LR	
	comp=E,560nm,13.8s					
LZH				LR	LR	
	comp=Z,1µm,14.9s					
ARMA	Armidale	40.17	146	eP	P	15 39 13.1 +1.0
ARMA	Armidale	40.17	146	eP	P	15 39 12.7 +0.6
	comp=Z,80nm,0.9s,mb5.5					
HHC	Hu-ho-hao-te	40.83	342	eP	P	15 39 19.7 +2.3
HHC				pP	pP	15 39 35.0 +0.5
HHC				sP	sP	15 39 42.1 -0.5
HHC				PP	PP	15 40 58.3 +5.6
HHC				PcS	PcS	15 45 09.1 +1.1
HHC				S	S	15 45 27.3 +3.9
HHC				SS	SS	15 48 26.8 -0.3
HHC				ScS	ScS	15 49 16.5 +0.7
HHC				pmax	pmax	
	comp=Z,12nm,0.9s,mb4.7					
HHC				pmax	pmax	
	comp=Z,770nm,6.5s					
HHC				LR	LR	
	comp=N,620nm,16.4s					
HHC				LR	LR	
	comp=E,660nm,19.0s					
HHC				LR	LR	
	comp=Z,990nm,16.6s					
VLA	Vladivostok	40.91	6	eP	P	15 39 18.1 +0.1
VLA				i	pP	15 39 31.7 -3.5
VLA				pmax	pmax	
	comp=Z,58nm,1.4s,mb5.2					
ARPS	Mount Arapiles	41.26	162	eP	P	15 39 20.9 -0.1
	comp=Z,42nm,0.9s,mb5.3					
CN2	Changchun	41.37	358	eP	P	15 39 24.0 +2.2
CN2				epP	pP	15 39 42.4 +3.4
CN2				PcP	PcP	15 41 20.0 +1.1
CN2				eS	S	15 45 33.9 +2.5
CN2				pmax	pmax	
	comp=Z,10.0nm,0.8s,mb4.7					
CN2				pmax	pmax	
	comp=Z,200nm,5.0s					
CN2				LR	LR	
	comp=N,800nm,17.0s					
CN2				LR	LR	
	comp=E,600nm,17.0s					
CN2				LR	LR	
	comp=Z,600nm,18.0s					
YNG	Young	41.62	153	eP	P	15 39 24.2 +0.2
	comp=Z,21nm,1.1s,mb4.8					
MDJ	Mudanjiang	42.23	3	P	P	15 39 29.9 +1.1
MDJ				pP	pP	15 39 45.3 -0.8
MDJ				sP	sP	15 39 52.4 -1.7
MDJ				PP	PP	15 41 08.4 +0.5
MDJ				PcP	PcP	15 41 22.0 +0.3
MDJ				S	S	15 45 44.8 +0.7
MDJ				SS	SS	15 48 57.9 +3.1
MDJ				ScS	ScS	15 49 24.3 +0.1
MDJ				pmax	pmax	
	comp=Z,31nm,1.2s,mb4.9					
MDJ				pmax	pmax	
	comp=Z,730nm,5.0s					
MDJ				LR	LR	
	comp=N,690nm,21.9s					
MDJ				LR	LR	
	comp=E,530nm,21.9s					
MDJ				LR	LR	
	comp=Z,1µm,21.9s					
CNB	Canberra Magne	42.90	153	eP	P	15 39 35.4 +1.0
TOO	Toolangi	43.23	158	eP	P	15 39 37.9 +0.9
LSA	Lhasa	43.53	312	P	P	15 39 40.0 +0.4
GTA	Gaotai	44.43	330	eP	P	15 39 46.4 -0.2
GTA				pP	pP	15 40 02.1 -1.9
GTA				sP	sP	15 40 08.7 -3.3
GTA				S	S	15 46 16.2 -0.2
GTA				pmax	pmax	
	comp=Z,4.0nm,0.8s,mb4.2					
GTA				pmax	pmax	
	comp=Z,310nm,6.6s					
GTA				LR	LR	
	comp=N,420nm,20.1s					
GTA				LR	LR	
	comp=E,690nm,17.1s					
GTA				LR	LR	
	comp=Z,480nm,18.9s					
HABR	Khabarovsk	46.55	7	deP	P	15 40 03.2 0.0
HABR				e*SP	sP	15 40 17.3 -11
HABR				e		15 41 36.9
HABR				eS	S	15 46 50.7 +4.0
HABR				e*SS	sS	15 47 07.2 -9.3
HABR				e		15 49 55.4
HABR				eSSS		15 51 15.1
HABR				pmax	pmax	
	comp=Z,54nm,1.5s,mb5.1					
HABR				pmax	pmax	
	comp=E,31nm,1.6s					
HABR				pmax	pmax	
	comp=N,10.0nm,0.6s					
HABR				MLR	MLR	
	comp=E,557nm,18.0s					
HABR				MLR	MLR	
	comp=N,494nm,19.0s					
HABR				MLR	MLR	
	comp=Z,580nm,16.0s					
YSS	Yuzh-Sakhalins	46.59	15	eP	P	15 40 03.9 +0.4
YSS	Yuzh-Sakhalins	46.59	15	eP	P	15 40 03.6 0.0
	comp=Z,10nm,0.7s,mb4.7					
GUN	Gumba	46.72	307	eP	P	15 40 03.2 -1.7
	comp=Z,92nm,0.6s,mb5.7					
PKI	Pulchoki	46.95	306	eP	P	15 40 04.7 -2.0
PKI	Pulchoki	46.95	306	eP	P	15 40 05.4 -1.3
PKI				pmax	pmax	
	comp=Z,11nm,0.4s,mb4.9					
PKI	Pulchoki	46.95	306	eP	P	15 40 05.4 -1.3
	comp=Z,11nm,0.4s,mb4.9					
PKIN	Phulchoki	46.97	306	eP	P	15 40 05.4 -1.4
	comp=Z,11nm,0.4s,mb4.9					
KKN	Kakani	47.15	307	eP	P	15 40 06.1 -2.2
	comp=Z,51nm,0.8s,mb5.3					
KKN	Kakani	47.15	307	eP	P	15 40 06.1 -2.2
KKN				pmax	pmax	
	comp=Z,51nm,0.8s,mb5.3					
DMN	Daman	47.21	306	eP	P	15 40 06.4 -2.4
	comp=Z,40nm,0.8s,mb5.2					
ULN	Ulaanbaatar	48.55	342	ceP	P	15 40 19.1 +0.4
ULN	Ulaanbaatar	48.55	342	eP	P	15 40 18.4 -0.2
	comp=Z,6.8nm,0.6s,mb4.8					
ULN	Ulaanbaatar	48.55	342	P	P	15 40 19.5 +0.8
	comp=Z,13nm,1.1s,mb4.8					
SONM	Songino Array	48.72	342	P	P	15 40 20.4 +0.3
	comp=Z,4.9nm,0.5s,mb4.7,baz=156,slow=8.7,SNR=41					
SONM				PcP	PcP	15 41 47.3 +3.1
	comp=Z,1.8nm,0.8s,baz=150,slow=4.8,SNR=2.3					
HYB	Hyderabad	49.78	291	iP	P	15 40 29.0 +0.4
ZAK	Zakamensk	51.95	341	eP	P	15 40 43.1 -1.2
ZAK				e		15 41 57.3
BHPL	Bhopal	52.22	298	ePKP	P	15 40 46.3 -0.5
BHPL				AMb	AMB	15 40 48.9
	comp=Z,15nm,0.5s,mb5.2					
JOSI	Joshimath	52.84	307	ePKP	P	15 40 51.6 +0.3
JOSI				AMb	AMB	15 40 57.1
	comp=Z,96nm,0.4s					
TLY	Talaya	52.96	342	eP	P	15 40 53.4 +1.6
TLY				pmax	pmax	
	comp=Z,8.0nm,0.8s,mb4.8					
AGRA	Agra	52.98	303	ePKP	P	15 40 50.8 -1.6
AGRA				AMb	AMB	15 40 53.4
	comp=Z,35nm,0.1s					
IRK	Irkutsk	53.26	343	eP	P	15 40 56.3 +2.3
IRK				pmax	pmax	
	comp=Z,34nm,2.3s,mb5.0					
MOY	Mondy	53.80	340	eP	P	15 40 59.1 +1.1
MOY				pmax	pmax	
	comp=Z,25nm,2.3s,mb4.8					
KAD	Karad	53.85	290	ePKP	P	15 40 57.4 -1.6
KAD				AMb	AMB	15 41 00.2
	comp=Z,11nm,0.5s,mb5.2					
WMQ	Urumqi	54.01	326	eP	P	15 41 02.0 +2.3
WMQ				pP	pP	15 41 18.0 +0.5
WMQ				sP	sP	15 41 25.0 -0.4
WMQ				PP	PP	15 43 05.0 +3.3
WMQ				S	S	15 48 32.0 +1.5
WMQ				ScS	ScS	15 50 42.0 -0.6
WMQ				SS	SS	15 52 13.0 +0.2
WMQ				pmax	pmax	
	comp=Z,18nm,1.0s,mb5.1					
WMQ				pmax	pmax	
	comp=Z,68nm,5.0s					
WMQ				LR	LR	
	comp=N,260nm,16.0s					
WMQ				LR	LR	
	comp=E,270nm,16.0s					
WMQ				LR	LR	
	comp=Z,320nm,16.0s					
SONA	Sohna	54.03	304	ePKP	P	15 40 58.8 -1.3
SONA				AMb	AMB	15 41 00.7
	comp=Z,29nm,0.3s,mb5.8					
NDI	New Delhi	54.06	304	ex	P	15 40 56.0 -4.4
KLP	Kalpa	54.25	308	ePKP	P	15 41 01.6 -0.1
KLP				AMb	AMB	15 41 08.1
	comp=Z,9.6nm,1.2s,mb4.7					
POO	Poona	54.38	291	ex	x	15 40 56.5
POO				AMb	AMB	15 40 57.1
	comp=Z,13nm,0.5s,mb5.2					
KKR	Kurukshetra	54.83	305	ePKP	P	15 41 06.2 +0.3
SMLA	Simla	54.96	307	ePKP	P	15 41 05.0 -1.9
SMLA				AMb	AMB	15 41 11.2
	comp=Z,30nm,1.4s,mb5.1					
KHET	Khetri	55.04	303	ePKP	P	15 41 07.0 -0.4
KHET				AMb	AMB	15 41 09.5
	comp=Z,19nm,0.3s,mb5.6					
AJM	Ajmer	55.55	301	ePKP	P	15 41 10.7 -0.4
AJM				AMb	AMB	15 41 26.7
	comp=Z,8.6nm,0.5s,mb5.0					
BOD	Bodaibo	56.32	352	eP	P	15 41 15.0 -1.0
BOD				pmax	pmax	
	comp=Z,11nm,1.0s,mb4.8					
PEA0B	Petropavlovsk-	56.71	22	P	P	15 41 19.8 +1.0
PETK	Petropavlovsk-	56.71	22	P	P	15 41 20.1 +1.2
	comp=Z,4.9nm,0.7s,mb4.7,baz=182,slow=4.1,SNR=11					
PETK				PKKP		16 02 48.0
	comp=Z,2.6nm,0.7s,baz=3.3,slow=5.8,SNR=4.9					
MKAR	Makanchi Array	58.84	326	P	P	15 41 33.7 -0.3
	comp=Z,4.2nm,0.4s,mb4.8,baz=113,slow=9.3,SNR=29					
MKAR	Makanchi Array	58.84	326	P	P	15 41 33.7 -0.3
JASL	Jaisalmer	58.89	300	ePKP	P	15 41 33.8 -0.9
KSH	Kashi	59.19	316	eP	P	15 41 37.8 +1.3
KSH				pP	pP	15 41 53.7 -1.0
KSH				sP	sP	15 42 00.7 -1.8
KSH				PcP	PcP	15 42 25.8 +1.5
KSH				PP	PP	15 43 50.5 +2.5
KSH				ScP	ScP	15 46 19.7 +0.6
KSH				PcS	PcS	15 46 26.3 0.0
KSH				S	S	15 49 37.1 -2.0
KSH				ScS	ScS	15 51 18.3 -2.2
KSH				pmax	pmax	
	comp=Z,3.0nm,0.4s,mb4.7					
KSH				pmax	pmax	
	comp=Z,92nm,5.3s					
KSH				LR	LR	
	comp=N,320nm,13.7s					
KSH				LR	LR	
	comp=E,370nm,12.9s					
KSH				LR	LR	
	comp=Z,350nm,12.2s					
YAK	Yakutsk	59.65	2	eP	P	15 41 39.4 +0.2
YAK				e		15 41 48.9
YAK				pmax	pmax	
	comp=N,22nm,1.5s					
YAK				pmax	pmax	
	comp=Z,64nm,1.0s,mb5.6					
YAK				pmax	pmax	
	comp=E,8.0nm,1.3s					
YAK	Yakutsk	59.65	2	eP	P	15 41 39.3 0.0
	comp=E,64nm,0.8s,mb5.7					
TKM2	Tokmak 2	60.95	319	eP	P	15 41 47.8 -0.7
TKM2				pmax	pmax	
	comp=Z,4.0nm,0.6s,mb4.6					
TKM2	Tokmak 2	60.95	319	eP	P	15 41 47.8 -0.6
	comp=Z,4.3nm,0.6s,mb4.7					
UCH	Uchtor	61.36	318	eP	P	15 41 52.0 +0.7
	comp=Z,5.5nm,0.7s,mb4.7					
AAK	Ala-Archa	61.55	318	ceP	P	15 41 53.0 +0.5
AAK				pmax	pmax	
	comp=Z,1.0nm,0.7s,mb4.0					
AAK	Ala-Archa	61.55	318	P	P	15 41 51.8 -0.7
	comp=Z,1.1nm,0.9s,mb3.9					
AML	Almayashu	61.87	318	eP	P	15 41 55.3 +0.6
	comp=Z,8.4nm,0.8s,mb4.8					
ZAA0	Zalesovo Array	61.95	333	eP	P	15 41 54.0 -1.1
ZALV	Zalesovo Beam	61.95	333	P	P	15 41 54.3 -0.8

comp=Z,2.5nm,0.4s,mb4.6,baz=133,slow=7.2,SNR=16
EKS2 Erkin-Say 62.03 318 *eP* **P 15 41 55.7 -0.1**
comp=Z,6.5nm,0.8s,mb4.7
KBL Kabul 62.54 308 P **P 15 41 58.7 -0.7**
KBL pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
KBL Kabul 62.54 308 P **P 15 41 58.7 -0.7**
comp=Z,9.5nm,0.6s,mb4.9
KURK Kurchatov 63.05 328 *eP* **P 15 42 01.8 -0.6**
KURK pmax pmax
comp=Z,28nm,0.6s,mb5.4
KURK Kurchatov 63.05 328 *eP* **P 15 42 01.8 -0.6**
comp=Z,28nm,0.6s,mb5.4
NVS Novosibirsk 63.24 333 *eP* **P 15 42 02.7 -0.9**
NVS *eS* **S 15 50 29.9 0.0**
NVS pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
NVS pmax pmax
comp=N,4.0nm,0.6s
NVS pmax pmax
comp=E,4.0nm,0.6s
NVS smax
comp=N,15nm,2.0s
NVS smax
comp=E,15nm,2.0s
BVAR Borovoye Array 68.63 327 P **P 15 42 38.4 +0.2**
comp=E,4.0nm,0.5s,mb4.5,baz=86,slow=4.8,SNR=22
BRVK Borovoye 68.70 327 *eP* **P 15 42 38.4 -0.3**
BRVK pmax pmax
comp=Z,15nm,0.9s,mb4.8
BRVK Borovoye 68.70 327 *ceP* **P 15 42 38.9 +0.2**
BRVK pmax pmax
comp=Z,26nm,1.7s,mb4.8
BRVK Borovoye 68.70 327 *eP* **P 15 42 38.4 -0.2**
comp=Z,15nm,0.9s,mb4.8
TIXI Tiksi 69.28 1 *eP* **P 15 42 42.0 0.0**
TIXI pmax pmax
comp=Z,18nm,1.0s,mb4.9
TIXI Tiksi 69.28 1 *eP* **P 15 42 41.2 -0.8**
comp=Z,16nm,0.9s,mb4.9
CASY Casey 69.40 187 *eP* **P 15 42 43.3 +0.6**
comp=Z,7.5nm,1.0s,mb4.5
IDAH Dahanechah 69.52 304 *eP* **P 15 42 44.4 +0.2**
IMYA Miami 70.06 308 *eP* **P 15 42 47.3 -0.1**
IAKL Akhelmad 71.17 308 *eP* **P 15 42 54.2 0.0**
IKRD Kardeh 71.40 308 *eP* **P 15 42 49.9 -5.6**
ISFR Sfrayin 71.86 308 *eP* **P 15 42 59.2 +0.9**
ABKAR Akbulak array 73.38 321 *eP* **P 15 43 06.3 -0.7**
comp=Z,4.9nm,0.6s,mb4.5
ISAD Sadrabad 74.56 302 *eP* **P 15 43 13.8 -0.6**
ISRV Sarvestan 74.77 300 *eP* **P 15 43 11.0 -4.6**
IPAR Pars 74.87 300 *eP* **P 15 43 15.9 -0.3**
IMOK Mouk 75.08 299 *eP* **P 15 43 15.5 -1.9**
IKIA Kiasar 75.14 307 *eP* **P 15 43 16.6 -1.0**
SVE Sverdlovsk 75.28 329⇑ *eP* **P 15 43 18.3 +0.3**
SVE pmax pmax
comp=Z,21nm,0.8s,mb4.9
ILAS Lasjerd 75.61 306 *eP* **P 15 43 18.2 -2.1**
GAMB Gambell 75.65 24 *eP* **P 15 43 21.1 +1.1**
comp=Z,15nm,1.0s,mb4.7
ISFB Sefidab 76.06 305 *eP* **P 15 43 22.8 -0.1**
ARU Arti 76.25 328 *c iP* **P 15 43 22.9 -0.6**
ARU *e* 15 46 09.5
ARU PPP 15 47 56.3
ARU S S 15 53 06.9 +4.5
ARU pmax pmax
comp=Z,16nm,1.0s,mb4.7
ARU Arti 76.25 328 *eP* **P 15 43 22.6 -0.9**
comp=Z,19nm,0.9s,mb4.8
IDMV Damavand 76.38 306 *eP* **P 15 43 25.8 +1.1**
IVRN Varamin 76.56 305 *eP* **P 15 43 26.0 +0.3**
IPIR Pirpir 77.00 303 *eP* **P 15 43 27.0 -1.3**
QRN Al-Qurain 79.25 299 *eP* **P 15 43 39.5 -1.3**
QRN AMb AMB 15 43 42.4
comp=Z,48nm,0.4s,mb5.7
RDF Al-Radifah 79.58 299 *eP* **P 15 43 41.5 -1.2**
RDF AMb AMB 15 43 45.7
comp=Z,23nm,0.6s,mb5.2
MIB Mutribah 79.81 300 *eP* **P 15 43 42.8 -1.0**
MIB AMb AMB 15 43 47.8
comp=Z,37nm,0.5s,mb5.5
NAY Al-Naaiem 79.87 299 *eP* **P 15 43 42.7 -1.4**
NAY AMb AMB 15 43 45.7
comp=Z,13nm,1.1s,mb4.7
IAZR Azarshahr 81.42 308 *eP* **P 15 43 53.1 +0.8**
TTA Tatalina 82.11 27 *eP* **P 15 43 57.1 +1.8**
MAW Mawson 82.46 200 P **P 15 43 56.8 -0.2**
comp=Z,5.1nm,0.6s,mb4.6,baz=73,slow=7.6,SNR=11
ZEI Tsey 83.32 313 *eP* **P 15 44 02.0 -0.1**
ZEI pmax pmax
comp=Z,24nm,1.0s,mb5.0
KIV Kislovodsk 84.26 314 *eP* **P 15 44 07.4 +0.6**
KIV pmax pmax
comp=Z,12nm,1.2s,mb4.6
ARTV Artvin 84.72 311 *i P* **P 15 44 08.2 -1.0**
DAGI Agillar 84.73 311 *i P* **P 15 44 10.1 +0.8**
DDEM Demirkent 84.85 311 *i P* **P 15 44 11.3 +1.4**
DBAD Bademkaya 84.90 311 *i P* **P 15 44 11.0 +0.9**
COLD Coldfoot 85.16 23 *eP* **P 15 44 12.3 +1.4**
comp=Z,11nm,1.1s,mb4.7
VRHR Novokhopersk 85.27 321 *eP* **P 15 44 11.3 -0.4**
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=Z,30nm,0.7s,mb5.3
VRHR pmax pmax
comp=E,20nm,0.9s
VRHR MLR MLR
comp=N,2μm,21.0s
VRHR MLR MLR
comp=Z,2μm,21.0s
VRHR MLR MLR
comp=E,1μm,16.0s
VSR Storozhevoye 86.82 321 *eP* **P 15 44 18.8 -0.6**
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VSR pmax pmax
comp=N,8.0nm,0.5s
VSR pmax pmax
comp=E,10.0nm,0.7s
VSR MLR MLR
comp=E,2μm,18.0s
VSR MLR MLR
comp=Z,3μm,18.0s
VSR MLR MLR
comp=N,2μm,17.0s
ANN Anapa 88.03 315 *eP* **P 15 44 24.2 -1.2**
ANN pmax pmax
comp=Z,48nm,1.0s,mb5.5
OBN Obninsk 88.34 325⇓ *eP* **P 15 44 26.0 -0.6**
OBN *eS* S 15 54 46.9 -19
OBN pmax pmax
comp=Z,24nm,1.2s,mb5.1
OBN MLR MLR
comp=Z,6μm,17.0s
KMBO Kilima Mbogo 89.69 269 P **P 15 44 34.5 +0.7**
comp=Z,3.1nm,1.0s,mb4.4,baz=62,slow=10,SNR=4.7
MMAI Mount Meron Ar 90.03 303 P **P 15 44 36.2 +1.1**
comp=Z,1.4nm,0.4s,mb4.4,baz=106,slow=8.9,SNR=4.9
JOF Joensuu 90.54 333 *ep* **P 15 44 38.6 +1.9**
comp=Z,5.6nm,0.8s,mb4.8
JOF Joensuu 90.54 333 *ep* **P 15 44 38.6 +1.9**
comp=Z,5.6nm,0.8s,mb4.8
BR131 Keskin Array S 91.07 310 *eP* **P 15 44 41.5 +1.8**
comp=Z,0.8nm,0.4s,mb4.2
BRTR Keskin Array B 91.07 310 P **P 15 44 39.2 -0.5**
comp=Z,1.2nm,0.4s,mb4.3,baz=121,slow=4.5,SNR=9.3
SYO Syowa Base 91.14 201⇑ *eP* **P 15 44 39.0 -0.3**
KEV Kevo 91.31 340 *ep* **P 15 44 48.4 +8.3**
KEV Kevo 91.31 340 *ep* **P 15 44 48.4 +8.3**
INK Inuvik 91.45 22 LR LR 16 30 35.7
comp=Z,14μm,19.2s,baz=70,slow=39
ARCES ARCESS Array B 91.86 340 P **P 15 44 41.2 -1.5**
comp=Z,3.1nm,0.8s,mb4.6,baz=79,slow=6.3,SNR=12
QSPA South Pole Qui 92.19 180 P **P 15 44 44.4 +0.4**
comp=Z,2.9nm,0.9s,mb4.5,baz=352,slow=2.9,SNR=12
QSPA South Pole Qui 92.19 180 P **P 15 44 44.4 +0.4**
KAF Kangasniemi 92.96 332 *ep* **P 15 44 49.1 +1.2**
comp=Z,5.6nm,1.0s,mb4.8
KAF Kangasniemi 92.96 332 *ep* **P 15 44 49.1 +1.2**
comp=Z,5.6nm,1.0s,mb4.8
AKASG Malin Array Be 93.12 321 P **P 15 44 48.1 -0.9**
comp=Z,2.9nm,0.5s,mb4.8,baz=70,slow=4.8,SNR=9.9
AKASG Malin Array Be 93.12 321 *ceP* **P 15 44 50.7 +1.8**
AKASG pmax pmax
comp=Z,3.0nm,0.5s

FINES FINESS Array B 93.19 332 P **P 15 44 48.8 -0.2**
comp=Z,4.0nm,0.8s,mb4.8,baz=60,slow=7.5,SNR=12
VRI Vrincioaia 95.46 316⇑ *iP* **P 15 45 03.6 +3.8**
MLR Muntele Rosu 96.06 316⇑ *iP* **P 15 45 02.8 +0.3**
BURAR Bucovina Array 96.19 318⇓ *iP* **P 15 45 05.1 +2.0**
BUR08 Bucovina Ar. S 96.20 318 *eP* **P 15 45 03.5 +0.4**
UZH Uzhgorod 97.91 320 *eP* **P 15 45 15.1 +4.3**
UZH *e* 15 45 24.5
DRGR 98.03 318⇑ *iP* **P 15 45 14.9 +3.5**
NOA NORSAR Array B 100.16 334 P Pdif 15 45 19.2 -1.4
comp=Z,0.5nm,0.7s,baz=155,slow=19,SNR=2.8
YKA Yellowknife Ar 100.74 25 P Pdif 15 45 22.8 -0.5
comp=Z,0.5nm,0.7s,baz=261,slow=3.7,SNR=3.5
CLL Collm 102.91 324 *ePP* PP 15 49 46.0 -1.6
GERES GERESS Array B 103.32 321 Pdiff Pdif 15 45 37.8 +3.1
comp=Z,0.2nm,0.4s,baz=57,slow=9.7,SNR=4.0
ECSD EROS Data Cent 119.88 35 *ePKPdf* PKPdf 15 50 25.4 +0.1
SCHQ Schefferville 121.97 9 PKP PKPdf 15 50 29.4 +0.4
comp=Z,2.8nm,0.6s,baz=287,slow=1.0,SNR=6.5
TXAR Lajitas Array 122.34 53 PKP PKPdf 15 50 31.8 +1.3
comp=Z,0.5nm,0.7s,baz=346,slow=0.5,SNR=8.0
TORD Torodi Ar. Bea 123.52 287 PKP PKPdf 15 50 32.9 -0.1
comp=Z,2.2nm,0.8s,baz=44,slow=2.4,SNR=9.6
TORD Torodi Ar. Bea 123.52 287 PKP PKPdf 15 50 32.9 -0.1
PLCA Paso Flores 138.59 160 PKP PKPdf 15 51 03.2 +2.3
comp=Z,4.1nm,1.0s,baz=181,slow=3.4,SNR=7.2
PLCA Paso Flores 138.59 160 PKP PKPdf 15 51 03.2 +2.3
JTS JuntasAbangare 145.92 68 *ePKP2* PKPab 15 51 16.3 +0.4
LCO Las Campanas 148.57 149 *ePKPbc* PKPbc 15 51 23.9 +1.6
CPUP Villa Florida 155.74 171 PKP PKPdf 15 51 27.8 -1.6
comp=Z,0.2nm,0.3s,baz=180,slow=4.0,SNR=2.1
CPUP Villa Florida 155.74 171 PKP PKPdf 15 51 27.8 -1.6
LPAZ La Paz 159.68 134 PKP PKPdf 15 51 33.8 -0.7
comp=Z,1.8nm,1.0s,baz=320,slow=1.8,SNR=6.2

CASC 01 15:46:23.2±1.5, 8°.40N×83°.09W, h13km±6km, MD3.6, 4C-1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.26**	**344⇓**	*iP*	Pg	15 46 29.0	+0.3
ACR				*eS*	Sg	15 46 33.6	+1.1
BRU2	**Volcan**	**0.56**	**45⇑**	*iP*	Pg	15 46 33.8	-0.3
BRU2				*eS*	Sg	15 46 42.2	+0.7
BAR1		**0.86**	**346⇑**	*eP*	Pg	15 46 39.4	-0.5
BAR1				*eS*	Sg	15 46 51.3	0.0
BUS	**Buena Vista**	**1.32**	**330⇑**	*eP*	Pn	15 46 47.5	+0.1
BUS				*eS*	Sb	15 47 04.4	-0.4
URSC	**Urasca**	**1.58**	**335⇑**	*eP*	Pn	15 46 51.8	+0.9

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*CSEM **01** 15:53:26.6, 35°.79N×21°.45E, h21km, MD3.5, After ATH*
*NEIC **01** 15:53:26.6, 35°.79N×21°.45E, h21km, MD3.5(ATH), After ATH.*

ATH 01 15:53:26.6, 35°.79N×21°.45E, h21km±2km, MD3.5/8, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**1.13**	**12**	*e*PN	Pn	15 53 48.2	+1.0
PYL				*e*SN	Sn	15 54 03.8	+1.8
PYL	**PYLOS**	**1.13**	**12**	*e*Pn	Pn	15 53 48.2	+1.0
PYL				*e*Sn	Sn	15 54 03.8	+1.8
KYTH	**Kithira**	**1.38**	**69**	*e*Pn	Pn	15 53 52.8	+2.2
KYTH	**Kithira**	**1.38**	**69**	*e*PN	Pn	15 53 52.8	+2.2
KYTH	**Kithira**	**1.38**	**69**	*e*Pn	Pn	15 53 52.8	+2.2
ITM	**Ithomi**	**1.44**	**15**	*e*Pn	Pn	15 53 53.7	+2.3
ITM				*e*Sn	Sn	15 54 13.1	+3.4
ITM	**Ithomi**	**1.44**	**15**	*e*PN	Pn	15 53 53.7	+2.3
ITM				*e*SN	Sn	15 54 13.1	+3.4
ITM	**Ithomi**	**1.44**	**15**	*e*Pn	Pn	15 53 53.7	+2.3
ITM				*e*Sn	Sn	15 54 13.1	+3.4
VLI	**Veliai**	**1.52**	**52**	*e*Pn	Pn	15 53 54.3	+1.8
VLI				*e*Sn	Sn	15 54 15.8	+4.2
VLI	**Veliai**	**1.52**	**52**	*e*PN	Pn	15 53 54.3	+1.8
VLI				*e*SN	Sn	15 54 15.8	+4.2
VLI	**Veliai**	**1.52**	**52**	*e*Pn	Pn	15 53 54.3	+1.8
VLI				*e*Sn	Sn	15 54 15.8	+4.2
VLX	**Vlachokerasia**	**1.75**	**25**	*e*PN	Pn	15 53 58.7	+3.1
VLX				*e*SN	Sn	15 54 20.2	+2.9
VLX	**Vlachokerasia**	**1.75**	**25**	*e*Pn	Pn	15 53 58.7	+3.1
VLX				*e*Sn	Sn	15 54 20.2	+2.9
KARN	**Karanos**	**2.05**	**100**	*e*PB	Pb	15 54 01.4	-1.7
KARN	**Karanos**	**2.05**	**100**	*e*Pb	Pb	15 54 01.4	-1.7
GUR	**Goura**	**2.26**	**18**	*e*PB	Pb	15 54 05.5	-1.2
GUR	**Goura**	**2.26**	**18**	*e*Pb	Pb	15 54 05.5	-1.2
VAM	**Vamos**	**2.27**	**99**	*e*Pn	Pn	15 54 05.9	+3.0
VAM	**Vamos**	**2.27**	**99**	*e*PN	Pn	15 54 05.9	+3.0
VAM	**Vamos**	**2.27**	**99**	*e*Pn	Pn	15 54 05.9	+3.0

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*NIED **01** 15:58:00, 38°.30N×142°.00E, h35km, Mw4.7 Best double couple: M_0=1.46000×10^{16} NP1:ϕ_s=20.00000°, δ75.00000°, λ87.00000°. NP2:ϕ_s=212.00000°, δ16.00000°, λ101.00000°.*
*BJI **01** 15:58:23.7, 38°.32N×142°.49E, h48km, mB5.0/28, mb5.1/53, Ms4.7/34, Ms7 4.5/34*
*MOS **01** 15:58:27.1±0.7, 38°.47N×141°.79E, h33km, mb5.3/65, Error ellipse: s-maj=8.1km s-min=4.3km az=109.6*
*ISCJB **01** 15:58:28.4±0.4, 38°.33N±0°.03×141°.83E±0°.04, h52km±2km, mb5.1/169, MS4.7/14, Error ellipse: s-maj=6.0km s-min=3.7km az=37.1*
*JMA **01** 15:58:28.9±0.1, 38°.30N×141°.88E, h46km±1km, M4.8 Broadband fault plane solution: P waves. NP1: ϕ_s=194.00000°, δ24.00000°, λ99.00000°. NP2:ϕ_s=4.00000°, δ66.00000°, λ86.00000°. Principal axes: T Plg69.0000°, Azm266.0000°; N Plg4.0000°, Azm6.0000°; P Plg21.0000°, Azm97.0000°;*
JMA Felt III J1.
*IDC **01** 15:58:29.6±1.7, 38°.36N×141°.83E, h48km±15km, mb4.5/26, mb1 4.6/32, mb1mx4.6/35, mbtmp4.5/32, ML4.0/4, MS4.0/2, Ms1 4.0/2, ms1mx3.2/39 Error ellipse: s-maj=15.4km s-min=11.1km az=140.0*
*NEIC **01** 15:58:29.5±0.6, 38°.37N×141°.84E, h48km±4km, mb5.1/71, MW4.7(NIED), Error ellipse: s-maj=7.3km s-min=3.9km az=138.0*
NEIC Recorded [3 JMA] in Fukushima and Miyagi; [2 JMA] in Akita, Gumma, Ibaraki, Iwate, Tochigi and Yamagata.
*SZGRF **01** 15:58:32.4, 39°.10N×142°.13E, h54km, mb5.2, Near east coast of eastern Honshu, Japan*

ISC 01 15:58:29.2±0.4, 38°.31N±0°.02×141°.85E±0°.04, h47km±2km, h51km±3.2km: pP-P, n457, σ0s77/485, mb5.1/169, MS4.7/14, 51C-31D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**0.42**	**291**	⇓P	**Pn**	**15 58 39.3**	**0.0**
JIO				S	**Sn**	**15 58 46.5**	**+0.1**
OFUJ	**Ofunato**	**0.79**	**350**	⇓P	**Pn**	**15 58 43.7**	**-0.2**
OFUJ				S	**Sn**	**15 58 54.3**	**-0.3**
JMK	**Ichinoseki**	**0.81**	**323**	⇓P	**Pn**	**15 58 44.6**	**+0.3**
JMK				S	**Sn**	**15 58 55.8**	**+0.5**
JOU	**Okura**	**0.93**	**274**	⇓P	**Pn**	**15 58 46.4**	**+0.5**
JOU				S	**Sn**	**15 58 58.9**	**+0.7**
JMM	**Marumori**	**0.94**	**242**	⇓P	**Pn**	**15 58 45.6**	**-0.4**
JMM				S	**Sn**	**15 58 57.9**	**-0.5**
JFK	**Kawauchi**	**1.22**	**220**	⇓P	**Pn**	**15 58 49.1**	**-0.7**
JFK				*e*S	**Sn**	**15 59 03.9**	**-1.1**
JOM	**Ohasama**	**1.24**	**340**	⇓P	**Pn**	**15 58 50.4**	**+0.3**
JYK	**Kaneyama**	**1.32**	**298**	⇓P	**Pn**	**15 58 51.6**	**+0.5**
JYS	**Shirataka**	**1.41**	**267**	⇓P	**Pn**	**15 58 52.8**	**+0.4**
JYS				*e*S	**Sn**	**15 59 10.1**	**+0.4**
JFT	**Otama**	**1.43**	**237**	⇓P	**Pn**	**15 58 53.1**	**+0.4**
JFT				*e*S	**Sn**	**15 59 10.8**	**+0.5**
MJAR	**Matsushiro Arr**	**3.39**	**240**	P	**Pn**	**15 59 21.0**	**+1.4**
MJAR	22nm,0.3s,baz=62,slow=11,SNR=133			LR	LR	16 00 53.6	
	comp=Z,2μm,20.5s,baz=70,slow=42						
MAJO	**Matsushiro**	**3.39**	**240**	*e*P	**Pn**	**15 59 21.2**	**+1.6**
MAT	**Matsushiro**	**3.39**	**240**	P	**Pn**	**15 59 21.2**	**+1.6**
MAT				S	**Sn**	**16 00 04.1**	**+5.5**
ERM	**Erimo**	**3.84**	**15**	Pn	**Pn**	**15 59 25.7**	**0.0**
	877nm,0.6s,SNR=29						
ERM	**Erimo**	**3.84**	**15**	*e*P	**Pn**	**15 59 25.1**	**-0.6**
JHJ	**Hachijo jima 2**	**5.44**	**199**	P	**Pn**	**15 59 48.1**	**+0.4**
JHJ				S	**Sn**	**16 00 46.9**	**-2.2**
	244nm,0.3s,baz=63,slow=24,SNR=5.1						
ASAJ	**Asahikawa**	**5.83**	**5**	P	**Pn**	**15 59 53.3**	**+0.3**
ASAJ				S	**Sn**	**16 00 58.0**	**-0.6**
	5.9nm,0.3s,baz=52,slow=30,SNR=4.9						
ASAJ	**Asahikawa**	**5.83**	**5**	P	**Pn**	**15 59 53.3**	**+0.3**
ASAJ				S	**Sn**	**16 00 58.0**	**-0.6**
ASAJ				smax			
	comp=N,6.0nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**6.47**	**27**	*e*P	**Pn**	**16 00 00.5**	**-1.3**
YUK				*i* S	**Sn**	**16 01 08.5**	**-5.8**
YUK				pmax	pmax		
	comp=N,190nm,0.5s						
YUK				pmax	pmax		
	comp=Z,190nm,0.5s						
YUK				smax			
	comp=E,580nm,0.5s						
YUK				smax			
	comp=E,2μm,0.8s						
KUR	**Kuril'sk**	**8.25**	**31**	*e*P	**Pn**	**16 00 25.5**	**-0.7**
KUR				*e*S	**Sn**	**16 01 51.5**	**-6.5**
KUR				pmax	pmax		
	comp=E,110nm,0.9s						
KUR				pmax	pmax		
	comp=Z,140nm,0.9s						
KUR				smax			
	comp=N,310nm,0.9s						
KUR				smax			
	comp=E,420nm,0.9s						
KUR				smax			
	comp=N,2μm,2.0s						
KUR				smax			
	comp=E,2μm,2.0s						
YSS	**Yuzh-Sakhalins**	**8.67**	**4**	*e*P	**Pn**	**16 00 30.8**	**-1.1**
YSS				*e*S	**Sn**	**16 02 07.0**	**-1.2**
YSS				pmax	pmax		
	comp=N,60nm,1.0s						
YSS				pmax	pmax		
	comp=Z,60nm,1.0s						
YSS				MLR	MLR		
	comp=Z,500nm,16.0s						
YSS	**Yuzh-Sakhalins**	**8.67**	**4**	*e*P	**Pn**	**16 00 31.0**	**-0.9**
	comp=Z,67nm,0.9s						
VLA	**Vladivostok**	**8.96**	**306**	*e*P	**Pn**	**16 00 37.2**	**+1.3**
VLA				pmax	pmax		
	comp=Z,146nm,1.4s						
VLA				MLR	MLR		
	comp=Z,1μm,19.3s						
KSRS	**Korea Array**	**11.04**	**270**	P	**Pn**	**16 01 05.3**	**+0.9**
	comp=Z,0.9nm,0.3s,baz=82,slow=14,SNR=22						
KSRS				LR	LR	16 04 59.1	
	comp=Z,792nm,19.6s,baz=355,slow=35						
KSRS	**Korea Array**	**11.04**	**270**	P	**Pn**	**16 01 05.3**	**+0.9**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,792nm,19.6s						
MDJ	**Mudanjiang**	**11.14**	**308**	P	**Pn**	**16 01 07.6**	**+1.8**
MDJ				pmax	pmax		
	comp=Z,79nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,530nm,7.6s						
CBIJ	**Chichi jima**	**11.18**	**178**	P	**Pn**	**16 01 04.8**	**-1.6**
	comp=Z,13nm,0.3s,baz=275,slow=17,SNR=3.2						
HABR	**Khabarovsk**	**11.29**	**336**	*e*P	**Pn**	**16 01 03.4**	**-4.4**
HABR				*e*		16 03 04.8	
HABR				pmax	pmax		
	comp=Z,55nm,1.3s						
HABR				MLR	MLR		
	comp=Z,470nm,15.0s						
CN2	**Changchun**	**13.53**	**299**	*e*P	**Pn**	**16 01 39.0**	**+0.6**
CN2				*ep*P		16 01 48.6	
CN2				*e*S	**Sn**	**16 04 07.0**	**-0.2**
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						
CN2				LR	LR		
	comp=N,600nm,16.0s						
CN2				LR	LR		
	comp=E,900nm,16.0s						
CN2				LR	LR		
	comp=Z,400nm,19.0s						
SNY	**Shenyang**	**14.43**	**290**	⇓P	**Pn**	**16 01 57.1**	**+6.6**
SNY				S	**Sn**	**16 04 26.5**	**-2.4**
SNY				pmax	pmax		
	comp=Z,52nm,0.7s						
SNY				LR	LR		
	comp=N,360nm,18.6s						
SNY				LR	LR		
	comp=E,920nm,18.6s						
SNY				LR	LR		
	comp=Z,1μm,19.8s						
JOW	**Kunigami**	**16.16**	**229**	P	**Pn**	**16 02 12.9**	**-0.2**
	comp=Z,1.2nm,0.3s,baz=17,slow=8.8,SNR=3.0						
PETK	**Petropavlovsk-**	**18.42**	**31**	P	**Pn**	**16 02 38.5**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=206,slow=9.7,SNR=7.1						
TIA	**Tai'an**	**19.78**	**272**	*e*P	**Pn**	**16 02 53.6**	**-3.6**
NJ2	**Nanjing**	**19.78**	**259**	*e*P	**Pn**	**16 02 54.2**	**-3.1**
NJ2				pP	pP	16 03 06.1	-0.3
NJ2				sP	sP	16 03 15.0	+2.7
NJ2				sS	sS	16 06 49.5	-3.9
NJ2				pmax	pmax		
	comp=Z,30nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,320nm,4.2s						
NJ2				LR	LR		
	comp=N,630nm,17.8s						
NJ2				LR	LR		
	comp=E,780nm,18.6s						
NJ2				LR	LR		
	comp=Z,820nm,18.6s						
BJI	**Beijing**	**19.96**	**283**	P	**Pn**	**16 02 55.6**	**-3.8**
BJI				S	**S**	**16 06 37.4**	**-1.9**
BJI				pmax	pmax		
	comp=Z,31nm,0.8s						
BJI				pmax	pmax		
	comp=Z,400nm,9.2s						
BJI				LR	LR		
	comp=N,660nm,16.9s						
BJI				LR	LR		
	comp=E,690nm,18.3s						
BJI				LR	LR		
	comp=Z,650nm,22.6s						
CLNS	**Chul'man**	**21.67**	**334**	*e*P	**P**	**16 03 14.6**	**-1.1**
CLNS				*e*		16 03 35.6	
CLNS				*e*S	**S**	**16 07 15.4**	**+2.7**
CLNS				pmax	pmax		
	comp=N,23nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,41nm,1.0s,mb4.8						
CLNS				pmax	pmax		
	comp=E,23nm,1.1s						
CLNS				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.5						
CLNS				pmax	pmax		
	comp=N,24nm,1.0s						
CLNS				pmax	pmax		
	comp=E,10.0nm,0.9s						
CLNS				smax			
	comp=N,271nm,16.0s						
CLNS				smax			
	comp=E,330nm,13.3s						
CLNS				MLR	MLR		
	comp=N,66nm,13.0s,MS3.8						
CLNS				MLR	MLR		
	comp=Z,287nm,15.0s,MS3.8						
CLNS				MLR	MLR		
	comp=E,257nm,13.0s,MS3.8						
HHC	**Hu-ho-hao-te**	**23.43**	**286**	*e*P	**P**	**16 03 32.3**	**-1.9**
HHC				pP		16 03 43.8	
HHC				sP	sP	16 03 49.3	-2.1
HHC				PP		16 04 05.0	
HHC				PcP	PcP	16 07 20.3	+1.2
HHC				S	**S**	**16 07 37.8**	**-6.0**
HHC				ScP	ScP	16 10 52.3	-1.0
HHC				PcS	PcS	16 10 58.5	+0.2
HHC				ScS	ScS	16 14 37.5	-2.1
HHC				pmax	pmax		
	comp=Z,21nm,0.9s,mb4.6						
HHC				pmax	pmax		
	comp=Z,380nm,6.5s						
HHC				LR	LR		
	comp=N,670nm,17.7s,MS4.3						
HHC				LR	LR		
	comp=E,600nm,19.2s,MS4.3						
HHC				LR	LR		
	comp=Z,750nm,19.1s,MS4.2						
WHN	**Wuhan**	**23.91**	**259**	⇓P	**P**	**16 03 38.2**	**-0.5**
WHN				pmax	pmax		
	comp=Z,69nm,0.7s,mb5.2						
CIT	**Chita**	**24.02**	**314**	*e*P	**P**	**16 03 40.0**	**+0.5**

CIT e 16 03 50.9
CIT e 16 04 17.1
CIT pmax pmax
comp=Z,276nm,1.1s,mb5.6
BTO Baotou 24.61 285 *e*P **P 16 03 43.4 -1.6**
YAK Yakutsk 24.91 346 *e*P **P 16 03 46.0 -1.5**
YAK *e**PP 16 03 55.6
YAK *e* 16 04 02.9
YAK *e*S **S 16 08 03.9 -3.4**
YAK *e*SS 16 08 22.7
YAK pmax pmax
comp=Z,85nm,1.1s,mb5.2
YAK pmax pmax
comp=N,38nm,1.0s
YAK pmax pmax
comp=E,15nm,1.3s
YAK smax
comp=N,129nm,2.5s
YAK smax
comp=E,58nm,1.8s
YAK MLR MLR
comp=Z,1μm,18.0s,MS4.4
YAK MLR MLR
comp=E,2μm,23.0s,MS4.6
YAK MLR MLR
comp=N,711nm,23.0s,MS4.6
YAK Yakutsk 24.91 346 *e*P **P 16 03 45.6 -1.9**
comp=N,87nm,0.9s,mb5.3
XAN Xi'an 26.84 271 P **P 16 04 03.6 -1.6**
XAN pP pP 16 04 17.4 0.0
XAN sP sP 16 04 23.2 +0.3
XAN S **S 16 08 37.5 -0.8**
XAN SS 16 09 55.0
XAN pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
XAN LR LR
comp=N,550nm,18.5s,MS4.2
XAN LR LR
comp=E,200nm,19.1s,MS4.2
XAN LR LR
comp=Z,300nm,17.1s,MS3.9
ULN Ulaanbaatar 26.95 302*ce*P **P 16 04 05.4 -0.7**
ULN Ulaanbaatar 26.95 302 *e*P **P 16 04 06.1 +0.1**
comp=Z,119nm,1.2s,mb5.3
ULN Ulaanbaatar 26.95 302 P **P 16 04 06.8 +0.7**
APYP Conner 27.19 227 *e*P **P 16 04 08.3 -0.2**
SONM Songino Array 27.39 302 P **P 16 04 10.5 +0.5**
comp=Z,9.1nm,0.8s,mb4.4,baz=100,slow=7.7,SNR=46
SONM PcP PcP 16 07 27.9 0.0
comp=Z,1.4nm,0.7s,baz=141,slow=2.9,SNR=3.8
PVCP Virac 29.20 217 *e*P **P 16 04 27.5 +1.1**
IRK Irkutsk 29.52 310 *e*P **P 16 04 28.6 -0.3**
IRK pmax pmax
comp=Z,38nm,1.3s,mb5.0
ZAK Zakamensk 29.77 307⇓*i*P **P 16 04 30.9 -0.3**
ZAK pmax pmax
comp=Z,24nm,0.9s,mb4.9
TLY Talaya 29.78 309 P **P 16 04 31.1 -0.1**
comp=Z,194nm,0.8s,mb5.9,SNR=8.2
TLY Talaya 29.78 309 *e*P **P 16 04 31.5 +0.3**
TLY *e* 16 04 50.2
TLY pmax pmax
comp=Z,31nm,0.9s,mb5.0
TLY Talaya 29.78 309 *e*P **P 16 04 31.2 0.0**
comp=Z,28nm,0.8s,mb5.0
AUQP San Andres 30.15 220 *e*P **P 16 04 37.6 +2.8**
LZH Lanzhou 30.22 278 P **P 16 04 34.5 -0.8**
LZH sP sP 16 04 51.0 -2.1
LZH PP PP 16 05 35.0 -9.0
LZH S **S 16 09 27.0 -4.5**
LZH pmax pmax
comp=Z,30nm,1.0s,mb5.0
LZH pmax pmax
comp=Z,120nm,5.0s
LZH LR LR
comp=N,1μm,14.8s
LZH LR LR
comp=Z,2μm,16.0s,MS4.8
LUBP Lubang 31.08 224 *e*P **P 16 04 43.0 0.0**
MOY Mondy 31.40 309 *e*P **P 16 04 45.6 +0.1**
GYA Guiyang 31.79 259⇑*i*P **P 16 04 47.7 -1.5**
GYA pP pP 16 05 03.8 +2.3
GYA sP sP 16 05 11.5 +4.4
GYA PP PP 16 05 57.3 -4.3
GYA PcP PcP 16 07 41.9 +2.3
GYA S **S 16 09 55.4 -0.9**
GYA sS sS 16 10 19.0 +2.1
GYA ScP ScP 16 11 18.9 -0.1
GYA PcS PcS 16 11 25.4 +1.1
GYA pmax pmax
comp=Z,50nm,0.6s,mb5.5
GYA pmax pmax
comp=Z,140nm,4.9s
GYA LR LR
comp=N,650nm,16.2s,MS4.5
GYA LR LR
comp=E,520nm,15.0s,MS4.5
GYA LR LR
comp=Z,620nm,15.3s,MS4.4
CD2 Chengdu 32.04 268⇑*i*P **P 16 04 50.1 -1.3**
CD2 pP pP 16 05 02.8 -0.8
CD2 sP sP 16 05 08.4 -0.8
CD2 PP PP 16 05 57.3 -6.9
CD2 S **S 16 09 57.4 -2.6**
CD2 pmax pmax
comp=Z,40nm,0.6s,mb5.4
CD2 pmax pmax
comp=Z,130nm,6.2s
CD2 LR LR
comp=N,1μm,17.8s,MS4.8
CD2 LR LR
comp=E,760nm,14.3s,MS4.8
CD2 LR LR
comp=Z,690nm,16.6s,MS4.4
GTA Gaotai 32.54 285 P **P 16 04 55.3 -0.4**
GTA pP pP 16 05 06.8 -1.2
GTA sP sP 16 05 12.6 -0.9
GTA PcP PcP 16 07 42.1 +0.7
GTA S **S 16 10 06.5 -1.2**
GTA SS SS 16 12 07.2 -22
GTA pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
GTA pmax pmax
comp=Z,260nm,5.1s
GTA LR LR
comp=N,510nm,18.3s,MS4.4
GTA LR LR
comp=E,420nm,18.6s,MS4.4
GTA LR LR
comp=Z,830nm,20.4s,MS4.4
TIXI Tiksi 34.07 353 *e*P **P 16 05 07.7 -0.9**
TIXI pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
TIXI Tiksi 34.07 353 *e*P **P 16 05 07.6 -1.0**
comp=Z,6.2nm,0.7s,mb4.7
KMI Kunming 35.51 260 P **P 16 05 21.7 +0.1**
KMI pP pP 16 05 36.2 +2.2
KMI sP sP 16 05 41.9 +2.4
KMI PP PP 16 06 44.0 +1.2
KMI S **S 16 10 50.2 -3.6**
KMI sS sS 16 11 16.1 +1.5
KMI pmax pmax
comp=Z,39nm,0.7s,mb5.5
KMI pmax pmax
comp=Z,97nm,3.9s
KMI LR LR
comp=N,720nm,19.1s,MS4.5
KMI LR LR
comp=E,560nm,20.2s,MS4.5
KMI LR LR
comp=Z,830nm,18.0s,MS4.5
WMQ Urumqi 40.59 296 P **P 16 06 06.0 +1.9**
WMQ pP pP 16 06 18.0 +1.3
WMQ sP sP 16 06 24.0 +1.8
WMQ PP PP 16 07 44.0 +5.9
WMQ S **S 16 12 12.0 +1.7**
WMQ sS sS 16 12 32.0 +0.7
WMQ pmax pmax
comp=Z,95nm,1.0s,mb5.4
WMQ pmax pmax
comp=Z,130nm,4.0s
WMQ LR LR
comp=N,1μm,15.0s,MS5.2
WMQ LR LR
comp=E,2μm,15.0s,MS5.2
WMQ LR LR
comp=Z,1μm,15.0s,MS4.9
ZAA0 Zalesovo Array 41.32 311 *e*P **P 16 06 09.6 -0.4**
ZALV Zalesovo Beam 41.32 311 P **P 16 06 10.3 +0.2**
comp=Z,31nm,0.6s,mb5.1,baz=85,slow=7.8,SNR=138
ZALV PcP PcP 16 08 07.4 -0.3
comp=Z,7.7nm,0.7s,baz=89,slow=3.2,SNR=5.6
ZALV Zalesovo Beam 41.32 311 P **P 16 06 10.3 +0.2**
ZALV PcP PcP 16 08 07.4 -0.3
CHG Chiang Mai 41.95 255⇑P **P 16 06 15.5 -0.1**
comp=Z,26nm,0.8s,mb4.9
CHTO Chiang Mai 41.95 255 *e*P **P 16 06 14.9 -0.7**
CHTO pmax pmax
comp=Z,56nm,1.4s,mb5.0
CHTO Chiang Mai 41.95 255 *e*P **P 16 06 14.9 -0.7**
comp=Z,56nm,1.4s,mb5.0
CM31 Chiang Mai Arr 42.16 254 *e*P **P 16 06 17.3 0.0**
comp=Z,7.6nm,0.4s,mb4.7
CMAR Chiang Mai Arr 42.16 254 P **P 16 06 17.3 0.0**
comp=Z,4.2nm,0.6s,mb4.2,baz=39,slow=4.8,SNR=76
CMAR Chiang Mai Arr 42.16 254 P **P 16 06 17.3 0.0**
CMAR Chiang Mai Arr 42.16 254 P **P 16 06 17.3 0.0**
NVS Novosibirsk 42.22 313⇑*i*P **P 16 06 17.2 -0.2**
NVS pmax pmax
comp=Z,41nm,1.2s,mb4.9
NVS pmax pmax
comp=N,6.0nm,1.4s
NVS pmax pmax
comp=E,42nm,1.4s
LSA Lhasa 42.45 274 P **P 16 06 20.1 +0.5**
MKAR Makanchi Array 43.75 301 P **P 16 06 29.9 +0.1**
comp=E,24nm,0.8s,mb5.0,baz=81,slow=11,SNR=134
KURK Kurchatov 45.43 307 P **P 16 06 43.8 +0.6**
comp=E,754nm,0.8s
KURK Kurchatov 45.43 307 P **P 16 06 43.0 -0.1**
comp=E,71nm,0.8s,mb5.5,baz=82,slow=8.2,SNR=185
KURK Kurchatov 45.43 307 P **P 16 06 43.1 -0.1**
KURK pmax pmax
comp=Z,71nm,0.8s,mb5.5
KURK Kurchatov 45.43 307 *e*P **P 16 06 42.9 -0.3**
comp=Z,106nm,0.8s,mb5.7
GUN Gumba 47.38 275 *e*P **P 16 06 58.8 0.0**
comp=Z,150nm,0.8s,mb6.0
KKN Kakani 47.91 275 *e*P **P 16 07 02.6 -0.3**
comp=Z,155nm,0.8s,mb6.1
PKI Pulchoki 47.91 275 *e*P **P 16 07 02.4 -0.5**
comp=Z,68nm,0.8s,mb5.7
PKI Pulchoki 47.91 275 *e*P **P 16 07 02.9 0.0**
comp=Z,64nm,0.6s,mb5.8
PKIN Phulchoki 47.92 275 *e*P **P 16 07 02.9 -0.1**
comp=Z,64nm,0.6s,mb5.9
DMN Daman 48.13 275 *e*P **P 16 07 04.1 -0.5**
comp=Z,27nm,0.5s,mb5.5
TKM2 Tokmak 2 49.34 298 P **P 16 07 14.8 +1.1**
SNR=19
TKM2 Tokmak 2 49.34 298 *e*P **P 16 07 14.1 +0.4**
TKM2 pmax pmax
comp=Z,22nm,0.7s,mb5.3
TKM2 Tokmak 2 49.34 298 *e*P **P 16 07 14.1 +0.5**
comp=Z,22nm,0.7s,mb5.3
KZA Kyzart 49.85 297 P **P 16 07 19.1 +1.5**
SNR=26
KBK Karagaybulak 49.88 297 P **P 16 07 18.6 +0.8**
SNR=37
BVAR Borovoye Array 49.98 312 P **P 16 07 18.3 -0.1**
comp=Z,7.3nm,0.6s,mb4.9,baz=72,slow=7.7,SNR=30
BVAR PcP PcP 16 08 37.9 +0.1
comp=Z,10nm,0.7s,baz=128,slow=3.1,SNR=11
USP Ospenovka 49.99 298 P **P 16 07 18.9 +0.2**
SNR=6.9
BRVK Borovoye 50.03 312 P **P 16 07 19.3 +0.5**
comp=Z,109nm,1.1s,mb5.8,SNR=5.2
BRVK Borovoye 50.03 312*ce*P **P 16 07 19.2 +0.4**
BRVK pmax pmax
comp=Z,23nm,1.2s,mb5.1
BRVK Borovoye 50.03 312 *e*P **P 16 07 18.7 -0.1**
comp=Z,19nm,1.0s,mb5.1
AAK Ala-Archa 50.20 298 P **P 16 07 20.9 +0.7**
SNR=5.6
AAK Ala-Archa 50.20 298 P **P 16 07 20.3 +0.1**
comp=Z,3.2nm,0.3s,mb4.8,baz=108,slow=4.8,SNR=11
AAK Ala-Archa 50.20 298*ce*P **P 16 07 20.6 +0.4**
AAK Ala-Archa 50.20 298 *e*P **P 16 07 18.1 -2.1**
comp=Z,6.8nm,0.7s,mb4.8
KSH Kashi 50.21 293 *e*P **P 16 07 24.8 +4.4**
KSH pP pP 16 07 37.2 +4.0
KSH sP sP 16 07 42.5 +3.9
KSH PcP PcP 16 08 42.7 +3.7
KSH PP PP 16 09 21.4 +5.6
KSH ScP ScP 16 12 33.4 +2.5
KSH PcS PcS 16 12 38.7 +2.7
KSH S **S 16 14 33.1 +4.0**
KSH sS sS 16 14 54.6 +4.0
KSH ScS ScS 16 17 08.7 +1.3
KSH SS SS 16 18 04.5 +1.9
KSH pmax pmax
comp=Z,11nm,0.8s,mb4.9
KSH pmax pmax
comp=Z,240nm,11.9s
KSH LR LR
comp=N,370nm,13.4s,MS4.9
KSH LR LR
comp=E,720nm,13.9s,MS4.9
KSH LR LR
comp=Z,350nm,10.4s,MS4.7
UCH Uchtor 50.32 297 P **P 16 07 22.6 +1.5**
SNR=7.6
UCH Uchtor 50.32 297 *e*P **P 16 07 21.9 +0.8**
comp=Z,4.8nm,0.7s,mb4.6
EKS2 Erkin-Say 50.69 298 P **P 16 07 24.3 +0.4**
SNR=9.7
EKS2 Erkin-Say 50.69 298 *e*P **P 16 07 22.7 -1.2**
comp=Z,8.1nm,0.8s,mb4.7
AML Almayashu 50.93 297 P **P 16 07 27.0 +1.3**
SNR=26
AML Almayashu 50.93 297 *e*P **P 16 07 26.4 +0.7**
comp=Z,21nm,0.8s,mb5.1
JOSI Joshimath 51.11 281 *e*PKP **P 16 07 28.1 +0.8**
KLP Kalpa 51.69 283 *e*PKP **P 16 07 31.6 +0.1**
KLP AMb AMB 16 07 35.5
comp=Z,54nm,0.4s,mb5.9
DDI Dehra Dun 52.37 282 *ex* **P 16 07 36.0 -0.7**
DDI *ex* x 16 07 36.0
INK Inuvik 53.10 28 P **P 16 07 41.8 +0.4**
comp=Z,7.4nm,0.9s,mb4.6,baz=280,slow=7.4,SNR=20
AGRA Agra 53.91 278 *e*PKP **P 16 07 47.4 -0.6**
SONA Sohna 54.09 280 *e*PKP **P 16 07 48.7 -0.6**
SONA AMb AMB 16 07 49.9
comp=Z,17nm,0.5s,mb5.3
SVE Sverdlovsk 54.43 318⇓*e*P **P 16 07 51.8 +0.5**
SVE pmax pmax
comp=Z,54nm,1.1s,mb5.4
KHET Khetri 55.16 280 *e*PKP **P 16 07 56.9 -0.1**
KHET AMb AMB 16 07 58.8
comp=Z,18nm,0.8s,mb5.1
SOKR Solikamsk 55.54 322*d i*P **P 16 08 00.1 +0.8**
SOKR pmax pmax
comp=Z,30nm,1.3s,mb5.2
SOKR MLR MLR
comp=Z,6μm,18.0s,MS5.7
ARU Arti 55.64 318 P **P 16 08 00.8 +0.7**
comp=Z,273nm,0.6s,SNR=17
ARU Arti 55.64 318*c i*P **P 16 07 59.9 -0.2**
ARU *e* 16 08 58.1
ARU *e* 16 09 59.3
ARU *e*PPP 16 11 15.8
ARU S **S 16 15 43.2 +0.7**
ARU SS SS 16 19 22.3 -5.3
ARU pmax pmax
comp=Z,62nm,1.2s,mb5.5
ARU Arti 55.64 318 *e*P **P 16 07 59.5 -0.5**
comp=Z,31nm,0.7s,mb5.4
BHPL Bhopal 56.32 274 *e*PKP **P 16 08 05.2 -0.2**
KBL Kabul 57.29 290 *e*P **P 16 08 11.8 -0.4**
KBL pmax pmax
comp=Z,43nm,1.0s,mb5.4
KBL Kabul 57.29 290 *e*P **P 16 08 11.8 -0.4**
comp=Z,43nm,1.0s,mb5.4
ABKAR Akbulak array 57.39 310 *e*P **P 16 08 11.9 -0.7**
comp=Z,8.6nm,0.6s,mb5.0
DLBC Dease Lake 57.41 39 P **P 16 08 12.9 +0.2**
comp=Z,2.5nm,0.8s,mb4.3,baz=273,slow=6.1,SNR=7.8
ALE Alert 58.82 4 P **P 16 08 22.3 +0.1**
comp=Z,102nm,0.9s,mb5.9,SNR=7.0
SPITS Spitsbergen Ar 59.34 349 P **P 16 08 26.1 +0.2**
comp=Z,2.9nm,0.6s,mb4.5,baz=83,slow=6.8,SNR=12
KBS Kingsbay 59.47 350*ce*P **P 16 08 28.0 +1.3**
KBS pmax pmax
comp=Z,29nm,1.7s,mb5.0
KBS Kingsbay 59.47 350 *e*P **P 16 08 27.0 +0.3**
comp=Z,11nm,0.8s,mb4.9
LVZ Lovozero 61.09 336 P **P 16 08 37.3 -0.6**
comp=Z,126nm,0.7s,mb6.2,SNR=5.5
LVZ Lovozero 61.09 336*ce*P **P 16 08 37.8 -0.1**
LVZ pmax pmax
comp=Z,17nm,0.8s,mb5.2
RES Resolute Bay 61.28 15 P **P 16 08 38.8 -0.3**
comp=Z,10nm,0.8s,mb5.0,baz=312,slow=6.7,SNR=34
POO Poona 61.67 272 *e*PKP **P 16 08 42.4 -0.1**
APA Apatity 61.67 336⇑*i*P **P 16 08 42.0 +0.2**
APA *e* 16 09 26.0
APA *e*S **S 16 16 58.0 -2.5**
APA pmax pmax
comp=Z,27nm,0.7s,mb5.5
APA MLR MLR
comp=Z,1μm,17.0s,MS5.2
KAD Karad 62.09 271 *e*PKP **P 16 08 45.2 -0.2**
ASAR Alice Springs 62.09 188 P **P 16 08 45.4 +0.3**
comp=Z,22nm,0.8s,mb5.3,baz=295,slow=23,SNR=4.3
KEV Kevo 62.38 339 *e*P **P 16 08 46.2 -0.3**
KEV pmax pmax
comp=Z,15nm,0.8s,mb5.2
KEV Kevo 62.38 339 *e*P **P 16 08 46.2 -0.4**
comp=Z,15nm,0.8s,mb5.2
KEV Kevo 62.38 339 *e*p **P 16 08 46.1 -0.4**
comp=Z,17nm,0.8s,mb5.2
KEV Kevo 62.38 339 *e*p **P 16 08 46.1 -0.4**
comp=Z,17nm,0.8s,mb5.2
YKA Yellowknife Ar 62.54 31 P **P 16 08 47.6 -0.1**
comp=Z,3.4nm,0.8s,mb4.5,baz=298,slow=6.7,SNR=12
YKA PcP PcP 16 09 27.0 +0.5
comp=Z,3.5nm,1.1s,baz=304,slow=4.9,SNR=5.3
IMYA Miami 62.91 296 *e*P **P 16 08 51.5 +0.9**
ARCES ARCESS Array B 62.93 339 P **P 16 08 50.3 0.0**
comp=Z,9.1nm,0.7s,mb5.0,baz=54,slow=7.7,SNR=85
ABKT Ailbek 63.52 299 P **P 16 08 54.6 -0.1**
comp=Z,82nm,0.9s,mb5.8,SNR=6.8
IAKL Akhelmad 63.73 297 *e*P **P 16 08 56.0 -0.1**
IKRD Kardeh 63.81 297 *e*P **P 16 08 52.4 -4.2**
ISFR Sfrayin 64.04 298 *e*P **P 16 08 58.4 +0.3**
DAG Danmarks Havn 64.54 355⇑*i*P **P 16 09 00.8 +0.1**
DAG pmax pmax
comp=Z,11nm,0.8s,mb4.9
DAG Danmarks Havn 64.54 355 *i*P **P 16 09 00.8 +0.1**
comp=Z,11nm,0.8s,mb4.9
IDAH Dahanechah 64.86 293 *e*P **P 16 09 04.4 +0.8**
JOF Joensuu 65.01 332 *e*p **P 16 09 03.2 -0.7**
comp=Z,22nm,1.1s,mb5.1
JOF Joensuu 65.01 332 *e*p **P 16 09 03.2 -0.7**
comp=Z,22nm,1.1s,mb5.1
MOS Moscow 66.44 323 *e*P **P 16 09 12.5 -0.8**
MOS pmax pmax
comp=Z,74nm,1.0s,mb5.7
VRHR Novokhopersk 66.98 318 *e*P **P 16 09 16.1 -0.7**
VRHR pmax pmax
comp=Z,30nm,0.9s,mb5.3
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,8.0nm,0.5s
IGLO Ghaloghah 67.20 299 *e*P **P 16 09 18.2 -0.3**
OBN Obninsk 67.29 323⇑*e*P **P 16 09 18.7 0.0**
OBN *e* 16 11 44.5
OBN *e*S S 16 18 01.4 -8.7
OBN pmax pmax
comp=Z,60nm,1.7s,mb5.3
OBN MLR MLR
comp=Z,1μm,17.0s,MS5.2
OBN Obninsk 67.29 323 *e*P **P 16 09 18.3 -0.4**
comp=Z,13nm,0.9s,mb5.0
KAF Kangasniemi 67.34 333 *e*p **P 16 09 18.2 -0.7**
comp=Z,25nm,0.7s,mb5.4,baz=48,slow=6.0
KAF Kangasniemi 67.34 333 *e*p **P 16 09 18.2 -0.7**
comp=Z,25nm,0.7s,mb5.4,baz=48,slow=6.0
IKIA Kiasar 67.45 299 *e*P **P 16 09 20.5 +0.4**
IANJ Anjilo 67.68 298 *e*P **P 16 09 21.5 -0.1**
FINES FINESS Array B 67.85 332 P **P 16 09 22.2 0.0**
comp=Z,34nm,0.8s,mb5.5,baz=39,slow=9.0,SNR=110
FINES FINESS Array B 67.85 332 P **P 16 09 22.2 0.0**
ISHM Shahmirzad 67.94 299 *e*P **P 16 09 24.4 +1.3**
VSR Storozhevoye 68.20 319 *e*P **P 16 09 24.3 -0.3**
VSR pmax pmax
comp=Z,20nm,0.6s,mb5.3
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,10.0nm,0.8s
ILAS Lasjerd 68.39 299 *e*P **P 16 09 26.8 +0.8**
IBAF Bafgh 68.57 294 *e*P **P 16 09 27.2 0.0**
IDMV Damavand 68.92 299 *e*P **P 16 09 30.1 +0.8**
IMEH Mehriz 69.37 294 *e*P **P 16 09 31.2 -0.9**
SUMG Summit 69.42 0 *e*P **P 16 09 32.0 +0.2**
comp=E,18nm,0.9s,mb5.0
SUMG Summit 69.42 0 *i* P **P 16 09 32.9 +1.2**
comp=E,17nm,0.8s,mb5.0
ISFB Sefidab 69.44 298 *e*P **P 16 09 32.0 -0.5**
IVRN Varamin 69.45 299 *e*P **P 16 09 32.5 -0.1**
VSU Vasula 69.53 329*c i*P **P 16 09 32.4 -0.3**
VSU pmax pmax
comp=Z,55nm,1.0s,mb5.4
ISAD Sadrabad 69.75 295 *e*P **P 16 09 35.0 +0.5**
IMHD Mahdasht 69.80 300 *e*P **P 16 09 35.0 +0.3**
IZEF Zefreh 70.17 297 *e*P **P 16 09 37.9 +0.8**
ZEI Tsey 70.27 309 *e*P **P 16 09 34.5 -3.0**
ZEI pmax pmax
comp=Z,24nm,1.4s,mb4.9
KIV Kislovodsk 70.34 311 P **P 16 09 38.8 +0.9**
comp=Z,440nm,1.0s,mb6.3,SNR=14
KIV Kislovodsk 70.34 311 *e*P **P 16 09 38.6 +0.7**
KIV pmax pmax
comp=Z,78nm,1.0s,mb5.6
KIV Kislovodsk 70.34 311 *e*P **P 16 09 38.4 +0.6**
comp=Z,74nm,0.9s,mb5.6
IKLH Kolahrood 70.47 297 *e*P **P 16 09 39.3 +0.4**
IGAR Gharneh 70.64 296 *e*P **P 16 09 40.1 +0.1**
IHRS Heris 70.77 304 *e*P **P 16 09 40.5 -0.1**
GNI Garni 71.23 307*ce*P **P 16 09 44.7 +1.4**
GNI pmax pmax
comp=Z,22nm,1.2s
GNI Garni 71.23 307 *e*P **P 16 09 43.8 +0.4**
comp=Z,26nm,1.1s,mb5.1
IPIR Pirpir 71.30 297 *e*P **P 16 09 44.8 +0.9**
IPAR Pars 71.34 294 *e*P **P 16 09 44.0 -0.2**
IMRD Marand 71.42 305 *e*P **P 16 09 43.7 -0.9**
IZAR Zarasai 71.52 327 *e*P **P 16 09 45.3 +0.4**
IZAR AMB AMB 16 09 46.1
comp=Z,11nm,0.7s,mb4.9
ISRV Sarvestan 71.55 293 *e*P **P 16 09 46.0 +0.5**
IDID Didziasalis 71.60 327 *e*P **P 16 09 45.7 +0.4**
IDID AMB AMB 16 09 46.3
comp=Z,13nm,0.8s,mb4.9
ISAL Salakas 71.69 327 *e*P **P 16 09 46.3 +0.5**
ISAL AMB AMB 16 09 47.3
comp=Z,22nm,1.1s,mb5.0
ISHB Shabestar 71.72 305 *e*P **P 16 09 46.7 +0.3**
IIGN Ignalina 71.80 327 *e*P **P 16 09 46.9 +0.4**
IIGN AMB AMB 16 09 47.5
comp=Z,14nm,0.6s,mb5.0
IAZR Azarshahr 71.83 304 *e*P **P 16 09 47.4 +0.4**
IMOK Mouk 72.03 293 *e*P **P 16 09 47.5 -0.9**
FFC Flin Flon 72.45 33*ce*P **P 16 09 51.6 +1.2**
NB2 NORSAR Subarra 73.15 337 P **P 16 09 54.5 +0.1**
comp=Z,38nm,0.8s,mb5.4,baz=39,slow=6.2
NOA NORSAR Array B 73.15 337 P **P 16 09 54.5 +0.1**
comp=Z,29nm,0.8s,mb5.3,baz=39,slow=5.9,SNR=110
IDHR Dehrash 73.25 301 *e*P **P 16 09 56.0 +0.4**
IGHG Ghaleghazi 73.34 301 *e*P **P 16 09 55.8 -0.3**
NAO01 NORSAR Array S 73.40 337 *e*P **P 16 09 55.7 -0.3**
comp=Z,18nm,0.8s,mb5.1
AKASG Malin Array Be 73.50 322 P **P 16 09 56.3 -0.4**
comp=Z,19nm,0.6s,mb5.2,baz=46,slow=5.9,SNR=102
AKASG Malin Array Be 73.50 322*ce*P **P 16 09 56.2 -0.5**
AKASG pmax pmax
comp=Z,19nm,0.6s
AKBB Malin Array Si 73.50 322 *e*P **P 16 09 56.2 -0.5**
NVAR Mina Array Bea 73.95 54 P **P 16 10 01.0 +1.4**
comp=Z,1.2nm,0.8s,baz=301,slow=4.5,SNR=9.5
NVAR Mina Array Bea 73.95 54 P **P 16 10 01.0 +1.4**
SUW Suwalki 74.00 327 *e*P **P 16 09 59.7 +0.1**
SUW Suwalki 74.00 327 *e*P **P 16 09 59.7 +0.1**
SFJD Kangerlussuaq 74.59 5 *i* P **P 16 10 01.8 -1.0**

SFJD pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
SFJD Kangerlussuaq 74.59 5 *i* P **P 16 10 01.8 -1.0**
comp=Z,10nm,0.9s,mb4.8
UMR Umm Al-Rimmam 75.31 296 *e*P **P 16 10 06.7 -1.0**
UMR AMb AMB 16 10 07.6
comp=Z,47nm,0.8s,mb5.5
MIB Mutribah 75.44 296 *e*P **P 16 10 07.6 -0.7**
MIB AMb AMB 16 10 08.7
comp=Z,75nm,0.9s,mb5.6
QRN Al-Qurain 75.64 295 *e*P **P 16 10 09.0 -0.5**
QRN AMb AMB 16 10 10.1
comp=Z,133nm,0.8s,mb5.9
RDF Al-Radifah 75.80 296 *e*P **P 16 10 09.9 -0.5**
RDF AMb AMB 16 10 11.2
comp=Z,152nm,1.0s,mb5.9
NAY Al-Naaiem 75.83 296 *e*P **P 16 10 09.7 -0.8**
NAY AMb AMB 16 10 10.5
comp=Z,36nm,0.7s,mb5.4
KIS Kishinev 76.15 320 *e*P **P 16 10 09.0 -3.1**
BSD Bornholm Skovb 76.49 332 *i* P **P 16 10 13.6 -0.3**
BSD pmax pmax
comp=Z,30nm,0.8s,mb5.3
BSD Bornholm Skovb 76.49 332 *i* P **P 16 10 13.6 -0.3**
comp=Z,30nm,0.8s,mb5.3
PDAR Pinedale Array 76.53 46 P **P 16 10 15.2 +0.8**
comp=Z,2.4nm,0.6s,mb4.3,baz=302,slow=1.9,SNR=20
LVV L'vov 76.56 324 *e*P **P 16 10 13.9 -0.4**
COP Copenhagen 76.95 333 *i* P **P 16 10 16.2 -0.2**
COP pmax pmax
comp=Z,29nm,0.8s,mb5.3
COP Copenhagen 76.95 333 *i* P **P 16 10 16.2 -0.2**
comp=Z,29nm,0.8s,mb5.3
KWP Kalwaria Pacla 77.30 324 *e*P **P 16 10 19.7 +1.2**
KWP Kalwaria Pacla 77.30 324 ⇓P **P 16 10 19.1 +0.6**
KWP Kalwaria Pacla 77.30 324 *e*P **P 16 10 19.7 +1.2**
KWP Kalwaria Pacla 77.30 324 ⇓*i*P **P 16 10 19.1 +0.6**
TLCR 77.36 318 ⇑P **P 16 10 19.4 +0.4**
TLCR 77.36 318 ⇑*i*P **P 16 10 19.4 +0.4**
MUD Monsted U'grnd 77.45 335 *i* P **P 16 10 19.9 +0.7**
MUD pmax pmax
comp=Z,14nm,0.9s,mb4.9
MUD Monsted U'grnd 77.45 335 *i* P **P 16 10 19.9 +0.7**
comp=Z,14nm,0.9s,mb4.9
BUR08 Bucovina Ar. S 77.52 322 *e*P **P 16 10 20.1 +0.3**
BURAR Bucovina Array 77.53 322 ⇑P **P 16 10 20.3 +0.5**
BURAR Bucovina Array 77.53 322 ⇑*i*P **P 16 10 20.3 +0.5**
CFR Carcaliu 77.72 318 ⇓P **P 16 10 21.3 +0.3**
CFR Carcaliu 77.72 318 ⇓*i*P **P 16 10 21.3 +0.3**
VRI Vrincioaia 77.98 320 ⇓P **P 16 10 23.2 +0.8**
VRI Vrincioaia 77.98 320 ⇓*i*P **P 16 10 23.2 +0.8**
KOLS Kolonicke sedl 78.00 324 *e*P **P 16 10 22.8 +0.4**
KOLS pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
KOLS Kolonicke sedl 78.00 324 *e*P **P 16 10 22.8 +0.4**
comp=Z,9.3nm,0.9s,mb4.7
KOLS Kolonicke sedl 78.00 324 *e*P **P 16 10 22.8 +0.4**
PLOR Plostina 78.03 320 ⇑P **P 16 10 23.7 +1.0**
PLOR Plostina 78.03 320 ⇑*i*P **P 16 10 23.7 +1.0**
TIRR Tirgusor 78.07 318 ⇓P **P 16 10 23.0 +0.1**
TIRR Tirgusor 78.07 318 ⇓*i*P **P 16 10 23.0 +0.1**
STHS Stebnicka Huta 78.12 325 *e*P **P 16 10 24.1 +1.0**
STHS pmax pmax
comp=Z,12nm,1.1s,mb4.7
STHS Stebnicka Huta 78.12 325 *e*P **P 16 10 24.1 +1.0**
comp=Z,12nm,1.1s,mb4.7
STHS Stebnicka Huta 78.12 325 *e*P **P 16 10 24.0 +0.9**
OJC Ojcow 78.18 326 *e*P **P 16 10 23.2 -0.2**
UZH Uzhgorod 78.20 324 *e*P **P 16 10 23.3 -0.3**
ULM Lac du Bonnet 78.25 34 P **P 16 10 22.8 -1.0**
comp=Z,2.3nm,0.6s,mb4.3,baz=344,slow=5.5,SNR=3.3
BR131 Keskin Array S 78.27 312 *e*P **P 16 10 24.0 -0.1**
comp=Z,2.7nm,0.6s,mb4.3
BRTR Keskin Array B 78.27 312 P **P 16 10 24.3 +0.2**
comp=Z,3.2nm,0.5s,mb4.5,baz=82,slow=4.2,SNR=32
BRTR Keskin Array B 78.27 312 *ce*P **P 16 10 24.2 +0.1**
BRTR pmax pmax
comp=Z,3.0nm,0.4s
TRPA Tarpa 78.45 323 ⇓*i*P **P 16 10 25.8 +0.9**
MLR Muntele Rosu 78.64 320 ⇓P **P 16 10 26.9 +0.9**
MLR Muntele Rosu 78.64 320 ⇓*i*P **P 16 10 26.9 +0.9**
RUE Ruedersdorf 78.95 331 *e*P **P 16 10 28.4 +0.8**
comp=Z,26nm,0.8s,mb5.2
BSEG Bad Segeberg 79.08 333 *e*P **P 16 10 28.7 +0.4**
comp=Z,37nm,0.9s,mb5.3
KECS Kecovo 79.14 325 *e*P **P 16 10 29.4 +0.7**
KECS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
KECS Kecovo 79.14 325 *e*P **P 16 10 29.4 +0.7**
comp=Z,3.7nm,1.0s,mb4.3
KECS Kecovo 79.14 325 *e*P **P 16 10 29.4 +0.7**
OKC Ostrava-Krasne 79.18 327 *e*P **P 16 10 29.1 +0.2**
OKC Ostrava-Krasne 79.18 327 *e*P **P 16 10 29.1 +0.2**
KSP Ksiaz 79.20 328 *e*P **P 16 10 30.1 +1.1**
KSP Ksiaz 79.20 328 ⇑*e*P **P 16 10 29.5 +0.5**
DRGR 79.32 322 ⇑P **P 16 10 30.2 +0.5**
DRGR 79.32 322 ⇑*i*P **P 16 10 30.2 +0.5**
MORC Moravsky Berou 79.48 327 ⇑P **P 16 10 31.2 +0.6**
MORC Moravsky Berou 79.48 327 *e*P **P 16 10 31.0 +0.4**
comp=Z,22nm,0.9s,mb5.1
MORC Moravsky Berou 79.48 327 ⇑*i*P **P 16 10 31.2 +0.6**
DPC Dobruska-Polom 79.56 328 *e*P **P 16 10 31.8 +0.8**
DPC Dobruska-Polom 79.56 328 *e*P **P 16 10 31.8 +0.8**
UPC Upice 79.58 328 *e*P **P 16 10 31.8 +0.7**
UPC Upice 79.58 328 *e*P **P 16 10 31.8 +0.7**
PSZ Piszkesteto 79.82 325 ⇓P **P 16 10 33.6 +1.1**
PSZ Piszkesteto 79.82 325 *e*P **P 16 10 33.0 +0.5**
comp=Z,22nm,1.0s,mb5.0
PSZ Piszkesteto 79.82 325 ⇑*e*P **P 16 10 33.3 +0.8**
PSZ Piszkesteto 79.82 325 ⇓*i*P **P 16 10 33.6 +1.1**
VYHS Vyhne 79.88 325 *e*P **P 16 10 33.5 +0.8**
VYHS pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
VYHS Vyhne 79.88 325 *e*P **P 16 10 33.5 +0.8**
comp=Z,7.4nm,1.0s,mb4.6
VYHS Vyhne 79.88 325 *e*P **P 16 10 33.5 +0.8**
BRG Berggiesshubel 80.13 330 *e*P **P 16 10 34.3 +0.2**
comp=Z,15nm,0.8s,mb5.0
BRG Berggiesshubel 80.13 330 *i* P **P 16 10 34.2 +0.1**
comp=Z,16nm,0.9s,mb4.9
PVCC Panska Ves 80.15 329 *e*P **P 16 10 34.7 +0.5**
PVCC Panska Ves 80.15 329 *e*P **P 16 10 34.7 +0.5**
CLL Collm 80.17 330 *e*P **P 16 10 34.1 -0.1**
comp=Z,32nm,0.9s,mb5.2
CLL Collm 80.17 330 ⇑*i*P **P 16 10 34.1 -0.1**
CLL *e* pP 16 10 50.0 +2.1
CLL pmax pmax
comp=Z,32nm,0.9s,mb5.2
CLL Collm 80.17 330 ⇑*i*P **P 16 10 34.1 -0.1**
comp=Z,32nm,0.9s,mb5.2
CLL *e* pP 16 10 50.0 +2.1
CLL Collm 80.17 330 ⇑*i*P **P 16 10 34.1 -0.1**
comp=Z,32nm,0.9s,mb5.2
CLL *e*(pP) pP 16 10 46.0 -1.9
CLL *e* pP 16 10 50.0 +2.1
VRAC Vranov 80.24 327 ⇑P **P 16 10 35.5 +0.8**
VRAC Vranov 80.24 327 ⇑*i*P **P 16 10 35.5 +0.8**
NRDL Niedersach Rie 80.32 332 *e*P **P 16 10 35.0 0.0**
comp=Z,14nm,0.9s,mb4.9
SMOL Smolenice 80.48 326 *e*P **P 16 10 37.2 +1.2**
SMOL Smolenice 80.48 326 *e*P **P 16 10 37.2 +1.2**
BUD Budapest 80.54 325 ⇑*e*P **P 16 10 37.0 +0.7**
PRU Pruhonice 80.58 329 *e*P **P 16 10 37.3 +0.8**
PRU Pruhonice 80.58 329 *e*P **P 16 10 37.3 +0.8**
TREC Trest 80.72 328 *e*P **P 16 10 37.7 +0.4**
TREC *e*PP pP 16 10 49.1 -1.8
TREC Trest 80.72 328 *e*P **P 16 10 37.7 +0.4**
TREC *e*pP pP 16 10 49.1 -1.8
CLZ Clausthal 80.74 332 *e*P **P 16 10 37.8 +0.5**
comp=Z,32nm,0.9s,mb5.2
CLZ Clausthal 80.74 332 *e*P **P 16 10 37.8 +0.5**
CLZ pmax pmax
comp=Z,32nm,0.9s,mb5.2
TANN Tannenbergstha 81.08 330 *e*P **P 16 10 39.4 +0.3**
comp=Z,8.0nm,1.0s,mb4.6
WERD Werda 81.12 330 *e*P **P 16 10 39.5 +0.2**
comp=Z,10.0nm,1.0s,mb4.7
GUNZ Gunzen 81.17 330 *e*P **P 16 10 39.6 0.0**
comp=Z,16nm,1.0s,mb4.9
WERN Wernitzgruen 81.22 330 *e*P **P 16 10 39.8 -0.1**
comp=Z,16nm,0.9s,mb5.0
WERN *e*pP pP 16 10 55.1 +1.6
MOX Moxa 81.23 331 *e*P **P 16 10 40.0 +0.1**
comp=Z,21nm,1.3s,mb4.9
MOX Moxa 81.23 331 *e*P **P 16 10 40.1 +0.2**
comp=Z,11nm,0.8s,mb4.8
NKC Novy Kostel 81.23 330 *e*P **P 16 10 40.3 +0.4**
NKC Novy Kostel 81.23 330 *e*P **P 16 10 40.3 +0.4**
IBBN Ibbenburen 81.31 334 *e*P **P 16 10 40.3 0.0**
comp=Z,27nm,0.9s,mb5.2
SOP Sopron 81.49 326 ⇑*e*P **P 16 10 42.4 +1.0**
MMAI Mount Meron Ar 81.51 305 P **P 16 10 42.6 +0.9**
comp=Z,17nm,0.7s,mb5.1,baz=40,slow=6.6,SNR=24
CONA Conrad Observa 81.61 327 ⇓*i*P **P 16 10 42.8 +0.8**
comp=Z,18nm,0.9s,mb5.0,SNR=19
KHC Kasperske Hory 81.64 329 *e*P **P 16 10 42.5 +0.4**
KHC *e*PP pP 16 10 54.1 -1.7
KHC Kasperske Hory 81.64 329 *e*P **P 16 10 42.3 +0.2**
comp=Z,23nm,0.9s,mb5.1
KHC Kasperske Hory 81.64 329 *e*P **P 16 10 42.5 +0.4**
KHC *e*pP pP 16 10 54.1 -1.7
PKSM Moragy 81.66 324 ⇓P **P 16 10 41.6 -0.7**
PKSM Moragy 81.66 324 ⇓*i*P **P 16 10 41.6 -0.7**
ROTZ Rotzenmuhle 81.69 330 *e*P **P 16 10 43.2 +0.8**
comp=Z,15nm,1.0s,mb4.9
UBBA Unterbreizbach 81.70 331 *e*P **P 16 10 42.6 +0.2**
comp=Z,8.0nm,1.1s,mb4.6
GEC2 GERESS Array S 81.81 328 *e*P **P 16 10 43.1 0.0**
comp=Z,12nm,1.0s,mb4.8
GEC2 GERESS Array S 81.81 328 *e*P **P 16 10 43.1 0.0**
GEC2 pmax pmax
comp=Z,12nm,1.0s,mb4.8
GERES GERESS Array B 81.81 328 P **P 16 10 43.1 0.0**
comp=Z,9.9nm,1.0s,mb4.7,baz=35,slow=4.9,SNR=62
GERES PP PP 16 13 52.4 +2.5
comp=Z,0.6nm,0.6s,baz=44,slow=4.4,SNR=3.5
WET Wettzell 81.92 329 *e*P **P 16 10 44.2 +0.6**
WET *e*pP pP 16 10 59.7 +2.4
GRA1 Grafenberg Arr 82.14 330 *e*P **P 16 10 45.5 +0.7**
comp=Z,43nm,0.9s,mb5.4
GRF Grafenberg Arr 82.14 330 *e*P **P 16 10 45.5 +0.7**
comp=Z,43nm,0.9s,mb5.4
GRF Grafenberg Arr 82.14 330 *e*P **P 16 10 45.5 +0.7**
GRF pmax pmax
comp=Z,43nm,0.9s,mb5.4
GRF Grafenberg Arr 82.14 330 *e*P **P 16 10 45.5 +0.7**
GRF pmax pmax
comp=Z,43nm,0.9s,mb5.4
BUG Bochum--Univer 82.19 333 *e*P **P 16 10 44.8 -0.2**
comp=Z,22nm,1.0s,mb5.0
ARSA Arzberg 82.28 326 ⇑*i*P **P 16 10 45.8 +0.3**
comp=Z,10nm,1.0s,mb4.7,SNR=9.2
MOA Molln 82.35 327 ⇑*i*P **P 16 10 46.2 +0.3**
comp=Z,12nm,1.2s,mb4.7,SNR=8.6
TNS Taunus Mts 82.77 332 *e*P **P 16 10 48.2 +0.2**
comp=Z,22nm,1.1s,mb5.1
TNS Taunus Mts 82.77 332 *e*P **P 16 10 48.2 +0.2**
TNS pmax pmax
comp=Z,22nm,1.1s,mb5.1
PERS Pernice 82.93 326 *i* P **P 16 10 49.0 +0.1**
SOKA Soboth 82.93 326 ⇑*i*P **P 16 10 49.0 +0.1**
comp=Z,30nm,1.0s,mb5.3
RJOB Jochberg 83.06 328 *e*P **P 16 10 50.2 +0.6**
comp=Z,31nm,0.9s,mb5.3
OBKA Obir 83.27 326 ⇑*i*P **P 16 10 50.5 -0.3**
comp=Z,10nm,0.8s,mb4.9
BEBN Eben Emael 83.29 334 P **P 16 10 50.6 -0.1**
comp=Z,7.8nm,1.0s,mb4.7
GCIS Gornji Cirnik 83.29 325 *e*P **P 16 10 50.5 -0.4**
VAY Valandovo 83.33 319 *e*P **P 16 10 49.9 -1.2**
MEM Membach 83.33 333 P **P 16 10 50.8 -0.1**
comp=Z,11nm,1.1s,mb4.8
FUR Furstenfeldbru 83.34 329 *e*P **P 16 10 51.4 +0.4**
comp=Z,46nm,1.0s,mb5.5
FUR Furstenfeldbru 83.34 329 *e*P **P 16 10 51.4 +0.4**
FUR pmax pmax
comp=Z,46nm,1.0s,mb5.5
KBA Koelnbreinsper 83.35 327 ⇑*i*P **P 16 10 51.0 0.0**
comp=Z,16nm,0.8s,mb5.1,SNR=12
SKO Skopje 83.44 320 *e*P **P 16 10 50.3 -1.3**
ANMO Albuquerque 83.50 50 *ce*P **P 16 10 54.1 +2.0**
ANMO pmax pmax
comp=Z,2.0nm,0.8s
MYKA Terra Mystica 83.57 327 ⇑*i*P **P 16 10 51.7 -0.5**
comp=Z,7.6nm,0.5s,mb5.0
STU Stuttgart 83.67 331 *e*P **P 16 10 52.8 +0.1**
comp=Z,23nm,0.9s,mb5.3
BCLA Clavier 83.73 334 P **P 16 10 53.1 +0.1**
comp=Z,8.9nm,1.3s,mb4.7
BOJS Bojanci 83.74 325 *i* P **P 16 10 52.8 -0.3**
WATA Walderalm 83.88 329 ⇑*i*P **P 16 10 53.8 0.0**
comp=Z,5.1nm,0.7s,mb4.7
ABTA Abfaltersbach 83.96 328 ⇑*i*P **P 16 10 53.3 -0.9**
comp=Z,9.2nm,1.0s,mb4.9,SNR=8.2
JAVS Javornik 83.96 326 *e*P **P 16 10 53.4 -0.8**
KRUS Krusevo 83.97 319 *e*P **P 16 10 53.6 -0.8**
SNF Seneffe 84.01 334 P **P 16 10 54.2 -0.2**
comp=Z,8.7nm,1.3s,mb4.7
SCHQ Schefferville 84.02 16 P **P 16 10 52.5 -1.9**
comp=Z,3.4nm,0.8s,mb4.5,baz=344,slow=7.5,SNR=3.5
SCHQ Schefferville 84.02 16 P **P 16 10 52.5 -1.9**
MOTA Moosalm 84.07 329 ⇑*i*P **P 16 10 54.8 0.0**
comp=Z,10nm,0.8s,mb5.0,SNR=9.7
WLF Walferdange 84.07 333 P **P 16 10 55.4 +0.7**
comp=Z,10nm,1.8s,mb4.7
WLF Walferdange 84.07 333 *e*P **P 16 10 55.5 +0.8**
comp=Z,8.0nm,0.9s,mb4.8
RETA Reutte 84.09 329 ⇑*i*P **P 16 10 55.0 +0.2**
comp=Z,23nm,0.9s,mb5.3
GIVF Givet 84.17 334 *e*P **P 16 10 54.8 -0.4**
comp=Z,24nm,1.0s,mb5.0
GIVF Givet 84.17 334 *e*P **P 16 10 54.8 -0.4**
GIVF pmax pmax
comp=Z,12nm,1.0s,mb5.0
GIVF Givet 84.17 334 *e*P **P 16 10 54.8 -0.4**
comp=Z,12nm,1.0s,mb5.0
DOU Dourbes 84.25 334 P **P 16 10 55.8 +0.1**
BFO Black Forest 84.36 331 P **P 16 10 56.1 -0.1**
comp=Z,146nm,0.9s,mb6.1,SNR=13
BFO Black Forest 84.36 331 *e*P **P 16 10 56.4 +0.2**
comp=Z,30nm,1.0s,mb5.4
BFO Black Forest 84.36 331 *ce*P **P 16 10 56.5 +0.3**
OHR Ohrid 84.39 319 *e*P **P 16 10 55.3 -1.2**
BAIF Baives 84.42 334 *e*P **P 16 10 56.2 -0.3**
comp=Z,13nm,0.9s,mb4.8
BAIF Baives 84.42 334 *e*P **P 16 10 56.2 -0.3**
BAIF pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
BAIF Baives 84.42 334 *e*P **P 16 10 56.2 -0.3**
comp=Z,6.6nm,0.9s,mb4.8
DAVA Damuels 84.61 329 ⇑*i*P **P 16 10 57.7 +0.2**
comp=Z,32nm,0.9s,mb5.4,SNR=13
CDF Champ du Feu 84.69 332 *e*P **P 16 10 57.8 -0.1**
comp=Z,45nm,1.0s,mb5.3
CDF Champ du Feu 84.69 332 *e*P **P 16 10 57.8 -0.1**
CDF pmax pmax
comp=Z,22nm,1.0s,mb5.2
CDF Champ du Feu 84.69 332 *e*P **P 16 10 57.8 -0.1**
comp=Z,22nm,1.0s,mb5.2
ECH Echery 84.90 331 *e*P **P 16 10 58.5 -0.5**
ECH pmax pmax
comp=Z,17nm,0.9s,mb5.2
ECH Echery 84.90 331 *e*P **P 16 10 58.5 -0.4**
comp=Z,17nm,0.9s,mb5.2
HINF Hinteralfeld 85.35 331 *e*P **P 16 11 00.6 -0.6**
comp=Z,16nm,0.9s,mb4.8
HINF Hinteralfeld 85.35 331 *e*P **P 16 11 00.6 -0.6**
HINF pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
HINF Hinteralfeld 85.35 331 *e*P **P 16 11 00.6 -0.6**
comp=Z,7.8nm,0.9s,mb4.8
HAU Haudompre 85.38 332 *e*P **P 16 11 00.8 -0.5**
comp=Z,25nm,0.8s,mb5.1
HAU Haudompre 85.38 332 *e*P **P 16 11 00.8 -0.5**
HAU pmax pmax
comp=Z,13nm,0.8s,mb5.1
HAU Haudompre 85.38 332 *e*P **P 16 11 00.8 -0.5**
comp=Z,13nm,0.8s,mb5.1
MEZF Maizieres J'vi 85.44 333 *e*P **P 16 11 01.7 +0.1**
comp=Z,28nm,0.9s,mb5.1
MEZF Maizieres J'vi 85.44 333 *e*P **P 16 11 01.7 +0.1**
comp=Z,28nm,0.9s,mb5.4
CABF La Chapelle 86.64 331 *e*P **P 16 11 07.3 -0.3**
comp=Z,8.6nm,0.8s,mb4.7
CABF La Chapelle 86.64 331 *e*P **P 16 11 07.3 -0.3**
CABF pmax pmax
comp=Z,4.0nm,0.8s,mb4.7
CABF La Chapelle 86.64 331 *e*P **P 16 11 07.3 -0.3**
comp=Z,4.3nm,0.8s,mb4.7
LOR Lormes 86.91 333 *e*P **P 16 11 08.6 -0.3**
comp=Z,42nm,1.0s,mb5.3
LOR Lormes 86.91 333 *e*P **P 16 11 08.6 -0.3**
LOR pmax pmax
comp=Z,21nm,1.0s,mb5.3
LOR Lormes 86.91 333 *e*P **P 16 11 08.6 -0.3**
comp=Z,21nm,1.0s,mb5.3
FLN La Foliniere 87.09 336 *e*P **P 16 11 09.4 -0.3**
comp=Z,14nm,0.9s,mb4.9
FLN La Foliniere 87.09 336 *e*P **P 16 11 09.4 -0.3**
FLN pmax pmax
comp=Z,7.0nm,0.9s,mb4.9
FLN La Foliniere 87.09 336 *e*P **P 16 11 09.4 -0.3**
comp=Z,6.9nm,0.9s,mb4.9
LDF La Druitiere 87.12 336 *e*P **P 16 11 09.5 -0.4**
comp=Z,15nm,0.9s,mb4.9
LDF La Druitiere 87.12 336 *e*P **P 16 11 09.5 -0.4**
LDF pmax pmax
comp=Z,7.0nm,0.9s,mb4.9
LDF La Druitiere 87.12 336 *e*P **P 16 11 09.5 -0.4**
comp=Z,7.4nm,0.9s,mb4.9
SSF Saint Saulge 87.21 333 *e*P **P 16 11 10.1 -0.3**
comp=Z,25nm,1.0s,mb5.1
SSF Saint Saulge 87.21 333 *e*P **P 16 11 10.1 -0.3**
SSF pmax pmax
comp=Z,12nm,1.0s,mb5.1
SSF Saint Saulge 87.21 333 *e*P **P 16 11 10.1 -0.3**
comp=Z,12nm,1.0s,mb5.1
LPL La Plagne 87.31 330 *e*P **P 16 11 11.0 +0.1**
comp=Z,13nm,0.7s,mb5.0
LPL La Plagne 87.31 330 *e*P **P 16 11 11.0 +0.1**
LPL pmax pmax
comp=Z,7.0nm,0.7s,mb5.0
LPL La Plagne 87.31 330 *e*P **P 16 11 11.0 +0.1**
comp=Z,6.7nm,0.7s,mb5.0
LPG La Plagne 87.31 330 *e*P **P 16 11 11.1 +0.2**
comp=Z,24nm,0.9s,mb5.1
LPG La Plagne 87.31 330 *e*P **P 16 11 11.1 +0.2**
LPG pmax pmax
comp=Z,12nm,0.9s,mb5.1
LPG La Plagne 87.31 330 *e*P **P 16 11 11.1 +0.2**
comp=Z,12nm,0.9s,mb5.1
SMF Signal de Mont 87.45 333 *e*P **P 16 11 11.3 -0.2**
comp=Z,33nm,1.1s,mb5.2
SMF Signal de Mont 87.45 333 *e*P **P 16 11 11.3 -0.2**
SMF pmax pmax
comp=Z,17nm,1.1s,mb5.2
SMF Signal de Mont 87.45 333 *e*P **P 16 11 11.3 -0.2**
comp=Z,17nm,1.1s,mb5.2
AVF Avril sur Loir 87.50 333 *e*P **P 16 11 11.6 -0.2**
comp=Z,56nm,1.0s,mb5.4
AVF Avril sur Loir 87.50 333 *e*P **P 16 11 11.6 -0.2**
AVF pmax pmax
comp=Z,28nm,1.0s,mb5.5
AVF Avril sur Loir 87.50 333 *e*P **P 16 11 11.6 -0.2**
comp=Z,28nm,1.0s,mb5.4
GRR Gorron 87.54 336 *e*P **P 16 11 11.9 0.0**
comp=Z,66nm,1.2s,mb5.5
GRR Gorron 87.54 336 *e*P **P 16 11 11.9 0.0**
GRR pmax pmax
comp=Z,33nm,1.2s,mb5.4
GRR Gorron 87.54 336 *e*P **P 16 11 11.9 0.0**
comp=Z,33nm,1.2s,mb5.4
TIP Timpagrande 87.89 320 *e*P **P 16 11 13.1 -0.7**
comp=Z,16nm,1.3s,mb5.1
MBDF Montbardon 87.95 330 *e*P **P 16 11 12.9 -1.0**
comp=Z,9.5nm,0.7s,mb4.8
MBDF Montbardon 87.95 330 *e*P **P 16 11 12.9 -1.0**
MBDF pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
MBDF Montbardon 87.95 330 *e*P **P 16 11 12.9 -1.0**
comp=Z,4.8nm,0.7s,mb4.8
ORIF Oris-en-Rattie 88.14 330 *e*P **P 16 11 14.3 -0.5**
comp=Z,10nm,0.7s,mb4.9
ORIF Oris-en-Rattie 88.14 330 *e*P **P 16 11 14.3 -0.5**
ORIF pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
ORIF Oris-en-Rattie 88.14 330 *e*P **P 16 11 14.3 -0.5**
comp=Z,5.1nm,0.7s,mb4.9
SGMF Saint Gilles 88.19 337 *e*P **P 16 11 15.0 0.0**
comp=Z,37nm,1.2s,mb5.2
SGMF Saint Gilles 88.19 337 *e*P **P 16 11 15.0 0.0**
SGMF pmax pmax
comp=Z,18nm,1.2s,mb5.2
SGMF Saint Gilles 88.19 337 *e*P **P 16 11 15.0 0.0**
comp=Z,18nm,1.2s,mb5.2
ROSF Rostrenen 88.33 338 *e*P **P 16 11 15.7 0.0**
comp=Z,13nm,1.0s,mb4.8
ROSF Rostrenen 88.33 338 *e*P **P 16 11 15.7 0.0**
ROSF pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
ROSF Rostrenen 88.33 338 *e*P **P 16 11 15.7 0.0**
comp=Z,6.6nm,1.0s,mb4.8
TCF Toulx Ste Croi 88.34 333 *e*P **P 16 11 15.9 +0.1**
VIVF Saint-Julien-I 88.65 331 *e*P **P 16 11 17.3 0.0**
comp=Z,16nm,0.9s,mb5.0
VIVF Saint-Julien-I 88.65 331 *e*P **P 16 11 17.3 0.0**
VIVF pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
VIVF Saint-Julien-I 88.65 331 *e*P **P 16 11 17.3 0.0**
comp=Z,7.8nm,0.9s,mb5.0
QUIF Quistinic 88.67 337 *e*P **P 16 11 16.9 -0.4**
comp=Z,6.8nm,0.7s,mb4.8
QUIF Quistinic 88.67 337 *e*P **P 16 11 16.9 -0.4**
QUIF pmax pmax
comp=Z,3.0nm,0.7s,mb4.7
QUIF Quistinic 88.67 337 *e*P **P 16 11 16.9 -0.4**
comp=Z,3.4nm,0.7s,mb4.8
MFF Saint Martin d 88.87 335 *e*P **P 16 11 18.4 +0.1**
comp=Z,19nm,1.0s,mb5.1
MFF Saint Martin d 88.87 335 *e*P **P 16 11 18.4 +0.1**
MFF pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
MFF Saint Martin d 88.87 335 *e*P **P 16 11 18.4 +0.1**
comp=Z,9.4nm,1.0s,mb5.1
CEL Celeste 89.03 320 *e*P **P 16 11 18.0 -1.1**
comp=Z,19nm,0.8s,mb5.5
TXAR Lajitas Array 89.07 53 P **P 16 11 20.2 +0.6**
comp=Z,1.9nm,0.7s,mb4.5,baz=294,slow=3.5,SNR=29
RJF Les Rejaudoux 89.43 333 *e*P **P 16 11 20.9 0.0**
comp=Z,12nm,0.8s,mb5.0
RJF Les Rejaudoux 89.43 333 *e*P **P 16 11 20.9 0.0**
RJF pmax pmax
comp=Z,6.0nm,0.8s,mb5.0
RJF Les Rejaudoux 89.43 333 *e*P **P 16 11 20.9 0.0**
comp=Z,5.9nm,0.8s,mb5.0
CAF Calviac 89.56 333 *e*P **P 16 11 21.9 +0.4**
comp=Z,9.8nm,0.7s,mb4.9
CAF Calviac 89.56 333 *e*P **P 16 11 21.9 +0.4**
CAF pmax pmax
comp=Z,5.0nm,0.7s,mb5.0
CAF Calviac 89.56 333 *e*P **P 16 11 21.9 +0.4**
comp=Z,4.9nm,0.7s,mb5.0
LASF Ste Croix 89.62 331 *e*P **P 16 11 21.8 -0.1**
ESDC Sonseca Array 96.30 334 P **P 16 11 51.2 -1.5**
comp=Z,0.5nm,0.7s,mb4.1,baz=16,slow=4.5,SNR=4.0
ESDC Sonseca Array 96.30 334 P **P 16 11 51.2 -1.5**
VNA2 Neumayer--Watz 143.63 196 *e*PKPdf PKPdf 16 17 54.1 -3.5
VNA2 *e* 16 18 12.8
VNA1 Neumayer--Stat 144.03 196 *e*PKPdf PKPdf 16 17 55.6 -2.7
VNA1 *e* 16 18 14.3
LPAZ La Paz 145.74 58 PKPbc PKPbc 16 18 03.4 -0.1
comp=Z,6.1nm,0.8s,baz=21,slow=12,SNR=32

MOS ***01*** *15:59:42.9±1.3, 9°.04S×118°.17E, h41km, mb5.3/14, Error ellipse: s-maj=14.2km s-min=7.1km az=118.6*
IDC ***01*** *15:59:48.5±1.3, 9°.14S×118°.10E, h76km±10km, mb4.9/26, mb1 4.9/26, mb1mx4.9/27, mbtmp4.9/26, MS4.2/2, Ms1 4.2/2, ms1mx3.3/30, Error ellipse: s-maj=15.5km s-min=10.4km az=70.0*
NEIC ***01*** *15:59:48.8±1.2, 9°.16S×118°.03E, h82km±10km, mb5.1/18, Error ellipse: s-maj=9.7km s-min=5.9km az=55.0*
NEIC Felt [IV] at Bima, Dompu and Raba; [III] at Sumbawa Besar. Also felt [III] at Denpasar, Bali.
TEH ***01*** *15:59:49.0, 9°.19S×118°.20E, h88km*
ISCJB ***01*** *15:59:49.5±0.4, 9°.43S±0°.03×117°.98E±0°.03, h117km±3km, mb5.2/84, Error ellipse: s-maj=5.0km s-min=4.1km az=0.1*
DJA ***01*** *15:59:50, 9°.53S×118°.04E, h90km, Mw5.6/37*
ISC 01 15:59:51.1±0.4, 9°.36S±0°.03×117°.98E±0°.02, h110km±3km, h96km±1.3km:pP-P, n407, σ1§25/291, mb5.2/83, 53C-44D, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
WSI	**Waingapu**	**2.31**	**98**	P	**Pn**	**16 00 23.3**	**-4.7**
WSI				S		16 00 27.5	
KHKI	**Kahang-Kahang**	**2.54**	**293**	P	**Pn**	**16 00 31.0**	**-0.1**
DNP	**Denpasar**	**2.82**	**284**	P	**Pn**	**16 00 35.8**	**+1.1**
IGBI	**Denpasar**	**2.85**	**281**	P	**Pn**	**16 00 35.1**	**0.0**
SRBI	**Singaraja**	**3.01**	**295**	P	**Pn**	**16 00 37.4**	**+0.1**
NBBI	**Negara**	**3.46**	**286**	P	**Pn**	**16 00 43.0**	**-0.2**
BYJI	**Banyuwangi**	**3.76**	**287**	P	**Pn**	**16 00 47.9**	**+0.7**
MMRI	**Maumere**	**4.27**	**81**	P	**Pn**	**16 00 51.1**	**-3.0**
KMMI	**Kalianget**	**4.59**	**300**	P	**Pn**	**16 01 00.3**	**+1.9**
GMJI	**Gumukmas**	**4.61**	**283**	P	**Pn**	**16 00 58.0**	**-0.7**
KAPI	**Kappang**	**4.66**	**22**	Pn	**Pn**	**16 00 56.6**	**-2.8**
	17μm,0.5s						
KAPI	**Kappang**	**4.66**	**22**	P	**Pn**	**16 00 56.8**	**-2.6**
	244nm,0.3s,baz=207,slow=7.5,SNR=1413						
KAPI				S	**Sn**	**16 01 46.8**	**-5.7**
	1μm,0.3s,baz=104,slow=23,SNR=61						
KAPI				LR	LR	16 03 07.3	
	comp=Z,3μm,19.6s,baz=193,slow=45						
KAPI	**Kappang**	**4.66**	**22**	‖ *i* P	**Pn**	**16 00 56.6**	**-2.8**
KAPI				*e*S	**Sn**	**16 01 46.9**	**-5.6**
KAPI	**Kappang**	**4.66**	**22**	P	**Pn**	**16 00 57.0**	**-2.4**
GRJI	**Gresik**	**5.96**	**294**	P	**Pn**	**16 01 18.0**	**+1.0**
	8.7nm2μm,0.8s						
PWJI	**Pagerwojo**	**6.25**	**282**	P	**Pn**	**16 01 19.0**	**-1.8**
	8.2nm845nm,0.6s						
KBKI	**Kotabaru**	**6.29**	**343**	P	**Pn**	**16 01 21.4**	**0.0**
	3.3nm10μm813nm,0.5s						
SJI	**Sawahan**	**6.35**	**284**	P	**Pn**	**16 01 20.9**	**-1.4**
	8.2nm624nm,0.4s						
TTSI	**Tana Toraja**	**6.54**	**16**	P	**Pn**	**16 01 25.6**	**+0.8**
	8.5nm708nm,0.8s						
BBKI	**Banjar Baru**	**6.64**	**332**	P	**Pn**	**16 01 27.9**	**+1.8**
NGJI	**Ngawi**	**6.75**	**287**	P	**Pn**	**16 01 28.7**	**+1.1**
	4.2nm5μm469nm,1.0s						
KDI	**Kendari**	**7.08**	**41**	P	**Pn**	**16 01 31.4**	**-0.7**
	1.8nm4μm399nm,1.5s						
UGM	**Wanagama**	**7.51**	**280**	P	**Pn**	**16 01 37.3**	**-0.7**
	6.1nm811nm,0.7s						
SMRI	**Semarang**	**7.81**	**287**	P	**Pn**	**16 01 42.4**	**+0.4**
	2.6nm6μm326nm,0.8s						
PBKI	**Pangkalan Bun**	**9.11**	**316**	P	**Pn**	**16 02 01.7**	**+1.9**
APSI	**Ampana**	**9.15**	**24**	P	**Pn**	**16 02 00.6**	**+0.3**
	8μm548nm,1.4s						
LUWI	**Luwuk**	**9.54**	**30**	P	**Pn**	**16 02 05.5**	**-0.1**
	2μm,1.1s						
MRSI	**Marisa**	**10.54**	**22**	P	**Pn**	**16 02 19.1**	**0.0**
	4μm471nm,1.0s						
LEM	**Lembang**	**10.56**	**283**	P	**Pn**	**16 02 18.9**	**-0.5**
	2μm192nm,1.0s						
NLAI	**Namlea**	**10.91**	**57**	P	**Pn**	**16 02 25.5**	**+1.4**
	1μm,1.2s						
FITZ	**Fitzroy Crossi**	**11.44**	**140**	*e*P	**Pn**	**16 02 25.0**	**-6.0**
	308nm,0.3s						
FITZ				*e*S	**Sn**	**16 04 22.1**	**-15**
FITZ	**Fitzroy Crossi**	**11.44**	**140**	P	**Pn**	**16 02 25.5**	**-5.6**
	39nm,0.3s,baz=330,slow=7.4,SNR=408						
FITZ	**Fitzroy Crossi**	**11.44**	**140**	*e*P	**Pn**	**16 02 25.0**	**-6.0**
	0.7nm,0.3s						
FITZ	**Fitzroy Crossi**	**11.44**	**140**	P	**Pn**	**16 02 25.3**	**-5.7**
	7μm640nm,0.7s						
AAI	**Ambon**	**11.61**	**62**	P	**Pn**	**16 02 32.3**	**-1.1**
	2μm251nm,0.8s						
MBWA	**Marble Bar**	**11.85**	**172**	*e*P	**Pn**	**16 02 31.2**	**-5.3**
MBWA	**Marble Bar**	**11.85**	**172**	*e*P	**Pn**	**16 02 31.8**	**-4.7**
	0.3nm,0.3s						
MBWA	**Marble Bar**	**11.85**	**172**	Pn	**Pn**	**16 02 34.5**	**-2.0**
	SNR=6.9						
MBWA				Pn	**Pn**	**16 02 34.5**	**-2.0**
	SNR=6.9						
MBWA	**Marble Bar**	**11.85**	**172**	P	**Pn**	**16 02 32.4**	**-4.1**
	3μm151nm,0.7s						
TPI	**Tanjungpandan**	**12.18**	**302**	P	**Pn**	**16 02 45.0**	**+4.0**
	1μm72nm,0.8s						
CGJI	**Cibinong**	**12.47**	**282**	P	**Pn**	**16 02 41.2**	**-3.6**
RBSI	**Rajabasa**	**12.62**	**285**	P	**Pn**	**16 02 45.4**	**-1.4**
	210nm,1.2s						
MNI	**Manado**	**12.73**	**33**	P	**Pn**	**16 02 49.5**	**+1.4**
	4μm301nm,1.0s						
LBMI	**Labuha**	**12.84**	**48**	P	**Pn**	**16 02 48.8**	**-0.9**
	9μm708nm,1.0s						
SBUM	**Sibu**	**13.06**	**334**	P	**Pn**	**16 02 54.6**	**+2.1**
	888nm69nm,0.6s						
KSM	**Kuching**	**13.20**	**324**	P	**Pn**	**16 02 57.8**	**+3.4**
KSM	**Kuching**	**13.20**	**324**	*e*P	**Pn**	**16 02 55.4**	**+1.0**
	261nm,1.0s						
KSM	**Kuching**	**13.20**	**324**	P	**Pn**	**16 02 57.2**	**+2.8**
	2μm261nm,1.0s						
BTM	**Bintulu**	**13.40**	**338**	P	**Pn**	**16 03 01.2**	**+4.2**
TSM	**Tawau**	**13.56**	**360**	P	**Pn**	**16 03 02.1**	**+3.0**
GIRL	**Giralia**	**13.69**	**195**	*e*P	**Pn**	**16 02 57.5**	**-3.1**
	2μm,0.6s						
TNTI	**Ternate**	**13.74**	**43**	P	**Pn**	**16 03 00.0**	**-1.4**
	3μm396nm,1.1s						
KLI	**Kotabumi**	**13.76**	**288**	P	**Pn**	**16 03 07.1**	**+5.4**
	575nm,0.7s						
KASI	**Kota Agung**	**13.90**	**285**	P	**Pn**	**16 03 01.2**	**-2.2**
	9μm577nm,0.9s						
MYLDM	**Lahad Datu**	**14.46**	**2**	P	**Pn**	**16 03 16.3**	**+5.7**
MYLDM	**Lahad Datu**	**14.46**	**2**	P	**Pn**	**16 03 16.1**	**+5.6**
	2μm117nm,1.0s						
LWLI	**Liwa**	**14.47**	**286**	P	**Pn**	**16 03 10.7**	**0.0**
	854nm,0.7s						
MDSI	**Maura Dua**	**14.53**	**289**	P	**Pn**	**16 03 09.3**	**-2.2**
	1μm92nm,0.9s						
KAKA	**Kakadu**	**14.58**	**105**	*e*P	**Pn**	**16 03 06.3**	**-5.8**
	238nm,0.8s						
KAKA				*e*S	**Sn**	**16 05 33.8**	**-19**
KAKA	**Kakadu**	**14.58**	**105**	*e*P	**Pn**	**16 03 06.0**	**-6.1**
	12nm,0.4s						
KAKA				*e*S	**Sn**	**16 05 33.5**	**-20**
KAKA	**Kakadu**	**14.58**	**105**	P	**Pn**	**16 03 07.1**	**-5.0**
	4μm386nm,0.6s						
PMBI	**Palembang**	**14.60**	**295**	P	**Pn**	**16 03 19.1**	**+6.7**
SDKM	**Sandakan**	**14.92**	**357**	P	**Pn**	**16 03 22.5**	**+6.0**
TLE	**Tual**	**15.09**	**77**	P	**Pn**	**16 03 12.4**	**-6.2**
	244nm,0.9s						
KKM	**Kota Kinabalu**	**15.40**	**353**	P	**Pn**	**16 03 26.3**	**+3.7**
KKM	**Kota Kinabalu**	**15.40**	**353**	*e*P	**Pn**	**16 03 25.6**	**+3.0**
	39nm,0.7s						
KKM	**Kota Kinabalu**	**15.40**	**353**	P	**Pn**	**16 03 26.1**	**+3.6**
	840nm65nm,1.4s						
KDM	**Kudat**	**16.21**	**356**	P	**Pn**	**16 03 34.5**	**+2.0**
KSI	**Kapahiang**	**16.30**	**289**	P	**Pn**	**16 03 32.0**	**-1.7**
	5μm610nm,0.7s						
MEEK	**Meekatharra**	**17.19**	**178**	*e*P	**Pn**	**16 03 43.1**	**-1.4**
MEEK				*e*S	Sn	16 06 35.1	-21
MYKOM	**Kota Tinggi**	**17.91**	**308**	P	**Pn**	**16 03 54.4**	**+1.1**
MYKOM	**Kota Tinggi**	**17.91**	**308**	P	**Pn**	**16 03 52.7**	**-0.6**
	1μm142nm,0.9s						
PAGZ	**Pagadian**	**17.92**	**18**	*e*P	**Pn**	**16 03 55.6**	**+2.2**
DMPH	**Davao City--Mi**	**17.98**	**25** ‖	*e*P	**Pn**	**16 03 54.8**	**+0.8**
MATI	**Mati**	**18.18**	**27**	*e*P	**P**	**16 03 55.5**	**+0.1**
KGM	**Kluang**	**18.47**	**307**	P	**P**	**16 04 00.4**	**+1.9**
SDSI	**Sungai Dareh**	**18.48**	**296**	P	**P**	**16 04 00.3**	**+1.7**
BUKP	**Musuan**	**18.52**	**23**	*e*P	**P**	**16 04 00.2**	**+1.1**
WRAB	**Tennant Creek**	**18.99**	**125**	P	**P**	**16 04 03.0**	**-1.1**
	1μm,0.8s						
WRAB	**Tennant Creek**	**18.99**	**125**	*e*P	**P**	**16 04 02.5**	**-1.6**
WRAB				pmax	pmax		
	comp=Z,111nm,0.7s						
WRAB	**Tennant Creek**	**18.99**	**125**	*e*P	**P**	**16 04 02.5**	**-1.7**
	comp=Z,111nm,0.7s						
WRAB				S	Sn	16 07 18.3	-21
WRAB	**Tennant Creek**	**18.99**	**125**	P	**P**	**16 04 03.2**	**-0.9**
	comp=Z,163nm,0.9s						
PPSI	**Pulau Pagai**	**19.02**	**289**	P	**P**	**16 04 04.5**	**-0.1**
PDSI	**Padang**	**19.35**	**295**	P	**P**	**16 04 06.7**	**-1.4**
BKNI	**Bangkinang**	**19.42**	**299**	P	**P**	**16 04 09.9**	**+1.0**
	comp=Z,7μmcomp=Z,736nm,1.1s						
PPI	**Padang Panjang**	**19.61**	**296**	P	**P**	**16 04 09.9**	**-1.0**
	comp=Z,2μmcomp=Z,193nm,0.7s						
CUYO	**Cuyo Island**	**20.30**	**9**	*e*P	**P**	**16 04 20.4**	**+2.0**
GUIM	**Jordan**	**20.38**	**13**	*e*P	**P**	**16 04 19.7**	**+0.5**
SISI	**Saibi**	**20.42**	**292**	P	**P**	**16 04 17.7**	**-2.0**
	comp=Z,139nm,0.7s						
ENPP	**El Nido**	**20.48**	**4**	*e*P	**P**	**16 04 22.3**	**+2.0**
MSLP	**Maasin**	**20.54**	**20**	*e*P	**P**	**16 04 23.5**	**+2.5**
FRIM	**Kepong**	**20.55**	**307**	P	**P**	**16 04 22.4**	**+1.3**
KTGM	**Kuala Trenggan**	**20.78**	**314**	P	**P**	**16 04 25.1**	**+1.5**
ASAR	**Alice Springs**	**20.83**	**135**	P	**P**	**16 04 23.4**	**-0.7**
	comp=Z,40nm,0.8s,baz=309,slow=10,SNR=512						
MNSI	**Mandailing Nat**	**20.92**	**298**	P	**P**	**16 04 24.7**	**-0.4**
	comp=Z,122nm,0.9s						
IPM	**Ipoh**	**21.78**	**308**	P	**P**	**16 04 36.4**	**+2.1**
IPM	**Ipoh**	**21.78**	**308**	P	**P**	**16 04 33.9**	**-0.4**
	comp=Z,104nm,1.3s,mb5.0						
SMPI	**Sarmi**	**21.88**	**72**	P	**P**	**16 04 33.9**	**-1.4**
	comp=Z,124nm,1.1s,mb5.1						
SJMP	**San Jose**	**21.90**	**8**	*e*P	**P**	**16 04 37.8**	**+2.3**
KLBR	**Kellerberrin**	**22.12**	**181**	*e*P	**P**	**16 04 37.5**	**-0.1**
	comp=Z,43nm,0.5s,mb5.0						
KLBR				*e*S	**S**	**16 08 23.2**	**-11**
MMPI	**Merauke**	**22.15**	**89**	P	**P**	**16 04 36.4**	**-1.8**
	comp=Z,6μmcomp=Z,670nm,1.2s,mb5.8						
PSI	**Prapat**	**22.51**	**302**	P	**P**	**16 04 41.5**	**-0.4**
	comp=Z,390nm,1.0s,mb5.7,baz=160,slow=9.7,SNR=232						
KULM	**Kulim**	**22.59**	**309**	P	**P**	**16 04 42.3**	**-0.4**
KULM	**Kulim**	**22.59**	**309**	*e*P	**P**	**16 04 41.1**	**-1.6**
	comp=Z,37nm,0.8s,mb4.8						
KULM	**Kulim**	**22.59**	**309**	P	**P**	**16 04 41.1**	**-1.6**
	comp=Z,993nmcomp=Z,50nm,1.1s,mb4.8						
CNP	**Catarman**	**22.72**	**17**	*e*P	**P**	**16 04 43.2**	**-0.8**
GSI	**Gunungsitoli**	**22.92**	**296**	P	**P**	**16 04 44.0**	**-1.9**
	comp=Z,188nm,0.8s,mb5.5						
FORT	**Forrest**	**23.29**	**158**	*e*P	**P**	**16 04 49.4**	**+0.3**
	comp=Z,341nm,0.7s,mb5.8						
FORT				*e*S	**S**	**16 09 00.4**	**+7.2**
FORT	**Forrest**	**23.29**	**158**	*e*P	**P**	**16 04 49.4**	**+0.2**
	comp=Z,309nm,0.6s,mb5.8						
NWAO	**Narrogin (SRO)**	**23.46**	**182**	P	**P**	**16 04 52.2**	**+1.5**
	comp=Z,55nm,1.0s,mb4.8,baz=4.8,slow=8.1,SNR=20						
NWAO	**Narrogin (SRO)**	**23.46**	**182**	*e*P	**P**	**16 04 51.6**	**+0.9**
NWAO				*e*		16 05 07.9	
NWAO				*e*S	**S**	**16 08 59.0**	**+3.1**
NWAO				pmax	pmax		
	comp=Z,82nm,0.8s						
NWAO	**Narrogin (SRO)**	**23.46**	**182**	*e*P	**P**	**16 04 51.6**	**+0.9**
	comp=Z,82nm,0.8s,mb5.1						
NWAO				*e*		16 05 07.9	
NWAO				*e*S	**S**	**16 08 59.0**	**+3.1**
TGY	**Tagaytay City**	**23.50**	**7**	P	**P**	**16 04 49.3**	**-1.8**
	comp=Z,115nm,0.4s,mb5.6,baz=287,slow=3.8,SNR=3.1						
TGY	**Tagaytay City**	**23.50**	**7**	P	**P**	**16 04 49.3**	**-1.8**
JAY	**Jayapura**	**23.59**	**75**	P	**P**	**16 04 54.9**	**+2.8**
	comp=Z,42nm,0.8s,mb4.8						
COEN	**Coen**	**25.09**	**103**	*e*P	**P**	**16 05 05.2**	**-0.5**
	comp=Z,828nm,0.8s,mb6.2						
COEN	**Coen**	**25.09**	**103**	P	**P**	**16 05 05.7**	**0.0**
	comp=Z,581nm,0.8s,mb6.1						
CTA	**Charters Tower**	**29.30**	**115**	*e*P	**P**	**16 05 44.0**	**+0.6**
	comp=Z,12nm,0.9s,mb4.5						
CTA	**Charters Tower**	**29.30**	**115**	P	**P**	**16 05 44.2**	**+0.8**
	comp=Z,13nm,0.8s,mb4.6,baz=277,slow=12,SNR=19						
CTA	**Charters Tower**	**29.30**	**115**	P	**P**	**16 05 44.2**	**+0.8**
CTAO	**Charters Tower**	**29.30**	**115**	*e*P	**P**	**16 05 43.4**	**0.0**
CTAO				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.7						
CTAO	**Charters Tower**	**29.30**	**115**	*e*P	**P**	**16 05 43.4**	**+0.1**
	comp=Z,18nm,0.9s,mb4.7						
CTAO	**Charters Tower**	**29.30**	**115**	P	**P**	**16 05 44.3**	**+0.9**
	comp=Z,21nm,1.1s,mb4.7						
NST	**Nakhon Sawan**	**30.51**	**324**	P	**P**	**16 05 55.0**	**+1.0**
STKA	**Stephens Creek**	**31.33**	**139**	*e*P	**P**	**16 06 01.7**	**+0.6**
	comp=Z,18nm,0.4s,mb5.2						
STKA				*e*		16 06 42.9	
STKA	**Stephens Creek**	**31.33**	**139**	P	**P**	**16 06 01.9**	**+0.8**
	comp=Z,26nm,0.5s,mb5.2,baz=313,slow=8.9,SNR=152						
STKA	**Stephens Creek**	**31.33**	**139**	*e*P	**P**	**16 06 01.5**	**+0.4**
STKA				*e*		16 06 19.9	
STKA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
STKA	**Stephens Creek**	**31.33**	**139**	*e*P	**P**	**16 06 01.5**	**+0.4**
	comp=Z,4.2nm,1.1s,mb4.1						
STKA				*e*		16 06 19.9	
BDT	**Bhumibol Dam**	**32.41**	**325**	P	**P**	**16 06 11.5**	**+0.8**
	comp=Z,20nm,0.9s,mb4.8						
CMAR	**Chiang Mai Arr**	**33.42**	**326**	P	**P**	**16 06 20.0**	**+0.5**
	comp=Z,9.3nm,0.5s,mb4.9,baz=153,slow=6.8,SNR=91						
CMAR				PcP	PcP	16 09 01.4	+2.7
	comp=Z,4.2nm,0.7s,baz=174,slow=3.7,SNR=5.7						
CMAR				ScP	ScP	16 12 37.5	+4.4
	comp=Z,17nm,1.1s,baz=173,slow=2.7,SNR=23						
CMAR	**Chiang Mai Arr**	**33.42**	**326**		PcP	16 09 01.4	+2.8
CMAR	**Chiang Mai Arr**	**33.42**	**326**	PcP	PcP	16 09 01.4	+2.7
CMAR				ScP	ScP	16 12 37.5	+4.4
CHTO	**Chiang Mai**	**33.71**	**326**	P	**P**	**16 06 16.0**	**-6.0**
	SNR=7.0						
CHTO				P		16 06 16.0	
	SNR=7.0						
ARPS	**Mount Arapiles**	**34.81**	**145**	*e*P	**P**	**16 06 32.4**	**+1.1**
	comp=Z,66nm,0.9s,mb5.5						
GUMO	**Guam**	**35.10**	**50**	LR	LR	16 19 54.1	
	comp=Z,462nm,20.8s,baz=358,slow=35						
GYA	**Guiyang**	**37.26**	**343** ‖	*i* P	**P**	**16 06 54.0**	**+1.7**
GYA				pP	pP	16 07 17.2	0.0
GYA				PP	PP	16 08 22.5	+2.9
GYA				PcP	PcP	16 09 12.2	+2.4
GYA				S	**S**	**16 12 34.6**	**+3.0**
GYA				ScP	ScP	16 12 49.0	+2.0
GYA				PcS	PcS	16 12 59.5	+1.2
GYA				SS	SS	16 15 11.4	-8.2
GYA				pmax	pmax		
	comp=Z,50nm,0.6s,mb5.6						
GYA				pmax	pmax		
	comp=Z,140nm,4.9s						
GYA				LR	LR		
	comp=N,750nm,16.4s						
GYA				LR	LR		
	comp=E,520nm,15.8s						
GYA				LR	LR		
	comp=Z,620nm,15.7s						
JOW	**Kunigami**	**37.34**	**15**	P	**P**	**16 06 53.2**	**+0.2**
	comp=Z,44nm,0.7s,mb5.5,baz=225,slow=5.2,SNR=8.4						
JOW	**Kunigami**	**37.34**	**15**	P	**P**	**16 06 53.2**	**+0.2**
KMI	**Kunming**	**37.35**	**337**	P	**P**	**16 06 55.0**	**+1.9**
KMI				pP	pP	16 07 18.1	+0.1
KMI				sP	sP	16 07 29.4	-1.2
KMI				PP	PP	16 08 25.5	+4.9
KMI				S	**S**	**16 12 34.8**	**+1.8**
KMI				SS	SS	16 15 13.7	-7.8
KMI				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
KMI				pmax	pmax		
	comp=Z,120nm,4.3s						
KMI				LR	LR		
	comp=N,430nm,32.2s						
KMI				LR	LR		
	comp=E,800nm,38.4s						
KMI				LR	LR		
	comp=Z,750nm,21.3s						
TOO	**Toolangi**	**37.48**	**143**	*e*P	**P**	**16 06 56.4**	**+2.3**
ARMA	**Armidale**	**37.72**	**129**	*e*P	**P**	**16 06 58.5**	**+2.3**
ARMA	**Armidale**	**37.72**	**129**	*e*P	**P**	**16 06 58.5**	**+2.4**
	comp=Z,23nm,0.9s,mb5.0						
CNB	**Canberra Magne**	**38.56**	**137**	*e*P	**P**	**16 07 04.6**	**+1.5**
NJ2	**Nanjing**	**41.19**	**1**	*e*P	**P**	**16 07 25.9**	**+1.0**
NJ2				pP	pP	16 07 46.7	-3.4
NJ2				sP	sP	16 07 58.7	-3.9
NJ2				PP	PP	16 09 04.9	+2.7
NJ2				S	**S**	**16 13 29.0**	**-1.2**
NJ2				sS	sS	16 14 08.5	-5.3
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
NJ2				pmax	pmax		
	comp=Z,160nm,6.2s						
NJ2				LR	LR		
	comp=N,650nm,22.9s						
NJ2				LR	LR		
	comp=E,560nm,21.0s						
NJ2				LR	LR		
	comp=Z,910nm,25.6s						
CD2	**Chengdu**	**42.30**	**342**	*e*P	**P**	**16 07 35.0**	**+1.0**
CD2				pP	pP	16 07 57.8	-1.5
CD2				sP	sP	16 08 09.3	-2.5
CD2				PP	PP	16 09 16.9	+2.6
CD2				S	**S**	**16 13 46.3**	**-0.4**
CD2				sS	sS	16 14 19.2	-11
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.8						
CD2				pmax	pmax		
	comp=Z,40nm,5.2s						
CD2				LR	LR		
	comp=N,320nm,12.2s						
CD2				LR	LR		
	comp=Z,210nm,14.2s						
SHL	**Shillong**	**43.02**	**324**	*ex*	**P**	**16 07 40.0**	**+0.1**
SHL	**Shillong**	**43.02**	**324**	*e*PKP	**P**	**16 07 40.0**	**+0.1**
CBIJ	**Chichi jima**	**43.18**	**32**	P	**P**	**16 07 38.9**	**-2.2**
	comp=Z,48nm,0.3s,mb5.7,baz=263,slow=18,SNR=3.6						
XAN	**Xi'an**	**44.01**	**349**	P	**P**	**16 07 47.5**	**-0.2**
XAN				pP	pP	16 08 10.2	-2.9
XAN				sP	sP	16 08 20.7	-4.9
XAN				PP	PP	16 09 33.2	+0.7
XAN				S	**S**	**16 14 15.1**	**+3.5**
XAN				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.3						
XAN				LR	LR		
	comp=N,2μm,18.1s						
XAN				LR	LR		
	comp=E,710nm,18.1s						
XAN				LR	LR		
	comp=Z,760nm,19.0s						
LZH	**Lanzhou**	**47.12**	**344**	*e*P	**P**	**16 08 13.0**	**+0.8**
LZH				pP	pP	16 08 36.0	-1.9
LZH				sP	sP	16 08 47.5	-2.8
LZH				PcP	PcP	16 09 44.0	+1.7
LZH				PP	PP	16 10 05.0	+0.8
LZH				S	**S**	**16 14 57.0**	**+0.7**
LZH				sS	sS	16 15 38.3	-2.4
LZH				SS	SS	16 18 19.0	-6.1
LZH				pmax	pmax		
	comp=Z,42nm,1.5s,mb5.0						
LZH				pmax	pmax		
	comp=Z,210nm,4.8s						
HYB	**Hyderabad**	**47.18**	**304**	*i* P	**P**	**16 08 15.5**	**+2.6**
	comp=Z,50nm,1.0s,mb5.2						
KSRS	**Korea Array**	**47.49**	**11**	P	**P**	**16 08 15.5**	**+0.5**
	comp=Z,12nm,0.7s,mb4.8,baz=186,slow=9.7,SNR=55						
GUN	**Gumba**	**48.35**	**321**	*e*P	**P**	**16 08 21.0**	**-0.8**
PKI	**Pulchoki**	**48.40**	**320**	*e*P	**P**	**16 08 21.2**	**-1.0**
	comp=Z,68nm,0.5s,mb5.8						
PKI	**Pulchoki**	**48.40**	**320**	*e*P	**P**	**16 08 21.5**	**-0.7**
PKI				pmax	pmax		
	comp=Z,67nm,0.5s,mb5.7						
PKI	**Pulchoki**	**48.40**	**320**	*e*P	**P**	**16 08 21.5**	**-0.7**
	comp=Z,67nm,0.5s,mb5.7						
PKIN	**Phulchoki**	**48.42**	**320**	*e*P	**P**	**16 08 21.5**	**-0.8**
	comp=Z,67nm,0.5s,mb5.7						
DMN	**Daman**	**48.62**	**320**	*e*P	**P**	**16 08 22.9**	**-1.0**
KKN	**Kakani**	**48.64**	**320**	*e*P	**P**	**16 08 22.4**	**-1.6**
BJI	**Beijing**	**49.18**	**358**	P	**P**	**16 08 27.2**	**-0.7**
BJI				pmax	pmax		
	comp=Z,37nm,0.5s,mb5.6						
BJI				pmax	pmax		
	comp=Z,300nm,11.2s						
BJI				LR	LR		
	comp=N,800nm,17.5s						
BJI				LR	LR		
	comp=E,730nm,17.5s						
BJI				LR	LR		
	comp=Z,920nm,22.2s						
MAT	**Matsushiro**	**49.46**	**21**	P	**P**	**16 08 27.7**	**-2.4**
MJAR	**Matsushiro Arr**	**49.46**	**21**	P	**P**	**16 08 28.4**	**-1.7**
	comp=Z,23nm,0.7s,mb5.2,baz=198,slow=8.3,SNR=73						
MJAR				ScP	ScP	16 13 38.0	+1.8
	comp=Z,1.0nm,0.6s,baz=181,slow=4.7,SNR=5.1						
BTO	**Baotou**	**50.26**	**352**	*e*P	**P**	**16 08 34.8**	**-1.3**
HHC	**Hu-ho-hao-te**	**50.31**	**354**	*e*P	**P**	**16 08 36.6**	**+0.2**
HHC				pP	pP	16 08 59.9	-2.6
HHC				sP	sP	16 09 11.2	-3.6
HHC				PcP	PcP	16 09 53.9	+0.2
HHC				PP	PP	16 10 34.6	+1.5
HHC				PcS	PcS	16 13 49.6	-1.3
HHC				S	**S**	**16 15 40.9**	**+0.1**
HHC				sS	sS	16 16 21.7	-3.9
HHC				ScS	ScS	16 18 14.7	-1.9
HHC				SS	SS	16 19 12.6	-3.5
HHC				pmax	pmax		
	comp=Z,19nm,1.2s,mb4.9						
HHC				pmax	pmax		
	comp=Z,300nm,7.5s						
HHC				LR	LR		
	comp=N,830nm,20.4s						
HHC				LR	LR		
	comp=E,800nm,18.0s						
HHC				LR	LR		
	comp=Z,700nm,20.4s						
KAD	**Karad**	**50.75**	**301**	*e*PKP	**P**	**16 08 39.2**	**-1.0**
KAD				AMb	AMB	16 08 40.0	
	comp=Z,24nm,0.5s,mb5.5						
BHPL	**Bhopal**	**51.22**	**310**	*e*PKP	**P**	**16 08 42.1**	**-1.5**
BHPL				AMb	AMB	16 08 43.0	
	comp=Z,16nm,0.3s,mb5.5						
BHPL	**Bhopal**	**51.22**	**310**	*e*PKP	**P**	**16 08 42.1**	**-1.5**
BHPL				AMb	AMB	16 08 43.0	
	comp=Z,16nm,0.3s,mb5.5						
GTA	**Gaotai**	**51.37**	**342**	*e*P	**P**	**16 08 45.2**	**+0.7**
GTA				pP	pP	16 09 08.7	-1.9
GTA				sP	sP	16 09 19.6	-3.3
GTA				PP	PP	16 10 45.6	+2.8
GTA				S	**S**	**16 15 54.3**	**-1.3**
GTA				sS	sS	16 16 35.7	-4.8
GTA				SS	SS	16 19 28.3	-4.7
GTA				pmax	pmax		
	comp=Z,17n

comp=Z,1.9nm,0.7s,baz=166,slow=3.6,SNR=4.1
THN Thein Dam 57.90 318 *ex* **P 16 09 29.0 -2.8**
JASL Jaisalmer 58.18 310 *e*PKP **P 16 09 32.8 -1.1**
MIR Mirnyy 59.59 191 *eP* **P 16 09 44.0 +1.1**
MIR pmax pmax
comp=Z,12nm,1.0s,mb4.9
MIR MLR MLR
comp=N,880nm,14.0s
MIR MLR MLR
comp=E,1µm,14.0s
MIR MLR MLR
comp=Z,2µm,14.0s
WMQ Urumqi 59.65 335 P **P 16 09 44.0 +0.4**
WMQ pP pP 16 10 08.0 -2.4
WMQ sP sP 16 10 19.0 -3.5
WMQ PP PP 16 11 58.0 +1.3
WMQ S **S 16 17 44.0 -1.5**
WMQ sS sS 16 18 26.0 -5.5
WMQ ScS ScS 16 19 21.0 -2.4
WMQ SS SS 16 21 44.0 +0.8
WMQ pmax pmax
comp=Z,56nm,1.0s,mb5.5
WMQ pmax pmax
comp=Z,100nm,5.0s
WMQ LR LR
comp=N,3µm,18.0s
WMQ LR LR
comp=E,2µm,18.0s
WMQ LR LR
comp=Z,3µm,18.0s
YSS Yuzh-Sakhalins 60.26 19 *eP* **P 16 09 47.0 -0.7**
YSS Yuzh-Sakhalins 60.26 19 *eP* **P 16 09 46.9 -0.8**
comp=Z,14nm,0.7s,mb5.1
ZAK Zakamensk 60.86 349 *eP* **P 16 09 51.4 -0.3**
ZAK *e* 16 10 35.6
ZAK pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
TLY Talaya 62.04 350 *eP* **P 16 09 59.4 -0.3**
TLY pmax pmax
comp=Z,15nm,1.1s,mb4.9
TLY MLR MLR
comp=Z,3µm,22.0s
TLY Talaya 62.04 350 *eP* **P 16 09 59.6 0.0**
comp=Z,7.0nm,0.7s,mb4.8
TLY Talaya 62.04 350 P **P 16 10 00.1 +0.5**
SNR=6.8
TLY P 16 10 00.1
SNR=6.8
KSH Kashi 62.30 324⇑ *iP* **P 16 10 00.9 -0.8**
KSH pP pP 16 10 25.1 -3.6
KSH sP sP 16 10 36.2 -4.5
KSH PcP PcP 16 10 40.8 +0.4
KSH PP PP 16 12 20.2 0.0
KSH ScP ScP 16 14 32.1 -0.3
KSH PcS PcS 16 14 42.5 -1.2
KSH S **S 16 18 12.9 -6.5**
KSH sS sS 16 18 56.7 -9.1
KSH ScS ScS 16 19 39.5 -4.0
KSH pmax pmax
comp=Z,61nm,0.8s,mb5.7
KSH pmax pmax
comp=Z,220nm,8.5s
KSH LR LR
comp=N,660nm,16.8s
KSH LR LR
comp=E,370nm,11.5s
KSH LR LR
comp=Z,840nm,14.1s
IRK Irkutsk 62.48 351 *eP* **P 16 10 01.8 -0.8**
IRK *e* 16 10 46.7
IRK pmax pmax
comp=Z,15nm,2.1s,mb4.7
MOY Mondy 62.52 348 *eP* **P 16 10 03.4 +0.5**
MOY pmax pmax
comp=Z,28nm,1.8s,mb4.9
KBL Kabul 63.64 316 *eP* **P 16 10 09.8 -0.9**
KBL pmax pmax
comp=Z,61nm,0.8s,mb5.5
KBL Kabul 63.64 316 *eP* **P 16 10 09.8 -0.9**
comp=Z,61nm,0.8s,mb5.5
MKAR Makanchi Array 64.32 334 P **P 16 10 14.6 -0.3**
comp=Z,29nm,0.5s,mb5.3,baz=138,slow=7.3,SNR=81
MKAR Makanchi Array 64.32 334 P **P 16 10 14.6 -0.3**
KZA Kyzart 64.42 326 P **P 16 10 16.2 +0.6**
SNR=47
TKM2 Tokmak 2 64.80 327 P **P 16 10 18.4 +0.4**
SNR=12
TKM2 Tokmak 2 64.80 327 *eP* **P 16 10 18.1 0.0**
UCH Uchtor 64.93 326 P **P 16 10 19.5 +0.6**
SNR=13
KBK Karagaybulak 64.97 326 P **P 16 10 19.6 +0.4**
SNR=44
AAK Ala-Archa 65.21 326 P **P 16 10 21.7 +1.0**
comp=Z,374nm,0.8s,mb6.3,SNR=16
AAK Ala-Archa 65.21 326 P **P 16 10 21.1 +0.4**
SNR=30
AAK Ala-Archa 65.21 326 P **P 16 10 21.4 +0.7**
comp=Z,35nm,0.8s,mb5.2,baz=132,slow=5.1,SNR=43
AAK Ala-Archa 65.21 326 *eP* **P 16 10 20.4 -0.3**
AAK Ala-Archa 65.21 326 P **P 16 10 21.3 +0.6**
SNR=18
AAK P 16 10 21.3
SNR=18
AAK Ala-Archa 65.21 326 P **P 16 10 20.6 -0.1**
comp=Z,17nm,0.9s,mb4.9
CHMS Chumysh 65.31 326 P **P 16 10 21.1 -0.2**
SNR=8.2
AML Almayashu 65.32 325 P **P 16 10 21.9 +0.4**
SNR=55
AML Almayashu 65.32 325 *eP* **P 16 10 21.7 +0.3**
EKS2 Erkin-Say 65.62 326 P **P 16 10 23.8 +0.4**
SNR=42
EKS2 Erkin-Say 65.62 326 *eP* **P 16 10 23.5 +0.2**
USP Ospenovka 65.62 327 P **P 16 10 23.1 -0.3**
SNR=24
MAW Mawson 68.56 200 P **P 16 10 44.9 +3.4**
comp=Z,6.7nm,1.0s,mb4.4,baz=70,slow=10,SNR=3.8
MAW Mawson 68.56 200 *eP* **P 16 10 44.2 +2.7**
MAW pmax pmax
comp=Z,2.0nm,1.0s
MAW Mawson 68.56 200 *eP* **P 16 10 44.2 +2.7**
comp=Z,1.6nm,1.0s
KURK Kurchatov 68.88 334 P **P 16 10 43.5 -0.2**
comp=Z,325nm,0.5s,SNR=26
KURK Kurchatov 68.88 334 P **P 16 10 43.0 -0.8**
comp=Z,28nm,0.7s,mb5.2,baz=139,slow=5.2,SNR=42
KURK Kurchatov 68.88 334 *eP* **P 16 10 42.8 -1.0**
KURK Kurchatov 68.88 334 P **P 16 10 43.7 -0.1**
SNR=14
KURK P 16 10 43.7
SNR=14
ZAA0 Zalesovo Array 69.02 340 *eP* **P 16 10 43.1 -1.4**
ZALV Zalesovo Beam 69.02 340 P **P 16 10 43.4 -1.2**
comp=Z,22nm,0.5s,mb5.3,baz=141,slow=4.9,SNR=53
NVS Novosibirsk 70.29 340⇑ *iP* **P 16 10 50.4 -1.9**
NVS *i* S S 16 19 51.9 -3.5
NVS pmax pmax
comp=N,14nm,0.9s
NVS pmax pmax
comp=E,15nm,0.9s
NVS pmax pmax
comp=Z,25nm,0.9s,mb5.0
NVS smax
comp=N,10.0nm,1.4s
NVS smax
comp=E,16nm,1.4s
PEA0B Petropavlovsk- 70.81 24 *eP* **P 16 10 55.5 0.0**
PETK Petropavlovsk- 70.81 24 P **P 16 10 56.1 +0.6**
comp=E,9.4nm,0.5s,mb4.9,baz=238,slow=2.5,SNR=46
IMOG Moghan 71.27 313 *eP* **P 16 10 58.8 +0.1**
YAK Yakutsk 71.75 6 *eP* **P 16 11 00.2 -0.8**
YAK *e* 16 11 12.6
YAK *e**PP pP 16 11 24.8 -3.9
YAK *e* 16 13 40.0
YAK *e*S S 16 20 08.2 -3.9
YAK *e*SS 16 20 44.4
YAK *e* 16 20 59.1
YAK pmax pmax
comp=Z,17nm,1.1s,mb4.8
YAK pmax pmax
comp=E,3.0nm,1.5s
YAK pmax pmax
comp=N,4.0nm,1.0s
YAK pmax pmax
comp=Z,13nm,1.4s,mb4.6
YAK pmax pmax
comp=N,9.0nm,1.3s
YAK pmax pmax
comp=E,2.0nm,0.6s
YAK smax
comp=N,29nm,1.4s
YAK smax
comp=E,41nm,1.9s
YAK MLR MLR
comp=Z,4µm,23.0s
YAK MLR MLR
comp=E,2µm,25.0s
YAK MLR MLR
comp=N,2µm,23.0s
ABKT Ailbek 72.97 314 P **P 16 11 09.6 +0.8**
comp=N,113nm,0.7s,mb5.8,SNR=6.2
BVAR Borovoye Array 74.14 332 P **P 16 11 14.9 -0.4**
comp=N,28nm,0.8s,mb5.0,baz=140,slow=7.8,SNR=65
BRVK Borovoye 74.21 332 P **P 16 11 15.4 -0.3**
comp=N,230nm,0.8s,mb6.0,SNR=15
BRVK Borovoye 74.21 332 *eP* **P 16 11 15.2 -0.5**
comp=N,0.5nm,2.7s
BRVK Borovoye 74.21 332 P **P 16 11 15.8 +0.1**
SNR=16
BRVK P 16 11 15.8
SNR=16
SYO Syowa Base 77.15 201⇑ *eP* **P 16 11 33.8 +1.5**
ABKAR Akbulak array 77.28 325 *eP* **P 16 11 32.8 -0.5**
QRN Al-Qurain 77.40 302 *eP* **P 16 11 34.4 0.0**
QRN AMb AMB 16 11 35.9
comp=Z,234nm,0.9s,mb5.9
KBD Kabd 77.72 303 *eP* **P 16 11 36.4 +0.3**
KBD AMb AMB 16 11 37.5
comp=Z,85nm,0.4s,mb5.8
RDF Al-Radifah 77.76 302 *eP* **P 16 11 36.7 +0.3**
RDF AMb AMB 16 11 38.1
comp=Z,225nm,0.5s,mb6.1
UMR Umm Al-Rimmam 77.81 303 *eP* **P 16 11 36.6 -0.1**
UMR AMb AMB 16 11 38.3
comp=Z,137nm,0.7s,mb5.8
IRAZ Razeghan 77.99 309 *eP* **P 16 11 37.9 +0.4**
NAY Al-Naaiem 78.11 303 *eP* **P 16 11 38.4 0.0**
NAY AMb AMB 16 11 39.8
comp=Z,86nm,0.7s,mb5.6
KMBO Kilima Mbogo 80.67 270 P **P 16 11 56.0 +3.4**
comp=Z,16nm,0.8s,mb4.9,baz=64,slow=7.6,SNR=33
KMBO Kilima Mbogo 80.67 270 *eP* **P 16 11 55.6 +3.0**
KMBO pmax pmax
comp=Z,19nm,1.0s
KMBO Kilima Mbogo 80.67 270 *eP* **P 16 11 55.6 +3.0**
comp=Z,19nm,1.0s,mb4.9
TIXI Tiksi 81.16 3 *eP* **P 16 11 52.7 -1.2**
TIXI pmax pmax
comp=Z,29nm,1.1s,mb5.0
TIXI Tiksi 81.16 3 *eP* **P 16 11 52.6 -1.3**
ARU Arti 81.69 331 *eP* **P 16 11 55.5 -1.5**
ARU Arti 81.69 331 *eP* **P 16 11 55.5 -1.5**
GNI Garni 83.43 312 *eP* **P 16 12 08.5 +2.1**
GNI pmax pmax
comp=Z,20nm,1.1s
GNI Garni 83.43 312 *eP* **P 16 12 08.5 +2.1**
comp=Z,20nm,1.1s,mb4.8
ZEI Tsey 84.84 315 *eP* **P 16 12 13.1 -0.4**
ZEI pmax pmax
comp=Z,30nm,0.5s,mb5.5
MAIT Maitri 86.50 199 *eP* **P 16 12 24.8 +3.6**
MAIT *e*pP pP 16 12 45.3 -4.5
MBAR Mbarara 87.18 270 P **P 16 12 28.8 +3.1**
comp=Z,58nm,0.9s,mb5.5,SNR=5.2
LSZ Lusaka 87.38 255 *eP* **P 16 12 29.5 +2.9**
LSZ pmax pmax
comp=Z,57nm,0.8s,mb5.5
LSZ Lusaka 87.38 255 *eP* **P 16 12 29.5 +2.9**
comp=Z,57nm,0.8s,mb5.5
LSZ Lusaka 87.38 255 P **P 16 12 30.2 +3.6**
SNR=13
LSZ P 16 12 30.2
SNR=13
BOSA Boshof 87.95 241 P **P 16 12 32.2 +3.1**
comp=Z,21nm,1.0s,mb5.1,baz=81,slow=4.6,SNR=18
BOSA Boshof 87.95 241 *eP* **P 16 12 32.1 +3.0**
BOSA pmax pmax
comp=Z,26nm,1.2s,mb5.1
BOSA Boshof 87.95 241 *eP* **P 16 12 32.1 +3.0**
comp=Z,26nm,1.2s,mb5.1
LBTB Lobatse 88.24 245 *eP* **P 16 12 34.0 +3.5**
LBTB pmax pmax
comp=Z,68nm,1.1s,mb5.6
LBTB Lobatse 88.24 245 *eP* **P 16 12 34.0 +3.5**
comp=Z,68nm,1.1s,mb5.6
VRHR Novokhopersk 88.77 322 *eP* **P 16 12 32.1 -0.3**
VRHR pmax pmax
comp=Z,20nm,0.7s,mb5.3
VRHR pmax pmax
comp=N,30nm,1.5s
VRHR pmax pmax
comp=E,20nm,0.7s
MMAI Mount Meron Ar 88.88 304 P **P 16 12 36.1 +2.8**
comp=E,6.9nm,0.4s,mb5.0,baz=90,slow=6.7,SNR=20
VSR Storozhevoye 90.30 322 *eP* **P 16 12 39.1 -0.4**
VSR pmax pmax
comp=Z,7.0nm,0.5s,mb5.0
VSR pmax pmax
comp=N,5.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,1.0s
BR131 Keskin Array S 91.59 310 *eP* **P 16 12 45.8 0.0**
comp=E,3.1nm,0.6s,mb4.7
BRTR Keskin Array B 91.59 310 P **P 16 12 46.0 +0.2**
comp=E,3.7nm,0.7s,mb4.7,baz=133,slow=6.0,SNR=15
VNA2 Neumayer--Watz 92.02 196 *eP* **P 16 12 49.5 +2.3**
VNA2 *e* pP 16 13 14.4 -1.5
VNA2 *e* 16 13 24.9
AKASG Malin Array Be 96.38 320 P **P 16 13 06.8 -0.7**
comp=E,1.0nm,0.4s,mb4.6,baz=88,slow=3.6,SNR=6.1
AKASG Malin Array Be 96.38 320 P **P 16 13 06.8 -0.7**
BUR08 Bucovina Ar. S 98.71 317 *eP* **P 16 13 16.9 -1.1**
FINES FINESS Array B 99.06 331 P **P 16 13 18.7 -0.6**
comp=E,2.0nm,0.6s,mb4.8,baz=90,slow=5.7,SNR=6.1
ARCES ARCESS Array B 99.57 339 P Pdif 16 13 20.2 -1.6
comp=E,1.7nm,0.6s,baz=12,slow=7.4,SNR=5.8
SPITS Spitsbergen Ar 101.48 348 P Pdif 16 13 28.9 -1.4
comp=E,8.3nm,0.8s,baz=110,slow=7.2,SNR=9.6
CDF Champ du Feu 110.67 318 *e*PKP1 PKiKP 16 18 12.7 +1.8
CABF La Chapelle 111.76 316 *e*PKP1 PKiKP 16 18 14.9 +1.9
BAIF Baives 112.33 320 *e*PKP1 PKiKP 16 18 16.0 +2.0
LOR Lormes 113.14 317 *e*PKP1 PKiKP 16 18 17.0 +1.4
SMF Signal de Mont 113.28 317 *e*PKP1 PKiKP 16 18 17.6 +1.7
SSF Saint Saulge 113.42 317 *e*PKP1 PKiKP 16 18 17.3 +1.1
comp=E,8.7nm,0.9s
AVF Avril sur Loir 113.58 317 *e*PKP1 PKiKP 16 18 17.5 +1.0
BGF Bois d'Agland 113.97 317 *e*PKP1 PKiKP 16 18 18.9 +1.7
comp=E,16nm,0.9s
TCF Toulx Ste Croi 114.45 317 *e*PKP1 PKiKP 16 18 20.0 +1.8
CAF Calviac 114.84 315 *e*PKP1 PKiKP 16 18 20.9 +1.9
YKA Yellowknife Ar 114.93 24 PKP PKiKP 16 18 19.2 +0.6
comp=E,1.8nm,0.5s,baz=304,slow=1.9,SNR=17
RJF Les Rejaudoux 115.14 316 *e*PKP1 PKiKP 16 18 21.6 +2.1
LDF La Druitiere 115.43 320 *e*PKP1 PKiKP 16 18 22.1 +2.1
FLN La Foliniere 115.62 320 *e*PKP1 PKiKP 16 18 22.0 +1.7
comp=E,5.4nm,0.6s
LFF La Frestale 115.76 315 *e*PKP1 PKPdf 16 18 22.9 +2.2
comp=E,15nm,0.7s
GRR Gorron 115.96 320 *e*PKP1 PKPdf 16 18 22.6 +1.6
comp=E,2.3nm,0.5s
MFF Saint Martin d 115.96 317 *e*PKP1 PKPdf 16 18 22.8 +1.7
ROSF Rostrenen 117.52 320 *e*PKP1 PKPdf 16 18 25.9 +1.9
TORD Torodi Ar. Bea 117.53 280 PKP PKPdf 16 18 26.0 +1.0
comp=E,6.6nm,0.7s,baz=48,slow=2.0,SNR=35
QUIF Quistinic 117.58 319 *e*PKP1 PKPdf 16 18 26.1 +2.0
ESDC Sonseca Array 120.38 311 PKP PKPdf 16 18 31.6 +1.7
comp=E,0.9nm,0.7s,baz=28,slow=2.9,SNR=5.6
NVAR Mina Array Bea 122.03 50 PKP PKPdf 16 18 35.5 +2.5
comp=E,1.3nm,0.6s,baz=257,slow=1.7,SNR=12
NVAR SKP 16 22 02.7
comp=E,0.8nm,0.7s,baz=242,slow=1.9,SNR=6.4
NVAR Mina Array Bea 122.03 50 PKP PKPdf 16 18 35.5 +2.5
NVAR SKP 16 22 02.7
KIC Kosan Boka 123.23 271 *e*PKP2 PKPdf 16 18 37.4 +1.4
comp=E,15nm,0.7s
DBIC Dimbokro 123.38 272 PKP PKPdf 16 18 38.2 +1.9
comp=E,5.5nm,0.5s,baz=70,slow=3.5,SNR=12
LIC Lamto 123.49 271 *e*PKP2 PKPdf 16 18 38.6 +2.1
comp=E,85nm,1.3s
LIC Lamto 123.49 271 *e*PKIKP PKPdf 16 18 38.0 +1.5
LIC Lamto 123.49 271 *e*PKPdf PKPdf 16 18 38.0 +1.5
TIC Toumodi 123.54 272 *e*PKP2 PKPdf 16 18 38.6 +2.0
comp=E,92nm,0.3s
EVO Evora 123.72 310 *e*PKIKP PKPdf 16 18 38.5 +2.2
comp=E,6.4nm,0.8s
PDAR Pinedale Array 126.87 43 PKP PKPdf 16 18 43.6 +1.5
comp=E,0.4nm,0.5s,baz=307,slow=3.6,SNR=5.5
N20A Spence Gulch, 128.55 44⇑SKPbc 16 21 57.9
baz=128
M21A Separation Pea 128.84 43⇓SKPbc 16 21 58.6
baz=129
N21A Black Mountain 129.09 44⇓SKPbc 16 22 00.1
baz=129
Q20A Ridgley Place, 129.28 47⇑SKPbc 16 22 01.0
baz=129
R20A Redvale 129.51 48⇑SKPbc 16 22 01.3
baz=129
117A Oracle 129.52 55⇑SKPbc 16 22 02.3
baz=129
T19A Beclabito 129.53 50⇑SKPbc 16 22 01.4
baz=129
PLCA Paso Flores 129.54 172 PKP PKPdf 16 18 49.0 +1.6
comp=E,1.3nm,0.7s,baz=250,slow=6.3,SNR=3.6
PLCA Paso Flores 129.54 172 PKP2 PKPdf 16 18 49.0 +1.6
W18A Petrified Fore 129.56 52⇑SKPbc 16 22 03.0
baz=129
U19A Dine' College, 129.57 50⇓SKPbc 16 22 02.4
baz=129
X18A Snowflake 129.58 53⇑SKPbc 16 22 02.9
baz=129
217A Green Valley 129.67 56⇑SKPbc 16 22 02.6
baz=130
Y18A Canyon Day Jun 129.74 54⇓SKPbc 16 22 02.5
baz=130
MVCO Mesa Verde 129.78 49⇑SKPbc 16 22 01.3
baz=130
N22A Wattenberg Ran 129.80 44⇓SKPbc 16 22 01.5
baz=130
Q21A Lamborn Mesa, 129.84 47⇑SKPbc 16 22 03.2
baz=130
R21A Cimarron 130.04 47⇑SKPbc 16 22 03.5
baz=130
118A Homack Ranch, 130.12 55⇑SKPbc SKPbc 16 22 04.1 +2.5
baz=130
218A Dragoon 130.25 56⇓SKPbc SKPbc 16 22 04.3 +2.2
baz=130
Y19A Nutrioso 130.30 53⇓SKPbc SKPbc 16 22 04.6 +2.3
baz=130
Q22A Crested Butte, 130.30 46⇓SKPbc SKPbc 16 22 04.0 +1.9
baz=130
V20A Brimhall 130.31 51⇓SKPbc SKPbc 16 22 04.5 +2.2
baz=130
318A Bisbee 130.44 57⇑SKPbc SKPbc 16 22 04.6 +1.7
baz=130
ULM Lac du Bonnet 130.54 28 SKPbc SKPbc 16 22 03.5 +0.9
comp=E,10nm,0.8s,baz=323,slow=5.0,SNR=9.6
119A Ashpeak Ranch, 130.62 55⇓SKPbc SKPbc 16 22 05.7 +2.2
baz=130
U21A Nageezi 130.70 50⇓SKPbc SKPbc 16 22 06.3 +2.7
baz=130
219A White Tail Can 130.88 56⇑SKPbc SKPbc 16 22 07.2 +2.6
baz=131
V21A Milan 130.94 50⇓SKPbc SKPbc 16 22 07.2 +2.6
baz=131
Y20A Horse Springs, 131.01 53⇑SKPbc SKPbc 16 22 07.2 +2.3
baz=131
T22A Edith 131.04 48⇓SKPbc SKPbc 16 22 07.3 +2.4
baz=131
319A Douglas 131.04 56⇑SKPbc SKPbc 16 22 07.0 +1.9
baz=131
Z20A Nine Sixteen R 131.09 54⇑SKPbc SKPbc 16 22 07.2 +1.9
baz=131
W21A San Fidel 131.17 51⇓SKPbc SKPbc 16 22 07.3 +1.8
baz=131
120A U Bar Ranch, L 131.23 55⇓SKPbc SKPbc 16 22 08.0 +2.2
baz=131
X21A Alamocita Cree 131.29 52⇓SKPbc SKPbc 16 22 08.1 +2.2
baz=131
V22A San Miguel Ran 131.45 50⇓SKPbc SKPbc 16 22 08.6 +2.1
baz=131
220A Playas Peak, P 131.51 55⇓SKPbc SKPbc 16 22 08.9 +2.1
baz=131
Y21A Point of Rocks 131.53 53⇑SKPbc SKPbc 16 22 09.1 +2.3
baz=131
320A Kipp Ranch, An 131.67 56⇓SKPbc SKPbc 16 22 09.0 +1.6
baz=132
Z21A St. Cloud Mine 131.76 53⇓SKPbc SKPbc 16 22 08.6 +0.9
baz=132
Z21A ⇓SKPab 16 22 10.0
baz=132
X22A Bernardo 131.88 52⇑SKPab 16 22 10.9
baz=132
121A Cooke's Peak, D 131.92 54⇓SKPab 16 22 10.7
baz=132
V23A Ortiz Mt. (NFS 132.06 50⇑SKPab 16 22 11.2
baz=132
Y22A Socorro 132.11 52⇓SKPbc SKPbc 16 22 10.2 +1.3
baz=132
Z22A Elephant Butte 132.34 53⇓SKPbc SKPbc 16 22 10.5 +0.7
baz=132
Z22A ⇑SKPab 16 22 13.0
baz=132
U24A Moreno Valley 132.48 49⇓SKPab 16 22 13.2
baz=132
X23A Hourglass Bar 132.48 51⇑SKPab 16 22 13.6
baz=132
122A Conniff Cattle 132.49 54⇓SKPab 16 22 14.0
baz=132
222A Williams Famil 132.60 55⇑SKPab 16 22 14.0
baz=132
T25A Trinidad 132.81 47⇑SKPbc SKPbc 16 22 12.5 +1.3
baz=133
T25A ⇓SKPab 16 22 14.4
baz=133
Y23A Lovelace Mesa, 132.82 52⇑SKPbc SKPbc 16 22 12.7 +1.4
baz=133
Y23A ⇑SKPab 16 22 14.3
baz=133
W24A Lazy 6 Ranch, 132.85 50⇓SKPab 16 22 14.9
baz=133
Z23A Rita Site, Whi 132.91 53⇑SKPbc SKPbc 16 22 13.3 +1.6
baz=133
Z23A ⇑SKPab 16 22 14.9
baz=133
U25A Circle Dot Ran 133.12 48⇓SKPab 16 22 15.9
baz=133
V25A Rancho No Teng 133.20 49⇑SKPbc SKPbc 16 22 13.9 +1.4
baz=133
V25A ⇓SKPab 16 22 15.8
baz=133
Y24A Capitan 133.30 52⇓SKPab 16 22 16.4
baz=133
W25A X Bar L Ranch, 133.56 50⇑SKPbc SKPbc 16 22 15.4 +1.6
baz=133
W25A ⇑SKPab 16 22 17.5
baz=133
Z24A Sheeppen Canyo 133.57 52⇑SKPbc SKPbc 16 22 15.4 +1.5
baz=133
Z24A ⇑SKPab 16 22 17.8
baz=133
U26A Atchley Ranch, 133.61 48⇓SKPbc SKPbc 16 22 15.4 +1.4
baz=133
U26A ⇓SKPab 16 22 17.8
baz=133
124A Stringfield Ra 133.72 53⇑SKPab 16 22 18.1
baz=134
V26A Tequesquite Ra 133.83 49⇑SKPab 16 22 18.0
baz=134
224A Cornudas Mount 133.88 54⇑SKPab 16 22 18.8
baz=134
Y25A Mesa, Roswell 133.88 51⇓SKPbc SKPbc 16 22 15.8 +0.9
baz=134
Y25A ⇑SKPab 16 22 18.3
baz=134
Z25A Roswell 134.09 52⇑SKPab 16 22 19.4
baz=134
324A Moseley Ranch, 134.12 55⇓SKPab 16 22 19.1
baz=134
X26A CR and CF Fran 134.31 50⇑SKPab 16 22 20.1
baz=134
125A Gardner Draw, 134.36 53⇓SKPab 16 22 20.1
baz=134
225A Deer Hill, Car 134.42 54⇑SKPbc SKPbc 16 22 18.0 +1.2
baz=134
225A ⇑SKPab 16 22 20.5
baz=134
SCHQ Schefferville 134.49 4 PKP PKPdf 16 18 58.2 +2.0
comp=E,3.7nm,1.0s,baz=267,slow=5.1,SNR=4.1
SCHQ SKPbc SKPbc 16 22 17.8 +1.6
comp=E,5.7nm,0.9s,baz=0.0,slow=8.1,SNR=5.1

SCHQ	Schefferville	134.49	4	PKP	PKPdf	16 18 58.2	+2.0
SCHQ				SKPbc	SKPbc	16 22 17.8	+1.6
W27A	Bowe Ranch, En	134.67	49	⇑SKPbc	SKPbc	16 22 19.0	+1.6
baz=134							
Z26A	Caprock	134.67	52	⇑SKPbc	SKPbc	16 22 19.0	+1.5
baz=134							
425A	Indio Mountain	134.73	56	⇑SKPbc	SKPbc	16 22 19.1	+1.3
baz=135							
126A	Clayton Basin,	134.87	53	⇓SKPbc	SKPbc	16 22 20.0	+1.8
baz=135							
226A	Malaga, Loving	135.01	54	⇑SKPbc	SKPbc	16 22 20.2	+1.5
baz=135							
Z27A	Tatum	135.25	52	⇑SKPbc	SKPbc	16 22 20.4	+1.0
baz=135							
426A	McDonald Obser	135.55	55	⇓SKPbc	SKPbc	16 22 22.0	+1.6
baz=135							
526A	Mary Lane Ranc	135.70	56	⇓SKPbc	SKPbc	16 22 22.4	+1.6
baz=136							
626A	Big Bend Ranch	135.82	57	⇓SKPbc	SKPbc	16 22 23.0	+1.7
baz=136							
527A	Woodward Ranch	136.06	56	⇓SKPbc	SKPbc	16 22 23.7	+1.7
baz=136							
TXAR	Lajitas Array	136.28	57	SKPbc	SKPbc	16 22 25.1	+2.5
comp=E,2.5nm,0.9s,baz=237,slow=3.1,SNR=10							
328A	Wristen Ranch,	136.28	54	⇓SKPbc	SKPbc	16 22 23.6	+1.0
baz=136							
627A	Terlingua Ranc	136.47	57	⇑SKPbc	SKPbc	16 22 24.7	+1.5
baz=136							
428A	Kincaid Ranch,	136.62	55	⇓SKPbc	SKPbc	16 22 25.4	+1.7
baz=136							
528A	Cox Ranch, San	136.73	56	⇑SKPdf	SKPdf	16 22 27.5	+1.2
baz=136							
CPUP	Villa Florida	144.23	187	PKP	PKPdf	16 19 15.8	+1.0
comp=E,5.2nm,0.5s,baz=156,slow=2.5,SNR=18							
CPUP				SKPbc	SKPbc	16 22 49.4	+5.4
comp=E,0.9nm,0.5s,baz=170,slow=6.1,SNR=3.1							
CPUP	Villa Florida	144.23	187	*e*PKP2	PKPdf	16 19 15.4	+0.5
CPUP	Villa Florida	144.23	187	*e*PKPdf	PKPdf	16 19 15.4	+0.6
WVT	Waverly	144.50	37	*e*PKIKP	PKPdf	16 19 13.9	-1.1
BINY	Binghamton	145.06	18	*e*PKP	PKPdf	16 19 15.6	-0.1
PLAL	Pickwick Lake	145.11	39	*e*PKP	PKPdf	16 19 15.3	-0.8
SSPA	Standing Stone	145.82	22	*e*PKPdf	PKPbc	16 19 18.1	+0.3
MCWV	Mont Chateau	145.89	25	*e*PKP	PKPbc	16 19 19.0	+1.0
TZTN	Tazewell	146.63	32	*e*PKPbc	PKPbc	16 19 20.9	+0.5
CPCT	Cooper Cave	146.90	35	*e*PKPbc	PKPbc	16 19 21.4	+0.2
LRAL	Lakeview Retre	147.05	41	*e*PKPbc	PKPbc	16 19 22.2	+0.6
TKL	Tuckaleechee C	147.16	34	*e*PKP2	PKPbc	16 19 22.5	+0.6
ELN	Prospectdale	147.49	28	*e*PKPbc	PKPbc	16 19 23.2	+0.5
GOGA	Godfrey	148.97	36	*e*PKP2	PKPbc	16 19 27.4	+0.7
LPAZ	La Paz	153.81	167	PKPbc	PKPbc	16 19 42.0	+3.7
comp=E,3.3nm,0.9s,baz=177,slow=2.3,SNR=3.5							
LPAZ				PKPab	PKPab	16 19 55.3	+3.8
comp=E,6.6nm,0.8s,baz=177,slow=5.0,SNR=5.5							

MEX 01 16:17:27.4±1.0, 15°.01N×92°.73W, h91km±10km, MD3.9, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.46	103	*i* P	Pn	16 17 40.2	-1.7
THIG				*i* S	Sn	16 17 51.2	-1.5
PCIG		0.84	325	*i* P	Pn	16 17 44.1	-1.2
PCIG				*i* S	Sn	16 17 57.4	-1.4
CCIG	Comitan	1.38	24	*i* P	Pn	16 17 51.4	-0.4
CCIG				*i* S	Sn	16 18 07.9	-2.2
HUIG	Huatulco	3.35	283	*i* P	Pn	16 18 17.1	-0.6
HUIG				*i* S	Sn	16 18 54.4	-2.1
PNIG	Pinotepa	5.38	285	*i* P	Pn	16 18 44.2	-1.0
PNIG				*i* S	Sn	16 19 44.0	-1.9

*ISCJB **01** 16:27:23.2±0.7, 11°.41S±0°.05×116°.76E±0°.05, h42km±8km, mb4.2/16, Error ellipse: s-maj=9.9km s-min=5.9km az=143.3*
*DJA **01** 16:27:26, 11°.33S×116°.63E, h30km, mb4.9/16*
*NEIC **01** 16:27:28.2±1.4, 11°.06S×116°.98E, h58km±13km, mb4.3/6, Error ellipse: s-maj=14.9km s-min=6.9km az=55.0*
*IDC **01** 16:27:28.6±3.1, 11°.02S×117°.07E, h58km±29km, mb3.8/11, mb1 4.0/12, mb1mx3.8/21, mbtmp3.9/12, ML4.3/1, Error ellipse: s-maj=26.2km s-min=12.9km az=73.0*

ISC 01 16:27:24.8±0.5, 11°.41S±0°.04×116°.79E±0°.05, h36km±6km, n65, σ1°.26/66, mb4.2/16, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DNP	Denpasar	3.12	330	P	Pn	16 28 12.1	+0.5
KHKI	Kahang-Kahang	3.24	339	P	Pn	16 28 12.6	-0.5
SRBI	Singaraja	3.65	335	P	Pn	16 28 19.2	+0.4
SRBI				S	Sn	16 29 01.0	+0.4
NBBI	Negara	3.70	324	P	Pn	16 28 19.5	0.0
NBBI				S	Sn	16 29 02.6	+0.8
WSI	Waingapu	3.86	64	P	Px	16 28 52.3	
BYJI	Banyuwangi	3.98	323	P	Pn	16 28 23.8	+0.5
ABJI	Asem Bagus	4.38	325	P	Pn	16 28 28.9	0.0
GMJI	Gumukmas	4.53	313	P	Pn	16 28 29.9	-1.1
KMMI	Kalianget	5.15	327	P	Pn	16 28 39.9	+0.5
0.5nm136nm,0.8s							
PWJI	Pagerwojo	5.95	304	P	Pn	16 28 49.3	-1.2
0.9nm4μm109nm,0.4s							
SJI	Sawahan	6.15	306	P	Pn	16 28 53.5	+0.3
PCJI	Pacitan	6.38	299	P	Pn	16 28 55.9	-0.5
KAPI	Kappang	6.99	25	P	Pn	16 29 04.2	-0.6
6.9nm,0.3s,baz=202,slow=6.8,SNR=23							
KAPI				S	Sn	16 30 14.3	-8.8
4.7nm,0.3s,baz=138,slow=22,SNR=8.1							
KAPI	Kappang	6.99	25	*e*Pn	Pn	16 29 04.0	-0.8
KAPI				S	Sn	16 30 14.3	-8.8
KAPI	Kappang	6.99	25	P	Pn	16 29 04.5	-0.3
0.1nm30nm,0.7s							
KBKI	Kotabaru	8.08	356	P	Pn	16 29 20.9	+1.2
0.3nm752nm88nm,0.6s							
BBKI	Banjar Baru	8.12	346	P	Pn	16 29 23.1	+2.8
2μm126nm,1.2s							
TTSI	Tana Toraja	8.83	20	P	Pn	16 29 32.4	+2.4
34nm,0.7s							
MBWA	Marble Bar	10.10	164	*e*P	Pn	16 29 45.5	-1.9
MBWA				*e*S	Sx	16 31 27.9	
MBWA	Marble Bar	10.10	164	*e*P	Pn	16 29 45.4	-2.0
102nm,0.4s							
LEM	Lembang	10.13	296	P	Pn	16 29 49.9	+2.0
41nm,0.8s							
FITZ	Fitzroy Crossi	10.84	129	*e*P	Pn	16 29 55.3	-2.2
33nm,0.4s							
FITZ				*e*S	Sx	16 31 49.0	
FITZ	Fitzroy Crossi	10.84	129	P	Pn	16 29 55.9	-1.6
3.4nm,0.3s,baz=297,slow=6.6,SNR=50							
FITZ				S	Sx	16 31 51.0	
4.9nm,0.3s,baz=179,slow=17,SNR=6.5							
FITZ	Fitzroy Crossi	10.84	129	*e*P	Pn	16 29 55.2	-2.4
FITZ				S	Sx	16 31 51.0	
FITZ	Fitzroy Crossi	10.84	129	P	Pn	16 29 56.6	-0.9
61nm,0.8s							
DBJI	Dramaga	11.03	295	P	Pn	16 30 00.3	+0.2
43nm,0.5s							
CGJI	Cibinong	11.95	293	P	Pn	16 30 11.7	-1.0
KNA	Kununurra	12.42	112	*e*P	Pn	16 30 17.1	-2.0
7.1nm,0.3s							
KNA				*e*S	Sx	16 32 26.6	
STKI	Sintang	12.56	335	P	Pn	16 30 21.9	+0.8
30nm,1.0s							
KSM	Kuching	14.32	333	P	Pn	16 30 43.0	-2.2
8.4nm,0.9s							
SBUM	Sibu	14.49	341	P	Pn	16 30 48.4	+0.9
13nm,0.7s							
MEEK	Meekatharra	15.25	174	*e*P	Pn	16 30 55.8	-1.7
KAKA	Kakadu	15.36	96	*e*P	Pn	16 30 58.6	-0.5
TNTI	Ternate	16.03	42	P	Pn	16 31 14.1	+6.5
42nm,1.0s							
KSI	Kapahiang	16.04	298	P	Pn	16 31 05.6	-2.2
159nm,0.7s							
KKM	Kota Kinabalu	17.34	358	*e*P	Pn	16 31 23.3	-0.9
MORW	Morawa	17.59	182	*e*P	Pn	16 31 26.5	-0.6
MORW				*e*S	Sx	16 34 24.2	
MYKOM	Kota Tinggi	18.37	315	P	Pn	16 31 36.0	-0.8
14nm,1.2s							
WRAB	Tennant Creek	18.90	119	*e*P	Pn	16 31 43.2	0.0
8.5nm,0.4s							
KLBR	Kellerberrin	20.11	178	*e*P	P	16 31 59.0	+3.5
36nm,0.4s							
KLBR				*e*S	Sx	16 35 24.7	
ASAR	Alice Springs	20.34	129	P	P	16 32 00.2	+2.0
8.6nm,0.7s,baz=302,slow=11,SNR=39							
ASAR				S	Sx	16 35 35.5	
3.4nm,0.7s,baz=313,slow=24,SNR=6.9							
KMBL	Kambalda	20.42	167	*e*P	P	16 32 02.6	+3.7
56nm,0.4s							
NWAO	Narrogin (SRO)	21.43	179	*e*P	P	16 32 15.9	+6.2
193nm,0.4s							
NWAO	Narrogin (SRO)	21.43	179	P	P	16 32 16.0	+6.2
25nm,0.4s,mb4.9,baz=6.4,slow=11,SNR=34							
NWAO				S	Sx	16 35 58.8	
20nm,0.5s,baz=286,slow=13,SNR=8.4							
FORT	Forrest	21.93	153	P	P	16 32 21.6	+6.4
32nm,0.7s,mb4.9							
IPM	Ipoh	22.25	314	P	P	16 32 20.0	+1.3
PSI	Prapat	22.69	307	P	P	16 32 24.9	+1.5
6.7nm,0.6s,mb4.2,baz=107,slow=10,SNR=8.0							
COEN	Coen	25.86	98	*e*P	P	16 32 53.9	+0.6
BBOO	Buckleboo	27.70	143	*e*P	P	16 33 11.7	+2.0
4.2nm,0.8s,mb4.1							
STKA	Stephens Creek	30.63	136	*e*P	P	16 33 38.1	+2.4
2.4nm,0.9s,mb4.0							
STKA	Stephens Creek	30.63	136	P	P	16 33 38.4	+2.6
1.8nm,0.7s,mb4.0,baz=308,slow=14,SNR=8.3							
CMAR	Chiang Mai Arr	34.50	329	P	P	16 34 10.0	+0.3
0.8nm,0.6s,mb3.8,baz=158,slow=6.2,SNR=9.1							
MJAR	Matsushiro Arr	51.78	22	P	P	16 36 27.8	-1.2
0.3nm,0.6s,mb3.4,baz=249,slow=21,SNR=3.4							
ULN	Ulaanbaatar	59.64	352	*e*P	P	16 37 23.8	-1.3
0.8nm,0.7s,mb3.9							
SONM	Songino Array	59.69	352	P	P	16 37 25.1	-0.4
1.8nm,0.7s,mb4.2,baz=169,slow=9.1,SNR=14							
MKAR	Makanchi Array	65.64	335	P	P	16 38 05.4	+0.2
2.1nm,0.5s,mb4.4,baz=138,slow=7.1,SNR=25							
KURK	Kurchatov	70.22	335	*e*P	P	16 38 32.4	-1.6
3.8nm,0.8s,mb4.4							
ZAA0	Zalesovo Array	70.54	341	*e*P	P	16 38 34.3	-1.5
ZALV	Zalesovo Beam	70.54	341	P	P	16 38 34.7	-1.1
2.4nm,0.5s,mb4.4,baz=144,slow=4.1,SNR=14							
BVAR	Borovoye Array	75.41	333	P	P	16 39 04.9	+0.2
0.9nm,0.7s,mb3.8,baz=166,slow=6.9,SNR=5.9							
ABKAR	Akbulak array	78.29	326	*e*P	P	16 39 20.2	-0.9
5.3nm,1.0s,mb4.4							
QSPA	South Pole Qui	78.61	180	P	P	16 39 25.1	+2.8
1.0nm,0.9s,mb3.8,baz=24,slow=7.7,SNR=3.1							
TIXI	Tiksi	83.26	4	*e*P	P	16 39 46.0	-1.1
2.0nm,0.8s,mb4.2							
TORD	Torodi Ar. Bea	116.71	279	PKP	PKPdf	16 46 07.3	+1.0
0.3nm,0.5s,baz=115,slow=1.7,SNR=3.7							
LPAZ	La Paz	152.06	170	PKPbc	PKPbc	16 47 21.1	+3.8
0.8nm,0.5s,baz=132,slow=3.8,SNR=5.6							

*CSEM **01** 16:30:20.9±0.3, 35°.76N×21°.31E, h5km, ML3.5/1, Error ellipse: s-maj=8.6km s-min=3.6km az=69.0*
*ATH **01** 16:30:21.7, 35°.79N×21°.40E, h21km±1km, MD3.6/7*
*THE **01** 16:30:22.9, 35°.83N×21°.49E, h0km±2km, ML3.5/1, Error ellipse: s-maj=5.5km s-min=1.0km az=252.0*

ISC 01 16:30:20.9±2.0, 35°.77N±0°.06×21°.3E±0°.2, h4km±10km, n23, σ0°.28/33, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	1.18	17	P	Pg	16 30 43.5	0.0
PYL				S	Sg	16 30 58.8	0.0
PYL	PYLOS	1.18	17	*e*PN	Pn	16 30 43.6	-0.6
PYL				*e*SN	Sg	16 30 58.8	0.0
PYL	PYLOS	1.18	17	*e*Pn	Pn	16 30 43.6	-0.6
PYL				S	Sg	16 30 58.8	0.0
KYTH	Kithira	1.48	69	*e*PN	Pn	16 30 48.4	0.0
KYTH	Kithira	1.48	69	*e*Pn	Pn	16 30 48.4	0.0
ITM	Ithomi	1.49	19	P	Pn	16 30 48.6	+0.1
ITM				S	Sn	16 31 08.5	0.0
ITM	Ithomi	1.49	19	*e*PN	Pn	16 30 48.5	0.0
ITM				*e*SN	Sn	16 31 08.5	0.0
ITM	Ithomi	1.49	19	*e*Pn	Pn	16 30 48.5	0.0
ITM				S	Sn	16 31 08.5	0.0
VLI	Veliai	1.61	53	*e*PN	Pn	16 30 49.8	-0.4
VLI				*e*SN	Sn	16 31 11.2	-0.3
VLI	Veliai	1.61	53	*e*Pn	Pn	16 30 49.8	-0.4
VLI				*e*Sn	Sn	16 31 11.2	-0.3
VLX	Vlachokerasia	1.81	28	P	Pn	16 30 53.1	+0.2
VLX				S	Sn	16 31 16.7	+0.3
VLX	Vlachokerasia	1.81	28	*e*PN	Pn	16 30 53.5	+0.6
VLX	Vlachokerasia	1.81	28	P	Pn	16 30 53.1	+0.2
VLX	Vlachokerasia	1.81	28	*e*Pn	Pn	16 30 53.5	+0.6
VLX				S	Sn	16 31 16.7	+0.3
KARN	Karanos	2.15	99	P	Pn	16 30 57.4	-0.1
KARN	Karanos	2.15	99	*e*PN	Pn	16 30 57.8	+0.3
KARN	Karanos	2.15	99	P	Pn	16 30 57.4	-0.1
KARN	Karanos	2.15	99	*e*Pn	Pn	16 30 57.8	+0.3
GUR	Goura	2.31	20	P	Pn	16 31 00.0	+0.2
GUR	Goura	2.31	20	P	Pn	16 31 00.0	+0.2
IDI	Anoyia	2.95	98	*e*Pn	Pn	16 31 08.8	+0.2
IDI	Anoyia	2.95	98	*e*PN	Pn	16 31 08.8	+0.2
IDI	Anoyia	2.95	98	*e*Pn	Pn	16 31 08.8	+0.2

*BGS **01** 16:34:57.0±1.6, 50°.73N×164°.42E, h33km, mb5.1*
*MOS **01** 16:35:00.4±1.0, 51°.63N×159°.21E, h14km, mb5.4/89, MS4.9/13, Error ellipse: s-maj=8.9km s-min=4.4km az=99.6*
*KRSC **01** 16:35:03.3±0.2, 51°.68N×159°.52E, h11km±11km, ML5.5*
*ISCJB **01** 16:35:05.3±0.5, 51°.61N±0°.03×159°.26E±0°.04, h50km±3km, mb5.1/243, MS5.0/31, Error ellipse: s-maj=6.0km s-min=3.3km az=141.7*
*BJI **01** 16:35:05.7, 51°.78N×158°.92E, h50km, mB5.2/24, mb5.1/51, Ms5.2/40, Ms7 4.9/37*
*NEIC **01** 16:35:06.0±0.2, 51°.62N×159°.28E, mb5.1/121, Error ellipse: s-maj=6.1km s-min=4.3km az=162.0*
*SZGRF **01** 16:35:08.5, 52°.04N×159°.98E, h42km, mb5.2, Off east coast of Kamchatka Peninsula, Russia*
*IDC **01** 16:35:10.9±1.6, 51°.67N×159°.18E, h87km±13km, mb4.5/32, mb1 4.6/32, mb1mx4.6/33, mbtmp4.5/32, MS4.8/2, Ms1 4.8/2, ms1mx3.9/33, Error ellipse: s-maj=13.0km s-min=9.2km az=151.0*

ISC 01 16:35:07.6±0.5, 51°.65N±0°.03×159°.20E±0°.05, h53km±3km, h45km±1.4km: pP-P, n679, σ0°.90/698, mb5.1/243, MS5.0/31, 70C-24D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	Gorelyy	1.14	323	*i* P	Pn	16 35 28.0	+0.8
PET	Petropavlovsk	1.41	347	α *i* PN	Pn	16 35 30.0	-0.9
PET				*e*S	Sn	16 35 52.3	+3.9
PET				pmax	pmax		
comp=Z,6μm,0.5s							
PET				smax			
comp=N,35μm,0.9s							
PET				smax			
comp=N,41μm,0.9s							
PET				MLR	MLR		
comp=Z,26μm,12.8s							
PET				MLR	MLR		
comp=Z,35μm,15.1s							
PET	Petropavlovsk	1.41	347	*i* P	Pn	16 35 30.0	-0.9
PET	Petropavlovsk	1.41	347	⇑*e*P	Pn	16 35 29.9	-1.0
INSR	Institute	1.46	346	*e*P	Pn	16 35 31.0	-0.6
INSR				*e*S	Sn	16 35 51.9	+2.3
SPN	Mys Shipunski	1.53	19	*e*P	Pn	16 35 32.0	-0.6
MIPR	Malaya Ipel'ka	1.63	293	*i* P	Pn	16 35 35.5	+1.6
SDLR	Sedlovina	1.64	353	*i* P	Pn	16 35 32.7	-1.3
PEA0B	Petropavlovsk-	1.72	328	⇑*e*P	Pn	16 35 35.9	+0.7
PETK	Petropavlovsk-	1.72	328	P	Pn	16 35 37.2	+2.1
comp=Z,2μm,0.3s,baz=125,slow=14,SNR=2122							
PETK				S	Sn	16 36 01.8	+5.8
comp=Z,634nm,0.3s,baz=111,slow=16,SNR=4.0							
SKR	Severo-Kuril's	2.17	245	⇑*i* PN	Pn	16 35 37.0	-4.2
SKR				*e*S	Sn	16 36 07.5	+0.6
SKR				pmax	pmax		
comp=Z,3μm,2.0s							
SKR				pmax	pmax		
comp=E,2μm,4.0s							
SKR				pmax	pmax		
comp=N,270nm,0.8s							
SKR				pmax	pmax		
comp=Z,1μm,0.8s							
SKR				pmax	pmax		
comp=E,310nm,0.5s							
SKR				smax			
comp=N,8μm,0.6s							
SKR				smax			
comp=E,5μm,0.6s							
SKR				smax			
comp=N,30μm,2.0s							
SKR				smax			
comp=E,22μm,2.0s							
SKR				MLR	MLR		
comp=N,33μm,14.0s							
SKR				MLR	MLR		
comp=E,33μm,14.0s							
SKR				MLR	MLR		
comp=Z,27μm,14.0s							
GNL	Ganaly	2.18	340	*i* P	Pn	16 35 41.9	+0.5
KII	Karymskiy	2.39	4	*i* P	Pn	16 35 43.1	-1.2
ALID	Alaid	2.42	253	*i* P	Pn	16 35 44.6	-0.1
ALID				*i* S	Sn	16 36 13.7	+0.6
MKZ	Mys Kozlova	3.28	27	*i* P	Pn	16 35 52.6	-3.9
MKZ				*i* S	Sn	16 36 28.2	-6.0
KMNR	Kamenistaya	4.16	8	*e*P	Pn	16 36 08.5	+0.1
KMNR				*e*S	Sn	16 36 55.9	+0.2
BZGR	Bezymyannyi-Gr	4.39	11	*e*P	Pn	16 36 11.2	-0.4
KOZ	Kozyrevsk	4.43	5	*e*P	Pn	16 36 12.9	+0.7
KOZ				*i* S	Sn	16 37 02.4	0.0
KOZR	Kozyr	4.44	5	PN	Pn	16 36 12.9	+0.6
KOZR				S	Sn	16 37 02.4	-0.2
ZLN	Zelenaya	4.47	12	*e*P	Pn	16 36 12.5	-0.3
KRSR	Krestovskiy	4.64	9	*e*P	Pn	16 36 14.3	-0.8
SRDR	Sredinnyy	4.68	4	*e*P	Pn	16 36 15.2	-0.4
KLY	Klyuchi	4.75	10	*e*P	Pn	16 36 15.1	-1.4
SRKR	Sorokina	5.14	12	*e*P	Pn	16 36 21.2	-0.7
KUR	Kuril'sk	9.89	234	*e*PN	Pn	16 37 33.0	+6.0
KUR				S	Sn	16 39 29.0	+13
KUR				pmax	pmax		
comp=E,110nm,1.0s							
KUR				pmax	pmax		
comp=Z,190nm,1.0s							
KUR				smax			
comp=N,190nm,1.0s							
KUR				smax			
comp=E,180nm,1.0s							
KUR				smax			
comp=N,2μm,2.0s							
KUR				smax			
comp=E,2μm,2.0s							
YSS	Yuzh-Sakhalins	11.71	253	*e*PN	Pn	16 37 51.6	-0.2
YSS				pmax	pmax		
comp=Z,90nm,1.4s							
YSS				MLR	MLR		
comp=Z,2μm,16.0s							
YSS	Yuzh-Sakhalins	11.71	253	*e*P	Pn	16 37 53.4	+1.6
comp=Z,91nm,1.2s							
ASAJ	Asahikawa	13.43	242	P	Pn	16 38 14.7	-0.6
comp=Z,1.0nm,0.3s,baz=71,slow=10,SNR=11							
ASAJ	Asahikawa	13.43	242	PN	Pn	16 38 14.7	-0.6
ASAJ				pmax	pmax		
comp=Z,1.0nm,0.3s							
HABR	Khabarovsk	15.81	268	*de*P	Pn	16 38 47.2	+0.7
HABR				*e*		16 41 38.3	
HABR				pmax	pmax		
comp=N,2.0nm,0.3s							
HABR				pmax	pmax		
comp=E,29nm,1.1s							
HABR				pmax	pmax		
comp=Z,23nm,1.1s							
HABR				MLR	MLR		
comp=Z,3μm,19.0s							
YAK	Yakutsk	19.02	315	*c i* P	Pn	16 39 23.2	-2.7
YAK				*e*S	S	16 42 55.0	-2.4
YAK				pmax	pmax		
comp=Z,327nm,0.9s							
YAK				pmax	pmax		
comp=E,128nm,1.2s							
YAK				pmax	pmax		
comp=N,50nm,1.1s							
YAK				smax			
comp=N,118nm,1.8s							
YAK				smax			
comp=E,172nm,1.6s							
YAK				MLR	MLR		
comp=Z,3μm,12.0s							
YAK				MLR	MLR		
comp=E,1μm,13.0s							
YAK				MLR	MLR		
comp=N,2μm,14.0s							
YAK	Yakutsk	19.02	315	*e*P	Pn	16 39 23.1	-2.8
comp=N,343nm,0.8s							
VLA	Vladivostok	20.27	256	*e*P	P	16 39 34.7	-3.8
VLA				*e*		16 39 39.9	
VLA				pmax	pmax		
comp=Z,101nm,1.3s							
CLNS	Chul'man	20.56	298	*e*P	P	16 39 46.4	+4.9
CLNS				*e*		16 40 05.7	
CLNS				*e*		16 43 48.7	
CLNS				*e*SS		16 44 11.8	
CLNS				*e*		16 51 07.9	
CLNS				pmax	pmax		
comp=Z,30nm,1.0s							
CLNS				pmax	pmax		
comp=N,18nm,1.1s							
CLNS				pmax	pmax		
comp=E,40nm,1.0s							
CLNS				pmax	pmax		
comp=Z,26nm,1.0s							
CLNS				pmax	pmax		
comp=E,28nm,1.1s							
CLNS				pmax	pmax		
comp=N,27nm,1.1s							
CLNS				MLR	MLR		
comp=E,874nm,14.0s,MS4.6							
CLNS				MLR	MLR		
comp=N,2μm,18.0s,MS4.6							
CLNS				MLR	MLR		
comp=Z,1μm,20.0s,MS4.3							
UNV	Unalaska Valle	20.76	70	P	P	16 39 39.3	-4.4
comp=Z,59nm,1.1s							
MDJ	Mudanjiang	20.88	262	P	P	16 39 42.8	-2.2
MDJ				pP		16 39 54.3	
MDJ				sP	sP	16 40 01.1	-2.6
MDJ				S	S	16 43 30.2	-4.4
MDJ				sS	sS	16 43 49.7	-4.5
MDJ				ScP	ScP	16 47 25.2	+2.0
MDJ				pmax	pmax		
comp=Z,24nm,0.8s							
MDJ				pmax	pmax		
comp=Z,2μm,8.3s							
MDJ				LR	LR		
comp=N,2μm,20.7s,MS4.6							
MDJ				LR	LR		
comp=E,2μm,20.1s,MS4.6							
MDJ				LR	LR		
comp=Z,3μm,20.4s,MS4.6							
MJAR	Matsushiro Arr	21.23	233	P	P	16 39 48.8	-0.1
comp=Z,36nm,1.0s,mb4.7,baz=26,slow=10,SNR=89							
MAJO	Matsushiro	21.23	233	*e*P	P	16 39 48.5	-0.4
MAJO				pmax	pmax		
comp=E,61nm,0.8s,mb5.0							
MAJO	Matsushiro	21.23	233	*e*P	P	16 39 48.5	-0.4
comp=E,61nm,0.8s,mb5.0							
MAT	Matsushiro	21.23	233	P	P	16 39 48.5	-0.4
MAT				S	S	16 43 29.0	-13
TNA	T

comp=Z,13nm,0.9s,mb4.5
CIT Chita 27.86 289 *e*P **P** **16 40 51.4 -0.4**
CIT *e* 16 41 35.0
CIT pmax pmax
comp=Z,65nm,1.1s,mb5.2
BJI Beijing 31.69 266 P **P** **16 41 26.1 +0.3**
BJI S **S** **16 46 31.6 +0.2**
BJI pmax pmax
comp=Z,15nm,0.6s,mb5.0
BJI pmax pmax
comp=Z,1μm,10.3s
BJI LR LR
comp=N,3μm,18.9s,MS5.2
BJI LR LR
comp=E,3μm,17.6s,MS5.2
BJI LR LR
comp=Z,3μm,18.9s,MS4.9
EGAK Eagle 32.68 43 *e*P **P** **16 41 31.7 -2.6**
comp=Z,13nm,0.7s,mb5.0
IRK Irkutsk 33.18 293 *e*P **P** **16 41 37.9 -0.8**
IRK pmax pmax
comp=Z,33nm,1.3s,mb5.1
ULN Ulaanbaatar 33.31 284 *ce*P **P** **16 41 39.3 -0.6**
ULN Ulaanbaatar 33.31 284 *e*P **P** **16 41 38.5 -1.4**
comp=Z,13nm,0.9s,mb4.8
ULN Ulaanbaatar 33.31 284 P **P** **16 41 39.8 -0.1**
SNR=7.6
ULN P 16 41 39.8
SNR=7.6
ULN P 16 41 39.8
SNR=7.6
ULN P 16 41 39.8
SNR=7.6
ULN P 16 41 39.8
SNR=7.6
ULN P 16 41 39.8
SNR=7.6
ULN P 16 41 39.8
SNR=7.6
ULN P 16 41 39.8
SNR=7.6
ULN P 16 41 39.8
SNR=7.6
ULN P 16 41 39.8
SNR=7.6
ULN Ulaanbaatar 33.31 284 P **P** **16 41 39.8 -0.1**
SNR=7.6
ULN P 16 41 39.8
SNR=7.6
ULN P 16 41 39.8
SNR=7.6
ULN P 16 41 39.8
SNR=7.6
ULN Ulaanbaatar 33.31 284 P **P** **16 41 39.8 -0.1**
SNR=7.6
ULN P 16 41 39.8
SNR=7.6
SONM Songino Array 33.72 285 P **P** **16 41 43.5 0.0**
comp=Z,5.8nm,0.7s,mb4.6,baz=52,slow=6.3,SNR=29
SONM PcP PcP 16 44 21.9 0.0
comp=Z,2.5nm,0.7s,baz=90,slow=2.0,SNR=4.6
TLY Talaya 33.75 292 *e*P **P** **16 41 43.5 -0.2**
TLY pmax pmax
comp=Z,31nm,1.3s,mb5.1
TLY Talaya 33.75 292 *e*P **P** **16 41 43.3 -0.4**
comp=Z,17nm,1.1s,mb4.9
TLY Talaya 33.75 292 P **P** **16 41 44.2 +0.5**
SNR=7.1
TLY P 16 41 44.2
SNR=7.1
TLY P 16 41 44.2
SNR=7.1
TLY P 16 41 44.2
SNR=7.1
TLY P 16 41 44.2
SNR=7.1
TLY P 16 41 44.2
SNR=7.1
TLY P 16 41 44.2
SNR=7.1
TLY P 16 41 44.2
SNR=7.1
TLY P 16 41 44.2
SNR=7.1
TLY Talaya 33.75 292 P **P** **16 41 44.2 +0.5**
SNR=7.1
TLY P 16 41 44.2
SNR=7.1
TLY P 16 41 44.2
SNR=7.1
TLY P 16 41 44.2
SNR=7.1
TLY Talaya 33.75 292 P **P** **16 41 44.2 +0.5**
SNR=7.1
TLY P 16 41 44.2
SNR=7.1
HHC Hu-ho-hao-te 34.09 271 *e*P **P** **16 41 48.1 +1.3**
HHC pP pP 16 42 03.2 +2.8
HHC PP PP 16 43 02.7 -1.9
HHC PcP PcP 16 44 25.3 +2.2
HHC S **S** **16 47 07.3 -1.4**
HHC sS sS 16 47 33.6 +1.9
HHC ScP ScP 16 48 03.2 0.0
HHC PcS PcS 16 48 10.2 +1.0
HHC SS SS 16 49 18.3 -19
HHC ScS ScS 16 52 04.3 -1.0
HHC pmax pmax
comp=Z,13nm,0.9s,mb4.9
HHC pmax pmax
comp=Z,670nm,6.4s
HHC LR LR
comp=N,2μm,15.6s,MS5.2
HHC LR LR
comp=E,3μm,16.8s,MS5.2
HHC LR LR
comp=Z,3μm,16.8s,MS5.1
ZAK Zakamensk 34.47 290⇑ *i*P **P** **16 41 50.2 +0.2**
ZAK *e* 16 44 24.8
ZAK pmax pmax
comp=Z,22nm,1.1s,mb5.0
MOY Mondy 35.27 294 *e*P **P** **16 41 57.3 +0.5**
MOY pmax pmax
comp=Z,37nm,1.0s,mb5.3
NJ2 Nanjing 35.28 252 *e*P **P** **16 41 58.0 +0.8**
NJ2 pP pP 16 42 12.1 +1.3
NJ2 PP PP 16 43 17.2 -0.7
NJ2 S **S** **16 47 26.0 -1.2**
NJ2 pmax pmax
comp=Z,30nm,1.2s,mb5.1
NJ2 pmax pmax
comp=Z,190nm,6.0s
NJ2 LR LR
comp=N,3μm,18.2s,MS5.1
NJ2 LR LR
comp=E,1μm,19.8s,MS5.1
NJ2 LR LR
comp=Z,4μm,18.2s,MS5.2
INK Inuvik 35.35 36 P **P** **16 41 56.6 -0.7**
comp=Z,14nm,0.8s,mb4.9,baz=291,slow=7.6,SNR=48
INK Inuvik 35.35 36 P **P** **16 41 56.7 -0.7**
INK pmax pmax
comp=Z,14nm,0.8s
INK Inuvik 35.35 36 *e*P **P** **16 41 56.3 -1.0**
comp=Z,15nm,0.8s,mb5.0
WHN Wuhan 39.05 255⇑P **P** **16 42 28.9 -0.2**
WHN *e*S **S** **16 48 30.0 +5.6**
WHN LR LR
comp=Z,5μm,19.2s,MS5.3
DLBC Dease Lake 39.36 52 P **P** **16 42 31.9 +0.5**
comp=Z,3.1nm,0.8s,mb4.1,baz=294,slow=9.3,SNR=6.9
DLBC Dease Lake 39.36 52 *e*P **P** **16 42 31.1 -0.2**
XAN Xi'an 39.96 264 P **P** **16 42 36.2 -0.5**
XAN pP pP 16 42 50.0 -0.5
XAN sP sP 16 42 56.2 -0.5
XAN PP PP 16 44 09.3 +0.1
XAN ScP ScP 16 48 26.1 +0.9
XAN S **S** **16 48 38.8 +0.7**
XAN pmax pmax
comp=Z,4.0nm,1.1s,mb4.1
XAN LR LR
comp=N,2μm,18.7s,MS5.0
XAN LR LR
comp=E,680nm,17.1s,MS5.0
XAN LR LR
comp=Z,760nm,19.1s,MS4.6

QZH Quanzhou 40.76 245 P **P** **16 42 43.4 +0.1**
QZH S **S** **16 48 49.1 -1.0**
QZH LR LR
comp=N,3μm,20.4s,MS5.3
QZH LR LR
comp=E,3μm,18.9s,MS5.3
QZH LR LR
comp=Z,3μm,27.0s
LZH Lanzhou 41.79 270 P **P** **16 42 52.2 +0.5**
LZH pP pP 16 43 07.0 +1.4
LZH sP sP 16 43 14.0 +2.3
LZH PP PP 16 44 32.0 +3.1
LZH *e*S **S** **16 49 04.0 -1.2**
LZH sS sS 16 49 30.2 +1.6
LZH SS SS 16 52 05.0 -7.4
LZH pmax pmax
comp=Z,30nm,1.0s,mb4.9
LZH pmax pmax
comp=Z,130nm,6.4s
LZH LR LR
comp=N,4μm,15.0s
LZH LR LR
comp=Z,5μm,16.8s,MS5.4
GTA Gaotai 42.23 277 *e*P **P** **16 42 55.1 -0.1**
GTA pP pP 16 43 10.6 +1.5
GTA sP sP 16 43 17.2 +1.9
GTA S **S** **16 49 11.6 -0.1**
GTA SS SS 16 52 16.3 -4.7
GTA pmax pmax
comp=Z,18nm,1.0s,mb4.7
GTA pmax pmax
comp=Z,930nm,7.5s
GTA LR LR
comp=N,1μm,18.3s,MS5.1
GTA LR LR
comp=E,2μm,16.8s,MS5.1
GTA LR LR
comp=Z,3μm,17.4s,MS5.2
ZALV Zalesovo Beam 43.11 304 P **P** **16 43 00.2 -1.9**
comp=Z,8.2nm,0.8s,mb4.5,baz=58,slow=6.8,SNR=35
ZALV PcP PcP 16 44 49.2 -1.8
comp=Z,3.1nm,0.6s,baz=62,slow=3.5,SNR=6.1
ZALV Zalesovo Beam 43.11 304 P **P** **16 43 00.2 -1.9**
ZALV PcP PcP 16 44 49.2 -1.8
NVS Novosibirsk 43.49 305⇑ *i*P **P** **16 43 03.2 -2.0**
NVS *i* 16 44 50.4
NVS *i* S **S** **16 49 26.9 -2.8**
NVS pmax pmax
comp=Z,55nm,0.9s,mb5.3
NVS pmax pmax
comp=N,30nm,1.4s
NVS pmax pmax
comp=E,57nm,1.2s
NVS pmax pmax
comp=N,21nm,2.1s
NVS pmax pmax
comp=Z,33nm,2.1s,mb4.7
NVS pmax pmax
comp=E,12nm,1.3s
NVS smax
comp=N,8.0nm,1.3s
NVS smax
comp=E,27nm,1.8s
ALE Alert 44.42 7 P **P** **16 43 12.0 -0.4**
comp=E,197nm,0.7s,mb6.0,SNR=16
YKA Yellowknife Ar 44.60 41 P **P** **16 43 13.4 -0.6**
comp=E,5.4nm,0.8s,mb4.4,baz=299,slow=7.9,SNR=20
YKA Yellowknife Ar 44.60 41 P **P** **16 43 13.4 -0.6**
RES Resolute Bay 44.87 21 P **P** **16 43 15.2 -0.8**
comp=E,5.2nm,0.7s,mb4.5,baz=298,slow=7.4,SNR=19
CD2 Chengdu 45.29 265 *e*P **P** **16 43 19.5 -0.3**
CD2 pP pP 16 43 34.9 +1.0
CD2 sP sP 16 43 42.1 +2.1
CD2 PP PP 16 45 06.6 +0.2
CD2 S **S** **16 49 54.1 -2.2**
CD2 sS sS 16 50 20.8 +0.9
CD2 SS SS 16 53 09.0 -11
CD2 pmax pmax
comp=Z,30nm,1.1s,mb5.0
CD2 pmax pmax
comp=Z,100nm,4.2s
CD2 LR LR
comp=N,2μm,15.4s,MS5.2
CD2 LR LR
comp=E,1μm,17.8s,MS5.2
CD2 LR LR
comp=Z,3μm,15.4s,MS5.3
GYA Guiyang 46.66 258⇑ *i*P **P** **16 43 30.8 +0.1**
GYA pP pP 16 43 48.6 +3.8
GYA sP sP 16 43 54.2 +3.3
GYA PcP PcP 16 45 06.8 +3.1
GYA PP PP 16 45 22.4 +1.5
GYA ScP ScP 16 48 53.2 +0.7
GYA PcS PcS 16 48 59.7 +1.0
GYA S **S** **16 50 15.8 -0.3**
GYA sS sS 16 50 41.7 +1.9
GYA SS SS 16 53 36.4 -6.2
GYA pmax pmax
comp=Z,40nm,1.0s,mb5.3
GYA pmax pmax
comp=Z,150nm,5.3s
GYA LR LR
comp=N,530nm,16.9s,MS4.7
GYA LR LR
comp=E,520nm,17.0s,MS4.7
GYA LR LR
comp=Z,620nm,17.2s,MS4.6
WMQ Urumqi 46.94 290 P **P** **16 43 33.0 +0.3**
WMQ pP pP 16 43 49.0 +2.2
WMQ sP sP 16 43 56.0 +3.1
WMQ PP PP 16 45 23.0 -0.4
WMQ S **S** **16 50 19.0 -0.8**
WMQ ScS ScS 16 53 19.0 -2.9
WMQ SS SS 16 53 40.0 -6.5
WMQ pmax pmax
comp=Z,57nm,1.0s,mb5.5
WMQ pmax pmax
comp=Z,110nm,4.0s
WMQ LR LR
comp=N,1μm,16.0s,MS5.1
WMQ LR LR
comp=E,1μm,16.0s,MS5.1
WMQ LR LR
comp=Z,980nm,15.0s,MS4.9
KURK Kurchatov 48.04 302 P **P** **16 43 39.4 -1.7**
comp=Z,424nm,0.8s,mb6.5,SNR=69
KURK Kurchatov 48.04 302 P **P** **16 43 40.0 -1.1**
comp=Z,34nm,0.8s,mb5.5,baz=62,slow=7.7,SNR=77
KURK PcP PcP 16 45 06.3 -1.9
comp=Z,5.2nm,0.8s,baz=55,slow=5.2,SNR=4.1
KURK Kurchatov 48.04 302 *e*P **P** **16 43 39.6 -1.5**
KURK pmax pmax
comp=Z,61nm,0.9s,mb5.6
KURK Kurchatov 48.04 302 *e*P **P** **16 43 39.6 -1.5**
comp=Z,61nm,0.9s,mb5.6
KURK Kurchatov 48.04 302 P **P** **16 43 40.0 -1.1**
SNR=28
KURK P 16 43 40.0
SNR=28
KURK P 16 43 40.0
SNR=28
KURK P 16 43 40.0
SNR=28
KURK P 16 43 40.0
SNR=28
KURK P 16 43 40.0
SNR=28
KURK P 16 43 40.0
SNR=28
KURK P 16 43 40.0
SNR=28
KURK P 16 43 40.0
SNR=28
KURK P 16 43 40.0
SNR=28
KURK Kurchatov 48.04 302 P **P** **16 43 40.0 -1.1**
SNR=28
KURK P 16 43 40.0
SNR=28
KURK P 16 43 40.0
SNR=28
KURK P 16 43 40.0
SNR=28
KURK Kurchatov 48.04 302 P **P** **16 43 40.0 -1.1**
SNR=28
KURK P 16 43 40.0

SNR=28
KBS Kingsbay 48.23 352⇑ *i*P **P** **16 43 42.4 +0.2**
KBS AMb AMB 16 43 44.1
comp=Z,121nm,0.6s,mb6.1
KBS Kingsbay 48.23 352 *ce*P **P** **16 43 43.1 +0.8**
KBS pmax pmax
comp=Z,69nm,0.7s,mb5.8
KBS Kingsbay 48.23 352 *e*P **P** **16 43 42.1 -0.1**
comp=Z,74nm,0.9s,mb5.7
MKAR Makanchi Array 48.29 296 P **P** **16 43 41.8 -1.4**
comp=Z,4.2nm,0.5s,mb4.8,baz=52,slow=8.0,SNR=48
SPITS Spitsbergen Ar 48.47 350 P **P** **16 43 44.0 -0.1**
comp=Z,51nm,0.6s,mb5.8,baz=57,slow=9.1,SNR=177
SPB4 Spitsbergen Ar 48.47 350 *e*P **P** **16 43 43.8 -0.3**
KMI Kunming 50.04 260⇑P **P** **16 43 57.6 +0.9**
KMI pP pP 16 44 13.3 +2.4
KMI sP sP 16 44 19.4 +2.4
KMI PcP PcP 16 45 18.8 +2.9
KMI PP PP 16 45 53.4 +1.4
KMI ScP ScP 16 49 07.7 +0.9
KMI PcS PcS 16 49 13.7 +0.7
KMI S **S** **16 51 03.8 0.0**
KMI ScS ScS 16 53 42.0 -1.1
KMI SS SS 16 54 32.1 -5.0
KMI pmax pmax
comp=Z,29nm,1.2s,mb5.2
KMI pmax pmax
comp=Z,620nm,8.7s
KMI LR LR
comp=N,2μm,21.0s,MS5.2
KMI LR LR
comp=E,2μm,18.8s,MS5.2
KMI LR LR
comp=Z,2μm,18.8s,MS5.1
EDM Edmonton 50.08 52 *e*P **P** **16 43 56.1 -0.6**
QIZ Qiongzhong 50.40 249 P **P** **16 43 59.7 +0.2**
QIZ pP pP 16 44 13.5 -0.2
QIZ sP sP 16 44 20.0 +0.2
QIZ S **S** **16 51 06.2 -2.7**
QIZ pmax pmax
comp=Z,38nm,1.1s,mb5.3
QIZ LR LR
comp=N,2μm,17.3s
QIZ LR LR
comp=Z,3μm,19.2s,MS5.3
BVAR Borovoye Array 50.86 309 P **P** **16 44 01.0 -1.6**
comp=Z,32nm,0.6s,mb5.4,baz=56,slow=7.9,SNR=219
BVAR PcP PcP 16 45 15.9 -2.5
comp=Z,3.8nm,0.5s,baz=57,slow=5.5,SNR=3.6
BVAR LR LR 17 07 48.3
comp=Z,2μm,18.6s,MS5.2,baz=36,slow=38
BVAR Borovoye Array 50.86 309 P **P** **16 44 01.0 -1.6**
BVAR 16 45 15.9
BRVK Borovoye 50.89 309 P **P** **16 44 01.0 -1.8**
comp=Z,368nm,0.8s,SNR=37
BRVK Borovoye 50.89 309 *ce*P **P** **16 44 01.2 -1.6**
BRVK pmax pmax
comp=Z,53nm,0.8s,mb5.5
BRVK Borovoye 50.89 309 *e*P **P** **16 44 00.9 -1.9**
comp=Z,43nm,0.7s,mb5.5
BRVK Borovoye 50.89 309 P **P** **16 44 01.6 -1.2**
SNR=16
BRVK P 16 44 01.6
SNR=16
BRVK P 16 44 01.6
SNR=16
BRVK P 16 44 01.6
SNR=16
BRVK P 16 44 01.6
SNR=16
BRVK P 16 44 01.6
SNR=16
BRVK P 16 44 01.6
SNR=16
BRVK P 16 44 01.6
SNR=16
BRVK Borovoye 50.89 309 P **P** **16 44 01.6 -1.2**
SNR=16
BRVK P 16 44 01.6
SNR=16
BRVK P 16 44 01.6
SNR=16
BRVK P 16 44 01.6
SNR=16
BRVK Borovoye 50.89 309 P **P** **16 44 01.6 -1.2**
SNR=16
BRVK P 16 44 01.6
SNR=16
DAG Danmarks Havn 51.84 359⇓ *i*P **P** **16 44 09.3 -0.3**
DAG pmax pmax
comp=Z,27nm,0.9s,mb5.2
DAG MLR MLR
comp=Z,10μm,21.0s,MS5.8
DAG MLR MLR
comp=N,4μm,22.0s,MS5.6
DAG MLR MLR
comp=E,4μm,21.0s,MS5.6
DAG Danmarks Havn 51.84 359⇓ *i*P **P** **16 44 09.3 -0.3**
comp=E,27nm,0.9s,mb5.2
DAG
comp=Z,9μm,21.0s
YBH Yreka Blue Hor 52.05 68 P **P** **16 44 16.9 +5.3**
comp=Z,1.7nm,1.0s,baz=305,slow=11,SNR=3.1
BSMT Bassoo Peak 52.60 58 *e*P **P** **16 44 14.4 -1.3**
comp=Z,15nm,0.8s,mb5.0
SOKR Solikamsk 52.76 321 *d i*P **P** **16 44 15.6 -1.0**
SOKR pmax pmax
comp=Z,20nm,1.3s,mb4.9
SVE Sverdlovsk 52.96 317⇑ *e*P **P** **16 44 17.3 -0.8**
SVE pmax pmax
comp=Z,39nm,1.2s,mb5.2
MOD Modoc 53.33 67 *e*P **P** **16 44 17.1 -4.0**
comp=Z,19nm,1.0s,mb5.0
LVZ Lovozero 53.82 337 P **P** **16 44 23.8 -0.5**
comp=Z,242nm,0.7s,mb6.2,SNR=7.4
LVZ Lovozero 53.82 337 *ce*P **P** **16 44 24.1 -0.2**
LVZ pmax pmax
comp=Z,23nm,0.7s,mb5.2
WVOR Wild Horse Val 53.93 65 *e*P **P** **16 44 24.7 -0.8**
WVOR pmax pmax
comp=Z,18nm,1.1s,mb4.9
WVOR Wild Horse Val 53.93 65 *e*P **P** **16 44 24.7 -0.8**
comp=Z,18nm,1.1s,mb4.9
LSA Lhasa 53.97 274 P **P** **16 44 27.0 +1.1**
KEV Kevo 54.01 341 *e*P **P** **16 44 24.8 -0.8**
KEV pmax pmax
comp=Z,23nm,0.8s,mb5.2
KEV Kevo 54.01 341 *e*P **P** **16 44 24.3 -1.3**
comp=Z,20nm,0.8s,mb5.1
KEV Kevo 54.01 341 *ep* **P** **16 44 24.8 -0.8**
comp=Z,23nm,0.8s,mb5.2
KEV Kevo 54.01 341 *ep* **P** **16 44 24.8 -0.8**
comp=Z,23nm,0.8s,mb5.2
ARU Arti 54.09 318 P **P** **16 44 24.5 -1.9**
comp=Z,234nm,0.4s,mb6.5,SNR=18
ARU Arti 54.09 318⇑ *e*P **P** **16 44 24.7 -1.7**
ARU *e* pP 16 44 37.8 -2.9
ARU *e* 16 46 24.9
ARU *e*S **S** **16 51 58.8 +0.3**
ARU pmax pmax
comp=Z,47nm,1.2s,mb5.3
ARU Arti 54.09 318 *e*P **P** **16 44 24.7 -1.7**
comp=Z,45nm,0.9s,mb5.4
APA Apatity 54.37 337⇓ *i*P **P** **16 44 28.0 -0.3**
APA *i* 16 44 34.0
APA pmax pmax
comp=Z,19nm,0.8s,mb5.1
TKM2 Tokmak 2 54.43 296 P **P** **16 44 28.6 -0.5**
SNR=7.1
ARCES ARCESS Array B 54.49 342 P **P** **16 44 28.6 -0.6**
comp=Z,39nm,0.8s,mb5.4,baz=38,slow=8.1,SNR=102
USP Ospenovka 54.81 297 P **P** **16 44 31.4 -0.4**
SNR=14
CHMS Chumysh 54.85 297 P **P** **16 44 31.5 -0.6**
SNR=6.2
KBK Karagaybulak 54.96 296 P **P** **16 44 32.5 -0.4**
SNR=8.6
EGMT Eagleton 55.10 55 *e*P **P** **16 44 34.0 +0.1**
comp=Z,25nm,1.5s,mb5.0
AAK Ala-Archa 55.23 297 P **P** **16 44 34.4 -0.4**
SNR=7.0
AAK Ala-Archa 55.23 297 P **P** **16 44 34.2 -0.7**
comp=Z,5.7nm,0.7s,mb4.7,baz=131,slow=4.6,SNR=18

AAK Ala-Archa 55.23 297 *e*P **P 16 44 34.2 -0.7**
AAK pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
AAK Ala-Archa 55.23 297 *e*P **P 16 44 34.2 -0.7**
comp=Z,7.3nm,0.7s,mb4.8
AAK Ala-Archa 55.23 297 P **P 16 44 34.4 -0.5**
SNR=8.6
AAK P 16 44 34.4
SNR=8.6
AAK P 16 44 34.4
SNR=8.6
AAK P 16 44 34.4
SNR=8.6
AAK P 16 44 34.4
SNR=8.6
AAK P 16 44 34.4
SNR=8.6
AAK P 16 44 34.4
SNR=8.6
AAK P 16 44 34.4
SNR=8.6
AAK P 16 44 34.4
SNR=8.6
AAK Ala-Archa 55.23 297 P **P 16 44 34.4 -0.5**
SNR=8.6
AAK P 16 44 34.4
SNR=8.6
AAK P 16 44 34.4
SNR=8.6
AAK P 16 44 34.4
SNR=8.6
AAK Ala-Archa 55.23 297 P **P 16 44 34.4 -0.5**
SNR=8.6
AAK P 16 44 34.4
SNR=8.6
KTK1 Kautokeino 55.37 342 *e*P **P 16 44 35.6 +0.2**
SUMG Summit 55.46 6 *e*P **P 16 44 36.2 +0.2**
comp=Z,32nm,0.9s,mb5.3
SUMG Summit 55.46 6 *i*P **P 16 44 36.7 +0.6**
comp=Z,29nm,1.0s,mb5.3
TRO Tromso 55.60 344⇑*i*P **P 16 44 36.8 -0.4**
TRO AMb AMB 16 44 38.0
comp=Z,62nm,1.1s,mb5.6
TRO *ep*P pP 16 44 48.2 -3.3
TRO Tromso 55.60 344⇑*i*P **P 16 44 36.8 -0.3**
TRO pmax pmax
comp=Z,62nm,1.0s,mb5.6
TRO Tromso 55.60 344⇑*i*P **P 16 44 36.8 -0.4**
comp=Z,62nm,1.0s,mb5.6
EKS2 Erkin-Say 55.61 297 P **P 16 44 37.4 -0.2**
SNR=16
EKS2 Erkin-Say 55.61 297 *e*P **P 16 44 37.0 -0.6**
comp=Z,12nm,0.8s,mb5.0
BOZ Bozeman (W) 55.68 58 P **P 16 44 39.4 +1.4**
comp=Z,3.5nm,0.6s,mb4.6
AML Almayashu 56.01 297 P **P 16 44 41.0 +0.6**
SNR=6.5
SHL Shillong 56.45 270 *e*PKP **P 16 44 44.0 +0.2**
KSH Kashi 56.46 293 *e*P **P 16 44 46.7 +3.0**
KSH pP pP 16 45 02.6 +4.5
KSH PcP PcP 16 45 42.3 +2.3
KSH PP PP 16 46 54.8 +5.4
KSH ScP ScP 16 49 34.9 +0.3
KSH PcS PcS 16 49 41.6 +1.0
KSH S **S 16 52 32.2 +1.6**
KSH ScS ScS 16 54 26.7 -1.3
KSH pmax pmax
comp=Z,13nm,1.2s,mb4.8
KSH pmax pmax
comp=Z,160nm,5.6s
KSH LR LR
comp=N,470nm,13.8s,MS5.0
KSH LR LR
comp=E,850nm,16.0s,MS5.0
KSH LR LR
comp=Z,920nm,18.4s,MS4.9
KKTK Khon Kaen 56.64 253⇑P **P 16 44 46.5 +1.3**
comp=Z,617nm,1.0s
NVAR Mina Array Bea 56.77 69 P **P 16 44 46.0 +0.1**
comp=Z,0.5nm,0.5s,baz=294,slow=7.3,SNR=5.9
CHG Chiang Mai 57.08 258⇑P **P 16 44 49.6 +1.3**
comp=Z,51nm,1.1s,mb5.5
CHTO Chiang Mai 57.08 258 *e*P **P 16 44 49.1 +0.8**
CHTO pmax pmax
comp=Z,31nm,0.7s,mb5.5
CHTO Chiang Mai 57.08 258 *e*P **P 16 44 49.1 +0.8**
comp=Z,31nm,0.7s,mb5.4
CHTO *e* pP 16 45 00.5 -2.3
CHTO Chiang Mai 57.08 258 P **P 16 44 49.8 +1.5**
SNR=16
CHTO P 16 44 49.8
SNR=16
CHTO P 16 44 49.8
SNR=16
CHTO P 16 44 49.8
SNR=16
CHTO P 16 44 49.8
SNR=16
CHTO P 16 44 49.8
SNR=16
CHTO P 16 44 49.8
SNR=16
CHTO P 16 44 49.8
SNR=16
CHTO P 16 44 49.8
SNR=16
CHTO P 16 44 49.8
SNR=16
CHTO Chiang Mai 57.08 258 P **P 16 44 49.8 +1.5**
SNR=16
CHTO P 16 44 49.8
SNR=16
CHTO P 16 44 49.8
SNR=16
CHTO P 16 44 49.8
SNR=16
CHTO Chiang Mai 57.08 258 P **P 16 44 49.8 +1.5**
SNR=16
CHTO P 16 44 49.8
SNR=16
IMW Indian Meadow 57.21 59 P **P 16 44 51.1 +2.1**
comp=Z,13nm,1.2s,mb4.8
CM31 Chiang Mai Arr 57.35 258 *e*P **P 16 44 51.5 +1.3**
comp=Z,20nm,0.7s,mb5.3
CMAR Chiang Mai Arr 57.35 258 P **P 16 44 51.8 +1.5**
comp=Z,14nm,0.9s,mb5.0,baz=28,slow=7.2,SNR=83
LOF Lofoten 57.82 346⇑*i*P **P 16 44 54.8 +1.9**
LOF AMb AMB 16 44 55.9
comp=Z,112nm,1.3s,mb5.7
LOF *ep*P pP 16 45 06.0 -1.4
LOF Lofoten 57.82 346⇑*i*P **P 16 44 54.8 +1.9**
comp=Z,112nm,1.3s,mb5.7
ABKAR Akbulak array 58.31 311 *e*P **P 16 44 54.9 -1.8**
comp=Z,21nm,0.8s,mb5.2
AKTK Aktyubinsk 58.39 313 P **P 16 44 55.6 -1.5**
AKTO Aktyubinsk 58.39 313 P **P 16 44 55.6 -1.5**
comp=Z,5.6nm,0.5s,mb4.8,baz=67,slow=9.2,SNR=32
GUN Gumba 58.50 276 *e*P **P 16 44 57.6 -0.6**
comp=Z,54nm,0.7s,mb5.7
JOF Joensuu 58.64 335 *ep* **P 16 44 58.3 -0.4**
comp=Z,29nm,0.9s,mb5.3
JOF Joensuu 58.64 335 *ep* **P 16 44 58.3 -0.4**
comp=Z,29nm,0.9s,mb5.3
PDAR Pinedale Array 58.72 59 P **P 16 45 00.1 +0.6**
comp=Z,2.9nm,0.8s,mb4.4,baz=336,slow=3.3,SNR=22
KKN Kakani 58.96 276 *e*P **P 16 45 00.9 -0.5**
comp=Z,42nm,0.5s,mb5.7
KKN Kakani 58.96 276 *e*P **P 16 45 00.9 -0.5**
KKN pmax pmax
comp=Z,42nm,0.5s,mb5.7
PKI Pulchoki 59.03 276 *e*P **P 16 45 01.5 -0.4**
comp=Z,79nm,0.9s,mb5.7
PKI Pulchoki 59.03 276 *e*P **P 16 45 01.5 -0.4**
PKI pmax pmax
comp=Z,79nm,0.9s,mb5.7
DMN Daman 59.20 276 *e*P **P 16 45 02.8 -0.2**
comp=Z,119nm,0.9s,mb5.9
MOR8 Moi Rana 59.47 344⇑*i*P **P 16 45 02.7 -1.6**
MOR8 AMb AMB 16 45 04.0
comp=Z,53nm,0.8s,mb5.6
MOR8 *ep*P pP 16 45 14.1 -4.8
MOR8 Moi Rana 59.47 344⇑*i*P **P 16 45 02.7 -1.6**
comp=Z,53nm,0.8s,mb5.6
SFJD Kangerlussuaq 59.55 13 P **P 16 45 03.8 -1.0**
comp=Z,7.6nm,0.8s,mb4.8,baz=6.5,slow=5.6,SNR=3.4
SFJD Kangerlussuaq 59.55 13 *i*P **P 16 45 03.8 -1.1**
comp=Z,9.4nm,0.8s,mb4.9
ULM Lac du Bonnet 60.22 46 P **P 16 45 09.5 -0.3**
comp=Z,3.7nm,0.6s,mb4.6,baz=331,slow=6.1,SNR=2.8
JOSI Joshimath 60.51 283 *e*PKP **P 16 45 12.3 +0.3**
KAF Kangasniemi 60.59 337 *ep* **P 16 45 11.2 -0.9**
comp=Z,26nm,0.6s,mb5.5
KAF Kangasniemi 60.59 337 *ep* **P 16 45 11.2 -0.9**
comp=Z,26nm,0.6s,mb5.5
KLP Kalpa 60.61 285 *e*PKP **P 16 45 12.4 -0.3**
KLP AMb AMB 16 45 13.5
comp=Z,16nm,0.2s,mb5.8
RSSD Black Hills 60.67 55 *e*P **P 16 45 12.7 -0.2**
RSSD pmax pmax
comp=Z,10.0nm,0.6s,mb5.1
RSSD Black Hills 60.67 55 *e*P **P 16 45 12.7 -0.3**
comp=Z,9.7nm,0.6s,mb5.1
SRU San Rafael 60.72 63 *e*P **P 16 45 13.3 0.0**
SRU pmax pmax
comp=Z,12nm,0.8s,mb5.1
SRU San Rafael 60.72 63 *e*P **P 16 45 13.2 -0.1**
comp=Z,12nm,0.8s,mb5.1
FINES FINESS Array B 61.23 336 P **P 16 45 16.1 -0.4**
comp=Z,28nm,0.7s,mb5.5,baz=30,slow=8.8,SNR=92
PUL Pulkovo 61.53 333 *ce*P **P 16 45 18.7 +0.2**
PUL pmax pmax
comp=Z,103nm,0.7s,mb6.1
SMLA Simla 61.55 285 *e*PKP **P 16 45 16.7 -2.3**
DDI Dehra Dun 61.58 284 *ex* x 16 45 17.5
MOS Moscow 62.57 327 *e*P **P 16 45 23.7 -1.8**
ISCO Idaho Springs 62.91 60 *e*P **P 16 45 28.4 +0.3**
ISCO pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
ISCO Idaho Springs 62.91 60 *e*P **P 16 45 28.4 +0.3**
comp=Z,7.5nm,0.8s,mb4.9
BISR Bishrakh 63.21 283 *e*PKP **P 16 45 29.7 -0.5**
OBN Obninsk 63.44 327⇓*e*P **P 16 45 30.6 -0.7**
OBN *e* 16 47 47.4
OBN *e*S **S 16 53 58.8 -0.9**
OBN pmax pmax
comp=Z,72nm,1.7s,mb5.5
OBN MLR MLR
comp=Z,1μm,17.0s,MS5.2
OBN Obninsk 63.44 327 *e*P **P 16 45 30.6 -0.7**
comp=Z,10nm,0.5s,mb5.2
VSU Vasula 63.62 334 *c i*P **P 16 45 32.1 -0.3**
VSU pmax pmax
comp=Z,106nm,1.0s,mb5.8
AGRA Agra 63.87 281 *e*PKP **P 16 45 33.3 -1.3**
KBL Kabul 63.89 293 *e*P **P 16 45 32.8 -1.8**
KBL pmax pmax
comp=Z,15nm,0.9s,mb5.0
KBL Kabul 63.89 293 *e*P **P 16 45 32.8 -1.8**
comp=Z,15nm,0.9s,mb5.0
SDCO Great Sand Dun 64.46 61 *e*P **P 16 45 39.5 +1.3**
comp=Z,4.7nm,1.2s,mb4.4
KHET Khetri 64.56 284 *e*PKP **P 16 45 37.9 -1.2**
KHET AMb AMB 16 45 38.8
comp=Z,6.6nm,0.2s,mb5.3
KSM Kuching 64.57 237 *e*P **P 16 45 40.7 +1.5**
comp=Z,18nm,0.9s,mb5.1
ECSD EROS Data Cent 64.65 51 *e*P **P 16 45 38.7 -0.7**
comp=Z,5.6nm,0.7s,mb4.7
NB2 NORSAR Subarra 64.77 343 P **P 16 45 39.8 -0.1**
comp=Z,40nm,0.7s,mb5.5,baz=22,slow=6.9
NOA NORSAR Array B 64.77 343 P **P 16 45 39.9 -0.1**
comp=Z,39nm,0.8s,mb5.5,baz=21,slow=6.6,SNR=131
NOA LR LR 17 20 12.7
comp=Z,280nm,18.8s,MS4.5,baz=80,slow=42
VRHR Novokhopersk 64.83 322 *e*P **P 16 45 39.2 -1.3**
VRHR *e**PP pP 16 45 48.4 -6.8
VRHR pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.6s
NAO01 NORSAR Array S 65.01 344 *e*P **P 16 45 41.0 -0.5**
comp=E,18nm,0.8s,mb5.1
VSR Storozhevoye 65.67 323 *e*P **P 16 45 44.9 -1.0**
VSR *e**PP pP 16 45 54.7 -5.9
VSR pmax pmax
comp=Z,40nm,0.8s,mb5.5
VSR pmax pmax
comp=N,20nm,1.5s
VSR pmax pmax
comp=E,6.0nm,0.3s
OSL Oslo 65.89 343 *e*P **P 16 45 46.8 -0.4**
IZAR Zarasai 66.10 333 *e*P **P 16 45 48.7 +0.2**
IZAR AMB AMB 16 45 49.2
comp=Z,20nm,0.8s,mb5.2
ISAL Salakas 66.29 333 *e*P **P 16 45 50.0 +0.2**
ISAL AMB AMB 16 45 50.5
comp=Z,20nm,0.9s,mb5.2
IDID Didziasalis 66.34 333 *e*P **P 16 45 50.3 +0.2**
IDID AMB AMB 16 45 51.8
comp=Z,31nm,0.9s,mb5.3
KONO Kongsberg 66.36 344 *e*P **P 16 45 50.1 -0.1**
KONO pmax pmax
comp=Z,26nm,0.9s,mb5.3
KONO Kongsberg 66.36 344 *e*P **P 16 45 50.1 -0.1**
comp=Z,26nm,0.9s,mb5.3
AJM Ajmer 66.43 283 *ex* x 16 45 44.2
AJM AMb AMB 16 45 51.4
comp=Z,16nm,0.4s,mb5.4
IIGN Ignalina 66.45 333 *e*P **P 16 45 51.3 +0.4**
IIGN AMB AMB 16 45 51.7
comp=Z,42nm,0.7s,mb5.5
MICGM Minsk 66.71 332 *e*P **P 16 45 50.0 -2.5**
KULM Kulim 66.71 248 *e*P **P 16 45 54.0 +1.0**
comp=Z,18nm,1.1s,mb5.0
MNK Minsk 66.72 332 *e*P **P 16 45 50.0 -2.6**
MNK pmax pmax
comp=Z,360nm,1.0s
BHPL Bhopal 67.11 279 *e*PKP **P 16 45 55.0 -0.6**
BHPL AMb AMB 16 45 56.3
comp=Z,25nm,0.7s,mb5.4
SCHQ Schefferville 67.19 27 P **P 16 45 54.9 -0.6**
comp=Z,6.6nm,0.8s,mb4.7,baz=11,slow=7.5,SNR=9.7
SCHQ Schefferville 67.19 27 *e*P **P 16 45 54.4 -1.1**
comp=Z,6.4nm,0.9s,mb4.7
ABKT Ailbek 67.41 303 P **P 16 45 57.0 -0.2**
comp=Z,86nm,1.1s,mb5.7,SNR=6.1
NGP Nagpur 67.66 276 *ex* x 16 45 54.8
SNART Snartemo 68.01 345 *e*P **P 16 46 01.2 +0.6**
SNART *ep*P pP 16 46 13.3 -2.1
SUW Suwalki 68.48 334 *e*P **P 16 46 03.2 -0.5**
SUW Suwalki 68.48 334 *e*P **P 16 46 02.7 -1.0**
comp=Z,116nm,1.0s,mb5.9
GOF Gofitskoye 69.08 317 *e*P **P 16 46 16.5 +9.0**
MUD Monsted U'grnd 69.45 343⇑*i*P **P 16 46 10.2 +0.5**
MUD pmax pmax
comp=Z,25nm,0.9s,mb5.1
MUD Monsted U'grnd 69.45 343⇑*i*P **P 16 46 10.2 +0.5**
comp=Z,25nm,0.9s,mb5.2
BSD Bornholm Skovb 69.54 339⇑*i*P **P 16 46 10.0 -0.2**
BSD pmax pmax
comp=Z,26nm,0.9s,mb5.2
BSD Bornholm Skovb 69.54 339⇑*i*P **P 16 46 10.0 -0.2**
comp=Z,26nm,0.9s,mb5.2
AKASG Malin Array Be 69.56 329 P **P 16 46 09.8 -0.7**
comp=Z,76nm,0.7s,mb5.7,baz=30,slow=6.1,SNR=172
AKASG Malin Array Be 69.56 329 P **P 16 46 09.8 -0.7**
AKBB Malin Array Si 69.56 329 *e*P **P 16 46 09.7 -0.7**
RSC Scourie 69.62 351 *e*P **P 16 46 10.1 -0.6**
RSC Scourie 69.62 351 P **P 16 46 10.1 -0.6**
PSI Prapat 69.73 248 P **P 16 46 12.8 +0.9**
comp=Z,2.3nm,0.4s,mb4.4,baz=266,slow=3.3,SNR=4.0
KIV Kislovodsk 70.11 317 *e*P **P 16 46 13.9 0.0**
KIV pmax pmax
comp=Z,12nm,0.9s,mb4.8
KIV Kislovodsk 70.11 317 *e*P **P 16 46 15.1 +1.2**
comp=Z,10nm,0.8s,mb4.8
RRH Rhenigidale 70.18 352 *e*P **P 16 46 13.6 -0.5**
RRH Rhenigidale 70.18 352 P **P 16 46 13.6 -0.5**
WMOK Wichita Mounta 70.31 59 *e*P **P 16 46 13.5 -1.8**
WMOK pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
WMOK Wichita Mounta 70.31 59 *e*P **P 16 46 13.5 -1.8**
comp=Z,9.9nm,0.9s,mb4.7
KAC Achnashellach 70.47 351 *e*P **P 16 46 15.6 -0.3**
KAC Achnashellach 70.47 351 P **P 16 46 15.6 -0.3**
ZEI Tsey 70.54 315 *e*P **P 16 46 14.9 -1.7**
ZEI pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
KPL Plockton 70.66 351 *e*P **P 16 46 18.3 +1.3**
KPL AMb AMB 16 46 20.3
comp=Z,26nm,3.2s
KPL Plockton 70.66 351 P **P 16 46 18.3 +1.3**
KPL AMb AMB 16 46 20.3
comp=Z,26nm,3.2s
GKP Gorka Klasztor 70.69 337 *e*P **P 16 46 17.6 +0.3**
KSB Sheil Bridge 70.77 351 *e*P **P 16 46 17.0 -0.7**
KSB Sheil Bridge 70.77 351 P **P 16 46 17.0 -0.7**
HYB Hyderabad 70.77 274 *i*P **P 16 46 18.5 +0.2**
comp=Z,60nm,1.0s,mb5.5
KAR1 Arisaig 71.09 351 *e*P **P 16 46 19.0 -0.7**
KAR1 Arisaig 71.09 351 P **P 16 46 19.0 -0.7**
EBH Black Hill 71.52 350⇑*e*P **P 16 46 22.1 -0.2**
EBH Black Hill 71.52 350 P **P 16 46 22.1 -0.2**
ANN Anapa 71.59 320 *e*P **P 16 46 26.4 +3.5**
ANN pmax pmax
comp=Z,56nm,1.2s,mb5.4
BSEG Bad Segeberg 71.61 341 *e*P **P 16 46 23.7 +0.9**
comp=Z,28nm,1.0s,mb5.2
BSEG *ep*P pP 16 46 35.3 -2.4
EAB Aberfoyle 71.67 350⇑*e*P **P 16 46 23.0 -0.1**
EAB Aberfoyle 71.67 350 P **P 16 46 23.0 -0.1**
TXAR Lajitas Array 71.72 66 P **P 16 46 22.6 -1.3**
comp=Z,1.7nm,0.7s,mb4.1,baz=296,slow=4.2,SNR=25
ESY Stoneypath 71.74 349 *e*P **P 16 46 23.2 -0.4**
ESY Stoneypath 71.74 349 P **P 16 46 23.2 -0.4**
EAU Auchinoon 71.91 350 *e*P **P 16 46 24.7 +0.1**
EAU Auchinoon 71.91 350 P **P 16 46 24.7 +0.1**
LVV L'vov 71.95 331⇓*i*P **P 16 46 23.8 -1.2**
LVV MLR MLR
comp=N,800nm,19.0s,MS5.1
LVV MLR MLR
comp=E,700nm,19.0s,MS5.1
LVV MLR MLR
comp=Z,1μm,19.0s,MS5.1
PGBU Glenifferbraes 72.05 350⇑*e*P **P 16 46 24.9 -0.5**
PGBU AMb AMB 16 46 28.6
comp=Z,51nm,1.0s,mb5.4
PGBU Glenifferbraes 72.05 350 P **P 16 46 24.9 -0.5**
PGBU AMb AMB 16 46 28.6
comp=Z,51nm,1.0s,mb5.4
RUE Ruedersdorf 72.23 339 *e*P **P 16 46 26.3 -0.3**
comp=Z,41nm,0.9s,mb5.4
GNI Garni 72.26 313 *e*P **P 16 46 27.8 +0.8**
GNI pmax pmax
comp=Z,10.0nm,0.8s
GNI Garni 72.26 313 *e*P **P 16 46 27.8 +0.8**
comp=Z,10nm,0.8s,mb4.8
CTA Charters Tower 72.33 193 P **P 16 46 26.3 -1.1**
comp=Z,2.9nm,0.9s,mb4.2,baz=14,slow=13,SNR=3.3
ESK Eskdalemuir 72.40 350 P **P 16 46 28.8 +1.3**
comp=Z,216nm,0.7s,mb6.2,SNR=8.4
ESK Eskdalemuir 72.40 350 *e*P **P 16 46 27.4 -0.2**
ESK AMb AMB 16 46 30.5
comp=Z,27nm,0.8s,mb5.2
ESK Eskdalemuir 72.40 350 P **P 16 46 27.4 -0.2**
ESK AMb AMB 16 46 30.5
comp=Z,27nm,0.8s,mb5.2
ESK Eskdalemuir 72.40 350 *e*P **P 16 46 28.0 +0.5**
ESK pmax pmax
comp=Z,28nm,0.8s,mb5.2
ESK Eskdalemuir 72.40 350 *e*P **P 16 46 28.0 +0.5**
comp=Z,28nm,0.8s,mb5.2
KWP Kalwaria Pacla 72.51 332 *e*P **P 16 46 29.2 +0.8**
KWP Kalwaria Pacla 72.51 332 *e*P **P 16 46 28.9 +0.6**
comp=Z,292nm,1.0s,mb6.2
KWP Kalwaria Pacla 72.51 332⇑*i*P **P 16 46 29.1 +0.8**
ECK Cauldkaine Hil 72.53 349⇑*e*P **P 16 46 28.1 -0.2**
ECK Cauldkaine Hil 72.53 349 P **P 16 46 28.1 -0.2**
XAL Allendale 72.73 349⇑*e*P **P 16 46 29.2 -0.3**
XAL Allendale 72.73 349 P **P 16 46 29.2 -0.3**
OJC Ojcow 72.81 334 *i*P **P 16 46 29.8 -0.2**
POO Poona 72.84 278 *e*PKP **P 16 46 31.3 +0.6**
POO AMb AMB 16 46 32.2
comp=Z,32nm,0.7s,mb5.3
KIS Kishinev 72.90 327⇑*i*P **P 16 46 28.0 -2.7**
comp=Z,200nm,1.0s,mb6.0
KIS Kishinev 72.90 327α*i*P **P 16 46 28.0 -2.7**
KIS pmax pmax
comp=Z,200nm,1.0s,mb6.0
KIS pmax pmax
comp=Z,200nm,1.0s,mb6.0
GCD Castle Douglas 72.93 350 *e*P **P 16 46 30.4 -0.3**
GCD Castle Douglas 72.93 350 P **P 16 46 30.4 -0.3**
GAL1 Galloway 73.01 350 *e*P **P 16 46 31.4 +0.3**
GAL1 AMb AMB 16 46 34.0
comp=Z,25nm,1.0s,mb5.1
GAL1 Galloway 73.01 350 P **P 16 46 31.4 +0.3**
GAL1 AMb AMB 16 46 34.0
comp=Z,25nm,1.0s,mb5.1
NRDL Niedersach Rie 73.01 341 *e*P **P 16 46 31.6 +0.4**
comp=Z,15nm,1.0s,mb4.9
NRDL *ep*P pP 16 46 43.9 -2.3
STHS Stebnicka Huta 73.13 333 *e*P **P 16 46 33.4 +1.4**
STHS pmax pmax
comp=Z,50nm,1.2s,mb5.3
STHS Stebnicka Huta 73.13 333 *e*P **P 16 46 33.4 +1.4**
comp=Z,50nm,1.2s,mb5.3
STHS Stebnicka Huta 73.13 333 *e*P **P 16 46 33.3 +1.3**
KSP Ksiaz 73.15 336 *e*P **P 16 46 32.3 +0.2**
KSP Ksiaz 73.15 336⇑*e*P **P 16 46 32.1 0.0**
KSP *ep*P pP 16 46 43.6 -3.4
MIAR Mount Ida 73.19 55 *e*P **P 16 46 31.8 -0.8**
comp=Z,5.1nm,0.8s,mb4.5
XDE Dent Fell 73.23 350 *e*P **P 16 46 32.2 -0.3**
XDE Dent Fell 73.23 350 P **P 16 46 32.2 -0.3**
KOLS Kolonicke sedl 73.27 332 *i*P **P 16 46 33.3 +0.5**
KOLS *e* pP 16 46 45.7 -2.0
KOLS pmax pmax
comp=Z,45nm,1.0s,mb5.3
KOLS Kolonicke sedl 73.27 332 *i*P **P 16 46 33.3 +0.5**
comp=Z,45nm,1.0s,mb5.3
KOLS *e*PP pP 16 46 45.7 -2.0
KOLS Kolonicke sedl 73.27 332 *i*P **P 16 46 33.3 +0.5**
KOLS *ep*P pP 16 46 45.7 -2.0
WIT Witteveen 73.38 343 *e*P **P 16 46 35.1 +1.8**
comp=Z,205nm,1.7s,mb5.8
USIN University of 73.40 49 *e*P **P 16 46 33.0 -0.7**
CLL Collm 73.50 339 *e*P **P 16 46 34.1 0.0**
comp=Z,28nm,0.9s,mb5.2
CLL Collm 73.50 339⇑*i*P **P 16 46 34.2 +0.1**
CLL *i* *SP sP 16 46 50.2 -4.8
CLL pmax pmax
comp=Z,29nm,0.9s,mb5.2
CLL MLR MLR
comp=Z,500nm,17.7s,MS4.8
CLL Collm 73.50 339⇑*i*P **P 16 46 34.2 +0.1**
comp=Z,29nm,0.9s,mb5.2
CLL *i* pP pP 16 46 45.8 -3.3
CLL *i* sP sP 16 46 50.2 -4.8
CLL Lm 17 25 00.0
comp=N,400nm,18.5s
CLL Lm 17 25 00.0
comp=E,300nm,21.1s
BUR08 Bucovina Ar. S 73.52 330 *e*P **P 16 46 34.5 +0.2**
UPC Upice 73.53 336 *e*P **P 16 46 33.6 -0.7**
UPC *e**PP pP 16 46 46.5 -2.7
UPC Upice 73.53 336 *e*P **P 16 46 33.6 -0.7**
UPC *ep*P pP 16 46 46.5 -2.7
UZH Uzhgorod 73.53 332⇓*i*P **P 16 46 34.1 -0.3**
UZH *i* 16 46 38.3
BURAR Bucovina Array 73.54 329⇑P **P 16 46 34.7 +0.3**
BURAR Bucovina Array 73.54 329⇑*i*P **P 16 46 34.7 +0.3**
HPK Haverah Park 73.55 348 *e*P **P 16 46 34.1 -0.2**
HPK AMb AMB 16 46 37.8
comp=Z,51nm,1.1s,mb5.4
HPK Haverah Park 73.55 348 P **P 16 46 34.1 -0.2**
HPK AMb AMB 16 46 37.8
comp=Z,51nm,1.1s,mb5.4
LEOM Leova 73.55 327⇓P **P 16 46 33.9 -0.6**
LEOM Leova 73.55 327⇓*i*P **P 16 46 33.9 -0.6**
KAD Karad 73.56 277 *e*PKP **P 16 46 35.4 +0.4**
CLZ Clausthal 73.57 340 *e*P **P 16 46 35.5 +1.0**
comp=Z,32nm,1.0s,mb5.2
CLZ *ep*P pP 16 46 47.5 -2.0
CLZ Clausthal 73.57 340 *e*P **P 16 46 35.5 +1.0**
CLZ *e**PP pP 16 46 47.5 -2.0
CLZ pmax pmax

comp=Z,32nm,1.0s,mb5.2
DPC Dobruska-Polom 73.60 336 *e*P **P 16 46 35.5 +0.8**
DPC *e**PP pP 16 46 47.1 -2.5
DPC MLR MLR
comp=Z,500nm,13.3s,MS5.0
DPC Dobruska-Polom 73.60 336 *e*P **P 16 46 35.5 +0.8**
DPC *e*pP pP 16 46 47.1 -2.5
DPC AMS AMS 17 24 30.0
comp=Z,500nm,13.3s
OKC Ostrava-Krasne 73.60 335 *e*P **P 16 46 35.3 +0.6**
OKC *e**PP pP 16 46 46.9 -2.8
OKC MLR MLR
comp=Z,400nm,14.0s,MS4.8
OKC Ostrava-Krasne 73.60 335 *e*P **P 16 46 35.3 +0.6**
OKC *e*pP pP 16 46 46.9 -2.8
OKC AMS AMS 17 23 50.0
comp=Z,400nm,14.0s
IBBN Ibbenburen 73.66 342 *e*P **P 16 46 35.6 +0.6**
comp=Z,27nm,0.9s,mb5.2
IBBN *e*pP pP 16 46 47.9 -2.1
BRG Berggiesshubel 73.69 338 *e*P **P 16 46 35.3 +0.1**
comp=Z,13nm,1.0s,mb4.8
BRG Berggiesshubel 73.69 338 *e*P **P 16 46 35.3 0.0**
comp=Z,13nm,1.1s,mb4.8
GMM Mts of Mourne 73.75 351 *e*P **P 16 46 34.7 -0.9**
GMM Mts of Mourne 73.75 351 P **P 16 46 34.7 -0.9**
MORC Moravsky Berou 73.81 335 ⇑P **P 16 46 36.7 +0.7**
MORC Moravsky Berou 73.81 335 *e*P **P 16 46 36.6 +0.6**
comp=Z,25nm,0.8s,mb5.2
MORC Moravsky Berou 73.81 335 ⇑*i*P **P 16 46 36.7 +0.7**
WCI Wyandotte Cave 73.83 48 *e*P **P 16 46 35.0 -1.3**
WCI pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
WCI Wyandotte Cave 73.83 48 *e*P **P 16 46 35.0 -1.3**
comp=Z,6.9nm,0.8s,mb4.6
PVCC Panska Ves 73.86 337 *e*P **P 16 46 36.8 +0.5**
PVCC *e**PP pP 16 46 49.7 -1.5
PVCC MLR MLR
comp=Z,1μm,14.6s,MS5.2
PVCC Panska Ves 73.86 337 *e*P **P 16 46 36.8 +0.5**
PVCC *e*pP pP 16 46 49.7 -1.5
PVCC AMS AMS 17 24 20.0
comp=Z,1μm,14.6s
TRPA Tarpa 73.91 331 ⇑*i*P **P 16 46 37.3 +0.7**
LHO Holmfirth 73.98 348 *e*P **P 16 46 36.8 0.0**
LHO Holmfirth 73.98 348 P **P 16 46 36.8 0.0**
BMR Baia Mare 74.03 331 P **P 16 46 38.5 +1.2**
WTSB Winterswijk 74.16 343 ⇑*i*P **P 16 46 38.3 +0.3**
comp=Z,35nm,0.9s,mb5.3
WTSB Winterswijk 74.16 343 *ex* x 16 46 49.6
KECS Kecovo 74.19 333 *e*P **P 16 46 38.8 +0.6**
KECS *e* pP 16 46 49.5 -3.6
KECS pmax pmax
comp=Z,17nm,1.3s,mb4.8
KECS Kecovo 74.19 333 *e*P **P 16 46 38.8 +0.6**
comp=Z,17nm,1.3s,mb4.8
KECS *e*PP pP 16 46 49.5 -3.6
KECS Kecovo 74.19 333 *e*P **P 16 46 38.8 +0.6**
KECS *e*pP pP 16 46 49.5 -3.6
PRU Pruhonice 74.37 337 *e*P **P 16 46 39.9 +0.7**
PRU *e**PP pP 16 46 50.4 -3.8
PRU MLR MLR
comp=Z,1μm,14.1s,MS5.3
PRU Pruhonice 74.37 337 *e*P **P 16 46 39.9 +0.7**
PRU *e*pP pP 16 46 50.4 -3.8
PRU AMS AMS 17 24 40.0
comp=Z,1μm,14.1s
MOX Moxa 74.43 339 *e*P **P 16 46 39.9 +0.3**
comp=Z,23nm,1.3s,mb5.0
MOX *e* pP 16 46 52.2 -2.3
MOX Moxa 74.43 339 *e*P **P 16 46 39.9 +0.3**
comp=Z,23nm,1.3s,mb5.0
MOX *e* pP 16 46 52.2 -2.3
MOX Moxa 74.43 339 *e*P **P 16 46 40.0 +0.4**
comp=Z,14nm,1.0s,mb4.8
TANN Tannenbergstha 74.46 339 *e*P **P 16 46 40.0 +0.3**
comp=Z,11nm,1.2s,mb4.7
TLCR 74.48 326 ⇓P **P 16 46 40.5 +0.6**
TLCR 74.48 326 ⇓*i*P **P 16 46 40.5 +0.6**
VRAC Vranov 74.49 336 P **P 16 46 40.9 +1.0**
VRAC Vranov 74.49 336 ⇑*i*P **P 16 46 40.8 +0.9**
WRAB Tennant Creek 74.53 204 P **P 16 46 40.0 -0.4**
comp=Z,91nm,1.1s,mb5.6,SNR=5.2
WRAB Tennant Creek 74.53 204 *e*P **P 16 46 39.4 -1.0**
WRAB pmax pmax
comp=Z,13nm,1.0s,mb4.8
WRAB Tennant Creek 74.53 204 *e*P **P 16 46 39.4 -1.0**
comp=Z,13nm,1.0s,mb4.8
BUG Bochum--Univer 74.57 342 *e*P **P 16 46 40.5 +0.1**
comp=Z,22nm,0.9s,mb5.1
VRI Vrincioaia 74.59 328 P **P 16 46 41.0 +0.4**
VRI Vrincioaia 74.59 328 ⇑*i*P **P 16 46 41.0 +0.4**
UBBA Unterbreizbach 74.62 340 *e*P **P 16 46 40.6 0.0**
comp=Z,18nm,1.5s,mb4.8
NKC Novy Kostel 74.63 339 *e*P **P 16 46 41.1 +0.4**
NKC *e**PP pP 16 46 53.4 -2.3
NKC MLR MLR
comp=Z,600nm,15.8s,MS5.0
NKC Novy Kostel 74.63 339 *e*P **P 16 46 41.1 +0.4**
NKC *e*pP pP 16 46 53.4 -2.3
NKC AMS AMS 17 25 00.0
comp=Z,600nm,15.8s
PLOR Plostina 74.63 328 ⇓P **P 16 46 41.7 +0.9**
PLOR Plostina 74.63 328 ⇓*i*P **P 16 46 41.7 +0.9**
VYHS Vyhne 74.64 334 *i* P **P 16 46 41.7 +0.9**
VYHS *e* pP 16 46 52.8 -3.0
VYHS pmax pmax
comp=Z,67nm,2.0s,mb5.2
VYHS Vyhne 74.64 334 *i* P **P 16 46 41.7 +0.9**
comp=Z,67nm,2.0s,mb5.2
VYHS *e*PP pP 16 46 52.8 -3.0
VYHS Vyhne 74.64 334 *i* P **P 16 46 41.7 +0.9**
VYHS *e*pP pP 16 46 52.8 -3.0
CWF Charnwood Fore 74.70 348 *e*P **P 16 46 41.7 +0.6**
CWF AMb AMB 16 46 42.4
comp=Z,20nm,1.6s,mb4.8
CWF Charnwood Fore 74.70 348 P **P 16 46 41.7 +0.6**
CWF AMb AMB 16 46 42.4
comp=Z,20nm,1.6s,mb4.8
CFR Carcaliu 74.72 326 P **P 16 46 41.7 +0.3**
CFR Carcaliu 74.72 326 ⇓*i*P **P 16 46 41.7 +0.3**
DSB Dublin 74.78 351 *e*P **P 16 46 43.7 +2.2**
comp=Z,22nm,0.9s,mb5.1
TREC Trest 74.78 336 *e*P **P 16 46 42.3 +0.7**
TREC *e**PP pP 16 46 53.5 -3.1
TREC MLR MLR
comp=Z,700nm,16.3s,MS5.0
TREC Trest 74.78 336 *e*P **P 16 46 42.3 +0.7**
TREC *e*pP pP 16 46 53.5 -3.1
TREC AMS AMS 17 23 50.0
comp=Z,700nm,16.3s
WVT Waverly 74.79 51 *e*P **P 16 46 41.2 -0.7**
comp=Z,3.7nm,1.0s,mb4.3
PSZ Piszkesteto 74.87 333 ⇓P **P 16 46 43.2 +1.1**
PSZ Piszkesteto 74.87 333 *e*P **P 16 46 42.8 +0.7**
comp=Z,58nm,1.4s,mb5.3
PSZ Piszkesteto 74.87 333 ⇑*e*P **P 16 46 43.2 +1.1**
PSZ Piszkesteto 74.87 333 ⇓*i*P **P 16 46 43.2 +1.1**
SMOL Smolenice 75.00 335 *e*P **P 16 46 44.5 +1.6**
SMOL *e* pP 16 46 55.9 -2.0
SMOL Smolenice 75.00 335 *e*P **P 16 46 44.5 +1.6**
SMOL *e*pP pP 16 46 55.9 -2.0
DRGR 75.06 331 P **P 16 46 43.6 +0.4**
DRGR 75.06 331 ⇑*i*P **P 16 46 43.5 +0.3**
HLM1 Long Mynd 75.11 349 *e*P **P 16 46 43.3 -0.2**
HLM1 Long Mynd 75.11 349 P **P 16 46 43.3 -0.2**
ROTZ Rotzenmuhle 75.12 339 *e*P **P 16 46 44.5 +0.9**
comp=Z,18nm,1.2s,mb4.9
TIRR Tirgusor 75.25 326 P **P 16 46 44.7 +0.3**
TIRR Tirgusor 75.25 326 *e*P **P 16 46 44.2 -0.2**
comp=Z,70nm,0.8s,mb5.6
TIRR Tirgusor 75.25 326 ⇑*i*P **P 16 46 44.6 +0.2**
KHC Kasperske Hory 75.40 337 *e*P **P 16 46 45.9 +0.7**
KHC *e* 16 46 50.5
KHC *e**PP pP 16 46 58.2 -2.0
KHC MLR MLR
comp=Z,1μm,14.4s,MS5.4
KHC Kasperske Hory 75.40 337 *e*P **P 16 46 45.6 +0.5**
comp=Z,25nm,0.8s,mb5.2
KHC Kasperske Hory 75.40 337 *e*P **P 16 46 45.9 +0.7**
KHC *ex* x 16 46 50.5
KHC *e*pP pP 16 46 58.2 -2.0
KHC AMS AMS 17 25 30.0
comp=Z,1μm,14.4s

GRA1 Grafenberg Arr 75.42 339 *e*P **P 16 46 46.3 +1.0**
comp=Z,50nm,1.1s,mb5.4
GRA1 *e*pP pP 16 46 58.6 -1.7
GRF Grafenberg Arr 75.42 339 *e*P **P 16 46 46.3 +1.0**
comp=Z,50nm,1.1s,mb5.4
GRF *e*pP pP 16 46 58.6 -1.7
GRF Grafenberg Arr 75.42 339 *e*P **P 16 46 46.3 +1.0**
GRF *e**PP pP 16 46 58.6 -1.7
GRF pmax pmax
comp=Z,50nm,1.1s,mb5.4
GRF Grafenberg Arr 75.42 339 *e*P **P 16 46 46.3 +1.0**
GRF *e**PP pP 16 46 58.6 -1.7
GRF pmax pmax
comp=Z,50nm,1.1s,mb5.4
HGN Heimansgroeve 75.47 343 ⇑*i*P **P 16 46 45.7 +0.1**
comp=Z,41nm,1.2s,mb5.2
BEBN Eben Emael 75.49 343 P **P 16 46 46.1 +0.4**
comp=Z,9.9nm,1.5s,mb4.5
TNS Taunus Mts 75.50 341 *e*P **P 16 46 46.2 +0.5**
comp=Z,23nm,0.8s,mb5.2
TNS *e*pP pP 16 46 58.7 -2.0
TNS Taunus Mts 75.50 341 *e*P **P 16 46 46.2 +0.5**
TNS *e**PP pP 16 46 58.7 -2.0
TNS pmax pmax
comp=Z,23nm,0.8s,mb5.2
BUD Budapest 75.51 333 ⇑*e*P **P 16 46 46.9 +1.1**
CVD Cernavoda 75.51 326 ⇓*i*P **P 16 46 46.7 +0.8**
CVD Cernavoda 75.51 326 ⇓*i*P **P 16 46 46.7 +0.8**
SSPA Standing Stone 75.53 41 *e*P **P 16 46 44.6 -1.5**
comp=Z,6.8nm,0.8s,mb4.6
WET Wettzell 75.55 338 *e*P **P 16 46 47.0 +0.9**
comp=Z,25nm,1.0s,mb5.1
WET Wettzell 75.55 338 *e*P **P 16 46 47.0 +0.9**
WET pmax pmax
comp=Z,25nm,1.0s,mb5.1
HTR Trewern Hill 75.59 349 *e*P **P 16 46 46.1 -0.1**
HTR Trewern Hill 75.59 349 P **P 16 46 46.1 -0.1**
MEM Membach 75.61 343 P **P 16 46 46.9 +0.6**
comp=Z,33nm,1.1s,mb5.2
GEC2 GERESS Array S 75.64 337 *e*P **P 16 46 47.0 +0.5**
comp=Z,14nm,0.9s,mb4.9
GEC2 *e*pP pP 16 46 59.2 -2.3
GEC2 GERESS Array S 75.64 337 *e*P **P 16 46 47.0 +0.5**
GEC2 *e**PP pP 16 46 59.2 -2.3
GEC2 pmax pmax
comp=Z,14nm,0.9s,mb4.9
GERES GERESS Array B 75.64 337 P **P 16 46 47.0 +0.5**
comp=Z,13nm,0.8s,mb4.9,baz=35,slow=4.9,SNR=86
UCC Uccle 75.72 344 P **P 16 46 46.9 0.0**
BCLA Clavier 75.92 343 P **P 16 46 48.9 +0.8**
comp=Z,14nm,1.1s,mb4.8
CONA Conrad Observa 75.95 336 *i* P **P 16 46 49.5 +1.2**
comp=Z,23nm,0.8s,mb5.1,SNR=24
SWN1 Swindon 75.96 348 *e*P **P 16 46 49.4 +1.0**
SWN1 AMb AMB 16 46 51.8
comp=Z,122nm,0.8s,mb5.9
SWN1 Swindon 75.96 348 P **P 16 46 49.4 +1.0**
SWN1 AMb AMB 16 46 51.8
comp=Z,122nm,0.8s,mb5.9
HGH Gray Hill 75.97 349 *e*P **P 16 46 47.8 -0.6**
HGH Gray Hill 75.97 349 P **P 16 46 47.8 -0.6**
SOP Sopron 75.99 335 ⇑*e*P **P 16 46 50.0 +1.4**
ABH Alteburg 76.01 342 *e*P **P 16 46 49.1 +0.5**
SNF Seneffe 76.01 344 P **P 16 46 49.5 +0.8**
comp=Z,7.3nm,0.9s,mb4.6
TOD Tromm 76.02 341 *e*P **P 16 46 49.3 +0.6**
MSL Mosul 76.05 312 *e*P **P 16 46 50.0 +0.9**
RUP Ruppelstein 76.27 342 *e*P **P 16 46 50.6 +0.4**
GIVF Givet 76.31 343 *e*P **P 16 46 50.5 +0.2**
comp=Z,37nm,1.0s,mb5.0
GIVF Givet 76.31 343 *e*P **P 16 46 50.5 +0.2**
GIVF pmax pmax
comp=Z,19nm,1.0s,mb5.0
GIVF Givet 76.31 343 *e*P **P 16 46 50.5 +0.2**
comp=Z,19nm,1.0s,mb5.0
MENF Mencas 76.32 345 *e*P **P 16 46 50.7 +0.3**
DOU Dourbes 76.35 343 P **P 16 46 50.7 +0.1**
comp=Z,8.2nm,1.1s,mb4.6
MOA Molln 76.43 337 ⇑*i*P **P 16 46 51.8 +0.7**
comp=Z,18nm,1.0s,mb5.0,SNR=13
BAIF Baives 76.46 344 *e*P **P 16 46 51.5 +0.3**
comp=Z,34nm,0.9s,mb5.0
BAIF Baives 76.46 344 *e*P **P 16 46 51.5 +0.3**
BAIF pmax pmax
comp=Z,17nm,0.9s,mb5.0
BAIF Baives 76.46 344 *e*P **P 16 46 51.5 +0.3**
comp=Z,17nm,0.9s,mb5.0
WLF Walferdange 76.48 342 P **P 16 46 52.3 +1.0**
comp=Z,9.8nm,1.2s,mb4.6
WLF Walferdange 76.48 342 *e*P **P 16 46 51.6 +0.3**
comp=Z,18nm,1.3s,mb4.8
ARSA Arzberg 76.66 335 ⇑*i*P **P 16 46 53.3 +0.9**
comp=Z,18nm,0.9s,mb5.0,SNR=17
PRD Provadia 76.71 326 *i* P **P 16 46 53.1 +0.4**
STU Stuttgart 76.72 340 *e*P **P 16 46 53.4 +0.7**
comp=Z,30nm,1.4s,mb5.0
STU Stuttgart 76.72 340 *e*P **P 16 46 53.4 +0.7**
STU pmax pmax
comp=Z,7.0nm,0.4s,mb4.9
STU Stuttgart 76.72 340 *e*P **P 16 46 53.4 +0.7**
comp=Z,7.1nm,0.4s,mb5.0
PKSM Moragy 76.78 333 P **P 16 46 53.2 +0.1**
PKSM Moragy 76.78 333 ⇓*i*P **P 16 46 52.8 -0.3**
HTL Hartland 76.80 349 *e*P **P 16 46 51.8 -1.3**
HTL AMb AMB 16 47 06.8
comp=Z,29nm,1.1s,mb5.1
HTL Hartland 76.80 349 P **P 16 46 51.8 -1.3**
HTL AMb AMB 16 47 06.8
comp=Z,29nm,1.1s,mb5.1
LANF Langenberg 76.81 341 *e*P **P 16 46 53.8 +0.6**
FUR Furstenfeldbru 76.84 339 *e*P **P 16 46 54.1 +0.7**
comp=Z,35nm,1.0s,mb5.2
FUR Furstenfeldbru 76.84 339 *e*P **P 16 46 54.1 +0.7**
FUR pmax pmax
comp=Z,35nm,1.0s,mb5.2
RJOB Jochberg 76.89 337 *e*P **P 16 46 54.7 +1.0**
comp=Z,16nm,0.9s,mb5.0
DYA Yadsworthy 77.28 349 *e*P **P 16 46 55.2 -0.7**
DYA AMb AMB 16 46 59.4
comp=Z,46nm,0.9s,mb5.4
DYA Yadsworthy 77.28 349 P **P 16 46 55.2 -0.7**
DYA AMb AMB 16 46 59.4
comp=Z,46nm,0.9s,mb5.4
SOKA Soboth 77.32 336 ⇑*i*P **P 16 46 56.9 +0.8**
comp=Z,30nm,0.9s,mb5.2
BFO Black Forest 77.33 341 P **P 16 46 56.4 +0.3**
comp=Z,94nm,0.7s,mb5.8,SNR=7.6
BFO Black Forest 77.33 341 *e*P **P 16 46 55.8 -0.3**
comp=Z,14nm,0.9s,mb4.9
BFO Black Forest 77.33 341 *e*P **P 16 46 55.8 -0.3**
BFO pmax pmax
comp=Z,14nm,0.9s,mb4.9
KBA Koelnbreinsper 77.37 337 ⇓*i*P **P 16 46 57.8 +1.4**
comp=Z,150nm,1.3s,mb5.8,SNR=57
BR131 Keskin Array S 77.38 320 *e*P **P 16 46 56.7 +0.1**
comp=Z,46nm,1.0s,mb5.4
BRTR Keskin Array B 77.38 320 P **P 16 46 56.9 +0.3**
comp=Z,36nm,0.9s,mb5.3,baz=46,slow=3.6,SNR=128
SPAK Spaichingen-Ko 77.45 340 *e*P **P 16 46 57.3 +0.5**
CDF Champ du Feu 77.46 341 *e*P **P 16 46 57.3 +0.4**
comp=Z,54nm,1.1s,mb5.1
CDF Champ du Feu 77.46 341 *e*P **P 16 46 57.3 +0.4**
CDF pmax pmax
comp=Z,27nm,1.1s,mb5.1
CDF Champ du Feu 77.46 341 *e*P **P 16 46 57.3 +0.4**
comp=Z,27nm,1.1s,mb5.1
OBKA Obir 77.60 336 ⇑*i*P **P 16 46 58.4 +0.7**
comp=Z,23nm,0.9s,mb5.1,SNR=12
WTTA Wattenberg 77.61 338 *i* P **P 16 46 58.9 +1.2**
comp=Z,42nm,1.0s,mb5.3,SNR=18
JMB Yambol 77.64 326 P **P 16 46 58.6 +0.6**
MOTA Moosalm 77.65 338 ⇑*i*P **P 16 46 58.8 +0.9**
comp=Z,29nm,1.0s,mb5.2,SNR=20
ECH Echery 77.67 341 *e*P **P 16 46 58.3 +0.3**
ECH Echery 77.67 341 *e*P **P 16 46 58.4 +0.4**
ECH pmax pmax
comp=Z,15nm,0.9s,mb4.9
ECH Echery 77.67 341 *e*P **P 16 46 58.4 +0.3**
comp=Z,15nm,0.9s,mb4.9
LRAL Lakeview Retre 77.69 52 *e*P **P 16 46 56.8 -1.6**
comp=Z,2.9nm,0.6s,mb4.4
MYKA Terra Mystica 77.72 336 ⇑*i*P **P 16 46 58.7 +0.4**
comp=Z,12nm,0.9s,mb4.8
MEZF Maizieres J'vi 77.81 343 *e*P **P 16 46 59.4 +0.6**
comp=Z,38nm,0.7s,mb5.1
MEZF Maizieres J'vi 77.81 343 *e*P **P 16 46 59.4 +0.6**

comp=Z,38nm,0.7s,mb5.4
FELD Feldberg im Sc 77.83 341 *e*P **P 16 46 59.0 +0.1**
ABTA Alpfaltersbach 77.88 337 ⇑*i*P **P 16 46 59.8 +0.6**
comp=Z,42nm,1.0s,mb5.3,SNR=14
THEF They Montfort 77.89 342 *e*P **P 16 46 59.6 +0.3**
DAVA Damuels 77.98 339 *i* P **P 16 47 01.1 +1.3**
comp=Z,27nm,1.1s,mb5.1,SNR=11
MOF Molkenrain 78.03 341 *e*P **P 16 47 00.3 +0.3**
HAU Haudompre 78.03 342 *e*P **P 16 47 00.3 +0.2**
comp=Z,38nm,1.0s,mb5.0
HAU Haudompre 78.03 342 *e*P **P 16 47 00.3 +0.2**
HAU pmax pmax
comp=Z,19nm,1.0s,mb5.0
HAU Haudompre 78.03 342 *e*P **P 16 47 00.3 +0.2**
comp=Z,19nm,1.0s,mb5.0
FETA Feichten 78.04 339 ⇑*i*P **P 16 47 01.1 +1.0**
comp=Z,34nm,1.1s,mb5.2,SNR=15
HINF Hinteralfeld 78.12 341 *e*P **P 16 47 00.5 0.0**
comp=Z,10nm,0.6s,mb4.6
HINF Hinteralfeld 78.12 341 *e*P **P 16 47 00.5 0.0**
HINF pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
HINF Hinteralfeld 78.12 341 *e*P **P 16 47 00.5 0.0**
comp=Z,5.2nm,0.6s,mb4.6
ASAR Alice Springs 78.22 204 P **P 16 47 01.2 0.0**
comp=Z,2.9nm,0.8s,mb4.2,baz=18,slow=5.3,SNR=32
JQE Queens East 78.26 348 *e*P **P 16 47 01.0 -0.3**
JQE Queens East 78.26 348 P **P 16 47 01.0 -0.3**
JRS Jersey 78.27 348 *e*P **P 16 47 02.6 +1.2**
JRS Jersey 78.27 348 P **P 16 47 02.6 +1.2**
JSA Saint Aubin 78.29 348 *e*P **P 16 47 00.8 -0.6**
JSA AMb AMB 16 47 04.7
comp=Z,28nm,1.1s,mb5.1
JSA Saint Aubin 78.29 348 P **P 16 47 00.8 -0.6**
JSA AMb AMB 16 47 04.7
comp=Z,28nm,1.1s,mb5.1
DIVS Divibare 78.31 331 P **P 16 47 01.7 0.0**
BBS Basel-Blauen 78.32 341 *e*P **P 16 47 02.0 +0.4**
FLN La Foliniere 78.47 346 *e*P **P 16 47 02.4 0.0**
comp=Z,37nm,0.9s,mb5.0
FLN La Foliniere 78.47 346 *e*P **P 16 47 02.4 0.0**
FLN pmax pmax
comp=Z,18nm,0.9s,mb5.0
FLN La Foliniere 78.47 346 *e*P **P 16 47 02.4 0.0**
comp=Z,18nm,0.9s,mb5.0
HATD Hatta, Dubai 78.54 295 P **P 16 47 03.5 +0.3**
SNR=9.4
HATD P 16 47 03.5
SNR=9.4
HATD P 16 47 03.5
SNR=9.4
HATD P 16 47 03.5
SNR=9.4
HATD P 16 47 03.5
SNR=9.4
HATD Hatta, Dubai 78.54 295 P **P 16 47 03.5 +0.3**
SNR=9.4
LOMF Lomont 78.57 341 *e*P **P 16 47 03.3 +0.3**
LDF La Druitiere 78.58 346 *e*P **P 16 47 03.2 +0.1**
comp=Z,32nm,1.0s,mb4.9
LDF La Druitiere 78.58 346 *e*P **P 16 47 03.2 +0.1**
LDF pmax pmax
comp=Z,16nm,1.0s,mb4.9
LDF La Druitiere 78.58 346 *e*P **P 16 47 03.2 +0.1**
comp=Z,16nm,1.0s,mb4.9
PLD Plovdiv 78.60 327 P **P 16 47 02.8 -0.5**
VTS Vitosha 78.66 328 P **P 16 47 03.8 +0.2**
VTS Vitosha 78.66 328 *i* P **P 16 47 03.9 +0.3**
GRR Gorron 78.89 347 *e*P **P 16 47 04.9 +0.1**
comp=Z,57nm,0.9s,mb5.2
GRR Gorron 78.89 347 *e*P **P 16 47 04.9 +0.1**
GRR pmax pmax
comp=Z,29nm,0.9s,mb5.2
GRR Gorron 78.89 347 *e*P **P 16 47 04.9 +0.1**
comp=Z,29nm,0.9s,mb5.2
RDO Rodhopi 79.17 326 P **P 16 47 06.2 -0.2**
LOR Lormes 79.21 343 *e*P **P 16 47 06.8 +0.3**
comp=Z,45nm,0.8s,mb5.1
LOR Lormes 79.21 343 *e*P **P 16 47 06.8 +0.3**
LOR pmax pmax
comp=Z,22nm,0.8s,mb5.1
LOR Lormes 79.21 343 *e*P **P 16 47 06.8 +0.3**
comp=Z,22nm,0.8s,mb5.2
ALN Alexandroupoli 79.21 326 P **P 16 47 06.6 -0.1**
SGMF Saint Gilles 79.25 348 *e*P **P 16 47 07.0 +0.2**
comp=Z,43nm,0.8s,mb5.1
SGMF Saint Gilles 79.25 348 *e*P **P 16 47 07.0 +0.2**
SGMF pmax pmax
comp=Z,21nm,0.8s,mb5.1
SGMF Saint Gilles 79.25 348 *e*P **P 16 47 07.0 +0.2**
comp=Z,22nm,0.8s,mb5.1
ROSF Rostrenen 79.27 348 *e*P **P 16 47 07.1 +0.3**
comp=Z,51nm,1.0s,mb5.2
ROSF Rostrenen 79.27 348 *e*P **P 16 47 07.1 +0.3**
ROSF pmax pmax
comp=Z,26nm,1.0s,mb5.1
ROSF Rostrenen 79.27 348 *e*P **P 16 47 07.1 +0.3**
comp=Z,26nm,1.0s,mb5.1
MIB Mutribah 79.33 305 *e*P **P 16 47 07.0 -0.5**
MIB AMb AMB 16 47 08.3
comp=Z,198nm,0.9s,mb6.0
UMR Umm Al-Rimmam 79.34 304 *e*P **P 16 47 06.9 -0.6**
UMR AMb AMB 16 47 08.0
comp=Z,108nm,0.7s,mb5.9
MMB Musomiste 79.39 328 *i* P **P 16 47 08.0 +0.4**
CABF La Chapelle 79.42 342 *e*P **P 16 47 08.3 +0.6**
comp=Z,43nm,1.1s,mb5.0
CABF La Chapelle 79.42 342 *e*P **P 16 47 08.3 +0.6**
CABF pmax pmax
comp=Z,21nm,1.1s,mb5.0
CABF La Chapelle 79.42 342 *e*P **P 16 47 08.3 +0.6**
comp=Z,22nm,1.1s,mb5.0
SSF Saint Saulge 79.47 343 *e*P **P 16 47 08.2 +0.2**
comp=Z,29nm,0.8s,mb5.0
SSF Saint Saulge 79.47 343 *e*P **P 16 47 08.2 +0.2**
SSF pmax pmax
comp=Z,15nm,0.8s,mb5.0
SSF Saint Saulge 79.47 343 *e*P **P 16 47 08.2 +0.2**
comp=Z,14nm,0.8s,mb5.0
KAVA Kavala 79.66 327 P **P 16 47 08.5 -0.6**
QUIF Quistinic 79.67 348 *e*P **P 16 47 09.3 +0.3**
comp=Z,39nm,1.0s,mb5.0
QUIF Quistinic 79.67 348 *e*P **P 16 47 09.3 +0.3**
QUIF pmax pmax
comp=Z,19nm,1.0s,mb5.0
QUIF Quistinic 79.67 348 *e*P **P 16 47 09.3 +0.3**
comp=Z,19nm,1.0s,mb5.0
AVF Avril sur Loir 79.76 343 *e*P **P 16 47 09.9 +0.4**
comp=Z,80nm,1.0s,mb5.3
AVF Avril sur Loir 79.76 343 *e*P **P 16 47 09.9 +0.4**
AVF pmax pmax
comp=Z,40nm,1.0s,mb5.3
AVF Avril sur Loir 79.76 343 *e*P **P 16 47 09.9 +0.4**
comp=Z,40nm,1.0s,mb5.3
SKO Skopje 79.79 329 *e*P **P 16 47 10.4 +0.6**
SKO Skopje 79.79 329 P **P 16 47 10.1 +0.3**
STIP Stip 79.80 329 *e*P **P 16 47 09.6 -0.3**
SMF Signal de Mont 79.81 343 *e*P **P 16 47 10.2 +0.4**
comp=Z,39nm,1.0s,mb5.0
SMF Signal de Mont 79.81 343 *e*P **P 16 47 10.2 +0.4**
SMF pmax pmax
comp=Z,20nm,1.0s,mb5.0
SMF Signal de Mont 79.81 343 *e*P **P 16 47 10.2 +0.4**
comp=Z,20nm,1.0s,mb5.0
NAY Al-Naaiem 79.83 305 *e*P **P 16 47 09.6 -0.6**
NAY AMb AMB 16 47 11.0
comp=Z,78nm,1.2s,mb5.5
SRS Serrai 79.86 328 P **P 16 47 09.9 -0.3**
QRN Al-Qurain 79.88 304 *e*P **P 16 47 10.1 -0.4**
QRN AMb AMB 16 47 11.1
comp=Z,153nm,0.7s,mb6.0
RDF Al-Radifah 79.93 304 *e*P **P 16 47 10.6 -0.2**
RDF AMb AMB 16 47 12.0
comp=Z,275nm,1.1s,mb6.1
VAY Valandovo 80.01 328 *e*P **P 16 47 10.7 -0.3**
VAY Valandovo 80.01 328 P **P 16 47 10.8 -0.2**
BGF Bois d'Agland 80.08 344 *e*P **P 16 47 11.7 +0.5**
comp=Z,22nm,0.7s,mb4.9
BGF Bois d'Agland 80.08 344 *e*P **P 16 47 11.7 +0.5**
BGF pmax pmax
comp=Z,11nm,0.7s,mb4.9
BGF Bois d'Agland 80.08 344 *e*P **P 16 47 11.7 +0.5**
comp=Z,11nm,0.7s,mb4.9
ISP Isparta 80.25 321 P **P 16 47 11.8 -0.5**
LPL La Plagne 80.34 341 *e*P **P 16 47 14.0 +1.3**
comp=Z,30nm,0.7s,mb5.0

LPL La Plagne 80.34 341 *eP* **P 16 47 14.0 +1.3**
LPL pmax pmax
comp=Z,15nm,0.7s,mb5.0
LPL La Plagne 80.34 341 *eP* **P 16 47 14.0 +1.3**
comp=Z,15nm,0.7s,mb5.0
LPG La Plagne 80.35 341 *eP* **P 16 47 14.2 +1.4**
comp=Z,53nm,0.8s,mb5.2
LPG La Plagne 80.35 341 *eP* **P 16 47 14.2 +1.4**
LPG pmax pmax
comp=Z,27nm,0.8s,mb5.2
LPG La Plagne 80.35 341 *eP* **P 16 47 14.2 +1.4**
comp=Z,27nm,0.8s,mb5.2
KRUS Krusevo 80.40 329 *eP* **P 16 47 12.3 -0.7**
LIA Limnos Island 80.40 326 P **P 16 47 12.9 -0.2**
TCF Toulx Ste Croi 80.45 344 *eP* **P 16 47 13.8 +0.5**
comp=Z,43nm,0.8s,mb5.1
TCF Toulx Ste Croi 80.45 344 *eP* **P 16 47 13.8 +0.5**
TCF pmax pmax
comp=Z,22nm,0.8s,mb5.1
TCF Toulx Ste Croi 80.45 344 *eP* **P 16 47 13.8 +0.5**
comp=Z,22nm,0.8s,mb5.1
BOB Bobbio (Coli) 80.47 339 P **P 16 47 14.8 +1.4**
PLDF La Plantade 80.51 343 *eP* **P 16 47 14.4 +0.8**
AGO Saint Agoulin 80.52 343 *eP* **P 16 47 14.9 +1.3**
MFF Saint Martin d 80.53 346 *eP* **P 16 47 14.3 +0.6**
comp=Z,30nm,0.8s,mb5.0
MFF Saint Martin d 80.53 346 *eP* **P 16 47 14.3 +0.6**
MFF pmax pmax
comp=Z,15nm,0.8s,mb5.0
MFF Saint Martin d 80.53 346 *eP* **P 16 47 14.3 +0.6**
comp=Z,15nm,0.8s,mb5.0
PLG Polygyros 80.58 327 P **P 16 47 13.2 -0.8**
PRK Paraskevi 80.60 325 P **P 16 47 12.1 -2.1**
BIA Bitola 80.69 329 *eP* **P 16 47 14.0 -0.7**
VMG Vicchio 80.73 337 P **P 16 47 16.8 +2.0**
comp=Z,60nm,1.0s,mb5.5
OHR Ohrid 80.77 329 *eP* **P 16 47 14.4 -0.7**
BNI Bardonecchia 80.80 341 *eP* **P 16 47 16.8 +1.7**
BNI pmax pmax
comp=Z,24nm,1.0s,mb5.1
BNI Bardonecchia 80.80 341 *eP* **P 16 47 16.8 +1.6**
comp=Z,24nm,1.0s,mb5.1
PYM Petit Puy Mans 80.83 343 *eP* **P 16 47 16.3 +1.0**
TIR Tirane 80.85 330 *eP* **P 16 47 15.4 -0.1**
TIR pmax pmax
comp=Z,73nm,0.9s,mb5.6
TIR Tirane 80.85 330 *eP* **P 16 47 15.4 -0.1**
comp=Z,73nm,0.9s,mb5.6
CING Cingoli 80.87 336 P **P 16 47 16.2 +0.6**
FNA Florina 80.89 329 P **P 16 47 15.3 -0.4**
PAIG Paliouri 80.90 327 P **P 16 47 12.7 -3.1**
COLF Collangettes 80.93 343 *eP* **P 16 47 16.9 +1.1**
SSB Saint Sauveur 81.00 342 *eP* **P 16 47 17.0 +0.8**
SSB Saint Sauveur 81.00 342 *eP* **P 16 47 16.9 +0.7**
SSB pmax pmax
comp=Z,12nm,0.8s,mb4.9
SSB Saint Sauveur 81.00 342 *eP* **P 16 47 16.9 +0.7**
comp=Z,12nm,0.8s,mb4.9
ORIF Oris-en-Rattie 81.09 341 *eP* **P 16 47 17.8 +1.1**
comp=Z,37nm,0.9s,mb5.0
ORIF Oris-en-Rattie 81.09 341 *eP* **P 16 47 17.8 +1.1**
ORIF pmax pmax
comp=Z,18nm,0.9s,mb5.0
ORIF Oris-en-Rattie 81.09 341 *eP* **P 16 47 17.8 +1.1**
comp=Z,18nm,0.9s,mb5.0
LIT Litokhoron 81.14 328 P **P 16 47 15.7 -1.4**
MURB Monte Urbino 81.15 336 P **P 16 47 18.1 +1.1**
FRNF Fournols 81.26 344 *eP* **P 16 47 19.7 +2.1**
LBL Lubilhac 81.29 343 *eP* **P 16 47 18.6 +0.9**
VIVF Saint-Julien-l 81.38 342 *eP* **P 16 47 19.2 +0.9**
comp=Z,24nm,0.8s,mb4.9
VIVF Saint-Julien-l 81.38 342 *eP* **P 16 47 19.2 +0.9**
VIVF pmax pmax
comp=Z,12nm,0.8s,mb4.9
VIVF Saint-Julien-l 81.38 342 *eP* **P 16 47 19.2 +0.9**
comp=Z,12nm,0.8s,mb4.9
AOS Alonnisos 81.50 326 P **P 16 47 18.4 -0.6**
RJF Les Rejaudoux 81.52 344 *eP* **P 16 47 19.8 +0.8**
comp=Z,38nm,0.9s,mb5.0
RJF Les Rejaudoux 81.52 344 *eP* **P 16 47 19.8 +0.8**
RJF pmax pmax
comp=Z,19nm,0.9s,mb5.0
RJF Les Rejaudoux 81.52 344 *eP* **P 16 47 19.8 +0.8**
comp=Z,19nm,0.9s,mb5.0
CSS Prodhromos 81.58 318 *eP* **P 16 47 18.7 -0.8**
comp=Z,38nm,0.7s,mb5.4
CSS Prodhromos 81.58 318 P **P 16 47 18.9 -0.6**
AQU L'Aquila 81.77 335 P **P 16 47 21.8 +1.4**
AQU L'Aquila 81.77 335 *eP* **P 16 47 21.3 +0.9**
comp=Z,55nm,0.9s,mb5.5
AQU L'Aquila 81.77 335 ⇓*iP* **P 16 47 21.2 +0.8**
SBF Sospel 81.77 340 *eP* **P 16 47 20.4 +0.1**
comp=Z,100nm,1.1s,mb5.3
SBF Sospel 81.77 340 *eP* **P 16 47 20.4 +0.1**
SBF pmax pmax
comp=Z,50nm,1.1s,mb5.4
SBF Sospel 81.77 340 *eP* **P 16 47 20.4 +0.1**
comp=Z,50nm,1.1s,mb5.4
CAF Calviac 81.79 344 *eP* **P 16 47 21.6 +1.2**
comp=Z,57nm,0.9s,mb5.2
CAF Calviac 81.79 344 *eP* **P 16 47 21.6 +1.2**
CAF pmax pmax
comp=Z,28nm,0.9s,mb5.2
CAF Calviac 81.79 344 *eP* **P 16 47 21.6 +1.2**
comp=Z,28nm,0.9s,mb5.2
RGNG Rignano Grg 81.81 333 P **P 16 47 20.7 +0.1**
LFF La Frestale 82.00 345 *eP* **P 16 47 22.5 +1.0**
comp=Z,45nm,0.8s,mb5.1
LFF La Frestale 82.00 345 *eP* **P 16 47 22.5 +1.0**
LFF pmax pmax
comp=Z,22nm,0.8s,mb5.1
LFF La Frestale 82.00 345 *eP* **P 16 47 22.5 +1.0**
comp=Z,22nm,0.8s,mb5.2
AGG Agios Georgios 82.16 327 P **P 16 47 21.2 -1.3**
MIDA Miranda 82.21 334 P **P 16 47 22.9 +0.2**
CERT Cerreto 82.26 335 P **P 16 47 22.8 -0.1**
LKR Lokris 82.27 327 P **P 16 47 21.1 -2.0**
LASF Ste Croix 82.29 342 *eP* **P 16 47 22.8 -0.2**
comp=Z,48nm,1.3s,mb5.0
IGT Igoumenitsa 82.36 329 P **P 16 47 18.0 -5.5**
MMAI Mount Meron Ar 82.36 315 P **P 16 47 24.2 +0.6**
comp=Z,28nm,0.6s,mb5.4,baz=39,slow=6.8,SNR=55
LMR La Mourre 82.47 340 *eP* **P 16 47 24.2 +0.2**
comp=Z,93nm,1.2s,mb5.3
LMR La Mourre 82.47 340 *eP* **P 16 47 24.2 +0.2**
LMR pmax pmax
comp=Z,46nm,1.2s,mb5.3
LMR La Mourre 82.47 340 *eP* **P 16 47 24.2 +0.2**
comp=Z,46nm,1.2s,mb5.3
RFI Roccamonfina 82.60 334 P **P 16 47 25.9 +1.2**
comp=Z,19nm,1.4s,mb4.9
DSF Desfina 82.65 327 P **P 16 47 23.5 -1.5**
CSSN Cassano Irpino 82.72 333 P **P 16 47 25.6 +0.2**
comp=Z,44nm,1.3s,mb5.3
KALE Kalithea 82.80 327 P **P 16 47 24.9 -0.9**
EFP Efpalio 82.84 328 P **P 16 47 23.9 -2.1**
MGR Morigerati 83.25 333 P **P 16 47 27.4 -0.7**
MTLF Montolieu 83.30 343 *eP* **P 16 47 28.0 -0.3**
comp=Z,15nm,0.9s,mb4.7
MTLF Montolieu 83.30 343 *eP* **P 16 47 28.0 -0.3**
MTLF pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
MTLF Montolieu 83.30 343 *eP* **P 16 47 28.0 -0.3**
comp=Z,7.3nm,0.9s,mb4.7
TIP Timpagrande 83.78 332 *eP* **P 16 47 31.0 +0.1**
comp=Z,21nm,0.8s,mb5.3
EPF Esparros 83.93 345 *eP* **P 16 47 31.8 +0.3**
comp=Z,32nm,1.2s,mb5.0
EPF Esparros 83.93 345 *eP* **P 16 47 31.8 +0.3**
EPF pmax pmax
comp=Z,16nm,1.2s,mb5.0
EPF Esparros 83.93 345 *eP* **P 16 47 31.8 +0.3**
comp=Z,16nm,1.2s,mb5.0
ETSF Etsaut 84.20 345 *eP* **P 16 47 32.7 -0.2**
comp=Z,18nm,0.8s,mb4.9
ETSF Etsaut 84.20 345 *eP* **P 16 47 32.7 -0.2**
ETSF pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
ETSF Etsaut 84.20 345 *eP* **P 16 47 32.7 -0.2**
comp=Z,8.8nm,0.8s,mb4.9
LAST Lasithi 84.51 323 P **P 16 47 32.9 -1.7**
STKA Stephens Creek 84.60 195 P **P 16 47 35.0 +0.2**
comp=Z,2.1nm,0.8s,mb4.3,baz=25,slow=11,SNR=4.9
KARN Karanos 84.87 325 P **P 16 47 33.5 -2.9**
CEL Celeste 84.89 332 *eP* **P 16 47 36.8 +0.4**
comp=Z,12nm,0.8s,mb5.1
SOI Samo 85.01 332 P **P 16 47 37.1 0.0**
SOI pmax pmax
comp=Z,9.0nm,0.6s,mb5.1
SOI Samo 85.01 332 P **P 16 47 37.1 0.0**
comp=Z,9.1nm,0.6s,mb5.1
PVRL Vila Real 86.75 350 *eP* **P 16 47 46.2 +0.6**
comp=Z,31nm,1.3s,mb5.4
MVO Moncorvo 86.79 350 *eP* **P 16 47 46.5 +0.7**
comp=Z,15nm,1.1s,mb5.1
ESDC Sonseca Array 87.87 347 P **P 16 47 50.8 -0.2**
comp=Z,2.0nm,0.7s,mb4.4,baz=360,slow=4.8,SNR=15
KEST Kesra 89.06 336 P **P 16 47 57.4 +0.6**
comp=Z,16nm,0.9s,mb5.4,baz=318,slow=2.4,SNR=30
PBAR Barrancos 89.74 349 *eP* **P 16 48 00.5 +0.6**
comp=Z,16nm,2.3s,mb5.0
ROSA Rosais 89.77 6 *eP* **P 16 47 57.9 -2.1**
PMAN Manadas 89.86 6 *eP* **P 16 47 50.9 -10**
comp=Z,30nm,0.8s,mb5.7
PICO Pico 89.97 6 *eP* **P 16 47 55.9 -5.1**
CMLA Cha da Macela 90.86 4 *eP* **P 16 48 08.1 +3.0**
comp=Z,34nm,1.0s,mb5.6
CMLA *e*LR LR 17 17 41.5
LPAZ La Paz 128.57 65 PKP PKPdf 16 54 09.1 +0.5
comp=Z,1.3nm,0.8s,baz=14,slow=4.2,SNR=6.0
LPAZ La Paz 128.57 65 P PKPdf 16 54 09.1 +0.5
BOSA Boshof 138.83 286 PKP PKPdf 16 54 29.8 +2.3
comp=Z,3.1nm,1.0s,baz=306,slow=7.4,SNR=3.8
QSPA South Pole Qui 141.39 180 PKhKP PKPpre 16 54 24.9
comp=Z,1.6nm,0.8s,baz=324,slow=2.2,SNR=7.9
PLCA Paso Flores 144.52 92 PKP PKPdf 16 54 36.2 -1.0
comp=Z,2.7nm,0.9s,baz=254,slow=1.8,SNR=7.4
PLCA Paso Flores 144.52 92 PKP PKPdf 16 54 36.2 -1.0
SYO Syowa Base 147.20 215⇓*e*PKPdf PKPdf 16 54 40.6 -0.3
SYO Syowa Base 147.20 215⇓*e*pPKPdf pPKPdf 16 54 56.8 0.0

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*ISK **01** 16:37:18.7,36°.98N×29°.18E,h8km,MD2.9*
*CSEM **01** 16:37:19.2±0.1,36°.95N×29°.18E,h10km,MD2.9, Error ellipse: s-maj=3.3km s-min=3.2km az=6.0*
*ISCJB **01** 16:37:19.1±0.5,36°.96N±0°.03×29°.18E±0°.03,h7km±5km, Error ellipse: s-maj=5.1km s-min=4.4km az=150.8*
*DDA **01** 16:37:21.9,37°.08N×29°.21E,h7km±9km,Md3.1*
ISC 01 16:37:19.5±0.5,36°.96N±0°.03×29°.18E±0°.03,h10km±5km, n32,σ0s67/49,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.32**	**52**	*e*PG	**Pg**	**16 37 25.2**	**-0.7**
GLHS				*e*SG	**Sg**	**16 37 29.9**	**-0.3**
GLHS	**Glhisar (BURDU**	**0.32**	**52**	*e*Pg	**Pg**	**16 37 25.2**	**-0.7**
GLHS				*e*Sg	**Sg**	**16 37 29.9**	**-0.3**
FETY	**Fethiye**	**0.33**	**194**	*e*PG	**Pg**	**16 37 26.1**	**0.0**
FETY				*e*SG	**Sg**	**16 37 31.5**	**+1.0**
FETY	**Fethiye**	**0.33**	**194**	*e*Pg	**Pg**	**16 37 26.1**	**0.0**
FETY				*e*Sg	**Sg**	**16 37 31.5**	**+0.9**
GOLH	**Golhisar**	**0.41**	**47**	*i* P	**Pg**	**16 37 27.2**	**-0.4**
GOLH				*i* S	**Sg**	**16 37 33.6**	**+0.5**
GOLH	**Golhisar**	**0.41**	**47**	*i* P	**Pg**	**16 37 27.2**	**-0.4**
GOLH				*i* S	**Sg**	**16 37 33.6**	**+0.5**
ELL	**Elmali**	**0.62**	**110**	*e*PG	**Pg**	**16 37 31.5**	**0.0**
ELL				*e*SG	**Sg**	**16 37 40.5**	**+0.8**
ELL	**Elmali**	**0.62**	**110**	*e*Pg	**Pg**	**16 37 31.5**	**0.0**
ELL				*e*Sg	**Sg**	**16 37 40.5**	**+0.9**
DNZL	**Cakiroluk**	**0.74**	**352**	*i* P	**Pg**	**16 37 33.2**	**-0.7**
DNZL				*i* S	**Sg**	**16 37 44.9**	**+1.4**
DNZL	**Cakiroluk**	**0.74**	**352**	*i* P	**Pg**	**16 37 33.2**	**-0.6**
DNZL				*i* S	**Sg**	**16 37 44.9**	**+1.4**
YER	**Yerkesik**	**0.74**	**284**	*e*PG	**Pg**	**16 37 33.8**	**-0.1**
YER				*e*SG	**Sg**	**16 37 43.9**	**+0.4**
YER	**Yerkesik**	**0.74**	**284**	*e*Pg	**Pg**	**16 37 33.8**	**-0.1**
YER				*e*Sg	**Sg**	**16 37 43.9**	**+0.3**
AKAS	**Kas**	**0.80**	**155**	*i* P	**Pg**	**16 37 33.3**	**-1.6**
AKAS				*i* S	**Sg**	**16 37 53.3**	**+8.0**
AKAS	**Kas**	**0.80**	**155**	*i* P	**Pg**	**16 37 33.3**	**-1.6**
DENT	**Denizli**	**0.80**	**351**	*e*PG	**Pg**	**16 37 34.1**	**-0.9**
DENT	**Denizli**	**0.80**	**351**	*e*Pg	**Pg**	**16 37 34.1**	**-1.0**
KORT	**Korkueli**	**0.94**	**87**	*i* P	**Pg**	**16 37 37.7**	**+0.1**
KORT				*i* S	**Sg**	**16 37 54.1**	**+4.4**
KORT	**Korkueli**	**0.94**	**87**	*i* P	**Pg**	**16 37 37.7**	**+0.2**
KORT				*i* S	**Sg**	**16 37 54.1**	**+4.4**
MLSB	**Milas**	**1.17**	**287**	*e*PN	**Pn**	**16 37 41.5**	**-0.5**
MLSB	**Milas**	**1.17**	**287**	*e*Pn	**Pn**	**16 37 41.5**	**-0.5**
BCK	**Bucak**	**1.23**	**65**	*e*PN	**Pn**	**16 37 42.7**	**-0.1**
BCK	**Bucak**	**1.23**	**65**	*e*Pn	**Pn**	**16 37 42.7**	**-0.1**
DAT	**Datca**	**1.31**	**260**	*e*PN	**Pn**	**16 37 43.8**	**0.0**
DAT	**Datca**	**1.31**	**260**	*e*Pn	**Pn**	**16 37 43.8**	**0.0**
ISP	**Isparta**	**1.38**	**50**	*e*PN	**Pn**	**16 37 44.5**	**-0.3**
ISP	**Isparta**	**1.38**	**50**	*e*Pn	**Pn**	**16 37 44.5**	**-0.3**
KHAL	**Karahalli**	**1.43**	**10**	*i* P	**Pn**	**16 37 46.5**	**+1.0**
KHAL				*i* S	**Sn**	**16 38 04.3**	**-0.1**
KHAL	**Karahalli**	**1.43**	**10**	*i* P	**Pn**	**16 37 46.5**	**+1.0**
KHAL				*i* S	**Sn**	**16 38 04.3**	**-0.1**
KULA	**Kula-Manisa**	**1.61**	**345**	*e*PN	**Pn**	**16 37 48.0**	**0.0**
KULA	**Kula-Manisa**	**1.61**	**345**	*e*Pn	**Pn**	**16 37 48.0**	**0.0**
HDMB	**Hadim**	**2.65**	**89**	*e*PN	**Pn**	**16 38 02.8**	**+0.6**
HDMB	**Hadim**	**2.65**	**89**	*e*Pn	**Pn**	**16 38 02.8**	**+0.6**

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*MOS **01** 16:37:14.4±2.0,51°.46N×159°.51E,h17km,mb4.7/12, Error ellipse: s-maj=18.7km s-min=9.5km az=92.9*
*KRSC **01** 16:37:20.8±0.7,51°.72N×159°.61E,h14km±12km,ML4.7*
*ISCJB **01** 16:37:22.6±1.2,51°.56N±0°.06×159°.3E±0°.1,h58km±7km, mb4.5/38, Error ellipse: s-maj=16.4km s-min=6.4km az=33.6*
*NEIC **01** 16:37:25.3±1.1,51°.68N×158°.97E,h62km±7km,mb4.4/12, Error ellipse: s-maj=13.1km s-min=7.7km az=121.0*
*IDC **01** 16:37:26.2±2.7,51°.69N×159°.11E,h75km±22km,mb4.0/19, mb1 4.1/19,mb1mx4.0/27,mbtmp4.0/19, Error ellipse: s-maj=21.5km s-min=15.8km az=130.0*
ISC 01 16:37:23.8±1.2,51°.59N±0°.06×159°.2E±0°.1,h54km±7km, n98,σ0s93/103,mb4.5/38,1C-3D,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	**Gorelyy**	**1.20**	**324**	*e*P	**Pn**	**16 37 44.5**	**+0.2**
GRL				*e*S	**Sn**	**16 38 01.4**	**+1.9**
PET	**Petropavlovsk**	**1.48**	**346**	*e*PN	**Pn**	**16 37 46.8**	**-1.3**
PET				*e*S	**Sn**	**16 38 08.3**	**+2.0**
PET				smax			
	comp=N,2μm,0.6s						
PET				smax			
	comp=N,3μm,0.5s						
PET	**Petropavlovsk**	**1.48**	**346**	*e*P	**Pn**	**16 37 46.5**	**-1.6**
PET				S	**Sn**	**16 38 04.8**	**-1.5**
PET	**Petropavlovsk**	**1.48**	**346**	*e*Pn	**Pn**	**16 37 47.0**	**-1.1**
SPN	**Mys Shipunski**	**1.58**	**18**	S	**Sn**	**16 38 07.6**	**-1.3**
MIPR	**Malaya Ipel'ka**	**1.68**	**295**	*e*P	**Pn**	**16 37 51.7**	**+0.9**
SDLR	**Sedlovina**	**1.70**	**353**	P	**Pn**	**16 37 50.9**	**-0.2**
PEA0B	**Petropavlovsk-**	**1.79**	**329**	*e*Pn	**Pn**	**16 37 52.7**	**+0.5**
PETK	**Petropavlovsk-**	**1.79**	**329**	P	**Pn**	**16 37 53.2**	**+1.0**
	comp=N,465nm,0.3s,baz=124,slow=17,SNR=11						
PETK				S	**Sn**	**16 38 19.3**	**+5.6**
	comp=N,93nm,0.3s,baz=116,slow=27,SNR=4.5						
PETK	**Petropavlovsk-**	**1.79**	**329**	P	**Pn**	**16 37 53.2**	**+1.0**
PETK				S	**Sn**	**16 38 19.3**	**+5.6**
SKR	**Severo-Kuril's**	**2.16**	**246**	PN	**Pn**	**16 37 54.5**	**-2.9**
SKR				*e*S	**Sn**	**16 38 22.5**	**-0.5**
SKR				smax			
	comp=N,2μm,0.6s						
SKR				smax			
	comp=E,1μm,0.6s						
GNL	**Ganaly**	**2.25**	**340**	P	**Pn**	**16 37 59.1**	**+0.6**
ALID	**Alaid**	**2.42**	**254**	P	**Pn**	**16 38 01.2**	**+0.2**
MKZ	**Mys Kozlova**	**3.33**	**26**	*e*P	**Pn**	**16 38 08.8**	**-4.5**
MKZ				S	**Sn**	**16 38 43.2**	**-8.4**
YAK	**Yakutsk**	**19.07**	**315**	*e*P	**Pn**	**16 41 39.4**	**-3.3**
YAK				pmax	pmax		
	comp=Z,40nm,0.8s						
YAK	**Yakutsk**	**19.07**	**315**	*e*P	**Pn**	**16 41 39.4**	**-3.3**
	comp=Z,40nm,0.8s						
MAJO	**Matsushiro**	**21.21**	**233**	*e*P	**P**	**16 42 04.2**	**-0.6**
MAT	**Matsushiro**	**21.21**	**233**	P	**P**	**16 42 05.0**	**+0.2**
MJAR	**Matsushiro Arr**	**21.21**	**233**	P	**P**	**16 42 05.5**	**+0.6**
	comp=Z,2.3nm,0.9s,mb3.5,baz=116,slow=16,SNR=4.4						
CN2	**Changchun**	**23.87**	**264**	*e*P	**P**	**16 42 33.1**	**+1.1**
TIXI	**Tiksi**	**24.24**	**337**	*e*P	**P**	**16 42 34.0**	**-1.2**
KSRS	**Korea Array**	**26.18**	**250**	P	**P**	**16 42 53.5**	**+0.5**
	comp=Z,2.0nm,0.6s,mb3.8,baz=51,slow=8.7,SNR=5.0						
KSRS	**Korea Array**	**26.18**	**250**	*e*P	**P**	**16 42 54.1**	**+1.1**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.8						
YKA	**Yellowknife Ar**	**44.64**	**41**	P	**P**	**16 45 30.2**	**-0.2**
	comp=Z,1.3nm,0.8s,mb3.8,baz=301,slow=8.1,SNR=2.8						
KURK	**Kurchatov**	**48.09**	**303**	P	**P**	**16 45 56.1**	**-1.5**
	comp=Z,7.0nm,0.8s,mb4.7,baz=62,slow=7.5,SNR=4.1						
KURK	**Kurchatov**	**48.09**	**303**	*e*P	**P**	**16 45 55.7**	**-1.9**
MKAR	**Makanchi Array**	**48.34**	**296**	P	**P**	**16 45 58.2**	**-1.4**
	comp=Z,0.8nm,0.4s,mb4.1,baz=56,slow=9.1,SNR=4.8						
SPITS	**Spitsbergen Ar**	**48.53**	**350**	P	**P**	**16 46 00.6**	**-0.1**
	comp=Z,7.9nm,0.5s,mb5.0,baz=59,slow=8.0,SNR=7.4						
BVAR	**Borovoye Array**	**50.92**	**309**	P	**P**	**16 46 17.6**	**-1.5**
	comp=Z,4.0nm,0.4s,mb4.7,baz=56,slow=8.4,SNR=8.5						
BRVK	**Borovoye**	**50.95**	**309**	*e*P	**P**	**16 46 17.9**	**-1.5**
ARCES	**ARCESS Array B**	**54.55**	**342**	P	**P**	**16 46 44.9**	**-0.8**
	comp=Z,2.7nm,0.6s,mb4.4,baz=45,slow=9.1,SNR=4.3						
CMAR	**Chiang Mai Arr**	**57.36**	**258**	P	**P**	**16 47 07.0**	**+0.6**
	comp=Z,1.6nm,0.8s,mb4.1,baz=33,slow=6.7,SNR=3.4						
AKTK	**Aktyubinsk**	**58.45**	**313**	P	**P**	**16 47 12.0**	**-1.7**
AKTO	**Aktyubinsk**	**58.45**	**313**	P	**P**	**16 47 12.0**	**-1.7**
	comp=Z,2.1nm,0.5s,mb4.5,baz=59,slow=7.5,SNR=5.4						
FINES	**FINESS Array B**	**61.29**	**336**	P	**P**	**16 47 32.3**	**-0.7**
	comp=Z,4.9nm,0.6s,mb4.8,baz=37,slow=8.3,SNR=4.8						
NOA	**NORSAR Array B**	**64.84**	**343**	P	**P**	**16 47 55.8**	**-0.7**
	comp=Z,5.0nm,0.7s,mb4.6,baz=22,slow=6.6,SNR=4.4						
VRHR	**Novokhopersk**	**64.89**	**322**	*e*P	**P**	**16 47 59.6**	**+2.6**
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.1						
VRHR				pmax	pmax		
	comp=N,10.0nm,0.6s						
VRHR				pmax	pmax		
	comp=E,40nm,1.8s						
VSR	**Storozhevoye**	**65.73**	**323**	*e*P	**P**	**16 48 06.7**	**+4.3**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
VSR				pmax	pmax		
	comp=N,10.0nm,1.1s						
VSR				pmax	pmax		
	comp=E,20nm,0.9s						
AKASG	**Malin Array Be**	**69.63**	**329**	P	**P**	**16 48 26.0**	**-1.0**
	comp=E,7.8nm,0.5s,mb4.9,baz=30,slow=7.1,SNR=7.5						
AKASG	**Malin Array Be**	**69.63**	**329**	P	**P**	**16 48 26.0**	**-1.0**
KIV	**Kislovodsk**	**70.17**	**317**	*e*P	pP	16 48 41.9	-3.5
KIV				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
TXAR	**Lajitas Array**	**71.72**	**66**	P	**P**	**16 48 40.7**	**+0.6**
	comp=Z,0.3nm,0.6s,mb3.4,baz=287,slow=6.1,SNR=2.3						
KWP	**Kalwaria Pacla**	**72.58**	**332**	*e*P	**P**	**16 48 45.4**	**+0.6**
KWP				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.0						
KWP	**Kalwaria Pacla**	**72.58**	**332**	*e*P	**P**	**16 48 45.4**	**+0.5**
	comp=Z,18nm,0.8s,mb5.0						
CLL	**Collm**	**73.57**	**339**	⇓*i*P	**P**	**16 48 50.6**	**-0.1**
CLL				*i*	pP	16 49 02.4	-3.4
CLL				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
CLL	**Collm**	**73.57**	**339**	⇓*i*P	**P**	**16 48 50.6**	**-0.1**
	comp=Z,5.0nm,0.9s,mb4.4						
CLL				*i*	pP	16 49 02.4	-3.4
CLL	**Collm**	**73.57**	**339**	⇓*i*P	**P**	**16 48 50.6**	**-0.1**
	comp=Z,5.0nm,0.9s,mb4.4						
CLL				⇑*i*	pP	16 49 02.4	-3.4
GERES	**GERESS Array B**	**75.70**	**337**	P	**P**	**16 49 03.1**	**+0.1**
	comp=Z,1.3nm,0.5s,mb4.1,baz=31,slow=6.4,SNR=5.9						
GIVF	**Givet**	**76.37**	**343**	*e*P	**P**	**16 49 06.8**	**0.0**
BAIF	**Baives**	**76.52**	**344**	*e*P	**P**	**16 49 07.9**	**+0.2**
	comp=Z,8.3nm,0.9s,mb4.3						
BAIF	**Baives**	**76.52**	**344**	*e*P	**P**	**16 49 07.9**	**+0.2**
BAIF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
BAIF	**Baives**	**76.52**	**344**	*e*P	**P**	**16 49 07.9**	**+0.2**
	comp=Z,4.2nm,0.9s,mb4.4						
BR131	**Keskin Array S**	**77.44**	**320**	*e*P	**P**	**16 49 12.7**	**-0.3**
BRTR	**Keskin Array B**	**77.44**	**320**	P	**P**	**16 49 13.4**	**+0.4**
	comp=Z,4.3nm,0.9s,mb4.4,baz=33,slow=3.3,SNR=4.7						
CDF	**Champ du Feu**	**77.53**	**341**	*e*P	**P**	**16 49 13.7**	**+0.3**
	comp=Z,7.0nm,0.9s,mb4.3						
CDF	**Champ du Feu**	**77.53**	**341**	*e*P	**P**	**16 49 13.7**	**+0.3**
CDF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
CDF	**Champ du Feu**	**77.53**	**341**	*e*P	**P**	**16 49 13.7**	**+0.3**
	comp=Z,3.5nm,0.9s,mb4.3						
MEZF	**Maizieres J'vi**	**77.87**	**343**	*e*P	**P**	**16 49 15.9**	**+0.6**
HAU	**Haudompre**	**78.10**	**342**	*e*P	**P**	**16 49 16.7**	**+0.1**
ASAR	**Alice Springs**	**78.17**	**204**	P	**P**	**16 49 17.7**	**+0.6**
	comp=Z,0.6nm,0.6s,mb3.7,baz=15,slow=5.8,SNR=3.2						
HINF	**Hinteralfeld**	**78.18**	**341**	*e*P	**P**	**16 49 17.1**	**+0.1**
FLN	**La Foliniere**	**78.53**	**346**	*e*P	**P**	**16 49 18.6**	**-0.3**
LDF	**La Druitiere**	**78.64**	**346**	*e*P	**P**	**16 49 19.4**	**-0.2**
	comp=Z,5.4nm,0.8s,mb4.2						
LDF	**La Druitiere**	**78.64**	**346**	*e*P	**P**	**16 49 19.4**	**-0.2**
LDF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
LDF	**La Druitiere**	**78.64**	**346**	*e*P	**P**	**16 49 19.4**	**-0.2**
	comp=Z,2.7nm,0.8s,mb4.2						
LOR	**Lormes**	**79.28**	**343**	*e*P	**P**	**16 49 23.4**	**+0.4**
	comp=Z,5.8nm,0.6s,mb4.4						
LOR	**Lormes**	**79.28**	**343**	*e*P	**P**	**16 49 23.4**	**+0.4**
LOR				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
LOR	**Lormes**	**79.28**	**343**	*e*P	**P**	**16 49 23.4**	**+0.4**
	comp=Z,2.9nm,0.6s,mb4.4						
ROSF	**Rostrenen**	**79.33**	**348**	*e*P	**P**	**16 49 23.5**	**+0.2**
MIB	**Mutribah**	**79.38**	**305**	*e*P	**P**	**16 49 23.5**	**-0.4**
MIB				AMb	AMB	16 49 24.3	
	comp=Z,33nm,1.2s,mb5.2						
CABF	**La Chapelle**	**79.49**	**342**	*e*P	**P**	**16 49 24.8**	**+0.6**
SSF	**Saint Saulge**	**79.54**	**343**	*e*P	**P**	**16 49 24.8**	**+0.3**
	comp=Z,5.6nm,0.8s,mb4.3						
SSF	**Saint Saulge**	**79.54**	**343**	*e*P	**P**	**16 49 24.8**	**+0.3**
SSF				pmax	pmax		
	comp=Z,3.0nm,0.8s,m

*KRSC **01** 16:38:19.2±1.1, 51°.63N×159°.74E, h10km±10km, ML4.4*
*ISCJB **01** 16:38:22.9±1.8, 51°.62N±0°.09×159°.6E±0°.2, h68km±10km, mb4.0/13, Error ellipse: s-maj=22.8km s-min=9.2km az=34.9*
*MOS **01** 16:38:28.1±1.8, 51°.71N×159°.47E, h14km, mb4.7/12, Error ellipse: s-maj=38.1km s-min=17.9km az=115.5*
*IDC **01** 16:38:29.6±5.0, 51°.79N×158°.76E, h85km±24km, mb3.8/13, mb1 3.9/13, mb1mx3.6/27, mbtmp3.8/13, MS4.5/1, Ms1 4.5/1, ms1mx3.6/34, Error ellipse: s-maj=75.1km s-min=18.6km az=118.0*
*NEIC **01** 16:38:30.5±2.0, 51°.84N×158°.58E, h90km±8km, mb4.7/1, Error ellipse: s-maj=34.3km s-min=10.1km az=111.0*
ISC 01 16:38:24.1±1.7,**51°.64N**±0°.09×**159°.6E**±0°.2,**h61**km±10km, **n36**,σ1°**02**/38,**mb4.1**/13,**Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	**Gorelyy**	**1.30**	**315**	*eP*	**Pn**	**16 38 45.1**	**-1.1**
SPN	**Mys Shipunski**	**1.49**	**10**	S	**Sn**	**16 39 06.6**	**-0.5**
PET	**Petropavlovsk**	**1.50**	**338**	PN	**Pn**	**16 38 47.3**	**-1.5**
PET				S	**Sn**	**16 39 07.8**	**+0.4**
PET	**Petropavlovsk**	**1.50**	**338**	*eP*	**Pn**	**16 38 47.3**	**-1.5**
PET				S	**Sn**	**16 39 07.8**	**+0.4**
NLC	**Nalytchevo**	**1.54**	**355**	S	**Sn**	**16 39 08.3**	**-0.1**
MIPR	**Malaya Ipel'ka**	**1.86**	**291**	*eP*	**Pn**	**16 38 52.4**	**-1.2**
MIPR				S	**Sn**	**16 39 16.7**	**+0.7**
PEA0B	**Petropavlovsk-**	**1.87**	**323**	P	**Pn**	**16 38 54.8**	**+1.0**
PETK	**Petropavlovsk-**	**1.87**	**323**	P	**Pn**	**16 38 54.9**	**+1.1**
70nm,0.3s,baz=127,slow=17,SNR=3.2							
PETK	**Petropavlovsk-**	**1.87**	**323**	PN	**Pn**	**16 38 54.9**	**+1.1**
PETK				*e*		16 45 03.2	
GNL	**Ganaly**	**2.29**	**335**	P	**Pn**	**16 39 00.2**	**+0.7**
ALID	**Alaid**	**2.65**	**255**	P	**Pn**	**16 39 05.8**	**+1.5**
YAK	**Yakutsk**	**19.20**	**314**	*eP*	**Pn**	**16 42 40.4**	**-3.6**
MJAR	**Matsushiro Arr**	**21.41**	**234**	P	**P**	**16 43 06.4**	**-0.3**
3.6nm,1.0s,mb3.7,baz=35,slow=11,SNR=2.6							
MAJO	**Matsushiro**	**21.41**	**234**	*eP*	**P**	**16 43 06.6**	**-0.1**
TIXI	**Tiksi**	**24.29**	**337**	*eP*	**P**	**16 43 35.0**	**-0.2**
KSRS	**Korea Array**	**26.40**	**250**	P	**P**	**16 43 53.3**	**-1.4**
0.9nm,0.6s,mb3.5,baz=44,slow=10.0,SNR=2.9							
KSRS	**Korea Array**	**26.40**	**250**	P	**P**	**16 43 53.3**	**-1.3**
KSRS				pmax	pmax		
comp=Z,1.0nm,0.6s,mb3.5							
INK	**Inuvik**	**35.23**	**36**	LR	LR	17 02 17.0	
comp=Z,736nm,18.7s,baz=257,slow=40							
KURK	**Kurchatov**	**48.25**	**303**	P	**P**	**16 46 57.8**	**-0.6**
comp=Z,0.7nm,0.3s,mb4.2,baz=61,slow=7.6,SNR=3.4							
KURK	**Kurchatov**	**48.25**	**303**	P	**P**	**16 46 57.8**	**-0.6**
KURK				pmax	pmax		
comp=Z,1.0nm,0.3s,mb4.3							
KURK	**Kurchatov**	**48.25**	**303**	*eP*	**P**	**16 46 56.8**	**-1.6**
MKAR	**Makanchi Array**	**48.51**	**297**	P	**P**	**16 46 59.8**	**-0.7**
comp=Z,0.4nm,0.4s,mb3.8,baz=52,slow=9.0,SNR=2.5							
SPITS	**Spitsbergen Ar**	**48.52**	**351**	P	**P**	**16 47 01.4**	**+1.2**
comp=Z,1.7nm,0.4s,mb4.4,baz=25,slow=5.1,SNR=5.6							
BVAR	**Borovoye Array**	**51.06**	**309**	P	**P**	**16 47 18.1**	**-1.6**
comp=Z,1.8nm,0.3s,mb4.4,baz=58,slow=7.9,SNR=4.2							
BRVK	**Borovoye**	**51.09**	**309**	*eP*	**P**	**16 47 17.7**	**-2.2**
ARCES	**ARCESS Array B**	**54.58**	**342**	P	**P**	**16 47 45.2**	**-0.2**
comp=Z,3.0nm,0.9s,mb4.3,baz=39,slow=10,SNR=3.0							
CMAR	**Chiang Mai Arr**	**57.58**	**259**	P	**P**	**16 48 08.3**	**+0.8**
comp=Z,0.6nm,0.7s,mb3.7,baz=30,slow=5.1,SNR=2.1							
FINES	**FINESS Array B**	**61.33**	**337**	P	**P**	**16 48 33.2**	**+0.4**
comp=Z,2.1nm,0.6s,mb4.4,baz=19,slow=8.8,SNR=3.1							
NB2	**NORSAR Subarra**	**64.85**	**344**	P	**P**	**16 48 56.4**	**+0.3**
comp=Z,8.2nm,0.8s,baz=22,slow=6.5							
NOA	**NORSAR Array B**	**64.85**	**344**	P	**P**	**16 48 56.9**	**+0.8**
comp=Z,2.5nm,0.7s,mb4.3,baz=21,slow=6.7,SNR=4.3							
AKASG	**Malin Array Be**	**69.70**	**329**	P	**P**	**16 49 26.8**	**-0.2**
comp=Z,3.0nm,0.4s,mb4.5,baz=30,slow=7.0,SNR=4.3							
BUR08	**Bucovina Ar. S**	**73.66**	**330**	*eP*	**P**	**16 49 50.8**	**+0.1**
TIRR	**Tirgusor**	**75.40**	**326**	*eP*	**P**	**16 50 01.7**	**+0.8**
TIRR				pmax	pmax		
comp=Z,9.0nm,0.9s							
TIRR	**Tirgusor**	**75.40**	**326**	*eP*	**P**	**16 50 01.6**	**+0.8**
comp=Z,9.4nm,0.9s							
BRTR	**Keskin Array B**	**77.54**	**320**	P	**P**	**16 50 14.8**	**+1.7**
comp=Z,1.7nm,0.8s,mb4.0,baz=5,3,slow=5.4,SNR=2.9							
MMAI	**Mount Meron Ar**	**82.53**	**315**	P	**P**	**16 50 41.4**	**+1.3**
comp=Z,1.4nm,0.5s,mb4.3,baz=45,slow=6.3,SNR=3.4							

*NEIC **01** 16:38:34.7±1.6, 51°.58N×159°.28E, h46km±11km, mb4.5/18, Error ellipse: s-maj=16.1km s-min=10.3km az=130.0*
*MOS **01** 16:38:35.5±1.6, 51°.46N×159°.50E, h24km, mb4.8/20, Error ellipse: s-maj=17.3km s-min=13.1km az=101.1*
*IDC **01** 16:38:35.4±3.1, 51°.65N×159°.40E, h56km±25km, mb4.1/21, mb1 4.2/21, mb1mx4.1/27, mbtmp4.1/21, Error ellipse: s-maj=21.0km s-min=15.8km az=143.0*
*SZGRF **01** 16:38:36.2, 51°.98N×160°.35E, h33km, mb4.4, Off east coast of Kamchatka Peninsula, Russia*
*ISCJB **01** 16:38:37.8±1.3, 51°.63N±0°.07×158°.7E±0°.2, h73km±7km, mb4.4/42, Error ellipse: s-maj=19.6km s-min=8.3km az=27.9*
ISC 01 16:38:39.2±1.3,**51°.67N**±0°.07×**158°.8E**±0°.2,**h72**km±7km, **n111**,σ0°**98**/114,**mb4.4**/43,**6C**,**Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PET	**Petropavlovsk**	**1.36**	**357**	*e*PN	**Pn**	**16 38 57.5**	**-4.8**
PET				*e*S	**Sn**	**16 39 20.9**	**+1.3**
PET				smax			
comp=N,7μm,0.5s							
PET				smax			
comp=N,5μm,0.4s							
PET	**Petropavlovsk**	**1.36**	**357**	*eP*	**Pn**	**16 38 57.0**	**-5.3**
PEA0B	**Petropavlovsk-**	**1.58**	**336**	*eP*	**Pn**	**16 39 05.4**	**+0.2**
PETK	**Petropavlovsk-**	**1.58**	**336**	P	**Pn**	**16 39 05.3**	**0.0**
comp=N,691nm,0.3s,baz=126,slow=18,SNR=18							
SKR	**Severo-Kuril's**	**1.95**	**241**	PN	**Pn**	**16 39 06.7**	**-3.4**
SKR				*e*S	**Sn**	**16 39 35.0**	**+1.4**
SKR				pmax	pmax		
comp=N,230nm,0.5s							
SKR				pmax	pmax		
comp=E,310nm,0.5s							
SKR				pmax	pmax		
comp=Z,390nm,0.5s							
SKR				smax			
comp=N,4μm,0.5s							
SKR				smax			
comp=E,1μm,0.5s							
HABR	**Khabarovsk**	**15.55**	**267**	*ce*P	**Pn**	**16 42 11.8**	**-2.1**
HABR				*e*		16 45 03.2	
HABR				pmax	pmax		
comp=Z,22nm,1.2s							
HABR				pmax	pmax		
comp=N,6.0nm,0.7s							
HABR				pmax	pmax		
comp=E,36nm,2.0s							
YAK	**Yakutsk**	**18.82**	**315**	*eP*	**Pn**	**16 42 51.3**	**-2.6**
YAK				pmax	pmax		
comp=Z,46nm,0.8s							
YAK	**Yakutsk**	**18.82**	**315**	*eP*	**Pn**	**16 42 51.3**	**-2.6**
comp=Z,46nm,0.8s							
VLA	**Vladivostok**	**20.02**	**255**	*eP*	**P**	**16 43 03.2**	**-2.7**
VLA				pmax	pmax		
comp=Z,26nm,1.1s							
MAJO	**Matsushiro**	**21.03**	**232**	*eP*	**P**	**16 43 17.0**	**+0.1**
MAT	**Matsushiro**	**21.03**	**232**	P	**P**	**16 43 17.3**	**+0.4**
MJAR	**Matsushiro Arr**	**21.03**	**232**	P	**P**	**16 43 16.8**	**-0.1**
comp=Z,3.6nm,0.6s,mb3.9,baz=26,slow=7.8,SNR=6.0							
TIXI	**Tiksi**	**24.06**	**337**	P	**P**	**16 43 45.7**	**-1.5**
KSRS	**Korea Array**	**25.95**	**249**	P	**P**	**16 44 06.5**	**+1.9**
comp=Z,2.9nm,0.6s,mb3.9,baz=53,slow=8.8,SNR=7.4							
KSRS	**Korea Array**	**25.95**	**249**	P	**P**	**16 44 06.5**	**+1.9**
KSRS				pmax	pmax		
comp=Z,3.0nm,0.6s,mb3.9							
ULN	**Ulaanbaatar**	**33.05**	**284**	*eP*	**P**	**16 45 07.1**	**-0.3**
SONM	**Songino Array**	**33.46**	**285**	P	**P**	**16 45 12.3**	**+1.3**
comp=Z,0.9nm,0.5s,mb3.8,baz=64,slow=4.0,SNR=4.4							
ZALV	**Zalesovo Beam**	**42.88**	**303**	P	**P**	**16 46 28.8**	**-1.2**
comp=Z,1.0nm,0.4s,mb3.9,baz=56,slow=5.4,SNR=3.3							
YKA	**Yellowknife Ar**	**44.76**	**41**	P	**P**	**16 46 39.6**	**-5.4**
comp=Z,1.1nm,0.8s,mb3.7,baz=296,slow=7.5,SNR=3.2							
KURK	**Kurchatov**	**47.81**	**302**	P	**P**	**16 47 08.9**	**-0.1**
comp=Z,4.7nm,0.4s,mb4.6,baz=62,slow=7.5,SNR=6.8							
KURK	**Kurchatov**	**47.81**	**302**	P	**P**	**16 47 08.9**	**-0.1**
KURK				pmax	pmax		
comp=Z,5.0nm,0.4s,mb4.7							
KURK	**Kurchatov**	**47.81**	**302**	*eP*	**P**	**16 47 08.0**	**-1.0**
MKAR	**Makanchi Array**	**48.05**	**296**	P	**P**	**16 47 10.6**	**-0.3**
comp=Z,1.2nm,0.4s,mb4.0,baz=54,slow=8.1,SNR=5.7							
KBS	**Kingsbay**	**48.17**	**352**	*ce*P	**P**	**16 47 12.6**	**+1.1**
KBS				pmax	pmax		
comp=Z,6.0nm,0.8s,mb4.5							
SPITS	**Spitsbergen Ar**	**48.41**	**350**	P	**P**	**16 47 11.5**	**-1.7**
comp=Z,2.8nm,0.4s,mb4.5,baz=59,slow=8.1,SNR=11							
BVAR	**Borovoye Array**	**50.65**	**309**	P	**P**	**16 47 29.7**	**-0.9**
comp=Z,6.3nm,0.4s,mb5.0,baz=56,slow=8.3,SNR=18							
BRVK	**Borovoye**	**50.68**	**309**	*ce*P	**P**	**16 47 30.5**	**-0.3**
BRVK				pmax	pmax		
comp=Z,6.0nm,1.0s,mb4.6							
BRVK	**Borovoye**	**50.68**	**309**	*eP*	**P**	**16 47 29.9**	**-0.9**
YBH	**Yreka Blue Hor**	**52.28**	**68**	P	**P**	**16 47 36.7**	**-6.3**
comp=Z,1.4nm,0.4s,mb4.4,baz=26,slow=15,SNR=7.4							
ARU	**Arti**	**53.90**	**317**	*c*P	**P**	**16 47 53.3**	**-1.3**
ARU				*e*		16 49 52.6	
ARU				S	**S**	**16 55 24.7**	**+0.7**
ARU				pmax	pmax		
comp=Z,13nm,1.2s,mb4.8							
ARCES	**ARCESS Array B**	**54.39**	**342**	P	**P**	**16 47 56.7**	**-1.2**
comp=Z,9.9nm,0.9s,mb4.8,baz=34,slow=8.8,SNR=6.9							
ARCES	**ARCESS Array B**	**54.39**	**342**	P	**P**	**16 47 56.7**	**-1.2**
CMAR	**Chiang Mai Arr**	**57.10**	**258**	P	**P**	**16 48 19.2**	**+1.2**
comp=Z,2.7nm,0.7s,mb4.4,baz=31,slow=6.7,SNR=5.6							
CMAR	**Chiang Mai Arr**	**57.10**	**258**	*ce*P	**P**	**16 48 20.2**	**+2.2**
CMAR				pmax	pmax		
comp=Z,3.0nm,0.7s							
AKTK	**Aktyubinsk**	**58.19**	**312**	P	**P**	**16 48 24.8**	**-0.5**
AKTO	**Aktyubinsk**	**58.19**	**312**	P	**P**	**16 48 24.8**	**-0.5**
comp=Z,2.5nm,0.5s,mb4.5,baz=62,slow=7.5,SNR=7.9							
GUN	**Gumba**	**58.24**	**276**	*eP*	**P**	**16 48 26.1**	**+0.1**
KKN	**Kakani**	**58.70**	**276**	*eP*	**P**	**16 48 29.4**	**+0.3**
comp=Z,16nm,0.4s,mb5.4							
KKN	**Kakani**	**58.70**	**276**	*eP*	**P**	**16 48 29.4**	**+0.3**
KKN				pmax	pmax		
comp=Z,16nm,0.4s,mb5.4							
PKI	**Pulchoki**	**58.77**	**276**	*eP*	**P**	**16 48 29.3**	**-0.4**
DMN	**Daman**	**58.94**	**276**	*eP*	**P**	**16 48 31.5**	**+0.7**
comp=Z,18nm,0.4s,mb5.4							
FINES	**FINESS Array B**	**61.10**	**336**	P	**P**	**16 48 44.6**	**-0.5**
comp=Z,3.9nm,0.5s,mb4.7,baz=29,slow=8.2,SNR=7.5							
NOA	**NORSAR Array B**	**64.68**	**343**	P	**P**	**16 49 08.5**	**-0.3**
comp=Z,7.0nm,0.8s,mb4.6,baz=21,slow=6.6,SNR=7.5							
AKASG	**Malin Array Be**	**69.41**	**328**	P	**P**	**16 49 38.3**	**-0.7**
comp=Z,10nm,0.5s,mb4.9,baz=30,slow=6.2,SNR=12							
AKASG	**Malin Array Be**	**69.41**	**328**	*ce*P	**P**	**16 49 38.2**	**-0.8**
AKASG				pmax	pmax		
comp=Z,11nm,0.5s							
TXAR	**Lajitas Array**	**71.95**	**66**	P	**P**	**16 49 52.9**	**-1.8**
comp=Z,0.3nm,0.5s,mb3.4,baz=304,slow=4.7,SNR=2.7							
STHS	**Stebnicka Huta**	**72.99**	**333**	*eP*	**P**	**16 50 01.6**	**+1.0**
STHS				pmax	pmax		
comp=Z,7.0nm,0.8s,mb4.5							
STHS	**Stebnicka Huta**	**72.99**	**333**	*eP*	**P**	**16 50 01.6**	**+1.0**
comp=Z,7.1nm,0.8s,mb4.5							
STHS	**Stebnicka Huta**	**72.99**	**333**	*eP*	**P**	**16 50 01.6**	**+1.0**
KOLS	**Kolonicke sedl**	**73.13**	**332**	*eP*	**P**	**16 50 01.9**	**+0.5**
KOLS				pmax	pmax		
comp=Z,8.0nm,0.9s,mb4.5							
KOLS	**Kolonicke sedl**	**73.13**	**332**	*eP*	**P**	**16 50 01.9**	**+0.5**
comp=Z,8.1nm,0.9s,mb4.5							
KOLS	**Kolonicke sedl**	**73.13**	**332**	*eP*	**P**	**16 50 01.9**	**+0.5**
BUR08	**Bucovina Ar. S**	**73.38**	**329**	*eP*	**P**	**16 50 02.7**	**-0.2**
CLL	**Collm**	**73.39**	**338**	*i* P	**P**	**16 50 02.8**	**-0.1**
CLL				*e*		16 50 15.0	
CLL				pmax	pmax		
comp=Z,6.0nm,1.0s,mb4.4							
CLL	**Collm**	**73.39**	**338**	*i* P	**P**	**16 50 02.8**	**-0.1**
comp=Z,6.0nm,1.0s,mb4.4							
CLL				*e*		16 50 15.0	
CLL	**Collm**	**73.39**	**338**	*i* P	**P**	**16 50 02.8**	**-0.1**
comp=Z,6.0nm,1.0s,mb4.4							
CLL				*e*pP	pP	16 50 15.0	-7.1
KECS	**Kecovo**	**74.05**	**333**	*eP*	**P**	**16 50 05.7**	**-1.1**
KECS				pmax	pmax		
comp=Z,3.0nm,1.2s,mb3.9							
KECS	**Kecovo**	**74.05**	**333**	*eP*	**P**	**16 50 05.7**	**-1.1**
comp=Z,3.4nm,1.2s,mb4.0							
KECS	**Kecovo**	**74.05**	**333**	*eP*	**P**	**16 50 05.7**	**-1.1**
VYHS	**Vyhne**	**74.51**	**334**	*eP*	**P**	**16 50 10.2**	**+0.7**
VYHS				pmax	pmax		
comp=Z,13nm,2.0s,mb4.3							
VYHS	**Vyhne**	**74.51**	**334**	*eP*	**P**	**16 50 10.2**	**+0.7**
comp=Z,13nm,2.0s,mb4.3							
VYHS	**Vyhne**	**74.51**	**334**	*eP*	**P**	**16 50 10.2**	**+0.7**
TIRR	**Tirgusor**	**75.09**	**326**	*eP*	**P**	**16 50 12.9**	**0.0**
KHC	**Kasperske Hory**	**75.28**	**337**	*eP*	**P**	**16 50 14.6**	**+0.6**
KHC	**Kasperske Hory**	**75.28**	**337**	*eP*	**P**	**16 50 14.5**	**+0.6**
GRA1	**Grafenberg Arr**	**75.31**	**339**	*eP*	**P**	**16 50 14.7**	**+0.6**
comp=Z,4.0nm,1.0s,mb4.1							
GRF	**Grafenberg Arr**	**75.31**	**339**	*eP*	**P**	**16 50 14.7**	**+0.6**
comp=Z,4.0nm,1.0s,mb4.1							
GRF	**Grafenberg Arr**	**75.31**	**339**	*eP*	**P**	**16 50 14.7**	**+0.6**
GRF				pmax	pmax		
comp=Z,4.0nm,1.0s,mb4.1							
GRF	**Grafenberg Arr**	**75.31**	**339**	*eP*	**P**	**16 50 14.7**	**+0.6**
GRF				pmax	pmax		
comp=Z,4.0nm,1.0s,mb4.1							
GRF	**Grafenberg Arr**	**75.31**	**339**	*eP*	**P**	**16 50 14.7**	**+0.6**
comp=Z,4.0nm,1.0s,mb4.1							
GERES	**GERESS Array B**	**75.52**	**337**	P	**P**	**16 50 15.8**	**+0.5**
comp=Z,1.9nm,0.5s,mb4.1,baz=34,slow=6.6,SNR=13							
BRTR	**Keskin Array B**	**77.20**	**320**	P	**P**	**16 50 25.4**	**+0.5**
comp=Z,4.7nm,0.7s,mb4.3,baz=46,slow=3.6,SNR=7.6							
CDF	**Champ du Feu**	**77.36**	**341**	*eP*	**P**	**16 50 26.0**	**+0.3**
comp=Z,4.3nm,0.6s,mb4.1							
CDF	**Champ du Feu**	**77.36**	**341**	*eP*	**P**	**16 50 26.0**	**+0.3**
CDF				pmax	pmax		
comp=Z,2.0nm,0.6s,mb4.0							
CDF	**Champ du Feu**	**77.36**	**341**	*eP*	**P**	**16 50 26.0**	**+0.3**
comp=Z,2.2nm,0.6s,mb4.1							
MEZF	**Maizieres J'vi**	**77.71**	**342**	*eP*	**P**	**16 50 28.3**	**+0.6**
comp=Z,7.7nm,0.6s,mb4.3							
MEZF	**Maizieres J'vi**	**77.71**	**342**	*eP*	**P**	**16 50 28.3**	**+0.6**
comp=Z,7.7nm,0.6s,mb4.6							
ASAR	**Alice Springs**	**78.13**	**203**	P	**P**	**16 50 29.3**	**-0.8**
comp=Z,0.8nm,0.6s,mb3.6,baz=18,slow=5.0,SNR=4.7							
GRR	**Gorron**	**78.81**	**346**	*eP*	**P**	**16 50 34.1**	**+0.4**
GRR	**Gorron**	**78.81**	**346**	*eP*	**P**	**16 50 34.1**	**+0.4**
GRR	**Gorron**	**78.81**	**346**	*eP*	**P**	**16 50 34.1**	**+0.4**
LOR	**Lormes**	**79.12**	**343**	*eP*	**P**	**16 50 35.5**	**+0.1**
comp=Z,5.5nm,0.6s,mb4.2							
LOR	**Lormes**	**79.12**	**343**	*eP*	**P**	**16 50 35.5**	**+0.1**
LOR				pmax	pmax		
comp=Z,3.0nm,0.6s,mb4.3							
LOR	**Lormes**	**79.12**	**343**	*eP*	**P**	**16 50 35.5**	**+0.1**
comp=Z,2.8nm,0.6s,mb4.3							
SGMF	**Saint Gilles**	**79.18**	**347**	*eP*	**P**	**16 50 35.9**	**+0.1**
SGMF	**Saint Gilles**	**79.18**	**347**	*eP*	**P**	**16 50 35.9**	**+0.1**
SGMF	**Saint Gilles**	**79.18**	**347**	*eP*	**P**	**16 50 35.9**	**+0.1**
SSF	**Saint Saulge**	**79.38**	**343**	*eP*	**P**	**16 50 37.1**	**+0.2**
comp=Z,4.8nm,0.6s,mb4.2							
SSF	**Saint Saulge**	**79.38**	**343**	*eP*	**P**	**16 50 37.1**	**+0.2**
SSF				pmax	pmax		
comp=Z,2.0nm,0.6s,mb4.1							
SSF	**Saint Saulge**	**79.38**	**343**	*eP*	**P**	**16 50 37.1**	**+0.2**
comp=Z,2.4nm,0.6s,mb4.2							
AVF	**Avril sur Loir**	**79.67**	**343**	*eP*	**P**	**16 50 38.8**	**+0.3**
comp=Z,9.4nm,0.7s,mb4.4							
AVF	**Avril sur Loir**	**79.67**	**343**	*eP*	**P**	**16 50 38.8**	**+0.3**
AVF				pmax	pmax		
comp=Z,5.0nm,0.7s,mb4.5							
AVF	**Avril sur Loir**	**79.67**	**343**	*eP*	**P**	**16 50 38.8**	**+0.3**
comp=Z,4.7nm,0.7s,mb4.4							
SMF	**Signal de Mont**	**79.72**	**343**	*eP*	**P**	**16 50 39.0**	**+0.3**
comp=Z,7.7nm,0.9s,mb4.2							
SMF	**Signal de Mont**	**79.72**	**343**	*eP*	**P**	**16 50 39.0**	**+0.3**
SMF				pmax	pmax		
comp=Z,4.0nm,0.9s,mb4.2							
SMF	**Signal de Mont**	**79.72**	**343**	*eP*	**P**	**16 50 39.0**	**+0.3**
comp=Z,3.8nm,0.9s,mb4.2							
BGF	**Bois d'Agland**	**79.99**	**343**	*eP*	**P**	**16 50 40.6**	**+0.4**
BGF	**Bois d'Agland**	**79.99**	**343**	*eP*	**P**	**16 50 40.6**	**+0.4**
BGF	**Bois d'Agland**	**79.99**	**343**	*eP*	**P**	**16 50 40.6**	**+0.4**
LPL	**La Plagne**	**80.24**	**340**	*eP*	**P**	**16 50 42.7**	**+1.2**
comp=Z,5.4nm,0.5s,mb4.4							
LPL	**La Plagne**	**80.24**	**340**	*eP*	**P**	**16 50 42.7**	**+1.2**
LPL				pmax	pmax		
comp=Z,3.0nm,0.4s,mb4.5							
LPL	**La Plagne**	**80.24**	**340**	*eP*	**P**	**16 50 42.7**	**+1.2**
comp=Z,2.7nm,0.4s,mb4.4							
LPG	**La Plagne**	**80.25**	**340**	*eP*	**P**	**16 50 42.9**	**+1.3**
comp=Z,7.5nm,0.6s,mb4.4							
LPG	**La Plagne**	**80.25**	**340**	*eP*	**P**	**16 50 42.9**	**+1.3**
LPG				pmax	pmax		
comp=Z,4.0nm,0.6s,mb4.4							
LPG	**La Plagne**	**80.25**	**340**	*eP*	**P**	**16 50 42.9**	**+1.3**
comp=Z,3.8nm,0.6s,mb4.4							
TCF	**Toulx Ste Croi**	**80.36**	**344**	*eP*	**P**	**16 50 42.7**	**+0.5**
comp=Z,6.5nm,0.7s,mb4.3							
TCF	**Toulx Ste Croi**	**80.36**	**344**	*eP*	**P**	**16 50 42.7**	**+0.5**
TCF				pmax	pmax		
comp=Z,3.0nm,0.6s,mb4.3							
TCF	**Toulx Ste Croi**	**80.36**	**344**	*eP*	**P**	**16 50 42.7**	**+0.5**
comp=Z,3.3nm,0.6s,mb4.3							
MMAI	**Mount Meron Ar**	**82.16**	**315**	P	**P**	**16 50 53.1**	**+1.1**
comp=Z,6.4nm,0.5s,mb4.7,baz=36,slow=7.2,SNR=13							
STKA	**Stephens Creek**	**84.55**	**195**	P	**P**	**16 51 11.6**	**+7.7**
comp=Z,1.5nm,0.9s,mb3.9,baz=259,slow=3.9,SNR=3.1							
KEST	**Kesra**	**88.93**	**336**	P	**P**	**16 51 29.0**	**+3.5**
comp=Z,2.2nm,0.5s,mb4.4,baz=300,slow=4.3,SNR=7.8							

*ISK **01** 16:41:44.7, 39°.15N×27°.91E, h5km, MD3.2*
*DDA **01** 16:41:45.4, 39°.09N×27°.96E, h7km±4km, Md3.2*
*ATH **01** 16:41:45.5, 39°.20N×27°.90E, h24km±9km, MD3.5/4*
*CSEM **01** 16:41:45.4±0.1, 39°.15N×27°.91E, h5km, MD3.2, Error ellipse: s-maj=2.3km s-min=1.7km az=117.0*
*ISCJB **01** 16:41:45.2±0.5, 39°.15N±0°.02×27°.93E±0°.03, h5km±4km, Error ellipse: s-maj=3.7km s-min=2.6km az=32.3*
*THE **01** 16:41:46.0, 39°.13N×27°.90E, h1km±1km, ML3.8/4, Error ellipse: s-maj=1.9km s-min=0.6km az=98.0*
ISC 01 16:41:45.8±0.4,**39°.14N**±0°.02×**27°.93E**±0°.03,**h8**km±3km, **n93**,σ0°**72**/122,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.28**	**199**	*i* P	**Pg**	**16 41 50.9**	**-0.4**
AKHS				*i* S	**Sg**	**16 41 55.6**	**+0.6**
AKHS	**Akhisar**	**0.28**	**199**	*i* P	**Pg**	**16 41 50.9**	**-0.4**
AKHS				*i* S	**Sg**	**16 41 55.6**	**+0.6**
AKS	**Akhisar**	**0.28**	**199**	PG	**Pg**	**16 41 50.8**	**-0.5**
AKS				*e*SG	**Sg**	**16 41 55.4**	**+0.4**
AKS	**Akhisar**	**0.28**	**199**	*i* Pg	**Pg**	**16 41 50.8**	**-0.5**
AKS				*e*Sg	**Sg**	**16 41 55.4**	**+0.4**
BALB	**Balikesir**	**0.50**	**356**	*e*PG	**Pg**	**16 41 55.0**	**-0.4**
BALB				*e*SG	**Sg**	**16 42 02.0**	**0.0**
BALB	**Balikesir**	**0.50**	**356**	*e*Pg	**Pg**	**16 41 55.0**	**-0.4**
BALB				*e*Sg	**Sg**	**16 42 02.0**	**+0.1**
DST	**Dursunbey**	**0.71**	**49**	*e*PG	**Pg**	**16 41 59.1**	**-0.3**
DST				*e*SG	**Sg**	**16 42 09.3**	**+0.7**
DST	**Dursunbey**	**0.71**	**49**	*e*Pg	**Pg**	**16 41 59.1**	**-0.3**
DST				*e*Sg	**Sg**	**16 42 09.3**	**+0.7**
KULA	**Kula-Manisa**	**0.85**	**137**	*e*PG	**Pg**	**16 42 01.1**	**-1.1**
KULA	**Kula-Manisa**	**0.85**	**137**	*e*Pg	**Pg**	**16 42 01.1**	**-1.0**
IZM	**Izmir**	**0.91**	**215**	*e*PG	**Pg**	**16 42 02.6**	**-0.7**
IZM				*e*SG	**Sg**	**16 42 15.9**	**+0.9**
IZM	**Izmir**	**0.91**	**215**	*e*Pg	**Pg**	**16 42 02.6**	**-0.6**
IZM				*e*Sg	**Sg**	**16 42 16.0**	**+1.0**
BLCB	**Balcova**	**1.03**	**223**	*e*PG	**Pg**	**16 42 04.8**	**-0.6**
BLCB	**Balcova**	**1.03**	**223**	P	**Pg**	**16 42 04.9**	**-0.6**
BLCB				S	**Sg**	**16 42 19.9**	**+1.1**

*NEIC **01** 16:46:28.0, 45.°13N×120.°95W, h17km, MD3.4(SEA), After SEA.*
*PNSN **01** 16:46:28.0, 45.°13N×120.°95W, h17km, MD3.4, Fault plane solution: NP1:φs255.00000°, δ80.00000°, NP2: φs349.00000°, δ70.00000°, Principal axes: T Plg7.0000°, Azm303.0000°; P Plg21.0000°, Azm210.0000°;*

ISC 01 16:46:27.8±0.3, 45.°11N±0.°02×120.°94W±0.°02, h16km±2km, n91, σ0s83/112, 38C-27D, Washington-Oregon border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CROR	**Criterion Ridg**	**0.13**	**196**	⇑P	**Pg**	**16 46 32.5**	**+1.0**
G06A	**Carlson Farm,** baz=0.2,SNR=1000	**0.25**	**59**	P	**Pg**	**16 46 33.5**	**+0.2**
G06A	baz=0.2			⇓S	**Sg**	**16 46 37.4**	**+0.4**
VTHM	**Trough**	**0.28**	**75**	⇑P	**Pg**	**16 46 34.2**	**+0.4**
VGB	**Gordon Butte**	**0.42**	**15**	⇓P	**Pg**	**16 46 36.3**	**-0.1**
VGB				S	**Sg**	**16 46 42.3**	**+0.2**
VFP	**Flag Point**	**0.43**	**299**	⇑P	**Pg**	**16 46 36.6**	**+0.2**
VBEM	**Beaver Butte**	**0.46**	**264**	⇑P	**Pg**	**16 46 37.4**	**+0.3**
VBEM				S	**Sg**	**16 46 44.0**	**+0.6**
HOOD	**Mount Hood Mea**	**0.55**	**293**	⇑P	**Pg**	**16 46 38.2**	**-0.4**
TDH	**Tom, Dick, Har**	**0.63**	**287**	⇑P	**Pg**	**16 46 39.7**	**-0.5**
VLL	**Laurance Lake**	**0.63**	**304**	⇑P	**Pg**	**16 46 39.9**	**-0.3**
VIPM	**Ingram Point**	**0.64**	**159**	⇑P	**Pg**	**16 46 40.9**	**+0.5**
GMO	**Grizzlie Mount**	**0.67**	**181**	⇓P	**Pg**	**16 46 41.3**	**+0.4**
BPO	**Bald Peter**	**0.70**	**230**	⇓P	**Pg**	**16 46 41.6**	**+0.1**
APM	**Augspurger Mou**	**0.82**	**320**	P	**Pb**	**16 46 43.4**	**-0.2**
JBO	**Jordan Butte**	**0.85**	**65**	⇓P	**Pb**	**16 46 44.0**	**-0.2**
GL2	**New Goldendale**	**0.85**	**5**	⇓P	**Pb**	**16 46 43.7**	**-0.5**
GULW	**Guler Mountain**	**0.94**	**331**	P	**Pb**	**16 46 45.1**	**-0.5**
GT2	**Goat Mountain**	**0.94**	**273**	P	**Pb**	**16 46 45.4**	**-0.4**
BKCOR	**Black Crater**	**0.97**	**214**	⇓P	**Pb**	**16 46 46.4**	**+0.2**
H04A	**Detroit Lake** baz=1.0,SNR=111	**0.98**	**245**	⇑P	**Pb**	**16 46 45.6**	**-0.8**
H04A	baz=1.0			⇑S	**Sb**	**16 46 58.7**	**-0.4**
F07A	**Phinny Hill Vi** baz=1.0	**1.06**	**42**	⇑P	**Pb**	**16 46 46.9**	**-0.8**
F07A	baz=1.0			⇑S	**Sb**	**16 47 01.4**	**+0.1**
G04A	**Mulino** baz=1.1,SNR=15	**1.09**	**276**	⇑P	**Pb**	**16 46 47.5**	**-0.8**
G04A	baz=1.1			⇓S	**Sb**	**16 47 02.6**	**+0.2**
SSOR	**Sweet Springs**	**1.11**	**257**	P	**Pb**	**16 46 48.6**	**0.0**
ASR	**Mount Adams--S**	**1.14**	**336**	P	**Pn**	**16 46 48.7**	**-0.3**
WIFE	**Three Sisters-**	**1.22**	**211**	⇓P	**Pn**	**16 46 50.2**	**+0.1**
CDFW	**Cedar Flats**	**1.27**	**323**	P	**Pn**	**16 46 50.5**	**-0.3**
MTMW	**Mount Mitchell**	**1.28**	**316**	⇑P	**Pn**	**16 46 50.5**	**-0.5**
PINOR	**Pine Mountain**	**1.30**	**178**	⇑P	**Pn**	**16 46 50.4**	**-0.8**
F04A	**Amboy** baz=1.3,SNR=57	**1.33**	**309**	⇑Pn	**Pn**	**16 46 51.0**	**-0.7**
F04A	baz=1.3			⇑Sn	**Sn**	**16 47 08.3**	**-0.6**
JLK	**June Lake**	**1.34**	**321**	⇓P	**Pn**	**16 46 51.9**	**+0.1**
G08A	**Pilot Rock** baz=1.4,SNR=164	**1.41**	**82**	⇑Pb	**Pb**	**16 46 52.6**	**-1.0**
G08A	baz=1.4			⇑Sn	**Sn**	**16 47 10.4**	**-0.5**
LVP	**Lakeview Peak**	**1.41**	**313**	P	**Pn**	**16 46 52.5**	**-0.2**
PRW	**Prosser**	**1.41**	**38**	P	**Pn**	**16 46 53.1**	**+0.3**
SOSW	**Source of Smit**	**1.41**	**324**	⇑P	**Pn**	**16 46 52.9**	**+0.1**
SHW	**Mount Saint He**	**1.42**	**320**	P	**Pn**	**16 46 53.1**	**+0.2**
STD	**Studebaker Rid**	**1.45**	**322**	P	**Pn**	**16 46 53.1**	**-0.1**
I07A	**Izee** baz=1.5,SNR=610	**1.45**	**135**	⇑Pb	**Pb**	**16 46 53.8**	**-0.5**
IRO	**Indian Ridge**	**1.45**	**221**	⇓P	**Pn**	**16 46 53.9**	**+0.6**
FL2	**Flat Top 2**	**1.47**	**318**	P	**Pn**	**16 46 53.9**	**+0.3**
BRVW	**Black Rock Val**	**1.53**	**25**	P	**Pn**	**16 46 54.2**	**-0.1**
MXC	**Moxie City**	**1.54**	**17**	P	**Pn**	**16 46 54.4**	**-0.1**
REDWA	**Red Mountain**	**1.59**	**41**	P	**Pn**	**16 46 55.2**	**0.0**
RSW	**Rattlesnake Hi**	**1.59**	**36**	P	**Pn**	**16 46 55.7**	**+0.4**
KOSW	**Kosmos**	**1.61**	**327**	P	**Pn**	**16 46 55.6**	**+0.1**
HAWA	**Hanford**	**1.62**	**37**	*e*Pn	**Pn**	**16 46 55.1**	**-0.5**
HAWA				*e*S	**Sn**	**16 47 17.2**	**+1.1**
SNIWA	**Snively Ranch**	**1.62**	**33**	P	**Pn**	**16 46 55.5**	**-0.2**
NAC	**Naches**	**1.63**	**3**	P	**Pn**	**16 46 56.4**	**+0.7**
E07A	**Sunnyside** baz=1.6,SNR=38	**1.64**	**27**	⇑Pn	**Pn**	**16 46 55.2**	**-0.6**
E07A	baz=1.6			⇑Sb	**Sb**	**16 47 18.2**	**+0.3**
RVW	**Rose Valley**	**1.64**	**310**	⇑P	**Pn**	**16 46 56.2**	**+0.3**
BENWA	**Benson Ranch**	**1.65**	**31**	P	**Pn**	**16 46 55.9**	**-0.1**
H2OWA	**Water**	**1.67**	**39**	⇓P	**Pn**	**16 46 56.0**	**-0.3**
F08A	**Pendleton** baz=1.7,SNR=26	**1.67**	**65**	⇑Pn	**Pn**	**16 46 55.5**	**-0.8**
MDW	**Midway**	**1.71**	**28**	⇓P	**Pn**	**16 46 56.8**	**-0.2**
H08A	**Prairie City** baz=1.7,SNR=50	**1.72**	**109**	⇓Pb	**Pb**	**16 46 57.9**	**-1.0**
H08A	baz=1.7			⇑Sb	**Sb**	**16 47 20.4**	**+0.1**
LON	**Longmire**	**1.75**	**340**	*e*Pn	**Pn**	**16 46 57.6**	**+0.1**
LON				*e*Sg	**Sg**	**16 47 21.4**	**-2.8**
WIW	**Wooded Island**	**1.75**	**41**	⇓P	**Pn**	**16 46 57.4**	**-0.1**
GBB	**Gable Butte**	**1.76**	**31**	P	**Pn**	**16 46 57.6**	**+0.1**
COR	**Corvallis**	**1.76**	**254**	*e*Pn	**Pn**	**16 46 58.6**	**+1.0**
COR				*e*S	**Sn**	**16 47 20.8**	**+1.2**
EBG	**Ellensburg**	**1.82**	**8**	⇑P	**Pn**	**16 46 58.7**	**+0.3**
EUO	**Eugene**	**1.87**	**235**	P	**Pn**	**16 46 59.9**	**+0.9**
E08A	**Dider Farm, El** baz=1.9	**1.91**	**43**	⇓Pn	**Pn**	**16 46 58.8**	**-0.7**
E08A	baz=1.9			⇑Sn	**Sn**	**16 47 22.8**	**-0.5**
HEBO	**Mount Hebo**	**2.00**	**274**	*e*Pn	**Pn**	**16 47 01.9**	**+1.1**
HEBO				*e*Sg	**Sg**	**16 47 29.5**	**-2.5**
LNOR	**Lincton Mounta**	**2.02**	**67**	*e*Pn	**Pn**	**16 47 00.3**	**-0.7**
F09A	**S2 Ranch, Elgi** baz=2.2	**2.21**	**73**	⇑Sg	**Sg**	**16 47 40.2**	**+1.2**
H09A	**Durkee** baz=2.4	**2.37**	**100**	⇓Sb	**Sb**	**16 47 39.9**	**+0.9**
K05A	**Summer Lake** baz=2.4	**2.38**	**179**	⇑Pb	**Pb**	**16 47 09.6**	**-0.6**
D08A	**Wollman Farm,** baz=2.4,SNR=32	**2.40**	**35**	⇓Pn	**Pn**	**16 47 05.8**	**-0.5**
J08A	**Circle Bar Ran** baz=2.5,SNR=32	**2.49**	**134**	⇓Pb	**Pb**	**16 47 10.6**	**-1.4**
ETW	**Entiat**	**2.53**	**9**	*e*Pn	**Pn**	**16 47 08.2**	**0.0**
D09A	**Jones Farm, Ri** baz=2.7,SNR=19	**2.68**	**42**	⇓Pn	**Pn**	**16 47 09.1**	**-1.0**
D09A	baz=2.7			⇓Sn	**Sn**	**16 47 40.5**	**-1.7**
G10A	**Bishop Farm, J** baz=2.7	**2.70**	**85**	⇑Sb	**Sb**	**16 47 50.3**	**+1.6**
F10A	**Beach Ranch, E** baz=2.7	**2.75**	**70**	⇓Pn	**Pn**	**16 47 10.7**	**-0.4**
OD2	**Odessa Site #2**	**2.76**	**33**	*e*Pn	**Pn**	**16 47 10.2**	**-1.1**
GNW	**Green Mountain**	**2.78**	**333**	*e*Pn	**Pn**	**16 47 15.1**	**+3.5**
GNW				*e*Sg	**Sg**	**16 47 50.4**	**-6.7**
HUMO	**Hull Mountain**	**2.90**	**211**	*e*Pn	**Pn**	**16 47 16.1**	**+3.0**
H10A	**Noah's Angus R** baz=3.0,SNR=9.2	**3.02**	**98**	⇓Pn	**Pn**	**16 47 14.5**	**-0.5**
NLWA	**Neilton Lookou** baz=3.0	**3.06**	**319**	⇑Pb	**Pb**	**16 47 21.2**	**-0.6**
NLWA	baz=3.0			⇑Sb	**Sb**	**16 48 00.7**	**+1.9**
NLWA	**Neilton Lookou**	**3.06**	**319**	*e*P	**Pn**	**16 47 19.7**	**+4.3**
I10A	**Payette** baz=3.1	**3.12**	**108**	⇑Pn	**Pn**	**16 47 15.7**	**-0.6**
WVOR	**Wild Horse Val**	**3.15**	**147**	*e*Pn	**Pn**	**16 47 17.0**	**+0.4**
JCW	**Jim Creek**	**3.16**	**348**	Pn	**Pn**	**16 47 18.3**	**+1.5**
JCW				*e*S	**Sn**	**16 48 01.4**	**+7.2**
MOD	**Modoc**	**3.24**	**172**	*e*Pg	**Pg**	**16 47 25.1**	**-4.7**
RPW	**Rockport**	**3.36**	**353**	Pn	**Pn**	**16 47 20.8**	**+1.2**
F11A	**Grangeville** baz=3.4	**3.45**	**75**	⇓Sn	**Sn**	**16 48 01.1**	**-0.2**
F11A	baz=3.4			⇓Sb	**Sb**	**16 48 12.2**	**+2.1**
H11A	**Donnelly** baz=3.5,SNR=5.9	**3.52**	**95**	⇓Pn	**Pn**	**16 47 20.8**	**-1.0**
YBH	**Yreka Blue Hor**	**3.61**	**202**	*e*Pn	**Pn**	**16 47 26.5**	**+3.5**
A07A	**Ashnola River,** baz=3.9	**3.96**	**5**	⇑Sb	**Sb**	**16 48 27.5**	**+2.8**
A05A	**Maple Falls** baz=3.9	**3.97**	**349**	⇑Sb	**Sb**	**16 48 27.9**	**+2.8**
NEW	**Newport**	**4.11**	**38**	*e*Pn	**Pn**	**16 47 29.8**	**0.0**
HLID	**Hailey**	**4.93**	**106**	*e*Pn	**Pn**	**16 47 41.7**	**+0.6**
F14A	**Wisdom** baz=5.4	**5.37**	**80**	⇑Sb	**Sb**	**16 49 10.0**	**+4.7**
E14A	**Clinton**	**5.37**	**73**	⇑Sb	**Sb**	**16 49 10.2**	**+4.9**

baz=5.4

KRSC 01 16:55:58.0±0.3, 53.°72N×160.°60E, h33km±23km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KII	**Karymskiy**	**0.75**	**295**	*i* P	Pn	16 56 13.1	+0.9
KII				*i* S	Sn	16 56 23.6	+1.1
NLC	**Nalytchevo**	**0.93**	**234**	*i* P	Pn	16 56 15.1	+0.4
NLC				*i* S	Sn	16 56 27.1	+0.2
MKZ	**Mys Kozlova**	**1.07**	**38**	*i* P	Pn	16 56 17.2	+0.6
MKZ				*i* S	Sn	16 56 30.9	+0.6
AVH	**Avacha**	**1.20**	**248**	*i* P	Pn	16 56 19.6	+1.2
AVH				*i* S	Sn	16 56 35.1	+1.5
PET	**Petropavlovsk**	**1.36**	**240**	*i* P	Pn	16 56 21.3	+0.7
PET				*i* S	Sn	16 56 37.5	+0.1
GNL	**Ganaly**	**1.58**	**270**	*i* P	Pn	16 56 24.7	+1.1
GNL				*i* S	Sn	16 56 43.4	+0.5
KMNR	**Kamenistaya**	**2.05**	**354**	*e*P	Pn	16 56 32.3	+2.2
KMNR				*i* S	Sn	16 56 56.9	+2.4
BZGR	**Bezymyannyi-Gr**	**2.23**	**1**	*e*P	Pn	16 56 34.9	+2.4
BZGR				*i* S	Sn	16 57 01.7	+2.9
KPT	**Kopyto**	**2.26**	**355**	P	Pn	16 56 35.2	+2.2
KPT				*i* S	Sn	16 57 01.7	+2.0
ZLN	**Zelenaya**	**2.31**	**3**	*e*P	Pn	16 56 36.0	+2.4
ZLN				*i* S	Sn	16 57 04.0	+3.2
KOZ	**Kozyrevsk**	**2.38**	**350**	P	Pn	16 56 36.2	+1.6
KOZ				*i* S	Sn	16 57 03.5	+0.9
KRSR	**Krestovskiy**	**2.50**	**360**	P	Pn	16 56 37.9	+1.6
KRSR				*i* S	Sn	16 57 08.0	+2.4
KLY	**Klyuchi**	**2.60**	**1**	P	Pn	16 56 39.5	+1.9
KLY				*i* S	Sn	16 57 09.6	+1.6
SRDR	**Sredinnyy**	**2.65**	**349**	P	Pn	16 56 39.0	+0.6
SRDR				*i* S	Sn	16 57 09.1	-0.2
MIPR	**Malaya Ipel'ka**	**2.73**	**240**	*e*P	Pn	16 56 41.1	+1.6
KBTR	**Krutoberegovo**	**2.80**	**26**	*e*P	Pn	16 56 42.1	+1.7
KBTR				*i* S	Sn	16 57 13.8	+0.8
SRKR	**Sorokina**	**2.96**	**6**	*e*P	Pn	16 56 44.4	+1.8
SRKR				*i* S	Sn	16 57 19.3	+2.4

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*NIED **01** 16:59:00, 24.°80N×121.°70E, h86km, Mw5.2 Best double couple: M0:6.97000×10^16 NP1:φs347.00000°, δ69.00000°, λ-29.00000°. NP2:φs88.00000°, δ64.00000°, λ-156.00000°.*
*SZGRF **01** 16:59:16.6, 25.°08N×121.°98E, h99km, mb5.4, Taiwan*
*MOS **01** 16:59:21.3±0.8, 24.°98N×121.°85E, h80km, mb5.4/98, MS4.3/4, Error ellipse: s-maj=7.7km s-min=3.9km az=117.7*
*BJI **01** 16:59:22.7, 24.°90N×121.°63E, h95km, mB5.2/28, mb5.1/61*
*DJA **01** 16:59:23, 24.°82N×121.°86E, h80km, mb5.5/47*
*NEIC **01** 16:59:23.8±0.1, 24.°85N×121.°82E, mb5.3/167, Error ellipse: s-maj=3.2km s-min=3.0km az=102.0*
NEIC Felt [IV] at Taipei. Felt at Lo-tung, Nan-t'ou, T'ai-chung, Tan-shui Chen and Yung-ho. Also felt at Fuzhou, China. Recorded [3 TAP] in Hua-lien, I-lan, Nan-t'ou, T'ai-chung and T'ai-pei; [2 TAP] in Chang-hua, Miao-li, T'ao-yuan and Yun-lin; [1 TAP] in Chia-i, T'ai-nan and T'ai-tung.
*ISCJB **01** 16:59:23.2±0.1, 24.°87N±0.°01×121.°82E±0.°01, h101km±1km, mb5.2/257, Error ellipse: s-maj=2.5km s-min=1.8km az=152.6*
*TAP **01** 16:59:23.7, 24.°86N×121.°79E, h92km, ML5.8, B*
*JMA **01** 16:59:23.4±0.3, 24.°83N×121.°75E, h92km, M5.2*
*TEH **01** 16:59:24.0, 24.°86N×121.°84E, h88km*
*IDC **01** 16:59:24.2±0.4, 24.°92N×121.°89E, h98km±3km, mb4.9/22, mb1 4.9/28, mb1mx4.9/30, mbtmp4.9/28, MS4.4/8, Ms1 4.4/8, ms1mx4.0/33, Error ellipse: s-maj=10.2km s-min=9.1km az=33.0*

ISC 01 16:59:24.1±0.1, 24.°87N±0.°01×121.°82E±0.°01, h97km±1km, h98km±.6km: pP-P, n937, σ0s98/970, mb5.2/257, 118C-105D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILA	**Ilan** baz=204	**0.12**	**211**	⇓*i*P	**Pn**	**16 59 37.7**	**0.0**
ILA	baz=204			*e*S	**Sn**	**16 59 47.9**	**+0.1**
TWE	**Neicheng** baz=230	**0.20**	**222**	⇓*i*P	**Pn**	**16 59 37.7**	**-0.2**
NWF	**Wu-fen Shan** baz=3.0	**0.20**	**351**	⇓*i*P	**Pn**	**16 59 37.5**	**-0.4**
TWB1	**Santiao Chiao** baz=45	**0.21**	**49**	⇓*i*P	**Pn**	**16 59 37.5**	**-0.4**
TWB1	baz=45			*e*S	**Sn**	**16 59 46.8**	**-1.4**
TWA	**Mucha** baz=296	**0.24**	**298**	⇓*i*P	**Pn**	**16 59 37.6**	**-0.4**
TWA	baz=296			S	**Sn**	**16 59 47.7**	**-0.6**
TWC	**Suao** baz=163	**0.26**	**173**	⇑*i*P	**Pn**	**16 59 38.1**	**0.0**
TAP1	**Taipei** baz=306	**0.31**	**302**	⇓*i*P	**Pn**	**16 59 37.7**	**-0.7**
TATO	**Taipei**	**0.32**	**289**	⇑*e*Pn	**Pn**	**16 59 37.4**	**-0.9**
TATO				*e*Sn	**Sn**	**16 59 48.1**	**-0.8**
TATO	**Taipei** SNR=571	**0.32**	**289**	P	**Pn**	**16 59 37.5**	**-0.8**
TATO	SNR=571			P		16 59 37.5	
TATO	**Taipei** SNR=571	**0.32**	**289**	P	**Pn**	**16 59 37.5**	**-0.8**
TATO	SNR=571			P		16 59 37.5	
TATO	**Taipei** SNR=571	**0.32**	**289**	P	**Pn**	**16 59 37.5**	**-0.8**
TATO	SNR=571			P		16 59 37.5	
ENTT	**Nioudou** baz=233	**0.32**	**225**	⇓*i*P	**Pn**	**16 59 38.0**	**-0.4**
ENA	**Nanau** baz=197	**0.45**	**189**	P	**Pn**	**16 59 38.9**	**-0.2**
ENA	baz=197			*e*S	**Sn**	**16 59 52.6**	**+2.2**
YHNB	**Yeheng**	**0.45**	**244**	*e*Pn	**Pn**	**16 59 38.0**	**-1.2**
YHNB				*e*Sn	**Sn**	**16 59 47.9**	**-2.5**
TWY	**Chenhua** baz=337	**0.45**	**334**	⇓*i*P	**Pn**	**16 59 38.7**	**-0.5**
NSK	**Sanguang** baz=245	**0.46**	**245**	⇓*i*P	**Pn**	**16 59 38.5**	**-0.7**
EHP	**Heping Village** baz=194	**0.56**	**187**	*e*P	**Pn**	**16 59 40.3**	**+0.3**
EHP	baz=194			*e*S	**Sn**	**16 59 54.3**	**+2.4**
NCU	**National Centr** baz=281	**0.58**	**280**	⇓*i*P	**Pn**	**16 59 39.7**	**-0.4**
NCU	baz=281			*e*S	**Sn**	**16 59 50.3**	**-1.8**
NNS	**Nan Shan** baz=228	**0.59**	**223**	⇓*i*P	**Pn**	**16 59 40.0**	**-0.2**
NNS	baz=228			*e*S	**Sn**	**16 59 51.6**	**-0.7**
NACB	**Ninganchiao**	**0.72**	**196**	*e*Pn	**Pn**	**16 59 39.9**	**-1.6**
NACB				*e*Sn	**Sn**	**16 59 53.4**	**-0.9**
NSTT	**Nanjuang** baz=246	**0.78**	**252**	*i* P	**Pn**	**16 59 41.3**	**-0.6**
PCYT	**Pengchaiyu** baz=12	**0.79**	**17**	⇓*i*P	**Pn**	**16 59 41.7**	**-0.4**
PCYT	baz=12			*i* S	**Sn**	**16 59 55.4**	**-0.2**
TWD	**Chiawan** baz=202	**0.81**	**194**	⇑*i*P	**Pn**	**16 59 41.1**	**-1.2**
TWD	baz=202			*e*S	**Sn**	**16 59 55.1**	**-0.8**
TWT	**Tachien** baz=232	**0.85**	**224**	⇓*i*P	**Pn**	**16 59 43.2**	**+0.6**
WHF	**Hehuan Shan** baz=210	**0.88**	**215**	⇑*i*P	**Pn**	**16 59 43.4**	**+0.4**
HWA	**Hwalien** baz=201	**0.91**	**192**	*e*P	**Pn**	**16 59 42.6**	**-0.8**
ESF	**Shoufeng Towns** baz=196	**1.03**	**196**	*e*P	**Pn**	**16 59 43.4**	**-1.2**
NSY	**Sanyi** baz=245	**1.06**	**245**	P	**Pn**	**16 59 44.9**	**0.0**
NSY	baz=245			*e*S	**Sn**	**17 00 00.1**	**-0.5**
TWQ1	**Liyutan** baz=242	**1.08**	**241**	⇓*i*P	**Pn**	**16 59 44.9**	**-0.2**
TWQ1	baz=242			*e*S	**Sn**	**16 59 60.0**	**-1.1**
ESL	**Shilin** baz=193	**1.11**	**198**	⇑*i*P	**Pn**	**16 59 43.9**	**-1.6**
YOJ	**Yonaguni jima**	**1.16**	**110**	P	**Pn**	**16 59 45.9**	**-0.2**
YOJ				S	**Sn**	**17 00 02.8**	**+0.1**
YOJ	**Yonaguni jima** baz=114	**1.16**	**110**	⇓*i*P	**Pn**	**16 59 46.1**	**0.0**
YOJ	baz=114			*e*S	**Sn**	**17 00 01.9**	**-0.8**
TEGC	**Jichi Village** baz=200	**1.18**	**192**	*e*P	**Pn**	**16 59 46.3**	**-0.1**
TCU	**Taichung** baz=236	**1.26**	**236**	⇓*i*P	**Pn**	**16 59 47.4**	**+0.1**
TCU	baz=236			S	**Sn**	**17 00 04.4**	**-0.4**
SMLT	**Sun Moon Lake** baz=221	**1.29**	**221**	⇑*i*P	**Pn**	**16 59 48.1**	**+0.5**
SMLT	baz=221			*e*S	**Sn**	**17 00 05.6**	**+0.2**
TYC	**Yuchr** baz=231	**1.30**	**222**	⇑*i*P	**Pn**	**16 59 48.0**	**+0.3**
TYC	baz=231			*e*S	**Sn**	**17 00 05.2**	**-0.3**
SSLB	**Suanglung**	**1.33**	**216**	*e*Pn	**Pn**	**16 59 48.1**	**0.0**
SSLB				*e*Sn	**Sn**	**17 00 04.9**	**-1.4**
WNT	**Mingjian** baz=227	**1.43**	**226**	*e*P	**Pn**	**16 59 49.6**	**+0.3**
WNT	baz=227			S	**Sn**	**17 00 08.4**	**+0.1**
EHY	**Hungye** baz=202	**1.43**	**198**	*e*P	**Pn**	**16 59 47.9**	**-1.4**
EHY	baz=202			*e*S	**Sn**	**17 00 07.4**	**-1.0**
YULB	**Yu-li**	**1.54**	**198**	*e*Pn	**Pn**	**16 59 48.9**	**-1.9**
TWF1	**Yuli** baz=195	**1.58**	**198**	⇑P	**Pn**	**16 59 49.5**	**-1.8**
YUS	**Yu-Shan** baz=220	**1.58**	**210**	⇑P	**Pn**	**16 59 52.4**	**+1.2**
YUS	baz=220			*e*S	**Sn**	**17 00 13.8**	**+2.0**
ALS	**Alishan** baz=223	**1.64**	**214**	⇑*i*P	**Pn**	**16 59 52.6**	**+0.7**
ALS	baz=223			*e*S	**Sn**	**17 00 15.8**	**+2.8**
CHN5	**Tsauling** baz=221	**1.64**	**220**	⇑*i*P	**Pn**	**16 59 52.3**	**+0.3**
WGK	**Gukeng** baz=225	**1.64**	**224**	⇑P	**Pn**	**16 59 52.4**	**+0.4**
WGK	baz=225			S	**Sn**	**17 00 13.9**	**+0.8**
WTCT	**Ta-ch'eng** baz=235	**1.72**	**235**	*e*P	**Pn**	**16 59 52.5**	**-0.5**
WTCT	baz=235			S	**Sn**	**17 00 14.2**	**-0.7**
CHKT	**Chengkung** baz=184	**1.81**	**193**	*e*P	**Pn**	**16 59 53.5**	**-0.6**
CHKT	baz=184			*e*S	**Sn**	**17 00 16.6**	**-0.3**
IRIF	**Iriomote-Funau**	**1.82**	**107**	P	**Pn**	**16 59 54.1**	**-0.1**
IRIF				S	**Sn**	**17 00 18.0**	**+0.8**
ELDTW	**Lidau** baz=199	**1.83**	**204**	⇑*e*P	**Pn**	**16 59 53.7**	**-0.7**
CHY	**Chiayi** baz=231	**1.87**	**223**	*e*P	**Pn**	**16 59 54.5**	**-0.3**
CHY	baz=231			*e*S	**Sn**	**17 00 18.0**	**-0.2**
TPUB	**Ta-pu**	**1.90**	**215**	*e*Pn	**Pn**	**16 59 55.2**	**-0.1**
WSF	**Szhu** baz=231	**1.90**	**230**	⇓*i*P	**Pn**	**16 59 55.2**	**-0.1**
WSF	baz=231			*e*S	**Sn**	**17 00 18.6**	**-0.4**
WTP	**Ta-pu** baz=215	**1.96**	**214**	⇑*i*P	**Pn**	**16 59 56.1**	**+0.1**
WTP	baz=215			*e*S	**Sn**	**17 00 21.1**	**+0.8**
HATJ	**Hateruma jima**	**1.99**	**114**	P	**Pn**	**16 59 56.9**	**+0.5**
HATJ				*e*S	**Sn**	**17 00 22.3**	**+1.3**
TWK	**Hsinying** baz=219	**2.00**	**218**	P	**Pn**	**16 59 56.7**	**+0.1**
TWK	baz=219			*e*S	**Sn**	**17 00 22.0**	**+0.6**
CHN1	**Nanshi** baz=216	**2.05**	**215**	⇑*i*P	**Pn**	**16 59 57.4**	**+0.2**
CHN1	baz=216			*e*S	**Sn**	**17 00 22.5**	**0.0**
JKRS	**Kuro-shima**	**2.10**	**107**	P	**Pn**	**16 59 58.0**	**+0.2**
JKRS				S	**Sn**	**17 00 24.9**	**+1.4**
SGST	**Jiashian** baz=222	**2.11**	**213**	*i* P	**Pn**	**16 59 58.5**	**+0.5**
SGST	baz=222			*e*S	**Sn**	**17 00 25.2**	**+1.5**
CHN8	**Yiju** baz=225	**2.11**	**224**	*e*P	**Pn**	**16 59 57.9**	**-0.1**
CHN8	baz=225			*e*S	**Sn**	**17 00 24.2**	**+0.4**
TWG	**Pinlang**	**2.15**	**199**	*e*Pn	**Pn**	**16 59 56.9**	**-1.6**
TWG	**Pinlang** baz=191	**2.15**	**199**	⇓P	**Pn**	**16 59 57.1**	**-1.4**
TWG	baz=191			*e*S	**Sn**	**17 00 23.6**	**-1.2**
JIJ	**Ishigaki jima**	**2.18**	**103**	P	**Pn**	**16 59 58.6**	**-0.2**
JIJ				S	**Sn**	**17 00 25.5**	**+0.1**
TTN	**Taitung** baz=193	**2.19**	**196**	*e*P	**Pn**	**16 59 58.7**	**-0.4**
CHN3	**Shinhua** baz=218	**2.23**	**217**	P	**Pn**	**17 00 00.2**	**+0.8**
CHN3	baz=218			*e*S	**Sn**	**17 00 27.6**	**+1.0**
SCLT	**Jiali** baz=231	**2.25**	**222**	*e*P	**Pn**	**16 59 60.0**	**+0.2**
SCLT	baz=231			*e*S	**Sn**	**17 00 27.6**	**+0.5**
TAI1	**Yung-k'ang** baz=229	**2.33**	**219**	*e*P	**Pn**	**17 00 01.3**	**+0.5**
TAI1	baz=229			*e*S	**Sn**	**17 00 29.1**	**+0.1**
SSD	**Sandimen** baz=217	**2.38**	**207**	⇑*i*P	**Pn**	**17 00 02.2**	**+0.8**
ECL	**Taimali** baz=192	**2.40**	**199**	*e*P	**Pn**	**17 00 00.4**	**-1.4**
ECL	baz=192			*e*S	**Sn**	**17 00 30.1**	**-0.5**
TWM1	**Shoushan** baz=222	**2.40**	**212**	⇑P	**Pn**	**17 00 03.2**	**+1.4**
PNG	**Penghu** baz=238	**2.44**	**238**	⇓*i*P	**Pn**	**17 00 01.6**	**-0.7**
PNG	baz=238			*e*S	**Sn**	**17 00 29.0**	**-2.5**
SGLT	**Jiouru** baz=220	**2.46**	**210**	P	**Pn**	**17 00 04.0**	**+1.5**
EAST	**Anshuo** baz=193	**2.63**	**200**	*e*P	**Pn**	**17 00 03.2**	**-1.7**
JTJ	**Tarama**	**2.63**	**94**	P	**Pn**	**17 00 06.0**	**+1.1**
JTJ				*e*S	**Sn**	**17 00 38.6**	**+2.4**
TAW	**Tawu** baz=191	**2.64**	**199**	*e*P	**Pn**	**17 00 04.5**	**-0.4**
TAW	baz=191			*e*S	**Sn**	**17 00 35.9**	**-0.4**
KAU	**Kaohsiung** baz=213	**2.68**	**211**	*e*P	**Pn**	**17 00 03.3**	**-2.2**
SCZT	**Fangliau** baz=206	**2.72**	**204**	⇑P	**Pn**	**17 00 06.7**	**+0.7**
SCZT	baz=206			*e*S	**Sn**	**17 00 39.0**	**+0.8**
LAY	**Lan-yu** baz=179	**2.83**	**185**	*e*P	**Pn**	**17 00 06.6**	**-0.9**
LAY	baz=179		

KNM	**Kinmen**	**3.11**	**262**	⇑P		**Pn**	**17 00 12.1 +0.8**
	baz=261						
JMJ	**Miyako jima 2**	**3.16**	**90**	P		**Pn**	**17 00 13.4 +1.5**
JMJ				*e*S		**Sn**	**17 00 49.6 +0.8**
JMJ	**Miyako jima 2**	**3.16**	**90**	*e*P		**Pn**	**17 00 13.4 +1.5**
	baz=99						
JMJ				*e*S		**Sn**	**17 00 49.1 +0.3**
	baz=99						
JOGS	**Gusukube**	**3.27**	**91**	P		**Pn**	**17 00 15.0 +1.7**
JOGS				*e*S		**Sn**	**17 00 52.9 +1.6**
JKE	**Kume jima 2**	**4.72**	**71**	P		**Pn**	**17 00 34.8 +1.9**
JKE				S		**Sn**	**17 01 30.5 +4.1**
JAGN	**Aguni-jima**	**5.18**	**70**	P		**Pn**	**17 00 40.8 +1.5**
JAGN				S		**Sn**	**17 01 38.9 +1.1**
NAH1	**Naha**	**5.47**	**75**	P		**Pn**	**17 00 44.6 +1.4**
NAH1				*e*S		**Sn**	**17 01 46.4 +1.6**
JJT2	**Tamagusuku 2**	**5.51**	**75**	P		**Pn**	**17 00 44.8 +1.1**
JJT2				*e*S		**Sn**	**17 01 46.8 +1.1**
JIH	**Iheya**	**5.94**	**67**	P		**Pn**	**17 00 50.6 +1.0**
JIH				S		**Sn**	**17 01 57.3 +1.0**
JOW	**Kunigami**	**6.14**	**70**	P		**Pn**	**17 00 52.5 +0.3**
JOW				S		**Sn**	**17 02 00.9 -0.1**
JOW	**Kunigami**	**6.14**	**70**	P		**Pn**	**17 00 52.4 +0.1**
	comp=Z,34nm,0.3s,baz=235,slow=9.7,SNR=73						
JOW				S		**Sn**	**17 01 56.7 -4.4**
	baz=139,slow=29,SNR=1.5						
JOW				LR		LR	17 03 11.8
	comp=Z,2μm,20.1s,baz=83,slow=38						
JOW	**Kunigami**	**6.14**	**70**	P		**Pn**	**17 00 52.4 +0.1**
JOW				S		**Sn**	**17 01 56.7 -4.4**
JOW				LR		LR	17 03 11.8
JOW	**Kunigami**	**6.14**	**70**	*e*P		**Pn**	**17 00 52.1 -0.1**
	baz=76						
SSE	**Sheshan**	**6.23**	**355**	P		**Pn**	**17 00 52.7 -0.7**
SSE				S		**Sn**	**17 02 03.7 +0.6**
SSE				smax			
	comp=N,1μm,1.0s						
SSE				smax			
	comp=E,1μm,0.9s						
SSE				LR		LR	
	comp=N,3μm,16.3s						
SSE				LR		LR	
	comp=E,2μm,16.3s						
SSE				LR		LR	
	comp=Z,4μm,18.8s						
SGCP	**Mt. Cagua**	**6.60**	**178**	*e*P		**Pn**	**17 00 59.3 +0.7**
APYP	**Conner**	**6.99**	**184**	*e*P		**Pn**	**17 01 05.0 +1.0**
JTK	**Tokunoshima**	**7.03**	**64**	P		**Pn**	**17 01 04.0 -0.4**
JTK				*e*S		**Sn**	**17 02 21.2 -1.5**
CVP	**Callao Caves**	**7.13**	**180**	*e*P		**Pn**	**17 01 06.2 +0.4**
ABRA	**Dolores**	**7.26**	**188**	*e*P		**Pn**	**17 01 08.8 +1.2**
NJ2	**Nanjing**	**7.61**	**341**	*e*P		**Pn**	**17 01 11.4 -0.9**
NJ2				sP			17 01 36.4
NJ2				S		**Sn**	**17 02 33.3 -3.7**
NJ2				ScP		ScP	17 11 06.2 -2.2
NJ2				PcS		PcS	17 11 16.3 -2.0
NJ2				pmax		pmax	
	comp=Z,180nm,0.9s						
NJ2				pmax		pmax	
	comp=Z,230nm,3.9s						
NJ2				LR		LR	
	comp=N,1μm,10.6s						
NJ2				LR		LR	
	comp=E,3μm,11.2s						
NJ2				LR		LR	
	comp=Z,920nm,11.0s						
PALP	**Palanan**	**7.79**	**176**	*e*P		**Pn**	**17 01 17.5 +2.7**
JAM	**Amami Oshima**	**7.81**	**61**	P		**Pn**	**17 01 14.3 -0.7**
CAUP	**Cauayan**	**7.89**	**180**	*e*P		**Pn**	**17 01 19.4 +3.3**
GZH	**Guangzhou**	**7.95**	**259**	P		**Pn**	**17 01 11.6 -5.3**
JMZ	**Minamidaito 2**	**8.56**	**82**	*e*S		**Sn**	**17 02 52.7 -7.4**
BOLP	**Bolinao**	**8.63**	**192**	*e*P		**Pn**	**17 01 27.8 +1.6**
WHN	**Wuhan**	**8.70**	**312**	P		**Pn**	**17 01 26.7 -0.4**
WHN				S		**Sn**	**17 02 57.6 -5.8**
WHN				LR		LR	
	comp=Z,8μm,19.7s						
BALP	**Baler**	**9.09**	**181**	*e*P		**Pn**	**17 01 34.7 +2.3**
TGY	**Tagaytay City**	**10.74**	**185**	P		**Pn**	**17 01 56.9 +1.9**
	comp=Z,14nm,0.3s,baz=97,slow=15,SNR=3.5						
TIA	**Tai'an**	**12.00**	**341**	P		**Pn**	**17 02 11.3 -0.5**
TIA				pmax		pmax	
	comp=Z,86nm,0.8s						
QIZ	**Qiongzhong**	**12.53**	**245**	P		**Pn**	**17 02 19.4 +0.4**
QIZ				S		**Sn**	**17 04 36.7 -0.1**
QIZ				pmax		pmax	
	comp=Z,21nm,1.5s						
QIZ				LR		LR	
	comp=N,2μm,18.4s						
QIZ				LR		LR	
	comp=Z,3μm,18.8s						
INCN	**Inchon**	**13.23**	**17**	*e*P		**Pn**	**17 02 30.3 +2.2**
	comp=Z,93nm,1.1s						
KSRS	**Korea Array**	**13.58**	**21**	P		**Pn**	**17 02 33.4 +0.7**
	comp=Z,0.6nm,0.3s,baz=200,slow=13,SNR=42						
KSRS				S		**Sn**	**17 05 05.4 +3.3**
	comp=Z,0.2nm,0.3s,baz=270,slow=29,SNR=2.7						
KSRS				LR		LR	17 08 31.0
	comp=Z,782nm,18.5s,baz=215,slow=40						
GYA	**Guiyang**	**13.76**	**280**	⇑*i*P		**Pn**	**17 02 35.6 +0.6**
GYA				pP			17 02 48.5
GYA				PP			17 02 50.3
GYA				S		**Sn**	**17 05 06.8 +0.4**
GYA				sS			17 05 25.4
GYA				pmax		pmax	
	comp=Z,80nm,0.9s						
GYA				pmax		pmax	
	comp=Z,150nm,4.0s						
GYA				LR		LR	
	comp=N,3μm,4.5s						
GYA				LR		LR	
	comp=E,2μm,4.8s						
GYA				LR		LR	
	comp=Z,5μm,4.8s						
XAN	**Xi'an**	**14.47**	**312**	P		**Pn**	**17 02 43.5 -0.6**
XAN				S		**Sn**	**17 05 25.1 +1.6**
XAN				pmax		pmax	
	comp=Z,60nm,1.5s						
XAN				pmax		pmax	
	comp=Z,170nm,4.4s						
XAN				LR		LR	
	comp=N,1μm,10.3s						
XAN				LR		LR	
	comp=E,620nm,12.9s						
XAN				LR		LR	
	comp=Z,790nm,16.8s						
TIY	**Taiyuan**	**15.09**	**330**	*e*P		**Pn**	**17 02 55.0 +2.9**
TIY				pP			17 03 08.5
TIY				sP		sP	17 03 23.9 -1.5
TIY				LR		LR	
	comp=N,1μm,5.6s						
TIY				LR		LR	
	comp=E,1μm,3.2s						
TIY				LR		LR	
	comp=Z,960nm,10.7s						
BJI	**Beijing**	**15.85**	**344**	P		**Pn**	**17 03 03.0 +1.4**
BJI				S		**S**	**17 05 58.8 -6.1**
BJI				pmax		pmax	
	comp=Z,110nm,1.5s						
BJI				pmax		pmax	
	comp=Z,1μm,5.5s						
BJI				LR		LR	
	comp=N,2μm,12.1s						
BJI				LR		LR	
	comp=E,1μm,13.2s						
BJI				LR		LR	
	comp=Z,630nm,19.2s						
SNY	**Shenyang**	**16.98**	**5**	⇓P		**Pn**	**17 03 17.6 +2.1**
SNY				S		**S**	**17 06 26.6 -1.2**
SNY				pmax		pmax	
	comp=Z,30nm,2.5s						
SNY				LR		LR	
	comp=N,1μm,15.6s						
SNY				LR		LR	
	comp=E,560nm,16.8s						
SNY				LR		LR	
	comp=Z,2μm,15.6s						
CD2	**Chengdu**	**17.05**	**295**	⇑*i*P		**Pn**	**17 03 15.9 -0.6**
CD2				pP		pP	17 03 30.1 -4.8
CD2				PP			17 03 33.5
CD2				sP		sP	17 03 44.8 -2.4
CD2				S		**S**	**17 06 22.3 -7.2**
CD2				sS		sS	17 06 45.3 -14
CD2				pmax		pmax	
	comp=Z,180nm,1.1s						
CD2				pmax		pmax	
	comp=Z,530nm,4.2s						
CD2				LR		LR	
	comp=N,2μm,7.2s						
CD2				LR		LR	
	comp=Z,3μm,5.4s						
KMI	**Kunming**	**17.30**	**275**	P		**Pn**	**17 03 20.6 +1.1**
KMI				pP		pP	17 03 34.3 -3.4
KMI				PP			17 03 40.3
KMI				sP		sP	17 03 47.8 -2.1
KMI				S		**S**	**17 06 28.6 -4.1**
KMI				sS		sS	17 06 50.5 -14
KMI				pmax		pmax	
	comp=Z,40nm,0.7s						
KMI				pmax		pmax	
	comp=Z,680nm,4.8s						
KMI				LR		LR	
	comp=N,1μm,13.4s						
KMI				LR		LR	
	comp=E,1μm,16.7s						
KMI				LR		LR	
	comp=Z,1μm,18.1s						
JGN	**Niukaw**	**17.48**	**46**	P		**Pn**	**17 03 23.3 +1.7**
JHJ	**Hachijo jima 2**	**17.72**	**58**	P		**Pn**	**17 03 24.4 -0.2**
	comp=Z,17nm,0.3s,baz=184,slow=9.7,SNR=4.7						
HHC	**Hu-ho-hao-te**	**18.09**	**334**	*e*P		**Pn**	**17 03 31.1 +2.1**
HHC				pP		pP	17 03 46.7 +0.4
HHC				PP			17 03 49.5
HHC				sP		sP	17 04 00.4 +1.8
HHC				S		**S**	**17 06 46.6 -3.7**
HHC				sS		sS	17 07 11.9 -8.4
HHC				PcP		PcP	17 08 00.3 +2.4
HHC				ScP		ScP	17 11 26.2 +1.7
HHC				pmax		pmax	
	comp=Z,77nm,1.0s						
HHC				pmax		pmax	
	comp=Z,2μm,5.2s						
HHC				LR		LR	
	comp=N,1μm,12.0s						
HHC				LR		LR	
	comp=E,1μm,14.0s						
HHC				LR		LR	
	comp=Z,1μm,14.0s						
MAJO	**Matsushiro**	**18.25**	**47**	*e*P		**Pn**	**17 03 28.6 -2.3**
MAJO				pmax		pmax	
	comp=Z,24nm,0.8s						
MAJO	**Matsushiro**	**18.25**	**47**	*e*P		**Pn**	**17 03 28.6 -2.3**
	comp=Z,24nm,0.8s						
MAT	**Matsushiro**	**18.25**	**47**	P		**Pn**	**17 03 28.6 -2.3**
MJAR	**Matsushiro Arr**	**18.25**	**47**	P		**Pn**	**17 03 29.5 -1.4**
	comp=Z,2.1nm,0.3s,baz=219,slow=9.9,SNR=34						
MJAR				PcP		PcP	17 07 58.0 -0.2
	comp=Z,0.2nm,0.3s,baz=244,slow=2.7,SNR=4.6						
MJAR				ScP		ScP	17 11 24.2 -0.7
	comp=Z,0.1nm,0.3s,baz=245,slow=2.8,SNR=21						
CBIJ	**Chichi jima**	**18.45**	**79**	P		**Pn**	**17 03 33.0 -0.4**
	comp=Z,17nm,0.3s,baz=291,slow=5.4,SNR=6.0						
CBIJ				LR		LR	17 09 29.6
	comp=Z,1μm,21.7s,baz=119,slow=33						
BTO	**Baotou**	**18.54**	**331**	*e*P		**Pn**	**17 03 34.4 +0.1**
BTO				pmax		pmax	
	comp=Z,68nm,1.3s						
LZH	**Lanzhou**	**19.07**	**310**	⇑P		**Pn**	**17 03 41.4 +0.7**
LZH				pP		pP	17 03 53.0 -4.2
LZH				sP		sP	17 04 06.0 -3.4
LZH				pmax		pmax	
	comp=Z,460nm,1.5s						
LZH				pmax		pmax	
	comp=Z,910nm,4.3s						
LZH				LR		LR	
	comp=E,3μm,14.2s						
LZH				LR		LR	
	comp=Z,3μm,16.1s						
CN2	**Changchun**	**19.12**	**8**	⇑P		**Pn**	**17 03 41.4 +0.2**
CN2				*e*pP		pP	17 03 58.7 +1.0
CN2				*e*S		**S**	**17 07 08.2 -2.7**
CN2				pmax		pmax	
	comp=Z,70nm,0.9s						
CN2				LR		LR	
	comp=N,1μm,15.0s						
CN2				LR		LR	
	comp=E,800nm,15.0s						
CN2				LR		LR	
	comp=Z,700nm,13.0s						
KKM	**Kota Kinabalu**	**19.47**	**197**	P		**Pn**	**17 03 44.5 -1.1**
KKM	**Kota Kinabalu**	**19.47**	**197**	*e*P		**Pn**	**17 03 43.8 -1.8**
	comp=Z,188nm,1.3s						
VLA	**Vladivostok**	**20.00**	**22**	*e*P		**Pn**	**17 03 48.0 -3.5**
VLA				*e*S		**S**	**17 07 31.8 +3.4**
VLA				pmax		pmax	
	comp=Z,277nm,1.5s						
MDJ	**Mudanjiang**	**20.69**	**16**	P		**P**	**17 03 57.5 +1.2**
MDJ				pP			17 04 14.9
MDJ				sP		sP	17 04 26.5 -0.6
MDJ				S		**S**	**17 07 40.9 -1.1**
MDJ				sS		sS	17 08 11.0 -1.9
MDJ				ScS		ScS	17 15 14.4 +0.9
MDJ				pmax		pmax	
	comp=Z,36nm,1.2s						
MDJ				LR		LR	
	comp=N,870nm,16.5s						
MDJ				LR		LR	
	comp=E,810nm,15.9s						
MDJ				LR		LR	
	comp=Z,1μm,16.5s						
CHG	**Chiang Mai**	**22.05**	**259**	⇓P		**P**	**17 04 12.7 +1.6**
	comp=Z,54nm,0.9s,mb4.9						
CHTO	**Chiang Mai**	**22.05**	**259**	*e*P		**P**	**17 04 11.7 +0.6**
CHTO				pmax		pmax	
	comp=Z,67nm,1.1s,mb4.9						
CHTO	**Chiang Mai**	**22.05**	**259**	*e*P		**P**	**17 04 11.7 +0.5**
	comp=Z,67nm,1.1s,mb4.9						
CHTO	**Chiang Mai**	**22.05**	**259**	P		**P**	**17 04 13.1 +2.0**
	SNR=21						
CM31	**Chiang Mai Arr**	**22.18**	**258**	*e*P		**P**	**17 04 13.5 +1.1**
	comp=Z,42nm,0.9s,mb4.8						
CMAR	**Chiang Mai Arr**	**22.18**	**258**	P		**P**	**17 04 14.1 +1.7**
	comp=Z,39nm,0.9s,mb4.7,baz=64,slow=8.8,SNR=140						
CMAR				pP			17 04 33.2
	comp=Z,5.4nm,0.7s,baz=61,slow=9.4,SNR=2.2						
CMAR				PcP		PcP	17 08 06.0 +0.1
	comp=Z,3.9nm,1.0s,baz=28,slow=0.9,SNR=8.5						
CMAR				LR		LR	17 13 36.7
	comp=Z,754nm,19.7s,baz=45,slow=38						
CMAR	**Chiang Mai Arr**	**22.18**	**258**	P		**P**	**17 04 14.1 +1.7**
CMAR				*PP			17 04 33.2
CMAR							17 08 06.0
GTA	**Gaotai**	**23.52**	**313**	⇓P		**P**	**17 04 26.0 +0.6**
GTA				pP			17 04 46.3
GTA				sP		sP	17 04 58.7 +1.2
GTA				pmax		pmax	
	comp=Z,120nm,1.6s,mb5.0						
GTA				pmax		pmax	
	comp=Z,850nm,6.0s						
GTA				LR		LR	
	comp=N,830nm,15.9s						
GTA				LR		LR	
	comp=E,980nm,17.7s						
GTA				LR		LR	
	comp=Z,560nm,16.2s						
GUMO	**Guam**	**24.45**	**113**	*e*P		**P**	**17 04 33.7 -0.3**
GUMO				pmax		pmax	
	comp=Z,420nm,1.3s,mb5.6						
GUMO	**Guam**	**24.45**	**113**	*e*P		**P**	**17 04 33.7 -0.3**
	comp=Z,420nm,1.3s,mb5.6						
ERM	**Erimo**	**24.58**	**41**	P		**P**	**17 04 33.1 -1.9**
	comp=Z,268nm,0.5s,mb5.9,SNR=7.4						
ASAJ	**Asahikawa**	**25.60**	**36**	P		**P**	**17 04 43.6 -0.7**
	comp=Z,16nm,0.6s,mb4.6,baz=236,slow=8.7,SNR=33						
ASAJ				pP		pP	17 05 06.8 +1.1
	comp=Z,29nm,0.7s,baz=249,slow=18,SNR=4.3						
ULN	**Ulaanbaatar**	**25.75**	**337**	*ce*P		**P**	**17 04 46.6 +1.0**
ULN	**Ulaanbaatar**	**25.75**	**337**	*e*P		**P**	**17 04 46.8 +1.2**
	comp=Z,107nm,0.9s,mb5.3						
ULN				*e*		pP	17 05 08.3 +1.2
ULN	**Ulaanbaatar**	**25.75**	**337**	P		**P**	**17 04 47.1 +1.5**
	SNR=67						
HABR	**Khabarovsk**	**25.76**	**21**	*ce*P		**P**	**17 04 44.6 -1.0**
HABR				*e*PP		pP	17 05 09.6 +2.5
HABR				*e*			17 05 27.8
HABR							17 08 11.0
HABR				*e*S		**S**	**17 09 05.0 -2.6**
HABR				*e*			17 15 28.3
HABR				pmax		pmax	
	comp=Z,43nm,1.6s,mb4.6						
HABR				MLR		MLR	
	comp=Z,538nm,14.0s						
KSM	**Kuching**	**25.78**	**207**	P		**P**	**17 04 46.1 -0.1**
KSM	**Kuching**	**25.78**	**207**	*e*P		**P**	**17 04 45.6 -0.5**
	comp=Z,154nm,1.1s,mb5.3						
SONM	**Songino Array**	**25.97**	**336**	P		**P**	**17 04 48.6 +1.1**
	comp=Z,114nm,1.0s,mb5.3,baz=152,slow=9.0,SNR=359						
SONM				pP		pP	17 05 09.3 +0.3
	comp=Z,57nm,0.9s,baz=160,slow=9.0,SNR=6.1						
SONM				ScP		ScP	17 11 43.8 -0.6
	comp=Z,2.6nm,0.9s,baz=175,slow=2.8,SNR=6.7						
SONM				LR		LR	17 15 50.5
	comp=Z,2μm,18.6s,baz=87,slow=38						
SONM	**Songino Array**	**25.97**	**336**	P		**P**	**17 04 48.6 +1.1**
SONM				*PP		pP	17 05 09.3 +0.3
SHL	**Shillong**	**27.06**	**278**	⇓*ix*		x	17 05 00.5
SHL				*e*S		**S**	**17 09 31.0 +2.4**
LSA	**Lhasa**	**27.63**	**287**	P		**P**	**17 05 04.6 +1.9**
LSA				LR		LR	
	comp=N,130nm,8.0s						
LSA				LR		LR	
	comp=E,220nm,8.0s						
LSA				LR		LR	
	comp=Z,320nm,10.0s						
YSS	**Yuzh-Sakhalins**	**27.64**	**32**	*e*P		**P**	**17 05 05.7 +3.1**
YSS				*e*		pP	17 05 28.9 +4.7
YSS				MLR		MLR	
	comp=Z,1μm,17.0s						
YSS	**Yuzh-Sakhalins**	**27.64**	**32**	*e*P		**P**	**17 05 01.6 -1.0**
	comp=Z,185nm,1.1s,mb5.5						
YSS				*e*		pP	17 05 24.8 +0.6
CIT	**Chita**	**27.83**	**349**	*e*P		**P**	**17 05 05.2 +1.0**
CIT				*e*		pP	17 05 26.3 +0.5
CIT				*e*			17 06 03.6
CIT				*e*			17 09 37.3
CIT				pmax		pmax	
	comp=Z,117nm,1.8s,mb5.1						
KULM	**Kulim**	**28.14**	**230**	P		**P**	**17 05 09.0 +1.7**
IPM	**Ipoh**	**28.47**	**228**	P		**P**	**17 05 11.1 +0.8**
ZAK	**Zakamensk**	**29.23**	**335**	*e*P		**P**	**17 05 16.4 -0.2**
ZAK				*e*		pP	17 05 39.0 +0.7
ZAK				pmax		pmax	
	comp=Z,14nm,1.1s,mb4.5						
TLY	**Talaya**	**30.16**	**337**	P		**P**	**17 05 25.2 +0.4**
	comp=Z,346nm,0.8s,mb6.0,SNR=24						
TLY	**Talaya**	**30.16**	**337**	*e*P		**P**	**17 05 25.6 +0.8**
TLY				pmax		pmax	
	comp=Z,39nm,0.7s,mb5.2						
TLY				MLR		MLR	
	comp=Z,766nm,20.0s						
TLY	**Talaya**	**30.16**	**337**	*e*P		**P**	**17 05 25.4 +0.6**
	comp=Z,41nm,0.8s,mb5.1						
TLY				*e*pP		pP	17 05 47.0 +0.4
IRK	**Irkutsk**	**30.42**	**339**	*e*P		**P**	**17 05 27.2 +0.2**
IRK				*e*		pP	17 05 49.2 +0.4
IRK				pmax		pmax	
	comp=Z,155nm,1.0s,mb5.6						
MOY	**Mondy**	**31.13**	**335**	*e*P		**P**	**17 05 33.7 +0.3**
MOY				pmax		pmax	
	comp=Z,55nm,1.6s,mb5.0						
GUN	**Gumba**	**32.26**	**283**	*e*P		**P**	**17 05 43.9 +0.3**
	comp=Z,170nm,0.9s,mb5.8						
PKI	**Pulchoki**	**32.70**	**283**	*e*P		**P**	**17 05 47.3 -0.1**
	comp=Z,92nm,1.0s,mb5.5						
PKI	**Pulchoki**	**32.70**	**283**	*e*P		**P**	**17 05 47.5 +0.1**
PKIN	**Phulchoki**	**32.71**	**283**	*e*P		**P**	**17 05 47.5 0.0**
KKN	**Kakani**	**32.80**	**283**	*e*P		**P**	**17 05 48.3 0.0**
	comp=Z,155nm,1.0s,mb5.8						
KKN	**Kakani**	**32.80**	**283**	*e*P		**P**	**17 05 48.3 0.0**
KKN				pmax		pmax	
	comp=Z,155nm,1.0s,mb5.8						
DMN	**Daman**	**32.97**	**283**	*e*P		**P**	**17 05 49.7 0.0**
	comp=Z,118nm,0.9s,mb5.7						
WMQ	**Urumqi**	**33.60**	**313**	P		**P**	**17 05 56.0 +0.9**
WMQ				pP		pP	17 06 18.0 +1.0
WMQ				sP		sP	17 06 30.0 +1.8
WMQ				PP		PP	17 07 11.0 -1.9
WMQ				S		**S**	**17 11 11.0 +0.5**
WMQ				sS		sS	17 11 48.0 -0.5
WMQ				SS		SS	17 13 21.0 -18
WMQ				pmax		pmax	
	comp=Z,54nm,1.0s,mb5.3						
WMQ				pmax		pmax	
	comp=Z,100nm,4.0s						
WMQ				LR		LR	
	comp=N,730nm,15.0s						
WMQ				LR		LR	
	comp=E,640nm,15.0s						
WMQ				LR		LR	
	comp=Z,570nm,15.0s						
SKR	**Severo-Kuril's**	**36.87**	**37**	*e*P		**P**	**17 06 17.5 -5.5**
YAK	**Yakutsk**	**37.53**	**6**	*e*P		**P**	**17 06 27.1 -1.3**
YAK				*e**PP		pP	17 06 49.9 -0.7
YAK				*e*			17 07 57.5
YAK				*e*			17 08 43.3
YAK				*e*S		**S**	**17 12 11.0 +0.9**
YAK				*e*SS		SS	17 14 51.5 -6.8
YAK				*e*			17 16 36.8
YAK				pmax		pmax	
	comp=N,25nm,1.5s						
YAK				pmax		pmax	
	comp=E,7.0nm,1.5s						
YAK				pmax		pmax	
	comp=Z,31nm,0.9s,mb5.1						
YAK				pmax		pmax	
	comp=Z,64nm,3.0s						
YAK				pmax		pmax	
	comp=N,34nm,2.8s						
YAK				pmax		pmax	
	comp=E,33nm,2.2s						
YAK				smax			
	comp=N,111nm,4.5s						
YAK				smax			
	comp=E,34nm,2.5s						
YAK				MLR		MLR	
	comp=Z,431nm,19.0s						
YAK				MLR		MLR	
	comp=E,364nm,16.0s						
YAK				MLR		MLR	
	comp=N,233nm,18.0s						
YAK	**Yakutsk**	**37.53**	**6**	*e*P		**P**	**17 06 27.5 -0.9**
	comp=N,41nm,0.8s,mb5.3						
YAK				*e*pP		pP	17 06 49.9 -0.8
MKAR	**Makanchi Array**	**38.25**	**315**	P		**P**	**17 06 35.3 +0.5**
	comp=N,45nm,0.8s,mb5.4,baz=99,slow=11,SNR=323						
MKAR				pP		pP	17 06 56.8 -0.2
	comp=N,15nm,0.8s,baz=96,slow=11,SNR=3.7						
MKAR				ScP		ScP	17 12 25.7 -0.5
	comp=N,2.5nm,0.8s,baz=97,slow=6.7,SNR=6.4						
KAKA	**Kakadu**	**38.76**	**163**	*e*P		**P**	**17 06 37.9 -1.4**
	comp=N,47nm,0.9s,mb5.3						
KAKA	**Kakadu**	**38.76**	**163**	*e*P		**P**	**17 06 37.9 -1.4**
KLP	**Kalpa**	**38.77**	**290**	*e*PKP		**P**	**17 06 40.3 +1.1**
PETK	**Petropavlovsk-**	**38.98**	**34**	P		**P**	**17 06 40.2 -0.5**
	comp=N,4.1nm,0.6s,mb4.5,baz=220,slow=4.1,SNR=14						
DDI	**Dehra Dun**	**38.98**	**288**	*e*PKP		**P**	**17 06 40.0 -1.1**
AGRA	**Agra**	**39.34**	**283**	*e*PKP		**P**	**17 06 42.6 -1.5**
AGRA				AMb		AMB	17 06 44.3
	comp=Z,50nm,0.3s,mb5.9						
PET	**Petropavlovsk**	**39.43**	**35**	P		**P**	**17 06 42.9 -1.5**
PET				*e**PP		pP	17 07 06.5 -0.3
PET				pmax		pmax	
	comp=Z,32nm,1.0s,mb5.1						
PET	**Petropavlovsk**	**39.43**	**35**	P		**P**	**17 06 42.9 -1.5**
	comp=Z,32nm,1.0s,mb5.1						
PET				*e*pP		pP	17 07 06.5 -0.3
BISR	**Bishrakh**	**39.64**	**285**	*e*PKP		**P**	**17 06 47.1 +0.5**
NDI	**New Delhi**	**39.83**	**286**	*ex*		**P**	**17 06 46.0 -2.1**
SONA	**Sohna**	**39.99**	**285**	*e*PKP		**P**	**17 06 49.3 -0.2**
SONA				AMb		AMB	17 06 51.2
	comp=Z,82nm,0.6s,mb5.8						
ZAA0	**Zalesovo Array**	**39.99**	**326**	*e*P		**P**	**17 06 48.3 -0.8**
ZAA0				*e*pP		pP	17 07 09.8 -1.7
ZALV	**Zalesovo Beam**	**39.99**	**326**	P		**P**	**17 06 48.7 -0.3**
	comp=Z,46nm,0.5s,mb5.5,baz=115,slow=7.8,SNR=208						
ZALV				pP		pP	17 07 11.2 -0.3
	comp=Z,65nm,0.7s,baz=112,slow=8.3,SNR=13						
ZALV				ScP		ScP	17 12 31.1 -1.6
	comp=Z,2.6nm,0.8s,baz=101,slow=2.3,SNR=5.4						
ZALV	**Zalesovo Beam**	**39.99**	**326**	P		**P**	**17 06 48.7 -0.4**
ZALV				*PP		pP	17 07 11.3 -0.2
ZALV	**Zalesovo Beam**	**39.99**	**326**	P		**P**

THN Thein Dam 40.90 291 *e*PKP **P 17 06 56.0 -0.9**
KSH Kashi 41.02 302 *e*P **P 17 07 01.8 +4.0**
KSH pP pP 17 07 24.8 +4.5
KSH sP sP 17 07 36.3 +5.0
KSH PcP PcP 17 08 58.2 +2.2
KSH ScP ScP 17 12 38.1 +1.0
KSH PcS PcS 17 12 48.2 +1.1
KSH S **S 17 13 09.2 +6.2**
KSH pmax pmax
comp=Z,25nm,1.1s,mb5.0
KSH pmax pmax
comp=Z,130nm,7.6s
KSH LR LR
comp=N,800nm,14.1s
KSH LR LR
comp=E,650nm,13.4s
KSH LR LR
comp=Z,800nm,13.5s
KHET Khetri 41.12 285 *e*PKP **P 17 06 58.9 0.0**
NVS Novosibirsk 41.24 327⇓*i*P **P 17 06 58.8 -0.6**
NVS *i* *PP pP 17 07 21.0 -0.9
NVS *i* 17 08 36.6
NVS *i* S **S 17 13 03.7 -2.2**
NVS pmax pmax
comp=N,48nm,1.0s
NVS pmax pmax
comp=Z,59nm,1.0s,mb5.4
NVS pmax pmax
comp=E,76nm,1.6s
NVS pmax pmax
comp=N,25nm,1.6s
NVS pmax pmax
comp=E,19nm,1.6s
NVS pmax pmax
comp=Z,26nm,1.6s,mb4.8
NVS smax
comp=N,71nm,3.1s
NVS smax
comp=E,65nm,1.9s
TKM2 Tokmak 2 41.80 307 P **P 17 07 06.0 +1.9**
SNR=76
TKM2 Tokmak 2 41.80 307 *e*P **P 17 07 05.8 +1.7**
TKM2 pmax pmax
comp=Z,73nm,0.8s,mb5.5
TKM2 Tokmak 2 41.80 307 *e*P **P 17 07 05.8 +1.7**
comp=Z,73nm,0.8s,mb5.5
KZA Kyzart 41.91 306 P **P 17 07 07.5 +2.4**
SNR=51
KURK Kurchatov 41.94 319 P **P 17 07 05.8 +0.6**
comp=Z,424nm,1.3s,mb6.0,SNR=41
KURK Kurchatov 41.94 319 *e*P **P 17 07 05.0 -0.2**
KURK pmax pmax
comp=Z,54nm,0.8s,mb5.3
KURK Kurchatov 41.94 319 *e*P **P 17 07 05.0 -0.2**
comp=Z,54nm,0.8s,mb5.3
KURK Kurchatov 41.94 319 P **P 17 07 05.6 +0.5**
SNR=33
KBK Karagaybulak 42.23 307 P **P 17 07 09.5 +1.9**
SNR=32
AJM Ajmer 42.36 283 *e*PKP **P 17 07 09.3 +0.4**
CHMS Chumysh 42.43 307 P **P 17 07 10.7 +1.4**
SNR=28
UCH Uchtor 42.48 306 P **P 17 07 12.4 +2.7**
SNR=88
UCH Uchtor 42.48 306 *e*P **P 17 07 11.4 +1.8**
comp=Z,93nm,1.2s,mb5.4
FRU Bishkek 42.50 307⇓*e*P **P 17 07 11.0 +1.2**
FRU pmax pmax
comp=Z,60nm,1.6s,mb5.1
AAK Ala-Archa 42.55 307 P **P 17 07 12.5 +2.3**
comp=Z,135nm,0.7s,mb5.8,SNR=10
AAK Ala-Archa 42.55 307 P **P 17 07 12.4 +2.1**
SNR=13
AAK Ala-Archa 42.55 307*ce*P **P 17 07 11.5 +1.3**
AAK pmax pmax
comp=Z,18nm,1.2s,mb4.7
AAK Ala-Archa 42.55 307 *e*P **P 17 07 11.3 +1.1**
comp=Z,82nm,1.5s,mb5.2
AAK Ala-Archa 42.55 307 P **P 17 07 12.2 +2.0**
SNR=16
USP Ospenovka 42.65 308 P **P 17 07 12.3 +1.3**
SNR=15
FITZ Fitzroy Crossi 42.87 175 *e*P **P 17 07 11.2 -1.8**
comp=Z,67nm,1.1s,mb5.3
FITZ *e* 17 09 01.8
FITZ Fitzroy Crossi 42.87 175 *e*P **P 17 07 11.0 -2.0**
FITZ *e*PcP PcP 17 09 02.0 -0.3
AML Almayashu 43.07 306 P **P 17 07 16.6 +2.2**
SNR=37
AML Almayashu 43.07 306 *e*P **P 17 07 16.5 +2.1**
comp=Z,69nm,1.2s,mb5.3
EKS2 Erkin-Say 43.08 307 P **P 17 07 16.0 +1.5**
SNR=29
EKS2 Erkin-Say 43.08 307 *e*P **P 17 07 15.6 +1.1**
comp=Z,15nm,0.7s,mb4.8
COEN Coen 43.86 149 *e*P **P 17 07 21.5 +0.5**
COEN Coen 43.86 149 *e*P **P 17 07 21.6 +0.6**
comp=Z,1μm,0.9s
POO Poona 44.83 272 *e*PKP **P 17 07 29.8 +0.9**
MBWA Marble Bar 45.80 183 *e*P **P 17 07 34.7 -1.6**
MBWA Marble Bar 45.80 183 *e*P **P 17 07 34.5 -1.8**
comp=Z,95nm,1.4s,mb5.3
MBWA *e*PcP PcP 17 09 11.8 -0.5
WRAB Tennant Creek 46.17 164 P **P 17 07 38.0 -1.2**
comp=Z,834nm,1.1s,SNR=35
WRAB Tennant Creek 46.17 164 *e*P **P 17 07 38.7 -0.5**
WRAB *e*PcP PcP 17 09 13.6 -0.1
KBL Kabul 46.39 295 *e*P **P 17 07 42.4 +1.4**
KBL *e**PP pP 17 08 04.7 +0.8
KBL pmax pmax
comp=Z,54nm,1.0s,mb5.2
KBL Kabul 46.39 295 *e*P **P 17 07 42.4 +1.5**
comp=Z,54nm,1.0s,mb5.2
KBL *e*pP pP 17 08 04.7 +0.8
TIXI Tiksi 46.98 3*c i*P **P 17 07 43.9 -1.1**
TIXI *e*S **S 17 14 25.3 -3.5**
TIXI pmax pmax
comp=Z,118nm,1.3s,mb5.5
TIXI Tiksi 46.98 3 *e*P **P 17 07 43.8 -1.2**
comp=Z,166nm,1.4s,mb5.6
BVAR Borovoye Array 47.51 320 P **P 17 07 49.9 +0.6**
comp=Z,17nm,0.6s,mb5.1,baz=112,slow=9.3,SNR=135
BVAR pP pP 17 08 12.8 +0.4
comp=Z,20nm,0.7s,baz=102,slow=8.7,SNR=9.3
BVAR PcP PcP 17 09 17.3 -0.7
comp=Z,2.8nm,0.4s,baz=113,slow=4.0,SNR=4.0
BVAR ScP ScP 17 13 04.3 +0.9
comp=Z,2.2nm,0.8s,baz=127,slow=3.9,SNR=4.9
BVAR Borovoye Array 47.51 320 P **P 17 07 49.9 +0.5**
BVAR *PP pP 17 08 12.8 +0.4
BVAR 17 09 17.3
BRVK Borovoye 47.58 320 P **P 17 07 50.4 +0.5**
comp=Z,379nm,1.2s,mb6.1,SNR=48
BRVK Borovoye 47.58 320 *e*P **P 17 07 50.4 +0.5**
BRVK *e**PP pP 17 08 13.2 +0.3
BRVK pmax pmax
comp=Z,58nm,0.9s,mb5.4
BRVK Borovoye 47.58 320 *e*P **P 17 07 50.4 +0.5**
comp=Z,58nm,0.9s,mb5.4
BRVK *e*pP pP 17 08 13.2 +0.2
BRVK Borovoye 47.58 320 P **P 17 07 50.7 +0.8**
SNR=35
ASAR Alice Springs 49.65 165 P **P 17 08 05.8 -0.2**
comp=Z,36nm,0.7s,mb5.4,baz=342,slow=6.7,SNR=112
ASAR pP pP 17 08 30.3 +1.1
comp=Z,11nm,0.7s,baz=343,slow=8.7,SNR=4.5
ASAR PcP PcP 17 09 25.9 -0.2
comp=Z,17nm,0.8s,baz=346,slow=3.7,SNR=10
CTA Charters Tower 50.62 150 *e*P **P 17 08 14.3 +0.9**
comp=Z,67nm,1.1s,mb5.6
CTA *e* 17 09 30.0
CTAO Charters Tower 50.62 150 *e*P **P 17 08 14.1 +0.7**
CTAO *e* 17 09 30.1
CTAO pmax pmax
comp=Z,118nm,1.0s,mb5.9
CTAO Charters Tower 50.62 150 *e*P **P 17 08 14.1 +0.7**
comp=Z,118nm,1.0s,mb5.9
CTAO *e*PcP PcP 17 09 30.1 +0.4
ABKAR Akbulak array 53.38 314 *e*P **P 17 08 34.1 +0.5**
comp=Z,19nm,0.4s,mb5.5
ABKAR *e*pP pP 17 08 57.5 +0.5
IMYA Miami 53.54 298 *e*P **P 17 08 36.8 +1.8**
SVE Sverdlovsk 53.84 323⇑*e*P **P 17 08 37.1 +0.3**
SVE pmax pmax
comp=Z,54nm,1.0s,mb5.5
ISRO Mashad 54.05 298 *e*P **P 17 08 40.6 +1.9**

IMOG Moghan 54.18 298 *e*P **P 17 08 41.9 +2.3**
IPAY Payeh 54.41 298 *e*P **P 17 08 43.3 +2.0**
IAKL Akhelmad 54.59 298 *e*P **P 17 08 44.7 +2.1**
IKRD Kardeh 54.76 299 *e*P **P 17 08 40.2 -3.7**
ARU Arti 54.91 323 P **P 17 08 44.9 +0.3**
comp=Z,349nm,0.6s,mb6.6,SNR=26
ARU Arti 54.91 323*d i*P **P 17 08 44.6 0.0**
ARU *e**PP pP 17 09 06.8 -1.4
ARU *e* 17 10 46.4
ARU *e*PPP 17 11 59.6
ARU S **S 17 16 17.9 -0.7**
ARU SS SS 17 20 00.1 -2.8
ARU pmax pmax
comp=Z,49nm,1.0s,mb5.5
ARU Arti 54.91 323 *e*P **P 17 08 44.3 -0.2**
comp=Z,34nm,0.6s,mb5.5
ARU *e*pP pP 17 09 06.5 -1.7
ABKT Ailbek 54.95 300 P **P 17 08 47.5 +2.3**
comp=Z,181nm,0.7s,mb6.2,SNR=11
ISFR Sfrayin 55.14 299 *e*P **P 17 08 48.4 +1.8**
FORT Forrest 55.66 173 *e*P **P 17 08 49.8 -0.4**
comp=Z,67nm,0.7s,mb5.8
FORT Forrest 55.66 173 *e*P **P 17 08 49.8 -0.4**
comp=Z,128nm,1.0s,mb5.9
SOKR Solikamsk 56.27 326*d i*P **P 17 08 54.7 +0.4**
SOKR pmax pmax
comp=Z,30nm,1.7s,mb5.0
EIDS Eidsvold 57.41 148 *e*P **P 17 09 02.9 +0.2**
comp=Z,128nm,1.4s,mb5.8
GAMB Gambell 57.61 29 *e*P **P 17 09 03.8 +0.2**
comp=Z,25nm,1.2s,mb5.1
NWAO Narrogin (SRO) 57.64 185 *e*P **P 17 09 03.2 -1.0**
NWAO pmax pmax
comp=Z,138nm,1.4s
NWAO Narrogin (SRO) 57.64 185 *e*P **P 17 09 03.2 -1.0**
comp=Z,138nm,1.4s,mb5.8
IBND Bandar-abas 58.04 288 *e*P pP 17 09 32.3 +1.2
IBND *e*P pP 17 09 32.6 +1.6
IGLO Ghaloghah 58.53 299 *e*P **P 17 09 12.8 +2.2**
IKIA Kiasar 58.69 299 *e*P **P 17 09 14.0 +2.3**
ISHM Shahmirzad 59.07 298 *e*P **P 17 09 16.5 +2.2**
ILAS Lasjerd 59.41 298 *e*P **P 17 09 18.2 +1.5**
TNA Tin City 59.47 27 *e*P **P 17 09 17.2 +0.6**
comp=Z,36nm,1.4s,mb5.2
STKA Stephens Creek 59.51 160 *e*P **P 17 09 16.9 -0.3**
comp=Z,35nm,1.0s,mb5.3
STKA Stephens Creek 59.51 160 P **P 17 09 16.4 -0.8**
comp=Z,42nm,0.9s,mb5.5,baz=340,slow=6.8,SNR=39
STKA Stephens Creek 59.51 160 *e*P **P 17 09 16.9 -0.3**
comp=Z,13nm,1.1s,mb4.9
IDMV Damavand 60.12 298 *e*P **P 17 09 23.1 +1.5**
ISFB Sefidab 60.19 297 *e*P **P 17 09 21.7 -0.3**
IZEF Zefreh 60.41 295 *e*P **P 17 09 25.2 +1.7**
IPAR Pars 60.47 291 *e*P **P 17 09 24.8 +0.8**
IVRN Varamin 60.48 297 *e*P **P 17 09 25.0 +1.0**
ISRV Sarvestan 60.52 291 *e*P **P 17 09 24.9 +0.5**
IMOK Mouk 60.94 291 *e*P **P 17 09 27.5 +0.3**
IPIR Pirpir 61.63 295 *e*P **P 17 09 34.2 +2.4**
ARMA Armidale 61.96 151 *e*P **P 17 09 34.9 +1.1**
ARMA Armidale 61.96 151 *e*P **P 17 09 34.7 +0.9**
comp=Z,41nm,0.9s,mb5.5
ISRB Sarab 63.14 301 *e*P **P 17 09 43.4 +1.6**
IHRS Heris 63.52 302 *e*P **P 17 09 45.8 +1.5**
ARPS Mount Arapiles 64.15 162 *e*P **P 17 09 47.7 -0.5**
comp=Z,123nm,1.0s,mb5.7
IMRD Marand 64.47 303 *e*P **P 17 09 52.2 +1.7**
IAZR Azarshahr 64.47 302 *e*P **P 17 09 52.2 +1.7**
TBLG Delisi 64.57 306 P **P 17 09 52.4 +1.3**
TTA Tatalina 64.63 30 *e*P **P 17 09 51.6 +0.5**
IDHR Dehrash 64.83 298 *e*P **P 17 09 52.7 -0.2**
GNI Garni 64.89 304*ce*P **P 17 09 55.2 +2.0**
GNI pmax pmax
comp=Z,25nm,1.2s
GNI Garni 64.89 304 *e*P **P 17 09 54.4 +1.2**
comp=Z,18nm,0.8s,mb4.9
GNI Garni 64.89 304 P **P 17 09 55.7 +2.5**
SNR=5.5
ZEI Tsey 64.98 307 *e*P **P 17 09 53.7 0.0**
ZEI pmax pmax
comp=Z,27nm,0.9s,mb5.1
SVW2 Sparrevohn 65.02 32 *e*P **P 17 09 54.6 +1.0**
VRHR Novokhopersk 65.03 317 *e*P **P 17 09 53.7 -0.2**
VRHR pmax pmax
comp=Z,50nm,0.6s,mb5.5
VRHR pmax pmax
comp=N,10.0nm,1.5s
VRHR pmax pmax
comp=E,10.0nm,0.6s
UMR Umm Al-Rimmam 65.03 292 *e*P **P 17 09 53.9 -0.4**
UMR AMb AMB 17 09 57.3
comp=Z,61nm,0.6s,mb5.6
KBD Kabd 65.16 292 *e*P **P 17 09 54.8 -0.4**
KBD AMb AMB 17 09 56.4
comp=Z,41nm,0.9s,mb5.3
MIB Mutribah 65.28 293 *e*P **P 17 09 55.8 -0.1**
MIB AMb AMB 17 09 57.1
comp=Z,110nm,0.8s,mb5.8
CNB Canberra Magne 65.29 155 *e*P **P 17 09 56.1 +0.4**
RDF Al-Radifah 65.34 292 *e*P **P 17 09 56.5 +0.1**
RDF AMb AMB 17 09 57.6
comp=Z,149nm,0.7s,mb6.0
NAY Al-Naaiem 65.52 292 *e*P **P 17 09 57.3 -0.1**
NAY AMb AMB 17 09 58.5
comp=Z,60nm,0.7s,mb5.5
KIV Kislovodsk 65.61 309 P **P 17 09 59.5 +1.7**
comp=Z,206nm,0.9s,mb6.0,SNR=7.0
KIV Kislovodsk 65.61 309 *e*P **P 17 09 58.0 +0.2**
KIV pmax pmax
comp=Z,41nm,1.2s,mb5.1
KIV Kislovodsk 65.61 309 *e*P **P 17 09 58.9 +1.2**
comp=Z,78nm,1.4s,mb5.3
KIV *e*pP pP 17 10 22.6 +0.5
KIV Kislovodsk 65.61 309 P **P 17 09 59.5 +1.8**
SNR=15
TOO Toolangi 65.98 160 *e*P **P 17 10 00.2 +0.2**
LVZ Lovozero 66.16 336 P **P 17 10 01.4 +0.5**
comp=Z,141nm,0.9s,mb5.8,SNR=5.7
LVZ Lovozero 66.16 336*ce*P **P 17 10 01.2 +0.3**
LVZ pmax pmax
comp=Z,13nm,0.7s,mb4.9
CHUM Lake Minchumin 66.17 29 *e*P **P 17 10 01.7 +0.7**
comp=Z,18nm,0.9s,mb4.9
PPLA Purkeypile 66.37 30 *e*P **P 17 10 02.4 +0.1**
comp=Z,21nm,0.7s,mb5.1
VOR Voronezh 66.42 318 *e*P **P 17 10 02.0 -0.8**
VOR pmax pmax
comp=Z,180nm,1.2s,mb5.8
RSO Redoubt South 66.48 33 *e*P **P 17 10 03.4 +0.4**
VSR Storozhevoye 66.53 317 *e*P **P 17 10 03.3 -0.2**
VSR pmax pmax
comp=Z,20nm,0.5s,mb5.2
VSR pmax pmax
comp=N,9.0nm,0.7s
VSR pmax pmax
comp=E,40nm,1.1s
COLD Coldfoot 66.57 25 *e*P **P 17 10 03.9 +0.4**
comp=E,8.6nm,0.7s,mb4.7
MOS Moscow 66.61 322 *e*P **P 17 10 02.8 -1.2**
MOS *e**PP pP 17 10 26.0 -2.3
MOS *e* 17 12 39.3
MOS *e*S S 17 18 44.4 -3.1
MOS pmax pmax
comp=Z,200nm,1.5s,mb5.7
MOS pmax pmax
comp=Z,155nm,1.2s,mb5.7
APA Apatity 66.68 335⇑*i*P **P 17 10 04.6 +0.4**
APA *i* pP 17 10 30.0 +1.5
APA pmax pmax
comp=Z,76nm,1.2s,mb5.4
BPAW Bear Paw Mtn. 66.72 29 *e*P **P 17 10 04.7 +0.2**
comp=Z,10nm,0.5s,mb4.9
KTH Kantishna Hill 66.83 29 *e*P **P 17 10 04.6 -0.7**
comp=Z,12nm,0.7s,mb4.8
KDAK Kodiak Island 67.02 35*ce*P **P 17 10 07.4 +0.9**
OBN Obninsk 67.32 322⇑*i*P **P 17 10 08.1 -0.4**
OBN *i* *PP pP 17 10 32.2 -0.6
OBN *e* 17 12 34.0
OBN *e*S S 17 18 54.7 -1.3
OBN pmax pmax
comp=Z,93nm,1.2s,mb5.5
OBN Obninsk 67.32 322 *e*P **P 17 10 07.8 -0.7**
comp=Z,90nm,1.1s,mb5.5
RC01 Rabbit Creek A 67.82 32 *e*P **P 17 10 11.1 -0.4**
COLA College 67.92 27 *e*P **P 17 10 12.1 +0.1**
COLA pmax pmax

comp=Z,15nm,0.8s,mb4.9
COLA College 67.92 27 *e*P **P 17 10 12.1 0.0**
comp=Z,15nm,0.8s,mb4.9
PMR Palmer 68.01 31 *e*P **P 17 10 12.6 -0.1**
PMR pmax pmax
comp=Z,13nm,0.5s,mb5.0
PMR Palmer 68.01 31 *e*P **P 17 10 12.6 -0.1**
comp=Z,13nm,0.5s,mb5.0
SEW Seward 68.16 33 *e*P **P 17 10 12.4 -1.2**
comp=Z,31nm,1.0s,mb5.1
JOF Joensuu 68.39 331 *e*p **P 17 10 14.2 -0.9**
comp=Z,47nm,0.5s,mb5.6
JOF Joensuu 68.39 331 *e*p **P 17 10 14.2 -0.9**
comp=Z,47nm,0.5s,mb5.6
KEV Kevo 68.56 338 *e*P **P 17 10 15.5 -0.5**
KEV pmax pmax
comp=Z,29nm,0.6s,mb5.3
KEV Kevo 68.56 338 *e*P **P 17 10 15.4 -0.6**
comp=Z,48nm,0.9s,mb5.3
KEV Kevo 68.56 338 *e*p **P 17 10 15.5 -0.5**
comp=Z,29nm,0.6s,mb5.3
KEV Kevo 68.56 338 *e*p **P 17 10 15.5 -0.5**
comp=Z,29nm,0.6s,mb5.3
SPB4 Spitsbergen Ar 68.94 348 *e*P **P 17 10 18.4 +0.1**
ANN Anapa 69.08 311*c i*P **P 17 10 19.5 -0.2**
ANN *i* *PP pP 17 10 43.1 -1.1
ANN *e*S S 17 19 15.2 -2.1
ANN pmax pmax
comp=Z,108nm,1.3s,mb5.5
ARCES ARCESS Array B 69.12 338 P **P 17 10 18.9 -0.5**
comp=Z,37nm,1.0s,mb5.2,baz=67,slow=7.6,SNR=64
ARCES PcP PcP 17 10 42.1 -0.6
comp=Z,6.0nm,0.8s,baz=98,slow=6.6,SNR=4.1
MSVF Nonsavu 69.23 122 P **P 17 10 22.0 +1.1**
comp=Z,265nm,0.8s,mb6.1,SNR=6.9
MSVF Nonsavu 69.23 122 *e*P **P 17 10 22.4 +1.4**
comp=Z,73nm,1.2s,mb5.4
MSVF Nonsavu 69.23 122 P **P 17 10 22.3 +1.4**
comp=Z,242nm,0.9s,mb6.0,SNR=6.9
PAX Paxson 69.37 29 *e*P **P 17 10 19.3 -1.8**
PAX pmax pmax
comp=Z,17nm,1.0s,mb4.8
PAX Paxson 69.37 29 *e*P **P 17 10 19.3 -1.8**
comp=Z,16nm,1.0s,mb4.8
KBS Kingsbay 69.47 349 *e*P **P 17 10 21.2 -0.3**
KBS AMb AMB 17 10 22.8
comp=Z,46nm,0.8s,mb5.4
KBS Kingsbay 69.47 349*ce*P **P 17 10 21.3 -0.2**
KBS pmax pmax
comp=Z,29nm,1.2s,mb5.0
KBS Kingsbay 69.47 349 *e*P **P 17 10 21.0 -0.6**
comp=Z,32nm,1.0s,mb5.1
PUL Pulkovo 69.59 327*ce*P **P 17 10 23.6 +1.1**
PUL pmax pmax
comp=Z,251nm,1.2s,mb5.9
DIV Divide 69.69 31 *e*P **P 17 10 22.8 -0.3**
comp=Z,44nm,1.1s,mb5.2
KTK1 Kautokeino 70.04 338 *e*P **P 17 10 26.0 +0.8**
MENT Mentasta 70.15 29 *e*P **P 17 10 26.7 +0.8**
BMRM Bremner River 70.28 31 *e*P **P 17 10 26.6 -0.1**
comp=Z,32nm,0.9s,mb5.2
EGAK Eagle 70.71 27 *e*P **P 17 10 28.6 -0.6**
comp=Z,20nm,0.8s,mb5.0
KAF Kangasniemi 70.85 330 *e*p **P 17 10 29.6 -0.5**
comp=Z,33nm,0.6s,mb5.3,baz=72,slow=5.7
KAF Kangasniemi 70.85 330 *e*p **P 17 10 29.6 -0.5**
comp=Z,33nm,0.6s,mb5.3,baz=72,slow=5.7
FINES FINESS Array B 71.15 330 P **P 17 10 32.0 0.0**
comp=Z,45nm,0.6s,mb5.5,baz=57,slow=5.7,SNR=365
FINES pP pP 17 10 56.0 -0.5
comp=Z,23nm,0.7s,baz=74,slow=6.8,SNR=5.1
FINES LR LR 17 44 53.3
comp=Z,437nm,18.4s,baz=256,slow=38
FINES FINESS Array B 71.15 330 P **P 17 10 32.0 0.0**
FINES *PP pP 17 10 56.1 -0.5
TRO Tromso 71.29 339 *e*P **P 17 10 32.5 -0.2**
TAU Tasmania Unive 71.42 161 *e*P **P 17 10 34.3 +0.6**
TAU pmax pmax
comp=Z,72nm,1.2s,mb5.4
TAU Tasmania Unive 71.42 161 *e*P **P 17 10 34.3 +0.6**
comp=Z,72nm,1.2s,mb5.4
DAWY Dawson 71.67 27 *e*P **P 17 10 34.8 -0.3**
VSU Vasula 71.73 327*d i*P **P 17 10 35.9 +0.4**
MICGM Minsk 72.34 322 *e*P **P 17 10 38.0 -1.2**
MNK Minsk 72.37 322 *e*P **P 17 10 38.0 -1.4**
INK Inuvik 72.38 22 *e*P **P 17 10 38.2 -1.0**
INK pmax pmax
comp=Z,15nm,0.9s
INK Inuvik 72.38 22 *e*P **P 17 10 38.2 -1.0**
comp=Z,15nm,0.9s,mb4.8
IDID Didziasalis 72.71 323 *e*P **P 17 10 42.1 +0.7**
IDID AMB AMB 17 10 44.0
comp=Z,48nm,1.1s,mb5.2
AKASG Malin Array Be 72.74 318 P **P 17 10 40.2 -1.5**
comp=Z,18nm,0.6s,mb5.1,baz=59,slow=5.8,SNR=20
AKASG pP pP 17 11 05.0 -1.4
comp=Z,8.3nm,0.6s,baz=58,slow=6.3,SNR=3.5
AKBB Malin Array Si 72.74 318 *e*P **P 17 10 40.6 -1.1**
AKBB *e**PP pP 17 11 03.8 -2.6
ALE Alert 72.81 1 P **P 17 10 41.0 -0.6**
comp=Z,96nm,1.1s,mb5.5,SNR=11
IZAR Zarasai 72.83 324 *e*P **P 17 10 42.9 +0.8**
IZAR AMB AMB 17 10 43.6
comp=Z,38nm,1.3s,mb5.1
ISAL Salakas 72.96 324 *e*P **P 17 10 43.5 +0.6**
ISAL AMB AMB 17 10 44.4
comp=Z,31nm,1.2s,mb5.0
IIGN Ignalina 72.98 324 *e*P **P 17 10 43.7 +0.7**
IIGN AMB AMB 17 10 45.6
comp=Z,30nm,0.9s,mb5.1
BR131 Keskin Array S 73.23 306 *e*P **P 17 10 44.8 0.0**
comp=Z,35nm,1.0s,mb5.2
BRTR Keskin Array B 73.23 306 P **P 17 10 45.3 +0.5**
comp=Z,26nm,0.9s,mb5.1,baz=100,slow=5.1,SNR=100
BRTR pP pP 17 11 10.4 +0.9
comp=Z,11nm,0.8s,baz=100,slow=6.0,SNR=4.3
BRTR Keskin Array B 73.23 306*ce*P **P 17 10 45.2 +0.4**
BRTR pmax pmax
comp=Z,26nm,0.9s
MMAI Mount Meron Ar 74.06 299 P **P 17 10 50.9 +1.1**
comp=Z,6.9nm,0.5s,mb4.6,baz=60,slow=10.0,SNR=24
KIS Kishinev 74.19 315 *e*P **P 17 10 48.0 -2.3**
KIS Kishinev 74.19 315 *e*P **P 17 10 48.0 -2.3**
KIS *e* pP 17 11 12.0 -3.1
MOR8 Moi Rana 74.22 336 *e*P **P 17 10 48.9 -1.1**
MOR8 AMb AMB 17 10 49.7
comp=Z,37nm,1.2s,mb5.0
MOR8 Moi Rana 74.22 336 *e*P **P 17 10 48.8 -1.3**
comp=Z,37nm,1.2s,mb5.0
TLCR 74.81 313 ⇓*i*P **P 17 10 54.6 +0.7**
TLCR 74.81 313 ⇓*i*P **P 17 10 54.6 +0.7**
CSS Prodhromos 75.03 302 *e*P **P 17 10 54.2 -1.1**
comp=Z,76nm,0.8s,mb5.5
CSS Prodhromos 75.03 302 P **P 17 10 54.5 -0.9**
SUW Suwalki 75.10 323 *e*P **P 17 10 55.1 -0.2**
SUW Suwalki 75.10 323 *e*P **P 17 10 55.1 -0.3**
SUW Suwalki 75.10 323 *e*P **P 17 10 54.9 -0.5**
comp=Z,355nm,1.0s,mb6.0
SKAG Skagway 75.14 31 *e*P **P 17 10 56.6 +1.1**
comp=Z,36nm,1.2s,mb5.0
TIRR Tirgusor 75.33 312 P **P 17 10 57.6 +0.7**
TIRR Tirgusor 75.33 312 *e*P **P 17 10 57.0 +0.1**
comp=Z,35nm,1.1s,mb5.0
TIRR Tirgusor 75.33 312 ⇓*i*P **P 17 10 57.3 +0.4**
PSN Preselentsi 75.75 312 *i*P **P 17 10 59.9 +0.6**
DAG Danmarks Havn 75.78 351⇑*i*P **P 17 10 58.1 -0.8**
DAG pmax pmax
comp=Z,17nm,1.2s,mb4.7
DAG Danmarks Havn 75.78 351⇑*i*P **P 17 10 58.1 -0.8**
comp=Z,17nm,1.2s,mb4.7
VRI Vrincioaia 75.94 314 P **P 17 11 01.4 +1.0**
VRI Vrincioaia 75.94 314⇑*i*P **P 17 11 01.3 +0.9**
PLOR Plostina 76.00 314 ⇓*i*P **P 17 11 01.8 +1.1**
PLOR Plostina 76.00 314 ⇓*i*P **P 17 11 01.8 +1.1**
SIT Sitka 76.12 33 *e*P **P 17 11 01.8 +0.6**
SIT pmax pmax
comp=Z,62nm,1.4s,mb5.2
SIT Sitka 76.12 33 *e*P **P 17 11 01.8 +0.6**
comp=Z,62nm,1.4s,mb5.1
ISP Isparta 76.16 305⇑*i*P **P 17 11 01.7 -0.1**
ISP Isparta 76.16 305 *e*P **P 17 11 01.0 -0.7**
comp=Z,123nm,1.4s,mb5.5
ISP Isparta 76.16 305 P **P 17 11 00.8 -1.0**
ISP Isparta 76.16 305⇑*i*P **P 17 11 01.7 -0.1**
LVV L'vov 76.18 319 *i*P **P 17 11 01.1 -0.5**
LVV MLR MLR

comp=Z,300nm,20.0s
LVV MLR MLR
comp=N,200nm,19.0s
LVV MLR MLR
comp=E,100nm,19.0s
BUR08 Bucovina Ar. S 76.27 316 *eP* **P 17 11 02.4 +0.2**
KWP Kalwaria Pacla 77.04 319 *eP* **P 17 11 07.0 +0.5**
KWP Kalwaria Pacla 77.04 319 *eP* **P 17 11 06.7 +0.2**
comp=E,277nm,1.0s,mb5.9
KWP Kalwaria Pacla 77.04 319⇑*iP* **P 17 11 07.0 +0.5**
BMR Baia Mare 77.32 317 P **P 17 11 09.3 +1.2**
SZH Strazhica 77.43 312 *i P* **P 17 11 08.6 -0.2**
KOLS Kolonicke sedl 77.58 318 *eP* **P 17 11 09.6 +0.1**
KOLS pmax pmax
comp=Z,16nm,0.9s,mb4.8
KOLS Kolonicke sedl 77.58 318 *eP* **P 17 11 09.6 +0.1**
comp=Z,16nm,0.9s,mb4.8
KOLS Kolonicke sedl 77.58 318 *eP* **P 17 11 09.6 +0.1**
UZH Uzhgorod 77.69 318⇑*iP* **P 17 11 10.5 +0.4**
UZH *e* 17 11 23.3
UZH *e* pP 17 11 35.7 +0.6
TRPA Tarpa 77.74 317⇑*iP* **P 17 11 10.6 +0.2**
NB2 NORSAR Subarra 77.89 332 P **P 17 11 11.0 0.0**
comp=Z,76nm,1.1s,mb5.3,baz=59,slow=5.6
NOA NORSAR Array B 77.89 332 P **P 17 11 10.5 -0.5**
comp=Z,37nm,0.9s,mb5.1,baz=59,slow=5.6,SNR=72
NOA pP pP 17 11 35.3 -0.6
comp=Z,13nm,0.7s,baz=58,slow=5.7,SNR=5.3
NOA LR LR 17 48 56.6
comp=Z,251nm,20.4s,baz=55,slow=38
NOA NORSAR Array B 77.89 332 P **P 17 11 10.5 -0.5**
NOA *PP pP 17 11 35.3 -0.7
NOA NORSAR Array B 77.89 332 P **P 17 11 10.5 -0.5**
NOA pP pP 17 11 35.3 -0.6
NOA LR LR 17 48 56.6
RES Resolute Bay 77.90 9 *eP* **P 17 11 09.6 -1.2**
RES pmax pmax
comp=Z,22nm,1.3s,mb4.7
RES Resolute Bay 77.90 9 *eP* **P 17 11 09.6 -1.2**
comp=Z,22nm,1.3s,mb4.7
CRAG Craig 77.91 34 *eP* **P 17 11 12.2 +1.0**
comp=Z,29nm,1.1s,mb4.9
STHS Stebnicka Huta 78.00 319 *eP* **P 17 11 13.0 +1.2**
STHS *e* pP 17 11 36.7 -0.1
STHS pmax pmax
comp=Z,24nm,1.2s,mb4.8
STHS Stebnicka Huta 78.00 319 *eP* **P 17 11 13.0 +1.2**
comp=Z,24nm,1.2s,mb4.8
STHS *e* pP 17 11 36.7 -0.1
STHS Stebnicka Huta 78.00 319 *eP* **P 17 11 13.0 +1.2**
STHS *ep*P pP 17 11 36.7 -0.1
DLBC Dease Lake 78.06 31 *eP* **P 17 11 12.3 +0.3**
NAO01 NORSAR Array S 78.13 332 *eP* **P 17 11 11.9 -0.4**
comp=Z,29nm,0.9s,mb5.0
DRGR 78.16 316 P **P 17 11 13.4 +0.6**
DRGR 78.16 316⇑*iP* **P 17 11 13.1 +0.3**
DIM Dimitrovgrad 78.17 311 *i P* **P 17 11 13.5 +0.6**
ALN Alexandroupoli 78.26 310 P **P 17 11 13.0 -0.4**
KDZ Kurdzhali 78.40 311 *i P* **P 17 11 14.7 +0.5**
DEV Deva 78.41 315⇑P **P 17 11 15.5 +1.4**
DEV Deva 78.41 315⇑*iP* **P 17 11 15.5 +1.4**
BLCB Balcova 78.51 307 P **P 17 11 11.4 -3.5**
RDO Rodhopi 78.51 310 P **P 17 11 14.6 -0.2**
OJC Ojcow 78.52 320 *eP* **P 17 11 14.2 -0.5**
OJC *ep*P pP 17 11 40.1 +0.4
OJC *e*S S 17 21 01.6 -1.6
ARG Arkhangelos 78.54 305 P **P 17 11 15.2 +0.1**
GKP Gorka Klasztor 78.64 324 *eP* **P 17 11 15.7 +0.5**
GKP Gorka Klasztor 78.64 324 *eP* **P 17 11 15.7 +0.5**
OSL Oslo 78.65 331 *eP* **P 17 11 15.3 +0.1**
PRK Paraskevi 78.73 308 P **P 17 11 15.6 -0.5**
KECS Kecovo 78.84 318 *eP* **P 17 11 17.1 +0.6**
KECS *e*SP 17 11 43.0
KECS pmax pmax
comp=Z,20nm,1.4s,mb4.8
KECS Kecovo 78.84 318 *eP* **P 17 11 17.1 +0.6**
comp=Z,20nm,1.4s,mb4.8
KECS *e*SP 17 11 43.0
KECS Kecovo 78.84 318 *eP* **P 17 11 17.1 +0.6**
KECS *ep*P pP 17 11 43.0 +1.5
RZN Rozhen 78.87 311 *i P* **P 17 11 17.0 +0.2**
BSD Bornholm Skovb 79.01 326⇑*iP* **P 17 11 16.4 -0.9**
BSD pmax pmax
comp=Z,39nm,1.0s,mb5.2
BSD Bornholm Skovb 79.01 326⇑*iP* **P 17 11 16.4 -0.9**
comp=Z,39nm,1.0s,mb5.2
PSZ Piszkesteto 79.44 318 *eP* **P 17 11 20.3 +0.5**
PSZ pmax pmax
comp=Z,56nm,1.3s,mb5.2
PSZ Piszkesteto 79.44 318 *eP* **P 17 11 20.3 +0.5**
comp=Z,56nm,1.3s,mb5.2
PSZ Piszkesteto 79.44 318⇑*eP* **P 17 11 20.1 +0.3**
PSZ Piszkesteto 79.44 318⇑*iP* **P 17 11 20.0 +0.2**
VTS Vitosha 79.54 312 P **P 17 11 20.6 +0.2**
VTS Vitosha 79.54 312 *i P* **P 17 11 20.7 +0.3**
MMB Musomiste 79.59 311 *i P* **P 17 11 19.9 -0.8**
OKC Ostrava-Krasne 79.64 320 *eP* **P 17 11 21.6 +0.8**
OKC *e*PP pP 17 11 46.1 +0.2
OKC Ostrava-Krasne 79.64 320 *eP* **P 17 11 21.6 +0.8**
OKC *ep*P pP 17 11 46.1 +0.2
VYHS Vyhne 79.83 319 *i P* **P 17 11 22.3 +0.4**
VYHS *e* pP 17 11 48.0 +1.1
VYHS pmax pmax
comp=Z,52nm,1.2s,mb5.2
VYHS Vyhne 79.83 319 *i P* **P 17 11 22.3 +0.4**
comp=Z,52nm,1.2s,mb5.2
VYHS *e* pP 17 11 48.0 +1.1
VYHS Vyhne 79.83 319 *i P* **P 17 11 22.3 +0.4**
VYHS *ep*P pP 17 11 48.0 +1.1
SRS Serrai 79.87 311 P **P 17 11 19.6 -2.6**
HYA Hoyanger 79.90 334⇑*iP* **P 17 11 23.7 +1.8**
HYA *ep*P pP 17 11 48.5 +1.5
HYA Hoyanger 79.90 334 *eP* **P 17 11 23.4 +1.4**
OUR Ouranopolis 79.92 310 P **P 17 11 21.1 -1.4**
COP Copenhagen 79.98 327 *i P* **P 17 11 23.9 +1.4**
COP pmax pmax
comp=Z,31nm,0.9s,mb5.1
COP Copenhagen 79.98 327 *i P* **P 17 11 23.9 +1.4**
comp=Z,31nm,0.9s,mb5.1
MORC Moravsky Berou 80.02 320⇑P **P 17 11 23.2 +0.3**
MORC Moravsky Berou 80.02 320 *eP* **P 17 11 22.9 +0.1**
comp=Z,45nm,1.2s,mb5.2
MORC Moravsky Berou 80.02 320⇑*iP* **P 17 11 23.2 +0.3**
FOO Floro 80.11 334 *eP* **P 17 11 23.0 -0.1**
BUD Budapest 80.16 318⇓*eP* **P 17 11 24.5 +0.9**
SOH Sokhos 80.16 310 P **P 17 11 22.6 -1.2**
KSP Ksiaz 80.25 322 *eP* **P 17 11 24.5 +0.4**
KSP Ksiaz 80.25 322⇑*eP* **P 17 11 23.7 -0.4**
KSP *ep*P pP 17 11 48.0 -1.2
PAIG Paliouri 80.30 309 P **P 17 11 23.5 -1.1**
DPC Dobruska-Polom 80.46 321 *eP* **P 17 11 25.8 +0.6**
DPC *e*PP pP 17 11 51.3 +1.0
DPC Dobruska-Polom 80.46 321 *eP* **P 17 11 25.8 +0.6**
DPC *ep*P pP 17 11 51.3 +1.0
AOS Alonnisos 80.47 309 P **P 17 11 24.1 -1.4**
VAY Valandovo 80.49 311 *eP* **P 17 11 24.7 -0.9**
VAY Valandovo 80.49 311 P **P 17 11 25.1 -0.5**
UPC Upice 80.57 321 *eP* **P 17 11 26.1 +0.3**
UPC *e*PP pP 17 11 51.6 +0.7
UPC Upice 80.57 321 *eP* **P 17 11 26.1 +0.3**
UPC *ep*P pP 17 11 51.6 +0.7
STIP Stip 80.60 312 *eP* **P 17 11 25.3 -0.8**
SMOL Smolenice 80.66 319 *eP* **P 17 11 27.9 +1.6**
SMOL *e* pP 17 11 53.0 +1.6
SMOL Smolenice 80.66 319 *eP* **P 17 11 27.9 +1.6**
SMOL *ep*P pP 17 11 53.0 +1.6
BLS5 Blasjo 80.76 332⇑*iP* **P 17 11 27.7 +1.0**
BLS5 *ep*P pP 17 11 52.5 +0.7
BLS5 Blasjo 80.76 332 *eP* **P 17 11 28.0 +1.4**
VRAC Vranov 80.79 320 P **P 17 11 27.8 +0.8**
VRAC Vranov 80.79 320⇓*iP* **P 17 11 27.5 +0.5**
RUE Ruedersdorf 80.86 324 *eP* **P 17 11 27.9 +0.7**
comp=Z,79nm,1.2s,mb5.4
LAST Lasithi 80.93 304 P **P 17 11 27.1 -0.9**
PKSM Moragy 80.96 317⇑P **P 17 11 27.8 -0.1**
PKSM Moragy 80.96 317⇑*iP* **P 17 11 27.8 -0.1**
SKO Skopje 80.99 312 *eP* **P 17 11 27.5 -0.7**
SKO Skopje 80.99 312 P **P 17 11 26.4 -1.8**
DIVS Divibare 81.03 314 P **P 17 11 27.8 -0.6**
LIT Litokhoron 81.06 310 P **P 17 11 25.8 -2.8**
MUD Monsted U'grnd 81.16 329 *i P* **P 17 11 29.2 +0.4**
MUD *i* pP 17 11 54.7 +0.8
MUD pmax pmax
comp=Z,24nm,0.9s,mb5.0
MUD Monsted U'grnd 81.16 329 *i P* **P 17 11 29.2 +0.4**
comp=Z,24nm,0.9s,mb5.0
MUD *i* pP 17 11 54.7 +0.8
ATAL Atalanti 81.27 309 P **P 17 11 24.8 -5.0**
LKR Lokris 81.31 308 P **P 17 11 27.5 -2.5**
PVCC Panska Ves 81.37 322 *eP* **P 17 11 30.7 +0.7**
PVCC *e*PP pP 17 12 00.4 +5.2
PVCC Panska Ves 81.37 322 *eP* **P 17 11 30.7 +0.7**
PVCC *ep*P pP 17 12 00.4 +5.2
KRUS Krusevo 81.37 312 *eP* **P 17 11 29.1 -1.2**
URZ Urewera 81.42 139 *eP* **P 17 11 29.2 -1.1**
comp=Z,47nm,1.0s,mb5.3
TREC Trest 81.43 321 *eP* **P 17 11 30.8 +0.4**
TREC *e*PP pP 17 11 56.6 +1.0
TREC Trest 81.43 321 *eP* **P 17 11 30.8 +0.4**
TREC *ep*P pP 17 11 56.6 +1.0
KZN Kozani 81.47 310 P **P 17 11 29.7 -1.1**
BIA Bitola 81.47 311 *eP* **P 17 11 29.4 -1.4**
FNA Florina 81.54 311 P **P 17 11 28.8 -2.3**
BRG Berggiesshubel 81.55 322 *eP* **P 17 11 30.8 -0.2**
comp=Z,20nm,1.3s,mb4.8
BRG *ep*P pP 17 11 56.2 +0.1
BRG Berggiesshubel 81.55 322 *i P* **P 17 11 30.8 -0.2**
comp=Z,20nm,1.3s,mb4.8
BRG *i* pP 17 11 55.9 -0.2
comp=Z,10nm,0.8s
SOP Sopron 81.56 319⇓*eP* **P 17 11 31.8 +0.7**
AGG Agios Georgios 81.62 309 P **P 17 11 29.5 -2.1**
PRU Pruhonice 81.64 321 *eP* **P 17 11 32.2 +0.7**
PRU *e*PP pP 17 11 57.7 +1.1
PRU Pruhonice 81.64 321 *eP* **P 17 11 32.2 +0.7**
PRU *ep*P pP 17 11 57.7 +1.1
DSF Desfina 81.74 308 P **P 17 11 29.8 -2.5**
OHR Ohrid 81.79 311 *eP* **P 17 11 31.0 -1.5**
RPZ Rata Peaks 81.84 146 P **P 17 11 31.9 -0.5**
comp=Z,106nm,0.9s,mb5.7
RPZ Rata Peaks 81.84 146 *eP* **P 17 11 31.9 -0.5**
comp=Z,164nm,1.1s,mb5.8
CLL Collm 81.85 323 *eP* **P 17 11 32.1 -0.5**
comp=Z,37nm,1.1s,mb5.1
CLL *ep*P pP 17 11 57.9 +0.2
CLL Collm 81.85 323⇓*iP* **P 17 11 32.6 0.0**
CLL *i* *PP pP 17 11 58.2 +0.5
CLL pmax pmax
comp=Z,37nm,1.1s,mb5.1
CLL Collm 81.85 323⇓*iP* **P 17 11 32.6 0.0**
comp=Z,37nm,1.1s,mb5.1
CLL *i* PcP PcP 17 11 36.1 -1.9
CLL *i* pP pP 17 11 58.2 +0.5
CLL *i* PKKP PKKPbc 17 30 03.0 -0.3
CLL *eP'P'* 17 38 12.0
CLL Collm 81.85 323⇓*iP* **P 17 11 32.6 0.0**
comp=Z,37nm,1.1s,mb5.1
CLL *i* PcP PcP 17 11 36.1 -1.9
CLL ⇓*i*pP pP 17 11 58.2 +0.5
comp=Z,22nm,0.9s
CLL *e* 17 12 18.0
CLL *eP*P PP 17 14 39.0 -1.5
CLL *ep*PP 17 15 07.0
CLL *eP*PP 17 16 29.0
CLL ⇓*i*PKKPbc PKKPbc 17 30 03.0 -0.3
comp=Z,5.0nm,1.1s
CLL *eP*KPPKPdf 17 38 12.0
CONA Conrad Observa 81.86 319⇓*iP* **P 17 11 33.3 +0.6**
comp=Z,41nm,1.4s,mb5.1,SNR=15
SUMG Summit 81.88 354 *eP* **P 17 11 32.2 -0.1**
comp=Z,18nm,0.9s,mb4.9
SUMG Summit 81.88 354 *i P* **P 17 11 32.0 -0.3**
comp=Z,6.9nm,0.8s,mb4.5
BSEG Bad Segeberg 81.93 326 *eP* **P 17 11 33.0 +0.1**
comp=Z,44nm,1.2s,mb5.2
KARN Karanos 82.00 305 P **P 17 11 31.9 -1.8**
YKA Yellowknife Ar 82.12 23 P **P 17 11 33.0 -0.7**
comp=Z,3.7nm,0.5s,mb4.5,baz=309,slow=4.9,SNR=25
YKA pP pP 17 11 58.9 0.0
comp=Z,7.9nm,0.7s,baz=312,slow=4.9,SNR=7.4
YKA Yellowknife Ar 82.12 23 P **P 17 11 33.0 -0.7**
YKA pP pP 17 11 58.9 0.0
EFP Efpalio 82.18 309 P **P 17 11 32.9 -1.6**
KHZ Kahutara 82.21 144 *eP* **P 17 11 33.8 -0.6**
comp=Z,96nm,1.1s,mb5.5
VLX Vlachokerasia 82.29 308 P **P 17 11 33.7 -1.5**
TIR Tirane 82.32 312 *eP* **P 17 11 35.3 +0.1**
TIR pmax pmax
comp=Z,64nm,1.0s,mb5.4
TIR Tirane 82.32 312 *eP* **P 17 11 35.3 0.0**
comp=Z,64nm,1.0s,mb5.4
ARSA Arzberg 82.38 319⇑*iP* **P 17 11 35.2 -0.2**
comp=Z,21nm,1.4s,mb4.8,SNR=13
TANN Tannenbergstha 82.60 323 *eP* **P 17 11 36.4 -0.1**
comp=Z,19nm,1.4s,mb4.7
TANN *ep*P pP 17 12 02.3 +0.6
KHC Kasperske Hory 82.61 321 *eP* **P 17 11 36.4 -0.2**
comp=Z,31nm,1.3s,mb5.0
KHC *ep*P pP 17 12 01.8 0.0
KHC Kasperske Hory 82.61 321 *eP* **P 17 11 36.9 +0.3**
KHC *ep*P pP 17 12 02.5 +0.7
GEC2 GERESS Array S 82.68 321 *eP* **P 17 11 36.9 0.0**
comp=Z,39nm,1.2s,mb5.1
GEC2 *ep*P pP 17 12 02.7 +0.6
GEC2 GERESS Array S 82.68 321 *eP* **P 17 11 36.9 0.0**
GEC2 *e*PP pP 17 12 02.7 +0.6
GEC2 pmax pmax
comp=Z,39nm,1.2s,mb5.1
GERES GERESS Array B 82.68 321 P **P 17 11 37.3 +0.4**
comp=Z,7.1nm,0.6s,mb4.7,baz=60,slow=3.5,SNR=96
GERES pP pP 17 12 02.9 +0.7
comp=Z,11nm,0.8s,baz=57,slow=4.9,SNR=9.3
NKC Novy Kostel 82.70 322 *eP* **P 17 11 37.4 +0.4**
NKC *e*PP pP 17 12 02.3 +0.1
NKC Novy Kostel 82.70 322 *eP* **P 17 11 37.4 +0.4**
NKC *ep*P pP 17 12 02.3 +0.1
ITM Ithomi 82.70 308 P **P 17 11 35.9 -1.4**
NRDL Niedersach Rie 82.79 325 *eP* **P 17 11 37.6 +0.2**
comp=Z,18nm,1.2s,mb4.8
NRDL *ep*P pP 17 12 03.4 +0.8
IGT Igoumenitsa 82.80 310 P **P 17 11 36.4 -1.4**
MOA Molln 82.84 320⇓*iP* **P 17 11 37.9 +0.2**
comp=Z,52nm,1.4s,mb5.2,SNR=23
MOX Moxa 82.94 323 *eP* **P 17 11 38.9 +0.6**
comp=Z,33nm,1.5s,mb4.9
MOX Moxa 82.94 323 *eP* **P 17 11 38.9 +0.6**
comp=Z,33nm,1.5s,mb4.9
MOX Moxa 82.94 323 *eP* **P 17 11 38.2 -0.1**
comp=Z,25nm,1.3s,mb4.9
SOKA Sobeh 82.95 318⇓*iP* **P 17 11 38.1 -0.3**
comp=Z,36nm,1.5s,mb5.0
CLZ Clausthal 82.99 324 *eP* **P 17 11 38.9 +0.4**
comp=Z,53nm,1.2s,mb5.2
CLZ *ep*P pP 17 12 04.3 +0.6
CLZ Clausthal 82.99 324 *eP* **P 17 11 38.9 +0.4**
CLZ *e*PP pP 17 12 04.3 +0.6
CLZ pmax pmax
comp=Z,53nm,1.2s,mb5.2
WET Wettzell 83.00 321 *eP* **P 17 11 38.8 +0.2**
comp=Z,27nm,1.3s,mb4.9
WET Wettzell 83.00 321 *eP* **P 17 11 38.8 +0.2**
WET pmax pmax
comp=Z,27nm,1.3s,mb4.9
ROTZ Rotzenmuhle 83.07 322 *eP* **P 17 11 39.3 +0.4**
comp=Z,36nm,1.2s,mb5.1
VLS Valsamata 83.22 309 P **P 17 11 39.6 -0.3**
OBKA Obir 83.33 318⇑*iP* **P 17 11 40.1 -0.2**
comp=Z,37nm,1.2s,mb5.1,SNR=15
LJU Ljubljana 83.56 318 *eP* **P 17 11 41.9 +0.4**
LJU *e* pP 17 12 07.5 +0.7
GRA1 Grafenberg Arr 83.65 322 *eP* **P 17 11 42.3 +0.4**
comp=Z,63nm,1.2s,mb5.3
GRA1 *ep*P pP 17 12 07.7 +0.5
GRF Grafenberg Arr 83.65 322 *eP* **P 17 11 42.3 +0.4**
comp=Z,63nm,1.2s,mb5.3
GRF *ep*P pP 17 12 07.7 +0.5
GRF Grafenberg Arr 83.65 322 *eP* **P 17 11 42.3 +0.4**
GRF *e*PP pP 17 12 07.7 +0.5
GRF pmax pmax
comp=Z,63nm,1.2s,mb5.3
GRF Grafenberg Arr 83.65 322 *eP* **P 17 11 42.3 +0.4**
GRF *e*PP pP 17 12 07.7 +0.5
GRF pmax pmax
comp=Z,63nm,1.2s,mb5.3
UBBA Unterbreizbach 83.73 324 *eP* **P 17 11 42.1 -0.2**
comp=Z,20nm,1.5s,mb4.7
RJOB Jochberg 83.76 320 *eP* **P 17 11 42.5 0.0**
comp=Z,41nm,1.0s,mb5.2
KBA Koelnbreinsper 83.76 319⇑*iP* **P 17 11 42.2 -0.4**
comp=Z,40nm,1.2s,mb5.1,SNR=17
MYKA Terra Mystica 83.81 319⇑*iP* **P 17 11 42.2 -0.6**
comp=Z,19nm,1.1s,mb4.8
VOY Vojsko 83.96 318 *eP* **P 17 11 42.5 -1.0**
VOY *e* pP 17 12 09.2 +0.4
PTCC Patocco-Chiusa 84.09 319 P **P 17 11 43.4 -0.8**
comp=Z,27nm,1.3s,mb4.9
IBBN Ibbenburen 84.10 326 *eP* **P 17 11 44.0 -0.1**
comp=Z,35nm,1.4s,mb5.0
FUR Furstenfeldbru 84.42 321 *eP* **P 17 11 46.1 +0.3**
comp=Z,145nm,1.3s,mb5.7
FUR *ep*P pP 17 12 12.5 +1.4
FUR Furstenfeldbru 84.42 321 *eP* **P 17 11 46.1 +0.3**
FUR *e*PP pP 17 12 12.5 +1.4
FUR pmax pmax
comp=Z,145nm,1.3s,mb5.7
ABTA Abfaltersbach 84.42 319⇑*iP* **P 17 11 44.8 -1.1**
comp=Z,38nm,1.2s,mb5.1,SNR=23
ABPO Ambohimpanom 84.67 246 *eP* **P 17 11 47.9 +0.4**
ABPO pmax pmax
comp=Z,26nm,1.1s,mb5.1
ABPO Ambohimpanom 84.67 246 *eP* **P 17 11 47.9 +0.3**
comp=Z,26nm,1.1s,mb5.1
WATA Walderalm 84.67 320⇓*iP* **P 17 11 47.0 -0.2**
comp=Z,38nm,1.2s,mb5.2
WTTA Wattenberg 84.67 320⇑*iP* **P 17 11 46.7 -0.4**
comp=Z,60nm,1.2s,mb5.4,SNR=25
BUG Bochum--Univer 84.84 325 *eP* **P 17 11 47.7 -0.2**
comp=Z,46nm,1.1s,mb5.3
TNS Taunus Mts 84.89 324 *eP* **P 17 11 48.2 +0.1**
comp=Z,42nm,1.5s,mb5.2
TNS Taunus Mts 84.89 324 *eP* **P 17 11 48.2 +0.1**
TNS pmax pmax
comp=Z,42nm,1.5s,mb5.2
MOTA Moosalm 84.94 320⇑*iP* **P 17 11 47.6 -0.9**
comp=Z,30nm,1.1s,mb5.1,SNR=15
RGNG Rignano Grg 85.02 314 P **P 17 11 48.8 -0.2**
TOD Tromm 85.03 323 *eP* **P 17 11 48.6 -0.3**
RETA Reutte 85.06 321⇑*iP* **P 17 11 48.6 -0.5**
comp=Z,15nm,1.3s,mb4.8,SNR=7.0
STU Stuttgart 85.27 322 *eP* **P 17 11 49.7 -0.4**
comp=Z,30nm,1.2s,mb5.1
STU *ep*P pP 17 12 16.0 +0.6
STU Stuttgart 85.27 322 *eP* **P 17 11 50.5 +0.4**
STU pmax pmax
comp=Z,14nm,0.8s,mb4.9
STU Stuttgart 85.27 322 *eP* **P 17 11 50.5 +0.4**
comp=Z,14nm,0.8s,mb5.0
FETA Feichten 85.33 320⇑*iP* **P 17 11 50.3 -0.2**
comp=Z,39nm,1.2s,mb5.2,SNR=15
AOI Ancona 85.37 316 P **P 17 11 50.9 +0.2**
FG5 Orsara di Pugl 85.42 314 P **P 17 11 51.8 +0.8**
FG5 pmax pmax
comp=Z,87nm,1.4s,mb5.5
FG5 Orsara di Pugl 85.42 314 P **P 17 11 51.8 +0.8**
comp=Z,87nm,1.4s,mb5.5
TIP Timpagrande 85.43 311 *eP* **P 17 11 50.7 -0.4**
comp=Z,50nm,1.3s,mb5.3
KMBO Kilima Mbogo 85.53 267 P **P 17 11 52.5 +0.5**
comp=Z,15nm,1.1s,mb4.8,baz=40,slow=9.0,SNR=16
KMBO pP pP 17 12 18.7 +1.3
comp=Z,8.6nm,0.8s,baz=44,slow=8.0,SNR=6.0
KMBO Kilima Mbogo 85.53 267 *eP* **P 17 11 53.2 +1.2**
KMBO pmax pmax
comp=Z,15nm,1.0s
KMBO Kilima Mbogo 85.53 267 *eP* **P 17 11 53.2 +1.1**
comp=Z,15nm,1.0s,mb4.9
KMBO Kilima Mbogo 85.53 267 P **P 17 11 54.3 +2.2**
SNR=5.2
ABH Alteburg 85.56 324 *eP* **P 17 11 51.4 -0.1**
DAVA Damuels 85.68 321⇑*iP* **P 17 11 52.0 -0.1**
comp=Z,26nm,1.1s,mb5.0,SNR=6.2
CING Cingoli 85.71 316 P **P 17 11 53.1 +0.7**
FSSB Fossombrone 85.82 317 P **P 17 11 53.6 +0.7**
comp=Z,74nm,1.4s,mb5.4
BRMO Bormio 85.83 320 P **P 17 11 53.4 +0.5**
TERO Teramo 85.83 315 P **P 17 11 52.8 -0.2**
SPAK Spaichingen-Ko 85.86 322 *eP* **P 17 11 52.5 -0.5**
MIDA Miranda 85.90 314 P **P 17 11 53.8 +0.4**
LANF Langenberg 85.92 323 *eP* **P 17 11 53.2 -0.1**
RUP Ruppelstein 85.92 324 *eP* **P 17 11 53.4 +0.1**
INTR Introdacqua 85.95 315 P **P 17 11 54.1 +0.5**
MEM Membach 85.97 325 P **P 17 11 54.0 +0.5**
comp=Z,15nm,1.5s,mb4.7
BFO Black Forest 85.99 322 P **P 17 11 52.5 -1.2**
comp=Z,71nm,1.2s,mb5.5,SNR=6.2
BFO Black Forest 85.99 322 *eP* **P 17 11 53.2 -0.5**
comp=Z,20nm,1.3s,mb4.9
BFO *ep*P pP 17 12 19.5 +0.5
BFO Black Forest 85.99 322 *eP* **P 17 11 53.3 -0.4**
BEBN Eben Emael 86.03 325 P **P 17 11 55.9 +2.1**
comp=Z,5.7nm,1.4s,mb4.3
NRCA Norcia 86.04 316 P **P 17 11 54.8 +0.8**
comp=Z,64nm,1.1s,mb5.5
PIEI Pieia 86.05 317 P **P 17 11 54.3 +0.2**
AQU L'Aquila 86.10 315 *eP* **P 17 11 55.2 +0.9**
AQU pmax pmax
comp=Z,135nm,1.2s,mb5.8
AQU L'Aquila 86.10 315 *eP* **P 17 11 55.2 +0.8**
comp=Z,135nm,1.2s,mb5.8
SDI San Donato 86.16 314 P **P 17 11 54.6 0.0**
SDI pmax pmax
comp=Z,86nm,1.6s,mb5.4
SDI San Donato 86.16 314 P **P 17 11 54.6 0.0**
comp=Z,86nm,1.6s,mb5.4
MURB Monte Urbino 86.19 316 P **P 17 11 55.1 +0.3**
VVLD Villa Vallelon 86.20 315 P **P 17 11 55.0 +0.2**
BORG Borgarnes 86.21 345 LR LR 17 51 47.8
comp=Z,180nm,20.3s,baz=117,slow=36
BADI Badiali 86.24 317 P **P 17 11 55.6 +0.6**
SFI Santa Sofia 86.28 317 P **P 17 11 55.9 +0.7**
FIAM Fiamignano 86.32 315 P **P 17 11 55.4 0.0**
CRE Caprese Michel 86.37 317 P **P 17 11 56.3 +0.7**
FELD Feldberg im Sc 86.42 322 *eP* **P 17 11 55.1 -0.7**
WLF Walferdange 86.43 324 P **P 17 11 56.2 +0.5**
comp=Z,37nm,1.4s,mb5.1
WLF AP pP 17 12 21.6 +0.4
WLF Walferdange 86.43 324 *eP* **P 17 11 56.0 +0.2**
comp=Z,56nm,1.1s,mb5.4
WLF *ep*P pP 17 12 22.4 +1.2
WLF Walferdange 86.43 324 *eP* **P 17 11 56.4 +0.6**
WLF pmax pmax
comp=Z,60nm,1.1s,mb5.4
WLF Walferdange 86.43 324 *eP* **P 17 11 56.4 +0.6**
comp=Z,60nm,1.1s,mb5.4
SOI Samo 86.44 310 P **P 17 11 56.8 +0.7**
SOI pmax pmax
comp=Z,48nm,1.2s,mb5.3
SOI Samo 86.44 310 P **P 17 11 56.8 +0.7**
comp=Z,48nm,1.2s,mb5.3
BCLA Clavier 86.44 325 P **P 17 11 56.0 +0.2**
comp=Z,12nm,1.5s,mb4.6
BCLA AP pP 17 12 18.6 -2.6
CEL Celeste 86.46 311 *eP* **P 17 11 56.6 +0.4**
comp=Z,152nm,1.3s,mb5.8
CEL *ep*P pP 17 12 21.7 +0.1
CDF Champ du Feu 86.53 323 *eP* **P 17 11 56.1 -0.2**
comp=Z,93nm,1.3s,mb5.2
CDF *ep*P pP 17 12 21.1 -0.6
CDF Champ du Feu 86.53 323 *eP* **P 17 11 56.1 -0.2**
CDF *e*PP pP 17 12 21.1 -0.6
CDF pmax pmax
comp=Z,46nm,1.3s,mb5.2
CDF Champ du Feu 86.53 323 *eP* **P 17 11 56.1 -0.2**
comp=Z,46nm,1.3s,mb5.2
CDF *ep*P pP 17 12 21.1 -0.6
MTCE Montecelio 86.69 315 P **P 17 11 56.7 -0.5**
ECH Echery 86.70 322 *eP* **P 17 11 56.7 -0.5**
ECH Echery 86.70 322 *eP* **P 17 11 57.2 0.0**
ECH pmax pmax
comp=Z,17nm,1.2s,mb4.8
ECH Echery 86.70 322 *eP* **P 17 11 57.2 +0.1**
comp=Z,17nm,1.2s,mb4.9
UCC Uccle 86.71 326 P **P 17 11 57.1 0.0**
UCC AP pP 17 12 21.5 -1.0
MTTG Motta San Giov 86.72 311 P **P 17 11 57.6 +0.1**
GIVF Givet 86.88 325 *eP* **P 17 11 57.5 -0.5**
comp=Z,45nm,1.1s,mb5.0
GIVF *ep*P pP 17 12 22.7 -0.7
GIVF Givet 86.88 325 *eP* **P 17 11 57.5 -0.5**
GIVF *e*PP pP 17 12 22.7 -0.7
GIVF pmax pmax

comp=Z,23nm,1.1s,mb5.0
GIVF Givet 86.88 325 *e*P **P 17 11 57.5 -0.5**
GIVF *e*pP pP 17 12 22.7 -0.7
comp=Z,23nm,1.1s,mb5.0
SNF Seneffe 86.92 325 P **P 17 11 58.4 +0.3**
comp=Z,9.8nm,1.4s,mb4.5
MOF Molkenrain 86.92 322 *e*P **P 17 11 58.8 +0.6**
NLWA Neilton Lookou 86.98 38 ⇓PcP PcP 17 12 00.2 -0.4
baz=87
NLWA Neilton Lookou 86.98 38 *e*P **P 17 12 00.1 +1.6**
comp=Z,28nm,1.1s,mb5.1
DOU Dourbes 87.00 325 P **P 17 11 58.5 -0.1**
comp=Z,10nm,1.4s,mb4.6
DOU AP pP 17 12 22.9 -1.1
HINF Hinteralfeld 87.10 322 *e*P **P 17 11 58.4 -0.7**
comp=Z,48nm,1.4s,mb4.9
HINF Hinteralfeld 87.10 322 *e*P **P 17 11 58.4 -0.7**
HINF pmax pmax
comp=Z,24nm,1.4s,mb4.9
HINF Hinteralfeld 87.10 322 *e*P **P 17 11 58.4 -0.7**
comp=Z,24nm,1.4s,mb4.9
BAIF Baives 87.22 325 *e*P **P 17 11 59.3 -0.3**
comp=Z,36nm,1.2s,mb4.9
BAIF Baives 87.22 325 *e*P **P 17 11 59.3 -0.3**
BAIF pmax pmax
comp=Z,18nm,1.2s,mb4.9
BAIF Baives 87.22 325 *e*P **P 17 11 59.3 -0.3**
comp=Z,18nm,1.2s,mb4.9
HAU Haudompre 87.27 323 *e*P **P 17 11 59.2 -0.7**
comp=Z,44nm,1.3s,mb4.9
HAU Haudompre 87.27 323 *e*P **P 17 11 59.2 -0.7**
HAU pmax pmax
comp=Z,22nm,1.3s,mb4.9
HAU Haudompre 87.27 323 *e*P **P 17 11 59.2 -0.7**
comp=Z,22nm,1.3s,mb4.9
THEF They Montfort 87.34 323 *e*P **P 17 11 59.9 -0.4**
LOMF Lomont 87.38 322 *e*P **P 17 12 01.0 +0.6**
JCW Jim Creek 87.59 37 *e*P **P 17 12 01.9 +0.4**
RPW Rockport 87.67 37 P **P 17 12 02.4 +0.5**
MEZF Maizieres J'vi 87.69 324 *e*P **P 17 12 01.7 -0.2**
comp=Z,63nm,1.3s,mb5.2
MEZF *e*pP pP 17 12 26.9 -0.5
MEZF Maizieres J'vi 87.69 324 *e*P **P 17 12 01.7 -0.2**
comp=Z,63nm,1.3s,mb5.5
MEZF *e*pP pP 17 12 26.9 -0.5
A07A Ashnola River, 87.92 36 ⇓PcP PcP 17 12 04.1 -0.6
baz=88
F03A Seaside 87.97 39 ⇓PcP PcP 17 12 04.4 -0.6
baz=88
RMW Rattlesnake Mo 88.09 37 P **P 17 12 05.8 +2.0**
D05A Enumclaw 88.14 38 ⇑PcP PcP 17 12 05.1 -0.7
baz=88
CABF La Chapelle 88.22 322 *e*P **P 17 12 03.9 -0.5**
comp=Z,32nm,1.3s,mb4.9
CABF La Chapelle 88.22 322 *e*P **P 17 12 03.9 -0.5**
CABF pmax pmax
comp=Z,16nm,1.3s,mb4.9
CABF La Chapelle 88.22 322 *e*P **P 17 12 03.9 -0.5**
comp=Z,16nm,1.3s,mb4.9
LPG La Plagne 88.47 320 *e*P **P 17 12 05.7 0.0**
comp=Z,49nm,1.0s,mb5.2
LPG *e*pP pP 17 12 30.9 -0.3
LPG La Plagne 88.47 320 *e*P **P 17 12 05.7 0.0**
LPG *e*PP* pP 17 12 30.9 -0.3
LPG pmax pmax
comp=Z,24nm,1.0s,mb5.2
LPG La Plagne 88.47 320 *e*P **P 17 12 05.7 0.0**
comp=Z,24nm,1.0s,mb5.2
LPG *e*pP pP 17 12 30.9 -0.3
LPL La Plagne 88.47 320 *e*P **P 17 12 05.6 -0.1**
comp=Z,45nm,1.0s,mb5.1
LPL La Plagne 88.47 320 *e*P **P 17 12 05.6 -0.1**
LPL pmax pmax
comp=Z,23nm,1.0s,mb5.2
LPL La Plagne 88.47 320 *e*P **P 17 12 05.6 -0.1**
comp=Z,22nm,1.0s,mb5.2
LON Longmire 88.50 38 *e*P **P 17 12 06.7 +0.9**
LON pmax pmax
comp=Z,39nm,1.1s,mb5.3
LON Longmire 88.50 38 *e*P **P 17 12 06.7 +0.9**
comp=Z,39nm,1.1s,mb5.3
F04A Amboy 88.63 39 ⇓PcP PcP 17 12 06.8 -1.1
baz=88
EDM Edmonton 88.73 30 *e*P **P 17 12 06.7 0.0**
BNI Bardonecchia 88.77 320 *e*P **P 17 12 06.7 -0.4**
BNI pmax pmax
comp=Z,20nm,1.0s,mb5.1
BNI Bardonecchia 88.77 320 *e*P **P 17 12 06.7 -0.4**
comp=Z,20nm,1.0s,mb5.1
PGF Pioggiola 88.77 317 *e*P **P 17 12 06.7 -0.4**
comp=Z,147nm,1.2s,mb5.6
PGF *e*pP pP 17 12 32.0 -0.7
PGF Pioggiola 88.77 317 *e*P **P 17 12 06.7 -0.4**
PGF *e*PP* pP 17 12 32.0 -0.7
PGF pmax pmax
comp=Z,74nm,1.2s,mb5.6
PGF Pioggiola 88.77 317 *e*P **P 17 12 06.7 -0.4**
comp=Z,74nm,1.2s,mb5.6
PGF *e*pP pP 17 12 32.0 -0.7
ETW Entiat 88.81 37 *e*P **P 17 12 08.0 +0.8**
comp=Z,18nm,0.6s,mb5.3
COR Corvallis 88.88 40 *e*P **P 17 12 09.2 +1.6**
comp=Z,172nm,1.5s,mb5.9
B08A Colville Reser 88.89 36 ⇑PcP PcP 17 12 07.9 -1.2
baz=89
MBDF Montbardon 88.90 320 *e*P **P 17 12 07.9 +0.2**
comp=Z,25nm,1.0s,mb4.9
MBDF Montbardon 88.90 320 *e*P **P 17 12 07.9 +0.2**
MBDF pmax pmax
comp=Z,13nm,1.0s,mb4.9
MBDF Montbardon 88.90 320 *e*P **P 17 12 07.9 +0.2**
comp=Z,13nm,1.0s,mb4.9
SBF Sospel 88.99 319 *e*P **P 17 12 08.3 +0.1**
comp=Z,67nm,1.0s,mb5.3
SBF Sospel 88.99 319 *e*P **P 17 12 08.3 +0.1**
SBF pmax pmax
comp=Z,34nm,1.0s,mb5.3
SBF Sospel 88.99 319 *e*P **P 17 12 08.3 +0.1**
comp=Z,34nm,1.0s,mb5.3
G04A Mulino 89.01 40 ⇑PcP PcP 17 12 09.1 -0.6
baz=89
LOR Lormes 89.07 323 *e*P **P 17 12 07.6 -0.8**
comp=Z,32nm,1.2s,mb4.9
LOR *e*pP pP 17 12 32.9 -1.1
LOR Lormes 89.07 323 *e*P **P 17 12 07.6 -0.8**
LOR *e*PP* pP 17 12 32.9 -1.1
LOR pmax pmax
comp=Z,16nm,1.2s,mb4.9
LOR Lormes 89.07 323 *e*P **P 17 12 07.6 -0.8**
comp=Z,16nm,1.2s,mb4.9
LOR *e*pP pP 17 12 32.9 -1.1
ORIF Oris-en-Rattie 89.31 320 *e*P **P 17 12 09.4 -0.2**
comp=Z,44nm,1.1s,mb5.1
ORIF Oris-en-Rattie 89.31 320 *e*P **P 17 12 09.4 -0.2**
ORIF pmax pmax
comp=Z,22nm,1.1s,mb5.1
ORIF Oris-en-Rattie 89.31 320 *e*P **P 17 12 09.4 -0.2**
comp=Z,22nm,1.1s,mb5.1
SSF Saint Saulge 89.39 323 *e*P **P 17 12 09.1 -0.8**
comp=Z,30nm,1.3s,mb4.8
SSF *e*pP pP 17 12 34.4 -1.1
SSF Saint Saulge 89.39 323 *e*P **P 17 12 09.1 -0.8**
SSF *e*PP* pP 17 12 34.4 -1.1
SSF pmax pmax
comp=Z,15nm,1.3s,mb4.9
SSF Saint Saulge 89.39 323 *e*P **P 17 12 09.1 -0.8**
comp=Z,15nm,1.3s,mb4.9
SSF *e*pP pP 17 12 34.4 -1.1
HOOD Mount Hood Mea 89.42 39 *e*P **P 17 12 11.8 +1.7**
comp=Z,432nm,1.8s,mb6.2
SMF Signal de Mont 89.45 323 *e*P **P 17 12 09.6 -0.6**
comp=Z,73nm,1.1s,mb5.3
SMF *e*pP pP 17 12 34.8 -1.0
SMF Signal de Mont 89.45 323 *e*P **P 17 12 09.6 -0.6**
SMF *e*PP* pP 17 12 34.8 -1.0
SMF pmax pmax
comp=Z,36nm,1.1s,mb5.3
SMF Signal de Mont 89.45 323 *e*P **P 17 12 09.6 -0.6**
comp=Z,36nm,1.1s,mb5.3
SMF *e*pP pP 17 12 34.8 -1.0
B09A Rice 89.48 35 ⇓PcP PcP 17 12 10.9 -0.8
baz=89
H04A Detroit Lake 89.48 40 ⇑PcP PcP 17 12 10.9 -0.8
baz=89
VFP Flag Point 89.53 39 P **P 17 12 12.3 +1.7**
AVF Avril sur Loir 89.63 323 *e*P **P 17 12 10.4 -0.7**
comp=Z,75nm,1.3s,mb5.4
AVF Avril sur Loir 89.63 323 *e*P **P 17 12 10.4 -0.7**
AVF pmax pmax
comp=Z,38nm,1.3s,mb5.4
AVF Avril sur Loir 89.63 323 *e*P **P 17 12 10.4 -0.7**
comp=Z,38nm,1.3s,mb5.4
FRF La Foret Royal 89.64 319 *e*P **P 17 12 10.5 -0.7**
comp=Z,88nm,1.4s,mb5.4
FRF La Foret Royal 89.64 319 *e*P **P 17 12 10.5 -0.7**
FRF pmax pmax
comp=Z,44nm,1.4s,mb5.4
FRF La Foret Royal 89.64 319 *e*P **P 17 12 10.5 -0.7**
comp=Z,44nm,1.4s,mb5.4
E07A Sunnyside 89.70 37 ⇑PcP PcP 17 12 12.2 -0.5
baz=90
HYF Humbligny 89.73 324 *e*P **P 17 12 11.6 +0.1**
OD2 Odessa Site #2 89.82 36 *e*P **P 17 12 12.2 +0.3**
comp=Z,23nm,1.2s,mb5.2
LMR La Mourre 89.85 319 *e*P **P 17 12 11.6 -0.6**
comp=Z,73nm,1.1s,mb5.4
LMR La Mourre 89.85 319 *e*P **P 17 12 11.6 -0.6**
LMR pmax pmax
comp=Z,36nm,1.1s,mb5.4
LMR La Mourre 89.85 319 *e*P **P 17 12 11.6 -0.6**
comp=Z,36nm,1.1s,mb5.4
SSB Saint Sauveur 89.87 321 *e*P **P 17 12 11.2 -1.0**
SSB pmax pmax
comp=Z,14nm,1.1s,mb5.0
SSB Saint Sauveur 89.87 321 *e*P **P 17 12 11.2 -1.0**
comp=Z,14nm,1.1s,mb5.0
D08A Wollman Farm, 89.91 37 ⇓PcP PcP 17 12 13.0 -0.6
baz=90
HAWA Hanford 89.98 37 *e*P **P 17 12 14.0 +1.3**
comp=Z,72nm,1.4s,mb5.6
SMRF Simiane la Rot 90.03 320 *e*P **P 17 12 12.9 -0.1**
comp=Z,32nm,1.2s,mb5.0
SMRF Simiane la Rot 90.03 320 *e*P **P 17 12 12.9 -0.1**
comp=Z,32nm,1.2s,mb5.3
VIVF Saint-Julien-l 90.04 321 *e*P **P 17 12 12.5 -0.6**
comp=Z,40nm,1.1s,mb5.2
VIVF *e*pP pP 17 12 37.7 -0.9
VIVF Saint-Julien-l 90.04 321 *e*P **P 17 12 12.5 -0.6**
VIVF *e*PP* pP 17 12 37.7 -0.9
VIVF pmax pmax
comp=Z,20nm,1.1s,mb5.2
VIVF Saint-Julien-l 90.04 321 *e*P **P 17 12 12.5 -0.6**
comp=Z,20nm,1.1s,mb5.2
VIVF *e*pP pP 17 12 37.7 -0.9
BGF Bois d'Agland 90.05 323 *e*P **P 17 12 12.6 -0.5**
comp=Z,34nm,1.3s,mb5.0
BGF Bois d'Agland 90.05 323 *e*P **P 17 12 12.6 -0.5**
BGF pmax pmax
comp=Z,17nm,1.3s,mb5.0
BGF Bois d'Agland 90.05 323 *e*P **P 17 12 12.6 -0.5**
comp=Z,17nm,1.3s,mb5.0
G06A Carlson Farm, 90.05 39 ⇑PcP PcP 17 12 13.9 -0.3
baz=90
NEW Newport 90.11 35 *e*P **P 17 12 14.2 +0.9**
NEW pmax pmax
comp=Z,56nm,1.3s
NEW Newport 90.11 35 *e*P **P 17 12 14.2 +0.9**
comp=Z,56nm,1.3s,mb5.5
HUMO Hull Mountain 90.21 42 *e*P **P 17 12 15.2 +1.3**
comp=Z,11nm,0.6s,mb5.2
D09A Jones Farm, Ri 90.24 36 ⇑PcP PcP 17 12 13.9 -1.1
baz=90
LDF La Druitiere 90.36 326 *e*P **P 17 12 13.6 -0.8**
comp=Z,28nm,1.3s,mb5.0
LDF La Druitiere 90.36 326 *e*P **P 17 12 13.6 -0.8**
LDF pmax pmax
comp=Z,14nm,1.3s,mb4.9
LDF La Druitiere 90.36 326 *e*P **P 17 12 13.6 -0.8**
comp=Z,14nm,1.3s,mb4.9
B11A Sandpoint 90.40 34 ⇑PcP PcP 17 12 14.8 -0.9
baz=90
FLN La Foliniere 90.43 326 *e*P **P 17 12 14.0 -0.8**
TCF Toulx Ste Croi 90.56 323 *e*P **P 17 12 15.1 -0.3**
comp=Z,51nm,1.3s,mb5.2
TCF *e*pP pP 17 12 40.3 -0.7
TCF Toulx Ste Croi 90.56 323 *e*P **P 17 12 15.1 -0.3**
TCF *e*PP* pP 17 12 40.3 -0.7
TCF pmax pmax
comp=Z,26nm,1.3s,mb5.2
TCF Toulx Ste Croi 90.56 323 *e*P **P 17 12 15.1 -0.3**
comp=Z,26nm,1.3s,mb5.2
TCF *e*pP pP 17 12 40.3 -0.7
F08A Pendleton 90.76 38 ⇑PcP PcP 17 12 16.6 -0.8
baz=90
D10A Wagner Farm, O 90.79 36 ⇑PcP PcP 17 12 16.2 -1.3
baz=91
YBH Yreka Blue Hor 90.86 43 *e*P **P 17 12 17.3 +0.4**
YBH pmax pmax
comp=Z,35nm,1.3s
YBH Yreka Blue Hor 90.86 43 *e*P **P 17 12 17.3 +0.4**
comp=Z,35nm,1.3s,mb5.3
GRR Gorron 90.87 326 *e*P **P 17 12 16.0 -0.8**
comp=Z,25nm,1.2s,mb4.9
GRR Gorron 90.87 326 *e*P **P 17 12 16.0 -0.8**
GRR pmax pmax
comp=Z,12nm,1.2s,mb4.9
GRR Gorron 90.87 326 *e*P **P 17 12 16.0 -0.8**
comp=Z,12nm,1.2s,mb4.9
G08A Pilot Rock 90.96 38 ⇓PcP PcP 17 12 17.3 -1.0
baz=91
LASF Ste Croix 90.98 320 *e*P **P 17 12 17.2 -0.2**
comp=Z,51nm,1.5s,mb5.1
LNOR Lincton Mounta 90.98 37 *e*P **P 17 12 18.7 +1.3**
LNOR pmax pmax
comp=Z,19nm,1.4s,mb5.0
LNOR Lincton Mounta 90.98 37 *e*P **P 17 12 18.6 +1.3**
comp=Z,19nm,1.4s,mb5.0
A13A Flathead Natio 91.06 33 ⇓PcP PcP 17 12 17.8 -0.8
baz=91
WALA Waterton Lakes 91.23 33 *e*P **P 17 12 19.2 +0.7**
comp=Z,1.5nm,1.1s
E10A Myers Farm, Un 91.24 36 ⇑PcP PcP 17 12 18.6 -0.9
baz=91
CASY Casey 91.27 185 *e*P **P 17 12 17.7 -0.2**
comp=Z,48nm,1.2s,mb5.5
D11A Klaveano Farm, 91.30 36 ⇑PcP PcP 17 12 18.7 -1.0
baz=91
K05A Summer Lake 91.39 41 ⇓P **P 17 12 18.2 -1.2**
baz=91,SNR=48
I07A Izee 91.39 39 ⇓P **P 17 12 17.5 -1.8**
baz=91,SNR=26
B13A Whitefish 91.40 34 ⇑P **P 17 12 17.9 -1.4**
baz=91
CAF Calviac 91.48 322 *e*P **P 17 12 19.9 +0.2**
comp=Z,95nm,1.1s,mb5.5
CAF *e*pP pP 17 12 45.1 -0.2
CAF Calviac 91.48 322 *e*P **P 17 12 19.9 +0.2**
CAF *e*PP* pP 17 12 45.1 -0.2
CAF pmax pmax
comp=Z,47nm,1.1s,mb5.5
CAF Calviac 91.48 322 *e*P **P 17 12 19.9 +0.2**
comp=Z,47nm,1.1s,mb5.5
CAF *e*pP pP 17 12 45.1 -0.2
A14A Double T Ranch 91.53 33 ⇑P **P 17 12 19.5 -0.4**
baz=91,SNR=48
RJF Les Rejaudoux 91.55 322 *e*P **P 17 12 20.2 +0.1**
comp=Z,141nm,1.1s,mb5.8
RJF *e*pP pP 17 12 45.5 -0.1
RJF Les Rejaudoux 91.55 322 *e*P **P 17 12 20.2 +0.1**
RJF *e*PP* pP 17 12 45.5 -0.1
RJF pmax pmax
comp=Z,71nm,1.1s,mb5.8
RJF Les Rejaudoux 91.55 322 *e*P **P 17 12 20.2 +0.1**
comp=Z,70nm,1.1s,mb5.8
RJF *e*pP pP 17 12 45.5 -0.1
BSMT Bassoo Peak 91.58 34 *e*P **P 17 12 20.9 +0.7**
comp=Z,41nm,1.3s,mb5.5
H08A Prairie City 91.60 39 ⇓P **P 17 12 19.3 -1.0**
baz=91,SNR=20
WDC Whiskeytown Da 91.63 43 *e*P **P 17 12 20.4 -0.1**
WDC pmax pmax
comp=Z,27nm,1.2s,mb5.3
WDC Whiskeytown Da 91.63 43 *e*P **P 17 12 20.4 -0.1**
comp=Z,27nm,1.2s,mb5.4
MFF Saint Martin d 91.64 324 *e*P **P 17 12 20.1 -0.3**
E11A Bogner Ranch, 91.80 36 ⇓P **P 17 12 20.1 -1.1**
baz=92,SNR=11
C13A Hot Springs 91.81 34 ⇑P **P 17 12 20.1 -1.1**
baz=92,SNR=14
SGMF Saint Gilles 91.81 327 *e*P **P 17 12 20.1 -1.1**
comp=Z,25nm,1.2s,mb5.0
SGMF Saint Gilles 91.81 327 *e*P **P 17 12 20.1 -1.1**
SGMF pmax pmax
comp=Z,12nm,1.2s,mb5.0
SGMF Saint Gilles 91.81 327 *e*P **P 17 12 20.1 -1.1**
comp=Z,12nm,1.2s,mb5.0
A15A Johnson Ranch, 91.86 32 ⇓P **P 17 12 21.0 -0.4**
baz=92,SNR=8.2
G10A Bishop Farm, J 91.98 37 ⇑P **P 17 12 22.1 0.0**
baz=92,SNR=27
B14A Marquette Ranc 92.01 33 ⇓P **P 17 12 21.4 -0.7**
baz=92,SNR=18
H09A Durkee 92.07 38 ⇓P **P 17 12 22.4 -0.1**
baz=92,SNR=13
E12A Beaver Dam Sad 92.11 36 ⇓P **P 17 12 22.1 -0.5**
baz=92,SNR=11
F11A Grangeville 92.13 36 ⇓P **P 17 12 21.3 -1.4**
baz=92
SWMT Swartz Lake 92.21 34 *e*P **P 17 12 23.5 +0.5**
comp=Z,18nm,1.0s,mb5.3
LFF La Frestale 92.21 322 *e*P **P 17 12 23.2 +0.1**
comp=Z,109nm,1.4s,mb5.6
LFF La Frestale 92.21 322 *e*P **P 17 12 23.2 +0.1**
LFF pmax pmax
comp=Z,55nm,1.4s,mb5.6
LFF La Frestale 92.21 322 *e*P **P 17 12 23.2 +0.1**
comp=Z,55nm,1.4s,mb5.6
MOD Modoc 92.22 41 *e*P **P 17 12 24.0 +0.7**
comp=Z,70nm,1.2s,mb5.8
KEST Kesra 92.25 311 P **P 17 12 23.3 -0.2**
comp=Z,6.0nm,1.1s,mb4.7,baz=94,slow=1.9,SNR=5.1
FFC Flin Flon 92.27 24 P **P 17 12 22.7 -0.5**
comp=Z,102nm,1.3s,mb5.9,SNR=5.5
FFC Flin Flon 92.27 24 *ce*P **P 17 12 23.6 +0.4**
FFC Flin Flon 92.27 24 *e*P **P 17 12 21.3 -1.9**
comp=Z,44nm,1.4s,mb5.5
QUIF Quistinic 92.34 327 *e*P **P 17 12 22.7 -0.9**
comp=Z,41nm,1.3s,mb5.2
QUIF Quistinic 92.34 327 *e*P **P 17 12 22.7 -0.9**
QUIF pmax pmax
comp=Z,20nm,1.3s,mb5.2
QUIF Quistinic 92.34 327 *e*P **P 17 12 22.7 -0.9**
comp=Z,20nm,1.3s,mb5.2
MTLF Montolieu 92.37 321 *e*P **P 17 12 23.6 -0.3**
comp=Z,46nm,1.3s,mb5.2
MTLF Montolieu 92.37 321 *e*P **P 17 12 23.6 -0.3**
MTLF pmax pmax
comp=Z,23nm,1.3s,mb5.2
MTLF Montolieu 92.37 321 *e*P **P 17 12 23.6 -0.3**
comp=Z,23nm,1.3s,mb5.2
G11A Walters Elk Ra 92.38 37 ⇓P **P 17 12 23.4 -0.5**
baz=92,SNR=13
B15A Bradely Ranch, 92.39 33 ⇓P **P 17 12 22.9 -0.9**
baz=92,SNR=10
J08A Circle Bar Ran 92.42 39 ⇓P **P 17 12 23.1 -1.0**
baz=92,SNR=28
I09A Lost Marbles R 92.46 39 ⇑P **P 17 12 23.1 -1.2**
baz=92,SNR=11
H10A Noah's Angus R 92.63 38 ⇓P **P 17 12 23.5 -1.5**
baz=92,SNR=21
SLMT Seeley Lake 92.64 34 *e*P **P 17 12 25.6 +0.5**
comp=Z,50nm,1.3s,mb5.7
MSO Missoula 92.69 35 *e*P **P 17 12 25.9 +0.6**
comp=Z,20nm,1.3s,mb5.3
F12A Elk City 92.70 36 ⇑P **P 17 12 24.3 -1.0**
baz=92,SNR=13
C15A Salmond Ranch, 92.73 33 ⇑P **P 17 12 24.4 -1.0**
baz=92,SNR=10.0
D14A Greenough 92.74 34 ⇑P **P 17 12 24.4 -1.1**
baz=92,SNR=9.3
J09A Fry Pan Ranch, 92.84 39 ⇑P **P 17 12 25.5 -0.6**
baz=93,SNR=32
A17A Triple J Farms 92.86 32 ⇑P **P 17 12 25.3 -0.7**
baz=93,SNR=25
WVOR Wild Horse Val 92.89 40 *e*P **P 17 12 26.9 +0.6**
WVOR pmax pmax
comp=Z,50nm,1.5s,mb5.6
WVOR Wild Horse Val 92.89 40 *e*P **P 17 12 26.9 +0.6**
comp=Z,50nm,1.5s,mb5.6
H11A Donnelly 92.96 37 ⇓P **P 17 12 25.5 -1.1**
baz=93,SNR=8.3
CHMT Chamberlain Mo 92.99 34 *e*P **P 17 12 27.0 +0.4**
comp=Z,8.4nm,1.2s,mb5.0
G12A Big Creek, Yel 93.07 37 ⇑P **P 17 12 26.1 -0.9**
baz=93
C16A Fuhringer Ranc 93.14 33 ⇑P **P 17 12 26.0 -1.4**
baz=93,SNR=11
E14A Clinton 93.19 35 ⇑P **P 17 12 26.1 -1.5**
baz=93,SNR=11
B17A L&G Farms, Che 93.27 32 ⇓P **P 17 12 26.8 -1.1**
baz=93,SNR=5.6
A18A Metzger Ranch, 93.29 31 ⇑P **P 17 12 27.4 -0.6**
baz=93,SNR=13
BEKR Beckworth 93.40 43 ⇓P **P 17 12 28.3 -0.4**
baz=93
I11A Placerville 93.50 38 ⇓P **P 17 12 28.6 -0.5**
baz=93,SNR=5.8
E15A Deer Lodge 93.63 34 ⇓P **P 17 12 29.4 -0.2**
baz=93,SNR=8.7
EPF Esparros 93.64 321 *e*P **P 17 12 29.1 -0.6**
F14A Wisdom 93.66 35 ⇓P **P 17 12 28.8 -0.9**
baz=93,SNR=8.7
G13A Cobalt 93.68 36 ⇓P **P 17 12 28.7 -1.1**
baz=94
B18A Beardsley Farm 93.69 32 ⇓P **P 17 12 29.3 -0.6**
baz=93,SNR=5.7
H12A Diamond D Ranc 93.70 37 ⇓P **P 17 12 29.8 -0.1**
baz=94,SNR=19
K10A MacKenzie Ranc 93.70 39 ⇑P **P 17 12 30.9 +0.9**
baz=94,SNR=17
MIR Mirnyy 93.71 191 ⇓*i*P **P 17 12 29.0 -0.3**
MIR pmax pmax
comp=Z,53nm,1.0s,mb5.8
D16A Dana Ranch, Ca 93.77 33 ⇓P **P 17 12 29.4 -0.8**
baz=94,SNR=15
MFID Camas Ranch 93.89 38 ⇓P **P 17 12 30.2 -0.7**
baz=94,SNR=13
EGMT Eagleton 93.96 32 *e*P **P 17 12 31.5 +0.4**
comp=Z,23nm,1.1s,mb5.4
H13A Challis 94.01 36 ⇓P **P 17 12 30.9 -0.5**
baz=94,SNR=11
I12A Atlanta 94.03 37 ⇑P **P 17 12 31.0 -0.5**
baz=94,SNR=7.6
E16A East Helena 94.04 34 ⇑P **P 17 12 30.9 -0.6**
baz=94,SNR=9.3
F15A Butte 94.09 35 ⇑P **P 17 12 30.9 -0.9**
baz=94,SNR=11
WCN Washoe City 94.11 43 ⇓P **P 17 12 30.5 -1.5**
baz=94
D17A Six Diamond Ra 94.11 33 ⇓P **P 17 12 30.6 -1.2**
baz=94
LRM Limekiln Ridge 94.13 35 *e*P **P 17 12 33.1 +1.2**
comp=Z,86nm,1.2s,mb6.0
K11A Parker Ranch, 94.18 39 ⇑P **P 17 12 31.5 -0.8**
baz=94,SNR=9.9
ETSF Etsaut 94.23 322 *e*P **P 17 12 32.5 +0.1**
comp=Z,18nm,1.0s,mb5.1
ETSF Etsaut 94.23 322 *e*P **P 17 12 32.5 +0.1**
ETSF pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
ETSF Etsaut 94.23 322 *e*P **P 17 12 32.5 +0.1**
comp=Z,9.3nm,1.0s,mb5.1
DLMT Dillon 94.36 35 *e*P **P 17 12 33.1 +0.2**
comp=Z,28nm,1.2s,mb5.5
L10A Juniper Basin 94.37 39 ⇑P **P 17 12 31.7 -1.4**
baz=94,SNR=19
J12A Stokes Ranch, 94.40 38 ⇓P **P 17 12 32.3 -0.9**
baz=94,SNR=8.0
CMB Columbia Colle 94.47 44 *e*P **P 17 12 33.9 +0.3**
CMB pmax pmax
comp=Z,34nm,1.1s,mb5.6
CMB Columbia Colle 94.47 44 *e*P **P 17 12 33.9 +0.2**
comp=Z,34nm,1.1s,mb5.6
I13A Wildhorse Cree 94.51 37 ⇓P **P 17 12 32.7 -1.0**
baz=94,SNR=26
G15A Dillon 94.55 35 ⇓P **P 17 12 32.5 -1.4**
baz=94,SNR=15
F16A Kennard Place, 94.58 34 ⇓P **P 17 12 33.1 -0.9**
baz=94
HLID Hailey 94.58 37 ⇓P **P 17 12 33.3 -0.8**
baz=94,SNR=20
HLID Hailey 94.58 37 *e*P **P 17 12 34.9 +0.9**
comp=Z,12nm,1.1s,mb5.2
BOZ Bozeman (W) 94.67 34 ⇓P **P 17 12 33.5 -0.9**
baz=94,SNR=5.5
BOZ Bozeman (W) 94.67 34 *e*P **P 17 12 35.1 +0.7**
BOZ pmax pmax
comp=Z,2.0nm,0.6s,mb4.7
BOZ Bozeman (W) 94.67 34 *e*P **P 17 12 35.1 +0.7**
comp=Z,2.1nm,0.6s,mb4.7
M10A I.L. Ranch, Tu 94.68 40 ⇓P **P 17 12 34.3 -0.2**

baz=94,SNR=6.6
L11A Cat Creek Ranc 94.73 39 ⇓P **P 17 12 33.7 -1.1**
baz=94,SNR=17
J13A Cove Ranch, Pi 94.82 37 ⇓P **P 17 12 34.2 -0.9**
baz=95,SNR=11
I14A Mackay 94.86 37 ⇑P **P 17 12 35.0 -0.3**
baz=95,SNR=17
G16A Moss Hill, Enn 94.86 35 ⇑P **P 17 12 34.5 -0.8**
baz=95,SNR=5.4
E18A Harlowton 94.90 33 ⇓P **P 17 12 34.9 -0.6**
baz=95,SNR=6.2
BMN Battle Mountai 94.97 41 *e*P **P 17 12 36.4 +0.5**
BMN pmax pmax
comp=Z,26nm,1.3s,mb5.5
BMN Battle Mountai 94.97 41 *e*P **P 17 12 36.4 +0.5**
comp=Z,26nm,1.3s,mb5.5
L12A House Creek Ra 95.16 39 ⇑P **P 17 12 36.0 -0.7**
baz=95,SNR=5.6
M11A Holland Ranch, 95.18 40 ⇑P **P 17 12 36.1 -0.7**
baz=95,SNR=12
J14A Carey 95.23 37 ⇓P **P 17 12 36.8 -0.2**
baz=95,SNR=7.6
H16A Russell Place, 95.51 35 ⇓P **P 17 12 38.1 -0.2**
baz=95,SNR=5.8
NVAR Mina Array Bea 95.54 43 P **P 17 12 39.5 +1.0**
comp=Z,7.0nm,0.8s,mb5.2,baz=280,slow=4.7,SNR=44
N12A Clover Valley, 95.98 40 ⇓P **P 17 12 39.3 -1.2**
baz=96
N12A Clover Valley, 95.98 40 *e*P **P 17 12 41.7 +1.2**
comp=Z,14nm,1.3s,mb5.2
H17A Grant Village 96.07 35 ⇑P **P 17 12 39.9 -0.9**
baz=96,SNR=6.0
O11A Cowboy Ranch, 96.08 41 ⇓P **P 17 12 40.1 -0.9**
baz=96,SNR=7.3
IMW Indian Meadow 96.23 35 *e*P **P 17 12 43.2 +1.7**
comp=Z,9.6nm,1.3s,mb5.1
RCTC Rector, Farmer 96.23 45 ⇓P **P 17 12 40.0 -1.7**
baz=96
RLMT Red Lodge 96.24 34 ⇑P **P 17 12 40.7 -0.8**
baz=96
RLMT Red Lodge 96.24 34 P **P 17 12 42.2 +0.6**
Q11A Duckwater 96.90 42 ⇑P **P 17 12 43.5 -1.2**
baz=97
S10A Tonopah Range, 96.91 43 ⇓P **P 17 12 43.2 -1.6**
baz=97
N14A Grayback Hills 97.05 39 ⇑P **P 17 12 43.9 -1.4**
baz=97
P13A Bates Ranch, G 97.48 40 ⇓P **P 17 12 46.4 -0.9**
baz=97
PDAR Pinedale Array 97.74 35 P **P 17 12 47.7 -0.7**
comp=Z,0.6nm,0.4s,mb4.4,baz=93,slow=0.2,SNR=8.0
T11A Corn Creek, Al 98.19 43 ⇓P **P 17 12 49.3 -1.3**
baz=98
Q14A Sevier Lake (B 98.22 40 ⇑P **P 17 12 50.1 -0.6**
baz=98
ESDC Sonseca Array 98.28 321 PP PP 17 16 53.1 +2.2
comp=Z,0.2nm,0.4s,baz=40,slow=7.7,SNR=4.2
T13A Saint George 99.13 42 ⇑P **P 17 12 55.0 +0.3**
baz=99
MSU Marysvale 99.18 40 *e*P **P 17 12 56.0 +1.1**
MSU pmax pmax
comp=Z,13nm,1.7s,mb5.2
MSU Marysvale 99.18 40 *e*P **P 17 12 56.0 +1.1**
comp=Z,13nm,1.7s,mb5.2
R17A Hanksville Air 100.10 39 ⇑P Pdif 17 12 57.9 -0.9
baz=100
IRM Iron Mountain 100.19 45 ⇓P Pdif 17 12 58.9 -0.3
baz=100
EVO Evora 101.35 322 ⇑*i*P Pdif 17 13 06.0 +1.7
comp=Z,16nm,1.1s
Z13A Yuma Proving G 101.76 45 ⇓P Pdif 17 13 05.1 -1.0
baz=102
V17A Tonalea, Kykot 101.94 41 ⇑P Pdif 17 13 05.6 -1.3
baz=102
426A McDonald Obser 109.45 41 ⇓PKiKP PKiKP 17 17 42.7 -1.0
baz=109
527A Woodward Ranch 110.07 41 ⇓PKiKP PKiKP 17 17 44.6 -0.3
baz=110
428A Kincaid Ranch, 110.20 40 ⇓PKiKP PKiKP 17 17 44.3 -0.8
baz=110
TORD Torodi Ar. Bea 110.46 296 PKiKP PKiKP 17 17 44.7 -1.2
comp=Z,0.4nm,0.4s,baz=17,slow=2.2,SNR=6.6
TXAR Lajitas Array 110.62 42 Pdif Pdif 17 13 47.0 +1.4
comp=Z,0.2nm,0.5s,baz=282,slow=2.3,SNR=5.1
TXAR PKiKP PKiKP 17 17 45.7 -0.2
comp=Z,0.6nm,0.4s,baz=192,slow=0.9,SNR=13
TXAR Lajitas Array 110.62 42 Pdif Pdif 17 13 47.0 +1.4
TXAR PKPdf PKiKP 17 17 45.7 -0.2
627A Terlingua Ranc 110.71 41 ⇓PKiKP PKiKP 17 17 45.1 -1.0
baz=110
PLAL Pickwick Lake 114.08 27 *e*PKiKP PKiKP 17 17 49.8 -2.6
TZTN Tazewell 114.40 22 *e*PKiKP PKiKP 17 17 51.4 -1.5
QSPA South Pole Qui 114.66 180 PKP PKiKP 17 17 51.3 -0.8
comp=Z,3.5nm,1.0s,baz=225,slow=0.5,SNR=9.5
DBIC Dimbokro 119.38 294 PKP PKPdf 17 18 02.7 -0.4
comp=Z,1.4nm,0.4s,baz=300,slow=3.9,SNR=5.0
SDV Santo Domingo 144.32 21 PKP PKPdf 17 18 48.0 -1.8
comp=Z,45nm,0.9s,baz=15,slow=1.8,SNR=52
SDV Santo Domingo 144.32 21 *e*PKP PKPdf 17 18 47.8 -2.0
PCRV Puerto La Cruz 144.60 11 PKP PKPdf 17 18 47.4 -2.9
comp=Z,47nm,1.0s,baz=358,slow=6.5,SNR=14
ROSC El Rosal 146.54 30 PKPbc PKPbc 17 18 54.7 -0.5
comp=Z,11nm,0.4s,baz=269,slow=23,SNR=20
ROSC El Rosal 146.54 30 *e*PKPdf PKPdf 17 18 54.0 +0.4
OTAV Otavalo 148.25 41 *e*PKPdf PKPdf 17 18 56.5 0.0
ATAH Atahualpa 153.83 51 PKPbc PKPbc 17 19 14.2 +1.3
comp=Z,27nm,0.9s,baz=311,slow=3.1,SNR=8.9
ATAH PKPab PKPab 17 19 27.6 +1.4
comp=Z,11nm,0.9s,baz=254,slow=5.6,SNR=4.2
PLCA Paso Flores 161.10 150 PKPab PKPab 17 19 57.3 +0.5
comp=Z,9.1nm,0.8s,baz=203,slow=5.3,SNR=12
PLCA Paso Flores 161.10 150 *e*PKIKP PKPdf 17 19 13.4 +0.2
PLCA *e* 17 19 56.9
LPAZ La Paz 167.37 49 PKP PKPdf 17 19 21.2 +1.7
comp=Z,17nm,1.2s,baz=21,slow=2.8,SNR=30
LPAZ PKPab PKPab 17 20 24.2 -0.8
comp=Z,7.5nm,1.0s,baz=7.4,slow=6.4,SNR=6.7
LPAZ La Paz 167.37 49 *e*PKPdf PKPdf 17 19 20.3 +0.8
LPAZ *e*PKPab PKPab 17 20 23.9 -1.0
CFAA Coronel Fontan 168.89 129 PKPab PKPab 17 20 32.5 +1.0
baz=256,slow=4.1
CPUP Villa Florida 178.35 208 PKP PKPdf 17 19 23.6 -0.2
comp=Z,0.2nm,0.3s,baz=345,slow=12,SNR=3.9
CPUP PKPab 17 21 12.1
comp=Z,8.9nm,0.8s,baz=129,slow=4.9,SNR=20

*NEIC **01** 17:04:03.5, 15°.45N×60°.31W, h35km, MD3.5(TRN), After TRN.*
TRN 01 17:04:02.4, 15°.51N×60°.31W, h34km, MD3.5, M3.6(FDF), Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DLPL	**La Plaine**	**0.92**	**259**	*e*P	Pn	17 04 20.5	+1.7
DLPL				*e*S	Sn	17 04 32.6	+1.7
DWS	**Wesley**	**0.97**	**274**	*e*P	Pn	17 04 21.1	+1.6
DWS				*e*S	Sn	17 04 36.2	+4.2
DWS	**Wesley**	**0.97**	**274**	*e*P	Pn	17 04 21.1	+1.6
DWS				*e*S	Sn	17 04 34.1	+2.1
DSTT	**Stowe**	**0.99**	**255**	*e*P	Pn	17 04 23.0	+3.2
DSTT				*e*S	Sn	17 04 36.0	+3.4
DSTT	**Stowe**	**0.99**	**255**	*e*P	Pn	17 04 23.0	+3.2
DSTT				*e*S	Sn	17 04 36.0	+3.4
DFBT	**Forest Bistro**	**1.04**	**255**	*e*P	Pn	17 04 23.4	+2.9
DFBT				*e*S	Sn	17 04 37.6	+3.7
DFBT	**Forest Bistro**	**1.04**	**255**	*e*P	Pn	17 04 22.4	+1.8
DFBT				*e*S	Sn	17 04 37.6	+3.7
MGG	**Marie-Galante**	**1.05**	**293**	*e*P	Pn	17 04 21.0	+0.4
DPMT	**Pointe Michel**	**1.06**	**257**	*e*P	Pn	17 04 24.5	+3.7
DPMT	**Pointe Michel**	**1.06**	**257**	*e*P	Pn	17 04 23.2	+2.5
MDN	**Morne-Daniel**	**1.06**	**260**	*e*P	Pn	17 04 24.4	+3.6
MDN				*e*S	Sn	17 04 38.2	+3.9
MDN	**Morne-Daniel**	**1.06**	**260**	*e*P	Pn	17 04 22.6	+1.8
MDN				*e*S	Sn	17 04 36.8	+2.4
DSHT	**Scott's Head**	**1.07**	**254**	*e*P	Pn	17 04 23.7	+2.8
DSHT				*e*S	Sn	17 04 37.1	+2.6
DSHT	**Scott's Head**	**1.07**	**254**	*e*P	Pn	17 04 23.5	+2.6
DSHT				*e*S	Sn	17 04 37.1	+2.6
DEG	**La Desirade**	**1.08**	**318**	*e*P	Pn	17 04 20.2	-0.8
DEG				*e*S	Sn	17 04 34.2	-0.5
MVM	**Montagne Vaucl**	**1.10**	**211**	*e*P	Pn	17 04 21.4	0.0
FDF	**Fort de France**	**1.12**	**227**	*e*Pn	Pn	17 04 21.6	+0.1
FDF				*e*Sn	Sn	17 04 36.6	+0.9
FDF	**Fort de France**	**1.12**	**227**	*e*P	Pn	17 04 21.8	+0.2
FDF				*e*S	Sn	17 04 37.4	+1.6
SFG	**Saint Francois**	**1.13**	**311**	*e*P	Pn	17 04 21.2	-0.6
BIM	**Bigot**	**1.23**	**217**	*e*P	Pn	17 04 23.3	+0.2
BIM				*e*S	Sn	17 04 39.9	+1.4
TBG	**Guadaloupe-3**	**1.33**	**285**	*e*P	Pn	17 04 24.8	+0.3
PHG	**Guadaloupe-2**	**1.38**	**292**	*e*P	Pn	17 04 26.1	+1.0
BCG	**Bois Riant Cap**	**1.38**	**295**	*e*P	Pn	17 04 25.7	+0.5
SCG	**Saint Claude**	**1.42**	**292**	*e*P	Pn	17 04 26.6	+0.9
SCG				*e*S	Sn	17 04 46.0	+2.8
HMG	**Houelmont**	**1.42**	**290**	*e*P	Pn	17 04 26.6	+0.8
LZG	**Guadaloupe-1**	**1.54**	**294**	*e*P	Pn	17 04 28.1	+0.7
SLW	**Petit Monier**	**1.60**	**202**	*e*P	Pn	17 04 29.6	+1.4
SLW				*e*S	Sn	17 04 49.1	+1.4
SLW	**Petit Monier**	**1.60**	**202**	*e*P	Pn	17 04 29.6	+1.4
SLW				*e*S	Sn	17 04 49.1	+1.4
SLPE	**Piton Saint Es**	**1.78**	**202**	*e*P	Pn	17 04 32.4	+1.6
SLPE				*e*S	Sn	17 04 53.8	+1.6
SLPE	**Piton Saint Es**	**1.78**	**202**	*e*P	Pn	17 04 32.4	+1.6
SLPE				*e*S	Sn	17 04 53.8	+1.6
SLB	**Belfond**	**1.81**	**203**	*e*P	Pn	17 04 33.0	+1.8
SLB				*e*S	Sn	17 04 55.4	+2.4
SLB	**Belfond**	**1.81**	**203**	*e*P	Pn	17 04 33.0	+1.8
SLB				*e*S	Sn	17 04 55.4	+2.4
SLDE	**Delcer**	**1.84**	**203**	*e*P	Pn	17 04 33.7	+2.1
SLDE				*e*S	Sn	17 04 55.8	+2.1
SLDE	**Delcer**	**1.84**	**203**	*e*P	Pn	17 04 33.7	+2.1
SLDE				*e*S	Sn	17 04 55.8	+2.1
MCLT	**Moule a Chique**	**1.89**	**199**	*e*P	Pn	17 04 34.4	+2.2
MCLT				*e*S	Sn	17 04 56.6	+1.8
MCLT	**Moule a Chique**	**1.89**	**199**	*e*P	Pn	17 04 34.4	+2.2
MCLT				*e*S	Sn	17 04 56.6	+1.8
BPA	**Boggy Peak**	**2.13**	**316**	*e*S	Sn	17 05 03.4	+2.6
SSV	**Crater Summit**	**2.33**	**202**	*e*P	Pn	17 04 40.6	+2.3
SSV				*e*S	Sn	17 05 07.7	+1.9
SSV	**Crater Summit**	**2.33**	**202**	*e*P	Pn	17 04 40.6	+2.3
SSV				*e*S	Sn	17 05 07.7	+1.9
BHS	**Barnard House**	**2.34**	**200**	*e*P	Pn	17 04 40.9	+2.5
BHS				*e*S	Sn	17 05 09.7	+3.8
BHS	**Barnard House**	**2.34**	**200**	*e*P	Pn	17 04 40.9	+2.5
BHS				*e*S	Sn	17 05 09.7	+3.8
SVV	**Soufriere Volc**	**2.35**	**202**	*e*P	Pn	17 04 41.3	+2.8
SVV				*e*S	Sn	17 05 08.4	+2.3
SVV	**Soufriere Volc**	**2.35**	**202**	*e*P	Pn	17 04 40.4	+1.9
SVV				*e*S	Sn	17 05 08.4	+2.3
SVB	**Belmont**	**2.40**	**202**	*e*P	Pn	17 04 41.3	+2.0
SVB				*e*S	Sn	17 05 09.1	+1.6
SVB	**Belmont**	**2.40**	**202**	*e*P	Pn	17 04 41.3	+2.0
SVB				*e*S	Sn	17 05 09.1	+1.6
FCV	**Fort Charlotte**	**2.51**	**201**	*e*P	Pn	17 04 43.1	+2.4
FCV				*e*S	Sn	17 05 11.0	+0.9
FCV	**Fort Charlotte**	**2.51**	**201**	*e*P	Pn	17 04 43.1	+2.4
FCV				*e*S	Sn	17 05 11.0	+0.9
TOSP	**Speyside**	**4.19**	**183**	*e*P	Pn	17 05 09.8	+5.9

*THE **01** 17:04:40.8, 38°.40N×21°.74E, h15km, ML2.3/4, Error ellipse: s-maj=1.1km s-min=0.6km az=302.0*
*ATH **01** 17:04:41.5, 38°.36N×21°.73E, h5km±3km, MD3.0/6*
*CSEM **01** 17:04:41.0±0.2, 38°.38N×21°.78E, h15km, ML2.3/4, Error ellipse: s-maj=4.8km s-min=4.4km az=153.0*
*ISCJB **01** 17:04:41.6±0.6, 38°.37N±0°.04×21°.77E±0°.05, h12km±4km, Error ellipse: s-maj=6.6km s-min=5.8km az=27.2*
ISC 01 17:04:41.7±0.7, 38°.36N±0°.04×21°.77E±0°.05, h13km±5km, n20, σ0=51/34, 1C, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.08**	**168**	P	**Pg**	**17 04 44.3**	**-0.1**
UPR				S	**Sg**	**17 04 46.9**	**+0.6**
UPR	**University Cam**	**0.08**	**168**	P	**Pg**	**17 04 44.3**	**-0.1**
UPR				S	**Sg**	**17 04 46.9**	**+0.6**
EFP	**Efpalio**	**0.13**	**58**	P	**Pg**	**17 04 44.4**	**-0.6**
EFP				S	**Sg**	**17 04 47.0**	**-0.4**
EFP	**Efpalio**	**0.13**	**58**	⇑*i*PG	**Pg**	**17 04 44.4**	**-0.6**
EFP				*e*SG	**Sg**	**17 04 47.0**	**-0.4**
EFP	**Efpalio**	**0.13**	**58**	P	**Pg**	**17 04 44.4**	**-0.6**
EFP				S	**Sg**	**17 04 47.0**	**-0.4**
KALE	**Kalithea**	**0.29**	**84**	P	**Pg**	**17 04 47.4**	**-0.4**
KALE				S	**Sg**	**17 04 52.1**	**+0.2**
KALE	**Kalithea**	**0.29**	**84**	P	**Pg**	**17 04 47.4**	**-0.4**
KALE				S	**Sg**	**17 04 52.1**	**+0.2**
RLS	**Riolos of Patr**	**0.38**	**218**	*e*PB	**Pg**	**17 04 49.6**	**+0.3**
RLS	**Riolos of Patr**	**0.38**	**218**	*e*Pb	**Pg**	**17 04 49.6**	**+0.3**
EVR	**Evrytania**	**0.56**	**3**	*e*PB	**Pg**	**17 04 53.0**	**+0.4**
EVR				*e*SB	**Sg**	**17 05 00.8**	**+0.8**
EVR	**Evrytania**	**0.56**	**3**	*e*Pb	**Pg**	**17 04 53.0**	**+0.4**
EVR				*e*Sb	**Sg**	**17 05 00.8**	**+0.8**
DSF	**Desfina**	**0.60**	**85**	P	**Pg**	**17 04 52.4**	**-1.0**
DSF				S	**Sg**	**17 05 01.8**	**+0.5**
DSF	**Desfina**	**0.60**	**85**	P	**Pg**	**17 04 52.4**	**-1.0**
DSF				S	**Sg**	**17 05 01.8**	**+0.5**
GUR	**Goura**	**0.62**	**133**	P	**Pg**	**17 04 53.4**	**-0.3**
GUR				S	**Sb**	**17 05 03.4**	**+0.5**
GUR	**Goura**	**0.62**	**133**	*e*PG	**Pg**	**17 04 53.5**	**-0.2**
GUR				*e*SB	**Sb**	**17 05 03.4**	**+0.5**
GUR	**Goura**	**0.62**	**133**	*e*Pg	**Pg**	**17 04 53.5**	**-0.2**
GUR				S	**Sb**	**17 05 03.4**	**+0.5**
VLS	**Valsamata**	**0.94**	**259**	*e*PB	**Pb**	**17 04 59.2**	**-0.7**
VLS	**Valsamata**	**0.94**	**259**	*e*Pb	**Pb**	**17 04 59.2**	**-0.7**
ITM	**Ithomi**	**1.18**	**174**	*e*PB	**Pb**	**17 05 04.1**	**+0.2**
ITM	**Ithomi**	**1.18**	**174**	*e*Pb	**Pb**	**17 05 04.1**	**+0.2**

*IDC **01** 17:14:16.9±1.3, 52°.15N×170°.18W, h0km, mb3.5/6, mb1 3.7/7, mb1mx3.5/28, mbtmp3.5/7, ML3.6/1, Error ellipse: s-maj=47.9km s-min=20.9km az=167.0*
*NEIC **01** 17:14:18.4±0.8, 52°.33N×170°.40W, h10km, mb4.5/5, Error ellipse: s-maj=30.6km s-min=8.9km az=164.0*
*ISCJB **01** 17:14:20.1±0.8, 52°.3N±0°.2×170°.3W±0°.1, h33km, mb3.7/6, Error ellipse: s-maj=26.9km s-min=6.6km az=155.5*
ISC 01 17:14:22.2±0.8, 52°.4N±0°.2×170°.3W±0°.1, h35km, n16, σ0=89/18, mb3.7/6, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**1.06**	**55**	*e*Pn	**Pn**	**17 14 39.2**	**-1.3**
NIKO				*e*Sn	**Sn**	**17 14 53.3**	**-0.7**
UNV	**Unalaska Valle**	**2.72**	**55**	*e*Pn	**Pn**	**17 15 03.6**	**+0.4**
UNV				*e*Sn	**Sn**	**17 15 38.8**	**+3.9**
SMY	**Shemya**	**9.53**	**278**	*e*Pn	**Pn**	**17 16 31.7**	**-5.0**
238nm,1.3s							
PNL	**Peninsula**	**18.61**	**55**	*e*P	**Pn**	**17 18 35.8**	**-0.8**
28nm,1.2s							
PET	**Petropavlovsk**	**18.77**	**284**	*e*P	**Pn**	**17 18 35.4**	**-3.3**
49nm,1.6s							
PETK	**Petropavlovsk-**	**19.32**	**285**	P	**Pn**	**17 18 45.5**	**+0.3**
0.2nm,0.3s,baz=82,slow=13,SNR=7.3							
SKAG	**Skagway**	**20.64**	**56**	*e*P	**P**	**17 18 59.4**	**+1.1**
5.0nm,0.4s							
INK	**Inuvik**	**23.66**	**34**	P	**P**	**17 19 30.1**	**+0.2**
0.5nm,0.5s,baz=356,slow=1.8,SNR=4.6							
YKA	**Yellowknife Ar**	**30.66**	**49**	P	**P**	**17 20 33.7**	**+0.8**
0.3nm,0.5s,mb3.4,baz=274,slow=7.9,SNR=2.9							
PDAR	**Pinedale Array**	**40.95**	**79**	P	**P**	**17 22 01.6**	**+0.5**
0.7nm,0.6s,mb3.5,baz=315,slow=4.5,SNR=6.5							
SONM	**Songino Array**	**50.82**	**300**	P	**P**	**17 23 20.2**	**+1.5**
0.2nm,0.5s,mb3.3,baz=76,slow=6.1,SNR=2.1							
SSLB	**Suanglung**	**58.65**	**269**	*e*P	**P**	**17 24 15.0**	**-0.8**
24nm,0.3s							
SSLB				*e*	pP	17 24 23.0	-3.4
YULB	**Yu-li**	**58.73**	**268**	*e*P	**P**	**17 24 16.3**	**-0.1**
14nm,0.3s							
CMAR	**Chiang Mai Arr**	**76.07**	**282**	P	**P**	**17 26 06.8**	**+0.6**
0.5nm,0.7s,mb3.6,baz=25,slow=7.0,SNR=4.0							
WRAB	**Tennant Creek**	**86.55**	**231**	*e*P	**P**	**17 27 01.3**	**-0.1**
4.9nm,1.1s,mb4.7							
ASAR	**Alice Springs**	**89.97**	**229**	P	**P**	**17 27 17.0**	**-0.6**
0.3nm,0.9s,mb3.6,baz=21,slow=4.5,SNR=4.7							

*JMA **01** 17:14:56.8±0.3, 24°.90N×121°.83E, h98km, M2.9*
*ISCJB **01** 17:14:57.0±0.5, 24°.89N±0°.03×121°.80E±0°.02, h92km±3km, Error ellipse: s-maj=5.0km s-min=3.0km az=146.7*
*TAP **01** 17:14:57.1, 24°.91N×121°.74E, h92km, ML3.8, B*
ISC 01 17:14:57.5±0.5, 24°.89N±0°.03×121°.80E±0°.03, h90km±3km, n58, σ0=49/114, 3C-3D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILA	**Ilan**	**0.14**	**199**	P	**Pn**	**17 15 10.4**	**+0.1**
baz=174							
ILA				S	**Sn**	**17 15 20.2**	**+0.4**
baz=174							
NWF	**Wu-fen Shan**	**0.18**	**356**	*i* P	**Pn**	**17 15 10.4**	**0.0**
baz=13							
NWF				S	**Sn**	**17 15 20.1**	**+0.1**
baz=13							
TWE	**Neicheng**	**0.21**	**214**	⇓*i*P	**Pn**	**17 15 10.7**	**+0.2**
baz=194							
TWE				S	**Sn**	**17 15 20.5**	**+0.3**
baz=194							
TWB1	**Santiao Chiao**	**0.21**	**57**	*i* P	**Pn**	**17 15 10.5**	**0.0**
baz=68							
TWB1				*e*S	**Sn**	**17 15 20.7**	**+0.4**
baz=68							
TWA	**Mucha**	**0.21**	**294**	⇓*i*P	**Pn**	**17 15 10.6**	**0.0**
baz=295							
TWA				S	**Sn**	**17 15 20.0**	**-0.2**
baz=295							
TAP1	**Taipei**	**0.29**	**300**	P	**Pn**	**17 15 10.6**	**-0.3**
baz=301							
TAP1				S	**Sn**	**17 15 20.6**	**-0.2**
baz=301							
TWC	**Suao**	**0.29**	**170**	*i* P	**Pn**	**17 15 11.2**	**+0.2**
baz=160							
TWC				S	**Sn**	**17 15 21.3**	**+0.5**
baz=160							
ENTT	**Nioudou**	**0.33**	**220**	P	**Pn**	**17 15 11.2**	**0.0**
baz=208							
ENTT				*e*S	**Sn**	**17 15 20.9**	**-0.3**
baz=208							
TWY	**Chenhua**	**0.42**	**335**	*i* P	**Pn**	**17 15 11.4**	**-0.2**
baz=341							
TWY				S	**Sn**	**17 15 21.7**	**-0.5**
baz=341							
NSK	**Sanguang**	**0.45**	**241**	⇑*i*P	**Pn**	**17 15 11.5**	**-0.4**
baz=234							
NSK				S	**Sn**	**17 15 22.4**	**-0.2**
baz=234							
ENA	**Nanau**	**0.47**	**186**	P	**Pn**	**17 15 12.2**	**+0.1**
baz=178							
ENA				*e*S	**Sn**	**17 15 23.3**	**+0.5**
baz=178							
NCU	**National Centr**	**0.56**	**278**	*e*P	**Pn**	**17 15 12.5**	**-0.2**
baz=276							
NCU				*e*S	**Sn**	**17 15 23.9**	**-0.2**
baz=276							
NNS	**Nan Shan**	**0.59**	**220**	P	**Pn**	**17 15 13.1**	**0.0**
baz=214							
NNS				S	**Sn**	**17 15 24.7**	**+0.1**
baz=214							
NSTT	**Nanjuang**	**0.77**	**250**	P	**Pn**	**17 15 14.3**	**-0.4**
baz=247							
NSTT				S	**Sn**	**17 15 26.7**	**-0.9**
baz=247							
PCYT	**Pengchaiyu**	**0.77**	**19**	⇓*i*P	**Pn**	**17 15 14.8**	**0.0**
baz=23							
PCYT				S	**Sn**	**17 15 28.6**	**+0.9**
baz=23							
TWD	**Chiawan**	**0.83**	**193**	P	**Pn**	**17 15 15.0**	**-0.4**
baz=188							
TWD				*e*S	**Sn**	**17 15 28.8**	**+0.1**
baz=188							
TWT	**Tachien**	**0.85**	**222**	P	**Pn**	**17 15 16.2**	**+0.6**
baz=218							
TWT				*e*S	**Sn**	**17 15 29.2**	**+0.2**
baz=218							
WHF	**Hehuan Shan**	**0.89**	**213**	⇑*i*P	**Pn**	**17 15 16.4**	**+0.4**
baz=209							
WHF				S	**Sn**	**17 15 30.1**	**+0.3**
baz=209							
HWA	**Hwalien**	**0.93**	**191**	*e*P	**Pn**	**17 15 16.5**	**0.0**
baz=187							
HWA				*e*S	**Sn**	**17 15 31.2**	**+0.6**
baz=187							
NSY	**Sanyi**	**1.05**	**243**	P	**Pn**	**17 15 17.7**	**-0.1**
baz=240							
NSY				*e*S	**Sn**	**17 15 32.5**	**-0.6**
baz=240							
TWQ1	**Liyutan**	**1.08**	**240**	P	**Pn**	**17 15 17.8**	**-0.3**
baz=237							
TWQ1				S	**Sn**	**17 15 33.3**	**-0.3**
baz=237							
ESL	**Shilin**	**1.12**	**197**	*e*P	**Pn**	**17 15 17.6**	**-1.1**
baz=193							
ESL				*e*S	**Sn**	**17 15 34.5**	**0.0**
baz=193							
YOJ	**Yonaguni jima**	**1.19**	**111**	P	**Pn**	**17 15 19.1**	**-0.3**
YOJ				*e*S	**Sn**	**17 15 35.8**	**-0.1**
TCU	**Taichung**	**1.26**	**234**	*e*P	**Pn**	**17 15 20.3**	**0.0**
baz=231							
TCU				*e*S	**Sn**	**17 15 37.0**	**-0.5**
baz=231							
SMLT	**Sun Moon Lake**	**1.30**	**219**	⇑*i*P	**Pn**	**17 15 21.0**	**+0.3**
baz=216							
SMLT				S	**Sn**	**17 15 38.9**	**+0.6**
baz=216							
TYC	**Yuchr**	**1.30**	**221**	*i* P	**Pn**	**17 15 20.9**	**0.0**
baz=218							
TYC				S	**Sn**	**17 15 38.1**	**-0.3**
baz=218							
WNT	**Mingjian**	**1.43**	**225**	P	**Pn**	**17 15 22.6**	**+0.2**
baz=222							
WNT				*e*S	**Sn**	**17 15 41.0**	**-0.2**
baz=222							
EHY	**Hungye**	**1.45**	**197**	*e*P	**Pn**	**17 15 22.9**	**+0.3**
baz=195							
EHY				*e*S	**Sn**	**17 15 41.7**	**+0.1**
baz=195							
YUS	**Yu-Shan**	**1.60**	**209**	*e*P	**Pn**	**17 15 25.1**	**+0.5**
baz=206							
YUS				*e*S	**Sn**	**17 15 45.6**	**+0.6**
baz=206							
TWF1	**Yuli**	**1.60**	**197**	*e*P	**Pn**	**17 15 25.0**	**+0.5**
baz=194							
TWF1				*e*S	**Sn**	**17 15 45.3**	**+0.3**
baz=194							
CHN5	**Tsauling**	**1.65**	**219**	P	**Pn**	**17 15 25.4**	**+0.2**
baz=216							
CHN5				S	**Sn**	**17 15 46.1**	**0.0**
baz=216							
ALS	**Alishan**	**1.65**	**213**	*i* P	**Pn**	**17 15 25.9**	**+0.7**
baz=211							
ALS				S	**Sn**	**17 15 47.0**	**+0.8**
baz=211							
WGK	**Gukeng**	**1.65**	**223**	P	**Pn**	**17 15 25.4**	**+0.2**
baz=221							
WGK				S	**Sn**	**17 15 45.9**	**-0.2**
baz=221							
WTCT	**Ta-ch'eng**	**1.72**	**234**	*e*P	**Pn**	**17 15 26.1**	**0.0**
baz=231							
WTCT				*e*S	**Sn**	**17 15 47.5**	**-0.3**
baz=231							
CHKT	**Chengkung**	**1.83**	**192**	*e*P	**Pn**	**17 15 27.4**	**-0.1**
baz=190							
CHKT				*e*S	**Sn**	**17 15 50.4**	**+0.1**
baz=190							
ELDTW	**Lidau**	**1.84**	**203**	P	**

TWG	Pinlang	2.17 198	eP	Pn	17 15 32.6	+0.6
	baz=196					
TWG			eS	Sn	17 15 57.2	-1.1
	baz=196					
JIJ	Ishigaki jima	2.20 103	P	Pn	17 15 31.8	-0.6
JIJ			eS	Sn	17 15 58.1	-0.9
TTN	Taitung	2.21 196	eP	Pn	17 15 32.1	-0.4
	baz=193					
TTN			eS	Sn	17 15 59.6	+0.3
	baz=193					
CHN3	Shinhua	2.23 216	eP	Pn	17 15 32.8	0.0
	baz=214					
CHN3			eS	Sn	17 15 59.4	-0.4
	baz=214					
SSD	Sandimen	2.39 207	P	Pn	17 15 35.4	+0.5
	baz=205					
SSD			eS	Sn	17 16 03.5	0.0
	baz=205					
ECL	Taimali	2.41 199	eP	Pn	17 15 35.1	-0.1
	baz=197					
ECL			eS	Sn	17 16 04.2	+0.1
	baz=197					
TWM1	Shoushan	2.41 212	eP	Pn	17 15 34.9	-0.4
	baz=209					
TWM1			eS	Sn	17 16 04.4	+0.3
	baz=209					
PNG	Penghu	2.43 238	eP	Pn	17 15 34.9	-0.6
	baz=235					
PNG			eS	Sn	17 16 02.6	-1.9
	baz=235					
SGLT	Jiouru	2.47 209	eP	Pn	17 15 37.1	+1.2
	baz=207					
SGLT			eS	Sn	17 16 03.7	-1.7
	baz=207					
EAST	Anshuo	2.65 199	eP	Pn	17 15 38.6	+0.3
	baz=197					
EAST			eS	Sn	17 16 09.8	+0.2
	baz=197					
SCZT	Fangliau	2.73 203	eP	Pn	17 15 39.8	+0.3
	baz=201					
SCZT			eS	Sn	17 16 11.1	-0.6
	baz=201					
TWK1	Hengchun	3.07 197	eP	Pn	17 15 44.8	+0.7
	baz=196					
TWK1			eS	Sn	17 16 19.5	-0.4
	baz=196					
KNM	Kinmen	3.10 262	eP	Pn	17 15 45.9	+1.5
	baz=260					
JOGS	Gusukube	3.28 92	eS	Sn	17 16 25.0	0.0

MEX 01 17:53:25.4±0.8, 16°.84N×100°.16W, h7km±4km, MD4.1, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.23	335	i P	Pg	17 53 29.4	-0.7
CAIG				i S	Sg	17 53 33.0	-0.3
ACX	Acapulco	0.29	83	eP	Pg	17 53 29.5	-1.6
ACX				i S	Sg	17 53 33.0	-2.1
ZIIG	Zihuatanejo	1.46	302	i P	Pn	17 53 48.7	-3.5
ZIIG				eP		17 53 48.9	
PLIG	Platanillo	1.67	22	eP	Pn	17 53 52.0	-3.1
PLIG				i S	Sn	17 54 13.0	-3.8
PNIG	Pinotepa	2.00	102	i P	Pn	17 53 57.4	-2.2
PNIG				i S	Sn	17 54 19.7	-5.2
YAIG	Yautepec	2.27	27	i P	Pn	17 54 00.5	-2.9
YAIG				i S	Sn	17 54 26.4	-5.2
MZVM		2.50	21	i P	Pn	17 54 03.7	-2.9
MZVM				i S	Sn	17 54 34.1	-3.3
PBVM	Pinon	2.79	21	i P	Pn	17 54 07.2	-3.2
PBVM				i S	Sn	17 54 39.4	-5.0
PTVM	Pico Tres Padr	2.92	20	i P	Pn	17 54 10.5	-1.8
PTVM				i S	Sn	17 54 44.1	-3.4
IIO	Organos	3.06	26	i P	Pn	17 54 11.6	-2.6
IIO				i S	Sn	17 54 46.3	-4.9
VHO	Vista Hermosa	3.29	85	i P	Pn	17 54 14.1	-3.2
VHO				i S	Sn	17 54 52.4	-4.3
MMIG	Aquila	3.36	296	i P	Pn	17 54 15.7	-2.7
MMIG				i S	Sn	17 54 54.2	-4.4
DEIG	Demacu	3.61	17	eP	Pn	17 54 20.4	-1.4
DEIG				i S	Sn	17 55 00.7	-3.9
HUIG	Huatulco	4.04	105	i P	Pn	17 54 23.9	-3.7
SFJM	Santa Fe	4.54	324	eP	Pn	17 54 35.1	+0.5

*IDC **01** 17:59:47.4±0.7, 7°.02S×129°.89E, h0km, mb4.0/9, mb1 4.1/11, mb1mx4.0/18, mbtmp4.0/11, ML4.4/2, Error ellipse: s-maj=38.4km s-min=15.6km az=67.0*
*NEIC **01** 17:59:52.2±0.6, 7°.15S×129°.76E, h35km, mb4.0/9, Error ellipse: s-maj=18.4km s-min=9.2km az=69.0*
ISC 01 17:59:54.0±1.8, 7°.29S±0°.08×129°.83E±0°.08, h60km±20km, n31, σ1°.26/40, mb4.0/14, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	5.97	155	eP	Pn	18 01 22.9	+3.0
	22nm,0.2s						
KAKA				eS	Sn	18 02 25.8	-1.1
KAKA	Kakadu	5.97	155	ePn	Pn	18 01 22.7	+2.8
	86nm,0.4s						
KAKA				eSn	Sn	18 02 27.2	+0.2
KNA	Kununurra	8.48	187	eP	Pn	18 01 56.9	+2.7
	20nm,0.2s						
KNA				eS	Sn	18 03 26.2	-2.2
FITZ	Fitzroy Crossi	11.50	200	eP	Pn	18 02 35.8	+0.3
	8.2nm,0.3s						
FITZ				eS	Sn	18 04 36.2	-6.3
FITZ	Fitzroy Crossi	11.50	200	Pn	Pn	18 02 37.1	+1.6
	2.1nm,0.3s,baz=33,slow=12,SNR=31						
FITZ				Sn	Sn	18 04 36.7	-5.8
	3.9nm,0.3s,baz=307,slow=23,SNR=7.7						
WRAB	Tennant Creek	13.31	161	ePn	Pn	18 02 58.4	-1.8
	6.3nm,0.6s						
WRAB				eSn	Sn	18 05 18.6	-8.0
COEN	Coen	14.69	118	eP	Pn	18 03 17.5	-1.0
COEN				eS	Sn	18 05 47.7	-12
ASAR	Alice Springs	16.75	167	Pn	Pn	18 03 45.1	+0.4
	0.9nm,0.3s,baz=334,slow=9.1,SNR=63						
ASAR				Sn	Sn	18 06 41.2	-8.9
	0.4nm,0.3s,baz=346,slow=22,SNR=7.9						
MBWA	Marble Bar	16.90	214	ePn	Pn	18 03 46.0	-0.6
	3.9nm,0.3s						
MBWA				eSn	Sn	18 06 38.7	-15
MTSU	Mount Surprise	17.76	129	eP	Pn	18 03 58.6	+1.4
MTSU				eS	S	18 06 59.5	-19
KKM	Kota Kinabalu	18.97	314	eP	Pn	18 04 11.8	-0.1
	3.4nm,0.7s						
CTA	Charters Tower	20.38	130	P	P	18 04 28.7	+2.7
	3.9nm,0.7s,baz=291,slow=12,SNR=7.6						
CTA	Charters Tower	20.38	130	P	P	18 04 28.7	+2.7
KSM	Kuching	21.34	293	eP	P	18 04 32.5	-3.8
	5.8nm,0.9s,mb3.9						
STKA	Stephens Creek	26.81	157	eP	P	18 05 31.0	+2.3
	0.7nm,0.4s,mb3.5						
STKA	Stephens Creek	26.81	157	P	P	18 05 31.0	+2.3
	0.8nm,0.5s,mb3.5,baz=337,slow=10.0,SNR=6.2						
STKA	Stephens Creek	26.81	157	eP	P	18 05 29.1	+0.4
	0.8nm,0.8s,mb3.3						
NWAO	Narrogin (SRO)	28.07	203	eP	P	18 05 41.9	+1.9
	24nm,1.5s,mb4.6						
COCO	West Island	32.87	259	eP	P	18 06 22.3	-0.2
	119nm,0.7s						
CM31	Chiang Mai Arr	39.79	310	eP	P	18 07 22.1	+0.6
	0.8nm,0.5s,mb3.7						
CMAR	Chiang Mai Arr	39.79	310	P	P	18 07 22.4	+0.9
	0.7nm,0.6s,mb3.6,baz=136,slow=6.9,SNR=9.5						
MJAR	Matsushiro Arr	44.30	10	P	P	18 07 56.1	-1.8
	1.6nm,0.8s,mb3.8,baz=181,slow=9.3,SNR=5.7						
KSRS	Korea Array	44.54	358	P	P	18 07 59.3	-0.6
	0.8nm,0.6s,mb3.8,baz=176,slow=8.6,SNR=5.9						
ULN	Ulaanbaatar	58.48	342	eP	P	18 09 43.9	+0.1
	3.1nm,0.5s,mb4.6						
SONM	Songino Array	58.66	342	P	P	18 09 45.5	+0.5
	1.2nm,0.5s,mb4.2,baz=156,slow=8.2,SNR=13						
MKAR	Makanchi Array	68.37	327	P	P	18 10 49.6	+0.4
	1.6nm,0.3s,mb4.5,baz=115,slow=7.8,SNR=11						
ZALV	Zalesovo Beam	71.76	334	P	P	18 11 09.4	-0.4
	1.0nm,0.4s,mb4.1,baz=141,slow=4.8,SNR=7.3						
BVAR	Borovoye Array	78.21	328	P	P	18 11 46.9	-0.1
	0.5nm,0.4s,mb3.6,baz=120,slow=5.8,SNR=6.3						
TIXI	Tiksi	78.77	360	eP	P	18 11 49.5	-0.3
	1.9nm,0.6s,mb4.2						
ABKAR	Akbulak array	82.63	322	eP	P	18 12 09.7	-1.1
	0.9nm,0.5s,mb4.1						
LPAZ	La Paz	150.59	143	PKPbc	PKPbc	18 19 43.6	+3.4
	1.0nm,0.3s,baz=50,slow=1.1,SNR=10						
LPAZ				PKPab	PKPab	18 19 49.9	+2.9
	0.8nm,0.4s,baz=68,slow=5.0,SNR=4.3						

IDC 01 18:01:54.6±3.4, 16°.54S×176°.82W, h355km±26km, mb3.4/2, mb1 3.7/3, mb1mx3.1/16, mbtmp3.5/3, Error ellipse: s-maj=399.3km s-min=24.0km az=156.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	5.53	62	P	Pn	18 03 21.3	+1.0
	5.3nm,0.3s,baz=95,slow=17,SNR=8.6						
AFI				S	S	18 04 29.6	-0.1
	2.5nm,0.3s,baz=162,slow=23,SNR=2.6						
ASAR	Alice Springs	46.63	253	P	P	18 09 48.8	-0.1
	5.5nm,0.5s,baz=89,slow=7.8,SNR=21						
TXAR	Lajitas Array	83.99	57	P	P	18 13 46.5	+0.4
	0.7nm,1.1s,baz=214,slow=6.0,SNR=4.5						
BRTR	Keskin Array B	144.86	317	PKP	PKPdf	18 20 49.1	-0.8
	0.4nm,0.6s,baz=141,slow=6.3,SNR=4.3						
BRTR	Keskin Array B	144.86	317	PKP	PKPdf	18 20 49.1	-0.8

*IDC **01** 18:15:14.3±6.0, 36°.07N×70°.88E, h119km±55km, mb3.2/4, mb1 3.2/8, mb1mx3.0/28, mbtmp3.2/8, Error ellipse: s-maj=42.6km s-min=29.2km az=26.0*
*ISCJB **01** 18:15:15.9±0.7, 36°.37N±0°.03×71°.14E±0°.07, h135km±11km, mb3.3/3, Error ellipse: s-maj=9.6km s-min=5.3km az=171.3*
*NEIC **01** 18:15:16.8±1.1, 36°.33N×71°.02E, h137km±12km, mb4.1/5, Error ellipse: s-maj=21.9km s-min=11.4km az=124.0*
*NNC **01** 18:15:21.9±5.0, 37°.23N×70°.34E, h0km, mb3.7, mpv3.9, Error ellipse: s-maj=40.1km s-min=37.4km az=158.0*
ISC 01 18:15:15.9±0.5, 36°.33N±0°.03×70°.99E±0°.06, h121km±8km, n29, σ1°.34/43, mb3.4/3, 3C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.39	222	ePn	Pn	18 15 57.0	+2.7
KBL				eSn	Sn	18 16 21.5	-2.2
KSH	Kashi	5.07	50	Pn	Pn	18 16 27.7	-2.0
KSH				Sn	Sn	18 17 18.8	-8.3
KSH				smax			
	comp=N,97nm,0.7s						
KSH				smax			
	comp=E,79nm,0.7s						
THN	Thein Dam	5.51	133	ePKP	Pn	18 16 37.0	+1.3
THN				eS	Sn	18 17 36.7	-1.1
AML	Almayashu	6.17	19	ePn	Pn	18 16 45.6	+1.1
	comp=E,26nm,0.4s						
AML				eSn	Sn	18 17 52.3	-1.3
UCH	Uchtor	6.50	24	ePn	Pn	18 16 49.1	+0.2
	comp=E,3.7nm,0.4s						
UCH				eSn	Sn	18 17 59.9	-1.7
EKS2	Erkin-Say	6.69	18	ePn	Pn	18 16 52.5	+1.0
	comp=E,4.6nm,0.6s						
EKS2				eSn	Sn	18 18 05.9	-0.3
KK31	Karatay Array	6.78	357	⇑Pn	Pn	18 16 53.5	+0.8
	comp=E,7.4nm,0.3s,baz=178,slow=13						
KK31				⇓Sn	Sn	18 18 04.8	-3.7
	comp=E,3.5nm,0.3s,baz=186,slow=25						
AAK	Ala-Archa	6.86	22	P	Pn	18 16 56.6	+2.8
	comp=E,0.0nm,0.3s,baz=144,slow=4.7,SNR=9.1						
AAK				S	Sn	18 18 09.2	-1.2
	comp=E,0.0nm,0.3s,baz=354,slow=23,SNR=9.8						
AAK	Ala-Archa	6.86	22	ePn	Pn	18 16 54.9	+1.1
AAK				eSn	Sn	18 18 09.3	-1.0
TKM2	Tokmak 2	7.48	27	⇑Pn	Pn	18 17 03.6	+1.3
	comp=E,3.3nm,0.6s						
TKM2				⇓Sn	Sn	18 18 25.3	-0.2
	comp=E,2.1nm,0.8s						
TKM2	Tokmak 2	7.48	27	ePn	Pn	18 17 03.3	+1.0
	comp=E,4.6nm,0.6s						
KLP	Kalpa	7.70	126	ePKP	Pn	18 17 07.5	+2.2
KLP				eS	Sn	18 18 30.0	-0.8
KLP				AML	AML	18 19 16.4	
	comp=N,38nm,0.8s						
KLP				AML	AML	18 19 18.0	
	comp=E,34nm,1.0s						
KHET	Khetri	9.18	152	ePKP	Pn	18 17 26.2	+0.8
KHET				eS	Sn	18 19 01.7	-5.1
SONA	Sohna	9.56	146	eS	Sn	18 19 10.1	-5.9
AGRA	Agra	10.82	145	eS	Sn	18 19 39.8	-6.8
AGRA				AML	AML	18 21 06.8	
	comp=N,73nm,0.3s						
AGRA				AML	AML	18 21 07.6	
	comp=E,94nm,0.4s						
MKAR	Makanchi Array	13.44	35	P	Pn	18 18 23.4	+1.8
	comp=E,0.4nm,0.3s,baz=224,slow=6.0,SNR=3.3						
MKAR				S	Sn	18 20 50.1	+0.5
	comp=E,0.6nm,0.3s,baz=328,slow=30,SNR=3.6						
AB31	Akbulak array	15.23	331	⇓Pn	Pn	18 18 44.3	-0.1
	comp=E,0.3nm,0.3s						
AB31				⇓Sn	Sn	18 21 21.7	-11
	comp=E,0.5nm,0.4s						
ABKAR	Akbulak array	15.23	331	ePn	Pn	18 18 43.7	-0.7
	comp=E,0.9nm,0.3s						
KURK	Kurchatov	15.40	19	P	Pn	18 18 43.7	-2.7
	comp=E,0.0nm,0.3s,baz=209,slow=12,SNR=2.9						
BVAR	Borovoye Array	16.70	359	P	Pn	18 19 03.7	+1.2
	comp=E,0.3nm,0.3s,baz=163,slow=12,SNR=9.4						
BVAR	Borovoye Array	16.70	359	P	Pn	18 19 03.7	+1.2
AKTK	Aktyubinsk	16.93	330	P	Pn	18 19 06.2	+1.0
AKTO	Aktyubinsk	16.93	330	⇑Pn	Pn	18 19 04.3	-1.0
	comp=E,0.1nm,0.5s						
AKTO	Aktyubinsk	16.93	330	P	Pn	18 19 06.2	+1.0
	comp=E,0.3nm,0.3s,baz=148,slow=15,SNR=4.0						
ZALV	Zalesovo Beam	20.08	24	P	P	18 19 40.1	+0.6
	comp=E,1.1nm,0.3s,baz=222,slow=11,SNR=6.7						
ARCES	ARCESS Array B	41.30	338	P	P	18 22 49.7	+0.7
	comp=E,0.7nm,0.8s,mb3.5,baz=125,slow=15,SNR=3.4						
ARCES	ARCESS Array B	41.30	338	P	P	18 22 49.7	+0.7
TORD	Torodi Ar. Bea	65.71	269	P	P	18 25 45.5	-2.4
	comp=E,0.2nm,0.3s,mb3.4,baz=45,slow=5.3,SNR=5.4						
ASAR	Alice Springs	84.16	125	P	P	18 27 32.3	-1.3
	comp=E,0.3nm,0.8s,mb3.2,baz=317,slow=5.3,SNR=5.8						

*NIED **01** 18:27:00, 25°.20N×124°.50E, h86km, Mw4.2 Best double couple: M0:1.97000×10^15 NP1:φs76.00000°, δ72.00000°, λ-64.00000°. NP2:φs198.00000°, δ31.00000°, λ-144.00000°.*
*ISCJB **01** 18:27:06.8±0.2, 25°.30N±0°.04×124°.50E±0°.03, h113km±3km, mb4.2/33, Error ellipse: s-maj=7.3km s-min=3.3km az=153.9*
*NEIC **01** 18:27:07.9±0.6, 25°.33N×124°.48E, h108km±5km, mb4.3/15, Error ellipse: s-maj=9.4km s-min=6.1km az=148.0*
*IDC **01** 18:27:07.6±2.3, 25°.43N×124°.50E, h104km±21km, mb3.8/17, mb1 3.9/19, mb1mx3.8/27, mbtmp3.8/19, MS3.2/2, Ms1 3.2/2, ms1mx2.4/35, Error ellipse: s-maj=16.6km s-min=14.9km az=52.0*
*BJI **01** 18:27:07.7, 25°.22N×124°.45E, h119km, mB4.5/11, mb4.3/16*
*JMA **01** 18:27:08.5±0.1, 25°.23N×124°.46E, h110km±3km, M4.0*
ISC 01 18:27:07.9±0.2, 25°.29N±0°.04×124°.51E±0°.03, h108km±3km, n92, σ1°.18/113, mb4.2/33, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTJ	Tarama	0.67	165	P	Pn	18 27 26.4	+0.5
JTJ				S	Sn	18 27 39.8	+0.4
JMJ	Miyako jima 2	0.86	124	P	Pn	18 27 28.4	+0.9
JMJ				S	Sn	18 27 43.4	+1.1
JOGS	Gusukube	0.97	123	P	Pn	18 27 29.8	+1.1
JOGS				S	Sn	18 27 45.8	+6.5
JIJ	Ishigaki jima	0.98	200	P	Pn	18 27 28.6	-0.2
JIJ				S	Sn	18 27 43.4	+3.8
JKRS	Kuro-shima	1.15	204	P	Pn	18 27 30.6	0.0
JKRS				S	Sn	18 27 47.0	+3.4
IRIF	Iriomote-Funau	1.19	217	P	Pn	18 27 30.8	-0.2
IRIF				eS	Sn	18 27 48.6	+4.0
HATJ	Hateruma jima	1.39	208	P	Pn	18 27 33.2	-0.1
HATJ				S	Sn	18 27 52.5	+3.0
YOJ	Yonaguni jima	1.59	239	P	Pn	18 27 36.1	+0.3
YOJ				S	Sn	18 27 56.6	+2.2
JKE	Kume jima 2	2.29	63	P	Pn	18 27 45.5	+0.9
TATO	Taipei	2.76	264	ePn	Pn	18 27 52.4	+1.8
JAGN	Aguni-jima	2.78	62	P	Pn	18 27 51.7	+0.8
JAGN				eS	Sn	18 28 23.8	+0.6
NACB	Ninganchiao	2.88	248	ePn	Pn	18 27 51.5	-0.7
NACB				eSn	Sn	18 28 23.8	-1.8
YHNB	Yeheng	2.91	258	ePn	Pn	18 27 54.1	+1.4
YHNB				eSn	Sn	18 28 21.3	-5.2
NAH1	Naha	3.01	72	eS	Sn	18 28 28.6	-0.2
YULB	Yu-li	3.49	238	ePn	Pn	18 27 58.9	-1.4
YULB				eSn	Sn	18 28 33.2	-7.3
JIH	Iheya	3.56	60	P	Pn	18 28 01.8	+0.5
JIH				S	Sn	18 28 41.6	-0.6
SSLB	Suanglung	3.57	246	ePn	Pn	18 28 01.3	-0.2
SSLB				eSn	Sn	18 28 40.6	-1.9
JOW	Kunigami	3.72	65	P	Pn	18 28 03.4	0.0
JOW				eS	Sn	18 28 44.8	-1.3
JOW	Kunigami	3.72	65	P	Pn	18 28 03.5	0.0
	14nm,0.3s,baz=236,slow=9.3,SNR=41						
JOW				S	Sn	18 28 45.0	-1.0
	22nm,0.3s,baz=109,slow=27,SNR=8.5						
TWG	Pinlang	3.99	233	ePn	Pn	18 28 05.0	-2.2
TWG				eSn	Sn	18 28 44.1	-8.6
TPUB	Ta-pu	4.06	242	ePn	Pn	18 28 08.5	+0.5
TPUB				eSn	Sn	18 28 55.1	+0.7
JTK	Tokunoshima	4.69	57	P	Pn	18 28 15.8	-0.7
JTK				S	Sn	18 29 07.2	-2.5
JAM	Amami Oshima	5.51	55	P	Pn	18 28 26.7	-0.9
JAM				S	Sn	18 29 26.2	-3.4
JMZ	Minamidaito 2	6.08	84	P	Pn	18 28 31.8	-3.6
SSE	Sheshan	6.48	334	P	Pn	18 28 42.1	+1.3
SSE				pmax	pmax		
	comp=Z,170nm,6.4s						
WHN	Wuhan	10.39	302	P	Pn	18 29 35.5	+1.6
KS15	Wonju Array Si	12.45	13	ePn	Pn	18 30 01.4	+0.2
KSRS	Korea Array	12.47	13	P	Pn	18 30 04.1	+2.6
	comp=Z,0.3nm,0.3s,baz=188,slow=13,SNR=26						
QIZ	Qiongzhong	14.94	248	eP	Pn	18 30 37.3	+3.6
MAJO	Matsushiro	16.22	43	ePn	Pn	18 30 47.2	-2.3
	comp=Z,4.8nm,0.6s						
MAT	Matsushiro	16.22	43	P	Pn	18 30 50.5	+1.0
MJAR	Matsushiro Arr	16.23	43	P	Pn	18 30 50.4	+0.9
	comp=Z,0.7nm,0.3s,baz=228,slow=9.2,SNR=30						
MJAR				LR	LR	18 37 28.3	
	comp=Z,56nm,18.8s,baz=215,slow=38						
DAV	Davao City (W)	18.15	177	ePn	pP	18 31 27.6	-4.3
CN2	Changchun	18.48	2	eP	P	18 31 16.7	+1.4
CN2				pmax	pmax		
	comp=Z,30nm,1.0s						
HHC	Hu-ho-hao-te	18.90	328	eP	P	18 31 22.2	+2.3
HHC				sP	sP	18 32 00.0	+6.4
HHC				S	S	18 34 44.2	-4.7
HHC				PcP	PcP	18 35 44.3	+2.6
HHC				ScP	ScP	18 39 05.4	-2.1
HHC				PcS	PcS	18 39 18.3	-0.2
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		
	comp=Z,99nm,7.3s						
HHC				LR	LR		
	comp=N,79nm,17.8s						
HHC				LR	LR		
	comp=E,73nm,15.5s						
HHC				LR	LR		
	comp=Z,110nm,15.5s						
CD2	Chengdu	19.13	292	eP	P	18 31 22.3	-0.3
CD2				pP		18 31 42.7	
CD2				sP	sP	18 32 00.3	+4.0
CD2				S	S	18 34 46.1	-7.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CD2				pmax	pmax		
	comp=Z,60nm,4.2s						
LZH	Lanzhou	20.73	306	eP	P	18 31 42.0	+2.2
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
ASAJ	Asahikawa	23.86	34	P	P	18 32 09.7	-1.5
	comp=Z,4.8nm,0.4s,mb4.2,baz=224,slow=19,SNR=14						
CMAR	Chiang Mai Arr	24.66	259	P	P	18 32 19.5	+0.8
	comp=Z,1.4nm,1.0s,mb3.3,baz=55,slow=8.1,SNR=6.6						
GTA	Gaotai	25.07	310	eP	P	18 32 22.4	+0.2
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.8						
ULN	Ulaanbaatar	26.41	333	eP	P	18 32 33.0	-1.2
	comp=Z,2.8nm,0.9s,mb3.7						
SONM	Songino Array	26.66	332	P	P	18 32 35.9	-0.6
	comp=Z,0.4nm,0.5s,mb3.2,baz=147,slow=9.1,SNR=5.8						
SONM				PcP	PcP	18 35 58.2	+0.7
	comp=Z,0.4nm,0.5s,baz=161,slow=4.6,SNR=4.7						
WMQ	Urumqi	35.14	311	eP	P	18 33 50.0	-1.1
PETK	Petropavlovsk-	37.28	33	P	P	18 34 08.2	-0.9
	comp=Z,2.3nm,0.6s,mb4.3,baz=193,slow=3.5,SNR=7.8						
MKAR	Makanchi Array	39.70	314	P	P	18 34 28.8	-0.7
	comp=Z,3.5nm,0.5s,mb4.5,baz=95,slow=12,SNR=30						
MKAR				PcP	PcP	18 36 34.1	+0.1
	comp=Z,0.9nm,0.8s,baz=90,slow=5.3,SNR=5.3						
ZAA0	Zalesovo Array	41.02	325	eP	P	18 34 38.5	-1.8
ZALV	Zalesovo Beam	41.02	325	P	P	18 34 39.2	-1.0
	comp=Z,6.9nm,0.5s,mb4.7,baz=114,slow=8.4,SNR=34						
ZALV				PcP	PcP	18 36 37.6	-0.5
	comp=Z,0.3nm,0.3s,baz=90,slow=2.9,SNR=2.9						
ZALV				LR	LR	18 52 38.9	
	comp=Z,34nm,18.3s,baz=215,slow=37						
ZALV	Zalesovo Beam	41.02	325	P	P	18 34 39.2	-1.0
ZALV				PcP	PcP	18 36 37.6	-0.5
ZALV				LR	LR	18 52 38.9	
KURK	Kurchatov	43.23	318	eP	P	18 34 57.0	-1.2
	comp=Z,6.7nm,0.5s,mb4.6						
TKM2	Tokmak 2	43.50	306	P	P	18 35 01.4	+0.8
	SNR=13						
TKM2	Tokmak 2	43.50	306	eP	P	18 35 01.0	+0.5
	comp=Z,8.2nm,0.7s,mb4.6						
KZA	Kyzart	43.66	305	P	P	18 35 03.6	+1.8
	SNR=5.4						
KBK	Karagaybulak	43.95	306	P	P	18 35 05.2	+1.1
	SNR=5.3						
CHMS	Chumysh	44.13	306	P	P	18 35 06.2	+0.6
	SNR=6.1						
UCH	Uchtor	44.22	305	P	P	18 35 08.1	+1.9
	SNR=13						
AML	Almayashu	44.81	305	P	P	18 35 12.4	+1.4
	SNR=6.4						
WRAB	Tennant Creek	45.96	167	eP	P	18 35 20.3	+0.1
	comp=Z,6.9nm,0.9s,mb4.4						
TIXI	Tiksi	46.45	2	eP	P	18 35 21.6	-1.9
	comp=Z,3.5nm,1.1s,mb4.0						
KBL	Kabul	48.44	295	eP	P	18 35 40.5	+1.0
	comp=Z,6.0nm,0.9s,mb4.4						
BVAR	Borovoye Array	48.77	319	P	P	18 35 41.2	-0.4
	comp=Z,3.0nm,0.6s,mb4.4,baz=98,slow=8.4,SNR=16						
BVAR				PcP	PcP	18 37 04.7	-0.3

comp=Z,1.1nm,0.7s,mb3.8,baz=56,slow=5.8,SNR=4.0
NOA NORSAR Array B 78.64 333 P **P** **18 38 56.9 -0.7**
KOLS Kolonicke sedl 78.88 319 *e*P **P** **18 38 58.7 -0.5**
comp=Z,5.6nm,1.9s,mb4.1
KOLS *e*PcP PcP 18 39 12.1 +4.6
KOLS *e*PP PP 18 41 58.5 -0.2
KOLS Kolonicke sedl 78.88 319 *e*P **P** **18 38 58.7 -0.5**
KOLS *e*PCP PcP 18 39 12.1 +4.6
KOLS *e*PP PP 18 41 58.5 -0.2
YKA Yellowknife Ar 80.76 24 P **P** **18 39 09.2 +0.1**
comp=Z,4.0nm,0.5s,mb4.5,baz=304,slow=5.3,SNR=20
YKA Yellowknife Ar 80.76 24 P **P** **18 39 09.2 +0.1**
VYHS Vyhne 81.11 320 *e*P **P** **18 39 11.4 +0.2**
comp=Z,1.6nm,1.0s,mb3.8
VYHS *e* 18 41 59.4
VYHS Vyhne 81.11 320 *e*P **P** **18 39 11.4 +0.2**
VYHS *e* 18 41 59.4
GERES GERESS Array B 83.88 322 P **P** **18 39 25.0 -0.6**
comp=Z,1.4nm,0.9s,mb3.8,baz=64,slow=6.1,SNR=13
HLID Hailey 92.75 39 *e*P **P** **18 40 09.5 +1.4**
comp=Z,5.5nm,1.7s,mb4.6
NVAR Mina Array Bea 93.55 44 P **P** **18 40 12.7 +0.8**
comp=Z,0.7nm,0.8s,mb4.1,baz=308,slow=5.3,SNR=6.0

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*CSEM **01** 18:32:52.6±0.1,42.°87N×1.°05W,h10km,ML2.0/9,Error ellipse: s-maj=3.2km s-min=2.3km az=8.0*
*STR **01** 18:32:52.6±0.1,42.°83N×1.°10W,h5km,Ml2.3,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*LDG **01** 18:32:53.9±0.1,42.°90N×1.°11W,h2km,Md2.4/3,Ml2.3/3, Error ellipse: s-maj=2.7km s-min=2.1km az=5.0*
MDD 01 18:32:53.2±0.2,42.°85N×1.°10W,h0km,mbLg1.7/22, 4C-2D,Error ellipse: s-maj=2.1km s-min=1.3km az=178.0,PRIMO,Pyrenees

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
EORO	**Oroz-Betelu**	**0.16**	**286**	⇓Pg		Pg	18 32 56.2	-0.2
	12nm,0.2s,SNR=18							
EORO				Lg			18 32 58.4	
	270nm,0.3s,SNR=7.9							
EORO	**Oroz-Betelu**	**0.16**	**286**	⇓Pg		Pg	18 32 56.2	-0.2
	12nm,0.2s,SNR=18							
EORO				Lg			18 32 58.4	
	270nm,0.3s,SNR=7.9							
EORO	**Oroz-Betelu**	**0.16**	**286**	Pg		Pg	18 32 56.2	-0.1
	12nm,0.2s,SNR=18							
IPRE	**Itoiz**	**0.20**	**257**	Pg		Pg	18 32 56.6	-0.3
	1.6nm,0.3s,SNR=41							
IPRE				Lg			18 32 59.9	
	39nm,0.2s,SNR=7.9							
IPRE	**Itoiz**	**0.20**	**257**	Pg		Pg	18 32 56.6	-0.3
	1.6nm,0.3s,SNR=41							
IPRE				Lg			18 32 59.9	
	39nm,0.2s,SNR=7.9							
IPRE	**Itoiz**	**0.20**	**257**	Pg		Pg	18 32 56.6	-0.4
	1.6nm,0.3s,SNR=41							
IZUN	**Zunzarren**	**0.26**	**273**	Lg			18 33 01.4	
	33nm,0.2s,SNR=7.9							
IZUN	**Zunzarren**	**0.26**	**273**	Lg			18 33 01.4	
	33nm,0.2s,SNR=7.9							
SJPF	**Ste Jean**	**0.28**	**340**	*e*Pg		Pg	18 32 58.4	-0.2
SJPF				*e*Sg		Sg	18 33 02.8	+0.6
	52nm,0.2s							
SJPF	**Ste Jean**	**0.28**	**340**	Pg		Pg	18 32 58.4	-0.2
SJPF				Lg			18 33 02.8	
	26nm,0.2s							
SJPF	**Ste Jean**	**0.28**	**340**	Pg		Pg	18 32 58.4	-0.2
SJPF				Lg			18 33 02.8	
	26nm,0.2s							
SJPF	**Ste Jean**	**0.28**	**340**	*e*Pg		Pg	18 32 58.4	-0.2
SJPF				*e*Sg		Sg	18 33 02.8	+0.6
	26nm,0.2s							
IUNC	**Unciti**	**0.31**	**253**	Pg		Pg	18 32 59.4	+0.3
	2.3nm,0.2s,SNR=7.9							
IUNC				Lg			18 33 04.9	
	37nm,0.2s,SNR=7.9							
IUNC	**Unciti**	**0.31**	**253**	Pg		Pg	18 32 59.4	+0.3
	2.3nm,0.2s,SNR=7.9							
IUNC				Lg			18 33 04.9	
	37nm,0.2s,SNR=7.9							
IUNC	**Unciti**	**0.31**	**253**	Pg		Pg	18 32 59.4	+0.3
	2.3nm,0.2s,SNR=7.9							
IUSE	**Utxeti**	**0.34**	**287**	Pg		Pg	18 32 59.7	-0.2
	0.8nm,0.2s,SNR=7.9							
IUSE				Lg			18 33 04.6	
	1.5nm,0.2s,SNR=7.9							
IUSE	**Utxeti**	**0.34**	**287**	Pg		Pg	18 32 59.7	-0.2
	0.8nm,0.2s,SNR=7.9							
IUSE				Lg			18 33 04.6	
	1.5nm,0.2s,SNR=7.9							
IUSE	**Utxeti**	**0.34**	**287**	Pg		Pg	18 32 59.7	-0.1
	0.8nm,0.2s,SNR=7.9							
ATE	**Arette**	**0.38**	**51**	Pg		Pg	18 33 00.4	0.0
ATE				Sg		Sg	18 33 05.9	+0.6
ATE	**Arette**	**0.38**	**51**	Pg		Pg	18 33 00.4	0.0
ORDF	**Ordiarp**	**0.38**	**18**	Pg		Pg	18 33 00.5	-0.1
ORDF				Sg		Sg	18 33 06.4	+0.9
ORDF	**Ordiarp**	**0.38**	**18**	P		Pg	18 33 00.5	-0.1
ORDF				S		Sg	18 33 05.8	+0.3
ORDF	**Ordiarp**	**0.38**	**18**	Pg		Pg	18 33 00.5	-0.1
ORDF				Lg			18 33 05.8	
ORDF	**Ordiarp**	**0.38**	**18**	Pg		Pg	18 33 00.5	-0.1
FDAF	**Les Forges d'A**	**0.39**	**94**	P		Pg	18 33 00.4	-0.3
FDAF				S		Sg	18 33 05.5	-0.3
FDAF	**Les Forges d'A**	**0.39**	**94**	Pg		Pg	18 33 00.4	-0.3
FDAF				Lg			18 33 05.5	
ETSF	**Etsaut**	**0.40**	**83**	*e*Pg		Pg	18 33 00.2	-0.7
ETSF				*e*Sg		Sg	18 33 05.5	-0.5
	24nm,0.2s							
ETSF	**Etsaut**	**0.40**	**83**	Pg		Pg	18 33 00.2	-0.7
ETSF				Lg			18 33 05.5	
	12nm,0.2s							
ETSF	**Etsaut**	**0.40**	**83**	Pg		Pg	18 33 00.2	-0.7
ETSF				Lg			18 33 05.5	
	12nm,0.2s							
ETSF	**Etsaut**	**0.40**	**83**	*e*Pg		Pg	18 33 00.2	-0.7
ETSF				*e*Sg		Sg	18 33 05.5	-0.5
	12nm,0.2s							
OSSF	**Osses**	**0.42**	**344**	Pg		Pg	18 33 01.1	-0.3
OSSF				Sg		Sg	18 33 07.5	+0.6
OSSF	**Osses**	**0.42**	**344**	P		Pg	18 33 01.1	-0.3
OSSF				S		Sg	18 33 07.4	+0.5
OSSF	**Osses**	**0.42**	**344**	Pg		Pg	18 33 01.1	-0.3
OSSF				Lg			18 33 07.4	
OSSF	**Osses**	**0.42**	**344**	Pg		Pg	18 33 01.1	-0.3
OSSF				Sg		Sg	18 33 07.5	+0.6
ELIZ	**Elizondo**	**0.45**	**315**	⇑Pg		Pg	18 33 01.4	-0.3
	37nm,0.2s,SNR=18							
ELIZ				Lg			18 33 08.1	
	18nm,0.2s,SNR=8.4							
ELIZ	**Elizondo**	**0.45**	**315**	⇑Pg		Pg	18 33 01.4	-0.3
	37nm,0.2s,SNR=18							
ELIZ				Lg			18 33 08.1	
	18nm,0.2s,SNR=8.4							
ELIZ	**Elizondo**	**0.45**	**315**	Pg		Pg	18 33 01.4	-0.4
	37nm,0.2s,SNR=18							
EALK	**Alkurruntz**	**0.48**	**321**	⇑Pg		Pg	18 33 02.0	-0.4
	0.3nm,0.2s,SNR=18							
EALK				Lg			18 33 08.9	
	46nm,0.5s,SNR=7.9							
EALK	**Alkurruntz**	**0.48**	**321**	⇑Pg		Pg	18 33 02.0	-0.4
	0.3nm,0.2s,SNR=18							
EALK				Lg			18 33 08.9	
	46nm,0.5s,SNR=7.9							
EALK	**Alkurruntz**	**0.48**	**321**	Pg		Pg	18 33 02.0	-0.4
	0.3nm,0.2s,SNR=18							
REYF	**Montagne du Re**	**0.56**	**67**	Pg		Pg	18 33 03.5	-0.5
REYF				Sg		Sg	18 33 11.4	+0.1
REYF	**Montagne du Re**	**0.56**	**67**	P		Pg	18 33 03.5	-0.5
REYF				S		Sg	18 33 11.3	0.0
REYF	**Montagne du Re**	**0.56**	**67**	Pg		Pg	18 33 03.5	-0.5
REYF				Lg			18 33 11.3	
REYF	**Montagne du Re**	**0.56**	**67**	Pg		Pg	18 33 03.5	-0.5
REYF				Sg		Sg	18 33 11.4	+0.1
VIEF	**Viey**	**0.82**	**87**	S		Sg	18 33 20.5	+0.8
VIEF	**Viey**	**0.82**	**87**	Lg			18 33 20.5	
EBIE	**Bielsa**	**0.93**	**100**	Pg		Pg	18 33 10.7	-0.2
	3.9nm,0.1s,SNR=14							
EBIE				Lg			18 33 24.1	
	6.3nm,0.1s,SNR=13							
EBIE	**Bielsa**	**0.93**	**100**	Pg		Pg	18 33 10.7	-0.2
	3.9nm,0.1s,SNR=14							
EBIE				Lg			18 33 24.1	
	6.3nm,0.1s,SNR=13							
EBIE	**Bielsa**	**0.93**	**100**	Pg		Pg	18 33 10.7	-0.3
	3.9nm,0.1s,SNR=14							
ECRI	**Cripan**	**1.07**	**257**	Pg		Pg	18 33 14.1	+0.4
	4.3nm,0.1s,SNR=7.9							
ECRI				Lg			18 33 26.1	
	4.9nm,0.3s,SNR=7.9							
ECRI	**Cripan**	**1.07**	**257**	Pg		Pg	18 33 14.1	+0.4
	4.3nm,0.1s,SNR=7.9							
ECRI				Lg			18 33 26.1	
	4.9nm,0.3s,SNR=7.9							
ECRI	**Cripan**	**1.07**	**257**	Pg		Pg	18 33 14.1	+0.4
	4.3nm,0.1s,SNR=7.9							
EPF	**Esparros**	**1.07**	**80**	*e*Pg		Pg	18 33 12.4	-1.3
EPF				*e*Sg		Sg	18 33 26.4	-1.2
	7.9nm,0.2s							
EPF	**Esparros**	**1.07**	**80**	Pg		Pg	18 33 12.4	-1.3
EPF				Lg			18 33 26.4	
	4.0nm,0.2s							
EPF	**Esparros**	**1.07**	**80**	Pg		Pg	18 33 12.4	-1.3
EPF				Lg			18 33 26.4	
	4.0nm,0.2s							
EPF	**Esparros**	**1.07**	**80**	*e*Pg		Pg	18 33 12.4	-1.3
EPF				*e*Sg		Sg	18 33 26.4	-1.2
	4.0nm,0.2s							
ESAC	**San Caprasio**	**1.22**	**157**	Pg		Pg	18 33 16.9	+0.3
	6.4nm,0.1s,SNR=11							
ESAC				Lg			18 33 33.2	
	128nm,0.4s,SNR=7.9							
ESAC	**San Caprasio**	**1.22**	**157**	Pg		Pg	18 33 16.9	+0.3
	6.4nm,0.1s,SNR=11							
ESAC				Lg			18 33 33.2	
	128nm,0.4s,SNR=7.9							
ESAC	**San Caprasio**	**1.22**	**157**	Pg		Pg	18 33 16.9	+0.3
	6.4nm,0.1s,SNR=11							
MELF	**Melles**	**1.36**	**88**	S		Sg	18 33 37.8	+0.7
MELF	**Melles**	**1.36**	**88**	Lg			18 33 37.8	
CSOR	**Sort**	**1.71**	**105**	Pg		Pg	18 33 24.4	-1.7
	0.6nm,0.3s,SNR=7.9							
CSOR				Lg			18 33 49.1	
	5.3nm,0.3s,SNR=7.9							
CSOR	**Sort**	**1.71**	**105**	Pg		Pg	18 33 24.4	-1.7
	0.6nm,0.3s,SNR=7.9							
CSOR				Lg			18 33 49.1	
	5.3nm,0.3s,SNR=7.9							
CSOR	**Sort**	**1.71**	**105**	Pg		Pg	18 33 24.4	-1.7
	0.6nm,0.3s,SNR=7.9							
ELAN	**Lanestosa**	**1.75**	**283**	Pn		Pn	18 33 24.3	-0.5
	0.5nm,0.1s,SNR=4.0							
ELAN				Lg			18 33 48.9	
	2.4nm,0.3s,SNR=7.9							
ELAN	**Lanestosa**	**1.75**	**283**	Pn		Pn	18 33 24.3	-0.5
	0.5nm,0.1s,SNR=4.0							
ELAN				Lg			18 33 48.9	
	2.4nm,0.3s,SNR=7.9							
ELAN	**Lanestosa**	**1.75**	**283**	Pn		Pn	18 33 24.3	-0.6
	0.5nm,0.1s,SNR=4.0							
ETOR	**Torete**	**2.15**	**200**	Pn		Pn	18 33 29.9	-0.4
	1.1nm,0.1s,SNR=7.9							
ETOR				Pg		Pg	18 33 33.7	-0.7
	2.3nm,0.2s,SNR=7.9							
ETOR				Sn		Sn	18 33 57.1	-0.6
	2.1nm,0.2s,SNR=4.0							
ETOR				Lg			18 34 02.4	
	3.0nm,0.2s,SNR=4.0							
ETOR	**Torete**	**2.15**	**200**	Pn		Pn	18 33 29.9	-0.4
	1.1nm,0.1s,SNR=7.9							
ETOR				Pg		Pg	18 33 33.7	-0.7
	2.3nm,0.2s,SNR=7.9							
ETOR				Sn		Sn	18 33 57.1	-0.6
	2.1nm,0.2s,SNR=4.0							
ETOR				Lg			18 34 02.4	
	3.0nm,0.2s,SNR=4.0							
ETOR	**Torete**	**2.15**	**200**	Pn		Pn	18 33 29.9	-0.4
	1.1nm,0.1s,SNR=7.9							
ERTA	**Horta de San J**	**2.17**	**150**	Pg		Pg	18 33 33.4	-1.5
	0.1nm,0.2s,SNR=7.9							
ERTA				Sn		Sn	18 33 55.9	-2.2
	1.1nm,0.3s,SNR=7.9							
ERTA				Lg			18 34 00.6	
	3.9nm,0.3s,SNR=7.9							
ERTA	**Horta de San J**	**2.17**	**150**	Pg		Pg	18 33 33.4	-1.5
	0.1nm,0.2s,SNR=7.9							
ERTA				Sn		Sn	18 33 55.9	-2.2
	1.1nm,0.3s,SNR=7.9							
ERTA				Lg			18 34 00.6	
	3.9nm,0.3s,SNR=7.9							
ERTA	**Horta de San J**	**2.17**	**150**	Pg		Pg	18 33 35.1	+0.3
	0.1nm,0.2s,SNR=7.9							
ERTA				Sn		Sn	18 33 55.9	-2.3
	1.1nm,0.3s,SNR=7.9							
EPOB	**Poblet**	**2.20**	**132**	Pn		Pn	18 33 29.6	-1.5
	0.4nm,0.1s,SNR=7.9							
EPOB				Sn		Sn	18 33 56.4	-2.6
	0.6nm,0.2s,SNR=7.9							
EPOB				Lg			18 34 01.6	
	1.6nm,0.2s,SNR=7.9							
EPOB	**Poblet**	**2.20**	**132**	Pn		Pn	18 33 29.6	-1.5
	0.4nm,0.1s,SNR=7.9							
EPOB				Sn		Sn	18 33 56.4	-2.6
	0.6nm,0.2s,SNR=7.9							
EPOB				Lg			18 34 01.6	
	1.6nm,0.2s,SNR=7.9							
EPOB	**Poblet**	**2.20**	**132**	Lg			18 34 01.6	
	1.6nm,0.2s,SNR=7.9							
EPOB	**Poblet**	**2.20**	**132**	Pn		Pn	18 33 29.6	-1.4
	0.4nm,0.1s,SNR=7.9							
EPOB				Sn		Sn	18 33 56.4	-2.6
	0.6nm,0.2s,SNR=7.9							
CLLI	**Llivia**	**2.29**	**98**	Pg		Pg	18 33 34.0	-3.2
	0.4nm,0.2s,SNR=4.0							
CLLI				Lg			18 34 06.4	
	2.9nm,0.3s,SNR=7.9							
CLLI	**Llivia**	**2.29**	**98**	Pg		Pg	18 33 34.0	-3.2
	0.4nm,0.2s,SNR=4.0							
CLLI				Lg			18 34 06.4	
	2.9nm,0.3s,SNR=7.9							
MTLF	**Montolieu**	**2.48**	**77**	*e*Pn		Pn	18 33 31.6	-3.2
MTLF	**Montolieu**	**2.48**	**77**	*e*Pg		Pg	18 33 38.1	-2.6
MTLF				*e*Sg		Sg	18 34 10.3	-2.5
	2.1nm,0.4s							
MTLF	**Montolieu**	**2.48**	**77**	Pn		Pn	18 33 31.6	-3.2
MTLF				Pg		Pg	18 33 38.1	-2.6
MTLF				Lg			18 34 10.3	
	1.1nm,0.4s							
MTLF	**Montolieu**	**2.48**	**77**	Pn		Pn	18 33 31.6	-3.2
MTLF				Pg		Pg	18 33 38.1	-2.6
MTLF				Lg			18 34 10.3	
	1.1nm,0.4s							
MTLF	**Montolieu**	**2.48**	**77**	*e*Pn		Pn	18 33 31.6	-3.2
MTLF	**Montolieu**	**2.48**	**77**	*e*Pg		Pg	18 33 38.1	-2.6
MTLF				*e*Sg		Sg	18 34 10.3	-2.5
	1.0nm,0.4s							
EMOS	**Mosqueruela**	**2.53**	**169**	Lg			18 34 12.2	
	1.4nm,0.2s,SNR=7.9							
EMOS	**Mosqueruela**	**2.53**	**169**	Lg			18 34 12.2	
	1.4nm,0.2s,SNR=7.9							
CFON	**Fontmartina**	**2.84**	**111**	Pn		Pn	18 33 38.9	-0.8
	5.8nm,0.2s,SNR=7.9							
CFON				Pg		Pg	18 33 46.0	-1.6
	0.9nm,0.2s,SNR=7.9							
CFON				Lg			18 34 23.5	
	6.6nm,0.2s,SNR=7.9							
CFON	**Fontmartina**	**2.84**	**111**	Pn		Pn	18 33 38.9	-0.8
	5.8nm,0.2s,SNR=7.9							
CFON				Pg		Pg	18 33 46.0	-1.6
	0.9nm,0.2s,SNR=7.9							
CFON				Lg			18 34 23.5	
	6.6nm,0.2s,SNR=7.9							
CFON	**Fontmartina**	**2.84**	**111**	Pn		Pn	18 33 38.9	-0.8
	5.8nm,0.2s,SNR=7.9							
EARI	**Arriondas**	**3.05**	**280**	Pn		Pn	18 33 42.2	-0.4
	0.1nm,0.1s,SNR=4.0							
EARI				Sn		Sn	18 34 17.5	-2.3
	0.3

0.1nm,0.4s,baz=175,slow=2.0,SNR=3.7
ARCES ARCESS Array B 155.58 316 PKPab PKPab 19 27 31.1 +0.2
1.4nm,0.9s,baz=23,slow=6.6,SNR=3.7

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*IDC **01** 19:08:53.5±0.7,31°.20N×103°.74E,h0km,mb3.9/15, mb1 4.0/16,mb1mx3.9/26,mbtmp3.9/16,ML3.1/1,MS3.2/2, Ms1 3.2/2,ms1mx2.4/38,Error ellipse: s-maj=29.7km s-min=14.1km az=56.0*
*BJI **01** 19:08:55.1,31°.19N×103°.91E,h14km,mB4.5/5,mb3.9/8, ML3.8/19,Ms3.8/7,Ms7 3.7/5*
*ISCJB **01** 19:08:55.3±0.8,31°.21N±0°.04×103°.84E±0°.07,h23km±7km, mb4.0/17,Error ellipse: s-maj=10.3km s-min=7.0km az=4.8*
*NEIC **01** 19:08:58.5±1.2,31°.49N×103°.58E,h10km,mb3.4/1,Error ellipse: s-maj=37.3km s-min=10.5km az=97.0*
ISC 01 19:08:54.3±0.8,31°.23N±0°.03×103°.94E±0°.04,h4km±5km, n37,σ1§24/45,mb4.0/17,1D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.35**	**207**	⇓*i*Pg	**Pg**	**19 09 01.2**	**+0.1**
CD2				Sg	**Sg**	**19 09 06.6**	**+0.9**
CD2				smax			
	comp=N,37μm,0.5s						
CD2				smax			
	comp=E,32μm,0.6s						
LZH	**Lanzhou**	**4.85**	**359**	Pn	**Pn**	**19 10 11.4**	**+3.3**
LZH				Pg	**Pg**	**19 10 25.7**	**-1.5**
LZH				Sn	**Sn**	**19 11 05.9**	**+1.2**
LZH				Sg	**Sg**	**19 11 30.2**	**+0.2**
LZH				smax			
	comp=N,110nm,0.6s						
LZH				smax			
	comp=E,100nm,0.8s						
LZH				LR	LR		
	comp=E,410nm,6.8s						
LZH				LR	LR		
	comp=Z,590nm,7.8s						
XAN	**Xi'an**	**5.05**	**55**	Pn	**Pn**	**19 10 12.7**	**+1.8**
XAN				Pg	**Pg**	**19 10 30.1**	**-1.0**
XAN				Sn	**Sn**	**19 11 11.0**	**+1.3**
XAN				Sg	**Sg**	**19 11 34.7**	**-1.8**
XAN				smax			
	comp=N,140nm,1.1s						
XAN				smax			
	comp=E,92nm,1.0s						
GYA	**Guiyang**	**5.32**	**153**	Pn	**Pn**	**19 10 17.5**	**+2.9**
GYA				smax			
	comp=N,160nm,0.8s						
GYA				smax			
	comp=E,190nm,0.9s						
KMI	**Kunming**	**6.17**	**190**	Pn	**Pn**	**19 10 27.1**	**+0.8**
KMI				Sn	**Sn**	**19 11 35.8**	**-1.6**
KMI				Sg	**Sg**	**19 12 09.2**	**-3.4**
KMI				smax			
	comp=N,35nm,1.4s						
KMI				smax			
	comp=E,33nm,1.4s						
KMI				LR	LR		
	comp=N,310nm,5.6s						
KMI				LR	LR		
	comp=E,350nm,7.3s						
GTA	**Gaotai**	**8.83**	**339**	*e*P	**Pn**	**19 11 05.0**	**+2.2**
GTA				pP		19 11 09.4	
GTA				sP		19 11 12.5	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
WHN	**Wuhan**	**8.97**	**92**	P	**Pn**	**19 10 59.6**	**-5.1**
WHN				S	**Sn**	**19 12 44.7**	**-1.5**
WHN				LR	LR		
	comp=N,510nm,5.6s						
WHN				LR	LR		
	comp=E,920nm,6.3s						
LSA	**Lhasa**	**11.14**	**265**	*e*P	**Pn**	**19 11 36.9**	**+2.4**
CM31	**Chiang Mai Arr**	**13.50**	**201**	*e*Pn	**Pn**	**19 12 14.2**	**+7.5**
	comp=E,2.1nm,0.5s						
CMAR	**Chiang Mai Arr**	**13.50**	**201**	Pn	**Pn**	**19 12 10.0**	**+3.3**
	comp=E,0.1nm,0.3s,baz=10,slow=11,SNR=5.8						
SONM	**Songino Array**	**16.69**	**6**	Pn	**Pn**	**19 12 50.1**	**+1.0**
	comp=E,0.1nm,0.3s,baz=184,slow=12,SNR=12						
ULN	**Ulaanbaatar**	**16.79**	**7**	*e*Pn	**Pn**	**19 12 51.0**	**+0.7**
	comp=E,3.0nm,0.9s						
KSRS	**Korea Array**	**20.73**	**66**	P	**P**	**19 13 37.6**	**+1.8**
	comp=E,3.2nm,0.7s,baz=260,slow=9.6,SNR=11						
CN2	**Changchun**	**21.11**	**47**	*e*P	**P**	**19 13 42.2**	**+2.3**
JOW	**Kunigami**	**21.71**	**95**	LR	LR	19 23 50.6	
	comp=E,106nm,19.9s,baz=253,slow=41						
MKAR	**Makanchi Array**	**22.80**	**319**	P	**P**	**19 13 57.8**	**-0.1**
	comp=E,4.6nm,0.9s,mb3.9,baz=120,slow=9.3,SNR=30						
AAK	**Ala-Archa**	**26.02**	**304**	LR	LR	19 27 00.6	
	comp=E,35nm,21.8s,baz=86,slow=42						
ZAA0	**Zalesovo Array**	**26.55**	**334**	*e*P	**P**	**19 14 32.6**	**-0.5**
ZALV	**Zalesovo Beam**	**26.55**	**334**	P	**P**	**19 14 32.5**	**-0.6**
	comp=E,3.9nm,0.8s,mb4.0,baz=132,slow=8.8,SNR=16						
ZALV	**Zalesovo Beam**	**26.55**	**334**	P	**P**	**19 14 32.5**	**-0.6**
KURK	**Kurchatov**	**27.06**	**323**	P	**P**	**19 14 37.3**	**-0.5**
	comp=E,2.6nm,0.7s,mb3.9,baz=128,slow=9.5,SNR=28						
BVAR	**Borovoye Array**	**32.61**	**322**	P	**P**	**19 15 26.5**	**-0.4**
	comp=E,0.5nm,0.5s,mb3.7,baz=146,slow=8.7,SNR=3.6						
BRTR	**Keskin Array B**	**56.56**	**300**	P	**P**	**19 18 37.5**	**-0.7**
	comp=E,0.6nm,0.8s,mb3.6,baz=96,slow=7.2,SNR=4.3						
ARCES	**ARCESS Array B**	**57.09**	**336**	P	**P**	**19 18 40.3**	**-1.1**
	comp=E,0.8nm,0.6s,mb4.0,baz=94,slow=8.6,SNR=9.0						
ARCES				PcP	PcP	19 19 35.1	-1.1
	comp=E,1.0nm,0.9s,baz=29,slow=5.5,SNR=4.3						
FINES	**FINESS Array B**	**57.39**	**326**	P	**P**	**19 18 42.3**	**-1.3**
	comp=E,1.2nm,0.7s,mb4.0,baz=86,slow=5.9,SNR=5.8						
ASAR	**Alice Springs**	**61.67**	**149**	P	**P**	**19 19 14.2**	**+0.6**
	comp=E,1.0nm,0.8s,mb4.0,baz=347,slow=6.9,SNR=8.9						
NOA	**NORSAR Array B**	**64.48**	**327**	P	**P**	**19 19 30.2**	**-1.6**
	comp=E,0.9nm,0.6s,mb4.0,baz=74,slow=6.8,SNR=4.4						
NWAO	**Narrogin (SRO)**	**65.03**	**168**	P	**P**	**19 19 36.0**	**+0.3**
	comp=E,3.8nm,0.7s,mb4.5,baz=344,slow=7.4,SNR=3.4						
GERES	**GERESS Array B**	**67.36**	**314**	P	**P**	**19 19 49.7**	**-0.9**
	comp=E,0.3nm,0.5s,mb3.6,baz=75,slow=5.7,SNR=4.9						
CDF	**Champ du Feu**	**71.43**	**316**	*e*P	**P**	**19 20 15.0**	**-0.8**
	comp=E,2.0nm,0.5s,mb4.0						
STKA	**Stephens Creek**	**72.19**	**147**	P	**P**	**19 20 20.3**	**-0.1**
	comp=E,0.8nm,0.6s,mb3.9,baz=306,slow=8.7,SNR=2.5						
LPG	**La Plagne**	**73.06**	**313**	*e*P	**P**	**19 20 25.6**	**0.0**
	comp=E,5.2nm,0.5s,mb4.4						
LPL	**La Plagne**	**73.07**	**313**	*e*P	**P**	**19 20 25.6**	**0.0**
	comp=E,5.0nm,0.4s,mb4.5						
AVF	**Avril sur Loir**	**74.53**	**316**	*e*P	**P**	**19 20 33.2**	**-1.0**
TCF	**Touki Ste Croi**	**75.47**	**315**	*e*P	**P**	**19 20 38.9**	**-0.7**
YKA	**Yellowknife Ar**	**81.61**	**17**	P	**P**	**19 21 13.4**	**+0.2**
	comp=E,0.8nm,0.6s,mb3.8,baz=332,slow=5.4,SNR=4.4						
TORD	**Torodi Ar. Bea**	**93.47**	**288**	P	**P**	**19 22 10.6**	**-1.1**
	comp=E,0.5nm,0.8s,mb4.0,baz=58,slow=2.5,SNR=2.8						

DJA 01 19:09:25,0°.07S×123°.15E,h23km,MLv4.3/3,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**1.04**	**201**	P	Pn	19 09 42.1	-2.0
LUWI				S	Sb	19 09 55.7	-1.8
MRSI	**Marisa**	**1.33**	**294**	P	Pn	19 09 48.7	+0.6
MRSI				S	Sn	19 10 05.0	-0.1
APSI	**Ampana**	**1.72**	**241**	P	Pn	19 09 51.9	-1.6
APSI				S	Sn	19 10 16.3	+1.5
MPSI	**Mapaga**	**3.28**	**277**	P	Pn	19 10 16.4	+1.4

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*ISCJB **01** 19:30:52.3±0.9,7°.73S±0°.06×128°.5E±0°.1,h100km, mb3.7/3,Error ellipse: s-maj=18.1km s-min=7.6km az=165.7*
*IDC **01** 19:30:53.8±5.0,7°.55S×128°.67E,h89km±50km,mb3.4/3, mb1 3.6/5,mb1mx3.3/17,mbtmp3.5/5,ML4.0/2,MS3.8/3, Ms1 3.8/3,ms1mx2.9/18,Error ellipse: s-maj=63.5km s-min=28.2km az=73.0*
*NEIC **01** 19:30:56.1±2.9,7°.68S×128°.54E,h116km±31km,mb4.3/1, Error ellipse: s-maj=32.1km s-min=24.8km az=81.0*
ISC 01 19:30:54.7±0.8,7°.72S±0°.06×128°.5E±0°.1,h100km,n14, σ1§46/18,mb3.7/3,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.30**	**142**	*e*P	**Pn**	**19 32 27.8**	**+2.7**
	74nm,0.1s						
KAKA				*e*S	**Sn**	**19 33 35.4**	**-0.3**
KAKA	**Kakadu**	**6.30**	**142**	*e*Pn	**Pn**	**19 32 27.2**	**+2.1**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA				*e*Sn	**Sn**	**19 33 34.5**	**-1.2**
KNA	**Kununurra**	**7.98**	**178**	*e*P	**Pn**	**19 32 51.6**	**+3.6**
	15nm,0.4s						
KNA				*e*S	**Sn**	**19 34 15.7**	**-0.9**
FITZ	**Fitzroy Crossi**	**10.68**	**195**	*e*P	**Pn**	**19 33 26.9**	**+2.2**
	11nm,0.9s						
FITZ				*e*S	**Sn**	**19 35 15.8**	**-6.6**
FITZ	**Fitzroy Crossi**	**10.68**	**195**	P	**Pn**	**19 33 26.4**	**+1.7**
	0.8nm,0.3s,baz=16,slow=13,SNR=28						
FITZ				S	**Sn**	**19 35 20.3**	**-2.0**
	1.6nm,0.3s,baz=83,slow=16,SNR=8.2						
WRAB	**Tennant Creek**	**13.40**	**155**	*e*Pn	**Pn**	**19 34 00.1**	**-0.8**
	6.4nm,0.6s						
WRAB				*e*Sn	**Sn**	**19 36 19.5**	**-8.9**
ASAR	**Alice Springs**	**16.68**	**162**	P	**Pn**	**19 34 44.2**	**+1.8**
	0.4nm,0.3s,baz=329,slow=9.9,SNR=23						
ASAR				S	**Sn**	**19 37 41.5**	**-6.1**
	0.3nm,0.3s,baz=342,slow=27,SNR=4.1						
GUMO	**Guam**	**26.70**	**38**	LR	LR	19 45 29.4	
	comp=Z,100nm,21.2s,baz=90,slow=33						
RAO	**Raoul Island**	**54.63**	**120**	LR	LR	19 58 18.8	
	comp=Z,197nm,21.6s,baz=342,slow=30						
SONM	**Songino Array**	**58.66**	**343**	P	**P**	**19 40 42.1**	**+0.6**
	0.3nm,0.7s,mb3.4,baz=160,slow=4.6,SNR=2.9						
PETK	**Petropavlovsk-**	**65.48**	**19**	P	**P**	**19 41 25.3**	**-1.6**
	1.9nm,0.8s,mb4.0,baz=187,slow=3.3,SNR=3.7						
PETK				LR	LR	20 06 12.9	
	comp=Z,60nm,19.9s,baz=172,slow=32						
PETK	**Petropavlovsk-**	**65.48**	**19**	P	**P**	**19 41 25.3**	**-1.6**
PETK				LR	LR	20 06 12.9	
MKAR	**Makanchi Array**	**68.02**	**328**	P	**P**	**19 41 42.6**	**-0.6**
	0.4nm,0.4s,mb3.6,baz=138,slow=6.8,SNR=4.8						
LPAZ	**La Paz**	**151.02**	**145**	PKPbc	PKPbc	19 50 38.1	+1.1
	1.1nm,0.4s,baz=225,slow=5.8,SNR=12						

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*CSEM **01** 19:44:00.4,43°.49N×12°.74E,h38km,MD1.7/4,After ROM*
ROM 01 19:44:00.4±0.5,43°.49N×12°.74E,h38km±5km,Md1.7/4, Ml1.2/4,2C,Error ellipse: s-maj=5.6km s-min=4.4km az=86.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARVD	**Arcevia**	**0.15**	**85**	Pg	Pn	19 44 07.1	0.0
ARVD				Sg	Sn	19 44 12.7	+1.0
	10.0nm,0.1s						
ARVD	**Arcevia**	**0.15**	**85**	Pg	Pn	19 44 07.1	0.0
ARVD				Sg	Sn	19 44 12.6	+0.9
	10.0nm,0.1s						
ARVD	**Arcevia**	**0.15**	**85**	Pg	Pn	19 44 07.1	0.0
ARVD				Sg	Sn	19 44 12.6	+0.9
	10.0nm,0.1s						
PIEI	**Pieia**	**0.16**	**289**	Pg	Pn	19 44 06.8	-0.3
PIEI				Sg	Sn	19 44 12.1	+0.3
	45nm,0.2s						
PIEI	**Pieia**	**0.16**	**289**	⇑*i*Pg	Pn	19 44 06.8	-0.3
PIEI				Sg	Sn	19 44 12.1	+0.3
PIEI	**Pieia**	**0.16**	**289**	⇑*i*Pg	Pn	19 44 06.8	-0.3
PIEI				Sg	Sn	19 44 12.1	+0.3
FSSB	**Fossombrone**	**0.21**	**8**	Pg	Pn	19 44 07.8	+0.2
FSSB				Sg	Sn	19 44 13.7	+1.2
	67nm,0.3s					

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTH	Kantishna Hill	0.40	333	P	Pn	20 02 30.3	+0.1
KTH				S	Sn	20 02 44.2	+0.3
PPLA	Purkeypile	0.82	249	P	Pn	20 02 33.6	+0.6
PPLA				S	Sn	20 02 49.4	+0.6
BPAW	Bear Paw Mtn.	0.93	347	P	Pn	20 02 34.1	+0.1
BPAW				S	Sn	20 02 50.3	-0.2
CHUM	Lake Minchumin	1.06	311	P	Pn	20 02 35.5	+0.3
CHUM				S	Sn	20 02 52.7	0.0
SKT	Skwentna	1.31	201	P	Pn	20 02 37.9	0.0
SKT				S	Sn	20 02 57.3	-0.1
SML	Sawmill	1.73	143	P	Pn	20 02 42.3	-0.3
SML				S	Sn	20 03 06.2	+0.4
PMR	Palmer	1.74	158	P	Pn	20 02 42.4	-0.3
PMR				S	Sn	20 03 05.7	-0.4
COLA	College	2.05	34	P	Pn	20 02 46.6	+0.2
RC01	Rabbit Creek A	2.15	170	P	Pn	20 02 47.5	-0.2
IL1	Eielson Array	2.25	44	P	Pn	20 02 49.0	+0.1
PAX	Paxson	2.31	94	P	Pn	20 02 50.4	+0.7
TTA	Tatalina	2.52	266	eP	Pn	20 02 51.4	-0.9
TT01	Tatalina	2.52	266	P	Pn	20 02 52.0	-0.4
SLKM	Skilak Lake	2.71	177	P	Pn	20 02 55.0	+0.2
DOT	Dot Lake	2.94	78	P	Pn	20 02 57.6	-0.1
RSO	Redoubt South	2.95	202	Pn	Pn	20 02 58.9	+1.0
DIV	Divide	3.05	131	P	Pn	20 02 58.1	-1.1
MENT	Mentasta	3.10	92	eP	Pn	20 02 59.6	-0.3
IM3	Indian Mountai	3.12	335	P	Pn	20 03 00.1	0.0
SEW	Seward	3.15	170	P	Pn	20 03 00.0	-0.5
SVW2	Sparrevohn	3.18	231	eP	Pn	20 03 00.9	0.0
EYAK	Cordova Ski Ar	3.49	138	P	Pn	20 03 04.5	-0.5
BMRM	Bremner River	3.57	126	P	Pn	20 03 05.2	-0.9
COLD	Coldfoot	4.04	2	ePn	Pn	20 03 12.3	+0.1
COLD				eSn	Sn	20 03 59.5	+0.7
EGAK	Eagle	4.41	65	P	Pn	20 03 17.3	+0.1
BM3	Burnt Mountain	4.90	28	P	Pn	20 03 23.7	0.0
DAWY	Dawson	5.04	75	P	Pn	20 03 25.1	-0.5
PNL	Peninsula	6.40	119	P	Pn	20 03 43.3	-0.6
SIT	Sitka	9.75	122	eP	Pn	20 04 29.8	+0.8
	6.7nm,0.3s						
YKA	Yellowknife Ar	16.28	76	Pn	Pn	20 05 51.2	-1.9
	0.1nm,0.3s,baz=284,slow=13,SNR=3.8						
PDAR	Pinedale Array	31.23	111	P	P	20 08 21.2	+2.0
	0.8nm,0.6s,mb3.6,baz=324,slow=7.3,SNR=6.1						
NVAR	Mina Array Bea	31.47	127	P	P	20 08 23.4	+2.0
	0.5nm,0.6s,mb3.4,baz=324,slow=9.4,SNR=5.1						
TXAR	Lajitas Array	45.16	116	P	P	20 10 17.5	+1.6
	0.6nm,0.6s,mb3.5,baz=330,slow=5.8,SNR=11						
ARCES	ARCESS Array B	47.52	2	P	P	20 10 33.3	-0.4
	0.7nm,0.6s,mb3.7,baz=358,slow=8.5,SNR=5.2						
SONM	Songino Array	53.88	306	P	P	20 11 22.1	+0.4
	0.7nm,0.8s,mb3.7,baz=49,slow=6.7,SNR=7.1						
ZALV	Zalesovo Beam	55.49	324	P	P	20 11 32.1	-1.1
	0.4nm,0.4s,mb3.8,baz=46,slow=8.9,SNR=3.6						
BVAR	Borovoye Array	59.77	333	P	P	20 12 02.7	-0.5
	0.3nm,0.4s,mb3.7,baz=35,slow=10,SNR=3.7						
MKAR	Makanchi Array	62.65	322	P	P	20 12 21.8	-0.9
	0.3nm,0.2s,mb3.8,baz=27,slow=9.7,SNR=4.4						

MEX 01 20:03:32.5±0.7, 16°.91N×100°.12W, h5km±4km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.20	314	iP	Pg	20 03 35.9	-0.5
CAIG				iS	Sg	20 03 39.3	+0.3
ACX	Acapulco	0.20	102	iP	Pg	20 03 35.9	-0.5
ACX				iS	Sg	20 03 39.4	+0.3
ZIIG	Zihuatanejo	1.46	299	iP	Pn	20 03 56.2	-3.3
ZIIG				iS	Sn	20 04 13.8	-5.2
PLIG	Platanillo	1.59	22	iP	Pn	20 03 58.0	-3.2
PLIG				iS	Sn	20 04 16.9	-5.2
PNIG	Pinotepa	1.98	105	iP	Pn	20 04 03.9	-2.7
PNIG				iS	Sn	20 04 25.9	-5.9

*ISCJB **01** 20:08:10.8±1.5, 18°.2S±0°.6×178°.9W±0°.3, h550km, mb3.7/6, Error ellipse: s-maj=89.6km s-min=23.2km az=156.6*
*IDC **01** 20:08:11.2±7.3, 17°.86S×178°.81W, h543km±78km, mb3.1/5, mb1 3.3/5, mb1mx3.0/16, mbtmp3.1/5, Error ellipse: s-maj=81.5km s-min=39.2km az=160.0*
*NEIC **01** 20:08:12.9±6.4, 18°.39S×178°.78W, h575km±73km, mb3.8/3, Error ellipse: s-maj=93.8km s-min=38.7km az=166.0*
ISC 01 20:08:11.8±1.5, 18°.2S±0°.6×178°.8W±0°.3, h550km, n13, σ1§04/8, mb3.7/6, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	33.00	261	P	P	20 14 01.9	-0.1
	2.2nm,0.8s,mb3.7,baz=107,slow=11,SNR=3.6						
CTAO	Charters Tower	33.00	261	eP	P	20 14 01.6	-0.4
	2.8nm,0.9s,mb3.8						
STKA	Stephens Creek	38.13	241	P	P	20 14 46.3	+1.9
	2.0nm,0.7s,mb3.8,baz=49,slow=5.4,SNR=5.3						
STKA	Stephens Creek	38.13	241	eP	P	20 14 43.9	-0.5
	0.8nm,1.3s,mb3.1						
WRAB	Tennant Creek	44.17	260	eP	P	20 15 30.6	-1.8
	4.7nm,1.1s,mb3.9						
ASAR	Alice Springs	44.32	255	P	P	20 15 34.0	+0.6
	9.7nm,0.7s,mb4.5,baz=88,slow=8.1,SNR=184						
ASAR				PcP	PcP	20 17 05.8	+0.1
	0.4nm,0.5s,baz=103,slow=4.0,SNR=5.6						
TXAR	Lajitas Array	86.49	58	P	P	20 19 56.5	-0.3
	0.4nm,0.9s,mb3.0,baz=231,slow=4.0,SNR=4.5						
CMAR	Chiang Mai Arr	88.60	290	P	P	20 20 08.0	+1.1
	0.5nm,0.8s,mb3.4,baz=134,slow=3.9,SNR=3.8						
MKAR	Makanchi Array	109.05	314	PKiKP	PKiKP	20 25 37.5	-1.6
	0.1nm,0.2s,baz=71,slow=2.4,SNR=1.7						
BRTR	Keskin Array B	144.70	314	PKP	PKPdf	20 26 45.4	-0.9
	0.8nm,0.8s,baz=129,slow=3.3,SNR=5.1						
CLL	Collm	145.66	347	⇑PKPbc	PKPbc	20 26 47.3	-1.8
MMAI	Mount Meron Ar	145.96	302	PKPbc	PKPbc	20 26 49.8	-0.8
	0.7nm,0.4s,baz=88,slow=5.9,SNR=5.1						
GERES	GERESS Array B	147.79	344	PKPbc	PKPbc	20 26 53.5	-1.4
	0.6nm,0.5s,baz=0.0,slow=2.7,SNR=8.1						

*ATH **01** 20:18:05.2, 37°.68N×27°.15E, h14km±4km, MD3.4/4*
*CSEM **01** 20:18:06.2±0.2, 37°.60N×27°.11E, h8km, MD2.8, Error ellipse: s-maj=4.3km s-min=2.9km az=50.0*
*DDA **01** 20:18:06.3, 37°.63N×27°.13E, h8km±2km, Md2.8*
*ISK **01** 20:18:06.3, 37°.63N×27°.22E, h9km, MD2.9*
*ISCJB **01** 20:18:06.1±0.4, 37°.61N±0°.02×27°.12E±0°.03, h5km±4km, Error ellipse: s-maj=4.4km s-min=3.3km az=145.9*
ISC 01 20:18:06.5±0.4, 37°.61N±0°.02×27°.11E±0°.03, h8km±4km, n38, σ0§91/67, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	G?zelcaml?	0.13	47	iP	Pg	20 18 09.1	-0.3
GCAM				iS	Sg	20 18 11.4	+0.2
GCAM	G?zelcaml?	0.13	47	iP	Pg	20 18 09.1	-0.3
GCAM				iS	Sg	20 18 11.4	+0.1
SMG	Samos	0.24	294	ePG	Pg	20 18 10.6	-0.7
SMG				eSG	Sg	20 18 14.2	-0.4
SMG	Samos	0.24	294	ePg	Pg	20 18 10.6	-0.7
SMG				eSg	Sg	20 18 14.2	-0.4
BDRM	Kayabasi	0.60	154	iP	Pg	20 18 17.8	-0.4
BDRM				iS	Sg	20 18 27.5	+1.4
BDRM	Kayabasi	0.60	154	iP	Pg	20 18 17.8	-0.4
BDRM				iS	Sg	20 18 27.5	+1.4
AYDN	Tasoluk	0.61	85	iP	Pg	20 18 17.9	-0.3
AYDN				iS	Sg	20 18 26.3	+0.1
AYDN	Tasoluk	0.61	85	iP	Pg	20 18 18.0	-0.3
AYDN				iS	Sg	20 18 26.3	+0.1
MLSB	Milas	0.61	121	ePG	Pg	20 18 17.7	-0.7
MLSB				eSG	Sg	20 18 25.8	-0.6
MLSB	Milas	0.61	121	ePg	Pg	20 18 17.7	-0.7
MLSB				eSg	Sg	20 18 25.8	-0.6
BLCB	Balcova	0.78	356	ePG	Pg	20 18 21.6	+0.2
BLCB				eSG	Sg	20 18 32.7	+1.2
BLCB	Balcova	0.78	356	ePg	Pg	20 18 21.6	+0.1
BLCB				eSg	Sg	20 18 32.7	+1.2
IZM	Izmir	0.79	8	ePG	Pg	20 18 21.8	0.0
IZM				eSG	Sg	20 18 32.7	+0.6
IZM	Izmir	0.79	8	ePg	Pg	20 18 21.8	0.0
IZM				eSg	Sg	20 18 32.7	+0.6
URLA	Izmir	0.85	331	iP	Pg	20 18 22.9	-0.1
URLA				iS	Sg	20 18 35.3	+1.2
URLA	Izmir	0.85	331	iP	Pg	20 18 22.9	0.0
URLA				iS	Sg	20 18 35.3	+1.3
DAT	Datca	0.96	157	ePG	Pg	20 18 25.0	+0.1
DAT				eSG	Sg	20 18 38.2	+0.9
DAT	Datca	0.96	157	ePg	Pg	20 18 25.0	+0.1
DAT				eSg	Sg	20 18 38.2	+0.9
YER	Yerkesik	1.05	117	ePG	Pg	20 18 25.7	-0.9
YER				eSG	Sg	20 18 39.7	-0.5
YER	Yerkesik	1.05	117	ePg	Pg	20 18 25.7	-0.9
YER				eSg	Sg	20 18 39.7	-0.5
CHOS	Chios island	1.14	313	ePB	Pb	20 18 26.9	-1.6
CHOS				eSB	Sb	20 18 41.8	-1.7
CHOS	Chios island	1.14	313	ePb	Pb	20 18 26.9	-1.6
CHOS				eSb	Sb	20 18 41.8	-1.7
APE	Apeiranthos	1.37	247	ePB	Pb	20 18 32.2	-0.3
APE				eSB	Sb	20 18 52.2	+2.0
APE	Apeiranthos	1.37	247	ePb	Pb	20 18 32.2	-0.3
APE				eSb	Sb	20 18 52.2	+2.0
AKHS	Akhisar	1.38	23	iP	Pn	20 18 32.8	+0.7
AKHS				iS	Sb	20 18 50.7	+0.3
AKHS	Akhisar	1.38	23	iP	Pn	20 18 32.8	+0.7
AKHS				iS	Sb	20 18 50.7	+0.3
AKS	Akhisar	1.38	23	ePN	Pn	20 18 31.9	-0.2
AKS	Akhisar	1.38	23	ePn	Pn	20 18 31.9	-0.2
KULA	Kula-Manisa	1.52	53	ePN	Pn	20 18 33.3	-0.7
KULA	Kula-Manisa	1.52	53	ePn	Pn	20 18 33.3	-0.7
DENT	Denizli	1.53	84	ePN	Pn	20 18 33.2	-1.0
DENT	Denizli	1.53	84	ePn	Pn	20 18 33.2	-1.0
DNZL	Cakiroluk	1.54	86	iP	Pn	20 18 34.5	+0.2
DNZL				iS	Sn	20 18 57.7	+3.3
DNZL	Cakiroluk	1.54	86	iP	Pn	20 18 34.5	+0.2
PRK	Paraskevi	1.76	338	ePN	Pn	20 18 36.4	-1.0
PRK	Paraskevi	1.76	338	ePn	Pn	20 18 36.4	-1.0
BALY	Balya	2.16	10	iP	Pn	20 18 45.0	+2.1
BALY				iS	Sn	20 19 09.7	-0.2
BALY	Balya	2.16	10	iP	Pn	20 18 45.0	+2.1
BALY				iS	Sn	20 19 09.7	-0.2

*IDC **01** 20:19:14.4±1.7, 57°.00N×157°.09W, h0km, mb3.3/4, mb1 3.8/5, mb1mx3.4/27, mbtmp3.4/5, ML3.4/1, Error ellipse: s-maj=48.1km s-min=30.0km az=7.0*
*NEIC **01** 20:19:15.6, 56°.93N×156°.86W, h15km, ML3.4(AEIC), After AEIC.*
*ISCJB **01** 20:19:16.0±1.3, 57°.04N±0°.07×157°.1W±0°.1, h17km±13km, mb3.3/4, Error ellipse: s-maj=15.7km s-min=6.5km az=42.3*
ISC 01 20:19:15.7±1.4, 56°.99N±0°.07×157°.0W±0°.1, h4km±11km, n13, σ1§06/16, mb3.3/4, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHGN	Chignik	1.03	228	eP	Pg	20 19 34.6	-0.7
CHGN				eS	Sg	20 19 48.6	-0.1
OHAK	Old Harbor	2.06	82	eP	Pn	20 19 50.9	-0.1
SDPT	Sand Point	2.53	231	ePn	Pn	20 19 57.0	-0.5
SDPT				eSn	Sn	20 20 29.6	+0.9
KDAK	Kodiak Island	2.54	70	P	Pn	20 19 58.0	+0.4
RSO	Redoubt South	4.13	31	ePn	Pn	20 20 21.3	+1.8
RSO				Sn	Sn	20 21 06.3	-1.9
SVW2	Sparrevohn	4.19	10	ePn	Pn	20 20 18.5	-1.8
TTA	Tatalina	5.98	5	eP	Pn	20 20 45.7	+0.9
BPAW	Bear Paw Mtn.	7.73	20	ePn	Pn	20 21 11.1	+2.3
	4.3nm,0.8s						
INK	Inuvik	15.53	34	Pn	Pn	20 22 55.6	+0.5
	0.1nm,0.3s,baz=225,slow=13,SNR=1.6						
YKA	Yellowknife Ar	21.75	58	P	P	20 24 06.9	-0.8
	0.7nm,0.8s,mb3.1,baz=269,slow=11,SNR=3.8						
NVAR	Mina Array Bea	31.42	109	P	P	20 25 37.2	-0.5
	0.2nm,0.5s,mb3.2,baz=325,slow=7.7,SNR=2.7						
PDAR	Pinedale Array	33.01	95	P	P	20 25 52.0	+0.5
	0.2nm,0.4s,mb3.4,baz=308,slow=10,SNR=2.3						
CMAR	Chiang Mai Arr	82.10	292	P	P	20 31 36.6	-0.7
	0.4nm,0.7s,mb3.5,baz=11,slow=6.4,SNR=4.6						

*IDC **01** 21:29:45.4±1.1, 36°.53N×21°.60E, h0km, mb3.6/7, mb1 3.6/10, mb1mx3.4/28, mbtmp3.6/10, ML3.1/3, MS2.8/1, Ms1 2.8/1, ms1mx1.9/36, Error ellipse: s-maj=22.4km s-min=20.0km az=13.0*
*ATH **01** 21:29:47.5, 36°.24N×21°.36E, h31km±1km, MD3.8/13, ML3.3*
*NEIC **01** 21:29:47.5, 36°.24N×21°.36E, h31km, ML3.3(ATH), After ATH.*
*CSEM **01** 21:29:49.0±0.2, 36°.27N×21°.42E, h20km, ML4.0/5, Error ellipse: s-maj=4.5km s-min=3.4km az=24.0*
*THE **01** 21:29:49.8, 36°.28N×21°.43E, h21km±3km, ML4.0/5, Error ellipse: s-maj=3.4km s-min=1.9km az=215.0*
ISC 01 21:29:49.5±0.8, 36°.26N±0°.03×21°.40E±0°.03, h26km±7km, n190, σ1§05/239, mb3.5/8, 2C-1D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.69	24	P	Pb	21 30 02.3	-0.6
PYL				S	Sb	21 30 12.7	+0.6
PYL	PYLOS	0.69	24	ePN	Pb	21 30 02.4	-0.5
PYL				eSN	Sb	21 30 12.4	+0.3
PYL	PYLOS	0.69	24	ePn	Pb	21 30 02.4	-0.5
PYL				eSn	Sb	21 30 12.4	+0.3
PYL				S	Sb	21 30 12.7	+0.6
ITM	Ithomi	1.01	25	ePn	Pn	21 30 07.6	-0.3
ITM				eSn	Sn	21 30 21.5	+0.2
ITM	Ithomi	1.01	25	P	Pn	21 30 07.3	-0.6
ITM				S	Sn	21 30 21.9	+0.6
ITM	Ithomi	1.01	25	ePN	Pn	21 30 07.6	-0.3
ITM				eSN	Sn	21 30 21.5	+0.2
ITM	Ithomi	1.01	25	P	Pn	21 30 07.3	-0.6
ITM	Ithomi	1.01	25	ePn	Pn	21 30 07.6	-0.3
ITM				eSn	Sn	21 30 21.5	+0.2
ITM				S	Sn	21 30 21.9	+0.6
VLI	Veliai	1.32	69	ePn	Pn	21 30 12.6	+0.4
VLI				eSn	Sn	21 30 30.3	+1.3
VLI	Veliai	1.32	69	ePN	Pn	21 30 12.6	+0.4
VLI				eSN	Sn	21 30 30.3	+1.3
VLI	Veliai	1.32	69	ePn	Pn	21 30 12.6	+0.4
VLI				eSn	Sn	21 30 30.3	+1.3
KYTH	Kithira	1.32	89	ePn	Pn	21 30 12.9	+0.6
KYTH	Kithira	1.32	89	ePN	Pn	21 30 12.9	+0.6
KYTH	Kithira	1.32	89	ePn	Pn	21 30 12.9	+0.6
VLX	Vlachokerasia	1.36	35	P	Pn	21 30 12.6	-0.1
VLX				S	Sn	21 30 31.1	+1.2
VLX	Vlachokerasia	1.36	35	ePN	Pn	21 30 12.9	+0.2
VLX				eSN	Sn	21 30 31.1	+1.2
VLX	Vlachokerasia	1.36	35	P	Pn	21 30 12.6	-0.1
VLX	Vlachokerasia	1.36	35	ePn	Pn	21 30 12.9	+0.2
VLX				S	Sn	21 30 31.1	+1.2
RLS	Riolos of Patr	1.79	2	ePb	Pn	21 30 19.5	+0.8
RLS				eSn	Sn	21 30 41.0	+0.4
RLS	Riolos of Patr	1.79	2	ePB	Pn	21 30 19.5	+0.8
RLS				eSN	Sn	21 30 41.0	+0.4
RLS	Riolos of Patr	1.79	2	ePb	Pn	21 30 19.5	+0.8
RLS				eSn	Sn	21 30 41.0	+0.4
GUR	Goura	1.83	24	P	Pn	21 30 19.9	+0.6
GUR				S	Sn	21 30 42.4	+0.8
GUR	Goura	1.83	24	ePB	Pn	21 30 20.3	+1.0
GUR	Goura	1.83	24	P	Pn	21 30 19.9	+0.6
GUR	Goura	1.83	24	ePb	Pn	21 30 20.3	+1.0
GUR				S	Sn	21 30 42.4	+0.8
KFL	Anninata	1.91	345	P	Pn	21 30 21.2	+0.9
VLS	Valsamata	2.02	342	ePb	Pn	21 30 22.3	+0.5
VLS				eSn	Sn	21 30 46.5	+0.3
VLS	Valsamata	2.02	342	P	Pn	21 30 22.4	+0.6
VLS				S	Sn	21 30 47.3	+1.1
VLS	Valsamata	2.02	342	ePB	Pn	21 30 22.2	+0.4
VLS				eSN	Sn	21 30 46.5	+0.3
VLS	Valsamata	2.02	342	P	Pn	21 30 22.4	+0.6
VLS				eSn	Sn	21 30 46.5	+0.3
VLS				S	Sn	21 30 47.3	+1.1
LAKA	Lakka	2.03	13	P	Pn	21 30 23.2	+1.3
LAKA	Lakka	2.03	13	P	Pn	21 30 23.2	+1.3
LTK	Loutraki	2.16	35	P	Pn	21 30 23.4	-0.3
LTK	Loutraki	2.16	35	ePN	Pn	21 30 23.6	-0.1
LTK				eSN	Sn	21 30 51.0	+1.3
LTK	Loutraki	2.16	35	ePn	Pn	21 30 23.6	-0.1
LTK				eSn	Sn	21 30 51.0	+1.3
EFP	Efpalio	2.20	10	P	Pn	21 30 24.8	+0.5
EFP	Efpalio	2.20	10	ePB	Pn	21 30 25.8	+1.5
EFP	Efpalio	2.20	10	P	Pn	21 30 24.8	+0.5
EFP	Efpalio	2.20	10	ePb	Pn	21 30 25.8	+1.5
KALE	Kalithea	2.21	15	P	Pn	21 30 25.5	+1.1
KALE	Kalithea	2.21	15	P	Pn	21 30 25.5	+1.1
KARN	Karanos	2.22	112	P	Pn	21 30 24.8	+0.2
KARN	Karanos	2.22	112	ePN	Pn	21 30 24.8	+0.2
KARN				eSN	Sn	21 30 51.8	+0.7
KARN	Karanos	2.22	112	P	Pn	21 30 24.8	+0.2
KARN				eSn	Sn	21 30 51.8	+0.7
NAIG	Nisos Aigina	2.24	48	ePn	Pn	21 30 24.4	-0.5
NAIG	Nisos Aigina	2.24	48	ePN	Pn	21 30 24.4	-0.5
NAIG	Nisos Aigina	2.24	48	ePn	Pn	21 30 24.4	-0.5
DSF	Desfina	2.33	22	P	Pn	21 30 26.0	0.0
DSF				S	Sn	21 30 55.0	+1.2
DSF	Desfina	2.33	22	P	Pn	21 30 26.0	0.0
DSF				S	Sn	21 30 55.0	+1.2
VAM	Vamos	2.43	110	ePn	Pn	21 30 27.6	+0.1
VAM	Vamos	2.43	110	ePN	Pn	21 30 27.6	+0.1
VAM	Vamos	2.43	110	ePn	Pn	21 30 27.6	+0.1
VLY	Voula,Athens	2.49	50	ePn	Pn	21 30 27.8	-0.5
VLY	Voula,Athens	2.49	50	ePN	Pn	21 30 27.8	-0.5
VLY	Voula,Athens	2.49	50	ePn	Pn	21 30 27.8	-0.5
ATH	Athens Observa	2.52	47	ePn	Pn	21 30 28.2	-0.5
ATH	Athens Observa	2.52	47	ePN	Pn	21 30 28.2	-0.5
ATH	Athens Observa	2.52	47	ePn	Pn	21 30 28.2	-0.5
GVD	Gavdhos	2.61	122	ePn	Pn	21 30 29.5	-0.5
GVD	Gavdhos	2.61	122	P	Pn	21 30 31.1	+1.1
GVD	Gavdhos	2.61	122	ePN	Pn	21 30 29.5	-0.5
GVD	Gavdhos	2.61	122	ePn	Pn	21 30 29.5	-0.5
GVD	Gavdhos	2.61	122	P	Pn	21 30 31.1	+1.1
PTL	Penteli	2.66	47	ePn	Pn	21 30 30.1	-0.5
PTL	Penteli	2.66	47	ePN	Pn	21 30 30.1	-0.5
PTL	Penteli	2.66	47	ePn	Pn	21 30 30.1	-0.5
EVR	Evrytania	2.67	7	ePb	Pb	21 30 33.8	-2.8
EVR	Evrytania	2.67	7	ePB	Pb	21 30 33.8	-2.8
EVR	Evrytania	2.67	7	ePb	Pb	21 30 33.8	-2.8
LKR	Lokris	2.70	28	ePn	Pn	21 30 31.0	-0.2
LKR	Lokris	2.70	28	P	Pn	21 30 30.3	-0.9
LKR	Lokris	2.70	28	ePN	Pn	21 30 31.0	-0.2
LKR	Lokris	2.70	28	P	Pn	21 30 30.3	-0.9
LKR	Lokris	2.70	28	ePn	Pn	21 30 31.0	-0.2
ATAL	Atalanti	2.75	28	P	Pn	21 30 31.5	-0.3
ATAL	Atalanti	2.75	28	P	Pn	21 30 31.5	-0.3
AGG	Agios Georgios	2.85	15	ePn	Pn	21 30 34.5	+1.2
AGG	Agios Georgios	2.85	15	P	Pn	21 30 34.1	+0.8
AGG	Agios Georgios	2.85	15	ePN	Pn	21 30 34.5	+1.2
AGG	Agios Georgios	2.85	15	P	Pn	21 30 34.1	+0.8
AGG	Agios Georgios	2.85	15	ePn	Pn	21 30 34.5	+1.2
IDI	Anoyia	3.00	108	Pn	Pn	21 30 34.7	-0.6
	0.9nm,0.3s,baz=292,slow=15,SNR=28						
IDI				Sn	Sn	21 31 11.2	+0.7
	7.8nm,0.3s,baz=352,slow=18,SNR=9.0						
IDI	Anoyia	3.00	108	Pn	Pn	21 30 34.7	-0.6
IDI				Sn	Sn	21 31 11.1	+0.7
THL	Klokotos Trika	3.33	8	P	Pn	21 30 40.6	+0.7
THL	Klokotos Trika	3.33	8	ePN	Pn	21 30 40.7	+0.8
THL	Klokotos Trika	3.33	8	P	Pn	21 30 40.6	+0.7
NEO	Neokhori	3.37	25	ePn	Pn	21 30 40.2	-0.1
NEO	Neokhori	3.37	25	ePN	Pn	21 30 40.2	-0.1
NEO	Neokhori	3.37	25	ePn	Pn	21 30 40.2	-0.1
IGT	Igoumenitsa	3.37	346	P	Pn	21 30 40.7	+0.3
IGT	Igoumenitsa	3.37	346	P	Pn	21 30 40.7	+0.3
IGT	Igoumenitsa	3.37	346	P	Pn	21 30 40.7	+0.3
XOR	Xorichti	3.41	24	P	Pn	21 30 41.4	+0.5
XOR	Xorichti	3.41	24	P	Pn	21 30 41.4	+0.5
XOR	Xorichti	3.41	24	P	Pn	21 30 41.4	+0.5
JAN	Janina	3.42	353	ePn	Pn	21 30 41.3	+0.3
JAN	Janina	3.42	353	ePN	Pn	21 30 41.3	+0.3
JAN	Janina	3.42	353	ePn	Pn	21 30 41.3	+0.3
APE	Apeiranthos	3.42	75	ePn	Pn	21 30 41.7	+0.6
APE	Apeiranthos	3.42	75	ePN	Pn	21 30 41.7	+0.6
APE	Apeiranthos	3.42	75	ePn	Pn	21 30 41.7	+0.6
LAST	Lasithi	3.50	107	ePn	Pn	21 30 41.6	-0.5
LAST	Lasithi	3.50	107	ePN	Pn	21 30 41.6	-0.5
LAST	Lasithi	3.50	107	ePn	Pn	21 30 41.6	-0.5
AOS	Alonnisos	3.51	33	P	Pn	21 30 40.8	-1.5
AOS	Alonnisos	3.51	33	P	Pn	21 30 40.8	-1.5
AOS				S	Sn	21 31 22.7	-0.2
AOS	Alonnisos	3.51	33	P	Pn	21 30 40.8	-1.5
AOS				S	Sn	21 31 22.7	-0.2
NPS	Neapolis	3.57	105	ePn	Pn	21 30 42.6	-0.5
NPS	Neapolis	3.57	105	ePN	Pn	21 30 42.6	-0.5
NPS	Neapolis	3.57	105	ePn	Pn	21 30 42.6	-0.5
KEK	Kerkira	3.67	340	ePn	Pn	21 30 44.7	+0.2
KEK	Kerkira	3.67	340	P	Pn	21 30 45.1

DIVS	Divibare	7.90	353	⇓iPn	Pn	21 31 40.7	-1.9
NVLJ	Novalja	9.67	331	ePn	Pn	21 32 05.2	-1.6
NVLJ				Sn	Sn	21 33 45.6	-8.9
NVLJ	Novalja	9.67	331	ePn	Pn	21 32 05.1	-1.7
MMAI	Mount Meron Ar	11.98	102	Pn	Pn	21 32 33.4	-5.1
0.2nm,0.3s,baz=314,slow=13,SNR=2.8							
MMAI				Sn	Sn	21 34 39.1	-12
0.5nm,0.3s,baz=285,slow=29,SNR=3.3							
EIL	Elat	13.13	116	Pn	Pn	21 32 51.8	-2.5
0.2nm,0.3s,baz=311,slow=9.3,SNR=4.5							
EIL				Sn	Sn	21 35 05.7	-14
0.3nm,0.3s,baz=240,slow=20,SNR=4.0							
EIL	Elat	13.13	116	Pn	Pn	21 32 51.8	-2.5
HFS	Hagfors	24.40	351	P	P	21 35 03.4	-2.0
0.4nm,0.3s,mb3.3,baz=138,slow=10.0,SNR=6.7							
HFS	Hagfors	24.40	351	P	P	21 35 03.4	-2.0
FINES	FINESS Array B	25.38	5	P	P	21 35 10.7	-3.6
0.6nm,0.4s,mb3.5,baz=171,slow=15,SNR=6.5							
FINES				LR	LR	21 46 27.7	
comp=Z,23nm,20.1s,baz=158,slow=40							
TORD	Torodi Ar. Bea	29.04	223	P	P	21 35 49.8	+2.3
0.1nm,0.5s,mb2.9,baz=30,slow=9.1,SNR=2.7							
ARCES	ARCESS Array B	33.41	3	P	P	21 36 23.4	-2.0
0.5nm,0.7s,mb3.5,baz=184,slow=4.9,SNR=4.2							
ARCES	ARCESS Array B	33.41	3	P	P	21 36 23.4	-2.0
BVAR	Borovoye Array	37.85	48	P	P	21 37 01.3	-2.4
0.2nm,0.3s,mb3.3,baz=246,slow=10,SNR=2.4							
MKAR	Makanchi Array	45.73	57	P	P	21 38 05.8	-2.5
0.8nm,0.4s,mb4.0,baz=287,slow=5.4,SNR=6.7							
ZALV	Zalesovo Beam	46.47	47	P	P	21 38 10.9	-3.1
0.9nm,0.3s,mb4.2,baz=272,slow=9.8,SNR=5.1							
SONM	Songino Array	61.14	50	P	P	21 39 56.2	-5.2
0.2nm,0.6s,mb3.4,baz=269,slow=8.4,SNR=3.0							

*ISCJB **01** 21:39:48.2±1.5, 16°.07S±0°.07×173°.88W±0°.08, h81km±14km, mb4.3/20, Error ellipse: s-maj=14.6km s-min=10.1km az=35.7*
*NEIC **01** 21:39:49.8±0.9, 16°.09S×173°.83W, h82km±9km, mb4.4/9, Error ellipse: s-maj=9.8km s-min=6.3km az=125.0*
*IDC **01** 21:39:53.2±0.7, 16°.20S×173°.83W, h111km±5km, mb4.0/8, mb1 4.1/8, mb1mx3.9/16, mbtmp4.0/8, Error ellipse: s-maj=35.6km s-min=16.8km az=136.0*
*SZGRF **01** 21:39:55.4, 16°.38S×176°.76W, h114km, Fiji Islands region*
ISC 01 21:39:49.7±1.4, 16°.09S±0°.07×173°.85W±0°.08, h80km±14km, h114km±2.3km: pP-P, n83, σ0s76/41, mb4.3/20, 7C, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.95	43	P	Pn	21 40 33.5	-0.9
140nm,0.3s,baz=73,slow=1.5,SNR=226							
AFI				S	Sn	21 41 04.1	-4.8
218nm,0.3s,baz=81,slow=21,SNR=18							
AFI	Afiamalu	2.95	43	P	Pn	21 40 33.5	-0.9
AFI				S	Sn	21 41 04.1	-4.8
MSVF	Nonsavu	7.92	257	ePn	Pn	21 41 50.9	+8.8
36nm,0.8s							
RAO	Raoul Island	13.63	195	ePn	Pn	21 43 01.0	+1.6
RAR	Rarotonga	14.28	113	ePn	Pn	21 43 08.5	+0.5
URZ	Urewera	23.48	198	eP	P	21 44 51.8	-0.3
14nm,0.8s,mb4.3							
SNZO	South Karori	27.01	199	eP	P	21 45 23.6	-0.5
RPZ	Rata Peaks	30.39	202	P	P	21 45 52.5	-1.6
6.1nm,0.7s,mb4.3,baz=55,slow=16,SNR=2.5							
CTAO	Charters Tower	38.07	258	eP	P	21 47 01.4	+0.6
1.2nm,0.5s,mb4.0							
CMSA	Cobar Meteorol	39.83	240	eP	P	21 47 14.9	-0.5
TAU	Tasmania Unive	42.52	223	eP	P	21 47 36.9	-0.3
STKA	Stephens Creek	43.32	240	eP	P	21 47 43.7	-0.2
8.4nm,1.0s,mb4.4							
STKA	Stephens Creek	43.32	240	P	P	21 47 43.8	-0.1
7.9nm,0.8s,mb4.5,baz=71,slow=7.8,SNR=16							
STKA				PcP	PcP	21 49 32.4	+0.9
1.1nm,0.8s,baz=56,slow=7.3,SNR=3.8							
STKA	Stephens Creek	43.32	240	eP	P	21 47 43.7	-0.1
2.0nm,0.9s,mb3.9							
STKA				PcP	PcP	21 49 32.4	+0.9
MIDW	Midway	44.17	356	P	P	21 47 51.9	+1.3
BBOO	Buckleboo	48.09	240	eP	P	21 48 20.8	-0.7
3.5nm,0.4s,mb4.5							
WRAB	Tennant Creek	49.26	257	eP	P	21 48 30.2	-0.4
5.5nm,0.8s,mb4.5							
ASAR	Alice Springs	49.49	252	P	P	21 48 31.7	-0.6
8.1nm,0.6s,mb4.9,baz=88,slow=8.2,SNR=170							
ASAR				PcP	PcP	21 49 53.3	0.0
1.0nm,0.6s,baz=101,slow=4.4,SNR=5.1							
GUMO	Guam	50.34	304	eP	P	21 48 39.4	+0.6
KAKA	Kakadu	52.02	266	eP	P	21 48 52.2	+0.8
9.4nm,0.8s,mb4.9							
KNA	Kununurra	55.02	262	eP	P	21 49 13.3	-0.1
7.6nm,0.5s,mb5.0							
FITZ	Fitzroy Crossi	57.65	259	eP	P	21 49 32.4	+0.4
4.7nm,0.6s,mb4.7							
FITZ	Fitzroy Crossi	57.65	259	eP	P	21 49 32.4	+0.3
2.0nm,0.5s,mb4.4							
RPN	Rapa Nui	60.43	112	eP	P	21 49 50.6	-0.6
SBA	Scott Base	62.53	185	eP	P	21 50 07.4	+2.9
4.3nm,0.7s,mb4.5							
MBWA	Marble Bar	62.75	254	eP	P	21 50 06.3	-0.6
MBWA	Marble Bar	62.75	254	eP	P	21 50 06.5	-0.4
4.2nm,0.4s,mb4.7							
MEEK	Meekatharra	63.15	248	eP	P	21 50 08.9	-0.6
CASY	Casey	69.61	205	eP	P	21 50 50.1	+0.2
3.0nm,0.6s,mb4.3							
PETK	Petropavlovsk-	73.15	343	P	P	21 51 11.0	-0.3
2.1nm,0.7s,mb4.1,baz=134,slow=10,SNR=2.9							
YBH	Yreka Blue Hor	74.41	37	P	P	21 51 19.8	+0.9
0.5nm,0.3s,mb3.7,baz=212,slow=9.5,SNR=2.5							
YBH				pP	pP	21 51 47.8	+7.8
2.2nm,0.9s,baz=277,slow=10,SNR=3.4							
NVAR	Mina Array Bea	75.13	42	pP	pP	21 51 51.7	+7.4
1.3nm,0.9s,baz=223,slow=11,SNR=5.0							
TXAR	Lajitas Array	81.35	56	P	P	21 51 58.2	+0.4
0.1nm,0.7s,mb2.8,baz=209,slow=5.2,SNR=2.1							
TXAR				pP	pP	21 52 26.8	+7.5
0.9nm,1.0s,baz=208,slow=7.0,SNR=4.9							
TXAR	Lajitas Array	81.35	56	P	P	21 51 58.2	+0.4
TXAR				pP	pP	21 52 26.8	+7.5
PDAR	Pinedale Array	83.06	42	P	P	21 52 05.4	-1.0
0.4nm,0.7s,mb3.4,baz=238,slow=2.8,SNR=3.6							
PDAR				pP	pP	21 52 35.8	+7.9
0.6nm,0.8s,baz=224,slow=2.5,SNR=4.0							
COLA	College	83.11	11	eP	P	21 52 05.8	-0.4
2.2nm,0.5s,mb4.2							
MAW	Mawson	87.01	199	P	P	21 52 26.0	+0.2
3.7nm,0.8s,mb4.4,baz=108,slow=9.0,SNR=6.4							
KULM	Kulim	87.14	276	eP	P	21 52 27.4	-0.1
CMAR	Chiang Mai Arr	92.42	288	P	P	21 52 52.8	+0.7
0.8nm,0.9s,mb4.0,baz=117,slow=2.5,SNR=6.3							
CHTO	Chiang Mai	92.51	289	P	P	21 52 52.7	+0.2
MKAR	Makanchi Array	110.99	314	PKiKP	PKiKP	21 58 12.7	-1.0
0.2nm,0.2s,baz=73,slow=2.5,SNR=2.6							
ARCES	ARCESS Array B	125.22	352	PKP	PKPdf	21 58 39.9	-0.5
1.4nm,0.7s,baz=347,slow=2.6,SNR=8.6							
FINES	FINESS Array B	132.51	347	PKP	PKPdf	21 58 54.7	+0.2
0.3nm,0.5s,baz=25,slow=3.7,SNR=5.2							
STHS	Stebnicka Huta	144.56	343	ePKP	PKPdf	21 59 16.8	0.0
KOLS	Kolonicke sedl	144.69	342	ePKP	PKPdf	21 59 16.7	-0.4
KMBO	Kilima Mbogo	144.84	244	PKP	PKPdf	21 59 18.6	+0.2
4.0nm,0.9s,baz=41,slow=6.4,SNR=10.0							
DPC	Dobruska-Polom	144.85	349	ePKP	PKPdf	21 59 17.2	-0.1
DPC				ex	x	21 59 49.7	
OKC	Ostrava-Krasne	144.96	346	ePKP	PKPdf	21 59 17.3	-0.2
OKC				ex	x	21 59 50.7	
MOX	Moxa	145.25	354	ePKP	PKPdf	21 59 18.3	+0.3
MOX	Moxa	145.25	354	ePKPbc	PKPbc	21 59 17.9	+0.1
PLN	Plauen	145.34	353	ePKPbc	PKPbc	21 59 19.2	+1.1
WERD	Werda	145.37	353	ePKPbc	PKPbc	21 59 18.0	-0.2
TANN	Tannenbergstha	145.38	353	ePKPbc	PKPbc	21 59 18.1	-0.1
GUNZ	Gunzen	145.45	353	ePKPbc	PKPbc	21 59 18.0	-0.5
PRU	Pruhonice	145.51	350	ePKP	PKPdf	21 59 19.4	+0.9
PRU				ex	x	21 59 50.1	
WERN	Wernitzgruen	145.52	353	ePKPbc	PKPbc	21 59 18.9	+0.2
NKC	Novy Kostel	145.56	353	ePKPbc	PKPbc	21 59 19.2	+0.4
KECS	Kecovo	145.62	343	ePKP	PKPdf	21 59 19.8	+1.1
VYHS	Vyhne	146.04	345	ePKP	PKPdf	21 59 20.5	+1.1
VYHS				e		21 59 52.4	
ROTZ	Rotzenmuhle	146.05	353	ePKPbc	PKPbc	21 59 20.3	0.0
BAIF	Baives	146.08	2	ePKP1	PKPbc	21 59 20.7	+0.3
GRF	Grafenberg Arr	146.23	354	ePKPbc	PKPbc	21 59 21.1	+0.2
GRF				epPKPbc	pPKPbc	21 59 51.6	+8.4
GRF	Grafenberg Arr	146.23	354	ePKP	PKPdf	21 59 21.1	+1.4
GRF				pPKPbc	pPKPbc	21 59 51.6	+8.4
BR131	Keskin Array S	146.41	320	ePKPbc	PKPbc	21 59 21.9	+0.2
BRTR	Keskin Array B	146.41	320	PKPbc	PKPbc	21 59 21.9	+0.1
2.9nm,0.8s,baz=91,slow=2.3,SNR=22							
BRTR				pPKPbc	pPKPbc	21 59 51.5	+7.4
1.3nm,0.9s,baz=163,slow=2.1,SNR=2.6							
KHC	Kasperske Hory	146.49	351	ePKP	PKPdf	21 59 21.4	+1.2
KHC				ex	x	21 59 53.1	
GEC2	GERESS Array S	146.75	351	ePKPbc	PKPbc	21 59 22.3	-0.1
GERES	GERESS Array B	146.75	351	PKPbc	PKPbc	21 59 22.3	-0.1
1.0nm,0.7s,baz=29,slow=3.0,SNR=11							
GERES				pPKPbc	pPKPbc	21 59 51.4	+6.6
0.3nm,0.7s,baz=1.6,slow=9.3,SNR=2.1							
FLN	La Foliniere	146.96	8	⇑iPKP1	PKPbc	21 59 22.5	-0.5
19nm,1.0s							
SGMF	Saint Gilles	147.13	11	⇑iPKP1	PKPbc	21 59 23.1	-0.4
LDF	La Druitiere	147.18	8	⇑iPKP1	PKPbc	21 59 22.9	-0.7
5.8nm,0.7s							
GRR	Gorron	147.28	9	ePKP1	PKPbc	21 59 23.6	-0.3
3.6nm,0.5s							
MEZF	Maizieres J'vi	147.66	1	ePKP1	PKPbc	21 59 25.0	+0.1
CDF	Champ du Feu	147.75	359	⇑iPKP1	PKPbc	21 59 25.3	+0.1
6.1nm,0.9s							
HAU	Haudompre	148.17	360	ePKP1	PKPbc	21 59 26.3	0.0
6.9nm,0.8s							
MMAI	Mount Meron Ar	148.65	308	PKPbc	PKPbc	21 59 28.4	+0.3
2.3nm,0.6s,baz=80,slow=4.6,SNR=8.2							
LOR	Lormes	148.85	3	⇑iPKP1	PKPbc	21 59 28.2	+0.1
3.6nm,0.7s							
SSF	Saint Saulge	149.04	4	⇑iPKP1	PKPbc	21 59 28.8	+0.2
6.9nm,0.8s							
AVF	Avril sur Loir	149.30	4	ePKP1	PKPbc	21 59 29.0	-0.2
4.7nm,0.9s							
BGF	Bois d'Agland	149.50	4	ePKP1	PKPbc	21 59 29.8	+0.1
12nm,1.0s							
CABF	La Chapelle	149.57	0	⇑iPKP1	PKPbc	21 59 30.6	+0.7
12nm,0.9s							
LPL	La Plagne	150.66	359	ePKP1	PKPbc	21 59 33.4	+0.8
LPG	La Plagne	150.68	359	ePKP1	PKPbc	21 59 33.8	+1.2
5.7nm,0.7s							

IDC 01 22:13:38.7±3.6, 9°.51S×122°.60E, h0km, mb3.8/2, mb1 3.7/3, mb1mx3.4/17, mbtmp3.7/3, ML3.4/1, Error ellipse: s-maj=312.0km s-min=37.0km az=61.0, Savu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	17.75	144	P	Pn	22 17 47.5	+0.2
0.1nm,0.3s,baz=324,slow=13,SNR=7.0							
SONM	Songino Array	58.87	347	P	P	22 23 39.6	+0.4
0.5nm,0.5s,baz=163,slow=7.9,SNR=8.6							
ZALV	Zalesovo Beam	70.82	337	P	P	22 24 56.8	-0.2
0.4nm,0.3s,baz=141,slow=5.3,SNR=3.6							

*SOF **01** 22:21:51.6, 39°.93N×26°.27E, h5km, MD2.8*
*ISK **01** 22:21:55.1, 40°.15N×26°.91E, h5km, MD3.4*
*NEIC **01** 22:21:55.4, 40°.15N×26°.92E, h5km, MD3.7(ATH), MD3.3(ISK), After ISK.*
*DDA **01** 22:21:55.9, 40°.16N×26°.94E, h24km±1km, Md3.1*
*CSEM **01** 22:21:56.5±0.1, 40°.16N×26°.88E, h5km, MD3.4, Error ellipse: s-maj=1.6km s-min=1.5km az=7.0*
*ATH **01** 22:21:56.0, 40°.18N×26°.90E, h24km, MD3.7/11*
*ISCJB **01** 22:21:56.0±0.4, 40°.17N±0°.01×26°.87E±0°.02, h5km±3km, Error ellipse: s-maj=2.4km s-min=2.1km az=29.0*
*THE **01** 22:21:57.4, 40°.16N×26°.82E, h6km±2km, ML3.6/8, Error ellipse: s-maj=2.6km s-min=0.9km az=69.0*
ISC 01 22:21:56.7±0.3, 40°.16N±0°.01×26°.87E±0°.02, h6km±2km, n179, σ0s79/246, 6C-3D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPK	Lapseki	0.23	338	PG	Pg	22 22 01.3	+0.1
LPK	Lapseki	0.23	338	Pg	Pg	22 22 01.7	+0.4
LPK	Lapseki	0.23	338	iPg	Pg	22 22 01.3	0.0
EZN	Ezine	0.54	232	ePG	Pg	22 22 07.0	0.0
EZN	Ezine	0.54	232	Pg	Pg	22 22 07.4	+0.3
EZN	Ezine	0.54	232	ePg	Pg	22 22 07.1	0.0
RKY	Sarkoy-Tekirda	0.57	24	ePG	Pg	22 22 07.5	-0.4
RKY	Sarkoy-Tekirda	0.57	24	Pg	Pg	22 22 07.5	-0.3
RKY				Sg	Sg	22 22 15.5	+0.2
RKY	Sarkoy-Tekirda	0.57	24	ePg	Pg	22 22 07.5	-0.3
RKY				Sg	Sg	22 22 15.5	+0.2
SART	Tekirdag	0.58	24	iP	Pg	22 22 07.5	-0.4
SART				iS	Sg	22 22 15.3	-0.1
SART	Tekirdag	0.58	24	iP	Pg	22 22 07.4	-0.5
SART				iS	Sg	22 22 15.3	-0.1
MFT	Murefte	0.70	26	ePG	Pg	22 22 09.2	-1.0
MFT				eSG	Sg	22 22 21.0	+1.7
MFT	Murefte	0.70	26	ePg	Pg	22 22 09.2	-1.0
MFT				eSg	Sg	22 22 21.0	+1.7
BALY	Balya	0.71	126	iP	Pg	22 22 09.8	-0.6
BALY				iS	Sg	22 22 19.3	-0.3
BALY	Balya	0.71	126	iP	Pg	22 22 09.8	-0.6
BALY				iS	Sg	22 22 19.3	-0.3
GADA	Gvkgeada	0.75	273	ePG	Pg	22 22 11.4	+0.3
GADA	Gvkgeada	0.75	273	Pg	Pg	22 22 11.7	+0.6
GADA	Gvkgeada	0.75	273	ePg	Pg	22 22 11.4	+0.3
EDC	Edincik	0.78	76	ePG	Pg	22 22 10.9	-0.8
EDC	Edincik	0.78	76	ePg	Pg	22 22 10.9	-0.8
ENEZ	Enez	0.80	317	ePG	Pg	22 22 11.7	-0.3
ENEZ	Enez	0.80	317	ePg	Pg	22 22 11.7	-0.3
BNT	Bandirma	0.82	76	ePG	Pg	22 22 11.0	-1.6
BNT	Bandirma	0.82	76	Pg	Pg	22 22 11.2	-1.4
AYVA	Ayvalik	0.86	189	iP	Pg	22 22 13.3	0.0
AYVA				iS	Sg	22 22 25.5	+1.0
AYVA	Ayvalik	0.86	189	iP	Pg	22 22 13.3	0.0
AYVA				iS	Sg	22 22 25.5	+1.0
BALB	Balikesir	0.93	124	ePG	Pg	22 22 13.7	-0.9
BALB				eSG	Sg	22 22 27.3	+0.6
BALB	Balikesir	0.93	124	ePg	Pg	22 22 13.7	-0.9
BALB				eSg	Sg	22 22 27.3	+0.6
ALN	Alexandroupoli	0.97	320	ePn	Pg	22 22 14.6	-0.7
ALN				eSn	Sg	22 22 27.6	-0.3
ALN	Alexandroupoli	0.97	320	P	Pg	22 22 14.7	-0.6
ALN				S	Sg	22 22 28.2	+0.3
ALN	Alexandroupoli	0.97	320	ePN	Pg	22 22 14.6	-0.7
ALN				eSN	Sg	22 22 27.6	-0.3
ALN	Alexandroupoli	0.97	320	P	Pg	22 22 14.7	-0.6
ALN				eSn	Sg	22 22 27.6	-0.3
ALN				S	Sg	22 22 28.2	+0.3
TKR	Tekirdag	0.97	31	ePG	Pg	22 22 14.7	-0.7
TKR				eSG	Sg	22 22 29.3	+1.4
TKR	Tekirdag	0.97	31	Pg	Pg	22 22 14.3	-1.1
TKR	Tekirdag	0.97	31	ePg	Pg	22 22 14.7	-0.7
TKR				eSg	Sg	22 22 29.3	+1.3
PRK	Paraskevi	1.02	207	ePn	Pg	22 22 16.1	-0.3
PRK				eSn	Sg	22 22 30.8	+1.1
PRK	Paraskevi	1.02	207	P	Pg	22 22 16.1	-0.3
PRK				S	Sg	22 22 30.6	+0.9
PRK	Paraskevi	1.02	207	ePN	Pg	22 22 16.1	-0.3
PRK				eSN	Sg	22 22 30.8	+1.1
PRK	Paraskevi	1.02	207	P	Pg	22 22 16.1	-0.3
PRK				S	Sg	22 22 30.6	+0.9
KCT	Karacabey	1.14	84	ePN	Pg	22 22 17.5	-1.2
KCT				eSN	Sg	22 22 34.5	+1.0
KCT	Karacabey	1.14	84	ePn	Pg	22 22 17.5	-1.1
KCT				eSn	Sg	22 22 34.5	+1.1
CRLT	Corlu	1.17	34	ePN	Pn	22 22 18.6	-1.0
CRLT				eSN	Sn	22 22 35.7	-0.2
CRLT	Corlu	1.17	34	Pn	Pn	22 22 19.2	-0.4
CRLT	Corlu	1.17	34	Pn	Pn	22 22 19.2	-0.4
CRLT				eSn	Sn	22 22 35.7	-0.1
SIGR	SIGRI	1.23	220	P	Pg	22 22 19.6	-0.7
SIGR				S	Sg	22 22 37.1	+0.8
SIGR	SIGRI	1.23	220	P	Pg	22 22 19.6	-0.7
SIGR				S	Sg	22 22 37.1	+0.8
LIA	Limnos Island	1.32	259	ePn	Pn	22 22 21.7	0.0
LIA				eSn	Sn	22 22 39.3	-0.3
LIA	Limnos Island	1.32	259	P	Pn	22 22 21.6	-0.1
LIA				S	Sb	22 22 40.5	+1.4
LIA	Limnos Island	1.32	259	ePN	Pn	22 22 21.7	0.0
LIA				eSN	Sn	22 22 39.3	-0.3
LIA	Limnos Island	1.32	259	ePn	Pn	22 22 21.7	0.0
LIA				eSn	Sn	22 22 39.3	-0.3
LIA				S	Sb	22 22 40.5	+1.4
DURS	Dursunbey	1.35	114	iP	Pn	22 22 21.2	-0.9
DURS				iS	Sb	22 22 38.4	-1.6
DURS	Dursunbey	1.35	114	iP	Pn	22 22 21.2	-0.9
DURS				iS	Sb	22 22 38.3	-1.7
DST	Dursunbey	1.45	112	ePN	Pn	22 22 23.3	-0.2
DST				eSN	Sn	22 22 43.4	+0.5
DST	Dursunbey	1.45	112	Pn	Pn	22 22 24.0	+0.5
DST	Dursunbey	1.45	112	ePn	Pn	22 22 23.3	-0.2
DST				eSn	Sn	22 22 43.4	+0.6
AKS	Akhisar	1.47	150	ePN	Pn	22 22 23.6	-0.1
AKS	Akhisar	1.47	150	ePn	Pn	22 22 23.6	-0.1
AKHS	Akhisar	1.47	150	iP	Pn	22 22 23.2	-0.5
AKHS				iS	Sn	22 22 42.4	-0.9
AKHS	Akhisar	1.47	150	iP	Pn	22 22 23.2	-0.5
AKHS				iS	Sn	22 22 42.4	-0.9
SLVT	Silivri	1.48	43	ePN	Pn	22 22 23.6	-0.2
SLVT	Silivri	1.48	43	ePn	Pn	22 22 23.6	-0.2
ELBA	Catalca	1.54	50	iP	Pn	22 22 23.5	-1.2
ELBA				iS	Sn	22 22 41.8	-3.2
ELBA	Catalca	1.54	50	iP	Pn	22 22 23.5	-1.2
ELBA				iS	Sn	22 22 41.8	-3.2
CTKS	Kestanelik-??a	1.64	49	ePN	Pn	22 22 26.1	0.0
CTKS	Kestanelik-??a	1.64	49	ePn	Pn	22 22 26.1	0.0
EDRB	Edirne	1.69	357	ePN	Pn	22 22 27.2	+0.5
EDRB	Edirne	1.69	357	ePn	Pn	22 22 27.2	+0.5
BGKT	Bogazkoy	1.77	54	ePN	Pn	22 22 27.8	0.0
BGKT	Bogazkoy	1.77	54	Pn	Pn	22 22 28.0	+0.2
BGKT	Bogazkoy	1.77	54	ePn	Pn	22 22 27.8	0.0
BLCB	Balcova	1.78	176	ePN	Pn	22 22 28.0	0.0
BLCB	Balcova	1.78	176	Pn	Pn	22 22 28.0	+0.1
BLCB	Balcova	1.78	176	P	Pn	22 22 27.4	-0.5
BLCB				S	Sn	22 22 50.9	+0.1
BLCB	Balcova	1.78	176	P	Pn	22 22 27.4	-0.5
BLCB	Balcova	1.78	176	ePn	Pn	22 22 28.0	+0.1
BLCB				S	Sn	22 22 50.9	+0.1
IZM	Izmir	1.79	170	ePN	Pn	22 22 28.0	0.0
IZM				eSN	Sn	22 22 52.2	+1.2
IZM	Izmir	1.79	170	ePn	Pn	22 22 28.0	-0.1
IZM				eSn	Sn	22 22 52.3	+1.3
GEMT	Gemlik	1.79	80	ePN	Pn	22 22 28.2	+0.1
GEMT				eSN	Sn	22 22 52.2	+1.1
GEMT	Gemlik	1.79	80	Pn	Pn	22 22 28.9	+0.8
GEMT	Gemlik	1.79	80	ePn	Pn	22 22 28.2	+0.1
GEMT				eSn	Sn	22 22 52.3	+1.1
DEMI	Demirci	1.81	128	iP	Pn	22 22 28.1	-0.3
DEMI				iS	Sn	22 22 51.0	-0.7
DEMI	Demirci	1.81	128	iP	Pn	22 22 28.1	-0.3
DEMI				iS	Sn	22 22 51.0	-0.6
KDZ	Kurdzhali	1.85	324	iPg	Pn	22 22 28.8	-0.2
KDZ	Kurdzhali	1.85	324	iPg	Pn	22 22 28.8	-0.2
CHOS	Chios island	1.88	200	P	Pn	22 22 28.5	-0.9
CHOS				S	Sn	22 22 53.2	-0.2
CHOS	Chios island	1.88	200	ePN	Pn	22 22 29.5	+0.1
CHOS				eSN	Sn	22 22 53.3	-0.1
CHOS	Chios island	1.88	200	P	Pn	22 22 28.5	-0.9
CHOS	Chios island	1.88	200	ePn	Pn	22 22 29.5	+0.1
CHOS				eSn	Sn	22 22 53.3	-0.1
ISK	Istanbul-Kandi	1.89	61	ePN	Pn	22 22 29.6	0.0
ISK	Istanbul-Kandi	1.89	61	ePn	Pn	22 22 29.6	+0.1
YLV	Yalova	1.95	77	ePN	Pn	22 22 30.4	0.0
YLV	Yalova	1.95	77	ePn	Pn	22 22 30.4	0.0
KLYT	Kilyos	1.98	56	ePN	Pn	22 22 30.9	+0.2
KLYT	Kilyos	1.98	56	ePn	Pn	22 22 30.9	+0.2
KAVA	Kavala	1.98	296	P	Pn	22 22 30.4	-0.4
KAVA				S	Sn	22 22 54.7	-1.2
KAVA	Kavala	1.98	296	P	Pn	22 22 30.4	-0.4
KAVA				S	Sn	22 22 54.7	-1.2
DIM	Dimitrovgrad	2.14	332	iP	Pn	22 22 32.5	-0.5
DIM	Dimitrovgrad	2.14	332	iP	Pn	22 22 32.5	-0.5
KULA	Kula-Manisa	2.15	139	ePN	Pn	22 22 33.4	+0.3
KULA	Kula-Manisa	2.15	139	ePn	Pn	22 22 33.4	+0.3
ADVT	Abdulvahap	2.21	82	ePN	Pn	22 22 34.0	+0.1
ADVT	Abdulvahap	2.21	82	ePn	Pn	22 22 34.0	+0.1
OUR	Ouranopolis	2.22	275	P	P

*ISCJB **01** 22:29:36.2±0.6, 13°.13S±0°.08×40°.75E±0°.07, h10km, mb3.5/4, Error ellipse: s-maj=12.0km s-min=9.4km az=14.9*
*IDC **01** 22:29:37.6±1.5, 13°.16S×40°.74E, h0km, mb3.7/3, mb1 3.8/5, mb1mx3.4/25, mbtmp3.7/5, ML3.5/2, Error ellipse: s-maj=35.6km s-min=29.4km az=76.0*
*NEIC **01** 22:29:38.3±0.5, 13°.14S×40°.74E, h10km, mb3.5/3, Error ellipse: s-maj=10.0km s-min=7.8km az=193.0*
ISC 01 22:29:38.0±0.6, 13°.10S±0°.06×40°.77E±0°.06, h10km, n13, σ1°.07/17, mb3.5/4, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**8.23**	**132**	Pn	**Pn**	**22 31 37.7**	**+0.2**
	2.6nm,0.3s,baz=298,slow=15,SNR=38						
OPO				Sn	**Sn**	**22 33 04.9**	**-5.7**
	1.7nm,0.3s,baz=185,slow=21,SNR=4.2						
ABPO	**Ambohimpanom**	**8.55**	**134**	*e*Pn	**Pn**	**22 31 42.5**	**+0.6**
	4.1nm,0.5s						
ABPO				*e*Sn	**Sn**	**22 33 15.7**	**-2.8**
LSZ	**Lusaka**	**12.39**	**258**	*e*Pn	**Pn**	**22 32 33.9**	**-0.7**
KMBO	**Kilima Mbogo**	**12.40**	**343**	Pn	**Pn**	**22 32 34.6**	**0.0**
	0.1nm,0.3s,baz=102,slow=17,SNR=2.7						
KMBO				Sn	**Sn**	**22 34 51.2**	**-1.8**
	0.1nm,0.3s,baz=25,slow=22,SNR=2.4						
KMBO	**Kilima Mbogo**	**12.40**	**343**	*e*Pn	**Pn**	**22 32 35.1**	**+0.4**
KMBO				Sn	**Sn**	**22 34 51.2**	**-1.8**
RER	**Riviere de l'E**	**16.39**	**121**	Pn	**Pn**	**22 33 28.4**	**+0.1**
MSEY	**Mahe Island**	**16.76**	**61**	Pn	**Pn**	**22 33 33.2**	**+0.1**
LBTB	**Lobatse**	**18.58**	**228**	*e*P	**Pn**	**22 33 55.6**	**+0.1**
	1.4nm,0.6s						
BOSA	**Boshof**	**21.14**	**221**	P	**P**	**22 34 23.6**	**+0.5**
	4.9nm,0.6s,mb4.0,baz=49,slow=13,SNR=17						
BOSA	**Boshof**	**21.14**	**221**	*e*P	**P**	**22 34 23.8**	**+0.6**
	4.8nm,0.6s,mb4.0						
TSUM	**Tsumeb**	**23.07**	**252**	*e*P	**P**	**22 34 43.1**	**-0.8**
	0.6nm,0.5s,mb3.3						
TORD	**Torodi Ar. Bea**	**46.69**	**302**	P	**P**	**22 38 08.6**	**+1.2**
	0.2nm,0.4s,mb3.4,baz=124,slow=8.6,SNR=6.3						
ZALV	**Zalesovo Beam**	**76.57**	**25**	P	**P**	**22 41 30.5**	**+2.1**
	0.2nm,0.3s,mb3.5,baz=220,slow=6.6,SNR=2.9						

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*ISK **01** 22:30:16.5, 39°.77N×43°.58E, h10km, MD2.7*
*CSEM **01** 22:30:17.0±0.1, 39°.79N×43°.60E, h2km, MD2.9, Error ellipse: s-maj=2.7km s-min=2.3km az=68.0*
*ISCJB **01** 22:30:17.2±0.5, 39°.79N±0°.03×43°.61E±0°.04, h10km, Error ellipse: s-maj=4.7km s-min=4.0km az=163.1*
*DDA **01** 22:30:19.4, 39°.73N×43°.65E, h3km, Md2.9*
ISC 01 22:30:17.8±0.6, 39°.77N±0°.03×43°.59E±0°.04, h2km±8km, n17, σ0°.87/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DYDN	**Diyadin**	**0.24**	**161**	*i* P	**Pg**	**22 30 22.1**	**-0.3**
DYDN				*i* S	**Sg**	**22 30 25.8**	**+0.2**
DYDN	**Diyadin**	**0.24**	**161**	*i* P	**Pg**	**22 30 22.1**	**-0.3**
DYDN				*i* S	**Sg**	**22 30 25.8**	**+0.2**
AGRB	**Hanur-Agry**	**0.50**	**247**	*e*PG	**Pg**	**22 30 27.3**	**-0.1**
AGRB				*e*SG	**Sg**	**22 30 33.9**	**0.0**
AGRB	**Hanur-Agry**	**0.50**	**247**	*e*Pg	**Pg**	**22 30 27.3**	**-0.1**
AGRB				*e*Sg	**Sg**	**22 30 33.9**	**0.0**
DIGO	**Kars**	**0.66**	**346**	*i* P	**Pg**	**22 30 31.5**	**+1.0**
DIGO				*i* S	**Sg**	**22 30 44.7**	**+5.6**
DIGO	**Kars**	**0.66**	**346**	*i* P	**Pg**	**22 30 31.5**	**+1.0**
CLDR	**Caldiran**	**0.68**	**158**	*e*PG	**Pg**	**22 30 29.7**	**-1.1**
CLDR				*e*SG	**Sg**	**22 30 39.8**	**+0.2**
CLDR	**Caldiran**	**0.68**	**158**	*e*Pg	**Pg**	**22 30 29.7**	**-1.1**
CLDR				*e*Sg	**Sg**	**22 30 39.8**	**+0.2**
KARS	**Kars**	**0.92**	**336**	*e*PG	**Pg**	**22 30 34.8**	**-0.7**
KARS				*e*SG	**Sg**	**22 30 47.8**	**+0.4**
GNI	**Garni**	**0.96**	**67**	*e*PG	**Pg**	**22 30 35.6**	**-0.6**
GNI				*e*SG	**Sg**	**22 30 49.8**	**+1.1**
GNI	**Garni**	**0.96**	**67**	*e*Pg	**Pg**	**22 30 35.6**	**-0.6**
GNI				*e*Sg	**Sg**	**22 30 49.8**	**+1.1**
HOMI	**Horasan**	**1.32**	**282**	*i* P	**Pg**	**22 30 42.8**	**-0.4**
HOMI				*i* S	**Sg**	**22 31 03.7**	**+3.4**
TATV	**Tatvan**	**1.63**	**220**	*i* P	**Pn**	**22 30 48.3**	**+0.8**
TATV				*i* S	**Sn**	**22 31 10.1**	**+1.1**
TATV	**Tatvan**	**1.63**	**220**	*i* P	**Pn**	**22 30 48.3**	**+0.8**
TATV				*i* S	**Sn**	**22 31 10.1**	**+1.1**
EZM	**Erzurum**	**1.72**	**275**	*e*PN	**Pn**	**22 30 47.3**	**-1.4**
BCA	**Borcka**	**2.24**	**319**	*e*PN	**Pn**	**22 30 54.7**	**-1.2**
BCA	**Borcka**	**2.24**	**319**	*e*Pn	**Pn**	**22 30 54.7**	**-1.2**

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*IDC **01** 22:30:43.8±0.8, 20°.04S×168°.62E, h0km, mb4.7/14, mb1 4.8/14, mb1mx4.7/18, mbtmp4.7/14, MS4.4/8, Ms1 4.4/8, ms1mx4.0/27, Error ellipse: s-maj=24.8km s-min=18.7km az=114.0*
*NOU **01** 22:30:45.7±0.9, 20°.09S×168°.73E, h10km±999km, MD2.9, ML3.2*
*LDG **01** 22:30:46.3±0.2, 19°.84S×168°.13E, h10km, Mb5.2/3, Ms4.6/8, Error ellipse: s-maj=16.6km s-min=3.4km az=116.0*
*ISCJB **01** 22:30:48.0±1.0, 20°.07S±0°.04×168°.56E±0°.04, h36km±8km, mb4.9/50, MS4.6/25, Error ellipse: s-maj=7.2km s-min=6.1km az=158.0*
*MOS **01** 22:30:50.4±3.4, 19°.99S×168°.46E, h33km, mb5.3/14, MS4.6/7, Error ellipse: s-maj=12.1km s-min=9.4km az=40.9*
*NEIC **01** 22:30:50.9±1.2, 20°.06S×168°.60E, h46km±10km, mb5.1/27, MS4.8/4, Error ellipse: s-maj=8.6km s-min=6.9km az=168.0*
*GCMT **01** 22:30:53.6±0.2, 20°.16S×168°.34E, h20km, MW5.2, Moment Tensor Solution. s61,c91; s86,c135; Moment tensor: Scale 10^{16}Nm; M_{rr}5.33±.17; $M_{\theta\theta}$-0.74±.13; $M_{\phi\phi}$-4.59±.14; $M_{r\theta}$2.36±.25; $M_{\theta\phi}$1.87±.09; $M_{\phi r}$-4.35±.26; Best double couple: $M_0$7.30000×10^{16} NP1:ϕ_s342.00000°, δ24.00000°, λ98.00000°. NP2:ϕ_s154.00000°, δ66.00000°, λ87.00000°. Principal axes: T 7.2900, Plg68.0000°, Azm57.0000°; N -0.0100, Plg3.0000°, Azm155.0000°; P -7.2700, Plg21.0000°, Azm246.0000°; Data Used: II IU IC G CN.*
*DJA **01** 22:31:35, 20°.37S×166°.17E, h343km, mb5.0/8*
ISC 01 22:30:51.9±0.9, 20°.11S±0°.04×168°.60E±0°.04, h57km±8km, h59km±2.8km: pP-P, n300, σ0°.94/131, mb4.9/50, MS4.6/25, 40C-3D, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.59**	**218**	*e*S	**Sn**	**22 31 55.0**	**-6.6**
BAYA				AMP		22 32 19.1	
	comp=Z,52nm,1.4s						
DZM	**Mont Dzumac**	**2.80**	**226**	*e*Pn	**Pn**	**22 31 28.4**	**-5.8**
	comp=Z,1μm,1.2s						
DZM	**Mont Dzumac**	**2.80**	**226**	*e*Pn	**Pn**	**22 31 28.2**	**-6.0**
DZM				*e*Sn	**Sn**	**22 32 05.6**	**-1.3**
PLUM	**Mont Dore**	**2.82**	**220**	*e*P	**Pn**	**22 31 29.3**	**-5.2**
PLUM				*e*S	**Sn**	**22 32 01.3**	**-6.0**
PLUM				AMP		22 32 05.1	
	comp=Z,452nm,0.0s						
NOUC	**Port Laguerre**	**2.92**	**227**	*e*P	**Pn**	**22 31 31.0**	**-4.8**
NOUC				*e*S	**Sn**	**22 32 05.1**	**-4.6**
NOUC				AMP		22 32 23.7	
	comp=Z,273nm,1.7s						
MSVF	**Nonsavu**	**9.25**	**77**	Pn	**Pn**	**22 33 05.6**	**+3.0**
	comp=Z,828nm,1.6s,SNR=8.0						
MSVF	**Nonsavu**	**9.25**	**77**	*e*Pn	**Pn**	**22 33 05.1**	**+2.5**
	comp=Z,410nm,1.5s						
MSVF				Sn	**Sn**	**22 34 59.8**	**+15**
HNR	**Honiara**	**13.51**	**321**	*e*P	**Pn**	**22 34 00.8**	**-0.1**
RAO	**Raoul Island**	**15.25**	**129**	P	**Pn**	**22 34 23.3**	**-0.3**
FUNA	**Funafuti**	**15.42**	**43**	*e*Pn	**Pn**	**22 34 25.9**	**0.0**
OUZ	**Omahuta**	**15.68**	**165**	*e*Pn	**Pn**	**22 34 29.7**	**+0.5**
	comp=Z,77nm,1.5s						
EIDS	**Eidsvold**	**16.98**	**249**	*e*Pn	**Pn**	**22 34 45.7**	**+0.1**
	comp=Z,60nm,1.3s						
ARMA	**Armidale**	**18.44**	**233**	*e*P	**Pn**	**22 35 03.9**	**+0.5**
ARMA				*e*S	**S**	**22 38 41.1**	**+11**
ARMA	**Armidale**	**18.44**	**233**	*e*Pn	**Pn**	**22 35 04.9**	**+1.5**
	comp=Z,47nm,1.0s						
URZ	**Urewera**	**19.53**	**160**	P	**Pn**	**22 35 16.8**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=350,slow=8.3,SNR=7.3						
URZ	**Urewera**	**19.53**	**160**	*e*P	**Pn**	**22 35 15.0**	**-1.3**
	comp=Z,96nm,1.2s						
URZ				*e*S	**S**	**22 38 51.9**	**-0.2**
AFI	**Afiamalu**	**19.74**	**75**	LR	LR	22 41 20.4	
	comp=Z,1μm,19.0s,baz=295,slow=32						
CTA	**Charters Tower**	**20.99**	**266**	*e*P	**P**	**22 35 31.1**	**+0.6**
	comp=Z,33nm,0.9s						
CTA	**Charters Tower**	**20.99**	**266**	P	**P**	**22 35 30.7**	**+0.2**
	comp=Z,28nm,1.1s,baz=89,slow=11,SNR=16						
CTA				LR	LR	22 43 04.9	
	comp=Z,1μm,19.4s,MS4.3,baz=84,slow=35						
CTAO	**Charters Tower**	**20.99**	**266**	*e*P	**P**	**22 35 30.7**	**+0.2**
CTAO				pmax	pmax		
	comp=Z,81nm,1.1s						
CTAO	**Charters Tower**	**20.99**	**266**	*e*P	**P**	**22 35 30.7**	**+0.2**
	comp=Z,80nm,1.1s						
CNB	**Canberra Magne**	**22.73**	**224**	*e*P	**P**	**22 35 50.6**	**+1.6**
CNB				*e*S	**S**	**22 40 01.0**	**+7.5**
YNG	**Young**	**22.80**	**228**	*e*P	**P**	**22 35 50.7**	**+1.0**
	comp=Z,49nm,0.9s,mb4.9						
MTSU	**Mount Surprise**	**23.02**	**271**	*e*P	**P**	**22 35 52.4**	**+0.2**
	comp=Z,65nm,1.0s,mb5.0						
MTSU				*e*pP		22 36 03.0	
RPZ	**Rata Peaks**	**23.62**	**176**	P	**P**	**22 35 56.9**	**-0.7**
	comp=Z,11nm,0.9s,mb4.3,baz=115,slow=14,SNR=3.4						
RPZ				LR	LR	22 43 42.3	
	comp=Z,774nm,20.0s,MS4.2,baz=174,slow=33						
RPZ	**Rata Peaks**	**23.62**	**176**	*e*P	**P**	**22 35 57.1**	**-0.6**
	comp=Z,61nm,1.2s,mb4.9						
COEN	**Coen**	**25.05**	**280**	*e*P	**P**	**22 36 11.1**	**+0.1**
	comp=Z,205nm,1.0s,mb5.6						
TOO	**Toolangi**	**26.58**	**224**	*e*P	**P**	**22 36 25.9**	**+1.3**
TOO				*e*S	**S**	**22 41 11.0**	**+16**
STKA	**Stephens Creek**	**26.88**	**239**	*e*P	**P**	**22 36 27.1**	**-0.2**
	comp=Z,23nm,0.9s,mb4.7						
STKA				*e*S	**S**	**22 41 09.3**	**+9.3**
STKA	**Stephens Creek**	**26.88**	**239**	P	**P**	**22 36 26.5**	**-0.8**
	comp=Z,28nm,0.8s,mb4.8,baz=70,slow=8.3,SNR=22						
STKA				LR	LR	22 47 35.2	
	comp=Z,881nm,18.5s,MS4.3,baz=95,slow=38						
STKA	**Stephens Creek**	**26.88**	**239**	*e*P	**P**	**22 36 26.5**	**-0.8**
	comp=Z,7.2nm,0.9s,mb4.2						
RAR	**Rarotonga**	**29.59**	**98**	P	**P**	**22 36 51.6**	**0.0**
WRAB	**Tennant Creek**	**32.15**	**264**	P	**P**	**22 37 12.5**	**-1.7**
	comp=Z,123nm,0.9s,mb5.7,SNR=6.8						
WRAB	**Tennant Creek**	**32.15**	**264**	*e*P	**P**	**22 37 12.8**	**-1.4**
WRAB				*e*S	**S**	**22 42 23.5**	**+0.5**
WRAB				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.0						
WRAB	**Tennant Creek**	**32.15**	**264**	*e*P	**P**	**22 37 12.8**	**-1.4**
	comp=Z,30nm,1.1s,mb5.0						
WRAB				*e*S	**S**	**22 42 23.5**	**+0.4**
ASAR	**Alice Springs**	**32.34**	**257**	P	**P**	**22 37 14.9**	**-0.9**
	comp=Z,24nm,0.8s,mb5.1,baz=87,slow=8.4,SNR=95						
FORT	**Forrest**	**37.94**	**246**	*e*P	**P**	**22 38 05.7**	**+1.8**
	comp=Z,17nm,0.8s,mb4.8						
FORT	**Forrest**	**37.94**	**246**	*e*P	**P**	**22 38 06.3**	**+2.3**
	comp=Z,23nm,0.8s,mb5.0						
KNA	**Kununurra**	**38.09**	**270**	*e*P	**P**	**22 38 04.4**	**-0.9**
	comp=Z,38nm,0.8s,mb5.2						
PPT	**Papeete**	**39.59**	**94**	*e*S	**S**	**22 44 17.0**	**0.0**
	comp=Z,285nm,25.5s						
PPT				*e*LQ		22 47 36.0	
	comp=Z,1μm,29.0s						
PPT				*e*LR	LR	22 49 20.8	
	comp=Z,848nm,27.8s,baz=249						
PPT	**Papeete**	**39.59**	**94**	LR	LR	22 50 02.9	
	comp=Z,419nm,21.2s,MS4.2,baz=252,slow=29						
FITZ	**Fitzroy Crossi**	**40.56**	**265**	*e*P	**P**	**22 38 25.5**	**-0.5**
	comp=Z,120nm,0.8s,mb5.6						
FITZ				*e*pP	pP	22 38 36.5	-4.2
FITZ	**Fitzroy Crossi**	**40.56**	**265**	*e*P	**P**	**22 38 25.6**	**-0.4**
	comp=Z,81nm,0.8s,mb5.4						
GUMO	**Guam**	**40.83**	**323**	P	**P**	**22 38 28.2**	**+0.1**
MBWA	**Marble Bar**	**45.60**	**260**	*e*P	**P**	**22 39 05.1**	**-1.6**
MBWA				*e*pP	pP	22 39 16.7	-4.9
MBWA	**Marble Bar**	**45.60**	**260**	*e*P	**P**	**22 39 05.8**	**-0.8**
	comp=Z,67nm,0.9s,mb5.6						
KLBR	**Kellerberrin**	**46.80**	**245**	*e*P	**P**	**22 39 15.0**	**-1.0**
	comp=Z,53nm,0.8s,mb5.5						
KLBR				*e*pP	pP	22 39 25.7	-5.2
NWAO	**Narrogin (SRO)**	**47.28**	**243**	*e*P	**P**	**22 39 19.2**	**-0.5**
NWAO				pmax	pmax		
	comp=Z,44nm,0.8s						
NWAO	**Narrogin (SRO)**	**47.28**	**243**	*e*P	**P**	**22 39 19.2**	**-0.5**
	comp=Z,44nm,0.8s,mb5.4						
KAPI	**Kappang**	**49.78**	**281**	P	**P**	**22 39 38.6**	**-0.5**
	comp=Z,18nm,0.8s,mb5.2,baz=170,slow=4.8,SNR=9.9						
KAPI	**Kappang**	**49.78**	**281**	*e*P	**P**	**22 39 38.5**	**-0.6**
	comp=Z,22nm,1.0s,mb5.2						
TAOE	**Nuku Hiva Isla**	**50.69**	**85**	*e*S	**S**	**22 47 02.0**	**+4.7**
	comp=Z,353nm,27.9s						
TAOE				*e*LR	LR	22 54 22.4	
	comp=Z,330nm,25.2s						
RKT	**Rikitea**	**52.27**	**104**	*e*S	**S**	**22 47 27.6**	**+8.6**
	comp=Z,328nm,29.0s						
RKT				*e*LR	LR	22 55 11.4	
	comp=Z,318nm,27.5s						
SBA	**Scott Base**	**57.79**	**180**	*e*P	**P**	**22 40 37.8**	**+1.1**
SBA				pmax	pmax		
	comp=Z,28nm,1.1s,mb5.2						
SBA	**Scott Base**	**57.79**	**180**	*e*P	**P**	**22 40 37.8**	**+1.1**
	comp=Z,28nm,1.1s,mb5.2						
CASY	**Casey**	**59.09**	**204**	*e*P	**P**	**22 40 45.8**	**0.0**
	comp=Z,22nm,1.4s,mb5.0						
KSM	**Kuching**	**60.99**	**283**	*e*P	**P**	**22 41 00.2**	**+0.4**
	comp=Z,8.7nm,0.8s,mb4.9						
MJAR	**Matsushiro Arr**	**63.24**	**333**	P	**P**	**22 41 12.8**	**-1.5**
	comp=Z,3.8nm,1.2s,mb4.4,baz=156,slow=7.5,SNR=5.3						
MAT	**Matsushiro**	**63.25**	**333**	P	**P**	**22 41 13.5**	**-0.9**
MAT				*e*S	**S**	**22 49 40.2**	**-1.7**
YHNB	**Yeheng**	**63.98**	**312**	P	**P**	**22 41 19.2**	**-0.3**
ASAJ	**Asahikawa**	**68.21**	**340**	P	**P**	**22 41 46.4**	**+0.2**
	comp=Z,6.8nm,0.9s,mb4.7,baz=269,slow=13,SNR=3.6						
ASAJ				LR	LR	23 08 48.5	
	comp=Z,362nm,18.4s,MS4.6,baz=186,slow=34						
KSRS	**Korea Array**	**68.89**	**326**	P	**P**	**22 41 50.2**	**-0.4**
	comp=Z,3.3nm,0.9s,mb4.2,baz=149,slow=6.4,SNR=8.0						
NJ2	**Nanjing**	**70.42**	**317**	*e*P	**P**	**22 42 03.3**	**+3.2**
NJ2				pP	pP	22 42 19.6	+3.6
NJ2				PP	PP	22 44 43.6	+6.7
NJ2				S	S	22 51 10.5	+1.8
NJ2				sS	sS	22 51 33.0	-2.4
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
NJ2				pmax	pmax		
	comp=Z,80nm,5.4s						
NJ2				LR	LR		
	comp=N,110nm,21.7s,MS4.4						
NJ2				LR	LR		
	comp=E,230nm,24.8s,MS4.4						
NJ2				LR	LR		
	comp=Z,80nm,17.2s						
KULM	**Kulim**	**71.34**	**283**	P	**P**	**22 42 06.1**	**-0.1**
PSI	**Prapat**	**71.98**	**280**	P	**P**	**22 42 08.4**	**-1.6**
	comp=Z,10nm,1.0s,mb4.7,baz=147,slow=3.3,SNR=6.6						
WHN	**Wuhan**	**72.49**	**313**	P	**P**	**22 42 20.2**	**+7.5**
PET	**Petropavlovsk**	**73.34**	**354**	*e*P	**P**	**22 42 25.6**	**+8.5**
PET				*e*S	S	22 51 53.9	+13
PET				pmax	pmax		
	comp=Z,100nm,14.2s						
PETK	**Petropavlovsk-**	**73.52**	**353**	P	**P**	**22 42 17.7**	**-0.5**
	comp=Z,15nm,0.9s,mb4.9,baz=131,slow=8.1,SNR=16						
MDJ	**Mudanjiang**	**73.61**	**332**	P	**P**	**22 42 19.6**	**+0.7**
MDJ				pP	pP	22 42 36.1	+1.3
MDJ				sP	sP	22 42 43.0	+1.8
MDJ				PP	PP	22 45 03.9	-0.1
MDJ				S	S	22 51 42.6	-2.1
MDJ				sS	sS	22 52 13.0	+1.4
MDJ				ScS	ScS	22 52 23.8	+0.7
MDJ				SS	SS	22 56 29.6	+0.2
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.2						
MDJ				pmax	pmax		
	comp=Z,86nm,6.2s						
MDJ				LR	LR		
	comp=N,150nm,16.5s,MS4.6						
MDJ				LR	LR		
	comp=E,220nm,19.7s,MS4.6						
MDJ				LR	LR		
	comp=Z,150nm,18.1s,MS4.3						
HABR	**Khabarovsk**	**74.57**	**338**	*e*P	**P**	**22 42 22.5**	**-1.9**
HABR				*e**PP	pP	22 42 43.4	+3.0
HABR				*e*S	S	22 51 51.7	-3.7
HABR				*e*		22 52 26.1	
HABR				SS	SS	22 56 41.0	-2.9
HABR				MLR	MLR		
	comp=Z,132nm,17.0s,MS4.3						
CN2	**Changchun**	**74.89**	**329**	*e*P	**P**	**22 42 27.1**	**+0.7**
CN2				*e*pP	pP	22 42 43.7	+1.3
CN2				*e*S	S	22 52 00.0	+0.8
CN2				SS	SS	22 56 48.3	-0.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,500nm,17.0s,MS5.0						
CN2				LR	LR		
	comp=E,300nm,17.0s,MS5.0						
CN2				LR	LR		
	comp=Z,200nm,18.0s,MS4.5						
GYA	**Guiyang**	**75.83**	**305**	P	**P**	**22 42 33.2**	**+1.0**
GYA				sP	sP	22 42 52.8	-1.8
GYA				PP	PP	22 45 27.5	+4.3
GYA				S	S	22 52 10.7	+0.4
GYA				SKS		22 52 33.4	
GYA				SS	SS	22 57 05.4	+1.6
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
GYA				pmax	pmax		
	comp=Z,130nm,4.6s						
GYA				LR	LR		
	comp=N,530nm,16.0s,MS5.1						
GYA				LR	LR		
	comp=E,480nm,16.9s,MS5.1						
GYA				LR	LR		
	comp=Z,620nm,17.0s,MS5.0						
KLR	**Kul'dur**	**76.42**	**336**	*e*P	**P**	**22 42 32.0**	**-3.0**
KLR				pmax	pmax		
	comp=Z,45nm,2.0s,mb5.0						
BJI	**Beijing**	**77.24**	**321**	P	**P**	**22 42 41.8**	**+2.0**
BJI				S	S	22 52 28.1	+3.0
BJI				SS	SS	22 57 28.7	+4.0
BJI				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
BJI				pmax	pmax		
	comp=Z,160nm,4.3s						
BJI				LR	LR		
	comp=N,170nm,27.9s,MS4.4						
BJI				LR	LR		
	comp=E,200nm,27.7s,MS4.4						
BJI				LR	LR		
	comp=Z,130nm,22.3s						
MAW	**Mawson**	**77.40**	**202**	P	**P**	**22 42 40.7**	**+0.3**
	comp=Z,9.2nm,1.1s,mb4.6,baz=61,slow=2.5,SNR=8.1						
KMI	**Kunming**	**78.23**	**302**	P	**P**	**22 42 46.4**	**+0.7**
KMI				PcP	PcP	22 42 57.4	+2.4
KMI				pP	pP	22 43 03.5	+1.7
KMI				sP	sP	22 43 10.8	+2.7
KMI				PP	PP	22 45 45.4	+2.0
KMI				S	S	22 52 37.6	+1.2
KMI				SKS		22 52 52.5	
KMI				ScS	ScS	22 53 00.4	-0.9
KMI				sS	sS	22 53 05.3	+1.7
KMI				SS	SS	22 57 44.0	+3.9
KMI				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
KMI				pmax	pmax		
	comp=Z,110nm,6.1s						
KMI				LR	LR		
	comp=N,280nm,13.3s,MS4.9						
KMI				LR	LR		
	comp=E,320nm,15.5s,MS4.9						
KMI				LR	LR		
	comp=Z,380nm,19.2s,MS4.7						
CM31	**Chiang Mai Arr**	**78.32**	**295**	*e*P	**P**	**22 42 46.9**	**+0.6**
	comp=Z,9.6nm,0.9s,mb4.7						
CMAR	**Chiang Mai Arr**	**78.32**	**295**	P	**P**	**22 42 47.4**	**+1.0**
	comp=Z,5.5nm,0.8s,mb4.5,baz=134,slow=4.3,SNR=23						
CHTO	**Chiang Mai**	**78.47**	**295**	P	**P**	**22 42 47.5**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
CHTO	**Chiang Mai**	**78.47**	**295**	P	**P**	**22 42 47.5**	**+0.4**
	comp=Z,7.9nm,0.9s,mb4.6						
CD2	**Chengdu**	**80.29**	**308**	*e*P	**P**	**22 42 58.8**	**+2.0**
CD2				pP	pP	22 43 15.6	+2.6
CD2				sP	sP	22 43 22.4	+3.1
CD2				PP	PP	22 46 03.5	+3.0
CD2				S	S	22 52 58.6	+0.5
CD2				sS	sS	22 53 26.3	+0.9
CD2				SS	SS	22 58 12.2	+1.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
CD2				pmax	pmax		
	comp=Z,40nm,5.8s						
CD2				LR	LR		
	comp=N,250nm,14.2s,MS4.8						
CD2				LR	LR		
	comp=E,200nm,16.2s,MS4.8						
CD2				LR	LR		
	comp=Z,180nm,15.2s,MS4.5						
HHC	**Hu-ho-hao-te**	**80.49**	**320**	*e*P	**P**	**22 42 59.3**	**+1.6**
HHC				pP	pP	22 43 16.1	+2.3
HHC				sP	sP	22 43 23.0	+2.8
HHC				PP	PP	22 46 06.4	+4.5
HHC				S	S	22 53 00.0	+0.2
HHC				SKS		22 53 07.5	
HHC				sS	sS	22 53 30.1	+3.0
HHC				SS	SS	22 58 18.3	+4.8
HHC				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
HHC				pmax	pmax		
	comp=Z,84nm,4.9s						
HHC				LR	LR		
	comp=N,160nm,19.2s,MS4.6						
HHC				LR	LR		
	comp=E,240nm,21.6s,MS4.6						
HHC				LR	LR		
	comp=Z,350nm,19.2s,MS4.7						
LZH	**Lanzhou**	**82.87**	**312**	*e*P	**P**	**22 43 12.0**	**+1.7**
LZH				pP	pP	22 43 29.0	+2.5
LZH				PP	PP	22 46 25.0	+3.4
LZH				S	S	22 53 25.1	+0.6
LZH				sS	sS	22 53 54.0	+2.1
LZH				SS	SS	22 58 52.4	+3.3
LZH				pmax	pmax		
	comp=Z,29nm,1.6s,mb5.1						
LZH				pmax	pmax		
	comp=Z,180nm,6.1s						
LZH		

OHCM	**Honcut**	**88.02**	**47**	*e*P	**P**	**22 43 36.0**	**+0.1**
CMB	**Columbia Colle**	**88.18**	**48**	*e*P	**P**	**22 43 36.6**	**-0.1**
YBH	**Yreka Blue Hor**	**88.34**	**44**	*e*P	**P**	**22 43 37.7**	**+0.4**
YBH				pmax	pmax		
	comp=Z,11nm,1.3s						
YBH	**Yreka Blue Hor**	**88.34**	**44**	*e*P	**P**	**22 43 37.7**	**+0.4**
	comp=Z,11nm,1.3s,mb4.9						
ISA	**Isabella**	**88.49**	**51**	*e*P	**P**	**22 43 38.0**	**-0.2**
HUMO	**Hull Mountain**	**88.60**	**43**	*e*P	**P**	**22 43 38.4**	**-0.2**
	comp=Z,11nm,1.2s,mb5.1						
LBCM	**Butte Creek Ri**	**88.82**	**46**	P	**P**	**22 43 39.7**	**+0.1**
WAKR	**Walker**	**89.06**	**48**	*e*P	**P**	**22 43 41.4**	**+0.6**
MTUM	**Tungsten Hills**	**89.17**	**50**	*e*P	**P**	**22 43 41.9**	**+0.6**
VNA1	**Neumayer--Stat**	**89.45**	**181**	*e*P	**P**	**22 43 41.2**	**-1.0**
GSC	**Goldstone**	**89.57**	**52**	*e*P	**P**	**22 43 44.0**	**+0.7**
PAHR	**Pah Rah Range**	**89.64**	**47**	*e*P	**P**	**22 43 43.9**	**+0.4**
NVAR	**Mina Array Bea**	**89.83**	**49**	P	**P**	**22 43 44.2**	**-0.1**
	comp=Z,3.1nm,1.0s,mb4.6,baz=227,slow=7.0,SNR=13						
MOD	**Modoc**	**90.01**	**45**	*e*P	**P**	**22 43 44.6**	**-0.5**
	comp=Z,9.6nm,1.2s,mb5.0						
OOW	**Octopus West**	**90.37**	**38**	P	**P**	**22 43 47.5**	**+0.8**
ZAK	**Zakamensk**	**90.65**	**324**⇑	*i*P	**P**	**22 43 48.2**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.9						
VFP	**Flag Point**	**90.84**	**42**	P	**P**	**22 43 49.2**	**+0.3**
VIPM	**Ingram Point**	**91.00**	**43**	P	**P**	**22 43 49.8**	**+0.1**
COLA	**College**	**91.05**	**17**	P	**P**	**22 43 49.1**	**-0.3**
SHPR	**Sheep Range**	**91.28**	**52**	*e*P	**P**	**22 43 51.4**	**+0.1**
TUC	**Tucson**	**92.98**	**57**	*e*P	**P**	**22 43 58.3**	**-0.9**
TUC				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb5.0						
TUC	**Tucson**	**92.98**	**57**	*e*P	**P**	**22 43 58.3**	**-0.9**
	comp=Z,8.6nm,1.4s,mb5.0						
CCUT	**Cedar City**	**93.02**	**51**	*e*P	**P**	**22 43 58.6**	**-0.6**
DLBC	**Dease Lake**	**93.09**	**28**	*e*P	**P**	**22 43 58.8**	**-0.2**
TIXI	**Tiksi**	**95.47**	**348**	*e*P	**P**	**22 44 07.9**	**-1.8**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.5s,mb4.6						
ANMO	**Albuquerque**	**97.29**	**56**	*e*P	**P**	**22 44 17.1**	**-1.7**
WMQ	**Urumqi**	**97.37**	**314**	*e*P	**P**	**22 44 20.0**	**+1.0**
INK	**Inuvik**	**97.56**	**19**	P	**P**	**22 44 17.0**	**-2.2**
PDAR	**Pinedale Array**	**97.65**	**47**	LR	LR	23 23 37.3	
	comp=Z,110nm,18.4s,MS4.4,baz=126,slow=32						
TXAR	**Lajitas Array**	**97.71**	**62**	LR	LR	23 23 58.5	
	comp=Z,213nm,18.2s,MS4.7,baz=255,slow=33						
ZALV	**Zalesovo Beam**	**102.45**	**323**	P	Pdif	22 44 40.6	-1.0
	comp=Z,0.4nm,0.2s,baz=116,slow=3.4,SNR=3.8						
KURK	**Kurchatov**	**105.29**	**319**	PKiKP	PKiKP	22 49 07.3	-0.5
BRVK	**Borovoye**	**110.77**	**320**⇑	*i*PKiKP	PKiKP	22 49 17.2	-0.8
ARU	**Arti**	**117.59**	**324**	PKIKP	PKPdf	22 49 30.4	-0.6
ARCES	**ARCESS Array B**	**125.75**	**345**	PKP	PKPdf	22 49 46.4	+0.1
	comp=Z,2.1nm,0.9s,baz=284,slow=21,SNR=3.8						
LSZ	**Lusaka**	**127.55**	**231**	*e*PKIKP	PKPdf	22 49 50.7	-0.7
KMBO	**Kilima Mbogo**	**127.88**	**252**	PKP	PKPdf	22 49 53.6	+1.5
	comp=Z,2.2nm,1.0s,baz=27,slow=6.6,SNR=4.4						
OBN	**Obninsk**	**129.89**	**326**⇓	*i*PKIKP	PKPdf	22 49 54.7	+0.1
OBN				*e*		22 52 05.4	
OBN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
AKASG	**Malin Array Be**	**135.84**	**324**	PKP	PKPdf	22 50 05.0	-0.9
	comp=Z,0.3nm,0.4s,baz=80,slow=0.9,SNR=4.5						
BRTR	**Keskin Array B**	**136.87**	**307**	PKP	PKPdf	22 50 08.8	+0.6
	comp=Z,0.7nm,0.8s,baz=126,slow=1.7,SNR=5.7						
KWP	**Kalwaria Pacla**	**139.97**	**325**	*e*PKIKP	PKPdf	22 50 11.7	-1.9
KOLS	**Kolonicke sedl**	**140.60**	**325**	*e*PKIKP	PKPdf	22 50 14.1	-0.6
KOLS				*e*		22 50 28.2	
KOLS	**Kolonicke sedl**	**140.60**	**325**	*e*PKP	PKPdf	22 50 14.1	-0.6
KOLS				*e*		22 50 28.1	
STHS	**Stebnicka Huta**	**140.87**	**326**	*e*PKIKP	PKPdf	22 50 20.3	+5.1
STHS	**Stebnicka Huta**	**140.87**	**326**	*e*PKP	PKPdf	22 50 20.3	+5.1
KECS	**Kecovo**	**141.82**	**325**	*e*PKIKP	PKPdf	22 50 18.9	+2.0
KECS	**Kecovo**	**141.82**	**325**	*e*PKP	PKPdf	22 50 18.9	+2.0
PSZ	**Piszkesteto**	**142.48**	**325**⇑	*e*PKP	PKPdf	22 50 14.1	-4.0
VYHS	**Vyhne**	**142.69**	**326**	*e*PKHKP		22 50 16.2	
VYHS	**Vyhne**	**142.69**	**326**	*e*PKP	PKPdf	22 50 16.2	-2.3
CHOS	**Chios island**	**142.91**	**308**	P	PKPdf	22 50 23.3	+4.1
KAVA	**Kavala**	**143.08**	**312**	P	PKPdf	22 50 12.7	-6.7
BRG	**Berggiesshubel**	**143.38**	**333**	*e*PKP	PKPdf	22 50 16.1	-3.6
	comp=Z,13nm,1.6s						
BRG				*e*		22 50 25.5	
	comp=Z,7.2nm,1.3s						
CLL	**Collm**	**143.45**	**334**⇓	*i*PKP	PKPdf	22 50 16.8	-2.9
CLL				*i* pPKP	pPKPdf	22 50 31.0	-5.7
CLL				LR	LR		
	comp=Z,100nm,20.4s,MS4.6						
CLL	**Collm**	**143.45**	**334**⇓	*i*PKPdf	PKPdf	22 50 16.8	-2.9
	comp=Z,20nm,1.9s						
CLL				*i* PKiKP	PKiKP	22 50 23.6	+0.5
CLL				*i* pPKPdf	pPKPdf	22 50 31.0	-5.7
CLL				*i* (sPKiKP)		22 50 45.4	
CLL				*e*PP	PP	22 53 37.0	+5.7
CLL				*e*SKPbc	SKPbc	22 53 53.0	-0.4
CLL				*e*		22 55 28.0	
CLL				*e*SS	SS	23 12 18.0	+10
CLL				*e*SSS		23 17 22.0	
CLL				*e*SSSS		23 21 24.0	
CLL				Lm		00 01 00.0	
	comp=N,100nm,20.0s						
CLL				Lm		00 01 00.0	
	comp=E,100nm,19.6s						
CLL				Lm		00 01 00.0	
	comp=Z,200nm,19.8s						
SRS	**Serrai**	**143.67**	**313**	P	PKPdf	22 50 17.1	-3.4
OUR	**Ouranopolis**	**143.72**	**312**	P	PKPdf	22 50 17.6	-3.0
PRU	**Pruhonice**	**143.76**	**331**	*e*PKHKP	PKPdf	22 50 18.8	-1.5
PRU	**Pruhonice**	**143.76**	**331**	*e*PKP	PKPdf	22 50 18.8	-1.5
TREC	**Trest**	**143.82**	**330**	*e*PKHKP	PKPdf	22 50 18.7	-1.7
TREC	**Trest**	**143.82**	**330**	*e*PKP	PKPdf	22 50 18.7	-1.7
SOH	**Sokhos**	**143.96**	**313**	P	PKPdf	22 50 18.9	-2.1
CLZ	**Clausthal**	**144.05**	**337**	*e*PKHKP	PKPdf	22 50 18.7	-2.1
PAIG	**Paliouri**	**144.09**	**311**	P	PKPdf	22 50 15.6	-5.6
HORT	**Hortiatis**	**144.23**	**312**	P	PKPdf	22 50 16.9	-4.6
VAY	**Valandovo**	**144.28**	**314**	*e*PKP	PKPdf	22 50 19.4	-2.1
VAY	**Valandovo**	**144.28**	**314**	P	PKPdf	22 50 18.6	-2.9
LAST	**Lasithi**	**144.28**	**303**	P	PKPdf	22 50 21.3	-0.4
SOP	**Sopron**	**144.38**	**327**⇑	*e*PKP	PKPdf	22 50 20.3	-1.2
NKC	**Novy Kostel**	**144.49**	**333**	*e*PKHKP	PKPdf	22 50 20.4	-1.2
NKC	**Novy Kostel**	**144.49**	**333**	*e*PKP	PKPdf	22 50 20.4	-1.2
MOX	**Moxa**	**144.52**	**335**	*e*PKP	PKPdf	22 50 20.2	-1.4
	comp=Z,26nm,1.5s						
MOX	**Moxa**	**144.52**	**335**	*e*PKP	PKPdf	22 50 20.2	-1.4
	comp=Z,26nm,1.5s						
CONA	**Conrad Observa**	**144.57**	**328**	*i* PKPdf	PKPdf	22 50 21.2	-0.6
	comp=Z,25nm,1.3s,SNR=21						
DIVS	**Divibare**	**144.59**	**320**	P	PKPdf	22 50 20.6	-1.4
XOR	**Xorichti**	**144.65**	**310**	P	PKPdf	22 50 19.7	-2.5
ATHU	**Athens Univers**	**144.74**	**308**	P	PKPdf	22 50 20.1	-2.3
SKO	**Skopje**	**144.74**	**316**	*e*PKP	PKPdf	22 50 22.7	+0.4
SKO	**Skopje**	**144.74**	**316**	P	PKPdf	22 50 21.9	-0.4
KHC	**Kasperske Hory**	**144.82**	**331**	*e*PKPdf	PKPdf	22 50 21.8	-0.4
KHC	**Kasperske Hory**	**144.82**	**331**	*e*PKP	PKPdf	22 50 21.3	-0.9
LIT	**Litokhoron**	**144.86**	**312**	P	PKPdf	22 50 20.5	-2.1
GEC2	**GERESS Array S**	**144.97**	**331**	*e*PKIKP	PKPdf	22 50 21.8	-0.7
GERES	**GERESS Array B**	**144.97**	**331**	PKP	PKPdf	22 50 21.9	-0.6
	comp=Z,2.9nm,0.8s,baz=37,slow=3.3,SNR=24						
ATAL	**Atalanti**	**145.03**	**309**	P	PKPbc	22 50 20.8	-1.6
LKR	**Lokris**	**145.06**	**309**	P	PKPbc	22 50 20.8	-1.7
WET	**Wettzell**	**145.12**	**332**	*e*PKIKP	PKPdf	22 50 22.6	-0.1
KRUS	**Krusevo**	**145.15**	**315**	*e*PKP	PKPdf	22 50 21.9	-1.1
WTSB	**Winterswijk**	**145.18**	**340**⇑	*e*P	PKPbc	22 50 22.0	-0.4
	comp=Z,50nm,2.0s						
ARSA	**Arzberg**	**145.19**	**327**⇑	*i*PKPbc	PKPbc	22 50 22.8	+0.2
	comp=Z,20nm,1.2s,SNR=14						
KZN	**Kozani**	**145.27**	**313**	P	PKPbc	22 50 22.1	-1.0
LTK	**Loutraki**	**145.32**	**308**	P	PKPbc	22 50 21.7	-1.6
FNA	**Florina**	**145.33**	**314**	P	PKPbc	22 50 20.5	-2.8
KOGS	**Kog**	**145.34**	**326**	*e*PKPbc	PKPbc	22 50 23.0	-0.1
AGG	**Agios Georgios**	**145.40**	**310**	P	PKPdf	22 50 22.8	-0.7
MOA	**Molln**	**145.41**	**329**⇑	*i*PKPbc	PKPbc	22 50 23.6	+0.3
	comp=Z,32nm,1.1s,SNR=21						
GRA1	**Grafenberg Arr**	**145.42**	**334**	*e*PKPbc	PKPbc	22 50 23.7	+0.5
GRF	**Grafenberg Arr**	**145.42**	**334**	*e*PKP2	PKPab	22 50 23.7	+0.3
BCI	**Bajram Curri**	**145.44**	**317**	*e*P	PKPdf	22 50 23.6	+0.1
KARN	**Karanos**	**145.45**	**304**	P	PKPdf	22 50 19.8	-3.9
DSF	**Desfina**	**145.50**	**309**	P	PKPdf	22 50 22.4	-1.3
OHR	**Ohrid**	**145.57**	**315**	*e*PKP	PKPdf	22 50 23.8	0.0
OHR	**Ohrid**	**145.57**	**315**	P	PKPdf	22 50 21.9	-1.9
PUK	**Puka**	**145.72**	**317**	*e*P	PKPdf	22 50 25.3	+1.3
KALE	**Kalithea**	**145.79**	**309**	P	PKPdf	22 50 23.3	-0.9
KBN	**Korca**	**145.80**	**314**	*e*P	PKPdf	22 50 25.5	+1.3
GUR	**Goura**	**145.81**	**309**	P	PKPdf	22 50 24.4	+0.1
PERS	**Pernice**	**145.81**	**327**	*e*PKPbc	PKPbc	22 50 24.4	-0.2
SOKA	**Soboth**	**145.82**	**327**⇑	*i*PKPdf	PKPdf	22 50 24.6	+0.6
	comp=Z,15nm,1.3s						
EFP	**Efpalio**	**145.94**	**310**	P	PKPdf	22 50 25.8	+1.3
LAKA	**Lakka**	**145.96**	**309**	P	PKPdf	22 50 25.2	+0.7
VLX	**Vlachokerasia**	**145.99**	**308**	P	PKPdf	22 50 25.4	+0.8
TIR	**Tirane**	**146.08**	**316**	*e*PKIKP	PKPdf	22 50 25.8	+1.2
TIR	**Tirane**	**146.08**	**316**	P	PKPdf	22 50 25.8	+1.2
TNS	**Taunus Mts**	**146.08**	**337**	*e*PKIKP	PKPdf	22 50 25.6	+1.3
UPR	**University Cam**	**146.08**	**309**	P	PKPdf	22 50 26.1	+1.4
ITM	**Ithomi**	**146.39**	**308**	P	PKPdf	22 50 20.9	-4.4
KBA	**Koelnbreinsper**	**146.39**	**329**⇑	*i*PKPdf	PKPdf	22 50 25.9	+0.9
	comp=Z,15nm,1.1s,SNR=5.4						
TOD	**Tromm**	**146.45**	**336**	PKIKP	PKPdf	22 50 26.5	+1.5
BOJS	**Bojanci**	**146.48**	**325**	*e*PKPbc	PKPbc	22 50 26.8	+0.2
HGN	**Heimansgroeve**	**146.49**	**340**⇑	*e*P	PKPdf	22 50 26.2	+1.2
	comp=Z,61nm,1.8s						
LJU	**Ljubljana**	**146.51**	**327**	*e*PKPbc	PKPbc	22 50 26.6	-0.1
BEBN	**Eben Emael**	**146.54**	**340**	PKPbc	PKPbc	22 50 26.8	+0.2
BEBN				APKP		22 50 43.0	
FUR	**Furstenfeldbru**	**146.56**	**332**	*e*PKIKP	PKPdf	22 50 27.1	+1.9
MEM	**Membach**	**146.60**	**340**	PKPbc	PKPbc	22 50 27.7	+0.9
MEM				APKP		22 50 42.1	
IGT	**Igoumenitsa**	**146.60**	**312**	P	PKPdf	22 50 26.4	+0.8
SRN	**Sarande**	**146.68**	**313**	*e*P	PKPdf	22 50 26.5	+0.8
ABH	**Alteburg**	**146.69**	**338**	PKP	PKPbc	22 50 27.4	+0.3
CADS	**Cadrg**	**146.79**	**327**	*e*PKPbc	PKPbc	22 50 26.5	-1.0
PTCC	**Patocco-Chiusa**	**146.86**	**328**	PKP	PKPdf	22 50 26.7	+0.9
UCC	**Uccle**	**146.94**	**342**	PKPbc	PKPbc	22 50 27.3	-0.4
UCC				APKP		22 50 42.3	
KTD	**Kalmit**	**146.95**	**336**	PKIKP	PKPbc	22 50 28.3	+0.5
STU	**Stuttgart**	**146.96**	**335**	*e*PKHKP		22 50 26.0	
BCLA	**Clavier**	**146.99**	**340**	PKPbc	PKPbc	22 50 27.6	-0.3
BCLA				APKP		22 50 43.0	
RUP	**Ruppelstein**	**147.01**	**338**	PKIKP	PKPbc	22 50 28.5	+0.5
WTTA	**Wattenberg**	**147.07**	**331**⇑	*i*PKPdf	PKPbc	22 50 28.5	+0.3
	comp=Z,20nm,1.1s,SNR=8.1						
SNF	**Seneffe**	**147.22**	**341**	PKPbc	PKPbc	22 50 29.0	+0.5
MOTA	**Moosalm**	**147.25**	**331**⇑	*i*PKPdf	PKPbc	22 50 28.6	-0.1
	comp=Z,14nm,1.2s,SNR=6.4						
RETA	**Reutte**	**147.30**	**332**⇑	*i*PKPdf	PKPbc	22 50 28.8	-0.1
	comp=Z,15nm,1.8s,SNR=7.1						
LANF	**Langenberg**	**147.34**	**336**	PKP	PKPbc	22 50 28.9	0.0
WLF	**Walferdange**	**147.36**	**339**	PKPbc	PKPbc	22 50 29.2	+0.2
WLF				APKP		22 50 42.3	
WLF	**Walferdange**	**147.36**	**339**	*e*PKPbc	PKPbc	22 50 28.9	-0.1
GIVF	**Givet**	**147.42**	**340**⇑	*i*PKP1	PKPbc	22 50 29.0	-0.1
	comp=Z,98nm,1.4s						
DOU	**Dourbes**	**147.49**	**341**	PKPbc	PKPbc	22 50 29.5	+0.2
DOU				APKP		22 50 42.7	
BAIF	**Baives**	**147.64**	**341**⇑	*i*PKP1	PKPbc	22 50 29.9	+0.2
	comp=Z,93nm,1.4s						
BFO	**Black Forest**	**147.66**	**335**	*e*PKIKP	PKPbc	22 50 29.7	-0.1
SPAK	**Spaichingen-Ko**	**147.66**	**334**	PKP	PKPbc	22 50 29.8	0.0
FETA	**Feichten**	**147.66**	**331**⇑	*i*PKPdf	PKPbc	22 50 30.2	+0.3
	comp=Z,15nm,1.1s,SNR=6.5						
MENF	**Mencas**	**147.78**	**344**	PKP	PKPdf	22 50 28.2	+1.0
DAVA	**Damuels**	**147.84**	**332**	*i* PKPdf	PKPbc	22 50 30.5	+0.2
	comp=Z,23nm,1.2s,SNR=8.2						
CDF	**Champ du Feu**	**148.00**	**336**⇑	*i*PKP1	PKPbc	22 50 30.7	0.0
	comp=Z,75nm,1.4s						
FELD	**Feldberg im Sc**	**148.16**	**335**	PKP	PKPbc	22 50 30.9	-0.3
ECH	**Echery**	**148.21**	**336**	PKP	PKPbc	22 50 30.7	-0.6
ECH	**Echery**	**148.21**	**336**	*e*PKPdf	PKPdf	22 50 28.3	+0.3
BRMO	**Bormio**	**148.23**	**331**	PKP	PKPbc	22 50 31.8	+0.4
MABI	**Malga Bissina**	**148.48**	**330**	PKP	PKPbc	22 50 31.5	-0.6
MOF	**Molkenrain**	**148.52**	**336**	PKP	PKPbc	22 50 31.7	-0.4
RGNG	**Rignano Grg**	**148.63**	**319**	PKP	PKPbc	22 50 32.5	-0.1
THEF	**They Montfort**	**148.63**	**337**	PKP	PKPbc	22 50 31.1	-1.3
HINF	**Hinteralfeld**	**148.66**	**336**⇑	*i*PKP1	PKPbc	22 50 32.2	-0.3
	comp=Z,57nm,1.5s						
BBS	**Basel-Blauen**	**148.69**	**335**	PKIKP	PKPbc	22 50 31.9	-0.7
HAU	**Haudompre**	**148.69**	**337**⇑	*i*PKP1	PKPbc	22 50 32.4	-0.1
	comp=Z,51nm,1.3s						
HAU				*e*MLR	MLR		
	comp=Z,181nm,22.5s,MS4.5						
HAU	**Haudompre**	**148.69**	**337**⇑	*i*PKP	PKPbc	22 50 32.4	-0.1
HAU				LR	LR		
	comp=Z,180nm,22.5s,MS4.8						
MEZF	**Maizieres J'vi**	**148.73**	**339**⇑	*i*PKP1	PKPbc	22 50 33.0	+0.4
	comp=Z,170nm,1.6s						
CING	**Cingoli**	**148.98**	**324**	PKP	PKPbc	22 50 34.0	+0.6
LOMF	**Lomont**	**149.05**	**336**	PKP	PKPbc	22 50 33.5	0.0
TIP	**Timpagrande**	**149.21**	**314**	*e*PKPbc	PKPbc	22 50 34.6	+0.5
VAI	**Varese**	**149.42**	**332**	PKHKP		22 50 34.0	
MURB	**Monte Urbino**	**149.43**	**324**	PKP	PKPbc	22 50 34.4	-0.2
AQU	**L'Aquila**	**149.52**	**322**	*e*PKHKP		22 50 34.6	
FNVD	**Fontana Vidola**	**149.55**	**327**	PKP	PKPbc	22 50 35.6	+0.8
CABF	**La Chapelle**	**149.94**	**336**⇑	*i*PKP1	PKPbc	22 50 36.2	+0.5
	comp=Z,71nm,1.4s						
FLN	**La Foliniere**	**150.10**	**345**⇑	*i*PKP1	PKPbc	22 50 35.6	-0.4
	comp=Z,133nm,1.5s						
FLN				*e*MLR	MLR		
	comp=Z,244nm,19.8s,MS4.7						
FLN	**La Foliniere**	**150.10**	**345**⇑	*i*PKP	PKPbc	22 50 35.6	-0.4
FLN				LR	LR		
	comp=Z,240nm,19.8s,MS5.0						
MTCE	**Montecelio**	**150.11**	**322**	PKP	PKPbc	22 50 35.6	-0.7
LDF	**La Druitiere**	**150.17**	**345**⇑	*i*PKP1	PKPbc	22 50 35.7	-0.5
	comp=Z,86nm,1.6s						
LOR	**Lormes**	**150.20**	**339**⇑	*i*PKP1	PKPbc	22 50 36.2	-0.1
	comp=Z,78nm,1.6s						
LOR				*e*MLR	MLR		
	comp=Z,234nm,21.2s,MS4.7						
LOR	**Lormes**	**150.20**	**339**⇑	*i*PKP	PKPbc	22 50 36.2	-0.1
LOR				LR	LR		
	comp=Z,230nm,21.3s,MS5.0						
CEL	**Celeste**	**150.26**	**313**	PKP	PKPbc	22 50 36.2	-0.5
SSF	**Saint Saulge**	**150.50**	**339**⇑	*i*PKP1	PKPbc	22 50 36.9	-0.1
	comp=Z,59nm,1.4s						
GRR	**Gorron**	**150.54**	**346**⇑	*i*PKP1	PKPbc	22 50 36.9	-0.2
	comp=Z,103nm,1.5s						
LPL	**La Plagne**	**150.58**	**334**⇑	*i*PKP1	PKPbc	22 50 37.6	+0.3
	comp=Z,50nm,1.2s						
LPG	**La Plagne**	**150.58**	**334**⇑	*i*PKP1	PKPbc	22 50 37.7	+0.4
	comp=Z,31nm,1.0s						
HYF	**Humbligny**	**150.60**	**340**	*e*PKP1	PKPbc	22 50 37.5	+0.2
SMF	**Signal de Mont**	**150.74**	**338**	*e*PKP1	PKPbc	22 50 37.3	-0.3
	comp=Z,79nm,1.4s						
AVF	**Avril sur Loir**	**150.79**	**339**	*e*PKP1	PKPbc	22 50 37.2	-0.5
	comp=Z,63nm,1.4s						
BNI	**Bardonecchia**	**150.97**	**333**	*e*PKIKP	PKPdf	22 50 33.1	+0.7
BNI				*e*		22 50 38.6	
BNI				*e*		22 50 46.6	
SGMF	**Saint Gilles**	**151.03**	**348**	*e*PKP1	PKPbc	22 50 37.8	-0.4
	comp=Z,80nm,1.3s						
ROSF	**Rostrenen**	**151.09**	**349**	*e*PKP1	PKPbc	22 50 37.6	-0.8
	comp=Z,29nm,1.1s						
BGF	**Bois d'Agland**	**151.16**	**339**	*e*PKP1	PKPbc	22 50 38.3	-0.3
MBDF	**Montbardon**	**151.19**	**333**	*e*PKP1	PKPbc	22 50 38.5	-0.2
ORIF	**Oris-en-Rattie**	**151.41**	**334**⇑	*i*PKP1	PKPbc	22 50 39.1	-0.1
	comp=Z,29nm,1.2s						
ORIF				*e*MLR	MLR		
	comp=Z,136nm,19.5s,MS4.5						
AGO	**Saint Agoulin**	**151.50**	**339**	PKP	PKPbc	22 50 36.5	-2.9
TCF	**Toulx Ste Croi**	**151.60**	**340**⇑	*i*PKP1	PKPbc	22 50 39.3	-0.3
	comp=Z,99nm,1.8s						
PGF	**Pioggiola**	**151.79**	**327**⇑	*i*PKP1	PKPbc	22 50 40.8	+0.6
	comp=Z,50nm,0.9s						
VIVF	**Saint-Julien-l**	**151.95**	**335**	*e*PKP1	PKPbc	22 50 40.3	-0.2
MFF	**Saint Martin d**	**152.02**	**343**	*e*PKP1	PKPbc	22 50 40.3	-0.3
	comp=Z,35nm,1.3s						
FRF	**La Foret Royal**	**152.16**	**331**⇑	*i*PKP1	PKPbc	22 50 40.6	-0.4
	comp=Z,156nm,1.7s						
LBL	**Lubilhac**	**152.17**	**337**	PKP	PKPbc	22 50 38.3	-2.7
SMRF	**Simiane la Rot**	**152.31**	**333**⇑	*i*PKP1	PKPbc	22 50 41.3	0.0
	comp=Z,122nm,1.5s						
LMR	**La Mourre**	**152.41**	**331**	*e*PKP1	PKPbc	22 50 41.0	-0.5
	comp=Z,130nm,1.5s						
RJF	**Les Rejaudoux**	**152.70**	**340**	*e*PKP1	PKPbc	22 50 41.9	-0.2
	comp=Z,72nm,1.4s						
RJF				*e*MLR	MLR		
	comp=Z,133nm,19.5s,MS4.5						
RJF	**Les Rejaudoux**	**152.70**	**340**	*e*PKP	PKPbc	22 50 41.9	-0.2
RJF				LR	LR		
	comp=Z,130nm,19.5s,MS4.8						
LASF	**Ste Croix**	**152.93**	**335**⇑	*i*PKP1	PKPbc	22 50 42.6	-0.1
	comp=Z,62nm,1.4s						
TOA0	**Torodi Ar. Sit**	**165.67**	**243**	PKPdf	PKPdf	22 50 51.3	+0.4
TORD	**Torodi Ar. Bea**	**165.67**	**243**	PKP	PKPdf	22 50 53.3	+2.4
	comp=Z,0.4nm,1.0s,baz=310,slow=15,SNR=3.0						
TORD				PKPab	PKPab	22 51 50.5	+0.4
	comp=Z,1.6nm,1.0s,baz=114,slow=4.6,SNR=3.5						
TORD	**Torodi Ar. Bea**	**165.67**	**243**	PKP	PKPdf	22 50 53.3	+2.4
TORD				PKPab	PKPab	22 51 50.5	+0.4

BJI ***01*** *22:55:32.3,4°.95S×129°.93E,h35km,mB5.3/38,mb4.9/48, Ms4.8/43,Ms7 4.4/39*

IDC ***01*** *22:55:33.1±0.4,4°.52S×129°.52E,h0km,mb5.0/25, mb1 5.0/27,mb1mx5.0/28,mbtmp5.0/27,ML4.6/2,MS4.4/14, Ms1 4.4/14,ms1mx4.2/25,Error ellipse: s-maj=17.9km s-min=11.0km az=72.0*

ISCJB ***01*** *22:55:33.6±0.8,4°.59S±0°.02×129°.66E±0°.03,h16km±5km, mb5.2/109,MS4.4/35,Error ellipse: s-maj=5.3km s-min=3.7km az=151.8*

NEIC ***01*** *22:55:34.0±0.1,4°.59S×129°.59E,h10km,mb5.4/49,Error ellipse: s-maj=5.5km s-min=3.8km az=63.0*

NEIC Felt [III] in the Kepulauan Banda.

GCMT ***01*** *22:55:34.5±0.2,4°.47S×129°.67E,h12km,MW5.1,Moment Tensor Solution. s31,c36; s85,c130; Moment tensor: Scale 10^16^Nm; Mrr-2.03±.13; Mθθ-1.87±.11; Mφφ3.90±.12; Mrθ1.91±.36; Mφφ3.38±.10; Mφr1.96±.33; Best double couple: M0:5.20000×10^16^ NP1:φs340.00000°,δ53.00000°, λ-167.00000°. NP2:φs242.00000°,δ79.00000°, λ-38.00000°. Principal axes: T 6.2700, Plg17.0000°, Azm296.0000°; N -2.2100, Plg51.0000°, Azm49.0000°; P -4.0600, Plg34.0000°, Azm194.0000°; Data Used: II IU IC CN G.*

MOS ***01*** *22:55:37.7±0.9,4°.32S×129°.42E,h33km,mb5.5/33, MS4.3/8 Error ellipse: s-maj=11.2km s-min=6.7km az=112.6*

DJA ***01*** *22:55:40,4°.35S×129°.81E,h57km,Mw5.4/24*

ISC 01 22:55:37.2±0.8,4°.57S±0°.03×129°.64E±0°.03,h27km±6km, h34km±1.4km:pP-P,n517,σ1900/307,mb5.2/109,MS4.4/35, 67C-55D,Banda Sea

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

comp=Z,188nm,1.0s,mb5.5
CTAO *e*PcP PcP 23 04 29.1 +0.9
CTAO Charters Tower 22.35 135 P P 23 00 32.8 -0.3
comp=Z,2μmcomp=Z,196nm,1.1s,mb5.5
GUMO Guam 23.54 40 P P 23 00 44.7 -0.9
CGJI Cibinong 23.92 264 P P 23 00 53.9 +4.8
FORT Forrest 26.11 183 *e*P P 23 01 08.4 -0.4
comp=Z,115nm,0.9s,mb5.4
FORT Forrest 26.11 183 *e*P P 23 01 08.7 -0.2
comp=Z,165nm,0.9s,mb5.6
MYKOM Kota Tinggi 26.54 283 P P 23 01 12.9 -0.1
MYKOM Kota Tinggi 26.54 283 P P 23 01 12.8 -0.1
comp=Z,594nmcomp=Z,28nm,1.3s,mb4.6
MNAI Manna 26.61 269 P P 23 01 12.7 -0.9
comp=Z,283nm,1.3s,mb5.6
KGM Kluang 27.11 283 P P 23 01 18.3 +0.3
KTGM Kuala Trenggan 28.24 290 P P 23 01 28.5 +0.3
FRIM Kepong 29.05 285 P P 23 01 34.9 -0.5
TPUB Ta-pu 29.07 343 *e*P P 23 01 34.5 -0.8
KLBR Kellerberrin 29.11 201 *e*P P 23 01 35.5 -0.2
comp=Z,175nm,1.3s,mb5.6
STKA Stephens Creek 29.39 159 *e*P P 23 01 38.3 +0.1
comp=Z,22nm,0.8s,mb4.9
STKA Stephens Creek 29.39 159 P P 23 01 37.6 -0.5
comp=Z,26nm,0.8s,mb5.0,baz=334,slow=8.2,SNR=46
STKA Stephens Creek 29.39 159 *e*P P 23 01 37.8 -0.4
comp=Z,9.6nm,0.9s,mb4.5
STKA *e*PcP PcP 23 04 42.9 -1.2
SSLB Suanglung 29.43 344 *e*P P 23 01 34.0 -4.6
comp=Z,31nm,1.2s,mb4.9
SSLB PP PP 23 02 42.4 -3.0
SSLB *e*PcP PcP 23 04 44.8 +0.5
NACB Ninganchiao 29.63 345 *e*P P 23 01 39.5 -0.8
IPM Ipoh 29.97 287 P P 23 01 43.3 -0.3
IPM Ipoh 29.97 287 P P 23 01 43.4 -0.2
comp=Z,444nmcomp=Z,43nm,1.3s,mb5.0
HNR Honiara 30.45 101 *e*P P 23 01 47.4 -0.4
HNR 23 04 54.0
HNR pmax pmax
comp=Z,285nm,0.9s,mb6.0
HNR Honiara 30.45 101 *e*P P 23 01 47.4 -0.4
comp=Z,285nm,0.9s,mb6.0
HNR PcP PcP 23 04 54.0 +6.8
NWAO Narrogin (SRO) 30.50 201 P P 23 01 47.9 -0.2
comp=Z,59nm,1.1s,mb5.2,baz=30,slow=11,SNR=13
NWAO Narrogin (SRO) 30.50 201 *e*P P 23 01 48.3 +0.3
NWAO *e* 23 04 46.7
NWAO pmax pmax
comp=Z,113nm,1.3s
NWAO Narrogin (SRO) 30.50 201 *e*P P 23 01 48.3 +0.3
comp=Z,113nm,1.3s,mb5.4
NWAO *e*PcP PcP 23 04 46.7 -0.2
NWAO Narrogin (SRO) 30.50 201 P P 23 01 50.3 +2.3
SNR=5.5
NWAO P 23 01 50.3
SNR=5.5
QIZ Qiongzhong 30.50 321 P P 23 01 47.6 -0.5
QIZ S **S** **23 06 46.6 -1.5**
QIZ pmax pmax
comp=Z,11nm,1.1s,mb4.5
QIZ pmax pmax
comp=Z,310nm,4.5s
QIZ LR LR
comp=N,390nm,14.7s
QIZ LR LR
comp=Z,590nm,15.3s,MS4.3
MNSI Mandailing Nat 30.51 279 P P 23 01 57.8 +9.5
KULM Kulim 30.57 288 P P 23 01 48.6 -0.3
KULM Kulim 30.57 288 *e*P P 23 01 47.5 -1.4
comp=Z,52nm,1.5s,mb5.1
KULM Kulim 30.57 288 P P 23 01 47.3 -1.6
comp=Z,22nm,1.3s,mb4.8
QZH Quanzhou 31.24 340 P P 23 01 55.8 +1.2
QZH S **S** **23 06 53.0 -6.6**
QZH LR LR
comp=N,760nm,8.9s
QZH LR LR
comp=E,500nm,7.0s
QZH LR LR
comp=Z,790nm,22.2s,MS4.3
JOW Kunigami 31.25 358 P P 23 01 54.7 +0.1
comp=Z,64nm,1.1s,mb5.4,baz=195,slow=2.9,SNR=5.7
PSI Prapat 31.56 283 P P 23 01 55.1 -2.5
comp=Z,4.2nm,0.5s,mb4.5,baz=139,slow=8.2,SNR=5.8
PSI PcP PcP 23 04 50.0 0.0
comp=Z,6.8nm,0.8s,baz=216,slow=2.8,SNR=5.3
PSI LR LR 23 17 10.9
comp=Z,1μm,18.1s,MS4.7,baz=132,slow=41
PSI Prapat 31.56 283 P P 23 01 55.2 -2.4
PSI 23 04 50.1
ARMA Armidale 33.03 144 *e*P P 23 02 11.0 +0.7
ARMA Armidale 33.03 144 *e*P P 23 02 10.2 -0.1
comp=Z,143nm,1.5s,mb5.7
ARMA *e*PP PP 23 03 24.2 -1.0
COCO West Island 33.30 255 P P 23 02 13.3 +0.4
KKTK Khon Kaen 33.69 309 P P 23 02 17.0 +0.8
CBIJ Chichi jima 33.74 20 LR LR 23 13 32.0
comp=Z,526nm,18.9s,MS4.3,baz=178,slow=32
YNG Young 34.32 152 *e*P P 23 02 21.5 0.0
comp=Z,86nm,1.0s,mb5.6
NST Nakhon Sawan 35.47 305 P P 23 02 32.1 +0.5
CNB Canberra Magne 35.61 152 *e*P P 23 02 33.5 +0.9
TOO Toolangi 35.90 158 *e*P P 23 02 36.7 +1.7
BDT Bhumibol Dam 37.22 306 P P 23 02 46.5 -0.1
comp=Z,22nm,1.0s,mb5.0
NJ2 Nanjing 37.84 345 *e*P P 23 02 52.0 +0.4
NJ2 S **S** **23 08 42.5 +1.3**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
NJ2 pmax pmax
comp=Z,50nm,5.0s
NJ2 LR LR
comp=N,270nm,26.1s
NJ2 LR LR
comp=E,50nm,15.5s
NJ2 LR LR
comp=Z,90nm,27.0s,MS3.4
WHN Wuhan 37.86 338 P P 23 02 52.4 +0.6
WHN S **S** **23 08 41.0 -0.5**
WHN LR LR
comp=N,270nm,7.5s
WHN LR LR
comp=E,810nm,11.7s
WHN LR LR
comp=Z,580nm,16.6s,MS4.5
CM31 Chiang Mai Arr 37.94 308 *e*P P 23 02 53.7 +1.0
CM31 *e*PcP PcP 23 05 09.8 +1.4
CMAR Chiang Mai Arr 37.94 308 P P 23 02 52.0 -0.6
comp=Z,17nm,0.8s,mb4.8,baz=138,slow=7.6,SNR=81
CMAR PcP PcP 23 05 09.3 +0.9
comp=Z,7.2nm,0.9s,baz=167,slow=2.4,SNR=11
CMAR LR LR 23 18 59.1
comp=Z,580nm,20.5s,MS4.4,baz=299,slow=37
CMAR Chiang Mai Arr 37.94 308 P P 23 02 52.0 -0.6
CMAR 23 05 09.3
GYA Guiyang 38.03 325⇓*i*P P 23 02 53.8 +0.5
GYA PP PP 23 04 25.3 +4.7
GYA S **S** **23 08 48.7 +4.4**
GYA SS SS 23 11 25.4 -6.8
GYA pmax pmax
comp=Z,20nm,1.0s,mb4.8
GYA pmax pmax
comp=Z,150nm,5.2s
GYA LR LR
comp=N,820nm,16.9s,MS4.7
GYA LR LR
comp=E,720nm,17.0s,MS4.7
GYA LR LR
comp=Z,820nm,17.2s,MS4.6
CHG Chiang Mai 38.14 308 ⇑P P 23 02 53.9 -0.4
comp=Z,54nm,1.1s,mb5.2
CHTO Chiang Mai 38.14 308 *e*P P 23 02 53.9 -0.4
CHTO *e* 23 05 10.3
CHTO pmax pmax
comp=Z,59nm,1.1s,mb5.2
CHTO Chiang Mai 38.14 308 *e*P P 23 02 53.9 -0.4
comp=Z,59nm,1.1s,mb5.2
CHTO *e*PcP PcP 23 05 10.3 +1.3
CHTO Chiang Mai 38.14 308 P P 23 02 54.4 +0.1
SNR=26
CHTO P 23 02 54.4
SNR=26
CHTO Chiang Mai 38.14 308 P P 23 02 53.7 -0.6
JHJ Hachijo jima 2 38.70 14 LR LR 23 17 01.7
comp=Z,461nm,18.9s,MS4.3,baz=135,slow=33
KMI Kunming 39.43 320 ⇓P P 23 03 06.2 +1.1
KMI pP pP 23 03 17.5 +4.3
KMI sP sP 23 03 21.9 +5.3
KMI PP PP 23 04 41.4 +5.5
KMI PcP PcP 23 05 14.2 +1.3
KMI ScP ScP 23 08 59.8 -0.2
KMI PcS PcS 23 09 03.9 +1.0
KMI S **S** **23 09 06.2 +0.8**
KMI sS sS 23 09 23.3 +4.5
KMI SS SS 23 11 55.7 -4.6
KMI ScS ScS 23 13 07.6 -4.5
KMI pmax pmax
comp=Z,21nm,1.2s,mb4.7
KMI LR LR
comp=N,250nm,18.7s,MS4.3
KMI LR LR
comp=E,360nm,16.0s,MS4.3
KMI LR LR
comp=Z,380nm,15.8s,MS4.3
DZM Mont Dzumac 39.65 119 *e*LR LR 23 14 01.6
comp=Z,1μm,33.6s
DZM Mont Dzumac 39.65 119 *e*P P 23 03 06.7 -0.3
comp=Z,57nm,1.0s,mb5.3
TAU Tasmania Unive 41.28 160 P P 23 03 20.2 +0.1
MJAR Matsushiro Arr 41.68 10 P P 23 03 21.9 -1.5
comp=Z,18nm,1.0s,mb4.7,baz=189,slow=10.0,SNR=37
MJAR PcP PcP 23 05 20.3 +0.4
comp=Z,1.1nm,0.5s,baz=192,slow=3.8,SNR=6.7
MJAR LR LR 23 19 21.6
comp=Z,292nm,20.4s,MS4.2,baz=185,slow=34
MJAR Matsushiro Arr 41.68 10 P P 23 03 21.9 -1.6
MJAR 23 05 20.3
MAJO Matsushiro 41.68 10 *e*P P 23 03 22.2 -1.3
MAJO *e* 23 05 19.9
MAJO pmax pmax
comp=Z,31nm,0.9s,mb4.9
MAJO Matsushiro 41.68 10 *e*P P 23 03 22.2 -1.3
comp=Z,31nm,0.9s,mb4.9
MAJO *e*PcP PcP 23 05 19.9 -0.1
MAT Matsushiro 41.68 10 P P 23 03 21.9 -1.6
KSRS Korea Array 41.84 358 P P 23 03 24.8 +0.1
comp=Z,6.4nm,0.8s,mb4.3,baz=179,slow=9.5,SNR=18
KSRS PcP PcP 23 05 20.7 +0.2
comp=Z,4.8nm,0.9s,baz=179,slow=3.1,SNR=7.1
KSRS LR LR 23 20 47.7
comp=Z,287nm,19.3s,MS4.2,baz=181,slow=36
CD2 Chengdu 43.08 327 *e*P P 23 03 34.5 -0.5
CD2 pP pP 23 03 44.4 +1.1
CD2 sP sP 23 03 48.2 +1.6
CD2 PP PP 23 05 17.3 +1.8
CD2 PcS PcS 23 09 15.3 -1.9
CD2 S **S** **23 09 58.7 -0.8**
CD2 sS sS 23 10 14.9 +1.8
CD2 SS SS 23 13 05.3 -7.4
CD2 ScS ScS 23 13 29.5 -4.5
CD2 pmax pmax
comp=Z,20nm,1.0s,mb4.8
CD2 pmax pmax
comp=Z,80nm,5.2s
CD2 LR LR
comp=N,2μm,15.2s,MS5.3
CD2 LR LR
comp=E,3μm,16.2s,MS5.3
CD2 LR LR
comp=Z,3μm,14.2s,MS5.4
XAN Xi'an 43.10 335 P P 23 03 34.0 -1.1
XAN PP PP 23 05 16.5 +0.9
XAN S **S** **23 10 04.0 +4.3**
XAN pmax pmax
comp=Z,9.0nm,1.2s,mb4.4
XAN pmax pmax
comp=Z,46nm,6.1s
XAN LR LR
comp=N,240nm,22.6s,MS4.1
XAN LR LR
comp=E,100nm,21.9s,MS4.1
XAN LR LR
comp=Z,100nm,17.9s,MS3.8
BJI Beijing 46.09 346 P P 23 03 58.7 -0.2
BJI S **S** **23 10 45.2 +2.3**
BJI pmax pmax
comp=Z,35nm,0.8s,mb5.3
BJI pmax pmax
comp=Z,350nm,3.5s
BJI LR LR
comp=N,170nm,26.3s,MS4.1
BJI LR LR
comp=E,200nm,25.4s,MS4.1
BJI LR LR
comp=Z,130nm,20.4s,MS3.9
SNY Shenyang 46.51 354 ⇑P P 23 03 58.3 -3.8
SNY S **S** **23 10 48.3 -0.5**
SNY pmax pmax
comp=Z,230nm,6.6s
SNY LR LR
comp=N,360nm,20.4s,MS4.4
SNY LR LR
comp=E,220nm,19.2s,MS4.4
SNY LR LR
comp=Z,290nm,19.8s,MS4.2
LZH Lanzhou 47.11 331 ⇓P P 23 04 07.5 +0.5
LZH pP pP 23 04 16.4 +1.1
LZH sP sP 23 04 20.4 +1.8
LZH PP PP 23 05 58.0 -0.1
LZH S **S** **23 10 58.0 +0.3**
LZH sS sS 23 11 13.0 +1.7
LZH SS SS 23 14 17.1 -8.1
LZH pmax pmax
comp=Z,47nm,1.0s,mb5.4
LZH pmax pmax
comp=Z,360nm,4.1s
LZH LR LR
comp=E,2μm,17.1s
LZH LR LR
comp=Z,3μm,19.4s,MS5.3
SHL Shillong 47.33 311 *e*PKP P 23 04 08.0 -0.8
SHL *e*S **S** **23 11 03.0 +2.0**
HHC Hu-ho-hao-te 48.14 342 *e*P P 23 04 15.9 +1.0
HHC pP pP 23 04 25.8 +2.6
HHC sP sP 23 04 29.7 +3.2
HHC PcP PcP 23 05 42.9 +0.8
HHC PP PP 23 06 08.0 +0.6
HHC ScP ScP 23 09 33.3 -1.7
HHC PcS PcS 23 09 37.0 -0.8
HHC S **S** **23 11 12.1 0.0**
HHC sS sS 23 11 29.0 +3.2
HHC ScS ScS 23 14 03.0 -3.2
HHC SS SS 23 14 38.1 -3.6
HHC pmax pmax
comp=Z,19nm,1.0s,mb5.1
HHC pmax pmax
comp=Z,190nm,5.2s
HHC LR LR
comp=N,250nm,21.1s,MS4.3
HHC LR LR
comp=E,260nm,19.9s,MS4.3
HHC LR LR
comp=Z,350nm,20.3s,MS4.3
CN2 Changchun 48.30 356 *e*P P 23 04 16.5 +0.5
CN2 PcP PcP 23 05 42.7 +0.1
CN2 *e*S **S** **23 11 15.1 +0.9**
CN2 pmax pmax
comp=Z,20nm,1.2s,mb5.0
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,400nm,14.0s,MS4.7
CN2 LR LR
comp=E,300nm,14.0s,MS4.7
CN2 LR LR
comp=Z,200nm,15.0s,MS4.2
MDJ Mudanjiang 48.97 360 P P 23 04 21.6 +0.5
MDJ PP PP 23 06 17.7 +2.9
MDJ S **S** **23 11 25.6 +2.0**
MDJ pmax pmax
comp=Z,18nm,1.3s,mb4.9
MDJ pmax pmax
comp=Z,150nm,4.4s
MDJ LR LR
comp=N,140nm,18.0s,MS4.2
MDJ LR LR
comp=E,140nm,15.4s,MS4.2
MDJ LR LR
comp=Z,270nm,17.5s,MS4.3
MSVF Nonsavu 49.10 109 *e*P P 23 04 23.3 +0.6
comp=Z,161nm,1.7s,mb5.8
MSVF PcP PcP 23 05 46.6 +0.5
ASAJ Asahikawa 49.85 12 P P 23 04 27.9 0.0
comp=Z,8.2nm,0.8s,mb4.8,baz=256,slow=17,SNR=7.0
GTA Gaotai 51.69 331 P P 23 04 42.2 +0.3
GTA pP pP 23 04 52.4 +2.1
GTA sP sP 23 04 55.4 +1.9
GTA PcP PcP 23 05 57.2 +2.0
GTA S **S** **23 12 02.3 +0.6**
GTA sS sS 23 12 19.7 +4.2
GTA SS SS 23 15 38.2 -0.4
GTA pmax pmax
comp=Z,22nm,1.3s,mb4.9
GTA pmax pmax
comp=Z,250nm,6.6s
GTA LR LR
comp=N,210nm,21.0s,MS4.3
GTA LR LR
comp=E,220nm,19.2s,MS4.3
GTA LR LR
comp=Z,330nm,19.5s,MS4.4
YSS Yuzh-Sakhalins 52.60 11 *e*P P 23 04 46.0 -2.5
YSS Yuzh-Sakhalins 52.60 11 P P 23 04 48.3 -0.2
HABR Khabarovsk 53.03 5 *e*P P 23 04 51.9 +0.2
HABR *e**PP pP 23 05 01.3 +1.2
HABR *e**SP sP 23 05 05.0 +1.7
HABR 23 05 58.8
HABR *e*PPP 23 07 58.1
HABR *e* 23 14 38.4
HABR pmax pmax
comp=E,28nm,0.8s
HABR pmax pmax
comp=Z,38nm,1.2s,mb5.2
HABR pmax pmax
comp=N,24nm,1.0s
HABR MLR MLR
comp=Z,235nm,18.0s,MS4.3
GUN Gumba 53.11 310 *e*P P 23 04 51.5 -1.1
comp=Z,87nm,0.9s,mb5.7
PKI Pulchoki 53.30 309 *e*P P 23 04 52.8 -1.3
comp=Z,69nm,1.2s,mb5.5
PKI Pulchoki 53.30 309 *e*P P 23 04 53.3 -0.8
PKI pmax pmax
comp=Z,26nm,1.0s,mb5.1
PKI Pulchoki 53.30 309 *e*P P 23 04 53.3 -0.8
comp=Z,26nm,1.0s,mb5.1
PKIN Phulchoki 53.31 309 *e*P P 23 04 53.3 -0.8
comp=Z,26nm,1.0s,mb5.1
KKN Kakani 53.51 310 *e*P P 23 04 53.1 -2.5
comp=Z,39nm,0.9s,mb5.4
KKN Kakani 53.51 310 *e*P P 23 04 53.1 -2.5
KKN pmax pmax
comp=Z,39nm,0.9s,mb5.3
DMN Daman 53.55 309 *e*P P 23 04 53.9 -2.0
comp=Z,64nm,1.0s,mb5.5
KLR Kul'dur 53.61 2 *e*P P 23 04 52.2 -3.7
KLR *e*S **S** **23 12 22.5 -5.1**
KLR pmax pmax
comp=Z,90nm,2.0s,mb5.3
URZ Urewera 54.60 135 *e*P P 23 05 03.6 +0.3
HYB Hyderabad 54.95 295 *i*P P 23 05 05.0 -1.3
ULN Ulaanbaatar 55.86 342 *c i*P P 23 05 12.7 +0.5
ULN Ulaanbaatar 55.86 342 *e*P P 23 05 11.3 -1.0
comp=Z,44nm,1.2s,mb5.4
ULN *e*PcP PcP 23 06 11.8 +1.0
ULN Ulaanbaatar 55.86 342 P P 23 05 13.5 +1.3
SNR=31
ULN P 23 05 13.5
SNR=31
SONM Songino Array 56.04 341 P P 23 05 13.0 -0.5
comp=Z,24nm,1.2s,mb5.1,baz=158,slow=7.5,SNR=62
SONM PcP PcP 23 06 12.6 +1.1
comp=Z,1.1nm,0.7s,baz=290,slow=20,SNR=2.4
SONM LR LR 23 32 47.5
comp=Z,182nm,19.8s,MS4.2,baz=156,slow=40
SONM PKPPKP 23 35 08.6
comp=Z,0.4nm,0.9s,baz=151,slow=3.4,SNR=3.9
SONM Songino Array 56.04 341 P P 23 05 13.0 -0.5
SONM 23 06 12.6
BHPL Bhopal 57.95 301 *e*PKP P 23 05 24.8 -2.7
BHPL AMb AMB 23 05 30.1
comp=Z,47nm,1.2s,mb5.4
KAD Karad 58.90 293 *e*PKP P 23 05 31.6 -2.6
KAD AMb AMB 23 05 37.6
comp=Z,55nm,1.1s,mb5.5
ZAK Zakamensk 59.27 341 *e*P P 23 05 27.4 -8.8
ZAK pmax pmax
comp=Z,13nm,1.9s,mb4.6
POO Poona 59.56 294 *e*PKP P 23 05 36.5 -2.3
TLY Talaya 60.27 342 *e*P P 23 05 44.3 +1.2
TLY *e*S **S** **23 13 50.9 -4.5**
TLY pmax pmax
comp=Z,12nm,1.0s,mb4.9
TLY MLR MLR
comp=Z,133nm,21.0s,MS4.1
DDI Dehra Dun 60.28 309 *e*PKP P 23 05 41.0 -2.6
IRK Irkutsk 60.57 342 *e*P P 23 05 45.8 +0.7
IRK *e* 23 05 56.2
IRK pmax pmax
comp=Z,70nm,2.7s,mb5.3
MOY Mondy 61.13 340 *e*P P 23 05 50.0 +1.1
MOY pmax pmax
comp=Z,100nm,2.0s,mb5.6
WMQ Urumqi 61.18 326 *e*P P 23 05 50.0 +0.6
WMQ PP PP 23 08 07.0 +2.5
WMQ ScS ScS 23 15 37.0 -1.9
WMQ SS SS 23 18 08.0 +0.1
WMQ pmax pmax
comp=Z,31nm,1.1s,mb5.3
WMQ pmax pmax
comp=Z,67nm,5.0s
WMQ LR LR
comp=N,420nm,18.0s,MS4.7
WMQ LR LR
comp=E,190nm,18.0s,MS4.7
WMQ LR LR
comp=Z,170nm,17.0s,MS4.3
CLNS Chul'man 61.32 357 *e*P P 23 05 49.6 -0.5
CLNS pmax pmax
comp=Z,13nm,1.1s,mb5.0
CLNS pmax pmax
comp=N,11nm,1.0s
CLNS pmax pmax
comp=E,3.0nm,0.6s
AJM Ajmer 61.49 303 *e*PKP P 23 05 50.2 -1.7
PETK Petropavlovsk- 62.15 19 P P 23 05 56.0 +0.3
comp=E,18nm,0.9s,mb5.2,baz=188,slow=5.1,SNR=17
PETK LR LR 23 27 31.4
comp=E,188nm,21.9s,MS4.2,baz=214,slow=31
PET Petropavlovsk 62.39 19⇓*i*P P 23 05 58.9 +1.6
PET pmax pmax
comp=Z,41nm,1.3s,mb5.4
PET Petropavlovsk 62.39 19 *e*P P 23 05 56.7 -0.7
CASY Casey 63.03 189 *e*P P 23 06 02.2 +0.7
CASY Casey 63.03 189 *e*P P 23 06 01.1 -0.4
comp=Z,57nm,1.4s,mb5.5
CASY *e*PcP PcP 23 06 39.6 +0.5
BOD Bodaibo 63.46 351 *e*P P 23 06 04.6 +0.2
BOD pmax pmax
comp=Z,19nm,1.3s,mb5.1
KSH Kashi 66.01 317 *e*P P 23 06 20.8 -0.6
KSH PcP PcP 23 06 51.6 -0.3
KSH PP PP 23 08 47.5 +0.5
KSH ScP 23 10 52.9
KSH PcS 23 10 54.5
KSH S S 23 15 05.1 -2.5
KSH ScS ScS 23 16 12.2 -3.7
KSH pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
KSH pmax pmax
comp=Z,110nm,5.2s
KSH LR LR
comp=N,120nm,5.7s
KSH LR LR
comp=E,74nm,5.1s
KSH LR LR
comp=Z,85nm,4.3s
MK31 Makanchi Array 66.02 326 *e*P P 23 06 21.1 -0.2
MK31 *e* 23 06 50.4
MKAR Makanchi Array 66.02 326 P P 23 06 20.6 -0.7
comp=Z,6.6nm,0.7s,mb4.8,baz=116,slow=7.2,SNR=36
YAK Yakutsk 66.41 0 *e*P P 23 06 24.3 +0.8
YAK *e**PP pP 23 06 32.6 +0.5
YAK *e*S S 23 15 14.2 +2.5
YAK *e**SS sS 23 15 33.5 +7.6
YAK *e* 23 16 17.8

YAK pmax pmax
comp=Z,289nm,3.7s
YAK pmax pmax
comp=N,76nm,1.9s
YAK pmax pmax
comp=E,32nm,2.0s
YAK pmax pmax
comp=Z,47nm,0.6s,mb5.7
YAK smax
comp=E,241nm,5.0s
MIR Mirnyy 66.88 195⇑ *i*P **P 23 06 28.0 +1.5**
MIR pmax pmax
comp=Z,72nm,1.4s,mb5.5
KZA Kyzart 67.72 319 P **P 23 06 33.3 +1.1**
SNR=10
TKM2 Tokmak 2 67.90 320 P **P 23 06 33.7 +0.3**
SNR=11
TKM2 Tokmak 2 67.90 320 *e*P **P 23 06 33.1 -0.3**
TKM2 *e* 23 07 00.4
TKM2 pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
TKM2 Tokmak 2 67.90 320 *e*P **P 23 06 33.1 -0.2**
comp=Z,8.4nm,0.8s,mb4.8
TKM2 *e*PcP PcP 23 07 00.4 +0.7
UCH Uchtor 68.27 319 P **P 23 06 37.2 +1.5**
SNR=13
UCH Uchtor 68.27 319 *e*P **P 23 06 35.6 -0.1**
comp=Z,37nm,1.6s,mb5.2
UCH *e*PcP PcP 23 07 03.0 +1.7
AAK Ala-Archa 68.47 319 P **P 23 06 37.7 +0.7**
comp=Z,52nm,1.1s,mb5.5,SNR=5.4
AAK Ala-Archa 68.47 319 P **P 23 06 37.0 0.0**
comp=Z,0.9nm,0.3s,mb4.2,baz=114,slow=4.6,SNR=11
AAK Ala-Archa 68.47 319 *e*P **P 23 06 37.1 +0.1**
AAK pmax pmax
comp=Z,36nm,1.6s,mb5.2
AAK Ala-Archa 68.47 319 *e*P **P 23 06 37.1 +0.1**
comp=Z,36nm,1.6s,mb5.2
AAK Ala-Archa 68.47 319 P **P 23 06 37.6 +0.6**
SNR=11
AAK P 23 06 37.6
SNR=11
AML Almayashu 68.76 319 P **P 23 06 40.0 +1.3**
SNR=10.0
AML Almayashu 68.76 319 *e*P **P 23 06 38.8 0.0**
comp=Z,96nm,1.8s,mb5.4
USP Ospenovka 68.77 320 P **P 23 06 39.0 +0.2**
SNR=11
KBL Kabul 68.94 310 *e*P **P 23 06 40.0 -0.1**
KBL 23 07 06.1
EKS2 Erkin-Say 68.95 319 *e*P **P 23 06 40.2 +0.2**
comp=Z,20nm,1.0s,mb5.0
ZAA0 Zalesovo Array 69.26 334 *e*P **P 23 06 40.1 -1.5**
ZALV Zalesovo Beam 69.26 334 P **P 23 06 40.1 -1.5**
comp=Z,14nm,0.9s,mb4.9,baz=122,slow=5.0,SNR=35
ZALV PKP2bc 23 34 51.0
comp=Z,0.8nm,0.8s,baz=324,slow=4.0,SNR=6.0
ZALV Zalesovo Beam 69.26 334 P **P 23 06 40.1 -1.5**
ZALV ⇑*e* 23 34 51.0
KURK Kurchatov 70.28 328 P **P 23 06 47.7 -0.2**
comp=Z,302nm,0.9s,mb6.2,SNR=20
KURK Kurchatov 70.28 328 P **P 23 06 46.8 -1.1**
comp=Z,18nm,0.9s,mb5.0,baz=130,slow=5.6,SNR=60
KURK PKP2ab 23 34 50.0
comp=Z,2.3nm,1.3s,baz=318,slow=4.1,SNR=5.0
KURK Kurchatov 70.28 328 *e*P **P 23 06 46.8 -1.1**
KURK pmax pmax
comp=Z,54nm,1.0s,mb5.4
KURK Kurchatov 70.28 328 *e*P **P 23 06 46.8 -1.2**
comp=Z,54nm,1.0s,mb5.4
KURK Kurchatov 70.28 328 P **P 23 06 47.2 -0.7**
SNR=28
KURK P 23 06 47.2
SNR=28
NVS Novosibirsk 70.55 334⇓ *i*P **P 23 06 48.9 -0.6**
NVS *i* S S 23 15 57.0 -4.2
NVS pmax pmax
comp=Z,145nm,2.3s,mb5.5
NVS pmax pmax
comp=N,60nm,1.8s
NVS pmax pmax
comp=E,26nm,1.1s
NVS smax
comp=N,48nm,2.1s
NVS smax
comp=E,51nm,2.1s
SBA Scott Base 75.77 172 *e*P **P 23 07 20.8 +0.7**
SBA *e* 23 10 13.4
BVAR Borovoye Array 75.83 328 P **P 23 07 19.8 -1.0**
comp=E,16nm,0.9s,mb4.9,baz=120,slow=8.8,SNR=57
BRVK Borovoye 75.91 328 P **P 23 07 21.0 -0.2**
comp=E,190nm,1.3s,mb5.9,SNR=11
BRVK Borovoye 75.91 328 *d i*P **P 23 07 19.8 -1.4**
BRVK pmax pmax
comp=Z,66nm,1.5s,mb5.3
BRVK Borovoye 75.91 328 *e*P **P 23 07 20.9 -0.3**
comp=Z,52nm,1.2s,mb5.3
BRVK Borovoye 75.91 328 P **P 23 07 20.7 -0.5**
SNR=27
BRVK P 23 07 20.7
SNR=27
TIXI Tiksi 76.08 360 *e*P **P 23 07 22.1 +0.3**
TIXI *e* 23 10 12.7
TIXI *e*S S 23 17 01.0 -2.3
TIXI pmax pmax
comp=Z,29nm,1.4s,mb5.0
TIXI MLR MLR
comp=Z,226nm,20.0s,MS4.5
TIXI Tiksi 76.08 360 *e*P **P 23 07 20.6 -1.2**
comp=Z,35nm,1.3s,mb5.1
BILL Bilibino 76.85 13⇑ *i*P **P 23 07 26.7 +0.5**
BILL *e* 23 10 16.3
BILL *e*S S 23 17 13.8 +2.0
BILL pmax pmax
comp=Z,17nm,2.4s,mb4.5
BILL Bilibino 76.85 13 *e*P **P 23 07 26.3 +0.1**
HATD Hatta, Dubai 77.05 297 P **P 23 07 29.8 +1.5**
SNR=5.2
MAW Mawson 77.07 201 *e*P **P 23 07 28.4 +0.9**
comp=Z,30nm,1.4s,mb5.0
MAW Mawson 77.07 201 P **P 23 07 27.8 +0.3**
comp=Z,43nm,1.2s,mb5.3,baz=68,slow=7.6,SNR=28
MAW LR LR 23 37 06.7
comp=Z,204nm,18.1s,MS4.5,baz=76,slow=32
MAW Mawson 77.07 201 *e*P **P 23 07 28.1 +0.6**
MAW pmax pmax
comp=Z,17nm,1.4s
MAW Mawson 77.07 201 *e*P **P 23 07 28.1 +0.6**
comp=Z,17nm,1.4s,mb4.8
ABKT Ailbek 78.39 310 P **P 23 07 35.5 0.0**
comp=Z,157nm,1.0s,mb5.9,SNR=12
PPT Papeete 79.86 107 *e*LR LR 23 32 38.7
comp=Z,721nm,37.2s
ABKAR Akbulak array 80.40 321 *e*P **P 23 07 45.3 -0.9**
comp=Z,13nm,0.8s,mb4.9
GAMB Gambell 80.83 23 *e*P **P 23 07 49.1 +0.9**
comp=Z,50nm,1.4s,mb5.3
IANJ Anjilo 81.09 307 *e*P **P 23 07 49.8 -0.4**
AKTK Aktyubinsk 81.95 322 P **P 23 07 53.5 -0.9**
AKTO Aktyubinsk 81.95 322 P **P 23 07 53.5 -0.9**
comp=Z,17nm,1.0s,mb4.9,baz=101,slow=6.6,SNR=41
SVE Sverdlovsk 82.52 329⇑ *e*P **P 23 07 57.5 +0.3**
SVE *e*S S 23 18 14.3 +2.1
SVE pmax pmax
comp=Z,47nm,1.7s,mb5.2
SVE MLR MLR
comp=Z,175nm,17.0s,MS4.5
TNA Tin City 83.11 22 *e*P **P 23 08 00.1 0.0**
comp=Z,23nm,1.1s,mb5.1
ARU Arti 83.47 328 P **P 23 08 00.4 -1.8**
comp=Z,146nm,1.4s,mb5.8,SNR=8.7
ARU Arti 83.47 328 *c i*P **P 23 07 59.9 -2.3**
ARU *e* 23 11 08.8
ARU S S 23 18 18.4 -3.5
ARU pmax pmax
comp=Z,64nm,1.7s,mb5.4
ARU Arti 83.47 328 *e*P **P 23 08 00.7 -1.5**
comp=Z,83nm,1.6s,mb5.5
ARU *e*PP PP 23 11 13.7 -0.9
QRN Al-Qurain 84.95 299 *e*P **P 23 08 10.5 +0.2**
QRN AMb AMB 23 08 13.7
comp=Z,98nm,1.7s,mb5.7
UMR Umm Al-Rimmam 85.23 300 *e*P **P 23 08 11.7 -0.1**
UMR AMb AMB 23 08 13.4
comp=Z,105nm,1.0s,mb5.9
RDF Al-Radifah 85.29 299 *e*P **P 23 08 11.8 -0.3**
RDF AMb AMB 23 08 13.8
comp=Z,92nm,1.1s,mb5.8
MIB Mutribah 85.59 300 *e*P **P 23 08 13.1 -0.5**
MIB AMb AMB 23 08 15.2
comp=Z,178nm,1.1s,mb6.2
NAY Al-Naaiem 85.60 300 *e*P **P 23 08 13.2 -0.4**
NAY AMb AMB 23 08 15.1
comp=Z,104nm,1.0s,mb6.0
SYO Syowa Base 85.78 201⇑ *i*P **P 23 08 12.2 -1.5**
SYO Syowa Base 85.78 201⇓ *i*PcP PcP 23 08 15.2 -1.3
SVW2 Sparrevohn 86.68 28 *e*P **P 23 08 18.8 +0.6**
OHAK Old Harbor 86.85 32 *e*P **P 23 08 18.9 -0.2**
comp=Z,73nm,1.0s,mb5.9
TTA Tatalina 86.98 26 *e*P **P 23 08 20.4 +0.8**
MAK Makhachkala 87.34 313 *e*P **P 23 08 23.6 +1.8**
MAK *e* 23 11 46.5
MAK *e*S S 23 18 49.5 -11
MAK pmax pmax
comp=Z,99nm,1.0s,mb6.0
KDAK Kodiak Island 87.35 32 *e*P **P 23 08 21.9 +0.4**
KDAK pmax pmax
comp=Z,208nm,1.5s,mb6.1
KDAK Kodiak Island 87.35 32 *e*P **P 23 08 21.9 +0.4**
comp=Z,208nm,1.5s,mb6.1
RSO Redoubt South 87.86 29 *e*P **P 23 08 24.7 +0.8**
BHD Baghdad 88.53 303 *e*P **P 23 08 21.0 -6.7**
BHD *e*S SKSac 23 18 50.0 -5.3
PPLA Purkeypile 88.67 27 *e*P **P 23 08 28.3 +0.6**
comp=Z,80nm,2.0s,mb5.7
DGRG David-gareji 88.70 312 P **P 23 08 29.8 +1.5**
CHUM Lake Minchumin 88.83 26 *e*P **P 23 08 28.6 +0.2**
comp=Z,22nm,0.8s,mb5.5
GNI Garni 89.02 310 P **P 23 08 31.4 +1.5**
comp=Z,11nm,0.9s,mb5.2,baz=137,slow=7.0,SNR=12
GNI Garni 89.02 310 *c i*P **P 23 08 31.5 +1.6**
GNI pmax pmax
comp=Z,29nm,1.3s
GNI Garni 89.02 310 *e*P **P 23 08 30.6 +0.7**
comp=Z,26nm,1.1s,mb5.5
GNI Garni 89.02 310 P **P 23 08 32.1 +2.2**
SNR=7.2
GNI P 23 08 32.1
SNR=7.2
MTA Mtatsminda 89.17 312 P **P 23 08 31.1 +0.6**
TBLG Delisi 89.21 312 P **P 23 08 31.9 +1.2**
KTH Kantishna Hill 89.37 26 *e*P **P 23 08 31.4 +0.5**
comp=Z,16nm,1.1s,mb5.3
TAOE Nuku Hiva Isla 89.51 99 *e*LR LR 23 37 06.2
comp=Z,356nm,32.4s
GOR Gori 89.71 312 P **P 23 08 34.6 +1.6**
PMR Palmer 89.82 28 *e*P **P 23 08 33.4 +0.3**
PMR pmax pmax
comp=Z,21nm,1.1s,mb5.4
PMR Palmer 89.82 28 *e*P **P 23 08 33.4 +0.3**
comp=Z,21nm,1.1s,mb5.4
KEH Kehvi 89.87 312 P **P 23 08 34.0 +0.2**
MSL Mosul 89.89 306 *e*P **P 23 08 36.0 +1.9**
ZEI Tsey 89.95 313 *e*P **P 23 08 34.4 +0.2**
ZEI pmax pmax
comp=Z,33nm,1.4s,mb5.5
ONI Oni 90.26 313 P **P 23 08 34.6 -1.0**
COLD Coldfoot 90.38 23 *e*P **P 23 08 35.2 -0.4**
comp=Z,16nm,0.9s,mb5.3
GOF Gofitskoye 90.81 315 *e*P **P 23 08 32.9 -5.2**
GOF pmax pmax
comp=Z,30nm,1.3s,mb5.5
COLA College 90.92 25 *e*P **P 23 08 38.2 0.0**
COLA pmax pmax
comp=Z,11nm,1.1s,mb5.1
COLA College 90.92 25 *e*P **P 23 08 38.2 0.0**
comp=Z,11nm,1.1s,mb5.1
KIV Kislovodsk 90.95 314 *e*P **P 23 08 38.5 -0.3**
KIV pmax pmax
comp=Z,7.0nm,1.1s,mb4.9
KIV MLR MLR
comp=Z,82nm,20.0s,MS4.2
KIV Kislovodsk 90.95 314 *e*P **P 23 08 39.0 +0.2**
KMBO Kilima Mbogo 92.29 269 P **P 23 08 46.7 +1.0**
comp=Z,2.0nm,0.9s,mb4.5,baz=51,slow=8.0,SNR=6.8
KMBO Kilima Mbogo 92.29 269 *e*P **P 23 08 46.3 +0.6**
KMBO pmax pmax
comp=Z,7.0nm,1.3s
KMBO Kilima Mbogo 92.29 269 *e*P **P 23 08 46.3 +0.5**
comp=Z,6.8nm,1.3s,mb4.8
EGAK Eagle 93.76 25 *e*P **P 23 08 51.0 -0.3**
comp=Z,16nm,1.0s,mb5.4
DAWY Dawson 94.50 26 *e*P **P 23 08 54.6 -0.2**
ASF Jabal al Asfar 94.73 302 P **P 23 08 57.7 +1.2**
comp=Z,5.8nm,0.8s,mb5.1,baz=297,slow=3.1,SNR=12
OBN Obninsk 95.48 325⇓ *e*P **P 23 08 58.3 -1.1**
OBN pmax pmax
comp=Z,25nm,2.1s,mb5.3
OBN MLR MLR
comp=Z,200nm,19.0s,MS4.6
MMAI Mount Meron Ar 96.02 303 P **P 23 09 03.2 +0.8**
comp=Z,5.9nm,0.9s,mb5.0,baz=95,slow=5.9,SNR=10
MMAI LR LR 23 59 08.1
comp=Z,147nm,18.2s,MS4.5,baz=120,slow=40
APA Apatity 96.59 337⇑ *i*P **P 23 09 04.0 -0.2**
APA MLR MLR
comp=Z,200nm,21.0s,MS4.6
INK Inuvik 96.75 22 *e*P **P 23 09 03.9 -1.0**
INK pmax pmax
comp=Z,21nm,1.1s
INK Inuvik 96.75 22 *e*P **P 23 09 03.9 -1.0**
comp=Z,21nm,1.1s,mb5.5
BR131 Keskin Array S 97.52 309 *e*P **P 23 09 08.3 -0.7**
comp=Z,2.9nm,0.9s,mb4.8
BRTR Keskin Array B 97.52 309 P **P 23 09 08.8 -0.2**
comp=Z,2.7nm,0.9s,mb4.8,baz=116,slow=5.6,SNR=19
BRTR PP PP 23 13 17.8 +11
comp=Z,0.6nm,0.9s,baz=132,slow=3.5,SNR=4.0
BRTR LR LR 00 01 45.3
comp=Z,100nm,18.6s,MS4.3,baz=79,slow=41
BRTR Keskin Array B 97.52 309 *i* P **P 23 09 08.3 -0.7**
BRTR pmax pmax
comp=Z,3.0nm,0.9s
BRTR Keskin Array B 97.52 309 P **P 23 09 08.8 -0.2**
BRTR PP PP 23 13 17.8 +11
ARCES ARCESS Array B 99.19 340 P **P 23 09 14.7 -1.1**
comp=Z,4.8nm,0.9s,mb5.0,baz=90,slow=6.1,SNR=13
LSZ Lusaka 99.81 254 *e*P Pdif 23 09 19.9 +1.0
LSZ pmax pmax
comp=Z,5.0nm,1.1s,mb4.9
LSZ Lusaka 99.81 254 *e*Pdif Pdif 23 09 19.9 +0.9
comp=Z,4.9nm,1.1s
AKASG Malin Array Be 100.12 321 P Pdif 23 09 18.8 -1.5
comp=Z,0.7nm,0.6s,baz=86,slow=2.7,SNR=4.5
AKASG PP PP 23 13 30.4 +4.3
comp=Z,0.2nm,0.2s,baz=78,slow=4.9,SNR=5.0
AKASG Malin Array Be 100.12 321 P Pdif 23 09 18.8 -1.5
AKASG PP PP 23 13 30.4 +4.3
BOSA Boshof 100.37 240 *e*P Pdif 23 09 22.1 +0.7
FINES FINESS Array B 100.47 332 P Pdif 23 09 20.0 -1.9
comp=Z,2.3nm,0.8s,baz=2.9,slow=3.8,SNR=5.7
FINES FINESS Array B 100.47 332 P Pdif 23 09 20.0 -1.9
BUR08 Bucovina Ar. S 103.09 318 *e*Pdif Pdif 23 09 33.7 +0.2
KWP Kalwaria Pacla 104.42 320 P Pdif 23 09 39.5 +0.1
UZH Uzhgorod 104.86 319 *e*P Pdif 23 09 42.3 +0.9
YKA Yellowknife Ar 105.74 26 Pdiff Pdif 23 09 43.4 -1.8
comp=Z,0.8nm,0.7s,baz=304,slow=4.8,SNR=4.6
YKA PKiKP PKiKP 23 13 57.5 -0.3
comp=Z,1.8nm,0.9s,baz=297,slow=1.9,SNR=4.5
YKA PKKPbc PKKPbc 23 25 21.3 -2.8
comp=Z,1.4nm,0.7s,baz=107,slow=2.5,SNR=7.0
YKA Yellowknife Ar 105.74 26 Pdif Pdif 23 09 43.4 -1.8
YKA PKPdf PKiKP 23 13 57.5 -0.3
YKA PKKPbc PKKPbc 23 25 21.3 -2.8
NOA NORSAR Array B 107.47 333 Pdiff Pdif 23 09 52.5 -0.5
comp=Z,0.5nm,0.8s,baz=181,slow=8.6,SNR=2.7
GCIS Gornji Cirnik 109.89 317 *i* PKiKP PKiKP 23 14 06.3 +0.2
NVAR Mina Array Bea 110.06 51 PKiKP PKiKP 23 14 07.7 +1.1
comp=Z,0.3nm,0.3s,baz=177,slow=3.0,SNR=4.4
NVAR PKKPbc PKKPbc 23 25 08.7 -1.0
comp=Z,0.8nm,0.8s,baz=134,slow=4.3,SNR=5.1
ZAVS Zavodnje 110.14 318 *i* PKiKP PKiKP 23 14 06.6 0.0
BOJS Bojanci 110.23 317 *e*PKiKP PKiKP 23 14 06.8 0.0
GERES GERESS Array B 110.34 321 PKiKP PKiKP 23 14 06.4 -0.5
comp=Z,1.2nm,0.8s,baz=48,slow=2.0,SNR=11
LJU Ljubljana 110.58 318 *i* PKiKP PKiKP 23 14 07.8 +0.4
SLMT Seeley Lake 111.40 41 *e*PKiKP PKiKP 23 14 09.0 +0.1
GRA1 Grafenberg Arr 111.61 322 *e*PKPdf PKiKP 23 14 08.6 -0.6
GRF Grafenberg Arr 111.61 322 *e*PKiKP PKiKP 23 14 08.6 -0.6
GRF *e*L 00 09 37.3
comp=Z,149nm,19.8s
H13A Challis 111.65 44 ⇑PKiKP PKiKP 23 14 09.4 0.0
baz=112,SNR=8.3
CHMT Chamberlain Mo 111.66 41 *e*PKiKP PKiKP 23 14 09.3 -0.1
B15A Bradely Ranch, 111.67 39 ⇑PKiKP PKiKP 23 14 08.6 -0.8
baz=112,SNR=6.0
C15A Salmond Ranch, 111.81 40 ⇓PKiKP PKiKP 23 14 09.6 -0.1
baz=112
I13A Wildhorse Cree 111.92 44 ⇑PKiKP PKiKP 23 14 10.2 +0.2
baz=112,SNR=6.7
Q11A Duckwater 112.01 50 ⇓PKiKP PKiKP 23 14 09.8 -0.5
baz=112
J13A Cove Ranch, Pi 112.01 45 ⇓PKiKP PKiKP 23 14 09.6 -0.6
baz=112
D15A Lincoln 112.09 41 ⇓PKiKP PKiKP 23 14 10.3 +0.1
baz=112
B16A M & M Farms, S 112.18 39 ⇑PKiKP PKiKP 23 14 10.0 -0.3
baz=112
A17A Triple J Farms 112.63 38 ⇑PKiKP PKiKP 23 14 10.9 -0.3
baz=113
F16A Kennard Place, 113.07 42 ⇓PKiKP PKiKP 23 14 12.4 +0.3
baz=113
M14A Sheep Mountain 113.10 47 ⇑PKiKP PKiKP 23 14 12.7 +0.4
baz=113
BOZ Bozeman (W) 113.11 42 ⇑PKiKP PKiKP 23 14 12.3 +0.1
baz=113
P13A Bates Ranch, G 113.11 49 ⇓PKiKP PKiKP 23 14 11.9 -0.5
baz=113
G16A Moss Hill, Enn 113.12 42 ⇓PKiKP PKiKP 23 14 12.4 +0.1
baz=113
A18A Metzger Ranch, 113.16 38 ⇑PKiKP PKiKP 23 14 12.1 -0.1
baz=113
Q13A Wheeler Ranch, 113.23 50 ⇓PKiKP PKiKP 23 14 12.3 -0.4
baz=113
J15A Blackfoot 113.23 44 ⇑PKiKP PKiKP 23 14 12.8 +0.3
baz=113
D17A Six Diamond Ra 113.24 40 ⇑PKiKP PKiKP 23 14 12.3 -0.1
baz=113
E17A Martinsdale 113.36 41 ⇓PKiKP PKiKP 23 14 12.4 -0.3
baz=113
B18A Beardsley Farm 113.39 39 ⇑PKiKP PKiKP 23 14 12.4 -0.3
baz=113
F17A Fitzpatrick Pl 113.67 41 ⇑PKiKP PKiKP 23 14 13.7 +0.4
baz=114,SNR=10
DUG Dugway 113.83 48 *e*PKIKP PKiKP 23 14 14.7 +0.9
W13A Hualapai Mount 114.19 54 ⇑PKiKP PKiKP 23 14 14.6 0.0
baz=114
TPAW Teton Pass 114.24 44 *e*PKiKP PKiKP 23 14 14.0 -0.4
F18A Big Timber 114.30 41 ⇓PKiKP PKiKP 23 14 13.6 -0.9
baz=114
REDW Red Top Meadow 114.35 44 *e*PKiKP PKiKP 23 14 15.4 +0.8
LOHW Long Hollow 114.44 44 *e*PKiKP PKiKP 23 14 15.3 +0.5
J17A Brown Place, J 114.44 44 ⇑PKiKP PKiKP 23 14 13.8 -1.0
baz=114,SNR=7.3
V14A Boquillas Ranc 114.69 53 ⇑PKiKP PKiKP 23 14 14.8 -0.8
baz=115
MSU Marysvale 114.73 50 *e*PKiKP PKiKP 23 14 17.1 +1.6
Z13A Yuma Proving G 114.75 56 ⇓PKiKP PKiKP 23 14 15.3 -0.5
baz=115
J18A Kendall Valley 114.97 44 ⇑PKiKP PKiKP 23 14 16.0 +0.2
baz=115,SNR=5.3
HINF Hinteralfeld 114.98 321 *e*PKIKP PKiKP 23 14 14.7 -1.0
M17A Scullys Gap (B 115.04 46 ⇑PKiKP PKiKP 23 14 16.2 +0.2
baz=115
K18A Toltan Ranch, 115.13 45 ⇑PKiKP PKiKP 23 14 16.4 +0.2
baz=115,SNR=8.5
HAU Haudompre 115.22 322 *e*PKIKP PKiKP 23 14 15.5 -0.7
GIVF Givet 115.29 324 *e*PKIKP PKPdf 23 14 16.0 -0.2
BW06 Boulder Array 115.43 44 ⇑PKiKP PKiKP 23 14 16.9 +0.1
baz=115,SNR=5.6
PDAR Pinedale Array 115.43 44 PKP PKPdf 23 14 17.4 +0.6
comp=Z,2.2nm,1.0s,baz=222,slow=2.0,SNR=14
PDAR PKKPbc PKKPbc 23 24 51.3 -0.5
comp=Z,1.5nm,0.9s,baz=104,slow=4.7,SNR=10
BAIF Baives 115.66 324 *e*PKIKP PKPdf 23 14 16.7 -0.3
K19A Absolon Red Bu 115.91 44 ⇓PKiKP PKiKP 23 14 17.2 -0.4
baz=116,SNR=8.5
LPG La Plagne 115.92 319 *e*PKIKP PKPdf 23 14 17.3 -0.3
comp=Z,29nm,1.3s
LPL La Plagne 115.92 319 *e*PKIKP PKPdf 23 14 17.3 -0.3
CABF La Chapelle 115.93 320 *e*PKIKP PKPdf 23 14 17.2 -0.4
comp=Z,18nm,1.0s
115A Sonoran Desert 116.03 56 ⇓PKiKP PKiKP 23 14 17.7 -0.5
baz=116
SBF Sospel 116.04 317 *e*PKIKP PKPdf 23 14 17.0 -0.9
comp=Z,34nm,1.0s
WUAZ Wupatki 116.09 53 *e*PKPdf PKPdf 23 14 19.2 +1.0
WUAZ PP PP 23 15 24.8 +1.6
Q18A Rafter H Ranch 116.12 48 ⇑PKiKP PKiKP 23 14 18.7 +0.5
baz=116
BNI Bardonecchia 116.13 319 *e*PKIKP PKPdf 23 14 18.9 +0.9
MBDF Montbardon 116.18 318 *e*PKIKP PKPdf 23 14 17.9 -0.2
X16A Lo Mia Camp, P 116.30 54 ⇑PKiKP PKiKP 23 14 18.2 -0.5
baz=116
K20A Yellowstone Ra 116.31 44 ⇑PKiKP PKiKP 23 14 18.6 +0.1
baz=116
V17A Tonalea, Kykot 116.53 52 ⇑PKiKP PKiKP 23 14 19.9 +0.9
baz=117
S18A Hurst Farm, Bl 116.61 50 ⇑PKiKP PKiKP 23 14 20.0 +0.8
baz=117
ORIF Oris-en-Rattie 116.70 319 *e*PKIKP PKPdf 23 14 18.2 -0.9
DGMT Dagmar 116.78 37 ⇑PKiKP PKiKP 23 14 19.0 -0.2
baz=117
T18A Mexican Hat 116.85 51 ⇓PKiKP PKiKP 23 14 18.6 -1.1
baz=117
Y17A Roosevelt 116.94 54 ⇑PKiKP PKiKP 23 14 19.3 -0.6
baz=117
N20A Spence Gulch, 116.97 46 ⇓PKiKP PKiKP 23 14 19.9 +0.1
baz=117
U18A Rough Rock, Ch 117.05 51 ⇑PKiKP PKiKP 23 14 19.6 -0.5
baz=117
LOR Lormes 117.06 322 *e*PKIKP PKPdf 23 14 18.9 -0.9
KEST Kesra 117.08 308 PKP PKPdf 23 14 19.3 -0.8
comp=Z,2.0nm,1.0s,baz=253,slow=3.5,SNR=3.2
O20A White River Ci 117.20 47 PKiKP PKiKP 23 14 21.4 +1.2
baz=117,SNR=5.2
L21A Rawlins 117.23 45 ⇓PKiKP PKiKP 23 14 20.8 +0.5
baz=117,SNR=30
117A Oracle 117.28 56 ⇓PKiKP PKiKP 23 14 20.4 -0.2
baz=117
P20A De Beque 117.29 48 ⇓PKiKP PKiKP 23 14 20.4 -0.1
baz=117
SMF Signal de Mont 117.33 321 *e*PKIKP PKPdf 23 14 19.6 -0.7
comp=Z,9.5nm,1.1s
M21A Separation Pea 117.35 45 ⇑PKiKP PKiKP 23 14 20.6 +0.1
baz=117,SNR=10
SSF Saint Saulge 117.37 322 *e*PKIKP PKPdf 23 14 19.8 -0.5
comp=Z,18nm,1.1s
217A Green Valley 117.39 57 ⇓PKiKP PKiKP 23 14 20.6 -0.3
baz=117
VIVF Saint-Julien-I 117.52 319 *e*PKIKP PKPdf 23 14 20.0 -0.7
N21A Black Mountain 117.52 46 ⇑PKiKP PKiKP 23 14 21.4 +0.6
baz=118
Q20A Ridgley Place, 117.53 48 ⇑PKiKP PKiKP 23 14 21.8 +0.9
baz=118,SNR=6.1
AVF Avril sur Loir 117.58 321 *e*PKIKP PKPdf 23 14 19.8 -1.0
comp=Z,10nm,1.2s
L22A Ellis Ranch, M 117.86 44 ⇓PKiKP PKiKP 23 14 21.5 +0.1
baz=118
MVCO Mesa Verde 117.89 50 ⇑PKiKP PKiKP 23 14 22.5 +0.8
baz=118,SNR=5.7
MVCO Mesa Verde 117.89 50 *e*PKPdf PKPdf 23 14 22.9 +1.2
MVCO *e*PP PP 23 15 36.3 +0.8
118A Homack Ranch, 117.90 55 ⇑PKiKP PKiKP 23 14 21.9 +0.1
baz=118
BGF Bois d'Agland 117.99 321 *e*PKIKP PKPdf 23 14 21.1 -0.5
comp=Z,18nm,0.9s
Q21A Lamborn Mesa, 118.10 48 ⇓PKiKP PKiKP 23 14 21.5 -0.5
baz=118
318A Bisbee 118.15 57 ⇑PKiKP PKiKP 23 14 22.0 -0.3
baz=118,SNR=5.8
N22A Wattenberg Ran 118.27 46 ⇑PKiKP PKiKP 23 14 22.4 +0.1
baz=118
LASF Ste Croix 118.36 318 *e*PKIKP PKPdf 23 14 21.0 -1.4
TCF Toulx Ste Croi 118.51 321 *e*PKIKP PKPdf 23 14 22.0 -0.6
219A White Tail Can 118.64 56 ⇓PKiKP PKiKP 23 14 23.2 -0.1
baz=119
RSSD Black Hills 118.70 41 *e*PKIKP PKPdf 23 14 22.6 -0.4
U21A Nageezi 118.76 51 ⇑PKiKP PKiKP 23 14 23.4 0.0
baz=119
LDF La Druitiere 118.85 324 *e*PKIKP PKPdf 23 14 22.4 -0.8
Z20A Nine Sixteen R 118.91 55 ⇑PKiKP PKiKP 23 14 22.4 -1.4
baz=119,SNR=5.1
FLN La Foliniere 118.98 325 *e*PKIKP PKPdf 23 14 22.6 -0.8
CAF Calviac 119.18 320 *e*PKIKP PKPdf 23 14 22.2 -1.7
comp=Z,29nm,1.3s
X21A Alamocita Cree 119.22 53 ⇓PKiKP PKiKP 23 14 24.4 +0.1
baz=119,SNR=11

ISCO	Idaho Springs	119.22	46	ePKIKP	PKPdf	23 14 24.6 +0.5
220A	Playas Peak, P	119.26	56	⇑PKiKP	PKiKP	23 14 24.7 +0.1
	baz=119,SNR=6.9					
RJF	Les Rejaudoux	119.37	320	ePKIKP	PKPdf	23 14 23.0 -1.3
GRR	Gorron	119.38	324	ePKIKP	PKPdf	23 14 23.8 -0.4
V22A	San Miguel Ran	119.49	51	⇑PKiKP	PKiKP	23 14 24.2 -0.6
	baz=120,SNR=6.4					
LAZ	Ladron	119.74	53	ePKPdf	PKPdf	23 14 26.3 +1.0
MTLF	Montolieu	119.75	318	ePKIKP	PKPdf	23 14 24.2 -0.8
	comp=Z,20nm,1.2s					
MFF	Saint Martin d	119.82	322	ePKIKP	PKPdf	23 14 24.4 -0.7
	comp=Z,25nm,1.1s					
U23A	El Rito	119.92	50	⇓PKiKP	PKiKP	23 14 26.0 +0.3
	baz=120					
SDCO	Great Sand Dun	119.99	49	ePKPdf	PKPdf	23 14 27.0 +1.3
Y22A	Socorro	120.01	53	⇑PKiKP	PKiKP	23 14 26.1 +0.2
	baz=120					
LFF	La Frestale	120.03	320	ePKIKP	PKPdf	23 14 24.8 -0.7
V23A	Ortiz Mt. (NFS	120.10	51	⇑PKiKP	PKiKP	23 14 26.6 +0.5
	baz=120					
ANMO	Albuquerque	120.12	52	ePKIKP	PKPdf	23 14 26.8 +0.8
SGMF	Saint Gilles	120.43	325	ePKIKP	PKPdf	23 14 25.3 -0.9
ULM	Lac du Bonnet	120.61	32	PKP	PKPdf	23 14 25.1 -1.3
	comp=Z,2.5nm,0.6s,baz=291,slow=3.9,SNR=3.8					
Y23A	Lovelace Mesa,	120.74	53	⇓PKiKP	PKiKP	23 14 27.6 +0.2
	baz=121,SNR=5.8					
W24A	Lazy 6 Ranch,	120.87	51	⇑PKiKP	PKiKP	23 14 28.3 +0.7
	baz=121,SNR=11					
T25A	Trinidad	121.01	49	⇑PKiKP	PKiKP	23 14 27.5 -0.3
	baz=121					
Y24A	Capitan	121.23	53	⇓PKiKP	PKiKP	23 14 28.7 +0.3
	baz=121,SNR=17					
U25A	Circle Dot Ran	121.26	50	⇑PKiKP	PKiKP	23 14 26.7 -1.6
	baz=121					
V25A	Rancho No Teng	121.28	51	⇓PKiKP	PKiKP	23 14 28.6 +0.3
	baz=121					
Z24A	Sheeppen Canyo	121.46	54	⇓PKiKP	PKiKP	23 14 29.4 +0.6
	baz=122,SNR=9.6					
124A	Stringfield Ra	121.57	54	⇓PKiKP	PKiKP	23 14 29.1 +0.1
	baz=122,SNR=13					
W25A	X Bar L Ranch,	121.60	51	⇓PKiKP	PKiKP	23 14 28.7 -0.3
	baz=122					
224A	Cornudas Mount	121.69	55	⇑PKiKP	PKiKP	23 14 29.0 -0.3
	baz=122,SNR=6.9					
AGMN	Agassiz Nation	121.70	34	ePKPdf	PKPdf	23 14 27.5 -1.2
U26A	Atchley Ranch,	121.77	50	⇑PKiKP	PKiKP	23 14 29.1 -0.2
	baz=122					
ETSF	Etsaut	121.77	319	ePKIKP	PKPdf	23 14 29.2 +0.2
	comp=Z,25nm,1.3s					
Y25A	Mesa, Roswell	121.82	53	⇑PKiKP	PKiKP	23 14 28.7 -0.8
	baz=122,SNR=11					
324A	Moseley Ranch,	121.89	56	⇓PKiKP	PKiKP	23 14 29.6 -0.1
	baz=122,SNR=13					
MNTX	Cornudas Mount	121.90	55	ePKPdf	PKPdf	23 14 30.0 +0.4
V26A	Tequesquite Ra	121.94	50	⇓PKiKP	PKiKP	23 14 29.2 -0.5
	baz=122					
Z25A	Roswell	121.99	53	⇓PKiKP	PKiKP	23 14 29.4 -0.4
	baz=122,SNR=7.3					
125A	Gardner Draw,	122.22	54	⇓PKiKP	PKiKP	23 14 30.8 +0.4
	baz=122,SNR=7.0					
225A	Deer Hill, Car	122.25	55	⇓PKiKP	PKiKP	23 14 30.3 -0.1
	baz=122,SNR=5.1					
X26A	CR and CF Fran	122.32	52	⇓PKiKP	PKiKP	23 14 30.4 0.0
	baz=122					
325A	Bean Ranch, Si	122.33	56	⇑PKiKP	PKiKP	23 14 30.0 -0.6
	baz=122,SNR=7.3					
425A	Indio Mountain	122.47	56	⇓PKiKP	PKiKP	23 14 29.4 -1.4
	baz=122,SNR=8.5					
W27A	Bowe Ranch, En	122.74	51	⇑PKiKP	PKiKP	23 14 31.4 +0.1
	baz=123					
126A	Clayton Basin,	122.74	54	⇓PKiKP	PKiKP	23 14 30.5 -0.8
	baz=123					
226A	Malaga, Loving	122.85	55	⇓PKiKP	PKiKP	23 14 30.9 -0.6
	baz=123,SNR=8.6					
X27A	F and S Farms,	122.85	51	⇑PKiKP	PKiKP	23 14 30.8 -0.6
	baz=123					
Y27A	Causey	123.04	52	⇓PKiKP	PKiKP	23 14 31.5 -0.4
	baz=123					
TAM	Tamanrasset	123.13	294	ePKIKP	PKPdf	23 14 32.9 +0.8
Z27A	Tatum	123.18	53	⇑PKiKP	PKiKP	23 14 31.9 -0.3
	baz=123					
426A	McDonald Obser	123.30	56	⇓PKiKP	PKiKP	23 14 31.9 -0.6
	baz=123					
MSTX	Muleshoe	123.32	52	⇓PKiKP	PKiKP	23 14 31.9 -0.5
	baz=123					
526A	Mary Lane Ranc	123.42	57	⇓PKiKP	PKiKP	23 14 32.9 +0.1
	baz=123,SNR=8.2					
626A	Big Bend Ranch	123.51	57	⇓PKiKP	PKiKP	23 14 32.7 -0.2
	baz=124					
ECSD	EROS Data Cent	123.65	39	ePKPdf	PKPdf	23 14 31.8 -0.8
ECSD				ePP	PP	23 16 12.8 -1.7
427A	Hayter Ranch,	123.77	56	⇓PKiKP	PKiKP	23 14 33.5 0.0
	baz=124,SNR=8.7					
527A	Woodward Ranch	123.79	57	⇑PKiKP	PKiKP	23 14 32.7 -0.8
	baz=124,SNR=9.7					
TXAR	Lajitas Array	123.96	58	PKP	PKPdf	23 14 33.8 +0.2
	comp=Z,2.2nm,0.9s,baz=255,slow=1.5,SNR=20					
328A	Wristen Ranch,	124.10	55	⇓PKiKP	PKiKP	23 14 33.0 -1.0
	baz=124					
627A	Terlingua Ranc	124.17	57	⇑PKiKP	PKiKP	23 14 33.9 -0.4
	baz=124,SNR=9.3					
428A	Kincaid Ranch,	124.39	56	⇓PKiKP	PKiKP	23 14 34.4 -0.3
	baz=124					
528A	Cox Ranch, San	124.47	56	⇑PKiKP	PKiKP	23 14 34.1 -0.7
	baz=124					
628A	Black Gap, Mar	124.58	57	⇑PKiKP	PKiKP	23 14 33.7 -1.4
	baz=125					
ESDC	Sonseca Array	125.52	317	PKP	PKPdf	23 14 36.3 +0.1
	comp=Z,0.8nm,0.7s,baz=16,slow=3.0,SNR=7.5					
ESLA	Sonseca Array	125.52	317	ePKPdf	PKPdf	23 14 36.2 -0.1
KSU1	Kansas State U	125.88	44	ePKPdf	PKPdf	23 14 37.0 0.0
WMOK	Wichita Mounta	126.14	50	ePKIKP	PKPdf	23 14 38.4 +0.8
COWI	Conover	126.70	33	ePKPdf	PKPdf	23 14 38.4 +0.1
MVO	Moncorvo	126.83	320	ePKPdf	PKPdf	23 14 40.3 +1.6
MVO	Moncorvo	126.83	320	eLR	LR	00 04 32.6
	comp=Z,144nm,20.0s					
JCT	Junction City	126.83	55	ePKIKP	PKPdf	23 14 39.6 +0.6
MTE	Manteigas	127.56	319	eLR	LR	00 05 16.7
	comp=Z,124nm,18.0s					
PCBR	Castelo Branco	127.81	318	ePKPdf	PKPdf	23 14 41.7 +1.1
TOA0	Torodi Ar. Sit	127.96	283	ePKPdf	PKPdf	23 14 41.7 +0.2
TORD	Torodi Ar. Bea	127.96	283	PKP	PKPdf	23 14 41.8 +0.2
	comp=Z,12nm,0.9s,baz=54,slow=1.9,SNR=50					
PMRV	Marv??o	127.96	318	eLR	LR	00 03 39.5
	comp=Z,102nm,18.0s					
JFWS	Jewell Farm	128.00	37	ePKIKP	PKPdf	23 14 40.2 -0.7
SCHQ	Schefferville	128.15	12	PKP	PKPdf	23 14 41.5 +0.8
	comp=Z,5.2nm,0.9s,baz=341,slow=5.9,SNR=3.7					
PBAR	Barrancos	128.34	316	eLR	LR	00 02 45.0
	comp=Z,187nm,18.0s					
PESTR	Estremoz	128.37	317	eLR	LR	00 00 18.8
	comp=Z,165nm,18.0s					
PVAQ	Vaqueiros	129.19	316	eLR	LR	23 59 37.6
	comp=Z,167nm,18.0s					
PCVE	Castro Verde	129.30	316	eLR	LR	23 58 16.8
	comp=Z,151nm,18.0s					
PBDV	Barranco-do-Ve	129.42	316	eLR	LR	23 59 00.5
	comp=Z,202nm,18.0s					
PMAFR	Mafra	129.46	318	eLR	LR	00 00 47.5
	comp=Z,133nm,18.0s					
HDIL	Hopedale	129.95	39	ePKPdf	PKPdf	23 14 45.0 +0.3
CCM	Cathedral Cave	130.06	42	ePKIKP	PKPdf	23 14 44.5 -0.5
PFVI	Vila Bisbo	130.09	316	eLR	LR	00 09 38.2
	comp=Z,145nm,16.0s					
MIAR	Mount Ida	130.12	48	ePKIKP	PKPdf	23 14 45.6 +0.4
HKT	Hockley	130.24	54	ePKIKP	PKPdf	23 14 46.3 +0.8
FVM	French Village	130.64	42	ePKIKP	PKPdf	23 14 46.2 +0.1
PLCA	Paso Flores	131.26	160	PKP	PKPdf	23 14 48.0 +0.9
	comp=Z,7.6nm,1.1s,baz=211,slow=4.5,SNR=10					
OLIL	Olney	131.75	40	ePKPdf	PKPdf	23 14 48.0 -0.1
USIN	University of	132.47	41	ePKPdf	PKPdf	23 14 50.1 +0.6
BLO	Bloomington	132.49	38	ePKIKP	PKPdf	23 14 49.5 0.0
WCI	Wyandotte Cave	133.19	39	ePKIKP	PKPdf	23 14 51.2 +0.3
WVT	Waverly	133.39	43	ePKIKP	PKPdf	23 14 51.4 +0.1
ACSO	Alum Creek Sta	133.92	35	ePKPdf	PKPdf	23 14 52.8 +0.6
DBIC	Dimbokro	134.68	275	PKP	PKPdf	23 14 54.5 +0.1
	comp=Z,8.3nm,1.0s,baz=115,slow=6.0,SNR=5.2					
DBIC	Dimbokro	134.68	275	ePKPdf	PKPdf	23 14 54.7 +0.3
LRAL	Lakeview Retre	135.63	46	ePKPdf	PKPdf	23 14 55.7 +0.1
BINY	Binghamton	136.12	28	ePKPdf	PKPdf	23 14 55.5 -0.8
TKL	Tuckaleechee C	136.35	41	ePKIKP	PKPdf	23 14 56.5 -0.4
LCO	Las Campanas	141.31	151	ePKPdf	PKPdf	23 15 03.5 -2.7
JTS	JuntasAbangare	145.25	79	ePKIKP	PKPdf	23 15 13.8 +0.3
CPUP	Villa Florida	148.55	168	PKP	PKPdf	23 15 19.2 +0.5
	comp=Z,25nm,0.9s,baz=182,slow=2.0,SNR=33					
CPUP				PKPbc	PKPbc	23 15 22.7 +0.4
	comp=Z,25nm,0.9s,baz=183,slow=2.0,SNR=33					
CPUP	Villa Florida	148.55	168	PKP	PKPdf	23 15 19.2 +0.5
CPUP				PKPbc	PKPbc	23 15 22.7 +0.4
NNA	Nana	148.95	122	ePKPdf	PKPdf	23 15 20.8 +1.2
BCIP	Isla Barro Col	150.39	80	ePKPdf	PKPdf	23 15 22.5 +0.6
BCIP				ePKPbc	PKPbc	23 15 27.4 +0.1
OTAV	Otavalo	151.61	98	ePKPdf	PKPdf	23 15 24.9 +1.0
LPAZ	La Paz	152.82	140	PKP	PKPdf	23 15 27.4 +1.9
	comp=Z,8.0nm,1.1s,baz=216,slow=1.4,SNR=21					
LPAZ				PKPbc	PKPbc	23 15 34.6 +1.9
	comp=Z,17nm,1.0s,baz=90,slow=1.3,SNR=30					
LPAZ	La Paz	152.82	140	ePKPdf	PKPdf	23 15 26.9 +1.3
LPAZ				ePKPbc	PKPbc	23 15 34.6 +1.9
LPAZ				ePP	PP	23 19 17.5 +1.9
ROSC	El Rosal	156.11	88	PKP	PKPdf	23 15 31.2 +1.0
	comp=Z,3.0nm,0.3s,baz=272,slow=22,SNR=5.8					
ROSC				PKPab	PKPab	23 16 00.9 +3.1
	comp=Z,2.6nm,0.3s,baz=106,slow=19,SNR=6.9					
ROSC	El Rosal	156.11	88	ePKPdf	PKPdf	23 15 31.2 +1.0
SDV	Santo Domingo	159.42	77	ePKPdf	PKPdf	23 15 34.4 +0.1

*IDC **01** 23:07:10.2±5.4, 36°.17N×71°.04E, h202km±48km, mb3.1/4, mb1 3.0/7, mb1mx2.8/27, mbtmp3.0/7, Error ellipse: s-maj=54.0km s-min=36.5km az=139.0*
*ISCJB **01** 23:07:12.3±0.4, 36°.48N±0°.03×71°.10E±0°.06, h231km±6km, mb3.7/6, Error ellipse: s-maj=7.8km s-min=4.5km az=170.1*
*NEIC **01** 23:07:13.6±1.1, 36°.48N×71°.01E, h224km±12km, mb4.0/3, Error ellipse: s-maj=33.9km s-min=9.4km az=130.0*
ISC 01 23:07:13.2±0.4, 36°.49N±0°.03×71°.13E±0°.06, h221km±6km, n28, σ1°34/38, mb3.7/6, 3C, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.59	222	ePn	Pn	23 08 00.2	+0.8
KBL				eSn	S	23 08 35.1	-0.4
KSH	Kashi	4.87	50	Pn	Pn	23 08 24.4	-2.0
KSH				Sn	S	23 09 16.1	-8.4
KSH				smax			
	comp=N,23nm,0.6s						
KSH				smax			
	comp=E,18nm,0.5s						
THN	Thein Dam	5.54	136	ePKP	Pn	23 08 38.0	+3.0
THN				eS	S	23 09 41.0	+1.1
AML	Almayashu	5.97	19	ePn	Pn	23 08 41.3	+1.0
	comp=E,11nm,0.5s						
AML				eSn	S	23 09 47.2	-2.5
UCH	Uchtor	6.30	24	ePn	Pn	23 08 46.0	+1.5
UCH				eSn	S	23 09 56.0	-1.2
EKS2	Erkin-Say	6.49	18	ePn	Pn	23 08 47.8	+0.8
EKS2				eSn	S	23 09 59.6	-2.0
KK31	Karatay Array	6.62	356	⇑Pn	Pn	23 08 47.1	-1.5
	comp=E,0.7nm,0.3s,baz=189,slow=14,SNR=35						
KK31				⇑Sn	S	23 09 57.9	-6.8
	comp=E,1.2nm,0.3s,baz=189,slow=25,SNR=8.5						
AAK	Ala-Archa	6.66	22	P	Pn	23 08 50.6	+1.5
	comp=E,0.0nm,0.3s,baz=179,slow=4.0,SNR=5.9						
AAK	Ala-Archa	6.66	22	ePn	Pn	23 08 50.2	+1.1
AAK				eSn	S	23 10 06.6	+1.0
TKM2	Tokmak 2	7.28	27	ePn	Pn	23 08 58.4	+1.3
KLP	Kalpa	7.71	128	ePKP	Pn	23 09 05.4	+2.7
KLP				eS	S	23 10 29.4	-0.8
KLP				AML	AML	23 10 33.1	
	comp=E,58nm,0.4s						
KLP				AML	AML	23 10 33.6	
	comp=N,56nm,0.6s						
KHET	Khetri	9.28	153	ePKP	Pn	23 09 23.1	+0.2
KHET				eS	S	23 11 03.1	-4.2
SONA	Sohna	9.63	147	eS	S	23 11 12.2	-3.5
AGRA	Agra	10.89	146	eS	S	23 11 40.3	-5.3
AGRA				AML	AML	23 11 43.8	
	comp=E,49nm,0.3s						
AGRA				AML	AML	23 11 44.2	
	comp=N,68nm,0.4s						
AB31	Akbulak array	15.14	331	⇑Pn	Pn	23 10 36.1	+0.1
	comp=N,0.6nm,0.5s,baz=162,slow=11,SNR=9.1						
KURK	Kurchatov	15.21	18	P	Pn	23 10 37.7	+1.0
	comp=N,0.0nm,0.3s,baz=207,slow=12,SNR=3.6						
AKTK	Aktyubinsk	16.84	330	P	P	23 10 55.4	+0.6
AKTO	Aktyubinsk	16.84	330	P	P	23 10 55.4	+0.6
	comp=N,0.2nm,0.3s,baz=135,slow=11,SNR=3.0						
ZALV	Zalesovo Beam	19.88	24	P	P	23 11 29.0	+1.4
	comp=N,0.7nm,0.4s,baz=211,slow=10,SNR=3.6						
KIV	Kislovodsk	22.89	298	eP	P	23 11 55.6	-2.0
	comp=N,1.4nm,0.4s,mb3.8						
KMI	Kunming	29.29	104	P	P	23 12 54.0	-1.2
KMI				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.6						
FINES	FINESS Array B	37.55	326	P	P	23 14 06.3	+0.5
	comp=Z,1.7nm,0.8s,mb3.6,baz=251,slow=30,SNR=3.2						
PSZ	Piszkesteto	38.97	303	eP	P	23 14 18.4	+0.6
	comp=Z,1.8nm,0.6s,mb3.8						
MORC	Moravsky Berou	40.45	306	P	P	23 14 28.6	-1.5
ARCES	ARCESS Array B	41.19	338	P	P	23 14 36.9	+1.1
	comp=Z,0.5nm,0.4s,mb3.3,baz=112,slow=7.9,SNR=10						
ARCES	ARCESS Array B	41.19	338	P	P	23 14 36.9	+1.1
TORD	Torodi Ar. Bea	65.82	269	P	P	23 17 33.7	-1.5
	comp=Z,0.6nm,1.1s,mb3.1,baz=48,slow=5.5,SNR=5.2						
TORD	Torodi Ar. Bea	65.82	269	P	P	23 17 33.7	-1.5

CASC 01 23:14:18.9±1.2, 8°.42N×83°.08W, h6km±6km, MD3.7, 1C-1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	Cerro Adams	0.25	338	⇑eP	Pg	23 14 24.6	+0.8
ACR				eS	Sg	23 14 28.3	+1.2
BRU2	Volcan	0.53	46	⇓iP	Pg	23 14 29.4	+0.3
BRU2				eS	Sg	23 14 38.5	+2.5
BAR1		0.85	344	eP	Pg	23 14 35.4	+0.2
BAR1				eS	Sg	23 14 46.2	0.0
CNI	Changuinola	1.13	29	eP	Pg	23 14 39.8	-0.8
BUS	Buena Vista	1.31	329	eP	Pn	23 14 43.4	-0.3
BUS				eS	Sb	23 15 01.9	+1.0
URSC	Urasca	1.56	334	eP	Pn	23 14 47.4	+0.2

*ATH **01** 23:25:04.9, 36°.26N×23°.58E, h15km±1km, MD3.6/10, ML2.7*
*NEIC **01** 23:25:04.9, 36°.26N×23°.58E, h15km, ML3.4(THE), ML2.7(ATH), After ATH.*
*CSEM **01** 23:25:05.1±0.1, 36°.25N×23°.55E, h2km, ML2.7, Error ellipse: s-maj=3.3km s-min=1.8km az=52.0*
*ISCJB **01** 23:25:05.0±0.5, 36°.25N±0°.03×23°.54E±0°.03, h7km±4km, Error ellipse: s-maj=5.8km s-min=2.3km az=138.7*
*THE **01** 23:25:07.1, 36°.24N×23°.52E, h15km±2km, ML3.4/6, Error ellipse: s-maj=2.1km s-min=0.6km az=209.0*
ISC 01 23:25:05.9±0.5, 36°.24N±0°.02×23°.53E±0°.03, h10km±4km, n127, σ0°64/195, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	Kithira	0.40	277	ePb	Pg	23 25 13.2	-0.5
KYTH	Kithira	0.40	277	ePB	Pg	23 25 13.2	-0.5
KYTH	Kithira	0.40	277	ePb	Pg	23 25 13.2	-0.5
VLI	Veliai	0.68	316	ePn	Pg	23 25 19.0	0.0
VLI				eSn	Sg	23 25 27.7	-0.1
VLI	Veliai	0.68	316	ePN	Pg	23 25 19.0	0.0
VLI				eSN	Sg	23 25 27.7	-0.1
VLI	Veliai	0.68	316	ePn	Pg	23 25 19.0	0.0
KARN	Karanos	0.89	159	P	Pg	23 25 22.5	-0.6
KARN				S	Sg	23 25 35.8	+1.1
KARN	Karanos	0.89	159	ePN	Pg	23 25 22.7	-0.4
KARN				eSN	Sg	23 25 34.2	-0.5
KARN	Karanos	0.89	159	P	Pg	23 25 22.5	-0.6
KARN				S	Sg	23 25 35.8	+1.1
VAM	Vamos	0.99	146	ePn	Pg	23 25 24.2	-0.8
VAM				eSn	Sg	23 25 38.4	+0.5
VAM	Vamos	0.99	146	ePN	Pg	23 25 24.2	-0.8
VAM				eSN	Sg	23 25 38.4	+0.5
VAM	Vamos	0.99	146	ePn	Pg	23 25 24.2	-0.8
VAM				eSn	Sg	23 25 38.4	+0.5
VLX	Vlachokerasia	1.46	321	P	Pn	23 25 31.9	-0.4
VLX				S	Sn	23 25 51.0	-0.5
VLX	Vlachokerasia	1.46	321	ePN	Pn	23 25 32.0	-0.3
VLX				eSN	Sn	23 25 52.6	+1.1
VLX	Vlachokerasia	1.46	321	P	Pn	23 25 31.9	-0.4
VLX				S	Sn	23 25 51.0	-0.5
VLX				eSn	Sn	23 25 52.6	+1.1
IDI	Anoyia	1.46	130	ePn	Pn	23 25 31.5	-0.8
IDI				eSn	Sn	23 25 51.5	0.0
IDI	Anoyia	1.46	130	ePN	Pn	23 25 31.5	-0.8
IDI				eSN	Sn	23 25 51.5	0.0
IDI	Anoyia	1.46	130	ePn	Pn	23 25 31.5	-0.8
IDI				eSn	Sn	23 25 51.5	0.0
GVD	Gavdhos	1.47	162	ePn	Pn	23 25 33.3	+0.8
GVD				S	Sn	23 25 51.8	+0.1
GVD	Gavdhos	1.47	162	P	Pn	23 25 32.8	+0.3
GVD				S	Sn	23 25 51.8	+0.1
GVD	Gavdhos	1.47	162	ePN	Pn	23 25 33.3	+0.8
GVD	Gavdhos	1.47	162	P	Pn	23 25 32.8	+0.3
GVD	Gavdhos	1.47	162	ePn	Pn	23 25 33.3	+0.8
GVD				S	Sn	23 25 51.8	+0.1
THR5	Thira Island,	1.48	82	P	Pn	23 25 32.5	-0.2
THR5	Thira Island,	1.48	82	P	Pn	23 25 32.5	-0.2
THR5	Thira Island,	1.48	82	P	Pn	23 25 32.5	-0.2
NAIG	Nisos Aigina	1.52	359	ePn	Pn	23 25 33.6	+0.4
NAIG	Nisos Aigina	1.52	359	ePN	Pn	23 25 33.6	+0.4
NAIG	Nisos Aigina	1.52	359	ePn	Pn	23 25 33.6	+0.4
PYL	PYLOS	1.58	295	P	Pn	23 25 33.7	-0.3
PYL				S	Sn	23 25 54.2	-0.3
PYL	PYLOS	1.58	295	ePN	Pn	23 25 34.3	+0.3
PYL				eSN	Sg	23 25 57.3	+0.6
PYL	PYLOS	1.58	295	P	Pn	23 25 33.7	-0.3
PYL	PYLOS	1.58	295	ePn	Pn	23 25 34.3	+0.3
PYL				S	Sn	23 25 54.2	-0.3
PYL				eSn	Sg	23 25 57.3	+0.6
ITM	Ithomi	1.59	307	ePn	Pn	23 25 35.1	+0.9
ITM				eSn	Sg	23 25 57.3	+0.1
ITM	Ithomi	1.59	307	P	Pn	23 25 34.6	+0.4
ITM				S	Sn	23 25 55.0	+0.2
ITM	Ithomi	1.59	307	ePN	Pn	23 25 35.1	+0.9
ITM				eSN	Sg	23 25 57.3	+0.1
ITM	Ithomi	1.59	307	P	Pn	23 25 34.6	+0.4
ITM	Ithomi	1.59	307	ePn	Pn	23 25 35.1	+0.9
ITM				S	Sn	23 25 55.0	+0.2
ITM				eSn	Sg	23 25 57.3	+0.1
SIVA	Sivas	1.60	139	P	Pn	23 25 34.5	+0.2
SIVA				S	Sn	23 25 55.6	+0.5
SIVA	Sivas	1.60	139	P	Pn	23 25 34.5	+0.2
SIVA				S	Sn	23 25 55.6	+0.5
VLY	Voula,Athens	1.63	8	ePn	Pn	23 25 34.5	-0.2
VLY				eSn	Sn	23 25 55.8	+0.1
VLY	Voula,Athens	1.63	8	ePN	Pn	23 25 34.5	-0.2
VLY				eSN	Sn	23 25 55.8	+0.1
VLY	Voula,Athens	1.63	8	ePn	Pn	23 25 34.5	-0.2
VLY				eSn	Sn	23 25 55.8	+0.1
ATH	Athens Observa	1.74	5	ePn	Pn	23 25 36.1	-0.1
ATH				eSn	Sn	23 25 59.1	+0.7
ATH	Athens Observa	1.74	5	ePN	Pn	23 25 36.1	-0.1
ATH				eSN	Sn	23 25 59.1	+0.7
ATH	Athens Observa	1.74	5	ePn	Pn	23 25 36.1	-0.1
ATH				eSn	Sn	23 25 59.1	+0.7
ATHU	Athens Univers	1.74	7	P	Pn	23 25 36.0	-0.2
ATHU				S	Sn	23 25 57.5	-0.9
ATHU	Athens Univers	1.74	7	P	Pn	23 25 36.0	-0.2
ATHU				S	Sn	23 25 57.5	-0.9
APE	Apeiranthos	1.81	62	ePn	Pn	23 25 38.0	+0.8
APE				S	Sn	23 26 00.8	+0.5
APE	Apeiranthos	1.81	62	P	Pn	23 25 37.5	+0.3
APE				S	Sn	23 26 00.8	+0.5
APE	Apeiranthos	1.81	62	ePN	Pn	23 25 38.0	+0.8
APE	Apeiranthos	1.81	62	P	Pn	23 25 37.5	+0.3
APE	Apeiranthos	1.81	62	ePn	Pn	23 25 38.0	+0.8
APE				S	Sn	23 26 00.8	+0.5
PTL	Penteli	1.83	8	ePn	Pn	23 25 37.3	-0.1
PTL				eSn	Sn	23 26 00.3	-0.4
PTL	Penteli	1.83	8	ePN	Pn	23 25 37.3	-0.1
PTL				eSN	Sn	23 26 00.3	-0.4
PTL	Penteli	1.83	8	ePn	Pn	23 25 37.3	-0.1
PTL				eSn	Sn	23 26 00.3	-0.4
LTK	Loutraki	1.84	346	P	Pn	23 25 37.4	-0.2
LTK	Loutraki	1.84	346	ePN	Pn	23 25 37.9	+0.3
LTK	Loutraki	1.84	346	P	Pn	23 25 37.4	-0.2
LTK	Loutraki	1.84	346	ePn	Pn	23 25 37.9	+0.3
LAST	Lasithi	1.92	123	ePb	Pn	23 25 38.0	-0.7
LAST				S	Sn	23 26 01.4	-1.4
LAST	Lasithi	1.92	123	P	Pn	23 25 37.8	-0.9
LAST				S	Sn	23 26 01.4	-1.4
LAST	Lasithi	1.92	123	ePB	Pn	23 25 38.0	-0.7
LAST	Lasithi	1.92

PLG	**Polygyros**	**4.13**	**359**	*e*Pn	**Pn**	**23 26 09.4**	**+0.3**
PLG	**Polygyros**	**4.13**	**359**	*e*PN	**Pn**	**23 26 09.4**	**+0.3**
PLG	**Polygyros**	**4.13**	**359**	*e*Pn	**Pn**	**23 26 09.4**	**+0.3**
KEK	**Kerkira**	**4.55**	**321**	*e*Pn	**Pn**	**23 26 15.5**	**+0.7**
KEK	**Kerkira**	**4.55**	**321**	*e*PN	**Pn**	**23 26 15.5**	**+0.7**
KEK	**Kerkira**	**4.55**	**321**	*e*Pn	**Pn**	**23 26 15.5**	**+0.7**
STON	**Ston**	**8.01**	**328**	*e*Pn	**Pn**	**23 26 59.3**	**-3.0**
STON				Sn	**Sn**	**23 28 24.6**	**-8.2**
NVLJ	**Novalja**	**10.61**	**324**	*e*Pn	**Pn**	**23 27 35.2**	**-2.8**
NVLJ				Sn	**Sn**	**23 29 26.7**	**-10**

CSEM ***01*** *23:40:02.7±0.3,27°.26N×54°.44E, h2km, ML3.3, Error ellipse: s-maj=11.5km s-min=7.5km az=28.0*
ISCJB ***01*** *23:40:02.1±1.2,27°.26N±0°.04×54°.46E±0°.04, h3km±10km, Error ellipse: s-maj=7.4km s-min=5.1km az=32.6*
SGS ***01*** *23:40:05.9,27°.16N×54°.53E, h17km*
KISR ***01*** *23:40:06.7±0.3,27°.80N×54°.20E, h33km, ML2.6*
TEH ***01*** *23:40:06.3,27°.19N×54°.55E, h30km*
OMAN ***01*** *23:40:36.2,24°.17N×55°.85E, h0km*

ISC 01 23:40:03.4±1.2, 27°.22N±0°.04×54°.47E±0°.04, h5km±9km, n40, σ0°99/50, 1D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**1.52**	**83**	P	**Pn**	**23 40 30.0**	**-1.2**
BNDS	**Bandar-Abbas**	**1.52**	**83**	P	**Pn**	**23 40 30.0**	**-1.2**
BNDS				*e*Sg	**Sn**	**23 40 50.3**	**-1.1**
GHIR	**Ghir-Karzin**	**1.69**	**309**	P	**Pn**	**23 40 34.0**	**+0.5**
GHIR	**Ghir-Karzin**	**1.69**	**309**	P	**Pn**	**23 40 34.0**	**+0.5**
GHIR	**Ghir-Karzin**	**1.69**	**309**	*e*Pg	**Pn**	**23 40 34.3**	**+0.8**
GHIR				*e*Sg	**Sg**	**23 40 57.7**	**0.0**
IBND	**Bandar-abas**	**1.85**	**83**	*e*Pn	**Pn**	**23 40 35.1**	**-0.7**
IBND				*e*Pn	**Pn**	**23 40 35.2**	**-0.6**
IBND				*e*Sg	**Sg**	**23 41 02.7**	**-0.2**
IBND				*e*		23 41 09.4	
	comp=Z,5μm,0.1s						
IMOK	**Mouk**	**2.39**	**320**	*e*Pn	**Pn**	**23 40 44.0**	**+0.9**
IMOK				*e*		23 41 28.0	
	comp=Z,3μm,0.2s						
ISRV	**Sarvestan**	**2.46**	**331**	*e*Pn	**Pn**	**23 40 45.2**	**+1.1**
ISRV				*e*		23 41 27.7	
	comp=Z,2μm,0.1s						
NAZ	**Nazwa, Dubai**	**2.47**	**154**	⇓P	**Pn**	**23 40 45.7**	**+1.5**
NAZ	**Nazwa, Dubai**	**2.47**	**154**	P	**Pn**	**23 40 45.8**	**+1.6**
FAQ	**Al Faqa, Dubai**	**2.66**	**158**	P	**Pn**	**23 40 48.0**	**+1.1**
	SNR=6.4						
FAQ	**Al Faqa, Dubai**	**2.66**	**158**	P	**Pn**	**23 40 48.0**	**+1.1**
	SNR=6.4						
FAQ				P		23 40 48.0	
	SNR=6.4						
FAQ				P		23 40 48.0	
	SNR=6.4						
FAQ				P		23 40 48.0	
	SNR=6.4						
FAQ				P		23 40 48.0	
	SNR=6.4						
FAQ	**Al Faqa, Dubai**	**2.66**	**158**	P	**Pn**	**23 40 48.0**	**+1.1**
	SNR=73						
ASUD	**Al Ashush, Dub**	**2.70**	**163**	P	**Pn**	**23 40 48.8**	**+1.4**
	SNR=73						
ASUD	**Al Ashush, Dub**	**2.70**	**163**	P	**Pn**	**23 40 48.8**	**+1.4**
	SNR=73						
ASUD	**Al Ashush, Dub**	**2.70**	**163**	P	**Pn**	**23 40 48.8**	**+1.4**
	SNR=73						
HATD	**Hatta, Dubai**	**2.81**	**148**	P	**Pn**	**23 40 49.6**	**+0.6**
	SNR=16						
HATD	**Hatta, Dubai**	**2.81**	**148**	P	**Pn**	**23 40 49.6**	**+0.6**
	SNR=16						
HATD				P		23 40 49.6	
	SNR=16						
HATD				P		23 40 49.6	
	SNR=16						
HATD				P		23 40 49.6	
	SNR=16						
HATD				P		23 40 49.6	
	SNR=16						
HATD	**Hatta, Dubai**	**2.81**	**148**	P	**Pn**	**23 40 49.6**	**+0.6**
	SNR=16						
HATD				S	**Sn**	**23 41 19.1**	**-4.2**
IPAR	**Pars**	**2.90**	**335**	*e*Pn	**Pn**	**23 40 51.3**	**+1.2**
IPAR				*e*		23 41 48.0	
	comp=Z,745nm,0.4s						
KRBR	**Kerman**	**3.41**	**36**	P	**Pn**	**23 40 57.0**	**-0.1**
KRBR	**Kerman**	**3.41**	**36**	P	**Pn**	**23 40 57.0**	**-0.1**
KRBR	**Kerman**	**3.41**	**36**	*e*Pn	**Pn**	**23 40 57.6**	**+0.5**
IMEH	**Mehriz**	**4.16**	**2**	*e*	**Sn**	**23 41 57.2**	**+0.9**
	comp=Z,294nm,0.1s						
IMEH				*e*Pn	**Pn**	**23 41 07.5**	**+0.1**
IBAF	**Bafgh**	**4.46**	**12**	*e*Pn	**Pn**	**23 41 11.2**	**-0.4**
ISAD	**Sadrabad**	**4.72**	**352**	*e*Pn	**Pn**	**23 41 15.8**	**+0.6**
BOQSS		**4.76**	**255**	P	**Pn**	**23 41 15.9**	**+0.2**
IZEF	**Zefreh**	**5.95**	**342**	*e*Pn	**Pn**	**23 41 30.8**	**-1.3**
QRN	**Al-Qurain**	**5.99**	**286**	*e*P	**Pn**	**23 41 32.4**	**-0.2**
IPIR	**Pirpir**	**6.27**	**331**	*e*Pn	**Pn**	**23 41 36.6**	**+0.2**
IPIR				*e*		23 42 46.8	
	comp=Z,142nm,0.1s						
RDF	**Al-Radifah**	**6.35**	**287**	*e*P	**Pn**	**23 41 37.4**	**-0.2**
RDF	**Al-Radifah**	**6.35**	**287**	*e*P	**Pn**	**23 41 37.4**	**-0.1**
NAY	**Al-Naaiem**	**6.69**	**289**	*e*P	**Pn**	**23 41 41.8**	**-0.4**
NAY				*e*S	**Sn**	**23 42 53.1**	**-5.7**
NAY				AML	AML	23 42 56.2	
	comp=Z,1.7nm,0.3s						
NAY	**Al-Naaiem**	**6.69**	**289**	*e*P	**Pn**	**23 41 41.8**	**-0.4**
NAY				*e*S	**Sn**	**23 42 53.1**	**-5.7**
	comp=Z,2.0nm,0.3s						
MIB	**Mutribah**	**6.78**	**294**	*e*P	**Pn**	**23 41 42.5**	**-1.1**
MIB				*e*S	**Sn**	**23 42 54.7**	**-6.4**
MIB	**Mutribah**	**6.78**	**294**	*e*P	**Pn**	**23 41 42.5**	**-1.0**
MIB				*e*S	**Sn**	**23 42 54.7**	**-6.4**
LYLS		**8.36**	**233**	P	**Pn**	**23 42 02.5**	**-2.6**
LYLS		**8.36**	**233**	P	**Pn**	**23 42 02.5**	**-2.7**
ASYS		**9.01**	**274**	P	**Pn**	**23 42 11.2**	**-2.9**
ASYS		**9.01**	**274**	P	**Pn**	**23 42 11.2**	**-2.9**

CASC 01 23:45:49.4±1.9, 8°.45N×83°.06W, h4km, MD3.7, 1C-2D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.23**	**332**	⇓*e*P	Pg	23 45 54.9	+0.9
ACR				*e*S	Sg	23 45 58.3	+1.3
BRU2	**Volcan**	**0.50**	**46**	⇓*i*P	Pg	23 45 59.6	+0.5
BRU2				*e*S	Sg	23 46 08.7	+3.0
BAR1		**0.83**	**343**	*e*P	Pg	23 46 05.5	+0.1
CNI	**Changuinola**	**1.10**	**29**	⇑*i*P	Pg	23 46 10.2	-0.5
BUS	**Buena Vista**	**1.30**	**328**	*e*P	Pn	23 46 13.6	-0.8
QCR	**Quepos**	**1.46**	**312**	*e*P	Pn	23 46 15.2	-1.4
QCR				*e*S	Sb	23 46 37.3	+1.1
URSC	**Urasca**	**1.55**	**333**	*e*P	Pn	23 46 17.5	-0.3
URSC				*e*S	Sn	23 46 38.6	+0.1
CGA2	**Cerro Gallo 2**	**2.09**	**318**	*e*P	Pn	23 46 26.6	+1.4
CGA2				*e*S	Sn	23 46 52.2	+0.5
BCIP	**Isla Barro Col**	**3.26**	**77**	*e*P	Pn	23 46 42.7	+1.3
BCIP				*e*S	Sn	23 47 28.0	+7.3

KRSC 02 00:09:08.4±1.2, 49°.31N×156°.35E, h5km±5km, ML4.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**1.64**	**342**	*e*P	Pn	00 09 38.2	+0.3
ALID				*i*S	Sn	00 10 00.0	+0.6
MIPR	**Malaya Ipel'ka**	**2.98**	**5**	*e*P	Pn	00 09 58.7	+2.4
MIPR				*e*S	Sn	00 10 35.8	+3.4
AVH	**Avacha**	**4.23**	**20**	*e*P	Pn	00 10 17.2	+3.7
GNL	**Ganaly**	**4.50**	**12**	*e*P	Pn	00 10 20.2	+3.0
MKZ	**Mys Kozlova**	**6.22**	**30**	*e*P	Pn	00 10 42.1	+1.4
KBTR	**Krutoberegovo**	**7.94**	**27**	P	Pn	00 11 06.2	+1.8

IDC ***02*** *00:23:32.9±1.2, 0°.49S×122°.88E, h0km, mb3.8/5, mb1 4.0/6, mb1mx3.7/21, mbtmp3.9/6, ML4.5/1, MS2.7/1, Ms1 2.7/1, ms1mx2.2/24, Error ellipse: s-maj=33.9km s-min=22.4km az=84.0*
DJA ***02*** *00:23:36, 0°.49S×122°.67E, h4km, MLv4.5/6*

ISC 02 00:23:33.9±1.4, 0°.47S±0°.06×122°.77E±0°.07, h4km±10km, n14, σ1°09/17, mb3.8/5, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.56**	**180**	P	**Pg**	**00 23 45.2**	**+0.4**
LUWI				S	**Sg**	**00 23 51.7**	**-0.5**
APSI	**Ampana**	**1.20**	**249**	P	**Pg**	**00 23 56.4**	**-0.6**
APSI				S	**Sg**	**00 24 14.0**	**+1.4**
MRSI	**Marisa**	**1.26**	**319**	P	**Pg**	**00 23 57.4**	**-0.6**
TTSI	**Tana Toraja**	**3.90**	**229**	P	**Pn**	**00 24 34.2**	**-0.6**
NLAI	**Namlea**	**5.13**	**122**	P	**Pn**	**00 24 54.6**	**+3.0**
	1.0nm4μm216nm,0.6s						
KAPI	**Kappang**	**5.42**	**214**	Pn	**Pn**	**00 24 53.8**	**-1.9**
	14nm,0.3s,baz=5.3,slow=6.8,SNR=14						
KAPI				Sn	**Sn**	**00 25 50.3**	**-8.4**
	1.3nm,0.3s,baz=45,slow=23,SNR=6.2						
KAPI				LR	LR	00 26 30.3	
	comp=Z,68nm,20.1s,baz=39,slow=32						
KAPI	**Kappang**	**5.42**	**214**	P	**Pn**	**00 24 54.1**	**-1.6**
	0.1nm348nm30nm,1.0s						
AAI	**Ambon**	**6.29**	**121**	P	**Pn**	**00 25 12.3**	**+4.7**
MYLDM	**Lahad Datu**	**7.05**	**323**	P	**Pn**	**00 25 21.9**	**+3.8**
PSI	**Prapat**	**24.06**	**278**	P	**P**	**00 28 51.8**	**+1.1**
	2.1nm,0.3s,mb4.0,baz=162,slow=20,SNR=4.3						
ASAR	**Alice Springs**	**25.46**	**156**	P	**P**	**00 29 02.9**	**-0.4**
	1.0nm,0.5s,mb3.6,baz=341,slow=11,SNR=20						
MJAR	**Matsushiro Arr**	**39.52**	**20**	P	**P**	**00 31 04.6**	**-1.4**
	0.9nm,0.4s,mb3.9,baz=188,slow=9.2,SNR=6.3						
SONM	**Songino Array**	**50.18**	**346**	P	**P**	**00 32 31.4**	**+0.7**
	0.4nm,0.7s,mb3.6,baz=150,slow=12,SNR=3.3						
MKAR	**Makanchi Array**	**58.89**	**329**	P	**P**	**00 33 34.0**	**-0.1**
	0.8nm,0.7s,mb3.9,baz=116,slow=9.2,SNR=4.4						

BJI ***02*** *00:31:55.0, 44°.00N×130°.60W, h10km, mB4.9/6, mb4.8/1, Ms4.6/3, Ms7 4.3/5*
ISCJB ***02*** *00:31:55.1±0.6, 44°.02N±0°.05×130°.56W±0°.06, h10km, Error ellipse: s-maj=7.2km s-min=6.2km az=8.4*
NEIC ***02*** *00:31:57.1±1.6, 44°.00N×130°.61W, h10km, mb4.0/3, Error ellipse: s-maj=19.2km s-min=3.8km az=83.0*

ISC 02 00:31:56.7±0.6, 44°.00N±0°.05×130°.65W±0°.06, h10km, n55, σ0°60/58, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEBO	**Mount Hebo**	**5.07**	**74**	*e*Pn	**Pn**	**00 33 12.4**	**-0.4**
HEBO				*e*Sn	**Sn**	**00 34 12.7**	**+1.3**
COR	**Corvallis**	**5.31**	**81**	*e*Pn	**Pn**	**00 33 16.3**	**+0.3**
COR				*e*Sn	**Sn**	**00 34 14.9**	**-2.3**
KMOR	**Kings Mountain**	**5.35**	**70**	P	**Pn**	**00 33 15.9**	**-0.7**
NLO	**Nicolai Mounta**	**5.52**	**65**	P	**Pn**	**00 33 18.7**	**-0.1**
WISH	**Wishkah**	**5.75**	**55**	P	**Pn**	**00 33 22.0**	**-0.1**
HUMO	**Hull Mountain**	**5.79**	**101**	*e*Pn	**Pn**	**00 33 22.4**	**-0.1**
HUMO				Sn	**Sn**	**00 34 25.5**	**-3.5**
NLWA	**Neilton Lookou**	**5.84**	**52**	*e*Pn	**Pn**	**00 33 22.6**	**-0.7**
OOW	**Octopus West**	**5.86**	**48**	P	**Pn**	**00 33 23.4**	**-0.2**
OTR	**Olympics--Tyee**	**6.00**	**45**	P	**Pn**	**00 33 25.5**	**0.0**
LCW	**Lucas Creek**	**6.21**	**62**	P	**Pn**	**00 33 28.1**	**-0.3**
YBH	**Yreka Blue Hor**	**6.26**	**108**	*e*Pn	**Pn**	**00 33 29.6**	**+0.6**
PFB	**Port Renfrew**	**6.28**	**41**	P	**Pn**	**00 33 29.1**	**-0.3**
MTMW	**Mount Mitchell**	**6.32**	**68**	P	**Pn**	**00 33 29.9**	**+0.1**
HDW	**Hoodsport**	**6.44**	**53**	P	**Pn**	**00 33 31.4**	**-0.2**
MEW	**McNeil Island**	**6.47**	**57**	P	**Pn**	**00 33 32.5**	**+0.6**
GNW	**Green Mountain**	**6.53**	**54**	P	**Pn**	**00 33 32.2**	**-0.6**
GHW	**Garrison Hill**	**6.63**	**60**	P	**Pn**	**00 33 34.2**	**+0.1**
SQM	**Sequim**	**6.68**	**50**	P	**Pn**	**00 33 35.6**	**+0.8**
BLN	**Blyn Mountain**	**6.69**	**50**	P	**Pn**	**00 33 35.3**	**+0.4**
VGZ	**Gonzales**	**6.74**	**46**	P	**Pn**	**00 33 34.8**	**-0.8**
LON	**Longmire**	**6.81**	**63**	P	**Pn**	**00 33 36.8**	**+0.2**
PGC	**Sidney**	**6.82**	**44**	*e*Pn	**Pn**	**00 33 36.3**	**-0.5**
WDC	**Whiskeytown Da**	**6.92**	**117**	P	**Pn**	**00 33 38.1**	**0.0**
RMW	**Rattlesnake Mo**	**7.09**	**58**	P	**Pn**	**00 33 40.8**	**+0.3**
MCW	**Mount Constitu**	**7.16**	**46**	P	**Pn**	**00 33 41.4**	**0.0**
JCW	**Jim Creek**	**7.37**	**52**	P	**Pn**	**00 33 44.8**	**+0.4**
MBW	**Mount Baker**	**7.71**	**49**	P	**Pn**	**00 33 49.8**	**+0.8**
RPW	**Rockport**	**7.74**	**52**	P	**Pn**	**00 33 49.7**	**+0.3**
VDB	**Vedder Mountai**	**7.75**	**47**	P	**Pn**	**00 33 49.7**	**+0.2**
ETW	**Entiat**	**8.06**	**60**	*e*Pn	**Pn**	**00 33 54.7**	**+0.9**
WVOR	**Wild Horse Val**	**8.91**	**96**	Pn	**Pn**	**00 34 05.4**	**-0.1**
	1.4nm,0.8s						
NEW	**Newport**	**10.31**	**61**	*e*Pn	**Pn**	**00 34 23.5**	**-1.2**
BSMT	**Bassoo Peak**	**11.70**	**65**	*e*Pn	**Pn**	**00 34 43.8**	**+0.2**
MSO	**Missoula**	**12.08**	**71**	*e*Pn	**Pn**	**00 34 49.4**	**+0.6**
SLMT	**Seeley Lake**	**12.44**	**69**	*e*Pn	**Pn**	**00 34 53.9**	**+0.1**
	4.3nm,0.8s						
ISA	**Isabella**	**12.52**	**128**	Pn	**Pn**	**00 34 54.9**	**+0.1**
CHMT	**Chamberlain Mo**	**12.56**	**70**	*e*Pn	**Pn**	**00 34 55.3**	**-0.1**
WALA	**Waterton Lakes**	**12.59**	**60**	*e*Pn	**Pn**	**00 34 55.3**	**-0.4**
DAC	**Darwin (Calif)**	**12.61**	**123**	*e*Pn	**Pn**	**00 34 56.0**	**-0.1**
DUG	**Dugway**	**13.78**	**100**	Pn	**Pn**	**00 35 12.5**	**+0.4**
EDM	**Edmonton**	**14.67**	**45**	*e*Pn	**Pn**	**00 35 24.4**	**+0.3**
MSU	**Marysvale**	**14.93**	**105**	Pn	**Pn**	**00 35 26.8**	**-0.9**
	3.5nm,1.1s						
GCMT	**Greycliff**	**14.98**	**76**	Pn	**Pn**	**00 35 28.4**	**0.0**
	1.3nm,0.6s						
EGMT	**Eagleton**	**15.06**	**67**	Pn	**Pn**	**00 35 30.1**	**+0.6**
	14nm,1.1s						
SRU	**San Rafael**	**15.83**	**101**	*e*Pn	**Pn**	**00 35 40.3**	**+0.7**
	13nm,1.0s						
WUAZ	**Wupatki**	**17.04**	**113**	Pn	**Pn**	**00 35 55.6**	**+0.6**
PV04	**Paradox Valley**	**17.28**	**101**	*e*Pn	**Pn**	**00 35 57.5**	**-0.5**
LAZ	**Ladron**	**20.53**	**110**	P	**P**	**00 36 35.6**	**+0.5**
	2.9nm,1.1s						
CN2	**Changchun**	**69.40**	**311**	*e*P	**P**	**00 43 04.6**	**0.0**
CN2				*e*S	S	00 52 09.8	-1.7
CN2				LR	LR		
	comp=Z,200nm,22.0s						
BJI	**Beijing**	**76.97**	**314**	P	**P**	**00 43 48.8**	**-0.6**
BJI				S	S	00 53 35.0	-2.5
BJI				SS	SS	00 58 32.2	-1.0
BJI				pmax	pmax		
	comp=Z,140nm,3.8s						
BJI				LR	LR		
	comp=N,200nm,15.2s						
BJI				LR	LR		
	comp=E,170nm,15.2s						
BJI				LR	LR		
	comp=Z,20nm,17.5s						
HHC	**Hu-ho-hao-te**	**78.71**	**317**	*e*P	**P**	**00 43 58.3**	**-0.8**
HHC				pP	pP	00 44 03.0	+0.6
HHC				sP	sP	00 44 05.3	+1.7
HHC				PcP	PcP	00 44 07.9	-0.1
HHC				PP	PP	00 46 58.5	+2.0
HHC				S	S	00 53 53.0	-3.3
HHC				SKS		00 54 07.3	
HHC				ScS	ScS	00 54 15.5	-4.9
HHC				SS	SS	00 58 57.4	-1.9
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,83nm,6.1s						
HHC				LR	LR		
	comp=N,110nm,21.4s						
HHC				LR	LR		
	comp=E,140nm,21.4s						
HHC				LR	LR		
	comp=Z,110nm,22.6s						
WMQ	**Urumqi**	**86.11**	**333**	*e*P	**P**	**00 44 38.0**	**+0.3**
CD2	**Chengdu**	**90.41**	**316**	*e*P	**P**	**00 44 57.7**	**-0.7**
CD2				pP	pP	00 45 01.5	-0.3
CD2				sP	sP	00 45 04.8	+1.8
CD2				pmax	pmax		
	comp=Z,30nm,5.2s						
GYA	**Guiyang**	**92.44**	**311**	*e*P	**P**	**00 45 07.8**	**-0.1**
KMI	**Kunming**	**95.62**	**313**	P	**P**	**00 45 23.4**	**+0.9**

CASC 02 00:37:40.6±2.4, 8°.39N×82°.97W, h8km±9km, MD3.8, 2C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.33**	**324**	⇑*i*P	Pg	00 37 47.6	+0.5
ACR				*e*S	Sg	00 37 52.3	+0.8
BRU2	**Volcan**	**0.49**	**34**	⇓*i*P	Pg	00 37 50.9	+0.8
BRU2				*e*S	Sg	00 37 59.0	+2.3
BAR1		**0.92**	**339**	⇓*e*P	Pg	00 37 57.8	-0.4
BAR1				*e*S	Sg	00 38 10.8	+0.7
CNI	**Changuinola**	**1.12**	**24**	⇑*e*P	Pg	00 38 01.6	-0.6
BUS	**Buena Vista**	**1.40**	**326**	*e*P	Pn	00 38 06.0	-0.4
QCR	**Quepos**	**1.57**	**311**	*e*P	Pn	00 38 09.2	+0.5
QCR				*e*S	Sn	00 38 29.3	+0.1
URSC	**Urasca**	**1.65**	**331**	⇓*e*P	Pn	00 38 09.6	-0.2
URSC				*e*S	Sn	00 38 30.8	-0.4
CGA2	**Cerro Gallo 2**	**2.19**	**318**	*e*P	Pn	00 38 18.9	+1.6
CGA2				*e*S	Sn	00 38 46.7	+2.0

UPA ***02*** *00:42:15.0, 8°.40N×82°.84W, h10km, MW4.0*

CASC 02 00:42:14.7±1.9, 8°.42N×82°.97W, h3km, MD3.9, 3C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.31**	**319**	⇑*i*P	Pg	00 42 21.4	+0.8
ACR				*e*S	Sg	00 42 27.0	+2.4
BRU2	**Volcan**	**0.46**	**36**	⇓*i*P	Pg	00 42 25.0	+1.4
BRU2				*e*S	Sg	00 42 33.0	+3.4
BAR1		**0.89**	**337**	⇓*e*P	Pg	00 42 31.7	-0.1
BAR1				⇓*i*P		00 42 31.7	
CNI	**Changuinola**	**1.09**	**24**	⇑*i*P	Pg	00 42 35.6	0.0
CNI				*e*S	Sg	00 42 48.0	-1.7
BUS	**Buena Vista**	**1.38**	**325**	*e*P	Pn	00 42 40.2	-0.6
QCR	**Quepos**	**1.55**	**310**	*e*P	Pn	00 42 43.1	-0.1
QCR				*e*S	Sn	00 43 04.2	+0.4
URSC	**Urasca**	**1.62**	**330**	*e*P	Pn	00 42 43.4	-0.8
URSC				*e*S	Sn	00 43 04.6	-1.0
CGA2	**Cerro Gallo 2**	**2.17**	**317**	*e*P	Pn	00 42 53.3	+1.6
FORC	**Fortuna**	**2.64**	**321**	⇑*i*P	Pn	00 43 02.2	+4.0

DJA 02 01:03:06, 0°.46S×122°.76E, h9km, MLv4.2/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.58**	**179**	P	Pg	01 03 15.3	-1.9
LUWI				S	Sg	01 03 22.9	-1.9
APSI	**Ampana**	**1.20**	**248**	P	Pb	01 03 26.6	-2.3
APSI				S	Sb	01 03 45.1	+0.6
MRSI	**Marisa**	**1.24**	**319**	P	Pn	01 03 27.5	-2.0
KDI	**Kendari**	**3.48**	**182**	P	Pn	01 03 57.8	-2.5
NLAI	**Namlea**	**5.14**	**123**	P	Pn	01 04 24.7	+1.5

GUC 02 01:30:31.0±0.5, 23°.76S×68°.66W, h125km, ML3.5, 3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PECH	**Pedro de Valdi**	**1.49**	**321**	⇓*i*P	Pn	01 30 59.6	+1.0
PECH				*i*S	Sn	01 31 21.5	+1.8
PECH				AML	AML	01 31 22.0	
	comp=E,958nm,0.1s						
PB04	**Plate Boundary**	**1.68**	**333**	⇓*i*P	Pn	01 31 04.8	+4.0
PB04				*i*S	Sn	01 31 31.0	+7.5
PB04				AML	AML	01 31 32.4	
	comp=E,171nm,0.2s						
MACH	**Maria Elena**	**1.86**	**327**	*e*P	Pn	01 31 04.1	+1.1
MACH				*i*S	Sn	01 31 29.4	+1.9
PB01	**Plate Boundary**	**2.81**	**344**	⇓*i*P	Pn	01 31 15.9	+0.8
PB01				*e*S	Sn	01 31 50.8	+1.8
PB01				AML	AML	01 31 52.4	
	comp=N,207nm,0.3s						
MNMC	**Miæe Miæ**	**4.69**	**349**	*e*P	Pn	01 31 40.0	0.0
MNMC				*i*S	Sn	01 32 34.0	+0.5

ISCJB ***02*** *01:30:38.4±1.4, 29°.35N±0°.04×51°.33E±0°.04, h9km±11km, Error ellipse: s-maj=6.9km s-min=6.0km az=36.3*
SGS ***02*** *01:30:40.1, 29°.61N×51°.38E, h27km*
TEH ***02*** *01:30:40.5, 29°.37N×51°.34E, h11km*
KISR ***02*** *01:30:42.5±0.7, 29°.49N×51°.19E, h45km±482km, MD3.8, ML3.1*
CSEM ***02*** *01:30:44.6±1.0, 29°.19N×51°.20E, h30km, ML3.1, Error ellipse: s-maj=25.8km s-min=8.3km az=47.0*

ISC 02 01:30:39.7±1.5, 29°.36N±0°.04×51°.34E±0°.05, h8km±12km, n32, σ0°86/41, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMOK	**Mouk**	**1.24**	**104**	*e*Pg	**Pg**	**01 31 02.9**	**-0.7**
IMOK				*e*		01 31 35.7	
	comp=Z,10μm,0.2s						
ISRV	**Sarvestan**	**1.55**	**89**	*e*Pn	**Pn**	**01 31 07.7**	**+0.1**
IPAR	**Pars**	**1.56**	**72**	*e*Sg	**Sg**	**01 31 28.9**	**-1.2**
IPAR				*e*Pn	**Pn**	**01 31 08.3**	**+0.5**
IPAR				*e*		01 31 36.6	
	comp=Z,6μm,0.4s						
QRN	**Al-Qurain**	**3.06**	**259**	*e*P	**Pn**	**01 31 29.4**	**+1.1**
QRN				AML	AML	01 32 08.3	
	comp=Z,143nm,0.4s						
IGAR	**Gharneh**	**3.10**	**11**	*e*Pn	**Pn**	**01 31 29.5**	**+0.6**
IGAR				*e*		01 31 41.2	
	comp=Z,386nm,0.1s						
KBD	**Kabd**	**3.19**	**268**	*e*P	**Pn**	**01 31 31.6**	**+1.4**
KBD				*e*S	**Sn**	**01 32 07.8**	**-0.6**
KBD				AML	AML	01 32 12.1	
	comp=Z,58nm,0.4s						
KBD	**Kabd**	**3.19**	**268**	*e*P	**Pn**	**01 31 31.6**	**+1.5**
KBD				*e*S	**Sn**	**01 32 07.8**	**-0.6**
ISAD	**Sadrabad**	**3.25**	**38**	*e*Pn	**Pn**	**01 31 31.7**	**+0.7**
ISAD				*e*		01 32 23.9	
	comp=Z,1μm,0.3s						
IPIR	**Pirpir**	**3.34**	**354**	*e*Pn	**Pn**	**01 31 32.4**	**+0.2**
IPIR				*e*		01 32 34.9	
	comp=Z,471nm,0.4s						
RDF	**Al-Radifah**	**3.34**	**264**	*e*P	**Pn**	**01 31

*DJA **02** 01:44:35, 6.′04S×127.°81E, h402km, Mw5.1/16*
ISC 02 01:44:35.4±0.3, **6.′06S**±0.′03×**127.°81E**±0.′04, **h396**km±4km, **h394**km±5.1km: **pP-P, n142,** σ0.**98**/139, **mb4.6**/54, **2C,**
Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**2.39**	**9**	P	**Pn**	**01 45 33.3**	**-0.3**
TLE	**Tual**	**4.92**	**85**	P	**Pn**	**01 45 56.8**	**+0.4**
LBMI	**Labuha**	**5.39**	**357**	P	**Pn**	**01 46 01.1**	**-0.3**
0.8nm2μm194nm,0.7s							
MMRI	**Maumere**	**6.09**	**245**	P	**Pn**	**01 46 08.4**	**-0.4**
1.7nm7μm556nm,0.9s							
SWI	**Sorong**	**6.21**	**34**	P	**Pn**	**01 46 09.1**	**-1.1**
479nm,0.6s							
LUWI	**Luwuk**	**7.07**	**315**	P	**Pn**	**01 46 19.8**	**0.0**
18nm229nm,0.8s							
APSI	**Ampana**	**7.99**	**310**	P	**Pn**	**01 46 30.3**	**0.0**
9.8nm104nm,0.9s							
MNI	**Manado**	**8.02**	**338**	P	**Pn**	**01 46 30.9**	**+0.3**
1.1nm223nm,0.5s							
KAKA	**Kakadu**	**8.04**	**146**	*e*P	**Pn**	**01 46 31.7**	**+1.0**
891nm,0.6s							
KAKA				*e*S	**S**	**01 47 58.7**	**-6.5**
KAKA	**Kakadu**	**8.04**	**146**	*e*Pn	**Pn**	**01 46 31.6**	**+0.9**
KAKA				*e*S	**S**	**01 47 58.1**	**-7.1**
KAKA	**Kakadu**	**8.04**	**146**	P	**Pn**	**01 46 32.1**	**+1.4**
2μm,0.7s							
KAPI	**Kappang**	**8.08**	**277**	P	**Pn**	**01 46 31.1**	**-0.2**
5.5nm,0.3s,baz=129,slow=5.5,SNR=25							
KAPI				S	**S**	**01 48 05.0**	**-1.3**
baz=323,slow=17,SNR=2.5							
KAPI	**Kappang**	**8.08**	**277**	*e*Pn	**Pn**	**01 46 31.5**	**+0.2**
KAPI	**Kappang**	**8.08**	**277**	P	**Pn**	**01 46 32.1**	**+0.8**
326nm41nm,1.0s							
WSI	**Waingapu**	**8.26**	**244**	P	**Pn**	**01 46 32.5**	**-0.8**
6.9nm1μm,0.6s							
TTSI	**Tana Toraja**	**8.50**	**290**	P	**Pn**	**01 46 36.4**	**+0.2**
76nm,0.8s							
MRSI	**Marisa**	**8.74**	**318**	P	**Pn**	**01 46 38.3**	**-0.6**
5μm274nm,0.6s							
KNA	**Kununurra**	**9.68**	**174**	*e*P	**Pn**	**01 46 50.3**	**+0.6**
30nm,0.5s							
KNA				*e*S	**S**	**01 48 37.0**	**-3.0**
SGSI	**Sangihe**	**9.94**	**347**	P	**Pn**	**01 46 51.7**	**-1.1**
SMPI	**Sarmi**	**11.60**	**70**	P	**Pn**	**01 47 12.6**	**+0.5**
2μm128nm,1.0s							
KBKI	**Kotabaru**	**11.92**	**283**	P	**Pn**	**01 47 17.0**	**+1.2**
2μm226nm,0.9s							
FITZ	**Fitzroy Crossi**	**12.16**	**190**	*e*P	**P**	**01 47 17.6**	**+0.7**
7.9nm,0.3s							
FITZ	**Fitzroy Crossi**	**12.16**	**190**	P	**P**	**01 47 17.3**	**+0.4**
1.3nm,0.3s,baz=16,slow=8.5,SNR=34							
FITZ				S	**S**	**01 49 29.9**	**-0.6**
0.6nm,0.3s,baz=162,slow=22,SNR=7.2							
FITZ	**Fitzroy Crossi**	**12.16**	**190**	*e*Pn	**Pn**	**01 47 17.8**	**-0.6**
FITZ				*e*S	**S**	**01 49 31.7**	**+1.2**
FITZ	**Fitzroy Crossi**	**12.16**	**190**	P	**P**	**01 47 18.1**	**+1.2**
30nm,0.9s							
MYLDM	**Lahad Datu**	**14.52**	**320**	P	**P**	**01 47 44.6**	**+1.6**
67nm,1.3s							
WRAB	**Tennant Creek**	**15.19**	**156**	*e*P	**P**	**01 47 50.4**	**+0.3**
74nm,0.6s							
WRAB				*e*S	**S**	**01 50 30.6**	**-0.7**
WRAB	**Tennant Creek**	**15.19**	**156**	P	**P**	**01 47 50.5**	**+0.4**
1μm104nm,0.9s							
SDKM	**Sandakan**	**15.72**	**317**	P	**P**	**01 47 56.9**	**+1.0**
KKM	**Kota Kinabalu**	**16.68**	**316**	P	**P**	**01 48 07.1**	**+0.8**
KKM	**Kota Kinabalu**	**16.68**	**316**	*e*P	**P**	**01 48 06.2**	**-0.1**
106nm,0.7s							
KKM	**Kota Kinabalu**	**16.68**	**316**	P	**P**	**01 48 06.9**	**+0.6**
1μm165nm,0.9s							
KDM	**Kudat**	**16.91**	**319**	P	**P**	**01 48 09.9**	**+1.2**
MBWA	**Marble Bar**	**16.93**	**207**	*e*P	**P**	**01 48 08.8**	**0.0**
MBWA	**Marble Bar**	**16.93**	**207**	*e*P	**P**	**01 48 09.4**	**+0.7**
32nm,0.9s							
MBWA	**Marble Bar**	**16.93**	**207**	P	**P**	**01 48 09.1**	**+0.3**
52nm,1.1s							
COEN	**Coen**	**17.04**	**119**	*e*P	**P**	**01 48 09.9**	**-0.1**
COEN	**Coen**	**17.04**	**119**	P	**P**	**01 48 10.1**	**+0.1**
53nm,2.1s							
BTM	**Bintulu**	**17.34**	**302**	P	**P**	**01 48 15.3**	**+2.1**
SBUM	**Sibu**	**17.71**	**298**	P	**P**	**01 48 18.9**	**+1.7**
SBUM	**Sibu**	**17.71**	**298**	P	**P**	**01 48 18.2**	**+1.0**
1μm107nm,0.8s							
ASAR	**Alice Springs**	**18.46**	**162**	P	**P**	**01 48 25.3**	**+0.3**
8.1nm,0.3s,baz=343,slow=12,SNR=446							
ASAR				S	**S**	**01 51 35.2**	**+0.3**
0.3nm,0.3s,baz=343,slow=23,SNR=18							
KSM	**Kuching**	**19.00**	**293**	*e*P	**P**	**01 48 30.7**	**-0.1**
58nm,0.9s							
KSM	**Kuching**	**19.00**	**293**	P	**P**	**01 48 30.6**	**-0.2**
602nm73nm,1.0s							
TGY	**Tagaytay City**	**21.16**	**341**	P	**P**	**01 48 50.0**	**-0.8**
264nm,0.3s,baz=237,slow=9.6,SNR=3.6							
MEEK	**Meekatharra**	**22.26**	**202**	*e*P	**P**	**01 49 00.9**	**+0.2**
CTA	**Charters Tower**	**22.71**	**130**	P	**P**	**01 49 05.3**	**+0.5**
1.9nm,0.9s,mb3.5,baz=270,slow=9.1,SNR=2.3							
CTA				PP	PP	01 50 06.7	-0.1
15nm,1.0s,baz=305,slow=14,SNR=9.6							
CTA	**Charters Tower**	**22.71**	**130**	P	**P**	**01 49 05.3**	**+0.5**
CTA				PP	PP	01 50 06.7	-0.1
MYKOM	**Kota Tinggi**	**25.16**	**287**	P	**P**	**01 49 29.0**	**+2.1**
MYKOM	**Kota Tinggi**	**25.16**	**287**	P	**P**	**01 49 28.8**	**+1.9**
583nm43nm,0.5s,mb5.1							
KGM	**Kluang**	**25.73**	**287**	P	**P**	**01 49 34.2**	**+2.2**
KTGM	**Kuala Trenggan**	**27.10**	**294**	P	**P**	**01 49 44.7**	**+0.5**
BBOO	**Buckleboo**	**27.71**	**165**	*e*P	pP	01 50 55.0	-5.5
14nm,0.7s							
FRIM	**Kepong**	**27.73**	**289**	P	**P**	**01 49 51.3**	**+1.6**
PPI	**Padang Panjang**	**27.91**	**280**	P	**P**	**01 49 50.7**	**-0.7**
2μm55nm,0.9s,mb4.9							
IPM	**Ipoh**	**28.71**	**291**	P	**P**	**01 49 59.9**	**+1.5**
IPM	**Ipoh**	**28.71**	**291**	P	**P**	**01 49 58.7**	**+0.3**
19nm,0.7s,mb4.5							
STKA	**Stephens Creek**	**28.74**	**155**	*e*P	pP	01 51 08.6	-1.8
17nm,0.8s							
STKA	**Stephens Creek**	**28.74**	**155**	P	**P**	**01 49 59.2**	**+0.9**
2.3nm,0.4s,mb3.8,baz=329,slow=8.8,SNR=7.3							
STKA	**Stephens Creek**	**28.74**	**155**	*e*P	**P**	**01 49 59.3**	**+0.9**
MNSI	**Mandailing Nat**	**28.99**	**283**	P	**P**	**01 50 00.4**	**-0.4**
KULM	**Kulim**	**29.36**	**292**	P	**P**	**01 50 05.5**	**+1.4**
KULM	**Kulim**	**29.36**	**292**	*e*P	**P**	**01 50 03.3**	**-0.8**
22nm,0.6s,mb4.7							
PSI	**Prapat**	**30.15**	**286**	P	**P**	**01 50 09.5**	**-1.5**
37nm,0.8s,mb4.8,baz=89,slow=4.6,SNR=31							
CMSA	**Cobar Meteorol**	**30.38**	**149**	*e*P	pP	01 51 23.7	-1.5
GSI	**Gunungsitoli**	**31.06**	**283**	P	**P**	**01 50 19.1**	**+0.2**
HNR	**Honiara**	**32.02**	**98**	*e*P	**P**	**01 50 27.8**	**+0.7**
69nm,0.3s,mb5.5							
BDT	**Bhumibol Dam**	**36.69**	**310**	P	**P**	**01 51 06.5**	**-0.2**
33nm,0.7s,mb4.8							
CM31	**Chiang Mai Arr**	**37.47**	**311**	*e*P	**P**	**01 51 13.2**	**0.0**
8.7nm,0.5s,mb4.3							
CMAR	**Chiang Mai Arr**	**37.47**	**311**	P	**P**	**01 51 13.1**	**-0.1**
22nm,0.6s,mb4.7,baz=141,slow=7.4,SNR=42							
CHG	**Chiang Mai**	**37.68**	**312**	⇑P	**P**	**01 51 14.4**	**-0.5**
42nm,0.9s,mb4.8							
CHTO	**Chiang Mai**	**37.68**	**312**	P	**P**	**01 51 14.5**	**-0.4**
GYA	**Guiyang**	**38.27**	**329**	P	**P**	**01 51 20.8**	**+1.1**
GYA				pP	pP	01 52 37.5	+2.5
GYA				PP	PP	01 53 01.6	+3.8
GYA				sP	sP	01 53 21.8	+1.4
GYA				PcP	PcP	01 53 28.9	+4.5
GYA				ScP	ScP	01 56 34.0	0.0
GYA				S	**S**	**01 56 47.9**	**+3.9**
GYA				sS	sS	01 59 01.3	+0.4
GYA				ScS	ScS	02 00 45.2	-0.1
GYA				pmax	pmax		
comp=Z,10.0nm,0.8s,mb4.2							
NJ2	**Nanjing**	**38.84**	**348**	*e*P	**P**	**01 51 24.2**	**-0.1**
NJ2				pmax	pmax		
comp=Z,30nm,0.9s,mb4.6							
KMI	**Kunming**	**39.44**	**323**	P	**P**	**01 51 29.3**	**+0.1**
KMI				pmax	pmax		
comp=Z,24nm,0.9s,mb4.5							
ENH	**Enshi**	**40.17**	**335**	*e*P	**P**	**01 51 34.1**	**-0.9**
comp=Z,12nm,0.7s,mb4.3							
CD2	**Chengdu**	**43.37**	**329**	*e*P	**P**	**01 52 01.2**	**+0.6**
CD2				pP	pP	01 53 19.4	+1.4
CD2				sP	sP	01 54 03.5	+0.7
CD2				pmax	pmax		
comp=Z,10.0nm,0.5s,mb4.4							
CD2				pmax	pmax		
comp=Z,30nm,4.2s							
MAJO	**Matsushiro**	**43.48**	**12**	*e*P	**P**	**01 52 00.2**	**-1.2**
comp=Z,11nm,0.9s,mb4.2							
MAT	**Matsushiro**	**43.48**	**12**	P	**P**	**01 51 59.9**	**-1.6**
MJAR	**Matsushiro Arr**	**43.48**	**12**	P	**P**	**01 51 59.8**	**-1.7**
comp=Z,6.4nm,0.7s,mb4.1,baz=190,slow=9.4,SNR=16							
XAN	**Xi'an**	**43.70**	**337**	P	**P**	**01 52 01.7**	**-1.5**
XAN				pmax	pmax		
comp=Z,8.0nm,0.8s,mb4.1							
XAN				pmax	pmax		
comp=Z,12nm,4.0s							
SHL	**Shillong**	**46.97**	**314**	*e*PKP	**P**	**01 52 27.0**	**-1.7**
BJI	**Beijing**	**47.11**	**348**	P	**P**	**01 52 28.6**	**-0.9**
BJI				S	**S**	**01 58 53.9**	**+2.8**
BJI				pmax	pmax		
comp=Z,20nm,0.7s,mb4.6							
BJI				pmax	pmax		
comp=Z,73nm,4.8s							
LZH	**Lanzhou**	**47.57**	**334**	*e*P	**P**	**01 52 33.4**	**+0.3**
LZH				PP	PP	01 54 27.0	-2.2
LZH				sP	sP	01 54 34.1	-2.4
LZH				*e*S	**S**	**01 58 59.0**	**+1.2**
LZH				SS	SS	02 02 33.2	+1.1
LZH				pmax	pmax		
comp=Z,39nm,1.0s,mb4.7							
LZH				pmax	pmax		
comp=Z,96nm,4.2s							
PALK	**Pallekele**	**48.82**	**285**	P	**P**	**01 52 41.5**	**-1.5**
comp=Z,7.8nm,0.7s,mb4.2,baz=101,slow=11,SNR=4.1							
HHC	**Hu-ho-hao-te**	**49.00**	**344**	*e*P	**P**	**01 52 45.9**	**+2.1**
HHC				pP	pP	01 54 03.3	-0.1
HHC				sP	sP	01 54 44.9	-2.7
HHC				PcS	PcS	01 57 59.0	+1.2
HHC				S	**S**	**01 59 19.1**	**+1.7**
HHC				sS	sS	02 01 39.1	-1.3
HHC				ScS	ScS	02 01 54.2	+1.4
HHC				SS	SS	02 02 58.2	+3.6
HHC				pmax	pmax		
comp=Z,22nm,0.9s,mb4.5							
HHC				pmax	pmax		
comp=Z,71nm,5.7s							
LSA	**Lhasa**	**50.02**	**317**	*e*P	**P**	**01 52 52.4**	**+0.8**
comp=Z,32nm,0.6s,mb4.8							
GTA	**Gaotai**	**52.12**	**333**	⇑P	**P**	**01 53 07.2**	**+0.4**
GTA				SS	SS	02 03 43.6	-0.3
GTA				pmax	pmax		
comp=Z,30nm,1.1s,mb4.4							
GTA				pmax	pmax		
comp=Z,70nm,4.8s							
GUN	**Gumba**	**52.70**	**312**	*e*P	**P**	**01 53 10.3**	**-1.0**
comp=Z,198nm,0.7s,mb5.5							
PKI	**Pulchoki**	**52.86**	**311**	*e*P	**P**	**01 53 11.2**	**-1.3**
comp=Z,55nm,0.6s,mb5.0							
KKN	**Kakani**	**53.08**	**311**	*e*P	**P**	**01 53 12.8**	**-1.2**
comp=Z,68nm,0.7s,mb5.0							
DMN	**Daman**	**53.11**	**311**	*e*P	**P**	**01 53 13.1**	**-1.1**
comp=Z,94nm,0.9s,mb5.0							
NGP	**Nagpur**	**54.94**	**301**	*e*x	x	01 53 22.4	
ULN	**Ulaanbaatar**	**56.72**	**343**	*e*P	**P**	**01 53 39.9**	**+0.6**
comp=Z,12nm,0.7s,mb4.3							
SONM	**Songino Array**	**56.88**	**343**	P	**P**	**01 53 41.2**	**+0.7**
comp=Z,11nm,0.7s,mb4.3,baz=166,slow=7.1,SNR=56							
BHPL	**Bhopal**	**57.17**	**303**	*e*PKP	**P**	**01 53 41.5**	**-1.4**
BHPL				AMb	AMB	01 53 42.4	
comp=Z,14nm,0.4s,mb4.7							
KAD	**Karad**	**57.83**	**295**	*e*PKP	**P**	**01 53 46.1**	**-1.5**
KAD				AMb	AMB	01 53 50.3	
comp=Z,27nm,0.4s,mb4.9							
POO	**Poona**	**58.53**	**296**	*e*PKP	**P**	**01 53 50.9**	**-1.5**
POO				AMb	AMB	01 53 55.2	
comp=Z,22nm,0.6s,mb4.7							
AJM	**Ajmer**	**60.80**	**305**	*e*PKP	**P**	**01 54 05.4**	**-2.1**
SMLA	**Simla**	**60.86**	**311**	*e*PKP	**P**	**01 54 06.4**	**-1.4**
WMQ	**Urumqi**	**61.43**	**328**	*e*P	**P**	**01 54 13.0**	**+1.6**
THN	**Thein Dam**	**62.56**	**311**	*e*x	x	01 54 16.6	
PETK	**Petropavlovsk-**	**64.14**	**20**	P	**P**	**01 54 29.2**	**+0.4**
comp=Z,8.6nm,0.6s,mb4.4,baz=182,slow=3.5,SNR=17							
PETK	**Petropavlovsk-**	**64.14**	**20**	P	**P**	**01 54 29.2**	**+0.4**
MK31	**Makanchi Array**	**66.26**	**328**	*e*P	**P**	**01 54 42.6**	**+0.2**
MKAR	**Makanchi Array**	**66.26**	**328**	P	**P**	**01 54 42.5**	**+0.1**
comp=Z,24nm,0.4s,mb5.1,baz=116,slow=8.1,SNR=111							
KZA	**Kyzart**	**67.66**	**320**	P	**P**	**01 54 52.5**	**+1.2**
SNR=15							
TKM2	**Tokmak 2**	**67.88**	**321**	P	**P**	**01 54 53.0**	**+0.5**
SNR=16							
TKM2	**Tokmak 2**	**67.88**	**321**	*e*P	**P**	**01 54 52.8**	**+0.2**
comp=Z,12nm,0.7s,mb4.6							
KBK	**Karagaybulak**	**68.15**	**321**	P	**P**	**01 54 55.0**	**+0.8**
SNR=8.8							
UCH	**Uchtor**	**68.20**	**320**	P	**P**	**01 54 56.2**	**+1.6**
SNR=12							
UCH	**Uchtor**	**68.20**	**320**	*e*P	**P**	**01 54 55.9**	**+1.3**
comp=Z,8.4nm,0.8s,mb4.4							
AAK	**Ala-Archa**	**68.42**	**320**	P	**P**	**01 54 56.8**	**+0.9**
SNR=7.2							
AAK	**Ala-Archa**	**68.42**	**320**	*e*P	**P**	**01 54 56.1**	**+0.2**
comp=Z,11nm,0.8s,mb4.5							
KBL	**Kabul**	**68.50**	**311**	*e*P	**P**	**01 54 56.5**	**0.0**
comp=Z,10nm,1.0s,mb4.4							
AML	**Almayashu**	**68.68**	**320**	P	**P**	**01 54 58.6**	**+1.1**
SNR=22							
AML	**Almayashu**	**68.68**	**320**	*e*P	**P**	**01 54 58.5**	**+1.0**
comp=Z,15nm,0.8s,mb4.7							
USP	**Ospenovka**	**68.75**	**321**	P	**P**	**01 54 58.3**	**+0.4**
SNR=13							
EKS2	**Erkin-Say**	**68.89**	**320**	P	**P**	**01 54 59.8**	**+1.0**
SNR=11							
EKS2	**Erkin-Say**	**68.89**	**320**	*e*P	**P**	**01 54 59.6**	**+0.8**
comp=Z,17nm,1.2s,mb4.5							
ZAA0	**Zalesovo Array**	**69.79**	**335**	*e*P	**P**	**01 55 03.1**	**-0.8**
ZALV	**Zalesovo Beam**	**69.79**	**335**	P	**P**	**01 55 03.1**	**-0.8**
comp=Z,17nm,0.6s,mb4.8,baz=125,slow=5.1,SNR=56							
KURK	**Kurchatov**	**70.59**	**329**	*e*P	**P**	**01 55 08.8**	**-0.1**
comp=Z,39nm,1.0s,mb4.9							
BVAR	**Borovoye Array**	**76.11**	**328**	P	**P**	**01 55 40.5**	**-0.1**
comp=Z,2.8nm,0.4s,mb4.2,baz=133,slow=6.3,SNR=21							
BRVK	**Borovoye**	**76.19**	**328**	*e*P	**P**	**01 55 41.0**	**-0.1**
comp=Z,10nm,1.0s,mb4.4							
ABKAR	**Akbulak array**	**80.42**	**322**	*e*P	**P**	**01 56 04.0**	**-0.1**
comp=Z,3.6nm,0.6s,mb4.2							
ARU	**Arti**	**83.76**	**328**	*e*P	**P**	**01 56 20.6**	**-0.5**
comp=Z,12nm,1.1s,mb4.5							
QRN	**Al-Qurain**	**84.08**	**300**	*e*P	**P**	**01 56 22.8**	**-0.5**
QRN				AMb	AMB	01 56 23.6	
comp=Z,48nm,0.6s,mb5.4							
RDF	**Al-Radifah**	**84.43**	**300**	*e*P	**P**	**01 56 24.4**	**-0.6**
RDF				AMb	AMB	01 56 25.4	
comp=Z,29nm,0.5s,mb5.2							
NAY	**Al-Naaiem**	**84.75**	**300**	*e*P	**P**	**01 56 25.9**	**-0.7**
NAY				AMb	AMB	01 56 26.7	
comp=Z,29nm,0.7s,mb5.1							
MIB	**Mutribah**	**84.76**	**301**	*e*P	**P**	**01 56 26.1**	**-0.6**
MIB				AMb	AMB	01 56 27.9	
comp=Z,39nm,1.2s,mb5.0							
BRTR	**Keskin Array B**	**97.03**	**309**	P	**P**	**01 57 22.5**	**-0.9**
comp=Z,0.5nm,0.6s,mb3.8,baz=131,slow=4.4,SNR=5.3							
GERES	**GERESS Array B**	**110.30**	**320**	PP	PP	02 03 00.3	-2.5
comp=Z,0.4nm,0.8s,baz=75,slow=6.1,SNR=4.1							
WLF	**Walferdange**	**114.76**	**322**	PKP	PKPdf	02 02 29.2	-0.3
DOU	**Dourbes**	**115.53**	**323**	PKP	PKPdf	02 02 31.8	+0.8
ESDC	**Sonseca Array**	**125.31**	**315**	PP	PP	02 04 45.2	-0.7
comp=Z,0.1nm,0.2s,baz=67,slow=7.4,SNR=4.6							
TXAR	**Lajitas Array**	**126.30**	**58**	PKP	PKPdf	02 02 53.3	+0.9
comp=Z,0.1nm,0.4s,baz=338,slow=3.0,SNR=3.7							
TXAR				SKPbc		02 05 32.0	
comp=Z,0.5nm,0.8s,baz=344,slow=4.2,SNR=5.0							
TORD	**Torodi Ar. Bea**	**126.49**	**282**	PKP	PKPdf	02 02 53.3	+0.3
comp=Z,0.8nm,0.7s,baz=67,slow=2.2,SNR=6.3							
TORD				SKPbc		02 05 30.5	
comp=Z,0.7nm,0.9s,baz=65,slow=3.4,SNR=3.8							
SCHQ	**Schefferville**	**129.96**	**11**	SKPbc	SKPbc	02 05 42.5	-0.9
comp=Z,3.3nm,0.9s,baz=285,slow=14,SNR=3.6							
PLCA	**Paso Flores**	**130.48**	**162**	SKPbc	SKPbc	02 05 46.2	+0.3
comp=Z,2.2nm,0.9s,baz=204,slow=5.8,SNR=6.1							
CPUP	**Villa Florida**	**147.42**	**171**	PKPbc	PKPbc	02 03 34.4	+0.3
comp=Z,0.3nm,0.4s,baz=152,slow=1.3,SNR=4.0							
LPAZ	**La Paz**	**152.77**	**145**	PKPbc	PKPbc	02 03 48.4	+1.3
comp=Z,0.8nm,0.4s,baz=30,slow=5.4,SNR=6.4							
LPAZ				PKPab	PKPab	02 04 01.6	+2.1
comp=Z,0.4nm,0.5s,baz=216,slow=4.7,SNR=6.0							

*ISK **02** 01:50:53.9, 39.°42N×33.°09E, h12km, MD3.0*
*CSEM **02** 01:50:54.3±0.1, 39.°42N×33.°08E, h10km, MD2.9, Error ellipse: s-maj=1.8km s-min=1.7km az=137.0*
*ISCJB **02** 01:50:54.6±0.8, 39.°41N±0.°04×33.°07E±0.°04, h10km±5km, Error ellipse: s-maj=6.2km s-min=5.0km az=169.8*

*DDA **02** 01:50:55.9, 39.°47N×33.°21E, h2km, Md2.9*
ISC 02 01:50:54.8±0.7, **39.°41N**±0.°04×**33.°09E**±0.°04, **h11**km±4km, **n24,** σ0.**67**/40, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBAL	**Bala**	**0.13**	**13**	*i* P	**Pg**	**01 50 57.9**	**0.0**
BBAL				*i* S	**Sg**	**01 51 00.6**	**+0.5**
BBAL	**Bala**	**0.13**	**13**	*i* P	**Pg**	**01 50 57.9**	**0.0**
BBAL				*i* S	**Sg**	**01 51 00.6**	**+0.5**
LOD	**Lodumlu**	**0.54**	**333**	*e*PG	**Pg**	**01 51 04.8**	**-0.5**
LOD				*e*SG	**Sg**	**01 51 12.7**	**+0.4**
LOD	**Lodumlu**	**0.54**	**333**	*e*Pg	**Pg**	**01 51 04.8**	**-0.4**
LOD				*e*Sg	**Sg**	**01 51 12.7**	**+0.4**
CDAG	**Cicekdag**	**1.02**	**78**	*i* P	**Pg**	**01 51 13.2**	**-1.1**
CDAG				*i* S	**Sg**	**01 51 27.9**	**+0.3**
CDAG	**Cicekdag**	**1.02**	**78**	*i* P	**Pg**	**01 51 13.2**	**-1.1**
CDAG				*i* S	**Sg**	**01 51 27.9**	**+0.3**
SVRH	**Sivrihisar-ESK**	**1.21**	**272**	*e*PN	**Pn**	**01 51 17.3**	**-0.4**
SVRH				*e*SN	**Sn**	**01 51 34.3**	**+0.2**
SVRH	**Sivrihisar-ESK**	**1.21**	**272**	*e*Pn	**Pn**	**01 51 17.3**	**-0.4**
SVRH				*e*Sn	**Sn**	**01 51 34.3**	**+0.2**
SULT	**Sultanhani-AKS**	**1.26**	**164**	*e*PN	**Pn**	**01 51 18.1**	**-0.2**
SULT	**Sultanhani-AKS**	**1.26**	**164**	*e*Pn	**Pn**	**01 51 18.1**	**-0.2**
CANT	**Cankiri**	**1.26**	**19**	*e*PN	**Pn**	**01 51 17.8**	**-0.6**
CANT				*e*SN	**Sn**	**01 51 35.0**	**-0.3**
LADK	**Ladik-KONYA**	**1.33**	**205**	*e*PN	**Pn**	**01 51 19.1**	**-0.2**
LADK				*e*SN	**Sn**	**01 51 37.8**	**+0.6**
LADK	**Ladik-KONYA**	**1.33**	**205**	*e*Pn	**Pn**	**01 51 19.2**	**-0.2**
LADK				*e*Sn	**Sn**	**01 51 37.8**	**+0.7**
CORM	**Corum**	**1.42**	**57**	*e*PN	**Pn**	**01 51 20.1**	**-0.4**
CORM				*e*SN	**Sn**	**01 51 39.1**	**0.0**
CORM	**Corum**	**1.42**	**57**	*e*Pn	**Pn**	**01 51 20.1**	**-0.4**
CORM				*e*Sn	**Sn**	**01 51 39.2**	**+0.1**
AVNT	**Avonos**	**1.52**	**114**	*i* P	**Pn**	**01 51 22.9**	**+1.0**
AVNT				*i* S	**Sn**	**01 51 41.5**	**-0.1**
AVNT	**Avonos**	**1.52**	**114**	*i* P	**Pn**	**01 51 22.9**	**+1.0**
AVNT				*i* S	**Sn**	**01 51 41.5**	**-0.1**
ESKT	**Eskisehir**	**1.73**	**274**	*e*PN	**Pn**	**01 51 24.5**	**-0.4**
ESKT	**Eskisehir**	**1.73**	**274**	*e*Pn	**Pn**	**01 51 24.5**	**-0.4**
SAFT	**Safranbolu**	**1.85**	**351**	*e*PN	**Pn**	**01 51 26.2**	**-0.3**
SAFT	**Safranbolu**	**1.85**	**351**	*e*Pn	**Pn**	**01 51 26.2**	**-0.3**
BALT	**Daday**	**2.13**	**6**	*i* P	**Pn**	**01 51 33.0**	**+2.6**
BALT				*i* S	**Sn**	**01 52 01.1**	**+4.3**
GULT	**Gulveren**	**2.22**	**298**	*e*PN	**Pn**	**01 51 31.2**	**-0.4**
GULT	**Gulveren**	**2.22**	**298**	*e*Pn	**Pn**	**01 51 31.2**	**-0.4**

MEX 02 01:55:53.3±0.4, **15.°30N**×**93.°29W**, **h81**km±5km, **MD3.7,**
Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.41**	**10**	*e*P	Pn	01 56 05.1	-1.3
PCIG				*i* S	Sn	01 56 14.4	-1.7
THIG		**1.06**	**112**	*i* P	Pn	01 56 11.7	-1.5
THIG				*i* S	Sn	01 56 26.6	-1.4
CCIG	**Comitan**	**1.48**	**49**	*i* P	Pn	01 56 17.6	-0.8
CCIG				*i* S	Sn	01 56 35.5	-1.7
HUIG	**Huatulco**	**2.76**	**280**	*e*P	Pn	01 56 34.8	-0.6
HUIG				*i* S	Sn	01 57 05.9	-1.8

*ISCJB **02** 01:58:43.8±0.8, 37.°7S±0.°2×17.°1W±0.°2, h10km, mb4.2/7, MS4.4/10, Error ellipse: s-maj=28.1km s-min=18.0km az=146.8*
*IDC **02** 01:58:44.1±1.5, 37.°67S×17.°07W, h0km, mb3.9/4, mb1 4.0/4, mb1mx3.8/15, mbtmp3.9/4, MS4.4/11, Ms1 4.4/11, ms1mx4.3/22, Error ellipse: s-maj=54.8km s-min=30.6km az=153.0*
*NEIC **02** 01:58:45.5±0.7, 37.°67S×17.°12W, h10km, mb4.3/2, Error ellipse: s-maj=24.

BRTR Keskin Array B 89.64 37 P P 02 19 44.7 -0.7
0.1nm,0.4s,mb3.5,baz=266,slow=7.6,SNR=2.0
SONM Songino Array 137.96 57 PKP PKPdf 02 26 15.8 +3.7
0.2nm,0.3s,baz=246,slow=2.8,SNR=2.9

*IDC **02** 02:17:15.6±1.0, 37.°57S×17.°63W, h0km, mb4.0/11, mb1 4.2/11, mb1mx4.1/18, mbtmp4.0/11, MS4.4/16, Ms1 4.4/16, ms1mx4.3/21, Error ellipse: s-maj=40.0km s-min=16.8km az=163.0*
*ISCJB **02** 02:17:16.4±0.5, 37.°6S±0.°1×17.°7W±0.°1, h10km, mb4.8/22, MS4.5/15, Error ellipse: s-maj=19.7km s-min=11.1km az=150.1*
*NEIC **02** 02:17:17.5±0.6, 37.°60S×17.°64W, h10km, mb5.0/7, Error ellipse: s-maj=22.4km s-min=12.7km az=156.0*
*GCMT **02** 02:17:22.0±0.2, 37.°65S×17.°37W, h12km±1km, MW5.0, Moment Tensor Solution. s21,c22; s84,c135; Moment tensor: Scale 10^{16}Nm; M_{rr}=4.02±.24; $M_{\theta\theta}$0.41±.13; $M_{\phi\phi}$3.61±.16; $M_{r\theta}$2.13±.55; $M_{r\phi}$-1.33±.09; $M_{\theta\phi}$1.11±.39; Best double couple: M_0=4.60000×10^{16} NP1:ϕ_s318.00000°, δ48.00000°, λ-125.00000°. NP2:ϕ_s184.00000°, δ53.00000°, λ-58.00000°. Principal axes: T 4.1100, Plg3.0000°, Azm252.0000°; N 1.0400, Plg25.0000°, Azm343.0000°; P -5.1500, Plg65.0000°, Azm156.0000°; Data Used: II IU G CN IC.*
*SZGRF **02** 02:17:34.5, 35.°98S×10.°83W, h33km, mb4.9, Tristan da Cunha region*

ISC 02 02:17:18.2±0.5, 37.°5S±0.°1×17.°7W±0.°1, h10km, n58, σ1§15/33, mb4.8/22, MS4.5/15, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**31.80**	**92**	LR	LR	02 33 39.3	
	comp=Z,759nm,18.3s,MS4.4,baz=194,slow=31						
TRQA	**Tornquist**	**34.77**	**255**	*e*P	**P**	**02 24 08.3**	**-0.4**
	32nm,1.7s,mb5.0						
CPUP	**Villa Florida**	**35.23**	**277**	P	**P**	**02 24 13.7**	**+0.8**
	5.5nm,1.0s,mb4.4,baz=123,slow=6.8,SNR=8.5						
CPUP				LR	LR	02 37 46.4	
	comp=Z,656nm,18.4s,MS4.4,baz=111,slow=35						
CPUP	**Villa Florida**	**35.23**	**277**	*e*P	**P**	**02 24 13.9**	**+1.1**
	10nm,1.0s,mb4.7						
CPUP				LR	LR	02 37 46.4	
BOSA	**Boshof**	**36.79**	**89**	P	**P**	**02 24 23.9**	**-2.3**
	5.4nm,1.1s,mb4.3,baz=231,slow=14,SNR=3.1						
BOSA				LR	LR	02 36 11.1	
	comp=Z,948nm,19.1s,MS4.6,baz=229,slow=31						
LBTB	**Lobatse**	**38.71**	**84**	P	**P**	**02 24 42.5**	**+0.1**
	1.2nm,0.4s,mb4.0,baz=288,slow=3.2,SNR=2.7						
PLCA	**Paso Flores**	**40.64**	**249**	P	**P**	**02 24 58.3**	**0.0**
	2.8nm,1.0s,mb3.9,baz=114,slow=8.8,SNR=7.0						
PLCA				LR	LR	02 37 37.7	
	comp=Z,731nm,21.3s,MS4.5,baz=46,slow=30						
CFAA	**Coronel Fontan**	**41.66**	**263**	P	**P**	**02 25 06.0**	**-0.7**
	0.3nm,0.8s,baz=105,slow=9.9,SNR=9.8						
LIC	**Lamto**	**45.10**	**18**	*e*P	**P**	**02 25 32.0**	**-2.7**
	83nm,1.5s,mb5.3						
KIC	**Kosan Boka**	**45.30**	**18**	*e*P	**P**	**02 25 34.5**	**-1.8**
	86nm,1.3s,mb5.4						
TIC	**Toumodi**	**45.51**	**18**	*e*P	**P**	**02 25 34.3**	**-3.6**
	85nm,1.3s,mb5.5						
DBIC	**Dimbokro**	**45.57**	**18**	LR	LR	02 39 57.9	
	comp=Z,340nm,20.9s,MS4.3,baz=165,slow=30						
LPAZ	**La Paz**	**49.08**	**281**	P	**P**	**02 26 04.0**	**-1.8**
	4.4nm,1.1s,mb4.4,baz=103,slow=6.4,SNR=12						
LPAZ				LR	LR	02 46 57.6	
	comp=Z,396nm,20.5s,MS4.4,baz=140,slow=36						
LPAZ	**La Paz**	**49.08**	**281**	P	**P**	**02 26 04.0**	**-1.8**
LPAZ				LR	LR	02 46 57.6	
MAW	**Mawson**	**52.38**	**151**	LR	LR	02 43 43.8	
	comp=Z,280nm,21.9s,MS4.3,baz=281,slow=30						
QSPA	**South Pole Qui**	**52.72**	**180**	*e*P	**P**	**02 26 32.4**	**0.0**
	34nm,1.2s,mb5.2						
TOA0	**Torodi Ar. Sit**	**53.60**	**24**	*e*P	**P**	**02 26 39.2**	**-0.3**
TORD	**Torodi Ar. Bea**	**53.60**	**24**	P	**P**	**02 26 38.4**	**-1.2**
	2.4nm,0.9s,mb4.1,baz=200,slow=6.4,SNR=12						
TORD				LR	LR	02 44 57.3	
	comp=Z,616nm,20.0s,MS4.7,baz=190,slow=31						
KMBO	**Kilima Mbogo**	**62.05**	**68**	LR	LR	02 52 09.5	
	comp=Z,619nm,18.3s,MS4.8,baz=273,slow=34						
ROSC	**El Rosal**	**67.40**	**296**	LR	LR	02 54 29.3	
	comp=Z,553nm,20.8s,MS4.8,baz=204,slow=33						
MDT	**Midelt**	**71.04**	**12**	P	**P**	**02 28 36.1**	**-0.1**
	4.0nm,1.1s,mb4.3,baz=270,slow=6.0,SNR=3.6						
KEST	**Kesra**	**77.08**	**22**	LR	LR	03 00 25.4	
	comp=Z,261nm,18.3s,MS4.6,baz=169,slow=34						
ESDC	**Sonseca Array**	**77.86**	**11**	P	**P**	**02 29 15.1**	**-0.5**
	0.1nm,0.3s,baz=188,slow=6.9,SNR=6.2						
ESDC				LR	LR	03 01 52.1	
	comp=Z,103nm,18.9s,baz=165,slow=34						
MMAI	**Mount Meron Ar**	**85.85**	**42**	LR	LR	02 49 16.4	
	comp=Z,306nm,18.9s,MS4.7,baz=205,slow=35						
MMAI	**Mount Meron Ar**	**85.85**	**42**	LR	LR	03 05 53.4	
	comp=Z,215nm,18.5s,MS4.6,baz=145,slow=34						
DAVOX	**Davos/Dischmat**	**87.50**	**19**	LR	LR	03 02 20.2	
	comp=Z,72nm,21.1s,MS4.1,baz=1.4,slow=31						
RJOB	**Jochberg**	**89.14**	**20**	*e*P	**P**	**02 30 13.6**	**+0.2**
	comp=Z,13nm,1.9s,mb4.9						
STU	**Stuttgart**	**89.18**	**17**	*e*P	**P**	**02 30 15.1**	**+1.6**
	comp=Z,14nm,1.0s,mb5.2						
BRTR	**Keskin Array B**	**90.17**	**37**	P	**P**	**02 30 18.4**	**+0.1**
	comp=Z,0.9nm,1.0s,mb4.0,baz=198,slow=3.6,SNR=5.0						
BRTR				LR	LR	03 10 07.0	
	comp=Z,84nm,18.0s,MS4.2,baz=350,slow=35						
GEC2	**GERESS Array S**	**90.40**	**20**	*e*P	**P**	**02 30 20.0**	**+0.8**
	comp=Z,17nm,2.3s,mb5.0						
GEC2	**GERESS Array S**	**90.40**	**20**	*e*P	**P**	**02 30 20.0**	**+0.8**
	comp=Z,17nm,2.3s,mb5.0						
GERES	**GERESS Array B**	**90.40**	**20**	P	**P**	**02 30 19.2**	**0.0**
	comp=Z,0.1nm,0.3s,baz=212,slow=4.3,SNR=4.3						
GERES				LR	LR	03 07 18.9	
	comp=Z,218nm,21.4s,MS4.6,baz=280,slow=33						
WET	**Wettzell**	**90.45**	**19**	*e*P	**P**	**02 30 20.3**	**+0.8**
	comp=Z,11nm,1.4s,mb5.0						
WET	**Wettzell**	**90.45**	**19**	*e*P	**P**	**02 30 20.3**	**+0.8**
	comp=Z,11nm,1.4s,mb5.0						
GRA1	**Grafenberg Arr**	**90.53**	**18**	*e*P	**P**	**02 30 21.0**	**+1.2**
	comp=Z,41nm,1.5s,mb5.5						
GRF	**Grafenberg Arr**	**90.53**	**18**	*e*P	**P**	**02 30 21.0**	**+1.2**
	comp=Z,41nm,1.5s,mb5.5						
GRF	**Grafenberg Arr**	**90.53**	**18**	*e*P	**P**	**02 30 21.1**	**+1.3**
	comp=Z,41nm,1.5s,mb5.5						
KHC	**Kasperske Hory**	**90.63**	**20**	AMS	AMS	02 47 40.0	
	comp=Z,300nm,24.6s						
KHC	**Kasperske Hory**	**90.63**	**20**	AMS	AMS	03 06 10.0	
	comp=Z,300nm,21.9s						
ROTZ	**Rotzenmuhle**	**90.85**	**19**	*e*P	**P**	**02 30 22.7**	**+1.4**
	comp=Z,12nm,1.4s,mb5.0						
TREC	**Trest**	**91.31**	**21**	AMS	AMS	02 29 20.0	
	comp=Z,200nm,20.4s						
TREC	**Trest**	**91.31**	**21**	AMS	AMS	02 48 20.0	
	comp=Z,300nm,20.1s						
TREC	**Trest**	**91.31**	**21**	AMS	AMS	03 07 20.0	
	comp=Z,200nm,23.6s						
TANN	**Tannenbergstha**	**91.51**	**19**	*e*P	**P**	**02 30 25.9**	**+1.6**
	comp=Z,10.0nm,1.4s,mb5.0						
PRU	**Pruhonice**	**91.67**	**20**	AMS	AMS	02 48 30.0	
	comp=Z,300nm,24.0s						
PRU	**Pruhonice**	**91.67**	**20**	AMS	AMS	03 07 50.0	
	comp=Z,200nm,21.0s						
PVCC	**Panska Ves**	**92.17**	**20**	AMS	AMS	02 49 30.0	
	comp=Z,200nm,25.1s						
BRG	**Berggiesshubel**	**92.32**	**19**	*e*P	**P**	**02 30 28.9**	**+0.8**
	comp=Z,2.0nm,0.8s,mb4.5						
CLL	**Collm**	**92.47**	**19**	*e*P	**P**	**02 30 30.0**	**+1.2**
	comp=Z,7.0nm,1.2s,mb4.9						
CLL	**Collm**	**92.47**	**19**	*i* P	**P**	**02 30 30.2**	**+1.4**
	comp=Z,7.0nm,1.2s,mb4.9						
CLL				*i* (pP)	pP	02 30 35.8	+3.7
CLL				Lm		02 51 00.0	
	comp=N,100nm,19.2s						
CLL				Lm		02 51 00.0	
	comp=E,100nm,19.6s						
CLL				Lm		02 51 00.0	
	comp=Z,100nm,18.9s						
DPC	**Dobruska-Polom**	**92.50**	**21**	AMS	AMS	02 48 50.0	
	comp=Z,200nm,21.3s						
DPC	**Dobruska-Polom**	**92.50**	**21**	AMS	AMS	03 08 30.0	
	comp=Z,200nm,24.1s						
OKC	**Ostrava-Krasne**	**92.57**	**22**	AMS	AMS	02 30 50.0	
	comp=Z,100nm,20.1s						
OKC	**Ostrava-Krasne**	**92.57**	**22**	AMS	AMS	03 10 30.0	
	comp=Z,100nm,11.3s						

YKA Yellowknife Ar 125.59 325 PKP PKPdf 02 36 15.3 -3.4
comp=Z,0.5nm,0.8s,baz=84,slow=1.8,SNR=5.9
ZALV Zalesovo Beam 126.22 46 PKP PKPdf 02 36 18.8 -1.4
comp=Z,0.3nm,0.3s,baz=251,slow=4.4,SNR=2.7
ZALV Zalesovo Beam 126.22 46 PKP PKPdf 02 36 18.8 -1.4
SONM Songino Array 138.44 57 PKhKP 02 36 37.0
comp=Z,0.1nm,0.3s,baz=222,slow=1.9,SNR=2.1

*CSEM **02** 02:37:59.9, 36.°33N×28.°02E, h2km, MD2.9, After ISK*

ISK 02 02:37:59.9, 36.°33N×28.°02E, h2km, MD2.9, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.53**	**318**	*e*Pg	Pg	02 38 11.3	+1.2
DAT				*e*SG	Sg	02 38 19.4	+2.4
DAT	**Datca**	**0.53**	**318**	*e*Pg	Pg	02 38 11.3	+1.2
DAT				*e*Sg	Sg	02 38 19.5	+2.5
TURN	**Turunc**	**0.71**	**41**	*i* P	Pg	02 38 14.9	+1.3
YER	**Yerkesik**	**0.83**	**15**	*e*PG	Pg	02 38 16.9	+1.1
YER	**Yerkesik**	**0.83**	**15**	*e*Pg	Pg	02 38 16.9	+1.1
BDRM	**Kayabasi**	**0.87**	**328**	*i* P	Pg	02 38 17.4	+0.9
FETY	**Fethiye**	**0.91**	**70**	*e*PG	Pg	02 38 18.2	+0.9
FETY	**Fethiye**	**0.91**	**70**	*e*Pg	Pg	02 38 18.2	+0.9
GLHS	**Glhisar (BURDU**	**1.44**	**55**	*e*PN	Pn	02 38 28.0	+1.0
GLHS	**Glhisar (BURDU**	**1.44**	**55**	*e*Pn	Pn	02 38 28.0	+1.0

IDC 02 03:03:01.5±3.0, 58.°92S×26.°50W, h0km, mb4.1/2, mb1 4.2/2, mb1mx3.6/13, mbtmp4.1/2, Error ellipse: s-maj=90.1km s-min=72.4km az=6.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**46.40**	**72**	P	P	03 11 29.7	+0.2
	4.2nm,0.5s,baz=205,slow=8.0,SNR=8.0						
TORD	**Torodi Ar. Bea**	**75.39**	**28**	P	P	03 14 46.8	0.0
	0.3nm,0.5s,baz=194,slow=6.3,SNR=9.9						
YKA	**Yellowknife Ar**	**138.52**	**316**	PKP	PKPdf	03 22 27.7	+0.3
	0.2nm,0.6s,baz=119,slow=3.0,SNR=4.0						
SONM	**Songino Array**	**150.42**	**91**	PKPbc	PKPbc	03 22 53.4	-0.4
	0.2nm,0.3s,baz=183,slow=2.9,SNR=3.2						

IDC 02 03:04:52.8±1.9, 16.°22S×172.°17W, h0km, mb3.8/2, mb1 4.1/3, mb1mx3.7/18, mbtmp3.8/3, Error ellipse: s-maj=76.3km s-min=28.0km az=135.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.33**	**9**	Pn	Pn	03 05 32.7	+0.3
	14nm,0.3s,baz=40,slow=22,SNR=12						
AFI				Sn	Sn	03 05 54.2	-7.4
	43nm,0.3s,baz=58,slow=17,SNR=12						
ASAR	**Alice Springs**	**50.99**	**253**	P	P	03 13 57.0	+0.3
	1.6nm,0.6s,baz=87,slow=8.0,SNR=17						
NVAR	**Mina Array Bea**	**74.15**	**41**	P	P	03 16 31.8	+0.6
	0.3nm,0.6s,baz=211,slow=6.9,SNR=2.7						
BRTR	**Keskin Array B**	**147.54**	**321**	PKPbc	PKPbc	03 24 37.7	-1.5
	0.4nm,0.7s,baz=62,slow=3.4,SNR=3.2						

*MOS **02** 03:08:48.9±0.9, 53.°23N×108.°54E, h9km, mb4.3/1, Error ellipse: s-maj=23.2km s-min=13.4km az=47.8*

BYKL 02 03:08:51.1±0.2, 53.°30N×108.°49E, h10km±4km, 12C-12D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXMB	**Maximikha**	**0.16**	**104**	⇓*i*Pg	Pg	03 08 54.0	-0.6
MXMB				*e*Sg	Sg	03 08 56.1	-0.8
MXMB				Pmax			
	1μm,0.2s						
MXMB				Smax			
	29μm,0.7s						
KELR	**Kotokel**	**0.59**	**205**	⇑*i*Pg	Pg	03 09 01.9	-0.7
KELR				*e*Pb	Pb	03 09 03.8	+0.2
KELR				*i* Sg	Sg	03 09 10.1	-0.3
KELR				max			
	375nm,0.1s						
KELR				Smax			
	4μm,0.4s						
OGRR	**Ongureny**	**0.64**	**303**	*e*PG	Pg	03 09 03.0	-0.4
OGRR				*e*		03 09 12.2	
OGRR				pmax	pmax		
	comp=Z,124nm,0.3s						
OGRR				smax			
	comp=N,2μm,0.3s						
OGRR	**Ongureny**	**0.64**	**303**	⇑*i*Pg	Pg	03 09 03.3	-0.1
	comp=N,137nm,0.5s						
OGRR				⇓*i*Pg	Pg	03 09 03.3	-0.1
	comp=N,143nm,0.5s						
OGRR				⇑*i*Pg	Pg	03 09 03.3	-0.1
	comp=N,201nm,0.5s						
OGRR				*e*Pb	Pb	03 09 04.0	-0.3
OGRR				*e*Sg	Sg	03 09 12.1	+0.4
OGRR				max			
	comp=N,81nm,0.1s						
OGRR				Smax			
	comp=N,1μm,0.2s						
SYVR	**Suvo**	**0.97**	**68**	*e*PG	Pg	03 09 08.3	-1.4
SYVR				*e*		03 09 21.5	
SYVR				pmax	pmax		
	comp=Z,120nm,0.1s						
SYVR				smax			
	comp=N,612nm,0.3s						
SYVR	**Suvo**	**0.97**	**68**	⇓*i*Pg	Pg	03 09 08.3	-1.4
SYVR				*i* Sg	Sg	03 09 21.2	-1.2
SYVR				*e*Sb	Sb	03 09 24.2	+1.4
SYVR				Pmax			
	comp=N,65nm,0.1s						
SYVR				max			
	comp=N,598nm,0.3s						
ZRHB	**Zarechye**	**1.10**	**228**	⇓*i*Pg	Pg	03 09 11.4	-0.8
ZRHB				*e*Pb	Pb	03 09 12.5	+0.3
ZRHB				*e*Sg	Sg	03 09 26.6	+0.1
ZRHB				*e*Sb	Sb	03 09 29.3	+2.7
ZRHB				max			
	comp=N,534nm,0.6s						
ZRHB				max			
	comp=N,1μm,0.5s						
TRTB	**Turuntaevo**	**1.19**	**206**	⇓*i*Pn	Pn	03 09 12.4	-1.4
TRTB				*e*Pg	Pg	03 09 13.2	-0.8
TRTB				*i* Sg	Sg	03 09 28.6	-0.8
TRTB				*i* Sb	Sb	03 09 31.4	+2.2
TRTB				Pmax			
	comp=N,434nm,0.3s						
TRTB				max			
	comp=N,1μm,0.5s						
TRG	**Tyrgan**	**1.40**	**248**	*e*PG	Pg	03 09 16.2	-1.8
TRG				*e*		03 09 35.0	
TRG				pmax	pmax		
	comp=Z,309nm,0.3s						
TRG				smax			
	comp=N,805nm,0.2s						
TRG	**Tyrgan**	**1.40**	**248**	⇑*i*Pg	Pg	03 09 16.4	-1.6
TRG				⇓*i*Pb	Pb	03 09 17.2	-0.1
TRG				*e*Sg	Sg	03 09 35.5	-0.7
TRG				*e*Sb	Sb	03 09 37.2	+2.0
TRG				max			
	comp=N,309nm,0.4s						
TRG				max			
	comp=N,788nm,0.3s						
UUDB	**Ulan-Yde**	**1.52**	**200**	⇑*i*Pg	Pg	03 09 18.3	-2.0
	comp=N,49nm,0.4s						
UUDB				⇑*i*Pg	Pg	03 09 18.3	-2.0
	comp=N,21nm,0.4s						
UUDB				⇓*i*Pg	Pg	03 09 18.3	-2.0
	comp=N,66nm,0.4s						
UUDB				*e*Sg	Sg	03 09 38.7	-1.3
UUDB				Pmax			
	comp=N,124nm,0.2s						
UUDB				Smax			
	comp=N,917nm,0.5s						
FFNB	**Fofonovo**	**1.64**	**221**	*e*Pn	Pn	03 09 20.0	+0.1
FFNB				⇑*i*Pg	Pg	03 09 21.1	-1.4
FFNB				*e*Sg	Sg	03 09 43.2	-0.5
FFNB				*e*Sb	Sb	03 09 44.2	+2.2
FFNB				Pmax			
	comp=N,700nm,0.1s						
FFNB				max			
	comp=N,2μm,0.3s						

HRMR Khuramsha 1.92 210 *e*Pn Pn 03 09 24.2 +0.4
HRMR ⇑*i*Pg Pg 03 09 25.6 -2.3
HRMR *i* Sg Sg 03 09 51.3 -1.4
HRMR Pmax
comp=N,275nm,0.3s
HRMR Smax
comp=N,3μm,0.3s
YLYR Ulyunkhan 2.23 44 *e*PN Pn 03 09 28.5 +0.5
YLYR *e* 03 09 30.4
YLYR *e* 03 10 00.2
YLYR pmax pmax
comp=Z,34nm,0.3s
YLYR smax
comp=N,194nm,0.4s
YLYR Ulyunkhan 2.23 44 ⇑*i*Pn Pn 03 09 28.3 +0.3
YLYR ⇑*i*Pg Pg 03 09 30.4 -3.4
YLYR *i* Sg Sg 03 10 00.8 -1.9
YLYR Pmax
comp=N,33nm,0.6s
YLYR Smax
comp=N,192nm,0.6s
NIZ Nizh Angarsk 2.56 13 ⇓*i*Pg Pg 03 09 36.4 -3.6
NIZ *e* 03 09 45.1
NIZ *i* Sg Sg 03 10 09.9 -3.2
NIZ *e* 03 10 12.8
NIZ Pmax
comp=N,18nm,0.4s
NIZ max
comp=N,90nm,0.6s
LSTR Listvyanka 2.65 239 ⇓*i*Pn Pn 03 09 33.9 0.0
LSTR *e*Pg Pg 03 09 38.0 -3.9
LSTR *e*Sn Sn 03 10 06.6 +0.6
LSTR *e*Sg Sg 03 10 12.0 -4.2
LSTR Pmax
comp=N,38nm,0.6s
LSTR Smax
comp=N,207nm,1.5s
IRK Irkutsk 2.77 249 *e*PN Pn 03 09 40.4 +4.9
IRK *e* 03 10 14.1
IRK pmax pmax
comp=Z,113nm,0.2s
IRK smax
comp=N,537nm,0.3s
IRK Irkutsk 2.77 249 *e*Sg Sg 03 10 16.1 -4.0
IRK Smax
comp=N,545nm,0.3s
KMO Kumora 3.03 30 *e*PN Pn 03 09 39.9 +0.8
KMO *e* 03 09 45.1
KMO *e*S Sn 03 10 14.4 -1.0
KMO Kumora 3.03 30 *e* Pn 03 09 42.6 +3.5
KMO ⇓*i*Pg Pg 03 09 45.3 -3.9
KMO ⇓*i*Pg Pg 03 09 47.2 -2.0
KMO *i* Sg Sg 03 10 25.6 -2.9
KMO max
comp=N,55nm,0.3s
KMO Smax
comp=N,154nm,1.1s
TLY Talaya 3.38 243 *e*PN Pn 03 09 42.4 -1.4
TLY *e* 03 09 49.9
TLY *e* 03 10 34.1
TLY pmax pmax
comp=Z,16nm,0.4s
TLY smax
comp=E,103nm,0.5s
TLY Talaya 3.38 243 *e*Pn Pn 03 09 44.1 +0.3
TLY *e*Pg Pg 03 09 51.4 -4.4
TLY *e*Sg Sg 03 10 35.2 -4.3
TLY Pmax
comp=E,14nm,0.9s
TLY Smax
comp=E,102nm,0.5s
YOA Uoyan 3.40 32 *e*Sg Sg 03 10 38.8 -1.5
YOA Smax
comp=E,330nm,1.1s
UKT Uakit 3.72 52 *e*PN Pn 03 09 49.6 +1.1
UKT *e* 03 09 57.2
UKT *e* 03 10 43.7
UKT pmax pmax
comp=Z,21nm,0.7s
UKT smax
comp=N,83nm,0.6s
UKT Uakit 3.72 52 ⇑*i*Pn Pn 03 09 49.8 +1.3
UKT *e*Pg Pg 03 09 58.2 -4.1
UKT *i* Sg Sg 03 10 46.2 -4.2
UKT *e*SgSg 03 10 52.1
UKT Pmax
comp=N,22nm,1.1s
UKT max
comp=N,105nm,1.3s
ARS Arshan 3.95 252 *e*PN Pn 03 09 52.6 +1.0
ARS *e* 03 10 01.8
ARS *e* 03 10 50.7
ARS pmax pmax
comp=Z,36nm,0.2s
ARS smax
comp=E,633nm,0.7s
ARS Arshan 3.95 252 *e*Pn Pn 03 09 51.9 +0.3
ARS *e*Pg Pg 03 10 01.0 -5.7
ARS *e* 03 10 45.2
ARS *i* Sg Sg 03 10 51.9 -5.9
ARS Pmax
comp=E,59nm,0.7s
ARS Smax
comp=E,633nm,0.8s
SVKR Severomuysk 4.08 44 *e* Pn 03 09 59.8 +6.4
SVKR *e*Sg Sg 03 10 59.4 -2.4
SVKR Smax
comp=E,256nm,0.8s
ZAK Zakamensk 4.36 230 *e*Pg Pg 03 10 08.5 -6.0
ZAK *e*Sg Sg 03 11 06.2 -4.6
ZAK Pmax
comp=E,9.0nm,0.5s
ZAK Smax
comp=E,59nm,1.5s
MOY Mondy 4.87 253 *e*PN Pg 03 10 18.5 -5.7
MOY *e* 03 11 18.4
MOY pmax pmax
comp=Z,8.0nm,0.4s
MOY smax
comp=E,98nm,1.1s
MOY Mondy 4.87 253 ⇑*i*Pn Pn 03 10 06.6 +2.4
MOY *e* 03 10 14.4
MOY *e* 03 11 05.1
MOY *e*Sg Sg 03 11 20.1 -7.1
MOY Smax
comp=E,112nm,1.5s
NLYR Nelyaty 5.25 50 *e*PN Pg 03 10 25.9 -5.6
NLYR *e* 03 11 32.9
NLYR pmax pmax
comp=Z,13nm,0.8s
NLYR smax
comp=N,118nm,1.2s
NLYR Nelyaty 5.25 50 *e*Pg Pg 03 10 25.3 -6.2
NLYR *e* 03 11 07.0
NLYR *e*Sg Sg 03 11 34.4 -5.0
NLYR Pmax
comp=N,9.0nm,1.4s
NLYR Smax
comp=N,119nm,1.3s
ORL Orlik 5.31 265 *e*PN Pn 03 10 12.3 +2.0
ORL *e* 03 10 27.9
ORL *e* 03 11 36.3
ORL pmax pmax
comp=Z,9.0nm,0.5s
ORL smax
comp=N,108nm,0.9s
ORL Orlik 5.31 265 ⇓*i*Pn Pn 03 10 12.7 +2.4
ORL *e* 03 10 18.3
ORL *e*Sn Sn 03 11 11.5 +0.1
ORL *e*Sg Sg 03 11 34.9 -6.5
ORL max
comp=N,9.0nm,0.8s
ORL Smax
comp=N,108nm,0.8s
TUP Tupik 6.88 76 *e*PG Pg 03 10 54.3 -8.3
TUP *e* 03 12 22.5
TUP pmax pmax
comp=Z,4.0nm,0.5s
TUP smax
comp=N,171nm,1.2s
TUP Tupik 6.88 76 *e*Pn Pn 03 10 31.4 -0.4
TUP *e*Pg Pg 03 10 54.3 -8.3
TUP *e* 03 12 04.3
TUP *e*Sg Sg 03 12 22.6 -9.0

TUP Pmax
comp=N,2.0nm,0.6s
TUP Smax
comp=N,174nm,1.4s

*CSEM **02** 03:17:42.2±0.3, 28°.24N×34°.46E, h5km, ML2.9, Error ellipse: s-maj=7.7km s-min=4.2km az=84.0*
*GII **02** 03:17:43.2±2.5, 28°.29N×34°.43E, h1km±158km, Md3.2/3*
*ISCJB **02** 03:17:43.5±1.5, 28°.19N±0°.04×34°.58E±0°.07, h11km±8km, Error ellipse: s-maj=11.0km s-min=5.9km az=162.9*
*SGS **02** 03:17:45.5, 28°.30N×34°.59E, h17km*
ISC 02 03:17:43.6±1.5, 28°.19N±0°.04×34°.59E±0°.08, h7km±7km, n23, σ0°98/29, Egypt

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDAS	**Al Bad'**	**0.51**	**62**	S	**Sg**	**03 18 01.9**	**+1.7**
BDAS	**Al Bad'**	**0.51**	**62**	P	**Pg**	**03 17 54.3**	**+0.7**
BDAS	**Al Bad'**	**0.51**	**62**	P	**Pg**	**03 17 54.3**	**+0.7**
BDAS				S	**Sg**	**03 18 02.0**	**+1.7**
HAQS	**Haql**	**0.91**	**19**	P	**Pg**	**03 18 00.2**	**-0.8**
HAQS	**Haql**	**0.91**	**19**	P	**Pg**	**03 18 00.2**	**-0.8**
HAQS				S	**Sg**	**03 18 11.1**	**-1.7**
JLOS		**0.96**	**56**	P	**Pb**	**03 18 01.7**	**-1.0**
JLOS		**0.96**	**56**	P	**Pb**	**03 18 01.7**	**-1.0**
JLOS				S	**Sb**	**03 18 13.8**	**-1.8**
EIL	**Elat**	**1.51**	**12**	Pn	**Pn**	**03 18 10.8**	**-0.2**
EIL				Sn	**Sn**	**03 18 31.0**	**+0.1**
DBAS	**Duba**	**1.57**	**128**	S	**Sn**	**03 18 31.3**	**-1.1**
DBAS	**Duba**	**1.57**	**128**	P	**Pn**	**03 18 11.7**	**-0.2**
DBAS	**Duba**	**1.57**	**128**	P	**Pn**	**03 18 11.7**	**-0.2**
MBRI	**Mt Berech**	**1.62**	**10**	Pn	**Pn**	**03 18 12.0**	**-0.6**
TBKS	**Tabuk**	**1.73**	**89**	P	**Pn**	**03 18 14.9**	**+0.9**
TBKS	**Tabuk**	**1.73**	**89**	P	**Pn**	**03 18 14.9**	**+0.9**
HRFI	**Mount Harif**	**1.88**	**12**	Pn	**Pn**	**03 18 16.7**	**+0.5**
HRFI				Sn	**Sn**	**03 18 41.8**	**+1.7**
KRMI	**Paran Flat**	**1.92**	**4**	Pn	**Pn**	**03 18 15.7**	**-1.0**
WJHS		**2.17**	**132**	P	**Pn**	**03 18 20.4**	**+0.3**
WJHS		**2.17**	**132**	P	**Pn**	**03 18 20.4**	**+0.3**
PRNI	**Paran**	**2.18**	**10**	Pn	**Pn**	**03 18 20.8**	**+0.5**
PRNI				Sn	**Sn**	**03 18 48.9**	**+1.3**
RMNI	**Mount Ramon**	**2.40**	**4**	Pn	**Pn**	**03 18 23.6**	**+0.3**
BIDS	**Bi'r al Bayda'**	**2.49**	**122**	P	**Pn**	**03 18 25.3**	**+0.8**
BIDS	**Bi'r al Bayda'**	**2.49**	**122**	P	**Pn**	**03 18 25.3**	**+0.8**
KZIT	**Kziot**	**2.71**	**357**	Pn	**Pn**	**03 18 27.3**	**-0.3**

*ISCJB **02** 03:29:56.0±1.1, 48°.38N±0°.03×27°.60E±0°.05, h5km±8km, Error ellipse: s-maj=6.4km s-min=4.6km az=149.1*
*NEIC **02** 03:29:57.9, 48°.46N×27°.81E, h30km, ML3.2(BUC), After BUC.*
*CSEM **02** 03:29:58.1±0.3, 48°.45N×27°.76E, h30km, ML3.2, Error ellipse: s-maj=8.0km s-min=6.0km az=71.0*
*IDC **02** 03:30:01.1±4.1, 48°.38N×27°.70E, h0km, mb1 3.5/2, mb1mx3.1/23, mbtmp3.4/2, ML3.0/3, Error ellipse: s-maj=40.9km s-min=24.5km az=158.0*
ISC 02 03:29:57.1±1.3, 48°.38N±0°.03×27°.58E±0°.06, h5km±10km, n59, σ1°31/89, 3C-9D, Ukraine - Moldova - Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIS	**Kishinev**	**1.62**	**148**	⇓*i*P	**Pn**	**03 30 24.0**	**-2.3**
	200nm,0.5s						
KIS				*i* S	**Sn**	**03 30 40.0**	**-7.5**
	600nm,1.0s						
KIS	**Kishinev**	**1.62**	**148**	P	**Pn**	**03 30 24.1**	**-2.2**
KIS				S	**Sn**	**03 30 44.1**	**-3.4**
KIS	**Kishinev**	**1.62**	**148**	⇑*i*P	**Pn**	**03 30 24.1**	**-2.2**
KIS	**Kishinev**	**1.62**	**148**	S	**Sn**	**03 30 44.2**	**-3.3**
KIS	**Kishinev**	**1.62**	**148**	P	**Pn**	**03 30 24.1**	**-2.2**
KIS				S	**Sn**	**03 30 44.2**	**-3.3**
BUR08	**Bucovina Ar. S**	**1.76**	**246**	*e*Pn	**Pn**	**03 30 28.6**	**+0.3**
BUR08				*e*S	**Sn**	**03 30 47.9**	**-3.2**
BUR08	**Bucovina Ar. S**	**1.76**	**246**	*e*Pn	**Pn**	**03 30 28.5**	**+0.2**
BURAR	**Bucovina Array**	**1.77**	**245**	P	**Pn**	**03 30 28.6**	**+0.3**
BURAR				S	**Sn**	**03 30 51.9**	**+0.8**
BURAR	**Bucovina Array**	**1.77**	**245**	⇓*i*P	**Pn**	**03 30 28.6**	**+0.3**
BURAR	**Bucovina Array**	**1.77**	**245**	S	**Sn**	**03 30 51.9**	**+0.8**
BURAR	**Bucovina Array**	**1.77**	**245**	P	**Pn**	**03 30 28.6**	**+0.3**
BURAR				S	**Sn**	**03 30 51.9**	**+0.8**
LEOM	**Leova**	**1.96**	**166**	⇓*i*P	**Pn**	**03 30 29.4**	**-1.7**
LEOM	**Leova**	**1.96**	**166**	S	**Sn**	**03 30 51.6**	**-4.4**
LEOM	**Leova**	**1.96**	**166**	⇓*i*P	**Pn**	**03 30 29.4**	**-1.7**
LEOM				S	**Sn**	**03 30 51.6**	**-4.4**
AKASG	**Malin Array Be**	**2.56**	**24**	Pn	**Pn**	**03 30 43.9**	**+4.7**
	0.5nm,0.3s,baz=203,slow=16,SNR=4.2						
AKASG				Pg	**Pg**	**03 30 46.6**	**+0.6**
	4.5nm,0.3s,baz=205,slow=17,SNR=12						
AKASG				Sn	**Sn**	**03 31 11.5**	**+0.9**
	5.2nm,0.3s,baz=97,slow=19,SNR=9.8						
AKASG				Lg		03 31 20.8	
	37nm,0.3s,baz=202,slow=30,SNR=22						
AKASG	**Malin Array Be**	**2.56**	**24**	Pg	**Pg**	**03 30 46.6**	**+0.5**
AKBB	**Malin Array Si**	**2.56**	**24**	*e*Pn	**Pn**	**03 30 43.6**	**+4.5**
AKBB				*e*Sg	**Sg**	**03 31 22.4**	**+3.2**
VRI	**Vrincioaia**	**2.58**	**193**	P	**Pn**	**03 30 39.2**	**-0.4**
VRI				S	**Sn**	**03 31 11.7**	**+0.3**
VRI	**Vrincioaia**	**2.58**	**193**	⇑*i*P	**Pn**	**03 30 39.2**	**-0.4**
VRI	**Vrincioaia**	**2.58**	**193**	S	**Sn**	**03 31 11.7**	**+0.3**
VRI	**Vrincioaia**	**2.58**	**193**	P	**Pn**	**03 30 39.2**	**-0.4**
VRI				S	**Sn**	**03 31 11.7**	**+0.3**
PLOR	**Plostina**	**2.61**	**194**	⇓*i*P	**Pn**	**03 30 40.1**	**+0.1**
PLOR	**Plostina**	**2.61**	**194**	S	**Sn**	**03 31 12.2**	**+0.2**
PLOR	**Plostina**	**2.61**	**194**	⇓*i*P	**Pn**	**03 30 40.1**	**+0.1**
PLOR				S	**Sn**	**03 31 12.2**	**+0.2**
ODB	**Odobesti**	**2.63**	**188**	S	**Sn**	**03 31 13.7**	**+1.1**
ODB	**Odobesti**	**2.63**	**188**	S	**Sn**	**03 31 13.7**	**+1.1**
BMR	**Baia Mare**	**2.83**	**257**	S	**Sn**	**03 31 18.6**	**+1.1**
BMR	**Baia Mare**	**2.83**	**257**	S	**Sn**	**03 31 18.6**	**+1.1**
MLR	**Muntele Rosu**	**3.10**	**202**	P	**Pn**	**03 30 46.8**	**+0.1**
MLR				S	**Sn**	**03 31 24.7**	**+0.6**
MLR	**Muntele Rosu**	**3.10**	**202**	⇓*i*P	**Pn**	**03 30 46.8**	**+0.1**
MLR	**Muntele Rosu**	**3.10**	**202**	S	**Sn**	**03 31 24.7**	**+0.5**
MLR	**Muntele Rosu**	**3.10**	**202**	P	**Pn**	**03 30 46.8**	**+0.1**
MLR				S	**Sn**	**03 31 24.7**	**+0.5**
CFR	**Carcaliu**	**3.23**	**173**	P	**Pn**	**03 30 46.7**	**-1.8**
CFR	**Carcaliu**	**3.23**	**173**	⇓*i*P	**Pn**	**03 30 46.7**	**-1.8**
CFR	**Carcaliu**	**3.23**	**173**	S	**Sn**	**03 31 28.7**	**+1.4**
CFR	**Carcaliu**	**3.23**	**173**	P	**Pn**	**03 30 46.7**	**-1.8**
CFR				S	**Sn**	**03 31 28.7**	**+1.4**
TLCR		**3.31**	**165**	P	**Pn**	**03 30 48.8**	**-0.8**
TLCR		**3.31**	**165**	⇓*i*P	**Pn**	**03 30 48.8**	**-0.8**
TLCR		**3.31**	**165**	S	**Sn**	**03 31 30.3**	**+1.1**
TLCR		**3.31**	**165**	P	**Pn**	**03 30 48.8**	**-0.8**
TLCR				S	**Sn**	**03 31 30.3**	**+1.1**
KOLS	**Kolonicke sedl**	**3.56**	**281**	*e*Pn	**Pn**	**03 30 53.9**	**+0.9**
KOLS				*e*Sn	**Sn**	**03 31 36.1**	**+0.6**
KOLS	**Kolonicke sedl**	**3.56**	**281**	*e*PN	**Pn**	**03 30 53.9**	**+0.9**
KOLS				*e*SN	**Sn**	**03 31 36.1**	**+0.6**
KOLS	**Kolonicke sedl**	**3.56**	**281**	*e*Pn	**Pn**	**03 30 53.9**	**+0.9**
KOLS				*e*Sn	**Sn**	**03 31 36.1**	**+0.6**
DRGR		**3.66**	**246**	P	**Pn**	**03 30 55.9**	**+1.5**
DRGR				S	**Sn**	**03 31 39.2**	**+1.3**
DRGR		**3.66**	**246**	⇑*i*P	**Pn**	**03 30 55.9**	**+1.5**
DRGR		**3.66**	**246**	S	**Sn**	**03 31 39.2**	**+1.3**
DRGR		**3.66**	**246**	P	**Pn**	**03 30 55.9**	**+1.5**
DRGR				S	**Sn**	**03 31 39.2**	**+1.3**
STHS	**Stebnicka Huta**	**4.31**	**286**	*e*Pn	**Pn**	**03 31 05.0**	**+1.7**
STHS				*e*Sn	**Sn**	**03 31 53.3**	**-0.5**
STHS	**Stebnicka Huta**	**4.31**	**286**	*e*PN	**Pn**	**03 31 05.0**	**+1.7**
STHS				*e*SN	**Sn**	**03 31 53.3**	**-0.5**
STHS	**Stebnicka Huta**	**4.31**	**286**	*e*Pn	**Pn**	**03 31 05.0**	**+1.7**
STHS				*e*Sn	**Sn**	**03 31 53.3**	**-0.5**
KECS	**Kecovo**	**4.73**	**274**	*e*Pn	**Pn**	**03 31 08.8**	**-0.2**
KECS				*e*Sn	**Sn**	**03 32 01.7**	**-2.4**
KECS	**Kecovo**	**4.73**	**274**	*e*PN	**Pn**	**03 31 08.8**	**-0.2**
KECS				*e*SN	**Sn**	**03 32 01.7**	**-2.4**
VYHS	**Vyhne**	**5.82**	**274**	*e*Pn	**Pn**	**03 31 22.1**	**-2.0**
VYHS				*e*Sn	**Sn**	**03 32 28.6**	**-2.6**
VYHS	**Vyhne**	**5.82**	**274**	*e*PN	**Pn**	**03 31 22.1**	**-2.0**
VYHS				*e*SN	**Sn**	**03 32 28.6**	**-2.6**
VYHS	**Vyhne**	**5.82**	**274**	*e*Pn	**Pn**	**03 31 22.1**	**-2.0**
VYHS				*e*Sn	**Sn**	**03 32 28.6**	**-2.6**
FINES	**FINESS Array B**	**13.12**	**357**	Pn	**Pn**	**03 33 01.9**	**-1.9**
	0.1nm,0.3s,baz=165,slow=11,SNR=5.0						
FINES	**FINESS Array B**	**13.12**	**357**	Pn	**Pn**	**03 33 02.0**	**-1.9**
NOA	**NORSAR Array B**	**15.75**	**330**	Pn	**Pn**	**03 33 35.4**	**-4.0**
	0.1nm,0.3s,baz=153,slow=12,SNR=2.3						
NOA	**NORSAR Array B**	**15.75**	**330**	Pn	**Pn**	**03 33 35.4**	**-4.0**

*JMA **02** 03:37:47.5, 37°.37N×139°.00E, h2km±1km, M3.0*
*ISCJB **02** 03:37:47.2±0.6, 37°.37N±0°.03×139°.00E±0°.05, h13km±5km, Error ellipse: s-maj=7.0km s-min=5.6km az=177.3*
ISC 02 03:37:47.1±0.7, 37°.36N±0°.03×139°.00E±0°.05, h17km±6km, n7, σ0°51/13, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHK	**Hiroka**	**0.12**	**172**	P	**Pg**	**03 37 50.2**	**-0.6**
JHK				S	**Sg**	**03 37 52.5**	**-0.7**
JIZZ	**Izumozaki**	**0.28**	**307**	P	**Pg**	**03 37 53.6**	**+0.3**
JIZZ				*e*S	**Sg**	**03 37 58.4**	**+0.9**
JNS	**Sasagawa**	**0.52**	**29**	P	**Pg**	**03 37 57.3**	**-0.2**
JNS				*e*S	**Sg**	**03 38 04.4**	**-0.2**
JFY	**Yanaizu**	**0.57**	**85**	P	**Pg**	**03 37 58.6**	**+0.3**
JFY				S	**Sg**	**03 38 06.4**	**+0.5**
JKT	**Katashina**	**0.63**	**161**	P	**Pg**	**03 37 59.6**	**+0.1**
JKT				*e*S	**Sg**	**03 38 08.2**	**+0.4**
JSD	**Sado**	**0.89**	**319**	P	**Pb**	**03 38 03.1**	**-1.0**
MAT	**Matsushiro**	**1.03**	**218**	P	**Pb**	**03 38 06.3**	**-0.2**
MAT				S	**Sb**	**03 38 20.1**	**+0.4**

*IDC **02** 03:38:16.4±1.0, 7°.91S×118°.19E, h0km, mb4.0/8, mb1 4.0/10, mb1mx3.9/22, mbtmp4.0/10, ML3.7/2, MS3.3/4, Ms1 3.4/4, ms1mx2.8/29, Error ellipse: s-maj=42.5km s-min=16.9km az=60.0*
*DJA **02** 03:38:17, 7°.99S×118°.33E, h250km, MLv4.6/8*
*ISCJB **02** 03:38:17.3±2.1, 7°.72S±0°.05×118°.44E±0°.04, h10km±15km, mb4.0/8, MS3.3/3, Error ellipse: s-maj=9.7km s-min=6.7km az=154.1*
*NEIC **02** 03:38:22.0±0.7, 7°.78S×118°.37E, h35km, mb3.7/2, Error ellipse: s-maj=27.9km s-min=10.9km az=59.0*
ISC 02 03:38:17.7±1.7, 7°.73S±0°.05×118°.44E±0°.04, h1km±12km, n35, σ1°04/38, mb4.0/8, MS3.3/3, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**2.66**	**136**	P	**Pg**	**03 39 16.4**	**+7.5**
KHKI	**Kahang-Kahang**	**2.87**	**257**	P	**Pn**	**03 39 03.6**	**-1.1**
KHKI				S	**Sn**	**03 39 45.5**	**+5.6**
BKSI	**Bulukumba**	**2.92**	**35**	P	**Pn**	**03 39 03.6**	**-1.7**
KAPI	**Kappang**	**3.00**	**26**	Pn	**Pn**	**03 39 06.8**	**+0.4**
	14nm,0.3s,baz=197,slow=4.3,SNR=19						
KAPI				Sn	**Sn**	**03 39 42.4**	**-0.6**
	27nm,0.3s,baz=150,slow=14,SNR=8.4						
KAPI	**Kappang**	**3.00**	**26**	Pn	**Pn**	**03 39 06.8**	**+0.4**
KAPI				Sn	**Sn**	**03 39 42.4**	**-0.7**
KAPI	**Kappang**	**3.00**	**26**	P	**Pn**	**03 39 06.9**	**+0.5**
SRBI	**Singaraja**	**3.21**	**263**	P	**Pn**	**03 39 08.6**	**-0.8**
DNP	**Denpasar**	**3.33**	**253**	P	**Pn**	**03 39 11.7**	**+0.7**
IGBI	**Denpasar**	**3.43**	**251**	P	**Pn**	**03 39 12.0**	**-0.4**
NBBI	**Negara**	**3.83**	**260**	P	**Pn**	**03 39 18.0**	**+0.1**
MMRI	**Maumere**	**3.87**	**104**	P	**Pn**	**03 39 20.2**	**+1.8**
SPSI	**Sidrap Palu**	**3.97**	**20**	P	**Pn**	**03 39 22.5**	**+2.7**
ABJI	**Asem Bagus**	**4.17**	**269**	P	**Pn**	**03 39 22.9**	**+0.4**
KMMI	**Kalianget**	**4.49**	**278**	P	**Pn**	**03 39 27.7**	**+0.8**
KBKI	**Kotabaru**	**4.95**	**333**	P	**Pg**	**03 39 51.9**	**-0.7**
GMJI	**Gumukmas**	**4.97**	**263**	P	**Pn**	**03 39 34.1**	**+0.5**
KDI	**Kendari**	**5.60**	**48**	P	**Pn**	**03 39 41.9**	**-0.3**
	0.1nm10nm,1.7s						
PWJI	**Pagerwojo**	**6.58**	**267**	P	**Pn**	**03 39 56.9**	**+1.2**
LUWI	**Luwuk**	**7.92**	**33**	P	**Pn**	**03 40 15.1**	**+0.9**
FITZ	**Fitzroy Crossi**	**12.47**	**146**	Pn	**Pn**	**03 41 14.8**	**-1.6**
	0.2nm,0.3s,baz=158,slow=5.0,SNR=5.9						
FITZ				Sn	**Sn**	**03 43 30.5**	**-5.6**
	0.4nm,0.3s,baz=167,slow=17,SNR=4.0						
FITZ				LR	LR	03 47 09.5	
	comp=Z,66nm,19.9s,baz=98,slow=43						
WRAB	**Tennant Creek**	**19.62**	**130**	*e*P	**Pn**	**03 42 47.9**	**-1.2**
	10nm,1.2s						
WRAB				*e*S	**Sn**	**03 46 39.1**	**+9.1**
ASAR	**Alice Springs**	**21.71**	**139**	P	**P**	**03 43 11.2**	**+0.8**
	2.7nm,0.5s,mb4.0,baz=318,slow=11,SNR=31						
CTA	**Charters Tower**	**29.60**	**117**	P	**P**	**03 44 25.4**	**+0.7**
	1.8nm,0.7s,mb4.0,baz=301,slow=12,SNR=2.7						
CTA				LR	LR	03 58 31.1	
	comp=Z,51nm,19.2s,MS3.2,baz=236,slow=41						
STKA	**Stephens Creek**	**32.28**	**141**	P	**P**	**03 44 45.6**	**-2.6**
	1.1nm,0.7s,mb3.9,baz=312,slow=11,SNR=3.8						
STKA				LR	LR	03 58 18.8	
	comp=Z,113nm,19.9s,MS3.6,baz=24,slow=37						
STKA	**Stephens Creek**	**32.28**	**141**	*e*P	**P**	**03 44 49.3**	**+1.1**
	0.7nm,1.0s,mb3.5						
STKA				LR	LR	03 58 18.8	
CMAR	**Chiang Mai Arr**	**32.36**	**324**	LR	LR	03 58 59.1	
	comp=Z,60nm,19.3s,MS3.3,baz=350,slow=38						
LSA	**Lhasa**	**45.54**	**326**	*e*P	**P**	**03 46 38.2**	**-1.0**
	11nm,0.2s						
KSRS	**Korea Array**	**45.81**	**11**	P	**P**	**03 46 41.9**	**+0.7**
	1.3nm,0.8s,mb4.0,baz=198,slow=7.7,SNR=3.1						
SONM	**Songino Array**	**56.34**	**350**	P	**P**	**03 48 01.0**	**+0.8**
	0.3nm,0.3s,mb3.8,baz=164,slow=12,SNR=3.9						
MK31	**Makanchi Array**	**63.08**	**333**	*e*P	**P**	**03 48 47.4**	**+0.7**
MKAR	**Makanchi Array**	**63.08**	**333**	P	**P**	**03 48 46.7**	**0.0**
	0.7nm,0.4s,mb4.1,baz=131,slow=7.8,SNR=8.4						
MKAR	**Makanchi Array**	**63.08**	**333**	P	**P**	**03 48 46.7**	**0.0**
ZALV	**Zalesovo Beam**	**67.66**	**339**	P	**P**	**03 49 15.3**	**-0.9**
	2.1nm,0.6s,mb4.6,baz=145,slow=5.2,SNR=9.2						
BVAR	**Borovoye Array**	**72.92**	**332**	P	**P**	**03 49 47.1**	**-1.5**
	1.2nm,0.6s,mb4.2,baz=123,slow=7.3,SNR=5.2						
TORD	**Torodi Ar. Bea**	**117.69**	**281**	PKP	PKPdf	03 57 03.6	-3.2
	0.2nm,0.7s,baz=79,slow=2.0,SNR=3.1						

IDC 02 03:43:31.9±9.8, 7°.32S×109°.51W, h0km, mb3.5/4, mb1 3.9/4, mb1mx3.7/12, mbtmp3.5/4, MS3.7/1, Ms1 3.6/1, ms1mx2.8/17, Error ellipse: s-maj=233.2km s-min=151.1km az=133.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**36.87**	**9**	P	P	03 50 43.2	+1.0
	0.2nm,0.8s,baz=186,slow=8.2,SNR=2.5						
NVAR	**Mina Array Bea**	**46.24**	**350**	P	P	03 51 58.5	-0.5
	0.4nm,0.6s,baz=169,slow=9.8,SNR=3.5						
PLCA	**Paso Flores**	**48.06**	**140**	LR	LR	04 07 41.0	
	comp=Z,73nm,19.5s,baz=66,slow=30						
PDAR	**Pinedale Array**	**49.84**	**360**	P	P	03 52 26.9	+0.1
	0.3nm,0.6s,baz=132,slow=4.2,SNR=4.4						
YKA	**Yellowknife Ar**	**69.72**	**357**	P	P	03 54 43.2	-0.1
	1.0nm,0.8s,baz=172,slow=6.2,SNR=15						

*IDC **02** 03:45:03.7±1.2, 10°.07N×93°.45E, h0km, mb3.8/9, mb1 3.9/11, mb1mx3.7/25, mbtmp3.8/11, ML3.4/2, MS3.1/1, Ms1 3.1/1, ms1mx2.4/41, Error ellipse: s-maj=41.5km s-min=22.0km az=58.0*
*NEIC **02** 03:45:08.9±0.5, 10°.08N×93°.51E, h35km, Error ellipse: s-maj=16.6km s-min=9.1km az=63.0*
*ISCJB **02** 03:45:09.6±3.1, 10°.1N±0°.1×93°.7E±0°.2, h61km±30km, mb3.8/9, Error ellipse: s-maj=41.4km s-min=15.2km az=164.4*
ISC 02 03:45:11.8±2.3, 10°.1N±0°.1×93°.7E±0°.2, h62km±23km, n14, σ0°70/14, mb3.8/9, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**8.93**	**144**	Pn	**Pn**	**03 47 17.9**	**-0.2**
	0.2nm,0.3s,baz=325,slow=9.0,SNR=6.9						
PSI				LR	LR	03 50 08.9	
	comp=Z,124nm,20.3s,baz=193,slow=33						
PSI	**Prapat**	**8.93**	**144**	Pn	**Pn**	**03 47 17.9**	**-0.2**
PSI				LR	LR	03 50 08.9	
CMAR	**Chiang Mai Arr**	**9.74**	**31**	Pn	**Pn**	**03 47 28.5**	**-0.7**
	0.1nm,0.3s,baz=225,slow=14,SNR=8.0						
SHL	**Shillong**	**15.47**	**354**	*e*PKP	**Pn**	**03 48 48.0**	**+1.7**
NACB	**Ninganchiao**	**30.03**	**59**	*e*P	**P**	**03 51 08.8**	**-6.2**
	28nm,0.4s						
MKAR	**Makanchi Array**	**37.83**	**347**	P	**P**	**03 52 21.7**	**-0.5**
	0.3nm,0.3s,mb3.5,baz=153,slow=7.8,SNR=4.9						
SONM	**Songino Array**	**39.10**	**14**	P	**P**	**03 52 32.5**	**-0.4**
	0.5nm,0.6s,mb3.5,baz=182,slow=7.2,SNR=4.1						
ZALV	**Zalesovo Beam**	**44.30**	**353**	P	**P**	**03 53 15.7**	**+0.4**
	0.9nm,0.4s,mb3.9,baz=199,slow=17,SNR=3.6						
BVAR	**Borovoye Array**	**46.75**	**341**	P	**P**	**03 53 34.1**	**-0.6**
	0.8nm,0.5s,mb3.9,baz=138,slow=18,SNR=3.9						
ASAR	**Alice Springs**	**51.69**	**131**	P	**P**	**03 54 13.7**	**+0.8**
	1.6nm,0.8s,mb4.0,baz=303,slow=7.2,SNR=4.7						
BRTR	**Keskin Array B**	**60.65**	**310**	P	**P**	**03 55 15.7**	**-0.8**
	0.5nm,0.7s,mb3.8,baz=120,slow=6.9,SNR=3.4						
FINES	**FINESS Array B**	**70.54**	**332**	P	**P**	**03 56 19.8**	**-0.1**
	2.9nm,0.9s,mb4.2,baz=146,slow=28,SNR=3.8						
ARCES	**ARCESS Array B**	**73.03**	**340**	P	**P**	**03 56 35.1**	**+0.4**
	0.9nm,0.7s,mb3.8,baz=79,slow=6.5,SNR=5.1						
GERES	**GERESS Array B**	**75.88**	**318**	P	**P**	**03 56 51.8**	**+0.2**
	0.2nm,0.6s,mb3.3,baz=78,slow=9.1,SNR=2.3						

*IDC **02** 03:49:11.4±1.1, 1°.21N×96°.99E, h0km, mb4.1/11, mb1 4.1/13, mb1mx3.9/26, mbtmp4.1/13, ML4.1/2, Error ellipse: s-maj=34.9km s-min=17.0km az=56.0*
*DJA **02** 03:49:13, 1°.26N×96°.89E, h16km, MLv4.1/7*
*ISCJB **02** 03:49:14.5±0.6, 1°.27N±0°.06×96°.95E±0°.06, h33km, mb4.1/13, Error ellipse: s-maj=10.1km s-min=5.9km az=41.9*
*NEIC **02** 03:49:16.7±0.6, 1°.28N×97°.06E, h35km, mb4.3/1, Error ellipse: s-maj=15.0km s-min=10.8km az=58.0*
ISC 02 03:49:15.4±2.4, 1°.27N±0°.07×97°.0E±0°.1, h25km±16km, n33, σ0°84/33, mb4.1/13, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.61**	**87**	P	**Pb**	**03 49 27.5**	**0.0**
GSI				S	**Sb**	**03 49 36.6**	**+0.9**
TRSI	**Tarutung**	**2.13**	**69**	P	**Pn**	**03 49 46.7**	**-2.7**
PSI	**Prapat**	**2.48**	**52**	Pn	**Pn**	**03 49 53.7**	**-0.5**
	8.2nm,0.3s,baz=280,slow=5.6,SNR=35						
MNSI	**Mandailing Nat**	**2.66**	**100**	P	**Pn**	**03 49 56.6**	**-0.1**
TSI	**Tuntungan**	**2.73**	**36**	P	**Pn**	**03 49 58.8**	**+1.1**
SISI	**Saibi**	**3.34**	**141**	P	**Pn**	**03 50 05.8**	**-0.3**
PPI	**Padang Panjang**	**3.84**	**117**	P	**Pn**	**03 50 13.7**	**+0.8**
PDSI	**Padang**	**4.12**	**122**	P	**Pn**	**03 50 17.4**	**+0.6**
BSI	**Banda Aceh**	**4.51**	**338**	P	**Pn**	**03 50 20.6**	**-1.6**
SDSI	**Sungai Dareh**	**4.97**	**116**	P	**Pn**	**03 50 28.9**	**+0.4**
IPM	**Ipoh**	**5.16**	**52**	P	**Pn**	**03 50 31.7**	**+0.6**
	0.1nm23nm,0.9s						
KULM	**Kulim**	**5.43**	**43**	*e*Pn	**Pn**	**03 50 34.1**	**-0.7**
	17nm,0.7s						
MDSI	**Maura Dua**	**9.20**	**128**	P	**Pn**	**03 51 25.8**	**-0.9**
CMAR	**Chiang Mai Arr**	**17.19**	**6**	P	**Pn**	**03 53 12.6**	**-1.4**
	0.8nm,0.3s,baz=193,slow=12,SNR=3.9						
SHL	**Shillong**	**24.64**	**349**	*e*PKP	**P**	**03 54 34.0**	**-0.1**
FITZ	**Fitzroy Crossi**	**34.16**	**126**	P	**P**	**03 55 57.1**	**-1.7**
	4.9nm,1.2s,mb4.3,baz=295,slow=14,SNR=3.8						
FITZ	**Fitzroy Crossi**	**34.16**	**126**	P	**P**	**03 55 57.6**	**-1.3**
GTA	**Gaotai**	**38.05**	**4**	*e*P	**P**	**03 56 33.0**	**+1.2**
GTA				pP	pP	03 56 39.3	+0.1
GTA				sP	sP	03 56 42.2	0.0
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.2						
ASAR	**Alice Springs**	**43.63**	**127**	P	**P**	**03 57 17.6**	**-0.6**
	comp=Z,1.3nm,0.7s,mb3.7,baz=296,slow=7.7,SNR=10						
KSRS	**Korea Array**	**45.92**	**35**	P	**P**	**03 57 35.5**	**-0.7**
	comp=Z,2.5nm,0.7s,mb4.2,baz=217,slow=8.7,SNR=6.9						
SONM	**Songino Array**	**47.09**	**9**	P	**P**	**03 57 45.6**	**+0.4**
	comp=Z,2.1nm,0.8s,mb4.1,baz=188,slow=8.9,SNR=9.4						
MK31	**Makanchi Array**	**47.11**	**346**	*e*P	**P**	**03 57 46.0**	**+0.7**
MKAR	**Makanchi Array**	**47.11**	**346**	P	**P**	**03 57 46.1**	**+0.7**
	comp=Z,0.9nm,0.5s,mb4.0,baz=151,slow=7.3,SNR=9.6						
KURK	**Kurchatov**	**51.66**	**345**	P	**P**	**03 58 19.9**	**-0.1**
	comp=Z,1.4nm,0.6s,mb4.1,baz=164,slow=6.5,SNR=4.8

IDC ***02*** *04:19:45.2±0.4, 15°.29S×173°.52W, h0km, mb4.8/22, mb1 4.9/23, mb1mx4.9/25, mbtmp4.8/23, MS5.0/15, Ms1 5.0/15, ms1mx4.8/18, Error ellipse: s-maj=21.1km s-min=12.3km az=135.0*

ISCJB ***02*** *04:19:49.3±0.2, 15°.21S±0°.05×173°.68W±0°.04, h33km, mb5.2/145, MS5.2/239, Error ellipse: s-maj=7.6km s-min=3.9km az=149.3*

SZGRF ***02*** *04:19:49.7, 15°.95S×173°.94W, h42km, mb5.4, Tonga Islands*

BJI ***02*** *04:19:49.9, 15°.26S×173°.19W, h52km, mB5.5/26, mb5.0/29, Ms5.3/28, Ms7 5.0/27*

MOS ***02*** *04:19:50.3±1.2, 15°.16S×173°.59W, h33km, mb5.5/46, MS5.3/54, Error ellipse: s-maj=11.8km s-min=7.0km az=58.6*

NEIC ***02*** *04:19:51.2±0.1, 15°.22S×173°.67W, h35km, mb5.4/112, MS5.3/202, MW5.5, Error ellipse: s-maj=6.9km s-min=3.5km az=144.0, Moment Tensor Solution. s88 Moment tensor: Scale 10^17^Nm; M_{rr}0.48; $M_{\theta\theta}$-0.87; $M_{\phi\phi}$0.39; $M_{r\theta}$-1.79; $M_{\theta\phi}$0.06; $M_{\phi r}$0.67; Best double couple: $M_0$2.00000×10^17^ NP1:ϕ_s291.00000°, δ81.00000°, λ101.00000°. NP2:ϕ_s60.00000°, δ14.00000°, λ40.00000°. Principal axes: T 1.9000, Plg52.0000°, Azm213.0000°; N 0.2800, Plg10.0000°, Azm109.0000°; P -2.1800, Plg35.0000°, Azm11.0000°;*

GCMT ***02*** *04:19:57.4±0.1, 15°.16S×173°.34W, h58km±1km, MW5.6, Moment Tensor Solution. s86,c157; s29,c30; Moment tensor: Scale 10^17^Nm; M_{rr}-0.24±.04; $M_{\theta\theta}$0.63±.04; $M_{\phi\phi}$-0.39±.04; $M_{r\theta}$-2.98±.05; $M_{\theta\phi}$0.63±.04; $M_{\phi r}$0.94±.03; Best double couple: $M_0$3.20000×10^17^ NP1:ϕ_s205.00000°, δ15.00000°, λ-172.00000°. NP2:ϕ_s107.00000°, δ88.00000°, λ-76.00000°. Principal axes: T 3.2100, Plg41.0000°, Azm183.0000°; N 0.0500, Plg14.0000°, Azm286.0000°; P -3.2600, Plg45.0000°, Azm31.0000°; Data Used: II IU CN IC G. Surface waves: sta=106, comp=197, per= 50.*

ISC 02 04:19:46.5±4.0, 15°.23S±0°.05×173°.66W±0°.03, h5km±24km, h35km±.3km:pP-P,n1073,σ0°59/679, mb5.2/145, MS5.2/239, 234C-220D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.25**	**54**	Pn	**Pn**	**04 20 21.0**	**-3.4**
	2μm,0.3s,baz=177,slow=1.7,SNR=821						
AFI				Sn	**Sn**	**04 20 40.9**	**-12**
	7μm,0.3s,baz=15,slow=23,SNR=22						
AFI				LR	LR	04 21 05.0	
	comp=Z,40μm,19.8s,baz=189,slow=37						
AFI	**Afiamalu**	**2.25**	**54**	*e*Pn	**Pn**	**04 20 20.5**	**-3.9**
AFI				*e*S	**Sn**	**04 20 41.1**	**-11**
MSVF	**Nonsavu**	**8.34**	**252**	Pn	Px	04 22 01.0	
	1μm,0.8s,SNR=19						
MSVF	**Nonsavu**	**8.34**	**252**	*e*Pn	Px	04 21 59.9	
MSVF				*e*Sn	**Sn**	**04 23 20.4**	**-2.3**
MSVF	**Nonsavu**	**8.34**	**252**	Pn	Px	04 22 01.0	
	242nm,0.9s,SNR=19						
FUNA	**Funafuti**	**9.66**	**313**	*e*Pn	**Pn**	**04 22 06.2**	**-0.2**
FUNA				*e*S	**Sn**	**04 23 43.4**	**-12**
RAR	**Rarotonga**	**14.46**	**116**	*e*Pn	**Pn**	**04 23 09.6**	**-2.4**
RAR				*e*S	**Sn**	**04 25 37.9**	**-15**
DZM	**Mont Dzumac**	**20.03**	**247**	*e*P	**P**	**04 24 24.2**	**+3.7**
DZM				*e*LR	LR	04 29 09.9	
	19μm,26.4s						
DZM	**Mont Dzumac**	**20.03**	**247**	*e*P	**P**	**04 24 23.5**	**+3.0**
DZM	**Mont Dzumac**	**20.03**	**247**	*e*P	**P**	**04 24 22.4**	**+1.8**
	910nm,1.8s						
PPT	**Papeete**	**23.21**	**99**	*e*LQ		04 29 31.5	
	7μm,30.0s						
PPT				*e*LR	LR	04 30 20.9	
	3μm,26.5s,baz=270						
PPT	**Papeete**	**23.21**	**99**	LR	LR	04 31 01.7	
	comp=Z,1μm,21.6s,MS4.2,baz=270,slow=29						
PPT				T		04 48 54.1	
	23nm,0.4s,baz=44,slow=16,SNR=4.0						
XMAS	**Kiritimati**	**23.50**	**44**	PFAKE		04 25 10.0	+12
XMAS				LR	LR		
	comp=Z,9μm,19.0s,MS5.2						
URZ	**Urewera**	**24.34**	**198**	P	**P**	**04 25 05.1**	**-0.2**
	comp=Z,17nm,0.5s,mb4.7,baz=34,slow=3.8,SNR=20						
URZ				LR	LR	04 33 26.5	
	comp=Z,8μm,18.8s,MS5.2,baz=36,slow=34						
URZ	**Urewera**	**24.34**	**198**	*e*P	**P**	**04 25 05.5**	**+0.2**
	comp=Z,28nm,0.7s,mb4.8						
PMOR	**Pomariorio Ree**	**24.87**	**93**	*e*P	**P**	**04 25 11.1**	**+0.7**
	comp=Z,392nm,1.4s,mb5.8						
HNR	**Honiara**	**26.41**	**280**	PFAKE		04 25 40.0	+16
HNR				LR	LR		
	comp=Z,473nm,19.0s,MS4.1						
SNZO	**South Karori**	**27.88**	**199**	PFAKE		04 25 50.0	+13
SNZO				LR	LR		
	comp=Z,6μm,19.0s,MS5.2						
RPZ	**Rata Peaks**	**31.24**	**202**	P	**P**	**04 26 06.5**	**-0.6**
	comp=Z,12nm,0.7s,mb4.8,baz=57,slow=9.5,SNR=6.8						
JOHN	**Johnston Islan**	**32.02**	**7**	PFAKE		04 26 30.0	+16
JOHN				LR	LR		
	comp=Z,6μm,22.0s,MS5.2						
TAOE	**Nuku Hiva Isla**	**33.35**	**83**	*e*LR	LR	04 34 51.8	
	comp=Z,6μm,28.5s,baz=259						
EIDS	**Eidsvold**	**34.48**	**247**	*e*Pn	**P**	**04 26 36.3**	**+0.6**
ARMA	**Armidale**	**35.22**	**239**	*e*P	**P**	**04 26 42.0**	**0.0**
ARMA	**Armidale**	**35.22**	**239**	*e*P	**P**	**04 26 42.0**	**0.0**
	comp=Z,14nm,0.6s,mb5.1						
RKT	**Rikitea**	**37.28**	**108**	*e*LR	LR	04 37 02.1	
	comp=Z,1μm,25.8s						
CTA	**Charters Tower**	**38.44**	**257**	P	**P**	**04 27 09.8**	**+0.2**
	comp=Z,4.0nm,0.7s,mb4.3,baz=90,slow=12,SNR=8.8						
CTA	**Charters Tower**	**38.44**	**257**	P	**P**	**04 27 09.8**	**+0.2**
CTAO	**Charters Tower**	**38.44**	**257**	*e*P	**P**	**04 27 10.0**	**+0.4**
CTAO				pmax	pmax		
	comp=Z,46nm,1.8s,mb4.9						
CTAO				MLR	MLR		
	comp=Z,1μm,21.0s,MS4.7						
CTAO	**Charters Tower**	**38.44**	**257**	*e*P	**P**	**04 27 10.0**	**+0.4**
	comp=Z,46nm,1.8s,mb4.9						
CTAO				LR	LR		
	comp=Z,1μm,21.0s,MS4.7						
CNB	**Canberra Magne**	**38.66**	**232**	*e*P	**P**	**04 27 10.4**	**-0.8**
CAN	**Canberra**	**38.94**	**232**	*e*P	**P**	**04 27 13.2**	**-0.3**
CAN				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.7						
CAN				MLR	MLR		
	comp=Z,2μm,20.0s,MS4.9						
CAN	**Canberra**	**38.94**	**232**	*e*P	**P**	**04 27 13.2**	**-0.4**
	comp=Z,14nm,0.8s,mb4.8						
CAN				LR	LR		
	comp=Z,2μm,20.0s,MS4.9						
POHA	**Pohakuloa**	**39.07**	**28**	PFAKE		04 27 30.0	+15
POHA				LR	LR		
	comp=Z,3μm,20.0s,MS5.1						
WAKE	**Wake Island**	**39.40**	**330**	PFAKE		04 27 30.0	+13
WAKE				LR	LR		
	comp=Z,2μm,21.0s,MS5.0						
KIP	**Kipapa**	**39.53**	**23**	*ce*P	**P**	**04 27 18.8**	**+0.2**
KIP	**Kipapa**	**39.53**	**23**	*e*P	**P**	**04 27 19.0**	**+0.4**
	comp=Z,168nm,1.2s,mb5.7						
KIP				LR	LR		
	comp=Z,3μm,19.0s,MS5.1						
COEN	**Coen**	**41.75**	**266**	*e*P	**P**	**04 27 37.5**	**+0.4**
TOO	**Toolangi**	**42.38**	**230**	*e*P	**P**	**04 27 41.3**	**-0.7**
TAU	**Tasmania Unive**	**43.27**	**222**	*e*P	**P**	**04 27 49.0**	**-0.1**
TAU				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.5						
TAU				MLR	MLR		
	comp=Z,4μm,22.0s,MS5.3						
TAU	**Tasmania Unive**	**43.27**	**222**	*e*P	**P**	**04 27 49.0**	**-0.1**
	comp=Z,4.8nm,0.5s,mb4.5						
TAU				LR	LR		
	comp=Z,4μm,22.0s,MS5.3						
MIDW	**Midway**	**43.34**	**355**	*e*P	**P**	**04 27 49.6**	**-0.1**
	comp=Z,115nm,1.2s,mb5.5						
MIDW				LR	LR		
	comp=Z,3μm,21.0s,MS5.2						
STKA	**Stephens Creek**	**43.91**	**240**	*e*P	**P**	**04 27 53.9**	**-0.5**
	comp=Z,16nm,0.9s,mb4.8						
STKA	**Stephens Creek**	**43.91**	**240**	P	**P**	**04 27 54.9**	**+0.4**
	comp=Z,12nm,0.8s,mb4.7,baz=78,slow=7.7,SNR=23						
STKA				LR	LR	04 44 07.1	
	comp=Z,2μm,21.5s,MS5.0,baz=75,slow=33						
STKA	**Stephens Creek**	**43.91**	**240**	*e*P	**P**	**04 27 53.9**	**-0.5**
	comp=Z,14nm,1.4s,mb4.5						
WRAB	**Tennant Creek**	**49.63**	**257**	*e*P	**P**	**04 28 38.9**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,79nm,1.5s,mb5.5						
WRAB				MLR	MLR		
	comp=Z,2μm,22.0s,MS5.0						
WRAB	**Tennant Creek**	**49.63**	**257**	*e*P	**P**	**04 28 38.9**	**-0.5**
	comp=Z,79nm,1.5s,mb5.5						
WRAB				LR	LR		
	comp=Z,2μm,22.0s,MS5.0						
ASAR	**Alice Springs**	**49.93**	**252**	P	**P**	**04 28 40.7**	**-1.0**
	comp=Z,42nm,0.7s,mb5.5,baz=87,slow=7.8,SNR=203						
KAKA	**Kakadu**	**52.26**	**266**	*e*P	**P**	**04 28 59.4**	**+0.1**
	comp=Z,8.4nm,0.4s,mb5.0						
KAKA	**Kakadu**	**52.26**	**266**	*e*P	**P**	**04 28 59.7**	**+0.4**
	comp=Z,29nm,0.6s,mb5.4						
FORT	**Forrest**	**55.27**	**243**	*e*P	**P**	**04 29 20.2**	**-1.0**
	comp=Z,16nm,0.6s,mb5.2						
FORT	**Forrest**	**55.27**	**243**	*e*P	**P**	**04 29 20.6**	**-0.5**
	comp=Z,18nm,0.9s,mb5.1						
FITZ	**Fitzroy Crossi**	**58.00**	**258**	*e*P	**P**	**04 29 42.1**	**+1.3**
	comp=Z,18nm,1.9s,mb4.8						
DRV	**Dumont d'Urvil**	**59.67**	**200**	P	**P**	**04 29 53.0**	**+1.4**
DRV				R		04 48 00.0	
MBWA	**Marble Bar**	**63.17**	**254**	PFAKE		04 30 30.0	+14
MBWA				LR	LR		
	comp=Z,2μm,19.0s,MS5.2						
SBA	**Scott Base**	**63.40**	**185**	*e*P	**P**	**04 30 19.1**	**+2.5**
SBA				pmax	pmax		
	comp=Z,442nm,2.5s,mb6.2						
SBA				MLR	MLR		
	comp=Z,1μm,22.0s,MS5.1						
SBA	**Scott Base**	**63.40**	**185**	*e*P	**P**	**04 30 19.1**	**+2.5**
	comp=Z,442nm,2.5s,mb6.2						
SBA				LR	LR		
	comp=Z,1μm,22.0s,MS5.1						
KLBR	**Kellerberrin**	**64.10**	**242**	*e*P	**P**	**04 30 20.6**	**-1.4**
	comp=Z,9.4nm,0.7s,mb4.9						
DAV	**Davao City (W)**	**64.15**	**286**	PFAKE		04 30 30.0	+7.4
DAV				LR	LR		
	comp=Z,562nm,21.0s,MS4.7						
NWAO	**Narrogin (SRO)**	**64.48**	**241**	PFAKE		04 30 40.0	+15
NWAO				LR	LR		
	comp=Z,2μm,21.0s,MS5.2						
KAPI	**Kappang**	**66.13**	**271**	PFAKE		04 30 50.0	+14
KAPI				LR	LR		
	comp=Z,364nm,22.0s,MS4.5						
ADK	**Adak**	**66.88**	**358**	PFAKE		04 30 50.0	+11
ADK				LR	LR		
	comp=Z,2μm,20.0s,MS5.3						
MJAR	**Matsushiro Arr**	**68.65**	**320**	P	**P**	**04 30 50.9**	**-0.1**
	comp=Z,6.8nm,1.1s,mb4.5,baz=158,slow=5.8,SNR=8.9						
MJAR				LR	LR	04 54 47.5	
	comp=Z,1μm,21.7s,MS5.2,baz=130,slow=31						
MAJO	**Matsushiro**	**68.65**	**320**	*e*P	**P**	**04 30 51.3**	**+0.3**
MAJO				pmax	pmax		
	comp=Z,37nm,1.6s,mb5.1						
MAJO				MLR	MLR		
	comp=Z,2μm,21.0s,MS5.3						
MAJO	**Matsushiro**	**68.65**	**320**	*e*P	**P**	**04 30 51.3**	**+0.3**
	comp=Z,37nm,1.6s,mb5.1						
MAJO				LR	LR		
	comp=Z,2μm,21.0s,MS5.3						
MAT	**Matsushiro**	**68.65**	**320**	P	**P**	**04 30 51.3**	**+0.3**
MAT				S	S	04 39 52.0	-2.6
ERM	**Erimo**	**69.49**	**327**	PFAKE		04 31 10.0	+14
ERM				LR	LR		
	comp=Z,1μm,22.0s,MS5.2						
CASY	**Casey**	**70.46**	**205**	*e*P	**P**	**04 31 01.0**	**-0.7**
CASY	**Casey**	**70.46**	**205**	*e*P	**P**	**04 31 01.6**	**-0.1**
	comp=Z,111nm,1.9s,mb5.5						
CASY				LR	LR		
	comp=Z,2μm,20.0s,MS5.3						
SNCC	**San Nicolas Is**	**70.64**	**46**	⇑P	**P**	**04 31 03.7**	**+0.4**
	baz=71						
BSC	**Santa Cruz Isl**	**70.98**	**45**	⇑P	**P**	**04 31 05.5**	**0.0**
	baz=71						
SCI	**San Clemente I**	**71.18**	**47**	⇓P	**P**	**04 31 06.7**	**+0.1**
	baz=71						
MCCM	**Marconi Confer**	**71.30**	**40**	PFAKE		04 31 20.0	+13
MCCM				LR	LR		
	comp=Z,2μm,20.0s,MS5.4						
PKM	**Peak Mountain**	**71.37**	**44**	⇑P	**P**	**04 31 08.2**	**+0.4**
	baz=72						
SAO	**San Andreas Ge**	**71.37**	**42**	*e*P	**P**	**04 31 08.4**	**+0.7**
SAO				MLR	MLR		
	comp=Z,2μm,22.0s,MS5.4						
BLG	**Laguna Peak**	**71.44**	**46**	⇑P	**P**	**04 31 07.9**	**-0.3**
	baz=72						
SMMC	**Simmler**	**71.48**	**44**	⇑P	**P**	**04 31 08.8**	**+0.4**
	baz=72						
CIS	**Catalina Islan**	**71.51**	**46**	⇑P	**P**	**04 31 08.4**	**-0.2**
	baz=72						
HOPS	**Hopland**	**71.70**	**39**	*e*P	**P**	**04 31 10.3**	**+0.7**
HOPS				LR	LR		
	comp=Z,2μm,21.0s,MS5.5						
FMP	**Fort Macarthur**	**71.75**	**46**	⇑P	**P**	**04 31 10.1**	**0.0**
	baz=72						
DECC	**Green Verdugo**	**72.02**	**46**	⇓P	**P**	**04 31 11.2**	**-0.4**
	baz=72						
PET	**Petropavlovsk**	**72.05**	**343**	*e*P	**P**	**04 31 13.9**	**+2.5**
PET				*e*S	S	04 40 31.9	-1.7
PET				*e*PS		04 41 03.5	
PET				*e*PPS		04 41 15.0	
PET				pmax	pmax		
	comp=Z,57nm,1.2s,mb5.4						
PET				pmax	pmax		
	comp=Z,400nm,13.3s						
PET				smax			
	comp=E,800nm,18.8s						
PET				MLR	MLR		
	comp=Z,700nm,17.0s,MS5.0						
PET				MLR	MLR		
	comp=Z,800nm,21.0s						
PET	**Petropavlovsk**	**72.05**	**343**	PFAKE		04 31 20.0	+8.6
PET				LR	LR		
	comp=Z,811nm,22.0s,MS5.0						
PASC	**Pasadena Art C**	**72.08**	**46**	*e*P	**P**	**04 31 11.4**	**-0.6**
	comp=Z,163nm,1.2s,mb5.8						
109C	**Camp Elliot, M**	**72.15**	**48**	⇓P	**P**	**04 31 12.1**	**-0.3**
	baz=72						
ARVC	**Arvin**	**72.17**	**45**	⇑P	**P**	**04 31 12.1**	**-0.4**
	baz=72						
MWC	**Mount Wilson**	**72.20**	**46**	*e*P	**P**	**04 31 12.9**	**+0.2**
MWC				pmax	pmax		
	comp=Z,44nm,1.3s,mb5.2						
MWC	**Mount Wilson**	**72.20**	**46**	*e*P	**P**	**04 31 12.9**	**+0.2**
	comp=Z,44nm,1.3s,mb5.2						
VES	**Vestal, Richgr**	**72.39**	**44**	⇓P	**P**	**04 31 13.1**	**-0.8**
	baz=73,SNR=19						
PETK	**Petropavlovsk-**	**72.40**	**342**	P	**P**	**04 31 12.8**	**-0.7**
	comp=Z,3.8nm,0.6s,mb4.5,baz=110,slow=7.0,SNR=7.2						
PETK				LR	LR	04 55 54.1	
	comp=Z,424nm,21.9s,MS4.7,baz=69,slow=30						
MURC	**Murrieta**	**72.46**	**47**	⇓P	**P**	**04 31 13.9**	**-0.4**
	baz=73,SNR=7.3						
KHMM	**Horse Mountain**	**72.48**	**37**	*e*P	**P**	**04 31 15.6**	**+1.3**
BFSC	**Mount Baldy Ra**	**72.48**	**46**	⇑P	**P**	**04 31 14.0**	**-0.4**
	baz=73,SNR=6.2						
RCTC	**Rector, Farmer**	**72.56**	**44**	⇑P	**P**	**04 31 14.2**	**-0.7**
	baz=73						
EDW2	**Edwards Air Fo**	**72.60**	**45**	⇑P	**P**	**04 31 14.9**	**-0.2**
	baz=73,SNR=15						
MONP	**Monument Peak**	**72.64**	**48**	⇑P	**P**	**04 31 15.4**	**0.0**
	baz=73,SNR=6.6						
ISA	**Isabella**	**72.71**	**44**	⇑P	**P**	**04 31 15.7**	**-0.1**
	baz=73,SNR=14						
ISA	**Isabella**	**72.71**	**44**	*e*P	**P**	**04 31 15.6**	**-0.1**
ISA				pmax	pmax		
	comp=Z,41nm,1.2s,mb5.2						
ISA	**Isabella**	**72.71**	**44**	*e*P	**P**	**04 31 15.6**	**-0.1**
	comp=Z,41nm,1.2s,mb5.2						
DVTC	**Desert V Tower**	**72.75**	**48**	⇓P	**P**	**04 31 16.2**	**+0.1**
	baz=73						
CMB	**Columbia Colle**	**72.80**	**41**	*e*P	**P**	**04 31 16.4**	**+0.1**
CMB				pmax	pmax		
	comp=Z,43nm,1.2s,mb5.2						
CMB				MLR	MLR		
	comp=Z,2μm,20.0s,MS5.3						
CMB	**Columbia Colle**	**72.80**	**41**	*e*P	**P**	**04 31 16.4**	**+0.2**
	comp=Z,43nm,1.2s,mb5.2						
CMB				LR	LR		
	comp=Z,2μm,20.0s,MS5.3						
OHCM	**Honcut**	**72.89**	**40**	*e*P	**P**	**04 31 16.7**	**0.0**
PFO	**Pinyon Flat Ob**	**72.99**	**47**	⇓P	**P**	**04 31 17.2**	**-0.2**
	baz=73,SNR=5.2						
PFO	**Pinyon Flat Ob**	**72.99**	**47**	*e*P	**P**	**04 31 17.2**	**-0.3**
PFO				pmax	pmax		
	comp=Z,87nm,1.5s,mb5.5						
PFO				MLR	MLR		
	comp=Z,1μm,20.0s,MS5.1						
PFO	**Pinyon Flat Ob**	**72.99**	**47**	*e*P	**P**	**04 31 17.2**	**-0.2**
	comp=Z,87nm,1.5s,mb5.5						
PFO				LR	LR		
	comp=Z,1μm,20.0s,MS5.1						
WDC	**Whiskeytown Da**	**73.00**	**38**	*e*P	**P**	**04 31 17.9**	**+0.5**
WDC				pmax	pmax		
	comp=Z,94nm,1.5s,mb5.5						
WDC				MLR	MLR		
	comp=Z,2μm,20.0s,MS5.4						
WDC	**Whiskeytown Da**	**73.00**	**38**	*e*P	**P**	**04 31 17.9**	**+0.5**
	comp=Z,94nm,1.5s,mb5.5						
WDC				LR	LR		
	comp=Z,2μm,20.0s,MS5.4						
BBRC	**Big Bear Solar**	**73.01**	**46**	⇓P	**P**	**04 31 17.5**	**-0.1**
	baz=73						
SWSC	**Sam W. Stewart**	**73.11**	**48**	⇓P	**P**	**04 31 17.9**	**-0.3**
	baz=73						
LRMC	**Laurel Mountai**	**73.14**	**45**	⇑P	**P**	**04 31 18.4**	**+0.1**
	baz=73						
YSS	**Yuzh-Sakhalins**	**73.22**	**330**	⇓*e*P	**P**	**04 31 19.0**	**+0.5**
YSS				*e*		04 31 31.0	
YSS				*e*S	S	04 40 42.0	-5.2
YSS				*e*PS		04 41 10.0	
YSS				*e*PPS		04 41 29.0	
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
YSS	**Yuzh-Sakhalins**	**73.22**	**330**	PFAKE		04 31 30.0	+12
YSS				LR	LR		
	comp=Z,343nm,21.0s,MS4.6						
RRX	**Edison Barstow**	**73.29**	**46**	⇓P	**P**	**04 31 18.8**	**-0.4**
	baz=73						
CWC	**Cottonwood Cre**	**73.40**	**44**	⇓P	**P**	**04 31 19.8**	**0.0**
	baz=74,SNR=7.0						
KEBM	**Edson Butte**	**73.41**	**36**	*e*P	**P**	**04 31 20.7**	**+1.0**
BELC	**Belle Mtn. Jos**	**73.52**	**47**	⇑P	**P**	**04 31 20.4**	**-0.2**
	baz=74,SNR=9.7						
MLAC	**Mammoth Lakes**	**73.57**	**43**	⇓P	**P**	**04 31 21.1**	**+0.3**
	baz=74,SNR=5.8						
MPMC	**Manual Prospec**	**73.59**	**45**	⇑P	**P**	**04 31 21.0**	**+0.1**
	baz=74,SNR=25						
MTUM	**Tungsten Hills**	**73.59**	**43**	*e*P	**P**	**04 31 21.2**	**+0.3**
YBH	**Yreka Blue Hor**	**73.62**	**37**	P	**P**	**04 31 20.4**	**-0.6**
	comp=Z,46nm,1.1s,mb5.3,baz=188,slow=1.6,SNR=52						
YBH	**Yreka Blue Hor**	**73.62**	**37**	*e*P	**P**	**04 31 21.8**	**+0.8**
YBH				pmax	pmax		
	comp=Z,87nm,1.4s						
YBH				MLR	MLR		
	comp=Z,2μm,22.0s						
YBH	**Yreka Blue Hor**	**73.62**	**37**	*e*P	**P**	**04 31 21.8**	**+0.8**
	comp=Z,87nm,1.4s,mb5.5						
YBH				LR	LR		
	comp=Z,2μm,22.0s,MS5.4						
DAC	**Darwin (Calif)**	**73.64**	**44**	PFAKE		04 31 30.0	+8.8
DAC				LR	LR		
	comp=Z,4μm,21.0s,MS5.7						
GSC	**Goldstone**	**73.65**	**46**	⇑P	**P**	**04 31 21.0**	**-0.3**
	baz=74,SNR=13						
GSC	**Goldstone**	**73.65**	**46**	*e*P	**P**	**04 31 21.3**	**0.0**
GSC				pmax	pmax		
	comp=Z,35nm,1.2s,mb5.2						
GSC	**Goldstone**	**73.65**	**46**	*e*P	**P**	**04 31 21.3**	**0.0**
	comp=Z,35nm,1.2s,mb5.2						
TIN	**Tinemaha**	**73.65**	**43**	⇑P	**P**	**04 31 21.2**	**0.0**
	baz=74						
WAKR	**Walker**	**73.68**	**42**	*e*P	**P**	**04 31 21.6**	**+0.1**
HEC	**Hector,Ludlow**	**73.72**	**46**	⇓P	**P**	**04 31 21.4**	**-0.4**
	baz=74,SNR=5.5						
BC3	**Big Chuckawall**	**73.73**	**48**	⇑P	**P**	**04 31 21.8**	**0.0**
	baz=74,SNR=10						
112A	**Yuma**	**73.78**	**49**	⇓P	**P**	**04 31 22.0**	**-0.1**
	baz=74,SNR=9.8						
GLA	**Glamis**	**73.87**	**48**	⇓P	**P**	**04 31 22.5**	**-0.1**
	baz=74						
GLA	**Glamis**	**73.87**	**48**	*e*P	**P**	**04 31 23.1**	**+0.5**
GLA				pmax	pmax		
	comp=Z,51nm,1.3s,mb5.3						
GLA	**Glamis**	**73.87**	**48**	*e*P	**P**	**04 31 23.1**	**+0.4**
	comp=Z,51nm,1.3s,mb5.3						
WCN	**Washoe City**	**73.94**	**41**	⇑P	**P**	**04 31 23.1**	**+0.1**
	baz=74,SNR=23						
HUMO	**Hull Mountain**	**74.02**	**36**	*e*P	**P**	**04 31 24.3**	**+0.9**
	comp=Z,68nm,1.3s,mb5.4						
HUMO				LR	LR		
	comp=Z,2μm,21.0s,MS5.4						
GMRC	**Granite Mounta**	**74.17**	**47**	⇑P	**P**	**04 31 24.1**	**-0.3**
	baz=74,SNR=20						
IRM	**Iron Mountain**	**74.20**	**47**	⇑P	**P**	**04 31 24.4**	**-0.2**
	baz=74,SNR=19						
BUOR	**Burton Butte**	**74.23**	**37**	P	**P**	**04 31 25.3**	**+0.7**
FURC	**Furnace Creek,**	**74.24**	**44**	⇓P	**P**	**04 31 24.5**	**-0.3**
	baz=74,SNR=10.0						
TUQ	**Turquoise Moun**	**74.33**	**46**	⇑P	**P**	**04 31 25.0**	**-0.3**
	baz=74						
SHOC	**Shoshone**	**74.33**	**45**	⇑P	**P**	**04 31 25.0**	**-0.3**
	baz=74,SNR=7.0						
NVAR	**Mina Array Bea**	**74.37**	**42**	P	**P**	**04 31 25.0**	**-0.5**
	comp=Z,31nm,1.1s,mb5.2,baz=227,slow=9.4,SNR=76						
PAHR	**Pah Rah Range**	**74.41**	**41**	*e*P	**P**	**04 31 26.3**	**+0.6**
Y12C	**Blythe**	**74.44**	**48**	⇓P	**P**	**04 31 25.9**	**-0.1**
	baz=75,SNR=7.9						
113A	**Mohawk Valley,**	**74.49**	**49**	⇑P	**P**	**04 31 25.9**	**-0.4**
	baz=75,SNR=9.0						
HOG	**Hogback Mounta**	**74.52**	**37**	P	**P**	**04 31 26.9**	**+0.6**
U10A	**Ash Meadows, A**	**74.57**	**45**	⇓P	**P**	**04 31 26.8**	**+0.1**
	baz=75,SNR=14						
LDFC	**Landfair**	**74.71**	**46**	*e*P	**P**	**04 31 28.2**	**+0.7**
	comp=Z,115nm,1.4s,mb5.6						
YHNB	**Yeheng**	**74.74**	**301**	PFAKE		04 31 40.0	+12
YHNB				LR	LR		
	comp=Z,683nm,21.0s,MS4.9						
TATO	**Taipei**	**74.78**	**302**	PFAKE		04 31 40.0	+12
TATO				LR	LR		
	comp=Z,683nm

S11A **Rachel** 75.62 44 ⇑P P 04 31 32.7 0.0
baz=76
Y14A **Wickenburg** 75.63 48 ⇓P P 04 31 32.6 -0.2
baz=76,SNR=15
H04A **Detroit Lake** 75.76 35 ⇑P P 04 31 33.2 -0.2
baz=76,SNR=14
T11A **Corn Creek, Al** 75.76 45 ⇑P P 04 31 33.7 +0.2
baz=76,SNR=48
F03A **Seaside** 75.81 34 ⇑P P 04 31 33.7 +0.1
baz=76,SNR=7.8
U12A **Valley of Fire** 75.81 46 ⇑P P 04 31 34.0 +0.2
baz=76,SNR=13
216A **Three Points,** 75.83 51 ⇑P P 04 31 34.2 +0.2
baz=76,SNR=24
Q10A **Clear Creek Ra** 75.83 43 ⇑P P 04 31 33.9 0.0
baz=76,SNR=7.9
KSRS **Korea Array** 75.87 316 P P 04 31 35.2 +1.1
comp=Z,1.1nm,0.5s,mb4.1,baz=133,slow=5.3,SNR=5.1
KSRS LR LR 04 58 55.3
comp=Z,560nm,21.1s,MS4.8,baz=120,slow=31
V13A **Grand Canyon W** 75.89 46 ⇓P P 04 31 34.2 -0.1
baz=76,SNR=22
116A **Eloy** 75.91 50 ⇓P P 04 31 34.3 -0.2
baz=76,SNR=8.6
Z15A **Gila River Ind** 75.92 49 ⇓P P 04 31 34.4 -0.2
baz=76,SNR=7.8
X14A **Yava** 75.97 48 ⇓P P 04 31 35.1 +0.3
baz=76,SNR=33
R11A **Troy Canyon, C** 76.11 43 ⇓P P 04 31 35.3 -0.2
baz=76,SNR=40
Y15A **Casa Rosa Ranc** 76.12 49 ⇓P P 04 31 35.8 +0.1
baz=76,SNR=66
BMN **Battle Mountai** 76.19 41 eP P 04 31 36.2 +0.3
BMN pmax pmax
comp=Z,42nm,1.2s,mb5.2
BMN MLR MLR
comp=Z,2µm,20.0s,MS5.3
BMN **Battle Mountai** 76.19 41 eP P 04 31 36.2 +0.3
comp=Z,42nm,1.2s,mb5.2
BMN LR LR
comp=Z,2µm,20.0s,MS5.3
U13A **Pakoon Wash** 76.19 46 ⇓P P 04 31 36.3 +0.3
baz=76,SNR=47
E03A **Lebam** 76.20 33 ⇑P P 04 31 35.8 0.0
baz=76,SNR=12
217A **Green Valley** 76.20 51 ⇑P P 04 31 36.2 0.0
baz=76,SNR=38
W14A **Seligman** 76.20 47 ⇓P P 04 31 36.5 +0.4
baz=76,SNR=46
S12A **Delamar Landin** 76.21 44 ⇓P P 04 31 36.5 +0.4
baz=76,SNR=26
P10A **Eureka** 76.22 42 ⇓P P 04 31 36.0 -0.1
baz=76,SNR=8.2
Q11A **Duckwater** 76.33 43 ⇑P P 04 31 36.7 -0.1
baz=76,SNR=46
V14A **Boquillas Ranc** 76.40 47 ⇓P P 04 31 37.7 +0.5
baz=77,SNR=38
F04A **Amboy** 76.42 34 ⇓P P 04 31 36.6 -0.4
baz=77,SNR=7.1
X15A **Humboldt** 76.45 48 ⇑P P 04 31 37.9 +0.4
baz=77,SNR=34
WVOR **Wild Horse Val** 76.46 39 eP P 04 31 37.5 +0.1
WVOR pmax pmax
comp=Z,99nm,1.4s,mb5.5
WVOR MLR MLR
comp=Z,2µm,20.0s,MS5.5
WVOR **Wild Horse Val** 76.46 39 eP P 04 31 37.5 +0.1
comp=Z,99nm,1.4s,mb5.5
WVOR LR LR
comp=Z,2µm,20.0s,MS5.5
TUC **Tucson** 76.48 51 eP P 04 31 38.1 +0.4
TUC pmax pmax
comp=Z,87nm,1.4s,mb5.5
TUC MLR MLR
comp=Z,2µm,21.0s,MS5.4
TUC **Tucson** 76.48 51 eP P 04 31 38.0 +0.3
comp=Z,87nm,1.4s,mb5.5
TUC LR LR
comp=Z,2µm,21.0s,MS5.4
Z16A **Peralta Trail,** 76.49 50 ⇓P P 04 31 37.7 -0.1
baz=77,SNR=16
LVP **Lakeview Peak** 76.51 34 P P 04 31 37.6 0.0
VLA **Vladivostok** 76.52 322 P P 04 31 46.0 +8.3
VIPM **Ingram Point** 76.53 36 P P 04 31 37.6 -0.1
T13A **Saint George** 76.54 45 ⇑P P 04 31 38.2 +0.2
baz=77,SNR=29
O10A **Cortez Mining,** 76.57 41 ⇓P P 04 31 38.0 0.0
baz=77,SNR=5.9
NLWA **Neilton Lookou** 76.59 32 ⇓P P 04 31 38.1 +0.1
baz=77,SNR=7.0
NLWA **Neilton Lookou** 76.59 32 eP P 04 31 38.4 +0.4
comp=Z,70nm,1.7s,mb5.3
NLWA LR LR
comp=Z,1µm,20.0s,MS5.2
FL2 **Flat Top 2** 76.62 34 P P 04 31 38.7 +0.5
117A **Oracle** 76.63 51 ⇓P P 04 31 38.9 +0.3
baz=77,SNR=36
P11A **Circle Ranch,** 76.65 42 ⇑P P 04 31 38.4 -0.1
baz=77,SNR=7.0
318A **Bisbee** 76.67 52 ⇑P P 04 31 39.1 +0.2
baz=77,SNR=38
Y16A **Circle Bar Ran** 76.71 49 ⇑P P 04 31 39.1 +0.1
baz=77,SNR=20
U14A **Mt Trumbull** 76.74 46 ⇓P P 04 31 39.5 +0.4
baz=77,SNR=67
R12A **Pony Springs,** 76.75 44 ⇑P P 04 31 39.3 +0.2
baz=77,SNR=29
INCN **Inchon** 76.76 315 PFAKE 04 31 50.0 +11
INCN LR LR
comp=Z,491nm,20.0s,MS4.8
W15A **Williams** 76.77 48 ⇑P P 04 31 39.7 +0.4
baz=77,SNR=8.3
N10A **Dunphy** 76.80 41 ⇑P P 04 31 39.5 +0.1
baz=77,SNR=5.4
S13A **Holt Ranch, En** 76.86 45 ⇑P P 04 31 40.0 +0.2
baz=77,SNR=29
218A **Dragoon** 76.88 51 ⇑P P 04 31 40.2 +0.2
baz=77,SNR=7.7
I07A **Izee** 76.91 37 ⇓P P 04 31 40.0 +0.1
baz=77,SNR=46
KSM **Kuching** 76.93 275 eP P 04 31 40.8 +0.1
comp=Z,8.2nm,1.0s,mb4.6
KSM LR LR
comp=Z,303nm,21.0s,MS4.6
Q12A **Willow Creek R** 76.98 43 ⇑P P 04 31 40.3 -0.1
baz=77,SNR=15
X16A **Lo Mia Camp, P** 76.99 49 ⇑P P 04 31 41.2 +0.6
baz=77,SNR=38
O11A **Cowboy Ranch,** 77.02 42 ⇑P P 04 31 40.8 +0.1
baz=77,SNR=30
Y17A **Roosevelt** 77.08 50 ⇓P P 04 31 41.4 +0.2
baz=77,SNR=18
J08A **Circle Bar Ran** 77.09 38 ⇓P P 04 31 40.8 -0.1
baz=77,SNR=46
R13A **O'Grain Ranch,** 77.10 44 ⇓P P 04 31 41.7 +0.6
baz=77,SNR=13
T14A **Hurricane** 77.13 46 ⇑P P 04 31 41.6 +0.3
baz=77,SNR=26
V15A **Kaibab Nationa** 77.15 47 ⇑P P 04 31 42.1 +0.7
baz=77,SNR=47
P12A **McGill** 77.16 43 ⇑P P 04 31 41.3 -0.1
baz=77,SNR=14
Z17A **San Carlos Hig** 77.17 50 ⇓P P 04 31 42.0 +0.4
baz=77,SNR=6.3
319A **Douglas** 77.19 52 ⇓P P 04 31 42.0 +0.2
baz=77,SNR=20
CCUT **Cedar City** 77.19 45 eP P 04 31 42.0 +0.4
comp=Z,55nm,1.4s,mb5.3
M10A **I.L. Ranch, Tu** 77.22 40 ⇑P P 04 31 42.0 +0.2
baz=77,SNR=25
118A **Homack Ranch,** 77.24 51 ⇓P P 04 31 42.4 +0.4
baz=77,SNR=32
GNW **Green Mountain** 77.24 33 eP P 04 31 41.4 -0.3
comp=Z,31nm,1.6s,mb5.0
W16A **Flagstaff** 77.25 48 ⇓P P 04 31 42.6 +0.6
baz=77,SNR=8.3
ARUT **Antelope Range** 77.26 45 eP P 04 31 42.2 +0.2
ARUT pmax pmax
comp=Z,67nm,1.5s,mb5.3
ARUT **Antelope Range** 77.26 45 eP P 04 31 42.2 +0.2
comp=Z,67nm,1.5s,mb5.3
LON **Longmire** 77.26 34 eP P 04 31 41.6 -0.2
LON pmax pmax
comp=Z,30nm,1.4s,mb5.0
LON **Longmire** 77.26 34 eP P 04 31 41.6 -0.2
comp=Z,30nm,1.4s,mb5.0
N11A **Elko Archery C** 77.34 41 ⇑P P 04 31 42.5 +0.1
baz=78,SNR=6.9

U15A **North Rim** 77.37 47 ⇓P P 04 31 43.4 +0.7
baz=78,SNR=52
Z18A **Geronimo** 77.39 50 ⇓P P 04 31 43.1 +0.2
baz=78
X17A **Forest Lakes** 77.41 49 ⇓P P 04 31 43.7 +0.7
baz=78,SNR=24
S14A **Cedar City** 77.43 45 ⇑P P 04 31 43.2 +0.3
baz=78,SNR=18
D05A **Enumclaw** 77.44 33 ⇑P P 04 31 43.2 +0.4
baz=78,SNR=10
Q13A **Wheeler Ranch,** 77.47 44 ⇓P P 04 31 43.1 -0.1
baz=78,SNR=22
MIR **Mirnyy** 77.47 204 eP P 04 31 42.0 -0.8
MIR pmax pmax
comp=Z,119nm,1.8s,mb5.5
219A **White Tail Can** 77.48 52 ⇓P P 04 31 43.6 +0.2
baz=78,SNR=27
J09A **Fry Pan Ranch,** 77.51 38 ⇓P P 04 31 43.2 -0.1
baz=78,SNR=49
WUAZ **Wupatki** 77.57 48 ⇓P P 04 31 44.2 +0.4
baz=78,SNR=16
WUAZ **Wupatki** 77.57 48 eP P 04 31 44.2 +0.4
comp=Z,53nm,1.3s,mb5.3
WUAZ LR LR
comp=Z,2µm,20.0s,MS5.3
L10A **Juniper Basin** 77.58 40 ⇓P P 04 31 43.6 -0.1
baz=78,SNR=52
T15A **Red Dirt Ranch** 77.59 46 ⇓P P 04 31 44.3 +0.4
baz=78,SNR=55
ELK **Elko** 77.62 42 eP P 04 31 44.2 +0.2
ELK pmax pmax
comp=Z,76nm,1.5s
ELK MLR MLR
comp=Z,2µm,21.0s
ELK **Elko** 77.62 42 eP P 04 31 44.2 +0.2
comp=Z,76nm,1.5s,mb5.4
ELK LR LR
comp=Z,2µm,21.0s,MS5.3
M11A **Holland Ranch,** 77.64 41 ⇓P P 04 31 44.3 +0.2
baz=78,SNR=23
H08A **Prairie City** 77.66 37 ⇓P P 04 31 43.9 -0.2
baz=78,SNR=21
SSE **Sheshan** 77.66 307 P P 04 31 44.5 +0.1
SSE S S 04 41 37.1 -0.1
SSE pmax pmax
comp=Z,21nm,0.8s,mb5.1
SSE pmax pmax
comp=Z,140nm,5.7s
SSE LR LR
comp=N,460nm,29.2s,MS4.9
SSE LR LR
comp=E,630nm,30.2s,MS4.9
SSE LR LR
comp=Z,830nm,32.2s,MS4.8
O12A **Currie** 77.68 42 ⇑P P 04 31 44.3 0.0
baz=78,SNR=26
Y18A **Canyon Day Jun** 77.72 50 ⇓P P 04 31 45.3 +0.6
baz=78,SNR=38
K10A **MacKenzie Ranc** 77.72 39 ⇓P P 04 31 44.4 0.0
baz=78,SNR=54
P13A **Bates Ranch, G** 77.73 43 ⇑P P 04 31 44.8 +0.2
baz=78,SNR=34
320A **Kipp Ranch, An** 77.74 53 ⇑P P 04 31 45.4 +0.5
baz=78,SNR=21
F07A **Phinny Hill Vi** 77.76 35 ⇑P P 04 31 44.4 -0.2
baz=78
119A **Ashpeak Ranch,** 77.80 51 ⇓P P 04 31 45.5 +0.3
baz=78,SNR=19
R14A **James Farms, M** 77.80 45 ⇑P P 04 31 45.3 +0.3
baz=78,SNR=5.4
N12A **Clover Valley,** 77.81 41 ⇑P P 04 31 45.1 +0.1
baz=78,SNR=22
N12A **Clover Valley,** 77.81 41 eP P 04 31 45.0 0.0
comp=Z,77nm,1.4s,mb5.4
W17A **Winslow** 77.83 48 ⇑P P 04 31 45.8 +0.5
baz=78,SNR=6.2
BBB **Bella Bella** 77.85 27 P P 04 31 44.5 -0.5
comp=Z,6.9nm,0.9s,mb4.6,baz=218,slow=5.1,SNR=5.9
BBB **Bella Bella** 77.85 27 P P 04 31 44.5 -0.5
I09A **Lost Marbles R** 77.88 38 ⇓P P 04 31 45.0 -0.4
baz=78,SNR=6.6
S15A **Panguitch** 77.94 45 ⇓P P 04 31 47.0 +1.2
baz=78,SNR=19
G08A **Pilot Rock** 77.94 36 ⇑P P 04 31 45.4 -0.3
baz=78,SNR=26
Q14A **Sevier Lake (B** 77.98 44 ⇓P P 04 31 46.3 +0.3
baz=78,SNR=25
220A **Playas Peak, P** 78.00 52 ⇓P P 04 31 46.7 +0.4
baz=78,SNR=61
V17A **Tonalea, Kykot** 78.03 48 ⇓P P 04 31 46.8 +0.4
baz=78,SNR=62
HABR **Khabarovsk** 78.06 328 eP P 04 31 44.2 -2.0
HABR 04 31 53.8
HABR e*SP sP 04 31 58.7 +10
HABR e 04 34 40.0
HABR PPP 04 36 28.6
HABR eS S 04 41 35.1 -5.7
HABR e 04 41 48.6
HABR e 04 42 00.6
HABR eSS SS 04 46 37.9 -4.8
HABR eSSS 04 50 02.3
HABR pmax pmax
comp=N,26nm,1.4s
HABR pmax pmax
comp=E,23nm,1.0s
HABR pmax pmax
comp=Z,48nm,1.5s,mb5.2
Z19A **T-Link Ranch,** 78.06 51 ⇓P P 04 31 47.0 +0.3
baz=78
L11A **Cat Creek Ranc** 78.07 40 ⇑P P 04 31 46.4 0.0
baz=78,SNR=40
O13A **Hicks Ranch, I** 78.11 43 ⇑P P 04 31 46.8 +0.1
baz=78
JCW **Jim Creek** 78.11 32 P P 04 31 46.7 +0.2
X18A **Snowflake** 78.13 49 ⇑P P 04 31 47.2 +0.2
baz=78,SNR=17
J10A **Berg Farm, Mel** 78.15 39 ⇑P P 04 31 46.2 -0.6
baz=78,SNR=5.9
T16A **Glen Canyon Da** 78.19 46 ⇑P P 04 31 47.6 +0.4
baz=78,SNR=17
M12A **Wells** 78.19 41 ⇑P P 04 31 46.8 -0.3
baz=78,SNR=36
120A **U Bar Ranch, L** 78.20 51 ⇓P P 04 31 47.6 +0.2
baz=78,SNR=19
E07A **Sunnyside** 78.20 35 ⇓P P 04 31 46.8 -0.3
baz=78
K11A **Parker Ranch,** 78.23 39 ⇑P P 04 31 47.3 0.0
baz=78,SNR=44
RSW **Rattlesnake Hi** 78.25 35 eP P 04 31 47.6 +0.3
R15A **Junction** 78.26 45 ⇑P P 04 31 48.3 +0.7
baz=78,SNR=8.3
HAWA **Hanford** 78.28 35 eP P 04 31 47.4 -0.1
comp=Z,108nm,1.6s,mb5.5
HAWA LR LR
comp=Z,2µm,22.0s,MS5.3
N13A **Wendover, West** 78.34 42 ⇓P P 04 31 47.8 -0.2
baz=78,SNR=15
N13A **Wendover, West** 78.34 42 eP P 04 31 48.0 0.0
comp=Z,94nm,1.1s,mb5.6
F08A **Pendleton** 78.35 36 ⇑P P 04 31 47.6 -0.3
baz=78
Y19A **Nutrioso** 78.38 50 ⇓P P 04 31 49.1 +0.7
baz=78,SNR=57
P14A **Drum Mountains** 78.43 43 ⇑P P 04 31 48.7 +0.2
baz=79,SNR=33
MVU **Marysvale** 78.45 45 PFAKE 04 32 00.0 +11
MVU LR LR
comp=Z,3µm,22.0s,MS5.6
MSU **Marysvale** 78.48 45 eP P 04 31 49.5 +0.7
MSU pmax pmax
comp=Z,146nm,1.7s,mb5.6
MSU **Marysvale** 78.48 45 eP P 04 31 49.5 +0.7
comp=Z,146nm,1.7s,mb5.6
RPW **Rockport** 78.49 32 eP P 04 31 48.3 -0.3
Z20A **Nine Sixteen R** 78.49 51 ⇓P P 04 31 49.5 +0.6
baz=79,SNR=41
I10A **Payette** 78.50 38 ⇓P P 04 31 48.9 +0.1
baz=79,SNR=13
L12A **House Creek Ra** 78.52 40 ⇑P P 04 31 49.0 0.0
baz=79,SNR=24
A05A **Maple Falls** 78.54 32 ⇑P P 04 31 48.0 -0.9
baz=79
B06A **Marblemount** 78.55 32 ⇑P P 04 31 48.0 -0.9
baz=79
W18A **Petrified Fore** 78.56 49 ⇓P P 04 31 49.6 +0.3
baz=79
X19A **St. Johns** 78.56 49 ⇑P P 04 31 49.7 +0.3

baz=79,SNR=30
ETW **Entiat** 78.58 34 eP P 04 31 49.3 +0.2
Q15A **Fillmore** 78.59 44 ⇑P P 04 31 49.5 +0.2
baz=79,SNR=15
U17A **Shonto** 78.59 47 ⇑P P 04 31 50.1 +0.6
baz=79,SNR=33
E08A **Dider Farm, El** 78.60 35 ⇓P P 04 31 48.9 -0.3
baz=79
221A **Mesquite Ranch** 78.61 52 ⇓P P 04 31 50.2 +0.5
baz=79,SNR=13
M13A **Montello** 78.64 41 ⇓P P 04 31 49.5 -0.1
baz=79,SNR=24
M13A **Montello** 78.64 41 eP P 04 31 49.5 -0.1
comp=Z,41nm,1.4s,mb5.2
T17A **Navajo Res., N** 78.69 47 ⇓P P 04 31 50.6 +0.6
baz=79,SNR=76
V18A **Ganado** 78.69 48 ⇓P P 04 31 50.5 +0.4
baz=79,SNR=45
MFID **Camas Ranch** 78.71 39 ⇓P P 04 31 49.6 -0.3
baz=79,SNR=32
MDJ **Mudanjiang** 78.74 322 P P 04 31 50.9 +0.8
MDJ PP PP 04 34 48.7 +0.1
MDJ S S 04 41 50.2 +2.0
MDJ pmax pmax
comp=Z,12nm,1.2s,mb4.7
MDJ pmax pmax
comp=Z,190nm,4.9s
MDJ LR LR
comp=N,550nm,20.4s,MS5.2
MDJ LR LR
comp=E,880nm,20.4s,MS5.2
MDJ LR LR
comp=Z,1µm,29.4s
MDJ **Mudanjiang** 78.74 322 eP P 04 31 51.6 +1.5
comp=Z,31nm,1.8s,mb4.9
MDJ LR LR
comp=Z,2µm,22.0s,MS5.3
GAMB **Gambell** 78.77 1 eP P 04 31 49.9 +0.1
comp=Z,29nm,1.6s,mb5.0
F09A **S2 Ranch, Elgi** 78.79 36 ⇓P P 04 31 50.0 -0.4
baz=79
W19A **Sanders** 78.81 49 ⇓P P 04 31 50.9 +0.2
baz=79
H10A **Noah's Angus R** 78.82 38 ⇓P P 04 31 49.8 -0.7
baz=79,SNR=44
121A **Cookes Peak, D** 78.84 52 ⇓P P 04 31 51.4 +0.5
baz=79,SNR=19
R16A **Teasdale** 78.84 45 ⇓P P 04 31 51.7 +0.9
baz=79,SNR=32
K12A **Draper Farm, C** 78.86 40 ⇑P P 04 31 50.5 -0.3
baz=79,SNR=29
DUG **Dugway** 78.91 43 ⇓P P 04 31 51.1 0.0
baz=79,SNR=22
DUG **Dugway** 78.91 43 eP P 04 31 50.7 -0.4
DUG pmax pmax
comp=Z,54nm,1.4s,mb5.3
DUG MLR MLR
comp=Z,2µm,21.0s,MS5.4
DUG **Dugway** 78.91 43 eP P 04 31 50.7 -0.4
comp=Z,54nm,1.4s,mb5.3
DUG LR LR
comp=Z,2µm,21.0s,MS5.4
I11A **Placerville** 78.91 38 ⇓P P 04 31 50.8 -0.2
baz=79,SNR=17
P15A **Leamington** 78.94 44 ⇑P P 04 31 51.4 0.0
baz=79
S17A **Black Ridge (B** 79.00 46 ⇑P P 04 31 51.4 -0.3
baz=79,SNR=53
N14A **Grayback Hills** 79.00 42 ⇓P P 04 31 51.4 -0.2
baz=79,SNR=13
G10A **Bishop Farm, J** 79.00 37 ⇑P P 04 31 51.0 -0.5
baz=79,SNR=20
Y20A **Horse Springs,** 79.00 50 ⇑P P 04 31 52.6 +0.8
baz=79,SNR=57
PMR **Palmer** 79.01 12 eP P 04 31 50.6 -0.5
PMR pmax pmax
comp=Z,108nm,1.8s,mb5.5
PMR **Palmer** 79.01 12 eP P 04 31 50.6 -0.5
comp=Z,108nm,1.8s,mb5.5
D08A **Wollman Farm,** 79.02 35 ⇓P P 04 31 51.2 -0.4
baz=79,SNR=6.7
J12A **Stokes Ranch,** 79.07 39 ⇑P P 04 31 51.9 0.0
baz=79,SNR=57
U18A **Rough Rock, Ch** 79.07 47 ⇓P P 04 31 52.4 +0.3
baz=79,SNR=35
TTA **Tatalina** 79.12 8 eP P 04 31 52.2 +0.4
E09A **Wood Farm, Sta** 79.12 35 ⇑P P 04 31 51.5 -0.6
baz=79
BGU **Big Grassy Mou** 79.14 42 eP P 04 31 52.8 +0.4
comp=Z,39nm,1.6s,mb5.1
L13A **Double Diamond** 79.16 41 ⇑P P 04 31 52.5 0.0
baz=79,SNR=14
222A **Williams Famil** 79.17 52 ⇓P P 04 31 52.8 0.0
baz=79
O15A **The Old Anders** 79.18 43 ⇓P P 04 31 52.5 -0.1
baz=79
X20A **Quemado** 79.20 50 ⇓P P 04 31 53.4 +0.5
baz=79,SNR=26
M14A **Sheep Mountain** 79.23 42 ⇓P P 04 31 52.9 0.0
baz=79,SNR=69
Z21A **St. Cloud Mine** 79.26 51 ⇑P P 04 31 54.0 +0.8
baz=79,SNR=79
NLU **North Lily Min** 79.27 43 eP P 04 31 53.5 +0.4
comp=Z,65nm,1.9s,mb5.2
DIV **Divide** 79.29 13 eP P 04 31 52.3 -0.4
comp=Z,17nm,1.0s,mb4.9
H11A **Donnelly** 79.32 38 ⇑P P 04 31 52.7 -0.5
baz=80,SNR=35
OD2 **Odessa Site #2** 79.33 34 eP P 04 31 53.3 +0.1
V19A **Window Rock** 79.33 48 ⇑P P 04 31 54.0 +0.5
baz=80,SNR=9.6
I12A **Atlanta** 79.34 39 ⇓P P 04 31 53.5 +0.1
baz=80,SNR=40
D09A **Jones Farm, Ri** 79.36 35 ⇑P P 04 31 52.9 -0.5
baz=80
Q16A **Castle Valley** 79.36 45 ⇑P P 04 31 54.3 +0.7
baz=80,SNR=18
K13A **Stover Farm, H** 79.37 40 ⇓P P 04 31 53.7 +0.1
baz=80,SNR=28
P16A **Fountain Green** 79.38 44 ⇑P P 04 31 54.3 +0.6
baz=80,SNR=7.9
T18A **Mexican Hat** 79.41 47 ⇓P P 04 31 54.4 +0.5
baz=80,SNR=148
BMRM **Bremner River** 79.42 14 eP P 04 31 53.3 0.0
comp=Z,134nm,1.6s,mb5.6
R17A **Hanksville Air** 79.44 45 ⇓P P 04 31 54.0 -0.1
baz=80,SNR=64
A07A **Ashnola River,** 79.44 32 ⇓P P 04 31 53.4 -0.5
baz=80,SNR=6.1
U19A **Dine' College,** 79.48 48 ⇓P P 04 31 54.8 +0.4
baz=80,SNR=50
122A **Conniff Cattle** 79.51 52 ⇓P P 04 31 55.2 +0.7
baz=80,SNR=12
TMUT **Trail Mountain** 79.53 44 eP P 04 31 55.7 +1.1
comp=Z,76nm,1.3s,mb5.5
G11A **Walters Elk Ra** 79.56 37 ⇑P P 04 31 54.0 -0.5
baz=80,SNR=28
Y21A **Point of Rocks** 79.57 50 ⇓P P 04 31 55.7 +0.8
baz=80,SNR=34
B08A **Colville Reser** 79.58 33 ⇑P P 04 31 53.5 -1.0
baz=80,SNR=6.7
L14A **Malta** 79.58 41 ⇓P P 04 31 54.5 -0.2
baz=80,SNR=15
S18A **Hurst Farm, Bl** 79.58 46 ⇓P P 04 31 54.9 0.0
baz=80,SNR=18
NOQ **North Oquirrh** 79.59 43 eP P 04 31 55.3 +0.4
comp=Z,36nm,1.1s,mb5.2
MPU **Maple Canyon** 79.60 44 eP P 04 31 55.4 +0.6
comp=Z,42nm,1.4s,mb5.2
223A **Chaparral, Ant** 79.65 53 ⇓P P 04 31 55.5 +0.2
baz=80
HLID **Hailey** 79.66 39 ⇓P P 04 31 55.3 +0.2
baz=80,SNR=75
HLID **Hailey** 79.66 39 eP P 04 31 55.2 +0.1
HLID LR LR
comp=Z,1µm,21.0s,MS5.2
X21A **Alamocita Cree** 79.68 50 ⇑P P 04 31 56.1 +0.6
baz=80,SNR=30
E10A **Myers Farm, Un** 79.69 36 ⇓P P 04 31 54.2 -1.0
baz=80
J13A **Cove Ranch, Pi** 79.72 40 ⇑P P 04 31 55.6 +0.2
baz=80,SNR=80
HVU **Hansel Valley** 79.75 42 eP P 04 31 56.1 +0.5
HVU pmax pmax
comp=Z,37nm,1.3s,mb5.2
HVU **Hansel Valley** 79.75 42 eP P 04 31 56.1 +0.4
comp=Z,37nm,1.3s,mb5.2
Z22A **Elephant Butte** 79.77 51 ⇓P P 04 31 56.5 +0.5

baz=80,SNR=18
O16A Springville 79.78 43 ⇑P P 04 31 55.9 0.0
baz=80,SNR=12
V20A Brimhall 79.79 49 ⇓P P 04 31 56.2 +0.1
baz=80,SNR=12
M15A Larsen Ranch, 79.79 42 ⇑P P 04 31 55.7 -0.3
baz=80,SNR=5.6
C09A Chrisman Ranch 79.81 34 ⇓P P 04 31 55.2 -0.7
baz=80
T19A Beclabito 79.86 47 ⇓P P 04 31 56.7 +0.2
baz=80,SNR=37
NJ2 Nanjing 79.87 307 *e*P **P 04 31 57.8 +1.3**
NJ2 pP pP 04 32 08.4 +10
NJ2 PP PP 04 35 01.3 +3.1
NJ2 S S 04 41 57.0 -3.8
NJ2 SKS 04 42 04.0
NJ2 pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
NJ2 pmax pmax
comp=Z,230nm,5.8s
NJ2 LR LR
comp=N,330nm,24.4s,MS5.2
NJ2 LR LR
comp=E,1μm,25.9s,MS5.2
NJ2 LR LR
comp=Z,1μm,24.3s,MS5.1
K14A Jones Ranch, D 79.89 41 ⇓P P 04 31 56.2 -0.2
baz=80,SNR=52
F11A Grangeville 79.90 37 ⇓P P 04 31 54.7 -1.6
baz=80,SNR=8.0
SRU San Rafael 79.90 45 ⇓P P 04 31 56.4 -0.2
baz=80,SNR=31
SRU San Rafael 79.90 45 *e*P **P 04 31 56.6 0.0**
SRU pmax pmax
comp=Z,22nm,1.5s,mb4.9
SRU San Rafael 79.90 45 *e*P **P 04 31 56.5 0.0**
comp=Z,22nm,1.5s,mb4.9
H12A Diamond D Ranc 79.92 38 ⇑P P 04 31 56.0 -0.5
baz=80,SNR=18
D10A Wagner Farm, O 79.93 35 ⇓P P 04 31 55.5 -1.0
baz=80
P17A Butcher Ranch, 79.93 44 ⇓P P 04 31 57.0 +0.3
baz=80,SNR=22
R18A Canyonlands Na 79.98 46 ⇑P P 04 31 56.9 -0.1
baz=80,SNR=62
JLU Jordanelle 80.01 43 *e*P **P 04 31 57.3 +0.2**
comp=Z,32nm,1.2s,mb5.1
U20A Newcomb 80.02 48 ⇑P P 04 31 57.6 +0.4
baz=80
I13A Wildhorse Cree 80.03 39 ⇓P P 04 31 57.2 +0.1
baz=80,SNR=19
123A Bell Site, Whi 80.04 52 ⇑P P 04 31 57.8 +0.4
baz=80
DAU Daniels Canyon 80.05 43 *e*P **P 04 31 57.8 +0.5**
Y22A Socorro 80.07 51 ⇑P P 04 31 57.8 +0.2
baz=80,SNR=24
J14A Carey 80.08 40 ⇓P P 04 31 57.9 +0.5
baz=80,SNR=53
W21A San Fidel 80.08 49 ⇑P P 04 31 58.3 +0.7
baz=80,SNR=12
L15A Malad City 80.11 42 ⇓P P 04 31 57.2 -0.4
baz=80,SNR=23
E11A Bogner Ranch, 80.13 36 ⇑P P 04 31 56.1 -1.5
baz=80,SNR=8.3
324A Moseley Ranch, 80.14 54 ⇑P P 04 31 58.0 0.0
baz=80,SNR=30
LAZ Ladron 80.14 50 *e*P **P 04 31 58.7 +0.7**
comp=Z,41nm,1.6s,mb5.1
LENM Lemitar 80.16 51 *e*P **P 04 31 59.1 +1.1**
N16A Rees Ranch, Co 80.16 43 ⇑P P 04 31 58.1 +0.2
baz=80,SNR=12
Y22D IRIS PASSCAL I 80.16 51 ⇓P P 04 31 58.6 +0.5
baz=80
Q18A Rafter H Ranch 80.16 45 ⇓P P 04 31 57.8 -0.2
baz=80,SNR=33
S19A Harvey Farm, M 80.21 47 ⇑P P 04 31 58.3 +0.1
baz=80,SNR=29
KLR Kul'dur 80.24 327 *e*P **P 04 31 52.2 -6.0**
KLR *e* 04 32 06.5
B09A Rice 80.25 34 ⇑P P 04 31 57.3 -0.9
baz=80
M16A Huntsville 80.25 42 ⇑P P 04 31 58.1 -0.3
baz=80,SNR=14
425A Indio Mountain 80.26 54 ⇑P P 04 31 58.9 +0.2
baz=80,SNR=56
O17A Robinson Place 80.28 44 ⇓P P 04 31 59.0 +0.4
baz=80,SNR=37
X22A Bernardo 80.28 50 ⇑P P 04 31 59.7 +0.9
baz=80
H13A Challis 80.29 39 ⇓P P 04 31 58.2 -0.4
baz=80,SNR=42
MNTX Cornudas Mount 80.33 53 *e*P **P 04 31 59.3 +0.3**
comp=Z,50nm,1.4s,mb5.2
MNTX LR LR
comp=Z,973nm,22.0s,MS5.1
Z23A Rita Site, Whi 80.33 52 ⇓P P 04 31 59.1 +0.1
baz=80,SNR=6.1
F12A Elk City 80.35 37 ⇑P P 04 31 58.1 -0.7
baz=80,SNR=47
C10A Spilker Farm, 80.35 35 ⇑P P 04 31 57.9 -0.8
baz=80
K15A Arbon 80.37 41 ⇑P P 04 31 58.8 -0.2
baz=80,SNR=24
224A Cornudas Mount 80.37 53 ⇑P P 04 31 59.4 +0.2
baz=80,SNR=30
R19A Curley Farm, L 80.38 46 ⇑P P 04 31 59.2 +0.1
baz=80,SNR=45
V21A Milan 80.39 49 ⇓P P 04 31 59.6 +0.3
baz=80,SNR=8.8
MVCO Mesa Verde 80.41 47 ⇑P P 04 31 59.7 +0.3
baz=81,SNR=7.3
MVCO Mesa Verde 80.41 47 *e*P **P 04 31 59.5 +0.1**
comp=Z,30nm,1.4s,mb5.0
MVCO LR LR
comp=Z,3μm,22.0s,MS5.5
BNM Barren Site 80.41 51 *e*P **P 04 32 00.1 +0.7**
comp=Z,51nm,1.5s,mb5.2
626A Big Bend Ranch 80.44 56 ⇓P P 04 31 59.8 +0.1
baz=80,SNR=36
HWUT Hardware Ranch 80.44 42 *e*P **P 04 31 59.1 -0.2**
comp=Z,45nm,1.4s,mb5.2
HWUT LR LR
comp=Z,3μm,22.0s,MS5.5
I14A Mackay 80.44 39 ⇓P P 04 31 59.5 +0.2
baz=81,SNR=26
D11A Klaveano Farm, 80.45 36 ⇓P P 04 31 58.1 -1.3
baz=81,SNR=11
LPM Los Pinos Moun 80.48 51 *e*P **P 04 32 00.2 +0.4**
KTH Kantishna Hill 80.49 10 *e*P **P 04 31 57.8 -1.4**
comp=Z,118nm,1.8s,mb5.5
325A Bean Ranch, Si 80.51 54 ⇑P P 04 31 59.9 -0.1
baz=81,SNR=49
E12A Beaver Dam Sad 80.53 37 ⇓P P 04 31 58.8 -1.0
baz=81,SNR=6.9
CHUM Lake Minchumin 80.57 9 *e*P **P 04 31 58.7 -0.9**
comp=Z,52nm,1.4s,mb5.3
PV10 Paradox Valley 80.57 46 *e*P **P 04 32 00.4 +0.2**
comp=Z,730nm,1.3s
N17A Moffit Pass 80.59 43 ⇑P P 04 32 00.2 0.0
baz=81
G13A Cobalt 80.59 38 ⇑P P 04 31 59.8 -0.4
baz=81,SNR=21
W22A Albuquerque 80.64 50 ⇓P P 04 32 01.6 +1.0
baz=81,SNR=8.2
SKAG Skagway 80.66 19 *e*P **P 04 32 01.0 +0.8**
comp=Z,94nm,2.0s,mb5.4
TNA Tin City 80.67 2 *e*P **P 04 32 00.8 +0.7**
comp=Z,106nm,1.8s,mb5.5
PV04 Paradox Valley 80.67 46 *e*P **P 04 32 01.4 +0.7**
B10A Chitwood Farm, 80.67 34 ⇑P P 04 31 59.9 -0.6
baz=81
526A Mary Lane Ranc 80.67 55 ⇓P P 04 32 01.0 0.0
baz=81,SNR=43
124A Stringfield Ra 80.69 52 ⇓P P 04 32 01.2 +0.2
baz=81,SNR=25
Q19A Hogan Spring (80.69 45 ⇑P P 04 32 00.9 +0.1
baz=81,SNR=41
NEW Newport 80.71 34 *e*P **P 04 32 00.2 -0.5**
NEW pmax pmax
comp=Z,22nm,1.8s
NEW MLR MLR
comp=Z,1μm,22.0s
NEW Newport 80.71 34 *e*P **P 04 32 00.2 -0.5**
comp=Z,22nm,1.8s,mb4.8
NEW LR LR
comp=Z,1μm,22.0s,MS5.2
TXAR Lajitas Array 80.72 56 P **P 04 32 01.3 +0.1**
comp=Z,40nm,1.3s,mb5.2,baz=224,slow=3.5,SNR=85
TXAR LR LR 05 01 07.1
comp=Z,1μm,19.5s,MS5.2,baz=70,slow=31
L16A Fish Haven 80.73 42 ⇑P P 04 32 00.6 -0.3
baz=81,SNR=11
Y23A Lovelace Mesa, 80.75 51 ⇑P P 04 32 01.4 +0.1
baz=81,SNR=19
PV01 Paradox Valley 80.79 46 *e*P **P 04 32 01.7 +0.3**
comp=Z,6μm,1.4s
J15A Blackfoot 80.80 40 ⇑P P 04 32 01.7 +0.4
baz=81,SNR=57
CN2 Changchun 80.80 320 *e*P **P 04 32 02.2 +0.9**
CN2 *ep*P pP 04 32 12.3 +9.5
CN2 *e*S S 04 42 10.3 +0.3
CN2 pmax pmax
comp=Z,20nm,1.1s,mb5.0
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,800nm,19.0s,MS5.2
CN2 LR LR
comp=E,500nm,19.0s,MS5.2
CN2 LR LR
comp=Z,600nm,23.0s,MS4.9
O18A Roosevelt 80.81 44 ⇓P P 04 32 01.5 +0.1
baz=81,SNR=8.6
H14A Leadore 80.86 39 ⇓P P 04 32 01.6 +0.1
baz=81,SNR=44
ANMO Albuquerque 80.88 50 P **P 04 32 02.2 +0.3**
comp=Z,15nm,1.1s,mb4.8,baz=233,slow=5.1,SNR=52
ANMO Albuquerque 80.88 50 *de*P **P 04 32 02.0 0.0**
ANMO pmax pmax
comp=Z,55nm,1.7s
ANMO Albuquerque 80.88 50 *e*P **P 04 32 02.3 +0.3**
comp=Z,60nm,1.5s,mb5.3
ANMO LR LR
comp=Z,2μm,21.0s,MS5.4
A10A Northport 80.89 34 ⇓P P 04 32 01.0 -0.6
baz=81
F13A Darby 80.91 38 ⇓P P 04 32 01.0 -0.8
baz=81,SNR=13
X23A Hourglass Bar 80.93 51 ⇑P P 04 32 02.3 +0.1
baz=81
225A Deer Hill, Car 80.93 53 ⇓P P 04 32 02.4 +0.2
baz=81,SNR=28
R20A Redvale 80.94 46 ⇓P P 04 32 02.4 +0.2
baz=81,SNR=21
M17A Scullys Gap (B 80.96 43 ⇓P P 04 32 01.6 -0.6
baz=81,SNR=15
426A McDonald Obser 80.97 55 ⇓P P 04 32 02.6 +0.1
baz=81,SNR=65
V22A San Miguel Ran 80.97 49 ⇑P P 04 32 02.8 +0.4
baz=81,SNR=11
BPAW Bear Paw Mtn. 80.99 10 *e*P **P 04 31 59.2 -2.7**
comp=Z,38nm,1.8s,mb5.0
627A Terlingua Ranc 81.00 56 ⇓P P 04 32 03.0 +0.3
baz=81,SNR=58
D12A Red Ives Fores 81.01 36 ⇑P P 04 32 01.6 -0.8
baz=81,SNR=9.7
Z24A Sheeppen Canyo 81.02 52 ⇓P P 04 32 02.7 0.0
baz=81,SNR=18
K16A Soda Springs 81.04 41 ⇑P P 04 32 02.6 0.0
baz=81,SNR=17
I15A Monteview 81.07 40 ⇓P P 04 32 03.1 +0.4
baz=81,SNR=18
527A Woodward Ranch 81.09 56 ⇓P P 04 32 03.0 -0.1
baz=81,SNR=29
S21A Coal Bank Pass 81.12 47 ⇓P P 04 32 03.7 +0.5
baz=81,SNR=20
G14A Jackson 81.13 38 ⇑P P 04 32 02.7 -0.3
baz=81
L17A Cokeville 81.13 42 ⇑P P 04 32 02.2 -0.9
baz=81,SNR=10
P19A Cripple Cowboy 81.20 45 ⇓P P 04 32 03.5 0.0
baz=81,SNR=22
W23A Wener Place, 81.20 50 ⇑P P 04 32 03.8 +0.1
baz=81,SNR=27
Y24A Capitan 81.21 51 ⇓P P 04 32 03.8 0.0
baz=81,SNR=40
B11A Sandpoint 81.22 35 ⇓P P 04 32 02.6 -0.8
baz=81,SNR=6.5
J16A Bone 81.25 41 ⇑P P 04 32 04.0 +0.3
baz=81,SNR=22
326A Caldwell Ranch 81.26 54 ⇑P P 04 32 03.9 -0.2
baz=81,SNR=17
125A Gardner Draw, 81.28 53 ⇑P P 04 32 03.9 -0.2
baz=81,SNR=24
C12B Naegeli Ranch, 81.31 35 ⇑P P 04 32 03.1 -0.8
baz=82
AHID Auburn Hatcher 81.32 41 *e*P **P 04 32 04.0 -0.1**
comp=Z,39nm,1.2s,mb5.2
AHID LR LR
comp=Z,1μm,19.0s,MS5.2
M18A Lyman 81.33 43 ⇓P P 04 32 03.7 -0.4
baz=82,SNR=14
E13A Victor 81.34 37 ⇑P P 04 32 03.1 -1.0
baz=82,SNR=18
Q20A Ridgley Place, 81.36 46 ⇓P P 04 32 04.2 -0.1
baz=82,SNR=27
628A Black Gap, Mar 81.41 56 ⇓P P 04 32 04.8 0.0
baz=82,SNR=33
O19A Miners Draw (B 81.42 44 ⇓P P 04 32 04.3 -0.4
baz=82
K17A Gardner Place, 81.42 41 ⇑P P 04 32 04.6 -0.1
baz=82,SNR=19
V23A Ortiz Mt. (NFS 81.43 49 ⇓P P 04 32 05.8 +1.0
baz=82,SNR=14
T22A Edith 81.46 48 ⇑P P 04 32 05.2 +0.3
baz=82,SNR=24
226A Malaga, Loving 81.47 54 ⇑P P 04 32 05.2 0.0
baz=82,SNR=34
RRI2 Red Ridge 81.47 41 *e*P **P 04 32 05.3 +0.5**
comp=Z,68nm,1.3s,mb5.4
X24A Lazy VL Ranch, 81.48 51 ⇑P P 04 32 04.7 -0.4
baz=82
F14A Wisdom 81.49 38 ⇓P P 04 32 04.4 -0.5
baz=82,SNR=10
Z25A Roswell 81.49 52 ⇑P P 04 32 05.4 +0.2
baz=82,SNR=32
A11A Hall Mountain, 81.52 34 ⇑P P 04 32 04.8 -0.2
baz=82,SNR=6.4
427A Hayter Ranch, 81.53 55 ⇑P P 04 32 05.7 +0.2
baz=82,SNR=40
P20A De Beque 81.54 45 ⇓P P 04 32 05.2 -0.1
baz=82,SNR=28
D13A Huson 81.54 36 ⇑P P 04 32 03.9 -1.2
baz=82,SNR=26
L18A Fontenelle, Gr 81.59 43 ⇓P P 04 32 05.0 -0.6
baz=82,SNR=7.3
R21A Cimarron 81.61 47 ⇓P P 04 32 06.1 +0.4
baz=82,SNR=14
I16A Newdale 81.63 40 ⇑P P 04 32 06.1 +0.4
baz=82,SNR=32
DLBC Dease Lake 81.64 22 P **P 04 32 04.5 -0.9**
comp=Z,3.9nm,0.9s,mb4.3,baz=212,slow=4.4,SNR=10
N19A John Jarvie Ra 81.66 44 ⇓P P 04 32 05.3 -0.7
baz=82,SNR=5.2
327A Balmorhea Ranc 81.67 54 ⇑P P 04 32 06.1 -0.1
baz=82
B12A Libby 81.67 35 ⇑P P 04 32 05.1 -0.6
baz=82
G15A Dillon 81.67 39 ⇑P P 04 32 05.8 -0.1
baz=82,SNR=46
DCID1 Drake Creek 81.68 41 *e*P **P 04 32 06.5 +0.5**
comp=Z,109nm,1.3s,mb5.6
MSO Missoula 81.70 37 *e*P **P 04 32 04.9 -1.1**
comp=Z,40nm,1.4s,mb5.2
MSO LR LR
comp=Z,1μm,22.0s,MS5.2
DLMT Dillon 81.71 39 *e*P **P 04 32 06.3 +0.2**
comp=Z,56nm,1.3s,mb5.3
E14A Clinton 81.73 37 ⇓P P 04 32 05.6 -0.6
baz=82,SNR=27
528A Cox Ranch, San 81.75 56 ⇓P P 04 32 06.8 +0.1
baz=82,SNR=36
126A Clayton Basin, 81.77 53 ⇑P P 04 32 06.4 -0.3
baz=82,SNR=15
REDW Red Top Meadow 81.77 41 *e*P **P 04 32 06.4 0.0**
comp=Z,67nm,1.5s,mb5.3
TPAW Teton Pass 81.77 41 *e*P **P 04 32 06.8 +0.3**
comp=Z,56nm,1.2s,mb5.4
Y25A Mesa, Roswell 81.77 52 ⇑P P 04 32 06.5 -0.2
baz=82,SNR=27
W24A Lazy 6 Ranch, 81.78 50 ⇑P P 04 32 06.6 0.0
baz=82,SNR=28
C13A Hot Springs 81.80 36 ⇓P P 04 32 05.5 -1.0
baz=82,SNR=15
Q21A Lamborn Mesa, 81.80 46 ⇑P P 04 32 07.0 +0.3
baz=82,SNR=22
J17A Brown Place, J 81.86 41 ⇓P P 04 32 06.9 -0.1
baz=82,SNR=19
SNOW Snow King Moun 81.88 41 *e*P **P 04 32 07.4 +0.3**
comp=Z,22nm,1.4s,mb4.9
A12A Yaak River Ran 81.89 34 ⇓P P 04 32 06.4 -0.6
baz=82
K18A Toltan Ranch, 81.93 42 ⇑P P 04 32 07.4 +0.1
baz=82,SNR=46
O20A White River Ci 81.94 45 ⇓P P 04 32 07.2 -0.3
baz=82,SNR=13
M19A Rock Springs 81.97 43 ⇑P P 04 32 07.1 -0.4
baz=82,SNR=12
IMW Indian Meadow 81.98 40 *e*P **P 04 32 08.1 +0.6**
comp=Z,59nm,1.3s,mb5.4
F15A Butte 82.02 38 ⇑P P 04 32 07.4 -0.4
baz=82,SNR=22
LRM Limekiln Ridge 82.04 38 *e*P **P 04 32 07.6 -0.2**
X25A Clemmons Ranch 82.05 51 ⇓P P 04 32 07.6 -0.6
baz=82
Z26A Caprock 82.05 52 ⇓P P 04 32 07.9 -0.2
baz=82,SNR=49
428A Kincaid Ranch, 82.05 55 ⇑P P 04 32 08.5 +0.3
baz=82,SNR=24
LOHW Long Hollow 82.05 41 *e*P **P 04 32 08.1 +0.2**
comp=Z,52nm,1.4s,mb5.3
227A Bennet, Jal 82.08 54 ⇑P P 04 32 07.9 -0.5
baz=82
D14A Greenough 82.08 37 ⇓P P 04 32 06.8 -1.2
baz=82,SNR=22
R22A Saguache, Gunn 82.10 47 ⇑P P 04 32 09.0 +0.7
baz=82,SNR=37
L19A Farson 82.12 43 ⇓P P 04 32 08.0 -0.3
baz=82,SNR=18
G16A Moss Hill, Enn 82.12 39 ⇓P P 04 32 08.1 -0.2
baz=82,SNR=18
CHMT Chamberlain Mo 82.14 37 *e*P **P 04 32 07.8 -0.5**
comp=Z,28nm,1.5s,mb5.0
CHMT *e*PP PP 04 35 15.5 -1.2
QLMT Earthquake Lak 82.15 39 *e*P **P 04 32 09.9 +1.5**
SLMT Seeley Lake 82.18 37 *e*P **P 04 32 07.7 -0.8**
comp=Z,14nm,1.5s,mb4.7
SLMT *e*PP PP 04 35 15.4 -1.5
H16A Russell Place, 82.20 40 ⇑P P 04 32 09.4 +0.8
baz=82,SNR=88
328A Wristen Ranch, 82.21 55 ⇓P P 04 32 08.6 -0.5
baz=82,SNR=12
I17A Pilgrim Ck. 82.22 41 ⇓P P 04 32 09.2 +0.4
baz=82,SNR=8.6
J18A Kendall Valley 82.22 41 ⇓P P 04 32 08.7 -0.2
baz=82,SNR=55
B13A Whitefish 82.24 35 ⇑P P 04 32 07.6 -1.2
baz=82,SNR=9.2
E15A Deer Lodge 82.24 38 ⇑P P 04 32 08.3 -0.6
baz=82,SNR=22
COLA College 82.25 11 *e*P **P 04 32 08.0 -0.4**
COLA pmax pmax
comp=Z,44nm,1.1s,mb5.3
COLA MLR MLR
comp=Z,2μm,22.0s,MS5.5
COLA College 82.25 11 *e*P **P 04 32 08.0 -0.5**
comp=Z,44nm,1.1s,mb5.3
COLA LR LR
comp=Z,2μm,22.0s,MS5.5
N20A Spence Gulch, 82.25 44 ⇓P P 04 32 09.0 0.0
baz=82,SNR=28
Q22A Crested Butte, 82.28 46 ⇑P P 04 32 09.5 +0.3
baz=82,SNR=32
127A Arkansas Junct 82.29 53 ⇑P P 04 32 09.1 -0.3
baz=82,SNR=5.4
BW06 Boulder Array 82.31 42 ⇑P P 04 32 08.6 -0.7
baz=82,SNR=27
BW06 Boulder Array 82.31 42 *e*P **P 04 32 09.2 -0.1**
BW06 LR LR
comp=Z,2μm,20.0s,MS5.5
PDAR Pinedale Array 82.31 42 P **P 04 32 08.8 -0.5**
comp=Z,5.8nm,0.8s,mb4.5,baz=208,slow=2.9,SNR=52
PDAR LR LR 05 02 52.8
comp=Z,2μm,19.9s,MS5.4,baz=250,slow=32
C14A Swan Lake 82.31 36 ⇓P P 04 32 08.1 -1.1
baz=82
YFT Old Faithful 82.32 40 *e*P **P 04 32 11.1 +1.7**
comp=Z,50nm,1.3s,mb5.3
YMR Madison River 82.35 40 *e*P **P 04 32 10.3 +0.8**
comp=Z,126nm,1.5s,mb5.6
SMCO Snowmass 82.37 46 *e*P **P 04 32 10.4 +0.7**
comp=Z,58nm,1.6s,mb5.3
U24A Moreno Valley 82.38 49 ⇓P P 04 32 10.5 +0.7
baz=82
Y26A Elida 82.43 52 ⇑P P 04 32 09.7 -0.5
baz=83,SNR=7.2
BOZ Bozeman (W) 82.44 39 ⇑P P 04 32 09.8 -0.1
baz=83,SNR=39
BOZ Bozeman (W) 82.44 39 *e*P **P 04 32 10.1 +0.2**
BOZ pmax pmax
comp=Z,50nm,1.4s,mb5.2
BOZ MLR MLR
comp=Z,2μm,21.0s,MS5.3
BOZ Bozeman (W) 82.44 39 *e*P **P 04 32 10.1 +0.2**
comp=Z,50nm,1.4s,mb5.3
BOZ LR LR
comp=Z,2μm,21.0s,MS5.3
H17A Grant Village 82.46 40 ⇑P P 04 32 11.2 +1.2
baz=83,SNR=9.3
W25A X Bar L Ranch, 82.48 51 ⇑P P 04 32 10.2 -0.2
baz=83,SNR=14
O21A Pagoda 82.50 45 ⇓P P 04 32 10.0 -0.3
baz=83
F16A Kennard Place, 82.51 39 ⇓P P 04 32 10.2 0.0
baz=83,SNR=15
YNR Norris Junctio 82.55 40 *e*P **P 04 32 12.5 +2.0**
comp=Z,126nm,1.8s,mb5.7
A13A Flathead Natio 82.57 35 ⇑P P 04 32 09.9 -0.6
baz=83
I18A Diamond G Ranc 82.59 41 ⇑P P 04 32 10.6 -0.2
baz=83,SNR=9.8
M20A Sweetwater, Wa 82.60 44 ⇑P P 04 32 10.8 -0.1
baz=83,SNR=24
QIZ Qiongzhong 82.61 292 P **P 04 32 11.5 +0.1**
QIZ S S 04 42 30.8 +1.0
QIZ SS SS 04 47 50.4 -1.5
QIZ pmax pmax
comp=Z,17nm,1.9s,mb4.8
QIZ pmax pmax
comp=Z,210nm,3.8s
QIZ LR LR
comp=E,180nm,22.6s
QIZ LR LR
comp=Z,630nm,23.9s,MS4.9
QIZ Qiongzhong 82.61 292 PFAKE 04 32 20.0 +8.6
QIZ LR LR
comp=Z,277nm,20.0s,MS4.6
V25A Rancho No Teng 82.62 50 ⇑P P 04 32 11.3 +0.1
baz=83
D15A Lincoln 82.63 37 ⇑P P 04 32 10.4 -0.5
baz=83,SNR=30
LKWY Lake 82.65 40 *e*P **P 04 32 12.8 +1.8**
LKWY pmax pmax
comp=Z,78nm,1.4s,mb5.5
LKWY MLR MLR
comp=Z,1μm,19.0s,MS5.3
LKWY Lake 82.65 40 *e*P **P 04 32 12.8 +1.7**
comp=Z,78nm,1.4s,mb5.5
LKWY LR LR
comp=Z,1μm,19.0s,MS5.3
Z27A Tatum 82.65 53 ⇑P P 04 32 10.7 -0.6
baz=83,SNR=16
X26A CR and CF Fran 82.70 51 ⇑P P 04 32 11.0 -0.5
baz=83,SNR=10
N21A Black Mountain 82.71 44 ⇓P P 04 32 11.7 +0.3
baz=83,SNR=42
L20A Wamsutter 82.74 43 ⇑P P 04 32 11.6 0.0
baz=83,SNR=40
SDCO Great Sand Dun 82.79 48 *e*P **P 04 32 12.0 0.0**
comp=Z,31nm,1.5s,mb5.1
SDCO LR LR
comp=Z,1μm,20.0s,MS5.3
K19A Absolon Red Bu 82.79 42 ⇑P P 04 32 10.9 -0.9
baz=83,SNR=21
G17A Pierce Place, 82.82 39 ⇑P P 04 32 12.2 +0.3
baz=83,SNR=8.7
E16A East Helena 82.87 38 ⇑P P 04 32 11.7 -0.4
baz=83,SNR=18
HRY Holter Researc 82.87 38 *e*P **P 04 32 12.3 +0.2**
B14A Marquette Ranc 82.90 36 ⇓P P 04 32 11.0 -1.2
baz=83,SNR=19
WALA Waterton Lakes 82.92 35 *e*P **P 04 32 11.9 -0.4**
comp=Z,0.9nm,1.5s
Y27A Causey 82.92 52 ⇑P P 04 32 12.3 -0.4

baz=83,SNR=31
W26A Owens Ranch, T 82.95 51 ⇑P **P 04 32 12.2 -0.6**
baz=83
C15A Salmond Ranch, 82.97 36 ⇑P **P 04 32 11.7 -1.0**
baz=83,SNR=29
U25A Circle Dot Ran 83.01 49 ⇑P **P 04 32 12.6 -0.5**
baz=83
K20A Yellowstone Ra 83.04 42 ⇑P **P 04 32 12.3 -0.8**
baz=83,SNR=21
A14A Double T Ranch 83.14 35 ⇓P **P 04 32 12.6 -0.8**
baz=83,SNR=17
F17A Fitzpatrick Pl 83.16 39 ⇓P **P 04 32 13.9 +0.2**
baz=83,SNR=23
D16A Dana Ranch, Ca 83.20 38 ⇑P **P 04 32 13.4 -0.4**
baz=83,SNR=21
M21A Separation Pea 83.20 44 ⇑P **P 04 32 13.6 -0.4**
baz=83,SNR=46
V26A Tequesquite Ra 83.22 50 ⇑P **P 04 32 13.4 -0.8**
baz=83,SNR=14
MSTX Muleshoe 83.25 52 ⇑P **P 04 32 14.0 -0.5**
baz=83,SNR=30
X27A F and S Farms, 83.27 52 ⇑P **P 04 32 14.1 -0.4**
baz=83,SNR=16
B15A Bradely Ranch, 83.28 36 ⇑P **P 04 32 12.7 -1.5**
baz=84,SNR=25
E17A Martinsdale 83.32 38 ⇓P **P 04 32 14.1 -0.4**
baz=84,SNR=15
DAWY Dawson 83.32 14 *e*P **P 04 32 14.1 0.0**
RWWY Rawlins 83.34 44 *e*P **P 04 32 14.5 -0.2**
comp=Z,100nm,1.4s,mb5.7
L21A Rawlins 83.36 43 ⇓P **P 04 32 14.3 -0.5**
baz=84,SNR=26
N22A Wattenberg Ran 83.45 45 ⇑P **P 04 32 15.6 +0.3**
baz=84,SNR=30
W27A Bowe Ranch, En 83.47 51 ⇑P **P 04 32 14.8 -0.7**
baz=84,SNR=20
C16A Fuhringer Ranc 83.48 37 ⇓P **P 04 32 14.3 -0.9**
baz=84
U26A Atchley Ranch, 83.50 50 ⇓P **P 04 32 15.3 -0.3**
baz=84,SNR=36
EGAK Eagle 83.52 13 *e*P **P 04 32 14.7 -0.4**
comp=Z,81nm,1.8s,mb5.5
EGAK LR LR
comp=Z,2μm,22.0s,MS5.5
A15A Johnson Ranch, 83.53 35 ⇑P **P 04 32 14.4 -1.1**
baz=84,SNR=27
G18A Lazy EL Ranch, 83.54 40 ⇑P **P 04 32 15.6 0.0**
baz=84,SNR=28
ISCO Idaho Springs 83.59 46 *e*P **P 04 32 16.4 +0.4**
ISCO pmax pmax
comp=Z,53nm,1.6s,mb5.4
ISCO MLR MLR
comp=Z,2μm,20.0s,MS5.4
ISCO Idaho Springs 83.59 46 *e*P **P 04 32 16.4 +0.4**
comp=Z,53nm,1.6s,mb5.4
ISCO LR LR
comp=Z,2μm,20.0s,MS5.4
RLMT Red Lodge 83.63 40 ⇑P **P 04 32 16.3 +0.3**
baz=84,SNR=18
RLMT Red Lodge 83.63 40 *e*P **P 04 32 16.6 +0.5**
comp=Z,62nm,1.5s,mb5.5
RLMT LR LR
comp=Z,889nm,22.0s,MS5.1
GCMT Greycliff 83.70 39 *e*P **P 04 32 17.6 +1.2**
F18A Big Timber 83.73 39 ⇓P **P 04 32 16.8 +0.2**
baz=84,SNR=27
D17A Six Diamond Ra 83.77 38 ⇑P **P 04 32 16.4 -0.3**
baz=84,SNR=56
B16A M & M Farms, S 83.81 36 ⇑P **P 04 32 15.6 -1.4**
baz=84,SNR=12
E18A Harlowton 83.94 38 ⇓P **P 04 32 17.7 +0.1**
baz=84,SNR=6.4
C17A Wharram Farm, 83.96 37 ⇑P **P 04 32 17.1 -0.7**
baz=84,SNR=29
L22A Ellis Ranch, M 84.02 44 ⇑P **P 04 32 18.2 +0.1**
baz=84
COLD Coldfoot 84.02 9 *e*P **P 04 32 18.1 +0.5**
comp=Z,25nm,1.3s,mb5.2
JCT Junction City 84.26 56 *e*P **P 04 32 18.8 -0.9**
JCT pmax pmax
comp=Z,6.0nm,0.6s,mb4.9
JCT MLR MLR
comp=Z,1μm,20.0s,MS5.2
JCT Junction City 84.26 56 *e*P **P 04 32 18.8 -0.9**
comp=Z,6.2nm,0.6s,mb4.9
JCT LR LR
comp=Z,1μm,20.0s,MS5.2
B17A L&G Farms, Che 84.28 37 ⇑P **P 04 32 18.4 -0.9**
baz=84,SNR=21
BILL Bilibino 84.31 353 ⇑*i*P **P 04 32 18.0 -1.1**
BILL *i* 04 32 31.6
BILL *e* 04 35 33.3
BILL *e*S S 04 42 42.1 -2.9
BILL *e*SS SS 04 48 06.9 -8.2
BILL pmax pmax
comp=Z,16nm,1.6s,mb4.9
BILL MLR MLR
comp=Z,300nm,19.0s,MS4.7
BILL Bilibino 84.31 353 *e*P **P 04 32 19.0 0.0**
comp=Z,22nm,1.3s,mb5.1
BILL LR LR
comp=Z,3μm,22.0s,MS5.6
D18A Linhart Farms, 84.31 38 ⇓P **P 04 32 19.3 -0.2**
baz=84,SNR=16
PHWY Pilot Hill 84.35 45 *e*P **P 04 32 19.9 +0.1**
PMSA Palmer Station 84.43 156 PFAKE 04 32 30.0 +10
PMSA LR LR
comp=Z,1μm,19.0s,MS5.3
AMTX Amarillo 84.44 52 *e*P **P 04 32 21.2 +0.7**
AMTX LR LR
comp=Z,2μm,21.0s,MS5.4
A17A Triple J Farms 84.66 36 ⇑P **P 04 32 20.6 -0.7**
baz=85,SNR=19
EGMT Eagleton 84.75 37 ⇑P **P 04 32 20.9 -0.8**
baz=85,SNR=15
EGMT Eagleton 84.75 37 *e*P **P 04 32 21.4 -0.3**
comp=Z,87nm,1.7s,mb5.6
EGMT LR LR
comp=Z,2μm,22.0s,MS5.4
KVTX Kingsville 84.80 60 PFAKE 04 32 30.0 +7.5
KVTX LR LR
comp=Z,562nm,22.0s,MS4.9
B18A Beardsley Farm 84.92 37 ⇓P **P 04 32 21.9 -0.6**
baz=85,SNR=28
A18A Metzger Ranch, 85.14 36 ⇑P **P 04 32 22.6 -1.0**
baz=85,SNR=26
BJT Baijiatuau 85.17 314 *e*P **P 04 32 25.1 +1.1**
BJT pmax pmax
comp=Z,34nm,1.5s
BJT MLR MLR
comp=Z,344nm,21.0s
BJT Baijiatuau 85.17 314 *e*P **P 04 32 25.1 +1.1**
comp=Z,34nm,1.5s,mb5.2
BJT LR LR
comp=Z,344nm,21.0s,MS4.7
BJI Beijing 85.18 314 P **P 04 32 24.9 +0.8**
BJI S S 04 42 44.1 -11
BJI SS SS 04 48 28.6 -0.4
BJI pmax pmax
comp=Z,21nm,1.5s,mb5.0
BJI pmax pmax
comp=Z,290nm,4.0s
BJI LR LR
comp=N,240nm,13.4s
BJI LR LR
comp=E,320nm,20.5s
BJI LR LR
comp=Z,510nm,36.5s
LAO LASA Array 86.24 40 *e*P **P 04 32 29.6 +0.5**
comp=Z,143nm,1.7s,mb5.9
LAO LR LR
comp=Z,775nm,21.0s,MS5.1
RSSD Black Hills 86.50 43 *e*P **P 04 32 30.3 -0.3**
RSSD pmax pmax
comp=Z,42nm,1.4s,mb5.5
RSSD MLR MLR
comp=Z,1μm,21.0s,MS5.3
RSSD Black Hills 86.50 43 *e*P **P 04 32 30.3 -0.3**
comp=Z,42nm,1.4s,mb5.5
RSSD LR LR
comp=Z,1μm,21.0s,MS5.3
OGNE Ogallala 86.56 46 PFAKE 04 32 40.0 +9.1
OGNE LR LR
comp=Z,2μm,22.0s,MS5.4
WMOK Wichita Mounta 86.60 53 *e*P **P 04 32 31.2 -0.1**
WMOK pmax pmax
comp=Z,15nm,1.3s,mb5.1
WMOK MLR MLR
comp=Z,1μm,22.0s,MS5.3
WMOK Wichita Mounta 86.60 53 *e*P **P 04 32 31.2 0.0**
comp=Z,15nm,1.3s,mb5.1
WMOK LR LR
comp=Z,1μm,22.0s,MS5.3
ENH Enshi 86.62 302 PFAKE 04 32 40.0 +8.5
ENH LR LR
comp=Z,443nm,21.0s,MS4.8
HIA Hailar 86.92 323 PFAKE 04 32 40.0 +7.6
HIA LR LR
comp=Z,1μm,22.0s,MS5.3
KULM Kulim 87.23 276 PFAKE 04 32 50.0 +15
KULM LR LR
comp=Z,526nm,21.0s,MS4.9
HKT Hockley 87.30 58 *de*P **P 04 32 33.5 -1.3**
HKT Hockley 87.30 58 *e*P **P 04 32 34.3 -0.6**
comp=Z,54nm,1.6s,mb5.5
HKT LR LR
comp=Z,1μm,21.0s,MS5.2
CBKS Cedar Bluff 87.37 49 PFAKE 04 32 50.0 +15
CBKS LR LR
comp=Z,1μm,20.0s,MS5.3
GYA Guiyang 87.75 298 P **P 04 32 38.0 +1.0**
GYA PP PP 04 36 05.4 +2.6
GYA S S 04 43 19.0 -1.4
GYA pmax pmax
comp=Z,40nm,1.0s,mb5.6
GYA pmax pmax
comp=Z,160nm,5.8s
GYA LR LR
comp=N,690nm,19.8s,MS5.3
GYA LR LR
comp=E,820nm,20.1s,MS5.3
GYA LR LR
comp=Z,940nm,22.6s,MS5.1
MAW Mawson 87.87 199 *e*P **P 04 32 36.4 -0.5**
comp=Z,13nm,0.6s,mb5.3
MAW Mawson 87.87 199 P **P 04 32 35.8 -1.0**
comp=Z,13nm,0.6s,mb5.3,baz=135,slow=5.2,SNR=35
MAW LR LR 05 09 19.5
comp=Z,2μm,20.4s,MS5.6,baz=128,slow=34
MAW Mawson 87.87 199 *e*P **P 04 32 36.8 -0.1**
MAW pmax pmax
comp=Z,4.0nm,0.7s
MAW MLR MLR
comp=Z,3μm,20.0s
MAW Mawson 87.87 199 *e*P **P 04 32 36.8 -0.1**
comp=Z,4.1nm,0.7s,mb4.8
MAW LR LR
comp=Z,3μm,20.0s,MS5.8
INK Inuvik 88.17 14 P **P 04 32 37.6 -0.5**
comp=Z,6.7nm,1.1s,mb4.8,baz=247,slow=5.7,SNR=7.9
INK Inuvik 88.17 14 *e*P **P 04 32 37.7 -0.3**
INK pmax pmax
comp=Z,10.0nm,1.2s
INK Inuvik 88.17 14 *e*P **P 04 32 37.7 -0.3**
comp=Z,9.7nm,1.2s,mb4.9
DGMT Dagmar 88.25 39 ⇑P **P 04 32 38.5 -0.4**
baz=88
DGMT Dagmar 88.25 39 *e*P **P 04 32 39.0 +0.1**
comp=Z,24nm,1.2s,mb5.3
DGMT LR LR
comp=Z,2μm,20.0s,MS5.6
HHC Hu-ho-hao-te 88.73 313 *e*P **P 04 32 42.2 +0.9**
HHC pP pP 04 32 52.8 +10
HHC PP PP 04 36 14.0 +3.6
HHC SKS 04 43 07.6
HHC S S 04 43 24.8 -4.3
HHC SS SS 04 49 20.7 -0.4
HHC pmax pmax
comp=Z,18nm,1.0s,mb5.4
HHC pmax pmax
comp=Z,210nm,5.7s
HHC LR LR
comp=N,180nm,19.0s,MS4.7
HHC LR LR
comp=E,230nm,17.8s,MS4.7
HHC LR LR
comp=Z,300nm,20.7s,MS4.7
NATX Nacogdoches 88.84 57 PFAKE 04 32 50.0 +7.9
NATX LR LR
comp=Z,1μm,20.0s,MS5.3
YAK Yakutsk 88.86 337 *e*P **P 04 32 49.6 +8.2**
YAK *e*S S 04 43 16.9 -13
YAK *e*SSS 04 52 58.8
YAK pmax pmax
comp=Z,94nm,8.9s
YAK smax
comp=N,100nm,8.6s
YAK MLR MLR
comp=Z,202nm,21.0s,MS4.5
YAK MLR MLR
comp=N,151nm,20.0s,MS4.6
YAK MLR MLR
comp=E,180nm,20.0s,MS4.6
YAK Yakutsk 88.86 337 PFAKE 04 32 50.0 +8.6
YAK LR LR
comp=Z,643nm,21.0s,MS5.0
KSU1 Kansas State U 89.75 49 PFAKE 04 33 00.0 +14
KSU1 LR LR
comp=Z,2μm,20.0s,MS5.5
PLCA Paso Flores 89.81 132 P **P 04 32 45.1 -1.5**
comp=Z,2.5nm,1.0s,mb4.5,baz=271,slow=5.0,SNR=5.6
PLCA LR LR 05 05 20.1
comp=Z,684nm,19.3s,MS5.1,baz=227,slow=30
YKA Yellowknife Ar 90.04 23 P **P 04 32 45.5 -1.5**
comp=Z,4.6nm,1.0s,mb4.8,baz=235,slow=4.4,SNR=33
YKA PP PP 04 36 16.6 -3.7
comp=Z,1.0nm,1.2s,baz=257,slow=6.2,SNR=4.3
YKA LR LR 05 08 00.9
comp=Z,157nm,19.3s,MS4.5,baz=5.0,slow=32
YKA Yellowknife Ar 90.04 23 P **P 04 32 45.5 -1.5**
YKA 04 36 16.6
YKA Yellowknife Ar 90.04 23 P **P 04 32 45.5 -1.5**
YKA PP PP 04 36 16.6 -3.7
YKA LR LR 05 08 00.9
TGUH Tegucigalpa,Un 90.22 76 PFAKE 04 33 00.0 +11
TGUH LR LR
comp=Z,649nm,20.0s,MS5.1
MIAR Mount Ida 90.58 54 PFAKE 04 33 00.0 +10
MIAR LR LR
comp=Z,966nm,20.0s,MS5.2
KMI Kunming 90.73 296 P **P 04 32 51.4 +0.3**
KMI PP PP 04 36 25.9 -0.8
KMI S S 04 43 43.1 -5.3
KMI SS SS 04 49 46.8 -3.9
KMI pmax pmax
comp=Z,6.0nm,1.1s,mb4.8
KMI pmax pmax
comp=Z,120nm,7.4s
KMI LR LR
comp=N,110nm,17.6s,MS4.7
KMI LR LR
comp=E,260nm,21.0s,MS4.7
KMI LR LR
comp=Z,520nm,31.6s
TEIG Tepich 90.96 69 PFAKE 04 33 00.0 +7.8
TEIG LR LR
comp=Z,358nm,21.0s,MS4.8
ECSD EROS Data Cent 91.32 45 *e*P **P 04 32 51.2 -2.2**
comp=Z,11nm,1.5s,mb5.0
ECSD LR LR
comp=Z,3μm,22.0s,MS5.7
JTS JuntasAbangare 91.42 80 *ce*P **P 04 32 55.6 +1.1**
JTS JuntasAbangare 91.42 80 PFAKE 04 33 10.0 +15
JTS LR LR
comp=Z,879nm,21.0s,MS5.2
CD2 Chengdu 91.51 302 *e*P **P 04 32 53.8 -0.8**
CD2 PP PP 04 36 34.1 +1.3
CD2 SKS 04 43 21.7
CD2 S S 04 43 48.0 -7.3
CD2 SS SS 04 49 57.5 -4.3
CD2 pmax pmax
comp=Z,20nm,0.8s,mb5.5
CD2 pmax pmax
comp=Z,120nm,5.8s
CD2 LR LR
comp=N,750nm,20.2s,MS5.2
CD2 LR LR
comp=E,590nm,20.2s,MS5.2
CD2 LR LR
comp=Z,350nm,16.6s,MS4.9
CIT Chita 91.65 324 *e*P **P 04 32 56.0 +1.3**
CIT *e* 04 33 08.2
CIT pmax pmax
comp=Z,77nm,2.0s,mb5.7
FFC Flin Flon 92.10 33 *e*P **P 04 32 56.7 0.0**
FFC *e* 04 36 32.2
FFC pmax pmax
comp=Z,5.0nm,1.1s,mb4.8
FFC MLR MLR
comp=Z,1μm,22.0s,MS5.2
FFC Flin Flon 92.10 33 *e*P **P 04 32 56.7 0.0**
comp=Z,4.9nm,1.1s,mb4.8
FFC *e*PP PP 04 36 32.2 -4.6
FFC LR LR
comp=Z,1μm,22.0s,MS5.2
CM31 Chiang Mai Arr 92.33 288 PFAKE 04 33 10.0 +11
CM31 LR LR
comp=Z,333nm,20.0s,MS4.8
CMAR Chiang Mai Arr 92.33 288 P **P 04 32 59.6 +1.0**
comp=Z,0.7nm,0.3s,mb4.4,baz=212,slow=30,SNR=2.6
CMAR LR LR 05 07 40.8
comp=Z,300nm,21.7s,MS4.7,baz=276,slow=31
VBMS Vicksburg 92.34 57 PFAKE 04 33 10.0 +12
VBMS LR LR
comp=Z,900nm,20.0s,MS5.2
CHTO Chiang Mai 92.42 289 PFAKE 04 33 10.0 +11
CHTO LR LR
comp=Z,394nm,22.0s,MS4.8
SYO Syowa Base 92.71 191 ⇓*e*P **P 04 32 56.8 -2.6**
SYO Syowa Base 92.71 191 ⇓*e*P **P 04 33 01.5 +2.1**
LZH Lanzhou 92.93 306 *e*P **P 04 33 02.0 +1.0**
LZH pP pP 04 33 12.4 +10
LZH sP sP 04 33 17.0 +14
LZH PP PP 04 36 47.0 +3.2
LZH SKS 04 43 33.1
LZH *e*S S 04 44 02.0 -5.8
LZH SS SS 04 50 19.0 -2.9
LZH pmax pmax
comp=Z,23nm,1.0s,mb5.6
LZH pmax pmax
comp=Z,130nm,4.0s
LZH LR LR
comp=E,520nm,18.6s
LZH LR LR
comp=Z,800nm,19.8s,MS5.2
SCIA State Center 93.10 47 PFAKE 04 33 10.0 +8.3
SCIA LR LR
comp=Z,2μm,22.0s,MS5.5
AGMN Agassiz Nation 93.33 41 PFAKE 04 33 10.0 +7.5
AGMN LR LR
comp=Z,2μm,19.0s,MS5.5
NNA Nana 93.33 103 PFAKE 04 33 10.0 +6.6
NNA LR LR
comp=Z,313nm,20.0s,MS4.8
CCM Cathedral Cave 93.42 52 PFAKE 04 33 10.0 +6.8
CCM LR LR
comp=Z,1μm,21.0s,MS5.4
LCO Las Campanas 93.64 121 PFAKE 04 33 20.0 +15
LCO LR LR
comp=Z,519nm,20.0s,MS5.0
VNA1 Neumayer--Stat 93.74 175 *e*P **P 04 33 04.4 +0.3**
ULM Lac du Bonnet 93.96 39 P **P 04 33 05.2 -0.2**
comp=Z,1.7nm,0.7s,mb4.6,baz=154,slow=2.7,SNR=3.0
ULM PP PP 04 36 48.5 -2.9
comp=Z,1.7nm,0.6s,baz=316,slow=5.0,SNR=3.6
ULM LR LR 05 10 21.5
comp=Z,2μm,19.4s,MS5.7,baz=242,slow=32
FVM French Village 94.02 52 *e*P **P 04 33 05.5 -0.5**
FVM pmax pmax
comp=Z,7.0nm,1.3s,mb4.9
FVM French Village 94.02 52 *e*P **P 04 33 05.5 -0.4**
comp=Z,7.3nm,1.3s,mb5.0
ULN Ulaanbaatar 94.14 318 *e*P **P 04 33 07.0 +0.7**
ULN pmax pmax
comp=Z,5.0nm,1.2s,mb4.8
ULN MLR MLR
comp=Z,552nm,22.0s,MS5.0
ULN Ulaanbaatar 94.14 318 *e*P **P 04 33 07.0 +0.7**
comp=Z,5.4nm,1.2s,mb4.8
ULN LR LR
comp=Z,552nm,22.0s,MS5.0
SONM Songino Array 94.56 318 P **P 04 33 08.4 +0.2**
comp=Z,0.4nm,0.4s,mb4.2,baz=190,slow=5.4,SNR=4.4
SONM LR LR 05 10 49.0
comp=Z,370nm,21.2s,MS4.8,baz=99,slow=32
TIXI Tiksi 94.78 344 PFAKE 04 33 20.0 +11
TIXI LR LR
comp=Z,874nm,22.0s,MS5.2
BRAL Brewton 94.86 59 PFAKE 04 33 20.0 +10
BRAL LR LR
comp=Z,465nm,20.0s,MS5.0
PLAL Pickwick Lake 95.05 55 PFAKE 04 33 20.0 +9.2
PLAL LR LR
comp=Z,743nm,21.0s,MS5.1
OTAV Otavalo 95.09 91 PFAKE 04 33 20.0 +8.5
OTAV LR LR
comp=Z,249nm,20.0s,MS4.7
LRAL Lakeview Retre 95.42 57 PFAKE 04 33 20.0 +7.5
LRAL LR LR
comp=Z,553nm,21.0s,MS5.0
JFWS Jewell Farm 95.49 47 *e*P **P 04 33 11.4 -1.2**
JFWS pmax pmax
comp=Z,26nm,1.5s,mb5.4
JFWS MLR MLR
comp=Z,2μm,21.0s,MS5.6
JFWS Jewell Farm 95.49 47 *e*P **P 04 33 11.4 -1.2**
comp=Z,26nm,1.5s,mb5.4
JFWS LR LR
comp=Z,2μm,21.0s,MS5.6
WVT Waverly 95.53 54 PFAKE 04 33 20.0 +7.0
WVT LR LR
comp=Z,1μm,20.0s,MS5.4
HDIL Hopedale 95.56 50 PFAKE 04 33 20.0 +7.0
HDIL LR LR
comp=Z,2μm,20.0s,MS5.5
EYMN Ely 96.01 42 PFAKE 04 33 30.0 +15
EYMN LR LR
comp=Z,1μm,21.0s,MS5.4
BCIP Isla Barro Col 96.02 82 PFAKE 04 33 30.0 +14
BCIP LR LR
comp=Z,352nm,22.0s,MS4.8
TRQA Tornquist 96.96 132 PFAKE 04 33 30.0 +10
TRQA LR LR
comp=Z,576nm,20.0s,MS5.1
COWI Conover 97.09 44 PFAKE 04 33 30.0 +10
COWI LR LR
comp=Z,3μm,20.0s,MS5.7
WCI Wyandotte Cave 97.23 52 PFAKE 04 33 30.0 +9.4
WCI LR LR
comp=Z,1μm,21.0s,MS5.4
ZAK Zakamensk 97.23 320 *e*P **P 04 33 20.0 -0.3**
ZAK pmax pmax
comp=Z,2.0nm,1.4s,mb4.3
TLY Talaya 97.35 321 *e*P **P 04 33 22.9 +2.1**
TLY *e* 04 43 59.3
TLY *e*S S 04 44 48.6 +3.1
TLY *e*SS SS 04 51 22.2 -1.9
TLY pmax pmax
comp=Z,1.0nm,0.6s,mb4.4
TLY Talaya 97.35 321 PFAKE 04 33 30.0 +9.2
TLY LR LR
comp=Z,701nm,21.0s,MS5.1
GOGA Godfrey 98.38 58 PFAKE 04 33 40.0 +14
GOGA LR LR
comp=Z,534nm,19.0s,MS5.1
DWPF Disney 98.94 63 PFAKE 04 33 40.0 +11
DWPF LR LR
comp=Z,317nm,20.0s,MS4.8
GLMI Grayling 99.90 46 PFAKE 04 33 40.0 +7.7
GLMI LR LR
comp=Z,1μm,19.0s,MS5.4
AAM Ann Arbor 100.08 49 PFAKE 04 33 40.0 +6.9
AAM LR LR
comp=Z,813nm,22.0s,MS5.2
LPAZ La Paz 100.10 110 PFAKE 04 33 50.0 +17
LPAZ LR LR
comp=Z,227nm,19.0s,MS4.7
ACSO Alum Creek Sta 100.18 51 PFAKE 04 33 50.0 +16
ACSO LR LR
comp=Z,2μm,22.0s,MS5.5
MTDJ Mount Denham 100.31 74 PFAKE 04 33 50.0 +16
MTDJ LR LR
comp=Z,565nm,22.0s,MS5.0
NHSC New Hope 101.02 59 PFAKE 04 33 50.0 +13
NHSC LR LR
comp=Z,639nm,19.0s,MS5.2
BLA Blacksburg 101.58 54 PFAKE 04 33 50.0 +10
BLA LR LR
comp=Z,1μm,20.0s,MS5.4

LSA Lhasa 101.81 298 PFAKE 04 33 50.0 +9.2
LSA LR LR
comp=Z,286nm,22.0s,MS4.8
MCWV Mont Chateau 102.44 52 PFAKE 04 34 00.0 +16
MCWV LR LR
comp=Z,2μm,22.0s,MS5.7
ERPA Erie 102.73 50 PFAKE 04 34 00.0 +15
ERPA LR LR
comp=Z,1μm,20.0s,MS5.4
GTBY Guantanamo Bay 102.91 73 PFAKE 04 34 00.0 +14
GTBY LR LR
comp=Z,321nm,22.0s,MS4.8
CNNC Cliffs of the 103.26 57 PFAKE 04 34 00.0 +13
CNNC LR LR
comp=Z,1μm,20.0s,MS5.4
SSPA Standing Stone 104.08 51 PFAKE 04 34 00.0 +9.1
SSPA LR LR
comp=Z,1μm,20.0s,MS5.5
CBN Corbin 104.12 54 PFAKE 04 34 00.0 +8.9
CBN LR LR
comp=Z,1μm,22.0s,MS5.4
SDV Santo Domingo 104.77 85 PFAKE 04 34 10.0 +16
SDV LR LR
comp=Z,150nm,22.0s,MS4.5
BINY Binghamton 105.69 50 PFAKE 04 38 20.0 +8.7
BINY LR LR
comp=Z,1μm,20.0s,MS5.5
SDDR Presa de Saban 106.27 74 PFAKE 04 38 20.0 +7.0
SDDR LR LR
comp=Z,986nm,21.0s,MS5.3
GRTK Grand Turk 106.86 72 PFAKE 04 38 30.0 +16
GRTK LR LR
comp=Z,497nm,22.0s,MS5.0
LONY Lake Ozonia 106.95 47 PFAKE 04 38 30.0 +16
LONY LR LR
comp=Z,2μm,20.0s,MS5.5
NCB Newcomb 107.15 48 PFAKE 04 38 30.0 +16
NCB LR LR
comp=Z,2μm,22.0s,MS5.7
LBNH Lisbon 108.82 48 PFAKE 04 38 30.0 +13
LBNH LR LR
comp=Z,2μm,20.0s,MS5.8
MKAR Makanchi Array 110.53 315 PKiKP PKiKP 04 38 19.1 -1.1
comp=Z,0.4nm,0.4s,baz=54,slow=4.9,SNR=4.6
PKME Peaks-Kenny Pk 110.73 47 PFAKE 04 38 30.0 +9.4
PKME LR LR
comp=Z,860nm,20.0s,MS5.3
DGAR Diego Garcia 110.75 256 PFAKE 04 38 30.0 +8.4
DGAR LR LR
comp=Z,1μm,21.0s,MS5.5
SJG San Juan 110.91 76 PFAKE 04 38 30.0 +8.3
SJG LR LR
comp=Z,1μm,22.0s,MS5.4
SCHQ Schefferville 112.00 37 PFAKE 04 38 30.0 +7.3
SCHQ LR LR
comp=Z,1μm,20.0s,MS5.4
KURK Kurchatov 112.85 319 PFAKE 04 38 40.0 +16
KURK LR LR
comp=Z,552nm,21.0s,MS5.1
BBSR BB Station 113.86 61 PFAKE 04 38 40.0 +13
BBSR LR LR
comp=Z,555nm,21.0s,MS5.1
GRGR Grenville 114.09 83 PFAKE 04 38 40.0 +12
GRGR LR LR
comp=Z,203nm,19.0s,MS4.7
ANWB Willy Bob 114.94 77 PFAKE 04 38 40.0 +11
ANWB LR LR
comp=Z,356nm,21.0s,MS5.0
FDF Fort de France 115.06 81 PFAKE 04 38 40.0 +10
FDF LR LR
comp=Z,267nm,20.0s,MS4.8
TKM2 Tokmak 2 115.36 311 PFAKE 04 38 40.0 +10
TKM2 LR LR
comp=Z,457nm,22.0s,MS5.0
AAK Ala-Archa 116.19 310 *d i* PKIKP PKPdf 04 38 32.7 +1.5
AAK Ala-Archa 116.19 310 PFAKE 04 38 40.0 +8.8
AAK LR LR
comp=Z,500nm,22.0s,MS5.1
UCH Uchtor 116.20 310 PFAKE 04 38 40.0 +8.8
UCH LR LR
comp=Z,523nm,22.0s,MS5.1
KBS Kingsbay 116.23 359 PFAKE 04 38 40.0 +10
KBS LR LR
comp=Z,382nm,21.0s,MS5.0
SFJD Kangerlussuaq 116.55 22 PFAKE 04 38 40.0 +8.9
SFJD LR LR
comp=Z,1μm,20.0s,MS5.5
EKS2 Erkin-Say 116.72 310 PFAKE 04 38 40.0 +7.8
EKS2 LR LR
comp=Z,363nm,20.0s,MS5.0
AML Almayashu 116.81 310 PFAKE 04 38 40.0 +7.6
AML LR LR
comp=Z,453nm,21.0s,MS5.1
SPITS Spitsbergen Ar 116.84 358 PKP PKPdf 04 38 30.0 -1.5
comp=Z,3.9nm,0.8s,baz=263,slow=3.3,SNR=4.5
NIL Nilore 117.38 300 PFAKE 04 38 50.0 +16
NIL LR LR
comp=Z,101nm,19.0s,MS4.5
BVAR Borovoye Array 117.60 322 PKP PKPdf 04 38 32.9 -0.6
comp=Z,1.2nm,0.7s,baz=46,slow=4.3,SNR=8.8
BRVK Borovoye 117.66 322 *d i* PKIKP PKPdf 04 38 33.1 -0.5
BRVK Borovoye 117.66 322 PFAKE 04 38 50.0 +16
BRVK LR LR
comp=Z,667nm,22.0s,MS5.2
ARU Arti 123.07 328 *i* PKIKP PKPdf 04 38 43.0 -0.9
ARU 04 40 22.6
ARU 04 45 39.6
ARU Arti 123.07 328 PFAKE 04 39 00.0 +16
ARU LR LR
comp=Z,568nm,21.0s,MS5.2
KEV Kevo 124.00 351 PFAKE 04 39 00.0 +15
KEV LR LR
comp=Z,544nm,20.0s,MS5.2
LVZ Lovozero 124.28 347 *c i* PKIKP PKPdf 04 38 44.5 -1.5
LVZ Lovozero 124.28 347 PFAKE 04 39 00.0 +14
LVZ LR LR
comp=Z,581nm,20.0s,MS5.2
ARCES ARCESS Array B 124.41 352 PKP PKPdf 04 38 45.1 -1.0
comp=Z,6.5nm,0.8s,baz=0.0,slow=1.5,SNR=19
APA Apatity 124.82 348 ⇑ *i* PKIKP PKPdf 04 38 47.0 0.0
APA pmax pmax
comp=Z,13nm,1.0s
BORG Borgarnes 127.06 14 PFAKE 04 39 00.0 +8.6
BORG LR LR
comp=Z,2μm,21.0s,MS5.8
ABPO Ambohimpanom 127.29 231 PFAKE 04 39 00.0 +6.8
ABPO LR LR
comp=Z,977nm,20.0s,MS5.5
MSEY Mahe Island 127.47 252 PFAKE 04 39 10.0 +16
MSEY LR LR
comp=Z,716nm,20.0s,MS5.3
SUR Sutherland 130.67 196 PFAKE 04 39 10.0 +11
SUR LR LR
comp=Z,1μm,19.0s,MS5.6
FINES FINESS Array B 131.73 347 PKP PKPdf 04 38 59.6 -0.7
comp=Z,3.2nm,0.8s,baz=72,slow=6.2,SNR=7.4
FINES FINESS Array B 131.73 347 PKP PKPdf 04 38 59.6 -0.7
BOSA Boshof 132.73 203 PFAKE 04 39 10.0 +6.7
BOSA LR LR
comp=Z,1μm,22.0s,MS5.5
RCBR Riachuelo 133.21 113 PFAKE 04 39 20.0 +15
RCBR LR LR
comp=Z,566nm,22.0s,MS5.2
OBN Obninsk 133.86 336 ⇑ *i* PKIKP PKPdf 04 39 04.7 +0.2
OBN *e* 04 39 16.7
OBN *e* 04 41 40.7
OBN *e* SS SS 04 59 19.8 -1.3
OBN pmax pmax
comp=Z,9.0nm,1.1s
OBN Obninsk 133.86 336 *e* PKPdf PKPdf 04 39 03.7 -0.8
OBN LR LR
comp=Z,483nm,21.0s,MS5.2
NB2 NORSAR Subarra 134.12 357 PKPdf PKPdf 04 39 04.3 -0.6
comp=Z,54nm,2.5s,baz=14,slow=1.8
NB2 NORSAR Subarra 134.12 357 PKPdf PKPdf 04 39 04.3 -0.6
baz=14,slow=1.8
NB2 NORSAR Subarra 134.12 357 PKIKP PKPdf 04 39 04.3 -0.6
NB2 NORSAR Subarra 134.12 357 PKPdf PKPdf 04 39 04.3 -0.6
NOA NORSAR Array B 134.12 357 PKP PKPdf 04 39 04.5 -0.4
comp=Z,1.9nm,0.9s,baz=13,slow=4.0,SNR=4.5
NAO01 NORSAR Array S 134.34 357 PFAKE 04 39 20.0 +15
NAO01 LR LR
comp=Z,705nm,21.0s,MS5.4
HFS Hagfors 134.85 355 PKP PKPdf 04 39 05.3 -0.9
comp=Z,4.0nm,0.9s,baz=90,slow=3.0,SNR=7.7

MAK Makhachkala 135.30 317 *i* PKIKP PKPdf 04 39 09.0 +1.4
MAK *e* PPP 04 44 46.9
MAK *e* PS PS 04 52 04.7 -1.7
MAK *e* SSS 05 04 37.0
MAK pmax pmax
comp=Z,128nm,1.3s
MAK LR LR
comp=Z,972nm,23.0s,MS5.5
KONO Kongsberg 135.59 358 PFAKE 04 39 20.0 +12
KONO LR LR
comp=Z,508nm,22.0s,MS5.2
LBTB Lobatse 135.81 205 PFAKE 04 39 20.0 +11
LBTB LR LR
comp=Z,844nm,21.0s,MS5.4
KIV Kislovodsk 137.92 320 *e* PKHKP PKPpre 04 39 05.7
KIV pmax pmax
comp=Z,5.0nm,0.8s
KIV LR LR
comp=Z,529nm,21.0s,MS5.2
KIV Kislovodsk 137.92 320 PFAKE 04 39 20.0 +7.6
KIV LR LR
comp=Z,474nm,20.0s,MS5.2
GNI Garni 138.38 314 PFAKE 04 39 30.0 +17
GNI LR LR
comp=Z,382nm,22.0s,MS5.1
ESK Eskdalemuir 139.32 8 PFAKE 04 39 30.0 +15
ESK LR LR
comp=Z,1μm,20.0s,MS5.6
SOC Sochi 139.92 322 *i* PKIKP PKPdf 04 39 19.7 +3.6
SOC *e* 04 42 18.6
SOC LR LR
comp=Z,980nm,22.0s,MS5.5
AKASG Malin Array Be 140.09 337 PKP PKPdf 04 39 14.6 -1.6
comp=Z,3.4nm,0.9s,baz=27,slow=1.8,SNR=10
AKBB Malin Array Si 140.09 337 *e* PKIKP PKPdf 04 39 15.7 -0.5
ANN Anapa 140.52 325 *e* PKIKP PKPdf 04 39 19.1 +1.9
ANN LR LR
comp=N,600nm,24.0s,MS5.4
ANN LR LR
comp=E,607nm,24.0s,MS5.4
ANN LR LR
comp=Z,412nm,24.0s,MS5.1
LSZ Lusaka 142.78 216 PFAKE 04 39 30.0 +7.9
LSZ LR LR
comp=Z,864nm,21.0s,MS5.5
KWP Kalwaria Pacla 143.19 342 ⇓ PKIKP PKPdf 04 39 18.4 -3.4
KWP Kalwaria Pacla 143.19 342 PFAKE 04 39 30.0 +8.2
KWP LR LR
comp=Z,548nm,21.0s,MS5.3
KWP Kalwaria Pacla 143.19 342 ⇓ *i* P PKPdf 04 39 18.4 -3.4
KIS Kishinev 143.22 334 *e* PKP PKPdf 04 39 20.0 -1.9
KIS LRM 05 34 00.0
comp=Z,700nm,24.0s
WTSB Winterswijk 143.35 360 *e* PKPpre PKPpre 04 39 21.2
comp=Z,18nm,1.9s
OJC Ojcow 143.44 345 *e* PKPdf PKPdf 04 39 18.5 -3.7
OJC *e* SKKSac SKKSac 04 49 22.2 -4.9
OJC *e* SS SS 05 01 10.8 -2.9
OJC L 05 39 17.4
comp=Z,1.2nm,22.9s
OJC Ojcow 143.44 345 *e* PKPdf PKPdf 04 39 18.5 -3.7
OJC *e* SKKSac SKKSac 04 49 22.2 -4.9
OJC *e* SS SS 05 01 10.8 -2.9
KSP Ksiaz 143.59 349 *e* PKIKP PKPdf 04 39 19.8 -2.6
KSP *e* 04 39 32.3
KSP *e* 04 42 37.0
KSP *e* PPS 04 55 07.0
CLL Collm 143.62 353 *e* PKPbc PKPdf 04 39 19.4 -3.1
CLL Collm 143.62 353 ⇓ PKIKP PKPdf 04 39 19.3 -3.2
CLL *e* 04 39 26.0
CLL *e* 04 42 40.0
CLL pmax pmax
comp=Z,6.0nm,1.1s
CLL MLR MLR
comp=Z,600nm,21.3s,MS5.3
CLL Collm 143.62 353 ⇓ *i* PKPpre PKPpre 04 39 19.3
comp=Z,6.0nm,1.1s
CLL *i* PKPdf PKPdf 04 39 22.5 0.0
comp=Z,25nm,1.7s
CLL *e* PKiKP PKiKP 04 39 26.0 +0.1
CLL *es* PKiKP 04 39 40.0
CLL *e* PP PP 04 42 40.0 +6.3
CLL *e* PPP 04 45 42.0
CLL *e* SKKSac SKKSac 04 49 19.0 -9.0
CLL *e* PSKS 04 52 51.0
CLL *e* PPS 04 55 06.0
CLL *e* SS SS 05 01 01.0 -15
CLL *e* 05 03 02.0
CLL *e* SSS 05 06 45.0
CLL *e* 05 11 30.0
CLL *e* 05 16 42.0
CLL Lm 05 43 00.0
comp=N,500nm,21.9s
CLL Lm 05 43 00.0
comp=E,300nm,19.5s
CLL Lm 05 43 00.0
comp=Z,600nm,21.3s
STHS Stebnicka Huta 143.80 343 *e* PKIKP PKPdf 04 39 21.2 -1.7
STHS Stebnicka Huta 143.80 343 *e* PKP PKPdf 04 39 21.2 -1.7
BRG Berggiesshubel 143.93 352 *e* PKPbc PKPdf 04 39 20.6 -2.4
BRG Berggiesshubel 143.93 352 *e* PKP PKPdf 04 39 20.2 -2.8
comp=Z,3.7nm,0.9s
BRG *e* 04 39 23.5
comp=Z,12nm,1.1s
BRG PP PP 04 42 41.0 +5.4
BRG SKP 04 43 31.0
BRG *i* 04 49 30.0
BRG SS SS 05 01 34.0 +15
BRG
comp=N,571nm,22.3s
BRG
comp=E,526nm,22.3s
BRG
comp=Z,621nm,23.4s
BRG Berggiesshubel 143.93 352 *e* PKP PKPdf 04 39 20.2 -2.8
BRG *e* 04 39 23.5
BRG PP PP 04 42 41.0 +5.4
BRG SKP 04 43 31.0
BRG *i* 04 49 30.0
BRG SS SS 05 01 34.0 +15
KOLS Kolonicke sedl 143.94 342 *e* PKP PKPdf 04 39 20.1 -3.0
KOLS *e* 04 39 37.6
KOLS LR LR
comp=Z,700nm,27.3s,MS5.3
KOLS Kolonicke sedl 143.94 342 *e* PKP PKPdf 04 39 20.1 -3.0
KOLS *e* 04 39 37.6
UPC Upice 143.96 349 *e* PKIKP PKPdf 04 39 21.0 -2.1
UPC *e* 04 39 33.9
UPC Upice 143.96 349 *e* PKP PKPdf 04 39 21.0 -2.1
UPC *ep* PKP pPKPdf 04 39 33.9 +9.2
CMLA Cha da Macela 143.99 45 PFAKE 04 39 40.0 +16
CMLA LR LR
comp=Z,937nm,22.0s,MS5.5
TSUM Tsumeb 144.04 198 *e* PKPdf PKPdf 04 39 22.5 -1.8
TSUM LR LR
comp=Z,533nm,21.0s,MS5.3
DPC Dobruska-Polom 144.05 349 *e* PKIKP PKPdf 04 39 21.6 -1.7
DPC *e* 04 39 33.2
DPC *e* 04 42 42.9
DPC MLR MLR
comp=Z,1μm,24.1s,MS5.5
DPC Dobruska-Polom 144.05 349 *e* PKP PKPdf 04 39 21.6 -1.7
DPC *ep* PKP pPKPdf 04 39 33.2 +8.3
DPC *e* PP PP 04 42 42.9 +6.5
DPC AMS AMS 05 39 10.0
comp=Z,1μm,24.1s
BUR08 Bucovina Ar. S 144.10 338 *e* PKPdf PKPdf 04 39 22.1 -1.4
BURAR Bucovina Array 144.12 338 ⇑ PKIKP PKPdf 04 39 22.7 -0.8
BURAR Bucovina Array 144.12 338 ⇑ *i* P PKPdf 04 39 22.7 -0.8
PVCC Panska Ves 144.17 351 *e* PKIKP PKPdf 04 39 21.6 -1.9
PVCC MLR MLR
comp=Z,1μm,20.2s,MS5.7
PVCC Panska Ves 144.17 351 *e* PKP PKPdf 04 39 21.6 -1.9
PVCC AMS AMS 05 41 40.0
comp=Z,1μm,20.2s
OKC Ostrava-Krasne 144.17 347 *e* PKIKP PKPdf 04 39 21.9 -1.6
OKC *e* 04 39 34.0
OKC MLR MLR
comp=Z,900nm,22.5s,MS5.5
OKC Ostrava-Krasne 144.17 347 *e* PKP PKPdf 04 39 21.9 -1.6
OKC *ep* PKP pPKPdf 04 39 34.0 +8.9
OKC AMS AMS 05 38 10.0
comp=Z,900nm,22.5s
UZH Uzhgorod 144.21 342 *e* PKIKP PKPdf 04 39 22.0 -1.6

UZH *e* 04 39 35.3
UZH *e* 04 46 25.0
MORC Moravsky Berou 144.36 348 ⇓ PKIKP PKPdf 04 39 22.7 -1.1
MORC Moravsky Berou 144.36 348 P PKPdf 04 39 22.8 -1.0
MORC Moravsky Berou 144.36 348 ⇓ *i* P PKPdf 04 39 22.7 -1.1
UBBA Unterbreizbach 144.38 356 *ep* PKPbc 04 39 34.3
MOX Moxa 144.42 354 *e* PKP PKPdf 04 39 22.7 -1.2
comp=Z,54nm,20.0s
MOX *e* 04 39 36.0
MOX
comp=Z,400nm,20.0s
MOX Moxa 144.42 354 *e* PKPbc PKPdf 04 39 22.3 -1.6
MOX *ep* PKPbc 04 39 34.5
UCC Uccle 144.49 2 PKP PKPdf 04 39 23.0 -1.0
BEBN Eben Emael 144.53 1 PKP PKPdf 04 39 23.5 -0.6
HGN Heimansgroeve 144.56 0 *e* PKiKP PKiKP 04 39 22.3 -5.5
comp=Z,16nm,2.0s
HGN Heimansgroeve 144.56 0 *e* PKPpre pPKPdf 04 39 34.9 +9.2
comp=Z,42nm,1.9s
TANN Tannenbergstha 144.56 353 *e* PKPbc PKPdf 04 39 23.0 -1.2
TANN *ep* PKPbc 04 39 34.9
TRPA Tarpa 144.58 341 ⇑ *i* P PKPdf 04 39 23.2 -1.1
PRA Prague 144.64 351 PKP PKPdf 04 39 23.0 -1.3
PRA pPKP pPKPdf 04 39 36.0 +10
PRA AMS AMS 05 40 00.0
BMR Baia Mare 144.67 340 PKIKP PKPdf 04 39 23.6 -0.8
PRU Pruhonice 144.70 351 *e* PKIKP PKPdf 04 39 23.7 -0.7
PRU *e* 04 39 36.6
PRU *e* 04 42 51.5
PRU MLR MLR
comp=Z,1μm,21.7s,MS5.7
PRU Pruhonice 144.70 351 *e* PKP PKPdf 04 39 23.7 -0.7
PRU *ep* PKP pPKPdf 04 39 36.6 +11
PRU *e* SKP 04 42 51.5
PRU *e* SKKS SKKSac 04 49 29.4 -4.9
PRU AMS AMS 05 42 20.0
comp=Z,1μm,21.7s
MEM Membach 144.72 0 PKP PKPdf 04 39 23.2 -1.2
NKC Novy Kostel 144.74 353 *e* PKIKP PKPdf 04 39 23.6 -0.9
NKC *e* 04 39 36.1
NKC Novy Kostel 144.74 353 *e* PKP PKPdf 04 39 23.6 -0.9
NKC *ep* PKP pPKPdf 04 39 36.1 +10
NKC *e* SKP 04 43 05.1
NKC *e* SKKS SKKSac 04 49 33.9 -0.6
KECS Kecovo 144.86 344 *e* PKIKP PKPdf 04 39 24.3 -0.4
KECS *e* 04 39 36.7
KECS Kecovo 144.86 344 *e* PKP PKPdf 04 39 24.2 -0.5
KECS *e* 04 39 36.7
BCLA Clavier 144.90 1 PKP PKPdf 04 39 23.1 -1.6
VRI Vrincioaia 144.99 335 PKIKP PKPdf 04 39 24.7 -0.4
VRI Vrincioaia 144.99 335 ⇓ *i* P PKPdf 04 39 24.4 -0.7
VRAC Vranov 145.00 348 PKPbc PKPdf 04 39 24.9 -0.1
comp=Z,3.9nm,0.5s,baz=28,slow=3.6,SNR=23
VRAC Vranov 145.00 348 P PKPdf 04 39 24.7 -0.3
VRAC Vranov 145.00 348 ⇓ *i* P PKPdf 04 39 24.7 -0.3
PLOR Plostina 145.03 335 ⇑ PKIKP PKPdf 04 39 25.2 +0.1
PLOR Plostina 145.03 335 ⇑ *i* P PKPbc 04 39 24.9 +0.4
TNS Taunus Mts 145.06 358 *e* PKPbc PKPbc 04 39 24.4 0.0
TNS *ep* PKPbc pPKPbc 04 39 36.6 +11
DOU Dourbes 145.20 2 PKP PKPdf 04 39 25.0 -0.3
GIVF Givet 145.20 2 *e* PKIKP PKPdf 04 39 24.8 -0.5
TREC Trest 145.22 349 *e* PKIKP PKPdf 04 39 25.0 -0.3
TREC *e* 04 39 37.3
TREC MLR MLR
comp=Z,900nm,21.6s,MS5.5
TREC Trest 145.22 349 *e* PKP PKPdf 04 39 25.0 -0.3
TREC *ep* PKP pPKPdf 04 39 37.3 +10
TREC AMS AMS 05 41 20.0
comp=Z,900nm,21.6s
BAIF Baives 145.22 2 *e* PKIKP PKPdf 04 39 25.1 -0.2
ROTZ Rotzenmuhle 145.23 353 *e* PKPbc PKPbc 04 39 24.7 -0.3
ROTZ *ep* PKPbc pPKPbc 04 39 36.8 +10
VYHS Vyhne 145.27 345 *e* PKIKP PKPdf 04 39 25.5 0.0
VYHS *e* 04 39 38.1
VYHS MLR MLR
comp=Z,600nm,33.2s,MS5.2
VYHS Vyhne 145.27 345 *e* PKP PKPdf 04 39 25.5 0.0
VYHS *e* 04 39 38.1
TIRR Tirgusor 145.37 332 ⇓ PKIKP PKPdf 04 39 25.9 +0.1
TIRR Tirgusor 145.37 332 P PKPbc 04 39 26.0 +0.4
TIRR Tirgusor 145.37 332 ⇓ *i* P PKPbc 04 39 25.9 +0.3
KMBO Kilima Mbogo 145.38 245 PKPbc PKPbc 04 39 27.0 +0.4
comp=Z,10nm,1.1s,baz=113,slow=3.4,SNR=18
KMBO Kilima Mbogo 145.38 245 *e* PKPbc PKPbc 04 39 27.3 +0.7
KMBO LR LR
comp=Z,412nm,20.0s,MS5.2
GRA1 Grafenberg Arr 145.41 354 *e* PKPbc PKPbc 04 39 25.5 0.0
GRA1 *ep* PKPbc pPKPbc 04 39 37.6 +11
GRA1 LR LR
comp=Z,800nm,22.0s,MS5.5
GRF Grafenberg Arr 145.41 354 *e* PKPbc PKPbc 04 39 25.5 0.0
GRF *ep* PKPbc pPKPbc 04 39 37.6 +11
GRF *eL* 05 43 04.2
comp=Z,765nm,22.0s
ABH Altenburg 145.43 359 PKP PKPdf 04 39 25.5 -0.2
PSZ Piszkesteto 145.53 344 PKIKP PKPdf 04 39 26.3 +0.4
PSZ Piszkesteto 145.53 344 ⇑ *e* PKP PKPdf 04 39 25.6 -0.3
PSZ Piszkesteto 145.53 344 ⇑ *i* P PKPdf 04 39 25.4 -0.5
SMOL Smolenice 145.58 347 *e* PKP PKPdf 04 39 27.4 +1.4
SMOL *e* 04 39 40.2
SMOL Smolenice 145.58 347 *e* PKP PKPdf 04 39 27.4 +1.4
SMOL *e* 04 39 40.2
MLR Muntele Rosu 145.62 335 PKPbc PKPbc 04 39 26.4 0.0
comp=Z,39nm,1.0s,baz=59,slow=2.1,SNR=51
RUP Ruppelstein 145.62 359 PKP PKPdf 04 39 26.3 +0.3
TOD Tromm 145.66 357 PKP PKPdf 04 39 26.1 0.0
WLF Walferdange 145.66 0 PKP PKPdf 04 39 26.9 +0.8
WLF Walferdange 145.66 0 *e* PKPbc PKPbc 04 39 26.9 +0.6
WLF *ep* PKPbc pPKPbc 04 39 39.4 +11
WLF Walferdange 145.66 0 *e* PKP2 PKPab 04 39 27.4 +0.8
WLF MLR MLR
comp=Z,931nm,20.0s,MS5.6
WLF Walferdange 145.66 0 *e* PKPbc PKPbc 04 39 27.4 +1.1
WLF LR LR
comp=Z,931nm,20.0s,MS5.6
KHC Kasperske Hory 145.68 352 *e* PKP2 PKPab 04 39 26.3 -0.4
KHC *e* 04 42 54.0
KHC MLR MLR
comp=Z,1μm,21.4s,MS5.6
KHC Kasperske Hory 145.68 352 *e* PKP PKPdf 04 39 26.3 +0.2
KHC *ex* x 04 39 30.5
KHC *ep* PKP pPKPdf 04 39 37.3 +10
KHC *e* SKP 04 42 54.0
KHC *e* SKKS SKKSac 04 49 39.9 0.0
KHC AMS AMS 05 42 00.0
comp=Z,1μm,21.4s
DRGR 145.70 340 ⇓ PKP2 PKPab 04 39 26.4 -0.5
DRGR 145.70 340 P PKPdf 04 39 26.7 +0.4
DRGR 145.70 340 ⇓ *i* P PKPdf 04 39 26.4 +0.2
WET Wettzell 145.76 352 *e* PKPbc PKPbc 04 39 26.9 +0.2
WET *ep* PKPbc pPKPbc 04 39 38.9 +11
BR131 Keskin Array S 145.87 321 *e* PKPbc PKPbc 04 39 27.6 +0.3
BR131 LR LR
comp=Z,270nm,19.0s,MS5.0
BRTR Keskin Array B 145.87 321 PKPbc PKPbc 04 39 26.8 -0.5
comp=Z,14nm,0.8s,baz=113,slow=1.9,SNR=68
GEC2 GERESS Array S 145.94 351 *e* PKPbc PKPbc 04 39 26.7 -0.5
GEC2 *ep* PKPbc pPKPbc 04 39 39.9 +11
GERES GERESS Array B 145.94 351 PKPbc PKPbc 04 39 26.6 -0.6
comp=Z,5.6nm,0.9s,baz=41,slow=2.5,SNR=39
ZST Bratislava 145.95 347 *e* PKP PKPdf 04 39 28.4 +1.8
ZST *e* 04 39 41.4
ZST Bratislava 145.95 347 *e* PKP PKPdf 04 39 28.4 +1.8
ZST *e* 04 39 41.4
KTD Kalmit 145.98 358 PKP2 PKPab 04 39 28.3 +0.5
FLN La Foliniere 146.10 8 *e* PKIKP PKPdf 04 39 26.3 -0.6
FLN *e* MLR MLR
comp=Z,2μm,22.0s,MS5.6
FLN La Foliniere 146.10 8 *e* PKPdf PKPdf 04 39 26.3 -0.6
FLN LR LR
comp=Z,2μm,22.0s,MS5.9
BUD Budapest 146.16 344 ⇓ *e* PKP PKPdf 04 39 28.4 +1.4
SGMF Saint Gilles 146.26 11 *e* PKIKP PKPdf 04 39 27.4 +0.2
comp=Z,11nm,0.6s
LDF La Druitiere 146.31 8 *e* PKIKP PKPdf 04 39 27.0 -0.2
LANF Langenberg 146.32 358 PKP PKPdf 04 39 28.3 +1.1
GRR Gorron 146.41 9 *e* PKIKP PKPdf 04 39 27.6 +0.2
CONA Conrad Observa 146.46 348 ⇓ *i* PKPdf PKPdf 04 39 27.4 -0.1
comp=Z,48nm,1.4s,SNR=36
STU Stuttgart 146.47 357 *e* PKPbc PKPbc 04 39 28.5 -0.3
STU *ep* PKPbc pPKPbc 04 39 41.6 +11
STU Stuttgart 146.47 357 *e* PKPbc PKPbc 04 39 28.6 -0.3

QUIF	Quistinic	146.47	12	ePKIKP	PKPdf	04 39 27.3	-0.2
SOP	Sopron	146.56	347⇑	ePKP	PKPdf	04 39 28.7	+1.0
MEZF	Maizieres J'vi	146.81	2	ePKIKP	PKPdf	04 39 29.8	+1.7
MOA	Molln	146.82	350⇑	iPKPdf	PKPdf	04 39 28.4	+0.3
	comp=Z,36nm,1.2s,SNR=16						
FUR	Furstenfeldbru	146.91	354	ePKPbc	PKPbc	04 39 30.4	+0.3
BFO	Black Forest	146.96	358	ePKPbc	PKPbc	04 39 30.0	-0.2
BFO				epPKPbc	pPKPbc	04 39 43.2	+11
THEF	They Montfort	147.10	0	PKP	PKPdf	04 39 30.2	+1.6
ECH	Echery	147.10	359	PKP	PKPdf	04 39 30.0	+1.4
ECH	Echery	147.10	359	ePKP2	PKPab	04 39 30.7	-1.5
ECH				MLR	MLR		
	comp=Z,822nm,21.0s,MS5.5						
ECH	Echery	147.10	359	ePKPbc	PKPbc	04 39 30.7	+0.1
ECH				LR	LR		
	comp=Z,822nm,21.0s,MS5.5						
RJOB	Jochberg	147.15	352	ePKPbc	PKPbc	04 39 30.9	+0.1
RJOB				epPKPbc	pPKPbc	04 39 43.4	+11
SPAK	Spaichingen-Ko	147.16	357	PKP	PKPdf	04 39 30.2	+1.5
ARSA	Arzberg	147.18	348⇓	iPKPdf	PKPdf	04 39 28.0	-0.7
	comp=Z,34nm,1.4s,SNR=12						
HWQ	Hawqa	147.29	311	eP	PKPdf	04 39 30.7	+1.4
HAU	Haudompre	147.32	360	ePKIKP	PKPdf	04 39 28.7	-0.2
HAU				eMLR	MLR		
	comp=Z,761nm,22.2s,MS5.1						
HAU	Haudompre	147.32	360	ePKPdf	PKPdf	04 39 28.7	-0.2
HAU				LR	LR		
	comp=Z,760nm,22.3s,MS5.4						
FELD	Feldberg im Sc	147.42	358	PKP	PKPdf	04 39 30.0	+0.9
PKSM	Moragy	147.44	344	PKIKP	PKPdf	04 39 29.1	-0.1
MOF	Molkenrain	147.47	359	PKP	PKPdf	04 39 30.2	+1.0
HINF	Hinteralfeld	147.51	359	ePKIKP	PKPdf	04 39 29.2	-0.1
RETA	Reutte	147.63	354⇑	iPKPdf	PKPdf	04 39 29.9	+0.4
	comp=Z,34nm,1.3s,SNR=10						
BHL	Bhannes	147.68	310	eP	PKPdf	04 39 31.3	+1.3
KBA	Koelnbreinsper	147.72	351⇑	iPKPdf	PKPdf	04 39 28.6	-1.0
	comp=Z,10nm,0.6s,SNR=6.8						
WTTA	Wattenberg	147.76	353⇑	iPKPdf	PKPdf	04 39 30.3	+0.6
	comp=Z,31nm,1.0s						
PERS	Pernice	147.84	349	iPKPbc	PKPbc	04 39 31.8	-1.0
PERS				i		04 39 44.1	
BBS	Basel-Blauen	147.85	359	PKP2	PKPbc	04 39 32.2	-0.5
DAVA	Damuels	147.91	355⇓	iPKPdf	PKPdf	04 39 30.7	+0.7
	comp=Z,35nm,1.1s,SNR=12						
LOMF	Lomont	147.97	359	PKP	PKPdf	04 39 31.3	+1.2
LOR	Lormes	147.99	3	ePKIKP	PKPdf	04 39 30.2	+0.1
LOR				eMLR	MLR		
	comp=Z,2μm,21.5s,MS5.5						
LOR	Lormes	147.99	3	ePKPdf	PKPdf	04 39 30.2	+0.1
LOR				LR	LR		
	comp=Z,2μm,21.5s,MS5.8						
OBKA	Obir	148.07	349	iPKPdf	PKPbc	04 39 32.9	-0.4
	comp=Z,17nm,1.2s,SNR=8.8						
FETA	Feichten	148.10	354⇓	iPKPdf	PKPdf	04 39 30.4	+0.1
	comp=Z,30nm,1.2s						
ABTA	Abfaltersbach	148.16	352⇑	iPKPdf	PKPdf	04 39 29.1	-1.3
	comp=Z,35nm,1.1s,SNR=22						
SSF	Saint Saulge	148.18	4	ePKIKP	PKPdf	04 39 30.5	+0.1
MFF	Saint Martin d	148.26	9	ePKIKP	PKPdf	04 39 28.9	-1.6
MMAI	Mount Meron Ar	148.27	309	PKPbc	PKPbc	04 39 33.6	-0.8
	comp=Z,8.7nm,0.8s,baz=50,slow=4.6,SNR=12						
PTCC	Patocco-Chiusa	148.37	351	PKP	PKPdf	04 39 30.2	-0.5
AVF	Avril sur Loir	148.44	4	ePKIKP	PKPdf	04 39 30.6	-0.2
LJU	Ljubljana	148.53	349	iPKPdf	PKPdf	04 39 30.2	-0.8
LJU				iPKPbc	PKPbc	04 39 34.1	-0.5
LJU				e		04 39 46.2	
APPI	Appiano	148.58	354	PKP	PKPbc	04 39 33.7	-1.0
SMF	Signal de Mont	148.61	3	ePKIKP	PKPdf	04 39 31.0	-0.1
	comp=Z,48nm,1.6s						
BGF	Bois d'Agland	148.63	5	ePKIKP	PKPdf	04 39 31.1	-0.1
VOY	Vojsko	148.65	350	ePKPdf	PKPdf	04 39 30.2	-1.0
VOY				e		04 39 33.7	
VOY				e		04 39 47.0	
BRMO	Bormio	148.67	355	PKP	PKPbc	04 39 34.9	0.0
JAVS	Javornik	148.75	350	iPKPdf	PKPdf	04 39 30.6	-0.8
JAVS				iPKPbc	PKPbc	04 39 34.2	-0.9
JAVS				e		04 39 46.6	
CSS	Prodhromos	148.81	314	PFAKE		04 39 40.0	+8.2
CSS				LR	LR		
	comp=Z,422nm,20.0s,MS5.2						
TCF	Toulx Ste Croi	148.85	6	ePKIKP	PKPdf	04 39 31.0	-0.5
	comp=Z,54nm,1.6s						
BOJS	Bojanci	148.90	348	iPKPdf	PKPdf	04 39 30.9	-0.7
BOJS				iPKPbc	PKPbc	04 39 35.2	-0.3
BOJS				e		04 39 47.6	
ISP	Isparta	148.96	321	⇓PKP2	PKPbc	04 39 35.5	-0.5
ISP	Isparta	148.96	321	P	PKPbc	04 39 35.7	-0.3
ISP	Isparta	148.96	321	⇓iP	PKPbc	04 39 35.5	-0.5
TRI	Trieste	148.98	350	ePKIKP	PKPdf	04 39 32.1	+0.3
TRI				e		04 39 35.4	
TRI				MLR	MLR		
	comp=Z,720nm,20.0s,MS5.5						
OG01	Vacheresse	149.00	360	PKP	PKPbc	04 39 36.5	+0.7
MABI	Malga Bissina	149.07	354	PKP	PKPbc	04 39 35.1	-0.9
PLDF	La Plantade	149.27	4	PKP	PKPbc	04 39 37.5	+1.0
PYM	Petit Puy Mans	149.45	5	PKP	PKPbc	04 39 37.5	+0.6
RSL	Roselend	149.64	360	PKP	PKPbc	04 39 38.1	+0.7
COLF	Collangettes	149.73	4	PKP	PKPbc	04 39 38.1	+0.5
FRNF	Fournols	149.77	5	PKP	PKPbc	04 39 38.3	+0.6
LPL	La Plagne	149.81	359	ePKIKP	PKPdf	04 39 34.2	+1.1
LPG	La Plagne	149.83	359	ePKIKP	PKPdf	04 39 34.0	+0.9
LBL	Lubilhac	149.98	4	PKP	PKPbc	04 39 39.6	+1.3
SSB	Saint Sauveur	150.01	3	PKP	PKPbc	04 39 38.7	+0.4
SSB	Saint Sauveur	150.01	3	ePKP2	PKPbc	04 39 39.0	+0.7
SSB				MLR	MLR		
	comp=Z,1μm,20.0s,MS5.7						
SSB	Saint Sauveur	150.01	3	ePKPbc	PKPbc	04 39 39.0	+0.7
SSB				LR	LR		
	comp=Z,1μm,20.0s,MS5.7						
CAF	Calviac	150.18	6	ePKIKP	PKPdf	04 39 33.8	+0.1
BNI	Bardonecchia	150.28	360	ePKIKP	PKPbc	04 39 40.1	+1.1
BNI				MLR	MLR		
	comp=Z,1μm,21.0s,MS5.7						
STIP	Stip	150.29	336	ePKP	PKPbc	04 39 38.3	-0.8
ORIF	Oris-en-Rattie	150.41	1	ePKIKP	PKPdf	04 39 34.3	+0.3
ORIF				eMLR	MLR		
	comp=Z,1μm,20.5s,MS5.3						
BOB	Bobbio (Coli)	150.44	356	PKIKP	PKPbc	04 39 39.0	-0.4
VAY	Valandovo	150.44	335	ePKP	PKPbc	04 39 37.5	-2.0
BCI	Bajram Curri	150.49	339	iPN	PKPbc	04 39 39.2	-0.4
BCI	Bajram Curri	150.49	339	iPn	PKPbc	04 39 39.2	-0.4
	SNR=57						
MBDF	Montbardon	150.60	359	ePKIKP	PKPdf	04 39 34.8	+0.5
OCF	Saint Nazaire	150.74	2	PKP	PKPbc	04 39 40.9	+0.8
OG26	St.-Nazaire-De	150.74	2	PKP	PKPbc	04 39 40.9	+0.8
PCAB	Cabril	150.84	22	ePKPdf	PKPdf	04 39 33.8	-1.0
PCAB	Cabril	150.84	22	ePKPbc	PKPbc	04 39 40.2	-0.2
PCAB				iP		04 39 54.0	
PUK	Puka	150.84	339	iPN	PKPdf	04 39 34.9	+0.1
PUK	Puka	150.84	339	iPn	PKPdf	04 39 34.9	+0.1
	SNR=57						
FNVD	Fontana Vidola	150.88	353	PKP	PKPdf	04 39 34.7	-0.1
KRUS	Krusevo	150.93	337	ePKP	PKPbc	04 39 38.9	-1.7
VLC	Villacollemand	150.97	354	PKP	PKPbc	04 39 39.0	-1.6
VLC				LR	LR		
	comp=Z,932nm,21.0s,MS5.6						
BIA	Bitola	151.20	336	ePKP	PKPbc	04 39 39.6	-1.7
OHR	Ohrid	151.32	337	ePKP	PKPbc	04 39 40.6	-0.9
PVRL	Vila Real	151.33	22	ePKPdf	PKPdf	04 39 35.2	-0.4
PVRL	Vila Real	151.33	22	ePKPbc	PKPbc	04 39 42.5	+0.9
PVRL				iP		04 39 55.4	
CING	Cingoli	151.35	350	PKP	PKPdf	04 39 35.1	-0.4
SBF	Sospel	151.45	358	ePKIKP	PKPdf	04 39 35.7	0.0
	comp=Z,42nm,1.0s						
TIR	Tirane	151.46	338	ePKIKP	PKPbc	04 39 41.8	-0.1
TIR				MLR	MLR		
	comp=Z,838nm,20.0s,MS5.5						
CSNT	Castellina Chi	151.54	352	PKP	PKPdf	04 39 38.5	+2.7
MURB	Monte Urbino	151.57	350	PKP	PKPbc	04 39 41.9	-0.2
MVO	Moncorvo	151.68	22	ePKPdf	PKPdf	04 39 35.9	-0.2
MVO	Moncorvo	151.68	22	ePKPab	PKPbc	04 39 42.5	+0.1
MVO				iP		04 39 54.9	
MVO	Moncorvo	151.68	22	eLR	LR	05 30 45.0	
	comp=Z,728nm,22.0s						
PVIS	Viseu	151.75	23	ePKPdf	PKPdf	04 39 36.2	0.0
KBN	Korca	151.75	336	iPN	PKPbc	04 39 39.8	-2.8
KBN	Korca	151.75	336	iPn	PKPbc	04 39 39.8	-2.8
	SNR=57						
ETSF	Etsaut	151.80	11	ePKIKP	PKPdf	04 39 36.7	+0.5
MTE	Manteigas	152.16	23	PFAKE		04 39 50.0	+13
MTE				LR	LR		
	comp=Z,1μm,20.0s,MS5.7						
MTE	Manteigas	152.16	23	ePKPdf	PKPdf	04 39 36.3	-0.6
MTE				iP		04 39 56.3	
MTE	Manteigas	152.16	23	eLR	LR	05 30 22.1	
	comp=Z,1μm,20.0s						
AQU	L'Aquila	152.30	349	ePKIKP	PKPbc	04 39 43.3	-0.5
AQU				MLR	MLR		
	comp=Z,1μm,22.0s,MS5.6						
RGNG	Rignano Grg	152.47	345	PKP	PKPbc	04 39 43.6	-0.6
PMAFR	Mafra	152.66	27	eLR	LR	05 31 09.8	
	comp=Z,811nm,20.0s						
PGF	Pioggiola	152.68	356	ePKIKP	PKPdf	04 39 37.7	+0.1
SRN	Sarande	152.69	337	iPN	PKPdf	04 39 34.2	-3.5
SRN	Sarande	152.69	337	iPn	PKPdf	04 39 34.2	-3.5
	SNR=57						
MIDA	Miranda	152.81	347	PKP	PKPbc	04 39 44.4	-0.5
TOLF	Tolfa	152.82	351	PKP	PKPdf	04 39 37.0	-0.8
LIS	Lisbon	152.92	27	ePP	PP	04 43 28.3	-0.2
LIS				eSS	SS	05 02 59.0	-2.0
LIS				AMS	AMS	05 41 44.8	
	comp=Z,1μm,21.4s,MS5.7						
PMRV	Marv??o	153.05	24	ePKPdf	PKPdf	04 39 39.8	+1.6
PMRV	Marv??o	153.05	24	ePKPab	PKPbc	04 39 45.3	-0.2
PMRV				iP		04 40 07.8	
PMRV	Marv??o	153.05	24	eLR	LR	05 30 40.5	
	comp=Z,744nm,20.0s						
PESTR	Estemoz	153.46	25	eLR	LR	05 31 14.7	
	comp=Z,617nm,22.0s						
EVOP	Sao Brissos	153.52	26	ePP	PP	04 43 31.9	0.0
EVOP				eSS	SS	05 03 05.5	-2.0
EVOP				eSS	SS	05 03 05.5	-2.0
EVOP				AMS	AMS	05 43 37.0	
	comp=Z,1μm,18.6s,MS5.7						
EVO	Evora	153.56	26	ePKPdf	PKPdf	04 39 38.6	-0.4
EVO				iP		04 40 08.8	
PAB	San Pablo	154.03	19	PFAKE		04 39 50.0	+10
PAB				LR	LR		
	comp=Z,629nm,21.0s,MS5.4						
ESDC	Sonseca Array	154.03	18	PKPbc	PKPbc	04 39 48.2	+0.6
	comp=Z,1.2nm,0.6s,baz=297,slow=38,SNR=4.0						
ESDC				PKPab	PKPab	04 40 00.5	-0.5
	comp=Z,0.6nm,0.5s,baz=297,slow=1.3,SNR=5.6						
ESLA	Sonseca Array	154.03	18	PFAKE		04 39 50.0	+10
ESLA				LR	LR		
	comp=Z,3μm,20.0s,MS6.1						
PBAR	Barrancos	154.27	25	ePKPdf	PKPdf	04 39 40.3	+0.3
PBAR	Barrancos	154.27	25	eLR	LR	05 31 36.9	
	comp=Z,772nm,22.0s						
MORF	Marnelete	154.30	28	eLR	LR	05 35 10.4	
	comp=Z,991nm,22.0s						
PCVE	Castro Verde	154.31	27	ePKPdf	PKPdf	04 39 42.5	+2.4
PCVE	Castro Verde	154.31	27	eLR	LR	05 31 42.2	
	comp=Z,1μm,20.0s						
PFVI	Vila Bisbo	154.36	29	eLR	LR	05 35 51.5	
	comp=Z,1μm,22.0s						
TIP	Timpagrande	154.45	341	ePKPbc	PKPbc	04 39 48.2	-0.4
TIP				LR	LR		
	comp=Z,480nm,20.0s,MS5.3						
PVAQ	Vaqueiros	154.64	27	ePKPab	PKPbc	04 39 48.4	-0.6
PVAQ	Vaqueiros	154.64	27	eLR	LR	05 31 46.3	
	comp=Z,932nm,22.0s						
PBDV	Barranco-do-Ve	154.68	27	eLR	LR	05 31 22.4	
	comp=Z,1μm,20.0s						
CEL	Celeste	155.56	342	PFAKE		04 39 50.0	+8.2
CEL				LR	LR		
	comp=Z,542nm,20.0s,MS5.4						
VSL	Villasalto	155.68	354	PFAKE		04 39 50.0	+8.1
VSL				LR	LR		
	comp=Z,986nm,21.0s,MS5.6						
SFS	San Fernando	156.07	26	PFAKE		04 39 50.0	+7.5
SFS				LR	LR		
	comp=Z,2μm,20.0s,MS5.8						
RTC	Rabat Centre	157.84	30	PFAKE		04 40 00.0	+15
RTC				LR	LR		
	comp=Z,522nm,19.0s,MS5.4						
WDD	Wield Dalam	158.19	342	PFAKE		04 40 00.0	+15
WDD				LR	LR		
	comp=Z,811nm,21.0s,MS5.5						
DBIC	Dimbokro	166.10	127	PFAKE		04 40 00.0	+6.1
DBIC				LR	LR		
	comp=Z,916nm,22.0s						
TAM	Tamanrasset	172.44	6	PFAKE		04 40 10.0	+13
TAM				LR	LR		
	comp=Z,867nm,21.0s						
TOA0	Torodi Ar. Sit	175.04	114	ePKPdf	PKPdf	04 39 56.9	-1.7
TORD	Torodi Ar. Bea	175.04	114	PKP	PKPdf	04 39 56.3	-2.3
	comp=Z,10nm,1.3s,baz=320,slow=1.0,SNR=17						
TORD				PKPab	PKPab	04 41 32.0	-1.9
	comp=Z,2.1nm,1.1s,baz=253,slow=5.6,SNR=4.6						
TORD				PP	PP	04 45 23.4	-3.0
	comp=Z,1.5nm,1.2s,baz=288,slow=6.1,SNR=4.0						

*IDC **02** 04:19:45.9±13.0, 58°77'N×157°02'W, h192km±101km, mb3.4/7, mb1 3.5/8, mb1mx3.2/29, mbtmp3.4/8, Error ellipse: s-maj=93.9km s-min=23.3km az=56.0*
*ISCJB **02** 04:19:45.8±0.5, 58°44'N±0°05×156°71'W±0°10, h205km±6km, mb3.6/6, Error ellipse: s-maj=9.3km s-min=7.1km az=37.6*
*NEIC **02** 04:19:47.8, 58°43'N×156°64'W, h206km, MG3.3(AEIC), After AEIC.*

ISC 02 04:19:46.7±0.5, 58°44N±0°05×156°7W±0°1, h200km±6km, n33, σ1°03/37, mb3.6/6, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	Old Harbor	2.20	122	ePn	Pn	04 20 27.6	+0.3
OHAK				eS	Sn	04 20 56.8	-2.0
KDAK	Kodiak Island	2.29	105	ePn	Pn	04 20 28.3	+0.1
KDAK				S	Sn	04 21 00.1	-0.4
KDAK				eS	Sn	04 21 00.9	+0.4
SVW2	Sparrevohn	2.73	12	ePn	Pn	04 20 33.9	+0.8
SDPT	Sand Point	3.72	215	eP	Pn	04 20 45.0	+0.1
SLKM	Skilak Lake	3.91	55	P	Pn	04 20 47.4	+0.1
SEW	Seward	4.09	63	ePn	Pn	04 20 49.5	0.0
SEW				eS	Sn	04 21 34.8	-4.0
SKT	Skwentna	4.40	34	P	Pn	04 20 53.6	+0.3
RC01	Rabbit Creek A	4.42	50	P	Pn	04 20 53.1	-0.5
TT01	Tatalina	4.50	4	P	Pn	04 20 55.2	+0.6
TTA	Tatalina	4.52	4	eP	Pn	04 20 55.5	+0.6
PMR	Palmer	4.95	47	P	Pn	04 20 59.0	-1.3
PPLA	Purkeypile	5.00	25	ePn	Pn	04 21 02.4	+1.5
KNK	Knik Glacier	5.12	51	P	Pn	04 21 02.5	0.0
FALS	False Pass	5.15	229	P	Pn	04 21 03.5	+0.6
SML	Sawmill	5.39	48	P	Pn	04 21 05.5	-0.4
KTH	Kantishna Hill	5.86	26	P	Pn	04 21 12.0	+0.1
CHUM	Lake Minchumin	5.87	19	P	Pn	04 21 12.6	+0.5
DIV	Vide	6.15	59	P	Pn	04 21 16.1	+0.4
BPAW	Bear Paw Mtn.	6.32	24	P	Pn	04 21 16.3	-1.6
AKLV	Akutan Long Va	6.69	234	P	Pn	04 21 22.8	+0.1
UNV	Unalaska Valle	7.14	234	P	Pn	04 21 27.9	-0.8
IM3	Indian Mountai	7.70	9	P	Pn	04 21 35.6	-0.2
PNL	Peninsula	9.01	75	ePn	Pn	04 21 54.7	+1.8
	52nm,0.4s						
DLBC	Dease Lake	13.95	79	P	Pn	04 23 00.3	+4.6
	0.0nm,0.3s,baz=270,slow=12,SNR=3.5						
INK	Inuvik	14.24	37	P	Pn	04 22 55.7	-3.5
	0.4nm,0.3s,baz=237,slow=12,SNR=8.6						
INK	Inuvik	14.24	37	P	Pn	04 22 55.7	-3.6
YKA	Yellowknife Ar	20.87	61	P	P	04 24 12.6	-0.3
	1.9nm,0.6s,baz=278,slow=9.6,SNR=20						
PDAR	Pinedale Array	32.99	97	P	P	04 26 04.8	+2.3
	1.1nm,0.5s,mb3.6,baz=316,slow=4.8,SNR=10						
ULM	Lac du Bonnet	35.26	76	P	P	04 26 22.8	+0.9
	1.9nm,0.3s,mb4.0,baz=304,slow=4.7,SNR=3.0						
SCHQ	Schefferville	46.03	54	P	P	04 27 48.6	-1.1
	1.3nm,0.5s,mb3.5,baz=278,slow=7.1,SNR=3.3						
TXAR	Lajitas Array	46.32	105	P	P	04 27 53.8	+1.4
	0.3nm,0.6s,mb2.8,baz=308,slow=4.8,SNR=6.4						
HFS	Hagfors	61.53	5	P	P	04 29 40.4	-1.5
	1.4nm,0.7s,mb3.7,baz=40,slow=11,SNR=4.7						
EKA	Eskdalemuir Ar	64.61	16	P	P	04 30 00.0	-2.2
	0.8nm,0.4s,mb3.7,baz=332,slow=5.2,SNR=10.0						

DJA 02 04:52:38, 1°67S×121°19E, h29km, MLv3.5/7, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	Ampana	0.88	31	P	Pn	04 52 54.5	0.0
APSI				S	Sb	04 53 08.4	+2.2
PCI	Palu	1.55	299	P	Pn	04 53 03.5	-0.2
LUWI	Luwuk	1.70	68	P	Pn	04 53 06.1	+0.4
LUWI				S	Sn	04 53 28.8	+2.3
MRSI	Marisa	2.26	19	P	Pn	04 53 14.5	+1.0
KDI	Kendari	2.68	148	P	Pn	04 53 20.3	+1.0
SPSI	Sidrap Palu	2.69	212	P	Pn	04 53 16.8	-2.5
KAPI	Kappang	3.62	203	P	Pn	04 53 31.9	-0.2
LBMI	Labuha	6.39	81	P	Pn	04 54 10.3	0.0

*ISCJB **02** 04:59:27.3±0.3, 33°04N±0°02×115°58W±0°02, h8km±3km, Error ellipse: s-maj=3.0km s-min=2.3km az=148.7*
*NEIC **02** 04:59:28.3, 33°03N×115°56W, h14km, ML3.0(PAS), After PAS.*
NEIC Felt at Brawley and Westmorland.
*ECX **02** 04:59:29.0±0.6, 33°03N×115°57W, h9km, MD3.1, ML3.1*

ISC 02 04:59:27.8±0.3, 33°03N±0°02×115°57W±0°02, h11km±3km, n46, σ0°84/69, 26C-21D, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNR	Schaffner Ranc	0.20	146⇓	eP	Pg	04 59 32.9	+0.8
SWSC	Sam W. Stewart	0.21	245	⇑P	Pg	04 59 32.5	+0.3
	baz=0.2,SNR=193						
SWSC				⇓S	Sg	04 59 35.1	0.0
	baz=0.2						
SGL	Mount Signal	0.40	199⇓	eP	Pg	04 59 35.9	+0.3
COA	Coachella	0.41	114⇑	eP	Pg	04 59 36.4	+0.5
YUH	Yuha Desert	0.48	218⇓	eP	Pg	04 59 37.3	+0.1
RUN	Ruthven	0.50	96⇑	eP	Pg	04 59 37.7	+0.1
DVTC	Desert V Tower	0.58	230	⇑P	Pg	04 59 39.2	+0.2
	baz=0.6,SNR=13						
DVTC				⇑S	Sg	04 59 47.1	+0.4
	baz=0.6						
RMX	La Rumorosa	0.60	225⇑	eP	Pg	04 59 40.0	+0.5
RMX				eS	Sg	04 59 48.0	+0.6
GLA	Glamis	0.62	88	⇑S	Sg	04 59 48.5	+0.3
	baz=0.6						
GLA	Glamis	0.62	88⇑	eP	Pg	04 59 39.8	-0.1
GLA	Glamis	0.62	88	ePg	Pg	04 59 39.7	-0.2
GLA				eSg	Sg	04 59 48.8	+0.7
BC3	Big Chuckawall	0.63	9	⇑P	Pg	04 59 40.3	+0.2
	baz=0.6,SNR=84						
BC3				⇑S	Sg	04 59 48.9	+0.6
	baz=0.6						
HAY	Hayfield	0.68	355⇓	eP	Pg	04 59 41.1	+0.2
MONP	Monument Peak	0.73	259	⇑P	Pg	04 59 41.6	-0.2
	baz=0.7,SNR=37						
MONP				⇑S	Sg	04 59 51.4	+0.1
	baz=0.7						
PFO	Pinyon Flat Ob	0.94	308	⇓P	Pg	04 59 44.7	-1.2
	baz=1.0,SNR=24						
PFO				⇓S	Sg	04 59 57.5	-0.6
	baz=1.0						
PFO	Pinyon Flat Ob	0.94	308	ePg	Pg	04 59 44.6	-1.3
PFO				eSg	Sg	04 59 57.7	-0.4
112A	Yuma	0.97	120	⇓P	Pg	04 59 45.4	-1.1
	baz=1.0						
112A				⇓S	Sg	04 59 58.8	-0.3
	baz=1.0						
YMD	Yuma Desert	0.99	118⇑	eP	Pg	04 59 45.9	-0.8
BAR	Barrett	0.99	250	ePg	Pg	04 59 46.2	-0.6
BAR				eSg	Sg	04 59 59.3	-0.5
BELC	Belle Mtn. Jos	1.03	340	⇓P	Pg	04 59 46.7	-0.9
	baz=1.0						
BELC				⇑S	Sg	05 00 00.5	-0.6
	baz=1.0						
Y12C	Blythe	1.13	50	⇑P	Pb	04 59 48.5	-0.9
	baz=1.1,SNR=20						
Y12C				⇑S	Sb	05 00 03.8	-0.3
	baz=1.1						
RDX	Rancho Dawling	1.14	196⇑	eP	Pb	04 59 48.4	-1.2
RDX				eS	Sb	05 00 03.3	-1.1
RDX				⇓e		05 00 10.5	
	comp=N,216nm,0.6s						
CBX	Cerro Bola	1.17	232⇓	eP	Pb	04 59 48.9	-1.0
CBX				eS	Sb	05 00 04.8	-0.3
IRM	Iron Mountain	1.18	17	⇑P	Pb	04 59 48.9	-1.3
	baz=1.2,SNR=38						
IRM				⇓S	Sb	05 00 04.9	-0.6
	baz=1.2						
109C	Camp Elliot, M	1.30	264	Pb	Pb	04 59 51.3	-0.9
	baz=1.3,SNR=8.7						
109C				⇓S	Sb	05 00 07.0	-1.9
	baz=1.3						
113A	Mohawk Valley,	1.54	99	⇑S	Sn	05 00 14.2	-1.0
	baz=1.5						
PBX	Punta Banda	1.61	218⇑	ePN	Pn	04 59 57.6	+1.4
PBX				eS	Sn	05 00 18.2	+1.2
Z13A	Yuma Proving G	1.62	83	⇓Pb	Pb	04 59 57.0	-0.6
	baz=1.6,SNR=19						
Z13A				⇓Sb	Sb	05 00 18.6	+0.6
	baz=1.6						
ECNX	Esteban Cantu	1.62	213	eS	Sn	05 00 18.4	+1.2
Y13A	Salome	1.65	61	⇑Pb	Pb	04 59 57.8	-0.5
	baz=1.6,SNR=11						
Y13A				⇓Sb

TUC	**Tucson**	**4.10**	**99**	*e*Pn	Pn	05 14 49.3	-2.5
MSU	**Marysvale**	**6.13**	**26**	*e*Pg	Pg	05 15 45.1	-1.0
	comp=N,3.5nm,0.6s						
SRU	**San Rafael**	**7.32**	**32**	*e*Pg	Pg	05 16 04.3	-4.5

*IDC **02** 05:36:04.3±2.0,53.°59N×87.°88E,h0km,mb1 3.4/3, mb1mx3.1/28,mbtmp3.4/3,ML3.5/3,Error ellipse: s-maj=17.6km s-min=8.6km az=95.0*
*NNC **02** 05:36:04.5±4.2,53.°56N×87.°60E,h0km,mb3.5,mpv3.1, Error ellipse: s-maj=40.3km s-min=23.4km az=28.0*
ISC 02 05:36:08.1±2.1,53.°7N±0.°1×87.°5E±0.°2,h10km,n10, σ1§26/16,9C-4D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.59**	**281**	Pg	**Pg**	**05 36 37.0**	**-1.7**
	6.2nm,0.3s,baz=102,slow=14,SNR=41						
ZALV				Lg		05 37 02.9	
	16nm,0.3s,baz=103,slow=26,SNR=21						
KURK	**Kurchatov**	**6.19**	**245**	⇑Pn	**Pn**	**05 37 39.9**	**+0.5**
	0.5nm,0.3s						
KURK				⇓Sn	**Sn**	**05 38 50.5**	**+0.4**
	1.8nm,0.5s						
KURK				⇑Lg		05 39 25.6	
	3.1nm,0.6s						
KURK	**Kurchatov**	**6.19**	**245**	Pn	**Pn**	**05 37 41.1**	**+1.7**
	0.7nm,0.3s,baz=64,slow=14,SNR=47						
KURK				Sn	**Sn**	**05 38 53.1**	**+3.0**
	0.2nm,0.3s,baz=140,slow=24,SNR=5.6						
KURK				Lg		05 39 29.1	
	0.2nm,0.3s,baz=55,slow=32,SNR=5.3						
KURBB	**Kurchatov Arra**	**6.29**	**245**	⇓Pn	**Pn**	**05 37 41.2**	**+0.5**
	0.6nm,0.3s,baz=63,slow=13						
KURBB				⇑Sn	**Sn**	**05 38 52.8**	**+0.2**
	1.6nm,0.7s						
KURBB				⇓Lg		05 39 27.5	
	1.1nm,0.5s						
MK31	**Makanchi Array**	**7.63**	**208**	⇑Pn	**Pn**	**05 37 58.1**	**-1.2**
	0.4nm,0.3s,baz=31,slow=10,SNR=5.8						
MK31				⇑Lg		05 40 03.3	
	1.3nm,0.6s,baz=29,slow=33,SNR=3.7						
MKAR	**Makanchi Array**	**7.63**	**208**	Pn	**Pn**	**05 37 58.2**	**-1.0**
	0.6nm,0.3s,baz=27,slow=13,SNR=6.7						
MKAR				Lg		05 40 08.9	
	0.4nm,0.3s,baz=30,slow=35,SNR=4.8						
VOSK	**Vostochnaya**	**9.94**	**271**	⇑Pn	**Pn**	**05 38 32.6**	**+1.8**
	0.8nm,0.7s						
VOSK				⇑Sn	**Sn**	**05 40 19.4**	**-3.0**
	0.9nm,0.5s						
BVA0	**Borovoye Array**	**10.23**	**273**	⇑Sn	**Sn**	**05 40 30.0**	**+0.5**
	0.2nm,0.3s,baz=72,slow=26,SNR=4.6						
BVAR	**Borovoye Array**	**10.23**	**273**	Pn	**Pn**	**05 38 36.1**	**+1.3**
	0.2nm,0.3s,baz=73,slow=15,SNR=2.9						
BVAR				Sn	**Sn**	**05 40 29.6**	**+0.1**
	0.9nm,0.3s,baz=70,slow=25,SNR=8.5						
ZRNK	**Zerenda**	**11.07**	**274**	⇑Pn	**Pn**	**05 38 42.3**	**-3.9**
	0.2nm,0.3s						
ZRNK				⇓Sn	**Sn**	**05 40 49.2**	**-0.8**
	0.6nm,0.3s						

*IDC **02** 05:43:23.8±0.6, 16.°17S×73.°23W,h74km±4km,mb4.0/11, mb1 4.1/14,mb1mx4.0/19,mbtmp4.0/14,MS3.7/3, Ms1 3.7/3,ms1mx3.0/23,Error ellipse: s-maj=19.9km s-min=10.7km az=34.0*
*ISCJB **02** 05:43:24.0±1.1, 16.°08S±0.°08×73.°21W±0.°07,h87km±10km, mb4.3/17,Error ellipse: s-maj=16.0km s-min=7.4km az=36.9*
*NEIC **02** 05:43:25.8±1.0, 16.°14S×73.°23W,h90km±9km,mb4.5/6, Error ellipse: s-maj=14.7km s-min=7.9km az=54.0*
ISC 02 05:43:25.5±1.0,16.°11S±0.°08×73.°22W±0.°07,h85km±9km, h74km±1.4km:pP-P,n39,σ1§02/32,mb4.3/17,Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**4.89**	**93**	P	**Pn**	**05 44 37.4**	**+0.7**
	3.8nm,0.3s,baz=273,slow=9.7,SNR=226						
LPAZ				S	**Sn**	**05 45 32.1**	**+0.2**
	baz=173,slow=14,SNR=1.2						
LPAZ				LR	LR	05 46 26.4	
	comp=Z,194nm,18.2s,baz=240,slow=37						
NNA	**Nana**	**5.40**	**319**	P	**Pn**	**05 44 43.4**	**-0.3**
	7.0nm,0.3s,baz=122,slow=9.7,SNR=13						
NNA				S	**Sn**	**05 45 43.5**	**-1.0**
	26nm,0.3s,baz=217,slow=13,SNR=6.6						
ATAH	**Atahualpa**	**10.26**	**330**	P	**Pn**	**05 45 56.3**	**+6.3**
	0.6nm,0.3s,baz=110,slow=4.4,SNR=7.1						
ATAH				S	**Sn**	**05 47 50.3**	**+7.0**
	baz=291,slow=19,SNR=1.8						
CFAA	**Coronel Fontan**	**16.08**	**164**	P	**Pn**	**05 47 07.9**	**+1.4**
	0.0nm,0.3s,baz=339,slow=11,SNR=11						
CPUP	**Villa Florida**	**17.95**	**127**	P	**Pn**	**05 47 28.0**	**-1.5**
	0.1nm,0.3s,baz=305,slow=12,SNR=5.5						
ROSC	**El Rosal**	**20.86**	**357**	P	**P**	**05 48 02.7**	**+2.0**
	11nm,0.6s,baz=114,slow=7.8,SNR=23						
PLCA	**Paso Flores**	**24.64**	**175**	P	**P**	**05 48 37.7**	**-0.3**
	3.3nm,0.9s,mb3.8,baz=348,slow=10.0,SNR=7.8						
PLCA	**Paso Flores**	**24.64**	**175**	P	**P**	**05 48 37.7**	**-0.3**
SDV	**Santo Domingo**	**24.97**	**6**	P	**P**	**05 48 41.3**	**0.0**
	9.5nm,0.8s,mb4.3,baz=219,slow=16,SNR=12						
SDV				LR	LR	05 59 19.0	
	comp=Z,138nm,19.2s,baz=124,slow=38						
TXAR	**Lajitas Array**	**53.91**	**327**	P	**P**	**05 52 40.0**	**-0.3**
	0.3nm,0.6s,mb3.5,baz=145,slow=9.1,SNR=3.8						
TXAR				pP	pP	05 52 59.1	-2.4
	0.3nm,0.5s,baz=154,slow=8.8,SNR=4.1						
MIAR	**Mount Ida**	**53.97**	**339**	*e*P	**P**	**05 52 40.5**	**-0.2**
	10nm,1.5s,mb4.6						
SDCO	**Great Sand Dun**	**61.57**	**331**	*e*P	**P**	**05 53 34.7**	**+0.8**
	6.4nm,1.0s,mb4.6						
AGMN	**Agassiz Nation**	**67.23**	**344**	*e*P	**P**	**05 54 10.0**	**-0.5**
	4.6nm,0.7s,mb4.4						
PDAR	**Pinedale Array**	**67.44**	**332**	P	**P**	**05 54 12.4**	**+0.3**
	0.3nm,0.7s,mb3.2,baz=153,slow=8.1,SNR=3.3						
NVAR	**Mina Array Bea**	**68.76**	**323**	P	**P**	**05 54 21.1**	**+0.7**
	0.1nm,0.3s,baz=155,slow=6.5,SNR=3.8						
NVAR				pP	pP	05 54 40.8	-1.6
	0.1nm,0.4s,baz=27,slow=45,SNR=2.6						
ULM	**Lac du Bonnet**	**69.02**	**345**	P	**P**	**05 54 21.3**	**-0.4**
	2.5nm,0.5s,mb4.3,baz=145,slow=5.9,SNR=3.3						
RLMT	**Red Lodge**	**69.18**	**334**	*e*P	**P**	**05 54 23.1**	**+0.2**
	1.1nm,0.7s,mb3.8						
LIC	**Lamto**	**71.01**	**77**	*e*P	**P**	**05 54 31.7**	**-3.1**
	111nm,1.7s,mb5.4						
TIC	**Toumodi**	**71.16**	**77**	*e*P	**P**	**05 54 31.7**	**-3.9**
	130nm,1.8s						
DBIC	**Dimbokro**	**71.32**	**77**	P	**P**	**05 54 35.2**	**-1.4**
	4.2nm,0.6s,mb4.4,baz=253,slow=6.8,SNR=6.9						
DBIC	**Dimbokro**	**71.32**	**77**	P	**P**	**05 54 35.2**	**-1.4**
KIC	**Kosan Boka**	**71.33**	**77**	*e*P	**P**	**05 54 35.2**	**-1.5**
	128nm,1.9s,mb5.4						
TORD	**Torodi Ar. Bea**	**79.55**	**73**	P	**P**	**05 55 22.8**	**-0.9**
	13nm,0.8s,mb4.8,baz=256,slow=5.2,SNR=68						
TORD				pP	pP	05 55 42.9	-3.3
	4.2nm,1.1s,baz=256,slow=4.5,SNR=3.4						
YKA	**Yellowknife Ar**	**84.80**	**342**	P	**P**	**05 55 49.5**	**-0.6**
	2.3nm,0.7s,mb4.2,baz=135,slow=5.1,SNR=36						
YKA				pP	pP	05 56 09.3	-3.5
	1.7nm,0.8s,baz=134,slow=5.0,SNR=8.1						
YKA	**Yellowknife Ar**	**84.80**	**342**	P	**P**	**05 55 49.5**	**-0.6**
YKA				pP	pP	05 56 09.3	-3.5
ESDC	**Sonseca Array**	**84.98**	**46**	P	**P**	**05 55 52.3**	**+0.7**
	4.3nm,0.7s,mb4.5,baz=252,slow=5.0,SNR=14						
ESLA	**Sonseca Array**	**84.98**	**46**	*e*P	**P**	**05 55 52.4**	**+0.8**
	1.3nm,1.1s,mb3.8						
TAM	**Tamanrasset**	**86.16**	**65**	*e*P	**P**	**05 55 59.5**	**+1.8**
	8.8nm,1.0s,mb4.6						
DLBC	**Dease Lake**	**87.58**	**334**	*e*P	**P**	**05 56 04.8**	**+1.0**
DLBC				*e*pP	pP	05 56 23.5	-3.2
URZ	**Urewera**	**94.86**	**228**	LR	LR	06 28 31.1	
	comp=Z,109nm,18.7s,baz=8.3,slow=29						
ABKAR	**Akbulak array**	**129.73**	**38**	*e*PKPdf	PKPdf	06 02 25.7	+0.9
ASAR	**Alice Springs**	**132.40**	**214**	PKP	PKPdf	06 02 29.6	-1.1
	0.7nm,0.8s,baz=120,slow=1.9,SNR=6.9						
ZALV	**Zalesovo Beam**	**138.54**	**20**	PKP	PKPdf	06 02 41.1	0.0
	1.4nm,0.6s,baz=288,slow=2.5,SNR=7.7						
ZALV				pPKP	pPKPdf	06 03 01.0	-4.0
	1.6nm,0.7s,baz=316,slow=4.1,SNR=2.9						
ZALV	**Zalesovo Beam**	**138.54**	**20**	PKP	PKPdf	06 02 41.1	0.0
ZALV				pPKP	pPKPdf	06 03 01.0	-4.0
MKAR	**Makanchi Array**	**143.26**	**28**	PKP	PKPdf	06 02 47.8	-2.1
	0.7nm,0.7s,baz=324,slow=3.7,SNR=6.4						
MKAR				pPKP	pPKPdf	06 03 11.0	-2.8
	0.2nm,0.5s,baz=348,slow=3.0,SNR=3.5						
MJAR	**Matsushiro Arr**	**145.49**	**312**	PKPbc	PKPbc	06 02 52.8	-1.5
	1.9nm,0.8s,baz=51,slow=0.7,SNR=6.1						
MJAR				pPKPbc	pPKPbc	06 03 13.1	-4.8
	3.9nm,0.9s,baz=100,slow=1.3,SNR=3.7						
MJAR	**Matsushiro Arr**	**145.49**	**312**	PKPbc	PKPbc	06 02 52.8	-1.5
MJAR				pPKPbc	pPKPbc	06 03 13.1	-4.8
SONM	**Songino Array**	**148.37**	**0**	PKPbc	PKPbc	06 03 02.5	+0.4
	3.6nm,0.6s,baz=319,slow=1.4,SNR=13						
SONM				pPKPbc	pPKPbc	06 03 22.9	-2.9
	3.0nm,0.7s,baz=318,slow=1.5,SNR=9.1						
KSRS	**Korea Array**	**151.70**	**323**	PKPbc	PKPbc	06 03 10.6	+0.1
	3.5nm,0.7s,baz=5.9,slow=2.5,SNR=11						
KSRS				pPKPbc	pPKPbc	06 03 31.1	-3.2
	2.8nm,0.7s,baz=345,slow=2.3,SNR=4.4						

NNC 02 05:59:09.9±33.0,37.°13N×72.°22E,h0km,mb3.9,mpv3.4, 3C-2D,Error ellipse: s-maj=266.5km s-min=199.7km az=166.0,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.11**	**348**	⇑P	Pn	06 00 45.9	+4.5
	1.2nm,0.3s,baz=180,slow=13,SNR=33						
KK31				⇑S	Sn	06 01 55.0	+3.0
	0.3nm,0.3s,baz=185,slow=23						
TKM2	**Tokmak 2**	**6.34**	**23**	⇑P	Pn	06 00 42.0	-2.6
	0.4nm,0.1s						
TKM2				⇓S	Sn	06 01 55.2	-2.4
	1.4nm,0.9s						
AB31	**Akbulak array**	**15.04**	**328**	⇓P	Pn	06 02 45.5	+1.8
	2.4nm,0.9s,baz=246,slow=2.6,SNR=11						

*ISCJB **02** 05:59:38.5±1.2,77.°07N±0.°05×19.°0E±0.°3,h2km±13km, Error ellipse: s-maj=13.0km s-min=6.8km az=156.2*
*CSEM **02** 05:59:41.4±0.1,77.°05N×17.°91E,h10km,ML2.0,Error ellipse: s-maj=14.1km s-min=1.9km az=71.0*
*NAO **02** 05:59:41.9±1.9,77.°10N×18.°72E,h18km±15km,ML2.0*
*BER **02** 05:59:43.2±3.5,77.°16N×19.°42E,h15km±26km,MD2.7, ML2.2,ML2.0(NAO)*
ISC 02 05:59:40.5±1.2,77.°11N±0.°04×18.°8E±0.°4,h5km±14km,n11, σ0§69/19,Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSP	**Hornsund**	**0.74**	**264**	*e*P	**Pg**	**05 59 55.2**	**+0.6**
HSP				*e*S	**Sg**	**06 00 04.3**	**+0.2**
SPA0	**Spitsbergen Ar**	**1.19**	**335**	Pg	**Pg**	**06 00 04.4**	**+1.0**
	baz=151,slow=22						
SPA0				Lg		06 00 19.7	
	baz=153,slow=37						
SPA0	**Spitsbergen Ar**	**1.19**	**335**	Pg	**Pg**	**06 00 04.4**	**+1.1**
	baz=151,slow=20,SNR=2.5						
SPA0				Lg		06 00 19.7	
	baz=153,slow=32						
KBS	**Kingsbay**	**2.32**	**325**	Pn	**Pn**	**06 00 19.2**	**0.0**
KBS				Pg	**Pg**	**06 00 24.6**	**-0.2**
KBS				Lg		06 00 53.8	
KBS	**Kingsbay**	**2.32**	**325**	*e*P	**Pn**	**06 00 19.1**	**0.0**
KBS				*e*Pg	**Pg**	**06 00 24.7**	**-0.1**
KBS				*e*Sg	**Sg**	**06 00 53.5**	**-1.3**
KBS				AML	AML	06 01 02.0	
	comp=Z,37nm,0.4s						
KBS	**Kingsbay**	**2.32**	**325**	*e*P	**Pn**	**06 00 19.1**	**-0.1**
	SNR=55						
BJO	**Bjornoya**	**2.62**	**178**	*e*Pg	**Pg**	**06 00 31.1**	**+0.4**
BJO				*e*Sg	**Sg**	**06 01 03.6**	**-1.0**
BJO				AML	AML	06 01 09.3	
	comp=Z,14nm,0.9s						
BJO	**Bjornoya**	**2.62**	**178**	*e*Pg	**Pg**	**06 00 31.1**	**+0.5**
	SNR=91						
BJO				*e*Sg	**Sg**	**06 01 03.6**	**-0.9**
	comp=Z,14nm,0.9s,SNR=91						
ARA0	**ARCESS Array S**	**7.85**	**162**	Pn	**Pn**	**06 01 35.1**	**+0.1**
	baz=354,slow=11						
ARA0				Sn	**Sn**	**06 02 56.1**	**-7.9**
	slow=22						
ARA0	**ARCESS Array S**	**7.85**	**162**	Pn	**Pn**	**06 01 35.1**	**+0.1**
ARA0				Sn	**Sn**	**06 02 56.1**	**-7.9**
ARA0	**ARCESS Array S**	**7.85**	**162**	Pn	**Pn**	**06 01 35.2**	**+0.2**
	baz=354,slow=11,SNR=4.5						

*ISCJB **02** 06:05:43.9±1.4, 15.°7S±0.°9×175.°6W±0.°5,h305km±18km, mb3.8/6,Error ellipse: s-maj=155.4km s-min=18.8km az=151.7*
*NEIC **02** 06:05:44.7±1.1, 15.°69S×175.°52W,h301km±14km,Error ellipse: s-maj=86.5km s-min=12.9km az=151.0*
*IDC **02** 06:05:44.5±1.4, 15.°85S×175.°42W,h300km±16km,mb3.3/5, mb1 3.7/6,mb1mx3.4/16,mbtmp3.4/6,Error ellipse: s-maj=94.2km s-min=13.7km az=151.0*
ISC 02 06:05:44.7±1.3,15.°8S±0.°9×175.°5W±0.°5,h299km±17km, n11,σ0§29/11,mb3.7/6,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.05**	**64**	P	**Pn**	**06 06 51.0**	**-0.3**
	76nm,0.3s,baz=198,slow=2.2,SNR=82						
AFI				S	**S**	**06 07 45.0**	**+0.2**
	9.7nm,0.3s,baz=341,slow=19,SNR=3.4						
AFI	**Afiamalu**	**4.05**	**64**	*e*Pn	**Pn**	**06 06 51.5**	**+0.1**
AFI				*e*Sn	**S**	**06 07 50.9**	**+6.0**
CTA	**Charters Tower**	**36.58**	**257**	P	**P**	**06 12 22.9**	**-0.1**
	1.2nm,0.4s,mb3.7,baz=84,slow=11,SNR=2.9						
STKA	**Stephens Creek**	**42.10**	**240**	P	**P**	**06 13 08.0**	**-0.2**
	1.2nm,0.5s,mb3.4,baz=108,slow=8.7,SNR=5.2						
STKA	**Stephens Creek**	**42.10**	**240**	P	**P**	**06 13 08.0**	**-0.2**
ASAR	**Alice Springs**	**48.07**	**252**	P	**P**	**06 13 55.3**	**+0.4**
	22nm,0.7s,mb4.6,baz=87,slow=8.1,SNR=279						
NVAR	**Mina Array Bea**	**75.95**	**43**	P	**P**	**06 16 59.2**	**+0.2**
	1.1nm,0.7s,mb3.6,baz=228,slow=10,SNR=6.8						
TXAR	**Lajitas Array**	**82.50**	**57**	P	**P**	**06 17 34.7**	**+0.3**
	0.5nm,0.8s,mb3.3,baz=211,slow=8.8,SNR=5.0						
PDAR	**Pinedale Array**	**83.89**	**43**	P	**P**	**06 17 40.6**	**-0.5**
	1.1nm,0.7s,mb3.8,baz=206,slow=2.5,SNR=9.4						
BRTR	**Keskin Array B**	**145.11**	**319**	PKPbc	PKPbc	06 24 46.9	-0.1
	1.4nm,0.9s,baz=90,slow=3.6,SNR=7.4						
MMAI	**Mount Meron Ar**	**147.18**	**307**	PKPbc	PKPbc	06 24 53.0	-0.2
	0.7nm,0.4s,baz=77,slow=6.2,SNR=2.4						

MEX 02 06:06:41.5±0.5,16.°45N×98.°73W,h20km±24km,MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.58**	**96**	*e*P	Pb	06 06 50.8	-2.1
PNIG				*i* S	Sb	06 06 58.8	-1.9
ACX	**Acapulco**	**1.21**	**290**	*i* P	Pn	06 07 00.7	-2.6
CAIG	**El Cayaco**	**1.59**	**292**	*e*P	Pn	06 07 05.5	-3.1
CAIG				*i* S	Sn	06 07 23.5	-5.1
VHO	**Vista Hermosa**	**2.01**	**72**	*i* P	Pn	06 07 11.6	-2.7
VHO				*i* S	Sn	06 07 35.5	-3.3
PLIG	**Platanillo**	**2.07**	**339**	*i* P	Pn	06 07 12.7	-2.4
PLIG				*i* S	Sn	06 07 36.3	-4.0

CASC 02 06:32:50.0±1.8,8.°52N×82.°98W,h4km,MD4.2,2C-2D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.23**	**306**	⇑*i*P	Pg	06 32 54.8	+0.4
ACR				*e*S	Sg	06 32 59.0	+1.6
BRU2	**Volcan**	**0.40**	**46**	⇓*i*P	Pg	06 32 58.7	+1.0
BAR1		**0.79**	**336**	⇓*i*P	Pg	06 33 05.2	0.0
CNI	**Changuinola**	**1.01**	**27**	⇑*i*P	Pg	06 33 09.5	+0.2
BUS	**Buena Vista**	**1.28**	**323**	*e*P	Pg	06 33 13.5	-1.2
QCR	**Quepos**	**1.48**	**308**	*e*P	Pn	06 33 16.8	-0.6
QCR				*e*S	Sn	06 33 37.7	+0.6
LIO	**Limon**	**1.48**	**358**	*e*P	Pn	06 33 17.9	+0.5
URSC	**Urasca**	**1.53**	**329**	*e*P	Pn	06 33 16.9	-1.2
URSC				*e*S	Sn	06 33 38.5	+0.1
LAJ	**Bijagual**	**1.75**	**320**	*e*P	Pn	06 33 23.9	+2.8
SJS	**Escuela Geolog**	**1.77**	**323**	*e*P	Pn	06 33 21.4	+0.1
CGA2	**Cerro Gallo 2**	**2.09**	**316**	*e*P	Pn	06 33 26.3	+0.5
JCR	**Jicaral**	**2.48**	**302**	*e*P	Pn	06 33 32.0	+0.8
VCR	**Vista de Mar**	**3.06**	**302**	*e*P	Pn	06 33 38.2	-1.0

*IDC **02** 06:39:06.8±0.8,31.°18N×103.°55E,h0km,mb4.1/14, mb1 4.2/16,mb1mx4.1/27,mbtmp4.1/16,ML3.8/2,MS3.4/6, Ms1 3.4/6,ms1mx3.0/35,Error ellipse: s-maj=28.2km s-min=16.1km az=50.0*
*NEIC **02** 06:39:09.3±0.5,31.°18N×103.°55E,h10km,mb4.2/7,Error ellipse: s-maj=9.9km s-min=7.4km az=58.0*
*BJI **02** 06:39:09.4,31.°26N×103.°55E,h14km,mB4.4/2,mb4.6/4, ML3.9/18,Ms3.9/9,Ms7 3.6/6*
*MOS **02** 06:39:09.6±1.0,31.°08N×103.°54E,h33km,mb4.5/11,Error ellipse: s-maj=18.8km s-min=8.7km az=109.2*
ISC 02 06:39:09.1±1.0,31.°22N±0.°03×103.°52E±0.°04,h9km±6km, n55,σ1§18/65,mb4.2/25,MS3.4/6,4C-1D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.37**	**147**	⇑*i*Pg	**Pg**	**06 39 17.4**	**+1.0**
CD2				Sg	**Sg**	**06 39 24.9**	**+3.6**
CD2				smax			
	comp=N,19μm,0.5s						
CD2				smax			
	comp=E,36μm,0.6s						
LZH	**Lanzhou**	**4.86**	**3**	Pg	**Pg**	**06 40 41.4**	**-0.7**
LZH				Sg	**Sg**	**06 41 44.2**	**-0.9**
LZH				smax			
	comp=N,87nm,1.0s						
LZH				smax			
	comp=E,140nm,1.2s						
LZH				LR	LR		
	comp=E,3μm,6.6s						
LZH				LR	LR		
	comp=Z,3μm,7.7s						
ENH	**Enshi**	**5.22**	**99**	*e*Pn	**Pn**	**06 40 27.7**	**+0.3**
	comp=Z,62nm,0.6s						
ENH				*e*Sn	**Sn**	**06 41 29.4**	**+1.7**
XAN	**Xi'an**	**5.35**	**57**	Pn	**Pn**	**06 40 29.8**	**+0.7**
XAN				Pg	**Pg**	**06 40 46.3**	**-5.3**
XAN				Sg	**Sg**	**06 41 55.7**	**-5.2**
XAN				smax			
	comp=N,110nm,0.9s						
XAN				smax			
	comp=E,54nm,0.8s						
XAN				LR	LR		
	comp=N,240nm,6.0s						
XAN				LR	LR		
	comp=E,100nm,7.4s						
XAN				LR	LR		
	comp=Z,91nm,8.4s						
GYA	**Guiyang**	**5.49**	**149**	Pn	**Pn**	**06 40 35.9**	**+4.9**
GYA				smax			
	comp=N,250nm,0.7s						
GYA				smax			
	comp=E,280nm,0.7s						
KMI	**Kunming**	**6.12**	**187**	Pg	**Pn**	**06 40 40.2**	**+0.6**
KMI				Sg	**Sn**	**06 41 52.1**	**+2.3**
KMI				smax			
	comp=N,61nm,1.8s						
KMI				smax			
	comp=E,46nm,1.3s						
KMI				LR	LR		
	comp=N,410nm,9.0s						
KMI				LR	LR		
	comp=E,2μm,10.4s						
KMI				LR	LR		
	comp=Z,250nm,7.5s						
WHN	**Wuhan**	**9.33**	**91**	P	**Pn**	**06 41 23.7**	**-0.1**
WHN				S	**Sn**	**06 43 06.5**	**-2.4**
WHN				LR	LR		
	comp=N,1μm,5.6s						
WHN				LR	LR		
	comp=E,210nm,4.1s						
WHN				LR	LR		
	comp=Z,1μm,6.0s						
SHL	**Shillong**	**11.69**	**244**	*e*PKP	**Pn**	**06 41 55.0**	**-1.1**
NJ2	**Nanjing**	**13.09**	**82**	*e*P	**Pn**	**06 42 19.4**	**+4.1**
NJ2				pP		06 42 22.8	
NJ2				sP		06 42 26.1	
NJ2				PP		06 42 30.1	
NJ2				S	**Sn**	**06 44 47.0**	**+5.9**
NJ2				sS		06 44 52.0	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,30nm,4.8s						
NJ2				LR	LR		
	comp=N,220nm,10.0s						
NJ2				LR	LR		
	comp=E,320nm,11.4s						
NJ2				LR	LR		
	comp=Z,300nm,12.4s						
CMAR	**Chiang Mai Arr**	**13.37**	**199**	Pn	**Pn**	**06 42 18.1**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=3.7,slow=10,SNR=2.7						
CMAR				Lg		06 46 18.5	
	comp=Z,0.6nm,0.3s,baz=225,slow=28,SNR=5.0						
CMAR				LR	LR	06 47 49.0	
	comp=Z,60nm,19.6s,baz=115,slow=39						
QIZ	**Qiongzhong**	**13.42**	**153**	P	**Pn**	**06 42 17.3**	**-2.4**
QIZ				S	**Sn**	**06 44 45.3**	**-3.8**
QIZ				pmax	pmax		
	comp=Z,16nm,1.3s						
QIZ				LR	LR		
	comp=N,270nm,7.0s						
QIZ				LR	LR		
	comp=Z,310nm,12.3s						
SONM	**Songino Array**	**16.74**	**7**	Pn	**Pn**	**06 43 04.3**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=186,slow=12,SNR=14						
ULN	**Ulaanbaatar**	**16.84**	**8**	*e*P	**Pn**	**06 43 05.7**	**+0.7**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ULN	**Ulaanbaatar**	**16.84**	**8**	*e*P	**Pn**	**06 43 05.7**	**+0.7**
	comp=Z,5.8nm,1.1s						
ZAK	**Zakamensk**	**19.14**	**360**	*e*P	**Pn**	**06 43 35.0**	**+1.7**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TLY	**Talaya**	**20.44**	**0**	*e*P	**P**	**06 43 49.4**	**+2.8**
TLY				pmax	pmax		
	comp=Z,3.0nm,1.1s						
TLY				MLR	MLR		
	comp=Z,109nm,12.0s,MS3.4						
KSRS	**Korea Array**	**21.06**	**66**	P	**P**	**06 43 53.2**	**-0.2**
	comp=Z,7.0nm,0.7s,mb4.1,baz=261,slow=10,SNR=22						
KSRS	**Korea Array**	**21.06**	**66**	P	**P**	**06 43 53.3**	**-0.1**
KSRS		

ARU Arti 40.03 322 *d iP* **P 06 46 44.3 +0.1**
ARU S **S 06 52 51.7 +1.8**
ARU pmax pmax
comp=Z,13nm,1.7s,mb4.4
ARU Arti 40.03 322 *eP* **P 06 46 44.6 +0.4**
comp=Z,3.9nm,0.4s,mb4.5
MIB Mutribah 47.97 284 *eP* **P 06 47 47.4 -0.9**
MIB AMb AMB 06 47 49.3
comp=Z,19nm,0.9s,mb5.1
RDF Al-Radifah 48.05 282 *eP* **P 06 47 48.2 -0.7**
RDF AMb AMB 06 47 50.0
comp=Z,17nm,1.0s,mb5.0
NAY Al-Naaiem 48.21 283 *eP* **P 06 47 48.9 -1.3**
NAY AMb AMB 06 47 50.6
comp=Z,12nm,0.7s,mb5.0
BILL Biiibino 51.28 25⇑ *eP* **P 06 48 12.9 -0.1**
BILL pmax pmax
comp=Z,7.0nm,1.7s,mb4.3
BRTR Keskin Array B 56.25 299 P **P 06 48 48.7 -1.1**
comp=Z,0.4nm,0.4s,mb3.8,baz=92,slow=6.2,SNR=4.0
AKASG Malin Array Be 56.94 313 P **P 06 48 53.0 -1.5**
comp=Z,0.6nm,0.3s,mb4.0,baz=71,slow=6.6,SNR=4.6
AKASG Malin Array Be 56.94 313 *ceP* **P 06 48 53.5 -1.0**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
ARCES ARCESS Array B 56.95 336 P **P 06 48 53.4 -0.9**
comp=Z,3.9nm,0.9s,mb4.5,baz=76,slow=5.1,SNR=6.7
ARCES ARCESS Array B 56.95 336 P **P 06 48 53.4 -0.9**
ARCES pmax pmax
comp=Z,4.0nm,0.9s
FINES FINESS Array B 57.19 326 P **P 06 48 54.7 -1.4**
comp=Z,3.1nm,0.9s,mb4.3,baz=112,slow=5.1,SNR=5.2
FINES FINESS Array B 57.19 326 P **P 06 48 54.7 -1.4**
FINES pmax pmax
comp=Z,3.0nm,0.9s
WRAB Tennant Creek 58.85 146 *eP* **P 06 49 07.8 -0.4**
WRAB pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
WRAB Tennant Creek 58.85 146 *eP* **P 06 49 07.8 -0.4**
comp=Z,7.2nm,0.9s,mb4.7
ASAR Alice Springs 61.85 148 P **P 06 49 27.5 -1.2**
comp=Z,1.3nm,0.8s,mb4.1,baz=340,slow=6.6,SNR=6.0
ASAR Alice Springs 61.85 148 P **P 06 49 27.5 -1.2**
ASAR pmax pmax
comp=Z,1.0nm,0.8s
GERES GERESS Array B 67.11 314 P **P 06 50 03.7 +0.8**
comp=Z,0.2nm,0.2s,mb3.7,baz=92,slow=8.8,SNR=2.8
STKA Stephens Creek 72.38 147 P **P 06 50 34.5 -0.9**
comp=Z,1.4nm,0.5s,mb4.1,baz=346,slow=5.5,SNR=4.8
YKA Yellowknife Ar 81.72 17 P **P 06 51 26.2 -1.5**
comp=Z,0.5nm,0.8s,mb3.5,baz=323,slow=4.8,SNR=5.5
YKA Yellowknife Ar 81.72 17 P **P 06 51 26.2 -1.5**
YKA pmax pmax
comp=Z,1.0nm,0.8s

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*ROM **02** 06:40:48.5±0.2, 44.2°N×7.4°E, h10km, Md2.4/5, Ml2.0/5, Error ellipse: s-maj=3.3km s-min=1.4km az=45.0*
*CSEM **02** 06:40:48.8±0.1, 44.2°N×7.46°E, h15km, ML2.5/16, Error ellipse: s-maj=1.9km s-min=1.4km az=75.0*
*NEIC **02** 06:40:48.5, 44.2°N×7.4°E, h10km, ML2.7(LDG), ML2.0(ROM), ML2.4(STR), After ROM.*
*LDG **02** 06:40:48.9±0.1, 44.30°N×7.53°E, h2km, Md2.4/3, Ml2.7/10, Error ellipse: s-maj=1.9km s-min=0.9km az=76.0*
*ISCJB **02** 06:40:49.1±0.3, 44.28°N±0.02°×7.47°E±0.03, h18km±4km, Error ellipse: s-maj=3.6km s-min=2.5km az=165.6*
*STR **02** 06:40:49.0±0.3, 44.29°N×7.51°E, h5km, Ml2.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*GEN **02** 06:40:49.1, 44.27°N×7.42°E, h4km, ML1.8*
ISC 02 06:40:49.0±0.3, 44.29N±0.02°×7.46E±0.03, h15km±2km, n57, σ0.68/108, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENR	**Entracque**	**0.07**	**206**	P	**Pg**	**06 40 50.3**	**-1.7**
DOI	**San Damiano**	**0.27**	**324**	Pg	**Pg**	**06 40 54.5**	**-0.3**
DOI				Sg	**Sg**	**06 40 58.6**	**-0.1**
260nm,0.3s							
DOI	**San Damiano**	**0.27**	**324**	Pg	**Pg**	**06 40 54.5**	**-0.3**
DOI				Sg	**Sg**	**06 40 58.6**	**-0.1**
260nm,0.3s							
AUTN	**L'Aution**	**0.29**	**185**	Pg	**Pg**	**06 40 55.0**	**-0.3**
AUTN				Sg	**Sg**	**06 40 59.4**	**0.0**
AUTN	**L'Aution**	**0.29**	**185**	Pg	**Pg**	**06 40 55.0**	**-0.3**
AUTN				Sg	**Sg**	**06 40 59.4**	**0.0**
MONE	**Monesi**	**0.30**	**135**	P	**Pg**	**06 40 54.9**	**-0.4**
MONE				S	**Sg**	**06 40 59.6**	**+0.1**
SAOF	**Saorge**	**0.31**	**168**	Pg	**Pg**	**06 40 55.1**	**-0.4**
SAOF				Sg	**Sg**	**06 40 59.8**	**-0.1**
SAOF	**Saorge**	**0.31**	**168**	Pg	**Pg**	**06 40 55.1**	**-0.4**
SAOF				Sg	**Sg**	**06 40 59.8**	**-0.1**
TOUF	**Mont Tournerai**	**0.32**	**209**	Pg	**Pg**	**06 40 55.3**	**-0.3**
TOUF				Sg	**Sg**	**06 41 00.4**	**+0.3**
TOUF	**Mont Tournerai**	**0.32**	**209**	Pg	**Pg**	**06 40 55.3**	**-0.3**
TOUF				Sg	**Sg**	**06 41 00.4**	**+0.3**
PZZ	**Stroppo**	**0.33**	**311**	Pg	**Pg**	**06 40 55.5**	**-0.4**
PZZ				Sg	**Sg**	**06 41 01.0**	**+0.5**
151nm,0.3s							
LUCF	**Luceram**	**0.41**	**192**	Pg	**Pg**	**06 40 56.9**	**-0.3**
LUCF				Sg	**Sg**	**06 41 03.1**	**+0.4**
LUCF	**Luceram**	**0.41**	**192**	Pg	**Pg**	**06 40 56.9**	**-0.3**
LUCF				Sg	**Sg**	**06 41 03.1**	**+0.4**
RONM	**Roccetta Nervi**	**0.42**	**167**	P	**Pg**	**06 40 57.1**	**-0.5**
SBF	**Sospel**	**0.43**	**183**	*e*Pg	**Pg**	**06 40 57.6**	**0.0**
SBF				*e*Sg	**Sg**	**06 41 03.5**	**+0.1**
212nm,0.3s							
SBF	**Sospel**	**0.43**	**183**	*e*Pg	**Pg**	**06 40 57.6**	**0.0**
SBF				*e*Sg	**Sg**	**06 41 03.5**	**+0.1**
106nm,0.3s							
MVIF	**Mont Vial**	**0.45**	**210**	Pg	**Pg**	**06 40 58.5**	**+0.4**
MVIF				Sg	**Sg**	**06 41 04.3**	**+0.1**
MVIF	**Mont Vial**	**0.45**	**210**	Pg	**Pg**	**06 40 58.5**	**+0.4**
MVIF				Sg	**Sg**	**06 41 04.3**	**+0.1**
RORO	**Rocca Rossa**	**0.47**	**112**	P	**Pg**	**06 40 57.6**	**-0.8**
NEGI	**Seborga**	**0.47**	**158**	P	**Pg**	**06 40 58.2**	**-0.3**
IMI	**Imperia**	**0.49**	**141**	Pg	**Pg**	**06 40 58.6**	**-0.2**
IMI				Sg	**Sg**	**06 41 05.7**	**+0.4**
80nm,0.4s							
IMI	**Imperia**	**0.49**	**141**	Pg	**Pg**	**06 40 58.6**	**-0.2**
IMI				Sg	**Sg**	**06 41 05.7**	**+0.4**
80nm,0.4s							
SURF	**Saint Ours**	**0.50**	**293**	Pg	**Pg**	**06 40 58.6**	**-0.4**
SURF				Sg	**Sg**	**06 41 07.3**	**+1.5**
SURF	**Saint Ours**	**0.50**	**293**	Pg	**Pg**	**06 40 58.6**	**-0.4**
SURF				Sg	**Sg**	**06 41 07.3**	**+1.5**
REVF	**Revere**	**0.55**	**187**	Pg	**Pg**	**06 41 00.2**	**+0.3**
REVF				Sg	**Sg**	**06 41 08.1**	**+0.8**
REVF	**Revere**	**0.55**	**187**	Pg	**Pg**	**06 41 00.2**	**+0.3**
REVF				Sg	**Sg**	**06 41 08.1**	**+0.8**
MBDF	**Montbardon**	**0.66**	**312**	*e*Pg	**Pg**	**06 41 01.8**	**-0.2**
MBDF				*e*Sg	**Sg**	**06 41 11.1**	**+0.4**
51nm,0.3s							
MBDF	**Montbardon**	**0.66**	**312**	*e*Pg	**Pg**	**06 41 01.8**	**-0.2**
MBDF				*e*Sg	**Sg**	**06 41 11.1**	**+0.4**
26nm,0.3s							
CALN	**Calern**	**0.68**	**218**	Pg	**Pg**	**06 41 02.4**	**+0.1**
CALN				Sg	**Sg**	**06 41 12.0**	**+0.7**
CALN	**Calern**	**0.68**	**218**	Pg	**Pg**	**06 41 02.4**	**+0.1**
CALN				Sg	**Sg**	**06 41 12.0**	**+0.7**
PCP	**Piancastagn**	**0.81**	**72**	Pg	**Pg**	**06 41 05.3**	**+0.4**
PCP				Sg	**Sg**	**06 41 16.5**	**+0.9**
37nm,0.4s							
PCP	**Piancastagn**	**0.81**	**72**	Pg	**Pg**	**06 41 05.3**	**+0.4**
PCP				S	**Sg**	**06 41 16.0**	**+0.4**
PCP				Sg	**Sg**	**06 41 16.5**	**+0.9**
37nm,0.4s							
ROTM	**Rocchetta Tana**	**0.85**	**48**	P	**Pb**	**06 41 06.7**	**+1.3**
ROTM				S	**Sb**	**06 41 19.0**	**+2.4**
RSP	**Reno Superiore**	**0.87**	**351**	P	**Pb**	**06 41 04.8**	**-1.0**
RSP				S	**Sb**	**06 41 16.1**	**-1.2**
FRF	**La Foret Royal**	**0.94**	**219**	*e*Pg	**Pg**	**06 41 07.2**	**0.0**
FRF				*e*Sg	**Sg**	**06 41 19.8**	**+0.3**
25nm,0.2s							
FRF	**La Foret Royal**	**0.94**	**219**	*e*Pg	**Pg**	**06 41 07.2**	**0.0**
FRF				*e*Sg	**Sg**	**06 41 19.8**	**+0.3**
13nm,0.2s							
BNI	**Bardonecchia**	**0.95**	**324**	*e*Pg	**Pg**	**06 41 06.8**	**-0.5**
BNI				*e*Sg	**Sg**	**06 41 19.3**	**-0.4**
BNI	**Bardonecchia**	**0.95**	**324**	*e*Pg	**Pg**	**06 41 06.8**	**-0.6**
BNI				*e*Sg	**Sg**	**06 41 19.3**	**-0.5**
LMR	**La Mourre**	**1.18**	**216**	*e*Pn	**Pn**	**06 41 11.2**	**+0.3**
LMR				*e*Sn	**Sn**	**06 41 27.0**	**+0.3**
80nm,0.3s							
LMR	**La Mourre**	**1.18**	**216**	*e*Pn	**Pn**	**06 41 11.2**	**+0.3**
LMR				*e*Sn	**Sn**	**06 41 27.0**	**+0.3**
40nm,0.3s							
TRAV	**Traversella**	**1.24**	**9**	P	**Pn**	**06 41 12.3**	**+0.5**
ORIF	**Oris-en-Rattie**	**1.29**	**300**	*e*Pn	**Pn**	**06 41 13.1**	**+0.6**
ORIF				*e*Sn	**Sn**	**06 41 30.2**	**+0.7**
26nm,0.4s							
ORIF	**Oris-en-Rattie**	**1.29**	**300**	*e*Pn	**Pn**	**06 41 13.1**	**+0.6**
ORIF				*e*Sn	**Sn**	**06 41 30.2**	**+0.7**
13nm,0.4s							
LPG	**La Plagne**	**1.31**	**338**	*e*Pn	**Pn**	**06 41 13.3**	**+0.6**
LPG				*e*Sn	**Sn**	**06 41 30.2**	**+0.3**
15nm,0.5s							
LPG	**La Plagne**	**1.31**	**338**	*e*Pn	**Pn**	**06 41 13.3**	**+0.6**
LPG				*e*Sn	**Sn**	**06 41 30.2**	**+0.3**
7.6nm,0.5s							
LPL	**La Plagne**	**1.33**	**337**	*e*Pn	**Pn**	**06 41 13.3**	**+0.3**
LPL				*e*Sn	**Sn**	**06 41 30.8**	**+0.3**
13nm,0.4s							
LPL	**La Plagne**	**1.33**	**337**	*e*Pn	**Pn**	**06 41 13.3**	**+0.3**
LPL				*e*Sn	**Sn**	**06 41 30.8**	**+0.3**
6.3nm,0.4s							
SMRF	**Simiane la Rot**	**1.40**	**258**	*e*Pg	**Pg**	**06 41 15.8**	**-0.1**
SMRF				*e*Sn	**Sn**	**06 41 32.7**	**+0.7**
33nm,0.4s							
SMRF	**Simiane la Rot**	**1.40**	**258**	*e*Pg	**Pg**	**06 41 15.8**	**-0.1**
SMRF				*e*Sn	**Sn**	**06 41 32.7**	**+0.7**
16nm,0.4s							
PGF	**Pioggiola**	**2.07**	**147**	*e*Pn	**Pn**	**06 41 22.5**	**-0.7**
PGF				*e*Sn	**Sn**	**06 41 47.4**	**-1.2**
5.8nm,0.4s							
PGF	**Pioggiola**	**2.07**	**147**	*e*Pn	**Pn**	**06 41 22.5**	**-0.7**
PGF				*e*Sn	**Sn**	**06 41 47.4**	**-1.2**
2.9nm,0.4s							
CABF	**La Chapelle**	**2.52**	**338**	*e*Sn	**Sn**	**06 41 57.9**	**-1.8**
2.5nm,0.4s							
CABF	**La Chapelle**	**2.52**	**338**	*e*Sn	**Sn**	**06 41 57.9**	**-1.8**
1.2nm,0.4s							
LASF	**Ste Croix**	**2.60**	**267**	*e*Pn	**Pn**	**06 41 30.4**	**-0.1**
LASF				*e*Sn	**Sn**	**06 42 01.6**	**-0.2**
3.4nm,0.3s							
LASF	**Ste Croix**	**2.60**	**267**	*e*Pn	**Pn**	**06 41 30.4**	**-0.1**
LASF				*e*Sn	**Sn**	**06 42 01.6**	**-0.2**
1.7nm,0.3s							
MTLF	**Montolieu**	**3.91**	**258**	*e*Pn	**Pn**	**06 41 48.3**	**-0.2**
MTLF				*e*Sn	**Sn**	**06 42 32.9**	**-1.2**
1.8nm,0.3s							
MTLF	**Montolieu**	**3.91**	**258**	*e*Pn	**Pn**	**06 41 48.3**	**-0.2**
MTLF				*e*Sn	**Sn**	**06 42 32.9**	**-1.2**
0.9nm,0.3s							

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*IDC **02** 06:42:15.8±2.6, 16.5°N×167.3°E, h0km, mb4.0/5, mb1 4.1/5, mb1mx3.9/16, mbtmp4.0/5, MS3.5/3, Ms1 3.5/3, ms1mx3.1/22, Error ellipse: s-maj=93.7km s-min=33.9km az=134.0*
*NEIC **02** 06:42:21.6±0.6, 16.48°N×167.30°E, h35km, mb4.5/3, Error ellipse: s-maj=27.6km s-min=15.7km az=159.0*
ISC 02 06:42:21.7±0.7, 16.6S±0.2°×167.4E±0.1, h35km, n21, σ1.16/11, mb4.3/8, MS3.4/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**20.32**	**257**	P	**P**	**06 46 54.7**	**-0.2**
2.0nm,0.8s,baz=72,slow=14,SNR=3.6							
CTA				LR	LR	06 52 47.8	
comp=Z,131nm,21.9s,MS3.2,baz=75,slow=31							
CTA	**Charters Tower**	**20.32**	**257**	P	**P**	**06 46 54.7**	**-0.2**
AFI	**Afiamalu**	**20.32**	**85**	LR	LR	06 52 49.8	
comp=Z,84nm,19.0s,MS3.1,baz=94,slow=31							
AFI	**Afiamalu**	**20.32**	**85**	*e*P	**P**	**06 46 54.0**	**-0.9**
14nm,0.6s							
URZ	**Urewera**	**23.21**	**160**	LR	LR	06 54 35.1	
comp=Z,244nm,18.9s,MS3.7,baz=351,slow=32							
STKA	**Stephens Creek**	**27.87**	**232**	P	**P**	**06 48 08.1**	**-0.2**
2.7nm,0.9s,mb3.9,baz=73,slow=6.2,SNR=4.2							
ASAR	**Alice Springs**	**32.12**	**252**	P	**P**	**06 48 44.5**	**-1.4**
8.6nm,0.9s,mb4.6,baz=81,slow=8.9,SNR=50							
QSPA	**South Pole Qui**	**73.43**	**180**	*e*P	**P**	**06 53 52.5**	**+2.6**
6.6nm,1.0s,mb4.5							
LZH	**Lanzhou**	**79.64**	**313**	*e*P	**P**	**06 54 27.5**	**+1.8**
LZH				pP	pP	06 54 32.5	-4.2
LZH				sP	sP	06 54 34.0	-6.7
LZH				pmax	pmax		
comp=Z,25nm,1.2s,mb5.0							
LZH				pmax	pmax		
comp=Z,89nm,4.5s							
GTA	**Gaotai**	**84.02**	**314**	P	**P**	**06 54 49.6**	**+0.9**
GTA				pP	pP	06 54 54.2	-5.5
GTA				sP	sP	06 54 56.6	-7.1
GTA				pmax	pmax		
comp=Z,5.0nm,1.4s,mb4.5							
SONM	**Songino Array**	**84.05**	**324**	P	**P**	**06 54 48.4**	**-0.2**
comp=Z,0.3nm,0.4s,mb3.8,baz=156,slow=7.3,SNR=4.1							
BILL	**Biiibino**	**84.41**	**360**	*e*P	**P**	**06 54 50.0**	**0.0**
comp=Z,3.2nm,1.0s,mb4.4							
MKAR	**Makanchi Array**	**98.61**	**316**	P	**P**	**06 55 55.7**	**-1.3**
comp=Z,0.1nm,0.4s,mb3.7,baz=83,slow=7.6,SNR=3.0							
ARCES	**ARCESS Array B 122.08**	**345**		PKP	PKPdf	07 01 11.7	-0.3
comp=Z,1.5nm,0.8s,baz=64,slow=2.1,SNR=8.4							
SNTG	**Esanatoglia**	**145.66**	**326**	P	PKPdf	07 01 57.9	+1.3
SFI	**Santa Sofia**	**145.79**	**328**	P	PKPdf	07 01 58.1	+1.4
NRCA	**Norcia**	**145.85**	**325**	P	PKPdf	07 01 58.1	+1.2
FLN	**La Foliniere**	**146.43**	**345**	*e*PKIKP	PKPdf	07 01 57.0	-0.7
comp=Z,44nm,1.2s							
SGMF	**Saint Gilles**	**147.37**	**347**	*e*PKIKP	PKPdf	07 01 57.1	-2.2
comp=Z,59nm,1.4s							
QUIF	**Quistinic**	**147.82**	**348**	*e*PKIKP	PKPdf	07 01 57.9	-2.1
MFF	**Saint Martin d**	**148.34**	**343**	*e*PKIKP	PKPdf	07 02 00.7	-0.2
comp=Z,12nm,0.8s							

CASC 02 06:47:39.5±1.5, 8.44N×83.05W, h3km, MD3.5, 1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.24**	**331**	*e*P	Pg	06 47 45.4	+1.3
ACR				*e*S	Sg	06 47 49.8	+2.5
BRU2	**Volcan**	**0.50**	**45**	*i* P	Pg	06 47 50.2	+1.1
BRU2				*e*S	Sg	06 47 58.6	+3.0
BAR1		**0.84**	**342**	*e*P	Pg	06 47 55.9	+0.3
BAR1				*e*S	Sg	06 48 07.4	+0.9
CNI	**Changuinola**	**1.10**	**29**	||*i*P	Pg	06 48 00.8	+0.1
BUS	**Buena Vista**	**1.31**	**328**	*e*P	Pg	06 48 04.4	-0.2
BUS				*e*S	Sg	06 48 22.5	+0.9
URSC	**Urasca**	**1.56**	**333**	*e*P	Pn	06 48 08.1	-0.1
URSC				*e*S	Sn	06 48 29.0	+0.1
CGA2	**Cerro Gallo 2**	**2.10**	**318**	*e*P	Pn	06 48 16.9	+1.4

DJA 02 06:53:31, 0.52N×98.54E, h16km, MLv3.9/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**1.07**	**75**	P	Pb	06 53 50.7	-0.5
MNSI				S	Sb	06 54 04.9	-0.2
SBSI	**Sibolga**	**1.08**	**19**	P	Pb	06 53 53.0	+1.6
SBSI				S	Sb	06 54 09.7	+4.5
GSI	**Gunungsitoli**	**1.24**	**309**	P	Pn	06 53 52.0	-1.7
GSI				S	Sb	06 54 10.2	+0.4
TRSI	**Tarutung**	**1.55**	**16**	P	Pn	06 53 58.0	0.0
TRSI				S	Sn	06 54 17.4	-0.4
SISI	**Saibi**	**1.92**	**163**	P	Pn	06 54 02.3	-0.7
PPI	**Padang Panjang**	**2.10**	**118**	P	Pn	06 54 06.7	+1.2
PPI				S	Sn	06 54 32.7	+1.5

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*MAN **02** 06:56:20, 9.10N×125.48E, h3km, mb5.6, ML4.6, MS4.9*
MAN INTENSITY V - BUTUAN CITY; INTENSITY IV - JASAAN MISAMIS ORIENTAL; CABADBARAN CITY AGUSAN DEL SUR.
*BJI **02** 06:56:20.6, 8.57N×125.87E, h73km, mB4.8/29, mb4.7/42, Ms4.6/33, Ms7 4.3/32*
*GCMT **02** 06:56:21.8±0.2, 9.18N×125.63E, h28km±1km, MW5.0, Moment Tensor Solution. s27,c30; s76,c118; Moment tensor: Scale 10^{16}Nm; M_{rr}0.52±.18; $M_{\theta\theta}$0.56±.12; $M_{\phi\phi}$-1.08±.15; $M_{r\theta}$-2.04±.24; $M_{\theta\phi}$-3.40±.10; $M_{\phi r}$-1.90±.26; Best double couple: $M_0$4.20000×10^{16} NP1:ϕ_s349.00000°, δ61.00000°, λ-10.00000°. NP2:ϕ_s83.00000°, δ82.00000°, λ-151.00000°. Principal axes: T 3.3400, Plg14.0000°, Azm213.0000°; N 1.7700, Plg60.0000°, Azm98.0000°; P -5.1100, Plg26.0000°, Azm310.0000°; Data Used: II G IU IC CN.*
*ISCJB **02** 06:56:23.0±0.5, 9.06N±0.02×125.63E±0.04, h53km±4km, mb4.8/92, MS4.2/34 Error ellipse: s-maj=6.2km s-min=3.7km az=168.1*
*IDC **02** 06:56:24.5±2.5, 9.07N×125.54E, h52km±22km, mb4.3/27, mb1 4.4/28, mb1mx4.3/30, mbtmp4.3/28, ML4.0/1, MS4.1/16, Ms1 4.1/16, ms1mx3.9/26, Error ellipse: s-maj=17.1km s-min=9.7km az=73.0*
*MOS **02** 06:56:24.0±1.0, 9.09N×125.61E, h64km, mb5.2/32, MS4.2/5, Error ellipse: s-maj=11.7km s-min=6.6km az=118.3*
*DJA **02** 06:56:25, 9.15N×125.77E, h59km, Mw5.3/22*
*NEIC **02** 06:56:25.3±0.8, 9.05N×125.62E, h61km±7km, mb4.9/50, Error ellipse: s-maj=6.1km s-min=3.9km az=71.0*
NEIC Felt [V PIVS] at Butuan; [IV PIVS] at Cabadbaran and Jasaan; [III PIVS] at Cugman, Magpayang and Mainit; [II PIVS] at Malasag, Surigao and Valencia; [I PIVS] on Camiguin and Dinagat Islands.
ISC 02 06:56:24.8±0.4, 9.04N±0.02×125.60E±0.04, h54km±3km, h62km±2.9km: pP-P, n245, σ1.08/255, mb4.8/92, MS4.2/34, 8C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.08**	**162**	*e*P	**Pn**	**06 56 24.9**	**-8.2**
CGP	**Cagayan de Oro**	**1.07**	**237**⇑	*e*P	**Pn**	**06 56 40.8**	**-2.7**
CGP				*e*S	**Sn**	**06 56 57.0**	**-0.4**
BUKP	**Musuan**	**1.27**	**205**	*e*P	**Pn**	**06 56 45.6**	**-0.7**
MSLP	**Maasin**	**1.31**	**326**	*e*P	**Pn**	**06 56 43.1**	**-3.7**
DAV	**Davao City (W)**	**1.96**	**181**	P	**Pn**	**06 56 55.6**	**-0.1**
489nm,0.3s,baz=352,slow=1.5,SNR=26							
DAV				S	**Sn**	**06 57 32.0**	**+13**
416nm,0.3s,baz=285,slow=22,SNR=5.3							
DAV	**Davao City (W)**	**1.96**	**181**	*e*Pn	**Pn**	**06 56 55.4**	**-0.3**
DAV	**Davao City (W)**	**1.96**	**181**	Pn	**Pn**	**06 56 58.0**	**+2.3**
SNR=92							
DAV				Pn	**Pn**	**06 56 58.0**	**+2.3**
SNR=92							
DAV	**Davao City (W)**	**1.96**	**181**	P	**Pn**	**06 56 58.0**	**+2.3**
SNR=92							
DAV				P		06 56 58.0	
SNR=92							
KCP	**Kidapawan**	**2.08**	**194**⇓	*e*P	**Pn**	**06 56 57.2**	**-0.2**
KCP				*i* S	**Sn**	**06 57 23.3**	**+1.2**
MATI	**Mati**	**2.18**	**163**	*e*P	**Pn**	**06 56 58.8**	**+0.1**
OCLP	**Ormoc**	**2.22**	**334**	*e*P	**Pn**	**06 56 57.6**	**-1.7**
CTBH	**Cotabato--PC H**	**2.25**	**217**⇑	*e*P	**Pn**	**06 56 58.5**	**-1.2**
CTBH				*i* S	**Sn**	**06 57 37.7**	**+11**
PAGZ	**Pagadian**	**2.49**	**242**	*e*P	**Pn**	**06 57 03.8**	**+0.8**
BESP	**Borongan**	**2.55**	**356**	*e*P	**Pn**	**06 57 05.0**	**+1.3**
GSPH	**General Santos**	**3.01**	**192**⇑	*e*P	**Pn**	**06 57 10.7**	**+0.7**
IPIL	**Ipil**	**3.24**	**248**	*e*P	**Pn**	**06 57 13.0**	**-0.2**
GUIM	**Jordan**	**3.36**	**298**	*e*P	**Pn**	**06 57 12.8**	**-2.0**
CNP	**Catarman**	**3.57**	**345**	*e*P	**Pn**	**06 57 16.7**	**-1.0**
ZMPH	**Zamboanga City**	**4.07**	**240**⇑	*e*P	**Pn**	**06 57 22.1**	**-2.5**
PVCP	**Virac**	**4.74**	**343**	*e*P	**Pn**	**06 57 34.5**	**+0.7**
OTRP	**Odiongan**	**4.82**	**314**	*e*P	**Pn**	**06 57 33.5**	**-1.5**
CUYO	**Cuyo Island**	**4.86**	**292**	*e*P	**Pn**	**06 57 33.8**	**-1.6**
AUQP	**San Andres**	**5.13**	**326**	*e*P	**Pn**	**06 57 47.7**	**+8.6**
SJMP	**San Jose**	**5.56**	**308**	*e*P	**Pn**	**06 57 44.0**	**-1.0**
BOAC	**Boac**	**5.73**	**320**	*e*P	**Pn**	**06 57 53.1**	**+5.7**
BUSP	**Coron**	**6.07**	**299**	*e*P	**Pn**	**06 57 50.6**	**-1.5**
ENPP	**El Nido**	**6.45**	**290**	*e*P	**Pn**	**06 57 55.8**	**-1.4**
POLP	**Polillo Island**	**6.69**	**328**	*e*P	**Pn**	**06 58 03.2**	**+2.7**
TGY	**Tagaytay City**	**6.79**	**318**	P	**Pn**	**06 58 08.0**	**+6.0**
35nm,0.3s,baz=141,slow=9.9,SNR=12							
LUBP	**Lubang**	**7.02**	**312**	*e*P	**Pn**	**06 58 05.6**	**+0.6**
CAUP	**Cauayan**	**8.67**	**335**	*e*P	**Pn**	**06 58 27.8**	**0.0**
KDM	**Kudat**	**8.93**	**257**	P	**Pn**	**06 58 40.4**	**+9.1**
SDKM	**Sandakan**	**8.99**	**249**	P	**Pn**	**06 58 39.0**	**+6.9**
BOLP	**Bolinao**	**9.16**	**323**	*e*P	**Pn**	**06 58 35.7**	**+1.3**
APYP	**Conner**	**9.73**	**335**	*e*P	**Pn**	**06 58 44.6**	**+2.4**
KKM	**Kota Kinabalu**	**9.77**	**253**	P	**Pn**	**06 58 46.6**	**+3.9**
KKM	**Kota Kinabalu**	**9.77**	**253**	Pn	**Pn**	**06 58 43.7**	**+1.0**
BTM	**Bintulu**	**13.72**	**246**	P	**Pn**	**06 59 38.3**	**+1.5**
SBUM	**Sibu**	**14.83**	**245**	P	**Pn**	**06 59 59.3**	**+7.9**
TPUB	**Ta-pu**	**14.96**	**342**	*e*Pn	**Pn**	**06 59 52.8**	**-0.2**
55nm,0.8s							
KAPI	**Kappang**	**15.13**	**203**	P	**Pn**	**06 59 56.7**	**+1.4**
0.7nm,0.3s,baz=28,slow=10,SNR=9.9							
KAPI	**Kappang**	**15.13**	**203**	*e*Pn	**Pn**	**06 59 56.5**	**+1.1**
116nm,1.3s							
KAPI	**Kappang**	**15.13**	**203**	Pn	**Pn**	**06 59 57.8**	**+2.4**
SNR=6.6							
KAPI				Pn	**Pn**	**06 59 57.8**	**+2.4**
SNR=6.6							
KAPI	**Kappang**	**15.13**	**203**	P	**Pn**	**06 59 57.8**	**+2.4**
SNR=6.6							
KAPI				P		06 59 57.8	
SNR=6.6							
SSLB	**Suanglung**	**15.32**	**344**	*e*Pn	**Pn**	**06 59 57.2**	**-0.5**
48nm,0.8s							
YHNB	**Yeheng**	**16.05**	**346**	P	**Pn**	**07 00 07.5**	**+0.4**
20nm,0.7s							
KSM	**Kuching**	**16.97**	**245**	P	**Pn**	**07 00 23.4**	**+4.7**
KSM	**Kuching**	**16.97**	**245**	*e*P	**Pn**	**07 00 19.4**	**+0.6**
33nm,1.1s						

GYA LR LR
comp=E,580nm,15.0s,MS4.3
GYA LR LR
comp=Z,620nm,14.7s,MS4.2
KULM Kulim 25.03 263 P **P** **07 01 45.1 +1.0**
KULM Kulim 25.03 263 *e*P **P** **07 01 44.1 0.0**
comp=Z,18nm,0.8s,mb4.7
ENH Enshi 25.94 327 *e*P **P** **07 01 52.3 0.0**
comp=Z,7.5nm,0.5s,mb4.5
FITZ Fitzroy Crossi 26.97 180 *e*P **P** **07 01 58.4 -3.2**
comp=Z,21nm,0.9s,mb4.7
FITZ Fitzroy Crossi 26.97 180 P **P** **07 02 00.8 -0.8**
comp=Z,12nm,0.9s,mb4.5,baz=16,slow=4.1,SNR=12
FITZ LR LR 07 12 54.2
comp=Z,256nm,18.3s,MS3.8,baz=3.2,slow=37
FITZ Fitzroy Crossi 26.97 180 *e*P **P** **07 02 00.9 -0.6**
comp=Z,34nm,1.3s,mb4.7
KMI Kunming 27.00 309 P **P** **07 02 03.0 +1.1**
KMI PP 07 02 51.4
KMI S **S** **07 06 42.1 +6.3**
KMI SS 07 08 00.5
KMI pmax pmax
comp=Z,11nm,0.8s,mb4.4
KMI LR LR
comp=N,510nm,19.6s,MS4.2
KMI LR LR
comp=E,450nm,19.2s,MS4.2
KMI LR LR
comp=Z,470nm,17.8s,MS4.1
BDT Bhumibol Dam 27.12 290 P **P** **07 02 02.0 -1.1**
PSI Prapat 27.23 258 P **P** **07 02 03.8 -0.3**
comp=Z,32nm,0.9s,mb4.8,baz=64,slow=3.5,SNR=26
PSI LR LR 07 13 41.9
comp=Z,244nm,19.6s,MS3.8,baz=252,slow=38
CMAR Chiang Mai Arr 27.50 293 P **P** **07 02 07.0 +0.6**
comp=Z,7.8nm,0.9s,mb4.2,baz=110,slow=7.0,SNR=31
CMAR PcP PcP 07 05 26.0 +2.2
comp=Z,2.1nm,0.3s,baz=354,slow=1.0,SNR=6.1
CMAR LR LR 07 13 37.1
comp=Z,422nm,18.7s,MS4.0,baz=213,slow=38
CMAR Chiang Mai Arr 27.50 293 P **P** **07 02 07.0 +0.6**
CMAR 07 05 26.0
CHG Chiang Mai 27.59 293 ⇓*e*P **P** **07 02 07.0 -0.3**
comp=Z,16nm,1.0s,mb4.6
CHTO Chiang Mai 27.59 293 *e*P **P** **07 02 07.6 +0.3**
CHTO pmax pmax
comp=Z,21nm,1.2s,mb4.6
CHTO Chiang Mai 27.59 293 *e*P **P** **07 02 07.6 +0.3**
comp=Z,21nm,1.2s,mb4.6
CHTO Chiang Mai 27.59 293 P **P** **07 02 08.0 +0.7**
SNR=7.1
CHTO P 07 02 08.0
SNR=7.1
CHTO Chiang Mai 27.59 293 P **P** **07 02 08.0 +0.7**
SNR=7.1
CHTO P 07 02 08.0
SNR=7.1
KSRS Korea Array 28.36 4 P **P** **07 02 13.1 -0.8**
comp=Z,3.6nm,0.8s,mb4.1,baz=183,slow=9.8,SNR=4.0
COEN Coen 28.75 142 *e*P **P** **07 02 16.4 -1.1**
comp=Z,136nm,0.8s,mb5.7
MJAR Matsushiro Arr 29.68 21 P **P** **07 02 25.6 0.0**
comp=Z,6.2nm,0.9s,mb4.3,baz=194,slow=8.7,SNR=8.8
MAJO Matsushiro 29.68 21 *e*P **P** **07 02 25.0 -0.6**
MAJO pmax pmax
comp=Z,3.0nm,0.5s,mb4.3
MAJO Matsushiro 29.68 21 *e*P **P** **07 02 25.0 -0.6**
comp=Z,3.1nm,0.5s,mb4.3
CD2 Chengdu 29.79 320 *e*P **P** **07 02 28.5 +1.8**
CD2 pP pP 07 02 43.3 +3.0
CD2 sP sP 07 02 50.6 +3.9
CD2 PP PP 07 03 28.1 -6.6
CD2 S **S** **07 07 20.9 +1.4**
CD2 SS SS 07 09 01.3 -27
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.8
CD2 pmax pmax
comp=Z,40nm,4.2s
CD2 LR LR
comp=N,1μm,20.2s
CD2 LR LR
comp=E,830nm,14.2s
CD2 LR LR
comp=Z,540nm,21.4s,MS4.2
WRAB Tennant Creek 30.05 163 *e*P **P** **07 02 30.2 +1.2**
WRAB pmax pmax
comp=Z,12nm,0.9s,mb4.6
WRAB Tennant Creek 30.05 163 *e*P **P** **07 02 27.9 -1.1**
comp=Z,7.5nm,0.9s,mb4.4
MBWA Marble Bar 30.56 191 *e*P **P** **07 02 33.4 -0.1**
comp=Z,5.2nm,0.8s,mb4.4
BJI Beijing 31.99 346 P **P** **07 02 47.4 +1.5**
BJI S **S** **07 07 56.0 +2.3**
BJI pmax pmax
comp=Z,8.0nm,0.5s,mb4.8
BJI pmax pmax
comp=Z,150nm,4.7s
BJI LR LR
comp=N,180nm,13.2s,MS4.3
BJI LR LR
comp=E,400nm,15.7s,MS4.3
BJI LR LR
comp=Z,190nm,22.9s
LZH Lanzhou 33.42 327 *e*P **P** **07 03 04.0 +5.5**
LZH pP pP 07 03 15.0 +2.8
LZH PP PP 07 04 17.6 +2.7
LZH *e*S **S** **07 08 22.0 +6.0**
LZH SS SS 07 10 29.0 -13
LZH pmax pmax
comp=Z,15nm,1.1s,mb4.8
LZH pmax pmax
comp=Z,99nm,7.1s
LZH LR LR
comp=N,1μm,16.6s
LZH LR LR
comp=Z,1μm,18.9s,MS4.7
ASAR Alice Springs 33.51 166 P **P** **07 02 58.6 -0.7**
comp=Z,1.5nm,0.4s,mb4.3,baz=344,slow=6.9,SNR=17
ASAR PcP PcP 07 05 40.7 +1.3
comp=Z,1.1nm,0.8s,baz=339,slow=3.0,SNR=2.8
HHC Hu-ho-hao-te 34.04 341 *e*P **P** **07 03 05.6 +1.8**
HHC pP pP 07 03 20.9 +3.4
HHC sP sP 07 03 28.0 +4.1
HHC PP PP 07 04 21.7 0.0
HHC PcP PcP 07 05 41.8 +1.2
HHC S **S** **07 08 26.2 +0.7**
HHC ScP ScP 07 09 19.9 -1.2
HHC PcS PcS 07 09 27.2 +0.6
HHC SS SS 07 10 38.7 -16
HHC ScS ScS 07 13 20.7 -2.4
HHC pmax pmax
comp=Z,16nm,0.9s,mb5.0
HHC pmax pmax
comp=Z,77nm,5.5s
HHC LR LR
comp=N,350nm,17.3s,MS4.3
HHC LR LR
comp=E,350nm,20.7s,MS4.3
HHC LR LR
comp=Z,300nm,21.5s,MS4.0
CN2 Changchun 34.63 360 *e*P **P** **07 03 09.1 +0.3**
CN2 *e*S **S** **07 08 35.2 +0.7**
CN2 pmax pmax
comp=Z,10.0nm,0.4s,mb5.1
CN2 pmax pmax
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,200nm,12.0s,MS4.2
CN2 LR LR
comp=E,200nm,12.0s,MS4.2
CN2 LR LR
comp=Z,300nm,13.0s,MS4.2
CTA Charters Tower 35.37 145 *e*P **P** **07 03 15.1 -0.4**
comp=Z,9.1nm,1.1s,mb4.6
CTA Charters Tower 35.37 145 P **P** **07 03 15.7 +0.2**
comp=Z,13nm,1.0s,mb4.8,baz=322,slow=11,SNR=19
CTA LR LR 07 17 50.7
comp=Z,115nm,21.2s,MS3.6,baz=330,slow=36
CTAO Charters Tower 35.37 145 *e*P **P** **07 03 15.3 -0.2**
CTAO pmax pmax
comp=Z,32nm,1.3s,mb5.1
CTAO Charters Tower 35.37 145 *e*P **P** **07 03 15.3 -0.2**
comp=Z,32nm,1.3s,mb5.1
MDJ Mudanjiang 35.61 5 P **P** **07 03 18.7 +1.4**
MDJ pP pP 07 03 33.1 +2.0
MDJ sP sP 07 03 41.1 +3.6
MDJ pmax pmax
comp=Z,11nm,1.0s,mb4.7
MDJ pmax pmax
comp=Z,63nm,4.3s
MDJ LR LR
comp=N,98nm,17.1s,MS4.0
MDJ LR LR
comp=E,190nm,18.3s,MS4.0
MDJ LR LR
comp=Z,170nm,19.5s,MS3.8
MDJ Mudanjiang 35.61 5 *e*P **P** **07 03 19.1 +1.8**
comp=Z,17nm,1.0s,mb4.9
SHL Shillong 35.99 301 *e*PKP **P** **07 03 21.0 +0.2**
ASAJ Asahikawa 37.94 20 P **P** **07 03 37.5 +0.4**
comp=Z,8.0nm,0.5s,mb4.7,baz=217,slow=23,SNR=7.2
GTA Gaotai 38.02 327 *e*P **P** **07 03 37.6 -0.3**
GTA pP pP 07 03 54.0 +2.2
GTA sP sP 07 04 00.2 +2.1
GTA PP PP 07 05 08.9 +3.3
GTA S **S** **07 09 24.8 -1.7**
GTA pmax pmax
comp=Z,2.0nm,1.0s,mb3.8
GTA pmax pmax
comp=Z,58nm,6.3s
GTA LR LR
comp=N,480nm,17.1s,MS4.5
GTA LR LR
comp=E,440nm,18.6s,MS4.5
GTA LR LR
comp=Z,650nm,20.4s,MS4.4
LSA Lhasa 38.22 307 *e*P **P** **07 03 41.6 +1.9**
LSA pmax pmax
comp=Z,18nm,1.0s,mb4.8
LSA Lhasa 38.22 307 *e*P **P** **07 03 41.6 +1.9**
comp=Z,18nm,1.0s,mb4.8
FORT Forrest 39.66 177 *e*P **P** **07 03 50.7 -0.9**
comp=Z,26nm,0.6s,mb5.1
FORT Forrest 39.66 177 *e*P **P** **07 03 52.3 +0.6**
comp=Z,34nm,0.7s,mb5.2
TAPN Taplejung 40.12 302 *e*P **P** **07 03 56.5 +0.9**
ODAN Odare 40.22 301 *e*P **P** **07 03 56.9 +0.4**
comp=Z,73nm,0.8s,mb5.5
KLR Kul'dur 40.39 6 *e*P **P** **07 03 51.8 -5.6**
YSS Yuzh-Sakhalins 40.51 18 *e*P **P** **07 03 58.7 +0.2**
RAMN Ramite 40.92 301 *e*P **P** **07 04 02.7 +0.5**
KLBR Kellerberrin 41.09 190 *e*P **P** **07 04 03.1 -0.4**
comp=Z,11nm,1.0s,mb4.4
ULN Ulaanbaatar 41.76 341 *e*P **P** **07 04 09.4 +0.7**
ULN pmax pmax
comp=Z,5.0nm,0.6s,mb4.3
ULN Ulaanbaatar 41.76 341 *e*P **P** **07 04 09.4 +0.7**
comp=Z,4.9nm,0.6s,mb4.3
GUN Gumba 41.83 302 *e*P **P** **07 04 10.4 +0.7**
comp=Z,77nm,0.8s,mb5.4
SONM Songino Array 41.94 341 P **P** **07 04 10.2 0.0**
comp=Z,1.5nm,0.7s,mb3.7,baz=156,slow=8.5,SNR=7.0
SONM LR LR 07 24 19.2
comp=Z,265nm,18.1s,MS4.2,baz=343,slow=40
PKI Pulchoki 42.12 301 *e*P **P** **07 04 12.3 +0.2**
PKI Pulchoki 42.12 301 *e*P **P** **07 04 13.1 +1.0**
PKI pmax pmax
comp=Z,28nm,0.5s,mb5.2
PKI Pulchoki 42.12 301 *e*P **P** **07 04 13.1 +1.0**
comp=Z,28nm,0.5s,mb5.2
PKIN Phulchoki 42.13 301 *e*P **P** **07 04 13.1 +0.9**
comp=Z,28nm,0.5s,mb5.1
KKN Kakani 42.30 302 *e*P **P** **07 04 13.5 0.0**
DMN Daman 42.39 301 *e*P **P** **07 04 14.6 +0.4**
comp=Z,29nm,0.9s,mb4.9
NWAO Narrogin (SRO) 42.49 190 P **P** **07 04 14.8 -0.1**
comp=Z,22nm,0.8s,mb4.8,baz=13,slow=9.4,SNR=12
NWAO Narrogin (SRO) 42.49 190 *e*P **P** **07 04 16.0 +1.2**
NWAO pmax pmax
comp=Z,23nm,1.0s
NWAO Narrogin (SRO) 42.49 190 *e*P **P** **07 04 16.0 +1.2**
comp=Z,23nm,1.0s,mb4.8
STKA Stephens Creek 43.47 160 *e*P **P** **07 04 23.3 +0.5**
comp=Z,10nm,0.9s,mb4.6
STKA Stephens Creek 43.47 160 P **P** **07 04 22.9 +0.1**
comp=Z,5.5nm,0.7s,mb4.4,baz=341,slow=7.1,SNR=10
STKA Stephens Creek 43.47 160 *e*P **P** **07 04 23.8 +0.9**
comp=Z,2.2nm,0.8s,mb3.9
ZAK Zakamensk 45.17 340 *e*P **P** **07 04 43.1 +6.9**
TLY Talaya 46.17 341 *e*P pP 07 04 55.3 -3.0
TLY pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
TLY MLR MLR
comp=Z,185nm,19.0s,MS4.0
TLY Talaya 46.17 341 *e*P **P** **07 04 43.8 -0.2**
comp=Z,5.2nm,0.9s,mb4.5
HYB Hyderabad 46.45 285 *e*P **P** **07 04 46.0 -0.8**
HYB Hyderabad 46.45 285 *i*P **P** **07 04 46.0 -0.8**
ARMA Armidale 46.53 149 *e*P **P** **07 04 47.6 +0.5**
WMQ Urumqi 47.79 323 P **P** **07 04 57.0 +0.2**
WMQ pP pP 07 05 13.0 +1.9
WMQ sP sP 07 05 20.0 +2.6
WMQ PP PP 07 06 49.0 0.0
WMQ S **S** **07 11 48.0 -1.6**
WMQ ScS ScS 07 14 41.0 -4.5
WMQ SS SS 07 15 12.0 -6.7
WMQ pmax pmax
comp=Z,15nm,1.0s,mb5.0
WMQ LR LR
comp=N,720nm,16.0s,MS4.8
WMQ LR LR
comp=E,530nm,16.0s,MS4.8
WMQ LR LR
comp=Z,380nm,15.0s,MS4.5
JOSI Joshimath 47.90 303 *e*PKP **P** **07 04 57.1 -0.8**
AGRA Agra 48.43 298 *e*PKP **P** **07 05 01.5 -0.6**
BISR Bishrakh 49.17 300 *ex* **P** **07 05 04.7 -3.0**
BISR AMb AMB 07 05 08.7
comp=Z,172nm,0.1s
KLP Kalpa 49.25 304 *e*PKP **P** **07 05 09.3 +1.0**
KLP AMb AMB 07 05 12.4
comp=Z,52nm,1.1s,mb5.5
SONA Sohna 49.40 299 *e*PKP **P** **07 05 08.8 -0.7**
SONA AMb AMB 07 05 12.0
comp=Z,26nm,1.2s,mb5.2
CNB Canberra Magne 49.50 154 *e*P **P** **07 05 11.1 +1.1**
TOO Toolangi 49.97 159 *e*P **P** **07 05 12.5 -1.1**
KKR Kurukshetra 50.02 302 *e*PKP **P** **07 05 14.3 +0.1**
KHET Khetri 50.46 299 *e*PKP **P** **07 05 17.2 -0.4**
KHET AMb AMB 07 05 18.6
comp=Z,20nm,1.1s,mb5.1
PETK Petropavlovsk- 51.02 24 P **P** **07 05 22.0 +0.7**
comp=Z,4.3nm,0.7s,mb4.5,baz=190,slow=2.0,SNR=7.9
PETK LR LR 07 26 01.3
comp=Z,159nm,19.8s,MS4.0,baz=221,slow=35
PETK Petropavlovsk- 51.02 24 P **P** **07 05 22.0 +0.7**
PETK LR LR 07 26 01.3
PET Petropavlovsk 51.35 25 *e*P **P** **07 05 23.2 -0.6**
PET pmax pmax
comp=Z,23nm,0.8s,mb5.2
PET Petropavlovsk 51.35 25 *e*P **P** **07 05 23.2 -0.6**
comp=Z,23nm,0.8s,mb5.2
MK31 Makanchi Array 52.61 324 *e*P **P** **07 05 32.9 -0.3**
MKAR Makanchi Array 52.61 324 P **P** **07 05 33.0 -0.2**
comp=Z,9.6nm,0.6s,mb4.9,baz=114,slow=8.5,SNR=135
YAK Yakutsk 52.97 2 *e*P **P** **07 05 37.2 +1.5**
YAK *e* 07 06 40.9
YAK *e* 07 07 34.5
YAK *e*PPP 07 08 41.8
YAK *e*S **S** **07 13 03.8 +2.8**
YAK *e* 07 15 19.1
YAK *e*SS SS 07 16 32.2 -8.5
YAK *e*SSS 07 18 26.3
YAK pmax pmax
comp=Z,14nm,0.8s,mb4.9
YAK pmax pmax
comp=E,3.0nm,1.3s
YAK pmax pmax
comp=N,7.0nm,1.3s
YAK pmax pmax
comp=Z,19nm,0.9s,mb5.0
YAK smax
comp=N,97nm,3.9s
YAK smax
comp=E,13nm,1.8s
YAK MLR MLR
comp=Z,191nm,22.0s,MS4.1
YAK MLR MLR
comp=E,117nm,17.0s,MS4.1
YAK MLR MLR
comp=N,100nm,19.0s,MS4.1
JASL Jaisalmer 54.55 297 *e*PKP **P** **07 05 47.0 -0.8**
JASL AMb AMB 07 05 49.5
comp=Z,46nm,0.8s,mb5.6
KZA Kyzart 55.01 316 P **P** **07 05 52.0 +1.1**
SNR=24
TKM2 Tokmak 2 55.09 317 P **P** **07 05 51.8 +0.4**
SNR=13
TKM2 Tokmak 2 55.09 317 *e*P **P** **07 05 51.4 0.0**
TKM2 pmax pmax
comp=Z,11nm,0.9s,mb4.9
TKM2 Tokmak 2 55.09 317 *e*P **P** **07 05 51.4 0.0**
comp=Z,11nm,0.9s,mb4.9
ZAA0 Zalesovo Array 55.38 332 *e*P **P** **07 05 51.8 -1.6**
ZALV Zalesovo Beam 55.38 332 P **P** **07 05 51.6 -1.7**
comp=Z,3.2nm,0.6s,mb4.5,baz=119,slow=7.4,SNR=3.9
ZALV LR LR 07 30 56.4
comp=Z,164nm,20.1s,MS4.1,baz=246,slow=37
KBK Karagaybulak 55.43 316 P **P** **07 05 55.0 +1.0**
SNR=15
UCH Uchtor 55.57 316 P **P** **07 05 56.2 +1.3**
SNR=29
UCH Uchtor 55.57 316 *e*P **P** **07 05 56.1 +1.2**
UCH pmax pmax
comp=Z,21nm,1.0s,mb5.1
UCH Uchtor 55.57 316 *e*P **P** **07 05 56.1 +1.1**
comp=Z,21nm,1.0s,mb5.1
AAK Ala-Archa 55.73 316 P **P** **07 05 55.2 -0.8**
comp=Z,2.3nm,0.3s,mb4.6,baz=149,slow=13,SNR=7.9
AAK LR LR 07 32 13.1
comp=Z,396nm,19.5s,MS4.5,baz=79,slow=39
AAK Ala-Archa 55.73 316 *e*P **P** **07 05 56.7 +0.6**
AAK pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
AAK Ala-Archa 55.73 316 *e*P **P** **07 05 56.7 +0.6**
comp=Z,8.9nm,1.0s,mb4.8
AAK Ala-Archa 55.73 316 P **P** **07 05 57.2 +1.1**
SNR=9.1
AAK P 07 05 57.2
SNR=9.1
AAK Ala-Archa 55.73 316 P **P** **07 05 57.2 +1.1**
SNR=9.1
AAK P 07 05 57.2
SNR=9.1
USP Ospenovka 55.96 317 P **P** **07 05 57.7 0.0**
SNR=12
AML Almayashu 56.10 315 P **P** **07 06 00.1 +1.4**
SNR=20
AML Almayashu 56.10 315 *e*P **P** **07 06 00.0 +1.2**
AML pmax pmax
comp=Z,14nm,0.9s,mb5.0
AML Almayashu 56.10 315 *e*P **P** **07 06 00.0 +1.3**
comp=Z,14nm,0.9s,mb5.0
EKS2 Erkin-Say 56.23 316 P **P** **07 06 00.3 +0.7**
SNR=11
EKS2 Erkin-Say 56.23 316 *e*P **P** **07 06 00.4 +0.7**
EKS2 pmax pmax
comp=Z,18nm,0.9s,mb5.1
EKS2 Erkin-Say 56.23 316 *e*P **P** **07 06 00.4 +0.7**
comp=Z,18nm,0.9s,mb5.1
NVS Novosibirsk 56.66 332 *e*P **P** **07 06 00.0 -2.5**
NVS pmax pmax
comp=Z,14nm,1.3s,mb4.8
NVS pmax pmax
comp=N,4.0nm,0.9s
NVS pmax pmax
comp=E,6.0nm,0.9s
KURK Kurchatov 56.70 326 P **P** **07 06 02.2 -0.6**
comp=E,6.0nm,0.5s,mb4.9,baz=127,slow=6.7,SNR=26
KURK Kurchatov 56.70 326 *e*P **P** **07 06 02.2 -0.7**
KURK pmax pmax
comp=Z,32nm,1.2s,mb5.2
KURK Kurchatov 56.70 326 *e*P **P** **07 06 02.2 -0.7**
comp=Z,32nm,1.2s,mb5.2
KURK Kurchatov 56.70 326 P **P** **07 06 02.4 -0.5**
SNR=11
KURK P 07 06 02.4
SNR=11
KURK Kurchatov 56.70 326 P **P** **07 06 02.4 -0.5**
SNR=11
KURK P 07 06 02.4
SNR=11
KBL Kabul 57.48 305 *e*P **P** **07 06 09.0 +0.3**
KBL pmax pmax
comp=Z,19nm,0.8s,mb5.2
KBL Kabul 57.48 305 *e*P **P** **07 06 09.0 +0.4**
comp=Z,19nm,0.8s,mb5.2
BVAR Borovoye Array 62.30 326 P **P** **07 06 40.5 -0.8**
comp=Z,4.2nm,0.7s,mb4.7,baz=125,slow=9.5,SNR=20
BVAR LR LR 07 34 20.3
comp=Z,190nm,19.4s,MS4.3,baz=106,slow=37
BRVK Borovoye 62.37 326 *ce*P **P** **07 06 40.4 -1.4**
BRVK pmax pmax
comp=Z,13nm,1.0s,mb5.0
BRVK Borovoye 62.37 326 *e*P **P** **07 06 41.1 -0.7**
comp=Z,11nm,0.8s,mb5.0
BRVK Borovoye 62.37 326 P **P** **07 06 41.1 -0.7**
SNR=7.7
BRVK P 07 06 41.1
SNR=7.7
BRVK Borovoye 62.37 326 P **P** **07 06 41.1 -0.7**
SNR=7.7
BRVK P 07 06 41.1
SNR=7.7
TIXI Tiksi 62.58 1 *e*P **P** **07 06 42.0 -0.9**
TIXI pmax pmax
comp=Z,18nm,1.0s,mb5.2
TIXI MLR MLR
comp=Z,147nm,19.0s,MS4.2
TIXI Tiksi 62.58 1 *e*P **P** **07 06 43.0 +0.1**
comp=Z,31nm,1.4s,mb5.2
BILL Bilibino 64.76 16↑*e*P **P** **07 06 57.6 +0.3**
BILL *e* 07 07 32.5
BILL *e* 07 09 22.1
BILL pmax pmax
comp=Z,18nm,1.4s,mb4.9
BILL Bilibino 64.76 16 *e*P **P** **07 06 56.7 -0.6**
comp=Z,13nm,1.1s,mb4.9
URZ Urewera 67.19 138 P **P** **07 07 13.5 0.0**
comp=Z,11nm,0.9s,mb4.9,baz=67,slow=2.1,SNR=4.6
ABKAR Akbulak array 67.37 320 *e*P **P** **07 07 13.8 -0.6**
comp=Z,2.5nm,0.6s,mb4.4
SVE Sverdlovsk 68.88 328 *e*P **P** **07 07 22.9 -0.9**
SVE pmax pmax
comp=Z,14nm,0.6s,mb5.1
UNV Unalaska Valle 69.76 36 *e*P **P** **07 07 29.6 +0.3**
comp=Z,20nm,0.8s,mb5.1
ARU Arti 69.88 327 *d i*P **P** **07 07 28.3 -1.6**
ARU S S 07 16 34.4 -1.2
ARU pmax pmax
comp=Z,12nm,1.0s,mb4.8
ARU Arti 69.88 327 *e*P **P** **07 07 28.6 -1.3**
comp=Z,12nm,0.6s,mb5.0
RDF Al-Radifah 75.26 298 *e*P **P** **07 08 01.0 -1.5**
RDF AMb AMB 07 08 03.7
comp=Z,44nm,1.1s,mb5.3
MIB Mutribah 75.41 298 *e*P **P** **07 08 02.1 -1.3**
MIB AMb AMB 07 08 03.9
comp=Z,44nm,0.8s,mb5.5
NAY Al-Naaiem 75.52 298 *e*P **P** **07 08 03.2 -0.8**
NAY AMb AMB 07 08 05.0
comp=Z,27nm,1.1s,mb5.1
CASY Casey 75.93 186 *e*P **P** **07 08 05.2 -0.2**
GNI Garni 77.26 309 *ce*P **P** **07 08 14.1 +0.5**
GNI pmax pmax
comp=Z,20nm,1.7s
ZEI Tsey 77.84 312 *e*P **P** **07 08 15.5 -1.3**
ZEI pmax pmax
comp=Z,15nm,1.0s,mb4.9
KIV Kislovodsk 78.69 313 *e*P **P** **07 08 22.0 +0.5**
KIV pmax pmax
comp=Z,15nm,1.0s,mb4.9
KIV MLR MLR
comp=Z,202nm,19.0s,MS4.5
KIV Kislovodsk 78.69 313 *e*P **P** **07 08 22.3 +0.8**
comp=Z,13nm,0.8s,mb4.9
KIV Kislovodsk 78.69 313 P **P** **07 08 22.1 +0.6**
SNR=5.2
KIV P 07 08 22.1
SNR=5.2
KIV Kislovodsk 78.69 313 P **P** **07 08 22.1 +0.6**
SNR=5.2
KIV P 07 08 22.1
SNR=5.2
BPAW Bear Paw Mtn. 79.05 26 *e*P **P** **07 08 23.5 +0.5**
comp=Z,27nm,1.1s,mb5.1
COLD Coldfoot 79.47 23 *e*P **P** **07 08 26.4 +1.1**
comp=Z,7.5nm,0.8s,mb4.7
PMR Palmer 79.86 29 *e*P **P** **07 08 26.9 -0.6**

PMR pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
PMR Palmer 79.86 29 *eP* **P 07 08 26.9 -0.5**
comp=Z,9.8nm,1.0s,mb4.7
COLA College 80.41 26 *eP* **P 07 08 29.7 -0.7**
COLA pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
COLA College 80.41 26 *eP* **P 07 08 29.6 -0.7**
comp=Z,4.3nm,0.8s,mb4.4
PAX Paxson 81.53 28 *eP* **P 07 08 36.5 +0.1**
PAX pmax pmax
comp=Z,31nm,1.3s,mb5.1
PAX Paxson 81.53 28 *eP* **P 07 08 36.5 +0.2**
comp=Z,31nm,1.3s,mb5.1
BMRM Bremner River 82.07 30 P **P 07 08 37.6 -1.7**
comp=Z,14nm,1.1s,mb4.8
OBN Obninsk 82.10 325⇓ *eP* **P 07 08 41.5 +2.0**
OBN *e* pP 07 08 59.6 +4.7
OBN pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
OBN MLR MLR
comp=Z,200nm,16.0s,MS4.6
ANN Anapa 82.41 314 *eP* **P 07 08 35.9 -5.5**
ANN pmax pmax
comp=Z,33nm,1.2s,mb5.1
APA Apatity 82.55 337⇑ *iP* **P 07 08 41.0 -0.6**
APA pmax pmax
comp=Z,13nm,1.0s,mb4.9
APA MLR MLR
comp=Z,200nm,22.0s,MS4.4
EGAK Eagle 83.27 26 *eP* **P 07 08 45.6 +0.1**
comp=Z,41nm,2.0s,mb5.1
JOF Joensuu 83.97 333 *ep* **P 07 08 47.3 -1.7**
comp=Z,6.8nm,0.7s,mb4.9
DAWY Dawson 84.13 26 *eP* **P 07 08 50.5 +0.6**
ARCES ARCESS Array B 85.11 340 P **P 07 08 53.4 -1.3**
comp=Z,5.0nm,0.9s,mb4.7,baz=77,slow=6.5,SNR=12
MMAI Mount Meron Ar 85.31 303 P **P 07 08 55.9 -0.6**
comp=Z,0.5nm,0.3s,mb4.1,baz=104,slow=7.0,SNR=3.7
MMAI LR LR 07 52 10.0
comp=Z,40nm,21.7s,MS3.8,baz=105,slow=39
INK Inuvik 85.66 21 *eP* **P 07 08 57.6 +0.1**
INK pmax pmax
comp=Z,24nm,1.2s
INK Inuvik 85.66 21 *eP* **P 07 08 57.6 +0.1**
comp=Z,24nm,1.2s,mb5.3
BR131 Keskin Array S 85.79 309 *eP* **P 07 08 58.0 -0.7**
comp=Z,1.8nm,0.7s,mb4.4
BRTR Keskin Array B 85.79 309 P **P 07 08 58.1 -0.6**
comp=Z,3.5nm,0.9s,mb4.6,baz=107,slow=4.1,SNR=17
BRTR LR LR 07 55 04.2
comp=Z,59nm,20.8s,MS4.0,baz=241,slow=41
FINES FINESS Array B 86.65 332 P **P 07 09 01.1 -1.4**
comp=Z,2.7nm,0.6s,mb4.7,baz=81,slow=4.8,SNR=8.1
FINES LR LR 07 50 07.3
comp=Z,162nm,21.8s,MS4.4,baz=37,slow=37
AKASG Malin Array Be 87.09 321 P **P 07 09 03.4 -1.5**
comp=Z,3.1nm,0.7s,mb4.6,baz=70,slow=4.4,SNR=9.5
AKASG LR LR 07 52 01.9
comp=Z,99nm,18.2s,MS4.3,baz=90,slow=38
AKASG Malin Array Be 87.09 321 P **P 07 09 03.4 -1.5**
AKASG LR LR 07 52 01.9
MAW Mawson 88.33 200 LR LR 07 45 48.8
comp=Z,61nm,20.8s,MS4.0,baz=228,slow=34
KMBO Kilima Mbogo 88.54 269 P **P 07 09 12.7 +0.2**
comp=Z,2.8nm,0.8s,mb4.6,baz=162,slow=6.4,SNR=5.7
KMBO Kilima Mbogo 88.54 269 *eP* **P 07 09 13.5 +1.0**
KMBO pmax pmax
comp=Z,6.0nm,1.1s
KMBO Kilima Mbogo 88.54 269 *eP* **P 07 09 13.5 +0.9**
comp=Z,6.1nm,1.1s,mb4.8
BUR08 Bucovina Ar. S 90.32 318 *eP* **P 07 09 20.1 0.0**
NB2 NORSAR Subarra 93.56 334 P **P 07 09 32.1 -2.7**
comp=Z,1.5nm,0.8s,mb4.5,baz=69,slow=4.8
NOA NORSAR Array B 93.56 334 P **P 07 09 32.7 -2.1**
comp=Z,0.9nm,0.7s,mb4.3,baz=68,slow=4.6,SNR=3.4
NOA LR LR 07 55 16.5
comp=Z,154nm,20.6s,MS4.4,baz=60,slow=38
NOA NORSAR Array B 93.56 334 P **P 07 09 32.7 -2.1**
NOA LR LR 07 55 16.5
YKA Yellowknife Ar 95.14 24 P **P 07 09 41.3 -0.7**
comp=Z,1.2nm,0.7s,mb4.4,baz=305,slow=4.4,SNR=16
GERES GERESS Array B 97.25 322 P **P 07 09 51.8 -0.1**
comp=Z,0.3nm,0.3s,mb4.2,baz=64,slow=6.1,SNR=6.3
GERES LR LR 07 55 51.9
comp=Z,124nm,21.5s,MS4.4,baz=264,slow=37
TXAR Lajitas Array 119.13 49 PKP PKPdf 07 15 07.2 -1.3
comp=Z,0.7nm,0.9s,baz=327,slow=1.6,SNR=3.8
TORD Torodi Ar. Bea 120.09 291 PKP PKPdf 07 15 09.6 -1.0
comp=Z,1.5nm,0.6s,baz=50,slow=1.8,SNR=12
JCT Junction City 121.33 46 *e*PKIKP PKPdf 07 15 13.8 +1.1
PLCA Paso Flores 145.33 158 PKPbc PKPbc 07 15 56.9 0.0
comp=Z,8.2nm,1.1s,baz=201,slow=5.5,SNR=12
MTP Monte Pirata 150.87 22 *e*PKPdf PKPdf 07 16 06.2 -0.6
MTP *e*PKPbc PKPbc 07 16 11.6 -0.8
MTP *e*PKPab PKPab 07 16 19.7 +0.2
OTAV Otavalo 154.34 70 PKPdf PKPdf 07 16 10.7 -1.3
OTAV *e*PKPbc PKPbc 07 16 20.0 -0.3
OTAV *e*PKPab PKPab 07 16 34.1 -0.4
CPUP Villa Florida 162.58 171 PKPab PKPab 07 17 09.0 -0.6
comp=Z,0.8nm,0.8s,baz=175,slow=12,SNR=2.9
LPAZ La Paz 164.80 120 PKP PKPdf 07 16 25.8 +2.1
comp=Z,0.7nm,0.9s,baz=45,slow=1.4,SNR=2.6

DDA ***02*** *06:57:01.3, 37.56N×35.71E, h7km±3km, Md3.1*
ISK ***02*** *06:57:01.2, 37.55N×35.67E, h4km, MD2.7*
ISCJB ***02*** *06:57:01.9±0.7, 37.53N±0.04×35.70E±0.03, h9km±5km,*
Error ellipse: s-maj=6.1km s-min=4.6km az=3.0
CSEM ***02*** *06:57:02.0±0.2, 37.53N×35.69E, h12km, MD2.7, Error ellipse: s-maj=4.2km s-min=3.2km az=2.0*
ISC 02 06:57:02.3±0.7, 37.53N±0.04×35.70E±0.03, h13km±5km,
n20,σ0.76/37, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.11**	**115**	PG	**Pg**	**06 57 04.8**	**-0.6**
KARA	**Karaisali**	**0.58**	**243**	*e*PG	**Pg**	**06 57 12.9**	**-0.8**
KARA				*e*SG	**Sg**	**06 57 21.4**	**+0.1**
KARA	**Karaisali**	**0.58**	**243**	*e*Pg	**Pg**	**06 57 12.9**	**-0.8**
KARA				*e*Sg	**Sg**	**06 57 21.5**	**+0.2**
YURE	**YUREGIR**	**0.70**	**184**	*i* P	**Pg**	**06 57 16.0**	**0.0**
YURE				*i* S	**Sg**	**06 57 26.6**	**+1.3**
YURE	**YUREGIR**	**0.70**	**184**	*i* P	**Pg**	**06 57 16.0**	**0.0**
YURE				*i* S	**Sg**	**06 57 26.5**	**+1.3**
GULE	**Gulek**	**0.78**	**252**	*i* P	**Pg**	**06 57 16.7**	**-0.7**
GULE				*i* S	**Sg**	**06 57 27.8**	**+0.3**
GULE	**Gulek**	**0.78**	**252**	*i* P	**Pg**	**06 57 16.7**	**-0.7**
GULE				*i* S	**Sg**	**06 57 27.8**	**+0.3**
KMRS	**Kahramanmaras**	**0.95**	**91**	*e*PG	**Pg**	**06 57 20.7**	**0.0**
KMRS				*e*SG	**Sg**	**06 57 34.6**	**+1.4**
KMRS	**Kahramanmaras**	**0.95**	**91**	*e*Pg	**Pg**	**06 57 20.7**	**0.0**
KMRS				*e*Sg	**Sg**	**06 57 34.6**	**+1.4**
KRTS	**Karatas**	**0.99**	**195**	*e*PG	**Pg**	**06 57 21.2**	**-0.2**
KRTS	**Karatas**	**0.99**	**195**	*e*Pg	**Pg**	**06 57 21.2**	**-0.2**
COBT	**Iskenderun**	**1.10**	**156**	*i* P	**Pb**	**06 57 22.5**	**-0.8**
COBT				*i* S	**Sb**	**06 57 38.6**	**+1.2**
COBT	**Iskenderun**	**1.10**	**156**	*i* P	**Pb**	**06 57 22.5**	**-0.7**
COBT				*i* S	**Sb**	**06 57 38.6**	**+1.1**
MERS	**Mersin**	**1.15**	**235**	*e*PN	**Pn**	**06 57 23.8**	**-0.3**
MERS				*e*SN	**Sn**	**06 57 40.0**	**+0.3**
MERS	**Mersin**	**1.15**	**235**	*e*Pn	**Pn**	**06 57 23.8**	**-0.3**
MERS				*e*Sn	**Sn**	**06 57 40.0**	**+0.3**
KUZU	**Kuzuini**	**1.33**	**124**	*i* P	**Pn**	**06 57 25.5**	**-1.2**
KUZU				*i* S	**Sb**	**06 57 43.0**	**-1.1**
KUZU	**Kuzuini**	**1.33**	**124**	*i* P	**Pn**	**06 57 25.5**	**-1.1**
KUZU				*i* S	**Sb**	**06 57 43.0**	**-1.1**
SARI	**SarD1z-Kayseri**	**1.39**	**34**	*e*PG	**Pn**	**06 57 22.0**	**-5.5**
SARI				*e*SG	**Sn**	**06 57 36.6**	**-9.1**
AVNT	**Avonos**	**1.42**	**332**	*e*P	**Pn**	**06 57 28.0**	**+0.2**
AVNT				*e*S	**Sn**	**06 57 47.2**	**+0.9**
AVNT	**Avonos**	**1.42**	**332**	*e*P	**Pn**	**06 57 28.0**	**+0.2**
AVNT				*e*S	**Sn**	**06 57 47.2**	**+0.9**

MAN ***02*** *07:03:55, 9.00N×126.33E, h28km, mb4.8, ML3.7, MS3.7*
MAN INTENSITY II - TAGO SURIGAO DEL SUR.
ISCJB ***02*** *07:03:55.5±0.6, 8.99N±0.03×126.38E±0.04, h74km±5km,*
mb4.6/66, Error ellipse: s-maj=7.5km s-min=4.2km
az=168.4
IDC ***02*** *07:03:57.9±1.5, 9.05N×126.34E, h81km±14km, mb4.2/22,*
mb1 4.2/24, mb1mx4.2/29, mbtmp4.2/24, MS3.8/2,
Ms1 3.8/2, ms1mx3.0/26, Error ellipse: s-maj=17.6km
s-min=9.5km az=84.0
MOS ***02*** *07:03:57.2±1.3, 9.05N×126.37E, h91km, mb4.8/18, Error ellipse: s-maj=13.8km s-min=6.6km az=118.7*
NEIC ***02*** *07:03:58.3±1.0, 9.01N×126.31E, h83km±10km, mb4.8/33,*
Error ellipse: s-maj=8.2km s-min=5.2km az=71.0
NEIC Felt [II PIVS] at Tago.
DJA ***02*** *07:04:02, 8.94N×126.45E, h117km, mb4.6/15*
ISC 02 07:03:57.1±0.6, 8.99N±0.03×126.34E±0.05, h72km±5km,
h101km±1.6km:pP-P,n137,σ15/145,mb4.6/66,8C-3D,
Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.71**	**269**	*e*P	**Pn**	**07 04 09.6**	**-2.7**
BUTP				*e*S	**Sn**	**07 04 19.1**	**-4.4**
BUKP	**Musuan**	**1.68**	**229**	*e*P	**Pn**	**07 04 23.9**	**-0.5**
BUKP				*e*S	**Sn**	**07 04 47.2**	**+2.0**
CGP	**Cagayan de Oro**	**1.71**	**252**⇑	*e*P	**Pn**	**07 04 23.0**	**-1.9**
CGP				*e*S	**Sn**	**07 04 45.0**	**-1.1**
MSLP	**Maasin**	**1.85**	**308**	*e*P	**Pn**	**07 04 27.7**	**+0.8**
MSLP				*e*S	**Sn**	**07 04 48.4**	**-1.1**
DAV	**Davao City (W)**	**2.05**	**202**	P	**Pn**	**07 04 30.2**	**+0.7**
122nm,0.3s,baz=52,slow=11,SNR=6.4							
DAV				S	**Sn**	**07 04 57.7**	**+3.6**
105nm,0.3s,baz=286,slow=19,SNR=9.5							
DAV	**Davao City (W)**	**2.05**	**202**	*e*Pn	**Pn**	**07 04 30.2**	**+0.7**
KCP	**Kidapawan**	**2.32**	**212**⇓	*e*P	**Pn**	**07 04 32.2**	**-1.0**
KCP				*i* S	**Sn**	**07 05 00.6**	**-0.2**
CTBH	**Cotabato--PC H**	**2.72**	**230**⇑	*e*P	**Pn**	**07 04 37.6**	**-0.9**
CTBH				*i* S	**Sn**	**07 05 12.4**	**+2.1**
GSPH	**General Santos**	**3.19**	**206**⇑	*i* P	**Pn**	**07 04 44.5**	**-0.5**
CNP	**Catarman**	**3.87**	**335**	*e*P	**Pn**	**07 04 53.4**	**-0.8**
CNP				*e*S	**Sn**	**07 05 39.7**	**+1.1**
GUIM	**Jordan**	**4.04**	**294**	*e*P	**Pn**	**07 04 56.8**	**+0.2**
GUIM				*e*S	**Sn**	**07 05 40.6**	**-2.1**
PVCP	**Virac**	**5.06**	**335**	*e*P	**Pn**	**07 05 10.5**	**0.0**
PVCP				*e*S	**Sn**	**07 06 02.9**	**-4.7**
TGY	**Tagaytay City**	**7.34**	**314**	P	**Pn**	**07 05 45.0**	**+3.3**
89nm,0.3s,baz=278,slow=12,SNR=3.7							
KKM	**Kota Kinabalu**	**10.46**	**254**	*e*Pn	**Pn**	**07 06 27.2**	**+3.0**
TPUB	**Ta-pu**	**15.25**	**340**	*e*Pn	**Pn**	**07 07 28.8**	**+0.5**
KAPI	**Kappang**	**15.38**	**206**	P	**Pn**	**07 07 30.6**	**+0.6**
0.3nm,0.3s,baz=57,slow=5.4,SNR=4.7							
KAPI				LR	LR	07 14 03.0	
comp=Z,365nm,19.2s,baz=248,slow=39							
KAPI	**Kappang**	**15.38**	**206**	*e*Pn	**Pn**	**07 07 30.9**	**+0.8**
32nm,1.1s							
KSM	**Kuching**	**17.61**	**246**	*e*P	**Pn**	**07 07 57.9**	**0.0**
9.5nm,0.8s							
JOW	**Kunigami**	**17.84**	**6**	LR	LR	07 13 45.9	
comp=Z,256nm,19.6s,baz=86,slow=33							
KAKA	**Kakadu**	**22.39**	**164**	*e*P	**P**	**07 08 49.4**	**-0.2**
12nm,0.6s,mb4.4							
KAKA	**Kakadu**	**22.39**	**164**	*e*P	**P**	**07 08 49.8**	**+0.2**
38nm,0.6s,mb4.9							
NJ2	**Nanjing**	**23.98**	**344**	*e*P	**P**	**07 09 06.6**	**+1.7**
NJ2				pmax	pmax		
comp=Z,10.0nm,0.6s,mb4.3							
KNA	**Kununurra**	**24.69**	**174**	*e*P	**P**	**07 09 09.3**	**-2.2**
comp=Z,16nm,0.8s,mb4.5							
GYA	**Guiyang**	**25.49**	**315**	P	**P**	**07 09 20.2**	**+1.4**
GYA				pP	pP	07 09 42.6	+6.9
GYA				sP	sP	07 09 55.4	+11
GYA				PP		07 10 03.2	
GYA				S	**S**	**07 13 37.4**	**-3.6**
GYA				pmax	pmax		
comp=Z,10.0nm,0.8s,mb4.3							
GYA				pmax	pmax		
comp=Z,90nm,4.7s							
KULM	**Kulim**	**25.75**	**264**	*e*P	**P**	**07 09 22.8**	**+1.6**
comp=Z,14nm,0.9s,mb4.4							
FITZ	**Fitzroy Crossi**	**26.92**	**181**	*e*P	**P**	**07 09 30.6**	**-1.1**
comp=Z,21nm,1.0s,mb4.6							
FITZ	**Fitzroy Crossi**	**26.92**	**181**	P	**P**	**07 09 30.8**	**-0.9**
comp=Z,14nm,1.0s,mb4.5,baz=16,slow=7.7,SNR=13							
FITZ	**Fitzroy Crossi**	**26.92**	**181**	*e*P	**P**	**07 09 31.3**	**-0.4**
comp=Z,16nm,1.0s,mb4.5							
KMI	**Kunming**	**27.61**	**308**	P	**P**	**07 09 40.5**	**+2.6**
KMI				pP	pP	07 10 03.3	+8.4
KMI				sP	sP	07 10 15.0	+12
KMI				PP	PP	07 10 32.1	-9.3
KMI				S	**S**	**07 14 12.4**	**-2.1**
KMI				pmax	pmax		
comp=Z,11nm,0.6s,mb4.6							
KMI				pmax	pmax		
comp=Z,58nm,3.5s							
KMI				LR	LR		
comp=N,130nm,14.9s							
KMI				LR	LR		
comp=E,190nm,15.4s							
KMI				LR	LR		
comp=Z,200nm,15.4s							
PSI	**Prapat**	**27.94**	**259**	P	**P**	**07 09 42.0**	**+1.0**
comp=Z,18nm,0.9s,mb4.6,baz=58,slow=3.6,SNR=14							
CMAR	**Chiang Mai Arr**	**28.20**	**292**	P	**P**	**07 09 43.6**	**+0.5**
comp=Z,6.7nm,0.8s,mb4.2,baz=106,slow=7.2,SNR=21							
COEN	**Coen**	**28.26**	**144**	*e*P	**P**	**07 09 42.7**	**-1.0**
KS15	**Wonju Array Si**	**28.36**	**3**	*e*P	**P**	**07 09 45.0**	**+0.6**
KSRS	**Korea Array**	**28.38**	**3**	P	**P**	**07 09 44.5**	**0.0**
comp=Z,8.9nm,1.0s,mb4.3,baz=180,slow=10,SNR=19							
MJAR	**Matsushiro Arr**	**29.48**	**20**	P	**P**	**07 09 52.2**	**-2.0**
comp=Z,4.9nm,0.9s,mb4.2,baz=199,slow=9.0,SNR=7.8							
WRAB	**Tennant Creek**	**29.80**	**165**	*e*P	**P**	**07 09 56.9**	**-0.4**
WRAB				pmax	pmax		
comp=Z,4.0nm,0.8s,mb4.1							
WRAB	**Tennant Creek**	**29.80**	**165**	*e*P	**P**	**07 09 56.9**	**-0.3**
comp=Z,2.3nm,0.8s,mb3.9							
CD2	**Chengdu**	**30.31**	**319**	*e*P	**P**	**07 10 04.2**	**+2.4**
CD2				pP	pP	07 10 26.7	+7.8
CD2				sP	sP	07 10 38.6	+11
CD2				S	**S**	**07 14 56.5**	**-0.3**
CD2				pmax	pmax		
comp=Z,10.0nm,0.5s,mb4.7							
CD2				pmax	pmax		
comp=Z,60nm,4.2s							
MBWA	**Marble Bar**	**30.65**	**192**	*e*P	**P**	**07 10 05.4**	**+0.6**
comp=Z,35nm,1.6s,mb4.8							
BJI	**Beijing**	**32.23**	**345**	P	**P**	**07 10 19.8**	**+1.3**
BJI				S	**S**	**07 15 27.3**	**+0.8**
BJI				pmax	pmax		
comp=Z,9.0nm,0.6s,mb4.7							
BJI				pmax	pmax		
comp=Z,38nm,4.1s							
BJI				LR	LR		
comp=N,170nm,10.3s							
BJI				LR	LR		
comp=E,160nm,17.7s							
BJI				LR	LR		
comp=Z,110nm,16.8s							
ASAR	**Alice Springs**	**33.28**	**167**	P	**P**	**07 10 26.8**	**-1.1**
comp=Z,0.6nm,0.3s,mb3.9,baz=354,slow=7.0,SNR=13							
ASAR				PcP	PcP	07 13 08.8	0.0
comp=Z,1.6nm,0.7s,baz=348,slow=2.9,SNR=8.4							
ASAR				ScP	ScP	07 16 44.6	-2.3
comp=Z,0.5nm,0.7s,baz=19,slow=2.4,SNR=4.4							
ASAR	**Alice Springs**	**33.28**	**167**	P	**P**	**07 10 26.8**	**-1.1**
ASAR						07 13 08.8	
LZH	**Lanzhou**	**33.87**	**326**	*e*P	**P**	**07 10 34.5**	**+1.6**
LZH				pP	pP	07 10 56.5	+6.3
LZH				sP	sP	07 11 07.8	+9.2
LZH				PP	PP	07 11 50.5	-0.3
LZH				*e*S	**S**	**07 15 50.2**	**-1.9**
LZH				pmax	pmax		
comp=Z,13nm,1.0s,mb4.7							
LZH				pmax	pmax		
comp=Z,71nm,4.7s							
LZH				LR	LR		
comp=N,1μm,17.6s							
LZH				LR	LR		
comp=Z,1μm,18.9s							
HHC	**Hu-ho-hao-te**	**34.34**	**340**	*e*P	**P**	**07 10 39.3**	**+2.4**
HHC				pP	pP	07 11 01.6	+7.4
HHC				sP	sP	07 11 13.2	+11
HHC				PP	PP	07 11 57.6	+1.7
HHC				S	**S**	**07 15 58.6**	**-0.6**
HHC				ScS	ScS	07 20 49.4	-3.5
HHC				pmax	pmax		
comp=Z,14nm,1.0s,mb4.8							
HHC				pmax	pmax		
comp=Z,65nm,6.2s							
HHC				LR	LR		
comp=N,100nm,19.0s							
HHC				LR	LR		
comp=E,310nm,16.6s							
HHC				LR	LR		
comp=Z,80nm,16.7s							
CN2	**Changchun**	**34.69**	**359**	*e*P	**P**	**07 10 39.1**	**-0.8**
CN2				pmax	pmax		
comp=Z,10.0nm,0.5s,mb4.9							
CN2				pmax	pmax		
comp=Z,200nm,4.0s							
CN2				LR	LR		
comp=N,200nm,13.0s							
CN2				LR	LR		
comp=E,200nm,13.0s							
CN2				LR	LR		
comp=Z,200nm,13.0s							
CTA	**Charters Tower**	**34.91**	**146**	P	**P**	**07 10 41.4**	**-0.7**
comp=Z,1.3nm,0.4s,mb4.1,baz=325,slow=11,SNR=4.4							
CTAO	**Charters Tower**	**34.91**	**146**	*e*P	**P**	**07 10 42.3**	**+0.3**
CTAO				pmax	pmax		
comp=Z,2.0nm,0.6s,mb4.1							
CTAO	**Charters Tower**	**34.91**	**146**	*e*P	**P**	**07 10 42.3**	**+0.2**
comp=Z,2.0nm,0.6s,mb4.1							
MDJ	**Mudanjiang**	**35.61**	**4**	P	**P**	**07 10 48.2**	**+0.5**
MDJ				pmax	pmax		
comp=Z,23nm,0.9s,mb5.1							
MDJ				pmax	pmax		
comp=Z,64nm,6.9s							
MDJ	**Mudanjiang**	**35.61**	**4**	*e*P	**P**	**07 10 48.5**	**+0.8**
comp=Z,11nm,0.8s,mb4.8							
ASAJ	**Asahikawa**	**37.75**	**19**	P	**P**	**07 11 06.2**	**+0.3**
comp=Z,11nm,0.7s,mb4.8,baz=242,slow=16,SNR=11							
LSA	**Lhasa**	**38.84**	**307**	*e*P	**P**	**07 11 16.6**	**+1.3**
LSA				pmax	pmax		
comp=Z,12nm,0.6s,mb4.9							
LSA	**Lhasa**	**38.84**	**307**	*e*P	**P**	**07 11 16.6**	**+1.3**
comp=Z,12nm,0.6s,mb4.9							
FORT	**Forrest**	**39.57**	**178**	*e*P	**P**	**07 11 21.3**	**0.0**
comp=Z,19nm,0.5s,mb5.2							
FORT	**Forrest**	**39.57**	**178**	*e*P	**P**	**07 11 21.5**	**+0.2**
comp=Z,30nm,0.7s,mb5.2							
TAPN	**Taplejung**	**40.77**	**302**	*e*P	**P**	**07 11 31.2**	**-0.2**
ODAN	**Odare**	**40.88**	**301**	*e*P	**P**	**07 11 31.9**	**-0.4**
comp=Z,73nm,0.7s,mb5.6							
KLBR	**Kellerberrin**	**41.17**	**191**	*e*P	**P**	**07 11 36.8**	**+2.2**
comp=Z,21nm,1.5s,mb4.7							
RAMN	**Ramite**	**41.58**	**301**	*e*P	**P**	**07 11 37.6**	**-0.5**
comp=Z,22nm,0.7s,mb5.0							
ULN	**Ulaanbaatar**	**42.05**	**341**	*e*P	**P**	**07 11 40.9**	**-0.6**
SONM	**Songino Array**	**42.24**	**340**	P	**P**	**07 11 41.5**	**-1.6**
comp=Z,1.1nm,0.7s,mb3.7,baz=162,slow=8.6,SNR=6.4							
SONM				PcP	PcP	07 13 36.2	+0.3
comp=Z,1.8nm,0.8s,baz=170,slow=3.9,SNR=6.5							
GUN	**Gumba**	**42.49**	**302**	*e*P	**P**	**07 11 45.2**	**-0.2**
comp=Z,67nm,0.8s,mb5.4							
NWAO	**Narrogin (SRO)**	**42.57**	**191**	P	**P**	**07 11 48.1**	**+2.2**
comp=Z,9.0nm,0.8s,mb4.5,baz=324,slow=2.6,SNR=6.8							
NWAO	**Narrogin (SRO)**	**42.57**	**191**	*e*P	**P**	**07 11 48.9**	**+3.0**
BBOO	**Buckleboo**	**42.58**	**168**	*e*P	**P**	**07 11 45.6**	**-0.4**
comp=Z,6.6nm,0.3s,mb4.8							
PKI	**Pulchoki**	**42.78**	**301**	*e*P	**P**	**07 11 48.2**	**+0.4**
PKI				pmax	pmax		
comp=Z,29nm,0.6s,mb5.2							
PKI	**Pulchoki**	**42.78**	**301**	*e*P	**P**	**07 11 48.2**	**+0.4**
comp=Z,29nm,0.6s,mb5.2							
PKIN	**Phulchoki**	**42.79**	**301**	*e*P	**P**	**07 11 48.2**	**+0.3**
comp=Z,29nm,0.6s,mb5.2							
KKN	**Kakani**	**42.96**	**301**	*e*P	**P**	**07 11 49.5**	**+0.3**
DMN	**Daman**	**43.05**	**301**	*e*P	**P**	**07 11 49.6**	**-0.4**
comp=Z,31nm,0.9s,mb5.0							
STKA	**Stephens Creek**	**43.17**	**161**	*e*P	**P**	**07 11 48.9**	**-1.9**
comp=Z,2.6nm,0.7s,mb4.1							
STKA	**Stephens Creek**	**43.17**	**161**	P	**P**	**07 11 50.3**	**-0.5**
comp=Z,3.4nm,0.7s,mb4.2,baz=316,slow=7.4,SNR=7.3							
STKA	**Stephens Creek**	**43.17**	**161**	*e*P	**P**	**07 11 50.3**	**-0.5**
comp=Z,1.8nm,1.1s,mb3.7							
CMSA	**Cobar Meteorol**	**44.35**	**156**	*e*P	**P**	**07 11 59.3**	**-1.0**
TLY	**Talaya**	**46.46**	**341**	*e*P	**P**	**07 12 18.3**	**+1.6**
TLY				pmax	pmax		
comp=Z,4.0nm,0.9s,mb4.2							
TLY	**Talaya**	**46.46**	**341**	*e*P	**P**	**07 12 16.6**	**-0.1**
comp=Z,3.3nm,0.8s,mb4.1							
WMQ	**Urumqi**	**48.28**	**323**	*e*P	**P**	**07 12 33.0**	**+2.0**
TOO	**Toolangi**	**49.66**	**160**	*e*P	**P**	**07 12 40.3**	**-1.3**
DDI	**Dehra Dun**	**49.73**	**302**	*ex*	x	07 12 36.5	
PETK	**Petropavlovsk-**	**50.77**	**24**	P	**P**	**07 12 50.9**	**+1.1**
comp=Z,4.7nm,0.7s,mb4.6,baz=205,slow=6.4,SNR=7.5							
PET	**Petropavlovsk**	**51.10**	**25**	*e*P	**P**	**07 12 52.5**	**+0.3**
PET				pmax	pmax		
comp=Z,12nm,0.8s,mb5.0							
PET	**Petropavlovsk**	**51.10**	**25**	*e*P	**P**	**07 12 52.5**	**+0.3**
comp=Z,12nm,0.8s,mb5.0							
YAK	**Yakutsk**	**53.00**	**2**	*e*P	**P**	**07 13 04.7**	**-1.5**
YAK				pmax	pmax		
comp=Z,12nm,0.9s,mb4.9							
YAK				pmax	pmax		
comp=N,4.0nm,0.9s							
YAK				pmax	pmax		
comp=E,3.0nm,0.9s							
MK31	**Makanchi Array**	**53.09**	**323**	*e*P	**P**	**07 13 06.4**	**-0.7**
MKAR	**Makanchi Array**	**53.09**	**323**	P	**P**	**07 13 06.3**	**-0.8**
comp=E,7.1nm,0.6s,mb4.9,baz=113,slow=8.5,SNR=79							
MKAR				PcP	PcP	07 14 14.3	-0.3
comp=E,3.7nm,0.6s,baz=94,slow=6.0,SNR=5.9							
MKAR	**Makanchi Array**	**53.09**	**323**	P	**P**	**07 13 06.3**	**-0.8**
MKAR				PcP	PcP	07 14 14.3	-0.3
TKM2	**Tokmak 2**	**55.63**	**316**	*e*P	**P**	**07 13 26.1**	**+0.4**
TKM2				pmax	pmax		
comp=Z,4.0nm,0.7s,mb4.6							
TKM2	**Tokmak 2**	**55.63**	**316**	*e*P	**P**	**07 13 26.1**	**+0.4**
comp=Z,4.3nm,0.7s,mb4.6							
ZAA0	**Zalesovo Array**	**55.78**	**332**	*e*P	**P**	**07 13 24.9**	**-1.6**
ZALV	**Zalesovo Beam**	**55.78**	**332**	P	**P**	**07 13 25.1**	**-1.5**
comp=Z,3.1nm,0.6s,mb4.5,baz=132,slow=4.4,SNR=4.8							
UCH	**Uchtor**	**56.13**	**315**	*e*P	**P**	**07 13 30.2**	**+1.0**
UCH				pmax	pmax		
comp=Z,6.0nm,0.7s,mb4.7							
UCH	**Uchtor**	**56.13**	**315**	*e*P	**P**	**07 13 30.2

GNI				pmax	pmax		
	comp=Z,17nm,1.7s						
ZEI	**Tsey**	**78.43**	**312**	*e*P	**P**	**07 15 49.0**	**-1.2**
ZEI				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.7						
BPAW	**Bear Paw Mtn.**	**78.77**	**26**	*e*P	**P**	**07 15 52.4**	**+0.8**
	comp=Z,18nm,0.9s,mb4.9						
KIV	**Kislovodsk**	**79.27**	**313**	*e*P	**P**	**07 15 54.0**	**-0.8**
KIV				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.8						
PMR	**Palmer**	**79.55**	**29**	*e*P	**P**	**07 15 56.3**	**+0.3**
COLA	**College**	**80.14**	**26**	*e*P	**P**	**07 15 59.3**	**+0.2**
COLA				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.5						
COLA	**College**	**80.14**	**26**	*e*P	**P**	**07 15 59.3**	**+0.2**
	comp=Z,6.7nm,0.9s,mb4.5						
MENT	**Mentasta**	**82.04**	**28**	*e*P	**P**	**07 16 10.7**	**+1.5**
LVZ	**Lovozero**	**82.38**	**338**	*c*eP	**P**	**07 16 10.1**	**-0.8**
LVZ				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.6						
APA	**Apatity**	**82.89**	**337**	⇑*i*P	**P**	**07 16 13.2**	**-0.3**
APA				pmax	pmax		
	comp=Z,25nm,12.0s						
APA				MLR	MLR		
	comp=Z,100nm,13.0s						
EGAK	**Eagle**	**83.01**	**26**	*e*P	**P**	**07 16 15.2**	**+1.0**
	comp=Z,5.2nm,0.9s,mb4.4						
DAWY	**Dawson**	**83.86**	**26**	*e*P	**P**	**07 16 20.0**	**+1.5**
ARCES	**ARCESS Array B**	**85.42**	**340**	P	**P**	**07 16 25.8**	**-0.5**
	comp=Z,3.7nm,0.7s,mb4.4,baz=80,slow=7.5,SNR=12						
INK	**Inuvik**	**85.45**	**22**	*e*P	**P**	**07 16 27.3**	**+0.8**
FINES	**FINESS Array B**	**87.05**	**332**	P	**P**	**07 16 33.3**	**-1.2**
	comp=Z,1.9nm,0.5s,mb4.2,baz=63,slow=4.7,SNR=7.8						
AKASG	**Malin Array Be**	**87.60**	**321**	P	**P**	**07 16 36.1**	**-1.3**
	comp=Z,1.8nm,0.5s,mb4.3,baz=73,slow=4.1,SNR=5.5						
NOA	**NORSAR Array B**	**93.94**	**334**	P	**P**	**07 17 06.8**	**+0.2**
	comp=Z,0.7nm,0.6s,mb4.2,baz=66,slow=4.6,SNR=3.7						
YKA	**Yellowknife Ar**	**94.89**	**24**	P	**P**	**07 17 11.4**	**+0.4**
	comp=Z,1.0nm,0.7s,mb4.4,baz=302,slow=4.6,SNR=13						
GERES	**GERESS Array B**	**97.74**	**322**	P	**P**	**07 17 24.0**	**-0.2**
	comp=Z,0.4nm,0.5s,mb4.2,baz=135,slow=0.8,SNR=3.8						
TXAR	**Lajitas Array**	**118.60**	**50**	PKP	PKPdf	07 22 37.8	+0.4
	comp=Z,0.3nm,0.8s,baz=244,slow=2.4,SNR=4.4						
TORD	**Torodi Ar. Bea**	**120.80**	**291**	PKP	PKPdf	07 22 41.2	-0.8
	comp=Z,1.4nm,0.8s,baz=38,slow=2.1,SNR=7.5						
TORD	**Torodi Ar. Bea**	**120.80**	**291**	PKP	PKPdf	07 22 41.2	-0.8
PLCA	**Paso Flores**	**145.00**	**157**	PKPbc	PKPbc	07 23 26.7	+0.8
	comp=Z,4.8nm,0.9s,baz=209,slow=4.8,SNR=14						
PLCA	**Paso Flores**	**145.00**	**157**	PKPbc	PKPbc	07 23 26.7	+0.8
LPAZ	**La Paz**	**164.13**	**119**	PKP	PKPdf	07 23 55.3	+2.1
	comp=Z,1.2nm,0.7s,baz=315,slow=3.2,SNR=5.7						

IDC ***02*** *07:18:26.5±1.2, 32°.61N×105°.50E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.6/25, mbtmp3.8/5, ML3.4/1, Error ellipse: s-maj=95.6km s-min=22.6km az=58.0*
ISCJB ***02*** *07:18:26.4±0.5, 32°.57N±0°.04×105°.47E±0°.04, h10km, mb3.8/7, Error ellipse: s-maj=5.4km s-min=5.1km az=149.0*
BJI ***02*** *07:18:28.3, 32°.60N×105°.60E, h10km, mB4.5/1, mb4.2/2, ML3.5/13, Ms3.4/5, Ms7 3.2/3*
NEIC ***02*** *07:18:28.6±0.6, 32°.62N×105°.45E, h10km, mb3.8/3, Error ellipse: s-maj=23.7km s-min=8.0km az=46.0*
ISC 02 07:18:28.4±0.4, 32°.64N±0°.03×105°.44E±0°.04, h10km, n15, σ1§20/24, mb3.8/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.24**	**220**	Pn	**Pn**	**07 19 06.9**	**+1.3**
CD2				Pg	**Pg**	**07 19 09.2**	**-2.2**
CD2				Sg	**Sg**	**07 19 39.4**	**-1.1**
CD2				smax			
	comp=N,840nm,0.7s						
CD2				smax			
	comp=E,840nm,0.7s						
XAN	**Xi'an**	**3.23**	**64**	Pn	**Pn**	**07 19 19.3**	**+0.1**
XAN				Pg	**Pg**	**07 19 27.4**	**-3.0**
XAN				Sn	**Sn**	**07 19 57.0**	**-0.8**
XAN				Sg	**Sg**	**07 20 06.1**	**-6.2**
XAN				smax			
	comp=N,190nm,0.5s						
XAN				smax			
	comp=E,110nm,0.7s						
XAN				LR	LR		
	comp=N,190nm,5.7s						
XAN				LR	LR		
	comp=E,80nm,5.9s						
XAN				LR	LR		
	comp=Z,85nm,6.9s						
LZH	**Lanzhou**	**3.68**	**339**	Pn	**Pn**	**07 19 26.9**	**+1.6**
LZH				Pg	**Pg**	**07 19 36.5**	**-2.4**
LZH				Sn	**Sn**	**07 20 09.8**	**+1.1**
LZH				Sg	**Sg**	**07 20 23.5**	**-3.0**
LZH				smax			
	comp=N,31nm,0.5s						
LZH				smax			
	comp=E,82nm,0.6s						
LZH				LR	LR		
	comp=E,470nm,6.0s						
LZH				LR	LR		
	comp=Z,730nm,7.5s						
ENH	**Enshi**	**4.19**	**123**	*e*Pg	**Pg**	**07 19 49.5**	**+0.7**
ENH				*e*Sg	**Sg**	**07 20 43.6**	**+0.5**
GYA	**Guiyang**	**6.26**	**170**	Pn	**Pn**	**07 20 01.0**	**+0.2**
GYA				smax			
	comp=N,40nm,0.8s						
GYA				smax			
	comp=E,30nm,0.8s						
SONM	**Songino Array**	**15.19**	**2**	Pn	**Pn**	**07 22 02.9**	**+0.1**
	comp=E,0.1nm,0.3s,baz=181,slow=8.2,SNR=5.1						
MK31	**Makanchi Array**	**22.62**	**315**	*e*P	**P**	**07 23 30.5**	**+1.3**
MKAR	**Makanchi Array**	**22.62**	**315**	P	**P**	**07 23 28.9**	**-0.3**
	comp=E,1.3nm,0.7s,mb3.5,baz=106,slow=11,SNR=15						
MKAR	**Makanchi Array**	**22.62**	**315**	P	**P**	**07 23 28.9**	**-0.3**
KURK	**Kurchatov**	**26.74**	**320**	*e*P	**P**	**07 24 09.0**	**+1.1**
	comp=E,0.7nm,0.4s,mb3.5						
ABKAR	**Akbulak array**	**37.53**	**310**	*e*P	**P**	**07 25 43.6**	**+1.2**
	comp=E,0.4nm,0.5s,mb3.4						
FINES	**FINESS Array B**	**56.93**	**326**	P	**P**	**07 28 14.0**	**+0.6**
	comp=E,3.4nm,0.9s,mb4.4,baz=99,slow=8.6,SNR=4.8						
WRAB	**Tennant Creek**	**59.15**	**148**	*e*P	**P**	**07 28 28.7**	**-0.7**
	comp=E,1.8nm,0.6s,mb4.3						
ASAR	**Alice Springs**	**62.24**	**150**	P	**P**	**07 28 49.8**	**-0.6**
	comp=E,0.7nm,0.4s,mb4.2,baz=336,slow=6.6,SNR=19						
NOA	**NORSAR Array B**	**63.98**	**327**	P	**P**	**07 29 01.7**	**+0.2**
	comp=E,0.4nm,0.6s,mb3.7,baz=71,slow=6.9,SNR=2.4						

ISCJB ***02*** *08:05:51.8±0.3, 41°.52N±0°.02×20°.28E±0°.03, h10km, Error ellipse: s-maj=3.5km s-min=1.9km az=41.7*
THE ***02*** *08:05:51.4, 41°.56N×20°.29E, h9km±1km, ML3.4/1, Error ellipse: s-maj=2.0km s-min=0.5km az=189.0*
NEIC ***02*** *08:05:51.8, 41°.55N×20°.28E, h4km, ML2.6(PDG), After PDG.*
SKO ***02*** *08:05:51.7, 41°.47N×20°.31E, h15km, M1.9, ML2.3*
CSEM ***02*** *08:05:51.9±0.2, 41°.51N×20°.27E, h2km, ML2.2, Error ellipse: s-maj=5.3km s-min=2.9km az=45.0*
PDG ***02*** *08:05:51.8±0.2, 41°.55N×20°.28E, h4km, ML2.6/9, Error ellipse: s-maj=0.4km s-min=0.7km az=0.0*
TIR ***02*** *08:05:51.1±1.7, 41°.52N×20°.24E, h6km±422km, ML3.4*
BEO ***02*** *08:05:53.1±0.3, 41°.50N×20°.26E, h6km±3km, ML2.2/8*
ISC 02 08:05:52.4±0.4, 41°.51N±0°.02×20°.27E±0°.03, h0km±4km, n57, σ1§09/115, 13C-9D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.34**	**242**	⇑*i*Pg	**Pg**	**08 05 59.0**	**0.0**
TIR				*e*Sg	**Sg**	**08 06 04.8**	**+1.4**
TIR	**Tirane**	**0.34**	**242**	*e*Pg	**Pg**	**08 05 59.2**	**+0.2**
TIR				*e*Sg	**Sg**	**08 06 04.4**	**+0.9**
TIR	**Tirane**	**0.34**	**242**	P	**Pg**	**08 05 59.0**	**0.0**
TIR				S	**Sg**	**08 06 04.4**	**+1.0**
TIR	**Tirane**	**0.34**	**242**	*e*Pg	**Pg**	**08 05 59.2**	**+0.2**
TIR				S	**Sg**	**08 06 04.4**	**+1.0**
TIR				*e*Sg	**Sg**	**08 06 04.8**	**+1.4**
OHR	**Ohrid**	**0.56**	**135**	⇑*i*Pg	**Pg**	**08 06 02.4**	**-0.8**
OHR				*e*Sg	**Sg**	**08 06 12.5**	**+2.0**
OHR	**Ohrid**	**0.56**	**135**	*i*Pg	**Pg**	**08 06 02.6**	**-0.6**
OHR				*i*Sg	**Sg**	**08 06 12.0**	**+1.6**
OHR				*e*Lg		08 06 12.5	
	comp=N,142nm,0.4s						
OHR				*e*Lg		08 06 13.2	
	comp=E,160nm,0.8s						
OHR	**Ohrid**	**0.56**	**135**	P	**Pg**	**08 06 02.6**	**-0.6**
OHR				S	**Sg**	**08 06 11.4**	**+0.9**
OHR	**Ohrid**	**0.56**	**135**	P	**Pg**	**08 06 02.6**	**-0.6**
OHR				S	**Sg**	**08 06 11.4**	**+0.9**
OHR				*e*Sg	**Sg**	**08 06 12.5**	**+2.0**
PUK	**Puka**	**0.60**	**332**	*i*PG	**Pg**	**08 06 02.9**	**-1.0**
PUK				*i*SG	**Sg**	**08 06 11.9**	**+0.2**
PUK	**Puka**	**0.60**	**332**	*i*Pg	**Pg**	**08 06 02.9**	**-1.0**
	SNR=92						
PUK				*i*Sg	**Sg**	**08 06 11.9**	**+0.2**
	SNR=92						
KRUS	**Krusevo**	**0.75**	**101**	*i*Pg	**Pg**	**08 06 05.6**	**-1.2**
KRUS				*i*Sg	**Sg**	**08 06 17.1**	**+0.7**
KRUS				*e*Lg		08 06 18.0	
	comp=N,48nm,0.2s						
KRUS				*e*Lg		08 06 18.4	
	comp=E,46nm,0.2s						
BCI	**Bajram Curri**	**0.87**	**350**	*i*PG	**Pg**	**08 06 07.9**	**-1.1**
BCI				*i*SG	**Sg**	**08 06 20.6**	**+0.3**
BCI	**Bajram Curri**	**0.87**	**350**	*i*Pg	**Pg**	**08 06 07.9**	**-1.1**
	SNR=91						
BCI				*i*Sg	**Sg**	**08 06 20.6**	**+0.3**
	SNR=91						
ULC	**Ulcinj**	**0.89**	**301**	⇓*i*Pg	**Pg**	**08 06 07.8**	**-1.6**
ULC				*e*Sg	**Sg**	**08 06 21.8**	**+0.9**
ULC	**Ulcinj**	**0.89**	**301**	⇓*i*Pg	**Pg**	**08 06 07.8**	**-1.6**
ULC				*e*Sg	**Sg**	**08 06 21.8**	**+0.9**
BIA	**Bitola**	**0.93**	**121**	*e*Pg	**Pg**	**08 06 10.2**	**-0.1**
BIA				*e*Sg	**Sg**	**08 06 23.2**	**+0.8**
BIA	**Bitola**	**0.93**	**121**	*e*Pg	**Pg**	**08 06 08.8**	**-1.4**
BIA				*e*Sg	**Sg**	**08 06 23.4**	**+1.1**
BIA				*e*Lg		08 06 24.4	
	comp=E,62nm,0.2s						
BIA				*e*Lg		08 06 25.7	
	comp=N,38nm,0.2s						
BIA	**Bitola**	**0.93**	**121**	P	**Pg**	**08 06 09.0**	**-1.3**
BIA				S	**Sg**	**08 06 22.8**	**+0.4**
BIA	**Bitola**	**0.93**	**121**	P	**Pg**	**08 06 09.0**	**-1.3**
BIA	**Bitola**	**0.93**	**121**	*e*Pg	**Pg**	**08 06 10.2**	**-0.1**
BIA				S	**Sg**	**08 06 22.8**	**+0.4**
BIA				*e*Sg	**Sg**	**08 06 23.2**	**+0.8**
KBN	**Korca**	**0.97**	**156**	*e*PG	**Pg**	**08 06 09.3**	**-1.6**
KBN				*i*SG	**Sg**	**08 06 25.8**	**+2.3**
KBN	**Korca**	**0.97**	**156**	*e*Pg	**Pg**	**08 06 09.3**	**-1.6**
	SNR=91						
KBN				*i*Sg	**Sg**	**08 06 25.8**	**+2.3**
	SNR=91						
SKO	**Skopje**	**0.99**	**62**	*e*Pg	**Pg**	**08 06 10.7**	**-0.6**
SKO				*e*Sg	**Sg**	**08 06 25.1**	**+0.9**
SKO	**Skopje**	**0.99**	**62**	*e*Pg	**Pg**	**08 06 11.2**	**-0.1**
SKO				*e*Sg	**Sg**	**08 06 24.6**	**+0.4**
SKO				*e*Lg		08 06 25.2	
	comp=E,92nm,0.3s						
SKO				*e*Lg		08 06 25.4	
	comp=N,138nm,0.5s						
SKO	**Skopje**	**0.99**	**62**	*e*Pg	**Pg**	**08 06 10.7**	**-0.6**
SKO				*e*Sg	**Sg**	**08 06 25.1**	**+0.9**
PVY	**Plav**	**1.11**	**349**	*e*Pg	**Pg**	**08 06 11.8**	**-1.8**
PVY				*i*Sg	**Sg**	**08 06 28.2**	**+0.3**
PVY	**Plav**	**1.11**	**349**	*e*Pg	**Pg**	**08 06 11.8**	**-1.8**
PVY				*i*Sg	**Sg**	**08 06 28.2**	**+0.3**
FNA	**Florina**	**1.11**	**131**	P	**Pg**	**08 06 12.6**	**-1.0**
FNA				S	**Sg**	**08 06 28.9**	**+1.0**
FNA	**Florina**	**1.11**	**131**	P	**Pg**	**08 06 12.6**	**-1.0**
FNA				S	**Sg**	**08 06 28.9**	**+1.0**
PDG	**Podgorica**	**1.19**	**321**	⇑*i*Pg	**Pg**	**08 06 13.3**	**-1.8**
PDG				*i*Sg	**Sg**	**08 06 31.1**	**+0.6**
TTG	**Podgorica**	**1.19**	**321**	⇑*i*Pg	**Pg**	**08 06 13.3**	**-1.8**
TTG				*i*Sg	**Sg**	**08 06 31.1**	**+0.6**
TTG	**Podgorica**	**1.19**	**321**	⇑*i*Pg	**Pg**	**08 06 13.3**	**-1.8**
TTG				*i*Sg	**Sg**	**08 06 31.1**	**+0.6**
BUM	**Brajici-Budva**	**1.29**	**308**	⇑*i*Pg	**Pn**	**08 06 15.2**	**-2.4**
BUM				*e*Sg	**Sg**	**08 06 35.2**	**+1.3**
BUM	**Brajici-Budva**	**1.29**	**308**	⇑*i*Pg	**Pn**	**08 06 15.2**	**-2.4**
BUM				*e*Sg	**Sg**	**08 06 35.2**	**+1.3**
BEY	**Berane**	**1.39**	**349**	⇓*i*Pg	**Pn**	**08 06 16.8**	**-2.2**
BEY				*e*Sg	**Sg**	**08 06 37.9**	**+0.9**
IVA	**Berane**	**1.39**	**349**	⇓*i*Pg	**Pn**	**08 06 16.8**	**-2.2**
IVA				*e*Sg	**Sg**	**08 06 37.9**	**+0.9**
IVA	**Berane**	**1.39**	**349**	⇓*i*Pg	**Pn**	**08 06 16.8**	**-2.2**
IVA				*e*Sg	**Sg**	**08 06 37.9**	**+0.9**
NKY	**Niksic**	**1.61**	**324**	⇑*i*Pn	**Pn**	**08 06 20.8**	**-1.2**
NKY				*e*Sn	**Sg**	**08 06 45.4**	**+1.3**
NKY	**Niksic**	**1.61**	**324**	⇑*i*Pn	**Pn**	**08 06 20.8**	**-1.2**
NKY				*e*Sn	**Sg**	**08 06 45.4**	**+1.3**
HCY	**Herceg Novi**	**1.62**	**306**	⇑*i*Pn	**Pn**	**08 06 20.9**	**-1.2**
HCY				*e*Sn	**Sg**	**08 06 45.6**	**+1.2**
HCY	**Herceg Novi**	**1.62**	**306**	⇑*i*Pn	**Pn**	**08 06 20.9**	**-1.2**
HCY				*e*Sn	**Sg**	**08 06 45.6**	**+1.2**
BARS	**Barje**	**1.74**	**41**	*e*Pn	**Pn**	**08 06 24.6**	**+0.8**
BARS				*e*Sg	**Sg**	**08 06 49.0**	**+0.7**
VAY	**Valandovo**	**1.74**	**95**	*e*Pn	**Pn**	**08 06 23.2**	**-0.6**
VAY				*e*Sg	**Sg**	**08 06 48.4**	**+0.1**
VAY	**Valandovo**	**1.74**	**95**	*e*Pg	**Pn**	**08 06 23.2**	**-0.6**
VAY				*e*Sg	**Sg**	**08 06 47.9**	**-0.4**
VAY				*e*Lg		08 06 47.9	
	comp=N,18nm,0.8s						
VAY				*e*Lg		08 06 48.8	
	comp=E,8.0nm,0.3s						
VAY	**Valandovo**	**1.74**	**95**	*e*Pn	**Pn**	**08 06 23.2**	**-0.6**
VAY				*e*Sg	**Sg**	**08 06 48.4**	**+0.1**
BRY	**Bratogost**	**1.89**	**318**	⇓*i*Pn	**Pn**	**08 06 25.7**	**-0.2**
BRY				*i*Sn	**Sg**	**08 06 52.4**	**-0.7**
BRY	**Bratogost**	**1.89**	**318**	⇓*i*Pn	**Pn**	**08 06 25.7**	**-0.2**
BRY				*i*Sn	**Sg**	**08 06 52.4**	**-0.7**
PLE	**Pljevlja**	**1.93**	**341**	⇓*i*Pn	**Pn**	**08 06 25.7**	**-0.7**
PLE				*e*Sn	**Sn**	**08 06 52.6**	**+1.2**
PLE	**Pljevlja**	**1.93**	**341**	⇓*i*Pn	**Pn**	**08 06 25.7**	**-0.7**
PLE				*e*Sn	**Sn**	**08 06 52.6**	**+1.2**
UPM	**Unac-Piva**	**1.97**	**330**	⇑*i*Pn	**Pn**	**08 06 26.7**	**-0.2**
UPM				*e*Sn	**Sn**	**08 06 54.0**	**+1.7**
UPM	**Unac-Piva**	**1.97**	**330**	⇑*i*Pn	**Pn**	**08 06 26.7**	**-0.2**
UPM				*e*Sn	**Sn**	**08 06 54.0**	**+1.7**
STON	**Ston**	**2.34**	**306**	*e*Pn	**Pn**	**08 06 33.3**	**+1.2**
STON				Sn	**Sg**	**08 07 07.4**	**-0.3**
STON	**Ston**	**2.34**	**306**	*e*Pn	**Pn**	**08 06 33.3**	**+1.2**
BBLS	**Lazići**	**2.44**	**345**	*e*Pn	**Pn**	**08 06 33.9**	**+0.5**
BBLS				*e*Sn	**Sn**	**08 07 04.7**	**+0.8**
BBLS	**Lazići**	**2.44**	**345**	*e*Pn	**Pn**	**08 06 33.9**	**+0.5**
BBLS				*e*Sn	**Sn**	**08 07 04.7**	**+0.8**
DIVS	**Divibare**	**2.59**	**356**	*e*Pn	**Pn**	**08 06 36.1**	**+0.6**
DIVS				*e*Sn	**Sn**	**08 07 07.2**	**-0.5**
DIVS	**Divibare**	**2.59**	**356**	*e*Pn	**Pn**	**08 06 36.1**	**+0.6**
DIVS				*e*Sn	**Sn**	**08 07 07.2**	**-0.5**

ISCJB ***02*** *08:18:09.8±0.5, 23°.18N±0°.02×121°.90E±0°.02, h10km±3km, Error ellipse: s-maj=3.1km s-min=2.2km az=139.4*
TAP ***02*** *08:18:10.7, 23°.18N×121°.83E, h13km, ML3.4, D*
NEIC ***02*** *08:18:10.4±2.5, 23°.23N×121°.86E, h10km, Error ellipse: s-maj=26.3km s-min=9.7km az=118.0*
JMA ***02*** *08:18:13.4±0.4, 23°.32N×122°.08E, h4km, M2.7*
ISC 02 08:18:10.5±0.5, 23°.18N±0°.02×121°.88E±0°.02, h14km±2km, n55, σ0§62/109, 1C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.48**	**260**	*i*P	**Pg**	**08 18 20.4**	**+0.5**
	baz=258						
CHKT				S	**Sg**	**08 18 26.3**	**0.0**
	baz=258						
TWF1	**Yuli**	**0.56**	**288**	*i*P	**Pg**	**08 18 21.5**	**+0.1**
	baz=288						
TWF1				S	**Sg**	**08 18 29.2**	**+0.3**
	baz=288						
YULB	**Yu-li**	**0.57**	**292**	*e*Pg	**Pg**	**08 18 21.3**	**-0.4**
YULB				*e*Sg	**Sg**	**08 18 30.5**	**+1.2**
EHY	**Hungye**	**0.60**	**303**	⇑*i*P	**Pg**	**08 18 22.3**	**0.0**
	baz=304						
EHY				*e*S	**Sg**	**08 18 31.0**	**+0.7**
	baz=304						
ESL	**Shilin**	**0.75**	**327**	P	**Pg**	**08 18 24.8**	**-0.3**
	baz=330						
ESL				S	**Sg**	**08 18 34.9**	**-0.1**
	baz=330						
ELDTW	**Lidau**	**0.79**	**271**	P	**Pg**	**08 18 25.5**	**-0.3**
	baz=270						
ELDTW				*e*S	**Sg**	**08 18 35.2**	**-1.0**
	baz=270						
TTN	**Taitung**	**0.79**	**238**	P	**Pg**	**08 18 25.9**	**0.0**
	baz=235						
TTN				S	**Sg**	**08 18 36.6**	**+0.3**
	baz=235						
TWG	**Pinlang**	**0.82**	**244**	*e*Pg	**Pg**	**08 18 26.1**	**-0.3**
TWG	**Pinlang**	**0.82**	**244**	P	**Pg**	**08 18 26.2**	**-0.2**
	baz=242						
TWG				S	**Sg**	**08 18 37.2**	**+0.1**
	baz=242						
HWA	**Hwalien**	**0.83**	**343**	P	**Pg**	**08 18 26.9**	**+0.3**
	baz=345						
HWA				S	**Sg**	**08 18 38.2**	**+0.7**
	baz=345						
YUS	**Yu-Shan**	**0.90**	**290**	P	**Pb**	**08 18 27.8**	**-0.1**
	baz=290						
YUS				S	**Sg**	**08 18 39.4**	**-0.4**
	baz=290						
TWD	**Chiawan**	**0.93**	**344**	P	**Pb**	**08 18 28.8**	**+0.4**
	baz=347						
TWD				S	**Sb**	**08 18 41.6**	**+0.9**
	baz=347						
NACB	**Ninganchiao**	**1.02**	**346**	*e*Pg	**Pg**	**08 18 28.8**	**-1.4**
NACB				*e*Sg	**Sg**	**08 18 41.7**	**-1.9**
ECL	**Taimali**	**1.03**	**236**	*e*P	**Pb**	**08 18 29.0**	**-1.1**
	baz=233						
ECL				*e*S	**Sb**	**08 18 43.0**	**-0.4**
	baz=233						
ALS	**Alishan**	**1.04**	**289**	P	**Pb**	**08 18 30.4**	**+0.2**
	baz=289						
ALS				S	**Sb**	**08 18 44.4**	**+0.6**
	baz=289						
SSLB	**Suanglung**	**1.04**	**306**	*e*Pg	**Pg**	**08 18 29.3**	**-1.3**
SSLB				*e*Sg	**Sg**	**08 18 43.8**	**-0.4**
WHF	**Hehuan Shan**	**1.11**	**330**	P	**Pb**	**08 18 31.0**	**-0.5**
	baz=331						
WHF				*e*S	**Sb**	**08 18 45.8**	**-0.1**
	baz=331						
SMLT	**Sun Moon Lake**	**1.14**	**308**	P	**Pb**	**08 18 31.9**	**-0.1**
	baz=309						
SMLT				S	**Sb**	**08 18 47.4**	**+0.8**
	baz=309						
TPUB	**Ta-pu**	**1.15**	**276**	*e*Pn	**Pn**	**08 18 32.4**	**+0.2**
TPUB				*e*Sn	**Sn**	**08 18 47.3**	**-0.5**
WTP	**Ta-pu**	**1.16**	**274**	P	**Pn**	**08 18 32.6**	**+0.2**
	baz=273						
WTP				S	**Sb**	**08 18 47.8**	**+0.5**
	baz=273						
CHN5	**Tsauling**	**1.18**	**291**	*e*P	**Pn**	**08 18 33.0**	**+0.4**
	baz=291						
CHN5				*e*S	**Sb**	**08 18 48.5**	**+0.8**
	baz=291						
TYC	**Yuchr**	**1.18**	**308**	*e*P	**Pn**	**08 18 32.5**	**-0.2**
	baz=309						
TYC				*e*S	**Sb**	**08 18 48.4**	**+0.5**
	baz=309						
SGST	**Jiashian**	**1.19**	**266**	*e*P	**Pn**	**08 18 32.3**	**-0.5**
	baz=264						
SGST				*e*S	**Sb**	**08 18 49.0**	**+0.8**
	baz=264						
SSD	**Sandimen**	**1.22**	**250**	*e*P	**Pn**	**08 18 32.5**	**-0.7**
	baz=248						
SSD				*e*S	**Sb**	**08 18 48.8**	**-0.3**
	baz=248						
EAST	**Anshuo**	**1.23**	**230**	*e*P	**Pn**	**08 18 32.4**	**-1.0**
	baz=228						
EAST				*e*S	**Sb**	**08 18 49.4**	**0.0**
	baz=228						
CHN1	**Nanshi**	**1.24**	**271**	*e*P	**Pn**	**08 18 33.5**	**+0.1**
	baz=270						
CHN1				*e*S	**Sb**	**08 18 49.9**	**+0.3**
	baz=270						
TWT	**Tachien**	**1.25**	**329**	*e*P	**Pn**	**08 18 34.2**	**+0.6**
	baz=329						
TWT				*e*S	**Sb**	**08 18 49.9**	**+0.1**
	baz=329						
ENA	**Nanau**	**1.25**	**354**	*e*P	**Pn**	**08 18 33.3**	**-0.3**
	baz=356						
ENA				*e*S	**Sb**	**08 18 49.0**	**-0.9**
	baz=356						
TWK	**Hsinying**	**1.28**	**274**	*e*P	**Pn**	**08 18 33.6**	**-0.3**
	baz=273						
TWK				*e*S	**Sb**	**08 18 50.7**	**0.0**
	baz=273						
WNT	**Mingjian**	**1.30**	**303**	*e*P	**Pn**	**08 18 34.1**	**-0.1**
	baz=303						
WNT				*e*S	**Sb**	**08 18 51.8**	**+0.6**
	baz=303						
NNS	**Nan Shan**	**1.34**	**340**	*e*P	**Pn**	**08 18 34.9**	**+0.1**
	baz=341						
NNS				*e*S	**Sb**	**08 18 50.7**	**-1.7**
	baz=341						
SGLT	**Jiouru**	**1.35**	**251**	*e*P	**Pn**	**08 18 35.0**	**+0.1**
	baz=249						
SGLT				*e*S	**Sn**	**08 18 52.7**	**-0.1**
	baz=249						
CHY	**Chiayi**	**1.37**	**284**	*e*P	**Pn**	**08 18 34.9**	**-0.3**
	baz=283						
CHY				*e*S	**Sn**	**08 18 53.2**	**-0.1**
	baz=283						
TWM1	**Shoushan**	**1.38**	**255**	*e*P	**Pn**	**08 18 35.6**	**+0.2**
	baz=254						
TWM1				*e*S	**Sn**	**08 18 53.1**	**-0.4**
	baz=254						
CHN3	**Shinhua**	**1.39**	**266**	*e*P	**Pn**	**08 18 35.5**	**0.0**
	baz=265						
CHN3				*e*S	**Sn**	**08 18 53.6**	**-0.2**
	baz=265						
SCZT	**Fangliau**	**1.41**	**235**	*e*P	**Pn**	**08 18 35.5**	**-0.3**
	baz=233						
SCZT				*e*S	**Sn**	**08 18 54.1**	**0.0**

JIJ	**Ishigaki jima**	**2.39**	**60**	P	**Pn**	**08 18 50.8**	**+1.5**
JIJ				eS	**Sn**	**08 19 17.5**	**-0.9**
JTJ	**Tarama**	**2.97**	**60**	P	**Pn**	**08 18 57.8**	**+0.6**
JTJ				eS	**Sn**	**08 19 32.5**	**-0.2**

*ISCJB **02** 08:18:06.8±2.1, 59°.24N±0°.04×27°.8E±0°.3, h0km, Error ellipse: s-maj=24.4km s-min=4.6km az=172.1*
*CSEM **02** 08:18:12.4±0.8, 59°.19N×27°.58E, h10km, ML2.5, Error ellipse: s-maj=24.0km s-min=8.1km az=92.0, Mining explosion.*
*NAO **02** 08:18:12.5±1.2, 59°.31N×27°.16E, ML2.4*
*BER **02** 08:18:13.7±3.0, 59°.32N×27°.10E, h0km±18km, ML2.4(NAO)*

ISC 02 08:18:11.0±1.5, 59°.27N±0°.03×27°.6E±0°.3, h0km, n21, σ1§23/22, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSU	**Vasula**	**0.92**	**209**	Pg	**Pg**	**08 18 28.6**	**0.0**
VSU				Lg		08 18 41.8	
VSU				Rg		08 18 46.5	
VSU	**Vasula** SNR=90	**0.92**	**209**	Pg	**Pg**	**08 18 28.6**	**0.0**
VSU	SNR=70			Lg		08 18 41.8	
MEF	**Metsahovi** SNR=50	**1.88**	**302**	eP	**Pn**	**08 18 44.8**	**+0.5**
MEF	21nm,0.8s,SNR=50			eS	**Sn**	**08 19 03.6**	**-5.1**
FIA0	**FINESS Array S** baz=157,slow=18	**2.31**	**342**	Pn	**Pn**	**08 18 51.2**	**+1.0**
FIA0	baz=158,slow=16			Pg	**Pg**	**08 18 53.3**	**-2.0**
FIA0	baz=165,slow=37			Lg		08 19 22.1	
FIA0	**FINESS Array S** baz=157,slow=17,SNR=50	**2.31**	**342**	Pn	**Pn**	**08 18 51.2**	**+0.9**
FIA0	**FINESS Array S** baz=158,slow=15,SNR=90	**2.31**	**342**	Pg	**Pg**	**08 18 53.3**	**-2.0**
SLIT	**Slitere, Latvi** SNR=50	**3.23**	**242**	eP	**Pn**	**08 18 56.2**	**-6.7**
SLIT	207nm,0.5s,SNR=50			eS	**Sn**	**08 19 47.4**	**+5.3**
RAF	**Rauma** SNR=49	**3.41**	**304**	eP	**Pn**	**08 19 07.4**	**+2.1**
RAF	6.6nm,0.6s,SNR=49			eS	**Sn**	**08 19 45.5**	**-0.9**
IZAR	**Zarasai**	**3.60**	**192**	eP	**Sg**	**08 20 08.4**	**+1.9**
IZAR	**Zarasai**	**3.60**	**192**	eP	**Sg**	**08 20 08.4**	**+1.9**
ISAL	**Salakas**	**3.79**	**193**	eP	**Sg**	**08 20 12.7**	**+0.1**
ISAL	**Salakas**	**3.79**	**193**	eP	**Sg**	**08 20 12.7**	**+0.1**
IDID	**Didziasalis**	**3.99**	**187**	eP	**Sg**	**08 20 18.6**	**-0.3**
IDID	**Didziasalis**	**3.99**	**187**	eP	**Sg**	**08 20 18.6**	**-0.4**
IIGN	**Ignalina**	**4.00**	**191**	eP	**Sg**	**08 20 17.2**	**-2.0**
IIGN	**Ignalina**	**4.00**	**191**	eP	**Sg**	**08 20 17.2**	**-2.0**
NACGM	**Naroch**	**4.40**	**186**	e	**Sg**	**08 20 32.0**	**-0.2**
HFS	**Hagfors** baz=93,slow=37	**7.09**	**283**	Lg		08 21 43.6	
HFS	**Hagfors** baz=93,slow=37	**7.09**	**283**	Lg		08 21 43.6	
HFS	**Hagfors** SNR=5.5	**7.09**	**283**	Lg		08 21 43.6	
ARA0	**ARCESS Array S** baz=173,slow=28	**10.35**	**356**	Sn	**Sn**	**08 22 29.7**	**-7.3**
ARA0	baz=170,slow=37			Lg		08 23 28.4	

*IDC **02** 08:37:17.8±2.0, 6°.25S×129°.79E, h0km, mb3.7/2, mb1 3.6/4, mb1mx3.5/17, mbtmp3.6/4, ML3.4/1, Error ellipse: s-maj=95.1km s-min=29.6km az=73.0*
*NEIC **02** 08:37:19.4±1.2, 6°.28S×129°.86E, h10km, Error ellipse: s-maj=25.1km s-min=11.7km az=53.0*
*ISCJB **02** 08:37:22.4±3.5, 6°.4S±0°.1×129°.6E±0°.1, h48km±37km, mb3.5/2, Error ellipse: s-maj=26.8km s-min=11.6km az=42.0*

ISC 02 08:37:23.7±2.7, 6°.4S±0°.1×129°.7E±0°.1, h40km±29km, n7, σ0§82/10, mb3.5/2, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**9.95**	**277**	ePn	**Pn**	**08 39 45.7**	**+1.4**
KAPI				eSn	**Sn**	**08 41 33.7**	**-1.0**
FITZ	**Fitzroy Crossi** baz=57,slow=16	**12.28**	**198**	Pn	**Pn**	**08 40 16.4**	**+0.3**
FITZ	0.2nm,0.3s,baz=134,slow=15,SNR=3.0			Sn	**Sn**	**08 42 32.3**	**+0.6**
FITZ	**Fitzroy Crossi**	**12.28**	**198**	ePn	**Pn**	**08 40 16.4**	**+0.3**
FITZ				eSn	**Sn**	**08 42 37.1**	**+5.4**
WRAB	**Tennant Creek**	**14.21**	**162**	ePn	**Pn**	**08 40 41.7**	**-0.8**
ASAR	**Alice Springs** 0.1nm,0.3s,baz=356,slow=10,SNR=9.7	**17.65**	**167**	P	**Pn**	**08 41 25.9**	**-0.8**
STKA	**Stephens Creek** 0.8nm,0.8s,mb3.4,baz=330,slow=11,SNR=2.9	**27.70**	**158**	P	**P**	**08 43 09.0**	**+0.8**
MKAR	**Makanchi Array** 0.2nm,0.3s,mb3.6,baz=124,slow=7.7,SNR=2.8	**67.53**	**327**	P	**P**	**08 48 15.6**	**-0.2**

*IDC **02** 08:40:47.2±1.4, 6°.40S×129°.81E, h0km, mb3.7/3, mb1 3.7/6, mb1mx3.6/19, mbtmp3.7/6, ML3.6/3, MS3.3/4, Ms1 3.3/4, ms1mx2.9/22, Error ellipse: s-maj=42.4km s-min=17.2km az=65.0*
*NEIC **02** 08:40:48.9±0.7, 6°.42S×129°.76E, h10km, mb4.2/2, Error ellipse: s-maj=16.1km s-min=10.2km az=49.0*
*ISCJB **02** 08:40:49.7±4.1, 6°.54S±0°.08×129°.6E±0°.1, h29km±32km, mb3.9/4, MS3.2/2, Error ellipse: s-maj=18.7km s-min=12.8km az=171.5*

ISC 02 08:40:49.1±4.0, 6°.45S±0°.07×129°.6E±0°.1, h10km±26km, n12, σ1§07/15, mb3.9/4, MS3.2/2, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang** 0.8nm,0.3s,baz=67,slow=16,SNR=2.8	**9.94**	**278**	Pn	**Pn**	**08 43 11.9**	**-0.3**
KAPI	comp=Z,286nm,21.3s,baz=96,slow=36			LR	LR	08 46 47.4	
KAPI	**Kappang**	**9.94**	**278**	ePn	**Pn**	**08 43 12.8**	**+0.6**
KAPI				LR	LR	08 46 47.4	
FITZ	**Fitzroy Crossi** 0.2nm,0.3s,baz=45,slow=10.0,SNR=2.3	**12.22**	**198**	Pn	**Pn**	**08 43 43.9**	**+0.4**
FITZ	0.1nm,0.3s,baz=131,slow=20,SNR=2.5			Sn	**Sn**	**08 45 58.1**	**-1.9**
FITZ	comp=Z,140nm,21.2s,baz=31,slow=40			LR	LR	08 48 59.2	
FITZ	**Fitzroy Crossi**	**12.22**	**198**	Pn	**Pn**	**08 43 44.5**	**+1.0**
FITZ				Sn	**Sn**	**08 45 58.1**	**-1.9**
FITZ				eSn	**Sn**	**08 45 59.2**	**-0.7**
FITZ				LR	LR	08 48 59.2	
WRAB	**Tennant Creek**	**14.16**	**162**	ePn	**Pn**	**08 44 10.3**	**+0.3**
ASAR	**Alice Springs** 0.1nm,0.3s,baz=356,slow=11,SNR=7.4	**17.61**	**167**	P	**Pn**	**08 44 54.8**	**+0.1**
ASAR	0.1nm,0.3s,baz=356,slow=29,SNR=4.9			S	**Sn**	**08 48 13.1**	**+2.1**
CTA	**Charters Tower** 0.8nm,0.4s,mb3.4,baz=306,slow=8.7,SNR=2.9	**21.07**	**132**	P	**P**	**08 45 31.4**	**-2.4**
CTAO	**Charters Tower** 12nm,1.0s,mb4.2	**21.07**	**132**	eP	**P**	**08 45 33.1**	**-0.6**
STKA	**Stephens Creek** 0.7nm,0.5s,mb3.6,baz=340,slow=15,SNR=2.7	**27.66**	**158**	P	**P**	**08 46 36.1**	**-1.2**
STKA	comp=Z,96nm,18.6s,MS3.4,baz=206,slow=39			LR	LR	08 58 56.0	
KSRS	**Korea Array** comp=Z,18nm,18.8s,MS3.0,baz=225,slow=40	**43.70**	**358**	LR	LR	09 09 32.5	
MKAR	**Makanchi Array** 0.5nm,0.4s,mb3.9,baz=114,slow=7.9,SNR=6.7	**67.57**	**327**	P	**P**	**08 51 46.6**	**+0.7**
PAX	**Paxson** 0.4nm,0.3s,mb4.3	**93.37**	**27**	eP	**P**	**08 54 04.4**	**+0.1**

*BJI **02** 08:59:08.8, 7°.84N×126°.60E, h128km, mB4.7/5, mb4.5/15*
*ISCJB **02** 08:59:08.3±0.7, 7°.59N±0°.05×126°.63E±0°.07, h144km±5km, mb4.4/47, Error ellipse: s-maj=12.7km s-min=7.3km az=159.0*
*IDC **02** 08:59:09.4±1.0, 7°.61N×126°.55E, h137km±8km, mb4.0/21, mb1 4.1/22, mb1mx4.0/25, mbtmp4.0/22, Error ellipse: s-maj=19.9km s-min=9.6km az=76.0*
*MOS **02** 08:59:10.0±0.8, 7°.85N×126°.51E, h145km, mb4.7/15, Error ellipse: s-maj=21.2km s-min=9.1km az=118.2*
*NEIC **02** 08:59:10.1±0.8, 7°.55N×126°.53E, h144km±7km, mb4.6/10, Error ellipse: s-maj=12.0km s-min=6.2km az=73.0*

*MAN **02** 08:59:15, 7°.60N×126°.49E, h40km, mb4.9, ML3.8, MS3.9*
*DJA **02** 08:59:15, 7°.35N×126°.44E, h111km, mb4.9/13*

ISC 02 08:59:09.6±0.6, 7°.56N±0°.05×126°.59E±0°.08, h139km±5km, n93, σ0§89/95, mb4.4/47, 5C-5D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.70**	**209**	eP	**Pn**	**08 59 30.4**	**-0.5**
MATI				eS	**Sn**	**08 59 40.4**	**-6.7**
DAV	**Davao City (W)**	**1.12**	**244**	P	**Pn**	**08 59 34.3**	**-0.1**
DAV	297nm,0.3s,baz=328,slow=0.7,SNR=21			S	**Sn**	**08 59 52.7**	**-0.6**
DAV	**Davao City (W)**	**1.12**	**244**	ePn	**Pn**	**08 59 34.5**	**+0.1**
DAV				eSn	**Sn**	**08 59 52.5**	**-0.9**
DAV				S	**Sn**	**08 59 52.7**	**-0.6**
BUKP	**Musuan**	**1.55**	**282**	eP	**Pn**	**08 59 39.4**	**+0.5**
KCP	**Kidapawan**	**1.59**	**250**	⇓iP	**Pn**	**08 59 40.8**	**+1.5**
BUTP	**Butuan**	**1.69**	**325**	eP	**Pn**	**08 59 42.4**	**+1.9**
CGP	**Cagayan de Oro**	**2.08**	**295**	⇓eP	**Pn**	**08 59 45.0**	**0.0**
CGP				eS	**Sn**	**09 00 10.6**	**-1.6**
GSPH	**General Santos**	**2.19**	**228**	⇓iP	**Pn**	**08 59 45.3**	**-1.1**
GSPH				eS	**Sn**	**09 00 10.9**	**-3.8**
CTBH	**Cotabato--PC H**	**2.35**	**262**	⇓iP	**Pn**	**08 59 47.5**	**-0.8**
CTBH				i S	**Sn**	**09 00 20.6**	**+2.4**
MSLP	**Maasin**	**3.08**	**326**	eP	**Pn**	**09 00 01.9**	**+4.4**
PAGZ	**Pagadian**	**3.19**	**275**	eP	**Pn**	**08 59 59.6**	**+0.5**
PAGZ				eS	Sn	09 00 15.5	-22
JOW	**Kunigami** 4.8nm,0.3s,baz=178,slow=11,SNR=4.7	**19.23**	**5**	P	**P**	**09 03 23.9**	**+0.8**
NJ2	**Nanjing** comp=Z,10.0nm,0.7s,mb4.5	**25.41**	**345**	eP	**P**	**09 04 22.7**	**-1.5**
NJ2				pmax	pmax		
FITZ	**Fitzroy Crossi** comp=Z,6.2nm,0.8s,mb4.3	**25.52**	**182**	eP	**P**	**09 04 25.0**	**-0.3**
FITZ	**Fitzroy Crossi** comp=Z,4.0nm,0.7s,mb4.1,baz=39,slow=6.2,SNR=12	**25.52**	**182**	P	**P**	**09 04 24.7**	**-0.6**
FITZ	comp=Z,1.9nm,0.5s,baz=53,slow=5.1,SNR=4.7			PcP	PcP	09 07 53.9	+0.6
COEN	**Coen**	**26.98**	**142**	eP	**P**	**09 04 38.3**	**-0.2**
CMAR	**Chiang Mai Arr** comp=Z,1.0nm,0.4s,mb3.9,baz=125,slow=7.6,SNR=4.3	**28.99**	**295**	P	**P**	**09 04 56.2**	**-0.1**
CMAR	comp=Z,1.8nm,0.6s,baz=118,slow=0.6,SNR=9.5			PcP	PcP	09 08 03.4	+1.6
KSRS	**Korea Array** comp=Z,0.4nm,0.3s,mb3.6,baz=185,slow=8.7,SNR=2.8	**29.78**	**2**	P	**P**	**09 05 00.9**	**-2.1**
MJAR	**Matsushiro Arr** comp=Z,4.3nm,0.8s,mb4.2,baz=195,slow=9.4,SNR=10	**30.73**	**19**	P	**P**	**09 05 10.6**	**-0.8**
XAN	**Xi'an**	**30.99**	**331**	P	**P**	**09 05 13.2**	**-0.6**
XAN	comp=Z,4.0nm,0.7s,mb4.3			pmax	pmax		
ASAR	**Alice Springs** comp=Z,0.6nm,0.4s,mb3.7,baz=344,slow=7.4,SNR=13	**31.85**	**167**	P	**P**	**09 05 21.3**	**-0.1**
ASAR	comp=Z,1.9nm,0.6s,baz=350,slow=2.3,SNR=14			PcP	PcP	09 08 09.6	+0.5
CTA	**Charters Tower** comp=Z,0.7nm,0.3s,mb3.8,baz=315,slow=2.9,SNR=2.6	**33.61**	**145**	P	**P**	**09 05 38.5**	**+1.6**
KMBL	**Kambalda** comp=Z,55nm,0.5s,mb5.4	**38.97**	**186**	eP	**P**	**09 06 22.5**	**+0.3**
GTA	**Gaotai**	**39.79**	**327**	eP	**P**	**09 06 30.2**	**+1.2**
GTA	comp=Z,13nm,0.8s,mb4.6			pmax	pmax		
BBOO	**Buckleboo** comp=Z,3.3nm,0.3s,mb4.4	**41.15**	**168**	eP	**P**	**09 06 40.4**	**+0.2**
NWAO	**Narrogin (SRO)** comp=Z,6.9nm,0.8s,mb4.3,baz=17,slow=6.6,SNR=5.4	**41.24**	**192**	P	**P**	**09 06 41.5**	**+0.5**
STKA	**Stephens Creek** comp=Z,1.3nm,0.6s,mb3.7	**41.76**	**161**	eP	**P**	**09 06 45.1**	**0.0**
STKA	**Stephens Creek** comp=Z,1.3nm,0.6s,mb3.8,baz=347,slow=8.2,SNR=9.0	**41.76**	**161**	P	**P**	**09 06 45.3**	**+0.2**
ULN	**Ulaanbaatar**	**43.46**	**341**	eP	**P**	**09 06 59.3**	**+0.6**
ULN	comp=Z,7.0nm,1.0s,mb4.2			pmax	pmax		
ULN	**Ulaanbaatar** comp=Z,7.2nm,1.0s,mb4.3	**43.46**	**341**	eP	**P**	**09 06 59.3**	**+0.6**
SONM	**Songino Array** comp=Z,1.7nm,0.6s,mb3.8,baz=152,slow=9.4,SNR=9.1	**43.65**	**340**	P	**P**	**09 07 00.1**	**-0.1**
SONM	comp=Z,0.7nm,0.7s,baz=116,slow=3.4,SNR=3.4			PcP	PcP	09 08 45.4	+0.4
SONM	**Songino Array**	**43.65**	**340**	P	**P**	**09 07 00.1**	**-0.1**
SONM				PcP	PcP	09 08 45.4	+0.4
TLY	**Talaya** comp=Z,7.0nm,1.5s,mb4.1	**47.88**	**341**	eP	**P**	**09 07 33.1**	**-0.2**
TLY				pmax	pmax		
PETK	**Petropavlovsk-** comp=Z,0.9nm,0.5s,mb3.7,baz=224,slow=4.1,SNR=4.9	**51.97**	**23**	P	**P**	**09 08 05.3**	**+1.1**
PETK	**Petropavlovsk-** comp=Z,12nm,0.4s,mb4.9,baz=110,slow=8.7,SNR=108	**51.97**	**23**	P	**P**	**09 08 05.3**	**+1.1**
MKAR	**Makanchi Array** comp=Z,4.7nm,0.8s,baz=102,slow=5.6,SNR=8.3	**54.37**	**324**	P	**P**	**09 08 22.5**	**+0.6**
MKAR				PcP	PcP	09 09 24.1	+0.1
YAK	**Yakutsk** comp=Z,16nm,1.1s,mb4.7	**54.41**	**2**	eP	**P**	**09 08 21.1**	**-0.8**
YAK	comp=N,2.0nm,1.0s			pmax	pmax		
KZA	**Kyzart** SNR=15	**56.75**	**316**	P	**P**	**09 08 40.5**	**+1.5**
TKM2	**Tokmak 2** SNR=12	**56.83**	**317**	P	**P**	**09 08 40.4**	**+0.9**
TKM2	**Tokmak 2**	**56.83**	**317**	eP	**P**	**09 08 40.5**	**+0.9**
TKM2				pmax	pmax		
TKM2	**Tokmak 2** comp=Z,5.0nm,0.7s,mb4.5	**56.83**	**317**	eP	**P**	**09 08 40.5**	**+0.9**
ZALV	**Zalesovo Beam** comp=Z,3.4nm,0.5s,mb4.5,baz=125,slow=7.4,SNR=8.5	**57.14**	**332**	P	**P**	**09 08 41.2**	**-0.3**
UCH	**Uchtor** SNR=22	**57.31**	**316**	P	**P**	**09 08 44.4**	**+1.5**
UCH	**Uchtor** comp=Z,17nm,0.9s,mb4.9	**57.31**	**316**	eP	**P**	**09 08 44.4**	**+1.5**
UCH				pmax	pmax		
UCH	**Uchtor** comp=Z,17nm,0.9s,mb4.9	**57.31**	**316**	eP	**P**	**09 08 44.4**	**+1.4**
AAK	**Ala-Archa**	**57.47**	**316**	ceP	**P**	**09 08 44.8**	**+0.7**
AAK	comp=Z,4.0nm,1.9s,mb3.9			pmax	pmax		
AAK	**Ala-Archa** comp=Z,3.2nm,0.8s,mb4.2	**57.47**	**316**	eP	**P**	**09 08 44.9**	**+0.9**
USP	**Ospenovka** SNR=11	**57.71**	**317**	P	**P**	**09 08 46.1**	**+0.4**
AML	**Almayashu** SNR=11	**57.84**	**316**	P	**P**	**09 08 48.0**	**+1.3**
AML	**Almayashu**	**57.84**	**316**	eP	**P**	**09 08 47.9**	**+1.2**
AML	comp=Z,13nm,0.9s,mb4.8			pmax	pmax		
AML	**Almayashu** comp=Z,13nm,0.9s,mb4.8	**57.84**	**316**	eP	**P**	**09 08 47.9**	**+1.2**
EKS2	**Erkin-Say** SNR=7.8	**57.98**	**316**	P	**P**	**09 08 48.6**	**+1.0**
KURK	**Kurchatov** comp=Z,7.0nm,0.6s,mb4.7	**58.47**	**326**	eP	**P**	**09 08 50.6**	**-0.3**
KURK				pmax	pmax		
KURK	**Kurchatov** comp=Z,6.7nm,0.6s,mb4.7	**58.47**	**326**	eP	**P**	**09 08 50.6**	**-0.3**
KBL	**Kabul** comp=Z,14nm,0.8s,mb4.8	**59.14**	**306**	eP	**P**	**09 08 55.9**	**+0.1**
KBL				pmax	pmax		
KBL	**Kabul** comp=Z,14nm,0.8s,mb4.8	**59.14**	**306**	eP	**P**	**09 08 55.9**	**+0.1**
TIXI	**Tiksi**	**64.03**	**1**	eP	**P**	**09 09 27.8**	**-0.1**
TIXI	comp=Z,2.0nm,0.5s,mb4.2			pmax	pmax		
TIXI	**Tiksi** comp=Z,1.7nm,0.5s,mb4.1	**64.03**	**1**	eP	**P**	**09 09 27.8**	**-0.1**
BVAR	**Borovoye Array** comp=Z,4.3nm,0.5s,mb4.6,baz=131,slow=8.1,SNR=29	**64.07**	**326**	P	**P**	**09 09 28.3**	**-0.2**
BRVK	**Borovoye** comp=Z,15nm,1.4s,mb4.6	**64.14**	**326**	ceP	**P**	**09 09 28.6**	**-0.4**
BRVK				pmax	pmax		
BILL	**Bilibino**	**65.91**	**15**	⇑eP	**P**	**09 09 40.2**	**+0.1**
BILL	comp=Z,4.0nm,1.4s,mb4.1			pmax	pmax		
ABKAR	**Akbulak array** comp=Z,5.3nm,0.8s,mb4.3	**69.13**	**320**	eP	**P**	**09 10 00.6**	**-0.2**
ARU	**Arti**	**71.65**	**327**	c iP	**P**	**09 10 15.2**	**-0.7**
ARU						09 12 51.0	
ARU				S	S	09 19 25.5	+1.4
ARU				SS	SS	09 23 56.2	-6.1
ARU	comp=Z,14nm,0.6s,mb4.9			pmax	pmax		
RDF	**Al-Radifah**	**76.81**	**298**	eP	**P**	**09 10 45.3**	**-1.1**
RDF	comp=Z,19nm,0.7s,mb4.9			AMb	AMB	09 10 46.2	
MIB	**Mutribah**	**76.98**	**299**	eP	**P**	**09 10 46.3**	**-1.0**
MIB				AMb	AMB	09 10 47.4	
	comp=Z,37nm,0.7s,mb5.1						
NAY	**Al-Naaiem**	**77.08**	**298**	eP	**P**	**09 10 46.4**	**-1.4**
NAY	comp=Z,15nm,1.0s,mb4.6			AMb	AMB	09 10 47.8	
GNI	**Garni**	**78.95**	**309**	deP	**P**	**09 10 59.2**	**+1.2**
GNI	comp=Z,17nm,1.7s			pmax	pmax		
ZEI	**Tsey**	**79.55**	**312**	eP	**P**	**09 11 00.7**	**-0.5**
ZEI	comp=Z,11nm,0.9s,mb4.5			pmax	pmax		
KIV	**Kislovodsk**	**80.42**	**313**	eP	**P**	**09 11 06.2**	**+0.4**
KIV	comp=Z,11nm,0.9s,mb4.5			pmax	pmax		
JOF	**Joensuu** comp=Z,6.7nm,0.4s,mb4.7	**85.73**	**333**	ep	**P**	**09 11 32.4**	**-0.3**
JOF	**Joensuu** comp=Z,6.7nm,0.4s,mb4.7	**85.73**	**333**	ep	**P**	**09 11 32.4**	**-0.3**
ARCES	**ARCESS Array B** comp=Z,2.1nm,0.7s,mb4.1,baz=86,slow=7.4,SNR=11	**86.83**	**340**	P	**P**	**09 11 37.4**	**-0.6**
MMAI	**Mount Meron Ar** comp=Z,3.9nm,0.6s,mb4.4,baz=90,slow=6.2,SNR=4.8	**86.93**	**303**	P	**P**	**09 11 39.9**	**+0.6**
BR131	**Keskin Array S** comp=Z,1.4nm,0.5s,mb4.0	**87.49**	**310**	eP	**P**	**09 11 41.2**	**-0.6**
BRTR	**Keskin Array B** comp=Z,2.3nm,0.7s,mb4.1,baz=109,slow=4.3,SNR=14	**87.49**	**310**	P	**P**	**09 11 41.0**	**-0.8**
KAF	**Kangasniemi**	**88.16**	**332**	eP	**P**	**09 11 44.4**	**0.0**
KAF	comp=Z,2.0nm,0.4s,mb4.3			pmax	pmax		
KAF	**Kangasniemi** comp=Z,2.3nm,0.4s,mb4.4	**88.16**	**332**	ep	**P**	**09 11 44.4**	**0.0**
KAF	**Kangasniemi** comp=Z,2.3nm,0.4s,mb4.4	**88.16**	**332**	ep	**P**	**09 11 44.4**	**0.0**
FINES	**FINESS Array B** comp=Z,1.9nm,0.4s,mb4.2,baz=46,slow=5.5,SNR=14	**88.41**	**332**	P	**P**	**09 11 44.7**	**-1.0**
FINES	**FINESS Array B**	**88.41**	**332**	P	**P**	**09 11 44.7**	**-1.0**
AKASG	**Malin Array Be** comp=Z,2.5nm,0.6s,mb4.3,baz=70,slow=4.1,SNR=8.7	**88.85**	**321**	P	**P**	**09 11 46.9**	**-1.1**
AKASG	**Malin Array Be**	**88.85**	**321**	ceP	**P**	**09 11 47.4**	**-0.6**
AKASG	comp=Z,3.0nm,0.6s			pmax	pmax		
BUR08	**Bucovina Ar. S**	**92.07**	**318**	eP	**P**	**09 12 03.5**	**+0.5**
NB2	**NORSAR Subarra** comp=Z,1.2nm,0.7s,mb4.2,baz=64,slow=5.1	**95.31**	**334**	P	**P**	**09 12 16.2**	**-1.4**
NOA	**NORSAR Array B** comp=Z,1.0nm,0.6s,mb4.2,baz=64,slow=4.7,SNR=5.6	**95.31**	**334**	P	**P**	**09 12 16.2**	**-1.4**
NOA	**NORSAR Array B**	**95.31**	**334**	P	**P**	**09 12 16.2**	**-1.4**
YKA	**Yellowknife Ar** comp=Z,0.4nm,0.6s,mb3.9,baz=299,slow=4.2,SNR=6.3	**96.08**	**24**	P	**P**	**09 12 21.0**	**-0.1**
GERES	**GERESS Array B** comp=Z,0.3nm,0.2s,mb4.3,baz=108,slow=3.2,SNR=4.1	**99.01**	**322**	P	**P**	**09 12 34.6**	**+0.1**
TXAR	**Lajitas Array** comp=Z,0.3nm,0.4s,baz=6.7,slow=2.0,SNR=7.9	**119.32**	**50**	PKP	PKPdf	09 17 43.8	+0.7
TORD	**Torodi Ar. Bea** comp=Z,1.4nm,0.4s,baz=60,slow=1.9,SNR=25	**121.53**	**290**	PKP	PKPdf	09 17 47.1	-0.5
JCT	**Junction City**	**121.62**	**47**	ePKIKP	PKPdf	09 17 48.4	+0.9
DBIC	**Dimbokro** comp=Z,7.1nm,1.1s,baz=146,slow=6.2,SNR=3.1	**129.55**	**285**	PKP	PKPdf	09 18 02.5	-0.5
PLCA	**Paso Flores** comp=Z,1.1nm,0.9s,baz=218,slow=6.1,SNR=3.3	**143.60**	**158**	PKP	PKPdf	09 18 27.4	-0.8

CASC 02 09:12:14.7±2.2, 8°.46N×83°.04W, h3km, MD3.5, 2C-1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.23**	**326**	⇓eP	Pg	09 12 19.8	+0.5
ACR				eS	Sg	09 12 24.6	+2.3
BRU2	**Volcan**	**0.48**	**46**	⇑iP	Pg	09 12 25.0	+1.1
BRU2				eS	Sg	09 12 33.3	+3.2
BAR1		**0.82**	**341**	⇑eP	Pg	09 12 30.5	0.0
CNI	**Changuinola**	**1.08**	**28**	eP	Pg	09 12 35.3	-0.1
BUS	**Buena Vista**	**1.30**	**327**	eP	Pg	09 12 39.6	-0.1
BUS				eS	Sg	09 12 56.4	-0.2
QCR	**Quepos**	**1.47**	**311**	eP	Pn	09 12 42.0	-0.2
QCR				eS	Sb	09 13 01.7	-0.2
URSC	**Urasca**	**1.55**	**332**	eP	Pn	09 12 43.0	-0.2
URSC				eS	Sn	09 13 03.6	-0.3
CGA2	**Cerro Gallo 2**	**2.10**	**318**	eP	Pn	09 12 52.5	+1.8
CGA2				eS	Sn	09 13 18.6	+1.2

IDC 02 10:01:13.8±1.3, 32°.64N×105°.35E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.5/25, mbtmp3.7/5, Error ellipse: s-maj=227.5km s-min=24.2km az=56.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array** 0.5nm,0.5s,baz=101,slow=4.6,SNR=4.3	**22.57**	**315**	P	P	10 06 14.9	-0.7
FINES	**FINESS Array B** 0.9nm,0.5s,baz=57,slow=5.1,SNR=5.5	**56.89**	**326**	P	P	10 11 00.6	+0.4
ASAR	**Alice Springs** 0.2nm,0.3s,baz=336,slow=6.5,SNR=8.9	**62.27**	**150**	P	P	10 11 37.7	0.0
HFS	**Hagfors** 1.0nm,0.5s,baz=113,slow=11,SNR=4.6	**63.10**	**326**	P	P	10 11 43.1	+0.4
NOA	**NORSAR Array B** 0.8nm,0.6s,baz=70,slow=6.8,SNR=3.4	**63.94**	**327**	P	P	10 11 48.1	-0.2

*GRAL **02** 10:04:08.5±0.3, 33°.61N×36°.78E, h0km±638km, MD3.0*
*CSEM **02** 10:04:09.0±0.1, 33°.70N×36°.75E, h20km, Mc1.7, Error ellipse: s-maj=3.6km s-min=2.9km az=81.0*
*NSSC **02** 10:04:09, 33°.70N×36°.75E, h20km±3km*
*ISCJB **02** 10:04:09.1±0.6, 33°.69N±0°.03×36°.76E±0°.05, h27km±8km, Error ellipse: s-maj=6.8km s-min=5.1km az=173.7*

ISC 02 10:04:09.0±0.6, 33°.69N±0°.03×36°.77E±0°.04, h17km±6km, n16, σ0§57/30, 4D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOTH	**TOTAH**	**0.43**	**221**	⇑P	**Pg**	**10 04 17.0**	**-0.8**
TOTH				⇑S	**Sg**	**10 04 24.0**	**+0.2**
TOTH	**TOTAH**	**0.43**	**221**	⇑iP	**Pg**	**10 04 17.8**	**0.0**
TOTH				⇑iS	**Sg**	**10 04 24.1**	**+0.3**
QASN	**Qassioun**	**0.44**	**249**	⇑P	**Pg**	**10 04 17.0**	**-0.9**
QASN				⇑S	**Sg**	**10 04 24.0**	**+0.1**
QASN	**Qassioun**	**0.44**	**249**	⇑iP	**Pg**	**10 04 17.7**	**-0.2**
QASN				⇑iS	**Sg**	**10 04 25.0**	**+1.1**
FKH	**Fakeheh**	**0.62**	**331**	eP	**Pg**	**10 04 21.1**	**-0.2**
FKH				eS	**Sg**	**10 04 30.4**	**+0.7**
FKH	**Fakeheh**	**0.62**

CPUP	**Villa Florida**	**37.66**	**310**	P		**P**	**10 16 39.4**	**-0.5**
	0.8nm,0.5s,mb3.7,baz=124,slow=8.4,SNR=7.8							
CPUP				LR		LR	10 31 05.5	
	comp=Z,56nm,19.9s,MS3.4,baz=143,slow=34							
CFAA	**Coronel Fontan**	**38.42**	**292**	P		**P**	**10 16 45.0**	**-1.3**
	0.2nm,0.3s,mb3.3,baz=146,slow=11,SNR=5.0							
MAW	**Mawson**	**39.37**	**143**	LR		LR	10 31 47.1	
	comp=Z,35nm,22.0s,MS3.1,baz=295,slow=34							
BOSA	**Boshof**	**45.33**	**74**	LR		LR	10 32 59.9	
	comp=Z,106nm,19.7s,MS3.8,baz=150,slow=31							
LPAZ	**La Paz**	**51.24**	**304**	P		**P**	**10 18 30.4**	**+2.1**
	7.0nm,0.5s,mb4.8,baz=133,slow=5.4,SNR=55							
LPAZ				LR		LR	10 37 57.4	
	comp=Z,29nm,18.5s,MS3.3,baz=154,slow=33							
DBIC	**Dimbokro**	**65.22**	**23**	P		**P**	**10 20 06.1**	**+0.2**
	2.8nm,0.5s,mb4.5,baz=200,slow=7.6,SNR=6.1							
ROSC	**El Rosal**	**72.75**	**309**	LR		LR	10 51 23.9	
	comp=Z,33nm,20.6s,MS3.6,baz=26,slow=35							
TORD	**Torodi Ar. Bea**	**73.03**	**28**	P		**P**	**10 20 54.5**	**+0.1**
	3.3nm,0.6s,mb4.5,baz=200,slow=6.7,SNR=11							
TORD				LR		LR	10 45 25.7	
	comp=Z,41nm,19.8s,MS3.7,baz=270,slow=30							
ASAR	**Alice Springs**	**98.37**	**161**	P		**P**	**10 23 01.1**	**-1.3**
	0.2nm,0.9s,mb3.6,baz=183,slow=3.8,SNR=4.0							
NVAR	**Mina Array Bea**	**122.26**	**292**	PKP		PKPdf	10 28 22.0	+3.5
	0.2nm,0.5s,baz=104,slow=3.8,SNR=2.9							
YKA	**Yellowknife Ar**	**136.98**	**317**	PKP		PKPdf	10 28 45.6	0.0
	0.2nm,0.6s,baz=117,slow=2.9,SNR=4.1							
INK	**Inuvik**	**146.60**	**320**	PKPbc		PKPbc	10 29 05.9	+1.6
	2.7nm,0.6s,baz=88,slow=1.6,SNR=16							
SONM	**Songino Array**	**149.98**	**86**	PKPbc		PKPbc	10 29 12.4	-1.4
	2.3nm,0.8s,baz=222,slow=2.0,SNR=6.3							

*IDC **02** 10:18:39.2±0.7, 12.°12N×143.°20E, h0km, mb4.2/12, mb1 4.3/12, mb1mx4.1/24, mbtmp4.2/12, Error ellipse: s-maj=31.7km s-min=19.1km az=81.0*
*NEIC **02** 10:18:40.6±0.4, 12.°10N×143.°22E, h10km, mb4.2/2, Error ellipse: s-maj=15.0km s-min=9.7km az=102.0*
*ISCJB **02** 10:18:42.0±5.1, 12.°09N±0.°09×143.°3E±0.°1, h32km±36km, mb4.2/14, Error ellipse: s-maj=20.4km s-min=11.6km az=31.8*
ISC 02 10:18:43.2±5.5, 12.°11N±0.°09×143.°3E±0.°1, h27km±40km, n20, σ0.°83/20, mb4.2/14, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.13**	**46**	*e*Pn	**Pn**	**10 19 17.3**	**+0.3**
GUMO				*e*Sn	**Sn**	10 19 42.0	-0.5
MJAR	**Matsushiro Arr**	**24.76**	**350**	P	**P**	**10 24 01.6**	**-1.0**
	1.2nm,0.7s,mb3.6,baz=170,slow=8.7,SNR=4.0						
MAJO	**Matsushiro**	**24.76**	**350**	*e*P	**P**	**10 24 03.0**	**+0.4**
WRAB	**Tennant Creek**	**33.03**	**196**	*e*P	**P**	**10 25 16.7**	**+0.3**
ASAR	**Alice Springs**	**36.72**	**194**	P	**P**	**10 25 48.5**	**+0.2**
	0.4nm,0.5s,mb3.5,baz=20,slow=11,SNR=14						
STKA	**Stephens Creek**	**43.76**	**182**	P	**P**	**10 26 45.0**	**-1.4**
	0.6nm,0.3s,mb3.8,baz=338,slow=14,SNR=3.6						
MKAR	**Makanchi Array**	**61.50**	**317**	P	**P**	**10 28 58.8**	**+1.2**
	0.2nm,0.2s,mb3.8,baz=72,slow=9.3,SNR=2.3						
ZALV	**Zalesovo Beam**	**61.94**	**325**	P	**P**	**10 28 59.4**	**-1.0**
	1.8nm,0.4s,mb4.6,baz=118,slow=9.9,SNR=3.0						
KURK	**Kurchatov**	**64.73**	**321**	P	**P**	**10 29 19.5**	**+0.5**
	1.9nm,0.7s,mb4.3,baz=107,slow=6.8,SNR=6.9						
BVAR	**Borovoye Array**	**70.14**	**322**	P	**P**	**10 29 53.5**	**+0.3**
	1.5nm,0.5s,mb4.2,baz=103,slow=8.3,SNR=8.0						
PAX	**Paxson**	**70.79**	**27**	*e*P	**P**	**10 29 57.5**	**+0.6**
EGAK	**Eagle**	**72.97**	**26**	*e*P	**P**	**10 30 09.8**	**-0.2**
	2.2nm,0.7s,mb4.2						
INK	**Inuvik**	**76.31**	**22**	P	**P**	**10 30 28.5**	**-0.8**
	2.9nm,0.7s,mb4.3,baz=262,slow=3.6,SNR=4.2						
INK	**Inuvik**	**76.31**	**22**	P	**P**	**10 30 28.5**	**-0.8**
ABKAR	**Akbulak array**	**76.61**	**318**	*e*P	**P**	**10 30 31.1**	**-0.3**
	0.7nm,0.5s,mb3.9						
YKA	**Yellowknife Ar**	**84.87**	**27**	P	**P**	**10 31 16.0**	**+0.8**
	2.2nm,0.6s,mb4.5,baz=287,slow=4.9,SNR=27						
ARCES	**ARCESS Array B**	**88.01**	**342**	P	**P**	**10 31 30.4**	**-0.2**
	1.2nm,0.5s,mb4.4,baz=72,slow=7.8,SNR=11						
NVAR	**Mina Array Bea**	**89.04**	**51**	P	**P**	**10 31 38.1**	**+2.0**
	2.4nm,0.6s,mb4.7,baz=265,slow=5.4,SNR=22						
FINES	**FINESS Array B**	**91.84**	**335**	P	**P**	**10 31 47.5**	**-1.1**
	1.2nm,0.5s,mb4.5,baz=57,slow=7.0,SNR=5.5						
LPAZ	**La Paz**	**149.27**	**101**	PKPbc	PKPbc	10 38 32.2	+1.8
	3.3nm,0.7s,baz=265,slow=3.4,SNR=15						

*SKO **02** 10:24:09.4, 39.°83N×21.°28E, h0km*
*THE **02** 10:24:11.2, 39.°94N×21.°45E, h15km, ML2.9/5, Error ellipse: s-maj=0.8km s-min=0.4km az=262.0*
*ATH **02** 10:24:12.0, 39.°98N×21.°56E, h31km±2km, MD2.8/3*
*CSEM **02** 10:24:12.3±0.3, 39.°99N×21.°54E, h30km±2km, ML2.9/5, Error ellipse: s-maj=8.6km s-min=6.5km az=74.0*
*NEIC **02** 10:24:12.0, 39.°98N×21.°56E, h31km, MD2.8(ATH), After ATH.*
*ISCJB **02** 10:24:12.6±0.5, 39.°95N±0.°02×21.°50E±0.°05, h18km±7km, Error ellipse: s-maj=6.7km s-min=3.7km az=160.7*
ISC 02 10:24:12.0±0.5, 39.°95N±0.°02×21.°49E±0.°05, h15km±6km, n33, σ1.°04/60, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEV	**Metsovon**	**0.26**	**231**	P	**Pg**	**10 24 16.3**	**-1.4**
KZN	**Kozani**	**0.41**	**31**	*e*Pb	**Pg**	**10 24 20.1**	**-0.2**
KZN				*e*Sb	**Sg**	10 24 28.2	+2.3
KZN	**Kozani**	**0.41**	**31**	P	**Pg**	**10 24 20.0**	**-0.3**
KZN				S	**Sg**	**10 24 26.9**	**+1.0**
KZN	**Kozani**	**0.41**	**31**	*e*PB	**Pg**	**10 24 20.1**	**-0.2**
KZN				*e*SB	**Sg**	**10 24 28.2**	**+2.3**
KZN	**Kozani**	**0.41**	**31**	*e*Pb	**Pg**	**10 24 20.1**	**-0.2**
KZN				S	**Sg**	**10 24 26.9**	**+1.0**
KZN				*e*Sb	**Sg**	**10 24 28.2**	**+2.3**
THL	**Klokotos Trika**	**0.56**	**134**	P	**Pg**	**10 24 21.9**	**-1.1**
THL				S	**Sg**	**10 24 31.0**	**+0.6**
THL	**Klokotos Trika**	**0.56**	**134**	*e*PN	**Pg**	**10 24 23.0**	**0.0**
THL				*e*SN	**Sg**	**10 24 31.9**	**+1.5**
THL	**Klokotos Trika**	**0.56**	**134**	P	**Pg**	**10 24 21.9**	**-1.1**
THL				S	**Sg**	**10 24 31.0**	**+0.6**
THL				*e*Sn	**Sg**	**10 24 31.9**	**+1.5**
JAN	**Janina**	**0.58**	**239**	*e*Pn	**Pg**	**10 24 25.0**	**+1.7**
JAN	**Janina**	**0.58**	**239**	*e*PN	**Pg**	**10 24 25.0**	**+1.7**
JAN	**Janina**	**0.58**	**239**	*e*Pn	**Pg**	**10 24 25.0**	**+1.7**
LIT	**Litokhoron**	**0.78**	**79**	*e*Pn	**Pg**	**10 24 26.8**	**-0.4**
LIT				*e*Sn	**Sg**	**10 24 37.0**	**-0.4**
LIT	**Litokhoron**	**0.78**	**79**	P	**Pg**	**10 24 26.8**	**-0.4**
LIT				S	**Sg**	**10 24 38.5**	**+1.1**
LIT	**Litokhoron**	**0.78**	**79**	*e*PN	**Pg**	**10 24 26.8**	**-0.4**
LIT				*e*SN	**Sg**	**10 24 37.0**	**-0.4**
LIT	**Litokhoron**	**0.78**	**79**	P	**Pg**	**10 24 26.8**	**-0.4**
LIT				*e*Sn	**Sg**	**10 24 37.0**	**-0.4**
LIT				S	**Sg**	**10 24 38.5**	**+1.1**
FNA	**Florina**	**0.83**	**354**	P	**Pg**	**10 24 26.9**	**-1.3**
FNA				S	**Sg**	**10 24 39.0**	**-0.2**
FNA	**Florina**	**0.83**	**354**	P	**Pg**	**10 24 26.9**	**-1.3**
FNA				S	**Sg**	**10 24 39.0**	**-0.2**
EVR	**Evrytania**	**1.06**	**167**	*e*Pb	**Pg**	**10 24 31.6**	**-0.9**
EVR				*e*Sn	**Sg**	**10 24 47.8**	**+1.4**
EVR	**Evrytania**	**1.06**	**167**	*e*PB	**Pg**	**10 24 31.6**	**-0.9**
EVR				*e*SN	**Sg**	**10 24 47.8**	**+1.4**
EVR	**Evrytania**	**1.06**	**167**	*e*Pb	**Pg**	**10 24 31.6**	**-0.9**
EVR				*e*Sn	**Sg**	**10 24 47.8**	**+1.4**
BIA	**Bitola**	**1.07**	**353**	*e*Pn	**Pn**	**10 24 33.8**	**+1.3**
BIA				*e*Sg	**Sg**	**10 24 48.1**	**+1.3**
AGG	**Agios Georgios**	**1.13**	**145**	*e*Pn	**Pg**	**10 24 32.6**	**-1.2**
AGG				*e*Sn	**Sg**	**10 24 49.2**	**+0.6**
AGG	**Agios Georgios**	**1.13**	**145**	P	**Pg**	**10 24 32.2**	**-1.6**
AGG				S	**Sg**	**10 24 48.2**	**-0.4**
AGG	**Agios Georgios**	**1.13**	**145**	*e*PN	**Pg**	**10 24 32.6**	**-1.2**
AGG				*e*SN	**Sg**	**10 24 49.2**	**+0.6**
AGG	**Agios Georgios**	**1.13**	**145**	P	**Pg**	**10 24 32.2**	**-1.6**
AGG				S	**Sg**	**10 24 48.2**	**-0.4**
AGG	**Agios Georgios**	**1.13**	**145**	*e*Pn	**Pg**	**10 24 32.6**	**-1.2**
AGG				*e*Sn	**Sg**	**10 24 49.2**	**+0.6**
OHR	**Ohrid**	**1.27**	**336**	*e*Pn	**Pn**	**10 24 34.3**	**-0.9**
OHR				*e*Sg	**Sg**	**10 24 52.6**	**-0.5**
KEK	**Kerkira**	**1.33**	**260**	*e*Pn	**Pn**	**10 24 37.0**	**+1.1**
KEK	**Kerkira**	**1.33**	**260**	*e*PN	**Pn**	**10 24 37.0**	**+1.1**
KEK	**Kerkira**	**1.33**	**260**	*e*Pn	**Pn**	**10 24 37.0**	**+1.1**
KRUS	**Krusevo**	**1.43**	**353**	*e*Pn	**Pn**	**10 24 37.6**	**+0.3**
KRUS				*e*Sg	**Sg**	**10 24 57.4**	**-0.6**
XOR	**Xorichti**	**1.44**	**114**	P	**Pn**	**10 24 36.4**	**-1.0**
XOR	**Xorichti**	**1.44**	**114**	P	**Pn**	**10 24 36.4**	**-1.0**

*TRN **02** 10:27:53.6, 18.°97N×64.°78W, h26km*
*ISCJB **02** 10:27:54.2±1.0, 19.°09N±0.°06×64.°78W±0.°06, h27km±10km, Error ellipse: s-maj=10.8km s-min=9.4km az=44.0*
*RSPR **02** 10:27:55.5, 19.°09N×64.°72W, h35km±8km, MD3.5/13, MD3.5/13*
*NEIC **02** 10:27:55.5, 19.°09N×64.°72W, h35km, MD3.5(RSPR), After RSPR.*
ISC 02 10:27:54.9±1.1, 19.°05N±0.°06×64.°77W±0.°06, h25km±10km, n34, σ0.°66/63, 24C-8D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.52**	**127**	⇓*e*P	**Pb**	**10 28 05.0**	**-0.5**
ABV				*e*S	**Sb**	**10 28 13.0**	**+0.3**
ABV	**Anegada**	**0.52**	**127**	⇓*e*P	**Pb**	**10 28 05.5**	**0.0**
ABV				*e*S	**Sb**	**10 28 13.4**	**+0.7**
TBVI	**Tortola**	**0.64**	**167**	⇑*i*P	**Pb**	**10 28 07.1**	**-0.5**
TBVI	**Tortola**	**0.64**	**167**	⇑*i*P	**Pb**	**10 28 07.8**	**+0.3**
STVI	**Saint Thomas**	**0.71**	**194**	⇓*e*P	**Pb**	**10 28 08.1**	**-0.6**
STVI				*e*S	**Sb**	**10 28 18.6**	**+0.5**
STVI	**Saint Thomas**	**0.71**	**194**	⇓*e*P	**Pb**	**10 28 08.1**	**-0.6**
STVI				*e*S	**Sb**	**10 28 18.6**	**+0.5**
MTP	**Monte Pirata**	**1.20**	**218**	⇑*e*P	**Pn**	**10 28 15.7**	**-0.5**
MTP				*e*S	**Sn**	**10 28 32.0**	**+0.4**
MTP	**Monte Pirata**	**1.20**	**218**	⇑*e*P	**Pn**	**10 28 15.7**	**-0.5**
MTP				*e*S	**Sn**	**10 28 32.2**	**+0.6**
CBYP	**Canovanas**	**1.28**	**233**	⇑*e*P	**Pn**	**10 28 16.9**	**-0.4**
CBYP				*e*S	**Sn**	**10 28 33.3**	**-0.5**
CBYP	**Canovanas**	**1.28**	**233**	⇑*e*P	**Pn**	**10 28 16.9**	**-0.4**
CBYP				*e*S	**Sn**	**10 28 33.3**	**-0.5**
CDVI	**St. Croix**	**1.29**	**180**	⇓*e*P	**Pn**	**10 28 18.1**	**+0.7**
CDVI				*e*S	**Sn**	**10 28 33.5**	**-0.3**
CDVI	**St. Croix**	**1.29**	**180**	⇓*e*P	**Pn**	**10 28 18.5**	**+1.1**
CDVI				*e*S	**Sn**	**10 28 33.5**	**-0.3**
HUMP	**Col San Antoni**	**1.36**	**229**	⇑*e*P	**Pn**	**10 28 17.9**	**-0.5**
HUMP				*e*S	**Sn**	**10 28 35.2**	**-0.5**
HUMP	**Col San Antoni**	**1.36**	**229**	⇑*e*P	**Pn**	**10 28 17.9**	**-0.5**
HUMP				*e*S	**Sn**	**10 28 35.2**	**-0.5**
CPD	**Cerro la Pandu**	**1.48**	**227**	⇓*e*P	**Pn**	**10 28 19.6**	**-0.4**
CPD				*e*S	**Sn**	**10 28 38.3**	**-0.2**
CPD	**Cerro la Pandu**	**1.48**	**227**	⇓*e*P	**Pn**	**10 28 19.6**	**-0.4**
CPD				*e*S	**Sn**	**10 28 38.3**	**-0.2**
SJG	**San Juan**	**1.60**	**235**	⇑*e*P	**Pn**	**10 28 21.1**	**-0.6**
SJG				*e*S	**Sn**	**10 28 40.6**	**-1.0**
SJG	**San Juan**	**1.60**	**235**	⇑*e*P	**Pn**	**10 28 21.1**	**-0.6**
SJG				*e*S	**Sn**	**10 28 40.9**	**-0.7**
SJG	**San Juan**	**1.60**	**235**	⇑*e*P	**Pn**	**10 28 21.1**	**-0.6**
SJG	**San Juan**	**1.60**	**235**	⇑*e*P	**Pn**	**10 28 21.9**	**+0.2**
SJG				*e*S	**Sn**	**10 28 40.6**	**-1.0**
SJG				*e*S	**Sn**	**10 28 40.9**	**-0.7**
AOPR	**Arecibo Observ**	**2.00**	**250**	⇑*e*P	**Pn**	**10 28 26.4**	**-0.8**
AOPR				*e*S	**Sn**	**10 28 51.6**	**+0.1**
AOPR	**Arecibo Observ**	**2.00**	**250**	⇑*e*P	**Pn**	**10 28 26.4**	**-0.8**
AOPR				*e*S	**Sn**	**10 28 51.6**	**+0.1**
OBIP	**Obispado Ponce**	**2.01**	**240**	⇑*e*P	**Pn**	**10 28 27.2**	**0.0**
OBIP				*e*S	**Sn**	**10 28 50.8**	**-0.8**
OBIP	**Obispado Ponce**	**2.01**	**240**	⇑*e*P	**Pn**	**10 28 27.2**	**0.0**
OBIP				*e*S	**Sn**	**10 28 50.8**	**-0.8**
ICM	**Isla Caja Muer**	**2.02**	**236**	⇑*e*P	**Pn**	**10 28 27.6**	**+0.2**
ICM				*e*S	**Sn**	**10 28 53.7**	**+1.9**
ICM	**Isla Caja Muer**	**2.02**	**236**	*e*Pn	**Pn**	**10 28 27.4**	**+0.1**
ICM				⇑*e*P		10 28 27.6	
ICM				*e*S	**Sn**	**10 28 53.7**	**+1.9**
ICM	**Isla Caja Muer**	**2.02**	**236**	⇑*e*P	**Pn**	**10 28 27.6**	**+0.2**
ICM				*e*S	**Sn**	**10 28 53.7**	**+1.9**
AGPR	**Aguadilla, PR**	**2.29**	**256**	⇑*e*P	**Pn**	**10 28 30.7**	**-0.5**
AGPR	**Aguadilla, PR**	**2.29**	**256**	⇑*e*P	**Pn**	**10 28 30.7**	**-0.5**
LSP	**Las Mesas**	**2.36**	**249**	⇑*e*P	**Pn**	**10 28 32.0**	**-0.1**
LSP				*e*S	**Sn**	**10 29 01.1**	**+0.8**
LSP	**Las Mesas**	**2.36**	**249**	⇑*e*P	**Pn**	**10 28 32.0**	**-0.1**
LSP				*e*S	**Sn**	**10 29 01.9**	**+1.6**
CRPR	**Cabo Rojo, PR**	**2.45**	**245**	⇑*e*P	**Pn**	**10 28 33.7**	**+0.4**
CRPR				*e*S	**Sn**	**10 29 02.8**	**+0.4**
CRPR	**Cabo Rojo, PR**	**2.45**	**245**	⇑*e*P	**Pn**	**10 28 33.7**	**+0.4**
CRPR				*e*S	**Sn**	**10 29 02.8**	**+0.4**
SDDR	**Presa de Saban**	**6.17**	**270**	*e*Pn	**Pn**	**10 29 25.7**	**+1.2**
	10nm,0.5s						

*ISCJB **02** 10:34:19.0±0.5, 31.°52N±0.°04×104.°30E±0.°06, h10km, mb3.9/5, Error ellipse: s-maj=7.8km s-min=5.0km az=24.6*
*NEIC **02** 10:34:19.1±0.7, 31.°54N×104.°72E, h10km, Error ellipse: s-maj=15.8km s-min=11.7km az=81.0*
*IDC **02** 10:34:19.8±1.9, 31.°60N×104.°18E, h0km, mb4.0/6, mb1 4.1/8, mb1mx3.8/28, mbtmp4.0/8, ML4.0/1, MS3.2/1, Ms1 3.2/1, ms1mx2.1/35, Error ellipse: s-maj=39.5km s-min=29.1km az=16.0*
*BJI **02** 10:34:20.7, 31.°51N×104.°22E, h10km, mB4.7/1, mb4.5/4, ML3.8/17, Ms3.7/3, Ms7 3.6/3*
ISC 02 10:34:21.1±0.5, 31.°53N±0.°04×104.°21E±0.°06, h10km, n23, σ0.°96/28, mb3.9/5, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.73**	**213**	⇓*i*Pg	**Pg**	**10 34 33.9**	**-1.3**
CD2				Sg	**Sg**	**10 34 44.4**	**-0.3**
CD2				smax			
	comp=N,14μm,0.8s						
CD2				smax			
	comp=E,10μm,0.6s						
LZH	**Lanzhou**	**4.56**	**356**	Pn	**Pn**	**10 35 31.6**	**+1.5**
LZH				Pg	**Pg**	**10 35 43.2**	**-5.2**
LZH				Sn	**Sn**	**10 36 22.4**	**-0.7**
LZH				Sg	**Sg**	**10 36 40.4**	**-7.1**
LZH				smax			
	comp=N,100nm,0.9s						
LZH				smax			
	comp=E,110nm,1.0s						
LZH				LR	LR		
	comp=N,370nm,5.4s						
LZH				LR	LR		
	comp=Z,580nm,7.9s						
XAN	**Xi'an**	**4.69**	**56**	Pg	**Pg**	**10 35 44.4**	**-6.5**
XAN				Sg	**Sg**	**10 36 44.9**	**-6.8**
XAN				smax			
	comp=N,180nm,0.9s						
XAN				smax			
	comp=E,82nm,0.8s						
ENH	**Enshi**	**4.70**	**104**	*e*Pn	**Pn**	**10 35 22.3**	**-10**
KMI	**Kunming**	**6.51**	**192**	Pn	**Pn**	**10 35 56.2**	**-0.8**
KMI				Sn	**Sn**	**10 37 06.4**	**-4.9**
KMI				smax			
	comp=N,20nm,1.0s						
KMI				smax			
	comp=E,24nm,0.8s						
KMI				LR	LR		
	comp=N,340nm,6.6s						
KMI				LR	LR		
	comp=E,190nm,6.6s						
KMI				LR	LR		
	comp=Z,270nm,6.8s						
WHN	**Wuhan**	**8.75**	**94**	P	Px	10 36 41.6	
WHN				S	**Sn**	**10 38 06.1**	**-0.3**
WHN				LR	LR		
	comp=N,360nm,3.1s						
WHN				LR	LR		
	comp=E,640nm,4.8s						
WHN				LR	LR		
	comp=Z,710nm,5.3s						
CHTO	**Chiang Mai**	**13.52**	**202**	*e*Pn	**Pn**	**10 37 34.5**	**+1.4**
CMAR	**Chiang Mai Arr**	**13.86**	**201**	Pn	**Pn**	**10 37 38.8**	**+1.1**
	baz=14,slow=12,SNR=5.1						
SONM	**Songino Array**	**16.37**	**5**	Pn	**Pn**	**10 38 09.9**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=173,slow=14,SNR=2.8						
KSRS	**Korea Array**	**20.39**	**67**	P	**P**	**10 38 58.3**	**+0.2**
	comp=Z,2.5nm,0.8s,baz=260,slow=10,SNR=8.6						
CN2	**Changchun**	**20.73**	**48**	*e*P	**P**	**10 39 03.4**	**+1.7**
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
MK31	**Makanchi Array**	**22.72**	**318**	*e*P	**P**	**10 39 23.5**	**+0.5**
MKAR	**Makanchi Array**	**22.72**	**318**	P	**P**	**10 39 23.2**	**+0.2**
	comp=Z,1.8nm,0.6s,mb3.7,baz=111,slow=13,SNR=20						
TKM2	**Tokmak 2**	**25.35**	**305**	*e*P	**P**	**10 39 49.0**	**+0.8**
UCH	**Uchtor**	**25.93**	**303**	*e*P	**P**	**10 39 54.2**	**+0.8**
ZALV	**Zalesovo Beam**	**26.38**	**334**	P	**P**	**10 39 57.5**	**+0.1**
	comp=Z,2.3nm,0.4s,mb4.1,baz=129,slow=12,SNR=6.7						
ZALV	**Zalesovo Beam**	**26.38**	**334**	P	**P**	**10 39 57.5**	**+0.1**
KURK	**Kurchatov**	**26.97**	**323**	P	**P**	**10 40 01.7**	**-1.0**
	comp=Z,1.7nm,0.8s,mb3.6,baz=127,slow=10,SNR=12						
KURK	**Kurchatov**	**26.97**	**323**	P	**P**	**10 40 01.7**	**-1.0**

GUMO	**Guam**	**41.28**	**106**	LR		LR	10 57 27.0	
	comp=Z,28nm,20.1s,slow=34							
FINES	**FINESS Array B**	**57.27**	**326**	P		**P**	**10 44 07.5**	**-1.0**
	comp=Z,3.2nm,0.9s,mb4.3,baz=72,slow=4.5,SNR=2.3							
INK	**Inuvik**	**71.73**	**19**	*e*P		**P**	**10 45 41.2**	**-1.7**
YKA	**Yellowknife Ar**	**81.26**	**17**	P		**P**	**10 46 36.8**	**-0.2**
	comp=Z,0.7nm,0.5s,mb3.9,baz=327,slow=5.2,SNR=15							

*IDC **02** 10:36:25.1±0.6, 1.°69N×97.°00E, h0km, mb4.5/22, mb1 4.5/23, mb1mx4.4/29, mbtmp4.5/23, ML3.8/2, MS3.6/8, Ms1 3.6/8, ms1mx3.2/31, Error ellipse: s-maj=21.0km s-min=12.0km az=46.0*
*DJA **02** 10:36:26, 1.°74N×96.°80E, h16km, MLv4.7/11*
*BJI **02** 10:36:28.7, 1.°95N×97.°19E, h21km, mB4.9/13, mb4.8/27, Ms4.5/5, Ms7 4.2/5*
*MOS **02** 10:36:28.6±0.8, 1.°80N×97.°17E, h33km, mb4.9/15, Error ellipse: s-maj=13.2km s-min=7.0km az=108.0*
*NEIC **02** 10:36:30.4±0.2, 1.°71N×97.°07E, h35km, mb4.8/19, Error ellipse: s-maj=6.8km s-min=4.0km az=224.0*
*ISCJB **02** 10:36:30.1±0.7, 1.°72N±0.°04×97.°07E±0.°05, h50km±6km, mb4.6/57, MS3.9/13, Error ellipse: s-maj=8.8km s-min=5.8km az=140.7*
ISC 02 10:36:31.5±0.6, 1.°71N±0.°04×97.°08E±0.°05, h46km±6km, h23km±5.6km: pP-P, n137, σ0.°82/135, mb4.6/57, MS3.9/13, 3C-2D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.64**	**129**	P	**Pn**	**10 36 43.2**	**-1.1**
GSI				S	**Sn**	**10 36 54.4**	**+0.9**
TRSI	**Tarutung**	**1.91**	**80**	P	**Pn**	**10 37 03.0**	**+1.4**
PSI	**Prapat**	**2.15**	**59**	Pn	**Pn**	**10 37 04.0**	**-0.9**
	6.4nm,0.3s,baz=248,slow=6.3,SNR=30						
TSI	**Tuntungan**	**2.32**	**40**	P	**Pn**	**10 37 07.3**	**0.0**
MNSI	**Mandailing Nat**	**2.66**	**110**	P	**Pn**	**10 37 11.8**	**-0.2**
SISI	**Saibi**	**3.62**	**146**	P	**Pn**	**10 37 24.6**	**-0.6**
PPI	**Padang Panjang**	**3.96**	**123**	P	**Pn**	**10 37 30.3**	**+0.6**
BSI	**Banda Aceh**	**4.16**	**335**	P	**Pn**	**10 37 29.1**	**-3.5**
BSI				S	**Sn**	**10 38 14.9**	**-5.1**
BKNI	**Bangkinang**	**4.19**	**109**	P	**Pn**	**10 37 33.8**	**+0.8**
PDSI	**Padang**	**4.27**	**127**	P	**Pn**	**10 37 37.5**	**+3.5**
FRIM	**Kepong**	**4.79**	**71**	P	**Pn**	**10 37 41.8**	**+0.6**
IPM	**Ipoh**	**4.81**	**55**	P	**Pn**	**10 37 42.0**	**+0.5**
IPM	**Ipoh**	**4.81**	**55**	P	**Pn**	**10 37 41.7**	**+0.2**
	0.4nm969nm60nm,0.7s						
KULM	**Kulim**	**5.04**	**45**	P	**Pn**	**10 37 44.8**	**+0.1**
KULM	**Kulim**	**5.04**	**45**	*e*Pn	**Pn**	**10 37 43.7**	**-1.0**
	70nm,0.8s						
KULM	**Kulim**	**5.04**	**45**	P	**Pn**	**10 37 44.2**	**-0.5**
	0.3nm831nm99nm,0.8s						
SDSI	**Sungai Dareh**	**5.08**	**121**	P	**Pn**	**10 37 43.8**	**-1.4**
KGM	**Kluang**	**6.25**	**87**	P	**Pn**	**10 38 02.6**	**+1.4**
MYKOM	**Kota Tinggi**	**6.77**	**89**	P	**Pn**	**10 38 09.6**	**+1.1**
MYKOM	**Kota Tinggi**	**6.77**	**89**	P	**Pn**	**10 38 09.0**	**+0.6**
	0.1nm441nm38nm,0.9s						
KTGM	**Kuala Trenggan**	**7.04**	**59**	P	**Pn**	**10 38 12.5**	**+0.5**
MDSI	**Maura Dua**	**9.39**	**131**	P	**Pn**	**10 38 43.6**	**-0.8**
	29nm,0.8s						
CGJI	**Cibinong**	**11.93**	**134**	P	**Pn**	**10 39 18.5**	**-0.6**
KSM	**Kuching**	**13.23**	**91**	*e*P	**Pn**	**10 39 36.3**	**-0.6**
	19nm,0.8s						
KSM	**Kuching**	**13.23**	**91**	P	**Pn**	**10 39 36.7**	**-0.2**
	25nm,0.9s						
STKI	**Sintang**	**14.49**	**96**	P	**Pn**	**10 40 01.0**	**+7.0**
SBUM	**Sibu**	**15.15**	**87**	P	**Pn**	**10 40 03.5**	**+0.8**
	285nm16nm,1.4s						
CMAR	**Chi

ASAR Alice Springs 43.80 127 P **P 10 44 33.0 -0.1**
comp=Z,2.3nm,0.8s,mb4.0,baz=301,slow=7.9,SNR=29
ASAR PcP PcP 10 46 20.2 +0.9
comp=Z,0.2nm,0.6s,baz=310,slow=4.7,SNR=2.3
KZA Kyzart 44.72 337 P **P 10 44 41.7 +1.4**
SNR=7.3
UCH Uchtor 45.14 336 P **P 10 44 45.2 +1.6**
SNR=20
UCH Uchtor 45.14 336 *e*P **P 10 44 44.7 +1.1**
UCH pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
UCH Uchtor 45.14 336 *e*P **P 10 44 44.7 +1.1**
comp=Z,9.7nm,0.7s,mb4.7
TKM2 Tokmak 2 45.31 338 P **P 10 44 45.8 +0.9**
SNR=11
TKM2 Tokmak 2 45.31 338 *e*P **P 10 44 45.4 +0.5**
TKM2 pmax pmax
comp=Z,8.0nm,0.8s,mb4.6
TKM2 Tokmak 2 45.31 338 *e*P **P 10 44 45.4 +0.4**
comp=Z,7.6nm,0.8s,mb4.6
KBK Karagaybulak 45.33 337 P **P 10 44 47.2 +2.1**
SNR=8.1
AML Almayashu 45.39 336 P **P 10 44 46.6 +1.0**
SNR=6.6
AML Almayashu 45.39 336 *e*P **P 10 44 46.0 +0.4**
AML pmax pmax
comp=Z,6.0nm,0.6s,mb4.6
AML Almayashu 45.39 336 *e*P **P 10 44 46.0 +0.4**
comp=Z,6.2nm,0.6s,mb4.6
AAK Ala-Archa 45.49 337 P **P 10 44 47.5 +1.1**
comp=Z,1.9nm,0.4s,mb4.3,baz=150,slow=4.2,SNR=7.1
AAK Ala-Archa 45.49 337 *de*P **P 10 44 47.7 +1.3**
AAK Ala-Archa 45.49 337 *e*P **P 10 44 48.0 +1.6**
comp=Z,13nm,1.4s,mb4.6
KSRS Korea Array 45.51 35 P **P 10 44 46.6 0.0**
comp=Z,5.0nm,0.7s,mb4.6,baz=224,slow=9.3,SNR=17
EKS2 Erkin-Say 45.80 336 P **P 10 44 50.6 +1.8**
SNR=9.1
EKS2 Erkin-Say 45.80 336 *e*P **P 10 44 49.8 +1.0**
EKS2 pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
EKS2 Erkin-Say 45.80 336 *e*P **P 10 44 49.8 +1.0**
comp=Z,7.1nm,0.7s,mb4.7
USP Ospenovka 46.02 337 P **P 10 44 51.5 +1.0**
SNR=16
SONM Songino Array 46.65 9 P **P 10 44 55.7 +0.2**
comp=Z,6.3nm,0.5s,mb4.8,baz=191,slow=9.5,SNR=20
SONM PcP PcP 10 46 29.2 +0.6
comp=Z,2.1nm,0.7s,baz=188,slow=3.7,SNR=3.5
MK31 Makanchi Array 46.72 346 *e*P **P 10 44 56.3 +0.3**
MKAR Makanchi Array 46.72 346 P **P 10 44 56.3 +0.3**
comp=Z,19nm,0.7s,mb5.2,baz=147,slow=7.3,SNR=140
ULN Ulaanbaatar 46.78 9 *e*P **P 10 44 56.8 +0.3**
ULN pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
ULN Ulaanbaatar 46.78 9 *e*P **P 10 44 56.8 +0.4**
comp=Z,4.8nm,0.7s,mb4.5
ZAK Zakamensk 48.78 5 *e*P **P 10 45 11.8 -0.1**
ZAK pmax pmax
comp=Z,3.0nm,1.2s,mb4.2
TLY Talaya 50.10 5 *e*P **P 10 45 22.6 +0.7**
TLY pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
TLY MLR MLR
comp=Z,51nm,15.0s,MS3.6
TLY Talaya 50.10 5 *e*P **P 10 45 22.8 +0.8**
comp=Z,9.6nm,0.7s,mb4.9
KURK Kurchatov 51.27 345 P **P 10 45 30.7 -0.1**
comp=Z,9.0nm,0.6s,mb4.9,baz=158,slow=7.5,SNR=38
KURK Kurchatov 51.27 345 *e*P **P 10 45 31.3 +0.5**
KURK pmax pmax
comp=Z,16nm,1.0s,mb4.9
KURK Kurchatov 51.27 345 *e*P **P 10 45 31.2 +0.5**
comp=Z,16nm,1.0s,mb4.9
MJAR Matsushiro Arr 51.41 43 P **P 10 45 31.7 -0.3**
comp=Z,3.5nm,0.7s,mb4.4,baz=215,slow=6.2,SNR=9.5
CTA Charters Tower 52.84 117 P **P 10 45 43.5 +0.5**
comp=Z,5.7nm,0.8s,mb4.5,baz=294,slow=8.7,SNR=10
CTAO Charters Tower 52.84 117 *e*P **P 10 45 43.4 +0.4**
CTAO pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
CTAO Charters Tower 52.84 117 *e*P **P 10 45 43.4 +0.5**
comp=Z,5.1nm,0.8s,mb4.5
ZALV Zalesovo Beam 53.04 351 P **P 10 45 44.1 +0.3**
comp=Z,30nm,0.7s,mb5.4,baz=176,slow=6.6,SNR=61
STKA Stephens Creek 53.78 132 P **P 10 45 50.6 +0.8**
comp=Z,3.0nm,0.8s,mb4.3,baz=330,slow=7.5,SNR=7.1
STKA LR LR 11 09 12.3
comp=Z,121nm,20.6s,MS3.9,baz=225,slow=36
NVS Novosibirsk 54.16 350⇑ *i*P **P 10 45 51.3 -0.7**
NVS *e*S **S 10 53 28.1 +2.5**
NVS pmax pmax
comp=N,18nm,1.1s
NVS pmax pmax
comp=Z,21nm,1.1s,mb5.0
NVS pmax pmax
comp=E,10.0nm,1.2s
NVS smax
comp=E,11nm,1.7s
RDF Al-Radifah 54.34 305 *e*P **P 10 45 54.1 +0.3**
RDF AMb AMB 10 46 08.6
comp=Z,29nm,1.2s,mb5.1
NAY Al-Naaiem 54.70 305 *e*P **P 10 45 56.1 -0.3**
NAY AMb AMB 10 46 09.1
comp=Z,8.8nm,0.8s,mb4.8
MIB Mutribah 54.82 306 *e*P **P 10 45 57.7 +0.4**
MIB AMb AMB 10 46 07.0
comp=Z,18nm,1.1s,mb5.0
BVAR Borovoye Array 55.73 341 P **P 10 46 03.0 -0.4**
comp=Z,4.9nm,0.6s,mb4.7,baz=134,slow=8.5,SNR=34
BRVK Borovoye 55.80 341 *e*P **P 10 46 03.3 -0.6**
BRVK Borovoye 55.80 341 *e*P **P 10 46 03.6 -0.2**
comp=Z,11nm,1.1s,mb4.8
KLR Kul'dur 55.86 27 *e*P **P 10 46 01.4 -3.0**
HABR Khabarovsk 56.88 29 *e*P **P 10 46 10.3 -1.4**
HABR *e**PP pP 10 46 18.7 -5.9
HABR *e**SP sP 10 46 22.9 -6.9
HABR *e* 10 47 03.8
HABR *e* 10 48 15.2
HABR *e*PPP 10 49 34.2
HABR *e*S **S 10 54 02.3 +0.2**
HABR *e**SS sS 10 54 17.8 -5.8
HABR *e* 10 55 55.2
HABR SS SS 10 57 50.5 -0.5
HABR pmax pmax
comp=E,26nm,2.8s
HABR pmax pmax
comp=N,14nm,2.0s
HABR pmax pmax
comp=Z,18nm,1.1s,mb5.0
HABR MLR MLR
comp=Z,73nm,21.0s,MS3.8
ABKAR Akbulak array 57.01 332 *e*P **P 10 46 12.2 -0.4**
comp=Z,6.6nm,0.7s,mb4.8
AKTK Aktyubinsk 58.73 332 P **P 10 46 23.9 -0.8**
AKTO Aktyubinsk 58.73 332 P **P 10 46 23.9 -0.8**
comp=Z,1.5nm,0.4s,mb4.3,baz=131,slow=7.0,SNR=5.8
YSS Yuzh-Sakhalins 60.00 34⇑ *e*P **P 10 46 33.0 -0.5**
YSS pmax pmax
comp=Z,40nm,1.0s,mb5.4
YSS Yuzh-Sakhalins 60.00 34 *e*P **P 10 46 33.5 0.0**
comp=Z,47nm,1.3s,mb5.3
ARU Arti 62.67 337 *c i*P **P 10 46 50.7 -0.7**
ARU S **S 10 55 18.6 +2.2**
ARU SS SS 10 59 22.0 +0.4
ARU pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
KIV Kislovodsk 63.85 319 *e*P **P 10 46 59.4 0.0**
KIV pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
YAK Yakutsk 64.97 16 *e*P **P 10 47 05.5 -0.9**
MMAI Mount Meron Ar 65.51 306 LR LR 11 18 53.0
comp=Z,56nm,18.8s,MS3.8,baz=110,slow=39
BRTR Keskin Array B 68.68 312 P **P 10 47 30.0 -0.5**
comp=Z,2.4nm,0.7s,mb4.2,baz=135,slow=6.4,SNR=15
BR131 Keskin Array S 68.68 312 *e*P **P 10 47 29.9 -0.6**
PETK Petropavlovsk- 71.39 34 P **P 10 47 46.7 -0.1**
comp=Z,1.8nm,0.8s,mb4.1,baz=174,slow=7.2,SNR=3.3
PETK LR LR 11 19 59.5
comp=Z,27nm,21.1s,MS3.5,baz=345,slow=37
OBN Obninsk 72.13 328⇓ *e*P **P 10 47 50.8 -0.4**
OBN *e* 10 50 31.7
OBN pmax pmax
comp=Z,11nm,1.1s,mb4.7
TIXI Tiksi 72.71 10 *e*P **P 10 47 53.3 -1.1**
TIXI pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
TIXI MLR MLR
comp=Z,104nm,18.0s,MS4.2
TIXI Tiksi 72.71 10 *e*P **P 10 47 53.6 -0.8**
MAW Mawson 73.17 193 LR LR 11 13 14.9
comp=Z,48nm,20.6s,MS3.8,baz=288,slow=30
AKASG Malin Array Be 74.78 322 P **P 10 48 06.0 -0.9**
comp=Z,2.6nm,0.5s,mb4.4,baz=88,slow=5.1,SNR=7.2
AKASG Malin Array Be 74.78 322 *i*P **P 10 48 06.3 -0.6**
AKASG pmax pmax
comp=Z,3.0nm,0.5s
BOSA Boshof 74.92 240 LR LR 11 19 40.6
comp=Z,59nm,18.7s,MS3.9,baz=336,slow=35
BUR08 Bucovina Ar. S 76.58 319 *e*P **P 10 48 17.2 0.0**
FINES FINESS Array B 79.50 332 P **P 10 48 33.0 -0.2**
comp=Z,2.4nm,0.5s,mb4.4,baz=104,slow=6.1,SNR=10
BILL Bilibino 80.74 21 *e*P **P 10 48 41.2 +1.5**
BILL pmax pmax
comp=Z,1.0nm,1.3s,mb3.6
BILL MLR MLR
comp=Z,100nm,15.0s,MS4.3
ARCES ARCESS Array B 82.02 340 P **P 10 48 46.8 +0.4**
comp=Z,3.2nm,0.5s,mb4.5,baz=99,slow=4.9,SNR=43
DPC Dobruska-Polom 82.78 320 *e*P **P 10 48 51.7 +0.8**
DPC Dobruska-Polom 82.78 320 *e*P **P 10 48 51.7 +0.8**
GERES GERESS Array B 84.35 319 P **P 10 48 59.7 +0.7**
comp=Z,1.8nm,0.7s,mb4.3,baz=97,slow=5.5,SNR=12
KHC Kasperske Hory 84.45 319 *e*P **P 10 48 58.7 -0.7**
KHC Kasperske Hory 84.45 319 *e*P **P 10 48 58.7 -0.7**
NB2 NORSAR Subarra 86.51 331 P **P 10 49 09.1 -0.3**
comp=Z,0.9nm,0.6s,mb4.2,baz=90,slow=5.1
NOA NORSAR Array B 86.51 331 P **P 10 49 09.5 +0.1**
comp=Z,2.1nm,0.8s,mb4.4,baz=94,slow=5.0,SNR=5.1
NOA LR LR 11 34 40.5
comp=Z,15nm,19.9s,MS3.4,baz=45,slow=40
TORD Torodi Ar. Bea 94.85 283 P **P 10 49 49.2 -0.2**
comp=Z,0.6nm,0.9s,mb4.0,baz=94,slow=5.9,SNR=2.9
NVAR Mina Array Bea 128.45 35 PKP PKPdf 10 55 34.4 +0.6
comp=Z,0.1nm,0.4s,baz=159,slow=1.3,SNR=4.3
PDAR Pinedale Array 129.64 25 PKP PKPdf 10 55 36.6 +0.7
comp=Z,0.2nm,0.5s,baz=5.2,slow=3.0,SNR=3.1
TXAR Lajitas Array 143.31 31 PKhKP 10 55 58.8
comp=Z,0.2nm,0.5s,baz=62,slow=0.8,SNR=6.0
CPUP Villa Florida 145.29 223 PKPbc PKPbc 10 56 05.5 +0.6
comp=Z,3.0nm,0.6s,baz=114,slow=1.6,SNR=14
CPUP Villa Florida 145.29 223 PKPbc PKPbc 10 56 05.5 +0.5

CASC 02 10:38:30.1±1.4, 8°.41N×82°.97W, h3km, MD3.6, 1C, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.31**	**322**⇑	*e*P	Pg	10 38 37.1	+1.0
ACR				*e*S	Sg	10 38 42.6	+2.5
BRU2	**Volcan**	**0.47**	**36**	*e*P	Pg	10 38 40.6	+1.4
BRU2				*e*S	Sg	10 38 48.5	+3.1
BAR1		**0.89**	**338**	*e*P	Pg	10 38 47.4	+0.1
BAR1				*e*S	Sg	10 38 58.9	0.0
CNI	**Changuinola**	**1.10**	**24**	*e*P	Pg	10 38 51.2	0.0
BUS	**Buena Vista**	**1.38**	**326**	*e*P	Pn	10 38 55.9	-0.3
QCR	**Quepos**	**1.55**	**311**	*e*P	Pn	10 38 58.9	+0.3
URSC	**Urasca**	**1.62**	**331**	*e*P	Pn	10 38 59.9	+0.2

IDC 02 10:45:53.6±18.0, 17°.60S×178°.77W, h632km±248km, mb2.9/6, mb1 3.2/6, mb1mx3.0/16, mbtmp2.9/6, Error ellipse: s-maj=134.3km s-min=68.4km az=137.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.16**	**260**	P	P	10 51 40.5	-0.1
2.1nm,0.6s,baz=90,slow=9.8,SNR=4.8							
STKA	**Stephens Creek**	**38.48**	**241**	P	P	10 52 24.1	+0.1
1.7nm,0.9s,baz=94,slow=8.8,SNR=3.6							
ASAR	**Alice Springs**	**44.54**	**254**	P	P	10 53 11.8	+0.2
7.4nm,0.6s,baz=87,slow=8.6,SNR=184							
NVAR	**Mina Array Bea**	**79.44**	**44**	P	P	10 56 57.3	+1.1
0.3nm,0.7s,baz=242,slow=7.8,SNR=2.4							
TXAR	**Lajitas Array**	**86.12**	**58**	P	P	10 57 29.6	0.0
0.4nm,0.8s,baz=240,slow=5.0,SNR=4.3							
PDAR	**Pinedale Array**	**87.37**	**44**	P	P	10 57 34.8	-0.4
0.3nm,0.7s,baz=187,slow=6.4,SNR=2.9							

NIED ***02*** *10:53:00, 42°.60N×144°.20E, h44km, Mw3.6 Best double couple: M₀2.81000×10¹⁴ NP1:φs65.00000°, δ53.00000°, λ-123.00000°. NP2:φs293.00000°, δ48.00000°, λ-54.00000°.*
MOS ***02*** *10:53:20.4±1.1, 42°.51N×144°.19E, h66km, mb3.9/1, Error ellipse: s-maj=22.4km s-min=12.8km az=82.8*
ISCJB ***02*** *10:53:20.3±0.5, 42°.53N±0°.05×144°.22E±0°.05, h61km±5km, mb3.7/5, Error ellipse: s-maj=9.2km s-min=4.6km az=143.3*
NEIC ***02*** *10:53:21.0, 42°.57N×144°.17E, h61km, MG3.6(JMA), After JMA.*
JMA ***02*** *10:53:21.0±0.1, 42°.57N×144°.17E, h61km±1km, M3.5 JMA Felt I J1.*
IDC ***02*** *10:53:22.9±4.1, 42°.55N×144°.05E, h62km±26km, mb3.4/5, mb1 3.4/6, mb1mx3.2/25, mbtmp3.4/6, ML3.3/1, Error ellipse: s-maj=64.6km s-min=22.8km az=81.0*

ISC 02 10:53:21.4±0.5, 42°.55N±0°.05×144°.21E±0°.05, h52km±6km, n27, σ0°69/40, mb3.7/5, 6C, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOB	**Onbets**	**0.45**	**322**	⇑P	**Pn**	**10 53 32.4**	**+0.1**
JOB				*e*S	**Sn**	**10 53 40.5**	**+0.4**
JAK	**Akkeshi**	**0.57**	**38**	⇑P	**Pn**	**10 53 33.8**	**+0.1**
JAK				*e*S	**Sn**	**10 53 43.0**	**+0.4**
JCH	**Churui**	**0.63**	**277**	⇑P	**Pn**	**10 53 34.2**	**-0.2**
JCH				*e*S	**Sn**	**10 53 43.2**	**-0.6**
JAR	**Ashorobuto**	**0.82**	**337**	P	**Pn**	**10 53 36.7**	**-0.1**
JAR				*e*S	**Sn**	**10 53 47.9**	**-0.1**
ERM	**Erimo**	**0.94**	**236**	*e*Pn	**Pn**	**10 53 40.0**	**+1.6**
ERM				*e*Sn	**Sn**	**10 53 54.1**	**+3.1**
JEM	**Erimo**	**0.94**	**236**	P	**Pn**	**10 53 38.1**	**-0.3**
JNK	**Nakash**	**1.10**	**19**	⇑P	**Pn**	**10 53 40.3**	**-0.3**
JNK				*e*S	**Sn**	**10 53 54.2**	**-0.6**
JNBK	**Urakawa-nobuka**	**1.11**	**257**	P	**Pn**	**10 53 40.1**	**-0.6**
JNBK				*e*S	**Sn**	**10 53 54.2**	**-0.8**
JFR	**Furan**	**1.34**	**298**	P	**Pn**	**10 53 43.7**	**-0.1**
JFR				*e*S	**Sn**	**10 53 59.6**	**-0.9**
JBT2	**Biratori 2**	**1.38**	**280**	P	**Pn**	**10 53 43.4**	**-0.9**
NEM2	**Nemuro 2**	**1.39**	**53**	P	**Pn**	**10 53 43.7**	**-0.7**
NEM2				*e*S	**Sn**	**10 54 00.3**	**-1.4**
JTKR	**Abashiri--Toko**	**1.44**	**351**	⇑P	**Pn**	**10 53 45.9**	**+0.7**
JRA	**Rausu**	**1.54**	**25**	⇑P	**Pn**	**10 53 46.7**	**+0.2**
JRA				*e*S	**Sn**	**10 54 05.9**	**+0.5**
JMP	**Maruseppu**	**1.59**	**337**	P	**Pn**	**10 53 47.5**	**+0.4**
JKK2	**Kamakawa 2**	**1.71**	**322**	P	**Pn**	**10 53 49.2**	**+0.5**
YUK	**Yuzh-Kuril'sk**	**1.92**	**38**	*e*PN	**Pn**	**10 53 51.9**	**+0.3**
YUK				*i* S	**Sn**	**10 54 14.7**	**+0.2**
YUK				pmax	pmax		
comp=N,120nm,0.4s							
YUK				pmax	pmax		
comp=E,100nm,0.4s							
YUK				pmax	pmax		
comp=Z,350nm,0.4s							
YUK				smax			
comp=N,2μm,0.4s							
YUK				smax			
comp=E,3μm,0.4s							
YUK				smax			
comp=N,890nm,0.5s							
YUK				smax			
comp=E,2μm,0.4s							
ASAJ	**Asahikawa**	**1.96**	**324**	P	**Pn**	**10 53 53.0**	**+0.8**
comp=E,15nm,0.3s,baz=178,slow=11,SNR=57							
ASAJ				S	**Sn**	**10 54 19.6**	**+3.9**
comp=E,12nm,0.3s,baz=1.8,slow=31,SNR=5.8							
ASAJ	**Asahikawa**	**1.96**	**324**	PN	**Pn**	**10 53 53.1**	**+0.8**
ASAJ				S	**Sn**	**10 54 19.6**	**+3.9**
ASAJ				pmax	pmax		
comp=Z,15nm,0.3s							
ASAJ				smax			
comp=N,12nm,0.3s							
YSS	**Yuzh-Sakhalins**	**4.53**	**347**	*e*PN	**Pn**	**10 54 27.9**	**+0.5**
MAJO	**Matsushiro**	**7.58**	**220**	*e*PN	**Pn**	**10 55 09.1**	**-0.1**
MJAR	**Matsushiro Arr**	**7.58**	**220**	P	**Pn**	**10 55 08.8**	**-0.4**
comp=N,0.4nm,0.3s,baz=29,slow=16,SNR=4.2							
MKAR	**Makanchi Array**	**43.24**	**298**	P	**P**	**11 01 17.1**	**-0.2**
comp=N,0.2nm,0.2s,mb3.4,baz=68,slow=9.8,SNR=2.3							
MKAR	**Makanchi Array**	**43.24**	**298**	P	**P**	**11 01 17.1**	**-0.2**
MKAR				pmax	pmax		
comp=Z,10.0nm,0.1s							
KURK	**Kurchatov**	**44.42**	**304**	P	**P**	**11 01 27.0**	**+0.3**
comp=Z,0.3nm,0.3s,mb3.5,baz=74,slow=9.0,SNR=3.6							
BVAR	**Borovoye Array**	**48.60**	**309**	P	**P**	**11 01 59.7**	**+0.2**
comp=Z,0.6nm,0.4s,mb4.0,baz=88,slow=9.7,SNR=4.4							
FINES	**FINESS Array B**	**64.95**	**332**	P	**P**	**11 03 54.3**	**-0.8**
comp=Z,1.5nm,0.5s,mb4.2,baz=64,slow=8.7,SNR=7.0							
ASAR	**Alice Springs**	**66.56**	**190**	P	**P**	**11 04 06.5**	**+0.6**
comp=Z,0.3nm,0.9s,mb3.3,baz=358,slow=6.0,SNR=4.4							

IDC ***02*** *11:07:21.0±1.2, 31°.68N×104°.53E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.6/26, mbtmp3.8/6, Error ellipse: s-maj=76.3km s-min=22.6km az=56.0*
ISCJB ***02*** *11:07:20.5±0.7, 31°.41N±0°.05×104°.1E±0°.1, h10km, mb3.7/6, Error ellipse: s-maj=13.5km s-min=7.0km az=12.5*
NEIC ***02*** *11:07:22.5±0.8, 31°.12N×103°.58E, h10km, Error ellipse: s-maj=32.6km s-min=10.9km az=221.0*
BJI ***02*** *11:07:24.2, 31°.30N×103°.93E, h10km, ML3.6/14, Ms3.7/1, Ms7 3.7/1*

ISC 02 11:07:22.5±0.6, 31°.39N±0°.05×104°.0E±0°.1, h10km, n16, σ1°03/18, mb3.7/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.52**	**201**	Pg	**Pg**	**11 07 31.4**	**-1.1**
CD2				Sg	**Sg**	**11 07 39.8**	**+0.5**
CD2				smax			
comp=N,3μm,0.6s							
LZH	**Lanzhou**	**4.68**	**359**	Pn	**Pn**	**11 08 39.5**	**+6.3**
LZH				smax			
comp=N,79nm,1.3s							
LZH				smax			
comp=E,78nm,1.2s							
LZH				LR	LR		
comp=E,480nm,5.4s							
LZH				LR	LR		
comp=Z,550nm,6.4s							
ENH	**Enshi**	**4.87**	**102**	*e*Pn	**Pn**	**11 08 40.3**	**+4.5**
comp=Z,45nm,0.7s							
XAN	**Xi'an**	**4.94**	**56**	Pg	**Pg**	**11 08 52.9**	**-4.1**
XAN				Sg	**Sg**	**11 09 53.6**	**-7.4**
XAN				smax			
comp=N,75nm,0.7s							
XAN				smax			
comp=E,53nm,0.9s							
GYA	**Guiyang**	**5.45**	**154**	Pn	**Pn**	**11 08 44.8**	**+1.0**
GYA				smax			
comp=N,90nm,1.0s							
GYA				smax			
comp=E,90nm,0.8s							
WHN	**Wuhan**	**8.95**	**93**	P	**Pn**	**11 09 35.1**	**+3.3**
MK31	**Makanchi Array**	**22.69**	**319**	*e*P	**P**	**11 12 24.6**	**+0.6**
MKAR	**Makanchi Array**	**22.69**	**319**	P	**P**	**11 12 25.0**	**+1.0**
comp=E,1.9nm,0.7s,mb3.6,baz=114,slow=11,SNR=17							
MKAR	**Makanchi Array**	**22.69**	**319**	P	**P**	**11 12 25.0**	**+1.0**
ZALV	**Zalesovo Beam**	**26.41**	**334**	P	**P**	**11 12 59.1**	**0.0**
comp=E,1.3nm,0.5s,mb3.8,baz=141,slow=9.3,SNR=2.5							
KURK	**Kurchatov**	**26.95**	**323**	P	**P**	**11 13 04.2**	**+0.3**
comp=E,1.9nm,1.0s,mb3.6,baz=129,slow=10,SNR=10							
ARCES	**ARCESS Array B**	**56.95**	**336**	P	**P**	**11 17 07.1**	**-0.5**
comp=E,1.7nm,0.7s,mb4.2,baz=78,slow=8.4,SNR=3.5							
WRAB	**Tennant Creek**	**58.77**	**146**	*e*P	**P**	**11 17 20.0**	**-0.9**
ASAR	**Alice Springs**	**61.80**	**149**	P	**P**	**11 17 41.7**	**+0.1**
comp=E,0.4nm,0.6s,mb3.7,baz=334,slow=6.7,SNR=8.3							
YKA	**Yellowknife Ar**	**81.45**	**17**	P	**P**	**11 19 37.5**	**-1.9**
comp=E,0.3nm,0.7s,mb3.4,baz=328,slow=5.1,SNR=5.1							
YKA	**Yellowknife Ar**	**81.45**	**17**	P	**P**	**11 19 37.5**	**-1.9**

IDC ***02*** *11:21:22.6±0.9, 1°.06N×118°.56E, h0km, mb3.9/6, mb1 3.9/7, mb1mx3.7/23, mbtmp3.9/7, ML3.4/1, MS3.0/1, Ms1 3.0/1, ms1mx2.2/28, Error ellipse: s-maj=145.5km s-min=16.7km az=63.0*
ISCJB ***02*** *11:21:25.4±0.7, 0°.9N±0°.1×118°.5E±0°.2, h33km, mb3.8/6, Error ellipse: s-maj=30.8km s-min=9.3km az=156.4*
NEIC ***02*** *11:21:28.0±0.6, 1°.00N×118°.66E, h35km, Error ellipse: s-maj=31.9km s-min=9.6km az=60.0*

ISC 02 11:21:28.0±0.7, 0°.89N±0°.10×118°.5E±0°.2, h35km, n12, σ1°24/13, mb3.8/6, Borneo

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**5.98**	**168**	Pn	**Pn**	**11 22 54.6**	**+0.5**
1.0nm,0.3s,baz=355,slow=11,SNR=4.6							
KAPI				Sn	**Sn**	**11 23 59.9**	**-1.6**
1.1nm,0.3s,baz=241,slow=19,SNR=3.1							
KAPI				LR	LR	11 25 39.1	
comp=Z,127nm,18.9s,baz=232,slow=42							
KAKA	**Kakadu**	**19.30**	**135**	*e*P	**Pn**	**11 25 48.7**	**-2.7**
FITZ	**Fitzroy Crossi**	**20.12**	**160**	P	**P**	**11 25 59.6**	**+0.5**
1.4nm,0.7s,baz=351,slow=10,SNR=3.8							
WRAB	**Tennant Creek**	**25.85**	**144**	*e*P	**P**	**11 26 57.9**	**+1.4**
CMAR	**Chiang Mai Arr**	**25.98**	**313**	P	**P**	**11 26 59.4**	**+1.7**
0.6nm,0.3s,mb3.6,baz=154,slow=11,SNR=4.6							
ASAR	**Alice Springs**	**28.61**	**150**	P	**P**	**11 27 22.4**	**+1.2**
1.3nm,0.7s,mb3.8,baz=331,slow=9.2,SNR=22							
ASAR				PcP	PcP	11 30 31.7	-0.2
0.6nm,0.7s,baz=344,slow=2.6,SNR=11							
STKA	**Stephens Creek**	**39.22**	**148**	P	**P**	**11 28 54.1**	**+1.1**
2.1nm,0.9s,mb3.9,baz=325,slow=11,SNR=5.7							
MKAR	**Makanchi Array**	**55.59**	**330**	P	**P**	**11 30 59.0**	**-1.1**
0.3nm,0.3s,mb3.8,baz=120,slow=7.2,SNR=5.5							
MKAR				PcP	PcP	11 31 59.2	-0.4
0.1nm,0.4s,baz=116,slow=3.4,SNR=2.2							
KURK	**Kurchatov**	**60.05**	**332**	P	**P**	**11 31 30.4**	**-0.9**
1.0nm,0.8s,mb3.9,baz=129,slow=7.5,SNR=6.3							
KURK	**Kurchatov**	**60.05**	**332**	P	**P**	**11 31 30.4**	**-0.9**
FUNA	**Funafuti**	**61.15**	**100**	P	**P**	**11 31 39.4**	**-0.2**
BVAR	**Borovoye Array**	**65.47**	**330**	P	**P**	**11 32 06.3**	**-1.1**
0.8nm,0.5s,mb4.0,baz=134,slow=8.5,SNR=6.0							

ISCJB ***02*** *11:27:03.6±0.7, 32°.39N±0°.05×105°.45E±0°.06, h10km, mb3.3/3, Error ellipse: s-maj=9.3km s-min=6.1km az=135.3*
IDC ***02*** *11:27:04.7±1.6, 32°.44N×105°.35E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.3/26, mbtmp3.4/4, ML3.9/1, Error ellipse: s-maj=82.5km s-min=24.2km az=58.0*

ISC 02 11:27:05.3±0.6, 32°.41N±0°.04×105°.33E±0°.06, h10km, n7, σ1°39/13, mb3.3/3, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.00**	**222**⇑	*i*Pn	**Pn**	**11 27 40.1**	**+0.9**
CD2				Pg	**Pg**	**11 27 42.1**	**-1.6**
CD2				Sg	**Sg**	**11 28 08.0**	**-1.7**
CD2				smax			
comp=N,2μm,0.8s							
CD2				smax			
comp=N,1μm,0.7s							
XAN	**Xi'an**	**3.42**	**61**	Pg	**Pg**	**11 28 10.8**	**-0.1**
XAN				Sg	**Sg**	**11 28 53.9**	**-1.4**
XAN				smax			
comp=N,89nm,0.8s							
XAN				smax			
comp=E,45nm,0.6s							
LZH	**Lanzhou**	**3.87**	**342**	Pn	**Pn**	**11 28 07.6**	**+2.8**
LZH				Pg	**Pg**	**11 28 17.9**	**-1.5**
LZH				Sn	**Sn**	**11 28 51.7**	**+1.3**
LZH				Sg	**Sg**	**11 29 06.3**	**-3.3**
LZH				smax			
comp=N,220nm,0.8s							
LZH				smax			
comp=E,220nm,0.6s							
LZH				LR	LR		
comp=E,420nm,6.2s							
LZH				LR	LR		
comp=Z,630nm,7.7s							
CMAR	**Chiang Mai Arr**	**15.03**	**204**	Pn	**Pn**	**11 30 38.7**	**+0.9**
comp=Z,0.2nm,0.3s,baz=7.6,slow=7.5,SNR=3.7							
MKAR	**Makanchi Array**	**22.73**	**316**	P	**P**	**11 32 07.8**	**+0.6**
comp=Z,0.7nm,0.6s,mb3.2,baz=106,slow=11,SNR=5.8							
KURK	**Kurchatov**	**26.86**	**321**	P	**P**	**11 32 47.0**	**+1.0**
comp=Z,0.3nm,0.4s,mb3.2,baz=131,slow=9.9,SNR=3.2							
ASAR	**Alice Springs**	**62.08**	**150**	P	**P**	**11 37

*IDC **02** 11:43:36.8±1.0, 23°.35N×94°.08E, h0km, mb3.9/7, mb1 4.0/8, mb1mx3.7/27, mbtmp3.8/8, ML3.7/1, MS2.8/1, Ms1 2.8/1, ms1mx2. 1/28, Error ellipse: s-maj=47.4km s-min=18.7km az=54.0*

*ISCJB **02** 11:43:41.8±1.4, 23°.3N±0°.2×94°.2E±0°.2, h56km±16km, mb3.8/7, Error ellipse: s-maj=44.6km s-min=11.2km az=138.4*

ISC 02 11:43:43.7±1.3, **23°.4N**±0°.2×**94°.2E**±0°.2, **h53**km±15km, **n10**, σ0°**70**/10, **mb3.8/7, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**3.06**	**316**	*e*PN	**Pn**	**11 44 29.0**	**-0.5**
SHL				*e*SN	**Sn**	**11 45 05.5**	**+0.7**
CMAR	**Chiang Mai Arr**	**6.58**	**137**	PN	**Pn**	**11 45 17.8**	**-0.2**
	0.4nm,0.3s,baz=313,slow=13,SNR=3.8						
MKAR	**Makanchi Array**	**25.27**	**341**	P	**P**	**11 49 05.5**	**+0.6**
	1.5nm,0.6s,mb3.7,baz=138,slow=10.0,SNR=14						
SONM	**Songino Array**	**26.28**	**19**	P	**P**	**11 49 13.8**	**-0.2**
	0.4nm,0.5s,mb3.2,baz=189,slow=8.2,SNR=3.2						
KURK	**Kurchatov**	**29.88**	**340**	P	**P**	**11 49 45.9**	**-0.2**
	0.3nm,0.3s,mb3.5,baz=154,slow=8.2,SNR=4.2						
KURK				LR	LR	12 04 23.6	
	comp=Z,15nm,18.5s,baz=170,slow=42						
AKTO	**Aktyubinsk**	**38.98**	**323**	P	**P**	**11 51 04.8**	**+0.1**
	1.2nm,0.7s,mb3.8,baz=137,slow=9.7,SNR=5.1						
AKASG	**Malin Array Be**	**56.54**	**316**	P	**P**	**11 53 18.9**	**-1.7**
	1.7nm,0.5s,mb4.3,baz=84,slow=6.3,SNR=7.4						
ASAR	**Alice Springs**	**60.59**	**138**	P	**P**	**11 53 50.0**	**+0.9**
	0.5nm,0.5s,mb3.9,baz=318,slow=6.5,SNR=21						
GERES	**GERESS Array B**	**66.67**	**315**	P	**P**	**11 54 29.2**	**+0.3**
	1.2nm,0.5s,mb4.2,baz=53,slow=6.9,SNR=7.8						
TXAR	**Lajitas Array**	**124.85**	**19**	PKP	PKPdf	12 02 38.6	+0.4
	0.1nm,0.4s,baz=8.9,slow=6.4,SNR=3.6						

*ISK **02** 13:04:06.2, 40°.55N×35°.04E, h5km, MD2.6*

*CSEM **02** 13:04:07.7±0.3, 40°.58N×34°.98E, h10km, MD2.6, Error ellipse: s-maj=7.4km s-min=6.0km az=109.0*

*ISCJB **02** 13:04:08.9±0.7, 40°.56N±0°.04×34°.9E±0°.1, h28km±10km, Error ellipse: s-maj=14.7km s-min=6.5km az=11.9*

ISC 02 13:04:09.1±0.7, **40°.57N**±0°.04×**34°.9E**±0°.1, **h27**km±9km, **n11**, σ0°**91**/19, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTKT	**Corum**	**0.09**	**312**	*i* P	**Pb**	**13 04 12.3**	**-1.6**
CTKT	**Corum**	**0.09**	**312**	*i* P	**Pb**	**13 04 12.3**	**-1.6**
CTKT				*i* S	**Sb**	**13 04 17.7**	**+0.6**
CORM	**Corum**	**0.43**	**206**	*e*PG	**Pb**	**13 04 16.9**	**-1.3**
CORM				*e*SG	**Sb**	**13 04 24.9**	**+0.5**
CORM	**Corum**	**0.43**	**206**	*e*Pg	**Pb**	**13 04 16.9**	**-1.3**
CORM				*e*Sg	**Sb**	**13 04 24.9**	**+0.5**
TOS	**Tosya**	**0.80**	**306**	*e*PG	**Pb**	**13 04 25.0**	**+0.6**
TOS	**Tosya**	**0.80**	**306**	*e*Pg	**Pb**	**13 04 25.0**	**+0.6**
CDAG	**Cicekdag**	**1.02**	**203**	*i* P	**Pn**	**13 04 23.3**	**-4.3**
CDAG				*i* S	**Sb**	**13 04 41.7**	**+0.7**
DIKM	**Dikmen**	**1.12**	**15**	*e*PN	**Pn**	**13 04 28.1**	**-1.0**
DIKM				*e*SN	**Sb**	**13 04 45.0**	**+1.0**
DIKM	**Dikmen**	**1.12**	**15**	*e*Pn	**Pn**	**13 04 28.1**	**-1.0**
DIKM				*e*Sn	**Sb**	**13 04 45.0**	**+1.0**
SVSK	**Karacayir**	**1.75**	**111**	*e*PN	**Pn**	**13 04 37.3**	**-0.4**
SVSK				*e*SN	**Sn**	**13 04 59.6**	**+0.6**
SVSK	**Karacayir**	**1.75**	**111**	*e*Pn	**Pn**	**13 04 37.3**	**-0.4**
SVSK				*e*Sn	**Sn**	**13 04 59.6**	**+0.5**

*NEIC **02** 13:07:20.4, 35°.18S×71°.50W, h83km, MD2.9(GUC), After GUC.*

GUC 02 13:07:20.4±0.8, **35°.18S**×**71°.50W**, **h83**km±6km, **MD2.9, ML3.5, 2C-3D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TALC	**Talca**	**0.24**	**207**	⇑*i*P	Pn	13 07 32.8	+0.1
TALC				*i* S	Sn	13 07 41.3	-0.5
TALC				AML	AML	13 07 42.0	
	comp=E,39μm,0.1s						
NICH	**Los Niches**	**0.28**	**51**	⇓*i*P	Pn	13 07 33.3	+0.5
NICH				*i* S	Sn	13 07 42.1	+0.1
LNV	**Longovilo**	**1.22**	**3**	*e*P	Pn	13 07 42.5	+0.2
LNV				*i* S	Sn	13 07 59.0	+0.2
CACH	**El Canelo**	**1.29**	**35**	⇑*i*P	Pn	13 07 43.8	+0.6
CACH				*i* S	Sn	13 08 01.2	+0.9
CHCH	**Chadas Angostu**	**1.43**	**29**	⇓*i*P	Pn	13 07 45.2	+0.3
CHCH				*i* S	Sn	13 08 03.9	+0.5
FCH	**Farellones**	**2.10**	**29**	*e*P	Pn	13 07 54.7	+1.0
FCH				AML	AML	13 08 20.4	
	comp=N,127nm,0.2s						
FCH				*i* S	Sn	13 08 21.1	+2.0
PEL	**Peldehue**	**2.14**	**19**	⇓*i*P	Pn	13 07 54.2	0.0
PEL				*i* S	Sn	13 08 21.4	+1.4
PEL				AML	AML	13 08 23.5	
	comp=N,143nm,0.3s						

GUC 02 13:14:53.2±0.3, **32°.32S**×**71°.81W**, **h37**km±2km, **MD3.6, ML2.8, 2C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PEL	**Peldehue**	**1.25**	**131**	⇑*i*P	Pn	13 15 15.3	+1.2
PEL				*i* S	Sn	13 15 31.9	+2.2
PEL				AML	AML	13 15 34.5	
	comp=N,465nm,0.3s						
FCH	**Farellones**	**1.62**	**129**	⇑*i*P	Pn	13 15 21.4	+2.1
FCH				AML	AML	13 15 38.9	
	comp=E,121nm,0.1s						
FCH				*i* S	Sn	13 15 42.7	+3.8
LNV	**Longovilo**	**1.66**	**169**	*e*P	Pn	13 15 20.9	+1.1
CACH	**El Canelo**	**2.06**	**151**	*e*S	Sn	13 15 53.6	+4.0

*IDC **02** 13:25:11.7±1.2, 23°.25N×122°.16E, h0km, mb3.4/6, mb1 3.5/7, mb1mx3.5/24, mbtmp3.5/7, ML3.1/1, Error ellipse: s-maj=33.7km s-min=22.2km az=62.0*

*NEIC **02** 13:25:12.7±0.7, 23°.19N×121°.90E, h10km, mb3.8/1, Error ellipse: s-maj=9.4km s-min=8.9km az=115.0*

*JMA **02** 13:25:14.2±0.3, 23°.22N×121°.91E, h16km, M3.4*

*TAP **02** 13:25:14.5, 23°.21N×121°.86E, h17km, ML4.1, D*

ISC 02 13:25:13.1±0.4, **23°.19N**±0°.02×**121°.89E**±0°.02, **h9**km±2km, **n82**, σ0°**98**/139, **mb3.4/7, 11C-3D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.49**	**259**	*i* P	**Pg**	**13 25 23.4**	**+0.8**
	baz=248						
CHKT				S	**Sg**	**13 25 29.1**	**+0.1**
	baz=248						
TWF1	**Yuli**	**0.57**	**287**	⇑*i*P	**Pg**	**13 25 24.7**	**+0.7**
	baz=275						
TWF1				S	**Sg**	**13 25 33.1**	**+1.6**
	baz=275						
ESL	**Shilin**	**0.75**	**326**	⇑*i*P	**Pg**	**13 25 27.6**	**0.0**
	baz=326						
ESL				*i* S	**Sg**	**13 25 38.1**	**+0.8**
	baz=326						
ELDTW	**Lidau**	**0.80**	**270**	⇑*i*P	**Pg**	**13 25 28.2**	**-0.3**
	baz=268						
ELDTW				*e*S	**Sg**	**13 25 37.5**	**-1.4**
	baz=268						
TTN	**Taitung**	**0.81**	**238**	⇓*i*P	**Pg**	**13 25 28.9**	**+0.2**
	baz=226						
TTN				S	**Sg**	**13 25 39.6**	**+0.4**
	baz=226						
HWA	**Hwalien**	**0.82**	**342**	P	**Pg**	**13 25 29.5**	**+0.5**
	baz=342						
HWA				S	**Sg**	**13 25 40.8**	**+1.0**
	baz=342						
TWG	**Pinlang**	**0.83**	**244**	*e*P	**Pg**	**13 25 28.2**	**-1.0**
TWG	**Pinlang**	**0.83**	**244**	P	**Pg**	**13 25 29.0**	**-0.2**
	baz=233						
TWG				S	**Sg**	**13 25 40.2**	**+0.1**
	baz=233						
YUS	**Yu-Shan**	**0.91**	**289**	⇑*i*P	**Pg**	**13 25 30.9**	**+0.3**
	baz=288						
YUS				S	**Sg**	**13 25 42.4**	**-0.1**
	baz=288						
TWD	**Chiawan**	**0.93**	**343**	P	**Pg**	**13 25 31.1**	**+0.1**
	baz=344						
TWD				S	**Sg**	**13 25 42.2**	**-0.8**
	baz=344						
NACB	**Ninganchiao**	**1.02**	**345**	*e*P	**Pg**	**13 25 31.8**	**-0.9**
ECL	**Taimali**	**1.04**	**236**	⇓*i*P	**Pg**	**13 25 32.0**	**-1.1**
	baz=234						
ECL				S	**Sg**	**13 25 44.1**	**-2.6**
	baz=234						
SSLB	**Suanglung**	**1.04**	**305**	*e*P	**Pg**	**13 25 32.2**	**-0.9**
ALS	**Alishan**	**1.04**	**288**	⇑*i*P	**Pg**	**13 25 33.3**	**+0.1**
	baz=286						
ALS				S	**Sg**	**13 25 47.2**	**+0.4**
	baz=286						
WHF	**Hehuan Shan**	**1.11**	**329**	⇑*i*P	**Pg**	**13 25 33.7**	**-0.8**
	baz=328						
WHF				*e*S	**Sg**	**13 25 47.3**	**-1.6**
	baz=328						
SMLT	**Sun Moon Lake**	**1.14**	**308**	⇑*i*P	**Pb**	**13 25 34.5**	**-0.5**
	baz=306						
SMLT				*e*S	**Sg**	**13 25 50.5**	**+0.7**
	baz=306						
TPUB	**Ta-pu**	**1.16**	**276**	*e*P	**Pb**	**13 25 35.0**	**-0.4**
WTP	**Ta-pu**	**1.17**	**273**	⇑*i*P	**Pb**	**13 25 35.5**	**-0.1**
	baz=271						
WTP				S	**Sb**	**13 25 50.5**	**-0.3**
	baz=271						
CHN5	**Tsauling**	**1.18**	**290**	⇑*i*P	**Pb**	**13 25 36.0**	**+0.2**
	baz=289						
CHN5				*e*S	**Sb**	**13 25 51.9**	**+0.7**
	baz=289						
TYC	**Yuchr**	**1.18**	**307**	P	**Pb**	**13 25 35.2**	**-0.5**
	baz=321						
LAY	**Lan-yu**	**1.19**	**195**	P	**Pb**	**13 25 33.9**	**-1.9**
	baz=194						
SGST	**Jiashian**	**1.20**	**265**	P	**Pb**	**13 25 35.7**	**-0.4**
	baz=263						
SGST				*e*S	**Sb**	**13 25 51.9**	**+0.1**
	baz=263						
TAW	**Tawu**	**1.23**	**228**	*e*P	**Pn**	**13 25 35.1**	**-1.4**
	baz=237						
TAW				*e*S	**Sb**	**13 25 49.5**	**-3.1**
	baz=237						
SSD	**Sandimen**	**1.24**	**249**	*e*P	**Pn**	**13 25 35.5**	**-1.1**
	baz=241						
SSD				*e*S	**Sb**	**13 25 51.8**	**-0.9**
	baz=241						
ENA	**Nanau**	**1.24**	**354**	*e*P	**Pn**	**13 25 35.8**	**-0.9**
	baz=354						
ENA				*e*S	**Sb**	**13 25 51.5**	**-1.3**
	baz=354						
TWT	**Tachien**	**1.24**	**329**	P	**Pn**	**13 25 36.4**	**-0.3**
	baz=327						
TWT				*e*S	**Sb**	**13 25 51.6**	**-1.3**
	baz=327						
CHN1	**Nanshi**	**1.25**	**270**	⇑*i*P	**Pn**	**13 25 37.1**	**+0.3**
	baz=268						
CHN1				*e*S	**Sb**	**13 25 53.0**	**-0.1**
	baz=268						
EAST	**Anshuo**	**1.25**	**230**	⇓*i*P	**Pn**	**13 25 35.4**	**-1.4**
	baz=229						
TWK	**Hsinying**	**1.29**	**274**	⇑*i*P	**Pn**	**13 25 37.6**	**+0.3**
	baz=272						
TWK				*e*S	**Sb**	**13 25 54.3**	**+0.1**
	baz=272						
WNT	**Mingjian**	**1.30**	**302**	*e*P	**Pn**	**13 25 38.2**	**+0.7**
	baz=300						
WNT				*e*S	**Sb**	**13 25 54.4**	**-0.1**
	baz=300						
WGK	**Gukeng**	**1.31**	**292**	*e*P	**Pn**	**13 25 38.1**	**+0.5**
	baz=290						
WGK				*e*S	**Sb**	**13 25 54.7**	**-0.2**
	baz=290						
NNS	**Nan Shan**	**1.33**	**339**	P	**Pn**	**13 25 37.6**	**-0.3**
	baz=339						
NNS				*e*S	**Sb**	**13 25 53.5**	**-1.9**
	baz=339						
SGLT	**Jiouru**	**1.37**	**251**	*e*P	**Pn**	**13 25 41.5**	**+3.1**
	baz=245						
CHY	**Chiayi**	**1.38**	**283**	P	**Pn**	**13 25 39.2**	**+0.7**
	baz=264						
CHY				*e*S	**Sb**	**13 25 57.6**	**+0.8**
	baz=264						
TWM1	**Shoushan**	**1.40**	**255**	*e*P	**Pn**	**13 25 41.1**	**+2.4**
	baz=254						
CHN3	**Shinhua**	**1.41**	**266**	P	**Pn**	**13 25 40.8**	**+1.9**
	baz=264						
CHN3				S	**Sn**	**13 26 00.0**	**+2.5**
	baz=264						
TWC	**Suao**	**1.41**	**359**	P	**Pn**	**13 25 39.1**	**0.0**
	baz=359						
TWC				S	**Sn**	**13 25 56.4**	**-1.4**
	baz=359						
SCZT	**Fangliau**	**1.42**	**235**	*e*P	**Pn**	**13 25 38.6**	**-0.6**
	baz=228						
SCZT				*e*S	**Sn**	**13 25 57.6**	**-0.4**
	baz=228						
TCU	**Taichung**	**1.46**	**311**	P	**Pn**	**13 25 40.8**	**+1.1**
	baz=309						
TCU				*e*S	**Sn**	**13 25 59.0**	**0.0**
	baz=309						
ENTT	**Nioudou**	**1.47**	**349**	*e*P	**Pn**	**13 25 39.7**	**-0.1**
	baz=348						
ENTT				*e*S	**Sn**	**13 25 56.5**	**-2.7**
	baz=348						
TAI1	**Yung-k'ang**	**1.53**	**265**	*e*P	**Pn**	**13 25 42.5**	**+1.8**
	baz=263						
TAI1				*e*S	**Sn**	**13 26 01.0**	**+0.2**
	baz=263						
TWE	**Neicheng**	**1.54**	**353**	*e*P	**Pn**	**13 25 41.2**	**+0.4**
	baz=352						
TWE				*e*S	**Sn**	**13 26 00.1**	**-0.8**
	baz=352						
TWQ1	**Liyutan**	**1.54**	**319**	*e*P	**Pn**	**13 25 41.9**	**+1.1**
	baz=318						
YHNB	**Yeheng**	**1.55**	**343**	*e*P	**Pn**	**13 25 40.3**	**-0.6**
CHN8	**Yiju**	**1.55**	**276**	*e*P	**Pn**	**13 25 40.8**	**-0.1**
	baz=274						
CHN8				S	**Sn**	**13 26 01.8**	**+0.7**
	baz=274						
NSK	**Sanguang**	**1.56**	**342**	P	**Pn**	**13 25 41.2**	**+0.2**
	baz=341						
NSK				*e*S	**Sn**	**13 25 59.8**	**-1.5**
	baz=341						
SCLT	**Jiali**	**1.56**	**270**	*e*P	**Pn**	**13 25 40.5**	**-0.5**
	baz=268						
SCLT				*e*S	**Sn**	**13 26 02.4**	**+1.1**
	baz=268						
ILA	**Ilan**	**1.57**	**355**	*e*P	**Pn**	**13 25 41.0**	**-0.2**
	baz=355						
ILA				*e*S	**Sn**	**13 26 01.8**	**0.0**
	baz=355						
TSEB	**Hengchuen, Pin**	**1.57**	**216**	*e*P	**Pn**	**13 25 41.6**	**+0.4**
	baz=216						
TSEB				*e*S	**Sn**	**13 26 01.8**	**0.0**
	baz=216						
HEN	**Hengchun**	**1.59**	**222**	*e*P	**Pn**	**13 25 42.5**	**+1.1**
	baz=221						
HEN				*e*S	**Sn**	**13 26 00.6**	**-1.4**
	baz=221						
TWK1	**Hengchun**	**1.59**	**219**	P	**Pn**	**13 25 41.0**	**-0.5**
	baz=207						
TWK1				*e*S	**Sn**	**13 26 01.8**	**-0.4**
	baz=207						
WSF	**Szhu**	**1.59**	**287**	*e*P	**Pn**	**13 25 41.2**	**-0.3**
	baz=299						
WSF				*e*S	**Sn**	**13 26 01.4**	**-0.8**
	baz=299						
NSY	**Sanyi**	**1.60**	**320**	P	**Pn**	**13 25 42.9**	**+1.3**
	baz=318						
NSY				*e*S	**Sn**	**13 26 04.3**	**+1.9**
	baz=318						
WTCT	**Ta-ch'eng**	**1.62**	**295**	*e*P	**Pn**	**13 25 42.5**	**+0.7**
	baz=293						
WTCT				*e*S	**Sn**	**13 26 02.3**	**-0.5**
	baz=293						
YOJ	**Yonaguni jima**	**1.63**	**39**	P	**Pn**	**13 25 42.1**	**+0.1**
YOJ				*e*S	**Sn**	**13 26 02.9**	**-0.3**
TWP	**Hsiaoliuchiu**	**1.64**	**239**	*e*P	**Pn**	**13 25 42.5**	**+0.4**
	baz=239						
NSTT	**Nanjuang**	**1.65**	**331**	*e*P	**Pn**	**13 25 42.5**	**+0.2**
	baz=329						
NSTT				*e*S	**Sn**	**13 26 03.0**	**-0.5**
	baz=329						
TWA	**Mucha**	**1.80**	**351**	*e*P	**Pn**	**13 25 45.7**	**+1.3**
	baz=350						
TWA				*e*S	**Sn**	**13 26 06.9**	**-0.5**
	baz=350						
HSN	**Hsinchu**	**1.81**	**333**	*e*S	**Sn**	**13 26 09.3**	**+1.7**
	baz=332						
TWB1	**Santiao Chiao**	**1.81**	**3**	*e*P	**Pn**	**13 25 44.8**	**+0.3**
	baz=17						
TWB1				*e*S	**Sn**	**13 26 07.0**	**-0.7**
	baz=17						
TATO	**Taipei**	**1.81**	**349**	*e*P	**Pn**	**13 25 45.3**	**+0.7**
NWF	**Wu-fen Shan**	**1.88**	**357**	P	**Pn**	**13 25 47.0**	**+1.6**
	baz=357						
NWF				*e*S	**Sn**	**13 26 09.0**	**-0.2**
	baz=357						
HATJ	**Hateruma jima**	**1.96**	**63**	P	**Pn**	**13 25 47.1**	**+0.6**
HATJ				S	**Sn**	**13 26 10.9**	**-0.4**
IRIF	**Iriomote-Funau**	**2.04**	**56**	P	**Pn**	**13 25 48.4**	**+0.8**
TWY	**Chenhua**	**2.09**	**353**	*e*P	**Pn**	**13 25 52.2**	**+3.8**
	baz=336						
PNG	**Penghu**	**2.17**	**280**	P	**Pn**	**13 25 49.5**	**0.0**
	baz=263						
PNG				*e*S	**Sn**	**13 26 14.1**	**-2.5**
	baz=263						
JKRS	**Kuro-shima**	**2.21**	**61**	P	**Pn**	**13 25 50.9**	**+0.9**
JKRS				S	**Sn**	**13 26 17.9**	**+0.5**
JIJ	**Ishigaki jima**	**2.38**	**60**	P	**Pn**	**13 25 52.6**	**+0.3**
JIJ				S	**Sn**	**13 26 20.3**	**-1.2**
JTJ	**Tarama**	**2.95**	**60**	P	**Pn**	**13 26 01.6**	**+1.4**
JTJ				*e*S	**Sn**	**13 26 35.8**	**0.0**
KNM	**Kinmen**	**3.39**	**292**	*e*P	**Pn**	**13 26 07.5**	**+1.2**
	baz=288						
KNM				*e*S	**Sn**	**13 26 46.7**	**+0.1**
	baz=288						
QZH	**Quanzhou**	**3.48**	**301**	Pn	**Pn**	**13 26 07.3**	**-0.2**
QZH				Sn	**Sn**	**13 26 45.2**	**-3.6**
QZH				smax			
	comp=N,170nm,0.4s						
QZH				smax			
	comp=E,180nm,0.9s						
JOGS	**Gusukube**	**3.58**	**63**	*e*S	**Sn**	**13 26 51.4**	**+0.2**
JOW	**Kunigami**	**6.84**	**57**	Pn	**Pn**	**13 26 51.4**	**-2.2**
	comp=E,1.0nm,0.3s,baz=245,slow=19,SNR=4.7						
JOW				Sn	**Sn**	**13 27 53.2**	**-18**
	comp=E,1.8nm,0.3s,baz=28,slow=26,SNR=2.2						
JOW	**Kunigami**	**6.84**	**57**	Pn	**Pn**	**13 26 51.4**	**-2.2**
JOW				Sn	**Sn**	**13 27 53.2**	**-18**
KSRS	**Korea Array**	**15.14**	**19**	Pn	**Pn**	**13 28 48.9**	**+1.8**
	comp=E,1.0nm,0.3s,baz=198,slow=12,SNR=20						
CHTO	**Chiang Mai**	**21.85**	**263**	P	**P**	**13 30 09.2**	**+3.0**
	comp=E,1.8nm,0.5s,mb3.8						
CMAR	**Chiang Mai Arr**	**21.95**	**262**	P	**P**	**13 30 10.9**	**+3.7**
	comp=E,0.4nm,0.4s,mb3.2,baz=74,slow=6.7,SNR=3.4						
SONM	**Songino Array**	**27.53**	**337**	P	**P**	**13 30 59.7**	**-0.3**
	comp=E,0.2nm,0.5s,mb3.0,baz=147,slow=8.1,SNR=2.5						
MKAR	**Makanchi Array**	**39.50**	**316**	P	**P**	**13 32 44.4**	**+0.4**
	comp=E,0.3nm,0.5s,mb3.3,baz=112,slow=9.5,SNR=3.7						
ZALV	**Zalesovo Beam**	**41.43**	**327**	P	**P**	**13 33 00.9**	**+1.1**
	comp=E,0.6nm,0.3s,mb3.7,baz=122,slow=5.2,SNR=2.9						
ASAR	**Alice Springs**	**48.02**	**165**	P	**P**	**13 33 53.0**	**+0.4**
	comp=E,0.1nm,0.6s,mb3.0,baz=343,slow=7.0,SNR=5.4						
STKA	**Stephens Creek**	**57.91**	**160**	P	**P**	**13 35 04.3**	**-1.2**
	comp=E,0.6nm,0.5s,mb3.9,baz=18,slow=6.4,SNR=2.9						

*ISK **02** 13:30:34.3, 37°.26N×28°.17E, h5km, MD2.8*

*CSEM **02** 13:30:35.8±0.2, 37°.25N×28°.20E, h5km, MD2.8, Error ellipse: s-maj=4.3km s-min=3.0km az=17.0*

*ISCJB **02** 13:30:35.7±0.5, 37°.23N±0°.03×28°.20E±0°.03, h10km, Error ellipse: s-maj=5.1km s-min=3.3km az=26.3*

ISC 02 13:30:36.1±0.5, **37°.25N**±0°.04×**28°.21E**±0°.04, **h4**km±11km, **n24**, σ0°**83**/33, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.13**	**154**	PG	**Pg**	**13 30 37.9**	**-0.8**
YER	**Yerkesik**	**0.13**	**154**	*i* Pg	**Pg**	**13 30 37.9**	**-0.8**
MLSB	**Milas**	**0.35**	**278**	*e*PG	**Pg**	**13 30 42.0**	**-0.9**
MLSB				*e*SG	**Sg**	**13 30 47.4**	**-0.1**
MLSB	**Milas**	**0.35**	**278**	*e*Pg	**Pg**	**13 30 42.0**	**-0.9**
MLSB				*e*Sg	**Sg**	**13 30 47.4**	**-0.1**
AYDN	**Tasoluk**	**0.49**	**327**	*i* P	**Pg**	**13 30 45.0**	**-0.6**
AYDN	**Tasoluk**	**0.49**	**327**	*i* P	**Pg**	**13 30 45.0**	**-0.5**
AYDN				*i* S	**Sg**	**13 30 52.7**	**+0.8**
TURN	**Turunc**	**0.49**	**140**	*i* P	**Pg**	**13 30 40.8**	**-4.8**
TURN	**Turunc**	**0.49**	**140**	*i* S	**Sg**	**13 30 51.2**	**-0.7**
BDRM	**Kayabasi**	**0.64**	**254**	*i* P	**Pg**	**13 30 47.2**	**-1.2**
BDRM	**Kayabasi**	**0.64**	**254**	*i* P	**Pg**	**13 30 47.2**	**-1.2**
BDRM				*i* S	**Sg**	**13 30 57.3**	**+0.6**
DAT	**Datca**	**0.73**	**225**	*e*PG	**Pg**	**13 30 49.3**	**-0.8**
DAT				*e*SG	**Sg**	**13 31 00.2**	**+0.7**
DAT	**Datca**	**0.73**	**225**	*e*Pg	**Pg**	**13 30 49.3**	**-0.8**
DAT				*e*Sg	**Sg**	**13 31 00.2**	**+0.7**
DNZL	**Cakiroluk**	**0.80**	**56**	*i* P	**Pg**	**13 30 51.1**	**-0.4**
DNZL	**Cakiroluk**	**0.80**	**56**	*i* P	**Pg**	**13 30 51.1**	**-0.3**
GCAM	**G?zelcaml?**	**0.90**	**300**	*e*P	**Pg**	**13 30 53.4**	**0.0**
GCAM	**G?zelcaml?**	**0.90**	**300**	*e*P	**Pg**	**13 30 53.4**	**0.0**
GCAM				*e*S	**Sg**	**13 31 06.4**	**+1.3**
FETY	**Fethiye**	**0.93**	**131**	*e*PG	**Pg**	**13 30 54.3**	**+0.3**
FETY				*e*SG	**Sg**	**13 31 08.2**	**+2.2**
FETY	**Fethiye**	**0.93**	**131**	*e*Pg	**Pg**	**13 30 54.3**	**+0.3**
FETY				*e*Sg	**Sg**	**13 31 08.2**	**+2.2**
GLHS	**Glhisar (BURDU**	**1.03**	**95**	*e*PG	**Pg**	**13 30 56.1**	**+0.2**
GLHS	**Glhisar (BURDU**	**1.03**	**95**	*e*Pg	**Pg**	**13 30 56.1**	**+0.2**
KULA	**Kula-Manisa**	**1.31**	**16**	*e*PN	**Pn**	**13 31 00.5**	**-0.7**
KULA	**Kula-Manisa**	**1.31**	**16**	*e*Pn	**Pn**	**13 31 00.5**	**-0.7**
ELL	**Elmali**	**1.45**	**110**	*e*PN	**Pn**	**13 31 03.4**	**+0.4**
ELL	**Elmali**	**1.45**	**110**	*e*Pn	**Pn**	**13 31 03.4**	**+0.4**

*IDC **02** 13:36:19.0±0.6, 9°.81N×125°.62E, h0km, mb4.1/20, mb1 4.2/21, mb1mx4.2/26, mbtmp4.1/21, ML4.5/1, Error ellipse: s-maj=24.6km s-min=10.4km az=77.0*

*MOS **02** 13:36:22.0±1.4, 9°.68N×125°.56E, h33km, mb4.8/11, Error ellipse: s-maj=17.4km s-min=8.4km az=112.0*

*MAN **02** 13:36:23, 9°.57N×125°.20E, h12km, mb4.9, ML3.8, MS3.9*

MAN INTENSITY III - SURIGAO CITY; INTENSITY II - MAINIT SURIGAO DEL NORTE.

*NEIC **02** 13:36:27.0±1.9, 9°.70N×125°.52E, h59km±17km, mb4.5/8, Error ellipse: s-maj=16.0km s-min=8.4km az=59.0*

NEIC Felt [III PIVS] at Surigao and [II PIVS] at Mainit.

ISC 02 13:36:24.4±0.8, **9°.67N**±0°.03×**125°.42E**±0°.05, **h31**km±6km, **n85**, σ1°**34**/87, **mb4.3**/41, **5C-6D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.72**	**164**	*e*P	**Pb**	**13 36 37.3**	**-1.2**
BUTP				*e*S	**Sb**	**13 36 49.6**	**+

comp=Z,5.3nm,0.6s,mb4.3
FITZ Fitzroy Crossi 27.59 180 P **P 13 42 08.0 -1.1**
comp=Z,3.3nm,0.8s,mb4.0,baz=71,slow=20,SNR=7.9
FITZ Fitzroy Crossi 27.59 180 *e*P **P 13 42 08.2 -0.9**
KSRS Korea Array 27.75 4 P **P 13 42 09.2 -1.1**
comp=Z,0.6nm,0.7s,mb3.4,baz=47,slow=22,SNR=3.7
MJAR Matsushiro Arr 29.16 21 P **P 13 42 19.9 -2.9**
comp=Z,0.3nm,0.3s,mb3.4,baz=166,slow=15,SNR=3.3
COEN Coen 29.35 143 *e*P **P 13 42 25.6 +0.9**
COEN Coen 29.35 143 *e*P **P 13 42 25.6 +1.0**
WRAB Tennant Creek 30.70 163 P **P 13 42 34.0 -2.6**
WRAB pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
WRAB Tennant Creek 30.70 163 P **P 13 42 34.0 -2.6**
comp=Z,3.1nm,0.8s,mb4.2
MTSU Mount Surprise 33.33 146 *e*P **P 13 42 59.9 +0.1**
comp=Z,34nm,1.3s,mb5.1
VLA Vladivostok 33.80 9 *d*e**P P 13 43 04.9 +1.4**
VLA pmax pmax
comp=Z,17nm,1.7s,mb4.7
ASAR Alice Springs 34.15 166 P **P 13 43 05.0 -1.8**
comp=Z,0.8nm,0.5s,mb3.9,baz=340,slow=6.9,SNR=20
CTA Charters Tower 35.98 145 P **P 13 43 21.4 -1.2**
comp=Z,1.1nm,0.4s,mb4.2,baz=286,slow=11,SNR=3.5
GTA Gaotai 37.41 327 *e*P **P 13 43 35.4 +0.8**
GTA pmax pmax
comp=Z,3.0nm,0.9s,mb4.1
ASAJ Asahikawa 37.41 20 P **P 13 43 36.8 +2.2**
comp=Z,2.5nm,0.5s,mb4.3,baz=224,slow=24,SNR=5.8
KLR Kul'dur 39.79 6 *e*P **P 13 43 51.0 -3.4**
SONM Songino Array 41.30 341 P **P 13 44 06.5 -0.5**
comp=Z,0.4nm,0.5s,mb3.3,baz=113,slow=26,SNR=2.8
NWAO Narrogin (SRO) 43.07 190 P **P 13 44 22.9 +1.4**
comp=Z,9.8nm,0.9s,mb4.5,baz=20,slow=8.7,SNR=4.7
BBOO Buckleboo 43.44 167 *e*P **P 13 44 24.8 +0.3**
comp=Z,3.4nm,0.4s,mb4.4
STKA Stephens Creek 44.11 160 *e*P **P 13 44 30.3 +0.3**
comp=Z,1.8nm,0.6s,mb4.0
STKA Stephens Creek 44.11 160 P **P 13 44 29.9 -0.1**
comp=Z,1.9nm,0.6s,mb4.0,baz=339,slow=7.7,SNR=8.7
TLY Talaya 45.52 341 *e*P **P 13 44 40.7 -0.2**
TLY pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
PETK Petropavlovsk- 50.53 25 P **P 13 45 21.6 +2.0**
comp=Z,2.3nm,0.6s,mb4.3,baz=188,slow=7.5,SNR=3.5
MK31 Makanchi Array 52.00 323 *e*P **P 13 45 31.1 +0.3**
MKAR Makanchi Array 52.00 323 P **P 13 45 31.2 +0.4**
comp=Z,1.6nm,0.6s,mb4.2,baz=110,slow=8.8,SNR=14
ZALV Zalesovo Beam 54.75 332 P **P 13 45 49.7 -1.2**
comp=Z,0.5nm,0.3s,mb4.0,baz=90,slow=6.1,SNR=3.0
UCH Uchtor 55.01 315 *e*P **P 13 45 54.3 +1.3**
UCH pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
UCH Uchtor 55.01 315 *e*P **P 13 45 54.3 +1.3**
comp=Z,9.0nm,0.9s,mb4.8
AAK Ala-Archa 55.16 316 *c*e**P P 13 45 55.4 +1.3**
AAK pmax pmax
comp=Z,3.0nm,2.5s,mb3.9
EKS2 Erkin-Say 55.67 316 *e*P **P 13 45 58.7 +1.0**
EKS2 pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
EKS2 Erkin-Say 55.67 316 *e*P **P 13 45 58.6 +0.9**
comp=Z,4.0nm,0.9s,mb4.5
KURK Kurchatov 56.09 326 *e*P **P 13 46 00.4 -0.2**
KURK pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
KURK Kurchatov 56.09 326 *e*P **P 13 46 00.4 -0.2**
comp=Z,7.3nm,1.1s,mb4.6
BVAR Borovoye Array 61.69 326 P **P 13 46 39.1 -0.3**
comp=Z,3.0nm,0.9s,mb4.4,baz=99,slow=9.2,SNR=11
BRVK Borovoye 61.76 326 *c*e**P P 13 46 39.6 -0.3**
BRVK pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
BRVK Borovoye 61.76 326 *e*P **P 13 46 39.9 0.0**
comp=Z,3.6nm,0.9s,mb4.5
BILL Bilibino 64.20 16⇑*e*P **P 13 46 55.7 -0.2**
BILL pmax pmax
comp=Z,6.0nm,1.3s,mb4.5
ABKAR Akbulak array 66.79 320 *e*P **P 13 47 12.2 -0.7**
comp=Z,3.6nm,0.8s,mb4.5
RPZ Rata Peaks 67.36 146 P **P 13 47 16.8 +0.2**
comp=Z,4.3nm,0.6s,mb4.7,baz=110,slow=19,SNR=3.8
SVE Sverdlovsk 68.27 328⇑*e*P **P 13 47 21.9 -0.2**
SVE pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
ARU Arti 69.27 327 *d*i P **P 13 47 27.5 -0.9**
ARU *e* 13 49 58.2
ARU S S 13 56 34.0 +1.4
ARU SS SS 14 01 05.9 +6.5
ARU pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
ARU Arti 69.27 327 *e*P **P 13 47 26.7 -1.6**
comp=Z,2.7nm,0.4s,mb4.5
BPAW Bear Paw Mtn. 78.57 26 *e*P **P 13 48 22.5 -0.2**
comp=Z,4.9nm,0.9s,mb4.4
JOF Joensuu 83.34 333 *e*P **P 13 48 46.8 -1.3**
JOF pmax pmax
comp=Z,5.0nm,0.5s,mb4.8
JOF Joensuu 83.34 333 *e*p **P 13 48 46.8 -1.3**
comp=Z,5.3nm,0.5s,mb4.8
JOF Joensuu 83.34 333 *e*p **P 13 48 46.8 -1.3**
comp=Z,5.3nm,0.5s,mb4.8
ARCES ARCESS Array B 84.46 340 P **P 13 48 51.4 -2.3**
comp=Z,3.6nm,0.7s,mb4.6,baz=84,slow=6.2,SNR=12
BRTR Keskin Array B 85.27 309 P **P 13 49 00.3 +1.9**
comp=Z,0.7nm,0.8s,mb3.9,baz=101,slow=6.4,SNR=4.5
FINES FINESS Array B 86.02 332 P **P 13 49 00.7 -0.9**
comp=Z,3.0nm,0.5s,mb4.8,baz=67,slow=4.7,SNR=14
AKASG Malin Array Be 86.50 321 P **P 13 49 02.7 -1.6**
comp=Z,0.2nm,0.3s,mb3.8,baz=66,slow=4.4,SNR=7.3
AKASG Malin Array Be 86.50 321 *c*e**P P 13 49 03.2 -1.1**
NOA NORSAR Array B 92.92 334 P **P 13 49 32.1 -2.2**
comp=Z,0.4nm,0.5s,mb4.1,baz=59,slow=1.9,SNR=3.4
YKA Yellowknife Ar 94.64 24 P **P 13 49 41.4 -0.7**
comp=Z,0.7nm,0.6s,mb4.2,baz=298,slow=4.4,SNR=4.4
ESK Eskdalemuir 102.41 333 *e*P Pdif 13 50 14.2 -3.0
ESK pmax pmax
comp=Z,24nm,1.0s
ESK Eskdalemuir 102.41 333 *e*P Pdif 13 50 14.2 -3.0
comp=Z,24nm,1.0s
PLCA Paso Flores 145.98 158 PKPbc PKPbc 13 56 02.2 +0.9
comp=Z,0.8nm,0.6s,baz=133,slow=1.7,SNR=4.7
PLCA Paso Flores 145.98 158 PKPbc PKPbc 13 56 02.2 +0.9

ISK ***02*** *13:48:18.5,36°.97N×27°.80E,h6km,MD2.8*
CSEM ***02*** *13:48:19.6±0.5,36°.97N×27°.80E,h15km,MD2.8, Error ellipse: s-maj=12.3km s-min=7.0km az=11.0*
DDA ***02*** *13:48:25.0,37°.24N×28°.21E,h7km±3km,Md2.8*
ISC 02 13:48:19.7±0.8,36°.99N±0°.06×27°.81E±0°.04,h9km±10km, n17,σ1§01/28,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.30**	**285**	*i* P	**Pg**	**13 48 37.1**	**+11**
BDRM				*i* S	**Sg**	**13 48 47.0**	**+17**
YER	**Yerkesik**	**0.41**	**69**	*e*PG	**Pg**	**13 48 27.3**	**-0.3**
YER				*e*SG	**Sg**	**13 48 33.6**	**+0.7**
YER	**Yerkesik**	**0.41**	**69**	*e*Pg	**Pg**	**13 48 27.3**	**-0.3**
YER				*e*Sg	**Sg**	**13 48 33.6**	**+0.7**
BODT	**Bodrum**	**0.41**	**280**	*e*PG	**Pg**	**13 48 27.2**	**-0.4**
BODT				*e*SG	**Sg**	**13 48 32.6**	**-0.3**
BODT	**Bodrum**	**0.41**	**280**	*e*Pg	**Pg**	**13 48 27.2**	**-0.4**
BODT				*e*Sg	**Sg**	**13 48 32.7**	**-0.3**
TURN	**Turunc**	**0.65**	**100**	*i* P	**Pg**	**13 48 33.0**	**+0.9**
TURN				*i* S	**Sg**	**13 48 41.4**	**+0.9**
TURN	**Turunc**	**0.65**	**100**	*i* P	**Pg**	**13 48 33.0**	**+0.9**
TURN				*i* S	**Sg**	**13 48 41.4**	**+0.9**
AYDN	**Tasoluk**	**0.67**	**5**	*i* P	**Pg**	**13 48 34.6**	**+1.9**
AYDN				*i* S	**Sg**	**13 48 41.9**	**+0.4**
AYDN	**Tasoluk**	**0.67**	**5**	*i* P	**Pg**	**13 48 34.6**	**+2.0**
AYDN				*i* S	**Sg**	**13 48 41.9**	**+0.5**
DNZL	**Cakiroluk**	**1.21**	**54**	*i* P	**Pg**	**13 48 40.7**	**-2.1**
DNZL				*i* S	**Sg**	**13 48 57.0**	**-1.6**
DNZL	**Cakiroluk**	**1.21**	**54**	*i* P	**Pg**	**13 48 40.7**	**-2.1**
DNZL				*i* S	**Sg**	**13 48 57.0**	**-1.5**
GLHS	**Glhisar (BURDU**	**1.36**	**82**	*e*PN	**Pg**	**13 48 44.9**	**-0.9**
GLHS	**Glhisar (BURDU**	**1.36**	**82**	*e*Pn	**Pg**	**13 48 44.9**	**-0.8**
KULA	**Kula-Manisa**	**1.67**	**24**	*e*PN	**Pn**	**13 48 49.6**	**+0.6**
KULA	**Kula-Manisa**	**1.67**	**24**	*e*Pn	**Pn**	**13 48 49.6**	**+0.6**
ELL	**Elmali**	**1.70**	**98**	*e*PN	**Pn**	**13 48 49.4**	**-0.1**
ELL	**Elmali**	**1.70**	**98**	*e*Pn	**Pn**	**13 48 49.4**	**-0.1**

LDG ***02*** *13:57:19.8±0.1,39°.38N×75°.00E,h10km,Mb4.5/10, Ms3.2/6, Error ellipse: s-maj=10.4km s-min=3.9km az=50.0*
NEIC ***02*** *13:57:22.8±0.2,39°.24N×75°.00E,mb4.5/23, Error ellipse: s-maj=6.4km s-min=4.1km az=52.0*
IDC ***02*** *13:57:23.3±0.6,39°.41N×74°.96E,h16km±3km, mb4.2/21, mb1 4.2/27,mb1mx4.1/34,mbtmp4.1/27,ML3.3/6,MS3.3/10, Ms1 3.3/10,ms1mx3.0/37, Error ellipse: s-maj=11.3km s-min=10.5km az=137.0*
MOS ***02*** *13:57:23.7±1.1,39°.29N×75°.01E,h33km,mb4.5/22, Error ellipse: s-maj=9.5km s-min=5.8km az=103.7*
BJI ***02*** *13:57:23.6,39°.61N×75°.13E,h15km,mB4.6/19,mb4.5/29, ML4.1/6,Ms4.0/21,Ms7 3.9/21*
NNC ***02*** *13:57:29.3±4.9,39°.86N×74°.79E,h15km±22km,mb4.4, mpv4.2, Error ellipse: s-maj=36.5km s-min=18.4km az=8.0*
ISC 02 13:57:22.0±0.8,39°.45N±0°.02×74°.96E±0°.03,h3km±5km, h17km±1.0km:pP-P,n188,σ1§40/205,mb4.4/54,MS3.6/16, 24C-11D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.79**	**84**	⇓*i*Pg	**Pg**	**13 57 34.5**	**-2.6**
KSH				Sg	**Sg**	**13 57 43.7**	**-3.6**
KSH				smax			
	comp=N,14μm,0.8s						
KSH				smax			
	comp=E,8μm,0.6s						
KZA	**Kyzart**	**2.64**	**5**	P	**Pn**	**13 58 08.6**	**+3.1**
	SNR=134						
UCH	**Uchtor**	**2.80**	**353**	P	**Pn**	**13 58 11.2**	**+3.4**
	SNR=331						
UCH	**Uchtor**	**2.80**	**353**	*e*Pn	**Pn**	**13 58 11.3**	**+3.5**
UCH				*e*S	**Sg**	**13 58 52.5**	**+0.5**
AML	**Almayashu**	**2.85**	**341**	P	**Pn**	**13 58 12.0**	**+3.6**
	SNR=54						
AML	**Almayashu**	**2.85**	**341**	*e*Pn	**Pn**	**13 58 12.1**	**+3.6**
AAK	**Ala-Archa**	**3.20**	**354**	P	**Pn**	**13 58 17.0**	**+3.7**
	SNR=47						
AAK	**Ala-Archa**	**3.20**	**354**	Pn	**Pn**	**13 58 16.9**	**+3.6**
	comp=E,0.2nm,0.3s,baz=153,slow=5.1,SNR=62						
AAK				Lg		13 59 04.0	
	comp=E,0.4nm,0.3s,baz=53,slow=19,SNR=7.7						
AAK				LR	LR	13 59 49.4	
	comp=E,496nm,20.6s,baz=168,slow=45						
AAK	**Ala-Archa**	**3.20**	**354**	*c*ePN	**Pn**	**13 58 16.6**	**+3.3**
AAK				pmax	pmax		
	comp=Z,45nm,0.7s						
AAK	**Ala-Archa**	**3.20**	**354**	*e*Pn	**Pn**	**13 58 15.9**	**+2.7**
AAK				*e*S	**Sg**	**13 59 03.8**	**-1.1**
KBK	**Karagaybulak**	**3.21**	**360**	P	**Pn**	**13 58 17.4**	**+4.1**
	SNR=67						
EKS2	**Erkin-Say**	**3.33**	**345**	P	**Pn**	**13 58 19.2**	**+4.2**
	SNR=40						
EKS2	**Erkin-Say**	**3.33**	**345**	*e*Pn	**Pn**	**13 58 19.1**	**+4.1**
TKM2	**Tokmak 2**	**3.50**	**8**	⇑Pn	**Pn**	**13 58 21.1**	**+3.7**
	comp=Z,206nm,0.7s						
TKM2				⇓Lg		13 59 03.6	
	comp=Z,270nm,0.7s						
TKM2	**Tokmak 2**	**3.50**	**8**	P	**Pn**	**13 58 21.8**	**+4.4**
	SNR=124						
TKM2	**Tokmak 2**	**3.50**	**8**	*e*Pn	**Pn**	**13 58 20.9**	**+3.4**
TKM2				*e*S	**Sn**	**13 59 03.4**	**+4.0**
CHMS	**Chumysh**	**3.55**	**358**	P	**Pn**	**13 58 21.6**	**+3.6**
	SNR=22						
USP	**Ospenovka**	**3.83**	**355**	P	**Pn**	**13 58 25.5**	**+3.6**
	SNR=15						
KNDC	**Almaty**	**4.06**	**21**	⇑Pn	**Pn**	**13 58 29.0**	**+4.0**
KNDC				⇑Lg		13 59 30.4	
AAA	**Alma-Ata**	**4.10**	**21**	*i* PN	**Pn**	**13 58 30.8**	**+5.2**
AAA				*e*S	**Sg**	**13 59 30.8**	**-3.0**
AAA				pmax	pmax		
	comp=Z,55nm,0.2s						
AAA				smax			
	comp=N,736nm,1.0s						
KK31	**Karatay Array**	**4.96**	**319**	⇑Pn	**Pn**	**13 58 39.9**	**+2.5**
	comp=N,5.3nm,0.3s,baz=127,slow=14,SNR=448						
KK31				Pg	**Pg**	**13 58 52.2**	**-4.8**
	comp=N,103nm,0.8s,baz=137,slow=15,SNR=54						
KK31				⇓Sn	**Sn**	**13 59 36.6**	**+1.4**
	comp=N,74nm,0.6s,baz=40,slow=91,SNR=5.2						
KK31				⇓Lg		13 59 58.6	
	comp=N,99nm,0.6s,baz=130,slow=28,SNR=6.5						
CEP	**Cherat**	**6.12**	**205**	P	**Pn**	**13 58 59.1**	**+5.7**
CEP				S	**Sn**	**14 00 09.0**	**+5.0**
KBL	**Kabul**	**6.81**	**226**	*e*PN	**Pn**	**13 59 08.6**	**+5.8**
KBL				pmax	pmax		
	comp=Z,32nm,0.7s						
KBL	**Kabul**	**6.81**	**226**	*e*Pn	**Pn**	**13 59 08.6**	**+5.8**
	comp=Z,32nm,0.7s						
THN	**Thein Dam**	**7.02**	**175**	*ex*	**Pn**	**13 59 09.0**	**+3.2**
THN				*ex*	x	14 00 25.6	
SARP	**Sargodha**	**7.74**	**195**	P	**Pn**	**13 59 19.5**	**+4.0**
SDNR	**Sundarnagar**	**8.10**	**168**	*e*PKP	**Pn**	**13 59 23.5**	**+3.0**
SDNR				*ex*	x	14 00 51.1	
BHK	**Bhakra**	**8.10**	**171**	*ex*	**Sn**	**14 00 55.0**	**+2.4**
KLP	**Kalpa**	**8.34**	**160**	*e*PKP	**Pn**	**13 59 26.2**	**+2.5**
KLP				*ex*	x	14 01 00.7	
KLP				AML	AML	14 01 07.1	
	comp=E,328nm,0.6s						
KLP				AML	AML	14 01 07.2	
	comp=N,297nm,0.8s						
MK31	**Makanchi Array**	**9.09**	**34**	⇓Pn	**Pn**	**13 59 36.1**	**+2.1**
	comp=N,2.5nm,0.7s,baz=201,slow=40,SNR=24						
MK31				⇓Lg		14 02 09.2	
	comp=N,16nm,0.9s,baz=215,slow=30,SNR=4.0						
MK31	**Makanchi Array**	**9.09**	**34**	*e*Pn	**Pn**	**13 59 35.9**	**+1.9**
MKAR	**Makanchi Array**	**9.09**	**34**	Pn	**Pn**	**13 59 34.6**	**+0.5**
	comp=N,0.1nm,0.3s,baz=212,slow=11,SNR=13						
MKAR				Lg		14 02 08.7	
	comp=N,0.2nm,0.3s,baz=215,slow=30,SNR=2.9						
DDI	**Dehra Dun**	**9.45**	**163**	*e*PKP	**Pn**	**13 59 40.2**	**+1.2**
DDI				*ex*	x	14 01 28.2	
KKR	**Kurukshetra**	**9.58**	**170**	*ex*	**Sn**	**14 01 24.4**	**-4.8**
JOSI	**Joshimath**	**9.63**	**156**	*e*PKP	**Pn**	**13 59 45.3**	**+3.7**
JOSI				*e*S	**Sn**	**14 01 28.3**	**-2.0**
JOSI				AML	AML	14 01 36.6	
	comp=E,509nm,0.9s						
JOSI				AML	AML	14 01 37.2	
	comp=N,301nm,0.8s						
WMQ	**Urumqi**	**10.48**	**61**	P	**Pn**	**13 59 55.0**	**+1.8**
WMQ				S	**Sn**	**14 01 53.0**	**+1.9**
WMQ				pmax	pmax		
	comp=Z,35nm,0.7s						
WMQ				LR	LR		
	comp=N,180nm,8.0s						
WMQ				LR	LR		
	comp=E,92nm,6.0s						
WMQ				LR	LR		
	comp=Z,130nm,6.0s						
PTH	**Pithoragarh**	**10.78**	**155**	*ex*	**Sn**	**14 02 03.8**	**+5.4**
NDI	**New Delhi**	**10.90**	**169**	*e*PKP	**Pn**	**13 59 59.0**	**+0.1**
NDI				*ex*	x	14 01 55.0	
AYAN	**Aya Nagar**	**11.08**	**170**	*e*PKP	**Pn**	**14 00 01.9**	**+0.5**
AYAN				*e*S	**Sn**	**14 01 59.4**	**-6.5**
SONA	**Sohna**	**11.30**	**170**	*e*PKP	**Pn**	**14 00 04.9**	**+0.4**
SONA				*e*S	**Sn**	**14 02 05.5**	**-5.8**
SONA				*e*S	**Sn**	**14 02 06.0**	**-5.4**
SONA				AML	AML	14 02 09.6	
	comp=E,73nm,0.4s						
KHET	**Khetri**	**11.36**	**176**	*e*PKP	**Pn**	**14 00 05.9**	**+0.6**
KHET				*e*S	**Sn**	**14 02 04.1**	**-8.7**
KURK	**Kurchatov**	**11.56**	**12**	⇑Pn	**Pn**	**14 00 11.4**	**+3.5**
	comp=E,4.2nm,0.8s						
KURK				⇑Lg		14 03 23.5	
	comp=E,177nm,1.4s						
KURK	**Kurchatov**	**11.56**	**12**	Pn	**Pn**	**14 00 07.1**	**-0.8**
	comp=E,0.1nm,0.3s,baz=202,slow=12,SNR=13						
KURK				Lg		14 03 18.6	
	comp=E,0.1nm,0.3s,baz=202,slow=3.0,SNR=4.6						
KURK				LR	LR	14 04 46.7	
	comp=E,144nm,20.5s,baz=190,slow=39						
KURK	**Kurchatov**	**11.56**	**12**	*e*P	**Pn**	**14 00 09.8**	**+1.9**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KURK	**Kurchatov**	**11.56**	**12**	*e*Pn	**Pn**	**14 00 09.8**	**+2.0**
	comp=Z,1.6nm,0.6s						
AGRA	**Agra**	**12.43**	**168**	*ex*	**Pn**	**14 00 19.7**	**-0.2**
AGRA				*e*S	**Sn**	**14 02 30.3**	**-8.7**
AGRA				AML	AML	14 02 34.0	
	comp=N,45nm,0.2s						
AGRA				AML	AML	14 02 35.2	
	comp=E,79nm,0.3s						
AJM	**Ajmer**	**12.93**	**181**	*e*PKP	**Pn**	**14 00 27.0**	**+0.2**
AJM				*ex*	x	14 02 44.0	

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JASL	**Jaisalmer**	**12.94**	**196**	*e*PKP	**Pn**	**14 00 26.9**	**+0.1**
VOSK	**Vostochnaya**	**13.56**	**350**	⇓Pn	**Pn**	**14 00 39.9**	**+4.7**
	comp=E,8.9nm,0.9s						
VOSK				⇑Lg		14 04 26.6	
	comp=E,70nm,1.1s						
BVA0	**Borovoye Array**	**13.94**	**348**	⇓Pn	**Pn**	**14 00 45.4**	**+5.1**
	comp=E,3.1nm,0.9s,baz=156,slow=13,SNR=50						
BVA0				⇑Lg		14 04 35.3	
	comp=E,7.3nm,1.1s,baz=161,slow=26,SNR=4.2						
BVAR	**Borovoye Array**	**13.94**	**348**	Pn	**Pn**	**14 00 38.4**	**-2.0**
	comp=E,0.2nm,0.3s,baz=151,slow=13,SNR=5.6						
BVAR				Lg		14 04 35.1	
	comp=E,0.3nm,0.3s,baz=155,slow=25,SNR=4.0						
BRVK	**Borovoye**	**13.99**	**348**	*c*e**P**	**Pn**	**14 00 45.9**	**+4.9**
BRVK				pmax	pmax		
	comp=Z,14nm,0.8s						
BRVK	**Borovoye**	**13.99**	**348**	*e*Pn	**Pn**	**14 00 44.1**	**+3.0**
	comp=Z,27nm,0.8s						
BRVK				*e*		14 00 50.2	
ZRNK	**Zerenda**	**14.12**	**345**	⇑Pn	**Pn**	**14 00 42.6**	**-0.1**
	comp=Z,3.7nm,0.8s						
ZRNK				⇑Lg		14 04 43.7	
	comp=Z,59nm,1.8s						
KKN	**Kakani**	**14.44**	**140**	*e*P	**Pn**	**14 00 44.3**	**-3.1**
	comp=Z,26nm,0.6s						
KKN	**Kakani**	**14.44**	**140**	*e*P	**Pn**	**14 00 44.3**	**-3.1**
KKN				pmax	pmax		
	comp=Z,26nm,0.6s						
DMN	**Daman**	**14.51**	**141**	*e*P	**Pn**	**14 00 45.4**	**-2.9**
	comp=Z,18nm,0.5s						
AB31	**Akbulak array**	**14.52**	**317**	Pn	**Pn**	**14 00 47.6**	**-0.7**
	comp=Z,12nm,0.7s,baz=130,slow=12,SNR=177						
AB31				⇑Sn	**Sn**	**14 03 21.5**	**-8.3**
	comp=Z,16nm,1.2s,baz=138,slow=22,SNR=7.6						
ABKAR	**Akbulak array**	**14.52**	**317**	*e*Pn	**Pn**	**14 00 47.5**	**-0.8**
	comp=Z,15nm,0.7s						
ABKAR				*e*Sn	**Sn**	**14 03 20.7**	**-9.0**
GUN	**Gumba**	**14.65**	**138**	*e*P	**Pn**	**14 00 47.1**	**-3.0**
	comp=Z,53nm,0.8s						
PKIN	**Phulchoki**	**14.68**	**141**	*e*P	**Pn**	**14 00 48.0**	**-2.6**
PKI	**Pulchoki**	**14.69**	**141**	*e*P	**Pn**	**14 00 47.9**	**-2.8**
	comp=Z,33nm,0.6s						
PKI	**Pulchoki**	**14.69**	**141**	*e*P	**Pn**	**14 00 48.0**	**-2.7**
JIRN	**Jiri**	**15.01**	**138**	*e*P	**Pn**	**14 00 52.4**	**-2.7**
RAMN	**Ramite**	**15.80**	**139**	*e*P	**Pn**	**14 01 01.0**	**-4.5**
	comp=Z,164nm,0.9s						
ZALV	**Zalesovo Beam**	**15.98**	**22**	Pn	**Pn**	**14 01 07.0**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=207,slow=11,SNR=2.5						
ZALV				LR	LR	14 07 53.6	
	comp=Z,25nm,19.8s,baz=310,slow=39						
TAPN	**Taplejung**	**16.07**	**135**	*e*P	**Pn**	**14 01 04.9**	**-4.0**
	comp=Z,27nm,0.6s						
AKTK	**Aktyubinsk**	**16.23**	**318**	Pn	**Pn**	**14 01 09.0**	**-1.8**
AKTK				LR	LR	14 07 57.0	
AKTO	**Aktyubinsk**	**16.23**	**318**	⇓Pn	**Pn**	**14 01 11.4**	**+0.6**
	comp=Z,3.7nm,1.1s						
AKTO				⇑Sn	**Sn**	**14 04 03.8**	**-7.4**
	comp=Z,2.8nm,1.4s						
AKTO	**Aktyubinsk**	**16.23**	**318**	Pn	**Pn**	**14 01 09.0**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=130,slow=13,SNR=6.8						
AKTO				LR	LR	14 07 57.0	
	comp=Z,115nm,21.8s,baz=204,slow=39						
ODAN	**Odare**	**16.28**	**137**	*e*P	**Pn**	**14 01 07.6**	**-4.1**
	comp=Z,57nm,0.5s						
NVS	**Novosibirsk**	**16.38**	**17**	*e*P	**Pn**	**14 01 14.2**	**+1.4**
LSA	**Lhasa**	**16.48**	**121**	*e*P	**Pn**	**14 01 17.0**	**+2.8**
LSA	**Lhasa**	**16.48**	**121**	*e*P	**Pn**	**14 01 16.7**	**+2.5**
LSA				pmax	pmax		
	comp=Z,14nm,0.9s						
LSA	**Lhasa**	**16.48**	**121**	*e*P	**Pn**	**14 01 16.7**	**+2.5**
	comp=Z,14nm,0.9s						
GTA	**Gaotai**	**19.19**	**82**	P	**Pn**	**14 01 48.0**	**+0.3**
GTA				pP	pP	14 01 52.0	+4.4
GTA				sP	sP	14 01 55.1	+7.2
GTA				S	**Sn**	**14 05 23.5**	**+0.4**
GTA				sS	sS	14 05 28.6	+2.6
GTA				pmax	pmax		
	comp=Z,3.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,120nm,6.0s						
GTA				LR	LR		
	comp=N,170nm,13.5s						
GTA				LR	LR		
	comp=E,170nm,14.1s						
GTA				LR	LR		
	comp=Z,160nm,13.2s						
SVE	**Sverdlovsk**	**19.77**	**336**	*e*P	**Pn**	**14 01 58.4**	**+3.9**
SVE				pmax	pmax		
	comp=Z,12nm,0.9s						
ARU	**Arti**	**20.14**	**333**	*d i*P	**P**	**14 02 01.5**	**+4.4**
ARU				pmax	pmax		
	comp=Z,14nm,0.8s						
ARU	**Arti**	**20.14**	**333**	*e*P	**P**	**14 01 59.2**	**+2.1**
	comp=Z,13nm,0.8s						
HYB	**Hyderabad**	**22.17**	**171**	*e*P	**P**	**14 02 20.5**	**+1.3**
HYB	**Hyderabad**	**22.17**	**171**	*i* P	**P**	**14 02 15.0**	**-4.2**
ZAK	**Zakamensk**	**22.70**	**52**	*e*P	**P**	**14 02 23.9**	**-0.8**
LZH	**Lanzhou**	**23.04**	**89**	P	**P**	**14 02 31.2**	**+2.9**
LZH				pP		14 02 35.2	
LZH				PP		14 03 00.9	
LZH				*e*S	**S**	**14 06 34.0**	**-5.8**
LZH				sS	sS	14 06 43.2	+2.1
LZH				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.4						
LZH				pmax	pmax		
	comp=Z,70nm,4.0s						
LZH				LR	LR		
	comp=E,390nm,11.0s						
LZH				LR	LR		
	comp=Z,560nm,13.3s,MS4.2						
GNI	**Garni**	**23.18**	**281**	*e*P	**P**	**14 02 32.0**	**+2.2**
GNI				pmax	pmax		
	comp=Z,21nm,0.9s						
GNI	**Garni**	**23.18**	**281**	*e*P	**P**	**14 02 32.0**	**+2.2**
	comp=Z,21nm,0.9s,mb4.6						
TLY	**Talaya**	**23.35**	**49**	*e*P	**P**	**14 02 39.1**	**+7.6**
TLY				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.0						
SONM	**Songino Array**	**24.11**	**59**	P	**P**	**14 02 39.4**	**+0.6**
	comp=Z,2.1nm,1.0s,mb3

HHC sS sS 14 08 02.8 +4.3
HHC SS 14 09 16.1
HHC ScP ScP 14 10 08.6 -1.7
HHC PcS PcS 14 10 10.5 -0.1
HHC ScS ScS 14 13 58.8 -3.7
HHC pmax pmax
comp=Z,7.0nm,0.8s,mb4.3
HHC pmax pmax
comp=Z,31nm,5.9s
HHC LR LR
comp=N,77nm,17.8s,MS3.7
HHC LR LR
comp=E,160nm,17.8s,MS3.7
HHC LR LR
comp=Z,130nm,17.8s,MS3.6
ANN Anapa 28.17 293 *e*P pP 14 03 26.0 +10
ANN pmax pmax
comp=Z,57nm,1.5s,mb5.0
GYA Guiyang 29.43 106 P **P** **14 03 27.0 +0.1**
GYA PP PP 14 04 23.4 -10
GYA PcP PcP 14 06 34.2 +1.4
GYA S **S** **14 08 20.9 -0.7**
GYA SS SS 14 09 52.8 -33
GYA ScP ScP 14 10 15.2 -0.2
GYA ScS ScS 14 14 06.5 -3.5
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
CMAR Chiang Mai Arr 29.46 128 P **P** **14 03 27.3 +0.1**
comp=Z,0.2nm,0.3s,mb3.3,baz=75,slow=7.6,SNR=3.1
CMAR PcP PcP 14 06 32.7 -0.2
comp=Z,1.1nm,0.8s,baz=296,slow=4.3,SNR=5.1
OBN Obninsk 29.93 314⇑ *e*P **P** **14 03 32.7 +1.6**
OBN pmax pmax
comp=Z,9.0nm,0.5s,mb4.8
OBN MLR MLR
comp=Z,100nm,15.0s,MS3.6
BJI Beijing 31.50 76 P **P** **14 03 45.7 +0.7**
BJI S **S** **14 08 54.4 +0.6**
BJI pmax pmax
comp=Z,11nm,0.6s,mb4.9
BJI pmax pmax
comp=Z,81nm,4.6s
BJI LR LR
comp=N,200nm,14.9s,MS4.0
BJI LR LR
comp=E,160nm,14.7s,MS4.0
BJI LR LR
comp=Z,48nm,18.7s,MS3.2
BRTR Keskin Array B 31.65 284 P **P** **14 03 47.5 +1.1**
comp=Z,5.2nm,0.7s,mb4.5,baz=95,slow=8.4,SNR=24
BRTR pP pP 14 03 51.8 +4.6
comp=Z,7.9nm,0.7s,baz=93,slow=7.9,SNR=23
AKASG Malin Array Be 33.69 305 P **P** **14 04 03.6 -0.5**
comp=Z,1.3nm,0.5s,mb4.1,baz=81,slow=7.7,SNR=9.0
AKASG pP pP 14 04 08.0 +3.1
comp=Z,4.6nm,0.6s,baz=79,slow=8.0,SNR=5.6
AKASG Malin Array Be 33.69 305 *c*e**P** **P** **14 04 02.7 -1.4**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKASG Malin Array Be 33.69 305 P **P** **14 04 03.6 -0.5**
AKASG pP pP 14 04 08.0 +3.1
AKBB Malin Array Si 33.69 305 *e*P **P** **14 04 03.7 -0.5**
AKBB *e* 14 04 08.2
VSU Vasula 35.96 318 *d*e**P** **P** **14 04 24.8 +1.2**
VSU pmax pmax
comp=Z,20nm,1.2s,mb4.9
NJ2 Nanjing 36.10 88 *e*P **P** **14 04 28.0 +2.9**
NJ2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
QIZ Qiongzhong 36.29 114 P **P** **14 04 26.9 0.0**
QIZ S **S** **14 10 08.6 +0.2**
QIZ pmax pmax
comp=Z,21nm,1.8s,mb4.8
QIZ LR LR
comp=Z,240nm,12.7s,MS4.2
BUR08 Bucovina Ar. S 36.45 300 *e*P **P** **14 04 27.8 -0.1**
FINES FINESS Array B 36.91 323 P **P** **14 04 31.2 -0.4**
comp=Z,1.5nm,0.5s,mb4.1,baz=114,slow=9.4,SNR=7.6
FINES pP pP 14 04 36.2 +3.7
comp=Z,5.3nm,0.7s,baz=113,slow=10,SNR=5.2
FINES LR LR 14 20 45.4
comp=Z,58nm,18.3s,MS3.4,baz=64,slow=38
FINES FINESS Array B 36.91 323 P **P** **14 04 31.2 -0.4**
FINES pP pP 14 04 36.2 +3.7
FINES LR LR 14 20 45.4
CN2 Changchun 37.52 67 *e*P **P** **14 04 39.3 +2.2**
CN2 *es*P sP 14 04 46.5 +8.3
CN2 *e*S **S** **14 10 28.2 +1.6**
CN2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.8
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,10.0s,MS4.4
CN2 LR LR
comp=E,200nm,10.0s,MS4.4
CN2 LR LR
comp=Z,200nm,11.0s,MS4.2
KOLS Kolonicke sedl 38.26 302 *e*P **P** **14 04 48.2 +4.9**
KOLS pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
KOLS Kolonicke sedl 38.26 302 *e*P **P** **14 04 48.2 +4.9**
comp=Z,2.0nm,0.8s,mb3.9
STHS Stebnicka Huta 38.88 303 *e*P **P** **14 04 53.2 +4.7**
STHS pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
STHS Stebnicka Huta 38.88 303 *e*P **P** **14 04 53.2 +4.7**
comp=Z,2.8nm,0.7s,mb4.1
KECS Kecovo 39.49 302 *e*P **P** **14 04 59.4 +5.8**
KECS pmax pmax
comp=Z,2.0nm,0.9s,mb3.9
KECS Kecovo 39.49 302 *e*P **P** **14 04 59.4 +5.8**
comp=Z,2.3nm,0.9s,mb3.9
KECS Kecovo 39.49 302 *e*P **P** **14 04 59.4 +5.8**
ARCES ARCESS Array B 39.70 335 P **P** **14 04 55.5 +0.3**
comp=Z,3.9nm,1.0s,mb4.1,baz=106,slow=8.8,SNR=5.5
VYHS Vyhne 40.57 302 *e*P **P** **14 05 08.1 +5.5**
VYHS pmax pmax
comp=Z,2.0nm,0.8s,mb3.8
VYHS Vyhne 40.57 302 *e*P **P** **14 05 08.1 +5.5**
comp=Z,1.7nm,0.8s,mb3.7
KSRS Korea Array 41.03 75 P **P** **14 05 05.5 -1.0**
comp=Z,1.9nm,0.8s,mb3.8,baz=289,slow=7.7,SNR=5.0
KSRS LR LR 14 24 29.2
comp=Z,54nm,19.9s,MS3.4,baz=206,slow=40
KSRS Korea Array 41.03 75 P **P** **14 05 05.6 -0.9**
KSRS pmax pmax
comp=Z,2.0nm,0.8s,mb3.8
KSRS MLR MLR
comp=Z,54nm,19.9s,MS3.4
TIXI Tiksi 41.87 23 *e*P **P** **14 05 11.8 -1.2**
TIXI *e* 14 05 17.0
TIXI pmax pmax
comp=Z,8.0nm,0.9s,mb4.3
TIXI Tiksi 41.87 23 *e*P **P** **14 05 11.8 -1.1**
comp=Z,8.5nm,0.9s,mb4.4
TIXI *e* 14 05 17.0
CONA Conrad Observa 42.63 302⇑ *i*pP pP 14 05 24.9 +4.6
comp=Z,7.9nm,0.8s
CSNA Conrad Observa 42.63 302⇑ *i*pP pP 14 05 25.0 +4.7
comp=Z,9.9nm,1.0s
ARSA Arzberg 42.99 301⇑ *i*pP pP 14 05 27.5 +4.2
comp=Z,5.1nm,0.7s
SOKA Soboth 43.44 300⇑ *i*pP pP 14 05 31.3 +4.4
comp=Z,9.6nm,1.0s
MOA Moln 43.70 302⇑ *i*pP pP 14 05 33.0 +4.1
comp=Z,3.9nm,0.7s
OBKA Obir 43.81 300⇑ *i*pP pP 14 05 34.5 +4.6
comp=Z,6.5nm,0.7s
CLL Collm 43.85 307 *e*P **P** **14 05 31.0 +1.7**
CLL pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
GEC2 GERESS Array 5 43.86 303 *e*P **P** **14 05 29.6 +0.2**
comp=Z,1μm,0.8s
GEC2 *e* 14 05 34.6
GERES GERESS Array B 43.86 303 P **P** **14 05 30.2 +0.8**
comp=Z,3.9nm,0.8s,mb4.2,baz=60,slow=7.9,SNR=12
GERES pP pP 14 05 35.3 +5.0
comp=Z,4.2nm,0.6s,baz=70,slow=7.7,SNR=13
GERES LR LR 14 27 14.7
comp=Z,40nm,18.9s,MS3.4,baz=78,slow=41
GERES GERESS Array B 43.86 303 P **P** **14 05 30.2 +0.8**
GERES *PP pP 14 05 35.3 +5.0
KHC Kasperske Hory 43.88 304 *e*P **P** **14 05 29.9 +0.3**
KHC pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
KHC Kasperske Hory 43.88 304 *e*P **P** **14 05 29.9 +0.3**
comp=Z,1.7nm,0.6s,mb4.0
KHC *e* 14 05 34.8
KHC Kasperske Hory 43.88 304 *e*P **P** **14 05 30.0 +0.4**
KHC *e*pP pP 14 05 34.5 +4.1
NB2 NORSAR Subarra 43.99 321 P **P** **14 05 29.6 -0.7**
comp=Z,6.4nm,0.6s,mb4.5,baz=90,slow=8.6
NOA NORSAR Array B 43.99 321 P **P** **14 05 29.7 -0.5**
comp=Z,7.1nm,0.7s,mb4.5,baz=90,slow=8.0,SNR=10
NOA pP pP 14 05 34.4 +3.3
comp=Z,7.4nm,0.8s,baz=90,slow=8.0,SNR=17
NOA LR LR 14 24 54.3
comp=Z,42nm,19.6s,MS3.4,baz=90,slow=38
JOW Kunigami 45.78 89 P **P** **14 05 44.9 -0.1**
comp=Z,22nm,0.8s,mb5.1,baz=200,slow=3.1,SNR=2.3
DAVA Damuels 46.72 302⇑ *i*pP pP 14 05 56.8 +3.9
comp=Z,9.8nm,0.7s
DAVOX Davos/Dischmat 46.85 301 P **P** **14 05 52.7 -0.5**
comp=Z,7.7nm,0.6s,mb4.8,baz=85,slow=12,SNR=4.7
DAVOX pP pP 14 05 57.1 +3.1
comp=Z,7.7nm,0.6s,baz=82,slow=12,SNR=6.5
CDF Champ du Feu 48.10 304 *e*P **P** **14 06 02.4 -0.5**
comp=Z,6.9nm,0.7s,mb4.5
CDF Champ du Feu 48.10 304 *e*P **P** **14 06 02.4 -0.5**
CDF pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
CDF Champ du Feu 48.10 304 *e*P **P** **14 06 02.4 -0.5**
comp=Z,3.5nm,0.7s,mb4.5
PGF Pioggiola 48.74 296 *e*P **P** **14 06 07.6 -0.3**
comp=Z,14nm,0.9s,mb4.7
PGF Pioggiola 48.74 296 *e*P **P** **14 06 07.6 -0.3**
PGF pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
PGF Pioggiola 48.74 296 *e*P **P** **14 06 07.6 -0.3**
comp=Z,6.8nm,0.9s,mb4.7
HAU Haudompre 48.81 304 *e*P **P** **14 06 07.8 -0.6**
comp=Z,7.6nm,0.6s,mb4.6
HAU *e*MLR MLR
comp=Z,51nm,18.8s,MS3.2
HAU Haudompre 48.81 304 *e*P **P** **14 06 07.8 -0.6**
HAU pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
HAU MLR MLR
comp=Z,50nm,18.8s,MS3.5
HAU Haudompre 48.81 304 *e*P **P** **14 06 07.8 -0.6**
comp=Z,3.8nm,0.6s,mb4.6
HAU LR LR
comp=Z,50nm,18.8s,MS3.5
MJAR Matsushiro Arr 49.02 72 P **P** **14 06 09.8 -0.3**
comp=Z,4.5nm,0.9s,mb4.5,baz=290,slow=9.2,SNR=7.6
MJAR Matsushiro Arr 49.02 72 P **P** **14 06 09.8 -0.3**
LPG La Plagne 49.31 301 *e*P **P** **14 06 12.1 -0.1**
comp=Z,10nm,0.7s,mb4.7
LPG La Plagne 49.31 301 *e*P **P** **14 06 12.1 -0.1**
LPG pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
LPG La Plagne 49.31 301 *e*P **P** **14 06 12.1 -0.1**
comp=Z,5.3nm,0.7s,mb4.7
LPL La Plagne 49.31 301 *e*P **P** **14 06 12.0 -0.2**
SBF Sospel 49.38 298 *e*P **P** **14 06 12.7 -0.1**
comp=Z,30nm,0.8s,mb5.1
SBF Sospel 49.38 298 *e*P **P** **14 06 12.7 -0.1**
SBF pmax pmax
comp=Z,15nm,0.8s,mb5.1
SBF Sospel 49.38 298 *e*P **P** **14 06 12.7 -0.1**
comp=Z,15nm,0.8s,mb5.1
FRF La Foret Royal 50.02 298 *e*P **P** **14 06 17.2 -0.4**
LOR Lormes 50.64 304 *e*P **P** **14 06 21.7 -0.6**
comp=Z,6.9nm,0.6s,mb4.5
LOR *e*MLR MLR
comp=Z,65nm,19.8s,MS3.4
LOR Lormes 50.64 304 *e*P **P** **14 06 21.7 -0.6**
LOR pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
LOR MLR MLR
comp=Z,70nm,19.8s,MS3.7
LOR Lormes 50.64 304 *e*P **P** **14 06 21.7 -0.6**
comp=Z,3.5nm,0.6s,mb4.5
LOR LR LR
comp=Z,70nm,19.8s,MS3.7
SMF Signal de Mont 50.86 303 *e*P **P** **14 06 23.0 -0.9**
VIVF Saint-Julien-l 50.91 300 *e*P **P** **14 06 23.9 -0.4**
AVF Avril sur Loir 51.12 303 *e*P **P** **14 06 25.2 -0.7**
comp=Z,13nm,0.6s,mb4.7
AVF Avril sur Loir 51.12 303 *e*P **P** **14 06 25.2 -0.7**
AVF pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
AVF Avril sur Loir 51.12 303 *e*P **P** **14 06 25.2 -0.7**
comp=Z,6.4nm,0.6s,mb4.7
TCF Toulx Ste Croi 52.04 303 *e*P **P** **14 06 32.3 -0.5**
KMBO Kilima Mbogo 53.12 230 P **P** **14 06 39.5 -1.7**
comp=Z,1.6nm,0.6s,mb4.1,baz=40,slow=18,SNR=5.5
BILL Bilibino 54.57 27⇑ *e*P **P** **14 06 50.7 -0.4**
BILL pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
PETK Petropavlovsk- 55.68 46 LR LR 14 32 03.0
comp=Z,16nm,18.1s,MS3.2,baz=30,slow=37
ESDC Sonseca Array 58.86 298 P **P** **14 07 20.0 -2.0**
comp=Z,0.4nm,0.3s,mb3.9,baz=43,slow=7.6,SNR=4.3
RES Resolute Bay 65.95 357 P **P** **14 08 08.0 -1.0**
comp=Z,0.6nm,0.6s,mb3.8,baz=124,slow=1.2,SNR=2.4
RES Resolute Bay 65.95 357 P **P** **14 08 08.0 -1.0**
COLD Coldfoot 68.27 17 *e*P **P** **14 08 22.9 -0.9**
comp=Z,1.3nm,0.7s,mb4.1
COLD *e* 14 08 28.1
TORD Torodi Ar. Bea 68.89 270 P **P** **14 08 26.6 -1.8**
comp=Z,1.8nm,0.5s,mb4.2,baz=43,slow=5.9,SNR=24
LSZ Lusaka 69.75 229 *e*P **P** **14 08 33.5 -0.1**
LSZ pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
LSZ Lusaka 69.75 229 *e*P **P** **14 08 33.5 -0.1**
comp=Z,9.7nm,1.1s,mb4.7
INK Inuvik 70.47 11 P **P** **14 08 36.5 -0.8**
comp=Z,3.1nm,0.6s,mb4.4,baz=1.2,slow=6.4,SNR=24
INK pP pP 14 08 41.3 +3.1
comp=Z,5.1nm,0.7s,baz=9.2,slow=9.2,SNR=11
INK Inuvik 70.47 11 P **P** **14 08 36.5 -0.8**
INK pmax pmax
comp=Z,3.0nm,0.6s
INK pmax pmax
comp=Z,5.0nm,0.7s
INK Inuvik 70.47 11 *e*P **P** **14 08 36.3 -1.0**
comp=Z,4.7nm,0.7s,mb4.5
INK *e* 14 08 41.4
DBIC Dimbokro 77.94 269 P **P** **14 09 20.1 -1.7**
comp=Z,3.7nm,0.8s,mb4.4,baz=64,slow=3.3,SNR=4.8
YKA Yellowknife Ar 78.12 5 P **P** **14 09 21.0 -1.0**
comp=Z,2.4nm,0.7s,mb4.3,baz=348,slow=5.6,SNR=23
YKA pP pP 14 09 25.9 +3.0
comp=Z,4.8nm,0.8s,baz=347,slow=5.6,SNR=21
WRAB Tennant Creek 81.00 125 *e*P **P** **14 09 37.0 -1.2**
BOSA Boshof 82.02 223 P **P** **14 09 42.1 -1.3**
comp=Z,4.1nm,0.9s,mb4.3,baz=0.5,slow=8.8,SNR=6.2
ASAR Alice Springs 83.47 128 P **P** **14 09 50.2 -0.9**
comp=Z,3.3nm,0.9s,mb4.4,baz=314,slow=4.9,SNR=41
EYMN Ely 92.16 351 *e*P **P** **14 10 31.6 -1.2**
comp=Z,5.4nm,0.9s,mb4.9
EYMN *e* 14 10 36.9
TRQA Tornquist 146.62 258 *e*PKPbc PKPbc 14 17 04.1 -0.8
comp=Z,70nm,20.9s,baz=0.0,slow=29
TXAR Lajitas Array 64.25 4 P P 14 17 59.0 +0.7
0.1nm,0.4s,baz=195,slow=5.6,SNR=3.4
NVAR Mina Array Bea 73.92 351 P P 14 18 59.0 +0.8
1.3nm,0.9s,baz=180,slow=7.4,SNR=6.7
PDAR Pinedale Array 77.59 358 P P 14 19 18.9 -0.2
1.0nm,0.9s,baz=149,slow=3.5,SNR=5.7
STKA Stephens Creek 87.05 233 LR LR 14 50 01.6
comp=Z,135nm,21.2s,baz=205,slow=29
CTA Charters Tower 91.20 244 LR LR 14 54 54.3
comp=Z,108nm,18.2s,baz=48,slow=31
CMAR Chiang Mai Arr 151.32 241 PKPbc PKPbc 14 27 18.4 +0.8
0.4nm,0.3s,baz=140,slow=2.8,SNR=4.0
SONM Songino Array 151.94 307 PKPbc PKPbc 14 27 16.8 -1.3
0.7nm,0.9s,baz=145,slow=2.4,SNR=3.6

IDC ***02*** *14:18:40.6±0.7,28°.93N×139°.69E,h435km±10km, mb3.1/10,mb1 3.2/14,mb1mx3.0/28,mbtmp3.1/14,Error ellipse: s-maj=18.3km s-min=12.6km az=75.0*
ISCJB ***02*** *14:18:40.2±0.4,28°.96N±0°.04×139°.6E±0°.1,h443km±6km, mb3.5/12,Error ellipse: s-maj=15.8km s-min=6.5km az=171.1*
NEIC ***02*** *14:18:41.2±1.3,28°.89N×139°.57E,h442km±12km,mb4.5/3, Error ellipse: s-maj=16.6km s-min=11.1km az=141.0*
JMA ***02*** *14:18:41.3±0.1,29°.09N×140°.13E,h455km,M3.8*
ISC 02 14:18:41.1±0.4,28°.98N±0°.04×139°.6E±0°.1,h435km±7km, n45,σ0s94/50,mb3.5/12,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.92**	**129**	P	**P**	**14 19 47.2**	**+0.8**
CBIJ				*e*S	**S**	**14 20 38.2**	**-1.1**
CBIJ	**Chichi jima**	**2.92**	**129**	P	**P**	**14 19 47.4**	**+0.9**
	45nm,0.3s,baz=299,slow=24,SNR=5.2						
CBIJ				S	**S**	**14 20 37.9**	**-1.5**
	93nm,0.3s,baz=277,slow=21,SNR=13						
JHHJ	**Haha-jima-NKT**	**3.24**	**136**	P	**P**	**14 19 49.3**	**+0.4**
JHHJ				*e*S	**S**	**14 20 43.5**	**-0.3**
BSO3	**Boso 3**	**5.86**	**7**	P	**P**	**14 20 14.0**	**+0.8**
BSO3				*e*S	**S**	**14 21 26.2**	**-2.3**
JIE	**Ise**	**5.95**	**336**	P	**P**	**14 20 17.4**	**+3.2**
JKN2	**Miekihoku**	**5.98**	**332**	P	**P**	**14 20 17.8**	**+3.3**
BSO4	**Boso 4**	**6.03**	**5**	*e*S	**S**	**14 21 31.2**	**-0.5**
JOD2	**Odawara 2**	**6.29**	**356**	P	**P**	**14 20 19.0**	**+1.3**
JEG	**Eigenji**	**6.73**	**337**	P	**P**	**14 20 26.3**	**+3.9**
JHU	**Hanno**	**6.86**	**358**	P	**P**	**14 20 23.8**	**0.0**
JHU				*e*S	**S**	**14 21 43.1**	**-4.8**
JRY	**Ryogami san**	**7.05**	**355**	P	**P**	**14 20 26.7**	**+0.9**
JRY				*e*S	**S**	**14 21 50.8**	**-0.8**
JYT	**Yasato**	**7.25**	**4**	P	**P**	**14 20 27.9**	**0.0**
JYT				S	**S**	**14 21 51.9**	**-3.6**
MJAR	**Matsushiro Arr**	**7.64**	**351**	P	**P**	**14 20 32.0**	**-0.2**
	2.7nm,0.3s,baz=167,slow=11,SNR=15						
MAJO	**Matsushiro**	**7.64**	**351**	*e*P	**P**	**14 20 32.8**	**+0.5**
	19nm,0.4s						
MAT	**Matsushiro**	**7.64**	**351**	P	**P**	**14 20 32.5**	**+0.3**
MAT				*e*S	**S**	**14 22 01.8**	**-1.6**
MAT	**Matsushiro**	**7.64**	**351**	P	**P**	**14 20 32.7**	**+0.5**
KSRS	**Korea Array**	**12.94**	**314**	P	**P**	**14 21 31.1**	**+0.9**
	0.1nm,0.3s,baz=124,slow=11,SNR=3.7						
ERM	**Erimo**	**13.32**	**11**	*e*P	**P**	**14 21 37.1**	**+2.9**
ASAJ	**Asahikawa**	**15.29**	**8**	P	**P**	**14 21 55.6**	**+0.1**
	0.7nm,0.3s,baz=209,slow=11,SNR=7.4						
SONM	**Songino Array**	**31.81**	**316**	P	**P**	**14 24 28.3**	**+0.5**
	0.3nm,0.4s,mb3.0,baz=122,slow=7.3,SNR=3.1						
CMAR	**Chiang Mai Arr**	**38.54**	**263**	P	**P**	**14 25 24.2**	**-0.6**
	1.0nm,0.6s,mb3.3,baz=87,slow=4.7,SNR=6.6						
BILL	**Bilibino**	**42.17**	**15**	*e*P	**P**	**14 25 54.4**	**+1.1**
	4.2nm,0.8s,mb3.8						
TAPN	**Taplejung**	**45.51**	**281**	*e*P	**P**	**14 26 18.8**	**-1.3**
TAPN	**Taplejung**	**45.51**	**281**	*e*P	**P**	**14 26 18.8**	**-1.3**
ODAN	**Odare**	**45.91**	**280**	*e*P	**P**	**14 26 22.9**	**-0.3**
ODAN	**Odare**	**45.91**	**280**	*e*P	**P**	**14 26 22.9**	**-0.3**
RAMN	**Ramite**	**46.57**	**281**	*e*P	**P**	**14 26 27.6**	**-0.6**
RAMN	**Ramite**	**46.57**	**281**	*e*P	**P**	**14 26 27.6**	**-0.6**
PSI	**Prapat**	**46.63**	**244**	P	**P**	**14 26 28.6**	**-0.3**
	3.2nm,0.8s,mb3.7,baz=92,slow=2.7,SNR=5.5						
JIRN	**Jiri**	**46.74**	**282**	*e*P	**P**	**14 26 29.4**	**-0.1**
JIRN	**Jiri**	**46.74**	**282**	*e*P	**P**	**14 26 29.4**	**-0.1**
GUN	**Gumba**	**46.94**	**282**	*e*P	**P**	**14 26 31.2**	**+0.2**
	14nm,0.5s,mb4.5						
GUN	**Gumba**	**46.94**	**282**	*e*P	**P**	**14 26 31.2**	**+0.2**
	14nm,0.5s,mb4.5						
KKN	**Kakani**	**47.48**	**282**	*e*P	**P**	**14 26 35.1**	**-0.1**
KKN	**Kakani**	**47.48**	**282**	*e*P	**P**	**14 26 35.1**	**-0.1**
MKAR	**Makanchi Array**	**47.55**	**308**	P	**P**	**14 26 35.1**	**-0.2**
	0.4nm,0.5s,mb3.0,baz=76,slow=10.0,SNR=2.6						
KURK	**Kurchatov**	**50.07**	**314**	P	**P**	**14 26 53.9**	**-0.2**
	1.3nm,0.5s,mb3.5,baz=91,slow=8.3,SNR=4.7						
ASAR	**Alice Springs**	**52.63**	**187**	P	**P**	**14 27 12.7**	**-0.4**
	1.0nm,0.5s,mb3.3,baz=16,slow=12,SNR=29						
BVAR	**Borovoye Array**	**55.14**	**316**	P	**P**	**14 27 30.7**	**+0.1**
	0.9nm,0.6s,mb3.2,baz=64,slow=6.7,SNR=4.6						
ARCES	**ARCESS Array B**	**71.03**	**340**	P	**P**	**14 29 13.6**	**+0.3**
	3.4nm,1.0s,mb3.8,baz=46,slow=5.2,SNR=4.0						
YKA	**Yellowknife Ar**	**71.55**	**28**	P	**P**	**14 29 15.9**	**-0.5**
	0.2nm,0.6s,mb2.8,baz=283,slow=8.8,SNR=3.0						
FINES	**FINESS Array B**	**75.27**	**333**	P	**P**	**14 29 37.4**	**-0.4**
	0.7nm,0.3s,mb3.7,baz=64,slow=4.4,SNR=7.8						
TORD	**Torodi Ar. Bea**	**121.66**	**310**	PKP	PKPdf	14 36 43.2	-1.9
	0.2nm,0.5s,baz=149,slow=3.0,SNR=4.1						
LPAZ	**La Paz**	**151.50**	**70**	PKPbc	PKPbc	14 37 45.7	+0.2
	0.6nm,0.3s,baz=241,slow=4.1,SNR=3.7						
LPAZ	**La Paz**	**151.50**	**70**	PKPbc	PKPbc	14 37 45.7	+0.2

KRSC 02 14:21:39.5±0.3,52°.77N×160°.33E,h21km±15km,ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.38**	**331**	*i* P	Pb	14 21 48.8	+1.3
SPN				*i* S	Sb	14 21 54.8	+1.9
NLC	**Nalytchevo**	**0.72**	**304**	*i* P	Pb	14 21 53.7	+0.4
NLC				*i* S	Sb	14 22 03.6	+0.9
PET	**Petropavlovsk**	**1.05**	**285**	*i* P	Pb	14 21 58.7	-0.2
PET				*i* S	Sb	14 22 12.4	+0.2
AVH	**Avacha**	**1.08**	**298**	*e*P	Pn	14 21 59.6	+0.2
AVH				*i* S	Sb	14 22 13.8	+0.6
KII	**Karymskiy**	**1.37**	**338**	*e*P	Pn	14 22 04.2	+0.8
KII				*i* S	Sn	14 22 21.5	+0.6
GNL	**Ganaly**	**1.71**	**304**	*i* P	Pn	14 22 09.6	+1.6
GNL				*i* S	Sn	14 22 31.4	+2.2
MKZ	**Mys Kozlova**	**1.97**	**24**	P	Pn	14 22 11.3	-0.3
MKZ				*i* S	Sn	14 22 35.3	-0.4
MIPR	**Malaya Ipel'ka**	**2.24**	**259**	P	Pn	14 22 17.2	+1.9
KMNR	**Kamenistaya**	**2.99**	**359**	P	Pn	14 22 29.0	+3.4
KBTR	**Krutoberegovo**	**3.74**	**22**	P	Pn	14 22 37.3	+1.4

DJA 02 14:35:05,0°.59S×122°.63E,h9km,MLv4.3/9,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.47**	**162**	P	Pg	14 35 13.4	-0.8
APSI	**Ampana**	**1.03**	**252**	P	Pg	14 35 25.0	+0.1
APSI				S	Sg	14 35 39.3	+1.0
MRSI	**Marisa**	**1.26**	**327**	P	Pn	14 35 25.9	-3.0
MNI	**Manado**	**2.99**	**48**	P	Pn	14 35 52.4	-0.3
KDI	**Kendari**	**3.34**	**180**	P	Pn	14 35 56.5	-1.0
TTSI	**Tana Toraja**	**3.72**	**229**	P	Pn	14 36 02.7	0.0
LBMI	**Labuha**	**4.87**	**91**	P	Pn	14 36 17.7	-0.8
TNTI	**Ternate**	**4.93**	**74**	P	Pn	14 36 23.5	+4.2
KAPI	**Kappang**	**5.25**	**213**	P	Pn	14 36 22.3	-1.4
	0.1nm19nm,0.9s						
AAI	**Ambon**	**6.35**	**119**	P	Pn	14 36 40.7	+1.8
	0.4nm78nm,1.0s						
MYLDM	**Lahad Datu**	**7.06**	**324**	P	Pn	14 36 50.6	+2.0

IDC ***02*** *14:42:46.5±1.4,6°.96N×91°.86E,h0km,mb3.7/5,mb1 3.8/8, mb1mx3.6/26,mbtmp3.8/8,ML3.9/3,Error ellipse: s-maj=38.8km s-min=21.2km az=58.0*
NEIC ***02*** *14:42:47.9±3.8,6°.94N×91°.86E,h10km±25km,Error ellipse: s-maj=11.9km s-min=8.6km az=221.0*
ISCJB ***02*** *14:42:48.8±0.8,6°.9N±0°.1×91°.8E±0°.1,h33km,mb3.6/5, Error ellipse: s-maj=17.3km s-min=12.0km az=41.0*
ISC 02 14:42:48.9±5.6,7°.0N±0°.1×91°.8E±0°.1,h15km±38km,n11, σ0s14/11,mb3.6/5,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**8.17**	**120**	Pn	**Pn**	**14 44 46.9**	**-0.1**
	1.1nm,0.3s,baz=3.9,slow=17,SNR=2.4						
PSI				Sn	Sx	14 46 16.9	
	1.4nm,0.3s,baz=235,slow=22,SNR=15						
PALK	**Pallekele**	**11.06**	**272**	Pn	**Pn**	**14 45 26.7**	**0.0**
	1.1nm,0.3s,baz=77,slow=12,SNR=7.4						
PALK				Sn	Sx	14 47 18.2	
	4.2nm,0.3s,baz=164,slow=23,SNR=12						
PALK	**Pallekele**	**11.06**	**272**	Pn	**Pn**	**14 45 26.7**	**0.0**
PALK				Sn	Sx	14 47 18.2	
CMAR	**Chiang Mai Arr**	**13.36**	**31**	Pn	**Pn**	**14 45 58.2**	**+0.1**
	0.2nm,0.3s,baz=232,slow=14,SNR=22						
MK31	**Makanchi Array**	**40.53**	**350**	*e*P	**P**	**14 50 27.4**	**+0.1**
MKAR	**Makanchi Array**	**40.53**	**350**	P	**P**	**14 50 27.3**	**0.0**
	0.4nm,0.5s,mb3.3,baz=156,slow=8.0,SNR=4.9						
SONM	**Songino Array**	**42.58**	**14**	P	**P**	**14 50 44.2**	**+0.1**
	0.8nm,0.7s,mb3.5,baz=189,slow=7.6,SNR=5.5						
ZALV	**Zalesovo Beam**	**47.20**	**354**	P	**P**	**14 51 20.5**	**-0.4**
	0.6nm,0.3s,mb4.0,baz=188,slow=8.7,SNR=4.1						
ABKAR	**Akbulak array**	**49.98**	**333**	*e*P	**P**	**14 51 42.4**	**+0.1**
ASAR	**Alice Springs**	**51.11**	**128**	P	**P**	**14 51 51.4**	**+0.1**
	0.4nm,0.7s,mb3.4,baz=298,slow=7.0,SNR=6.5						
STKA	**Stephens Creek**	**61.15**	**132**	P	**P**	**14 53 03.0**	**+0.1**
	0.6nm,0.6s,mb3.9,baz=323,slow=9.6,SNR=3.2						

*IDC **02** 15:38:41.6±4.0, 10°.64S×106°.68E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.5/21, mbtmp3.6/5, Error ellipse: s-maj=175.5km s-min=27.1km az=51.0*
*ISCJB **02** 15:38:42.9±4.2, 10°.35S±0°.09×106°.9E±0°.1, h15km±27km, mb3.6/5, Error ellipse: s-maj=22.1km s-min=13.4km az=155.7*
*DJA **02** 15:38:56, 9°.36S×107°.50E, h10km, MLv4.5/5*
ISC 02 15:38:43.7±5.2, 10°.31S±0°.09×106°.9E±0°.1, h4km±33km, n12, σ0°99/14, mb3.6/5, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBJI	**Dramaga**	**3.73**	**357**	P	**Pn**	**15 39 43.0**	**+0.9**
DBJI				S	**Sn**	**15 40 26.8**	**+0.3**
CGJI	**Cibinong**	**3.87**	**341**	S	**Sn**	**15 40 29.0**	**-0.9**
TNG	**Tangerang**	**4.12**	**356**	P	**Pn**	**15 39 45.6**	**-1.8**
UGM	**Wanagama**	**4.27**	**56**	P	**Pn**	**15 39 50.0**	**+0.5**
UGM				S	**Sn**	**15 40 29.6**	**-10**
PCJI	**Pacitan**	**4.69**	**64**	P	**Pn**	**15 39 56.0**	**+0.8**
PWJI	**Pagerwojo**	**5.32**	**65**	P	**Pn**	**15 40 03.4**	**-0.5**
SJI	**Sawahan**	**5.42**	**62**	P	**Pn**	**15 40 04.7**	**-0.6**
ASAR	**Alice Springs**	**28.95**	**121**	P	**P**	**15 44 43.4**	**-0.9**
	0.6nm,0.8s,mb3.4,baz=300,slow=9.2,SNR=7.3						
CMAR	**Chiang Mai Arr**	**29.65**	**345**	P	**P**	**15 44 52.0**	**+1.6**
	0.4nm,0.8s,mb3.2,baz=179,slow=10.0,SNR=4.8						
SONM	**Songino Array**	**57.88**	**360**	P	**P**	**15 48 37.6**	**+1.0**
	0.6nm,0.7s,mb3.8,baz=166,slow=7.4,SNR=5.7						
MKAR	**Makanchi Array**	**60.96**	**341**	P	**P**	**15 48 58.7**	**+0.8**
	0.5nm,0.7s,mb3.8,baz=133,slow=6.8,SNR=4.9						
KURK	**Kurchatov**	**65.57**	**341**	P	**P**	**15 49 27.1**	**-1.3**
	0.7nm,0.8s,mb3.7,baz=157,slow=5.4,SNR=4.2						

*IDC **02** 15:45:02.2±1.1, 11°.40N×86°.25W, h0km, mb3.8/4, mb1 4.1/6, mb1mx3.8/23, mbtmp3.7/6, ML3.5/1, MS3.2/3, Ms1 3.2/3, ms1mx2.6/30, Error ellipse: s-maj=46.1km s-min=17.2km az=45.0*
*NEIC **02** 15:45:03.0±0.9, 11°.24N×86°.36W, h10km, mb4.3/2, Error ellipse: s-maj=32.2km s-min=10.2km az=218.0*
*CASC **02** 15:45:03.6±2.5, 10°.88N×86°.71W, h17km±10km, MD4.2, ML3.7*
*ISCJB **02** 15:45:03.8±0.8, 10°.86N±0°.06×86°.76W±0°.07, h38km±10km, mb3.9/6, Error ellipse: s-maj=14.3km s-min=4.7km az=137.6*
ISC 02 15:45:05.1±2.1, 10°.91N±0°.06×86°.68W±0°.06, h32km±19km, n57, σ1°05/56, mb3.9/6, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSN	**San Juan del S**	**0.90**	**64**	*e*P	**Pn**	**15 45 21.1**	**-0.3**
NY14	**Universidad de**	**1.15**	**103**	*i*P	**Pn**	**15 45 24.6**	**-0.3**
NY14				*i*S	**Sn**	**15 45 41.0**	**+1.4**
APON	**Apoyo**	**1.16**	**31**	*e*P	**Pn**	**15 45 25.6**	**+0.5**
MASN	**Masaya**	**1.19**	**26**	*e*P	**Pn**	**15 45 25.1**	**-0.4**
GBS3	**Finca Las lm^¡**	**1.21**	**96**	*i*P	**Pn**	**15 45 25.3**	**-0.4**
CONN	**Concepcion**	**1.22**	**58**	*e*P	**Pn**	**15 45 26.3**	**+0.4**
LAPC	**Finca la Perla**	**1.23**	**97**	*i*P	**Pn**	**15 45 24.9**	**-1.1**
BUEV	**Buena Vista**	**1.25**	**95**	*i*P	**Pn**	**15 45 26.0**	**-0.4**
GB1A	**Borinquen Arri**	**1.26**	**94**	*i*P	**Pn**	**15 45 26.3**	**-0.2**
COPN	**Copaltepe**	**1.26**	**4**	*e*P	**Pn**	**15 45 26.3**	**-0.2**
XAVN	**Gruta Xavier**	**1.27**	**16**	*e*P	**Pn**	**15 45 26.9**	**+0.2**
CSAN		**1.29**	**11**	*e*P	**Pn**	**15 45 26.8**	**-0.1**
VCR	**Vista de Mar**	**1.29**	**127**	*e*P	**Pn**	**15 45 25.1**	**-1.8**
GPS3	**Bodega del ICE**	**1.30**	**97**	*i*P	**Pn**	**15 45 26.6**	**-0.4**
MGAN	**Managua**	**1.30**	**19**	*e*P	**Pn**	**15 45 27.4**	**+0.4**
MGAN				AML	AML	15 45 42.4	
	comp=N,1μm,0.6s						
GPS2	**Hotel Rinc^‡n**	**1.31**	**97**	*i*P	**Pn**	**15 45 26.7**	**-0.5**
WILN	**Americas 2**	**1.33**	**21**	*e*P	**Pn**	**15 45 27.4**	**-0.1**
APYN	**Apoyeque**	**1.35**	**14**	*e*P	**Pn**	**15 45 28.1**	**+0.4**
LIM1	**Limonal**	**1.42**	**99**	*i*P	**Pn**	**15 45 27.8**	**-0.8**
MOMN	**Momotombo**	**1.49**	**5**	*e*P	**Pn**	**15 45 29.9**	**+0.2**
HUEN		**1.50**	**19**	*e*P	**Pn**	**15 45 29.9**	**+0.2**
CUI	**Cuipilapa**	**1.51**	**100**	*i*P	**Pn**	**15 45 29.9**	**0.0**
CNGN	**Cerro Negro**	**1.58**	**359**	*e*P	**Pn**	**15 45 30.7**	**-0.2**
AMAS	**Alto Masis**	**1.68**	**100**	*i*P	**Pn**	**15 45 31.6**	**-0.7**
JTS	**JuntasAbangare**	**1.80**	**110**	Pn	**Pn**	**15 45 33.1**	**-0.8**
	comp=N,15nm,0.3s,baz=309,slow=19,SNR=29						
JTS				Sn	**Sn**	**15 45 55.9**	**+0.2**
	comp=N,77nm,0.3s,baz=280,slow=19,SNR=10						
JTS	**JuntasAbangare**	**1.80**	**110**	*e*Pn	**Pn**	**15 45 32.6**	**-1.3**
JTS				Sn	**Sn**	**15 45 55.9**	**+0.2**
JTS	**JuntasAbangare**	**1.80**	**110**	*e*P	**Pn**	**15 45 33.0**	**-1.0**
JTS				*e*S	**Sn**	**15 45 56.2**	**+0.5**
JCR	**Jicaral**	**1.87**	**124**	*e*P	**Pn**	**15 45 33.4**	**-1.4**
CGA2	**Cerro Gallo 2**	**2.35**	**112**	*e*P	**Pn**	**15 45 42.1**	**+0.6**
CNCH	**Conchagua**	**2.61**	**334**	*e*P	**Pn**	**15 45 44.6**	**-0.4**
LAJ	**Bijagual**	**2.72**	**112**	*e*P	**Pn**	**15 45 42.2**	**-4.4**
QCR	**Quepos**	**2.88**	**121**	*e*P	**Pn**	**15 45 49.8**	**+1.0**
URSC	**Urasca**	**3.04**	**110**	*e*P	**Pn**	**15 45 53.9**	**+2.9**
BUS	**Buena Vista**	**3.17**	**115**	*e*P	**Pn**	**15 45 54.3**	**+1.5**
TGUH	**Tegucigalpa,Un**	**3.18**	**349**	*e*P	**Pn**	**15 45 54.1**	**+1.2**
TGUH	**Tegucigalpa,Un**	**3.18**	**349**	*e*P	**Pn**	**15 45 53.4**	**+0.5**
TGUH				AML	AML	15 46 44.8	
	comp=N,371nm,0.6s						
CAHU	**Cacacuatique**	**3.21**	**332**	*e*P	**Pn**	**15 45 52.4**	**-1.0**
BAR1		**3.71**	**116**	*e*P	**Pn**	**15 46 02.9**	**+2.8**
ACR	**Cerro Adams**	**4.12**	**123**	*e*P	**Pn**	**15 46 06.6**	**+0.7**
APG	**El Apazote**	**5.49**	**318**	Pn	**Pn**	**15 46 26.5**	**+1.8**
	comp=N,0.3nm,0.3s,baz=162,slow=17,SNR=2.7						
BCIP	**Isla Barro Col**	**6.95**	**104**	Pn	**Pn**	**15 46 41.9**	**-2.9**
CMIG	**Matias Romero**	**10.06**	**309**	Pn	**Pn**	**15 47 27.6**	**+0.2**
	comp=N,0.4nm,0.3s,baz=140,slow=11,SNR=4.3						
ROSC	**El Rosal**	**3.62**	**115**	LR	LR	15 52 35.1	
	comp=N,52nm,19.5s,baz=254,slow=34						
SDV	**Santo Domingo**	**15.93**	**96**	Pn	**Pn**	**15 48 49.1**	**+2.1**
	comp=N,0.2nm,0.3s,baz=294,slow=7.3,SNR=6.1						
ATAH	**Atahualpa**	**19.73**	**155**	LR	LR	15 56 55.3	
	comp=N,57nm,19.4s,baz=311,slow=36						
TXAR	**Lajitas Array**	**24.24**	**322**	P	**P**	**15 50 19.1**	**-0.1**
	comp=N,3.2nm,0.9s,mb3.8,baz=136,slow=11,SNR=26						
TXAR				PcP	PcP	15 54 01.6	+2.5
	comp=N,0.6nm,0.8s,baz=160,slow=4.0,SNR=5.7						
MIAR	**Mount Ida**	**24.35**	**346**	*e*P	**P**	**15 50 19.4**	**-0.7**
	comp=N,3.1nm,0.6s,mb3.9						
TKL	**Tuckaleechee C**	**24.77**	**6**	P	**P**	**15 50 22.4**	**-1.5**
	comp=N,3.3nm,0.7s,mb4.0,baz=158,slow=8.5,SNR=3.6						
TKL	**Tuckaleechee C**	**24.77**	**6**	P	**P**	**15 50 22.4**	**-1.6**
WMOK	**Wichita Mounta**	**26.16**	**337**	*e*P	**P**	**15 50 37.1**	**+0.5**
	comp=N,13nm,1.1s,mb4.4						
NVAR	**Mina Array Bea**	**39.35**	**319**	P	**P**	**15 52 34.4**	**+2.9**
	comp=N,0.8nm,0.8s,mb3.5,baz=146,slow=5.7,SNR=5.4						
NVAR				PcP	PcP	15 54 42.6	+3.0
	comp=N,0.8nm,0.5s,baz=140,slow=5.2,SNR=6.3						
NVAR	**Mina Array Bea**	**39.35**	**319**	P	**P**	**15 52 34.4**	**+2.8**
NVAR				PcP	PcP	15 54 42.6	+3.0
SCHQ	**Schefferville**	**46.53**	**16**	LR	LR	16 14 20.0	
	comp=N,46nm,18.2s,baz=82,slow=38						
YKA	**Yellowknife Ar**	**55.29**	**345**	P	**P**	**15 54 32.8**	**-2.4**
	comp=N,0.5nm,0.8s,mb3.6,baz=138,slow=7.4,SNR=4.7						
YKA	**Yellowknife Ar**	**55.29**	**345**	P	**P**	**15 54 32.8**	**-2.4**
ASAR	**Alice Springs**	**139.38**	**246**	PKP	PKPdf	16 04 33.1	+3.2
	comp=N,0.2nm,0.6s,baz=104,slow=2.0,SNR=4.6						
CMAR	**Chiang Mai Arr**	**150.30**	**349**	PKPbc	PKPbc	16 04 54.0	0.0
	comp=N,0.5nm,0.6s,baz=323,slow=2.9,SNR=7.4						

*NNC **02** 16:32:30.6±5.3, 37°.21N×70°.28E, h0km, mb4.0, mpv3.9, Error ellipse: s-maj=46.5km s-min=41.1km az=93.0*
ISC 02 16:32:33.1±3.2, 36°.9N±0°.2×70°.5E±0°.2, h189km±61km, n11, σ0°35/14, 1C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**5.06**	**57**	Pn	**Pn**	**16 33 42.1**	**-5.8**
KSH				Sn	**Sn**	**16 34 36.4**	**-10**
KSH				smax			
	comp=N,14nm,0.3s						
KSH				smax			
	comp=E,15nm,0.4s						
AML	**Almayashu**	**5.80**	**24**	P	**Pn**	**16 33 57.5**	**+0.1**
	SNR=35						
UCH	**Uchtor**	**6.18**	**29**	P	**Pn**	**16 34 02.5**	**+0.1**
	SNR=30						
KK31	**Karatay Array**	**6.21**	**0**	⇓Pn	**Pn**	**16 34 02.1**	**-0.7**
	comp=E,1.8nm,0.3s,baz=174,slow=13,SNR=3.6						
KK31				⇑Sn	**Sn**	**16 35 13.9**	**+0.2**
	comp=E,1.2nm,0.5s,baz=182,slow=23						
EKS2	**Erkin-Say**	**6.30**	**23**	P	**Pn**	**16 34 04.2**	**+0.3**
	SNR=5.8						
KZA	**Kyzart**	**6.36**	**34**	P	**Pn**	**16 34 04.4**	**-0.3**
	SNR=6.2						
AAK	**Ala-Archa**	**6.52**	**27**	P	**Pn**	**16 34 07.1**	**+0.3**
	SNR=6.7						
KBK	**Karagaybulak**	**6.71**	**29**	P	**Pn**	**16 34 09.8**	**+0.5**
	SNR=5.6						
TKM2	**Tokmak 2**	**7.19**	**31**	⇓Pn	**Pn**	**16 34 15.1**	**-0.5**
	comp=E,9.9nm,0.5s						
TKM2				⇓Sn	**Sn**	**16 35 36.7**	**-0.2**
	comp=E,1.4nm,0.7s						
TKM2	**Tokmak 2**	**7.19**	**31**	P	**Pn**	**16 34 15.5**	**-0.1**
	SNR=18						
AB31	**Akbulak array**	**14.55**	**331**	⇓Pn	**Pn**	**16 35 50.0**	**0.0**
	comp=E,0.3nm,0.4s,baz=34,slow=21,SNR=15						

*NIED **02** 16:46:00, 25°.50N×128°.00E, h14km, Mw3.9 Best double couple: M07.05000×10^14 NP1:φs=36.00000°, δ=58.00000°, λ=72.00000°. NP2:φs=247.00000°, δ=36.00000°, λ=116.00000°.*
*IDC **02** 16:46:07.1±1.2, 25°.73N×127°.77E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.7/24, mbtmp3.8/7, MS3.0/1, Ms1 3.0/1, ms1mx2.5/38, Error ellipse: s-maj=35.5km s-min=21.6km az=82.0*
*ISCJB **02** 16:46:07.4±1.0, 25°.51N±0°.05×128°.05E±0°.05, h30km±6km, mb3.8/9, Error ellipse: s-maj=8.1km s-min=6.9km az=173.3*
*JMA **02** 16:46:08.1±0.2, 25°.52N×128°.00E, h33km±3km, M3.7*
*NEIC **02** 16:46:12.0±1.1, 25°.71N×127°.73E, h35km, mb4.0/1, Error ellipse: s-maj=22.5km s-min=14.6km az=119.0*
ISC 02 16:46:08.0±1.2, 25°.54N±0°.05×128°.03E±0°.05, h21km±8km, n26, σ0°81/32, mb3.8/9, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT2	**Tamagusuku 2**	**0.65**	**337**	P	**Pb**	**16 46 20.8**	**+0.1**
JJT2				*e*S	**Sb**	**16 46 29.7**	**+0.4**
NAH1	**Naha**	**0.73**	**335**	P	**Pb**	**16 46 21.9**	**-0.2**
NAH1				*e*S	**Sb**	**16 46 31.7**	**0.0**
JAGN	**Aguni-jima**	**1.27**	**326**	P	**Pn**	**16 46 30.1**	**-0.3**
JAGN				*e*S	**Sn**	**16 46 46.3**	**-0.5**
JOW	**Kunigami**	**1.31**	**9**	P	**Pn**	**16 46 31.0**	**0.0**
JOW	**Kunigami**	**1.31**	**9**	Pn	**Pn**	**16 46 31.1**	**0.0**
	102nm,0.3s,baz=170,slow=17,SNR=225						
JOW				Sn	**Sn**	**16 46 44.5**	**-3.4**
	141nm,0.3s,baz=127,slow=18,SNR=12						
JKE	**Kume jima 2**	**1.37**	**305**	P	**Pn**	**16 46 31.3**	**-0.6**
JKE				*e*S	**Sn**	**16 46 49.4**	**0.0**
JIH	**Iheya**	**1.49**	**358**	P	**Pn**	**16 46 33.6**	**0.0**
JIH				*e*S	**Sn**	**16 46 53.7**	**+1.3**
JTK	**Tokunoshima**	**2.39**	**20**	P	**Pn**	**16 46 45.8**	**0.0**
JOGS	**Gusukube**	**2.50**	**253**	P	**Pn**	**16 46 46.3**	**-1.1**
JMZ	**Minamidaito 2**	**2.89**	**84**	P	**Pn**	**16 46 53.6**	**+0.8**
JMZ				*e*S	**Sn**	**16 47 26.0**	**-0.9**
JTJ	**Tarama**	**3.15**	**254**	P	**Pn**	**16 46 57.3**	**+1.0**
JAM	**Amami Oshima**	**3.19**	**26**	P	**Pn**	**16 46 56.8**	**-0.1**
JIJ	**Ishigaki jima**	**3.72**	**253**	P	**Pn**	**16 47 05.2**	**+1.0**
YULB	**Yu-li**	**6.50**	**252**	*e*Pn	**Pn**	**16 47 40.7**	**-1.6**
GUMO	**Guam**	**19.80**	**124**	LR	LR	16 58 08.9	
	comp=Z,40nm,18.4s,baz=83,slow=36						
GTA	**Gaotai**	**27.40**	**307**	*e*P	**P**	**16 51 51.7**	**-0.3**
GTA				pP	pP	16 51 59.2	+0.8
GTA				sP	sP	16 52 03.3	+2.3
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.1						
SONM	**Songino Array**	**28.04**	**328**	P	**P**	**16 51 57.0**	**-0.6**
	comp=Z,0.8nm,0.5s,mb3.6,baz=141,slow=10,SNR=8.3						
MKAR	**Makanchi Array**	**41.87**	**312**	P	**P**	**16 53 56.2**	**-0.3**
	comp=Z,0.4nm,0.4s,mb3.4,baz=86,slow=13,SNR=5.3						
ZALV	**Zalesovo Beam**	**42.69**	**323**	P	**P**	**16 54 02.4**	**-0.8**
	comp=Z,0.5nm,0.5s,mb3.5,baz=96,slow=12,SNR=2.8						
KURK	**Kurchatov**	**45.20**	**317**	P	**P**	**16 54 23.4**	**+0.1**
	comp=Z,0.8nm,0.4s,mb3.9,baz=107,slow=9.0,SNR=11						
KURK	**Kurchatov**	**45.20**	**317**	*e*P	**P**	**16 54 23.1**	**-0.2**
ASAR	**Alice Springs**	**49.24**	**173**	P	**P**	**16 54 59.0**	**+4.0**
	comp=Z,0.4nm,0.5s,mb3.8,baz=352,slow=7.1,SNR=23						
BVAR	**Borovoye Array**	**50.67**	**319**	P	**P**	**16 55 06.6**	**+1.0**
	comp=Z,0.9nm,0.5s,mb4.0,baz=74,slow=6.8,SNR=5.0						
ABKAR	**Akbulak array**	**56.99**	**314**	*e*P	**P**	**16 55 53.1**	**+1.1**
	comp=Z,0.8nm,0.5s,mb4.0						
FINES	**FINESS Array B**	**73.38**	**331**	P	**P**	**16 57 39.4**	**+1.4**
	comp=Z,1.7nm,0.5s,mb4.2,baz=63,slow=6.7,SNR=4.8						
FINES	**FINESS Array B**	**73.38**	**331**	P	**P**	**16 57 39.4**	**+1.4**

*MOS **02** 16:46:09.2±1.6, 51°.47N×159°.61E, h13km, mb4.6/12, Error ellipse: s-maj=10.4km s-min=5.4km az=93.3*
*ISCJB **02** 16:46:12.3±0.7, 51°.43N±0°.04×159°.79E±0°.06, h40km±5km, mb4.3/37, MS3.6/5, Error ellipse: s-maj=7.7km s-min=4.9km az=135.7*
*IDC **02** 16:46:13.5±5.5, 51°.72N×159°.61E, h23km±37km, mb4.0/21, mb1 4.1/23, mb1mx4.1/29, mbtmp4.0/23, ML4.1/2, MS3.5/5, Ms1 3.5/5, ms1mx3.0/39, Error ellipse: s-maj=19.1km s-min=9.3km az=169.0*
*KRSC **02** 16:46:13.0±0.5, 51°.63N×159°.79E, h12km±11km, ML4.7*
*BJI **02** 16:46:15.0, 51°.59N×159°.40E, h60km, mB4.6/4, mb4.7/7, Ms4.0/1, Ms7 3.7/1*
*NEIC **02** 16:46:18.2±1.4, 51°.71N×159°.36E, h59km±10km, mb4.4/10, Error ellipse: s-maj=14.0km s-min=9.6km az=140.0*
ISC 02 16:46:14.2±0.7, 51°.47N±0°.04×159°.73E±0°.06, h37km±5km, n103, σ1°26/120, mb4.3/37, MS3.6/5, 4C-3D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	**Gorelyy**	**1.49**	**317**	*i*P	**Pn**	**16 46 39.0**	**+0.5**
GRL				*i*S	**Sn**	**16 46 58.1**	**+1.4**
SPN	**Mys Shipunski**	**1.64**	**6**	P	**Pn**	**16 46 39.7**	**-0.9**
SPN				*i*S	**Sn**	**16 46 59.6**	**-0.8**
PET	**Petropavlovsk**	**1.69**	**337**	*α i*PN	**Pn**	**16 46 40.7**	**-0.5**
PET				*e*S	**Sn**	**16 47 03.6**	**+1.9**
PET				pmax	pmax		
	comp=Z,500nm,1.9s						
PET				pmax	pmax		
	comp=Z,200nm,11.0s						
PET				pmax	pmax		
	comp=Z,395nm,0.4s						
PET				smax			
	comp=N,4μm,0.7s						
PET				smax			
	comp=N,4μm,0.5s						
PET				smax			
	comp=E,3μm,0.6s						
PET	**Petropavlovsk**	**1.69**	**337**	*e*P	**Pn**	**16 46 41.2**	**0.0**
PET				*i*S	**Sn**	**16 47 01.8**	**+0.1**
PET	**Petropavlovsk**	**1.69**	**337**	*e*P	**Pn**	**16 46 40.6**	**-0.7**
NLC	**Nalytchevo**	**1.72**	**352**	*e*P	**Pn**	**16 46 40.9**	**-0.7**
NLC				*e*S	**Sn**	**16 47 00.9**	**-1.5**
AVH	**Avacha**	**1.90**	**342**	*e*P	**Pn**	**16 46 44.7**	**+0.6**
AVH				*i*S	**Sn**	**16 47 07.4**	**+0.6**
MIPR	**Malaya Ipel'ka**	**2.01**	**295**	*i*P	**Pn**	**16 46 46.6**	**+1.0**
MIPR				*i*S	**Sn**	**16 47 10.5**	**+1.0**
PEA0B	**Petropavlovsk-**	**2.06**	**324**	*e*P	**Pn**	**16 46 46.7**	**+0.4**
PETK	**Petropavlovsk-**	**2.06**	**324**	Pn	**Pn**	**16 46 47.3**	**+1.0**
	comp=E,68nm,0.3s,baz=124,slow=16,SNR=737						
PETK				Sn	**Sn**	**16 47 15.2**	**+4.4**
	comp=E,56nm,0.3s,baz=118,slow=25,SNR=6.6						
SKR	**Severo-Kuril's**	**2.41**	**252**	*e*PN	**Pn**	**16 46 48.2**	**-2.9**
SKR				*e*S	**Sn**	**16 47 16.9**	**-2.4**
SKR				pmax	pmax		
	comp=Z,180nm,0.5s						
SKR				pmax	pmax		
	comp=N,90nm,0.2s						
SKR				pmax	pmax		
	comp=E,240nm,0.2s						
SKR				smax			
	comp=N,1μm,0.5s						
SKR				smax			
	comp=E,620nm,0.5s						
GNL	**Ganaly**	**2.48**	**335**	*i*P	**Pn**	**16 46 52.9**	**+0.8**
GNL				*i*S	**Sn**	**16 47 21.6**	**+0.5**
KII	**Karymskiy**	**2.58**	**356**	P	**Pn**	**16 46 54.4**	**+1.0**
KII				*i*S	**Sn**	**16 47 24.1**	**+0.6**
ALID	**Alaid**	**2.70**	**259**	*i*P	**Pn**	**16 46 55.8**	**+0.8**
ALID				*i*S	**Sn**	**16 47 26.3**	**-0.1**
MKZ	**Mys Kozlova**	**3.32**	**21**	*i*P	**Pn**	**16 47 02.4**	**-1.2**
MKZ				*i*S	**Sn**	**16 47 38.1**	**-3.7**
KMNR	**Kamenistaya**	**4.31**	**4**	P	**Pn**	**16 47 18.9**	**+1.8**
KPT	**Kopyto**	**4.52**	**4**	P	**Pn**	**16 47 21.3**	**+1.3**
BZGR	**Bezymyannyi-Gr**	**4.52**	**7**	P	**Pn**	**16 47 21.5**	**+1.5**
KOZ	**Kozyrevsk**	**4.60**	**1**	P	**Pn**	**16 47 20.4**	**-0.7**
ZLN	**Zelenaya**	**4.60**	**8**	P	**Pn**	**16 47 20.6**	**-0.6**
KOZR	**Kozyr**	**4.61**	**1**	PN	**Pn**	**16 47 20.4**	**-0.9**
KRSR	**Krestovskiy**	**4.79**	**6**	P	**Pn**	**16 47 23.3**	**-0.4**
SRDR	**Sredinnyy**	**4.86**	**360**	P	**Pn**	**16 47 24.7**	**0.0**
KBTR	**Krutoberegovo**	**5.09**	**20**	P	**Pn**	**16 47 27.2**	**-0.7**
KBTR				*i*S	**Sn**	**16 48 21.0**	**-4.3**
FX1	**Attu Island--F**	**8.38**	**75**	Pn	**Pn**	**16 48 12.4**	**-0.6**
	comp=E,22nm,0.3s,baz=258,slow=2.3,SNR=183						
FX1				Sn	**Sn**	**16 49 40.6**	**-5.7**
	comp=E,24nm,0.3s,baz=134,slow=21,SNR=16						
FX1				LR	LR	16 51 17.1	
	comp=E,75nm,19.4s,baz=37,slow=36						
ASAJ	**Asahikawa**	**13.64**	**244**	Pn	**Pn**	**16 49 25.9**	**+1.0**
	comp=E,0.6nm,0.3s,baz=71,slow=13,SNR=7.3						
ASAJ	**Asahikawa**	**13.64**	**244**	P	**Pn**	**16 49 26.0**	**+1.0**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
HABR	**Khabarovsk**	**16.13**	**269**	P	**Pn**	**16 49 55.0**	**-3.0**
HABR				*e*		16 52 54.7	
HABR				pmax	pmax		
	comp=Z,15nm,2.3s						
HABR				MLR	MLR		
	comp=Z,197nm,18.0s						
BILL	**Bilibino**	**16.93**	**8**	⇓*e*P	**Pn**	**16 50 06.1**	**-1.8**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.6s						
BILL				MLR	MLR		
	comp=Z,200nm,17.0s						
KLR	**Kul'dur**	**17.95**	**274**	*e*P	**Pn**	**16 50 19.4**	**-1.2**
KLR				MLR	MLR		
	comp=Z,600nm,14.0s						
YAK	**Yakutsk**	**19.38**	**315**	*e*P	**Pn**	**16 50 34.1**	**-3.7**
YAK				*e*S	**S**	**16 54 17.2**	**+3.8**
YAK				pmax	pmax		
	comp=Z,35nm,0.9s						
YAK				pmax	pmax		
	comp=E,11nm,1.1s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.4s						
YAK				smax			
	comp=N,51nm,3.8s						
YAK				smax			
	comp=E,12nm,1.4s						
YAK				MLR	MLR		
	comp=Z,143nm,14.0s						
YAK				MLR	MLR		
	comp=N,78nm,12.0s						
YAK				MLR	MLR		
	comp=E,82nm,12.0s						
YAK	**Yakutsk**	**19.38**	**315**	*e*P	**Pn**	**16 50 33.9**	**-3.9**
	comp=E,45nm,0.8s						
VLA	**Vladivostok**	**20.55**	**257**	*e*P	**P**	**16 50 46.5**	**-2.8**
VLA				pmax	pmax		
	comp=Z,24nm,2.0s						
MAJO	**Matsushiro**	**21.38**	**234**	*e*P	**P**	**16 51 00.0**	**+1.6**
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.2						
MAJO	**Mat

AKTO	Aktyubinsk	58.76	313	P	P	16 56 06.5	-1.5
	comp=Z,0.9nm,0.4s,mb4.2,baz=70,slow=10,SNR=4.3						
JOF	Joensuu	58.95	335	*e*p	P	16 56 08.9	-0.2
	comp=Z,1.9nm,0.3s,mb4.6						
KAF	Kangasniemi	60.90	337	*e*p	P	16 56 22.3	-0.2
	comp=Z,5.5nm,0.6s,mb4.9						
FINES	FINESS Array B	61.53	337	P	P	16 56 26.1	-0.7
	comp=Z,2.6nm,0.5s,mb4.6,baz=41,slow=6.4,SNR=16						
NB2	NORSAR Subarra	65.04	344	P	P	16 56 50.3	+0.3
	comp=Z,2.6nm,0.7s,mb4.4,baz=23,slow=6.9						
NOA	NORSAR Array B	65.04	344	P	P	16 56 49.4	-0.6
	comp=Z,2.3nm,0.7s,mb4.3,baz=20,slow=6.7,SNR=11						
NOA				LR	LR	17 27 56.3	
	comp=Z,12nm,18.2s,MS3.1,baz=285,slow=39						
NOA	NORSAR Array B	65.04	344	P	P	16 56 49.4	-0.6
NOA				LR	LR	17 27 56.3	
AKASG	Malin Array Be	69.89	329	P	P	16 57 20.6	-0.3
	comp=Z,4.6nm,0.4s,mb4.7,baz=30,slow=6.1,SNR=24						
TXAR	Lajitas Array	71.49	66	P	P	16 57 33.2	+2.2
	comp=Z,0.3nm,0.7s,mb3.3,baz=312,slow=5.7,SNR=4.5						
GNI	Garni	72.63	313	*ce*P	P	16 57 35.2	-2.4
GNI				pmax	pmax		
	comp=Z,11nm,1.2s						
STHS	Stebnicka Huta	73.44	333	*e*P	P	16 57 43.6	+1.4
STHS				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
STHS	Stebnicka Huta	73.44	333	*e*P	P	16 57 43.6	+1.4
	comp=Z,2.5nm,0.7s,mb4.2						
KOLS	Kolonicke sedl	73.58	332	*e*P	P	16 57 44.1	+1.0
KOLS				pmax	pmax		
	comp=Z,7.0nm,1.6s,mb4.3						
KOLS	Kolonicke sedl	73.58	332	*e*P	P	16 57 44.1	+1.0
	comp=Z,6.8nm,1.6s,mb4.3						
CLL	Collm	73.80	339	*e*P	P	16 57 45.0	+0.8
DPC	Dobruska-Polom	73.90	337	*e*P	P	16 57 47.0	+2.1
DPC	Dobruska-Polom	73.90	337	*e*P	P	16 57 47.0	+2.1
KECS	Kecovo	74.50	333	*e*P	P	16 57 49.8	+1.4
KECS				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
KECS	Kecovo	74.50	333	*e*P	P	16 57 49.8	+1.4
	comp=Z,1.2nm,0.7s,mb3.9						
KECS	Kecovo	74.50	333	*e*P	P	16 57 49.8	+1.4
VYHS	Vyhne	74.95	334	*e*P	P	16 57 52.3	+1.3
VYHS				pmax	pmax		
	comp=Z,23nm,3.1s						
VYHS	Vyhne	74.95	334	*e*P	P	16 57 52.3	+1.3
	comp=Z,23nm,3.1s						
KHC	Kasperske Hory	75.70	338	*e*P	P	16 57 57.3	+2.0
KHC	Kasperske Hory	75.70	338	*e*P	P	16 57 57.3	+2.0
GERES	GERESS Array B	75.94	338	P	P	16 57 57.1	+0.4
	comp=Z,0.8nm,0.6s,mb3.8,baz=23,slow=4.4,SNR=5.5						
BR131	Keskin Array B	77.73	320	*e*P	P	16 58 07.8	+0.9
	comp=Z,3.9nm,1.0s,mb4.3						
BRTR	Keskin Array B	77.73	320	P	P	16 58 08.0	+1.1
	comp=Z,3.4nm,0.8s,mb4.3,baz=41,slow=4.6,SNR=12						
ASAR	Alice Springs	78.18	204	P	P	16 58 11.6	+2.2
	comp=Z,0.5nm,0.6s,mb3.6,baz=17,slow=5.2,SNR=15						
MIB	Mutribah	79.71	305	*e*P	P	16 58 17.2	-0.7
MIB				AMb	AMB	16 58 18.9	
	comp=Z,31nm,1.0s,mb5.2						
NAY	Al-Naaiem	80.20	305	*e*P	P	16 58 20.3	-0.3
NAY				AMb	AMB	16 58 21.2	
	comp=Z,11nm,0.8s,mb4.8						
RDF	Al-Radifah	80.31	305	*e*P	P	16 58 21.1	-0.1
RDF				AMb	AMB	16 58 22.5	
	comp=Z,43nm,1.1s,mb5.3						
MMAI	Mount Meron Ar	82.72	316	P	P	16 58 35.1	+1.2
	comp=Z,3.3nm,0.6s,mb4.6,baz=36,slow=6.1,SNR=10						

IDC ***02*** *17:24:00.5±1.2, 31°.16N×103°.73E, h0km, mb3.7/6, mb1 3.8/7, mb1mx3.5/25, mbtmp3.7/7, ML3.2/1, MS2.8/1, Ms1 2.8/1, ms1mx2.2/39, Error ellipse: s-maj=41.7km s-min=20.6km az=51.0*

ISCJB ***02*** *17:24:00.6±0.5, 31°.24N±0°.04×103°.80E±0°.07, h10km, mb3.8/7, Error ellipse: s-maj=9.2km s-min=5.0km az=18.6*

NEIC ***02*** *17:24:02.6±0.6, 31°.30N×103°.85E, h10km, mb4.5/1, Error ellipse: s-maj=15.5km s-min=10.0km az=66.0*

BJI ***02*** *17:24:04.3, 31°.19N×103°.84E, h15km, mB4.3/3, mb4.3/4, ML3.5/16, Ms3.5/3, Ms7 3.3/3*

ISC 02 17:24:02.4±0.5, 31°.23N±0°.04×103°.76E±0°.07, h10km, n17, σ0s80/23, mb3.8/7, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.31	180	⇓*i*Pg	Pg	17 24 08.0	-0.7
CD2				Sg	Sg	17 24 12.9	0.0
CD2				smax			
	comp=N,9μm,0.8s						
CD2				smax			
	comp=E,28μm,0.6s						
LZH	Lanzhou	4.85	1	Pg	Pg	17 25 30.5	-4.8
LZH				Sg	Sg	17 26 33.0	-5.2
LZH				smax			
	comp=N,40nm,0.7s						
LZH				smax			
	comp=E,72nm,0.8s						
LZH				LR	LR		
	comp=E,180nm,6.3s						
LZH				LR	LR		
	comp=Z,240nm,7.3s						
ENH	Enshi	5.02	99	*e*P	Pn	17 25 18.4	+0.5
XAN	Xi'an	5.18	56	Pn	Pn	17 25 18.6	-1.4
XAN				Pg	Pg	17 25 36.4	-5.3
XAN				Sn	Sn	17 26 20.5	+0.6
XAN				Sg	Sg	17 26 40.2	-8.6
XAN				smax			
	comp=N,100nm,0.8s						
XAN				smax			
	comp=E,53nm,0.9s						
GYA	Guiyang	5.39	151	Pn	Pn	17 25 27.7	+4.8
GYA				smax			
	comp=N,100nm,0.8s						
GYA				smax			
	comp=E,110nm,0.7s						
KMI	Kunming	6.14	189	Pn	Pn	17 25 28.9	-4.4
KMI				Sn	Sn	17 26 43.6	0.0
KMI				smax			
	comp=N,25nm,1.4s						
KMI				smax			
	comp=E,23nm,1.5s						
KMI				LR	LR		
	comp=Z,150nm,8.3s						
WHN	Wuhan	9.13	92	P	Pn	17 26 14.5	+0.3
WHN				LR	LR		
	comp=N,470nm,9.9s						
WHN				LR	LR		
	comp=E,550nm,5.0s						
CMAR	Chiang Mai Arr	13.44	200	Pn	Pn	17 27 15.9	+2.6
	comp=E,0.0nm,0.3s,baz=20,slow=13,SNR=4.3						
SONM	Songino Array	16.71	6	Pn	Pn	17 27 55.9	-0.7
	comp=E,0.1nm,0.3s,baz=182,slow=12,SNR=7.0						
KSRS	Korea Array	20.87	66	P	P	17 28 44.8	+0.2
	comp=E,2.3nm,0.7s,baz=260,slow=10,SNR=9.0						
CN2	Changchun	21.22	48	*e*P	P	17 28 49.2	+0.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2						
MKAR	Makanchi Array	22.69	319	P	P	17 29 04.5	+0.5
	comp=Z,0.8nm,0.6s,mb3.3,baz=119,slow=11,SNR=9.5						
ZALV	Zalesovo Beam	26.48	335	P	P	17 29 39.8	+0.1
	comp=Z,1.0nm,0.7s,mb3.5,baz=128,slow=9.6,SNR=7.0						
ZALV				LR	LR	17 41 19.4	
	comp=Z,20nm,19.4s,baz=144,slow=39						
KURK	Kurchatov	26.97	323	P	P	17 29 44.1	0.0
	comp=Z,1.2nm,0.8s,mb3.5,baz=126,slow=9.7,SNR=10.0						
ARCES	ARCESS Array B	57.03	336	P	P	17 33 47.6	-0.4
	comp=Z,0.6nm,0.4s,mb4.0,baz=96,slow=8.7,SNR=5.3						
WRAB	Tennant Creek	58.74	146	*e*P	P	17 33 59.7	-0.9
	comp=Z,3.4nm,0.8s,mb4.4						
ASAR	Alice Springs	61.75	148	P	P	17 34 20.6	-0.6
	comp=Z,0.8nm,0.9s,mb3.8,baz=332,slow=6.5,SNR=11						

THE ***02*** *17:24:21.8, 40°.17N×26°.95E, h0km±1km, ML3.7/3, Error ellipse: s-maj=2.3km s-min=0.3km az=89.0*

NEIC ***02*** *17:24:21.6, 40°.17N×26°.99E, h28km, MD3.4(ATH), MD3.2(ISK), After ATH.*

ISK ***02*** *17:24:21.4, 40°.19N×26°.90E, h5km, MD3.3*

ATH ***02*** *17:24:21.6, 40°.17N×26°.99E, h28km±5km, MD3.4/6*

ISCJB ***02*** *17:24:22.0±0.4, 40°.18N±0°.02×26°.87E±0°.02, h2km±3km, Error ellipse: s-maj=2.8km s-min=2.4km az=39.6*

SOF ***02*** *17:24:22.1, 40°.26N×26°.79E, h4km, MD3.0*

DDA ***02*** *17:24:22.4, 40°.20N×26°.90E, h16km, Md3.3*

CSEM ***02*** *17:24:22.5±0.1, 40°.17N×26°.87E, h5km, MD3.3, Error ellipse: s-maj=2.3km s-min=2.0km az=30.0*

ISC 02 17:24:22.8±0.3, 40°.18N±0°.02×26°.88E±0°.02, h5km±3km, n131, σ0s87/181, 4C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPK	Lapseki	0.21	335	*e*PG	Pg	17 24 26.6	-0.4
LPK				SG	Sg	17 24 30.3	+0.5
LPK	Lapseki	0.21	335	*e*Pg	Pg	17 24 26.6	-0.4
LPK				*i* Sg	Sg	17 24 30.3	+0.5
EZN	Ezine	0.55	230	*e*PG	Pg	17 24 33.4	-0.1
EZN	Ezine	0.55	230	*e*Pg	Pg	17 24 33.4	0.0
RKY	Sarkoy-Tekirda	0.56	24	*e*PG	Pg	17 24 33.1	-0.4
RKY				*e*SG	Sg	17 24 41.3	+0.6
RKY	Sarkoy-Tekirda	0.56	24	*e*Pg	Pg	17 24 33.1	-0.4
RKY				*e*Sg	Sg	17 24 41.3	+0.6
BALY	Balya	0.72	127	*i* P	Pg	17 24 36.2	-0.4
BALY				*i* S	Sg	17 24 45.9	-0.1
BALY	Balya	0.72	127	*i* P	Pg	17 24 36.2	-0.4
BALY				*i* S	Sg	17 24 45.9	0.0
GADA	Gvkgeada	0.75	271	*e*PG	Pg	17 24 37.3	+0.1
GADA	Gvkgeada	0.75	271	*e*Pg	Pg	17 24 37.3	+0.1
EDC	Edincik	0.77	77	*e*PG	Pg	17 24 36.4	-1.2
EDC	Edincik	0.77	77	*e*Pg	Pg	17 24 36.4	-1.2
ENEZ	Enez	0.78	315	*e*PG	Pg	17 24 38.0	+0.1
ENEZ				*e*SG	Sg	17 24 49.2	+1.2
ENEZ	Enez	0.78	315	*e*Pg	Pg	17 24 38.0	+0.1
ENEZ				*e*Sg	Sg	17 24 49.2	+1.1
BNT	Bandirma	0.82	77	*e*PG	Pg	17 24 37.1	-1.3
AYVA	Ayvalik	0.88	190	*i* P	Pg	17 24 39.4	-0.4
AYVA				*i* S	Sg	17 24 52.6	+1.4
AYVA	Ayvalik	0.88	190	*i* P	Pg	17 24 39.4	-0.4
AYVA				*i* S	Sg	17 24 52.6	+1.4
BALB	Balikesir	0.94	125	*e*PG	Pg	17 24 39.8	-1.1
BALB	Balikesir	0.94	125	*e*Pg	Pg	17 24 39.8	-1.0
TKR	Tekirdag	0.95	32	*e*PG	Pg	17 24 40.5	-0.5
TKR				*e*SG	Sg	17 24 54.2	+0.8
TKR	Tekirdag	0.95	32	*e*Pg	Pg	17 24 40.5	-0.6
TKR				*e*Sg	Sg	17 24 54.2	+0.8
ALN	Alexandroupoli	0.96	319	*e*Pn	Pg	17 24 40.7	-0.5
ALN				*e*Sn	Sg	17 24 54.5	+0.9
ALN	Alexandroupoli	0.96	319	P	Pg	17 24 40.7	-0.5
ALN				S	Sg	17 24 55.5	+1.9
ALN	Alexandroupoli	0.96	319	*e*PN	Pg	17 24 40.7	-0.5
ALN				*e*SN	Sg	17 24 54.5	+0.9
ALN	Alexandroupoli	0.96	319	P	Pg	17 24 40.7	-0.5
ALN				*e*Sn	Sg	17 24 54.5	+0.9
ALN				S	Sg	17 24 55.5	+1.9
PRK	Paraskevi	1.04	207	*e*Pn	Pg	17 24 42.3	-0.5
PRK				*e*Sn	Sg	17 24 56.9	+0.5
PRK	Paraskevi	1.04	207	P	Pg	17 24 42.0	-0.8
PRK				S	Sg	17 24 57.8	+1.4
PRK	Paraskevi	1.04	207	*e*PN	Pg	17 24 42.3	-0.5
PRK				*e*SN	Sg	17 24 56.9	+0.5
PRK	Paraskevi	1.04	207	P	Pg	17 24 42.0	-0.8
PRK	Paraskevi	1.04	207	*e*Pn	Pg	17 24 42.3	-0.5
PRK				*e*Sn	Sg	17 24 56.9	+0.5
PRK				S	Sg	17 24 57.8	+1.4
KCT	Karacabey	1.14	85	*e*PN	Pg	17 24 43.6	-1.0
KCT	Karacabey	1.14	85	*e*Pn	Pg	17 24 43.6	-1.0
CRLT	Corlu	1.15	34	*e*PN	Pn	17 24 44.4	-1.2
CRLT				*e*SN	Sn	17 25 00.9	-0.8
CRLT	Corlu	1.15	34	*e*Pn	Pn	17 24 44.4	-1.2
CRLT				*e*Sn	Sn	17 25 00.9	-0.8
SIGR	SIGRI	1.25	220	P	Pg	17 24 45.6	-1.2
SIGR				S	Sg	17 25 04.3	+1.4
SIGR	SIGRI	1.25	220	P	Pg	17 24 45.6	-1.2
SIGR				S	Sg	17 25 04.3	+1.4
LIA	Limnos Island	1.33	258	*e*Pn	Pn	17 24 47.5	-0.6
LIA				*e*Sn	Sn	17 25 06.5	+0.3
LIA	Limnos Island	1.33	258	P	Pn	17 24 47.5	-0.6
LIA				S	Sg	17 25 07.3	+1.7
LIA	Limnos Island	1.33	258	*e*PN	Pn	17 24 47.5	-0.6
LIA				*e*SN	Sn	17 25 06.5	+0.3
LIA	Limnos Island	1.33	258	P	Pn	17 24 47.5	-0.6
LIA				*e*Sn	Sn	17 25 06.5	+0.3
LIA				S	Sg	17 25 07.3	+1.7
DURS	Dursunbey	1.36	115	*i* P	Pn	17 24 47.7	-0.7
DURS				*i* S	Sb	17 25 06.8	+0.4
DURS	Dursunbey	1.36	115	*i* P	Pn	17 24 47.7	-0.7
DURS				*i* S	Sb	17 25 06.8	+0.4
RDO	Rodhopi	1.40	314	*e*Pn	Pn	17 24 48.8	-0.3
RDO				*e*Sn	Sn	17 25 08.5	+0.5
RDO	Rodhopi	1.40	314	P	Pn	17 24 48.4	-0.7
RDO				S	Sb	17 25 09.0	+1.3
RDO	Rodhopi	1.40	314	*e*PN	Pn	17 24 48.8	-0.3
RDO				*e*SN	Sn	17 25 08.5	+0.5
RDO	Rodhopi	1.40	314	P	Pn	17 24 48.4	-0.7
RDO	Rodhopi	1.40	314	*e*Pn	Pn	17 24 48.8	-0.3
RDO				*e*Sn	Sn	17 25 08.5	+0.5
RDO				S	Sb	17 25 09.0	+1.3
DST	Dursunbey	1.46	113	*e*PN	Pn	17 24 49.8	0.0
DST	Dursunbey	1.46	113	*e*Pn	Pn	17 24 49.8	0.0
SLVT	Silivri	1.46	44	*e*PN	Pn	17 24 49.6	-0.2
SLVT	Silivri	1.46	44	*e*Pn	Pn	17 24 49.6	-0.2
AKS	Akhisar	1.49	151	*e*PN	Pn	17 24 50.3	+0.1
AKS	Akhisar	1.49	151	*e*Pn	Pn	17 24 50.3	+0.1
AKHS	Akhisar	1.49	151	*i* P	Pn	17 24 49.3	-0.9
AKHS				*i* S	Sn	17 25 11.2	+1.2
AKHS	Akhisar	1.49	151	*i* P	Pn	17 24 49.3	-0.9
AKHS				*i* S	Sn	17 25 11.2	+1.2
CTKS	Kestanelik-??a	1.63	49	*e*PN	Pn	17 24 52.0	-0.1
CTKS	Kestanelik-??a	1.63	49	*e*Pn	Pn	17 24 52.0	-0.1
EDRB	Edirne	1.67	357	*e*PN	Pn	17 24 52.8	+0.1
EDRB	Edirne	1.67	357	*e*Pn	Pn	17 24 52.8	+0.1
ULDT	Uludag	1.73	91	*i* P	Pn	17 24 52.7	-0.9
ULDT				*i* S	Sn	17 25 18.5	+2.5
ULDT	Uludag	1.73	91	*i* P	Pn	17 24 52.7	-0.9
ULDT				*i* S	Sn	17 25 18.5	+2.5
BGKT	Bogazkoy	1.75	55	*e*PN	Pn	17 24 53.9	+0.1
BGKT	Bogazkoy	1.75	55	*e*Pn	Pn	17 24 53.9	0.0
GEMT	Gemlik	1.79	81	*e*PN	Pn	17 24 55.1	+0.8
GEMT	Gemlik	1.79	81	*e*Pn	Pn	17 24 55.1	+0.8
BLCB	Balcova	1.80	176	*e*PN	Pn	17 24 54.9	+0.4
BLCB	Balcova	1.80	176	*e*Pn	Pn	17 24 54.9	+0.4
IZM	Izmir	1.81	170	*e*PN	Pn	17 24 55.3	+0.7
IZM	Izmir	1.81	170	*e*Pn	Pn	17 24 55.3	+0.7
DEMI	Demirci	1.82	128	*i* P	Pn	17 24 54.2	-0.5
DEMI				*i* S	Sn	17 25 19.8	+1.6
DEMI	Demirci	1.82	128	*i* P	Pn	17 24 54.2	-0.6
DEMI				*i* S	Sn	17 25 19.8	+1.6
KDZ	Kurdzhali	1.84	323	P	Pn	17 24 54.6	-0.5
KDZ	Kurdzhali	1.84	323	P	Pn	17 24 54.6	-0.5
ISK	Istanbul-Kandi	1.88	61	*e*PN	Pn	17 24 55.9	+0.2
ISK	Istanbul-Kandi	1.88	61	*e*Pn	Pn	17 24 55.9	+0.3
CHOS	Chios island	1.90	200	P	Pn	17 24 54.6	-1.3
CHOS	Chios island	1.90	200	*e*PB	Pn	17 24 54.6	-1.3
CHOS	Chios island	1.90	200	*e*Pb	Pn	17 24 54.6	-1.3
YLV	Yalova	1.94	78	*e*PN	Pn	17 24 57.1	+0.7
YLV	Yalova	1.94	78	*e*Pn	Pn	17 24 57.2	+0.7
KLYT	Kilyos	1.96	56	*e*PN	Pn	17 24 57.3	+0.6
KLYT	Kilyos	1.96	56	*e*Pn	Pn	17 24 57.3	+0.6
KAVA	Kavala	1.98	295	P	Pn	17 24 56.4	-0.5
KAVA	Kavala	1.98	295	P	Pn	17 24 56.4	-0.5
KULA	Kula-Manisa	2.16	140	*e*PN	Pn	17 25 00.4	+0.9
KULA	Kula-Manisa	2.16	140	*e*Pn	Pn	17 25 00.4	+0.9
ADVT	Abdulvahap	2.20	82	*e*PN	Pn	17 25 00.6	+0.5
ADVT	Abdulvahap	2.20	82	*e*Pn	Pn	17 25 00.5	+0.5
OUR	Ouranopolis	2.22	275	P	Pn	17 24 59.2	-1.1
OUR	Ouranopolis	2.22	275	P	Pn	17 24 59.2	-1.1
RZN	Rozhen	2.23	313	P	Pn	17 25 00.1	-0.3
RZN	Rozhen	2.23	313	P	Pn	17 25 00.1	-0.3
JMB	Yambol	2.29	355	P	Pn	17 25 00.8	-0.5
JMB	Yambol	2.29	355	P	Pn	17 25 02.0	+0.7
JMB	Yambol	2.29	355	P	Pn	17 25 00.8	-0.5
SILT	Sile	2.32	64	*e*PN	Pn	17 25 02.2	+0.6
SILT	Sile	2.32	64	*e*Pn	Pn	17 25 02.2	+0.6
SMG	Samos	2.47	181	*e*Pn	Pn	17 25 02.1	-1.6
SMG	Samos	2.47	181	*e*PN	Pn	17 25 02.1	-1.6
SMG	Samos	2.47	181	*e*Pn	Pn	17 25 02.1	-1.6
NVR	Nevrokopi	2.57	298	*e*Pn	Pn	17 25 04.8	-0.3
NVR				*e*Sn	Sn	17 25 35.4	-1.4
NVR	Nevrokopi	2.57	298	*e*PN	Pn	17 25 04.8	-0.3
NVR				*e*SN	Sn	17 25 35.4	-1.4
NVR	Nevrokopi	2.57	298	*e*Pn	Pn	17 25 04.8	-0.3
NVR				*e*Sn	Sn	17 25 35.4	-1.4
PLG	Polygyros	2.63	275	*e*Pn	Pn	17 25 05.6	-0.4
PLG				*e*Sn	Sn	17 25 37.0	-1.3
PLG	Polygyros	2.63	275	*e*PN	Pn	17 25 05.6	-0.4
PLG				*e*SN	Sn	17 25 37.0	-1.3
PLG	Polygyros	2.63	275	*e*Pn	Pn	17 25 05.6	-0.4
PLG				*e*Sn	Sn	17 25 37.0	-1.3
SRS	Serrai	2.67	292	P	Pn	17 25 05.8	-0.7
SRS	Serrai	2.67	292	P	Pn	17 25 05.8	-0.7
ALT	Altintas	2.74	113	*e*PN	Pn	17 25 07.7	+0.3
ALT	Altintas	2.74	113	*e*Pn	Pn	17 25 07.7	+0.3
MMB	Musomiste	2.77	302	P	Pn	17 25 07.4	-0.5
MMB	Musomiste	2.77	302	P	Pn	17 25 07.4	-0.5
GULT	Gulveren	2.79	84	*e*PN	Pn	17 25 08.9	+0.8
GULT	Gulveren	2.79	84	*e*Pn	Pn	17 25 08.9	+0.8
ESKT	Eskisehir	3.13	101	*e*PN	Pn	17 25 12.8	+0.1
ESKT	Eskisehir	3.13	101	*e*Pn	Pn	17 25 12.8	0.0
PVL	Pavlikeni	3.25	340	P	Pn	17 25 13.5	-0.9
PVL	Pavlikeni	3.25	340	P	Pn	17 25 13.5	-0.9
APE	Apeiranthos	3.28	199	*e*Pn	Pn	17 25 13.5	-1.4
APE	Apeiranthos	3.28	199	*e*PN	Pn	17 25 13.5	-1.4
APE	Apeiranthos	3.28	199	*e*Pn	Pn	17 25 13.5	-1.4
MDU	Mudurnu	3.33	84	*e*PN	Pn	17 25 16.6	+1.1
MDU	Mudurnu	3.33	84	*e*Pn	Pn	17 25 16.6	+1.1
KKB	Krupnik	3.33	302	P	Pn	17 25 15.9	+0.4
KKB	Krupnik	3.33	302	P	Pn	17 25 15.9	+0.4
VTS	Vitosha	3.66	312	P	Pn	17 25 20.4	+0.3
VTS	Vitosha	3.66	312	P	Pn	17 25 20.4	+0.3
TIRR	Tirgusor	4.42	14	⇑*i*P	Pg	17 25 51.5	+4.0
BARS	Barje	4.62	306	⇑*i*Pn	Pn	17 25 33.8	+0.5
NISS		4.89	313	⇑*i*Pn	Pn	17 25 37.9	+0.9
MLR	Muntele Rosu	5.35	353	⇑*i*P	Pn	17 25 46.6	+3.3

IDC ***02*** *17:27:39.0±1.1, 61°.93N×150°.62W, h0km, mb3.9/16, mb1 4.0/18, mb1mx3.9/30, mbtmp3.9/18, ML3.8/2, MS2.9/1, Ms1 2.9/1, ms1mx2.1/39, Error ellipse: s-maj=27.1km s-min=16.7km az=10.0*

NEIC ***02*** *17:27:40.4, 61°.88N×150°.10W, h6km, mb4.2/1, ML3.8(PMR), ML3.6(AEIC), After AEIC.*

NEIC Felt at Palmer and Willow.

ISCJB ***02*** *17:27:40.9±0.5, 61°.88N±0°.03×150°.16W±0°.06, h23km±5km, mb3.9/18, Error ellipse: s-maj=5.1km s-min=4.2km az=27.7*

ISC 02 17:27:40.7±0.6, 61°.87N±0°.03×150°.15W±0°.05, h8km±4km, n63, σ1s09/71, mb3.9/18, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMR	Palmer	0.56	119	P	Pg	17 27 50.9	-0.6
PMR				S	Sg	17 27 58.5	-0.3
GHO	Glory Hole Cre	0.59	99	P	Pg	17 27 50.9	-1.2
SKT	Skwentna	0.66	280	P	Pg	17 27 53.3	-0.1
SKT				S	Sg	17 28 03.0	+1.0
FIB	Fire Island	0.70	181	P	Pg	17 27 55.0	+0.8
FIB				S	Sg	17 28 04.6	+1.1
RC01	Rabbit Creek A	0.81	166	P	Pg	17 27 55.4	-0.8
RC01				S	Sg	17 28 06.6	-0.1
SML	Sawmill	0.86	93	P	Pg	17 27 56.0	-1.4
KNK	Knik Glacier	0.93	119	P	Pg	17 27 57.5	-1.0
SLKM	Skilak Lake	1.37	181	P	Pn	17 28 04.5	-1.5
PPLA	Purkeypile	1.40	318	P	Pn	17 28 06.6	+0.1
PPLA				S	Sb	17 28 26.4	+1.4
KTH	Kantishna Hill	1.73	348	P	Pn	17 28 11.0	0.0
KTH				S	Sn	17 28 34.2	+1.1
SEW	Seward	1.80	169	P	Pn	17 28 12.4	+0.4
RSO	Redoubt South	1.89	223	*e*P	Pn	17 28 13.7	+0.4
DIV	Divide	2.23	108	*e*Pn	Pn	17 28 17.3	-0.6
DIV				*e*Sg	Sg	17 28 48.1	-4.1
CHUM	Lake Minchumin	2.25	335	P	Pn	17 28 18.8	+0.6
BPAW	Bear Paw Mtn.	2.27	351	P	Pn	17 28 18.0	-0.5
PAX	Paxson	2.44	61	P	Pn	17 28 21.3	+0.5
EYAK	Cordova Ski Ar	2.51	120	P	Pn	17 28 23.2	+1.5
SVW2	Sparrevohn	2.72	256	*e*P	Pn	17 28 24.5	-0.1
BMRM	Bremner River	2.82	106	P	Pn	17 28 26.8	+0.9
TT01	Tatalina	2.92	293	P	Pn	17 28 27.5	0.0
TTA	Tatalina	2.93	294	*e*P	Pn	17 28 27.6	+0.1
MID	Middleton Isla	3.09	141	*e*Pg	Pg	17 28 36.5	-3.3
MENT	Mentasta	3.18	67	*e*P	Pn	17 28 32.5	+1.6
COLA	College	3.19	18	P	Pn	17 28 30.6	-0.4
IL1	Eielson Array	3.27	25	P	Pn	17 28 31.5	-0.6
DOT	Dot Lake	3.32	55	P	Pn	17 28 34.9	+2.0

comp=N,197nm,0.3s
CEN1 Los Morros 2.52 281 ‖ *i* P Pn 17 28 43.2 +3.0
CEN1 *i* S S 17 29 20.3 +3.7
CEN1 AML AML 17 29 22.9
comp=N,119nm,0.2s
MACH Maria Elena 2.67 308 *i* S S 17 29 22.3 +2.8
ANCH Antofagasta 2.67 274 ‖ *i* P Pn 17 28 43.5 +1.7
ANCH *i* S S 17 29 20.9 +1.4
ANCH AML AML 17 29 23.8
comp=E,326nm,0.2s
PB01 Plate Boundary 3.37 327 *e*P Pn 17 28 51.2 +1.6
PB01 *i* S S 17 29 35.9 +2.3
PB01 AML AML 17 29 37.0
comp=E,142nm,0.2s
HMBC Humberston 4.21 328 *e*P Pn 17 29 00.9 +1.3
HMBC *i* S S 17 29 53.0 +1.4
HMBC AML AML 17 29 58.1
comp=E,110nm,0.4s

MEX 02 17:27:59.8±1.2, 17°20N×94°55W, h146km±15km, MD4.0, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUIG	**Tuzandepetl**	**0.83**	**8**	*i* P	Pn	17 28 21.8	-1.1
TUIG				*i* S	Sn	17 28 38.0	-2.5
TGIG		**1.43**	**107**	*e*P	Pn	17 28 27.2	-1.1
TGIG				*i* S	Sn	17 28 48.1	-2.0
SCX	**San Cristobal**	**1.89**	**104**	*i* P	Pn	17 28 30.9	-2.5
SCX				*i* S	Sn	17 28 58.6	-0.5
PCIG		**1.96**	**139**	*e*P	Pn	17 28 32.8	-1.5
PCIG				*i* S	Sn	17 28 59.8	-0.9
HUIG	**Huatulco**	**2.07**	**227**	*e*P	Pn	17 28 33.3	-2.2
HUIG				*i* S	Sn	17 29 01.1	-1.8
OXX	**Oaxaca**	**2.08**	**267**	*i* P	Pn	17 28 36.1	+0.5
OXX				*i* S	Sn	17 29 02.2	-0.9
VHO	**Vista Hermosa**	**2.09**	**267**	*e*P	Pn	17 28 35.7	0.0
VHO				*i* S	Sn	17 29 01.6	-1.7
CCIG	**Comitan**	**2.49**	**111**	*i* P	Pn	17 28 40.7	+0.1
CCIG				*i* S	Sn	17 29 10.7	-1.3
TPIG	**Tehuac#an**	**2.94**	**295**	*i* P	Pn	17 28 46.3	+0.1
TPIG				*i* S	Sn	17 29 20.5	-1.5
PNIG	**Pinotepa**	**3.52**	**257**	*i* P	Pn	17 28 51.5	-2.1
PNIG				*i* S	Sn	17 29 32.7	-2.7

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*LDG **02** 17:36:11.1±0.2, 36°.25N×6°.44E, h10km, Ml3.8/11, Error ellipse: s-maj=5.1km s-min=4.2km az=179.0*
*IDC **02** 17:36:11.1±0.8, 36°.23N×6°.46E, h0km, mb3.7/13, mb1 3.9/19, mb1mx3.8/35, mbtmp3.8/19, ML4.0/6, MS3.1/8, Ms1 3.1/8, ms1mx2.9/43, Error ellipse: s-maj=16.3km s-min=13.5km az=165.0*
*CSEM **02** 17:36:12.3±0.3, 36°.46N×6°.55E, h2km, mb4.5/2, Error ellipse: s-maj=7.8km s-min=6.0km az=166.0*
*NEIC **02** 17:36:12.3±1.0, 36°.45N×6°.54E, h1km±8km, mb4.5/2, ML4.1(ALG), Error ellipse: s-maj=7.0km s-min=5.2km az=169.0*
NEIC Felt at Mila.
*ISCJB **02** 17:36:12.1±0.7, 36°.60N±0°.03×6°.46E±0°.03, h9km±5km, mb3.8/13, MS3.0/4, Error ellipse: s-maj=5.1km s-min=3.5km az=177.1*
*STR **02** 17:36:20.8±2.2, 37°.05N×6°.46E, h10km, Ml3.8, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*CRAAG **02** 17:36:10.0, 36°.38N×6°.40E, Ml4.2*

ISC 02 17:36:13.2±0.6, 36°.54N±0°.03×6°.50E±0°.03, h6km±5km, n192, σ1°43/220, mb3.8/13, MS3.0/4, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CKFL	**Kef-Lekhel**	**0.22**	**127**	P	**Pg**	**17 36 16.7**	**-0.9**
CKFL	**Kef-Lekhel**	**0.22**	**127**	P	**Pg**	**17 36 16.7**	**-0.9**
CKFL	**Kef-Lekhel**	**0.22**	**127**	P	**Pg**	**17 36 16.7**	**-0.9**
CKFL	**Kef-Lekhel**	**0.22**	**127**	P	**Pg**	**17 36 16.7**	**-0.9**
CASM	**Ain Smara**	**0.28**	**181**	P	**Pg**	**17 36 14.0**	**-4.6**
CASM	**Ain Smara**	**0.28**	**181**	P	**Pg**	**17 36 14.0**	**-4.6**
CASM	**Ain Smara**	**0.28**	**181**	P	**Pg**	**17 36 14.0**	**-4.6**
CASM	**Ain Smara**	**0.28**	**181**	P	**Pg**	**17 36 14.0**	**-4.6**
CAEH	**'Ain El Ouahch**	**0.37**	**49**	P	**Pg**	**17 36 18.0**	**-2.5**
CAEH	**'Ain El Ouahch**	**0.37**	**49**	P	**Pg**	**17 36 18.0**	**-2.5**
CTEI	**Djebel Teioual**	**0.48**	**189**	P	**Pg**	**17 36 18.2**	**-4.2**
CTEI	**Djebel Teioual**	**0.48**	**189**	P	**Pg**	**17 36 18.2**	**-4.2**
CTEI	**Djebel Teioual**	**0.48**	**189**	P	**Pg**	**17 36 18.2**	**-4.2**
CTEI	**Djebel Teioual**	**0.48**	**189**	P	**Pg**	**17 36 18.2**	**-4.2**
DFRA	**Djebel Bou Aff**	**0.50**	**271**	P	**Pg**	**17 36 21.0**	**-1.8**
DFRA	**Djebel Bou Aff**	**0.50**	**271**	P	**Pg**	**17 36 21.0**	**-1.8**
CMAH	**Djebel Manchou**	**0.75**	**83**	P	**Pg**	**17 36 28.7**	**+1.1**
CMAH	**Djebel Manchou**	**0.75**	**83**	P	**Pg**	**17 36 28.8**	**+1.2**
CMAH	**Djebel Manchou**	**0.75**	**83**	P	**Pg**	**17 36 28.8**	**+1.2**
CMAH	**Djebel Manchou**	**0.75**	**83**	P	**Pg**	**17 36 28.7**	**+1.1**
ABSA	**Djebel Ababsia**	**0.83**	**108**	P	**Pg**	**17 36 29.3**	**+0.1**
ABSA	**Djebel Ababsia**	**0.83**	**108**	P	**Pg**	**17 36 29.3**	**+0.1**
CKHR	**Kef el Ahmar**	**0.95**	**237**	P	**Pg**	**17 36 29.0**	**-2.4**
CKHR	**Kef el Ahmar**	**0.95**	**237**	P	**Pg**	**17 36 29.0**	**-2.4**
AKF	**Akfadou**	**1.56**	**274**	P	**Pn**	**17 36 42.0**	**+0.5**
AKF	**Akfadou**	**1.56**	**274**	P	**Pn**	**17 36 42.0**	**+0.5**
AKET	**Djebel Ketaf**	**2.17**	**258**	P	**Pn**	**17 36 48.0**	**-1.9**
AKET	**Djebel Ketaf**	**2.17**	**258**	P	**Pn**	**17 36 48.0**	**-1.9**
KEST	**Kesra**	**2.44**	**108**	Pn	**Pn**	**17 36 52.9**	**-0.7**
	11nm,0.3s,baz=224,slow=3.8,SNR=95						
KEST				Pg	**Pg**	**17 36 55.0**	**-5.0**
	14nm,0.3s,baz=232,slow=3.5,SNR=120						
KEST				Sn	**Sn**	**17 37 22.4**	**-1.4**
	1.0nm,0.3s,baz=127,slow=23,SNR=1.7						
ADJB	**Djebel Djouab**	**2.50**	**262**	P	**Pn**	**17 36 52.3**	**-2.1**
ADJB	**Djebel Djouab**	**2.50**	**262**	P	**Pn**	**17 36 52.3**	**-2.1**
ABA	**Alger-Bouzarea**	**2.80**	**276**	P	**Pn**	**17 36 57.4**	**-1.1**
ABA	**Alger-Bouzarea**	**2.80**	**276**	P	**Pn**	**17 36 57.4**	**-1.1**
EMHD	**Djebel Mahouad**	**2.88**	**264**	P	**Pn**	**17 36 57.9**	**-1.8**
EMHD	**Djebel Mahouad**	**2.88**	**264**	P	**Pn**	**17 36 57.9**	**-1.8**
VSL	**Villasalto**	**3.73**	**37**	*e*Pn	**Pn**	**17 37 11.9**	**+0.6**
VSL				*e*Sn	**Sn**	**17 37 55.0**	**-0.6**
VSL	**Villasalto**	**3.73**	**37**	*e*Pn	**Pn**	**17 37 11.9**	**+0.6**
VSL				*e*Sn	**Sn**	**17 37 55.0**	**-0.6**
EBNR	**Beni Rached**	**4.01**	**268**	P	**Pn**	**17 37 13.8**	**-1.4**
EBNR	**Beni Rached**	**4.01**	**268**	P	**Pn**	**17 37 13.8**	**-1.4**
ECHA	**Ech Chlef**	**4.16**	**266**	P	**Pn**	**17 37 15.2**	**-2.0**
ECHA	**Ech Chlef**	**4.16**	**266**	P	**Pn**	**17 37 15.2**	**-2.0**
ETOS	**Mallorca**	**4.34**	**319**	P	**Pn**	**17 37 20.7**	**+1.0**
ETOS				S	**Sn**	**17 38 10.8**	**+0.2**
ETOS	**Mallorca**	**4.34**	**319**	P	**Pn**	**17 37 20.7**	**+1.0**
	42nm,0.5s,SNR=56						
ETOS				S	**Sn**	**17 38 10.9**	**+0.3**
ETRT	**Tiaret**	**4.37**	**256**	P	**Pn**	**17 37 18.7**	**-1.4**
ETRT	**Tiaret**	**4.37**	**256**	P	**Pn**	**17 37 18.7**	**-1.4**
EANR	**'Ain N'Sour**	**4.40**	**264**	P	**Pn**	**17 37 18.1**	**-2.5**
EANR	**'Ain N'Sour**	**4.40**	**264**	P	**Pn**	**17 37 18.1**	**-2.5**
EIBI	**Ibiza**	**4.78**	**303**	P	**Pn**	**17 37 26.8**	**+1.1**
EIBI				S	**Sn**	**17 38 19.5**	**-2.0**
EIBI	**Ibiza**	**4.78**	**303**	P	**Pn**	**17 37 26.8**	**+1.0**
	44nm,0.4s,SNR=58						
EIBI				S	**Sn**	**17 38 19.5**	**-2.0**
	38nm,0.3s,SNR=7.9						
OSPF	**L'Ospedale**	**5.53**	**21**	P	**Pn**	**17 37 36.8**	**+0.7**
OSPF				S	**Sn**	**17 38 40.0**	**0.0**
OSPF	**L'Ospedale**	**5.53**	**21**	P	**Pn**	**17 37 36.8**	**+0.7**
OSPF				S	**Sn**	**17 38 40.0**	**0.0**
EBEN	**Beniarda**	**5.76**	**294**	P	**Pn**	**17 37 39.8**	**+0.5**
EBEN	**Beniarda**	**5.76**	**294**	P	**Pn**	**17 37 39.8**	**+0.6**
CART	**Cartagena**	**6.09**	**282**	*e*Pn	**Pn**	**17 37 42.7**	**-1.0**
	101nm,0.5s						
CART	**Cartagena**	**6.09**	**282**	*e*Pn	**Pn**	**17 37 42.7**	**-1.0**
	101nm,0.5s						
CFON	**Fontmartina**	**6.10**	**330**	P	**Pn**	**17 37 43.2**	**-0.7**
CFON				S	**Sn**	**17 38 52.0**	**-2.0**
CFON	**Fontmartina**	**6.10**	**330**	P	**Pn**	**17 37 43.2**	**-0.7**
	9.4nm,0.3s,SNR=7.9						
CFON				S	**Sn**	**17 38 52.0**	**-2.0**
	30nm,0.4s,SNR=7.9						
PGF	**Pioggiola**	**6.31**	**17**	*e*Pn	**Pn**	**17 37 46.8**	**+0.1**
PGF				*e*Sn	**Sn**	**17 38 56.9**	**-2.2**
	42nm,0.5s						
PGF	**Pioggiola**	**6.31**	**17**	*e*Pn	**Pn**	**17 37 46.8**	**+0.1**
PGF				*e*Sn	**Sn**	**17 38 56.9**	**-2.2**
	21nm,0.5s						
EMUR	**La Murta**	**6.31**	**284**	P	**Pn**	**17 37 47.2**	**+0.4**
EMUR	**La Murta**	**6.31**	**284**	P	**Pn**	**17 37 47.2**	**+0.4**
	5.0nm,0.2s,SNR=6.9						
EPOB	**Poblet**	**6.40**	**320**	P	**Pn**	**17 37 49.0**	**+0.9**
EPOB				S	**Sn**	**17 38 57.9**	**-3.5**
EPOB	**Poblet**	**6.40**	**320**	P	**Pn**	**17 37 49.0**	**+1.0**
	0.8nm,0.2s,SNR=6.5						
EJON	**La Jonquera**	**6.53**	**336**	S	**Sn**	**17 39 02.2**	**-2.4**
	1.4nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**6.67**	**307**	P	**Pn**	**17 37 53.4**	**+1.6**
EMOS				S	**Sn**	**17 39 03.7**	**-4.4**
EMOS	**Mosqueruela**	**6.67**	**307**	P	**Pn**	**17 37 53.4**	**+1.7**
	18nm,0.5s,SNR=39						
ETOB	**Tobarra**	**6.73**	**291**	P	**Pn**	**17 37 54.2**	**+1.7**
ETOB	**Tobarra**	**6.73**	**291**	P	**Pn**	**17 37 54.2**	**+1.7**
	20nm,0.5s,SNR=20						
FILF	**Fillols**	**6.74**	**334**	P	**Pn**	**17 37 52.9**	**+0.2**
FILF	**Fillols**	**6.74**	**334**	P	**Pn**	**17 37 52.9**	**+0.2**
LMR	**La Mourre**	**6.79**	**0**	*e*Pn	**Pn**	**17 37 51.5**	**-1.9**
LMR				*e*Sn	**Sn**	**17 39 06.8**	**-4.2**
	9.0nm,0.3s						
LMR	**La Mourre**	**6.79**	**0**	*e*Pn	**Pn**	**17 37 51.5**	**-1.9**
CLLI	**Llivia**	**6.89**	**331**	P	**Pn**	**17 37 55.4**	**+0.7**
CLLI				S	**Sn**	**17 39 11.6**	**-1.8**
CLLI	**Llivia**	**6.89**	**331**	P	**Pn**	**17 37 55.4**	**+0.7**
	17nm,0.4s,SNR=7.9						
CLLI				S	**Sn**	**17 39 11.6**	**-1.8**
	23nm,0.6s,SNR=7.9						
FRF	**La Foret Royal**	**7.02**	**1**	*e*Pn	**Pn**	**17 37 55.6**	**-0.9**
FRF				*e*Sn	**Sn**	**17 39 12.1**	**-4.5**
	12nm,0.5s						
FRF	**La Foret Royal**	**7.02**	**1**	*e*Pn	**Pn**	**17 37 55.6**	**-0.9**
CSOR	**Sort**	**7.16**	**326**	P	**Pn**	**17 37 59.9**	**+1.5**
CSOR				S	**Sn**	**17 39 20.3**	**+0.3**
CSOR	**Sort**	**7.16**	**326**	P	**Pn**	**17 37 59.9**	**+1.5**
	SNR=7.9						
CSOR				S	**Sn**	**17 39 20.3**	**+0.3**
	59nm,0.6s,SNR=7.9						
SBF	**Sospel**	**7.35**	**5**	*e*Pn	**Pn**	**17 37 59.7**	**-1.4**
SBF				*e*Sn	**Sn**	**17 39 20.7**	**-4.1**
	10.0nm,0.3s						
SBF	**Sospel**	**7.35**	**5**	*e*Pn	**Pn**	**17 37 59.7**	**-1.4**
EHUE	**Huescar**	**7.37**	**283**	P	**Pn**	**17 38 01.8**	**+0.4**
EHUE	**Huescar**	**7.37**	**283**	P	**Pn**	**17 38 01.8**	**+0.5**
	6.8nm,0.3s,SNR=7.9						
EVIA	**Vianos**	**7.45**	**289**	P	**Pn**	**17 38 04.1**	**+1.7**
EVIA	**Vianos**	**7.45**	**289**	P	**Pn**	**17 38 04.1**	**+1.7**
	14nm,0.5s,SNR=9.2						
SMRF	**Simiane la Rot**	**7.46**	**355**	*e*Pn	**Pn**	**17 38 03.3**	**+0.7**
SMRF				*e*Sn	**Sn**	**17 39 25.0**	**-2.6**
	9.6nm,0.5s						
SMRF	**Simiane la Rot**	**7.46**	**355**	*e*Pn	**Pn**	**17 38 03.3**	**+0.7**
SMRF				*e*Sn	**Sn**	**17 39 25.0**	**-2.6**
	4.8nm,0.5s						
ESAC	**San Caprasio**	**7.49**	**316**	P	**Pn**	**17 38 04.8**	**+1.9**
ESAC	**San Caprasio**	**7.49**	**316**	P	**Pn**	**17 38 04.8**	**+1.8**
	33nm,0.5s,SNR=8.9						
EBER	**Berja**	**7.55**	**276**	P	**Pn**	**17 38 02.1**	**-1.7**
MTLF	**Montolieu**	**7.55**	**336**	*e*Pn	**Pn**	**17 38 02.1**	**-1.7**
MTLF				*e*Sn	**Sn**	**17 39 23.7**	**-6.0**
	5.9nm,0.4s						
MTLF	**Montolieu**	**7.55**	**336**	*e*Pn	**Pn**	**17 38 02.1**	**-1.7**
MELF	**Melles**	**7.72**	**327**	P	**Pn**	**17 38 07.6**	**+1.5**
MELF	**Melles**	**7.72**	**327**	P	**Pn**	**17 38 07.6**	**+1.5**
EQES	**Quesada**	**7.74**	**282**	P	**Pn**	**17 38 08.7**	**+2.2**
EQES	**Quesada**	**7.74**	**282**	P	**Pn**	**17 38 08.7**	**+2.2**
	8.2nm,0.2s,SNR=34						
LASF	**Ste Croix**	**7.80**	**346**	*e*Pn	**Pn**	**17 38 06.7**	**-0.5**
LASF				*e*Sn	**Sn**	**17 39 30.3**	**-5.4**
	9.5nm,0.5s						
LASF	**Ste Croix**	**7.80**	**346**	*e*Pn	**Pn**	**17 38 06.7**	**-0.5**
EBIE	**Bielsa**	**7.86**	**323**	P	**Pn**	**17 38 10.8**	**+2.7**
EBIE	**Bielsa**	**7.86**	**323**	P	**Pn**	**17 38 10.8**	**+2.8**
	4.1nm,0.5s,SNR=7.8						
ETOR	**Torete**	**7.94**	**305**	P	**Pn**	**17 38 12.1**	**+3.0**
ETOR	**Torete**	**7.94**	**305**	P	**Pn**	**17 38 12.1**	**+3.0**
	6.8nm,0.5s,SNR=7.9						
EQUE	**Quentar**	**7.99**	**278**	P	**Pn**	**17 38 10.1**	**+0.2**
	8.0nm,0.4s,SNR=11						
EPF	**Esparros**	**8.03**	**326**	*e*Pn	**Pn**	**17 38 10.2**	**-0.2**
EPF				*e*Sn	**Sn**	**17 39 35.3**	**-6.2**
	11nm,0.4s						
EPF	**Esparros**	**8.03**	**326**	*e*Pn	**Pn**	**17 38 10.2**	**-0.2**
EGUA	**Guajares**	**8.09**	**275**	P	**Pn**	**17 38 10.9**	**-0.3**
EGUA	**Guajares**	**8.09**	**275**	P	**Pn**	**17 38 10.9**	**-0.3**
	70nm,0.6s,SNR=7.9						
EBAN	**Banos Encina**	**8.35**	**284**	P	**Pn**	**17 38 15.3**	**+0.6**
EBAN	**Banos Encina**	**8.35**	**284**	P	**Pn**	**17 38 15.4**	**+0.6**
	5.2nm,0.2s,SNR=7.9						
ETSF	**Etsaut**	**8.36**	**322**	*e*Pn	**Pn**	**17 38 13.1**	**-1.8**
ETSF				*e*Sn	**Sn**	**17 39 43.0**	**-6.6**
	5.3nm,0.5s						
ETSF	**Etsaut**	**8.36**	**322**	*e*Pn	**Pn**	**17 38 13.1**	**-1.8**
ORIF	**Oris-en-Rattie**	**8.39**	**357**	*e*Pn	**Pn**	**17 38 14.0**	**-1.3**
ORIF	**Oris-en-Rattie**	**8.39**	**357**	*e*Pn	**Pn**	**17 38 14.0**	**-1.3**
VIVF	**Saint-Julien-l**	**8.43**	**351**	*e*Pn	**Pn**	**17 38 14.8**	**-1.0**
VIVF				*e*Sn	**Sn**	**17 39 46.2**	**-5.0**
	12nm,0.4s						
VIVF	**Saint-Julien-l**	**8.43**	**351**	*e*Pn	**Pn**	**17 38 14.8**	**-1.0**
BNI	**Bardonecchia**	**8.51**	**1**	*e*P	**Pn**	**17 38 20.7**	**+3.8**
	8.9nm,0.9s						
BNI	**Bardonecchia**	**8.51**	**1**	*e*P	**Pn**	**17 38 20.7**	**+3.8**
	8.9nm,0.9s						
ELOJ	**Sierra Loja**	**8.56**	**277**	P	**Pn**	**17 38 18.9**	**+1.2**
ELOJ	**Sierra Loja**	**8.56**	**277**	P	**Pn**	**17 38 18.9**	**+1.2**
	4.5nm,0.4s,SNR=7.7						
ESDC	**Sonseca Array**	**8.82**	**294**	Pn	**Pn**	**17 38 22.7**	**+1.5**
	1.5nm,0.3s,baz=103,slow=14,SNR=9.2						
ESDC	**Sonseca Array**	**8.82**	**294**	P	**Pn**	**17 38 23.2**	**+2.0**
ESDC	**Sonseca Array**	**8.82**	**294**	P	**Pn**	**17 38 23.2**	**+2.0**
	0.8nm,0.3s,baz=109,slow=14,SNR=6.7						
ESLA	**Sonseca Array**	**8.82**	**294**	*e*Pn	**Pn**	**17 38 22.5**	**+1.3**
ESLA	**Sonseca Array**	**8.82**	**294**	*e*Pn	**Pn**	**17 38 22.5**	**+1.3**
SJPF	**Ste Jean**	**8.85**	**320**	*e*Pn	**Pn**	**17 38 19.7**	**-2.0**
SJPF				*e*Sn	**Sn**	**17 39 54.7**	**-7.0**
	2.9nm,0.3s						
SJPF	**Ste Jean**	**8.85**	**320**	*e*Pn	**Pn**	**17 38 19.7**	**-2.0**
SSB	**Saint Sauveur**	**8.86**	**351**	*e*Pn	**Pn**	**17 38 21.8**	**0.0**
	5.5nm,0.6s						
SSB	**Saint Sauveur**	**8.86**	**351**	*e*Pn	**Pn**	**17 38 21.8**	**+0.1**
	5.5nm,0.6s						
LPG	**La Plagne**	**8.96**	**1**	*e*Pn	**Pn**	**17 38 23.0**	**-0.1**
LPG	**La Plagne**	**8.96**	**1**	*e*Pn	**Pn**	**17 38 23.0**	**-0.1**
EADA	**Adamuz**	**8.97**	**284**	P	**Pn**	**17 38 23.1**	**-0.2**
EADA	**Adamuz**	**8.97**	**284**	P	**Pn**	**17 38 23.1**	**-0.2**
	1.2nm,0.2s,SNR=7.9						
LBL	**Lubilhac**	**9.03**	**345**	P	**Pn**	**17 38 24.4**	**+0.3**
LBL	**Lubilhac**	**9.03**	**345**	P	**Pn**	**17 38 24.4**	**+0.3**
PAB	**San Pablo**	**9.07**	**293**	*e*Pn	**Pn**	**17 38 25.3**	**+0.7**
PAB	**San Pablo**	**9.07**	**293**	*e*Pn	**Pn**	**17 38 25.3**	**+0.7**
EALK	**Alkurruntz**	**9.07**	**320**	P	**Pn**	**17 38 27.4**	**+2.7**
EALK	**Alkurruntz**	**9.07**	**320**	P	**Pn**	**17 38 27.4**	**+2.7**
	SNR=7.9						
ECRI	**Cripan**	**9.22**	**314**	P	**Pn**	**17 38 28.4**	**+1.6**
ECRI	**Cripan**	**9.22**	**314**	P	**Pn**	**17 38 28.4**	**+1.7**
	4.1nm,0.3s,SNR=7.9						
GUD	**Guadarrama**	**9.29**	**299**	P	**Pn**	**17 38 30.5**	**+2.8**
GUD	**Guadarrama**	**9.29**	**299**	P	**Pn**	**17 38 30.5**	**+2.8**
	4.4nm,0.3s,SNR=7.9						
MDT	**Midelt**	**9.87**	**251**	Pn	**Pn**	**17 38 31.0**	**-4.7**
	0.3nm,0.3s,baz=70,slow=15,SNR=7.6						
MDT				Lg		17 41 24.0	
	0.2nm,0.3s,baz=260,slow=11,SNR=2.0						
MDT				LR	LR	17 42 55.5	
	comp=Z,82nm,18.6s,baz=89,slow=42						
MDT	**Midelt**	**9.87**	**251**	Pn	**Pn**	**17 38 31.0**	**-4.7**
MDT				Lg		17 41 24.0	
ELAN	**Lanestosa**	**10.14**	**314**	P	**Pn**	**17 38 41.2**	**+1.9**
	1.8nm,0.3s						
ELAN	**Lanestosa**	**10.14**	**314**	P	**Pn**	**17 38 41.2**	**+1.9**
	1.8nm,0.3s,SNR=5.5						
DAVOX	**Davos/Dischmat**	**10.54**	**13**	LR	LR	17 42 35.0	
	comp=Z,161nm,20.8s,baz=266,slow=35						
EMIN	**Mina Concepcio**	**10.59**	**281**	P	**Pn**	**17 38 46.0**	**+0.6**
	0.2nm,0.3s						
EMIN	**Mina Concepcio**	**10.59**	**281**	P	**Pn**	**17 38 46.0**	**+0.6**
	0.2nm,0.3s,SNR=7.9						
EARI	**Arriondas**	**11.24**	**311**	P	**Pn**	**17 38 56.9**	**+2.5**
EARI	**Arriondas**	**11.24**	**311**	P	**Pn**	**17 38 56.9**	**+2.6**
	SNR=7.9						
ECAL	**Calabor**	**11.59**	**302**	P	**Pn**	**17 39 01.4**	**+2.2**
ECAL	**Calabor**	**11.59**	**302**	P	**Pn**	**17 39 01.4**	**+2.2**
	SNR=7.9						
GERES	**GERESS Array B**	**13.38**	**21**	Pn	**Pn**	**17 39 26.4**	**+2.8**
	0.2nm,0.3s,baz=194,slow=10.0,SNR=4.3						
GERES				LR	LR	17 44 45.2	
	comp=Z,66nm,19.8s,baz=178,slow=38						
GERES	**GERESS Array B**	**13.38**	**21**	Pn	**Pn**	**17 39 26.4**	**+2.8**
VRAC	**Vranov**	**14.73**	**27**	Pn	**Pn**	**17 39 45.3**	**+3.3**
	0.2nm,0.3s,baz=135,slow=16,SNR=2.3						
VRAC				LR	LR	17 45 55.9	
	comp=Z,127nm,18.8s,baz=212,slow=39						
VRAC	**Vranov**	**14.73**	**27**	Pn	**Pn**	**17 39 45.3**	**+3.3**
MLR	**Muntele Rosu**	**17.16**	**53**	Pn	**Pn**	**17 40 15.9**	**+2.5**
	0.2nm,0.3s,baz=97,slow=8.1,SNR=2.6						
MLR	**Muntele Rosu**	**17.16**	**53**	Pn	**Pn**	**17 40 15.9**	**+2.4**
EKA	**Eskdalemuir Ar**	**19.93**	**344**	P	**Pn**	**17 40 47.4**	**+0.3**
	1.7nm,0.9s,baz=154,slow=10,SNR=7.8						
EKA	**Eskdalemuir Ar**	**19.93**	**344**	P	**Pn**	**17 40 47.4**	**+0.2**
BRTR	**Keskin Array B**	**21.56**	**73**	P	**P**	**17 41 05.3**	**+2.0**
	2.5nm,0.8s,mb3.7,baz=268,slow=9.7,SNR=11						
BRTR	**Keskin Array B**	**21.56**	**73**	P	**P**	**17 41 05.3**	**+2.0**
AKASG	**Malin Array Be**	**21.59**	**42**	P	**P**	**17 41 04.5**	**+0.9**
	1.7nm,0.7s,mb3.6,baz=238,slow=11,SNR=5.2						
AKASG	**Malin Array Be**	**21.59**	**42**	P	**P**	**17 41 04.5**	**+0.9**
TORD	**Torodi Ar. Bea**	**23.68**	**192**	P	**P**	**17 41 20.9**	**-4.9**
	2.9nm,0.6s,mb3.9,baz=5.2,slow=11,SNR=25						
TORD				LR	LR	17 51 01.7	
	comp=Z,63nm,18.2s,MS3.1,baz=340,slow=38						
TORD	**Torodi Ar. Bea**	**23.68**	**192**	P	**P**	**17 41 20.9**	**-4.9**
TORD				LR	LR	17 51 01.7	
HFS	**Hagfors**	**24.07**	**9**	P	**P**	**17 41 29.6**	**+0.6**
	1.1nm,0.6s,mb3.5,baz=199,slow=7.8,SNR=5.1						
HFS				LR	LR	17 51 26.5	
	comp=Z,53nm,19.0s,MS3.0,baz=305,slow=38						
HFS	**Hagfors**	**24.07**	**9**	P	**P**	**17 41 29.6**	**+0.6**
NB2	**NORSAR Subarra**	**24.71**	**5**	P	**P**	**17 41 35.8**	**+1.0**
	comp=Z,2.1nm,0.9s,mb3.7,baz=201,slow=9.3						
NB2	**NORSAR Subarra**	**24.71**	**5**	P	**P**	**17 41 35.8**	**+1.0**
	comp=Z,2.1nm,0.9s,mb3.7,SNR=5.3						
NOA	**NORSAR Array B**	**24.71**	**5**	P	**P**	**17 41 36.2**	**+1.4**
	comp=Z,1.5nm,0.7s,mb3.6,baz=200,slow=8.7,SNR=5.5						
NOA				LR	LR	17 51 18.7	
	comp=Z,34nm,20.0s,MS2.8,baz=200,slow=36						
NOA	**NORSAR Array B**	**24.71**	**5**	P	**P**	**17 41 36.2**	**+1.4**
EIL	**Elat**	**24.74**	**98**	LR	LR	17 54 02.4	
	comp=Z,29nm,19.5s,MS2.8,baz=84,slow=43						
DBIC	**Dimbokro**	**31.49**	**202**	P	**P**	**17 42 32.2**	**-3.7**
	comp=Z,3.4nm,0.9s,mb4.2,baz=11,slow=12,SNR=1.9						
DBIC	**Dimbokro**	**31.49**	**202**	*e*P	**P**	**17 42 32.3**	**-3.6**
	comp=Z,4.8nm,1.0s,mb4.3						
DBIC	**Dimbokro**	**31.49**	**202**	*e*P	**P**	**17 42 32.3**	**-3.6**
	comp=Z,4.8nm,1.0s,mb4.3						
KURK	**Kurchatov**	**52.07**	**50**	P	**P**	**17 45 22.6**	**-1.1**
	comp=Z,1.1nm,1.0s,mb3.7,baz=284,slow=8.4,SNR=7.0						
KURK	**Kurchatov**	**52.07**	**50**	P	**P**	**17 45 22.6**	**-1.1**
ZALV	**Zalesovo Beam**	**54.94**	**45**	PcP	PcP	17 46 47.9	+1.4
	comp=Z,0.6nm,0.5s,baz=298,slow=6.2,SNR=1.1						
MKAR	**Makanchi Array**	**55.49**	**54**	P	**P**	**17 45 48.4**	**-0.4**
	comp=Z,0.7nm,0.5s,mb3.9,baz=309,slow=6.6,SNR=7.7						
LSA	**Lhasa**	**69.05**	**68**	*e*P	**P**	**17 47 19.8**	**-0.2**
	comp=Z,4.1nm,0.8s,m

PRK				S		Sg	17 46 38.2	-0.4
URLA	**Izmir**	**0.89**	**118**	*i* P		Pg	17 46 32.4	-0.5
URLA				*i* S		Sg	17 46 44.3	-0.1
URLA	**Izmir**	**0.89**	**118**	*i* P		Pg	17 46 32.4	-0.5
URLA				*i* S		Sg	17 46 44.3	-0.1
AYVA	**Ayvalik**	**1.00**	**58**	*i* P		Pg	17 46 34.3	-0.8
AYVA				*i* S		Sg	17 46 46.5	-1.6
AYVA	**Ayvalik**	**1.00**	**58**	*i* P		Pg	17 46 34.3	-0.9
AYVA				*i* S		Sg	17 46 46.5	-1.7
LIA	**Limnos Island**	**1.16**	**344**	*e*Pn		Pn	17 46 38.4	-0.8
LIA				*e*Sn		Sn	17 46 53.6	-2.1
LIA	**Limnos Island**	**1.16**	**344**	P		Pg	17 46 38.3	0.0
LIA	**Limnos Island**	**1.16**	**344**	*e*PN		Pn	17 46 38.4	-0.8
LIA				*e*SN		Sn	17 46 53.6	-2.1
LIA	**Limnos Island**	**1.16**	**344**	P		Pg	17 46 38.3	0.0
LIA				*e*Sn		Sn	17 46 53.6	-2.1
BLCB	**Balcova**	**1.20**	**109**	*e*PN		Pn	17 46 36.1	-3.5
BLCB	**Balcova**	**1.20**	**109**	*e*Pn		Pn	17 46 36.1	-3.6
IZM	**Izmir**	**1.36**	**106**	*e*PN		Pn	17 46 38.6	-3.3
AOS	**Alonnisos**	**1.40**	**287**	P		Pn	17 46 42.6	+0.2
AOS				S		Sg	17 47 02.2	+1.4
AOS	**Alonnisos**	**1.40**	**287**	P		Pn	17 46 42.6	+0.2
AOS				S		Sg	17 47 02.2	+1.4
GADA	**Gvkgeada**	**1.43**	**9**	*e*PN		Pn	17 46 40.0	-2.9
GADA	**Gvkgeada**	**1.43**	**9**	*e*Pn		Pn	17 46 40.0	-2.9
SMG	**Samos**	**1.45**	**137**	*e*Pn		Pn	17 46 42.8	-0.3
SMG				*e*Sn		Sn	17 47 02.0	-0.6
SMG	**Samos**	**1.45**	**137**	*e*PN		Pn	17 46 42.8	-0.3
SMG				*e*SN		Sn	17 47 02.0	-0.6
SMG	**Samos**	**1.45**	**137**	*e*Pn		Pn	17 46 42.8	-0.3
SMG				*e*Sn		Sn	17 47 02.0	-0.6
PTL	**Penteli**	**1.54**	**242**	*e*Pn		Pn	17 46 44.1	-0.3
PTL				*e*SN		Sn	17 47 04.3	-0.7
PTL	**Penteli**	**1.54**	**242**	*e*PN		Pn	17 46 44.1	-0.3
PTL				*e*SN		Sn	17 47 04.3	-0.7
PTL	**Penteli**	**1.54**	**242**	*e*Pn		Pn	17 46 44.1	-0.3
PTL				*e*Sn		Sn	17 47 04.3	-0.7
GCAM	**G?zelcaml?**	**1.68**	**129**	*i* P		Pn	17 46 45.8	-0.5
GCAM				*i* S		Sn	17 47 08.7	+0.4
GCAM	**G?zelcaml?**	**1.68**	**129**	*i* P		Pn	17 46 45.8	-0.5
GCAM				*i* S		Sn	17 47 08.7	+0.4
VLY	**Voula,Athens**	**1.69**	**237**	*e*Pn		Pn	17 46 46.0	-0.5
VLY	**Voula,Athens**	**1.69**	**237**	*e*PN		Pn	17 46 46.0	-0.5
VLY	**Voula,Athens**	**1.69**	**237**	*e*Pn		Pn	17 46 46.0	-0.5
AKHS	**Akhisar**	**1.73**	**86**	*i* P		Pn	17 46 47.0	0.0
AKHS				*i* S		Sn	17 47 09.7	0.0
AKHS	**Akhisar**	**1.73**	**86**	*i* P		Pn	17 46 47.0	0.0
AKHS				*i* S		Sn	17 47 09.7	0.0
AKS	**Akhisar**	**1.73**	**86**	*e*PN		Pn	17 46 46.9	-0.1
AKS	**Akhisar**	**1.73**	**86**	*e*Pn		Pn	17 46 46.9	-0.1
LPK	**Lapseki**	**1.83**	**29**	*e*PN		Pn	17 46 48.6	+0.2
LPK	**Lapseki**	**1.83**	**29**	*e*Pn		Pn	17 46 48.6	+0.2
BALY	**Balya**	**1.84**	**58**	*i* P		Pn	17 46 46.5	-2.0
BALY	**Balya**	**1.84**	**58**	*i* P		Pn	17 46 46.5	-2.0
NEO	**Neokhori**	**1.92**	**287**	*e*Pn		Pn	17 46 49.5	-0.2
NEO	**Neokhori**	**1.92**	**287**	*e*PN		Pn	17 46 49.5	-0.2
NEO	**Neokhori**	**1.92**	**287**	*e*Pn		Pn	17 46 49.5	-0.2
BALB	**Balikesir**	**1.97**	**63**	*e*PN		Pn	17 46 52.5	+2.2
BALB	**Balikesir**	**1.97**	**63**	*e*Pn		Pn	17 46 52.5	+2.2
ENEZ	**Enez**	**2.00**	**12**	*e*PN		Pn	17 46 47.7	-3.1
ENEZ	**Enez**	**2.00**	**12**	*e*Pn		Pn	17 46 47.7	-3.0
LKR	**Lokris**	**2.04**	**267**	*e*Pn		Pn	17 46 51.3	+0.1
LKR	**Lokris**	**2.04**	**267**	*e*PN		Pn	17 46 51.3	+0.1
LKR	**Lokris**	**2.04**	**267**	*e*Pn		Pn	17 46 51.3	+0.1
AYDN	**Tasoluk**	**2.12**	**121**	*i* P		Pn	17 46 53.0	+0.7
AYDN				*i* S		Sn	17 47 22.0	+2.9
AYDN	**Tasoluk**	**2.12**	**121**	*i* P		Pn	17 46 53.0	+0.7
AYDN				*i* S		Sn	17 47 22.0	+2.9
ALN	**Alexandroupoli**	**2.14**	**9**	*e*Pb		Pn	17 46 51.5	-1.2
ALN	**Alexandroupoli**	**2.14**	**9**	P		Pn	17 46 51.0	-1.7
ALN	**Alexandroupoli**	**2.14**	**9**	*e*PB		Pn	17 46 51.5	-1.2
ALN	**Alexandroupoli**	**2.14**	**9**	P		Pn	17 46 51.0	-1.7
ALN	**Alexandroupoli**	**2.14**	**9**	*e*Pb		Pn	17 46 51.5	-1.2
LTK	**Loutraki**	**2.20**	**251**	*e*PB		Pb	17 46 54.2	-2.2
LTK	**Loutraki**	**2.20**	**251**	*e*Pb		Pb	17 46 54.2	-2.2
RKY	**Sarkoy-Tekirda**	**2.26**	**32**	*e*PN		Pn	17 46 54.9	+0.6
RKY	**Sarkoy-Tekirda**	**2.26**	**32**	*e*Pn		Pn	17 46 54.9	+0.6
EDC	**Edincik**	**2.35**	**47**	*e*PN		Pn	17 46 57.9	+2.4
EDC	**Edincik**	**2.35**	**47**	*e*Pn		Pn	17 46 57.9	+2.4
RDO	**Rodhopi**	**2.37**	**359**	*e*Pn		Pn	17 46 54.7	-1.0
RDO	**Rodhopi**	**2.37**	**359**	*e*PN		Pn	17 46 54.7	-1.0
RDO	**Rodhopi**	**2.37**	**359**	*e*Pn		Pn	17 46 54.7	-1.0
BNT	**Bandirma**	**2.39**	**48**	*e*PN		Pn	17 46 57.9	+1.8
MFT	**Murefte**	**2.39**	**32**	*e*PN		Pn	17 46 57.1	+1.0
MFT	**Murefte**	**2.39**	**32**	*e*Pn		Pn	17 46 57.1	+1.0
KULA	**Kula-Manisa**	**2.41**	**95**	*e*PN		Pn	17 46 54.1	-2.2
KULA	**Kula-Manisa**	**2.41**	**95**	*e*Pn		Pn	17 46 54.1	-2.3
DST	**Dursunbey**	**2.49**	**70**	*e*PN		Pn	17 46 59.0	+1.6
DST	**Dursunbey**	**2.49**	**70**	*e*Pn		Pn	17 46 59.0	+1.6
AGG	**Agios Georgios**	**2.56**	**276**	*e*Pb		Pn	17 46 59.5	+1.1
AGG	**Agios Georgios**	**2.56**	**276**	*e*PB		Pn	17 46 59.5	+1.1
AGG	**Agios Georgios**	**2.56**	**276**	*e*Pb		Pn	17 46 59.5	+1.1
KCT	**Karacabey**	**2.60**	**54**	*e*PN		Pn	17 47 00.9	+1.9
KCT	**Karacabey**	**2.60**	**54**	*e*Pn		Pn	17 47 00.9	+1.9
GUR	**Goura**	**2.69**	**253**	*e*PB		Pn	17 47 01.2	+0.9
GUR	**Goura**	**2.69**	**253**	*e*Pb		Pn	17 47 01.2	+0.9
LIT	**Litokhoron**	**2.75**	**300**	*e*Pn		Pn	17 47 01.8	+0.8
LIT	**Litokhoron**	**2.75**	**300**	*e*PN		Pn	17 47 01.8	+0.8
LIT	**Litokhoron**	**2.75**	**300**	*e*Pn		Pn	17 47 01.8	+0.8
KDZ	**Kurdzhali**	**2.87**	**357**	P		Pn	17 47 01.6	-1.1
NVR	**Nevrokopi**	**2.89**	**333**	*e*Pn		Pn	17 47 02.9	-0.1
NVR	**Nevrokopi**	**2.89**	**333**	*e*PN		Pn	17 47 02.9	-0.1
NVR	**Nevrokopi**	**2.89**	**333**	*e*Pn		Pn	17 47 02.9	-0.1
THL	**Klokotos Trika**	**2.89**	**287**	*e*PN		Pn	17 47 03.9	+0.9
THL	**Klokotos Trika**	**2.89**	**287**	*e*Pn		Pn	17 47 03.9	+0.9
EFP	**Efpalio**	**2.91**	**264**	*e*PN		Pn	17 47 03.7	+0.4
EFP	**Efpalio**	**2.91**	**264**	*e*Pn		Pn	17 47 03.7	+0.4
VLI	**Veliai**	**2.95**	**227**	*e*Pn		Pn	17 47 03.0	-0.7
VLI	**Veliai**	**2.95**	**227**	*e*PN		Pn	17 47 03.0	-0.7
VLI	**Veliai**	**2.95**	**227**	*e*Pn		Pn	17 47 03.0	-0.7
RZN	**Rozhen**	**2.98**	**347**	P		Pn	17 47 03.9	-0.3
EDRB	**Edirne**	**3.19**	**16**	*e*PN		Pn	17 47 01.8	-5.2
KYTH	**Kithira**	**3.22**	**220**	*e*Pn		Pn	17 47 07.1	-0.4
KYTH	**Kithira**	**3.22**	**220**	*e*PN		Pn	17 47 07.1	-0.4
KYTH	**Kithira**	**3.22**	**220**	*e*Pn		Pn	17 47 07.1	-0.4
ITM	**Ithomi**	**3.31**	**242**	P		Pn	17 47 11.9	+3.2
ITM	**Ithomi**	**3.31**	**242**	P		Pn	17 47 11.9	+3.2
CTKS	**Kestanelik-??a**	**3.32**	**41**	*e*PN		Pn	17 47 09.7	+0.8
CTKS	**Kestanelik-??a**	**3.32**	**41**	*e*Pn		Pn	17 47 09.7	+0.9
YLV	**Yalova**	**3.42**	**57**	*e*P		Pn	17 47 12.2	+2.0
YLV	**Yalova**	**3.42**	**57**	*e*P		Pn	17 47 12.2	+2.0
BGKT	**Bogazkoy**	**3.42**	**44**	*e*PN		Pn	17 47 11.4	+1.1
BGKT	**Bogazkoy**	**3.42**	**44**	*e*Pn		Pn	17 47 11.4	+1.1
ALT	**Altintas**	**3.53**	**84**	*e*PN		Pn	17 47 10.3	-1.4
ALT	**Altintas**	**3.53**	**84**	*e*Pn		Pn	17 47 10.3	-1.4

*IDC **02** 17:46:47.1±2.4, 19°.02S×170°.20E, h0km, mb4.2/7, mb1 4.2/7, mb1mx4.0/15, mbtmp4.2/7, Error ellipse: s-maj=71.2km s-min=25.5km az=130.0*
*NEIC **02** 17:47:12.5±3.6, 19°.30S×170°.27E, h229km±26km, mb4.1/2, Error ellipse: s-maj=59.5km s-min=27.4km az=110.0*
*ISCJB **02** 17:47:15.9±2.0, 19°.3S±0°.2×169°.6E±0°.3, h258km±16km, mb3.9/9, Error ellipse: s-maj=45.4km s-min=24.9km az=33.9*
*NOU **02** 17:47:16.3±0.5, 18°.17S×168°.88E, h30km, MD3.2*

ISC 02 17:47:16.9±2.1, 19°.3S±0°.2×169°.6E±0°.3, h254km±16km, n18, σ1°.22/17, mb3.9/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**4.02**	**226**	*e*P	**Pn**	17 48 21.8	+0.8
DZM				*e*S	**S**	17 49 09.7	-2.4
DZM				AMP		17 49 34.8	
	comp=Z,304nm,6.8s						
LASL	**Noumea**	**4.07**	**224**	*e*P	**Pn**	17 48 22.6	+1.0
NOUC	**Port Laguerre**	**4.14**	**227**	*e*P	**Pn**	17 48 22.8	+0.4
NOUC				*e*S	**S**	17 49 12.5	-2.0
NOUC				AMP		17 49 18.2	
	comp=Z,20nm,6.0s						
EIDS	**Eidsvold**	**18.13**	**247**	*e*P	**P**	17 51 15.1	+4.5
URZ	**Urewera**	**20.01**	**162**	*e*P	**P**	17 51 20.7	-10
CTA	**Charters Tower**	**21.96**	**264**	P	**P**	17 51 50.5	+0.2
	comp=Z,1.4nm,0.4s,mb3.9,baz=79,slow=16,SNR=3.8						
STKA	**Stephens Creek**	**28.08**	**238**	P	**P**	17 52 48.0	+2.8
	comp=Z,0.7nm,0.6s,mb3.5,baz=37,slow=10,SNR=3.2						
STKA	**Stephens Creek**	**28.08**	**238**	P	**P**	17 52 48.1	+2.8
ASAR	**Alice Springs**	**33.41**	**256**	P	**P**	17 53 32.1	+0.1
	comp=Z,2.2nm,0.5s,mb3.9,baz=81,slow=8.7,SNR=95						
MJAR	**Matsushiro Arr**	**62.94**	**332**	P	**P**	17 57 14.6	-1.9
	comp=Z,1.5nm,0.8s,mb3.6,baz=173,slow=7.2,SNR=3.9						
ASAJ	**Asahikawa**	**67.75**	**339**	P	**P**	17 57 47.4	+0.2
	comp=Z,5.0nm,0.8s,mb4.2,baz=226,slow=7.7,SNR=7.1						
PETK	**Petropavlovsk-**	**72.82**	**353**	P	**P**	17 58 17.5	-0.1
	comp=Z,2.7nm,0.6s,mb4.0,baz=140,slow=5.1,SNR=8.7						
MAW	**Mawson**	**78.50**	**202**	*e*P	**P**	17 58 48.1	-1.5
	comp=Z,4.0nm,0.5s,mb4.3						
ULN	**Ulaanbaatar**	**87.09**	**323**	*e*P	**P**	17 59 34.0	+0.2
	comp=Z,0.7nm,0.5s,mb3.6						
SONM	**Songino Array**	**87.44**	**323**	P	**P**	17 59 35.9	+0.4
	comp=Z,1.0nm,0.5s,mb3.8,baz=161,slow=5.9,SNR=7.9						
MKAR	**Makanchi Array**	**101.99**	**315**	P	Pdif	18 00 43.4	+1.4
	comp=Z,0.4nm,0.7s,baz=94,slow=7.9,SNR=3.1						
ARCES	**ARCESS Array B**	**125.19**	**345**	PKP	PKPdf	18 05 48.3	+1.8
	comp=Z,2.5nm,1.0s,baz=11,slow=1.2,SNR=4.5						
GERES	**GERESS Array B**	**144.68**	**332**	PKP	PKPdf	18 06 24.1	+0.9
	comp=Z,0.6nm,0.8s,baz=302,slow=2.2,SNR=4.4						

*IDC **02** 17:50:22.8±0.7, 44°.04N×129°.40W, h0km, mb4.4/22, mb1 4.4/27, mb1mx4.4/35, mbtmp4.4/27, ML3.6/5, MS4.4/31, Ms1 4.4/31, ms1mx4.3/41, Error ellipse: s-maj=21.9km s-min=10.6km az=34.0*
*ISCJB **02** 17:50:24.8±0.2, 44°.29N±0°.01×129°.15W±0°.02, h13km, mb4.6/69, MS4.5/32, Error ellipse: s-maj=2.6km s-min=2.0km az=152.5*
*NEIC **02** 17:50:24.9±0.3, 44°.18N×129°.22W, h10km, mb4.7/64, Error ellipse: s-maj=8.0km s-min=3.8km az=30.0*
*GCMT **02** 17:50:25.3±0.2, 43°.96N×129°.41W, h12km, MW5.2, Moment Tensor Solution. s60,c96; s98,c189; Moment tensor: Scale 10^16^Nm; M_{rr}-1.54±.13; $M_{\theta\theta}$-5.44±.13; $M_{\phi\phi}$6.98±.13; $M_{r\theta}$-0.82±.31; $M_{r\phi}$-5.14±.11; $M_{\theta\phi}$1.87±.32; Best double couple: $M_0$8.30000×10^16^ NP1:ϕ_s26.00000°, δ81.00000°, λ7.00000°. NP2:ϕ_s295.00000°, δ83.00000°, λ171.00000°. Principal axes: T 9.2200, Plg11.0000°, Azm250.0000°; N -1.9200, Plg79.0000°, Azm78.0000°; P -7.2900, Plg1.0000°, Azm340.0000°; Data Used: II IU IC CN G.*
*BJI **02** 17:50:26.5, 44°.86N×130°.09W, h10km, mB5.1/13, mb5.0/20, Ms5.0/9, Ms7 4.6/9*
*SZGRF **02** 17:50:32.9, 43°.62N×127°.31W, h33km, mb4.4, MS4.9, Off coast of Oregon, United States*

ISC 02 17:50:24.8±1.0, 44°.26N±0°.02×129°.31W±0°.03, h5km±6km, h13km±1.4km: pP-P, n654, σ0°.86/640, mb4.6/69, MS4.5/32, 202C-212D, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEBM	**Edson Butte**	**3.87**	**109**	*e*Pn	**Pn**	17 51 20.3	-4.6
HEBO	**Mount Hebo**	**4.07**	**75**	P	**Pn**	17 51 25.9	-1.7
MPOR	**Mary's Peak**	**4.13**	**85**	P	**Pn**	17 51 26.3	-2.2
COR	**Corvallis**	**4.32**	**84**	*e*Pn	**Pn**	17 51 29.0	-1.9
KMOR	**Kings Mountain**	**4.35**	**70**	P	**Pn**	17 51 29.9	-1.6
F03A	**Seaside**	**4.40**	**66**	⇑P	**Pn**	17 51 31.0	-1.1
F03A	baz=4.4			⇓S	**Sn**	17 52 24.4	+0.7
	baz=4.4						
NLO	**Nicolai Mounta**	**4.53**	**64**	P	**Pn**	17 51 33.1	-0.8
E03A	**Lebam**	**4.65**	**59**	⇑P	**Pn**	17 51 34.7	-0.8
	baz=4.6						
HUMO	**Hull Mountain**	**4.91**	**107**	*e*Pn	**Pn**	17 51 35.5	-3.6
HUMO				*e*Sn	**Sn**	17 52 31.8	-4.5
NLWA	**Neilton Lookou**	**4.92**	**49**	⇑P	**Pn**	17 51 38.5	-0.8
	baz=4.9						
NLWA	**Neilton Lookou**	**4.92**	**49**	*e*Pn	**Pn**	17 51 38.4	-1.0
NLWA				*e*Sn	**Sn**	17 52 35.5	-1.1
G04A	**Mulino**	**4.96**	**77**	⇑P	**Pn**	17 51 38.1	-1.7
	baz=4.9						
RVW	**Rose Valley**	**5.01**	**66**	P	**Pn**	17 51 39.5	-1.0
H04A	**Detroit Lake**	**5.12**	**83**	⇓P	**Pn**	17 51 40.5	-1.4
	baz=5.0						
H04A				⇓S	**Sn**	17 52 42.0	+0.7
	baz=5.0						
F04A	**Amboy**	**5.16**	**69**	⇑P	**Pn**	17 51 41.5	-1.0
	baz=5.1						
MTMW	**Mount Mitchell**	**5.32**	**68**	P	**Pn**	17 51 44.5	-0.3
KHMM	**Horse Mountain**	**5.33**	**127**	*e*Pn	**Pn**	17 51 42.0	-2.9
YBH	**Yreka Blue Hor**	**5.46**	**115**	Pn	**Pn**	17 51 44.2	-2.5
	1.3nm,0.3s,baz=278,slow=8.5,SNR=25						
YBH				Sn	**Sn**	17 52 46.2	-3.6
	1.8nm,0.3s,baz=248,slow=23,SNR=6.8						
YBH	**Yreka Blue Hor**	**5.46**	**115**	*e*Pn	**Pn**	17 51 44.3	-2.3
HOOD	**Mount Hood Mea**	**5.55**	**76**	*e*Pn	**Pn**	17 51 47.0	-0.9
GNW	**Green Mountain**	**5.60**	**52**	*e*P	**Pn**	17 51 47.6	-1.0
	33nm,0.5s						
LON	**Longmire**	**5.83**	**62**	*e*Pn	**Pn**	17 51 50.8	-0.9
D05A	**Enumclaw**	**5.90**	**58**	⇓P	**Pn**	17 51 52.4	-0.3
	baz=5.9						
D05A				⇓S	**Sn**	17 53 02.5	+1.8
	baz=5.9						
PGC	**Sidney**	**5.97**	**41**	*e*Pn	**Pn**	17 51 51.9	-1.8
WDC	**Whiskeytown Da**	**6.21**	**124**	*e*Pn	**Pn**	17 51 56.4	-0.7
KCPM	**Cahto Peak**	**6.25**	**135**	*e*Pn	**Pn**	17 51 56.5	-1.1
G06A	**Carlson Farm,**	**6.25**	**78**	⇑P	**Pn**	17 51 56.1	-1.4
	baz=6.2						
K05A	**Summer Lake**	**6.31**	**101**	⇑P	**Pn**	17 51 56.4	-1.9
	baz=6.2						
JCW	**Jim Creek**	**6.45**	**50**	*e*Pn	**Pn**	17 52 00.3	0.0
RPW	**Rockport**	**6.83**	**49**	*e*Pn	**Pn**	17 52 05.2	-0.2
F07A	**Phinny Hill Vi**	**6.84**	**73**	⇓P	**Pn**	17 52 04.8	-0.8
	baz=6.8						
A05A	**Maple Falls**	**6.87**	**44**	⇓P	**Pn**	17 52 06.7	+0.7
	baz=6.9						
B06A	**Marblemount**	**6.88**	**49**	⇑P	**Pn**	17 52 06.2	0.0
	baz=6.9						
MOD	**Modoc**	**7.00**	**107**	*e*Pn	**Pn**	17 52 06.5	-1.4
HOPS	**Hopland**	**7.04**	**136**	*e*Pn	**Pn**	17 52 06.0	-2.3
E07A	**Sunnyside**	**7.04**	**68**	⇓P	**Pn**	17 52 07.5	-0.9
	baz=7.0						
I07A	**Izee**	**7.05**	**88**	⇑P	**Pn**	17 52 07.2	-1.4
	baz=7.0						
I07A				⇑S	**Sn**	17 53 28.2	-0.9
	baz=7.0						
ETW	**Entiat**	**7.10**	**59**	*e*Pn	**Pn**	17 52 09.5	+0.4
RSW	**Rattlesnake Hi**	**7.17**	**69**	*e*Pn	**Pn**	17 52 10.2	0.0
HAWA	**Hanford**	**7.21**	**69**	*e*Pn	**Pn**	17 52 10.8	+0.1
G08A	**Pilot Rock**	**7.44**	**78**	⇑P	**Pn**	17 52 12.2	-1.6
	baz=7.4						
F08A	**Pendleton**	**7.62**	**75**	⇓P	**Pn**	17 52 15.9	-0.4
	baz=7.5						
H08A	**Prairie City**	**7.63**	**84**	⇑P	**Pn**	17 52 14.7	-1.7
	baz=7.5						
H08A				⇓S	**Sn**	17 53 42.8	-0.3
	baz=7.5						
OHCM	**Honcut**	**7.64**	**127**	*e*Pn	**Pn**	17 52 16.7	+0.1
A07A	**Ashnola River,**	**7.78**	**49**	⇑P	**Pn**	17 52 18.5	0.0
	baz=7.8						
A07A				⇓S	**Sn**	17 53 45.7	-1.2
	baz=7.8						
D08A	**Wollman Farm,**	**7.80**	**65**	⇑P	**Pn**	17 52 17.9	-0.9
	baz=7.7						
D08A				⇓S	**Sn**	17 53 48.6	+1.3
	baz=7.7						
J08A	**Circle Bar Ran**	**7.89**	**93**	⇓P	**Pn**	17 52 18.4	-1.6
	baz=7.8						
BBB	**Bella Bella**	**7.97**	**5**	Pn	**Pn**	17 52 24.1	+3.0
	0.7nm,0.3s,baz=198,slow=11,SNR=6.9						
BBB				LR	LR	17 54 35.3	
	comp=Z,1μm,19.5s,baz=188,slow=31						
LNOR	**Lincton Mounta**	**7.97**	**74**	*e*Pn	**Pn**	17 52 24.5	+3.4
WVOR	**Wild Horse Val**	**7.99**	**100**	*e*P	**Pn**	17 52 18.8	-2.6
	18nm,0.8s						
B08A	**Colville Reser**	**8.03**	**56**	⇓P	**Pn**	17 52 21.6	-0.3
	baz=8.0						
OD2	**Odessa Site #2**	**8.04**	**63**	*e*Pn	**Pn**	17 52 21.6	-0.4
E09A	**Wood Farm, Sta**	**8.18**	**70**	⇑P	**Pn**	17 52 23.5	-0.4
	baz=8.1						
D09A	**Jones Farm, Ri**	**8.20**	**66**	⇑P	**Pn**	17 52 23.2	-1.1
	baz=8.1						
F09A	**S2 Ranch, Elgi**	**8.21**	**76**	⇓P	**Pn**	17 52 24.0	-0.5
	baz=8.1						
I09A	**Lost Marbles R**	**8.33**	**88**	⇑P	**Pn**	17 52 25.4	-0.7
	baz=8.2						
H09A	**Durkee**	**8.34**	**83**	⇑P	**Pn**	17 52 25.6	-0.7
	baz=8.3						
J09A	**Fry Pan Ranch,**	**8.41**	**92**	⇓P	**Pn**	17 52 26.2	-1.0
	baz=8.3						
C09A	**Chrisman Ranch**	**8.45**	**61**	⇑P	**Pn**	17 52 27.5	-0.2
	baz=8.4						
PAHR	**Pah Rah Range**	**8.68**	**118**	*e*Pn	**Pn**	17 52 33.0	+2.2
WCN	**Washoe City**	**8.69**	**121**	⇑P	**Pn**	17 52 30.3	-0.7
	baz=8.6						
F10A	**Beach Ranch, E**	**8.71**	**74**	⇓P	**Pn**	17 52 30.8	-0.5
	baz=8.6						
G10A	**Bishop Farm, J**	**8.73**	**79**	⇓P	**Pn**	17 52 31.2	-0.4
	baz=8.7						
B09A	**Rice**	**8.77**	**58**	⇑P	**Pn**	17 52 31.7	-0.4
	baz=8.7						
E10A	**Myers Farm, Un**	**8.87**	**71**	⇑P	**Pn**	17 52 33.4	-0.1
	baz=8.8						
D10A	**Wagner Farm, O**	**8.88**	**67**	⇓P	**Pn**	17 52 33.4	-0.2
	baz=8.8						
I10A	**Payette**	**8.99**	**87**	⇑P	**Pn**	17 52 35.1	-0.1
	baz=8.9						
H10A	**Noah's Angus R**	**9.00**	**84**	⇑P	**Pn**	17 52 34.2	-1.1
	baz=8.9						
C10A	**Spilker Farm,**	**9.07**	**63**	⇑P	**Pn**	17 52 36.7	+0.5
	baz=9.0						
J10A	**Berg Farm, Mel**	**9.10**	**91**	⇑P	**Pn**	17 52 36.2	-0.5
	baz=9.0						
CMB	**Columbia Colle**	**9.16**	**130**	*e*Pn	**Pn**	17 52 37.8	+0.3
K10A	**MacKenzie Ranc**	**9.16**	**95**	⇓P	**Pn**	17 52 36.9	-0.6
	baz=9.1						
B10A	**Chitwood Farm,**	**9.29**	**60**	⇑P	**Pn**	17 52 39.2	0.0
	baz=9.2						
G11A	**Walters Elk Ra**	**9.34**	**78**	⇓P	**Pn**	17 52 40.5	+0.6
	baz=9.3						
NEW	**Newport**	**9.34**	**60**	*e*Pn	**Pn**	17 52 39.7	-0.2
A10A	**Northport**	**9.36**	**56**	⇓P	**Pn**	17 52 39.9	-0.2
	baz=9.3						
WAKR	**Walker**	**9.38**	**124**	*e*Pn	**Pn**	17 52 41.3	+0.8
F11A	**Grangeville**	**9.45**	**75**	⇓P	**Pn**	17 52 41.0	-0.5
	baz=9.4						
E11A	**Bogner Ranch,**	**9.47**	**73**	⇓P	**Pn**	17 52 41.0	-0.6
	baz=9.4						
D11A	**Klaveano Farm,**	**9.50**	**68**	⇓P	**Pn**	17 52 41.7	-0.4
	baz=9.4						
H11A	**Donnelly**	**9.52**	**83**	⇓P	**Pn**	17 52 42.5	+0.2
	baz=9.4						
SAO	**San Andreas Ge**	**9.58**	**139**	*e*Pn	**Pn**	17 52 42.8	-0.5
I11A	**Placerville**	**9.62**	**87**	⇓P	**Pn**	17 52 43.5	-0.2
	baz=9.5						
L10A	**Juniper Basin**	**9.63**	**99**	⇓P	**Pn**	17 52 44.8	+0.9
	baz=9.5						
BMN	**Battle Mountai**	**9.73**	**109**	*e*Pn	**Pn**	17 52 48.3	+3.0
K11A	**Parker Ranch,**	**9.76**	**94**	⇑P	**Pn**	17 52 46.2	+0.6
	baz=9.7						
M10A	**I.L. Ranch, Tu**	**9.76**	**102**	⇑P	**Pn**	17 52 46.3	+0.6
	baz=9.7						
MFID	**Camas Ranch**	**9.78**	**

baz=11
CHMT Chamberlain Mo 11.56 71 ePn Pn 17 53 10.2 -0.1
Q11A Duckwater 11.57 113 ⇓P Pn 17 53 10.3 -0.1
baz=12
CWC Cottonwood Cre 11.59 129 ⇓P Pn 17 53 09.9 -0.8
baz=12
WALA Waterton Lakes 11.61 60 ePn Pn 17 53 11.1 +0.1
N13A Wendover, West 11.65 102 ⇓P Pn 17 53 10.7 -0.8
baz=12
N13A Wendover, West 11.65 102 ePn Pn 17 53 11.7 +0.2
P12A McGill 11.75 109 ⇓P Pn 17 53 12.9 -0.1
baz=12
MCMT McKenzie Canyo 11.76 81 eP Pn 17 53 12.2 -0.8
13nm,1.0s
B14A Marquette Ranc 11.82 64 ⇓P Pn 17 53 13.4 -0.4
baz=12
K14A Jones Ranch, D 11.86 93 ⇓P Pn 17 53 14.5 0.0
baz=12
PKM Peak Mountain 11.87 139 ⇑P Pn 17 53 15.3 +0.7
baz=12
R11A Troy Canyon, C 11.88 115 ⇓P Pn 17 53 14.9 +0.1
baz=12
A14A Double T Ranch 11.89 61 ⇑P Pn 17 53 15.1 +0.3
baz=12
DLMT Dillon 11.93 79 ePn Pn 17 53 17.1 +1.8
E15A Deer Lodge 11.93 74 ⇓P Pn 17 53 14.9 -0.4
baz=12
ISA Isabella 11.94 132 ⇓P Pn 17 53 14.8 -0.8
baz=12
ISA Isabella 11.94 132 ePn Pn 17 53 15.1 -0.5
L14A Malta 11.95 95 ⇑P Pn 17 53 15.8 +0.1
baz=12
F15A Butte 12.00 77 ⇑P Pn 17 53 15.8 -0.6
baz=12
G15A Dillon 12.01 80 ⇑P Pn 17 53 16.4 +0.1
baz=12
Q12A Willow Creek R 12.02 111 ⇓P Pn 17 53 17.4 +0.8
baz=12
LRM Limekiln Ridge 12.03 77 ePn Pn 17 53 17.8 +1.0
M14A Sheep Mountain 12.03 98 ⇑P Pn 17 53 16.7 -0.1
baz=12
D15A Lincoln 12.07 71 ⇓P Pn 17 53 16.8 -0.5
baz=12
O13A Hicks Ranch, I 12.09 105 ⇓P Pn 17 53 17.7 +0.1
baz=12
I15A Monteview 12.10 85 ⇓P Pn 17 53 18.2 +0.6
baz=12
C15A Salmond Ranch, 12.13 67 ⇑P Pn 17 53 17.8 -0.2
baz=12
ARVC Arvin 12.17 135 ⇑P Pn 17 53 17.2 -1.5
baz=12
MPMC Manual Prospec 12.19 128 ⇑P Pn 17 53 19.0 0.0
baz=12
S11A Rachel 12.19 118 ⇓P Pn 17 53 19.7 +0.7
baz=12
J15A Blackfoot 12.22 88 ⇑P Pn 17 53 21.1 +1.8
baz=12
FURC Furnace Creek, 12.27 125 ⇓P Pn 17 53 20.3 +0.4
baz=12
B15A Bradely Ranch, 12.27 65 ⇑P Pn 17 53 19.2 -0.7
baz=12
K15A Arbon 12.29 92 ⇑P Pn 17 53 21.5 +1.1
baz=12
TPNV Topopah Spring 12.31 122 ⇑P Pn 17 53 21.0 +0.3
baz=12
A15A Johnson Ranch, 12.33 62 ⇑P Pn 17 53 20.6 -0.2
baz=12
HVU Hansel Valley 12.35 96 ePn Pn 17 53 21.9 +0.8
N14A Grayback Hills 12.37 100 ⇑P Pn 17 53 22.1 +0.7
baz=12
BGU Big Grassy Mou 12.45 100 eP Pn 17 53 22.9 +0.4
14nm,1.1s
G16A Moss Hill, Enn 12.49 79 ⇑P Pn 17 53 23.5 +0.6
baz=12
LRMC Laurel Mountai 12.50 131 ⇑P Pn 17 53 24.7 +1.5
baz=12
R12A Pony Springs, 12.54 113 ⇑P Pn 17 53 25.0 +1.3
baz=12
L15A Malad City 12.57 94 ⇓P Pn 17 53 25.1 +1.0
baz=12
E16A East Helena 12.60 73 ⇑P Pn 17 53 24.8 +0.2
baz=12
BOZ Bozeman (W) 12.60 78 ⇓P Pn 17 53 24.0 -0.5
baz=12
BOZ Bozeman (W) 12.60 78 ePn Pn 17 53 25.4 +0.9
Q13A Wheeler Ranch, 12.61 110 ⇓P Pn 17 53 26.1 +1.5
baz=12
F16A Kennard Place, 12.61 77 ⇑P Pn 17 53 24.9 +0.3
baz=12
U10A Ash Meadows, A 12.61 124 ⇓P Pn 17 53 25.3 +0.6
baz=12
M15A Larsen Ranch, 12.68 97 ⇑P Pn 17 53 26.3 +0.6
baz=13
BSC Santa Cruz Isl 12.70 141 ⇑P Pn 17 53 26.5 +0.6
baz=13
C16A Fuhringer Ranc 12.71 68 ⇓P Pn 17 53 25.4 -0.5
baz=13
D16A Dana Ranch, Ca 12.73 71 ⇓P Pn 17 53 26.6 +0.3
baz=13
T11A Corn Creek, Al 12.77 118 ⇓P Pn 17 53 26.3 -0.6
baz=13
QLMT Earthquake Lak 12.77 81 ePn Pn 17 53 28.4 +1.5
S12A Delamar Landin 12.79 116 ⇑P Pn 17 53 27.5 +0.5
baz=13
EDW2 Edwards Air Fo 12.79 133 ⇑P Pn 17 53 25.9 -1.3
baz=13
N15A Stansbury Isla 12.82 99 ⇑P Pn 17 53 28.6 +1.0
baz=13
I16A Newdale 12.83 86 ⇓P Pn 17 53 29.1 +1.5
baz=13
J16A Bone 12.83 88 ⇑P Pn 17 53 29.1 +1.4
baz=13
B16A M & M Farms, S 12.85 65 ⇑P Pn 17 53 27.4 -0.5
baz=13
BLG Laguna Peak 12.87 139 ⇓P Pn 17 53 28.6 +0.4
baz=13
DUG Dugway 12.88 103 ⇑P Pn 17 53 28.3 0.0
baz=13
DUG Dugway 12.88 103 ePn Pn 17 53 28.9 +0.6
H16A Russell Place, 12.91 82 ⇓P Pn 17 53 29.5 +0.8
baz=13
K16A Soda Springs 12.94 90 ⇑P Pn 17 53 30.1 +1.0
baz=13
P14A Drum Mountains 12.96 105 ⇑P Pn 17 53 30.1 +0.7
baz=13
SHOC Shoshone 13.00 126 ⇑P Pn 17 53 30.5 +0.5
baz=13
RRI2 Red Ridge 13.03 88 ePn Pn 17 53 32.7 +2.3
R13A O'Grain Ranch, 13.04 112 ⇑P Pn 17 53 30.6 0.0
baz=13
DCID1 Drake Creek 13.09 87 ePn Pn 17 53 33.4 +2.3
O15A The Old Anders 13.09 102 ⇑P Pn 17 53 32.2 +1.0
baz=13
Q14A Sevier Lake (B 13.10 108 ⇓P Pn 17 53 32.4 +1.1
baz=13
DECC Green Verdugo 13.11 136 ⇑P Pn 17 53 31.9 +0.3
baz=13
YMR Madison River 13.11 82 eP Pn 17 53 33.1 +1.6
33nm,1.1s
GSC Goldstone 13.12 129 ⇓P Pn 17 53 31.8 +0.1
baz=13
GSC Goldstone 13.12 129 ePn Pn 17 53 32.2 +0.5
E17A Martinsdale 13.16 74 ⇓P Pn 17 53 32.2 0.0
baz=13
U11A Corn Creek 13.18 122 ⇑P Pn 17 53 33.8 +1.3
baz=13
NOQ North Oquirrh 13.19 100 eP Pn 17 53 32.1 -0.5
IMW Indian Meadow 13.22 85 ePn Pn 17 53 35.2 +2.3
YFT Old Faithful 13.22 83 ePn Pn 17 53 35.8 +2.7
G17A Pierce Place, 13.23 79 ⇑P Pn 17 53 34.0 +0.8
baz=13
L16A Fish Haven 13.25 94 ⇓P Pn 17 53 32.7 -0.7
baz=13
SHPR Sheep Range 13.27 121 ePn Pn 17 53 34.8 +1.1
HWUT Hardware Ranch 13.27 95 ePn Pn 17 53 35.0 +1.3
TPAW Teton Pass 13.27 87 ePn Pn 17 53 36.4 +2.7
F17A Fitzpatrick Pl 13.28 76 ⇓P Pn 17 53 33.4 -0.5
baz=13
AHID Auburn Hatcher 13.30 90 ePn Pn 17 53 37.0 +2.9
YNR Norris Junctio 13.31 82 eP Pn 17 53 36.0 +1.7
24nm,1.1s
M16A Huntsville 13.31 97 ⇑P Pn 17 53 34.4 +0.1
baz=13
RRX Edison Barstow 13.32 130 ⇑P Pn 17 53 34.9 +0.4
baz=13
D17A Six Diamond Ra 13.33 71 ⇑P Pn 17 53 34.7 +0.3
baz=13

C17A Wharram Farm, 13.34 69 ⇓P Pn 17 53 34.4 -0.1
baz=13
REDW Red Top Meadow 13.36 87 ePn Pn 17 53 37.5 +2.6
SNCC San Nicolas Is 13.38 142 ⇓P Pn 17 53 36.8 +1.6
baz=13
T12A Moapa 13.40 119 ⇓P Pn 17 53 36.1 +0.6
baz=13
H17A Grant Village 13.42 83 ⇑P Pn 17 53 36.8 +1.1
baz=13
SNOW Snow King Moun 13.42 87 ePn Pn 17 53 36.8 +1.2
B17A L&G Farms, Che 13.42 66 ⇑P Pn 17 53 35.1 -0.6
baz=13
K17A Gardner Place, 13.44 90 ⇑P Pn 17 53 36.8 +0.9
baz=13
S13A Holt Ranch, En 13.44 114 ⇑P Pn 17 53 37.0 +0.9
baz=13
BFSC Mount Baldy Ra 13.46 134 ⇑P Pn 17 53 35.6 -0.8
baz=13
J17A Brown Place, J 13.46 87 ⇓P Pn 17 53 37.3 +1.0
baz=13
I17A Pilgrim Ck. 13.47 85 ⇑P Pn 17 53 38.7 +2.2
baz=13
NLU North Lily Min 13.50 103 ePn Pn 17 53 36.8 +0.1
LOHW Long Hollow 13.50 86 ePn Pn 17 53 39.5 +2.7
P15A Leamington 13.52 104 ⇑P Pn 17 53 37.9 +0.8
baz=13
TUQ Turquoise Moun 13.53 126 ⇓P Pn 17 53 36.9 -0.4
baz=13
V11A Goosesprings 13.54 124 ⇑P Pn 17 53 37.1 -0.3
baz=13
FMP Fort Macarthur 13.56 137 ⇓P Pn 17 53 38.6 +0.9
baz=14
N16A Rees Ranch, Co 13.60 98 ⇓P Pn 17 53 39.2 +1.1
baz=14
ARUT Antelope Range 13.60 113 eP Pn 17 53 40.1 +1.8
49nm,1.2s
R14A James Farms, M 13.61 110 ⇓P Pn 17 53 38.8 +0.4
baz=14
A17A Triple J Farms 13.62 63 ⇓P Pn 17 53 37.8 -0.6
baz=14
L17A Cokeville 13.63 93 ⇓P Pn 17 53 39.1 +0.6
baz=14
JLU Jordanelle 13.69 99 ePn Pn 17 53 39.4 0.0
U12A Valley of Fire 13.70 120 ⇑P Pn 17 53 40.4 +0.8
baz=14
Q15A Fillmore 13.71 107 ⇓P Pn 17 53 39.9 +0.3
baz=14
HEC Hector,Ludlow 13.73 129 ⇓P Pn 17 53 39.1 -0.9
baz=14
T13A Saint George 13.74 116 ⇓P Pn 17 53 40.8 +0.7
baz=14
MPU Maple Canyon 13.78 102 eP Pn 17 53 41.6 +1.0
16nm,0.8s
CCUT Cedar City 13.79 114 ePn Pn 17 53 42.8 +2.1
O16A Springville 13.80 101 ⇑P Pn 17 53 41.5 +0.6
baz=14
S14A Cedar City 13.80 113 ⇓P Pn 17 53 40.4 -0.5
baz=14
EDM Edmonton 13.80 44 ePn Pn 17 53 41.3 +0.4
E18A Harlowton 13.82 74 ⇓P Pn 17 53 40.5 -0.6
baz=14
BBRC Big Bear Solar 13.83 132 ⇑P Pn 17 53 41.5 +0.1
baz=14
DAU Daniels Canyon 13.89 100 ePn Pn 17 53 42.5 +0.3
P16A Fountain Green 13.93 103 ⇓P Pn 17 53 42.8 +0.1
baz=14
D18A Linhart Farms, 13.94 71 ⇓P Pn 17 53 42.7 0.0
baz=14
F18A Big Timber 13.94 76 ⇑P Pn 17 53 42.7 -0.1
baz=14
M17A Scullys Gap (B 13.95 95 ⇓P Pn 17 53 42.3 -0.7
baz=14
V12A Nelson 13.97 123 ⇓P Pn 17 53 43.6 +0.4
baz=14
GCMT Greycliff 13.98 77 eP Pn 17 53 52.7 +9.4
J18A Kendall Valley 13.99 88 ⇓P Pn 17 53 44.3 +0.8
baz=14
N17A Moffit Pass 14.01 97 ⇓P Pn 17 53 42.3 -1.4
baz=14
I18A Diamond G Ranc 14.05 85 ⇓P Pn 17 53 44.1 -0.1
baz=14
EGMT Eagleton 14.06 68 ⇑P Pn 17 53 44.1 -0.3
baz=14
EGMT Eagleton 14.06 68 ePn Pn 17 53 44.2 -0.2
G18A Lazy EL Ranch, 14.06 79 ⇓P Pn 17 53 44.6 +0.1
baz=14
U13A Pakoon Wash 14.07 119 ⇑P Pn 17 53 45.2 +0.6
baz=14
MSU Marysvale 14.08 108 ePn Pn 17 53 46.3 +1.6
K18A Toltan Ranch, 14.09 90 ⇑P Pn 17 53 44.9 0.0
baz=14
B18A Beardsley Farm 14.11 66 ⇑P Pn 17 53 44.4 -0.6
baz=14
GMRC Granite Mounta 14.15 127 ⇓P Pn 17 53 45.1 -0.6
baz=14
R15A Junction 14.16 109 ⇑P Pn 17 53 45.6 -0.2
baz=14
A18A Metzger Ranch, 14.16 64 ⇑P Pn 17 53 44.2 -1.6
baz=14
MURC Murrieta 14.20 134 ⇑P Pn 17 53 46.2 -0.2
baz=14
DLBC Dease Lake 14.20 358 Pn Pn 17 53 52.5 +6.2
0.3nm,0.3s,baz=170,slow=7.9,SNR=3.3
DLBC LR LR 17 58 39.6
comp=Z,5µm,18.4s,baz=178,slow=34
DLBC Dease Lake 14.20 358 ePn Pn 17 53 49.1 +2.8
DLBC LR LR 17 58 39.6
W12A Cal Nev Ari 14.24 124 ⇑P Pn 17 53 47.6 +0.7
baz=14
T14A Hurricane 14.25 115 ⇑P Pn 17 53 47.5 +0.4
baz=14
LDFC Landfair 14.25 125 ePn Pn 17 53 47.6 +0.5
L18A Fontenelle, Gr 14.28 93 ⇓P Pn 17 53 47.6 +0.2
baz=14
RLMT Red Lodge 14.28 80 ⇑P Pn 17 53 48.1 +0.6
baz=14
RLMT Red Lodge 14.28 80 ePn Pn 17 53 48.8 +1.3
O17A Robinson Place 14.34 100 ⇓P Pn 17 53 48.9 +0.6
baz=14
S15A Panguitch 14.38 111 ⇓P Pn 17 53 49.4 +0.6
baz=14
TMUT Trail Mountain 14.38 104 ePn Pn 17 53 50.9 +2.0
M18A Lyman 14.40 95 ⇑P Pn 17 53 49.1 0.0
baz=14
BW06 Boulder Array 14.41 89 ⇓P Pn 17 53 49.2 0.0
baz=14
BW06 Boulder Array 14.41 89 ePn Pn 17 53 50.5 +1.2
PDAR Pinedale Array 14.41 89 Pn Pn 17 53 50.2 +1.0
0.1nm,0.3s,baz=266,slow=11,SNR=16
PDAR LR LR 17 59 27.4
comp=Z,4µm,19.9s,baz=286,slow=38
V13A Grand Canyon W 14.41 120 ⇑P Pn 17 53 48.8 -0.5
baz=14
BELC Belle Mtn. Jos 14.53 130 ⇓P Pn 17 53 50.5 -0.4
baz=14
U14A Mt Trumbull 14.57 117 ⇑P Pn 17 53 51.3 -0.1
baz=14
Q16A Castle Valley 14.58 105 ⇑P Pn 17 53 51.1 -0.4
baz=14
PFO Pinyon Flat Ob 14.58 132 ⇓P Pn 17 53 51.8 +0.2
baz=14
PFO Pinyon Flat Ob 14.58 132 ePn Pn 17 53 51.5 0.0
P17A Butcher Ranch, 14.63 103 ⇑P Pn 17 53 52.6 +0.3
baz=14
R16A Teasdale 14.66 108 ⇓P Pn 17 53 53.5 +0.8
baz=14
L19A Farson 14.72 91 ⇑P Pn 17 53 53.4 +0.1
baz=15
T15A Red Dirt Ranch 14.73 114 ⇑P Pn 17 53 54.0 +0.4
baz=15
NEE2 Needles Airpor 14.76 125 ⇓P Pn 17 53 53.1 -0.9
baz=15
109C Camp Elliot, M 14.81 136 ⇑P Pn 17 53 54.2 -0.6
baz=15
N18A Larsen Ranch, 14.82 96 ⇓P Pn 17 53 54.0 -0.8
baz=15
O18A Roosevelt 14.83 99 ⇓P Pn 17 53 54.7 -0.3
baz=15
IRM Iron Mountain 14.88 128 ⇑P Pn 17 53 54.9 -0.8
baz=15
K19A Absolon Red Bu 14.91 88 ⇑P Pn 17 53 55.5 -0.6
baz=15
P18A Preston Nutter 14.92 101 ⇓P Pn 17 53 55.4 -0.7
baz=15
SRU San Rafael 14.94 104 ⇓P Pn 17 53 55.8 -0.7
baz=15
SRU San Rafael 14.94 104 ePn Pn 17 53 56.9 +0.4

W13A Hualapai Mount 14.97 122 ⇓P Pn 17 53 57.1 +0.2
baz=15
M19A Rock Springs 15.03 94 ⇓P Pn 17 53 57.2 -0.5
baz=15
BC3 Big Chuckawall 15.09 130 ⇓P Pn 17 53 57.6 -0.9
baz=15
V14A Boquillas Ranc 15.10 119 ⇑P Pn 17 53 59.1 +0.5
baz=15
R17A Hanksville Air 15.13 106 ⇑P Pn 17 53 58.6 -0.5
baz=15
U15A North Rim 15.13 115 ⇓P Pn 17 53 59.7 +0.6
baz=15
MONP Monument Peak 15.16 134 ⇓P Pn 17 53 58.6 -0.9
baz=15
BAR Barrett 15.20 135 ePn Pn 17 53 58.4 -1.6
119nm,2.0s
N19A John Jarvie Ra 15.20 96 ⇑P Pn 17 53 59.0 -1.0
baz=15
Q18A Rafter H Ranch 15.22 103 ⇓P Pn 17 53 59.9 -0.3
baz=15
K20A Yellowstone Ra 15.31 89 ⇑P Pn 17 54 00.7 -0.7
baz=15
T16A Glen Canyon Da 15.33 112 ⇑P Pn 17 54 01.5 -0.2
baz=15
X13A Yucca 15.35 124 ⇑P Pn 17 54 01.3 -0.6
baz=15
PDMCI Parker Dam,Lak 15.37 125 ⇑P Pn 17 54 01.4 -0.8
baz=15
W14A Seligman 15.39 120 ⇑P Pn 17 54 02.5 0.0
baz=15
SWSC Sam W. Stewart 15.45 132 ⇓P Pn 17 54 02.0 -1.2
baz=15
O19A Miners Draw (B 15.45 98 ⇓P Pn 17 54 02.8 -0.4
baz=15
S17A Black Ridge (B 15.46 109 ⇑P Pn 17 54 03.7 +0.4
baz=15
L20A Wamsutter 15.47 91 ⇑P Pn 17 54 02.9 -0.6
baz=15
DVTC Desert V Tower 15.51 134 ⇑P Pn 17 54 02.7 -1.4
baz=15
Y12C Blythe 15.54 127 ⇓P Pn 17 54 03.4 -1.0
baz=15
V15A Kaibab Nationa 15.58 117 ⇑P Pn 17 54 05.3 +0.4
baz=16
SKAG Skagway 15.66 349 eP Pn 17 54 12.6 +6.8
31nm,1.4s
R18A Canyonlands Na 15.71 105 ⇑P Pn 17 54 07.0 +0.4
baz=16
M20A Sweetwater, Wa 15.73 93 ⇓P Pn 17 54 06.3 -0.5
baz=16
T17A Navajo Res., N 15.79 111 ⇑P Pn 17 54 07.5 -0.2
baz=16
P19A Cripple Cowboy 15.81 100 ⇓P Pn 17 54 07.9 0.0
baz=16
N20A Spence Gulch, 15.88 95 ⇓P Pn 17 54 08.3 -0.5
baz=16
GLA Glamis 15.89 130 ⇓P Pn 17 54 07.8 -1.1
baz=16
Q19A Hogan Spring (15.89 103 ⇑P Pn 17 54 08.4 -0.6
baz=16
Y13A Salome 15.89 126 ⇓P Pn 17 54 08.8 -0.3
baz=16
W15A Williams 15.92 119 ⇓P Pn 17 54 09.4 +0.1
baz=16
S18A Hurst Farm, Bl 15.98 108 ⇓P Pn 17 54 10.4 +0.3
baz=16
X14A Yava 16.00 122 ⇑P Pn 17 54 10.2 -0.2
baz=16
O20A White River Ci 16.14 97 ⇑P Pn 17 54 11.5 -0.6
baz=16
L21A Rawlins 16.18 91 ⇑P Pn 17 54 12.2 -0.5
baz=16
R19A Curley Farm, L 16.19 105 ⇓P Pn 17 54 13.1 +0.2
baz=16
WUAZ Wupatki 16.28 116 ⇓P Pn 17 54 14.0 +0.1
baz=16
WUAZ Wupatki 16.28 116 ePn Pn 17 54 15.0 +1.1
60nm,1.2s
P20A De Beque 16.28 100 ⇑P Pn 17 54 13.1 -0.9
baz=16
M21A Separation Pea 16.28 92 ⇓P Pn 17 54 13.8 -0.2
baz=16
Y14A Wickenburg 16.29 124 ⇓P Pn 17 54 14.0 -0.2
baz=16
T18A Mexican Hat 16.35 109 ⇑P Pn 17 54 15.0 +0.1
baz=16
LAO LASA Array 16.36 73 eP Pn 17 54 14.8 -0.2
98nm,1.0s
RWWY Rawlins 16.37 91 ePn Pn 17 54 14.6 -0.5
53nm,1.0s
X15A Humboldt 16.39 121 ⇓P Pn 17 54 15.3 -0.1
baz=16
PV04 Paradox Valley 16.39 104 eP Pn 17 54 15.3 -0.1
112A Yuma 16.41 131 ⇑P Pn 17 54 14.4 -1.3
baz=16
N21A Black Mountain 16.43 95 ⇓P Pn 17 54 15.4 -0.6
baz=16
Z13A Yuma Proving G 16.44 127 ⇑P Pn 17 54 15.7 -0.3
baz=16
W16A Flagstaff 16.44 118 ⇓P Pn 17 54 15.9 -0.1
baz=16
S19A Harvey Farm, M 16.54 106 ⇓P Pn 17 54 17.8 +0.5
baz=16
Q20A Ridgley Place, 16.57 101 ⇓P Pn 17 54 17.4 -0.3
baz=16
V17A Tonalea, Kykot 16.59 115 ⇓P Pn 17 54 18.5 +0.6
baz=16
O21A Pagoda 16.66 96 ⇓P Pn 17 54 18.2 -0.6
baz=16
Y15A Casa Rosa Ranc 16.69 122 ⇓P Pn 17 54 19.6 +0.4
baz=17
113A Mohawk Valley, 16.69 128 ⇓P Pn 17 54 20.8 +1.5
baz=17
Z14A Wintersburg 16.73 125 ⇓P Pn 17 54 20.5 +0.7
baz=17
U18A Rough Rock, Ch 16.74 111 ⇓P Pn 17 54 20.4 +0.6
baz=17
PV01 Paradox Valley 16.75 104 eP Pn 17 54 19.9 0.0
9µm,1.4s
L22A Ellis Ranch, M 16.84 90 ⇑P Pn 17 54 21.1 +0.1
baz=17
R20A Redvale 16.86 104 ⇓P Pn 17 54 21.5 +0.2
baz=17
X16A Lo Mia Camp, P 16.93 119 ⇑P Pn 17 54 23.0 +0.8
baz=17
W17A Winslow 16.97 116 ⇓P Pn 17 54 23.4 +0.7
baz=17
V18A Ganado 17.10 113 ⇓P Pn 17 54 25.2 +0.8
baz=17
Q21A Lamborn Mesa, 17.13 101 ⇑P Pn 17 54 24.2 -0.5
baz=17
N22A Wattenberg Ran 17.18 94 ⇑P Pn 17 54 24.6 -0.8
baz=17
114A Black Gap (USA 17.21 126 ⇑P Pn 17 54 25.2 -0.6
baz=17
MVCO Mesa Verde 17.25 107 ⇓P Pn 17 54 26.5 +0.3
baz=17
MVCO Mesa Verde 17.25 107 eP Pn 17 54 27.6 +1.3
480nm,2.5s
Z15A Gila River Ind 17.25 124 ⇑P Pn 17 54 26.5 +0.2
baz=17
U19A Dine' College, 17.25 111 ⇓P Pn 17 54 26.7 +0.4
baz=17
Y16A Circle Bar Ran 17.26 121 ⇑P Pn 17 54 27.1 +0.7
baz=17
HYT Haines Junctio 17.30 346 ePn Pn 17 54 31.6 +4.9
R21A Cimarron 17.35 102 ⇓P Pn 17 54 27.2 -0.3
baz=17
SMCO Snowmass 17.41 99 eP Pn 17 54 28.6 +0.4
28nm,1.0s
S21A Coal Bank Pass 17.51 105 ⇓P Pn 17 54 30.0 +0.4
baz=17
W18A Petrified Fore 17.58 115 ⇓P Pn 17 54 31.1 +0.6
baz=18
Q22A Crested Butte, 17.59 100 ⇓P Pn 17 54 29.0 -1.4
baz=18
115A Sonoran Desert 17.63 125 ⇓P Pn 17 54 30.4 -0.5
baz=18
U20A Newcomb 17.67 109 ⇓P Pn 17 54 32.1 +0.6
baz=18
V19A Window Rock 17.69 112 ⇓P Pn 17 54 31.5 -0.2
baz=18
PHWY Pilot Hill 17.74 91 eP Pn 17 54 29.8 -2.6
21nm,1.0s
Y17A Roosevelt 17.78 120 ⇑P Pn 17 54 32.8 0.0
baz=18
X18A Snowflake 17.80 116 ⇑P Pn 17 54 33.1 0.0
baz=18

DGMT **Dagmar** 17.80 67 ⇓P Pn 17 54 32.6 -0.5
baz=18
DGMT **Dagmar** 17.80 67 *e*Pn Pn 17 54 33.2 +0.1
106nm,1.1s
W19A **Sanders** 17.81 114 ⇑P Pn 17 54 33.0 -0.2
baz=18
214A **Organ Pipe Nat** 17.83 128 ⇓P Pn 17 54 33.3 -0.3
baz=18
R22A **Saguache, Gunn** 17.97 102 ⇑P Pn 17 54 35.4 +0.2
baz=18
V20A **Brimhall** 18.03 111 ⇑P Pn 17 54 35.8 -0.1
baz=18
116A **Eloy** 18.03 124 ⇓P Pn 17 54 35.5 -0.5
baz=18
RSSD **Black Hills** 18.11 82 *e*Pn Pn 17 54 36.3 -0.5
38nm,1.2s
ISCO **Idaho Springs** 18.14 96 *e*Pn Pn 17 54 36.4 -0.9
29nm,0.9s
Y18A **Canyon Day Jun** 18.23 118 ⇑P Pn 17 54 38.7 +0.3
baz=18
Z17A **San Carlos Hig** 18.27 120 ⇑P Pn 17 54 39.1 +0.2
baz=18
X19A **St. Johns** 18.29 116 ⇓P Pn 17 54 39.2 0.0
baz=18
T22A **Edith** 18.45 105 ⇓P Pn 17 54 40.9 -0.1
baz=18
216A **Three Points,** 18.58 125 ⇑P Pn 17 54 42.7 0.0
baz=18
V21A **Milan** 18.58 110 ⇓P Pn 17 54 42.5 -0.2
baz=18
117A **Oracle** 18.61 123 ⇓P Pn 17 54 43.2 +0.2
baz=18
Y19A **Nutrioso** 18.61 117 ⇑P Pn 17 54 43.2 +0.2
baz=18
Z18A **Geronimo** 18.69 120 ⇑P Pn 17 54 43.8 -0.2
baz=19
X20A **Quemado** 18.74 114 ⇓P Pn 17 54 44.5 -0.2
baz=19
TUC **Tucson** 18.76 123 *e*P Pn 17 54 44.0 -0.9
15nm,0.9s
W21A **San Fidel** 18.96 111 ⇓P Pn 17 54 46.9 -0.5
baz=19
V22A **San Miguel Ran** 19.02 108 ⇑P Pn 17 54 47.4 -0.6
baz=19
Z19A **T-Link Ranch,** 19.03 118 ⇓P Pn 17 54 47.5 -0.7
baz=19
SDCO **Great Sand Dun** 19.08 102 *e*Pn Pn 17 54 49.4 +0.7
25nm,0.9s
217A **Green Valley** 19.12 124 ⇓P Pn 17 54 49.0 -0.3
baz=19
Y20A **Horse Springs,** 19.21 115 ⇑P Pn 17 54 49.7 -0.6
baz=19
X21A **Alamocita Cree** 19.27 113 ⇓P Pn 17 54 50.6 -0.4
baz=19
119A **Ashpeak Ranch,** 19.36 120 ⇓P Pn 17 54 51.7 -0.4
baz=19
218A **Dragoon** 19.44 123 ⇓P Pn 17 54 52.3 -0.8
baz=19
W22A **Albuquerque** 19.51 110 ⇑P Pn 17 54 53.0 -0.9
baz=19
Z20A **Nine Sixteen R** 19.58 118 ⇓P Pn 17 54 54.1 -0.7
baz=20
Y21A **Point of Rocks** 19.61 114 ⇓P Pn 17 54 54.9 -0.2
baz=20
LAZ **Ladron** 19.72 112 *e*P Pn 17 54 56.0 -0.4
8.8nm,0.9s
X22A **Bernardo** 19.75 112 ⇑P Pn 17 54 55.3 -1.4
baz=20
318A **Bisbee** 19.85 124 ⇓P Pn 17 54 56.3 -1.7
baz=20
ANMO **Albuquerque** 19.86 110 P Pn 17 54 57.1 -0.9
0.1nm,0.3s,baz=312,slow=11,SNR=11
ANMO LR LR 18 01 59.7
comp=Z,703nm,20.2s,baz=305,slow=35
ANMO **Albuquerque** 19.86 110 *e*Pn Pn 17 54 57.2 -0.8
15nm,0.9s
U24A **Moreno Valley** 19.88 105 ⇑P Pn 17 54 56.5 -1.8
baz=20
219A **White Tail Can** 19.91 121 ⇓P Pn 17 54 57.0 -1.6
baz=20
120A **U Bar Ranch, L** 19.92 119 ⇓P Pn 17 54 58.1 -0.7
baz=20
W23A **Werner Place,** 19.95 109 ⇓P Pn 17 54 57.7 -1.4
baz=20
LENM **Lemitar** 19.97 113 *e*Pn Pn 17 54 58.3 -1.1
Z21A **St. Cloud Mine** 20.04 116 ⇑P P 17 54 59.0 +0.4
baz=20
Y22D **IRIS PASSCAL I** 20.06 113 ⇑P P 17 54 58.5 -0.2
baz=20
LPM **Los Pinos Moun** 20.11 112 *e*Pn P 17 55 00.7 +1.5
Y22A **Socorro** 20.11 113 ⇑P P 17 54 59.9 +0.6
baz=20
YKA **Yellowknife Ar** 20.17 20 P P 17 55 00.4 +0.8
5.8nm,0.9s,baz=209,slow=11,SNR=16
YKA PcP PcP 17 59 15.0 +1.1
0.8nm,0.8s,baz=188,slow=2.3,SNR=3.8
YKA **Yellowknife Ar** 20.17 20 P P 17 55 00.4 +0.8
YKA PcP PcP 17 59 15.1 +1.1
BNM **Barren Site** 20.21 112 *e*P P 17 55 01.6 +1.3
22nm,0.9s
X23A **Hourglass Bar** 20.25 111 ⇓P P 17 55 01.1 +0.3
baz=20
OGNE **Ogallala** 20.31 90 *e*Pn P 17 55 00.7 -0.7
75nm,1.1s
319A **Douglas** 20.32 123 ⇑P P 17 55 01.8 +0.2
baz=20
220A **Playas Peak, P** 20.42 120 ⇓P P 17 55 02.9 +0.2
baz=20
W24A **Lazy 6 Ranch,** 20.43 108 ⇓P P 17 55 02.9 +0.2
baz=20
121A **Cookes Peak, D** 20.47 118 ⇓P P 17 55 04.1 +0.9
baz=20
FFC **Flin Flon** 20.48 50 *e*P P 17 55 03.2 +0.1
70nm,0.9s
MENT **Mentasta** 20.48 341 *e*P P 17 55 09.8 +6.8
U25A **Circle Dot Ran** 20.49 104 ⇓P P 17 55 03.9 +0.5
baz=20
Z22A **Elephant Butte** 20.54 115 ⇑P P 17 55 04.6 +0.7
baz=20
V25A **Rancho No Teng** 20.63 106 ⇑P P 17 55 05.5 +0.6
baz=20
Y23A **Lovelace Mesa,** 20.72 112 ⇓P P 17 55 06.5 +0.6
baz=21
X24A **Lazy VL Ranch,** 20.77 110 ⇑P P 17 55 06.3 -0.1
baz=21
320A **Kipp Ranch, An** 20.81 121 ⇑P P 17 55 07.8 +0.9
baz=21
221A **Mesquite Ranch** 20.82 119 ⇑P P 17 55 07.3 +0.3
baz=21
122A **Conniff Cattle** 20.86 116 ⇑P P 17 55 08.3 +0.8
baz=21
PAX **Paxson** 20.94 339 *e*P P 17 55 13.9 +6.0
33nm,1.7s
U26A **Atchley Ranch,** 20.96 103 ⇑P P 17 55 09.0 +0.6
baz=21
Z23A **Rita Site, Whi** 21.01 114 ⇑P P 17 55 10.3 +1.3
baz=21
W25A **X Bar L Ranch,** 21.07 107 ⇑P P 17 55 10.1 +0.5
baz=21
Y24A **Capitan** 21.14 111 ⇑P P 17 55 10.2 -0.2
baz=21
222A **Williams Famil** 21.19 117 ⇓P P 17 55 11.0 0.0
baz=21
V26A **Tequesquite Ra** 21.23 105 ⇑P P 17 55 11.7 +0.4
baz=21
X25A **Clemmons Ranch** 21.32 109 ⇓P P 17 55 12.9 +0.6
baz=21
123A **Bell Site, Whi** 21.38 115 ⇓P P 17 55 12.7 -0.3
baz=21
RSO **Redoubt South** 21.45 327 *e*P P 17 55 15.3 +1.8
Z24A **Sheeppen Canyo** 21.54 112 ⇓P P 17 55 15.0 +0.3
baz=21
EGAK **Eagle** 21.61 346 *e*P P 17 55 16.6 +1.5
144nm,2.5s,mb5.0
W26A **Owens Ranch, T** 21.62 106 ⇓P P 17 55 15.9 +0.4
baz=22
Y25A **Mesa, Roswell** 21.64 110 ⇓P P 17 55 16.3 +0.5
baz=22
223A **Chaparral, Ant** 21.68 117 ⇑P P 17 55 17.2 +0.9
baz=22
124A **Stringfield Ra** 21.87 114 ⇓P P 17 55 18.2 -0.1
baz=22
X26A **CR and CF Fran** 21.88 108 ⇓P P 17 55 18.6 +0.1
baz=22
Z25A **Roswell** 22.00 112 ⇓P P 17 55 19.8 +0.1
baz=22
W27A **Bowe Ranch, En** 22.12 106 ⇑P P 17 55 21.0 +0.1
baz=22

224A **Cornudas Mount** 22.22 115 ⇓P P 17 55 22.3 +0.2
baz=22
Y26A **Elida** 22.23 109 ⇓P P 17 55 22.2 +0.1
baz=22
X27A **F and S Farms,** 22.32 106 ⇑P P 17 55 23.3 +0.2
baz=22
125A **Gardner Draw,** 22.42 113 ⇑P P 17 55 24.3 +0.2
baz=22
Z26A **Caprock** 22.50 111 ⇑P P 17 55 25.1 0.0
baz=22
MNTX **Cornudas Mount** 22.56 116 *e*P P 17 55 25.4 -0.1
26nm,1.5s,mb4.4
225A **Deer Hill, Car** 22.66 114 ⇓P P 17 55 27.4 +0.7
baz=22
324A **Moseley Ranch,** 22.66 116 ⇑P P 17 55 27.5 +0.8
baz=22
Y27A **Causey** 22.70 108 ⇑P P 17 55 27.0 -0.1
baz=23
CBKS **Cedar Bluff** 22.72 94 *e*P P 17 55 27.1 -0.3
30nm,0.9s,mb4.7
126A **Clayton Basin,** 22.85 112 ⇑P P 17 55 28.3 -0.5
baz=23
PPLA **Purkeypile** 22.86 333 *e*P P 17 55 29.9 +1.4
175nm,1.8s,mb5.2
MSTX **Muleshoe** 22.92 108 ⇓P P 17 55 28.8 -0.6
baz=23
KTH **Kantishna Hill** 22.93 335 *e*P P 17 55 31.4 +2.1
2µm,0.6s
SVW2 **Sparrevohn** 22.94 327 *e*P P 17 55 29.6 +0.3
Z27A **Tatum** 23.00 109 ⇓P P 17 55 30.2 0.0
baz=23
325A **Bean Ranch, Si** 23.04 116 ⇓P P 17 55 30.5 -0.2
baz=23
226A **Malaga, Loving** 23.16 113 ⇑P P 17 55 31.4 -0.6
baz=23
127A **Arkansas Junct** 23.28 111 ⇑P P 17 55 32.0 -1.2
baz=23
ULM **Lac du Bonnet** 23.34 63 P P 17 55 33.0 -0.7
31nm,1.0s,mb4.7,baz=277,slow=9.3,SNR=18
ULM LR LR 18 04 45.8
comp=Z,3µm,19.3s,MS4.7,baz=252,slow=37
BPAW **Bear Paw Mtn.** 23.35 336 *e*P P 17 55 33.1 -0.6
2µm,0.7s
AGMN **Agassiz Nation** 23.36 68 *e*P P 17 55 32.7 -1.3
24nm,0.9s,mb4.6
425A **Indio Mountain** 23.41 117 ⇓P P 17 55 34.4 -0.3
baz=23
ECSD **EROS Data Cent** 23.45 80 *e*P P 17 55 33.8 -1.2
96nm,1.5s,mb5.0
CHUM **Lake Minchumin** 23.59 334 *e*P P 17 55 37.0 +0.8
19nm,1.1s,mb4.4
326A **Caldwell Ranch** 23.72 114 ⇑P P 17 55 37.9 +0.2
baz=24
227A **Bennet, Jal** 23.73 112 ⇑P P 17 55 36.8 -1.0
baz=24
327A **Balmorhea Ranc** 24.00 114 ⇑P P 17 55 40.6 +0.4
baz=24
426A **McDonald Obser** 24.10 116 ⇑P P 17 55 40.9 -0.3
baz=24
TTA **Tatalina** 24.20 330 *e*P P 17 55 42.1 +0.3
18nm,1.0s,mb4.4
INK **Inuvik** 24.21 356 P P 17 55 43.0 +1.2
3.4nm,1.0s,mb3.8,baz=172,slow=9.9,SNR=4.1
INK LR LR 18 04 50.3
comp=Z,1µm,21.1s,MS4.4,baz=180,slow=36
INK **Inuvik** 24.21 356 *e*P P 17 55 41.0 -0.7
23nm,1.5s,mb4.4
427A **Hayter Ranch,** 24.39 115 ⇓P P 17 55 43.6 -0.2
baz=24
328A **Wristen Ranch,** 24.44 113 ⇓P P 17 55 43.8 -0.5
baz=24
526A **Mary Lane Ranc** 24.47 117 ⇑P P 17 55 44.4 -0.2
baz=24
527A **Woodward Ranch** 24.72 116 ⇓P P 17 55 46.7 -0.1
baz=25
626A **Big Bend Ranch** 24.79 118 ⇑P P 17 55 47.3 -0.1
baz=25
KSU1 **Kansas State U** 24.86 91 *e*P P 17 55 47.7 -0.3
33nm,0.9s,mb4.9
428A **Kincaid Ranch,** 24.94 114 ⇓P P 17 55 48.8 0.0
baz=25
TXAR **Lajitas Array** 25.23 118 P P 17 55 50.6 -0.8
3.8nm,0.9s,mb3.9,baz=294,slow=7.7,SNR=29
TXAR LR LR 18 05 33.7
comp=Z,531nm,20.0s,MS4.0,baz=240,slow=36
528A **Cox Ranch, San** 25.24 115 ⇓P P 17 55 51.7 +0.2
baz=25
WMOK **Wichita Mounta** 25.28 102 *e*P P 17 55 48.1 -3.7
36nm,0.9s,mb4.9
627A **Terlingua Ranc** 25.33 117 ⇓P P 17 55 52.4 +0.1
baz=25
COLD **Coldfoot** 25.58 341 *e*P P 17 55 55.0 +0.7
12nm,1.2s,mb4.3
628A **Black Gap, Mar** 25.63 116 ⇑P P 17 55 55.1 +0.1
baz=26
FCC **Fort Churchill** 25.91 43 *e*P P 17 55 56.5 -0.8
3.2nm,1.6s,mb3.6
UNV **Unalaska Valle** 25.92 305 *e*P P 17 55 56.9 -0.5
55nm,1.1s,mb5.0
EYMN **Ely** 26.30 68 *e*P P 17 56 00.7 -0.3
25nm,1.0s,mb4.7
JCT **Junction City** 27.02 111 *e*P P 17 56 07.7 +0.1
18nm,0.9s,mb4.6
JFWS **Jewell Farm** 28.15 79 *e*P P 17 56 17.3 -0.3
14nm,0.8s,mb4.6
COWI **Conover** 28.17 72 *e*P P 17 56 17.4 -0.4
12nm,0.8s,mb4.6
MIAR **Mount Ida** 29.07 97 *e*P P 17 56 26.3 +0.3
20nm,0.9s,mb4.8
CCM **Cathedral Cave** 29.13 89 *e*P P 17 56 26.4 0.0
12nm,0.9s,mb4.6
HDIL **Hopedale** 29.57 83 *e*P P 17 56 30.5 +0.2
17nm,0.8s,mb4.8
HKT **Hockley** 30.04 107 *e*P P 17 56 36.9 +2.3
26nm,1.5s,mb4.8
OLIL **Olney** 31.11 86 *e*P P 17 56 45.0 +1.1
99nm,1.6s,mb5.4
WVT **Waverly** 32.43 90 *e*P P 17 56 54.5 -1.0
7.2nm,0.9s,mb4.5
RES **Resolute Bay** 34.10 16 P P 17 57 11.0 +1.3
3.4nm,0.8s,mb4.3,baz=231,slow=11,SNR=14
RES **Resolute Bay** 34.10 16 *e*P P 17 57 10.1 +0.3
6.4nm,0.9s,mb4.5
LONY **Lake Ozonia** 38.45 70 *e*P P 17 57 46.3 -0.9
8.0nm,0.9s,mb4.5
NCB **Newcomb** 38.91 70 *e*P P 17 57 49.6 -1.5
8.0nm,1.0s,mb4.4
FRNY **Flat Rock** 39.04 69 *e*P P 17 57 50.3 -1.9
14nm,0.9s,mb4.7
CMIG **Matias Romero** 39.65 122 LR LR 18 15 02.2
comp=Z,308nm,18.4s,MS4.2,baz=101,slow=37
TRY **Troy** 39.73 72 *e*P P 17 57 58.0 0.0
LBNH **Lisbon** 40.37 69 *e*P P 17 58 02.9 -0.4
16nm,0.8s,mb4.8
BILL **Bilibino** 40.44 328 *e*P P 17 58 02.7 -0.8
15nm,1.1s,mb4.6
SCHQ **Schefferville** 40.59 52 P P 17 58 03.9 -1.1
4.4nm,0.9s,mb4.1,baz=260,slow=17,SNR=3.7
SCHQ LR LR 18 14 59.5
comp=Z,2µm,18.2s,MS5.0,baz=278,slow=36
PETK **Petropavlovsk-** 47.03 308 P P 17 58 55.9 -0.9
7.9nm,0.8s,mb4.7,baz=80,slow=12,SNR=8.5
PETK LR LR 18 17 07.3
comp=Z,150nm,18.5s,MS4.0,baz=274,slow=34
SUMG **Summit** 48.70 24 *e*P P 17 59 11.5 +2.0
10nm,0.7s,mb5.0
JTS **JuntasAbangare** 51.02 118 LR LR 18 23 52.9
comp=Z,213nm,20.7s,MS4.2,baz=61,slow=39
TIXI **Tiksi** 52.19 337 *e*P P 17 59 35.4 -0.4
7.2nm,0.9s,mb4.6
TAOE **Nuku Hiva Isla** 53.77 193 *e*LR LR 18 15 07.3
565nm,25.2s
YAK **Yakutsk** 56.73 326 *e*P P 18 00 07.5 -1.4
17nm,0.8s,mb5.1
SJG **San Juan** 58.44 95 LR LR 18 25 37.3
comp=Z,943nm,18.2s,MS5.0,baz=96,slow=36
ASAJ **Asahikawa** 60.02 304 P P 18 00 31.2 -0.9
10.0nm,0.8s,mb4.9,baz=297,slow=5.9,SNR=13
PMOR **Pomariorio Ree** 61.37 201 *e*T 19 06 56.6
23nm,0.3s
SDV **Santo Domingo** 61.59 106 LR LR 18 30 42.5
comp=Z,167nm,18.4s,MS4.2,baz=132,slow=39
ROSC **El Rosal** 62.01 112 LR LR 18 29 32.0
comp=Z,110nm,21.8s,MS4.0,baz=14,slow=38
PPT **Papeete** 64.26 202 *e*LQ 18 17 17.7
2µm,28.5s
PCRV **Puerto La Cruz** 64.87 101 LR LR 18 29 51.8
comp=Z,417nm,21.4s,MS4.6,baz=156,slow=36

MJAR **Matsushiro Arr** 67.22 299 P P 18 01 19.5 -0.4
1.8nm,0.9s,mb4.1,baz=21,slow=5.6,SNR=5.0
MJAR LR LR 18 25 37.9
comp=Z,171nm,19.7s,MS4.3,baz=70,slow=32
MJAR **Matsushiro Arr** 67.22 299 P P 18 01 19.5 -0.4
MJAR LR LR 18 25 37.9
RKT **Rikitea** 67.25 186 *e*LQ 18 18 30.2
900nm,27.0s
RKT *e*LR LR 18 21 21.3
536nm,25.8s
RKT *e*T 19 14 19.8
6.7nm,0.3s
CN2 **Changchun** 69.94 312 *e*P P 18 01 35.7 -1.1
CN2 *e*S S 18 10 41.6 -5.6
CN2 pmax pmax
comp=Z,10.0nm,0.4s,mb5.1
CN2 pmax pmax
comp=Z,100nm,4.0s
CN2 LR LR
comp=N,350nm,17.0s,MS4.8
CN2 LR LR
comp=E,260nm,17.0s,MS4.8
CN2 LR LR
comp=Z,200nm,5.0s
NB2 **NORSAR Subarra** 70.27 19 P P 18 01 40.1 +1.7
comp=Z,6.3nm,1.0s,mb4.5,baz=332,slow=6.2
NOA **NORSAR Array B** 70.27 19 P P 18 01 39.0 +0.6
comp=Z,3.8nm,0.9s,mb4.3,baz=332,slow=5.8,SNR=7.7
NOA LR LR 18 33 14.2
comp=Z,121nm,18.9s,MS4.2,baz=320,slow=36
HFS **Hagfors** 71.64 19 P P 18 01 47.6 +0.8
comp=Z,4.6nm,0.9s,mb4.4,baz=332,slow=5.7,SNR=7.0
FINES **FINESS Array B** 72.78 12 P P 18 01 54.2 +0.6
comp=Z,5.8nm,0.9s,mb4.5,baz=20,slow=6.1,SNR=7.3
SONM **Songino Array** 76.04 325 P P 18 02 12.7 -0.1
comp=Z,3.8nm,0.8s,mb4.4,baz=37,slow=4.0,SNR=20
SONM LR LR 18 36 07.5
comp=Z,379nm,18.1s,MS4.7,baz=80,slow=36
BJI **Beijing** 77.48 314 P P 18 02 19.1 -2.0
BJI S S 18 12 09.2 -3.2
BJI SS SS 18 17 07.8 -2.4
BJI pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
BJI pmax pmax
comp=Z,150nm,4.5s
BJI LR LR
comp=N,200nm,25.0s,MS4.6
BJI LR LR
comp=E,280nm,25.0s,MS4.6
BJI LR LR
comp=Z,140nm,26.4s,MS4.2
BAIF **Baives** 77.71 29 *e*P P 18 02 23.2 +1.0
comp=Z,13nm,1.0s,mb4.5
BAIF **Baives** 77.71 29 *e*P P 18 02 23.2 +1.0
comp=Z,6.5nm,1.0s,mb4.5
ZAA0 **Zalesovo Array** 77.91 340 *e*P P 18 02 23.0 -0.2
ZALV **Zalesovo Beam** 77.91 340 P P 18 02 22.7 -0.5
comp=Z,4.3nm,0.7s,mb4.5,baz=16,slow=6.6,SNR=18
ZALV LR LR 18 37 49.7
comp=Z,199nm,19.7s,MS4.4,baz=48,slow=36
ZALV **Zalesovo Beam** 77.91 340 P P 18 02 22.7 -0.5
ZALV LR LR 18 37 49.8
IZAR **Zarasai** 78.24 14 *e*P P 18 02 25.2 +0.2
ISAL **Salakas** 78.39 14 *e*P P 18 02 26.1 +0.2
IIGN **Ignalina** 78.62 14 *e*P P 18 02 27.6 +0.5
IDID **Didziasalis** 78.74 14 *e*P P 18 02 28.1 +0.3
HHC **Hu-ho-hao-te** 79.17 318 *e*P P 18 02 30.1 -0.3
HHC pP pP 18 02 34.8 +2.6
HHC sP sP 18 02 37.2 +4.4
HHC PcP PcP 18 02 39.0 +0.2
HHC PP PP 18 05 30.6 +1.5
HHC S S 18 12 27.3 -3.2
HHC sS sS 18 12 35.0 +1.6
HHC SKS 18 12 40.0
HHC ScS ScS 18 12 48.1 -5.4
HHC pmax pmax
comp=Z,12nm,0.7s,mb4.9
HHC pmax pmax
comp=Z,100nm,6.4s
HHC LR LR
comp=N,290nm,17.8s,MS4.8
HHC LR LR
comp=E,330nm,19.0s,MS4.8
HHC LR LR
comp=Z,230nm,19.0s,MS4.5
ARU **Arti** 79.46 356 *e*P P 18 02 32.5 +0.8
comp=Z,9.7nm,0.9s,mb4.7
LOR **Lormes** 79.95 30 *e*P P 18 02 36.8 +2.3
SSF **Saint Saulge** 80.00 31 *e*P P 18 02 36.9 +2.1
BRG **Berggiesshubel** 80.02 23 *e*P P 18 02 33.5 -1.4
comp=Z,2.0nm,0.8s,mb4.1
BRG *e* 18 02 39.1
comp=Z,12nm,1.5s
BRG S S 18 12 45.0 +5.9
BRG SS SS 18 17 53.0 +5.5
BRG
comp=N,207nm,15.4s
BRG
comp=E,162nm,18.3s
BRG
comp=Z,296nm,22.3s
BRG **Berggiesshubel** 80.02 23 *e*P P 18 02 33.5 -1.4
comp=Z,1.2nm,0.8s,mb3.9
BRG *e* 18 02 39.1
BRG S S 18 12 45.0 +5.9
BRG SS SS 18 17 53.0 +5.5
BRG LR LR
comp=Z,180nm,22.3s,MS4.4
CDF **Champ du Feu** 80.16 28 *e*P P 18 02 35.8 +0.2
comp=Z,13nm,1.0s,mb4.5
CDF **Champ du Feu** 80.16 28 *e*P P 18 02 35.8 +0.2
comp=Z,6.7nm,1.0s,mb4.5
AVF **Avril sur Loir** 80.17 31 *e*P P 18 02 35.2 -0.5
NKC **Novy Kostel** 80.17 24 AMS AMS 18 42 40.0
comp=Z,300nm,12.9s
GRA1 **Grafenberg Arr** 80.29 25 *e*P P 18 02 38.9 +2.6
comp=Z,4.0nm,0.8s,mb4.4
GRA1 LR LR
comp=Z,500nm,18.3s,MS4.9
GRF **Grafenberg Arr** 80.29 25 *e*P P 18 02 38.9 +2.6
comp=Z,4.0nm,0.8s,mb4.4
GRF *e*L 18 39 57.3
comp=Z,484nm,18.3s
SMF **Signal de Mont** 80.47 31 *e*P P 18 02 37.5 +0.2
PVCC **Panska Ves** 80.50 22 AMS AMS 18 40 40.0
comp=Z,300nm,14.1s
HINF **Hinteralfeld** 80.53 28 *e*P P 18 02 36.5 -1.2
comp=Z,6.6nm,0.7s,mb4.4
HINF **Hinteralfeld** 80.53 28 *e*P P 18 02 36.5 -1.2
comp=Z,3.3nm,0.7s,mb4.4
PRU **Pruhonice** 80.98 23 AMS AMS 18 39 50.0
DPC **Dobruska-Polom** 81.14 21 *e*P P 18 02 44.8 +4.0
DPC AMS AMS 18 40 50.0
comp=Z,300nm,16.2s
KHC **Kasperske Hory** 81.48 24 *e*P P 18 02 44.5 +1.8
KHC AMS AMS 18 40 50.0
comp=Z,300nm,19.3s
BRVK **Borovoye** 81.61 348 *e*P P 18 02 44.8 +1.5
comp=Z,8.5nm,0.8s,mb4.7
BVAR **Borovoye Array** 81.62 348 P P 18 02 43.0 -0.4
comp=Z,4.4nm,0.7s,mb4.5,baz=20,slow=4.7,SNR=25
BVAR LR LR 18 40 32.4
comp=Z,327nm,21.9s,MS4.7,baz=18,slow=37
GERES **GERESS Array B** 81.78 24 P P 18 02 45.8 +1.5
comp=Z,1.1nm,0.7s,mb3.9,baz=333,slow=5.1,SNR=8.4
GERES LR LR 18 41 10.8
comp=Z,350nm,18.3s,MS4.8,baz=73,slow=37
TREC **Trest** 81.87 22 AMS AMS 18 41 40.0
comp=Z,400nm,15.2s
NJ2 **Nanjing** 81.93 307 *e*P P 18 02 46.1 +0.7
NJ2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
LPAZ **La Paz** 82.02 122 P P 18 02 44.4 -1.5
comp=Z,2.1nm,0.7s,mb4.2,baz=336,slow=5.9,SNR=8.4
LPAZ **La Paz** 82.02 122 *e*P P 18 02 44.3 -1.6
comp=Z,7.3nm,0.8s,mb4.7
OKC **Ostrava-Krasne** 82.08 21 AMS AMS 18 42 50.0
comp=Z,200nm,16.6s
KURK **Kurchatov** 82.34 343 P P 18 02 47.0 -0.2
comp=Z,7.1nm,0.8s,mb4.7,baz=20,slow=5.0,SNR=34
KURK LR LR 18 41 06.7
comp=Z,208nm,20.2s,MS4.5,baz=60,slow=37
KURK **Kurchatov** 82.34 343 *e*P P 18 02 46.0 -1.1
comp=Z,5.3nm,0.8s,mb4.5
ESDC **Sonseca Array** 83.02 39 P P 18 02 53.1 +2.1
comp=Z,0.5nm,0.5s,mb3.8,baz=316,slow=7.2,SNR=4.7

ESDC LR LR 18 38 07.6
comp=Z,283nm,18.5s,MS4.7,baz=320,slow=34
AKASG Malin Array Be 83.60 14 P P 18 02 51.9 -1.8
comp=Z,1.0nm,0.6s,mb4.2,baz=344,slow=4.7,SNR=2.9
AKASG LR LR 18 42 30.2
comp=Z,155nm,18.4s,MS4.4,baz=350,slow=37
AKASG Malin Array Be 83.60 14 P P 18 02 51.9 -1.8
AKASG LR LR 18 42 30.2
MKAR Makanchi Array 85.13 339 P P 18 03 00.5 -1.1
comp=Z,1.0nm,0.8s,mb4.0,baz=47,slow=4.5,SNR=7.4
RAO Raoul Island 85.58 221 LR LR 18 32 41.3
comp=Z,277nm,19.1s,MS4.7,baz=292,slow=30
WMQ Urumqi 86.30 334 *eP* **P 18 03 08.0 +0.6**
ABKAR Akbulak array 86.52 354 *eP* **P 18 03 09.2 +0.8**
comp=Z,7.3nm,1.0s,mb4.9
LZH Lanzhou 86.63 320 *eP* **P 18 03 08.5 -0.7**
LZH pP pP 18 03 11.7 +0.8
LZH sP sP 18 03 13.0 +1.4
LZH pmax pmax
comp=Z,13nm,1.0s,mb5.1
DZM Mont Dzumac 88.30 237 *eLR* LR 18 31 11.9
comp=Z,624nm,22.4s
TKM2 Tokmak 2 90.39 342 *eP* **P 18 03 26.8 -0.1**
comp=Z,8.3nm,1.0s,mb5.0
CD2 Chengdu 90.89 317 *eP* **P 18 03 28.6 -0.9**
CD2 pP pP 18 03 33.4 +2.2
CD2 sP sP 18 03 35.8 +3.9
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.4
CD2 pmax pmax
comp=Z,30nm,5.8s
AAK Ala-Archa 90.91 343 P P 18 03 29.3 -0.1
comp=Z,0.8nm,0.3s,mb4.6,baz=198,slow=6.4,SNR=5.0
AAK LR LR 18 47 35.2
comp=Z,390nm,18.2s,MS4.9,baz=24,slow=38
AAK Ala-Archa 90.91 343 P P 18 03 29.2 -0.1
AAK LR LR 18 47 35.2
KEST Kesra 91.98 33 LR LR 18 45 30.2
comp=Z,59nm,18.3s,MS4.1,baz=220,slow=36
GYA Guiyang 92.99 312 P **P 18 03 38.5 -0.8**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb5.2
BRTR Keskin Array B 94.99 13 LR LR 18 53 31.5
comp=Z,86nm,18.6s,MS4.2,baz=149,slow=40
KMI Kunming 96.14 314 P **P 18 03 53.3 -0.4**
KMI pP pP 18 03 56.5 +1.0
KMI sP sP 18 03 57.5 +1.4
KMI PP PP 18 07 47.5 +1.7
KMI S S 18 15 09.3 -4.2
KMI sS sS 18 15 14.7 -1.8
KMI pmax pmax
comp=Z,6.0nm,0.6s,mb5.2
KMI LR LR
comp=N,190nm,17.4s,MS4.7
KMI LR LR
comp=E,160nm,19.3s,MS4.7
KMI LR LR
comp=Z,160nm,26.9s
CPUP Villa Florida 96.16 121 LR LR 18 53 24.3
comp=Z,89nm,20.1s,MS4.2,baz=57,slow=39
PLCA Paso Flores 99.72 139 LR LR 18 40 59.2
comp=Z,130nm,18.3s,MS4.5,baz=309,slow=30
QSPA South Pole Qui 134.06 180 PKP PKPdf 18 09 41.3 -0.2
comp=Z,1.3nm,0.8s,baz=65,slow=1.8,SNR=4.7
QSPA South Pole Qui 134.06 180 PKP PKPdf 18 09 41.3 -0.2
KMBO Kilima Mbogo 135.42 19 PKP PKPdf 18 09 45.6 -0.5
comp=Z,1.6nm,0.7s,baz=180,slow=2.0,SNR=2.3
LSZ Lusaka 145.36 41 *e*PKPdf PKPdf 18 10 02.6 -1.2

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*NEIC **02** 17:52:58.6±0.8, 23°.51S×179°.79W, h551km±9km, mb4.8/8, Error ellipse: s-maj=13.4km s-min=8.3km az=144.0*
*ISCJB **02** 17:52:58.6±0.7, 23°.48S±0°.06×179°.86W±0°.07, h560km±9km, mb4.4/21, Error ellipse: s-maj=11.4km s-min=8.9km az=37.0*
*IDC **02** 17:52:59.0±1.5, 23°.42S×179°.84W, h552km±16km, mb3.6/10, mb1 3.8/12, mb1mx3.7/19, mbtmp3.6/12, Error ellipse: s-maj=17.6km s-min=12.5km az=155.0*
ISC 02 17:52:59.0±0.7, 23°.48S±0°.07×179°.81W±0°.07, h551km±8km, n50, σ0°.80/47, mb4.4/21, 4D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**5.99**	**164**	S		**17 55 58.1**	**+0.1**
	23nm,0.3s,baz=102,slow=22,SNR=2.8						
MSVF	**Nonsavu**	**6.06**	**340**	*eP*	**P**	**17 54 38.0**	**-0.3**
AFI	**Afiamalu**	**12.18**	**40**	P	**P**	**17 55 38.7**	**-0.8**
	2.4nm,0.3s,baz=194,slow=12,SNR=2.7						
AFI	**Afiamalu**	**12.18**	**40**	P	**P**	**17 55 39.0**	**-0.5**
DZM	**Mont Dzumac**	**12.76**	**274**	*eP*	**P**	**17 55 46.9**	**+1.5**
OUZ	**Omahuta**	**13.03**	**205**	*eP*	**P**	**17 55 52.9**	**+4.9**
URZ	**Urewera**	**14.97**	**189**	P	**P**	**17 56 06.8**	**-1.1**
	2.7nm,0.3s,baz=248,slow=3.9,SNR=18						
URZ				S	**S**	**17 58 38.5**	**-4.8**
	0.6nm,0.3s,baz=74,slow=21,SNR=8.3						
URZ	**Urewera**	**14.97**	**189**	*eP*	**P**	**17 56 06.7**	**-1.1**
URZ				S	**S**	**17 58 38.5**	**-4.8**
RPZ	**Rata Peaks**	**21.54**	**198**	P	**P**	**17 57 08.3**	**-0.3**
	3.2nm,0.3s,mb4.4,baz=71,slow=17,SNR=9.7						
RPZ	**Rata Peaks**	**21.54**	**198**	*eP*	**P**	**17 57 08.2**	**-0.4**
EIDS	**Eidsvold**	**26.55**	**260**	*eP*	**P**	**17 57 53.6**	**+0.2**
CNB	**Canberra Magne**	**29.22**	**239**	*eP*	**P**	**17 58 18.0**	**+1.5**
CMSA	**Cobar Meteorol**	**31.54**	**248**	⇓*iP*	**P**	**17 58 36.9**	**+0.4**
CTA	**Charters Tower**	**31.65**	**270**	*eP*	**P**	**17 58 37.9**	**+0.3**
	45nm,0.3s,mb5.5						
CTA	**Charters Tower**	**31.65**	**270**	P	**P**	**17 58 37.9**	**+0.2**
	59nm,0.4s,mb5.5,baz=95,slow=11,SNR=195						
CTAO	**Charters Tower**	**31.65**	**270**	*eP*	**P**	**17 58 37.8**	**+0.2**
	63nm,0.4s,mb5.5						
TOO	**Toolangi**	**32.82**	**237**	*eP*	**P**	**17 58 47.9**	**+0.6**
MTSU	**Mount Surprise**	**33.90**	**272**	⇓*iP*	**P**	**17 58 56.7**	**+0.1**
	44nm,0.6s,mb5.2						
STKA	**Stephens Creek**	**35.04**	**248**	⇓*iP*	**P**	**17 59 06.5**	**+0.5**
	8.1nm,0.5s,mb4.5						
STKA	**Stephens Creek**	**35.04**	**248**	P	**P**	**17 59 06.5**	**+0.4**
	12nm,0.6s,mb4.6,baz=91,slow=9.6,SNR=57						
STKA	**Stephens Creek**	**35.04**	**248**	*eP*	**P**	**17 59 06.3**	**+0.3**
ARPS	**Mount Arapiles**	**35.48**	**239**	*eP*	**P**	**17 59 09.8**	**+0.2**
	17nm,0.5s,mb4.8						
ASAR	**Alice Springs**	**42.28**	**260**	P	**P**	**18 00 04.2**	**-0.5**
	16nm,0.6s,mb4.8,baz=95,slow=7.2,SNR=559						
ASAR				ScP	ScP	18 04 45.3	+1.3
	1.7nm,0.9s,baz=129,slow=3.4,SNR=9.2						
ASAR				S	**S**	**18 05 44.2**	**-1.7**
	0.5nm,0.7s,baz=100,slow=14,SNR=5.7						
WRAB	**Tennant Creek**	**42.60**	**266**	*eP*	**P**	**18 00 06.2**	**-1.1**
	18nm,0.6s,mb4.8						
KAKA	**Kakadu**	**46.45**	**275**	*eP*	**P**	**18 00 36.3**	**-0.6**
	12nm,0.3s,mb4.9						
KAKA	**Kakadu**	**46.45**	**275**	*eP*	**P**	**18 00 35.8**	**-1.1**
	46nm,0.7s,mb5.1						
FORT	**Forrest**	**46.62**	**249**	*eP*	**P**	**18 00 37.2**	**-0.8**
	71nm,0.6s,mb5.4						
FITZ	**Fitzroy Crossi**	**51.04**	**265**	*eP*	**P**	**18 01 10.4**	**-0.4**
	20nm,0.4s,mb4.8						
FITZ	**Fitzroy Crossi**	**51.04**	**265**	*eP*	**P**	**18 01 10.4**	**-0.5**
	18nm,0.7s,mb4.5						
KLBR	**Kellerberrin**	**55.31**	**247**	⇓*iP*	**P**	**18 01 40.4**	**-0.6**
	19nm,0.5s,mb4.6						
MBWA	**Marble Bar**	**55.62**	**260**	*eP*	**P**	**18 01 42.2**	**-1.1**
MBWA	**Marble Bar**	**55.62**	**260**	*eP*	**P**	**18 01 42.4**	**-0.9**
	22nm,0.6s,mb4.6						
QSPA	**South Pole Qui**	**66.60**	**180**	P	**P**	**18 02 55.8**	**+1.6**
	1.9nm,0.6s,mb3.8,baz=55,slow=2.7,SNR=19						
QSPA	**South Pole Qui**	**66.60**	**180**	P	**P**	**18 02 55.8**	**+1.6**
KSRS	**Korea Array**	**78.04**	**320**	P	**P**	**18 04 00.9**	**+0.1**
	1.4nm,0.9s,mb3.3,baz=121,slow=6.1,SNR=4.3						
PEA0B	**Petropavlovsk-**	**78.73**	**346**	*eP*	**P**	**18 04 06.1**	**+1.9**
HUMO	**Hull Mountain**	**84.06**	**38**	P	**P**	**18 04 32.0**	**+0.2**
	3.2nm,1.1s,mb3.8						
NVAR	**Mina Array Bea**	**84.33**	**44**	P	**P**	**18 04 33.0**	**-0.2**
	1.6nm,0.9s,mb3.6,baz=224,slow=9.1,SNR=5.8						
TUC	**Tucson**	**86.12**	**52**	*eP*	**P**	**18 04 42.7**	**+0.7**
	2.6nm,0.8s,mb3.9						
ELK	**Elko**	**87.59**	**43**	P	**P**	**18 04 48.1**	**-0.6**
	0.7nm,0.5s,mb3.6,baz=238,slow=13,SNR=4.5						
CMAR	**Chiang Mai Arr**	**89.55**	**290**	P	**P**	**18 04 59.2**	**+0.9**
	2.6nm,0.9s,mb4.1,baz=135,slow=3.1,SNR=16						
HLID	**Hailey**	**89.67**	**41**	*eP*	**P**	**18 04 57.9**	**-0.4**
TXAR	**Lajitas Array**	**90.06**	**58**	P	**P**	**18 05 00.5**	**+0.1**
	2.0nm,0.7s,mb4.0,baz=212,slow=6.6,SNR=24						
PDAR	**Pinedale Array**	**92.27**	**44**	P	**P**	**18 05 09.7**	**-0.5**
	0.9nm,0.6s,mb4.0,baz=176,slow=4.5,SNR=4.6						
SCHQ	**Schefferville**	**122.04**	**39**	PKP	PKPdf	18 10 50.8	+0.1
	1.7nm,0.4s,baz=217,slow=16,SNR=5.6						
ARCES	**ARCESS Array B 131.51 348**			SKPbc	SKPbc	18 13 41.3	-1.2
	3.3nm,0.9s,baz=10,slow=5.5,SNR=2.5						
FINES	**FINESS Array B 138.11 342**			SKPbc	SKPbc	18 14 01.9	-1.4
	3.2nm,0.7s,baz=42,slow=3.1,SNR=8.6						
AKASG	**Malin Array Be 144.72 328**			PKP	PKPdf	18 11 31.6	-1.2
	0.8nm,0.3s,baz=42,slow=5.1,SNR=5.7						
AKASG				SKPbc	SKPbc	18 14 18.8	-1.6
	2.2nm,0.8s,baz=46,slow=2.2,SNR=5.9						
BRTR	**Keskin Array B 147.47 308**			PKPbc	PKPbc	18 11 40.2	-1.1
	1.2nm,0.6s,baz=136,slow=4.8,SNR=3.8						
BRTR				PKPab	PKPab	18 11 44.4	-0.9
	1.4nm,0.6s,baz=96,slow=4.3,SNR=7.3						
MMAI	**Mount Meron Ar 147.69 295**			PKPbc	PKPbc	18 11 42.2	+0.1
	1.7nm,0.4s,baz=75,slow=6.4,SNR=9.5						

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*CSEM **02** 18:31:48.3, 63°.95N×21°.27W, h6km, ML4.4, After REY*
REY 02 18:31:48.3, 63°.95N×21°.27W, h6km, ML4.4, ML3.8, Iceland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IBJA	**Bjarnastaoir**	**0.01**	**256**	P	Pg	18 31 49.4	+0.1
IBJA				S	Sg	18 31 50.3	+0.3
ISOL	**Solvholt**	**0.15**	**98**	P	Pg	18 31 51.3	+0.1
ISOL				S	Sg	18 31 53.8	+0.6
IKRO	**Krokur**	**0.16**	**24**	P	Pg	18 31 51.6	0.0
IKRO				S	Sg	18 31 54.3	+0.5
ISAN	**Sandskeio**	**0.17**	**309**	P	Pg	18 31 51.8	+0.1
ISAN				S	Sg	18 31 54.7	+0.7
IVOS	**Vogsosar**	**0.21**	**243**	P	Pg	18 31 52.5	0.0
IVOS				S	Sg	18 31 56.2	+0.9
IHEI	**Heioarbar**	**0.25**	**4**	P	Pg	18 31 53.2	0.0
IHEI				S	Sg	18 31 57.1	+0.5
IKAS	**Kald??rsel**	**0.27**	**286**	P	Pg	18 31 53.6	+0.1
IKAS				S	Sg	18 31 57.8	+0.8
IASM	**Asmuli**	**0.31**	**111**	P	Pg	18 31 54.2	-0.1
IASM				S	Sg	18 31 58.9	+0.5
IKRI	**Krysuvik**	**0.36**	**259**	P	Pg	18 31 55.0	-0.3
IKRI				S	Sg	18 32 00.3	+0.3
ISAU	**Saurbar**	**0.38**	**83**	P	Pg	18 31 55.6	0.0
ISAU				S	Sg	18 32 00.9	+0.3
IVOG	**Vogar**	**0.49**	**273**	P	Pg	18 31 57.2	-0.6
IVOG				S	Sg	18 32 04.8	+0.6
IHAU	**Haukadalur**	**0.58**	**87**	P	Pg	18 31 58.7	-0.7
IHAU				S	Sg	18 32 06.8	-0.1
INYL	**Nylenda**	**0.65**	**273**	P	Pg	18 31 59.6	-1.1
INYL				S	Sg	18 32 09.0	-0.1
IASB	**`sbjarnarst**	**0.80**	**358**	P	Pg	18 32 02.2	-1.5
IASB				S	Sg	18 32 13.4	-0.7
IESK	**Eystri-Skogar**	**0.92**	**117**	P	Pg	18 32 04.3	-1.5
IESK				S	Sg	18 32 16.9	-0.8
IVAT	**Vatnsfell**	**1.06**	**76**	P	Pg	18 32 06.8	-1.8
IVAT				S	Sg	18 32 21.5	-0.9
IHVO	**Lagu-Hvolar**	**1.16**	**110**	P	Pg	18 32 08.5	-2.0
IHVO				S	Sg	18 32 24.4	-1.1
IHVE	**Hveravellir**	**1.18**	**38**	P	Pg	18 32 08.2	-2.8
IHVE				S	Sg	18 32 24.4	-1.9
ISKR	**Skrokkalda**	**1.40**	**63**	P	Pn	18 32 12.4	-1.9
ISKR				S	Sb	18 32 31.6	-1.3
IKAL	**Kalfafell**	**1.58**	**88**	P	Pn	18 32 15.6	-1.2
IKAL				S	Sn	18 32 37.3	-0.3
IGRF	**Grimsfjall**	**1.81**	**74**	P	Pn	18 32 19.3	-0.7
IFAG	**Fagurholsmyri**	**2.04**	**90**	P	Pn	18 32 22.1	-1.1
IFAG				S	Sn	18 32 48.8	-0.1
ISVA	**Svartarkot**	**2.22**	**49**	P	Pn	18 32 24.3	-1.3
ISVA				S	Sn	18 32 55.2	+1.9
IHRN	**Hraun**	**2.22**	**12**	P	Pn	18 32 24.9	-0.7
IHRN				S	Sn	18 32 54.0	+0.6
IKRE	**Kreppuhraun**	**2.29**	**66**	P	Pn	18 32 25.4	-1.1
IHLA	**Hella**	**2.35**	**30**	P	Pn	18 32 25.8	-1.6
ISIG	**Siglufjorour**	**2.41**	**23**	P	Pn	18 32 27.2	-1.0
IBRU	**Bruarjokull**	**2.42**	**66**	P	Pn	18 32 27.5	-0.8
IADA	**Aoalbol**	**2.69**	**64**	P	Pn	18 32 32.5	+0.5
IGRS	**Grimsstaoir**	**2.78**	**50**	P	Pn	18 32 33.9	+0.6
IGRS				S	Sn	18 33 11.9	+4.8
IGLU	**Glumsstadir**	**2.87**	**66**	P	Pn	18 32 35.4	+0.8
IGRI	**Grimsey**	**2.94**	**26**	P	Pn	18 32 36.2	+0.7
IGRI				S	Sn	18 33 14.2	+3.1

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*ISCJB **02** 18:39:36.3±0.6, 27°.34N±0°.04×103°.1E±0°.1, h10km, mb3.8/8, Error ellipse: s-maj=15.4km s-min=5.1km az=4.8*
*IDC **02** 18:39:38.5±1.0, 27°.49N×102°.86E, h0km, mb3.6/8, mb1 3.7/9, mb1mx3.5/26, mbtmp3.6/9, ML3.1/1, MS3.2/1, Ms1 3.4/1, ms1mx2.4/30, Error ellipse: s-maj=29.4km s-min=17.9km az=83.0*
*NEIC **02** 18:39:39.4±0.7, 27°.52N×103°.10E, h10km, mb4.0/2, Error ellipse: s-maj=18.8km s-min=12.1km az=82.0*
*BJI **02** 18:39:40.1, 27°.37N×102°.83E, h14km, ML3.4/14, Ms3.6/2, Ms7 3.1/2*
ISC 02 18:39:39.0±0.5, 27°.33N±0°.04×102°.9E±0°.1, h10km, n19, σ1°.50/24, mb3.8/8, 1C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	**2.20**	**184**	Pg	**Pg**	**18 40 18.9**	**-2.3**
KMI				Sg	**Sg**	**18 40 49.4**	**-0.4**
KMI				smax			
	comp=N,130nm,0.8s						
KMI				smax			
	comp=E,140nm,1.0s						
GYA	**Guiyang**	**3.45**	**104**	⇑*iPg*	**Pg**	**18 40 38.2**	**-6.9**
GYA				Sg	**Sg**	**18 41 23.0**	**-6.8**
GYA				smax			
	comp=N,70nm,0.7s						
GYA				smax			
	comp=E,100nm,0.8s						
CD2	**Chengdu**	**3.64**	**11**	⇓*iPn*	**Pn**	**18 40 38.8**	**+3.4**
CD2				Pg	**Pg**	**18 40 48.7**	**0.0**
CD2				Sn	**Sn**	**18 41 23.1**	**+4.7**
CD2				Sg	**Sg**	**18 41 34.5**	**-1.4**
CD2				smax			
	comp=N,540nm,0.8s						
CD2				smax			
	comp=E,590nm,1.0s						
CD2				LR	LR		
	comp=N,770nm,4.8s						
CD2				LR	LR		
	comp=E,780nm,7.1s						
CD2				LR	LR		
	comp=Z,380nm,5.9s						
ENH	**Enshi**	**6.46**	**61**	Pn	**Pn**	**18 41 18.1**	**+3.9**
	comp=Z,20nm,0.7s						
XAN	**Xi'an**	**8.45**	**36**	P	**Pn**	**18 41 44.6**	**+3.2**
XAN				LR	LR		
	comp=N,120nm,7.3s						
XAN				LR	LR		
	comp=E,97nm,7.0s						
XAN				LR	LR		
	comp=Z,32nm,7.4s						
CMAR	**Chiang Mai Arr**	**9.56**	**203**	Pn	**Pn**	**18 42 00.9**	**+4.1**
	comp=Z,0.1nm,0.3s,baz=15,slow=14,SNR=7.2						
CMAR				Pg	Pn	18 42 37.0	+40
	comp=Z,0.1nm,0.3s,baz=12,slow=17,SNR=10						
CMAR				Lg		18 44 49.6	
	comp=Z,0.0nm,0.3s,baz=21,slow=28,SNR=4.9						
CMAR				LR	LR	18 46 03.2	
	comp=Z,138nm,20.1s,baz=45,slow=40						
LSA	**Lhasa**	**10.62**	**286**	*eP*	**Pn**	**18 42 13.9**	**+2.7**
	comp=Z,2.3nm,0.6s						
SONM	**Songino Array**	**20.65**	**7**	P	**P**	**18 44 19.5**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=182,slow=11,SNR=3.6						
ULN	**Ulaanbaatar**	**20.75**	**8**	*eP*	**P**	**18 44 17.3**	**-2.4**
	comp=Z,1.7nm,0.9s						
KSRS	**Korea Array**	**23.34**	**58**	P	**P**	**18 44 49.5**	**+2.1**
	comp=Z,1.0nm,0.8s,mb3.3,baz=240,slow=11,SNR=2.6						
MKAR	**Makanchi Array**	**25.33**	**326**	P	**P**	**18 45 06.9**	**+1.1**
	comp=Z,0.6nm,0.5s,mb3.4,baz=123,slow=11,SNR=9.9						
ZALV	**Zalesovo Beam**	**29.75**	**338**	P	**P**	**18 45 44.9**	**-0.5**
	comp=Z,0.8nm,0.6s,mb3.6,baz=144,slow=10,SNR=2.3						
KURK	**Kurchatov**	**29.78**	**328**	P	**P**	**18 45 44.3**	**-1.4**
	comp=Z,0.8nm,0.6s,mb3.6,baz=132,slow=10,SNR=6.1						
KURK	**Kurchatov**	**29.78**	**328**	*eP*	**P**	**18 45 43.1**	**-2.6**
ABKAR	**Abkulak array**	**39.52**	**315**	*eP*	**P**	**18 47 10.2**	**+0.4**
WRAB	**Tennant Creek**	**55.98**	**144**	*eP*	**P**	**18 49 18.4**	**+0.6**
	comp=Z,8.6nm,1.2s,mb4.7						
ASAR	**Alice Springs**	**58.87**	**147**	P	**P**	**18 49 39.1**	**+1.1**
	comp=Z,0.3nm,0.6s,mb3.5,baz=328,slow=7.0,SNR=6.9						
FINES	**FINESS Array B**	**60.15**	**327**	P	**P**	**18 49 45.4**	**-1.0**
	comp=Z,2.2nm,0.9s,mb4.2,baz=92,slow=9.5,SNR=4.1						
ARCES	**ARCESS Array B**	**60.29**	**337**	P	**P**	**18 49 46.4**	**-0.9**
	comp=Z,1.7nm,0.8s,mb4.2,baz=101,slow=7.4,SNR=3.2						

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*CSEM **02** 18:41:26.3, 63°.95N×21°.28W, h5km, ML3.5, After REY*
REY 02 18:41:26.3, 63°.95N×21°.28W, h5km, ML3.5, ML3.2, Iceland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ISOL	**Solvholt**	**0.15**	**97**	P	Pg	18 41 29.4	+0.2
ISOL				S	Sg	18 41 31.7	+0.5
IKRO	**Krokur**	**0.17**	**24**	P	Pg	18 41 29.7	+0.1
IKRO				S	Sg	18 41 32.5	+0.7
ISAN	**Sandskeio**	**0.17**	**310**	P	Pg	18 41 29.9	+0.3
ISAN				S	Sg	18 41 32.9	+1.0
IVOS	**Vogsosar**	**0.21**	**244**	P	Pg	18 41 30.5	+0.1
IVOS				S	Sg	18 41 34.0	+0.8
IHEI	**Heioarbar**	**0.25**	**4**	P	Pg	18 41 31.3	+0.1
IHEI				S	Sg	18 41 35.4	+0.8
IKAS	**Kald??rsel**	**0.27**	**287**	P	Pg	18 41 31.6	+0.2
IKAS				S	Sg	18 41 35.9	+1.0
IASM	**Asmuli**	**0.31**	**111**	P	Pg	18 41 32.2	-0.1
IASM				S	Sg	18 41 36.8	+0.4
IKRI	**Krysuvik**	**0.36**	**259**	P	Pg	18 41 33.0	-0.2
IKRI				S	Sg	18 41 38.1	+0.2
ISAU	**Saurbar**	**0.38**	**83**	P	Pg	18 41 33.4	-0.2
ISAU				S	Sg	18 41 38.9	+0.3
IKUD	**Kuludalsa**	**0.46**	**325**	P	Pg	18 41 34.5	-0.6
IKUD				S	Sg	18 41 41.0	-0.1
IVOG	**Vogar**	**0.49**	**273**	P	Pg	18 41 35.3	-0.5
IVOG				S	Sg	18 41 42.5	+0.3
IGYG	**Gygjarholskot**	**0.57**	**54**	P	Pg	18 41 36.6	-0.7
IGYG				S	Sg	18 41 44.7	0.0
IHAU	**Haukadalur**	**0.58**	**87**	P	Pg	18 41 36.8	-0.6
IHAU				S	Sg	18 41 44.9	0.0
INYL	**Nylenda**	**0.65**	**273**	P	Pg	18 41 37.6	-1.1
INYL				S	Sg	18 41 46.7	-0.4
IVES	**Vestmannaeyjar**	**0.67**	**139**	P	Pg	18 41 38.5	-0.6
IVES				S	Sg	18 41 47.9	+0.1
IMID	**Miomork**	**0.68**	**115**	P	Pg	18 41 38.5	-0.8
IMID				S	Sg	18 41 47.9	-0.3
IASB	**`sbjarnarst**	**0.80**	**358**	P	Pg	18 41 40.3	-1.4
IASB				S	Sg	18 41 51.6	-0.5
IESK	**Eystri-Skogar**	**0.92**	**117**	P	Pg	18 41 42.3	-1.5
IESK				S	Sg	18 41 54.7	-1.0
IVAT	**Vatnsfell**	**1.06**	**76**	P	Pg	18 41 44.9	-1.8
IVAT				S	Sg	18 41 59.4	-1.0
IHVO	**Lagu-Hvolar**	**1.16**	**110**	P	Pg	18 41 46.3	-2.2
IHVO				S	Sg	18 42 02.2	-1.3
IHVE	**Hveravellir**	**1.19**	**38**	P	Pg	18 41 46.4	-2.6
IHVE				S	Sg	18 42 02.6	-1.8
ISKR	**Skrokkalda**	**1.40**	**63**	P	Pn	18 41 50.3	-2.2
ISKR				S	Sb	18 42 09.8	-1.3

JMA 02 18:52:19.9, 34°.91N×135°.18E, h15km±1km, M3.4, 3D Broadband fault plane solution: P waves. NP1: ϕ_s146.00000°, δ47.00000°, λ59.00000°. NP2: ϕ_s7.00000°, δ51.00000°, λ119.00000°. Principal axes: T Plg68.0000°, Azm342.0000°; N Plg22.0000°, Azm168.0000°; P Plg2.0000°, Azm77.0000°; **Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMIK	**Miki**	**0.15**	**225**	⇓P	Pg	18 52 23.9	+0.2
JMIK				S	Sg	18 52 26.5	+0.2
JKS	**Kasai**	**0.28**	**285**	⇓P	Pg	18 52 26.1	+0.2
JKS				S	Sg	18 52 30.2	+0.2
JWT	**Wachi**	**0.41**	**26**	⇓P	Pg	18 52 28.3	+0.1
JWT				S	Sg	18 52 33.8	-0.1
MAT	**Matsushiro**	**2.95**	**56**	P	Pn	18 53 12.1	+5.9
MAT				*e*S	Sn	18 53 49.7	+8.3

JMA 02 18:57:19.5, 34°.91N×135°.18E, h15km±1km, M3.6, 1C-2D, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMIK	**Miki**	**0.15**	**225**	⇑P	Pg	18 57 23.4	+0.1
JMIK				S	Sg	18 57 26.1	+0.2
JKS	**Kasai**	**0.28**	**285**	⇓P	Pg	18 57 25.6	+0.1
JKS				S	Sg	18 57 29.8	+0.2
JWT	**Wachi**	**0.41**	**26**	⇓P	Pg	18 57 27.9	+0.1
JWT				S	Sg	18 57 33.4	-0.1
MAT	**Matsushiro**	**2.95**	**56**	P	Pn	18 58 12.6	+6.8
MAT				*e*S	Sn	18 58 49.2	+8.2

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*IDC **02** 18:59:17.0±1.2, 24°.66S×176°.22W, h0km, mb4.1/5, mb1 4.2/5, mb1mx3.9/17, mbtmp4.1/5, Error ellipse: s-maj=42.4km s-min=32.4km az=143.0*
*NEIC **02** 18:59:23.0±2.2, 25°.225S×176°.05W, h52km±15km, mb4.4/2, Error ellipse: s-maj=26.4km s-min=14.2km az=90.0*
*ISCJB **02** 18:59:31.7±3.6, 24°.96S±0°.09×177°.0W±0°.5, h88km±18km, mb4.0/6, Error ellipse: s-maj=78.8km s-min=13.1km az=173.9*
ISC 02 18:59:32.8±3.5, 24°.96S±0°.09×176°.9W±0°.5, h89km±15km, n19, σ0°.47/12, mb4.0/6, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.36**	**191**	Sn	**Sn**	**19 01 26.6**	**+0.2**
	96nm,0.3s,baz=56,slow=22,SNR=9.6						
MSVF	**Nonsavu**	**8.57**	**326**	*eP*	**Pn**	**19 01 34.0**	**-0.1**
	14nm,0.6s						
AFI	**Afiamalu**	**12.02**	**25**	Sn	Sx	19 03 58.2	
	2.4nm,0.3s,baz=89,slow=19,SNR=1.2						
URZ	**Urewera**	**14.19**	**199**	Pn	**Pn**	**19 02 49.8**	**+0.3**
	1.9nm,0.3s,baz=51,slow=12,S

MAW Mawson 77.46 200 P **P 19 17 20.9 -0.4**
2.4nm,0.6s,mb4.3,baz=134,slow=7.6,SNR=6.2
CMAR Chiang Mai Arr 92.68 289 P **P 19 18 42.4 +3.7**
0.4nm,0.7s,mb4.0,baz=140,slow=5.8,SNR=5.1
BVAR Borovoye Array 123.36 318 PKP PKPdf 19 24 24.3 +1.4
0.3nm,0.5s,baz=157,slow=7.8,SNR=3.6
NOA NORSAR Array B 143.81 353 PKP PKPdf 19 25 03.5 +2.7
2.2nm,0.8s,baz=11,slow=2.3,SNR=6.8
NOA NORSAR Array B 143.81 353 PKP PKPdf 19 25 03.5 +2.7
AKASG Malin Array Be 147.64 329 PKPbc PKPbc 19 25 13.3 +2.9
0.6nm,0.6s,baz=41,slow=5.8,SNR=4.0
MMAI Mount Meron Ar 150.87 293 PKPbc PKPbc 19 25 20.7 +1.7
1.4nm,0.6s,baz=68,slow=7.3,SNR=5.2

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*ISK **02** 19:08:46.3,36.96N×29.23E,h7km,MD2.9*
*CSEM **02** 19:08:47.4±0.2,36.95N×29.25E,h8km,MD2.9,Error ellipse: s-maj=5.3km s-min=4.6km az=16.0*
*ISCJB **02** 19:08:47.9±0.4,36.94N±0.03×29.28E±0.03,h10km,Error ellipse: s-maj=4.1km s-min=3.6km az=23.8*
*DDA **02** 19:08:48.1,36.95N×29.21E,h7km±5km,Md3.1*
ISC 02 19:08:47.8±0.5,36.94N±0.03×29.24E±0.03,h4km±6km, n35,σ1.1912/54,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**43**	*e*PG	**Pg**	**19 08 52.5**	**-1.0**
GLHS				*e*SG	**Sg**	**19 08 57.1**	**-0.4**
GLHS	**Glhisar (BURDU**	**0.30**	**43**	*e*Pg	**Pg**	**19 08 52.6**	**-1.0**
GLHS				*e*Sg	**Sg**	**19 08 57.1**	**-0.4**
FETY	**Fethiye**	**0.33**	**203**	*e*PG	**Pg**	**19 08 53.9**	**-0.3**
FETY	**Fethiye**	**0.33**	**203**	*e*Pg	**Pg**	**19 08 53.9**	**-0.2**
GOLH	**Golhisar**	**0.39**	**40**	*i* P	**Pg**	**19 08 55.0**	**-0.3**
GOLH				*i* S	**Sg**	**19 09 02.5**	**+2.0**
GOLH	**Golhisar**	**0.39**	**40**	*i* P	**Pg**	**19 08 55.0**	**-0.4**
GOLH				*i* S	**Sg**	**19 09 02.5**	**+2.0**
TURN	**Turunc**	**0.52**	**263**	*i* P	**Pg**	**19 09 03.3**	**+5.6**
TURN				*i* S	**Sg**	**19 09 14.2**	**+10**
ELL	**Elmali**	**0.57**	**109**	*e*PG	**Pg**	**19 08 57.3**	**-1.4**
ELL				*e*SG	**Sg**	**19 09 06.8**	**+0.8**
ELL	**Elmali**	**0.57**	**109**	*e*Pg	**Pg**	**19 08 57.3**	**-1.4**
ELL				*e*Sg	**Sg**	**19 09 06.8**	**+0.8**
AKAS	**Kas**	**0.76**	**157**	*i* P	**Pg**	**19 09 02.3**	**-0.1**
AKAS				*i* S	**Sg**	**19 09 14.7**	**+2.4**
AKAS	**Kas**	**0.76**	**157**	*i* P	**Pg**	**19 09 02.3**	**-0.1**
AKAS				*i* S	**Sg**	**19 09 14.6**	**+2.3**
DNZL	**Cakiroluk**	**0.77**	**348**	*i* P	**Pg**	**19 09 01.6**	**-0.9**
DNZL				*i* S	**Sg**	**19 09 13.4**	**+0.9**
DNZL	**Cakiroluk**	**0.77**	**348**	*i* P	**Pg**	**19 09 01.6**	**-0.9**
DNZL				*i* S	**Sg**	**19 09 13.4**	**+0.9**
YER	**Yerkesik**	**0.79**	**285**	*e*PG	**Pg**	**19 09 01.7**	**-1.3**
YER	**Yerkesik**	**0.79**	**285**	*e*Pg	**Pg**	**19 09 01.7**	**-1.3**
DENT	**Denizli**	**0.83**	**348**	*e*PG	**Pg**	**19 09 02.3**	**-1.4**
DENT	**Denizli**	**0.83**	**348**	*e*Pg	**Pg**	**19 09 02.3**	**-1.5**
KORT	**Korkueli**	**0.89**	**86**	*i* P	**Pg**	**19 09 06.0**	**+1.1**
KORT				*i* S	**Sg**	**19 09 20.2**	**+3.8**
KORT	**Korkueli**	**0.89**	**86**	*i* P	**Pg**	**19 09 06.0**	**+1.1**
KORT				*i* S	**Sg**	**19 09 20.2**	**+3.8**
ANTB	**Antalya**	**1.13**	**92**	*e*PN	**Pg**	**19 09 09.1**	**-0.4**
ANTB	**Antalya**	**1.13**	**92**	*e*Pn	**Pg**	**19 09 09.1**	**-0.4**
BCK	**Bucak**	**1.20**	**64**	*e*PN	**Pn**	**19 09 09.6**	**-1.7**
BCK	**Bucak**	**1.20**	**64**	*e*Pn	**Pn**	**19 09 09.6**	**-1.7**
AYDN	**Tasoluk**	**1.30**	**304**	*i* P	**Pg**	**19 09 13.1**	**+0.3**
AYDN				*i* S	**Sg**	**19 09 30.2**	**+0.4**
AYDN	**Tasoluk**	**1.30**	**304**	*i* P	**Pg**	**19 09 13.1**	**+0.3**
AYDN				*i* S	**Sg**	**19 09 30.2**	**+0.5**
DAT	**Datca**	**1.35**	**262**	*e*PN	**Pn**	**19 09 12.2**	**-1.2**
DAT	**Datca**	**1.35**	**262**	*e*Pn	**Pn**	**19 09 12.2**	**-1.2**
KHAL	**Karahalli**	**1.44**	**8**	*e*P	**Pn**	**19 09 15.9**	**+1.1**
KHAL				*i* S	**Sb**	**19 09 35.1**	**+1.2**
KHAL	**Karahalli**	**1.44**	**8**	*e*P	**Pn**	**19 09 15.9**	**+1.2**
KHAL				*i* S	**Sb**	**19 09 35.2**	**+1.2**
BDRM	**Kayabasi**	**1.45**	**276**	*i* P	**Pn**	**19 09 15.4**	**+0.6**
BDRM				*i* S	**Sb**	**19 09 35.5**	**+1.5**
BDRM	**Kayabasi**	**1.45**	**276**	*i* P	**Pn**	**19 09 15.4**	**+0.7**
BDRM				*i* S	**Sb**	**19 09 35.5**	**+1.5**
SUTC	**Sutluce-Ispart**	**1.50**	**69**	*e*PN	**Pn**	**19 09 14.4**	**-1.1**
SUTC	**Sutluce-Ispart**	**1.50**	**69**	*e*Pn	**Pn**	**19 09 14.4**	**-1.1**
KONT	**Konya--Tatoy**	**2.68**	**67**	*e*PN	**Pn**	**19 09 31.1**	**-0.6**
KONT	**Konya--Tatoy**	**2.68**	**67**	*e*Pn	**Pn**	**19 09 31.1**	**-0.6**

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*BJI **02** 19:36:35.1,64.19N×149.75W,h96km,mB4.7/10, mb4.7/20*
*BGS **02** 19:36:35.2±2.3,62.82N×148.17W,h126km,mb4.3*
*ISCJB **02** 19:36:37.9±0.2,63.80N±0.02×149.73W±0.05, h126km±2km,mb4.4/97,Error ellipse: s-maj=4.3km s-min=2.9km az=137.9*
*NEIC **02** 19:36:38.9,63.62N×149.53W,h126km,mb4.4/45,After AEIC.*
*IDC **02** 19:36:39.7±2.1,63.81N×149.75W,h129km±18km, mb3.9/28,mb1 4.1/30,mb1mx4.0/33,mbtmp3.9/30,MS2.5/1, Ms1 2.5/1,ms1mx2.0/42,Error ellipse: s-maj=12.7km s-min=8.8km az=34.0*
ISC 02 19:36:39.1±0.2,63.78N±0.02×149.72W±0.05, h119km±2km,n340,σ0.977/344,mb4.4/97,111C-58D, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTH	**Kantishna Hill**	**0.58**	**248**	P	**Pn**	**19 36 57.5**	**+0.1**
KTH				S	**Sn**	**19 37 12.3**	**+1.1**
BPAW	**Bear Paw Mtn.**	**0.65**	**301**	P	**Pn**	**19 36 58.5**	**+0.6**
BPAW				S	**Sn**	**19 37 14.1**	**+2.1**
CHUM	**Lake Minchumin**	**1.16**	**276**	P	**Pn**	**19 37 03.9**	**+1.4**
CHUM				S	**Sn**	**19 37 22.2**	**+2.0**
COLA	**College**	**1.37**	**36**	P	**Pn**	**19 37 06.0**	**+1.2**
COLA				S	**Sn**	**19 37 25.8**	**+1.3**
PPLA	**Purkeypile**	**1.42**	**233**	P	**Pn**	**19 37 05.4**	**+0.1**
PPLA				S	**Sn**	**19 37 26.6**	**+1.1**
IL1	**Eielson Array**	**1.59**	**50**	P	**Pn**	**19 37 07.5**	**+0.1**
SKT	**Skwentna**	**1.99**	**205**	P	**Pn**	**19 37 10.7**	**-1.5**
SML	**Sawmill**	**2.08**	**162**	P	**Pn**	**19 37 11.3**	**-2.1**
PAX	**Paxson**	**2.08**	**111**	P	**Pn**	**19 37 12.0**	**-1.3**
PMR	**Palmer**	**2.21**	**173**	*e*P	**Pn**	**19 37 12.8**	**-2.2**
DOT	**Dot Lake**	**2.52**	**90**	P	**Pn**	**19 37 17.8**	**-1.2**
FIB	**Fire Island**	**2.63**	**185**	P	**Pn**	**19 37 19.1**	**-1.3**
RC01	**Rabbit Creek A**	**2.70**	**180**	*e*Pn	**Pn**	**19 37 19.2**	**-2.1**
IM3	**Indian Mountai**	**2.80**	**324**	P	**Pn**	**19 37 24.1**	**+1.5**
MENT	**Mentasta**	**2.83**	**105**	*e*P	**Pn**	**19 37 21.1**	**-1.9**
TTA	**Tatalina**	**2.96**	**256**	*e*P	**Pn**	**19 37 24.7**	**0.0**
TT01	**Tatalina**	**2.97**	**256**	P	**Pn**	**19 37 24.9**	**+0.1**
DIV	**Divide**	**3.23**	**144**	P	**Pn**	**19 37 25.0**	**-3.2**
GCSA	**Galena City Sc**	**3.27**	**290**	P	**Pn**	**19 37 30.5**	**+1.8**
SLKM	**Skilak Lake**	**3.29**	**184**	P	**Pn**	**19 37 27.2**	**-1.8**
COLD	**Coldfoot**	**3.47**	**357**	P	**Pn**	**19 37 33.4**	**+2.0**
RSO	**Redoubt South**	**3.62**	**205**	*e*P	**Pn**	**19 37 33.0**	**-0.4**
SEW	**Seward**	**3.69**	**178**	P	**Pn**	**19 37 31.6**	**-2.8**
BMRM	**Bremner River**	**3.69**	**137**	P	**Pn**	**19 37 31.2**	**-3.1**
EYAK	**Cordova Ski Ar**	**3.74**	**148**	P	**Pn**	**19 37 32.0**	**-3.0**
SVW2	**Sparrevohn**	**3.83**	**228**	*e*P	**Pn**	**19 37 35.2**	**-1.0**
EGAK	**Eagle**	**3.87**	**71**	P	**Pn**	**19 37 36.9**	**+0.3**
BM3	**Burnt Mountain**	**4.23**	**28**	P	**Pn**	**19 37 42.5**	**+1.1**
DAWY	**Dawson**	**4.57**	**82**	P	**Pn**	**19 37 44.7**	**-1.4**
MID	**Middleton Isla**	**4.65**	**158**	*e*P	**Pn**	**19 37 44.7**	**-2.6**
KDAK	**Kodiak Island**	**6.18**	**194**	*e*P	**Pn**	**19 38 03.4**	**-4.4**
PNL	**Peninsula**	**6.40**	**125**	*e*P	**Pn**	**19 38 07.7**	**-3.1**
OHAK	**Old Harbor**	**6.81**	**197**	P	**Pn**	**19 38 14.6**	**-1.7**
3.7nm,0.6s							
WHY	**Whitehorse**	**7.60**	**108**	P	**Pn**	**19 38 25.2**	**-1.7**
INK	**Inuvik**	**7.99**	**48**	P	**Pn**	**19 38 33.0**	**+0.8**
1.9nm,0.3s,baz=237,slow=16,SNR=136							
INK				S	**Sn**	**19 40 01.2**	**+0.6**
0.3nm,0.3s,baz=349,slow=2.2,SNR=5.1							
INK				LR	LR	19 42 05.2	
comp=Z,33nm,19.9s,baz=268,slow=41							
INK	**Inuvik**	**7.99**	**48**	*e*P	**Pn**	**19 38 32.5**	**+0.4**
55nm,0.8s							
YKA	**Yellowknife Ar**	**15.80**	**79**	P	**Pn**	**19 40 12.8**	**-1.7**
1.3nm,0.3s,baz=296,slow=11,SNR=27							
YKA				PcP	PcP	19 45 04.5	-0.9
0.1nm,0.3s,baz=298,slow=1.6,SNR=4.9							
YKA				ScP	ScP	19 48 27.0	-1.3
0.1nm,0.3s,baz=299,slow=2.1,SNR=4.6							
RES	**Resolute Bay**	**21.30**	**37**	P	**P**	**19 41 14.9**	**-0.7**
4.0nm,0.4s,mb4.1,baz=250,slow=11,SNR=22							
RES	**Resolute Bay**	**21.30**	**37**	*e*P	**P**	**19 41 14.6**	**-1.0**
6.2nm,0.6s,mb4.1							
EDM	**Edmonton**	**21.42**	**102**	*e*P	**P**	**19 41 16.8**	**-0.3**
A07A	**Ashnola River,**	**21.65**	**119**	⇓P	**P**	**19 41 20.1**	**+0.6**
baz=21							
FX1	**Attu Island--F**	**21.98**	**258**	P	**P**	**19 41 21.6**	**-1.3**
1.9nm,0.4s,mb3.8,baz=226,slow=22,SNR=6.0							
B09A	**Rice**	**23.03**	**117**	⇓P	**P**	**19 41 33.5**	**0.0**
baz=23							
F04A	**Amboy**	**23.49**	**127**	⇑P	**P**	**19 41 37.4**	**-0.3**
baz=23							
A14A	**Double T Ranch**	**24.52**	**110**	⇑P	**P**	**19 41 47.1**	**+0.1**
baz=24							
B13A	**Whitefish**	**24.55**	**112**	⇓P	**P**	**19 41 46.9**	**-0.4**
baz=24							
H04A	**Detroit Lake**	**24.65**	**128**	⇑P	**P**	**19 41 48.8**	**+0.6**
baz=24							
A15A	**Johnson Ranch,**	**24.80**	**109**	⇑P	**P**	**19 41 49.3**	**-0.3**
baz=25							
C13A	**Hot Springs**	**25.06**	**113**	⇓P	**P**	**19 41 51.4**	**-0.6**
baz=25							
G08A	**Pilot Rock**	**25.30**	**122**	⇑P	**P**	**19 41 53.6**	**-0.5**
baz=25							
B15A	**Bradely Ranch,**	**25.39**	**110**	⇓P	**P**	**19 41 54.0**	**-0.9**
baz=25							
FFC	**Flin Flon**	**25.44**	**88**	*e*P	**P**	**19 41 54.7**	**-0.6**
4.9nm,1.1s,mb3.9							
E11A	**Bogner Ranch,**	**25.48**	**117**	⇑P	**P**	**19 41 54.8**	**-0.9**
baz=25							
D13A	**Huson**	**25.58**	**114**	⇑P	**P**	**19 41 56.0**	**-0.6**
baz=25							
C15A	**Salmond Ranch,**	**25.79**	**111**	⇓P	**P**	**19 41 58.0**	**-0.5**
baz=26							
H08A	**Prairie City**	**26.07**	**123**	⇑P	**P**	**19 42 00.8**	**-0.3**
baz=26							
C16A	**Fuhringer Ranc**	**26.13**	**110**	⇑P	**P**	**19 42 01.1**	**-0.5**
baz=26							
I07A	**Izee**	**26.14**	**125**	⇓P	**P**	**19 42 01.3**	**-0.4**
baz=26							
B17A	**L&G Farms, Che**	**26.15**	**108**	⇑P	**P**	**19 42 01.6**	**-0.1**
baz=26							
G11A	**Walters Elk Ra**	**26.24**	**119**	⇓P	**P**	**19 42 02.3**	**-0.4**
baz=26							
C17A	**Wharram Farm,**	**26.68**	**109**	⇑P	**P**	**19 42 06.0**	**-0.5**
baz=26							
F13A	**Darby**	**26.69**	**116**	⇓P	**P**	**19 42 06.3**	**-0.3**
baz=26							
H10A	**Noah's Angus R**	**26.74**	**120**	⇑P	**P**	**19 42 06.7**	**-0.4**
baz=26							
EGMT	**Eagleton**	**26.80**	**107**	⇑P	**P**	**19 42 07.6**	**0.0**
baz=27							
G12A	**Big Creek, Yel**	**26.84**	**118**	⇓P	**P**	**19 42 08.1**	**+0.1**
baz=27							
E16A	**East Helena**	**27.17**	**111**	⇓P	**P**	**19 42 10.8**	**-0.1**
baz=27							
G13A	**Cobalt**	**27.30**	**116**	⇑P	**P**	**19 42 12.0**	**-0.1**
baz=27							
MFID	**Camas Ranch**	**28.08**	**120**	⇓P	**P**	**19 42 18.8**	**-0.2**
baz=28							
G16A	**Moss Hill, Enn**	**28.17**	**113**	⇑P	**P**	**19 42 19.6**	**-0.2**
baz=28							
K10A	**MacKenzie Ranc**	**28.23**	**122**	⇓P	**P**	**19 42 20.0**	**-0.4**
baz=28							
I13A	**Wildhorse Cree**	**28.33**	**118**	⇓P	**P**	**19 42 21.4**	**+0.1**
baz=28							
F18A	**Big Timber**	**28.49**	**110**	⇓P	**P**	**19 42 22.8**	**+0.2**
baz=28							
HLID	**Hailey**	**28.51**	**118**	⇑P	**P**	**19 42 23.3**	**+0.5**
baz=28							
K11A	**Parker Ranch,**	**28.55**	**121**	⇓P	**P**	**19 42 23.0**	**-0.2**
baz=28							
G18A	**Lazy EL Ranch,**	**29.02**	**110**	⇓P	**P**	**19 42 27.0**	**-0.4**
baz=29							
J14A	**Carey**	**29.06**	**117**	⇓P	**P**	**19 42 27.4**	**-0.3**
baz=29							
RLMT	**Red Lodge**	**29.30**	**110**	⇓P	**P**	**19 42 30.3**	**+0.4**
baz=29							
M10A	**I.L. Ranch, Tu**	**29.44**	**123**	⇑P	**P**	**19 42 31.2**	**+0.1**
baz=29							
L12A	**House Creek Ra**	**29.48**	**121**	⇑P	**P**	**19 42 32.1**	**+0.6**
baz=29							
IMW	**Indian Meadow**	**29.61**	**114**	*e*P	**P**	**19 42 33.5**	**+0.9**
2.4nm,0.5s,mb4.1							
L14A	**Malta**	**30.26**	**118**	⇑P	**P**	**19 42 38.8**	**+0.5**
baz=30							
N12A	**Clover Valley,**	**30.59**	**122**	⇓P	**P**	**19 42 41.9**	**+0.7**
baz=30							
ELK	**Elko**	**30.60**	**122**	P	**P**	**19 42 42.5**	**+1.1**
0.5nm,0.5s,mb3.5,baz=247,slow=11,SNR=5.3							
M14A	**Sheep Mountain**	**30.67**	**119**	⇑P	**P**	**19 42 42.6**	**+0.6**
baz=30							
L16A	**Fish Haven**	**30.99**	**116**	⇑P	**P**	**19 42 45.0**	**+0.3**
baz=31							
PDAR	**Pinedale Array**	**31.11**	**113**	P	**P**	**19 42 46.6**	**+0.7**
2.5nm,0.8s,mb4.0,baz=325,slow=7.2,SNR=17							
PDAR				PcP	PcP	19 45 36.5	-1.5
0.4nm,0.5s,baz=340,slow=2.2,SNR=4.0							
O12A	**Currie**	**31.20**	**122**	⇓P	**P**	**19 42 46.6**	**0.0**
baz=31							
ULM	**Lac du Bonnet**	**31.22**	**90**	P	**P**	**19 42 46.7**	**0.0**
4.2nm,0.6s,mb4.3,baz=319,slow=6.8,SNR=4.6							
K19A	**Absolon Red Bu**	**31.36**	**112**	⇑P	**P**	**19 42 48.5**	**+0.5**
baz=31							
N15A	**Stansbury Isla**	**31.52**	**119**	⇑P	**P**	**19 42 49.6**	**+0.2**
baz=31							
NVAR	**Mina Array Bea**	**31.54**	**128**	P	**P**	**19 42 49.9**	**+0.3**
1.2nm,0.8s,mb3.7,baz=309,slow=7.5,SNR=7.5							
NVAR				pP	pP	19 43 18.1	+2.5
1.8nm,0.8s,baz=307,slow=7.8,SNR=5.1							
NVAR				PcP	PcP	19 45 37.9	-1.3
0.5nm,0.4s,baz=320,slow=2.7,SNR=4.5							
Q11A	**Duckwater**	**32.11**	**125**	⇑P	**P**	**19 42 54.7**	**+0.1**
baz=32							
P14A	**Drum Mountains**	**32.43**	**121**	⇑P	**P**	**19 42 57.7**	**+0.4**
baz=32							
N18A	**Larsen Ranch,**	**32.57**	**115**	⇑P	**P**	**19 42 59.0**	**+0.4**
baz=32							
R11A	**Troy Canyon, C**	**32.58**	**125**	⇑P	**P**	**19 42 58.9**	**+0.2**
baz=32							
S10A	**Tonopah Range,**	**32.59**	**127**	⇓P	**P**	**19 42 59.4**	**+0.6**
baz=32							
M20A	**Sweetwater, Wa**	**32.74**	**113**	⇓P	**P**	**19 43 00.5**	**+0.4**
baz=32							
O17A	**Robinson Place**	**32.81**	**117**	⇑P	**P**	**19 43 01.5**	**+0.7**
baz=33							
Q14A	**Sevier Lake (B**	**32.87**	**121**	⇑P	**P**	**19 43 01.2**	**0.0**
baz=33							
L22A	**Ellis Ranch, M**	**33.02**	**110**	⇓P	**P**	**19 43 03.6**	**+1.1**
baz=33							
N20A	**Spence Gulch,**	**33.26**	**114**	⇑P	**P**	**19 43 05.4**	**+0.7**
baz=33							
R13A	**O'Grain Ranch,**	**33.32**	**123**	⇑P	**P**	**19 43 05.7**	**+0.6**
baz=33							
P18A	**Preston Nutter**	**33.49**	**117**	⇓P	**P**	**19 43 07.4**	**+0.7**
baz=33							
Q16A	**Castle Valley**	**33.74**	**119**	⇓P	**P**	**19 43 09.3**	**+0.5**
baz=34							
SRU	**San Rafael**	**33.83**	**118**	⇑P	**P**	**19 43 10.1**	**+0.6**
baz=34							
S13A	**Holt Ranch, En**	**33.89**	**123**	⇓P	**P**	**19 43 10.2**	**+0.1**
baz=34							
T13A	**Saint George**	**34.37**	**124**	⇓P	**P**	**19 43 14.6**	**+0.3**
baz=34							
Q19A	**Hogan Spring (**	**34.46**	**117**	⇓P	**P**	**19 43 15.5**	**+0.5**
baz=34							
EYMN	**Ely**	**34.87**	**89**	*e*P	**P**	**19 43 17.9**	**-0.5**
43nm,1.1s,mb5.2							
S17A	**Black Ridge (B**	**35.00**	**120**	⇑P	**P**	**19 43 19.9**	**+0.2**
baz=35							
R19A	**Curley Farm, L**	**35.03**	**117**	⇑P	**P**	**19 43 20.5**	**+0.6**
baz=35							
U14A	**Mt Trumbull**	**35.17**	**124**	⇑P	**P**	**19 43 21.6**	**+0.5**
baz=35							
V13A	**Grand Canyon W**	**35.38**	**125**	⇑P	**P**	**19 43 23.5**	**+0.6**
baz=35							
R20A	**Redvale**	**35.47**	**116**	⇑P	**P**	**19 43 23.7**	**0.0**
baz=35							
U15A	**North Rim**	**35.49**	**122**	⇓P	**P**	**19 43 24.5**	**+0.6**
baz=35							
T17A	**Navajo Res., N**	**35.56**	**120**	⇑P	**P**	**19 43 24.1**	**-0.3**
baz=35							
T18A	**Mexican Hat**	**35.79**	**119**	⇓P	**P**	**19 43 26.2**	**-0.3**
baz=36							
ECSD	**EROS Data Cent**	**35.86**	**98**	*e*P	**P**	**19 43 25.8**	**-1.1**
6.6nm,0.4s,mb4.9							
V14A	**Boquillas Ranc**	**35.89**	**124**	⇑P	**P**	**19 43 27.8**	**+0.5**
baz=36							
V15A	**Kaibab Nationa**	**36.08**	**123**	⇓P	**P**	**19 43 29.5**	**+0.7**
baz=36,SNR=6.7							
W13A	**Hualapai Mount**	**36.09**	**125**	⇑P	**P**	**19 43 29.4**	**+0.5**
baz=36							
R22A	**Saguache, Gunn**	**36.09**	**114**	⇑P	**P**	**19 43 29.2**	**+0.2**
baz=36							
S21A	**Coal Bank Pass**	**36.16**	**116**	⇑P	**P**	**19 43 30.0**	**+0.5**
baz=36							
SUMG	**Summit**	**36.32**	**28**	*e*P	**P**	**19 43 31.5**	**+1.0**
5.4nm,0.6s,mb4.7							
BELC	**Belle Mtn. Jos**	**36.33**	**129**	⇑P	**P**	**19 43 31.4**	**+0.4**
baz=36							
U18A	**Rough Rock, Ch**	**36.42**	**119**	⇑P	**P**	**19 43 32.3**	**+0.5**
baz=36							
IRM	**Iron Mountain**	**36.48**	**128**	⇑P	**P**	**19 43 32.6**	**+0.3**
baz=36							
X13A	**Yucca**	**36.56**	**126**	⇑P	**P**	**19 43 33.6**	**+0.6**
baz=36							
WUAZ	**Wupatki**	**36.64**	**122**	⇓P	**P**	**19 43 34.4**	**+0.7**
baz=36							
V17A	**Tonalea, Kykot**	**36.77**	**121**	⇓P	**P**	**19 43 35.3**	**+0.5**
baz=37,SNR=11							
V18A	**Ganado**	**37.02**	**120**	⇑P	**P**	**19 43 37.2**	**+0.4**
baz=37							
MONP	**Monument Peak**	**37.19**	**130**	⇓P	**P**	**19 43 39.0**	**+0.6**
baz=37							
SFJD	**Kangerlussuaq**	**37.23**	**40**	P	**P**	**19 43 37.8**	**-0.5**
9.1nm,0.6s,mb4.8,baz=313,slow=9.9,SNR=6.9							
Y14A	**Wickenburg**	**37.45**	**125**	⇓P	**P**	**19 43 41.1**	**+0.6**
baz=37							
V20A	**Brimhall**	**37.51**	**118**	⇓P	**P**	**19 43 41.5**	**+0.5**
baz=37							
X16A	**Lo Mia Camp, P**	**37.59**	**123**	⇓P	**P**	**19 43 42.5**	**+0.8**
baz=37							
Y15A	**Casa Rosa Ranc**	**37.68**	**124**	⇑P	**P**	**19 43 42.8**	**+0.4**
baz=38							
Z13A	**Yuma Proving G**	**37.88**	**126**	⇑P	**P**	**19 43 44.5**	**+0.4**
baz=38							
Z14A	**Wintersburg**	**37.98**	**126**	⇓P	**P**	**19 43 45.3**	**+0.3**
baz=38							
V22A	**San Miguel Ran**	**38.02**	**116**	⇑P	**P**	**19 43 45.6**	**+0.3**
baz=38							
Y17A	**Roosevelt**	**38.46**	**123**	⇓P	**P**	**19 43 49.6**	**+0.6**
baz=38							
115A	**Sonoran Desert**	**38.84**	**125**	⇑P	**P**	**19 43 52.8**	**+0.7**
baz=39							
X21A	**Alamocita Cree**	**38.96**	**119**	⇑P	**P**	**19 43 53.8**	**+0.6**
baz=39							
ANMO	**Albuquerque**	**39.04**	**117**	P	**P**	**19 43 54.7**	**+0.9**
1.0nm,0.4s,mb4.0,baz=351,slow=6.5,SNR=4.1							
X22A	**Bernardo**	**39.22**	**118**	⇑P	**P**	**19 43 56.3**	**+1.0**
baz=39							
214A	**Organ Pipe Nat**	**39.30**	**126**	⇑P	**P**	**19 43 56.4**	**+0.4**
baz=39							
Y21A	**Point of Rocks**	**39.39**	**119**	⇑P	**P**	**19 43 57.6**	**+0.9**
baz=39							
117A	**Oracle**	**39.50**	**123**	⇓P	**P**	**19 43 58.1**	**+0.4**
baz=39							
W25A	**X Bar L Ranch,**	**39.61**	**114**	⇑P	**P**	**19 43 59.0**	**+0.4**
baz=39							
Y22A	**Socorro**	**39.73**	**118**	⇓P	**P**	**19 44 00.1**	**+0.5**
baz=40							
216A	**Three Points,**	**39.75**	**125**	⇓P	**P**	**19 44 00.3**	**+0.5**
baz=40							
Z20A	**Nine Sixteen R**	**39.83**	**120**	⇑P	**P**	**19 44 01.3**	**+0.9**
baz=40							
119A	**Ashpeak Ranch,**	**39.87**	**122**	⇓P	**P**	**19 44 01.5**	**+0.8**
baz=40							
W26A	**Owens Ranch, T**	**40.01**	**114**	⇑P	**P**	**19 44 02.7**	**+0.9**
baz=40							
Y23A	**Lovelace Mesa,**	**40.10**	**117**	⇓P	**P**	**19 44 03.2**	**+0.7**
baz=40							
X25A	**Clemmons Ranch**	**40.13**	**115**	⇑P	**P**	**19 44 03.4**	**+0.5**
baz=40							
217A	**Green Valley**	**40.19**	**124**	⇑P	**P**	**19 44 04.2**	**+0.8**
baz=40							
SCHQ	**Schefferville**	**40.31**	**63**	P	**P**	**19 44 03.0**	**-1.1**
5.8nm,0.8s,mb4.4,baz=314,slow=8.7,SNR=5.2							
W27A	**Bowe Ranch, En**	**40.32**	**113**	⇑P	**P**	**19 44 05.2**	**+0.8**
baz=40							
120A	**U Bar Ranch, L**	**40.32**	**121**	⇓P	**P**	**19 44 05.5**	**+1.0**
baz=40							
Z22A	**Elephant Butte**	**40.33**	**118**	⇓P	**P**	**19 44 05.6**	**+1.0**
baz=40							
Y24A	**Capitan**	**40.35**	**116**	⇓P	**P**	**19 44 05.6**	**+0.9**
baz=40							
219A	**White Tail Can**	**40.57**	**122**	⇑P	**P**	**19 44 07.2**	**+0.7**
baz=40							
Z23A	**Rita

comp=Z,11nm,0.7s,mb5.0,baz=2.7,slow=8.8,SNR=61
ZAA0 Zalesovo Array 55.23 324 *eP* **P 19 45 58.3 -0.8**
ZALV Zalesovo Beam 55.23 324 *P* **P 19 45 58.3 -0.7**
comp=Z,3.0nm,0.7s,mb4.5,baz=26,slow=7.1,SNR=16
KPL Plockton 56.10 23 *eP* **P 19 46 04.7 -0.6**
KPL AMb AMB 19 46 10.4
comp=Z,35nm,2.9s,mb4.9
KPL Plockton 56.10 23 P **P 19 46 04.7 -0.6**
KPL AMb AMB 19 46 10.4
comp=Z,35nm,2.9s,mb4.9
BJI Beijing 56.66 294 P **P 19 46 10.8 +1.4**
BJI S **S** 19 53 54.4 +2.3
BJI SS SS 19 57 42.3 +1.6
BJI pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
BJI pmax pmax
comp=Z,110nm,4.3s
BJI LR LR
comp=N,190nm,16.7s
BJI LR LR
comp=E,340nm,11.4s
BJI LR LR
comp=Z,280nm,22.0s
EAB Aberfoyle 57.42 22⇑ *eP* **P 19 46 14.3 -0.3**
EAB AMb AMB 19 46 14.6
comp=Z,12nm,0.6s,mb5.1
EAB Aberfoyle 57.42 22 P **P 19 46 14.3 -0.3**
EAB AMb AMB 19 46 14.6
comp=Z,12nm,0.6s,mb5.1
EBH Black Hill 57.50 22⇑ *eP* **P 19 46 14.7 -0.4**
EBH AMb AMB 19 46 14.9
comp=Z,10.0nm,0.6s,mb5.0
EBH Black Hill 57.50 22 P **P 19 46 14.7 -0.4**
EBH AMb AMB 19 46 14.9
comp=Z,10.0nm,0.6s,mb5.0
EAU Auchinoon 57.90 22⇑ *eP* **P 19 46 17.6 -0.2**
EAU AMb AMB 19 46 18.4
comp=Z,24nm,3.5s
EAU Auchinoon 57.90 22 P **P 19 46 17.6 -0.2**
EAU AMb AMB 19 46 18.4
comp=Z,24nm,3.5s
ARU Arti 58.16 342 *eP* **P 19 46 19.3 -0.4**
comp=Z,13nm,0.8s,mb5.0
ESK Eskdalemuir 58.45 22⇑ *eP* **P 19 46 21.2 -0.5**
ESK AMb AMB 19 46 26.1
comp=Z,15nm,2.4s,mb4.6
ESK Eskdalemuir 58.45 22 P **P 19 46 21.2 -0.5**
ESK AMb AMB 19 46 26.1
comp=Z,15nm,2.4s,mb4.6
ECK Cauldkaine Hil 58.59 22⇑ *eP* **P 19 46 22.1 -0.6**
ECK Cauldkaine Hil 58.59 22 P **P 19 46 22.1 -0.6**
GAL1 Galloway 58.62 23⇑ *eP* **P 19 46 22.3 -0.6**
GAL1 AMb AMB 19 46 25.0
comp=Z,14nm,2.3s,mb4.6
GAL1 Galloway 58.62 23 P **P 19 46 22.3 -0.6**
GAL1 AMb AMB 19 46 25.0
comp=Z,14nm,2.3s,mb4.6
BVAR Borovoye Array 59.42 333 P **P 19 46 28.2 -0.2**
comp=Z,7.4nm,0.5s,mb5.0,baz=48,slow=8.7,SNR=40
KURK Kurchatov 59.75 327 P **P 19 46 30.5 -0.2**
comp=Z,2.8nm,0.6s,mb4.5,baz=28,slow=7.1,SNR=24
KURK Kurchatov 59.75 327 *eP* **P 19 46 29.5 -1.2**
comp=Z,3.3nm,0.8s,mb4.4
IZAR Zarasai 60.77 3 *eP* **P 19 46 38.0 +0.5**
IZAR AMB AMB 19 46 38.8
comp=Z,10nm,0.7s,mb5.0
ISAL Salakas 60.94 3 *eP* **P 19 46 38.9 +0.1**
ISAL AMB AMB 19 46 40.1
comp=Z,4.2nm,1.1s,mb4.4
IIGN Ignalina 61.16 3 *eP* **P 19 46 40.4 +0.1**
IIGN AMB AMB 19 46 40.7
comp=Z,4.0nm,0.9s,mb4.4
IDID Didziasalis 61.21 2 *eP* **P 19 46 40.2 -0.3**
IDID AMB AMB 19 46 41.8
comp=Z,3.9nm,1.0s,mb4.4
NJ2 Nanjing 62.37 287 *eP* **P 19 46 48.4 -0.3**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
MKAR Makanchi Array 62.41 322 P **P 19 46 47.8 -1.0**
comp=Z,2.5nm,0.5s,mb4.5,baz=46,slow=8.6,SNR=28
GTA Gaotai 63.50 306 *eP* **P 19 46 56.3 +0.2**
GTA pmax pmax
comp=Z,10.0nm,1.2s,mb4.5
CLL Colln 64.46 12⇑ *iP* **P 19 47 01.3 -0.8**
comp=Z,3.0nm,0.7s,mb4.2
CLL *e* 19 47 18.0
BAIF Baives 64.67 18⇑ *iP* **P 19 47 03.1 -0.4**
comp=Z,7.3nm,0.5s,mb4.5
BAIF Baives 64.67 18⇑ *iP* **P 19 47 03.1 -0.4**
comp=Z,3.7nm,0.5s,mb4.5
GIVF Givet 64.72 18 *eP* **P 19 47 03.3 -0.5**
comp=Z,30nm,1.1s,mb4.7
GIVF Givet 64.72 18 *eP* **P 19 47 03.3 -0.5**
comp=Z,15nm,1.1s,mb4.7
ABKAR Akbulak array 64.92 339 *eP* **P 19 47 04.5 -0.6**
comp=Z,8.6nm,0.6s,mb4.8
LZH Lanzhou 64.94 301 *eP* **P 19 47 05.7 +0.2**
LZH pmax pmax
comp=Z,18nm,1.4s,mb4.7
BRG Berggiesshubel 64.97 11 *eP* **P 19 47 04.8 -0.7**
comp=Z,4.7nm,0.9s,mb4.3
ROSF Rostrenen 65.15 24 *eP* **P 19 47 06.1 -0.6**
FLN La Foliniere 65.22 22 *eP* **P 19 47 06.1 -1.0**
SGMF Saint Gilles 65.36 23 *eP* **P 19 47 07.3 -0.7**
comp=Z,14nm,0.8s,mb4.5
SGMF Saint Gilles 65.36 23 *eP* **P 19 47 07.3 -0.7**
comp=Z,6.8nm,0.8s,mb4.5
LDF La Druitiere 65.44 22 *eP* **P 19 47 08.3 -0.2**
NKC Novy Kostel 65.47 12 *eP* **P 19 47 08.8 +0.1**
UPC Upice 65.51 10 *eP* **P 19 47 09.0 +0.1**
GRR Gorron 65.52 22 *eP* **P 19 47 08.3 -0.7**
QUIF Quistinic 65.57 24 *eP* **P 19 47 08.6 -0.8**
DPC Dobruska-Polom 65.69 10 *eP* **P 19 47 10.4 +0.3**
AKASG Malin Array Be 65.86 1 P **P 19 47 10.3 -0.9**
comp=Z,4.1nm,0.4s,mb4.6,baz=360,slow=6.4,SNR=31
AKASG Malin Array Be 65.86 1 P **P 19 47 10.3 -0.9**
PRU Pruhonice 65.90 11 *eP* **P 19 47 12.1 +0.6**
OKC Ostrava-Krasne 66.33 9 *eP* **P 19 47 14.2 0.0**
KHC Kasperske Hory 66.67 12 *eP* **P 19 47 16.8 +0.4**
CDF Champ du Feu 66.69 16⇑ *iP* **P 19 47 16.1 -0.4**
comp=Z,6.5nm,0.8s,mb4.2
CDF Champ du Feu 66.69 16⇑ *iP* **P 19 47 16.1 -0.4**
comp=Z,3.3nm,0.8s,mb4.2
STHS Stebnicka Huta 66.93 6 *eP* **P 19 47 18.3 +0.3**
comp=Z,2.8nm,0.7s,mb4.2
STHS Stebnicka Huta 66.93 6 *eP* **P 19 47 18.3 +0.3**
STHS *e* 20 00 34.1
GERES GERESS Array B 66.96 12 P **P 19 47 18.1 -0.2**
comp=Z,1.4nm,0.5s,mb4.0,baz=358,slow=6.0,SNR=18
HAU Haudompre 66.97 17⇑ *iP* **P 19 47 17.7 -0.6**
comp=Z,6.5nm,0.5s,mb4.4
HAU Haudompre 66.97 17⇑ *iP* **P 19 47 17.7 -0.6**
comp=Z,3.3nm,0.5s,mb4.4
HINF Hinteralfeld 67.23 17 *eP* **P 19 47 19.2 -0.7**
comp=Z,6.3nm,0.7s,mb4.3
HINF Hinteralfeld 67.23 17 *eP* **P 19 47 19.2 -0.7**
comp=Z,3.2nm,0.6s,mb4.3
LOR Lormes 67.35 19⇑ *iP* **P 19 47 20.0 -0.7**
comp=Z,12nm,0.7s,mb4.5
LOR Lormes 67.35 19⇑ *iP* **P 19 47 20.0 -0.7**
comp=Z,6.1nm,0.7s,mb4.5
MFF Saint Martin d 67.37 22 *eP* **P 19 47 20.4 -0.5**
KOLS Kolonicke sedl 67.46 6 *iP* **P 19 47 22.1 +0.8**
comp=Z,7.5nm,1.7s,mb4.2
KOLS Kolonicke sedl 67.46 6 *iP* **P 19 47 22.1 +0.8**
SSF Saint Saulge 67.50 19 *eP* **P 19 47 21.0 -0.7**
comp=Z,14nm,0.8s,mb4.6
SSF Saint Saulge 67.50 19 *eP* **P 19 47 21.0 -0.7**
comp=Z,6.8nm,0.8s,mb4.5
VYHS Vyhne 67.71 8 *iP* **P 19 47 22.8 -0.1**
comp=Z,1.4nm,0.7s,mb3.9
VYHS Vyhne 67.71 8 *iP* **P 19 47 22.8 -0.1**
AVF Avril sur Loir 67.74 20⇑ *iP* **P 19 47 22.3 -0.9**
comp=Z,8.5nm,0.7s,mb4.4
AVF Avril sur Loir 67.74 20⇑ *iP* **P 19 47 22.3 -0.9**
comp=Z,4.3nm,0.7s,mb4.4
TKM2 Tokmak 2 67.77 326 P **P 19 47 23.8 +0.4**
SNR=5.6
TKM2 Tokmak 2 67.77 326 *eP* **P 19 47 23.2 -0.2**
comp=Z,4.0nm,0.9s,mb4.2
KECS Kecovo 67.82 7 *eP* **P 19 47 23.2 -0.4**
comp=Z,2.1nm,0.7s,mb4.1
KECS Kecovo 67.82 7 *eP* **P 19 47 23.2 -0.4**
ZST Bratislava 67.89 9 *eP* **P 19 47 24.5 +0.4**
comp=Z,6.1nm,0.7s,mb4.5
ZST Bratislava 67.89 9 *eP* **P 19 47 24.5 +0.4**

BGF Bois d'Agland 67.89 20 *eP* **P 19 47 24.4 +0.3**
CHMS Chumysh 67.90 326 P **P 19 47 24.6 +0.3**
SNR=5.6
RETA Reutte 68.02 14⇑ *iP* **P 19 47 24.7 -0.2**
comp=Z,3.4nm,1.0s,mb4.2
CONA Conrad Observa 68.06 10⇑ *iP* **P 19 47 25.2 0.0**
comp=Z,4.2nm,0.9s,mb4.2
CSNA Conrad Observa 68.06 10⇑ *iP* **P 19 47 25.1 0.0**
comp=Z,4.1nm,1.0s,mb4.2
TCF Toulx Ste Croi 68.06 21⇑ *iP* **P 19 47 24.2 -1.0**
comp=Z,5.4nm,0.7s,mb4.2
TCF Toulx Ste Croi 68.06 21⇑ *iP* **P 19 47 24.2 -1.0**
comp=Z,2.7nm,0.7s,mb4.2
DAVA Damuels 68.11 15⇑ *iP* **P 19 47 25.5 0.0**
comp=Z,2.8nm,0.6s,mb4.3
KBK Karagaybulak 68.17 326 P **P 19 47 26.2 +0.3**
SNR=5.5
WATA Walderalm 68.25 14⇓ *iP* **P 19 47 26.3 -0.1**
comp=Z,3.1nm,0.5s,mb4.4
CABF La Chapelle 68.31 18 *eP* **P 19 47 26.4 -0.3**
comp=Z,14nm,0.6s,mb4.6
CABF La Chapelle 68.31 18 *eP* **P 19 47 26.4 -0.3**
comp=Z,6.8nm,0.6s,mb4.7
AAK Ala-Archa 68.31 326 P **P 19 47 26.6 -0.2**
comp=Z,1.1nm,0.3s,mb4.2,baz=152,slow=6.8,SNR=8.7
AAK Ala-Archa 68.31 326 *eP* **P 19 47 26.7 -0.1**
comp=Z,5.1nm,0.9s,mb4.3
WTTA Wattenberg 68.33 14⇑ *iP* **P 19 47 27.0 +0.1**
comp=Z,6.8nm,0.9s,mb4.5
EKS2 Erkin-Say 68.46 327 *eP* **P 19 47 28.0 +0.3**
SNR=15
EKS2 Erkin-Say 68.46 327 *eP* **P 19 47 27.8 +0.1**
comp=Z,8.5nm,0.8s,mb4.6
KBA Koelnbreinsper 68.68 12⇑ *iP* **P 19 47 29.4 +0.4**
comp=Z,16nm,1.1s,mb4.8
AML Almayashu 68.98 327 P **P 19 47 31.8 +0.8**
SNR=6.5
AML Almayashu 68.98 327 *eP* **P 19 47 31.4 +0.5**
comp=Z,4.5nm,0.8s,mb4.3
LFF La Frestale 69.13 22 *eP* **P 19 47 30.9 -1.0**
comp=Z,19nm,0.8s,mb4.7
LFF La Frestale 69.13 22 *eP* **P 19 47 30.9 -1.0**
comp=Z,9.3nm,0.8s,mb4.7
OBKA Obir 69.36 12⇑ *iP* **P 19 47 33.0 -0.2**
comp=Z,8.2nm,0.6s,mb4.7
CAF Calviac 69.36 21 *eP* **P 19 47 32.3 -1.0**
LPL La Plagne 69.47 17 *eP* **P 19 47 34.4 +0.5**
LPG La Plagne 69.49 17⇑ *iP* **P 19 47 34.6 +0.6**
comp=Z,15nm,1.2s,mb4.4
LPG La Plagne 69.49 17⇑ *iP* **P 19 47 34.6 +0.6**
comp=Z,7.5nm,1.2s,mb4.4
VIVF Saint-Julien-l 69.83 19⇑ *iP* **P 19 47 35.5 -0.6**
comp=Z,8.0nm,0.7s,mb4.4
VIVF Saint-Julien-l 69.83 19⇑ *iP* **P 19 47 35.5 -0.6**
comp=Z,4.0nm,0.7s,mb4.4
ORIF Oris-en-Rattie 69.94 18⇑ *iP* **P 19 47 36.4 -0.4**
comp=Z,8.2nm,0.7s,mb4.4
ORIF Oris-en-Rattie 69.94 18⇑ *iP* **P 19 47 36.4 -0.4**
comp=Z,4.1nm,0.7s,mb4.4
LASF Ste Croix 70.47 20 *eP* **P 19 47 39.8 -0.3**
SMRF Simiane la Rot 70.82 19 *eP* **P 19 47 42.4 +0.2**
ETSF Etsaut 70.89 23 *eP* **P 19 47 42.4 -0.2**
EPF Esparros 70.92 23 *eP* **P 19 47 42.2 -0.6**
comp=Z,8.9nm,0.9s,mb4.3
EPF Esparros 70.92 23 *eP* **P 19 47 42.2 -0.6**
comp=Z,4.4nm,0.9s,mb4.3
MTLF Montolieu 70.93 21 *eP* **P 19 47 42.1 -0.8**
comp=Z,5.2nm,0.8s,mb4.1
MTLF Montolieu 70.93 21 *eP* **P 19 47 42.1 -0.8**
comp=Z,2.6nm,0.8s,mb4.1
SBF Sospel 71.19 17⇑ *iP* **P 19 47 43.8 -0.6**
comp=Z,22nm,0.8s,mb4.8
SBF Sospel 71.19 17⇑ *iP* **P 19 47 43.8 -0.6**
comp=Z,11nm,0.8s,mb4.7
FRF La Foret Royal 71.38 18 *eP* **P 19 47 44.8 -0.7**
comp=Z,9.9nm,0.9s,mb4.3
FRF La Foret Royal 71.38 18 *eP* **P 19 47 44.8 -0.7**
comp=Z,4.9nm,0.9s,mb4.3
PGF Pioggiola 72.68 16 *eP* **P 19 47 52.6 -0.7**
comp=Z,8.6nm,0.9s,mb4.3
PGF Pioggiola 72.68 16 *eP* **P 19 47 52.6 -0.7**
comp=Z,4.3nm,0.9s,mb4.3
ESDC Sonseca Array 73.37 27 P **P 19 47 57.0 -0.4**
comp=Z,3.6nm,0.7s,mb4.3,baz=344,slow=5.7,SNR=19
KMI Kunming 75.11 297 P **P 19 48 09.2 +1.4**
KMI PP PP 19 51 01.9 +5.0
KMI S S 19 57 36.3 +0.1
KMI SS SS 20 02 30.9 +4.0
KMI pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
KMI pmax pmax
comp=Z,56nm,4.7s
KMI LR LR
comp=N,160nm,16.1s
KMI LR LR
comp=E,130nm,17.2s
KMI LR LR
comp=Z,150nm,16.1s
LSA Lhasa 75.32 308 *eP* **P 19 48 09.8 +1.0**
comp=Z,3.6nm,0.6s,mb4.3
BRTR Keskin Array B 76.81 357 P **P 19 48 16.4 -0.8**
comp=Z,1.0nm,0.8s,mb3.6,baz=37,slow=3.1,SNR=4.9
KBL Kabul 77.31 328 *eP* **P 19 48 18.4 -1.6**
comp=Z,5.2nm,1.0s,mb4.2
ROSC El Rosal 79.22 101 P **P 19 48 31.3 +0.5**
comp=Z,2.5nm,0.3s,mb4.5,baz=100,slow=19,SNR=4.1
KEST Kesra 79.44 17 P **P 19 48 31.4 -0.4**
comp=Z,0.7nm,0.6s,mb3.6,baz=294,slow=4.1,SNR=3.2
CMAR Chiang Mai Arr 82.62 297 P **P 19 48 48.1 -0.7**
comp=Z,3.0nm,0.8s,mb4.2,baz=7.4,slow=6.1,SNR=25
MIB Mutribah 85.76 345 *eP* **P 19 49 03.6 -0.9**
MIB AMb AMB 19 49 04.9
comp=Z,23nm,0.8s,mb5.1
NAY Al-Naaiem 86.32 345 *eP* **P 19 49 06.2 -1.2**
NAY AMb AMB 19 49 12.9
comp=Z,3.8nm,1.3s,mb4.2
RDF Al-Radifah 86.61 345 *eP* **P 19 49 08.1 -0.6**
RDF AMb AMB 19 49 09.1
comp=Z,18nm,0.9s,mb5.0
BOSA Boshof 144.68 8 PKP PKPdf 19 55 58.0 -2.9
comp=Z,6.8nm,0.8s,baz=24,slow=2.0,SNR=11
BOSA Boshof 144.68 8 PKP PKPdf 19 55 58.0 -2.9
QSPA South Pole Qui 153.59 180 PKPbc PKPbc 19 56 20.4 -1.1
comp=Z,5.8nm,0.6s,baz=178,slow=0.2,SNR=47
QSPA PKPab PKPab 19 56 33.5 -1.2
comp=Z,2.9nm,0.7s,baz=301,slow=1.9,SNR=4.0

MOS ***02*** *19:47:13.0±1.3, 0.°07N×123.°10E, h135km, mb5.3/37, Error ellipse: s-maj=10.2km s-min=5.6km az=106.8*
ISCJB ***02*** *19:47:14.5±0.1, 0.°06S±0.°02×123.°37E±0.°02, h152km, mb5.3/142, Error ellipse: s-maj=3.3km s-min=2.6km az=175.2*
IDC ***02*** *19:47:15.5±0.6, 0.°01N×123.°13E, h146km±4km, mb4.9/23, mb1 4.9/26, mb1mx4.9/27, mbtmp4.9/26, MS4.0/14, Ms1 4.0/14, ms1mx3.7/36, Error ellipse: s-maj=11.2km s-min=7.5km az=89.0*
NEIC ***02*** *19:47:16.2±0.5, 0.°03S×123.°28E, h153km±4km, mb5.4/64, MW5.3, Error ellipse: s-maj=6.8km s-min=4.2km az=69.0, Moment Tensor Solution. s15 Moment tensor: Scale 10^{17}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{\phi r}$0.00; Best double couple: $M_0$1.10000×10^{17} NP1: ϕ_s243.00000°, δ90.00000°, λ-97.00000°. NP2: ϕ_s151.00000°, δ7.00000°, λ-3.00000°. Principal axes: T 0.8600, Plg44.0000°, Azm340.0000°; N 0.3600, Plg6.0000°, Azm243.0000°; P -1.2200, Plg44.0000°, Azm146.0000°;*
NEIC Felt [II] at Luwuk.
DJA ***02*** *19:47:16, 0.°01S×123.°41E, h142km, Mw5.5/38*
GCMT ***02*** *19:47:18.1±0.1, 0.°06S×123.°43E, h144km±1km, MW5.3, Moment Tensor Solution. s80,c134; s89,c176; Moment tensor: Scale 10^{17}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{\phi r}$0.00; Best double couple: $M_0$1.20000×10^{17} NP1:ϕ_s157.00000°, δ30.00000°, λ22.00000°. NP2:ϕ_s48.00000°, δ79.00000°, λ118.00000°. Principal axes: T 1.2000, Plg48.0000°, Azm347.0000°; N -0.0200, Plg27.0000°, Azm222.0000°; P -1.1800, Plg29.0000°, Azm115.0000°; Data Used: II IU IC G CN.*
ISC 02 19:47:16.3±0.1, 0.°07S±0.°02×123.°37E±0.°02, h154km, h154km±1.8km:pP-P,n762,σ1§35/421, mb5.3/142, 160C-124D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**1.14**	**212**	P	**Pn**	**19 47 40.4**	**-2.2**
MRSI	**Marisa**	**1.53**	**291**	P	**Pn**	**19 47 44.5**	**-1.9**
APSI	**Ampana**	**1.91**	**244**	P	**Pn**	**19 47 49.4**	**-1.2**
MNI	**Manado**	**2.10**	**44**	P	**Pn**	**19 47 53.3**	**+0.5**
PCI	**Palu**	**3.63**	**257**	P	**Pn**	**19 48 13.0**	**+1.2**
KDI	**Kendari**	**3.93**	**191**	P	**Pn**	**19 48 13.9**	**-1.9**
TNTI	**Ternate**	**4.08**	**78**	P	**Pn**	**19 48 15.9**	**-1.8**
TTSI	**Tana Toraja**	**4.62**	**230**	P	**Pn**	**19 48 24.7**	**-0.1**
NLAI	**Namlea**	**4.88**	**130**	P	**Pn**	**19 48 27.6**	**-0.6**
AAI	**Ambon**	**6.01**	**127**	P	**Pn**	**19 48 43.9**	**+0.7**
	8.4nm1μm,0.8s						
KAPI	**Kappang**	**6.10**	**216**	Pn	**Pn**	**19 48 43.5**	**-0.9**
	5μm,0.7s						
KAPI	**Kappang**	**6.10**	**216**	P	**Pn**	**19 48 42.8**	**-1.5**
	71nm,0.3s,baz=41,slow=9.7,SNR=114						
KAPI				S	**Sn**	**19 49 49.7**	**-3.6**
	90nm,0.3s,baz=42,slow=20,SNR=6.5						
KAPI				LR	LR	19 51 35.1	
	comp=Z,1μm,18.2s,baz=221,slow=43						
KAPI	**Kappang**	**6.10**	**216**	*eP*	**Pn**	**19 48 43.2**	**-1.2**
	487nm,0.6s						
KAPI	**Kappang**	**6.10**	**216**	Pn	**Pn**	**19 48 44.1**	**-0.3**
	SNR=33						
KAPI				Pn	**Pn**	**19 48 44.1**	**-0.3**
	SNR=33						
KAPI	**Kappang**	**6.10**	**216**	P	**Pn**	**19 48 43.4**	**-1.0**
	1.7nm4μm323nm,0.7s						
GSPH	**General Santos**	**6.32**	**14⇓**	*iP*	**Pn**	**19 48 47.7**	**+0.5**
TSM	**Tawau**	**7.00**	**308**	P	**Pn**	**19 48 56.1**	**-0.2**
ZMPH	**Zamboanga City**	**7.10**	**349⇑**	*iP*	**Pn**	**19 48 58.4**	**+0.8**
ZMPH				*i* S	**Sn**	**19 50 15.9**	**-1.4**
MYLDM	**Lahad Datu**	**7.13**	**317**	P	**Pn**	**19 49 02.4**	**+4.3**
MYLDM	**Lahad Datu**	**7.13**	**317**	P	**Pn**	**19 49 00.4**	**+2.3**
	11nm3μm,0.8s						
KCP	**Kidapawan**	**7.24**	**14⇓**	*eP*	**Pn**	**19 49 05.8**	**+6.3**
CTBH	**Cotabato--PC H**	**7.29**	**7⇑**	*iP*	**Pn**	**19 49 02.1**	**+1.8**
CTBH				*i* S	**Sn**	**19 50 21.6**	**-0.4**
DAV	**Davao City (W)**	**7.43**	**17**	P	**Pn**	**19 49 04.3**	**+2.2**
	30nm,0.3s,baz=270,slow=22,SNR=25						
DAV				S	**Sn**	**19 50 26.8**	**+1.6**
	14nm,0.3s,baz=73,slow=22,SNR=1.7						
DAV				LR	LR	19 51 06.2	
	comp=Z,254nm,19.1s,baz=350,slow=31						
DAV	**Davao City (W)**	**7.43**	**17**	*eP*	**Pn**	**19 49 06.6**	**+4.5**
	1μm,1.1s						
DAV	**Davao City (W)**	**7.43**	**17**	Pn	**Pn**	**19 49 06.9**	**+4.8**
	SNR=33						
DAV				Pn	**Pn**	**19 49 06.9**	**+4.8**
	SNR=33						
DAV	**Davao City (W)**	**7.43**	**17**	P	**Pn**	**19 49 07.3**	**+5.2**
MATI	**Mati**	**7.54**	**22**	*eP*	**Pn**	**19 49 06.2**	**+2.6**
IPIL	**Ipil**	**7.84**	**354**	*eP*	**Pn**	**19 49 10.9**	**+3.3**
PAGZ	**Pagadian**	**7.87**	**0**	*eP*	**Pn**	**19 49 09.6**	**+1.7**
KBKI	**Kotabaru**	**7.88**	**246**	P	**Pn**	**19 49 08.0**	**-0.1**
	2.0nm5μm682nm,0.8s						
BUKP	**Musuan**	**8.07**	**12**	*eP*	**Pn**	**19 49 14.2**	**+3.5**
SDKM	**Sandakan**	**8.38**	**313**	P	**Pn**	**19 49 17.6**	**+2.9**
MMRI	**Maumere**	**8.58**	**188**	P	**Pn**	**19 49 19.3**	**+1.8**
	4μm362nm,0.9s						
BUTP	**Butuan**	**9.25**	**14**	*eP*	**Pn**	**19 49 30.1**	**+3.7**
KKM	**Kota Kinabalu**	**9.37**	**310**	P	**Pn**	**19 49 32.1**	**+4.1**
KKM	**Kota Kinabalu**	**9.37**	**310**	*eP*	**Pn**	**19 49 28.9**	**+0.8**
	1μm,0.5s						
KKM	**Kota Kinabalu**	**9.37**	**310**	P	**Pn**	**19 49 29.6**	**+1.6**
	2μm,0.6s						
KDM	**Kudat**	**9.52**	**317**	P	**Pn**	**19 49 35.9**	**+6.0**
WSI	**Waingapu**	**10.01**	**198**	P	**Pn**	**19 49 39.7**	**+3.2**
	7μm616nm,0.6s						
MSLP	**Maasin**	**10.24**	**8**	*eP*	**Pn**	**19 49 42.9**	**+3.4**
BATP	**Bataraza**	**10.41**	**328**	*eP*	**Pn**	**19 49 45.6**	**+3.9**
GUIM	**Jordan**	**10.65**	**356**	*eP*	**Pn**	**19 49 48.5**	**+3.6**
BTM	**Bintulu**	**10.78**	**288**	P	**Pn**	**19 49 48.0**	**+1.4**
TLE	**Tual**	**10.87**	**121**	P	**Pn**	**19 49 48.1**	**+0.4**
	1μm,1.3s						
CUYO	**Cuyo Island**	**11.10**	**348**	*eP*	**Pn**	**19 49 56.0**	**+5.3**
KHKI	**Kahang-Kahang**	**11.30**	**223**	P	**Pn**	**19 49 57.2**	**+3.8**
	93nm,0.9s						
SRBI	**Singaraja**	**11.38**	**225**	P	**Pn**	**19 49 57.1**	**+2.7**
	116nm,0.7s						
SBUM	**Sibu**	**11.42**	**283**	P	**Pn**	**19 49 55.8**	**+0.7**
SBUM	**Sibu**	**11.42**	**283**	P	**Pn**	**19 49 55.5**	**+0.5**
	833nm39nm,0.8s						
KMMI	**Kalianget**	**11.66**	**233**	P	**Pn**	**19 50 05.7**	**+7.5**
ENPP	**El Nido**	**11.87**	**341**	*eP*	**Pn**	**19 50 05.9**	**+5.1**
STKI	**Sintang**	**11.89**	**271**	P	**Pn**	**19 50 03.0**	**+1.8**
	260nm,0.9s						
BUSP	**Coron**	**12.40**	**345**	*eP*	**Pn**	**19 50 17.3**	**+10**
OTRP	**Odiongan**	**12.42**	**354**	*eP*	**Pn**	**19 50 13.4**	**+5.4**
CNP	**Catarman**	**12.56**	**6**	*eP*	**Pn**	**19 50 12.6**	**+2.8**
SJMP	**San Jose**	**12.65**	**350**	*eP*	**Pn**	**19 50 14.1**	**+3.2**
GMJI	**Gumukmas**	**12.82**	**230**	P	**Pn**	**19 50 20.6**	**+7.5**
KSM	**Kuching**	**13.15**	**277**	P	**Pn**	**19 50 20.0**	**+2.6**
KSM	**Kuching**	**13.15**	**277**	*eP*	**Pn**	**19 50 18.1**	**+0.8**
	151nm,0.6s						
KSM	**Kuching**	**13.15**	**277**	P	**Pn**	**19 50 20.0**	**+2.6**
	2μm234nm,0.7s						
AUQP	**San Andres**	**13.32**	**357**	*eP*	**Pn**	**19 50 25.5**	**+6.0**
BOAC	**Boac**	**13.53**	**354**	*eP*	**Pn**	**19 50 26.8**	**+4.7**
PVCP	**Virac**	**13.60**	**3**	*eP*	**Pn**	**19 50 26.7**	**+3.7**
NGJI	**Ngawi**	**13.91**	**238**	P	**Pn**	**19 50 34.2**	**+7.2**
PWJI	**Pagerwojo**	**13.97**	**235**	P	**Pn**	**19 50 31.2**	**+3.4**
	2μm206nm,0.8s						
LUBP	**Lubang**	**14.06**	**347**	*eP*	**Pn**	**19 50 31.2**	**+2.3**
TGY	**Tagaytay City**	**14.28**	**350**	P	**Pn**	**19 50 29.4**	**-2.3**
	17nm,0.3s,baz=149,slow=11,SNR=2.0						
TGY				S	**Sn**	**19 53 12.0**	**+1.7**
	26nm,0.3s,baz=155,slow=8.3,SNR=1.4						
PCJI	**Pacitan**	**14.59**	**236**	P	**Pn**	**19 50 39.1**	**+3.6**
SMRI	**Semarang**	**14.64**	**241**	P	**Pn**	**19 50 40.4**	**+4.2**
	237nm,0.8s						
POLP	**Polilio Island**	**14.77**	**355**	*eP*	**Pn**	**19 50 40.0**	**+2.2**
UGM	**Wanagama**	**14.99**	**238**	P	**Pn**	**19 50 44.0**	**+3.5**
	135nm,0.7s						
KAKA	**Kakadu**	**15.45**	**145**	*eP*	**Pn**	**19 50 45.8**	**-0.4**
	558nm,0.7s						
KAKA	**Kakadu**	**15.45**	**145**	*eP*	**Pn**	**19 50 45.6**	**-0.5**
	1μm,0.7s						
KAKA	**Kakadu**	**15.45**	**145**	P	**Pn**	**19 50 47.0**	**+0.8**
	8μm1μm,0.8s						
SMPI	**Sarmi**	**15.46**	**97**	P	**Pn**	**19 50 47.9**	**+1.6**
	1μm,1.3s						
BALP	**Baler**	**15.81**	**354**	*eP*	**Pn**	**19 50 53.2**	**+2.6**
JCJI	**Jatiwangi**	**16.36**	**247**	P	**Pn**	**19 50 59.8**	**+2.4**
	250nm,0.8s						
BOLP	**Bolinao**	**16.70**	**348**	*eP*	**Pn**	**19 51 01.8**	**+0.4**
CAUP	**Cauayan**	**16.97**	**355**	*eP*	**Pn**	**19 51 06.3**	**+1.6**
PALP	**Palanan**	**17.05**	**357**	*eP*	**Pn**	**19 51 08.4**	**+2.8**
LEM	**Lembang**	**17.09**	**247**	P	**Pn**	**19 51 07.1**	**+1.0**
	3μm167nm,0.7s						
JAY	**Jayapura**	**17.50**	**98**	P	**Pn**	**19 51 11.2**	**+0.1**
	176nm,1.2s						
DBJI	**Dramaga**	**17.79**	**248**	P	**Pn**	**19 51 13.4**	**-1.1**
	2μm210nm,0.6s						
ABRA	**Dolores**	**17.80**	**352**	*eP*	**Pn**	**19 51 13.2**	**-1.4**
APYP	**Conner**	**17.94**	**353**	*eP*	**Pn**	**19 51 16.3**	**+0.1**
FITZ	**Fitzroy Crossi**	**18.06**	**173⇓**	*iP*	**P**	**19 51 16.4**	**+0.4**
	193nm,1.1s						
FITZ				*e*S	**S**	**19 54 28.3**	**-6.8**
FITZ	**Fitzroy Crossi**	**18.06**	**173**	P	**P**	**19 51 16.2**	**+0.2**
	8.1nm,0.3s,baz=5.1,slow=8.5,SNR=219						
FITZ				S	**S**	**19 54 28.8**	**-6.4**
	0

3μm206nm,0.6s
MDSI Maura Dua 19.67 257 P **P 19 51 33.3 -0.2**
1μm77nm,0.6s
LWLI Liwa 19.90 255 P **P 19 51 36.8 +0.7**
2μm222nm,0.7s
KGM Kluang 20.15 276 P **P 19 51 40.5 +1.7**
MNAI Manna 20.83 258 P **P 19 51 46.0 -0.1**
364nm,1.0s
KTGM Kuala Trenggan 20.91 285 P **P 19 51 48.2 +1.3**
KSI Kapahiang 21.07 260 P **P 19 51 50.8 +2.3**
3μm151nm,0.8s,mb5.4
MBWA Marble Bar 21.26 189 *eP* **P 19 51 50.0 -0.5**
MBWA Marble Bar 21.26 189 *eP* **P 19 51 49.7 -0.7**
37nm,0.8s,mb4.8
MBWA Marble Bar 21.26 189 P **P 19 51 50.9 +0.4**
59nm,1.2s,mb4.8
SDSI Sungai Dareh 21.96 268 P **P 19 51 58.0 0.0**
FRIM Kepong 21.98 279 P **P 19 51 59.7 +1.5**
BKNI Bangkinang 22.33 271 P **P 19 52 03.4 +1.6**
1μm92nm,0.9s,mb5.2
WRAB Tennant Creek 22.48 152 P **P 19 52 02.0 -1.0**
1μm,0.6s
WRAB Tennant Creek 22.48 152 *eP* **P 19 52 02.0 -1.0**
WRAB pmax pmax
comp=Z,116nm,0.6s,mb5.5
WRAB Tennant Creek 22.48 152 *eP* **P 19 52 02.0 -1.0**
comp=Z,116nm,0.6s,mb5.5
WRAB Tennant Creek 22.48 152 P **P 19 52 02.9 -0.1**
comp=Z,4μmcomp=Z,243nm,1.3s,mb5.5
IPM Ipoh 22.77 282 P **P 19 52 07.0 +1.2**
IPM Ipoh 22.77 282 P **P 19 52 06.6 +0.8**
comp=Z,3μmcomp=Z,294nm,0.7s,mb5.8
TWG Pinlang 22.86 355 *eP* **P 19 52 05.6 -0.8**
comp=Z,154nm,0.6s,mb5.6
PPI Padang Panjang 22.98 269 P **P 19 52 08.1 +0.4**
comp=Z,2μmcomp=Z,297nm,0.8s,mb5.8
QIZ Qiongzhong 23.16 326 P **P 19 52 10.2 +0.9**
QIZ pP 19 52 38.5
QIZ S **S 19 56 10.5 +1.2**
QIZ sS sS 19 57 03.6 +1.5
QIZ pmax pmax
comp=Z,180nm,1.0s,mb5.5
QIZ Qiongzhong 23.16 326 *eP* **P 19 52 09.3 0.0**
comp=Z,224nm,1.0s,mb5.5
KULM Kulim 23.30 284 P **P 19 52 12.1 +1.5**
KULM Kulim 23.30 284 *eP* **P 19 52 11.2 +0.5**
comp=Z,109nm,0.7s,mb5.4
KULM Kulim 23.30 284 P **P 19 52 11.8 +1.1**
comp=Z,2μmcomp=Z,169nm,0.9s,mb5.5
TPUB Ta-pu 23.38 354 *eP* **P 19 52 12.0 +0.8**
comp=Z,178nm,0.5s,mb5.8
YULB Yu-li 23.41 355 *eP* **P 19 52 10.9 -0.6**
comp=Z,59nm,0.6s,mb5.2
PPSI Pulau Pagai 23.50 263 P **P 19 52 13.5 +1.0**
comp=Z,447nm,0.6s,mb6.1
UBT Ubonrachathani 23.67 311 ⇓P **P 19 52 15.9 +1.9**
comp=Z,340nm,0.9s,mb5.9
MNSI Mandailing Nat 23.80 272 P **P 19 52 16.8 +1.5**
comp=Z,1μmcomp=Z,111nm,0.6s,mb5.5
SNG Songkhla 23.81 288 P **P 19 52 16.0 +0.7**
comp=Z,740nm,1.0s,mb6.2
SSLB Suanglung 23.83 355 *eP* **P 19 52 15.2 -0.1**
comp=Z,163nm,0.6s,mb5.7
COEN Coen 23.98 126 *eP* **P 19 52 16.4 -0.3**
comp=Z,1μm,1.0s,mb6.4
COEN Coen 23.98 126 P **P 19 52 16.7 -0.1**
comp=Z,5μmcomp=Z,484nm,0.9s,mb6.0
NACB Ninganchiao 24.16 356 *eP* **P 19 52 17.3 -1.0**
comp=Z,30nm,0.6s,mb5.0
TRSI Tarutung 24.49 275 P **P 19 52 21.0 -0.5**
comp=Z,390nm,0.5s,mb6.2
PSI Prapat 24.60 277 P **P 19 52 21.1 -1.4**
comp=Z,23nm,0.7s,mb4.8,baz=106,slow=7.3,SNR=30
PSI PcP PcP 19 55 56.3 -0.1
comp=Z,4.9nm,0.6s,baz=139,slow=5.1,SNR=4.2
PSI ScP ScP 19 59 20.7 -0.3
comp=Z,9.8nm,0.7s,baz=18,slow=3.1,SNR=13
PSI Prapat 24.60 277 P **P 19 52 21.1 -1.4**
PSI 19 55 56.3
YHNB Yeheng 24.67 356 *eP* **P 19 52 22.9 -0.1**
comp=Z,84nm,0.5s,mb5.5
GUMO Guam 25.25 57 P **P 19 52 29.2 +0.9**
comp=Z,38nm,0.5s,mb5.2,baz=19,slow=22,SNR=3.7
GUMO S **S 19 56 46.5 +3.7**
comp=Z,35nm,0.8s,baz=23,slow=20,SNR=2.4
QZH Quanzhou 25.29 350 P **P 19 52 29.5 +0.9**
QZH LR LR
comp=N,1μm,15.6s
QZH LR LR
comp=E,740nm,13.8s
QZH LR LR
comp=Z,960nm,16.5s
ASAR Alice Springs 25.59 157 P **P 19 52 31.4 +0.1**
comp=Z,10nm,0.5s,mb4.7,baz=346,slow=14,SNR=223
ASAR pP pP 19 53 02.4 -0.9
comp=Z,79nm,1.1s,baz=330,slow=7.7,SNR=9.9
ASAR PcP PcP 19 55 59.0 +0.6
comp=Z,5.2nm,0.5s,baz=346,slow=2.5,SNR=5.4
ASAR ScP ScP 19 59 24.2 +0.7
comp=Z,9.6nm,0.7s,baz=342,slow=2.4,SNR=18
ASAR P3KPbc 20 25 17.9
ASAR Alice Springs 25.59 157 P **P 19 52 31.4 +0.1**
ASAR *PP pP 19 53 02.4 -0.9
ASAR 19 55 59.0
ASAR Alice Springs 25.59 157 P **P 19 52 31.4 +0.1**
ASAR pP pP 19 53 02.4 -0.9
ASAR PcP PcP 19 55 59.0 +0.6
ASAR ScP ScP 19 59 24.2 +0.7
ASAR *e* 20 25 17.9
GSI Gunungsitoli 25.83 273 P **P 19 52 33.6 0.0**
comp=Z,71nm,0.6s,mb5.5
KKTK Khon Kaen 26.01 310 P **P 19 52 36.1 +0.9**
comp=Z,1μm,0.9s,mb6.5
JOW Kunigami 27.16 10 P **P 19 52 45.7 +0.4**
comp=Z,71nm,0.5s,mb5.6,baz=174,slow=8.5,SNR=27
JOW Kunigami 27.16 10 P **P 19 52 45.7 +0.4**
NST Nakhon Sawan 27.77 305 P **P 19 52 52.0 +1.1**
comp=Z,108nm,0.6s,mb5.8
BDT Bhumibol Dam 29.52 307 P **P 19 53 07.5 +1.0**
comp=Z,76nm,0.8s,mb5.5
CTA Charters Tower 29.96 133 *eP* **P 19 53 11.5 +1.2**
comp=Z,23nm,0.8s,mb5.0
CTAO Charters Tower 29.96 133 *eP* **P 19 53 11.4 +1.1**
CTAO pmax pmax
comp=Z,117nm,1.4s,mb5.4
CTAO Charters Tower 29.96 133 *eP* **P 19 53 11.4 +1.1**
comp=Z,118nm,1.4s,mb5.4
CTAO Charters Tower 29.96 133 P **P 19 53 11.7 +1.4**
comp=Z,57nm,1.4s,mb5.1
CM31 Chiang Mai Arr 30.25 309 *eP* **P 19 53 13.6 +0.8**
comp=Z,36nm,0.6s,mb5.3
CMAR Chiang Mai Arr 30.25 309 P **P 19 53 13.8 +1.0**
comp=Z,58nm,0.6s,mb5.5,baz=131,slow=6.9,SNR=289
CMAR PcP PcP 19 56 10.8 +0.9
comp=Z,13nm,0.6s,baz=149,slow=2.0,SNR=22
CMAR ScP ScP 19 59 38.7 +0.6
comp=Z,8.8nm,0.7s,baz=164,slow=2.7,SNR=33
CMAR PKiKP PKiKP 20 03 41.5 -0.3
comp=Z,1.0nm,0.6s,baz=254,slow=1.6,SNR=9.4
CMAR LR LR 20 04 31.3
comp=Z,588nm,19.2s,baz=280,slow=34
CMAR Chiang Mai Arr 30.25 309 P **P 19 53 13.8 +1.0**
CMAR PcP PcP 19 56 10.8 +0.9
CMAR ScP ScP 19 59 38.7 +0.6
CHG Chiang Mai 30.45 309 ⇑P **P 19 53 15.6 +1.0**
comp=Z,141nm,0.7s,mb5.8
CHTO Chiang Mai 30.45 309 *eP* **P 19 53 15.4 +0.8**
CHTO *e* 19 56 10.9
CHTO pmax pmax
comp=Z,102nm,0.6s,mb5.7
CHTO Chiang Mai 30.45 309 *eP* **P 19 53 15.4 +0.8**
comp=Z,102nm,0.6s,mb5.7
CHTO *e*PcP PcP 19 56 10.8 +0.4
CHTO *e*ScP ScP 19 59 38.9 +0.2
CHTO Chiang Mai 30.45 309 P **P 19 53 15.9 +1.3**
SNR=25
CHTO P 19 53 15.9
SNR=25
CHTO Chiang Mai 30.45 309 P **P 19 53 16.1 +1.5**
comp=Z,2μmcomp=Z,173nm,0.7s,mb5.9
FORT Forrest 30.86 172 *eP* **P 19 53 18.0 -0.1**
comp=Z,183nm,0.6s,mb6.0
FORT Forrest 30.86 172 *eP* **P 19 53 17.9 -0.2**
comp=Z,179nm,0.6s,mb6.0
FORT *e*ScP ScP 19 59 40.2 +0.4
GYA Guiyang 30.90 330 ⇑*i*P **P 19 53 20.6 +2.2**
GYA pP pP 19 53 53.2 +2.2
GYA sP sP 19 54 12.0 +3.3
GYA PP PP 19 54 29.2 -2.2
GYA PcP PcP 19 56 12.6 +1.1
GYA S **S 19 58 11.8 +0.5**
GYA sS sS 19 59 10.5 +1.9
GYA ScP ScP 19 59 40.0 0.0
GYA PcS PcS 19 59 56.7 +0.9
GYA ScS ScS 20 03 35.4 -1.8
GYA pmax pmax
comp=Z,60nm,0.6s,mb5.5
GYA pmax pmax
comp=Z,160nm,4.9s
WHN Wuhan 31.63 345 P **P 19 53 26.2 +1.4**
KLBR Kellerberrin 31.80 189 *eP* **P 19 53 25.4 -0.9**
comp=Z,14nm,0.4s,mb5.0
KLBR *e* 19 56 14.0
KMI Kunming 32.02 323 P **P 19 53 30.0 +1.7**
KMI pP pP 19 54 02.2 +1.2
KMI sP sP 19 54 22.2 +3.5
KMI PP PP 19 54 42.7 -1.1
KMI S **S 19 58 31.0 +2.2**
KMI sS sS 19 59 26.9 +0.7
KMI SS SS 20 00 33.9 -19
KMI pmax pmax
comp=Z,41nm,0.6s,mb5.3
KMI pmax pmax
comp=Z,270nm,3.6s
KMI LR LR
comp=N,280nm,17.7s
KMI LR LR
comp=E,210nm,21.7s
KMI LR LR
comp=Z,430nm,33.3s
NJ2 Nanjing 32.23 353 *eP* **P 19 53 30.6 +0.6**
NJ2 pP pP 19 54 04.8 +2.1
NJ2 sP sP 19 54 23.4 +3.0
NJ2 PP PP 19 54 44.6 -1.5
NJ2 S **S 19 58 34.0 +2.1**
NJ2 SS SS 20 00 40.0 -17
NJ2 pmax pmax
comp=Z,40nm,0.9s,mb5.2
NJ2 pmax pmax
comp=Z,210nm,6.2s
NJ2 LR LR
comp=N,260nm,23.2s
NJ2 LR LR
comp=E,190nm,22.3s
NJ2 LR LR
comp=Z,360nm,19.9s
ENH Enshi 32.94 338 *eP* **P 19 53 36.9 +0.7**
comp=Z,86nm,0.7s,mb5.6
NWAO Narrogin (SRO) 33.19 189 *eP* **P 19 53 38.3 -0.1**
NWAO pmax pmax
comp=Z,23nm,1.0s
NWAO Narrogin (SRO) 33.19 189 *eP* **P 19 53 38.3 -0.1**
comp=Z,23nm,1.0s,mb4.9
RKGY Rocky Gully 34.88 189 *eP* **P 19 53 54.2 +1.3**
comp=Z,28nm,0.8s,mb4.9
CD2 Chengdu 36.00 331 ⇑*i*P **P 19 54 03.7 +1.1**
CD2 pP pP 19 54 38.4 +2.7
CD2 sP sP 19 54 56.7 +3.4
CD2 PP PP 19 55 31.5 +3.8
CD2 S **S 19 59 29.9 -0.1**
CD2 sS sS 20 00 30.4 +2.4
CD2 SS SS 20 02 03.5 -10
CD2 ScS ScS 20 04 01.4 -2.4
CD2 pmax pmax
comp=Z,150nm,0.5s,mb5.9
CD2 pmax pmax
comp=Z,350nm,5.2s
CD2 LR LR
comp=N,350nm,19.0s
CD2 LR LR
comp=E,400nm,14.2s
CD2 LR LR
comp=Z,320nm,14.2s
STKA Stephens Creek 36.03 153 *eP* **P 19 54 03.5 +0.7**
comp=Z,41nm,0.6s,mb5.2
STKA *e* 19 55 27.2
STKA Stephens Creek 36.03 153 P **P 19 54 03.6 +0.8**
comp=Z,70nm,0.6s,mb5.4,baz=325,slow=9.0,SNR=183
STKA ScP ScP 19 59 59.0 +1.1
comp=Z,12nm,0.7s,baz=315,slow=5.3,SNR=11
STKA Stephens Creek 36.03 153 *eP* **P 19 54 03.6 +0.8**
comp=Z,23nm,0.9s,mb4.8
STKA *e*PP PP 19 55 26.4 -1.6
STKA *e*ScP ScP 19 59 58.4 +0.5
XAN Xi'an 36.54 340 P **P 19 54 07.9 +0.8**
XAN pP pP 19 54 40.3 0.0
XAN sP sP 19 54 57.7 -0.1
XAN PP PP 19 55 34.5 +0.9
XAN S **S 19 59 40.4 +2.3**
XAN sS sS 20 00 37.9 +1.7
XAN pmax pmax
comp=Z,15nm,0.7s,mb4.7
XAN pmax pmax
comp=Z,46nm,5.8s
EIDS Eidsvold 36.73 135 *eP* **P 19 54 08.7 -0.2**
comp=Z,42nm,1.2s,mb4.9
EIDS *e*PP PP 19 55 38.4 +2.6
KSRS Korea Array 37.57 6 P **P 19 54 15.4 -0.4**
comp=Z,21nm,0.6s,mb5.0,baz=181,slow=9.2,SNR=43
KSRS PcP PcP 19 56 30.9 +0.5
comp=Z,5.5nm,0.5s,baz=186,slow=2.6,SNR=18
KSRS ScP ScP 20 00 03.8 +0.2
comp=Z,4.0nm,0.6s,baz=184,slow=3.4,SNR=15
KSRS LR LR 20 09 18.9
comp=Z,224nm,20.1s,baz=347,slow=35
DL2 Dalian 38.82 358 P **P 19 54 16.3 -10**
DL2 sP sP 19 55 13.1 -4.1
DL2 *e*S **S 19 59 54.6 -18**
DL2 pmax pmax
comp=Z,50nm,0.5s,mb5.4
DL2 pmax pmax
comp=Z,250nm,4.3s
MJAR Matsushiro Arr 38.94 19 P **P 19 54 26.0 -1.2**
comp=Z,32nm,0.6s,mb5.1,baz=195,slow=8.4,SNR=100
MJAR ScP ScP 20 00 09.2 +0.4
comp=Z,4.4nm,0.7s,baz=186,slow=5.1,SNR=9.3
MJAR LR LR 20 09 19.8
comp=Z,141nm,19.8s,baz=230,slow=34
MJAR Matsushiro Arr 38.94 19 P **P 19 54 26.0 -1.3**
MJAR 20 00 09.2
MAJO Matsushiro 38.94 19 *eP* **P 19 54 25.7 -1.6**
MAJO pmax pmax
comp=Z,57nm,0.6s,mb5.4
MAJO Matsushiro 38.94 19 *eP* **P 19 54 25.7 -1.6**
comp=Z,57nm,0.6s,mb5.4
MAT Matsushiro 38.94 19 P **P 19 54 25.9 -1.4**
LZH Lanzhou 40.30 335 ⇑P **P 19 54 40.3 +1.9**
LZH pP pP 19 55 13.2 +1.1
LZH sP sP 19 55 35.0 +5.4
LZH PP PP 19 56 20.0 +5.5
LZH *e*S **S 20 00 36.2 +1.7**
LZH sS sS 20 01 37.4 +4.1
LZH SS SS 20 03 35.6 -4.0
LZH pmax pmax
comp=Z,170nm,1.0s,mb5.6
LZH pmax pmax
comp=Z,490nm,4.0s
ARMA Armidale 40.41 141 *eP* **P 19 54 41.6 +2.1**
ARMA Armidale 40.41 141 *eP* **P 19 54 41.4 +2.0**
comp=Z,86nm,0.6s,mb5.5
BJT Baijiatuau 40.44 351 *eP* **P 19 54 38.9 -0.6**
BJT pmax pmax
comp=Z,49nm,0.4s
BJT Baijiatuau 40.44 351 *eP* **P 19 54 38.9 -0.6**
comp=Z,49nm,0.4s,mb5.5
BJI Beijing 40.45 351 P **P 19 54 40.8 +1.1**
BJI S **S 20 00 39.4 +2.7**
BJI pmax pmax
comp=Z,54nm,0.5s,mb5.4
BJI pmax pmax
comp=Z,150nm,3.9s
BJI LR LR
comp=N,190nm,17.8s
BJI LR LR
comp=E,340nm,11.7s
BJI LR LR
comp=Z,280nm,22.4s
SNY Shenyang 41.70 0 ⇑P **P 19 54 48.4 -1.5**
SNY S **S 20 01 00.0 +4.8**
SNY SS SS 20 04 02.2 -5.0
SNY pmax pmax
comp=Z,28nm,0.6s,mb5.1
SNY pmax pmax
comp=Z,230nm,8.6s
SNY LR LR
comp=E,480nm,19.0s
SNY LR LR
comp=Z,360nm,24.7s
HHC Hu-ho-hao-te 42.12 347 *eP* **P 19 54 52.5 -0.7**
HHC pP pP 19 55 27.9 +0.7
HHC sP sP 19 55 46.1 +1.6
HHC PP PP 19 56 36.0 +2.0
HHC PcP PcP 19 56 44.5 -0.4
HHC ScP ScP 20 00 18.7 -2.5
HHC PcS PcS 20 00 35.6 -1.2
HHC S **S 20 01 01.0 -0.2**
HHC sS sS 20 02 03.1 +2.7
HHC SS SS 20 04 07.0 -8.3
HHC ScS ScS 20 04 34.8 -4.4
HHC pmax pmax
comp=Z,13nm,1.1s,mb4.5
HHC pmax pmax
comp=Z,280nm,5.3s
HHC LR LR
comp=N,230nm,17.8s
HHC LR LR
comp=E,530nm,17.8s
HHC LR LR
comp=Z,210nm,16.6s
BTO Baotou 42.27 345 *eP* **P 19 54 52.9 -1.5**
CAN Canberra 42.44 148 *eP* **P 19 54 57.9 +1.9**
CAN pmax pmax
comp=Z,91nm,0.6s,mb5.6
CAN Canberra 42.44 148 *eP* **P 19 54 57.9 +1.9**
comp=Z,91nm,0.6s,mb5.6
TOO Toolangi 42.54 154 *eP* **P 19 54 58.7 +2.0**
CNB Canberra Magne 42.63 148 *eP* **P 19 54 59.7 +2.2**
LSA Lhasa 42.65 317 *eP* **P 19 54 59.9 +2.1**
LSA pmax pmax
comp=Z,141nm,0.6s,mb5.8
LSA Lhasa 42.65 317 *eP* **P 19 54 59.9 +2.1**
comp=Z,141nm,0.6s,mb5.8
PALK Pallekele 43.17 281 LR LR 20 12 31.9
comp=Z,210nm,20.6s,baz=99,slow=35
VLA Vladivostok 43.67 9 *eP* **P 19 55 03.5 -2.2**
VLA pmax pmax
comp=Z,69nm,1.9s,mb5.0
CN2 Changchun 43.72 2 *eP* **P 19 55 04.2 -1.8**
CN2 *eS* **S 20 01 25.2 +0.7**
CN2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,150nm,7.0s
CN2 LR LR
comp=E,210nm,7.0s
CN2 LR LR
comp=Z,200nm,6.0s
GTA Gaotai 44.81 334 ⇓P **P 19 55 16.3 +1.4**
GTA pP pP 19 55 51.5 +2.3
GTA sP sP 19 56 10.0 +3.6
GTA PcP PcP 19 56 55.5 +1.4
GTA PP PP 19 57 04.4 +1.6
GTA ScP ScP 20 00 33.0 +0.8
GTA S **S 20 01 40.7 +0.1**
GTA sS sS 20 02 45.1 +4.9
GTA SS SS 20 05 00.5 -4.9
GTA pmax pmax
comp=Z,91nm,0.6s,mb5.6
GTA pmax pmax
comp=Z,140nm,5.7s
GTA LR LR
comp=N,280nm,17.1s
GTA LR LR
comp=E,270nm,15.0s
GTA LR LR
comp=Z,270nm,17.1s
MDJ Mudanjiang 44.84 6 P **P 19 55 14.3 -0.6**
MDJ pP pP 19 55 47.1 -2.1
MDJ sP sP 19 56 04.2 -2.3
MDJ ScP ScP 20 00 31.6 -0.6
MDJ PcS PcS 20 00 46.6 -1.1
MDJ S **S 20 01 43.8 +3.1**
MDJ pmax pmax
comp=Z,53nm,0.6s,mb5.3
MDJ pmax pmax
comp=Z,120nm,4.8s
ERM Erimo 45.54 21 P **P 19 55 21.9 +1.4**
comp=Z,215nm,0.4s,mb6.1,SNR=20
ERM Erimo 45.54 21 *eP* **P 19 55 20.8 +0.3**
ERM pmax pmax
comp=Z,22nm,0.6s,mb5.0
ERM Erimo 45.54 21 *eP* **P 19 55 20.8 +0.3**
comp=Z,22nm,0.6s,mb5.0
NOUC Port Laguerre 47.20 121 *eP* **P 19 55 34.8 +1.0**
ASAJ Asahikawa 47.21 19 LR LR 20 15 28.9
comp=Z,146nm,19.4s,baz=198,slow=36
DZM Mont Dzumac 47.31 120 *eP* **P 19 55 36.2 +1.5**
HYB Hyderabad 47.40 294 *eP* **P 19 55 34.5 -0.9**
HYB *e*PP pP 19 56 10.0 -0.1
HYB Hyderabad 47.40 294 *i* P **P 19 55 34.0 -1.4**
comp=Z,85nm,0.8s,mb5.4
HYB *e*pP pP 19 56 08.0 -2.1
LASL Noumea 47.45 121 *eP* **P 19 55 37.5 +1.7**
HIA Hailar 49.24 357 *eP* **P 19 55 48.3 -0.7**
HIA pmax pmax
comp=Z,43nm,0.5s
HIA Hailar 49.24 357 *eP* **P 19 55 48.3 -0.7**
comp=Z,43nm,0.5s,mb5.3
HABR Khabarovsk 49.40 10 *ce*P **P 19 55 49.4 -0.8**
HABR *e* 19 57 07.8
HABR *e* 19 57 42.8
HABR S **S 20 02 45.3 +0.1**
HABR *e*SS sS 20 03 40.1 -5.7
HABR *e* 20 05 24.5
HABR *e*SS SS 20 06 18.9 -0.3
HABR pmax pmax
comp=N,50nm,2.1s
HABR pmax pmax
comp=Z,119nm,1.5s,mb5.3
HABR pmax pmax
comp=E,59nm,1.6s
HABR MLR MLR
comp=Z,42nm,17.0s
KLR Kul'dur 49.64 7 *eP* **P 19 55 46.0 -6.0**
KLR pmax pmax
comp=Z,70nm,1.8s,mb5.0
ULN Ulaanbaatar 49.81 346 P **P 19 55 53.4 +0.1**
SNR=26
ULN P 19 55 53.4
SNR=26
ULN Ulaanbaatar 49.81 346 P **P 19 55 52.9 -0.4**
YSS Yuzh-Sakhalins 49.81 17 ⇓*i*P **P 19 55 53.0 -0.3**
YSS pmax pmax
comp=Z,60nm,1.0s,mb5.2
YSS Yuzh-Sakhalins 49.81 17 *eP* **P 19 55 52.8 -0.6**
comp=Z,47nm,0.7s,mb5.2
SONM Songino Array 49.95 345 P **P 19 55 53.7 -0.6**
comp=Z,53nm,0.5s,mb5.4,baz=160,slow=7.9,SNR=274
SONM pP pP 19 56 25.6 -3.8
comp=Z,12nm,0.6s,baz=168,slow=8.7,SNR=3.0
SONM PcP PcP 19 57 11.9 -0.3
comp=Z,14nm,0.5s,baz=172,slow=3.2,SNR=8.3
SONM ScP ScP 20 00 52.8 -0.8
comp=Z,1.8nm,0.7s,baz=156,slow=4.8,SNR=4.1
SONM LR LR 20 15 51.7
comp=Z,162nm,21.3s,baz=12,slow=34
SONM Songino Array 49.95 345 P **P 19 55 53.7 -0.7**
SONM *PP pP 19 56 25.6 -3.7
SONM 19 57 11.9
BHPL Bhopal 50.27 301 *e*PKP **P 19 55 54.2 -3.1**
BHPL AMb AMB 19 55 58.8
comp=Z,72nm,0.8s,mb5.4
PTH Pithoragarh 50.57 310 *e*PKP **P 19 55 57.2 -2.2**
PTH *ex* x 19 57 08.6
KAD Karad 51.39 292 *e*PKP **P 19 56 01.9 -3.8**
POO Poona 52.01 294 *e*PKP **P 19 56 07.0 -3.3**
NDI New Delhi 52.55 307 *e*PKP **P 19 56 12.0 -2.1**
NDI *ex* x 20 07 08.0
DDI Dehra Dun 52.59 309 *e*PKP **P 19 56 11.8 -2.6**
DDI *ex* x 19 57 20.3
ZAK Zakamensk 53.10 344 *eP* **P 19 56 17.1 -0.7**
ZAK *e* 19 57 23.1
AJM Ajmer 53.79 303 *e*PKP **P 19 56 21.1 -2.2**
AJM AMb AMB 19 56 23.7

comp=Z,87nm,0.7s,mb5.6
SDNR Sundarnagar 53.95 310 *e*PKP **P** **19 56 22.5 -1.8**
WMQ Urumqi 54.04 329 P **P** **19 56 25.0 +0.3**
WMQ pP pP 19 57 02.0 +1.8
WMQ sP sP 19 57 20.0 +2.8
WMQ PP PP 19 58 30.0 +2.1
WMQ S **S** **20 03 47.0 -2.0**
WMQ sS sS 20 04 51.0 +0.5
WMQ ScS ScS 20 05 54.0 -4.6
WMQ SS SS 20 07 30.0 -2.8
WMQ pmax pmax
comp=Z,54nm,1.0s,mb5.2
WMQ pmax pmax
comp=Z,98nm,5.0s
WMQ LR LR
comp=N,330nm,16.0s
WMQ LR LR
comp=E,220nm,16.0s
WMQ LR LR
comp=Z,220nm,16.0s
TLY Talaya 54.19 345 P **P** **19 56 27.7 +2.1**
comp=Z,277nm,0.6s,mb6.2,SNR=6.4
TLY Talaya 54.19 345 *e*P **P** **19 56 26.3 +0.7**
TLY pmax pmax
comp=Z,28nm,0.6s,mb5.2
TLY Talaya 54.19 345 *e*P **P** **19 56 26.3 +0.7**
comp=Z,28nm,0.6s,mb5.2
TLY Talaya 54.19 345 P **P** **19 56 26.5 +0.9**
SNR=7.8
TLY P 19 56 26.5
SNR=7.8
BHK Bhakra 54.34 310 *e*PKP **P** **19 56 24.4 -2.8**
IRK Irkutsk 54.54 346 *e*P **P** **19 56 27.7 -0.5**
IRK pmax pmax
comp=Z,41nm,2.5s,mb4.7
MOY Mondy 54.90 343 *e*P **P** **19 56 30.7 -0.1**
MOY pmax pmax
comp=Z,55nm,2.6s,mb4.8
DLH Dalhousie 55.18 311 *e*x **P** **19 56 24.4 -8.8**
THN Thein Dam 55.32 311 *e*PKP **P** **19 56 32.0 -2.2**
THN *e*x x 20 01 15.0
CLNS Chul'man 56.74 1*c i*P **P** **19 56 43.5 -0.3**
CLNS *e**SS S 20 04 44.7 +20
CLNS pmax pmax
comp=Z,60nm,0.7s,mb5.5
CLNS pmax pmax
comp=E,22nm,0.7s
CLNS pmax pmax
comp=N,38nm,0.8s
BOD Bodaibo 58.20 354 *e*P **P** **19 56 53.3 -0.6**
BOD pmax pmax
comp=Z,32nm,1.4s,mb5.0
KSH Kashi 58.48 318⇑ *i*P **P** **19 56 56.5 +0.2**
KSH pP pP 19 57 33.9 +1.6
KSH PcP PcP 19 57 45.3 +0.1
KSH sP sP 19 57 51.7 +2.6
KSH PP PP 19 59 09.4 +1.9
KSH ScP ScP 20 01 28.9 -2.3
KSH PcS PcS 20 01 45.5 -1.4
KSH S **S** **20 04 44.8 -2.8**
KSH sS sS 20 05 50.0 0.0
KSH ScS ScS 20 06 26.2 -4.8
KSH SS SS 20 08 41.1 -1.6
KSH pmax pmax
comp=Z,25nm,0.7s,mb5.2
KSH LR LR
comp=N,74nm,4.9s
KSH LR LR
comp=E,93nm,6.4s
KSH LR LR
comp=Z,85nm,8.0s
MKAR Makanchi Array 58.87 328 P **P** **19 56 58.2 -0.6**
comp=Z,33nm,0.6s,mb5.4,baz=111,slow=9.3,SNR=406
MKAR PcP PcP 19 57 45.5 -1.1
comp=Z,26nm,0.5s,baz=121,slow=3.4,SNR=22
MKAR ScP ScP 20 01 31.4 -1.3
comp=Z,3.0nm,0.6s,baz=117,slow=5.5,SNR=6.2
MKAR Makanchi Array 58.87 328 P **P** **19 56 58.2 -0.6**
MKAR 19 57 45.5
MKAR Makanchi Array 58.87 328 P **P** **19 56 58.2 -0.6**
MKAR PcP PcP 19 57 45.5 -1.1
MKAR ScP ScP 20 01 31.4 -1.3
PEA0B Petropavlovsk- 60.20 23 *e*P **P** **19 57 08.5 +0.6**
PETK Petropavlovsk- 60.20 23 P **P** **19 57 08.6 +0.8**
comp=Z,35nm,0.5s,mb5.4,baz=200,slow=3.4,SNR=53
PETK PcP PcP 19 57 52.3 +0.6
comp=Z,6.1nm,0.6s,baz=191,slow=3.9,SNR=3.6
PETK LR LR 20 21 47.9
comp=Z,69nm,19.5s,baz=92,slow=34
PETK Petropavlovsk- 60.20 23 P **P** **19 57 08.6 +0.8**
PETK 19 57 52.4
KZA Kyzart 60.25 320 P **P** **19 57 09.2 +0.8**
SNR=34
TKM2 Tokmak 2 60.47 321 P **P** **19 57 10.0 +0.1**
SNR=48
PET Petropavlovsk 60.52 24 *e*P **P** **19 57 10.6 +0.6**
PET pmax pmax
comp=Z,44nm,0.4s,mb5.6
PET Petropavlovsk 60.52 24 *e*P **P** **19 57 10.6 +0.6**
comp=Z,44nm,0.4s,mb5.6
RPZ Rata Peaks 60.73 142 LR LR 20 21 55.1
comp=Z,333nm,20.3s,baz=108,slow=34
RPZ Rata Peaks 60.73 142 *e*P **P** **19 57 12.5 +0.9**
comp=Z,127nm,0.9s,mb5.8
KBK Karagaybulak 60.74 321 P **P** **19 57 12.0 +0.3**
SNR=17
UCH Uchtor 60.80 320 P **P** **19 57 12.7 +0.6**
SNR=26
AAK Ala-Archa 61.02 321 P **P** **19 57 13.3 -0.3**
comp=Z,125nm,0.6s,mb5.9,SNR=9.0
AAK Ala-Archa 61.02 321 P **P** **19 57 13.9 +0.3**
SNR=13
AAK Ala-Archa 61.02 321*c e*P **P** **19 57 13.3 -0.3**
AAK Ala-Archa 61.02 321 P **P** **19 57 14.1 +0.5**
SNR=14
AAK P 19 57 14.1
SNR=14
AAK Ala-Archa 61.02 321 P **P** **19 57 13.6 0.0**
comp=Z,101nmcomp=Z,5.0nm,0.7s,mb4.4
CHMS Chumysh 61.04 321 P **P** **19 57 13.1 -0.6**
SNR=7.6
FRU Bishkek 61.04 321 *e*P **P** **19 57 12.0 -1.7**
KBL Kabul 61.27 310 *e*P **P** **19 57 14.4 -1.0**
KBL pmax pmax
comp=Z,165nm,0.6s,mb6.0
KBL Kabul 61.27 310 *e*P **P** **19 57 14.4 -1.0**
comp=Z,165nm,0.6s,mb6.0
AML Almayashu 61.28 320 P **P** **19 57 15.6 +0.3**
SNR=34
USP Ospenovka 61.34 321 P **P** **19 57 15.3 -0.4**
SNR=14
EKS2 Erkin-Say 61.49 320 P **P** **19 57 16.9 +0.2**
SNR=34
KHZ Kahutara 61.63 140 *e*P **P** **19 57 18.4 +0.7**
comp=Z,22nm,0.6s,mb5.2
SNZO South Karori 61.87 138 *e*P **P** **19 57 19.5 +0.2**
comp=Z,309nm,1.5s,mb5.9
YAK Yakutsk 62.12 3*c i*P **P** **19 57 19.8 -0.8**
YAK *e* pP 19 57 58.8 +1.8
YAK *e**SS sS 20 06 18.3 -18
YAK *e* 20 06 52.6
YAK pmax pmax
comp=Z,152nm,0.9s,mb5.8
YAK pmax pmax
comp=E,8.0nm,0.9s
YAK pmax pmax
comp=N,20nm,0.9s
YAK Yakutsk 62.12 3 *e*P **P** **19 57 19.7 -0.9**
comp=N,196nm,0.6s,mb6.1
URZ Urewera 62.20 134 LR LR 20 25 59.0
comp=N,126nm,19.0s,baz=294,slow=37
URZ Urewera 62.20 134 *e*P **P** **19 57 21.6 -0.1**
comp=N,26nm,0.5s,mb5.3
ZAA0 Zalesovo Array 62.53 335 *e*P **P** **19 57 21.4 -2.0**
ZALV Zalesovo Beam 62.53 335 P **P** **19 57 21.5 -2.0**
comp=N,21nm,0.4s,mb5.3,baz=130,slow=6.3,SNR=80
ZALV pP pP 19 57 56.7 -3.2
comp=N,7.0nm,0.5s,baz=102,slow=7.0,SNR=2.0
ZALV PcP PcP 19 58 00.1 -1.0
comp=N,7.6nm,0.5s,baz=85,slow=4.0,SNR=5.3
ZALV S **S** **20 05 37.5 -1.2**
comp=N,1.7nm,0.7s,baz=127,slow=17,SNR=7.3
ZALV Zalesovo Beam 62.53 335 P **P** **19 57 21.5 -2.0**
ZALV pP pP 19 57 56.7 -3.2
ZALV PcP PcP 19 58 00.1 -1.0
ZALV S **S** **20 05 37.5 -1.2**

KURK Kurchatov 63.22 330 P **P** **19 57 27.8 -0.3**
comp=N,930nm,0.6s
KURK Kurchatov 63.22 330 P **P** **19 57 26.7 -1.4**
comp=N,39nm,0.6s,mb5.4,baz=136,slow=6.2,SNR=212
KURK PcP PcP 19 58 02.7 -1.4
comp=N,17nm,0.5s,baz=120,slow=4.0,SNR=9.5
KURK Kurchatov 63.22 330 *e*P **P** **19 57 26.9 -1.2**
KURK pmax pmax
comp=Z,84nm,0.6s,mb5.8
KURK Kurchatov 63.22 330 *e*P **P** **19 57 26.9 -1.2**
comp=Z,84nm,0.6s,mb5.7
KURK Kurchatov 63.22 330 P **P** **19 57 27.0 -1.1**
SNR=24
KURK P 19 57 27.0
SNR=24
NVS Novosibirsk 63.81 335⇑ *i*P **P** **19 57 29.5 -2.4**
NVS *e**PP pP 19 58 04.3 -4.2
NVS *i* 19 59 48.3
NVS *e*S **S** **20 05 48.5 -6.1**
NVS *e*PS 20 06 12.4
NVS *e**SS sS 20 06 31.9 -26
NVS pmax pmax
comp=Z,36nm,0.6s,mb5.4
NVS pmax pmax
comp=N,23nm,0.5s
NVS pmax pmax
comp=E,26nm,0.5s
NVS pmax pmax
comp=N,35nm,2.1s
NVS pmax pmax
comp=E,25nm,2.1s
NVS pmax pmax
comp=Z,42nm,2.1s,mb4.9
NVS smax
comp=N,16nm,1.7s
NVS smax
comp=E,14nm,1.5s
FX1 Attu Island--F 67.03 30 P **P** **19 57 53.4 +0.8**
comp=E,30nm,0.4s,mb5.5,baz=290,slow=1.7,SNR=62
BVAR Borovoye Array 68.73 329 P **P** **19 58 01.9 -1.3**
comp=E,9.9nm,0.5s,mb4.8,baz=124,slow=9.1,SNR=36
BVAR PcP PcP 19 58 28.1 +1.1
comp=E,5.8nm,0.5s,baz=132,slow=4.8,SNR=6.1
BVAR pP pP 19 58 38.7 -1.7
comp=E,2.2nm,0.5s,baz=160,slow=4.7,SNR=1.5
BRVK Borovoye 68.80 329 P **P** **19 58 02.8 -0.9**
comp=E,147nm,0.5s,mb6.0,SNR=6.5
BRVK Borovoye 68.80 329 *e*P **P** **19 58 02.4 -1.3**
BRVK pmax pmax
comp=Z,14nm,0.6s,mb4.9
BRVK Borovoye 68.80 329 *e*P **P** **19 58 02.4 -1.3**
comp=Z,14nm,0.6s,mb4.9
BRVK Borovoye 68.80 329 P **P** **19 58 02.7 -1.0**
SNR=9.9
BRVK P 19 58 02.7
SNR=9.9
TIXI Tiksi 71.69 2*c i*P **P** **19 58 19.1 -1.8**
TIXI pmax pmax
comp=Z,83nm,1.5s,mb5.2
TIXI MLR MLR
comp=Z,111nm,18.0s
TIXI Tiksi 71.69 2 *e*P **P** **19 58 19.1 -1.7**
comp=Z,32nm,0.4s,mb5.4
ABKAR Akbulak array 73.01 322 *e*P **P** **19 58 27.6 -1.6**
comp=Z,8.5nm,0.5s,mb4.7
BILL Bilibino 74.07 15⇑ *e*P **P** **19 58 34.4 -0.6**
BILL pmax pmax
comp=Z,42nm,1.7s,mb4.9
BILL Bilibino 74.07 15 *e*P **P** **19 58 34.2 -0.8**
comp=Z,15nm,0.4s,mb5.1
SVE Sverdlovsk 75.47 330⇓ *e*P **P** **19 58 41.7 -1.5**
SVE pmax pmax
comp=Z,37nm,0.6s,mb5.2
ARU Arti 76.38 329 P **P** **19 58 46.6 -1.8**
comp=Z,232nm,0.6s,mb6.0,SNR=21
ARU Arti 76.38 329*c i*P **P** **19 58 46.3 -2.1**
ARU *e* 19 58 57.0
ARU *e* 20 01 34.7
ARU *e*PPP 20 03 29.4
ARU S S 20 08 19.6 -1.1
ARU pmax pmax
comp=Z,23nm,0.7s,mb4.9
ARU Arti 76.38 329 *e*P **P** **19 58 46.2 -2.2**
comp=Z,22nm,0.6s,mb5.0
QRN Al-Qurain 77.29 299 *e*P **P** **19 58 51.6 -2.6**
QRN AMb AMB 19 58 55.4
comp=Z,111nm,0.7s,mb5.6
RDF Al-Radifah 77.63 300 *e*P **P** **19 58 53.8 -2.2**
RDF AMb AMB 19 58 57.4
comp=Z,96nm,0.6s,mb5.6
MIB Mutribah 77.92 300 *e*P **P** **19 58 55.2 -2.4**
MIB AMb AMB 19 58 58.6
comp=Z,77nm,0.6s,mb5.5
NAY Al-Naaiem 77.94 300 *e*P **P** **19 58 54.8 -3.0**
NAY AMb AMB 19 58 58.9
comp=Z,38nm,0.6s,mb5.2
UNV Unalaska Valle 78.44 35 *e*P **P** **19 59 00.4 +0.5**
comp=Z,46nm,0.7s,mb5.2
AKUT Akutan 78.93 35 *e*P **P** **19 59 02.8 +0.2**
comp=Z,201nm,0.8s,mb5.8
MAW Mawson 79.06 200 *e*P **P** **19 58 54.8 -8.2**
comp=Z,5.5nm,0.8s,mb4.2
MAW Mawson 79.06 200 P **P** **19 59 04.1 +1.0**
comp=Z,5.1nm,0.4s,mb4.5,baz=63,slow=4.5,SNR=18
MAW LR LR 20 28 45.1
comp=Z,94nm,21.0s,baz=256,slow=32
MAK Makhachkala 79.72 314 *e*P **P** **19 59 05.8 -1.3**
MAK *e**PP pP 19 59 40.7 -4.5
MAK *e*PPP 20 04 02.7
MAK *e*S S 20 08 53.1 -4.0
MAK pmax pmax
comp=Z,241nm,1.7s,mb5.5
BHD Baghdad 80.83 304 *e*P **P** **19 59 10.0 -3.3**
GNI Garni 81.35 311*c e*P **P** **19 59 17.0 +1.1**
GNI pmax pmax
comp=Z,5.0nm,0.6s
TNA Tin City 81.37 23 *e*P **P** **19 59 14.9 -0.5**
MSL Mosul 82.19 307 *e*P **P** **19 59 21.0 +0.6**
SDPT Sand Point 82.20 34 *e*P **P** **19 59 20.3 +0.3**
comp=Z,224nm,0.6s,mb6.0
SDPT LR LR
comp=Z,100nm,18.0s
ZEI Tsey 82.31 313 *e*P **P** **19 59 19.2 -1.7**
ZEI pmax pmax
comp=Z,11nm,0.5s,mb4.7
KIV Kislovodsk 83.33 314 *e*P **P** **19 59 26.2 +0.1**
KIV pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
KIV MLR MLR
comp=Z,40nm,19.0s
KIV Kislovodsk 83.33 314 *e*P **P** **19 59 26.4 +0.3**
comp=Z,7.9nm,0.5s,mb4.7
ARTV Artvin 83.59 311 *i*P **P** **19 59 27.4 -0.1**
DAGI Agillar 83.59 311 *i*P **P** **19 59 26.9 -0.6**
DBAD Bademkaya 83.75 311 *i*P **P** **19 59 28.0 -0.4**
BEST Besiri 83.80 308 *i*P **P** **19 59 28.6 0.0**
SVW2 Sparrevohn 85.73 29 *e*P **P** **19 59 38.9 +1.2**
TTA Tatalina 85.78 27 *e*P **P** **19 59 38.4 +0.4**
KEMA Kemaliye 86.07 309 *i*P **P** **19 59 39.4 -0.5**
KMBO Kilima Mbogo 86.12 269 P **P** **19 59 40.5 -0.3**
comp=Z,8.6nm,0.8s,mb4.5,baz=66,slow=7.8,SNR=27
VSR Storozhevoye 86.41 321*c i*P **P** **19 59 39.2 -2.1**
VSR pmax pmax
comp=Z,60nm,0.6s,mb5.5
VSR pmax pmax
comp=N,2.0nm,0.5s
VSR pmax pmax
comp=E,20nm,0.8s
OHAK Old Harbor 86.44 33 *e*P **P** **19 59 41.9 +0.5**
comp=E,34nm,0.6s,mb5.2
AKCD Akcadag 86.46 308 *i*P **P** **19 59 41.5 -0.4**
GZT Gaziantep 86.70 307 *i*P **P** **19 59 42.6 -0.4**
KDAK Kodiak Island 86.87 32 P **P** **19 59 44.6 +1.2**
comp=E,287nm,1.3s,mb5.9,SNR=5.1
KDAK Kodiak Island 86.87 32 *i*P **P** **19 59 44.0 +0.6**
ANN Anapa 87.16 315 *e*P **P** **19 59 42.6 -2.5**
ANN *e**PP pP 20 00 19.9 -3.9
ANN *e*S S 20 09 55.4 -16
ANN pmax pmax
comp=Z,66nm,1.3s,mb5.3
PPLA Purkeypile 87.52 27 *e*P **P** **19 59 46.3 -0.1**
comp=Z,10nm,0.6s,mb4.8
SYO Syowa Base 87.70 201⇑ *e*P **P** **19 59 45.6 -1.5**
SYO Syowa Base 87.70 201⇓ *e*PcP PcP 19 59 48.8 -0.1
YAYL Yayladag 87.82 306 *i*P **P** **19 59 47.6 -0.8**
KTH Kantishna Hill 88.14 27 *e*P **P** **19 59 48.7 -0.6**

comp=Z,5.7nm,0.8s,mb4.5
BPAW Bear Paw Mtn. 88.15 26 *e*P **P** **19 59 49.4 0.0**
comp=Z,12nm,0.6s,mb4.9
OBN Obninsk 88.22 325 P **P** **19 59 48.2 -1.7**
comp=Z,525nm,0.6s,mb6.5,SNR=8.6
OBN Obninsk 88.22 325*c i*P **P** **19 59 47.8 -2.1**
OBN *e**PP pP 20 00 26.3 -2.4
OBN pmax pmax
comp=Z,41nm,0.6s,mb5.4
OBN Obninsk 88.22 325 *e*P **P** **19 59 48.0 -1.9**
comp=Z,46nm,0.6s,mb5.5
MMAI Mount Meron Ar 88.33 303 P **P** **19 59 50.5 -0.5**
comp=Z,13nm,0.5s,mb5.0,baz=82,slow=6.3,SNR=54
COLD Coldfoot 88.67 23 *e*P **P** **19 59 52.4 +0.6**
comp=Z,20nm,0.8s,mb5.1
BR131 Keskin Array S 89.84 310 *e*P **P** **19 59 55.5 -2.3**
comp=Z,1.7nm,0.5s,mb4.2
BRTR Keskin Array B 89.84 310 P **P** **19 59 55.6 -2.2**
comp=Z,2.7nm,0.6s,mb4.3,baz=141,slow=4.3,SNR=15
BRTR PP PP 20 03 29.9 -2.5
comp=Z,1.3nm,0.6s,baz=125,slow=9.0,SNR=5.5
BRTR LR LR 20 46 39.2
comp=Z,39nm,19.1s,baz=227,slow=40
BRTR Keskin Array B 89.84 310 P **P** **19 59 55.6 -2.2**
BRTR 20 03 30.0
QSPA South Pole Qui 89.86 180 P **P** **19 59 58.1 +0.9**
comp=Z,6.1nm,0.6s,mb4.7,baz=61,slow=0.6,SNR=23
QSPA S S 20 10 12.8 -23
comp=Z,1.9nm,0.9s,baz=133,slow=21,SNR=17
QSPA PKKP PKKPbc 20 17 27.9 -4.4
comp=Z,1.1nm,0.6s,baz=238,slow=1.1,SNR=6.7
APA Apatity 90.05 337⇑ *i*P **P** **19 59 51.0 -7.2**
APA pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
APA MLR MLR
comp=Z,100nm,18.0s
DIV Divide 90.48 29 *e*P **P** **20 00 00.3 0.0**
comp=Z,13nm,0.8s,mb4.9
PAX Paxson 90.59 27 *e*P **P** **20 00 00.8 0.0**
PAX pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
PAX Paxson 90.59 27 *e*P **P** **20 00 00.8 0.0**
comp=Z,8.0nm,0.7s,mb4.9
JOF Joensuu 91.00 333 *e*p **P** **20 00 00.1 -2.6**
comp=Z,26nm,0.4s,mb5.6
JOF Joensuu 91.00 333 *e*p **P** **20 00 00.1 -2.6**
comp=Z,26nm,0.4s,mb5.6
MENT Mentasta 91.39 27 *e*P **P** **20 00 04.9 +0.4**
KEV Kevo 92.28 340 *e*p **P** **20 00 05.2 -3.3**
comp=Z,7.0nm,0.5s,mb5.0
KEV Kevo 92.28 340 *e*p **P** **20 00 05.2 -3.3**
comp=Z,7.0nm,0.5s,mb5.0
EGAK Eagle 92.40 25 *e*P **P** **20 00 09.0 -0.2**
comp=Z,3.9nm,0.7s,mb4.5
AKASG Malin Array Be 92.69 321 P **P** **20 00 08.0 -2.7**
comp=Z,6.5nm,0.5s,mb5.0,baz=74,slow=4.4,SNR=27
AKASG LR LR 20 45 50.0
comp=Z,76nm,20.6s,baz=50,slow=38
AKASG Malin Array Be 92.69 321 *i*P **P** **20 00 08.3 -2.5**
AKASG pmax pmax
comp=Z,7.0nm,0.5s
AKBB Malin Array Si 92.69 321 *e*P **P** **20 00 08.1 -2.7**
ARCES ARCESS Array B 92.82 340 P **P** **20 00 09.1 -1.9**
comp=Z,12nm,0.7s,mb5.2,baz=86,slow=6.3,SNR=51
ARCES PKKP PKKPbc 20 17 21.8 -2.7
comp=Z,1.8nm,0.7s,baz=316,slow=3.3,SNR=3.6
DAWY Dawson 93.24 26 *e*P **P** **20 00 13.2 +0.2**
KAF Kangasniemi 93.38 332 *e*P **P** **20 00 10.6 -3.1**
KAF pmax pmax
comp=Z,4.0nm,0.4s,mb4.9
KAF Kangasniemi 93.38 332 *e*p **P** **20 00 10.6 -3.1**
comp=Z,3.6nm,0.4s,mb4.8
KAF Kangasniemi 93.38 332 *e*p **P** **20 00 10.6 -3.1**
comp=Z,3.6nm,0.4s,mb4.8
SPB4 Spitsbergen Ar 93.53 349 *e*P **P** **20 00 12.6 -1.6**
VSU Vasula 93.54 328*de*P **P** **20 00 12.4 -2.1**
VSU pmax pmax
comp=Z,16nm,0.6s,mb5.3
FINES FINESS Array B 93.56 331 P **P** **20 00 12.0 -2.6**
comp=Z,5.4nm,0.5s,mb4.9,baz=58,slow=5.1,SNR=54
FINES PKiKP PKiKP 20 05 00.1 +0.7
comp=Z,2.8nm,0.8s,baz=107,slow=6.4,SNR=4.0
IDID Didziasalis 93.84 325 *e*P **P** **20 00 14.8 -1.2**
IDID AMB AMB 20 00 15.7
comp=Z,12nm,0.8s,mb5.1
IZAR Zarasai 94.08 326 *e*P **P** **20 00 16.0 -1.0**
IZAR AMB AMB 20 00 16.7
comp=Z,13nm,0.6s,mb5.2
KBS Kingsbay 94.12 350 *e*P **P** **20 00 15.2 -1.6**
comp=Z,525nm,1.1s
IIGN Ignalina 94.13 325 *e*P **P** **20 00 16.1 -1.2**
IIGN AMB AMB 20 00 17.0
comp=Z,10nm,0.6s,mb5.1
ISAL Salakas 94.16 326 *e*P **P** **20 00 16.0 -1.5**
ISAL AMB AMB 20 00 17.0
comp=Z,7.1nm,0.7s,mb4.9
INK Inuvik 94.90 21 *e*P **P** **20 00 19.7 -0.9**
INK pmax pmax
comp=Z,9.0nm,0.6s
INK Inuvik 94.90 21 *e*P **P** **20 00 19.7 -0.9**
comp=Z,8.7nm,0.6s,mb5.2
MLR Muntele Rosu 95.26 316 ⇑P **P** **20 00 21.4 -1.3**
MLR Muntele Rosu 95.26 316⇑ *i*P **P** **20 00 21.4 -1.3**
BURAR Bucovina Array 95.56 318 ⇑P **P** **20 00 22.8 -1.2**
BURAR Bucovina Array 95.56 318⇑ *i*P **P** **20 00 22.8 -1.2**
BUR08 Bucovina Ar. S 95.56 318 *e*P **P** **20 00 22.6 -1.5**
SKAG Skagway 95.80 30 *e*P **P** **20 00 25.9 +1.1**
comp=Z,18nm,0.8s,mb5.4
KWP Kalwaria Pacla 96.96 320 *e*P **P** **20 00 28.6 -1.7**
KWP Kalwaria Pacla 96.96 320 ⇓P **P** **20 00 29.2 -1.1**
KWP Kalwaria Pacla 96.96 320 ⇓ *i*P **P** **20 00 29.1 -1.2**
BOSA Boshof 97.09 241 P **P** **20 00 32.3 +0.9**
comp=Z,2.3nm,0.7s,mb4.6,baz=144,slow=1.1,SNR=7.7
KOLS Kolonicke sedl 97.34 319 *e*P **P** **20 00 31.1 -1.0**
KOLS pmax pmax
comp=Z,5.0nm,1.3s,mb4.7
KOLS Kolonicke sedl 97.34 319 *e*P **P** **20 00 31.1 -1.0**
comp=Z,5.2nm,1.3s,mb4.7
KOLS Kolonicke sedl 97.34 319 *e*P **P** **20 00 31.1 -1.0**
DRGR 97.35 317 ⇓P **P** **20 00 30.4 -1.8**
DRGR 97.35 317 ⇓ *i*P **P** **20 00 30.4 -1.8**
STHS Stebnicka Huta 97.94 320 *e*P **P** **20 00 34.1 -0.6**
STHS pmax pmax
comp=Z,4.0nm,0.6s,mb5.0
STHS Stebnicka Huta 97.94 320 *e*P **P** **20 00 34.1 -0.6**
comp=Z,3.6nm,0.6s,mb5.0
KECS Kecovo 98.58 319 *e*P **P** **20 00 36.2 -1.4**
KECS pmax pmax
comp=Z,1.0nm,0.7s,mb4.3
KECS Kecovo 98.58 319 *e*P **P** **20 00 36.2 -1.4**
comp=Z,1.4nm,0.7s,mb4.5
KECS Kecovo 98.58 319 PDIF **P** **20 00 36.2 -1.4**
VYHS Vyhne 99.66 319 *e*P Pdif 20 00 42.2 -0.1
VYHS Vyhne 99.66 319 PDIF Pdif 20 00 42.2 -0.1
OKC Ostrava-Krasne 99.84 321 AMS AMS 20 49 00.0
comp=Z,200nm,26.1s
PKSM Moragy 100.22 317 ⇓P Pdif 20 00 43.4 -1.4
PKSM Moragy 100.22 317 ⇓ *i*P Pdif 20 00 43.4 -1.4
NB2 NORSAR Subarra100.64 333 P Pdif 20 00 43.7 -2.9
comp=Z,2.0nm,0.5s,baz=72,slow=4.4
NB2 NORSAR Subarra100.64 333 P Pdif 20 00 43.7 -2.9
NB2 NORSAR Subarra100.64 333 P Pdif 20 00 43.7 -2.9
NOA NORSAR Array B100.64 333 P Pdif 20 00 43.8 -2.9
comp=Z,2.0nm,0.5s,baz=73,slow=4.5,SNR=16
NOA PKKP PKKPbc 20 17 06.5 +3.6
comp=Z,0.6nm,0.7s,baz=346,slow=7.9,SNR=3.6
DPC Dobruska-Polom 100.88 321 *e*PP PP 20 05 04.4 +6.9
DPC AMS AMS 20 36 20.0
UPC Upice 101.03 322 *e*PP PP 20 04 53.3 -5.3
TREC Trest 101.65 320 AMS AMS 20 43 40.0
comp=Z,100nm,21.2s
PRU Pruhonice 102.08 321 AMS AMS 20 37 30.0
RES Resolute Bay 102.11 10 P Pdif 20 00 52.6 -0.6
CLL Collm 102.67 323 *e*P Pdif 20 00 55.0 -0.7
CLL *e* 20 05 18.0
CLL Collm 102.67 323 *e*Pdif Pdif 20 00 55.0 -0.7
CLL *e*(PP) 20 05 18.0
CLL *e*sPP 20 06 01.0
CLL *e*SKKSac SKKSac 20 11 53.0 -8.1
CLL *e*sPS 20 15 06.0
GERES GERESS Array B 102.90 320 P Pdif 20 00 55.7 -1.0
comp=Z,0.8nm,0.6s,baz=47,slow=5.9,SNR=8.4
GERES PP PP 20 05 06.1 -6.5
comp=Z,0.6nm,0.6s,baz=76,slow=8.4,SNR=5.1
KHC Kasperske Hory 102.90 321 *e*PP PP 20 05 16.0 +3.3

KHC AMS AMS 20 38 20.0
NKC Novy Kostel 103.31 322 AMS AMS 20 40 10.0
YKA Yellowknife Ar 104.32 24 Pdiff Pdif 20 01 04.2 +1.2
comp=Z,0.6nm,0.5s,baz=300,slow=4.8,SNR=4.4
YKA PKiKP PKiKP 20 05 18.4 -0.1
comp=Z,1.4nm,0.5s,baz=306,slow=1.7,SNR=8.8
YKA PKKPbc PKKPbc 20 16 48.6 -3.5
comp=Z,1.2nm,0.6s,baz=121,slow=2.7,SNR=7.9
H04A Detroit Lake 107.22 43 ⇑P PKiKP 20 05 25.4 +0.9
baz=107
HUMO Hull Mountain 107.29 45 ePKiKP PKiKP 20 05 25.8 +1.1
YBH Yreka Blue Hor 107.72 46 PKiKP PKiKP 20 05 26.3 +0.8
comp=Z,1.4nm,0.6s,baz=286,slow=3.3,SNR=5.9
K05A Summer Lake 108.71 44 ⇑P PKiKP 20 05 28.6 +1.3
baz=109
I07A Izee 109.23 43 ⇓P PKiKP 20 05 29.2 +1.0
baz=109
H08A Prairie City 109.65 42 ⇓P PKiKP 20 05 30.3 +1.2
baz=110
F10A Beach Ranch, E 110.08 40 ⇑P PKiKP 20 05 31.0 +1.3
baz=110
J08A Circle Bar Ran 110.18 43 ⇓P PKiKP 20 05 31.4 +1.3
baz=110
D11A Klaveano Farm, 110.23 39 ⇓P PKiKP 20 05 30.6 +0.6
baz=110
J09A Fry Pan Ranch, 110.68 43 ⇓P PKiKP 20 05 32.5 +1.5
baz=111,SNR=6.1
F11A Grangeville 110.80 40 ⇓P PKiKP 20 05 32.6 +1.5
baz=111
B13A Whitefish 110.84 37 ⇓P PKiKP 20 05 31.1 -0.1
baz=111
D12A Red Ives Fores 110.85 39 ⇓P PKiKP 20 05 31.3 +0.1
baz=111
H10A Noah's Angus R 110.91 42 ⇑P PKiKP 20 05 31.6 +0.2
baz=111
C13A Hot Springs 111.07 38 ⇑P PKiKP 20 05 32.0 +0.4
baz=111
H11A Donnelly 111.35 41 ⇑P PKiKP 20 05 32.6 +0.4
baz=111
D13A Huson 111.39 38 ⇑P PKiKP 20 05 32.6 +0.4
baz=111
F12A Elk City 111.43 40 ⇓P PKiKP 20 05 32.9 +0.5
baz=111
K10A MacKenzie Ranc 111.49 43 ⇑P PKiKP 20 05 33.7 +1.2
baz=111,SNR=6.9
A15A Johnson Ranch, 111.61 36 ⇓P PKiKP 20 05 33.1 +0.5
baz=112
G12A Big Creek, Yel 111.63 41 ⇑P PKiKP 20 05 33.6 +0.9
baz=112
MSO Missoula 111.82 38 ePKiKP PKiKP 20 05 33.5 +0.5
E13A Victor 111.83 39 ⇑P PKiKP 20 05 33.5 +0.5
baz=112
NVAR Mina Array Bea 111.93 48 PKiKP PKiKP 20 05 35.4 +1.9
comp=Z,3.3nm,0.6s,baz=270,slow=1.9,SNR=29
NVAR PKKPbc PKKPbc 20 16 27.1 -0.2
comp=Z,0.6nm,0.7s,baz=151,slow=2.2,SNR=4.6
MFID Camas Ranch 111.96 42 ⇓P PKiKP 20 05 34.5 +1.1
baz=112
D14A Greenough 111.98 38 ⇓P PKiKP 20 05 33.8 +0.4
baz=112
F13A Darby 112.01 40 ⇓P PKiKP 20 05 33.8 +0.4
baz=112
L10A Juniper Basin 112.01 44 ⇑P PKiKP 20 05 35.0 +1.4
baz=112,SNR=14
B15A Bradely Ranch, 112.02 37 ⇓P PKiKP 20 05 33.4 +0.1
baz=112
K11A Parker Ranch, 112.06 43 ⇓P PKiKP 20 05 34.5 +0.9
baz=112
M10A I.L. Ranch, Tu 112.17 45 ⇓P PKiKP 20 05 35.4 +1.5
baz=112
H12A Diamond D Ranc 112.17 41 ⇑P PKiKP 20 05 34.8 +1.0
baz=112
C15A Salmond Ranch, 112.23 37 ⇑P PKiKP 20 05 34.2 +0.4
baz=112
E14A Clinton 112.28 39 ⇓P PKiKP 20 05 34.7 +0.8
baz=112
I12A Atlanta 112.28 42 ⇑P PKiKP 20 05 35.1 +1.1
baz=112
G13A Cobalt 112.36 40 ⇓P PKiKP 20 05 35.2 +1.1
baz=112
N10A Dunphy 112.47 45 ⇓P PKiKP 20 05 34.9 +0.4
baz=112
B16A M & M Farms, S 112.48 36 ⇑P PKiKP 20 05 34.8 +0.6
baz=112
L11A Cat Creek Ranc 112.48 44 ⇑P PKiKP 20 05 35.7 +1.3
baz=112,SNR=8.5
SNCC San Nicolas Is 112.49 54 ⇑P PKiKP 20 05 35.7 +1.0
baz=112
J12A Stokes Ranch, 112.52 42 ⇑P PKiKP 20 05 35.9 +1.4
baz=112
H13A Challis 112.56 41 ⇑P PKiKP 20 05 35.7 +1.2
baz=112
D15A Lincoln 112.61 38 ⇑P PKiKP 20 05 35.6 +1.0
baz=112
F14A Wisdom 112.61 39 ⇑P PKiKP 20 05 35.3 +0.8
baz=112
O10A Cortez Mining, 112.63 46 ⇑P PKiKP 20 05 35.8 +1.0
baz=113
M11A Holland Ranch, 112.72 44 ⇑P PKiKP 20 05 36.3 +1.4
baz=113
C16A Fuhringer Ranc 112.73 37 ⇑P PKiKP 20 05 35.2 +0.4
baz=113
A17A Triple J Farms 112.82 35 ⇑P PKiKP 20 05 36.1 +1.2
baz=113
HLID Hailey 112.85 42 ⇑P PKiKP 20 05 36.8 +1.7
baz=113
HLID Hailey 112.85 42 ePKiKP PKiKP 20 05 36.8 +1.7
K12A Draper Farm, C 112.89 43 ⇑P PKiKP 20 05 36.5 +1.3
baz=113
I13A Wildhorse Cree 112.91 41 ⇓P PKiKP 20 05 36.5 +1.3
baz=113
L12A House Creek Ra 112.99 43 ⇑P PKiKP 20 05 37.1 +1.7
baz=113,SNR=13
B17A L&G Farms, Che 113.07 36 ⇓P PKiKP 20 05 36.3 +0.9
baz=113
J13A Cove Ranch, Pi 113.08 42 ⇑P PKiKP 20 05 37.2 +1.7
baz=113
H14A Leadore 113.11 40 ⇓P PKiKP 20 05 36.4 +0.8
baz=113
F15A Butte 113.15 39 ⇑P PKiKP 20 05 36.6 +1.0
baz=113
LRM Limekiln Ridge 113.19 39 ePKiKP PKiKP 20 05 36.4 +0.7
Q10A Clear Creek Ra 113.21 47 ⇓P PKiKP 20 05 37.4 +1.5
baz=113
EDW2 Edwards Air Fo 113.25 52 ⇓P PKiKP 20 05 37.4 +1.2
baz=113
MPMC Manual Prospec 113.28 50 ⇓P PKiKP 20 05 37.6 +1.4
baz=113
O11A Cowboy Ranch, 113.29 46 ⇓P PKiKP 20 05 37.3 +1.2
baz=113
DLMT Dillon 113.29 40 ePKiKP PKiKP 20 05 37.0 +1.1
A18A Metzger Ranch, 113.32 35 ⇑P PKiKP 20 05 36.3 +0.5
baz=113
M12A Wells 113.34 44 ⇑P PKiKP 20 05 37.4 +1.3
baz=113,SNR=7.1
I14A Mackay 113.34 41 ⇑P PKiKP 20 05 37.2 +1.2
baz=113
E16A East Helena 113.35 38 ⇓P PKiKP 20 05 36.9 +0.9
baz=113
MCMT McKenzie Canyo 113.36 40 ePKiKP PKiKP 20 05 37.1 +1.1
ELK Elko 113.36 45 PKiKP PKiKP 20 05 37.7 +1.5
comp=Z,5.3nm,0.6s,baz=298,slow=3.0,SNR=39
ELK SKP 20 08 57.8
comp=Z,0.9nm,0.7s,baz=246,slow=8.8,SNR=3.8
S10A Tonopah Range, 113.36 48 ⇑P PKiKP 20 05 37.7 +1.4
baz=113
C17A Wharram Farm, 113.40 37 ⇓P PKiKP 20 05 37.1 +1.0
baz=113
K13A Stover Farm, H 113.44 43 ⇓P PKiKP 20 05 37.7 +1.4
baz=113
G15A Dillon 113.45 40 ⇓P PKiKP 20 05 37.9 +1.7
baz=113
N12A Clover Valley, 113.46 45 ⇑P PKiKP 20 05 37.8 +1.4
baz=113,SNR=13
N12A Clover Valley, 113.46 45 ePKiKP PKiKP 20 05 37.4 +1.0
B18A Beardsley Farm 113.62 36 ⇓P PKiKP 20 05 36.5 +0.1
baz=114
D17A Six Diamond Ra 113.67 37 ⇓P PKiKP 20 05 37.0 +0.4
baz=114
Q11A Duckwater 113.75 47 ⇑P PKiKP 20 05 38.2 +1.2
baz=114
L13A Double Diamond 113.75 43 ⇑P PKiKP 20 05 38.2 +1.3
baz=114
BOZ Bozeman (W) 113.78 39 ⇑P PKiKP 20 05 37.9 +1.1
baz=114
BOZ Bozeman (W) 113.78 39 ePKiKP PKiKP 20 05 37.9 +1.1
EGMT Eagleton 113.81 36 ⇓P PKiKP 20 05 38.0 +1.2
baz=114

G16A Moss Hill, Enn 113.86 39 ⇑P PKiKP 20 05 37.8 +0.9
baz=114
M13A Montello 113.88 44 ⇑P PKiKP 20 05 38.4 +1.3
baz=114,SNR=6.1
M13A Montello 113.88 44 ePKiKP PKiKP 20 05 38.3 +1.1
O12A Currie 113.89 45 ⇑P PKiKP 20 05 38.6 +1.4
baz=114
E17A Martinsdale 113.89 38 ⇓P PKiKP 20 05 38.1 +1.1
baz=114
R11A Troy Canyon, C 113.97 47 ⇓P PKiKP 20 05 38.7 +1.3
baz=114
GSC Goldstone 114.05 51 ⇑P PKiKP 20 05 38.7 +1.0
baz=114
N13A Wendover, West 114.05 45 ⇓P PKiKP 20 05 38.4 +0.9
baz=114
P12A McGill 114.06 46 ⇑P PKiKP 20 05 38.3 +0.7
baz=114
K14A Jones Ranch, D 114.09 42 ⇑P PKiKP 20 05 38.6 +1.0
baz=114
FFC Flin Flon 114.12 27 ePKIKP PKiKP 20 05 37.4 +0.2
D18A Linhart Farms, 114.18 37 ⇓P PKiKP 20 05 38.4 +0.9
baz=114
J15A Blackfoot 114.23 41 ⇑P PKiKP 20 05 39.3 +1.6
baz=114
L14A Malta 114.25 43 ⇓P PKiKP 20 05 38.8 +0.9
baz=114,SNR=5.1
SHOC Shoshone 114.27 50 ⇑P PKiKP 20 05 39.7 +1.6
baz=114
F17A Fitzpatrick Pl 114.27 38 ⇑P PKiKP 20 05 38.6 +0.8
baz=114
M14A Sheep Mountain 114.39 44 ⇓P PKiKP 20 05 39.8 +1.6
baz=114,SNR=23
E18A Harlowton 114.42 37 ⇓P PKiKP 20 05 38.6 +0.6
baz=114
K15A Arbon 114.47 42 ⇓P PKiKP 20 05 39.4 +1.2
baz=114
G17A Pierce Place, 114.48 39 ⇑P PKiKP 20 05 39.9 +1.7
baz=114
FCC Fort Churchill 114.50 20 ePKIKP PKiKP 20 05 36.9 -0.9
T11A Corn Creek, Al 114.62 49 ⇑P PKiKP 20 05 40.0 +1.3
baz=115
HVU Hansel Valley 114.67 43 ePKIKP PKiKP 20 05 39.8 +1.1
P13A Bates Ranch, G 114.71 46 ⇓P PKiKP 20 05 40.1 +1.3
baz=115
N14A Grayback Hills 114.76 44 ⇑P PKiKP 20 05 39.6 +0.7
baz=115,SNR=8.4
S12A Delaware Landin 114.77 48 ⇑P PKiKP 20 05 40.4 +1.4
baz=115
J16A Bone 114.83 41 ⇓P PKiKP 20 05 40.5 +1.5
baz=115
BGU Big Grassy Mou 114.84 44 ePKiKP PKiKP 20 05 40.3 +1.3
L15A Malad City 114.85 43 ⇑P PKiKP 20 05 39.9 +0.9
baz=115
F18A Big Timber 114.85 38 ⇓P PKiKP 20 05 40.0 +1.1
baz=115
Q13A Wheeler Ranch, 114.89 46 ⇓P PKiKP 20 05 40.4 +1.2
baz=115
V11A Goodsprings 114.94 50 ⇑P PKiKP 20 05 40.6 +1.2
baz=115
M15A Larsen Ranch, 115.03 43 ⇓P PKiKP 20 05 40.1 +0.7
baz=115,SNR=5.3
K16A Soda Springs 115.04 42 ⇓P PKiKP 20 05 41.0 +1.6
baz=115
BELC Belle Mtn. Jos 115.09 52 ⇑P PKiKP 20 05 41.3 +1.6
baz=115
MONP Monument Peak 115.09 53 ⇓P PKiKP 20 05 41.3 +1.5
baz=115
GMRC Granite Mounta 115.11 51 ⇓P PKiKP 20 05 41.2 +1.5
baz=115
N15A Stansbury Isla 115.21 44 ⇑P PKiKP 20 05 41.0 +1.2
baz=115,SNR=8.6
R13A O'Grain Ranch, 115.22 47 ⇓P PKiKP 20 05 41.2 +1.4
baz=115
G18A Lazy EL Ranch, 115.22 38 ⇓P PKiKP 20 05 40.1 +0.5
baz=115
DUG Dugway 115.28 45 ⇓P PKiKP 20 05 41.1 +1.2
baz=115,SNR=7.6
DUG Dugway 115.28 45 ePKiKP PKiKP 20 05 41.2 +1.3
REDW Red Top Meadow 115.29 41 ePKiKP PKiKP 20 05 40.3 +0.5
P14A Drum Mountains 115.34 45 ⇓P PKiKP 20 05 41.3 +1.3
baz=115
LOHW Long Hollow 115.34 41 ePKiKP PKiKP 20 05 40.6 +0.7
J17A Brown Place, J 115.38 41 ⇓P PKiKP 20 05 41.4 +1.4
baz=115
U12A Valley of Fire 115.42 49 ⇓P PKiKP 20 05 41.8 +1.5
baz=115
V12A Nelson 115.42 50 ⇑P PKiKP 20 05 42.1 +1.9
baz=115
Q14A Sevier Lake (B 115.42 46 ⇑P PKiKP 20 05 41.4 +1.2
baz=115
L16A Fish Haven 115.49 42 ⇑P PKiKP 20 05 41.2 +1.0
baz=115
O15A The Old Anders 115.49 45 ⇑P PKiKP 20 05 41.6 +1.3
baz=115
S13A Holt Ranch, En 115.52 48 ⇓P PKiKP 20 05 41.9 +1.5
baz=116
BC3 Big Chuckawall 115.62 52 ⇑P PKPdf 20 05 42.2 +1.4
baz=116
M16A Huntsville 115.65 43 ⇑P PKiKP 20 05 41.5 +1.0
baz=116
T13A Saint George 115.68 48 ⇓P PKPdf 20 05 42.0 +1.3
baz=116
IRM Iron Mountain 115.70 52 ⇓P PKPdf 20 05 42.5 +1.6
baz=116
I18A Diamond G Ranc 115.81 40 ⇑P PKPdf 20 05 42.1 +1.3
baz=116
L17A Cokeville 115.83 42 ⇓P PKPdf 20 05 42.1 +1.2
baz=116
CCUT Cedar City 115.89 48 ePKiKP PKiKP 20 05 43.4 +2.2
P15A Leamington 115.91 45 ⇑P PKPdf 20 05 42.7 +1.6
baz=116
S14A Cedar City 115.96 47 ⇓P PKPdf 20 05 42.8 +1.5
baz=116
N16A Rees Ranch, Co 115.96 44 ⇑P PKPdf 20 05 42.5 +1.3
baz=116
V13A Grand Canyon W 116.04 50 ⇑P PKPdf 20 05 42.9 +1.5
baz=116
Q15A Fillmore 116.06 46 ⇑P PKPdf 20 05 42.7 +1.3
baz=116
JLU Jordanelle 116.07 44 ePKiKP PKiKP 20 05 42.6 +1.2
K18A Toltan Ranch, 116.15 41 ⇑P PKPdf 20 05 43.0 +1.5
baz=116
M17A Scullys Gap (B 116.24 43 ⇑P PKPdf 20 05 42.7 +1.0
baz=116
DAU Daniels Canyon 116.28 44 ePKIKP PKPdf 20 05 43.3 +1.5
W13A Hualapai Mount 116.37 50 ⇑P PKPdf 20 05 44.0 +1.8
baz=116
MSU Marysvale 116.40 46 ePKIKP PKPdf 20 05 44.1 +2.0
BW06 Boulder Array 116.41 41 ⇑P PKPdf 20 05 42.8 +0.9
baz=116
PDAR Pinedale Array 116.41 41 PKhKP 20 05 39.0
comp=Z,0.7nm,0.5s,baz=38,slow=17,SNR=7.0
PDAR PKP PKPdf 20 05 42.9 +0.9
comp=Z,3.5nm,0.6s,baz=176,slow=1.2,SNR=18
PDAR PKKPbc PKKPbc 20 16 10.7 -1.6
comp=Z,2.1nm,0.6s,baz=123,slow=5.5,SNR=4.6
PDAR PKKPab PKKPab 20 16 15.7 -0.5
comp=Z,2.1nm,0.6s,baz=119,slow=5.5,SNR=18
R15A Junction 116.44 47 ⇑P PKPdf 20 05 44.3 +2.1
baz=116
U14A Mt Trumbull 116.44 49 ⇑P PKPdf 20 05 44.1 +1.8
baz=116
L18A Fontenelle, Gr 116.47 42 ⇑P PKPdf 20 05 43.7 +1.6
baz=116
X13A Yucca 116.59 51 ⇑P PKPdf 20 05 44.0 +1.4
baz=116
M18A Lyman 116.67 43 ⇓P PKPdf 20 05 43.4 +0.8
baz=117
O17A Robinson Place 116.73 44 ⇑P PKPdf 20 05 44.1 +1.4
baz=117,SNR=9.4
DGMT Dagmar 116.74 33 ⇑P PKPdf 20 05 43.8 +1.4
baz=117
V14A Boquillas Ranc 116.78 50 ⇓P PKPdf 20 05 45.0 +2.1
baz=117
T15A Red Dirt Ranch 116.82 48 ⇑P PKPdf 20 05 44.7 +1.7
baz=117
L19A Farson 116.84 42 ⇓P PKPdf 20 05 44.1 +1.2
baz=117
K19A Absolon Red Bu 116.84 41 ⇓P PKPdf 20 05 43.8 +1.0
baz=117
Y13A Salome 116.85 52 ⇑P PKPdf 20 05 44.3 +1.2
baz=117
W14A Seligman 116.95 50 ⇓P PKPdf 20 05 44.9 +1.7
baz=117
Q16A Castle Valley 116.96 45 ⇓P PKPdf 20 05 44.7 +1.5
baz=117
R16A Teasdale 116.99 46 ⇓P PKPdf 20 05 44.7 +1.5
baz=117

P17A Butcher Ranch, 117.03 45 ⇑P PKPdf 20 05 44.6 +1.3
baz=117
U15A North Rim 117.11 48 ⇓P PKPdf 20 05 45.6 +2.1
baz=117
N18A Larsen Ranch, 117.13 43 ⇓P PKPdf 20 05 45.2 +1.8
baz=117
Z13A Yuma Proving G 117.19 52 ⇓P PKPdf 20 05 45.1 +1.3
baz=117
O18A Roosevelt 117.21 44 ⇓P PKPdf 20 05 45.1 +1.5
baz=117
M19A Rock Springs 117.24 42 ⇓P PKPdf 20 05 45.0 +1.3
baz=117
K20A Yellowstone Ra 117.25 41 ⇑P PKPdf 20 05 44.6 +1.0
baz=117
P18A Preston Nutter 117.32 44 ⇓P PKPdf 20 05 45.2 +1.4
baz=117,SNR=18
SRU San Rafael 117.34 45 ⇓P PKPdf 20 05 44.8 +0.9
baz=117,SNR=15
SRU San Rafael 117.34 45 ePKPdf PKPdf 20 05 44.8 +0.9
V15A Kaibab Nationa 117.42 49 ⇑P PKPdf 20 05 46.0 +1.8
baz=117
Y14A Wickenburg 117.45 51 ⇑P PKPdf 20 05 44.8 +0.5
baz=117
T16A Glen Canyon Da 117.48 48 ⇑P PKPdf 20 05 45.6 +1.3
baz=117
R17A Hanksville Air 117.49 46 ⇓P PKPdf 20 05 44.9 +0.7
baz=117
L20A Wamutter 117.56 41 ⇑P PKPdf 20 05 45.5 +1.3
baz=118
Q18A Rafter H Ranch 117.62 45 ⇑P PKPdf 20 05 45.7 +1.3
baz=118,SNR=6.7
S17A Black Ridge (B 117.74 47 ⇓P PKPdf 20 05 46.1 +1.4
baz=118
O19A Miners Draw (B 117.80 43 ⇓P PKPdf 20 05 45.8 +1.0
baz=118
X15A Humboldt 117.86 50 ⇑P PKPdf 20 05 46.7 +1.7
baz=118
M20A Sweetwater, Wa 117.90 42 ⇓P PKPdf 20 05 46.4 +1.6
baz=118
114A Black Gap (USA 117.96 52 ⇑P PKPdf 20 05 46.4 +1.1
baz=118
ESDC Sonseca Array 117.96 316 PKP PKPdf 20 05 45.3 +0.2
comp=Z,0.6nm,0.5s,baz=50,slow=0.9,SNR=3.9
Y15A Casa Rosa Ranc 117.97 51 ⇑P PKPdf 20 05 46.5 +1.3
baz=118
T17A Navajo Res., N 117.99 47 ⇓P PKPdf 20 05 46.9 +1.7
baz=118
R18A Canyonlands Na 118.09 46 ⇑P PKPdf 20 05 46.7 +1.4
baz=118,SNR=11
WUAZ Wupatki 118.14 49 ⇑P PKPdf 20 05 47.1 +1.6
baz=118
N20A Spence Gulch, 118.15 42 ⇑P PKPdf 20 05 47.1 +1.7
baz=118
W16A Flagstaff 118.18 50 ⇓P PKPdf 20 05 47.2 +1.5
baz=118
P19A Cripple Cowboy 118.19 44 ⇓P PKPdf 20 05 47.3 +1.8
baz=118
L21A Rawlins 118.22 41 ⇑P PKPdf 20 05 46.4 +0.9
baz=118
Q19A Hogan Spring (118.29 45 ⇑P PKPdf 20 05 47.2 +1.5
baz=118,SNR=15
S18A Hurst Farm, Bl 118.30 46 ⇑P PKPdf 20 05 47.3 +1.5
baz=118
M21A Separation Pea 118.39 41 ⇑P PKPdf 20 05 47.0 +1.2
baz=118
RWWY Rawlins 118.45 41 ePKPdf PKPdf 20 05 46.6 +0.7
O20A White River Ci 118.48 43 ⇑P PKPdf 20 05 47.3 +1.3
baz=118
V17A Tonalea, Kykot 118.54 49 ⇑P PKPdf 20 05 47.5 +1.2
baz=118
R19A Curley Farm, L 118.58 45 ⇓P PKPdf 20 05 47.3 +1.0
baz=118
T18A Mexican Hat 118.62 47 ⇓P PKPdf 20 05 47.9 +1.5
baz=119
P20A De Beque 118.66 44 ⇑P PKPdf 20 05 47.9 +1.5
baz=119
Y16A Circle Bar Ran 118.66 51 ⇓P PKPdf 20 05 47.5 +0.9
baz=119
N21A Black Mountain 118.68 42 ⇓P PKPdf 20 05 47.8 +1.4
baz=119
L22A Ellis Ranch, M 118.79 40 ⇓P PKPdf 20 05 48.4 +1.8
baz=119
U18A Rough Rock, Ch 118.91 48 ⇑P PKPdf 20 05 48.7 +1.7
baz=119
O21A Pagoda 118.97 43 ⇑P PKPdf 20 05 48.5 +1.5
baz=119
Q20A Ridgley Place, 118.97 44 ⇑P PKPdf 20 05 48.3 +1.2
baz=119,SNR=9.5
PV01 Paradox Valley 119.14 45 ePKPdf PKPdf 20 05 48.7 +1.3
Y17A Roosevelt 119.22 51 ⇑P PKPdf 20 05 48.8 +1.1
baz=119
RSSD Black Hills 119.23 37 ePKIKP PKPdf 20 05 47.5 +0.1
R20A Redvale 119.25 45 ⇑P PKPdf 20 05 48.9 +1.3
baz=119
216A Three Points, 119.34 53 ⇑P PKPdf 20 05 49.2 +1.3
baz=119
N22A Wattenberg Ran 119.38 42 ⇓P PKPdf 20 05 49.1 +1.4
baz=119
W18A Petrified Fore 119.53 49 ⇓P PKPdf 20 05 49.7 +1.5
baz=120
Q21A Lamborn Mesa, 119.53 44 ⇑P PKPdf 20 05 49.5 +1.3
baz=120
MVCO Mesa Verde 119.58 46 ⇓P PKPdf 20 05 49.8 +1.6
baz=120,SNR=8.8
MVCO Mesa Verde 119.58 46 ePKPdf PKPdf 20 05 49.5 +1.2
X18A Snowflake 119.59 50 ⇑P PKPdf 20 05 49.8 +1.4
baz=120
PVRL Vila Real 119.75 319 ePKPdf PKPdf 20 05 49.0 +0.6
V19A Window Rock 119.81 48 ⇑P PKPdf 20 05 50.3 +1.5
baz=120
ULM Lac du Bonnet 119.88 28 PKP PKPdf 20 05 47.9 -0.6
comp=Z,18nm,0.6s,baz=321,slow=1.4,SNR=25
ULM Lac du Bonnet 119.88 28 ePKPdf PKPdf 20 05 47.8 -0.7
S21A Coal Bank Pass 119.90 45 ⇓P PKPdf 20 05 50.8 +1.9
baz=120,SNR=25
217A Green Valley 119.94 53 ⇑P PKPdf 20 05 50.6 +1.5
baz=120
Q22A Crested Butte, 119.98 44 ⇓P PKPdf 20 05 51.1 +2.1
baz=120
MTE Manteigas 120.06 318 ePKPdf PKPdf 20 05 50.5 +1.4
X19A St. Johns 120.14 49 ⇑P PKPdf 20 05 51.0 +1.6
baz=120
PVIS Viseu 120.14 319 ePKPdf PKPdf 20 05 49.3 +0.1
V20A Brimhall 120.20 48 ⇑P PKPdf 20 05 51.0 +1.5
baz=120
PCBR Castelo Branco 120.29 318 ePKPdf PKPdf 20 05 50.1 +0.6
R22A Saguache, Gunn 120.38 44 ⇑P PKPdf 20 05 51.7 +1.9
baz=120
ISCO Idaho Springs 120.42 42 ePKIKP PKPdf 20 05 50.7 +0.9
PMRV Marv??o 120.43 317 ePKPdf PKPdf 20 05 50.1 +0.3
PBAR Barrancos 120.77 316 ePKPdf PKPdf 20 05 50.9 +0.4
TORD Torodi Ar. Bea 120.78 285 PKP PKPdf 20 05 50.5 -0.7
comp=Z,7.2nm,0.6s,baz=90,slow=1.5,SNR=62
TORD PP PP 20 07 17.8 -3.7
comp=Z,2.9nm,0.7s,baz=67,slow=6.4,SNR=7.5
TORD PKKPab PKKPab 20 15 57.8 +0.5
comp=Z,1.3nm,0.7s,baz=283,slow=3.7,SNR=8.8
V21A Milan 120.81 47 ⇓P PKPdf 20 05 52.0 +1.4
baz=121,SNR=5.2
PESTR Estremoz 120.83 317 ePKPdf PKPdf 20 05 50.7 +0.1
Y20A Horse Springs, 121.04 50 ⇑P PKPdf 20 05 52.5 +1.3
baz=121
Z20A Nine Sixteen R 121.19 51 ⇓P PKPdf 20 05 53.3 +1.8
baz=121
AGMN Agassiz Nation 121.21 30 ePKPdf PKPdf 20 05 50.1 -0.9
X21A Alamocita Cree 121.27 49 ⇑P PKPdf 20 05 53.6 +2.0
baz=121
V22A San Miguel Ran 121.30 47 ⇑P PKPdf 20 05 53.4 +1.8
baz=121
120A U Bar Ranch, L 121.37 51 ⇑P PKPdf 20 05 53.6 +1.8
baz=121
PBEJ Beja 121.42 316 ePKPdf PKPdf 20 05 52.6 +0.8
Y21A Point of Rocks 121.53 49 ⇓P PKPdf 20 05 54.2 +2.1
baz=122
220A Playas Peak, P 121.70 52 ⇑P PKPdf 20 05 54.2 +1.7
baz=122
PCVE Castro Verde 121.73 316 ePKPdf PKPdf 20 05 54.1 +1.7
Z21A St. Cloud Mine 121.82 50 ⇓P PKPdf 20 05 54.2 +1.6
baz=122
X22A Bernardo 121.82 48 ⇑P PKPdf 20 05 54.4 +1.7
baz=122,SNR=5.4
320A Kipp Ranch, An 121.91 52 ⇓P PKPdf 20 05 54.7 +1.8
baz=122
PMAFR Mafra 121.94 317 ePKPdf PKPdf 20 05 53.4 +0.7
121A Cookes Peak, D 122.04 51 ⇑P PKPdf 20 05 54.9 +1.8
baz=122
ANMO Albuquerque 122.05 48 PKP PKPdf 20 05 55.0 +2.0

comp=Z,6.0nm,0.7s,baz=200,slow=3.0,SNR=16
ANMO Albuquerque 122.05 48c *i*PKIKP PKPdf 20 05 54.8 +1.7
ANMO pmax pmax
comp=Z,12nm,1.2s
Y22A Socorro 122.10 49 ⇓P PKPdf 20 05 54.5 +1.3
baz=122
BNM Barren Site 122.26 49 *e*PKPdf PKPdf 20 05 55.2 +1.7
MORF Marmelete 122.31 316 *e*PKPdf PKPdf 20 05 54.2 +0.7
Z22A Elephant Butte 122.38 50 ⇓P PKPdf 20 05 55.6 +1.8
baz=122
X23A Hourglass Bar 122.41 48 ⇑P PKPdf 20 05 55.2 +1.4
baz=122
PFVI Vila Bisbo 122.51 315 *e*PKPdf PKPdf 20 05 54.6 +0.7
122A Conniff Cattle 122.58 50 ⇑P PKPdf 20 05 56.4 +2.3
baz=122
W24A Lazy 6 Ranch, 122.70 47 ⇑P PKPdf 20 05 56.3 +2.0
baz=123,SNR=7.3
222A Williams Famil 122.74 51 ⇑P PKPdf 20 05 56.1 +1.6
baz=123
Y23A Lovelace Mesa, 122.78 49 ⇑P PKPdf 20 05 56.3 +1.8
baz=123
Z23A Rita Site, Whi 122.93 49 ⇑P PKPdf 20 05 56.4 +1.5
baz=123
X24A Lazy VL Ranch, 122.97 48 ⇑P PKPdf 20 05 56.0 +1.2
baz=123
V25A Rancho No Teng 122.99 46 ⇓P PKPdf 20 05 56.7 +1.8
baz=123
U26A Atchley Ranch, 123.35 45 ⇑P PKPdf 20 05 56.8 +1.2
baz=123
W25A X Bar L Ranch, 123.39 47 ⇑P PKPdf 20 05 57.1 +1.4
baz=123
EYMN Ely 123.54 27 *e*PKPdf PKPdf 20 05 54.8 -0.7
V26A Tequesquite Ra 123.61 46 ⇑P PKPdf 20 05 57.4 +1.3
baz=124
ECSD EROS Data Cent 123.80 34 *e*PKPdf PKPdf 20 05 56.0 -0.1
W26A Owens Ranch, T 123.96 46 ⇓P PKPdf 20 05 57.9 +1.2
baz=124
224A Cornudas Mount 123.97 50 ⇓P PKPdf 20 05 58.7 +1.9
baz=124
Z25A Roswell 124.07 49 ⇑P PKPdf 20 05 58.3 +1.3
baz=124
X26A CR and CF Fran 124.17 47 ⇓P PKPdf 20 05 58.5 +1.3
baz=124
MNTX Cornudas Mount 124.24 51 *e*PKPdf PKPdf 20 05 58.1 +0.8
Y26A Elida 124.45 48 ⇑P PKPdf 20 05 59.1 +1.4
baz=124
W27A Bowe Ranch, En 124.48 46 ⇑P PKPdf 20 05 59.3 +1.5
baz=124
225A Deer Hill, Car 124.50 50 ⇓P PKPdf 20 05 59.1 +1.2
baz=124
X27A F and S Farms, 124.65 47 ⇑P PKPdf 20 05 59.2 +1.2
baz=125
SCHQ Schefferville 124.78 7 PKP PKPdf 20 05 58.1 +0.4
comp=Z,12nm,0.6s,baz=2.3,slow=2.5,SNR=28
SCHQ SKP 20 09 19.1
comp=Z,2.5nm,0.7s,baz=345,slow=5,9,SNR=3.8
SCHQ Schefferville 124.78 7 *e*PKPdf PKPdf 20 05 57.7 0.0
126A Clayton Basin, 124.88 49 ⇑P PKPdf 20 05 59.8 +1.2
baz=125
Y27A Causey 124.96 47 ⇑P PKPdf 20 06 00.1 +1.4
baz=125
226A Malaga, Loving 125.07 50 ⇓P PKPdf 20 06 00.1 +1.1
baz=125
Z27A Tatum 125.18 48 ⇓P PKPdf 20 06 00.1 +1.0
baz=125
127A Arkansas Junct 125.36 49 ⇓P PKPdf 20 06 00.4 +0.9
baz=125
426A McDonald Obser 125.72 51 ⇓P PKPdf 20 06 01.2 +0.9
baz=126
COWI Conover 125.99 28 *e*PKPdf PKPdf 20 06 00.3 0.0
626A Big Bend Ranch 126.10 53 ⇓P PKPdf 20 06 02.2 +1.2
baz=126
427A Hayter Ranch, 126.13 51 ⇓P PKPdf 20 06 02.3 +1.3
baz=126
TXAR Lajitas Array 126.56 53 PKP PKPdf 20 06 03.4 +1.5
comp=Z,1.8nm,0.6s,baz=231,slow=0.4,SNR=26
KSU1 Kansas State U 126.66 39 *e*PKPdf PKPdf 20 06 02.8 +1.0
JFWS Jewell Farm 127.78 31 *e*PKIKP PKPdf 20 06 03.1 -0.7
KIC Kosan Boka 127.85 278 *e*PKIKP PKPdf 20 06 05.2 +0.4
comp=Z,13nm,0.6s
DBIC Dimbokro 127.94 278 PKP PKPdf 20 06 05.0 +0.1
comp=Z,6.1nm,0.6s,baz=70,slow=1.9,SNR=16
DBIC SKPbc 20 09 09.3
comp=Z,3.5nm,0.8s,baz=13,slow=22,SNR=3.8
DBIC Dimbokro 127.94 278 *e*PKPdf PKPdf 20 06 04.3 -0.6
TIC Toumodi 128.10 278 *e*PKIKP PKPdf 20 06 05.1 -0.1
comp=Z,4.2nm,0.2s
LIC Lamto 128.14 278 *e*PKIKP PKPdf 20 06 05.5 +0.2
comp=Z,26nm,0.7s
HDIL Hopedale 129.96 32 *e*PKPdf PKPdf 20 06 08.7 +0.7
CCM Cathedral Cave 130.57 36 *e*PKIKP PKPdf 20 06 09.0 -0.3
SLM Saint Louis 130.77 35 *e*SKPbc SKPbc 20 09 19.8 +0.2
FVM French Village 131.10 36 *e*SKPbc SKPbc 20 09 20.1 -0.7
SADO Sadowa 131.22 21 PKP PKPdf 20 06 10.4 +0.1
comp=Z,20nm,0.6s,baz=330,slow=4.1,SNR=20
SADO SKPbc SKPbc 20 09 21.5 +0.6
comp=Z,3.9nm,0.6s,baz=313,slow=10,SNR=4.1
SADO Sadowa 131.22 21 PKP PKPdf 20 06 10.4 +0.1
SADO SKPbc SKPbc 20 09 21.5 +0.5
MIAR Mount Ida 131.33 41 *e*PKPdf PKPdf 20 06 12.0 +1.2
MIAR *e*SKPbc SKPbc 20 09 21.1 -0.7
OLIL Olney 131.90 33 *e*PKPdf PKPdf 20 06 13.3 +1.6
OLIL *e*SKPbc SKPbc 20 09 24.6 +0.9
SIUC Southern Illin 131.99 35 *e*SKPbc SKPbc 20 09 24.9 +1.0
NATX Nacogdoches 132.19 45 *e*SKPbc SKPbc 20 09 27.1 +2.2
HKT Hockley 132.31 48 *e*SKPbc SKPbc 20 09 26.4 +1.1
LONY Lake Ozonia 132.86 17 *e*SKPbc SKPbc 20 09 24.9 -1.9
ERPA Erie 133.14 24 *e*PKPdf PKPdf 20 06 13.6 -0.5
WCI Wyandotte Cave 133.24 32 *e*PKIKP PKPdf 20 06 14.6 +0.3
ACSO Alum Creek Sta 133.38 28 *e*SKPbc SKPbc 20 09 27.4 -1.2
NCB Newcomb 133.56 18 *e*PKPdf PKPdf 20 06 16.2 +1.5
PKME Peaks-Kenny Pk 133.62 12 *e*SKPbc SKPbc 20 09 29.4 0.0
WVT Waverly 133.88 36 *e*PKPdf PKPdf 20 06 16.2 +0.6
WVT *e*SKPbc SKPbc 20 09 28.1 -2.4
BINY Binghamton 134.58 20 *e*PKPdf PKPdf 20 06 16.8 +0.1
BINY *e*SKPbc SKPbc 20 09 30.4 -2.1
TKL Tuckaleechee C 136.50 33 PKHKP 20 06 06.5
comp=Z,3.4nm,0.5s,baz=169,slow=6.8,SNR=3.4
TKL PKP PKPdf 20 06 22.7 +2.2
comp=Z,18nm,0.5s,baz=154,slow=5.7,SNR=12
TKL SKPbc SKPbc 20 09 38.8 +0.1
comp=Z,6.7nm,0.6s,baz=146,slow=3.6,SNR=5.5
TKL Tuckaleechee C 136.50 33 PKHKP 20 06 06.5
TKL *e* 20 06 21.4
TKL Tuckaleechee C 136.50 33 PKP 20 06 06.5
TKL *e*PKPdf PKPdf 20 06 21.4 +0.9
TKL *e*SKPbc SKPbc 20 09 36.0 -2.8
LRAL Lakeview Retre 136.50 38 *e*SKPbc SKPbc 20 09 39.0 +0.1
PLCA Paso Flores 137.46 164 SKPbc SKPbc 20 09 42.9 +1.5
comp=Z,2.5nm,0.6s,baz=260,slow=1.1,SNR=7.8
CMIG Matias Romero 138.71 64 PKhKP 20 06 16.5
comp=Z,1.9nm,0.6s,baz=353,slow=14,SNR=3.0
CMIG PKP PKPdf 20 06 25.8 +0.8
comp=Z,5.0nm,0.6s,baz=302,slow=3.8,SNR=7.5
CMIG SKPbc SKPbc 20 09 46.5 +0.9
comp=Z,7.4nm,0.6s,baz=309,slow=4.6,SNR=13
CMIG Matias Romero 138.71 64 PKP 20 06 16.5
CMIG PKP PKPdf 20 06 25.8 +0.8
CMIG SKPbc SKPbc 20 09 46.5 +0.9
TRQA Tornquist 141.74 173 *e*PKPpre 20 06 25.6
TEIG Tepich 143.12 55 *e*PKPpre PKPdf 20 06 31.0 -1.9
DWPF Disney 143.36 38 *e*PKPpre PKPdf 20 06 31.6 -1.6
APG El Apazote 143.42 65 PKP PKPdf 20 06 32.1 -1.4
comp=Z,7.1nm,0.5s,baz=80,slow=13,SNR=15
APG SKPbc SKPbc 20 09 58.6 +0.8
comp=Z,5.2nm,0.5s,baz=96,slow=21,SNR=8.9
LCO Las Campanas 148.11 156 *e*PKPbc PKPbc 20 06 46.0 +1.4
JTS JuntasAbangare 150.06 69 PKP PKPdf 20 06 44.5 -0.2
comp=Z,15nm,0.8s,baz=308,slow=11,SNR=3.6
JTS PKPbc PKPbc 20 06 51.0 +1.2
comp=Z,10nm,0.6s,baz=315,slow=4.3,SNR=12
JTS JuntasAbangare 150.06 69 PKP PKPdf 20 06 44.5 -0.2
JTS PKPbc PKPbc 20 06 51.0 +1.2
JTS *e*PKPbc PKPbc 20 06 51.1 +1.3
CPUP Villa Florida 153.75 179 PKP PKPdf 20 06 49.1 -0.8
comp=Z,0.9nm,0.6s,baz=236,slow=2.5,SNR=4.4
CPUP PKPbc PKPbc 20 06 58.5 +0.7
comp=Z,3.9nm,0.6s,baz=138,slow=1.3,SNR=18
GRTK Grand Turk 154.42 33 *e*PKPbc PKPbc 20 07 00.1 +0.7
LPAZ La Paz 160.18 146 PKP PKPdf 20 06 59.4 +1.1
comp=Z,2.3nm,0.8s,baz=190,slow=0.7,SNR=8.6
LPAZ PKPab PKPab 20 07 41.9 +2.8
comp=Z,5.2nm,0.9s,baz=218,slow=3.1,SNR=7.8
LPAZ La Paz 160.18 146 *e*PKPdf PKPdf 20 07 00.3 +2.0
ROSC El Rosal 161.69 75 PKP PKPdf 20 07 01.1 +1.0
comp=Z,4.5nm,0.4s,baz=90,slow=21,SNR=5.0
SDV Santo Domingo 163.53 58 *e*PKPdf PKPdf 20 07 01.7 -0.1

CRAAG ***02*** *20:02:39.2,36°.36N×7°.20E,MI4.0*
IDC ***02*** *20:02:39.4±1.4,36°.34N×7°.23E,h0km,mb3.4/5,mb1 3.5/6, mb1mx3.3/29,mbtmp3.5/6,ML4.4/1,Error ellipse: s-maj=30.3km s-min=25.0km az=145.0*
ISCJB ***02*** *20:02:39.6±0.4,36°.45N±0°.04×7°.25E±0°.04,h10km, mb3.5/5,Error ellipse: s-maj=6.1km s-min=4.9km az=177.7*
LDG ***02*** *20:02:40.5±0.1,36°.51N×7°.22E,h10km,MI3.4/6,Error ellipse: s-maj=3.3km s-min=2.2km az=37.0*
NEIC ***02*** *20:02:40.8±0.8,36°.32N×7°.30E,h10km,ML3.9(ALG), Error ellipse: s-maj=11.1km s-min=6.7km az=163.0*
CSEM ***02*** *20:02:41.3±0.3,36°.42N×7°.36E,h10km,ML4.0,Error ellipse: s-maj=9.2km s-min=6.5km az=175.0*
ISC 02 20:02:41.5±0.5,36°.40N±0°.05×7°.32E±0°.04,h10km,n103, σ1§16/111,mb3.5/4,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABSA	**Djebel Ababsia**	**0.18**	**135**	P	**Pg**	**20 02 45.4**	**+0.1**
ABSA	**Djebel Ababsia**	**0.18**	**135**	P	**Pg**	**20 02 45.4**	**+0.1**
CMAH	**Djebel Manchou**	**0.24**	**19**	P	**Pg**	**20 02 46.6**	**+0.2**
CMAH	**Djebel Manchou**	**0.24**	**19**	P	**Pg**	**20 02 46.7**	**+0.4**
CMAH	**Djebel Manchou**	**0.24**	**19**	P	**Pg**	**20 02 46.6**	**+0.2**
CKFL	**Kef-Lekhel**	**0.49**	**270**	P	**Pg**	**20 02 47.5**	**-3.4**
CAEH	**'Ain El Ouahch**	**0.54**	**315**	P	**Pg**	**20 02 47.0**	**-4.9**
CASM	**Ain Smara**	**0.69**	**259**	P	**Pg**	**20 02 50.8**	**-3.9**
CTEI	**Djebel Teioual**	**0.81**	**246**	P	**Pg**	**20 02 54.0**	**-3.1**
CTEI	**Djebel Teioual**	**0.81**	**246**	P	**Pg**	**20 02 54.0**	**-3.1**
DFRA	**Djebel Bou Aff**	**1.18**	**278**	P	**Pb**	**20 03 00.0**	**-3.8**
CKHR	**Kef el Ahmar**	**1.51**	**256**	P	**Pn**	**20 03 06.0**	**-2.6**
SET	**Setif**	**1.57**	**263**	P	**Pn**	**20 03 05.0**	**-4.3**
KEST	**Kesra**	**1.77**	**112**	Pn	**Pn**	**20 03 12.9**	**+0.8**
5.5nm,0.3s,baz=244,slow=3.4,SNR=101							
ADJB	**Djebel Djouab**	**3.15**	**267**	P	**Pn**	**20 03 37.0**	**+5.9**
VSL	**Villasalto**	**3.49**	**27**	*e*Pn	**Pn**	**20 03 34.9**	**-0.9**
VSL	**Villasalto**	**3.49**	**27**	*e*Pn	**Pn**	**20 03 34.9**	**-0.9**
EMHD	**Djebel Mahouad**	**3.54**	**268**	P	**Pn**	**20 03 35.4**	**-1.0**
EMHD	**Djebel Mahouad**	**3.54**	**268**	P	**Pn**	**20 03 35.4**	**-1.0**
EBNR	**Beni Rached**	**4.68**	**270**	P	**Pn**	**20 03 42.1**	**-10**
ECHA	**Ech Chlef**	**4.82**	**269**	P	**Pn**	**20 03 57.7**	**+3.7**
ETOS	**Mallorca**	**4.89**	**315**	P	**Pn**	**20 03 54.1**	**-0.9**
ETOS	**Mallorca**	**4.89**	**315**	P	**Pn**	**20 03 54.1**	**-1.0**
12nm,0.7s,SNR=50							
ETRT	**Tiaret**	**4.99**	**260**	P	**Pn**	**20 03 59.2**	**+2.8**
ETRT	**Tiaret**	**4.99**	**260**	P	**Pn**	**20 03 59.2**	**+2.8**
EANR	**'Ain N'Sour**	**5.05**	**267**	P	**Pn**	**20 03 55.5**	**-1.8**
EIBI	**Ibiza**	**5.42**	**301**	P	**Pn**	**20 04 01.9**	**-0.4**
EIBI	**Ibiza**	**5.42**	**301**	P	**Pn**	**20 04 01.9**	**-0.4**
1.1nm,0.2s,SNR=21							
PGF	**Pioggiola**	**6.28**	**11**	*e*P	**Pn**	**20 04 14.3**	**+0.3**
PGF				*e*Sn	**Sn**	**20 05 16.3**	**-9.5**
10.0nm,0.4s							
PGF	**Pioggiola**	**6.28**	**11**	*e*Pn	**Pn**	**20 04 09.5**	**-4.5**
PGF				*e*Sn	**Sn**	**20 05 16.3**	**-9.5**
PGF	**Pioggiola**	**6.28**	**11**	*e*P	**Pn**	**20 04 14.3**	**+0.3**
EBEN	**Beniarda**	**6.42**	**293**	P	**Pn**	**20 04 16.9**	**+0.9**
EBEN	**Beniarda**	**6.42**	**293**	P	**Pn**	**20 04 16.9**	**+0.8**
0.2nm,0.4s,SNR=7.9							
CART	**Cartagena**	**6.77**	**283**	*e*P	**Pn**	**20 04 19.6**	**-1.2**
CART	**Cartagena**	**6.77**	**283**	*e*P	**Pn**	**20 04 19.6**	**-1.2**
EPOB	**Poblet**	**6.94**	**317**	P	**Pn**	**20 04 22.6**	**-0.5**
EPOB	**Poblet**	**6.94**	**317**	P	**Pn**	**20 04 22.6**	**-0.6**
1.1nm,0.2s,SNR=7.9							
LMR	**La Mourre**	**6.95**	**355**	*e*Pn	**Pn**	**20 04 19.2**	**-4.1**
LMR				*e*Sn	**Sn**	**20 05 30.6**	**-12**
6.6nm,0.3s							
EMUR	**La Murta**	**6.99**	**284**	P	**Pn**	**20 04 23.6**	**-0.3**
EMUR	**La Murta**	**6.99**	**284**	P	**Pn**	**20 04 23.6**	**-0.3**
3.9nm,0.3s,SNR=8.2							
FRF	**La Foret Royal**	**7.17**	**356**	*e*Pn	**Pn**	**20 04 22.5**	**-3.8**
FRF				*e*Sn	**Sn**	**20 05 36.4**	**-11**
4.9nm,0.3s							
EMOS	**Mosqueruela**	**7.29**	**305**	P	**Pn**	**20 04 27.9**	**-0.1**
EMOS	**Mosqueruela**	**7.29**	**305**	P	**Pn**	**20 04 27.9**	**-0.1**
8.3nm,0.4s,SNR=11							
CLLI	**Llivia**	**7.35**	**327**	P	**Pn**	**20 04 26.6**	**-2.1**
CLLI	**Llivia**	**7.35**	**327**	P	**Pn**	**20 04 26.6**	**-2.1**
11nm,0.3s,SNR=7.9							
ETOB	**Tobarra**	**7.40**	**290**	P	**Pn**	**20 04 31.0**	**+1.5**
ETOB	**Tobarra**	**7.40**	**290**	P	**Pn**	**20 04 31.0**	**+1.6**
3.9nm,0.2s,SNR=16							
SBF	**Sospel**	**7.46**	**1**	*e*Pn	**Pn**	**20 04 25.3**	**-4.9**
SBF				*e*Sn	**Sn**	**20 05 43.6**	**-11**
7.2nm,0.4s							
CSOR	**Sort**	**7.65**	**323**	P	**Pn**	**20 04 32.3**	**-0.7**
CSOR	**Sort**	**7.65**	**323**	P	**Pn**	**20 04 32.3**	**-0.6**
7.8nm,0.3s,SNR=7.9							
SMRF	**Simiane la Rot**	**7.69**	**351**	*e*Pn	**Pn**	**20 04 29.4**	**-4.0**
SMRF	**Simiane la Rot**	**7.69**	**351**	*e*P	**Pn**	**20 04 33.5**	**+0.1**
SMRF	**Simiane la Rot**	**7.69**	**351**	*e*P	**Pn**	**20 04 33.5**	**+0.1**
MTLF	**Montolieu**	**7.97**	**332**	*e*Pn	**Pn**	**20 04 31.7**	**-5.5**
MTLF				*e*Sn	**Sn**	**20 05 55.8**	**-12**
0.9nm,0.3s							
EHUE	**Huescar**	**8.05**	**283**	P	**Pn**	**20 04 40.1**	**+1.7**
EHUE	**Huescar**	**8.05**	**283**	P	**Pn**	**20 04 40.1**	**+1.7**
2.2nm,0.3s,SNR=7.9							
ESAC	**San Caprasio**	**8.06**	**314**	P	**Pn**	**20 04 38.9**	**+0.4**
ESAC	**San Caprasio**	**8.06**	**314**	P	**Pn**	**20 04 38.9**	**+0.4**
5.6nm,0.6s,SNR=6.3							
LASF	**Ste Croix**	**8.11**	**342**	*e*P	**Pn**	**20 04 38.7**	**-0.5**
LASF				*e*Sn	**Sn**	**20 05 59.7**	**-11**
2.5nm,0.4s							
LASF	**Ste Croix**	**8.11**	**342**	*e*Pn	**Pn**	**20 04 33.9**	**-5.3**
LASF				*e*Sn	**Sn**	**20 05 59.7**	**-11**
LASF	**Ste Croix**	**8.11**	**342**	*e*P	**Pn**	**20 04 38.7**	**-0.5**
EVIA	**Vianos**	**8.12**	**289**	P	**Pn**	**20 04 39.9**	**+0.6**
EVIA	**Vianos**	**8.12**	**289**	P	**Pn**	**20 04 39.9**	**+0.5**
13nm,0.5s,SNR=7.9							
EBER	**Berja**	**8.22**	**276**	P	**Pn**	**20 04 41.7**	**+0.9**
EBER	**Berja**	**8.22**	**276**	P	**Pn**	**20 04 41.7**	**+0.9**
3.3nm,0.4s,SNR=5.7							
EBIE	**Bielsa**	**8.38**	**321**	P	**Pn**	**20 04 43.5**	**+0.7**
EBIE	**Bielsa**	**8.38**	**321**	P	**Pn**	**20 04 43.5**	**+0.7**
0.5nm,0.2s,SNR=6.4							
EQES	**Quesada**	**8.42**	**283**	P	**Pn**	**20 04 44.2**	**+0.7**
EQES	**Quesada**	**8.42**	**283**	P	**Pn**	**20 04 44.2**	**+0.7**
5.8nm,0.5s,SNR=19							
EPF	**Esparros**	**8.53**	**323**	*e*Pn	**Pn**	**20 04 39.7**	**-5.3**
EPF	**Esparros**	**8.53**	**323**	*e*P	**Pn**	**20 04 44.5**	**-0.5**
EPF	**Esparros**	**8.53**	**323**	*e*P	**Pn**	**20 04 44.5**	**-0.5**
EPF	**Esparros**	**8.53**	**323**	*e*P	**Pn**	**20 04 44.5**	**-0.5**
ETOR	**Torete**	**8.56**	**304**	P	**Pn**	**20 04 47.4**	**+2.0**
ETOR	**Torete**	**8.56**	**304**	P	**Pn**	**20 04 47.4**	**+2.0**
4.6nm,0.5s,SNR=7.9							
VIVF	**Saint-Julien-l**	**8.68**	**347**	*e*Pn	**Pn**	**20 04 42.2**	**-4.9**
ETSF	**Etsaut**	**8.89**	**319**	*e*P	**Pn**	**20 04 49.5**	**-0.4**
ETSF	**Etsaut**	**8.89**	**319**	*e*P	**Pn**	**20 04 49.5**	**-0.4**
SJPF	**Ste Jean**	**9.39**	**318**	*e*P	**Pn**	**20 04 57.1**	**+0.3**
SJPF	**Ste Jean**	**9.39**	**318**	*e*P	**Pn**	**20 04 57.1**	**+0.3**
ESDC	**Sonseca Array**	**9.48**	**294**	Pn	**Pn**	**20 04 58.6**	**+0.5**
0.9nm,0.3s,baz=99,slow=14,SNR=11							
ESDC	**Sonseca Array**	**9.48**	**294**	P	**Pn**	**20 04 58.4**	**+0.4**
ESDC	**Sonseca Array**	**9.48**	**294**	P	**Pn**	**20 04 58.4**	**+0.3**
0.7nm,0.3s,baz=102,slow=13,SNR=10.0							
ESLA	**Sonseca Array**	**9.48**	**294**	*e*P	**Pn**	**20 04 58.9**	**+0.8**
ESLA	**Sonseca Array**	**9.48**	**294**	*e*P	**Pn**	**20 04 58.9**	**+0.8**
EALK	**Alkurruntz**	**9.62**	**318**	P	**Pn**	**20 05 00.2**	**+0.4**
EALK	**Alkurruntz**	**9.62**	**318**	P	**Pn**	**20 05 00.2**	**+0.4**
7.5nm,0.4s,SNR=7.9							
PAB	**San Pablo**	**9.74**	**292**	*e*Pn	**Pn**	**20 05 02.3**	**+0.8**
PAB	**San Pablo**	**9.74**	**292**	*e*Pn	**Pn**	**20 05 02.3**	**+0.8**
GUD	**Guadarrama**	**9.94**	**299**	P	**Pn**	**20 05 04.8**	**+0.5**
GUD	**Guadarrama**	**9.94**	**299**	P	**Pn**	**20 05 04.8**	**+0.5**
SNR=7.9							
ECAL	**Calabor**	**12.23**	**301**	P	**Pn**	**20 05 36.2**	**+0.6**
ECAL	**Calabor**	**12.23**	**301**	P	**Pn**	**20 05 36.2**	**+0.6**
SNR=7.9							
BRTR	**Keskin Array B**	**20.96**	**73**	P	**P**	**20 07 26.5**	**+2.0**
0.9nm,0.7s,baz=271,slow=11,SNR=4.3							
BRTR	**Keskin Array B**	**20.96**	**73**	P	**P**	**20 07 26.5**	**+2.0**
AKASG	**Malin Array Be**	**21.25**	**41**	P	**P**	**20 07 27.5**	**-0.1**
1.9nm,0.8s,mb3.5,baz=238,slow=8.8,SNR=2.9							
AKASG	**Malin Array Be**	**21.25**	**41**	P	**P**	**20 07 27.5**	**-0.1**
AKASG	**Malin Array Be**	**21.25**	**41**	P	**P**	**20 07 27.5**	**-0.1**
TORD	**Torodi Ar. Bea**	**23.70**	**194**	P	**P**	**20 07 51.6**	**-2.0**
2.3nm,1.1s,mb3.5,baz=4.2,slow=9.8,SNR=5.6							
KURK	**Kurchatov**	**51.65**	**50**	P	**P**	**20 11 47.4**	**-0.7**
0.5nm,0.8s,mb3.5,baz=284,slow=8.6,SNR=4.6							
KURK	**Kurchatov**	**51.65**	**50**	P	**P**	**20 11 47.4**	**-0.7**
MKAR	**Makanchi Array**	**55.04**	**54**	P	**P**	**20 12 13.0**	**-0.1**
0.6nm,0.8s,mb3.7,baz=305,slow=4.3,SNR=5.9							
MKAR	**Makanchi Array**	**55.04**	**54**	P	**P**	**20 12 13.0**	**-0.1**

ISCJB ***02*** *20:39:41.3±1.1,3°.2S±0°.2×68°.1E±0°.2,h10km,mb3.9/6, Error ellipse: s-maj=35.9km s-min=20.2km az=143.3*
IDC ***02*** *20:39:42.1±1.6,3°.26S×68°.04E,h0km,mb3.9/5,mb1 4.0/5, mb1mx3.5/24,mbtmp3.9/5,MS3.5/2,Ms1 3.5/2, ms1mx2.7/36,Error ellipse: s-maj=74.7km s-min=27.5km az=136.0*
NEIC ***02*** *20:39:43.1±0.7,3°.30S×68°.10E,h10km,mb3.8/1,Error ellipse: s-maj=27.1km s-min=14.6km az=144.0*
ISC 02 20:39:43.3±1.1,3°.3S±0°.2×68°.1E±0°.2,h10km,n12,σ0§46/9, mb3.9/6,Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**16.38**	**50**	LR	LR	20 48 13.3	
comp=Z,133nm,20.3s,baz=190,slow=31							
KULM	**Kulim**	**33.61**	**75**	*e*P	**P**	**20 46 23.6**	**-0.6**
CMAR	**Chiang Mai Arr**	**37.28**	**53**	P	**P**	**20 46 56.5**	**+0.8**
0.8nm,0.9s,mb3.6,baz=245,slow=9.6,SNR=7.9							
CHTO	**Chiang Mai**	**37.47**	**53**	*e*P	**P**	**20 46 57.1**	**-0.2**
1.6nm,0.8s,mb3.9							
BOSA	**Boshof**	**47.87**	**234**	P	**P**	**20 48 21.8**	**+0.1**
2.5nm,0.8s,mb4.3,baz=77,slow=12,SNR=3.6							
MKAR	**Makanchi Array**	**51.43**	**12**	P	**P**	**20 48 48.2**	**-0.3**
0.1nm,0.3s,mb3.2,baz=199,slow=6.7,SNR=3.7							
ZAA0	**Zalesovo Array**	**58.73**	**11**	P	**P**	**20 49 40.9**	**-0.2**
ZALV	**Zalesovo Beam**	**58.73**	**11**	P	**P**	**20 49 40.8**	**-0.3**
1.3nm,0.6s,mb4.1,baz=214,slow=7.6,SNR=6.9							
SONM	**Songino Array**	**60.94**	**29**	P	**P**	**20 49 57.2**	**+0.7**
1.5nm,0.9s,mb4.1,baz=218,slow=6.8,SNR=8.8							
SONM				LR	LR	21 16 19.6	
comp=Z,53nm,18.2s,baz=69,slow=36							
SONM	**Songino Array**	**60.94**	**29**	P	**P**	**20 49 57.2**	**+0.7**
SONM				LR	LR	21 16 19.6	
TXAR	**Lajitas Array**	**152.96**	**344**	PKPbc	PKPbc	20 59 41.7	+0.1
0.2nm,0.8s,baz=131,slow=2.5,SNR=3.0							
TXAR				PKPab	PKPab	20 59 54.5	+1.9
0.5nm,0.8s,baz=77,slow=5.4,SNR=5.9							
TXAR	**Lajitas Array**	**152.96**	**344**	PKPbc	PKPbc	20 59 41.7	+0.1
TXAR				PKPab	PKPab	20 59 54.5	+1.8

CASC 02 20:43:04.2±1.6,10°.89N×85°.16W,h209km±5km,MD3.8, ML3.5,8C-2D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MESS	**Mesas**	**0.16**	**194**	*i*P	Pn	20 43 31.8	+0.3
GUAB	**Guayabo de Bag**	**0.20**	**202**	*i*P	Pn	20 43 31.8	+0.2
LIM1	**Limonal**	**0.22**	**206**	*i*P	Pn	20 43 31.6	0.0
LIM1				*i*S	Sn	20 43 53.6	+0.8
GPS1	**Guardaparques**	**0.22**	**238**	*i*P	Pn	20 43 31.6	0.0
GPS1				*i*S	Sn	20 43 54.0	+1.2
COLC	**Colonia**	**0.23**	**192**	*i*P	Pn	20 43 31.8	+0.2
CUI	**Cuipilapa**	**0.23**	**182**	*i*P	Pn	20 43 32.0	+0.3
CUI				*i*S	Sn	20 43 53.2	+0.2
GPS2	**Hotel Rinc^‡n**	**0.24**	**234**	*i*P	Pn	20 43 31.6	0.0
GPS2				*i*S	Sn	20 43 53.9	+1.0
GB1A	**Borinquen Arri**	**0.25**	**253**	*i*P	Pn	20 43 31.8	+0.2
BUEV	**Buena Vista**	**0.27**	**249**	*i*P	Pn	20 43 31.6	0.0
BUEV				*i*S	Sn	20 43 53.8	+0.9
LAPC	**Finca la Perla**	**0.30**	**245**	⇑*i*P	Pn	20 43 31.3	-0.4
LAPC				*i*S	Sn	20 43 53.1	+0.1
GBS3	**Finca Las Im^¡**	**0.32**	**249**	*i*P	Pn	20 43 31.5	-0.2
AMAS	**Alto Masis**	**0.32**	**150**	*i*P	Pn	20 43 32.3	+0.5
AMAS				*i*S	Sn	20 43 54.0	+0.8
A494	**Palo Verde**	**0.58**	**199**	*i*P	Pn	20 43 33.2	+0.5
A494				*i*S	Sn	20 43 55.7	+1.0
A495	**El Viejo**	**0.58**	**211**	*i*P	Pn	20 43 32.9	+0.2
A495				*i*S	Sn	20 43 55.3	+0.6
CASO	**Castillo**	**0.62**	**138**	*i*P	Pn	20 43 33.5	+0.8
CASO				*i*S	Sn	20 43 56.2	+1.3
JTS	**JuntasAbangare**	**0.63**	**162**	*e*P	Pn	20 43 33.1	+0.2
JTS				*e*S	Sn	20 43 55.8	+0.7
FORC	**Fortuna**	**0.64**	**132**	⇑*i*P	Pn	20 43 33.8	+0.9
FORC				*e*S	Sn	20 43 56.2	+1.1
SSN	**San Juan del S**	**0.80**	**301**	*e*P	Pn	20 43 33.2	-0.4
SSN				AML	AML	20 43 58.4	
comp=Z,508nm,0.3s							
CONN	**Concepcion**	**0.81**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	baz=285						
TWT				*e*S	**Sb**	**20 54 08.8**	**+0.5**
	baz=285						
NSK	**Sanguang**	**1.29**	**305**	P	**Pn**	**20 53 51.8**	**-0.2**
	baz=306						
NSK				S	**Sb**	**20 54 09.1**	**+0.1**
	baz=306						
NWF	**Wu-fen Shan**	**1.32**	**330**	P	**Pn**	**20 53 51.7**	**-0.7**
	baz=331						
NWF				*e*S	**Sb**	**20 54 09.3**	**-0.5**
	baz=331						
TWA	**Mucha**	**1.35**	**321**	P	**Pn**	**20 53 53.5**	**+0.7**
	baz=322						
TWA				*e*S	**Sb**	**20 54 11.1**	**+0.5**
	baz=322						
JKRS	**Kuro-shima**	**1.40**	**77**	P	**Pn**	**20 53 54.3**	**+0.8**
JKRS				*e*S	**Sn**	**20 54 12.1**	**+0.1**
SMLT	**Sun Moon Lake**	**1.48**	**269**	*e*P	**Pn**	**20 53 54.9**	**+0.2**
	baz=268						
SMLT				*e*S	**Sn**	**20 54 13.6**	**-0.5**
	baz=268						
YUS	**Yu-Shan**	**1.50**	**253**	P	**Pn**	**20 53 55.1**	**+0.2**
	baz=252						
YUS				*e*S	**Sn**	**20 54 13.9**	**-0.6**
	baz=252						
TYC	**Yuchr**	**1.52**	**269**	*e*P	**Pn**	**20 53 55.5**	**+0.3**
	baz=269						
TYC				*e*S	**Sn**	**20 54 14.7**	**-0.3**
	baz=269						
JIJ	**Ishigaki jima**	**1.55**	**73**	P	**Pn**	**20 53 55.2**	**-0.4**
JIJ				*e*S	**Sn**	**20 54 15.0**	**-0.7**
NSTT	**Nanjuang**	**1.55**	**297**	*e*P	**Pn**	**20 53 56.2**	**+0.6**
	baz=297						
NSTT				*e*S	**Sn**	**20 54 15.7**	**-0.1**
	baz=297						
ELDTW	**Lidau**	**1.56**	**242**	P	**Pn**	**20 53 55.0**	**-0.7**
	baz=240						
ALS	**Alishan**	**1.62**	**255**	*e*P	**Pn**	**20 53 57.1**	**+0.5**
	baz=254						
ALS				*e*S	**Sn**	**20 54 16.9**	**-0.6**
	baz=254						
TWQ1	**Liyutan**	**1.65**	**285**	*e*P	**Pn**	**20 53 56.8**	**-0.2**
	baz=285						
TWQ1				*e*S	**Sn**	**20 54 17.9**	**-0.3**
	baz=285						
CHN5	**Tsauling**	**1.72**	**259**	*e*P	**Pn**	**20 53 59.5**	**+1.6**
	baz=258						
CHN5				*e*S	**Sn**	**20 54 21.3**	**+1.5**
	baz=258						
TTN	**Taitung**	**1.72**	**227**	*e*P	**Pn**	**20 53 57.7**	**-0.2**
	baz=225						
TWG	**Pinlang**	**1.73**	**231**	*e*P	**Pn**	**20 53 58.6**	**+0.6**
	baz=229						
TWG				*e*S	**Sn**	**20 54 18.0**	**-2.2**
	baz=229						
WGK	**Gukeng**	**1.81**	**263**	*e*P	**Pn**	**20 53 58.9**	**-0.2**
	baz=262						
WGK				*e*S	**Sn**	**20 54 21.5**	**-0.5**
	baz=262						
WTP	**Ta-pu**	**1.87**	**249**	*e*P	**Pn**	**20 54 01.3**	**+1.2**
	baz=248						
WTP				*e*S	**Sn**	**20 54 24.7**	**+1.0**
	baz=248						
CHN1	**Nanshi**	**1.97**	**248**	*e*P	**Pn**	**20 54 03.2**	**+1.8**
	baz=247						
CHN1				*e*S	**Sn**	**20 54 27.9**	**+1.7**
	baz=247						
TWK	**Hsinying**	**1.98**	**251**	*e*P	**Pn**	**20 54 01.2**	**-0.3**
	baz=249						
TWK				*e*S	**Sn**	**20 54 25.6**	**-0.6**
	baz=249						
SSD	**Sandimen**	**2.10**	**236**	*e*P	**Pn**	**20 54 04.6**	**+1.5**
	baz=234						
EAST	**Anshuo**	**2.17**	**225**	*e*P	**Pn**	**20 54 04.6**	**+0.4**
	baz=223						
EAST				*e*S	**Sn**	**20 54 30.5**	**-0.7**
	baz=223						

ISCJB ***02*** *20:54:56.5±0.9, 23°.93N±0°.03×122°.51E±0°.02, h4km±7km, Error ellipse: s-maj=5.1km s-min=2.9km az=173.6*
TAP ***02*** *20:54:57.4, 23°.97N×122°.54E, h24km±1km, ML2.7, D*
JMA ***02*** *20:54:58.7±0.2, 24°.11N×122°.54E, h9km, M1.9*
ISC 02 20:54:56.7±0.5, 23°.94N±0°.03×122°.52E±0°.02, h4km±4km, n30, σ0s.73/52, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.69**	**41**	P	**Pg**	**20 55 09.5**	**-0.4**
YOJ				*e*S	**Sg**	**20 55 17.0**	**-1.9**
ENA	**Nanau**	**0.86**	**305**	P	**Pg**	**20 55 13.6**	**+0.4**
	baz=310						
ENA				*e*S	**Sg**	**20 55 25.6**	**+1.2**
	baz=310						
TWC	**Suao**	**0.91**	**318**	P	**Pg**	**20 55 14.0**	**-0.1**
	baz=315						
TWC				*e*S	**Sg**	**20 55 25.5**	**-0.4**
	baz=315						
ESL	**Shilin**	**1.00**	**263**	*e*P	**Pg**	**20 55 16.2**	**+0.4**
	baz=248						
ESL				*e*S	**Sg**	**20 55 28.9**	**+0.1**
	baz=248						
TWE	**Neicheng**	**1.10**	**315**	P	**Pg**	**20 55 18.0**	**+0.1**
	baz=313						
TWE				*i* S	**Sg**	**20 55 32.9**	**+0.8**
	baz=313						
ENTT	**Nioudou**	**1.12**	**309**	P	**Pg**	**20 55 18.1**	**-0.1**
	baz=307						
ENTT				*e*S	**Sg**	**20 55 33.3**	**+0.7**
	baz=307						
NNS	**Nan Shan**	**1.16**	**296**	P	**Pg**	**20 55 18.6**	**-0.3**
	baz=293						
NNS				*e*S	**Sg**	**20 55 33.9**	**-0.1**
	baz=293						
WHF	**Hehuan Shan**	**1.17**	**281**	P	**Pg**	**20 55 18.4**	**-0.6**
	baz=265						
WHF				*e*S	**Sg**	**20 55 33.7**	**-0.4**
	baz=265						
IRIF	**Iriomote-Funau**	**1.18**	**70**	P	**Pg**	**20 55 19.4**	**+0.2**
IRIF				*e*S	**Sg**	**20 55 34.4**	**-0.1**
EHY	**Hungye**	**1.18**	**249**	*e*P	**Pg**	**20 55 19.1**	**-0.1**
	baz=247						
EHY				*e*S	**Sg**	**20 55 33.4**	**-1.1**
	baz=247						
HATJ	**Hateruma jima**	**1.18**	**84**	P	**Pg**	**20 55 20.1**	**+0.7**
HATJ				*e*S	**Sg**	**20 55 35.4**	**+0.7**
TWF1	**Yuli**	**1.26**	**243**	*e*P	**Pg**	**20 55 20.2**	**-0.7**
	baz=241						
TWF1				*e*S	**Sg**	**20 55 36.5**	**-0.7**
	baz=241						
TWT	**Tachien**	**1.27**	**285**	*e*P	**Pg**	**20 55 21.0**	**0.0**
	baz=269						
TWT				*e*S	**Sg**	**20 55 37.4**	**-0.1**
	baz=269						
NSK	**Sanguang**	**1.29**	**305**	P	**Pg**	**20 55 20.6**	**-0.8**
	baz=287						
NSK				*e*S	**Sg**	**20 55 38.1**	**-0.1**
	baz=287						
NWF	**Wu-fen Shan**	**1.32**	**329**	*e*P	**Pn**	**20 55 21.2**	**-0.6**
	baz=327						
TWA	**Mucha**	**1.34**	**321**	*e*P	**Pn**	**20 55 22.4**	**+0.2**
	baz=319						
TWA				*e*S	**Sg**	**20 55 40.5**	**+0.5**
	baz=319						
JKRS	**Kuro-shima**	**1.40**	**77**	*e*S	**Sb**	**20 55 41.8**	**+0.4**
SMLT	**Sun Moon Lake**	**1.48**	**268**	*e*P	**Pn**	**20 55 23.8**	**-0.3**
	baz=256						
SMLT				*e*S	**Sn**	**20 55 43.0**	**-0.9**
	baz=256						
YUS	**Yu-Shan**	**1.50**	**253**	*e*P	**Pn**	**20 55 24.6**	**+0.2**
	baz=251						
YUS				*e*S	**Sn**	**20 55 42.2**	**-2.1**
	baz=251						
TYC	**Yuchr**	**1.52**	**269**	*e*P	**Pn**	**20 55 24.5**	**-0.1**
	baz=267						
JIJ	**Ishigaki jima**	**1.54**	**74**	P	**Pn**	**20 55 24.7**	**-0.2**
JIJ				*e*S	**Sn**	**20 55 44.3**	**-1.1**
NSTT	**Nanjuang**	**1.55**	**297**	*e*P	**Pn**	**20 55 24.9**	**-0.1**
	baz=294						
ELDTW	**Lidau**	**1.56**	**242**	*e*P	**Pn**	**20 55 25.0**	**-0.3**
	baz=241						
ALS	**Alishan**	**1.63**	**255**	*e*P	**Pn**	**20 55 26.1**	**+0.1**
	baz=254						
TWQ1	**Liyutan**	**1.65**	**285**	*e*P	**Pn**	**20 55 27.2**	**+0.9**
	baz=282						
CHN5	**Tsauling**	**1.72**	**259**	*e*P	**Pn**	**20 55 28.8**	**+1.4**
	baz=246						
CHN5				*e*S	**Sn**	**20 55 49.4**	**-0.4**
	baz=246						
WTP	**Ta-pu**	**1.88**	**249**	*e*P	**Pn**	**20 55 30.7**	**+1.2**
	baz=239						
WTP				*e*S	**Sn**	**20 55 53.3**	**-0.3**
	baz=239						
SGST	**Jiashian**	**1.97**	**245**	*e*P	**Pn**	**20 55 31.2**	**+0.4**
	baz=234						
SGST				*e*S	**Sn**	**20 55 55.7**	**-0.2**
	baz=234						
CHN1	**Nanshi**	**1.97**	**248**	*e*P	**Pn**	**20 55 32.0**	**+1.2**
	baz=247						
CHN1				*e*S	**Sn**	**20 55 56.8**	**+0.7**
	baz=247						
SSD	**Sandimen**	**2.10**	**236**	*e*P	**Pn**	**20 55 34.4**	**+1.8**
	baz=228						

ISCJB ***02*** *21:16:15.6±0.4, 51°.39N±0°.02×16°.15E±0°.02, h0km, Error ellipse: s-maj=3.0km s-min=1.8km az=11.9*
CSEM ***02*** *21:16:16.1±0.1, 51°.49N×16°.15E, h2km, ML3.5/14, Error ellipse: s-maj=3.0km s-min=2.2km az=14.0*
IPEC ***02*** *21:16:16.0±0.3, 51°.51N×16°.25E, h0km, ML2.9/4, Error ellipse: s-maj=1.9km s-min=1.5km az=40.0*
BGR ***02*** *21:16:17.9±0.5, 51°.41N×16°.14E, h1km, ML3.1, Error ellipse: s-maj=6.7km s-min=2.2km az=12.0*
NEIC ***02*** *21:16:17.9, 51°.41N×16°.14E, h1km, ML3.1(SZGRF), ML2.9(BRA), After SZGRF.*
WAR ***02*** *21:16:17.7, 51°.47N×16°.14E, ML3.0, Mining Induced*
PRU ***02*** *21:16:17.3, 51°.45N×16°.15E, h0km, Felt In Harrachov*
IDC ***02*** *21:16:17.4±0.7, 51°.45N×16°.04E, h0km, mb1 3.5/8, mb1mx3.3/29, mbtmp3.4/8, ML2.9/8, Error ellipse: s-maj=10.9km s-min=6.6km az=116.0*
VIE ***02*** *21:16:19.5±0.9, 51°.26N×16°.23E, h0km, mb2.6/4, ML3.0/4, Error ellipse: s-maj=7.1km s-min=5.4km az=96.0 57 km WNW of Wroclaw Suspected Mining induced.*
ISC 02 21:16:15.8±0.3, 51°.51N±0°.02×16°.17E±0°.02, h0km, n120, σ0s.99/210, 9C-12D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.67**	**173**	*e*Pg	**Pg**	**21 16 29.2**	**+0.7**
KSP				*e*Sg	**Sg**	**21 16 36.9**	**-0.4**
KSP	**Ksiaz**	**0.67**	**173**	*e*Pg	**Pg**	**21 16 29.2**	**+0.6**
KSP				*e*Sg	**Sg**	**21 16 36.9**	**-0.3**
KSP				*e*L		21 16 41.0	
KSP	**Ksiaz**	**0.67**	**173**	*e*Pg	**Pg**	**21 16 29.2**	**+0.6**
KSP				*e*Sg	**Sg**	**21 16 36.8**	**-0.4**
KSP	**Ksiaz**	**0.67**	**173**	⇓*i*Pg	**Pg**	**21 16 29.2**	**+0.6**
KSP				*e*		21 16 30.4	
KSP				*e*Sg	**Sg**	**21 16 36.8**	**-0.4**
KSP				*e*		21 16 41.0	
KSP	**Ksiaz**	**0.67**	**173**	*e*Pg	**Pg**	**21 16 29.0**	**+0.4**
	baz=358						
KSP				Sg	**Sg**	**21 16 36.8**	**-0.4**
UPC	**Upice**	**1.00**	**186**	*e*PG	**Pg**	**21 16 35.3**	**+0.3**
UPC	**Upice**	**1.00**	**186**	Pg	**Pg**	**21 16 35.3**	**+0.3**
DPC	**Dobruska-Polom**	**1.16**	**175**	*e*Pg	**Pg**	**21 16 38.1**	**0.0**
DPC				*e*Sg	**Sg**	**21 16 52.5**	**-0.6**
DPC	**Dobruska-Polom**	**1.16**	**175**	*e*PG	**Pg**	**21 16 38.2**	**+0.2**
DPC				*e*SG	**Sg**	**21 16 52.6**	**-0.5**
	comp=Z,75nm,0.6s						
DPC	**Dobruska-Polom**	**1.16**	**175**	Pg	**Pg**	**21 16 38.1**	**+0.1**
DPC				Sg	**Sg**	**21 16 52.6**	**-0.5**
	comp=Z,75nm,0.6s						
PVCC	**Panska Ves**	**1.41**	**226**	*e*PG	**Pg**	**21 16 42.7**	**0.0**
PVCC	**Panska Ves**	**1.41**	**226**	Pg	**Pg**	**21 16 42.7**	**0.0**
PVCC				*e*Sg	**Sg**	**21 17 01.2**	**+0.3**
	baz=47						
BRG	**Berggiesshubel**	**1.54**	**247**	*e*Pn	**Pn**	**21 16 45.6**	**+1.2**
BRG				*e*Sg	**Sg**	**21 17 05.8**	**+0.7**
BRG	**Berggiesshubel**	**1.54**	**247**	PN	**Pn**	**21 16 43.8**	**-0.6**
BRG				PG	**Pg**	**21 16 45.6**	**+0.4**
BRG				SG	**Sg**	**21 17 05.8**	**+0.7**
	comp=Z,106nm,0.8s						
BRG	**Berggiesshubel**	**1.54**	**247**	Pn	**Pn**	**21 16 43.8**	**-0.6**
BRG				Sg	**Sg**	**21 17 05.8**	**+0.7**
RUE	**Ruedersdorf**	**1.77**	**304**	*e*Pn	**Pn**	**21 16 47.4**	**-0.2**
RUE				*e*Sn	**Sn**	**21 17 14.8**	**+4.1**
RUE	**Ruedersdorf**	**1.77**	**304**	*e*Pn	**Pn**	**21 16 47.4**	**-0.2**
RUE				*e*Sn	**Sn**	**21 17 14.8**	**+4.0**
PRU	**Pruhonice**	**1.84**	**215**	*e*PN	**Pn**	**21 16 48.8**	**+0.3**
PRU				*e*PG	**Pg**	**21 16 50.5**	**-0.5**
PRU				*e*SG	**Sg**	**21 17 13.9**	**-0.9**
	comp=Z,85nm,0.9s						
PRU	**Pruhonice**	**1.84**	**215**	Pn	**Pn**	**21 16 48.8**	**+0.3**
PRU	**Pruhonice**	**1.84**	**215**	Pg	**Pg**	**21 16 50.5**	**-0.5**
PRU				Sg	**Sg**	**21 17 13.9**	**-0.9**
	comp=Z,85nm,0.9s						
GKP	**Gorka Klasztor**	**1.88**	**20**	*e*Pn	**Pn**	**21 16 58.5**	**+9.3**
GKP				*e*Sn	**Sn**	**21 17 20.1**	**+6.4**
RAC	**Raciborz**	**1.92**	**137**	*e*Pg	**Pg**	**21 16 53.0**	**+0.4**
RAC				*e*Sg	**Sg**	**21 17 17.7**	**+0.3**
MORC	**Moravsky Berou**	**1.94**	**153**	*e*Pn	**Pn**	**21 16 49.8**	**-0.2**
MORC	**Moravsky Berou**	**1.94**	**153**	*e*Pn	**Pn**	**21 16 49.7**	**-0.2**
MORC				*e*S	**Sn**	**21 17 17.6**	**+2.5**
MORC	**Moravsky Berou**	**1.94**	**153**	Pn	**Pn**	**21 16 49.8**	**-0.2**
MORC				*e*Sg	**Sg**	**21 17 16.2**	**-1.9**
	comp=Z,32nm,0.3s,baz=335						
MORC				*e*S	**Sn**	**21 17 17.5**	**+2.5**
CLL	**Collm**	**1.99**	**266**	*e*Pn	**Pn**	**21 16 50.8**	**+0.1**
CLL				*e*Pg	**Pg**	**21 16 53.0**	**-0.9**
CLL				*e*Sg	**Sg**	**21 17 20.8**	**+1.1**
CLL	**Collm**	**1.99**	**266**	*e*Pn	**Pn**	**21 16 50.0**	**-0.7**
CLL				*e*Pg	**Pg**	**21 16 53.0**	**-0.9**
CLL				*e*		21 16 58.0	
CLL				*e*Sg	**Sg**	**21 17 20.0**	**+0.3**
	comp=Z,45nm,0.7s						
CLL	**Collm**	**1.99**	**266**	Pn	**Pn**	**21 16 50.8**	**+0.1**
OKC	**Ostrava-Krasne**	**2.09**	**142**	*e*Pn	**Pn**	**21 16 51.3**	**-0.8**
OKC				*e*Sg	**Sg**	**21 17 21.5**	**-1.5**
OKC	**Ostrava-Krasne**	**2.09**	**142**	*e*PN	**Pn**	**21 16 52.0**	**-0.1**
OKC				*e*PG	**Pg**	**21 16 55.3**	**-0.6**
OKC				*e*SG	**Sg**	**21 17 21.9**	**-1.1**
	comp=Z,72nm,0.7s						
OKC	**Ostrava-Krasne**	**2.09**	**142**	Pn	**Pn**	**21 16 52.0**	**-0.1**
VRAC	**Vranov**	**2.22**	**173**	Pn	**Pn**	**21 16 54.6**	**+0.8**
	comp=Z,1.9nm,0.3s,baz=341,slow=17,SNR=16						
VRAC				Lg		21 17 22.8	
	comp=Z,4.5nm,0.3s,baz=269,slow=23,SNR=4.8						
VRAC	**Vranov**	**2.22**	**173**	*e*Pn	**Pn**	**21 16 54.1**	**+0.3**
	baz=354						
VRAC				Lg		21 17 22.8	
VRAC				*e*Sg	**Sg**	**21 17 25.2**	**-1.8**
	comp=Z,40nm,0.5s,baz=354						
KRUC	**Moravsky**	**2.45**	**176**	*e*Pn	**Pn**	**21 16 57.2**	**+0.2**
	baz=358						
KRUC				*e*Sg	**Sg**	**21 17 32.9**	**-1.6**
	comp=Z,114nm,1.4s,baz=358						
TANN	**Tannenbergstha**	**2.58**	**246**	*e*Pn	**Pn**	**21 16 59.0**	**+0.1**
TANN				*e*Sg	**Sg**	**21 17 38.7**	**-0.1**
TANN	**Tannenbergstha**	**2.58**	**246**	Pn	**Pn**	**21 16 59.0**	**+0.2**
TANN				Sg	**Sg**	**21 17 38.7**	**-0.1**
OJC	**Ojcow**	**2.64**	**118**	*e*Pn	**Pn**	**21 16 57.8**	**-1.7**
OJC				*e*Pg	**Pg**	**21 17 06.0**	**-0.3**
OJC				*e*Sn	**Sn**	**21 17 31.3**	**-0.9**
OJC				*e*Sg	**Sg**	**21 17 40.3**	**-0.2**
OJC	**Ojcow**	**2.64**	**118**	*e*Pn	**Pn**	**21 16 57.8**	**-1.7**
OJC	**Ojcow**	**2.64**	**118**	*e*Pg	**Pg**	**21 17 06.0**	**-0.3**
OJC				*e*Sn	**Sn**	**21 17 31.3**	**-0.9**
OJC				Sg	**Sg**	**21 17 41.4**	**+0.9**
WERD	**Werda**	**2.66**	**248**	*e*Pn	**Pn**	**21 17 00.1**	**+0.3**
WERD				*e*Sg	**Sg**	**21 17 41.1**	**-0.1**
WERD	**Werda**	**2.66**	**248**	Pn	**Pn**	**21 17 00.1**	**+0.2**
WERD				Sg	**Sg**	**21 17 41.1**	**-0.1**
NKC	**Novy Kostel**	**2.68**	**243**	*e*PN	**Pn**	**21 17 00.6**	**+0.5**
NKC				*e*PG	**Pg**	**21 17 06.9**	**-0.2**
NKC				*e*SG	**Sg**	**21 17 41.7**	**-0.1**
	comp=Z,56nm,0.5s						
NKC	**Novy Kostel**	**2.68**	**243**	Pn	**Pn**	**21 17 00.6**	**+0.5**
JAVC	**Velka Javorina**	**2.82**	**159**	*e*Pn	**Pn**	**21 17 03.4**	**+1.3**
JAVC				*e*Sg	**Sg**	**21 17 47.4**	**+1.0**
	comp=Z,61nm,1.4s						
KHC	**Kasperske Hory**	**2.90**	**216**	*e*Pn	**Pn**	**21 17 02.0**	**-1.2**
KHC				*e*Pg	**Pg**	**21 17 09.3**	**-2.0**
KHC				*e*S	**Sn**	**21 17 45.8**	**+7.1**
KHC	**Kasperske Hory**	**2.90**	**216**	*e*PN	**Pn**	**21 17 03.3**	**+0.2**
KHC				*e*PG	**Pg**	**21 17 09.7**	**-1.6**
KHC				*e*SN	**Sn**	**21 17 38.2**	**-0.5**
KHC				*e*SG	**Sg**	**21 17 48.0**	**-0.9**
	comp=Z,33nm,0.8s						
KHC	**Kasperske Hory**	**2.90**	**216**	Pn	**Pn**	**21 17 03.3**	**+0.2**
KHC	**Kasperske Hory**	**2.90**	**216**	Pg	**Pg**	**21 17 09.7**	**-1.6**
KHC				Sn	**Sn**	**21 17 38.2**	**-0.5**
KHC				Sg	**Sg**	**21 17 48.0**	**-0.9**
	comp=Z,33nm,0.8s						
MOX	**Moxa**	**3.00**	**255**	*e*PN	**Pn**	**21 17 05.0**	**+0.5**
MOX				*i* PG	**Pg**	**21 17 13.4**	**+0.2**
MOX				*i* SG	**Sg**	**21 17 53.1**	**+1.1**
MOX	**Moxa**	**3.00**	**255**	*e*PN	**Pn**	**21 17 05.0**	**+0.5**
MOX				*i* PG	**Pg**	**21 17 13.4**	**+0.2**
MOX				*i* SG	**Sg**	**21 17 53.1**	**+1.1**
MOX	**Moxa**	**3.00**	**255**	⇓*e*Pn	**Pn**	**21 17 05.0**	**+0.5**
MOX				⇓*i*Pg	**Pg**	**21 17 13.4**	**+0.2**
MOX				*e*Sg	**Sg**	**21 17 52.0**	**-0.1**
MOX	**Moxa**	**3.00**	**255**	Pn	**Pn**	**21 17 05.0**	**+0.5**
MOX	**Moxa**	**3.00**	**255**	Pg	**Pg**	**21 17 13.4**	**+0.2**
MOX				Sg	**Sg**	**21 17 52.0**	**0.0**
ROTZ	**Rotzenmuhle**	**3.06**	**237**	*e*Pn	**Pn**	**21 17 05.8**	**+0.4**
ROTZ				*e*Sg	**Sg**	**21 17 54.5**	**+0.4**
GEC2	**GERESS Array S**	**3.10**	**212**	*e*Pn	**Pn**	**21 17 06.3**	**+0.4**
GEC2	**GERESS Array S**	**3.10**	**212**	*e*Pn	**Pn**	**21 17 06.3**	**+0.4**
GEC2	**GERESS Array S**	**3.10**	**212**	Pn	**Pn**	**21 17 06.3**	**+0.4**
GERES	**GERESS Array B**	**3.10**	**212**	Pn	**Pn**	**21 17 06.4**	**+0.5**
	comp=Z,0.9nm,0.3s,baz=30,slow=13,SNR=28						
GERES				Pg	**Pg**	**21 17 13.0**	**-2.1**
	comp=Z,3.6nm,0.3s,baz=34,slow=14,SNR=48						
GERES				Sn	**Sn**	**21 17 41.3**	**-2.2**
	comp=Z,2.1nm,0.3s,baz=33,slow=26,SNR=6.5						
GERES				Lg		21 17 53.0	
	comp=Z,5.1nm,0.3s,baz=28,slow=28,SNR=12						
GERES	**GERESS Array B**	**3.10**	**212**	Pn	**Pn**	**21 17 06.4**	**+0.5**
GERES	**GERESS Array B**	**3.10**	**212**	Pg	**Pg**	**21 17 13.1**	**-2.1**
SMOL	**Smolenice**	**3.10**	**164**	*e*Pn	**Pn**	**21 17 07.6**	**+1.6**
SMOL				*e*		21 17 15.3	
SMOL				*e*Sg	**Sg**	**21 17 55.4**	**-0.1**
SMOL	**Smolenice**	**3.10**	**164**	*e*PN	**Pn**	**21 17 07.6**	**+1.6**
SMOL				*e*		21 17 15.3	
SMOL	**Smolenice**	**3.10**	**164**	*e*SG	**Sg**	**21 17 55.4**	**-0.1**
SMOL	**Smolenice**	**3.10**	**164**	*e*Pn	**Pn**	**21 17 07.6**	**+1.6**
SMOL				*e*Sg	**Sg**	**21 17 55.4**	**-0.1**
WET	**Wettzell**	**3.17**	**223**	*e*Pn	**Pn**	**21 17 06.9**	**+0.1**
WET	**Wettzell**	**3.17**	**223**	*e*Pn	**Pn**	**21 17 06.9**	**+0.1**
WET	**Wettzell**	**3.17**	**223**	Pn	**Pn**	**21 17 06.9**	**+0.1**
ZST	**Bratislava**	**3.37**	**169**	*e*	**Pn**	**21 17 18.3**	**+8.7**
ZST	**Bratislava**	**3.37**	**169**	*e*SG	**Sg**	**21 18 03.4**	**-0.5**
ZST	**Bratislava**	**3.37**	**169**	*e*Sg	**Sg**	**21 18 03.4**	**-0.5**
NIE	**Niedzica**	**3.37**	**127**	*e*Pn	**Pn**	**21 17 10.8**	**+1.1**
NIE				*e*Pg	**Pg**	**21 17 20.6**	**+0.2**
NIE				*e*Sg	**Sg**	**21 18 03.8**	**-0.3**
VYHS	**Vyhne**	**3.47**	**149**	*e*Pn	**Pn**	**21 17 11.1**	**+0.1**
VYHS				*e*		21 17 23.9	
VYHS				*e*Sg	**Sg**	**21 18 06.9**	**-0.4**
VYHS	**Vyhne**	**3.47**	**149**	*e*PN	**Pn**	**21 17 11.1**	**+0.1**
VYHS				*e*		21 17 23.8	
VYHS	**Vyhne**	**3.47**	**149**	*e*SG	**Sg**	**21 18 06.9**	**-0.4**
VYHS	**Vyhne**	**3.47**	**149**	*e*Pn	**Pn**	**21 17 11.1**	**+0.1**
VYHS				*e*Sg	**Sg**	**21 18 06.9**	**-0.4**
CONA	**Conrad Observa**	**3.59**	**183**	⇑*i*Pn	**Pn**	**21 17 13.4**	**+0.8**
	comp=Z,1.5nm,0.3s						
CONA				⇓*i*Sg	**Sg**	**21 18 10.3**	**-0.7**
	comp=Z,21nm,0.4s						
CONA	**Conrad Observa**	**3.59**	**183**	Pn	**Pn**	**21 17 13.4**	**+0.8**
	comp=Z,1.5nm,0.3s						
CONA				Sg	**Sg**	**21 18 10.3**	**-0.7**
	comp=Z,21nm,0.4s						
CSNA	**Conrad Observa**	**3.59**	**183**	⇑*i*Pn	**Pn**	**21 17 13.3**	**+0.7**
	comp=Z,1.1nm,0.2s						
CSNA				⇑*i*Sg	**Sg**	**21 18 09.9**	**-1.0**
	comp=Z,14nm,0.3s						
CSNA	**Conrad Observa**	**3.59**	**183**	Pn	**Pn**	**21 17 13.3**	**+0.7**
	comp=Z,1.1nm,0.2s						
CSNA				Sg	**Sg**	**21 18 09.9**	**-1.1**
	comp=Z,14nm,0.3s						
GRA1	**Grafenberg Arr**	**3.64**	**242**	Sg	**Sg**	**21 18 12.3**	**-0.2**
GRF	**Grafenberg Arr**	**3.64**	**242**	*e*Sg	**Sg**	**21 18 12.3**	**-0.2**
BSD	**Bornholm Skovb**	**3.69**	**349**	*i* P	**Pn**	**21 17 13.8**	**-0.2**
BSD				*i* S	**Sn**	**21 17 57.0**	**-1.2**
BSD	**Bornholm Skovb**	**3.69**	**349**	*i* P	**Pn**	**21 17 13.8**	**-0.2**
BSD				*i* S	**Sn**	**21 17 57.0**	**-1.2**
SOP	**Sopron**	**3.83**	**176**	⇓*e*Pn	**Pn**	**21 17 12.2**	**-3.8**
SOP				*e*Sg	**Sg**	**21 18 23.5**	**+4.6**
SOP	**Sopron**	**3.83**	**176**	⇓*e*Pn	**Pn**	**21 17 12.2**	**-3.8**
STHS	**Stebnicka Huta**	**3.86**	**121**	*e*Pn	**Pn**	**21 17 17.9**	**+1.6**
STHS				*e*		21 17 33.0	
STHS				*e*Sg	**Sg**	**21 18 22.0**	**+2.3**
STHS	**Stebnicka Huta**	**3.86**	**121**	*e*PN	**Pn**	**21 17 17.9**	**+1.6**
STHS				*e*		21 17 33.0	
STHS	**Stebnicka Huta**	**3.86**	**121**	*e*SG	**Sg**	**21 18 22.0**	**+2.3**
STHS	**Stebnicka Huta**	**3.86**	**121**	*e*Pn	**Pn**	**21 17 17.9**	**+1.6**
STHS				*e*Sg	**Sg**	**21 18 22.0**	**+2.3**
MOA	**Molln**	**3.86**	**199**	⇑*i*Pn	**Pn**	**21 17 17.1**	**+0.8**
	comp=Z,2.1nm,0.2s						

HFS Lg 21 21 02.9
comp=Z,0.1nm,0.3s,baz=172,slow=23,SNR=4.3
HFS Hagfors 8.76 352 Pn **Pn 21 18 23.5 0.0**
FINES FINESS Array B 11.35 25 Pn **Pn 21 18 57.4 -1.6**
comp=Z,0.1nm,0.3s,baz=212,slow=12,SNR=4.4
FINES Sn **Sn 21 20 58.7 -7.7**
comp=Z,0.2nm,0.3s,baz=215,slow=26,SNR=4.1
EKA Eskdalemuir Ar 12.14 296 Pn **Pn 21 19 08.7 -1.1**
baz=98,slow=12,SNR=2.7
ARCES ARCESS Array B 18.62 10 Pn **Pn 21 20 32.9 -1.7**
comp=Z,0.1nm,0.3s,baz=195,slow=8.8,SNR=4.0

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*BJI **02** 21:29:17.6, 36.11N×70.91E, h305km, mb4.1/1*
*ISCJB **02** 21:29:19.6±0.3, 36.72N±0.02×70.62E±0.05, h291km±4km, mb3.5/9, Error ellipse: s-maj=6.3km s-min=3.7km az=167.4*
*NEIC **02** 21:29:20.9±0.5, 36.77N×70.52E, h289km±6km, mb4.4/15, Error ellipse: s-maj=7.0km s-min=5.1km az=54.0*
*IDC **02** 21:29:20.6±2.1, 36.67N×70.67E, h298km±18km, mb3.2/8, mb1 3.4/14, mb1mx3.1/31, mbtmp3.4/14, Error ellipse: s-maj=23.4km s-min=12.2km az=141.0*
*NNC **02** 21:29:27.1±1.6, 37.30N×70.68E, h290km±11km, mb3.1, mpv4.5, Error ellipse: s-maj=15.6km s-min=9.4km az=23.0*

ISC 02 21:29:20.6±0.3, 36.75N±0.03×70.55E±0.05, h286km±5km, n69, σ0.94/87, mb3.5/9, 8C-6D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.52**	**210**	*e*Pn	**Pn**	**21 30 11.3**	**+0.6**
KBL				*e*S	**S**	**21 30 49.4**	**-1.3**
CEP	**Cherat**	**3.12**	**159**	⇓P	**Pn**	**21 30 17.6**	**+0.9**
CEP				S	**S**	**21 31 07.0**	**+5.6**
KSH	**Kashi**	**5.09**	**55**	P	**Pn**	**21 30 33.8**	**-4.7**
KSH				smax			
	comp=N,220nm,0.6s						
KSH				smax			
	comp=E,310nm,0.7s						
JMU	**Jammu**	**5.38**	**137**	*e*S	**S**	**21 31 40.0**	**-7.6**
AML	**Almayashu**	**5.90**	**23**	P	**Pn**	**21 30 48.7**	**+0.6**
	SNR=77						
AML	**Almayashu**	**5.90**	**23**	*e*P	**Pn**	**21 30 48.6**	**+0.4**
	comp=E,43nm,0.5s						
AML				*e*S	**S**	**21 31 55.8**	**-2.8**
THN	**Thein Dam**	**6.05**	**134**	*e*PKP	**Pn**	**21 30 50.0**	**-0.2**
THN				*e*S	**S**	**21 31 56.7**	**-5.6**
DLH	**Dalhousie**	**6.12**	**132**	*ex*	x	21 32 14.8	
UCH	**Uchtor**	**6.27**	**28**	P	**Pn**	**21 30 53.5**	**+0.8**
	SNR=34						
UCH	**Uchtor**	**6.27**	**28**	*e*Pn	**Pn**	**21 30 53.4**	**+0.7**
	comp=E,15nm,0.6s						
UCH				*e*S	**S**	**21 32 05.9**	**-0.9**
KK31	**Karatay Array**	**6.35**	**360**	⇑P	**Pn**	**21 30 53.9**	**+0.4**
	comp=E,40nm,0.4s,baz=188,slow=12,SNR=999						
KK31				⇑S	**S**	**21 32 03.8**	**-4.7**
	comp=E,3.5nm,0.3s,baz=190,slow=20,SNR=4.5						
EKS2	**Erkin-Say**	**6.41**	**22**	P	**Pn**	**21 30 55.1**	**+0.8**
	SNR=38						
EKS2	**Erkin-Say**	**6.41**	**22**	*e*Pn	**Pn**	**21 30 54.8**	**+0.5**
	comp=E,13nm,0.6s						
EKS2				*e*S	**S**	**21 32 06.7**	**-3.2**
KZA	**Kyzart**	**6.45**	**33**	P	**Pn**	**21 30 55.6**	**+0.8**
	SNR=14						
AAK	**Ala-Archa**	**6.62**	**26**	P	**Pn**	**21 30 57.8**	**+1.0**
	SNR=23						
AAK	**Ala-Archa**	**6.62**	**26**	P	**Pn**	**21 30 57.6**	**+0.8**
	comp=E,0.1nm,0.3s,baz=185,slow=4.5,SNR=33						
AAK				S	**S**	**21 32 14.8**	**+0.3**
	comp=E,0.1nm,0.3s,baz=336,slow=22,SNR=8.9						
AAK	**Ala-Archa**	**6.62**	**26**	*e*Pn	**Pn**	**21 30 57.7**	**+0.8**
	comp=E,17nm,0.4s						
AAK				S	**S**	**21 32 14.0**	**-0.5**
KBK	**Karagaybulak**	**6.80**	**29**	P	**Pn**	**21 31 00.4**	**+1.3**
	SNR=14						
CHMS	**Chumysh**	**7.03**	**26**	P	**Pn**	**21 31 02.2**	**+0.3**
	SNR=8.1						
USP	**Ospenovka**	**7.18**	**24**	P	**Pn**	**21 31 04.1**	**+0.3**
	SNR=9.5						
BHK	**Bhakra**	**7.21**	**136**	*ex*	x	21 32 14.8	
TKM2	**Tokmak 2**	**7.29**	**31**	⇓P	**Pn**	**21 31 05.7**	**+0.7**
	comp=E,22nm,1.3s						
TKM2				⇓S	**S**	**21 32 24.9**	**-4.6**
	comp=E,34nm,1.1s						
TKM2	**Tokmak 2**	**7.29**	**31**	P	**Pn**	**21 31 05.9**	**+0.9**
	SNR=26						
TKM2	**Tokmak 2**	**7.29**	**31**	*e*Pn	**Pn**	**21 31 05.5**	**+0.4**
	comp=E,13nm,0.8s						
TKM2				*e*Sn	**S**	**21 32 21.2**	**-8.3**
SDNR	**Sundarnagar**	**7.46**	**133**	*e*PKP	**Pn**	**21 31 06.5**	**-0.9**
SDNR				*e*S	**S**	**21 32 28.1**	**-5.7**
DDI	**Dehra Dun**	**8.96**	**134**	*ex*	**Pn**	**21 31 25.7**	**-0.2**
DDI				*ex*	x	21 32 48.7	
NDI	**New Delhi**	**9.80**	**143**	*e*PKP	**Pn**	**21 31 34.0**	**-2.4**
NDI				*e*S	**S**	**21 33 17.0**	**-10**
AJM	**Ajmer**	**10.81**	**160**	*ex*	**Pn**	**21 31 45.0**	**-3.9**
AJM				*e*S	**S**	**21 33 43.8**	**-6.3**
AJM				AML	AML	21 34 18.4	
	comp=E,52nm,0.7s						
AJM				AML	AML	21 34 22.1	
	comp=N,63nm,0.5s						
MK09	**Makanchi Array**	**13.29**	**37**	⇓P	**Pn**	**21 32 19.6**	**+0.8**
	comp=N,2.0nm,0.8s						
MKAR	**Makanchi Array**	**13.31**	**37**	P	**Pn**	**21 32 19.3**	**+0.3**
	comp=N,0.5nm,0.3s,baz=224,slow=10,SNR=14						
AB31	**Akbulak array**	**14.70**	**332**	⇑P	**Pn**	**21 32 34.8**	**-0.8**
	comp=N,3.7nm,0.7s,baz=145,slow=12,SNR=56						
AB31				⇑S	**S**	**21 35 13.4**	**-2.5**
	comp=N,5.5nm,0.9s						
ABKAR	**Akbulak array**	**14.70**	**332**	*e*Pn	**Pn**	**21 32 34.6**	**-0.9**
	comp=N,2.2nm,0.4s						
ABKAR				*e*S	**S**	**21 35 12.5**	**-3.5**
BHPL	**Bhopal**	**14.71**	**154**	*e*PKP	**Pn**	**21 32 30.0**	**-6.0**
BHPL				*e*S	**S**	**21 35 11.6**	**-5.3**
KURBB	**Kurchatov Arra**	**15.01**	**20**	⇑P	**Pn**	**21 32 38.7**	**-0.6**
	comp=N,2.5nm,0.6s						
KURK	**Kurchatov**	**15.12**	**20**	⇑P	**Pn**	**21 32 39.8**	**-0.8**
	comp=N,4.6nm,0.7s						
KURK	**Kurchatov**	**15.12**	**20**	P	**Pn**	**21 32 38.8**	**-1.8**
	comp=N,0.8nm,0.3s,baz=216,slow=11,SNR=40						
KURK	**Kurchatov**	**15.12**	**20**	*e*Pn	**Pn**	**21 32 39.7**	**-0.9**
	comp=N,4.3nm,0.6s						
DMN	**Daman**	**15.31**	**122**	*e*P	**Pn**	**21 32 43.4**	**+0.3**
	comp=N,38nm,0.6s						
KKN	**Kakani**	**15.31**	**121**	*e*P	**Pn**	**21 32 42.5**	**-0.7**
	comp=N,43nm,0.5s						
PKI	**Pulchoki**	**15.54**	**122**	*e*P	**Pn**	**21 32 45.7**	**-0.1**
	comp=N,30nm,0.5s						
GUN	**Gumba**	**15.65**	**120**	*e*P	**Pn**	**21 32 47.0**	**-0.1**
	comp=N,45nm,0.4s						
VOSK	**Vostochnaya**	**15.98**	**1**	⇑P	**Pn**	**21 32 49.2**	**-1.4**
	comp=N,9.2nm,0.4s						
ZRNK	**Zerenda**	**16.24**	**357**	⇓P	**P**	**21 32 52.1**	**+0.5**
	comp=N,8.4nm,0.5s						
BVA0	**Borovoye Array**	**16.28**	**360**	P	**P**	**21 32 52.8**	**+0.8**
	comp=N,1.0nm,0.5s,baz=177,slow=12,SNR=36						
BVAR	**Borovoye Array**	**16.28**	**360**	P	**P**	**21 32 53.0**	**+1.0**
	comp=N,2.2nm,0.3s,baz=168,slow=12,SNR=25						
BRVK	**Borovoye**	**16.31**	**359**	*e*P	**P**	**21 32 53.3**	**+0.9**
	comp=N,15nm,0.6s						
AKTK	**Aktyubinsk**	**16.39**	**331**	P	**P**	**21 32 54.3**	**+1.1**
AKTK				S	**S**	**21 35 49.8**	**-0.1**
AKTO	**Aktyubinsk**	**16.39**	**331**	⇓P	**P**	**21 32 54.1**	**+0.9**
	comp=N,5.6nm,0.7s						
AKTO				⇑S	**S**	**21 35 50.0**	**0.0**
	comp=N,3.1nm,1.4s						
AKTO	**Aktyubinsk**	**16.39**	**331**	P	**P**	**21 32 54.3**	**+1.1**
	comp=N,2.8nm,0.3s,baz=144,slow=8.2,SNR=30						
AKTO				S	**S**	**21 35 49.8**	**-0.1**
	comp=N,0.1nm,0.3s,baz=34,slow=12,SNR=4.9						
RAMN	**Ramite**	**16.75**	**121**	*e*P	**P**	**21 32 59.3**	**+1.8**
LSA	**Lhasa**	**18.59**	**106**	*e*P	**P**	**21 33 18.2**	**+0.9**
	comp=N,7.5nm,0.8s						
KAD	**Karad**	**19.63**	**170**	*ex*	x	21 33 35.9	
ZAA0	**Zalesovo Array**	**19.84**	**25**	*e*P	**P**	**21 33 29.8**	**-0.6**
ZALV	**Zalesovo Beam**	**19.84**	**25**	P	**P**	**21 33 30.1**	**-0.2**
	comp=N,1.4nm,0.3s,baz=220,slow=11,SNR=33						
ZALV				S	**S**	**21 36 56.6**	**-0.9**
	comp=N,0.1nm,0.3s,baz=218,slow=18,SNR=5.2						
GNI	**Garni**	**20.48**	**287**	P	**P**	**21 33 37.4**	**+0.2**
	comp=N,1.2nm,0.3s,baz=156,slow=10.0,SNR=2.0						
GNI	**Garni**	**20.48**	**287**	*e*P	**P**	**21 33 37.3**	**+0.1**
	comp=N,44nm,1.5s						
MIB	**Mutribah**	**20.58**	**257**	*e*P	**P**	**21 33 38.6**	**+0.2**
MIB				AMb	AMB	21 33 40.8	
	comp=Z,32nm,1.1s						
RDF	**Al-Radifah**	**20.81**	**255**	*e*P	**P**	**21 33 40.8**	**0.0**
RDF				AMb	AMB	21 33 42.7	
	comp=Z,29nm,0.6s						
NAY	**Al-Naaiem**	**20.90**	**256**	*e*P	**P**	**21 33 41.8**	**+0.2**
NAY				AMb	AMB	21 33 43.1	
	comp=Z,13nm,0.7s						
ARU	**Arti**	**21.28**	**341**	*e*P	**P**	**21 33 45.1**	**+0.4**
	comp=Z,6.8nm,0.8s,mb4.0						
BRTR	**Keskin Array B**	**29.02**	**287**	P	**P**	**21 34 55.1**	**+0.8**
	comp=Z,0.9nm,0.8s,mb3.3,baz=110,slow=9.3,SNR=4.9						
MLR	**Muntele Rosu**	**34.35**	**299**	P	**P**	**21 35 40.8**	**+0.2**
	comp=Z,1.5nm,0.7s,mb3.6,baz=152,slow=8.0,SNR=3.5						
FINES	**FINESS Array B**	**37.08**	**326**	P	**P**	**21 36 03.7**	**+0.2**
	comp=Z,2.4nm,1.1s,mb3.5,baz=114,slow=14,SNR=3.6						
ARCES	**ARCESS Array B**	**40.78**	**338**	P	**P**	**21 36 33.9**	**+0.1**
	comp=Z,3.2nm,0.9s,mb3.5,baz=100,slow=5.0,SNR=5.3						
NOA	**NORSAR Array B**	**43.97**	**323**	P	**P**	**21 37 00.2**	**+0.8**
	comp=Z,0.3nm,0.5s,mb2.7,baz=94,slow=8.0,SNR=3.3						
NOA	**NORSAR Array B**	**43.97**	**323**	P	**P**	**21 37 00.2**	**+0.8**
TIXI	**Tiksi**	**45.68**	**22**	*e*P	**P**	**21 37 12.8**	**0.0**
	comp=Z,0.8nm,0.5s,mb3.3						
TORD	**Torodi Ar. Bea**	**65.36**	**268**	P	**P**	**21 39 31.6**	**-1.3**
	comp=Z,2.3nm,0.5s,mb4.1,baz=51,slow=5.9,SNR=23						
ASAR	**Alice Springs**	**84.69**	**125**	P	**P**	**21 41 21.1**	**-1.4**
	comp=Z,0.2nm,0.6s,mb3.2,baz=324,slow=4.6,SNR=3.7						

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*IDC **02** 21:38:14.0±2.1, 6.69S×155.31E, h0km, mb3.8/8, mb1 3.9/8, mb1mx3.8/14, mbtmp3.8/8, MS3.0/2, Ms1 3.0/2, ms1mx2.8/18, Error ellipse: s-maj=76.0km s-min=24.0km az=98.0*
*ISCJB **02** 21:38:27.6±3.0, 6.5S±0.1×154.3E±0.1, h88km±31km, mb3.7/12, Error ellipse: s-maj=21.3km s-min=14.2km az=146.6*
*NEIC **02** 21:38:32.3±2.6, 6.50S×154.53E, h123km±29km, mb4.0/5, Error ellipse: s-maj=26.4km s-min=14.2km az=130.0*

ISC 02 21:38:29.2±2.4, 6.5S±0.1×154.3E±0.1, h85km±27km, n25, σ0.95/24, mb3.7/12, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.33**	**118**	*e*Pn	**Pn**	**21 39 58.9**	**-1.1**
	138nm,0.8s						
HNR				Sn	**Sn**	**21 41 11.8**	**+1.0**
CTA	**Charters Tower**	**15.63**	**209**	Pn	**Pn**	**21 42 09.4**	**+4.8**
	0.6nm,0.3s,baz=31,slow=12,SNR=14						
CTAO	**Charters Tower**	**15.63**	**209**	*e*Pn	**Pn**	**21 42 09.2**	**+4.5**
	8.2nm,0.7s						
KAKA	**Kakadu**	**22.41**	**252**	*e*P	**P**	**21 43 20.5**	**-0.5**
WRAB	**Tennant Creek**	**23.54**	**233**	*e*P	**P**	**21 43 31.8**	**-0.2**
	6.4nm,0.9s,mb4.0						
ASAR	**Alice Springs**	**26.02**	**227**	P	**P**	**21 43 54.7**	**+0.3**
	1.5nm,0.5s,mb3.6,baz=60,slow=8.7,SNR=31						
ASAR				PcP	PcP	21 47 21.1	+0.3
	0.4nm,0.5s,baz=54,slow=2.4,SNR=5.8						
ASAR				ScP	ScP	21 50 58.8	+5.9
	0.3nm,0.6s,baz=51,slow=2.6,SNR=5.5						
STKA	**Stephens Creek**	**27.93**	**204**	P	**P**	**21 44 08.3**	**-3.2**
	0.9nm,0.7s,mb3.4,baz=346,slow=11,SNR=4.7						
STKA				LR	LR	21 55 04.5	
	comp=Z,65nm,20.3s,baz=200,slow=36						
STKA	**Stephens Creek**	**27.93**	**204**	*e*P	**P**	**21 44 11.3**	**-0.2**
	0.6nm,1.1s,mb3.0						
STKA				LR	LR	21 55 04.5	
FITZ	**Fitzroy Crossi**	**30.24**	**245**	*e*P	**P**	**21 44 31.5**	**-0.6**
	1.5nm,0.6s,mb3.8						
MJAR	**Matsushiro Ar**	**45.36**	**342**	P	**P**	**21 46 39.8**	**+0.8**
	0.6nm,0.4s,mb3.6,baz=166,slow=8.2,SNR=3.1						
YSS	**Yuzh-Sakhalins**	**54.16**	**350**	P	**P**	**21 47 45.2**	**-0.3**
KULM	**Kulim**	**54.80**	**281**	P	**P**	**21 47 51.6**	**+0.7**
CMAR	**Chiang Mai Arr**	**59.93**	**296**	P	**P**	**21 48 30.1**	**+3.2**
	0.3nm,0.6s,mb3.5,baz=116,slow=6.1,SNR=3.1						
HIA	**Hailar**	**63.15**	**335**	P	**P**	**21 48 47.4**	**-0.6**
CASY	**Casey**	**66.88**	**198**	P	**P**	**21 49 12.9**	**+1.0**
ULN	**Ulaanbaatar**	**68.18**	**328**	*e*P	**P**	**21 49 21.6**	**+1.2**
	1.4nm,0.8s,mb3.8						
SONM	**Songino Array**	**68.52**	**328**	P	**P**	**21 49 24.1**	**+1.6**
	0.7nm,0.5s,mb3.8,baz=149,slow=6.2,SNR=6.5						
LSA	**Lhasa**	**70.40**	**305**	*e*P	**P**	**21 49 34.2**	**-0.3**
BILL	**Bilibino**	**74.81**	**5**	P	**P**	**21 49 59.5**	**-0.3**
MKAR	**Makanchi Array**	**82.55**	**319**	P	**P**	**21 50 42.7**	**-0.1**
	0.2nm,0.4s,mb3.3,baz=99,slow=9.2,SNR=2.7						
ZALV	**Zalesovo Beam**	**83.35**	**326**	P	**P**	**21 50 45.7**	**-1.0**
	0.3nm,0.3s,mb3.6,baz=136,slow=5.2,SNR=2.5						
BVAR	**Borovoye Array**	**91.45**	**323**	P	**P**	**21 51 24.9**	**-1.0**
	0.3nm,0.5s,mb3.7,baz=97,slow=6.1,SNR=4.5						
NVAR	**Mina Array Bea**	**91.94**	**52**	P	**P**	**21 51 27.2**	**-1.3**
	0.4nm,0.4s,mb4.0,baz=251,slow=4.5,SNR=4.2						
YKA	**Yellowknife Ar**	**96.19**	**28**	LR	LR	22 32 38.2	
	comp=Z,3.7nm,18.4s,baz=115,slow=34						
TORD	**Torodi Ar. Bea**	**152.21**	**286**	PKPbc	PKPbc	21 58 13.9	-2.1
	0.4nm,0.3s,baz=104,slow=2.0,SNR=7.7						
TORD				pPKPbc	pPKPbc	21 58 19.7	-20
	1.0nm,0.6s,baz=54,slow=2.6,SNR=4.1						
TORD				PKPab	PKPab	21 58 24.4	-1.7
	0.5nm,0.6s,baz=84,slow=3.7,SNR=7.0						

MEX 02 22:07:02.0±0.6, 17.27N×100.30W, h6km±7km, MD3.5, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.22**	**173**	*e*P	Pg	22 07 05.9	-0.4
CAIG				*i* S	Sg	22 07 09.2	-0.1
ACX	**Acapulco**	**0.54**	**137**	*i* P	Pg	22 07 11.7	-0.7
ACX				*i* S	Sg	22 07 20.3	+0.9
ZIIG	**Zihuatanejo**	**1.17**	**287**	*i* P	Pg	22 07 21.5	-2.9
ZIIG				*i* S	Sg	22 07 34.8	-4.8
PNIG	**Pinotepa**	**2.25**	**112**	*i* P	Pn	22 07 36.9	-2.8
PNIG				*i* S	Sn	22 08 02.7	-5.1

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*ISCJB **02** 22:12:13.1±0.6, 29.92S±0.06×179.4W±0.1, h381km±6km, mb4.0/12, Error ellipse: s-maj=15.5km s-min=8.7km az=21.0*
*NEIC **02** 22:12:14.7±0.8, 29.74S×179.35W, h388km±8km, mb4.1/6, Error ellipse: s-maj=13.6km s-min=12.9km az=155.0*
*IDC **02** 22:12:15.4±1.1, 29.75S×179.31W, h393km±11km, mb3.7/6, mb1 3.8/6, mb1mx3.6/15, mbtmp3.7/6, Error ellipse: s-maj=20.2km s-min=17.2km az=15.0*

ISC 02 22:12:14.0±0.6, 29.93S±0.07×179.4W±0.1, h375km±6km, n39, σ1.16/35, mb4.0/12, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.47**	**63**	P	**Pn**	**22 13 06.8**	**+2.3**
	448nm,0.3s,baz=271,slow=4.3,SNR=27						
RAO				S	**S**	**22 13 44.4**	**-0.7**
	93nm,0.3s,baz=96,slow=22,SNR=6.7						
PUZ	**Puketiti**	**8.35**	**193**	P	**Pn**	**22 14 12.5**	**+0.1**
URZ	**Urewera**	**8.79**	**198**	P	**Pn**	**22 14 18.2**	**+0.6**
	6.1nm,0.3s,baz=2.4,slow=3.6,SNR=68						
URZ				S	**S**	**22 15 56.9**	**-1.9**
	27nm,0.3s,baz=64,slow=20,SNR=19						
MOVZ	**Moawhango**	**10.25**	**202**	P	**Pn**	**22 14 35.9**	**+1.2**
BFZ	**Birch Farm**	**11.29**	**197**	P	**Pn**	**22 14 46.4**	**-0.5**
KIW	**Kapiti Island**	**11.84**	**201**	P	**Pn**	**22 14 52.1**	**-1.3**
QRZ	**Quartz Range**	**12.69**	**209**	P	**P**	**22 15 02.9**	**+0.8**
THZ	**Tophouse**	**13.34**	**206**	P	**P**	**22 15 08.1**	**-1.1**
RPZ	**Rata Peaks**	**15.71**	**206**	S	**S**	**22 18 17.7**	**-3.9**
	4.5nm,0.3s,baz=162,slow=18,SNR=4.7						
FUNA	**Funafuti**	**21.34**	**356**	P	**P**	**22 16 29.6**	**-2.9**
TAU	**Tasmania Unive**	**29.53**	**235**	P	**P**	**22 17 47.1**	**+1.7**
CTA	**Charters Tower**	**32.51**	**280**	*e*P	**P**	**22 18 12.3**	**+0.8**
	8.2nm,0.6s,mb4.1						
CTA	**Charters Tower**	**32.51**	**280**	P	**P**	**22 18 13.1**	**+1.6**
	7.5nm,0.5s,mb4.2,baz=104,slow=11,SNR=15						
CTA	**Charters Tower**	**32.51**	**280**	P	**P**	**22 18 13.1**	**+1.6**
CTAO	**Charters Tower**	**32.51**	**280**	*e*P	**P**	**22 18 12.9**	**+1.4**
	7.2nm,0.5s,mb4.2						
STKA	**Stephens Creek**	**33.39**	**257**	*e*P	**P**	**22 18 20.0**	**+1.1**
	3.8nm,0.6s,mb3.8						
STKA	**Stephens Creek**	**33.39**	**257**	P	**P**	**22 18 20.1**	**+1.2**
	6.4nm,0.6s,mb4.0,baz=97,slow=8.0,SNR=21						
STKA	**Stephens Creek**	**33.39**	**257**	*e*P	**P**	**22 18 20.2**	**+1.3**
	1.0nm,0.6s,mb3.2						
BBOO	**Buckleboo**	**37.92**	**254**	*e*P	**P**	**22 18 56.9**	**0.0**
	7.7nm,0.8s,mb4.0						
ASAR	**Alice Springs**	**41.91**	**267**	P	**P**	**22 19 29.4**	**-0.1**
	4.3nm,0.8s,mb3.6,baz=106,slow=7.9,SNR=37						
ASAR				ScP	ScP	22 24 29.2	-1.7
	1.3nm,1.0s,baz=127,slow=4.0,SNR=5.7						
WRAB	**Tennant Creek**	**42.85**	**272**	*e*P	**P**	**22 19 36.5**	**-0.5**
	11nm,0.8s,mb4.0						
FORT	**Forrest**	**44.98**	**255**	*e*P	**P**	**22 19 52.9**	**-0.8**
	17nm,0.6s,mb4.3						
SBA	**Scott Base**	**48.41**	**184**	*e*P	**P**	**22 20 22.5**	**+3.3**
	5.9nm,0.7s,mb3.9						
FITZ	**Fitzroy Crossi**	**51.13**	**270**	*e*P	**P**	**22 20 40.1**	**-0.2**
	11nm,0.9s,mb4.1						
FITZ	**Fitzroy Crossi**	**51.13**	**270**	*e*P	**P**	**22 20 40.4**	**+0.1**
	8.7nm,1.0s,mb3.9						
MBWA	**Marble Bar**	**55.05**	**264**	*e*P	**P**	**22 21 07.6**	**-1.0**
	6.9nm,0.8s,mb4.0						
QSPA	**South Pole Qui**	**60.17**	**180**	P	**P**	**22 21 44.8**	**+1.9**
	7.1nm,0.6s,mb4.3,baz=39,slow=1.3,SNR=75						
QSPA	**South Pole Qui**	**60.17**	**180**	P	**P**	**22 21 44.8**	**+1.9**
RPN	**Rapa Nui**	**60.74**	**106**	P	**P**	**22 21 46.8**	**-0.8**
MAW	**Mawson**	**72.31**	**201**	P	**P**	**22 22 59.7**	**+0.4**
	2.5nm,0.5s,mb4.2,baz=136,slow=12,SNR=6.4						
YHNB	**Yeheng**	**78.57**	**307**	*e*P	**P**	**22 23 34.2**	**-1.0**
PLCA	**Paso Flores**	**83.72**	**134**	P	**P**	**22 24 01.8**	**-0.1**
NVAR	**Mina Array Bea**	**88.73**	**43**	P	**P**	**22 24 25.5**	**-0.4**
	0.4nm,0.5s,mb3.5,baz=225,slow=8.9,SNR=2.9						
BVAR	**Borovoye Array**	**125.22**	**316**	PKP	PKPdf	22 30 28.7	-1.3
	0.3nm,0.5s,baz=120,slow=5.2,SNR=3.4						
FINES	**FINESS Array B**	**144.28**	**339**	PKP	PKPdf	22 31 02.3	-2.8
	2.3nm,0.6s,baz=55,slow=3.8,SNR=16						
AKASG	**Malin Array Be**	**150.18**	**322**	PKPbc	PKPbc	22 31 19.3	-1.4
	0.5nm,0.4s,baz=64,slow=1.8,SNR=3.6						
MMAI	**Mount Meron Ar**	**150.22**	**285**	PKPbc	PKPbc	22 31 21.4	0.0
	2.1nm,0.5s,baz=83,slow=6.8,SNR=13						
BRTR	**Keskin Array B**	**151.30**	**299**	PKPbc	PKPbc	22 31 22.7	-1.0
	0.6nm,0.9s,baz=75,slow=1.9,SNR=3.5						
BRTR				PKPab	PKPab	22 31 32.5	-0.9
	0.6nm,0.8s,baz=56,slow=5.9,SNR=3.1						
TORD	**Torodi Ar. Bea**	**163.26**	**184**	PKPab	PKPab	22 32 24.9	-0.6
	2.0nm,0.6s,baz=187,slow=3.3,SNR=21						

CASC 02 22:28:14.4±1.9, 9.62N×84.18W, h13km, MD3.9, ML3.3, 5C-4D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QCR	**Quepos**	**0.20**	**177**	⇑*i* P	Pg	22 28 19.4	+0.6
QCR				*e*S	Sg	22 28 23.6	+1.8
LAJ	**Bijagual**	**0.25**	**13**	⇓*i* P	Pg	22 28 22.7	+3.0
SJS	**Escuela Geolog**	**0.34**	**21**	⇓*e*P	Pg	22 28 22.2	+0.9
SJS				*e*S	Sg	22 28 28.5	+2.6
BUS	**Buena Vista**	**0.42**	**99**	⇑*i* P	Pg	22 28 23.3	+0.6
BUS				*e*S	Sg	22 28 30.1	+1.8
URSC	**Urasca**	**0.45**	**62**	⇓*i* P	Pg	22 28 23.9	+0.6
URSC				*e*S	Sg	22 28 30.7	+1.5
CGA2	**Cerro Gallo 2**	**0.48**	**324**	⇑*i* P	Pg	22 28 24.2	+0.2
CGA2				*e*S	Sg	22 28 31.6	+1.2
BAR1		**0.93**	**114**	⇓*e*P	Pg	22 28 31.1	-1.3
JCR	**Jicaral**	**0.95**	**284**	⇑*e*P	Pb	22 28 31.1	-1.6
FORC	**Fortuna**	**0.97**	**330**	⇑*i* P	Pb	22 28 32.3	-0.8
FORC				*e*S	Sb	22 28 43.9	-1.9
JTS	**JuntasAbangare**	**1.01**	**311**	*e*P	Pb	22 28 31.9	-1.9
JTS				*e*S	Sb	22 28 49.6	+2.6
LIO	**Limon**	**1.19**	**71**	*e*P	Pn	22 28 33.4	-3.4
LIO				*e*S	Sb	22 28 48.9	-3.2
AMAS	**Alto Masis**	**1.27**	**321**	*i* P	Pn	22 28 36.8	-1.0
CUI	**Cuipilapa**	**1.42**	**317**	*i* P	Pn	22 28 38.8	-1.0
CUI				*i* S	Sn	22 28 58.1	-0.3
COLC	**Colonia**	**1.45**	**316**	*i* P	Pn	22 28 39.3	-1.0
GUAB	**Guayabo de Bag**	**1.50**	**316**	*i* P	Pn	22 28 40.0	-1.0
MESS	**Mesas**	**1.50**	**318**	*i* P	Pn	22 28 40.5	-0.5
MESS				*i* S	Sn	22 29 00.1	-0.2
LIM1	**Limonal**	**1.50**	**315**	*i* P	Pn	22 28 40.2	-0.9
VCR	**Vista de Mar**	**1.52**	**289**	*e*P	Pn	22 28 40.2	-1.0

ARG	**Arkhangelos**	**2.52**	**35**	*e*Pn	**Pn**	**23 16 22.5**	**+2.2**
SLUM		**2.82**	**200**	P	**Pn**	**23 16 25.6**	**+1.1**
	baz=199						
SLUM				S	**Sn**	**23 16 54.4**	**-2.9**
	baz=199						
SLUM				AMP		23 17 00.0	
	comp=E,40μm,0.2s,logA/T=5.2,baz=199						
SLUM		**2.82**	**200**	P	**Pn**	**23 16 25.6**	**+1.2**
SLUM				S	**Sn**	**23 16 54.3**	**-2.9**
HMAT	**Matruh**	**3.13**	**168**	P	**Pn**	**23 16 30.2**	**+1.6**
	baz=165						
HMAT				S	**Sn**	**23 17 02.6**	**-2.1**
	baz=165						
HMAT	**Matruh**	**3.13**	**168**	P	**Pn**	**23 16 30.2**	**+1.6**
HMAT				S	**Sn**	**23 17 02.6**	**-2.1**
AKAS	**Kas**	**3.39**	**51**	*i* P	**Pn**	**23 16 32.7**	**+0.5**
AKAS	**Kas**	**3.39**	**51**	*i* P	**Pn**	**23 16 32.7**	**+0.5**
AKAS				*i* S	**Sn**	**23 17 08.9**	**-2.2**
GOLH	**Golhisar**	**4.04**	**40**	*i* P	**Pn**	**23 16 42.0**	**+0.8**
GOLH	**Golhisar**	**4.04**	**40**	*i* P	**Pn**	**23 16 42.0**	**+0.8**
GOLH				*i* S	**Sn**	**23 17 28.1**	**+0.8**
KORT	**Korkueli**	**4.33**	**48**	*i* P	**Pn**	**23 16 48.5**	**+3.4**
KORT	**Korkueli**	**4.33**	**48**	*i* P	**Pn**	**23 16 48.5**	**+3.3**
KORT				*i* S	**Sn**	**23 17 38.6**	**+4.2**
KHAL	**Karahalli**	**4.92**	**30**	*i* P	**Pn**	**23 16 52.3**	**-0.9**
KHAL	**Karahalli**	**4.92**	**30**	*i* P	**Pn**	**23 16 52.3**	**-0.9**
KHAL				*i* S	**Sn**	**23 17 46.4**	**-2.4**
SWA2		**4.96**	**189**	P	**Pn**	**23 16 54.8**	**+1.0**
	baz=189						
SWA2				AMP		23 18 00.0	
	comp=N,20μm,0.4s,logA/T=4.7,baz=189						
SWA2		**4.96**	**189**	P	**Pn**	**23 16 54.8**	**+1.0**
GAZI	**Gazipasa**	**5.32**	**65**	*i* P	**Pn**	**23 16 59.4**	**+0.6**
GAZI	**Gazipasa**	**5.32**	**65**	*i* P	**Pn**	**23 16 59.4**	**+0.6**
GAZI				*i* S	**Sn**	**23 17 55.1**	**-3.7**
ERMK	**Ermenek**	**5.92**	**63**	*i* P	**Pn**	**23 17 09.5**	**+2.5**
ERMK	**Ermenek**	**5.92**	**63**	*i* P	**Pn**	**23 17 09.5**	**+2.5**
ERMK				*i* S	**Sn**	**23 18 16.6**	**0.0**
MMAI	**Mount Meron Ar**	**7.66**	**96**	Pn	**Pn**	**23 17 30.7**	**-0.2**
	comp=N,1.2nm,0.3s,baz=274,slow=12,SNR=14						
MMAI				Sn	**Sn**	**23 18 54.0**	**-2.4**
	comp=N,0.7nm,0.3s,baz=283,slow=27,SNR=3.1						
EIL	**Elat**	**8.59**	**119**	Pn	**Pn**	**23 17 44.1**	**+0.5**
	comp=N,0.3nm,0.3s,baz=315,slow=2.9,SNR=7.4						
EIL				Sn	**Sn**	**23 19 17.8**	**-1.5**
	comp=N,0.3nm,0.3s,baz=101,slow=18,SNR=3.5						
EIL	**Elat**	**8.59**	**119**	Pn	**Pn**	**23 17 44.1**	**+0.5**
EIL				Sn	**Sn**	**23 19 17.8**	**-1.5**
EIL	**Elat**	**8.59**	**119**	Pn	**Pn**	**23 17 44.1**	**+0.5**
VAE	**Valguarnera**	**10.22**	**292**	LR	LR	23 22 49.5	
	comp=N,62nm,19.1s,baz=41,slow=42						
ESDC	**Sonseca Array**	**24.77**	**292**	P	**P**	**23 20 59.0**	**-1.1**
	comp=N,0.5nm,0.6s,mb3.3,baz=82,slow=8.8,SNR=4.8						
ESDC	**Sonseca Array**	**24.77**	**292**	P	**P**	**23 20 59.0**	**-1.2**
ESDC	**Sonseca Array**	**24.77**	**292**	P	**P**	**23 20 59.0**	**-1.1**
TORD	**Torodi Ar. Bea**	**30.62**	**233**	P	**P**	**23 21 53.2**	**+0.5**
	comp=N,0.2nm,0.3s,mb3.4,baz=33,slow=8.4,SNR=8.5						
MKAR	**Makanchi Array**	**43.53**	**56**	P	**P**	**23 23 43.1**	**+1.2**
	comp=N,0.7nm,0.6s,mb3.6,baz=285,slow=6.0,SNR=8.9						
MKAR	**Makanchi Array**	**43.53**	**56**	P	**P**	**23 23 43.1**	**+1.2**
ZALV	**Zalesovo Beam**	**45.01**	**45**	P	**P**	**23 23 53.8**	**+0.2**
	comp=N,0.6nm,0.4s,mb3.8,baz=279,slow=9.5,SNR=3.2						
ZALV	**Zalesovo Beam**	**45.01**	**45**	P	**P**	**23 23 53.8**	**+0.2**
SONM	**Songino Array**	**59.38**	**50**	P	**P**	**23 25 41.5**	**+1.1**
	comp=N,0.3nm,0.4s,mb3.7,baz=270,slow=4.3,SNR=2.8						
SONM	**Songino Array**	**59.38**	**50**	P	**P**	**23 25 41.5**	**+1.1**

NEIC ***02*** *23:47:13.2±2.7,23°.21N×121°.91E,h10km,MG3.0(JMA), Error ellipse: s-maj=27.8km s-min=10.1km az=118.0*
ISCJB ***02*** *23:47:14.6±0.8,23°.18N±0°.02×121°.90E±0°.02,h15km±5km, Error ellipse: s-maj=3.0km s-min=2.3km az=138.0*
TAP ***02*** *23:47:15.7,23°.23N×121°.83E,h15km,ML3.6,C*
JMA ***02*** *23:47:15.3±0.4,23°.14N×121°.97E,h17km,M3.0*
ISC 02 23:47:13.9±0.5,**23°.19N**±0°.02×**121°.89E**±0°.02,**h9**km±2km,
n62,σ0°**99**/111,**13C-1D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.49**	**260**	⇑*i*P	**Pg**	**23 47 24.2**	**+0.8**
	baz=244						
CHKT				*i* S	**Sg**	**23 47 30.2**	**+0.3**
	baz=244						
TWF1	**Yuli**	**0.57**	**287**	⇑*i*P	**Pg**	**23 47 25.5**	**+0.6**
	baz=273						
TWF1				*e*S	**Sg**	**23 47 33.1**	**+0.7**
	baz=273						
YULB	**Yu-li**	**0.58**	**290**	⇓*i*P	**Pg**	**23 47 25.3**	**+0.2**
YULB				*e*S	**Sg**	**23 47 34.5**	**+1.8**
EHY	**Hungye**	**0.61**	**301**	*e*P	**Pg**	**23 47 26.4**	**+0.7**
	baz=301						
ESL	**Shilin**	**0.75**	**326**	P	**Pg**	**23 47 28.4**	**0.0**
	baz=327						
ESL				S	**Sg**	**23 47 38.0**	**-0.1**
	baz=327						
ELDTW	**Lidau**	**0.80**	**270**	⇑*i*P	**Pg**	**23 47 29.1**	**-0.3**
	baz=266						
ELDTW				*e*S	**Sg**	**23 47 38.7**	**-1.1**
	baz=266						
TTN	**Taitung**	**0.81**	**238**	P	**Pg**	**23 47 29.9**	**+0.4**
	baz=223						
TTN				S	**Sg**	**23 47 40.4**	**+0.3**
	baz=223						
HWA	**Hwalien**	**0.83**	**342**	P	**Pg**	**23 47 30.3**	**+0.4**
	baz=344						
HWA				*e*S	**Sg**	**23 47 41.4**	**+0.8**
	baz=344						
TWG	**Pinlang**	**0.84**	**244**	*e*P	**Pg**	**23 47 29.7**	**-0.4**
TWG				*e*S	**Sg**	**23 47 40.9**	**-0.1**
TWG	**Pinlang**	**0.84**	**244**	P	**Pg**	**23 47 30.1**	**+0.1**
	baz=229						
TWG				S	**Sg**	**23 47 41.0**	**0.0**
	baz=229						
YUS	**Yu-Shan**	**0.91**	**289**	⇑*i*P	**Pg**	**23 47 31.8**	**+0.3**
	baz=287						
YUS				S	**Sg**	**23 47 43.2**	**-0.1**
	baz=287						
TWD	**Chiawan**	**0.93**	**343**	P	**Pg**	**23 47 32.6**	**+0.9**
	baz=345						
TWD				*e*S	**Sg**	**23 47 42.7**	**-1.1**
	baz=345						
NACB	**Ninganchiao**	**1.02**	**345**	*e*P	**Pg**	**23 47 32.4**	**-1.0**
NACB				*e*S	**Sg**	**23 47 45.5**	**-1.1**
ECL	**Taimali**	**1.04**	**236**	P	**Pg**	**23 47 32.9**	**-1.1**
	baz=232						
ECL				*e*S	**Sg**	**23 47 45.0**	**-2.6**
	baz=232						
SSLB	**Suanglung**	**1.04**	**305**	*e*P	**Pg**	**23 47 33.0**	**-1.0**
SSLB				S	**Sg**	**23 47 46.2**	**-1.4**
ALS	**Alishan**	**1.05**	**288**	⇑*i*P	**Pg**	**23 47 34.1**	**+0.1**
	baz=275						
ALS				*i* S	**Sg**	**23 47 47.8**	**+0.2**
	baz=275						
WHF	**Hehuan Shan**	**1.11**	**329**	⇑*i*P	**Pb**	**23 47 34.5**	**-0.7**
	baz=330						
SMLT	**Sun Moon Lake**	**1.14**	**307**	⇑*i*P	**Pb**	**23 47 35.3**	**-0.5**
	baz=306						
SMLT				*e*S	**Sb**	**23 47 50.3**	**-0.4**
	baz=306						
TPUB	**Ta-pu**	**1.16**	**276**	*e*Pn	**Pn**	**23 47 35.7**	**-0.7**
TPUB				*e*Sn	**Sn**	**23 47 49.3**	**-3.1**
WTP	**Ta-pu**	**1.17**	**273**	⇑*i*P	**Pb**	**23 47 36.4**	**0.0**
	baz=270						
WTP				S	**Sb**	**23 47 51.2**	**-0.4**
	baz=270						
CHN5	**Tsauling**	**1.18**	**290**	⇑*i*P	**Pb**	**23 47 36.7**	**+0.2**
	baz=277						
CHN5				S	**Sb**	**23 47 52.1**	**+0.1**
	baz=277						
TYC	**Yuchr**	**1.18**	**307**	⇑*i*P	**Pb**	**23 47 36.0**	**-0.5**
	baz=306						
TYC				*e*S	**Sb**	**23 47 52.3**	**+0.3**
	baz=306						
LAY	**Lan-yu**	**1.19**	**195**	*e*P	**Pb**	**23 47 34.8**	**-1.8**
	baz=193						
LAY				*e*S	**Sb**	**23 47 50.3**	**-1.8**
	baz=193						
SGST	**Jiashian**	**1.21**	**265**	*i* P	**Pn**	**23 47 36.9**	**0.0**
	baz=262						
SGST				*e*S	**Sb**	**23 47 52.9**	**+0.3**
	baz=262						
TAW	**Tawu**	**1.23**	**228**	*e*P	**Pn**	**23 47 35.9**	**-1.4**
	baz=237						
TAW				*e*S	**Sb**	**23 47 50.7**	**-2.7**
	baz=237						
ENA	**Nanau**	**1.24**	**354**	P	**Pn**	**23 47 36.7**	**-0.7**
	baz=355						
ENA				*e*S	**Sb**	**23 47 52.3**	**-1.3**
	baz=355						
SSD	**Sandimen**	**1.24**	**249**	P	**Pn**	**23 47 36.8**	**-0.6**
	baz=247						
TWT	**Tachien**	**1.24**	**328**	*i* P	**Pn**	**23 47 37.4**	**-0.1**
	baz=327						
TWT				*e*S	**Sb**	**23 47 52.1**	**-1.6**
	baz=327						
CHN1	**Nanshi**	**1.25**	**270**	⇑*i*P	**Pn**	**23 47 37.9**	**+0.4**
	baz=267						
CHN1				*e*S	**Sb**	**23 47 54.3**	**+0.3**
	baz=267						
EAST	**Anshuo**	**1.25**	**230**	*e*P	**Pn**	**23 47 36.5**	**-1.1**
	baz=228						
TWK	**Hsinying**	**1.29**	**274**	*i* P	**Pn**	**23 47 38.4**	**+0.3**
	baz=271						
TWK				S	**Sb**	**23 47 55.7**	**+0.6**
	baz=271						
WNT	**Mingjian**	**1.30**	**302**	P	**Pn**	**23 47 39.1**	**+0.8**
	baz=300						
WNT				*e*S	**Sb**	**23 47 55.5**	**+0.1**
	baz=300						
WGK	**Gukeng**	**1.31**	**292**	*e*P	**Pn**	**23 47 39.3**	**+0.9**
	baz=290						
WGK				*e*S	**Sb**	**23 47 56.3**	**+0.6**
	baz=290						
NNS	**Nan Shan**	**1.33**	**339**	P	**Pn**	**23 47 38.3**	**-0.4**
	baz=339						
NNS				S	**Sb**	**23 47 54.4**	**-1.9**
	baz=339						
CHY	**Chiayi**	**1.38**	**283**	*e*P	**Pn**	**23 47 40.6**	**+1.3**
	baz=280						
CHY				*e*S	**Sb**	**23 47 58.5**	**+0.9**
	baz=280						
TWM1	**Shoushan**	**1.40**	**255**	*e*P	**Pn**	**23 47 39.9**	**+0.3**
	baz=254						
CHN3	**Shinhua**	**1.41**	**266**	*e*P	**Pn**	**23 47 41.6**	**+1.9**
	baz=263						
CHN3				*e*S	**Sn**	**23 48 00.9**	**+2.6**
	baz=263						
TWC	**Suao**	**1.41**	**359**	*i* P	**Pn**	**23 47 39.8**	**0.0**
	baz=360						
TWC				S	**Sn**	**23 47 57.0**	**-1.5**
	baz=360						
SCZT	**Fangliau**	**1.43**	**235**	*e*P	**Pn**	**23 47 40.8**	**+0.9**
	baz=224						
TCU	**Taichung**	**1.47**	**311**	*e*P	**Pn**	**23 47 41.9**	**+1.4**
	baz=309						
TCU				*e*S	**Sn**	**23 48 00.2**	**+0.4**
	baz=309						
ENTT	**Nioudou**	**1.47**	**349**	P	**Pn**	**23 47 40.6**	**0.0**
	baz=349						
ENTT				S	**Sn**	**23 47 58.7**	**-1.3**
	baz=349						
TWE	**Neicheng**	**1.54**	**352**	*e*P	**Pn**	**23 47 41.8**	**+0.3**
	baz=353						
TWE				*e*S	**Sn**	**23 48 00.7**	**-0.9**
	baz=353						
TWQ1	**Liyutan**	**1.54**	**319**	⇑*i*P	**Pn**	**23 47 42.8**	**+1.3**
	baz=330						
TWQ1				S	**Sn**	**23 48 02.6**	**+0.9**
	baz=330						
YHNB	**Yeheng**	**1.55**	**342**	*e*Pn	**Pn**	**23 47 41.2**	**-0.5**
YHNB				*e*Sn	**Sn**	**23 47 59.0**	**-2.9**
CHN8	**Yiju**	**1.55**	**276**	*e*S	**Sn**	**23 48 02.7**	**+0.8**
	baz=273						
NSK	**Sanguang**	**1.56**	**342**	⇑*i*P	**Pn**	**23 47 42.0**	**+0.3**
	baz=342						
NSK				S	**Sn**	**23 48 00.3**	**-1.7**
	baz=342						
TSEB	**Hengchuen, Pin**	**1.58**	**216**	*e*S	**Sn**	**23 48 03.6**	**+1.1**
	baz=214						
HEN	**Hengchun**	**1.59**	**222**	*e*P	**Pn**	**23 47 42.8**	**+0.7**
	baz=221						
TWK1	**Hengchun**	**1.59**	**219**	*e*P	**Pn**	**23 47 41.2**	**-1.1**
	baz=205						
TWK1				*e*S	**Sn**	**23 48 02.0**	**-1.0**
	baz=205						
NSY	**Sanyi**	**1.60**	**320**	*e*P	**Pn**	**23 47 43.7**	**+1.3**
	baz=319						
NSY				*e*S	**Sn**	**23 48 04.7**	**+1.6**
	baz=319						
YOJ	**Yonaguni jima**	**1.63**	**39**	P	**Pn**	**23 47 43.5**	**+0.7**
YOJ				*e*S	**Sn**	**23 48 04.8**	**+0.9**
NSTT	**Nanjuang**	**1.65**	**331**	*e*P	**Pn**	**23 47 45.2**	**+2.2**
	baz=330						
NSTT				*e*S	**Sn**	**23 48 03.9**	**-0.5**
	baz=330						
TWA	**Mucha**	**1.80**	**351**	*e*S	**Sn**	**23 48 08.3**	**+0.2**
	baz=351						
TWB1	**Santiao Chiao**	**1.81**	**3**	*e*S	**Sn**	**23 48 09.2**	**+0.8**
	baz=17						
NWF	**Wu-fen Shan**	**1.88**	**357**	P	**Pn**	**23 47 47.8**	**+1.6**
	baz=357						
NWF				S	**Sn**	**23 48 10.2**	**+0.3**
	baz=357						
HATJ	**Hateruma jima**	**1.96**	**63**	P	**Pn**	**23 47 48.0**	**+0.7**
HATJ				*e*S	**Sn**	**23 48 11.3**	**-0.7**
IRIF	**Iriomote-Funau**	**2.04**	**56**	P	**Pn**	**23 47 49.6**	**+1.2**
IRIF				*e*S	**Sn**	**23 48 14.3**	**+0.4**
PNG	**Penghu**	**2.18**	**280**	P	**Pn**	**23 47 50.7**	**+0.4**
	baz=262						
PNG				*e*S	**Sn**	**23 48 15.8**	**-1.5**
	baz=262						
JKRS	**Kuro-shima**	**2.21**	**61**	P	**Pn**	**23 47 51.8**	**+1.1**
JKRS				*e*S	**Sn**	**23 48 17.7**	**-0.4**
JIJ	**Ishigaki jima**	**2.37**	**60**	P	**Pn**	**23 47 53.4**	**+0.4**
JIJ				*e*S	**Sn**	**23 48 21.2**	**-1.0**
JTJ	**Tarama**	**2.95**	**60**	*e*S	**Sn**	**23 48 36.9**	**+0.4**
KNM	**Kinmen**	**3.39**	**292**	*e*P	**Pn**	**23 48 08.3**	**+1.3**
	baz=290						

IDC ***02*** *23:47:16.6±2.9,3°.36S×141°.99E,h0km,mb3.7/6, mb1 3.8/6,mb1mx3.7/15,mbtmp3.7/6,Error ellipse: s-maj=86.7km s-min=25.8km az=98.0*
NEIC ***02*** *23:47:24.4±1.0,3°.41S×141°.32E,h35km,mb3.8/4,Error ellipse: s-maj=31.9km s-min=10.4km az=103.0*
ISCJB ***02*** *23:47:25.7±5.2,3°.6S±0°.2×141°.4E±0°.2,h71km±49km, mb3.6/8,Error ellipse: s-maj=40.5km s-min=23.1km az=29.7*
ISC 02 23:47:25.9±4.4,**3°.5S**±0°.2×**141°.5E**±0°.2,**h57**km±39km,**n14,**
σ0°**56**/15,**mb3.8**/8,**New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**12.77**	**224**	*e*Pn	**Pn**	**23 50 24.6**	**-0.1**
	54nm,0.5s						
KAKA				*e*Sn	**Sn**	**23 52 44.9**	**-0.4**
WRAB	**Tennant Creek**	**17.73**	**202**	*e*P	**Pn**	**23 51 29.3**	**+0.4**
	5.0nm,0.8s						
FITZ	**Fitzroy Crossi**	**21.22**	**226**	P	**P**	**23 52 10.4**	**+3.3**
	0.8nm,0.4s,mb3.4,baz=51,slow=8.6,SNR=4.6						
FITZ	**Fitzroy Crossi**	**21.22**	**226**	*e*P	**P**	**23 52 07.7**	**+0.6**
	2.2nm,0.5s,mb3.7						
ASAR	**Alice Springs**	**21.32**	**199**	P	**P**	**23 52 08.0**	**-0.2**
	0.6nm,0.5s,mb3.1,baz=25,slow=11,SNR=10						
MBWA	**Marble Bar**	**27.46**	**229**	P	**P**	**23 53 06.5**	**-0.2**
	35nm,1.6s,mb4.6						
CMAR	**Chiang Mai Arr**	**47.22**	**299**	P	**P**	**23 55 54.6**	**+1.1**
	0.5nm,0.5s,mb3.7,baz=112,slow=6.1,SNR=4.3						
MKAR	**Makanchi Array**	**72.11**	**322**	P	**P**	**23 58 44.2**	**0.0**
	0.9nm,0.7s,mb3.8,baz=107,slow=7.8,SNR=9.1						
ZALV	**Zalesovo Beam**	**74.02**	**329**	P	**P**	**23 58 54.8**	**-0.6**
	0.2nm,0.3s,mb3.5,baz=108,slow=9.3,SNR=2.6						
UCH	**Uchtor**	**75.55**	**315**	P	**P**	**23 59 04.6**	**+0.1**
AAK	**Ala-Archa**	**75.69**	**316**	*e*P	**P**	**23 59 05.5**	**+0.3**
KURK	**Kurchatov**	**75.95**	**324**	*e*P	**P**	**23 59 06.1**	**-0.6**
EKS2	**Erkin-Say**	**76.20**	**315**	*e*P	**P**	**23 59 07.6**	**-0.6**
	0.6nm,0.6s,mb3.7						
BVAR	**Borovoye Array**	**81.54**	**325**	P	**P**	**23 59 37.4**	**+0.2**
	1.1nm,0.6s,mb3.9,baz=113,slow=6.7,SNR=8.5						

IDC ***02*** *23:50:21.7±0.9,4°.23N×73°.78W,h0km,mb3.8/7,mb1 4.2/9, mb1mx3.9/22,mbtmp3.9/9,ML4.5/2,MS3.0/2,Ms1 3.1/2, ms1mx2.3/24,Error ellipse: s-maj=19.9km s-min=9.9km az=43.0*
NEIC ***02*** *23:50:25.0,4°.42N×73°.72W,h0km,mb4.2/9, ML3.9(RSNC),After RSNC.*
NEIC Felt at Bogota.
ISCJB ***02*** *23:50:25.4±0.9,4°.47N±0°.04×73°.72W±0°.04,h26km±6km, mb4.0/14,MS3.5/3,Error ellipse: s-maj=8.0km s-min=5.5km az=40.2*
ISC 02 23:50:25.4±1.1,**4°.43N**±0°.04×**73°.73W**±0°.04,**h11**km±6km,
n45,σ1°**28**/45,**mb4.0**/14,**MS3.5**/3,**1C,Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIC	**Chingaza**	**0.20**	**1**	⇑*i*P	**Pg**	**23 50 29.2**	**-0.5**
ROSC	**El Rosal**	**0.73**	**306**	Pg	**Pg**	**23 50 38.8**	**-0.8**
	220nm,0.3s,baz=107,slow=17,SNR=264						
ROSC				Lg		23 50 48.7	
	282nm,0.3s,baz=90,slow=20,SNR=22						
TOLC	**Tolima**	**1.61**	**276**	*e*P	**Pn**	**23 50 52.1**	**-1.7**
BETC	**Betania**	**2.43**	**225**	*e*P	**Pn**	**23 51 05.9**	**+0.8**
BETC				*e*S	**Sn**	**23 51 35.6**	**+0.7**
HELC	**Santa Helena**	**2.55**	**315**	*e*P	**Pn**	**23 51 07.2**	**+0.5**
HELC				*e*S	**Sn**	**23 51 40.1**	**+2.4**
SDV	**Santo Domingo**	**5.39**	**35**	Pn	**Pn**	**23 51 48.1**	**+2.2**
	24nm,0.3s,baz=150,slow=2.8,SNR=76						
SDV				Sn	**Sn**	**23 52 49.3**	**+1.3**
	19nm,0.3s,baz=32,slow=19,SNR=6.9						
SDV				Lg		23 53 20.2	
	9.7nm,0.3s,baz=10,slow=6.8,SNR=3.1						
SDV	**Santo Domingo**	**5.39**	**35**	*e*Pn	**Pn**	**23 51 47.6**	**+1.7**
	44nm,0.3s						
SDV				*e*Sn	**Sn**	**23 52 49.2**	**+1.2**
OTAV	**Otavalo**	**6.29**	**229**	*e*Pn	**Pn**	**23 52 00.9**	**+2.8**
	32nm,1.1s						
OTAV				*e*Sn	Sn	23 53 34.5	+24
BCIP	**Isla Barro Col**	**7.67**	**308**	*e*Pn	**Pn**	**23 52 18.2**	**+1.0**
PCRV	**Puerto La Cruz**	**10.68**	**57**	Pn	**Pn**	**23 52 59.7**	**+1.3**
	2.4nm,0.3s,baz=54,slow=18,SNR=5.9						
PCRV				Sn	**Sn**	**23 54 57.9**	**-0.1**
	0.9nm,0.3s,baz=338,slow=19,SNR=2.6						
PCRV				Lg		23 56 06.1	
	0.6nm,0.3s,baz=180,slow=20,SNR=2.1						
JTS	**JuntasAbangare**	**12.55**	**298**	Pn	**Pn**	**23 53 25.4**	**+1.3**
SDDR	**Presa de Saban**	**14.66**	**9**	Pn	**Pn**	**23 53 54.0**	**+1.1**
MTP	**Monte Pirata**	**15.77**	**30**	*e*P	**Pn**	**23 54 07.5**	**-0.1**
	5.0nm,0.6s						
CBYP	**Canovanas**	**15.77**	**29**	*e*Pn	**Pn**	**23 54 08.2**	**+0.6**
BBGH	**Gun Hill**	**16.46**	**57**	Pn	**Pn**	**23 54 17.2**	**+0.7**
NNA	**Nana**	**16.60**	**191**	*e*Pn	**Pn**	**23 54 18.2**	**-0.1**
	10nm,0.8s						
TEIG	**Tepich**	**21.14**	**319**	*e*P	**P**	**23 55 11.7**	**+1.1**
	8.8nm,0.6s,mb4.3						
LPAZ	**La Paz**	**21.32**	**165**	P	**P**	**23 55 13.5**	**+1.1**
	3.0nm,0.8s,mb3.7,baz=346,slow=12,SNR=10.0						
LPAZ				LR	LR	00 04 12.8	
	comp=Z,35nm,18.7s,MS2.8,baz=31,slow=39						
LPAZ	**La Paz**	**21.32**	**165**	*e*P	**P**	**23 55 13.4**	**+1.0**
	3.3nm,0.8s,mb3.7						
SIV	**San Ignacio**	**23.84**	**149**	P	**P**	**23 55 37.0**	**-2.0**
	1.5nm,0.8s,mb3.5,baz=320,slow=9.4,SNR=6.8						
CMIG	**Matias Romero**	**24.25**	**303**	LR	LR	00 05 20.2	
	comp=Z,39nm,21.1s,MS2.9,baz=359,slow=37						
LCO	**Las Campanas**	**33.37**	**175**	P	**P**	**23 57 04.5**	**+0.6**
WVT	**Waverly**	**34.12**	**339**	*e*P	**P**	**23 57 10.4**	**+0.1**
CPUP	**Villa Florida**	**34.46**	**153**	*e*P	**P**	**23 57 13.6**	**+0.2**
	2.9nm,0.7s,mb4.3						
ACSO	**Alum Creek Sta**	**36.61**	**348**	P	**P**	**23 57 32.8**	**+1.1**
FVM	**French Village**	**36.71**	**338**	*e*P	**P**	**23 57 30.6**	**-2.0**
	4.3nm,0.6s,mb4.5						
CCM	**Cathedral Cave**	**37.09**	**337**	*e*P	**P**	**23 57 32.8**	**-3.0**
	3.5nm,0.6s,mb4.4						
TXAR	**Lajitas Array**	**37.64**	**314**	P	**P**	**23 57 39.2**	**-1.4**
	0.2nm,0.6s,mb3.1,baz=126,slow=9.4,SNR=5.3						
TXAR				PcP	PcP	23 59 58.2	0.0
	0.2nm,0.6s,baz=151,slow=2.1,SNR=3.9						
TXAR	**Lajitas Array**	**37.64**	**314**	P	**P**	**23 57 39.2**	**-1.4**
TXAR				PcP	PcP	23 59 58.2	0.0
ANMO	**Albuquerque**	**42.88**	**319**	P	**P**	**23 58 25.1**	**+1.1**
TRQA	**Tornquist**	**43.66**	**167**	P	**P**	**23 58 30.8**	**+0.7**
EYMN	**Ely**	**45.96**	**343**	*e*P	**P**	**23 58 46.7**	**-1.8**
	4.3nm,0.6s,mb4.6						
PDAR	**Pinedale Array**	**49.67**	**326**	P	**P**	**23 59 15.8**	**-1.5**
	0.6nm,0.5s,mb3.9,baz=90,slow=4.4,SNR=3.9						
SCHQ	**Schefferville**	**50.56**	**5**	P	**P**	**23 59 21.7**	**-2.2**
	4.0nm,0.8s,mb4.4,baz=155,slow=6.2,SNR=3.6						
BOZ	**Bozeman (W)**	**52.66**	**327**	P	**P**	**23 59 38.3**	**-1.4**
	0.8nm,0.5s,mb3.9						
NVAR	**Mina Array Bea**	**52.75**	**316**	P	**P**	**23 59 40.0**	**-0.5**
	0.7nm,0.6s,mb3.8,baz=124,slow=6.8,SNR=4.6						
NVAR	**Mina Array Bea**	**52.75**	**316**	P	**P**	**23 59 40.0**	**-0.5**
YKA	**Yellowknife Ar**	**65.29**	**340**	P	**P**	**00 01 05.5**	**-1.6**
	2.1nm,0.5s,mb4.4,baz=135,slow=6.2,SNR=30						
YKA	**Yellowknife Ar**	**65.29**	**340**	P	**P**	**00 01 05.5**	**-1.6**
SUMG	**Summit**	**71.44**	**11**	P	**P**	**00 01 44.7**	**-0.8**
TORD	**Torodi Ar. Bea**	**74.83**	**78**	P	**P**	**00 02 04.7**	**-2.0**
	0.2nm,0.5s,mb3.3,baz=276,slow=3.8,SNR=10						
HHC	**Hu-ho-hao-te**	**134.68**	**354**	*e*PKP	PKPdf	00 09 45.1	+0.5
HHC				PP	PP	00 12 22.1	+5.8
HHC				PKS		00 13 20.1	
HHC				SKS	SKSdf	00 16 54.6	-1.3
HHC				SKKS	SKKSac	00 19 12.2	-1.1
HHC				SS	SS	00 30 09.5	+2.1
HHC				AMB	AMB		
	comp=Z,91nm,9.5s						
HHC				LR	LR		
	comp=N,140n

DLMT				*e*Pg	**Pg**	**00 04 45.2**	**-0.1**
DLMT				*e*Sg	**Sg**	**00 05 57.5**	**+0.9**
LRM	**Limekiln Ridge**	**5.54**	**295**	*e*Pn	**Pn**	**00 04 23.6**	**+0.1**
	12nm,0.3s						
LRM				*e*Pg	**Pg**	**00 04 39.5**	**-6.6**
LRM				*e*Sg	**Sg**	**00 05 57.0**	**-0.8**
JLU	**Jordanelle**	**5.58**	**238**	*e*Pn	**Pn**	**00 04 25.1**	**+1.0**
	5.8nm,0.7s						
JLU				*e*Pg	**Pg**	**00 04 46.3**	**-0.4**
JLU				*e*Sg	**Sg**	**00 05 58.2**	**-0.9**
SPUT	**South Promonto**	**5.86**	**248**	*e*Pn	**Pn**	**00 04 28.9**	**+1.0**
	2.0nm,0.3s						
SPUT				*e*Pg	**Pg**	**00 04 49.6**	**-2.4**
SPUT				*e*Sg	**Sg**	**00 06 04.2**	**-3.7**
MPU	**Maple Canyon**	**6.05**	**234**	*e*Pn	**Pn**	**00 04 29.0**	**-1.6**
SRU	**San Rafael**	**6.09**	**222**	*e*Pn	**Pn**	**00 04 31.2**	**+0.1**
	9.4nm,0.4s						
SRU				Pg	**Pg**	**00 04 56.2**	**-0.4**
SRU				*e*Sg	**Sg**	**00 06 13.1**	**-2.5**
ECSD	**EROS Data Cent**	**6.25**	**87**	*e*Pn	**Pn**	**00 04 34.7**	**+1.5**
	6.5nm,0.3s						
ECSD				*e*Pg	**Pg**	**00 05 00.2**	**+0.7**
ECSD				*e*Sg	**Sg**	**00 06 19.8**	**-0.7**
BGU	**Big Grassy Mou**	**6.42**	**247**	*e*Pn	**Pn**	**00 04 35.7**	**+0.1**
	1.3nm,0.3s						
BGU				*e*Sg	**Sg**	**00 06 21.3**	**-4.8**
MVCO	**Mesa Verde**	**6.98**	**202**	Pn	**Pn**	**00 04 43.2**	**-0.1**
ELK	**Elko**	**8.00**	**251**	Pn	**Pn**	**00 04 58.4**	**+1.1**
ELK	**Elko**	**8.00**	**251**	Pn	**Pn**	**00 04 58.4**	**+1.1**
	0.3nm,0.3s,baz=74,slow=12,SNR=5.0						
ULM	**Lac du Bonnet**	**9.12**	**41**	Pn	**Pn**	**00 05 10.9**	**-1.8**
	1.3nm,0.3s,baz=233,slow=8.5,SNR=5.9						
NVAR	**Mina Array Bea**	**11.19**	**246**	Pn	**Pn**	**00 05 40.7**	**-0.4**
	0.1nm,0.3s,baz=59,slow=14,SNR=2.6						
YKA	**Yellowknife Ar**	**19.57**	**347**	P	**Pn**	**00 07 29.1**	**-1.2**
	0.1nm,0.3s,baz=153,slow=14,SNR=4.8						

*DDA **03** 00:07:48.2, 37.°87N×30.°14E, h7km±6km, Md2.8*
*ISK **03** 00:07:49.2, 37.°77N×29.°99E, h8km, MD2.6*
*CSEM **03** 00:07:49.3±0.3, 37.°78N×29.°98E, h5km, MD2.6, Error ellipse: s-maj=6.6km s-min=4.8km az=88.0*
*ISCJB **03** 00:07:49.6±0.6, 37.°76N±0.°03×30.°00E±0.°05, h8km±8km, Error ellipse: s-maj=7.1km s-min=4.8km az=176.4*

ISC 03 00:07:50.1±0.6, 37.°77N±0.°03×30.°01E±0.°06, h15km±10km, n18, σ1°09/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISP	**Isparta**	**0.41**	**79**	*e*PG	**Pg**	**00 07 57.1**	**-1.2**
ISP				*e*SG	**Sg**	**00 08 04.8**	**+0.9**
ISP	**Isparta**	**0.41**	**79**	*e*Pg	**Pg**	**00 07 57.1**	**-1.2**
ISP				*e*Sg	**Sg**	**00 08 04.8**	**+1.0**
BCK	**Bucak**	**0.55**	**123**	*e*PG	**Pg**	**00 08 00.5**	**-0.5**
BCK	**Bucak**	**0.55**	**123**	*e*Pg	**Pg**	**00 08 00.5**	**-0.5**
KHAL	**Karahalli**	**0.73**	**326**	*i* P	**Pg**	**00 08 02.8**	**-1.6**
KHAL				*i* S	**Sg**	**00 08 15.5**	**+1.5**
KHAL	**Karahalli**	**0.73**	**326**	*i* P	**Pg**	**00 08 02.8**	**-1.5**
KHAL				*i* S	**Sg**	**00 08 15.5**	**+1.6**
GLHS	**Glhisar (BURDU**	**0.73**	**214**	*e*PG	**Pg**	**00 08 04.0**	**-0.4**
GLHS	**Glhisar (BURDU**	**0.73**	**214**	*e*Pg	**Pg**	**00 08 04.0**	**-0.3**
KORT	**Korkueli**	**0.81**	**160**	*i* P	**Pg**	**00 08 04.0**	**-1.9**
KORT				*i* S	**Sg**	**00 08 18.7**	**+2.2**
KORT	**Korkueli**	**0.81**	**160**	*i* P	**Pg**	**00 08 04.0**	**-1.9**
KORT				*i* S	**Sg**	**00 08 18.7**	**+2.2**
SHUT	**Suhut-Afyon**	**0.90**	**28**	*e*PG	**Pg**	**00 08 06.9**	**-0.6**
SHUT				*e*SG	**Sg**	**00 08 19.9**	**+0.7**
SHUT	**Suhut-Afyon**	**0.90**	**28**	*e*Pg	**Pg**	**00 08 06.9**	**-0.6**
SHUT				*e*Sg	**Sg**	**00 08 19.9**	**+0.6**
ELL	**Elmali**	**1.02**	**184**	*e*PG	**Pg**	**00 08 09.3**	**-0.5**
ELL				*e*SG	**Sg**	**00 08 23.9**	**+0.8**
ELL	**Elmali**	**1.02**	**184**	*e*Pg	**Pg**	**00 08 09.3**	**-0.5**
ELL				*e*Sg	**Sg**	**00 08 23.9**	**+0.8**
ALT	**Altintas**	**1.29**	**4**	*e*PN	**Pn**	**00 08 13.8**	**+0.2**
ALT	**Altintas**	**1.29**	**4**	*e*Pn	**Pn**	**00 08 13.8**	**+0.2**
KULA	**Kula-Manisa**	**1.30**	**306**	*e*PN	**Pn**	**00 08 14.2**	**+0.4**
KULA	**Kula-Manisa**	**1.30**	**306**	*e*Pn	**Pn**	**00 08 14.2**	**+0.5**

DJA 03 00:44:50, 1.°12N×120.°40E, h31km, MLv3.7/5, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPSI	**Mapaga**	**0.93**	**213**	P	Pn	00 45 05.8	-1.1
MPSI				S	Sn	00 45 19.5	+0.4
MRSI	**Marisa**	**1.67**	**113**	P	Pn	00 45 14.8	-2.3
PCI	**Palu**	**2.09**	**196**	P	Pn	00 45 23.4	+0.5
APSI	**Ampana**	**2.37**	**148**	P	Pn	00 45 29.2	+2.4
LUWI	**Luwuk**	**3.20**	**132**	P	Pn	00 45 39.3	+1.1
TTSI	**Tana Toraja**	**4.18**	**188**	P	Pn	00 45 52.1	+0.4
MYLDM	**Lahad Datu**	**4.46**	**335**	P	Pn	00 45 56.4	+0.9

*IDC **03** 01:03:18.9±0.8, 0.°56S×120.°82E, h0km, mb4.1/9, mb1 4.2/11, mb1mx4.0/22, mbtmp4.1/11, ML4.0/2, MS3.5/2, Ms1 3.5/2, ms1mx2.7/28, Error ellipse: s-maj=36.7km s-min=14.9km az=71.0*
*ISCJB **03** 01:03:25.3±0.4, 0.°86S±0.°04×120.°79E±0.°04, h79km±6km, mb4.4/17, Error ellipse: s-maj=7.5km s-min=6.1km az=153.2*
*NEIC **03** 01:03:26.8±1.5, 0.°79S×120.°64E, h66km±15km, mb4.6/8, Error ellipse: s-maj=25.7km s-min=8.8km az=70.0*
NEIC Felt [IV] at Poso and [II] at Palu.
*DJA **03** 01:03:27, 0.°85S×120.°80E, h40km, Mw5.4/7*

ISC 03 01:03:26.6±0.4, 0.°85S±0.°04×120.°81E±0.°04, h71km±6km, n40, σ0°95/43, mb4.4/17, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	**Ampana**	**0.84**	**94**	P	**Pn**	**01 03 43.0**	**-0.2**
APSI				S	**Sn**	**01 03 56.2**	**+0.6**
PCI	**Palu**	**0.97**	**267**	P	**Pn**	**01 03 43.6**	**-1.2**
MRSI	**Marisa**	**1.73**	**41**	P	**Pn**	**01 03 53.6**	**-1.2**
LUWI	**Luwuk**	**1.97**	**96**	P	**Pn**	**01 03 57.7**	**-0.2**
LUWI				S	**Sn**	**01 04 21.0**	**-0.7**
TTSI	**Tana Toraja**	**2.40**	**204**	P	**Pn**	**01 04 04.5**	**+0.8**
KDI	**Kendari**	**3.58**	**150**	P	**Pn**	**01 04 19.7**	**-0.1**
SMKI	**Samarinda**	**3.62**	**276**	P	**Pn**	**01 04 21.0**	**+0.6**
KAPI	**Kappang**	**4.27**	**194**	Pn	**Pn**	**01 04 28.6**	**-0.7**
	31nm,0.3s,baz=359,slow=8.5,SNR=106						
KAPI				Sn	**Sn**	**01 05 16.1**	**-1.7**
	55nm,0.3s,baz=34,slow=19,SNR=10						
KAPI	**Kappang**	**4.27**	**194**	P	**Pn**	**01 04 28.5**	**-0.7**
KBKI	**Kotabaru**	**5.24**	**242**	P	**Pn**	**01 04 41.4**	**-1.1**
	5μm292nm,0.6s						
MYLDM	**Lahad Datu**	**6.42**	**339**	P	**Pn**	**01 05 00.1**	**+1.5**
	2μm190nm,0.8s						
BBKI	**Banjar Baru**	**6.50**	**246**	P	**Pn**	**01 05 00.5**	**+0.7**
	6μm474nm,0.6s						
LBMI	**Labuha**	**6.69**	**88**	P	**Pn**	**01 05 00.8**	**-1.6**
	6μm224nm,0.5s						
NLAI	**Namlea**	**6.72**	**111**	P	**Pn**	**01 05 04.2**	**+1.5**
	9μm173nm,0.7s						
AAI	**Ambon**	**7.90**	**111**	P	**Pn**	**01 05 23.2**	**+4.4**
	162nm,0.9s						
KKM	**Kota Kinabalu**	**8.24**	**326**	*e*Pn	**Pn**	**01 05 22.8**	**-0.7**
	32nm,0.7s						
KKM				*e*S	**Sn**	**01 06 34.8**	**-20**
KKM	**Kota Kinabalu**	**8.24**	**326**	P	**Pn**	**01 05 25.5**	**+2.0**
	441nm44nm,0.7s						
KHKI	**Kahang-Kahang**	**9.09**	**215**	P	**Pn**	**01 05 36.5**	**+1.4**
	32nm,1.3s						
SRBI	**Singaraja**	**9.10**	**218**	P	**Pn**	**01 05 35.1**	**-0.1**
	52nm,1.6s						
SWI	**Sorong**	**10.45**	**90**	P	**Pn**	**01 05 54.9**	**+1.2**
FITZ	**Fitzroy Crossi**	**17.79**	**165**	P	**Pn**	**01 07 29.9**	**+0.3**
	0.1nm,0.3s,baz=22,slow=11,SNR=3.3						
FITZ				LR	LR	01 15 48.0	
	comp=Z,58nm,19.2s,baz=13,slow=42						
YULB	**Yu-li**	**24.10**	**1**	*e*P	**P**	**01 08 36.0**	**+0.3**
	25nm,0.7s,mb4.7						
YHNB	**Yeheng**	**25.37**	**1**	*e*P	**P**	**01 08 47.1**	**-0.1**
	20nm,0.6s,mb4.7						
ASAR	**Alice Springs**	**26.00**	**152**	P	**P**	**01 08 55.5**	**+2.5**
	0.3nm,0.6s,baz=340,slow=12,SNR=4.5						
CMAR	**Chiang Mai Arr**	**28.81**	**313**	P	**P**	**01 09 19.1**	**+0.8**
	4.9nm,0.7s,mb4.2,baz=137,slow=7.5,SNR=23						
STKA	**Stephens Creek**	**36.58**	**150**	P	**P**	**01 10 30.4**	**+4.5**
	0.5nm,0.4s,mb3.8,baz=306,slow=14,SNR=2.1						
KSRS	**Korea Array**	**38.67**	**9**	P	**P**	**01 10 42.3**	**-1.1**
	2.4nm,0.7s,mb4.1,baz=187,slow=11,SNR=6.4						
MJAR	**Matsushiro Arr**	**40.56**	**22**	LR	LR	01 26 55.2	
	comp=Z,121nm,18.5s,baz=205,slow=35						
GTA	**Gaotai**	**44.45**	**337**	*e*P	**P**	**01 11 31.9**	**+1.3**
GTA				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.7						
ULN	**Ulaanbaatar**	**49.98**	**348**	*e*P	**P**	**01 12 13.9**	**+0.4**
	comp=Z,2.2nm,0.5s,mb4.3						
SONM	**Songino Array**	**50.09**	**347**	P	**P**	**01 12 14.2**	**-0.1**
	comp=Z,2.8nm,0.7s,mb4.3,baz=169,slow=9.0,SNR=19						
MKAR	**Mankchi Array**	**58.21**	**330**	P	**P**	**01 13 13.3**	**-0.1**
	comp=Z,1.7nm,0.4s,mb4.4,baz=116,slow=8.2,SNR=9.4						
TKM2	**Tokmak 2**	**59.51**	**323**	*e*P	**P**	**01 13 22.9**	**+0.4**
	comp=Z,1.9nm,0.6s,mb4.3						
KBL	**Kabul**	**59.83**	**311**	*e*P	**P**	**01 13 24.7**	**-0.2**
	comp=Z,6.0nm,0.6s,mb4.8						
PETK	**Petropavlovsk-**	**61.94**	**24**	P	**P**	**01 13 38.4**	**-0.5**
	comp=Z,1.6nm,0.5s,mb4.3,baz=213,slow=9.6,SNR=6.9						
ZALV	**Zalesovo Beam**	**62.20**	**337**	P	**P**	**01 13 39.5**	**-1.0**
	comp=Z,4.7nm,0.7s,mb4.6,baz=129,slow=5.9,SNR=16						
KURK	**Kurchatov**	**62.64**	**331**	*e*P	**P**	**01 13 43.4**	**-0.1**
	comp=Z,9.7nm,1.0s,mb4.7						
BVAR	**Borovoye Array**	**68.09**	**330**	P	**P**	**01 14 18.0**	**-0.7**
	comp=Z,1.8nm,0.6s,mb4.1,baz=127,slow=9.5,SNR=16						
BRVK	**Borovoye**	**68.16**	**330**	*e*P	**P**	**01 14 18.5**	**-0.7**
	comp=Z,2.4nm,0.6s,mb4.2						
ABKAR	**Akbulak array**	**72.07**	**323**	*e*P	**P**	**01 14 42.3**	**-0.9**
	comp=Z,2.0nm,0.6s,mb4.1						

*ECX **03** 01:08:15.0±0.3, 33.°03N×115.°57W, h15km, MD3.0, ML3.0*
*ISCJB **03** 01:08:15.5±0.3, 33.°04N±0.°02×115.°60W±0.°02, h7km±3km, Error ellipse: s-maj=3.1km s-min=2.3km az=1.5*
*NEIC **03** 01:08:16.6, 33.°04N×115.°56W, h14km, ML3.0(PAS), After PAS.*
NEIC Felt at Brawley and Westmorland.

ISC 03 01:08:16.1±0.3, 33.°03N±0.°02×115.°60W±0.°02, h15km±3km, n46, σ0°90/73, 20C-27D, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SWSC	**Sam W. Stewart**	**0.19**	**244**	⇓P	**Pg**	**01 08 20.9**	**+0.4**
	baz=0.2,SNR=306						
SWSC				⇑S	**Sg**	**01 08 24.2**	**+0.7**
	baz=0.2						
COK	**Cook Ranch**	**0.21**	**212**	⇓*e*P	**Pg**	**01 08 21.7**	**+0.9**
SNR	**Schaffner Ranc**	**0.21**	**141**	⇓*e*P	**Pg**	**01 08 21.1**	**+0.3**
CRR	**Carrizo Plain**	**0.34**	**246**	⇓*e*P	**Pg**	**01 08 23.8**	**+0.6**
SGL	**Mount Signal**	**0.39**	**196**	⇓*e*P	**Pg**	**01 08 24.3**	**+0.3**
COA	**Coachella**	**0.43**	**112**	⇓*e*P	**Pg**	**01 08 24.6**	**-0.1**
YUH	**Yuha Desert**	**0.47**	**216**	⇓*e*P	**Pg**	**01 08 25.7**	**+0.3**
RUN	**Ruthven**	**0.52**	**96**	⇓*e*P	**Pg**	**01 08 25.8**	**-0.6**
DVTC	**Desert V Tower**	**0.56**	**230**	⇓P	**Pg**	**01 08 27.4**	**+0.3**
	baz=0.6,SNR=34						
DVTC				⇓S	**Sg**	**01 08 35.5**	**+0.9**
	baz=0.6						
RMX	**La Rumorosa**	**0.59**	**224**	*e*P	**Pg**	**01 08 28.0**	**+0.4**
BC3	**Big Chuckawall**	**0.64**	**11**	P	**Pg**	**01 08 28.5**	**-0.2**
	baz=0.6,SNR=63						
BC3				⇓S	**Sg**	**01 08 36.9**	**-0.2**
	baz=0.6						
GLA	**Glamis**	**0.65**	**87**	⇑P	**Pg**	**01 08 27.9**	**-0.9**
	baz=0.6						
GLA				⇓S	**Sg**	**01 08 36.1**	**-1.2**
	baz=0.6						
GLA	**Glamis**	**0.65**	**87**	⇑*e*P	**Pg**	**01 08 27.9**	**-0.8**
GLA	**Glamis**	**0.65**	**87**	*e*Pg	**Pg**	**01 08 27.9**	**-0.8**
GLA				*e*Sg	**Sg**	**01 08 37.0**	**-0.3**
CPBX	**Cerro Prieto**	**0.65**	**158**	*e*P	**Pg**	**01 08 28.2**	**-0.6**
CPBX				*e*S	**Sg**	**01 08 37.9**	**+0.4**
CPBX				⇓*e*		01 08 40.0	
	comp=N,2μm,0.6s						
MONP	**Monument Peak**	**0.71**	**259**	⇓P	**Pg**	**01 08 29.6**	**-0.3**
	baz=0.7,SNR=82						
MONP				⇑S	**Sg**	**01 08 39.7**	**+0.5**
	baz=0.7						
PFO	**Pinyon Flat Ob**	**0.93**	**309**	⇓P	**Pb**	**01 08 32.9**	**-1.0**
	baz=0.9,SNR=70						
PFO				⇑S	**Sb**	**01 08 46.0**	**0.0**
	baz=0.9						
PFO	**Pinyon Flat Ob**	**0.93**	**309**	*e*Pg	**Pg**	**01 08 32.9**	**-1.2**
PFO				*e*Sg	**Sg**	**01 08 47.1**	**+0.9**
BAR	**Barrett**	**0.97**	**250**	*e*Pg	**Pg**	**01 08 34.7**	**-0.1**
BAR				*e*Sg	**Sg**	**01 08 47.5**	**0.0**
112A	**Yuma**	**0.98**	**119**	⇓P	**Pb**	**01 08 33.5**	**-1.4**
	baz=1.0						
112A				⇓S	**Sb**	**01 08 46.8**	**-0.9**
	baz=1.0						
BELC	**Belle Mtn. Jos**	**1.03**	**341**	⇑P	**Pb**	**01 08 34.5**	**-1.1**
	baz=1.0,SNR=24						
BELC				⇓S	**Sb**	**01 08 48.2**	**-0.8**
	baz=1.0						
RDX	**Rancho Dawling**	**1.13**	**195**	*e*P	**Pb**	**01 08 36.5**	**-0.9**
RDX				*e*S	**Sb**	**01 08 51.8**	**-0.1**
RDX				*e*		01 08 53.6	
	comp=N,228nm,0.3s						
Y12C	**Blythe**	**1.15**	**51**	⇑P	**Pn**	**01 08 36.5**	**-1.2**
	baz=1.1,SNR=27						
Y12C				⇓S	**Sb**	**01 08 52.0**	**-0.5**
	baz=1.1						
IRM	**Iron Mountain**	**1.19**	**18**	⇓P	**Pn**	**01 08 36.7**	**-1.5**
	baz=1.2,SNR=111						
IRM				⇓S	**Sb**	**01 08 53.7**	**+0.1**
	baz=1.2						
109C	**Camp Elliot, M**	**1.28**	**264**	⇑P	**Pn**	**01 08 38.5**	**-0.9**
	baz=1.3,SNR=14						
109C				⇓S	**Sb**	**01 08 56.0**	**-0.1**
	baz=1.3						
MURC	**Murieta**	**1.46**	**294**	⇑P	**Pn**	**01 08 40.9**	**-1.1**
	baz=1.5,SNR=15						
MURC				⇓S	**Sn**	**01 09 00.3**	**-0.5**
	baz=1.5						
Z13A	**Yuma Proving G**	**1.64**	**83**	⇑Pb	**Pb**	**01 08 45.3**	**-0.7**
	baz=1.6,SNR=21						
Z13A				⇓Sb	**Sb**	**01 09 06.5**	**+0.1**
	baz=1.6						
Y13A	**Salome**	**1.67**	**61**	⇑Pb	**Pb**	**01 08 45.9**	**-0.7**
	baz=1.6						
Y13A				⇑Sb	**Sb**	**01 09 07.4**	**-0.2**
	baz=1.6						
GMRC	**Granite Mounta**	**1.75**	**358**	⇓Sb	**Sb**	**01 09 11.1**	**+1.3**
	baz=1.7						
PDMCI	**Parker Dam,Lak**	**1.76**	**43**	⇓Sb	**Sb**	**01 09 09.9**	**0.0**
	baz=1.7						
LDFC	**Landfair**	**2.09**	**11**	*e*Pn	**Pn**	**01 08 55.4**	**+4.8**
X13A	**Yucca**	**2.15**	**43**	⇓Sb	**Sb**	**01 09 22.2**	**+1.0**
	baz=2.1						
Z14A	**Wintersburg**	**2.25**	**81**	⇑Sb	**Sb**	**01 09 25.1**	**+1.0**
	baz=2.2						
Y14A	**Wickenburg**	**2.35**	**66**	⇑Sb	**Sb**	**01 09 27.9**	**+0.9**
	baz=2.3						
MWC	**Mount Wilson**	**2.38**	**301**	*e*Pn	**Pn**	**01 08 54.3**	**-0.3**
MWC				*e*Pg	**Pg**	**01 09 01.5**	**-0.2**
MWC				*e*Sg	**Sg**	**01 09 32.7**	**+0.2**
CIS	**Catalina Islan**	**2.38**	**280**	⇓Sb	**Sb**	**01 09 30.5**	**+2.5**
	baz=2.4						
PASC	**Pasadena Art C**	**2.44**	**299**	*e*Pn	**Pn**	**01 08 56.7**	**+1.2**
PASC				*e*Pg	**Pg**	**01 09 03.2**	**+0.2**
GSC	**Goldstone**	**2.48**	**336**	*e*Pn	**Pn**	**01 08 54.8**	**-1.2**
GSC				*e*Pg	**Pg**	**01 09 02.2**	**-1.5**
W13A	**Hualapai Mount**	**2.51**	**34**	⇓Sb	**Sb**	**01 09 33.6**	**+2.0**
	baz=2.5						
214A	**Organ Pipe Nat**	**2.58**	**114**	⇓Sb	**Sb**	**01 09 35.1**	**+1.4**
	baz=2.6						
X14A	**Yava**	**2.67**	**57**	⇓Sb	**Sb**	**01 09 37.9**	**+1.5**
	baz=2.6						
EDW2	**Edwards Air Fo**	**2.72**	**314**	⇑Sb	**Sb**	**01 09 40.5**	**+3.0**
	baz=2.7						
Y15A	**Casa Rosa Ranc**	**2.88**	**70**	⇑Sb	**Sb**	**01 09 43.9**	**+1.7**
	baz=2.8						
ISA	**Isabella**	**3.55**	**319**	*e*Pn	**Pn**	**01 09 10.8**	**+0.2**
ISA				*e*Sg	**Sg**	**01 10 08.6**	**-1.5**
TUC	**Tucson**	**4.12**	**99**	*e*Pn	**Pn**	**01 09 18.0**	**-0.5**
TUC				*e*Pg	**Pg**	**01 09 34.6**	**-0.4**
CCUT	**Cedar City**	**4.87**	**21**	*e*Pn	**Pn**	**01 09 30.0**	**+1.1**
CCUT				*e*Pg	**Pg**	**01 09 50.4**	**+1.0**
CCUT				*e*Sg	**Sg**	**01 10 52.3**	**-0.2**

*NIED **03** 01:36:00, 36.°70N×141.°40E, h26km, Mw3.4 Best double couple: Mo1.20000×10^14 NP1:φs197.00000°, δ85.00000°, λ-64.00000°. NP2:φs297.00000°, δ26.00000°, λ-169.00000°.*
*JMA **03** 01:36:28.6±0.1, 36.°68N×141.°31E, h46km±2km, M3.6*
JMA Felt I J1.

ISC 03 01:36:27.1±2.0, 36.°67N±0.°05×141.°4E±0.°1, h21km±8km, n9, σ0°69/16, 4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.66**	**310**	⇓P	**Pb**	**01 36 40.3**	**+0.3**
ONAJ				S	**Sb**	**01 36 49.1**	**+0.4**
JHO	**Hitachi**	**0.69**	**265**	P	**Pb**	**01 36 40.8**	**+0.3**
JHO				S	**Sb**	**01 36 49.3**	**-0.3**
JFK	**Kawauchi**	**0.82**	**327**	⇓P	**Pb**	**01 36 42.6**	**-0.1**
JFK				S	**Sb**	**01 36 53.3**	**0.0**
JYT	**Yasato**	**1.09**	**246**	P	**Pn**	**01 36 46.4**	**-0.7**
JYT				S	**Sb**	**01 36 59.8**	**-1.2**
JFT	**Otama**	**1.21**	**314**	⇓P	**Pn**	**01 36 49.2**	**+0.4**
JFT				*e*S	**Sn**	**01 37 04.4**	**-0.2**
JMM	**Marumori**	**1.29**	**337**	⇓P	**Pn**	**01 36 49.3**	**-0.6**
JMM				*e*S	**Sn**	**01 37 05.4**	**-1.2**
JFY	**Yanaizu**	**1.56**	**298**	P	**Pn**	**01 36 54.5**	**+0.9**
JAG	**Ashikaga**	**1.61**	**262**	P	**Pn**	**01 36 54.1**	**-0.2**
MAT	**Matsushiro**	**2.60**	**268**	P	**Pn**	**01 37 09.2**	**+1.4**
MAT				*e*S	**Sn**	**01 37 39.4**	**+0.7**

*ISK **03** 01:37:49.6, 37.°01N×29.°18E, h7km, MD2.8*
*DDA **03** 01:37:50.6, 36.°99N×29.°17E, h7km±6km, Md2.9*
*CSEM **03** 01:37:50.2±0.5, 37.°01N×29.°19E, h8km, MD2.8, Error ellipse: s-maj=3.5km s-min=2.5km az=3.0*
*ISCJB **03** 01:37:50.2±0.5, 37.°00N±0.°03×29.°17E±0.°03, h5km±4km, Error ellipse: s-maj=5.4km s-min=3.6km az=178.0*

ISC 03 01:37:50.6±0.5, 37.°00N±0.°03×29.°18E±0.°03, h9km±4km, n34, σ0°83/56, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**59**	*e*PG	**Pg**	**01 37 55.9**	**-0.7**
GLHS				*e*SG	**Sg**	**01 38 00.7**	**0.0**
GLHS	**Glhisar (BURDU**	**0.30**	**59**	*e*Pg	**Pg**	**01 37 55.9**	**-0.7**
GLHS				*e*Sg	**Sg**	**01 38 00.7**	**+0.1**
FETY	**Fethiye**	**0.37**	**192**	*e*PG	**Pg**	**01 37 57.5**	**-0.4**
FETY				*e*SG	**Sg**	**01 38 03.3**	**+0.5**
FETY	**Fethiye**	**0.37**	**192**	*e*Pg	**Pg**	**01 37 57.5**	**-0.4**
FETY				*e*Sg	**Sg**	**01 38 03.3**	**+0.5**
GOLH	**Golhisar**	**0.39**	**52**	*i* P	**Pg**	**01 37 58.1**	**-0.1**
GOLH				*i* S	**Sg**	**01 38 05.2**	**+1.9**
GOLH	**Golhisar**	**0.39**	**52**	*i* P	**Pg**	**01 37 58.1**	**-0.1**
GOLH				*i* S	**Sg**	**01 38 05.2**	**+1.8**
TURN	**Turunc**	**0.48**	**255**	*i* P	**Pg**	**01 38 04.7**	**+4.8**
TURN				*i* S	**Sg**	**01 38 17.2**	**+11**
TURN	**Turunc**	**0.48**	**255**	*i* P	**Pg**	**01 38 04.7**	**+4.8**
ELL	**Elmali**	**0.64**	**113**	*e*PG	**Pg**	**01 38 02.3**	**-0.7**
ELL				*e*SG	**Sg**	**01 38 11.8**	**+0.5**
ELL	**Elmali**	**0.64**	**113**	*e*Pg	**Pg**	**01 38 02.3**	**-0.6**
ELL				*e*Sg	**Sg**	**01 38 11.8**	**+0.5**
YER	**Yerkesik**	**0.73**	**281**	*e*PG	**Pg**	**01 38 04.0**	**-0.7**
YER				*e*SG	**Sg**	**01 38 14.4**	**+0.3**
YER	**Yerkesik**	**0.73**	**281**	*e*Pg	**Pg**	**01 38 04.0**	**-0.6**
YER				*e*Sg	**Sg**	**01 38 14.4**	**+0.3**
DENT	**Denizli**	**0.76**	**351**	*e*PG	**Pg**	**01 38 03.7**	**-1.6**
DENT	**Denizli**	**0.76**	**351**	*e*Pg	**Pg**	**01 38 03.7**	**-1.6**
AKAS	**Kas**	**0.84**	**156**	*i* P	**Pg**	**01 38 07.0**	**+0.2**
AKAS				*i* S	**Sg**	**01 38 24.1**	**+6.4**
AKAS	**Kas**	**0.84**	**156**	*i* P	**Pg**	**01 38 06.9**	**+0.1**
KORT	**Korkueli**	**0.94**	**90**	*i* P	**Pg**	**01 38 07.8**	**-0.9**
KORT				*i* S	**Sg**	**01 38 23.8**	**+2.9**
KORT	**Korkueli**	**0.94**	**90**	*i* P	**Pg**	**01 38 07.8**	**-0.9**
KORT				*i* S	**Sg**	**01 38 23.8**	**+2.9**
MLSB	**Milas**	**1.16**	**285**	*e*PN	**Pn**	**01 38 12.2**	**-0.7**
MLSB				*e*SN	**Sn**	**01 38 28.7**	**-0.2**
MLSB	**Milas**	**1.16**	**285**	*e*Pn	**Pn**	**01 38 12.3**	**-0.7**
MLSB				*e*Sn	**Sn**	**01 38 28.7**	**-0.2**
ANTB	**Antalya**	**1.19**	**94**	*e*PN	**Pn**	**01 38 12.7**	**-0.7**
ANTB				*e*SN	**Sn**	**01 38 29.6**	**-0.1**
ANTB	**Antalya**	**1.19**	**94**	*e*Pn	**Pn**	**01 38 12.7**	**-0.7**
ANTB				*e*Sn	**Sn**	**01 38 29.6**	**-0.1**

ZALV				Sn	Sn	01 52 41.2	-2.7
ZALV				Lg		01 53 03.6	
ZALV				LR	LR	01 53 57.0	
KRAR	Krasnoyarsk	5.34	16	*i* PN	Pg	01 52 18.0	-7.5
KRAR				*i*		01 53 29.4	
KRAR				pmax	pmax		
comp=Z,190nm,0.2s							
NVS	Novosibirsk	5.83	315	*e*PN	Pn	01 52 09.3	+0.3
NVS				*e*		01 52 28.7	
NVS				*e*		01 53 15.3	
NVS	Novosibirsk	5.83	315	*e*Pn	Pn	01 52 09.0	0.0
NVS				*e*Pg	Pg	01 52 28.9	-6.0
NVS				*e*Sn	Sn	01 53 15.3	-0.2
NVS				*e*Sg	Sg	01 53 44.9	-5.4
MK05	Makanchi Array	6.71	235	⇑P	Pn	01 52 21.8	+0.8
comp=Z,152nm,0.6s							
MKAR	Makanchi Array	6.71	235	Pn	Pn	01 52 21.6	+0.6
comp=Z,20nm,0.3s,baz=58,slow=13,SNR=789							
MKAR				Pg	Pn	01 52 48.4	+27
comp=Z,36nm,0.3s,baz=57,slow=16,SNR=12							
MKAR				Lg		01 54 05.0	
comp=Z,9.0nm,0.3s,baz=50,slow=21,SNR=2.8							
MKAR	Makanchi Array	6.71	235	*i* PN	Pn	01 52 21.6	+0.6
MKAR				pmax	pmax		
comp=Z,99nm,0.6s							
MKAR	Makanchi Array	6.71	235	Pn	Pn	01 52 21.6	+0.6
MKAR				Pg	Pn	01 52 48.4	+27
MKAR				Lg		01 54 05.0	
MOY	Mondy	6.74	79	*e*PN	Pn	01 52 24.9	+3.6
MOY				*e*		01 52 43.5	
MOY				*e*S	Sn	01 54 33.5	+56
MOY				pmax	pmax		
comp=Z,197nm,1.0s							
WMQ	Urumqi	7.30	195	*e*Pn	Pn	01 52 28.0	-1.1
WMQ				Sn	Sn	01 53 47.0	-4.6
WMQ				smax			
comp=N,3μm,1.2s							
WMQ				smax			
comp=E,3μm,1.2s							
KURK	Kurchatov	7.42	273	⇑P	Pn	01 52 30.7	-0.1
comp=E,38nm,0.7s							
KURK	Kurchatov	7.42	273	Pn	Pn	01 52 31.1	+0.3
comp=E,2.7nm,0.3s,baz=87,slow=15,SNR=78							
KURK				Sn	Sn	01 53 55.0	+0.4
comp=E,4.3nm,0.3s,baz=78,slow=19,SNR=5.0							
KURK				Lg		01 54 32.2	
comp=E,3.3nm,0.3s,baz=85,slow=32,SNR=4.5							
KURK				LR	LR	01 55 34.9	
comp=E,438nm,19.9s,baz=85,slow=39							
KURK	Kurchatov	7.42	273	P	Pn	01 52 31.1	+0.3
KURK						01 53 55.0	
KURK				pmax	pmax		
comp=Z,3.0nm,0.3s							
KURK				smax			
comp=N,4.0nm,0.3s							
KURK				MLR	MLR		
comp=Z,439nm,19.9s							
KURK	Kurchatov	7.42	273	*e*Pn	Pn	01 52 30.5	-0.3
KURK				*e*Sn	Sn	01 53 54.6	0.0
KURBB	Kurchatov Arra	7.49	272	⇑P	Pn	01 52 31.8	+0.1
comp=Z,7.6nm,0.7s							
ZAK	Zakamensk	8.25	89	*e*P	Pn	01 52 42.0	-0.1
ZAK				*e*		01 54 26.3	
ZAK				pmax	pmax		
comp=Z,8.0nm,1.2s							
ZAK				smax			
comp=N,9.0nm,2.0s							
TLY	Talaya	8.38	79	*e*P	Pn	01 52 47.6	+3.6
SONM	Songino Array	10.91	100	Pn	Pn	01 53 17.5	-1.1
comp=N,0.4nm,0.3s,baz=292,slow=14,SNR=31							
SONM				Pg	Pn	01 53 59.9	+41
comp=N,1.4nm,0.3s,baz=301,slow=18,SNR=9.0							
SONM				Lg		01 56 21.8	
comp=N,3.8nm,0.3s,baz=299,slow=25,SNR=5.7							
SONM				LR	LR	01 57 33.0	
comp=N,550nm,19.0s,baz=164,slow=38							
ULN	Ulaanbaatar	11.31	99	*e*P	Pn	01 53 25.1	+1.0
VOSK	Vostochnaya	12.11	286	⇑P	Pn	01 53 32.3	-2.7
comp=N,7.3nm,0.6s							
BVA0	Borovoye Array	12.48	288	⇑P	Pn	01 53 38.1	-1.9
comp=N,2.8nm,0.7s							
BVAR	Borovoye Array	12.48	288	Pn	Pn	01 53 37.8	-2.1
comp=N,1.6nm,0.3s,baz=78,slow=14,SNR=27							
BVAR				Sn	Sn	01 55 56.5	-2.0
comp=N,1.5nm,0.3s,baz=88,slow=21,SNR=3.8							
BVAR				LR	LR	01 58 51.4	
comp=N,445nm,18.7s,baz=101,slow=39							
BVAR	Borovoye Array	12.48	288	P	Pn	01 53 37.8	-2.2
BVAR						01 55 56.5	
BVAR				pmax	pmax		
comp=Z,2.0nm,0.3s							
BVAR				smax			
comp=N,2.0nm,0.3s							
BVAR				MLR	MLR		
comp=Z,445nm,18.7s							
BRVK	Borovoye	12.54	288	⇑P	Pn	01 53 39.2	-1.7
comp=Z,32nm,0.7s							
BRVK	Borovoye	12.54	288	*de*P	Pn	01 53 39.5	-1.4
BRVK	Borovoye	12.54	288	*e*Pn	Pn	01 53 39.0	-1.8
BRVK				*e*Sn	Sn	01 55 58.5	-1.5
TKM2	Tokmak 2	12.83	237	⇓P	Pn	01 53 44.5	-0.3
comp=Z,5.0nm,0.6s							
TKM2	Tokmak 2	12.83	237	P	Pn	01 53 45.0	+0.1
SNR=8.8							
GTA	Gaotai	13.28	146	⇓P	Pn	01 53 50.7	-0.3
GTA				pP		01 53 56.3	
GTA				sP		01 54 00.7	
GTA				pmax	pmax		
comp=Z,19nm,1.3s							
GTA				pmax	pmax		
comp=Z,82nm,3.9s							
GTA				LR	LR		
comp=N,600nm,16.5s							
GTA				LR	LR		
comp=E,770nm,13.8s							
GTA				LR	LR		
comp=Z,1μm,14.1s							
ZRNK	Zerenda	13.31	287	⇑P	Pn	01 53 48.9	-2.5
comp=Z,16nm,0.7s							
KBK	Karagaybulak	13.36	238	P	Pn	01 53 52.8	+0.7
SNR=7.1							
KZA	Kyzart	13.61	235	P	Pn	01 53 55.0	-0.5
SNR=11							
AAK	Ala-Archa	13.62	239	P	Pn	01 53 56.3	+0.6
SNR=7.0							
AAK	Ala-Archa	13.62	239	Pn	Pn	01 53 55.8	+0.2
comp=Z,0.0nm,0.3s,baz=88,slow=6.7,SNR=12							
AAK				LR	LR	01 59 16.7	
comp=Z,279nm,18.9s,baz=29,slow=38							
AAK	Ala-Archa	13.62	239	*ce*P	Pn	01 53 55.6	0.0
AAK				pmax	pmax		
comp=Z,2.0nm,0.6s							
AAK	Ala-Archa	13.62	239	*e*Pn	Pn	01 53 55.9	+0.3
UCH	Uchtor	13.89	237	P	Pn	01 54 00.6	+1.3
SNR=9.0							
EKS2	Erkin-Say	13.99	240	P	Pn	01 54 09.2	+8.5
SNR=16							
AML	Almayashu	14.40	239	P	Pn	01 54 04.7	-1.6
SNR=15							
KSH	Kashi	15.20	227	⇓*i*P	Pn	01 54 22.5	+5.5
KSH				S	Sn	01 57 14.3	+9.4
KSH				PcP	PcP	01 59 24.0	+1.3
KSH				pmax	pmax		
comp=Z,11nm,0.8s							
KSH				pmax	pmax		
comp=Z,67nm,4.0s							
KSH				LR	LR		
comp=N,350nm,5.2s							
KSH				LR	LR		
comp=E,820nm,7.9s							
KSH				LR	LR		
comp=Z,300nm,5.2s							
BOD	Bodaibo	15.38	54	⇓*e*P	Pn	01 54 24.0	+4.6
BOD				pmax	pmax		
comp=Z,19nm,1.2s							
KK31	Karatay Array	15.57	248	⇑P	Pn	01 54 16.6	-5.4
comp=Z,9.2nm,0.7s							
LZH	Lanzhou	17.71	142	*e*P	Pn	01 54 49.5	+0.5
LZH				pP	pP	01 54 55.6	+1.2
LZH				sP	sP	01 54 59.4	+2.9
LZH				PP		01 55 04.6	
LZH				*e*S	Sn	01 58 04.5	-1.4
LZH				sS	sS	01 58 14.0	-6.2
LZH				*e*SS		01 58 26.7	
LZH				pmax	pmax		
comp=Z,46nm,1.3s							
LZH				pmax	pmax		
comp=Z,140nm,4.0s							
LZH				LR	LR		
comp=E,350nm,10.5s							
LZH				LR	LR		
comp=Z,600nm,12.3s							
HHC	Hu-ho-hao-te	17.82	116	*e*P	Pn	01 54 51.7	+1.4
HHC				pP	pP	01 54 57.8	+2.3
HHC				sP	sP	01 55 01.7	+4.1
HHC				PP		01 55 06.6	
HHC				S	Sn	01 58 06.9	-1.5
HHC				sS	sS	01 58 16.7	-5.6
HHC				SS		01 58 29.8	
HHC				PcP	PcP	01 59 28.8	+2.1
HHC				ScS	ScS	02 06 40.3	-0.9
HHC				pmax	pmax		
comp=Z,18nm,0.9s							
HHC				pmax	pmax		
comp=Z,220nm,5.3s							
HHC				LR	LR		
comp=N,590nm,12.9s							
HHC				LR	LR		
comp=E,870nm,13.9s							
HHC				LR	LR		
comp=Z,630nm,12.9s							
SVE	Sverdlovsk	18.39	300	⇑*e*P	Pn	01 54 57.5	+0.2
SVE				pmax	pmax		
comp=Z,38nm,1.1s							
SVE				MLR	MLR		
comp=Z,629nm,14.0s							
ARU	Arti	19.50	299	*d i*P	Pn	01 55 09.5	-1.2
ARU				S	Sn	01 58 43.1	-5.9
ARU				pmax	pmax		
comp=Z,15nm,1.0s							
ARU				MLR	MLR		
comp=Z,403nm,16.0s							
ARU	Arti	19.50	299	*e*P	Pn	01 55 09.7	-1.0
comp=Z,18nm,0.7s							
ARU				*e*S	Sn	01 58 39.8	-9.1
AB31	Akbulak array	19.51	277	P	Pn	01 55 09.4	-1.4
comp=Z,16nm,0.7s,baz=76,slow=11,SNR=206							
ABKAR	Akbulak array	19.51	277	*e*P	Pn	01 55 09.4	-1.4
comp=Z,18nm,0.7s							
AKTK	Aktyubinsk	20.41	281	P	P	01 55 19.0	-0.3
AKTK				LR	LR	02 03 47.9	
AKTO	Aktyubinsk	20.41	281	⇑P	P	01 55 18.9	-0.4
comp=Z,6.7nm,0.8s							
AKTO	Aktyubinsk	20.41	281	P	P	01 55 19.0	-0.3
comp=Z,15nm,0.8s,baz=94,slow=12,SNR=28							
AKTO				LR	LR	02 03 47.9	
comp=Z,182nm,20.6s,MS3.4,baz=77,slow=38							
AKTO	Aktyubinsk	20.41	281	P	P	01 55 19.0	-0.2
AKTO				pmax	pmax		
comp=Z,15nm,0.8s							
AKTO				MLR	MLR		
comp=Z,182nm,20.6s,MS3.4							
SOKR	Solikamsk	20.80	308	⇑*i*P	P	01 55 24.1	+0.7
SOKR				S	S	01 59 28.8	+14
SOKR				pmax	pmax		
comp=Z,10.0nm,1.0s							
SOKR				MLR	MLR		
comp=Z,330nm,17.0s,MS3.8							
BJI	Beijing	21.02	111	P	P	01 55 26.2	+0.2
BJI				S	S	01 59 18.5	-0.8
BJI				pmax	pmax		
comp=Z,52nm,0.6s,mb5.0							
BJI				pmax	pmax		
comp=Z,130nm,3.8s							
BJI				LR	LR		
comp=N,380nm,18.5s,MS4.0							
BJI				LR	LR		
comp=E,430nm,19.8s,MS4.0							
BJI				LR	LR		
comp=Z,190nm,16.8s,MS3.5							
LSA	Lhasa	21.18	178	P	P	01 55 29.6	+1.8
LSA				pmax	pmax		
comp=Z,30nm,1.0s,mb4.6							
LSA				LR	LR		
comp=N,110nm,11.0s,MS3.7							
LSA				LR	LR		
comp=E,170nm,13.0s,MS3.7							
LSA				LR	LR		
comp=Z,330nm,13.0s,MS3.9							
KLP	Kalpa	21.32	209	*e*PKP	P	01 55 28.8	-0.5
KLP				AMb	AMB	01 55 30.6	
comp=Z,48nm,1.4s,mb4.6							
XAN	Xi'an	21.62	134	P	P	01 55 32.0	-0.5
XAN				pP		01 55 38.7	
XAN				sP	sP	01 55 44.4	+5.3
XAN				S	S	01 59 22.6	-8.7
XAN				pmax	pmax		
comp=Z,11nm,0.9s,mb4.3							
XAN				LR	LR		
comp=N,450nm,12.0s,MS4.2							
XAN				LR	LR		
comp=E,170nm,10.6s,MS4.2							
XAN				LR	LR		
comp=Z,220nm,12.0s,MS3.8							
JOSI	Joshimath	21.86	206	*e*PKP	P	01 55 35.5	+0.5
CD2	Chengdu	22.33	148	*e*P	P	01 55 40.7	+0.6
CD2				pP		01 55 47.7	
CD2				sP	sP	01 55 51.2	+4.4
CD2				PP		01 56 08.3	
CD2				S	S	01 59 40.3	-4.8
CD2				SS		02 00 21.8	
CD2				pmax	pmax		
comp=Z,30nm,0.6s,mb4.9							
CD2				pmax	pmax		
comp=Z,50nm,5.8s							
CD2				LR	LR		
comp=N,630nm,13.1s,MS4.4							
CD2				LR	LR		
comp=E,640nm,14.2s,MS4.4							
CD2				LR	LR		
comp=Z,730nm,10.7s,MS4.4							
KBL	Kabul	22.50	232	*e*P	P	01 55 42.4	+0.6
KBL				pmax	pmax		
comp=Z,18nm,0.9s,mb4.5							
KBL	Kabul	22.50	232	*e*P	P	01 55 42.4	+0.6
comp=Z,18nm,0.9s,mb4.5							
DDI	Dehra Dun	22.51	209	*ex*	x	01 55 35.2	
GUN	Gumba	23.20	190	*e*P	P	01 55 48.6	-0.7
comp=Z,36nm,0.5s,mb5.0							
KKN	Kakani	23.39	191	*e*P	P	01 55 50.8	-0.5
comp=Z,40nm,0.6s,mb5.0							
KKN	Kakani	23.39	191	*e*P	P	01 55 50.8	-0.5
KKN				pmax	pmax		
comp=Z,40nm,0.6s,mb5.0							
PKIN	Phulchoki	23.59	191	*e*P	P	01 55 52.3	-1.0
DMN	Daman	23.59	192	*e*P	P	01 55 53.1	-0.2
comp=Z,24nm,0.7s,mb4.7							
PKI	Pulchoki	23.59	191	*e*P	P	01 55 52.7	-0.6
comp=Z,31nm,0.7s,mb4.8							
PKI	Pulchoki	23.59	191	*e*P	P	01 55 52.7	-0.6
PKI				pmax	pmax		
comp=Z,31nm,0.7s,mb4.8							
YAK	Yakutsk	24.02	47	*e*P	P	01 55 56.2	-0.7
YAK				*e**PP		01 56 04.7	
YAK				*e*PPP		01 56 30.8	
YAK				*e*S	S	02 00 10.5	-2.6
YAK				*e*SSS		02 01 07.6	
YAK				*e*		02 07 01.0	
YAK				pmax	pmax		
comp=E,11nm,1.5s							
YAK				pmax	pmax		
comp=Z,18nm,0.9s,mb4.5							
YAK				smax			
comp=N,15nm,1.8s							
YAK				MLR	MLR		
comp=Z,282nm,10.0s,MS4.0							
YAK				MLR	MLR		
comp=E,292nm,12.0s							
BISR	Bishrakh	24.33	208	*e*PKP	P	01 55 58.9	-1.2
AYAN	Aya Nagar	24.51	209	*e*PKP	P	01 56 00.8	-0.9
AYAN				AMb	AMB	01 56 02.9	
comp=Z,20nm,0.7s,mb4.8							
CN2	Changchun	24.65	93	*e*P	P	01 56 03.4	+0.5
CN2				*ep*P		01 56 10.3	
CN2				*es*P	sP	01 56 13.9	+4.2
CN2				*e*S	S	02 00 20.3	-3.2
CN2				pmax	pmax		
comp=Z,10.0nm,1.0s,mb4.3							
CN2				pmax	pmax		
comp=Z,100nm,4.0s							
CN2				LR	LR		
comp=N,190nm,6.0s							
CN2				LR	LR		
comp=E,330nm,6.0s							
CN2				LR	LR		
comp=Z,400nm,8.0s							
SONA	Sohna	24.74	209	*e*PKP	P	01 56 03.2	-0.6
KHET	Khetri	25.31	211	*e*PKP	P	01 56 08.0	-1.0
KHET				AMb	AMB	01 56 10.7	
comp=Z,32nm,1.1s,mb4.8							
AGRA	Agra	25.45	206	*e*PKP	P	01 56 09.4	-0.8
KLR	Kul'dur	26.40	77	*e*P	P	01 56 19.1	+0.5
MDJ	Mudanjiang	26.89	88	P	P	01 56 22.5	-0.6
MDJ				pP	pP	01 56 28.8	+0.8
MDJ				sP	sP	01 56 31.1	+1.1
MDJ				PcP	PcP	01 59 46.0	+1.1
MDJ				S	S	02 01 00.3	+1.3
MDJ				ScP	ScP	02 03 24.1	-0.1
MDJ				PcS	PcS	02 03 27.1	+0.9
MDJ				ScS	ScS	02 07 15.5	+0.6
MDJ				pmax	pmax		
comp=Z,6.0nm,0.9s,mb4.1							
MDJ				pmax	pmax		
comp=Z,43nm,4.8s							
MDJ				LR	LR		
comp=N,68nm,17.1s,MS3.5							
MDJ				LR	LR		
comp=E,110nm,17.1s,MS3.5							
MDJ				LR	LR		
comp=Z,160nm,17.1s,MS3.6							
TIXI	Tiksi	27.00	26	*e*P	P	01 56 23.8	-0.1
TIXI				pmax	pmax		
comp=Z,9.0nm,0.9s,mb4.3							
TIXI				MLR	MLR		
comp=Z,422nm,11.0s,MS4.3							
WHN	Wuhan	27.08	130	P	P	01 56 30.1	+5.2
KMI	Kunming	27.45	155	P	P	01 56 30.0	+1.7
KMI				pP	pP	01 56 37.4	+4.2
KMI				sP	sP	01 56 40.8	+5.6
KMI				PP		01 57 19.1	
KMI				S	S	02 01 08.8	+0.7
KMI				sS	sS	02 01 21.4	+5.2
KMI				SS		02 02 26.3	
KMI				pmax	pmax		
comp=Z,10.0nm,0.7s,mb4.5							
KMI				pmax	pmax		
comp=Z,140nm,4.0s							
KMI				LR	LR		
comp=N,150nm,14.4s,MS4.2							
KMI				LR	LR		
comp=E,390nm,13.9s,MS4.2							
KMI				LR	LR		
comp=Z,170nm,14.4s,MS3.8							
NJ2	Nanjing	28.21	121	*e*P	P	01 56 35.1	0.0
NJ2				pmax	pmax		
comp=Z,10.0nm,0.5s,mb4.7							
KSRS	Korea Array	29.78	102	LR	LR	02 09 37.9	
comp=Z,149nm,19.5s,MS3.6,baz=200,slow=38							
MAK	Makhachkala	29.95	272	*e*P	P	01 56 53.9	+3.5
MAK				MLR	MLR		
comp=Z,237nm,12.0s,MS4.0							
VSR	Storozhevoye	31.63	291	*e*P	P	01 57 04.3	-0.8
VSR				pmax	pmax		
comp=Z,3.0nm,0.4s,mb4.5							
VSR				pmax	pmax		
comp=N,9.0nm,0.8s							
VSR				pmax	pmax		
comp=E,10.0nm,1.2s							
OBN	Obninsk	31.95	299	*e*P	P	01 57 06.2	-1.7
OBN				*e*		01 58 16.9	
OBN				pmax	pmax		
comp=Z,16nm,0.9s,mb4.8							
OBN				MLR	MLR		
comp=Z,200nm,16.0s,MS3.9							
OBN	Obninsk	31.95	299	*e*P	P	01 57 07.5	-0.4
comp=Z,18nm,1.0s,mb4.8							
ZEI	Tsey	32.33	274	*e*P	P	01 57 10.3	-1.0
ZEI				pmax	pmax		
comp=Z,11nm,1.3s,mb4.5							
CMAR	Chiang Mai Arr	33.09	165	P	P	01 57 16.2	-1.9
comp=Z,1.2nm,0.3s,mb4.3,baz=357,slow=10,SNR=5.1							
CMAR				LR	LR	02 11 30.0	
comp=Z,44nm,21.2s,MS3.1,baz=355,slow=38							
CMAR	Chiang Mai Arr	33.09	165	*e*P	P	01 57 19.1	+1.0
CMAR				pmax	pmax		
comp=Z,1.0nm,0.3s							
JOF	Joensuu	33.14	314	*e*P	P	01 57 17.7	-0.6
JOF				pmax	pmax		
comp=Z,5.0nm,1.0s,mb4.4							
JOF	Joensuu	33.14	314	*ep*	P	01 57 17.7	-0.6
comp=Z,4.9nm,1.0s,mb4.4							
JOF	Joensuu	33.14	314	*ep*	P	01 57 17.7	-0.6
comp=Z,4.9nm,1.0s,mb4.4							
GNI	Garni	33.20	269	*ce*P	P	01 57 20.3	+1.3
GNI				pmax	pmax		
comp=Z,18nm,1.2s							
KEV	Kevo	34.46	327	*ep*	P	01 57 25.6	-4.1
KEV	Kevo	34.46	327	*ep*	P	01 57 25.6	-4.1
ARCES	ARCESS Array B	34.99	326	P	P	01 57 33.6	-0.6
comp=Z,2.1nm,0.7s,mb4.2,baz=71,slow=7.5,SNR=6.1							
ARCES				PcP	PcP	02 00 04.7	-1.3
comp=Z,3.0nm,0.9s,baz=64,slow=4.1,SNR=4.0							
ARCES	ARCESS Array B	34.99	326	P	P	01 57 33.7	-0.5
ARCES						02 00 04.7	
ARCES				pmax	pmax		
comp=Z,2.0nm,0.7s							
KAF	Kangasniemi	35.56	313	*e*P	P	01 57 35.3	-3.9
KAF				pmax	pmax		
comp=Z,2.0nm,0.5s,mb4.3							
KAF	Kangasniemi	35.56	313	*ep*	P	01 57 35.3	-3.9
comp=Z,2.1nm,0.5s,mb4.3							
KAF	Kangasniemi	35.56	313	*ep*	P	01 57 35.3	-3.9
comp=Z,2.1nm,0.5s,mb4.3							
FINES	FINESS Array B	35.81	312	P	P	01 57 41.4	0.0
comp=Z,4.8nm,0.7s,mb4.5,baz=83,slow=9.0,SNR=15							
FINES				LR	LR	02 13 43.6	
comp=Z,82nm,19.9s,MS3.5,baz=18,slow=38							
FINES	FINESS Array B	35.81	312	P	P	01 57 41.4	0.0
FINES				pmax	pmax		
comp=Z,5.0nm,0.7s							
FINES				MLR	MLR		
comp=Z,82nm,19.9s							
VSU	Vasula	36.25	307	*de*P	P	01 57 44.5	-0.7
VSU				pmax	pmax		
comp=Z,32nm,1.1s,mb5.2							
IDID	Didziasalis	37.25	302	*e*P	P	01 57 54.0	+0.3
IDID				AMB	AMB	01 57 54.8	
comp=Z,6.8nm,0.8s,mb4.5							
IZAR	Zarasai	37.36	303	*e*P	P	01 57 55.0	+0.4
IZAR				AMB	AMB	01 57 56.3	
comp=Z,7.3nm,1.1s,mb4.4							
ISAL	Salakas	37.49	303	*e*P	P	01 57 56.0	+0.3
ISAL				AMB	AMB	01 57 57.5	
comp=Z,6.2nm,1.3s,mb4.3							
IIGN	Ignalina	37.51	302	*e*P	P	01 57 56.3	+0.4
IIGN				AMB	AMB	01 57 57.2	
comp=Z,8.9nm,0.8s,mb4.6							
AKASG	Malin Array Be	37.64	294	P	P	01 57 56.4	-0.7
comp=Z,5.9nm,0.5s,mb4.6,baz=58,slow=8.8,SNR=22							
AKASG	Malin Array Be	37.64	294	*e*P	P	01 57 56.3	-0.8
AKASG				pmax	pmax		
comp=Z,6.0nm,0.5s							
AKBB	Malin Array Si	37.64	294	*e*P	P	01 57 56.3	-0.8
BILL	Bilibino	39.20	35	*e*P	P	01 58 07.8	-2.1
BILL				*e*		01 58 16.9	
BILL				pmax	pmax		
comp=Z,4.0nm,1.2s,mb4.0							
BILL				MLR	MLR		
comp=Z,200nm,17.0s,MS4.0							
PETK	Petropavlovsk-	40.15	60	P	P	01 58 16.3	-1.7
comp=Z,3.2nm,0.9s,mb4.0,baz=297,slow=9.5,SNR=3.3							
PETK	Petropavlovsk-	40.15	60	P	P	01 58 16.3	-1.7
PETK				pmax	pmax		
comp=Z,3.0nm,0.9s,mb4.0							
BR131	Keskin Array S	40.46	277	*e*P	P	01 58 21.6	+0.8
comp=Z,8.9nm,0.7s,mb4.6							
BRTR	Keskin Array B	40.46	277	P	P	01 58 21.6	+0.8
comp=Z,14nm,0.7s,mb4.8,baz=81,slow=8.0,SNR=80							
BRTR	Keskin Array B	40.46	277	P	P	01 58 21.6	+0.8
BRTR				pmax	pmax		
comp=Z,15nm,0.7s							
TIRR	Tirgusor	41.09	286	⇓P	P	01 58 26.2	+0.3
TIRR	Tirgusor	41.09	286	⇓*i*P	P	01 58 26.2	+0.3
VRI	Vrincioaia	41.38	289	⇓P	P	01 58 29.3	+1.0
VRI	Vrincioaia	41.38	289	⇓*i*P	P	01 58 29.3	+1.0
BUR08	Bucovina Ar. S	41.39	292	*e*P	P	01 58 28.8	+0.5
BURAR	Bucovina Array	41.39	292	⇑P	P	01 58 28.7	+0.3

BURAR **Bucovina Array** 41.39 292⇑ *i*P P 01 58 28.7 +0.3
KWP **Kalwaria Pacla** 41.86 296 ⇑P P 01 58 32.7 +0.5
KWP **Kalwaria Pacla** 41.86 296 *e*P P 01 58 32.9 +0.7
comp=Z,8.0nm,0.4s,mb4.7
KWP **Kalwaria Pacla** 41.86 296⇑ *i*P P 01 58 32.7 +0.5
HFS **Hagfors** 41.99 313 P P 01 58 33.0 -0.1
comp=Z,31nm,0.8s,mb5.0,baz=75,slow=7.8,SNR=63
HFS LR LR 02 17 24.5
comp=Z,136nm,19.6s,MS3.8,baz=161,slow=38
HFS **Hagfors** 41.99 313 P P 01 58 33.0 -0.1
HFS pmax pmax
comp=Z,31nm,0.8s
HFS MLR MLR
comp=Z,136nm,19.7s
MLR **Muntele Rosu** 42.04 289 ⇓P P 01 58 34.9 +1.2
MLR **Muntele Rosu** 42.04 289⇓ *i*P P 01 58 34.9 +1.2
KOLS **Kolonicke sedl** 42.45 295 *e*P P 01 58 37.4 +0.4
KOLS *e* pP 01 58 42.5 +0.5
KOLS *e* 02 00 19.1
KOLS pmax pmax
comp=Z,7.0nm,1.2s,mb4.2
KOLS **Kolonicke sedl** 42.45 295 *e*P P 01 58 37.4 +0.4
comp=Z,6.8nm,1.2s,mb4.2
KOLS *e* pP 01 58 42.5 +0.5
KOLS *e*PP PP 02 00 19.1 +3.9
KOLS **Kolonicke sedl** 42.45 295 *e*P P 01 58 37.4 +0.4
KOLS *e*pP pP 01 58 42.5 +0.5
KOLS *e*PP PP 02 00 19.1 +3.9
TRPA **Tarpa** 42.70 294⇓ *i*P P 01 58 39.8 +0.8
NB2 **NORSAR Subarra** 42.75 315 P P 01 58 39.0 -0.3
comp=Z,9.9nm,0.6s,mb4.7,baz=62,slow=7.9
NOA **NORSAR Array B** 42.75 315 P P 01 58 39.1 -0.1
comp=Z,9.5nm,0.8s,mb4.6,baz=62,slow=7.8,SNR=30
NOA LR LR 02 17 26.3
comp=Z,89nm,20.7s,MS3.6,baz=70,slow=38
NOA **NORSAR Array B** 42.75 315 P P 01 58 39.2 -0.1
NOA pmax pmax
comp=Z,10.0nm,0.8s
NOA MLR MLR
comp=Z,89nm,20.7s
STHS **Stebnicka Huta** 42.80 296 *e*P P 01 58 40.0 +0.2
STHS pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
STHS **Stebnicka Huta** 42.80 296 *e*P P 01 58 40.0 +0.2
comp=Z,3.5nm,0.7s,mb4.2
STHS *e*PP PP 02 00 21.8 +2.9
STHS **Stebnicka Huta** 42.80 296 *e*P P 01 58 40.0 +0.2
STHS *e*PP PP 02 00 21.8 +2.9
NAO01 **NORSAR Array S** 42.98 315 *e*P P 01 58 40.9 -0.2
comp=Z,14nm,0.8s,mb4.7
ASF **Jabal al Asfar** 43.11 265 P P 01 58 43.2 +0.6
comp=Z,2.8nm,0.8s,mb4.0,baz=282,slow=11,SNR=4.7
ASF **Jabal al Asfar** 43.11 265 P P 01 58 43.2 +0.7
ASF pmax pmax
comp=Z,3.0nm,0.9s
OJC **Ojcow** 43.22 298 *e*P P 01 58 42.7 -0.5
NIE **Niedzica** 43.33 297 *e*P P 01 58 45.2 +1.1
KECS **Kecovo** 43.70 295 *e*P P 01 58 47.9 +0.8
KECS pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
KECS **Kecovo** 43.70 295 *e*P P 01 58 47.9 +0.8
comp=Z,5.2nm,0.6s,mb4.4
KECS *e*PP PP 02 00 29.5 +0.9
KECS **Kecovo** 43.70 295 *e*P P 01 58 47.9 +0.8
KECS *e*PP PP 02 00 29.5 +0.9
PSZ **Piszkesteto** 44.33 295 ⇓P P 01 58 53.1 +0.9
PSZ **Piszkesteto** 44.33 295⇓ *e*P P 01 58 53.3 +1.1
PSZ **Piszkesteto** 44.33 295⇓ *i*P P 01 58 53.1 +0.9
OKC **Ostrava-Krasne** 44.34 298 *e*P P 01 58 50.2 -2.0
OKC MLR MLR
comp=Z,100nm,15.2s,MS3.9
OKC **Ostrava-Krasne** 44.34 298 *e*P P 01 58 50.2 -2.0
OKC AMS AMS 02 18 10.0
comp=Z,100nm,15.2s
RGN **Rugen** 44.61 306 *e*pP pP 01 59 00.7 +1.4
comp=Z,51nm,0.9s
VYHS **Vyhne** 44.64 296 *e*P P 01 58 55.5 +0.9
VYHS *e* pP 01 59 00.0 +0.4
VYHS *e* 02 00 38.7
VYHS pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
VYHS **Vyhne** 44.64 296 *e*P P 01 58 55.5 +0.9
comp=Z,3.8nm,0.7s,mb4.3
VYHS *e* pP 01 59 00.0 +0.4
VYHS *e*PP PP 02 00 38.7 +0.1
VYHS **Vyhne** 44.64 296 *e*P P 01 58 55.5 +0.9
VYHS *e*pP pP 01 59 00.0 +0.4
VYHS *e*PP PP 02 00 38.7 +0.1
MORC **Moravsky Berou** 44.70 298 ⇑P P 01 58 55.9 +0.8
MORC **Moravsky Berou** 44.70 298 *e*P P 01 58 55.3 +0.2
comp=Z,3.2nm,0.8s,mb4.2
MORC **Moravsky Berou** 44.70 298⇑ *i*P P 01 58 55.9 +0.8
KSP **Ksiaz** 44.85 300 *e*P P 01 58 56.6 +0.3
BUD **Budapest** 45.06 295⇓ *e*P P 01 58 58.4 +0.4
DPC **Dobruska-Polom** 45.09 300 *e*P P 01 58 58.9 +0.7
DPC *e* pP 01 59 02.4 -0.8
DPC MLR MLR
comp=Z,200nm,11.2s,MS4.3
DPC **Dobruska-Polom** 45.09 300 *e*P P 01 58 58.9 +0.7
DPC *e*pP pP 01 59 02.4 -0.8
DPC AMS AMS 02 19 20.0
comp=Z,200nm,11.2s
UPC **Upice** 45.18 300 *e*P P 01 58 59.5 +0.6
UPC *e* pP 01 59 03.7 -0.2
UPC **Upice** 45.18 300 *e*P P 01 58 59.5 +0.6
UPC *e*pP pP 01 59 03.7 -0.2
SMOL **Smolenice** 45.42 297 *e*P P 01 59 02.0 +1.1
SMOL **Smolenice** 45.42 297 *e*P P 01 59 02.0 +1.1
VRAC **Vranov** 45.48 298 ⇓P P 01 59 02.3 +1.0
VRAC **Vranov** 45.48 298⇓ *i*P P 01 59 02.3 +1.0
MUD **Monsted U'grnd** 45.75 310 *i*P P 01 59 04.2 +0.8
MUD pmax pmax
comp=Z,24nm,0.8s,mb5.2
ZST **Bratislava** 45.78 297 *e*P P 01 59 04.9 +1.2
ZST pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
ZST **Bratislava** 45.78 297 *e*P P 01 59 04.9 +1.2
comp=Z,4.4nm,0.6s,mb4.6
ZST **Bratislava** 45.78 297 *e*P P 01 59 04.9 +1.2
PVCC **Panska Ves** 45.96 301 *e*P P 01 59 05.7 +0.7
PVCC MLR MLR
comp=Z,200nm,12.0s,MS4.3
PVCC **Panska Ves** 45.96 301 *e*P P 01 59 05.7 +0.7
PVCC AMS AMS 02 19 20.0
comp=Z,200nm,12.0s
PKSM **Moragy** 45.97 294 ⇓P P 01 59 05.8 +0.6
PKSM **Moragy** 45.97 294⇓ *i*P P 01 59 05.8 +0.6
EIL **Elat** 46.03 264 P P 01 59 06.2 +0.3
comp=Z,2.4nm,0.9s,mb4.1,baz=45,slow=7.1,SNR=3.1
TREC **Trest** 46.10 299 *e*P P 01 59 06.8 +0.6
TREC MLR MLR
comp=Z,200nm,13.4s,MS4.2
TREC **Trest** 46.10 299 *e*P P 01 59 06.8 +0.6
TREC AMS AMS 02 20 00.0
comp=Z,200nm,13.4s
BRG **Berggiesshubel** 46.12 301 *e*P P 01 59 06.3 0.0
BRG *e*pP pP 01 59 10.7 -0.6
comp=Z,11nm,1.5s
BRG **Berggiesshubel** 46.12 301 *e*P P 01 59 06.3 0.0
comp=Z,2.8nm,0.7s,mb4.3
BRG *e* pP 01 59 10.9 -0.5
comp=Z,11nm,1.5s
BRG
comp=N,110nm,11.3s
BRG
comp=E,107nm,14.5s
BRG
comp=Z,217nm,14.4s
PRU **Pruhonice** 46.25 300 *e*P P 01 59 08.4 +1.0
PRU *e* pP 01 59 12.8 +0.4
PRU MLR MLR
comp=Z,100nm,13.9s,MS3.9
PRU **Pruhonice** 46.25 300 *e*P P 01 59 08.4 +1.0
PRU *e*pP pP 01 59 12.8 +0.4
PRU AMS AMS 02 19 20.0
comp=Z,100nm,13.9s
SOP **Sopron** 46.36 296⇓ *e*P P 01 59 09.8 +1.5
CLL **Collm** 46.40 302 *e*P P 01 59 08.6 +0.1
CLL *e*pP pP 01 59 12.8 -0.7
comp=Z,14nm,1.0s
CLL **Collm** 46.40 302⇑ *i*P P 01 59 08.7 +0.2
CLL *i* *PP pP 01 59 12.4 -1.1
CLL *e* 02 00 56.0
CLL pmax pmax
comp=Z,21nm,1.3s,mb4.9
CLL **Collm** 46.40 302⇑ *i*P P 01 59 08.7 +0.2
comp=Z,21nm,1.3s,mb4.9
CLL *i* pP pP 01 59 12.4 -1.1
CLL *e*PP PP 02 00 56.0 -1.2
BSEG **Bad Segeberg** 46.44 307 *e*P P 01 59 08.9 +0.1
comp=Z,16nm,0.9s,mb5.0
BSEG *e*pP pP 01 59 13.9 0.0
CONA **Conrad Observa** 46.62 297⇑ *i*P P 01 59 11.6 +1.3
comp=Z,4.3nm,0.7s,mb4.5,SNR=6.9
CSNA **Conrad Observa** 46.62 297⇑ *i*P P 01 59 11.5 +1.2
comp=Z,4.1nm,0.7s,mb4.5
TANN **Tannenbergstha** 47.16 301 *e*P P 01 59 14.9 +0.4
comp=Z,4.0nm,0.8s,mb4.4
TANN *e*pP pP 01 59 19.0 -0.5
ARSA **Arzberg** 47.19 296⇑ *i*P P 01 59 15.4 +0.7
comp=Z,4.0nm,0.9s,mb4.4
KHC **Kasperske Hory** 47.24 299 *e*P P 01 59 16.0 +0.9
KHC pmax pmax
comp=Z,7.0nm,1.3s,mb4.4
KHC **Kasperske Hory** 47.24 299 *e*P P 01 59 15.9 +0.8
comp=Z,7.2nm,1.3s,mb4.4
KHC **Kasperske Hory** 47.24 299 *e*P P 01 59 15.6 +0.5
KHC *e*pP pP 01 59 19.9 -0.3
KHC AMS AMS 02 20 00.0
comp=Z,200nm,12.9s
NKC **Novy Kostel** 47.27 301 *e*P P 01 59 16.1 +0.8
NKC *e* pP 01 59 19.8 -0.6
NKC MLR MLR
comp=Z,200nm,17.2s,MS4.2
NKC **Novy Kostel** 47.27 301 *e*P P 01 59 16.1 +0.8
NKC *e*pP pP 01 59 19.8 -0.6
NKC AMS AMS 02 20 00.0
comp=Z,200nm,17.2s
NRDL **Niedersach Rie** 47.30 305 *e*P P 01 59 16.3 +0.8
comp=Z,12nm,1.1s,mb4.7
NRDL *e*pP pP 01 59 20.7 +0.1
GEC2 **GERESS Array S** 47.33 299 *e*P P 01 59 16.3 +0.5
comp=Z,3.0nm,1.0s,mb4.2
GERES **GERESS Array B** 47.33 299 P P 01 59 16.3 +0.5
comp=Z,1.3nm,0.7s,mb4.0,baz=58,slow=7.3,SNR=12
GERES LR LR 02 20 31.8
comp=Z,162nm,18.5s,MS4.0,baz=96,slow=38
GERES **GERESS Array B** 47.33 299 P P 01 59 16.3 +0.5
GERES pmax pmax
comp=Z,1.0nm,0.7s
GERES MLR MLR
comp=Z,162nm,18.5s
MOX **Moxa** 47.49 302 *e*P P 01 59 17.2 +0.1
comp=Z,5.0nm,0.7s,mb4.5
MOX *e*pP pP 01 59 21.8 -0.3
MOX **Moxa** 47.49 302 *e*P P 01 59 17.4 +0.3
MOX pmax pmax
comp=Z,16nm,1.6s,mb4.7
CLZ **Clausthal** 47.51 304 *e*P P 01 59 17.9 +0.7
comp=Z,5.0nm,0.6s,mb4.7
MOA **Molln** 47.56 298⇑ *i*P P 01 59 18.5 +0.8
comp=Z,6.7nm,1.0s,mb4.6
WET **Wettzell** 47.62 300 *e*P P 01 59 18.5 +0.4
comp=Z,3.0nm,0.7s,mb4.4
WET *e*pP pP 01 59 22.6 -0.5
ROTZ **Rotzenmuhle** 47.65 301 *e*P P 01 59 19.1 +0.8
comp=Z,5.0nm,0.8s,mb4.6
ROTZ *e*pP pP 01 59 23.4 +0.1
SOKA **Soboth** 47.78 296⇑ *i*P P 01 59 19.7 +0.3
comp=Z,4.5nm,0.9s,mb4.5
GOLS **Golise** 47.82 295 *i* P P 01 59 19.7 0.0
DOBS **Dobrina** 47.83 295 *e*P P 01 59 19.6 -0.2
ZAVS **Zavodnje** 47.93 296 *i* P P 01 59 20.5 0.0
OBKA **Obir** 48.16 296⇑ *i*P P 01 59 22.7 +0.5
comp=Z,7.2nm,0.7s,mb4.8,SNR=6.7
GRF **Grafenberg Arr** 48.22 301 *e*P P 01 59 23.6 +0.9
comp=Z,25nm,1.3s,mb5.1
GRF *e*pP pP 01 59 28.1 +0.3
GRF **Grafenberg Arr** 48.22 301 *e*P P 01 59 23.6 +0.9
GRF *e**PP pP 01 59 28.1 +0.3
GRF pmax pmax
comp=Z,25nm,1.3s,mb5.1
UBBA **Unterbreizbach** 48.26 303 *e*P P 01 59 24.3 +1.3
comp=Z,5.0nm,1.3s,mb4.4
RJOB **Jochberg** 48.45 298 *e*P P 01 59 25.5 +1.0
comp=Z,5.0nm,0.8s,mb4.6
KBA **Koelnbreinsper** 48.52 297⇑ *i*P P 01 59 26.3 +1.3
comp=Z,12nm,0.8s,mb5.0,SNR=7.9
IBBN **Ibbenburen** 48.62 306 *e*P P 01 59 26.3 +0.6
comp=Z,17nm,0.5s,mb5.3
FUR **Furstenfeldbru** 49.05 300 *e*P P 01 59 29.9 +0.8
comp=Z,10.0nm,0.8s,mb4.9
WATA **Walderalm** 49.36 298⇑ *i*P P 01 59 32.3 +0.8
comp=Z,2.6nm,0.6s,mb4.4
WTTA **Wattenberg** 49.37 298⇑ *i*P P 01 59 32.3 +0.7
comp=Z,7.7nm,0.9s,mb4.8
TNS **Taunus Mts** 49.41 303 *e*P P 01 59 32.6 +0.7
comp=Z,14nm,1.0s,mb5.0
MOTA **Moosalm** 49.62 299⇑ *i*P P 01 59 34.1 +0.7
comp=Z,3.5nm,0.8s,mb4.5
RETA **Reutte** 49.72 299⇑ *i*P P 01 59 35.1 +0.8
comp=Z,7.2nm,0.9s,mb4.7
STU **Stuttgart** 49.84 301 *e*P P 01 59 35.6 +0.5
comp=Z,13nm,0.8s,mb5.0
DAVA **Damuels** 50.33 299⇑ *i*P P 01 59 39.5 +0.7
comp=Z,15nm,1.0s,mb5.0,SNR=6.0
BFO **Black Forest** 50.56 301 *e*P P 01 59 40.6 0.0
comp=Z,3.0nm,0.8s,mb4.3
BFO **Black Forest** 50.56 301 *i* P P 01 59 42.6 +2.0
WLF **Walferdange** 50.95 304 *e*P P 01 59 45.1 +1.6
comp=Z,8.0nm,1.2s,mb4.5
MRLC **Muro Lucano** 51.02 289 P P 01 59 49.0 +4.9
CDF **Champ du Feu** 51.09 302 *e*P P 01 59 44.5 -0.1
comp=Z,11nm,0.9s,mb4.5
CDF **Champ du Feu** 51.09 302 *e*P P 01 59 44.5 -0.1
CDF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
CDF **Champ du Feu** 51.09 302 *e*P P 01 59 44.5 -0.1
comp=Z,5.3nm,0.9s,mb4.5
TIP **Timpagrande** 51.23 287 *e*P P 01 59 46.0 +0.2
comp=Z,6.8nm,0.8s,mb4.6
GIVF **Givet** 51.39 305 *e*P P 01 59 47.3 +0.5
SEI **Scarperia** 51.42 295 P P 01 59 48.9 +1.8
comp=Z,51nm,0.8s,mb5.5
ESY **Stoneypath** 51.59 314 *e*P P 01 59 47.8 -0.4
HINF **Hinteralfeld** 51.67 301 *e*P P 01 59 48.4 -0.5
comp=Z,4.4nm,0.6s,mb4.3
HINF **Hinteralfeld** 51.67 301 *e*P P 01 59 48.4 -0.5
HINF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
HINF **Hinteralfeld** 51.67 301 *e*P P 01 59 48.4 -0.5
comp=Z,2.2nm,0.6s,mb4.3
BAIF **Baives** 51.73 305 *e*P P 01 59 49.8 +0.4
comp=Z,34nm,1.0s,mb4.9
BAIF **Baives** 51.73 305 *e*P P 01 59 49.8 +0.4
BAIF pmax pmax
comp=Z,17nm,1.0s,mb4.9
BAIF **Baives** 51.73 305 *e*P P 01 59 49.8 +0.4
comp=Z,17nm,1.0s,mb4.9
VAI **Varese** 51.79 298 P P 01 59 48.9 -0.9
VAI pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
VAI **Varese** 51.79 298 P P 01 59 48.9 -0.9
comp=Z,7.8nm,0.7s,mb4.8
EBH **Black Hill** 51.80 315 *e*P P 01 59 49.5 -0.2
SUMG **Summit** 51.80 343 *i* P P 01 59 50.3 +0.8
comp=Z,2.3nm,0.8s,mb4.2
HAU **Haudompre** 51.83 302 *e*P P 01 59 50.1 0.0
HAU *e*MLR MLR
comp=Z,86nm,18.0s,MS3.5
HAU **Haudompre** 51.83 302 *e*P P 01 59 50.1 0.0
HAU LR LR
comp=Z,90nm,18.0s,MS3.9
XAL **Allendale** 52.03 313 *e*P P 01 59 50.8 -0.7
ESK **Eskdalemuir** 52.22 314 *e*P P 01 59 51.8 -1.1
ESK AMb AMB 01 59 57.0
comp=Z,18nm,2.0s,mb4.7
MEZF **Maizieres J'vi** 52.22 303 *e*P P 01 59 53.7 +0.7
comp=Z,76nm,1.2s,mb5.2
MEZF **Maizieres J'vi** 52.22 303 *e*P P 01 59 53.7 +0.7
comp=Z,76nm,1.2s,mb5.5
ECK **Cauldkaine Hil** 52.26 314 *e*P P 01 59 52.9 -0.3
HPK **Haverah Park** 52.30 312 *e*P P 01 59 53.1 -0.4
HPK AMb AMB 01 59 54.2
comp=Z,18nm,1.0s,mb5.0
SOI **Samo** 52.36 286 P P 01 59 53.6 -0.6
PGBU **Glenifferbraes** 52.50 315 *e*P P 01 59 54.7 -0.3
PGBU AMb AMB 01 59 56.0
comp=Z,42nm,1.4s,mb5.2
LHO **Holmfirth** 52.66 311 *e*P P 01 59 55.3 -0.9
CABF **La Chapelle** 52.81 301 *e*P P 01 59 57.1 -0.3
GCD **Castle Douglas** 52.83 314 *e*P P 01 59 57.0 -0.4
CWF **Charnwood Fore** 52.88 310 *e*P P 01 59 57.5 -0.3
CWF AMb AMB 01 59 58.2
comp=Z,13nm,1.6s,mb4.6
LSD **Lago del Serru** 52.94 299 P P 01 59 59.3 +0.9
LSD pmax pmax
comp=Z,21nm,0.9s,mb5.1
LSD **Lago del Serru** 52.94 299 P P 01 59 59.3 +0.9
comp=Z,21nm,0.9s,mb5.1
LPL **La Plagne** 53.13 299 *e*P P 02 00 00.3 +0.5
comp=Z,7.3nm,0.5s,mb4.5
LPL **La Plagne** 53.13 299 *e*P P 02 00 00.3 +0.5
LPL pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
LPL **La Plagne** 53.13 299 *e*P P 02 00 00.3 +0.5
comp=Z,3.7nm,0.5s,mb4.6
LPG **La Plagne** 53.13 299 *e*P P 02 00 00.5 +0.7
GAL1 **Galloway** 53.18 314 *e*P P 01 59 59.4 -0.6
GAL1 AMb AMB 02 00 07.3
comp=Z,22nm,2.7s,mb4.6
BNI **Bardonecchia** 53.45 299 *e*P P 02 00 02.4 +0.2
BNI pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
BNI **Bardonecchia** 53.45 299 *e*P P 02 00 02.4 +0.2
comp=Z,6.8nm,0.8s,mb4.6
MBDF **Montbardon** 53.60 298 *e*P P 02 00 04.4 +1.1
comp=Z,42nm,0.8s,mb5.1
MBDF **Montbardon** 53.60 298 *e*P P 02 00 04.4 +1.1
MBDF pmax pmax
comp=Z,21nm,0.8s,mb5.1
MBDF **Montbardon** 53.60 298 *e*P P 02 00 04.4 +1.1
comp=Z,21nm,0.8s,mb5.1
LOR **Lormes** 53.61 302 *e*P P 02 00 02.6 -0.7
comp=Z,22nm,1.2s,mb4.7
LOR *e*MLR MLR
comp=Z,93nm,18.8s,MS3.6
LOR **Lormes** 53.61 302 *e*P P 02 00 02.6 -0.7
LOR pmax pmax
comp=Z,11nm,1.2s,mb4.7
LOR MLR MLR
comp=Z,90nm,18.8s,MS3.9
LOR **Lormes** 53.61 302 *e*P P 02 00 02.6 -0.7
comp=Z,11nm,1.2s,mb4.7
LOR LR LR
comp=Z,90nm,18.8s,MS3.9
PGF **Pioggiola** 53.70 295 *e*P P 02 00 04.2 +0.1
comp=Z,28nm,1.0s,mb4.8
PGF **Pioggiola** 53.70 295 *e*P P 02 00 04.2 +0.1
PGF pmax pmax
comp=Z,14nm,1.0s,mb4.8
PGF **Pioggiola** 53.70 295 *e*P P 02 00 04.2 +0.1
comp=Z,14nm,1.0s,mb4.8
COLD **Coldfoot** 53.73 25 *e*P P 02 00 04.0 +0.1
comp=Z,4.6nm,0.9s,mb4.4
SBF **Sospel** 53.77 297 *e*P P 02 00 04.5 0.0
SSF **Saint Saulge** 53.93 302 *e*P P 02 00 04.9 -0.7
comp=Z,17nm,1.1s,mb4.6
SSF **Saint Saulge** 53.93 302 *e*P P 02 00 04.9 -0.7
SSF pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
SSF **Saint Saulge** 53.93 302 *e*P P 02 00 04.9 -0.7
comp=Z,8.4nm,1.1s,mb4.6
ORIF **Oris-en-Rattie** 53.98 299 *e*P P 02 00 05.9 -0.1
comp=Z,12nm,0.7s,mb4.7
ORIF *e*MLR MLR
comp=Z,213nm,19.0s,MS3.9
ORIF **Oris-en-Rattie** 53.98 299 *e*P P 02 00 05.9 -0.1
ORIF pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
ORIF **Oris-en-Rattie** 53.98 299 *e*P P 02 00 05.9 -0.1
comp=Z,5.9nm,0.7s,mb4.6
GMM **Mts of Mourne** 54.13 314 *e*P P 02 00 06.8 -0.2
AVF **Avril sur Loir** 54.18 302 *e*P P 02 00 06.9 -0.6
comp=Z,6.8nm,0.8s,mb4.3
AVF **Avril sur Loir** 54.18 302 *e*P P 02 00 06.9 -0.6
AVF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
AVF **Avril sur Loir** 54.18 302 *e*P P 02 00 06.9 -0.6
comp=Z,3.4nm,0.8s,mb4.3
HTR **Trewern Hill** 54.24 311 *e*P P 02 00 06.1 -1.7
HGH **Gray Hill** 54.29 310 *e*P P 02 00 06.0 -2.2
FRF **La Foret Royal** 54.40 297 *e*P P 02 00 08.6 -0.5
BGF **Bois d'Agland** 54.60 302 *e*P P 02 00 10.4 -0.1
comp=Z,12nm,0.7s,mb4.7
BGF **Bois d'Agland** 54.60 302 *e*P P 02 00 10.4 -0.1
BGF pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
BGF **Bois d'Agland** 54.60 302 *e*P P 02 00 10.4 -0.1
comp=Z,5.9nm,0.7s,mb4.7
VIVF **Saint-Julien-l** 54.68 300 *e*P P 02 00 10.7 -0.4
LDF **La Druitiere** 54.87 306 *e*P P 02 00 12.0 -0.4
comp=Z,11nm,0.6s,mb4.8
LDF **La Druitiere** 54.87 306 *e*P P 02 00 12.0 -0.4
LDF pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
LDF **La Druitiere** 54.87 306 *e*P P 02 00 12.0 -0.4
comp=Z,5.3nm,0.6s,mb4.8
FLN **La Foliniere** 54.95 306 *e*P P 02 00 12.5 -0.5
comp=Z,50nm,1.1s,mb5.2
FLN *e*MLR MLR
comp=Z,93nm,21.0s,MS3.5
FLN **La Foliniere** 54.95 306 *e*P P 02 00 12.5 -0.5
FLN pmax pmax
comp=Z,25nm,1.1s,mb5.2
FLN MLR MLR
comp=Z,90nm,21.0s,MS3.8
FLN **La Foliniere** 54.95 306 *e*P P 02 00 12.5 -0.5
comp=Z,25nm,1.1s,mb5.2
FLN LR LR
comp=Z,90nm,21.0s,MS3.8
TCF **Toulx Ste Croi** 55.11 302 *e*P P 02 00 13.9 -0.3
GRR **Gorron** 55.38 306 *e*P P 02 00 15.5 -0.6
comp=Z,24nm,0.9s,mb4.9
GRR **Gorron** 55.38 306 *e*P P 02 00 15.5 -0.6
GRR pmax pmax
comp=Z,12nm,0.9s,mb4.9
GRR **Gorron** 55.38 306 *e*P P 02 00 15.5 -0.6
comp=Z,12nm,0.9s,mb4.9
LASF **Ste Croix** 55.63 299 *e*P P 02 00 18.1 +0.1
RJF **Les Rejaudoux** 56.11 302 *e*P P 02 00 21.3 -0.1
RJF *e*MLR MLR
comp=Z,65nm,20.2s,MS3.4
RJF **Les Rejaudoux** 56.11 302 *e*P P 02 00 21.3 -0.1
RJF LR LR
comp=Z,70nm,20.3s,MS3.7
MFF **Saint Martin d** 56.16 304 *e*P P 02 00 21.5 -0.2
comp=Z,33nm,1.0s,mb5.0
MFF **Saint Martin d** 56.16 304 *e*P P 02 00 21.5 -0.2
MFF pmax pmax
comp=Z,17nm,1.0s,mb5.0
MFF **Saint Martin d** 56.16 304 *e*P P 02 00 21.5 -0.2
comp=Z,17nm,1.0s,mb5.0
INK **Inuvik** 56.72 18 P P 02 00 25.6 +0.1
comp=Z,3.5nm,0.7s,mb4.5,baz=350,slow=9.5,SNR=17
INK **Inuvik** 56.72 18 P P 02 00 25.6 +0.1
INK pmax pmax
comp=Z,4.0nm,0.7s
INK **Inuvik** 56.72 18 *e*P P 02 00 25.6 +0.2
comp=Z,5.9nm,1.0s,mb4.6
LFF **La Frestale** 56.77 302 *e*P P 02 00 26.3 +0.2
comp=Z,39nm,1.0s,mb5.1
LFF **La Frestale** 56.77 302 *e*P P 02 00 26.3 +0.2
LFF pmax pmax
comp=Z,19nm,1.0s,mb5.1
LFF **La Frestale** 56.77 302 *e*P P 02 00 26.3 +0.2
comp=Z,19nm,1.0s,mb5.1
QUIF **Quistinic** 56.86 307 *e*P P 02 00 26.5 -0.2
comp=Z,24nm,0.8s,mb5.0
QUIF **Quistinic** 56.86 307 *e*P P 02 00 26.5 -0.2
QUIF pmax pmax
comp=Z,12nm,0.8s,mb5.0
QUIF **Quistinic** 56.86 307 *e*P P 02 00 26.5 -0.2
comp=Z,12nm,0.8s,mb5.0
KEST **Kesra** 57.95 289 P P 02 00 34.8 +0.2
comp=Z,1.5nm,0.8s,mb4.0,baz=225,slow=4.3,SNR=3.0
EPF **Esparros** 58.24 300 *e*P P 02 00 35.6 -0.9
PBRG **Braganca** 62.89 304 *e*P P 02 01 08.7 +0.4
comp=Z,11nm,1.8s,mb4.7
ESDC **Sonseca Array** 62.90 300 P P 02 01 08.3 -0.1
comp=Z,2.8nm,0.6s,mb4.6,baz=42,slow=6.7,SNR=28
ESDC **Sonseca Array** 62.90 300 P P 02 01 08.3 -0.1
ESLA **Sonseca Array** 62.90 300 *e*P P 02 01 08.2 -0.1
comp=Z,0.6nm,0.7s,mb3.8
MVO **Moncorvo** 63.50 303 *e*P P 02 01 12.7 +0.4
comp=Z,12nm,1.4s,mb4.8

PCAB Cabril 63.63 304 *eP* **P 02 01 13.9 +0.7**
comp=Z,11nm,1.1s,mb4.8
PVIS Viseu 64.28 303 *eP* **P 02 01 18.4 +1.0**
comp=Z,12nm,1.5s,mb4.7
MTE Manteigas 64.32 303 *eP* **P 02 01 18.4 +0.7**
comp=Z,9.0nm,1.1s,mb4.7
PMRV Marv??o 64.94 302 *eP* **P 02 01 22.3 +0.6**
comp=Z,11nm,2.1s,mb4.5
YKA Yellowknife Ar 65.24 12 P **P 02 01 22.4 -0.9**
comp=Z,2.2nm,0.8s,mb4.2,baz=341,slow=7.0,SNR=14
YKA LR LR 02 31 54.4
comp=Z,4.5nm,19.2s,MS2.7,baz=35,slow=38
YKA Yellowknife Ar 65.24 12 P **P 02 01 22.4 -0.9**
YKA pmax pmax
comp=Z,2.0nm,0.9s
YKA MLR MLR
comp=Z,5.0nm,19.2s
YKA Yellowknife Ar 65.24 12 P **P 02 01 22.4 -0.9**
YKA LR LR 02 31 54.5
PESTR Estremoz 65.45 302 *eP* **P 02 01 25.4 +0.3**
comp=Z,8.9nm,1.7s,mb4.5
EVO Evora 65.92 302 *eP* **P 02 01 28.6 +0.5**
comp=Z,7.9nm,1.3s,mb4.6
PBEJ Beja 66.20 301 *eP* **P 02 01 30.6 +0.6**
comp=Z,11nm,1.6s,mb4.6
KMBO Kilima Mbogo 68.58 239 P **P 02 01 44.5 -0.7**
comp=Z,2.1nm,0.8s,mb4.1,baz=32,slow=13,SNR=4.9
KMBO Kilima Mbogo 68.58 239 P **P 02 01 44.5 -0.7**
KMBO pmax pmax
comp=Z,2.0nm,0.8s
SCHQ Schefferville 72.93 346 P **P 02 02 09.9 -1.2**
comp=Z,3.6nm,0.9s,mb4.3,baz=0.0,slow=12,SNR=3.5
KAKA Kakadu 73.19 137 *eP* **P 02 02 12.9 -0.2**
comp=Z,7.4nm,0.6s,mb4.8
FFC Flin Flon 74.25 7 *i*P **P 02 02 19.7 +0.8**
FFC Flin Flon 74.25 7 *eP* **P 02 02 18.6 -0.3**
comp=Z,4.3nm,0.6s,mb4.6
FITZ Fitzroy Crossi 75.37 145 *eP* **P 02 02 24.2 -1.6**
comp=Z,7.4nm,0.6s,mb4.8
TORD Torodi Ar. Bea 79.07 277 P **P 02 02 46.0 -0.8**
comp=Z,1.6nm,0.4s,mb4.3,baz=38,slow=4.6,SNR=39
BSMT Bassoo Peak 79.29 17 *eP* **P 02 02 48.6 +1.1**
comp=Z,4.2nm,0.7s,mb4.5
COEN Coen 79.29 128 *eP* **P 02 02 47.1 -0.7**
WRAB Tennant Creek 80.44 138 *eP* **P 02 02 52.6 -1.3**
WRAB pmax pmax
comp=Z,24nm,0.8s,mb5.2
WRAB Tennant Creek 80.44 138 *eP* **P 02 02 52.6 -1.3**
comp=Z,24nm,0.8s,mb5.2
MTSU Mount Surprise 83.42 129 *eP* **P 02 03 09.3 -0.3**
comp=Z,27nm,0.9s,mb5.3
ASAR Alice Springs 83.58 141 P **P 02 03 09.1 -1.3**
ASAR Alice Springs 83.58 141 P **P 02 03 09.1 -1.3**
ASAR pmax pmax
comp=Z,8.0nm,0.7s
LONY Lake Ozonia 83.97 349 *eP* **P 02 03 12.8 +0.6**
comp=Z,6.9nm,0.9s,mb4.8
PDAR Pinedale Array 85.12 15 P **P 02 03 16.1 -2.1**
comp=Z,0.3nm,0.4s,mb3.8,baz=32,slow=5.3,SNR=2.8
CTA Charters Tower 86.03 129 *eP* **P 02 03 21.9 -0.9**
comp=Z,7.0nm,0.9s,mb4.9
CTAO Charters Tower 86.03 129 *eP* **P 02 03 22.0 -0.8**
CTAO pmax pmax
comp=Z,12nm,1.0s,mb5.1
CTAO Charters Tower 86.03 129 *eP* **P 02 03 22.0 -0.7**
comp=Z,12nm,1.0s,mb5.1
ISCO Idaho Springs 88.61 12 *eP* **P 02 03 36.8 +1.6**
ISCO pmax pmax
comp=Z,4.0nm,0.8s,mb4.8
ISCO Idaho Springs 88.61 12 *eP* **P 02 03 36.8 +1.6**
comp=Z,3.6nm,0.8s,mb4.8
MSU Marysvale 88.80 17 *eP* **P 02 03 38.3 +2.2**
MSU pmax pmax
comp=Z,3.0nm,0.8s,mb4.7
MSU Marysvale 88.80 17 *eP* **P 02 03 38.2 +2.2**
comp=Z,2.8nm,0.8s,mb4.6
SMCO Snowmass 89.03 13 *eP* **P 02 03 38.9 +1.7**
comp=Z,4.7nm,0.9s,mb4.8
BBOO Buckleboo 92.58 143 *eP* **P 02 03 51.3 -2.2**
comp=Z,7.3nm,0.8s,mb5.2
ANMO Albuquerque 93.25 14 *cePn* **P 02 03 56.5 -0.3**
ANMO pmax pmax
comp=Z,3.0nm,1.2s
STKA Stephens Creek 93.99 138 *eP* **P 02 03 58.0 -2.0**
comp=Z,3.3nm,1.0s,mb4.7
STKA Stephens Creek 93.99 138 P **P 02 03 57.9 -2.1**
comp=Z,1.7nm,0.4s,mb4.8,baz=320,slow=6.2,SNR=7.9
CMSA Cobar Meteorol 95.48 135 *eP* **P 02 04 05.5 -1.3**
TXAR Lajitas Array 99.17 12 P **P 02 04 24.8 +0.9**
comp=Z,0.1nm,0.5s,mb3.6,baz=28,slow=3.5,SNR=4.9
LPAZ La Paz 141.39 326 PKP PKPdf 02 10 13.8 +0.5
comp=Z,0.7nm,0.6s,baz=45,slow=6.5,SNR=3.8
LPAZ La Paz 141.39 326 PKIKP PKPdf 02 10 13.9 +0.6
LPAZ pmax pmax
comp=Z,1.0nm,0.6s
PLCA Paso Flores 163.29 300 PKPab PKPab 02 11 33.1 -1.9
comp=Z,3.2nm,0.8s,baz=250,slow=6.2,SNR=5.1
PLCA Paso Flores 163.29 300 PKP2 PKPab 02 11 33.1 -1.9
PLCA pmax pmax
comp=Z,3.0nm,0.8s

BJI ***03*** *02:00:44.9, 51.7′79N×90.7′45E, h10km, mb3.9/1*
IDC ***03*** *02:00:55.3±0.9, 50.7′85N×90.7′47E, h0km, mb3.8/10, mb1 3.9/15, mb1mx3.8/33, mbtmp3.8/15, ML3.7/4, MS2.6/1, Ms1 2.6/1, ms1mx2.2/39, Error ellipse: s-maj=19.0km s-min=13.0km az=179.0*
ISCJB ***03*** *02:00:55.5±0.5, 50.7′94N±0.7′04×90.7′29E±0.7′06, h10km, mb3.8/9, Error ellipse: s-maj=5.5km s-min=5.4km az=30.0*
MOS ***03*** *02:00:55.0±1.4, 50.7′63N×90.7′38E, h12km, mb4.2/7, Error ellipse: s-maj=17.1km s-min=9.8km az=123.5*
ASRS ***03*** *02:00:57.0±1.5, 50.7′82N×90.7′27E, h15km, Ms3.1/4*
NEIC ***03*** *02:00:57.1±0.6, 50.7′85N×90.7′37E, h10km, Error ellipse: s-maj=15.9km s-min=9.4km az=11.0*
NNC ***03*** *02:01:00.1±7.7, 50.7′72N×89.7′95E, h0km, mb4.1, mpv3.7, Error ellipse: s-maj=93.8km s-min=43.6km az=28.0*
ISC 03 02:00:57.8±0.5, 50.7′97N±0.7′04×90.7′30E±0.7′06, h10km, n47, σ1°18′/62, mb3.8/9, 2C-6D, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CERR	**Cheremushki**	**2.01**	**20**	*i* PN	**Pg**	**02 01 36.0**	**-0.4**
CERR				*e*		02 02 04.1	
CERR	**Cheremushki**	**2.01**	**20**	*i* Pg	**Pg**	**02 01 36.0**	**-0.4**
CERR				*e*Sg	**Sg**	**02 02 04.1**	**+1.7**
TASR	**Tashtagol**	**2.34**	**321**	*e*PN	**Pg**	**02 01 40.4**	**-2.3**
TASR				*e*		02 02 13.7	
TASR	**Tashtagol**	**2.34**	**321**	*e*Pg	**Pg**	**02 01 40.4**	**-2.3**
TASR				*e*Sg	**Sg**	**02 02 13.7**	**+0.7**
ELT	**Yel'tsovka**	**3.40**	**314**	*e*PN	**Pn**	**02 01 53.3**	**+2.5**
ELT				*e*		02 02 03.3	
ELT				*e*		02 02 44.4	
ELT	**Yel'tsovka**	**3.40**	**314**	*e*Pn	**Pn**	**02 01 53.3**	**+2.5**
ELT				*e*Pg	**Pg**	**02 02 03.3**	**+0.4**
ELT				*e*Sg	**Sg**	**02 02 44.4**	**-2.5**
UKR	**Ust'-Kan**	**3.50**	**272**	*e*Sg	**Sg**	**02 02 44.3**	**-5.7**
ZALV	**Zalesovo Beam**	**4.49**	**314**	Pn	**Pn**	**02 02 08.6**	**+2.8**
	2.0nm,0.3s,baz=132,slow=13,SNR=12						
ZALV				Pg	**Pg**	**02 02 20.1**	**-3.7**
	7.8nm,0.3s,baz=129,slow=16,SNR=20						
ZALV				Lg		02 03 18.8	
	18nm,0.3s,baz=134,slow=28,SNR=9.3						
ZALV	**Zalesovo Beam**	**4.49**	**314**	*e*PN	**Pn**	**02 02 08.6**	**+2.8**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZALV	**Zalesovo Beam**	**4.49**	**314**	Pn	**Pn**	**02 02 08.6**	**+2.8**
ZALV				Pg	**Pg**	**02 02 20.1**	**-3.7**
ZALV				Lg		02 03 18.8	
NVS	**Novosibirsk**	**5.77**	**315**	*e*PN	**Pn**	**02 02 27.5**	**+4.1**
NVS				*e*		02 02 44.4	
NVS				*e*		02 04 00.8	
NVS	**Novosibirsk**	**5.77**	**315**	*e*Pg	**Pg**	**02 02 44.4**	**-3.9**
NVS				*e*Sn	**Sn**	**02 03 30.7**	**+1.1**
NVS				*e*Sg	**Sg**	**02 04 00.8**	**-2.2**
MK05	**Makanchi Array**	**6.73**	**235**	⇓P	**Pn**	**02 02 37.4**	**+0.8**
	comp=Z,7.6nm,0.5s,baz=59,slow=13						
MKAR	**Makanchi Array**	**6.73**	**235**	Pn	**Pn**	**02 02 37.1**	**+0.5**
	comp=Z,2.7nm,0.3s,baz=52,slow=11,SNR=54						
MKAR				Pg	**Pg**	**02 03 02.4**	**-4.3**
	comp=Z,4.6nm,0.3s,baz=47,slow=17,SNR=6.6						
MKAR				Lg		02 04 20.5	
	comp=Z,1.6nm,0.3s,baz=52,slow=26,SNR=2.9						
MKAR	**Makanchi Array**	**6.73**	**235**	*i* PN	**Pn**	**02 02 37.2**	**+0.6**
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
WMQ	**Urumqi**	**7.37**	**195**	*e*Pg	**Pg**	**02 03 12.0**	**-6.8**
WMQ				Sn	**Sn**	**02 04 17.0**	**+8.1**
KURK	**Kurchatov**	**7.40**	**273**	⇑Pn	**Pn**	**02 02 45.5**	**-0.3**
	comp=Z,8.9nm,0.9s						
KURK				⇓Sn	**Sn**	**02 04 09.3**	**-0.5**
	comp=Z,14nm,0.6s						
KURK				⇓Lg		02 04 49.0	
	comp=Z,67nm,0.7s						
KURK	**Kurchatov**	**7.40**	**273**	Pn	**Pn**	**02 02 47.0**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=86,slow=15,SNR=15						
KURK				Sn	**Sn**	**02 04 11.9**	**+2.1**
	comp=Z,0.4nm,0.3s,baz=83,slow=24,SNR=3.0						
KURK				Lg		02 04 51.5	
	comp=Z,0.8nm,0.3s,baz=82,slow=29,SNR=7.8						
KURK				LR	LR	02 05 52.2	
	comp=Z,50nm,20.9s,baz=105,slow=39						
KURK	**Kurchatov**	**7.40**	**273**	P	**Pn**	**02 02 47.0**	**+1.2**
KURK						02 04 11.9	
KURK				MLR	MLR		
	comp=Z,50nm,20.9s						
KURK	**Kurchatov**	**7.40**	**273**	*e*Pn	**Pn**	**02 02 45.3**	**-0.6**
KURK				*e*S	**Sn**	**02 04 10.5**	**+0.7**
KURK				Lg		02 04 51.5	
KURK				LR	LR	02 05 52.2	
KURBB	**Kurchatov Arra**	**7.47**	**272**	⇑Pn	**Pn**	**02 02 46.9**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=87,slow=14						
KURBB				⇓Sn	**Sn**	**02 04 11.8**	**+0.3**
	comp=Z,3.3nm,0.6s						
KURBB				⇓Lg		02 04 51.4	
	comp=Z,28nm,0.7s						
SONM	**Songino Array**	**10.95**	**100**	Pn	**Pn**	**02 03 33.2**	**-1.1**
	baz=281,slow=15,SNR=2.1						
SONM				Pg	Pn	02 04 20.4	+46
	comp=Z,0.4nm,0.3s,baz=293,slow=20,SNR=3.7						
SONM				Lg		02 06 39.5	
	comp=Z,0.3nm,0.3s,baz=269,slow=25,SNR=9.6						
BVAR	**Borovoye Array**	**12.44**	**287**	Pn	**Pn**	**02 03 53.4**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=89,slow=13,SNR=3.5						
BVAR	**Borovoye Array**	**12.44**	**287**	*e*P	**Pn**	**02 03 58.4**	**+3.6**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GTA	**Gaotai**	**13.35**	**146**	*e*P	**Pn**	**02 04 07.3**	**+0.1**
GTA				pP		02 04 15.3	
GTA				sP		02 04 17.7	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ARU	**Arti**	**19.45**	**299**	*d i*P	**Pn**	**02 05 24.7**	**-0.8**
ARU				S	**Sn**	**02 09 08.0**	**+4.5**
ARU				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AKTK	**Aktyubinsk**	**20.37**	**281**	P	**P**	**02 05 34.1**	**-0.2**
AKTO	**Aktyubinsk**	**20.37**	**281**	P	**P**	**02 05 34.1**	**-0.2**
	comp=Z,3.3nm,0.9s,baz=79,slow=16,SNR=3.4						
AKTO	**Aktyubinsk**	**20.37**	**281**	P	**P**	**02 05 34.2**	**-0.2**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKASG	**Malin Array Be**	**37.59**	**294**	P	**P**	**02 08 11.4**	**-0.8**
	comp=Z,0.9nm,0.5s,mb3.8,baz=59,slow=8.7,SNR=3.8						
AKASG	**Malin Array Be**	**37.59**	**294**	P	**P**	**02 08 11.4**	**-0.8**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRTR	**Keskin Array B**	**40.44**	**277**	P	**P**	**02 08 36.8**	**+0.7**
	comp=Z,1.9nm,0.7s,mb3.9,baz=88,slow=7.7,SNR=12						
BRTR	**Keskin Array B**	**40.44**	**277**	P	**P**	**02 08 36.8**	**+0.7**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BUR08	**Bucovina Ar. S**	**41.34**	**292**	*e*P	**P**	**02 08 44.1**	**+0.6**
HFS	**Hagfors**	**41.93**	**313**	P	**P**	**02 08 48.1**	**0.0**
	comp=Z,3.5nm,0.8s,mb4.0,baz=90,slow=8.9,SNR=7.3						
HFS	**Hagfors**	**41.93**	**313**	P	**P**	**02 08 48.1**	**0.0**
HFS				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NB2	**NORSAR Subarra**	**42.69**	**315**	P	**P**	**02 08 54.8**	**+0.5**
	comp=Z,0.6nm,0.6s,mb3.5,baz=82,slow=6.9						
NOA	**NORSAR Array B**	**42.69**	**315**	P	**P**	**02 08 54.4**	**+0.1**
	comp=Z,1.6nm,0.8s,mb3.8,baz=62,slow=7.8,SNR=4.7						
NOA	**NORSAR Array B**	**42.69**	**315**	P	**P**	**02 08 54.4**	**+0.1**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GERES	**GERESS Array B**	**47.28**	**299**	P	**P**	**02 09 31.5**	**+0.5**
	comp=Z,0.3nm,0.6s,mb3.4,baz=35,slow=3.6,SNR=2.7						
INK	**Inuvik**	**56.66**	**18**	P	**P**	**02 10 40.8**	**+0.2**
	comp=Z,1.7nm,1.1s,mb4.0,baz=7.0,slow=9.2,SNR=3.2						
INK	**Inuvik**	**56.66**	**18**	P	**P**	**02 10 40.8**	**+0.2**
INK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ESDC	**Sonseca Array**	**62.85**	**300**	P	**P**	**02 11 23.8**	**+0.2**
	comp=Z,0.2nm,0.4s,mb3.6,baz=42,slow=6.7,SNR=4.2						
ESDC	**Sonseca Array**	**62.85**	**300**	P	**P**	**02 11 23.8**	**+0.2**
TORD	**Torodi Ar. Bea**	**79.04**	**277**	P	**P**	**02 13 01.1**	**-1.1**
	comp=Z,0.3nm,0.5s,mb3.5,baz=30,slow=4.5,SNR=8.0						
ASAR	**Alice Springs**	**83.65**	**140**	P	**P**	**02 13 24.1**	**-2.2**
	comp=Z,0.8nm,0.7s,mb4.0,baz=336,slow=5.3,SNR=6.7						
ASAR	**Alice Springs**	**83.65**	**140**	*e*P	**P**	**02 13 24.5**	**-1.8**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						

FUNV 03 02:02:20.2, 10.8′5N×70.3′1W, h10km, MW4.0, 6C-4D, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DABV	**Dabajuro**	**0.33**	**283**	⇓*e*P	Pg	02 02 26.3	-0.4
DABV				*e*S	Sg	02 02 31.9	+0.7
SIQV	**Siquisique**	**0.53**	**112**	⇓*i*P	Pg	02 02 30.4	-0.1
SIQV				*e*S	Sg	02 02 37.9	+0.4
QARV	**Quebrada Arrib**	**0.67**	**198**	⇑*e*P	Pg	02 02 31.7	-1.5
QARV				*e*S	Sg	02 02 41.5	-0.4
CURV	**Curarigua**	**0.90**	**157**	⇓*e*P	Pg	02 02 36.0	-1.5
CURV				*e*S	Sg	02 02 49.7	+0.5
MONV	**Montecano**	**1.15**	**17**	⇑*i*P	Pb	02 02 41.3	-0.9
MONV				*e*S	Sb	02 02 57.5	+0.3
TEPV	**Terepaima**	**1.41**	**128**	*e*P	Pn	02 02 45.5	-0.4
TEPV				*e*S	Sn	02 03 04.1	-0.5
JACV	**Jacura**	**1.47**	**81**	⇑*e*P	Pn	02 02 46.5	-0.3
JACV				*e*S	Sn	02 03 05.1	-1.1
SANV	**Sanarito**	**1.54**	**150**	⇓*e*P	Pn	02 02 47.7	0.0
SANV				*e*S	Sn	02 03 08.2	+0.4
IMOV	**Isla Los Monje**	**1.61**	**339**	*e*P	Pn	02 02 48.3	-0.4
IMOV				*e*S	Sn	02 03 08.8	-0.8
MAPV	**Macapo**	**2.08**	**119**	*e*S	Sn	02 03 20.0	-1.2
VIRV	**Villa del Rosa**	**2.09**	**261**	⇑*e*P	Pn	02 02 54.0	-1.3
VIRV				*e*S	Sn	02 03 20.2	-1.2
VIGV	**El Vigia**	**2.25**	**208**	⇑*e*P	Pn	02 02 57.6	+0.1
VIGV				*e*S	Sn	02 03 23.4	-1.9
TURV	**Turiamo**	**2.46**	**99**	*e*P	Pn	02 02 58.9	-1.5
TURV				*e*S	Sn	02 03 28.1	-2.5
SOCV	**Socops**	**2.60**	**192**	*e*P	Pn	02 03 02.0	-0.4
SOCV				*e*S	Sn	02 03 33.0	-1.0
BAUV	**El Baul**	**2.93**	**130**	*e*P	Pn	02 03 06.6	-0.2
FUNV	**FUNVISIS**	**3.46**	**96**	*e*P	Pn	02 03 13.4	-0.8
CAPV	**Capacho**	**3.56**	**214**	⇑*e*P	Pn	02 03 15.2	-0.4
ELOV	**Elorza**	**3.91**	**168**	*e*P	Pn	02 03 19.1	-1.2
BIRV	**Birongo**	**3.99**	**95**	*e*P	Pn	02 03 20.0	-1.5
ORCV	**Isla La Orchil**	**4.15**	**76**	*e*P	Pn	02 03 21.6	-2.0
MERV	**Las Mercedes**	**4.26**	**112**	*e*P	Pn	02 03 23.8	-1.3
CUPV	**Cœpira**	**4.52**	**100**	*e*P	Pn	02 03 28.1	-0.6
CAOV	**Caicara del Or**	**5.27**	**131**	*e*P	Pn	02 03 38.1	-0.9
PCRV	**Puerto La Cruz**	**5.62**	**96**	*e*P	Pn	02 03 43.5	-0.4
PRGV	**PARIAGUAN**	**5.96**	**110**	*e*P	Pn	02 03 45.6	-2.9

IDC ***03*** *02:23:17.4±1.3, 6.7′59S×142.7′46E, h0km, mb4.1/3, mb1 4.3/5, mb1mx4.1/13, mbtmp4.2/5, ML4.6/1, MS3.4/2, Ms1 3.4/2, ms1mx2.6/20, Error ellipse: s-maj=55.7km s-min=21.9km az=102.0*
NEIC ***03*** *02:23:24.3±0.8, 6.7′42S×141.7′87E, h35km, mb4.6/4, Error ellipse: s-maj=20.9km s-min=12.1km az=93.0*
ISCJB ***03*** *02:23:26.2±2.6, 6.7′7S±0.7′1×141.7′92E±0.7′09, h83km±24km, mb4.1/6, Error ellipse: s-maj=19.5km s-min=13.0km az=158.6*
ISC 03 02:23:27.0±1.6, 6.7′71S±0.7′08×142.7′01E±0.7′10, h76km±15km, n22, σ0°84/22, mb4.2/6, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**7.29**	**171**	*e*Pn	**Pn**	**02 25 12.3**	**+1.4**
	166nm,0.5s						
KAKA	**Kakadu**	**11.16**	**237**	*e*P	**Pn**	**02 26 03.4**	**-0.4**
	117nm,0.5s						
KAKA				*e*S	**Sn**	**02 28 06.7**	**-0.1**
KAKA	**Kakadu**	**11.16**	**237**	*e*Pn	**Pn**	**02 26 03.1**	**-0.7**
	393nm,0.7s						
CTA	**Charters Tower**	**13.92**	**163**	Pn	**Pn**	**02 26 45.4**	**+4.5**
	0.5nm,0.3s,baz=330,slow=12,SNR=8.3						
CTA				Lg		02 30 38.8	
	0.4nm,0.3s,baz=249,slow=20,SNR=4.0						
CTA				LR	LR	02 31 07.2	
	comp=Z,93nm,18.9s,baz=228,slow=34						
WRAB	**Tennant Creek**	**15.11**	**209**	*e*Pn	**Pn**	**02 26 55.5**	**-0.7**
	11nm,0.6s						
KNA	**Kununurra**	**15.79**	**234**	*e*P	**Pn**	**02 27 08.9**	**+4.0**
	58nm,0.8s						
KNA				*e*S	**S**	**02 29 54.1**	**-15**
ASAR	**Alice Springs**	**18.57**	**204**	P	**Pn**	**02 27 39.2**	**+0.1**
	1.7nm,0.3s,baz=32,slow=10.0,SNR=74						
ASAR				S	**S**	**02 31 06.1**	**+0.2**
	0.6nm,0.3s,baz=14,slow=30,SNR=5.5						
FITZ	**Fitzroy Crossi**	**19.57**	**233**	*e*P	**Pn**	**02 27 51.2**	**+0.2**
	17nm,0.7s						
FITZ	**Fitzroy Crossi**	**19.57**	**233**	P	**Pn**	**02 27 51.6**	**+0.6**
	1.0nm,0.3s,baz=59,slow=11,SNR=25						
FITZ				LR	LR	02 36 13.1	
	comp=Z,165nm,20.4s,baz=129,slow=39						
QLP	**Quilpie**	**19.88**	**174**	*e*P	**Pn**	**02 27 53.0**	**-1.5**
STKA	**Stephens Creek**	**25.04**	**181**	*e*P	**P**	**02 28 43.4**	**-0.7**
	3.5nm,0.8s,mb3.8						
STKA	**Stephens Creek**	**25.04**	**181**	P	**P**	**02 28 44.0**	**-0.2**
	2.5nm,0.5s,mb3.9,baz=357,slow=9.7,SNR=9.1						
STKA	**Stephens Creek**	**25.04**	**181**	*e*P	**P**	**02 28 44.5**	**+0.4**
	0.6nm,0.7s,mb3.1						
MBWA	**Marble Bar**	**25.91**	**234**	*e*P	**P**	**02 29 01.8**	**+10**
FORT	**Forrest**	**27.29**	**207**	*e*P	**P**	**02 29 04.4**	**0.0**
	14nm,0.7s,mb4.6						
PETK	**Petropavlovsk-**	**61.06**	**11**	P	**P**	**02 33 31.4**	**-1.3**
	4.0nm,0.9s,mb4.4,baz=197,slow=4.5,SNR=3.6						
SONM	**Songino Array**	**62.73**	**334**	P	**P**	**02 33 44.2**	**+0.3**
	0.3nm,0.4s,mb3.6,baz=123,slow=5.3,SNR=4.1						
QSPA	**South Pole Qui**	**83.26**	**180**	*e*P	**P**	**02 35 44.9**	**+0.1**
	1.6nm,0.7s,mb4.0						
BRVK	**Borovoye**	**84.53**	**325**	*e*P	**P**	**02 35 53.0**	**+1.4**
	8.1nm,0.8s,mb4.7						
TORD	**Torodi Ar. Bea**	**140.43**	**282**	PKP	PKPdf	02 42 51.6	+3.2
	0.4nm,0.8s,baz=40,slow=3.3,SNR=3.6						
LPAZ	**La Paz**	**142.42**	**128**	PKP	PKPdf	02 42 55.3	+3.3
	0.9nm,0.8s,baz=246,slow=2.1,SNR=4.2						
DBIC	**Dimbokro**	**147.10**	**272**	PKPbc	PKPbc	02 43 05.4	+3.0
	9.0nm,1.1s,baz=158,slow=7.9,SNR=5.0						

IDC ***03*** *02:26:03.6±0.6, 0.7′28N×97.7′66E, h0km, mb4.4/22, mb1 4.5/24, mb1mx4.4/29, mbtmp4.4/24, ML4.2/2, MS3.9/10, Ms1 3.9/10, ms1mx3.5/38, Error ellipse: s-maj=19.6km s-min=14.4km az=44.0*
ISCJB ***03*** *02:26:06.7±1.8, 0.7′30N±0.7′04×97.7′63E±0.7′06, h32km±13km, mb4.6/40, MS4.0/10, Error ellipse: s-maj=10.8km s-min=5.4km az=152.7*
DJA ***03*** *02:26:07, 0.7′28N×97.7′59E, h17km, Mw5.2/9*
BJI ***03*** *02:26:07.1, 0.7′31N×97.7′89E, h32km, mB4.8/11, mb4.8/24, Ms4.4/5, Ms7 4.2/6*
NEIC ***03*** *02:26:08.9±0.4, 0.7′33N×97.7′68E, h35km, mb4.6/13, Error ellipse: s-maj=11.3km s-min=7.9km az=64.0*
NEIC Felt [III] at Gunungsitoli.
ISC 03 02:26:07.8±2.0, 0.7′31N±0.7′04×97.7′61E±0.7′06, h26km±14km, h29km±1.1km: pP-P, n102, σ0°93/93, mb4.6/40, MS4.0/10, 1D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.99**	**358**	P	**Pn**	**02 26 25.6**	**-0.5**
MNSI	**Mandailing Nat**	**2.03**	**76**	P	**Pn**	**02 26 40.3**	**0.0**
TRSI	**Tarutung**	**2.18**	**38**	P	**Pn**	**02 26 42.0**	**-0.4**
SISI	**Saibi**	**2.19**	**138**	P	**Pn**	**02 26 42.7**	**+0.1**
PSI	**Prapat**	**2.81**	**28**	Pn	**Pn**	**02 26 49.8**	**-1.2**
	9.3nm,0.3s,baz=190,slow=10,SNR=101						
PPI	**Padang Panjang**	**2.89**	**105**	P	**Pn**	**02 26 52.1**	**-0.1**
PDSI	**Padang**	**3.10**	**113**	P	**Pn**	**02 26 54.6**	**-0.4**
TSI	**Tuntungan**	**3.31**	**17**	P	**Pn**	**02 26 57.9**	**-0.1**
BKNI	**Bangkinang**	**3.43**	**90**	P	**Pn**	**02 26 59.5**	**-0.1**
PPSI	**Pulau Pagai**	**3.88**	**142**	P	**Pn**	**02 27 06.2**	**+0.4**
SDSI	**Sungai Dareh**	**4.01**	**108**	P	**Pn**	**02 27 07.6**	**0.0**
FRIM	**Kepong**	**4.96**	**54**	P	**Pn**	**02 27 20.6**	**-0.1**
IPM	**Ipoh**	**5.37**	**39**	P	**Pn**	**02 27 27.6**	**+1.3**
IPM	**Ipoh**	**5.37**	**39**	P	**Pn**	**02 27 26.8**	**+0.5**
	0.7nm1μm187nm,0.9s						
BSI	**Banda Aceh**	**5.65**	**336**	P	**Pn**	**02 27 29.3**	**-0.9**
	0.6nm2μm59nm,1.1s						
KULM	**Kulim**	**5.81**	**31**	P	**Pn**	**02 27 32.6**	**+0.3**
KULM	**Kulim**	**5.81**	**31**	P	**Pn**	**02 27 32.4**	**+0.1**
	0.8nm2μm248nm,0.8s						
KGM	**Kluang**	**5.96**	**73**	P	**Pn**	**02 27 34.8**	**+0.5**
KSI	**Kapahiang**	**6.34**	**128**	P	**Pn**	**02 27 39.8**	**+0.1**
	2.5nm8μm363nm,0.9s						
MYKOM	**Kota Tinggi**	**6.41**	**77**	P	**Pn**	**02 27 41.5**	**+0.9**
MYKOM	**Kota Tinggi**	**6.41**	**77**	P	**Pn**	**02 27 40.9**	**+0.3**
	0.5nm711nm47nm,0.6s						
MNAI	**Manna**	**7.07**	**131**	P	**Pn**	**02 27 50.4**	**+0.7**
	2.5nm10μm449nm,1.2s						
KTGM	**Kuala Trenggan**	**7.44**	**48**	P	**Pn**	**02 27 55.5**	**+0.8**
MDSI	**Maura Dua**	**8.11**	**126**	P	**Pn**	**02 28 03.4**	**-0.

comp=Z,16nm,1.0s,mb4.9
XAN pmax pmax
comp=Z,15nm,5.3s
LZH Lanzhou 36.07 9 *e*P **P 02 33 06.5 -0.8**
LZH pP pP 02 33 14.0 -1.0
LZH sP sP 02 33 17.5 -0.7
LZH pmax pmax
comp=Z,21nm,1.2s,mb4.9
LZH pmax pmax
comp=Z,110nm,5.0s
GTA Gaotai 38.97 3 *e*P **P 02 33 31.9 +0.1**
GTA pmax pmax
comp=Z,5.0nm,1.2s,mb4.1
ASAR Alice Springs 42.53 127 P **P 02 34 01.5 0.0**
comp=Z,14nm,0.8s,mb4.7,baz=312,slow=6.3,SNR=7.8
BJT Baijiatuau 42.99 21 *e*P **P 02 34 06.0 +0.9**
comp=Z,34nm,0.8s,mb5.1
KSRS Korea Array 46.35 34 P **P 02 34 31.6 -0.3**
comp=Z,13nm,0.8s,mb4.9,baz=221,slow=9.1,SNR=33
KSRS LR LR 02 53 57.9
comp=Z,132nm,18.3s,MS3.9,baz=58,slow=36
TKM2 Tokmak 2 46.80 338 *e*P **P 02 34 36.3 +1.1**
comp=Z,6.0nm,1.0s,mb4.5
AAK Ala-Archa 46.98 337 P **P 02 34 38.2 +1.5**
comp=Z,0.8nm,0.3s,mb4.1,baz=164,slow=10,SNR=2.8
AAK PcP PcP 02 36 10.0 +1.2
comp=Z,1.5nm,0.4s,baz=199,slow=4.0,SNR=4.0
AAK Ala-Archa 46.98 337 P **P 02 34 38.2 +1.5**
AAK PcP PcP 02 36 10.0 +1.2
SONM Songino Array 47.95 8 P **P 02 34 45.0 +0.9**
comp=Z,14nm,0.8s,mb5.0,baz=190,slow=8.8,SNR=61
SONM PcP PcP 02 36 13.0 +0.8
comp=Z,2.5nm,0.7s,baz=192,slow=3.8,SNR=3.6
ULN Ulaanbaatar 48.08 9 P **P 02 34 45.7 +0.6**
MKAR Makanchi Array 48.20 346 P **P 02 34 46.7 +0.6**
comp=Z,10.0nm,0.7s,mb4.9,baz=140,slow=7.8,SNR=69
MKAR Makanchi Array 48.20 346 P **P 02 34 46.7 +0.6**
CN2 Changchun 49.91 26 *e*P **P 02 34 58.9 -0.4**
CN2 pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
TLY Talaya 51.44 5 *e*P **P 02 35 11.9 +1.3**
comp=Z,9.7nm,0.8s,mb4.8
MJAR Matsushiro Arr 52.08 42 P **P 02 35 14.6 -1.0**
comp=Z,4.6nm,0.9s,mb4.4,baz=223,slow=6.9,SNR=9.8
STKA Stephens Creek 52.46 132 P **P 02 35 18.7 +0.1**
comp=Z,2.0nm,0.7s,mb4.2,baz=296,slow=19,SNR=2.8
STKA LR LR 02 57 14.1
comp=Z,151nm,19.0s,MS4.1,baz=111,slow=36
KURK Kurchatov 52.76 345 P **P 02 35 20.5 +0.1**
comp=Z,9.0nm,0.8s,mb4.8,baz=168,slow=7.2,SNR=71
KURK LR LR 03 03 30.2
comp=Z,92nm,18.1s,MS3.9,baz=65,slow=43
KURK Kurchatov 52.76 345 *e*P **P 02 35 21.0 +0.5**
comp=Z,13nm,0.9s,mb4.9
OPO Ambohidratompo 52.94 246 P **P 02 35 22.2 -0.2**
comp=Z,2.4nm,0.9s,mb4.1,baz=44,slow=9.1,SNR=4.2
ZALV Zalesovo Beam 54.50 351 P **P 02 35 33.6 +0.5**
comp=Z,28nm,0.7s,mb5.3,baz=181,slow=6.0,SNR=44
ZALV LR LR 03 02 02.1
comp=Z,50nm,18.3s,MS3.6,baz=190,slow=40
BVAR Borovoye Array 57.22 341 P **P 02 35 52.6 -0.1**
comp=Z,9.3nm,0.8s,mb4.9,baz=140,slow=7.8,SNR=55
BVAR LR LR 03 04 11.7
comp=Z,110nm,18.7s,MS4.0,baz=142,slow=40
EIDS Eidsvold 57.57 121 *e*P **P 02 35 56.4 +0.7**
comp=Z,6.4nm,0.8s,mb4.7
ARU Arti 64.16 337 *e*P **P 02 36 39.4 -0.5**
comp=Z,2.7nm,0.5s,mb4.5
YAK Yakutsk 66.16 16 *e*P **P 02 36 52.3 -0.5**
comp=Z,45nm,1.0s,mb5.5
MMAI Mount Meron Ar 66.76 306 LR LR 03 08 09.2
comp=Z,64nm,18.6s,MS3.9,baz=150,slow=38
BRTR Keskin Array B 70.01 312 P **P 02 37 17.1 -0.4**
comp=Z,1.0nm,0.7s,mb3.9,baz=142,slow=7.1,SNR=8.3
BR131 Keskin Array S 70.01 312 *e*P **P 02 37 17.9 +0.5**
comp=Z,1.8nm,0.7s,mb4.1
PETK Petropavlovsk- 72.25 33 P **P 02 37 29.1 -1.7**
comp=Z,3.7nm,0.7s,mb4.4,baz=202,slow=5.4,SNR=6.1
PETK LR LR 03 13 32.9
comp=Z,70nm,18.1s,MS4.0,baz=245,slow=39
TIXI Tiksi 73.99 10 *e*P **P 02 37 39.7 -1.0**
comp=Z,12nm,0.8s,mb4.9
BOSA Boshof 74.69 240 LR LR 03 05 47.3
comp=Z,109nm,18.1s,MS4.2,baz=153,slow=32
AKASG Malin Array Be 76.21 323 P **P 02 37 53.1 -0.8**
comp=Z,1.8nm,0.7s,mb4.1,baz=97,slow=4.4,SNR=9.8
FINES FINESS Array B 80.98 333 P **P 02 38 18.9 -1.1**
comp=Z,2.2nm,0.8s,mb4.1,baz=120,slow=8.2,SNR=3.5
URZ Urewera 81.94 129 LR LR 03 13 41.8
comp=Z,143nm,19.3s,MS4.3,baz=86,slow=35
ARCES ARCESS Array B 83.51 340 P **P 02 38 32.7 -0.3**
comp=Z,2.8nm,0.9s,mb4.4,baz=83,slow=5.0,SNR=3.6
ARCES ARCESS Array B 83.51 340 P **P 02 38 32.7 -0.3**
GERES GERESS Array B 85.75 319 P **P 02 38 45.2 +0.4**
comp=Z,0.9nm,0.8s,mb4.0,baz=111,slow=3.0,SNR=9.2
GERES GERESS Array B 85.75 319 P **P 02 38 45.2 +0.4**
BRG Berggiesshubel 85.76 321 *e*(P) **P 02 38 50.8 +6.1**
comp=Z,4.0nm,1.1s,mb4.5
NOA NORSAR Array B 87.98 331 P **P 02 38 54.5 -0.9**
comp=Z,1.1nm,0.8s,mb4.1,baz=93,slow=4.7,SNR=3.7
KEST Kesra 88.41 306 P **P 02 38 59.1 +1.2**
comp=Z,1.9nm,0.9s,mb4.3,baz=122,slow=9.5,SNR=3.6
TORD Torodi Ar. Bea 95.69 283 P **P 02 39 33.3 +1.2**
comp=Z,0.2nm,0.9s,mb3.6,baz=105,slow=5.7,SNR=3.0
NVAR Mina Array Bea 129.26 37 PKP PKPdf 02 45 15.2 +0.8
comp=Z,0.3nm,0.6s,baz=244,slow=2.7,SNR=4.0
NVAR Mina Array Bea 129.26 37 PKP PKPdf 02 45 15.2 +0.8
PDAR Pinedale Array 130.66 26 PKP PKPdf 02 45 16.1 -0.7
comp=Z,0.6nm,0.8s,baz=27,slow=0.7,SNR=3.9
MIAR Mount Ida 143.78 16 *e*PKPdf PKPdf 02 45 39.1 -2.1
TXAR Lajitas Array 144.20 33 PKP PKPdf 02 45 40.9 -1.3
comp=Z,1.1nm,0.8s,baz=274,slow=1.3,SNR=21
JCT Junction City 145.19 27 *e*PKPbc PKPbc 02 45 43.8 +0.4
JSC Jenkinsville 145.58 358 *e*PKPbc PKPbc 02 45 44.6 +0.1

*BJI **03** 02:30:43.5, 0.°47S×97.°93E, h35km, mB5.1/5, mb4.8/12, Ms4.2/2, Ms7 4.0/2*
*IDC **03** 02:30:46.0±0.7, 0.°25N×97.°57E, h0km, mb4.3/18, mb1 4.4/20, mb1mx4.2/29, mbtmp4.3/20, ML4.3/2, MS3.8/1, Ms1 3.8/1, ms1mx2.8/39, Error ellipse: s-maj=22.3km s-min=13.3km az=50.0*
*ISCJB **03** 02:30:49.7±0.9, 0.°30N±0.°05×97.°60E±0.°07, h38km±8km, mb4.4/24, Error ellipse: s-maj=12.7km s-min=6.2km az=151.7*
*DJA **03** 02:30:50, 0.°29N×97.°60E, h22km, MLv4.8/13*
*NEIC **03** 02:30:51.3±0.4, 0.°30N×97.°65E, h35km, mb4.4/3, Error ellipse: s-maj=11.3km s-min=7.0km az=58.0*
ISC 03 02:30:50.5±2.4, 0.°30N±0.°05×97.°58E±0.°07, h29km±17km, h30km±6.5km:pP-P, n60, σ0°81/56, mb4.4/24, 1C, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.00**	**360**	P	**Pn**	**02 31 08.3**	**-0.3**
MNSI	**Mandailing Nat**	**2.06**	**76**	P	**Pn**	**02 31 22.8**	**-0.4**
TRSI	**Tarutung**	**2.20**	**39**	P	**Pn**	**02 31 25.2**	**0.0**
SISI	**Saibi**	**2.21**	**137**	P	**Pn**	**02 31 25.4**	**+0.1**
PSI	**Prapat**	**2.83**	**28**	Pn	**Pn**	**02 31 32.3**	**-1.5**
	9.5nm,0.3s,baz=179,slow=7.8,SNR=11						
PPI	**Padang Panjang**	**2.92**	**105**	P	**Pn**	**02 31 34.7**	**-0.3**
PDSI	**Padang**	**3.12**	**113**	P	**Pn**	**02 31 38.3**	**+0.4**
TSI	**Tuntungan**	**3.33**	**17**	P	**Pn**	**02 31 41.3**	**+0.6**
BKNI	**Bangkinang**	**3.46**	**90**	P	**Pn**	**02 31 42.4**	**-0.1**
IPM	**Ipoh**	**5.39**	**40**	P	**Pn**	**02 32 10.1**	**+1.0**
IPM	**Ipoh**	**5.39**	**40**	P	**Pn**	**02 32 09.8**	**+0.7**
	0.4nm1μm110nm,0.7s						
BSI	**Banda Aceh**	**5.64**	**336**	P	**Pn**	**02 32 12.1**	**-0.4**
	0.5nm59nm,1.3s						
KULM	**Kulim**	**5.83**	**32**	P	**Pn**	**02 32 15.2**	**+0.1**
KULM	**Kulim**	**5.83**	**32**	P	**Pn**	**02 32 15.2**	**+0.1**
	0.4nm140nm,0.8s						
KSI	**Kapahiang**	**6.37**	**128**	P	**Pn**	**02 32 23.1**	**+0.7**
	2.2nm242nm,0.8s						
MYKOM	**Kota Tinggi**	**6.44**	**77**	P	**Pn**	**02 32 24.7**	**+1.2**
MYKOM	**Kota Tinggi**	**6.44**	**77**	P	**Pn**	**02 32 23.4**	**-0.1**
	0.2nm25nm,1.2s						
MNAI	**Manna**	**7.09**	**131**	P	**Pn**	**02 32 33.0**	**+0.6**
	1.3nm349nm,1.3s						
KTGM	**Kuala Trenggan**	**7.46**	**48**	P	**Pn**	**02 32 38.0**	**+0.4**
MDSI	**Maura Dua**	**8.13**	**126**	P	**Pn**	**02 32 46.9**	**+0.2**
KASI	**Kota Agung**	**9.01**	**130**	P	**Pn**	**02 32 57.6**	**-1.2**
	60nm,1.1s						
SBUM	**Sibu**	**14.79**	**82**	P	**Pn**	**02 34 19.2**	**+1.3**
CMAR	**Chiang Mai Arr**	**18.09**	**4**	P	**Pn**	**02 34 58.5**	**-1.4**
	1.3nm,0.3s,baz=191,slow=11,SNR=27						
CHTO	**Chiang Mai**	**18.45**	**4**	*e*P	**Pn**	**02 35 03.7**	**-0.5**
	9.2nm,0.9s						
CHTO	**Chiang Mai**	**18.45**	**4**	P	**Pn**	**02 35 03.8**	**-0.4**
	12nm,0.9s						
KKM	**Kota Kinabalu**	**19.46**	**73**	P	**Pn**	**02 35 16.0**	**-0.4**
KKM	**Kota Kinabalu**	**19.46**	**73**	P	**Pn**	**02 35 15.3**	**-1.1**
	38nm,1.0s						
SDKM	**Sandakan**	**20.29**	**74**	P	**P**	**02 35 24.4**	**+0.2**
KDM	**Kudat**	**20.30**	**71**	P	**P**	**02 35 26.0**	**+1.6**
TRD	**Trivandrum**	**22.10**	**292⇑**	*e*x	x	02 36 08.0	
KAPI	**Kappang**	**22.77**	**104**	P	**P**	**02 35 49.4**	**-1.4**
	9.6nm,1.0s,mb4.2,baz=48,slow=15,SNR=3.0						
KMI	**Kunming**	**25.18**	**11**	P	**P**	**02 36 14.8**	**+1.2**
KMI				pP	pP	02 36 26.1	+4.2
KMI				pmax	pmax		
	comp=Z,29nm,1.0s,mb4.8						
ENH	**Enshi**	**31.89**	**20**	*e*P	**P**	**02 37 12.6**	**-0.9**
	comp=Z,18nm,1.0s,mb4.9						
FITZ	**Fitzroy Crossi**	**33.10**	**125**	P	**P**	**02 37 22.5**	**-1.7**
	comp=Z,7.8nm,0.8s,mb4.7,baz=214,slow=9.1,SNR=4.6						
XAN	**Xi'an**	**35.21**	**16**	P	**P**	**02 37 41.6**	**-0.7**
XAN				pP	pP	02 37 50.2	-0.5
XAN				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
GTA	**Gaotai**	**38.98**	**3**	*e*P	**P**	**02 38 24.1**	**+10**
GTA				pP	pP	02 38 28.6	+5.9
GTA				sP	sP	02 38 31.0	+4.8
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.8						
WRAB	**Tennant Creek**	**41.25**	**121**	*e*P	**P**	**02 38 32.8**	**-0.6**
	comp=Z,5.0nm,0.6s,mb4.3						
WRAB	**Tennant Creek**	**41.25**	**121**	P	**P**	**02 38 33.4**	**0.0**
ASAR	**Alice Springs**	**42.56**	**127**	P	**P**	**02 38 44.1**	**+0.1**
	comp=Z,6.9nm,0.8s,mb4.4,baz=297,slow=7.9,SNR=20						
KSRS	**Korea Array**	**46.38**	**34**	P	**P**	**02 39 14.0**	**-0.4**
	comp=Z,7.0nm,0.8s,mb4.6,baz=220,slow=8.9,SNR=16						
AML	**Almayashu**	**46.87**	**336**	*e*P	**P**	**02 39 19.5**	**+1.4**
SONM	**Songino Array**	**47.96**	**8**	P	**P**	**02 39 27.5**	**+1.0**
	comp=Z,6.7nm,0.6s,mb4.8,baz=190,slow=9.7,SNR=32						
SONM				PcP	PcP	02 40 55.3	+0.9
	comp=Z,2.0nm,0.7s,baz=195,slow=3.1,SNR=3.7						
MKAR	**Makanchi Array**	**48.20**	**346**	P	**P**	**02 39 29.2**	**+0.9**
	comp=Z,6.2nm,0.7s,mb4.7,baz=148,slow=7.7,SNR=25						
CN2	**Changchun**	**49.94**	**26**	*e*P	**P**	**02 39 40.1**	**-1.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
CTA	**Charters Tower**	**51.77**	**116**	P	**P**	**02 39 55.6**	**-0.3**
	comp=Z,3.4nm,0.8s,mb4.4,baz=307,slow=8.2,SNR=5.3						
MJAR	**Matsushiro Arr**	**52.10**	**42**	P	**P**	**02 39 58.1**	**-0.1**
	comp=Z,1.5nm,0.5s,mb4.2,baz=231,slow=6.4,SNR=5.3						
STKA	**Stephens Creek**	**52.48**	**132**	P	**P**	**02 40 02.0**	**+1.0**
	comp=Z,1.1nm,0.6s,mb3.9,baz=308,slow=19,SNR=2.5						
KURK	**Kurchatov**	**52.75**	**345**	P	**P**	**02 40 03.0**	**+0.3**
	comp=Z,6.6nm,0.8s,mb4.6,baz=166,slow=7.1,SNR=23						
OPO	**Ambohidratompo**	**52.91**	**246**	P	**P**	**02 40 04.2**	**-0.2**
	comp=Z,0.5nm,0.3s,mb3.9,baz=91,slow=10,SNR=3.9						
ZALV	**Zalesovo Beam**	**54.50**	**351**	P	**P**	**02 40 16.2**	**+0.7**
	comp=Z,14nm,0.5s,mb5.3,baz=184,slow=6.5,SNR=23						
ZALV	**Zalesovo Beam**	**54.50**	**351**	P	**P**	**02 40 16.2**	**+0.7**
BVAR	**Borovoye Array**	**57.22**	**341**	P	**P**	**02 40 35.1**	**+0.2**
	comp=Z,5.4nm,0.7s,mb4.7,baz=138,slow=9.1,SNR=19						
BRTR	**Keskin Array B**	**69.99**	**312**	P	**P**	**02 41 59.8**	**+0.2**
	comp=Z,0.7nm,0.7s,mb3.7,baz=134,slow=7.5,SNR=5.3						
AKASG	**Malin Array Be**	**76.20**	**323**	P	**P**	**02 42 35.0**	**-1.0**
	comp=Z,0.2nm,0.3s,mb3.5,baz=94,slow=4.6,SNR=4.0						
FINES	**FINESS Array B**	**80.97**	**333**	P	**P**	**02 43 01.8**	**-0.3**
	comp=Z,1.8nm,1.0s,mb4.0,baz=88,slow=8.5,SNR=3.6						
ARCES	**ARCESS Array B**	**83.50**	**340**	P	**P**	**02 43 15.5**	**+0.2**
	comp=Z,1.6nm,0.8s,mb4.2,baz=56,slow=6.5,SNR=3.8						
GERES	**GERESS Array B**	**85.73**	**319**	P	**P**	**02 43 27.8**	**+0.9**
	comp=Z,0.2nm,0.2s,mb4.0,baz=129,slow=5.5,SNR=4.7						
HFS	**Hagfors**	**86.69**	**330**	LR	LR	03 27 20.8	
	comp=Z,42nm,19.0s,baz=356,slow=39						
TXAR	**Lajitas Array**	**144.22**	**33**	PKP	PKPdf	02 50 23.6	-0.9
	comp=Z,0.7nm,0.7s,baz=320,slow=1.2,SNR=8.9						
JCT	**Junction City**	**145.21**	**27**	*e*PKPbc	PKPbc	02 50 26.2	+0.5

*PGC **03** 02:46:11.0±5.8, 63.°46N×145.°17W, h15km, ML3.2/2, 196km Ese of Fairbanks, Ak Central Alaska*
NEIC 03 02:46:08.1, 63.°40N×145.°28W, h2km, ML2.8(AEIC)**, 6D, After AEIC., Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAX	**Paxson**	**0.44**	**191**	*e*Pg	Pg	02 46 16.1	-0.5
PAX				*e*Sg	Sg	02 46 22.0	-0.3
DOT	**Dot Lake**	**0.60**	**65**	P	Pg	02 46 20.0	+0.4
DOT				S	Sg	02 46 27.9	+0.5
MENT	**Mentasta**	**0.85**	**123**	*e*Pg	Pg	02 46 23.5	-0.8
IL1	**Eielson Array**	**1.55**	**334**	P	Pn	02 46 35.5	-1.1
COLA	**College**	**1.86**	**324**	*e*Pn	Pn	02 46 41.6	+0.7
COLA				*e*S	Sn	02 47 05.7	+0.8
SML	**Sawmill**	**2.13**	**223**	P	Pn	02 46 44.9	+0.3
SML				S	Sn	02 47 11.6	-0.1
EGAK	**Eagle**	**2.28**	**51**	*e*Pn	Pn	02 46 48.9	+2.2
EGAK				*e*S	Sn	02 47 19.9	+4.7
DIV	**Divide**	**2.29**	**186**	*e*Pn	Pn	02 46 47.1	+0.3
DIV				*e*S	Sn	02 47 17.3	+1.7
BMRM	**Bremner River**	**2.46**	**172**	*e*Pn	Pn	02 46 50.4	+1.3
BMRM				*e*S	Sn	02 47 21.5	+1.8
KNK	**Knik Glacier**	**2.48**	**218**	P	Pn	02 46 50.8	+1.3
KTH	**Kantishna Hill**	**2.54**	**276**	P	Pn	02 46 51.6	+1.4
PMR	**Palmer**	**2.55**	**226**	*e*Pn	Pn	02 46 51.3	+1.0
BPAW	**Bear Paw Mtn.**	**2.63**	**288**	P	Pn	02 46 51.8	+0.3
DAWY	**Dawson**	**2.70**	**73**	P	Pn	02 46 52.7	+0.2
DAWY	**Dawson**	**2.70**	**73**	⇑Pn	Pn	02 46 52.8	+0.3
DAWY				⇑Pg	Pg	02 46 58.1	-1.8
DAWY				⇓Sg	Sg	02 47 33.8	-1.0
RC01	**Rabbit Creek A**	**3.12**	**224**	*e*Pn	Pn	02 47 01.9	+3.7
RC01				*e*S	Sn	02 47 39.7	+3.7
PPLA	**Purkeypile**	**3.18**	**264**	P	Pn	02 47 00.8	+1.8
SKT	**Skwentna**	**3.21**	**246**	P	Pn	02 47 01.0	+1.5
BM3	**Burnt Mountain**	**4.05**	**4**	P	Pn	02 47 11.3	+0.4
COLD	**Coldfoot**	**4.36**	**334**	*e*Pn	Pn	02 47 15.8	+0.6
COLD				*e*S	Sn	02 48 23.7	+17
IM3	**Indian Mountai**	**4.46**	**309**	P	Pn	02 47 16.3	-0.4
HYT	**Haines Junctio**	**4.47**	**122**	⇑Pg	Pg	02 47 31.6	-2.2
TTA	**Tatalina**	**4.89**	**269**	*e*Pn	Pn	02 47 24.4	+1.9
TT01	**Tatalina**	**4.90**	**269**	P	Pn	02 47 23.3	+0.7
WHY	**Whitehorse**	**5.61**	**115**	⇓Pn	Pn	02 47 31.8	-0.6
WHY				⇓Sg	Sg	02 49 03.6	-4.5
INK	**Inuvik**	**6.88**	**39**	*e*Pn	Pn	02 47 50.0	+0.2
INK	**Inuvik**	**6.88**	**39**	⇑Pn	Pn	02 47 48.8	-1.0

*IDC **03** 02:48:31.8±1.1, 4.°19N×73.°79W, h0km, mb3.6/4, mb1 4.1/6, mb1mx3.8/21, mbtmp3.8/6, ML4.2/2, MS2.7/1, Ms1 2.8/1, ms1mx2.3/30, Error ellipse: s-maj=32.8km s-min=11.5km az=49.0*
*NEIC **03** 02:48:35.2, 4.°46N×73.°76W, h3km, ML3.4(RSNC), After RSNC.*
*ISCJB **03** 02:48:35.1±1.9, 4.°43N±0.°08×73.°71W±0.°09, h24km±16km, mb3.5/5, Error ellipse: s-maj=16.8km s-min=10.4km az=34.7*
ISC 03 02:48:36.1±2.2, 4.°48N±0.°08×73.°78W±0.°10, h12km±15km, n11, σ1°10/12, mb3.5/5, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**0.66**	**304**	Pg	**Pg**	**02 48 48.6**	**-0.5**
	139nm,0.3s,baz=81,slow=23,SNR=171						
ROSC				Lg		02 48 59.8	
	131nm,0.3s,baz=75,slow=20,SNR=18						
SDV	**Santo Domingo**	**5.38**	**35**	Pn	**Pn**	**02 49 58.3**	**+2.1**
	11nm,0.3s,baz=200,slow=14,SNR=51						
SDV				Sn	**Sn**	**02 50 58.4**	**+0.3**
	14nm,0.3s,baz=54,slow=19,SNR=7.7						
SDV	**Santo Domingo**	**5.38**	**35**	*e*Pn	**Pn**	**02 49 57.8**	**+1.6**
SDV				*e*S	**Sn**	**02 50 58.4**	**+0.3**
OTAV	**Otavalo**	**6.29**	**228**	*e*Pn	**Pn**	**02 50 10.4**	**+1.7**
	7.6nm,0.8s						
PCRV	**Puerto La Cruz**	**10.69**	**58**	Pn	**Pn**	**02 51 08.5**	**-0.6**
	1.0nm,0.3s,baz=221,slow=9.3,SNR=3.4						
LPAZ	**La Paz**	**21.38**	**165**	P	**P**	**02 53 23.2**	**-0.4**
	2.4nm,0.8s,mb3.6,baz=342,slow=12,SNR=8.1						
LPAZ				LR	LR	03 01 30.4	
	comp=Z,21nm,21.2s,baz=51,slow=37						
SIV	**San Ignacio**	**23.91**	**149**	P	**P**	**02 53 46.3**	**-3.8**
	0.8nm,0.8s,mb3.2,baz=318,slow=16,SNR=5.1						
TXAR	**Lajitas Array**	**37.57**	**314**	P	**P**	**02 55 50.9**	**+0.3**
	0.1nm,0.5s,mb2.9,baz=122,slow=8.6,SNR=3.3						
NVAR	**Mina Array Bea**	**52.68**	**316**	P	**P**	**02 57 50.4**	**-0.1**
	0.5nm,0.6s,mb3.6,baz=106,slow=9.5,SNR=3.5						
YKA	**Yellowknife Ar**	**65.23**	**340**	P	**P**	**02 59 15.4**	**-1.8**
	0.9nm,0.5s,mb4.0,baz=135,slow=6.2,SNR=22						
ASAR	**Alice Springs**	**147.19**	**232**	PKPbc	PKPbc	03 08 16.0	-4.1
	0.3nm,0.5s,baz=110,slow=3.7,SNR=5.7						

CASC 03 02:57:09.6±2.1, 8.°40N×83.°06W, h3km, MD3.6, 1C-2D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.54**	**43⇑**	*e*P	Pg	02 57 20.3	+0.4
BRU2				*e*S	Sg	02 57 29.9	+3.0
TBS2		**0.56**	**46**	*e*P	Pg	02 57 22.9	+2.5
TBS2				*e*S	Sg	02 57 31.8	+4.1
BAR1		**0.87**	**344⇓**	*e*P	Pg	02 57 25.5	-0.9
BUS	**Buena Vista**	**1.34**	**329⇓**	*e*P	Pn	02 57 33.7	-1.5
BUS				*e*S	Sg	02 57 46.6	-6.0
QCR	**Quepos**	**1.49**	**313**	*e*P	Pn	02 57 36.4	-0.9
QCR				*e*S	Sn	02 57 58.8	+1.4
URSC	**Urasca**	**1.59**	**334**	*e*P	Pn	02 57 37.6	-1.1
LAJ	**Bijagual**	**1.79**	**324**	*e*P	Pn	02 57 44.6	+3.2
CGA2	**Cerro Gallo 2**	**2.12**	**319**	*e*P	Pn	02 57 45.8	-0.2

*BJI **03** 03:00:38.6, 34.°76N×81.°42E, h18km, ML3.6/3*
*IDC **03** 03:00:42.9±3.3, 35.°30N×80.°91E, h0km, mb3.2/2, mb1 3.5/6, mb1mx3.3/27, mbtmp3.4/6, ML3.6/2, Error ellipse: s-maj=73.1km s-min=25.3km az=65.0*
*ISCJB **03** 03:00:42.4±1.4, 35.°5N±0.°1×80.°9E±0.°2, h10km, mb3.1/2, Error ellipse: s-maj=29.6km s-min=14.9km az=147.3*
*NEIC **03** 03:00:43.7±1.4, 35.°36N×80.°81E, h10km, mb3.5/1, Error ellipse: s-maj=28.5km s-min=15.1km az=51.0*
ISC 03 03:00:44.1±1.4, 35.°4N±0.°1×81.°0E±0.°2, h10km, n10, σ1°17/9, mb3.1/2, Kashmir-Xizang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**5.71**	**317**	*e*Pn	**Pn**	**03 02 14.8**	**+5.9**
UCH	**Uchtor**	**8.47**	**326**	*e*Pn	**Pn**	**03 02 46.7**	**-0.1**
	4.4nm,0.8s						
AAK	**Ala-Archa**	**8.80**	**327**	Pg		03 03 30.2	
	0.0nm,0.3s,baz=163,slow=16,SNR=6.1						
AAK				Lg		03 05 21.0	
	0.0nm,0.3s,baz=180,slow=20,SNR=2.0						
MKAR	**Makanchi Array**	**11.43**	**5**	Pn	**Pn**	**03 03 27.3**	**0.0**
	0.2nm,0.3s,baz=176,slow=31,SNR=10						
KURK	**Kurchatov**	**15.40**	**354**	Pn	**Pn**	**03 04 19.6**	**-1.7**
	baz=178,slow=11,SNR=4.7						
ZALV	**Zalesovo Beam**	**18.74**	**7**	P	**Pn**	**03 05 02.6**	**-0.7**
	baz=186,slow=13,SNR=3.2						
BVAR	**Borovoye Array**	**19.14**	**340**	P	**Pn**	**03 05 09.8**	**+1.7**
	0.3nm,0.3s,baz=152,slow=9.6,SNR=3.7						
ABKAR	**Akbulak array**	**20.72**	**318**	*e*P	**P**	**03 05 24.6**	**+0.1**
	3.3nm,1.3s						
SONM	**Songino Array**	**22.60**	**49**	P	**P**	**03 05 47.6**	**+3.0**
	0.1nm,0.3s,mb2.7,baz=230,slow=10,SNR=2.2						
CMAR	**Chiang Mai Arr**	**23.21**	**132**	P	**P**	**03 05 50.9**	**-0.5**
	0.8nm,0.3s,mb3.6,baz=315,slow=12,SNR=4.9						

*IDC **03** 03:08:35.8±0.8, 31.°41N×103.°69E, h0km, mb4.0/13, mb1 4.1/15, mb1mx4.0/27, mbtmp4.0/15, ML3.7/2, Error ellipse: s-maj=30.8km s-min=15.7km az=53.0*
*BJI **03** 03:08:39.0, 31.°36N×103.°77E, h16km, mB4.2/3, mb4.4/6, ML4.4/11, Ms4.7/6, Ms7 4.7/5*
ISC 03 03:08:37.0±1.2, 31.°44N±0.°04×103.°7E±0.°1, h4km±8km, n21, σ0°94/23, mb4.0/14, 2C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.54**	**172⇑**	*i*Pg	**Pg**	**03 08 46.8**	**-0.5**
CD2				Sg	**Sg**	**03 08 54.3**	**+0.1**
CD2				smax			
	comp=N,11μm,0.6s						
CD2				smax			
	comp=E,20μm,0.7s						
LZH	**Lanzhou**	**4.63**	**2**	Pg	**Pg**	**03 10 05.1**	**-0.7**
LZH				Sg	**Sg**	**03 10 57.5**	**-8.3**
LZH				smax			
	comp=N,1μm,0.6s						
LZH				smax			
	comp=E,720nm,0.8s						
LZH				LR	LR		
	comp=E,5μm,6.2s						
LZH				LR	LR		
	comp=Z,5μm,6.5s						
GYA	**Guiyang**	**5.62**	**151⇑**	*i*Pn	**Pn**	**03 10 01.5**	**+0.3**
GYA				LR	LR		
	comp=N,3μm,5.0s						
GYA				LR	LR		
	comp=E,6μm,5.6s						
GYA				LR	LR		
	comp=Z,7μm,8.4s						
KMI	**Kunming**	**6.35**	**188**	Pn	**Pn**	**03 10 11.8**	**+0.5**
KMI				LR	LR		
	comp=N,6μm,6.2s						
KMI				LR	LR	

CD2 Sg **Sg** **03 10 12.8 +0.7**
CD2 smax
comp=N,47μm,0.6s
CD2 smax
comp=E,42μm,1.1s
LZH Lanzhou 4.10 351 Pn **Pn** **03 10 34.7 +2.7**
LZH Pg **Pg** **03 10 46.5 -1.4**
LZH Sn **Sn** **03 11 21.7 +1.7**
LZH Sg **Sg** **03 11 38.5 -2.6**
LZH smax
comp=N,4μm,0.9s
LZH smax
comp=E,6μm,0.8s
LZH LR LR
comp=E,21μm,8.2s
LZH LR LR
comp=Z,22μm,9.7s
XAN Xi'an 4.14 60 Pn **Pn** **03 10 32.6 0.0**
XAN Pg **Pg** **03 10 44.6 -4.2**
XAN Sn **Sn** **03 11 23.2 +2.1**
XAN Sg **Sg** **03 11 37.0 -5.4**
XAN smax
comp=N,4μm,1.0s
XAN smax
comp=E,1μm,0.8s
XAN LR LR
comp=N,4μm,6.2s
XAN LR LR
comp=E,3μm,6.8s
XAN LR LR
comp=Z,3μm,7.3s
KMI Kunming 7.07 194 Pn **Pn** **03 11 13.9 +1.1**
KMI Sn **Sn** **03 12 32.5 -0.7**
KMI smax
comp=N,190nm,1.4s
KMI smax
comp=E,170nm,1.4s
KMI LR LR
comp=N,2μm,8.0s
KMI LR LR
comp=E,3μm,10.3s
WHN Wuhan 8.47 97 ⇑P **Pn** **03 11 33.6 +1.6**
WHN S **Sn** **03 13 00.6 -7.0**
WHN LR LR
comp=N,12μm,9.8s
WHN LR LR
comp=E,11μm,12.0s
WHN LR LR
comp=Z,7μm,8.2s
BTO Baotou 9.61 25 *e*P **Pn** **03 11 46.1 -1.5**
BTO S **Sn** **03 13 39.3 +3.7**
BTO LR LR
comp=N,1μm,9.9s
BTO LR LR
comp=E,980nm,8.3s
HHC Hu-ho-hao-te 10.43 30 *e*P **Pn** **03 11 59.3 +0.4**
HHC pP 03 12 02.6
HHC sP 03 12 05.3
HHC PP 03 12 07.6
HHC S **Sn** **03 13 56.1 +0.3**
HHC SS 03 14 08.4
HHC PcS PcS 03 21 39.6 +1.7
HHC ScS ScS 03 25 11.0 -0.6
HHC pmax pmax
comp=Z,14nm,1.0s
HHC pmax pmax
comp=Z,150nm,5.2s
HHC LR LR
comp=N,3μm,7.5s
HHC LR LR
comp=E,3μm,6.9s
HHC LR LR
comp=Z,3μm,11.4s
TIA Tai'an 11.18 65 P **Pn** **03 12 10.0 +0.8**
TIA S **Sn** **03 14 18.0 +3.8**
TIA LR LR
comp=N,630nm,8.0s
TIA LR LR
comp=E,970nm,8.0s
LSA Lhasa 11.79 262 P **Pn** **03 12 19.2 +1.6**
LSA pP 03 12 25.7
LSA S **Sn** **03 14 29.6 +0.4**
LSA pmax pmax
comp=Z,20nm,0.8s
LSA pmax pmax
comp=Z,300nm,10.0s
LSA LR LR
comp=N,1μm,12.0s
LSA LR LR
comp=E,630nm,11.0s
LSA LR LR
comp=Z,600nm,11.0s
LSA Lhasa 11.79 262 *e*P **Pn** **03 12 19.3 +1.7**
LSA pmax pmax
comp=Z,23nm,0.8s
LSA Lhasa 11.79 262 *e*Pn **Pn** **03 12 19.3 +1.7**
comp=Z,23nm,0.8s
GZH Guangzhou 11.80 137 P **Pn** **03 12 11.1 -6.6**
GZH S **Sn** **03 14 15.0 -14**
GZH LR LR
comp=N,3μm,7.8s
GZH LR LR
comp=E,3μm,7.2s
NJ2 Nanjing 12.09 86 *e*P **Pn** **03 12 22.8 +1.1**
NJ2 pP 03 12 26.1
NJ2 sP 03 12 29.2
NJ2 PP 03 12 32.7
NJ2 S **Sn** **03 14 37.0 +0.5**
NJ2 sS 03 14 43.0
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
NJ2 pmax pmax
comp=Z,80nm,10.2s
NJ2 LR LR
comp=N,2μm,7.6s
NJ2 LR LR
comp=E,2μm,14.1s
NJ2 LR LR
comp=Z,2μm,11.6s
BJI Beijing 12.31 46 P **Pn** **03 12 23.6 -0.9**
BJI pmax pmax
comp=Z,9.0nm,0.7s
BJI pmax pmax
comp=Z,88nm,4.1s
BJI LR LR
comp=N,1μm,16.5s
BJI LR LR
comp=E,2μm,17.9s
BJI LR LR
comp=Z,380nm,18.0s
SHL Shillong 12.87 243 *e*PKP **Pn** **03 12 33.5 +1.1**
SHL *ex* x 03 15 18.0
QIZ Qiongzhong 13.77 159 P **Pn** **03 12 43.7 -1.0**
QIZ S **Sn** **03 15 16.2 -1.5**
QIZ pmax pmax
comp=Z,21nm,1.6s
QIZ LR LR
comp=N,4μm,11.1s
QIZ LR LR
comp=Z,6μm,10.3s
CHTO Chiang Mai 14.11 203 *e*Pn **Pn** **03 12 51.5 +2.3**
CHTO *e*Sn **Sn** **03 15 39.2 +13**
CHTO Chiang Mai 14.11 203 Pn **Pn** **03 12 52.8 +3.5**
SNR=6.5
CHTO Pn **Pn** **03 12 52.8 +3.5**
SNR=6.5
CHTO Chiang Mai 14.11 203 P **Pn** **03 12 52.8 +3.5**
SNR=6.5
CHTO P 03 12 52.8
SNR=6.5
SSE Sheshan 14.17 89 P **Pn** **03 12 48.0 -2.0**
SSE S **Sn** **03 15 24.0 -3.3**
SSE pmax pmax
comp=Z,17nm,0.6s
SSE pmax pmax
comp=Z,150nm,4.2s
SSE LR LR
comp=N,1μm,7.9s
SSE LR LR
comp=E,330nm,8.1s
SSE LR LR
comp=Z,1μm,8.5s
CM31 Chiang Mai Arr 14.44 202 *e*Pn **Pn** **03 12 56.2 +2.4**
CMAR Chiang Mai Arr 14.44 202 Pn **Pn** **03 12 53.3 -0.5**
comp=Z,0.4nm,0.3s,baz=14,slow=12,SNR=14
CMAR LR LR 03 19 07.3
comp=Z,910nm,21.5s,baz=230,slow=40
SONM Songino Array 15.85 4 Pn **Pn** **03 13 12.8 +0.4**
comp=Z,0.6nm,0.3s,baz=184,slow=12,SNR=26
SONM Songino Array 15.85 4 P **Pn** **03 13 12.8 +0.4**
SONM pmax pmax
comp=Z,1.0nm,0.3s
ULN Ulaanbaatar 15.93 6 *e*P **Pn** **03 13 13.4 0.0**
ULN pmax pmax
comp=Z,34nm,0.8s
ULN Ulaanbaatar 15.93 6 *e*Pn **Pn** **03 13 13.4 0.0**
comp=Z,34nm,0.8s
ULN Ulaanbaatar 15.93 6 Pn **Pn** **03 13 14.5 +1.1**
SNR=18
ULN Pn **Pn** **03 13 14.5 +1.1**
SNR=18
ULN Ulaanbaatar 15.93 6 P **Pn** **03 13 14.5 +1.1**
SNR=18
ULN P 03 13 14.5
SNR=18
YHNB Yeheng 16.47 112 *e*Pn **Pn** **03 13 22.6 +2.1**
comp=Z,27nm,0.6s
SSLB Suanglung 16.60 116 *e*Pn **Pn** **03 13 23.6 +1.4**
comp=Z,80nm,1.1s
NACB Ninganchiao 16.89 113 *e*Pn **Pn** **03 13 27.2 +1.3**
comp=Z,135nm,1.4s
WMQ Urumqi 17.76 316 P **Pn** **03 13 37.0 +0.5**
WMQ sP sP 03 13 44.0 +2.3
WMQ PP 03 13 51.0
WMQ S **Sn** **03 16 52.0 -2.3**
WMQ SS 03 17 17.0
WMQ pmax pmax
comp=Z,16nm,0.8s
WMQ LR LR
comp=N,1μm,6.0s
WMQ LR LR
comp=E,920nm,6.0s
WMQ LR LR
comp=Z,1μm,6.0s
SNY Shenyang 18.02 52 ⇑P **Pn** **03 13 40.0 +0.3**
SNY S **Sn** **03 16 55.3 -5.3**
SNY SS 03 17 23.1
SNY pmax pmax
comp=Z,15nm,0.9s
SNY LR LR
comp=N,700nm,8.3s
SNY LR LR
comp=E,430nm,15.6s
SNY LR LR
comp=Z,420nm,16.9s
TLY Talaya 19.65 358 Pn **Pn** **03 14 00.3 +0.8**
comp=Z,119nm,1.6s,SNR=9.0
TLY Talaya 19.65 358 *e*P **Pn** **03 14 00.7 +1.2**
TLY pmax pmax
comp=Z,52nm,1.7s
TLY MLR MLR
comp=Z,1μm,11.0s
TLY Talaya 19.65 358 *e*P **Pn** **03 14 00.4 +0.9**
comp=Z,106nm,1.8s
TLY Talaya 19.65 358 P **Pn** **03 14 01.2 +1.8**
SNR=14
TLY P 03 14 01.2
SNR=14
TLY Talaya 19.65 358 P **Pn** **03 14 01.2 +1.8**
SNR=14
TLY P 03 14 01.2
SNR=14
KSRS Korea Array 19.89 68 P **Pn** **03 14 01.1 -1.4**
comp=Z,0.9nm,0.3s,baz=256,slow=9.9,SNR=18
KSRS Korea Array 19.89 68 P **Pn** **03 14 01.1 -1.4**
KSRS pmax pmax
comp=Z,1.0nm,0.3s
CN2 Changchun 20.15 48 ⇑P **P** **03 14 05.0 +1.4**
CN2 *e*pP 03 14 09.0
CN2 *es*P sP 03 14 11.7 +3.7
CN2 *e*S **S** **03 17 53.5 +3.8**
CN2 pmax pmax
comp=Z,70nm,0.8s
CN2 LR LR
comp=N,900nm,8.0s
CN2 LR LR
comp=E,620nm,8.0s
CN2 LR LR
comp=Z,600nm,8.0s
IRK Irkutsk 20.21 359 ⇓*i*P **P** **03 14 06.4 +2.3**
IRK pmax pmax
comp=Z,298nm,1.5s
HIA Hailar 20.63 29 *e*P **P** **03 14 10.1 +1.3**
HIA pmax pmax
comp=Z,27nm,0.8s
HIA Hailar 20.63 29 *e*P **P** **03 14 10.1 +1.3**
comp=Z,27nm,0.8s
CIT Chita 21.03 16 *e*P **P** **03 14 17.4 +4.4**
JOW Kunigami 21.24 98 P **P** **03 14 15.7 +0.2**
comp=Z,14nm,0.4s,mb4.6,baz=220,slow=5.3,SNR=4.9
JOSI Joshimath 21.45 273 *e*PKP **P** **03 14 17.5 -0.2**
KLP Kalpa 22.40 276 *e*PKP **P** **03 14 28.0 +0.1**
KLP AMb AMB 03 14 37.3
comp=Z,111nm,1.4s,mb5.1
MKAR Makanchi Array 22.58 317 P **P** **03 14 30.6 +0.9**
comp=Z,42nm,1.0s,mb4.8,baz=108,slow=12,SNR=40
MKAR Makanchi Array 22.58 317 P **P** **03 14 30.6 +0.9**
MKAR pmax pmax
comp=Z,42nm,1.0s
MDJ Mudanjiang 23.18 50 P **P** **03 14 35.8 -0.3**
MDJ pP 03 14 38.5
MDJ PcP PcP 03 18 23.7 -0.4
MDJ S **S** **03 18 46.5 -1.0**
MDJ ScP ScP 03 22 02.4 +0.3
MDJ PcS PcS 03 22 03.9 +0.8
MDJ ScS ScS 03 25 48.8 +0.8
MDJ pmax pmax
comp=Z,20nm,1.4s,mb4.3
MDJ pmax pmax
comp=Z,170nm,5.0s
MDJ LR LR
comp=N,360nm,8.0s
MDJ LR LR
comp=E,330nm,8.0s
MDJ LR LR
comp=Z,470nm,9.4s
MDJ Mudanjiang 23.18 50 *e*P **P** **03 14 37.4 +1.3**
comp=Z,33nm,1.3s,mb4.6
AGRA Agra 23.64 265 *e*PKP **P** **03 14 39.5 -1.4**
BISR Bishrakh 23.68 269 *e*PKP **P** **03 14 40.2 -1.1**
BHK Bhakra 23.96 276 *e*PKP **P** **03 14 47.8 +4.0**
AYAN Aya Nagar 23.97 269 *e*PKP **P** **03 14 41.6 -2.3**
AYAN AMb AMB 03 14 48.0
comp=Z,61nm,1.1s,mb4.9
SONA Sohna 24.07 268 *e*PKP **P** **03 14 44.7 -0.2**
SONA AMb AMB 03 14 50.2
comp=Z,76nm,1.1s,mb5.0
KSH Kashi 24.34 296 ⇓*i*P **P** **03 14 50.7 +3.5**
KSH pP 03 14 54.3
KSH sP sP 03 14 56.9 +5.2
KSH PP 03 15 26.2
KSH PcP PcP 03 18 28.9 +2.2
KSH S **S** **03 19 07.7 +1.4**
KSH sS sS 03 19 14.7 +3.1
KSH ScP ScP 03 22 05.8 +0.5
KSH PcS PcS 03 22 07.5 +1.1
KSH ScS ScS 03 25 52.4 -0.3
KSH pmax pmax
comp=Z,38nm,0.9s,mb4.8
KSH pmax pmax
comp=Z,130nm,1.9s,mb5.0
KSH LR LR
comp=N,340nm,8.5s
KSH LR LR
comp=E,540nm,9.2s
KSH LR LR
comp=Z,470nm,7.9s
KHET Khetri 25.20 269 *e*PKP **P** **03 14 54.2 -1.0**
KHET AMb AMB 03 14 59.1
comp=Z,52nm,0.9s,mb5.1
NGP Nagpur 25.23 251 *e*PKP **P** **03 14 49.3 -6.2**
NGP AMb AMB 03 14 55.1
comp=Z,65nm,1.0s,mb5.1
TKM2 Tokmak 2 25.34 304 P **P** **03 14 58.0 +1.7**
SNR=10
TKM2 Tokmak 2 25.34 304 *e*P **P** **03 14 57.5 +1.2**
TKM2 pmax pmax
comp=Z,15nm,0.9s,mb4.5
TKM2 Tokmak 2 25.34 304 *e*P **P** **03 14 57.5 +1.2**
comp=Z,15nm,0.9s,mb4.5
KZA Kyzart 25.38 302 P **P** **03 14 58.8 +2.2**
SNR=10
BHPL Bhopal 25.57 257 *e*PKP **P** **03 14 59.3 +0.7**
BHPL AML AML 03 15 06.2
comp=Z,75nm,1.6s
KBK Karagaybulak 25.74 303 P **P** **03 15 00.9 +1.1**
SNR=18
UCH Uchtor 25.95 302 P **P** **03 15 04.3 +2.5**
SNR=26
UCH Uchtor 25.95 302 *e*P **P** **03 15 03.5 +1.8**
comp=Z,50nm,1.2s,mb4.9
FRU Bishkek 26.02 303 *e*P **P** **03 15 05.0 +2.6**
FRU pmax pmax
comp=Z,58nm,2.0s,mb4.8
AAK Ala-Archa 26.05 303 P **P** **03 15 05.5 +2.7**
comp=Z,83nm,0.8s,mb5.3,SNR=5.7
AAK Ala-Archa 26.05 303 P **P** **03 15 04.4 +1.6**
comp=Z,6.7nm,0.8s,mb4.2,baz=93,slow=2.3,SNR=8.6
AAK LR LR 03 27 12.8
comp=Z,646nm,19.7s,MS4.2,baz=96,slow=41
AAK Ala-Archa 26.05 303 P **P** **03 15 04.4 +1.6**
AAK pmax pmax
comp=Z,7.0nm,0.8s,mb4.2
AAK MLR MLR
comp=Z,646nm,19.7s,MS4.2
AAK Ala-Archa 26.05 303 *e*P **P** **03 15 04.8 +2.0**
comp=Z,17nm,1.0s,mb4.5
AAK Ala-Archa 26.05 303 P **P** **03 15 07.4 +4.6**
SNR=8.0
AAK P 03 15 07.4
SNR=8.0
AAK Ala-Archa 26.05 303 P **P** **03 15 07.4 +4.6**
SNR=8.0
AAK P 03 15 07.4
SNR=8.0
AAK P 03 15 07.4
SNR=8.0
AAK P 03 15 07.4
SNR=8.0
ZAA0 Zalesovo Array 26.09 333 *e*P **P** **03 15 03.2 +0.3**
ZALV Zalesovo Beam 26.09 333 P **P** **03 15 03.1 +0.2**
comp=Z,49nm,0.8s,mb5.1,baz=131,slow=9.6,SNR=56
ZALV Zalesovo Beam 26.09 333 P **P** **03 15 03.1 +0.2**
ZALV pmax pmax
comp=Z,49nm,0.8s,mb5.1
USP Ospenovka 26.21 304 P **P** **03 15 05.4 +1.2**
SNR=14
AML Almayashu 26.52 301 P **P** **03 15 08.9 +1.9**
SNR=12
AML Almayashu 26.52 301 *e*P **P** **03 15 08.8 +1.8**
comp=Z,24nm,1.0s,mb4.7
EKS2 Erkin-Say 26.58 302 *e*P **P** **03 15 08.7 +1.2**
comp=Z,9.3nm,1.0s,mb4.3
KLR Kul'dur 26.62 42 *e*P **P** **03 15 04.0 -3.8**
AJM Ajmer 26.67 266 *e*PKP **P** **03 15 08.0 -0.5**
AJM AMb AMB 03 15 14.8
comp=Z,65nm,1.1s,mb5.1
KURK Kurchatov 26.78 322 P **P** **03 15 09.7 +0.5**
comp=Z,186nm,1.0s,mb5.6,SNR=14
KURK Kurchatov 26.78 322 P **P** **03 15 09.2 0.0**
comp=Z,24nm,0.9s,mb4.7,baz=131,slow=8.7,SNR=15
KURK Kurchatov 26.78 322 P **P** **03 15 09.2 0.0**
KURK pmax pmax
comp=Z,24nm,0.9s,mb4.7
KURK Kurchatov 26.78 322 *e*P **P** **03 15 09.6 +0.4**
comp=Z,39nm,1.1s,mb4.8
KURK Kurchatov 26.78 322 P **P** **03 15 10.4 +1.2**
SNR=13
KURK P 03 15 10.4
SNR=13
KURK Kurchatov 26.78 322 P **P** **03 15 10.4 +1.2**
SNR=13
KURK P 03 15 10.4
SNR=13
KURK P 03 15 10.4
SNR=13
KURK P 03 15 10.4
SNR=13
NVS Novosibirsk 27.37 333 *e*P **P** **03 15 13.1 -1.4**
NVS *e*S **S** **03 19 43.8 -10**
NVS pmax pmax
comp=Z,34nm,1.5s,mb4.7
NVS pmax pmax
comp=N,39nm,1.7s
NVS pmax pmax
comp=E,30nm,1.9s
NVS smax
comp=N,18nm,1.6s
NVS smax
comp=E,8.0nm,1.6s
MAT Matsushiro 28.04 71 P **P** **03 15 18.9 -1.8**
MJAR Matsushiro Arr 28.04 71 P **P** **03 15 19.3 -1.4**
comp=E,3.2nm,0.7s,mb4.1,baz=275,slow=11,SNR=6.1
MJAR Matsushiro Arr 28.04 71 P **P** **03 15 19.3 -1.4**
MJAR pmax pmax
comp=Z,3.0nm,0.7s
PSI Prapat 29.56 192 P **P** **03 15 35.3 +1.0**
comp=Z,14nm,0.7s,mb4.8,baz=341,slow=7.9,SNR=10.0
PSI Prapat 29.56 192 P **P** **03 15 35.3 +1.0**
PSI pmax pmax
comp=Z,15nm,0.7s,mb4.8
JASL Jaisalmer 29.70 269 *e*PKP **P** **03 15 36.1 +0.6**
KBL Kabul 29.75 285 *e*P **P** **03 15 36.0 +0.2**
KBL pmax pmax
comp=Z,37nm,1.0s,mb5.1
KBL Kabul 29.75 285 *e*P **P** **03 15 36.0 +0.1**
comp=Z,37nm,1.0s,mb5.1
BVAR Borovoye Array 32.34 321 P **P** **03 15 59.0 +0.5**
comp=Z,5.2nm,0.7s,mb4.5,baz=112,slow=9.8,SNR=17
BVAR Borovoye Array 32.34 321 P **P** **03 15 59.0 +0.5**
BVAR pmax pmax
comp=Z,5.0nm,0.7s
BRVK Borovoye 32.42 321 P **P** **03 15 59.0 -0.2**
comp=Z,96nm,0.9s,mb5.6,SNR=5.4
BRVK Borovoye 32.42 321 *d*/P **P** **03 15 59.5 +0.3**
BRVK pmax pmax
comp=Z,23nm,1.2s,mb4.9
BRVK Borovoye 32.42 321 *e*P **P** **03 15 59.3 +0.1**
comp=Z,18nm,1.0s,mb4.8
BRVK Borovoye 32.42 321 P **P** **03 16 00.1 +0.9**
SNR=10
BRVK P 03 16 00.1
SNR=10
BRVK Borovoye 32.42 321 P **P** **03 16 00.1 +0.9**
SNR=10
BRVK P 03 16 00.1
SNR=10
BRVK P 03 16 00.1
SNR=10
BRVK P 03 16 00.1
SNR=10
YSS Yuzh-Sakhalins 32.64 52 *e*P pP 03 16 11.6 +7.1
YSS MLR MLR
comp=Z,400nm,16.0s,MS4.2
YSS MLR MLR
comp=N,300nm,14.0s
YAK Yakutsk 34.09 21 *e*P **P** **03 16 12.9 -0.8**
YAK pmax pmax
comp=E,14nm,1.4s
YAK pmax pmax
comp=N,8.0nm,0.9s
YAK pmax pmax
comp=Z,32nm,0.9s,mb5.2
YAK MLR MLR
comp=N,194nm,10.0s,MS4.3
YAK MLR MLR
comp=Z,334nm,10.0s,MS4.4
YAK MLR MLR
comp=E,188nm,10.0s,MS4.3
YAK Yakutsk 34.09 21 *e*P **P** **03 16 13.6 -0.1**
comp=E,34nm,0.7s,mb5.4
ABKAR Akbulak array 37.39 311 *e*P **P** **03 16 42.6 +0.5**
comp=E,14nm,0.9s,mb4.8
ABKT Ailbek 38.23 292 P **P** **03 16 51.1 +1.7**
comp=E,251nm,1.0s,mb5.9,SNR=9.9
AKTK Aktyubinsk 38.83 312 P **P** **03 16 54.1 -0.1**
AKTO Aktyubinsk 38.83 312 P **P** **03 16 54.1 -0.1**
comp=E,12nm,1.0s,mb4.6,baz=93,slow=8.5,SNR=24
AKTO Aktyubinsk 38.83 312 P **P** **03 16 54.2 -0.1**
AKTO pmax pmax
comp=Z,12nm,1.0s,mb4.6
SVE Sverdlovsk 39.02 323 ⇑*e*P **P** **03 16 56.8 +1.0**
SVE pmax pmax
comp=Z,64nm,1.2s,mb5.2
SVE MLR MLR
comp=Z,624nm,17.0s,MS4.5
KAPI Kappang 39.55 156 P **P** **03 16 58.8 -1.8**
comp=Z,24nm,1.0s,mb4.9,baz=265,slow=7.3,SNR=5.4
ARU Arti 39.98 322 P **P** **03 17 04.2 +0.5**

comp=Z,434nm,0.8s,mb6.2,SNR=12
ARU Arti 39.98 322 *d iP* **P 03 17 04.2 +0.5**
ARU *e* 03 18 33.4
ARU S **S 03 23 07.6 -1.2**
ARU SS SS 03 25 59.2 -6.2
ARU pmax pmax
comp=Z,84nm,1.0s,mb5.4
ARU MLR MLR
comp=Z,401nm,15.0s,MS4.4
ARU Arti 39.98 322 *eP* **P 03 17 04.3 +0.6**
comp=Z,58nm,0.8s,mb5.4
TIXI Tiksi 41.77 11 *d iP* **P 03 17 17.2 -1.1**
TIXI pmax pmax
comp=Z,36nm,2.1s,mb4.6
TIXI MLR MLR
comp=Z,903nm,16.0s,MS4.7
TIXI Tiksi 41.77 11 *eP* **P 03 17 17.5 -0.8**
comp=Z,65nm,1.9s,mb4.9
SOKR Solikamsk 41.88 326 *c iP* **P 03 17 20.3 +0.9**
SOKR pmax pmax
comp=Z,60nm,1.1s,mb5.1
PETK Petropavlovsk- 43.23 45 P **P 03 17 29.9 -0.6**
comp=Z,7.3nm,0.7s,mb4.5,baz=232,slow=4.6,SNR=8.9
PETK Petropavlovsk- 43.23 45 P **P 03 17 29.9 -0.6**
PETK pmax pmax
comp=Z,7.0nm,0.7s,mb4.5
GNI Garni 48.26 297 *cP* **P 03 18 12.0 +1.6**
GNI pmax pmax
comp=Z,30nm,1.5s
ZEI Tsey 48.47 301 *eP* **P 03 18 09.9 -2.1**
ZEI pmax pmax
comp=Z,23nm,1.4s,mb5.0
MIB Mutribah 48.69 283 *eP* **P 03 18 12.5 -1.3**
MIB AMb AMB 03 18 18.3
comp=Z,53nm,1.0s,mb5.5
RDF Al-Radifah 48.79 282 *eP* **P 03 18 13.9 -0.7**
RDF AMb AMB 03 18 19.1
comp=Z,61nm,0.9s,mb5.6
NAY Al-Naaiem 48.94 283 *eP* **P 03 18 14.8 -1.0**
NAY AMb AMB 03 18 20.2
comp=Z,53nm,1.0s,mb5.5
VRHR Novokhopersk 49.24 312 *eP* **P 03 18 17.6 -0.2**
VRHR pmax pmax
comp=Z,40nm,0.7s,mb5.6
VRHR pmax pmax
comp=N,30nm,0.9s
VRHR pmax pmax
comp=E,20nm,0.5s
BILL Bilibino 50.16 26 *deP* **P 03 18 23.6 -0.9**
BILL *i* 03 19 43.5
BILL pmax pmax
comp=Z,20nm,1.2s,mb5.0
BILL MLR MLR
comp=Z,400nm,15.0s,MS4.5
BILL Bilibino 50.16 26 *eP* **P 03 18 24.3 -0.3**
comp=Z,38nm,1.4s,mb5.2
VSR Storozhevoye 50.78 312 *eP* **P 03 18 28.8 -0.6**
VSR pmax pmax
comp=Z,30nm,0.7s,mb5.3
VSR pmax pmax
comp=N,8.0nm,0.6s
VSR pmax pmax
comp=E,50nm,1.0s
MOS Moscow 51.46 318 *eP* **P 03 18 33.6 -0.9**
MOS pmax pmax
comp=Z,85nm,0.8s,mb5.7
OBN Obninsk 52.09 318 *eP* **P 03 18 37.7 -1.5**
OBN pmax pmax
comp=Z,38nm,1.2s,mb5.2
OBN MLR MLR
comp=Z,400nm,16.0s,MS4.5
OBN Obninsk 52.09 318 *eP* **P 03 18 39.2 +0.1**
comp=Z,44nm,1.2s,mb5.3
FX1 Attu Island--F 52.56 45 P **P 03 18 42.2 -0.5**
comp=Z,9.2nm,0.7s,mb4.8,baz=160,slow=16,SNR=6.2
FX1 Attu Island--F 52.56 45 P **P 03 18 42.3 -0.4**
FX1 pmax pmax
comp=Z,9.0nm,0.7s
ANN Anapa 52.76 304 *eP* **P 03 18 43.3 -1.0**
ANN *e**PP pP 03 18 55.4 +7.7
ANN *e*S **S 03 26 07.0 -5.4**
ANN pmax pmax
comp=Z,72nm,1.6s,mb5.3
ANN MLR MLR
comp=Z,201nm,16.0s,MS4.3
LVZ Lovozero 53.23 334 *cP* **P 03 18 43.8 -3.6**
LVZ pmax pmax
comp=Z,61nm,1.7s,mb5.2
APA Apatity 53.68 333⇑ *eP* **P 03 18 50.0 -0.7**
APA pmax pmax
comp=Z,51nm,1.5s,mb5.2
APA MLR MLR
comp=Z,800nm,15.0s,MS4.9
FITZ Fitzroy Crossi 53.76 155 *eP* **P 03 18 50.2 -1.7**
comp=Z,20nm,0.8s,mb5.1
JOF Joensuu 54.48 327 *eP* **P 03 18 55.8 -0.9**
JOF pmax pmax
comp=Z,22nm,1.0s,mb5.0
JOF Joensuu 54.48 327 *ep* **P 03 18 55.8 -0.9**
comp=Z,22nm,1.0s,mb5.0
JOF Joensuu 54.48 327 *ep* **P 03 18 55.8 -0.9**
comp=Z,22nm,1.0s,mb5.0
MBWA Marble Bar 54.83 163 *eP* **P 03 19 00.6 +1.0**
comp=Z,16nm,0.9s,mb5.0
KEV Kevo 56.07 336 *eP* **P 03 19 06.5 -1.5**
KEV pmax pmax
comp=Z,29nm,1.0s,mb5.3
KEV Kevo 56.07 336 *ep* **P 03 19 06.5 -1.5**
comp=Z,29nm,1.0s,mb5.3
KEV Kevo 56.07 336 *ep* **P 03 19 06.5 -1.5**
comp=Z,29nm,1.0s,mb5.3
ARCES ARCESS Array B 56.60 336 P **P 03 19 11.7 -0.2**
comp=Z,5.0nm,0.6s,mb4.7,baz=79,slow=8.0,SNR=35
ARCES ARCESS Array B 56.60 336 P **P 03 19 11.7 -0.1**
ARCES pmax pmax
comp=Z,5.0nm,0.6s
BR131 Keskin Array S 56.66 299 *eP* **P 03 19 12.2 -0.5**
comp=Z,4.2nm,0.9s,mb4.5
BRTR Keskin Array B 56.66 299 P **P 03 19 12.6 -0.2**
comp=Z,4.3nm,0.8s,mb4.5,baz=102,slow=7.2,SNR=22
BRTR Keskin Array B 56.66 299 P **P 03 19 12.6 -0.2**
BRTR pmax pmax
comp=Z,4.0nm,0.8s
KAF Kangasniemi 56.86 327 *eP* **P 03 19 12.8 -0.9**
KAF pmax pmax
comp=Z,11nm,0.8s,mb4.9
KAF Kangasniemi 56.86 327 *ep* **P 03 19 12.8 -0.9**
comp=Z,11nm,0.8s,mb4.9,baz=82,slow=6.8
KAF Kangasniemi 56.86 327 *ep* **P 03 19 12.8 -0.9**
comp=Z,11nm,0.8s,mb4.9,baz=82,slow=6.8
FINES FINESS Array B 57.05 326 P **P 03 19 14.9 -0.1**
comp=Z,17nm,0.8s,mb5.1,baz=94,slow=8.4,SNR=26
FINES FINESS Array B 57.05 326 P **P 03 19 15.0 -0.1**
FINES pmax pmax
comp=Z,17nm,0.8s
AKASG Malin Array Be 57.07 313 P **P 03 19 14.8 -0.7**
comp=Z,13nm,0.7s,mb5.1,baz=70,slow=6.5,SNR=34
AKASG Malin Array Be 57.07 313 P **P 03 19 14.8 -0.7**
AKASG pmax pmax
comp=Z,13nm,0.7s
AKASG Malin Array Be 57.07 313 P **P 03 19 14.8 -0.7**
AKBB Malin Array Si 57.07 313 *eP* **P 03 19 14.7 -0.8**
VSU Vasula 57.13 322 *deP* **P 03 19 14.8 -0.9**
VSU pmax pmax
comp=Z,52nm,1.2s,mb5.4
MMAI Mount Meron Ar 57.35 291 P **P 03 19 17.5 -0.2**
comp=Z,0.8nm,0.3s,mb4.2,baz=77,slow=12,SNR=6.5
IDID Didziasalis 57.65 319 *eP* **P 03 19 19.3 -0.2**
IDID AMB AMB 03 19 21.2
comp=Z,10nm,1.0s,mb4.8
NACGM Naroch 57.71 318 *e* **P 03 19 18.0 -1.9**
IZAR Zarasai 57.85 319 *eP* **P 03 19 20.7 -0.1**
IZAR AMB AMB 03 19 21.5
comp=Z,8.3nm,1.0s,mb4.7
IIGN Ignalina 57.94 319 *eP* **P 03 19 21.3 -0.2**
IIGN AMB AMB 03 19 23.3
comp=Z,11nm,1.1s,mb4.8
ISAL Salakas 57.95 319 *eP* **P 03 19 21.5 -0.1**
ISAL AMB AMB 03 19 22.3
comp=Z,8.4nm,0.9s,mb4.8
KIS Kishinev 58.17 309 *eP* **P 03 19 25.0 +1.8**
KIS *e* 03 19 35.0
KIS MLR MLR
comp=Z,400nm,14.0s,MS4.7
KIS MLR MLR
comp=Z,500nm,16.0s

CSS Prodhromos 58.33 294 *eP* **P 03 19 23.6 -1.0**
comp=Z,17nm,0.8s,mb5.1
SPITS Spitsbergen Ar 58.55 346 P **P 03 19 25.1 -0.4**
comp=Z,12nm,1.1s,mb4.8,baz=102,slow=7.8,SNR=6.2
SPITS Spitsbergen Ar 58.55 346 P **P 03 19 25.1 -0.4**
SPITS pmax pmax
comp=Z,12nm,1.1s
COEN Coen 58.78 135 *eP* **P 03 19 27.6 -0.2**
COEN Coen 58.78 135 *eP* **P 03 19 28.2 +0.4**
comp=Z,120nm,1.0s,mb5.9
WRAB Tennant Creek 59.00 147 P **P 03 19 29.0 -0.3**
comp=Z,353nm,0.6s,SNR=19
WRAB Tennant Creek 59.00 147 *eP* **P 03 19 29.6 +0.3**
WRAB pmax pmax
comp=Z,39nm,0.7s,mb5.5
WRAB Tennant Creek 59.00 147 *eP* **P 03 19 29.6 +0.3**
comp=Z,39nm,0.7s,mb5.5
TIRR Tirgusor 59.10 306 ⇓*P* **P 03 19 29.1 -0.7**
TIRR Tirgusor 59.10 306 ⇓*iP* **P 03 19 29.1 -0.7**
VRI Vrincioaia 59.86 308 ⇑*P* **P 03 19 35.7 +0.7**
VRI Vrincioaia 59.86 308 *P* **P 03 19 35.8 +0.8**
VRI Vrincioaia 59.86 308 ⇑*iP* **P 03 19 35.7 +0.7**
PLOR Plostina 59.91 308 *P* **P 03 19 36.2 +0.8**
PLOR Plostina 59.91 308 ⇓*iP* **P 03 19 36.4 +1.0**
SUW Suwalki 59.95 318 *eP* **P 03 19 35.0 -0.5**
SUW Suwalki 59.95 318 *eP* **P 03 19 35.0 -0.5**
comp=Z,37nm,0.9s,mb5.4
BURAR Bucovina Array 60.37 310 ⇑*P* **P 03 19 38.6 +0.1**
BURAR Bucovina Array 60.37 310 *P* **P 03 19 39.0 +0.5**
BURAR Bucovina Array 60.37 310 ⇑*iP* **P 03 19 38.6 +0.1**
BUR08 Bucovina Ar. S 60.37 310 *eP* **P 03 19 38.6 +0.2**
MLR Muntele Rosu 60.49 308 P **P 03 19 39.5 +0.1**
comp=Z,9.7nm,1.0s,mb4.8,baz=4.6,slow=8.6,SNR=9.8
MLR Muntele Rosu 60.49 308 P **P 03 19 39.5 +0.2**
MLR pmax pmax
comp=Z,10.0nm,1.0s
LVV L'vov 60.52 313 *i P* **P 03 19 39.1 -0.3**
LVV MLR MLR
comp=N,200nm,17.0s,MS4.5
LVV MLR MLR
comp=E,220nm,17.0s,MS4.5
LVV MLR MLR
comp=Z,230nm,17.0s,MS4.4
KWP Kalwaria Pacla 61.40 313 *eP* **P 03 19 45.9 +0.5**
KWP *e* pP 03 19 49.9 +1.1
KWP Kalwaria Pacla 61.40 313 ⇓*P* **P 03 19 45.7 +0.3**
KWP Kalwaria Pacla 61.40 313 *eP* **P 03 19 45.9 +0.5**
comp=Z,76nm,1.0s,mb5.8
KWP Kalwaria Pacla 61.40 313 ⇓*iP* **P 03 19 45.7 +0.3**
BMR Baia Mare 61.47 311 P **P 03 19 47.1 +1.2**
KOLS Kolonicke sedl 61.87 312 *eP* **P 03 19 48.8 +0.2**
KOLS pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
KOLS Kolonicke sedl 61.87 312 *eP* **P 03 19 48.8 +0.2**
comp=Z,6.4nm,1.0s,mb4.7
KOLS Kolonicke sedl 61.87 312 *eP* **P 03 19 48.8 +0.2**
TRPA Tarpa 61.95 311 ⇓*iP* **P 03 19 50.0 +0.9**
UZH Uzhgorod 61.95 312 ⇓*iP* **P 03 19 48.4 -0.8**
UZH *e* 03 22 08.0
UZH *e*S **S 03 28 09.3 -3.9**
UZH MLR MLR
comp=E,300nm,16.0s
UZH MLR MLR
comp=Z,200nm,16.0s,MS4.4
ASAR Alice Springs 62.06 149 P **P 03 19 50.4 +0.3**
comp=Z,8.3nm,0.8s,mb4.9,baz=334,slow=6.9,SNR=23
ASAR Alice Springs 62.06 149 P **P 03 19 50.4 +0.3**
ASAR pmax pmax
comp=Z,8.0nm,0.8s
DRGR 62.24 310 ⇑*P* **P 03 19 51.9 +0.7**
DRGR 62.24 310 ⇑*iP* **P 03 19 51.9 +0.7**
STHS Stebnicka Huta 62.37 313 *eP* **P 03 19 52.2 +0.2**
STHS pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
STHS Stebnicka Huta 62.37 313 *eP* **P 03 19 52.2 +0.2**
comp=Z,7.4nm,0.9s,mb4.8
STHS Stebnicka Huta 62.37 313 *eP* **P 03 19 52.2 +0.2**
NIE Niedzica 62.95 313 *eP* **P 03 19 56.4 +0.6**
OJC Ojcow 63.01 314 *eP* **P 03 19 55.3 -0.9**
KECS Kecovo 63.14 312 *eP* **P 03 19 57.0 -0.1**
KECS pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
KECS Kecovo 63.14 312 *eP* **P 03 19 57.0 -0.1**
comp=Z,3.3nm,0.8s,mb4.5
KECS Kecovo 63.14 312 *eP* **P 03 19 57.0 -0.1**
HFS Hagfors 63.25 326 P **P 03 19 57.0 -0.7**
comp=Z,9.7nm,0.8s,mb5.0,baz=85,slow=6.7,SNR=16
HFS PP PP 03 22 15.8 -0.5
comp=Z,1.8nm,0.7s,baz=44,slow=6.8,SNR=3.6
HFS Hagfors 63.25 326 P **P 03 19 57.0 -0.6**
HFS 03 22 15.8
HFS pmax pmax
comp=Z,10.0nm,0.8s
HFS pmax pmax
comp=Z,2.0nm,0.7s
GKP Gorka Klasztor 63.56 318 *eP* **P 03 19 60.0 +0.2**
PSZ Piszkesteto 63.70 312 ⇓*P* **P 03 20 00.7 -0.1**
PSZ Piszkesteto 63.70 312 *eP* **P 03 20 01.1 +0.3**
comp=Z,8.5nm,1.1s,mb4.7
PSZ Piszkesteto 63.70 312 ⇓*eP* **P 03 20 00.7 -0.1**
PSZ Piszkesteto 63.70 312 ⇓*iP* **P 03 20 00.7 -0.1**
NB2 NORSAR Subarra 64.12 327 P **P 03 20 02.1 -1.2**
comp=Z,19nm,1.0s,mb5.1,baz=72,slow=6.9
NB2 NORSAR Subarra 64.12 327 P **P 03 20 02.1 -1.2**
NB2 NORSAR Subarra 64.12 327 P **P 03 20 02.1 -1.2**
NOA NORSAR Array B 64.12 327 P **P 03 20 02.3 -1.1**
comp=Z,8.9nm,0.8s,mb4.8,baz=71,slow=6.7,SNR=20
NOA NORSAR Array B 64.12 327 P **P 03 20 02.3 -1.0**
NOA pmax pmax
comp=Z,9.0nm,0.8s
OKC Ostrava-Krasne 64.14 314 *eP* **P 03 20 03.6 -0.1**
OKC MLR MLR
comp=Z,600nm,17.3s,MS4.8
OKC Ostrava-Krasne 64.14 314 *eP* **P 03 20 03.6 -0.1**
OKC *epP* pP 03 20 07.6 +0.4
OKC AMS AMS 03 49 10.0
comp=Z,600nm,17.3s
VYHS Vyhne 64.17 313 *eP* **P 03 20 04.3 +0.4**
VYHS pmax pmax
comp=Z,15nm,1.3s,mb4.9
VYHS Vyhne 64.17 313 *eP* **P 03 20 04.3 +0.4**
comp=Z,15nm,1.3s,mb4.8
VYHS Vyhne 64.17 313 *eP* **P 03 20 04.3 +0.4**
BUD Budapest 64.40 311 ⇓*eP* **P 03 20 05.2 -0.2**
KLBR Kellerberrin 64.48 168 *eP* **P 03 20 06.2 +0.2**
comp=Z,14nm,0.9s,mb5.0
MORC Moravsky Berou 64.53 314 *eP* **P 03 20 06.2 -0.1**
comp=Z,6.6nm,0.8s,mb4.7
MORC Moravsky Berou 64.53 314 ⇑*iP* **P 03 20 06.2 -0.1**
IDI Anoyia 64.69 297 P **P 03 20 05.1 -2.5**
comp=Z,12nm,0.9s,mb4.9,baz=32,slow=9.2,SNR=4.3
KSP Ksiaz 64.92 316 *eP* **P 03 20 09.2 +0.4**
KSP *e* pP 03 20 13.1 +0.9
KSP Ksiaz 64.92 316 *eP* **P 03 20 08.6 -0.2**
KSP MLR MLR
comp=Z,1μm,18.5s,MS5.2
KSP Ksiaz 64.92 316 *eP* **P 03 20 08.6 -0.2**
KSP LR LR
comp=Z,1μm,18.5s,MS5.2
DPC Dobruska-Polom 65.07 315 *eP* **P 03 20 09.8 0.0**
DPC MLR MLR
comp=Z,700nm,18.6s,MS4.9
DPC Dobruska-Polom 65.07 315 *eP* **P 03 20 09.8 0.0**
DPC *epP* pP 03 20 14.2 +1.0
DPC AMS AMS 03 49 40.0
comp=Z,700nm,18.6s
PKSM Moragy 65.09 310 ⇑*P* **P 03 20 09.6 -0.4**
PKSM Moragy 65.09 310 ⇑*iP* **P 03 20 09.6 -0.4**
UPC Upice 65.20 315 *eP* **P 03 20 10.4 -0.2**
UPC Upice 65.20 315 *eP* **P 03 20 10.4 -0.2**
UPC *epP* pP 03 20 14.8 +0.8
VRAC Vranov 65.28 314 P **P 03 20 11.0 -0.1**
comp=Z,10nm,0.8s,mb4.9,baz=44,slow=5.4,SNR=12
VRAC Vranov 65.28 314 P **P 03 20 11.0 -0.1**
VRAC pmax pmax
comp=Z,10.0nm,0.8s
VRAC Vranov 65.28 314 ⇓*P* **P 03 20 11.9 +0.8**
VRAC Vranov 65.28 314 ⇓*iP* **P 03 20 11.9 +0.8**
ZST Bratislava 65.36 313 *eP* **P 03 20 11.9 +0.2**
ZST pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
ZST Bratislava 65.36 313 *eP* **P 03 20 11.9 +0.2**
comp=Z,5.3nm,0.8s,mb4.6
ZST *e* pP 03 20 16.6 +1.5

ZST Bratislava 65.36 313 *eP* **P 03 20 11.9 +0.2**
ZST *epP* pP 03 20 16.6 +1.5
CTA Charters Tower 65.39 137 *eP* **P 03 20 11.9 -0.3**
comp=Z,3.9nm,0.9s,mb4.4
CTA Charters Tower 65.39 137 P **P 03 20 11.5 -0.7**
comp=Z,3.9nm,0.7s,mb4.6,baz=306,slow=10.0,SNR=4.3
CTA Charters Tower 65.39 137 P **P 03 20 11.5 -0.7**
CTA pmax pmax
comp=Z,4.0nm,0.7s
SOP Sopron 65.89 312 ⇓*eP* **P 03 20 15.2 +0.1**
TREC Trest 65.96 314 *eP* **P 03 20 15.7 +0.2**
TREC MLR MLR
comp=Z,600nm,16.6s,MS4.9
TREC Trest 65.96 314 *eP* **P 03 20 15.7 +0.2**
TREC *epP* pP 03 20 19.7 +0.7
TREC AMS AMS 03 50 10.0
comp=Z,600nm,16.6s
PVCC Panska Ves 66.05 316 *eP* **P 03 20 16.1 0.0**
PVCC MLR MLR
comp=Z,500nm,13.8s,MS4.9
PVCC Panska Ves 66.05 316 *eP* **P 03 20 16.1 0.0**
PVCC AMS AMS 03 50 10.0
comp=Z,500nm,13.8s
TTA Tatalina 66.05 30 *eP* **P 03 20 15.8 -0.1**
CONA Conrad Observa 66.23 313 ⇓*iP* **P 03 20 17.6 +0.3**
comp=Z,17nm,1.4s,mb4.9,SNR=8.0
CSNA Conrad Observa 66.23 313 ⇓*iP* **P 03 20 17.7 +0.4**
comp=Z,13nm,1.1s,mb4.9
PRU Pruhonice 66.27 315 *eP* **P 03 20 18.1 +0.6**
PRU MLR MLR
comp=Z,700nm,18.5s,MS4.9
PRU Pruhonice 66.27 315 *eP* **P 03 20 18.1 +0.6**
PRU *epP* pP 03 20 21.8 +0.8
PRU AMS AMS 03 50 20.0
comp=Z,700nm,18.5s
BRG Berggiesshubel 66.30 316 *eP* **P 03 20 17.5 -0.2**
comp=Z,13nm,1.0s,mb4.9
BRG Berggiesshubel 66.30 316 *eP* **P 03 20 17.8 +0.2**
comp=Z,13nm,1.0s,mb4.9
BRG *e* pP 03 20 21.4 +0.3
comp=Z,11nm,0.9s
BRG S S 03 29 56.0 +49
BRG
comp=N,254nm,17.0s
BRG
comp=E,306nm,15.5s
BRG
comp=Z,469nm,15.4s
FORT Forrest 66.30 158 *eP* **P 03 20 18.9 +1.1**
comp=Z,22nm,0.7s,mb5.3
FORT Forrest 66.30 158 *eP* **P 03 20 19.0 +1.2**
COLD Coldfoot 66.46 24 *eP* **P 03 20 18.2 -0.3**
comp=Z,12nm,1.0s,mb4.9
CLL Collm 66.68 317 *eP* **P 03 20 19.8 -0.3**
comp=Z,14nm,1.2s,mb4.9
CLL Collm 66.68 317 ⇓*iP* **P 03 20 19.5 -0.6**
CLL *e* 03 20 32.0
CLL pmax pmax
comp=Z,14nm,1.2s,mb4.9
CLL MLR MLR
comp=Z,300nm,17.9s,MS4.5
CLL Collm 66.68 317 ⇓*iP* **P 03 20 19.5 -0.6**
comp=Z,14nm,1.2s,mb4.9
CLL *e* pP 03 20 23.0 -0.6
CLL *e* 03 20 32.0
CLL LR LR
comp=Z,300nm,17.9s,MS4.5
CLL Collm 66.68 317 ⇓*iP* **P 03 20 19.5 -0.6**
comp=Z,14nm,1.2s,mb4.9
CLL *epP* pP 03 20 23.0 -0.6
CLL *e* 03 20 32.0
CLL *e*SS SS 03 33 44.0 +16
CLL Lm 03 50 00.0
comp=N,200nm,19.5s
CLL Lm 03 50 00.0
comp=E,300nm,18.3s
ARSA Arzberg 66.70 312 ⇓*iP* **P 03 20 20.0 -0.3**
comp=E,8.4nm,0.9s,mb4.8
GOLS Golise 67.11 311 *i P* **P 03 20 22.9 0.0**
CHUM Lake Minchumin 67.16 28 *eP* **P 03 20 23.6 +0.7**
comp=E,8.1nm,0.9s,mb4.8
BSEG Bad Segeberg 67.17 320 *eP* **P 03 20 23.5 +0.3**
comp=Z,27nm,1.0s,mb5.2
KHC Kasperske Hory 67.18 315 *eP* **P 03 20 23.3 0.0**
KHC MLR MLR
comp=Z,700nm,17.3s,MS4.9
KHC Kasperske Hory 67.18 315 *eP* **P 03 20 23.3 0.0**
comp=Z,4.5nm,0.8s,mb4.5
KHC Kasperske Hory 67.18 315 *eP* **P 03 20 23.3 0.0**
KHC *epP* pP 03 20 26.5 -0.3
KHC AMS AMS 03 50 50.0
comp=Z,700nm,17.3s
PERS Pernice 67.19 312 *eP* **P 03 20 23.2 -0.3**
GEC2 GERESS Array S 67.21 314 *eP* **P 03 20 23.5 -0.1**
comp=Z,16nm,1.3s,mb4.9
GEC2 GERESS Array S 67.21 314 *eP* **P 03 20 23.7 +0.1**
comp=Z,2μm,1.0s
GERES GERESS Array B 67.21 314 P **P 03 20 23.5 -0.1**
comp=Z,4.6nm,0.7s,mb4.6,baz=75,slow=5.7,SNR=26
GERES GERESS Array B 67.21 314 P **P 03 20 23.5 -0.1**
GERES pmax pmax
comp=Z,5.0nm,0.7s
SOKA Soboth 67.23 312 ⇓*iP* **P 03 20 23.5 -0.2**
comp=Z,16nm,0.9s,mb5.1
MOA Molln 67.25 313 ⇓*iP* **P 03 20 23.9 +0.1**
comp=Z,30nm,1.9s,mb5.0,SNR=10
TANN Tannenbergstha 67.34 316 *eP* **P 03 20 24.2 -0.1**
comp=Z,13nm,1.2s,mb4.8
NKC Novy Kostel 67.42 316 *eP* **P 03 20 24.8 -0.1**
NKC MLR MLR
comp=Z,500nm,15.5s,MS4.8
NKC Novy Kostel 67.42 316 *eP* **P 03 20 24.8 -0.1**
NKC AMS AMS 03 51 10.0
comp=Z,500nm,15.5s
BOJS Bojanci 67.55 310 *eP* **P 03 20 25.8 +0.1**
BPAW Bear Paw Mtn. 67.59 27 *eP* **P 03 20 25.3 -0.4**
comp=Z,3μm,0.9s
WET Wettzell 67.59 315 *eP* **P 03 20 26.1 +0.1**
comp=Z,7.0nm,1.0s,mb4.7
OBKA Obir 67.60 312 ⇓*iP* **P 03 20 25.8 -0.3**
comp=Z,11nm,1.2s,mb4.8
PPLA Purkeypile 67.65 29 *eP* **P 03 20 26.4 +0.3**
comp=Z,12nm,0.8s,mb5.0
VISS Visnje 67.70 311 *eP* **P 03 20 26.4 -0.2**
MOX Moxa 67.75 317 *eP* **P 03 20 27.0 +0.1**
comp=Z,18nm,1.5s,mb4.9
MOX
comp=Z,300nm,20.0s
MOX Moxa 67.75 317 *eP* **P 03 20 26.7 -0.2**
comp=Z,16nm,1.4s,mb4.9
MOX Moxa 67.75 317 *eP* **P 03 20 27.0 +0.1**
MOX pmax pmax
comp=Z,18nm,1.5s,mb4.9
MOX MLR MLR
comp=Z,300nm,20.0s,MS4.5
ROTZ Rotzenmuhle 67.75 316 *eP* **P 03 20 27.2 +0.3**
comp=Z,26nm,1.3s,mb5.1
LJU Ljubljana 67.80 311 *eP* **P 03 20 26.9 -0.4**
NRDL Niedersach Rie 67.86 319 *eP* **P 03 20 27.9 +0.3**
comp=Z,20nm,1.1s,mb5.1
KTH Kantishna Hill 67.86 28 *eP* **P 03 20 27.7 +0.3**
comp=Z,4μm,1.2s
CLZ Clausthal 67.98 318 *eP* **P 03 20 28.4 +0.1**
comp=Z,26nm,1.0s,mb5.2
KBA Koelnbreinsper 68.13 313 ⇓*iP* **P 03 20 29.2 -0.2**
comp=Z,14nm,0.8s,mb5.0,SNR=8.3
RJOB Jochberg 68.21 313 *eP* **P 03 20 30.2 +0.3**
comp=Z,17nm,1.5s,mb4.8
CADS Cadrg 68.23 312 *eP* **P 03 20 29.2 -0.8**
GRF Grafenberg Arr 68.36 316 *eP* **P 03 20 31.1 +0.3**
comp=Z,24nm,1.0s,mb5.2
GRF *epP* pP 03 20 35.0 +0.8
GRF *e*L 03 51 55.2
comp=Z,669nm,19.0s
GRF Grafenberg Arr 68.36 316 *eP* **P 03 20 31.1 +0.3**
GRF pmax pmax
comp=Z,24nm,1.0s,mb5.2
GRF MLR MLR
comp=Z,700nm,19.0s,MS4.9
PTCC Patocco-Chiusa 68.40 312 P **P 03 20 30.1 -1.0**
comp=Z,7.4nm,1.0s,mb4.7
COLA College 68.42 26 *eP* **P 03 20 31.0 +0.2**
COLA pmax pmax
comp=Z,16nm,0.9s,mb5.0
COLA College 68.42 26 *eP* **P 03 20 31.0 +0.2**
comp=Z,16nm,0.9s,mb5.1

RSO	Redoubt South	68.51	31	eP		P	03 20 32.7	+1.2
UBBA	Unterbreizbach	68.61	317	eP		P	03 20 31.9	-0.4
	comp=Z,10.0nm,1.4s,mb4.5							
ABTA	Abfaltersbach	68.79	313	⇓iP		P	03 20 32.2	-1.3
	comp=Z,8.3nm,1.0s,mb4.6							
FUR	Furstenfeldbru	68.96	314	eP		P	03 20 35.0	+0.4
	comp=Z,48nm,1.1s,mb5.3							
TIP	Timpagrande	69.10	304	eP		P	03 20 35.1	-0.5
	comp=Z,18nm,1.2s,mb4.9							
WTTA	Wattenberg	69.12	313	⇓iP		P	03 20 35.3	-0.3
	comp=Z,20nm,0.8s,mb5.1,SNR=8.8							
WATA	Walderalm	69.13	313	⇓iP		P	03 20 35.2	-0.4
	comp=Z,12nm,0.8s,mb4.8							
IBBN	Ibbenburen	69.25	319	eP		P	03 20 36.3	0.0
	comp=Z,14nm,0.8s,mb4.9							
FG5	Orsara di Pugl	69.25	306	P		P	03 20 37.2	+0.7
FG5				pmax		pmax		
	comp=Z,23nm,0.9s,mb5.1							
FG5	Orsara di Pugl	69.25	306	P		P	03 20 37.2	+0.7
	comp=Z,23nm,0.9s,mb5.1							
MOTA	Moosalm	69.42	314	⇓iP		P	03 20 36.9	-0.5
	comp=Z,11nm,1.0s,mb4.8,SNR=6.6							
GRI	Girifalco	69.48	304	P		P	03 20 37.9	-0.1
GRI				pmax		pmax		
	comp=Z,11nm,0.8s,mb4.8							
GRI	Girifalco	69.48	304	P		P	03 20 37.9	-0.1
	comp=Z,11nm,0.8s,mb4.8							
PMR	Palmer	69.53	29	eP		P	03 20 37.2	-0.6
RETA	Reutte	69.56	314	⇓iP		P	03 20 37.9	-0.4
	comp=Z,9.9nm,1.1s,mb4.7							
WIT	Witteveen	69.62	320	eP		P	03 20 39.6	+1.0
	comp=Z,106nm,0.9s,mb5.8							
TNS	Taunus Mts	69.76	317	eP		P	03 20 39.7	+0.2
	comp=Z,8.0nm,0.6s,mb4.8							
FETA	Feichten	69.78	313	⇓iP		P	03 20 39.3	-0.4
	comp=Z,19nm,1.1s,mb5.0,SNR=12							
TOD	Tromm	69.83	316	eP		P	03 20 39.3	-0.6
BUG	Bochum--Univer	69.90	319	eP		P	03 20 40.6	+0.3
	comp=Z,17nm,1.2s,mb4.8							
WTSB	Winterswijk	69.93	319	eP		P	03 20 40.8	+0.3
	comp=Z,24nm,0.9s,mb5.1							
STU	Stuttgart	69.96	315	eP		P	03 20 40.8	+0.1
	comp=Z,10.0nm,0.7s,mb4.8							
SNTG	Esanatoglia	69.98	309	P		P	03 20 41.4	+0.4
	comp=Z,11nm,0.8s,mb4.8							
NRCA	Norcia	70.05	309	P		P	03 20 41.6	+0.2
	comp=Z,15nm,0.8s,mb5.0							
SDI	San Donato	70.06	307	P		P	03 20 41.2	-0.3
SDI				pmax		pmax		
	comp=Z,13nm,0.9s,mb4.9							
SDI	San Donato	70.06	307	P		P	03 20 41.2	-0.3
	comp=Z,13nm,0.9s,mb4.8							
CEL	Celeste	70.10	303	eP		P	03 20 41.5	-0.3
	comp=Z,26nm,1.0s,mb5.1							
DAVA	Damuels	70.19	314	⇓iP		P	03 20 41.6	-0.5
	comp=Z,5.8nm,0.6s,mb4.7							
MURB	Monte Urbino	70.26	309	P		P	03 20 44.0	+1.4
	comp=Z,36nm,0.9s,mb5.3							
ASS	Assisi	70.26	309	P		P	03 20 43.9	+1.2
ASS				pmax		pmax		
	comp=Z,16nm,0.8s,mb5.0							
ASS	Assisi	70.26	309	P		P	03 20 43.9	+1.2
	comp=Z,16nm,0.8s,mb5.0							
BADI	Badiali	70.33	309	P		P	03 20 44.4	+1.3
	comp=Z,16nm,0.9s,mb5.0							
DAVOX	Davos/Dischmat	70.41	313	P		P	03 20 43.4	-0.1
	comp=Z,17nm,0.8s,mb5.0,baz=74,slow=4.3,SNR=23							
SPAK	Spaichingen-Ko	70.50	315	eP		P	03 20 42.8	-1.2
BFO	Black Forest	70.67	315	eP		P	03 20 44.8	-0.3
	comp=Z,18nm,1.4s,mb4.8							
BFO	Black Forest	70.67	315	eP		P	03 20 44.8	-0.3
BFO				pmax		pmax		
	comp=Z,16nm,1.2s,mb4.8							
BFO	Black Forest	70.67	315	eP		P	03 20 44.8	-0.2
	comp=Z,16nm,1.2s,mb4.8							
RUP	Ruppelstein	70.80	317	eP		P	03 20 45.6	-0.2
EGAK	Eagle	70.89	24	eP		P	03 20 45.2	-0.9
	comp=Z,5.8nm,0.9s,mb4.5							
HGN	Heimansgroeve	70.96	318	eP		P	03 20 45.2	-1.6
	comp=Z,13nm,1.1s,mb4.8							
MEM	Membach	70.99	318	P		P	03 20 47.3	+0.3
	comp=Z,4.3nm,1.2s,mb4.2							
FELD	Feldberg im Sc	71.07	315	eP		P	03 20 47.0	-0.5
INK	Inuvik	71.15	19	eP		P	03 20 47.1	-0.5
INK				pmax		pmax		
	comp=Z,16nm,0.9s							
INK	Inuvik	71.15	19	eP		P	03 20 47.1	-0.6
	comp=Z,16nm,0.9s,mb5.0							
CDF	Champ du Feu	71.26	316	eP		P	03 20 48.0	-0.6
	comp=Z,30nm,0.9s,mb4.9							
CDF	Champ du Feu	71.26	316	eP		P	03 20 48.0	-0.6
CDF				pmax		pmax		
	comp=Z,15nm,0.9s,mb4.9							
CDF	Champ du Feu	71.26	316	eP		P	03 20 48.0	-0.6
	comp=Z,15nm,0.9s,mb4.9							
WLF	Walferdange	71.34	317	P		P	03 20 49.6	+0.5
	comp=Z,26nm,1.3s,mb5.0							
WLF	Walferdange	71.34	317	eP		P	03 20 49.5	+0.4
	comp=Z,38nm,1.0s,mb5.3							
WLF	Walferdange	71.34	317	eP		P	03 20 49.8	+0.7
ECH	Echery	71.42	316	eP		P	03 20 49.2	-0.4
ECH	Echery	71.42	316	eP		P	03 20 49.5	-0.1
ECH				pmax		pmax		
	comp=Z,6.0nm,0.9s,mb4.5							
ECH	Echery	71.42	316	eP		P	03 20 49.5	-0.1
	comp=Z,5.7nm,0.9s,mb4.5							
BCLA	Clavier	71.47	318	P		P	03 20 50.0	+0.1
	comp=Z,11nm,1.5s,mb4.6							
VAI	Varese	71.51	313	P		P	03 20 49.1	-1.1
VAI				pmax		pmax		
	comp=Z,16nm,0.8s,mb5.0							
VAI	Varese	71.51	313	P		P	03 20 49.1	-1.1
	comp=Z,16nm,0.8s,mb5.0							
KMBO	Kilima Mbogo	71.54	257	P		P	03 20 50.6	-0.2
	comp=Z,3.0nm,0.7s,mb4.3,baz=38,slow=16,SNR=5.5							
KMBO	Kilima Mbogo	71.54	257	P		P	03 20 50.7	-0.2
KMBO				pmax		pmax		
	comp=Z,3.0nm,0.7s							
KMBO	Kilima Mbogo	71.54	257	eP		P	03 20 53.5	+2.6
	comp=Z,17nm,1.4s,mb4.8							
BBS	Basel-Blauen	71.55	315	eP		P	03 20 50.2	-0.2
MOF	Molkenrain	71.60	315	eP		P	03 20 50.2	-0.5
BMRM	Bremner River	71.72	29	eP		P	03 20 51.4	+0.2
	comp=Z,12nm,0.8s,mb4.9							
DAWY	Dawson	71.93	25	eP		P	03 20 51.5	-0.8
SNF	Seneffe	72.00	319	P		P	03 20 52.8	-0.3
	comp=Z,5.9nm,1.1s,mb4.4							
DOU	Dourbes	72.03	318	P		P	03 20 53.3	0.0
	comp=Z,5.5nm,1.3s,mb4.3							
STKA	Stephens Creek	72.55	148	eP		P	03 20 55.7	-0.7
	comp=Z,5.0nm,0.7s,mb4.5							
STKA	Stephens Creek	72.55	148	P		P	03 20 56.0	-0.5
	comp=Z,6.0nm,0.7s,mb4.6,baz=348,slow=6.7,SNR=8.8							
SUMG	Summit	72.62	349	eP		P	03 20 56.1	-0.4
	comp=Z,11nm,0.9s,mb4.8							
SUMG	Summit	72.62	349	iP		P	03 20 56.2	-0.2
	comp=Z,8.1nm,1.0s,mb4.6							
LSD	Lago del Serru	72.72	313	P		P	03 20 58.0	+0.6
LSD				pmax		pmax		
	comp=Z,28nm,0.9s,mb5.2							
LSD	Lago del Serru	72.72	313	P		P	03 20 58.0	+0.6
	comp=Z,28nm,0.9s,mb5.2							
RES	Resolute Bay	72.78	5	P		P	03 20 55.7	-1.6
	comp=Z,3.9nm,0.9s,mb4.3,baz=336,slow=8.2,SNR=5.4							
RES	Resolute Bay	72.78	5	P		P	03 20 55.7	-1.7
RES				pmax		pmax		
	comp=Z,4.0nm,0.9s,mb4.3							
RES	Resolute Bay	72.78	5	P		P	03 20 55.7	-1.6
LPG	La Plagne	72.93	313	eP		P	03 20 59.0	+0.3
	comp=Z,49nm,0.6s,mb5.3							
LPG	La Plagne	72.93	313	eP		P	03 20 59.0	+0.3
LPG				pmax		pmax		
	comp=Z,25nm,0.6s,mb5.3							
LPG	La Plagne	72.93	313	eP		P	03 20 59.0	+0.3
	comp=Z,25nm,0.6s,mb5.3							
LPL	La Plagne	72.94	313	eP		P	03 20 58.9	+0.1
	comp=Z,44nm,0.7s,mb5.2							
LPL	La Plagne	72.94	313	eP		P	03 20 58.9	+0.1
LPL				pmax		pmax		
	comp=Z,22nm,0.7s,mb5.2							
LPL	La Plagne	72.94	313	eP		P	03 20 58.9	+0.1
	comp=Z,22nm,0.7s,mb5.2							
SAOF	Saorge	73.15	312	eP		P	03 21 00.1	+0.1
BNI	Bardonecchia	73.19	313	eP		P	03 21 00.3	0.0
BNI				pmax		pmax		
	comp=Z,7.0nm,0.7s,mb4.7							
BNI	Bardonecchia	73.19	313	eP		P	03 21 00.3	0.0
	comp=Z,6.9nm,0.7s,mb4.7							
AUTN	L'Aution	73.22	312	eP		P	03 21 00.8	+0.3
LUCF	Luceram	73.32	312	eP		P	03 21 01.0	-0.1
TOUF	Mont Tournerai	73.33	312	eP		P	03 21 01.3	+0.2
EKA	Eskdalemuir Ar	73.44	325	P		P	03 21 00.2	-1.3
	comp=Z,3.5nm,0.9s,mb4.3,baz=42,slow=6.8,SNR=8.5							
EKA	Eskdalemuir Ar	73.44	325	P		P	03 21 00.3	-1.2
EKA				pmax		pmax		
	comp=Z,4.0nm,0.9s							
MVIF	Mont Vial	73.44	312	eP		P	03 21 01.3	-0.5
ESK	Eskdalemuir	73.47	325	iP		P	03 21 02.7	+1.0
SMF	Signal de Mont	74.15	315	eP		P	03 21 05.0	-0.9
	comp=Z,38nm,0.9s,mb5.0							
SMF	Signal de Mont	74.15	315	eP		P	03 21 05.0	-0.9
SMF				pmax		pmax		
	comp=Z,19nm,0.9s,mb5.0							
SMF	Signal de Mont	74.15	315	eP		P	03 21 05.0	-0.9
	comp=Z,19nm,0.9s,mb5.0							
HYT	Haines Junctio	74.61	27	eP		P	03 21 10.9	+2.6
PLDF	La Plantade	74.62	315	eP		P	03 21 08.4	-0.2
AGO	Saint Agoulin	74.87	315	eP		P	03 21 10.2	+0.1
PYM	Petit Puy Mans	75.10	315	eP		P	03 21 11.2	-0.2
TCF	Toulx Ste Croi	75.30	316	eP		P	03 21 12.0	-0.5
	comp=Z,34nm,1.0s,mb4.9							
TCF	Toulx Ste Croi	75.30	316	eP		P	03 21 12.0	-0.5
TCF				pmax		pmax		
	comp=Z,17nm,1.0s,mb4.9							
TCF	Toulx Ste Croi	75.30	316	eP		P	03 21 12.0	-0.5
	comp=Z,17nm,1.0s,mb4.9							
KEST	Kesra	75.91	303	LR		LR	04 00 37.4	
	comp=Z,48nm,18.5s,MS3.8,baz=251,slow=40							
CAF	Calviac	76.09	314	eP		P	03 21 17.0	-0.1
	comp=Z,23nm,1.0s,mb4.8							
CAF	Calviac	76.09	314	eP		P	03 21 17.0	-0.1
CAF				pmax		pmax		
	comp=Z,11nm,1.0s,mb4.7							
CAF	Calviac	76.09	314	eP		P	03 21 17.0	-0.1
	comp=Z,11nm,1.0s,mb4.8							
SKAG	Skagway	76.33	27	eP		P	03 21 18.6	+0.5
YKA	Yellowknife Ar	80.69	17	P		P	03 21 41.6	-0.6
	comp=Z,5.5nm,0.7s,mb4.6,baz=324,slow=4.7,SNR=32							
YKA	Yellowknife Ar	80.69	17	P		P	03 21 41.6	-0.6
YKA				pmax		pmax		
	comp=Z,6.0nm,0.7s							
ESDC	Sonseca Array	82.72	312	P		P	03 21 53.1	-0.3
	comp=Z,1.8nm,0.7s,mb4.2,baz=65,slow=4.5,SNR=7.5							
PBRG	Braganca	83.15	315	eP		P	03 21 55.9	+0.4
	comp=Z,21nm,1.4s,mb5.0							
MVO	Moncorvo	83.71	315	eP		P	03 21 59.1	+0.7
	comp=Z,18nm,0.9s,mb5.2							
PCAB	Cabril	83.97	316	eP		P	03 22 00.6	+0.8
	comp=Z,29nm,1.3s,mb5.2							
PVRL	Vila Real	84.05	315	eP		P	03 22 01.2	+1.0
	comp=Z,18nm,1.5s,mb5.0							
MTE	Manteigas	84.49	315	eP		P	03 22 04.2	+1.8
	comp=Z,15nm,1.2s,mb5.0							
PMRV	Marv??o	84.99	314	eP		P	03 22 05.3	+0.3
	comp=Z,21nm,1.7s,mb5.0							
PESTR	Estremoz	85.45	314	eP		P	03 22 07.8	+0.5
	comp=Z,12nm,1.9s,mb4.7							
PBAR	Barrancos	85.53	313	eP		P	03 22 08.3	+0.6
	comp=Z,26nm,2.1s,mb5.1							
PBEJ	Beja	86.14	313	eP		P	03 22 11.4	+0.7
	comp=Z,20nm,1.8s,mb5.0							
LSZ	Lusaka	86.89	250	eP		P	03 22 13.7	-0.9
LSZ				pmax		pmax		
	comp=Z,31nm,1.6s,mb5.3							
LSZ	Lusaka	86.89	250	eP		P	03 22 13.7	-0.9
	comp=Z,31nm,1.6s,mb5.3							
FCC	Fort Churchill	88.22	10	eP		P	03 22 19.7	-0.7
	comp=Z,0.5nm,1.3s							
EDM	Edmonton	88.92	22	eP		P	03 22 23.8	0.0
FFC	Flin Flon	90.62	15	P		P	03 22 31.4	-0.3
	comp=Z,57nm,1.1s,mb5.8,SNR=6.4							
FFC	Flin Flon	90.62	15	iP		P	03 22 31.3	-0.4
FFC	Flin Flon	90.62	15	eP		P	03 22 31.1	-0.6
	comp=Z,8.7nm,0.9s,mb5.1							
TORD	Torodi Ar. Bea	93.76	288	P		P	03 22 45.6	-1.3
	comp=Z,0.8nm,0.8s,mb4.2,baz=45,slow=2.0,SNR=3.7							
TORD				LR		LR	04 13 59.0	
	comp=Z,50nm,20.6s,MS4.0,baz=345,slow=41							
TXAR	Lajitas Array	113.33	27	PP		PP	03 28 57.1	+0.1
	comp=Z,0.5nm,1.0s,baz=347,slow=3.7,SNR=3.8							
ROSC	El Rosal	143.31	358	PKP		PKPdf	03 29 02.6	-2.0
	comp=Z,3.7nm,0.6s,baz=155,slow=9.6,SNR=5.0							
ROSC	El Rosal	143.31	358	PKP		PKPdf	03 29 02.6	-2.0
ROSC				ePKPdf		PKPdf	03 29 05.6	+1.0
OTAV	Otavalo	147.78	6	ePKPbc		PKPbc	03 29 15.7	+0.7

*IDC **03** 03:42:07.0±1.2, 26°.67N×96°.85E, h0km, mb3.6/7, mb1 3.7/7, mb1mx3.5/26, mbtmp3.6/7, Error ellipse: s-maj=45.9km s-min=25.1km az=60.0*
*ISCJB **03** 03:42:10.0±1.0, 26°.7N±0°.1×96°.76E±0°.09, h33km, mb3.8/8, Error ellipse: s-maj=20.2km s-min=9.9km az=161.1*
*BJI **03** 03:42:11.0, 27°.03N×96°.78E, h15km, mB4.3/1, mb3.9/3, ML3.3/4*
*NEIC **03** 03:42:12.2±1.0, 26°.67N×96°.78E, h35km, mb4.0/2, Error ellipse: s-maj=20.8km s-min=13.7km az=172.0*
ISC 03 03:42:09.6±4.5, 26°.7N±0°.1×96°.85E±0°.10, h15km±27km, n15, σ0°93/16, mb3.8/8, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	Shillong	4.60	257	ePN	Pn	03 43 21.5	+2.9
SHL				eSN	Sn	03 44 11.5	-0.3
GUN	Gumba	9.83	280	eP	Pn	03 44 30.8	+0.4
	19nm,0.4s						
PKI	Pulchoki	10.22	277	eP	Pn	03 44 35.4	-0.4
	12nm,0.4s						
PKIN	Phulchoki	10.24	277	eP	Pn	03 44 35.3	-0.7
	37nm,0.6s						
KKN	Kakani	10.35	279	eP	Pn	03 44 37.1	-0.5
	14nm,0.3s						
DMN	Daman	10.49	278	eP	Pn	03 44 38.8	-0.8
	7.4nm,0.4s						
SONM	Songino Array	22.39	17	P	P	03 47 06.5	-0.7
	0.6nm,0.7s,mb3.1,baz=218,slow=11,SNR=3.6						
MKAR	Makanchi Array	23.13	334	P	P	03 47 15.2	+0.1
	2.4nm,0.8s,mb3.7,baz=128,slow=10.0,SNR=9.5						
KBL	Kabul	25.11	295	eP	P	03 47 36.5	+2.6
	3.5nm,0.5s,mb4.2						
KURK	Kurchatov	27.73	335	P	P	03 47 57.7	+0.4
	1.0nm,0.6s,mb3.6,baz=146,slow=10,SNR=3.7						
KURK	Kurchatov	27.73	335	eP	P	03 47 58.4	+1.1
	2.0nm,0.8s,mb3.8						
BRTR	Keskin Array B	53.45	301	P	P	03 51 29.1	0.0
	0.6nm,0.6s,mb3.7,baz=122,slow=9.3,SNR=4.4						
ASAR	Alice Springs	61.56	141	P	P	03 52 26.3	-0.1
	0.5nm,0.5s,mb3.9,baz=326,slow=7.1,SNR=5.3						
NOA	NORSAR Array B	64.94	328	P	P	03 52 48.5	+0.2
	0.5nm,0.6s,mb3.7,baz=81,slow=8.4,SNR=3.2						
TORD	Torodi Ar. Bea	88.69	284	P	P	03 55 02.1	-0.9
	0.7nm,0.9s,mb4.0,baz=57,slow=5.3,SNR=4.0						

*IDC **03** 04:01:30.8±1.8, 28°.04N×52°.94E, h0km, mb4.0/12, mb1 4.0/13, mb1mx3.8/28, mbtmp3.9/13, ML3.2/1, MS3.3/2, Ms1 3.3/2, ms1mx2.5/35, Error ellipse: s-maj=40.5km s-min=18.4km az=150.0*
*ISCJB **03** 04:01:32.1±1.0, 28°.16N±0°.05×52°.76E±0°.05, h5km±7km, mb3.9/14, MS3.2/2, Error ellipse: s-maj=8.6km s-min=6.7km az=145.8*
*CSEM **03** 04:01:33.4±0.3, 28°.16N×52°.80E, h2km, ML3.5, Error ellipse: s-maj=8.9km s-min=5.6km az=140.0*
*SGS **03** 04:01:35.6, 28°.25N×52°.72E, h11km*
*NEIC **03** 04:01:36.3, 28°.29N×52°.54E, h5km, mb3.7/2, MN3.5(TEH), After TEH.*
*TEH **03** 04:01:36.3, 28°.29N×52°.54E, h5km*
ISC 03 04:01:33.1±1.1, 28°.15N±0°.05×52°.79E±0°.05, h1km±7km, n72, σ1°12/72, mb3.9/14, MS3.2/2, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHIR	Ghir-Karzin	0.22	51	ePg	Pg	04 01 36.6	-0.8
GHIR				eSg	Sg	04 01 39.3	-1.0
IMOK	Mouk	0.90	356	Pg	Pg	04 01 49.9	-0.5
IMOK	Mouk	0.90	356	ePg	Pg	04 01 50.0	-0.4
IMOK				e		04 02 11.6	
	comp=Z,39μm,0.3s						
IMOK	Mouk	0.90	356	Pg	Pg	04 01 49.9	-0.5
ISRV	Sarvestan	1.27	13	Pg	Pg	04 01 57.9	+0.5
ISRV	Sarvestan	1.27	13	ePg	Pg	04 01 58.0	+0.6
ISRV				e		04 02 22.9	
	comp=Z,22μm,0.3s						
ISRV	Sarvestan	1.27	13	ePg	Pg	04 01 58.0	+0.6
IPAR	Pars	1.71	8	Pn	Pn	04 02 05.5	+1.5
IPAR	Pars	1.71	8	eSg	Sg	04 02 27.3	-0.7
IPAR				ePn	Pn	04 02 05.5	+1.5
IPAR				e		04 02 36.7	
	comp=Z,7μm,0.5s						
BNDS	Bandar-Abbas	3.09	103	ePn	Pn	04 02 24.1	+1.1
IMEH	Mehriz	3.60	26	Pn	Pn	04 02 32.5	+2.5
IMEH	Mehriz	3.60	26	Pn	Pn	04 02 32.5	+2.5
IMEH				e		04 03 46.3	
	comp=Z,745nm,0.4s						
IMEH	Mehriz	3.60	26	ePn	Pn	04 02 32.5	+2.5
ISAD	Sadrabad	3.83	11	Pn	Pn	04 02 34.1	+0.8
ISAD	Sadrabad	3.83	11	ePn	Pn	04 02 34.2	+0.9
ISAD				e		04 03 54.2	
	comp=Z,1μm,0.5s						
ISAD	Sadrabad	3.83	11	ePn	Pn	04 02 34.2	+0.9
KRBR	Kerman	3.93	61	ePn	Pn	04 02 34.3	-0.2
IBAF	Bafgh	4.20	34	Pn	Pn	04 02 38.9	+0.7
IBAF	Bafgh	4.20	34	e	Pg	04 02 52.8	-0.8
	comp=Z,385nm,0.2s						
IBAF	Bafgh	4.20	34	Pn	Pn	04 02 38.9	+0.7
IGAR	Gharneh	4.29	352	ePn	Pn	04 02 40.3	+0.7
IGAR				e		04 03 32.5	
	comp=Z,781nm,0.3s						
ICHK	Chekchek	4.32	19	Pn	Pn	04 02 41.6	+1.7
ICHK	Chekchek	4.32	19	ePn	Pn	04 02 41.6	+1.7
ICHK				e		04 02 47.9	
	comp=Z,685nm,0.2s						
ICHK	Chekchek	4.32	19	ePn	Pn	04 02 41.6	+1.7
BTHS		4.44	204	P	Pn	04 02 43.3	+1.7
BTHS		4.44	204	P	Pn	04 02 43.3	+1.7
RDF	Al-Radifah	4.68	281	eP	Pn	04 02 45.8	+0.9
RDF				AML	AML	04 03 41.6	
	comp=Z,29nm,0.4s						
RDF	Al-Radifah	4.68	281	eP	Pn	04 02 45.8	+1.0
IZEF	Zefreh	4.75	355	Pn	Pn	04 02 46.6	+0.7
IZEF	Zefreh	4.75	355	ePn	Pn	04 02 46.6	+0.7
IZEF				e		04 03 42.8	
	comp=Z,238nm,0.2s						
IZEF	Zefreh	4.75	355	ePn	Pn	04 02 46.6	+0.7
IPIR	Pirpir	4.81	341	Pn	Pn	04 02 46.7	0.0
IPIR	Pirpir	4.81	341	ePn	Pn	04 02 46.7	0.0
IPIR				e		04 03 46.5	
	comp=Z,389nm,0.2s						
IPIR	Pirpir	4.81	341	ePn	Pn	04 02 46.7	0.0
NAY	Al-Naaiem	5.00	284	eP	Pn	04 02 50.0	+0.8
NAY				AML	AML	04 03 60.0	
	comp=Z,18nm,0.7s						
NAY	Al-Naaiem	5.00	284	eP	Pn	04 02 50.0	+0.8
MIB	Mutribah	5.05	290	eP	Pn	04 02 50.8	+0.8
MIB				AML	AML	04 03 51.2	
	comp=Z,43nm,0.6s						
MIB	Mutribah	5.05	290	eP	Pn	04 02 50.8	+0.8
ASYS		7.51	267	P	Pn	04 03 23.3	-0.5
LYLS		7.89	221	S	Sn	04 04 56.0	-2.8
LYLS		7.89	221	P	Pn	04 03 29.3	+0.4
LYLS		7.89	221	P	Pn	04 03 29.3	+0.3
EIL	Elat	15.70	280	Pn	Pn	04 05 19.5	+4.0
	comp=Z,0.3nm,0.3s,baz=193,slow=14,SNR=4.3						
BRTR	Keskin Array B	19.60	311	P	Pn	04 06 03.6	-0.3
	comp=Z,0.1nm,0.3s,baz=134,slow=12,SNR=5.2						
BRTR	Keskin Array B	19.60	311	P	Pn	04 06 03.7	-0.3
ABKAR	Akbulak array	21.79	13	eP	P	04 06 25.8	-0.5
	comp=Z,1.8nm,0.8s,mb3.5						
ABKAR	Akbulak array	21.79	13	eP	P	04 06 25.8	-0.5
	comp=Z,1.8nm,0.8s,mb3.5						
AML	Almayashu	21.99	45	eP	P	04 06 29.2	+0.6
	comp=Z,2.5nm,0.6s,mb3.8						
AML	Almayashu	21.99	45	eP	P	04 06 29.2	+0.7
	comp=Z,2.5nm,0.6s,mb3.8						
AKTK	Aktyubinsk	22.61	9	P	P	04 06 35.7	+0.6
AKTK	Aktyubinsk	22.61	9	P	P	04 06 35.7	+0.6
AKTO	Aktyubinsk	22.61	9	P	P	04 06 35.7	+0.6
	comp=Z,2.3nm,0.7s,mb3.8,baz=171,slow=13,SNR=6.9						
AAK	Ala-Archa	22.76	45	LR	LR	04 16 15.6	
	comp=Z,26nm,21.5s,MS2.6,baz=28,slow=39						
IDI	Anoyia	24.73	294	P	P	04 06 56.6	+0.6
	comp=Z,7.9nm,0.7s,mb4.5,baz=82,slow=16,SNR=5.7						
IDI	Anoyia	24.73	294	P	P	04 06 56.6	+0.6
BVAR	Borovoye Array	28.07	23	P	P	04 07 25.7	-0.2
	comp=Z,0.5nm,0.6s,mb3.5,baz=306,slow=5.2,SNR=3.3						
BVAR	Borovoye Array	28.07	23	P	P	04 07 25.7	-0.2
AKASG	Malin Array Be	28.73	328	P	P	04 07 29.3	-2.6
	comp=Z,0.5nm,0.5s,mb3.6,baz=113,slow=8.3,SNR=3.7

JHLN				⇓S		Sn	04 10 48.0	+1.2
JHLN	Al Jahlan	2.61	252	⇑iP		Pn	04 10 15.8	+0.8
JHLN				⇓iS		Sn	04 10 48.1	+1.3
ATAB	Bozova	2.72	291	eP		Pb	04 10 21.4	-0.2
ATAB				i S		Sg	04 10 59.1	-1.2
ATAB	Bozova	2.72	291	eP		Pb	04 10 21.4	-0.2
ATAB				i S		Sg	04 10 59.1	-1.2
ELZG	Elazig	2.80	315	eP		Pg	04 10 23.7	-2.7
ELZG				i S		Sg	04 11 00.5	-2.1
ELZG	Elazig	2.80	315	eP		Pg	04 10 23.7	-2.7
ELZG				i S		Sg	04 11 00.5	-2.2
PTK	Pertek	2.89	326	ePN		Pn	04 10 21.5	+2.7
PTK	Pertek	2.89	326	ePn		Pn	04 10 21.5	+2.7
SLMH	Al Salmeh	2.89	265	⇓P		Pn	04 10 19.0	+0.1
SLMH				⇑S		Sn	04 10 54.0	+0.3
SLMH	Al Salmeh	2.89	265	⇓iP		Pn	04 10 19.3	+0.5
SLMH				⇑iS		Sn	04 10 54.3	+0.6
MYA	Malataya	3.03	307	ePN		Pn	04 10 24.3	+3.5
MYA	Malataya	3.03	307	ePn		Pn	04 10 24.3	+3.5
AGRB	Hanur-Agry	3.27	21	ePN		Pn	04 10 25.7	+1.6
AGRB	Hanur-Agry	3.27	21	ePn		Pn	04 10 25.7	+1.6
AKCD	Akcadag	3.34	303	eP		Pg	04 10 35.1	-1.7
AKCD				i S		Sg	04 11 18.1	-2.0
ERZM	Erzurum	3.38	358	i P		Pb	04 10 34.5	+1.8
EZM	Erzurum	3.38	358	ePN		Pn	04 10 28.2	+2.7
EZM	Erzurum	3.38	358	ePn		Pn	04 10 28.2	+2.7
GAZ	Gaziantep	3.49	282	ePN		Pn	04 10 30.7	+3.6
GAZ	Gaziantep	3.49	282	ePn		Pn	04 10 30.7	+3.6
EZC	Erzincan	3.63	333	ePN		Pn	04 10 32.6	+3.5
DARE	Darende-Malaty	3.79	311	ePN		Pn	04 10 35.3	+4.1
DARE	Darende-Malaty	3.79	311	ePn		Pn	04 10 35.3	+4.0
KMRS	Kahramanmaras	3.80	286	ePN		Pn	04 10 34.9	+3.5
KMRS	Kahramanmaras	3.80	286	ePn		Pn	04 10 34.9	+3.5
BHD	Baghdad	4.03	143	ePn		Pn	04 10 33.0	-1.5
BHD				i Sn		Sn	04 11 20.0	-1.7
BHD	Baghdad	4.03	143	ePn		Pn	04 10 33.0	-1.5
BHD				i Sn		Sn	04 11 20.0	-1.7
BTCH	Batrach	4.09	265	⇑P		Pn	04 10 35.0	-0.4
BTCH	Batrach	4.09	265	⇑iP		Pn	04 10 35.3	-0.1
SARI	SarD1z-Kayseri	4.37	301	ePN		Pn	04 10 44.5	+5.3
KOZT	Kozan	4.63	284	ePN		Pn	04 10 46.9	+4.1
KOZT	Kozan	4.63	284	ePn		Pn	04 10 46.9	+4.1
ZALF	Zalf	4.96	225	⇓P		Pn	04 10 47.0	-0.3
ZALF				⇑S		Sn	04 11 46.0	+1.2
ZALF	Zalf	4.96	225	⇓iP		Pn	04 10 47.3	0.0
ZALF				⇑iS		Sn	04 11 46.7	+1.9
SALA	Sala	5.46	227	⇓P		Pn	04 10 54.0	-0.2
SALA	Sala	5.46	227	⇓iP		Pn	04 10 54.2	0.0

*BJI **03** 04:15:36.6, 52°.00N×169°.70W, h26km, mB4.9/18, mb4.9/24, Ms4.7/17, Ms7 4.3/17*
*IDC **03** 04:15:39.6±6.1, 52°.08N×169°.68W, h21km±39km, mb4.2/27, mb1 4.4/29, mb1mx4.3/34, mbtmp4.2/29, ML3.8/1, MS3.7/5, Ms1 3.7/5, ms1mx3.2/34, Error ellipse: s-maj=19.2km s-min=9.9km az=173.0*
*NEIC **03** 04:15:40.6±1.2, 52°.03N×169°.65W, h26km±8km, mb4.7/67, ML3.9(AEIC), Error ellipse: s-maj=7.4km s-min=3.4km az=175.0*
*ISCJB **03** 04:15:40.1±0.3, 52°.03N±0°.05×169°.68W±0°.04, h33km, mb4.6/117, MS4.1/11, Error ellipse: s-maj=7.0km s-min=3.1km az=162.7*
*MOS **03** 04:15:45.4±0.9, 52°.94N×170°.33W, h33km, mb4.9/47, Error ellipse: s-maj=14.9km s-min=6.1km az=96.9*
*SZGRF **03** 04:15:47.3, 52°.73N×169°.42W, h33km, mb4.7, Fox Islands, Aleutian Islands, United States*
ISC 03 04:15:42.2±0.3, 52°.08N±0°.05×169°.66W±0°.04, h35km, (h35km±1.9km:pP-P), n278, s092/286, mb4.6/117, MS4.1/11, 17C-3D, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NIKO	Nikolski	1.02	29	P		Pn		04 15 58.4	-1.6
NIKO				S		Sn		04 16 11.7	-1.5
OKFG	Magazine Ridge	1.71	38	P		Pn		04 16 08.7	-0.7
OKFG				S		Sn		04 16 31.4	+1.5
UNV	Unalaska Valle	2.61	46	P		Pn		04 16 20.7	-1.1
UNV				S		Sn		04 16 53.0	+0.9
AKLV	Akutan Long Va	3.06	45	P		Pn		04 16 28.4	+0.5
AKGG	Akutan Green G	3.07	45	P		Pn		04 16 28.9	+0.9
AKUT	Akutan	3.12	47	eP		Pn		04 16 31.1	+2.3
ADK	Adak	4.34	270	P		Pn		04 16 44.8	-0.8
ADK				S		Sn		04 17 35.3	+0.3
ADK	Adak	4.34	270	P		Pn		04 16 44.9	-0.7
ADK				S		Sn		04 17 35.3	+0.4
FALS	False Pass	4.66	51	ePn		Pn		04 16 50.0	+0.1
SDPT	Sand Point	6.36	55	P		Pn		04 17 13.7	+0.4
AMKA	Amchitka	6.89	269	eP		Pn		04 17 21.4	+0.8
CHGN	Chignik	7.83	53	ePn		Pn		04 17 32.5	-1.0
FX1	Attu Island--F	10.51	281	Pn		Pn		04 18 10.3	+0.2
	2.5nm,0.3s,baz=186,slow=19,SNR=21								
FX1	Attu Island--F	10.51	281	P		Pn		04 18 09.6	-0.5
OHAK	Old Harbor	10.79	55	ePn		Pn		04 18 11.3	-2.6
KDAK	Kodiak Island	11.35	53	i P		Pn		04 18 20.9	-0.7
RSO	Redoubt South	12.57	41	ePn		Pn		04 18 38.1	-0.1
TTA	Tatalina	13.08	28	eP		Pn		04 18 50.6	+5.4
TNA	Tin City	13.55	3	ePn		Pn		04 18 51.2	-0.4
SEW	Seward	13.80	47	ePn		Pn		04 18 53.1	-2.0
RC01	Rabbit Creek A	14.15	43	ePn		Pn		04 18 57.4	-2.5
PPLA	Purkeypile	14.29	34	ePn		Pn		04 19 04.3	+2.7
	9.5nm,0.7s								
CHUM	Lake Minchumin	14.92	31	ePn		Pn		04 19 11.0	+0.8
	7.8nm,0.4s								
KTH	Kantishna Hill	15.15	33	ePn		Pn		04 19 13.9	+0.7
	11nm,0.9s								
BPAW	Bear Paw Mtn.	15.49	32	ePg		Pn		04 19 18.7	+1.1
	34nm,1.0s								
COLD	Coldfoot	17.95	25	ePn		Pn		04 19 48.7	+0.1
	7.2nm,0.9s								
EGAK	Eagle	19.38	38	eP		Pn		04 20 03.3	-2.6
	6.7nm,0.6s								
PEA0B	Petropavlovsk-	19.77	286	eP		Pn		04 20 08.6	-2.0
PETK	Petropavlovsk-	19.77	286	P		Pn		04 20 08.8	-1.8
	9.1nm,0.3s,baz=86,slow=13,SNR=197								
PETK	Petropavlovsk-	19.77	286	P		Pn		04 20 08.8	-1.8
DAWY	Dawson	19.77	41	eP		Pn		04 20 07.2	-3.3
BILL	Bilibino	19.78	333	eP		Pn		04 20 07.9	-2.7
BILL					pmax	pmax			
	comp=Z,17nm,1.0s								
BILL					MLR	MLR			
	comp=Z,200nm,17.0s								
BILL	Bilibino	19.78	333	eP		Pn		04 20 09.8	-0.8
	comp=Z,18nm,1.1s								
SKAG	Skagway	20.49	55	eP		P		04 20 15.3	-1.3
	comp=Z,20nm,0.9s								
DLBC	Dease Lake	23.19	58	P		P		04 20 46.6	+1.1
	comp=Z,4.4nm,1.1s,mb3.8,baz=286,slow=10,SNR=2.7								
INK	Inuvik	23.69	33	P		P		04 20 48.1	-2.1
	comp=Z,4.7nm,0.5s,mb4.2,baz=253,slow=6.9,SNR=37								
INK	Inuvik	23.69	33	eP		P		04 20 47.8	-2.5
INK					pmax	pmax			
	comp=Z,8.0nm,0.9s								
INK	Inuvik	23.69	33	eP		P		04 20 47.8	-2.5
	comp=Z,8.3nm,0.9s,mb4.2								
YKA	Yellowknife Ar	30.57	48	P		P		04 21 51.6	-0.4
	comp=Z,2.1nm,0.6s,mb4.1,baz=274,slow=10.0,SNR=23								
TIXI	Tiksi	32.89	329	eP		P		04 22 11.7	-0.6
TIXI					pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.3								
TIXI	Tiksi	32.89	329	eP		P		04 22 11.7	-0.7
	comp=Z,2.7nm,0.7s,mb4.3								
YAK	Yakutsk	33.23	311	eP		P		04 22 12.6	-2.8
YAK					pmax	pmax			
	comp=Z,10.0nm,0.8s,mb4.8								
EDM	Edmonton	33.43	65	eP		P		04 22 17.4	+0.2
RES	Resolute Bay	36.71	25	P		P		04 22 43.4	-1.8
	comp=Z,0.5nm,0.4s,mb3.7,baz=244,slow=14,SNR=5.9								
RES	Resolute Bay	36.71	25	eP		P		04 22 43.3	-1.9
RES					pmax	pmax			
	comp=Z,3.0nm,1.2s,mb4.0								
RES	Resolute Bay	36.71	25	eP		P		04 22 43.3	-1.9
	comp=Z,3.0nm,1.2s,mb4.0								
MCMT	McKenzie Canyo	37.51	78	eP		P		04 22 52.5	+0.2
	comp=Z,1.1nm,0.6s,mb3.8								
EGMT	Eagleton	37.73	72	eP		P		04 22 53.7	-0.5
	comp=Z,9.0nm,0.8s,mb4.5								
NVAR	Mina Array Bea	37.84	90	P		P		04 22 56.0	+0.8
	comp=Z,0.4nm,0.7s,baz=292,slow=7.8,SNR=3.4								
FFC	Flin Flon	39.03	58	i P		P		04 23 05.1	+0.1
FFC	Flin Flon	39.03	58	eP		P		04 23 04.6	-0.3
	comp=Z,30nm,2.3s,mb4.6								
MJAR	Matsushiro Arr	39.51	268	P		P		04 23 08.2	-0.9
	comp=Z,1.5nm,0.7s,mb3.8,baz=48,slow=7.8,SNR=4.0								
BW06	Boulder Array	40.64	79	eP		P		04 23 18.8	+0.3
	comp=Z,3.8nm,1.0s,mb4.0								
PDAR	Pinedale Array	40.64	79	P		P		04 23 18.1	-0.5
	comp=Z,2.0nm,0.8s,mb3.8,baz=310,slow=5.6,SNR=14								
FCC	Fort Churchill	41.27	50	eP		P		04 23 23.4	-0.1
	comp=Z,0.3nm,0.8s								
SRU	San Rafael	42.21	84	eP		P		04 23 32.5	+1.0
SRU					pmax	pmax			
	comp=Z,4.0nm,1.0s,mb4.0								
SRU	San Rafael	42.21	84	eP		P		04 23 32.5	+1.1
	comp=Z,4.4nm,1.0s,mb4.0								
CN2	Changchun	42.92	286	eP		P		04 23 32.6	-4.5
CN2				eS		S		04 29 59.3	-0.1
CN2					pmax	pmax			
	comp=Z,10.0nm,0.4s,mb4.9								
CN2					pmax	pmax			
	comp=Z,200nm,4.0s								
CN2					LR	LR			
	comp=N,170nm,8.0s								
CN2					LR	LR			
	comp=E,120nm,8.0s								
CN2					LR	LR			
	comp=Z,100nm,6.0s								
PV10	Paradox Valley	43.58	83	eP		P		04 23 42.6	+0.1
PV04	Paradox Valley	43.65	83	eP		P		04 23 42.7	-0.4
WUAZ	Wupatki	43.97	88	eP		P		04 23 46.2	+0.5
	comp=Z,2.5nm,0.8s,mb4.0								
PV01	Paradox Valley	44.02	83	eP		P		04 23 45.4	-0.7
ULM	Lac du Bonnet	44.45	62	P		P		04 23 48.5	-0.8
	comp=Z,2.7nm,0.5s,mb4.2,baz=337,slow=5.4,SNR=3.4								
ULM					LR	LR		04 43 42.3	
	comp=Z,146nm,18.8s,MS3.9,baz=260,slow=38								
KSRS	Korea Array	45.26	277	P		P		04 23 56.0	+0.1
	comp=Z,8.7nm,0.9s,mb4.6,baz=56,slow=7.6,SNR=17								
AGMN	Agassiz Nation	45.52	64	eP		P		04 23 56.8	-1.1
	comp=Z,7.6nm,1.0s,mb4.6								
TUC	Tucson	46.48	91	eP		P		04 24 05.4	-0.2
TUC					pmax	pmax			
	comp=Z,3.0nm,0.9s,mb4.2								
TUC	Tucson	46.48	91	eP		P		04 24 05.4	-0.2
	comp=Z,2.7nm,0.9s,mb4.2								
ANMO	Albuquerque	47.37	85	⇑eP		P		04 24 12.6	0.0
ANMO					pmax	pmax			
	comp=Z,1.0nm,1.2s								
ANMO	Albuquerque	47.37	85	eP		P		04 24 12.2	-0.4
	comp=Z,1.2nm,1.4s,mb3.6								
ECSD	EROS Data Cent	47.74	70	eP		P		04 24 14.4	-1.0
	comp=Z,7.3nm,1.4s,mb4.5								
EYMN	Ely	48.12	62	eP		P		04 24 17.2	-1.0
	comp=Z,5.6nm,0.8s,mb4.7								
DAG	Danmarks Havn	50.11	8	⇑iP		P		04 24 32.5	-0.5
DAG					pmax	pmax			
	comp=Z,10.0nm,0.6s,mb5.0								
MNTX	Cornudas Mount	50.23	88	eP		P		04 24 34.5	-0.1
	comp=Z,4.1nm,0.9s,mb4.5								
TLY	Talaya	50.37	306	eP		P		04 24 35.1	-0.2
TLY				e		pP		04 24 46.9	+1.1
TLY					pmax	pmax			
	comp=Z,11nm,1.4s,mb4.7								
TLY					MLR	MLR			
	comp=Z,216nm,18.0s,MS4.2								
TLY	Talaya	50.37	306	eP		P		04 24 34.6	-0.7
	comp=Z,5.7nm,0.8s,mb4.7								
BJI	Beijing	50.69	287	P		P		04 24 37.5	-0.4
BJI				S		S		04 31 49.8	-0.7
BJI					pmax	pmax			
	comp=Z,13nm,0.8s,mb4.9								
BJI					pmax	pmax			
	comp=Z,100nm,3.8s								
BJI					LR	LR			
	comp=N,330nm,13.5s,MS4.6								
BJI					LR	LR			
	comp=E,240nm,12.8s,MS4.6								
BJI					LR	LR			
	comp=Z,110nm,19.3s								
ULN	Ulaanbaatar	50.93	301	eP		P		04 24 39.3	-0.3
ULN					pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.4								
ULN	Ulaanbaatar	50.93	301	eP		P		04 24 39.3	-0.2
	comp=Z,5.0nm,0.9s,mb4.4								
SUMG	Summit	51.11	17	eP		P		04 24 40.2	-0.5
SUMG					pmax	pmax			
	comp=Z,21nm,0.7s								
SUMG	Summit	51.11	17	eP		P		04 24 40.2	-0.5
	comp=Z,20nm,0.7s,mb5.2								
SONM	Songino Array	51.29	301	P		P		04 24 41.5	-0.9
	comp=Z,2.4nm,0.6s,mb4.3,baz=59,slow=6.6,SNR=21								
ZAK	Zakamensk	51.34	305	eP		P		04 24 41.2	-1.4
ZAK					pmax	pmax			
	comp=Z,4.0nm,1.2s,mb4.2								
WMOK	Wichita Mounta	52.21	80	eP		P		04 24 48.4	-1.0
WMOK					pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.3								
WMOK	Wichita Mounta	52.21	80	eP		P		04 24 48.4	-0.9
	comp=Z,3.0nm,0.8s,mb4.3								
SFJD	Kangerlussuaq	52.72	26	i P		P		04 24 52.7	+0.1
SFJD					pmax	pmax			
	comp=Z,7.0nm,0.8s,mb4.6								
SFJD	Kangerlussuaq	52.72	26	i P		P		04 24 52.7	+0.1
	comp=Z,6.7nm,0.8s,mb4.6								
HHC	Hu-ho-hao-te	52.86	291	eP		P		04 24 54.9	+0.8
HHC					pP	pP		04 25 05.0	+0.4
HHC					sP	sP		04 25 08.8	+0.1
HHC					PcP	PcP		04 26 04.2	+1.3
HHC					PP	PP		04 26 55.7	+2.3
HHC					ScP	ScP		04 29 58.0	+0.7
HHC					PcS	PcS		04 30 01.4	-0.1
HHC					S	S		04 32 19.9	-0.3
HHC					ScS	ScS		04 34 38.7	-2.0
HHC					SS	SS		04 35 57.2	-1.5
HHC					pmax	pmax			
	comp=Z,18nm,0.9s,mb5.0								
HHC					pmax	pmax			
	comp=Z,76nm,5.1s								
HHC					LR	LR			
	comp=N,200nm,16.7s,MS4.5								
HHC					LR	LR			
	comp=E,350nm,19.0s,MS4.5								
HHC					LR	LR			
	comp=Z,120nm,19.0s,MS4.0								
TXAR	Lajitas Array	52.94	88	P		P		04 24 54.0	-0.8
	comp=Z,1.8nm,0.7s,mb4.1,baz=297,slow=5.7,SNR=26								
NJ2	Nanjing	54.41	278	eP		P		04 25 08.7	+3.1
NJ2					pmax	pmax			
	comp=Z,10.0nm,0.6s,mb4.9								
SCO	Scoresbysund	55.55	13	i P		P		04 25 12.4	-0.8
SCO					pmax	pmax			
	comp=Z,7.0nm,0.8s,mb4.7								
SCO	Scoresbysund	55.55	13	i P		P		04 25 12.4	-0.8
	comp=Z,6.8nm,0.8s,mb4.7								
SCHQ	Schefferville	55.77	43	P		P		04 25 14.7	-0.4
	comp=Z,3.7nm,0.7s,mb4.5,baz=319,slow=8.5,SNR=6.2								
SCHQ					LR	LR		04 52 27.5	
	comp=Z,113nm,18.0s,MS4.0,baz=19,slow=40								
ZALV	Zalesovo Beam	57.52	318	P		P		04 25 27.4	-0.1
	comp=Z,1.1nm,0.3s,mb4.3,baz=27,slow=10,SNR=3.4								
ZALV					PcP	PcP		04 26 20.6	0.0
	comp=Z,2.2nm,0.5s,baz=35,slow=6.2,SNR=4.6								
ZALV	Zalesovo Beam	57.52	318	P		P		04 25 27.4	-0.1
ZALV				PcP		PcP		04 26 20.6	0.0
ARCES	ARCESS Array B	58.19	354	P		P		04 25 31.1	-0.9
	comp=Z,7.5nm,1.0s,mb4.7,baz=11,slow=6.8,SNR=13								
WHN	Wuhan	58.21	280	P		P		04 25 31.4	-1.3
XAN	Xi'an	59.01	287	P		P		04 25 37.8	-0.4
XAN					pmax	pmax			
	comp=Z,3.0nm,1.0s,mb4.3								
XAN					pmax	pmax			
	comp=Z,20nm,4.7s								
APA	Apatity	59.42	350	⇓eP		P		04 25 35.0	-5.5
APA					MLR	MLR			
	comp=Z,200nm,15.0s,MS4.4								
SSPA	Standing Stone	60.27	61	eP		P		04 25 45.8	-1.0
	comp=Z,35nm,2.0s,mb5.0								
GTA	Gaotai	60.45	297	eP		P		04 25 47.4	-0.6
GTA					pP	pP		04 25 57.7	-1.0
GTA					sP	sP		04 26 01.4	-1.4
GTA					pmax	pmax			
	comp=Z,5.0nm,1.0s,mb4.5								
LZH	Lanzhou	60.53	292	eP		P		04 25 48.7	+0.1
LZH					pP	pP		04 25 58.8	-0.5
LZH					sP	sP		04 26 02.7	-0.7
LZH					PP	PP		04 28 03.9	+2.0
LZH					pmax	pmax			
	comp=Z,21nm,1.5s,mb5.0								
LZH					pmax	pmax			
	comp=Z,150nm,6.3s								
LZH					LR	LR			
	comp=N,240nm,15.8s								
LZH					LR	LR			
	comp=Z,380nm,19.2s,MS4.5								
KURK	Kurchatov	62.47	318	P		P		04 26 01.4	-0.1
	comp=Z,5.6nm,0.7s,mb4.8,baz=43,slow=7.3,SNR=28								
KURK					PcP	PcP		04 26 41.4	+0.9
	comp=Z,0.7nm,0.3s,baz=43,slow=6.7,SNR=4.9								
KURK	Kurchatov	62.47	318	eP		P		04 26 00.6	-0.9
KURK					pmax	pmax			
	comp=Z,7.0nm,0.6s,mb5.0								
KURK	Kurchatov	62.47	318	eP		P		04 26 00.6	-0.9
	comp=Z,6.6nm,0.6s,mb4.9								
WMQ	Urumqi	63.57	308	eP		P		04 26 10.0	+1.1
BVAR	Borovoye Array	63.84	324	P		P		04 26 10.2	-0.2
	comp=Z,16nm,0.6s,mb5.2,baz=53,slow=6.8,SNR=64								
BVAR					PcP	PcP		04 26 45.3	-0.7
	comp=Z,2.6nm,0.6s,baz=74,slow=5.3,SNR=3.7								
BRVK	Borovoye	63.85	324	ceP		P		04 26 10.0	-0.5
BRVK					pmax	pmax			
	comp=Z,18nm,1.0s,mb5.1								
BRVK	Borovoye	63.85	324	eP		P		04 26 10.4	-0.1
	comp=Z,12nm,0.7s,mb5.0								
MKAR	Makanchi Array	63.87	313	P		P		04 26 09.7	-1.1
	comp=Z,0.9nm,0.5s,mb4.0,baz=52,slow=8.0,SNR=14								
MKAR					PcP	PcP		04 26 45.9	-0.4
	comp=Z,1.1nm,0.7s,baz=61,slow=6.2,SNR=4.3								
MKAR	Makanchi Array	63.87	313	ceP		P		04 26 09.6	-1.2
MKAR					pmax	pmax			
	comp=Z,1.0nm,0.5s								
JOF	Joensuu	64.16	350	ep		P		04 26 11.6	-0.9
	comp=Z,8.5nm,0.6s,mb5.0								
JOF	Joensuu	64.16	350	ep		P		04 26 11.6	-0.9
	comp=Z,8.5nm,0.6s,mb5.0								
ARU	Arti	64.80	333	d iP		P		04 26 16.1	-0.6
ARU				e				04 28 34.6	
ARU					S	S		04 34 55.3	+0.7
ARU					SS	SS		04 39 01.1	-4.0
ARU					pmax	pmax			
	comp=Z,16nm,1.2s,mb4.9								
ARU	Arti	64.80	333	eP		P		04 26 16.3	-0.4
	comp=Z,16nm,1.2s,mb4.9								
KAF	Kangasniemi	65.45	352	eP		P		04 26 19.2	-1.7
KAF					pmax	pmax			
	comp=Z,12nm,0.6s,mb5.1								
KAF	Kangasniemi	65.45	352	ep		P		04 26 19.2	-1.7
	comp=Z,12nm,0.6s,mb5.1								
KAF	Kangasniemi	65.45	352	ep		P		04 26 19.2	-1.7
	comp=Z,12nm,0.6s,mb5.1								
FINES	FINESS Array B	66.13	352	P		P		04 26 24.6	-0.6
	comp=Z,7.5nm,0.7s,mb4.9,baz=20,slow=8.5,SNR=19								
FINES					LR	LR		04 55 19.9	
	comp=Z,47nm,18.2s,MS3.7,baz=291,slow=36								
NB2	NORSAR Subarra	67.23	360	P		P		04 26 31.7	-0.6
	comp=Z,6.3nm,0.9s,mb4.7,baz=359,slow=6.2								
NOA	NORSAR Array B	67.23	360	P		P		04 26 32.0	-0.2
	comp=Z,3.7nm,0.7s,mb4.5,baz=0.6,slow=6.3,SNR=12								
NOA					LR	LR		04 55 16.0	
	comp=Z,29nm,21.6s,MS3.5,baz=90,slow=35								
VSU	Vasula	69.01	351	⇑eP		P		04 26 43.7	+0.2
VSU					pmax	pmax			
	comp=Z,25nm,1.0s,mb5.1								
KMI	Kunming	69.17	284	P		P		04 26 45.5	+0.5
KMI					pP	pP		04 26 54.3	-1.5
KMI					sP	sP		04 26 57.5	-2.3
KMI					PP	PP		04 29 20.2	+2.5
KMI					S	S		04 35 47.0	-1.2
KMI					sS	sS		04 36 02.0	-4.0
KMI					SS	SS		04 40 14.6	+0.3
KMI					pmax	pmax			
	comp=Z,8.0nm,1.0s,mb4.6								
KMI					pmax	pmax			
	comp=Z,120nm,5.1s								
KMI					LR	LR			
	comp=N,120nm,16.0s,MS4.3								
KMI					LR	LR			
	comp=E,86nm,19.6s,MS4.3								
KMI					LR	LR			
	comp=Z,120nm,15.1s,MS4.2								
TKM2	Tokmak 2	69.87	315	P		P		04 26 49.1	+0.1
	SNR=7.0								
TKM2	Tokmak 2	69.87	315	eP		P		04 26 49.4	+0.4
TKM2					pmax	pmax			
	comp=Z,8.0nm,1.2s,mb4.5								
TKM2	Tokmak 2	69.87	315	eP		P		04 26 49.4	+0.3
	comp=Z,8.2nm,1.2s,mb4.5								
USP	Ospenovka	70.07	316	P		P		04 26 50.4	+0.2
	SNR=11								
AKTK	Aktyubinsk	70.17	330	P		P		04 26 50.4	-0.4
AKTO	Aktyubinsk	70.17	330	P		P		04 26 50.4	-0.4
	comp=Z,8.3nm,0.7s,mb4.8,baz=45,slow=6.1,SNR=32								
KBK	Karagaybulak	70.37	315	P		P	

CMAR Chiang Mai Arr 76.50 283 *c*eP P 04 27 28.5 -0.1
CMAR pmax pmax
comp=Z,2.0nm,0.6s
ODAN Odare 76.70 297 *e*P P 04 27 29.5 -0.1
comp=Z,7.9nm,0.5s,mb4.9
GUN Gumba 76.70 298 *e*P P 04 27 29.4 -0.2
comp=Z,57nm,1.0s,mb5.5
JIRN Jiri 76.73 298 *e*P P 04 27 29.8 +0.1
comp=Z,4.6nm,0.2s,mb5.1
CLL Collm 76.97 358 *e*P P 04 27 30.0 -0.6
RAMN Ramite 77.06 297 *e*P P 04 27 31.0 -0.6
comp=Z,39nm,1.0s,mb5.3
KKN Kakani 77.12 299 *e*P P 04 27 31.4 -0.5
comp=Z,8.5nm,0.5s,mb5.0
KKN Kakani 77.12 299 *e*P P 04 27 31.4 -0.5
KKN pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
PKI Pulchoki 77.22 298 *e*P P 04 27 32.4 -0.1
comp=Z,39nm,1.1s,mb5.2
PKI Pulchoki 77.22 298 *e*P P 04 27 32.4 -0.1
PKI pmax pmax
comp=Z,39nm,1.1s,mb5.2
DMN Daman 77.36 299 *e*P P 04 27 32.9 -0.4
comp=Z,6.8nm,0.6s,mb4.8
BRG Berggiesshubel 77.38 358 *e*P P 04 27 33.2 +0.2
comp=Z,11nm,1.6s,mb4.5
BRG Berggiesshubel 77.38 358 *e*P P 04 27 33.5 +0.5
comp=Z,4.8nm,1.0s,mb4.4
DPC Dobruska-Polom 77.82 356 *e*P P 04 27 36.2 +0.7
DPC Dobruska-Polom 77.82 356 *e*P P 04 27 36.2 +0.7
GIVF Givet 78.09 4 *e*P P 04 27 37.3 +0.4
BAIF Baives 78.11 4 *e*P P 04 27 36.7 -0.3
OKC Ostrava-Krasne 78.25 355 *e*P P 04 27 39.0 +1.2
OKC Ostrava-Krasne 78.25 355 *e*P P 04 27 39.0 +1.2
PRU Pruhonice 78.25 357 *e*P P 04 27 38.3 +0.5
PRU Pruhonice 78.25 357 *e*P P 04 27 38.3 +0.5
STHS Stebnicka Huta 78.46 353 *e*P P 04 27 40.4 +1.4
STHS pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
STHS Stebnicka Huta 78.46 353 *e*P P 04 27 40.4 +1.4
comp=Z,3.2nm,1.1s,mb4.2
STHS Stebnicka Huta 78.46 353 *e*P P 04 27 40.4 +1.4
ROTZ Rotzenmuhle 78.52 359 *e*P P 04 27 40.2 +0.9
comp=Z,3.0nm,0.8s,mb4.3
GRF Grafenberg Arr 78.61 359 *e*P P 04 27 40.5 +0.7
comp=Z,9.0nm,0.9s,mb4.7
GRF Grafenberg Arr 78.61 359 *e*P P 04 27 40.5 +0.7
GRF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
KOLS Kolonicke sedl 78.85 352 *e*P P 04 27 40.9 -0.3
KOLS pmax pmax
comp=Z,4.0nm,1.4s,mb4.2
KOLS Kolonicke sedl 78.85 352 *e*P P 04 27 40.9 -0.3
comp=Z,4.2nm,1.4s,mb4.2
KOLS Kolonicke sedl 78.85 352 *e*P P 04 27 40.9 -0.3
KHC Kasperske Hory 79.13 358 *e*P P 04 27 43.5 +0.8
KHC Kasperske Hory 79.13 358 *e*P P 04 27 43.5 +0.8
WET Wettzell 79.13 358 *e*P P 04 27 43.5 +0.8
comp=Z,8.0nm,1.5s,mb4.4
GOF Gofitskoye 79.22 337 *e*P P 04 27 27.9 -15
GOF pmax pmax
comp=Z,50nm,1.0s,mb5.4
LDF La Druitiere 79.31 7 *e*P P 04 27 43.7 0.0
GEC2 GERESS Array S 79.41 358 *e*P P 04 27 44.4 +0.2
comp=Z,10.0nm,1.6s,mb4.5
GERES GERESS Array B 79.41 358 P P 04 27 44.1 -0.2
comp=Z,1.5nm,0.7s,mb4.1,baz=3.7,slow=4.1,SNR=14
KECS Kecovo 79.44 353 *e*P P 04 27 44.6 +0.2
KECS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
KECS Kecovo 79.44 353 *e*P P 04 27 44.6 +0.2
comp=Z,2.7nm,0.9s,mb4.2
KECS Kecovo 79.44 353 *e*P P 04 27 44.6 +0.2
GRR Gorron 79.46 8 *e*P P 04 27 44.5 0.0
VYHS Vyhne 79.54 354 *e*P P 04 27 45.2 +0.2
VYHS pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
VYHS Vyhne 79.54 354 *e*P P 04 27 45.2 +0.2
comp=Z,6.0nm,1.2s,mb4.4
VYHS Vyhne 79.54 354 *e*P P 04 27 45.2 +0.2
KBL Kabul 79.66 314 *e*P P 04 27 45.5 -0.4
KBL pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
KBL Kabul 79.66 314 *e*P P 04 27 45.5 -0.4
comp=Z,10nm,0.8s,mb4.8
CDF Champ du Feu 79.85 2 *e*P P 04 27 47.1 +0.5
HAU Haudompre 80.24 3 *e*P P 04 27 49.0 +0.3
CONA Conrad Observa 80.26 356⇑ *i*P P 04 27 49.8 +1.0
comp=Z,6.1nm,0.8s,mb4.6
CSNA Conrad Observa 80.26 356⇑ *i*P P 04 27 49.8 +1.0
comp=Z,5.1nm,0.7s,mb4.6
HINF Hinteralfeld 80.44 2 *e*P P 04 27 49.9 +0.1
LOR Lormes 80.88 4 *e*P P 04 27 52.5 +0.3
comp=Z,7.0nm,0.7s,mb4.4
LOR Lormes 80.88 4 *e*P P 04 27 52.5 +0.3
LOR pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
LOR Lormes 80.88 4 *e*P P 04 27 52.5 +0.3
comp=Z,3.5nm,0.7s,mb4.4
ARSA Arzberg 80.95 356⇑ *i*P P 04 27 53.4 +0.9
comp=Z,3.6nm,0.6s,mb4.5
MOTA Moosalm 80.95 359⇑ *i*P P 04 27 53.1 +0.5
comp=Z,2.2nm,0.4s,mb4.4
WTTA Wattenberg 81.03 359⇑ *i*P P 04 27 53.9 +0.9
comp=Z,6.9nm,0.7s,mb4.7
SSF Saint Saulge 81.07 5 *e*P P 04 27 53.5 +0.3
comp=Z,9.9nm,0.7s,mb4.5
SSF Saint Saulge 81.07 5 *e*P P 04 27 53.5 +0.3
SSF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
SSF Saint Saulge 81.07 5 *e*P P 04 27 53.5 +0.3
comp=Z,4.9nm,0.7s,mb4.5
ZEI Tsey 81.16 336 *e*P P 04 27 48.9 -4.9
ZEI pmax pmax
comp=Z,12nm,1.4s,mb4.6
KBA Koelnbreinsper 81.19 358⇓ *i*P P 04 27 55.2 +1.4
comp=Z,13nm,0.6s,mb5.0
FETA Feichten 81.28 360⇑ *i*P P 04 27 55.2 +0.9
comp=Z,5.6nm,0.7s,mb4.6
MFF Saint Martin d 81.29 7 *e*P P 04 27 54.7 +0.3
comp=Z,8.8nm,0.7s,mb4.5
MFF Saint Martin d 81.29 7 *e*P P 04 27 54.7 +0.3
MFF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
MFF Saint Martin d 81.29 7 *e*P P 04 27 54.7 +0.3
comp=Z,4.4nm,0.7s,mb4.5
AVF Avril sur Loir 81.33 5 *e*P P 04 27 54.8 +0.2
comp=Z,18nm,0.9s,mb4.7
AVF Avril sur Loir 81.33 5 *e*P P 04 27 54.8 +0.2
AVF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
AVF Avril sur Loir 81.33 5 *e*P P 04 27 54.8 +0.2
comp=Z,8.9nm,0.9s,mb4.7
SMF Signal de Mont 81.50 5 *e*P P 04 27 55.8 +0.3
BGF Bois d'Agland 81.53 5 *e*P P 04 27 56.0 +0.3
ABTA Abfaltersbach 81.54 358⇑ *i*P P 04 27 56.1 +0.5
comp=Z,5.1nm,0.9s,mb4.5
SOKA Soboth 81.54 357⇑ *i*P P 04 27 56.5 +0.8
comp=Z,13nm,1.3s,mb4.7
PERS Pernice 81.58 357 *i*P P 04 27 56.6 +0.7
CABF La Chapelle 81.62 3 *e*P P 04 27 57.1 +1.0
comp=Z,9.8nm,0.8s,mb4.5
CABF La Chapelle 81.62 3 *e*P P 04 27 57.1 +1.0
CABF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
CABF La Chapelle 81.62 3 *e*P P 04 27 57.1 +1.0
comp=Z,4.9nm,0.8s,mb4.5
MYKA Terra Mystica 81.63 358⇑ *i*P P 04 27 56.3 +0.1
comp=Z,4.0nm,0.7s,mb4.4
GROS Grobnik 81.74 356 *i*P P 04 27 57.0 +0.2
TCF Toulx Ste Croi 81.77 6 *e*P P 04 27 57.2 +0.3
comp=Z,7.8nm,0.7s,mb4.5
TCF Toulx Ste Croi 81.77 6 *e*P P 04 27 57.2 +0.3
TCF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
TCF Toulx Ste Croi 81.77 6 *e*P P 04 27 57.2 +0.3
comp=Z,3.9nm,0.7s,mb4.5
RJF Les Rejaudoux 82.70 6 *e*P P 04 28 01.9 +0.1
BOJS Bojanci 82.71 357 *i*P P 04 28 02.0 +0.2
LPL La Plagne 82.74 3 *e*P P 04 28 03.8 +1.8
LPG La Plagne 82.75 3 *e*P P 04 28 04.1 +2.0
LFF La Frestale 83.01 7 *e*P P 04 28 03.9 +0.5
BNI Bardonecchia 83.20 3 *e*P P 04 28 06.7 +2.3
BNI pmax pmax
comp=Z,40nm,1.7s,mb5.2
BNI Bardonecchia 83.20 3 *e*P P 04 28 06.7 +2.3
comp=Z,40nm,1.7s,mb5.2
ORIF Oris-en-Rattie 83.31 3 *e*P P 04 28 06.0 +1.1
comp=Z,11nm,0.8s,mb4.6
ORIF Oris-en-Rattie 83.31 3 *e*P P 04 28 06.0 +1.1
ORIF pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
ORIF Oris-en-Rattie 83.31 3 *e*P P 04 28 06.0 +1.1
comp=Z,5.4nm,0.8s,mb4.6
VIVF Saint-Julien-l 83.32 4 *e*P P 04 28 05.8 +0.8
comp=Z,5.4nm,0.5s,mb4.5
VIVF Saint-Julien-l 83.32 4 *e*P P 04 28 05.8 +0.8
VIVF pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
VIVF Saint-Julien-l 83.32 4 *e*P P 04 28 05.8 +0.8
comp=Z,2.7nm,0.5s,mb4.5
MBDF Montbardon 83.53 3 *e*P P 04 28 07.7 +1.6
LASF Ste Croix 84.06 5 *e*P P 04 28 09.1 +0.3
comp=Z,15nm,1.0s,mb4.8
SMRF Simiane la Rot 84.24 3 *e*P P 04 28 11.3 +1.6
SBF Sospel 84.41 2 *e*P P 04 28 11.3 +0.7
comp=Z,26nm,0.9s,mb5.1
SBF Sospel 84.41 2 *e*P P 04 28 11.3 +0.7
SBF pmax pmax
comp=Z,13nm,0.9s,mb5.1
SBF Sospel 84.41 2 *e*P P 04 28 11.3 +0.7
comp=Z,13nm,0.9s,mb5.1
SJPF Ste Jean 84.66 8 *e*P P 04 28 12.2 +0.3
FRF La Foret Royal 84.69 3 *e*P P 04 28 12.6 +0.6
comp=Z,15nm,0.9s,mb4.8
FRF La Foret Royal 84.69 3 *e*P P 04 28 12.6 +0.6
FRF pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
FRF La Foret Royal 84.69 3 *e*P P 04 28 12.6 +0.6
comp=Z,7.6nm,0.9s,mb4.8
MTLF Montolieu 84.70 6 *e*P P 04 28 12.8 +0.7
comp=Z,23nm,1.0s,mb5.0
MTLF Montolieu 84.70 6 *e*P P 04 28 12.8 +0.7
MTLF pmax pmax
comp=Z,12nm,1.0s,mb5.0
MTLF Montolieu 84.70 6 *e*P P 04 28 12.8 +0.7
comp=Z,12nm,1.0s,mb5.0
EPF Esparros 84.88 7 *e*P P 04 28 12.8 -0.2
comp=Z,12nm,0.9s,mb4.7
EPF Esparros 84.88 7 *e*P P 04 28 12.8 -0.2
EPF pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
EPF Esparros 84.88 7 *e*P P 04 28 12.8 -0.2
comp=Z,5.8nm,0.9s,mb4.7
LMR La Mourre 84.91 3 *e*P P 04 28 13.8 +0.7
comp=Z,22nm,1.0s,mb4.9
LMR La Mourre 84.91 3 *e*P P 04 28 13.8 +0.7
LMR pmax pmax
comp=Z,11nm,1.0s,mb4.9
LMR La Mourre 84.91 3 *e*P P 04 28 13.8 +0.7
comp=Z,11nm,1.0s,mb4.9
ETSF Etsaut 84.93 8 *e*P P 04 28 14.3 +1.0
comp=Z,9.4nm,0.7s,mb4.7
ETSF Etsaut 84.93 8 *e*P P 04 28 14.3 +1.0
ETSF pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
ETSF Etsaut 84.93 8 *e*P P 04 28 14.3 +1.0
comp=Z,4.7nm,0.7s,mb4.7
PGF Pioggiola 85.75 1 *e*P P 04 28 18.1 +0.8
comp=Z,27nm,0.8s,mb5.2
PGF Pioggiola 85.75 1 *e*P P 04 28 18.1 +0.8
PGF pmax pmax
comp=Z,14nm,0.8s,mb5.2
PGF Pioggiola 85.75 1 *e*P P 04 28 18.1 +0.8
comp=Z,14nm,0.8s,mb5.2
BRTR Keskin Array B 86.35 342 P P 04 28 21.2 +0.9
comp=Z,0.6nm,0.4s,mb4.2,baz=360,slow=5.1,SNR=5.4
BRTR LR LR 05 14 07.9
comp=Z,16nm,20.0s,MS3.4,baz=297,slow=41
ESDC Sonseca Array 87.78 11 P P 04 28 26.9 -0.3
comp=Z,0.6nm,0.5s,mb4.1,baz=353,slow=5.5,SNR=5.3
HYB Hyderabad 89.12 298 *e*P P 04 28 33.5 -0.4
HYB Hyderabad 89.12 298 *i*P P 04 28 33.0 -0.9
ASAR Alice Springs 90.07 230 P P 04 28 37.0 -1.0
comp=Z,5.1nm,0.7s,mb5.0,baz=31,slow=4.6,SNR=45
MAW Mawson 150.53 218 PKPbc PKPbc 04 35 28.6 0.0
comp=Z,2.0nm,0.9s,baz=90,slow=5.1,SNR=2.4
MAW PKPab PKPab 04 35 32.4 -3.0
comp=Z,2.2nm,0.7s,baz=83,slow=8.1,SNR=3.7

SZGRF ***03*** *04:26:07.6, 46°.78N×154°.82E, h9km, mb4.7, East of Kuril Islands, Russia*
ISCJB ***03*** *04:26:25.5±1.1, 47°.8N±0°.1×152°.5E±0°.1, h118km±9km, mb4.2/46, Error ellipse: s-maj=20.4km s-min=9.7km az=144.9*
MOS ***03*** *04:26:26.4±1.1, 47°.84N×152°.52E, h125km, mb4.2/24, Error ellipse: s-maj=14.6km s-min=7.4km az=96.1*
NEIC ***03*** *04:26:27.7±0.9, 47°.81N×152°.41E, h127km±7km, mb4.3/15, Error ellipse: s-maj=12.9km s-min=7.3km az=146.0*
IDC ***03*** *04:26:28.9±2.5, 47°.82N×152°.46E, h140km±22km, mb3.7/18, mb1 3.8/20, mb1mx3.7/29, mbtmp3.6/20, Error ellipse: s-maj=18.1km s-min=13.0km az=160.0*
ISC 03 04:26:27.5±1.0, 47°.8N±0°.1×152°.5E±0°.1, h124km±8km, n121, σ0s85/123, mb4.2/46, 11C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.73**	**38**	*e*PN		**Pn**	**04 27 20.7**	**-2.7**
SKR				*e*S		**Sn**	**04 28 02.5**	**-4.2**
SKR				pmax	pmax			
	comp=Z,60nm,0.5s							
SKR				smax				
	comp=N,200nm,0.3s							
SKR				smax				
	comp=E,240nm,0.3s							
PEA0B	**Petropavlovsk-**	**6.26**	**30**	*e*Pn		**Pn**	**04 27 58.2**	**+0.9**
PETK	**Petropavlovsk-**	**6.26**	**30**	P		**Pn**	**04 27 58.5**	**+1.1**
	comp=E,0.3nm,0.3s,baz=201,slow=12,SNR=7.1							
PETK				S		**Sn**	**04 29 15.2**	**+7.7**
	comp=E,0.1nm,0.3s,baz=238,slow=14,SNR=2.1							
ASAJ	**Asahikawa**	**7.83**	**246**	P		**Pn**	**04 28 20.6**	**+2.0**
	comp=E,1.3nm,0.3s,baz=88,slow=14,SNR=5.9							
ASAJ	**Asahikawa**	**7.83**	**246**	PN		**Pn**	**04 28 20.6**	**+2.0**
ASAJ				pmax	pmax			
	comp=Z,1.0nm,0.3s							
ERM	**Erimo**	**8.80**	**232**	*e*Pn		**Pn**	**04 28 31.2**	**-0.5**
ERM				*e*S		**Sn**	**04 30 04.2**	**-4.9**
SONM	**Songino Array**	**30.62**	**288**	P		**P**	**04 32 28.8**	**-0.8**
	comp=Z,0.5nm,0.5s,mb3.5,baz=61,slow=9.2,SNR=4.6							
SONM	**Songino Array**	**30.62**	**288**	P		**P**	**04 32 28.8**	**-0.8**
SONM				pmax	pmax			
	comp=Z,1.0nm,0.5s							
COLD	**Coldfoot**	**34.70**	**35**	*e*P		**P**	**04 33 04.8**	**-0.1**
	comp=Z,2.9nm,0.9s,mb4.1							
INK	**Inuvik**	**40.99**	**33**	P		**P**	**04 33 57.9**	**+0.3**
	comp=Z,2.0nm,0.5s,mb4.2,baz=298,slow=6.3,SNR=16							
INK	**Inuvik**	**40.99**	**33**	P		**P**	**04 33 57.9**	**+0.3**
INK				pmax	pmax			
	comp=Z,2.0nm,0.5s							
ZALV	**Zalesovo Beam**	**41.68**	**305**	P		**P**	**04 34 02.9**	**-0.6**
	comp=Z,2.1nm,0.5s,mb4.1,baz=69,slow=8.0,SNR=4.6							
ZALV	**Zalesovo Beam**	**41.68**	**305**	P		**P**	**04 34 02.9**	**-0.6**
ZALV				pmax	pmax			
	comp=Z,2.0nm,0.5s,mb4.1							
ZALV	**Zalesovo Beam**	**41.68**	**305**	P		**P**	**04 34 02.9**	**-0.6**
MKAR	**Makanchi Array**	**46.12**	**296**	P		**P**	**04 34 37.1**	**-1.8**
	comp=Z,1.0nm,0.7s,mb3.7,baz=65,slow=9.5,SNR=8.3							
MKAR	**Makanchi Array**	**46.12**	**296**	P		**P**	**04 34 37.1**	**-1.8**
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
KURK	**Kurchatov**	**46.46**	**303**	P		**P**	**04 34 41.2**	**-0.3**
	comp=Z,6.4nm,0.7s,mb4.5,baz=67,slow=8.3,SNR=12							
KURK	**Kurchatov**	**46.46**	**303**	P		**P**	**04 34 41.3**	**-0.3**
KURK				pmax	pmax			
	comp=Z,6.0nm,0.7s,mb4.4							
BVAR	**Borovoye Array**	**49.89**	**309**	P		**P**	**04 35 07.7**	**-0.2**
	comp=Z,1.5nm,0.4s,mb4.3,baz=61,slow=7.9,SNR=6.9							
BVAR	**Borovoye Array**	**49.89**	**309**	P		**P**	**04 35 07.7**	**-0.2**
BVAR				pmax	pmax			
	comp=Z,2.0nm,0.4s							
BRVK	**Borovoye**	**49.93**	**309**⇑	*i*P		**P**	**04 35 08.5**	**+0.3**
BRVK				pmax	pmax			
	comp=Z,1.0nm,0.5s,mb4.0							
RES	**Resolute Bay**	**49.98**	**19**	P		**P**	**04 35 08.1**	**-0.2**
	comp=Z,0.7nm,0.5s,mb3.8,baz=332,slow=6.6,SNR=7.5							
RES	**Resolute Bay**	**49.98**	**19**	P		**P**	**04 35 08.1**	**-0.2**
RES				pmax	pmax			
	comp=Z,1.0nm,0.5s,mb4.0							
YKA	**Yellowknife Ar**	**50.33**	**37**	P		**P**	**04 35 10.7**	**-0.4**
	comp=Z,0.8nm,0.6s,mb3.9,baz=298,slow=6.7,SNR=5.3							
YKA	**Yellowknife Ar**	**50.33**	**37**	P		**P**	**04 35 10.7**	**-0.4**
YKA				pmax	pmax			
	comp=Z,1.0nm,0.6s							
YKA	**Yellowknife Ar**	**50.33**	**37**	P		**P**	**04 35 10.7**	**-0.4**
AAK	**Ala-Archa**	**53.02**	**295**	*c i*P		**P**	**04 35 32.0**	**+0.7**
AAK				pmax	pmax			
	comp=Z,3.0nm,2.5s,mb3.9							
ARU	**Arti**	**53.98**	**317**	*d i*P		**P**	**04 35 37.4**	**-0.7**
ARU							04 37 37.8	
ARU				S		**S**	**04 43 20.8**	**+17**
ARU				pmax	pmax			
	comp=Z,4.0nm,1.7s,mb4.2							
ARCES	**ARCESS Array B**	**56.74**	**340**	P		**P**	**04 35 56.5**	**-1.1**
	comp=Z,5.4nm,1.1s,mb4.5,baz=22,slow=7.8,SNR=6.7							
ARCES	**ARCESS Array B**	**56.74**	**340**	P		**P**	**04 35 56.6**	**-1.1**
ARCES				pmax	pmax			
	comp=Z,5.0nm,1.1s							
ABKAR	**Akbulak array**	**57.46**	**309**	*e*P		**P**	**04 36 02.5**	**-0.6**
	comp=Z,0.5nm,0.3s,mb4.0							
FFC	**Flin Flon**	**60.20**	**40**	*i*P		**P**	**04 36 12.9**	**-9.0**
JOF	**Joensuu**	**60.22**	**333**	*e*P		**P**	**04 36 19.6**	**-2.3**
JOF				pmax	pmax			
	comp=Z,4.0nm,0.8s,mb4.5							
JOF	**Joensuu**	**60.22**	**333**	*e*p		**P**	**04 36 19.6**	**-2.3**
	comp=Z,3.8nm,0.8s,mb4.5							
JOF	**Joensuu**	**60.22**	**333**	*e*p		**P**	**04 36 19.6**	**-2.3**
	comp=Z,3.8nm,0.8s,mb4.5							
NVAR	**Mina Array Bea**	**62.31**	**62**	P		**P**	**04 36 36.1**	**-0.2**
	comp=Z,0.2nm,0.4s,mb3.5,baz=307,slow=7.7,SNR=2.3							
KAF	**Kangasniemi**	**62.33**	**335**	*e*P		**P**	**04 36 33.5**	**-2.6**
KAF				pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.4							
KAF	**Kangasniemi**	**62.33**	**335**	*e*p		**P**	**04 36 33.5**	**-2.6**
	comp=Z,3.3nm,0.7s,mb4.5							
KAF	**Kangasniemi**	**62.33**	**335**	*e*p		**P**	**04 36 33.5**	**-2.6**
	comp=Z,3.3nm,0.7s,mb4.5							
FINES	**FINESS Array B**	**62.93**	**334**	P		**P**	**04 36 39.1**	**-1.0**
	comp=Z,2.2nm,0.4s,mb4.4,baz=35,slow=7.1,SNR=17							
FINES	**FINESS Array B**	**62.93**	**334**	P		**P**	**04 36 39.1**	**-1.0**
FINES				pmax	pmax			
	comp=Z,2.0nm,0.4s							
NOA	**NORSAR Array B**	**67.11**	**341**	P		**P**	**04 37 06.8**	**-0.3**
	comp=Z,0.7nm,0.4s,mb3.8,baz=28,slow=6.5,SNR=7.3							
NOA	**NORSAR Array B**	**67.11**	**341**	P		**P**	**04 37 06.9**	**-0.2**
NOA				pmax	pmax			
	comp=Z,1.0nm,0.4s							
AKASG	**Malin Array Be**	**70.46**	**326**	P		**P**	**04 37 26.9**	**-1.2**
	comp=Z,1.9nm,0.5s,mb4.2,baz=34,slow=6.4,SNR=7.4							
AKASG	**Malin Array Be**	**70.46**	**326**	*c e*P		**P**	**04 37 26.8**	**-1.2**
AKASG				pmax	pmax			
	comp=Z,2.0nm,0.5s							
ANN	**Anapa**	**71.64**	**317**	*e*P		**P**	**04 37 37.8**	**+2.5**
ANN				pmax	pmax			
	comp=Z,41nm,1.1s,mb5.2							
ASAR	**Alice Springs**	**73.07**	**198**	P		**P**	**04 37 43.4**	**-0.4**
	comp=Z,1.7nm,0.6s,mb4.1,baz=7.9,slow=5.3,SNR=22							
ASAR	**Alice Springs**	**73.07**	**198**	P		**P**	**04 37 43.4**	**-0.4**
ASAR				pmax	pmax			
	comp=Z,2.0nm,0.6s							
DPC	**Dobruska-Polom**	**75.22**	**333**	*e*P		**P**	**04 37 57.9**	**+1.8**
DPC	**Dobruska-Polom**	**75.22**	**333**	*e*P		**P**	**04 37 57.9**	**+1.8**
CLL	**Collm**	**75.35**	**335**	*i*P		**P**	**04 37 56.2**	**-0.7**
CLL				pmax	pmax			
	comp=Z,8.0nm,0.6s,mb4.6							
CLL	**Collm**	**75.35**	**335**	*i*P		**P**	**04 37 56.2**	**-0.7**
	comp=Z,8.0nm,0.6s,mb4.6							
CLL	**Collm**	**75.35**	**335**	*i*P		**P**	**04 37 56.2**	**-0.7**
	comp=Z,8.0nm,0.6s,mb4.6							
CLL				*e*PcP	PcP		04 38 08.0	-1.5
VYHS	**Vyhne**	**76.02**	**330**	*e*P		**P**	**04 38 00.9**	**+0.2**
VYHS	**Vyhne**	**76.02**	**330**	*e*P		**P**	**04 38 00.9**	**+0.2**
PRU	**Pruhonice**	**76.08**	**334**	*e*P		**P**	**04 38 01.5**	**+0.5**
PRU	**Pruhonice**	**76.08**	**334**	*e*P		**P**	**04 38 01.5**	**+0.5**
KHC	**Kasperske Hory**	**77.13**	**334**	*e*P		**P**	**04 38 07.1**	**+0.2**
KHC	**Kasperske Hory**	**77.13**	**334**	*e*P		**P**	**04 38 07.1**	**+0.2**
GRF	**Grafenberg Arr**	**77.31**	**335**	*e*pP		**P**	**04 38 08.5**	**+0.6**
	comp=Z,6.0nm,0.8s,mb4.4							
TXAR	**Lajitas Array**	**77.33**	**60**	P		**P**	**04 38 07.3**	**-1.1**
	comp=Z,0.2nm,0.5s,mb3.1,baz=295,slow=5.1,SNR=7.2							
TXAR	**Lajitas Array**	**77.33**	**60**	P		**P**	**04 38 07.3**	**-1.1**
GERES	**GERESS Array B**	**77.35**	**334**	P		**P**	**04 38 07.8**	**-0.3**
	comp=Z,1.1nm,0.4s,mb4.0,baz=34,slow=5.4,SNR=13							
GERES	**GERESS Array B**	**77.35**	**334**	P		**P**	**04 38 07.8**	**-0.4**
GERES				pmax	pmax			
	comp=Z,1.0nm,0.4s							
BRTR	**Keskin Array B**	**77.36**	**316**	P		**P**	**04 38 08.2**	**-0.2**
	comp=Z,1.1nm,0.8s,mb3.6,baz=62,slow=5.7,SNR=4.7							
BRTR	**Keskin Array B**	**77.36**	**316**	P		**P**	**04 38 08.3**	**-0.1**
BRTR				pmax	pmax			
	comp=Z,1.0nm,0.9s							
CONA	**Conrad Observa**	**77.49**	**332**⇑	*i*P		**P**	**04 38 09.6**	**+0.6**
	comp=Z,3.7nm,0.7s,mb4.2							
CSNA	**Conrad Observa**	**77.49**	**332**⇑	*i*P		**P**	**04 38 09.6**	**+0.6**
	comp=Z,3.6nm,0.7s,mb4.2							
BAIF	**Baives**	**78.77**	**340**	*e*P		**P**	**04 38 15.7**	**-0.3**
SOKA	**Soboth**	**78.86**	**332**⇑	*i*P		**P**	**04 38 16.6**	**+0.1**
	comp=Z,3.4nm,0.7s,mb4.3							
KBA	**Koelnbreinsper**	**79.03**	**333**⇑	*i*P		**P**	**04 38 18.4**	**+0.9**
	comp=Z,7.3nm,0.5s,mb4.8							
WATA	**Walderalm**	**79.33**	**334**⇑	*i*P		**P**	**04 38 19.5**	**+0.4**
	comp=Z,4.5nm,0.5s,mb4.6							
MYKA	**Terra Mystica**	**79.34**	**333**⇑	*i*P		**P**	**04 38 19.0**	**-0.2**
	comp=Z,1.8nm,0.4s,mb4.3							
WTTA	**Wattenberg**	**79.38**	**334**⇑	*i*P		**P**	**04 38 20.1**	**+0.8**
	comp=Z,8.3nm,0.5s,mb4.8							
RETA	**Reutte**	**79.43**	**335**⇑	*i*P		**P**	**04 38 19.9**	**+0.3**
	comp=Z,3.0nm,0.8s,mb4.2							
CDF	**Champ du Feu**	**79.54**	**337**	*e*P		**P**	**04 38 20.0**	**-0.2**
	comp=Z,14nm,0.9s,mb4.5							
CDF	**Champ du Feu**	**79.54**	**337**	*e*P		**P**	**04 38 20.0**	**-0.2**
CDF				pmax	pmax			
	comp=Z,7.0nm,0.9s,mb4.5							
CDF	**Champ du Feu**	**79.54**	**337**	*e*P		**P**	**04 38 20.0**	**-0.2**
	comp=Z,6.8nm,0.9s,mb4.5							
MEZF	**Maizieres J'vi**	**80.02**	**339**	*e*P		**P**	**04 38 22.9**	**+0.1**
	comp=Z,11nm,0.6s,mb4.6							
MEZF	**Maizieres J'vi**	**80.02**	**339**	*e*P		**P**	**04 38 22.9**	**+0.1**
	comp=Z,11nm,0.6s,mb4.9							
HAU	**Haudompre**	**80.16**	**338**	*e*P		**P**	**04 38 22.5**	**-1.0**
HAU				*e*MLR	MLR			
	comp=Z,59nm,19.5s							
HAU	**Haudompre**	**80.16**	**338**	*e*P		**P**	**04 38 22.5**	**-1.0**
HAU				LR	LR			
	comp=Z,60nm,19.5s							
HINF	**Hinteralfeld**	**80.20**	**337**	*e*P		**P**	**04 38 22.4**	**-1.4**
FLN	**La Foliniere**	**81.02**	**342**	*e*P		**P**	**04 38 28.4**	**+0.3**
FLN				*e*MLR	MLR			
	comp=Z,90nm,20.2s							
FLN	**La Foliniere**	**81.02**	**342**	*e*P		**P**	**04 38 28.4**	**+0.3**
FLN				LR	LR			
	comp=Z,90nm,20.3s							
LOR	**Lormes**	**81.46**	**339**	*e*P		**P**	**04 38 30.3**	**-0.2**
	comp=Z,9.6nm,0.7s,mb4.4							
LOR				*e*M

LPG	**La Plagne**	**82.37**	**336**	*eP*	**P**	**04 38 36.1**	**+0.8**
LPG				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.3						
LPG	**La Plagne**	**82.37**	**336**	*eP*	**P**	**04 38 36.1**	**+0.8**
	comp=Z,1.6nm,0.4s,mb4.2						
BGF	**Bois d'Agland**	**82.37**	**339**	*eP*	**P**	**04 38 35.3**	**0.0**
TCF	**Toulx Ste Croi**	**82.77**	**340**	*eP*	**P**	**04 38 37.7**	**+0.3**
	comp=Z,7.5nm,0.9s,mb4.2						
TCF	**Toulx Ste Croi**	**82.77**	**340**	*eP*	**P**	**04 38 37.7**	**+0.3**
TCF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
TCF	**Toulx Ste Croi**	**82.77**	**340**	*eP*	**P**	**04 38 37.7**	**+0.3**
	comp=Z,3.8nm,0.9s,mb4.2						
MFF	**Saint Martin d**	**83.00**	**341**	*eP*	**P**	**04 38 39.0**	**+0.5**
ORIF	**Oris-en-Rattie**	**83.14**	**337**	*eP*	**P**	**04 38 39.9**	**+0.6**
ORIF				*e*MLR	MLR		
	comp=Z,111nm,21.2s						
CAF	**Calviac**	**84.09**	**339**	*eP*	**P**	**04 38 45.0**	**+0.9**
SMRF	**Simiane la Rot**	**84.09**	**337**	*eP*	**P**	**04 38 44.9**	**+0.7**
LFF	**La Frestale**	**84.39**	**340**	*eP*	**P**	**04 38 46.4**	**+0.8**
	comp=Z,16nm,0.8s,mb4.6						
LFF	**La Frestale**	**84.39**	**340**	*eP*	**P**	**04 38 46.4**	**+0.8**
LFF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.6						
LFF	**La Frestale**	**84.39**	**340**	*eP*	**P**	**04 38 46.4**	**+0.8**
	comp=Z,8.2nm,0.8s,mb4.6						
LMR	**La Mourre**	**84.44**	**336**	*eP*	**P**	**04 38 46.1**	**+0.2**
	comp=Z,3.8nm,0.6s,mb4.1						
LMR	**La Mourre**	**84.44**	**336**	*eP*	**P**	**04 38 46.1**	**+0.2**
LMR				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
LMR	**La Mourre**	**84.44**	**336**	*eP*	**P**	**04 38 46.1**	**+0.2**
	comp=Z,1.9nm,0.6s,mb4.1						
MTLF	**Montolieu**	**85.55**	**339**	*eP*	**P**	**04 38 51.7**	**+0.3**
	comp=Z,6.2nm,0.8s,mb4.3						
MTLF	**Montolieu**	**85.55**	**339**	*eP*	**P**	**04 38 51.7**	**+0.3**
MTLF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
MTLF	**Montolieu**	**85.55**	**339**	*eP*	**P**	**04 38 51.7**	**+0.3**
	comp=Z,3.1nm,0.8s,mb4.3						
LPAZ	**La Paz**	**134.20**	**61**	PKP	PKPdf	04 45 32.5	+1.9
	comp=Z,1.0nm,0.4s,baz=270,slow=4.0,SNR=7.0						
LPAZ	**La Paz**	**134.20**	**61**	PKIKP	PKPdf	04 45 32.5	+2.0
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.4s						

CSEM ***03*** *05:13:22.5±0.2, 35°.39N×25°.35E, h8km, MD3.2, Error ellipse: s-maj=3.9km s-min=3.8km az=165.0*
THE ***03*** *05:13:22.8, 35°.36N×25°.37E, h4km±6km, Error ellipse: s-maj=6.8km s-min=0.9km az=139.0*
NEIC ***03*** *05:13:22.1, 35°.39N×25°.34E, h17km, MD3.2(ATH), After ATH.*
ATH ***03*** *05:13:22.1, 35°.39N×25°.34E, h17km±3km, MD3.2/8*
ISC 03 05:13:22.7±0.4**, 35°.40N**±0°.03×**25°.36E**±0°.03**, h7**km±7km**, n45**, σ0**s47/64, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NPS	**Neapolis**	**0.25**	**122**	*e*Pb	**Pg**	**05 13 27.5**	**-0.1**
NPS				*e*Sb	**Sg**	**05 13 30.9**	**0.0**
NPS	**Neapolis**	**0.25**	**122**	*e*PB	**Pg**	**05 13 27.5**	**-0.1**
NPS				*e*SB	**Sg**	**05 13 30.9**	**0.0**
NPS	**Neapolis**	**0.25**	**122**	*e*Pb	**Pg**	**05 13 27.5**	**-0.1**
NPS				*e*Sb	**Sg**	**05 13 30.9**	**0.0**
LAST	**Lasithi**	**0.26**	**157**	*e*Pb	**Pg**	**05 13 27.6**	**-0.1**
LAST				*e*Sb	**Sg**	**05 13 31.1**	**0.0**
LAST	**Lasithi**	**0.26**	**157**	P	**Pg**	**05 13 27.2**	**-0.5**
LAST				S	**Sg**	**05 13 31.0**	**-0.1**
LAST	**Lasithi**	**0.26**	**157**	*e*PB	**Pg**	**05 13 27.6**	**-0.1**
LAST				*e*SB	**Sg**	**05 13 31.1**	**0.0**
LAST	**Lasithi**	**0.26**	**157**	P	**Pg**	**05 13 27.2**	**-0.5**
LAST	**Lasithi**	**0.26**	**157**	*e*Pb	**Pg**	**05 13 27.6**	**-0.1**
LAST				*e*Sb	**Sg**	**05 13 31.1**	**0.0**
SIVA	**Sivas**	**0.59**	**230**	*e*Pn	**Pg**	**05 13 34.2**	**+0.2**
SIVA				*e*Sn	**Sg**	**05 13 42.0**	**+0.4**
SIVA	**Sivas**	**0.59**	**230**	P	**Pg**	**05 13 34.0**	**0.0**
SIVA				S	**Sg**	**05 13 41.8**	**+0.2**
SIVA	**Sivas**	**0.59**	**230**	*e*PN	**Pg**	**05 13 34.2**	**+0.2**
SIVA				*e*SN	**Sg**	**05 13 42.0**	**+0.4**
SIVA	**Sivas**	**0.59**	**230**	*e*Pn	**Pg**	**05 13 34.2**	**+0.2**
SIVA				S	**Sg**	**05 13 41.8**	**+0.2**
XRY	**Khrisi**	**0.59**	**152**	*e*Pn	**Pg**	**05 13 33.5**	**-0.6**
XRY	**Khrisi**	**0.59**	**152**	*e*PN	**Pg**	**05 13 33.5**	**-0.6**
XRY	**Khrisi**	**0.59**	**152**	*e*Pn	**Pg**	**05 13 33.5**	**-0.6**
ZKR	**Zakros**	**0.76**	**112**	*e*Pn	**Pg**	**05 13 36.6**	**-0.7**
ZKR	**Zakros**	**0.76**	**112**	P	**Pg**	**05 13 36.8**	**-0.5**
ZKR				S	**Sg**	**05 13 47.9**	**+0.7**
ZKR	**Zakros**	**0.76**	**112**	*e*PN	**Pg**	**05 13 36.6**	**-0.7**
ZKR	**Zakros**	**0.76**	**112**	P	**Pg**	**05 13 36.8**	**-0.5**
ZKR				S	**Sg**	**05 13 47.9**	**+0.7**
VAM	**Vamos**	**0.94**	**271**	*e*Pn	**Pg**	**05 13 39.9**	**-0.9**
VAM				*e*Sn	**Sg**	**05 13 53.4**	**+0.3**
VAM	**Vamos**	**0.94**	**271**	*e*PN	**Pg**	**05 13 39.9**	**-0.9**
VAM				*e*SN	**Sg**	**05 13 53.4**	**+0.3**
VAM	**Vamos**	**0.94**	**271**	*e*Pn	**Pg**	**05 13 39.9**	**-0.9**
THR1	**Thera Island**	**0.97**	**5**	P	**Pg**	**05 13 42.2**	**+0.8**
THR1	**Thera Island**	**0.97**	**5**	P	**Pg**	**05 13 42.2**	**+0.8**
THR3	**Thira Island,**	**1.01**	**2**	P	**Pg**	**05 13 42.0**	**-0.1**
THR3	**Thira Island,**	**1.01**	**2**	P	**Pg**	**05 13 42.0**	**-0.1**
THR5	**Thira Island,**	**1.02**	**360**	P	**Pg**	**05 13 42.0**	**-0.3**
THR5	**Thira Island,**	**1.02**	**360**	P	**Pg**	**05 13 42.0**	**-0.3**
THR2	**Thira island,**	**1.05**	**3**	P	**Pg**	**05 13 42.8**	**-0.1**
THR2	**Thira island,**	**1.05**	**3**	P	**Pg**	**05 13 42.8**	**-0.1**
KARN	**Karanos**	**1.18**	**271**	P	**Pg**	**05 13 45.0**	**-0.3**
KARN				S	**Sg**	**05 14 00.7**	**+0.2**
KARN	**Karanos**	**1.18**	**271**	*e*PN	**Pn**	**05 13 44.7**	**-0.9**
KARN	**Karanos**	**1.18**	**271**	*e*Pn	**Pn**	**05 13 44.7**	**-0.9**
KARN	**Karanos**	**1.18**	**271**	P	**Pg**	**05 13 45.0**	**-0.3**
KARN				S	**Sg**	**05 14 00.7**	**+0.2**
GVD	**Gavdhos**	**1.18**	**242**	P	**Pg**	**05 13 45.7**	**+0.4**
GVD				S	**Sg**	**05 14 01.2**	**+0.6**
GVD	**Gavdhos**	**1.18**	**242**	P	**Pg**	**05 13 45.7**	**+0.4**
GVD				S	**Sg**	**05 14 01.2**	**+0.6**
KARP	**Karpathos**	**1.48**	**84**	*e*Pn	**Pn**	**05 13 50.6**	**+0.8**
KARP	**Karpathos**	**1.48**	**84**	*e*PN	**Pn**	**05 13 50.6**	**+0.8**
KARP	**Karpathos**	**1.48**	**84**	*e*Pn	**Pn**	**05 13 50.6**	**+0.8**
KYTH	**Kithira**	**2.08**	**296**	*e*Pn	**Pn**	**05 13 58.2**	**+0.2**
KYTH	**Kithira**	**2.08**	**296**	*e*PN	**Pn**	**05 13 58.2**	**+0.2**
KYTH	**Kithira**	**2.08**	**296**	*e*Pn	**Pn**	**05 13 58.2**	**+0.2**
VLI	**Veliai**	**2.36**	**305**	*e*Pb	**Pn**	**05 14 01.7**	**-0.2**
VLI	**Veliai**	**2.36**	**305**	*e*PB	**Pn**	**05 14 01.7**	**-0.2**
VLI	**Veliai**	**2.36**	**305**	*e*Pb	**Pn**	**05 14 01.7**	**-0.2**

BJI ***03*** *05:14:45.4, 8°.04N×82°.71W, h22km, mB4.9/2, Ms7 4.4/3*
CASC ***03*** *05:14:45.6±3.4, 8°.49N×82°.94W, h10km±12km, MD4.3, ML4.1, mb4.4(NEIC)*
ISCJB ***03*** *05:14:45.5±1.0, 8°.49N±0°.04×82°.97W±0°.03, h12km±6km, mb4.1/20, MS3.6/6, Error ellipse: s-maj=7.0km s-min=4.1km az=28.7*
NEIC ***03*** *05:14:49.2±3.2, 8°.55N×83°.00W, h22km±25km, mb4.4/15, Error ellipse: s-maj=14.7km s-min=8.5km az=50.0*
NEIC Felt at Golfito, Costa Rica.
IDC ***03*** *05:14:50.3±5.5, 8°.45N×83°.19W, h29km±42km, mb3.7/9, mb1 4.0/14, mb1mx3.9/25, mbtmp3.9/14, ML3.9/4, MS3.3/7, Ms1 3.3/7, ms1mx3.1/25, Error ellipse: s-maj=32.3km s-min=12.6km az=56.0*
ISC 03 05:14:47.1±1.0**, 8°.55N**±0°.04×**82°.98W**±0°.03**, h8**km±5km**, n77, σ1s39/82, mb4.1/20, MS3.6/6, 3C-2D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.38**	**49**	*e*P	**Pg**	**05 14 53.4**	**-1.1**
BRU2				*e*S	**Sg**	**05 15 01.2**	**+1.7**
BAR1		**0.77**	**335**	⇑*i*P	**Pg**	**05 14 59.1**	**-2.7**
BAR1				*e*S	**Sg**	**05 15 13.9**	**+2.1**
CNI	**Changuinola**	**0.98**	**28**	⇓*i*P	**Pg**	**05 15 03.6**	**-2.3**
BUS	**Buena Vista**	**1.26**	**323**	*e*P	**Pn**	**05 15 07.5**	**-3.5**
LIO	**Limon**	**1.45**	**358**	*e*P	**Pn**	**05 15 10.3**	**-3.3**
LIO				*e*S	**Sn**	**05 15 33.0**	**+0.2**
QCR	**Quepos**	**1.46**	**307**	⇑*i*P	**Pn**	**05 15 11.2**	**-2.5**
QCR				*e*S	**Sn**	**05 15 32.2**	**-0.7**
URSC	**Urasca**	**1.50**	**329**	⇓*i*P	**Pn**	**05 15 11.2**	**-3.1**
LAJ	**Bijagual**	**1.73**	**319**	*e*P	**Pn**	**05 15 16.6**	**-0.8**
LAJ				*e*S	**Sn**	**05 15 44.1**	**+4.5**
SJS	**Escuela Geolog**	**1.74**	**323**	*e*P	**Pn**	**05 15 15.3**	**-2.3**
SJS				*e*S	**Sn**	**05 15 40.0**	**0.0**
CGA2	**Cerro Gallo 2**	**2.07**	**315**	⇑*i*P	**Pn**	**05 15 20.3**	**-1.8**
CGA2				*e*S	**Sn**	**05 15 48.0**	**-0.1**
JCR	**Jicaral**	**2.47**	**302**	*e*P	**Pn**	**05 15 25.0**	**-2.6**
FORC	**Fortuna**	**2.53**	**319**	*e*P	**Pn**	**05 15 28.1**	**-0.4**
JTS	**JuntasAbangare**	**2.60**	**312**	Pn	**Pn**	**05 15 27.3**	**-2.2**
	29nm,0.3s,baz=104,slow=18,SNR=116						
JTS				Sn	**Sn**	**05 15 59.2**	**-2.1**
	25nm,0.3s,baz=339,slow=21,SNR=6.2						
JTS	**JuntasAbangare**	**2.60**	**312**	*e*Pn	**Pn**	**05 15 28.5**	**-0.9**
JTS				*e*Sn	**Sn**	**05 15 57.8**	**-3.5**
JTS	**JuntasAbangare**	**2.60**	**312**	*e*P	**Pn**	**05 15 28.8**	**-0.7**
JTS				*e*S	**Sn**	**05 16 01.3**	**0.0**
VCR	**Vista de Mar**	**3.05**	**301**	*e*P	**Pn**	**05 15 33.0**	**-2.6**
GUAB	**Guayabo de Bag**	**3.09**	**314**	*i*P	**Pn**	**05 15 36.6**	**+0.5**
LIM1	**Limonal**	**3.10**	**314**	*i*P	**Pn**	**05 15 36.9**	**+0.7**
BCIP	**Isla Barro Col**	**3.17**	**79**	*e*Pn	**Pn**	**05 15 34.8**	**-2.4**
BCIP				*e*S	**Sn**	**05 16 24.1**	**+8.9**
BCIP	**Isla Barro Col**	**3.17**	**79**	*e*P	**Pn**	**05 15 34.5**	**-2.7**
GPS3	**Bodega del ICE**	**3.21**	**313**	*i*P	**Pn**	**05 15 38.4**	**+0.5**
LAPC	**Finca la Perla**	**3.27**	**313**	*i*P	**Pn**	**05 15 39.1**	**+0.5**
BUEV	**Buena Vista**	**3.27**	**313**	*i*P	**Pn**	**05 15 39.4**	**+0.7**
GB1A	**Borinquen Arri**	**3.28**	**314**	*i*P	**Pn**	**05 15 39.8**	**+0.9**
UPIG		**3.44**	**82**	*e*P	**Pn**	**05 15 40.1**	**-0.8**
UPIG				*e*S	**Sn**	**05 16 21.1**	**-0.7**
SSN	**San Juan del S**	**3.94**	**314**	*e*P	**Pn**	**05 15 47.9**	**+0.1**
CONN	**Concepcion**	**3.97**	**319**	*e*P	**Pn**	**05 15 49.0**	**+0.7**
APON	**Apoyo**	**4.52**	**318**	*e*P	**Pn**	**05 15 57.4**	**+1.5**
CRUN	**El Crucero**	**4.72**	**317**	*e*P	**Pn**	**05 16 01.7**	**+3.1**
XAVN	**Gruta Xavier**	**4.86**	**318**	*e*P	**Pn**	**05 16 01.7**	**+1.1**
HUEN		**4.90**	**320**	*e*P	**Pn**	**05 16 02.2**	**+1.1**
CSAN		**4.95**	**317**	*e*P	**Pn**	**05 16 02.5**	**+0.7**
MOMN	**Momotombo**	**5.19**	**318**	*e*P	**Pn**	**05 16 06.0**	**+0.9**
CNGN	**Cerro Negro**	**5.37**	**317**	*e*P	**Pn**	**05 16 08.2**	**+0.7**
TGUH	**Tegucigalpa,Un**	**6.91**	**323**	*e*Pn	**Pn**	**05 16 31.3**	**+2.6**
	43nm,0.5s						
TGUH	**Tegucigalpa,Un**	**6.91**	**323**	*e*P	**Pn**	**05 16 28.4**	**-0.3**
TGUH				AML	AML	05 16 44.2	
	comp=N,166nm,0.5s						
ROSC	**El Rosal**	**9.34**	**113**	Pn	**Pn**	**05 17 05.8**	**+3.7**
	comp=N,0.4nm,0.3s,baz=275,slow=22,SNR=2.4						
ROSC				LR	LR	05 20 12.5	
	comp=N,110nm,19.2s,baz=360,slow=34						
OTAV	**Otavalo**	**9.41**	**151**	*e*Pn	**Pn**	**05 17 04.0**	**+1.0**
	comp=N,8.3nm,1.1s						
APG	**El Apazote**	**9.74**	**312**	Pn	**Pn**	**05 17 08.8**	**+1.3**
	comp=N,1.6nm,0.3s,baz=121,slow=9.4,SNR=16						
MTDJ	**Mount Denham**	**10.98**	**28**	*e*P	**Pn**	**05 17 25.6**	**+1.0**
SDV	**Santo Domingo**	**12.21**	**87**	Pn	**Pn**	**05 17 44.1**	**+2.7**
	comp=N,0.3nm,0.3s,baz=300,slow=10.0,SNR=6.5						
CMIG	**Matias Romero**	**14.37**	**307**	Pn	**Pn**	**05 18 09.0**	**-2.0**
	comp=N,0.7nm,0.3s,baz=100,slow=10,SNR=11						
CMIG				LR	LR	05 24 14.2	
	comp=N,103nm,19.1s,baz=236,slow=40						
SDDR	**Presa de Saban**	**15.37**	**46**	*e*P	**Pn**	**05 18 24.5**	**+0.1**
	comp=N,20nm,0.9s						
ATAH	**Atahualpa**	**16.23**	**164**	LR	LR	05 24 01.3	
	comp=N,282nm,19.9s,baz=16,slow=34						
MTP	**Monte Pirata**	**19.42**	**59**	*e*P	**Pn**	**05 19 12.3**	**-2.7**
	comp=N,19nm,1.0s						
NNA	**Nana**	**21.29**	**163**	P	**P**	**05 19 34.9**	**+0.6**
	comp=N,15nm,1.0s,mb4.3,baz=7.5,slow=12,SNR=4.0						
NNA	**Nana**	**21.29**	**163**	*e*P	**P**	**05 19 34.3**	**0.0**
	comp=N,12nm,0.8s,mb4.3						
HKT	**Hockley**	**24.46**	**332**	*e*P	**P**	**05 20 07.5**	**+1.0**
	comp=N,2.8nm,0.8s,mb3.7						
LRAL	**Lakeview Retre**	**24.65**	**352**	*e*P	**P**	**05 20 10.1**	**+1.8**
	comp=N,7.9nm,1.0s,mb4.2						
GOGA	**Godfrey**	**24.75**	**359**	*e*P	**P**	**05 20 09.2**	**+0.1**
	comp=N,17nm,1.0s,mb4.5						
SWET	**Sewanee**	**26.68**	**355**	*e*P	**P**	**05 20 28.6**	**+2.0**
TKL	**Tuckaleechee C**	**27.00**	**359**	P	**P**	**05 20 31.7**	**+2.2**
	comp=N,7.0nm,1.2s,mb4.1,baz=163,slow=13,SNR=2.5						
TKL				LR	LR	05 31 46.0	
	comp=N,135nm,19.0s,MS3.5,baz=104,slow=38						
TKL	**Tuckaleechee C**	**27.00**	**359**	P	**P**	**05 20 31.7**	**+2.2**
TKL				LR	LR	05 31 46.0	
MIAR	**Mount Ida**	**27.65**	**341**	*e*P	**P**	**05 20 37.4**	**+2.1**
	comp=N,9.1nm,1.3s,mb4.2						
TXAR	**Lajitas Array**	**28.37**	**320**	P	**P**	**05 20 43.0**	**+1.1**
	comp=N,0.1nm,0.7s,baz=153,slow=8.1,SNR=2.5						
LPAZ	**La Paz**	**28.72**	**149**	P	**P**	**05 20 47.4**	**+2.3**
	comp=N,0.6nm,0.8s,mb3.4,baz=328,slow=9.5,SNR=3.9						
WCI	**Wyandotte Cave**	**29.70**	**355**	*e*P	**P**	**05 20 54.0**	**+0.5**
	comp=N,6.2nm,0.7s,mb4.5						
CCM	**Cathedral Cave**	**30.31**	**347**	*e*P	**P**	**05 20 58.0**	**-0.9**
	comp=N,3.0nm,0.7s,mb4.1						
ACSO	**Alum Creek Sta**	**31.55**	**360**	*e*P	**P**	**05 21 08.9**	**-1.0**
	comp=N,11nm,1.0s,mb4.7						
JFWS	**Jewell Farm**	**34.82**	**351**	*e*P	**P**	**05 21 38.6**	**+0.2**
	comp=N,4.3nm,0.6s,mb4.6						
AGMN	**Agassiz Nation**	**41.09**	**347**	*e*P	**P**	**05 22 30.1**	**-1.1**
	comp=N,3.9nm,1.0s,mb4.0						
PDAR	**Pinedale Array**	**41.30**	**330**	P	**P**	**05 22 33.7**	**+0.6**
	comp=N,0.2nm,0.4s,mb3.1,baz=129,slow=7.2,SNR=2.4						
CFAA	**Coronel Fontan**	**42.34**	**161**	P	**P**	**05 22 42.2**	**+0.5**
	comp=N,0.2nm,0.8s,baz=8.9,slow=6.4,SNR=3.9						
NVAR	**Mina Array Bea**	**43.52**	**319**	P	**P**	**05 22 50.6**	**-0.6**
	comp=N,1.3nm,0.6s,mb3.8,baz=121,slow=6.7,SNR=11						
WVOR	**Wild Horse Val**	**46.04**	**323**	*e*P	**P**	**05 23 12.2**	**+1.0**
	comp=N,1.4nm,0.7s,mb4.0						
PLCA	**Paso Flores**	**50.35**	**168**	P	**P**	**05 23 42.3**	**-2.3**
	comp=N,1.8nm,0.8s,mb4.2,baz=342,slow=15,SNR=3.5						
EDM	**Edmonton**	**50.87**	**337**	*e*P	**P**	**05 23 47.3**	**-1.0**
YKA	**Yellowknife Ar**	**58.55**	**343**	P	**P**	**05 24 43.4**	**-0.4**
	comp=N,0.5nm,0.7s,mb3.7,baz=138,slow=7.2,SNR=6.0						
YKA				LR	LR	05 51 27.7	
	comp=N,4.3nm,19.4s,MS2.6,baz=230,slow=38						
RES	**Resolute Bay**	**66.45**	**357**	*e*P	**P**	**05 25 35.4**	**-1.1**
	comp=N,2.1nm,0.9s,mb4.2						
SUMG	**Summit**	**69.32**	**13**	*e*P	**P**	**05 25 53.8**	**-0.8**
	comp=N,5.1nm,0.9s,mb4.5						
TORD	**Torodi Ar. Bea**	**82.95**	**78**	LR	LR	06 03 23.5	
	comp=N,36nm,18.5s,MS3.8,baz=200,slow=35						
NOA	**NORSAR Array B**	**84.62**	**29**	LR	LR	05 58 02.9	
	comp=N,9.3nm,20.5s,MS3.2,baz=315,slow=31						
ARCES	**ARCESS Array B**	**88.40**	**19**	P	**P**	**05 27 38.3**	**-1.0**
	comp=N,4.3nm,0.9s,mb4.7,baz=303,slow=6.7,SNR=3.8						
BJI	**Beijing**	**128.51**	**341**	PKP	PKPdf	05 33 53.7	-1.3
BJI				LR	LR		
	comp=Z,29nm,16.7s,MS4.0						
HHC	**Hu-ho-hao-te**	**129.06**	**346**	*e*PKP	PKPdf	05 33 54.1	-1.9
HHC				PP	PP	05 36 05.4	+3.1
HHC				PKS		05 37 29.1	
HHC				SKS	SKSdf	05 41 00.4	-7.8
HHC				SKKS	SKKSac	05 42 52.1	-9.1
HHC				AMB	AMB		
	comp=Z,51nm,10.1s						
HHC				LR	LR		
	comp=Z,110nm,30.9s,MS4.4						
NJ2	**Nanjing**	**134.56**	**334**	*e*PKP	PKPdf	05 34 04.2	-2.5
CD2	**Chengdu**	**140.24**	**351**	*e*PKP	PKPdf	05 34 14.8	-2.4

ISK ***03*** *05:14:47.6, 37°.81N×27°.02E, h10km, MD2.9*
NEIC ***03*** *05:14:47.0, 37°.81N×27°.01E, h9km, MD3.2(ATH), MD3.0(ISK), After ISK.*
ATH ***03*** *05:14:47.7, 37°.75N×27°.14E, h28km±6km, MD3.2/4*
ISCJB ***03*** *05:14:48.8±0.4, 37°.84N±0°.02×27°.13E±0°.03, h9km±3km, Error ellipse: s-maj=5.2km s-min=3.1km az=142.5*
DDA ***03*** *05:14:48.4, 37°.86N×27°.10E, h7km±2km, Md2.9*
CSEM ***03*** *05:14:48.8±0.2, 37°.83N×27°.13E, h8km, MD3.2, Error ellipse: s-maj=5.1km s-min=2.9km az=54.0*
THE ***03*** *05:14:51.2, 37°.98N×27°.11E, h0km±6km, ML3.5/3, Error ellipse: s-maj=14.2km s-min=2.9km az=135.0*
ISC 03 05:14:49.3±0.4**, 37°.83N**±0°.02×**27°.13E**±0°.04**, h10**km±3km**, n49, σ0s84/76, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.15**	**147**	*i*P	**Pg**	**05 14 52.7**	**0.0**
GCAM				*i*S	**Sg**	**05 14 55.8**	**+0.7**
GCAM	**G?zelcaml?**	**0.15**	**147**	*i*P	**Pg**	**05 14 52.7**	**0.0**
GCAM				*i*S	**Sg**	**05 14 55.8**	**+0.7**
SMG	**Samos**	**0.26**	**243**	*e*Pb	**Pg**	**05 14 54.5**	**-0.1**
SMG				*e*Sb	**Sg**	**05 14 58.9**	**+0.7**
SMG	**Samos**	**0.26**	**243**	*e*PB	**Pg**	**05 14 54.5**	**-0.1**
SMG				*e*SB	**Sg**	**05 14 58.9**	**+0.7**
SMG	**Samos**	**0.26**	**243**	*e*Pb	**Pg**	**05 14 54.5**	**-0.1**
SMG				*e*Sb	**Sg**	**05 14 58.9**	**+0.7**
BLCB	**Balcova**	**0.56**	**353**	*e*PG	**Pg**	**05 14 58.9**	**-1.3**
BLCB				*e*SG	**Sg**	**05 15 07.8**	**+0.2**
BLCB	**Balcova**	**0.56**	**353**	P	**Pg**	**05 14 58.9**	**-1.3**
BLCB				S	**Sg**	**05 15 05.6**	**-2.0**
BLCB	**Balcova**	**0.56**	**353**	*e*Sg	**Sg**	**05 15 07.8**	**+0.2**
BLCB	**Balcova**	**0.56**	**353**	P	**Pg**	**05 14 58.9**	**-1.3**
BLCB				S	**Sg**	**05 15 05.6**	**-2.0**
IZM	**Izmir**	**0.58**	**10**	*e*PG	**Pg**	**05 15 01.0**	**+0.4**
IZM				*e*SG	**Sg**	**05 15 09.2**	**+1.1**
IZM	**Izmir**	**0.58**	**10**	*e*Pg	**Pg**	**05 15 01.0**	**+0.5**
AYDN	**Tasoluk**	**0.62**	**106**	*e*P	**Pg**	**05 15 00.9**	**-0.4**
AYDN				*i*S	**Sg**	**05 15 09.0**	**-0.4**
AYDN	**Tasoluk**	**0.62**	**106**	*e*P	**Pg**	**05 15 00.9**	**-0.4**
AYDN				*i*S	**Sg**	**05 15 09.0**	**-0.4**
MLSB	**Milas**	**0.74**	**136**	*e*PG	**Pg**	**05 15 03.2**	**-0.4**
MLSB				*e*SG	**Sg**	**05 15 14.4**	**+1.1**
MLSB	**Milas**	**0.74**	**136**	*e*Pg	**Pg**	**05 15 03.2**	**-0.4**
MLSB				*e*Sg	**Sg**	**05 15 14.4**	**+1.1**
BDRM	**Kayabasi**	**0.80**	**162**	*i*P	**Pg**	**05 15 04.2**	**-0.6**
BDRM	**Kayabasi**	**0.80**	**162**	*i*P	**Pg**	**05 15 04.2**	**-0.6**
CHOS	**Chios island**	**1.01**	**304**	P	**Pg**	**05 15 08.6**	**-0.2**
CHOS				S	**Sg**	**05 15 22.6**	**+0.6**
CHOS	**Chios island**	**1.01**	**304**	*e*PN	**Pg**	**05 15 08.7**	**-0.1**
CHOS				*e*SN	**Sn**	**05 15 23.2**	**-0.6**
CHOS	**Chios island**	**1.01**	**304**	P	**Pg**	**05 15 08.6**	**-0.2**
CHOS				S	**Sg**	**05 15 22.6**	**+0.6**
CHOS				*e*Sn	**Sn**	**05 15 23.2**	**-0.6**
YER	**Yerkesik**	**1.15**	**127**	*e*PN	**Pn**	**05 15 10.7**	**-0.7**
YER				*e*SN	**Sn**	**05 15 28.5**	**+1.4**
YER	**Yerkesik**	**1.15**	**127**	*e*Pn	**Pn**	**05 15 10.7**	**-0.7**
YER				*e*Sn	**Sn**	**05 15 28.5**	**+1.4**
DAT	**Datca**	**1.16**	**162**	*e*PN	**Pn**	**05 15 10.7**	**-0.8**
DAT				*e*SN	**Sn**	**05 15 26.6**	**-0.7**
DAT	**Datca**	**1.16**	**162**	*e*Pn	**Pn**	**05 15 10.7**	**-0.8**
DAT				*e*Sn	**Sn**	**05 15 26.6**	**-0.7**
AKS	**Akhisar**	**1.18**	**27**	*e*PN	**Pn**	**05 15 10.7**	**-1.1**
AKS	**Akhisar**	**1.18**	**27**	*e*Pn	**Pn**	**05 15 10.7**	**-1.1**
KULA	**Kula-Manisa**	**1.39**	**60**	*e*PN	**Pn**	**05 15 14.7**	**0.0**
KULA	**Kula-Manisa**	**1.39**	**60**	*e*Pn	**Pn**	**05 15 14.7**	**0.0**
DENT	**Denizli**	**1.51**	**92**	*e*PN	**Pn**	**05 15 16.8**	**+0.4**
DENT	**Denizli**	**1.51**	**92**	*e*Pn	**Pn**	**05 15 16.8**	**+0.5**
PRK	**Paraskevi**	**1.57**	**335**	*e*Pb	**Pb**	**05 15 16.1**	**-2.2**
PRK				*e*Sn	**Sn**	**05 15 38.2**	**+0.8**
PRK	**Paraskevi**	**1.57**	**335**	P	**Pn**	**05 15 17.3**	**+0.2**
PRK				S	**Sn**	**05 15 38.2**	**+0.8**
PRK	**Paraskevi**	**1.57**	**335**	*e*PB	**Pb**	**05 15 16.1**	**-2.2**
PRK				*e*SN	**Sn**	**05 15 38.2**	**+0.8**
PRK	**Paraskevi**	**1.57**	**335**	*e*Pb	**Pb**	**05 15 16

SONM	Songino Array	80.32	323	P		P	05 57 14.0	+0.6
	0.8nm,0.7s,mb3.5,baz=136,slow=4.7,SNR=6.3							
COLA	College	84.03	18	*e*P		P	05 57 31.6	-0.7
	6.8nm,0.7s,mb4.5							
COLD	Coldfoot	85.11	15	*e*P		P	05 57 38.5	+0.9
	3.2nm,1.1s,mb4.0							
NVAR	Mina Array Bea	85.87	49	P		P	05 57 40.8	-1.2
	1.0nm,0.7s,mb3.7,baz=237,slow=9.6,SNR=8.4							
EGAK	Eagle	86.07	20	*e*P		P	05 57 42.2	-0.1
	3.3nm,0.7s,mb4.2							
N12A	Clover Valley,	89.02	48	*e*P		P	05 57 57.9	+1.0
	5.7nm,1.0s,mb4.4							
M13A	Montello	89.79	48	*e*P		P	05 58 01.2	+0.7
	7.7nm,0.9s,mb4.5							
MKAR	Makanchi Array	95.20	317	P		P	05 58 25.8	+0.4
	2.5nm,0.8s,mb4.4,baz=88,slow=8.6,SNR=18							
TXAR	Lajitas Array	95.34	61	P		P	05 58 25.1	-1.3
	0.2nm,0.5s,mb3.5,baz=228,slow=3.2,SNR=3.7							
YKA	Yellowknife Ar	95.47	27	P		P	05 58 25.0	-1.2
	0.7nm,0.5s,mb4.0,baz=258,slow=4.8,SNR=9.6							
ARCES	ARCESS Array B	117.77	346	PKP	PKPdf		06 03 45.9	-0.2
	1.5nm,0.3s,baz=77,slow=2.3,SNR=34							
ARCES	ARCESS Array B	117.77	346	PKP	PKPdf		06 03 45.9	-0.2
FINES	FINESS Array B	123.30	339	PKP	PKPdf		06 03 56.8	-0.1
	1.9nm,0.7s,baz=90,slow=0.4,SNR=4.4							
NOA	NORSAR Array B	128.15	345	PKP	PKPdf		06 04 07.0	+0.8
	0.5nm,0.5s,baz=34,slow=3.1,SNR=3.1							
GERES	GERESS Array B	137.29	334	PKP	PKPdf		06 04 25.2	+1.4
	0.4nm,0.2s,baz=129,slow=1.9,SNR=3.7							
ORIF	Oris-en-Rattie	143.63	337	⇑*i*PKP1	PKPdf		06 04 34.2	-1.2
	15nm,0.6s							
SBF	Sospel	143.88	335	⇑*i*PKP1	PKPdf		06 04 34.2	-1.6
	37nm,0.8s							
MFF	Saint Martin d	144.05	345	*e*PKP1	PKPdf		06 04 36.7	+0.7
VIVF	Saint-Julien-l	144.13	338	*e*PKP1	PKPdf		06 04 35.7	-0.5
	6.8nm,0.7s							
PGF	Pioggiola	144.24	332	⇑*i*PKP1	PKPdf		06 04 35.7	-0.8
	23nm,0.7s							
FRF	La Foret Royal	144.46	335	⇑*i*PKP1	PKPdf		06 04 36.3	-0.6
	19nm,0.7s							
SMRF	Simiane la Rot	144.54	337	*e*PKP1	PKPdf		06 04 37.2	+0.2
	10nm,0.8s							
LMR	La Mourre	144.70	335	⇑*i*PKP1	PKPdf		06 04 37.1	-0.2
	17nm,0.8s							
LASF	Ste Croix	145.09	339	*e*PKP1	PKPbc		06 04 38.8	+0.8
MTLF	Montolieu	146.31	340	*e*PKP1	PKPbc		06 04 42.4	+0.8
SJPF	Ste Jean	147.57	344	*e*PKP1	PKPbc		06 04 42.7	-2.4
KEST	Kesra	149.08	323	PKPbc	PKPbc		06 04 49.6	+0.3
	3.0nm,0.9s,baz=296,slow=9.8,SNR=4.7							
ESDC	Sonseca Array	151.51	345	PKPbc	PKPbc		06 04 55.5	+0.6
	1.0nm,0.5s,baz=1.1,slow=3.6,SNR=6.7							
TORD	Torodi Ar. Bea	165.60	275	PKPab	PKPab		06 06 05.8	-0.3
	1.1nm,1.0s,baz=80,slow=5.1,SNR=5.0							

*TAP **03** 05:48:02.3, 24°.26N×121°.69E, h55km, ML3.4, C*
*JMA **03** 05:48:02.2±0.3, 24°.34N×121°.81E, h72km, M2.7*
*ISCJB **03** 05:48:02.3±0.3, 24°.24N±0°.02×121°.80E±0°.02, h54km±4km, Error ellipse: s-maj=4.3km s-min=2.7km az=145.5*

ISC 03 05:48:02.8±0.3, 24°.25N±0°.02×121°.79E±0°.02, h52km±5km, n46, σ0°86/78, 7C-2D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.18**	**347**	⇑P	**Pn**	**05 48 11.2**	**-0.1**
	baz=6.0						
ENA				*e*S	**Sn**	**05 48 18.3**	**+1.0**
	baz=6.0						
TWD	**Chiawan**	**0.24**	**226**	⇓*i*P	**Pn**	**05 48 11.2**	**-0.5**
	baz=217						
TWD				*e*S	**Sn**	**05 48 17.5**	**-0.5**
	baz=217						
HWA	**Hwalien**	**0.32**	**212**	*e*P	**Pn**	**05 48 12.1**	**-0.2**
	baz=208						
HWA				*e*S	**Sn**	**05 48 19.3**	**+0.2**
	baz=208						
TWC	**Suao**	**0.36**	**9**	P	**Pn**	**05 48 13.0**	**+0.3**
	baz=18						
TWC				*e*S	**Sn**	**05 48 21.5**	**+1.7**
	baz=18						
NNS	**Nan Shan**	**0.42**	**297**	⇑P	**Pn**	**05 48 12.8**	**-0.5**
	baz=301						
NNS				*e*S	**Sn**	**05 48 20.4**	**-0.5**
	baz=301						
ENTT	**Nioudou**	**0.44**	**333**	P	**Pn**	**05 48 13.1**	**-0.4**
	baz=341						
ENTT				*e*S	**Sn**	**05 48 21.0**	**-0.2**
	baz=341						
ESF	**Shoufeng Towns**	**0.45**	**214**	*e*P	**Pn**	**05 48 12.7**	**-1.0**
	baz=212						
TWE	**Neicheng**	**0.48**	**347**	P	**Pn**	**05 48 13.7**	**-0.3**
	baz=352						
TWE				*e*S	**Sn**	**05 48 22.6**	**+0.5**
	baz=352						
WHF	**Hehuan Shan**	**0.49**	**258**	⇓*i*P	**Pn**	**05 48 13.9**	**-0.2**
	baz=251						
WHF				S	**Sn**	**05 48 22.0**	**-0.1**
	baz=251						
ESL	**Shilin**	**0.54**	**217**	P	**Pn**	**05 48 13.2**	**-1.5**
	baz=214						
ESL				*e*S	**Sn**	**05 48 21.5**	**-1.7**
	baz=214						
TWT	**Tachien**	**0.56**	**271**	⇑P	**Pn**	**05 48 14.9**	**0.0**
	baz=263						
TWT				S	**Sn**	**05 48 23.8**	**+0.2**
	baz=263						
NSK	**Sanguang**	**0.58**	**318**	⇑*i*P	**Pn**	**05 48 14.6**	**-0.5**
	baz=322						
NSK				S	**Sn**	**05 48 22.7**	**-1.3**
	baz=322						
TWA	**Mucha**	**0.75**	**346**	⇑P	**Pn**	**05 48 16.8**	**-0.6**
	baz=351						
TWA				*e*S	**Sn**	**05 48 28.0**	**+0.2**
	baz=351						
TWB1	**Santiao Chiao**	**0.78**	**14**	*e*P	**Pn**	**05 48 17.9**	**+0.3**
	baz=26						
TWB1				*e*S	**Sn**	**05 48 30.1**	**+1.6**
	baz=26						
NSTT	**Nanjuang**	**0.81**	**298**	P	**Pn**	**05 48 17.5**	**-0.5**
	baz=300						
NSTT				*e*S	**Sn**	**05 48 29.2**	**0.0**
	baz=300						
NWF	**Wu-fen Shan**	**0.82**	**360**	⇑P	**Pn**	**05 48 18.1**	**0.0**
	baz=351						
NWF				*e*S	**Sn**	**05 48 30.9**	**+1.5**
	baz=351						
EHY	**Hungye**	**0.85**	**210**	*e*P	**Pn**	**05 48 17.6**	**-1.1**
	baz=198						
SMLT	**Sun Moon Lake**	**0.89**	**246**	*e*P	**Pn**	**05 48 19.0**	**-0.1**
	baz=240						
SMLT				*e*S	**Sn**	**05 48 31.1**	**+0.1**
	baz=240						
NCU	**National Centr**	**0.90**	**323**	*i*P	**Pn**	**05 48 18.5**	**-0.7**
	baz=326						
NCU				*e*S	**Sn**	**05 48 31.5**	**+0.1**
	baz=326						
TYC	**Yuchr**	**0.92**	**248**	*e*P	**Pn**	**05 48 19.3**	**-0.1**
	baz=246						
TYC				*e*S	**Sn**	**05 48 31.9**	**+0.2**
	baz=246						
TWQ1	**Liyutan**	**0.93**	**276**	⇑*i*P	**Pn**	**05 48 19.1**	**-0.5**
	baz=276						
TWQ1				*e*S	**Sn**	**05 48 31.6**	**-0.4**
	baz=276						
NSY	**Sanyi**	**0.95**	**280**	P	**Pn**	**05 48 19.5**	**-0.4**
	baz=280						
TWF1	**Yuli**	**1.00**	**207**	*e*P	**Pn**	**05 48 19.3**	**-1.3**
	baz=206						
TCU	**Taichung**	**1.02**	**265**	*e*P	**Pn**	**05 48 20.5**	**-0.3**
	baz=264						
TWY	**Chenhua**	**1.04**	**351**	*e*P	**Pn**	**05 48 19.6**	**-1.4**
	baz=344						
WNT	**Mingjian**	**1.07**	**250**	*e*P	**Pn**	**05 48 21.9**	**+0.3**
	baz=248						
WNT				*e*S	**Sn**	**05 48 36.9**	**+1.5**
	baz=248						
YUS	**Yu-Shan**	**1.07**	**225**	*e*P	**Pn**	**05 48 20.0**	**-1.5**
	baz=219						
YOJ	**Yonaguni jima**	**1.14**	**79**	P	**Pn**	**05 48 22.3**	**-0.1**
YOJ				*e*S	**Sn**	**05 48 37.3**	**+0.3**
ALS	**Alishan**	**1.16**	**231**	*e*P	**Pn**	**05 48 23.4**	**+0.7**
	baz=221						
ALS				*e*S	**Sn**	**05 48 37.1**	**-0.4**
	baz=221						
CHN5	**Tsauling**	**1.20**	**238**	*e*P	**Pn**	**05 48 23.6**	**+0.3**
	baz=236						
CHN5				*e*S	**Sn**	**05 48 39.7**	**+1.2**
	baz=236						
ELDTW	**Lidau**	**1.27**	**214**	*e*P	**Pn**	**05 48 23.0**	**-1.2**
	baz=205						
PCYT	**Pengchaiyu**	**1.40**	**11**	*e*P	**Pn**	**05 48 26.0**	**+0.1**
	baz=12						
CHY	**Chiayi**	**1.45**	**239**	*e*P	**Pn**	**05 48 28.7**	**+2.0**
	baz=250						
WTP	**Ta-pu**	**1.47**	**227**	*e*P	**Pn**	**05 48 27.4**	**+0.6**
	baz=226						
WTP				*e*S	**Sn**	**05 48 47.0**	**+2.1**
	baz=226						
TWK	**Hsinying**	**1.54**	**231**	*e*P	**Pn**	**05 48 28.4**	**+0.5**
	baz=230						
TWK				*e*S	**Sn**	**05 48 48.0**	**+1.3**
	baz=230						
CHN1	**Nanshi**	**1.56**	**228**	*e*P	**Pn**	**05 48 27.8**	**-0.4**
	baz=227						
CHN1				*e*S	**Sn**	**05 48 48.8**	**+1.4**
	baz=227						
TWG	**Pinlang**	**1.56**	**205**	*e*P	**Pn**	**05 48 26.6**	**-1.7**
	baz=195						
SGST	**Jiashian**	**1.60**	**224**	*e*P	**Pn**	**05 48 29.3**	**+0.6**
	baz=223						
IRIF	**Iriomote-Funau**	**1.78**	**87**	P	**Pn**	**05 48 30.6**	**-0.5**
IRIF				*e*S	**Sn**	**05 48 52.2**	**-0.3**
SSD	**Sandimen**	**1.83**	**216**	*e*P	**Pn**	**05 48 33.0**	**+1.1**
	baz=205						
SSD				*e*S	**Sn**	**05 48 55.0**	**+1.1**
	baz=205						
HATJ	**Hateruma jima**	**1.85**	**95**	P	**Pn**	**05 48 32.4**	**+0.3**
HATJ				*e*S	**Sn**	**05 48 55.8**	**+1.4**
JKRS	**Kuro-shima**	**2.03**	**90**	P	**Pn**	**05 48 34.8**	**+0.3**
JKRS				*e*S	**Sn**	**05 48 58.7**	**0.0**
EAST	**Anshuo**	**2.05**	**205**	*e*P	**Pn**	**05 48 36.2**	**+1.4**
	baz=197						
PNG	**Penghu**	**2.15**	**252**	*e*P	**Pn**	**05 48 34.1**	**-2.1**
	baz=252						
JIJ	**Ishigaki jima**	**2.15**	**86**	P	**Pn**	**05 48 36.0**	**-0.2**
JIJ				*e*S	**Sn**	**05 49 01.1**	**-0.7**
JTJ	**Tarama**	**2.69**	**81**	P	**Pn**	**05 48 43.8**	**+0.3**
JTJ				*e*S	**Sn**	**05 49 14.6**	**-0.2**

CASC 03 06:21:39.7±2.7, 8°.39N×82°.92W, h32km±17km, MD3.6, 1C-1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.46**	**29**	*i*P	Pb	06 21 50.0	+0.3
BRU2				*e*S	Sb	06 21 58.1	+1.6
TBS2		**0.48**	**33**	*e*P	Pb	06 21 56.2	+6.3
TBS2				*e*S	Sb	06 22 05.6	+8.6
BAR1		**0.93**	**336**	*e*P	Pn	06 21 56.0	-0.6
CNI	**Changuinola**	**1.10**	**21**	⇑*i*P	Pn	06 22 00.3	+1.4
BUS	**Buena Vista**	**1.43**	**325**	*e*P	Pn	06 22 04.2	+0.8
BUS				*e*S	Sn	06 22 22.6	+1.6
URSC	**Urasca**	**1.67**	**330**	⇓*e*P	Pn	06 22 07.9	+1.2
URSC				*e*S	Sn	06 22 25.7	-1.3

CASC 03 06:44:45.2±2.3, 8°.28N×82°.76W, h27km±11km, MD3.9, 2C-1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.52**	**8**	⇓*i*P	Pb	06 44 56.1	+0.4
BRU2				*e*S	Sb	06 45 05.0	+2.1
TBS2		**0.52**	**12**	⇑*i*P	Pb	06 45 02.5	+6.7
TBS2				*e*S	Sb	06 45 11.1	+8.1
BAR1		**1.10**	**330**	*e*P	Pn	06 45 03.4	-1.4
CNI	**Changuinola**	**1.16**	**12**	⇑*i*P	Pn	06 45 06.6	+1.0
BUS	**Buena Vista**	**1.60**	**322**	*e*P	Pn	06 45 11.5	-0.2
BUS				*e*S	Sn	06 45 30.2	-1.4
QCR	**Quepos**	**1.79**	**309**	*e*P	Pn	06 45 14.6	+0.3
QCR				*e*S	Sn	06 45 38.5	+2.3
URSC	**Urasca**	**1.84**	**327**	*e*P	Pn	06 45 15.1	+0.1
URSC				*e*S	Sn	06 45 38.0	+0.5
URSC				*e*S	Sn	06 45 38.1	+0.7
LAJ	**Bijagual**	**2.07**	**320**	*e*P	Pn	06 45 21.9	+3.8
CGA2	**Cerro Gallo 2**	**2.41**	**316**	*e*P	Pn	06 45 22.9	+0.1

*NEIC **03** 06:53:22.0, 37°.95S×73°.37W, h18km, ML4.1(GUC), After GUC.*

GUC 03 06:53:22.0±0.7, 37°.95S×73°.37W, h18km±3km, MD3.9, ML4.1, 4C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCHI	**Chillan**	**1.69**	**38**	*e*P	Pn	06 53 50.9	+0.3
CCHI				*i*S	Sn	06 54 12.3	+0.4
CCHI	**Chillan**	**1.69**	**38**	*e*P	Pn	06 53 50.9	+0.3
CCHI				*i*S	Sn	06 54 12.3	+0.4
CCHI				AML	AML	06 54 17.9	
	comp=E,2μm,0.3s						
VLCH	**Valdivia**	**1.85**	**177**	⇑*i*P	Pn	06 53 52.9	0.0
VLCH				*i*S	Sn	06 54 16.7	+0.8
VLCH	**Valdivia**	**1.85**	**177**	⇑*i*P	Pn	06 53 52.9	0.0
VLCH				*i*S	Sn	06 54 16.7	+0.8
VLCH				AML	AML	06 54 23.4	
	comp=E,2μm,0.6s						
COCH	**Cobquecura**	**1.87**	**14**	*i*P	Pn	06 53 53.5	+0.3
COCH				*i*S	Sn	06 54 17.4	+1.0
OSCH	**Osorno**	**2.63**	**176**	*i*P	Pn	06 54 04.5	+1.0
OSCH				*i*S	Sn	06 54 37.0	+2.1
TALC	**Talca**	**2.90**	**29**	*e*P	Pn	06 54 07.0	-0.3
TALC				*e*S	Sn	06 54 42.2	+0.5
TALC	**Talca**	**2.90**	**29**	*e*P	Pn	06 54 07.0	-0.3
TALC				*e*S	Sn	06 54 42.2	+0.5
TALC				AML	AML	06 54 56.0	
	comp=E,2μm,0.4s						
PLCA	**Paso Flores**	**3.53**	**143**	*e*Pn	Pn	06 54 15.4	-0.6
LNV	**Longovilo**	**4.29**	**22**	⇑*i*P	Pn	06 54 25.6	-0.8
LNV				*i*S	Sn	06 55 14.9	-1.0
CACH	**El Canelo**	**4.43**	**31**	⇑*i*P	Pn	06 54 29.3	+1.0
CACH				*i*S	Sn	06 55 21.0	+1.5

IDC 03 06:54:08.5±1.3, 10°.18N×126°.09E, h0km, mb3.9/7, mb1 3.9/7, mb1mx3.7/22, mbtmp3.9/7, MS3.7/1, Ms1 3.7/1, ms1mx2.5/28, Error ellipse: s-maj=62.5km s-min=27.6km az=66.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**36.03**	**147**	LR	LR	07 14 01.8	
	comp=Z,116nm,21.2s,baz=272,slow=33						
SONM	**Songino Array**	**41.05**	**340**	P	P	07 01 55.2	+1.6
	0.2nm,0.3s,baz=162,slow=9.2,SNR=2.9						
STKA	**Stephens Creek**	**44.37**	**161**	P	P	07 02 20.9	+0.1
	0.7nm,0.6s,baz=346,slow=8.3,SNR=3.6						
PETK	**Petropavlovsk-**	**49.80**	**24**	P	P	07 03 02.6	-0.3
	1.1nm,0.7s,baz=239,slow=7.2,SNR=3.1						
MKAR	**Makanchi Array**	**52.00**	**323**	P	P	07 03 19.7	+0.1
	0.5nm,0.4s,baz=114,slow=7.4,SNR=8.0						
ZALV	**Zalesovo Beam**	**54.62**	**331**	P	P	07 03 38.5	-0.3
	0.7nm,0.4s,baz=108,slow=7.7,SNR=3.3						
KURK	**Kurchatov**	**56.05**	**326**	P	P	07 03 48.7	-0.5
	0.6nm,0.4s,baz=122,slow=7.4,SNR=6.8						
ARCES	**ARCESS Array B**	**84.22**	**340**	P	P	07 06 41.2	-0.4
	2.6nm,0.7s,baz=78,slow=6.4,SNR=6.8						

DJA 03 06:54:34.0±54S×122°.70E, h13km, MLv3.8/6, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.50**	**172**	P	Pg	06 54 42.6	-1.3
LUWI				S	Sg	06 54 49.7	-1.0
APSI	**Ampana**	**1.11**	**251**	P	Pb	06 54 53.9	-1.2
APSI				S	Sb	06 55 10.2	+0.6
MRSI	**Marisa**	**1.26**	**323**	P	Pn	06 54 55.7	-1.7
MNI	**Manado**	**2.91**	**47**	P	Pn	06 55 22.6	+2.6
KDI	**Kendari**	**3.40**	**181**	P	Pn	06 55 25.8	-0.9
TTSI	**Tana Toraja**	**3.81**	**229**	P	Pn	06 55 32.5	+0.1
NLAI	**Namlea**	**5.15**	**121**	P	Pn	06 55 52.3	+1.4
	0.6nm2μm109nm,1.1s						
KAPI	**Kappang**	**5.33**	**213**	P	Pn	06 55 52.1	-1.3

*NIED **03** 06:55:00, 46°.30N×152°.10E, h50km, Mw4.2 Best double couple: M0:2.32000×10^15 NP1:φ0=230.00000°, δ77.00000°, λ103.00000°. NP2:φ0=5.00000°, δ19.00000°, λ46.00000°.*
*ISCJB **03** 06:55:27.5±1.1, 46°.3N±0°.1×152°.22E±0°.09, h45km±9km, mb4.1/27, MS3.4/5, Error ellipse: s-maj=19.2km s-min=7.2km az=154.2*
*MOS **03** 06:55:30.0±0.9, 46°.19N×152°.09E, h74km, mb4.4/14, Error ellipse: s-maj=16.1km s-min=11.7km az=53.9*
*NEIC **03** 06:55:30.6±0.8, 46°.30N×152°.23E, h58km±6km, mb4.1/12, Error ellipse: s-maj=12.3km s-min=5.5km az=161.0*
*IDC **03** 06:55:33.7±3.1, 46°.51N×152°.13E, h79km±25km, mb3.7/15, mb1 3.9/17, mb1mx3.8/28, mbtmp3.7/17, MS3.2/8, Ms1 3.2/8, ms1mx2.9/31, Error ellipse: s-maj=39.2km s-min=14.7km az=173.0*

ISC 03 06:55:29.8±1.0, 46°.3N±0°.1×152°.18E±0°.09, h49km±8km, n68, σ0°68/65, mb4.1/27, MS3.4/5, 2C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.21**	**252**	*e*PN	**Pn**	**06 56 18.0**	**+0.3**
KUR				*e*S	**Sn**	**06 56 54.0**	**-0.7**
KUR				pmax	pmax		
	comp=Z,90nm,0.5s						
KUR				smax			
	comp=N,190nm,0.7s						
KUR				smax			
	comp=E,370nm,0.7s						
SKR	**Severo-Kuril's**	**5.08**	**30**	*e*PN	**Pn**	**06 56 41.5**	**-1.9**
SKR				pmax	pmax		
	comp=N,50nm,0.5s						
SKR				pmax	pmax		
	comp=E,50nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
YSS	**Yuzh-Sakhalins**	**6.52**	**279**	⇑*i*PN	**Pn**	**06 57 06.3**	**+3.2**
YSS	**Yuzh-Sakhalins**	**6.52**	**279**	*e*Pn	**Pn**	**06 57 06.3**	**+3.2**
ASAJ	**Asahikawa**	**7.12**	**255**	P	**Pn**	**06 57 16.1**	**+4.9**
	comp=Z,1.3nm,0.3s,baz=185,slow=4.0,SNR=6.8						
ASAJ	**Asahikawa**	**7.12**	**255**	PN	**Pn**	**06 57 16.2**	**+4.9**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PEA0B	**Petropavlovsk-**	**7.67**	**26**	*e*Pn	**Pn**	**06 57 19.4**	**+0.6**
PETK	**Petropavlovsk-**	**7.67**	**26**	P	**Pn**	**06 57 20.1**	**+1.3**
	comp=Z,1.5nm,0.3s,baz=181,slow=12,SNR=24						
PETK				LR	LR	07 00 16.4	
	comp=Z,70nm,21.1s,baz=232,slow=38						
PETK	**Petropavlovsk-**	**7.67**	**26**	PN	**Pn**	**06 57 20.1**	**+1.3**
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PETK				MLR	MLR		
	comp=Z,70nm,21.1s						
ERM	**Erimo**	**7.79**	**240**	*e*PN	**Pn**	**06 57 20.4**	**0.0**
ERM				pmax	pmax		
	comp=Z,29nm,0.9s						
ERM	**Erimo**	**7.79**	**240**	*e*Pn	**Pn**	**06 57 20.4**	**-0.1**
	comp=Z,29nm,0.9s						
MJAR	**Matsushiro Arr**	**14.31**	**232**	LR	LR	07 05 04.9	
	comp=Z,119nm,18.8s,baz=110,slow=40						
FX1	**Attu Island--F**	**15.07**	**57**	P	**Pn**	**06 58 57.9**	**-1.5**
	comp=Z,1.3nm,0.3s,baz=71,slow=15,SNR=8.4						
FX1				LR	LR	07 03 55.4	
	comp=Z,16nm,19.4s,baz=288,slow=33						
FX1	**Attu Island--F**	**15.07**	**57**	P	**Pn**	**06 58 57.9**	**-1.5**
FX1				pmax	pmax		
	comp=Z,1.0nm,0.3s						
FX1				MLR	MLR		
	comp=Z,16nm,19.4s						
BILL	**Bilibino**	**22.95**	**14**	*e*P	**P**	**07 00 29.9**	**+0.4**
BILL				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb3.9						
BILL	**Bilibino**	**22.95**	**14**	*e*P	**P**	**07 00 29.9**	**+0.4**
	comp=Z,3.4nm,0.6s,mb4.0						
SONM	**Songino Array**	**30.87**	**290**	P	**P**	**07 01 41.8**	**+0.6**
	comp=Z,0.2nm,0.4s,mb3.3,baz=90,slow=8.6,SNR=2.5						
SONM				LR	LR	07 15 10.3	
	comp=Z,52nm,19.9s,MS3.2,baz=103,slow=38						
COLA	**College**	**36.87**	**38**	*e*P	**P**	**07 02 33.5**	**+0.5**
COLA				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.5						
COLA	**College**	**36.87**	**38**	*e*P	**P**	**07 02 33.5**	**+0.5**
	comp=Z,6.1nm,0.7s,mb4.5						
ZALV	**Zalesovo Beam**	**42.34**	**306**	LR	LR	07 22 08.2	
	comp=Z,40nm,18.5s,MS3.3,baz=45,slow=38						
INK	**Inuvik**	**42.35**	**32**	P	**P**	**07 03 18.4**	**-0.2**
	comp=Z,1.9nm,0.5s,mb4.0,baz=303,slow=6.3,SNR=18						
INK	**Inuvik**	**42.35**	**32**	P	**P**	**07 03 18.4**	**-0.2**
INK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
INK	**Inuvik**	**42.35**	**32**	*e*P	**P**	**07 03 18.3**	**-0.3**
	comp=Z,2.8nm,0.8s,mb3.9						
MKAR	**Makanchi Array**	**46.56**	**297**	P	**P**	**07 03 51.6**	**-0.8**
	comp=Z,0.2nm,0.5s,mb3.4,baz=59,slow=7.1,SNR=3.0						
KURK	**Kurchatov**	**47.06**	**304**	P	**P**	**07 03 55.5**	**-0.8**
	comp=Z,1.7nm,1.1s,mb3.9,baz=68,slow=8.2,SNR=7.0						
KURK	**Kurchatov**	**47.06**	**304**	P	**P**	**07 03 55.5**	**-0.8**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.0						
KURK	**Kurchatov**	**47.06**	**304**	P	**P**	**07 03 55.5**	**-0.8**
BVAR	**Borovoye Array**	**50.63**	**309**	LR	LR	07 26 54.7	
	comp=Z,38nm,20.7s,MS3.4,baz=325,slow=37						
CMAR	**Chiang Mai Arr**	**51.64**	**256**	LR	LR	07 29 25.1	
	comp=Z,24nm,18.4s,MS3.2,baz=75,slow=39						
YKA	**Yellowknife Ar**	**51.65**	**36**	P	**P**	**07 04 31.3**	**+0.3**
	comp=Z,1.0nm,0.7s,mb3.9,baz=294,slow=7.0,SNR=9.3						
YKA	**Yellowknife Ar**	**51.65**	**36**	P	**P**	**07 04 31.3**	**+0.2**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**51.65**	**36**	P	**P**	**07 04 31.3**	**+0.3**
EDM	**Edmonton**	**57.07**	**46**	*e*P	**P**	**07 05 09.8**	**-0.8**
WVOR	**Wild Horse Val**	**60.53**	**58**	*e*P	**P**	**07 05 34.8**	**0.0**
WVOR				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2						
WVOR	**Wild Horse Val**	**60.53**	**58**	*e*P	**P**	**07 05 34.8**	**0.0**
	comp=Z,2.2nm,0.9s,mb4.3						
SUMG	**Summit**	**61.17**	**4**	*e*P	**P**	**07 05 39.0**	**+0.4**
	comp=Z,5.4nm,0.6s,mb4.8						
NVAR	**Mina Array Bea**	**63.20**	**62**	P	**P**	**07 05 53.3**	**+0.5**
	comp=Z,2.4nm,0.7s,mb4.4,baz=289,sl

BRTR	**Keskin Array B**	**78.25**	**316**	P	**P**	**07 07 24.9**	**+0.7**
	comp=Z,1.7nm,1.0s,mb3.9,baz=89,slow=5.4,SNR=5.2						
BRTR	**Keskin Array B**	**78.25**	**316**	P	**P**	**07 07 24.9**	**+0.7**
BRTR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TXAR	**Lajitas Array**	**78.26**	**60**	P	**P**	**07 07 24.4**	**-0.1**
	comp=Z,2.8nm,0.8s,mb4.3,baz=299,slow=4.1,SNR=36						
TXAR	**Lajitas Array**	**78.26**	**60**	*e*P	**P**	**07 07 24.4**	**-0.1**
TXAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GERES	**GERESS Array B**	**78.55**	**333**	P	**P**	**07 07 25.5**	**-0.2**
	comp=Z,0.5nm,0.4s,mb3.8,baz=18,slow=5.6,SNR=8.9						
GERES				LR	LR	07 46 43.9	
	comp=Z,30nm,18.6s,MS3.6,baz=304,slow=39						
GERES	**GERESS Array B**	**78.55**	**333**	P	**P**	**07 07 25.5**	**-0.2**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GERES				MLR	MLR		
	comp=Z,30nm,18.6s						
MMAI	**Mount Meron Ar**	**82.61**	**311**	P	**P**	**07 07 48.0**	**+0.3**
	comp=Z,0.9nm,0.3s,mb4.2,baz=57,slow=5.3,SNR=2.9						

BEO ***03*** *06:59:20.1,39°.73N×27°.41E,h84km,ML3.9/3*
ATH ***03*** *06:59:21.5,40°.20N×27°.00E,h26km±2km,MD3.7/9*
NEIC ***03*** *06:59:21.0,40°.17N×26°.91E,h9km,MD3.7(ATH),*
ML3.8(ISK),After ISK.
ISCJB ***03*** *06:59:22.3±0.3,40°.17N±0°.01×26°.89E±0°.02,h10km±2km,*
Error ellipse: s-maj=2.4km s-min=2.1km az=18.9
CSEM ***03*** *06:59:22.9±0.1,40°.16N×26°.91E,h10km,ML4.0,Error*
ellipse: s-maj=1.5km s-min=1.3km az=5.0
DDA ***03*** *06:59:22.2,40°.16N×26°.93E,h7km±5km,Ml4.0*
ISK ***03*** *06:59:22.0,40°.16N×26°.92E,h9km,ML4.0*
SOF ***03*** *06:59:24.8,40°.26N×26°.76E,h22km,MD3.5*
THE ***03*** *06:59:24.5,40°.16N×26°.77E,h8km±2km,ML4.1/12,Error*
ellipse: s-maj=2.5km s-min=0.9km az=81.0

ISC 03 06:59:22.9±0.3,40°.17N±0°.01×26°.90E±0°.02,h9km±2km,
n211,σ0°78/292,14C-4D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPK	**Lapseki**	**0.23**	**333**	PG	**Pg**	**06 59 28.0**	**+0.4**
LPK				*e*SG	**Sg**	06 59 31.4	+0.7
LPK	**Lapseki**	**0.23**	**333**	*i* Pg	**Pg**	06 59 28.0	+0.4
LPK				*e*Sg	**Sg**	06 59 31.4	+0.7
EZN	**Ezine**	**0.56**	**232**	*e*PG	**Pg**	06 59 33.4	-0.4
EZN	**Ezine**	**0.56**	**232**	*e*Pg	**Pg**	06 59 33.4	-0.3
RKY	**Sarkoy-Tekirda**	**0.56**	**22**	PG	**Pg**	06 59 33.4	-0.4
RKY				*e*SG	**Sg**	06 59 41.6	+0.5
RKY	**Sarkoy-Tekirda**	**0.56**	**22**	*i* Pg	**Pg**	06 59 33.4	-0.4
RKY				*e*Sg	**Sg**	06 59 41.6	+0.5
SART	**Tekirdag**	**0.56**	**22**	*i* P	**Pg**	06 59 33.8	0.0
SART				*i* S	**Sg**	06 59 41.4	+0.2
SART	**Tekirdag**	**0.56**	**22**	*i* P	**Pg**	06 59 33.8	0.0
SART				*i* S	**Sg**	06 59 41.4	+0.2
BALY	**Balya**	**0.70**	**127**	*i* P	**Pg**	06 59 36.1	-0.4
BALY				*i* S	**Sg**	06 59 44.9	-0.7
BALY	**Balya**	**0.70**	**127**	*i* P	**Pg**	06 59 36.1	-0.3
BALY				*i* S	**Sg**	06 59 44.9	-0.7
EDC	**Edincik**	**0.76**	**76**	*e*PG	**Pg**	06 59 36.7	-0.9
EDC				*e*SG	**Sg**	06 59 47.6	+0.1
EDC	**Edincik**	**0.76**	**76**	*e*Pg	**Pg**	06 59 36.7	-0.9
EDC				*e*Sg	**Sg**	06 59 47.6	+0.1
GADA	**Gvkgeada**	**0.77**	**272**	*e*PG	**Pg**	06 59 37.5	-0.2
GADA	**Gvkgeada**	**0.77**	**272**	*e*Pg	**Pg**	06 59 37.5	-0.2
ENEZ	**Enez**	**0.80**	**315**	*e*PG	**Pg**	06 59 38.1	-0.2
ENEZ	**Enez**	**0.80**	**315**	*e*Pg	**Pg**	06 59 38.1	-0.3
BNT	**Bandirma**	**0.80**	**76**	*e*PG	**Pg**	06 59 36.9	-1.5
AYVA	**Ayvalik**	**0.88**	**191**	*i* P	**Pg**	06 59 39.8	0.0
AYVA				*i* S	**Sg**	06 59 51.8	+0.7
AYVA	**Ayvalik**	**0.88**	**191**	*i* P	**Pg**	06 59 39.8	+0.1
AYVA				*i* S	**Sg**	06 59 51.8	+0.7
BALB	**Balikesir**	**0.92**	**125**	*e*PG	**Pg**	06 59 39.8	-0.8
BALB				*e*SG	**Sg**	06 59 52.6	0.0
BALB	**Balikesir**	**0.92**	**125**	*e*Pg	**Pg**	06 59 39.8	-0.8
BALB				*e*Sg	**Sg**	06 59 52.6	0.0
TKR	**Tekirdag**	**0.95**	**30**	*e*PG	**Pg**	06 59 40.9	-0.3
TKR	**Tekirdag**	**0.95**	**30**	*e*Pg	**Pg**	06 59 40.9	-0.3
ALN	**Alexandroupoli**	**0.97**	**318**	*e*Pn	**Pg**	06 59 41.0	-0.7
ALN				*e*Sn	**Sg**	06 59 54.4	+0.1
ALN	**Alexandroupoli**	**0.97**	**318**	P	**Pg**	06 59 41.0	-0.7
ALN				S	**Sg**	06 59 53.8	-0.5
ALN	**Alexandroupoli**	**0.97**	**318**	*e*PN	**Pg**	06 59 41.0	-0.7
ALN				*e*SN	**Sg**	06 59 54.4	+0.1
ALN	**Alexandroupoli**	**0.97**	**318**	P	**Pg**	06 59 41.0	-0.7
ALN				S	**Sg**	06 59 53.8	-0.5
ALN				*e*Sn	**Sg**	06 59 54.4	+0.1
PRK	**Paraskevi**	**1.04**	**208**	*e*Pn	**Pg**	06 59 42.5	-0.4
PRK				*e*Sn	**Sn**	06 59 58.6	+0.3
PRK	**Paraskevi**	**1.04**	**208**	P	**Pg**	06 59 42.4	-0.5
PRK				S	**Sg**	06 59 57.7	+1.3
PRK	**Paraskevi**	**1.04**	**208**	*e*PN	**Pg**	06 59 42.5	-0.4
PRK				*e*SN	**Sn**	06 59 58.6	+0.3
PRK	**Paraskevi**	**1.04**	**208**	P	**Pg**	06 59 42.4	-0.5
PRK				S	**Sg**	06 59 57.7	+1.3
PRK				*e*Sn	**Sn**	06 59 58.6	+0.3
KCT	**Karacabey**	**1.12**	**85**	*e*PN	**Pg**	06 59 43.6	-0.9
KCT	**Karacabey**	**1.12**	**85**	*e*Pn	**Pg**	06 59 43.6	-0.8
CRLT	**Corlu**	**1.15**	**33**	*e*PN	**Pn**	06 59 45.0	-0.2
CRLT	**Corlu**	**1.15**	**33**	*e*Pn	**Pn**	06 59 45.0	-0.2
SIGR	**SIGRI**	**1.25**	**220**	P	**Pn**	06 59 47.0	+0.5
SIGR				S	**Sb**	07 00 03.5	+0.7
SIGR	**SIGRI**	**1.25**	**220**	P	**Pn**	06 59 47.0	+0.5
SIGR				S	**Sb**	07 00 03.5	+0.7
DURS	**Dursunbey**	**1.34**	**115**	*i* P	**Pn**	06 59 47.7	-0.1
DURS	**Dursunbey**	**1.34**	**115**	*i* P	**Pn**	06 59 47.7	0.0
LIA	**Limnos Island**	**1.34**	**259**	*e*Pn	**Pn**	06 59 48.0	+0.2
LIA				*e*Sn	**Sn**	07 00 06.9	+1.1
LIA	**Limnos Island**	**1.34**	**259**	P	**Pn**	06 59 47.9	+0.1
LIA				S	**Sb**	07 00 06.2	+0.7
LIA	**Limnos Island**	**1.34**	**259**	*e*PN	**Pn**	06 59 48.0	+0.2
LIA				*e*SN	**Sn**	07 00 06.9	+1.1
LIA	**Limnos Island**	**1.34**	**259**	P	**Pn**	06 59 47.9	+0.1
LIA				S	**Sb**	07 00 06.2	+0.7
LIA				*e*Sn	**Sn**	07 00 06.9	+1.1
RDO	**Rodhopi**	**1.42**	**314**	*e*Pn	**Pn**	06 59 48.9	0.0
RDO	**Rodhopi**	**1.42**	**314**	P	**Pn**	06 59 48.8	-0.1
RDO				S	**Sn**	07 00 08.2	+0.5
RDO	**Rodhopi**	**1.42**	**314**	*e*PN	**Pn**	06 59 48.9	0.0
RDO	**Rodhopi**	**1.42**	**314**	P	**Pn**	06 59 48.8	-0.1
RDO				S	**Sn**	07 00 08.2	+0.5
DST	**Dursunbey**	**1.44**	**113**	*e*PN	**Pn**	06 59 48.6	-0.5
DST				*e*SN	**Sn**	07 00 08.2	+0.1
DST	**Dursunbey**	**1.44**	**113**	*e*Pn	**Pn**	06 59 48.6	-0.5
DST				*e*Sn	**Sn**	07 00 08.2	+0.1
SLVT	**Silivri**	**1.46**	**43**	*e*PN	**Pn**	06 59 48.9	-0.5
SLVT				*e*SN	**Sn**	07 00 08.6	+0.1
SLVT	**Silivri**	**1.46**	**43**	*e*Pn	**Pn**	06 59 48.9	-0.4
SLVT				*e*Sn	**Sn**	07 00 08.6	+0.1
AKHS	**Akhisar**	**1.47**	**151**	*i* P	**Pn**	06 59 49.4	-0.2
AKHS	**Akhisar**	**1.47**	**151**	*i* P	**Pn**	06 59 49.4	-0.2
AKS	**Akhisar**	**1.47**	**151**	*e*PN	**Pn**	06 59 49.3	-0.3
AKS				*e*SN	**Sn**	07 00 09.1	+0.2
AKS	**Akhisar**	**1.47**	**151**	*e*Pn	**Pn**	06 59 49.3	-0.2
AKS				*e*Sn	**Sn**	07 00 09.1	+0.2
ELBA	**Catalca**	**1.52**	**50**	*i* P	**Pn**	06 59 49.7	-0.6
ELBA	**Catalca**	**1.52**	**50**	*i* P	**Pn**	06 59 49.7	-0.5
CTKS	**Kestanelik-??a**	**1.62**	**48**	*e*PN	**Pn**	06 59 50.7	-0.9
CTKS	**Kestanelik-??a**	**1.62**	**48**	*e*Pn	**Pn**	06 59 50.7	-0.9
CTYL	**Yal??k??y-??at**	**1.68**	**39**	*e*PN	**Pn**	06 59 52.0	-0.4
CTYL	**Yal??k??y-??at**	**1.68**	**39**	*e*Pn	**Pn**	06 59 52.0	-0.4
EDRB	**Edirne**	**1.68**	**356**	*e*PN	**Pn**	06 59 52.5	+0.1
EDRB	**Edirne**	**1.68**	**356**	*e*Pn	**Pn**	06 59 52.5	+0.1
BGKT	**Bogazkoy**	**1.75**	**54**	*e*PN	**Pn**	06 59 52.6	-0.7
BGKT	**Bogazkoy**	**1.75**	**54**	*e*Pn	**Pn**	06 59 52.6	-0.8
GEMT	**Gemlik**	**1.77**	**81**	*e*PN	**Pn**	06 59 53.4	-0.3
GEMT	**Gemlik**	**1.77**	**81**	*e*Pn	**Pn**	06 59 53.4	-0.3
BLCB	**Balcova**	**1.79**	**176**	*e*PN	**Pn**	06 59 53.5	-0.4
BLCB	**Balcova**	**1.79**	**176**	P	**Pn**	06 59 53.9	0.0
BLCB				S	**Sn**	07 00 19.1	+2.5
BLCB	**Balcova**	**1.79**	**176**	*e*Pn	**Pn**	06 59 53.5	-0.4
BLCB	**Balcova**	**1.79**	**176**	P	**Pn**	06 59 53.9	0.0
BLCB				S	**Sn**	07 00 19.1	+2.5
IZM	**Izmir**	**1.79**	**171**	*e*PN	**Pn**	06 59 53.6	-0.3
IZM	**Izmir**	**1.79**	**171**	*e*Pn	**Pn**	06 59 53.6	-0.4
DEMI	**Demirci**	**1.80**	**128**	*i* P	**Pn**	06 59 54.5	+0.5
DEMI	**Demirci**	**1.80**	**128**	*i* P	**Pn**	06 59 54.5	+0.4
KDZ	**Kurdzhali**	**1.86**	**323**	*i* P	**Pn**	06 59 55.0	+0.1
KDZ	**Kurdzhali**	**1.86**	**323**	*i* P	**Pn**	06 59 55.0	+0.1
ISK	**Istanbul-Kandi**	**1.87**	**61**	*e*PN	**Pn**	06 59 54.9	-0.2
ISK	**Istanbul-Kandi**	**1.87**	**61**	*e*Pn	**Pn**	06 59 54.9	-0.2
CHOS	**Chios island**	**1.90**	**200**	P	**Pn**	06 59 55.5	+0.1
CHOS				S	**Sn**	07 00 21.4	+2.0
CHOS	**Chios island**	**1.90**	**200**	*e*PB	**Pn**	06 59 54.9	-0.5
CHOS	**Chios island**	**1.90**	**200**	*e*Pb	**Pn**	06 59 54.9	-0.5
CHOS	**Chios island**	**1.90**	**200**	P	**Pn**	06 59 55.5	+0.1
CHOS				S	**Sn**	07 00 21.4	+2.0
YLV	**Yalova**	**1.93**	**77**	*e*PN	**Pn**	06 59 55.1	-0.8
YLV	**Yalova**	**1.93**	**77**	*e*Pn	**Pn**	06 59 55.1	-0.8
KLYT	**Kilyos**	**1.96**	**56**	*e*PN	**Pn**	06 59 56.1	-0.2
KLYT				*e*SN	**Sn**	07 00 21.1	+0.2
KLYT	**Kilyos**	**1.96**	**56**	*e*Pn	**Pn**	06 59 56.1	-0.1
KLYT				*e*Sn	**Sn**	07 00 21.1	+0.2
KAVA	**Kavala**	**2.00**	**295**	P	**Pn**	06 59 56.8	0.0
KAVA				S	**Sn**	07 00 20.9	-0.9
KAVA	**Kavala**	**2.00**	**295**	P	**Pn**	06 59 56.8	0.0
KAVA				S	**Sn**	07 00 20.9	-0.9
DIM	**Dimitrovgrad**	**2.14**	**332**	*i* P	**Pn**	06 59 58.8	0.0
DIM	**Dimitrovgrad**	**2.14**	**332**	*i* P	**Pn**	06 59 58.8	0.0
KULA	**Kula-Manisa**	**2.15**	**140**	*e*PN	**Pn**	06 59 58.7	-0.2
KULA	**Kula-Manisa**	**2.15**	**140**	*e*Pn	**Pn**	06 59 58.7	-0.1
ADVT	**Abdulvahap**	**2.19**	**82**	*e*PN	**Pn**	06 59 59.3	-0.1
ADVT	**Abdulvahap**	**2.19**	**82**	*e*Pn	**Pn**	06 59 59.3	-0.1
OUR	**Ouranopolis**	**2.24**	**275**	P	**Pn**	06 59 59.6	-0.5
OUR				S	**Sn**	07 00 26.1	-1.7
OUR	**Ouranopolis**	**2.24**	**275**	P	**Pn**	06 59 59.6	-0.5
OUR				S	**Sn**	07 00 26.1	-1.7
RZN	**Rozhen**	**2.24**	**313**	*i* P	**Pn**	07 00 00.4	+0.2
RZN	**Rozhen**	**2.24**	**313**	*i* P	**Pn**	07 00 00.4	+0.2
JMB	**Yambol**	**2.31**	**354**	P	**Pn**	07 00 02.2	+1.1
JMB				S	**Sn**	07 00 31.3	+1.8
JMB	**Yambol**	**2.31**	**354**	*i* P	**Pn**	07 00 02.2	+1.1
JMB	**Yambol**	**2.31**	**354**	*i* P	**Pn**	07 00 02.2	+1.1
JMB				S	**Sn**	07 00 31.3	+1.8
SILT	**Sile**	**2.31**	**64**	*e*PN	**Pn**	07 00 01.1	+0.1
SILT	**Sile**	**2.31**	**64**	*e*Pn	**Pn**	07 00 01.1	0.0
SMG	**Samos**	**2.46**	**181**	*e*Pn	**Pn**	07 00 02.8	-0.3
SMG	**Samos**	**2.46**	**181**	*e*PN	**Pn**	07 00 02.8	-0.3
SMG	**Samos**	**2.46**	**181**	*e*Pn	**Pn**	07 00 02.8	-0.3
PAIG	**Paliouri**	**2.48**	**265**	P	**Pn**	07 00 03.3	-0.2
PAIG				S	**Sn**	07 00 33.6	-0.2
PAIG	**Paliouri**	**2.48**	**265**	P	**Pn**	07 00 03.3	-0.2
PAIG				S	**Sn**	07 00 33.6	-0.2
AOS	**Alonnisos**	**2.53**	**248**	P	**Pn**	07 00 04.5	+0.3
AOS				S	**Sn**	07 00 34.1	-1.0
AOS	**Alonnisos**	**2.53**	**248**	P	**Pn**	07 00 04.5	+0.3
AOS				S	**Sn**	07 00 34.1	-1.0
PLD	**Plovdiv**	**2.55**	**320**	P	**Pn**	07 00 04.9	+0.6
PLD				S	**Sn**	07 00 35.5	+0.1
PLD	**Plovdiv**	**2.55**	**320**	*i* P	**Pn**	07 00 04.6	+0.3
PLD	**Plovdiv**	**2.55**	**320**	*i* P	**Pn**	07 00 04.6	+0.3
PLD				S	**Sn**	07 00 35.5	+0.1
NVR	**Nevrokopi**	**2.59**	**298**	P	**Pn**	07 00 05.9	+1.0
NVR	**Nevrokopi**	**2.59**	**298**	P	**Pn**	07 00 05.9	+1.0
GPA	**Golpazari**	**2.62**	**86**	*e*PN	**Pn**	07 00 05.6	+0.3
GPA	**Golpazari**	**2.62**	**86**	*e*Pn	**Pn**	07 00 05.6	+0.3
PLG	**Polygyros**	**2.65**	**276**	*e*Pn	**Pn**	07 00 05.9	+0.1
PLG				*e*Sn	**Sn**	07 00 37.2	-0.8
PLG	**Polygyros**	**2.65**	**276**	P	**Pn**	07 00 05.9	+0.1
PLG				S	**Sn**	07 00 36.5	-1.5
PLG	**Polygyros**	**2.65**	**276**	*e*PN	**Pn**	07 00 05.9	+0.1
PLG				*e*SN	**Sn**	07 00 37.2	-0.8
PLG	**Polygyros**	**2.65**	**276**	P	**Pn**	07 00 05.9	+0.1
PLG				S	**Sn**	07 00 36.5	-1.5
PLG				*e*Sn	**Sn**	07 00 37.2	-0.8
SRS	**Serrai**	**2.69**	**292**	P	**Pn**	07 00 06.2	-0.1
SRS				S	**Sn**	07 00 37.8	-1.1
SRS	**Serrai**	**2.69**	**292**	P	**Pn**	07 00 06.2	-0.1
SRS				S	**Sn**	07 00 37.8	-1.1
ALT	**Altintas**	**2.72**	**113**	*e*PN	**Pn**	07 00 06.7	0.0
ALT	**Altintas**	**2.72**	**113**	*e*Pn	**Pn**	07 00 06.7	0.0
GULT	**Gulveren**	**2.78**	**83**	*e*PN	**Pn**	07 00 07.3	-0.2
GULT	**Gulveren**	**2.78**	**83**	*e*Pn	**Pn**	07 00 07.3	-0.2
SOH	**Sokhos**	**2.78**	**285**	*e*Pn	**Pn**	07 00 07.8	+0.2
SOH	**Sokhos**	**2.78**	**285**	P	**Pn**	07 00 07.7	+0.1
SOH	**Sokhos**	**2.78**	**285**	*e*PN	**Pn**	07 00 07.8	+0.2
SOH	**Sokhos**	**2.78**	**285**	P	**Pn**	07 00 07.7	+0.1
MMB	**Musomiste**	**2.79**	**302**	*i* P	**Pn**	07 00 07.1	-0.6
MMB	**Musomiste**	**2.79**	**302**	*i* P	**Pn**	07 00 07.1	-0.6
HORT	**Hortiatis**	**2.93**	**280**	P	**Pn**	07 00 09.6	-0.1
HORT				S	**Sn**	07 00 43.8	-1.2
HORT	**Hortiatis**	**2.93**	**280**	P	**Pn**	07 00 09.6	-0.1
HORT				S	**Sn**	07 00 43.8	-1.2
ROIA	**ROIAK**	**2.94**	**7**	*i* P	**Pn**	07 00 10.6	+0.8
NEO	**Neokhori**	**2.96**	**254**	*e*Pn	**Pn**	07 00 10.0	0.0
NEO	**Neokhori**	**2.96**	**254**	*e*PN	**Pn**	07 00 10.0	0.0
NEO	**Neokhori**	**2.96**	**254**	*e*Pn	**Pn**	07 00 10.0	0.0
XOR	**Xorichti**	**2.97**	**255**	P	**Pn**	07 00 09.3	-0.8
XOR				S	**Sn**	07 00 44.2	-1.6
XOR	**Xorichti**	**2.97**	**255**	P	**Pn**	07 00 09.3	-0.8
XOR				S	**Sn**	07 00 44.2	-1.6
ESKT	**Eskisehir**	**3.11**	**101**	*e*PN	**Pn**	07 00 12.5	+0.4
ESKT	**Eskisehir**	**3.11**	**101**	*e*Pn	**Pn**	07 00 12.5	+0.4
PVL	**Pavlikeni**	**3.26**	**339**	*i* P	**Pn**	07 00 14.6	+0.4
PVL	**Pavlikeni**	**3.26**	**339**	*i* P	**Pn**	07 00 14.6	+0.4
APE	**Apeiranthos**	**3.28**	**200**	*e*Pn	**Pn**	07 00 13.7	-0.7
APE	**Apeiranthos**	**3.28**	**200**	P	**Pn**	07 00 13.6	-0.8
APE				S	**Sn**	07 00 52.3	-1.1
APE	**Apeiranthos**	**3.28**	**200**	⇑*i* P	**Pn**	07 00 13.7	-0.7
APE	**Apeiranthos**	**3.28**	**200**	*e*PN	**Pn**	07 00 13.7	-0.7
APE	**Apeiranthos**	**3.28**	**200**	*e*Pn	**Pn**	07 00 13.7	-0.7
APE				S	**Sn**	07 00 52.3	-1.1
MDU	**Mudurnu**	**3.31**	**83**	*e*PN	**Pn**	07 00 15.3	+0.4
MDU	**Mudurnu**	**3.31**	**83**	*e*Pn	**Pn**	07 00 15.3	+0.4
KKB	**Krupnik**	**3.35**	**302**	*i* P	**Pn**	07 00 15.6	+0.3
KKB	**Krupnik**	**3.35**	**302**	*i* P	**Pn**	07 00 15.6	+0.3
LIT	**Litokhoron**	**3.38**	**270**	P	**Pn**	07 00 16.0	+0.2
LIT				S	**Sn**	07 00 55.8	-0.2
LIT	**Litokhoron**	**3.38**	**270**	P	**Pn**	07 00 16.0	+0.2
LIT				S	**Sn**	07 00 55.8	-0.2
VAY	**Valandovo**	**3.48**	**291**	*e*Pn	**Pn**	07 00 17.7	+0.5
VAY	**Valandovo**	**3.48**	**291**	*e*Pn	**Pn**	07 00 17.4	+0.2
VAY	**Valandovo**	**3.48**	**291**	P	**Pn**	07 00 16.9	-0.3
VAY	**Valandovo**	**3.48**	**291**	P	**Pn**	07 00 16.9	-0.3
VAY	**Valandovo**	**3.48**	**291**	*e*Pn	**Pn**	07 00 17.7	+0.5
NAIG	**Nisos Aigina**	**3.59**	**229**	*e*Pn	**Pn**	07 00 18.4	-0.2
NAIG	**Nisos Aigina**	**3.59**	**229**	*e*PN	**Pn**	07 00 18.4	-0.2
NAIG	**Nisos Aigina**	**3.59**	**229**	*e*Pn	**Pn**	07 00 18.4	-0.2
ISP	**Isparta**	**3.67**	**129**	P	**Pn**	07 00 20.7	+0.9
VTS	**Vitosha**	**3.68**	**312**	*e*Pn	**Pn**	07 00 21.2	+1.2
VTS				*e*Sn	**Sn**	07 01 02.8	-0.7
VTS	**Vitosha**	**3.68**	**312**	P	**Pn**	07 00 21.0	+1.0
VTS				S	**Sn**	07 01 02.8	-0.7
VTS	**Vitosha**	**3.68**	**312**	*i* P	**Pn**	07 00 21.2	+1.2
VTS	**Vitosha**	**3.68**	**312**	P	**Pn**	07 00 21.0	+1.0
VTS				S	**Sn**	07 01 02.8	-0.7
AGG	**Agios Georgios**	**3.71**	**253**	*e*Pn	**Pn**	07 00 21.6	+1.3
AGG	**Agios Georgios**	**3.71**	**253**	P	**Pn**	07 00 21.3	+1.0
AGG				S	**Sn**	07 01 03.4	-0.7
AGG	**Agios Georgios**	**3.71**	**253**	*e*PN	**Pn**	07 00 21.6	+1.3
AGG	**Agios Georgios**	**3.71**	**253**	P	**Pn**	07 00 21.3	+1.0
AGG	**Agios Georgios**	**3.71**	**253**	*e*Pn	**Pn**	07 00 21.6	+1.3
AGG				S	**Sn**	07 01 03.4	-0.7
THL	**Klokotos Trika**	**3.81**	**262**	P	**Pn**	07 00 22.2	+0.5
THL	**Klokotos Trika**	**3.81**	**262**	P	**Pn**	07 00 22.2	+0.5
MPEP	**Malo Peshtene**	**3.96**	**324**	*i* P	**Pn**	07 00 24.6	+0.8
CVD	**Cernavoda**	**4.23**	**11**	⇑*i* P	**Pn**	07 00 33.5	+6.1
TIRR	**Tirgusor**	**4.43**	**14**	*e*Pn	**Pn**	07 00 30.9	+0.7
TIRR	**Tirgusor**	**4.43**	**14**	⇑*i*P	**Pn**	07 00 31.3	+1.1
TIRR	**Tirgusor**	**4.43**	**14**	*e*Pn	**Pn**	07 00 30.9	+0.7
TIRR	**Tirgusor**	**4.43**	**14**	⇑*i*P	**Pn**	07 00 31.3	+1.1
ZAPS	**Zavoj**	**4.45**	**316**	⇑*i*Pn	**Pn**	07 00 32.5	+2.0
ZAPS				*e*Sn	**Sn**	07 01 20.3	-2.1
KRUS	**Krusevo**	**4.45**	**287**	*e*Pn	**Pn**	07 00 31.2	+0.6
HARR	**Harsova**	**4.58**	**9**	⇑P	**Pn**	07 00 32.8	+0.5
HARR	**Harsova**	**4.58**	**9**	⇑*i*P	**Pn**	07 00 32.8	+0.5
HARR	**Harsova**	**4.58**	**9**	⇑P	**Pn**	07 00 32.8	+0.5
BARS	**Barje**	**4.64**	**306**	⇑*i*Pn	**Pn**	07 00 34.1	+0.9
BARS				*e*Sn	**Sn**	07 01 25.7	-1.4
BARS	**Barje**	**4.64**	**306**	⇑*i*Pn	**Pn**	07 00 34.1	+0.9
BARS				*e*Sn	**Sn**	07 01 25.7	-1.4
NISS		**4.91**	**313**	⇑*i*Pn	**Pn**	07 00 38.3	+1.4
NISS		**4.91**	**313**	⇑*i*Pn	**Pn**	07 00 38.3	+1.4
KYTH	**Kithira**	**4.93**	**219**	*e*Pn	**Pn**	07 00 37.0	-0.1
KYTH	**Kithira**	**4.93**	**219**	*e*PN	**Pn**	07 00 37.0	-0.1
KYTH	**Kithira**	**4.93**	**219**	*e*Pn	**Pn**	07 00 37.0	-0.1
BR131	**Keskin Array S**	**5.20**	**93**	*e*Pn	**Pn**	07 00 40.8	0.0
	3.6nm,0.6s						
BR131	**Keskin Array S**	**5.20**	**93**	*e*Pn	**Pn**	**07 00 40.8**	**0.0**
	3.6nm,0.6s						
PLOR	**Plostina**	**5.68**	**358**	⇓*i*P	**Pn**	**07 00 51.5**	**+4.1**
VRI	**Vrincioaia**	**5.70**	**359**	⇓P	**Pn**	**07 00 50.4**	**+2.8**
VRI	**Vrincioaia**	**5.70**	**359**	⇓*i*P	**Pn**	**07 00 50.4**	**+2.8**
GRUS	**Gruza**	**5.92**	**311**	*e*Pn	**Pn**	**07 00 50.4**	**-0.2**
GRUS	**Gruza**	**5.92**	**311**	*e*Pn	**Pn**	**07 00 50.4**	**-0.2**
DIVS	**Divibare**	**6.46**	**310**	*e*Pn	**Pn**	**07 00 58.6**	**+0.5**
DIVS				*e*Sn	**Sn**	07 02 08.3	-3.6
DIVS	**Divibare**	**6.46**	**310**	*e*Pn	**Pn**	**07 00 58.6**	**+0.5**
BBLS	**Lazići**	**6.69**	**306**	*e*Pn	**Pn**	**07 01 01.9**	**+0.6**
BBLS	**Lazići**	**6.69**	**306**	*e*Pn	**Pn**	**07 01 01.9**	**+0.6**
DRGR		**7.29**	**337**	⇓*i*P	**Pn**	**07 01 16.5**	**+7.1**
BURAR	**Bucovina Array**	**7.54**	**351**	⇑P	**Pn**	**07 01 09.9**	**-3.0**
BURAR	**Bucovina Array**	**7.54**	**351**	⇑*i*P	**Pn**	**07 01 09.9**	**-3.0**
BUR08	**Bucovina Ar. S**	**7.57**	**351**	*e*Pn	**Pn**	**07 01 14.3**	**+1.0**
BUR08	**Bucovina Ar. S**	**7.57**	**351**	*e*Pn	**Pn**	**07 01 14.3**	**+1.0**

IDC 03 07:05:03.6±1.6,4°.64S×152°.88E,h0km,mb3.9/5,
**mb1 4.0/

BBOO Buckleboo 44.09 240 *eP* P 08 18 50.5 -1.9
3.4nm,0.4s
ASAR Alice Springs 45.24 253 P P 08 19 01.4 -0.4
16nm,0.6s,baz=88,slow=8.4,SNR=232
TXAR Lajitas Array 85.26 58 P P 08 23 21.5 +0.2
0.4nm,0.7s,baz=205,slow=5.5,SNR=5.1

ISK ***03*** *08:38:51.2, 38.°96N×27.°25E, h10km, MD2.8*
DDA ***03*** *08:38:52.1, 38.°89N×27.°24E, h17km±1km, Md3.1*
CSEM ***03*** *08:38:52.4±0.2, 38.°94N×27.°24E, h12km, MD2.8, Error ellipse: s-maj=5.1km s-min=4.4km az=116.0*
ISCJB ***03*** *08:38:52.2±0.5, 38.°94N±0.°02×27.°24E±0.°03, h4km±5km, Error ellipse: s-maj=4.5km s-min=3.8km az=20.9*
ISC 03 08:38:52.7±0.4, 38.°93N±0.°02×27.°25E±0.°03, h13km±4km, n36, σ1°9°04/60, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKS	**Akhisar**	**0.44**	**96**	*e*PG	**Pg**	**08 39 00.3**	**-1.1**
AKS				*e*SG	**Sg**	**08 39 07.1**	**-0.2**
AKS	**Akhisar**	**0.44**	**96**	*e*Pg	**Pg**	**08 39 00.3**	**-1.1**
AKS				*e*Sg	**Sg**	**08 39 07.1**	**-0.2**
AKHS	**Akhisar**	**0.44**	**96**	*i* P	**Pg**	**08 39 01.3**	**-0.1**
AKHS				*i* S	**Sg**	**08 39 08.1**	**+0.9**
AKHS	**Akhisar**	**0.44**	**96**	*i* P	**Pg**	**08 39 01.3**	**-0.1**
AKHS				*i* S	**Sg**	**08 39 08.1**	**+0.8**
IZM	**Izmir**	**0.53**	**179**	*e*PG	**Pg**	**08 39 02.6**	**-0.5**
IZM				*e*SG	**Sg**	**08 39 10.8**	**+0.7**
IZM	**Izmir**	**0.53**	**179**	*e*Pg	**Pg**	**08 39 02.6**	**-0.5**
IZM				*e*Sg	**Sg**	**08 39 10.8**	**+0.7**
BLCB	**Balcova**	**0.57**	**197**	*e*PG	**Pg**	**08 39 02.9**	**-0.9**
BLCB	**Balcova**	**0.57**	**197**	*e*Pg	**Pg**	**08 39 02.9**	**-0.9**
AYVA	**Ayvalik**	**0.58**	**311**	*i* P	**Pg**	**08 39 04.1**	**+0.1**
AYVA				*i* S	**Sg**	**08 39 12.7**	**+1.0**
AYVA	**Ayvalik**	**0.58**	**311**	*i* P	**Pg**	**08 39 04.1**	**+0.1**
AYVA				*i* S	**Sg**	**08 39 12.6**	**+0.9**
URLA	**Izmir**	**0.77**	**222**	*i* P	**Pg**	**08 39 06.7**	**-0.9**
URLA				*i* S	**Sg**	**08 39 19.4**	**+1.8**
URLA	**Izmir**	**0.77**	**222**	*i* P	**Pg**	**08 39 06.7**	**-0.8**
URLA				*i* S	**Sg**	**08 39 19.4**	**+1.8**
BALY	**Balya**	**0.86**	**19**	*i* P	**Pg**	**08 39 09.4**	**+0.1**
BALY				*i* S	**Sg**	**08 39 22.1**	**+1.6**
BALY	**Balya**	**0.86**	**19**	*i* P	**Pg**	**08 39 09.4**	**+0.1**
BALY				*i* S	**Sg**	**08 39 22.1**	**+1.6**
BALB	**Balikesir**	**0.86**	**34**	*e*PG	**Pg**	**08 39 07.8**	**-1.5**
BALB				*e*SG	**Sg**	**08 39 19.9**	**-0.6**
BALB	**Balikesir**	**0.86**	**34**	*e*Pg	**Pg**	**08 39 07.9**	**-1.4**
BALB				*e*Sg	**Sg**	**08 39 19.9**	**-0.7**
MANT	**Manisa**	**1.11**	**113**	*i* P	**Pb**	**08 39 13.4**	**-0.3**
MANT	**Manisa**	**1.11**	**113**	*i* P	**Pb**	**08 39 13.4**	**-0.4**
DEMI	**Demirci**	**1.15**	**84**	*i* P	**Pb**	**08 39 13.9**	**-0.5**
DEMI				*i* S	**Sb**	**08 39 29.9**	**+0.7**
DEMI	**Demirci**	**1.15**	**84**	*i* P	**Pb**	**08 39 13.9**	**-0.5**
DEMI				*i* S	**Sb**	**08 39 29.9**	**+0.7**
EZN	**Ezine**	**1.15**	**321**	*e*PN	**Pn**	**08 39 13.4**	**-1.1**
EZN	**Ezine**	**1.15**	**321**	*e*Pn	**Pn**	**08 39 13.4**	**-1.1**
DURS	**Dursunbey**	**1.16**	**54**	*i* P	**Pb**	**08 39 14.0**	**-0.6**
DURS				*i* S	**Sb**	**08 39 30.4**	**+0.8**
DURS	**Dursunbey**	**1.16**	**54**	*i* P	**Pb**	**08 39 14.0**	**-0.6**
DURS				*i* S	**Sb**	**08 39 30.4**	**+0.8**
KULA	**Kula-Manisa**	**1.18**	**110**	*e*PN	**Pn**	**08 39 14.4**	**-0.4**
KULA	**Kula-Manisa**	**1.18**	**110**	*e*Pn	**Pn**	**08 39 14.4**	**-0.5**
DST	**Dursunbey**	**1.26**	**57**	*e*PN	**Pn**	**08 39 15.3**	**-0.7**
DST	**Dursunbey**	**1.26**	**57**	*e*Pn	**Pn**	**08 39 15.3**	**-0.7**
AYDN	**Tasoluk**	**1.36**	**159**	*e*P	**Pn**	**08 39 18.4**	**+1.0**
AYDN				*e*S	**Sb**	**08 39 34.0**	**-1.3**
AYDN	**Tasoluk**	**1.36**	**159**	*e*P	**Pn**	**08 39 18.4**	**+1.0**
AYDN				*e*S	**Sb**	**08 39 34.0**	**-1.3**
KCT	**Karacabey**	**1.58**	**32**	*e*PN	**Pn**	**08 39 18.8**	**-1.6**
KCT	**Karacabey**	**1.58**	**32**	*e*Pn	**Pn**	**08 39 18.8**	**-1.7**
GDZ	**Gediz**	**1.74**	**84**	*i* P	**Pn**	**08 39 25.3**	**+2.6**
GDZ				*i* S	**Sn**	**08 39 48.9**	**+4.2**
GDZ	**Gediz**	**1.74**	**84**	*i* P	**Pn**	**08 39 25.3**	**+2.6**
GDZ				*i* S	**Sn**	**08 39 48.9**	**+4.1**
KHAL	**Karahalli**	**1.84**	**107**	*i* P	**Pn**	**08 39 25.3**	**+1.3**
KHAL				*i* S	**Sn**	**08 39 50.8**	**+3.6**
KHAL	**Karahalli**	**1.84**	**107**	*i* P	**Pn**	**08 39 25.3**	**+1.3**
KHAL				*i* S	**Sn**	**08 39 50.8**	**+3.7**

BJI ***03*** *08:42:08.3, 4.°11S×67.°65E, h10km, mB5.3/37, mb5.0/48, Ms5.0/46, Ms7 4.8/43*
ISCJB ***03*** *08:42:14.9±0.2, 3.°47S±0.°04×68.°31E±0.°03, h10km, mb5.0/143, MS4.6/49, Error ellipse: s-maj=5.9km s-min=4.4km az=175.0*
IDC ***03*** *08:42:14.7±0.5, 3.°47S×68.°35E, h0km, mb4.5/20, mb1 4.6/20, mb1mx4.5/27, mbtmp4.5/20, MS4.5/23, Ms1 4.5/23, ms1mx4.3/35, Error ellipse: s-maj=14.8km s-min=11.3km az=42.0*
MOS ***03*** *08:42:15.6±1.0, 3.°30S×68.°25E, h10km, mb5.3/47, MS4.2/8, Error ellipse: s-maj=8.2km s-min=5.3km az=111.7*
NEIC ***03*** *08:42:16.8±0.2, 3.°44S×68.°31E, h10km, mb5.2/69, Error ellipse: s-maj=5.8km s-min=4.7km az=189.0*
GCMT ***03*** *08:42:19.8±0.2, 3.°51S×68.°32E, h12km, MW5.3, Moment Tensor Solution. s51,c75; s99,c191; Moment tensor: Scale 10^17 Nm; Mrr0.00; Mθθ0.00; Mφφ0.00; Mrθ0.00; Mrφ0.00; Mθφ0.00; Best double couple: M0 1.00000×10^17 NP1:φs=127.00000°, δ39.00000°, λ-72.00000°. NP2: φs=285.00000°, δ53.00000°, λ-104.00000°. Principal axes: T 1.0100, Plg7.0000°, Azm25.0000°; N 0.0100, Plg11.0000°, Azm294.0000°; P -1.0100, Plg77.0000°, Azm147.0000°; Data Used: II IU IC CN G. Surface waves from 103 sta.*
SZGRF ***03*** *08:42:20.0, 3.°34S×67.°74E, h22km, mb5.1, MS4.3, Carlsberg Ridge*
DJA ***03*** *08:42:25, 3.°48S×68.°38E, h64km, mb4.9/19*
ISC 03 08:42:16.9±0.2, 3.°47S±0.°04×68.°31E±0.°03, h10km, (h20km±.8km):pP-P), n592, σ0°94/346, mb5.0/143, MS4.6/49, 131C-100D, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGAR	**Diego Garcia**	**5.69**	**134**	*e*P	**Pn**	**08 43 39.7**	**-1.8**
DGAR				pmax	pmax		
	comp=Z,515nm,1.1s						
DGAR	**Diego Garcia**	**5.69**	**134**	*e*Pn	**Pn**	**08 43 39.7**	**-1.8**
	comp=Z,515nm,1.1s						
MSEY	**Mahe Island**	**12.86**	**264**	*e*P	**Pn**	**08 45 21.5**	**+1.6**
TRD	**Trivandrum**	**14.69**	**36**	⇑*i*P	**Pn**	**08 45 50.5**	**+5.6**
TRD				*i* S	Sn	08 48 50.0	+22
PALK	**Pallekele**	**16.33**	**49**	LR	LR	08 50 58.3	
	comp=Z,7μm,20.1s,baz=222,slow=32						
HYB	**Hyderabad**	**23.08**	**26**	*e*P	**P**	**08 47 23.0**	**+0.1**
HYB				*e*S	**S**	**08 51 44.0**	**+10**
HYB	**Hyderabad**	**23.08**	**26**	*i* P	**P**	**08 47 22.0**	**-0.9**
HYB				*e*S	**S**	**08 51 38.0**	**+4.0**
HYB				LR	LR	08 58 00.0	
	comp=Z,3.9nm,20.0s						
NGP	**Nagpur**	**26.63**	**23**	*e*PKP	**P**	**08 47 52.7**	**-3.1**
NGP				*ex*	x	08 48 03.3	
	comp=Z,38nm,1.3s						
NGP				*e*S	**S**	**08 52 29.9**	**-1.0**
ATD	**Arta Tunnel**	**29.39**	**301**	LR	LR	08 58 09.3	
	comp=Z,196nm,20.7s,MS3.7,baz=154,slow=32						
KMBO	**Kilima Mbogo**	**31.12**	**274**	*e*P	**P**	**08 48 37.4**	**+1.4**
KMBO				*e*		08 48 44.7	
KMBO				pmax	pmax		
	comp=Z,20nm,1.4s						
KMBO	**Kilima Mbogo**	**31.12**	**274**	*e*P	**P**	**08 48 37.4**	**+1.4**
	comp=Z,20nm,1.4s,mb4.8						
KMBO				*e*		08 48 44.7	
PSI	**Prapat**	**31.22**	**79**	LR	LR	08 59 15.6	
	comp=Z,2μm,19.4s,MS4.8,baz=261,slow=33						
KULM	**Kulim**	**33.45**	**75**	*e*P	**P**	**08 48 56.6**	**+0.1**
	comp=Z,64nm,1.4s,mb5.4						
KULM				*e*		08 49 04.3	
DMN	**Daman**	**34.88**	**27**	*e*P	**P**	**08 49 08.7**	**+0.1**
	comp=Z,159nm,1.3s,mb5.8						
PKIN	**Phulchoki**	**34.98**	**27**	*e*P	**P**	**08 49 09.3**	**-0.2**
	comp=Z,43nm,1.1s,mb5.3						
PKI	**Pulchoki**	**34.98**	**27**	*e*P	**P**	**08 49 09.4**	**-0.1**
	comp=Z,81nm,1.3s,mb5.5						
PKI	**Pulchoki**	**34.98**	**27**	*e*P	**P**	**08 49 09.4**	**-0.1**
PKI				pmax	pmax		
	comp=Z,81nm,1.3s,mb5.5						
RAMN	**Ramite**	**35.02**	**29**	*e*P	**P**	**08 49 10.3**	**+0.5**
	comp=Z,136nm,1.2s,mb5.8						
KKN	**Kakani**	**35.11**	**27**	*e*P	**P**	**08 49 10.5**	**-0.1**
	comp=Z,152nm,1.3s,mb5.8						
KKN	**Kakani**	**35.11**	**27**	*e*P	**P**	**08 49 10.5**	**-0.1**
KKN				pmax	pmax		
	comp=Z,152nm,1.3s,mb5.8						
ODAN	**Odare**	**35.34**	**30**	*e*P	**P**	**08 49 13.1**	**+0.5**
	comp=Z,177nm,1.3s,mb5.8						
GUN	**Gumba**	**35.49**	**27**	*e*P	**P**	**08 49 13.9**	**+0.1**
	comp=Z,139nm,1.0s,mb5.8						
TAPN	**Taplejung**	**35.90**	**30**	*e*P	**P**	**08 49 17.8**	**+0.4**
	comp=Z,92nm,1.0s,mb5.7						
CM31	**Chiang Mai Arr**	**37.21**	**53**	*e*P	**P**	**08 49 30.0**	**+1.3**
	comp=Z,5.7nm,0.4s,mb4.8						
CMAR	**Chiang Mai Arr**	**37.21**	**53**	P	**P**	**08 49 29.5**	**+0.8**
	comp=Z,12nm,1.0s,mb4.7,baz=244,slow=10,SNR=28						
CMAR				LR	LR	09 02 36.5	
	comp=Z,932nm,21.8s,MS4.5,baz=235,slow=33						
CMAR	**Chiang Mai Arr**	**37.21**	**53**	*ce*P	**P**	**08 49 30.0**	**+1.3**
CMAR				pmax	pmax		
	comp=Z,12nm,1.0s						
CHTO	**Chiang Mai**	**37.41**	**53**	*e*P	**P**	**08 49 31.5**	**+1.1**
CHTO				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.0						
CHTO	**Chiang Mai**	**37.41**	**53**	*e*P	**P**	**08 49 31.5**	**+1.1**
	comp=Z,26nm,1.0s,mb5.0						
CHTO	**Chiang Mai**	**37.41**	**53**	P	**P**	**08 49 31.9**	**+1.5**
	SNR=16						
CHTO				P		08 49 31.9	
	SNR=16						
CHTO	**Chiang Mai**	**37.41**	**53**	P	**P**	**08 49 31.9**	**+1.5**
	SNR=16						
CHTO				P		08 49 31.9	
	SNR=16						
CHTO				P		08 49 31.9	
	SNR=16						
CHTO				P		08 49 31.9	
	SNR=16						
CHTO	**Chiang Mai**	**37.41**	**53**	P	**P**	**08 49 31.9**	**+1.5**
	SNR=16						
CHTO				P		08 49 31.9	
	SNR=16						
KBL	**Kabul**	**37.81**	**1**	*e*P	**P**	**08 49 35.6**	**+2.1**
KBL				*e*		08 49 42.3	
KBL				pmax	pmax		
	comp=Z,53nm,1.6s,mb5.0						
KBL	**Kabul**	**37.81**	**1**	*e*P	**P**	**08 49 35.6**	**+2.0**
	comp=Z,53nm,1.6s,mb5.0						
KBL				*e*		08 49 42.3	
LSA	**Lhasa**	**39.57**	**32**	P	**P**	**08 49 50.5**	**+2.1**
LSA				sP	sP	08 50 01.4	+8.6
LSA				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.9						
LSA				pmax	pmax		
	comp=Z,250nm,6.0s						
LSA				LR	LR		
	comp=N,1μm,20.0s,MS4.9						
LSA				LR	LR		
	comp=E,1μm,20.0s,MS4.9						
LSA				LR	LR		
	comp=Z,4μm,22.0s,MS5.2						
LSA	**Lhasa**	**39.57**	**32**	*e*P	**P**	**08 49 50.5**	**+2.1**
LSA				pmax	pmax		
	comp=Z,170nm,1.6s,mb5.5						
LSA	**Lhasa**	**39.57**	**32**	*e*P	**P**	**08 49 50.5**	**+2.1**
	comp=Z,170nm,1.6s,mb5.5						
LSZ	**Lusaka**	**41.20**	**251**	P	**P**	**08 50 02.2**	**0.0**
	comp=Z,10nm,0.7s,mb4.5,baz=65,slow=6.6,SNR=10.0						
LSZ	**Lusaka**	**41.20**	**251**	*e*P	**P**	**08 50 02.8**	**+0.6**
LSZ				*e*		08 50 10.3	
LSZ				pmax	pmax		
	comp=Z,47nm,1.4s,mb4.9						
LSZ	**Lusaka**	**41.20**	**251**	*e*P	**P**	**08 50 02.8**	**+0.6**
	comp=Z,47nm,1.4s,mb4.9						
LSZ				*e*		08 50 10.3	
KSM	**Kuching**	**42.26**	**84**	*e*P	**P**	**08 50 10.8**	**-0.1**
	comp=Z,39nm,1.4s,mb4.8						
KSM				*e*		08 50 18.0	
KSH	**Kashi**	**43.35**	**9**	⇓*i*P	**P**	**08 50 16.1**	**-3.2**
KSH				pP	pP	08 50 20.5	-1.9
KSH				sP	sP	08 50 23.2	-0.4
KSH				PP	PP	08 51 58.0	-2.2
KSH				PcP	PcP	08 52 07.8	-0.2
KSH				ScP	ScP	08 55 57.2	-2.4
KSH				PcS	PcS	08 55 58.6	-1.8
KSH				ScS	ScS	09 00 14.5	-5.2
KSH				pmax	pmax		
	comp=Z,24nm,1.2s,mb4.8						
KSH				LR	LR		
	comp=N,2μm,19.7s						
KSH				LR	LR		
	comp=E,580nm,14.6s						
KSH				LR	LR		
	comp=Z,2μm,17.2s,MS5.0						
KMI	**Kunming**	**43.86**	**48**	P	**P**	**08 50 24.9**	**+1.2**
KMI				pP	pP	08 50 31.0	+4.2
KMI				sP	sP	08 50 33.6	+5.6
KMI				PP	PP	08 52 09.3	+3.4
KMI				S	**S**	**08 56 55.7**	**+0.7**
KMI				pmax	pmax		
	comp=Z,14nm,1.5s,mb4.5						
KMI				LR	LR		
	comp=N,530nm,21.5s,MS4.6						
KMI				LR	LR		
	comp=E,600nm,18.7s,MS4.6						
KMI				LR	LR		
	comp=Z,830nm,19.4s,MS4.7						
AML	**Almayashu**	**45.64**	**6**	*e*P	**P**	**08 50 38.3**	**+0.7**
	comp=Z,9.9nm,1.0s,mb4.7						
KZA	**Kyzart**	**45.76**	**7**	P	**P**	**08 50 39.7**	**+1.2**
	SNR=38						
UCH	**Uchtor**	**45.83**	**6**	P	**P**	**08 50 40.0**	**+1.0**
	SNR=17						
UCH	**Uchtor**	**45.83**	**6**	*e*P	**P**	**08 50 40.2**	**+1.2**
	comp=Z,66nm,1.6s,mb5.3						
EKS2	**Erkin-Say**	**46.18**	**6**	P	**P**	**08 50 44.3**	**+2.5**
	SNR=15						
EKS2	**Erkin-Say**	**46.18**	**6**	*e*P	**P**	**08 50 42.9**	**+1.1**
	comp=Z,72nm,1.4s,mb5.4						
EKS2				*e*		08 50 49.7	
AAK	**Ala-Archa**	**46.22**	**6**	P	**P**	**08 50 43.4**	**+1.2**
	comp=Z,112nm,1.3s,mb5.6,SNR=6.7						
AAK	**Ala-Archa**	**46.22**	**6**	P	**P**	**08 50 43.2**	**+1.1**
	SNR=9.2						
AAK	**Ala-Archa**	**46.22**	**6**	*d*i P	**P**	**08 50 42.8**	**+0.6**
AAK				pmax	pmax		
	comp=Z,18nm,1.7s,mb4.7						
AAK	**Ala-Archa**	**46.22**	**6**	*e*P	**P**	**08 50 43.2**	**+1.0**
	comp=Z,37nm,1.2s,mb5.2						
AAK				*e*		08 50 50.5	
AAK	**Ala-Archa**	**46.22**	**6**	P	**P**	**08 50 43.5**	**+1.3**
	SNR=24						
AAK				P		08 50 43.5	
	SNR=24						
AAK	**Ala-Archa**	**46.22**	**6**	P	**P**	**08 50 43.5**	**+1.3**
	SNR=24						
AAK				P		08 50 43.5	
	SNR=24						
AAK				P		08 50 43.5	
	SNR=24						
AAK				P		08 50 43.5	
	SNR=24						
AAK	**Ala-Archa**	**46.22**	**6**	P	**P**	**08 50 43.5**	**+1.3**
	SNR=24						
AAK				P		08 50 43.5	
	SNR=24						
KBK	**Karagaybulak**	**46.30**	**7**	P	**P**	**08 50 43.7**	**+1.0**
	SNR=8.9						
ASF	**Jabal al Asfar**	**46.32**	**322**	P	**P**	**08 50 44.4**	**+1.2**
	comp=Z,2.0nm,0.7s,mb4.1,baz=63,slow=2.3,SNR=6.5						
FRU	**Bishkek**	**46.44**	**6**	*e*P	**P**	**08 50 44.0**	**+0.2**
FRU				pmax	pmax		
	comp=Z,83nm,1.8s,mb5.4						
QIZ	**Qiongzhong**	**46.57**	**60**	P	**P**	**08 50 47.1**	**+1.8**
QIZ				S	**S**	**08 57 31.8**	**-2.6**
QIZ				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.8						
QIZ				pmax	pmax		
	comp=Z,200nm,4.0s						
QIZ				LR	LR		
	comp=E,370nm,18.1s						
QIZ				LR	LR		
	comp=Z,890nm,19.2s,MS4.7						
TKM2	**Tokmak 2**	**46.64**	**7**	P	**P**	**08 50 45.8**	**+0.4**
	SNR=28						
TKM2	**Tokmak 2**	**46.64**	**7**	*e*P	**P**	**08 50 45.4**	**0.0**
TKM2				*e*		08 50 53.1	
TKM2				pmax	pmax		
	comp=Z,33nm,1.1s,mb5.2						
TKM2	**Tokmak 2**	**46.64**	**7**	*e*P	**P**	**08 50 45.4**	**0.0**
	comp=Z,33nm,1.1s,mb5.2						
TKM2				*e*		08 50 53.1	
USP	**Ospenovka**	**46.85**	**6**	P	**P**	**08 50 47.0**	**-0.1**
	SNR=7.5						
MMAI	**Mount Meron Ar**	**47.81**	**322**	P	**P**	**08 50 55.7**	**+0.9**
	comp=Z,0.5nm,0.3s,mb4.0,baz=148,slow=6.8,SNR=4.3						
MMAI				LR	LR	09 08 45.9	
	comp=Z,317nm,21.7s,MS4.2,baz=205,slow=33						
BOSA	**Boshof**	**47.94**	**234**	P	**P**	**08 50 55.6**	**-0.2**
	comp=Z,10nm,0.8s,mb4.9,baz=54,slow=6.6,SNR=14						
BOSA				LR	LR	09 09 02.7	
	comp=Z,1μm,18.4s,MS4.9,baz=89,slow=34						
BOSA	**Boshof**	**47.94**	**234**	*e*P	**P**	**08 50 55.2**	**-0.7**
BOSA				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.0						
BOSA	**Boshof**	**47.94**	**234**	*e*P	**P**	**08 50 55.2**	**-0.7**
	comp=Z,16nm,1.0s,mb5.0						
CD2	**Chengdu**	**48.07**	**42**	⇑*i*P	**P**	**08 50 56.6**	**-0.2**
CD2				pP	pP	08 51 01.1	+1.2
CD2				sP	sP	08 51 03.8	+2.6
CD2				PP	PP	08 52 48.2	-0.9
CD2				PcS	PcS	08 56 18.5	-1.9
CD2				S	**S**	**08 57 54.4**	**-1.0**
CD2				ScS	ScS	09 00 46.4	-4.2
CD2				pmax	pmax		
	comp=Z,40nm,1.5s,mb5.2						
CD2				pmax	pmax		
	comp=Z,150nm,5.8s						
CD2				LR	LR		
	comp=N,850nm,16.7s,MS4.9						
CD2				LR	LR		
	comp=E,590nm,15.5s,MS4.9						
CD2				LR	LR		
	comp=Z,700nm,15.5s,MS4.8						
GNI	**Garni**	**48.49**	**336**	P	**P**	**08 50 58.0**	**-1.9**
	comp=Z,5.4nm,0.5s,mb4.9,baz=141,slow=13,SNR=2.7						
GNI	**Garni**	**48.49**	**336**	*e*P	**P**	**08 50 59.0**	**-0.9**
GNI				*e*		08 51 07.0	
GNI				pmax	pmax		
	comp=Z,39nm,1.3s						
GNI	**Garni**	**48.49**	**336**	*e*P	**P**	**08 50 59.0**	**-0.9**
	comp=Z,39nm,1.3s,mb5.3						
GNI				*e*		08 51 07.0	
GNI	**Garni**	**48.49**	**336**	P	**P**	**08 51 01.9**	**+2.0**
	SNR=6.2						
GNI				P		08 51 01.9	
	SNR=6.2						
GNI	**Garni**	**48.49**	**336**	P	**P**	**08 51 01.9**	**+2.0**
	SNR=6.2						
GNI				P		08 51 01.9	
	SNR=6.2						
GNI				P		08 51 01.9	
	SNR=6.2						
GNI				P		08 51 01.9	
	SNR=6.2						
GNI	**Garni**	**48.49**	**336**	P	**P**	**08 51 01.9**	**+2.0**
	SNR=6.2						
GNI				P		08 51 01.9	
	SNR=6.2						
KKM	**Kota Kinabalu**	**48.76**	**79**	*e*P	**P**	**08 51 03.0**	**+0.6**
	comp=Z,47nm,1.4s,mb5.3						
WMQ	**Urumqi**	**50.20**	**18**	P	**P**	**08 51 14.0**	**+1.2**
WMQ				sP	sP	08 51 21.0	+3.8
WMQ				PP	PP	08 53 10.0	+1.7
WMQ				S	**S**	**08 58 24.0**	**-0.9**
WMQ				ScS	ScS	09 01 01.0	-3.3
WMQ				pmax	pmax		
	comp=Z,42nm,1.0s,mb5.4						
WMQ				pmax	pmax		
	comp=Z,89nm,5.0s						
WMQ				LR	LR		
	comp=N,2μm,16.0s,MS5.2						
WMQ				LR	LR		
	comp=E,1μm,16.0s,MS5.2						
WMQ				LR	LR		
	comp=Z,2μm,16.0s,MS5.1						
ZEI	**Tsey**	**51.05**	**337**	*e*P	**P**	**08 51 19.0**	**-0.3**
ZEI				pmax	pmax		
	comp=Z,29nm,2.0s,mb4.9						
LZH	**Lanzhou**	**51.48**	**37**	⇑P	**P**	**08 51 23.2**	**+0.5**
LZH				pP	pP	08 51 27.8	+1.9
LZH				sP	sP	08 51 30.2	+3.1
LZH				PP	PP	08 53 21.5	+1.4
LZH				S	**S**	**08 58 42.3**	**-0.7**
LZH				pmax	pmax		
	comp=Z,69nm,1.4s,mb5.4						
LZH				pmax	pmax		
	comp=Z,280nm,5.8s						
LZH				LR	LR		
	comp=E,760nm,14.3s						
LZH				LR	LR		
	comp=Z,1μm,17.5s,MS4.9						
MKAR	**Makanchi Array**	**51.54**	**12**	P	**P**	**08 51 22.1**	**-0.8**
	comp=Z,3.2nm,0.7s,mb4.4,baz=189,slow=6.1,SNR=23						
GTA	**Gaotai**	**51.58**	**31**	⇑P	**P**	**08 51 23.8**	**+0.4**
GTA				pP	pP	08 51 28.3	+1.7
GTA				sP	sP	08 51 30.9	+3.1
GTA				PP	PP	08 53 23.1	+2.2
GTA				S	**S**	**08 58 46.4**	**+2.1**
GTA				sS	sS	08 58 54.6	+5.1
GTA				SS	SS	09 02 22.1	+1.4
GTA				pmax	pmax		
	comp=Z,14nm,1.6s,mb4.6						
GTA				pmax	pmax		
	comp=Z,240nm,6.3s						
GTA				LR	LR		
	comp=N,1μm,20.4s,MS5.0						
GTA				LR	LR		
	comp=E,1μm,20.7s,MS5.0						
GTA				LR	LR		
	comp=Z,2μm,22.5s,MS5.1						
ENH	**Enshi**	**51.69**	**47**	*e*P	**P**	**08 51 23.5**	**-0.9**
	comp=Z,118nm,1.5s,mb5.6						
ENH				*e*		08 51 31.0	
MORW	**Morawa**	**51.91**	**125**	*e*P	**P**	**08 51 25.9**	**-0.2**
TSUM	**Tsumeb**	**51.92**	**248**	*e*P	**P**	**08 51 27.2**	**+1.0**
	comp=Z,50nm,1.8s,mb5.2						
MBWA	**Marble Bar**	**52.94**	**114**	*e*P	**P**	**08 51 34.2**	**+0.3**
MBWA	**Marble Bar**	**52.94**	**114**	*e*P	**P**	**08 51 34.5**	**+0.7**
	comp=Z,110nm,1.8s,mb5.5						
ABKAR	**Akbulak array**	**53.01**	**353**	*e*P	**P**	**08 51 33.2**	**-0.6**
	comp=Z,33nm,1.4s,mb5.1						
ABKAR				*e*		08 51 40.3	
GOF	**Gofitskoye**	**53.32**	**338**	*e*P	**P**	**08 51 20.3**	**-16**
GOF				pmax	pmax		
	comp=Z,40nm,1.7s,mb5.1						
XAN	**Xi'an**	**53.43**	**42**	P	**P**	**08 51 35.7**	**-1.5**
XAN				pP	pP	08 51 49.2	+8.8
XAN				S	**S**	**08 59 08.5**	**-1.2**
XAN				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.7						
XAN				pmax	pmax		
	comp=Z,35nm,5.4s						
XAN				LR	LR		
	comp=N,210nm,22.3s,MS

KURK	**Kurchatov**	**54.69**	**8**	P	**P**	**08 51 45.5**	**-0.5**
	SNR=17						
KURK				P		08 51 45.5	
	SNR=17						
KURK				P		08 51 45.5	
	SNR=17						
KURK				P		08 51 45.5	
	SNR=17						
KURK	**Kurchatov**	**54.69**	**8**	P	**P**	**08 51 45.5**	**-0.5**
	SNR=17						
KURK				P		08 51 45.5	
	SNR=17						
WHN	**Wuhan**	**55.43**	**49**	P	**P**	**08 51 48.1**	**-3.7**
WHN				S	**S**	**08 59 39.6**	**+2.8**
WHN				LR	LR		
	comp=N,1µm,15.6s,MS5.2						
WHN				LR	LR		
	comp=E,800nm,16.0s,MS5.2						
WHN				LR	LR		
	comp=Z,1µm,19.9s,MS5.0						
BVAR	**Borovoye Array**	**56.31**	**2**	P	**P**	**08 51 56.4**	**-1.3**
	comp=Z,0.9nm,0.6s,mb4.0,baz=165,slow=6.2,SNR=8.7						
BVAR				PcP	PcP	08 52 54.7	-0.3
	comp=Z,1.0nm,0.6s,baz=160,slow=4.7,SNR=3.7						
BVAR				LR	LR	09 15 26.6	
	comp=Z,661nm,21.4s,MS4.7,baz=188,slow=35						
BVAR	**Borovoye Array**	**56.31**	**2**	P	**P**	**08 51 56.4**	**-1.3**
BVAR						08 52 54.7	
BRVK	**Borovoye**	**56.34**	**1**	P	**P**	**08 51 58.5**	**+0.6**
	comp=Z,43nm,1.6s,mb5.2,SNR=5.0						
BRVK	**Borovoye**	**56.34**	**1**	*d iP*	**P**	**08 51 57.1**	**-0.8**
BRVK				pmax	pmax		
	comp=Z,29nm,2.5s,mb4.9						
BRVK	**Borovoye**	**56.34**	**1**	*eP*	**P**	**08 51 58.8**	**+1.0**
	comp=Z,23nm,1.5s,mb5.0						
BRVK				*e*		08 52 04.6	
BRVK	**Borovoye**	**56.34**	**1**	P	**P**	**08 51 58.4**	**+0.5**
	SNR=7.4						
BRVK				P		08 51 58.4	
	SNR=7.4						
BRVK	**Borovoye**	**56.34**	**1**	P	**P**	**08 51 58.4**	**+0.5**
	SNR=7.4						
BRVK				P		08 51 58.4	
	SNR=7.4						
BRVK				P		08 51 58.4	
	SNR=7.4						
BRVK				P		08 51 58.4	
	SNR=7.4						
BRVK	**Borovoye**	**56.34**	**1**	P	**P**	**08 51 58.4**	**+0.5**
	SNR=7.4						
BRVK				P		08 51 58.4	
	SNR=7.4						
FITZ	**Fitzroy Crossi**	**57.92**	**109**	*eP*	**P**	**08 52 09.9**	**+0.1**
	comp=Z,17nm,1.0s,mb5.0						
FITZ	**Fitzroy Crossi**	**57.92**	**109**	LR	LR	09 12 39.4	
	comp=Z,198nm,21.4s,MS4.2,baz=280,slow=32						
FITZ	**Fitzroy Crossi**	**57.92**	**109**	*eP*	**P**	**08 52 09.7**	**-0.1**
	comp=Z,28nm,1.4s,mb5.1						
DAV	**Davao City (W)**	**58.10**	**80**	LR	LR	09 14 53.7	
	comp=Z,276nm,21.6s,MS4.3,baz=171,slow=34						
ZAA0	**Zalesovo Array**	**58.85**	**11**	*eP*	**P**	**08 52 14.2**	**-1.4**
ZAA0				*e*		08 52 21.8	
ZALV	**Zalesovo Beam**	**58.85**	**11**	P	**P**	**08 52 14.2**	**-1.3**
	comp=Z,8.8nm,0.6s,mb5.0,baz=205,slow=7.4,SNR=14						
ZALV				LR	LR	09 17 03.9	
	comp=Z,479nm,21.6s,MS4.6,baz=215,slow=36						
HHC	**Hu-ho-hao-te**	**59.17**	**37**	*eP*	**P**	**08 52 19.5**	**+1.4**
HHC				pP	pP	08 52 24.1	+2.8
HHC				sP	sP	08 52 26.5	+4.0
HHC				PcP	PcP	08 53 07.0	+0.4
HHC				PP	PP	08 54 32.6	+3.6
HHC				ScP	ScP	08 57 05.6	-2.0
HHC				PcS	PcS	08 57 08.2	-0.2
HHC				S	**S**	**09 00 26.0**	**+0.2**
HHC				ScS	ScS	09 02 05.8	-2.7
HHC				SS	SS	09 04 22.7	+2.3
HHC				pmax	pmax		
	comp=Z,36nm,0.9s,mb5.4						
HHC				LR	LR		
	comp=N,560nm,17.4s,MS4.9						
HHC				LR	LR		
	comp=E,530nm,20.1s,MS4.9						
HHC				LR	LR		
	comp=Z,630nm,19.6s,MS4.8						
NVS	**Novosibirsk**	**59.41**	**10**	*eP*	**P**	**08 52 18.1**	**-1.3**
NVS				pmax	pmax		
	comp=N,97nm,2.0s						
NVS				pmax	pmax		
	comp=Z,111nm,2.0s,mb5.5						
NVS				pmax	pmax		
	comp=E,21nm,1.7s						
NJ2	**Nanjing**	**59.54**	**50**	*eP*	**P**	**08 52 21.2**	**+0.4**
NJ2				pP	pP	08 52 25.8	+1.8
NJ2				sP	sP	08 52 28.2	+3.0
NJ2				PP	PP	08 54 34.3	+1.9
NJ2				S	**S**	**09 00 28.0**	**-2.8**
NJ2				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
NJ2				pmax	pmax		
	comp=Z,20nm,4.8s						
NJ2				LR	LR		
	comp=N,680nm,15.2s,MS5.2						
NJ2				LR	LR		
	comp=E,1µm,16.1s,MS5.2						
NJ2				LR	LR		
	comp=Z,800nm,18.5s,MS4.9						
VSR	**Storozhevoye**	**59.89**	**339**	*eP*	**P**	**08 52 21.8**	**-1.0**
VSR				pmax	pmax		
	comp=N,30nm,1.3s						
VSR				pmax	pmax		
	comp=Z,30nm,1.3s,mb5.2						
VSR				pmax	pmax		
	comp=E,20nm,1.2s						
HARR	**Harsova**	**59.98**	**328**	⇑P	**P**	**08 52 21.5**	**-2.1**
HARR	**Harsova**	**59.98**	**328**	⇑*iP*	**P**	**08 52 21.5**	**-2.1**
ARU	**Arti**	**60.22**	**354**	*d iP*	**P**	**08 52 24.4**	**-0.6**
ARU						08 54 33.9	
ARU				S	**S**	**09 00 38.6**	**-0.1**
ARU				SS	SS	09 04 33.5	-2.7
ARU				pmax	pmax		
	comp=Z,26nm,1.7s,mb5.0						
ARU	**Arti**	**60.22**	**354**	*eP*	**P**	**08 52 24.0**	**-1.0**
KNA	**Kununurra**	**60.65**	**106**	*eP*	**P**	**08 52 28.3**	**-0.4**
	comp=Z,48nm,1.4s,mb5.4						
SONM	**Songino Array**	**60.99**	**28**	P	**P**	**08 52 30.9**	**+0.6**
	comp=Z,14nm,0.8s,mb5.1,baz=220,slow=5.5,SNR=75						
SONM				LR	LR	09 18 45.6	
	comp=Z,3µm,20.6s,MS5.5,baz=226,slow=36						
KIS	**Kishinev**	**61.09**	**330**	*e*UNK	**P**	**08 52 28.0**	**-3.1**
KIS				*e*L		09 18 04.0	
KIS	**Kishinev**	**61.09**	**330**	*eP*	**P**	**08 52 28.0**	**-3.1**
KIS				*e*		08 52 35.0	
ULN	**Ulaanbaatar**	**61.32**	**29**	*eP*	**P**	**08 52 33.1**	**+0.5**
ULN				*e*		08 52 39.9	
ULN				pmax	pmax		
	comp=Z,33nm,1.3s,mb5.3						
ULN	**Ulaanbaatar**	**61.32**	**29**	*eP*	**P**	**08 52 33.1**	**+0.5**
	comp=Z,33nm,1.3s,mb5.3						
ULN				*e*		08 52 39.9	
ULN	**Ulaanbaatar**	**61.32**	**29**	P	**P**	**08 52 33.5**	**+0.9**
	SNR=14						
ULN				P		08 52 33.5	
	SNR=14						
ULN	**Ulaanbaatar**	**61.32**	**29**	P	**P**	**08 52 33.5**	**+0.9**
	SNR=14						
ULN				P		08 52 33.5	
	SNR=14						
ULN				P		08 52 33.5	
	SNR=14						
ULN				P		08 52 33.5	
	SNR=14						
ULN	**Ulaanbaatar**	**61.32**	**29**	P	**P**	**08 52 33.5**	**+0.9**
	SNR=14						
ULN				P		08 52 33.5	
	SNR=14						
VRI	**Vrincioaia**	**61.40**	**328**	⇑P	**P**	**08 52 33.3**	**+0.1**
VRI	**Vrincioaia**	**61.40**	**328**	⇑*iP*	**P**	**08 52 33.3**	**+0.1**
PLOR	**Plostina**	**61.43**	**328**	⇑P	**P**	**08 52 33.2**	**-0.2**
PLOR	**Plostina**	**61.43**	**328**	⇑*iP*	**P**	**08 52 33.2**	**-0.2**
ZAK	**Zakamensk**	**61.47**	**25**	*eP*	**P**	**08 52 33.0**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.5s,mb4.7						
MOY	**Mondy**	**61.56**	**22**	*eP*	**P**	**08 52 36.1**	**+1.9**
MLR	**Muntele Rosu**	**61.57**	**327**	⇑P	**P**	**08 52 35.3**	**+0.9**
MLR	**Muntele Rosu**	**61.57**	**327**	⇑*iP*	**P**	**08 52 35.3**	**+0.9**
BJI	**Beijing**	**61.60**	**40**	P	**P**	**08 52 35.2**	**+0.5**
BJI				S	**S**	**09 00 58.4**	**+1.5**
BJI				pmax	pmax		
	comp=Z,24nm,1.1s,mb5.2						
BJI				pmax	pmax		
	comp=Z,260nm,4.2s						
BJI				LR	LR		
	comp=N,330nm,13.7s,MS4.8						
BJI				LR	LR		
	comp=E,350nm,13.1s,MS4.8						
BJI				LR	LR		
	comp=Z,280nm,28.1s						
TLY	**Talaya**	**62.61**	**24**	*eP*	**P**	**08 52 41.7**	**+0.5**
TLY				*eS*	**S**	**09 01 18.9**	**+10**
TLY				pmax	pmax		
	comp=Z,32nm,1.3s,mb5.3						
TLY				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.2						
TLY	**Talaya**	**62.61**	**24**	*eP*	**P**	**08 52 41.0**	**-0.2**
	comp=Z,33nm,1.4s,mb5.3						
TLY	**Talaya**	**62.61**	**24**	P	**P**	**08 52 44.1**	**+2.8**
	SNR=8.6						
TLY				P		08 52 44.1	
	SNR=8.6						
TLY	**Talaya**	**62.61**	**24**	P	**P**	**08 52 44.1**	**+2.8**
	SNR=8.6						
TLY				P		08 52 44.1	
	SNR=8.6						
TLY				P		08 52 44.1	
	SNR=8.6						
TLY				P		08 52 44.1	
	SNR=8.6						
IRK	**Irkutsk**	**63.29**	**24**	*eP*	**P**	**08 52 47.0**	**+1.3**
IRK				*e*		08 53 29.1	
IRK				pmax	pmax		
	comp=Z,57nm,2.6s,mb5.2						
BURAR	**Bucovina Array**	**63.32**	**329**	⇓P	**P**	**08 52 46.5**	**+0.4**
BURAR	**Bucovina Array**	**63.32**	**329**	⇓*iP*	**P**	**08 52 46.5**	**+0.4**
BUR08	**Bucovina Ar. S**	**63.35**	**329**	*eP*	**P**	**08 52 46.2**	**-0.1**
AKASG	**Malin Array Be**	**63.49**	**333**	P	**P**	**08 52 45.5**	**-1.6**
	comp=Z,4.1nm,0.8s,mb4.6,baz=134,slow=5.5,SNR=17						
AKBB	**Malin Array Si**	**63.49**	**333**	*eP*	**P**	**08 52 46.3**	**-0.8**
KAKA	**Kakadu**	**64.01**	**102**	*eP*	**P**	**08 52 51.3**	**+0.1**
	comp=Z,81nm,1.3s,mb5.6						
MAW	**Mawson**	**64.14**	**182**	LR	LR	09 13 48.2	
	comp=Z,1µm,21.8s,MS5.1,baz=69,slow=30						
MAW	**Mawson**	**64.14**	**182**	*eP*	**P**	**08 52 52.1**	**+1.0**
MAW				pmax	pmax		
	comp=Z,10.0nm,2.0s						
MAW	**Mawson**	**64.14**	**182**	*eP*	**P**	**08 52 52.1**	**+1.0**
	comp=Z,10nm,2.0s,mb4.5						
MOS	**Moscow**	**64.15**	**341**	*eP*	**P**	**08 52 49.0**	**-2.4**
MOS				pmax	pmax		
	comp=Z,98nm,1.6s,mb5.6						
MIR	**Mirnyy**	**65.30**	**169**	*eP*	**P**	**08 53 06.0**	**+7.3**
MIR				pmax	pmax		
	comp=Z,29nm,1.4s,mb5.1						
LVV	**L'vov**	**65.34**	**330**	*eP*	**P**	**08 52 54.3**	**-5.0**
UZH	**Uzhgorod**	**65.48**	**328**	*eP*	**P**	**08 52 59.6**	**-0.6**
KOLS	**Kolonicke sedl**	**65.68**	**329**	*eP*	**P**	**08 53 01.8**	**+0.3**
KOLS				*e*		08 53 08.1	
KOLS				pmax	pmax		
	comp=Z,22nm,1.4s,mb5.0						
KOLS	**Kolonicke sedl**	**65.68**	**329**	*eP*	**P**	**08 53 01.8**	**+0.3**
	comp=Z,22nm,1.4s,mb5.0						
KOLS				*e*		08 53 08.1	
KOLS	**Kolonicke sedl**	**65.68**	**329**	*eP*	**P**	**08 53 01.8**	**+0.3**
KOLS				*ep*P	pP	08 53 08.1	+3.4
ASAR	**Alice Springs**	**66.28**	**114**	P	**P**	**08 53 05.4**	**-0.5**
	comp=Z,7.5nm,1.1s,mb4.6,baz=281,slow=5.9,SNR=27						
WRAB	**Tennant Creek**	**66.31**	**110**	P	**P**	**08 53 05.5**	**-0.6**
	comp=Z,150nm,1.3s,mb5.9,SNR=11						
WRAB	**Tennant Creek**	**66.31**	**110**	*eP*	**P**	**08 53 04.8**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.3						
WRAB	**Tennant Creek**	**66.31**	**110**	*eP*	**P**	**08 53 04.8**	**-1.3**
	comp=Z,40nm,1.2s,mb5.3						
PSZ	**Piszkesteto**	**66.35**	**327**	⇑*ep*P	pP	08 53 11.2	+2.2
KECS	**Kecovo**	**66.36**	**327**	*eP*	**P**	**08 53 06.7**	**+0.9**
KECS				*e*		08 53 12.2	
KECS				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
KECS	**Kecovo**	**66.36**	**327**	*eP*	**P**	**08 53 06.7**	**+0.9**
	comp=Z,2.2nm,0.8s,mb4.2						
KECS				*e*		08 53 12.2	
KECS	**Kecovo**	**66.36**	**327**	*eP*	**P**	**08 53 06.7**	**+0.9**
KECS				*ep*P	pP	08 53 12.2	+3.1
STHS	**Stebnicka Huta**	**66.51**	**329**	*eP*	**P**	**08 53 06.9**	**+0.1**
STHS				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.4						
STHS	**Stebnicka Huta**	**66.51**	**329**	*eP*	**P**	**08 53 06.9**	**+0.1**
	comp=Z,4.5nm,1.3s,mb4.3						
STHS	**Stebnicka Huta**	**66.51**	**329**	*eP*	**P**	**08 53 06.9**	**+0.1**
TAM	**Tamanrasset**	**66.54**	**297**	*eP*	**P**	**08 53 09.2**	**+1.7**
TAM				*e*		08 53 16.3	
TAM				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
TAM	**Tamanrasset**	**66.54**	**297**	*eP*	**P**	**08 53 09.2**	**+1.6**
	comp=Z,4.7nm,0.9s,mb4.5						
TAM				*e*		08 53 16.3	
MNK	**Minsk**	**66.79**	**336**	*eP*	**P**	**08 53 06.0**	**-2.5**
CIT	**Chita**	**67.22**	**28**	*eP*	**P**	**08 53 11.7**	**+0.4**
VYHS	**Vyhne**	**67.26**	**327**	*eP*	**P**	**08 53 10.5**	**-1.1**
VYHS				*e*		08 53 17.8	
VYHS				pmax	pmax		
	comp=Z,62nm,2.6s,mb5.2						
VYHS	**Vyhne**	**67.26**	**327**	*eP*	**P**	**08 53 10.5**	**-1.1**
	comp=Z,62nm,2.6s,mb5.2						
VYHS				*e*		08 53 17.8	
VYHS	**Vyhne**	**67.26**	**327**	*eP*	**P**	**08 53 10.5**	**-1.1**
VYHS				*ep*P	pP	08 53 17.8	+3.0
KEST	**Kesra**	**67.43**	**311**	LR	LR	09 20 05.5	
	comp=Z,51nm,21.0s,MS3.7,baz=155,slow=34						
NRCA	**Norcia**	**67.77**	**319**	P	**P**	**08 53 13.7**	**-1.2**
IDID	**Didziasalis**	**67.81**	**336**	*eP*	**P**	**08 53 15.3**	**+0.4**
IDID				AMB	AMB	08 53 16.1	
	comp=Z,10nm,0.7s,mb5.0						
IIGN	**Ignalina**	**68.05**	**336**	*eP*	**P**	**08 53 16.6**	**+0.2**
IIGN				AMB	AMB	08 53 18.3	
	comp=Z,8.8nm,1.4s,mb4.6						
ZST	**Bratislava**	**68.05**	**326**	*eP*	**P**	**08 53 22.4**	**+5.8**
ZST	**Bratislava**	**68.05**	**326**	*ep*P	pP	08 53 22.4	+2.5
GROS	**Grobnik**	**68.06**	**324**	*eP*	**P**	**08 53 15.4**	**-1.3**
SOP	**Sopron**	**68.08**	**325**	⇑*eP*	**P**	**08 53 16.5**	**-0.3**
VISS	**Visnje**	**68.12**	**323**	*eP*	**P**	**08 53 15.6**	**-1.4**
TORD	**Torodi Ar. Bea**	**68.14**	**286**	P	**P**	**08 53 17.3**	**-0.5**
	comp=Z,4.6nm,1.2s,mb4.4,baz=137,slow=3.5,SNR=13						
TORD				LR	LR	09 22 02.6	
	comp=Z,213nm,18.8s,MS4.4,baz=105,slow=35						
ISAL	**Salakas**	**68.24**	**336**	*eP*	**P**	**08 53 17.6**	**0.0**
ISAL				AMB	AMB	08 53 19.5	
	comp=Z,8.2nm,1.4s,mb4.6						
IZAR	**Zarasai**	**68.32**	**336**	*eP*	**P**	**08 53 18.2**	**+0.1**
IZAR				AMB	AMB	08 53 19.9	
	comp=Z,11nm,1.1s,mb4.8						
FSSB	**Fossombrone**	**68.38**	**320**	P	**P**	**08 53 19.5**	**+0.7**
	comp=Z,34nm,0.6s,mb5.6						
OKC	**Ostrava-Krasne**	**68.39**	**328**	AMS	AMS	09 24 20.0	
	comp=Z,200nm,19.6s						
KSRS	**Korea Array**	**68.56**	**48**	P	**P**	**08 53 19.2**	**-0.8**
	comp=Z,4.3nm,0.8s,mb4.4,baz=249,slow=7.8,SNR=13						
KSRS				LR	LR	09 25 09.2	
	comp=Z,893nm,18.0s,MS5.0,baz=249,slow=38						
CN2	**Changchun**	**69.46**	**41**	*eP*	**P**	**08 53 25.5**	**0.0**
CN2				*eS*	S	09 02 34.9	+1.8
CN2				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
CN2				LR	LR		
	comp=N,310nm,16.0s,MS4.8						
CN2				LR	LR		
	comp=E,300nm,16.0s,MS4.8						
CN2				LR	LR		
	comp=Z,400nm,15.0s,MS4.8						
DPC	**Dobruska-Polom**	**69.65**	**327**	*eP*	**P**	**08 53 25.4**	**-1.1**
DPC				*e*		08 53 32.4	
DPC	**Dobruska-Polom**	**69.65**	**327**	*eP*	**P**	**08 53 25.4**	**-1.1**
DPC				*ep*P	pP	08 53 32.4	+2.6
UPC	**Upice**	**69.91**	**327**	*eP*	**P**	**08 53 28.0**	**-0.1**
UPC				*e*		08 53 34.3	
UPC	**Upice**	**69.91**	**327**	*eP*	**P**	**08 53 28.0**	**-0.1**
UPC				*ep*P	pP	08 53 34.3	+3.0
RJOB	**Jochberg**	**70.30**	**324**	*eP*	**P**	**08 53 30.1**	**-0.4**
	comp=Z,9.0nm,1.0s,mb4.7						
GEC2	**GERESS Array S**	**70.32**	**325**	*eP*	**P**	**08 53 29.3**	**-1.3**
	comp=Z,17nm,2.0s,mb4.6						
GEC2				*ep*P	pP	08 53 35.3	+1.4
GERES	**GERESS Array B**	**70.32**	**325**	LR	LR	09 24 02.6	
	comp=Z,116nm,21.2s,MS4.1,baz=114,slow=36						
PRU	**Pruhonice**	**70.43**	**326**	*eP*	**P**	**08 53 30.4**	**-0.9**
PRU				MLR	MLR		
	comp=Z,200nm,15.8s,MS4.5						
PRU	**Pruhonice**	**70.43**	**326**	*eP*	**P**	**08 53 30.4**	**-0.9**
PRU				AMS	AMS	09 25 50.0	
	comp=Z,200nm,15.8s						
KHC	**Kasperske Hory**	**70.53**	**325**	*eP*	**P**	**08 53 31.1**	**-0.8**
KHC				*e*		08 53 37.2	
KHC				MLR	MLR		
	comp=Z,200nm,20.0s,MS4.4						
KHC	**Kasperske Hory**	**70.53**	**325**	*eP*	**P**	**08 53 31.1**	**-0.8**
KHC				*ep*P	pP	08 53 37.2	+2.0
KHC				AMS	AMS	09 28 10.0	
	comp=Z,200nm,20.0s						
MABI	**Malga Bissina**	**70.89**	**321**	P	**P**	**08 53 33.7**	**-0.5**
WET	**Wettzell**	**70.94**	**325**	*eP*	**P**	**08 53 33.4**	**-1.0**
BRG	**Berggiesshubel**	**71.22**	**327**	*eP*	**P**	**08 53 36.0**	**-0.1**
	comp=Z,8.0nm,0.9s,mb4.7						
BRG				*ep*P	pP	08 53 42.1	+2.7
BRG	**Berggiesshubel**	**71.22**	**327**	*eP*	**P**	**08 53 35.5**	**-0.6**
	comp=Z,7.5nm,0.9s,mb4.6						
FUR	**Furstenfeldbru**	**71.40**	**324**	*eP*	**P**	**08 53 36.9**	**-0.3**
	comp=Z,43nm,1.1s,mb5.3						
NKC	**Novy Kostel**	**71.72**	**326**	*eP*	**P**	**08 53 38.5**	**-0.6**
NKC				*e*		08 53 45.9	
NKC	**Novy Kostel**	**71.72**	**326**	*eP*	**P**	**08 53 38.5**	**-0.6**
NKC				*ex*	x	08 53 45.9	
TANN	**Tannenbergstha**	**71.80**	**326**	*eP*	**P**	**08 53 39.4**	**-0.2**
	comp=Z,9.0nm,1.5s,mb4.5						
TANN				*ep*P	pP	08 53 46.2	+3.3
SBF	**Sospel**	**71.94**	**318**	*eP*	**P**	**08 53 40.2**	**-0.4**
CLL	**Collm**	**71.95**	**327**	*eP*	**P**	**08 53 40.8**	**+0.3**
	comp=Z,37nm,1.6s,mb5.1						
CLL				*ep*P	pP	08 53 46.8	+3.0
CLL	**Collm**	**71.95**	**327**	*eP*	**P**	**08 53 40.0**	**-0.5**
CLL				*i*		08 53 47.1	
CLL				*eS*	S	09 02 55.0	-6.7
CLL				pmax	pmax		
	comp=Z,37nm,1.6s,mb5.1						
CLL				MLR	MLR		
	comp=Z,100nm,18.8s,MS4.1						
CLL	**Collm**	**71.95**	**327**	*eP*	**P**	**08 53 40.0**	**-0.5**
	comp=Z,37nm,1.6s,mb5.1						
CLL				*i*		08 53 47.1	
CLL				*e*		08 53 51.0	
CLL				*eS*	S	09 02 55.0	-6.7
CLL				LR	LR		
	comp=Z,100nm,18.8s,MS4.1						
CLL	**Collm**	**71.95**	**327**	*eP*	**P**	**08 53 40.0**	**-0.5**
	comp=Z,37nm,1.6s,mb5.1						
CLL				*i*		08 53 47.1	
CLL				*e*		08 53 51.0	
CLL				*e*PP	PP	08 56 17.0	-3.4
CLL				*eS*	S	09 02 55.0	-6.7
CLL				*e*PS		09 03 36.0	
CLL				*e*PPS		09 03 54.0	
CLL				*e*SS	SS	09 07 37.0	-1.5
CLL				*e*		09 11 42.0	
CLL				LmV		09 29 00.0	
	comp=Z,100nm,18.8s						
GRF	**Grafenberg Arr**	**72.15**	**325**	*eP*	**P**	**08 53 41.0**	**-0.7**
	comp=Z,83nm,1.8s,mb5.4						
GRF				*ep*P	pP	08 53 47.7	+2.7
GRF				*eL*		09 45 47.2	
	comp=Z,172nm,19.6s						
GRF	**Grafenberg Arr**	**72.15**	**325**	*eP*	**P**	**08 53 41.0**	**-0.7**
GRF				*e**PP	pP	08 53 47.7	+2.7
GRF				pmax	pmax		
	comp=Z,83nm,1.8s,mb5.4						
GRF				MLR	MLR		
	comp=Z,200nm,19.6s,MS4.4						
FRF	**La Foret Royal**	**72.35**	**318**	*eP*	**P**	**08 53 42.5**	**-0.6**
	comp=Z,16nm,0.9s,mb4.6						
FRF	**La Foret Royal**	**72.35**	**318**	*eP*	**P**	**08 53 42.5**	**-0.6**
FRF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
FRF	**La Foret Royal**	**72.35**	**318**	*eP*	**P**	**08 53 42.5**	**-0.6**
	comp=Z,7.9nm,0.9s,mb4.6						
LMR	**La Mourre**	**72.36**	**318**	*eP*	**P**	**08 53 42.7**	**-0.4**
MOX	**Moxa**	**72.38**	**326**	*eP*	**P**	**08 53 43.1**	**0.0**
MOX							
	comp=Z,100nm,20.0s						
MOX	**Moxa**	**72.38**	**326**	*eP*	**P**	**08 53 43.1**	**0.0**
MOX							
	comp=Z,100nm,20.0s						
MOX	**Moxa**	**72.38**	**326**	*eP*	**P**	**08 53 42.8**	**-0.3**
	comp=Z,10.0nm,1.1s,mb4.7						
FINES	**FINESS Array B**	**72.39**	**340**	LR	LR	09 28 43.6	
	comp=Z,258nm,19.8s,MS4.5,baz=356,slow=38						
MDJ	**Mudanjiang**	**72.51**	**41**	P	**P**	**08 53 44.4**	**+0.4**
MDJ				pP	pP	08 53 47.9	+0.6
MDJ				PcP	PcP	08 54 01.9	+0.2
MDJ				PP	PP	08 56 22.9	-2.5
MDJ				S	S	09 03 08.4	0.0
MDJ				ScS	ScS	09 03 51.4	+0.2
MDJ				SS	SS	09 07 51.0	+3.6
MDJ				pmax	pmax		
	comp=Z,26nm,1.2s,mb5.0						
MDJ				pmax	pmax		
	comp=Z,110nm,4.5s						
MDJ				LR	LR		
	comp=N,380nm,19.6s,MS4.7						
MDJ				LR	LR		
	comp=E,220nm,24.4s,MS4.7						
MDJ				LR	LR		
	comp=Z,320nm,21.3s,MS4.6						
MDJ	**Mudanjiang**	**72.51**	**41**	*eP*	**P**	**08 53 44.3**	**+0.3**
	comp=Z,39nm,1.3s,mb5.2						
MDJ				*e*		08 53 51.1	
MBDF	**Montbardon**	**72.72**	**319**	*eP*	**P**	**08 53 44.3**	**-1.0**
LSD	**Lago del Serru**	**72.78**	**320**	P	**P**	**08 53 45.6**	**0.0**
LPG	**La Plagne**	**73.04**	**320**	*eP*	**P**	**08 53 46.3**	**-0.8**
LPL	**La Plagne**	**73.06**	**320**	*eP*	**P**	**08 53 46.3**	**-1.0**
SMRF	**Simiane la Rot**	**73.23**	**318**	*eP*	**P**	**08 53 48.6**	**+0.3**
	comp=Z,53nm,1.5s,mb4.9						
SMRF	**Simiane la Rot**	**73.23**	**318**	*eP*	**P**	**08 53 48.6**	**+0.3**
	comp=Z,53nm,1.5s,mb5.2						
BFO	**Black Forest**	**73.23**	**323**	*eP*	**P**	**08 53 48.2**	**0.0**
	comp=Z,37nm,1.6s,mb5.1						
BFO				*ep*P	pP	08 53 54.6	+3.1
BFO	**Black Forest**	**73.23**

comp=Z,82nm,1.5s,mb5.1
CABF La Chapelle 73.91 321 *e*P **P 08 53 52.1 -0.1**
CABF pmax pmax
comp=Z,41nm,1.5s,mb5.1
CABF La Chapelle 73.91 321 *e*P **P 08 53 52.1 -0.1**
comp=Z,41nm,1.5s,mb5.1
HINF Hinteralfeld 73.91 322 *e*P **P 08 53 51.0 -1.2**
comp=Z,19nm,0.8s,mb4.8
HINF Hinteralfeld 73.91 322 *e*P **P 08 53 51.0 -1.2**
HINF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
HINF Hinteralfeld 73.91 322 *e*P **P 08 53 51.0 -1.2**
comp=Z,9.4nm,0.8s,mb4.8
TNS Taunus Mts 73.98 325 *e*P **P 08 53 52.9 +0.3**
comp=Z,38nm,1.5s,mb5.1
STKA Stephens Creek 73.99 122 *e*P **P 08 53 51.8 -1.2**
comp=Z,4.7nm,1.6s,mb4.2
STKA Stephens Creek 73.99 122 P **P 08 53 50.9 -2.1**
comp=Z,4.7nm,0.8s,mb4.5,baz=298,slow=6.7,SNR=11
STKA LR LR 09 22 36.7
comp=Z,272nm,20.2s,MS4.5,baz=206,slow=33
STKA Stephens Creek 73.99 122 *e*P **P 08 53 52.2 -0.9**
comp=Z,4.5nm,1.4s,mb4.2
NRDL Niedersach Rie 74.09 327 *e*P **P 08 53 53.1 -0.1**
comp=Z,17nm,1.4s,mb4.8
VIVF Saint-Julien-l 74.16 319 *e*P **P 08 53 53.4 -0.3**
HAU Haudompre 74.30 322 *e*P **P 08 53 53.6 -0.9**
HAU *e*MLR MLR
comp=Z,128nm,22.5s,MS3.9
HAU Haudompre 74.30 322 *e*P **P 08 53 53.6 -0.9**
HAU LR LR
comp=Z,130nm,22.5s,MS4.2
LASF Ste Croix 74.42 318 *e*P **P 08 53 55.7 +0.5**
BSEG Bad Segeberg 74.67 329 *e*P **P 08 53 56.5 0.0**
comp=Z,39nm,1.8s,mb5.0
APA Apatity 75.01 347⇓*e*P **P 08 54 04.0 +5.8**
APA pmax pmax
comp=Z,109nm,2.0s,mb5.4
APA MLR MLR
comp=Z,400nm,16.0s,MS4.8
WLF Walferdange 75.09 324 *e*P **P 08 53 57.7 -1.3**
comp=Z,10.0nm,0.9s,mb4.8
WLF *e*pP pP 08 54 05.7 +3.4
BUG Bochum--Univer 75.19 325 *e*P **P 08 53 59.5 0.0**
comp=Z,14nm,1.0s,mb4.8
MTLF Montolieu 75.28 316 *e*P **P 08 54 00.6 +0.3**
comp=Z,144nm,1.9s,mb5.3
MTLF Montolieu 75.28 316 *e*P **P 08 54 00.6 +0.3**
MTLF pmax pmax
comp=Z,72nm,1.9s,mb5.3
MTLF Montolieu 75.28 316 *e*P **P 08 54 00.6 +0.3**
comp=Z,72nm,1.9s,mb5.3
MEZF Maizieres J'vi 75.29 322 *e*P **P 08 53 59.9 -0.3**
SMF Signal de Mont 75.35 320 *e*P **P 08 53 59.7 -0.9**
LOR Lormes 75.57 321 *e*P **P 08 54 01.4 -0.4**
comp=Z,88nm,1.7s,mb5.1
LOR *e*MLR MLR
comp=Z,138nm,20.8s,MS3.9
LOR Lormes 75.57 321 *e*P **P 08 54 01.4 -0.4**
LOR pmax pmax
comp=Z,44nm,1.7s,mb5.1
LOR MLR MLR
comp=Z,140nm,20.8s,MS4.2
LOR Lormes 75.57 321 *e*P **P 08 54 01.4 -0.4**
comp=Z,44nm,1.7s,mb5.1
LOR LR LR
comp=Z,140nm,20.8s,MS4.2
KLR Kul'dur 75.68 37 *e*P **P 08 53 57.2 -5.2**
AVF Avril sur Loir 75.72 320 *e*P **P 08 54 02.1 -0.6**
comp=Z,45nm,1.6s,mb4.8
AVF Avril sur Loir 75.72 320 *e*P **P 08 54 02.1 -0.6**
AVF pmax pmax
comp=Z,22nm,1.6s,mb4.8
AVF Avril sur Loir 75.72 320 *e*P **P 08 54 02.1 -0.6**
comp=Z,22nm,1.6s,mb4.8
SSF Saint Saulge 75.72 320 *e*P **P 08 54 02.1 -0.6**
comp=Z,19nm,0.9s,mb4.7
SSF Saint Saulge 75.72 320 *e*P **P 08 54 02.1 -0.6**
SSF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
SSF Saint Saulge 75.72 320 *e*P **P 08 54 02.1 -0.6**
comp=Z,9.4nm,0.9s,mb4.7
BCLA Clavier 75.90 324 P **P 08 54 04.7 +1.1**
comp=Z,14nm,1.9s,mb4.6
CAF Calviac 75.92 318 *e*P **P 08 54 04.3 +0.4**
BGF Bois d'Agland 75.96 320 *e*P **P 08 54 04.1 0.0**
comp=Z,73nm,1.4s,mb5.1
BGF Bois d'Agland 75.96 320 *e*P **P 08 54 04.1 0.0**
BGF pmax pmax
comp=Z,37nm,1.4s,mb5.1
BGF Bois d'Agland 75.96 320 *e*P **P 08 54 04.1 0.0**
comp=Z,36nm,1.4s,mb5.1
GIVF Givet 76.06 324 *e*P **P 08 54 04.3 -0.2**
MAT Matsushiro 76.07 51 P **P 08 54 05.4 +0.5**
MJAR Matsushiro Arr 76.07 51 P **P 08 54 04.9 0.0**
comp=Z,2.4nm,0.8s,mb4.2,baz=258,slow=7.0,SNR=5.7
MJAR LR LR 09 26 53.7
comp=Z,288nm,18.1s,MS4.6,baz=265,slow=35
MAIT Maitri 76.19 197 *e*P **P 08 54 05.3 +0.4**
DOU Dourbes 76.19 324 P **P 08 54 05.9 +0.6**
comp=Z,8.7nm,1.8s,mb4.4
TCF Toulx Ste Croi 76.28 319 *e*P **P 08 54 05.9 0.0**
comp=Z,30nm,1.3s,mb4.8
TCF Toulx Ste Croi 76.28 319 *e*P **P 08 54 05.9 0.0**
TCF pmax pmax
comp=Z,15nm,1.3s,mb4.8
TCF Toulx Ste Croi 76.28 319 *e*P **P 08 54 05.9 0.0**
comp=Z,15nm,1.3s,mb4.8
BAIF Baives 76.40 323 *e*P **P 08 54 06.5 0.0**
RJF Les Rejaudoux 76.41 318 *e*P **P 08 54 07.1 +0.4**
comp=Z,136nm,1.6s,mb5.3
RJF *e*MLR MLR
comp=Z,84nm,22.2s,MS3.7
RJF Les Rejaudoux 76.41 318 *e*P **P 08 54 07.1 +0.4**
RJF pmax pmax
comp=Z,68nm,1.6s,mb5.3
RJF MLR MLR
comp=Z,80nm,22.3s,MS4.0
RJF Les Rejaudoux 76.41 318 *e*P **P 08 54 07.1 +0.4**
comp=Z,68nm,1.6s,mb5.3
RJF LR LR
comp=Z,80nm,22.3s,MS4.0
SNF Seneffe 76.53 324 P **P 08 54 08.2 +0.9**
comp=Z,8.4nm,1.8s,mb4.4
LFF La Frestale 76.81 318 *e*P **P 08 54 09.5 +0.6**
CMSA Cobar Meteorol 77.44 121 *e*P **P 08 54 12.3 -0.5**
CTA Charters Tower 77.50 110 *e*P **P 08 54 12.8 -0.5**
comp=Z,9.0nm,1.1s,mb4.6
CTAO Charters Tower 77.50 110 *e*P **P 08 54 13.0 -0.3**
CTAO *e* 08 54 20.7
CTAO pmax pmax
comp=Z,24nm,1.3s,mb5.0
CTAO Charters Tower 77.50 110 *e*P **P 08 54 13.0 -0.3**
comp=Z,24nm,1.3s,mb5.0
CTAO *e* 08 54 20.6
SJPF Ste Jean 77.61 315 *e*P **P 08 54 14.5 +1.0**
comp=Z,144nm,1.4s,mb5.4
SJPF Ste Jean 77.61 315 *e*P **P 08 54 14.5 +1.0**
SJPF pmax pmax
comp=Z,72nm,1.4s,mb5.4
SJPF Ste Jean 77.61 315 *e*P **P 08 54 14.5 +1.0**
comp=Z,72nm,1.4s,mb5.4
NB2 NORSAR Subarra 77.79 335 P **P 08 54 13.4 -0.7**
comp=Z,17nm,1.4s,mb4.8,baz=120,slow=6.2
NOA NORSAR Array B 77.79 335 P **P 08 54 12.9 -1.2**
comp=Z,5.0nm,1.1s,mb4.4,baz=114,slow=6.0,SNR=4.3
MFF Saint Martin d 77.92 319 *e*P **P 08 54 15.1 0.0**
comp=Z,37nm,1.1s,mb4.9
MFF Saint Martin d 77.92 319 *e*P **P 08 54 15.1 0.0**
MFF pmax pmax
comp=Z,18nm,1.1s,mb4.9
MFF Saint Martin d 77.92 319 *e*P **P 08 54 15.1 0.0**
comp=Z,18nm,1.1s,mb4.9
LDF La Druitiere 78.54 321 *e*P **P 08 54 18.2 -0.3**
ESDC Sonseca Array 78.68 311 P **P 08 54 19.6 +0.1**
comp=Z,6.1nm,0.7s,mb4.6,baz=89,slow=5.1,SNR=18
ESLA Sonseca Array 78.68 311 *e*P **P 08 54 19.6 +0.1**
comp=Z,11nm,1.3s,mb4.6
ESLA *e* 08 54 26.8
PAB San Pablo 78.93 311 *e*P **P 08 54 21.1 +0.2**
PAB *e* 08 54 28.4
PAB pmax pmax
comp=Z,26nm,1.1s,mb5.1
PAB San Pablo 78.93 311 *e*P **P 08 54 21.1 +0.2**
comp=Z,26nm,1.1s,mb5.1
PAB *e* 08 54 28.4

GRR Gorron 78.94 321 *e*P **P 08 54 20.6 -0.1**
RMQ Roma 79.91 116 *e*P **P 08 54 26.5 -0.1**
comp=Z,29nm,1.4s,mb5.0
ROSF Rostrenen 80.46 320 *e*P **P 08 54 28.8 -0.2**
PBAR Barrancos 80.68 309 *e*P **P 08 54 30.3 -0.1**
comp=Z,26nm,1.6s,mb4.9
PMRV Marv??o 81.20 311 *e*P **P 08 54 34.0 +0.8**
comp=Z,49nm,1.7s,mb5.2
PBRG Braganca 81.22 313 *e*P **P 08 54 34.7 +1.5**
comp=Z,45nm,1.6s,mb5.2
PBEJ Beja 81.29 309 *e*P **P 08 54 34.0 +0.3**
comp=Z,32nm,1.9s,mb4.9
MVO Moncorvo 81.30 312 *e*P **P 08 54 35.1 +1.5**
comp=Z,40nm,1.7s,mb5.1
PCVE Castro Verde 81.34 309 *e*P **P 08 54 35.7 +1.7**
comp=Z,35nm,1.4s,mb5.1
PCBR Castelo Branco 81.35 311 *e*P **P 08 54 35.3 +1.3**
comp=Z,38nm,1.4s,mb5.1
EVO Evora 81.50 310 *e*P **P 08 54 36.5 +1.7**
comp=Z,28nm,1.1s,mb4.8
EVO *e*MLR MLR
comp=Z,190nm,22.2s,MS4.1
EVO Evora 81.50 310 *e*P **P 08 54 36.2 +1.4**
comp=Z,33nm,1.8s,mb5.0
MTE Manteigas 81.52 312 *e*P **P 08 54 37.1 +2.3**
comp=Z,37nm,1.6s,mb5.1
PTEO Sao Teotonio 81.86 309 *e*P **P 08 54 38.0 +1.3**
comp=Z,48nm,1.7s,mb5.2
YSS Yuzh-Sakhalins 81.97 42⇑*i*P **P 08 54 35.7 -1.4**
YSS *e* 08 54 42.4
YSS pmax pmax
comp=Z,40nm,1.1s,mb5.3
YSS Yuzh-Sakhalins 81.97 42 *e*P **P 08 54 35.8 -1.2**
comp=Z,8.6nm,0.4s,mb5.0
YSS *e* 08 54 43.5
PCAB Cabril 82.14 313 *e*P **P 08 54 40.0 +1.9**
comp=Z,55nm,1.6s,mb5.2
TIXI Tiksi 84.35 16 *e*P **P 08 54 47.7 -1.1**
TIXI pmax pmax
comp=Z,50nm,2.0s,mb5.3
TIXI MLR MLR
comp=Z,737nm,21.0s,MS5.0
TIXI Tiksi 84.35 16 *e*P **P 08 54 47.2 -1.6**
comp=Z,42nm,1.4s,mb5.4
TIXI *e* 08 54 54.6
QSPA South Pole Qui 86.54 180 *e*P **P 08 54 59.9 +0.2**
comp=Z,134nm,2.3s,mb5.8
JMIC Jan Mayen 88.98 341 LR LR 09 36 53.2
comp=Z,213nm,18.7s,MS4.6,baz=238,slow=37
PETK Petropavlovsk- 92.38 37 LR LR 09 39 07.6
comp=Z,331nm,21.4s,MS4.8,baz=272,slow=37
YKA Yellowknife Ar 121.07 2 PKP PKPdf 09 01 08.1 -1.4
comp=Z,1.2nm,0.8s,baz=360,slow=2.2,SNR=13
YKA PP PP 09 02 39.0 +0.7
comp=Z,1.0nm,1.0s,baz=353,slow=7.0,SNR=8.6
YKA Yellowknife Ar 121.07 2 PKP PKPdf 09 01 08.2 -1.4
YKA PP PP 09 02 39.0 +0.7
MSO Missoula 136.76 2 *e*PKPdf PKPdf 09 01 40.0 +0.2
PDAR Pinedale Array 140.82 358 PKP PKPdf 09 01 46.0 -1.5
comp=Z,1.5nm,0.7s,baz=58,slow=2.5,SNR=11
AHID Auburn Hatcher 140.87 359 *e*PKPdf PKPdf 09 01 49.5 +2.0
L20A Wamsutter 141.51 356 ⇓P PKPdf 09 01 48.0 -0.6
baz=141
HWUT Hardware Ranch 142.03 360 *e*PKPdf PKPdf 09 01 52.6 +3.0
P11A Circle Ranch, 143.89 5 ⇑P PKPdf 09 01 51.1 -1.9
baz=144
P19A Cripple Cowboy 143.91 356 ⇑P PKPdf 09 01 51.3 -1.7
baz=144
P14A Drum Mountains 144.02 2 ⇑P PKPdf 09 01 51.5 -1.7
baz=144,SNR=5.2
P16A Fountain Green 144.02 360 ⇑P PKPdf 09 01 51.8 -1.4
baz=144
P12A McGill 144.04 4 ⇓P PKPdf 09 01 51.6 -1.6
baz=144
P15A Leamington 144.06 1 ⇓P PKPdf 09 01 51.5 -1.8
baz=144
P17A Butcher Ranch, 144.15 359 ⇓P PKPdf 09 01 51.9 -1.5
baz=144
SMCO Snowmass 144.20 354 *e*PKPdf PKPdf 09 01 52.3 -1.2
Q12A Willow Creek R 144.48 4 ⇑P PKPdf 09 01 52.9 -1.1
baz=144,SNR=7.9
Q18A Rafter H Ranch 144.50 358 ⇑P PKPdf 09 01 52.3 -1.7
baz=144,SNR=17
Q22A Crested Butte, 144.50 354 ⇑P PKPdf 09 01 52.9 -1.2
baz=144
SRU San Rafael 144.50 358 ⇓P PKPdf 09 01 52.3 -1.7
baz=144
SRU San Rafael 144.50 358 *e*PKPdf PKPdf 09 01 52.3 -1.8
Q20A Ridgley Place, 144.54 355 ⇑P PKPdf 09 01 52.3 -1.8
baz=144
Q10A Clear Creek Ra 144.54 6 ⇑P PKPdf 09 01 52.9 -1.2
baz=144
Q21A Lamborn Mesa, 144.60 354 ⇑P PKPdf 09 01 52.8 -1.4
baz=144
Q11A Duckwater 144.60 5 ⇓P PKPdf 09 01 52.7 -1.5
baz=144,SNR=15
Q19A Hogan Spring (144.61 357 ⇑P PKPdf 09 01 52.8 -1.4
baz=144
Q13A Wheeler Ranch, 144.61 3 ⇓P PKPdf 09 01 53.4 -0.9
baz=144,SNR=13
Q14A Sevier Lake (B 144.61 2 ⇓P PKPdf 09 01 53.3 -1.0
baz=144,SNR=16
Q15A Fillmore 144.63 1 ⇓P PKPdf 09 01 53.6 -0.7
baz=144
NVAR Mina Array Bea 144.68 9 PKP PKPdf 09 01 54.0 -0.3
comp=Z,2.7nm,0.7s,baz=0.0,slow=2.6,SNR=23
CMB Columbia Colle 144.69 12 *e*PKIKP PKPdf 09 01 53.6 -0.8
Q16A Castle Valley 144.71 359 ⇑P PKPdf 09 01 53.5 -0.9
baz=145,SNR=26
MIAR Mount Ida 144.79 334 *e*PKIKP PKPdf 09 01 53.6 -1.1
R21A Cimarron 145.06 354 ⇑P PKPab 09 01 54.4 +0.1
baz=145
R10A Warm Springs 145.09 6 ⇓P PKPbc 09 01 54.0 -0.5
baz=145,SNR=12
R11A Troy Canyon, C 145.10 5 ⇑P PKPbc 09 01 54.4 -0.1
baz=145,SNR=18
R22A Saguache, Gunn 145.11 353 ⇑P PKPbc 09 01 54.7 +0.2
baz=145
MSU Marysvale 145.12 1 *e*PKIKP PKPdf 09 01 55.5 +0.4
ATAH Atahualpa 145.14 252 PKPbc PKPbc 09 01 56.0 +0.6
comp=Z,8.2nm,0.8s,baz=90,slow=4.0,SNR=10
VBMS Vicksburg 145.17 328 *e*PKPdf PKPdf 09 01 55.4 0.0
R12A Pony Springs, 145.20 4 ⇑P PKPbc 09 01 54.8 -0.1
baz=145,SNR=16
R17A Hanksville Air 145.20 359 ⇓P PKPbc 09 01 54.8 -0.1
baz=145,SNR=27
R18A Canyonlands Na 145.21 358 ⇑P PKPbc 09 01 54.8 0.0
baz=145,SNR=33
R19A Curley Farm, L 145.27 357 ⇓P PKPbc 09 01 55.0 -0.1
baz=145,SNR=33
R20A Redvale 145.31 355 ⇑P PKPbc 09 01 55.3 +0.2
baz=145,SNR=25
R14A James Farms, M 145.31 2 ⇑P PKPbc 09 01 55.6 +0.5
baz=145,SNR=5.8
R16A Teasdale 145.34 360 ⇑P PKPbc 09 01 56.0 +0.7
baz=145,SNR=37
MLAC Mammoth Lakes 145.37 10 ⇓P PKPbc 09 01 55.5 +0.1
baz=145
PV01 Paradox Valley 145.38 356 *e*PKPdf PKPdf 09 01 55.4 -0.2
R13A O'Grain Ranch, 145.39 3 ⇓P PKPbc 09 01 56.1 +0.7
baz=145,SNR=34
S10A Tonopah Range, 145.41 7 ⇓P PKPbc 09 01 55.6 0.0
baz=145,SNR=42
R15A Junction 145.41 1 ⇑P PKPbc 09 01 56.3 +0.8
baz=145,SNR=16
SDCO Great Sand Dun 145.42 351 *e*PKPdf PKPdf 09 01 55.5 -0.2
S21A Coal Bank Pass 145.78 354 ⇑P PKPdf 09 01 57.4 +1.1
baz=146,SNR=12
S11A Rachel 145.78 6 ⇓P PKPdf 09 01 57.0 +0.7
baz=146,SNR=12
S19A Harvey Farm, M 145.80 356 ⇓P PKPdf 09 01 56.7 +0.3
baz=146,SNR=16
S14A Cedar City 145.84 2 ⇓P PKPdf 09 01 57.2 +0.8
baz=146,SNR=17
S12A Delamar Landin 145.90 4 ⇑P PKPdf 09 01 57.8 +1.3
baz=146,SNR=12
S18A Hurst Farm, Bl 145.90 358 ⇑P PKPdf 09 01 56.7 +0.2
baz=146,SNR=13
S15A Panguitch 145.95 1 ⇑P PKPdf 09 01 58.1 +1.5
baz=146,SNR=11
S17A Black Ridge (B 145.98 359 ⇓P PKPdf 09 01 57.4 +0.7
baz=146,SNR=23
S13A Holt Ranch, En 145.99 3 ⇓P PKPdf 09 01 58.0 +1.4
baz=146,SNR=16
TIN Tinemaha 146.04 9 ⇓P PKPdf 09 01 57.8 +1.0
baz=146
CCUT Cedar City 146.04 2 *e*PKPdf PKPdf 09 01 58.3 +1.6

T11A Corn Creek, Al 146.23 5 ⇓P PKPdf 09 01 58.5 +1.5
baz=146,SNR=16
MVCO Mesa Verde 146.29 355 ⇓P PKPdf 09 01 58.4 +1.2
baz=146,SNR=5.3
MVCO Mesa Verde 146.29 355 *e*PKPdf PKPdf 09 01 58.4 +1.2
T22A Edith 146.32 353 ⇓P PKPdf 09 01 58.5 +1.2
baz=146,SNR=18
U26A Atchley Ranch, 146.42 348 ⇓P PKPdf 09 01 58.9 +1.4
baz=146,SNR=14
T18A Mexican Hat 146.45 357 ⇓P PKPbc 09 01 59.4 +0.7
baz=146,SNR=21
T14A Hurricane 146.54 2 ⇓P PKPbc 09 01 59.9 +0.9
baz=146,SNR=24
T13A Saint George 146.55 3 ⇓P PKPbc 09 01 59.9 +0.9
baz=146,SNR=9.6
U25A Circle Dot Ran 146.55 349 ⇑P PKPbc 09 01 59.4 +0.4
baz=146
RCTC Rector, Farmer 146.58 11 ⇑P PKPbc 09 01 59.1 0.0
baz=146
T15A Red Dirt Ranch 146.60 1 ⇓P PKPbc 09 01 59.3 +0.1
baz=146
T17A Navajo Res., N 146.62 359 ⇑P PKPbc 09 01 59.6 +0.4
baz=146,SNR=8.3
OTAV Otavalo 146.63 265 *e*PKPbc PKPbc 09 02 00.6 +0.6
T16A Glen Canyon Da 146.64 360 ⇑P PKPbc 09 01 59.2 -0.1
baz=146
WMOK Wichita Mounta 146.65 340 *e*PKP2 PKPbc 09 01 58.6 -0.8
T19A Beclabito 146.71 356 ⇓P PKPbc 09 01 59.4 0.0
baz=147,SNR=12
T12A Moapa 146.78 4 ⇓P PKPbc 09 01 59.9 +0.2
baz=147
FURC Furnace Creek, 146.81 8 ⇓P PKPbc 09 02 00.0 +0.2
baz=147
U10A Ash Meadows, A 146.93 7 ⇓P PKPbc 09 02 00.7 +0.6
baz=147,SNR=6.4
V26A Tequesquite Ra 147.01 348 ⇑P PKPbc 09 02 00.3 -0.1
baz=147,SNR=14
U17A Shonto 147.01 358 ⇑P PKPbc 09 01 59.9 -0.4
baz=147
U11A Corn Creek 147.03 5 ⇓P PKPbc 09 02 00.2 -0.2
baz=147
VES Vestal, Richgr 147.07 11 ⇑P PKPbc 09 01 59.9 -0.6
baz=147
U12A Valley of Fire 147.09 4 ⇑P PKPbc 09 02 00.7 +0.1
baz=147
U20A Newcomb 147.12 355 ⇓P PKPbc 09 02 00.9 +0.2
baz=147
MPMC Manual Prospec 147.13 9 ⇑P PKPbc 09 02 01.1 +0.4
baz=147
U13A Pakoon Wash 147.14 3 ⇑P PKPbc 09 02 00.9 +0.1
baz=147,SNR=11
U18A Rough Rock, Ch 147.16 357 ⇓P PKPbc 09 02 01.3 +0.4
baz=147,SNR=9.7
U14A Mt Trumbull 147.18 2 ⇓P PKPbc 09 02 01.6 +0.7
baz=147,SNR=14
U15A North Rim 147.19 1 ⇓P PKPbc 09 02 01.5 +0.6
baz=147,SNR=15
U19A Dine' College, 147.25 356 ⇓P PKPbc 09 02 00.9 -0.2
baz=147,SNR=13
ISA Isabella 147.35 10 ⇑P PKPbc 09 02 01.1 -0.2
baz=147
V22A San Miguel Ran 147.41 353 ⇑P PKPbc 09 02 01.8 +0.3
baz=147,SNR=13
W27A Bowe Ranch, En 147.56 347 ⇓P PKPbc 09 02 01.5 -0.4
baz=147,SNR=8.9
V11A Goodsprings 147.60 6 ⇑P PKPbc 09 02 01.7 -0.4
baz=147
V21A Milan 147.60 354 ⇓P PKPbc 09 02 02.1 0.0
baz=148
NATX Nacogdoches 147.62 332 *e*PKPdf PKPbc 09 02 00.1 -2.1
W26A Owens Ranch, T 147.69 348 ⇓P PKPbc 09 02 01.8 -0.5
baz=148
V20A Brimhall 147.69 355 ⇓P PKPbc 09 02 01.9 -0.4
baz=148,SNR=8.2
V13A Grand Canyon W 147.70 3 ⇑P PKPbc 09 02 02.5 +0.1
baz=148,SNR=12
W25A X Bar L Ranch, 147.70 349 ⇑P PKPbc 09 02 01.9 -0.4
baz=148,SNR=10.0
V12A Nelson 147.76 5 ⇑P PKPbc 09 02 02.4 0.0
baz=148,SNR=7.3
ARVC Arvin 147.81 11 ⇑P PKPbc 09 02 02.5 -0.1
baz=148
V19A Window Rock 147.82 356 ⇑P PKPbc 09 02 02.2 -0.4
baz=148
PKM Peak Mountain 147.83 13 ⇑P PKPbc 09 02 02.0 -0.6
baz=148
V18A Ganado 147.87 357 ⇑P PKPbc 09 02 02.7 0.0
baz=148,SNR=8.7
W24A Lazy 6 Ranch, 147.88 350 ⇑P PKPbc 09 02 03.0 +0.2
baz=148,SNR=8.1
V14A Boquillas Ranc 147.96 2 ⇑P PKPbc 09 02 02.8 -0.3
baz=148,SNR=7.9
X27A F and S Farms, 147.96 347 ⇑P PKPbc 09 02 02.4 -0.7
baz=148
GSC Goldstone 147.97 8 *e*PKP2 PKPbc 09 02 03.0 -0.1
V17A Tonalea, Kykot 147.99 359 ⇓P PKPbc 09 02 02.7 -0.4
baz=148
W23A Werner Place, 148.05 351 ⇓P PKPbc 09 02 02.7 -0.6
baz=148
WUAZ Wupatki 148.11 360 ⇓P PKPbc 09 02 02.8 -0.6
baz=148
WUAZ Wupatki 148.11 360 *e*PKPbc PKPbc 09 02 05.3 +1.9
W12A Cal Nev Ari 148.19 5 ⇑P PKPbc 09 02 03.3 -0.3
baz=148
EDW2 Edwards Air Fo 148.20 10 ⇓P PKPbc 09 02 02.8 -0.8
baz=148
X26A CR and CF Fran 148.22 348 ⇓P PKPbc 09 02 03.3 -0.4
baz=148,SNR=6.5
W22A Albuquerque 148.24 352 ⇑P PKPbc 09 02 03.1 -0.6
baz=148
W21A San Fidel 148.28 354 ⇑P PKPbc 09 02 03.6 -0.3
baz=148
SBC Santa Barbara 148.29 13 ⇑P PKPbc 09 02 03.5 -0.4
baz=148
ANMO Albuquerque 148.30 352 *c i*PKP2 PKPbc 09 02 03.1 -0.8
ANMO pmax pmax
comp=Z,10.0nm,1.7s
ANMO Albuquerque 148.30 352 *e*PKPdf PKPdf 09 02 01.2 +0.6
ANMO *e*PKPbc PKPbc 09 02 04.5 +0.5
LDFC Landfair 148.38 5 *e*PKPbc PKPbc 09 02 04.3 +0.2
W14A Seligman 148.38 2 ⇑P PKPbc 09 02 04.5 +0.4
baz=148,SNR=10
X25A Clemmons Ranch 148.41 349 ⇓P PKPbc 09 02 03.7 -0.5
baz=148
W19A Sanders 148.44 356 ⇑P PKPbc 09 02 03.8 -0.5
baz=148
W15A Williams 148.44 1 ⇑P PKPbc 09 02 04.0 -0.3
baz=148
W18A Petrified Fore 148.45 357 ⇑P PKPbc 09 02 04.0 -0.3
baz=148
W13A Hualapai Mount 148.46 3 ⇓P PKPbc 09 02 04.2 -0.1
baz=148,SNR=5.7
HEC Hector,Ludlow 148.50 7 ⇑P PKPbc 09 02 04.4 -0.1
baz=148
X24A Lazy VL Ranch, 148.52 350 ⇓P PKPbc 09 02 04.3 -0.2
baz=148
W16A Flagstaff 148.53 360 ⇑P PKPbc 09 02 04.1 -0.4
baz=148
W17A Winslow 148.53 358 ⇑P PKPbc 09 02 04.4 -0.1
baz=148
MSTX Muleshoe 148.53 346 ⇓P PKPbc 09 02 03.6 -1.0
baz=148,SNR=7.4
GMRC Granite Mounta 148.62 6 ⇓P PKPbc 09 02 04.3 -0.5
baz=148
Y27A Causey 148.71 346 ⇑P PKPbc 09 02 04.4 -0.6
baz=149,SNR=11
Y26A Elida 148.82 347 ⇓P PKPbc 09 02 05.0 -0.3
baz=149
BFSC Mount Baldy Ra 148.88 10 ⇑P PKPbc 09 02 05.6 +0.2
baz=149
LAZ Ladron 148.93 353 *e*PKPdf PKPdf 09 02 02.4 +0.8
LAZ *e*PKPbc PKPbc 09 02 06.4 +0.8
X20A Quemado 148.94 355 ⇓P PKPbc 09 02 05.6 0.0
baz=149
X21A Alamocita Cree 148.96 354 ⇓P PKPbc 09 02 05.8 +0.1
baz=149
X13A Yucca 148.97 3 ⇑P PKPbc 09 02 06.1 +0.4
baz=149,SNR=6.1
BBRC Big Bear Solar 148.97 8 ⇑P PKPbc 09 02 05.3 -0.5
baz=149
Y25A Mesa, Roswell 149.00 349 ⇑P PKPbc 09 02 05.3 -0.5
baz=149
X18A Snowflake 149.05 357 ⇓P PKPbc 09 02 06.0 +0.1
baz=149
X19A St. Johns 149.11 356 ⇑P PKPbc 09 02 06.4 +0.4
baz=149
X15A Humboldt 149.13 1 ⇑P PKPbc 09 02 06.5 +0.4
baz=149,SNR=8.9

X14A	**Yava**	**149.13**	**2**	⇓P	PKPbc	09 02 06.6	+0.5
	baz=149,SNR=6.4						
Y24A	**Capitan**	**149.14**	**350**	⇓P	PKPbc	09 02 06.2	0.0
	baz=149						
X16A	**Lo Mia Camp, P**	**149.20**	**360**	⇑P	PKPbc	09 02 06.8	+0.5
	baz=149,SNR=9.2						
Y22D	**IRIS PASSCAL I**	**149.22**	**352**	⇑P	PKPbc	09 02 06.3	0.0
	baz=149						
PDMCI	**Parker Dam,Lak**	**149.24**	**4**	⇓P	PKPbc	09 02 06.7	+0.4
	baz=149						
Y23A	**Lovelace Mesa,**	**149.24**	**351**	⇑P	PKPbc	09 02 06.6	+0.3
	baz=149						
Z27A	**Tatum**	**149.27**	**346**	⇓P	PKPbc	09 02 06.3	-0.2
	baz=149,SNR=18						
IRM	**Iron Mountain**	**149.29**	**6**	⇑P	PKPbc	09 02 06.6	+0.1
	baz=149						
BELC	**Belle Mtn. Jos**	**149.36**	**7**	⇓P	PKPbc	09 02 06.9	+0.2
	baz=149						
Y22A	**Socorro**	**149.37**	**352**	⇑P	PKPbc	09 02 06.3	-0.4
	baz=149						
Y21A	**Point of Rocks**	**149.38**	**353**	⇓P	PKPbc	09 02 06.4	-0.3
	baz=149						
Z26A	**Caprock**	**149.48**	**347**	⇓P	PKPbc	09 02 06.3	-0.7
	baz=149						
Y20A	**Horse Springs,**	**149.56**	**355**	⇓P	PKPbc	09 02 07.5	+0.3
	baz=149						
CIS	**Catalina Islan**	**149.56**	**11**	⇓P	PKPbc	09 02 06.6	-0.6
	baz=149						
Y19A	**Nutrioso**	**149.58**	**356**	⇑P	PKPbc	09 02 07.7	+0.5
	baz=149,SNR=6.8						
MURC	**Murrieta**	**149.58**	**9**	⇑P	PKPbc	09 02 07.2	-0.1
	baz=149						
Z25A	**Roswell**	**149.63**	**348**	⇓P	PKPbc	09 02 06.9	-0.5
	baz=150						
Y14A	**Wickenburg**	**149.66**	**2**	⇓P	PKPbc	09 02 07.2	-0.2
	baz=150						
Y15A	**Casa Rosa Banc**	**149.66**	**1**	⇑P	PKPbc	09 02 07.9	+0.5
	baz=150,SNR=8.4						
HKT	**Hockley**	**149.68**	**332**	*e*PKHKP	PKPbc	09 02 04.4	-3.2
HKT				*e*		09 02 08.2	
PFO	**Pinyon Flat Ob**	**149.68**	**8**	⇓P	PKPbc	09 02 07.4	-0.1
	baz=150						
PFO	**Pinyon Flat Ob**	**149.68**	**8**	*e*PKPbc	PKPbc	09 02 07.8	+0.3
CPRX	**Cap Rock**	**149.69**	**347**	*e*PKPbc	PKPbc	09 02 06.9	-0.6
CPRX				*e*PKPab	PKPab	09 02 13.8	+1.2
Z24A	**Sheeppen Canyo**	**149.71**	**349**	⇑P	PKPbc	09 02 07.3	-0.3
	baz=150						
Y13A	**Salome**	**149.74**	**4**	⇓P	PKPbc	09 02 07.5	-0.1
	baz=150						
Y16A	**Circle Bar Ran**	**149.74**	**360**	⇑P	PKPbc	09 02 08.1	+0.4
	baz=150,SNR=7.2						
Y12C	**Blythe**	**149.75**	**5**	⇓P	PKPbc	09 02 07.7	0.0
	baz=150						
BC3	**Big Chuckawall**	**149.76**	**6**	⇑P	PKPbc	09 02 07.9	+0.2
	baz=150						
Y18A	**Canyon Day Jun**	**149.80**	**357**	⇓P	PKPbc	09 02 08.3	+0.5
	baz=150,SNR=23						
127A	**Arkansas Junct**	**149.91**	**346**	⇑P	PKPbc	09 02 07.7	-0.4
	baz=150						
Y17A	**Roosevelt**	**149.91**	**359**	⇑P	PKPbc	09 02 08.4	+0.4
	baz=150,SNR=8.8						
Z23A	**Rita Site, Whi**	**149.92**	**351**	⇑P	PKPbc	09 02 07.8	-0.3
	baz=150						
SCI	**San Clemente I**	**149.94**	**12**	⇑P	PKPbc	09 02 08.0	-0.2
	baz=150						
Z22A	**Elephant Butte**	**150.04**	**352**	⇑P	PKPbc	09 02 08.0	-0.4
	baz=150,SNR=6.9						
Z21A	**St. Cloud Mine**	**150.07**	**353**	⇑P	PKPbc	09 02 08.1	-0.4
	baz=150						
126A	**Clayton Basin,**	**150.09**	**347**	⇓P	PKPbc	09 02 07.8	-0.7
	baz=150						
125A	**Gardner Draw,**	**150.22**	**348**	⇑P	PKPbc	09 02 07.3	-1.6
	baz=150						
Z14A	**Wintersburg**	**150.23**	**2**	⇓P	PKPbc	09 02 08.8	0.0
	baz=150						
Z19A	**T-Link Ranch,**	**150.24**	**356**	⇑P	PKPbc	09 02 08.6	-0.2
	baz=150						
Z16A	**Peralta Trail,**	**150.28**	**360**	⇑P	PKPbc	09 02 08.6	-0.4
	baz=150						
109C	**Camp Elliot, M**	**150.29**	**9**	⇓P	PKPbc	09 02 09.1	+0.1
	baz=150						
Z17A	**San Carlos Hig**	**150.30**	**358**	⇑P	PKPbc	09 02 09.6	+0.6
	baz=150,SNR=9.7						
Z15A	**Gila River Ind**	**150.33**	**1**	⇓P	PKPbc	09 02 08.8	-0.3
	baz=150						
124A	**Stringfield Ra**	**150.34**	**349**	⇑P	PKPbc	09 02 09.0	-0.1
	baz=150						
Z13A	**Yuma Proving G**	**150.36**	**3**	⇓P	PKPbc	09 02 09.2	+0.1
	baz=150						
Z20A	**Nine Sixteen R**	**150.36**	**355**	⇑P	PKPbc	09 02 09.6	+0.4
	baz=150,SNR=11						
MONP	**Monument Peak**	**150.39**	**8**	⇑P	PKPbc	09 02 09.8	+0.6
	baz=150						
GLA	**Glamis**	**150.42**	**5**	⇑P	PKPbc	09 02 09.8	+0.5
	baz=150						
SWSC	**Sam W. Stewart**	**150.43**	**7**	⇑P	PKPbc	09 02 09.9	+0.5
	baz=150						
Z18A	**Geronimo**	**150.49**	**357**	⇑P	PKPbc	09 02 09.7	+0.2
	baz=150,SNR=5.3						
227A	**Bennet, Jal**	**150.53**	**345**	⇓P	PKPbc	09 02 08.9	-0.7
	baz=150						
123A	**Bell Site, Whi**	**150.54**	**351**	⇑P	PKPbc	09 02 09.6	0.0
	baz=150						
BAR	**Barrett**	**150.56**	**9**	*e*PKPdf	PKPdf	09 02 05.9	+1.6
BAR				*e*PKPbc	PKPbc	09 02 11.5	+1.8
BAR				*e*PKPab	PKPab	09 02 16.5	+0.4
122A	**Conniff Cattle**	**150.59**	**352**	⇓P	PKPbc	09 02 09.5	-0.2
	baz=150						
GDL2	**Guadalupe Moun**	**150.60**	**347**	*e*PKPdf	PKPdf	09 02 05.3	+0.9
GDL2				*e*PKPbc	PKPbc	09 02 10.3	+0.5
GDL2				*e*PKPab	PKPab	09 02 16.1	-0.2
DVTC	**Desert V Tower**	**150.66**	**8**	⇑P	PKPbc	09 02 10.5	+0.6
	baz=150						
226A	**Malaga, Loving**	**150.67**	**347**	⇓P	PKPbc	09 02 09.5	-0.4
	baz=150						
119A	**Ashpeak Ranch,**	**150.77**	**356**	⇑P	PKPbc	09 02 10.2	+0.1
	baz=151,SNR=7.2						
113A	**Mohawk Valley,**	**150.78**	**4**	⇑P	PKPbc	09 02 10.0	-0.2
	baz=151						
225A	**Deer Hill, Car**	**150.78**	**348**	⇑P	PKPbc	09 02 09.4	-0.8
	baz=151,SNR=6.3						
114A	**Black Gap (USA**	**150.84**	**2**	⇑P	PKPbc	09 02 10.1	-0.2
	baz=151						
121A	**Cookes Peak, D**	**150.85**	**353**	⇓P	PKPbc	09 02 10.4	+0.1
	baz=151,SNR=7.9						
JCT	**Junction City**	**150.88**	**339**	*e*PKIKP	PKPdf	09 02 05.6	+0.8
JCT				*e*		09 02 09.8	
JCT	**Junction City**	**150.88**	**339**	*e*PKPdf	PKPdf	09 02 05.6	+0.8
JCT				*e*PKPbc	PKPbc	09 02 09.8	-0.7
JCT				*e*PKPab	PKPab	09 02 17.3	-0.2
115A	**Sonoran Desert**	**150.91**	**1**	⇑P	PKPbc	09 02 10.8	+0.4
	baz=151						
120A	**U Bar Ranch, L**	**150.93**	**355**	⇓P	PKPbc	09 02 10.4	-0.1
	baz=151,SNR=6.6						
112A	**Yuma**	**150.95**	**5**	⇓P	PKPbc	09 02 10.9	+0.3
	baz=151						
224A	**Cornudas Mount**	**150.96**	**349**	⇑P	PKPbc	09 02 10.7	+0.1
	baz=151,SNR=5.8						
328A	**Wristen Ranch,**	**151.00**	**344**	⇓P	PKPbc	09 02 10.1	-0.7
	baz=151						
116A	**Eloy**	**151.06**	**0**	⇑P	PKPbc	09 02 11.0	+0.1
	baz=151						
223A	**Chaparral, Ant**	**151.18**	**351**	⇑P	PKPbc	09 02 11.1	-0.1
	baz=151						
222A	**Williams Famil**	**151.19**	**352**	⇑P	PKPbc	09 02 11.2	0.0
	baz=151						
327A	**Balmorhea Ranc**	**151.19**	**345**	⇑P	PKPbc	09 02 10.9	-0.3
	baz=151						
TUC	**Tucson**	**151.29**	**358**	*e*PKIKP	PKPdf	09 02 05.5	+0.1
TUC				*e*		09 02 11.9	
TUC	**Tucson**	**151.29**	**358**	*e*PKPdf	PKPdf	09 02 05.5	0.0
TUC				*e*PKPbc	PKPbc	09 02 11.9	+0.5
TUC				*e*PKPab	PKPab	09 02 18.9	-0.3
MNTX	**Cornudas Mount**	**151.30**	**349**	*e*PKPdf	PKPdf	09 02 07.0	+1.6
MNTX				*e*PKPbc	PKPbc	09 02 11.1	-0.3
MNTX				*e*PKPab	PKPab	09 02 18.8	-0.4
221A	**Mesquite Ranch**	**151.37**	**353**	⇓P	PKPbc	09 02 11.7	+0.1
	baz=151						
219A	**White Tail Can**	**151.53**	**356**	⇑P	PKPbc	09 02 11.7	-0.2
	baz=151,SNR=10						
325A	**Bean Ranch, Si**	**151.53**	**348**	⇑P	PKPbc	09 02 11.3	-0.7
	baz=151,SNR=30						
220A	**Playas Peak, P**	**151.56**	**354**	⇓P	PKPbc	09 02 12.0	0.0
	baz=151,SNR=12						
324A	**Moseley Ranch,**	**151.56**	**349**	⇑P	PKPbc	09 02 11.4	-0.6
	baz=151,SNR=25						
428A	**Kincaid Ranch,**	**151.58**	**344**	⇓P	PKPbc	09 02 11.6	-0.5
	baz=152,SNR=8.3						
218A	**Dragoon**	**151.60**	**357**	⇓P	PKPbc	09 02 12.0	-0.1
	baz=152						
216A	**Three Points,**	**151.61**	**360**	⇑P	PKPbc	09 02 12.0	-0.1
	baz=152						
214A	**Organ Pipe Nat**	**151.64**	**2**	⇑P	PKPbc	09 02 12.3	+0.1
	baz=152						
427A	**Hayter Ranch,**	**151.66**	**345**	⇓P	PKPbc	09 02 11.6	-0.7
	baz=152,SNR=6.9						
217A	**Green Valley**	**151.83**	**358**	⇑P	PKPbc	09 02 12.7	0.0
	baz=152						
426A	**McDonald Obser**	**151.99**	**346**	⇓P	PKPbc	09 02 12.4	-0.6
	baz=152,SNR=27						
320A	**Kipp Ranch, An**	**152.12**	**354**	⇓P	PKPbc	09 02 13.8	+0.5
	baz=152,SNR=11						
318A	**Bisbee**	**152.13**	**357**	⇑P	PKPbc	09 02 12.7	-0.6
	baz=152						
528A	**Cox Ranch, San**	**152.14**	**343**	⇓P	PKPbc	09 02 13.0	-0.4
	baz=152,SNR=10						
319A	**Douglas**	**152.15**	**356**	⇑P	PKPbc	09 02 13.1	-0.2
	baz=152						
527A	**Woodward Ranch**	**152.38**	**345**	⇓P	PKPbc	09 02 13.5	-0.4
	baz=152,SNR=13						
628A	**Black Gap, Mar**	**152.81**	**343**	⇑P	PKPbc	09 02 14.4	-0.5
	baz=153,SNR=6.5						
TXAR	**Lajitas Array**	**153.17**	**344**	PKP	PKPdf	09 02 08.3	+0.1
	comp=Z,0.8nm,0.9s,baz=170,slow=1.8,SNR=8.5						
TXAR				PKPbc	PKPbc	09 02 15.4	-0.2
	comp=Z,2.9nm,0.9s,baz=148,slow=1.9,SNR=22						
TXAR				PKPab	PKPab	09 02 24.6	-2.6
	comp=Z,8.6nm,1.0s,baz=108,slow=2.0,SNR=9.1						
TGUH	**Tegucigalpa,Un**	**153.71**	**295**	*e*PKPdf	PKPdf	09 02 11.5	+2.1
APG	**El Apazote**	**156.15**	**300**	PKPab	PKPab	09 02 40.9	+0.6
	comp=Z,5.8nm,0.8s,baz=28,slow=1.5,SNR=5.8						

IDC 03 08:46:14.9±3.2, 3°35S×67°88E, h0km, mb4.0/4, mb1 4.1/4, mb1mx3.6/24, mbtmp4.0/4, MS4.2/4, Ms1 4.2/4, ms1mx3.5/35, Error ellipse: s-maj=88.0km s-min=60.4km az=156.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**37.49**	**54**	P	P	08 53 30.6	-0.1
	1.1nm,0.3s,baz=242,slow=11,SNR=4.5						
MKAR	**Makanchi Array**	**51.53**	**13**	P	P	08 55 22.3	-0.1
	0.2nm,0.3s,baz=199,slow=7.6,SNR=2.6						
ZALV	**Zalesovo Beam**	**58.82**	**12**	P	P	08 56 14.9	-0.1
	1.1nm,0.4s,baz=193,slow=5.9,SNR=2.8						
SONM	**Songino Array**	**61.09**	**29**	P	P	08 56 31.1	+0.4
	2.3nm,1.1s,baz=228,slow=6.8,SNR=4.7						
VRAC	**Vranov**	**68.60**	**327**	LR	LR	09 27 40.8	
	comp=Z,192nm,20.1s,baz=87,slow=36						
DAVOX	**Davos/Dischmat**	**71.25**	**322**	LR	LR	09 28 02.7	
	comp=Z,87nm,22.0s,baz=82,slow=35						
HFS	**Hagfors**	**75.99**	**335**	LR	LR	09 31 53.8	
	comp=Z,231nm,20.8s,baz=109,slow=36						
NOA	**NORSAR Array B**	**77.51**	**335**	LR	LR	09 34 04.7	
	comp=Z,167nm,20.1s,baz=100,slow=37						
TXAR	**Lajitas Array**	**152.94**	**344**	PKPbc	PKPbc	09 06 15.0	+0.1
	0.6nm,0.9s,baz=31,slow=2.1,SNR=3.9						

IDC 03 08:49:45.6±4.1, 3°84S×67°63E, h0km, mb4.0/4, mb1 4.1/4, mb1mx3.7/24, mbtmp4.0/4, Error ellipse: s-maj=106.1km s-min=38.9km az=70.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**37.98**	**53**	P	P	08 57 05.6	+0.1
	1.0nm,0.3s,baz=249,slow=10,SNR=4.1						
MKAR	**Makanchi Array**	**52.06**	**13**	P	P	08 58 57.5	+0.4
	0.2nm,0.3s,baz=196,slow=10,SNR=2.2						
SONM	**Songino Array**	**61.64**	**29**	P	P	09 00 04.8	-0.3
	1.4nm,0.8s,baz=234,slow=4.8,SNR=8.7						
ASAR	**Alice Springs**	**66.75**	**114**	P	P	09 00 39.4	+0.1
	0.7nm,0.9s,baz=291,slow=5.9,SNR=5.8						

IDC 03 08:54:21.6±4.0, 3°61S×68°62E, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.5/24, mbtmp3.8/3, Error ellipse: s-maj=116.3km s-min=68.3km az=158.0, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**37.05**	**53**	P	P	09 01 33.9	+0.3
	0.4nm,0.3s,baz=241,slow=11,SNR=4.2						
MKAR	**Makanchi Array**	**51.62**	**12**	P	P	09 03 30.2	+0.4
	0.2nm,0.2s,baz=193,slow=5.9,SNR=2.5						
SONM	**Songino Array**	**60.96**	**28**	P	P	09 04 36.2	-0.3
	1.3nm,0.8s,baz=221,slow=6.3,SNR=8.2						
TXAR	**Lajitas Array**	**153.39**	**345**	PKPbc	PKPbc	09 14 22.9	+0.2
	0.3nm,0.9s,baz=60,slow=4.3,SNR=2.6						

MEX 03 08:55:16.6±0.6, 17°17N×99°45W, h46km±21km, MD3.8, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.49**	**233**	*i* P	Pn	08 55 26.2	-1.3
ACX				*i* S	Sn	08 55 34.2	-1.0
CAIG	**El Cayaco**	**0.79**	**261**	*i* P	Pn	08 55 29.9	-1.5
CAIG				*i* S	Sn	08 55 40.5	-1.5
PLIG	**Platanillo**	**1.22**	**358**	*e*P	Pn	08 55 35.5	-1.7
PLIG				*i* S	Sn	08 55 50.7	-1.9
PNIG	**Pinotepa**	**1.49**	**121**	*i* P	Pn	08 55 40.0	-0.9
PNIG				*i* S	Sn	08 55 57.4	-1.8
ZIIG	**Zihuatanejo**	**1.97**	**283**	*i* P	Pn	08 55 46.7	-0.8
ZIIG				*i* S	Sn	08 56 08.4	-2.6
VHO	**Vista Hermosa**	**2.60**	**92**	*i* P	Pn	08 55 55.2	-1.0
VHO				*i* S	Sn	08 56 25.9	-0.7
HUIG	**Huatulco**	**3.50**	**113**	*i* P	Pn	08 56 06.0	-2.5
HUIG				*i* S	Sn	08 56 46.2	-2.5

*IDC **03** 08:58:05.3±1.2, 11°10S×163°10E, h0km, mb4.3/8, mb1 4.4/9, mb1mx4.2/17, mbtmp4.3/9, ML4.1/1, MS4.0/3, Ms1 4.0/3, ms1mx3.5/24, Error ellipse: s-maj=43.8km s-min=22.1km az=129.0*

*NEIC **03** 08:58:10.5±0.7, 11°14S×163°14E, h35km, mb4.5/10, Error ellipse: s-maj=19.2km s-min=12.7km az=145.0*

ISC 03 08:58:06.0±5.9, 11°23S±0°09×163°24E±0°08, h5km±36km, n31, σ1°33/30, mb4.4/15, MS4.0/2, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.69**	**299**	*e*Pn	**Pn**	**08 59 04.9**	**+1.1**
HNR				*e*Sn	**Sn**	**08 59 48.8**	**+1.0**
CTA	**Charters Tower**	**18.56**	**240**	*e*P	**Pn**	**09 02 25.2**	**+1.1**
	7.3nm,0.6s						
CTA	**Charters Tower**	**18.56**	**240**	P	**Pn**	**09 02 25.1**	**+1.0**
	0.4nm,0.3s,baz=68,slow=13,SNR=12						
CTA				LR	LR	09 08 40.2	
	comp=Z,209nm,18.2s,baz=76,slow=34						
CTAO	**Charters Tower**	**18.56**	**240**	*e*P	**Pn**	**09 02 24.8**	**+0.7**
	8.7nm,0.7s						
COEN	**Coen**	**19.76**	**260**	*e*P	**Pn**	**09 02 38.5**	**-0.2**
	292nm,1.4s						
AFI	**Afiamalu**	**24.53**	**99**	LR	LR	09 11 06.6	
	comp=Z,194nm,18.7s,MS3.6,baz=51,slow=32						
CMSA	**Cobar Meteorol**	**25.91**	**216**	*e*P	**P**	**09 03 39.8**	**+0.5**
STKA	**Stephens Creek**	**28.66**	**221**	*e*P	**P**	**09 04 04.5**	**+0.6**
	6.6nm,0.8s,mb4.4						
STKA	**Stephens Creek**	**28.66**	**221**	P	**P**	**09 04 04.5**	**+0.7**
	9.2nm,0.9s,mb4.5,baz=52,slow=12,SNR=15						
STKA	**Stephens Creek**	**28.66**	**221**	*e*P	**P**	**09 04 04.1**	**+0.3**
	2.5nm,1.0s						
WRAB	**Tennant Creek**	**29.10**	**249**	*e*P	**P**	**09 04 06.7**	**-1.3**
	4.9nm,1.0s,mb4.2						
KAKA	**Kakadu**	**30.15**	**264**	*e*P	**P**	**09 04 15.6**	**-1.8**
	6.0nm,0.5s,mb4.6						
KAKA	**Kakadu**	**30.15**	**264**	*e*P	**P**	**09 04 15.7**	**-1.7**
	14nm,0.4s,mb5.0						
ASAR	**Alice Springs**	**30.52**	**242**	P	**P**	**09 04 18.7**	**-1.8**
	2.1nm,0.5s,mb4.2,baz=64,slow=10.0,SNR=43						
TOO	**Toolangi**	**30.69**	**208**	*e*P	**P**	**09 04 23.6**	**+1.7**
FITZ	**Fitzroy Crossi**	**36.96**	**255**	*e*P	**P**	**09 05 14.3**	**-2.3**
	8.5nm,0.9s,mb4.6						
FITZ	**Fitzroy Crossi**	**36.96**	**255**	P	**P**	**09 05 14.8**	**-1.7**
	3.9nm,0.7s,mb4.3,baz=92,slow=5.9,SNR=9.1						
FITZ	**Fitzroy Crossi**	**36.96**	**255**	*e*P	**P**	**09 05 14.3**	**-2.2**
	5.5nm,0.8s,mb4.4						
MBWA	**Marble Bar**	**42.81**	**251**	*e*P	**P**	**09 06 03.6**	**-1.7**
	13nm,1.1s,mb4.6						
MEEK	**Meekatharra**	**44.66**	**243**	*e*P	**P**	**09 06 19.7**	**-0.4**
JOW	**Kunigami**	**50.83**	**319**	LR	LR	09 24 36.0	
	comp=Z,427nm,19.9s,MS4.5,baz=283,slow=31						
LZH	**Lanzhou**	**73.07**	**313**	*e*P	**P**	**09 09 40.5**	**+3.0**
LZH				pP	pP	09 09 46.0	+7.0
LZH				sP	sP	09 09 48.3	+8.7
LZH				pmax	pmax		
	comp=Z,22nm,1.5s,mb4.9						
LZH				pmax	pmax		
	comp=Z,89nm,4.7s						
SONM	**Songino Array**	**77.37**	**325**	P	**P**	**09 10 01.8**	**-0.2**
	comp=Z,2.2nm,0.9s,mb4.1,baz=144,slow=5.4,SNR=11						
GTA	**Gaotai**	**77.42**	**315**	*e*P	**P**	**09 10 05.2**	**+2.7**
GTA				pP	pP	09 10 08.9	+4.9
GTA				sP	sP	09 10 11.3	+6.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.1						
QSPA	**South Pole Qui**	**78.78**	**180**	*e*P	**P**	**09 10 11.7**	**+2.3**
	comp=Z,2.3nm,0.8s,mb4.2						
BILL	**Bilibino**	**79.09**	**1**	*e*P	**P**	**09 10 10.1**	**-1.0**
	comp=Z,7.8nm,1.2s,mb4.5						
MAW	**Mawson**	**83.63**	**202**	P	**P**	**09 10 36.0**	**+0.6**
	comp=Z,2.5nm,1.1s,mb4.3,baz=78,slow=6.5,SNR=2.9						
NVAR	**Mina Array Bea**	**88.03**	**50**	P	**P**	**09 10 58.2**	**+0.5**
	comp=Z,0.8nm,0.7s,baz=236,slow=6.9,SNR=4.7						
N12A	**Clover Valley,**	**91.08**	**49**	*e*P	**P**	**09 11 12.1**	**+0.1**
	comp=Z,3.2nm,0.7s,mb4.8						
MKAR	**Makanchi Array**	**91.97**	**317**	P	**P**	**09 11 15.9**	**-0.1**
	comp=Z,1.2nm,0.7s,mb4.3,baz=96,slow=4.3,SNR=8.7						
YKA	**Yellowknife Ar**	**96.27**	**28**	P	**P**	**09 11 33.4**	**-1.9**
	comp=Z,0.3nm,0.7s,mb3.9,baz=261,slow=4.9,SNR=2.7						

*IDC **03** 09:00:25.5±0.6, 8°47N×82°91W, h0km, mb4.1/15, mb1 4.4/19, mb1mx4.3/24, mbtmp4.2/19, ML4.2/4, MS3.9/8, Ms1 3.9/8, ms1mx3.5/35, Error ellipse: s-maj=24.6km s-min=12.7km az=53.0*

*CASC **03** 09:00:26.9±3.3, 8°46N×82°95W, h0km±11km, MD4.1, ML3.6, mb4.7(NEIC)*

*ISCJB **03** 09:00:28.6±1.0, 8°50N±0°06×82°90W±0°03, h23km±5km, mb4.6/75, MS4.2/7, Error ellipse: s-maj=9.8km s-min=3.9km az=17.6*

*NEIC **03** 09:00:31.7±0.4, 8°43N×82°93W, mb4.7/54, Error ellipse: s-maj=10.6km s-min=6.3km az=33.0*

ISC 03 09:00:29.5±1.2, 8°49N±0°05×82°87W±0°03, h17km±6km, h40km±.9km: pP-P, n336, σ0°86/330, mb4.6/75, MS4.2/7, 94C-100D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.35**	**30**	*e*P	**Pg**	**09 00 36.9**	**+0.2**
BAR1		**0.86**	**330**	⇓*i*P	**Pb**	**09 00 42.4**	**-3.7**
BAR1				*e*S	**Sb**	**09 01 00.7**	**+3.3**
CNI	**Changuinola**	**0.98**	**21**	⇓*i*P	**Pb**	**09 00 47.0**	**-1.1**
BUS	**Buena Vista**	**1.37**	**320**	⇑*i*P	**Pn**	**09 00 50.2**	**-3.7**
LIO	**Limon**	**1.51**	**354**	⇑*i*P	**Pn**	**09 00 54.5**	**-1.3**
QCR	**Quepos**	**1.58**	**306**	⇑*i*P	**Pn**	**09 00 51.7**	**-5.0**
QCR				*e*S	**Sn**	**09 01 14.7**	**-2.1**
URSC	**Urasca**	**1.61**	**326**	⇑*i*P	**Pn**	**09 00 54.0**	**-3.1**
LAJ	**Bijagual**	**1.84**	**318**	⇓*i*P	**Pn**	**09 01 00.3**	**0.0**
SJS	**Escuela Geolog**	**1.85**	**321**	*e*P	**Pn**	**09 00 59.0**	**-1.5**
SJS				*e*S	**Sn**	**09 01 26.3**	**+2.8**
CGA2	**Cerro Gallo 2**	**2.19**	**314**	⇑*i*P	**Pn**	**09 01 02.8**	**-2.3**
CGA2				*e*S	**Sn**	**09 01 32.6**	**+0.9**
JCR	**Jicaral**	**2.59**	**301**	*e*P	**Pn**	**09 01 06.6**	**-4.0**
JTS	**JuntasAbangare**	**2.72**	**311**	Pn	**Pn**	**09 01 09.9**	**-2.6**
	166nm,0.3s,baz=132,slow=8.3,SNR=161						
JTS				Sn	**Sn**	**09 01 45.2**	**+0.2**
	51nm,0.3s,baz=143,slow=20,SNR=6.6						
JTS	**JuntasAbangare**	**2.72**	**311**	*e*Pn	**Pn**	**09 01 09.9**	**-2.6**
JTS				*e*Sn	**Sn**	**09 01 45.0**	**-0.1**
JTS	**JuntasAbangare**	**2.72**	**311**	*e*P	**Pn**	**09 01 10.2**	**-2.2**
BCIP	**Isla Barro Col**	**3.07**	**77**	*e*Pn	**Pn**	**09 01 18.0**	**+0.8**
BCIP				*e*Sn	**Sn**	**09 01 54.8**	**+1.2**
BCIP	**Isla Barro Col**	**3.07**	**77**	*e*P	**Pn**	**09 01 18.5**	**+1.2**
CUI	**Cuipilapa**	**3.12**	**314**	*i* P	**Pn**	**09 01 18.3**	**+0.4**
CUI				*i* S	**Sn**	**09 01 60.0**	**+5.1**
VCR	**Vista de Mar**	**3.17**	**301**	⇓*i*P	**Pn**	**09 01 15.8**	**-2.9**
VCR				*e*S	**Sn**	**09 01 52.5**	**-3.6**
MESS	**Mesas**	**3.20**	**314**	*i* P	**Pn**	**09 01 19.2**	**+0.1**
GUAB	**Guayabo de Bag**	**3.20**	**314**	*i* P	**Pn**	**09 01 19.3**	**+0.2**
LIM1	**Limonal**	**3.21**	**313**	*i*

TXAR			LR	LR	09 19 28.8	
528A	Cox Ranch, San baz=28	28.50	322	⇑P	P	09 06 23.8 -0.3
LPAZ	La Paz comp=Z,0.8nm,0.7s,mb3.6,baz=59,slow=5.9,SNR=2.2	28.62	149	P	P	09 06 25.5 +0.3
527A	Woodward Ranch baz=29	29.00	321	⇓P	P	09 06 28.0 -0.5
USIN	University of comp=Z,24nm,1.0s,mb4.9	29.66	352	eP	P	09 06 33.6 -0.7
FVM	French Village comp=Z,35nm,1.7s,mb4.8	30.14	348	eP	P	09 06 38.0 -0.5
CCM	Cathedral Cave comp=Z,20nm,1.3s,mb4.7	30.39	347	eP	P	09 06 39.4 -1.4
OLIL	Olney comp=Z,30nm,1.1s,mb4.9	30.47	352	eP	P	09 06 41.3 -0.2
226A	Malaga, Loving baz=31	30.64	323	⇓P	P	09 06 43.8 +0.8
BLO	Bloomington comp=Z,152nm,2.5s,mb5.4	30.72	354	eP	P	09 06 43.2 -0.4
GDL2	Guadalupe Moun	30.89	323	eP	P	09 06 43.4 -1.9
324A	Moseley Ranch, baz=31	31.06	320	⇑P	P	09 06 46.9 +0.2
MNTX	Cornudas Mount comp=Z,1.2nm,0.8s,mb3.8	31.17	321	eP	P	09 06 47.6 -0.1
125A	Gardner Draw, baz=31	31.39	323	⇓P	P	09 06 49.6 -0.1
224A	Cornudas Mount baz=32	31.51	321	⇑P	P	09 06 50.8 +0.1
ACSO	Alum Creek Sta comp=Z,27nm,1.1s,mb5.0	31.60	360	eP	P	09 06 51.8 +0.4
124A	Stringfield Ra baz=32	31.90	322	⇓P	P	09 06 54.6 +0.5
SSPA	Standing Stone comp=Z,20nm,1.4s,mb4.8	32.31	7	eP	P	09 06 58.7 +1.0
HDIL	Hopedale comp=Z,12nm,0.8s,mb4.8	32.44	351	eP	P	09 06 57.8 -0.9
320A	Kipp Ranch, An baz=33,SNR=6.8	32.98	317	⇓P	P	09 07 03.7 +0.1
Z22A	Elephant Butte baz=33	33.20	321	⇑P	P	09 07 05.8 +0.2
121A	Cookes Peak, D baz=33	33.24	320	⇓P	P	09 07 06.3 +0.4
220A	Playas Peak, P baz=33,SNR=7.4	33.33	318	⇑P	P	09 07 07.3 +0.6
319A	Douglas baz=33,SNR=5.3	33.51	316	⇑P	P	09 07 08.9 +0.7
120A	U Bar Ranch, L baz=34	33.80	319	⇑P	P	09 07 11.3 +0.5
219A	White Tail Can baz=34,SNR=5.8	33.88	317	⇓P	P	09 07 12.0 +0.6
318A	Bisbee baz=34,SNR=5.1	34.04	316	⇑P	P	09 07 13.3 +0.5
ANMO	Albuquerque comp=Z,1.3nm,1.4s,mb3.7	34.07	324	eP	P	09 07 14.8 +1.7
Z20A	Nine Sixteen R baz=34	34.14	320	⇑P	P	09 07 14.9 +1.2
Y21A	Point of Rocks baz=34,SNR=6.8	34.15	322	⇑P	P	09 07 14.9 +1.2
119A	Ashpeak Ranch, baz=34	34.38	318	⇓P	P	09 07 16.7 +1.0
X21A	Alamocita Cree baz=34	34.51	322	⇓P	P	09 07 17.8 +0.9
Y20A	Horse Springs, baz=34	34.52	321	⇑P	P	09 07 17.9 +0.9
217A	Green Valley baz=35,SNR=8.5	34.80	316	⇓P	P	09 07 19.7 +0.2
JFWS	Jewell Farm comp=Z,9.8nm,0.9s,mb4.7	34.89	351	eP	P	09 07 19.0 -1.1
X20A	Quemado baz=35	35.01	322	⇑P	P	09 07 22.1 +0.9
TUC	Tucson comp=Z,6.7nm,1.1s,mb4.5	35.09	316	eP	P	09 07 22.8 +0.8
Y19A	Nutrioso baz=35	35.10	320	⇓P	P	09 07 22.6 +0.6
216A	Three Points, baz=35	35.38	315	⇑P	P	09 07 24.9 +0.5
X19A	St. Johns baz=35	35.43	321	⇓P	P	09 07 25.2 +0.4
Z17A	San Carlos Hig baz=35	35.48	318	⇑P	P	09 07 25.7 +0.4
Y18A	Canyon Day Jun baz=35	35.49	319	⇓P	P	09 07 25.4 +0.1
116A	Eloy baz=36,SNR=9.0	35.87	316	⇑P	P	09 07 28.7 0.0
X18A	Snowflake baz=36	35.91	320	⇓P	P	09 07 29.5 +0.5
Y17A	Roosevelt baz=36	35.97	318	⇑P	P	09 07 29.7 +0.2
Z16A	Peralta Trail, baz=36	36.14	317	⇓P	P	09 07 31.2 +0.3
214A	Organ Pipe Nat baz=36,SNR=9.3	36.30	314	⇑P	P	09 07 32.7 +0.3
115A	Sonoran Desert baz=36,SNR=6.3	36.31	316	⇓P	P	09 07 32.7 +0.2
Y16A	Circle Bar Ran baz=36,SNR=6.7	36.50	318	⇑P	P	09 07 34.7 +0.7
U19A	Dine' College, baz=37	36.62	323	⇓P	P	09 07 34.9 -0.1
114A	Black Gap (USA baz=37,SNR=8.8	36.80	315	⇓P	P	09 07 37.0 +0.5
X16A	Lo Mia Camp, P baz=37,SNR=7.8	36.80	319	⇑P	P	09 07 37.0 +0.4
ECSD	EROS Data Cent comp=Z,18nm,1.4s,mb4.7	37.10	343	eP	P	09 07 36.9 -2.1
Y15A	Casa Rosa Ranc baz=37,SNR=6.6	37.11	317	⇓P	P	09 07 39.5 +0.3
V17A	Tonalea, Kykot baz=37	37.14	321	⇓P	P	09 07 39.8 +0.4
Z14A	Wintersburg baz=37	37.19	316	⇑P	P	09 07 40.1 +0.2
X15A	Humboldt baz=37,SNR=7.1	37.37	318	⇓P	P	09 07 41.8 +0.4
113A	Mohawk Valley, baz=37,SNR=6.4	37.42	315	⇓P	P	09 07 42.1 +0.2
WUAZ	Wupatki baz=37	37.44	320	⇑P	P	09 07 42.6 +0.6
Y14A	Wickenburg baz=38	37.56	317	⇑P	P	09 07 43.3 +0.2
Z13A	Yuma Proving G baz=38,SNR=7.3	37.59	315	⇑P	P	09 07 43.2 0.0
X14A	Yava baz=38,SNR=7.0	37.79	318	⇓P	P	09 07 45.4 +0.4
COWI	Conover comp=Z,4.6nm,1.0s,mb4.2	37.86	353	eP	P	09 07 43.8 -1.6
112A	Yuma baz=38	37.88	314	⇓P	P	09 07 46.1 +0.4
S18A	Hurst Farm, Bl baz=38	38.02	324	⇓P	P	09 07 47.4 +0.5
Y13A	Salome baz=38	38.05	316	⇓P	P	09 07 47.5 +0.3
V15A	Kaibab Nationa baz=38,SNR=8.3	38.14	320	⇓P	P	09 07 48.3 +0.5
GLA	Glamis baz=38	38.33	314	⇓P	P	09 07 49.9 +0.4
GLA	Glamis comp=Z,27nm,1.1s,mb4.9	38.33	314	eP	P	09 07 50.3 +0.8
W14A	Seligman baz=38	38.36	318	⇓P	P	09 07 50.5 +0.8
X13A	Yucca baz=38,SNR=6.0	38.49	317	⇑P	P	09 07 51.0 +0.1
Y12C	Blythe baz=38	38.49	315	⇓P	P	09 07 51.5 +0.6
PDMCI	Parker Dam,Lak baz=38	38.53	316	⇓P	P	09 07 52.1 +0.9
U15A	North Rim baz=38	38.59	321	⇓P	P	09 07 52.7 +1.0
V14A	Boquillas Ranc baz=39,SNR=7.7	38.62	319	⇓P	P	09 07 52.4 +0.4
W13A	Hualapai Mount baz=39,SNR=7.0	38.82	318	⇑P	P	09 07 54.2 +0.5
N21A	Black Mountain baz=39	38.89	330	⇑P	P	09 07 54.9 +0.7
R17A	Hanksville Air baz=39	38.93	324	⇓P	P	09 07 54.8 +0.2
SWSC	Sam W. Stewart baz=39	38.96	313	⇓P	P	09 07 55.5 +0.6
T15A	Red Dirt Ranch baz=39	39.02	321	⇑P	P	09 07 55.6 +0.4
Q18A	Rafter H Ranch baz=39	39.07	326	⇓P	P	09 07 56.2 +0.5
BC3	Big Chuckawall baz=39,SNR=5.1	39.09	315	⇑P	P	09 07 56.1 +0.2
U14A	Mt Trumbull baz=39	39.15	320	⇓P	P	09 07 57.3 +0.9
IRM	Iron Mountain baz=39	39.15	315	⇑P	P	09 07 57.1 +0.6
R16A	Teasdale baz=39	39.29	323	⇓P	P	09 07 58.4 +0.8
SRU	San Rafael baz=39	39.30	325	⇓P	P	09 07 58.4 +0.9
SRU	San Rafael comp=Z,5.6nm,1.2s,mb4.2	39.30	325	eP	P	09 07 59.4 +1.8
N20A	Spence Gulch, baz=39	39.32	329	⇑P	P	09 07 58.3 +0.6
V13A	Grand Canyon W baz=39	39.33	319	⇓P	P	09 07 58.5 +0.7
L22A	Ellis Ranch, M baz=39	39.34	332	⇑P	P	09 07 58.7 +0.8
U13A	Pakoon Wash baz=40	39.65	319	⇑P	P	09 08 01.2 +0.7
BELC	Belle Mtn. Jos baz=40,SNR=6.2	39.66	315	⇓P	P	09 08 01.0 +0.3
L21A	Rawlins baz=40	39.73	331	⇓P	P	09 08 01.9 +0.8
PFO	Pinyon Flat Ob baz=40	39.78	314	⇑P	P	09 08 02.2 +0.5
PFO	Pinyon Flat Ob comp=Z,19nm,1.1s,mb4.7	39.78	314	eP	P	09 08 02.9 +1.2
V12A	Nelson baz=40,SNR=5.9	39.83	318	⇓P	P	09 08 02.2 +0.1
GMRC	Granite Mounta baz=40,SNR=5.7	39.84	316	⇓P	P	09 08 02.3 +0.1
109C	Camp Elliot, M baz=40	39.88	312	⇓P	P	09 08 03.0 +0.5
N18A	Larsen Ranch, baz=40	40.15	328	⇑P	P	09 08 05.5 +0.8
S13A	Holt Ranch, En baz=40	40.29	321	⇓P	P	09 08 06.7 +0.8
MURC	Murrieta baz=40	40.31	313	⇓P	P	09 08 06.2 +0.1
HEC	Hector,Ludlow baz=40	40.33	316	⇑P	P	09 08 07.0 +0.7
TUQ	Turquoise Moun baz=40	40.38	317	⇑P	P	09 08 07.5 +0.8
BBRC	Big Bear Solar baz=40	40.45	314	⇓P	P	09 08 08.0 +0.8
SHPR	Sheep Range	40.48	318	eP	P	09 08 08.6 +1.2
DAU	Daniels Canyon	40.60	326	eP	P	09 08 10.1 +1.6
P15A	Leamington baz=41	40.61	324	⇓P	P	09 08 08.9 +0.4
K20A	Yellowstone Ra baz=41	40.73	331	⇓P	P	09 08 10.4 +1.0
R13A	O'Grain Ranch, baz=41	40.73	321	⇓P	P	09 08 10.4 +1.0
Q14A	Sevier Lake (B baz=41	40.82	323	⇓P	P	09 08 10.7 +0.5
GSC	Goldstone baz=41,SNR=5.6	40.91	316	⇓P	P	09 08 10.9 -0.2
GSC	Goldstone comp=Z,30nm,1.5s,mb4.7	40.91	316	eP	P	09 08 12.2 +1.1
T11A	Corn Creek, Al baz=41	40.95	319	⇑P	P	09 08 12.1 +0.8
M17A	Scullys Gap (B baz=41	41.03	328	⇑P	P	09 08 13.1 +1.2
K19A	Absolon Red Bu baz=41	41.10	331	⇑P	P	09 08 13.4 +1.0
AGMN	Agassiz Nation comp=Z,28nm,1.6s,mb4.6	41.16	347	eP	P	09 08 11.0 -1.9
U10A	Ash Meadows, A baz=41,SNR=5.8	41.20	318	⇓P	P	09 08 13.5 +0.1
R12A	Pony Springs, baz=41	41.21	321	⇓P	P	09 08 14.2 +0.7
Q13A	Wheeler Ranch, baz=41,SNR=7.4	41.24	322	⇑P	P	09 08 13.8 +0.1
BW06	Boulder Array baz=41	41.40	330	⇑P	P	09 08 15.4 +0.5
PDAR	Pinedale Array comp=Z,0.5nm,0.5s,mb3.4,baz=120,slow=9.0,SNR=5.8	41.40	330	P	P	09 08 12.9 -2.1
PDAR comp=Z,0.6nm,0.6s,baz=129,slow=4.0,SNR=3.8				PcP	PcP	09 10 11.8 -1.1
EDW2	Edwards Air Fo baz=41	41.52	314	⇓P	P	09 08 16.5 +0.4
S11A	Rachel baz=42	41.52	319	⇑P	P	09 08 17.0 +0.9
K18A	Toltan Ranch, baz=42	41.55	329	⇓P	P	09 08 16.7 +0.6
P13A	Bates Ranch, G baz=42	41.56	323	⇓P	P	09 08 16.7 +0.4
L17A	Cokeville baz=42	41.58	328	⇑P	P	09 08 16.0 -0.4
FURC	Furnace Creek, baz=42	41.59	317	⇑P	P	09 08 16.9 +0.3
HWUT	Hardware Ranch comp=Z,7.4nm,1.1s,mb4.2	41.60	327	eP	P	09 08 15.9 -0.7
Q12A	Willow Creek R baz=42	41.79	322	⇑P	P	09 08 18.5 +0.4
MPMC	Manual Prospec baz=42,SNR=8.4	41.79	316	⇓P	P	09 08 18.3 +0.1
L16A	Fish Haven baz=42	41.82	328	⇑P	P	09 08 18.7 +0.3
R11A	Troy Canyon, C baz=42	41.84	320	⇑P	P	09 08 18.9 +0.3
J18A	Kendall Valley baz=42	41.96	330	⇓P	P	09 08 20.2 +0.7
N14A	Grayback Hills baz=42	41.98	325	⇑P	P	09 08 20.3 +0.6
P12A	McGill baz=42	42.10	322	⇑P	P	09 08 21.1 +0.4
Q11A	Duckwater baz=42	42.18	321	⇑P	P	09 08 21.7 +0.3
S10A	Tonopah Range, baz=42,SNR=6.5	42.23	319	⇓P	P	09 08 22.1 +0.3
ARVC	Arvin baz=42	42.24	314	⇓P	P	09 08 22.4 +0.5
CFAA	Coronel Fontan comp=Z,0.1nm,0.5s,baz=294,slow=19,SNR=2.9	42.26	161	P	P	09 08 19.3 -2.7
R10A	Warm Springs baz=42	42.26	320	⇓P	P	09 08 22.3 +0.3
ISA	Isabella baz=42	42.26	315	⇓P	P	09 08 22.4 +0.3
ISA	Isabella comp=Z,27nm,1.6s,mb4.6	42.26	315	eP	P	09 08 23.1 +1.0
BSC	Santa Cruz Isl baz=42	42.27	312	⇓P	P	09 08 22.5 +0.3
L15A	Malad City baz=42	42.32	327	⇓P	P	09 08 22.7 +0.3
CWC	Cottonwood Cre baz=42	42.40	316	⇑P	P	09 08 23.3 +0.1
J17A	Brown Place, J baz=42	42.41	330	⇓P	P	09 08 23.7 +0.5
O12A	Currie baz=42	42.51	323	⇑P	P	09 08 24.4 +0.4
M14A	Sheep Mountain baz=42	42.51	326	⇑P	P	09 08 24.2 +0.2
CPUP	Villa Florida comp=Z,1.8nm,0.9s,mb3.8,baz=316,slow=6.9,SNR=4.0	42.59	145	P	P	09 08 24.7 -0.1
Q10A	Clear Creek Ra baz=43	42.63	320	⇑P	P	09 08 25.5 +0.4
VES	Vestal, Richgr baz=43,SNR=8.7	42.78	315	⇓P	P	09 08 26.2 -0.1
L14A	Malta baz=43	42.80	326	⇑P	P	09 08 26.2 -0.3
PKM	Peak Mountain baz=43	42.83	313	⇑P	P	09 08 27.2 +0.4
M13A	Montello baz=43	42.87	325	⇑P	P	09 08 26.8 -0.2
M13A	Montello comp=Z,6.4nm,1.1s,mb4.3	42.87	325	eP	P	09 08 29.7 +2.7
ULM	Lac du Bonnet comp=Z,6.9nm,0.9s,mb4.4,baz=177,slow=7.0,SNR=7.1	43.01	348	P	P	09 08 25.6 -2.3
RLMT	Red Lodge comp=Z,3.0nm,0.8s,mb4.1	43.04	333	eP	P	09 08 28.0 -0.2
N12A	Clover Valley, comp=Z,6.1nm,1.1s,mb4.2	43.05	324	eP	P	09 08 32.2 +3.8
K14A	Jones Ranch, D baz=43,SNR=6.7	43.12	327	⇑P	P	09 08 28.7 -0.2
RCTC	Rector, Farmer baz=43	43.13	316	⇑P	P	09 08 29.3 +0.2
J15A	Blackfoot baz=43	43.32	328	⇓P	P	09 08 30.2 -0.3
G18A	Lazy EL Ranch, baz=43	43.32	332	⇑P	P	09 08 29.3 -1.2
N11A	Elko Archery C baz=43	43.44	323	⇑P	P	09 08 30.9 -0.6
NVAR	Mina Array Bea comp=Z,3.1nm,0.9s,mb4.1,baz=134,slow=7.4,SNR=24	43.63	319	P	P	09 08 33.2 0.0
NVAR comp=Z,0.7nm,0.8s,baz=126,slow=4.6,SNR=3.5				PcP	PcP	09 10 20.3 -0.1
K13A	Stover Farm, H baz=44	43.68	326	⇑P	P	09 08 32.6 -0.9
DGMT	Dagmar baz=44	43.72	339	⇑P	P	09 08 33.2 -0.5
J14A	Carey baz=44,SNR=6.3	43.83	328	⇑P	P	09 08 35.0 +0.3
F18A	Big Timber baz=44	43.84	333	⇑P	P	09 08 34.1 -0.6
L12A	House Creek Ra baz=44	43.87	325	⇑P	P	09 08 34.6 -0.4
K12A	Draper Farm, C baz=44	44.12	326	⇓P	P	09 08 36.3 -0.8
J13A	Cove Ranch, Pi baz=44	44.23	327	⇓P	P	09 08 37.3 -0.6
F17A	Fitzpatrick Pl baz=44	44.27	332	⇓P	P	09 08 37.8 -0.3
L11A	Cat Creek Ranc baz=44	44.30	325	⇑P	P	09 08 38.3 -0.2
G16A	Moss Hill, Enn baz=44	44.31	331	⇑P	P	09 08 38.4 -0.1
WAKR	Walker	44.41	318	eP	P	09 08 40.6 +1.1
E18A	Harlowton baz=44	44.43	333	⇑P	P	09 08 39.1 -0.3
HLID	Hailey baz=44	44.47	327	⇓P	P	09 08 39.2 -0.6
HLID	Hailey comp=Z,1.1nm,0.8s,mb3.6	44.47	327	eP	P	09 08 39.1 -0.7
HLID				epP	pP	09 08 50.0 +5.0
BOZ	Bozeman (W) baz=44	44.53	331	⇑P	P	09 08 39.1 -1.1
BOZ	Bozeman (W) comp=Z,20nm,2.0s,mb4.6	44.53	331	eP	P	09 08 39.4 -0.9
BOZ				epP	pP	09 08 50.2 +4.7
MCMT	McKenzie Canyo comp=Z,3.0nm,1.3s,mb4.0	44.54	330	eP	P	09 08 40.5 +0.1
I13A	Wildhorse Cree baz=44,SNR=5.5	44.55	328	⇑P	P	09 08 40.0 -0.5
F16A	Kennard Place, baz=45	44.63	331	⇓P	P	09 08 40.7 -0.4
J12A	Stokes Ranch, baz=45	44.64	326	⇑P	P	09 08 40.9 -0.3
H14A	Leadore baz=45,SNR=5.5	44.65	329	⇓P	P	09 08 41.8 +0.6
E17A	Martinsdale baz=45	44.78	333	⇓P	P	09 08 41.9 -0.3
DLMT	Dillon comp=Z,7.5nm,1.4s,mb4.3	44.79	330	eP	P	09 08 42.0 -0.4
CMB	Columbia Colle comp=Z,10nm,1.4s,mb4.5	44.80	317	eP	P	09 08 43.0 +0.5
K11A	Parker Ranch, baz=45	44.85	325	⇓P	P	09 08 42.0 -0.8
D18A	Linhart Farms, baz=45	44.87	334	⇓P	P	09 08 42.5 -0.4
I12A	Atlanta baz=45	45.02	327	⇓P	P	09 08 43.5 -0.6
PAHR	Pah Rah Range comp=Z,24nm,1.8s,mb4.7	45.04	320	eP	P	09 08 45.7 +1.3
LRM	Limekiln Ridge comp=Z,12nm,0.7s,mb4.8	45.05	331	eP	P	09 08 44.0 -0.5
LRM				ePcP	PcP	09 10 23.8 -1.3
LRM				ePP	PP	09 10 29.1 -0.8
WCN	Washoe City baz=45	45.05	319	⇓P	P	09 08 44.5 0.0
H13A	Challis baz=45	45.07	328	⇓P	P	09 08 44.0 -0.6
F15A	Butte baz=45	45.09	331	⇓P	P	09 08 43.9 -0.8
MFID	Camas Ranch baz=45	45.15	326	⇓P	P	09 08 45.3 +0.1
D17A	Six Diamond Ra baz=45	45.22	333	⇑P	P	09 08 45.2 -0.6
K10A	MacKenzie Ranc baz=45	45.33	325	⇑P	P	09 08 45.9 -0.7
G13A	Cobalt baz=45	45.42	329	⇓P	P	09 08 47.2 -0.2
D16A	Dana Ranch, Ca baz=46	45.52	333	⇑P	P	09 08 47.3 -0.8
I11A	Placerville baz=46	45.54	326	⇑P	P	09 08 47.8 -0.5
E15A	Deer Lodge baz=46	45.58	331	⇓P	P	09 08 48.0 -0.6
C17A	Wharram Farm, baz=46	45.62	334	⇑P	P	09 08 48.0 -0.9
B18A	Beardsley Farm baz=46	45.79	335	⇑P	P	09 08 49.4 -0.8
F13A	Darby baz=46	45.96	329	⇑P	P	09 08 50.5 -1.1
E14A	Clinton baz=46	45.98	331	⇑P	P	09 08 50.8 -1.0
H11A	Donnelly baz=46	46.09	327	⇓P	P	09 08 51.4 -1.2
WVOR	Wild Horse Val comp=Z,8.4nm,1.0s,mb4.6	46.15	323	eP	P	09 08 52.5 -0.6
WVOR				ePcP	PcP	09 10 30.5 +1.5
C16A	Fuhringer Ranc baz=46	46.19	333	⇓P	P	09 08 52.8 -0.6
J09A	Fry Pan Ranch, baz=46	46.19	325	⇑P	P	09 08 52.6 -0.8
A18A	Metzger Ranch, baz=46	46.23	336	⇑P	P	09 08 53.0 -0.6
E13A	Victor baz=46	46.34	330	⇑P	P	09 08 53.4 -1.2
F12A	Elk City baz=46	46.40	329	⇑P	P	09 08 54.0 -1.1
H10A	Noah's Angus R baz=46	46.41	327	⇓P	P	09 08 53.4 -1.8
I09A	Lost Marbles R baz=46	46.57	325	⇓P	P	09 08 55.3 -1.2
A17A	Triple J Farms baz=47,SNR=6.0	46.60	335	⇓P	P	09 08 55.2 -1.4
G11A	Walters Elk Ra baz=47	46.69	328	⇓P	P	09 08 56.1 -1.2
MOD	Modoc	46.84	322	eP	P	09 08 58.8 +0.1
B15A	Bradely Ranch, baz=47	46.93	333	⇓P	P	09 08 58.1 -1.1
F11A	Grangeville baz=47	46.96	328	⇓P	P	09 08 58.8 -0.6
G10A	Bishop Farm, J baz=47	47.07	327	⇑P	P	09 08 59.0 -1.4
E11A	Bogner Ranch, baz=47	47.30	329	⇑P	P	09 09 01.0 -1.1
D12A	Red Ives Fores baz=47	47.34	330	⇑P	P	09 09 01.6 -0.8
A15A	Johnson Ranch, baz=48,SNR=6.3	47.50	334	⇓P	P	09 09 02.2 -1.4
A14A	Double T Ranch baz=48	47.80	333	⇓P	P	09 09 05.4 -0.6
B13A	Whitefish baz=48	47.85	332	⇓P	P	09 09 05.8 -0.5
SCHQ	Schefferville comp=Z,1.5nm,0.5s,mb4.2,baz=178,slow=7.5,SNR=3.0	47.95	12	P	P	09 09 05.8 -1.3
KHMM	Horse Mountain comp=Z,17nm,1.3s,mb4.9	48.48	318	eP	P	09 09 11.4 +0.1
FFC	Flin Flon comp=Z,17nm,1.5s,mb4.8	48.57	345	eP	P	09 09 10.8 -1.0
PLCA	Paso Flores comp=Z,1.8nm,0.7s,mb4.2,baz=334,slow=11,SNR=4.7	50.28	168	P	P	09 09 23.7 -1.3
FCC	Fort Churchill comp=Z,0.3nm,1.2s	50.88	352	eP	P	09 09 28.0 -1.4
FCC				epP	pP	09 09 39.9 +5.3
FCC				ePcP	PcP	09 10 44.5 -1.3
EDM	Edmonton	50.96	337	eP	P	09 09 28.5 -1.5
EDM				epP	pP	09 09 40.1 +4.8
EDM				ePcP	PcP	09 10 45.6 -0.5
YKA	Yellowknife Ar comp=Z,3.3nm,0.9s,mb4.4,baz=138,slow=6.9,SNR=30	58.63	343	P	P	09 10 23.7 -1.7
RES	Resolute Bay comp=Z,5.2nm,1.0s,mb4.5	66.51	357	eP	P	09 11 16.4 -1.5
DAWY	Dawson	68.18	337	eP	P	09 11 27.9 -0.7
INK	Inuvik comp=Z,14nm,1.1s,mb4.9	68.32	342	eP	P	09 11 29.1 -0.3
EGAK	Eagle comp=Z,8.0nm,1.0s,mb4.6	69.18	337	eP	P	09 11 34.9 0.0
SUMG	Summit comp=Z,22nm,1.2s,mb5.0	69.34	13	eP	P	09 11 35.0 -0.7
BPAW	Bear Paw Mtn. comp=Z,8.1nm,1.0s,mb4.6	72.92	335	eP	P	09 11 57.0 -0.5
COLD	Coldfoot comp=Z,13nm,1.3s,mb4.7	73.53	338	eP	P	09 12 01.8 +0.7
ESDC	Sonseca Array comp=Z,0.4nm,0.3s,mb3.8,baz=255,slow=3.9,SNR=7.8	76.10	51	P	P	09 12 16.6 0.0
TIC	Toumodi comp=Z,45nm,1.2s,mb5.3	77.07	85	eP	P	09 12 24.6 +2.1
LIC	Lamto comp=Z,38nm,0.9s,mb5.3	77.12	86	eP	P	09 12 22.7 -0.1
DBIC	Dimbokro comp=Z,7.2nm,1.0s,mb4.5,baz=258,slow=10,SNR=3.3	77.23	85	P	P	09 12 22.8 -0.6
KIC	Kosan Boka comp=Z,109nm,1.7s,mb5.5	77.38	85	eP	P	09 12 24.3 0.0
TORD	Torodi Ar. Bea comp=Z,1.2nm,0.9s,mb3.9,baz=278,slow=4.8,SNR=5.9	82.85	78	P	P	09 12 51.7 -2.0
NB2	NORSAR Subarra comp=Z,9.1nm,1.2s,mb4.8,baz=277,slow=5.1	84.61	29	P	P	09 13 01.3 -0.6
NOA	NORSAR Array B comp=Z,2.9nm,1.1s,mb4.3,baz=276,slow=4.9,SNR=3.9	84.61	29	P	P	09 13 01.2 -0.7
PLN	Plauen	86.70	40	eP	P	09 13 11.6 -0.9

comp=Z,35nm,1.1s,mb5.5
WERN Wernitzgruen 86.87 40 *e*P **P 09 13 13.6 +0.3**
comp=Z,18nm,1.7s,mb5.0
TANN Tannenbergstha 86.91 40 *e*P **P 09 13 13.1 -0.4**
comp=Z,6.0nm,1.2s,mb4.7
NKC Novy Kostel 86.93 40 *e*P **P 09 13 14.4 +0.8**
comp=Z,10.0nm,1.4s,mb4.8
WET Wettzell 87.39 41 *e*P **P 09 13 15.6 -0.3**
comp=Z,14nm,1.6s,mb4.9
KHC Kasperske Hory 87.84 41 *e*P **P 09 13 17.5 -0.5**
comp=Z,9.2nm,1.4s,mb4.8
GEC2 GERESS Array S 87.97 41 *e*P **P 09 13 18.8 +0.1**
comp=Z,17nm,1.9s,mb5.0
GERES GERESS Array B 87.97 41 P **P 09 13 17.0 -1.7**
comp=Z,0.5nm,0.3s,mb4.2,baz=246,slow=4.9,SNR=5.8
GERES LR LR 09 45 41.7
comp=Z,132nm,19.9s,MS4.3,baz=22,slow=31
VRAC Vranov 89.74 40 LR LR 09 49 17.8
comp=Z,110nm,18.7s,MS4.3,baz=264,slow=33
BILL Bilibino 89.80 339 *e*P **P 09 13 26.9 +0.1**
comp=Z,24nm,1.4s,mb5.3
BILL *e*pP pP 09 13 38.8 +6.3
AKASG Malin Array Be 97.09 36 LR LR 09 54 53.0
comp=Z,62nm,20.0s,MS4.1,baz=255,slow=34
CSS Prodhromos 105.96 50 *e*Pdif Pdif 09 14 40.5 +0.3
comp=Z,41nm,0.5s
CN2 Changchun 121.96 336 *e*PKP PKPdf 09 19 22.5 -0.8
CN2 PP PP 09 21 02.1 +5.9
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,210nm,5.0s
CN2 LR LR
comp=E,160nm,5.0s
CN2 LR LR
comp=Z,100nm,8.0s
SONM Songino Array 123.32 353 PKP PKPdf 09 19 23.7 -2.1
comp=Z,0.3nm,0.5s,baz=336,slow=3.2,SNR=2.9
MKAR Makanchi Array 123.39 12 PKP PKPdf 09 19 24.1 -1.8
comp=Z,0.2nm,0.3s,baz=336,slow=3.2,SNR=3.5
KSRS Korea Array 125.97 330 PKP PKPdf 09 19 30.2 -1.0
comp=Z,1.1nm,0.7s,baz=0.6,slow=0.5,SNR=6.1
HHC Hu-ho-hao-te 129.13 346 *e*PKP PKPdf 09 19 36.0 -1.1
HHC sPKP 09 19 50.4
HHC PP PP 09 21 47.1 +3.3
HHC PKS 09 23 11.5
HHC SKS SKSdf 09 26 42.5 -5.8
HHC SKKS SKKSac 09 28 34.5 -7.2
HHC SS SS 09 39 00.3 -2.1
HHC AMB AMB
comp=Z,230nm,6.6s
HHC LR LR
comp=N,160nm,25.0s,MS4.7
HHC LR LR
comp=E,150nm,27.4s,MS4.7
HHC LR LR
comp=Z,130nm,26.2s,MS4.5
GTA Gaotai 132.28 357 *e*PKP PKPdf 09 19 43.2 +0.1
GTA sPKP 09 19 57.6
NJ2 Nanjing 134.66 334 *e*PKP PKPdf 09 19 48.1 +0.3
LZH Lanzhou 135.21 352 *e*PKP PKPdf 09 19 51.0 +2.3
LZH sPKP 09 20 05.5
LZH LR LR
comp=E,220nm,18.0s
LZH LR LR
comp=Z,410nm,20.3s,MS5.1
CD2 Chengdu 140.31 351 *e*PKP PKPdf 09 19 56.8 -1.5
ASAR Alice Springs 141.73 242 PKhKP 09 19 53.5
comp=Z,0.2nm,0.5s,baz=109,slow=3.3,SNR=4.2
ASAR PKP PKPdf 09 19 57.0 -4.0
comp=Z,0.5nm,0.8s,baz=114,slow=3.2,SNR=4.8
KMI Kunming 146.14 351 PKPbc PKPbc 09 20 08.2 -1.4
KMI pPKP pPKPdf 09 20 19.4 +5.0
KMI sPKP 09 20 23.7
CMAR Chiang Mai Arr 153.16 356 PKP PKPdf 09 20 16.6 -3.4
comp=Z,0.5nm,0.3s,baz=0.0,slow=1.1,SNR=4.4
CMAR PKPbc PKPbc 09 20 25.4 -1.9
comp=Z,0.7nm,0.3s,baz=327,slow=3.2,SNR=6.5
CMAR PKPab PKPab 09 20 37.6 -1.1
comp=Z,1.3nm,0.6s,baz=334,slow=5.2,SNR=4.4

BJI ***03*** *09:21:43.4, 32°.62N×47°.69E, h10km, mB4.9/18, mb4.9/24, Ms4.4/14, Ms7 4.2/14*
ISCJB ***03*** *09:21:49.3±0.2, 32°.35N±0°.02×48°.58E±0°.02, h10km, mb4.6/102, MS3.8/18, Error ellipse: s-maj=3.6km s-min=2.1km az=4.1*
IDC ***03*** *09:21:49.7±0.6, 32°.47N×48°.72E, h0km, mb4.3/26, mb1 4.4/33, mb1mx4.3/38, mbtmp4.3/33, ML3.9/4, MS3.6/8, Ms1 3.6/8, ms1mx3.2/43, Error ellipse: s-maj=15.6km s-min=10.7km az=177.0*
CSEM ***03*** *09:21:51.1±0.1, 32°.36N×48°.59E, h10km, mb4.7/77, Error ellipse: s-maj=5.5km s-min=2.8km az=8.0*
NEIC ***03*** *09:21:51.2±0.2, 32°.36N×48°.60E, h10km, mb4.8/42, ML4.5(THR), MN4.6(TEH), Error ellipse: s-maj=4.9km s-min=2.8km az=190.0*
THR ***03*** *09:21:52.7±1.5, 32°.50N×48°.90E, h14km±9km, ML4.5*
MOS ***03*** *09:21:53.1±1.1, 32°.51N×48°.59E, h33km, mb4.7/41, Error ellipse: s-maj=7.0km s-min=4.5km az=120.9*
TEH ***03*** *09:21:53.2, 32°.41N×48°.64E, h8km*
ISC 03 09:21:51.4±0.2, 32°.38N±0°.03×48°.59E±0°.02, h10km, (h20km±4.3km:pP-P), n503, σ1§14/525, mb4.6/102, MS3.8/18, 14C-7D, Western Iran

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
IPIR	**Pirpir**	**1.97**	**81**	Pg		**Pn**	**Pn**	**09 22 27.1**	**+2.3**
IPIR				Sg			**Sg**	**09 22 53.7**	**-0.9**
IPIR	**Pirpir**	**1.97**	**81**	*e*Pg		**Pn**	**Pn**	**09 22 27.2**	**+2.4**
IPIR				*e*Sg		**Sg**	**Sg**	**09 22 53.7**	**-0.9**
IPIR	**Pirpir**	**1.97**	**81**	*e*Pg		**Pn**	**Pn**	**09 22 27.2**	**+2.4**
IPIR				*e*Sg		**Sg**	**Sg**	**09 22 53.7**	**-0.9**
IKOM	**Komasi**	**2.00**	**333**	Pn		**Pn**	**Pn**	**09 22 27.2**	**+1.9**
IKOM	**Komasi**	**2.00**	**333**	*e*Pn		**Pn**	**Pn**	**09 22 27.3**	**+2.0**
IKOM				*e*				09 23 01.4	
comp=Z,76μm,0.3s									
IKOM	**Komasi**	**2.00**	**333**	*e*Pn		**Pn**	**Pn**	**09 22 27.3**	**+2.0**
ASAO	**Ashtian**	**2.47**	**29**	*e*Pg		**Pn**	**Pn**	**09 22 33.0**	**+1.3**
ASAO				*e*Sg		**Sn**	**Sn**	**09 23 03.0**	**+1.1**
ASAO	**Ashtian**	**2.47**	**29**	*e*Pg		**Pn**	**Pn**	**09 22 33.1**	**+1.4**
ASAO				*e*Sg		**Sn**	**Sn**	**09 23 03.3**	**+1.4**
ASAO				AML		AML	AML	09 23 11.1	
comp=N,4μm,0.6s									
ASAO				AML		AML	AML	09 23 14.9	
comp=E,3μm,0.7s									
IGHG	**Ghaleghazi**	**2.58**	**319**	Pn		**Pn**	**Pn**	**09 22 35.2**	**+2.0**
IGHG	**Ghaleghazi**	**2.58**	**319**	*e*Pn		**Pn**	**Pn**	**09 22 35.2**	**+2.0**
IGHG				*e*				09 23 23.3	
comp=Z,26μm,0.2s									
IGHG	**Ghaleghazi**	**2.58**	**319**	*e*Pn		**Pn**	**Pn**	**09 22 35.2**	**+2.0**
IVIS	**Veis**	**2.59**	**326**	Pn		**Pn**	**Pn**	**09 22 35.1**	**+1.8**
IVIS	**Veis**	**2.59**	**326**	*e*Pn		**Pn**	**Pn**	**09 22 35.1**	**+1.8**
IVIS				*e*				09 23 21.8	
comp=Z,15μm,0.1s									
IVIS	**Veis**	**2.59**	**326**	*e*Pn		**Pn**	**Pn**	**09 22 35.1**	**+1.8**
IKLH	**Kolahrood**	**2.68**	**69**	Pn		**Pn**	**Pn**	**09 22 36.1**	**+1.5**
IKLH	**Kolahrood**	**2.68**	**69**	*e*Pn		**Pn**	**Pn**	**09 22 36.2**	**+1.6**
IKLH				*e*				09 23 19.7	
comp=Z,23μm,0.2s									
IKLH	**Kolahrood**	**2.68**	**69**	*e*Pn		**Pn**	**Pn**	**09 22 36.2**	**+1.6**
ILIN	**Lien**	**2.87**	**332**	Pn		**Pn**	**Pn**	**09 22 39.3**	**+2.1**
ILIN	**Lien**	**2.87**	**332**	*e*Pn		**Pn**	**Pn**	**09 22 39.4**	**+2.2**
ILIN				*e*				09 23 27.2	
comp=N,31μm,0.4s									
ILIN	**Lien**	**2.87**	**332**	*e*Pn		**Pn**	**Pn**	**09 22 39.4**	**+2.2**
SNGE	**Sanandaj**	**2.90**	**339**	*e*Pn		**Pn**	**Pn**	**09 22 40.0**	**+2.5**
SNGE	**Sanandaj**	**2.90**	**339**	*e*Pn		**Pn**	**Pn**	**09 22 40.3**	**+2.8**
SNGE				Sn		**Sn**	**Sn**	**09 23 14.7**	**+2.3**
SNGE				AML		AML	AML	09 23 27.7	
comp=N,2μm,0.6s									
SNGE				AML		AML	AML	09 23 29.2	
comp=E,2μm,0.4s									
SNGE	**Sanandaj**	**2.90**	**339**	*e*Pn		**Pn**	**Pn**	**09 22 40.6**	**+3.1**
IGAR	**Gharneh**	**2.92**	**89**	*e*Pn		**Pn**	**Pn**	**09 22 39.3**	**+1.4**
IDHR	**Dehrash**	**2.96**	**322**	Pn		**Pn**	**Pn**	**09 22 40.6**	**+2.2**
IDHR	**Dehrash**	**2.96**	**322**	*e*Pn		**Pn**	**Pn**	**09 22 40.6**	**+2.2**
IDHR				*e*				09 23 32.3	
comp=N,39μm,0.2s									
IDHR	**Dehrash**	**2.96**	**322**	*e*Pn		**Pn**	**Pn**	**09 22 40.6**	**+2.2**
GHVR	**GHOM**	**3.08**	**46**	*e*Pg		**Pn**	**Pn**	**09 22 41.9**	**+1.9**
IZEF	**Zefreh**	**3.19**	**80**	Pn		**Pn**	**Pn**	**09 22 43.0**	**+1.3**
IZEF	**Zefreh**	**3.19**	**80**	*e*Pn		**Pn**	**Pn**	**09 22 43.0**	**+1.3**
IZEF				*e*				09 23 32.3	
comp=Z,10μm,0.3s									
IZEF	**Zefreh**	**3.19**	**80**	*e*Pn		**Pn**	**Pn**	**09 22 43.0**	**+1.3**
IRAZ	**Razeghan**	**3.21**	**20**	Pn		**Pn**	**Pn**	**09 22 43.5**	**+1.6**
IRAZ	**Razeghan**	**3.21**	**20**	*e*Pn		**Pn**	**Pn**	**09 22 43.5**	**+1.6**
IRAZ				*e*				09 23 42.0	
comp=Z,37μm,0.6s									
IRAZ	**Razeghan**	**3.21**	**20**	*e*Pn		**Pn**	**Pn**	**09 22 43.5**	**+1.6**
KBD	**Kabd**	**3.29**	**194**	*e*P		**Pn**	**Pn**	**09 22 47.9**	**+4.9**
KBD	**Kabd**	**3.29**	**194**	*e*P		**Pn**	**Pn**	**09 22 47.9**	**+4.9**
RDF	**Al-Radifah**	**3.56**	**195**	*e*P		**Pn**	**Pn**	**09 22 51.7**	**+5.0**
RDF	**Al-Radifah**	**3.56**	**195**	*e*P		**Pn**	**Pn**	**09 22 51.7**	**+5.0**
ISFB	**Sefidab**	**3.63**	**56**	Pn		**Pn**	**Pn**	**09 22 48.3**	**+0.7**
ISFB	**Sefidab**	**3.63**	**56**	*e*Pn		**Pn**	**Pn**	**09 22 48.4**	**+0.8**
ISFB				*e*				09 23 48.0	
comp=Z,9μm,0.3s									
ISFB	**Sefidab**	**3.63**	**56**	*e*Pn		**Pn**	**Pn**	**09 22 48.4**	**+0.8**
BHD	**Baghdad**	**3.66**	**285**	*e*Pn		**Pn**	**Pb**	**09 22 58.0**	**+1.9**
BHD				*e*Sn		**Sg**	**Sg**	**09 23 51.0**	**+2.2**
QRN	**Al-Qurain**	**3.67**	**189**	*e*P		**Pn**	**Pn**	**09 22 53.0**	**+4.8**
IR3	**Iran Long-Peri**	**3.69**	**33**	*e*Pn		**Pn**	**Pn**	**09 22 49.2**	**+0.8**
IR3	**Iran Long-Peri**	**3.69**	**33**	*e*Pn		**Pn**	**Pn**	**09 22 49.2**	**+0.8**
IVRN	**Varamin**	**3.69**	**44**	Pn		**Pn**	**Pn**	**09 22 49.0**	**+0.5**
IVRN	**Varamin**	**3.69**	**44**	*e*Pn		**Pn**	**Pn**	**09 22 49.0**	**+0.5**
IVRN				*e*Pn		**Pn**	**Pn**	**09 22 49.4**	**+0.9**
IVRN	**Varamin**	**3.69**	**44**	*e*Pn		**Pn**	**Pn**	**09 22 49.0**	**+0.5**
IMHD	**Mahdasht**	**3.72**	**27**	Pn		**Pn**	**Pn**	**09 22 49.2**	**+0.4**
IMHD	**Mahdasht**	**3.72**	**27**	*e*Pn		**Pn**	**Pn**	**09 22 49.3**	**+0.5**
IMHD				*e*				09 23 58.0	
comp=Z,12μm,0.5s									
IMHD	**Mahdasht**	**3.72**	**27**	*e*Pn		**Pn**	**Pn**	**09 22 49.3**	**+0.5**
THKV	**Tehran--Karaj**	**4.00**	**28**	*e*Pn		**Pn**	**Pn**	**09 22 53.7**	**+0.9**
CHTH	**Charan**	**4.10**	**30**	*e*Pn		**Pn**	**Pn**	**09 22 54.0**	**-0.1**
CHTH				*e*Sg		**Sb**	**Sb**	**09 23 52.0**	**-1.1**
CHTH	**Charan**	**4.10**	**30**	*e*Pn		**Pn**	**Pn**	**09 22 54.3**	**+0.3**
CHTH	**Charan**	**4.10**	**30**	*e*Pn		**Pn**	**Pn**	**09 22 54.0**	**-0.1**
ZNJK	**Zanjan**	**4.28**	**1**	*e*Pn		**Pn**	**Pn**	**09 22 58.9**	**+2.3**
ZNJK				*e*Pg		**Pg**	**Pg**	**09 23 07.5**	**-5.9**
ZNJK				Sn		**Sn**	**Sn**	**09 23 45.9**	**-0.6**
ZNJK				*e*Sg		**Sg**	**Sg**	**09 24 01.9**	**-6.8**
IDMV	**Damavand**	**4.28**	**41**	Pn		**Pn**	**Pn**	**09 22 56.9**	**+0.3**
IDMV	**Damavand**	**4.28**	**41**	*e*Pn		**Pn**	**Pn**	**09 22 57.0**	**+0.4**
IDMV				*e*Pn		**Pn**	**Pn**	**09 22 57.2**	**+0.6**
IDMV				*e*				09 24 07.9	
comp=E,12μm,0.5s									
IDMV				*e*				09 24 17.8	
comp=Z,8μm,0.6s									
IDMV	**Damavand**	**4.28**	**41**	*e*Pn		**Pn**	**Pn**	**09 22 57.2**	**+0.6**
DAMV	**Damavand**	**4.29**	**40**	*e*Pn		**Pn**	**Pn**	**09 22 55.0**	**-1.7**
DAMV				*e*Sg		**Sb**	**Sb**	**09 23 57.0**	**-1.6**
DAMV	**Damavand**	**4.29**	**40**	*e*Pn		**Pn**	**Pn**	**09 22 56.9**	**+0.3**
DAMV	**Damavand**	**4.29**	**40**	*e*Pn		**Pn**	**Pn**	**09 22 56.0**	**-0.7**
ISAD	**Sadrabad**	**4.35**	**95**	Pn		**Pn**	**Pn**	**09 22 58.6**	**+1.1**
ISAD	**Sadrabad**	**4.35**	**95**	*e*Pn		**Pn**	**Pn**	**09 22 58.6**	**+1.1**
ISAD				*e*				09 24 14.4	
comp=Z,6μm,0.4s									
ISAD	**Sadrabad**	**4.35**	**95**	*e*Pn		**Pn**	**Pn**	**09 22 58.6**	**+1.1**
IPAR	**Pars**	**4.58**	**122**	Pn		**Pn**	**Pn**	**09 23 01.9**	**+1.1**
IPAR	**Pars**	**4.58**	**122**	*e*Pn		**Pn**	**Pn**	**09 23 01.9**	**+1.1**
IPAR				*e*				09 24 31.7	
comp=Z,3μm,0.3s									
IPAR	**Pars**	**4.58**	**122**	*e*Pn		**Pn**	**Pn**	**09 23 01.9**	**+1.1**
ILAS	**Lasjerd**	**4.71**	**49**	Pn		**Pn**	**Pn**	**09 23 03.1**	**+0.7**
ILAS	**Lasjerd**	**4.71**	**49**	*e*Pn		**Pn**	**Pn**	**09 23 03.2**	**+0.8**
ILAS				*e*				09 24 41.1	
comp=Z,9μm,0.5s									
ILAS	**Lasjerd**	**4.71**	**49**	*e*Pn		**Pn**	**Pn**	**09 23 03.2**	**+0.8**
IFIR	**Firoozkooh**	**4.74**	**46**	Pn		**Pn**	**Pn**	**09 23 04.1**	**+1.1**
IFIR	**Firoozkooh**	**4.74**	**46**	*e*		**Pn**	**Pn**	**09 23 05.3**	**+2.3**
comp=Z,3μm,0.1s									
IFIR				*e*Pn		**Pn**	**Pn**	**09 23 04.2**	**+1.2**
IMOK	**Mouk**	**4.86**	**132**	Pn		**Pn**	**Pn**	**09 23 06.3**	**+1.7**
IMOK	**Mouk**	**4.86**	**132**	*e*Pn		**Pn**	**Pn**	**09 23 06.3**	**+1.7**
IMOK				*e*				09 24 14.2	
comp=Z,3μm,0.2s									
IMOK	**Mouk**	**4.86**	**132**	*e*Pn		**Pn**	**Pn**	**09 23 06.3**	**+1.7**
ISRV	**Sarvestan**	**4.90**	**126**	Pn		**Pn**	**Pn**	**09 23 06.5**	**+1.3**
ISRV	**Sarvestan**	**4.90**	**126**	*e*Pn		**Pn**	**Pn**	**09 23 06.5**	**+1.3**
ISRV				*e*				09 25 01.7	
comp=Z,4μm,0.5s									
ISRV	**Sarvestan**	**4.90**	**126**	*e*Pn		**Pn**	**Pn**	**09 23 06.5**	**+1.3**
ICHK	**Chekchek**	**4.93**	**90**	Pn		**Pn**	**Pn**	**09 23 06.7**	**+1.2**
ICHK	**Chekchek**	**4.93**	**90**	*e*Pn		**Pn**	**Pn**	**09 23 06.7**	**+1.2**
ICHK				*e*				09 24 33.8	
comp=Z,7μm,0.5s									
ICHK	**Chekchek**	**4.93**	**90**	*e*Pn		**Pn**	**Pn**	**09 23 06.7**	**+1.2**
IPRN	**Peran**	**4.94**	**38**	Pn		**Pn**	**Pn**	**09 23 05.9**	**+0.2**
IPRN	**Peran**	**4.94**	**38**	*e*Pn		**Pn**	**Pn**	**09 23 06.0**	**+0.3**
IPRN				*e*				09 24 39.8	
comp=Z,7μm,0.4s									
IPRN	**Peran**	**4.94**	**38**	*e*Pn		**Pn**	**Pn**	**09 23 06.0**	**+0.3**
IALA	**Alasht**	**5.08**	**42**	Pn		**Pn**	**Pn**	**09 23 08.4**	**+0.8**
IALA	**Alasht**	**5.08**	**42**	*e*		**Sn**	**Pn**	**09 23 49.6**	**-17**
comp=Z,3μm,0.3s									
IALA				*e*Pn		**Pn**	**Pn**	**09 23 08.5**	**+0.9**
ISHM	**Shahmirzad**	**5.18**	**48**	Pn		**Pn**	**Pn**	**09 23 09.9**	**+0.9**
ISHM	**Shahmirzad**	**5.18**	**48**	*e*Pn		**Pn**	**Pn**	**09 23 10.0**	**+1.0**
ISHM				*e*Pn		**Pn**	**Pn**	**09 23 10.2**	**+1.2**
ISHM				*e*				09 24 36.6	
comp=E,10μm,0.4s									
ISHM				*e*				09 24 43.5	
comp=Z,5μm,0.4s									
ISHM	**Shahmirzad**	**5.18**	**48**	*e*Pn		**Pn**	**Pn**	**09 23 10.2**	**+1.2**
IMEH	**Mehriz**	**5.22**	**99**	Pn		**Pn**	**Pn**	**09 23 10.5**	**+1.0**
IMEH	**Mehriz**	**5.22**	**99**	*e*Pn		**Pn**	**Pn**	**09 23 10.5**	**+1.0**
IMEH				*e*				09 24 59.0	
comp=Z,2μm,0.4s									
IMEH	**Mehriz**	**5.22**	**99**	*e*Pn		**Pn**	**Pn**	**09 23 10.5**	**+1.0**
IANJ	**Anjilo**	**5.39**	**54**	Pn		**Pn**	**Pn**	**09 23 11.9**	**+0.1**
IANJ	**Anjilo**	**5.39**	**54**	*e*Pn		**Pn**	**Pn**	**09 23 12.0**	**+0.2**
IANJ				*e*				09 24 52.3	
comp=Z,2μm,0.4s									
IANJ	**Anjilo**	**5.39**	**54**	*e*Pn		**Pn**	**Pn**	**09 23 12.0**	**+0.2**
ISRB	**Sarab**	**5.48**	**352**	Pn		**Pn**	**Pn**	**09 23 14.2**	**+1.1**
ISRB	**Sarab**	**5.48**	**352**	*e*Pn		**Pn**	**Pn**	**09 23 14.3**	**+1.2**
ISRB				*e*				09 24 54.1	
comp=Z,1μm,0.5s									
ISRB	**Sarab**	**5.48**	**352**	*e*Pn		**Pn**	**Pn**	**09 23 14.3**	**+1.2**
GHIR	**Ghir-Karzin**	**5.58**	**136**	*e*Pn		**Pn**	**Pn**	**09 23 15.0**	**+0.6**
GHIR	**Ghir-Karzin**	**5.58**	**136**	*e*Pn		**Pn**	**Pn**	**09 23 15.6**	**+1.2**
GHIR	**Ghir-Karzin**	**5.58**	**136**	*e*Pn		**Pn**	**Pn**	**09 23 15.2**	**+0.8**
IKIA	**Kiasar**	**5.68**	**46**	Pn		**Pn**	**Pn**	**09 23 16.8**	**+0.9**
IKIA	**Kiasar**	**5.68**	**46**	*e*Pn		**Pn**	**Pn**	**09 23 16.9**	**+1.0**
IKIA	**Kiasar**	**5.68**	**46**	*e*Pn		**Pn**	**Pn**	**09 23 16.9**	**+1.0**
IAZR	**Azarshahr**	**5.70**	**339**	Pn		**Pn**	**Pn**	**09 23 17.4**	**+1.3**
IAZR	**Azarshahr**	**5.70**	**339**	*e*Pn		**Pn**	**Pn**	**09 23 17.4**	**+1.3**
IAZR				*e*				09 25 05.9	
comp=Z,3μm,0.4s									
IAZR	**Azarshahr**	**5.70**	**339**	*e*Pn		**Pn**	**Pn**	**09 23 17.4**	**+1.3**
IGLO	**Ghaloghah**	**5.97**	**45**	Pn		**Pn**	**Pn**	**09 23 21.1**	**+1.3**
IGLO	**Ghaloghah**	**5.97**	**45**	*e*Pn		**Pn**	**Pn**	**09 23 21.1**	**+1.3**
IGLO	**Ghaloghah**	**5.97**	**45**	*e*Pn		**Pn**	**Pn**	**09 23 21.1**	**+1.3**
IBAF	**Bafgh**	**5.98**	**96**	Pn		**Pn**	**Pn**	**09 23 20.9**	**+1.0**
IBAF	**Bafgh**	**5.98**	**96**	*e*Pn		**Pn**	**Pn**	**09 23 21.0**	**+1.1**
IBAF				*e*				09 25 33.5	
comp=Z,2μm,0.5s									
IBAF	**Bafgh**	**5.98**	**96**	*e*Pn		**Pn**	**Pn**	**09 23 21.0**	**+1.1**
MSL	**Mosul**	**6.05**	**313**	*e*Pn		**Pn**	**Pn**	**09 23 22.0**	**+1.1**
MSL				*e*Sn		**Sn**	**Sn**	**09 24 30.0**	**-0.2**
IHRS	**Heris**	**6.06**	**348**	Pn		**Pn**	**Pn**	**09 23 22.6**	**+1.6**
IHRS	**Heris**	**6.06**	**348**	*e*Pn		**Pn**	**Pn**	**09 23 22.6**	**+1.6**
ISHB	**Shabestar**	**6.37**	**338**	Pn		**Pn**	**Pn**	**09 23 26.1**	**+0.8**
ISHB	**Shabestar**	**6.37**	**338**	*e*Pn		**Pn**	**Pn**	**09 23 26.1**	**+0.8**
ISHB				*e*				09 23 53.8	
comp=Z,855nm,0.2s									
KRBR	**Kerman**	**7.40**	**107**	*e*Pn		**Pn**	**Pn**	**09 23 40.2**	**+0.8**
BNDS	**Bandar-Abbas**	**8.24**	**125**	*e*Pn		**Pn**	**Pn**	**09 23 50.0**	**-1.0**
BNDS	**Bandar-Abbas**	**8.24**	**125**	*e*Pn		**Pn**	**Pn**	**09 23 50.0**	**-1.0**
GNI	**Garni**	**8.35**	**339**	Pn		**Pn**	**Pn**	**09 23 54.0**	**+1.6**
comp=Z,0.5nm,0.3s,baz=106,slow=18,SNR=2.3									
GNI				Lg				09 26 17.2	
comp=Z,2.7nm,0.3s,baz=245,slow=21,SNR=4.1									
GNI				LR		LR		09 27 31.9	
comp=Z,317nm,20.3s,baz=156,slow=41									
GNI	**Garni**	**8.35**	**339**	*i* P		**Pn**	**Pn**	**09 23 51.1**	**-1.4**
GNI	**Garni**	**8.35**	**339**	Pn		**Pn**	**Pn**	**09 23 54.0**	**+1.5**
IBND	**Bandar-abas**	**8.47**	**123**	*e*Pn		**Pn**	**Pn**	**09 23 53.9**	**-0.2**
IBND				*e*				09 25 56.6	
comp=Z,2μm,0.2s									
IKOO	**Kooshah**	**8.80**	**87**	*e*Pn		**Pn**	**Pn**	**09 23 59.2**	**+0.5**
IKOO	**Kooshah**	**8.80**	**87**	*e*Pn		**Pn**	**Pn**	**09 23 59.2**	**+0.5**
ISFR	**Sfrayin**	**9.04**	**56**	Pn		**Pn**	**Pn**	**09 24 02.2**	**+0.3**
ISFR	**Sfrayin**	**9.04**	**56**	*e*		**Pn**	**Pn**	**09 24 04.2**	**+2.3**
comp=Z,1μm,0.4s									
ISFR				*e*Pn		**Pn**	**Pn**	**09 24 02.2**	**+0.3**
IDAH	**Dahanechah**	**9.52**	**85**	*e*Pn		**Pn**	**Pn**	**09 24 08.9**	**+0.3**
IDAH	**Dahanechah**	**9.52**	**85**	*e*Pn		**Pn**	**Pn**	**09 24 08.9**	**+0.3**
VAN	**Vannovskaya**	**9.56**	**52**	*e*P		**Pn**	**Pn**	**09 24 10.0**	**+0.9**
VAN				*e*S		**Sn**	**Sn**	**09 26 00.0**	**+3.4**
VAN	**Vannovskaya**	**9.56**	**52**	*e*P		**Pn**	**Pn**	**09 24 10.0**	**+0.9**
IMOG	**Moghan**	**9.64**	**64**	Pn		**Pn**	**Pn**	**09 24 10.7**	**+0.5**
IMOG	**Moghan**	**9.64**	**64**	*e*Pn		**Pn**	**Pn**	**09 24 10.8**	**+0.6**
IMOG	**Moghan**	**9.64**	**64**	*e*Pn		**Pn**	**Pn**	**09 24 10.8**	**+0.6**
IEMG	**Emamgholi**	**9.66**	**56**	Pn		**Pn**	**Pn**	**09 24 10.7**	**+0.2**
IEMG	**Emamgholi**	**9.66**	**56**	*e*Pn		**Pn**	**Pn**	**09 24 10.8**	**+0.3**
IEMG				*e*				09 24 24.9	
comp=Z,225nm,0.2s									
IEMG	**Emamgholi**	**9.66**	**56**	*e*Pn		**Pn**	**Pn**	**09 24 10.8**	**+0.3**
ASF	**Jabal al Asfar**	**9.90**	**272**	Pn		**Pn**	**Pn**	**09 24 14.7**	**+0.9**
comp=Z,1.6nm,0.3s,baz=127,slow=7.2,SNR=10									
ASF				Sn		**Sn**	**Sn**	**09 26 03.0**	**-2.0**
comp=Z,2.4nm,0.3s,baz=68,slow=20,SNR=4.3									
ASF				Lg				09 27 15.5	
comp=Z,0.7nm,0.3s,baz=326,slow=22,SNR=1.8									
ASF	**Jabal al Asfar**	**9.90**	**272**	P		**Pn**	**Pn**	**09 24 14.7**	**+0.9**
ASF								09 26 03.0	
ASF				pmax		pmax			
comp=Z,2.0nm,0.3s									
ASF				smax					
comp=N,2.0nm,0.3s									
IMYA	**Miami**	**10.30**	**64**	Pn		**Pn**	**Pn**	**09 24 19.2**	**0.0**
IMYA	**Miami**	**10.30**	**64**	*e*Pn		**Pn**	**Pn**	**09 24 19.3**	**+0.1**
IMYA	**Miami**	**10.30**	**64**	*e*Pn		**Pn**	**Pn**	**09 24 19.3**	**+0.1**
ZEI	**Tsey**	**11.01**	**342**	*e*P		**Pn**	**Pn**	**09 24 33.8**	**+4.8**
ZEI				pmax		pmax			
comp=Z,24nm,1.6s									
MMAI	**Mount Meron Ar**	**11.13**	**277**	Pn		**Pn**	**Pn**	**09 24 32.3**	**+1.7**
comp=Z,1.4nm,0.3s,baz=88,slow=16,SNR=2.6									
MMAI				Lg				09 27 57.1	
baz=104,slow=30,SNR=2.1									
EIL	**Elat**	**12.01**	**261**	Pn		**Pn**	**Pn**	**09 24 44.4**	**+1.8**
comp=Z,1.0nm,0.3s,baz=57,slow=11,SNR=5.8									
EIL				Lg				09 28 20.8	
comp=Z,0.4nm,0.3s,baz=241,slow=19,SNR=2.1									
EIL				LR		LR		09 30 24.2	
comp=Z,244nm,20.5s,baz=264,slow=42									
EIL	**Elat**	**12.01**	**

TKM2 pmax pmax
comp=Z,17nm,1.3s,mb4.3
TKM2 Tokmak 2 23.73 56 *e*P **P 09 27 04.4 +0.7**
comp=Z,17nm,1.3s,mb4.3
TKM2 Tokmak 2 23.73 56 *e*P **P 09 27 04.4 +0.7**
comp=Z,17nm,1.3s,mb4.3
PHP Peshkopia 24.23 301 *i* Pn **P 09 27 07.9 -0.3**
OBN Obninsk 24.26 343 *e*P **P 09 27 07.4 -1.0**
OBN *e* 09 27 36.8
OBN pmax pmax
comp=Z,22nm,1.6s,mb4.3
OBN Obninsk 24.26 343 *e*P **P 09 27 07.4 -1.0**
comp=Z,22nm,1.6s,mb4.3
MOS Moscow 24.58 345 *e*P **P 09 27 10.0 -1.3**
MOS *e* 09 27 50.6
MOS *e*S **S 09 31 31.5 -0.6**
MOS pmax pmax
comp=Z,80nm,1.4s,mb5.1
MOS pmax pmax
comp=Z,100nm,1.9s,mb5.0
MOS Moscow 24.58 345 *e*P **P 09 27 10.0 -1.3**
comp=Z,100nm,1.9s,mb5.0
MOS *e*S **S 09 31 31.5 -0.6**
GRUS Gruza 24.64 306 *e*P **P 09 27 11.4 -0.6**
PUK Puka 24.71 301 *i* Pn **P 09 27 12.2 -0.4**
TRUS Trudelj 24.95 306 *e*P **P 09 27 13.4 -1.4**
ARU Arti 25.02 13*d i*P **P 09 27 14.7 -0.6**
ARU *e* 09 27 47.5
ARU *e*PPP 09 27 59.9
ARU S **S 09 31 36.5 -2.7**
ARU pmax pmax
comp=Z,18nm,1.2s,mb4.5
ARU Arti 25.02 13 *e*P **P 09 27 14.2 -1.2**
comp=Z,22nm,1.4s,mb4.5
ARU Arti 25.02 13 *i* P **P 09 27 14.7 -0.6**
comp=Z,18nm,1.2s,mb4.5
DIVS Divibare 25.20 306⇓*i*P **P 09 27 17.7 +0.6**
BBLS Lazići 25.53 305⇓*i*P **P 09 27 21.1 +1.0**
KOLS Kolonicke sedl 25.73 318 *e*P **P 09 27 23.4 +1.5**
KOLS pmax pmax
comp=Z,25nm,1.3s,mb4.6
KOLS Kolonicke sedl 25.73 318 *e*P **P 09 27 23.4 +1.5**
comp=Z,25nm,1.3s,mb4.6
KOLS Kolonicke sedl 25.73 318 *e*P **P 09 27 23.4 +1.5**
comp=Z,25nm,1.3s,mb4.6
KWP Kalwaria Pacla 25.85 319 *e*P **P 09 27 23.8 +0.9**
KWP Kalwaria Pacla 25.85 319 *e*P **P 09 27 23.8 +0.9**
BRVK Borovoye 25.91 31*ce*P **P 09 27 21.5 -1.9**
BRVK pmax pmax
comp=Z,12nm,1.0s,mb4.4
BRVK Borovoye 25.91 31 *e*P **P 09 27 22.7 -0.7**
comp=Z,9.2nm,0.8s,mb4.4
BRVK Borovoye 25.91 31 *e*P **P 09 27 22.7 -0.7**
comp=Z,9.2nm,0.8s,mb4.4
BVAR Borovoye Array 25.93 31 P **P 09 27 22.6 -1.0**
comp=Z,7.8nm,0.7s,mb4.3,baz=219,slow=6.9,SNR=26
BVAR PcP PcP 09 30 51.4 -0.7
comp=Z,1.9nm,0.5s,baz=197,slow=1.5,SNR=5.5
BVAR LR LR 09 39 34.1
BVAR Borovoye Array 25.93 31 P **P 09 27 22.6 -1.0**
BVAR 09 30 51.4
BVAR pmax pmax
comp=Z,8.0nm,0.7s
BVAR MLR MLR
comp=Z,180nm,18.7s
BVAR Borovoye Array 25.93 31 P **P 09 27 22.6 -1.0**
comp=Z,8.0nm,0.7s,mb4.4
BVAR Borovoye Array 25.93 31 PcP PcP 09 30 51.4 -0.7
comp=Z,180nm,18.7s
KECS Kecovo 26.56 315 *e*P **P 09 27 30.5 +1.2**
KECS pmax pmax
comp=Z,5.0nm,1.3s,mb3.9
KECS Kecovo 26.56 315 *e*P **P 09 27 30.5 +1.2**
comp=Z,5.1nm,1.3s,mb3.9
STHS Stebnicka Huta 26.56 318 *e*P **P 09 27 31.3 +1.9**
STHS Stebnicka Huta 26.56 318 *e*P **P 09 27 31.3 +1.9**
MNK Minsk 26.56 332 *e*P **P 09 27 27.0 -2.3**
MNK Minsk 26.56 332 *e*P **P 09 27 27.0 -2.3**
TIP Timpagrande 26.61 294 *e*P **P 09 27 31.3 +1.4**
comp=Z,67nm,2.1s,mb4.8
TIP Timpagrande 26.61 294 *e*P **P 09 27 31.3 +1.4**
comp=Z,67nm,2.1s,mb4.8
PSZ Piszkesteto 26.67 314⇓*e*P **P 09 27 31.3 +1.0**
PKSM Moragy 26.80 310⇓*e*P **P 09 27 32.5 +1.0**
VYHS Vyhne 27.55 314 *e*P **P 09 27 39.4 +1.1**
VYHS pmax pmax
comp=Z,16nm,2.6s,mb4.2
VYHS Vyhne 27.55 314 *e*P **P 09 27 39.4 +1.1**
comp=Z,16nm,2.6s,mb4.2
VYHS Vyhne 27.55 314 *e*P **P 09 27 39.4 +1.1**
comp=Z,16nm,2.6s,mb4.2
IDID Didziasalis 27.59 333 *e*P **P 09 27 38.4 -0.1**
IDID AMB AMB 09 27 40.0
comp=Z,5.1nm,1.6s,mb3.9
IIGN Ignalina 27.82 332 *e*P **P 09 27 40.7 +0.1**
IIGN AMB AMB 09 27 42.1
comp=Z,8.0nm,1.3s,mb4.2
ISAL Salakas 28.02 332 *e*P **P 09 27 42.2 -0.2**
ISAL AMB AMB 09 27 43.9
comp=Z,7.5nm,1.3s,mb4.2
IZAR Zarasai 28.10 333 *e*P **P 09 27 43.1 0.0**
IZAR AMB AMB 09 27 44.5
comp=Z,6.4nm,0.9s,mb4.2
KURK Kurchatov 28.70 41 P **P 09 27 47.5 -1.0**
comp=Z,9.6nm,1.0s,mb4.5,baz=244,slow=9.6,SNR=42
KURK Kurchatov 28.70 41 P **P 09 27 47.5 -1.0**
KURK pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
KURK Kurchatov 28.70 41 *e*P **P 09 27 48.4 -0.1**
comp=Z,14nm,1.0s,mb4.6
KURK Kurchatov 28.70 41 *e*P **P 09 27 48.4 -0.1**
comp=Z,14nm,1.0s,mb4.6
CONA Conrad Observa 29.17 312⇑*i*P **P 09 27 52.9 +0.2**
comp=Z,4.7nm,0.9s,mb4.2
CONA Conrad Observa 29.17 312 P **P 09 27 52.9 +0.2**
comp=Z,4.7nm,0.9s,mb4.2
CSNA Conrad Observa 29.18 312⇑*i*P **P 09 27 52.9 +0.2**
comp=Z,4.8nm,1.0s,mb4.2
CSNA Conrad Observa 29.18 312 P **P 09 27 52.9 +0.2**
comp=Z,4.8nm,1.0s,mb4.2
MKAR Makanchi Array 29.43 51 P **P 09 27 54.9 -0.2**
comp=Z,12nm,0.7s,mb4.8,baz=250,slow=7.4,SNR=109
MKAR Makanchi Array 29.43 51 *i* P **P 09 27 54.9 -0.1**
MKAR pmax pmax
comp=Z,12nm,0.7s
MKAR Makanchi Array 29.43 51 P **P 09 27 54.8 -0.2**
MOA Molln 30.16 311⇑*i*P **P 09 28 01.6 +0.1**
comp=Z,6.2nm,1.1s,mb4.3
MOA Molln 30.16 311 P **P 09 28 01.6 +0.1**
comp=Z,6.2nm,1.1s,mb4.3
KBA Koelnbreinsper 30.53 309⇑*i*P **P 09 28 05.0 +0.2**
comp=Z,6.9nm,0.6s,mb4.7
KBA Koelnbreinsper 30.53 309 P **P 09 28 05.0 +0.2**
comp=Z,6.9nm,0.6s,mb4.7
GERES GERESS Array B 30.84 313 P **P 09 28 07.4 -0.1**
comp=Z,0.8nm,0.5s,mb3.8,baz=89,slow=10.0,SNR=5.7
GERES PcP PcP 09 31 04.3 0.0
comp=Z,0.6nm,0.5s,baz=90,slow=3.9,SNR=3.9
GERES GERESS Array B 30.84 313 P **P 09 28 07.4 -0.1**
GERES 09 31 04.3
GERES pmax pmax
comp=Z,1.0nm,0.5s
GERES GERESS Array B 30.84 313 P **P 09 28 07.4 -0.1**
comp=Z,1.0nm,0.5s,mb3.9
GERES GERESS Array B 30.84 313 PcP PcP 09 31 04.3 0.0
WTTA Wattenberg 31.70 309⇑P **P 09 28 15.3 +0.1**
comp=Z,11nm,1.0s,mb4.6
WTTA Wattenberg 31.70 309 P **P 09 28 15.3 +0.2**
comp=Z,11nm,1.0s,mb4.6
WATA Walderalm 31.76 309⇑P **P 09 28 15.4 -0.2**
comp=Z,5.9nm,0.5s,mb4.6
WATA Walderalm 31.76 309 P **P 09 28 15.4 -0.2**
comp=Z,5.9nm,0.5s,mb4.6
DMN Daman 31.88 89 *e*P **P 09 28 15.9 -1.0**
comp=Z,80nm,1.0s,mb5.5
DMN Daman 31.88 89 *e*P **P 09 28 15.9 -1.0**
comp=Z,80nm,1.0s,mb5.5
KKN Kakani 31.97 89 *e*P **P 09 28 16.7 -1.0**
comp=Z,42nm,0.6s,mb5.4
KKN Kakani 31.97 89 *e*P **P 09 28 16.7 -1.0**
KKN pmax pmax
comp=Z,42nm,0.6s,mb5.5
KKN Kakani 31.97 89 *e*P **P 09 28 16.7 -1.0**
comp=Z,42nm,0.6s,mb5.5
SQTA Sankt Quirin 31.98 309 *e*P **P 09 28 17.6 +0.1**
comp=Z,9.1nm,0.5s,mb4.8
SQTA Sankt Quirin 31.98 309 P **P 09 28 17.6 +0.1**
comp=Z,9.1nm,0.5s,mb4.8
MOTA Moosalm 32.08 309⇑*e*P **P 09 28 17.9 -0.4**
comp=Z,11nm,0.9s,mb4.7
MOTA Moosalm 32.08 309 P **P 09 28 17.9 -0.5**
comp=Z,11nm,0.9s,mb4.7
PKIN Phulchoki 32.13 89 *e*P **P 09 28 18.0 -1.1**
comp=Z,53nm,0.6s,mb5.6
PKI Pulchoki 32.15 89 *e*P **P 09 28 18.1 -1.1**
comp=Z,60nm,0.8s,mb5.5
PKI Pulchoki 32.15 89 *e*P **P 09 28 18.1 -1.1**
PKI pmax pmax
comp=Z,60nm,0.8s,mb5.5
PKI Pulchoki 32.15 89 *e*P **P 09 28 18.1 -1.1**
comp=Z,60nm,0.8s,mb5.5
FETA Feichten 32.25 308⇑*i*P **P 09 28 19.6 -0.3**
comp=Z,12nm,1.2s,mb4.6
FETA Feichten 32.25 308 P **P 09 28 19.6 -0.3**
comp=Z,12nm,1.2s,mb4.6
GUN Gumba 32.44 88 *e*P **P 09 28 21.2 -0.6**
comp=Z,76nm,0.9s,mb5.5
GUN Gumba 32.44 88 *e*P **P 09 28 21.2 -0.6**
comp=Z,76nm,0.9s,mb5.5
JOF Joensuu 32.47 345 *e*P **P 09 28 20.3 -1.3**
JOF pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
JOF Joensuu 32.47 345 *e*p **P 09 28 20.3 -1.3**
comp=Z,5.9nm,0.7s,mb4.5
JOF Joensuu 32.47 345 *e*P **P 09 28 20.3 -1.3**
comp=Z,5.9nm,0.7s,mb4.5
WMQ Urumqi 32.54 58 *e*P **P 09 28 23.0 +0.5**
FINES FINESS Array B 32.54 340 P **P 09 28 21.5 -0.7**
comp=Z,4.2nm,0.7s,mb4.5,baz=148,slow=9.8,SNR=10
FINES FINESS Array B 32.54 340 P **P 09 28 21.5 -0.8**
FINES pmax pmax
comp=Z,4.0nm,0.7s
FINES FINESS Array B 32.54 340 P **P 09 28 21.5 -0.7**
FINES FINESS Array B 32.54 340 P **P 09 28 21.5 -0.8**
comp=Z,4.0nm,0.7s,mb4.5
GRF Grafenberg Arr 32.65 313 *e*P **P 09 28 23.5 +0.1**
comp=Z,8.0nm,0.9s,mb4.7
GRF Grafenberg Arr 32.65 313 *e*P **P 09 28 23.5 +0.1**
GRF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
GRF Grafenberg Arr 32.65 313 *e*P **P 09 28 23.5 +0.1**
comp=Z,8.0nm,0.9s,mb4.7
PGF Pioggiola 32.76 300 *e*P **P 09 28 24.6 +0.1**
comp=Z,31nm,1.1s,mb4.8
PGF Pioggiola 32.76 300 *e*P **P 09 28 24.6 +0.1**
PGF pmax pmax
comp=Z,15nm,1.1s,mb4.8
PGF Pioggiola 32.76 300 *e*P **P 09 28 24.6 +0.1**
comp=Z,15nm,1.1s,mb4.8
PGF Pioggiola 32.76 300 *e*P **P 09 28 24.6 +0.1**
comp=Z,15nm,1.1s,mb4.8
DAVOX Davos/Dischmat 32.76 307 P **P 09 28 24.6 +0.2**
comp=Z,17nm,0.3s,mb4.5,baz=173,slow=15,SNR=4.3
DAVOX Davos/Dischmat 32.76 307 P **P 09 28 24.7 +0.3**
JIRN Jiri 32.78 88 *e*P **P 09 28 24.1 -0.7**
comp=Z,41nm,0.8s,mb5.4
JIRN Jiri 32.78 88 *e*P **P 09 28 24.1 -0.7**
comp=Z,41nm,0.8s,mb5.4
DAVA Damuels 32.87 308⇑*i*P **P 09 28 25.1 -0.2**
comp=Z,9.3nm,0.5s,mb5.0
DAVA Damuels 32.87 308 P **P 09 28 25.1 -0.2**
comp=Z,9.3nm,0.5s,mb5.0
KAF Kangasniemi 33.02 341 *e*P **P 09 28 26.9 +0.5**
KAF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
KAF Kangasniemi 33.02 341 *e*p **P 09 28 26.9 +0.5**
comp=Z,4.5nm,0.8s,mb4.5
KAF Kangasniemi 33.02 341 *e*P **P 09 28 26.9 +0.5**
comp=Z,4.5nm,0.8s,mb4.5
NVS Novosibirsk 33.13 37 *e*P **P 09 28 21.6 -5.9**
RAMN Ramite 33.35 89 *e*P **P 09 28 28.1 -1.6**
comp=Z,62nm,0.7s,mb5.6
RAMN Ramite 33.35 89 *e*P **P 09 28 28.1 -1.6**
comp=Z,62nm,0.7s,mb5.7
ZAA0 Zalesovo Array 33.55 39 *e*P **P 09 28 30.0 -1.2**
ZAA0 Zalesovo Array 33.55 39 *e*P **P 09 28 30.0 -1.2**
ZALV Zalesovo Beam 33.55 39 P **P 09 28 30.1 -1.1**
comp=Z,8.9nm,0.7s,mb4.8,baz=259,slow=8.5,SNR=20
ZALV LR LR 09 43 08.4
comp=Z,51nm,19.5s,MS3.2,baz=22,slow=38
ZALV Zalesovo Beam 33.55 39 P **P 09 28 30.1 -1.1**
ZALV pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
ZALV MLR MLR
comp=Z,51nm,19.5s,MS3.2
SBF Sospel 34.02 302 *e*P **P 09 28 35.7 +0.3**
comp=Z,44nm,0.9s,mb5.1
SBF Sospel 34.02 302 *e*P **P 09 28 35.7 +0.3**
SBF pmax pmax
comp=Z,22nm,0.9s,mb5.1
SBF Sospel 34.02 302 *e*P **P 09 28 35.7 +0.3**
comp=Z,22nm,0.9s,mb5.1
SBF Sospel 34.02 302 *e*P **P 09 28 35.7 +0.3**
comp=Z,22nm,0.9s,mb5.1
TAPN Taplejung 34.16 88 *e*P **P 09 28 36.0 -0.8**
comp=Z,29nm,0.8s,mb5.3
TAPN Taplejung 34.16 88 *e*P **P 09 28 36.0 -0.8**
comp=Z,29nm,0.8s,mb5.3
FRF La Foret Royal 34.56 301 *e*P **P 09 28 38.7 -1.4**
FRF La Foret Royal 34.56 301 *e*P **P 09 28 38.7 -1.4**
MBDF Montbardon 34.58 303 *e*P **P 09 28 40.4 +0.1**
comp=Z,16nm,0.7s,mb4.7
MBDF Montbardon 34.58 303 *e*P **P 09 28 40.4 +0.1**
MBDF pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
MBDF Montbardon 34.58 303 *e*P **P 09 28 40.4 +0.1**
comp=Z,7.8nm,0.7s,mb4.8
MBDF Montbardon 34.58 303 *e*P **P 09 28 40.4 +0.1**
comp=Z,7.8nm,0.7s,mb4.8
BNI Bardonecchia 34.69 304 *e*P **P 09 28 41.4 +0.2**
BNI pmax pmax
comp=Z,17nm,0.8s,mb5.0
BNI Bardonecchia 34.69 304 *e*P **P 09 28 41.4 +0.3**
comp=Z,17nm,0.8s,mb5.0
BNI Bardonecchia 34.69 304 *e*P **P 09 28 41.4 +0.2**
comp=Z,17nm,0.8s,mb5.0
LPG La Plagne 34.69 304 *e*P **P 09 28 41.2 0.0**
comp=Z,24nm,0.9s,mb4.8
LPG La Plagne 34.69 304 *e*P **P 09 28 41.2 0.0**
LPG pmax pmax
comp=Z,12nm,0.9s,mb4.8
LPG La Plagne 34.69 304 *e*P **P 09 28 41.2 0.0**
comp=Z,12nm,0.9s,mb4.8
LPG La Plagne 34.69 304 *e*P **P 09 28 41.2 0.0**
comp=Z,12nm,0.9s,mb4.8
LPL La Plagne 34.71 305 *e*P **P 09 28 41.2 -0.1**
comp=Z,47nm,1.1s,mb5.0
LPL La Plagne 34.71 305 *e*P **P 09 28 41.2 -0.1**
LPL pmax pmax
comp=Z,23nm,1.1s,mb5.0
LPL La Plagne 34.71 305 *e*P **P 09 28 41.2 -0.1**
comp=Z,24nm,1.1s,mb5.0
LPL La Plagne 34.71 305 *e*P **P 09 28 41.2 -0.1**
comp=Z,24nm,1.1s,mb5.0
CDF Champ du Feu 34.83 310 *e*P **P 09 28 41.6 -0.7**
CDF Champ du Feu 34.83 310 *e*P **P 09 28 41.6 -0.7**
HINF Hinteralfeld 34.99 309 *e*P **P 09 28 42.9 -0.8**
HINF Hinteralfeld 34.99 309 *e*P **P 09 28 42.9 -0.8**
ORIF Oris-en-Rattie 35.23 303 *e*P **P 09 28 45.2 -0.7**
ORIF *e*MLR MLR
comp=Z,107nm,20.5s,MS3.3
ORIF Oris-en-Rattie 35.23 303 *e*P **P 09 28 45.2 -0.7**
CABF La Chapelle 35.30 306 *e*P **P 09 28 46.4 0.0**
comp=Z,37nm,0.9s,mb5.0
CABF La Chapelle 35.30 306 *e*P **P 09 28 46.4 0.0**
CABF pmax pmax
comp=Z,19nm,0.9s,mb5.0
CABF La Chapelle 35.30 306 *e*P **P 09 28 46.4 0.0**
comp=Z,19nm,0.9s,mb5.0
CABF La Chapelle 35.30 306 *e*P **P 09 28 46.4 0.0**
comp=Z,19nm,0.9s,mb5.0
HAU Haudompre 35.36 309 *e*P **P 09 28 45.9 -1.0**
HAU *e*MLR MLR
comp=Z,150nm,22.0s,MS3.4
HAU Haudompre 35.36 309 *e*P **P 09 28 45.9 -1.0**
HAU LR LR
comp=Z,150nm,22.0s,MS3.7
HAU Haudompre 35.36 309 *e*P **P 09 28 45.9 -1.0**
SMRF Simiane la Rot 35.37 302 *e*P **P 09 28 46.6 -0.5**
SMRF Simiane la Rot 35.37 302 *e*P **P 09 28 46.6 -0.5**
HFS Hagfors 36.02 331 P **P 09 28 51.8 -0.7**
comp=Z,9.7nm,0.5s,mb5.0,baz=125,slow=9.3,SNR=37
HFS Hagfors 36.02 331 P **P 09 28 51.8 -0.7**
HFS pmax pmax
comp=Z,10.0nm,0.5s
HFS Hagfors 36.02 331 P **P 09 28 51.8 -0.7**
comp=Z,10.0nm,0.5s,mb5.0
LASF Ste Croix 36.61 302 *e*P **P 09 28 56.5 -1.2**
comp=Z,10nm,0.9s,mb4.4
LASF Ste Croix 36.61 302 *e*P **P 09 28 56.5 -1.2**
comp=Z,5.2nm,0.9s,mb4.4
SMF Signal de Mont 36.84 306 *e*P **P 09 28 59.0 -0.6**
comp=Z,26nm,0.8s,mb4.8
SMF Signal de Mont 36.84 306 *e*P **P 09 28 59.0 -0.6**
SMF pmax pmax
comp=Z,13nm,0.8s,mb4.8
SMF Signal de Mont 36.84 306 *e*P **P 09 28 59.0 -0.6**
comp=Z,13nm,0.8s,mb4.8
SMF Signal de Mont 36.84 306 *e*P **P 09 28 59.0 -0.6**
comp=Z,13nm,0.8s,mb4.8
LOR Lormes 36.90 307 *e*P **P 09 28 59.1 -1.1**
comp=Z,14nm,0.9s,mb4.5
LOR *e*MLR MLR
comp=Z,171nm,20.5s,MS3.5
LOR Lormes 36.90 307 *e*P **P 09 28 59.1 -1.1**
LOR pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
LOR MLR MLR
comp=Z,170nm,20.5s,MS3.8
LOR Lormes 36.90 307 *e*P **P 09 28 59.1 -1.1**
comp=Z,6.8nm,0.9s,mb4.5
LOR LR LR
comp=Z,170nm,20.5s,MS3.8
LOR Lormes 36.90 307 *e*P **P 09 28 59.1 -1.1**
comp=Z,6.8nm,0.9s,mb4.5
SSF Saint Saulge 37.12 307 *e*P **P 09 29 01.3 -0.7**
comp=Z,18nm,1.0s,mb4.6
SSF Saint Saulge 37.12 307 *e*P **P 09 29 01.3 -0.7**
SSF pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
SSF Saint Saulge 37.12 307 *e*P **P 09 29 01.3 -0.7**
comp=Z,8.8nm,1.0s,mb4.5
SSF Saint Saulge 37.12 307 *e*P **P 09 29 01.3 -0.7**
comp=Z,8.8nm,1.0s,mb4.6
AVF Avril sur Loir 37.19 306 *e*P **P 09 29 01.7 -0.9**
comp=Z,14nm,1.0s,mb4.5
AVF Avril sur Loir 37.19 306 *e*P **P 09 29 01.7 -0.9**
AVF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
AVF Avril sur Loir 37.19 306 *e*P **P 09 29 01.7 -0.9**
comp=Z,7.1nm,1.0s,mb4.5
AVF Avril sur Loir 37.19 306 *e*P **P 09 29 01.7 -0.9**
comp=Z,7.1nm,1.0s,mb4.5
BGF Bois d'Agland 37.51 306 *e*P **P 09 29 04.7 -0.6**
BGF Bois d'Agland 37.51 306 *e*P **P 09 29 04.7 -0.6**
NB2 NORSAR Subarra 37.55 331 P **P 09 29 04.1 -1.3**
comp=Z,18nm,1.4s,mb4.6,baz=124,slow=8.6
NB2 NORSAR Subarra 37.55 331 P **P 09 29 04.1 -1.3**
comp=Z,18nm,1.4s,mb4.6,SNR=1.0
NOA NORSAR Array B 37.55 331 P **P 09 29 04.4 -1.0**
comp=Z,2.5nm,0.6s,mb4.1,baz=123,slow=8.4,SNR=11
NOA LR LR 09 45 36.8
comp=Z,86nm,19.2s,MS3.6,baz=135,slow=38
NOA NORSAR Array B 37.55 331 P **P 09 29 04.4 -1.0**
NOA pmax pmax
comp=Z,3.0nm,0.6s
NOA MLR MLR
comp=Z,86nm,19.2s
NOA NORSAR Array B 37.55 331 P **P 09 29 04.4 -1.0**
comp=Z,86nm,19.2s
CAF Calviac 37.94 303 *e*P **P 09 29 08.5 -0.5**
CAF Calviac 37.94 303 *e*P **P 09 29 08.5 -0.5**
RJF Les Rejaudoux 38.34 304 *e*P **P 09 29 10.9 -1.5**
RJF *e*MLR MLR
comp=Z,92nm,21.5s,MS3.3
RJF Les Rejaudoux 38.34 304 *e*P **P 09 29 10.9 -1.5**
RJF LR LR
comp=Z,90nm,21.5s,MS3.5
RJF Les Rejaudoux 38.34 304 *e*P **P 09 29 10.9 -1.5**
LFF La Frestale 38.88 303 *e*P **P 09 29 16.5 -0.4**
LFF La Frestale 38.88 303 *e*P **P 09 29 16.5 -0.4**
KEV Kevo 39.33 348 *e*p **P 09 29 19.0 -1.3**
KEV Kevo 39.33 348 *e*P **P 09 29 19.0 -1.3**
ARCES ARCESS Array B 39.40 347 P **P 09 29 20.4 -0.5**
comp=Z,3.5nm,0.9s,mb4.1,baz=161,slow=8.6,SNR=12
ARCES ARCESS Array B 39.40 347 P **P 09 29 20.5 -0.4**
ARCES pmax pmax
comp=Z,4.0nm,0.9s
ARCES ARCESS Array B 39.40 347 P **P 09 29 20.5 -0.4**
comp=Z,4.0nm,0.9s,mb4.2
LDF La Druitiere 39.72 309 *e*P **P 09 29 22.5 -1.3**
LDF La Druitiere 39.72 309 *e*P **P 09 29 22.5 -1.3**
FLN La Foliniere 39.97 309 *e*P **P 09 29 24.7 -1.2**
FLN *e*MLR MLR
comp=Z,118nm,21.0s,MS3.4
FLN La Foliniere 39.97 309 *e*P **P 09 29 24.7 -1.2**
FLN LR LR
comp=Z,120nm,21.0s,MS3.7
FLN La Foliniere 39.97 309 *e*P **P 09 29 24.7 -1.2**
GRR Gorron 40.18 308 *e*P **P 09 29 26.7 -1.0**
GRR Gorron 40.18 308 *e*P **P 09 29 26.7 -1.0**
SJPF Ste Jean 40.29 300 *e*P **P 09 29 27.1 -1.6**
SJPF Ste Jean 40.29 300 *e*P **P 09 29 27.1 -1.6**
SGMF Saint Gilles 41.30 308 *e*P **P 09 29 36.1 -0.9**
SGMF Saint Gilles 41.30 308 *e*P **P 09 29 36.1 -0.9**
GTA Gaotai 41.62 65 *e*P **P 09 29 39.6 -0.1**
GTA pP pP 09 29 44.2 +1.4
GTA sP sP 09 29 46.6 +2.6
GTA S **S 09 35 54.0 -2.0**
GTA pmax pmax
comp=Z,8.0nm,1.2s,mb4.2
GTA pmax pmax
comp=Z,100nm,6.3s
GTA LR LR
comp=N,140nm,21.0s,MS4.0
GTA LR LR
comp=E,110nm,18.0s,MS4.0
GTA LR LR
comp=Z,190nm,18.0s,MS4.0
QUIF Quistinic 41.70 307 *e*P **P 09 29 39.1 -1.1**
QUIF Quistinic 41.70 307 *e*P **P 09 29 39.1 -1.1**
ROSF Rostrenen 41.79 308 *e*P **P 09 29 39.8 -1.1**
ROSF Rostrenen 41.79 308 *e*P **P 09 29 39.8 -1.1**
MOY Mondy 42.39 47 *e*P **P 09 29 46.7 +0.9**
MOY Mondy 42.39 47 *e*P **P 09 29 46.7 +0.9**
EKA Eskdalemuir Ar 42.55 318 P **P 09 29 46.4 -0.6**
comp=Z,2.3nm,0.6s,mb4.1,baz=103,slow=8.0,SNR=11
EKA Eskdalemuir Ar 42.55 318 P **P 09 29 46.4 -0.6**
EKA pmax pmax
comp=Z,2.0nm,0.6s
EKA Eskdalemuir Ar 42.55 318 P **P 09 29 46.4 -0.6**
comp=Z,2.0nm,0.6s,mb4.0
ESDC Sonseca Array 42.61 295 P **P 09 29 48.4 +0.6**
comp=Z,1.3nm,0.6s,mb3.9,baz=82,slow=7.3,SNR=6.5
ESDC Sonseca Array 42.61 295 P **P 09 29 48.3 +0.5**
ZAK Zakamensk 43.73 49 *e*P **P 09 29 56.4 -0.3**
ZAK *e* 09 31 41.6
ZAK pmax pmax
comp=Z,3.0nm,1.5s,mb3.8
ZAK Zakamensk 43.73 49 *e*P **P 09 29 56.4 -0.3**
comp=Z,3.0nm,1.5s,mb3.8
TLY Talaya 44.04 47 *e*P **P 09 29 59.2 +0.1**
TLY pmax pmax
comp=Z,3.0nm,1.1s,mb3.9
TLY Talaya 44.04 47 *e*P **P 09 29 59.2 +0.1**
comp=Z,3.0nm,1.1s,mb3.9
MDT Midelt 44.42 286 P **P 09 30 03.9 +1.5**
comp=Z,2.0nm,0.7s,mb4.0,baz=104,slow=5.4,SNR=5.2
MDT Midelt 44.42 286 P **P 09 30 03.9 +1.5**
MVO Moncorvo 44.75 298 *e*P **P 09 30 04.1 -0.8**
comp=Z,16nm,1.3s,mb4.7
MVO Moncorvo 44.75 298 *e*P **P 09 30 04.1 -0.8**
comp=Z,16nm,1.3s,mb4.7
PBAR Barrancos 45.21 294 *e*P **P 09 30 09.5 +0.8**
comp=Z,20nm,1.2s,mb4.8
PBAR Barrancos 45.21 294 *e*P **P 09 30 09.5 +0.8**
comp=Z,20nm,1.2s,mb4.8
PCBR Castelo Branco 45.27 296 *e*P **P 09 30 10.3 +1.2**
comp=Z,25nm,1.4s,mb4.8
PCBR Castelo Branco 45.27 296 *e*P **P 09 30 10.3 +1.2**
comp=Z,25nm,1.4s,mb4.8
LZH Lanzhou 45.32 69 *e*P **P 09 30 05.7 -3.8**
LZH pP pP 09 30 19.0 +6.3
LZH PP PP 09 31 52.5 -2.9
LZH pmax pmax
comp=Z,23nm,1.3s,mb4.8
LZH pmax pmax
comp=Z,76nm,6.5s

LZH LR LR
comp=N,550nm,14.2s
LZH LR LR
comp=Z,660nm,18.0s,MS4.6
SONM Songino Array 45.76 53 P **P** **09 30 12.1 -0.8**
comp=Z,2.4nm,0.9s,mb4.1,baz=272,slow=8.8,SNR=14
SONM PcP PcP 09 31 49.5 -0.9
comp=Z,0.8nm,0.9s,baz=222,slow=1.9,SNR=4.2
SONM Songino Array 45.76 53 P **P** **09 30 12.1 -0.8**
SONM 09 31 49.5
SONM pmax pmax
comp=Z,2.0nm,0.9s
SONM Songino Array 45.76 53 P **P** **09 30 12.1 -0.8**
comp=Z,2.0nm,0.9s,mb4.0
SONM Songino Array 45.76 53 PcP PcP 09 31 49.5 -1.0
ULN Ulaanbaatar 46.20 53 *e*P **P** **09 30 16.3 -0.1**
ULN pmax pmax
comp=Z,11nm,0.9s,mb4.8
ULN Ulaanbaatar 46.20 53 *e*P **P** **09 30 16.3 -0.1**
comp=Z,11nm,0.9s,mb4.8
ULN Ulaanbaatar 46.20 53 *e*P **P** **09 30 16.3 -0.1**
comp=Z,11nm,0.9s,mb4.8
CD2 Chengdu 46.54 76 ⇓*i*P **P** **09 30 18.5 -0.8**
CD2 pP pP 09 30 23.0 +0.6
CD2 sP sP 09 30 25.8 +2.1
CD2 PP PP 09 32 07.5 -1.0
CD2 S **S** **09 37 04.9 -3.0**
CD2 pmax pmax
comp=Z,30nm,0.6s,mb5.4
CD2 pmax pmax
comp=Z,120nm,5.8s
CD2 LR LR
comp=E,130nm,13.0s
CD2 LR LR
comp=Z,170nm,13.0s,MS4.2
TORD Torodi Ar. Bea 46.87 257 P **P** **09 30 23.1 +1.2**
comp=Z,1.9nm,0.8s,mb4.1,baz=68,slow=6.4,SNR=3.7
CMAR Chiang Mai Arr 47.14 94 P **P** **09 30 22.5 -1.6**
comp=Z,1.1nm,0.5s,mb4.1,baz=294,slow=9.2,SNR=6.3
CMAR PcP PcP 09 31 55.0 -0.8
comp=Z,1.4nm,0.6s,baz=291,slow=4.5,SNR=5.2
CMAR Chiang Mai Arr 47.14 94*c i*P **P** **09 30 23.3 -0.8**
CMAR pmax pmax
comp=Z,1.0nm,0.5s
CMAR Chiang Mai Arr 47.14 94 *i*P **P** **09 30 23.3 -0.8**
comp=Z,1.0nm,0.5s,mb4.0
CMAR Chiang Mai Arr 47.14 94 PcP PcP 09 31 55.0 -0.8
KMI Kunming 47.60 84 P **P** **09 30 26.9 -0.7**
KMI pmax pmax
comp=Z,15nm,0.9s,mb5.0
HHC Hu-ho-hao-te 50.29 61 *e*P **P** **09 30 48.5 +0.5**
HHC pP pP 09 30 53.0 +1.8
HHC sP sP 09 30 55.5 +3.1
HHC PcP PcP 09 32 07.5 +0.7
HHC PP PP 09 32 44.7 +1.4
HHC ScP ScP 09 36 01.6 -1.2
HHC PcS PcS 09 36 04.4 +0.5
HHC S **S** **09 37 58.5 -2.1**
HHC ScS ScS 09 40 37.0 -2.4
HHC SS SS 09 41 28.6 -5.2
HHC pmax pmax
comp=Z,18nm,0.9s,mb5.1
HHC pmax pmax
comp=Z,100nm,6.6s
HHC LR LR
comp=N,140nm,20.2s,MS4.1
HHC LR LR
comp=E,140nm,19.0s,MS4.1
HHC LR LR
comp=Z,83nm,17.8s,MS3.8
ENH Enshi 51.44 75 *e*P **P** **09 31 04.1 +7.2**
comp=Z,46nm,0.6s,mb5.6
SCO Scoresbysund 53.36 337 *i*P **P** **09 31 11.2 +0.7**
SCO pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
SCO Scoresbysund 53.36 337 *i*P **P** **09 31 11.2 +0.7**
comp=Z,5.0nm,1.0s,mb4.4
BJI Beijing 53.90 61 P **P** **09 31 13.6 -1.3**
BJI S **S** **09 38 48.5 -1.6**
BJI SS SS 09 42 30.3 -0.7
BJI pmax pmax
comp=Z,22nm,0.7s,mb5.2
BJI pmax pmax
comp=Z,81nm,5.2s
BJI LR LR
comp=N,180nm,26.6s,MS4.2
BJI LR LR
comp=E,230nm,26.8s,MS4.2
BJI LR LR
comp=Z,88nm,23.5s,MS3.8
DBIC Dimbokro 55.80 255 P **P** **09 31 30.1 +1.1**
comp=Z,2.7nm,0.7s,mb4.4,baz=356,slow=6.4,SNR=2.9
DBIC Dimbokro 55.80 255 P **P** **09 31 30.1 +1.1**
DBIC pmax pmax
comp=Z,3.0nm,0.7s
DBIC Dimbokro 55.80 255 P **P** **09 31 30.1 +1.1**
comp=Z,3.0nm,0.7s,mb4.4
LIC Lamto 56.20 254 *e*P **P** **09 31 28.4 -3.5**
comp=Z,23nm,0.9s,mb4.9
LIC Lamto 56.20 254 *e*P **P** **09 31 28.4 -3.5**
comp=Z,12nm,0.9s,mb4.9
LIC Lamto 56.20 254 *e*P **P** **09 31 28.4 -3.5**
comp=Z,12nm,0.9s,mb4.9
NJ2 Nanjing 58.39 70 *e*P **P** **09 31 48.6 +1.4**
NJ2 pmax pmax
comp=Z,30nm,0.5s,mb5.6
SUMG Summit 58.58 339 *e*P **P** **09 31 48.2 +0.4**
comp=Z,29nm,0.9s,mb5.3
SUMG Summit 58.58 339 *e*P **P** **09 31 48.2 +0.4**
comp=Z,29nm,0.9s,mb5.3
CN2 Changchun 59.54 55 *e*P **P** **09 31 56.5 +1.5**
CN2 *e*S **S** **09 40 03.6 -1.1**
CN2 pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
CN2 pmax pmax
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,110nm,6.0s
CN2 LR LR
comp=E,140nm,6.0s
CN2 LR LR
comp=Z,80nm,6.0s
MDJ Mudanjiang 62.12 53 P **P** **09 32 10.7 -1.8**
MDJ pmax pmax
comp=Z,6.0nm,1.4s,mb4.5
MDJ pmax pmax
comp=Z,39nm,5.4s
KSRS Korea Array 63.42 61 P **P** **09 32 19.8 -1.6**
comp=Z,10nm,0.7s,mb5.0,baz=282,slow=7.1,SNR=32
KSRS LR LR 10 04 22.6
comp=Z,34nm,19.1s,MS3.5,baz=10.0,slow=40
KSRS Korea Array 63.42 61 P **P** **09 32 19.8 -1.5**
KSRS pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
KSRS MLR MLR
comp=Z,34nm,19.1s,MS3.5
KSRS Korea Array 63.42 61 P **P** **09 32 19.8 -1.5**
comp=Z,34nm,19.1s
VLA Vladivostok 64.20 54 *e*P **P** **09 32 27.5 +1.2**
VLA pmax pmax
comp=Z,30nm,0.8s,mb5.4
VLA Vladivostok 64.20 54 *e*P **P** **09 32 27.5 +1.2**
comp=Z,30nm,0.8s,mb5.4
HABR Khabarovsk 64.37 47 *e*P **P** **09 32 25.8 -1.5**
HABR *e**PP pP 09 32 36.0 +5.4
HABR 09 33 00.7
HABR *e* 09 34 46.9
HABR *e*PPP 09 36 17.5
HABR *e*S **S** **09 41 00.6 -4.9**
HABR *e* 09 42 16.9
HABR *e*SS SS 09 45 11.0 -3.8
HABR pmax pmax
comp=E,13nm,1.1s
HABR pmax pmax
comp=Z,11nm,0.9s,mb4.9
HABR pmax pmax
comp=N,4.0nm,0.6s
HABR MLR MLR
comp=Z,66nm,16.0s,MS3.9
HABR Khabarovsk 64.37 47 *e*P **P** **09 32 25.8 -1.5**
comp=Z,4.0nm,0.6s,mb4.6
HABR Khabarovsk 64.37 47 PcP PcP 09 33 00.7 -1.1
BOSA Boshof 64.59 203 P **P** **09 32 30.5 +1.7**
comp=Z,5.8nm,1.1s,mb4.5,baz=1.6,slow=5.8,SNR=3.7
BOSA Boshof 64.59 203 P **P** **09 32 30.5 +1.6**
BOSA pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
BOSA Boshof 64.59 203 P **P** **09 32 30.5 +1.7**
BOSA Boshof 64.59 203 P **P** **09 32 30.5 +1.6**
comp=Z,6.0nm,1.1s,mb4.5
YSS Yuzh-Sakhalins 69.74 47 *e*P **P** **09 33 00.0 -1.5**
YSS Yuzh-Sakhalins 69.74 47 *e*P **P** **09 33 00.0 -1.5**
BILL Bilibino 69.76 21 *e*P **P** **09 33 00.2 -1.0**
BILL pmax pmax
comp=Z,11nm,1.6s,mb4.5
BILL Bilibino 69.76 21 *e*P **P** **09 33 00.2 -1.0**
comp=Z,11nm,1.6s,mb4.5
SCHQ Schefferville 77.02 328 P **P** **09 33 43.5 -0.8**
comp=Z,1.7nm,0.6s,mb4.2,baz=60,slow=6.3,SNR=6.1
SCHQ Schefferville 77.02 328 P **P** **09 33 43.5 -0.8**
INK Inuvik 79.61 1 P **P** **09 33 56.9 -1.5**
comp=Z,1.2nm,0.6s,mb4.0,baz=27,slow=11,SNR=5.1
INK Inuvik 79.61 1 P **P** **09 33 56.9 -1.4**
INK pmax pmax
comp=Z,1.0nm,0.6s
INK Inuvik 79.61 1 P **P** **09 33 56.8 -1.5**
COLD Coldfoot 79.68 7 *e*P **P** **09 33 58.5 -0.3**
comp=Z,11nm,1.5s,mb4.6
COLD Coldfoot 79.68 7 *e*P **P** **09 33 58.5 -0.3**
comp=Z,11nm,1.5s,mb4.6
BPAW Bear Paw Mtn. 82.60 9 *e*P **P** **09 34 14.0 -0.4**
comp=Z,16nm,1.3s,mb4.9
BPAW Bear Paw Mtn. 82.60 9 *e*P **P** **09 34 14.0 -0.4**
comp=Z,16nm,1.3s,mb4.9
CHUM Lake Minchumin 82.64 9 *e*P **P** **09 34 14.2 -0.4**
comp=Z,12nm,1.0s,mb4.9
CHUM Lake Minchumin 82.64 9 *e*P **P** **09 34 14.1 -0.5**
comp=Z,12nm,1.0s,mb4.9
EGAK Eagle 82.86 4 *e*P **P** **09 34 15.0 -0.7**
comp=Z,3.6nm,0.9s,mb4.4
EGAK Eagle 82.86 4 *e*P **P** **09 34 15.0 -0.7**
comp=Z,3.6nm,0.9s,mb4.4
FCC Fort Churchill 84.02 341 *e*P **P** **09 34 21.7 -0.1**
FCC Fort Churchill 84.02 341 *e*P **P** **09 34 21.7 -0.1**
YKA Yellowknife Ar 84.49 352 P **P** **09 34 22.6 -1.5**
comp=Z,2.9nm,0.9s,mb4.4,baz=11,slow=5.4,SNR=21
YKA Yellowknife Ar 84.49 352 P **P** **09 34 22.6 -1.5**
LBNH Lisbon 86.46 322 *e*P **P** **09 34 34.5 +0.2**
LBNH pmax pmax
comp=Z,42nm,1.8s,mb5.4
LBNH Lisbon 86.46 322 *e*P **P** **09 34 34.5 +0.3**
comp=Z,42nm,1.8s,mb5.4
LBNH Lisbon 86.46 322 *e*P **P** **09 34 34.5 +0.2**
comp=Z,42nm,1.8s,mb5.4
KDAK Kodiak Island 88.43 11 *i*P **P** **09 34 43.0 -0.5**
KDAK Kodiak Island 88.43 11 *i*P **P** **09 34 43.0 -0.5**
FFC Flin Flon 89.62 343 *i*P **P** **09 34 49.6 +0.5**
FFC Flin Flon 89.62 343 *i*P **P** **09 34 49.6 +0.5**
ASAR Alice Springs 98.59 112 P **P** **09 35 28.8 -2.0**
comp=Z,0.4nm,0.7s,mb4.0,baz=304,slow=4.4,SNR=6.2
ASAR Alice Springs 98.59 112 P **P** **09 35 28.8 -1.9**
TXAR Lajitas Array 113.21 334 PKiKP PKiKP 09 40 28.7 -0.9
comp=Z,0.2nm,0.8s,baz=84,slow=3.9,SNR=3.6
TXAR Lajitas Array 113.21 334 *i* PKIKP PKiKP 09 40 28.7 -0.9
RPZ Rata Peaks 134.13 122 *e*PKPdf PKPdf 09 41 07.6 -1.3
RPZ Rata Peaks 134.13 122 *e*PKIKP PKPdf 09 41 07.6 -1.3

ISCJB ***03*** *09:23:38.4±0.4, 45°.52N±0°.04×142°.56E±0°.09, h312km±3km, mb3.4/5, Error ellipse: s-maj=10.3km s-min=6.5km az=167.8*
MOS ***03*** *09:23:38.2±0.6, 45°.55N×142°.51E, h311km, mb4.0/3, Error ellipse: s-maj=42.6km s-min=18.3km az=85.8*
IDC ***03*** *09:23:39.0±0.7, 45°.62N×142°.43E, h300km±9km, mb3.2/5, mb1 3.4/6, mb1mx3.0/26, mbtmp3.2/6, Error ellipse: s-maj=22.4km s-min=17.7km az=136.0*
JMA ***03*** *09:23:39.0±0.2, 45°.51N×142°.47E, h312km±2km, M3.3*
NEIC ***03*** *09:23:39.0, 45°.51N×142°.47E, h312km, MG3.3(JMA), After JMA.*
SKHL ***03*** *09:23:40.1±0.3, 45°.54N×142°.45E, h295km±2km, mb4.2/3, msh4.4/2*

ISC 03 09:23:39.2±0.4, 45°.52N±0°.04×142°.56E±0°.09, h306km±3km, n40, σ0°.86/58, mb3.4/5, 2D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWK2	**Keihoku**	**0.51**	**247**	P	**Pn**	**09 24 18.9**	**+0.4**
JWK2				*e*S	**S**	**09 24 49.6**	**-0.2**
JSE	**Soyaes**	**0.56**	**178**	P	**Pn**	**09 24 18.9**	**+0.2**
JSE				*e*S	**S**	**09 24 49.3**	**-0.9**
JRR	**Rishiri**	**0.96**	**247**	P	**Pn**	**09 24 20.3**	**+0.3**
JRR				*e*S	**S**	**09 24 52.4**	**-0.1**
JSS	**Shosan**	**1.22**	**204**	P	**Pn**	**09 24 21.7**	**+0.3**
JYG	**Yagishiri**	**1.35**	**217**	P	**Pn**	**09 24 22.5**	**+0.4**
JYG				*e*S	**S**	**09 24 56.1**	**-0.2**
ASAJ	**Asahikawa**	**1.40**	**179**	P	**Pn**	**09 24 23.1**	**+0.7**
ASAJ				*e*S	**S**	**09 24 58.1**	**+1.3**
ASAJ	**Asahikawa**	**1.40**	**179**	P	**Pn**	**09 24 23.2**	**+0.8**
	3.8nm,0.3s,baz=311,slow=4.8,SNR=27						
ASAJ				S	**S**	**09 24 57.0**	**+0.2**
	1.7nm,0.3s,baz=120,slow=20,SNR=21						
ASAJ	**Asahikawa**	**1.40**	**179**	PN	**Pn**	**09 24 23.2**	**+0.8**
ASAJ				S	**S**	**09 24 57.1**	**+0.3**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ASAJ				smax			
	comp=N,2.0nm,0.3s						
YSS	**Yuzh-Sakhalins**	**1.45**	**5**	⇓*i*PN	**Pn**	**09 24 22.8**	**+0.3**
YSS				*i* S	**S**	**09 24 55.7**	**-1.3**
YSS				pmax	pmax		
	comp=Z,120nm,0.4s						
YSS				smax			
	comp=N,90nm,0.7s						
YSS	**Yuzh-Sakhalins**	**1.45**	**5**	*e*Pn	**Pn**	**09 24 23.1**	**+0.6**
YSS				*e*Sn	**S**	**09 24 56.8**	**-0.2**
YSS	**Yuzh-Sakhalins**	**1.45**	**5**	⇓*i*P	**Pn**	**09 24 22.8**	**+0.3**
YSS				AMB	AMB	09 24 23.2	
	comp=N,120nm,0.4s						
YSS				*i* S	**S**	**09 24 55.7**	**-1.3**
YSS				A		09 24 57.0	
	comp=N,90nm,0.7s						
JMP	**Maruseppu**	**1.61**	**159**	P	**Pn**	**09 24 24.4**	**+0.6**
JMP				*e*S	**S**	**09 25 00.0**	**+0.7**
JKK2	**Kamakawa 2**	**1.65**	**175**	P	**Pn**	**09 24 24.9**	**+0.9**
JKK2				*e*S	**S**	**09 25 00.8**	**+1.1**
JTKR	**Abashiri--Toko**	**1.82**	**148**	P	**Pn**	**09 24 26.1**	**+0.9**
JTKR				*e*S	**S**	**09 25 02.3**	**+0.4**
JAB	**Ashibetsu**	**2.03**	**187**	P	**Pn**	**09 24 27.5**	**+0.7**
JFR	**Furan**	**2.35**	**179**	P	**Pn**	**09 24 29.7**	**+0.2**
JAR	**Ashorobuto**	**2.38**	**158**	P	**Pn**	**09 24 30.6**	**+0.9**
JRA	**Rausu**	**2.42**	**130**	P	**Pn**	**09 24 31.3**	**+1.3**
JSK	**Shakotan**	**2.63**	**215**	P	**Pn**	**09 24 31.8**	**-0.1**
YUK	**Yuzh-Kuril'sk**	**2.78**	**121**	*e*P	**Pn**	**09 24 35.0**	**+1.7**
JEW	**Eniwo**	**2.79**	**197**	P	**Pn**	**09 24 33.9**	**+0.5**
JAK	**Akkeshi**	**2.95**	**148**	P	**Pn**	**09 24 34.8**	**-0.2**
JAK				*e*S	**S**	**09 25 17.0**	**-2.5**
JCH	**Churui**	**2.96**	**168**	P	**Pn**	**09 24 33.9**	**-1.1**
JCH				*e*S	**S**	**09 25 15.3**	**-4.4**
NEM2	**Nemuro 2**	**3.14**	**132**	P	**Pn**	**09 24 36.0**	**-0.7**
NEM2				*e*S	**S**	**09 25 20.1**	**-2.7**
JNBK	**Urakawa-nobuka**	**3.24**	**177**	P	**Pn**	**09 24 37.1**	**-0.7**
ERM	**Erimo**	**3.53**	**173**	*e*Pn	**Pn**	**09 24 40.6**	**-0.1**
ERM				*e*Sn	**S**	**09 25 28.4**	**-1.7**
JKB	**Kayabe**	**3.79**	**197**	P	**Pn**	**09 24 42.3**	**-1.3**
TEY	**Ternei**	**4.23**	**266**	*e*P	**Pn**	**09 24 48.0**	**-0.2**
TEY				AMB	AMB	09 24 48.2	
	comp=N,26nm,0.8s						
TYV	**Tymovskoe**	**5.35**	**1**	*e*P	**Pn**	**09 25 00.5**	**-0.3**
TYV				AMB	AMB	09 25 01.7	
	comp=N,18nm,0.7s						
TYV				*e*S	**S**	**09 26 06.0**	**-0.6**
TYV				A		09 26 07.0	
	comp=N,22nm,1.0s						
MJAR	**Matsushiro Arr**	**9.55**	**202**	P	**Pn**	**09 25 50.9**	**-0.9**
	comp=N,0.9nm,0.3s,baz=11,slow=13,SNR=9.9						
MJAR	**Matsushiro Arr**	**9.55**	**202**	PN	**Pn**	**09 25 50.9**	**-0.9**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM	**Songino Array**	**24.78**	**288**	P	**P**	**09 28 33.5**	**-0.2**
	comp=Z,1.8nm,0.3s,mb3.9,baz=79,slow=8.8,SNR=15						
SONM	**Songino Array**	**24.78**	**288**	P	**P**	**09 28 33.5**	**-0.1**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KURK	**Kurchatov**	**41.82**	**301**	P	**P**	**09 30 58.7**	**-0.6**
	comp=Z,0.6nm,0.3s,mb3.2,baz=72,slow=8.1,SNR=5.3						
KURK	**Kurchatov**	**41.82**	**301**	P	**P**	**09 30 58.7**	**-0.6**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.4						
INK	**Inuvik**	**46.55**	**31**	P	**P**	**09 31 36.1**	**-0.2**
	comp=Z,0.9nm,0.3s,mb3.6,baz=274,slow=7.0,SNR=14						
INK	**Inuvik**	**46.55**	**31**	P	**P**	**09 31 36.1**	**-0.2**
INK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
YKA	**Yellowknife Ar**	**56.13**	**33**	P	**P**	**09 32 46.8**	**-0.1**
	comp=Z,0.3nm,0.5s,mb3.0,baz=308,slow=7.9,SNR=6.2						
ASAR	**Alice Springs**	**69.30**	**188**	P	**P**	**09 34 15.0**	**+1.3**
	comp=Z,0.5nm,0.8s,mb3.3,baz=5.4,slow=6.2,SNR=6.7						
ASAR	**Alice Springs**	**69.30**	**188**	P	**P**	**09 34 15.0**	**+1.3**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						

DDA ***03*** *09:25:24.5, 40°.92N×44°.55E, h14km, Md3.0*
TIF 03 09:25:23.2, 41°.41N×44°.49E, h0km±3km, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBLG	**Delisi**	**0.37**	**29**	P	Pg	09 25 31.9	+1.5
TBLG				S	Sg	09 25 38.9	+3.6
GOR	**Gori**	**0.65**	**334**	P	Sg	09 25 47.7	+3.6
DGRG	**David-gareji**	**0.66**	**86**	P	Pg	09 25 38.5	+2.6
KEH	**Kehvi**	**0.99**	**335**	P	Pg	09 25 42.1	-0.2
KEH				S	Sg	09 25 56.5	+1.3
DIGO	**Kars**	**1.30**	**221**	*i* P	Pg	09 25 43.5	-4.8
DIGO				*i* S	Sg	09 26 04.5	-0.6
DAGI	**Agillar**	**1.97**	**261**	*i* P	Pn	09 25 59.4	+1.6
DAGI				*i* S	Sn	09 26 26.2	+2.9
DBAD	**Bademkaya**	**2.15**	**261**	*i* P	Pn	09 26 02.4	+2.1
DBAD				*i* S	Sn	09 26 31.3	+3.7

IDC ***03*** *09:35:44.8±0.9, 51°.65N×75°.74E, h0km, mb1 2.9/4, mb1mx2.9/29, mbtmp2.9/4, ML2.8/4, Error ellipse: s-maj=22.2km s-min=8.3km az=27.0*
NNC ***03*** *09:35:44.1±3.4, 51°.16N×75°.17E, h0km, mb3.2, mpv2.8, Error ellipse: s-maj=134.1km s-min=7.7km az=21.0*
ISCJB ***03*** *09:35:47.2±0.6, 51°.70N±0°.08×75°.69E±0°.07, h33km, Error ellipse: s-maj=12.1km s-min=4.9km az=19.6*
ISC 03 09:35:49.8±0.6, 51°.73N±0°.08×75°.61E±0°.07, h35km, n9, σ1°.45/15, 5C-2D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.15**	**120**	⇓Pn	**Pn**	**09 36 21.3**	**-1.7**
	1.9nm,0.7s						
KURBB				⇑Sn	**Sn**	**09 36 51.0**	**+2.6**
	13nm,0.8s						
KURK	**Kurchatov**	**2.15**	**117**	⇑Pn	**Pn**	**09 36 20.9**	**-2.2**
	7.0nm,0.6s						
KURK				⇑Sn	**Sn**	**09 36 51.8**	**+3.3**
	61nm,0.8s						
KURK	**Kurchatov**	**2.15**	**117**	Pn	**Pn**	**09 36 19.6**	**-3.5**
	0.7nm,0.3s,baz=304,slow=19,SNR=42						
KURK				Lg		09 36 51.5	
	1.2nm,0.3s,baz=306,slow=31,SNR=23						
VOSK	**Vostochnaya**	**3.02**	**291**	⇑Pn	**Pn**	**09 36 33.7**	**-1.3**
	4.3nm,0.6s						
VOSK				⇑Sn	**Sn**	**09 37 09.9**	**+0.1**
	31nm,0.9s						
BVA0	**Borovoye Array**	**3.45**	**294**	Pn	**Pn**	**09 36 40.9**	**-0.1**
	0.5nm,0.7s,baz=110,slow=14,SNR=13						
BVAR	**Borovoye Array**	**3.45**	**294**	Pn	**Pn**	**09 36 41.1**	**+0.2**
	0.5nm,0.3s,baz=113,slow=16,SNR=11						
BVAR				Sn	**Sn**	**09 37 23.4**	**+2.8**
	1.5nm,0.3s,baz=109,slow=25,SNR=6.4						
BRVK	**Borovoye**	**3.52**	**294**	⇓Pn	**Pn**	**09 36 42.4**	**+0.5**
	5.8nm,0.7s						
ZALV	**Zalesovo Beam**	**6.01**	**65**	Pn	**Pn**	**09 37 14.7**	**-1.3**
	0.7nm,0.3s,baz=247,slow=14,SNR=3.6						
ZALV				Sn	**Sn**	**09 38 24.4**	**+0.9**
	1.9nm,0.3s,baz=243,slow=22,SNR=4.1						
ZALV				Lg		09 38 55.1	
	0.4nm,0.3s,baz=247,slow=30,SNR=2.5						
MKAR	**Makanchi Array**	**6.60**	**136**	Pn	**Pn**	**09 37 20.5**	**-3.7**
	0.2nm,0.3s,baz=331,slow=12,SNR=4.8						
MKAR				Sn	**Sn**	**09 38 38.6**	**+0.6**
	0.2nm,0.3s,baz=321,slow=22,SNR=5.8						
MKAR				Lg		09 39 09.8	
	0.5nm,0.3s,baz=324,slow=29,SNR=6.7						

TEH ***03*** *09:38:35.8, 35°.87N×71°.29E, h90km*
BJI ***03*** *09:38:51.3, 37°.00N×71°.80E, h153km*
NEIC ***03*** *09:38:53.3±1.0, 37°.04N×71°.81E, h154km±9km, mb4.9/15, Error ellipse: s-maj=13.9km s-min=5.2km az=60.0*
MOS ***03*** *09:38:53.0±1.2, 37°.09N×71°.82E, h162km, mb4.1/7, Error ellipse: s-maj=17.2km s-min=8.0km az=86.9*
ISCJB ***03*** *09:38:53.0±0.4, 37°.11N±0°.03×71°.87E±0°.04, h163km±6km, mb4.0/9, Error ellipse: s-maj=5.9km s-min=3.8km az=159.1*
IDC ***03*** *09:38:54.7±4.1, 37°.20N×71°.79E, h158km±31km, mb3.5/7, mb1 3.7/13, mb1mx3.5/30, mbtmp3.6/13, Error ellipse: s-maj=31.5km s-min=20.3km az=2.0*
NNC ***03*** *09:38:54.4±8.9, 37°.50N×71°.23E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=89.7km s-min=69.5km az=58.0*
ISC 03 09:38:53.8±0.3, 37°.10N±0°.02×71°.85E±0°.04, h153km±5km, n91, σ1°.09/106, mb4.0/9, 5C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.27**	**179**	⇓P	**Pn**	**09 39 49.3**	**+4.6**
CEP				S	**Sn**	**09 40 30.0**	**+6.0**
KSH	**Kashi**	**4.04**	**52**	⇓*i*P	**Pn**	**09 39 51.7**	**-2.9**
KSH				S	**Sn**	**09 40 32.4**	**-9.5**
JMU	**Jammu**	**5.04**	**149**	*ex*	**Sn**	**09 41 05.0**	**-0.4**
AML	**Almayashu**	**5.22**	**15**	P	**Pn**	**09 40 11.3**	**+1.2**
	SNR=86						
AML	**Almayashu**	**5.22**	**15**	*e*Pn	**Pn**	**09 40 11.2**	**+1.1**
	371nm,0.6s						
AML				*e*Sn	**Sn**	**09 41 06.7**	**-3.0**
UCH	**Uchtor**	**5.52**	**21**	P	**Pn**	**09 40 15.4**	**+1.4**
	SNR=92						
UCH	**Uchtor**	**5.52**	**21**	*e*Pn	**Pn**	**09 40 15.3**	**+1.3**
	61nm,0.6s						
UCH				*e*Sn	**Sn**	**09 41 15.4**	**-1.3**
KZA	**Kyzart**	**5.62**	**27**	P	**Pn**	**09 40 16.3**	**+0.9**
	SNR=14						
THN	**Thein Dam**	**5.63**	**145**	*e*PKP	**Pn**	**09 40 17.5**	**+1.9**
THN				*ex*	x	09 41 19.4	
EKS2	**Erkin-Say**	**5.75**	**14**	P	**Pn**	**09 40 18.4**	**+1.3**
	SNR=17						
EKS2	**Erkin-Say**	**5.75**	**14**	*e*Pn	**Pn**	**09 40 18.2**	**+1.2**
	15nm,0.6s						
EKS2				*e*Sn	**Sn**	**09 41 19.9**	**-2.4**
AAK	**Ala-Archa**	**5.89**	**19**	P	**Pn**	**09 40 20.3**	**+1.4**
	SNR=26						
AAK	**Ala-Archa**	**5.89**	**19**	P	**Pn**	**09 40 20.4**	**+1.5**
	0.2nm,0.3s,baz=185,slow=7.0,SNR=37						
AAK				S	**Sn**	**09 41 24.1**	**-1.5**
	0.1nm,0.3s,baz=130,slow=23,SNR=19						
AAK	**Ala-Archa**	**5.89**	**19**	*d i*PN	**Pn**	**09 40 20.1**	**+1.2**
AAK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KBK	**Karagaybulak**	**6.04**	**22**	P	**Pn**	**09 40 23.3**	**+2.3**
	SNR=12						
KK31	**Karatay Array**	**6.09**	**351**	⇑P	**Pn**	**09 40 22.2**	**+0.7**
	comp=Z,4.3nm,0.3s,baz=177,slow=14,SNR=76						
KK31				⇑S	**Sn**	**09 41 25.4**	**-4.9**
	comp=Z,124nm,0.5s,baz=172,slow=23						
CHMS	**Chumysh**	**6.30**	**20**	P	**Pn**	**09 40 25.4**	**+1.1**
	SNR=7.7						
TKM2	**Tokmak 2**	**6.49**	**25**	⇓Pn	**Pn**	**09 40 28.4**	**+1.5**
	comp=Z,3.2nm,0.4s						
TKM2				⇓Sn	**Sn**	**09 41 34.4**	**-5.5**
	comp=Z,34nm,1.1s						
TKM2				⇑Lg		09 41 59.8	
	comp=Z,23nm,0.7s						
TKM2	**Tokmak 2**	**6.49**	**25**	*e*PN	**Pn**	**09 40 28.6**	**+1.8**
TKM2				pmax	pmax		
	comp=Z,7.0nm,0.4s						
TKM2	**Tokmak 2**	**6.49**	**25**	*e*Pn	**Pn**	**09 40 28.6**	**+1.8**
	comp=Z,6.6nm,0.4s						
USP	**Ospenovka**	**6.49**	**17**	P	**Pn**	**09 40 27.7**	**+0.9**
	SNR=8.2						
BHK	**Bhakra**	**6.81**	**145**	*ex*	**Sn**	**09 41 46.4**	**-1.3**
SDNR	**Sundarnagar**	**7.00**	**141**	*e*PKP	**Pn**	**09 40 35.1**	**+1.2**
SDNR				*ex*	x	09 41 50.1	
KKR	**Kurukshetra**	**8.23**	**148**	*e*PKP	**Pn**	**09 40 51.5**	**+1.2**
KKR				*e*S	**Sn**	**09 42 17.5**	**-4.4**

DDI	**Dehra Dun**	**8.50**	**141**	*ex*	**Pn**	09 40 59.8	**+6.0**
DDI				*ex*	x	09 42 46.1	
JOSI	**Joshimath**	**9.14**	**133**	*e*PKP	**Pn**	09 41 03.9	**+1.6**
JOSI				*e*S	**Sn**	09 42 36.3	**-7.5**
JOSI				AML	AML	09 42 45.1	
	comp=N,324nm,0.3s						
JOSI				AML	AML	09 42 45.5	
	comp=E,323nm,0.7s						
IMYA	**Miami**	**9.47**	**269**	*e*P	**Pn**	09 41 06.6	**0.0**
NDI	**New Delhi**	**9.52**	**150**	*e*PKP	**Pn**	09 41 06.0	**-1.4**
NDI				*e*S	**Sn**	09 42 44.0	**-9.0**
KHET	**Khetri**	**9.59**	**159**	*e*PKP	**Pn**	09 41 08.9	**+0.6**
KHET				*e*S	**Sn**	09 42 48.0	**-6.7**
AYAN	**Aya Nagar**	**9.67**	**151**	*e*PKP	**Pn**	09 41 10.0	**+0.7**
AYAN				*e*S	**Sn**	09 42 51.1	**-5.3**
SONA	**Sohna**	**9.86**	**152**	*e*S	**Sn**	09 42 54.2	**-6.9**
ISRO	**Mashad**	**9.98**	**269**	*e*P	**Pn**	09 41 12.0	**-1.3**
IMOG	**Moghan**	**10.11**	**268**	*e*P	**Pn**	09 41 14.0	**-1.1**
PTH	**Pithoragarh**	**10.27**	**135**	*ex*	x	09 42 58.0	
IAKL	**Akhelmad**	**10.51**	**271**	*e*P	**Pn**	09 41 20.4	**0.0**
IEMG	**Emamgholi**	**10.53**	**276**	*e*P	**Pn**	09 41 20.6	**0.0**
ISFR	**Sfrayin**	**11.07**	**274**	*e*P	**Pn**	09 41 27.2	**-0.5**
AGRA	**Agra**	**11.10**	**151**	*ex*	**Pn**	09 41 27.3	**-1.0**
AGRA				*e*S	**Sn**	09 43 23.4	**-7.7**
ISHV	**Shirvan**	**11.28**	**276**	*e*P	**Pn**	09 41 30.4	**-0.1**
MKAR	**Makanchi Array**	**12.41**	**35**	P	**Pn**	09 41 45.2	**+0.2**
	comp=E,0.2nm,0.3s,baz=222,slow=13,SNR=4.9						
MKAR	**Makanchi Array**	**12.41**	**35**	P	**Pn**	09 41 45.2	**+0.1**
KURK	**Kurchatov**	**14.45**	**17**	*e*Pn	**Pn**	09 42 07.9	**-3.0**
	comp=E,0.1nm,0.3s,baz=207,slow=11,SNR=12						
KURK	**Kurchatov**	**14.45**	**17**	*e*Pn	**Pn**	09 42 08.8	**-2.1**
KKN	**Kakani**	**14.64**	**125**	*e*P	**Pn**	09 42 12.3	**-1.2**
	comp=E,41nm,0.5s						
KKN	**Kakani**	**14.64**	**125**	*e*P	**Pn**	09 42 12.3	**-1.2**
KKN				pmax	pmax		
	comp=Z,41nm,0.5s						
DMN	**Daman**	**14.65**	**126**	*e*P	**Pn**	09 42 12.8	**-0.8**
	comp=Z,37nm,0.4s						
PKIN	**Phulchoki**	**14.86**	**126**	*e*P	**Pn**	09 42 15.7	**-0.5**
	comp=Z,40nm,0.3s						
PKI	**Pulchoki**	**14.87**	**126**	*e*P	**Pn**	09 42 15.9	**-0.5**
	comp=Z,42nm,0.4s						
PKI	**Pulchoki**	**14.87**	**126**	*e*P	**Pn**	09 42 15.9	**-0.5**
PKI				pmax	pmax		
	comp=Z,42nm,0.4s						
AB31	**Akbulak array**	**14.91**	**328**	P	**Pn**	09 42 17.2	**+0.4**
	comp=Z,1.9nm,0.4s,baz=136,slow=14,SNR=67						
ABKAR	**Akbulak array**	**14.91**	**328**	*e*Pn	**Pn**	09 42 16.8	**0.0**
	comp=Z,6.2nm,0.6s						
ABKAR				*e*Sn	**Sn**	09 44 50.2	**-12**
GUN	**Gumba**	**14.95**	**124**	*e*P	**Pn**	09 42 16.6	**-0.8**
	comp=Z,91nm,0.7s						
JIRN	**Jiri**	**15.32**	**124**	*e*P	**Pn**	09 42 21.8	**-0.2**
	comp=Z,129nm,0.4s						
BVAR	**Borovoye Array**	**15.96**	**357**	P	**Pn**	09 42 28.0	**-1.6**
	comp=Z,1.1nm,0.3s,baz=161,slow=14,SNR=12						
BVAR	**Borovoye Array**	**15.96**	**357**	P	**Pn**	09 42 28.0	**-1.6**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	**Borovoye**	**16.00**	**357**	*i* P	**Pn**	09 42 30.0	**0.0**
BRVK	**Borovoye**	**16.00**	**357**	*e*P	**Pn**	09 42 30.7	**+0.7**
	comp=Z,3.0nm,0.4s						
RAMN	**Ramite**	**16.07**	**125**	*e*P	**Pn**	09 42 30.7	**-0.4**
	comp=Z,90nm,0.6s						
IBND	**Bandar-abas**	**16.11**	**238**	*e*P	**Pn**	09 42 25.2	**-6.5**
TAPN	**Taplejung**	**16.55**	**121**	*e*P	**Pn**	09 42 37.3	**+0.3**
	comp=Z,30nm,0.4s						
AKTK	**Aktyubinsk**	**16.62**	**328**	P	**Pn**	09 42 37.9	**+0.2**
AKTO	**Aktyubinsk**	**16.62**	**328**	⇑P	**Pn**	09 42 38.4	**+0.7**
	comp=Z,1.0nm,0.9s						
AKTO	**Aktyubinsk**	**16.62**	**328**	P	**Pn**	09 42 37.9	**+0.2**
	comp=Z,1.0nm,0.3s,baz=126,slow=8.3,SNR=13						
AKTO	**Aktyubinsk**	**16.62**	**328**	P	**Pn**	09 42 37.9	**+0.2**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ODAN	**Odare**	**16.65**	**123**	*e*P	**Pn**	09 42 38.7	**+0.5**
ZAA0	**Zalesovo Array**	**19.09**	**24**	*e*P	**P**	09 43 04.4	**+0.1**
ZALV	**Zalesovo Beam**	**19.09**	**24**	P	**P**	09 43 04.5	**+0.2**
	comp=Z,4.2nm,0.3s,baz=220,slow=11,SNR=32						
ZALV	**Zalesovo Beam**	**19.09**	**24**	P	**P**	09 43 04.6	**+0.3**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.3s						
NVS	**Novosibirsk**	**19.38**	**20**	*e*P	**P**	09 43 07.0	**-0.5**
NVS				pmax	pmax		
	comp=Z,17nm,1.0s						
NVS				pmax	pmax		
	comp=N,20nm,1.2s						
ARU	**Arti**	**21.30**	**339**	*e*P	**P**	09 43 28.7	**+0.7**
ARU						09 43 59.4	
ARU				S	**S**	09 47 28.3	**+13**
ARU				SS		09 48 03.2	
SONM	**Songino Array**	**27.43**	**56**	P	**P**	09 44 26.1	**+1.1**
	comp=N,1.7nm,1.1s,mb3.6,baz=248,slow=10,SNR=5.0						
SONM	**Songino Array**	**27.43**	**56**	P	**P**	09 44 26.1	**+1.1**
SONM				pmax	pmax		
	comp=Z,2.0nm,1.1s						
AKASG	**Malin Array Be**	**33.11**	**308**	*ce*P	**P**	09 45 08.5	**-6.4**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WHN	**Wuhan**	**35.68**	**88**	P	**P**	09 45 35.1	**-2.2**
ARCES	**ARCESS Array B**	**40.86**	**337**	P	**P**	09 46 20.3	**+0.3**
	comp=Z,3.0nm,0.8s,mb4.0,baz=114,slow=9.1,SNR=13						
ARCES	**ARCESS Array B**	**40.86**	**337**	P	**P**	09 46 20.3	**+0.3**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARCES	**ARCESS Array B**	**40.86**	**337**	P	**P**	09 46 20.3	**+0.2**
NB2	**NORSAR Subarra**	**44.32**	**323**	P	**P**	09 46 48.4	**+0.4**
	comp=Z,0.6nm,0.4s,mb3.6,baz=92,slow=7.9						
NOA	**NORSAR Array B**	**44.32**	**323**	P	**P**	09 46 48.1	**+0.1**
	comp=Z,1.7nm,0.8s,mb3.7,baz=94,slow=7.6,SNR=5.1						
NOA	**NORSAR Array B**	**44.32**	**323**	P	**P**	09 46 48.1	**+0.1**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TIXI	**Tiksi**	**44.97**	**22**	*e*P	**P**	09 46 53.3	**+0.3**
TIXI				pmax	pmax		
	comp=Z,10.0nm,0.3s,mb4.9						
TIXI	**Tiksi**	**44.97**	**22**	*e*P	**P**	09 46 53.3	**+0.3**
	comp=Z,10nm,0.3s,mb4.9						
BILL	**Bilibino**	**57.77**	**26**	*e*P	**P**	09 48 29.2	**+1.0**
BILL				pmax	pmax		
	comp=Z,6.0nm,2.5s,mb4.0						
TORD	**Torodi Ar. Bea**	**66.42**	**269**	P	**P**	09 49 25.6	**-1.1**
	comp=Z,0.4nm,0.4s,mb3.6,baz=49,slow=6.2,SNR=5.7						
FX1	**Attu Island--F**	**67.50**	**40**	P	**P**	09 49 32.1	**-0.8**
	comp=Z,4.7nm,0.6s,mb4.4						
FX1	**Attu Island--F**	**67.50**	**40**	P	**P**	09 49 32.1	**-0.8**
FX1				pmax	pmax		
	comp=Z,5.0nm,0.6s						
PPLA	**Purkeypile**	**74.30**	**19**	*e*P	**P**	09 50 13.8	**0.0**
	comp=Z,2.9nm,0.4s,mb4.4						
YKA	**Yellowknife Ar**	**80.62**	**3**	P	**P**	09 50 48.7	**-0.1**
	comp=Z,1.6nm,0.5s,mb3.9,baz=350,slow=5.5,SNR=29						
YKA	**Yellowknife Ar**	**80.62**	**3**	P	**P**	09 50 48.7	**-0.1**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
YKA	**Yellowknife Ar**	**80.62**	**3**	P	**P**	09 50 48.7	**-0.1**
ASAR	**Alice Springs**	**84.04**	**125**	P	**P**	09 51 09.0	**+1.8**
	comp=Z,0.1nm,0.6s,baz=316,slow=5.4,SNR=3.3						

NEIC 03 09:39:02.7,38.55S×175.97E,h135km,MG4.6(WEL), After WEL.,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHTZ	**Whakaora**	**0.12**	**185**	P	Pn	09 39 21.2	+0.2
WATZ	**Wairara**	**0.24**	**229**	P	Pn	09 39 21.2	0.0
RATZ	**Rangitukua**	**0.35**	**206**	P	Pn	09 39 21.5	-0.1
HATZ	**Hinemaiaia**	**0.35**	**164**	P	Pn	09 39 21.5	-0.1
HATZ				S	Sn	09 39 35.4	-0.6
KATZ	**Kakaramea**	**0.48**	**207**	P	Pn	09 39 22.2	0.0
KARZ	**Kaharoa**	**0.57**	**22**	P	Pn	09 39 22.7	0.0
TWVZ	**Taurewa**	**0.67**	**218**	P	Pn	09 39 23.2	-0.1
BKZ	**Black Stump Fm**	**0.74**	**147**	P	Pn	09 39 23.6	-0.2
TUVZ	**Tukino**	**0.76**	**199**	P	Pn	09 39 24.2	+0.2
FWVZ	**Far West T-bar**	**0.78**	**205**	P	Pn	09 39 24.0	-0.1
MARZ	**Manawahe**	**0.79**	**45**	P	Pn	09 39 24.4	+0.1
WNVZ	**Wahianoa**	**0.83**	**200**	P	Pn	09 39 24.7	+0.1
TGRZ	**Tauranga**	**0.85**	**16**	P	Pn	09 39 24.7	-0.1
MOVZ	**Moawhango**	**0.87**	**191**	P	Pn	09 39 24.7	-0.2
HIZ	**Hauiti**	**0.88**	**272**	P	Pn	09 39 24.5	-0.4
TOZ	**Tahuroa Road**	**0.90**	**336**	P	Pn	09 39 25.0	-0.1
URZ	**Urewera**	**0.94**	**72**	P	Pn	09 39 24.9	-0.6
VRZ	**Vera Road**	**1.11**	**238**	P	Pn	09 39 26.4	-0.6
MWZ	**Matawai**	**1.24**	**81**	P	Pn	09 39 28.1	-0.3
KNZ	**Kokohu**	**1.41**	**110**	P	Pn	09 39 30.6	+0.5
WAZ	**Wanganui**	**1.43**	**212**	P	Pn	09 39 30.1	-0.2
RAEZ	**Rainy Point**	**1.43**	**239**	P	Pn	09 39 30.6	+0.2
TSZ	**Takapari Road**	**1.51**	**180**	P	Pn	09 39 30.5	-0.7
MKAZ	**Moumakai**	**1.57**	**336**	P	Pn	09 39 31.4	-0.5
NEZ	**North Egmont**	**1.63**	**243**	P	Pn	09 39 32.8	+0.3
DFE	**Dawson Falls**	**1.65**	**241**	P	Pn	09 39 33.0	+0.2
PKE	**Pukeiti**	**1.68**	**247**	P	Pn	09 39 32.4	-0.7
OTAZ	**Otara**	**1.80**	**332**	P	Pn	09 39 34.3	-0.2
KUZ	**Kuaotunu**	**1.81**	**354**	P	Pn	09 39 34.2	-0.5
PUZ	**Puketiti**	**1.86**	**76**	P	Pn	09 39 34.8	-0.4
MXZ	**Matakaoa Point**	**2.09**	**63**	P	Pn	09 39 38.1	+0.1
MRZ	**Mangatainoka R**	**2.13**	**188**	P	Pn	09 39 36.7	-1.8
KIW	**Kapiti Island**	**2.45**	**199**	P	Pn	09 39 40.4	-2.0
MTW	**Mount Morrison**	**2.63**	**188**	P	Pn	09 39 42.5	-2.2
CAW	**Cannon Point**	**2.65**	**195**	P	Pn	09 39 42.7	-2.2
MRW	**Makara Radio**	**2.85**	**200**	P	Pn	09 39 44.9	-2.6
PAWZ	**Paruwai Farm**	**2.86**	**188**	P	Pn	09 39 45.2	-2.4
WEL	**Wellington**	**2.88**	**198**	P	Pn	09 39 45.4	-2.5
MSWZ	**Moikau Station**	**2.92**	**191**	P	Pn	09 39 45.8	-2.5
SNZO	**South Karori**	**2.92**	**199**	P	Pn	09 39 45.7	-2.7
TCW	**Tory Channel**	**2.96**	**206**	P	Pn	09 39 46.2	-2.7
BHW	**Baring Head**	**2.98**	**196**	P	Pn	09 39 46.5	-2.6
NNZ	**Nelson**	**3.33**	**216**	P	Pn	09 39 50.5	-3.2
CMWZ	**Cape Campbell**	**3.47**	**202**	P	Pn	09 39 53.0	-2.5
QRZ	**Quartz Range**	**3.50**	**228**	P	Pn	09 39 52.7	-3.2
BSWZ	**Blackbirch Sta**	**3.54**	**206**	P	Pn	09 39 53.4	-3.1
OUZ	**Omahuta**	**3.83**	**329**	*e*Pn	Pn	09 40 00.4	+0.1
THZ	**Tophouse**	**3.98**	**215**	P	Pn	09 39 58.7	-3.5
KHZ	**Kahutara**	**4.29**	**205**	P	Pn	09 40 02.7	-3.6
DSZ	**Denniston Nort**	**4.51**	**224**	P	Pn	09 40 05.4	-3.9
LTZ	**Lake Taylor**	**5.08**	**212**	P	Pn	09 40 12.2	-4.6
CRLZ	**Canterbury Las**	**5.62**	**206**	P	Pn	09 40 18.8	-5.3
MQZ	**McQueen's Vall**	**5.73**	**205**	P	Pn	09 40 19.9	-5.6
WVZ	**Waitaha Valley**	**6.02**	**220**	P	Pn	09 40 23.8	-5.6
RPZ	**Rata Peaks**	**6.36**	**214**	P	Pn	09 40 29.3	-4.6
FOZ	**Fox Glacier**	**6.90**	**221**	P	Pn	09 40 34.6	-6.7
LBZ	**Lake Benmore**	**7.27**	**215**	P	Pn	09 40 41.5	-4.7
ODZ	**Otahua Downs**	**7.61**	**210**	P	Pn	09 40 45.6	-5.2
EAZ	**Earnscleugh**	**8.32**	**215**	P	Pn	09 40 55.1	-5.2
TUZ	**Tuapeka**	**8.76**	**210**	P	Pn	09 41 01.8	-4.5

*ISCJB **03** 09:41:07.1±0.5, 36.12N±0.03×23.29E±0.04, h85km±7km, Error ellipse: s-maj=6.5km s-min=3.4km az=143.5*
*ATH **03** 09:41:07.5, 36.14N×23.32E, h69km±2km, ML3.5*
*HLW **03** 09:41:07.5, 36.04N×23.68E, h33km±26km, Md3.8, Ml3.5*
*NEIC **03** 09:41:07.5, 36.14N×23.32E, h69km, MG3.5(ATH), After ATH.*
*CSEM **03** 09:41:09.2±0.1, 36.16N×23.30E, h60km, ML3.5, Error ellipse: s-maj=4.5km s-min=2.4km az=47.0*
*THE **03** 09:41:10.6, 36.22N×23.44E, h30km±6km, ML4.1/3, Error ellipse: s-maj=6.3km s-min=1.2km az=234.0*

ISC 03 09:41:08.6±0.5, 36.13N±0.03×23.30E±0.04, h70km±9km, n88, σ0.93/132, 8D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.26**	**305**	*e*P	**Pn**	09 41 18.9	**-0.7**
KYTH	**Kithira**	**0.26**	**305**	*e*P	**Pn**	09 41 18.9	**-0.7**
KYTH	**Kithira**	**0.26**	**305**	*e*P	**Pn**	09 41 18.9	**-0.7**
VLI	**Veliai**	**0.66**	**333**	⇓*i*P	**Pn**	09 41 22.6	**-0.5**
VLI				*e*S	**Sn**	09 41 33.2	**-0.5**
VLI	**Veliai**	**0.66**	**333**	⇓*i*P	**Pn**	09 41 22.6	**-0.5**
VLI				*e*S	**Sn**	09 41 33.2	**-0.5**
VLI	**Veliai**	**0.66**	**333**	⇓*i*P	**Pn**	09 41 22.6	**-0.5**
VLI				*e*S	**Sn**	09 41 33.2	**-0.5**
KARN	**Karanos**	**0.88**	**145**	P	**Pn**	09 41 25.9	**+0.2**
KARN				S	**Sn**	09 41 39.2	**+0.9**
KARN	**Karanos**	**0.88**	**145**	P	**Pn**	09 41 25.9	**+0.2**
KARN				S	**Sn**	09 41 39.2	**+0.9**
VAM	**Vamos**	**1.03**	**134**	*e*P	**Pn**	09 41 27.5	**+0.1**
VAM				*e*S	**Sn**	09 41 41.3	**-0.1**
VAM	**Vamos**	**1.03**	**134**	*e*P	**Pn**	09 41 27.5	**+0.1**
VAM				*e*S	**Sn**	09 41 41.3	**-0.1**
VAM	**Vamos**	**1.03**	**134**	*e*P	**Pn**	09 41 27.5	**+0.1**
VAM				*e*S	**Sn**	09 41 41.3	**-0.1**
PYL	**PYLOS**	**1.47**	**302**	⇓*i*P	**Pn**	09 41 32.7	**-0.5**
PYL	**PYLOS**	**1.47**	**302**	⇓*i*P	**Pn**	09 41 32.7	**-0.5**
ITM	**Ithomi**	**1.52**	**314**	⇓*i*P	**Pn**	09 41 34.5	**+0.6**
ITM	**Ithomi**	**1.52**	**314**	P	**Pn**	09 41 34.5	**+0.6**
ITM				S	**Sn**	09 41 56.9	**+4.0**
ITM	**Ithomi**	**1.52**	**314**	⇓*i*P	**Pn**	09 41 34.5	**+0.6**
ITM	**Ithomi**	**1.52**	**314**	⇓*i*P	**Pn**	09 41 34.5	**+0.6**
ITM				S	**Sn**	09 41 56.9	**+4.0**
NAIG	**Nisos Aigina**	**1.63**	**5**	*e*P	**Pn**	09 41 35.6	**+0.3**
NAIG	**Nisos Aigina**	**1.63**	**5**	*e*P	**Pn**	09 41 35.6	**+0.3**
NAIG	**Nisos Aigina**	**1.63**	**5**	*e*P	**Pn**	09 41 35.6	**+0.3**
SIVA	**Sivas**	**1.66**	**132**	P	**Pn**	09 41 37.8	**+2.2**
SIVA				S	**Sn**	09 41 57.3	**+1.2**
SIVA	**Sivas**	**1.66**	**132**	P	**Pn**	09 41 37.8	**+2.2**
SIVA				S	**Sn**	09 41 57.3	**+1.2**
THR5	**Thira Island,**	**1.68**	**80**	P	**Pn**	09 41 35.9	**0.0**
THR5	**Thira Island,**	**1.68**	**80**	P	**Pn**	09 41 35.9	**0.0**
THR1	**Thera Island**	**1.76**	**82**	P	**Pn**	09 41 37.0	**0.0**
THR1	**Thera Island**	**1.76**	**82**	P	**Pn**	09 41 37.0	**0.0**
VLY	**Voula,Athens**	**1.76**	**13**	*e*P	**Pn**	09 41 37.0	**0.0**
VLY				*e*S	**Sn**	09 41 57.9	**-0.7**
VLY	**Voula,Athens**	**1.76**	**13**	*e*P	**Pn**	09 41 37.0	**0.0**
VLY				*e*S	**Sn**	09 41 57.9	**-0.7**
VLY	**Voula,Athens**	**1.76**	**13**	*e*P	**Pn**	09 41 37.0	**0.0**
VLY				*e*S	**Sn**	09 41 57.9	**-0.7**
ATH	**Athens Observa**	**1.87**	**10**	*e*P	**Pn**	09 41 38.6	**+0.1**
ATH				*e*S	**Sn**	09 42 00.3	**-0.8**
ATH	**Athens Observa**	**1.87**	**10**	*e*P	**Pn**	09 41 38.6	**+0.1**
ATH				*e*S	**Sn**	09 42 00.3	**-0.8**
ATH	**Athens Observa**	**1.87**	**10**	*e*P	**Pn**	09 41 38.6	**+0.1**
ATH				*e*S	**Sn**	09 42 00.3	**-0.8**
LTK	**Loutraki**	**1.91**	**352**	*e*P	**Pn**	09 41 39.7	**+0.7**
LTK	**Loutraki**	**1.91**	**352**	*e*P	**Pn**	09 41 39.7	**+0.7**
GUR	**Goura**	**1.96**	**337**	*e*P	**Pn**	09 41 40.6	**+0.9**
GUR	**Goura**	**1.96**	**337**	*e*P	**Pn**	09 41 40.6	**+0.9**
PTL	**Penteli**	**1.97**	**13**	*e*P	**Pn**	09 41 39.8	**0.0**
PTL				*e*S	**Sn**	09 42 02.9	**-0.6**
PTL	**Penteli**	**1.97**	**13**	*e*P	**Pn**	09 41 39.8	**0.0**
PTL				*e*S	**Sn**	09 42 02.9	**-0.6**
PTL	**Penteli**	**1.97**	**13**	*e*P	**Pn**	09 41 39.8	**0.0**
PTL				*e*S	**Sn**	09 42 02.9	**-0.6**
LAST	**Lasithi**	**2.02**	**118**	P	**Pn**	09 41 41.1	**+0.6**
LAST				S	**Sn**	09 42 04.6	**-0.2**
LAST	**Lasithi**	**2.02**	**118**	P	**Pn**	09 41 41.1	**+0.6**
LAST				S	**Sn**	09 42 04.6	**-0.2**
APE	**Apeiranthos**	**2.02**	**62**	*e*P	**Pn**	09 41 40.3	**-0.2**
APE	**Apeiranthos**	**2.02**	**62**	P	**Pn**	09 41 40.3	**-0.2**
APE				S	**Sn**	09 42 04.1	**-0.7**
APE	**Apeiranthos**	**2.02**	**62**	*e*P	**Pn**	09 41 40.3	**-0.2**
APE	**Apeiranthos**	**2.02**	**62**	*e*P	**Pn**	09 41 40.3	**-0.2**
APE				S	**Sn**	09 42 04.1	**-0.7**
NPS	**Neapolis**	**2.07**	**114**	*e*P	**Pn**	09 41 41.3	**+0.1**
NPS				*e*S	**Sn**	09 42 04.7	**-1.3**
NPS	**Neapolis**	**2.07**	**114**	*e*P	**Pn**	09 41 41.3	**+0.1**
NPS				*e*S	**Sn**	09 42 04.7	**-1.3**
NPS	**Neapolis**	**2.07**	**114**	*e*P	**Pn**	09 41 41.3	**+0.1**
NPS				*e*S	**Sn**	09 42 04.7	**-1.3**
LKR	**Lokris**	**2.53**	**355**	*e*P	**Pn**	09 41 47.8	**+0.5**
LKR				*e*S	**Sn**	09 42 17.3	**+0.2**
LKR	**Lokris**	**2.53**	**355**	P	**Pn**	09 41 47.7	**+0.4**
LKR				S	**Sn**	09 42 17.4	**+0.3**
LKR	**Lokris**	**2.53**	**355**	*e*P	**Pn**	09 41 47.8	**+0.5**
LKR				*e*S	**Sn**	09 42 17.2	**+0.1**
LKR	**Lokris**	**2.53**	**355**	P	**Pn**	09 41 47.7	**+0.4**
LKR				*e*S	**Sn**	09 42 17.3	**+0.2**
AGG	**Agios Georgios**	**2.99**	**345**	P	**Pn**	09 41 55.0	**+1.4**
AGG				S	**Sn**	09 42 28.2	**-0.1**
AGG	**Agios Georgios**	**2.99**	**345**	P	**Pn**	09 41 55.0	**+1.4**
AGG				S	**Sn**	09 42 28.2	**-0.1**
AOS	**Alonnisos**	**3.07**	**8**	P	**Pn**	09 41 55.0	**+0.3**
AOS				S	**Sn**	09 42 29.1	**-1.1**
AOS	**Alonnisos**	**3.07**	**8**	P	**Pn**	09 41 55.0	**+0.3**
AOS				S	**Sn**	09 42 29.1	**-1.1**
CHOS	**Chios island**	**3.14**	**43**	P	**Pn**	09 41 55.6	**-0.1**
CHOS				S	**Sn**	09 42 32.3	**+0.2**
CHOS	**Chios island**	**3.14**	**43**	P	**Pn**	09 41 55.6	**-0.1**
CHOS				S	**Sn**	09 42 32.3	**+0.2**
NEO	**Neokhori**	**3.17**	**359**	*e*P	**Pn**	09 41 57.0	**+0.9**
NEO	**Neokhori**	**3.17**	**359**	*e*P	**Pn**	09 41 57.0	**+0.9**
NEO	**Neokhori**	**3.17**	**359**	*e*P	**Pn**	09 41 57.0	**+0.9**
KARP	**Karpathos**	**3.19**	**99**	*e*P	**Pn**	09 41 57.1	**+0.8**
KARP	**Karpathos**	**3.19**	**99**	*e*P	**Pn**	09 41 57.1	**+0.8**
KARP	**Karpathos**	**3.19**	**99**	*e*P	**Pn**	09 41 57.1	**+0.8**
SMG	**Samos**	**3.24**	**60**	*e*P	**Pn**	09 41 57.2	**+0.2**
SMG	**Samos**	**3.24**	**60**	*e*P	**Pn**	09 41 57.2	**+0.2**
SMG	**Samos**	**3.24**	**60**	*e*P	**Pn**	09 41 57.2	**+0.2**
PRK	**Paraskevi**	**3.90**	**36**	P	**Pn**	09 42 06.9	**+0.9**
PRK	**Paraskevi**	**3.90**	**36**	P	**Pn**	09 42 06.9	**+0.9**
ARG	**Arkhangelos**	**3.90**	**87**	P	**Pn**	09 42 08.5	**+2.4**
ARG	**Arkhangelos**	**3.90**	**87**	P	**Pn**	09 42 07.8	**+1.7**
ARG				S	**Sn**	09 42 50.9	**+0.3**
ARG	**Arkhangelos**	**3.90**	**87**	P	**Pn**	09 42 07.8	**+1.7**
ARG				S	**Sn**	09 42 50.9	**+0.3**
SRN	**Sarande**	**4.56**	**326**	*i* PN	**Pn**	09 42 14.7	**-0.4**
SRN				*i* SN	Sn	09 42 42.2	-25
SRN	**Sarande**	**4.56**	**326**	*i* Pn	**Pn**	09 42 14.7	**-0.4**
SLUM		**4.89**	**161**	P	**Pn**	09 42 16.2	**-3.4**
	baz=163						
SLUM				AMP		09 43 00.0	
	comp=N,40μm,0.2s,logA/T=5.3,baz=163						
SLUM		**4.89**	**161**	P	**Pn**	09 42 16.2	**-3.4**
HMAT	**Matruh**	**5.94**	**147**	P	**Pn**	09 42 30.9	**-3.0**
	baz=149						
HMAT				S	**Sn**	09 43 29.0	**-11**
	baz=149						
TIP	**Timpagrande**	**6.02**	**302**	P	**Pn**	09 42 34.6	**-0.4**
TIP	**Timpagrande**	**6.02**	**302**	P	**Pn**	09 42 34.6	**-0.4**
PUK	**Puka**	**6.47**	**337**	*i* PN	**Pn**	09 42 40.6	**-0.5**
PUK				*i* SN	Sn	09 43 24.3	-29
PUK	**Puka**	**6.47**	**337**	*i* Pn	**Pn**	09 42 40.6	**-0.5**
BCI	**Bajram Curri**	**6.71**	**339**	*i* PN	**Pn**	09 42 44.7	**+0.2**
BCI				*i* SN	**Sn**	09 43 42.4	**-17**
BCI	**Bajram Curri**	**6.71**	**339**	*i* Pn	**Pn**	09 42 44.7	**+0.2**
SWA2		**7.10**	**165**	P	**Pn**	09 42 47.4	**-2.4**
	baz=167						
SWA2				AMP		09 44 00.0	
	comp=N,50μm,0.2s,logA/T=5.3,baz=167						
AMAG	**Maghara**	**9.92**	**121**	P	**Pn**	09 43 24.8	**-3.5**
	baz=121						
HNKL	**Nakhl**	**10.88**	**122**	P	**Pn**	09 43 38.7	**-2.8**
	baz=122						

GUC 03 09:42:01.8±0.5, 42.17S×72.58W, h9km±999km, ML3.5, 1C, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOCH	**HornopirØn**	**0.29**	**27**	⇑*i*P	Pg	09 42 06.3	-1.3
HOCH				*i* S	Sg	09 42 09.8	-1.6
HOCH				AML	AML

west coast of northern Sumatera, Indonesia
ISC 03 10:15:50.5±0.2, 0°33N±0°02×97°72E±0°02, h31km, h31km±1.5km:pP-P, n378, σ1§03/369, mb5.0/138, MS5.1/51, 17C-11D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.98**	**352**	P	**Pn**	**10 16 06.7**	**-1.4**
MNSI	**Mandailing Nat**	**1.92**	**76**	P	**Pn**	**10 16 21.5**	**+0.5**
TRSI	**Tarutung**	**2.09**	**36**	P	**Pn**	**10 16 23.2**	**-0.2**
SISI	**Saibi**	**2.14**	**140**	P	**Pn**	**10 16 23.5**	**-0.6**
PSI	**Prapat**	**2.73**	**26**	Pn	**Pn**	**10 16 30.6**	**-1.7**
	49nm,0.3s,baz=189,slow=9.5,SNR=96						
PSI				LR	LR	10 17 23.4	
	comp=Z,13μm,20.1s,baz=130,slow=36						
PSI	**Prapat**	**2.73**	**26**	Pn	**Pn**	**10 16 30.6**	**-1.7**
PSI				LR	LR	10 17 23.4	
PPI	**Padang Panjang**	**2.79**	**106**	P	**Pn**	**10 16 33.9**	**+0.8**
PDSI	**Padang**	**3.01**	**114**	P	**Pn**	**10 16 35.8**	**-0.2**
TSI	**Tuntungan**	**3.26**	**15**	P	**Pn**	**10 16 39.3**	**-0.2**
BKNI	**Bangkinang**	**3.32**	**90**	P	**Pn**	**10 16 41.4**	**+1.0**
PPSI	**Pulau Pagai**	**3.83**	**143**	P	**Pn**	**10 16 47.2**	**-0.2**
FRIM	**Kepong**	**4.86**	**53**	P	**Pn**	**10 17 01.9**	**+0.5**
IPM	**Ipoh**	**5.28**	**39**	P	**Pn**	**10 17 08.7**	**+1.4**
IPM	**Ipoh**	**5.28**	**39**	P	**Pn**	**10 17 08.7**	**+1.4**
	3.9nm5μm320nm,0.7s						
BSI	**Banda Aceh**	**5.67**	**335**	P	**Pn**	**10 17 11.0**	**-1.7**
	2.4nm6μm259nm,0.7s						
KULM	**Kulim**	**5.73**	**31**	P	**Pn**	**10 17 13.8**	**+0.3**
KULM	**Kulim**	**5.73**	**31**	*e*Pn	**Pn**	**10 17 13.3**	**-0.2**
	360nm,0.9s						
KULM				*e*Sn	**Sn**	**10 18 17.4**	**-0.9**
KULM	**Kulim**	**5.73**	**31**	P	**Pn**	**10 17 13.6**	**+0.1**
	1.9nm6μm442nm,0.9s						
KGM	**Kluang**	**5.84**	**73**	P	**Pn**	**10 17 16.0**	**+0.9**
KSI	**Kapahiang**	**6.28**	**129**	P	**Pn**	**10 17 21.6**	**+0.6**
	5.4nm716nm,0.8s						
MYKOM	**Kota Tinggi**	**6.30**	**77**	P	**Pn**	**10 17 22.5**	**+1.1**
MYKOM	**Kota Tinggi**	**6.30**	**77**	P	**Pn**	**10 17 22.0**	**+0.7**
	2.7nm3μm117nm,1.2s						
MNAI	**Manna**	**7.01**	**132**	P	**Pn**	**10 17 30.5**	**-0.6**
	6.7nm750nm,0.9s						
KTGM	**Kuala Trenggan**	**7.34**	**47**	P	**Pn**	**10 17 36.9**	**+1.2**
MDSI	**Maura Dua**	**8.03**	**127**	P	**Pn**	**10 17 45.2**	**0.0**
	3μm382nm,0.7s						
LWLI	**Liwa**	**8.27**	**130**	P	**Pn**	**10 17 48.4**	**+0.1**
KLI	**Kotabumi**	**8.80**	**126**	P	**Pn**	**10 17 55.8**	**+0.1**
	4μm351nm,0.8s						
KASI	**Kota Agung**	**8.92**	**131**	P	**Pn**	**10 17 56.1**	**-1.3**
	3μm206nm,0.7s						
RBSI	**Rajabasa**	**10.09**	**128**	P	**Pn**	**10 18 13.8**	**+0.4**
	2μm155nm,1.1s						
COCO	**West Island**	**12.47**	**184**	*e*P	**Pn**	**10 18 46.0**	**+0.1**
KSM	**Kuching**	**12.64**	**85**	P	**Pn**	**10 18 50.3**	**+2.0**
KSM	**Kuching**	**12.64**	**85**	*e*Pn	**Pn**	**10 18 49.9**	**+1.6**
STKI	**Sintang**	**13.76**	**91**	P	**Pn**	**10 19 12.8**	**+9.2**
SBUM	**Sibu**	**14.65**	**82**	P	**Pn**	**10 19 17.5**	**+1.7**
SBUM	**Sibu**	**14.65**	**82**	P	**Pn**	**10 19 17.8**	**+2.1**
KMMI	**Kalianget**	**17.79**	**115**	P	**Pn**	**10 19 55.8**	**-0.2**
	3μm108nm,1.5s						
CM31	**Chiang Mai Arr**	**18.05**	**4**	*e*P	**Pn**	**10 19 58.5**	**-0.6**
	16nm,0.5s						
CMAR	**Chiang Mai Arr**	**18.05**	**4**	P	**Pn**	**10 19 57.1**	**-2.0**
	2.3nm,0.3s,baz=193,slow=12,SNR=80						
CMAR				S	**Sn**	**10 23 25.2**	**+5.5**
	baz=186,slow=16,SNR=2.3						
CMAR				Lg		10 25 14.0	
	baz=165,slow=32,SNR=2.4						
CMAR				LR	LR	10 27 42.5	
	comp=Z,4μm,18.6s,baz=189,slow=40						
CMAR	**Chiang Mai Arr**	**18.05**	**4**	*i* P	**Pn**	**10 19 57.2**	**-1.9**
CMAR				pmax	pmax		
	comp=Z,38nm,0.7s						
CMAR	**Chiang Mai Arr**	**18.05**	**4**	P	**Pn**	**10 19 57.1**	**-2.0**
CMAR				S	**Sn**	**10 23 25.2**	**+5.5**
CMAR				Lg		10 25 14.0	
CMAR				LR	LR	10 27 42.5	
PALK	**Pallekele**	**18.32**	**293**	P	**Pn**	**10 20 04.9**	**+2.5**
	comp=Z,0.7nm,0.3s,baz=125,slow=15,SNR=3.0						
PALK				S	**Sn**	**10 23 26.9**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=105,slow=16,SNR=2.4						
PALK				LR	LR	10 26 18.9	
	comp=Z,4μm,19.2s,baz=110,slow=34						
PALK	**Pallekele**	**18.32**	**293**	*e*P	**Pn**	**10 20 05.6**	**+3.2**
PALK				pmax	pmax		
	comp=Z,50nm,1.2s						
PALK	**Pallekele**	**18.32**	**293**	*e*P	**Pn**	**10 20 05.6**	**+3.2**
	comp=Z,50nm,1.2s						
PALK	**Pallekele**	**18.32**	**293**	P	Px	10 20 12.6	
KKM	**Kota Kinabalu**	**19.31**	**73**	P	**Pn**	**10 20 14.3**	**-0.2**
KKM	**Kota Kinabalu**	**19.31**	**73**	*e*P	**Pn**	**10 20 14.1**	**-0.4**
	comp=Z,91nm,0.8s						
KKM	**Kota Kinabalu**	**19.31**	**73**	P	**Pn**	**10 20 13.9**	**-0.6**
	comp=Z,2μmcomp=Z,128nm,1.2s						
SDKM	**Sandakan**	**20.15**	**74**	P	**P**	**10 20 22.8**	**+0.4**
KDM	**Kudat**	**20.16**	**71**	P	**P**	**10 20 24.0**	**+1.5**
TSM	**Tawau**	**20.52**	**79**	P	**P**	**10 20 26.5**	**+0.1**
MYLDM	**Lahad Datu**	**21.30**	**77**	P	**P**	**10 20 38.4**	**+3.5**
MYLDM	**Lahad Datu**	**21.30**	**77**	P	**P**	**10 20 36.4**	**+1.5**
	comp=Z,2μmcomp=Z,115nm,1.2s,mb5.1						
QIZ	**Qiongzhong**	**22.06**	**32**	P	**P**	**10 20 42.3**	**-0.7**
QIZ				pP		10 20 51.5	
QIZ				S	**S**	**10 24 47.0**	**+2.2**
QIZ				sS	sS	10 24 59.0	+0.7
QIZ				pmax	pmax		
	comp=Z,680nm,7.9s						
QIZ				LR	LR		
	comp=N,4μm,15.0s,MS5.0						
QIZ				LR	LR		
	comp=E,2μm,14.8s,MS5.0						
QIZ				LR	LR		
	comp=Z,3μm,13.8s,MS4.9						
QIZ	**Qiongzhong**	**22.06**	**32**	*e*P	**P**	**10 20 41.5**	**-1.4**
	comp=Z,106nm,1.8s,mb5.0						
TRD	**Trivandrum**	**22.22**	**292⇑**	*i* P	x	10 21 05.5	
TRD				*i* S	**S**	**10 25 00.0**	**+12**
VIS	**Vishakhapatnam**	**22.34**	**321**	*i* P	**P**	**10 20 47.1**	**+1.2**
VIS				*ex*	x	10 20 50.4	
	comp=Z,123nm,1.5s						
VIS				*i* S	**S**	**10 24 51.0**	**+0.9**
TTSI	**Tana Toraja**	**22.34**	**99**	P	**P**	**10 20 47.0**	**+1.0**
	comp=Z,839nmcomp=Z,54nm,1.1s,mb4.9						
KAPI	**Kappang**	**22.64**	**104**	*e*P	**P**	**10 20 48.9**	**-0.3**
	comp=Z,52nm,1.1s,mb4.9						
APSI	**Ampana**	**23.96**	**93**	P	**P**	**10 21 01.6**	**-0.8**
	comp=Z,2μmcomp=Z,108nm,1.1s,mb5.2						
MRSI	**Marisa**	**24.22**	**90**	P	**P**	**10 21 03.6**	**-1.2**
	comp=Z,1μmcomp=Z,87nm,1.0s,mb5.1						
WSI	**Waingapu**	**24.57**	**114**	P	**P**	**10 21 17.0**	**+9.1**
LUWI	**Luwuk**	**25.09**	**93**	P	**P**	**10 21 14.0**	**+1.3**
	comp=Z,2μmcomp=Z,183nm,0.9s,mb5.6						
KMI	**Kunming**	**25.12**	**11**	P	**P**	**10 21 13.6**	**+0.8**
KMI				pP	pP	10 21 24.7	+2.9
KMI				sP	sP	10 21 29.0	+3.4
KMI				PP		10 21 54.0	
KMI				S	**S**	**10 25 36.4**	**+0.7**
KMI				sS	sS	10 25 52.4	+1.8
KMI				SS		10 26 37.1	
KMI				pmax	pmax		
	comp=Z,130nm,1.1s,mb5.4						
KMI				pmax	pmax		
	comp=Z,780nm,5.0s						
KMI				LR	LR		
	comp=N,8μm,17.0s,MS5.3						
KMI				LR	LR		
	comp=E,2μm,17.0s,MS5.3						
KMI				LR	LR		
	comp=Z,9μm,16.1s,MS5.4						
KDI	**Kendari**	**25.24**	**100**	P	**P**	**10 21 14.9**	**+0.8**
	comp=Z,734nmcomp=Z,32nm,1.1s,mb4.8						
HYB	**Hyderabad**	**25.38**	**313**	*e*P	**P**	**10 21 17.0**	**+1.8**
HYB	**Hyderabad**	**25.38**	**313**	*i* P	**P**	**10 21 17.0**	**+1.8**
GZH	**Guangzhou**	**27.25**	**33**	P	**P**	**10 21 37.7**	**+5.7**
GZH				S	**S**	**10 26 22.1**	**+13**
GZH				LR	LR		
	comp=N,4μm,14.2s,MS5.3						
GZH				LR	LR		
	comp=E,5μm,15.4s,MS5.3						
GZH				LR	LR		
	comp=Z,8μm,14.9s,MS5.4						
PKI	**Pulchoki**	**29.55**	**337**	*e*P	**P**	**10 21 56.5**	**+4.0**
	comp=Z,72nm,1.0s,mb5.4						
PKI	**Pulchoki**	**29.55**	**337**	*e*P	**P**	**10 21 56.5**	**+4.0**
PKI				pmax	pmax		
	comp=Z,72nm,1.0s,mb5.4						
PKIN	**Phulchoki**	**29.56**	**337**	*e*P	**P**	**10 21 56.2**	**+3.6**
	comp=Z,89nm,0.9s,mb5.5						
GUN	**Gumba**	**29.68**	**338**	*e*P	**P**	**10 21 53.0**	**-0.7**
	comp=Z,88nm,0.8s,mb5.5						
DMN	**Daman**	**29.70**	**337**	*e*P	**P**	**10 21 57.4**	**+3.6**
	comp=Z,66nm,0.9s,mb5.3						
KKN	**Kakani**	**29.80**	**337**	*e*P	**P**	**10 21 55.5**	**+0.8**
	comp=Z,60nm,0.7s,mb5.4						
KKN	**Kakani**	**29.80**	**337**	*e*P	**P**	**10 21 55.5**	**+0.8**
KKN				pmax	pmax		
	comp=Z,60nm,0.7s,mb5.4						
LBMI	**Labuha**	**29.80**	**92**	P	**P**	**10 21 55.4**	**+0.5**
	comp=Z,73nm,1.1s,mb5.3						
LSA	**Lhasa**	**29.87**	**348**	P	**P**	**10 21 56.3**	**+1.0**
LSA				sP	sP	10 22 14.6	+6.4
LSA				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.8						
LSA				LR	LR		
	comp=N,1μm,23.0s,MS4.7						
LSA				LR	LR		
	comp=E,2μm,28.0s,MS4.7						
LSA				LR	LR		
	comp=Z,2μm,23.0s,MS4.8						
LSA	**Lhasa**	**29.87**	**348**	*e*P	**P**	**10 21 56.5**	**+1.2**
LSA				pmax	pmax		
	comp=Z,32nm,0.8s,mb5.1						
LSA	**Lhasa**	**29.87**	**348**	*e*P	**P**	**10 21 56.5**	**+1.2**
	comp=Z,32nm,0.8s,mb5.1						
MBWA	**Marble Bar**	**30.31**	**136**	*e*P	**P**	**10 22 00.5**	**+1.2**
MBWA				*e*P		10 22 00.6	
CD2	**Chengdu**	**30.95**	**10**	P	**P**	**10 22 05.4**	**+0.6**
CD2				pP	pP	10 22 14.9	+1.0
CD2				sP	sP	10 22 18.2	+0.5
CD2				PP	PP	10 23 07.8	-7.3
CD2				PcP	PcP	10 25 01.0	+0.2
CD2				S	**S**	**10 27 06.7**	**-0.7**
CD2				sS	sS	10 27 22.7	+0.3
CD2				SS	SS	10 28 51.7	-29
CD2				ScS	ScS	10 32 35.5	-3.0
CD2				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.2						
CD2				pmax	pmax		
	comp=Z,370nm,11.8s						
CD2				LR	LR		
	comp=N,5μm,13.0s,MS5.5						
CD2				LR	LR		
	comp=E,7μm,15.5s,MS5.5						
CD2				LR	LR		
	comp=Z,7μm,13.0s,MS5.5						
QZH	**Quanzhou**	**31.72**	**38**	P	**P**	**10 22 13.1**	**+1.4**
QZH				LR	LR		
	comp=N,7μm,12.7s,MS5.6						
QZH				LR	LR		
	comp=E,5μm,14.4s,MS5.6						
QZH				LR	LR		
	comp=Z,10μm,15.6s,MS5.6						
ENH	**Enshi**	**31.81**	**20**	*e*P	**P**	**10 22 11.4**	**-1.1**
	comp=Z,100nm,1.2s,mb5.5						
SSLB	**Suanglung**	**32.43**	**42**	*e*P	**P**	**10 22 18.4**	**+0.4**
	comp=Z,97nm,0.9s,mb5.6						
FITZ	**Fitzroy Crossi**	**33.01**	**125**	*e*P	**P**	**10 22 21.6**	**-1.5**
	comp=Z,34nm,0.8s,mb5.3						
FITZ	**Fitzroy Crossi**	**33.01**	**125**	P	**P**	**10 22 21.7**	**-1.3**
	comp=Z,17nm,0.7s,mb5.1,baz=288,slow=4.2,SNR=33						
FITZ				S	**S**	**10 27 32.9**	**-6.9**
	comp=Z,1.9nm,0.9s,baz=270,slow=20,SNR=1.7						
FITZ	**Fitzroy Crossi**	**33.01**	**125**	*e*P	**P**	**10 22 22.0**	**-1.1**
	comp=Z,19nm,0.8s,mb5.1						
FITZ	**Fitzroy Crossi**	**33.01**	**125**	P	**P**	**10 22 22.1**	**-1.0**
	comp=Z,60nm,0.8s,mb5.6						
NACB	**Ninganchiao**	**33.12**	**43**	P	**P**	**10 22 22.0**	**-2.0**
YHNB	**Yeheng**	**33.31**	**42**	*e*P	**P**	**10 22 26.1**	**+0.4**
	comp=Z,14nm,0.7s,mb5.0						
SWI	**Sorong**	**33.56**	**92**	P	**P**	**10 22 27.0**	**-1.0**
	comp=Z,31nm,1.2s,mb5.1						
WHN	**Wuhan**	**33.95**	**26**	⇓P	**P**	**10 22 31.3**	**+0.2**
WHN				pmax	pmax		
	comp=Z,150nm,1.3s,mb5.8						
WHN				LR	LR		
	comp=N,5μm,13.3s						
WHN				LR	LR		
	comp=Z,6μm,13.2s,MS5.5						
KNA	**Kununurra**	**34.57**	**119**	P	**P**	**10 22 34.8**	**-1.9**
	comp=Z,38nm,0.9s,mb5.3						
XAN	**Xi'an**	**35.14**	**16**	P	**P**	**10 22 39.3**	**-2.1**
XAN				pP	pP	10 22 51.3	+0.8
XAN				S	**S**	**10 28 21.2**	**+8.8**
XAN				pmax	pmax		
	comp=Z,46nm,1.2s,mb5.3						
XAN				LR	LR		
	comp=N,3μm,15.5s,MS5.1						
XAN				LR	LR		
	comp=E,340nm,14.9s,MS5.1						
XAN				LR	LR		
	comp=Z,2μm,14.9s,MS4.9						
LZH	**Lanzhou**	**36.03**	**8**	⇑P	**P**	**10 22 48.4**	**-0.6**
LZH				pP	pP	10 22 58.1	-0.1
LZH				sP	sP	10 23 02.3	+0.4
LZH				PP	PP	10 24 11.5	+0.2
LZH				S	**S**	**10 28 25.6**	**-0.4**
LZH				sS	sS	10 28 41.5	+0.4
LZH				SS	SS	10 30 50.3	-14
LZH				pmax	pmax		
	comp=Z,53nm,1.1s,mb5.4						
LZH				pmax	pmax		
	comp=Z,310nm,5.9s						
LZH				LR	LR		
	comp=E,2μm,12.6s						
LZH				LR	LR		
	comp=Z,3μm,17.7s						
KAKA	**Kakadu**	**36.80**	**112**	*e*P	**P**	**10 22 54.6**	**-1.3**
	comp=Z,9.8nm,0.9s,mb4.6						
KAKA	**Kakadu**	**36.80**	**112**	*e*P	**P**	**10 22 53.5**	**-2.3**
	comp=Z,14nm,0.5s,mb5.0						
NJ2	**Nanjing**	**37.34**	**30**	*e*P	**P**	**10 23 00.0**	**-0.2**
NJ2				pP	pP	10 23 09.7	+0.3
NJ2				sP	sP	10 23 13.7	+0.5
NJ2				PP	PP	10 24 25.0	-0.8
NJ2				S	**S**	**10 28 43.0**	**-3.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
NJ2				pmax	pmax		
	comp=Z,120nm,5.2s						
NJ2				LR	LR		
	comp=N,4μm,14.7s,MS5.5						
NJ2				LR	LR		
	comp=E,4μm,15.0s,MS5.5						
NJ2				LR	LR		
	comp=Z,5μm,12.8s,MS5.5						
SSE	**Sheshan**	**37.83**	**34**	P	**P**	**10 23 04.3**	**-0.1**
SSE				sP	sP	10 23 17.5	+0.1
SSE				PP	PP	10 24 39.4	+8.2
SSE				pmax	pmax		
	comp=Z,34nm,0.8s,mb5.1						
SSE				pmax	pmax		
	comp=Z,270nm,6.4s						
SSE				LR	LR		
	comp=N,3μm,17.7s,MS5.2						
SSE				LR	LR		
	comp=E,3μm,17.7s,MS5.2						
SSE				LR	LR		
	comp=Z,5μm,16.7s,MS5.4						
GTA	**Gaotai**	**38.94**	**3**	⇑P	**P**	**10 23 13.2**	**-0.4**
GTA				pP	pP	10 23 23.1	+0.3
GTA				sP	sP	10 23 27.1	+0.5
GTA				PcP	PcP	10 25 24.0	+0.1
GTA				S	**S**	**10 29 10.0**	**-0.1**
GTA				sS	sS	10 29 25.6	+0.3
GTA				SS	SS	10 31 54.4	-8.3
GTA				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.3						
GTA				pmax	pmax		
	comp=Z,390nm,5.1s						
GTA				LR	LR		
	comp=N,1μm,21.0s,MS5.0						
GTA				LR	LR		
	comp=E,2μm,19.8s,MS5.0						
GTA				LR	LR		
	comp=Z,2μm,20.4s,MS4.9						
JOW	**Kunigami**	**39.46**	**46**	LR	LR	10 40 47.7	
	comp=Z,781nm,18.7s,MS4.6,baz=146,slow=38						
TIY	**Taiyuan**	**39.60**	**18**	*e*P	**P**	**10 23 20.8**	**+1.7**
TIY				S	**S**	**10 29 21.7**	**+1.6**
TIY				LR	LR		
	comp=N,4μm,14.0s,MS5.4						
TIY				LR	LR		
	comp=E,1μm,13.7s,MS5.4						
TIA	**Tai'an**	**39.99**	**25**	P	**P**	**10 23 21.2**	**-1.2**
TIA				LR	LR		
	comp=N,2μm,14.0s,MS5.2						
TIA				LR	LR		
	comp=E,1μm,14.0s,MS5.2						
WRAB	**Tennant Creek**	**41.15**	**121**	P	**P**	**10 23 31.0**	**-1.2**
	comp=E,230nm,0.7s,mb5.9,SNR=26						
WRAB	**Tennant Creek**	**41.15**	**121**	*e*P	**P**	**10 23 31.4**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,24nm,0.8s,mb4.9						
WRAB	**Tennant Creek**	**41.15**	**121**	*e*P	**P**	**10 23 31.4**	**-0.8**
	comp=Z,24nm,0.8s,mb4.9						
WRAB	**Tennant Creek**	**41.15**	**121**	P	**P**	**10 23 31.3**	**-0.9**
	comp=Z,48nm,1.5s,mb4.9						
BTO	**Baotou**	**41.62**	**14**	*e*P	**P**	**10 23 35.4**	**-0.4**
HHC	**Hu-ho-hao-te**	**42.24**	**16**	*e*P	**P**	**10 23 42.3**	**+1.4**
HHC				pP	pP	10 23 52.1	+1.9
HHC				sP	sP	10 23 56.1	+2.2
HHC				PP	PP	10 25 23.9	+4.8
HHC				PcP	PcP	10 25 36.1	+1.6
HHC				ScP	ScP	10 29 22.1	-1.0
HHC				PcS	PcS	10 29 26.8	+0.6
HHC				S	**S**	**10 30 00.9**	**+1.5**
HHC				sS	sS	10 30 17.6	+2.9
HHC				SS	SS	10 33 04.9	-3.6
HHC				ScS	ScS	10 33 39.0	-1.8
HHC				pmax	pmax		
	comp=Z,36nm,0.7s,mb5.1						
HHC				pmax	pmax		
	comp=Z,540nm,5.6s						
HHC				LR	LR		
	comp=N,3μm,14.2s,MS5.5						
HHC				LR	LR		
	comp=E,3μm,14.9s,MS5.5						
HHC				LR	LR		
	comp=Z,3μm,14.2s,MS5.4						
ASAR	**Alice Springs**	**42.46**	**127**	P	**P**	**10 23 42.5**	**-0.4**
	comp=Z,21nm,0.7s,mb4.9,baz=297,slow=8.0,SNR=172						
ASAR				S	**S**	**10 30 01.5**	**-1.6**
	comp=Z,1.9nm,0.9s,baz=296,slow=14,SNR=11						
BJT	**Baijiatuau**	**42.93**	**21**	*e*P	**P**	**10 23 47.3**	**+0.8**
BJT				pmax	pmax		
	comp=Z,79nm,0.8s						
BJT	**Baijiatuau**	**42.93**	**21**	*e*P	**P**	**10 23 47.3**	**+0.8**
	comp=Z,79nm,0.8s,mb5.5						
BJI	**Beijing**	**42.95**	**21**	P	**P**	**10 23 47.2**	**+0.5**
BJI				pmax	pmax		
	comp=Z,91nm,0.8s,mb5.6						
BJI				pmax	pmax		
	comp=Z,570nm,4.5s						
BJI				LR	LR		
	comp=N,2μm,18.1s,MS5.2						
BJI				LR	LR		
	comp=E,2μm,17.2s,MS5.2						
BJI				LR	LR		
	comp=Z,920nm,19.4s,MS4.7						
KBL	**Kabul**	**43.33**	**325**	*e*P	**P**	**10 23 50.9**	**+1.1**
KBL				*e*	pP	10 24 00.2	+1.1
KBL				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.4						
KBL	**Kabul**	**43.33**	**325**	*e*P	**P**	**10 23 50.9**	**+1.1**
	comp=Z,3.6nm,0.5s,mb4.4						
KBL				*e*	pP	10 24 00.2	+1.2
KSH	**Kashi**	**43.77**	**336**	*e*P	**P**	**10 23 51.5**	**-1.8**
KSH				pP	pP	10 24 01.4	-1.2
KSH				sP	sP	10 24 05.4	-0.9
KSH				PP	PP	10 25 34.7	-0.9
KSH				PcP	PcP	10 25 40.1	+0.4
KSH				ScP	ScP	10 29 27.6	-1.7
KSH				PcS	PcS	10 29 31.5	-1.0
KSH				S	**S**	**10 30 16.9**	**-4.9**
KSH				ScS	ScS	10 33 46.3	-4.1
KSH				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.3						
KSH				pmax	pmax		
	comp=Z,180nm,4.5s						
KSH				LR	LR		
	comp=N,2μm,21.4s,MS5.0						
KSH				LR	LR		
	comp=E,450nm,16.4s,MS5.0						
KSH				LR	LR		
	comp=Z,690nm,15.2s,MS4.7						
DL2	**Dalian**	**44.20**	**27⇑**	*i* P	**P**	**10 23 57.1**	**+0.3**
DL2				S	**S**	**10 30 31.3**	**+3.1**
DL2				pmax	pmax		
	comp=Z,50nm,0.8s,mb5.3						
DL2				pmax	pmax		
	comp=Z,260nm,4.8s						
DL2				LR	LR		
	comp=N,1μm,14.8s,MS5.0						
DL2				LR	LR		
	comp=E,360nm,14.8s,MS5.0						
DL2				LR	LR		
	comp=Z,1μm,14.7s,MS5.0						
WMQ	**Urumqi**	**44.22**	**350**	P	**P**	**10 23 58.0**	**+1.2**
WMQ				pP	pP	10 24 08.0	+1.9
WMQ				sP	sP	10 24 12.0	+2.2
WMQ				PP	PP	10 25 43.0	+2.7
WMQ				S	**S**	**10 30 29.0**	**+0.8**
WMQ				sS	sS	10 30 46.0	+2.5
WMQ				SS	SS	10 33 38.0	-9.0
WMQ				pmax	pmax		
	comp=Z,35nm,1.0s,mb5.0						
WMQ				pmax	pmax		
	comp=Z,87nm,4.0s						
WMQ				LR	LR		
	comp=N,950nm,15.0s,MS5.0						
WMQ				LR	LR		
	comp=E,1μm,15.0s,MS5.0						
WMQ				LR	LR		
	comp=Z,1μm,15.0s,MS4.9						
KZA	**Kyzart**	**46.23**	**337**	P	**P**	**10 24 13.6**	**+0.8**
	SNR=8.1						
KS15	**Wonju Array Si**	**46.24**	**34**	*e*P	**P**	**10 24 12.6**	**-0.3**
KS15				*e*		10 24 23.5	
KSRS	**Korea Array**	**46.27**	**34**	P	**P**	**10 24 12.4**	**-0.8**
	comp=Z,26nm,0.9s,mb5.2,baz=223,slow=8.7,SNR=38						
KSRS				LR	LR	10 46 07.7	
	comp=Z,2μm,18.7s,MS5.0,baz=223,slow=39						
UCH	**Uchtor**	**46.65**	**336**	P	**P**	**10 24 17.0**	**+0.9**
	SNR=21						
UCH	**Uchtor**	**46.65**	**336**	*e*P	**P**	**10 24 17.0**	**+0.9**
	comp=Z,18nm,1.0s,mb5.0						
TKM2	**Tokmak 2**	**46.81**	**338**	P	**P**	**10 24 17.9**	**+0.6**
	SNR=25						
TKM2	**Tokmak 2**	**46.81**	**338**	*e*P	**P**	**10 24 17.9**	**+0.6**
TKM2				pmax	pmax		
	comp=Z,38nm,1.2s,mb5.2						
TKM2	**Tokmak 2**	**46.81**	**338**	*e*P	**P**	**10 24 17.9**	**+0.5**
	comp=Z,38nm,1.2s,mb5.2						
KBK	**Karagaybulak**	**46.84**	**337**	P	**P**	**10 24 18.7**	**+1.2**
	SNR=17						
AML	**Almayashu**	**46.90**	**335**	P	**P**	**10 24 19.0**	**+0.9**
	SNR=19						
AML	**Almayashu**	**46.90**	**335**	*e*P	**P**	**10 24 18.9**	**+0.8**
	comp=Z,58nm,1.4s,mb5.3						
AAK	**Ala-Archa**	**47.00**	**

comp=Z,26nm,1.2s,mb5.0
SNY Shenyang 47.44 26 ⇓P **P 10 24 21.9 -0.4**
SNY pmax pmax
comp=Z,20nm,0.7s,mb5.2
SNY pmax pmax
comp=Z,320nm,5.1s
SNY LR LR
comp=N,2μm,16.5s,MS5.4
SNY LR LR
comp=E,2μm,14.5s,MS5.4
SNY LR LR
comp=Z,4μm,14.7s,MS5.5
USP Ospenovka 47.53 337 P **P 10 24 23.2 +0.3**
SNR=38
SONM Songino Array 47.91 8 P **P 10 24 26.3 +0.5**
comp=Z,30nm,0.8s,mb5.4,baz=190,slow=8.9,SNR=120
SONM PcP PcP 10 25 53.7 -0.2
comp=Z,4.7nm,0.7s,baz=190,slow=3.7,SNR=5.7
SONM ScP ScP 10 29 46.3 0.0
comp=Z,0.7nm,0.8s,baz=202,slow=2.7,SNR=3.7
SONM S **S 10 31 23.8 +2.7**
comp=Z,0.2nm,0.5s,baz=215,slow=12,SNR=2.6
SONM LR LR 10 47 36.8
comp=Z,3μm,18.5s,MS5.2,baz=189,slow=40
SONM Songino Array 47.91 8 P **P 10 24 26.3 +0.5**
SONM 10 25 53.7
SONM S **S 10 31 23.8 +2.6**
ULN Ulaanbaatar 48.04 8 *e*P **P 10 24 27.2 +0.4**
ULN pmax pmax
comp=Z,38nm,1.1s,mb5.3
ULN Ulaanbaatar 48.04 8 *e*P **P 10 24 27.2 +0.5**
comp=Z,38nm,1.1s,mb5.3
ULN Ulaanbaatar 48.04 8 P **P 10 24 27.5 +0.7**
SNR=17
ULN P 10 24 27.5
SNR=17
ULN P 10 24 27.5
SNR=17
ULN P 10 24 27.5
SNR=17
ULN Ulaanbaatar 48.04 8 P **P 10 24 27.5 +0.7**
SNR=17
ULN P 10 24 27.5
SNR=17
ULN Ulaanbaatar 48.04 8 P **P 10 24 26.9 +0.1**
comp=Z,572nmcomp=Z,36nm,1.3s,mb5.2
MKAR Makanchi Array 48.20 346 P **P 10 24 28.1 0.0**
comp=Z,26nm,0.7s,mb5.3,baz=143,slow=6.8,SNR=101
MKAR S **S 10 31 27.8 +2.5**
comp=Z,0.3nm,0.3s,baz=146,slow=13,SNR=3.3
CN2 Changchun 49.84 26 *e*P **P 10 24 39.8 -0.9**
CN2 *e*pP pP 10 24 49.9 -0.3
CN2 *e*sP sP 10 24 53.5 -0.4
CN2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
CN2 pmax pmax
comp=Z,400nm,6.0s
CN2 LR LR
comp=N,2μm,15.0s,MS5.4
CN2 LR LR
comp=E,2μm,15.0s,MS5.4
CN2 LR LR
comp=Z,2μm,14.0s,MS5.3
ZAK Zakamensk 50.09 5 *e*P **P 10 24 41.8 -0.6**
ZAK *e* 10 26 42.7
ZAK pmax pmax
comp=Z,11nm,1.2s,mb4.8
PMG Port Moresby 50.16 102 *e*P **P 10 24 43.0 -0.6**
PMG pmax pmax
comp=Z,68nm,0.8s
PMG Port Moresby 50.16 102 *e*P **P 10 24 43.0 -0.7**
comp=Z,68nm,0.8s,mb5.7
MOY Mondy 51.23 3 *e*P **P 10 24 51.6 +0.6**
MOY pmax pmax
comp=Z,46nm,3.0s
TLY Talaya 51.41 5 P **P 10 24 53.7 +1.3**
comp=Z,150nm,0.8s,mb6.0,SNR=7.0
TLY Talaya 51.41 5 *e*P **P 10 24 52.8 +0.4**
TLY *e* 10 26 49.3
TLY *e*S **S 10 32 11.4 +1.5**
TLY *e* 10 32 24.2
TLY pmax pmax
comp=Z,21nm,0.8s,mb5.1
TLY MLR MLR
comp=Z,2μm,15.0s,MS5.3
TLY Talaya 51.41 5 *e*P **P 10 24 53.0 +0.7**
comp=Z,20nm,0.8s,mb5.1
TLY Talaya 51.41 5 P **P 10 24 53.4 +1.0**
SNR=11
TLY P 10 24 53.4
SNR=11
TLY P 10 24 53.4
SNR=11
TLY P 10 24 53.4
SNR=11
TLY Talaya 51.41 5 P **P 10 24 53.4 +1.0**
SNR=11
TLY P 10 24 53.4
SNR=11
CTA Charters Tower 51.66 116 *e*P **P 10 24 54.1 -0.7**
comp=Z,5.8nm,0.8s,mb4.6
CTA Charters Tower 51.66 116 P **P 10 24 53.5 -1.3**
comp=Z,7.2nm,0.9s,mb4.6,baz=286,slow=7.8,SNR=8.1
CTAO Charters Tower 51.66 116 *e*P **P 10 24 55.1 +0.3**
CTAO pmax pmax
comp=Z,127nm,2.2s,mb5.5
CTAO Charters Tower 51.66 116 *e*P **P 10 24 55.1 +0.3**
comp=Z,127nm,2.2s,mb5.5
CTAO Charters Tower 51.66 116 P **P 10 24 56.0 +1.2**
MAJO Matsushiro 51.98 42 *e*P **P 10 24 57.0 0.0**
MAJO pmax pmax
comp=Z,17nm,0.8s,mb5.0
MAJO Matsushiro 51.98 42 *e*P **P 10 24 57.0 0.0**
comp=Z,17nm,0.8s,mb5.0
MAT Matsushiro 51.98 42 P **P 10 24 55.3 -1.7**
MAT *e*S **S 10 32 27.6 +9.2**
MJAR Matsushiro Arr 51.99 42 P **P 10 24 55.0 -1.9**
comp=Z,15nm,1.1s,mb4.8,baz=225,slow=7.8,SNR=16
MJAR PcP PcP 10 26 08.8 -0.3
comp=Z,6.1nm,1.1s,baz=238,slow=4.2,SNR=4.8
MJAR LR LR 10 50 18.2
comp=Z,1μm,19.1s,MS4.9,baz=250,slow=40
MJAR Matsushiro Arr 51.99 42 P **P 10 24 55.0 -2.0**
MJAR 10 26 08.8
MJAR Matsushiro Arr 51.99 42 P **P 10 24 55.0 -1.9**
MJAR PcP PcP 10 26 08.8 -0.3
MJAR LR LR 10 50 18.2
IRK Irkutsk 52.02 5 *e*P **P 10 24 56.6 -0.3**
IRK *e* 10 26 58.0
IRK pmax pmax
comp=Z,51nm,2.2s,mb5.1
HIA Hailar 52.30 18 *e*P **P 10 24 59.6 +0.6**
HIA pmax pmax
comp=Z,15nm,0.8s
HIA Hailar 52.30 18 *e*P **P 10 24 59.6 +0.6**
comp=Z,15nm,0.8s,mb5.0
MDJ Mudanjiang 52.37 28 P **P 10 25 00.7 +1.0**
MDJ pP pP 10 25 10.0 +0.8
MDJ sP sP 10 25 14.0 +1.1
MDJ PcP PcP 10 26 10.5 +0.1
MDJ PP PP 10 26 58.7 0.0
MDJ ScP ScP 10 30 05.4 -0.1
MDJ PcS PcS 10 30 09.4 +0.8
MDJ S **S 10 32 24.8 +1.3**
MDJ ScS ScS 10 34 46.3 -1.1
MDJ SS SS 10 36 04.0 +2.3
MDJ pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
MDJ pmax pmax
comp=Z,370nm,5.4s
MDJ LR LR
comp=N,4μm,15.2s,MS5.7
MDJ LR LR
comp=E,2μm,14.1s,MS5.7
MDJ LR LR
comp=Z,6μm,15.2s,MS5.7
MDJ Mudanjiang 52.37 28 *e*P **P 10 24 59.5 -0.2**
comp=Z,6.8nm,0.6s,mb4.8
STKA Stephens Creek 52.39 132 *e*P **P 10 25 00.7 +0.6**
comp=Z,10nm,0.8s,mb4.8
STKA Stephens Creek 52.39 132 P **P 10 25 00.5 +0.4**
comp=Z,3.8nm,0.5s,mb4.6,baz=312,slow=8.0,SNR=11
STKA LR LR 10 48 46.4
comp=Z,2μm,21.6s,MS5.2,baz=289,slow=38
STKA Stephens Creek 52.39 132 *e*P **P 10 25 01.2 +1.1**
comp=Z,3.6nm,0.9s,mb4.3

VLA Vladivostok 52.43 31 *e*P **P 10 24 58.6 -1.6**
VLA pmax pmax
comp=Z,64nm,1.4s,mb5.4
VLA MLR MLR
comp=Z,1μm,15.8s,MS5.1
KURK Kurchatov 52.76 345 P **P 10 25 02.2 -0.2**
comp=Z,209nm,1.0s,mb6.0,SNR=33
KURK Kurchatov 52.76 345 LR LR 10 53 03.7
comp=Z,631nm,19.0s,MS4.7,baz=155,slow=42
KURK Kurchatov 52.76 345 *e*P **P 10 25 02.1 -0.3**
KURK pmax pmax
comp=Z,48nm,1.1s,mb5.3
KURK Kurchatov 52.76 345 *e*P **P 10 25 02.1 -0.3**
comp=Z,48nm,1.1s,mb5.3
KURK Kurchatov 52.76 345 P **P 10 25 02.6 +0.2**
SNR=19
KURK P 10 25 02.6
SNR=19
KURK P 10 25 02.6
SNR=19
KURK P 10 25 02.6
SNR=19
KURK Kurchatov 52.76 345 P **P 10 25 02.6 +0.2**
SNR=19
KURK P 10 25 02.6
SNR=19
OPO Ambohidratompo 53.05 246 P **P 10 25 05.5 +0.3**
comp=Z,2.0nm,0.8s,mb4.1,baz=34,slow=7.2,SNR=3.4
ZAA0 Zalesovo Array 54.49 351 *e*P **P 10 25 14.8 -0.2**
ZALV Zalesovo Beam 54.49 351 P **P 10 25 14.9 -0.1**
comp=Z,51nm,0.6s,mb5.6,baz=179,slow=6.2,SNR=94
ZALV LR LR 10 52 04.0
comp=Z,516nm,19.1s,MS4.6,baz=5.0,slow=40
QRN Al-Qurain 55.28 305 *e*P **P 10 25 20.3 -1.0**
QRN AMb AMB 10 25 23.2
comp=Z,54nm,0.9s,mb5.6
NVS Novosibirsk 55.62 350⇑ *i*P **P 10 25 22.4 -0.8**
NVS *e*S **S 10 33 05.3 -1.6**
NVS pmax pmax
comp=Z,73nm,1.2s,mb5.6
NVS pmax pmax
comp=N,55nm,1.3s
NVS pmax pmax
comp=E,41nm,1.3s
NVS smax
comp=E,24nm,1.7s
RDF Al-Radifah 55.65 305 *e*P **P 10 25 23.5 -0.5**
RDF AMb AMB 10 25 34.2
comp=Z,84nm,1.1s,mb5.7
NAY Al-Naaiem 56.02 306 *e*P **P 10 25 25.6 -1.0**
NAY AMb AMB 10 25 30.3
comp=Z,25nm,1.1s,mb5.2
MIB Mutribah 56.15 306 *e*P **P 10 25 26.8 -0.6**
MIB AMb AMB 10 25 38.4
comp=Z,76nm,1.1s,mb5.7
KLR Kul'dur 56.80 26 *e*P **P 10 25 28.0 -3.7**
KLR *e*S **S 10 33 23.0 +0.2**
KLR pmax pmax
comp=E,33nm,1.4s
KLR pmax pmax
comp=Z,52nm,1.4s,mb5.4
KLR MLR MLR
comp=E,2μm,13.0s
KLR MLR MLR
comp=Z,10μm,13.0s,MS6.1
BVAR Borovoye Array 57.24 341 P **P 10 25 33.7 -1.0**
comp=Z,17nm,0.8s,mb5.2,baz=141,slow=8.4,SNR=42
BVAR LR LR 10 54 04.8
comp=Z,1μm,19.9s,MS5.1,baz=144,slow=40
BRVK Borovoye 57.30 341 P **P 10 25 34.6 -0.6**
comp=Z,129nm,1.1s,mb5.9,SNR=7.7
BRVK Borovoye 57.30 341c *i*P **P 10 25 34.1 -1.1**
BRVK pmax pmax
comp=Z,27nm,1.0s,mb5.2
BRVK Borovoye 57.30 341 *e*P **P 10 25 34.3 -0.9**
comp=Z,21nm,0.9s,mb5.2
BRVK Borovoye 57.30 341 P **P 10 25 34.6 -0.6**
SNR=10
BRVK P 10 25 34.6
SNR=10
BRVK P 10 25 34.6
SNR=10
BRVK P 10 25 34.6
SNR=10
BRVK Borovoye 57.30 341 P **P 10 25 34.6 -0.6**
SNR=10
BRVK P 10 25 34.6
SNR=10
EIDS Eidsvold 57.49 121 *e*P **P 10 25 37.2 +0.1**
comp=Z,265nm,2.8s,mb5.8
HABR Khabarovsk 57.76 28 *e*P **P 10 25 35.9 -2.7**
HABR *e**SP sP 10 25 49.5 -2.3
HABR 10 26 27.8
HABR *e* 10 27 43.4
HABR S **S 10 33 33.3 -2.3**
HABR *e**SS sS 10 33 50.1 -1.2
HABR *e* 10 35 22.0
HABR *e*SS SS 10 37 24.6 -1.9
HABR pmax pmax
comp=E,10.0nm,0.8s
HABR pmax pmax
comp=N,9.0nm,1.0s
HABR pmax pmax
comp=Z,24nm,1.2s,mb5.1
HABR MLR MLR
comp=Z,2μm,17.0s,MS5.2
ABKAR Akbulak array 58.52 332 *e*P **P 10 25 42.7 -1.2**
comp=Z,16nm,0.8s,mb5.1
BOD Bodaibo 58.77 10 *e*P **P 10 25 44.6 -0.8**
BOD pmax pmax
comp=Z,35nm,1.0s,mb5.3
ASAJ Asahikawa 59.05 36 P **P 10 25 47.2 -0.4**
comp=Z,8.9nm,0.5s,mb5.1,baz=221,slow=6.2,SNR=18
AKTO Aktyubinsk 60.24 332 LR LR 10 54 54.6
comp=Z,618nm,21.5s,MS4.7,baz=139,slow=39
CLNS Chul'man 60.41 17 *e*P **P 10 25 57.5 +0.7**
CLNS pmax pmax
comp=E,9.0nm,1.1s
CLNS pmax pmax
comp=Z,12nm,0.9s,mb4.9
CLNS pmax pmax
comp=N,8.0nm,1.0s
KMBO Kilima Mbogo 60.48 269 P **P 10 25 59.6 +1.5**
YSS Yuzh-Sakhalins 60.77 34⇑ *e*P **P 10 25 58.8 -0.6**
YSS *e*S **S 10 34 08.0 -6.6**
YSS pmax pmax
comp=Z,90nm,1.0s,mb5.8
YSS MLR MLR
comp=Z,900nm,14.0s,MS5.1
YSS MLR MLR
comp=N,500nm,16.0s,MS5.2
YSS MLR MLR
comp=E,1μm,15.0s,MS5.2
YSS Yuzh-Sakhalins 60.77 34 *e*P **P 10 25 59.6 +0.2**
comp=E,73nm,0.9s,mb5.8
MAK Makhachkala 61.73 320 *e*P **P 10 26 04.3 -1.7**
DGRG David-gareji 62.42 318 P **P 10 26 11.1 +0.5**
HNR Honiara 62.69 101 *e*P **P 10 26 13.2 +0.2**
MTA Mtatsminda 62.92 318 P **P 10 26 14.0 0.0**
TBLG Delisi 62.97 318 *e*P **P 10 26 14.2 -0.1**
TBLG Delisi 62.97 318 P **P 10 26 14.2 -0.1**
SVE Sverdlovsk 63.68 338⇑ *e*P **P 10 26 18.2 -0.5**
SVE *e* 10 28 38.8
SVE *e*S **S 10 34 48.8 -2.0**
SVE *e*SS SS 10 38 59.4 +0.4
SVE *e*SSS 10 41 45.9
SVE pmax pmax
comp=Z,41nm,1.2s,mb5.3
SVE MLR MLR
comp=Z,1μm,22.0s,MS5.0
KEH Kehvi 63.76 318 P **P 10 26 18.7 -0.9**
ZEI Tsey 63.99 319 *e*P **P 10 26 20.4 -0.6**
ZEI pmax pmax
comp=Z,14nm,1.0s,mb5.0
ARU Arti 64.18 337d *i*P **P 10 26 20.9 -1.1**
ARU *e* 10 26 55.4
ARU *e* 10 28 38.5
ARU *e*PPP 10 30 17.6
ARU S **S 10 34 57.9 +0.8**
ARU SS SS 10 39 12.2 +5.4
ARU pmax pmax
comp=Z,26nm,1.2s,mb5.1
ARU MLR MLR
comp=Z,1μm,20.0s,MS5.1
ARU Arti 64.18 337 *e*P **P 10 26 20.9 -1.1**
comp=Z,21nm,1.1s,mb5.1

ONI Oni 64.21 318 P **P 10 26 23.2 +0.7**
KIV Kislovodsk 65.30 319 *e*P **P 10 26 29.3 -0.3**
KIV *e*S S 10 35 10.4 -0.9
KIV pmax pmax
comp=Z,24nm,1.1s,mb5.1
KIV Kislovodsk 65.30 319 *e*P **P 10 26 29.9 +0.3**
KIV Kislovodsk 65.30 319 P **P 10 26 29.8 +0.2**
SNR=6.0
KIV P 10 26 29.8
SNR=6.0
KIV P 10 26 29.8
SNR=6.0
KIV P 10 26 29.8
SNR=6.0
KIV Kislovodsk 65.30 319 P **P 10 26 29.8 +0.2**
SNR=6.0
KIV P 10 26 29.8
SNR=6.0
YAK Yakutsk 66.11 16c *i*P **P 10 26 33.2 -1.2**
YAK *e**PP pP 10 26 38.9 -5.2
YAK *e* 10 27 03.5
YAK *e* 10 28 56.7
YAK *e*PPP 10 30 35.2
YAK *e*S S 10 35 19.4 -1.1
YAK *e**SS sS 10 35 40.1 +3.6
YAK *e* 10 36 21.5
YAK *e*SS SS 10 39 30.4 -6.2
YAK pmax pmax
comp=N,28nm,1.1s
YAK pmax pmax
comp=Z,84nm,1.1s,mb5.7
YAK pmax pmax
comp=E,39nm,1.9s
YAK pmax pmax
comp=E,68nm,3.7s
YAK pmax pmax
comp=Z,271nm,8.6s
YAK pmax pmax
comp=N,86nm,4.3s
YAK smax
comp=E,123nm,6.1s
YAK smax
comp=N,265nm,9.0s
YAK MLR MLR
comp=Z,2μm,17.0s,MS5.5
YAK MLR MLR
comp=E,1μm,15.0s,MS5.4
YAK MLR MLR
comp=N,1μm,14.0s,MS5.4
YAK Yakutsk 66.11 16 *e*P **P 10 26 33.5 -0.9**
comp=N,78nm,0.9s,mb5.7
MMAI Mount Meron Ar 66.83 306 P **P 10 26 37.9 -1.8**
comp=N,0.6nm,0.3s,mb4.1,baz=116,slow=9.0,SNR=2.3
SOKR Solikamsk 67.08 339d *i*P **P 10 26 41.3 +0.7**
SOKR S S 10 35 22.0 -10
SOKR SS SS 10 39 53.9 +2.2
SOKR pmax pmax
comp=Z,30nm,1.1s,mb5.2
SOKR MLR MLR
comp=Z,1μm,23.0s,MS5.0
CASY Casey 67.09 174 *e*P **P 10 26 40.7 +0.1**
comp=Z,14nm,1.0s,mb5.0
SOC Sochi 67.11 318 *e*P **P 10 26 40.4 -0.8**
SOC *e*S S 10 35 30.2 -3.1
SOC pmax pmax
comp=Z,28nm,0.8s,mb5.3
ANN Anapa 69.09 319 *e*P **P 10 26 51.6 -2.0**
ANN *e*S S 10 35 55.7 -1.2
ANN pmax pmax
comp=Z,16nm,1.0s,mb4.9
BR131 Keskin Array S 70.08 312 *e*P **P 10 26 58.8 -1.0**
comp=Z,2.6nm,0.7s,mb4.3
BRTR Keskin Array B 70.08 312 P **P 10 26 58.4 -1.5**
comp=Z,2.6nm,0.7s,mb4.2,baz=125,slow=6.2,SNR=13
DZM Mont Dzumac 70.46 113 *e*LR LR 10 48 30.7
comp=Z,1μm,23.8s
MAW Mawson 71.99 193 P **P 10 27 10.5 -0.3**
comp=Z,1.2nm,0.5s,mb4.1,baz=341,slow=13,SNR=4.4
MAW LR LR 10 51 41.2
comp=Z,870nm,19.1s,MS5.0,baz=74,slow=30
MAW Mawson 71.99 193 *e*P **P 10 27 12.4 +1.5**
MAW LR LR 10 51 41.2
PETK Petropavlovsk- 72.17 33 P **P 10 27 11.7 -0.5**
comp=Z,5.8nm,0.7s,mb4.6,baz=204,slow=3.6,SNR=8.9
PETK LR LR 11 03 33.8
comp=Z,559nm,18.6s,MS4.9,baz=245,slow=40
PET Petropavlovsk 72.66 34c *i*P **P 10 27 14.9 -0.2**
PET *e*S S 10 36 36.2 -1.9
PET *e*PS 10 37 08.6
PET pmax pmax
comp=Z,400nm,5.8s
PET pmax pmax
comp=Z,61nm,1.2s,mb5.4
PET pmax pmax
comp=Z,300nm,16.7s
PET MLR MLR
comp=Z,700nm,17.0s,MS5.0
PET MLR MLR
comp=Z,800nm,18.0s
PET Petropavlovsk 72.66 34 *e*P **P 10 27 15.1 -0.1**
comp=Z,75nm,1.2s,mb5.5
MOS Moscow 73.34 329 *e*P **P 10 27 16.1 -3.0**
OBN Obninsk 73.63 328 *e*P **P 10 27 19.8 -1.0**
OBN 10 27 34.8
OBN *i* S S 10 36 49.5 +0.5
OBN *i* SS SS 10 41 36.7 +4.1
OBN pmax pmax
comp=Z,48nm,1.6s,mb5.2
TIXI Tiksi 73.95 10c *i*P **P 10 27 20.9 -1.5**
TIXI *e* 10 30 07.0
TIXI *e*S S 10 36 49.0 -3.1
TIXI *e*SS SS 10 41 36.5 -0.4
TIXI pmax pmax
comp=Z,58nm,1.3s,mb5.3
TIXI MLR MLR
comp=Z,2μm,17.0s,MS5.4
TIXI Tiksi 73.95 10⇑ *i*P **P 10 27 20.8 -1.6**
BOSA Boshof 74.80 240 LR LR 10 56 16.4
comp=Z,771nm,18.5s,MS5.0,baz=100,slow=32
TIRR Tirgusor 75.11 316⇓ *i*P **P 10 27 29.1 -0.5**
AKASG Malin Array Be 76.26 322 P **P 10 27 34.6 -1.5**
comp=Z,5.7nm,0.7s,mb4.6,baz=91,slow=4.8,SNR=20
AKASG Malin Array Be 76.26 322c*e*P **P 10 27 34.5 -1.6**
AKASG pmax pmax
comp=Z,6.0nm,0.7s
AKBB Malin Array Si 76.26 322 *e*P **P 10 27 33.2 -2.9**
MLR Muntele Rosu 77.05 317⇓ *i*P **P 10 27 40.9 +0.2**
BURAR Bucovina Array 78.02 319⇓ *i*P **P 10 27 46.8 +0.8**
BUR08 Bucovina Ar. S 78.03 319 *e*P **P 10 27 46.3 +0.2**
RPZ Rata Peaks 78.23 135 P **P 10 27 47.2 -0.1**
comp=Z,18nm,0.8s,mb5.0,baz=199,slow=21,SNR=8.8
IDID Didziasalis 78.99 327 *e*P **P 10 27 51.0 -0.2**
IDID AMB AMB 10 27 53.6
comp=Z,6.4nm,1.2s,mb4.4
JOF Joensuu 79.15 335 *e*P **P 10 27 52.0 +0.1**
JOF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
JOF Joensuu 79.15 335 *e*p **P 10 27 52.0 +0.1**
comp=Z,9.5nm,0.9s,mb4.7
JOF Joensuu 79.15 335 *e*p **P 10 27 52.0 +0.1**
comp=Z,9.5nm,0.9s,mb4.7
IIGN Ignalina 79.28 327 *e*P **P 10 27 52.8 -0.1**
IIGN AMB AMB 10 27 55.3
comp=Z,9.0nm,1.2s,mb4.6
SYO Syowa Base 79.34 198⇑ *e*PcP PcP 10 28 01.5 +0.5
IZAR Zarasai 79.38 327 *e*P **P 10 27 53.3 0.0**
IZAR AMB AMB 10 27 55.1
comp=Z,5.2nm,1.1s,mb4.4
ISAL Salakas 79.39 327 *e*P **P 10 27 53.4 0.0**
ISAL AMB AMB 10 27 55.8
comp=Z,7.3nm,0.6s,mb4.8
DRGR 79.52 318⇑ *i*P **P 10 27 54.7 +0.4**
KWP Kalwaria Pacla 80.07 320 *e*P **P 10 27 57.5 +0.3**
APA Apatity 80.12 339⇑ *i*P **P 10 27 56.2 -0.9**
APA pmax pmax
comp=Z,37nm,1.4s,mb5.1
APA MLR MLR
comp=Z,600nm,17.0s,MS5.0
KOLS Kolonicke sedl 80.21 320 *e*P **P 10 27 58.7 +0.7**
KOLS pmax pmax
comp=Z,17nm,1.1s,mb4.9
KOLS Kolonicke sedl 80.21 320 *e*P **P 10 27 58.7 +0.7**
comp=Z,16nm,1.1s,mb4.9
KOLS *e*PP pP 10 28 06.5 -1.4
KOLS *e*SP 10 28 15.1

KOLS	**Kolonicke sedl**	**80.21 320**	*e*P	**P**	**10 27 58.7**	**+0.7**
KOLS			*e*pP	pP	10 28 06.4	-1.5
KOLS			*e*sP	sP	10 28 15.1	+3.6
SUW	**Suwalki**	**80.68 325**	*e*P	**P**	**10 27 59.5**	**-0.9**
TSUM	**Tsumeb**	**80.79 251**	*e*P	**P**	**10 28 01.0**	**-0.7**
	comp=Z,5.4nm,1.0s,mb4.4					
STHS	**Stebnicka Huta**	**80.96 320**	*e*P	**P**	**10 28 02.6**	**+0.6**
STHS			pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5					
STHS	**Stebnicka Huta**	**80.96 320**	*e*P	**P**	**10 28 02.6**	**+0.6**
	comp=Z,4.7nm,0.8s,mb4.5					
STHS			*e*PP	pP	10 28 10.7	-1.3
STHS			*e*SP		10 28 15.9	
STHS	**Stebnicka Huta**	**80.96 320**	*e*P	**P**	**10 28 02.6**	**+0.6**
STHS			*e*pP	pP	10 28 10.7	-1.3
STHS			*e*sP	sP	10 28 15.9	+0.3
FX1	**Attu Island--F**	**80.98 36**	P	**P**	**10 28 01.8**	**-0.2**
	comp=Z,8.2nm,0.7s,mb4.8,baz=214,slow=3.6,SNR=5.5					
FX1	**Attu Island--F**	**80.98 36**	P	**P**	**10 28 01.8**	**-0.2**
FINES	**FINESS Array B**	**81.00 333**	P	**P**	**10 28 00.6**	**-1.3**
	comp=Z,8.9nm,0.9s,mb4.7,baz=100,slow=4.7,SNR=11					
FINES			LR	LR	11 10 58.7	
	comp=Z,497nm,20.1s,MS4.9,baz=26,slow=41					
KAF	**Kangasniemi**	**81.09 333**	*e*P	**P**	**10 28 01.3**	**-1.1**
KAF			pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8					
KAF	**Kangasniemi**	**81.09 333**	*e*p	**P**	**10 28 01.3**	**-1.1**
	comp=Z,10.0nm,0.7s,mb4.8					
KAF	**Kangasniemi**	**81.09 333**	*e*p	**P**	**10 28 01.3**	**-1.1**
	comp=Z,10.0nm,0.7s,mb4.8					
KECS	**Kecovo**	**81.30 319**	*e*P	**P**	**10 28 04.9**	**+1.1**
KECS			pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3					
KECS	**Kecovo**	**81.30 319**	*e*P	**P**	**10 28 04.9**	**+1.1**
	comp=Z,2.9nm,0.8s,mb4.3					
KECS			*e*PP	pP	10 28 12.5	-1.3
KECS	**Kecovo**	**81.30 319**	*e*P	**P**	**10 28 04.9**	**+1.1**
KECS			*e*pP	pP	10 28 12.5	-1.3
PSZ	**Piszkesteto**	**81.60 318**	*e*P	**P**	**10 28 07.1**	**+1.7**
PSZ			pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6					
PSZ	**Piszkesteto**	**81.60 318**	*e*P	**P**	**10 28 07.1**	**+1.7**
	comp=Z,7.3nm,0.9s,mb4.6					
PSZ	**Piszkesteto**	**81.60 318**	‖ *e*P	**P**	**10 28 06.8**	**+1.4**
PSZ	**Piszkesteto**	**81.60 318**	‖ *i*P	**P**	**10 28 06.8**	**+1.4**
BILL	**Bilibino**	**81.79 21**	‖ *i*P	**P**	**10 28 04.9**	**-1.1**
BILL			*e*		10 28 11.8	
BILL			*i*		10 31 14.4	
BILL			*i* S	S	10 38 18.4	+1.7
BILL			pmax	pmax		
	comp=Z,16nm,2.5s,mb4.5					
BILL	**Bilibino**	**81.79 21**	‖ *i*P	**P**	**10 28 04.0**	**-2.0**
URZ	**Urewera**	**81.87 129**	P	**P**	**10 28 05.7**	**-1.4**
	comp=Z,5.1nm,0.8s,mb4.5,baz=278,slow=15,SNR=5.0					
OJC	**Ojcow**	**82.02 321**	*e*P	**P**	**10 28 08.2**	**+0.6**
VYHS	**Vyhne**	**82.38 319**	*e*P	**P**	**10 28 10.0**	**+0.4**
VYHS			pmax	pmax		
	comp=Z,8.0nm,1.6s,mb4.4					
VYHS	**Vyhne**	**82.38 319**	*e*P	**P**	**10 28 10.0**	**+0.4**
	comp=Z,7.9nm,1.6s,mb4.4					
VYHS			*e*PP	pP	10 28 17.4	-2.1
OKC	**Ostrava-Krasne**	**83.02 320**	*e*P	**P**	**10 28 14.1**	**+1.3**
OKC			*e*		10 28 20.7	
OKC	**Ostrava-Krasne**	**83.02 320**	*e*P	**P**	**10 28 14.1**	**+1.3**
OKC			*e*pP	pP	10 28 20.7	-2.1
MORC	**Moravsky Berou**	**83.40 320**	*e*P	**P**	**10 28 14.9**	**+0.1**
MORC			pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1					
MORC	**Moravsky Berou**	**83.40 320**	*e*P	**P**	**10 28 14.9**	**+0.1**
	comp=Z,1.0nm,0.5s,mb4.1					
ZST	**Bratislava**	**83.49 318**	*e*P	**P**	**10 28 16.7**	**+1.4**
ZST			pmax	pmax		
	comp=Z,13nm,1.2s,mb4.8					
ZST	**Bratislava**	**83.49 318**	*e*P	**P**	**10 28 16.7**	**+1.4**
	comp=Z,13nm,1.2s,mb4.8					
ZST	**Bratislava**	**83.49 318**	*e*P	**P**	**10 28 16.7**	**+1.4**
ARCES	**ARCESS Array B**	**83.52 340**	P	**P**	**10 28 13.8**	**-1.2**
	comp=Z,4.7nm,0.8s,mb4.7,baz=109,slow=4.9,SNR=7.1					
DPC	**Dobruska-Polom**	**84.25 320**	*e*P	**P**	**10 28 19.6**	**+0.5**
DPC			*e*		10 28 26.4	
DPC	**Dobruska-Polom**	**84.25 320**	*e*P	**P**	**10 28 19.6**	**+0.5**
DPC			*e*pP	pP	10 28 26.4	-2.7
RAO	**Raoul Island**	**85.24 119**	*e*P	**P**	**10 28 25.4**	**+0.8**
	comp=Z,121nm,0.7s,mb6.1					
GEC2	**GERESS Array S**	**85.81 319**	*e*P	**P**	**10 28 27.0**	**0.0**
	comp=Z,11nm,1.2s,mb5.0					
GEC2	**GERESS Array S**	**85.81 319**	*e*P	**P**	**10 28 27.6**	**+0.6**
GEC2	**GERESS Array S**	**85.81 319**	*e*P	**P**	**10 28 27.6**	**+0.6**
	comp=Z,558nm,0.8s					
GERES	**GERESS Array B**	**85.81 319**	P	**P**	**10 28 26.9**	**-0.1**
	comp=Z,1.3nm,0.6s,mb4.3,baz=99,slow=4.5,SNR=14					
BRG	**Berggiesshubel**	**85.81 321**	*e*P	**P**	**10 28 27.8**	**+0.9**
	comp=Z,6.0nm,1.1s,mb4.7					
BRG	**Berggiesshubel**	**85.81 321**	*e*P	**P**	**10 28 27.7**	**+0.8**
	comp=Z,4.8nm,1.1s,mb4.6					
BRG			S	S	10 38 56.0	-1.8
BRG						
	comp=N,237nm,18.2s					
BRG						
	comp=E,346nm,16.8s					
BRG						
	comp=Z,459nm,17.3s					
KHC	**Kasperske Hory**	**85.91 319**	*e*P	**P**	**10 28 28.4**	**+0.9**
KHC			*e*		10 28 33.8	
KHC	**Kasperske Hory**	**85.91 319**	*e*P	**P**	**10 28 28.4**	**+0.9**
KHC			*e*x	x	10 28 33.8	
WET	**Wettzell**	**86.37 319**	*e*P	**P**	**10 28 29.4**	**-0.3**
	comp=Z,5.0nm,0.9s,mb4.7					
CLL	**Collm**	**86.43 321**	*e*P	**P**	**10 28 32.0**	**+2.0**
CLL			*e*S	S	10 39 03.0	-0.9
CLL			MLR	MLR		
	comp=Z,400nm,18.7s,MS4.8					
CLL	**Collm**	**86.43 321**	*e*(P)	**P**	**10 28 32.0**	**+2.0**
CLL			LmH		10 10 00.0	
	comp=N,200nm,20.0s					
CLL			LmH		10 10 00.0	
	comp=E,200nm,21.8s					
CLL			LmV		10 15 00.0	
	comp=Z,400nm,18.7s					
CLL			*e*PP	PP	10 31 58.0	+6.4
CLL			*e*		10 38 22.0	
CLL			*e*S	S	10 39 03.0	-0.9
CLL			*e*SS	SS	10 44 48.0	+3.8
CLL			*e*SSS		10 48 12.0	
CLL			*e*SSSS		10 51 30.0	
ROTZ	**Rotzenmuhle**	**86.84 320**	*e*P	**P**	**10 28 32.4**	**+0.4**
	comp=Z,4.0nm,1.0s,mb4.6					
MOX	**Moxa**	**87.27 321**	*e*P	**P**	**10 28 35.1**	**+1.0**
	comp=Z,4.0nm,1.2s,mb4.5					
GRF	**Grafenberg Arr**	**87.48 320**	*e*P	**P**	**10 28 35.8**	**+0.7**
	comp=Z,21nm,1.3s,mb5.2					
GRF			*e*L		11 14 53.1	
	comp=Z,454nm,19.8s					
GRF	**Grafenberg Arr**	**87.48 320**	*e*P	**P**	**10 28 35.8**	**+0.7**
GRF			pmax	pmax		
	comp=Z,21nm,1.3s,mb5.2					
GRF			MLR	MLR		
	comp=Z,500nm,19.8s,MS4.9					
GRF	**Grafenberg Arr**	**87.48 320**	*e*P	**P**	**10 28 35.8**	**+0.7**
	comp=Z,21nm,1.3s,mb5.2					
GRF			LR	LR		
	comp=Z,500nm,19.8s,MS4.9					
NOA	**NORSAR Array B**	**88.01 331**	P	**P**	**10 28 36.6**	**-0.9**
	comp=Z,2.8nm,0.8s,mb4.5,baz=95,slow=4.7,SNR=7.2					
NOA			LR	LR	11 13 01.9	
	comp=Z,254nm,20.3s,MS4.6,baz=100,slow=39					
CLZ	**Clausthal**	**88.10 322**	*e*P	**P**	**10 28 38.8**	**+0.8**
	comp=Z,8.0nm,1.1s,mb4.9					
BSEG	**Bad Segeberg**	**88.20 324**	*e*P	**P**	**10 28 39.8**	**+1.3**
	comp=Z,18nm,1.1s,mb5.2					
NRDL	**Niedersach Rie**	**88.28 322**	*e*P	**P**	**10 28 39.8**	**+0.9**
	comp=Z,22nm,1.2s,mb5.3					
KEST	**Kesra**	**88.48 306**	LR	LR	11 08 15.4	
	comp=Z,169nm,20.9s,MS4.4,baz=345,slow=36					
PGF	**Pioggiola**	**88.83 312**	*e*P	**P**	**10 28 40.6**	**-1.1**
MAIT	**Maitri**	**88.98 199**	*e*P	**P**	**10 28 44.1**	**+2.3**
MAIT			*e*E		10 28 51.5	
TNS	**Taunus Mts**	**89.28 320**	*e*P	**P**	**10 28 44.0**	**+0.3**
	comp=Z,12nm,0.9s,mb5.2					
BFO	**Black Forest**	**89.35 318**	*e*P	**P**	**10 28 43.4**	**-0.6**
	comp=Z,7.0nm,1.4s,mb4.8					
QSPA	**South Pole Qui**	**90.28 180**	P	**P**	**10 28 48.6**	**+0.9**
	comp=Z,1.2nm,0.7s,mb4.3,baz=214,slow=1.9,SNR=10					
QSPA	**South Pole Qui**	**90.28 180**	*e*P	**P**	**10 28 49.2**	**+1.5**
QSPA			*e*	pP	10 28 59.7	+1.9
LPG	**La Plagne**	**90.45 315**	*e*P	**P**	**10 28 49.2**	**0.0**
	comp=Z,21nm,1.0s,mb5.1					
LPG	**La Plagne**	**90.45 315**	*e*P	**P**	**10 28 49.2**	**0.0**
LPG			pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.1					
LPG	**La Plagne**	**90.45 315**	*e*P	**P**	**10 28 49.2**	**0.0**
	comp=Z,10nm,1.0s,mb5.1					
LPL	**La Plagne**	**90.46 315**	*e*P	**P**	**10 28 49.1**	**-0.2**
	comp=Z,38nm,1.3s,mb5.3					
LPL	**La Plagne**	**90.46 315**	*e*P	**P**	**10 28 49.1**	**-0.2**
LPL			pmax	pmax		
	comp=Z,19nm,1.3s,mb5.3					
LPL	**La Plagne**	**90.46 315**	*e*P	**P**	**10 28 49.1**	**-0.2**
	comp=Z,19nm,1.3s,mb5.3					
HAU	**Haudompre**	**90.68 318**	*e*P	**P**	**10 28 49.6**	**-0.6**
WLF	**Walferdange**	**90.77 319**	*e*P	**P**	**10 28 52.4**	**+1.8**
	comp=Z,11nm,1.0s,mb5.1					
CABF	**La Chapelle**	**90.89 316**	*e*P	**P**	**10 28 51.1**	**-0.1**
	comp=Z,38nm,1.3s,mb5.3					
CABF	**La Chapelle**	**90.89 316**	*e*P	**P**	**10 28 51.1**	**-0.1**
CABF			pmax	pmax		
	comp=Z,19nm,1.3s,mb5.3					
CABF	**La Chapelle**	**90.89 316**	*e*P	**P**	**10 28 51.1**	**-0.1**
	comp=Z,19nm,1.3s,mb5.3					
SMRF	**Simiane la Rot**	**91.32 314**	*e*P	**P**	**10 28 51.6**	**-1.7**
LOR	**Lormes**	**92.39 317**	*e*P	**P**	**10 28 57.8**	**-0.4**
	comp=Z,15nm,1.0s,mb5.0					
LOR	**Lormes**	**92.39 317**	*e*P	**P**	**10 28 57.8**	**-0.4**
LOR			pmax	pmax		
	comp=Z,8.0nm,1.0s,mb5.0					
LOR	**Lormes**	**92.39 317**	*e*P	**P**	**10 28 57.8**	**-0.4**
	comp=Z,7.5nm,1.0s,mb5.0					
TORD	**Torodi Ar. Bea**	**95.79 283**	LR	LR	11 12 52.8	
	comp=Z,540nm,18.1s,MS5.1,baz=60,slow=36					
BPAW	**Bear Paw Mtn.**	**98.88 24**	*e*P	**P**	**10 29 28.5**	**+1.1**
	comp=Z,15nm,1.6s,mb5.3					
SFJD	**Kangerlussuaq**	**109.22 347**	*e*PKPdf	PKiKP	10 34 09.1	-8.0
PPT	**Papeete**	**111.71 109**	*e*LR	LR	11 07 37.3	
	comp=Z,484nm,22.5s					
YKA	**Yellowknife Ar**	**112.78 16**	PP	PP	10 35 08.5	-2.8
	comp=Z,1.1nm,1.0s,baz=333,slow=7.0,SNR=4.9					
TAOE	**Nuku Hiva Isla**	**121.77 100**	*e*LR	LR	11 12 16.6	
	comp=Z,473nm,23.1s					
RKT	**Rikitea**	**124.07 118**	*e*LR	LR	11 13 24.3	
	comp=Z,598nm,27.5s					
MSO	**Missoula**	**125.47 26**	*e*PKPdf	PKPdf	10 34 49.0	+0.3
WVOR	**Wild Horse Val**	**126.33 33**	*e*PKiKP	PKPdf	10 34 50.0	-0.5
DLMT	**Dillon**	**127.20 27**	*e*PKPdf	PKPdf	10 34 53.0	+0.9
MCMT	**McKenzie Canyo**	**127.49 27**	*e*PKPdf	PKPdf	10 34 53.8	+1.2
NVAR	**Mina Array Bea**	**129.17 37**	PKP	PKPdf	10 34 56.7	+0.6
	comp=Z,1.8nm,1.0s,baz=243,slow=1.4,SNR=7.5					
M13A	**Montello**	**129.45 31**	*e*PKPdf	PKPdf	10 34 58.0	+1.5
REDW	**Red Top Meadow**	**129.54 27**	*e*PKPdf	PKPdf	10 34 57.8	+1.2
PDAR	**Pinedale Array**	**130.59 26**	PKP	PKPdf	10 34 58.5	-0.1
	comp=Z,0.7nm,0.8s,baz=207,slow=0.3,SNR=6.3					
DUG	**Dugway**	**131.00 31**	*e*PKiKP	PKPdf	10 35 01.1	+1.6
ARUT	**Antelope Range**	**132.41 34**	*e*PKiKP	PKPdf	10 35 02.6	+0.4
MVCO	**Mesa Verde**	**135.46 30**	*e*PKPdf	PKPdf	10 35 08.9	+1.0
MNTX	**Cornudas Mount**	**141.36 32**	*e*PKPdf	PKPdf	10 35 21.0	+2.0
GDL2	**Guadalupe Moun**	**141.50 31**	*e*PKPdf	PKPdf	10 35 20.0	+0.8
WVT	**Waverly**	**143.36 8**	*e*PKiKP	PKPdf	10 35 18.0	-4.4
MIAR	**Mount Ida**	**143.73 16**	*e*PKiKP	PKPdf	10 35 20.5	-2.6
UALR	**University of**	**143.83 14**	*e*PKPdf	PKPdf	10 35 20.3	-3.0
TXAR	**Lajitas Array**	**144.12 33**	PKP	PKPdf	10 35 22.1	-1.8
	comp=Z,2.5nm,0.8s,baz=278,slow=1.1,SNR=29					
TXAR			PP	PP	10 38 38.8	+1.5
	comp=Z,0.7nm,1.0s,baz=46,slow=2.6,SNR=2.6					
TKL	**Tuckaleechee C**	**144.17 2**	*e*PKiKP	PKPdf	10 35 20.7	-3.1
CPCT	**Cooper Cave**	**144.34 3**	*e*PKPdf	PKPdf	10 35 21.3	-2.8
PLAL	**Pickwick Lake**	**144.46 8**	*e*PKPdf	PKPdf	10 35 21.4	-2.9
JCT	**Junction City**	**145.12 27**	*e*PKPdf	PKPdf	10 35 24.8	-0.8
JSC	**Jenkinsville**	**145.56 359**	*e*PKiKP	PKPdf	10 35 25.4	-0.8
CFAA	**Coronel Fontan**	**146.17 202**	PKPbc	PKPbc	10 35 28.0	-0.4
	comp=Z,0.2nm,0.4s,baz=194,slow=4.2,SNR=6.2					
GOGA	**Godfrey**	**146.42 2**	*e*PKP2	PKPbc	10 35 28.4	-0.6
LRAL	**Lakeview Retre**	**146.52 7**	*e*PKPdf	PKPdf	10 35 27.9	0.0
LRAL			*e*PKPbc	PKPbc	10 35 29.3	0.0
LRAL			*e*PKPab	PKPab	10 35 30.1	-0.1
HKT	**Hockley**	**147.23 22**	*e*PKPdf	PKPdf	10 35 30.0	+0.8
HKT			*e*PKPbc	PKPbc	10 35 31.8	+0.4
HKT			*e*PKPab	PKPab	10 35 33.1	-0.1
SIV	**San Ignacio**	**153.92 232**	PKPbc	PKPbc	10 35 46.8	-1.1
	comp=Z,0.4nm,0.5s,baz=94,slow=19,SNR=3.0					

*IDC **03** 10:19:00.3±3.4, 19°.55S×170°.43E, h0km, mb4.3/5, mb1 4.4/5, mb1mx4.1/15, mbtmp4.3/5, Error ellipse: s-maj=114.4km s-min=31.1km az=144.0*

*ISCJB **03** 10:19:31.0±2.6, 19°.3S±0°.3×169°.6E±0°.4, h250km, mb3.9/5, Error ellipse: s-maj=65.0km s-min=19.4km az=30.0*

ISC 03 10:19:32.3±2.7, 19°.4S±0°.3×169°.5E±0°.5, h250km, n8, σ0s41/7, mb3.9/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.94**	**226**	*e*P	**Pn**	**10 20 35.3**	**-0.1**
NOUC	**Port Laguerre**	**4.06**	**227**	*e*P	**Pn**	**10 20 37.0**	**+0.2**
CTA	**Charters Tower**	**21.92**	**264**	P	**P**	**10 24 05.6**	**-0.1**
	0.9nm,0.4s,mb3.7,baz=81,slow=14,SNR=3.6						
ASAR	**Alice Springs**	**33.36**	**256**	P	**P**	**10 25 47.0**	**-0.4**
	11nm,0.4s,mb4.7,baz=80,slow=8.7,SNR=40						
FITZ	**Fitzroy Crossi**	**41.50**	**264**	P	**P**	**10 26 55.8**	**+0.3**
	1.9nm,0.5s,mb3.8,baz=85,slow=8.3,SNR=5.6						
PETK	**Petropavlovsk-**	**72.89**	**353**	P	**P**	**10 30 33.3**	**-0.6**
	2.6nm,0.5s,mb4.1,baz=144,slow=8.4,SNR=5.2						
SONM	**Songino Array**	**87.48**	**323**	P	**P**	**10 31 52.3**	**+0.8**
	0.7nm,0.8s,mb3.4,baz=122,slow=5.4,SNR=3.8						
ARCES	**ARCESS Array B**	**125.26**	**345**	PKP	PKPdf	10 38 02.8	+0.3
	6.3nm,1.1s,baz=54,slow=1.6,SNR=6.4						

DJA 03 10:24:09, 1°.39N×98°.44E, h19km, MLv3.8/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRSI	**Tarutung**	**0.82**	**39**	P	Pb	10 24 24.1	-0.5
TRSI				S	Sb	10 24 35.6	+0.3
GSI	**Gunungsitoli**	**0.87**	**264**	P	Pb	10 24 24.5	-1.0
GSI				S	Sb	10 24 37.5	+0.8
MNSI	**Mandailing Nat**	**1.28**	**117**	P	Pn	10 24 30.9	-1.0

CASC 03 10:25:07.6±1.8, 9°.51N×83°.66W, h6km±6km, MD3.5, 3C-1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUS	**Buena Vista**	**0.10**	**293**	*i* P	Pg	10 25 11.4	+1.5
URSC	**Urasca**	**0.34**	**340**	⇑ *i*P	Pg	10 25 15.2	+1.0
URSC				*e*S	Sg	10 25 20.1	+1.4
BAR1		**0.44**	**128**	‖ *e*P	Pg	10 25 15.5	-0.6
QCR	**Quepos**	**0.51**	**260**	‖ *i*P	Pg	10 25 18.2	+0.9
QCR				*e*S	Sg	10 25 25.7	+1.8
LIO	**Limon**	**0.79**	**52**	*e*P	Pg	10 25 22.3	-0.5
LIO				*e*S	Sg	10 25 32.5	-0.5
CGA2	**Cerro Gallo 2**	**0.94**	**302**	*e*P	Pg	10 25 25.7	+0.1
CNI	**Changuinola**	**1.13**	**95**	*e*P	Pg	10 25 28.4	-0.9
BRU2	**Volcan**	**1.20**	**127**	⇑ *i*P	Pg	10 25 28.9	-1.7
BRU2				*e*S	Sg	10 25 46.8	+0.7

JMA 03 10:43:52.6±0.3, 44°.03N×148°.06E, h0km, M4.3, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.81**	**249**	P	Pn	10 44 25.4	+0.4
NEM2				*e*S	Sn	10 44 49.2	+0.6
JRA	**Rausu**	**2.12**	**269**	P	Pn	10 44 29.9	+0.6
JRA				*e*S	Sn	10 44 57.6	+1.3
JNK	**Nakash**	**2.46**	**261**	P	Pn	10 44 34.8	+0.9
JNK				*e*S	Sn	10 45 05.7	+1.1
JAK	**Akkeshi**	**2.66**	**248**	P	Pn	10 44 37.5	+0.9
JAK				*e*S	Sn	10 45 11.4	+1.9
JTKR	**Abashiri--Toko**	**3.00**	**270**	P	Pn	10 44 41.4	+0.1
JAR	**Ashorobuto**	**3.20**	**258**	P	Pn	10 44 45.8	+1.7
JCH	**Churui**	**3.71**	**249**	P	Pn	10 44 52.1	+1.0
JKK2	**Kamakawa 2**	**3.84**	**269**	P	Pn	10 44 55.4	+2.5
JSE	**Soyaes**	**4.03**	**285**	P	Pn	10 44 54.2	-1.3
JFR	**Furan**	**4.06**	**260**	P	Pn	10 44 59.5	+3.5
JNBK	**Urakawa-nobuka**	**4.26**	**248**	P	Pn	10 45 00.4	+1.7
JWK2	**Keihoku**	**4.58**	**288**	P	Pn	10 45 02.8	-0.3
JKB	**Kayabe**	**5.58**	**250**	P	Pn	10 45 18.6	+1.7
JKB				*e*S	Sn	10 46 22.9	+1.2
JOT	**Ohata**	**5.80**	**245**	P	Pn	10 45 21.2	+1.3
JOT				*e*S	Sn	10 46 25.2	-1.9

CASC 03 11:36:56.2±1.4, 8°.48N×82°.91W, h4km, MD4.0, 1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAR1		**0.86**	**332**	‖ *e*P	Pg	11 37 12.7	0.0
BUS	**Buena Vista**	**1.36**	**322**	*e*P	Pn	11 37 20.9	-1.0
LIO	**Limon**	**1.52**	**355**	*e*P	Pn	11 37 23.4	-0.8
QCR	**Quepos**	**1.56**	**307**	*e*P	Pn	11 37 23.5	-1.2
URSC	**Urasca**	**1.60**	**328**	*e*P	Pn	11 37 24.2	-1.0
LAJ	**Bijagual**	**1.82**	**319**	*e*P	Pn	11 37 31.3	+2.9
LAJ				*e*S	Sn	11 37 59.0	+7.1
CGA2	**Cerro Gallo 2**	**2.17**	**315**	*e*P	Pn	11 37 33.6	+0.5
JCR	**Jicaral**	**2.57**	**302**	*e*P	Pn	11 37 37.2	-1.4
VCR	**Vista de Mar**	**3.15**	**302**	*e*P	Pn	11 37 47.4	+0.9

*ISCJB **03** 12:22:27.3±0.9, 23°.18N±0°.02×121°.91E±0°.02, h15km±6km, Error ellipse: s-maj=3.9km s-min=2.7km az=154.4*

*TAP **03** 12:22:28.1, 23°.21N×121°.84E, h12km, ML3.2, C*

*JMA **03** 12:22:31.0±0.2, 23°.11N×122°.05E, h76km*

ISC 03 12:22:26.8±0.6, 23°.19N±0°.02×121°.90E±0°.02, h8km±3km, n46, σ0s91/81, 3C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWF1	**Yuli**	**0.57**	**287**	⇑ *i*P	**Pg**	**12 22 38.4**	**+0.5**
	baz=271						
TWF1				S	**Sg**	**12 22 46.2**	**+0.8**
	baz=271						
EHY	**Hungye**	**0.61**	**301**	P	**Pg**	**12 22 39.1**	**+0.4**
	baz=299						
EHY				S	**Sg**	**12 22 47.9**	**+1.2**
	baz=299						
ESL	**Shilin**	**0.75**	**326**	P	**Pg**	**12 22 41.6**	**+0.3**
	baz=327						
ESL				*e*S	**Sg**	**12 22 51.9**	**+0.8**
	baz=327						
ELDTW	**Lidau**	**0.81**	**270**	⇑ *i*P	**Pg**	**12 22 41.9**	**-0.5**
	baz=267						
ELDTW				*e*S	**Sg**	**12 22 51.9**	**-1.0**
	baz=267						
TTN	**Taitung**	**0.81**	**238**	*e*P	**Pg**	**12 22 43.3**	**+0.8**
	baz=223						
TTN				*e*S	**Sg**	**12 22 53.2**	**+0.1**
	baz=223						
HWA	**Hwalien**	**0.83**	**341**	*e*P	**Pg**	**12 22 43.3**	**+0.6**
	baz=343						
TWG	**Pinlang**	**0.84**	**244**	*i* P	**Pg**	**12 22 42.8**	**-0.2**
	baz=229						
TWG				S	**Sg**	**12 22 53.3**	**-0.7**
	baz=229						
YUS	**Yu-Shan**	**0.92**	**289**	⇑ *i*P	**Pg**	**12 22 44.7**	**+0.3**
	baz=286						
YUS				S	**Sg**	**12 22 56.3**	**-0.1**
	baz=286						
TWD	**Chiawan**	**0.93**	**343**	P	**Pg**	**12 22 44.7**	**0.0**
	baz=344						
TWD				*e*S	**Sg**	**12 22 56.8**	**+0.1**
	baz=344						
ECL	**Taimali**	**1.05**	**236**	*e*P	**Pg**	**12 22 45.4**	**-1.5**
	baz=232						
ECL				*e*S	**Sg**	**12 22 57.8**	**-2.8**
	baz=232						
ALS	**Alishan**	**1.05**	**288**	P	**Pg**	**12 22 47.0**	**0.0**
	baz=272						
ALS				S	**Sg**	**12 23 01.0**	**+0.3**
	baz=272						
WHF	**Hehuan Shan**	**1.11**	**329**	P	**Pg**	**12 22 47.6**	**-0.5**
	baz=328						
WHF				*e*S	**Sg**	**12 23 01.4**	**-1.3**
	baz=328						
SMLT	**Sun Moon Lake**	**1.15**	**307**	P	**Pg**	**12 22 48.3**	**-0.5**
	baz=305						
SMLT				*e*S	**Sg**	**12 23 03.5**	**-0.2**
	baz=305						
WTP	**Ta-pu**	**1.18**	**273**	*i* P	**Pb**	**12 22 49.2**	**-0.2**
	baz=269						
WTP				*e*S	**Sg**	**12 23 04.6**	**-0.2**
	baz=269						
LAY	**Lan-yu**	**1.19**	**196**	*e*P	**Pb**	**12 22 47.1**	**-2.4**
	baz=193						
TYC	**Yuchr**	**1.19**	**307**	*e*P	**Pb**	**12 22 49.3**	**-0.3**
	baz=305						
TYC				*e*S	**Sg**	**12 23 05.7**	**+0.5**
	baz=305						
CHN5	**Tsauling**	**1.19**	**290**	*e*P	**Pb**	**12 22 49.9**	**+0.3**
	baz=275						
CHN5				S	**Sg**	**12 23 05.8**	**+0.6**
	baz=275						
SGST	**Jiashian**	**1.21**	**265**	*e*P	**Pb**	**12 22 49.4**

NSTT	Nanjuang	1.65	330	eP		Pn	12 22 55.8	-0.3
	baz=329							
NSTT				eS		Sn	12 23 17.7	+0.2
	baz=329							
TWB1	Santiao Chiao	1.81	3	eP		Pn	12 22 59.2	+0.9
	baz=18							
TWB1				eS		Sn	12 23 21.1	-0.4
	baz=18							
HATJ	Hateruma jima	1.95	63	P		Pn	12 23 01.6	+1.4
HATJ				eS		Sn	12 23 24.3	-0.6
IRIF	Iriomote-Funau	2.03	55	P		Pn	12 23 02.9	+1.6
IRIF				eS		Sn	12 23 26.9	+0.1
JKRS	Kuro-shima	2.20	61	P		Pn	12 23 05.1	+1.5
JKRS				eS		Sn	12 23 31.1	+0.1
JIJ	Ishigaki jima	2.37	60	P		Pn	12 23 07.3	+1.4
JIJ				S		Sn	12 23 34.2	-0.9
JTJ	Tarama	2.95	60	eS		Sn	12 23 49.3	-0.1

CASC 03 12:26:16.6±2.2, 8°46N×83°04W, h3km, MD3.6, 1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	Volcan	0.48	46	eP	Pg	12 26 28.1	+2.3
BRU2				eS	Sg	12 26 35.2	+3.1
BAR1		0.82	341⇓	eP	Pg	12 26 33.3	+0.9
BAR1				eS	Sg	12 26 41.4	-1.8
BUS	Buena Vista	1.30	327	eP	Pg	12 26 41.3	-0.3
BUS				eS	Sg	12 26 58.4	-0.1
URSC	Urasca	1.55	332	eP	Pn	12 26 45.1	0.0
LAJ	Bijagual	1.76	323	eP	Pn	12 26 52.4	+4.4
CGA2	Cerro Gallo 2	2.09	318	eP	Pn	12 26 54.6	+2.0

IDC 03 12:27:10.0±3.3, 46°96N×152°83E, h70km±28km, mb3.5/6, mb1 3.7/8, mb1mx3.4/26, mbtmp3.5/8, MS3.6/1, Ms1 3.6/1, ms1mx2.6/23, Error ellipse: s-maj=46.7km s-min=21.8km az=152.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	6.91	25	P	Pn	12 28 48.0	-0.4
	0.1nm,0.3s,baz=194,slow=18,SNR=2.7						
ASAJ	Asahikawa	7.72	252	P	Pn	12 28 59.9	+0.3
	0.5nm,0.3s,baz=104,slow=15,SNR=4.7						
KSRS	Korea Array	20.67	252	P	P	12 31 44.4	+0.4
	1.2nm,0.9s,baz=51,slow=10,SNR=3.9						
BVAR	Borovoye Array	50.57	309	LR	LR	13 00 39.2	
	comp=Z,59nm,20.0s,baz=237,slow=40						
YKA	Yellowknife Ar	50.88	37	P	P	12 36 04.0	+0.7
	0.6nm,0.8s,baz=310,slow=8.7,SNR=4.8						
FINES	FINESS Array B	63.77	335	P	P	12 37 33.6	-0.4
	2.3nm,0.7s,baz=34,slow=8.4,SNR=6.0						
NOA	NORSAR Array B	67.97	341	P	P	12 38 01.6	+0.6
	0.6nm,0.7s,baz=26,slow=6.2,SNR=3.2						
AKASG	Malin Array Be	71.26	326	P	P	12 38 21.4	-0.1
	1.4nm,0.4s,baz=36,slow=5.6,SNR=3.3						
TXAR	Lajitas Array	77.56	60	P	P	12 38 58.2	-0.2
	0.3nm,0.5s,baz=306,slow=4.7,SNR=7.1						

*NEIC **03** 12:51:45.5, 32°77N×115°58W, h14km, ML2.9(PAS), After PAS.*

ECX 03 12:51:44.1±0.6, 32°78N×115°58W, h12km, MD2.9, ML3.0, 6C-3D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COK	Cook Ranch	0.14	298⇑	eP	Pg	12 51 48.9	+1.4
SNR	Schaffner Ranc	0.14	57⇓	eP	Pg	12 51 48.9	+1.4
SGL	Mount Signal	0.18	222	eP	Pg	12 51 49.5	+1.4
YUH	Yuha Desert	0.32	245⇑	eP	Pg	12 51 51.8	+1.2
CRR	Carrizo Plain	0.34	288⇑	eP	Pg	12 51 52.1	+1.1
COA	Coachella	0.39	78⇑	eP	Pg	12 51 53.4	+1.5
CPBX	Cerro Prieto	0.43	147	eP	Pg	12 51 51.0	-1.7
CPBX				eS	Sg	12 51 58.7	+0.3
CPBX			⇑	e		12 51 59.2	
	comp=N,8μm,0.3s						
RMX	La Rumorosa	0.46	247	eP	Pg	12 51 54.4	+1.3
EMX	El Mayor	0.84	160	eP	Pg	12 52 00.4	0.0
EMX				eS	Sg	12 52 12.3	+0.9
EMX				e		12 52 12.6	
	comp=N,317nm,0.4s						
RDX	Rancho Dawling	0.91	200⇓	eP	Pg	12 52 02.0	+0.4
RDX				eS	Sg	12 52 15.3	+1.9
RDX			⇓	e		12 52 16.8	
	comp=N,157nm,0.3s						
BAR	Barrett	0.93	264	ePg	Pg	12 52 02.2	+0.2
BAR				eSg	Sg	12 52 15.1	+1.0
ECNX	Esteban Cantu	1.42	218	ePN	Pn	12 52 08.6	-1.0
LDFC	Landfair	2.32	10	ePg	Pg	12 52 33.5	+4.8
LDFC				eSg	Sg	12 53 06.9	+8.1
GSC	Goldstone	2.71	338	ePn	Pn	12 52 26.8	-0.6
GSC				eSn	Sn	12 53 01.9	+1.7
ARUT	Antelope Range	5.29	19	ePg	Pg	12 53 29.2	+3.8
ARUT				eSg	Sg	12 54 40.9	+6.9

*ISCJB **03** 13:42:35.1±1.8, 15°65S±0°2×174°0W±0°2, h95km±18km, mb3.9/8, Error ellipse: s-maj=41.4km s-min=16.3km az=43.7*
*NEIC **03** 13:42:37.0±1.4, 15°61S×173°91W, h102km±13km, Error ellipse: s-maj=28.2km s-min=12.3km az=133.0*
*IDC **03** 13:42:36.9±2.6, 15°62S×173°91W, h100km±24km, mb3.8/8, mb1 4.0/9, mb1mx3.8/17, mbtmp3.8/9, Error ellipse: s-maj=36.1km s-min=16.0km az=136.0*

ISC 03 13:42:36.0±1.8, 15°55S±0°1×174°0W±0°2, h87km±17km, n25, σ0°79/13, mb3.9/8, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.66	53	P	Pn	13 43 18.5	+1.6
	98nm,0.3s,baz=36,slow=2.1,SNR=297						
AFI				S	Sn	13 43 47.6	-0.8
	233nm,0.3s,baz=107,slow=19,SNR=15						
AFI	Afiamalu	2.66	53	eP	Pn	13 43 18.4	+1.5
AFI				eS	Sn	13 43 47.6	-0.8
URZ	Urewera	23.98	197	P	P	13 47 41.4	-0.9
	4.1nm,0.3s,mb4.2,baz=317,slow=1.6,SNR=15						
URZ				S	S	13 51 54.1	+1.3
	4.2nm,0.7s,baz=162,slow=20,SNR=1.9						
STKA	Stephens Creek	43.50	240	P	P	13 50 30.3	-0.5
	1.4nm,0.7s,mb3.8,baz=115,slow=11,SNR=5.1						
ASAR	Alice Springs	49.55	252	P	P	13 51 17.9	-0.4
	2.4nm,0.5s,mb4.4,baz=86,slow=8.2,SNR=61						
PETK	Petropavlovsk-	72.58	343	P	P	13 53 53.2	-0.2
	2.2nm,0.8s,mb4.0,baz=134,slow=4.2,SNR=3.6						
NVAR	Mina Array Bea	74.79	42	P	P	13 54 07.1	+0.3
	1.5nm,0.9s,mb3.7,baz=227,slow=9.4,SNR=8.4						
TXAR	Lajitas Array	81.14	56	P	P	13 54 42.0	-0.1
	0.4nm,0.6s,mb3.5,baz=223,slow=5.1,SNR=5.4						
PDAR	Pinedale Array	82.73	42	P	P	13 54 49.6	-0.5
	1.3nm,0.8s,mb3.8,baz=222,slow=2.0,SNR=9.9						
CMAR	Chiang Mai Arr	92.13	288	P	P	13 55 37.3	+1.1
	0.4nm,0.7s,mb3.8,baz=72,slow=2.9,SNR=3.2						
ARCES	ARCESS Array B	124.65	352	PKP	PKPdf	14 01 23.5	-1.2
	2.2nm,0.8s,baz=57,slow=4.5,SNR=4.8						
GIVF	Givet	145.50	1	ePKP1	PKPbc	14 02 03.1	-0.9
BAIF	Baives	145.52	2	ePKP1	PKPbc	14 02 03.4	-0.7
	7.7nm,0.8s						
BRTR	Keskin Array B	145.90	320	PKPbc	PKPbc	14 02 05.5	-0.1
	2.2nm,0.7s,baz=94,slow=1.5,SNR=12						
GERES	GERESS Array B	146.18	351	PKPbc	PKPbc	14 02 04.6	-1.5
	0.4nm,0.3s,baz=278,slow=2.0,SNR=5.3						
ROSF	Rostrenen	146.40	11	ePKP1	PKPbc	14 02 07.0	+0.2
GRR	Gorron	146.74	8	ePKP1	PKPbc	14 02 07.2	-0.6
HAU	Haudompre	147.61	360	ePKP1	PKPbc	14 02 09.0	-1.2
LOR	Lormes	148.30	3	ePKP1	PKPbc	14 02 11.2	-0.9
	10.0nm,0.8s						
SSF	Saint Saulge	148.49	3	ePKP1	PKPbc	14 02 11.8	-0.8
	18nm,1.0s						
AVF	Avril sur Loir	148.75	4	ePKP1	PKPbc	14 02 12.0	-1.3
	9.5nm,0.9s						
CABF	La Chapelle	149.01	360	ePKP1	PKPbc	14 02 11.3	-2.6
TCF	Toulx Ste Croi	149.16	5	ePKP1	PKPbc	14 02 13.1	-1.2
RJF	Les Rejaudoux	150.07	6	ePKP1	PKPbc	14 02 15.3	-1.3
CAF	Calviac	150.50	6	ePKP1	PKPbc	14 02 16.8	-0.8

*IDC **03** 13:48:17.4±6.0, 2°46N×96°46E, h0km, mb3.6/4, mb1 3.5/6, mb1mx3.4/25, mbtmp3.5/6, ML2.5/1, Error ellipse: s-maj=123.4km s-min=35.3km az=22.0*

*ISCJB **03** 13:48:19.3±1.5, 2°4N±0°2×96°5E±0°1, h33km, mb3.7/4, Error ellipse: s-maj=26.5km s-min=16.3km az=33.7*
*NEIC **03** 13:48:21.8±1.1, 2°40N×96°53E, h35km, Error ellipse: s-maj=20.3km s-min=12.2km az=217.0*

ISC 03 13:48:21.8±1.5, 2°4N±0°2×96°5E±0°1, h35km, n8, σ0°41/8, mb3.7/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	2.42	80	Pn	Pn	13 48 59.5	+0.6
	1.1nm,0.3s,baz=250,slow=10,SNR=4.1						
KULM	Kulim	5.01	55	eP	Pn	13 49 34.2	-0.4
CMAR	Chiang Mai Arr	16.14	8	Pn	Pn	13 52 06.1	0.0
	baz=198,slow=11,SNR=5.0						
FITZ	Fitzroy Crossi	35.16	127	eP	P	13 55 12.3	-0.3
MKAR	Makanchi Array	45.93	346	P	P	13 56 41.8	+0.7
	0.6nm,0.6s,mb3.7,baz=142,slow=7.2,SNR=6.0						
SONM	Songino Array	46.06	9	P	P	13 56 41.8	-0.3
	0.2nm,0.4s,mb3.4,baz=204,slow=14,SNR=2.4						
KURK	Kurchatov	50.48	345	P	P	13 57 15.8	-0.4
	0.3nm,0.5s,mb3.6,baz=164,slow=7.3,SNR=2.7						
ZALV	Zalesovo Beam	52.28	351	P	P	13 57 29.8	+0.2
	0.9nm,0.5s,mb4.0,baz=165,slow=6.0,SNR=4.2						

*NEIC **03** 14:01:12.2±2.1, 23°21N×121°60E, h8km±13km, Error ellipse: s-maj=22.4km s-min=9.2km az=113.0*
*TAP **03** 14:01:14.9, 23°25N×121°41E, h22km, ML3.8, C*
*ISCJB **03** 14:01:14.1±0.3, 23°20N±0°02×121°52E±0°02, h21km±3km, Error ellipse: s-maj=3.5km s-min=2.8km az=43.4*
*JMA **03** 14:01:15.5±0.4, 23°30N×121°51E, h100km, M2.8*

ISC 03 14:01:14.0±0.4, 23°20N±0°02×121°50E±0°02, h15km±2km, n70, σ0°85/106, 14C-4D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKT	Chengkung	0.17	231⇓	eP	Pg	14 01 20.2	+2.1
	baz=187						
CHKT				eS	Sg	14 01 23.9	+3.1
	baz=187						
TWF1	Yuli	0.24	308⇑	iP	Pg	14 01 20.3	+1.1
	baz=315						
TWF1				S	Sg	14 01 24.0	+1.1
	baz=315						
YULB	Yu-li	0.27	315	ePg	Pg	14 01 19.4	-0.3
YULB				eSg	Sg	14 01 23.5	-0.1
EHY	Hungye	0.34	331⇑	iP	Pg	14 01 21.5	+0.5
	baz=330						
EHY				eS	Sg	14 01 26.3	+0.4
	baz=330						
ELDTW	Lidau	0.45	268⇑	iP	Pg	14 01 22.7	-0.2
	baz=254						
ELDTW				eS	Sg	14 01 27.7	-1.3
	baz=254						
TEGC	Jichi Village	0.50	4	eP	Pg	14 01 24.9	+0.9
	baz=19						
TWG	Pinlang	0.55	226	ePg	Pg	14 01 24.3	-0.5
TWG	Pinlang	0.55	226	⇓P	Pg	14 01 24.9	0.0
	baz=218						
TTN	Taitung	0.56	216	eP	Pg	14 01 25.2	+0.3
	baz=207						
YUS	Yu-Shan	0.58	299⇑	iP	Pg	14 01 25.5	+0.1
	baz=304						
YUS				eS	Sg	14 01 31.9	-1.2
	baz=304						
ESL	Shilin	0.61	354	eP	Pg	14 01 25.3	-0.7
	baz=352						
ALS	Alishan	0.71	296⇑	iP	Pg	14 01 27.8	-0.1
	baz=288						
ALS				eS	Sg	14 01 36.0	-1.3
	baz=288						
SSLB	Suanglung	0.77	319	ePg	Pg	14 01 27.7	-1.2
HWA	Hwalien	0.78	7	eP	Pg	14 01 29.1	0.0
	baz=2.0						
HWA				eS	Sg	14 01 40.7	+1.4
	baz=2.0						
ECL	Taimali	0.79	220	eP	Pg	14 01 28.0	-1.3
	baz=214						
TPUB	Ta-pu	0.81	277	ePg	Pg	14 01 29.2	-0.5
TPUB				eS	Sg	14 01 40.0	-0.4
WTP	Ta-pu	0.82	273⇑	iP	Pb	14 01 29.8	-0.1
	baz=270						
WTP				eS	Sg	14 01 40.1	-0.6
	baz=270						
CHN5	Tsauling	0.85	297	⇑P	Pb	14 01 30.4	-0.1
	baz=291						
CHN5				eS	Sb	14 01 41.9	+0.1
	baz=291						
SGST	Jiashian	0.86	262⇑	iP	Pb	14 01 30.5	0.0
	baz=258						
SGST				eS	Sb	14 01 41.5	-0.3
	baz=258						
SMLT	Sun Moon Lake	0.87	321⇑	iP	Pb	14 01 30.2	-0.7
	baz=329						
TWD	Chiawan	0.88	6	P	Pb	14 01 30.0	-0.9
	baz=357						
TWD				eS	Sb	14 01 41.4	-1.0
	baz=357						
CHN1	Nanshi	0.90	269⇑	iP	Pb	14 01 31.4	+0.1
	baz=266						
CHN1				eS	Sb	14 01 43.1	+0.1
	baz=266						
TYC	Yuchr	0.92	320⇑	iP	Pb	14 01 30.9	-0.7
	baz=330						
TYC				eS	Sb	14 01 44.0	+0.5
	baz=330						
SSD	Sandimen	0.92	241	eP	Pb	14 01 30.6	-1.0
	baz=233						
TWK	Hsinying	0.94	274	iP	Pb	14 01 31.8	-0.1
	baz=272						
TWK				eS	Sb	14 01 43.9	-0.2
	baz=272						
WHF	Hehuan Shan	0.96	347⇓	iP	Pb	14 01 31.5	-0.8
	baz=360						
NACB	Ninganchiao	0.97	5	ePg	Pg	14 01 30.6	-2.1
WGK	Gukeng	0.99	299	P	Pb	14 01 33.0	+0.2
	baz=299						
WGK				eS	Sb	14 01 45.7	0.0
	baz=299						
WNT	Mingjian	1.01	312⇑	iP	Pb	14 01 33.4	+0.3
	baz=313						
WNT				S	Sb	14 01 46.9	+0.7
	baz=313						
TAW	Tawu	1.01	214	eP	Pb	14 01 31.8	-1.3
	baz=209						
EAST	Anshuo	1.02	217	⇓P	Pb	14 01 32.0	-1.3
	baz=202						
CHY	Chiayi	1.03	287⇑	iP	Pb	14 01 33.9	+0.3
	baz=285						
CHY				eS	Sb	14 01 47.2	+0.3
	baz=285						
SGLT	Jiouru	1.05	243	eP	Pb	14 01 35.4	+1.6
	baz=240						
SGLT				eS	Sb	14 01 50.6	+3.3
	baz=240						
CHN3	Shinhua	1.06	263	eP	Pb	14 01 35.0	+1.1
	baz=271						
CHN3				eS	Sb	14 01 50.2	+2.7
	baz=271						
TWM1	Shoushan	1.07	249	eP	Pb	14 01 34.8	+0.7
	baz=246						
TWT	Tachien	1.09	344	eP	Pb	14 01 33.7	-0.8
	baz=334						
LAY	Lan-yu	1.16	178	eP	Pn	14 01 34.4	-1.2
	baz=164						
SCZT	Fangliau	1.16	225	eP	Pn	14 01 34.7	-0.9
	baz=209						
CHN8	Yiju	1.20	277	P	Pn	14 01 36.0	-0.1
	baz=275						
CHN8				S	Sb	14 01 52.5	+0.8
	baz=275						
SCLT	Jiali	1.21	269	eP	Pn	14 01 36.6	+0.4
	baz=267						
SCLT				S	Sb	14 01 53.3	+1.4
	baz=267						
TCU	Taichung	1.21	321	eP	Pn	14 01 36.1	-0.2
	baz=322						
TCU				eS	Sb	14 01 52.0	0.0
	baz=322						
NNS	Nan Shan	1.24	354	eP	Pn	14 01 35.7	-1.0
	baz=9.0						
ENA	Nanau	1.24	10	eP	Pn	14 01 35.4	-1.3
	baz=1.0						
WSF	Szhu	1.25	290	P	Pn	14 01 36.9	0.0
	baz=289						
WSF				S	Sb	14 01 52.9	-0.4
	baz=289						
WTCT	Ta-ch'eng	1.30	301	eP	Pn	14 01 37.6	+0.1
	baz=300						
WTCT				eS	Sb	14 01 54.5	-0.1
	baz=300						
TWQ1	Liyutan	1.32	330⇑	iP	Pn	14 01 38.7	+0.9
	baz=330						
TWQ1				eS	Sn	14 01 56.2	+1.0
	baz=330						
NSY	Sanyi	1.39	331	P	Pn	14 01 39.8	+1.1
	baz=331						
NSY				S	Sn	14 01 58.2	+1.4
	baz=331						
HEN	Hengchun	1.39	211	eP	Pn	14 01 38.8	0.0
	baz=200						
TWK1	Hengchun	1.41	207	eP	Pn	14 01 38.9	-0.2
	baz=191						
TSEB	Hengchuen, Pin	1.41	203	eP	Pn	14 01 39.6	+0.5
	baz=190						
ENTT	Nioudou	1.43	2	eP	Pn	14 01 38.8	-0.6
	baz=4.0						
TWC	Suao	1.43	13	eP	Pn	14 01 38.9	-0.5
	baz=2.0						
YHNB	Yeheng	1.46	355	eP	Pn	14 01 38.9	-0.9
NSK	Sanguang	1.47	355	eP	Pn	14 01 39.8	-0.1
	baz=8.0						
NSK				eS	Sn	14 01 57.4	-1.5
	baz=8.0						
NSTT	Nanjuang	1.49	342	eP	Pn	14 01 40.8	+0.6
	baz=342						
NSTT				eS	Sn	14 01 59.7	+0.3
	baz=342						
TWE	Neicheng	1.52	6	eP	Pn	14 01 40.7	+0.1
	baz=7.0						
TATO	Taipei	1.76	360	Pn	Pn	14 01 43.3	-0.7
TWA	Mucha	1.77	2	eP	Pn	14 01 44.6	+0.6
	baz=14						
PNG	Penghu	1.83	282	P	Pn	14 01 44.2	-0.6
	baz=265						
PNG				eS	Sn	14 02 06.2	-1.5
	baz=265						
TWB1	Santiao Chiao	1.85	14	eP	Pn	14 01 45.3	+0.2
	baz=3.0						
YOJ	Yonaguni jima	1.86	47	P	Pn	14 01 45.9	+0.6
YOJ				S	Sn	14 02 09.0	+0.4
NWF	Wu-fen Shan	1.88	8	eP	Pn	14 01 46.2	+0.7
	baz=9.0						
TWS1	Kuangyinshan	1.89	358	eP	Pn	14 01 46.6	+0.9
	baz=16						
TWY	Chenhua	2.06	2	eP	Pn	14 01 48.9	+0.8
	baz=3.0						
HATJ	Hateruma jima	2.27	68	P	Pn	14 01 51.8	+0.8
HATJ				S	Sn	14 02 18.2	-0.6
IRIF	Iriomote-Funau	2.33	61	P	Pn	14 01 52.3	+0.6
IRIF				S	Sn	14 02 20.9	+0.8
JKRS	Kuro-shima	2.52	65	P	Pn	14 01 55.0	+0.7
JIJ	Ishigaki jima	2.68	64	P	Pn	14 01 56.7	+0.2
JIJ				S	Sn	14 02 27.4	-1.3
KNM	Kinmen	3.06	294	eP	Pn	14 02 01.9	+0.1
	baz=291						
JTJ	Tarama	3.26	63	P	Pn	14 02 05.2	+0.7
JTJ				eS	Sn	14 02 43.5	+0.5

*IDC **03** 14:25:03.6±1.1, 34°65S×179°73W, h0km, mb4.1/2, mb1 4.3/3, mb1mx3.9/15, mbtmp4.2/3, ML4.2/1, MS3.5/2, Ms1 3.5/2, ms1mx3.1/15, Error ellipse: s-maj=41.0km s-min=30.2km az=77.0*
*NEIC **03** 14:25:04.7±0.8, 34°81S×179°51W, h10km, mb4.2/1, Error ellipse: s-maj=17.9km s-min=12.2km az=124.0*

ISC 03 14:25:11.4±2.9, 35°25±0°1×179°7W±0°3, h63km±22km, n21, σ0°94/16, mb4.0/3, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	Puketiti	3.33	209	P	Pn	14 26 02.1	+1.1
MWZ	Matawai	3.87	215	P	Pn	14 26 08.8	+0.5
URZ	Urewera	4.01	219	Pn	Pn	14 26 10.6	+0.3
	13nm,0.3s,baz=26,slow=5.7,SNR=53						
URZ				Sn	Sn	14 26 56.7	+0.6
	16nm,0.3s,baz=162,slow=16,SNR=7.3						
URZ	Urewera	4.01	219	eP	Pn	14 26 11.1	+0.8
URZ				eS	Sn	14 26 55.5	-0.6
KUZ	Kuaotunu	4.04	246	P	Pn	14 26 10.9	+0.2
MKAZ	Moumakai	4.59	244	P	Pn	14 26 19.4	+1.2
BKZ	Black Stump Fm	5.02	216	P	Pn	14 26 24.2	+0.1
OUZ	Omahuta	5.50	268	P	Pn	14 26 29.7	-1.0
MRZ	Mangatainoka R	6.63	213	P	Pn	14 26 43.9	-2.2
MRZ				S	Sx	14 27 57.8	
RPZ	Rata Peaks	11.13	217	Pn	Pn	14 27 45.9	-1.6
	1.0nm,0.3s,baz=16,slow=16,SNR=5.7						
RPZ				Sn	Sx	14 29 39.3	
	0.8nm,0.3s,baz=212,slow=19,SNR=5.7						
RPZ				LR	LR	14 32 16.7	
	comp=Z,238nm,20.0s,baz=170,slow=38						
RPZ	Rata Peaks	11.13	217	eP	Pn	14 27 46.5	-1.1
RPZ				Sn	Sx	14 29 39.3	
RPZ				LR	LR	14 32 16.7	
ASAR	Alice Springs	41.68	273	P	P	14 32 54.0	0.0
	1.9nm,0.7s,mb3.9,baz=117,slow=7.3,SNR=29						
WRAB	Tennant Creek	43.10	278	eP	P	14 33 05.9	+0.3
	2.6nm,0.5s,mb4.2						
QSPA	South Pole Qui	54.95	180	P	P	14 34 41.2	+5.9
	1.0nm,0.6s,mb4.0,baz=4.0,slow=16,SNR=14						
GUMO	Guam	59.00	319	LR	LR	14 58 30.6	
	comp=Z,33nm,18.3s,baz=354,slow=34						
KURK	Kurchatov	123.25	312	PKP	PKPdf	14 44 00.6	+0.1
	0.4nm,0.5s,baz=108,slow=1.5,SNR=4.3						
FINES	FINESS Array B	149.03	336	PKPbc	PKPbc	14 44 51.7	+0.3
	1.4nm,0.6s,baz=5.0,slow=4.4,SNR=5.0						
DBIC	Dimbokro	151.24	169	PKPab	PKPab	14 45 06.7	+0.6
	4.0nm,0.9s,baz=125,slow=7.6,SNR=3.3						
NOA	NORSAR Array B	153.19	348	PKPbc	PKPbc	14 45 01.9	+0.7
	1.5nm,0.9s,baz=14,slow=4.6,SNR=3.7						
BRTR	Keskin Array B	153.25	290	PKPbc	PKPbc	14 45 02.1	+0.1
	0.8nm,0.5s,baz=151,slow=4.3,SNR=4.6						
TORD	Torodi Ar. Bea	158.03	184	PKPab	PKPab	14 45 38.1	+3.2
	0.7nm,0.9s,baz=155,slow=2.1,SNR=3.0						

CASC 03 14:35:53.1±2.2, 12°11N×87°13W, h54km±20km, MD4.1, ML4.6, 1C-1D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	Copaltepe	0.53	82	eP	Pn	14 36 04.8	-0.1
CNGN	Cerro Negro	0.57	47	eP	Pn	14 36 05.7	+0.3
CNGN				eS	Sn	14 36 15.4	+1.0
MOMN	Momotombo	0.65	62	eP	Pn	14 36 06.8	+0.4
CSAN		0.69	84	eP	Pn	14 36 07.0	+0.1
APYN	Apoyeque	0.77	81	eP	Pn	14 36 08.1	+0.2
APYN				eS	Sn	14 36 20.2	+1.5
CRUN	El Crucero	0.82	99	eP	Pn	14 36 08.9	+0.4
MGAN	Managua	0.86	87	eP	Pn	14 36 08.5	-0.5
MGAN				eS	Sn	14 36 20.9	+0.2
HUEN		0.96	76	eP	Pn	14 36 10.3	-0.1
APON	Apoyo	1.05	100	eP	Pn	14 36 11.8	+0.2
CNCH	Conchagua	1.35	329	eP	Pn	14 36 15.6	-0.1
CNCH				eS	Sn	14 36 33.4	+0.9
SSN	San Juan del S	1.48	123	eP	Pn	14 36 16.9	-0.5
CONN	Concepcion	1.56	110	eP	Pn	14 36 18.4	-0.1
BLLM	Bellamira	1.71	321	eP	Pn	14 36 20.7	+0.1
BLLM			

SNJE	**San Jose**	**2.98 306**	*e*P	Pn	14 36 40.6	+2.6
SNJE			*e*S	Sn	14 37 15.7	+3.2
JCR	**Jicaral**	**2.99 138**	*e*P	Pn	14 36 38.5	+0.5
RTR	**El Retiro**	**3.03 306**	*e*P	Pn	14 36 40.2	+1.6
RTR			*e*S	Sn	14 37 14.7	+0.9
CGA2	**Cerro Gallo 2**	**3.34 128**	*e*P	Pn	14 36 44.9	+2.1
LAJ	**Bijagual**	**3.70 127**	*e*P	Pn	14 36 46.1	-1.6
QCR	**Quepos**	**3.95 132**	*e*P	Pn	14 36 52.4	+1.3
URSC	**Urasca**	**3.99 124**	*e*P	Pn	14 36 53.5	+1.8
BUS	**Buena Vista**	**4.17 127**	*e*P	Pn	14 36 56.6	+2.4
BUS			*e*S	Sn	14 37 41.5	-0.2
BAR1		**4.71 127⇑**	*e*P	Pn	14 37 03.7	+2.1
BAR1			*e*S	Sn	14 37 55.6	+0.7
BCIP	**Isla Barro Col**	**7.74 111**	*e*P	Pn	14 37 43.3	+0.1
MTDJ	**Mount Denham**	**11.07 56**	*e*P	Pn	14 38 45.5	+17

GUC 03 14:37:04.1±0.8, 21°08S×68°92W, h136km±6km, MD3.5, ML3.4, 4C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**0.53**	**274⇑**	*i*P	Pn	14 37 24.6	+0.6
PB01				*i* S	Sn	14 37 39.5	+0.4
PB01				AML	AML	14 37 41.7	
	comp=N,911nm,0.3s						
HMBC	**Humberston**	**1.21**	**311⇑**	*i*P	Pn	14 37 30.7	+1.2
HMBC				*i* S	Sn	14 37 50.6	+1.7
HMBC				AML	AML	14 37 51.3	
	comp=N,966nm,0.9s						
PB04	**Plate Boundary**	**1.29**	**204**	*e*P	Pn	14 37 36.7	+6.3
PB04				*i* S	Sn	14 38 00.7	+10
PB04				AML	AML	14 38 08.8	
	comp=N,272nm,0.4s						
PECH	**Pedro de Valdi**	**1.66**	**205⇓**	*i*P	Pn	14 37 35.8	+1.4
PECH				*i* S	Sn	14 37 59.1	+1.5
PECH				AML	AML	14 38 02.6	
	comp=N,429nm,0.7s						
PSGC	**Pisagua**	**1.86**	**322⇑**	*i*P	Pn	14 37 37.5	+0.7
PSGC				*i* S	Sn	14 38 02.6	+0.9
MNMC	**Miæe Miæ**	**2.04**	**342⇑**	*i*P	Pn	14 37 40.1	+1.2
MNMC				*i* S	Sn	14 38 07.5	+1.9
MNMC				AML	AML	14 38 10.6	
	comp=N,466nm,0.1s						
CEN1	**Los Morros**	**2.59**	**207**	*e*P	Pn	14 37 49.9	+4.3
CEN1				*i* S	Sn	14 38 24.2	+6.5

*ISCJB **03** 14:44:08.9±2.4, 17°7S±0°9×178°6W±0°5, h615km±20km, mb3.4/6, Error ellipse: s-maj=155.4km s-min=22.9km az=150.8*
*NEIC **03** 14:44:09.5±1.4, 17°70S×178°53W, h608km±10km, mb3.4/1, Error ellipse: s-maj=84.6km s-min=14.8km az=151.0*
*IDC **03** 14:44:09.5±6.0, 17°88S×178°42W, h609km±75km, mb2.9/5, mb1 3.3/5, mb1mx3.0/15, mbtmp2.9/5, Error ellipse: s-maj=127.5km s-min=25.1km az=152.0*

ISC 03 14:44:09.5±2.5, 17°8S±0°9×178°5W±0°5, h606km±19km, n10, σ0°19/7, mb3.4/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.30**	**271**	*e*P	**P**	**14 45 30.9**	**0.0**
STKA	**Stephens Creek**	**38.60**	**241**	P	**P**	**14 50 42.3**	**-0.1**
	1.9nm,0.8s,mb3.6,baz=11,slow=10,SNR=3.7						
WRAB	**Tennant Creek**	**44.56**	**259**	*e*P	**P**	**14 51 29.1**	**-0.2**
	0.7nm,0.5s,mb3.5						
ASAR	**Alice Springs**	**44.74**	**254**	P	**P**	**14 51 30.9**	**+0.3**
	3.1nm,0.5s,mb4.1,baz=88,slow=8.3,SNR=70						
ASAR				PcP	PcP	14 52 59.0	-0.5
	0.5nm,0.6s,baz=98,slow=4.3,SNR=7.9						
NVAR	**Mina Array Bea**	**79.41**	**44**	P	**P**	**14 55 14.1**	**+0.1**
	0.4nm,0.6s,mb2.9,baz=206,slow=6.0,SNR=3.4						
TXAR	**Lajitas Array**	**86.01**	**58**	P	**P**	**14 55 47.2**	**0.0**
	0.3nm,0.6s,mb3.1,baz=218,slow=7.4,SNR=5.3						
PDAR	**Pinedale Array**	**87.34**	**43**	P	**P**	**14 55 53.0**	**-0.1**
	0.4nm,0.5s,mb3.4,baz=181,slow=3.6,SNR=3.1						
BRTR	**Keskin Array B**	**144.66**	**315**	PKP	PKPdf	15 02 38.5	+0.2
	0.5nm,0.6s,baz=103,slow=3.3,SNR=3.6						
CLL	**Collm**	**145.36**	**347**	*e*PKPbc	PKPbc	15 02 40.0	-0.5
GERES	**GERESS Array B**	**147.50**	**345**	PKPbc	PKPbc	15 02 45.8	-0.6
	0.9nm,0.5s,baz=352,slow=2.7,SNR=4.4						

IDC 03 14:49:35.1±12.0, 15°45S×177°85W, h458km±146km, mb3.0/3, mb1 3.4/3, mb1mx3.0/15, mbtmp3.0/3, Error ellipse: s-maj=257.7km s-min=35.3km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**46.02**	**252**	P	P	14 57 16.3	-0.1
	1.5nm,0.6s,baz=85,slow=8.1,SNR=23						
NVAR	**Mina Array Bea**	**77.29**	**44**	P	P	15 00 41.5	+0.2
	0.7nm,0.7s,baz=228,slow=8.9,SNR=5.0						
TXAR	**Lajitas Array**	**84.23**	**58**	P	P	15 01 18.1	+0.4
	0.4nm,0.7s,baz=215,slow=6.1,SNR=4.9						
BRTR	**Keskin Array B**	**143.39**	**318**	PKP	PKPdf	15 08 16.4	-0.4
	1.3nm,0.7s,baz=66,slow=3.5,SNR=7.4						

*NIED **03** 15:03:00, 35°10N×137°00E, h23km, Mw3.5 Best double couple: M₀2.21000×1014 NP1:φs187.00000°, δ67.00000°, λ-85.00000°. NP2:φs355.00000°, δ24.00000°, λ-102.00000°.*
*JMA **03** 15:03:59.5±0.1, 35°05N×137°00E, h39km±1km, M3.6 Broadband fault plane solution: P waves. NP1: φs19.00000°, δ33.00000°, λ-68.00000°. NP2:φs173.00000°, δ59.00000°, λ-104.00000°. Principal axes: T Plg13.0000°, Azm273.0000°; N Plg12.0000°, Azm180.0000°; P Plg72.0000°, Azm50.0000°;*
JMA Felt II J1.
*ISCJB **03** 15:03:59.8±0.5, 35°03N±0°03×136°97E±0°06, h33km Error ellipse: s-maj=7.5km s-min=4.4km az=22.5*

ISC 03 15:03:59.9±0.6, 35°03N±0°04×136°96E±0°06, h34km±5km, n9, σ0°50/15, 3C-1D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAO	**Obara**	**0.34**	**45**	⇑P	**Pb**	**15 04 07.8**	**-0.4**
JAO				S	**Sb**	**15 04 13.7**	**-0.2**
JAA	**Atsumi**	**0.42**	**159**	P	**Pb**	**15 04 09.4**	**+0.1**
JAA				S	**Sb**	**15 04 16.1**	**+0.3**
TSUJ	**Tsu 2**	**0.55**	**235**	⇑P	**Pb**	**15 04 11.1**	**-0.2**
TSUJ				S	**Sb**	**15 04 19.7**	**+0.6**
JIE	**Ise**	**0.67**	**198**	P	**Pn**	**15 04 12.9**	**-0.1**
JIE				S	**Sn**	**15 04 22.4**	**+0.2**
JGM	**Miyama**	**0.70**	**343**	⇓P	**Pn**	**15 04 13.0**	**-0.4**
JGM				S	**Sn**	**15 04 22.6**	**-0.4**
JKN2	**Miekihoku**	**0.97**	**216**	⇑P	**Pn**	**15 04 16.8**	**-0.3**
TK04	**Tokai 4**	**0.99**	**130**	P	**Pn**	**15 04 16.9**	**-0.4**
SHZ3	**Shizuoka 3**	**1.02**	**88**	P	**Pn**	**15 04 17.3**	**-0.5**
MAT	**Matsushiro**	**1.82**	**33**	P	**Pn**	**15 04 29.1**	**+0.3**
MAT				S	**Sn**	**15 04 52.1**	**+1.5**

*CSEM **03** 15:04:31.6±0.9, 26°89N×35°12E, h40km, ML3.1, Error ellipse: s-maj=23.5km s-min=9.2km az=52.0*

SGS 03 15:04:30.9, 26°91N×35°01E, h28km, Red Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBAS	**Duba**	**0.91**	**70**	P	Pn	15 04 46.5	-1.3
DBAS	**Duba**	**0.91**	**70**	P	Pn	15 04 46.5	-1.2
DBAS				S	Sb	15 04 57.9	-1.8
WJHS		**1.25**	**98**	P	Pn	15 04 51.0	-1.5
WJHS		**1.25**	**98**	P	Pn	15 04 51.0	-1.4
BDAS	**Al Bad'**	**1.52**	**3**	S	Sn	15 05 12.7	-2.3
BDAS	**Al Bad'**	**1.52**	**3**	S	Sn	15 05 12.6	-2.4

*ISCJB **03** 15:20:38.3±0.2, 45°645N±0°010×6°84E±0°02, h15km±2km, Error ellipse: s-maj=2.2km s-min=1.7km az=178.5*
*CSEM **03** 15:20:39.4±0.1, 45°62N×6°89E, h10km, ML2.7/32, Error ellipse: s-maj=1.6km s-min=1.2km az=87.0*
*ROM **03** 15:20:39.7±0.2, 45°64N×6°94E, h10km±1km, Md2.5/10, Ml2.1/7, Error ellipse: s-maj=2.5km s-min=1.2km az=96.0*
*ZUR **03** 15:20:40.7, 45°64N×6°97E, h5km±2km, ML2.0/6*
*GEN **03** 15:20:40.3, 45°64N×6°93E, h10km, ML2.0*
*LDG **03** 15:20:40.4±0.0, 45°62N×6°93E, h2km, Md2.8/3, Ml2.8/23, Error ellipse: s-maj=1.0km s-min=0.7km az=98.0*

*NEIC **03** 15:20:40.4, 45°62N×6°93E, h2km, ML2.8(LDG), ML2.5(STR), ML2.1(ROM), After LDG.*
*STR **03** 15:20:42.8±0.2, 45°72N×7°05E, h5km, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 03 15:20:39.5±0.2, 45°622N±0°010×6°89E±0°02, h16km±2km, n129, σ0°85/236, 13C, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPL	**La Plagne**	**0.15**	**227**	*e*Pg	**Pg**	**15 20 44.1**	**+0.6**
	SNR=1.0						
LPL				*e*Sg	**Sg**	**15 20 46.7**	**+0.4**
	295nm,0.3s						
LPL	**La Plagne**	**0.15**	**227**	*e*Pg	**Pg**	**15 20 44.1**	**+0.6**
	SNR=1.0						
LPL				*e*Sg	**Sg**	**15 20 46.7**	**+0.4**
	147nm,0.3s						
LPG	**La Plagne**	**0.16**	**219**	*e*Pg	**Pg**	**15 20 44.2**	**+0.6**
	SNR=1.0						
LPG				*e*Sg	**Sg**	**15 20 46.9**	**+0.5**
	174nm,0.2s						
LPG	**La Plagne**	**0.16**	**219**	*e*Pg	**Pg**	**15 20 44.2**	**+0.6**
	SNR=1.0						
LPG				*e*Sg	**Sg**	**15 20 46.9**	**+0.5**
	87nm,0.2s						
MRGE	**Morge**	**0.19**	**38**	Pg	**Pg**	**15 20 43.8**	**-0.3**
MRGE				Sg	**Sg**	**15 20 46.8**	**-0.3**
	349nm,0.2s						
MRGE	**Morge**	**0.19**	**38**	Pg	**Pg**	**15 20 43.8**	**-0.3**
MRGE				Sg	**Sg**	**15 20 46.8**	**-0.3**
	349nm,0.2s						
LSD	**Lago del Serru**	**0.23**	**134**	Pg	**Pg**	**15 20 45.1**	**+0.4**
LSD				Sg	**Sg**	**15 20 48.3**	**0.0**
	240nm,0.3s						
EMV	**Vieux Emosson**	**0.44**	**0**	Pg	**Pg**	**15 20 48.8**	**+0.4**
EMV				Sg	**Sg**	**15 20 54.5**	**+0.1**
EMV	**Vieux Emosson**	**0.44**	**0**	⇑*i*Pg	**Pg**	**15 20 48.7**	**+0.3**
	214nm,0.3s						
EMV	**Vieux Emosson**	**0.44**	**0**	⇑*i*Pg	**Pg**	**15 20 48.7**	**+0.3**
	214nm,0.3s						
EMV				Sg	**Sg**	**15 20 54.5**	**+0.1**
SALAN	**Lac Salanfe**	**0.53**	**6**	⇑*i*Pg	**Pg**	**15 20 50.2**	**+0.3**
	40nm,0.3s						
SALAN				*e*Sg	**Sg**	**15 20 56.8**	**-0.2**
	40nm,0.3s						
SALAN	**Lac Salanfe**	**0.53**	**6**	⇑*i*Pg	**Pg**	**15 20 50.2**	**+0.3**
	40nm,0.3s						
SALAN				*e*Sg	**Sg**	**15 20 56.8**	**-0.2**
	40nm,0.3s						
RSP	**Reno Superiore**	**0.54**	**151**	Pg	**Pg**	**15 20 50.7**	**+0.5**
RSP				Sg	**Sg**	**15 20 58.5**	**+1.1**
	134nm,0.4s						
RSP	**Reno Superiore**	**0.54**	**151**	P	**Pg**	**15 20 50.7**	**+0.5**
RSP				S	**Sg**	**15 20 57.8**	**+0.4**
RSP				Sg	**Sg**	**15 20 58.5**	**+1.1**
	134nm,0.4s						
DIX	**Grande Dixence**	**0.58**	**38**	Pg	**Pg**	**15 20 51.0**	**0.0**
DIX				Sg	**Sg**	**15 20 58.2**	**-0.6**
DIX	**Grande Dixence**	**0.58**	**38**	⇑*i*Pg	**Pg**	**15 20 51.0**	**0.0**
	303nm,0.2s						
DIX	**Grande Dixence**	**0.58**	**38**	⇑*i*Pg	**Pg**	**15 20 51.0**	**0.0**
	303nm,0.2s						
DIX				Sg	**Sg**	**15 20 58.2**	**-0.6**
BNI	**Bardonecchia**	**0.59**	**195**	Pg	**Pg**	**15 20 51.8**	**+0.7**
BNI				Sg	**Sg**	**15 21 00.1**	**+1.1**
	41nm,0.3s						
BNI	**Bardonecchia**	**0.59**	**195**	Pg	**Pg**	**15 20 51.8**	**+0.7**
BNI				Sg	**Sg**	**15 21 00.1**	**+1.1**
	41nm,0.3s						
TRAV	**Traversella**	**0.61**	**100**	Pg	**Pg**	**15 20 51.8**	**+0.3**
TRAV				Sg	**Sg**	**15 20 59.0**	**-0.6**
	87nm,0.2s						
TRAV	**Traversella**	**0.61**	**100**	P	**Pg**	**15 20 51.5**	**0.0**
TRAV	**Traversella**	**0.61**	**100**	Pg	**Pg**	**15 20 51.8**	**+0.3**
TRAV				S	**Sg**	**15 20 59.0**	**-0.6**
GRYON	**Gryon**	**0.65**	**13**	⇑*i*Pg	**Pg**	**15 20 52.5**	**+0.3**
	27nm,0.5s						
GRYON	**Gryon**	**0.65**	**13**	⇑*i*Pg	**Pg**	**15 20 52.5**	**+0.3**
	27nm,0.5s						
AIGLE	**Aigle**	**0.72**	**3**	⇑*i*Pg	**Pg**	**15 20 53.8**	**+0.2**
	107nm,0.6s						
AIGLE	**Aigle**	**0.72**	**3**	⇑*i*Pg	**Pg**	**15 20 53.8**	**+0.2**
	107nm,0.6s						
ORO	**Oropa**	**0.76**	**89**	Pg	**Pg**	**15 20 54.3**	**-0.1**
ORO				Sg	**Sg**	**15 21 04.8**	**+0.4**
	52nm,0.2s						
ORO	**Oropa**	**0.76**	**89**	Pg	**Pg**	**15 20 54.3**	**-0.1**
ORO				Sg	**Sg**	**15 21 04.8**	**+0.4**
	52nm,0.2s						
SENIN	**Lac Senin/Sane**	**0.79**	**21**	⇑*i*Pg	**Pg**	**15 20 55.0**	**0.0**
	85nm,0.3s						
SENIN				*e*Sg	**Sg**	**15 21 05.3**	**-0.1**
	85nm,0.3s						
SENIN	**Lac Senin/Sane**	**0.79**	**21**	⇑*i*Pg	**Pg**	**15 20 55.0**	**0.0**
	85nm,0.3s						
SENIN				*e*Sg	**Sg**	**15 21 05.3**	**-0.1**
	85nm,0.3s						
MMK	**Mattmark**	**0.86**	**60**	Pg	**Pg**	**15 20 56.0**	**-0.3**
MMK				Sg	**Sg**	**15 21 06.3**	**-1.3**
MMK	**Mattmark**	**0.86**	**60**	Pg	**Pg**	**15 20 56.0**	**-0.3**
MMK				Sg	**Sg**	**15 21 06.3**	**-1.3**
MBDF	**Montbardon**	**0.90**	**186**	*e*Pg	**Pg**	**15 20 57.4**	**+0.5**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**15 21 09.0**	**+0.3**
	44nm,0.3s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**1.00**	**226**	*e*Pg	**Pg**	**15 20 59.6**	**+0.7**
	SNR=1.0						
ORIF				*e*Sg	**Sg**	**15 21 13.0**	**+0.9**
	51nm,0.3s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**1.00**	**226**	*e*Pg	**Pg**	**15 20 59.6**	**+0.7**
	SNR=1.0						
ORIF				*e*Sg	**Sg**	**15 21 13.0**	**+0.9**
	25nm,0.3s,SNR=1.0						
PZZ	**Stroppo**	**1.13**	**172**	S	**Sb**	**15 21 14.8**	**-0.1**
CABF	**La Chapelle**	**1.14**	**331**	*e*Pg	**Pg**	**15 21 02.0**	**+0.5**
CABF	**La Chapelle**	**1.14**	**331**	*e*P	**Pb**	**15 21 03.6**	**+2.8**
	SNR=1.0						
CABF				*e*Sg	**Sg**	**15 21 17.0**	**+0.7**
	61nm,0.4s,SNR=1.0						
CABF	**La Chapelle**	**1.14**	**331**	*e*P	**Pb**	**15 21 03.6**	**+2.8**
CABF				*e*Sg	**Sg**	**15 21 17.0**	**+0.7**
CABF	**La Chapelle**	**1.14**	**331**	*e*Pg	**Pg**	**15 21 02.0**	**+0.5**
CABF				*e*Sg	**Sg**	**15 21 17.0**	**+0.7**
	30nm,0.4s,SNR=1.0						
DOI	**San Damiano**	**1.15**	**167**	Pg	**Pg**	**15 21 01.1**	**-0.5**
DOI				Sg	**Sg**	**15 21 17.1**	**+0.6**
	61nm,0.6s						
DOI	**San Damiano**	**1.15**	**167**	Pg	**Pg**	**15 21 01.1**	**-0.5**
DOI				Sg	**Sg**	**15 21 17.1**	**+0.6**
	61nm,0.6s						
PCP	**Piancastagn**	**1.59**	**132**	P	**Pn**	**15 21 07.2**	**+0.2**
PCP				S	**Sn**	**15 21 25.8**	**-1.4**
TOUF	**Mont Tournerai**	**1.63**	**171**	Pn	**Pn**	**15 21 11.5**	**+4.0**
TOUF				Pg	**Pg**	**15 21 14.7**	**+3.9**
TOUF				Sg	**Sg**	**15 21 39.4**	**+7.5**
TOUF	**Mont Tournerai**	**1.63**	**171**	Pn	**Pn**	**15 21 11.5**	**+4.0**
MONE	**Monesi**	**1.66**	**158**	P	**Pn**	**15 21 08.4**	**+0.5**
MONE				S	**Sn**	**15 21 27.5**	**-1.4**
AUTN	**L'Aution**	**1.67**	**167**	Pn	**Pn**	**15 21 11.5**	**+3.4**
AUTN				Pg	**Pg**	**15 21 16.0**	**+4.4**
AUTN	**L'Aution**	**1.67**	**167**	Pn	**Pn**	**15 21 11.5**	**+3.4**
SAOF	**Saorge**	**1.70**	**164**	Pg	**Pg**	**15 21 17.1**	**+4.9**
SAOF				Sg	**Sg**	**15 21 41.8**	**+7.5**
SAOF	**Saorge**	**1.70**	**164**	Pg	**Pg**	**15 21 17.1**	**+4.9**
LOMF	**Lomont**	**1.73**	**358**	Pg	**Pg**	**15 21 13.6**	**+0.9**
LOMF	**Lomont**	**1.73**	**358**	Pg	**Pg**	**15 21 13.6**	**+0.9**
MVIF	**Mont Vial**	**1.73**	**174**	Pn	**Pn**	**15 21 12.8**	**+3.8**
MVIF	**Mont Vial**	**1.73**	**174**	Pn	**Pn**	**15 21 12.8**	**+3.8**
VIVF	**Saint-Julien-l**	**1.75**	**245**	*e*Pg	**Pg**	**15 21 13.4**	**+0.4**
	SNR=1.0						
VIVF				*e*Sn	**Sn**	**15 21 32.1**	**+1.1**
	SNR=1.0						
VIVF				*e*Sg	**Sg**	**15 21 36.1**	**+0.4**
	20nm,0.4s,SNR=1.0						
VIVF	**Saint-Julien-l**	**1.75**	**245**	*e*Pg	**Pg**	**15 21 13.4**	**+0.4**
	SNR=1.0						
VIVF				*e*Sn	**Sn**	**15 21 32.1**	**+1.1**
	SNR=1.0						
VIVF				*e*Sg	**Sg**	**15 21 36.1**	**+0.4**
	10.0nm,0.4s,SNR=1.0						
LUCF	**Luceram**	**1.76**	**169**	Pn	**Pn**	**15 21 14.3**	**+5.0**
LUCF	**Luceram**	**1.76**	**169**	Pg	**Pg**	**15 21 17.6**	**+4.3**
LUCF				Sg	**Sg**	**15 21 42.1**	**+6.0**
LUCF	**Luceram**	**1.76**	**169**	Pn	**Pn**	**15 21 14.3**	**+5.0**
LUCF	**Luceram**	**1.76**	**169**	Pg	**Pg**	**15 21 17.6**	**+4.3**
SBF	**Sospel**	**1.80**	**167**	*e*Pg	**Pg**	**15 21 13.7**	**-0.4**
	SNR=1.0						
SBF				*e*Sg	**Sg**	**15 21 36.8**	**-0.6**
	63nm,0.6s						
SBF	**Sospel**	**1.80**	**167**	*e*Pg	**Pg**	**15 21 13.7**	**-0.4**
	SNR=1.0						
SBF				*e*Sg	**Sg**	**15 21 36.8**	**-0.6**
	32nm,0.6s						
RONM	**Roccetta Nervi**	**1.82**	**164**	P	**Pn**	**15 21 09.7**	**-0.4**
RONM				S	**Sn**	**15 21 29.6**	**-3.1**
IMI	**Imperia**	**1.85**	**157**	P	**Pn**	**15 21 10.4**	**-0.2**
IMI				S	**Sn**	**15 21 30.8**	**-2.8**
NEGI	**Seborga**	**1.86**	**162**	P	**Pn**	**15 21 10.0**	**-0.7**
NEGI				S	**Sn**	**15 21 31.0**	**-2.9**
BBS	**Basel-Blauen**	**1.89**	**13**	Pg	**Pg**	**15 21 16.4**	**+0.6**
BBS				Sg	**Sg**	**15 21 41.0**	**+0.6**
BBS	**Basel-Blauen**	**1.89**	**13**	Pg	**Pg**	**15 21 16.4**	**+0.6**
BBS				Sg	**Sg**	**15 21 41.0**	**+0.6**
SMRF	**Simiane la Rot**	**1.90**	**210**	*e*Pg	**Pg**	**15 21 15.9**	**0.0**
SMRF				*e*Sg	**Sg**	**15 21 40.5**	**0.0**
	5.0nm,0.4s						
FRF	**La Foret Royal**	**2.07**	**185**	*e*Pg	**Pg**	**15 21 18.5**	**-0.7**
	SNR=1.0						
FRF				*e*Sg	**Sg**	**15 21 45.6**	**-0.4**
	14nm,0.4s,SNR=1.0						
FRF	**La Foret Royal**	**2.07**	**185**	*e*Pg	**Pg**	**15 21 18.5**	**-0.7**
	SNR=1.0						
FRF				*e*Sg	**Sg**	**15 21 45.6**	**-0.4**
	7.1nm,0.4s,SNR=1.0						
HINF	**Hinteralfeld**	**2.20**	**359**	*e*Pg	**Pg**	**15 21 21.4**	**-0.2**
	SNR=1.0						
HINF				*e*Sg	**Sg**	**15 21 49.4**	**-0.7**
	11nm,0.4s,SNR=1.0						
HINF	**Hinteralfeld**	**2.20**	**359**	*e*Pn	**Pn**	**15 21 16.2**	**+0.9**
HINF				*e*Pg	**Pg**	**15 21 21.4**	**-0.2**
HINF				*e*Sg	**Sg**	**15 21 49.4**	**-0.7**
HINF	**Hinteralfeld**	**2.20**	**359**	*e*Pn	**Pn**	**15 21 16.2**	**+0.9**
HINF				*e*Sg	**Sg**	**15 21 49.4**	**-0.7**
	5.7nm,0.4s,SNR=1.0						
MOF	**Molkenrain**	**2.24**	**4**	Pg	**Pg**	**15 21 23.1**	**+0.7**
MOF				Sg	**Sg**	**15 21 52.3**	**+0.9**
LMR	**La Mourre**	**2.30**	**187**	*e*Pg	**Pg**	**15 21 23.1**	**-0.6**
	SNR=1.0						
LMR				*e*Sg	**Sg**	**15 21 53.0**	**-0.6**
	8.8nm,0.4s,SNR=1.0						
SMF	**Signal de Mont**	**2.36**	**297**	*e*Pn	**Pn**	**15 21 18.2**	**+0.7**
SMF	**Signal de Mont**	**2.36**	**297**	*e*P	**Pn**	**15 21 20.7**	**+3.2**
SMF	**Signal de Mont**	**2.36**	**297**	*e*Pg	**Pg**	**15 21 24.7**	**0.0**
	SNR=1.0						
SMF				*e*Sg	**Sg**	**15 21 55.1**	**-0.1**
	14nm,0.2s,SNR=1.0						
SMF	**Signal de Mont**	**2.36**	**297**	*e*P	**Pn**	**15 21 20.7**	**+3.2**
SMF				*e*Pg	**Pg**	**15 21 24.7**	**0.0**
SMF				*e*Sg	**Sg**	**15 21 55.1**	**-0.1**
SMF	**Signal de Mont**	**2.36**	**297**	*e*Pn	**Pn**	**15 21 18.2**	**+0.7**
SMF	**Signal de Mont**	**2.36**	**297**	*e*P	**Pn**	**15 21 20.7**	**+3.2**
SMF	**Signal de Mont**	**2.36**	**297**	*e*Pg	**Pg**	**15 21 24.7**	**0.0**
	SNR=1.0						
SMF				*e*Sg	**Sg**	**15 21 55.1**	**-0.1**
	7.1nm,0.2s,SNR=1.0						
FELD	**Feldberg im Sc**	**2.38**	**18**	Pn	**Pn**	**15 21 19.7**	**+1.9**
FELD				Pg	**Pg**	**15 21 24.9**	**-0.3**
FELD				Sg	**Sg**	**15 21 55.5**	**-0.5**
FELD	**Feldberg im Sc**	**2.38**	**18**	Pn	**Pn**	**15 21 19.7**	**+1.9**
HAU	**Haudompre**	**2.41**	**351**	*e*Pg	**Pg**	**15 21 25.4**	**-0.4**
	SNR=1.0						
HAU				*e*Sn	**Sn**	**15 21 47.3**	**-0.2**
	SNR=1.0						
HAU				*e*Sg	**Sg**	**15 21 56.4**	**-0.7**
	8.5nm,0.2s,SNR=1.0						
HAU	**Haudompre**	**2.41**	**351**	*e*Pn	**Pn**	**15 21 19.3**	**+1.0**
HAU				*e*Pg	**Pg**	**15 21 25.4**	**-0.4**
HAU				*e*Sn	**Sn**	**15 21 47.3**	**-0.2**
HAU				*e*Sg	**Sg**	**15 21 56.4**	**-0.7**
HAU	**Haudompre**	**2.41**	**351**	*e*Pg	**Pg**	**15 21 25.4**	**-0.4**
	SNR=1.0						
HAU				*e*Sn	**Sn**	**15 21 47.3**	**-0.2**
	SNR=1.0						
HAU				*e*Sg	**Sg**	**15 21 56.4**	**-0.7**
	4.2nm,0.2s,SNR=1.0						
ECH	**Echery**	**2.60**	**4**	Pg	**Pg**	**15 21 30.7**	**+1.3**
ECH	**Echery**	**2.60**	**4**	Pg	**Pg**	**15 21 30.7**	**+1.3**
DAVA	**Damuels**	**2.65**	**50**	⇑*i*Sn	**Sg**	**15 22 05.8**	**+1.1**
	6.1nm,0.4s						
DAVA	**Damuels**	**2.65**	**50**	Pg	**Pg**	**15 21 30.2**	**-0.1**
	1.2nm,0.2s						
DAVA	**Damuels**	**2.65**	**50**	Pg	**Pg**	**15 21 30.2**	**-0.1**
	1.2nm,0.2s						
DAVA				Sg	**Sg**	**15 22 05.8**	**+1.1**
	6.1nm,0.4s						
LASF	**Ste Croix**	**2.66**	**235**	*e*Pg	**Pg**	**15 21 30.0**	**-0.4**
LASF				*e*Sg	**Sg**	**15 22 04.5**	**-0.3**
	2.5nm,0.3s						
LASF	**Ste Croix**	**2.66**	**235**	*e*Pg	**Pg**	**15 21 30.0**	**-0.4**
LASF				*e*Sg	**Sg**	**15 22 04.5**	**-0.3**
	1.2nm,0.3s						
LOR	**Lormes**	**2.67**	**309**	*e*P	Pn	**15 21 25.5**	**+3.7**
	baz=128						
LOR	**Lormes**	**2.67**	**309**	*e*Pg	**Pg**	**15 21

BGF				*e*Sg		**Sg**	**15 22 14.2**	**-0.6**
	35nm,0.3s,SNR=1.0							
BGF	**Bois d'Agland**	**2.97**	**290**	*e*P		**Pn**	**15 21 29.7**	**+3.8**
BGF				*e*Pg		**Pg**	**15 21 35.9**	**-0.5**
BGF				*e*Sg		**Sg**	**15 22 14.2**	**-0.6**
BGF	**Bois d'Agland**	**2.97**	**290**	*e*Pn		**Pn**	**15 21 26.9**	**+1.0**
BGF	**Bois d'Agland**	**2.97**	**290**	*e*P		**Pn**	**15 21 29.7**	**+3.8**
BGF	**Bois d'Agland**	**2.97**	**290**	*e*Pg		**Pg**	**15 21 35.9**	**-0.5**
	SNR=1.0							
BGF				*e*Sg		**Sg**	**15 22 14.2**	**-0.6**
	18nm,0.3s,SNR=1.0							
MEZF	**Maizieres J'vi**	**3.14**	**337**	*e*Pg		**Pg**	**15 21 38.6**	**-1.1**
MEZF				*e*Sg		**Sg**	**15 22 19.4**	**-1.1**
	6.0nm,0.4s							
MEZF	**Maizieres J'vi**	**3.14**	**337**	*e*Pg		**Pg**	**15 21 38.6**	**-1.1**
MEZF				*e*Sg		**Sg**	**15 22 19.4**	**-1.1**
	3.0nm,0.4s							
TCF	**Toulx Ste Croi**	**3.33**	**283**	*e*Pg		**Pg**	**15 21 42.9**	**-0.5**
	SNR=1.0							
TCF				*e*Sg		**Sg**	**15 22 26.1**	**-0.5**
	4.4nm,0.3s							
TCF	**Toulx Ste Croi**	**3.33**	**283**	*e*Pg		**Pg**	**15 21 42.9**	**-0.5**
	SNR=1.0							
MTLF	**Montolieu**	**4.05**	**237**	*e*Pg		**Pg**	**15 21 55.4**	**-1.6**
	SNR=1.0							
MTLF				*e*Sg		**Sg**	**15 22 48.1**	**-1.4**
	1.5nm,0.3s							
MTLF	**Montolieu**	**4.05**	**237**	*e*Pg		**Pg**	**15 21 55.4**	**-1.6**
	SNR=1.0							
MTLF				*e*Sg		**Sg**	**15 22 48.1**	**-1.4**
	0.8nm,0.3s							

*IDC **03** 15:25:38.2±1.3, 11°.17S×163°.03E, h0km, mb4.2/9, mb1 4.4/9, mb1mx4.2/16, mbtmp4.2/9, MS3.7/5, Ms1 3.7/5, ms1mx3.4/26, Error ellipse: s-maj=46.5km s-min=22.4km az=134.0*
*ISCJB **03** 15:25:43.6±1.9, 11°.32S±0°.08×163°.1E±0°.1, h51km±15km, mb4.2/13, MS3.6/5, Error ellipse: s-maj=18.1km s-min=11.7km az=151.9*
*NEIC **03** 15:25:44.8±1.8, 11°.22S×163°.07E, h47km±16km, mb4.0/3, Error ellipse: s-maj=16.6km s-min=15.2km az=58.0*
ISC 03 15:25:45.6±1.6, 11°.27S±0°.08×163°.05E±0°.10, h53km±13km, n30, σ1§02/26, mb4.2/13, MS3.6/5, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.56**	**301**	*e*Pn	**Pn**	**15 26 37.1**	**-1.3**
HNR				*e*S	**Sn**	**15 27 20.6**	**+1.4**
DZM	**Mont Dzumac**	**11.22**	**164**	*e*P	**Pn**	**15 28 23.3**	**-0.1**
CTA	**Charters Tower**	**18.38**	**239**	P	**Pn**	**15 29 58.5**	**+1.7**
	0.4nm,0.3s,baz=73,slow=12,SNR=8.5						
CTAO	**Charters Tower**	**18.38**	**239**	*e*P	**Pn**	**15 29 55.5**	**-1.3**
	11nm,0.9s						
COEN	**Coen**	**19.58**	**260**	*e*P	**Pn**	**15 30 11.2**	**+0.1**
	148nm,1.1s						
ARMA	**Armidale**	**21.81**	**207**	*e*P	**P**	**15 30 37.1**	**+3.8**
AFI	**Afiamalu**	**24.70**	**99**	LR	LR	15 39 29.6	
	comp=Z,111nm,19.6s,MS3.4,baz=132,slow=34						
RAO	**Raoul Island**	**25.21**	**138**	LR	LR	15 39 19.7	
	comp=Z,225nm,18.6s,MS3.7,baz=303,slow=32						
STKA	**Stephens Creek**	**28.50**	**221**	*e*P	**P**	**15 31 36.8**	**+0.8**
	5.8nm,0.8s,mb4.4						
STKA	**Stephens Creek**	**28.50**	**221**	P	**P**	**15 31 37.2**	**+1.2**
	7.5nm,0.8s,mb4.5,baz=20,slow=8.4,SNR=15						
STKA	**Stephens Creek**	**28.50**	**221**	*e*P	**P**	**15 31 37.2**	**+1.2**
	1.6nm,0.9s,mb3.8						
WRAB	**Tennant Creek**	**28.92**	**249**	*e*P	**P**	**15 31 39.0**	**-0.9**
	3.4nm,0.8s,mb4.1						
KAKA	**Kakadu**	**29.97**	**264**	*e*P	**P**	**15 31 47.9**	**-1.3**
	5.6nm,0.5s,mb4.5						
ASAR	**Alice Springs**	**30.34**	**242**	P	**P**	**15 31 51.5**	**-1.0**
	2.2nm,0.5s,mb4.1,baz=64,slow=10,SNR=65						
TOO	**Toolangi**	**30.57**	**208**	*e*P	**P**	**15 31 56.2**	**+1.9**
GUMO	**Guam**	**30.58**	**323**	LR	LR	15 40 40.1	
	comp=Z,70nm,21.2s,MS3.3,slow=30						
FITZ	**Fitzroy Crossi**	**36.77**	**255**	*e*P	**P**	**15 32 46.6**	**-1.8**
	7.9nm,0.9s,mb4.5						
FITZ	**Fitzroy Crossi**	**36.77**	**255**	P	**P**	**15 32 46.9**	**-1.5**
	5.7nm,0.9s,mb4.4,baz=96,slow=7.0,SNR=11						
FITZ	**Fitzroy Crossi**	**36.77**	**255**	*e*P	**P**	**15 32 47.0**	**-1.4**
MEEK	**Meekatharra**	**44.48**	**243**	*e*P	**P**	**15 33 52.1**	**+0.2**
TGY	**Tagaytay City**	**48.77**	**300**	LR	LR	15 51 21.7	
	comp=Z,1.9nm,21.9s,baz=333,slow=32						
KSRS	**Korea Array**	**58.61**	**328**	LR	LR	15 58 48.7	
	comp=Z,62nm,19.6s,MS3.7,baz=122,slow=34						
CMAR	**Chiang Mai Arr**	**69.79**	**295**	P	**P**	**15 36 50.7**	**-0.1**
	0.7nm,0.8s,mb3.6,baz=107,slow=4.9,SNR=6.0						
CMAR				LR	LR	16 07 04.0	
	comp=Z,74nm,18.1s,MS4.0,baz=342,slow=36						
LZH	**Lanzhou**	**72.97**	**313**	*e*P	**P**	**15 37 10.0**	**+0.3**
LZH				pP	pP	15 37 15.3	-9.4
LZH				sP	sP	15 37 18.8	-12
LZH				pmax	pmax		
	comp=Z,22nm,1.5s,mb4.9						
LZH				pmax	pmax		
	comp=Z,89nm,4.3s						
SONM	**Songino Array**	**77.30**	**325**	P	**P**	**15 37 34.6**	**+0.2**
	comp=Z,1.8nm,0.8s,mb4.0,baz=143,slow=6.0,SNR=10						
GTA	**Gaotai**	**77.32**	**315**	*e*P	**P**	**15 37 35.1**	**+0.4**
GTA				pP	pP	15 37 39.9	-10
GTA				PcP	PcP	15 37 42.3	-2.8
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.9						
NVAR	**Mina Array Bea**	**88.19**	**50**	P	**P**	**15 38 30.5**	**-0.6**
	comp=Z,0.5nm,0.7s,mb3.9,baz=242,slow=5.8,SNR=4.2						
MKAR	**Makanchi Array**	**91.88**	**317**	P	**P**	**15 38 47.3**	**-0.9**
	comp=Z,1.2nm,0.7s,mb4.3,baz=71,slow=5.3,SNR=6.3						
ZALV	**Zalesovo Beam**	**92.20**	**325**	P	**P**	**15 38 50.9**	**+1.5**
	comp=Z,0.4nm,0.4s,mb4.1,baz=96,slow=4.3,SNR=2.9						
YKA	**Yellowknife Ar**	**96.39**	**28**	P	**P**	**15 39 08.7**	**+0.3**
	comp=Z,0.3nm,0.6s,mb3.9,baz=244,slow=5.4,SNR=2.9						

*NEIC **03** 15:33:47.0, 32°.78N×115°.58W, h14km, ML2.9(ECX), ML2.8(PAS), After PAS.*
ECX 03 15:33:47.6±0.7, 32°.79N×115°.58W, h7km, MD2.9, ML2.9, 6C-4D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNR	**Schaffner Ranc**	**0.14**	**60**	⇑*i*P	Pg	15 33 50.5	0.0
COK	**Cook Ranch**	**0.14**	**294**	⇑*i*P	Pg	15 33 50.5	-0.1
SGL	**Mount Signal**	**0.19**	**221**	⇓*i*P	Pg	15 33 51.1	-0.4
YUH	**Yuha Desert**	**0.33**	**244**	⇑*i*P	Pg	15 33 53.3	-0.6
CRR	**Carrizo Plain**	**0.34**	**286**	⇑*i*P	Pg	15 33 53.7	-0.6
COA	**Coachella**	**0.39**	**79**	⇑*i*P	Pg	15 33 55.0	-0.2
GLA	**Glamis**	**0.68**	**68**	*e*Pg	Pg	15 33 59.2	-1.5
GLA				*e*Sg	Sg	15 34 08.9	-0.7
EMX	**El Mayor**	**0.85**	**160**	*e*P	Pg	15 34 02.0	-2.0
EMX				*e*S	Sg	15 34 13.9	-1.1
EMX				⇓*e*		15 34 15.3	
	comp=N,221nm,0.4s						
EMX				⇑*e*		15 34 15.3	
	comp=E,417nm,0.7s						
RDX	**Rancho Dawling**	**0.92**	**200**	*e*P	Pg	15 34 03.6	-1.6
RDX				*e*S	Sg	15 34 15.8	-1.3
RDX				⇓*e*		15 34 18.6	
	comp=E,350nm,0.7s						
RDX				⇓*e*		15 34 20.7	
	comp=N,149nm,0.4s						
BAR	**Barrett**	**0.93**	**263**	*e*Pg	Pg	15 34 03.7	-1.7
BAR				*e*Sg	Sg	15 34 16.0	-1.6
CBX	**Cerro Bola**	**1.04**	**243**	*e*P	Pg	15 34 06.2	-1.3
CBX				*e*S	Sg	15 34 20.1	-0.8
PFO	**Pinyon Flat Ob**	**1.10**	**318**	*e*P	Pg	15 34 05.4	-3.3
PFO				*e*S	Sg	15 34 19.5	-3.4
LDFC	**Landfair**	**2.31**	**10**	*e*Pg	Pg	15 34 30.9	-1.0
MWC	**Mount Wilson**	**2.52**	**305**	Pn	Pn	15 34 27.4	-1.5
GSC	**Goldstone**	**2.70**	**338**	*e*Pg	Pg	15 34 39.5	+0.1
TMUT	**Trail Mountain**	**7.39**	**27**	Pn	Pn	15 35 34.4	-1.5
	comp=N,16nm,0.5s						

*NEIC **03** 15:41:32.3, 32°.77N×115°.58W, h15km, ML3.1(ECX), ML2.8(PAS), After PAS.*
ECX 03 15:41:32.9±0.6, 32°.80N×115°.59W, h10km, MD2.9, ML3.1, 6C, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COK	**Cook Ranch**	**0.13**	**293**	⇑*i*P	Pg	15 41 35.8	-0.1
SNR	**Schaffner Ranc**	**0.14**	**65**	⇑*i*P	Pg	15 41 35.8	-0.3
SGL	**Mount Signal**	**0.19**	**217**	⇑*i*P	Pg	15 41 36.4	-0.6
YUH	**Yuha Desert**	**0.32**	**242**	⇑*i*P	Pg	15 41 38.6	-0.7
CRR	**Carrizo Plain**	**0.33**	**285**	⇑*i*P	Pg	15 41 39.0	-0.5
COA	**Coachella**	**0.40**	**81**	⇑*i*P	Pg	15 41 40.3	-0.4
CPBX	**Cerro Prieto**	**0.45**	**148**	*e*P	Pg	15 41 39.9	-1.8
CPBX				*e*S	Sg	15 41 46.1	-1.6
CPBX				*e*		15 41 48.2	
	comp=N,4μm,0.2s						
RMX	**La Rumorosa**	**0.46**	**245**	*e*P	Pg	15 41 41.3	-0.6
RMX				*e*S	Sg	15 41 48.0	+0.2
GLA	**Glamis**	**0.69**	**68**	*e*Pg	Pg	15 41 44.6	-1.6
GLA				Sg	Sg	15 41 54.1	-1.1
EMX	**El Mayor**	**0.86**	**160**	*e*P	Pg	15 41 47.1	-2.4
EMX				*e*S	Sg	15 41 58.8	-1.9
RDX	**Rancho Dawling**	**0.92**	**199**	*e*P	Pg	15 41 49.0	-1.7
RDX				*e*S	Sg	15 42 01.2	-1.4
BAR	**Barrett**	**0.92**	**263**	*e*Pg	Pg	15 41 49.0	-1.6
BAR				*e*		15 41 52.1	
BAR				*e*S	Sg	15 42 01.3	-1.4
CBX	**Cerro Bola**	**1.03**	**242**	*e*P	Pg	15 41 51.4	-1.3
CBX				*e*S	Sg	15 42 04.6	-1.5
PFO	**Pinyon Flat Ob**	**1.08**	**318**	*e*P	Pb	15 41 51.1	-2.6
PFO				*e*S	Sg	15 42 05.2	-2.7
ECBX	**El Chinero**	**1.40**	**161**	*e*P	Pn	15 41 57.3	-1.2
ECBX				*e*S	Sn	15 42 16.5	-0.5
LDFC	**Landfair**	**2.31**	**10**	*e*Pg	Pg	15 42 16.1	-1.0

IDC 03 15:42:58.0±2.6, 30°.65N×141°.79E, h0km, mb3.7/5, mb1 3.7/6, mb1mx3.5/24, mbtmp3.6/6, ML3.5/1, Error ellipse: s-maj=107.8km s-min=24.5km az=73.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**6.59**	**334**	Pn	Pn	15 44 37.2	+1.0
	1.0nm,0.3s,baz=157,slow=10,SNR=8.2						
SONM	**Songino Array**	**31.99**	**313**	P	P	15 49 26.5	+0.8
	0.3nm,0.8s,baz=107,slow=5.0,SNR=3.7						
MKAR	**Makanchi Array**	**48.01**	**307**	P	P	15 51 38.6	0.0
	0.4nm,0.6s,baz=76,slow=6.1,SNR=3.2						
KURK	**Kurchatov**	**50.30**	**312**	P	P	15 51 55.8	-0.4
	0.6nm,0.4s,baz=90,slow=7.2,SNR=3.8						
ASAR	**Alice Springs**	**54.53**	**189**	P	P	15 52 27.9	+0.2
	0.3nm,0.4s,baz=2.4,slow=5.4,SNR=19						
FINES	**FINESS Array B**	**74.62**	**333**	P	P	15 54 38.5	-0.2
	1.7nm,0.9s,baz=64,slow=6.3,SNR=6.8						

*ISK **03** 15:47:22.6, 40°.52N×32°.95E, h7km, MD2.8*
*CSEM **03** 15:47:23.5±0.1, 40°.52N×32°.96E, h8km, MD3.1, Error ellipse: s-maj=3.0km s-min=2.5km az=154.0*
*ISCJB **03** 15:47:23.5±0.5, 40°.53N±0°.03×32°.97E±0°.03, h4km±5km, Error ellipse: s-maj=4.9km s-min=3.8km az=164.6*
*DDA **03** 15:47:24.1, 40°.56N×33°.02E, h7km±1km, Md3.1*
ISC 03 15:47:24.1±0.5, 40°.52N±0°.03×32°.98E±0°.03, h8km±5km, n34, σ0§81/53, 2C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDT	**Eldivan**	**0.34**	**95**	⇑*i*P	**Pg**	**15 47 30.8**	**0.0**
ELDT				*i* S	**Sg**	**15 47 35.8**	**+0.4**
ELDT	**Eldivan**	**0.34**	**95**	*i* P	**Pg**	**15 47 30.8**	**0.0**
ELDT				*i* S	**Sg**	**15 47 35.8**	**+0.4**
CANT	**Cankiri**	**0.50**	**80**	PG	**Pg**	**15 47 33.1**	**-0.6**
CANT				*e*SG	**Sg**	**15 47 41.0**	**+0.8**
LOD	**Lodumlu**	**0.65**	**194**	*e*PG	**Pg**	**15 47 35.5**	**-1.1**
LOD				*e*SG	**Sg**	**15 47 44.8**	**-0.4**
LOD	**Lodumlu**	**0.65**	**194**	*e*Pg	**Pg**	**15 47 35.5**	**-1.2**
LOD				*e*Sg	**Sg**	**15 47 44.8**	**-0.4**
SGKT	**Sivrigoynuk**	**0.70**	**274**	*i* P	**Pg**	**15 47 38.4**	**+0.7**
SGKT				*i* S	**Sg**	**15 47 49.0**	**+2.3**
SGKT	**Sivrigoynuk**	**0.70**	**274**	*i* P	**Pg**	**15 47 38.4**	**+0.8**
SAFT	**Safranbolu**	**0.75**	**343**	*e*PG	**Pg**	**15 47 37.6**	**-1.0**
SAFT				*e*SG	**Sg**	**15 47 48.5**	**+0.2**
SAFT	**Safranbolu**	**0.75**	**343**	*e*Pg	**Pg**	**15 47 37.6**	**-0.9**
SAFT				*e*Sg	**Sg**	**15 47 48.5**	**+0.2**
ILGA	**Ilgaz**	**0.77**	**47**	*i* P	**Pg**	**15 47 38.2**	**-0.7**
ILGA				*i* S	**Sg**	**15 47 48.6**	**-0.4**
ILGA	**Ilgaz**	**0.77**	**47**	*i* P	**Pg**	**15 47 38.2**	**-0.7**
ILGA				*i* S	**Sg**	**15 47 48.6**	**-0.4**
TOS	**Tosya**	**0.95**	**57**	*e*PG	**Pg**	**15 47 41.4**	**-0.8**
TOS				*e*SG	**Sg**	**15 47 55.6**	**+1.0**
TOS	**Tosya**	**0.95**	**57**	*e*Pg	**Pg**	**15 47 41.4**	**-0.9**
TOS				*e*Sg	**Sg**	**15 47 55.6**	**+1.0**
CORM	**Corum**	**1.31**	**105**	*e*PN	**Pn**	**15 47 48.5**	**-0.2**
CORM				*e*SN	**Sn**	**15 48 06.8**	**+0.5**
CORM	**Corum**	**1.31**	**105**	*e*Pn	**Pn**	**15 47 48.5**	**-0.2**
CORM				*e*Sn	**Sn**	**15 48 06.8**	**+0.4**
CTKT	**Corum**	**1.39**	**85**	*i* P	**Pn**	**15 47 49.7**	**0.0**
CTKT				*i* S	**Sb**	**15 48 08.5**	**+0.5**
CTKT	**Corum**	**1.39**	**85**	*i* P	**Pn**	**15 47 49.7**	**0.0**
CTKT				*i* S	**Sb**	**15 48 08.5**	**+0.4**
CDAG	**Cicekdag**	**1.40**	**130**	⇑*i*P	**Pn**	**15 47 50.0**	**+0.1**
CDAG				*i* S	**Sb**	**15 48 09.2**	**+0.8**
CDAG	**Cicekdag**	**1.40**	**130**	*i* P	**Pn**	**15 47 50.0**	**+0.1**
CDAG				*i* S	**Sb**	**15 48 09.2**	**+0.8**
KDZE	**Karadeniz Ereo**	**1.41**	**305**	*e*PN	**Pn**	**15 47 49.2**	**-0.8**
KDZE	**Karadeniz Ereo**	**1.41**	**305**	*e*Pn	**Pn**	**15 47 49.2**	**-0.8**
SVRH	**Sivrihisar-ESK**	**1.55**	**227**	*e*PN	**Pn**	**15 47 51.0**	**-1.0**
SVRH	**Sivrihisar-ESK**	**1.55**	**227**	*e*Pn	**Pn**	**15 47 51.0**	**-1.0**
BZK	**Bozkurt**	**1.63**	**28**	*e*PN	**Pn**	**15 47 52.9**	**-0.3**
BZK	**Bozkurt**	**1.63**	**28**	*e*Pn	**Pn**	**15 47 52.9**	**-0.2**
BYBT	**Boyabat**	**1.65**	**55**	*e*PN	**Pn**	**15 47 53.2**	**-0.2**
BYBT	**Boyabat**	**1.65**	**55**	*e*Pn	**Pn**	**15 47 53.2**	**-0.2**
KIZT	**Kizilcal**	**1.85**	**208**	*e*PN	**Pn**	**15 47 55.2**	**-0.8**
KIZT	**Kizilcal**	**1.85**	**208**	*e*Pn	**Pn**	**15 47 55.2**	**-0.9**
ESKT	**Eskisehir**	**1.92**	**239**	*i* P	**Pn**	**15 47 59.4**	**+2.4**
ESKT				*i* S	**Sn**	**15 48 28.2**	**+6.9**
YOZ	**Yozgat**	**2.00**	**115**	*e*PN	**Pn**	**15 47 58.1**	**-0.1**
YOZ	**Yozgat**	**2.00**	**115**	*e*Pn	**Pn**	**15 47 58.2**	**0.0**
DIKM	**Dikmen**	**2.06**	**56**	*e*PN	**Pn**	**15 47 58.9**	**-0.1**
DIKM	**Dikmen**	**2.06**	**56**	*e*Pn	**Pn**	**15 47 58.9**	**-0.1**

*IDC **03** 15:51:01.8±1.1, 10°.17N×126°.39E, h0km, mb3.8/10, mb1 3.9/10, mb1mx3.7/23, mbtmp3.8/10, Error ellipse: s-maj=57.4km s-min=16.8km az=70.0*
*ISCJB **03** 15:51:05.2±0.8, 10°.1N±0°.1×126°.2E±0°.3, h33km, mb3.8/11, Error ellipse: s-maj=46.2km s-min=12.0km az=158.2*
*NEIC **03** 15:51:07.1±0.6, 10°.15N×126°.35E, h35km, mb4.6/1, Error ellipse: s-maj=32.9km s-min=8.5km az=68.0*
ISC 03 15:51:07.1±0.8, 10°.1N±0°.1×126°.3E±0°.3, h35km, n11, σ0§39/11, mb3.8/11, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**23.50**	**165**	*e*P	**P**	**15 56 14.5**	**+0.4**
	12nm,0.5s,mb4.6						
CMAR	**Chiang Mai Arr**	**27.78**	**290**	P	**P**	**15 56 52.9**	**-0.1**
	0.3nm,0.8s,mb3.0,baz=103,slow=7.5,SNR=3.2						
FITZ	**Fitzroy Crossi**	**28.07**	**181**	P	**P**	**15 56 55.9**	**+0.4**
	2.0nm,1.0s,mb3.7,baz=340,slow=12,SNR=3.2						
ASAR	**Alice Springs**	**34.40**	**168**	P	**P**	**15 57 50.1**	**-1.0**
	0.2nm,0.5s,mb3.3,baz=349,slow=6.5,SNR=4.5						
SONM	**Songino Array**	**41.16**	**340**	P	**P**	**15 58 47.9**	**-0.1**
	0.3nm,0.6s,mb3.1,baz=155,slow=10,SNR=2.7						
STKA	**Stephens Creek**	**44.26**	**161**	P	**P**	**15 59 13.5**	**+0.2**
	1.2nm,0.7s,mb3.7,baz=352,slow=11,SNR=4.5						
MKAR	**Makanchi Array**	**52.17**	**323**	P	**P**	**16 00 14.5**	**+0.2**
	0.6nm,0.5s,mb3.8,baz=110,slow=7.9,SNR=5.7						
ZALV	**Zalesovo Beam**	**54.77**	**331**	P	**P**	**16 00 33.1**	**-0.1**
	0.8nm,0.6s,mb3.9,baz=113,slow=7.5,SNR=4.2						
KURK	**Kurchatov**	**56.21**	**326**	P	**P**	**16 00 43.6**	**-0.1**
	0.5nm,0.4s,mb3.9,baz=125,slow=7.2,SNR=2.9						
ARCES	**ARCESS Array B**	**84.34**	**340**	P	**P**	**16 03 35.6**	**+0.4**
	1.9nm,0.6s,mb4.4,baz=75,slow=6.4,SNR=6.3						
FINES	**FINESS Array B**	**86.04**	**332**	P	**P**	**16 03 43.7**	**-0.2**
	1.7nm,0.8s,mb4.3,baz=22,slow=2.1,SNR=5.5						

*ZUR **03** 16:09:55.1, 47°.20N×9°.46E, h-0km±1km, ML2.2/5*
*VIE **03** 16:09:55.4±0.4, 47°.21N×9°.46E, h5km±4km, mb1.3/2, ML2.2/4, Error ellipse: s-maj=2.4km s-min=1.2km az=123.0 10 km NNW of Vaduz*
*CSEM **03** 16:09:55.7±0.2, 47°.24N×9°.49E, h10km, ML2.7/10, Error ellipse: s-maj=5.1km s-min=3.3km az=3.0*
*ISCJB **03** 16:09:55.2±0.5, 47°.25N±0°.03×9°.49E±0°.03, h11km±4km, Error ellipse: s-maj=4.5km s-min=3.2km az=177.1*
*BGR **03** 16:09:56.6±1.1, 47°.24N×9°.51E, h10km, ML2.0/2, Error ellipse: s-maj=14.5km s-min=5.6km az=0.0*
ISC 03 16:09:56.0±0.4, 47°.23N±0°.02×9°.48E±0°.03, h8km±5km, n33, σ1§04/62, 15C-4D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIENZ	**Kamor/St.Gall**	**0.06**	**10**	⇑*i*Pg	**Pg**	**16 09 57.5**	**-0.4**
	1μm,0.1s						
LIENZ				*e*Sg	**Sg**	**16 09 59.5**	**+0.3**
	1μm,0.1s						
LIENZ	**Kamor/St.Gall**	**0.06**	**10**	⇑*i*Pg	**Pg**	**16 09 57.5**	**-0.4**
	1μm,0.1s						
LIENZ				*e*Sg	**Sg**	**16 09 59.5**	**+0.3**
	1μm,0.1s						
PLONS	**Plons/SG**	**0.20**	**199**	⇑*i*Pg	**Pg**	**16 09 58.7**	**-1.3**
	410nm,0.5s						
PLONS				*i* Sg	**Sg**	**16 10 01.5**	**-1.2**
	410nm,0.5s						
DAVA	**Damuels**	**0.28**	**79**	⇑*i*Pg	**Pg**	**16 10 01.4**	**-0.1**
	9.1nm,0.1s						
DAVA				⇑*i*Sg	**Sg**	**16 10 06.0**	**+0.7**
	127nm,0.3s						
DAVA	**Damuels**	**0.28**	**79**	Pg	**Pg**	**16 10 01.4**	**-0.1**
	9.1nm,0.1s						
DAVA				Sg	**Sg**	**16 10 06.0**	**+0.7**
	127nm,0.3s						
WILA	**Wila**	**0.43**	**295**	⇓*i*Pg	**Pg**	**16 10 04.8**	**+0.5**
	464nm,0.3s						
WILA				*i* Sg	**Sg**	**16 10 11.9**	**+2.0**
	464nm,0.3s						
WILA	**Wila**	**0.43**	**295**	⇓*i*Pg	**Pg**	**16 10 04.8**	**+0.5**
	464nm,0.3s						
WILA				*i* Sg	**Sg**	**16 10 11.9**	**+2.0**
	464nm,0.3s						
DAVOX	**Davos/Dischmat**	**0.53**	**149**	*e*Pg	**Pg**	**16 10 05.6**	**-0.6**
	145nm,0.5s						
DAVOX				*i* Sg	**Sg**	**16 10 13.2**	**0.0**
	145nm,0.5s						
DAVOX	**Davos/Dischmat**	**0.53**	**149**	*e*Pg	**Pg**	**16 10 05.6**	**-0.6**
	145nm,0.5s						
DAVOX				*i* Sg	**Sg**	**16 10 13.2**	**0.0**
	145nm,0.5s						
MUO	**Muotathal**	**0.63**	**245**	⇑*i*Pg	**Pg**	**16 10 07.6**	**-0.6**
	245nm,0.6s						
MUO				*i* Sg	**Sg**	**16 10 17.1**	**+0.7**
	245nm,0.6s						
MUO	**Muotathal**	**0.63**	**245**	⇑*i*Pg	**Pg**	**16 10 07.6**	**-0.6**
	245nm,0.6s						
MUO				*i* Sg	**Sg**	**16 10 17.1**	**+0.7**
	245nm,0.6s						
FETA	**Feichten**	**0.88**	**104**	⇑*i*Pg	**Pg**	**16 10 12.6**	**-0.3**
	0.3nm,0.1s						
FETA				⇑*i*Sg	**Sg**	**16 10 24.4**	**0.0**
	2.2nm,0.2s						
FETA	**Feichten**	**0.88**	**104**	Pg	**Pg**	**16 10 12.6**	**-0.3**
	0.3nm,0.1s						
FETA				Sg	**Sg**	**16 10 24.4**	**0.0**
	2.2nm,0.2s						
RETA	**Reutte**	**0.91**	**73**	⇓*i*Pg	**Pg**	**16 10 13.9**	**+0.5**
	3.0nm,0.1s						
RETA				⇑*i*Sg	**Sg**	**16 10 26.3**	**+1.0**
	11nm,0.2s						
RETA	**Reutte**	**0.91**	**73**	Pg	**Pg**	**16 10 13.9**	**+0.4**
	3.0nm,0.1s						
RETA				Sg	**Sg**	**16 10 26.3**	**+1.0**
	11nm,0.2s						
MOTA	**Moosalm**	**1.11**	**84**	⇓*i*Pg	**Pg**	**16 10 17.8**	**+0.5**
	7.9nm,0.2s						
MOTA				⇑*i*Sg	**Sg**	**16 10 34.1**	**+2.3**
	14nm,0.2s						
MOTA	**Moosalm**	**1.11**	**84**	Pg	**Pg**	**16 10 17.8**	**+0.5**
	7.9nm,0.2s						
MOTA				Sg	**Sg**	**16 10 34.1**	**+2.3**
	14nm,0.2s						
BFO	**Black Forest**	**1.34**	**325**	*e*Pn	**Pn**	**16 10 21.5**	**+0.5**
	SNR=0.7						
BFO				*e*Pg	**Pg**	**16 10 22.5**	**+0.8**
	SNR=2.4						
BFO				*e*Sg	**Sg**	**16 10 38.3**	**-0.8**
BFO	**Black Forest**	**1.34**	**325**	Pn	**Pn**	**16 10 21.5**	**+0.6**
	SNR=0.7						
WATA	**Walderalm**	**1.43**	**85**	⇑*i*Pg	**Pg**	**16 10 23.6**	**+0.1**
	2.4nm,0.2s						
WATA				⇑*i*Sg	**Sg**	**16 10 43.2**	**+1.1**
	4.1nm,0.2s						
**

NOUC Port Laguerre 12.55 158 eP Pn 16 23 48.0 +0.5
NOUC AMP 16 26 10.1
comp=Z,228nm,4.2s
DZM Mont Dzumac 12.57 158 ePn Pn 16 23 46.8 -1.0
comp=Z,2μm,0.9s
DZM eSn **Sn 16 26 00.0 -6.0**
comp=Z,258nm,0.3s
DZM eLQ 16 26 10.4
comp=Z,129μm,25.4s
DZM eLR LR 16 26 43.0
comp=Z,106μm,31.1s
DZM Mont Dzumac 12.57 158 eP Pn 16 23 47.9 +0.1
DZM eS **Sn 16 26 01.6 -4.5**
DZM AMP 16 26 08.1
comp=Z,4μm,0.8s
NORM Noumea 12.73 158 eP Pn 16 23 50.5 +0.6
LASL Noumea 12.76 157 eP Pn 16 23 50.8 +0.6
BAYA Yate Dam 12.82 156 eP Pn 16 23 50.8 -0.3
PLUM Mont Dore 12.83 157 eP Pn 16 23 51.2 -0.1
PLUM AMP 16 26 15.6
comp=Z,395nm,4.2s
CTA Charters Tower 17.39 235⇓iP Pn 16 24 52.1 +2.9
comp=Z,886nm,0.7s
CTA i S **S 16 28 08.5 +5.0**
CTA Charters Tower 17.39 235 P Pn 16 24 50.2 +1.0
comp=Z,52nm,0.3s,baz=61,slow=12,SNR=484
CTA S **S 16 28 05.6 +2.2**
comp=Z,4.7nm,0.3s,baz=167,slow=18,SNR=3.9
CTA LR LR 16 29 11.5
comp=Z,7μm,19.7s,baz=56,slow=29
CTA Charters Tower 17.39 235 P Pn 16 24 50.2 +1.0
CTA S **S 16 28 05.6 +2.1**
CTA pmax pmax
comp=Z,52nm,0.3s
CTA smax
comp=N,5.0nm,0.3s
CTA MLR MLR
comp=Z,7μm,19.7s
CTAO Charters Tower 17.39 235⇓eP Pn 16 24 52.4 +3.2
CTAO pmax pmax
comp=Z,1μm,0.8s
CTAO Charters Tower 17.39 235⇓eP Pn 16 24 52.4 +3.3
comp=Z,1μm,0.8s
EIDS Eidsvold 17.74 212⇓eP Pn 16 24 54.9 +1.6
comp=Z,386nm,0.8s
FUNA Funafuti 17.75 85 eP Pn 16 24 48.9 -4.7
comp=Z,748nm,1.1s
MSVF Nonsavu 17.78 116 Pn **Pn 16 24 53.0 -0.9**
comp=Z,3μm,1.2s,SNR=28
MSVF Nonsavu 17.78 116 eP Pn 16 24 52.7 -1.2
comp=Z,8μm,2.3s
MSVF Nonsavu 17.78 116 Pn **Pn 16 24 52.4 -1.5**
comp=Z,648nm,1.6s,SNR=28
COEN Coen 18.06 257⇓eP Pn 16 25 00.8 +3.4
comp=Z,14μm,1.4s
KWAJ Kwajalein Atol 20.12 18 eP P 16 25 19.4 +0.5
comp=Z,2μm,0.7s
KWAJ e 16 25 29.6
ARMA Armidale 21.83 203⇓iP P 16 25 37.5 +0.3
ARMA i S **S 16 29 35.9 +2.7**
ARMA Armidale 21.83 203 eP P 16 25 37.5 +0.4
comp=Z,781nm,0.9s,mb6.0
RIV Riverview 25.07 200 eP P 16 26 08.4 +0.2
AFI Afiamalu 26.53 100 P P 16 26 21.2 -0.3
comp=Z,58nm,0.8s,mb5.2,baz=102,slow=12,SNR=7.3
AFI LR LR 16 35 14.7
comp=Z,5μm,20.6s,baz=271,slow=33
AFI Afiamalu 26.53 100 P P 16 26 21.2 -0.4
AFI pmax pmax
comp=Z,59nm,0.8s,mb5.2
AFI MLR MLR
comp=Z,5μm,20.6s
AFI Afiamalu 26.53 100 eP P 16 26 18.4 -3.2
comp=Z,462nm,1.6s,mb5.8
RAO Raoul Island 26.98 137 LR LR 16 35 08.4
comp=Z,12μm,20.2s,baz=302,slow=32
RAO Raoul Island 26.98 137 eP P 16 26 25.6 +0.2
RAO pmax pmax
comp=Z,677nm,0.9s,mb6.2
RAO Raoul Island 26.98 137 eP P 16 26 25.6 +0.2
comp=Z,677nm,0.9s,mb6.2
OUZ Omahuta 27.09 158 eP P 16 26 25.7 -0.7
comp=Z,165nm,1.0s,mb5.5
WRAB Tennant Creek 27.64 247 P **P 16 26 31.0 -0.4**
comp=Z,2μm,0.6s,mb6.8
WRAB Tennant Creek 27.64 247 eP P 16 26 31.7 +0.3
WRAB pmax pmax
comp=Z,351nm,1.0s,mb5.8
WRAB Tennant Creek 27.64 247 eP P 16 26 31.7 +0.2
comp=Z,351nm,1.0s,mb5.8
WRAB Tennant Creek 27.64 247 P **P 16 26 31.0 -0.4**
comp=Z,334nm,0.3s,mb6.3
STKA Stephens Creek 28.06 218⇓iP P 16 26 35.2 +0.1
comp=Z,103nm,0.8s,mb5.4
STKA eS **S 16 31 09.9 -3.3**
STKA Stephens Creek 28.06 218 P **P 16 26 35.4 +0.3**
comp=Z,88nm,0.6s,mb5.4,baz=27,slow=10,SNR=113
STKA LR LR 16 36 59.3
comp=Z,17μm,20.9s,baz=45,slow=34
STKA PKiKP PKiKP 16 37 21.9 -1.7
comp=Z,3.4nm,0.7s,baz=342,slow=6.6,SNR=3.9
STKA Stephens Creek 28.06 218 eP P 16 26 35.1 0.0
comp=Z,272nm,1.8s,mb5.5
KAKA Kakadu 28.36 263 eP P 16 26 38.8 +0.8
comp=Z,485nm,0.6s,mb6.2
KAKA Kakadu 28.36 263 eP P 16 26 38.6 +0.7
comp=Z,1μm,0.6s,mb6.6
GUMO Guam 28.91 325 P **P 16 26 43.0 +0.3**
comp=Z,90nm,0.4s,mb5.8,baz=112,slow=4.9,SNR=18
GUMO Guam 28.91 325 P **P 16 26 43.0 +0.3**
GUMO pmax pmax
comp=Z,90nm,0.4s,mb5.8
GUMO Guam 28.91 325 eP P 16 26 42.5 -0.3
comp=Z,470nm,1.4s,mb5.9
ASAR Alice Springs 29.24 240 P **P 16 26 45.0 -0.7**
comp=Z,60nm,0.8s,mb5.3,baz=72,slow=9.2,SNR=328
ASAR ScP ScP 16 33 24.9 +0.6
comp=Z,12nm,0.9s,baz=73,slow=2.7,SNR=4.6
ASAR PKiKP PKiKP 16 37 22.2 -2.3
comp=Z,2.8nm,0.8s,baz=88,slow=1.7,SNR=5.7
ASAR P3KPbc 16 58 52.0
comp=Z,5.2nm,0.7s,baz=242,slow=4.0,SNR=60
TOO Toolangi 30.54 205⇓iP P 16 26 57.8 +0.8
TOO eS S 16 31 31.6 -20
URZ Urewera 31.12 155 P **P 16 27 00.7 -1.4**
comp=Z,19nm,0.5s,mb5.1,baz=0.6,slow=2.3,SNR=22
URZ LR LR 16 35 49.4
comp=Z,11μm,21.3s,baz=128,slow=29
URZ Urewera 31.12 155 eP P 16 27 00.8 -1.2
comp=Z,90nm,0.9s,mb5.5
SNZO South Karori 32.94 161 eP P 16 27 17.5 -0.5
MOO Moorlands 34.19 199 eP P 16 27 28.3 -0.5
MOO e 16 29 02.2
MOO eS **S 16 32 52.3 +3.7**
RPZ Rata Peaks 34.22 167 P **P 16 27 28.3 -0.7**
comp=Z,177nm,0.8s,mb5.9,baz=147,slow=2.1,SNR=23
RPZ Rata Peaks 34.22 167 eP P 16 27 27.6 -1.5
comp=Z,207nm,0.9s,mb6.0
TAU Tasmania Unive 34.58 198 P **P 16 27 33.3 +1.2**
comp=Z,3μm,1.3s,mb7.0,SNR=46
TAU Tasmania Unive 34.58 198 eP P 16 27 32.9 +0.8
TAU pmax pmax
comp=Z,1μm,1.3s,mb6.5
TAU Tasmania Unive 34.58 198 eP P 16 27 32.9 +0.8
comp=Z,1μm,1.3s,mb6.5
FITZ Fitzroy Crossi 35.35 253 eP P 16 27 38.1 -1.0
comp=Z,424nm,0.7s,mb6.4
FITZ eS **S 16 33 03.3 -3.7**
FITZ Fitzroy Crossi 35.35 253 LR LR 16 42 17.9
comp=Z,13μm,18.1s,baz=72,slow=36
FITZ Fitzroy Crossi 35.35 253 eP P 16 27 38.8 -0.3
comp=Z,1.6nm,0.4s
FORT Forrest 36.90 232 eP P 16 27 52.5 +0.3
comp=Z,180nm,0.5s,mb6.3
FORT eS **S 16 33 29.1 -1.4**
FORT Forrest 36.90 232 eP P 16 27 52.2 0.0
comp=Z,268nm,0.8s,mb6.2
DAV Davao City (W) 39.59 295 LR LR 16 43 56.8
comp=Z,4μm,18.6s,baz=312,slow=35
DAV Davao City (W) 39.59 295⇓eP P 16 28 13.2 -1.8
MBWA Marble Bar 41.28 250 eP P 16 28 29.0 +0.1
comp=Z,258nm,0.9s,mb6.1
MBWA Marble Bar 41.28 250 P **P 16 28 29.4 +0.5**
SNR=48
MBWA P 16 28 29.4
SNR=48
KAPI Kappang 41.50 274 P **P 16 28 30.8 0.0**
comp=Z,2μm,0.7s,mb6.9,SNR=40
KAPI Kappang 41.50 274 eP P 16 28 30.4 -0.4
comp=Z,171nm,0.7s,mb6.0
MSLP Maasin 41.61 298 eP P 16 28 31.1 -0.5
CBIJ Chichi jima 41.67 334 P **P 16 28 29.9 -2.0**
comp=Z,420nm,0.4s,mb6.5,baz=202,slow=2.5,SNR=36
PAGZ Pagadian 41.90 294 eP P 16 28 34.4 +0.4
XMAS Kiritimati 42.88 76 eP P 16 28 41.2 -0.8
comp=Z,392nm,1.0s,mb6.1
MIDW Midway 43.61 28 eP P 16 28 45.5 -2.0
comp=Z,148nm,1.1s,mb5.6
GUIM Jordan 43.82 297 eP P 16 28 49.3 -0.2
PVCP Virac 43.92 302 eP P 16 28 50.3 0.0
MCQ Macquarie Isla 43.99 182 eP P 16 28 50.9 +0.7
AUQP San Andres 45.02 301 eP P 16 29 00.9 +1.9
OTRP Odiongan 45.12 299 eP P 16 29 00.0 +0.2
CUYO Cuyo Island 45.30 297 eP P 16 29 02.8 +1.6
KLBR Kellerberrin 45.40 236 eP P 16 29 01.1 -0.7
comp=Z,494nm,1.5s,mb6.0
TSM Tawau 45.66 287 P **P 16 29 05.0 +0.9**
BOAC Boac 45.79 300 eP P 16 29 05.9 +0.7
SJMP San Jose 45.94 299 eP P 16 29 07.2 +0.9
NWAO Narrogin (SRO) 46.23 234 LR LR 16 48 47.4
comp=Z,38nm,18.0s,baz=73,slow=36
NWAO Narrogin (SRO) 46.23 234 eP P 16 29 08.4 0.0
NWAO pmax pmax
comp=Z,169nm,0.8s
NWAO Narrogin (SRO) 46.23 234 eP P 16 29 08.4 0.0
comp=Z,169nm,0.8s,mb5.8
NWAO Narrogin (SRO) 46.23 234 P **P 16 29 09.0 +0.6**
SNR=25
NWAO P 16 29 09.0
SNR=25
POLP Polillo Island 46.34 302 eP P 16 29 09.7 +0.2
BUSP Coron 46.53 298 eP P 16 29 11.1 +0.1
SDKM Sandakan 46.74 288 P **P 16 29 12.6 0.0**
ENPP El Nido 46.85 296 eP P 16 29 14.3 +0.9
TGY Tagaytay City 46.88 301 P **P 16 29 14.3 +0.7**
comp=Z,102nm,0.3s,mb6.0,baz=184,slow=11,SNR=11
TGY LR LR 16 46 23.4
comp=Z,21nm,19.5s,baz=308,slow=33
TGY Tagaytay City 46.88 301 P **P 16 29 14.3 +0.7**
TGY pmax pmax
comp=Z,102nm,0.4s
TGY MLR MLR
comp=Z,21nm,19.5s
BALP Baler 47.16 303 eP P 16 29 15.8 0.0
PALP Palanan 47.16 305 eP P 16 29 16.3 +0.5
LUBP Lubang 47.29 300 eP P 16 29 16.0 -0.8
BATP Bataraza 47.32 292 eP P 16 29 18.5 +1.3
KDM Kudat 47.52 289 P **P 16 29 19.6 +0.9**
CAUP Cauayan 47.58 304 eP P 16 29 19.9 +0.9
KKM Kota Kinabalu 47.79 288 P **P 16 29 21.6 +0.8**
KKM Kota Kinabalu 47.79 288 eP P 16 29 21.0 +0.2
comp=Z,517nm,0.9s,mb6.4
PAE Paea 48.08 104 eP P 16 29 22.0 -0.9
comp=Z,29nm,1.1s,mb5.0
PAE Paea 48.08 104 eP P 16 29 22.0 -0.9
PAE pmax pmax
comp=Z,29nm,1.1s,mb5.0
PPT Papeete 48.08 104 eP P 16 29 22.2 -0.7
comp=Z,91nm,1.1s,mb5.5
PPT eS **S 16 36 09.5 -5.4**
comp=Z,8μm,25.2s
PPT eLQ 16 40 55.7
comp=Z,26μm,29.2s
PPT eLR LR 16 42 55.7
comp=Z,34μm,32.8s
PPT Papeete 48.08 104 LR LR 16 45 30.8
comp=Z,4μm,18.5s,baz=276,slow=31
PPT Papeete 48.08 104 eP P 16 29 22.2 -0.7
PPT eS **S 16 36 09.5 -5.4**
PPT pmax pmax
comp=Z,91nm,1.1s
PPT Papeete 48.08 104 eP P 16 29 22.2 -0.7
comp=Z,91nm,1.1s,mb5.5
PPT eS **S 16 36 09.5 -5.4**
PPT eLQ 16 40 55.7
TIAR Tiarei 48.30 104 eP P 16 29 23.3 -1.3
comp=Z,175nm,0.9s,mb5.9
BCPH Baguio City Da 48.30 303⇓eP P 16 29 24.5 -0.1
APYP Conner 48.54 305 eP P 16 29 26.2 -0.3
ABRA Dolores 48.85 305 eP P 16 29 28.0 -0.8
BOLP Bolinao 48.86 303 eP P 16 29 27.3 -1.6
JOW Kunigami 49.00 320 P **P 16 29 29.4 -0.4**
comp=Z,63nm,0.4s,mb5.9,baz=124,slow=11,SNR=34
MEH Mehetia 49.52 105 eP P 16 29 33.0 -1.0
comp=Z,271nm,1.1s,mb6.1
BTM Bintulu 49.88 283 P **P 16 29 37.5 +0.7**
SBUM Sibu 50.51 282 P **P 16 29 42.4 +0.9**
KIP Kipapa 50.97 51 *d iP P 16 29 44.6 -0.2*
KIP Kipapa 50.97 51 eP P 16 29 44.0 -0.8
comp=Z,482nm,1.3s,mb6.4
TWG Pinlang 51.43 310 eP P 16 29 47.0 -1.3
comp=Z,76nm,0.9s,mb5.7
MJAR Matsushiro Arr 51.54 336 P **P 16 29 48.0 -0.8**
comp=Z,113nm,0.6s,mb6.1,baz=170,slow=8.6,SNR=277
MJAR S **S 16 37 00.9 -1.5**
comp=Z,3.2nm,1.0s,baz=140,slow=16,SNR=4.0
MJAR Matsushiro Arr 51.54 336 P **P 16 29 48.0 -0.8**
MJAR S **S 16 37 00.9 -1.5**
MJAR pmax pmax
comp=Z,113nm,0.6s
MJAR smax
comp=N,3.0nm,1.0s
MJAR Matsushiro Arr 51.54 336 P **P 16 29 48.0 -0.8**
MJAR S **S 16 37 00.9 -1.5**
MAJO Matsushiro 51.54 336 eP P 16 29 47.4 -1.4
MAJO pmax pmax
comp=Z,252nm,0.6s,mb6.4
MAJO Matsushiro 51.54 336 eP P 16 29 47.4 -1.4
comp=Z,252nm,0.6s,mb6.4
MAT Matsushiro 51.54 336 P **P 16 29 47.9 -0.9**
MAT S **S 16 36 59.9 -2.5**
YULB Yu-li 51.60 311 eP P 16 29 49.1 -0.4
comp=Z,177nm,0.8s,mb6.2
KHU Kahuku 51.69 55 eP P 16 29 50.1 -0.2
NACB Ninganchiao 51.84 312 eP P 16 29 50.6 -0.7
comp=Z,323nm,0.9s,mb6.4
POHA Pohakuloa 52.02 55 eP P 16 29 52.8 0.0
comp=Z,2μm,1.3s,mb6.9
TPUB Ta-pu 52.04 311 eP P 16 29 52.3 -0.5
comp=Z,135nm,0.7s,mb6.1
SSLB Suanglung 52.08 311 eP P 16 29 52.9 -0.2
comp=Z,210nm,0.8s,mb6.2
PUH Pauahi 52.08 55 eP P 16 29 52.3 -0.8
KSM Kuching 52.10 280 P **P 16 29 53.6 +0.1**
KSM Kuching 52.10 280 eP P 16 29 53.1 -0.3
comp=Z,222nm,0.7s,mb6.3
STCH Steam Cracks 52.16 55 eP P 16 29 53.4 -0.3
YHNB Yeheng 52.30 312 eP P 16 29 54.9 +0.2
comp=Z,376nm,0.9s,mb6.4
TATO Taipei 52.40 313 eP P 16 29 55.5 0.0
comp=Z,247nm,0.9s,mb6.2
TATO Taipei 52.40 313 P **P 16 29 55.9 +0.5**
SNR=9.1
TATO P 16 29 55.9
SNR=9.1
QZH Quanzhou 54.50 311⇓iP P 16 30 12.2 +1.4
QZH sP sP 16 30 39.0 -4.7
QZH S **S 16 37 40.0 -3.1**
QZH pmax pmax
comp=Z,180nm,0.8s,mb6.2
QZH LR LR
comp=N,4μm,18.3s
QZH LR LR
comp=E,4μm,14.6s
QZH LR LR
comp=Z,28μm,42.7s
ERM Erimo 54.79 343 P **P 16 30 13.8 +1.2**
comp=Z,760nm,0.6s,mb6.9,SNR=36
ERM Erimo 54.79 343 eP P 16 30 13.4 +0.8
ERM pmax pmax
comp=Z,88nm,0.7s,mb5.9
ERM Erimo 54.79 343 eP P 16 30 13.3 +0.8
comp=Z,88nm,0.7s,mb5.9
YUK Yuzh-Kuril'sk 56.00 347 *c iP* **P 16 30 21.5 +0.3**
YUK *e*PPP 16 33 42.3
YUK *i* S **S 16 38 04.5 +2.1**
YUK *e* 16 39 59.8
YUK *e*SS SS 16 41 46.4 -3.7
YUK pmax pmax
comp=N,4μm,3.0s
YUK pmax pmax
comp=E,2μm,3.0s
YUK pmax pmax
comp=Z,4μm,3.0s
YUK pmax pmax
comp=Z,200nm,0.5s,mb6.4
YUK smax
comp=E,3μm,3.0s
YUK smax
comp=N,10μm,3.8s
SSE Sheshan 56.44 318 P **P 16 30 24.3 -0.3**
SSE sP sP 16 30 56.4 -1.2
SSE S **S 16 38 07.4 -1.3**
SSE sS sS 16 38 44.8 -2.8
SSE pmax pmax
comp=Z,140nm,0.8s,mb6.0
SSE pmax pmax
comp=Z,1μm,5.1s
SSE LR LR
comp=N,3μm,19.1s
SSE LR LR
comp=E,3μm,19.4s
SSE LR LR
comp=Z,5μm,20.5s
HKC Hong Kong Obse 56.51 306 P **P 16 30 30.0 +4.8**
HKC S **S 16 38 12.0 +2.1**
ASAJ Asahikawa 56.89 344 P **P 16 30 27.8 +0.3**
comp=Z,203nm,0.6s,mb6.3,baz=211,slow=7.7,SNR=365
ASAJ pP pP 16 30 49.5 -0.9
comp=Z,135nm,0.8s,baz=223,slow=16,SNR=3.7
ASAJ S **S 16 38 14.8 +0.6**
comp=Z,20nm,1.2s,baz=341,slow=31,SNR=14
ASAJ LR LR 16 53 31.9
comp=Z,7μm,20.6s,baz=176,slow=34
ASAJ Asahikawa 56.89 344 P **P 16 30 27.8 +0.3**
ASAJ *PP pP 16 30 49.5 -0.8
ASAJ S **S 16 38 14.8 +0.6**
ASAJ pmax pmax
comp=Z,203nm,0.6s
ASAJ smax
comp=N,20nm,1.2s
ASAJ MLR MLR
comp=Z,7μm,20.6s
KSRS Korea Array 57.00 329 P **P 16 30 28.9 +0.4**
comp=Z,57nm,0.6s,mb5.8,baz=139,slow=7.1,SNR=206
KSRS pP pP 16 30 51.2 0.0
comp=Z,33nm,0.8s,baz=142,slow=7.6,SNR=4.3
KSRS S **S 16 38 16.2 +0.4**
comp=Z,2.0nm,1.0s,baz=151,slow=16,SNR=4.1
KSRS LR LR 16 52 38.0
comp=Z,5μm,19.4s,baz=139,slow=33
KSRS Korea Array 57.00 329 P **P 16 30 28.9 +0.5**
KSRS *PP pP 16 30 51.2 0.0
KSRS S **S 16 38 16.3 +0.5**
KSRS pmax pmax
comp=Z,57nm,0.6s,mb5.8
KSRS smax
comp=N,2.0nm,1.0s
KSRS MLR MLR
comp=Z,5μm,19.4s
GZH Guangzhou 57.56 306 P **P 16 30 32.2 -0.5**
GZH S **S 16 38 16.3 -7.4**
GZH LR LR
comp=N,5μm,26.3s
GZH LR LR
comp=E,4μm,24.8s
GZH LR LR
comp=Z,10μm,26.2s
TAOE Nuku Hiva Isla 57.67 94 *e*S **S 16 38 20.1 -5.5**
comp=Z,3μm,22.5s
TAOE *e*LR LR 16 47 18.6
comp=Z,18μm,31.4s
INCN Inchon 57.69 328 *e*P **P 16 30 33.9 +0.6**
comp=Z,636nm,1.3s,mb6.5
INCN Inchon 57.69 328 P **P 16 30 34.4 +1.1**
SNR=41
INCN P 16 30 34.4
SNR=41
DRV Dumont d'Urvil 57.98 190 P **P 16 30 32.0 -2.9**
DRV S **S 16 38 22.0 -6.0**
DRV L 16 45 00.0
MYKOM Kota Tinggi 58.44 279 P **P 16 30 39.6 +0.5**
QIZ Qiongzhong 58.57 300 P **P 16 30 40.8 +1.0**
QIZ sP sP 16 31 10.0 -2.9
QIZ S **S 16 38 38.1 +1.1**
QIZ pmax pmax
comp=Z,140nm,1.9s,mb5.7
QIZ pmax pmax
comp=Z,2μm,8.1s
QIZ LR LR
comp=N,3μm,27.3s
QIZ LR LR
comp=E,2μm,28.3s
QIZ LR LR
comp=Z,10μm,29.1s
QIZ Qiongzhong 58.57 300 eP P 16 30 40.6 +0.8
comp=Z,530nm,1.7s,mb6.3
NJ2 Nanjing 58.58 318 eP P 16 30 40.5 +0.9
NJ2 pP pP 16 31 04.3 +1.8
NJ2 sP sP 16 31 15.5 +2.8
NJ2 PP PP 16 32 48.8 -1.5
NJ2 S **S 16 38 31.0 -5.7**
NJ2 sS sS 16 39 12.0 -3.9
NJ2 pmax pmax
comp=Z,2μm,6.6s
NJ2 LR LR
comp=N,6μm,17.1s
NJ2 LR LR
comp=E,5μm,20.0s
NJ2 LR LR
comp=Z,13μm,25.8s
KGM Kluang 59.01 279 P **P 16 30 43.4 +0.3**
YSS Yuzh-Sakhalins 59.49 345⇓iP P 16 30 46.0 +0.4
YSS *i* pP 16 31 13.3 +4.8
YSS *i* S **S 16 38 48.0 +0.1**
YSS pmax pmax
comp=N,290nm,1.5s
YSS pmax pmax
comp=Z,480nm,1.5s,mb6.3
YSS pmax pmax
comp=Z,2μm,8.0s
YSS pmax pmax
comp=N,2μm,6.0s
YSS smax
comp=N,4μm,14.0s
YSS MLR MLR
comp=N,6μm,18.0s
YSS MLR MLR
comp=Z,6μm,18.0s
YSS Yuzh-Sakhalins 59.49 345 *e*P **P 16 30 45.8 +0.2**
comp=Z,100nm,0.6s,mb6.0
VLA Vladivostok 59.68 335 *e*P **P 16 30 46.3 -0.7**
VLA *e*S **S 16 38 51.8 +1.3**
VLA *e**SS sS 16 39 00.8 -29
VLA pmax pmax
comp=Z,494nm,1.7s,mb6.3
VLA Vladivostok 59.68 335⇑iP P 16 30 47.5 +0.5
KTGM Kuala Trenggan 60.00 282 P **P 16 30 50.1 +0.3**
WHN Wuhan 60.77 314 ⇓P **P 16 30 54.7 0.0**
WHN sP sP 16 31 23.5 -4.4
WHN S **S 16 39 03.1 -1.9**
WHN LR LR
comp=N,8μm,23.5s
WHN LR LR
comp=E,4μm,14.9s
WHN LR LR
comp=Z,21μm,31.2s
FRIM Kepong 60.94 280 P **P 16 30 55.9 -0.3**
SKR Severo-Kuril's 61.03 356⇓iP P 16 30 52.0 -4.0
SKR *e* 16 31 38.0
SKR *e*S **S 16 39 04.0 -3.4**
SKR *e* 16 40 34.0
SKR *e*SS SS 16 43 03.0 -5.9
SKR pmax pmax
comp=N,220nm,1.0s
SKR pmax pmax
comp=E,180nm,1.0s
SKR pmax pmax
comp=Z,220nm,1.0s,mb6.1
SKR pmax pmax
comp=N,2μm,4.0s
SKR pmax pmax
comp=E,2μm,4.0s
SKR pmax pmax
comp=Z,3μm,4.0s
SKR smax
comp=N,8μm,10.0s
SKR smax

comp=E,5μm,10.0s
DL2 Dalian 61.44 325⇓iP P 16 30 59.6 +0.6
DL2 pP pP 16 31 21.0 -1.1
DL2 S **S 16 39 13.2 +0.1**
DL2 sS sS 16 39 50.5 -2.0
DL2 ScS ScS 16 40 43.0 +1.0
DL2 pmax pmax
comp=Z,160nm,0.7s,mb6.2
DL2 pmax pmax
comp=Z,950nm,5.6s
DL2 LR LR
comp=N,2μm,25.8s
DL2 LR LR
comp=E,2μm,21.0s
DL2 LR LR
comp=Z,5μm,26.5s
IPM Ipoh 61.82 281 P P 16 31 02.4 +0.3
MDJ Mudanjiang 61.86 335 P P 16 31 02.3 +0.6
MDJ pP pP 16 31 25.1 +0.3
MDJ sP sP 16 31 32.0 -3.0
MDJ PcP PcP 16 31 42.5 +0.7
MDJ PP PP 16 33 18.2 -0.9
MDJ ScP ScP 16 35 35.5 +0.1
MDJ PcS PcS 16 35 47.2 +2.4
MDJ S **S 16 39 17.5 -0.7**
MDJ SS SS 16 43 21.6 -0.5
MDJ pmax pmax
comp=Z,260nm,1.5s,mb6.0
MDJ pmax pmax
comp=Z,2μm,6.7s
MDJ LR LR
comp=N,4μm,41.0s
MDJ LR LR
comp=E,4μm,38.0s
MDJ LR LR
comp=Z,6μm,38.9s
MDJ Mudanjiang 61.86 335 eP P 16 31 02.0 +0.3
comp=Z,1μm,1.7s,mb6.6
RKT Rikitea 61.89 111 eS S 16 39 14.9 -4.6
comp=Z,4μm,29.5s
RKT eLQ 16 46 42.4
comp=Z,3μm,30.2s
RKT eLR LR 16 49 24.9
comp=Z,29μm,30.8s
TIA Tai'an 62.31 320 P P 16 31 05.0 0.0
TIA S **S 16 39 13.0 -11**
TIA pmax pmax
comp=Z,890nm,6.0s
TIA LR LR
comp=N,1μm,10.0s
TIA LR LR
comp=E,850nm,10.0s
KULM Kulim 62.38 282 P P 16 31 06.1 +0.2
KULM Kulim 62.38 282 eP P 16 31 05.2 -0.7
comp=E,137nm,0.8s,mb6.0
SNY Shenyang 62.49 329 ⇓P P 16 31 06.3 +0.3
SNY S **S 16 39 20.6 -5.6**
SNY SS SS 16 43 30.7 -1.4
SNY pmax pmax
comp=Z,90nm,0.2s,mb6.5
SNY LR LR
comp=N,6μm,24.5s
SNY LR LR
comp=Z,9μm,28.4s
SNG Songkhla 62.90 284 P P 16 31 09.0 -0.3
comp=Z,640nm,0.9s,mb6.5
CN2 Changchun 63.05 332 ⇓P P 16 31 09.8 +0.1
CN2 epP pP 16 31 32.3 -0.6
CN2 eSP sP 16 31 45.1 +2.1
CN2 eS **S 16 39 34.4 +1.2**
CN2 SS SS 16 43 43.6 +2.7
CN2 pmax pmax
comp=Z,500nm,0.6s,mb6.6
CN2 LR LR
comp=N,5μm,21.0s
CN2 LR LR
comp=E,3μm,21.0s
CN2 LR LR
comp=Z,8μm,22.0s
HABR Khabarovsk 63.08 341d iP P 16 31 10.2 +0.4
HABR pmax pmax
comp=Z,921nm,2.2s,mb6.3
HABR pmax pmax
comp=N,81nm,0.7s
HABR pmax pmax
comp=E,44nm,0.6s
HABR pmax pmax
comp=Z,4μm,4.1s
COCO West Island 63.11 262 P P 16 31 12.3 +1.6
COCO pmax pmax
comp=Z,177nm,1.0s,mb6.0
COCO West Island 63.11 262 P P 16 31 12.3 +1.6
comp=Z,177nm,1.0s,mb6.0
PET Petropavlovsk 63.25 358⇓iP P 16 31 10.8 0.0
PET i S **S 16 39 35.6 +0.4**
PET e*SS sS 16 40 10.7 -4.2
PET e 16 40 49.6
PET eSS SS 16 43 43.9 +0.4
PET pmax pmax
comp=Z,3μm,4.4s
PET pmax pmax
comp=Z,201nm,1.4s,mb5.9
PET pmax pmax
comp=Z,2μm,15.7s
PET Petropavlovsk 63.25 358 eP P 16 31 10.4 -0.4
comp=Z,486nm,1.6s,mb6.2
PEA0B Petropavlovsk- 63.37 358 eP P 16 31 11.6 +0.1
PETK Petropavlovsk- 63.37 358 P P 16 31 11.0 -0.5
comp=Z,43nm,0.7s,mb5.5,baz=157,slow=8.1,SNR=68
PETK pP pP 16 31 35.3 +0.6
comp=Z,78nm,0.9s,baz=150,slow=5.9,SNR=6.9
PETK Petropavlovsk- 63.37 358 P P 16 31 11.0 -0.6
PETK *PP pP 16 31 35.3 +0.6
PETK pmax pmax
comp=Z,43nm,0.7s,mb5.5
PETK Petropavlovsk- 63.37 358 P P 16 31 11.0 -0.5
PETK pP pP 16 31 35.3 +0.6
AMKA Amchitka 63.51 12 eP P 16 31 17.5 +5.0
comp=Z,146nm,2.1s,mb5.4
KKTK Khon Kaen 63.68 294 P P 16 31 15.0 +0.6
comp=Z,926nm,0.5s,mb6.9
SMY Shemya 63.86 9 eP P 16 31 15.3 +0.5
SMY pmax pmax
comp=Z,648nm,0.8s,mb6.5
SMY Shemya 63.86 9 eP P 16 31 15.3 +0.5
comp=Z,648nm,0.8s,mb6.5
FX1 Attu Island--F 63.88 8 P P 16 31 14.8 -0.2
comp=Z,222nm,0.6s,mb6.2,baz=184,slow=3.4,SNR=140
FX1 pP pP 16 31 37.3 -0.9
comp=Z,169nm,0.7s,baz=140,slow=5.8,SNR=4.9
FX1 Attu Island--F 63.88 8 P P 16 31 14.8 -0.1
FX1 *PP pP 16 31 37.3 -0.9
FX1 pmax pmax
comp=Z,222nm,0.6s
ENH Enshi 64.17 311 eP P 16 31 16.9 -0.5
comp=Z,565nm,1.5s,mb6.2
GYA Guiyang 64.50 306⇓iP P 16 31 19.5 -0.1
GYA pP pP 16 31 44.8 +2.0
GYA sP sP 16 31 54.2 +1.3
GYA PP PP 16 33 46.0 +3.3
GYA ScP 16 35 47.0
GYA PcS 16 35 56.8
GYA S **S 16 39 52.0 +0.2**
GYA sS sS 16 40 31.6 +0.1
GYA SKS 16 41 02.7
GYA SS SS 16 44 05.9 +1.9
GYA pmax pmax
comp=Z,90nm,1.0s,mb5.5
GYA pmax pmax
comp=Z,180nm,5.8s
GYA LR LR
comp=N,6μm,18.9s
GYA LR LR
comp=E,9μm,19.2s
GYA LR LR
comp=Z,8μm,18.0s
KLR Kul'dur 64.85 339α iP P 16 31 18.0 -3.3
KLR pmax pmax
comp=E,420nm,1.8s
KLR pmax pmax
comp=Z,900nm,1.8s,mb6.3
KLR pmax pmax
comp=E,800nm,8.0s
KLR pmax pmax
comp=Z,3μm,8.0s

NNT Nongplab 65.28 289 P P 16 31 25.9 +1.0
BJT Baijiatuau 65.31 323 eP P 16 31 24.1 -0.5
BJT pmax pmax
comp=Z,81nm,0.7s
BJT Baijiatuau 65.31 323 eP P 16 31 24.1 -0.5
comp=Z,81nm,0.7s,mb5.7
BJI Beijing 65.33 323 P P 16 31 24.8 +0.1
BJI S S 16 39 57.6 -3.8
BJI SS SS 16 44 20.8 +4.4
BJI pmax pmax
comp=Z,140nm,1.7s,mb5.5
BJI pmax pmax
comp=Z,2μm,4.3s
BJI LR LR
comp=N,3μm,24.9s
BJI LR LR
comp=E,5μm,22.3s
BJI LR LR
comp=Z,9μm,30.9s
CASY Casey 65.40 200 eP P 16 31 24.1 -0.6
CASY Casey 65.40 200 eP P 16 31 23.8 -0.9
comp=Z,566nm,1.1s,mb6.3
NST Nakhon Sawan 65.88 292 P P 16 31 28.0 -0.7
comp=Z,383nm,0.6s,mb6.4
TIY Taiyuan 66.20 319⇓iP P 16 31 30.6 +0.2
TIY pP pP 16 31 53.3 -0.4
TIY S S 16 40 08.3 -3.9
TIY sS sS 16 40 56.4 +4.3
TIY pmax pmax
comp=Z,2μm,4.6s
TIY LR LR
comp=N,940nm,12.0s
TIY LR LR
comp=E,5μm,21.5s
TIY LR LR
comp=Z,5μm,20.4s
XAN Xi'an 66.53 314 P P 16 31 32.7 +0.2
XAN pP pP 16 31 54.1 -1.8
XAN sP sP 16 32 03.2 -2.8
XAN PP PP 16 34 01.0 +0.7
XAN S S 16 40 19.5 +3.2
XAN sS sS 16 40 55.3 -1.0
XAN SS SS 16 44 39.5 +4.2
XAN pmax pmax
comp=Z,67nm,1.5s,mb5.2
XAN pmax pmax
comp=Z,440nm,11.8s
XAN LR LR
comp=N,3μm,25.0s
XAN LR LR
comp=E,880nm,22.4s
XAN LR LR
comp=Z,1μm,23.3s
KMI Kunming 67.10 303 P P 16 31 37.9 +1.5
KMI pP pP 16 32 01.2 +1.4
KMI sP sP 16 32 11.3 +1.5
KMI PP PP 16 34 05.9 +0.4
KMI S S 16 40 25.5 +1.9
KMI sS sS 16 41 05.1 +1.5
KMI SS SS 16 44 48.5 +3.9
KMI pmax pmax
comp=Z,130nm,1.4s,mb5.6
KMI pmax pmax
comp=Z,2μm,5.1s
KMI LR LR
comp=N,1μm,29.0s
KMI LR LR
comp=E,3μm,26.3s
KMI LR LR
comp=Z,6μm,28.1s
BDT Bhumibol Dam 67.42 294 P P 16 31 40.0 +1.5
comp=Z,27nm,0.9s,mb5.1
SBA Scott Base 67.46 179 eP P 16 31 38.5 +0.8
SBA e*PP pP 16 32 01.7 +0.6
SBA e*SP sP 16 32 10.1 -1.1
SBA pmax pmax
comp=Z,403nm,1.5s,mb6.0
SBA Scott Base 67.46 179 eP P 16 31 38.5 +0.7
comp=Z,403nm,1.5s,mb6.0
SBA epP pP 16 32 01.7 +0.5
SBA esP sP 16 32 10.1 -1.2
CM31 Chiang Mai Arr 67.88 295 eP P 16 31 41.6 +0.2
CMAR Chiang Mai Arr 67.88 295 P P 16 31 41.7 +0.3
comp=Z,97nm,0.6s,mb5.8,baz=127,slow=5.1,SNR=362
CMAR pP pP 16 32 03.6 -1.2
comp=Z,38nm,0.7s,baz=126,slow=4.7,SNR=5.5
CMAR PKP2bc 16 59 57.5
comp=Z,9.1nm,1.0s,baz=281,slow=4.3,SNR=10
CMAR LR LR 17 01 04.4
comp=Z,2μm,18.3s,baz=274,slow=36
CMAR Chiang Mai Arr 67.88 295 P P 16 31 41.7 +0.3
CMAR pP pP 16 32 03.6 -1.2
CMAR ⇑e 16 59 57.5
CMAR LR LR 17 01 04.4
HHC Hu-ho-hao-te 68.59 322 eP P 16 31 45.9 +0.5
HHC pP pP 16 32 10.5 +1.7
HHC sP sP 16 32 21.4 +2.5
HHC PP PP 16 34 21.0 +2.9
HHC ScP 16 36 03.0
HHC PcS 16 36 13.5
HHC S S 16 40 40.8 +0.1
HHC sS sS 16 41 23.0 +2.1
HHC ScS ScS 16 41 32.7 -4.3
HHC SS SS 16 45 09.0 +2.0
HHC pmax pmax
comp=Z,250nm,1.8s,mb5.7
HHC pmax pmax
comp=Z,2μm,5.5s
HHC LR LR
comp=N,4μm,20.0s
HHC LR LR
comp=E,3μm,21.8s
HHC LR LR
comp=Z,3μm,22.4s
CD2 Chengdu 68.80 309⇓iP P 16 31 47.5 +0.6
CD2 pP pP 16 32 13.4 +3.1
CD2 sP sP 16 32 23.9 +3.5
CD2 pmax pmax
comp=Z,350nm,1.2s,mb6.1
CD2 pmax pmax
comp=Z,3μm,7.1s
CD2 LR LR
comp=N,5μm,17.8s
CD2 LR LR
comp=E,4μm,15.5s
CD2 LR LR
comp=Z,6μm,26.2s
BTO Baotou 69.41 321 eP P 16 31 50.6 +0.2
BTO pmax pmax
comp=Z,100nm,1.9s,mb5.3
UNV Unalaska Valle 69.62 20 eP P 16 31 50.7 -0.7
comp=Z,254nm,1.0s,mb6.0
HIA Hailar 69.75 332 eP P 16 31 52.6 +0.3
HIA pmax pmax
comp=Z,352nm,0.7s
HIA Hailar 69.75 332 eP P 16 31 52.6 +0.3
comp=Z,352nm,0.7s,mb6.3
AKUT Akutan 70.10 20 eP P 16 31 53.8 -0.5
comp=Z,483nm,0.8s,mb6.4
LZH Lanzhou 71.15 314 ⇑P P 16 32 02.3 +1.1
LZH pP pP 16 32 27.0 +2.2
LZH sP sP 16 32 38.1 +3.3
LZH PP PP 16 34 43.5 +3.2
LZH S S 16 41 10.6 -0.3
LZH sS sS 16 41 53.7 +2.4
LZH pmax pmax
comp=Z,880nm,1.5s,mb6.4
LZH pmax pmax
comp=Z,3μm,6.7s
LZH LR LR
comp=E,4μm,15.6s
LZH LR LR
comp=Z,5μm,19.7s
FALS False Pass 71.49 21 eP P 16 32 01.4 -1.4
comp=Z,289nm,0.8s,mb6.2
MIR Mirnyy 71.91 203⇓iP P 16 32 05.2 0.0
MIR eS S 16 41 20.0 +1.4
MIR pmax pmax
comp=Z,2μm,1.8s,mb6.6
MIR pmax pmax
comp=N,606nm,4.0s
MIR pmax pmax
comp=E,3μm,4.0s
MIR pmax pmax
comp=Z,7μm,4.0s

MIR smax
comp=N,2μm,10.0s
SDPT Sand Point 72.92 22 eP P 16 32 10.4 -0.9
comp=N,475nm,0.7s,mb6.4
CLNS Chul'man 73.46 340 eP P 16 32 15.5 +1.1
CLNS e pP 16 32 36.6 -1.5
CLNS e 16 34 58.3
CLNS ePPP 16 36 45.0
CLNS eS S 16 41 40.1 +3.8
CLNS pmax pmax
comp=E,39nm,1.1s
CLNS pmax pmax
comp=Z,134nm,1.0s,mb5.7
CLNS pmax pmax
comp=N,102nm,1.1s
CLNS pmax pmax
comp=N,30nm,1.5s
CLNS pmax pmax
comp=Z,26nm,1.4s,mb4.9
CLNS pmax pmax
comp=E,38nm,1.3s
CLNS smax
comp=E,915nm,12.2s
CLNS smax
comp=N,2μm,12.0s
CLNS MLR MLR
comp=E,749nm,19.0s
SEY Seymchan 73.47 356d iP P 16 32 14.3 0.0
SEY Seymchan 73.47 356 i P P 16 32 14.4 +0.1
CHGN Chignik 74.40 22 eP P 16 32 18.7 -1.2
CIT Chita 74.50 332 eP P 16 32 21.8 +1.2
CIT e 16 32 36.6
CIT e pP 16 32 45.0 +0.6
CIT eS S 16 41 49.6 +1.3
CIT e 16 42 30.9
CIT pmax pmax
comp=Z,2μm,2.4s,mb6.3
ULN Ulaanbaatar 75.29 326 eP P 16 32 26.0 +0.7
ULN e*PP pP 16 32 49.5 +0.4
ULN pmax pmax
comp=Z,368nm,0.8s,mb6.2
ULN Ulaanbaatar 75.29 326 eP P 16 32 26.0 +0.8
comp=Z,368nm,0.8s,mb6.2
ULN epP pP 16 32 49.5 +0.4
ULN Ulaanbaatar 75.29 326 P P 16 32 26.4 +1.1
SNR=423
ULN P 16 32 26.4
SNR=423
GTA Gaotai 75.53 315 ⇓P P 16 32 27.7 +0.9
GTA pP pP 16 32 52.7 +2.0
GTA sP sP 16 33 03.5 +2.9
GTA PP PP 16 35 22.2 +4.8
GTA S S 16 42 02.2 +2.0
GTA SKS 16 42 25.3
GTA pmax pmax
comp=Z,290nm,1.4s,mb5.8
GTA pmax pmax
comp=Z,3μm,8.4s
GTA LR LR
comp=N,3μm,19.2s
GTA LR LR
comp=E,2μm,18.6s
GTA LR LR
comp=Z,3μm,19.2s
SONM Songino Array 75.64 325 P P 16 32 27.8 +0.5
comp=Z,272nm,0.6s,mb6.1,baz=141,slow=5.3,SNR=999
SONM pP pP 16 32 51.9 +0.8
comp=Z,162nm,0.7s,baz=141,slow=5.3,SNR=6.4
SONM S S 16 42 00.3 -0.8
comp=Z,2.3nm,1.1s,baz=169,slow=0.8,SNR=3.6
SONM PKKPbc PKKPbc 16 51 44.1 -3.9
comp=Z,0.8nm,0.8s,baz=290,slow=3.2,SNR=3.8
SONM PKPPKP 16 59 40.8
comp=Z,0.6nm,0.9s,baz=9.7,slow=0.7,SNR=4.2
SONM LR LR 17 04 17.4
comp=Z,4μm,21.9s,baz=121,slow=34
YAK Yakutsk 76.34 345d iP P 16 32 30.4 -0.5
YAK e*PP pP 16 32 37.7 -17
YAK ePPP 16 37 19.7
YAK eS S 16 42 08.2 0.0
YAK e*SS sS 16 42 24.1 -25
YAK e 16 42 45.8
YAK pmax pmax
comp=E,107nm,1.4s
YAK pmax pmax
comp=Z,351nm,0.7s,mb6.2
YAK pmax pmax
comp=N,175nm,1.5s
YAK smax
comp=E,1μm,3.2s
YAK smax
comp=N,2μm,2.9s
YAK Yakutsk 76.34 345 eP P 16 32 30.5 -0.4
comp=N,1μm,0.6s,mb6.8
SHL Shillong 76.41 300⇓iP P 16 32 31.0 -1.1
SHL eS S 16 42 12.2 +1.8
AGT Agartala 76.43 298 ex x 16 32 26.0
AGT ex x 16 33 18.0
GAMB Gambell 76.81 12 eP P 16 32 33.5 -0.1
comp=N,137nm,0.8s,mb5.7
OHAK Old Harbor 77.02 23 eP P 16 32 36.6 +1.8
comp=N,756nm,1.1s,mb6.3
KDAK Kodiak Island 77.68 23 P P 16 32 38.0 -0.5
comp=N,3μm,0.7s,mb7.2,SNR=48
KDAK Kodiak Island 77.68 23 i P P 16 32 38.2 -0.3
KDAK Kodiak Island 77.68 23 eP P 16 32 38.4 -0.2
comp=N,360nm,0.8s,mb6.2
BOD Bodaibo 78.17 336 eP P 16 32 40.3 -0.9
BOD e pP 16 33 03.6 -1.6
BOD e 16 42 27.3
BOD pmax pmax
comp=Z,170nm,1.4s,mb5.6
BILL Bilibino 78.35 2d iP P 16 32 41.7 -0.3
BILL i 16 32 48.9
BILL i 16 35 36.2
BILL i S S 16 42 30.4 +0.6
BILL pmax pmax
comp=Z,600nm,1.2s,mb6.2
BILL Bilibino 78.35 2 i P P 16 32 41.8 -0.2
LSA Lhasa 78.36 303 P P 16 32 43.3 +0.4
LSA sS sS 16 43 10.0 -2.4
LSA pmax pmax
comp=Z,110nm,2.0s,mb5.2
LSA pmax pmax
comp=Z,670nm,5.0s
LSA LR LR
comp=N,820nm,23.0s
LSA LR LR
comp=E,3μm,25.0s
LSA LR LR
comp=Z,3μm,25.0s
LSA Lhasa 78.36 303 eP P 16 32 43.9 +1.0
LSA pmax pmax
comp=Z,653nm,1.9s,mb6.0
LSA Lhasa 78.36 303 eP P 16 32 43.9 +1.0
comp=Z,653nm,1.9s,mb6.0
LSA epP pP 16 33 05.0 -1.9
ZAK Zakamensk 78.74 326⇑iP P 16 32 44.9 +0.4
ZAK e pP 16 33 07.9 -0.7
ZAK e 16 42 35.9
ZAK pmax pmax
comp=Z,302nm,1.5s,mb5.9
SVW2 Sparrevohn 78.96 20 eP P 16 32 45.9 +0.4
TNA Tin City 79.16 13 eP P 16 32 46.2 -0.3
comp=Z,312nm,1.2s,mb6.0
TNA epP pP 16 33 10.6 +0.1
IRK Irkutsk 79.21 328 eP P 16 32 46.3 -0.8
IRK eS S 16 42 40.3 +0.8
IRK e 16 43 22.4
IRK pmax pmax
comp=Z,642nm,1.9s,mb6.1
TLY Talaya 79.23 328 P P 16 32 47.8 +0.6
comp=Z,1μm,1.3s,mb6.6,SNR=77
TLY Talaya 79.23 328d iP P 16 32 46.9 -0.3
TLY eS S 16 42 40.3 +0.5
TLY e 16 42 55.7
TLY ePS 16 43 25.8
TLY eSS SS 16 47 46.7 -1.8
TLY pmax pmax
comp=Z,286nm,1.0s,mb6.1
TLY MLR MLR
comp=Z,2μm,21.0s
TLY Talaya 79.23 328 eP P 16 32 46.8 -0.5
comp=Z,839nm,1.6s,mb6.3
TLY epP pP 16 33 10.9 -0.3

TLY *es*P sP 16 33 20.9 -0.3
TLY Talaya 79.23 328 P **P 16 32 47.2 -0.1**
SNR=206
TLY P 16 32 47.2
SNR=206
RSO Redoubt South 79.48 21 *e*P **P 16 32 47.5 -0.8**
QSPA South Pole Qui 79.56 180 PKKPbc PKKPbc 16 51 34.6 -4.9
comp=Z,1.6nm,0.7s,baz=62,slow=2.0,SNR=7.9
QSPA LR LR 17 07 18.5
comp=Z,2µm,18.1s,baz=16,slow=35
TTA Tatalina 80.17 18 *e*P **P 16 32 51.9 -0.1**
SEW Seward 80.45 23 *e*P **P 16 32 53.3 -0.3**
comp=Z,261nm,0.9s,mb6.1
MOY Mondy 80.64 327 *e*P **P 16 32 54.8 0.0**
MOY pmax pmax
comp=Z,615nm,3.3s
RC01 Rabbit Creek A 80.99 22 *e*P **P 16 32 56.2 -0.2**
BOK Bokaro 81.11 296 *e*PKP **P 16 32 58.4 +0.4**
PPLA Purkeypile 81.37 20 *e*P **P 16 32 57.7 -0.7**
comp=Z,127nm,0.2s,mb6.4
PMR Palmer 81.54 22 *e*P **P 16 32 59.5 +0.1**
PMR pmax pmax
comp=Z,778nm,1.6s,mb6.3
PMR Palmer 81.54 22 *e*P **P 16 32 59.5 +0.1**
comp=Z,778nm,1.6s,mb6.3
VIS Vishakhapatnam 81.90 290 *i* P **P 16 33 02.6 +0.4**
VIS *i* S S 16 43 07.0 -1.9
CHUM Lake Minchumin 82.01 19 *e*P **P 16 33 01.4 -0.4**
comp=Z,260nm,0.6s,mb6.2
PALK Pallekele 82.14 279 P **P 16 33 04.2 +0.6**
comp=Z,675nm,0.8s,mb6.5,SNR=13
PALK Pallekele 82.14 279 LR LR 17 07 58.3
comp=Z,2µm,21.4s,baz=109,slow=34
PALK Pallekele 82.14 279 *e*P **P 16 33 04.1 +0.5**
PALK pmax pmax
comp=Z,285nm,1.3s,mb5.9
PALK Pallekele 82.14 279 *e*P **P 16 33 04.1 +0.5**
comp=Z,285nm,1.3s,mb5.9
PALK Pallekele 82.14 279 P **P 16 33 04.8 +1.2**
PALK P 16 33 04.8
SNR=11
PALK Pallekele 82.14 279 P **P 16 33 04.2 +0.6**
comp=Z,675nm,0.8s,mb6.5,SNR=13
GUN Gumba 82.23 300 *e*P **P 16 33 02.0 -1.7**
KTH Kantishna Hill 82.23 20 *e*P **P 16 33 01.6 -1.3**
DIV Divide 82.50 23 *e*P **P 16 33 04.4 0.0**
comp=Z,291nm,0.7s,mb6.2
PKI Pulchoki 82.53 300 *e*P **P 16 33 03.3 -2.0**
PKIN Phulchoki 82.55 300 *e*P **P 16 33 03.1 -2.3**
comp=Z,102nm,0.6s,mb5.8
BPAW Bear Paw Mtn. 82.59 19 *e*P **P 16 33 03.4 -1.4**
comp=Z,558nm,1.5s,mb6.2
KKN Kakani 82.70 300 *e*P **P 16 33 03.9 -2.3**
comp=Z,224nm,1.0s,mb6.0
KKN Kakani 82.70 300 *e*P **P 16 33 03.9 -2.3**
KKN pmax pmax
comp=Z,224nm,1.0s,mb6.0
DMN Daman 82.80 300 *e*P **P 16 33 04.8 -1.9**
comp=Z,2µm,2.0s,mb6.7
BMRM Bremner River 82.86 23 *e*P **P 16 33 05.9 -0.3**
comp=Z,167nm,0.7s,mb6.0
MAW Mawson 83.63 202 *e*P **P 16 33 10.3 +0.1**
comp=Z,172nm,0.9s,mb5.9
MAW Mawson 83.63 202 P **P 16 33 09.8 -0.4**
comp=Z,171nm,0.9s,mb5.9,baz=89,slow=8.3,SNR=34
MAW PKPPKP 16 59 23.0
comp=Z,3.2nm,0.6s,baz=207,slow=3.0,SNR=7.1
MAW LR LR 17 05 37.7
comp=Z,1µm,19.5s,baz=82,slow=32
MAW Mawson 83.63 202 *e*P **P 16 33 10.1 -0.1**
MAW pmax pmax
comp=Z,188nm,1.4s
MAW Mawson 83.63 202 *e*P **P 16 33 10.1 -0.2**
comp=Z,188nm,1.4s,mb5.7
PAX Paxson 83.74 22 *e*P **P 16 33 10.6 -0.1**
PAX pmax pmax
comp=Z,32nm,0.6s,mb5.3
PAX Paxson 83.74 22 *e*P **P 16 33 10.6 -0.2**
comp=Z,32nm,0.6s,mb5.3
MDRS Chennai 83.77 284 *ex* pP 16 33 36.7 +0.5
MDRS AMb AMB 16 33 45.2
comp=Z,586nm,1.8s,mb6.1
COLA College 84.12 19 *e*P **P 16 33 11.6 -1.0**
COLA pmax pmax
comp=Z,246nm,0.6s,mb6.2
COLA College 84.12 19 *e*P **P 16 33 11.6 -1.0**
comp=Z,246nm,0.6s,mb6.2
PNL Peninsula 84.27 26 *e*P **P 16 33 13.4 -0.1**
comp=Z,278nm,1.0s,mb6.0
MENT Mentasta 84.36 22 *e*P **P 16 33 14.0 +0.1**
TIXI Tiksi 84.71 350 *i* P **P 16 33 14.2 -1.3**
TIXI *e* 16 36 30.5
TIXI *e*PPP 16 38 23.2
TIXI *e*S S 16 43 34.7 -0.5
TIXI *e*SS SS 16 49 10.4 +1.4
TIXI *e*SSS 16 52 43.4
TIXI pmax pmax
comp=N,165nm,2.2s
TIXI pmax pmax
comp=Z,424nm,4.3s
TIXI MLR MLR
comp=Z,2µm,19.0s
TIXI Tiksi 84.71 350 *e*P **P 16 33 14.2 -1.3**
comp=Z,504nm,1.4s,mb6.3
TIXI *e*pP pP 16 33 39.2 -0.6
SIT Sitka 84.83 29 *e*P **P 16 33 15.8 -0.5**
SIT pmax pmax
comp=Z,432nm,1.8s,mb6.1
SIT Sitka 84.83 29 *e*P **P 16 33 15.8 -0.5**
comp=Z,432nm,1.8s,mb6.1
COLD Coldfoot 84.95 17 *e*P **P 16 33 16.9 +0.1**
comp=Z,1µm,2.3s,mb6.4
CRAG Craig 85.20 31 *e*P **P 16 33 18.7 +0.4**
comp=Z,91nm,1.2s,mb5.6
MCCM Marconi Confer 85.45 50 *e*P **P 16 33 19.8 -0.1**
comp=Z,414nm,1.3s,mb6.2
HOPS Hopland 85.55 49 *e*P **P 16 33 20.5 +0.1**
comp=Z,412nm,1.4s,mb6.2
WMQ Urumqi 85.60 316 P **P 16 33 20.0 -0.5**
WMQ pP pP 16 33 46.0 +1.1
WMQ sP sP 16 33 56.0 +1.3
WMQ PP PP 16 36 42.0 +1.3
WMQ S S 16 43 41.0 -4.1
WMQ SS SS 16 49 24.0 +0.7
WMQ pmax pmax
comp=Z,170nm,1.2s,mb5.8
WMQ pmax pmax
comp=Z,3µm,8.0s
WMQ LR LR
comp=N,3µm,20.0s
WMQ LR LR
comp=E,3µm,20.0s
WMQ LR LR
comp=Z,4µm,20.0s
SKAG Skagway 85.96 27 *e*P **P 16 33 22.2 +0.3**
comp=Z,259nm,1.3s,mb6.0
TRD Trivandrum 86.02 279⇓*ex* **P 16 33 25.0 +1.7**
TRD *ex* x 16 36 26.0
SAO San Andreas Ge 86.15 52 *e*P **P 16 33 23.6 +0.2**
SAO pmax pmax
comp=Z,322nm,1.4s,mb6.1
SAO San Andreas Ge 86.15 52 *e*P **P 16 33 23.6 +0.1**
comp=Z,322nm,1.4s,mb6.1
JBP Jabalpur 86.20 294⇓*i* P **P 16 33 22.8 -1.2**
JBP *ex* x 16 43 37.4
HYB Hyderabad 86.28 288 *e*P **P 16 33 24.5 +0.1**
HYB *e*S S 16 43 40.0 -13
HYB pmax pmax
comp=Z,333nm,1.6s,mb6.0
HYB Hyderabad 86.28 288 *e*P **P 16 33 24.5 +0.1**
comp=Z,333nm,1.6s,mb6.0
HYB *e*S S 16 43 40.0 -13
HYB Hyderabad 86.28 288 *i* P **P 16 33 24.5 +0.1**
comp=Z,333nm,1.6s,mb6.0
HYB *e*S S 16 43 51.0 -1.7
EGAK Eagle 86.35 21 *e*P **P 16 33 24.1 +0.3**
comp=Z,1µm,1.4s,mb6.7
WDC Whiskeytown Da 86.41 48 *e*P **P 16 33 24.6 0.0**
WDC pmax pmax
comp=Z,283nm,1.3s,mb6.0
WDC Whiskeytown Da 86.41 48 *e*P **P 16 33 24.6 0.0**
comp=Z,283nm,1.3s,mb6.0
WDC *e*pP pP 16 33 47.4 -1.6
BBB Bella Bella 86.59 36 LR LR 17 04 04.5
comp=Z,1µm,20.4s,baz=243,slow=30

DAWY Dawson 86.61 22 *e*P **P 16 33 25.3 +0.3**
NGP Nagpur 86.61 292 *ex* **P 16 33 21.5 -4.5**
NGP *ex* x 16 43 46.8
YBH Yreka Blue Hor 86.62 47 S S 16 43 44.7 -10
comp=Z,0.4nm,0.3s,baz=38,slow=17,SNR=2.0
YBH LR LR 17 10 46.8
comp=Z,2µm,18.5s,baz=252,slow=35
YBH Yreka Blue Hor 86.62 47 *e*P **P 16 33 26.0 +0.4**
YBH pmax pmax
comp=Z,183nm,1.0s
YBH Yreka Blue Hor 86.62 47 *e*P **P 16 33 26.0 +0.4**
comp=Z,183nm,1.0s,mb6.0
HUMO Hull Mountain 86.70 46 *e*P **P 16 33 26.5 +0.6**
comp=Z,306nm,1.3s,mb6.1
HUMO *e*pP pP 16 33 51.4 +1.0
SNCC San Nicolas Is 86.75 56⇓P **P 16 33 26.6 +0.1**
baz=87
BSC Santa Cruz Isl 86.85 55⇓P **P 16 33 27.1 +0.2**
baz=87,SNR=6.2
BSC ⇑SKSac SKSac 16 43 46.1 +0.2
baz=87
SMMC Simmler 86.89 53⇓P **P 16 33 27.8 +0.7**
baz=87,SNR=28
SMMC ⇑SKSac SKSac 16 43 46.6 +0.6
baz=87
SBC Santa Barbara 86.90 54⇑P **P 16 33 27.3 +0.1**
baz=87
PKM Peak Mountain 86.93 54⇑P **P 16 33 27.4 +0.2**
baz=87,SNR=36
PKM ⇓SKSac SKSac 16 43 47.4 +1.1
baz=87
HEBO Mount Hebo 86.94 43 *e*P **P 16 33 27.6 +0.6**
comp=Z,212nm,0.8s,mb6.1
KMOR Kings Mountain 87.25 43 P **P 16 33 29.3 +0.8**
F03A Seaside 87.29 42⇓P **P 16 33 29.2 +0.5**
baz=87,SNR=9.3
CMB Columbia Colle 87.31 51 *e*P **P 16 33 28.3 -0.7**
CMB pmax pmax
comp=Z,225nm,1.4s,mb5.9
CMB Columbia Colle 87.31 51 *e*P **P 16 33 28.3 -0.7**
comp=Z,225nm,1.4s,mb5.9
BLG Laguna Peak 87.34 55⇓P **P 16 33 29.4 +0.1**
baz=87,SNR=5.9
BLG ⇑SKSac SKSac 16 43 48.7 -0.1
baz=87
PTH Pithoragarh 87.45 300 *e*PKP **P 16 33 28.9 -1.0**
PTH *ex* x 16 35 32.0
E03A Lebam 87.48 42⇑P **P 16 33 30.2 +0.6**
baz=88,SNR=30
SCI San Clemente I 87.48 56⇓P **P 16 33 30.3 +0.3**
baz=88,SNR=7.9
HOG Hogback Mounta 87.48 46 P **P 16 33 30.6 +0.8**
NLWA Neilton Lookou 87.54 41⇓P **P 16 33 30.5 +0.5**
baz=88
NLWA ⇓SKSac SKSac 16 43 50.8 +1.3
baz=88
NLWA Neilton Lookou 87.54 41 *e*P **P 16 33 30.1 +0.2**
comp=Z,188nm,1.4s,mb5.9
CIS Catalina Islan 87.70 56⇑P **P 16 33 31.0 0.0**
baz=88,SNR=15
CIS ⇓SKSac SKSac 16 43 51.0 0.0
baz=88
RCTC Rector, Farmer 87.75 53⇓P **P 16 33 31.2 0.0**
baz=88,SNR=5.7
VES Vestal, Richgr 87.75 53⇓P **P 16 33 31.1 -0.1**
baz=88,SNR=11
VES ⇓SKSac SKSac 16 43 51.3 +0.1
baz=88
ARVC Arvin 87.78 54⇑P **P 16 33 31.5 +0.2**
baz=88,SNR=12
ARVC ⇓SKSac SKSac 16 43 51.5 0.0
baz=88
G04A Mulino 87.80 43⇑P **P 16 33 31.5 +0.3**
baz=88,SNR=12
H04A Detroit Lake 87.84 44⇓P **P 16 33 31.5 0.0**
baz=88,SNR=33
H04A ⇑SKSac SKSac 16 43 52.2 +0.8
baz=88
FMP Fort Macarthur 87.86 55⇑P **P 16 33 31.7 -0.1**
baz=88
DECC Green Verdugo 87.96 55⇓P **P 16 33 32.3 +0.1**
baz=88
DLBC Dease Lake 87.98 29 P **P 16 33 31.4 -0.3**
comp=Z,66nm,1.1s,mb5.6,baz=234,slow=5.6,SNR=28
DLBC pP pP 16 33 53.4 -2.8
comp=Z,5.1nm,0.7s,baz=239,slow=11,SNR=1.1
DLBC S S 16 43 55.5 -12
comp=Z,1.7nm,0.3s,baz=18,slow=20,SNR=1.8
DLBC LR LR 17 05 06.4
comp=Z,3µm,21.6s,baz=250,slow=30
DLBC Dease Lake 87.98 29 *e*P **P 16 33 30.8 -1.0**
F04A Amboy 88.05 43⇑P **P 16 33 32.6 +0.2**
baz=88,SNR=24
F04A ⇑SKSac SKSac 16 43 53.5 +0.9
baz=88
PASC Pasadena Art C 88.06 55 *e*P **P 16 33 32.6 -0.1**
comp=Z,2µm,1.4s,mb6.8
LVP Lakeview Peak 88.10 43 P **P 16 33 33.3 +0.7**
WCN Washoe City 88.11 50⇑P **P 16 33 33.0 +0.2**
baz=88,SNR=27
WCN ⇓SKSac SKSac 16 43 54.1 +0.8
baz=88
MWC Mount Wilson 88.17 55 *e*P **P 16 33 33.4 +0.1**
MWC pmax pmax
comp=Z,676nm,1.3s,mb6.5
MWC Mount Wilson 88.17 55 *e*P **P 16 33 33.4 +0.1**
comp=Z,676nm,1.3s,mb6.5
FL2 Flat Top 2 88.17 42 P **P 16 33 34.0 +1.1**
ISA Isabella 88.19 53⇑P **P 16 33 33.5 +0.2**
baz=88,SNR=70
ISA Isabella 88.19 53 *e*P **P 16 33 33.2 -0.1**
ISA *e* 16 37 00.7
ISA pmax pmax
comp=Z,503nm,1.5s,mb6.3
ISA Isabella 88.19 53 *e*P **P 16 33 33.1 -0.1**
comp=Z,503nm,1.5s,mb6.3
ISA *e*PP PP 16 37 00.7 -1.0
K05A Summer Lake 88.19 46⇓P **P 16 33 33.5 +0.4**
baz=88,SNR=87
PGC Sidney 88.20 40 *e*P **P 16 33 32.2 -0.8**
comp=Z,12nm,1.3s,mb4.8
TDL Tradedollar La 88.31 42 P **P 16 33 34.6 +1.0**
EDW2 Edwards Air Fo 88.39 54⇓P **P 16 33 34.4 +0.2**
baz=88,SNR=69
MLAC Mammoth Lakes 88.39 51⇑P **P 16 33 34.3 +0.1**
baz=88
HOOD Mont Hood Mea 88.39 43 *e*P **P 16 33 35.0 +1.0**
comp=Z,3µm,2.0s,mb6.9
MOD Modoc 88.39 47 *e*P **P 16 33 34.1 +0.1**
comp=Z,354nm,1.4s,mb6.2
BFSC Mount Baldy Ra 88.50 55⇓P **P 16 33 34.7 -0.1**
baz=89,SNR=64
109C Camp Elliot, M 88.64 56⇑P **P 16 33 35.7 +0.2**
baz=89,SNR=11
CWC Cottonwood Cre 88.69 53⇓P **P 16 33 35.7 +0.1**
baz=89
LON Longmire 88.69 42 *e*P **P 16 33 34.9 -0.5**
LON pmax pmax
comp=Z,157nm,1.4s,mb5.8
LON Longmire 88.69 42 *e*P **P 16 33 34.9 -0.5**
comp=Z,157nm,1.4s,mb5.8
D05A Enumclaw 88.70 42⇑P **P 16 33 36.0 +0.6**
baz=89,SNR=20
TIN Tinemaha 88.72 52⇑P **P 16 33 36.1 +0.4**
baz=89,SNR=17
MURC Murrieta 88.72 56⇑P **P 16 33 36.0 +0.1**
baz=89,SNR=22
LRMC Laurel Mountai 88.77 54⇑P **P 16 33 36.4 +0.4**
baz=89,SNR=176
WPW White Pass 88.85 42 P **P 16 33 36.7 +0.5**
BAR Barrett 88.94 57 *e*P **P 16 33 36.6 -0.3**
comp=Z,504nm,1.5s,mb6.3
NVAR Mina Array Bea 88.99 51 P **P 16 33 37.3 +0.3**
comp=Z,115nm,0.7s,mb6.0,baz=242,slow=6.5,SNR=249
NVAR PP PP 16 37 05.1 -3.0
comp=Z,2.7nm,0.9s,baz=246,slow=6.8,SNR=3.5
NVAR PKKPbc PKKPbc 16 51 16.9 +0.5
comp=Z,1.2nm,0.6s,baz=83,slow=3.4,SNR=4.5
NVAR PKPPKP 16 59 23.9
comp=Z,1.7nm,0.9s,baz=73,slow=3.9,SNR=7.4
JCW Jim Creek 89.03 41 *e*P **P 16 33 36.9 -0.1**
G06A Carlson Farm, 89.06 44⇑P **P 16 33 37.4 +0.2**
baz=89,SNR=17
MPMC Manual Prospec 89.06 53⇑P **P 16 33 37.8 +0.4**
baz=89,SNR=161
BBRC Big Bear Solar 89.10 55⇑P **P 16 33 37.7 +0.1**
baz=89

A05A Maple Falls 89.16 40⇑P **P 16 33 37.2 -0.3**
baz=89,SNR=9.9
RRX Edison Barstow 89.18 54⇓P **P 16 33 38.1 +0.2**
baz=89
MONP Monument Peak 89.20 56⇑P **P 16 33 38.2 +0.1**
baz=89,SNR=113
PFO Pinyon Flat Ob 89.33 56 P **P 16 33 39.8 +1.1**
comp=Z,697nm,1.7s,mb6.4,SNR=21
PFO Pinyon Flat Ob 89.33 56⇓P **P 16 33 38.9 +0.2**
baz=89,SNR=39
PFO Pinyon Flat Ob 89.33 56 *e*P **P 16 33 38.6 -0.1**
PFO pmax pmax
comp=Z,615nm,1.8s,mb6.3
PFO Pinyon Flat Ob 89.33 56 *e*P **P 16 33 38.6 -0.1**
comp=Z,615nm,1.8s,mb6.3
NAC Naches 89.34 42 P **P 16 33 39.1 +0.7**
RPW Rockport 89.37 40 *e*P **P 16 33 37.9 -0.6**
comp=Z,42nm,0.7s,mb5.6
B06A Marblemount 89.41 40⇑P **P 16 33 38.5 -0.2**
baz=90,SNR=7.5
DVTC Desert V Tower 89.41 57⇑P **P 16 33 39.1 0.0**
baz=90,SNR=23
GSC Goldstone 89.43 54⇓P **P 16 33 39.3 +0.2**
baz=90,SNR=76
GSC Goldstone 89.43 54 *e*P **P 16 33 39.1 0.0**
GSC pmax pmax
comp=Z,310nm,1.4s,mb6.2
GSC Goldstone 89.43 54 *e*P **P 16 33 39.1 0.0**
comp=Z,310nm,1.4s,mb6.2
DDI Dehra Dun 89.45 301 *ex* PcP 16 33 43.8 +3.1
I07A Izee 89.53 45⇓P **P 16 33 39.9 +0.6**
baz=90,SNR=100
WRW Wenatchee Ridg 89.61 41 P **P 16 33 40.0 +0.3**
FURC Furnace Creek, 89.65 53⇑P **P 16 33 40.4 +0.3**
baz=90,SNR=41
HEC Hector,Ludlow 89.70 55⇑P **P 16 33 40.5 0.0**
baz=90,SNR=103
SWSC Sam W. Stewart 89.72 57⇑P **P 16 33 40.7 +0.1**
baz=90,SNR=55
WVOR Wild Horse Val 89.73 47 *e*P **P 16 33 40.7 +0.4**
comp=Z,1µm,1.6s,mb6.8
BELC Belle Mtn. Jos 89.79 55⇓P **P 16 33 41.2 +0.4**
baz=90,SNR=156
NDI New Delhi 89.82 299 *ex* x 16 33 37.0
ETW Entiat 89.90 42 *e*P **P 16 33 40.7 -0.3**
comp=Z,293nm,1.2s,mb6.3
E07A Sunnyside 89.94 43⇑P **P 16 33 41.4 +0.2**
baz=90
SHOC Shoshone 89.98 54⇓P **P 16 33 41.7 +0.1**
baz=90,SNR=68
MDW Midway 90.01 43 P **P 16 33 42.3 +0.7**
U10A Ash Meadows, A 90.06 53⇓P **P 16 33 42.2 +0.2**
baz=90,SNR=45
RSW Rattlesnake Hi 90.07 43 *e*P **P 16 33 42.2 +0.4**
comp=Z,595nm,1.5s,mb6.5
J08A Circle Bar Ran 90.07 46⇑P **P 16 33 42.4 +0.5**
baz=90,SNR=183
HAWA Hanford 90.11 43 *e*P **P 16 33 42.1 +0.1**
comp=Z,105nm,0.8s,mb6.0
MKAR Makanchi Array 90.11 318 P **P 16 33 41.0 -1.0**
comp=Z,148nm,0.7s,mb6.2,baz=87,slow=7.1,SNR=589
MKAR S SKSac 16 44 02.1 -2.6
comp=Z,5.0nm,1.1s,baz=87,slow=7.7,SNR=6.6
MKAR PKPPKP 16 59 14.5
comp=Z,0.8nm,0.8s,baz=289,slow=3.7,SNR=4.7
MKAR Makanchi Array 90.11 318 P **P 16 33 41.1 -0.9**
MKAR S SKSac 16 44 02.2 -2.5
MKAR pmax pmax
comp=Z,148nm,0.7s
MKAR smax
comp=N,5.0nm,1.1s
BC3 Big Chuckawall 90.16 56⇑P **P 16 33 42.6 0.0**
baz=90,SNR=100
TUQ Turquoise Moun 90.16 54⇓P **P 16 33 42.7 +0.2**
baz=90,SNR=166
S10A Tonopah Range, 90.18 52⇑P **P 16 33 43.0 +0.4**
baz=90,SNR=396
G08A Pilot Rock 90.21 44⇑P **P 16 33 43.0 +0.5**
baz=90,SNR=65
H08A Prairie City 90.22 45⇑P **P 16 33 42.8 +0.2**
baz=90,SNR=49
GMRC Granite Mounta 90.23 55⇑P **P 16 33 43.1 +0.2**
baz=90,SNR=166
A07A Ashnola River, 90.25 40⇓P **P 16 33 42.5 -0.1**
baz=90,SNR=64
BMN Battle Mountai 90.28 49 *e*P **P 16 33 43.5 +0.5**
BMN pmax pmax
comp=Z,472nm,1.3s,mb6.5
BMN Battle Mountai 90.28 49 *e*P **P 16 33 43.5 +0.5**
comp=Z,472nm,1.3s,mb6.5
KAD Karad 90.35 287 *e*PKP **P 16 33 42.5 -1.3**
GOA Goa 90.35 286⇑*e*PKP **P 16 33 41.5 -2.3**
SMLA Simla 90.37 301 *e*PKP **P 16 33 42.5 -1.1**
E08A Dider Farm, El 90.45 43⇑P **P 16 33 43.8 +0.2**
baz=91,SNR=30
F08A Pendleton 90.47 44⇓P **P 16 33 43.9 +0.2**
baz=91,SNR=5.4
R10A Warm Springs 90.49 51⇓P **P 16 33 44.5 +0.5**
baz=91,SNR=87
IRM Iron Mountain 90.51 55⇑P **P 16 33 44.5 +0.3**
baz=91,SNR=121
ZAA0 Zalesovo Array 90.53 325 *e*P **P 16 33 41.7 -2.1**
ZALV Zalesovo Beam 90.53 325 P **P 16 33 41.8 -2.0**
comp=Z,42nm,0.5s,mb5.8,baz=114,slow=6.1,SNR=137
ZALV pP pP 16 34 06.0 -2.3
comp=Z,7.6nm,0.5s,baz=132,slow=6.6,SNR=1.8
ZALV ScS ScS 16 44 35.3 +0.5
comp=Z,5.9nm,1.1s,baz=121,slow=5.7,SNR=6.5
ZALV PKKP PKKPbc 16 51 09.6 -3.7
comp=Z,1.0nm,0.4s,baz=275,slow=3.3,SNR=4.5
ZALV PKPPKP 16 59 15.6
comp=Z,1.2nm,0.7s,baz=242,slow=3.2,SNR=4.5
ZALV LR LR 17 18 09.1
comp=Z,1µm,18.6s,baz=102,slow=38
ZALV Zalesovo Beam 90.53 325 P **P 16 33 41.8 -2.0**
ZALV *PP pP 16 34 06.0 -2.3
ZALV 16 44 35.3
ZALV pmax pmax
comp=Z,43nm,0.5s,mb5.8
ZALV MLR MLR
comp=Z,1µm,18.6s
ZALV Zalesovo Beam 90.53 325 P **P 16 33 41.8 -2.0**
ZALV pP pP 16 34 06.0 -2.3
ZALV ScS ScS 16 44 35.3 +0.5
ZALV PKKP PKKPbc 16 51 09.6 -3.7
ZALV P'P' 16 59 15.6
ZALV LR LR 17 18 09.1
Q10A Clear Creek Ra 90.53 51⇓P **P 16 33 44.6 +0.4**
baz=91,SNR=210
GLA Glamis 90.54 57⇑P **P 16 33 44.4 +0.1**
baz=91,SNR=47
GLA Glamis 90.54 57 *e*P **P 16 33 45.0 +0.6**
GLA pmax pmax
comp=Z,274nm,1.1s,mb6.3
GLA Glamis 90.54 57 *e*P **P 16 33 45.0 +0.6**
comp=Z,274nm,1.1s,mb6.3
J09A Fry Pan Ranch, 90.58 46⇑P **P 16 33 44.6 +0.3**
baz=91,SNR=300
112A Yuma 90.64 57⇓P **P 16 33 45.1 +0.3**
baz=91
V11A Goodsprings 90.64 54⇓P **P 16 33 44.9 +0.2**
baz=91,SNR=34
P10A Eureka 90.66 50⇓P **P 16 33 44.9 +0.1**
baz=91,SNR=59
D08A Wollman Farm, 90.68 42⇑P **P 16 33 44.6 -0.1**
baz=91,SNR=29
LDFC Landfair 90.73 55 *e*P **P 16 33 45.7 +0.5**
comp=Z,922nm,1.4s,mb6.7
I09A Lost Marbles R 90.74 45⇓P **P 16 33 45.1 +0.1**
baz=91,SNR=71
B08A Colville Reser 90.74 41⇓P **P 16 33 44.5 -0.5**
baz=91,SNR=64
INK Inuvik 90.77 20 P **P 16 33 43.6 -1.0**
comp=Z,34nm,0.8s,mb5.5,baz=237,slow=5.6,SNR=82
INK pP pP 16 34 06.5 -2.7
comp=Z,8.5nm,0.6s,baz=234,slow=16,SNR=2.0
INK PKiKP PKiKP 16 38 37.5 -0.4
comp=Z,3.1nm,0.8s,baz=244,slow=0.7,SNR=4.1
INK S SKSac 16 44 06.7 -0.9
comp=Z,1.8nm,1.0s,baz=27,slow=32,SNR=6.5
INK ScS ScS 16 44 34.6 -1.6
comp=Z,2.4nm,0.9s,baz=90,slow=29,SNR=7.4
INK LR LR 17 12 37.7
comp=Z,3µm,19.5s,baz=238,slow=34
INK Inuvik 90.77 20 P **P 16 33 43.6 -1.0**
INK S SKSac 16 44 06.7 -0.9
INK 16 44 34.6

INK pmax pmax
comp=Z,34nm,0.8s
INK smax
comp=N,2.0nm,1.0s
INK MLR MLR
comp=Z,3μm,19.5s
INK Inuvik 90.77 20 *e*P **P 16 33 43.8 -0.9**
comp=Z,216nm,1.4s,mb6.1
S11A Rachel 90.78 52 ⇑P **P 16 33 45.7 +0.3**
baz=91,SNR=52
O10A Cortez Mining, 90.79 49 ⇓P **P 16 33 45.8 +0.4**
baz=91,SNR=58
U11A Corn Creek 90.80 53 ⇓P **P 16 33 45.6 +0.1**
baz=91,SNR=19
LNOR Lincton Mounta 90.82 44 *e*P **P 16 33 45.5 +0.2**
LNOR pmax pmax
comp=Z,323nm,2.1s,mb6.1
LNOR Lincton Mounta 90.82 44 *e*P **P 16 33 45.5 +0.2**
comp=Z,323nm,2.1s,mb6.1
N10A Dunphy 90.88 49 ⇓P **P 16 33 46.2 +0.4**
baz=91,SNR=17
POO Poona 90.88 289 *e*PKP **P 16 33 44.9 -1.4**
OD2 Odessa Site #2 90.91 42 *e*P **P 16 33 45.5 -0.2**
comp=Z,386nm,1.0s,mb6.5
Y12C Blythe 90.93 56 ⇑P **P 16 33 46.5 +0.3**
baz=91,SNR=28
H09A Durkee 90.95 45 ⇑P **P 16 33 46.3 +0.4**
baz=91,SNR=58
W12A Cal Nev Ari 90.97 54 ⇓P **P 16 33 46.5 +0.2**
baz=91,SNR=31
F09A S2 Ranch, Elgi 91.03 44 ⇑P **P 16 33 46.3 0.0**
baz=91
M10A I.L. Ranch, Tu 91.03 48 ⇓P **P 16 33 46.7 +0.2**
baz=91,SNR=120
R11A Troy Canyon, C 91.05 51 ⇓P **P 16 33 46.9 +0.3**
baz=91,SNR=322
SYO Syowa Base 91.06 198 ⇑*i*P **P 16 33 43.8 -2.3**
SYO Syowa Base 91.06 198 ⇓*i*P **P 16 33 46.4 +0.3**
NEE2 Needles Airpor 91.06 55 ⇑P **P 16 33 47.0 +0.3**
baz=91
E09A Wood Farm, Sta 91.07 43 ⇑P **P 16 33 46.6 +0.1**
baz=91,SNR=17
K10A MacKenzie Ranc 91.08 47 ⇑P **P 16 33 47.3 +0.7**
baz=91,SNR=282
V12A Nelson 91.08 54 ⇑P **P 16 33 46.9 +0.1**
baz=91,SNR=111
D09A Jones Farm, Ri 91.09 42 ⇑P **P 16 33 46.8 +0.2**
baz=91,SNR=60
Q11A Duckwater 91.11 51 ⇑P **P 16 33 47.2 +0.3**
baz=91,SNR=418
P11A Circle Ranch, 91.19 50 ⇑P **P 16 33 47.8 +0.6**
baz=91,SNR=81
L10A Juniper Basin 91.21 48 ⇓P **P 16 33 47.7 +0.5**
baz=91,SNR=288
BMO Blue Mountains 91.25 45 *e*P **P 16 33 47.2 -0.1**
BMO pmax pmax
comp=Z,305nm,1.4s,mb6.2
BMO Blue Mountains 91.25 45 *e*P **P 16 33 47.2 -0.1**
comp=Z,305nm,1.4s,mb6.2
C09A Chrisman Ranch 91.29 42 ⇑P **P 16 33 47.0 -0.4**
baz=91,SNR=25
J10A Berg Farm, Mel 91.30 46 ⇑P **P 16 33 47.9 +0.3**
baz=91,SNR=33
113A Mohawk Valley, 91.36 57 ⇑P **P 16 33 48.2 0.0**
baz=91,SNR=21
PDMCI Parker Dam,Lak 91.36 56 ⇑P **P 16 33 48.2 0.0**
baz=91,SNR=40
O11A Cowboy Ranch, 91.38 50 ⇓P **P 16 33 48.7 +0.6**
baz=92,SNR=212
T12A Moapa 91.39 53 ⇓P **P 16 33 48.6 +0.4**
baz=92
I10A Payette 91.42 46 ⇓P **P 16 33 48.7 +0.6**
baz=92,SNR=22
S12A Delamar Landin 91.47 52 ⇑P **P 16 33 49.0 +0.5**
baz=92,SNR=246
U12A Valley of Fire 91.47 53 ⇑P **P 16 33 48.9 +0.3**
baz=92
N11A Elko Archery C 91.47 49 ⇓P **P 16 33 48.8 +0.3**
baz=92,SNR=13
G10A Bishop Farm, J 91.47 44 ⇓P **P 16 33 48.4 0.0**
baz=92,SNR=157
Y13A Salome 91.51 56 ⇓P **P 16 33 48.8 0.0**
baz=92,SNR=32
B09A Rice 91.52 41 ⇑P **P 16 33 48.4 -0.2**
baz=92,SNR=72
Z13A Yuma Proving G 91.53 57 ⇓P **P 16 33 49.1 +0.2**
baz=92,SNR=151
F10A Beach Ranch, E 91.56 44 ⇓P **P 16 33 48.7 -0.1**
baz=92,SNR=127
M11A Holland Ranch, 91.56 48 ⇑P **P 16 33 49.3 +0.4**
baz=92,SNR=227
H10A Noah's Angus R 91.57 45 ⇑P **P 16 33 48.7 -0.2**
baz=92,SNR=206
AJM Ajmer 91.63 296 *e*PKP **P 16 33 48.0 -1.6**
X13A Yucca 91.67 55 ⇓P **P 16 33 49.6 +0.1**
baz=92,SNR=76
NVS Novosibirsk 91.67 326 ⇓*i*P **P 16 33 47.9 -1.2**
NVS *e* 16 37 24.8
NVS *e*S SKSac 16 44 10.9 -2.4
NVS pmax pmax
comp=Z,445nm,1.8s,mb6.4
NVS pmax pmax
comp=N,101nm,1.6s
NVS pmax pmax
comp=E,228nm,1.6s
NVS smax
comp=E,641nm,2.9s
NVS smax
comp=N,54nm,1.6s
K11A Parker Ranch, 91.68 47 ⇑P **P 16 33 49.9 +0.6**
baz=92,SNR=234
W13A Hualapai Mount 91.72 55 ⇓P **P 16 33 50.1 +0.3**
baz=92,SNR=128
L11A Cat Creek Ranc 91.75 48 ⇑P **P 16 33 50.2 +0.5**
baz=92,SNR=188
D10A Wagner Farm, O 91.77 43 ⇑P **P 16 33 49.7 0.0**
baz=92,SNR=148
Q12A Willow Creek R 91.78 51 ⇑P **P 16 33 50.6 +0.7**
baz=92,SNR=150
V13A Grand Canyon W 91.79 54 ⇓P **P 16 33 50.4 +0.3**
baz=92,SNR=135
R12A Pony Springs, 91.80 52 ⇓P **P 16 33 50.4 +0.4**
baz=92,SNR=91
P12A McGill 91.81 50 ⇑P **P 16 33 50.5 +0.4**
baz=92,SNR=217
ELK Elko 91.82 49 S SKSac 16 44 17.4 +2.6
comp=N,0.3nm,0.3s,baz=111,slow=22,SNR=9.0
ELK PKPPKP 16 59 18.9
comp=N,0.4nm,0.6s,baz=120,slow=5.0,SNR=4.9
ELK LR LR 17 06 54.4
comp=N,1μm,20.0s,baz=55,slow=30
ELK Elko 91.82 49 *e*P **P 16 33 50.6 +0.5**
ELK pmax pmax
comp=Z,318nm,1.3s
ELK Elko 91.82 49 *e*P **P 16 33 50.6 +0.5**
comp=Z,318nm,1.3s,mb6.4
THN Them Dam 91.84 302 *e*PKP **P 16 33 47.6 -2.8**
U13A Pakoon Wash 91.92 53 ⇑P **P 16 33 50.8 +0.1**
baz=92,SNR=125
C10A Spilker Farm, 91.93 42 ⇑P **P 16 33 50.1 -0.3**
baz=92,SNR=7.7
MFID Camas Ranch 91.96 46 ⇓P **P 16 33 51.0 +0.3**
baz=92,SNR=141
I11A Placerville 91.98 46 ⇑P **P 16 33 51.2 +0.4**
baz=92,SNR=100
214A Organ Pipe Nat 91.99 58 ⇓P **P 16 33 51.3 +0.1**
baz=92,SNR=32
N12A Clover Valley, 92.00 49 ⇑P **P 16 33 51.5 +0.6**
baz=92,SNR=254
N12A Clover Valley, 92.00 49 *e*P **P 16 33 51.5 +0.6**
comp=Z,373nm,0.9s,mb6.6
A10A Northport 92.04 41 ⇓P **P 16 33 50.7 -0.2**
baz=92,SNR=8.4
114A Black Gap (USA 92.08 57 ⇑P **P 16 33 51.8 +0.3**
baz=92,SNR=33
G11A Walters Elk Ra 92.08 44 ⇑P **P 16 33 50.9 -0.4**
baz=92,SNR=350
T13A Saint George 92.08 53 ⇓P **P 16 33 51.7 +0.3**
baz=92,SNR=97
B10A Chitwood Farm, 92.09 41 ⇑P **P 16 33 51.0 -0.2**
baz=92,SNR=13
O12A Currie 92.09 50 ⇓P **P 16 33 51.3 -0.1**
baz=92,SNR=161
H11A Donnelly 92.11 45 ⇑P **P 16 33 51.3 0.0**
baz=92,SNR=46
Z14A Wintersburg 92.15 57 ⇑P **P 16 33 52.0 +0.2**
baz=92,SNR=18
NEW Newport 92.15 41 *e*P **P 16 33 51.0 -0.5**
NEW pmax pmax
comp=Z,379nm,1.3s
NEW Newport 92.15 41 *e*P **P 16 33 51.0 -0.4**
comp=Z,379nm,1.3s,mb6.5
M12A Wells 92.20 48 ⇓P **P 16 33 52.3 +0.4**
baz=92,SNR=132
Y14A Wickenburg 92.21 56 ⇓P **P 16 33 51.9 -0.2**
baz=92,SNR=6.9
S13A Holt Ranch, En 92.23 52 ⇓P **P 16 33 52.5 +0.5**
baz=92,SNR=60
F11A Grangeville 92.27 44 ⇓P **P 16 33 50.9 -1.2**
baz=92,SNR=59
L12A House Creek Ra 92.28 48 ⇑P **P 16 33 52.7 +0.5**
baz=92,SNR=231
E11A Bogner Ranch, 92.33 43 ⇓P **P 16 33 51.6 -0.7**
baz=92,SNR=144
Q13A Wheeler Ranch, 92.38 51 ⇓P **P 16 33 53.1 +0.4**
baz=92,SNR=81
W14A Seligman 92.39 55 ⇓P **P 16 33 52.7 -0.2**
baz=92,SNR=81
D11A Klaveano Farm, 92.40 43 ⇑P **P 16 33 52.1 -0.5**
baz=92,SNR=88
J12A Stokes Ranch, 92.45 47 ⇓P **P 16 33 53.5 +0.6**
baz=92,SNR=550
V14A Boquillas Ranc 92.45 54 ⇑P **P 16 33 53.6 +0.4**
baz=92,SNR=104
K12A Draper Farm, C 92.46 47 ⇓P **P 16 33 53.5 +0.5**
baz=93,SNR=110
P13A Bates Ranch, G 92.48 50 ⇑P **P 16 33 53.7 +0.5**
baz=93
I12A Atlanta 92.53 46 ⇓P **P 16 33 53.6 +0.2**
baz=93,SNR=141
U14A Mt Trumbull 92.54 54 ⇑P **P 16 33 53.7 +0.2**
baz=93,SNR=173
ARUT Antelope Range 92.60 52 *e*P **P 16 33 54.9 +1.1**
ARUT pmax pmax
comp=Z,356nm,1.7s,mb6.4
ARUT Antelope Range 92.60 52 *e*P **P 16 33 54.9 +1.1**
comp=Z,356nm,1.7s,mb6.4
CCUT Cedar City 92.61 52 *e*P **P 16 33 54.4 +0.6**
comp=Z,300nm,1.5s,mb6.4
N13A Wendover, West 92.61 49 ⇓P **P 16 33 54.2 +0.5**
baz=93,SNR=26
N13A Wendover, West 92.61 49 *e*P **P 16 33 54.3 +0.5**
115A Sonoran Desert 92.62 57 ⇓P **P 16 33 54.1 +0.2**
baz=93,SNR=39
O13A Hicks Ranch, I 92.64 50 ⇓P **P 16 33 54.2 +0.2**
baz=93,SNR=8.2
B11A Sandpoint 92.68 41 ⇓P **P 16 33 53.8 -0.1**
baz=93,SNR=25
T14A Hurricane 92.74 53 ⇓P **P 16 33 54.6 +0.1**
baz=93,SNR=15
M13A Montello 92.74 49 ⇓P **P 16 33 54.7 +0.4**
baz=93,SNR=258
M13A Montello 92.74 49 *e*P **P 16 33 54.9 +0.6**
comp=Z,154nm,0.7s,mb6.4
Y15A Casa Rosa Ranc 92.76 56 ⇑P **P 16 33 54.7 +0.1**
baz=93,SNR=75
E12A Beaver Dam Sad 92.78 43 ⇑P **P 16 33 53.9 -0.5**
baz=93,SNR=76
Z15A Gila River Ind 92.78 57 ⇓P **P 16 33 54.8 0.0**
baz=93
A11A Hall Mountain, 92.80 41 ⇓P **P 16 33 54.9 +0.4**
baz=93,SNR=111
S14A Cedar City 92.80 52 ⇑P **P 16 33 54.9 +0.2**
baz=93,SNR=6.7
F12A Elk City 92.86 44 ⇑P **P 16 33 54.4 -0.4**
baz=93,SNR=272
H12A Diamond D Ranc 92.89 45 ⇓P **P 16 33 55.0 +0.1**
baz=93,SNR=110
X15A Humboldt 92.94 56 ⇓P **P 16 33 55.6 +0.2**
baz=93,SNR=40
Q14A Sevier Lake (B 92.95 51 ⇓P **P 16 33 55.9 +0.5**
baz=93,SNR=110
KSH Kashi 92.99 309 ⇓*i*P **P 16 33 56.6 +1.1**
KSH pP pP 16 34 22.5 +2.4
KSH sP sP 16 34 32.6 +2.7
KSH PP PP 16 37 44.2 +4.5
KSH SKS 16 44 19.5
KSH S S 16 44 50.6 -3.6
KSH sS sS 16 45 38.2 +1.7
KSH SS SS 16 51 15.6 +4.9
KSH pmax pmax
comp=Z,30nm,0.9s,mb5.6
KSH pmax pmax
comp=Z,970nm,4.1s
KSH LR LR
comp=N,540nm,15.5s
KSH LR LR
comp=E,1μm,17.2s
KSH LR LR
comp=Z,980nm,13.3s
HLID Hailey 93.00 46 ⇑P **P 16 33 56.2 +0.7**
baz=93,SNR=132
HLID Hailey 93.00 46 *e*P **P 16 33 56.2 +0.7**
comp=Z,250nm,1.2s,mb6.4
R14A James Farms, M 93.02 52 ⇑P **P 16 33 56.0 +0.3**
baz=93
116A Eloy 93.03 58 ⇑P **P 16 33 55.9 0.0**
baz=93,SNR=22
W15A Williams 93.04 55 ⇓P **P 16 33 56.0 +0.1**
baz=93,SNR=21
L13A Double Diamond 93.05 48 ⇑P **P 16 33 56.0 +0.2**
baz=93,SNR=43
K13A Stover Farm, H 93.06 47 ⇑P **P 16 33 55.8 0.0**
baz=93,SNR=18
C12B Naegeli Ranch, 93.11 42 ⇓P **P 16 33 55.8 -0.1**
baz=93,SNR=7.8
216A Three Points, 93.13 58 ⇓P **P 16 33 56.4 0.0**
baz=93,SNR=11
J13A Cove Ranch, Pi 93.14 47 ⇓P **P 16 33 56.5 +0.3**
baz=93,SNR=105
B12A Libby 93.19 41 ⇑P **P 16 33 56.2 -0.1**
baz=93,SNR=7.3
P14A Drum Mountains 93.22 51 ⇓P **P 16 33 56.8 +0.2**
baz=93,SNR=61
V15A Kaibab Nationa 93.23 54 ⇑P **P 16 33 57.0 +0.3**
baz=93,SNR=53
U15A North Rim 93.25 54 ⇑P **P 16 33 56.8 0.0**
baz=93,SNR=134
A12A Yaak River Ran 93.25 41 ⇑P **P 16 33 56.5 -0.1**
baz=93,SNR=9.0
I13A Wilhorse Cree 93.28 46 ⇑P **P 16 33 57.1 +0.3**
baz=93,SNR=426
T15A Red Dirt Ranch 93.28 53 ⇑P **P 16 33 57.2 +0.2**
baz=93,SNR=12
H13A Challis 93.31 45 ⇓P **P 16 33 57.2 +0.3**
baz=93,SNR=284
N14A Grayback Hills 93.37 49 ⇑P **P 16 33 57.2 0.0**
baz=94,SNR=36
M14A Sheep Mountain 93.38 49 ⇑P **P 16 33 57.6 +0.3**
baz=94,SNR=46
Z16A Peralta Trail, 93.39 57 ⇓P **P 16 33 57.4 -0.1**
baz=94,SNR=10
KURK Kurchatov 93.40 321 P **P 16 33 55.6 -1.6**
comp=Z,530nm,1.1s,mb6.8,SNR=40
KURK Kurchatov 93.40 321 P **P 16 33 55.9 -1.2**
comp=Z,45nm,0.7s,mb5.9,baz=102,slow=3.7,SNR=65
KURK PKPPKP 16 59 09.8
comp=Z,0.3nm,0.6s,baz=301,slow=1.6,SNR=3.0
KURK Kurchatov 93.40 321 *e*P **P 16 33 55.3 -1.9**
KURK pmax pmax
comp=Z,387nm,1.6s,mb6.5
KURK Kurchatov 93.40 321 *e*P **P 16 33 55.3 -1.8**
comp=Z,387nm,1.6s,mb6.5
KURK Kurchatov 93.40 321 P **P 16 33 55.8 -1.3**
SNR=79
KURK P 16 33 55.8
SNR=79
S15A Panguitch 93.42 52 ⇑P **P 16 33 58.0 +0.5**
baz=94
G13A Cobalt 93.43 45 ⇑P **P 16 33 57.5 +0.1**
baz=94,SNR=197
Y16A Circle Bar Ran 93.45 56 ⇓P **P 16 33 57.7 -0.1**
baz=94,SNR=44
F13A Darby 93.50 44 ⇑P **P 16 33 57.5 -0.3**
baz=94,SNR=382
BGU Big Grassy Mou 93.50 49 *e*P **P 16 33 57.7 -0.2**
comp=Z,197nm,1.5s,mb6.2
DUG Dugway 93.53 50 ⇑P **P 16 33 58.1 +0.1**
baz=94
DUG Dugway 93.53 50 *e*P **P 16 33 58.8 +0.8**
DUG pmax pmax
comp=Z,257nm,1.8s,mb6.2
DUG Dugway 93.53 50 *e*P **P 16 33 58.8 +0.8**
comp=Z,257nm,1.8s,mb6.3
L14A Malta 93.55 48 ⇓P **P 16 33 58.4 +0.4**
baz=94
X16A Lo Mia Camp, P 93.57 56 ⇑P **P 16 33 58.7 +0.3**
baz=94,SNR=26
R15A Junction 93.58 52 ⇓P **P 16 33 58.7 +0.4**
baz=94,SNR=16
J14A Carey 93.59 47 ⇓P **P 16 33 58.9 +0.6**
baz=94,SNR=50
BSMT Bassoo Peak 93.59 42 *e*P **P 16 33 57.6 -0.5**
comp=Z,50nm,0.9s,mb5.8
W16A Flagstaff 93.62 55 ⇑P **P 16 33 58.9 +0.3**
baz=94,SNR=5.3
217A Green Valley 93.63 59 ⇓P **P 16 33 58.9 +0.2**
baz=94,SNR=64
Q15A Fillmore 93.64 51 ⇑P **P 16 33 58.7 +0.2**
baz=94,SNR=7.1
D13A Huson 93.66 43 ⇓P **P 16 33 57.9 -0.6**
baz=94,SNR=12
K14A Jones Ranch, D 93.69 48 ⇑P **P 16 33 58.5 -0.2**
baz=94,SNR=31
C13A Hot Springs 93.70 42 ⇑P **P 16 33 58.1 -0.5**
baz=94,SNR=24
MSU Marysvale 93.71 52 *e*P **P 16 34 00.0 +1.1**
MSU pmax pmax
comp=Z,376nm,1.8s,mb6.4
MSU Marysvale 93.71 52 *e*P **P 16 33 60.0 +1.1**
comp=Z,376nm,1.8s,mb6.4
E13A Victor 93.72 44 ⇑P **P 16 33 57.9 -0.8**
baz=94,SNR=43
TUC Tucson 93.75 58 *e*P **P 16 33 59.6 +0.4**
TUC pmax pmax
comp=Z,38nm,0.8s,mb5.8
TUC Tucson 93.75 58 *e*P **P 16 33 59.6 +0.4**
comp=Z,38nm,0.8s,mb5.8
I14A Mackay 93.75 46 ⇑P **P 16 33 59.2 +0.3**
baz=94,SNR=175
O15A The Old Anders 93.80 50 ⇓P **P 16 33 59.7 +0.4**
baz=94,SNR=12
WUAZ Wupatki 93.82 55 ⇑P **P 16 33 59.5 +0.1**
baz=94
WUAZ Wupatki 93.82 55 *e*P **P 16 33 59.7 +0.3**
comp=Z,39nm,0.8s,mb5.8
P15A Leamington 93.82 51 ⇓P **P 16 33 59.5 +0.1**
baz=94,SNR=12
HVU Hansel Valley 93.85 48 *e*P **P 16 33 59.8 +0.4**
HVU pmax pmax
comp=Z,211nm,1.4s,mb6.3
HVU Hansel Valley 93.85 48 *e*P **P 16 33 59.8 +0.4**
comp=Z,211nm,1.4s,mb6.3
N15A Stansbury Isla 93.88 49 ⇑P **P 16 33 59.6 0.0**
baz=94,SNR=6.8
TKM2 Tokmak 2 93.90 313 P **P 16 33 59.0 -0.6**
SNR=25
TKM2 Tokmak 2 93.90 313 *e*P **P 16 33 58.9 -0.8**
TKM2 pmax pmax
comp=Z,17nm,0.7s,mb5.5
TKM2 Tokmak 2 93.90 313 *e*P **P 16 33 58.9 -0.7**
comp=Z,17nm,0.7s,mb5.5
B13A Whitefish 93.91 42 ⇑P **P 16 33 59.1 -0.5**
baz=94,SNR=35
JTMT Jette 93.91 42 *e*P **P 16 33 58.7 -0.9**
comp=Z,51nm,1.3s,mb5.7
Y17A Roosevelt 93.93 57 ⇓P **P 16 33 60.0 0.0**
baz=94,SNR=46
H14A Leadore 93.94 46 ⇑P **P 16 34 00.1 +0.3**
baz=94,SNR=280
MSO Missoula 93.96 43 *e*P **P 16 33 59.4 -0.5**
comp=Z,148nm,1.9s,mb6.0
T16A Glen Canyon Da 93.97 53 ⇑P **P 16 34 00.1 0.0**
baz=94,SNR=5.5
G14A Jackson 93.99 45 ⇑P **P 16 34 00.1 0.0**
baz=94,SNR=32
KZA Kyzart 94.00 312 P **P 16 34 01.2 +1.0**
SNR=6.2
SPUT South Promonto 94.00 49 *e*P **P 16 34 00.6 +0.4**
comp=Z,98nm,1.4s,mb6.0
M15A Larsen Ranch, 94.03 49 ⇓P **P 16 34 00.3 0.0**
baz=94,SNR=15
NLU North Lily Min 94.04 50 *e*P **P 16 34 01.1 +0.8**
comp=Z,85nm,1.2s,mb6.0
SWMT Swartz Lake 94.05 43 *e*P **P 16 33 59.0 -1.2**
comp=Z,109nm,1.7s,mb5.9
YBMT Yellow Bay 94.11 42 *e*P **P 16 34 00.1 -0.4**
comp=Z,50nm,1.5s,mb5.6
NOQ North Oquirrh 94.13 50 *e*P **P 16 34 01.6 +0.8**
comp=Z,143nm,1.5s,mb6.1
F14A Wisdom 94.16 44 ⇓P **P 16 34 00.5 -0.3**
baz=94,SNR=5.5
L15A Malad City 94.17 48 ⇑P **P 16 34 00.9 0.0**
baz=94,SNR=7.3
Z17A San Carlos Hig 94.17 57 ⇓P **P 16 34 00.9 -0.3**
baz=94
E14A Clinton 94.19 44 ⇓P **P 16 34 00.5 -0.4**
baz=94,SNR=22
K15A Arbon 94.19 48 ⇑P **P 16 34 01.4 +0.4**
baz=94
R16A Teasdale 94.21 52 ⇑P **P 16 34 01.6 +0.4**
baz=94,SNR=38
318A Bisbee 94.27 59 ⇑P **P 16 34 02.0 +0.4**
baz=94,SNR=38
W17A Winslow 94.28 55 ⇓P **P 16 34 01.9 +0.4**
baz=94,SNR=5.5
P16A Fountain Green 94.30 51 ⇑P **P 16 34 02.0 +0.5**
baz=94
D14A Greenough 94.30 43 ⇓P **P 16 34 00.8 -0.6**
baz=94,SNR=31
V17A Tonalea, Kykot 94.30 55 ⇑P **P 16 34 01.7 0.0**
baz=94,SNR=54
218A Dragoon 94.31 58 ⇑P **P 16 34 01.9 +0.1**
baz=94,SNR=54
SLMT Seeley Lake 94.34 43 *e*P **P 16 34 00.6 -0.9**
comp=Z,167nm,1.8s,mb6.1
MCMT McKenzie Canyo 94.34 45 *e*P **P 16 34 02.1 +0.5**
comp=Z,67nm,1.3s,mb5.8
J15A Blackfoot 94.39 47 ⇑P **P 16 34 02.4 +0.5**
baz=94,SNR=51
MPU Maple Canyon 94.39 50 *e*P **P 16 34 02.9 +0.9**
comp=Z,265nm,1.7s,mb6.3
WALA Waterton Lakes 94.40 41 *e*P **P 16 34 01.9 +0.1**
comp=Z,2.5nm,0.7s
CHMT Chamberlain Mo 94.44 43 *e*P **P 16 34 01.9 -0.2**
comp=Z,132nm,1.6s,mb6.0
I15A Monteview 94.45 46 ⇓P **P 16 34 02.8 +0.6**
baz=94
Z18A Geronimo 94.50 57 ⇑P **P 16 34 02.7 +0.1**
baz=95
T17A Navajo Res., N 94.52 53 ⇓P **P 16 34 03.0 +0.4**
baz=95,SNR=16
CHMS Chumysh 94.53 313 P **P 16 34 01.8 -0.7**
SNR=9.1
Q16A Castle Valley 94.56 51 ⇑P **P 16 34 03.2 +0.4**
baz=95,SNR=41
UCH Uchtor 94.57 312 P **P 16 34 03.5 +0.8**
SNR=19
UCH Uchtor 94.57 312 *e*P **P 16 34 02.3 -0.4**
comp=Z,130nm,1.9s,mb6.0
U17A Shonto 94.57 54 ⇓P **P 16 34 03.0 +0.2**
baz=95,SNR=13
TMUT Trail Mountain 94.59 51 *e*P **P 16 34 03.3 +0.4**
comp=Z,125nm,1.5s,mb6.1
FRU Bishkek 94.59 313 *e*P **P 16 34 01.0 -1.8**
FRU *e* 16 44 28.0
FRU pmax pmax
comp=Z,205nm,2.2s,mb6.2
M16A Huntsville 94.61 49 ⇓P **P 16 34 02.8 -0.1**
baz=95,SNR=5.5
DLMT Dillon 94.61 45 *e*P **P 16 34 02.9 +0.1**
comp=Z,102nm,0.8s,mb6.3
Y18A Canyon Day Jun 94.61 57 ⇓P **P 16 34 03.2 0.0**
baz=95,SNR=13
JLU Jordanelle 94.63 50 *e*P **P 16 34 03.6 +0.5**
comp=Z,192nm,1.7s,mb6.2
S17A Black Ridge (B 94.63 53 ⇑P **P 16 34 02.8 -0.3**
baz=95,SNR=16
AAK Ala-Archa 94.65 312 P **P 16 34 02.3 -0.8**
comp=Z,104nm,0.9s,mb6.3,SNR=10.0
AAK Ala-Archa 94.65 312 P **P 16 34 02.7 -0.4**
SNR=10
AAK Ala-Archa 94.65 312 P **P 16 34 02.1 -1.0**
comp=Z,7.4nm,0.6s,mb5.3,baz=130,slow=7.5,SNR=21
AAK Ala-Archa 94.65 312 *d*/*i*P **P 16 34 02.3 -0.8**
AAK pmax pmax
comp=Z,33nm,2.1s,mb5.4
AAK Ala-Archa 94.65 312 *e*P **P 16 34 01.7 -1.4**
comp=Z,15nm,0.8s,mb5.5
AAK Ala-Archa 94.65 312 P **P 16 34 02.8 -0.3**
SNR=19
AAK P 16 34 02.8
SNR=19
G15A Dillon 94.65 45 ⇓P **P 16 34 03.4 +0.3**

baz=95,SNR=52
N16A Rees Ranch, Co 94.68 49 ⇑P P 16 34 03.7 +0.4
baz=95,SNR=7.3
B14A Marquette Ranc 94.69 42 ⇑P P 16 34 02.6 -0.6
baz=95,SNR=11
A14A Double T Ranch 94.70 41 ⇑P P 16 34 03.1 -0.1
baz=95,SNR=52
HWUT Hardware Ranch 94.71 49 eP P 16 34 03.1 -0.3
comp=Z,77nm,1.4s,mb5.9
DAU Daniels Canyon 94.74 50 eP P 16 34 04.5 +0.9
DAU pmax pmax
comp=Z,61nm,1.4s,mb5.8
DAU Daniels Canyon 94.74 50 eP P 16 34 04.5 +0.9
comp=Z,61nm,1.4s,mb5.8
USP Ospenovka 94.75 313 P P 16 34 02.8 -0.8
SNR=18
E15A Deer Lodge 94.77 44 ⇓P P 16 34 03.4 -0.2
baz=95,SNR=56
F15A Butte 94.77 44 ⇑P P 16 34 03.2 -0.4
baz=95,SNR=55
LRM Limekiln Ridge 94.79 44 eP P 16 34 03.5 -0.2
comp=Z,281nm,0.8s,mb6.7
X18A Snowflake 94.80 56 ⇑P P 16 34 04.0 0.0
baz=95,SNR=12
R17A Hanksville Air 94.83 52 ⇑P P 16 34 04.3 +0.3
baz=95,SNR=87
319A Douglas 94.86 59 ⇑P P 16 34 04.3 0.0
baz=95,SNR=13
L16A Fish Haven 94.88 48 ⇑P P 16 34 04.3 +0.1
baz=95,SNR=12
K16A Soda Springs 94.90 48 ⇓P P 16 34 04.5 +0.2
baz=95,SNR=13
D15A Lincoln 94.96 43 ⇑P P 16 34 04.3 0.0
baz=95,SNR=21
219A White Tail Can 94.97 59 ⇓P P 16 34 04.6 -0.2
baz=95,SNR=91
P17A Butcher Ranch, 94.98 51 ⇓P P 16 34 05.0 +0.3
baz=95,SNR=9.0
V18A Ganado 95.01 55 ⇓P P 16 34 05.1 +0.2
baz=95,SNR=18
119A Ashpeak Ranch, 95.06 58 ⇑P P 16 34 05.1 -0.1
baz=95,SNR=28
W18A Petrified Fore 95.07 55 ⇑P P 16 34 05.3 +0.1
baz=95,SNR=11
SRU San Rafael 95.08 51 ⇓P P 16 34 04.9 -0.3
baz=95
SRU San Rafael 95.08 51 eP P 16 34 04.8 -0.4
SRU pmax pmax
comp=Z,16nm,0.7s,mb5.6
SRU San Rafael 95.08 51 eP P 16 34 04.8 -0.4
comp=Z,16nm,0.7s,mb5.5
O17A Robinson Place 95.10 50 ⇑P P 16 34 05.3 +0.1
baz=95,SNR=32
G16A Moss Hill, Enn 95.14 45 ⇑P P 16 34 05.6 +0.4
baz=95,SNR=36
I16A Newdale 95.14 46 ⇑P P 16 34 05.7 +0.4
baz=95,SNR=19
N17A Moffit Pass 95.14 49 ⇓P P 16 34 05.5 +0.1
baz=95
B15A Bradely Ranch, 95.15 42 ⇓P P 16 34 04.6 -0.7
baz=95,SNR=47
A15A Johnson Ranch, 95.15 41 ⇑P P 16 34 04.8 -0.5
baz=95,SNR=67
AML Almayashu 95.15 312 P P 16 34 05.5 +0.1
SNR=31
AML Almayashu 95.15 312 eP P 16 34 05.0 -0.4
comp=Z,64nm,1.3s,mb5.9
U18A Rough Rock, Ch 95.17 54 ⇓P P 16 34 05.9 +0.3
baz=95,SNR=30
Z19A T-Link Ranch, 95.17 57 ⇑P P 16 34 05.2 -0.5
baz=95
EKS2 Erkin-Say 95.18 312 P P 16 34 05.0 -0.5
SNR=26
EKS2 Erkin-Say 95.18 312 eP P 16 34 04.5 -1.0
comp=Z,15nm,0.8s,mb5.5
RRI2 Red Ridge 95.18 47 eP P 16 34 06.4 +0.9
comp=Z,330nm,1.8s,mb6.5
AHID Auburn Hatcher 95.24 48 eP P 16 34 06.4 +0.6
comp=Z,30nm,1.1s,mb5.6
S18A Hurst Farm, Bl 95.27 53 ⇓P P 16 34 05.9 -0.1
baz=95
T18A Mexican Hat 95.28 53 ⇑P P 16 34 06.2 +0.1
baz=95,SNR=33
Y19A Nutrioso 95.28 57 ⇑P P 16 34 06.2 0.0
baz=95,SNR=39
L17A Cokeville 95.30 48 ⇑P P 16 34 05.7 -0.4
baz=95
DCID1 Drake Creek 95.31 47 eP P 16 34 07.5 +1.4
X19A St. Johns 95.33 56 ⇑P P 16 34 06.1 -0.3
baz=95,SNR=12
BOZ Bozeman (W) 95.33 45 ⇑P P 16 34 06.2 0.0
baz=95
BOZ Bozeman (W) 95.33 45 eP P 16 34 06.2 +0.1
BOZ pmax pmax
comp=Z,58nm,0.8s,mb6.1
BOZ Bozeman (W) 95.33 45 eP P 16 34 06.2 0.0
comp=Z,58nm,0.8s,mb6.1
QLMT Earthquake Lak 95.34 46 eP P 16 34 07.5 +1.3
comp=Z,76nm,1.4s,mb5.9
M17A Scullys Gap (B 95.35 49 ⇑P P 16 34 06.0 -0.4
baz=95,SNR=10
W19A Sanders 95.35 55 ⇓P P 16 34 06.5 0.0
baz=95
F16A Kennard Place, 95.36 45 ⇓P P 16 34 06.5 +0.3
baz=95,SNR=77
HRY Holter Researc 95.37 44 eP P 16 34 06.5 +0.2
comp=Z,65nm,0.6s,mb6.2
K17A Gardner Place, 95.37 48 ⇑P P 16 34 06.4 0.0
baz=96
P18A Preston Nutter 95.38 51 ⇓P P 16 34 06.8 +0.3
baz=96,SNR=30
Q18A Rafter H Ranch 95.38 51 ⇑P P 16 34 06.4 -0.2
baz=96,SNR=16
E16A East Helena 95.44 44 ⇓P P 16 34 06.6 0.0
baz=96,SNR=45
H16A Russell Place, 95.45 46 ⇑P P 16 34 07.0 +0.3
baz=96,SNR=82
R18A Canyonlands Na 95.46 52 ⇑P P 16 34 06.9 0.0
baz=96,SNR=56
TPAW Teton Pass 95.46 47 eP P 16 34 07.5 +0.7
comp=Z,23nm,0.7s,mb5.7
320A Kipp Ranch, An 95.48 59 ⇓P P 16 34 07.3 +0.1
baz=96,SNR=11
EDM Edmonton 95.50 37 eP P 16 34 06.0 -0.7
REDW Red Top Meadow 95.52 47 eP P 16 34 07.7 +0.7
comp=Z,302nm,1.9s,mb6.4
IMW Indian Meadow 95.54 47 eP P 16 34 07.7 +0.6
comp=Z,131nm,1.3s,mb6.2
220A Playas Peak, P 95.57 59 ⇓P P 16 34 07.5 -0.1
baz=96,SNR=32
120A U Bar Ranch, L 95.58 58 ⇓P P 16 34 07.6 -0.1
baz=96,SNR=17
SNOW Snow King Moun 95.60 47 eP P 16 34 08.5 +1.1
comp=Z,50nm,1.1s,mb5.9
C16A Fuhringer Ranc 95.60 43 ⇓P P 16 34 06.7 -0.6
baz=96,SNR=66
D16A Dana Ranch, Ca 95.61 43 ⇑P P 16 34 07.3 0.0
baz=96,SNR=14
J17A Brown Place, J 95.62 47 ⇑P P 16 34 07.8 +0.3
baz=96,SNR=7.5
YMR Madison River 95.64 46 eP P 16 34 08.6 +1.0
comp=Z,200nm,1.4s,mb6.4
O18A Roosevelt 95.66 50 ⇑P P 16 34 08.0 +0.2
baz=96,SNR=8.5
U19A Dine' College, 95.68 54 ⇓P P 16 34 08.0 +0.1
baz=96,SNR=19
YFT Old Faithful 95.70 46 eP P 16 34 10.3 +2.5
comp=Z,26nm,0.6s,mb5.8
Z20A Nine Sixteen R 95.70 58 ⇑P P 16 34 08.1 0.0
baz=96,SNR=22
V19A Window Rock 95.72 55 ⇑P P 16 34 08.1 -0.1
baz=96
B16A M & M Farms, S 95.72 42 ⇑P P 16 34 07.2 -0.7
baz=96,SNR=8.3
LOHW Long Hollow 95.73 47 eP P 16 34 08.7 +0.7
comp=Z,62nm,1.3s,mb5.9
M18A Lyman 95.79 49 ⇑P P 16 34 07.9 -0.4
baz=96
I17A Pilgrim Ck. 95.80 47 ⇓P P 16 34 08.7 +0.4
baz=96
YNR Norris Junctio 95.85 46 eP P 16 34 10.9 +2.4
comp=Z,51nm,1.1s,mb5.9
H17A Grant Village 95.87 46 ⇓P P 16 34 09.1 +0.5
baz=96,SNR=17
L18A Fontenelle, Gr 95.89 49 ⇑P P 16 34 08.3 -0.5
baz=96
G17A Pierce Place, 95.90 45 ⇑P P 16 34 08.9 +0.2
baz=96,SNR=20

T19A Beclabito 95.90 54 ⇑P P 16 34 09.2 +0.2
baz=96,SNR=24
R19A Curley Farm, L 95.94 52 ⇓P P 16 34 09.0 -0.1
baz=96,SNR=8.8
S19A Harvey Farm, M 95.95 53 ⇑P P 16 34 09.3 +0.2
baz=96,SNR=16
X20A Quemado 95.99 56 ⇓P P 16 34 09.3 -0.1
baz=96,SNR=29
E17A Martisdale 95.99 44 ⇓P P 16 34 09.3 +0.2
baz=96,SNR=50
K18A Toltan Ranch, 95.99 48 ⇑P P 16 34 09.4 +0.2
baz=96,SNR=11
Y20A Horse Springs, 96.00 57 ⇓P P 16 34 09.4 -0.1
baz=96,SNR=33
N18A Larsen Ranch, 96.02 50 ⇑P P 16 34 08.9 -0.5
baz=96,SNR=17
F17A Fitzpatrick Pl 96.04 45 ⇓P P 16 34 09.8 +0.4
baz=96,SNR=74
J18A Kendall Valley 96.09 47 ⇓P P 16 34 09.6 0.0
baz=96
V20A Brimhall 96.20 55 ⇑P P 16 34 10.0 -0.3
baz=96,SNR=11
D17A Six Diamond Ra 96.21 43 ⇓P P 16 34 10.1 0.0
baz=96,SNR=29
221A Mesquite Ranch 96.22 59 ⇓P P 16 34 10.2 -0.3
baz=96,SNR=6.1
PV04 Paradox Valley 96.23 52 eP P 16 34 10.4 0.0
C17A Wharam Farm, 96.23 43 ⇑P P 16 34 09.8 -0.4
baz=96,SNR=41
U20A Newcomb 96.24 54 ⇓P P 16 34 10.4 -0.1
baz=96
121A Cookes Peak, D 96.29 58 ⇑P P 16 34 10.3 -0.6
baz=96,SNR=18
B17A L&G Farms, Che 96.31 42 ⇓P P 16 34 09.9 -0.6
baz=96,SNR=34
I18A Diamond G Ranc 96.31 47 ⇓P P 16 34 10.8 +0.1
baz=96,SNR=28
O19A Miners Draw (B 96.33 50 ⇓P P 16 34 10.6 -0.3
baz=96,SNR=6.2
P19A Cripple Cowboy 96.35 51 ⇑P P 16 34 10.9 0.0
baz=96,SNR=20
BW06 Boulder Array 96.36 48 ⇓P P 16 34 10.4 -0.5
baz=96
PDAR Pinedale Array 96.36 48 P P 16 34 11.0 +0.1
comp=Z,19nm,0.7s,mb5.6,baz=217,slow=2.9,SNR=60
PDAR PKiKP PKiKP 16 38 48.3 0.0
comp=Z,1.0nm,0.6s,baz=215,slow=4.4,SNR=2.6
NVL N'lazarevskaya 96.37 190 eP P 16 34 09.1 -1.3
NVL pmax pmax
comp=Z,26nm,0.9s,mb5.7
NVL MLR MLR
comp=Z,4μm,17.0s
MVCO Mesa Verde 96.38 53 ⇑P P 16 34 10.9 -0.2
baz=96
MVCO Mesa Verde 96.38 53 eP P 16 34 10.9 -0.2
comp=Z,23nm,0.7s,mb5.7
N19A John Jarvie Ra 96.38 50 ⇓P P 16 34 10.4 -0.6
baz=96
MAIT Maitri 96.38 190 eP P 16 34 09.2 -1.3
MAIT eE pP 16 34 33.2 -1.9
L19A Farson 96.42 48 ⇑P P 16 34 10.9 -0.3
baz=96,SNR=15
PV01 Paradox Valley 96.45 53 eP P 16 34 11.3 -0.1
comp=Z,2μm,0.7s
YKA Yellowknife Ar 96.45 28 P P 16 34 08.8 -2.0
comp=Z,43nm,0.7s,mb6.0,baz=260,slow=4.7,SNR=215
YKA PKiKP PKiKP 16 38 47.9 +0.1
comp=Z,0.9nm,0.6s,baz=272,slow=1.3,SNR=5.3
YKA PKKP PKKPbc 16 50 53.6 -4.4
comp=Z,0.5nm,0.5s,baz=72,slow=2.9,SNR=5.3
YKA LR LR 17 10 01.9
comp=Z,261nm,21.9s,baz=0.0,slow=31
A17A Triple J Farms 96.47 42 ⇓P P 16 34 10.9 -0.3
baz=97,SNR=186
M19A Rock Springs 96.48 49 ⇓P P 16 34 10.9 -0.6
baz=97
Z21A St. Cloud Mine 96.49 57 ⇓P P 16 34 11.5 -0.3
baz=97,SNR=20
X21A Alamocita Cree 96.56 56 ⇓P P 16 34 11.9 -0.1
baz=97,SNR=23
Y21A Point of Rocks 96.59 57 ⇓P P 16 34 12.2 0.0
baz=97,SNR=33
R20A Redvale 96.61 52 ⇑P P 16 34 12.2 +0.1
baz=97,SNR=26
E18A Harlowton 96.65 44 ⇑P P 16 34 12.7 +0.6
baz=97,SNR=82
F18A Big Timber 96.69 45 ⇓P P 16 34 12.8 +0.4
baz=97,SNR=34
G18A Lazy EL Ranch, 96.72 45 ⇓P P 16 34 12.8 +0.3
baz=97,SNR=17
W21A San Fidel 96.77 56 ⇑P P 16 34 12.9 0.0
baz=97
Q20A Ridgley Place, 96.78 52 ⇑P P 16 34 12.7 -0.2
baz=97
P20A De Beque 96.78 51 ⇑P P 16 34 13.0 +0.1
baz=97
222A Williams Famil 96.80 59 ⇑P P 16 34 12.8 -0.3
baz=97
D18A Linhart Farms, 96.81 43 ⇑P P 16 34 12.8 0.0
baz=97,SNR=10
V21A Milan 96.87 55 ⇑P P 16 34 13.2 -0.2
baz=97
K19A Absolon Red Bu 96.89 48 ⇑P P 16 34 12.7 -0.6
baz=97,SNR=21
RLMT Red Lodge 96.90 45 ⇑P P 16 34 13.3 0.0
baz=97
RLMT Red Lodge 96.90 45 eP P 16 34 10.7 -2.5
comp=Z,65nm,1.3s,mb5.9
EGMT Eagleton 96.96 43 ⇑P P 16 34 13.2 -0.3
baz=97
EGMT Eagleton 96.96 43 eP P 16 34 13.0 -0.5
comp=Z,146nm,0.9s,mb6.4
122A Conniff Cattle 96.97 58 ⇓P P 16 34 13.7 -0.2
baz=97
O20A White River Ci 96.98 51 ⇓P P 16 34 13.5 -0.3
baz=97
B18A Beardsley Farm 96.99 42 ⇓P P 16 34 13.2 -0.4
baz=97,SNR=53
S21A Coal Bank Pass 97.00 53 ⇓P P 16 34 13.9 0.0
baz=97,SNR=14
A18A Metzger Ranch, 97.02 42 ⇑P P 16 34 13.5 -0.2
baz=97,SNR=44
N20A Spence Gulch, 97.06 50 ⇑P P 16 34 14.1 0.0
baz=97,SNR=20
Z22A Elephant Butte 97.07 58 ⇑P P 16 34 14.1 -0.2
baz=97,SNR=34
LAZ Ladron 97.08 56 eP P 16 34 14.2 -0.2
comp=Z,7.4nm,0.9s,mb5.1
L20A Wamsutter 97.15 49 ⇑P P 16 34 14.4 -0.1
baz=97,SNR=14
Y22A Socorro 97.16 57 ⇓P P 16 34 14.5 -0.2
baz=97
LENM Lemitar 97.19 57 eP P 16 34 14.9 +0.1
comp=Z,10nm,0.8s,mb5.3
M20A Sweetwater, Wa 97.20 49 ⇑P P 16 34 14.9 +0.2
baz=97
X22A Bernardo 97.20 56 ⇑P P 16 34 15.2 +0.3
baz=97,SNR=7.9
Y22D IRIS PASSCAL I 97.22 57 ⇑P P 16 34 15.1 +0.1
baz=97
K20A Yellowstone Ra 97.24 48 ⇑P P 16 34 14.6 -0.3
baz=97
R21A Cimarron 97.28 52 ⇑P P 16 34 15.2 +0.1
baz=97,SNR=11
Q21A Lamborn Mesa, 97.32 52 ⇓P P 16 34 15.4 +0.1
baz=97
223A Chaparral, Ant 97.35 59 ⇑P P 16 34 15.5 -0.2
baz=97
W22A Albuquerque 97.39 56 ⇓P P 16 34 16.0 +0.3
baz=98
BNM Barren Site 97.47 57 eP P 16 34 16.3 +0.2
comp=Z,24nm,0.8s,mb5.7
V22A San Miguel Ran 97.47 55 ⇑P P 16 34 16.0 0.0
baz=98
123A Bell Site, Whi 97.57 58 ⇑P P 16 34 16.4 -0.2
baz=98
O21A Pagoda 97.58 51 ⇑P P 16 34 16.4 0.0
baz=98
N21A Black Mountain 97.61 50 ⇓P P 16 34 16.7 +0.1
baz=98,SNR=10
T22A Edith 97.61 54 ⇑P P 16 34 16.8 +0.1
baz=98
KBL Kabul 97.68 304 eP P 16 34 15.7 -1.4
KBL pmax pmax
comp=Z,7.0nm,0.8s,mb5.2
KBL Kabul 97.68 304 eP P 16 34 15.7 -1.4
comp=Z,7.1nm,0.8s,mb5.2
Z23A Rita Site, Whi 97.68 58 ⇑P P 16 34 16.9 -0.2

baz=98
ANMO Albuquerque 97.71 56d iP P 16 34 17.1 -0.1
ANMO pmax pmax
comp=Z,32nm,1.1s
ANMO Albuquerque 97.71 56 eP P 16 34 16.6 -0.6
comp=Z,6.8nm,0.9s,mb5.2
M21A Separation Pea 97.83 49 ⇓P P 16 34 17.3 -0.2
baz=98,SNR=13
SMCO Snowmass 97.83 52 eP P 16 34 18.2 +0.6
comp=Z,13nm,0.7s,mb5.6
Q22A Crested Butte, 97.84 52 ⇓P P 16 34 17.9 +0.2
baz=98,SNR=33
L21A Rawlins 97.87 49 ⇓P P 16 34 17.4 -0.3
baz=98,SNR=18
R22A Saguache, Gunn 97.88 53 ⇑P P 16 34 18.0 +0.1
baz=98,SNR=7.7
X23A Hourglass Bar 97.88 56 ⇑P P 16 34 17.6 -0.3
baz=98,SNR=11
Y23A Lovelace Mesa, 97.91 57 ⇓P P 16 34 17.3 -0.8
baz=98
RWWY Rawlins 97.95 49 P P 16 34 16.5 -1.6
comp=Z,24nm,1.2s,mb5.6
W23A Werner Place, 97.99 56 ⇑P P 16 34 18.3 -0.1
baz=98,SNR=6.6
V23A Ortiz Mt. (NFS 98.03 55 ⇓P P 16 34 18.4 -0.2
baz=98
324A Moseley Ranch, 98.08 60 ⇓P P 16 34 18.3 -0.6
baz=98
224A Cornudas Mount 98.12 59 ⇑P P 16 34 18.9 -0.2
baz=98
MNTX Cornudas Mount 98.19 59 eP P 16 34 18.4 -1.0
comp=Z,27nm,1.4s,mb5.6
124A Stringfield Ra 98.26 58 ⇓P P 16 34 19.2 -0.5
baz=98
Z24A Sheeppen Canyo 98.41 58 ⇓P P 16 34 19.9 -0.5
baz=98
N22A Wattenberg Ran 98.41 50 ⇓P P 16 34 20.5 +0.3
baz=98
Y24A Capitan 98.42 57 ⇓P P 16 34 19.8 -0.6
baz=98,SNR=19
X24A Lazy VL Ranch, 98.50 56 ⇑P P 16 34 20.2 -0.5
baz=99
325A Bean Ranch, Si 98.50 60 ⇑P P 16 34 20.3 -0.6
baz=99
L22A Ellis Ranch, M 98.57 49 ⇑P P 16 34 20.9 +0.1
baz=99
W24A Lazy 6 Ranch, 98.60 56 ⇑P P 16 34 20.8 -0.4
baz=99,SNR=16
225A Deer Hill, Car 98.72 59 ⇑P P 16 34 21.2 -0.5
baz=99
VNA1 Neumayer--Stat 98.79 184 eP P 16 34 19.5 -1.8
BVAR Borovoye Array 98.80 322 P P 16 34 19.6 -2.0
comp=Z,30nm,0.7s,mb5.9,baz=101,slow=4.9,SNR=91
BVAR PP PP 16 38 20.0 -4.2
comp=Z,2.9nm,0.7s,baz=90,slow=7.5,SNR=3.8
BVAR LR LR 17 18 40.1
comp=Z,3μm,21.7s,baz=280,slow=35
BVAR Borovoye Array 98.80 322 P P 16 34 19.6 -2.0
BVAR 16 38 20.0
BVAR pmax pmax
comp=Z,30nm,0.7s
BVAR pmax pmax
comp=Z,3.0nm,0.7s
BVAR MLR MLR
comp=Z,3μm,21.7s
SDCO Great Sand Dun 98.81 53 eP P 16 34 22.3 +0.3
comp=Z,5.8nm,0.9s,mb5.1
BRVK Borovoye 98.86 322d iP P 16 34 20.4 -1.5
BRVK pmax pmax
comp=Z,97nm,1.7s,mb6.1
BRVK Borovoye 98.86 322 eP P 16 34 19.7 -2.2
comp=Z,159nm,1.6s,mb6.3
BRVK Borovoye 98.86 322 Pdiff P 16 34 20.9 -1.0
SNR=40
BRVK Pdiff P 16 34 20.9 -1.0
SNR=40
QUE Quetta 98.90 299 eP P 16 34 13.0 -10
QUE eS SKSac 16 44 45.0 -7.8
125A Gardner Draw, 98.92 58 ⇑P P 16 34 22.2 -0.5
baz=99
Z25A Roswell 98.94 58 ⇑P P 16 34 22.4 -0.3
baz=99
ISCO Idaho Springs 98.94 51 eP P 16 34 23.6 +1.0
ISCO pmax pmax
comp=Z,15nm,1.0s,mb5.5
ISCO Idaho Springs 98.94 51 eP P 16 34 23.6 +1.0
comp=Z,15nm,1.0s,mb5.5
626A Big Bend Ranch 99.00 62 ⇑P P 16 34 22.4 -0.7
baz=99
Y25A Mesa, Roswell 99.04 57 ⇓P P 16 34 22.6 -0.6
baz=99
GDL2 Guadalupe Moun 99.11 59 eP P 16 34 23.9 +0.4
comp=Z,4.6nm,0.6s,mb5.2
X25A Clemmons Ranch 99.13 57 ⇓P P 16 34 22.8 -0.8
baz=99
426A McDonald Obser 99.22 60 ⇑P P 16 34 23.4 -0.7
baz=99
V25A Rancho No Teng 99.31 55 ⇓P P 16 34 24.0 -0.3
baz=99
226A Malaga, Loving 99.32 59 ⇓P P 16 34 23.9 -0.6
baz=99
W25A X Bar L Ranch, 99.37 56 ⇑P P 16 34 23.6 -1.0
baz=99
TXAR Lajitas Array 99.38 62 P P 16 34 24.6 -0.2
comp=Z,4.2nm,0.7s,mb5.1,baz=218,slow=3.2,SNR=24
TXAR PP PP 16 38 27.4 -1.9
comp=Z,34nm,1.3s,baz=254,slow=4.6,SNR=21
TXAR PKKPbc PKKPbc 16 50 47.6 -1.0
comp=Z,1.4nm,0.7s,baz=108,slow=3.8,SNR=8.1
TXAR LR LR 17 09 06.0
comp=Z,994nm,21.7s,baz=55,slow=29
TXAR Lajitas Array 99.38 62 P P 16 34 24.6 -0.2
TXAR 16 38 27.5
TXAR pmax pmax
comp=Z,4.0nm,0.7s
TXAR pmax pmax
comp=Z,35nm,1.3s
TXAR MLR MLR
comp=Z,994nm,21.7s
126A Clayton Basin, 99.45 58 ⇑P Pdif 16 34 24.1 -0.5
baz=100
527A Woodward Ranch 99.52 61 ⇓P Pdif 16 34 24.9 0.0
baz=100
U25A Circle Dot Ran 99.53 55 ⇑P Pdif 16 34 25.1 +0.2
baz=100
Z26A Caprock 99.56 58 ⇓P Pdif 16 34 24.6 -0.4
baz=100
CPRX Cap Rock 99.62 58 ePdif Pdif 16 34 24.2 -1.1
comp=Z,8.8nm,0.8s
627A Terlingua Ranc 99.64 62 ⇑P Pdif 16 34 25.4 0.0
baz=100
Y26A Elida 99.75 57 ⇓P Pdif 16 34 25.4 -0.6
baz=100
327A Balmorhea Ranc 99.76 60 ⇓P Pdif 16 34 25.4 -0.6
baz=100
427A Hayter Ranch, 99.78 60 ⇓P Pdif 16 34 25.9 -0.2
baz=100
X26A CR and CF Fran 99.83 57 ⇑P Pdif 16 34 25.6 -0.7
baz=100
W26A Owens Ranch, T 99.92 56 ⇑P Pdif 16 34 26.0 -0.7
baz=100
V26A Tequesquite Ra 99.97 55 ⇑P Pdif 16 34 26.1 -0.8
baz=100
227A Bennet, Jal 100.00 59 ⇑P Pdif 16 34 26.8 -0.2
baz=100
127A Arkansas Junct 100.01 59 ⇓P Pdif 16 34 26.8 -0.2
baz=100
U26A Atchley Ranch, 100.07 55 ⇑P Pdif 16 34 27.5 +0.1
baz=100
628A Black Gap, Mar 100.07 62 ⇓P Pdif 16 34 27.1 -0.3
baz=100
Z27A Tatum 100.20 58 ⇓P Pdif 16 34 27.5 -0.4
baz=100
528A Cox Ranch, San 100.23 61 ⇑P Pdif 16 34 28.1 +0.1
baz=100
Y27A Causey 100.30 57 ⇓P Pdif 16 34 28.0 -0.4
baz=100
328A Wristen Ranch, 100.34 60 ⇓P Pdif 16 34 28.2 -0.3
baz=100
428A Kincaid Ranch, 100.38 61 ⇑P Pdif 16 34 28.6 -0.1
baz=100
X27A F and S Farms, 100.42 57 ⇑P Pdif 16 34 28.6 -0.3
baz=100
W27A Bowe Ranch, En 100.49 56 ⇑P Pdif 16 34 29.0 -0.2
baz=101
RSSD Black Hills 100.51 47 eP Pdif 16 34 29.6 +0.3
RSSD pmax pmax
comp=Z,42nm,1.1s

RSSD	Black Hills	100.51	47	ePdif	Pdif	16 34 29.6	+0.3
	comp=Z,42nm,1.1s						
MSTX	Muleshoe	100.63	57	⇑P	Pdif	16 34 29.7	-0.2
	baz=101						
DGMT	Dagmar	100.70	42	⇑P	Pdif	16 34 30.5	+0.3
	baz=101						
DGMT	Dagmar	100.70	42	ePdif	Pdif	16 34 29.9	-0.2
	comp=Z,118nm,0.9s						
AMTX	Amarillo	101.61	56	ePdif	Pdif	16 34 34.0	-0.2
	comp=Z,35nm,0.9s						
FFC	Flin Flon	102.32	36	i P	Pdif	16 34 36.7	-0.6
FFC	Flin Flon	102.32	36	ePdif	Pdif	16 34 35.8	-1.5
	comp=Z,22nm,1.3s						
JCT	Junction City	102.83	61	P	Pdif	16 34 39.2	-0.4
JCT				pmax	pmax		
	comp=Z,10.0nm,0.7s						
JCT	Junction City	102.83	61	Pdif	Pdif	16 34 39.2	-0.4
	comp=Z,10nm,0.7s						
RES	Resolute Bay	103.64	15	PKKPbc	PKKPbc	16 50 33.8	-4.0
	comp=Z,1.4nm,0.7s,baz=325,slow=3.4,SNR=5.7						
SVE	Sverdlovsk	104.50	326	eP	Pdif	16 34 45.2	-1.8
SVE				pmax	pmax		
	comp=Z,40nm,1.8s						
ABKAR	Akbulak array	105.24	318	ePdif	Pdif	16 34 47.8	-2.5
	comp=Z,7.9nm,0.6s						
ARU	Arti	105.67	326d	i P	Pdif	16 34 50.1	-2.1
ARU				S	SKSac	16 45 25.7	+2.1
ARU				PS	PS	16 48 21.8	-12
ARU				pmax	pmax		
	comp=Z,33nm,1.7s						
ARU				MLR	MLR		
	comp=Z,3μm,21.0s						
ARU	Arti	105.67	326	ePdif	Pdif	16 34 50.2	-2.0
	comp=Z,14nm,0.9s						
ECSD	EROS Data Cent	105.86	47	ePdif	Pdif	16 34 52.8	-0.3
	comp=Z,38nm,1.4s						
ULM	Lac du Bonnet	106.15	41	Pdiff	Pdif	16 34 53.5	-0.8
	comp=Z,11nm,0.7s,baz=286,slow=6.2,SNR=12						
ULM				PKKP	PKiKP	16 39 03.7	-2.1
	comp=Z,12nm,0.9s,baz=286,slow=3.7,SNR=5.8						
ULM	Lac du Bonnet	106.15	41	ePdif	Pdif	16 34 53.0	-1.3
	comp=Z,48nm,1.4s						
ULM				PKPdf	PKiKP	16 39 03.7	-2.1
AGMN	Agassiz Nation	106.25	43	ePdif	Pdif	16 34 54.3	-0.5
	comp=Z,27nm,1.6s						
AGMN				ePKiKP	PKiKP	16 39 03.6	-2.4
FCC	Fort Churchill	106.43	32	eP	Pdif	16 34 54.2	-1.4
FCC				pmax	pmax		
	comp=Z,1.0nm,1.4s						
FCC	Fort Churchill	106.43	32	ePdif	Pdif	16 34 54.2	-1.4
	comp=Z,1.4nm,1.4s						
FCC				ePKiKP	PKiKP	16 39 04.2	-1.9
AKTK	Aktyubinsk	106.44	320	Pdif	Pdif	16 34 53.5	-2.1
AKTK				PKPdf	PKiKP	16 39 04.4	-1.9
AKTK				PP	PP	16 39 19.9	-1.5
AKTO	Aktyubinsk	106.44	320	Pdiff	Pdif	16 34 53.5	-2.1
	comp=Z,3.4nm,0.7s,baz=94,slow=6.9,SNR=12						
AKTO				PKiKP	PKiKP	16 39 04.4	-1.9
	comp=Z,4.1nm,0.7s,baz=120,slow=8.1,SNR=4.1						
AKTO				PP	PP	16 39 19.9	-1.5
	comp=Z,4.9nm,0.8s,baz=90,slow=10,SNR=5.1						
AKTO	Aktyubinsk	106.44	320	P	Pdif	16 34 53.5	-2.1
AKTO						16 39 19.9	
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.7s						
EYMN	Ely	109.19	43	ePKiKP	PKiKP	16 39 10.1	-1.4
KBS	Kingsbay	109.89	354	ePP	PP	16 39 44.6	-1.1
KBS				e		16 48 51.9	
CCM	Cathedral Cave	110.08	53	ePKiKP	PKiKP	16 39 12.7	-0.8
PLCA	Paso Flores	110.17	140	PKiKP	PKiKP	16 39 12.4	-1.2
	comp=Z,6.6nm,1.2s,baz=195,slow=5.9,SNR=3.2						
PLCA				PKKPbc	PKKPbc	16 50 13.2	-3.1
	comp=Z,3.2nm,0.7s,baz=32,slow=3.1,SNR=8.1						
PLCA				PKKPab	PKKPab	16 50 26.3	-1.8
	comp=Z,8.0nm,0.7s,baz=60,slow=4.4,SNR=20						
PLCA	Paso Flores	110.17	140	i PKIKP	PKiKP	16 39 12.4	-1.3
PLCA						16 50 13.3	
PLCA						16 50 26.3	
PLCA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
PLCA	Paso Flores	110.17	140	PKPdf	PKiKP	16 39 12.4	-1.2
PLCA				PKKPbc	PKKPbc	16 50 13.2	-3.1
PLCA				PKKPab	PKKPab	16 50 26.3	-1.8
JFWS	Jewell Farm	110.53	48	ePKIKP	PKiKP	16 39 12.6	-1.6
COWI	Conover	111.00	45	ePKIKP	PKiKP	16 39 13.2	-1.8
HDIL	Hopedale	111.44	51	ePKIKP	PKiKP	16 39 14.6	-1.4
WVT	Waverly	112.91	55	ePKIKP	PKiKP	16 39 16.4	-2.5
APA	Apatity	113.46	341	⇑iPKIKP	PKiKP	16 39 25.6	+6.6
APA				i		16 40 08.0	
APA				i		16 45 56.0	
APA				i PS	PS	16 49 34.0	-15
APA				i PPS		16 50 48.0	
APA				pmax	pmax		
	comp=Z,13nm,1.0s						
APA				MLR	MLR		
	comp=Z,2μm,22.0s						
DAG	Danmarks Havn	113.68	360	⇑iPKIKP	PKiKP	16 39 18.9	-0.4
DAG				pmax	pmax		
	comp=Z,4.0nm,0.7s						
DAG	Danmarks Havn	113.68	360	⇑iP	PKiKP	16 39 18.9	-0.4
	comp=Z,4.1nm,0.7s						
LRAL	Lakeview Retre	113.77	59	ePKiKP	PKiKP	16 39 18.6	-2.1
WCI	Wyandotte Cave	113.96	53	ePKIKP	PKiKP	16 39 18.4	-2.5
KEV	Kevo	114.07	344	ePKIKP	PKiKP	16 39 19.5	-0.7
KEV				pmax	pmax		
	comp=Z,6.0nm,0.4s						
KEV	Kevo	114.07	344	epkp	PKiKP	16 39 19.5	-0.7
	comp=Z,5.9nm,0.4s						
KEV	Kevo	114.07	344	epkp	PKiKP	16 39 19.5	-0.7
	comp=Z,5.9nm,0.4s						
MAK	Makhachkala	114.43	312	i PKIKP	PKiKP	16 39 19.0	-2.6
MAK				i		16 40 18.9	
MAK				ePPP		16 42 41.5	
MAK				ePS	PS	16 49 57.6	-1.0
MAK				eSS	SS	16 56 02.8	-2.0
MAK				pmax	pmax		
	comp=Z,277nm,1.5s						
MAK				MLR	MLR		
	comp=Z,2μm,19.0s						
SWET	Sewanee	114.52	56	ePKiKP	PKiKP	16 39 19.9	-2.2
ARCES	ARCESS Array B	114.61	344	PKP	PKiKP	16 39 19.8	-1.4
	comp=Z,8.3nm,0.3s,baz=62,slow=1.3,SNR=217						
ARCES				PKKPbc	PKKPbc	16 49 59.8	-2.7
	comp=Z,4.0nm,0.7s,baz=297,slow=1.1,SNR=5.9						
ARCES				PKKP	PKKPdf	16 50 20.5	-4.6
	comp=Z,2.1nm,0.5s,baz=232,slow=1.4,SNR=8.1						
ARCES	ARCESS Array B	114.61	344	PKP	PKiKP	16 39 19.8	-1.4
ARCES				PKKPbc	PKKPbc	16 49 59.8	-2.7
ARCES				PKKP	PKKPdf	16 50 20.5	-4.6
KBD	Kabd	115.58	297	eP	PKPdf	16 39 22.8	-1.5
KBD				AMb	AMB	16 39 25.4	
	comp=Z,26nm,0.9s						
CPCT	Cooper Cave	115.64	56	ePKiKP	PKiKP	16 39 21.9	-2.4
RDF	Al-Radifah	115.72	297	eP	PKPdf	16 39 23.4	-1.1
RDF				AMb	AMB	16 39 25.0	
	comp=Z,65nm,0.8s						
NAY	Al-Naaiem	115.98	297	eP	PKPdf	16 39 23.0	-2.0
NAY				AMb	AMB	16 39 25.6	
	comp=Z,17nm,1.2s						
TRO	Tromso	116.19	346	e	PKPdf	16 39 21.5	-2.7
TRO				ePP	PP	16 40 30.3	-0.2
TRO				eSS	SS	16 56 29.0	+3.0
TRO				AMS	AMS	17 23 32.8	
	comp=Z,3μm,30.7s						
TKL	Tuckaleechee C	116.23	55	ePKIKP	PKPdf	16 39 23.6	-1.7
DGRG	David-gareji	116.23	311	P	PKPdf	16 39 26.2	+1.0
ACSO	Alum Creek Sta	116.26	50	ePKiKP	PKiKP	16 39 23.6	-1.6
FRB	Frobisher Bay	116.31	22	PKP	PKPdf	16 39 23.1	-1.6
	comp=Z,17nm,0.7s,baz=309,slow=3.0,SNR=18						
FRB	Frobisher Bay	116.31	22	PKIKP	PKPdf	16 39 23.1	-1.5
FRB				pmax	pmax		
	comp=Z,17nm,0.7s						
TZTN	Tazewell	116.31	54	ePKPdf	PKPdf	16 39 24.0	-1.5
VRHR	Novokhopersk	116.54	322	ePKIKP	PKPdf	16 39 24.8	-0.6
VRHR				pmax	pmax		
	comp=Z,20nm,0.5s						
VRHR				pmax	pmax		
	comp=N,10.0nm,0.4s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.7s						
VRHR				MLR	MLR		
	comp=Z,3μm,24.0s						
VRHR				MLR	MLR		
	comp=N,1μm,21.0s						
VRHR				MLR	MLR		
	comp=E,2μm,26.0s						
MTA	Mtatsminda	116.62	311	P	PKPdf	16 39 25.5	-0.5
GOGA	Godfrey	116.70	58	ePKIKP	PKPdf	16 39 24.8	-1.5
JOF	Joensuu	116.70	337	ePKIKP	PKPdf	16 39 24.0	-1.4
JOF				pmax	pmax		
	comp=Z,9.0nm,0.8s						
JOF	Joensuu	116.70	337	epkp	PKPdf	16 39 24.0	-1.4
	comp=Z,9.1nm,0.8s						
JOF	Joensuu	116.70	337	epkp	PKPdf	16 39 24.0	-1.4
	comp=Z,9.1nm,0.8s						
SUMG	Summit	116.78	7	ePKPdf	PKPdf	16 39 24.5	-0.8
SUMG	Summit	116.78	7	i P	PP	16 40 30.3	-4.2
ZEI	Tsey	117.08	313	ePKIKP	PKPdf	16 39 27.3	+0.6
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MOS	Moscow	117.19	328	ePKIKP	PKPdf	16 39 24.6	-1.9
MOS				i		16 40 34.6	
MOS				ePPP		16 43 05.6	
MOS				i SS	SS	16 56 43.4	+3.6
MOS				MLR	MLR		
	comp=Z,3μm,24.0s						
ONI	Oni	117.43	313	P	PKPdf	16 39 28.1	+0.6
KIV	Kislovodsk	117.69	314	eP	Pdif	16 35 44.5	-1.2
KIV				i		16 39 26.9	
KIV				e		16 40 39.1	
KIV				ePS	PS	16 50 24.2	-4.0
KIV				eSS	SS	16 56 49.1	+1.8
KIV				eSSS		17 01 10.1	
KIV				pmax	pmax		
	comp=Z,16nm,1.0s						
VOR	Voronezh	117.78	323	PKIKP	PKPdf	16 39 27.0	-0.8
VOR				pmax	pmax		
	comp=Z,120nm,1.4s						
VSR	Storozhevoye	117.97	323	ePKIKP	PKPdf	16 39 26.9	-1.3
VSR				pmax	pmax		
	comp=Z,20nm,0.7s						
VSR				pmax	pmax		
	comp=N,10.0nm,0.9s						
VSR				pmax	pmax		
	comp=E,6.0nm,0.4s						
OBN	Obninsk	117.99	328d	iPKIKP	PKPdf	16 39 26.8	-1.3
OBN				i		16 40 40.3	
OBN				i PS	PS	16 50 17.1	-13
OBN				i SS	SS	16 56 53.7	+3.5
OBN				pmax	pmax		
	comp=Z,10.0nm,1.2s						
OBN	Obninsk	117.99	328	i PKP	PKPdf	16 39 26.9	-1.2
ERPA	Erie	118.15	48	ePKPdf	PKPdf	16 39 27.5	-1.3
SADO	Sadowa	118.16	45	PKKPbc	PKKPbc	16 49 46.1	-3.2
	comp=Z,1.6nm,0.4s,baz=162,slow=3.2,SNR=2.4						
JSC	Jenkinsville	118.44	57	ePKIKP	PKPdf	16 39 27.8	-1.8
BLA	Blacksburg	118.71	53	ePKIKP	PKPdf	16 39 28.3	-1.8
MCWV	Mont Chateau	118.74	50	ePKPdf	PKPdf	16 39 27.8	-2.2
MSL	Mosul	118.77	306	ePKP	PKPdf	16 39 31.0	+0.8
DWPF	Disney	118.84	64	ePKPdf	PKPdf	16 39 29.5	-1.1
COW	Cow Castle Cre	119.01	58	ePKPdf	PKPdf	16 39 30.1	-0.7
KAF	Kangasniemi	119.07	338	ePKIKP	PKPdf	16 39 28.3	-1.7
KAF				pmax	pmax		
	comp=Z,11nm,0.9s						
KAF	Kangasniemi	119.07	338	epkp	PKPdf	16 39 28.3	-1.7
	comp=Z,11nm,0.9s,baz=51,slow=2.0						
KAF	Kangasniemi	119.07	338	epkp	PKPdf	16 39 28.3	-1.7
	comp=Z,11nm,0.9s,baz=51,slow=2.0						
FINES	FINESS Array B	119.56	337	Pdiff	Pdif	16 35 54.0	0.0
	comp=Z,2.0nm,0.6s,baz=66,slow=6.7,SNR=6.7						
FINES				PKP	PKPdf	16 39 29.8	-1.1
	comp=Z,8.7nm,0.8s,baz=108,slow=2.8,SNR=12						
FINES				PKKPbc	PKKPbc	16 49 42.0	-2.7
	comp=Z,3.0nm,0.6s,baz=175,slow=1.9,SNR=7.8						
FINES	FINESS Array B	119.56	337	P	Pdif	16 35 54.0	0.0
FINES						16 39 29.8	
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SFJD	Kangerlussuaq	119.58	14	PKKPab	PKKPab	16 49 41.0	-2.9
	comp=Z,3.6nm,0.5s,baz=123,slow=6.5,SNR=3.8						
SFJD	Kangerlussuaq	119.58	14	ePKIKP	PKPdf	16 39 28.8	-2.0
SFJD	Kangerlussuaq	119.58	14	i P	PP	16 40 49.0	-4.9
SFJD							
	comp=Z,1μm,22.0s						
OTAV	Otavalo	119.75	96	ePKPdf	PKPdf	16 39 33.5	+0.8
BCIP	Isla Barro Col	119.82	85	ePKPdf	PKPdf	16 39 29.9	-3.0
SOC	Sochi	119.87	314	eP	Pdif	16 35 53.3	-2.1
SOC				i		16 39 30.8	
SOC				e		16 40 56.2	
SOC				ePPP		16 43 39.3	
SOC				eSS	SS	16 57 23.5	+8.1
SOC				eSSS		17 01 36.3	
SOC				pmax	pmax		
	comp=Z,13nm,0.7s						
SOC				MLR	MLR		
	comp=Z,3μm,21.0s						
SCO	Scoresbysund	119.97	1	i P	PP	16 40 52.4	-4.1
SCO							
	comp=Z,1μm,20.0s						
SSPA	Standing Stone	120.01	49	ePKPdf	PKPdf	16 39 30.2	-2.2
BINY	Binghamton	121.02	47	ePKPdf	PKPdf	16 39 32.7	-1.7
ANN	Anapa	121.11	316	i PKIKP	PKPdf	16 39 34.8	+0.4
ANN				e		16 41 01.8	
ANN				e		16 46 29.8	
ANN				eSSS		17 02 04.8	
ANN				pmax	pmax		
	comp=Z,50nm,1.3s						
ANN				MLR	MLR		
	comp=N,4μm,24.0s						
ANN				MLR	MLR		
	comp=E,2μm,24.0s						
ANN				MLR	MLR		
	comp=Z,2μm,24.0s						
LONY	Lake Ozonia	121.33	44	ePKPdf	PKPdf	16 39 32.9	-2.0
NCB	Newcomb	121.77	44	ePKPdf	PKPdf	16 39 33.8	-1.9
SCHQ	Schefferville	121.77	30	PKP	PKPdf	16 39 34.6	-0.7
	comp=Z,13nm,0.6s,baz=296,slow=2.6,SNR=28						
SCHQ				PKKPbc	PKKPbc	16 49 34.1	-2.1
	comp=Z,5.9nm,0.8s,baz=135,slow=5.0,SNR=7.3						
SCHQ	Schefferville	121.77	30	ePKPdf	PKPdf	16 39 33.6	-1.8
NSS	Namsos	121.88	345	e	PKPdf	16 39 30.6	-4.7
NSS				AMS	AMS	17 28 35.3	
	comp=Z,4μm,28.5s						
BOSA	Boshof	122.47	226	PKP	PKPdf	16 39 36.8	-0.8
	comp=Z,25nm,0.8s,baz=120,slow=1.6,SNR=34						
BOSA				PKKPab	PKKPab	16 49 31.9	-2.0
	comp=Z,7.7nm,0.7s,baz=318,slow=2.2,SNR=14						
BOSA	Boshof	122.47	226	ePKPdf	PKPdf	16 39 36.2	-1.4
MICGM	Minsk	122.72	330	eP	PKPdf	16 39 39.0	+1.8
MNK	Minsk	122.75	330	ePKIKP	PKPdf	16 39 34.0	-3.3
IZAR	Zarasai	122.83	332	eP	PKPdf	16 39 36.7	-0.7
IZAR				AMB	AMB	16 39 37.3	
	comp=Z,11nm,1.6s						
IDID	Didziasalis	122.84	331	eP	PKPdf	16 39 36.4	-1.0
IDID				AMB	AMB	16 39 39.5	
	comp=Z,13nm,0.9s						
ISAL	Salakas	122.98	331	eP	PKPdf	16 39 37.1	-0.6
ISAL				AMB	AMB	16 39 37.7	
	comp=Z,8.9nm,1.6s						
NACGM	Naroch	123.05	331	ePKP	PKPdf	16 39 28.0	-10
IIGN	Ignalina	123.06	331	eP	PKPdf	16 39 37.1	-0.8
IIGN				AMB	AMB	16 39 39.3	
	comp=Z,14nm,1.5s						
KMBO	Kilima Mbogo	123.17	262	ePKIKP	PKPdf	16 39 38.6	-0.8
LBNH	Lisbon	123.25	44	ePKIKP	PKPdf	16 39 37.3	-1.3
AKASG	Malin Array Be	123.92	325	PKP	PKPdf	16 39 38.3	-1.4
	comp=Z,47nm,0.8s,baz=68,slow=1.9,SNR=63						
AKASG				PP	PP	16 41 24.0	0.0
	comp=Z,4.9nm,0.8s,baz=50,slow=6.3,SNR=6.1						
AKASG				PKKPbc	PKKPbc	16 49 24.8	-2.9
	comp=Z,11nm,0.8s,baz=248,slow=4.4,SNR=24						
AKASG	Malin Array Be	123.92	325	PKIKP	PKPdf	16 39 38.3	-1.4
AKASG						16 41 24.0	
AKASG				pmax	pmax		
	comp=Z,47nm,0.8s						
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AKBB	Malin Array Si	123.92	325	ePKIKP	PKPdf	16 39 37.7	-2.0
LBTB	Lobatse	124.27	230	PKKPab	PKKPab	16 49 25.1	-1.0
	comp=Z,4.3nm,0.7s,baz=311,slow=5.8,SNR=9.8						
LBTB	Lobatse	124.27	230	ePKIKP	PKPdf	16 39 39.9	-1.3
LPAZ	La Paz	124.34	118	PKP	PKPdf	16 39 41.4	-0.1
	comp=Z,19nm,0.7s,baz=290,slow=1.2,SNR=44						
LPAZ	La Paz	124.34	118	ePKPdf	PKPdf	16 39 41.0	-0.5
PKME	Peaks-Kenny Pk	124.64	42	ePKPdf	PKPdf	16 39 39.6	-1.6
PKME				epPKPdf	pPKPdf	16 40 05.7	-1.1
ROSC	El Rosal	124.64	91	PKP	PKPdf	16 39 41.5	-0.7
	comp=Z,25nm,0.7s,baz=89,slow=20,SNR=13						
ROSC	El Rosal	124.64	91	ePKPdf	PKPdf	16 39 41.0	-1.1
NB2	NORSAR Subarra	124.90	343	PKPdf	PKPdf	16 39 39.6	-1.6
	comp=Z,22nm,1.1s,baz=31,slow=1.9						
NB2	NORSAR Subarra	124.90	343	PKPdf	PKPdf	16 39 39.6	-1.6
	baz=31,slow=1.9						
NOA	NORSAR Array B	124.90	343	PKP	PKPdf	16 39 39.8	-1.4
	comp=Z,9.1nm,0.7s,baz=37,slow=2.0,SNR=42						
NOA				PP	PP	16 41 33.4	+3.4
	comp=Z,3.5nm,0.7s,baz=42,slow=6.2,SNR=4.3						
NOA				PKKPbc		16 49 20.9	
	comp=Z,7.3nm,0.8s,baz=218,slow=4.3,SNR=21						
NOA	NORSAR Array B	124.90	343	PKIKP	PKPdf	16 39 39.8	-1.4
NOA						16 41 33.4	
NOA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
NOA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HWQ	Hawqa	124.91	305	ePP	PKPdf	16 39 41.0	-1.1
GTBY	Guantanamo Bay	124.95	73	ePKPdf	PKPdf	16 39 40.6	-2.0
NAO01	NORSAR Array S	125.16	343	ePKPdf	PKPdf	16 39 40.7	-1.0
BHL	Bhannes	125.22	304	eP	PKPdf	16 39 41.9	-0.8
SUW	Suwalki	125.28	331	ePKPdf	PKPdf	16 39 41.2	-1.0
SUW				ePP	PP	16 41 33.2	+0.3
SUW				eSKSac	SKSac	16 46 36.0	-2.0
SUW				eSP	SP	16 51 25.9	+2.7
SUW				ePS	PS	16 51 26.6	-8.5
SUW				LMZ		17 31 13.0	
	comp=Z,4μm,25.2s						
SUW	Suwalki	125.28	331	ePKPdf	PKPdf	16 39 41.3	-0.8
BR131	Keskin Array S	125.32	312	ePKPdf	PKPdf	16 39 40.6	-2.1
BRTR	Keskin Array B	125.32	312	PKP	PKPdf	16 39 41.5	-1.2
	comp=Z,7.2nm,0.6s,baz=143,slow=5.3,SNR=31						
BRTR				PKKPbc		16 49 19.6	
	comp=Z,2.7nm,0.8s,baz=224,slow=3.7,SNR=9.4						
KSDI	Kefar Szold	125.36	303	eP	PKPdf	16 39 42.7	-0.3
MMAI	Mount Meron Ar	125.61	303	PKP	PKPdf	16 39 43.1	-0.3
	comp=Z,21nm,0.7s,baz=78,slow=5.2,SNR=25						
KIS	Kishinev	125.87	321	ePKP	PKPdf	16 39 41.0	-2.5
	comp=Z,200nm,2.0s						
KIS	Kishinev	125.87	321	ePKIKP	PKPdf	16 39 41.0	-2.5
KIS				e		16 40 08.0	
KIS				ePS	PS	16 51 22.0	-19
KIS				pmax	pmax		
	comp=Z,210nm,2.0s						
KIS				MLR	MLR		
	comp=Z,3μm,22.0s						
KIS				MLR	MLR		
	comp=Z,3μm,22.0s						
FOO	Floro	126.06	346	eP	PKPdf	16 39 39.2	-4.2
FOO				ePP	PP	16 41 36.0	-1.6
FOO				AMS	AMS	17 28 44.8	
	comp=Z,2μm,24.1s						
LEOM	Leova	126.46	321	⇑PKIKP	PKPdf	16 39 44.6	0.0
LEOM	Leova	126.46	321	⇑iP	PKPdf	16 39 44.6	0.0
KONO	Kongsberg	126.50	343	eP	PKPdf	16 39 42.6	-1.7
KONO				ePP	PP	16 41 40.4	-0.2
KONO				eSS	SS	16 58 40.2	+2.6
EIL	Elat	126.59	299	eP	PKPdf	16 39 44.7	-0.7
TLCR		126.66	319	⇑PKIKP	PKPdf	16 39 45.2	+0.1
TLCR		126.66	319	⇑iP	PKPdf	16 39 45.2	+0.1
CSS	Prodhromos	126.86	306	ePKPdf	PKPdf	16 39 44.1	-1.7
BER	Bergen	127.05	345	eP	PKPdf	16 39 44.6	-0.8
BER				ePP	PP	16 41 46.0	+1.8
BER				eSS	SS	16 58 45.6	+1.4
BER				AMS	AMS	17 31 06.0	
	comp=Z,2μm,16.9s						
TIRR	Tirgusor	127.23	319	⇓PKIKP	PKPdf	16 39 45.6	-0.6
TIRR	Tirgusor	127.23	319	ePKPdf	PKPdf	16 39 45.5	-0.7
TIRR	Tirgusor	127.23	319	⇓iP	PKPdf	16 39 45.6	-0.6
LVV	L'vov	127.24	326c	iPKIKP	PKPdf	16 39 45.1	-0.9
LVV				e		16 46 48.1	
LVV				ePS	PS	16 51 32.8	-20
LVV				MLR	MLR		
	comp=Z,3μm,23.0s						
WAR	Warsaw	127.39	330	ePKP	PKPdf	16 39 46.4	+0.2
WAR				ePP	PP	16 41 48.3	+1.5
WAR				LMZ		17 34 20.8	
	comp=Z,4μm,25.5s						
HARR	Harsova	127.44	319	⇑PKIKP	PKPdf	16 39 46.4	-0.2
HARR	Harsova	127.44	319	⇑iP	PKPdf	16 39 46.4	-0.2
CPUP	Villa Florida	127.60	135	PKP	PKPdf	16 39 45.9	-1.6
	comp=Z,21nm,0.7s,baz=277,slow=1.5,SNR=45						
CPUP	Villa Florida	127.60	135	PKIKP	PKPdf	16 39 45.9	-1.6
CPUP				pmax	pmax		
	comp=Z,21nm,0.7s						
CPUP	Villa Florida	127.60	135	PKP	PKPdf	16 39 45.9	-1.6
BUR08	Bucovina Ar. S	127.73	324	ePKPdf	PKPdf	16 39 47.7	+0.6
BURAR	Bucovina Array	127.73	324	P	PKPdf	16 39 47.7	+0.7
BURAR				⇑P		16 39 48.3	
BURAR	Bucovina Array	127.73	324	⇑iP	PKPdf	16 39 48.3	+1.3
KWP	Kalwaria Pacla	128.06	327	ePKP	PKPdf	16 39 46.3	-1.3
KWP				ePP	PP	16 41 51.6	+0.2
KWP				LMZ		17 31 16.3	
	comp=Z,5μm,24.7s						
KWP	Kalwaria Pacla	128.06	327	ePKPdf	PKPdf	16 39 46.8	-0.8
KWP	Kalwaria Pacla	128.06	327	⇓iP	PKPdf	16 39 48.0	+0.4
BSD	Bornholm Skovb	128.17	336	i PKIKP	PKPdf	16 39 46.7	-0.9
BSD				i		16 41 49.4	
BSD				MLR	MLR		
	comp=Z,2μm,22.0s						
BSD	Bornholm Skovb	128.17	336	i P	PKPdf	16 39 46.7	-0.9
BSD				i		16 41 49.4	
BSD							
	comp=Z,2μm,22.0

comp=Z,3µm,21.4s
JMB Yambol 129.29 317 PKIKP PKPdf 16 39 49.6 -0.6
JMB Yambol 129.29 317 P PKPdf 16 39 49.6 -0.6
NIE Niedzica 129.46 328 *e*PKPdf PKPdf 16 39 51.0 +0.7
NIE *e*PP PP 16 42 02.2 +1.7
DRGR 129.62 324 P PKPdf 16 39 50.3 -0.4
DRGR ⇑P 16 39 50.6
DRGR 129.62 324 ⇑*i*P PKPdf 16 39 50.6 -0.1
KECS Kecovo 129.92 327 *e*PKIKP PKPdf 16 39 50.6 -0.6
KECS *e* 16 42 05.4
KECS Kecovo 129.92 327 *e*PKP PKPdf 16 39 50.6 -0.6
KECS *e* 16 42 05.4
KECS *e* 16 43 07.1
KECS Kecovo 129.92 327 *e*PKP PKPdf 16 39 50.5 -0.7
KECS *e*PP PP 16 42 05.4 +1.9
KECS *e*SKP 16 43 07.1
OKC Ostrava-Krasne 130.31 329 *e*PKIKP PKPdf 16 39 51.9 0.0
OKC *e* 16 42 03.5
OKC MLR MLR
comp=Z,3µm,21.7s
OKC Ostrava-Krasne 130.31 329 *e*PKP PKPdf 16 39 51.9 0.0
OKC *e*PP PP 16 42 03.5 -2.4
OKC *e*SKP 16 43 07.6
OKC AMS AMS 17 36 40.0
comp=Z,3µm,21.7s
ALN Alexandroupoli 130.32 316 PKIKP PKPdf 16 39 49.8 -2.4
ALN Alexandroupoli 130.32 316 P PKPdf 16 39 49.8 -2.4
ALN Alexandroupoli 130.32 316 *e*P PKPdf 16 39 50.3 -1.9
KSP Ksiaz 130.55 331 *e*PKPdf PKPdf 16 39 52.3 0.0
KSP *e*PP PP 16 42 05.5 -1.9
KSP *e*SP SP 16 52 07.4 -1.8
KSP *e*SS SS 16 59 32.2 +4.0
KSP LMZ 17 34 14.4
comp=Z,9µm,25.3s
KSP Ksiaz 130.55 331 *e*PKP PKPdf 16 39 52.3 0.0
KSP *e*pPKP pPKPdf 16 40 15.7 -2.1
KSP *e*PP PP 16 42 05.5 -1.9
KSP *e*SS SS 16 59 21.4 -6.8
KSP LR LR
comp=Z,10µm,25.3s
RDO Rodhopi 130.56 316 P PKPdf 16 39 47.8 -4.8
RDO Rodhopi 130.56 316 P PKPdf 16 39 47.8 -4.8
RDO Rodhopi 130.56 316 *e*P PKPdf 16 39 51.0 -1.6
PSZ Piszkesteto 130.57 326 *e*PKIKP PKPdf 16 39 51.8 -0.6
PSZ Piszkesteto 130.57 326 *e*PKP PKPdf 16 39 51.3 -1.1
MORC Moravsky Berou 130.65 330 ⇑PKIKP PKPdf 16 39 52.9 +0.4
MORC Moravsky Berou 130.65 330 *e*PKPdf PKPdf 16 39 51.1 -1.4
PLD Plovdiv 130.70 318 PKIKP PKPdf 16 39 51.1 -1.8
PLD Plovdiv 130.70 318 P PKPdf 16 39 51.1 -1.8
VYHS Vyhne 130.79 328 *e*PKIKP PKPdf 16 39 50.8 -2.0
VYHS *e* 16 42 08.6
VYHS Vyhne 130.79 328 *e*PKP PKPdf 16 39 50.8 -2.0
VYHS *e* 16 40 15.0
VYHS *e* 16 42 08.6
VYHS *e* 16 43 10.4
VYHS LR LR
comp=Z,2µm,31.6s
VYHS Vyhne 130.79 328 *e*PKP PKPdf 16 39 50.8 -2.0
VYHS *e* 16 40 15.0
VYHS *e*PP PP 16 42 08.6 -0.5
VYHS *e*SKP 16 43 10.4
BSEG Bad Segeberg 130.83 338 *e*PKPdf PKPdf 16 39 51.2 -1.5
BSEG *e*PP PP 16 42 09.9 +0.9
PRK Paraskevi 130.83 314 PKIKP PKPdf 16 39 51.4 -1.8
PRK Paraskevi 130.83 314 P PKPdf 16 39 51.4 -1.8
PRK Paraskevi 130.83 314 *e*P PKPdf 16 39 52.0 -1.2
DPC Dobruska-Polom 130.87 331 *e*PKIKP PKPdf 16 39 53.3 +0.4
DPC *e* 16 42 07.8
DPC MLR MLR
comp=Z,5µm,25.5s
DPC Dobruska-Polom 130.87 331 *e*PKP PKPdf 16 39 53.3 +0.4
DPC *e*PP PP 16 42 07.8 -1.7
DPC *e*SKP 16 43 09.0
DPC AMS AMS 17 34 10.0
comp=Z,5µm,25.5s
UPC Upice 130.91 331 *e*PKIKP PKPdf 16 39 53.0 0.0
UPC *e* 16 42 06.8
UPC Upice 130.91 331 *e*PKP PKPdf 16 39 53.0 0.0
UPC *e*PP PP 16 42 06.8 -3.0
UPC *e*SKP 16 43 10.6
SIGR SIGRI 131.14 314 P PKPdf 16 39 53.0 -0.8
KAVA Kavala 131.32 316 P PKPdf 16 39 51.6 -2.5
LIA Limnos Island 131.34 315 P PKPdf 16 39 51.6 -2.5
LIA Limnos Island 131.34 315 P PKPdf 16 39 51.6 -2.5
LIA Limnos Island 131.34 315 *e*P PKPdf 16 39 52.0 -2.1
VRAC Vranov 131.42 330 ⇑P PKPdf 16 39 54.3 +0.3
VRAC P 16 39 54.5
VTS Vitosha 131.45 319 PKIKP PKPdf 16 39 50.9 -3.4
VTS Vitosha 131.45 319 P PKPdf 16 39 50.9 -3.4
PVCC Panska Ves 131.57 332 *e*PKIKP PKPdf 16 39 54.4 +0.2
PVCC MLR MLR
comp=Z,4µm,23.5s
PVCC Panska Ves 131.57 332 *e*PKP PKPdf 16 39 54.4 +0.2
PVCC *e*PP PP 16 42 09.3 -4.7
PVCC *e*SKP 16 43 10.2
PVCC AMS AMS 17 35 00.0
comp=Z,4µm,23.5s
BRG Berggiesshubel 131.61 333 *e*PKPdf PKPdf 16 39 52.8 -1.5
BRG *e*PP PP 16 42 14.3 +0.1
BRG *e*SS SS 16 59 28.8 -12
BRG Berggiesshubel 131.61 333 *i* PKP PKPdf 16 39 54.3 0.0
comp=Z,254nm,2.1s
BRG *i* 16 40 23.5
comp=Z,121nm,2.1s
BRG PP PP 16 42 02.0 -12
BRG *i* PKS 16 43 08.0
BRG *i* 16 44 02.1
comp=Z,160nm,2.1s
BRG *e* 16 48 57.0
BRG *e* 16 49 55.0
BRG *e* 16 52 07.0
BRG *e* 16 52 30.2
comp=Z,17nm,1.8s
BRG *e* 16 53 33.0
BRG SS SS 16 59 20.0 -21
BRG
comp=N,3µm,23.0s
BRG
comp=E,3µm,29.5s
BRG
comp=Z,4µm,25.6s
CLL Collm 131.72 334 *e*PKPdf PKPdf 16 39 52.8 -1.7
CLL *e*PP PP 16 42 14.3 -0.6
CLL *e*pPP 16 42 35.8
CLL *e*SS SS 16 59 35.1 -7.2
CLL Collm 131.72 334 ⇓*i*PKIKP PKPdf 16 39 53.5 -1.0
CLL *e* 16 40 25.0
CLL *i* 16 42 14.6
CLL pmax pmax
comp=Z,142nm,2.0s
CLL pmax pmax
comp=Z,174nm,2.1s
CLL MLR MLR
comp=Z,2µm,21.5s
CLL Collm 131.72 334 ⇓*i*PKP PKPdf 16 39 53.5 -1.0
CLL *e* 16 40 25.0
CLL *i* PP PP 16 42 14.6 -0.3
CLL *i* PKS 16 43 13.7
CLL *e*SKKS SKKSac 16 49 03.0 +0.1
CLL LR LR
comp=Z,2µm,21.5s
ZST Bratislava 131.88 328 *e*PKIKP PKPdf 16 39 54.8 -0.1
ZST *e* 16 42 16.0
ZST Bratislava 131.88 328 *e*PKP PKPdf 16 39 54.8 -0.1
ZST *e* 16 40 18.5
ZST *e* 16 42 16.0
ZST *e* 16 43 22.8
ZST LR LR
comp=Z,1µm,21.0s
SRS Serrai 131.89 317 PKIKP PKPdf 16 39 52.0 -3.2
SRS Serrai 131.89 317 P PKPdf 16 39 52.0 -3.2
PRA Prague 131.95 332 ⇓PKP PKPdf 16 39 55.0 0.0
PRA pPKP pPKPdf 16 40 16.0 -4.5
PRA PP PP 16 42 15.0 -1.4
PRU Pruhonice 131.95 332 *e*PKIKP PKPdf 16 39 55.1 +0.1
PRU *e* 16 40 24.5
PRU *e* 16 52 17.9
PRU MLR MLR
comp=Z,4µm,24.5s
PRU Pruhonice 131.95 332 *e*PKP PKPdf 16 39 55.1 +0.1
PRU *ex* x 16 40 24.5
PRU *e*PP PP 16 42 12.0 -4.5
PRU *e*SKP 16 43 14.3
PRU *e*SP SP 16 52 17.9 -3.4
PRU AMS AMS 17 34 00.0
comp=Z,4µm,24.5s
TREC Trest 131.97 330 *e*PKIKP PKPdf 16 39 54.9 -0.1
TREC MLR MLR
comp=Z,6µm,24.0s
TREC Trest 131.97 330 *e*PKP PKPdf 16 39 54.9 -0.1
TREC *e*PP PP 16 42 11.6 -5.1
TREC AMS AMS 17 36 10.0
comp=Z,6µm,24.0s
OUR Ouranopolis 131.98 316 PKIKP PKPdf 16 39 54.2 -1.1
NRDL Niedersach Rie 132.02 337 *e*PKPdf PKPdf 16 39 53.5 -1.5
NRDL *e*PP PP 16 42 15.0 -1.8
SOH Sokhos 132.19 317 PKIKP PKPdf 16 39 52.8 -2.9
PKSM Moragy 132.27 325 ⇑PKIKP PKPdf 16 39 55.8 +0.1
PKSM Moragy 132.27 325 P PKPdf 16 39 54.4 -1.3
PKSM ⇑P 16 39 55.8
PLG Polygyros 132.33 316 PKIKP PKPdf 16 39 54.6 -1.4
PAIG Palíouri 132.37 315 PKIKP PKPdf 16 39 54.3 -1.8
CLZ Clausthal 132.42 336 *e*PKPdf PKPdf 16 39 54.5 -1.3
CLZ *e*PP PP 16 42 19.3 0.0
CLZ *e*pPP 16 42 41.8
CLZ *e*SS SS 16 59 49.3 -1.4
HORT Hortiatis 132.46 317 P PKPdf 16 39 53.8 -2.4
VAY Valandovo 132.48 318 PKIKP PKPdf 16 39 53.4 -2.9
VAY Valandovo 132.48 318 *e*PKP PKPdf 16 39 55.2 -1.0
THE Thessaloniki 132.54 317 PKIKP PKPdf 16 39 53.9 -2.5
AOS Alonnisos 132.56 314 P PKPdf 16 39 55.5 -1.0
CRPR Cabo Rojo, PR 132.58 75 *e*PKPdf PKPdf 16 39 56.1 -0.9
TANN Tannenbergstha 132.60 333 *e*PKPdf PKPdf 16 39 54.7 -1.5
TANN *e*PP PP 16 42 19.3 -1.3
TANN *e*SS SS 16 59 45.4 -7.6
DIVS Divibare 132.69 322 P PKPdf 16 39 52.0 -4.6
CONA Conrad Observa 132.69 329 ⇓*i*PKPdf PKPdf 16 39 55.9 -0.5
comp=Z,24nm,0.7s
CSNA Conrad Observa 132.69 329 ⇓*i*PKPdf PKPdf 16 39 55.9 -0.6
comp=Z,22nm,0.7s
NKC Novy Kostel 132.74 333 *e*PKIKP PKPdf 16 39 56.4 -0.1
NKC *e* 16 52 23.5
NKC *e* 16 53 59.9
NKC MLR MLR
comp=Z,3µm,20.4s
NKC Novy Kostel 132.74 333 *e*PKP PKPdf 16 39 56.4 -0.1
NKC *e*PP PP 16 42 16.0 -5.4
NKC *e*SKP 16 43 15.3
NKC *ex* x 16 52 23.5
NKC *ex* x 16 53 59.9
NKC AMS AMS 17 38 00.0
comp=Z,3µm,20.4s
MOX Moxa 132.80 334 *e*PKP PKPdf 16 39 56.3 -0.3
comp=Z,206nm,2.5s
MOX *e*PP PP 16 42 22.0 +0.2
MOX *e*SS SS 16 59 42.0 -13
MOX
comp=Z,2µm,22.0s
MOX Moxa 132.80 334 *e*PKPdf PKPdf 16 39 55.1 -1.5
MOX *e*PP PP 16 42 22.0 +0.2
MOX *e*pPP 16 42 44.1
MOX *e*SS SS 16 59 46.1 -9.3
MOX Moxa 132.80 334 *e*PKIKP PKPdf 16 39 56.3 -0.3
MOX *e* 16 42 22.0
MOX MLR MLR
comp=Z,2µm,22.0s
SKO Skopje 132.90 319 PKIKP PKPdf 16 39 56.3 -0.7
SKO Skopje 132.90 319 *e*PKP PKPdf 16 39 56.0 -1.0
XOR Xorichti 132.95 315 P PKPdf 16 39 54.5 -2.7
KHC Kasperske Hory 133.00 331 *e*PKIKP PKPdf 16 39 56.9 -0.1
KHC *e* 16 40 26.3
KHC *e* 16 42 20.4
KHC MLR MLR
comp=Z,6µm,24.4s
KHC Kasperske Hory 133.00 331 *e*PKPpre PKPpre 16 39 49.7
KHC *i* PKP PKPdf 16 39 55.8 -1.2
KHC Kasperske Hory 133.00 331 *e*PKP PKPdf 16 39 56.9 -0.1
KHC *ex* x 16 40 26.3
KHC *e*PP PP 16 42 20.4 -2.8
KHC *e*SKP 16 43 14.4
KHC AMS AMS 17 35 30.0
comp=Z,6µm,24.4s
IBBN Ibbenburen 133.06 338 *e*PKPdf PKPdf 16 39 55.5 -1.5
IBBN *e*PP PP 16 42 22.4 -1.0
LIT Litokhoron 133.10 316 PKIKP PKPdf 16 39 54.8 -2.7
GEC2 GERESS Array S 133.14 331 *e*PKPdf PKPdf 16 39 55.6 -1.7
GEC2 *e*PP PP 16 42 23.2 -0.9
GEC2 GERESS Array S 133.14 331 *e*PKPdf PKPdf 16 39 55.0 -2.2
GERES GERESS Array B 133.14 331 PKhKP PKPpre 16 39 41.8
comp=Z,0.5nm,0.6s,baz=31,slow=3.1,SNR=3.7
GERES PKP PKPdf 16 39 56.6 -0.7
comp=Z,8.7nm,0.7s,baz=63,slow=1.1,SNR=16
GERES SKP 16 43 21.2
comp=Z,9.5nm,1.0s,baz=64,slow=3.1,SNR=7.2
GERES GERESS Array B 133.14 331 PKHKP PKPpre 16 39 41.8
GERES 16 39 56.6
GERES pmax pmax
comp=Z,1.0nm,0.6s
GERES pmax pmax
comp=Z,9.0nm,0.7s
ARSA Arzberg 133.31 328 ⇓*e*PKPdf PKPdf 16 39 56.5 -1.1
comp=Z,13nm,1.0s
WET Wettzell 133.32 332 *e*PKPdf PKPdf 16 39 56.2 -1.4
WET *e*PP PP 16 42 26.2 +1.0
KRUS Krusevo 133.32 318 *e*PKP PKPdf 16 39 56.8 -1.0
UBBA Unterbreizbach 133.35 335 *e*PKPdf PKPdf 16 39 56.1 -1.5
UBBA *e*PP PP 16 42 25.1 -0.2
UBBA *e*pPP 16 42 47.5
LKR Lokris 133.40 314 P PKPdf 16 39 55.1 -3.0
KOGS Kog 133.44 327 *e*PKPdf PKPdf 16 39 56.8 -1.1
KOGS *e*PP PP 16 42 24.4 -1.7
KOGS *e* 16 44 03.7
KOGS *e* 16 52 24.8
BIA Bitola 133.45 318 *e*PKP PKPdf 16 39 57.0 -1.0
SJG San Juan 133.49 75 *e*PKIKP PKPdf 16 39 58.1 -0.7
KZN Kozani 133.49 317 PKIKP PKPdf 16 39 55.7 -2.5
FNA Florina 133.53 318 PKIKP PKPdf 16 39 54.3 -3.9
MOA Molln 133.55 330 ⇓*e*PKPdf PKPdf 16 39 56.7 -1.3
comp=Z,11nm,0.8s
GRF Grafenberg Arr 133.67 333 *e*PKPdf PKPdf 16 39 56.8 -1.4
GRF *e*PP PP 16 42 28.4 +1.0
GRF *e*pPP 16 42 50.8
GRF *e*SKKPdf 16 54 14.8
GRF Grafenberg Arr 133.67 333 *e*PKIKP PKPdf 16 39 56.8 -1.4
GRF 16 42 28.4
TSUM Tsumeb 133.68 231 PKPdf PKPdf 16 39 57.7 -1.5
AGG Agios Georgios 133.70 315 PKIKP PKPdf 16 39 56.4 -2.2
OHR Ohrid 133.75 318 PKIKP PKPdf 16 39 56.4 -2.2
OHR Ohrid 133.75 318 *e*PKP PKPdf 16 39 57.6 -1.0
CBYP Canovanas 133.76 75 *e*PKPdf PKPdf 16 39 58.3 -1.0
PERS Pernice 133.92 328 *e*PKPdf PKPdf 16 39 57.2 -1.5
PERS *e* 16 40 20.1
SOKA Soboth 133.93 328 ⇓*e*PKPdf PKPdf 16 39 57.6 -1.3
comp=Z,31nm,1.2s
BUG Bochum--Univer 133.94 338 *e*PKPdf PKPdf 16 39 57.1 -1.6
BUG *e*PP PP 16 42 29.0 0.0
BUG *e*pPP 16 42 51.2
SISC Sisak 133.98 326 P PKPdf 16 39 59.2 +0.2
SISC Sisak 133.98 326 *i* P PKPdf 16 39 59.2 +0.2
DOBS Dobrina 134.04 327 *e*PKPdf PKPdf 16 39 56.7 -2.3
MTP Monte Pirata 134.06 75 *e*PKPdf PKPdf 16 39 59.2 -0.7
GVD Gavdhos 134.12 309 *e*PKPdf PKPdf 16 39 59.6 +0.1
TIR Tirane 134.23 319 PKIKP PKPdf 16 39 57.4 -2.2
OBKA Obir 134.30 328 ⇓*e*PKPdf PKPdf 16 39 58.6 -0.9
comp=Z,8.3nm,0.8s
RJOB Jochberg 134.35 330 *e*PKPdf PKPdf 16 39 57.7 -1.9
RJOB *e*PP PP 16 42 33.2 +1.4
RJOB *e*pPP 16 42 54.2
TNS Taunus Mts 134.44 336 *e*PKPdf PKPdf 16 39 58.5 -1.2
TNS *e*PP PP 16 42 32.5 +0.3
KBA Koelnbreinsper 134.53 329 ⇓*e*PKPdf PKPdf 16 39 58.4 -1.5
comp=Z,17nm,1.1s
BOJS Bojanci 134.57 327 *e*PKPdf PKPdf 16 39 59.5 -0.6
BOJS *e* 16 40 22.0
BOJS *e* 16 52 32.5
BOJS *e* 16 54 25.6
BOJS *e* 16 55 53.2
LJU Ljubljana 134.61 328 *e*PKPdf PKPdf 16 39 59.4 -0.7
LJU *e*PP PP 16 42 31.6 -2.0
MYKA Terra Mystica 134.68 329 ⇓*e*PKPdf PKPdf 16 39 58.5 -1.7
comp=Z,9.1nm,0.7s
STON Ston 134.76 322 P PKPdf 16 39 58.3 -2.2
STON Ston 134.76 322 *i* P PKPdf 16 39 58.3 -2.2
FUR Furstenfeldbru 134.76 332 *e*PKPdf PKPdf 16 39 58.7 -1.6
FUR *e*PP PP 16 42 35.4 +1.0
FUR *e*pPP 16 42 57.3
ITM Ithomi 134.80 313 P PKPdf 16 39 58.5 -2.2
IGT Igoumenitsa 134.84 317 PKIKP PKPdf 16 39 58.6 -2.1
CADS Cadrg 134.90 328 *e*PKPdf PKPdf 16 39 59.2 -1.5
VOY Vojsko 134.95 328 *e*PKPdf PKPpre 16 39 48.8
VOY *e* PKPdf 16 39 59.3 -1.4
VOY *e* 16 42 36.8
PTCC Patocco-Chiusa 134.98 329 P PKPdf 16 39 59.3 -1.5
KNDS Knezji Dol 135.03 327 *e*PKPdf PKPdf 16 39 59.5 -1.4
KNDS *e* 16 40 22.7
KNDS *e*PP PP 16 42 33.7 -2.5
KNDS *e* 16 56 05.6
KNDS *e* 16 58 22.7
KEK Kerkira 135.10 317 P PKPdf 16 39 58.8 -2.4
ABTA Abfaltersbach 135.17 330 ⇓*e*PKPdf PKPdf 16 39 59.6 -1.5
comp=Z,25nm,0.9s
TRI Trieste 135.23 328 PKIKP PKPdf 16 40 01.8 +0.5
WTTA Wattenberg 135.24 331 ⇑*i*PKPdf PKPdf 16 40 00.1 -1.1
comp=Z,34nm,0.9s
STU Stuttgart 135.25 334 *e*PKPdf PKPdf 16 39 59.7 -1.5
STU *e*PP PP 16 42 37.7 +0.4
STU *e*SS SS 17 00 18.5 -6.4
VLS Valsamata 135.30 315 PKIKP PKPdf 16 40 01.2 -0.5
NVLJ Novalja 135.38 326 P PKPdf 16 39 56.6 -5.0
NVLJ Novalja 135.38 326 *i* P PKPdf 16 39 56.6 -5.0
MOTA Moosalm 135.43 331 ⇓*i*PKPdf PKPdf 16 40 00.2 -1.4
comp=Z,23nm,0.7s
RETA Reutte 135.49 332 ⇓PKPdf PKPdf 16 40 00.5 -1.2
comp=Z,15nm,0.8s
WLF Walferdange 135.79 337 *e*PKPdf PKPdf 16 40 01.5 -0.7
WLF *e*PP PP 16 42 43.9 +3.2
WLF Walferdange 135.79 337 PKPdf PKPdf 16 40 02.3 +0.1
FETA Feichten 135.84 331 ⇓*e*PKPdf PKPdf 16 40 01.4 -1.0
comp=Z,43nm,1.1s
SPAK Spaichingen-Ko 135.93 334 PKP PKPpre 16 39 50.0
BFO Black Forest 135.96 334 *e*PKPdf PKPdf 16 40 00.9 -1.6
BFO *e*PP PP 16 42 42.3 +0.5
BFO *e*pPP 16 43 03.9
BFO Black Forest 135.96 334 *e*PKHKP PKPpre 16 39 50.1
DAVA Damuels 136.05 332 ⇓*e*PKPdf PKPdf 16 40 01.8 -1.0
comp=Z,20nm,0.8s
BRMO Bormio 136.41 331 P PKPdf 16 40 02.0 -1.4
FELD Feldberg im Sc 136.44 334 PKP PKPpre 16 39 52.0
ECH Echery 136.54 335 PKP PKPdf 16 39 53.7 -10
MABI Malga Bissina 136.64 330 P PKPdf 16 40 02.5 -1.4
RGNG Rignano Grg 136.73 322 P PKPdf 16 39 54.9 -9.3
MOF Molkenrain 136.83 335 PKP PKPpre 16 39 52.3
CING Cingoli 137.07 326 P PKPdf 16 40 03.9 -0.9
ORI Oriolo Calabro 137.11 320 PKIKP PKPdf 16 40 05.3 +0.3
TIP Timpagrande 137.40 318 *e*PKPpre PKPpre 16 39 55.2
TIP P 16 40 04.5
TIP PKPdf PKPdf 16 40 04.7 -0.8
BADI Badiali 137.50 326 P PKPpre 16 39 55.7
MURB Monte Urbino 137.51 326 P PKPpre 16 39 55.3
MIDA Miranda 137.55 323 P PKPdf 16 40 04.3 -1.4
CRE Caprese Michel 137.59 327 PKIKP PKPdf 16 40 04.6 -1.1
AQU L'Aquila 137.60 324 ⇓PKIKP PKPdf 16 40 06.0 +0.2
AQU L'Aquila 137.60 324 *e*PKPdf PKPdf 16 40 06.3 +0.5
VAI Varese 137.61 331 PKHKP PKPpre 16 39 52.9
MGR Morigerati 137.64 320 P PKPdf 16 40 03.9 -2.0
FNVD Fontana Vidola 137.66 328 P PKPdf 16 40 00.8 -5.0
VLC Villacollemand 138.05 328 P PKPdf 16 40 04.6 -1.9
BOB Bobbio (Coli) 138.09 330 PKHKP PKPpre 16 39 55.8
RDP Rocca di Papa 138.38 324 PKIKP PKPdf 16 40 06.5 -0.7
FDF Fort de France 138.39 80 *e*PKIKP PKPdf 16 40 07.2 -0.8
SOI Samo 138.45 317 PKIKP PKPdf 16 40 07.0 -0.5
CEL Celeste 138.46 318 PKPpre PKPpre 16 39 57.4
BNI Bardonecchia 139.20 332 *e*PKHKP PKPpre 16 39 59.9
SAOF Saorge 139.59 330 PKP PKPdf 16 40 01.1 -8.3
AUTN L'Aution 139.64 331 PKP PKPdf 16 40 01.0 -8.5
TOUF Mont Tournerai 139.71 331 PKP PKPdf 16 40 01.0 -8.6
LUCF Luceram 139.76 331 PKP PKPdf 16 40 02.3 -7.4
PLDF La Plantade 139.79 336 PKP PKPdf 16 40 00.7 -9.0
MVIF Mont Vial 139.85 331 PKP PKPdf 16 40 01.5 -8.4
REVF Revere 139.86 330 PKP PKPdf 16 40 00.7 -9.2
SSB Saint Sauveur 139.96 334 PKP PKPpre 16 40 02.5
SSB Saint Sauveur 139.96 334 *e*PKPpre PKPpre 16 40 01.9
OCF Saint Nazaire 140.18 333 PKP PKPdf 16 40 03.0 -7.4
OG26 St.-Nazaire-De 140.18 333 PKP PKPdf 16 40 03.0 -7.4
PYM Petit Puy Mans 140.21 336 PKP PKPdf 16 40 04.0 -6.5
LBL Lubilhac 140.54 335 PKP PKPdf 16 40 03.6 -7.5
LMR La Mourre 140.58 331 *e*PKIKP PKPdf 16 40 09.0 -2.2
comp=Z,128nm,1.2s
LRDF Laroque-de-Fa 142.70 334 PKP PKPdf 16 40 10.8 -4.2
SJAF Saint Jean de 142.92 333 PKP PKPdf 16 40 11.3 -4.1
EJON La Jonquera 142.94 333 PKP PKPdf 16 40 09.4 -6.0
FILF Fillols 143.00 334 PKP PKPdf 16 40 11.8 -3.7
CARF Carcanieres 143.07 334 PKP PKPdf 16 40 10.6 -5.1
MLS Moulis 143.29 335 PKP PKPdf 16 40 09.4 -6.7
CLLI Livia 143.32 334 PKP PKPdf 16 40 11.4 -4.7
VALF Valcebollere 143.36 334 PKP PKPdf 16 40 13.0 -3.2
MELF Melles 143.50 336 PKP PKPdf 16 40 13.4 -3.0
LABF Labassere 143.63 337 PKP PKPdf 16 40 13.7 -2.9
CFON Fontmartina 143.69 333 PKP PKPdf 16 40 13.3 -3.5
CSOR Sort 143.76 335 PKP PKPdf 16 40 13.6 -3.3
ORDF Ordiarp 143.87 338 PKP PKPdf 16 40 14.3 -2.8
EBIE Bielsa 143.90 336 PKP PKPdf 16 40 14.9 -2.2
OSSF Osses 143.95 338 PKP PKPdf 16 40 14.3 -2.9
ETSF Etsaut 144.00 337 *e*PKIKP PKPdf 16 40 14.6 -2.7
comp=Z,137nm,0.7s
SJPF Ste Jean 144.06 338 *e*PKIKP PKPdf 16 40 14.2 -3.2
EALK Alkurruntz 144.07 338 PKP PKPdf 16 40 15.0 -2.4
ELIZ Elizondo 144.13 338 PKIKP PKPdf 16 40 15.1 -2.4
KEST Kesra 144.20 319 PKP PKPdf 16 40 15.9 -1.9
comp=Z,26nm,0.8s,baz=298,slow=0.8,SNR=33
EPOB Poblet 144.62 334 PKP PKPdf 16 40 15.7 -2.8
ELAN Lanestosa 144.73 341 PKP PKPdf 16 40 16.8 -1.7
CMAH Djebel Manchou 144.83 322 P PKPdf 16 40 17.0 -1.9
ESAC San Caprasio 144.96 336 PKP PKPdf 16 40 17.1 -1.9
ECRI Cripan 144.97 339 PKIKP PKPdf 16 40 18.4 -0.6
ABSA Djebel Ababsia 145.03 322 P PKPbc 16 40 18.0 -0.8
CAEH 'Ain El Ouahch 145.07 323 P PKPbc 16 40 18.0 -0.9
ETOS Mallorca 145.09 330 PKP PKPdf 16 40 17.6 -1.6
EARI Arriondas 145.22 343 PKP PKPdf 16 40 17.9 -1.5
ERTA Horta de San J 145.27 334 PKP PKPdf 16 40 17.9 -1.6
CKFL Kef-Lekhel 145.40 322 P PKPdf 16 40 19.0 -0.9
CASM Ain Smara 145.63 322 P PKPdf 16 40 20.0 -0.3
EPON Pontenova 145.73 345 PKP PKPdf 16 40 18.7 -1.6
DFRA Djebel Bou Aff 145.80 323 P PKPdf 16 40 20.9 +0.3
CTEI Djebel Teioual 145.81 322 P PKPdf 16 40 21.0 +0.3
EMOS Mosqueruela 146.10 335 PKP PKPdf 16 40 21.2 +0.2
SET Setif 146.32 323 P PKPab 16 40 24.0 +0.3
ETOR Torete 146.35 337 PKP2 PKPdf 16 40 21.2 -0.2
EIBI Ibiza 146.38 331 PKP PKPdf 16 40 20.3 -1.2
CKHR Kef el Ahmar 146.38 323 P PKPdf 16 40 23.0 +1.4
STS Santiago 146.48 346 PKP2 PKPdf 16 40 21.3 -0.3
AKF Akfadou 146.50 325 P PKPdf 16 40 23.1 +1.3
EMAZ Mazaricos 146.52 347 PKP PKPdf 16 40 22.0 +0.3
ERUA La Rua 146.60 344 PKP2 PKPbc 16 40 22.4 -1.0
ECAL Calabor 146.91 344 PKP PKPdf 16 40 21.6 -0.7
PBRG Braganca 147.04 343 *e*PKP PKPdf 16 40 21.5 -1.0
EZAM Zamans 147.22 346 PKIKP PKPdf 16 40 22.2 -0.6
ABA Alger-Bouzarea 147.22 327 P PKPbc 16 40 25.2 -0.2
GUD Guadarrama 147.28 339 PKIKP PKPdf 16 40 22.8 -0.2
AKET Djebel Ketaf 147.30 325 P PKPdf 16 40 24.7 +1.5
ELOB Lobios 147.33 345 PKP PKPdf 16 40 21.6 -1.4
EBEN Beniarda 147.36 333 PKP PKPdf 16 40 20.2 -2.9
PCAB Cabril 147.47 345 *e*PKP PKPdf 16 40 22.0 -1.3
ADJB Djebel Djouab 147.47 325 P PKPdf 16 40 24.7 +1.3
EMHD Djebel Mahouad 147.71 326 P PKPdf 16 40 24.0 +0.2
MVO Moncorvo 147.71 343 PKP PKPdf 16 40 22.6 -1.0
MVO Moncorvo 147.71 343 *e*PKP PKPdf 16 40 22.1 -1.6
MVO Moncorvo 147.71 343 *e*LQ 17 24 44.2
MVO *e*LR LR 17 31 35.2
comp=Z,974nm,20.0s
PVRL Vila Real 147.79 344 *e*PKP PKPdf 16 40 23.3 -0.5
ETOB Tobarra 147.99 334 PKP PKPdf 16 40 23.3 -0.9
ESBB Sonseca Array 148.07 338 PKP PKPdf 16 40 22.4 -1.9
ESDC Sonseca Array 148.07 338 PKP PKPdf 16 40 23.0 -1.3
comp=Z,13nm,0.6s,baz=352,slow=1.7,SNR=7.7
ESDC PKPbc PKPbc 16 40 28.0 +0.4
comp=Z,19nm,0.7s,baz=15,slow=3.3,SNR=57
ESDC Sonseca Array 148.07 338 PKP PKPdf 16 40 22.7 -1.6
ESLA Sonseca Array 148.07 338 *e*PKPdf PKPdf 16 40 23.2 -1.1
ESLA *e*PKPbc PKPbc 16 40 27.3 -0.2
PAB San Pablo 148.32 339 *e*PKIKP PKPdf 16 40 24.2 -0.5
PAB *e* 16 40 28.3
PVIS Viseu 148.37 344 *e*PKP PKPdf 16 40 23.7 -1.1
EVIA Vianos 148.40 335 PKIKP PKPdf 16 40 25.0 +0.1

EBNR	**Beni Rached**	**148.41 328**	P	PKPbc	16 40 28.0	-0.5
EMUR	**La Murta**	**148.52 333**	PKP	PKPdf	16 40 24.0	-1.1
MTE	**Manteigas**	**148.56 344**	*e*PKPab	PKPab	16 40 31.3	-1.1
MTE	**Manteigas**	**148.56 344**	*e*PKP	PKPdf	16 40 23.6	-1.5
MTE	**Manteigas**	**148.56 344**	*e*PP	PP	16 43 57.6	-0.2
MTE	**Manteigas**	**148.56 344**	*e*LQ		17 22 36.5	
MTE	**Manteigas**	**148.56 344**	*e*LR	LR	17 34 41.3	
comp=Z,2μm,20.0s						
ECHA	**Ech Chlef**	**148.60 328**	P	PKPbc	16 40 29.0	0.0
CART	**Cartagena**	**148.63 332**	*e*PKPbc	PKPbc	16 40 28.1	-1.0
EANR	**´Ain N´Sour**	**148.89 328**	P	PKPdf	16 40 26.0	+0.2
PCBR	**Castelo Branco**	**149.06 343**	*e*PKP	PKPdf	16 40 24.7	-1.2
EHUE	**Huescar**	**149.13 335**	PKIKP	PKPdf	16 40 25.1	-1.0
ETRT	**Tiaret**	**149.21 327**	P	PKPdf	16 40 26.5	+0.2
EBAN	**Banos Encina**	**149.32 337**	PKHKP	PKPdf	16 40 25.3	-1.1
EQES	**Quesada**	**149.34 335**	PKP	PKPdf	16 40 24.9	-1.6
PMRV	**Marv??o**	**149.42 343**	*e*PKP	PKPdf	16 40 25.4	-1.1
PMRV	**Marv??o**	**149.42 343**	*e*LQ		17 25 33.2	
PMRV			*e*LR	LR	17 32 20.0	
comp=Z,1μm,20.0s						
PTOM	**Tomar**	**149.53 344**	*e*PKP	PKPdf	16 40 26.1	-0.6
EADA	**Adamuz**	**149.62 338**	PKP	PKPdf	16 40 25.7	-1.2
ENIJ	**Nijar**	**149.68 333**	PKHKP	PKPdf	16 40 26.6	-0.4
EBAD	**Badajoz**	**149.93 342**	PKP	PKPdf	16 40 25.4	-1.9
ECOG	**Cogollos-Vega**	**150.00 335**	PKHKP	PKPbc	16 40 30.6	-1.9
PESTR	**Estremoz**	**150.00 343**	*e*PKP	PKPdf	16 40 26.0	-1.4
PESTR	**Estremoz**	**150.00 343**	*e*LQ		17 23 13.8	
PESTR	**Estremoz**	**150.00 343**	*e*LR	LR	17 36 22.2	
comp=Z,2μm,22.0s						
ECAB	**El Cabril**	**150.01 339**	PKP	PKPdf	16 40 26.8	-0.7
EBER	**Berja**	**150.03 334**	PKP	PKPdf	16 40 26.1	-1.5
ERON	**Agron**	**150.32 335**	PKP	PKPbc	16 40 31.6	-1.7
ELOJ	**Sierra Loja**	**150.34 336**	PKIKP	PKPbc	16 40 31.5	-1.8
EGUA	**Guajares**	**150.38 335**	PKIKP	PKPbc	16 40 31.8	-1.6
PMAFR	**Mafra**	**150.38 345**	*e*PKP	PKPdf	16 40 27.2	-0.8
PMAFR	**Mafra**	**150.38 345**	*e*LQ		17 23 23.9	
PMAFR			*e*LR	LR	17 32 46.8	
comp=Z,1μm,20.0s						
EVO	**Evora**	**150.43 343**	*e*PKP	PKPdf	16 40 27.3	-0.8
PBAR	**Barrancos**	**150.47 341**	*e*PKP	PKPdf	16 40 26.7	-1.5
PBAR	**Barrancos**	**150.47 341**	*e*PP	PP	16 44 09.8	+1.0
PBAR	**Barrancos**	**150.47 341**	*e*LQ		17 25 49.9	
PBAR			*e*LR	LR	17 35 46.6	
comp=Z,2μm,22.0s						
EVOP	**Sao Brissos**	**150.47 343**	*e*P	PKPdf	16 40 26.4	-1.8
EVOP			*e*PP	PP	16 44 08.8	0.0
EVOP			AMS	AMS	17 48 32.5	
comp=Z,1μm,24.6s						
EVOP	**Sao Brissos**	**150.47 343**	*e*PKIKP	PKPdf	16 40 26.4	-1.8
EVOP			*e*		16 44 08.8	
PCED	**Cedros**	**150.53 16**	*e*PKP	PKPdf	16 40 28.2	-0.1
ROSA	**Rosais**	**150.57 15**	*e*PKP	PKPdf	16 40 28.4	+0.1
LIS	**Lisbon**	**150.57 345**	*e*P	PKPdf	16 40 26.8	-1.5
LIS			AMS	AMS	17 44 29.9	
comp=Z,2μm,20.7s						
PMAN	**Manadas**	**150.69 15**	*e*PKP	PKPdf	16 40 29.1	+0.6
EMIN	**Mina Concepcio**	**150.72 340**	PKP	PKPdf	16 40 27.9	-0.7
PCAN	**Candelaria**	**150.75 16**	*e*PKP	PKPdf	16 40 28.8	+0.2
SHEL	**Horse Pasture**	**150.81 206**	*e*PKIKP	PKPbc	16 40 34.8	-0.2
PBEJ	**Beja**	**150.86 342**	*e*PKP	PKPdf	16 40 27.3	-1.5
ADH	**Angra Heroismo**	**150.88 14**	*e*PKP	PKPbc	16 40 34.3	-0.2
EALB	**Alboran**	**150.90 333**	PKP	PKPdf	16 40 27.5	-1.4
EMIJ	**Mijas**	**151.10 336**	PKP	PKPdf	16 40 26.9	-2.3
EGRO	**El Granado**	**151.19 341**	PKP	PKPdf	16 40 28.6	-0.7
ESPR	**Espera**	**151.24 338**	PKP	PKPdf	16 40 28.4	-1.0
PCVE	**Castro Verde**	**151.27 342**	*e*PKP	PKPdf	16 40 28.2	-1.3
PCVE	**Castro Verde**	**151.27 342**	*e*LR	LR	17 36 31.2	
comp=Z,1μm,22.0s						
PVAQ	**Vaqueiros**	**151.38 342**	*e*PKP	PKPdf	16 40 28.8	-0.8
PVAQ	**Vaqueiros**	**151.38 342**	*e*LQ		17 23 12.7	
PVAQ	**Vaqueiros**	**151.38 342**	*e*LR	LR	17 33 56.6	
comp=Z,2μm,20.0s						
EJIF	**Jimena Fronter**	**151.47 337**	PKIKP	PKPdf	16 40 28.7	-1.1
PTEO	**Sao Teotonio**	**151.55 343**	*e*PKP	PKPdf	16 40 29.3	-0.6
PBDV	**Barranco-do-Ve**	**151.60 342**	*e*PKP	PKPdf	16 40 28.7	-1.3
PBDV	**Barranco-do-Ve**	**151.60 342**	*e*PP	PP	16 44 16.0	+0.7
MORF	**Marmelete**	**151.76 343**	*e*PKIKP	PKPdf	16 40 28.5	-1.7
MORF			*e*		16 44 15.7	
PFVI	**Vila Bisbo**	**151.97 343**	PKP	PKPdf	16 40 29.4	-1.1
PFVI	**Vila Bisbo**	**151.97 343**	*e*PKP	PKPdf	16 40 29.3	-1.2
PFVI	**Vila Bisbo**	**151.97 343**	*e*PP	PP	16 44 17.1	-0.3
PFVI	**Vila Bisbo**	**151.97 343**	*e*LR	LR	17 36 52.5	
comp=Z,1μm,22.0s						
PDA	**Ponta Delgada**	**152.09 12**	*e*PKP	PKPdf	16 40 30.0	-0.7
PDA	**Ponta Delgada**	**152.09 12**	*e*PKP	PKPdf	16 40 30.4	-0.3
PDA	**Ponta Delgada**	**152.09 12**	*e*PP	PP	16 44 20.0	+2.0
CMLA	**Cha da Macela**	**152.11 12**	*e*PKP	PKPdf	16 40 30.4	-0.3
CMLA	**Cha da Macela**	**152.11 12**	*e*PP	PP	16 44 18.6	+0.5
CMLA	**Cha da Macela**	**152.11 12**	*e*PKPbc	PKPbc	16 40 37.9	+0.5
PSMA	**Santa Maria**	**152.93 11**	*e*PKP	PKPdf	16 40 31.9	0.0
PSMA	**Santa Maria**	**152.93 11**	*e*PP	PP	16 44 18.2	-4.5
TAM	**Tamanrasset**	**153.79 301**	*e*PKPdf	PKPdf	16 40 33.7	+0.1
TAM			*e*PKPbc	PKPbc	16 40 41.6	0.0
PMPS	**Porto Santo**	**157.38 355**	*e*PKP	PKPdf	16 40 38.8	+0.7
PMPS	**Porto Santo**	**157.38 355**	*e*PP	PP	16 44 48.7	+1.2
PMAR	**Madeira**	**157.76 356**	*e*PKP	PKPdf	16 40 38.8	+0.2
PMAR	**Madeira**	**157.76 356**	*e*PP	PP	16 44 50.1	+0.6
TORD	**Torodi Ar. Bea**	**159.86 280**	PKP	PKPdf	16 40 40.2	-1.3
comp=Z,22nm,0.9s,baz=37,slow=1.1,SNR=77						
TORD			PKPab	PKPab	16 41 20.8	-0.3
comp=Z,36nm,0.9s,baz=75,slow=3.8,SNR=17						
TORD	**Torodi Ar. Bea**	**159.86 280**	PKP	PKPdf	16 40 40.2	-1.3
TORD			PKPab	PKPab	16 41 20.8	-0.3
KIC	**Kosan Boka**	**165.62 255**	*e*PKIKP	PKPdf	16 40 45.4	-1.9
comp=Z,278nm,1.4s						
DBIC	**Dimbokro**	**165.81 256**	PKP	PKPdf	16 40 46.0	-1.4
comp=Z,28nm,0.9s,baz=102,slow=0.6,SNR=15						
DBIC			PKPab	PKPab	16 41 47.5	+0.1
comp=Z,22nm,0.8s,baz=46,slow=3.7,SNR=9.3						
DBIC			PP	PP	16 45 31.8	-3.1
comp=Z,13nm,1.0s,baz=71,slow=4.1,SNR=8.1						
DBIC	**Dimbokro**	**165.81 256**	*e*PKPdf	PKPdf	16 40 45.6	-1.8
LIC	**Lamto**	**165.85 254**	*e*PKIKP	PKPdf	16 40 45.4	-2.0
comp=Z,218nm,1.4s						
TIC	**Toumodi**	**165.96 256**	*e*PKIKP	PKPdf	16 40 45.7	-1.8
comp=Z,254nm,1.4s						

IDC ***03*** *16:41:34.9±0.5, 35°.96N×142°.27E, h0km, mb4.3/25, mb1 4.4/29, mb1mx4.3/37, mbtmp4.3/29, ML4.0/4, MS4.8/4, Ms1 4.9/4, ms1mx4.2/35, Error ellipse: s-maj=15.5km s-min=12.6km az=139.0*

ISCJB ***03*** *16:41:35.4±1.1, 36°.12N±0°.03×142°.28E±0°.03, h9km±6km, mb4.4/45, MS4.9/9, Error ellipse: s-maj=5.4km s-min=4.6km az=155.5*

JMA ***03*** *16:41:38.9±0.2, 36°.06N×142°.13E, h59km, M3.9*

BJI ***03*** *16:41:39.1, 36°.44N×142°.57E, h51km, mB5.3/18, mb4.6/29, Ms4.9/21, Ms7 4.8/20*

NEIC ***03*** *16:41:40.3±0.3, 35°.97N×142°.21E, h35km, mb4.6/11, Error ellipse: s-maj=9.5km s-min=6.0km az=171.0*

MOS ***03*** *16:41:40.7±1.0, 36°.44N×142°.15E, h33km, mb4.6/27, Error ellipse: s-maj=10.6km s-min=7.2km az=109.0*

ISC 03 16:41:36.0±1.1, 36°.10N±0°.03×142°.22E±0°.04, h2km±6km, h37km±2.3km:pP-P, n120, σ1§03/132, mb4.4/45, MS4.9/9, 3C-1D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.17**	**250**	P	**Pg**	**16 41 58.4**	**-0.1**
CHOJ				S	**Sg**	**16 42 13.7**	**0.0**
JHO	**Hitachi**	**1.42**	**291**	P	**Pn**	**16 42 01.8**	**-1.0**
JHO				*e*S	**Sb**	**16 42 19.8**	**-2.0**
JFK	**Kawauchi**	**1.66**	**320**	P	**Pn**	**16 42 05.6**	**-0.5**
JFK				*e*S	**Sn**	**16 42 27.0**	**-0.9**
BSO1	**Boso 1**	**1.76**	**215**	P	**Pn**	**16 42 06.7**	**-0.8**
BSO1				*e*S	**Sn**	**16 42 30.6**	**+0.1**
BSO3	**Boso 3**	**1.90**	**227**	P	**Pn**	**16 42 09.3**	**-0.1**
JFT	**Otama**	**2.07**	**314**	P	**Pn**	**16 42 12.3**	**+0.6**
JFT				*e*S	**Sn**	**16 42 35.7**	**-2.3**
JMM	**Marumori**	**2.10**	**328**	P	**Pn**	**16 42 11.5**	**-0.6**
JAG	**Ashikaga**	**2.25**	**279**	P	**Pn**	**16 42 14.0**	**-0.3**
JFY	**Yanaizu**	**2.40**	**304**	P	**Pn**	**16 42 17.2**	**+0.9**
JFY				S	**Sn**	**16 42 47.8**	**+1.6**
JOD2	**Odawara 2**	**2.68**	**253**	P	**Pn**	**16 42 19.8**	**-0.3**
JRY	**Ryogami san**	**2.69**	**269**	P	**Pn**	**16 42 19.8**	**-0.4**
JMK	**Ichinoseki**	**2.95**	**345**	P	**Pn**	**16 42 24.1**	**+0.2**
JMK				S	**Sn**	**16 42 59.1**	**-0.8**
JYN	**Shimob**	**3.04**	**260**	P	**Pn**	**16 42 25.4**	**+0.3**
JYK	**Kaneyama**	**3.17**	**333**	P	**Pn**	**16 42 27.0**	**+0.1**
MJAR	**Matsushiro Arr**	**3.27**	**279**	Pn	**Pn**	**16 42 29.1**	**+1.0**
7.8nm,0.3s,baz=217,slow=19,SNR=49							
MJAR				LR	LR	16 44 01.6	
comp=Z,3μm,18.8s,baz=130,slow=44							
MJAR	**Matsushiro Arr**	**3.27**	**279**	P	**Pn**	**16 42 29.1**	**+0.9**
MJAR				pmax	pmax		
comp=Z,8.0nm,0.3s							
MJAR				MLR	MLR		
comp=Z,3μm,18.8s							
MAJO	**Matsushiro**	**3.27**	**279**	*e*P	**Pn**	**16 42 28.8**	**+0.6**
MAT	**Matsushiro**	**3.27**	**279**	P	**Pn**	**16 42 28.9**	**+0.7**
MAT				S	**Sn**	**16 43 10.7**	**+3.1**
JHJ	**Hachijo jima 2**	**3.59**	**215**	Pn	**Pn**	**16 42 30.8**	**-1.8**
comp=Z,29nm,0.3s,baz=76,slow=18,SNR=2.4							
JHJ				Sn	**Sn**	**16 43 09.8**	**-5.7**
comp=Z,92nm,0.3s,baz=232,slow=19,SNR=4.0							
ERM	**Erimo**	**5.95**	**7**	*e*P	**Pn**	**16 43 02.4**	**-2.7**
ERM				pmax	pmax		
comp=Z,73nm,1.1s							
ERM	**Erimo**	**5.95**	**7**	*e*P	**Pn**	**16 43 02.4**	**-2.6**
comp=Z,73nm,1.1s							
ASAJ	**Asahikawa**	**8.01**	**2**	Pn	**Pn**	**16 43 32.5**	**-0.8**
comp=Z,1.6nm,0.3s,baz=200,slow=15,SNR=33							
ASAJ	**Asahikawa**	**8.01**	**2**	P	**Pn**	**16 43 32.5**	**-0.8**
ASAJ				pmax	pmax		
comp=Z,2.0nm,0.3s							
YUK	**Yuzh-Kuril´sk**	**8.40**	**18**	*e*P	**Pn**	**16 43 48.5**	**+10**
YUK				*e*S	**Sn**	**16 45 06.0**	**-8.0**
YUK				pmax	pmax		
comp=Z,150nm,0.5s							
YUK				smax			
comp=N,190nm,0.5s							
YUK				smax			
comp=E,100nm,0.5s							
CBIJ	**Chichi jima**	**8.98**	**180**	Pn	**Pn**	**16 43 42.4**	**-4.3**
comp=E,13nm,0.3s,baz=320,slow=16,SNR=3.5							
VLA	**Vladivostok**	**10.60**	**315**	*e*P	**Pn**	**16 44 09.1**	**+0.3**
VLA				pmax	pmax		
comp=Z,13nm,0.9s							
YSS	**Yuzh-Sakhalins**	**10.85**	**2⇑**	*i*P	**Pn**	**16 44 12.0**	**-0.2**
YSS				pmax	pmax		
comp=N,30nm,1.0s							
YSS				pmax	pmax		
comp=Z,30nm,1.0s							
KSRS	**Korea Array**	**11.54**	**281**	Pn	**Pn**	**16 44 25.4**	**+3.7**
comp=Z,0.2nm,0.3s,baz=98,slow=13,SNR=12							
MDJ	**Mudanjiang**	**12.83**	**315**	P	**Pn**	**16 44 38.7**	**-0.7**
MDJ				pmax	pmax		
comp=Z,7.0nm,2.5s							
CN2	**Changchun**	**14.97**	**306**	*e*P	**Pn**	**16 45 06.5**	**-2.0**
CN2				*e*S	**Sn**	**16 47 57.3**	**+2.5**
CN2				pmax	pmax		
comp=Z,2μm,10.0s							
CN2				LR	LR		
comp=N,3μm,22.0s							
CN2				LR	LR		
comp=E,2μm,22.0s							
CN2				LR	LR		
comp=Z,2μm,27.0s							
KLR	**Kul´dur**	**15.19**	**333**	*e*P	Px	16 45 24.0	
NJ2	**Nanjing**	**19.76**	**265**	*e*P	**Pn**	**16 46 14.7**	**+6.1**
NJ2				pmax	pmax		
comp=Z,10.0nm,0.5s							
PETK	**Petropavlovsk-**	**20.19**	**28**	P	**P**	**16 46 12.9**	**+1.2**
comp=Z,5.7nm,1.0s,baz=224,slow=4.1,SNR=5.9							
PETK	**Petropavlovsk-**	**20.19**	**28**	P	**P**	**16 46 12.9**	**+1.2**
PETK				pmax	pmax		
comp=Z,6.0nm,1.0s							
BJI	**Beijing**	**20.85**	**289**	P	**P**	**16 46 18.8**	**-0.2**
BJI				S	**S**	**16 50 07.0**	**-5.1**
BJI				pmax	pmax		
comp=Z,13nm,0.5s							
BJI				pmax	pmax		
comp=Z,860nm,10.9s							
BJI				LR	LR		
comp=N,4μm,24.2s,MS4.9							
BJI				LR	LR		
comp=E,5μm,25.0s,MS4.9							
BJI				LR	LR		
comp=Z,4μm,24.6s,MS4.7							
HHC	**Hu-ho-hao-te**	**24.39**	**291**	*e*P	**P**	**16 46 56.1**	**+0.6**
HHC				pP		16 47 05.5	
HHC				sP	sP	16 47 09.5	+13
HHC				PP		16 47 31.3	
HHC				PcP	PcP	16 50 38.1	+3.3
HHC				S	**S**	**16 51 09.2**	**-6.7**
HHC				PcS	PcS	16 54 16.3	+1.8
HHC				pmax	pmax		
comp=Z,16nm,0.9s,mb4.5							
HHC				pmax	pmax		
comp=Z,1μm,5.9s							
HHC				LR	LR		
comp=N,2μm,19.2s,MS4.8							
HHC				LR	LR		
comp=E,2μm,18.0s,MS4.8							
HHC				LR	LR		
comp=Z,4μm,22.8s,MS4.9							
YAK	**Yakutsk**	**27.12**	**347**	*e*P	**P**	**16 47 19.2**	**-0.8**
YAK				pmax	pmax		
comp=Z,12nm,1.0s,mb4.4							
ULN	**Ulaanbaatar**	**28.41**	**305**	*e*P	**P**	**16 47 32.8**	**+1.0**
ULN				pmax	pmax		
comp=Z,7.0nm,0.9s,mb4.3							
ULN	**Ulaanbaatar**	**28.41**	**305**	*e*P	**P**	**16 47 32.8**	**+1.0**
comp=Z,6.6nm,0.9s,mb4.3							
SONM	**Songino Array**	**28.84**	**305**	P	**P**	**16 47 36.8**	**+1.2**
comp=Z,5.4nm,0.9s,mb4.3,baz=106,slow=8.4,SNR=22							
SONM	**Songino Array**	**28.84**	**305**	P	**P**	**16 47 36.8**	**+1.2**
SONM				pmax	pmax		
comp=Z,5.0nm,0.9s							
LZH	**Lanzhou**	**30.87**	**282**	*e*P	**P**	**16 47 56.2**	**+2.5**
LZH				pP	pP	16 48 05.7	+11
LZH				sP	sP	16 48 09.8	+15
LZH				PP	PP	16 48 57.5	-5.7
LZH				pmax	pmax		
comp=Z,25nm,1.3s,mb4.9							
LZH				pmax	pmax		
comp=Z,78nm,6.8s							
LZH				LR	LR		
comp=N,550nm,13.5s							
LZH				LR	LR		
comp=Z,760nm,17.6s,MS4.4							
ZAK	**Zakamensk**	**31.36**	**309**	*e*P	**P**	**16 47 58.3**	**+0.5**
ZAK				pmax	pmax		
comp=Z,5.0nm,1.1s,mb4.3							
TLY	**Talaya**	**31.43**	**312**	*e*P	**P**	**16 48 00.5**	**+2.1**
TLY				pmax	pmax		
comp=Z,7.0nm,0.8s,mb4.5							
TLY	**Talaya**	**31.43**	**312**	*e*P	**P**	**16 47 58.8**	**+0.4**
comp=Z,5.7nm,0.8s,mb4.5							
GYA	**Guiyang**	**31.72**	**262**	P	**P**	**16 48 03.2**	**+2.0**
GYA				pP	pP	16 48 14.0	+12
GYA				sP	sP	16 48 19.0	+17
GYA				PP	PP	16 49 10.4	-2.3
GYA				PcP	PcP	16 50 54.8	+1.9
GYA				S	**S**	**16 53 10.9**	**-0.8**
GYA				sS	sS	16 53 27.4	+15
GYA				ScP	ScP	16 54 33.9	-3.3
GYA				SS	SS	16 55 01.0	-26
GYA				pmax	pmax		
comp=Z,10.0nm,0.8s,mb4.7							
GYA				pmax	pmax		
comp=Z,80nm,4.9s							
GYA				LR	LR		
comp=N,430nm,16.5s,MS4.4							
GYA				LR	LR		
comp=E,480nm,16.0s,MS4.4							
GYA				LR	LR		
comp=Z,420nm,15.8s,MS4.2							
CD2	**Chengdu**	**32.34**	**272**	*e*P	**P**	**16 48 08.8**	**+2.2**
CD2				pP	pP	16 48 18.3	+11
CD2				sP	sP	16 48 22.3	+15
CD2				PP	PP	16 49 16.1	-3.4
CD2				S	**S**	**16 53 18.4**	**-2.9**
CD2				SS	SS	16 55 13.3	-26
CD2				pmax	pmax		
comp=Z,10.0nm,0.6s,mb4.8							
CD2				pmax	pmax		
comp=Z,30nm,4.2s							
GTA	**Gaotai**	**33.46**	**289**	P	**P**	**16 48 16.9**	**+0.5**
GTA				pP	pP	16 48 26.3	+9.2
GTA				sP	sP	16 48 30.2	+13
GTA				S	**S**	**16 53 34.1**	**-4.6**
GTA				SS	SS	16 55 38.3	-24
GTA				pmax	pmax		
comp=Z,11nm,1.1s,mb4.7							
GTA				pmax	pmax		
comp=Z,620nm,8.4s							
GTA				LR	LR		
comp=N,3μm,18.6s,MS5.1							
GTA				LR	LR		
comp=E,2μm,19.2s,MS5.1							
GTA				LR	LR		
comp=Z,3μm,18.9s,MS5.0							
BILL	**Bilibino**	**34.74**	**16**	*e*P	**P**	**16 48 26.8**	**-0.3**
BILL				pmax	pmax		
comp=Z,7.0nm,1.4s,mb4.4							
KMI	**Kunming**	**35.48**	**263**	P	**P**	**16 48 33.3**	**-0.7**
KMI				pP	pP	16 48 46.3	+12
KMI				sP	sP	16 48 50.7	+16
KMI				PP	PP	16 49 57.3	+2.9
KMI				S	**S**	**16 54 08.1**	**-1.9**
KMI				SS	SS	16 56 26.7	-17
KMI				pmax	pmax		
comp=Z,7.0nm,1.0s,mb4.5							
KMI				LR	LR		
comp=N,1μm,21.7s,MS4.8							
KMI				LR	LR		
comp=E,1μm,20.2s,MS4.8							
KMI				LR	LR		
comp=Z,2μm,21.7s,MS4.8							
TIXI	**Tiksi**	**36.29**	**353**	*e*P	**P**	**16 48 40.5**	**+0.1**
WMQ	**Urumqi**	**41.84**	**298**	*e*P	**P**	**16 49 29.0**	**+1.8**
WMQ				pmax	pmax		
comp=Z,15nm,1.0s,mb4.6							
CMAR	**Chiang Mai Arr**	**41.90**	**257**	P	**P**	**16 49 27.5**	**-0.5**
comp=Z,2.2nm,0.8s,mb3.8,baz=47,slow=6.7,SNR=21							
CMAR	**Chiang Mai Arr**	**41.90**	**257**	P	**P**	**16 49 27.5**	**-0.5**
CMAR				pmax	pmax		
comp=Z,2.0nm,0.8s							
ZALV	**Zalesovo Beam**	**43.02**	**313**	P	**P**	**16 49 36.9**	**+0.3**
comp=Z,4.2nm,0.7s,mb4.3,baz=89,slow=6.8,SNR=15							
ZALV	**Zalesovo Beam**	**43.02**	**313**	P	**P**	**16 49 36.9**	**+0.2**
ZALV				pmax	pmax		
comp=Z,4.0nm,0.7s,mb4.3							
ZALV	**Zalesovo Beam**	**43.02**	**313**	P	**P**	**16 49 36.9**	**+0.3**
MKAR	**Makanchi Array**	**45.16**	**303**	P	**P**	**16 49 54.0**	**+0.1**
comp=Z,6.0nm,0.9s,mb4.4,baz=82,slow=10,SNR=21							
MKAR				PcP	PcP	16 51 34.0	-0.2
comp=Z,1.0nm,0.6s,baz=307,slow=2.2,SNR=4.5							
MKAR	**Makanchi Array**	**45.16**	**303**	*i* P	**P**	**16 49 54.0**	**0.0**
MKAR				pmax	pmax		
comp=Z,6.0nm,0.9s							
KURK	**Kurchatov**	**47.02**	**309**	P	**P**	**16 50 08.6**	**+0.1**
comp=Z,8.0nm,0.8s,mb4.7,baz=84,slow=8.0,SNR=24							
KURK	**Kurchatov**	**47.02**	**309**	P	**P**	**16 50 08.6**	**+0.1**
KURK				pmax	pmax		
comp=Z,8.0nm,0.8s,mb4.7							
KURK	**Kurchatov**	**47.02**	**309**	*e*P	**P**	**16 50 07.4**	**-1.1**
comp=Z,13nm,0.8s,mb4.9							
BVAR	**Borovoye Array**	**51.68**	**313**	P	**P**	**16 50 44.6**	**+0.5**
comp=Z,2.7nm,0.8s,mb4.2,baz=76,slow=7.4,SNR=11							
BVAR	**Borovoye Array**	**51.68**	**313**	P	**P**	**16 50 44.6**	**+0.5**
BVAR				pmax	pmax		
comp=Z,3.0nm,0.8s							
BRVK	**Borovoye**	**51.73**	**313**	*d i* P	**P**	**16 50 43.9**	**-0.6**
BRVK				pmax	pmax		
comp=Z,17nm,2.5s,mb4.5							
BRVK	**Borovoye**	**51.73**	**313**	*e*P	**P**	**16 50 44.1**	**-0.4**
comp=Z,3.3nm,0.8s,mb4.3							
PSI	**Prapat**	**51.88**	**241**	P	**P**	**16 50 45.8**	**-0.3**
comp=Z,2.3nm,0.3s,mb4.5,baz=308,slow=12,SNR=6.3							
PSI	**Prapat**	**51.88**	**241**	P	**P**	**16 50 45.8**	**-0.3**
PSI				pmax	pmax		
comp=Z,2.0nm,0.3s,mb4.5							
AML	**Almayashu**	**52.22**	**299**	*e*P	**P**	**16 50 49.5**	**+1.2**
comp=Z,6.6nm,0.7s,mb4.7							
INK	**Inuvik**	**54.92**	**27**	P	**P**	**16 51 08.3**	**+0.6**
comp=Z,1.7nm,0.5s,mb4.3,baz=308,slow=5.3,SNR=6.8							
INK	**Inuvik**	**54.92**	**27**	P	**P**	**16 51 08.3**	**+0.6**
INK				pmax	pmax		
comp=Z,2.0nm,0.5s							
INK	**Inuvik**	**54.92**	**27**	P	**P**	**16 51 08.3**	**+0.6**
FITZ	**Fitzroy Crossi**	**56.15**	**199**	P	**P**	**16 51 14.1**	**-3.0**
comp=Z,1.1nm,0.6s,mb4.1,baz=90,slow=10,SNR=4.3							
ARU	**Arti**	**57.48**	**319**	P	**P**	**16 51 25.8**	**-0.4**
ARU	**Arti**	**57.48**	**319**	P	**P**	**16 51 25.3**	**-0.9**
comp=Z,8.5nm,0.8s,mb4.8							
ABKAR	**Akbulak array**	**59.03**	**311**	*e*P	**P**	**16 51 36.7**	**-0.4**
ASAR	**Alice Springs**	**59.96**	**189**	P	**P**	**16 51 42.8**	**-1.0**
comp=Z,0.5nm,0.6s,mb3.7,baz=18,slow=15,SNR=9.7							
RES	**Resolute Bay**	**63.34**	**14**	P	**P**	**16 52 05.4**	**-0.6**
comp=Z,3.0nm,0.8s,mb4.5,baz=323,slow=8.4,SNR=4.6							
RES	**Resolute Bay**	**63.34**	**14**	P	**P**	**16 52 05.4**	**-0.6**
RES				pmax	pmax		
comp=Z,3.0nm,0.9s,mb4.4							
APA	**Apatity**	**63.80**	**336⇑**	*e*P	**P**	**16 52 18.0**	**+8.9**
APA				*i*		16 52 40.0	
APA				pmax	pmax		
comp=Z,15nm,1.0s,mb5.0							
YKA	**Yellowknife Ar**	**64.29**	**30**	P	**P**	**16 52 11.9**	**-0.5**
comp=Z,2.0nm,0.

MMAI	**Mount Meron Ar**	**83.03**	**306**	LR	LR	17 35 45.1	
	comp=Z,828nm,20.1s,MS5.1,baz=60,slow=39						
GERES	**GERESS Array B**	**83.84**	**329**	P	**P**	**16 54 05.6**	**-1.3**
	comp=Z,0.5nm,0.7s,mb3.7,baz=15,slow=5.5,SNR=4.2						
GERES	**GERESS Array B**	**83.84**	**329**	P	**P**	**16 54 05.6**	**-1.3**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ANMO	**Albuquerque**	**84.69**	**50**	P	**P**	**16 54 11.9**	**+0.4**
	comp=Z,0.7nm,0.4s,mb4.2,baz=304,slow=7.3,SNR=3.4						
ANMO	**Albuquerque**	**84.69**	**50**	P	**P**	**16 54 11.9**	**+0.4**
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TXAR	**Lajitas Array**	**90.17**	**53**	P	**P**	**16 54 37.6**	**-0.5**
	comp=Z,1.8nm,0.9s,mb4.4,baz=301,slow=3.7,SNR=8.6						
TXAR	**Lajitas Array**	**90.17**	**53**	P	**P**	**16 54 37.7**	**-0.4**
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ESDC	**Sonseca Array**	**98.41**	**334**	LR	LR	17 44 07.2	
	comp=Z,873nm,21.9s,MS5.2,baz=0.0,slow=38						
LPAZ	**La Paz**	**146.59**	**62**	PKPbc	PKPbc	17 01 19.2	-0.3
	comp=Z,2.3nm,0.8s,baz=355,slow=4.4,SNR=11						
LPAZ	**La Paz**	**146.59**	**62**	PKPbc	PKPbc	17 01 19.2	-0.3

*IDC **03** 17:00:42.1±0.5, 47°.67N×154°.13E, h0km, mb4.3/24, mb1 4.4/25, mb1mx4.4/30, mbtmp4.3/25, ML3.9/1, MS4.2/1, Ms1 4.2/1, ms1mx3.5/42, Error ellipse: s-maj=16.3km s-min=12.3km az=151.0*

*SKHL **03** 17:00:43.7±1.1, 47°.45N×154°.91E, h90km±9km, mb5.1/7, msh6.1/4*

*SZGRF **03** 17:00:45.8, 47°.53N×155°.92E, h33km, mb4.8, East of Kuril Islands, Russia*

*NEIC **03** 17:00:45.7±1.5, 47°.57N×154°.09E, h26km±10km, mb4.7/55, Error ellipse: s-maj=6.4km s-min=3.9km az=142.0*

*BJI **03** 17:00:45.0, 47°.51N×154°.50E, h45km, mB4.9/4, mb4.5/24, Ms4.7/3, Ms7 4.5/3*

*ISCJB **03** 17:00:46.3±0.8, 47°.61N±0°.05×154°.23E±0°.05, h42km±6km, mb4.6/104, Error ellipse: s-maj=8.7km s-min=4.5km az=146.7*

*MOS **03** 17:00:48.9±0.9, 47°.56N×154°.13E, h64km, mb4.8/44, Error ellipse: s-maj=9.1km s-min=6.1km az=97.5*

ISC 03 17:00:49.5±0.7, 47°.64N±0°.04×154°.23E±0°.05, h55km±5km, h15km±4.1km; pP-P, n297, σ0°.87/306, mb4.6/104, 24C-13D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.29**	**21**	*e*PN	**Pn**	**17 01 33.9**	**-4.6**
SKR				pmax	pmax		
	comp=N,220nm,1.0s						
SKR				pmax	pmax		
	comp=E,220nm,1.0s						
SKR				pmax	pmax		
	comp=Z,1μm,1.0s						
SKR	**Severo-Kuril's**	**3.29**	**21**	*e*P	**Pn**	**17 01 33.9**	**-4.6**
SKR				AMB	AMB	17 01 37.5	
	comp=Z,220nm,1.0s						
SKR				AMB	AMB	17 01 37.5	
	comp=Z,1μm,1.0s						
SKR				*i* S	**Sn**	**17 02 12.5**	**-3.8**
SKR				A		17 02 27.5	
	comp=Z,4μm,4.0s						
SKR				A		17 02 27.5	
	comp=Z,3μm,4.0s						
SKR				A		17 02 27.5	
	comp=Z,1μm,1.0s						
SKR				A		17 02 27.5	
	comp=Z,2μm,1.0s						
SKR				A		17 02 27.5	
	comp=Z,670nm,1.0s						
SKR				AMS	AMS	17 02 44.0	
	comp=Z,3μm,14.0s						
KUR	**Kuril'sk**	**5.01**	**244**	*e*PN	**Pn**	**17 02 02.0**	**-0.1**
KUR				*e*S	**Sn**	**17 02 59.2**	**+0.5**
KUR				pmax	pmax		
	comp=N,110nm,0.8s						
KUR				pmax	pmax		
	comp=E,90nm,0.8s						
KUR				pmax	pmax		
	comp=Z,460nm,0.8s						
KUR				smax			
	comp=N,5μm,2.0s						
KUR				smax			
	comp=E,2μm,2.0s						
KUR				smax			
	comp=N,1μm,0.5s						
KUR				smax			
	comp=E,470nm,0.5s						
KUR	**Kuril'sk**	**5.01**	**244**	*e*P	**Pn**	**17 02 02.0**	**-0.1**
KUR				AMB	AMB	17 02 02.8	
	comp=E,110nm,0.8s						
KUR				AMB	AMB	17 02 02.8	
	comp=E,90nm,0.8s						
KUR				AMB	AMB	17 02 02.8	
	comp=E,460nm,0.8s						
KUR				*e*S	**Sn**	**17 02 59.2**	**+0.5**
KUR				A		17 03 15.0	
	comp=E,5μm,2.0s						
KUR				A		17 03 15.0	
	comp=E,2μm,2.0s						
KUR				A		17 03 20.4	
	comp=E,1μm,0.5s						
KUR				A		17 03 20.4	
	comp=E,470nm,0.5s						
PEA0B	**Petropavlovsk-**	**5.91**	**21**	*e*Pn	**Pn**	**17 02 13.8**	**-0.6**
PEA0B				*e*S	**Sn**	**17 03 28.1**	**+7.5**
PETK	**Petropavlovsk-**	**5.91**	**21**	Pn	**Pn**	**17 02 13.3**	**-1.0**
	comp=E,3.6nm,0.3s,baz=178,slow=11,SNR=86						
PETK	**Petropavlovsk-**	**5.91**	**21**	PN	**Pn**	**17 02 13.3**	**-1.0**
PETK				pmax	pmax		
	comp=Z,4.0nm,0.3s						
PET	**Petropavlovsk**	**6.09**	**26**	*e*PN	**Pn**	**17 02 17.6**	**+0.8**
PET	**Petropavlovsk**	**6.09**	**26**	*e*Pn	**Pn**	**17 02 15.6**	**-1.2**
	comp=Z,27nm,0.5s						
PET				*e*Sn	**Sn**	**17 03 22.2**	**-2.9**
YUK	**Yuzh-Kuril'sk**	**6.87**	**241**	⇓*i*PN	**Pn**	**17 02 26.5**	**-1.0**
YUK				*e*S	**Sn**	**17 03 45.4**	**+1.2**
YUK				pmax	pmax		
	comp=Z,210nm,0.4s						
YUK				pmax	pmax		
	comp=N,180nm,0.5s						
YUK				pmax	pmax		
	comp=E,100nm,0.5s						
YUK				pmax	pmax		
	comp=Z,1μm,1.4s						
YUK				smax			
	comp=N,3μm,1.9s						
YUK				smax			
	comp=E,2μm,0.8s						
YUK				smax			
	comp=N,1μm,0.7s						
YUK				smax			
	comp=E,350nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**6.87**	**241**	⇓*i*P	**Pn**	**17 02 26.5**	**-1.0**
YUK				AMB	AMB	17 02 32.1	
	comp=E,190nm,0.5s						
YUK				AMB	AMB	17 02 32.1	
	comp=E,100nm,0.5s						
YUK				AMB	AMB	17 02 32.1	
	comp=E,210nm,0.4s						
YUK				*e*S	**Sn**	**17 03 45.4**	**+1.2**
YUK				A		17 04 05.0	
	comp=E,3μm,1.9s						
YUK				A		17 04 12.6	
	comp=E,1μm,0.5s						
YUK				A		17 04 12.6	
	comp=E,350nm,0.5s						
YSS	**Yuzh-Sakhalins**	**7.84**	**269**	⇓*i*PN	**Pn**	**17 02 41.6**	**+0.8**
YSS				*e*S	**Sn**	**17 04 10.0**	**+2.0**
YSS				pmax	pmax		
	comp=N,30nm,1.0s						
YSS				pmax	pmax		
	comp=E,90nm,1.0s						
YSS				pmax	pmax		
	comp=Z,70nm,1.0s						
YSS				smax			
	comp=E,70nm,0.8s						
YSS	**Yuzh-Sakhalins**	**7.84**	**269**	⇓*i*Pn	**Pn**	**17 02 41.9**	**+1.2**
	comp=E,66nm,0.8s						
YSS				*e*Sn	**Sn**	**17 04 07.6**	**-0.4**
YSS	**Yuzh-Sakhalins**	**7.84**	**269**	⇓*i*P	**Pn**	**17 02 41.6**	**+0.8**
YSS				AMB	AMB	17 02 42.8	
	comp=E,70nm,1.0s						
YSS				AMB	AMB	17 02 42.8	
	comp=E,30nm,1.0s						
YSS				AMB	AMB	17 02 42.8	
	comp=E,90nm,1.0s						
YSS				*e*S	**Sn**	**17 04 10.0**	**+2.0**
YSS				A		17 04 17.0	
	comp=E,70nm,0.8s						
UGL	**Uglegorsk**	**8.23**	**285**	*e*P	**Pn**	**17 02 48.7**	**+2.5**
UGL				AMB	AMB	17 02 49.2	
	comp=E,90nm,0.8s						
TYV	**Tymovskoe**	**8.23**	**297**	*e*P	**Pn**	**17 02 47.0**	**+0.8**
TYV				AMB	AMB	17 02 50.0	
	comp=E,22nm,1.0s						
TYV				AMB	AMB	17 02 50.0	
	comp=E,26nm,1.0s						
ASAJ	**Asahikawa**	**8.85**	**251**	Pn	**Pn**	**17 02 55.2**	**+0.6**
	comp=E,1.6nm,0.3s,baz=85,slow=14,SNR=43						
ASAJ				LR	LR	17 05 59.1	
	comp=E,2μm,18.9s,baz=71,slow=36						
ASAJ	**Asahikawa**	**8.85**	**251**	PN	**Pn**	**17 02 55.2**	**+0.6**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,2μm,18.9s						
ERM	**Erimo**	**9.67**	**239**	*e*PN	**Pn**	**17 03 05.9**	**+0.1**
ERM	**Erimo**	**9.67**	**239**	*e*Pn	**Pn**	**17 03 02.9**	**-2.9**
	comp=Z,28nm,0.6s						
NKL	**Nikolayevsk**	**10.26**	**308**	*e*P	**Pn**	**17 03 09.2**	**-4.6**
NKL				AMB	AMB	17 03 13.4	
	comp=Z,50nm,1.1s						
NKL				AMB	AMB	17 03 13.4	
	comp=Z,100nm,1.1s						
HABR	**Khabarovsk**	**12.86**	**281**	*e*PN	**Pn**	**17 03 51.1**	**+1.7**
HABR				*e*S	**Sn**	**17 06 12.5**	**+1.7**
HABR				pmax	pmax		
	comp=Z,68nm,1.8s						
HABR				pmax	pmax		
	comp=E,57nm,1.7s						
HABR				pmax	pmax		
	comp=N,7.0nm,1.7s						
HABR				MLR	MLR		
	comp=Z,2μm,17.0s						
KLR	**Kul'dur**	**15.00**	**284**	*e*P	**Pn**	**17 04 17.6**	**-0.4**
JSD	**Sado**	**15.12**	**236**	P	**Pn**	**17 04 23.8**	**+4.3**
MAJO	**Matsushiro**	**16.23**	**233**	*e*P	**Pn**	**17 04 28.0**	**-5.7**
MAJO				pmax	pmax		
	comp=Z,29nm,0.8s						
MAJO	**Matsushiro**	**16.23**	**233**	*e*Pn	**Pn**	**17 04 27.9**	**-5.8**
	comp=Z,29nm,0.8s						
MAT	**Matsushiro**	**16.23**	**233**	P	**Pn**	**17 04 29.2**	**-4.5**
MAT	**Matsushiro**	**16.23**	**233**	P	**Pn**	**17 04 31.7**	**-2.0**
MJAR	**Matsushiro Arr**	**16.23**	**233**	Pn	**Pn**	**17 04 29.2**	**-4.5**
	comp=Z,0.5nm,0.3s,baz=35,slow=11,SNR=18						
MJAR	**Matsushiro Arr**	**16.23**	**233**	P	**Pn**	**17 04 29.2**	**-4.5**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
VLA	**Vladivostok**	**16.32**	**262**	*e*P	**Pn**	**17 04 31.3**	**-3.5**
VLA				pmax	pmax		
	comp=Z,24nm,1.1s						
MDJ	**Mudanjiang**	**17.33**	**269**	P	**Pn**	**17 04 49.0**	**+1.6**
MDJ				pmax	pmax		
	comp=Z,11nm,0.8s						
MDJ	**Mudanjiang**	**17.33**	**269**	*e*Pn	**Pn**	**17 04 48.0**	**+0.7**
	comp=Z,9.9nm,0.9s						
ZEA	**Zeya**	**18.09**	**300**	*e*P	**Pn**	**17 04 53.4**	**-3.2**
ZEA				AMB	AMB	17 04 56.8	
	comp=Z,23nm,1.0s						
JWT	**Wachi**	**18.69**	**235**	P	**Pn**	**17 05 03.4**	**-0.6**
YAK	**Yakutsk**	**20.01**	**325**	*e*P	**P**	**17 05 18.5**	**+1.2**
YAK				*e*		17 05 37.3	
YAK				*e*S	**S**	**17 09 00.9**	**+1.9**
YAK				*e*		17 09 29.2	
YAK				*e*		17 16 43.3	
YAK				pmax	pmax		
	comp=Z,30nm,1.1s						
YAK				pmax	pmax		
	comp=E,18nm,1.4s						
YAK				pmax	pmax		
	comp=N,15nm,1.4s						
YAK				pmax	pmax		
	comp=Z,70nm,2.4s						
YAK				smax			
	comp=N,82nm,4.8s						
YAK				smax			
	comp=E,53nm,2.1s						
YAK	**Yakutsk**	**20.01**	**325**	*e*P	**P**	**17 05 16.8**	**-0.6**
	comp=E,38nm,1.0s						
CN2	**Changchun**	**20.41**	**270**	*e*P	**P**	**17 05 20.3**	**-1.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BILL	**Bilibino**	**21.36**	**12**	*e*P	**P**	**17 05 28.5**	**-3.3**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb3.6						
BILL	**Bilibino**	**21.36**	**12**	P	**P**	**17 05 29.1**	**-2.7**
	comp=Z,9.3nm,1.0s,mb4.1						
KSRS	**Korea Array**	**21.80**	**252**	P	**P**	**17 05 36.8**	**0.0**
	comp=Z,20nm,0.8s,mb4.6,baz=59,slow=10,SNR=62						
KSRS	**Korea Array**	**21.80**	**252**	P	**P**	**17 05 36.8**	**0.0**
KSRS				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.6						
SONM	**Songino Array**	**31.77**	**288**	P	**P**	**17 07 07.1**	**-1.2**
	comp=Z,0.5nm,0.7s,baz=50,slow=9.6,SNR=3.5						
SONM				PcP	PcP	17 09 57.6	-0.6
	comp=Z,0.9nm,0.8s,baz=92,slow=3.7,SNR=4.6						
SONM	**Songino Array**	**31.77**	**288**	P	**P**	**17 07 07.1**	**-1.2**
SONM						17 09 57.6	
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WHN	**Wuhan**	**34.90**	**255**	P	**P**	**17 07 35.0**	**-0.7**
COLA	**College**	**34.97**	**39**	*e*P	**P**	**17 07 36.4**	**+0.5**
COLA				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
COLA	**College**	**34.97**	**39**	*e*P	**P**	**17 07 36.4**	**+0.5**
	comp=Z,12nm,0.9s,mb4.8						
XAN	**Xi'an**	**36.35**	**265**	P	**P**	**17 07 47.9**	**-0.2**
XAN				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.1						
ENH	**Enshi**	**38.28**	**259**	*e*P	**P**	**17 08 03.4**	**-1.1**
	comp=Z,15nm,0.9s,mb4.7						
LZH	**Lanzhou**	**38.63**	**271**	*e*P	**P**	**17 08 06.8**	**-0.5**
LZH				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.6						
GTA	**Gaotai**	**39.59**	**279**	*e*P	**P**	**17 08 15.4**	**+0.1**
GTA				PcP	PcP	17 10 22.6	+1.1
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
INK	**Inuvik**	**40.49**	**33**	P	**P**	**17 08 23.5**	**+1.1**
	comp=Z,3.8nm,0.8s,mb4.2,baz=295,slow=8.5,SNR=11						
INK	**Inuvik**	**40.49**	**33**	P	**P**	**17 08 23.5**	**+1.1**
INK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
INK	**Inuvik**	**40.49**	**33**	P	**P**	**17 08 23.5**	**+1.1**
ZALV	**Zalesovo Beam**	**42.72**	**305**	P	**P**	**17 08 39.9**	**-0.9**
	comp=Z,1.0nm,0.5s,mb3.8,baz=59,slow=7.9,SNR=6.9						
ZALV				PcP	PcP	17 10 31.6	+0.2
	comp=Z,2.9nm,0.8s,baz=79,slow=3.2,SNR=8.3						
ZALV	**Zalesovo Beam**	**42.72**	**305**	P	**P**	**17 08 39.9**	**-0.9**
ZALV						17 10 31.7	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
KMI	**Kunming**	**46.16**	**260**	P	**P**	**17 09 09.0**	**+0.4**
KMI				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.9						
MKAR	**Makanchi Array**	**47.22**	**297**	P	**P**	**17 09 14.8**	**-1.8**
	comp=Z,5.8nm,0.9s,mb4.5,baz=61,slow=9.9,SNR=43						
MKAR	**Makanchi Array**	**47.22**	**297**	P	**P**	**17 09 14.8**	**-1.8**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MKAR	**Makanchi Array**	**47.22**	**297**	P	**P**	**17 09 14.8**	**-1.8**
KURK	**Kurchatov**	**47.51**	**303**	*e*P	**P**	**17 09 17.0**	**-1.9**
KURK				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
KURK	**Kurchatov**	**47.51**	**303**	*e*P	**P**	**17 09 17.0**	**-1.9**
	comp=Z,10nm,0.9s,mb4.8						
RES	**Resolute Bay**	**49.75**	**19**	*e*P	**P**	**17 09 35.7**	**0.0**
YKA	**Yellowknife Ar**	**49.76**	**37**	P	**P**	**17 09 36.5**	**+0.6**
	comp=Z,3.2nm,0.8s,mb4.4,baz=297,slow=7.3,SNR=16						
YKA				PcP	PcP	17 10 55.4	-0.6
	comp=Z,0.8nm,0.7s,baz=300,slow=4.1,SNR=4.5						
YKA	**Yellowknife Ar**	**49.76**	**37**	P	**P**	**17 09 36.5**	**+0.6**
YKA						17 10 55.4	
YKA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YKA	**Yellowknife Ar**	**49.76**	**37**	P	**P**	**17 09 36.5**	**+0.6**
YKA				PcP	PcP	17 10 55.4	-0.6
BVAR	**Borovoye Array**	**50.89**	**309**	P	**P**	**17 09 43.4**	**-1.2**
	comp=Z,0.9nm,0.5s,mb3.9,baz=60,slow=8.8,SNR=8.4						
BVAR				PcP	PcP	17 11 00.5	+0.1
	comp=Z,2.3nm,0.7s,baz=72,slow=4.8,SNR=7.5						
BVAR	**Borovoye Array**	**50.89**	**309**	P	**P**	**17 09 43.4**	**-1.2**
BVAR						17 11 00.5	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRVK	**Borovoye**	**50.93**	**309**	*c*eP	**P**	**17 09 45.5**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.1						
BRVK	**Borovoye**	**50.93**	**309**	P	**P**	**17 09 43.5**	**-1.3**
LSA	**Lhasa**	**50.99**	**273**	*e*P	**P**	**17 09 47.4**	**+1.7**
LSA				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
LSA	**Lhasa**	**50.99**	**273**	*e*P	**P**	**17 09 47.4**	**+1.7**
	comp=Z,12nm,0.8s,mb4.9						
SHL	**Shillong**	**53.16**	**269**	*e*PKP	**P**	**17 10 02.0**	**+0.2**
TKM2	**Tokmak 2**	**53.30**	**296**	*e*P	**P**	**17 10 01.2**	**-1.4**
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
TKM2	**Tokmak 2**	**53.30**	**296**	*e*P	**P**	**17 10 01.2**	**-1.4**
	comp=Z,2.4nm,0.9s,mb4.1						
CMAR	**Chiang Mai Arr**	**53.32**	**257**	P	**P**	**17 10 04.0**	**+1.0**
	comp=Z,5.0nm,0.8s,mb4.5,baz=34,slow=7.3,SNR=42						
CMAR				PcP	PcP	17 11 10.6	+0.5
	comp=Z,1.2nm,0.8s,baz=19,slow=3.3,SNR=4.9						
CMAR	**Chiang Mai Arr**	**53.32**	**257**	*i* P	**P**	**17 10 04.0**	**+0.9**
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AAK	**Ala-Archa**	**54.13**	**296**	*c i*P	**P**	**17 10 07.5**	**-1.2**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
AAK	**Ala-Archa**	**54.13**	**296**	*e*P	**P**	**17 10 07.8**	**-0.9**
	comp=Z,4.3nm,0.8s,mb4.4						
UCH	**Uchtor**	**54.35**	**296**	*e*P	**P**	**17 10 09.2**	**-1.1**
EKS2	**Erkin-Say**	**54.54**	**297**	*e*P	**P**	**17 10 11.0**	**-0.8**
	comp=Z,3.8nm,1.0s,mb4.4						
ARU	**Arti**	**54.88**	**317**	*c i*P	**P**	**17 10 12.3**	**-1.6**
ARU				S	**S**	**17 17 49.8**	**-1.1**
ARU				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
ARU	**Arti**	**54.88**	**317**	*e*P	**P**	**17 10 12.3**	**-1.6**
AML	**Almayashu**	**54.90**	**296**	*e*P	**P**	**17 10 13.6**	**-0.8**
	comp=Z,1.6nm,0.7s,mb4.2						
GUN	**Gumba**	**55.68**	**275**	*e*P	**P**	**17 10 19.8**	**-0.3**
	comp=Z,17nm,0.6s,mb5.3						
KKN	**Kakani**	**56.16**	**275**	*e*P	**P**	**17 10 23.5**	**-0.1**
	comp=Z,56nm,0.9s,mb5.6						
PKI	**Pulchoki**	**56.22**	**275**	*e*P	**P**	**17 10 23.6**	**-0.4**
	comp=Z,8.1nm,0.4s,mb5.1						
DMN	**Daman**	**56.40**	**275**	*e*P	**P**	**17 10 25.3**	**0.0**
	comp=Z,70nm,0.9s						
ARCES	**ARCESS Array B**	**57.27**	**341**	P	**P**	**17 10 30.9**	**+0.1**
	comp=Z,4.1nm,1.1s,mb4.4,baz=34,slow=8.2,SNR=2.9						
ARCES	**ARCESS Array B**	**57.27**	**341**	P	**P**	**17 10 30.9**	**+0.1**
ARCES				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ARCES	**ARCESS Array B**	**57.27**	**341**	P	**P**	**17 10 30.9**	**+0.1**
JOSI	**Joshimath**	**58.21**	**282**	*e*PKP	**P**	**17 10 36.6**	**-1.4**
ABKAR	**Akbulak array**	**58.44**	**310**	*e*P	**P**	**17 10 38.0**	**-1.3**
	comp=Z,0.7nm,0.4s,mb4.0						
KLP	**Kalpa**	**58.45**	**284**	*e*PKP	**P**	**17 10 39.0**	**-0.6**
KLP				AMb	AMB	17 10 42.6	
	comp=Z,6.0nm,0.5s,mb4.9						
FFC	**Flin Flon**	**59.57**	**41**	*i* P	**P**	**17 10 48.3**	**+1.3**
FFC	**Flin Flon**	**59.57**	**41**	*e*P	**P**	**17 10 47.4**	**+0.4**
	comp=Z,11nm,1.1s,mb4.8						
KSM	**Kuching**	**59.62**	**234**	P	**P**	**17 10 45.0**	**-2.8**
SUMG	**Summit**	**59.76**	**4**	*e*P	**P**	**17 10 48.6**	**+0.5**
	comp=Z,24nm,1.0s,mb5.2						
LRM	**Limekiln Ridge**	**60.05**	**54**	*e*P	**P**	**17 10 51.1**	**+0.6**
	comp=Z,29nm,1.1s,mb5.2						
FCC	**Fort Churchill**	**60.10**	**34**	*e*P	**P**	**17 10 50.7**	**+0.1**
HLID	**Hailey**	**60.38**	**57**	*e*P	**P**	**17 10 53.2**	**+0.4**
	comp=Z,3.3nm,1.2s,mb4.2						
BISR	**Bishrakh**	**60.90**	**281**	*e*PKP	**P**	**17 10 56.1**	**-0.4**
AYAN	**Aya Nagar**	**61.16**	**282**	*e*PKP	**P**	**17 10 57.3**	**-1.0**
AYAN				AMb	AMB	17 11 00.1	
	comp=Z,8.0nm,0.5s,mb5.1						
SONA	**Sohna**	**61.35**	**281**	*e*PKP	**P**	**17 10 59.3**	**-0.3**
NVAR	**Mina Array Bea**	**61.35**	**63**	P	**P**	**17 11 00.5**	**+1.1**
	comp=Z,1.0nm,0.7s,mb4.1,baz=289,slow=7.2,SNR=6.7						
NVAR	**Mina Array Bea**	**61.35**	**63**	P	**P**	**17 11 00.5**	**+1.1**
ELK	**Elko**	**61.69**	**60**	P	**P**	**17 11 02.0**	**+0.3**
	comp=Z,0.7nm,0.8s,mb3.9,baz=300,slow=12,SNR=2.5						
ELK	**Elko**	**61.69**	**60**	P	**P**	**17 11 02.1**	**+0.4**
ELK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FINES	**FINESS Array B**	**63.56**	**335**	P	**P**	**17 11 12.7**	**-1.1**
	comp=Z,1.9nm,0.4s,mb4.4,baz=26,slow=6.9,SNR=13						
FINES	**FINESS Array B**	**63.56**	**335**	P	**P**	**17 11 12.7**	**-1.1**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
BW06	**Boulder Array**	**63.61**	**55**	*e*P	**P**	**17 11 14.6**	**+0.2**
	comp=Z,7.0nm,1.4s,mb4.5						
PDAR	**Pinedale Array**	**63.61**	**55**	P	**P**	**17 11 15.8**	**+1.3**
	comp=Z,2.3nm,0.9s,mb4.2,baz=327,slow=2.5,SNR=8.3						
BHPL	**Bhopal**	**64.47**	**277**	*e*PKP	**P**	**17 11 20.3**	**-0.1**
NGP	**Nagpur**	**64.81**	**274**	*e x*	x	17 11 17.8	
RSSD	**Black Hills**	**65.67**	**51**	*e*P	**P**	**17 11 28.3**	**+0.5**
RSSD				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.4						
RSSD	**Black Hills**	**65.67**	**51**	*e*P	**P**	**17 11 28.3**	**+0.5**
	comp=Z,4.1nm,1.1s,mb4.4						
JASL	**Jaisalmer**	**66.30**	**284**	*e*PKP	**P**	**17 11 32.4**	**+0.2**
NB2	**NORSAR Subarra**	**67.63**	**342**	P	**P**	**17 11 39.1**	**-1.0**
	comp=Z,4.6nm,1.0s,mb4.5,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**67.63**	**342**	P	**P**	**17 11 39.4**	**-0.6**
	comp=Z,2.3nm,0.9s,mb4.2,baz=26,slow=6.4,SNR=4.8						
NOA	**NORSAR Array B**	**67.63**	**342**	P	**P**	**17 11 39.4**	**-0.7**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NOA	**NORSAR Array B**	**67.63**	**342**	P	**P**	**17 11 39.4**	**-0.6**
CTA	**Charters Tower**	**67.79**	**188**	P	**P**	**17 11 40.6**	**-0.8**
	comp=Z,3.0nm,0.9s,mb4.3,baz=18,slow=9.6,SNR=3.7						
CTA	**Charters Tower**	**67.79**	**188**	P	**P**	**17 11 40.6**	**-0.8**
CTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ISCO	**Idaho Springs**	**67.80**	**55**	*e*P	**P**	**17 11 42.5**	**+1.0**
ISCO				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2						
ISCO	**Idaho Springs**	**67.80**	**55**	*e*P	**P**	**17 11 42.5**	**+1.0**
	comp=Z,2.4nm,0.9s,m

comp=Z,4.1nm,1.0s,mb4.3
KOLS Kolonicke sedl 75.19 330 *e*P **P 17 12 25.5 -0.3**
BUR08 Bucovina Ar. S 75.25 327 *e*P **P 17 12 26.5 +0.3**
BURAR Bucovina Array 75.27 327 ⇑P **P 17 12 27.3 +1.0**
BURAR Bucovina Array 75.27 327 ⇑*i*P **P 17 12 27.3 +1.0**
NRDL Niedersach Rie 75.65 338 *e*P **P 17 12 28.2 -0.2**
comp=Z,8.0nm,1.3s,mb4.5
OKC Ostrava-Krasne 75.77 332 *e*P **P 17 12 29.4 +0.3**
OKC Ostrava-Krasne 75.77 332 *e*P **P 17 12 29.4 +0.3**
UPC Upice 75.83 334 *e*P **P 17 12 29.8 +0.4**
UPC *e* 17 12 36.5
UPC Upice 75.83 334 *e*P **P 17 12 29.8 +0.4**
UPC epP pP 17 12 36.5 -8.2
DPC Dobruska-Polom 75.87 334 *e*P **P 17 12 30.4 +0.7**
DPC MLR MLR
comp=Z,1μm,22.1s
DPC Dobruska-Polom 75.87 334 *e*P **P 17 12 30.4 +0.7**
CLL Collm 75.97 336 *e*P **P 17 12 29.7 -0.5**
comp=Z,13nm,0.9s,mb4.9
CLL Collm 75.97 336⇑*i*P **P 17 12 30.0 -0.2**
comp=Z,13nm,0.9s,mb4.9
CLL epP pP 17 12 36.0 -10
MORC Moravsky Berou 76.01 333 ⇑P **P 17 12 30.6 +0.1**
MORC Moravsky Berou 76.01 333 *e*P **P 17 12 29.8 -0.6**
comp=Z,6.2nm,1.0s,mb4.5
MORC Moravsky Berou 76.01 333⇑*i*P **P 17 12 30.6 +0.1**
BRG Berggiesshubel 76.10 335 *e*P **P 17 12 30.6 -0.4**
comp=Z,5.0nm,1.0s,mb4.4
BRG Berggiesshubel 76.10 335 *e*P **P 17 12 30.9 -0.1**
comp=Z,4.7nm,1.0s,mb4.4
CLZ Clausthal 76.18 338 *e*P **P 17 12 31.7 +0.3**
comp=Z,9.0nm,0.9s,mb4.7
KECS Kecovo 76.19 330 *e*P **P 17 12 31.7 +0.2**
KECS pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
KECS Kecovo 76.19 330 *e*P **P 17 12 31.7 +0.2**
comp=Z,2.3nm,1.0s,mb4.1
KECS Kecovo 76.19 330 *e*P **P 17 12 31.7 +0.2**
TXAR Lajitas Array 76.39 61 P **P 17 12 33.6 +0.6**
comp=Z,3.9nm,0.8s,mb4.4,baz=295,slow=4.5,SNR=39
TXAR Lajitas Array 76.39 61 P **P 17 12 33.6 +0.6**
TXAR pmax pmax
comp=Z,4.0nm,0.8s
VRAC Vranov 76.71 333 ⇑P **P 17 12 35.0 +0.5**
VRAC Vranov 76.71 333⇑*i*P **P 17 12 35.0 +0.5**
PRU Pruhonice 76.72 335 *e*P **P 17 12 35.2 +0.7**
PRU Pruhonice 76.72 335 *e*P **P 17 12 35.2 +0.7**
VYHS Vyhne 76.72 331 *e*P **P 17 12 34.8 +0.3**
VYHS pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
VYHS Vyhne 76.72 331 *e*P **P 17 12 34.8 +0.3**
comp=Z,3.6nm,1.2s,mb4.2
VYHS Vyhne 76.72 331 *e*P **P 17 12 34.8 +0.3**
MLR Muntele Rosu 76.77 325 ⇑P **P 17 12 35.7 +0.8**
MLR Muntele Rosu 76.77 325⇑*i*P **P 17 12 35.7 +0.8**
PSZ Piszkesteto 76.87 330 *e*P **P 17 12 35.8 +0.4**
MOX Moxa 76.95 337 *e*P **P 17 12 35.8 0.0**
comp=Z,9.0nm,1.1s,mb4.6
MOX Moxa 76.95 337 *e*P **P 17 12 35.8 0.0**
comp=Z,9.0nm,1.1s,mb4.6
MOX Moxa 76.95 337 *e*P **P 17 12 35.7 -0.1**
comp=Z,7.0nm,0.9s,mb4.6
MOX Moxa 76.95 337 *e*P **P 17 12 35.8 0.0**
MOX pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
ZST Bratislava 77.54 332 *e*P **P 17 12 40.4 +1.3**
ZST pmax pmax
comp=Z,8.0nm,1.3s,mb4.5
ZST Bratislava 77.54 332 *e*P **P 17 12 40.4 +1.3**
comp=Z,7.9nm,1.3s,mb4.5
ZST Bratislava 77.54 332 *e*P **P 17 12 40.4 +1.3**
KHC Kasperske Hory 77.77 335 *e*P **P 17 12 40.6 +0.2**
KHC pmax pmax
comp=Z,11nm,0.9s,mb4.8
KHC Kasperske Hory 77.77 335 *e*P **P 17 12 40.6 +0.2**
comp=Z,11nm,0.9s,mb4.8
KHC Kasperske Hory 77.77 335 *e*P **P 17 12 41.0 +0.6**
KHC epP pP 17 12 45.1 -11
GRF Grafenberg Arr 77.92 336 *e*P **P 17 12 41.9 +0.7**
comp=Z,24nm,1.0s,mb5.1
GRF Grafenberg Arr 77.92 336 *e*P **P 17 12 41.9 +0.7**
GRF pmax pmax
comp=Z,24nm,1.0s,mb5.1
WET Wettzell 77.96 335 *e*P **P 17 12 41.9 +0.5**
comp=Z,12nm,1.0s,mb4.8
GEC2 GERESS Array S 77.99 335 *e*P **P 17 12 41.6 0.0**
comp=Z,5.0nm,1.0s,mb4.4
GEC2 GERESS Array S 77.99 335 *e*P **P 17 12 40.4 -1.2**
comp=Z,842nm,1.0s
GERES GERESS Array B 77.99 335 P **P 17 12 41.7 +0.1**
comp=Z,2.9nm,0.7s,mb4.3,baz=34,slow=5.0,SNR=24
GERES GERESS Array B 77.99 335 P **P 17 12 41.7 +0.1**
GERES pmax pmax
comp=Z,3.0nm,0.7s
TNS Taunus Mts 78.15 338 *e*P **P 17 12 43.4 +0.9**
comp=Z,12nm,0.7s,mb4.9
BRTR Keskin Array B 78.26 317 P **P 17 12 44.0 +0.7**
comp=Z,4.9nm,0.9s,mb4.5,baz=50,slow=3.9,SNR=22
BRTR Keskin Array B 78.26 317 P **P 17 12 44.0 +0.7**
BRTR pmax pmax
comp=Z,5.0nm,0.9s
BZS Buzias 78.27 328 ⇓P **P 17 12 43.2 0.0**
BZS Buzias 78.27 328⇓*i*P **P 17 12 43.2 0.0**
MOA Molln 78.72 334⇑*i*P **P 17 12 46.0 +0.3**
comp=Z,5.6nm,0.8s,mb4.5
PKSM Moragy 78.78 330 ⇓P **P 17 12 46.3 +0.3**
PKSM Moragy 78.78 330⇓*i*P **P 17 12 46.3 +0.3**
ARSA Arzberg 78.87 333⇑*i*P **P 17 12 46.5 0.0**
comp=Z,6.6nm,1.1s,mb4.5
GIVF Givet 79.13 341 *e*P **P 17 12 48.0 +0.2**
RJOB Jochberg 79.25 335 *e*P **P 17 12 49.5 +0.9**
comp=Z,8.0nm,0.9s,mb4.7
FUR Furstenfeldbru 79.29 336 *e*P **P 17 12 49.6 +0.8**
comp=Z,24nm,1.1s,mb5.0
BAIF Baives 79.30 341 *e*P **P 17 12 49.0 +0.2**
SOKA Soboth 79.53 333⇑*i*P **P 17 12 50.4 +0.3**
comp=Z,13nm,1.1s,mb4.8
PERS Pernice 79.54 333 *i*P **P 17 12 50.4 +0.3**
KBA Koelnbreinsper 79.68 334⇑*i*P **P 17 12 51.9 +1.0**
comp=Z,24nm,0.9s,mb5.1
OBKA Obir 79.83 333⇑*i*P **P 17 12 51.9 +0.1**
comp=Z,3.2nm,0.6s,mb4.4
BFO Black Forest 79.93 338 *e*P **P 17 12 52.4 +0.2**
comp=Z,12nm,1.1s,mb4.7
BFO Black Forest 79.93 338 *i*P **P 17 12 53.1 +0.9**
BFO Black Forest 79.93 338 *e*P **P 17 12 52.3 0.0**
comp=Z,3.3nm,0.7s,mb4.4
WATA Walderalm 79.96 335⇑*i*P **P 17 12 53.3 +0.9**
comp=Z,11nm,0.8s,mb4.9
WTTA Wattenberg 80.01 335⇑*i*P **P 17 12 53.7 +1.0**
comp=Z,18nm,0.7s,mb5.1
RETA Reutte 80.05 336⇑*i*P **P 17 12 53.5 +0.6**
comp=Z,10nm,0.9s,mb4.8
GCIS Gornji Cirnik 80.07 332 *i*P **P 17 12 53.0 0.0**
MOTA Moosalm 80.09 336⇑*i*P **P 17 12 53.8 +0.7**
comp=Z,20nm,1.0s,mb5.0
LEGS Legarje 80.09 332 *i*P **P 17 12 53.0 -0.2**
CDF Champ du Feu 80.12 338 *e*P **P 17 12 53.6 +0.3**
comp=Z,27nm,1.1s,mb4.8
CDF Champ du Feu 80.12 338 *e*P **P 17 12 53.6 +0.3**
CDF pmax pmax
comp=Z,14nm,1.1s,mb4.8
CDF Champ du Feu 80.12 338 *e*P **P 17 12 53.6 +0.3**
comp=Z,14nm,1.1s,mb4.8
ABTA Abfaltersbach 80.23 334⇑*i*P **P 17 12 53.5 -0.4**
comp=Z,3.4nm,0.7s,mb4.4
ECH Echery 80.33 338 *e*P **P 17 12 54.3 -0.1**
ECH pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
ECH Echery 80.33 338 *e*P **P 17 12 54.2 -0.2**
comp=Z,4.5nm,0.8s,mb4.5
DAVA Damuels 80.48 336⇑*i*P **P 17 12 55.8 +0.6**
comp=Z,12nm,0.8s,mb4.8
FETA Feichten 80.49 336⇑*i*P **P 17 12 56.1 +0.8**
comp=Z,7.5nm,0.8s,mb4.7
MEZF Maizieres J'vi 80.57 340 *e*P **P 17 12 55.0 -0.7**
comp=Z,43nm,1.1s,mb5.0
MEZF Maizieres J'vi 80.57 340 *e*P **P 17 12 55.0 -0.7**
comp=Z,43nm,1.1s,mb5.3
HAU Haudompre 80.73 339 *e*P **P 17 12 55.5 -1.0**
comp=Z,22nm,1.0s,mb4.7
HAU Haudompre 80.73 339 *e*P **P 17 12 55.5 -1.0**
HAU pmax pmax
comp=Z,11nm,1.0s,mb4.7
HAU Haudompre 80.73 339 *e*P **P 17 12 55.5 -1.0**
comp=Z,11nm,1.0s,mb4.7
HINF Hinteralfeld 80.78 338 *e*P **P 17 12 56.7 -0.1**
comp=Z,4.8nm,0.6s,mb4.3
HINF Hinteralfeld 80.78 338 *e*P **P 17 12 56.7 -0.1**
HINF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
HINF Hinteralfeld 80.78 338 *e*P **P 17 12 56.7 -0.1**
comp=Z,2.4nm,0.6s,mb4.3
FLN La Foliniere 81.51 343 *e*P **P 17 13 00.7 0.0**
LDF La Druitiere 81.60 343 *e*P **P 17 13 01.4 +0.2**
GRR Gorron 81.94 344 *e*P **P 17 13 03.2 +0.3**
comp=Z,66nm,1.2s,mb5.1
GRR Gorron 81.94 344 *e*P **P 17 13 03.2 +0.3**
GRR pmax pmax
comp=Z,33nm,1.2s,mb5.1
GRR Gorron 81.94 344 *e*P **P 17 13 03.2 +0.3**
comp=Z,33nm,1.2s,mb5.1
LOR Lormes 82.01 340 *e*P **P 17 13 02.3 -1.0**
comp=Z,27nm,1.1s,mb4.8
LOR Lormes 82.01 340 *e*P **P 17 13 02.3 -1.0**
LOR pmax pmax
comp=Z,13nm,1.1s,mb4.8
LOR Lormes 82.01 340 *e*P **P 17 13 02.3 -1.0**
comp=Z,13nm,1.1s,mb4.8
CABF La Chapelle 82.09 338 *e*P **P 17 13 03.1 -0.7**
comp=Z,27nm,1.3s,mb4.7
CABF La Chapelle 82.09 338 *e*P **P 17 13 03.1 -0.7**
CABF pmax pmax
comp=Z,13nm,1.3s,mb4.7
CABF La Chapelle 82.09 338 *e*P **P 17 13 03.1 -0.7**
comp=Z,13nm,1.3s,mb4.7
SSF Saint Saulge 82.28 340 *e*P **P 17 13 04.8 0.0**
comp=Z,8.1nm,0.7s,mb4.4
SSF Saint Saulge 82.28 340 *e*P **P 17 13 04.8 0.0**
SSF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
SSF Saint Saulge 82.28 340 *e*P **P 17 13 04.8 0.0**
comp=Z,4.1nm,0.7s,mb4.5
SGMF Saint Gilles 82.38 345 *e*P **P 17 13 04.9 -0.4**
ROSF Rostrenen 82.43 345 *e*P **P 17 13 04.9 -0.6**
AVF Avril sur Loir 82.58 340 *e*P **P 17 13 06.7 +0.4**
comp=Z,28nm,1.1s,mb4.9
AVF Avril sur Loir 82.58 340 *e*P **P 17 13 06.7 +0.4**
AVF pmax pmax
comp=Z,14nm,1.1s,mb4.9
AVF Avril sur Loir 82.58 340 *e*P **P 17 13 06.7 +0.4**
comp=Z,14nm,1.1s,mb4.9
SMF Signal de Mont 82.60 340 *e*P **P 17 13 06.9 +0.5**
comp=Z,46nm,1.0s,mb5.2
SMF Signal de Mont 82.60 340 *e*P **P 17 13 06.9 +0.5**
SMF pmax pmax
comp=Z,23nm,1.0s,mb5.2
SMF Signal de Mont 82.60 340 *e*P **P 17 13 06.9 +0.5**
comp=Z,23nm,1.0s,mb5.2
MMAI Mount Meron Ar 82.79 312 P **P 17 13 08.4 +0.7**
comp=Z,11nm,0.7s,mb5.0,baz=29,slow=7.7,SNR=18
BGF Bois d'Agland 82.91 341 *e*P **P 17 13 08.3 +0.3**
LPL La Plagne 82.95 338 *e*P **P 17 13 09.5 +1.2**
comp=Z,16nm,0.8s,mb4.8
LPL La Plagne 82.95 338 *e*P **P 17 13 09.5 +1.2**
LPL pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
LPL La Plagne 82.95 338 *e*P **P 17 13 09.5 +1.2**
comp=Z,8.1nm,0.8s,mb4.8
LPG La Plagne 82.96 338 *e*P **P 17 13 09.6 +1.3**
comp=Z,26nm,1.0s,mb4.9
LPG La Plagne 82.96 338 *e*P **P 17 13 09.6 +1.3**
LPG pmax pmax
comp=Z,13nm,1.0s,mb4.9
LPG La Plagne 82.96 338 *e*P **P 17 13 09.6 +1.3**
comp=Z,13nm,1.0s,mb4.9
TCF Toulx Ste Croi 83.31 341 *e*P **P 17 13 09.5 -0.6**
comp=Z,29nm,1.1s,mb4.9
TCF Toulx Ste Croi 83.31 341 *e*P **P 17 13 09.5 -0.6**
TCF pmax pmax
comp=Z,14nm,1.1s,mb4.9
TCF Toulx Ste Croi 83.31 341 *e*P **P 17 13 09.5 -0.6**
comp=Z,14nm,1.1s,mb4.9
MFF Saint Martin d 83.51 343 *e*P **P 17 13 10.4 -0.7**
ORIF Oris-en-Rattie 83.72 338 *e*P **P 17 13 13.3 +1.0**
comp=Z,33nm,0.9s,mb5.2
ORIF Oris-en-Rattie 83.72 338 *e*P **P 17 13 13.3 +1.0**
ORIF pmax pmax
comp=Z,17nm,0.9s,mb5.2
ORIF Oris-en-Rattie 83.72 338 *e*P **P 17 13 13.3 +1.0**
comp=Z,16nm,0.9s,mb5.2
VIVF Saint-Julien-l 84.08 339 *e*P **P 17 13 13.8 -0.3**
comp=Z,16nm,1.0s,mb4.8
VIVF Saint-Julien-l 84.08 339 *e*P **P 17 13 13.8 -0.3**
VIVF pmax pmax
comp=Z,8.0nm,1.0s,mb4.8
VIVF Saint-Julien-l 84.08 339 *e*P **P 17 13 13.8 -0.3**
comp=Z,8.1nm,1.0s,mb4.8
SBF Sospel 84.30 337 *e*P **P 17 13 14.1 -1.1**
comp=Z,51nm,1.2s,mb5.2
SBF Sospel 84.30 337 *e*P **P 17 13 14.1 -1.1**
SBF pmax pmax
comp=Z,25nm,1.2s,mb5.2
SBF Sospel 84.30 337 *e*P **P 17 13 14.1 -1.1**
comp=Z,25nm,1.2s,mb5.2
CAF Calviac 84.63 341 *e*P **P 17 13 16.2 -0.7**
FRF La Foret Royal 84.79 337 *e*P **P 17 13 17.7 0.0**
LASF Ste Croix 85.02 339 *e*P **P 17 13 17.9 -0.9**
LMR La Mourre 85.04 337 *e*P **P 17 13 19.3 +0.3**
comp=Z,39nm,1.0s,mb5.2
LMR La Mourre 85.04 337 *e*P **P 17 13 19.3 +0.3**
LMR pmax pmax
comp=Z,19nm,1.0s,mb5.2
LMR La Mourre 85.04 337 *e*P **P 17 13 19.3 +0.3**
comp=Z,19nm,1.0s,mb5.2
MTLF Montolieu 86.10 340 *e*P **P 17 13 23.4 -0.8**
comp=Z,5.5nm,0.8s,mb4.5
MTLF Montolieu 86.10 340 *e*P **P 17 13 23.4 -0.8**
MTLF pmax pmax
comp=Z,3.0nm,0.8s,mb4.6
MTLF Montolieu 86.10 340 *e*P **P 17 13 23.4 -0.8**
comp=Z,2.8nm,0.8s,mb4.5
EPF Esparros 86.82 341 *e*P **P 17 13 27.0 -0.7**
TORD Torodi Ar. Bea 114.71 330 PKP PKiKP 17 19 23.3 -0.7
comp=Z,0.3nm,0.7s,baz=18,slow=1.9,SNR=2.9
TORD Torodi Ar. Bea 114.71 330 PKP PKiKP 17 19 23.3 -0.7
CPUP Villa Florida 147.36 61 PKPbc PKPbc 17 20 26.1 -0.8
comp=Z,1.1nm,0.6s,baz=124,slow=4.0,SNR=4.3

*IDC **03** 17:09:51.9±1.3, 10°.60S×161°.54E, h0km, mb4.2/12, mb1 4.3/12, mb1mx4.2/19, mbtmp4.2/12, MS4.2/2, Ms1 4.2/2, ms1mx3.4/26, Error ellipse: s-maj=42.5km s-min=19.9km az=125.0*
*NEIC **03** 17:10:02.9±2.3, 10°.63S×161°.46E, h87km±17km, mb4.4/6, Error ellipse: s-maj=26.1km s-min=11.9km az=131.0*
*ISCJB **03** 17:10:03.9±1.3, 10°.57S±0°.07×161°.31E±0°.10, h106km±12km, mb4.1/17, Error ellipse: s-maj=16.4km s-min=9.9km az=156.5*
ISC 03 17:10:04.5±1.2,**10°.55S**±0°.07×**161°.37E**±0°.09,**h97**km±12km, **n27**,σ0°**97**/26,**mb4.1**/17,**Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.79**	**308**	*e*Pn		**Pn**	**17 10 33.9**	**-0.3**
DZM	**Mont Dzumac**	**12.45**	**158**	*e*P		**Pn**	**17 12 60.0**	**+1.8**
DZM				*e*S		**Sn**	**17 15 14.4**	**-0.7**
CTA	**Charters Tower**	**17.38**	**235**	LR		LR	17 19 13.3	
	comp=Z,1μm,18.3s,baz=311,slow=32							
CTAO	**Charters Tower**	**17.38**	**235**	*e*Pn		**Pn**	**17 14 05.0**	**+4.0**
	14nm,0.9s							
WRAB	**Tennant Creek**	**27.65**	**247**	*e*P		**P**	**17 15 43.7**	**+0.3**
	3.4nm,0.8s,mb3.9							
STKA	**Stephens Creek**	**28.01**	**218**	P		**P**	**17 15 44.3**	**-2.2**
	1.3nm,0.7s,mb3.6,baz=67,slow=8.9,SNR=2.4							
ASAR	**Alice Springs**	**29.24**	**240**	P		**P**	**17 15 57.5**	**0.0**
	0.7nm,0.7s,mb3.4,baz=64,slow=10,SNR=13							
URZ	**Urewera**	**30.99**	**155**	LR		LR	17 24 57.6	
	comp=Z,245nm,19.5s,baz=253,slow=29							
FITZ	**Fitzroy Crossi**	**35.37**	**254**	P		**P**	**17 16 51.3**	**+0.1**
	2.5nm,0.8s,mb4.1,baz=69,slow=14,SNR=5.1							
KKM	**Kota Kinabalu**	**47.89**	**288**	P		**P**	**17 18 33.4**	**+0.1**
ASAJ	**Asahikawa**	**57.02**	**344**	P		**P**	**17 19 40.8**	**+0.6**
	5.6nm,0.7s,mb4.7,baz=222,slow=9.9,SNR=9.1							
KSRS	**Korea Array**	**57.12**	**329**	P		**P**	**17 19 41.4**	**+0.3**
	0.9nm,0.6s,mb4.0,baz=140,slow=6.7,SNR=4.0							
FX1	**Attu Island--F**	**63.98**	**8**	P		**P**	**17 20 26.0**	**-1.4**
	6.3nm,0.6s,mb4.7,baz=113,slow=7.7,SNR=5.3							
CMAR	**Chiang Mai Arr**	**67.99**	**295**	P		**P**	**17 20 54.4**	**+0.6**
	0.6nm,0.7s,mb3.5,baz=121,slow=4.8,SNR=5.9							
ULN	**Ulaanbaatar**	**75.42**	**326**	*e*P		**P**	**17 21 37.5**	**-0.2**
	12nm,1.5s,mb4.4							
SONM	**Songino Array**	**75.77**	**325**	P		**P**	**17 21 40.4**	**+0.7**
	2.6nm,0.8s,mb4.0,baz=141,slow=5.4,SNR=22							
BILL	**Bilibino**	**78.46**	**2**	*e*P		**P**	**17 21 54.0**	**-0.3**
	5.3nm,0.9s,mb4.3							
SVW2	**Sparrevohn**	**79.04**	**20**	*e*P		**P**	**17 21 57.9**	**+0.2**
TTA	**Tatalina**	**80.25**	**18**	*e*P		**P**	**17 22 04.2**	**0.0**
	6.0nm,0.9s,mb4.4							
KTH	**Kantishna Hill**	**82.32**	**20**	*e*P		**P**	**17 22 13.8**	**-1.3**
	6.9nm,0.8s,mb4.5							
COLA	**College**	**84.20**	**19**	*e*P		**P**	**17 22 23.8**	**-1.0**
MKAR	**Makanchi Array**	**90.24**	**318**	P		**P**	**17 22 53.5**	**-0.8**
	0.4nm,0.5s,mb3.9,baz=86,slow=5.8,SNR=4.8							
ZALV	**Zalesovo Beam**	**90.66**	**325**	P		**P**	**17 22 58.0**	**+1.9**
	0.3nm,0.3s,mb3.9,baz=90,slow=10,SNR=2.6							
PDAR	**Pinedale Array**	**96.39**	**48**	P		**P**	**17 23 24.5**	**+1.7**
	0.4nm,0.5s,mb4.1,baz=186,slow=0.9,SNR=2.8							
YKA	**Yellowknife Ar**	**96.52**	**28**	P		**P**	**17 23 21.8**	**-1.0**
	0.8nm,0.7s,mb4.3,baz=256,slow=4.1,SNR=6.2							
YKA	**Yellowknife Ar**	**96.52**	**28**	P		**P**	**17 23 21.8**	**-1.0**
PHWY	**Pilot Hill**	**99.24**	**50**	*e*P		**P**	**17 23 36.4**	**+0.8**
	32nm,1.0s							

*IDC **03** 17:20:30.4±0.8, 43°.94N×147°.60E, h0km, mb4.0/18, mb1 4.1/19, mb1mx4.1/25, mbtmp3.9/19, ML3.4/1, Error ellipse: s-maj=23.8km s-min=16.3km az=155.0*
*JMA **03** 17:20:33.5±0.3, 43°.64N×147°.54E, h8km±4km, M4.5*
*MOS **03** 17:20:34.2±1.3, 43°.86N×147°.73E, h46km, mb4.2/19, Error ellipse: s-maj=8.9km s-min=7.5km az=98.9*
*ISCJB **03** 17:20:34.6±0.7, 43°.87N±0°.05×147°.71E±0°.06, h47km±5km, mb4.1/32, Error ellipse: s-maj=9.3km s-min=5.7km az=137.2*
*SKHL **03** 17:20:35.6±0.4, 43°.92N×147°.76E, h44km±13km, mb5.0/5*
*NEIC **03** 17:20:37.0±0.9, 43°.86N×147°.59E, h52km±8km, mb4.4/11, Error ellipse: s-maj=11.8km s-min=7.5km az=143.0*
ISC 03 17:20:35.9±0.7,**43°.87N**±0°.04×**147°.72E**±0°.06,**h41**km±5km, **n101**,σ1**9**°**17**/109,**mb4.1**/32,**1C-4D**,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**1.35**	**278**	⇓*i*P		**Pn**	**17 20 57.2**	**-1.1**
YUK				*i*S		**Sn**	**17 21 13.7**	**-1.3**
YUK				pmax		pmax		
	comp=Z,4μm,0.8s							
YUK				pmax		pmax		
	comp=Z,3μm,0.3s							
YUK				pmax		pmax		
	comp=N,2μm,0.5s							
YUK				pmax		pmax		
	comp=E,2μm,0.5s							
YUK				smax				
	comp=N,8μm,1.0s							
YUK				smax				
	comp=E,8μm,0.8s							
YUK				smax				
	comp=N,6μm,0.4s							
YUK				smax				
	comp=E,2μm,0.4s							
YUK	**Yuzh-Kuril'sk**	**1.35**	**278**	⇓*i*P		**Pn**	**17 20 57.2**	**-1.1**
YUK				AMB		AMB	17 20 57.2	
	comp=E,4μm,0.8s							
YUK				AMB		AMB	17 20 59.5	
	comp=E,2μm,0.5s							
YUK				AMB		AMB	17 20 59.5	
	comp=E,3μm,0.2s							
YUK				AMB		AMB	17 20 59.8	
	comp=E,490nm,0.3s							
YUK				AMB		AMB	17 20 59.8	
	comp=E,2μm,0.3s							
YUK				AMB		AMB	17 20 59.8	
	comp=E,500nm,0.1s							
YUK				*i*S		**Sn**	**17 21 13.7**	**-1.3**
YUK				A			17 21 14.0	
	comp=E,8μm,1.0s							
YUK				A			17 21 17.6	
	comp=E,6μm,0.4s							
YUK				A			17 21 17.6	
	comp=E,2μm,0.4s							
KUR	**Kuril'sk**	**1.37**	**4**	*e*PN		**Pn**	**17 20 58.3**	**-0.2**
KUR				*e*S		**Sn**	**17 21 15.0**	**-0.4**
KUR				pmax		pmax		
	comp=N,270nm,0.7s							
KUR				pmax		pmax		
	comp=E,260nm,0.7s							
KUR				pmax		pmax		
	comp=Z,340nm,0.7s							
KUR				smax				
	comp=N,1μm,0.4s							
KUR				smax				
	comp=E,2μm,0.4s							
KUR				smax				
	comp=N,4μm,1.6s							
KUR				smax				
	comp=E,2μm,1.6s							
KUR	**Kuril'sk**	**1.37**	**4**	*e*P		**Pn**	**17 20 58.3**	**-0.2**
KUR				AMB		AMB	17 21 06.5	
	comp=E,270nm,0.7s							
KUR				AMB		AMB	17 21 06.5	
	comp=E,260nm,0.7s							
KUR				AMB		AMB	17 21 06.5	
	comp=E,340nm,0.7s							
KUR				*i*rx		rx	17 21 09.0	
KUR				*e*S		**Sn**	**17 21 15.0**	**-0.4**
KUR				A			17 21 15.0	
	comp=E,4μm,1.6s							
KUR				A			17 21 15.0	
	comp=E,2μm,1.6s							
KUR				A			17 21 17.3	
	comp=E,1μm,0.4s							
KUR				A			17 21 17.3	
	comp=E,2μm,0.4s							
NEM2	**Nemuro 2**	**1.52**	**251**	P		**Pn**	**17 20 58.3**	**-2.3**
JRA	**Rausu**	**1.88**	**273**	P		**Pn**	**17 21 04.9**	**-0.6**
JRA				*e*S		**Sn**	**17 21 27.9**	**-0.1**
JNK	**Nakash**	**2.19**	**264**	P		**Pn**	**17 21 08.6**	**-1.2**
JAK	**Akkeshi**	**2.37**	**249**	P		**Pn**	**17 21 10.3**	**-1.9**
JTKR	**Abashiri--Toko**	**2.75**	**273**	P		**Pn**	**17 21 17.8**	**+0.2**
JTKR				*e*S		**Sn**	**17 21 51.3**	**+1.7**
JAR	**Ashorobuto**	**2.93**	**260**	P		**Pn**	**17 21 19.3**	**-0.6**
JOB	**Onbets**	**2.99**	**252**	P		**Pn**	**17 21 19.9**	**-0.9**
JMP	**Maruseppu**	**3.15**	**274**	P		**Pn**	**17 21 23.5**	**+0.5**
JCH	**Churui**	**3.42**	**250**	P		**Pn**	**17 21 25.6**	**-1.1**
JKK2	**Kamakawa 2**	**3.59**	**272**	P		**Pn**	**17 21 31.4**	**+2.3**
ASAJ	**Asahikawa**	**3.70**	**276**	P		**Pn**	**17 21 31.7**	**+1.1**
ASAJ	**Asahikawa**	**3.70**	**276**	Pn		**Pn**	**17 21 31.6**	**+1.0**
	comp=E,3.2nm,0.3s,baz=88,slow=14,SNR=32							
ASAJ	**Asahikawa**	**3.70**	**276**	PN		**Pn**	**17 21 31.6**	**+1.0**
ASAJ				pmax		pmax		
	comp=Z,3.0nm,0.3s							
JFR	**Furan**	**3.79**	**261**	P		**Pn**	**17 21 32.4**	**+0.6**
JFR				*e*S		**Sn**	**17 22 15.8**	**+0.6**
ERM	**Erimo**	**3.83**	**243**	*e*PN		**Pn**	**17 21 33.3**	**+1.0**
JEM	**Erimo**	**3.83**	**243**	P		**Pn**	**17 21 33.2**	**+0.9**
JSE	**Soyaes**	**3.84**	**288**	P		**Pn**	**17 21 33.1**	**+0.7**
JNBK	**Urakawa-nobuka**	**3.97**	**248**	P		**Pn**	**17 21 34.8**	**+0.6**
YSS	**Yuzh-Sakhalins**	**4.66**	**313**	⇓*i*PN		**Pn**	**17 21 44.3**	**+0.6**
YSS				*e*S		**Sn**	**17 22 36.0**	**-0.5**
YSS				pmax		pmax		
	comp=E,30nm,0.4s							
YSS				pmax		pmax		
	comp=Z,30nm,0.4s							
YSS				smax				
	comp=N,50nm,0.6s							
YSS	**Yuzh-Sakhalins**	**4.66**	**313**	*e*Pn		**Pn**	**17 21 44.6**	**+0.9**
YSS	**Yuzh-Sakhalins**	**4.66**	**313**	⇓*i*P		**Pn**	**17 21 44.3**	**+0.6**
YSS				AMB		AMB	17 21 45.0	
	comp=N,30nm,0.4s							
YSS				AMB		AMB	17 21 45.0	
	comp=N,30nm,0.4s							
YSS				*e*S		**Sn**	**17 22 36.0**	**-0.5**
YSS				A			17 22 43.7	
	comp=N,50nm,0.6s							
SKR	**Severo-Kuril's**	**8.89**	**37**	*e*PN		**Pn**	**17 22 40.2**	**-1.4**
SKR	**Severo-Kuril's**	**8.89**	**37**	*e*P		**Pn**	**17 22 40.2**	**-1.4**
HABR	**Khabarovsk**	**9.92**	**302**	*e*PN		**Pn**	**17 22 57.0**	**+1.2**
HABR				pmax		pmax		
	comp=N,13nm,2.3s							
HABR				pmax		pmax		
	comp=E,14nm,1.3s							
HABR				pmax		pmax		
	comp=Z,19nm,1.3s							
HABR				MLR		MLR		

comp=Z,254nm,14.0s
MAJO Matsushiro 10.31 228 *e*PN **Pn 17 23 00.6 -0.6**
MJAR Matsushiro Arr 10.31 228 Pn **Pn 17 22 59.7 -1.6**
comp=Z,0.3nm,0.3s,baz=21,slow=15,SNR=4.1
NKL Nikolayevsk 10.39 336 *e*P **Pn 17 23 00.5 -1.7**
NKL AMB AMB 17 23 02.0
comp=Z,10.0nm,1.0s
PETK Petropavlovsk- 11.36 32 Pn **Pn 17 23 17.3 +1.9**
comp=Z,0.2nm,0.3s,baz=196,slow=10,SNR=4.7
VLA Vladivostok 11.52 272 *e*PN **Pn 17 23 19.2 +1.4**
VLA pmax pmax
comp=Z,9.0nm,1.0s
KLR Kul'dur 12.22 302 *e*PN **Pn 17 23 28.6 +1.3**
MDJ Mudanjiang 13.02 280 P **Pn 17 23 41.7 +3.5**
comp=Z,15nm,1.1s
KSRS Korea Array 16.31 254 Pn **Pn 17 24 23.4 +1.5**
comp=Z,0.1nm,0.3s,baz=64,slow=11,SNR=8.4
ZEA Zeya 16.65 314 *e*P **Pn 17 24 28.8 +2.7**
ZEA AMB AMB 17 24 36.7
comp=Z,20nm,0.8s
YAK Yakutsk 21.05 336 *e*P **P 17 25 13.6 -2.5**
YAK pmax pmax
comp=Z,5.0nm,0.8s,mb3.9
ULN Ulaanbaatar 28.36 293 *e*P **P 17 26 25.7 -0.2**
ULN pmax pmax
comp=Z,1.0nm,0.7s,mb3.5
ULN Ulaanbaatar 28.36 293 *e*P **P 17 26 25.7 -0.2**
comp=Z,1.3nm,0.7s,mb3.7
SONM Songino Array 28.80 293 P **P 17 26 30.3 +0.4**
comp=Z,0.8nm,0.5s,mb3.7,baz=80,slow=9.2,SNR=9.3
SONM Songino Array 28.80 293 P **P 17 26 30.3 +0.5**
SONM pmax pmax
comp=Z,1.0nm,0.5s
WHN Wuhan 29.51 254 P **P 17 26 34.4 -1.8**
ZALV Zalesovo Beam 41.26 307 PcP PcP 17 30 15.0 +0.3
comp=Z,1.5nm,0.6s,baz=72,slow=2.4,SNR=7.5
MKAR Makanchi Array 44.89 298 P **P 17 28 45.9 -0.3**
comp=Z,0.9nm,0.5s,mb3.9,baz=73,slow=9.1,SNR=9.2
MKAR PcP PcP 17 30 27.5 +0.4
comp=Z,0.2nm,0.2s,baz=64,slow=5.0,SNR=3.4
MKAR Makanchi Array 44.89 298 *i*P **P 17 28 46.2 0.0**
MKAR pmax pmax
comp=Z,1.0nm,0.5s
KURK Kurchatov 45.80 304 *e*P **P 17 28 52.1 -1.2**
KURK pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
KURK Kurchatov 45.80 304 *e*P **P 17 28 52.1 -1.3**
comp=Z,2.2nm,0.6s,mb4.3
INK Inuvik 46.09 30 P **P 17 28 56.8 +1.4**
comp=Z,0.8nm,0.3s,mb4.1,baz=286,slow=9.6,SNR=6.9
INK Inuvik 46.09 30 P **P 17 28 56.8 +1.4**
INK pmax pmax
comp=Z,1.0nm,0.3s
INK Inuvik 46.09 30 *e*P **P 17 28 56.4 +1.1**
CMAR Chiang Mai Arr 47.95 254 P **P 17 29 11.2 +0.7**
comp=Z,0.9nm,0.7s,mb3.9,baz=41,slow=7.1,SNR=10
CMAR Chiang Mai Arr 47.95 254 P **P 17 29 11.3 +0.8**
CMAR pmax pmax
comp=Z,1.0nm,0.7s
BVAR Borovoye Array 49.74 309 P **P 17 29 24.6 +0.8**
comp=Z,0.3nm,0.4s,mb3.6,baz=70,slow=4.9,SNR=3.6
BVAR PcP PcP 17 30 43.6 -0.7
comp=Z,0.5nm,0.4s,baz=64,slow=3.4,SNR=4.1
BVAR Borovoye Array 49.74 309 P **P 17 29 24.6 +0.8**
BVAR PcP PcP 17 30 43.6 -0.7
TKM2 Tokmak 2 50.83 296 *e*P **P 17 29 32.5 +0.3**
TKM2 pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
TKM2 Tokmak 2 50.83 296 *e*P **P 17 29 32.5 +0.3**
comp=Z,4.1nm,0.9s,mb4.4
AAK Ala-Archa 51.68 296 *ce*P **P 17 29 39.9 +1.4**
AAK pmax pmax
comp=Z,3.0nm,2.5s,mb3.8
UCH Uchtor 51.86 295 P **P 17 29 41.0 +1.1**
EKS2 Erkin-Say 52.13 296 *e*P **P 17 29 39.5 -2.5**
comp=Z,3.1nm,0.8s,mb4.3
AML Almayashu 52.44 296 *e*P **P 17 29 44.6 +0.4**
comp=Z,1.9nm,0.5s,mb4.3
ARU Arti 54.54 317 *e*P **P 17 29 58.6 -0.8**
ARU pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
ARU Arti 54.54 317 *e*P **P 17 29 58.6 -0.8**
comp=Z,5.7nm,0.9s,mb4.6
RES Resolute Bay 54.73 17 P **P 17 30 00.7 +0.2**
comp=Z,1.0nm,0.5s,mb4.1,baz=74,slow=23,SNR=10
RES Resolute Bay 54.73 17 P **P 17 30 00.7 +0.1**
RES pmax pmax
comp=Z,1.0nm,0.5s,mb4.1
RES Resolute Bay 54.73 17 *e*P **P 17 30 00.3 -0.2**
comp=Z,2.5nm,0.8s,mb4.3
YKA Yellowknife Ar 55.47 34 P **P 17 30 07.0 +1.0**
comp=Z,0.6nm,0.7s,mb3.8,baz=298,slow=7.5,SNR=4.3
YKA Yellowknife Ar 55.47 34 P **P 17 30 07.0 +1.0**
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 55.47 34 P **P 17 30 07.0 +1.0**
ABKAR Akbulak array 57.31 309 *e*P **P 17 30 18.6 -0.7**
comp=Z,1.5nm,0.4s,mb4.4
ARCES ARCESS Array B 59.28 340 P **P 17 30 31.4 -1.4**
comp=Z,1.2nm,0.6s,mb4.1,baz=40,slow=8.6,SNR=3.5
ARCES ARCESS Array B 59.28 340 P **P 17 30 31.4 -1.3**
ARCES pmax pmax
comp=Z,1.0nm,0.6s
JOF Joensuu 62.17 332 *e*P **P 17 30 50.7 -1.8**
JOF pmax pmax
comp=Z,1.0nm,0.4s,mb4.3
JOF Joensuu 62.17 332 *ep* **P 17 30 50.7 -1.8**
comp=Z,1.3nm,0.4s,mb4.4
KAF Kangasniemi 64.39 334 *e*P **P 17 31 05.3 -1.9**
KAF pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
KAF Kangasniemi 64.39 334 *ep* **P 17 31 05.3 -1.9**
comp=Z,2.1nm,0.5s,mb4.4
FINES FINESS Array B 64.95 333 P **P 17 31 09.9 -1.0**
comp=Z,3.0nm,0.5s,mb4.5,baz=40,slow=8.9,SNR=18
FINES FINESS Array B 64.95 333 P **P 17 31 09.9 -1.0**
FINES pmax pmax
comp=Z,3.0nm,0.5s
FFC Flin Flon 65.36 37 P **P 17 31 14.2 +0.6**
FFC pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
FFC Flin Flon 65.36 37 P **P 17 31 14.2 +0.6**
comp=Z,2.2nm,0.6s,mb4.4
FCC Fort Churchill 65.71 30 P **P 17 31 14.7 -1.1**
NVAR Mina Array Bea 67.17 58 P **P 17 31 26.8 +1.3**
comp=Z,0.4nm,0.5s,mb3.7,baz=288,slow=8.2,SNR=4.7
ASAR Alice Springs 68.39 194 P **P 17 31 33.2 +0.1**
comp=Z,0.3nm,0.8s,mb3.4,baz=14,slow=5.9,SNR=5.0
PDAR Pinedale Array 69.52 50 P **P 17 31 41.3 +1.2**
comp=Z,0.4nm,0.4s,mb3.7,baz=265,slow=4.4,SNR=2.7
NB2 NORSAR Subarra 69.64 339 P **P 17 31 39.7 -0.8**
comp=Z,1.2nm,0.5s,mb4.1,baz=31,slow=6.5
NOA NORSAR Array B 69.64 339 P **P 17 31 39.9 -0.6**
comp=Z,1.3nm,0.5s,mb4.2,baz=31,slow=6.3,SNR=8.1
NOA NORSAR Array B 69.64 339 P **P 17 31 39.9 -0.6**
NOA pmax pmax
comp=Z,1.0nm,0.5s
KIV Kislovodsk 69.99 312 *e*P **P 17 31 44.3 +1.3**
KIV pmax pmax
comp=Z,18nm,0.9s,mb5.0
KIV Kislovodsk 69.99 312 *e*P **P 17 31 44.0 +1.0**
comp=Z,13nm,0.7s,mb5.0
ZEI Tsey 70.12 311 *e*P **P 17 31 42.4 -1.4**
ZEI pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
AKASG Malin Array Be 71.73 324 P **P 17 31 52.9 -0.5**
comp=Z,5.2nm,0.7s,mb4.6,baz=38,slow=5.9,SNR=24
AKASG Malin Array Be 71.73 324 P **P 17 31 52.9 -0.5**
AKASG pmax pmax
comp=Z,5.0nm,0.7s
BRTR Keskin Array B 77.76 314 P **P 17 32 28.8 +0.2**
comp=Z,0.8nm,0.7s,mb3.8,baz=29,slow=3.7,SNR=5.0
BRTR Keskin Array B 77.76 314 P **P 17 32 28.8 +0.3**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
KHC Kasperske Hory 79.05 331 *e*P **P 17 32 36.0 +0.5**
KHC MLR MLR
comp=Z,1μm,22.0s
KHC Kasperske Hory 79.05 331 *e*P **P 17 32 36.0 +0.5**
GERES GERESS Array B 79.25 331 P **P 17 32 36.5 -0.1**
comp=Z,0.5nm,0.4s,mb3.8,baz=28,slow=6.0,SNR=5.8
GERES GERESS Array B 79.25 331 P **P 17 32 36.5 -0.1**
GERES pmax pmax
comp=Z,1.0nm,0.4s
MMAI Mount Meron Ar 81.73 308 P **P 17 32 51.5 +1.3**
comp=Z,3.0nm,0.6s,mb4.4,baz=34,slow=6.1,SNR=8.4

TXAR Lajitas Array 82.24 57 P **P 17 32 54.1 +1.2**
comp=Z,0.5nm,0.7s,mb3.5,baz=320,slow=4.0,SNR=3.8
TXAR Lajitas Array 82.24 57 P **P 17 32 54.1 +1.2**
TXAR pmax pmax
comp=Z,1.0nm,0.7s

IDC ***03*** *17:31:30.5±0.4, 8.°18S×120.°27E, h0km, mb5.1/21, mb1 5.2/23, mb1mx5.1/26, mbtmp5.1/23, ML4.7/2, MS5.2/29, Ms1 5.2/29, ms1mx5.2/39, Error ellipse: s-maj=16.5km s-min=9.2km az=65.0*
ISCJB ***03*** *17:31:31.7±0.2, 8.°22S±0.°02×120.°30E±0.°03, h16km, mb5.3/119, MS5.3/224, Error ellipse: s-maj=3.9km s-min=3.0km az=152.1*
BJI ***03*** *17:31:31.3, 8.°20S×120.°30E, h14km, mB5.8/49, mb5.3/58, Ms5.5/71, Ms7 5.3/61*
NEIC ***03*** *17:31:32.4±0.2, 8.°17S×120.°26E, h14km, mb5.6/52, MS5.3/174, MW5.9, MW5.7, Error ellipse: s-maj=7.7km s-min=4.4km az=59.0, Moment Tensor Solution. s30 Moment tensor: Scale 10^{17}Nm; M_{rr}2.28; $M_{\theta\theta}$-0.59; $M_{\phi\phi}$-1.68; $M_{r\theta}$-4.00; $M_{\theta\phi}$-1.07; $M_{\phi r}$0.19; Best double couple: $M_0$4.60000×10^{17} NP1:ϕ_s260.00000°, δ78.00000°, λ108.00000°. NP2:ϕ_s23.00000°, δ21.00000°, λ35.00000°. Principal axes: T 5.1800, Plg53.0000°, Azm190.0000°; N -1.4700, Plg17.0000°, Azm75.0000°; P -3.7100, Plg30.0000°, Azm334.0000°;*
NEIC Felt [IV] at Ruteng, [III] at Labuhanbajo and [II] at Ende. Felt [III] at Bima, Sumbawa.
MOS ***03*** *17:31:33.9±1.1, 8.°10S×120.°24E, h33km, mb5.6/45, MS5.2/26 Error ellipse: s-maj=10.9km s-min=6.3km az=108.1*
GCMT ***03*** *17:31:38.6±0.1, 8.°09S×120.°32E, h21km, MW5.9, Moment Tensor Solution. s96,c176; s66,c89; Moment tensor: Scale 10^{17}Nm; M_{rr}6.40±.11; $M_{\theta\theta}$-6.76±.07; $M_{\phi\phi}$0.36±.08; $M_{r\theta}$-5.14±.16; $M_{\theta\phi}$-0.42±.05; $M_{\phi r}$-1.10±.18; Best double couple: $M_0$8.40000×10^{17} NP1:ϕ_s93.00000°, δ26.00000°, λ100.00000°. NP2:ϕ_s261.00000°, δ64.00000°, λ85.00000°. Principal axes: T 8.2700, Plg70.0000°, Azm160.0000°; N 0.3200, Plg5.0000°, Azm263.0000°; P -8.5900, Plg19.0000°, Azm355.0000°; Data Used: II IU CN IC G. Surface waves: sta=105, comp=232, per= 50.*
DJA ***03*** *17:31:39, 8.°25S×120.°42E, h35km, Mw5.8/49*
ISC 03 17:31:33.8±0.1, 8.°24S±0.°02×120.°29E±0.°03, h17km, h17km±1.8km:pP-P,n548,σ1§44/398, mb5.3/119, MS5.3/224, 35C-19D, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.42**	**180**	P	**Pn**	**17 32 01.2**	**+2.4**
MMRI	**Maumere**	**1.96**	**102**	P	**Pn**	**17 32 06.6**	**+0.3**
KAPI	**Kappang**	**3.25**	**350**	Pn	**Pn**	**17 32 20.0**	**-4.0**
	10μm,0.6s						
KAPI	**Kappang**	**3.25**	**350**	Pn	**Pn**	**17 32 20.6**	**-3.3**
	127nm,0.3s,baz=182,slow=7.9,SNR=303						
KAPI				Sn	**Sn**	**17 32 56.1**	**-6.1**
	219nm,0.3s,baz=50,slow=21,SNR=6.0						
KAPI	**Kappang**	**3.25**	**350**	*i*P	**Pn**	**17 32 20.6**	**-3.4**
KHKI	**Kahang-Kahang**	**4.64**	**268**	P	**Pn**	**17 32 43.2**	**+0.1**
KDI	**Kendari**	**4.84**	**29**	P	**Pn**	**17 32 47.6**	**+1.7**
SRBI	**Singaraja**	**5.03**	**271**	P	**Pn**	**17 32 49.8**	**+1.3**
	19nm1μm,0.9s						
DNP	**Denpasar**	**5.05**	**265**	P	**Pn**	**17 32 54.5**	**+5.8**
	81nm6μm,1.1s						
IGBI	**Denpasar**	**5.12**	**263**	P	**Pn**	**17 32 53.2**	**+3.4**
TTSI	**Tana Toraja**	**5.18**	**355**	P	**Pn**	**17 32 51.4**	**+0.9**
	5.1nm1μm,1.0s						
NBBI	**Negara**	**5.62**	**268**	P	**Pn**	**17 33 04.3**	**+7.8**
	24nm2μm,1.4s						
ABJI	**Asem Bagus**	**6.02**	**274**	P	**Pn**	**17 33 04.3**	**+2.2**
	1μm,0.9s						
KMMI	**Kalianget**	**6.38**	**280**	P	**Pn**	**17 33 08.2**	**+1.1**
	1μm,0.7s						
KBKI	**Kotabaru**	**6.40**	**320**	P	**Pn**	**17 33 16.0**	**+8.7**
	3.3nm9μm162nm,0.9s						
GMJI	**Gumukmas**	**6.78**	**269**	P	**Pn**	**17 33 15.5**	**+3.0**
	7.4nm826nm,1.4s						
BBKI	**Banjar Baru**	**7.21**	**311**	P	**Pn**	**17 33 19.5**	**+1.1**
	349nm,1.0s						
APSI	**Ampana**	**7.40**	**11**	P	**Pn**	**17 33 23.3**	**+2.2**
	1.4nm5μm314nm,0.8s						
LUWI	**Luwuk**	**7.56**	**19**	P	**Pn**	**17 33 25.0**	**+1.7**
	2.1nm9μm548nm,0.8s						
GRJI	**Gresik**	**7.86**	**279**	P	**Pn**	**17 33 28.3**	**+0.9**
	4.3nm1μm,1.1s						
NLAI	**Namlea**	**8.40**	**54**	P	**Pn**	**17 33 39.0**	**+4.2**
	1.4nm5μm396nm,0.8s						
PWJI	**Pagerwojo**	**8.41**	**271**	P	**Pn**	**17 33 42.2**	**+7.3**
	4.4nm6μm453nm,0.7s						
SJI	**Sawahan**	**8.46**	**273**	P	**Pn**	**17 33 44.5**	**+8.9**
	7μm375nm,0.6s						
NGJI	**Ngawi**	**8.79**	**275**	P	Px	17 33 52.6	
	580nm,1.1s,4.8nm						
MRSI	**Marisa**	**8.81**	**11**	P	**Pn**	**17 33 41.5**	**+1.1**
	0.9nm3μm188nm,0.8s						
PCJI	**Pacitan**	**9.02**	**270**	P	**Pn**	**17 33 53.4**	**+10**
SMRI	**Semarang**	**9.84**	**276**	P	**Pn**	**17 33 57.4**	**+2.9**
	10μm354nm,0.9s						
MNI	**Manado**	**10.63**	**25**	P	**Pn**	**17 34 13.8**	**+8.4**
	4μm225nm,1.4s						
FITZ	**Fitzroy Crossi**	**11.10**	**153**	*e*P	**Pn**	**17 34 11.4**	**-0.4**
	341nm,0.8s						
FITZ				*e*S	**Sn**	**17 36 15.0**	**-0.5**
FITZ	**Fitzroy Crossi**	**11.10**	**153**	Pn	**Pn**	**17 34 12.0**	**+0.2**
	2.6nm,0.3s,baz=339,slow=9.6,SNR=60						
FITZ				Sn	**Sn**	**17 36 13.6**	**-1.9**
	7.5nm,0.3s,baz=168,slow=18,SNR=3.2						
FITZ				LR	LR	17 38 57.6	
	comp=Z,14μm,19.3s,baz=333,slow=40						
FITZ	**Fitzroy Crossi**	**11.10**	**153**	*e*Pn	**Pn**	**17 34 12.5**	**+0.7**
FITZ				*e*Sn	**Sn**	**17 36 14.0**	**-1.5**
FITZ	**Fitzroy Crossi**	**11.10**	**153**	P	**Pn**	**17 34 12.8**	**+1.0**
	7μm519nm,1.0s						
KNA	**Kununurra**	**11.15**	**133**	P	**Pn**	**17 34 13.0**	**+0.5**
	2μm,0.9s						
TNTI	**Ternate**	**11.39**	**39**	P	**Pn**	**17 34 19.6**	**+3.7**
	4μm211nm,1.1s						
STKI	**Sintang**	**12.05**	**313**	P	**Pn**	**17 34 27.5**	**+2.6**
	5μm155nm,1.8s						
TLE	**Tual**	**12.62**	**79**	P	**Pn**	**17 34 40.0**	**+7.4**
	9μm217nm,1.1s						
LEM	**Lembang**	**12.64**	**276**	P	**Pn**	**17 34 43.0**	**+10**
	7μm287nm,0.9s						
TSM	**Tawau**	**12.68**	**349**	P	**Pn**	**17 34 35.3**	**+1.9**
KAKA	**Kakadu**	**12.74**	**111**	*e*P	**Pn**	**17 34 33.4**	**-0.9**
	132nm,0.4s						
KAKA				*e*S	**Sn**	**17 36 52.4**	**-3.5**
KAKA	**Kakadu**	**12.74**	**111**	*e*Pn	**Pn**	**17 34 33.4**	**-0.9**
KAKA	**Kakadu**	**12.74**	**111**	P	**Pn**	**17 34 34.7**	**+0.4**
	4μm564nm,0.7s						
MBWA	**Marble Bar**	**12.86**	**182**	*e*Pn	**Pn**	**17 34 35.6**	**-0.2**
	209nm,1.1s						
MBWA				*e*Sn	**Sn**	**17 36 51.5**	**-7.1**
MBWA	**Marble Bar**	**12.86**	**182**	Pn	**Pn**	**17 34 39.1**	**+3.3**
	SNR=14						
MBWA				Pn	**Pn**	**17 34 39.1**	**+3.3**
	SNR=14						
MBWA	**Marble Bar**	**12.86**	**182**	P	**Pn**	**17 34 38.2**	**+2.4**
	3μm146nm,1.4s						
SBUM	**Sibu**	**13.32**	**322**	P	**Pn**	**17 34 43.9**	**+1.6**
SBUM	**Sibu**	**13.32**	**322**	P	**Pn**	**17 34 43.7**	**+1.4**
	3μm65nm,1.4s						
BTM	**Bintulu**	**13.45**	**327**	P	**Pn**	**17 34 46.0**	**+2.1**
MYLDM	**Lahad Datu**	**13.45**	**352**	P	**Pn**	**17 34 48.0**	**+4.0**
MYLDM	**Lahad Datu**	**13.45**	**352**	P	**Pn**	**17 34 48.2**	**+4.2**
	7μm202nm,1.4s						
DBJI	**Dramaga**	**13.54**	**276**	P	**Pn**	**17 34 49.9**	**+4.7**
	8μm681nm,1.1s						
KSM	**Kuching**	**13.86**	**314**	P	**Pn**	**17 34 51.5**	**+1.9**
KSM	**Kuching**	**13.86**	**314**	*i*P	**Pn**	**17 34 49.6**	**0.0**
KSM	**Kuching**	**13.86**	**314**	P	**Pn**	**17 34 51.4**	**+1.8**
	4μm138nm,1.6s						
SDKM	**Sandakan**	**14.13**	**347**	P	**Pn**	**17 34 55.3**	**+2.1**
CGJI	**Cibinong**	**14.57**	**275**	P	**Pn**	**17 35 06.7**	**+7.4**
	328nm,1.4s						
KKM	**Kota Kinabalu**	**14.76**	**344**	P	**Pn**	**17 35 04.4**	**+2.6**
KKM	**Kota Kinabalu**	**14.76**	**344**	*i*P	**Pn**	**17 35 01.4**	**-0.5**
KKM	**Kota Kinabalu**	**14.76**	**344**	P	**Pn**	**17 35 04.0**	**+2.1**
	4μm93nm,1.2s						
KLI	**Kotabumi**	**15.70**	**281**	P	**Pn**	**17 35 21.6**	**+7.3**
	5μm267nm,1.0s						
KASI	**Kota Agung**	**15.91**	**279**	P	**Pn**	**17 35 22.0**	**+4.9**
	4μm274nm,0.9s						
DAV	**Davao City (W)**	**16.09**	**19**	LR	LR	17 42 36.3	
	comp=Z,4μm,19.9s,baz=322,slow=42						
DAV	**Davao City (W)**	**16.09**	**19**	*i*P	**Pn**	**17 35 18.2**	**-1.2**
MATI	**Mati**	**16.21**	**22**	*e*P	**Pn**	**17 35 23.0**	**+2.0**
PAGZ	**Pagadian**	**16.27**	**11**	*e*P	**Pn**	**17 35 24.1**	**+2.4**
LWLI	**Liwa**	**16.44**	**280**	P	**Pn**	**17 35 31.6**	**+7.8**
MDSI	**Maura Dua**	**16.44**	**282**	P	**Pn**	**17 35 28.2**	**+4.3**
	6μm110nm,1.2s						
BUKP	**Musuan**	**16.70**	**17**	*e*P	Px	17 35 39.5	
BATP	**Bataraza**	**17.10**	**352**	*e*P	**Pn**	**17 35 37.2**	**+5.0**
WRAB	**Tennant Creek**	**17.90**	**132**	P	**Pn**	**17 35 42.0**	**-0.1**
	1μm,1.1s,SNR=52						
WRAB	**Tennant Creek**	**17.90**	**132**	*e*P	**Pn**	**17 35 39.5**	**-2.6**
WRAB				*e*		17 38 50.9	
WRAB				pmax	pmax		
	comp=Z,667nm,1.6s						
WRAB	**Tennant Creek**	**17.90**	**132**	*e*Pn	**Pn**	**17 35 39.5**	**-2.6**
	comp=Z,667nm,1.6s						
WRAB				*e*Sn	**Sn**	**17 38 50.9**	**-10**
WRAB	**Tennant Creek**	**17.90**	**132**	P	**Pn**	**17 35 42.3**	**+0.2**
	comp=Z,5μmcomp=Z,271nm,1.3s						
KSI	**Kapahiang**	**18.18**	**283**	P	**Pn**	**17 35 49.4**	**+3.8**
	comp=Z,6μmcomp=Z,342nm,1.0s						
MSLP	**Maasin**	**18.81**	**14**	*e*P	**Pn**	**17 35 53.8**	**+0.6**
GUIM	**Jordan**	**18.88**	**7**	*e*P	**Pn**	**17 35 55.1**	**+1.1**
MYKOM	**Kota Tinggi**	**19.18**	**301**	P	**Pn**	**17 35 60.0**	**+2.2**
MYKOM	**Kota Tinggi**	**19.18**	**301**	P	**Pn**	**17 35 59.0**	**+1.2**
	comp=Z,5μmcomp=Z,188nm,1.1s						
ENPP	**El Nido**	**19.34**	**357**	*e*P	**Pn**	**17 35 59.4**	**-0.1**
SMPI	**Sarmi**	**19.36**	**72**	P	**Pn**	**17 36 01.3**	**+1.5**
	comp=Z,250nm,1.4s						
KGM	**Kluang**	**19.75**	**300**	P	**Pn**	**17 36 07.1**	**+2.5**
MMPI	**Merauke**	**19.88**	**92**	P	**Pn**	**17 36 10.6**	**+4.5**
	comp=Z,572nm,0.8s						
BUSP	**Coron**	**20.11**	**360**	*e*P	**P**	**17 36 07.9**	**+1.0**
ASAR	**Alice Springs**	**20.14**	**141**	P	**P**	**17 36 08.1**	**+0.9**
	comp=Z,352nm,0.8s,baz=316,slow=10,SNR=881						
ASAR				S	**S**	**17 39 53.3**	**+0.6**
	comp=Z,78nm,1.0s,baz=316,slow=22,SNR=6.9						
SJMP	**San Jose**	**20.58**	**2**	*e*P	**P**	**17 36 13.2**	**+1.2**
BKNI	**Bangkinang**	**20.99**	**293**	P	pP	17 36 27.6	+6.1
	comp=Z,286nm,1.3s,comp=Z,4μm						
CNP	**Catarman**	**21.07**	**12**	*e*P	**P**	**17 36 17.6**	**+0.4**
JAY	**Jayapura**	**21.09**	**75**	P	**P**	**17 36 20.0**	**+2.4**
	comp=Z,104nm,1.9s,mb4.8						
PPI	**Padang Panjang**	**21.28**	**290**	P	**P**	**17 36 22.1**	**+2.5**
	comp=Z,3μmcomp=Z,128nm,1.3s,mb5.1						
AUQP	**San Andres**	**21.55**	**6**	*e*P	pP	17 36 33.1	+5.6
BOAC	**Boac**	**21.61**	**4**	*e*P	**P**	**17 36 26.9**	**+3.9**
KTGM	**Kuala Trenggan**	**21.78**	**308**	P	**P**	**17 36 26.1**	**+1.1**
LUBP	**Lubang**	**21.83**	**360**	*e*P	**P**	**17 36 25.8**	**+0.3**
FRIM	**Kepong**	**21.83**	**301**	P	**P**	**17 36 27.3**	**+1.8**
PVCP	**Virac**	**22.03**	**10**	*e*P	**P**	**17 36 28.6**	**+1.0**
TGY	**Tagaytay City**	**22.20**	**2**	P	**P**	**17 36 29.2**	**-0.2**
	comp=Z,153nm,0.7s,mb5.5,baz=179,slow=6.3,SNR=13						
TGY				LR	LR	17 45 16.8	
	comp=Z,24nm,19.1s,baz=167,slow=37						
MNSI	**Mandailing Nat**	**22.51**	**293**	P	**P**	**17 36 35.1**	**+2.3**
	comp=Z,3μmcomp=Z,150nm,1.3s,mb5.3						
IPM	**Ipoh**	**23.00**	**303**	P	**P**	**17 36 40.6**	**+2.6**
IPM	**Ipoh**	**23.00**	**303**	P	**P**	**17 36 41.2**	**+3.2**
	comp=Z,6μmcomp=Z,222nm,1.2s,mb5.5						
COEN	**Coen**	**23.15**	**106**	*e*P	**P**	**17 36 38.3**	**-1.3**
	comp=Z,1μm,0.9s,mb6.4						
COEN	**Coen**	**23.15**	**106**	P	**P**	**17 36 38.6**	**-1.0**
	comp=Z,729nm,1.1s,mb6.0						
KLBR	**Kellerberrin**	**23.36**	**185**	*i*P	**P**	**17 36 41.5**	**0.0**
	comp=Z,414nm,1.1s,mb5.8						
KLBR				*e*S	**S**	**17 40 53.3**	**-0.1**
COCO	**West Island**	**23.41**	**258**	P	**P**	**17 36 39.8**	**-2.5**
COCO				pmax	pmax		
	comp=Z,359nm,1.2s,mb5.7						
COCO				MLR	MLR		
	comp=Z,7μm,20.0s,MS5.1						
COCO	**West Island**	**23.41**	**258**	P	**P**	**17 36 39.8**	**-2.6**
	comp=Z,359nm,1.2s,mb5.7						
COCO				LR	LR		
	comp=Z,7μm,20.0s,MS5.1						
FORT	**Forrest**	**23.57**	**163**	*e*P	**P**	**17 36 43.8**	**+0.1**
	comp=Z,319nm,0.9s,mb5.8						
FORT				*e*S	**S**	**17 40 58.7**	**+1.7**
FORT	**Forrest**	**23.57**	**163**	*i*P	**P**	**17 36 43.4**	**-0.3**
	comp=Z,380nm,0.9s,mb5.8						
KULM	**Kulim**	**23.76**	**304**	P	**P**	**17 36 45.7**	**+0.1**
KULM	**Kulim**	**23.76**	**304**	*i*P	**P**	**17 36 44.3**	**-1.3**
	comp=Z,230nm,1.2s,mb5.5						
KULM				*e*S	**S**	**17 41 00.5**	**+0.2**
KULM				LR	LR		
	comp=Z,11μm,19.0s,MS5.3						
BALP	**Baler**	**23.86**	**3**	*e*P	**P**	**17 36 53.9**	**+7.5**
PSI	**Prapat**	**23.97**	**296**	P	**P**	**17 36 46.5**	**-1.1**
	comp=Z,70nm,1.1s,mb5.0,baz=163,slow=9.5,SNR=28						
PSI				LR	LR	17 46 36.9	
	comp=Z,11μm,19.5s,MS5.3,baz=211,slow=38						
BCPH	**Baguio City Da**	**24.46**	**1**	*e*P	**P**	**17 36 48.4**	**-3.5**
BOLP	**Bolinao**	**24.46**	**359**	*e*P	**P**	**17 36 55.0**	**+3.1**
GSI	**Gunungsitoli**	**24.55**	**292**	P	**P**	**17 37 01.8**	**+8.9**
	comp=Z,98nm,1.8s,mb5.0						
NWAO	**Narrogin (SRO)**	**24.73**	**186**	P	**P**	**17 36 55.0**	**+0.7**
	comp=Z,168nm,0.8s,mb5.6,baz=19,slow=10,SNR=54						
NWAO				LR	LR	17 46 02.5	
	comp=Z,51nm,20.4s,baz=359,slow=35						
NWAO	**Narrogin (SRO)**	**24.73**	**186**	*i*P	**P**	**17 36 54.3**	**0.0**
NWAO				pmax	pmax		
	comp=Z,490nm,1.4s						
NWAO				MLR	MLR		
	comp=Z,10μm,20.0s						
NWAO	**Narrogin (SRO)**	**24.73**	**186**	*i*P	**P**	**17 36 54.3**	**0.0**
	comp=Z,490nm,1.4s,mb5.8						
NWAO				LR	LR		
	comp=Z,10μm,20.0s,MS5.3						
NWAO	**Narrogin (SRO)**	**24.73**	**186**	P	**P**	**17 36 56.3**	**+2.0**
	SNR=20						
NWAO				P		17 36 56.3	
	SNR=20						
SNG	**Songkhla**	**24.89**	**307**	P	**P**	**17 36 58.0**	**+2.1**
	comp=Z,400nm,0.9s,mb6.0						
CAUP	**Cauayan**	**25.07**	**3**	*e*P	**P**	**17 37 00.6**	**+3.2**
PALP	**Palanan**	**25.23**	**5**	*e*P	**P**	**17 37 08.0**	**+9.1**
CTA	**Charters Tower**	**27.74**	**118**	*e*P	**P**	**17 37 21.6**	**-0.1**

SSLB	**Suanglung**	**31.84**	**1**	*e*P	**P**	**17 37 56.8**	**-1.0**
	comp=Z,36nm,0.8s,mb5.3						
GZH	**Guangzhou**	**31.86**	**348**	P	**P**	**17 38 00.9**	**+2.8**
GZH				S	**S**	**17 43 11.0**	**+2.8**
GZH				LR	LR		
	comp=N,5μm,19.4s,MS5.3						
GZH				LR	LR		
	comp=E,2μm,17.7s,MS5.3						
GZH				LR	LR		
	comp=Z,9μm,35.9s						
GUMO	**Guam**	**32.64**	**49**	PFAKE		17 38 20.0	+15
GUMO				LR	LR		
	comp=Z,2μm,21.0s,MS4.8						
YHNB	**Yeheng**	**32.72**	**2**	P	**P**	**17 38 06.4**	**+0.8**
	comp=Z,124nm,1.3s,mb5.7						
YHNB				LR	LR		
	comp=Z,4μm,20.0s,MS5.1						
QZH	**Quanzhou**	**33.02**	**357**	P	**P**	**17 38 05.0**	**-3.2**
QZH				LR	LR		
	comp=N,2μm,16.3s,MS5.3						
QZH				LR	LR		
	comp=E,4μm,14.0s,MS5.3						
QZH				LR	LR		
	comp=Z,6μm,17.4s,MS5.4						
TATO	**Taipei**	**33.03**	**2**	*e*P	**P**	**17 38 03.2**	**-5.1**
	comp=Z,85nm,1.2s,mb5.5						
TATO				LR	LR		
	comp=Z,3μm,19.0s,MS5.0						
CMAR	**Chiang Mai Arr**	**33.88**	**322**	P	**P**	**17 38 15.2**	**-0.6**
	comp=Z,5.3nm,0.7s,mb4.6,baz=150,slow=6.8,SNR=52						
CMAR				LR	LR	17 54 04.3	
	comp=Z,5μm,19.4s,MS5.3,baz=159,slow=40						
JOW	**Kunigami**	**35.71**	**12**	LR	LR	17 53 20.7	
	comp=Z,3μm,19.9s,MS5.0,baz=133,slow=37						
ARMA	**Armidale**	**36.68**	**131**	*e*P	**P**	**17 38 41.7**	**+1.9**
ARMA				*e*S	**S**	**17 44 28.5**	**+6.0**
ARMA	**Armidale**	**36.68**	**131**	*e*P	**P**	**17 38 41.9**	**+2.0**
	comp=Z,55nm,0.8s,mb5.4						
GYA	**Guiyang**	**36.94**	**339⇑**	*i*P	**P**	**17 38 44.8**	**+2.8**
GYA				pP	pP	17 38 49.6	+2.2
GYA				PP	PP	17 40 09.3	+2.9
GYA				PcP	PcP	17 41 03.4	+0.1
GYA				S	**S**	**17 44 28.0**	**+1.5**
GYA				sS	sS	17 44 35.1	-0.3
GYA				ScP	ScP	17 44 50.9	+1.2
GYA				SS	SS	17 46 57.7	-11
GYA				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.3						
GYA				pmax	pmax		
	comp=Z,160nm,5.2s						
GYA				LR	LR		
	comp=N,5μm,17.9s,MS5.6						
GYA				LR	LR		
	comp=E,6μm,17.0s,MS5.6						
GYA				LR	LR		
	comp=Z,9μm,16.8s,MS5.6						
TOO	**Toolangi**	**37.05**	**146⇑**	*i*P	**P**	**17 38 44.6**	**+1.7**
TOO				*e*S	**S**	**17 44 37.0**	**+8.9**
KMI	**Kunming**	**37.31**	**333**	P	**P**	**17 38 45.8**	**+0.6**
KMI				pP	pP	17 38 49.9	-0.7
KMI				sP	sP	17 38 51.2	-1.5
KMI				PP	PP	17 40 14.6	+4.1
KMI				S	**S**	**17 44 35.0**	**+2.8**
KMI				sS	sS	17 44 41.6	+0.6
KMI				SS	SS	17 47 06.7	-9.4
KMI				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.5						
KMI				pmax	pmax		
	comp=Z,370nm,4.4s						
KMI				LR	LR		
	comp=N,7μm,13.3s,MS5.6						
KMI				LR	LR		
	comp=E,3μm,17.8s,MS5.6						
KMI				LR	LR		
	comp=Z,9μm,14.6s,MS5.7						
CAN	**Canberra**	**37.64**	**140**	*e*P	**P**	**17 38 48.8**	**+0.9**
CAN				pmax	pmax		
	comp=Z,67nm,1.0s,mb5.3						
CAN				MLR	MLR		
	comp=Z,8μm,19.0s,MS5.5						
CAN	**Canberra**	**37.64**	**140**	*e*P	**P**	**17 38 48.8**	**+0.9**
	comp=Z,68nm,1.0s,mb5.3						
CAN				LR	LR		
	comp=Z,8μm,19.0s,MS5.5						
CNB	**Canberra Magne**	**37.87**	**140**	*e*P	**P**	**17 38 51.1**	**+1.2**
CNB				*e*S	**S**	**17 44 45.5**	**+5.0**
RIV	**Riverview**	**38.17**	**136**	*e*P	**P**	**17 38 54.6**	**+2.1**
WHN	**Wuhan**	**38.98**	**352**	⇓P	**P**	**17 39 03.0**	**+3.8**
WHN				pmax	pmax		
	comp=Z,110nm,1.2s,mb5.5						
WHN				LR	LR		
	comp=N,3μm,14.3s						
WHN				LR	LR		
	comp=Z,7μm,16.8s,MS5.6						
SSE	**Sheshan**	**39.12**	**1**	P	**P**	**17 39 02.1**	**+1.8**
SSE				PP	PP	17 40 32.9	+2.6
SSE				S	**S**	**17 45 00.4**	**+1.0**
SSE				pmax	pmax		
	comp=Z,55nm,1.2s,mb5.2						
SSE				pmax	pmax		
	comp=Z,730nm,6.9s						
SSE				LR	LR		
	comp=N,2μm,25.9s,MS4.9						
SSE				LR	LR		
	comp=E,990nm,26.2s,MS4.9						
SSE				LR	LR		
	comp=Z,3μm,27.6s,MS5.0						
HNR	**Honiara**	**39.19**	**95**	PFAKE		17 39 10.0	+8.7
HNR				LR	LR		
	comp=Z,4μm,19.0s,MS5.3						
ENH	**Enshi**	**39.67**	**345**	*e*P	**P**	**17 39 03.2**	**-1.8**
	comp=Z,39nm,0.7s,mb5.2						
ENH				LR	LR		
	comp=Z,3μm,20.0s,MS5.1						
NJ2	**Nanjing**	**40.09**	**358**	*e*P	**P**	**17 39 05.0**	**-3.4**
NJ2				pP	pP	17 39 09.5	-4.3
NJ2				PP	PP	17 40 39.7	-1.1
NJ2				S	**S**	**17 45 08.0**	**-5.9**
NJ2				sS	sS	17 45 26.0	+3.2
NJ2				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.9						
NJ2				pmax	pmax		
	comp=Z,1μm,10.9s						
NJ2				LR	LR		
	comp=N,3μm,17.6s,MS5.4						
NJ2				LR	LR		
	comp=E,3μm,16.2s,MS5.4						
NJ2				LR	LR		
	comp=Z,4μm,27.7s						
CBIJ	**Chichi jima**	**41.04**	**30**	LR	LR	17 54 08.6	
	comp=Z,2μm,20.4s,MS4.8,baz=318,slow=33						
MOO	**Moorlands**	**41.48**	**150**	*e*P	**P**	**17 39 21.9**	**+2.0**
TAU	**Tasmania Unive**	**41.90**	**150**	PFAKE		17 39 30.0	+6.8
TAU				LR	LR		
	comp=Z,6μm,20.0s,MS5.5						
CD2	**Chengdu**	**42.03**	**339⇑**	*i*P	**P**	**17 39 24.0**	**-0.4**
CD2				pP	pP	17 39 28.5	-1.4
CD2				sP	sP	17 39 31.0	-1.0
CD2				PP	PP	17 41 05.0	+3.0
CD2				PcP	PcP	17 41 18.9	-0.5
CD2				PcS	PcS	17 45 09.2	-1.9
CD2				S	**S**	**17 45 43.5**	**+0.7**
CD2				sS	sS	17 45 50.9	-0.9
CD2				SS	SS	17 48 45.7	-4.8
CD2				ScS	ScS	17 49 23.6	-3.1
CD2				pmax	pmax		
	comp=Z,140nm,1.3s,mb5.4						
CD2				pmax	pmax		
	comp=Z,1μm,8.2s						
CD2				LR	LR		
	comp=N,5μm,19.0s,MS5.6						
CD2				LR	LR		
	comp=E,6μm,16.6s,MS5.6						
CD2				LR	LR		
	comp=Z,4μm,15.5s,MS5.4						
PALK	**Pallekele**	**42.37**	**290**	LR	LR	17 57 40.1	
	comp=Z,5μm,18.2s,MS5.4,baz=115,slow=37						
XAN	**Xi'an**	**43.41**	**346**	P	**P**	**17 39 35.8**	**+0.2**
XAN				pP	pP	17 39 38.9	-2.1
XAN				sP	sP	17 39 40.2	-3.0
XAN				PP	PP	17 41 17.1	+0.4
XAN				S	**S**	**17 46 00.8**	**-2.2**
XAN				pmax	pmax		
	comp=Z,8.0nm,1.5s,mb4.2						
XAN				LR	LR		
	comp=N,3μm,26.8s,MS5.1						
XAN				LR	LR		
	comp=E,1μm,22.1s,MS5.1						
XAN				LR	LR		
	comp=Z,1μm,28.4s						
SHL	**Shillong**	**43.51**	**321**	*e*PKP	**P**	**17 39 36.2**	**-0.4**
SHL				*e*S	**S**	**17 46 04.0**	**-0.8**
CAL	**Calcutta**	**43.77**	**315**	*e*PKP	**P**	**17 39 45.6**	**+6.9**
CAL				*e*S	**S**	**17 46 15.4**	**+6.8**
TIA	**Tai'an**	**44.31**	**356**	*e*P	**P**	**17 39 49.6**	**+6.8**
JHS	**Saijyo**	**44.68**	**15**	P	**P**	**17 39 55.1**	**+9.3**
VIS	**Vishakhapatnam**	**44.70**	**305**	*i* P	**P**	**17 39 43.8**	**-2.5**
VIS				*e*x	x	17 40 02.0	
	comp=Z,148nm,1.7s						
VIS				*i* x	x	17 46 14.2	
JAD	**Aida**	**44.90**	**16**	P	**P**	**17 39 54.7**	**+7.1**
JWT	**Wachi**	**45.58**	**17**	P	**P**	**17 40 01.9**	**+9.0**
INCN	**Inchon**	**45.87**	**7**	PFAKE		17 40 10.0	+15
INCN				LR	LR		
	comp=Z,1μm,21.0s,MS4.9						
KSRS	**Korea Array**	**46.01**	**8**	P	**P**	**17 39 56.4**	**+0.1**
	comp=Z,16nm,1.1s,mb4.9,baz=185,slow=8.2,SNR=27						
KSRS				LR	LR	18 01 16.8	
	comp=Z,2μm,20.6s,MS5.0,baz=45,slow=39						
BOK	**Bokaro**	**46.30**	**314**	*e*x	**P**	**17 40 00.7**	**+1.9**
TIY	**Taiyuan**	**46.30**	**351**	*e*P	**P**	**17 39 56.5**	**-2.0**
TIY				S	**S**	**17 46 37.5**	**-7.3**
TIY				LR	LR		
	comp=N,2μm,12.6s,MS5.4						
TIY				LR	LR		
	comp=E,2μm,13.4s,MS5.4						
TIY				LR	LR		
	comp=Z,2μm,18.9s						
NOUC	**Port Laguerre**	**46.31**	**113**	*e*P	**P**	**17 39 59.2**	**+0.2**
DZM	**Mont Dzumac**	**46.43**	**113**	*e*P	**P**	**17 40 00.1**	**+0.2**
	comp=Z,221nm,1.3s,mb5.9						
DZM				*e*S	**S**	**17 46 47.9**	**+0.5**
	comp=Z,2μm,35.0s						
DZM				*e*LQ		17 51 14.0	
	comp=Z,5μm,27.8s						
DZM				*e*LR	LR	17 53 14.8	
	comp=Z,5μm,23.1s						
DZM	**Mont Dzumac**	**46.43**	**113**	*e*P	**P**	**17 40 00.3**	**+0.4**
	comp=Z,105nm,1.1s,mb5.7						
NORM	**Noumea**	**46.49**	**113**	*e*P	**P**	**17 40 01.4**	**+0.9**
LZH	**Lanzhou**	**46.73**	**342**	*e*P	**P**	**17 40 03.4**	**+1.4**
LZH				pP	pP	17 40 07.2	-0.2
LZH				sP	sP	17 40 10.0	+0.4
LZH				PP	PP	17 41 49.0	-3.0
LZH				S	**S**	**17 46 51.0**	**0.0**
LZH				sS	sS	17 47 02.0	+2.0
LZH				SS	SS	17 50 14.1	-3.7
LZH				pmax	pmax		
	comp=Z,85nm,1.3s,mb5.5						
LZH				pmax	pmax		
	comp=Z,570nm,5.4s						
LZH				LR	LR		
	comp=E,3μm,13.1s						
LZH				LR	LR		
	comp=Z,4μm,13.8s,MS5.5						
DL2	**Dalian**	**46.92**	**1**	*e*P	**P**	**17 40 02.5**	**-0.9**
DL2				S	**S**	**17 46 51.3**	**-2.4**
DL2				SS	SS	17 50 09.2	-12
DL2				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
DL2				pmax	pmax		
	comp=Z,420nm,5.6s						
DL2				LR	LR		
	comp=N,780nm,18.8s,MS4.9						
DL2				LR	LR		
	comp=E,980nm,16.6s,MS4.9						
DL2				LR	LR		
	comp=Z,1μm,15.2s,MS4.9						
LSA	**Lhasa**	**47.00**	**325**	P	**P**	**17 40 04.0**	**-0.2**
LSA				pP	pP	17 40 15.6	+5.9
LSA				S	**S**	**17 46 51.8**	**-3.4**
LSA				pmax	pmax		
	comp=Z,30nm,1.3s,mb5.1						
LSA				pmax	pmax		
	comp=Z,1μm,5.0s						
LSA				LR	LR		
	comp=N,550nm,15.0s,MS4.9						
LSA				LR	LR		
	comp=E,1μm,19.0s,MS4.9						
LSA				LR	LR		
	comp=Z,1μm,17.0s,MS5.0						
LSA	**Lhasa**	**47.00**	**325⇓**	*e*P	**P**	**17 40 03.9**	**-0.3**
LSA				*e*S	**S**	**17 46 55.1**	**-0.1**
LSA				pmax	pmax		
	comp=Z,156nm,1.4s,mb5.8						
LSA				MLR	MLR		
	comp=Z,4μm,19.0s,MS5.4						
LSA	**Lhasa**	**47.00**	**325⇓**	*e*P	**P**	**17 40 03.9**	**-0.3**
	comp=Z,156nm,1.4s,mb5.8						
LSA				*e*S	**S**	**17 46 55.0**	**-0.1**
LSA				LR	LR		
	comp=Z,4μm,19.0s,MS5.4						
JRY	**Ryogami san**	**47.38**	**21**	P	**P**	**17 40 14.9**	**+7.9**
DGAR	**Diego Garcia**	**47.38**	**268**	PFAKE		17 40 20.0	+12
DGAR				LR	LR		
	comp=Z,4μm,22.0s,MS5.3						
MAJO	**Matsushiro**	**47.62**	**20**	*e*P	**P**	**17 40 08.8**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,114nm,1.4s,mb5.7						
MAJO				MLR	MLR		
	comp=Z,2μm,21.0s,MS5.1						
MAJO	**Matsushiro**	**47.62**	**20**	*e*P	**P**	**17 40 08.8**	**-0.1**
	comp=Z,114nm,1.4s,mb5.7						
MAJO				LR	LR		
	comp=Z,2μm,21.0s,MS5.1						
MAT	**Matsushiro**	**47.62**	**20**	P	**P**	**17 40 08.7**	**-0.2**
MAT				S	**S**	**17 46 56.0**	**-7.7**
MAT	**Matsushiro**	**47.62**	**20**	P	**P**	**17 40 14.7**	**+5.8**
MJAR	**Matsushiro Arr**	**47.62**	**20**	P	**P**	**17 40 08.7**	**-0.2**
	comp=Z,18nm,1.1s,mb5.0,baz=195,slow=8.0,SNR=17						
MJAR				LR	LR	17 58 53.8	
	comp=Z,1μm,19.9s,MS4.9,baz=205,slow=34						
BJT	**Baijiatuau**	**48.16**	**356**	*e*P	**P**	**17 40 11.4**	**-1.7**
BJT				pmax	pmax		
	comp=Z,154nm,1.1s						
BJT				MLR	MLR		
	comp=Z,2μm,22.0s						
BJT	**Baijiatuau**	**48.16**	**356**	*e*P	**P**	**17 40 11.4**	**-1.7**
	comp=Z,154nm,1.1s,mb6.0						
BJT				LR	LR		
	comp=Z,2μm,22.0s,MS5.1						
BJI	**Beijing**	**48.18**	**356**	P	**P**	**17 40 12.4**	**-0.8**
BJI				S	**S**	**17 47 08.5**	**-3.1**
BJI				pmax	pmax		
	comp=Z,36nm,0.7s,mb5.5						
BJI				pmax	pmax		
	comp=Z,810nm,6.0s						
BJI				LR	LR		
	comp=N,2μm,17.9s,MS5.2						
BJI				LR	LR		
	comp=E,2μm,22.4s,MS5.2						
BJI				LR	LR		
	comp=Z,2μm,21.9s,MS5.0						
HYB	**Hyderabad**	**48.49**	**302**	*e*P	**P**	**17 40 13.0**	**-3.0**
HYB				*e*S	**S**	**17 47 10.0**	**-6.7**
HYB	**Hyderabad**	**48.49**	**302**	*i* P	**P**	**17 40 13.0**	**-3.0**
HYB				*e*S	**S**	**17 47 14.0**	**-2.7**
HYB				LR	LR	18 02 16.0	
	comp=Z,5.5nm,18.0s						
GUN	**Gumba**	**48.98**	**318**	*e*P	**P**	**17 40 19.3**	**-0.3**
	comp=Z,105nm,0.7s,mb6.0						
JSD	**Sado**	**48.99**	**19**	P	**P**	**17 40 18.7**	**-0.8**
PKI	**Pulchoki**	**49.06**	**318**	*e*P	**P**	**17 40 19.4**	**-0.8**
	comp=Z,119nm,1.3s,mb5.8						
PKI	**Pulchoki**	**49.06**	**318**	*e*P	**P**	**17 40 19.4**	**-0.8**
PKI				pmax	pmax		
	comp=Z,119nm,1.3s,mb5.8						
DMN	**Daman**	**49.29**	**318**	*e*P	**P**	**17 40 21.3**	**-0.7**
	comp=Z,172nm,1.2s,mb6.0						
KKN	**Kakani**	**49.29**	**318**	*e*P	**P**	**17 40 21.3**	**-0.7**
	comp=Z,267nm,1.6s,mb6.0						
KKN	**Kakani**	**49.29**	**318**	*e*P	**P**	**17 40 21.3**	**-0.7**
KKN				pmax	pmax		
	comp=Z,267nm,1.6s,mb6.0						
HHC	**Hu-ho-hao-te**	**49.50**	**351**	*e*P	**P**	**17 40 26.4**	**+3.1**
HHC				pP	pP	17 40 30.9	+2.1
HHC				sP	sP	17 40 33.4	+2.5
HHC				PcP	PcP	17 41 47.4	+2.2
HHC				PP	PP	17 42 21.9	+4.1
HHC				ScP	ScP	17 45 41.1	+1.1
HHC				PcS	PcS	17 45 42.6	+0.9
HHC				S	**S**	**17 47 34.7**	**+4.5**
HHC				ScS	ScS	17 50 14.8	+0.3
HHC				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
HHC				LR	LR		
	comp=N,1μm,23.7s,MS5.1						
HHC				LR	LR		
	comp=E,2μm,21.6s,MS5.1						
HHC				LR	LR		
	comp=Z,3μm,28.8s						
BTO	**Baotou**	**49.51**	**350**	*e*P	**P**	**17 40 24.0**	**+0.6**
JMM	**Marumori**	**49.70**	**21**	P	**P**	**17 40 26.6**	**+1.7**
SNY	**Shenyang**	**49.91**	**3 ⇑**	P	**P**	**17 40 27.0**	**+0.6**
SNY				S	**S**	**17 47 27.9**	**-8.0**
SNY				pmax	pmax		
	comp=Z,34nm,1.2s,mb5.2						
SNY				pmax	pmax		
	comp=Z,880nm,5.7s						
SNY				LR	LR		
	comp=N,2μm,25.0s						
SNY				LR	LR		
	comp=Z,2μm,27.9s,MS5.1						
NGP	**Nagpur**	**49.93**	**306**	*e*PKP	**P**	**17 40 19.9**	**-7.0**
NGP				*e*x	x	17 40 38.0	
	comp=Z,125nm,1.6s						
NGP				⇓*i*S	**S**	**17 47 27.1**	**-10**
JYA	**Atsumi**	**49.98**	**20**	P	**P**	**17 40 28.7**	**+1.7**
JBP	**Jabalpur**	**50.28**	**309**	*i* P	**P**	**17 40 29.0**	**-0.6**
JBP				*i* x	x	17 47 37.0	
GTA	**Gaotai**	**51.07**	**340**	⇓P	**P**	**17 40 35.4**	**+0.2**
GTA				pP	pP	17 40 40.0	-0.8
GTA				sP	sP	17 40 42.5	-0.4
GTA				PP	PP	17 42 33.4	+1.3
GTA				ScP	ScP	17 45 44.8	-2.0
GTA				S	**S**	**17 47 53.5**	**+1.4**
GTA				sS	sS	17 48 01.3	+0.1
GTA				SS	SS	17 51 26.7	-0.9
GTA				pmax	pmax		
	comp=Z,9.0nm,1.7s,mb4.4						
GTA				pmax	pmax		
	comp=Z,590nm,6.0s						
GTA				LR	LR		
	comp=N,2μm,18.6s,MS5.4						
GTA				LR	LR		
	comp=E,3μm,18.9s,MS5.4						
GTA				LR	LR		
	comp=Z,2μm,18.0s,MS5.3						
JOM	**Ohasama**	**51.31**	**21**	P	**P**	**17 40 39.8**	**+2.8**
CN2	**Changchun**	**52.00**	**5**	*e*P	**P**	**17 40 41.8**	**-0.3**
CN2				*e*pP	pP	17 40 46.2	-1.5
CN2				*e*sP	sP	17 40 48.8	-1.0
CN2				PP	PP	17 42 41.6	+1.1
CN2				*e*S	**S**	**17 47 58.9**	**-5.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,2.0s,mb4.4						
CN2				pmax	pmax		
	comp=Z,1μm,12.0s						
CN2				LR	LR		
	comp=N,1μm,18.0s,MS5.1						
CN2				LR	LR		
	comp=E,1μm,18.0s,MS5.1						
CN2				LR	LR		
	comp=Z,900nm,23.0s,MS4.7						
KAD	**Karad**	**52.16**	**299**	*e*PKP	**P**	**17 40 42.5**	**-1.3**
VLA	**Vladivostok**	**52.19**	**11**	*e*P	**P**	**17 40 41.4**	**-2.1**
VLA				*e**PP	pP	17 40 50.1	+1.0
VLA				*e**SP	sP	17 40 58.2	+7.0
VLA				*e*		17 41 54.0	
VLA				*e*S	**S**	**17 48 00.8**	**-6.6**
VLA				*e**SS	sS	17 48 19.6	+3.1
VLA				pmax	pmax		
	comp=Z,41nm,1.4s,mb5.2						
VLA				MLR	MLR		
	comp=Z,800nm,18.2s,MS4.8						
BHPL	**Bhopal**	**52.31**	**308**	*e*PKP	**P**	**17 40 43.1**	**-1.7**
JOT	**Ohata**	**52.93**	**20**	P	**P**	**17 40 57.5**	**+8.4**
POO	**Poona**	**52.98**	**301**	*e*PKP	**P**	**17 40 47.9**	**-1.9**
WAKE	**Wake Island**	**53.24**	**59**	PFAKE		17 41 00.0	+8.3
WAKE				LR	LR		
	comp=Z,1μm,20.0s,MS5.0						
MDJ	**Mudanjiang**	**53.27**	**8**	P	**P**	**17 40 52.0**	**+0.5**
MDJ				pP	pP	17 40 54.4	-2.7
MDJ				PcP	PcP	17 41 59.3	+0.2
MDJ				PP	PP	17 42 58.5	+6.6
MDJ				ScP	ScP	17 45 55.7	-0.5
MDJ				PcS	PcS	17 45 57.5	-0.3
MDJ				S	**S**	**17 48 17.9**	**-4.2**
MDJ				ScS	ScS	17 50 42.7	+2.3
MDJ				pmax	pmax		
	comp=Z,41nm,1.1s,mb5.3						
MDJ				pmax	pmax		
	comp=Z,670nm,7.4s						
MDJ				LR	LR		
	comp=N,2μm,27.6s,MS5.1						
MDJ				LR	LR		
	comp=E,1μm,29.6s,MS5.1						
MDJ				LR	LR		
	comp=Z,2μm,35.4s						
MDJ	**Mudanjiang**	**53.27**	**8**	*e*P	**P**	**17 40 51.2**	**-0.3**
	comp=Z,151nm,1.4s,mb5.7						
MDJ				LR	LR		
	comp=Z,2μm,19.0s,MS5.1						
JSH	**Shimam**	**53.75**	**18**	P	**P**	**17 41 03.8**	**+8.7**
ERM	**Erimo**	**54.21**	**21**	PFAKE		17 41 10.0	+12
ERM				LR	LR		
	comp=Z,2μm,19.0s,MS5.2						
JEM	**Erimo**	**54.22**	**21**	P	**P**	**17 41 05.3**	**+6.8**
NDI	**New Delhi**	**55.44**	**313**	*e*PKP	**P**	**17 41 04.0**	**-3.6**
ASAJ	**Asahikawa**	**55.88**	**19**	P	**P**	**17 41 11.9**	**+1.4**
ASAJ	**Asahikawa**	**55.88**	**19**	LR	LR	18 03 08.9	
	comp=Z,2μm,21.5s,MS5.1,baz=188,slow=34						
JMP	**Maruseppu**	**56.04**	**20**	P	pP	17 41 21.7	+4.5
AJM	**Ajmer**	**56.15**	**309**	*e*PKP	**P**	**17 41 10.0**	**-2.8**
RPZ	**Rata Peaks**	**56.49**	**138**	LR	LR	18 04 32.0	
	comp=Z,3μm,19.1s,MS5.4,baz=306,slow=35						
RPZ	**Rata Peaks**	**56.49**	**138**	*e*P	**P**	**17 41 15.4**	**+0.4**
	comp=Z,124nm,1.0s,mb5.9						
JWK2	**Keihoku**	**56.74**	**18**	P	**P**	**17 41 25.2**	**+8.6**
MSVF	**Nonsavu**	**56.88**	**106**	*e*P	**P**	**17 41 18.1**	**0.0**
	comp=Z,58nm,0.8s,mb5.7						
MSVF				LR	LR		
	comp=Z,2μm,20.0s,MS5.2						
SMLA	**Simla**	**56.89**	**316**	*e*PKP	**P**	**17 41 15.9**	**-2.0**
YUK	**Yuzh-Kuril'sk**	**56.95**	**22**	*e*P	**P**	**17 41 17.0**	**-1.1**
YUK				*e*		17 43 23.4	
YUK				*e*S	**S**	**17 49 08.1**	**-3.3**
YUK				*e*		17 51 03.5	
YUK				pmax	pmax		
	comp=N,90nm,0.9s						
YUK				pmax	pmax		
	comp=E,50nm,0.9s						
YUK				pmax	pmax		
	comp=Z,170nm,0.9s,mb6.1						
ULN	**Ulaanbaatar**	**57.07**	**349**	*e*P	**P**	**17 41 18.1**	**-0.8**
ULN				*e*S	**S**	**17 49 12.0**	**-0.9**
ULN				pmax	pmax		
	comp=Z,117nm,1.3s,mb5.8						
ULN				MLR	MLR		
	comp=Z,3μm,22.0s,MS5.4						
ULN	**Ulaanbaatar**	**57.07**	**349**	*e*P	**P**	**17 41 18.1**	**-0.8**
	comp=Z,117nm,1.3s,mb5.8						
ULN				*e*S	**S**	**17 49 12.0**	**-1.0**
ULN				LR	LR		
	comp=Z,3μm,22.0s,MS5.4						
ULN	**Ulaanbaatar**	**57.07**	**349**	P	**P**	**17 41 19.1**	**+0.2**
	SNR=71						
ULN				P		17 41 19.1	
	SNR=71						
ULN	**Ulaanbaatar**	**57.07**	**349**	P	**P**	**17 41 18.4**	**-0.5**
	comp=Z,1μmcomp=Z,75nm,1.4s,mb5.5						
SONM	**Songino Array**	**57.17**	**349**	P	**P**	**17 41 18.9**	**-0.7**
	comp=Z,15nm,0.9s,mb5.0,baz=170,slow=8.0,SNR=32						
SONM				LR	LR	18 07 03.3	
	comp=Z,3μm,21.8s,MS5.3,baz=207,slow=37						
HIA	**Hailar**	**57.26**	**360**	*e*P	**P**	**17 41 19.7**	**-0.5**
HIA				pmax	pmax		
	comp=Z,64nm,1.1s						
HIA				MLR	MLR		
	comp=Z,1μm,19.0s						
HIA	**Hailar**	**57.26**	**360**	*e*P	**P**	**17 41 19.6**	**-0.5**
	comp=Z,64nm,1.1s,mb5.6						
HIA				LR	LR		
	comp=Z,1μm,19.0s,MS5.1						
KHZ	**Kahutara**	**57.71**

HABR Khabarovsk 57.95 12 *de*P **P 17 41 22.7 -2.3**
HABR *e**PP pP 17 41 33.2 +2.6
HABR *e**SP sP 17 41 36.5 +3.8
HABR *e* 17 42 13.6
HABR 17 43 32.2
HABR PPP 17 44 50.3
HABR *e*S **S 17 49 22.6 -1.8**
HABR *e* 17 49 35.2
HABR *e**SS sS 17 49 39.6 +6.1
HABR *e* 17 51 09.8
HABR *e*SS SS 17 53 15.4 -0.4
HABR pmax pmax
comp=N,10.0nm,0.8s
HABR pmax pmax
comp=Z,47nm,1.6s,mb5.3
HABR pmax pmax
comp=E,39nm,1.6s
HABR smax
comp=N,638nm,5.8s
HABR smax
comp=Z,295nm,5.3s
HABR smax
comp=E,655nm,6.0s
HABR MLR MLR
comp=Z,673nm,18.0s,MS4.8
KLR Kul'dur 58.10 9 *e*P **P 17 41 21.0 -5.1**
KLR pmax pmax
comp=Z,57nm,1.6s,mb5.3
SNZO South Karori 58.16 134 PFAKE 17 41 40.0 +13
SNZO LR LR
comp=Z,4µm,19.0s,MS5.6
CASY Casey 58.34 185 *e*P **P 17 41 27.9 +0.3**
CASY Casey 58.34 185 *e*P **P 17 41 26.6 -1.0**
comp=Z,61nm,1.3s,mb5.5
CASY *e*PcP PcP 17 42 18.4 0.0
CASY LR LR
comp=Z,8µm,19.0s,MS5.8
YSS Yuzh-Sakhalins 58.47 18⇓ *e*P **P 17 41 29.0 +0.3**
YSS *e* 17 41 37.0
YSS *e*S **S 17 49 28.0 -3.3**
YSS pmax pmax
comp=Z,80nm,1.5s,mb5.5
YSS pmax pmax
comp=Z,400nm,5.0s
YSS MLR MLR
comp=Z,600nm,19.0s,MS4.7
YSS Yuzh-Sakhalins 58.47 18 P **P 17 41 27.2 -1.5**
comp=Z,82nm,1.3s,mb5.6
YSS LR LR
comp=Z,508nm,21.0s,MS4.6
URZ Urewera 59.05 130 LR LR 18 06 02.7
comp=Z,5µm,20.1s,MS5.6,baz=75,slow=35
URZ Urewera 59.05 130 *e*P **P 17 41 32.2 -0.9**
comp=Z,94nm,1.3s,mb5.7
WMQ Urumqi 59.64 333 P **P 17 41 37.0 +0.1**
WMQ sP sP 17 41 44.0 -0.7
WMQ PP PP 17 43 51.0 +2.1
WMQ S **S 17 49 45.0 -1.6**
WMQ ScS ScS 17 51 23.0 -3.5
WMQ SS SS 17 53 42.0 -0.7
WMQ pmax pmax
comp=Z,38nm,1.0s,mb5.4
WMQ pmax pmax
comp=Z,89nm,6.0s
WMQ LR LR
comp=N,3µm,17.0s,MS5.6
WMQ LR LR
comp=E,3µm,17.0s,MS5.6
WMQ LR LR
comp=Z,2µm,16.0s,MS5.3
ZAK Zakamensk 60.22 348 *e*P **P 17 41 40.5 -0.3**
ZAK pmax pmax
comp=Z,37nm,1.4s,mb5.2
CIT Chita 60.30 355 *e*P **P 17 41 41.4 +0.1**
CIT *e* 17 41 49.9
CIT *e* 17 49 54.1
MIR Mirnyy 61.15 192⇓ *i*P **P 17 41 48.0 +1.1**
MIR *i* 17 42 31.0
MIR pmax pmax
comp=Z,96nm,1.4s,mb5.7
MIR MLR MLR
comp=N,2µm,18.0s,MS5.4
MIR MLR MLR
comp=E,2µm,18.0s,MS5.4
MIR MLR MLR
comp=Z,3µm,18.0s,MS5.5
TLY Talaya 61.38 348 P **P 17 41 49.0 +0.4**
comp=Z,295nm,0.9s,mb6.4,SNR=11
TLY Talaya 61.38 348 *e*P **P 17 41 49.7 +1.1**
TLY *e*S **S 17 50 05.5 -3.0**
TLY pmax pmax
comp=Z,61nm,1.0s,mb5.7
TLY MLR MLR
comp=Z,1µm,19.0s,MS5.1
TLY Talaya 61.38 348 *e*P **P 17 41 49.1 +0.5**
comp=Z,46nm,0.9s,mb5.6
TLY LR LR
comp=Z,1µm,20.0s,MS5.1
TLY Talaya 61.38 348 P **P 17 41 49.7 +1.1**
SNR=27
TLY P 17 41 49.7
SNR=27
RAO Raoul Island 61.44 119 LR LR 18 06 58.6
comp=Z,2µm,19.3s,MS5.3,baz=1.6,slow=35
RAO Raoul Island 61.44 119 PFAKE 17 42 00.0 +10
RAO LR LR
comp=Z,4µm,19.0s,MS5.6
IRK Irkutsk 61.79 349 *e*P **P 17 41 51.4 0.0**
IRK *e*S **S 17 50 15.6 +1.9**
IRK pmax pmax
comp=Z,80nm,2.7s,mb5.4
MOY Mondy 61.94 347 *e*P **P 17 41 52.9 +0.5**
MOY pmax pmax
comp=Z,260nm,3.1s
KSH Kashi 62.77 323⇑ *i*P **P 17 41 57.0 -1.2**
KSH pP pP 17 42 01.6 -2.3
KSH sP sP 17 42 04.7 -1.3
KSH PcP PcP 17 42 36.2 -0.5
KSH PP PP 17 44 16.3 -0.3
KSH ScP ScP 17 46 36.4 -1.9
KSH PcS PcS 17 46 38.1 -1.9
KSH S **S 17 50 21.7 -4.9**
KSH ScS ScS 17 51 44.9 -5.3
KSH SS SS 17 54 27.2 -4.7
KSH pmax pmax
comp=Z,49nm,0.7s,mb5.8
KSH LR LR
comp=N,2µm,14.8s,MS5.4
KSH LR LR
comp=E,850nm,16.1s,MS5.4
KSH LR LR
comp=Z,2µm,16.1s,MS5.4
RER Riviere de l'E 63.38 251 P **P 17 42 03.4 +0.7**
comp=Z,159nm,1.1s,mb6.1
QUE Quetta 63.87 309 *e*P **P 17 41 56.0 -10**
QUE *e*S **S 17 50 24.0 -17**
MKAR Makanchi Array 64.38 332 P **P 17 42 07.5 -1.1**
comp=Z,17nm,0.7s,mb5.2,baz=120,slow=7.2,SNR=100
MSEY Mahe Island 64.45 269 PFAKE 17 42 20.0 +10
MSEY LR LR
comp=Z,3µm,21.0s,MS5.5
KZA Kyzart 64.81 324 P **P 17 42 11.6 -0.1**
SNR=26
CLNS Chul'man 64.95 3 *e*P **P 17 42 13.4 +1.1**
CLNS *e* 17 42 44.2
CLNS *e* 17 44 35.9
CLNS *e*PPP 17 46 09.9
CLNS *e*S **S 17 50 52.4 -0.6**
CLNS pmax pmax
comp=Z,66nm,1.5s,mb5.4
CLNS pmax pmax
comp=N,47nm,1.4s
CLNS pmax pmax
comp=E,26nm,1.3s
CLNS pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
CLNS pmax pmax
comp=N,10.0nm,1.2s
CLNS pmax pmax
comp=E,5.0nm,1.2s
CLNS smax
comp=E,445nm,13.0s
CLNS smax
comp=N,644nm,11.3s
CLNS MLR MLR
comp=Z,294nm,15.0s,MS4.6
CLNS MLR MLR
comp=E,271nm,16.0s,MS4.8
CLNS MLR MLR
comp=N,331nm,15.0s,MS4.8
TKM2 Tokmak 2 65.15 325 P **P 17 42 13.0 -0.8**
SNR=12
TKM2 Tokmak 2 65.15 325 *e*P **P 17 42 11.9 -1.9**
TKM2 pmax pmax
comp=Z,29nm,1.0s,mb5.3
TKM2 Tokmak 2 65.15 325 *e*P **P 17 42 11.9 -1.9**
comp=Z,29nm,1.0s,mb5.3
UCH Uchtor 65.33 324 P **P 17 42 14.8 -0.2**
SNR=13
UCH Uchtor 65.33 324⇑ *e*P **P 17 42 13.8 -1.3**
comp=Z,27nm,1.0s,mb5.2
KBK Karagaybulak 65.35 325 P **P 17 42 14.9 -0.3**
SNR=14
AAK Ala-Archa 65.59 324 P **P 17 42 16.9 +0.2**
comp=Z,200nm,0.9s,mb6.2,SNR=8.8
AAK Ala-Archa 65.59 324 P **P 17 42 16.4 -0.3**
SNR=13
AAK Ala-Archa 65.59 324 *c i*P **P 17 42 15.8 -0.9**
AAK pmax pmax
comp=Z,23nm,1.6s,mb5.0
AAK Ala-Archa 65.59 324⇑ *i*P **P 17 42 15.2 -1.5**
comp=Z,33nm,0.9s,mb5.4
AAK LR LR
comp=Z,3µm,20.0s,MS5.4
AAK Ala-Archa 65.59 324 P **P 17 42 16.6 -0.2**
SNR=27
AAK P 17 42 16.6
SNR=27
AAK Ala-Archa 65.59 324 P **P 17 42 16.5 -0.2**
comp=Z,200nmcomp=Z,9.5nm,1.1s,mb4.7
FRU Bishkek 65.65 325 *e*P **P 17 42 18.0 +0.9**
FRU pmax pmax
comp=Z,102nm,2.2s,mb5.5
AML Almayashu 65.75 324 P **P 17 42 17.0 -0.8**
SNR=50
AML Almayashu 65.75 324⇑ *e*P **P 17 42 16.7 -1.0**
comp=Z,82nm,1.0s,mb5.7
USP Ospenovka 65.99 325 P **P 17 42 16.5 -2.8**
SNR=17
EKS2 Erkin-Say 66.03 324 P **P 17 42 19.8 +0.3**
SNR=24
EKS2 Erkin-Say 66.03 324⇑ *e*P **P 17 42 18.3 -1.2**
comp=Z,54nm,1.2s,mb5.5
BOD Bodaibo 66.03 356 *e*P **P 17 42 14.3 -4.9**
BOD pmax pmax
comp=Z,50nm,1.3s,mb5.4
AFI Afiamalu 66.72 102 PFAKE 17 42 40.0 +15
AFI LR LR
comp=Z,1µm,20.0s,MS5.2
ZALV Zalesovo Beam 68.80 338 P **P 17 42 34.4 -2.4**
comp=Z,15nm,0.6s,mb5.1,baz=134,slow=5.4,SNR=60
ZALV LR LR 18 14 12.6
comp=Z,635nm,21.2s,MS4.8,baz=272,slow=37
ZALV Zalesovo Beam 68.80 338 P **P 17 42 34.4 -2.4**
ZALV LR LR 18 14 12.6
PETK Petropavlovsk- 68.87 23 P **P 17 42 36.5 -0.8**
comp=Z,11nm,0.9s,mb4.8,baz=207,slow=3.0,SNR=13
PETK LR LR 18 15 01.5
comp=Z,736nm,18.0s,MS5.0,baz=134,slow=38
PETK Petropavlovsk- 68.87 23 P **P 17 42 36.5 -0.8**
PETK LR LR 18 15 01.5
KURK Kurchatov 68.89 333 P **P 17 42 36.4 -1.1**
comp=Z,183nm,1.3s,mb5.8,SNR=19
KURK Kurchatov 68.89 333⇑ *e*P **P 17 42 35.0 -2.5**
KURK pmax pmax
comp=Z,44nm,1.1s,mb5.3
KURK MLR MLR
comp=Z,3µm,21.0s,MS5.5
KURK Kurchatov 68.89 333⇑ *e*P **P 17 42 35.0 -2.4**
comp=Z,44nm,1.1s,mb5.3
KURK LR LR
comp=Z,3µm,21.0s,MS5.5
KURK Kurchatov 68.89 333 P **P 17 42 36.8 -0.7**
SNR=25
KURK P 17 42 36.8
SNR=25
PET Petropavlovsk 69.18 24 *e*P **P 17 42 38.6 -0.6**
PET *e*S S 17 51 43.0 -1.2
PET *e*PS 17 52 06.9
PET pmax pmax
comp=Z,1µm,5.7s
PET pmax pmax
comp=Z,800nm,15.1s
PET pmax pmax
comp=Z,79nm,1.2s,mb5.5
PET MLR MLR
comp=Z,900nm,18.0s,MS5.0
PET Petropavlovsk 69.18 24 P **P 17 42 38.1 -1.1**
comp=Z,98nm,1.2s,mb5.6
PET LR LR
comp=Z,925nm,20.0s,MS5.0
NVS Novosibirsk 70.07 338 *i*P **P 17 42 41.6 -3.1**
NVS *e*S S 17 51 51.1 -3.5
NVS pmax pmax
comp=Z,166nm,2.0s,mb5.6
NVS pmax pmax
comp=N,124nm,1.9s
NVS pmax pmax
comp=E,76nm,1.9s
NVS smax
comp=E,78nm,2.4s
NVS smax
comp=N,29nm,1.9s
MAW Mawson 70.39 200 *i*P **P 17 42 47.4 +0.9**
comp=N,33nm,0.9s,mb5.3
MAW Mawson 70.39 200 P **P 17 42 47.6 +1.1**
comp=N,45nm,1.0s,mb5.3,baz=54,slow=8.1,SNR=33
MAW LR LR 18 12 31.2
comp=N,2µm,18.3s,MS5.5,baz=59,slow=35
YAK Yakutsk 70.43 5 *e*P **P 17 42 44.7 -2.0**
YAK *e**PP pP 17 42 55.0 +2.6
YAK *e* 17 43 05.9
YAK *e* 17 45 21.1
YAK *e*PPP 17 47 01.8
YAK *e*S S 17 51 55.2 -3.4
YAK *e* 17 52 42.1
YAK pmax pmax
comp=Z,43nm,1.2s,mb5.2
YAK pmax pmax
comp=N,24nm,1.3s
YAK pmax pmax
comp=E,6.0nm,1.5s
YAK pmax pmax
comp=N,171nm,5.2s
YAK pmax pmax
comp=Z,345nm,7.0s
YAK pmax pmax
comp=E,62nm,3.1s
YAK smax
comp=N,2µm,10.9s
YAK MLR MLR
comp=N,522nm,13.0s
YAK MLR MLR
comp=Z,761nm,20.0s
YAK Yakutsk 70.43 5⇑ *e*P **P 17 42 44.0 -2.7**
comp=Z,94nm,1.1s,mb5.6
YAK LR LR
comp=Z,795nm,21.0s,MS5.0
ABPO Ambohimpanom 71.41 253⇑ *e*P **P 17 42 53.1 -0.5**
ABPO pmax pmax
comp=Z,60nm,1.4s,mb5.3
ABPO MLR MLR
comp=Z,1µm,20.0s,MS5.2
ABPO Ambohimpanom 71.41 253⇑ *e*P **P 17 42 53.1 -0.5**
comp=Z,60nm,1.4s,mb5.3
ABPO LR LR
comp=Z,1µm,20.0s,MS5.2
OPO Ambohidratompo 71.46 253 P **P 17 42 53.9 -0.1**
comp=Z,8.9nm,0.7s,mb4.8,baz=88,slow=6.6,SNR=17
SBA Scott Base 73.53 171 *e*P **P 17 43 06.1 +0.9**
SBA pmax pmax
comp=Z,294nm,2.3s,mb5.8
SBA MLR MLR
comp=Z,4µm,19.0s,MS5.8
SBA Scott Base 73.53 171 *e*P **P 17 43 06.0 +0.9**
comp=Z,294nm,2.3s,mb5.8
SBA LR LR
comp=Z,4µm,19.0s,MS5.8
JOHN Johnston Islan 73.69 70 PFAKE 17 43 20.0 +13
JOHN LR LR
comp=Z,1µm,19.0s,MS5.3
ABKT Ailbek 73.85 313 P **P 17 43 06.0 -1.7**
comp=Z,167nm,1.3s,mb5.8,SNR=7.1
BVAR Borovoye Array 74.24 331 P **P 17 43 08.9 -0.8**
comp=Z,5.8nm,0.8s,mb4.5,baz=141,slow=7.3,SNR=29
BVAR LR LR 18 20 05.7
comp=Z,3µm,20.3s,MS5.5,baz=130,slow=39
BRVK Borovoye 74.31 331 P **P 17 43 08.6 -1.5**
comp=Z,131nm,0.9s,mb5.9,SNR=7.8
BRVK Borovoye 74.31 331 *c e*P **P 17 43 08.7 -1.4**
BRVK pmax pmax
comp=Z,18nm,1.2s,mb4.9
BRVK Borovoye 74.31 331 *e*P **P 17 43 07.6 -2.5**
comp=Z,52nm,1.3s,mb5.3
BRVK LR LR
comp=Z,3µm,20.0s,MS5.5
BRVK Borovoye 74.31 331 P **P 17 43 09.2 -0.9**
SNR=22
BRVK P 17 43 09.2
SNR=22
SEY Seymchan 75.10 15 *c e*P **P 17 43 13.5 -1.0**
SEY Seymchan 75.10 15⇑ *e*P **P 17 43 13.6 -0.9**
FX1 Attu Island--F 75.59 30 P **P 17 43 18.6 +1.1**
baz=344,slow=7.4
FX1 LR LR 18 15 49.3
comp=Z,388nm,20.7s,MS4.7,baz=255,slow=35
ABKAR Akbulak array 77.68 324 *e*P **P 17 43 26.6 -2.8**
comp=Z,20nm,1.0s,mb5.0
SYO Syowa Base 79.02 201⇓ *i*P **P 17 43 35.6 -0.9**
SYO Syowa Base 79.02 201⇓ *i*pP pP 17 43 41.0 -1.3
RDF Al-Radifah 79.11 302 *e*P **P 17 43 36.2 -1.6**
RDF AMb AMB 17 43 37.6
comp=Z,45nm,1.1s,mb5.3
NAY Al-Naaiem 79.46 302 *e*P **P 17 43 38.0 -1.7**
NAY AMb AMB 17 43 42.2
comp=Z,18nm,1.1s,mb4.9
MIB Mutribah 79.53 302 *e*P **P 17 43 38.3 -1.7**
MIB AMb AMB 17 43 39.8
comp=Z,29nm,1.2s,mb5.1
TIXI Tiksi 79.92 3 *c i*P **P 17 43 38.3 -2.9**
TIXI *e*S S 17 53 33.5 -10
TIXI pmax pmax
comp=Z,43nm,1.5s,mb5.2
TIXI Tiksi 79.92 3 *e*P **P 17 43 38.3 -3.0**
comp=Z,26nm,1.0s,mb5.1
TIXI LR LR
comp=Z,1µm,20.0s,MS5.2
SVE Sverdlovsk 81.03 331⇓ *e*P **P 17 43 45.7 -1.8**
SVE *e*S S 17 53 51.7 -4.1
SVE pmax pmax
comp=Z,36nm,1.1s,mb5.2
QSPA South Pole Qui 81.75 180 LR LR 18 21 25.9
comp=Z,3µm,18.1s,MS5.8,baz=354,slow=37
ARU Arti 81.83 330 *c i*P **P 17 43 49.3 -2.4**
ARU *e* 17 46 59.6
ARU *e*PPP 17 48 44.4
ARU S S 17 54 00.8 -3.4
ARU SS SS 17 59 15.5 -7.2
ARU pmax pmax
comp=Z,21nm,1.2s,mb4.9
ARU Arti 81.83 330⇑ *e*P **P 17 43 48.1 -3.7**
comp=Z,42nm,1.3s,mb5.2
ARU LR LR
comp=Z,2µm,20.0s,MS5.5
XMAS Kiritimati 82.64 87 PFAKE 17 44 10.0 +13
XMAS LR LR
comp=Z,2µm,19.0s,MS5.5
BILL Bilibino 82.71 16 *d i*P **P 17 43 55.7 -0.4**
BILL *i* 17 44 03.5
BILL pmax pmax
comp=Z,15nm,1.4s,mb4.8
BILL Bilibino 82.71 16 *i*P **P 17 43 55.8 -0.3**
BILL LR LR
comp=Z,955nm,21.0s,MS5.1
KMBO Kilima Mbogo 82.95 270 *e*P **P 17 43 57.6 -1.0**
KMBO pmax pmax
comp=Z,28nm,1.3s
KMBO MLR MLR
comp=Z,3µm,20.0s
KMBO Kilima Mbogo 82.95 270 *e*P **P 17 43 57.6 -1.0**
comp=Z,28nm,1.3s,mb5.1
KMBO LR LR
comp=Z,3µm,20.0s,MS5.6
KMBO Kilima Mbogo 82.95 270 P **P 17 43 58.6 0.0**
SNR=8.0
KMBO P 17 43 58.6
SNR=8.0
MAK Makhachkala 83.20 315 *e*P **P 17 43 57.4 -1.8**
MAK *i* pP 17 44 04.2 -0.8
MAK *e*S S 17 54 09.7 -9.1
MAK *e*SS SS 17 59 40.2 -3.5
MAK pmax pmax
comp=Z,149nm,1.0s,mb6.0
MAK MLR MLR
comp=Z,2µm,24.0s,MS5.3
SOKR Solikamsk 84.13 333 *c i*P **P 17 44 00.3 -3.3**
SOKR S S 17 54 19.0 -8.4
SOKR SS SS 17 59 50.0 -6.7
SOKR pmax pmax
comp=Z,30nm,1.6s,mb5.2
DGRG David-gareji 84.28 313 P **P 17 44 02.1 -2.7**
GNI Garni 84.38 312 *d i*P **P 17 44 05.4 +0.1**
GNI pmax pmax
comp=Z,45nm,1.7s
GNI Garni 84.38 312⇓ *i*P **P 17 44 05.5 +0.2**
GNI LR LR
comp=Z,776nm,20.0s,MS5.1
MSL Mosul 84.66 308 *e*P **P 17 44 06.0 -0.8**
MTA Mtatsminda 84.76 313 P **P 17 44 05.1 -2.1**
TBLG Delisi 84.81 313 *e*P **P 17 44 07.1 -0.4**
TBLG Delisi 84.81 313 P **P 17 44 07.1 -0.4**
KIP Kipapa 85.32 68 PFAKE 17 44 20.0 +10
KIP LR LR
comp=Z,1µm,19.0s,MS5.3
GOR Gori 85.33 313 P **P 17 44 11.1 +1.0**
KEH Kehvi 85.54 314 P **P 17 44 09.5 -1.7**
ZEI Tsey 85.69 314 *e*P **P 17 44 09.3 -2.5**
ZEI *e* 17 44 22.1
ZEI pmax pmax
comp=Z,28nm,1.4s,mb5.3
ONI Oni 85.96 314 P **P 17 44 11.3 -1.9**
KIV Kislovodsk 86.85 315 *e*P **P 17 44 14.3 -3.2**
KIV *e* 17 54 37.6
KIV pmax pmax
comp=Z,9.0nm,1.2s,mb4.9
KIV Kislovodsk 86.85 315 PFAKE 17 44 30.0 +12
KIV LR LR
comp=Z,1µm,20.0s,MS5.2
POHA Pohakuloa 87.32 70 PFAKE 17 44 30.0 +10
POHA LR LR
comp=Z,1µm,19.0s,MS5.3
PPT Papeete 87.68 107 *e*S S 17 54 53.9 -10
comp=Z,2µm,27.8s
PPT *e*LQ 18 08 32.8
comp=Z,5µm,39.5s
PPT *e*LR LR 18 12 15.3
comp=Z,2µm,28.0s
NVL N'lazarevskaya 88.26 198 *e*P **P 17 44 23.7 -0.1**
NVL *e**PP pP 17 44 34.3 +4.7
NVL *e**SP sP 17 44 38.3 +6.6
NVL *e*S SKSac 17 54 48.2 -3.4
NVL *e*SP 17 56 16.0
NVL pmax pmax
comp=Z,51nm,1.2s,mb5.6
NVL MLR MLR
comp=Z,1µm,15.0s,MS5.5
MAIT Maitri 88.28 198 *e*P **P 17 44 25.0 +1.1**
ASF Jabal al Asfar 88.79 303 LR LR 18 29 52.4
comp=Z,2µm,18.1s,MS5.5,baz=306,slow=40
SOC Sochi 88.86 314 *e*P **P 17 44 22.6 -4.5**
SOC *e* 17 47 55.0
SOC *e*S SKSac 17 54 47.6 -8.4
SOC *e*SS SS 18 01 06.7 0.0
SOC pmax pmax
comp=Z,23nm,1.2s,mb5.4
VRHR Novokhopersk 89.30 322 *e*P **P 17 44 35.3 +6.3**
VRHR pmax pmax
comp=Z,7.0nm,0.4s,mb5.3
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,20nm,1.1s
LSZ Lusaka 89.88 255 *e*P **P 17 44 31.0 -1.5**
LSZ pmax pmax
comp=Z,44nm,1.3s,mb5.6
LSZ MLR MLR
comp=Z,2µm,20.0s,MS5.4

LSZ Lusaka 89.88 255 *e*P P **17 44 31.0 -1.6**
comp=Z,44nm,1.3s,mb5.6
LSZ LR LR

comp=Z,2µm,20.0s,MS5.4
MMAI Mount Meron Ar 90.18 303 P P **17 44 33.6 0.0**
comp=Z,4.3nm,0.9s,mb4.8,baz=78,slow=7.9,SNR=5.9
MMAI LR LR 18 30 51.7

comp=Z,2µm,18.6s,MS5.6,baz=80,slow=40
BOSA Boshof 90.49 241 P P **17 44 35.0 -0.2**
comp=Z,7.1nm,0.4s,mb5.3,baz=117,slow=4.4,SNR=36
BOSA LR LR 18 21 09.2

comp=Z,2µm,20.3s,MS5.5,baz=75,slow=33
BOSA Boshof 90.49 241 P P **17 44 35.0 -0.2**
BOSA LR LR 18 21 09.2
LBTB Lobatse 90.78 245 P P **17 44 36.5 -0.2**
comp=Z,8.6nm,0.8s,mb5.1,baz=125,slow=4.3,SNR=9.6
LBTB Lobatse 90.78 245 P P **17 44 36.5 -0.2**
VSR Storozhevoye 90.84 322 *e*P P **17 44 34.2 -2.0**
VSR pmax pmax

comp=Z,5.0nm,0.5s,mb5.1
VSR pmax pmax

comp=N,7.0nm,0.8s
VSR pmax pmax

comp=E,4.0nm,0.5s
BRTR Keskin Array B 92.64 310 P P **17 44 42.8 -2.1**
comp=E,1.6nm,0.9s,mb4.5,baz=116,slow=5.6,SNR=7.3
BRTR LR LR 18 36 03.2

comp=E,879nm,19.5s,MS5.2,baz=1.8,slow=42
OBN Obninsk 93.11 325 *e*P P **17 44 45.1 -1.5**
OBN *i* 17 44 53.4
OBN *e* 17 48 28.3
OBN *e*S SKSac 17 55 20.6 +0.7
OBN pmax pmax

comp=Z,20nm,1.4s,mb5.3
OBN Obninsk 93.11 325⇑ *e*P P **17 44 45.2 -1.4**
OBN LR LR

comp=Z,1µm,20.0s,MS5.4
SUR Sutherland 93.56 237 PFAKE 17 45 00.0 +11
SUR LR LR

comp=Z,3µm,20.0s,MS5.7
VNA2 Neumayer--Watz 93.70 195 *e*P P **17 44 49.0 -0.1**
VNA1 Neumayer--Stat 94.10 195 *e*P P **17 44 51.2 +0.2**
ISP Isparta 94.81 307 PFAKE 17 45 00.0 +5.1
ISP LR LR

comp=Z,705nm,20.0s,MS5.1
KDAK Kodiak Island 95.37 33 PFAKE 17 45 10.0 +13
KDAK LR LR

comp=Z,765nm,20.0s,MS5.2
LVZ Lovozero 95.93 338 PFAKE 17 45 10.0 +11
LVZ LR LR

comp=Z,1µm,19.0s,MS5.4
CHUM Lake Minchumin 96.18 26 *e*P P **17 44 57.0 -3.5**
comp=Z,11nm,1.2s,mb5.2
AKASG Malin Array Be 96.98 320 P P **17 45 03.1 -1.4**
comp=Z,0.2nm,0.3s,mb4.0,baz=92,slow=3.8,SNR=7.4
AKASG LR LR 18 37 43.5

comp=Z,783nm,20.1s,MS5.2,baz=50,slow=41
COLD Coldfoot 97.34 23 *e*P P **17 45 04.1 -1.6**
comp=Z,7.0nm,1.0s,mb5.0
TAOE Nuku Hiva Isla 98.09 100 *e*S S 17 56 29.0 -8.4
comp=Z,1µm,24.6s
TAOE Nuku Hiva Isla 98.09 100 *e*PS PS 17 58 01.2 -1.9
comp=Z,506nm,28.1s
TAOE *e*LR LR 18 17 10.3

comp=Z,927nm,22.6s
COLA College 98.19 26 PFAKE 17 45 20.0 +10
COLA LR LR

comp=Z,433nm,21.0s,MS4.9
KEV Kevo 98.81 339 PFAKE 17 45 20.0 +7.7
KEV LR LR

comp=Z,1µm,22.0s,MS5.4
MLR Muntele Rosu 98.86 315 LR LR 18 42 54.1
comp=Z,2µm,18.6s,MS5.5,baz=298,slow=43
IDI Anoyia 99.10 304 LR LR 18 36 44.5
comp=Z,586nm,20.2s,MS5.1,baz=82,slow=40
TSUM Tsumeb 99.17 249 PFAKE 17 45 30.0 +15
TSUM LR LR

comp=Z,1µm,19.0s,MS5.4
ARCES ARCESS Array B 99.34 339 PKKPbc PKKPbc 18 01 38.2 -3.1
comp=Z,1.9nm,0.8s,baz=297,slow=2.9,SNR=6.4
RKT Rikitea 100.15 115 *e*PS PS 17 58 26.5 +1.6
comp=Z,622nm,30.5s
RKT *e*LR LR 18 18 10.7

comp=Z,1µm,23.8s
EGAK Eagle 101.05 26 PFAKE 17 45 30.0 +7.4
EGAK LR LR

comp=Z,481nm,20.0s,MS5.0
KWP Kalwaria Pacla 101.13 319 PFAKE 17 45 30.0 +7.0
KWP LR LR

comp=Z,882nm,21.0s,MS5.2
KBS Kingsbay 101.53 349 PFAKE 17 45 30.0 +5.3
KBS LR LR

comp=Z,1µm,22.0s,MS5.4
PSZ Piszkesteto 103.03 317 PFAKE 17 45 40.0 +8.6
PSZ LR LR

comp=Z,736nm,20.0s,MS5.2
TIR Tirane 103.21 310 PFAKE 17 45 40.0 +7.8
TIR LR LR

comp=Z,816nm,19.0s,MS5.3
OKC Ostrava-Krasne 104.08 319 AMS AMS 18 38 00.0
comp=Z,1µm,20.1s
DPC Dobruska-Polom 105.21 320 *e*PP PP 17 50 09.0 +6.7
DPC AMS AMS 18 38 20.0

comp=Z,1µm,22.1s
TIP Timpagrande 105.64 308 PFAKE 17 50 10.0 +13
TIP LR LR

comp=Z,606nm,21.0s,MS5.1
TREC Trest 105.86 319 AMS AMS 18 38 40.0
comp=Z,900nm,22.9s
PVCC Panska Ves 106.31 320 AMS AMS 18 38 40.0
comp=Z,900nm,23.9s
CEL Celeste 106.35 307 PFAKE 17 50 10.0 +12
CEL LR LR

comp=Z,679nm,21.0s,MS5.2
PRU Pruhonice 106.39 320 AMS AMS 18 38 50.0
comp=Z,1µm,21.3s
GERES GERESS Array B 107.07 319 PKKPbc PKKPbc 18 01 18.0 +0.4
comp=Z,0.3nm,0.6s,baz=215,slow=1.6,SNR=5.1
KHC Kasperske Hory 107.12 319 *e*PP PP 17 50 19.8 +3.4
KHC AMS AMS 18 39 30.0

comp=Z,1µm,22.0s
PMSA Palmer Station 107.12 178 PFAKE 17 50 10.0 +11
PMSA LR LR

comp=Z,2µm,19.0s,MS5.7
CLL Collm 107.19 321 *e*PP PP 17 50 17.0 +0.2
CLL *e*SS SS 18 05 24.0 +0.2
TRI Trieste 107.39 315 PFAKE 17 50 10.0 +10
TRI LR LR

comp=Z,780nm,21.0s,MS5.2
KONO Kongsberg 107.47 330 PFAKE 17 50 10.0 +11
KONO LR LR

comp=Z,1µm,20.0s,MS5.4
WDD Wield Dalam 107.55 305 PFAKE 17 50 10.0 +10
WDD LR LR

comp=Z,826nm,19.0s,MS5.3
NKC Novy Kostel 107.69 320 AMS AMS 18 42 50.0
comp=Z,1µm,18.5s
AQU L'Aquila 107.98 312 PFAKE 17 50 10.0 +9.2
AQU LR LR

comp=Z,705nm,20.0s,MS5.2
MOX Moxa 108.16 321 *e*P PP 17 50 30.4 +6.5
comp=Z,10.0nm,1.4s
MOX Moxa 108.16 321 *e*P PP 17 50 30.4 +6.5
comp=Z,10.0nm,1.4s
VLC Villacollemand 109.96 314 PFAKE 17 50 20.0 +16
VLC LR LR

comp=Z,871nm,19.0s,MS5.3
BFO Black Forest 110.67 319 PFAKE 17 50 20.0 +14
BFO LR LR

comp=Z,1µm,20.0s,MS5.4
VSL Villasalto 111.32 309 PFAKE 17 50 20.0 +13
VSL LR LR

comp=Z,410nm,19.0s,MS5.0
ECH Echery 111.46 319 PFAKE 17 50 20.0 +13
ECH LR LR

comp=Z,677nm,19.0s,MS5.2
WLF Walferdange 111.79 320 PFAKE 17 50 20.0 +12
WLF LR LR

comp=Z,843nm,20.0s,MS5.3
LPG La Plagne 112.29 316 *e*PP PP 17 50 49.1 -4.8
comp=Z,48nm,1.6s
LPL La Plagne 112.30 316 *e*PP PP 17 50 49.1 -4.9
BNI Bardonecchia 112.42 315 PFAKE 17 50 20.0 +11
BNI LR LR

comp=Z,1µm,20.0s,MS5.5
YKA Yellowknife Ar 112.97 24 PKiKP PKiKP 17 50 07.3 -2.3
comp=Z,0.2nm,0.4s,baz=290,slow=2.0,SNR=4.4
YKA PKKPbc PKKPbc 18 00 55.7 -3.2
comp=Z,2.1nm,1.1s,baz=106,slow=4.0,SNR=8.8
YKA Yellowknife Ar 112.97 24 PKPdf PKiKP 17 50 07.3 -2.3
YKA PKKPbc PKKPbc 18 00 55.7 -3.2
NLWA Neilton Lookou 113.42 42 PFAKE 17 50 20.0 +9.1
NLWA LR LR

comp=Z,706nm,19.0s,MS5.3
SSB Saint Sauveur 113.86 316 PFAKE 17 50 20.0 +8.2
SSB LR LR

comp=Z,533nm,21.0s,MS5.1
COR Corvallis 114.46 45 PFAKE 17 50 20.0 +7.0
COR LR LR

comp=Z,191nm,20.0s,MS4.7
HUMO Hull Mountain 115.14 47 PFAKE 17 50 30.0 +16
HUMO LR LR

comp=Z,854nm,22.0s,MS5.3
ESK Eskdalemuir 115.41 328 PFAKE 17 50 30.0 +16
ESK LR LR

comp=Z,1µm,21.0s,MS5.5
YBH Yreka Blue Hor 115.51 48 PFAKE 17 50 30.0 +15
YBH LR LR

comp=Z,580nm,19.0s,MS5.2
HOPS Hopland 115.78 51 PFAKE 17 50 30.0 +14
HOPS LR LR

comp=Z,757nm,19.0s,MS5.3
WDC Whiskeytown Da 115.88 49 PFAKE 17 50 30.0 +14
WDC LR LR

comp=Z,946nm,21.0s,MS5.4
TAM Tamanrasset 115.95 291 PFAKE 17 50 30.0 +14
TAM LR LR

comp=Z,824nm,19.0s,MS5.4
MCCM Marconi Confer 116.09 52 PFAKE 17 50 30.0 +14
MCCM LR LR

comp=Z,716nm,19.0s,MS5.3
HAWA Hanford 116.56 42 PFAKE 17 50 30.0 +13
HAWA LR LR

comp=Z,793nm,19.0s,MS5.3
MOD Modoc 117.22 47 PFAKE 17 50 30.0 +12
MOD LR LR

comp=Z,744nm,19.0s,MS5.3
SAO San Andreas Ge 117.46 53 PFAKE 17 50 30.0 +11
SAO LR LR

comp=Z,842nm,22.0s,MS5.3
BORG Borgarnes 117.48 343 PFAKE 17 50 30.0 +12
BORG LR LR

comp=Z,2µm,22.0s,MS5.7
NEW Newport 117.52 39 PFAKE 17 50 30.0 +11
NEW LR LR

comp=Z,616nm,21.0s,MS5.2
CMB Columbia Colle 118.04 51 PFAKE 17 50 30.0 +10
CMB LR LR

comp=Z,749nm,21.0s,MS5.3
WVOR Wild Horse Val 118.28 46 PFAKE 17 50 30.0 +10
WVOR LR LR

comp=Z,890nm,20.0s,MS5.4
BMO Blue Mountains 118.51 43 PFAKE 17 50 30.0 +9.2
BMO LR LR

comp=Z,664nm,21.0s,MS5.2
NVAR Mina Array Bea 119.55 50 PKP PKPdf 17 50 22.0 -1.0
comp=Z,0.6nm,0.7s,baz=256,slow=3.6,SNR=3.0
NVAR PKKPab PKKPab 18 00 39.1 +3.3
comp=Z,0.4nm,0.4s,baz=130,slow=4.9,SNR=4.7
NVAR Mina Array Bea 119.55 50 PKP PKPdf 17 50 22.0 -1.0
NVAR PKKPab PKKPab 18 00 39.1 +3.3
TORD Torodi Ar. Bea 119.58 280 PKP PKPdf 17 50 20.9 -2.8
comp=Z,1.9nm,0.5s,baz=74,slow=1.5,SNR=24
BMN Battle Mountai 119.85 48 PFAKE 17 50 30.0 +6.5
BMN LR LR

comp=Z,787nm,19.0s,MS5.4
MSO Missoula 120.05 40 PFAKE 17 50 30.0 +6.3
MSO LR LR

comp=Z,477nm,19.0s,MS5.2
TPH Tonopah 120.46 51 PFAKE 17 50 40.0 +15
TPH LR LR

comp=Z,718nm,20.0s,MS5.3
DAC Darwin (Calif) 120.60 53 PFAKE 17 50 40.0 +15
DAC LR LR

comp=Z,1µm,21.0s,MS5.5
HLID Hailey 120.89 44 PFAKE 17 50 40.0 +15
HLID LR LR

comp=Z,649nm,19.0s,MS5.3
SFJD Kangerlussuaq 121.00 356 PFAKE 17 50 40.0 +15
SFJD LR LR

comp=Z,774nm,20.0s,MS5.3
ELK Elko 121.21 47 PFAKE 17 50 40.0 +14
ELK LR LR

comp=Z,850nm,20.0s,MS5.4
SHEL Horse Pasture 121.42 246 PFAKE 17 50 40.0 +13
SHEL LR LR

comp=Z,1µm,21.0s,MS5.5
PAB San Pablo 121.69 312 PFAKE 17 50 40.0 +13
PAB LR LR

comp=Z,844nm,21.0s,MS5.4
BOZ Bozeman (W) 121.98 41 PFAKE 17 50 40.0 +13
BOZ LR LR

comp=Z,587nm,21.0s,MS5.2
PFO Pinyon Flat Ob 122.10 55 PFAKE 17 50 40.0 +12
PFO LR LR

comp=Z,874nm,20.0s,MS5.4
EGMT Eagleton 122.15 37 PFAKE 17 50 40.0 +12
EGMT LR LR

comp=Z,602nm,20.0s,MS5.2
FFC Flin Flon 122.74 28 PFAKE 17 50 40.0 +11
FFC LR LR

comp=Z,809nm,19.0s,MS5.4
DUG Dugway 123.14 47 PFAKE 17 50 40.0 +10
DUG LR LR

comp=Z,716nm,19.0s,MS5.3
LKWY Lake 123.21 41 PFAKE 17 50 40.0 +10
LKWY LR LR

comp=Z,889nm,20.0s,MS5.4
AHID Auburn Hatcher 123.44 44 PFAKE 17 50 40.0 +10
AHID LR LR

comp=Z,690nm,20.0s,MS5.3
HWUT Hardware Ranch 123.55 45 PFAKE 17 50 40.0 +9.4
HWUT LR LR

comp=Z,696nm,21.0s,MS5.3
RLMT Red Lodge 123.72 40 PFAKE 17 50 40.0 +9.2
RLMT LR LR

comp=Z,790nm,22.0s,MS5.3
MTE Manteigas 123.75 313 PFAKE 17 50 40.0 +9.0
MTE LR LR

comp=Z,768nm,22.0s,MS5.3
SFS San Fernando 123.97 309 PFAKE 17 50 40.0 +8.4
SFS LR LR

comp=Z,1µm,21.0s,MS5.5
MVU Marysvale 124.12 49 PFAKE 17 50 40.0 +8.2
MVU LR LR

comp=Z,792nm,20.0s,MS5.4
BW06 Boulder Array 124.49 43 PFAKE 17 50 40.0 +7.7
BW06 LR LR

comp=Z,867nm,19.0s,MS5.4
PDAR Pinedale Array 124.49 43 PKKPbc 18 00 14.9
comp=Z,0.6nm,0.5s,baz=117,slow=5.5,SNR=4.6
LAO LASA Array 124.90 38 PFAKE 17 50 40.0 +7.0
LAO LR LR

comp=Z,637nm,20.0s,MS5.3
RTC Rabat Centre 125.16 306 PFAKE 17 50 40.0 +6.1
RTC LR LR

comp=Z,711nm,20.0s,MS5.3
DGMT Dagmar 125.18 35 PFAKE 17 50 40.0 +6.5
DGMT LR LR

comp=Z,785nm,22.0s,MS5.3
DBIC Dimbokro 125.62 272 PKP PKPdf 17 50 34.4 -1.0
comp=Z,8.7nm,1.1s,baz=210,slow=4.2,SNR=3.8
WUAZ Wupatki 125.67 52 PFAKE 17 50 50.0 +15
WUAZ LR LR

comp=Z,663nm,20.0s,MS5.3
TUC Tucson 127.03 56 PFAKE 17 50 50.0 +12
TUC LR LR

comp=Z,688nm,19.0s,MS5.3
MVCO Mesa Verde 127.32 49 PFAKE 17 50 50.0 +12
MVCO LR LR

comp=Z,483nm,21.0s,MS5.2
RSSD Black Hills 127.50 39 PFAKE 17 50 50.0 +12
RSSD LR LR

comp=Z,166nm,20.0s,MS4.7
ISCO Idaho Springs 128.41 45 PFAKE 17 50 50.0 +10
ISCO LR LR

comp=Z,723nm,20.0s,MS5.4
ULM Lac du Bonnet 128.47 29 SKP 17 54 13.8
comp=Z,3.7nm,0.8s,baz=18,slow=4.5,SNR=3.0
SDCO Great Sand Dun 129.34 47 PFAKE 17 50 50.0 +8.2
SDCO LR LR

comp=Z,630nm,20.0s,MS5.3
ANMO Albuquerque 129.66 51 *c i*PKIKP PKPdf 17 50 52.1 +10
ANMO pmax pmax

comp=Z,3.0nm,1.2s
ANMO Albuquerque 129.66 51 PFAKE 17 50 50.0 +7.5
ANMO LR LR

comp=Z,772nm,22.0s,MS5.3
AGMN Agassiz Nation 129.76 31 PFAKE 17 50 50.0 +7.8
AGMN LR LR

comp=Z,495nm,22.0s,MS5.2
PLCA Paso Flores 130.26 169 PKP PKPdf 17 50 42.6 -0.9
comp=Z,1.4nm,0.6s,baz=102,slow=4.4,SNR=3.2
OGNE Ogallala 130.34 42 PFAKE 17 50 50.0 +6.4
OGNE LR LR

comp=Z,680nm,21.0s,MS5.3
MNTX Cornudas Mount 131.60 55 PFAKE 17 51 00.0 +14
MNTX LR LR

comp=Z,568nm,20.0s,MS5.3
EYMN Ely 132.15 29 PFAKE 17 51 00.0 +13
EYMN LR LR

comp=Z,1µm,22.0s,MS5.5
ECSD EROS Data Cent 132.20 36 PFAKE 17 51 00.0 +13
ECSD LR LR

comp=Z,814nm,21.0s,MS5.4
CBKS Cedar Bluff 132.92 43 PFAKE 17 51 00.0 +11
CBKS LR LR

comp=Z,702nm,21.0s,MS5.3
AMTX Amarillo 133.31 49 PFAKE 17 51 00.0 +11
AMTX LR LR

comp=Z,646nm,19.0s,MS5.4
TXAR Lajitas Array 133.75 57 PKP PKPdf 17 50 47.7 -2.7
comp=Z,0.2nm,0.6s,baz=108,slow=2.8,SNR=3.4
TXAR SKPbc SKPbc 17 54 14.4 -4.2
comp=Z,2.7nm,1.1s,baz=325,slow=2.0,SNR=8.4
TRQA Tornquist 133.90 178 PFAKE 17 51 00.0 +10
TRQA LR LR

comp=Z,2µm,21.0s,MS5.8
COWI Conover 134.59 29 PFAKE 17 51 00.0 +8.6
COWI LR LR

comp=Z,764nm,20.0s,MS5.4
KSU1 Kansas State U 134.85 41 PFAKE 17 51 00.0 +7.9
KSU1 LR LR

comp=Z,745nm,19.0s,MS5.4
SCIA State Center 135.30 36 PFAKE 17 51 00.0 +7.1
SCIA LR LR

comp=Z,701nm,21.0s,MS5.4
WMOK Wichita Mounta 135.53 48 PFAKE 17 51 00.0 +6.5
WMOK LR LR

comp=Z,658nm,20.0s,MS5.4
JFWS Jewell Farm 136.29 33 PFAKE 17 51 10.0 +15
JFWS LR LR

comp=Z,967nm,21.0s,MS5.5
JCT Junction City 136.51 54 PFAKE 17 51 10.0 +15
JCT LR LR

comp=Z,627nm,20.0s,MS5.3
CMLA Cha da Macela 137.37 319 PFAKE 17 51 10.0 +13
CMLA LR LR

comp=Z,560nm,19.0s,MS5.3
GLMI Grayling 137.63 26 PFAKE 17 51 10.0 +13
GLMI LR LR

comp=Z,719nm,19.0s,MS5.4
HDIL Hopedale 138.42 35 PFAKE 17 51 10.0 +11
HDIL LR LR

comp=Z,831nm,20.0s,MS5.5
CCM Cathedral Cave 138.88 39 PFAKE 17 51 10.0 +10
CCM LR LR

comp=Z,135nm,20.0s,MS4.7
KVTX Kingsville 139.14 57 PFAKE 17 51 10.0 +10
KVTX LR LR

comp=Z,793nm,19.0s,MS5.5
MIAR Mount Ida 139.36 45 PFAKE 17 51 10.0 +9.4
MIAR LR LR

comp=Z,835nm,20.0s,MS5.5
HKT Hockley 139.87 53 PFAKE 17 51 10.0 +8.3
HKT LR LR

comp=Z,150nm,20.0s,MS4.7
NATX Nacogdoches 139.96 49 PFAKE 17 51 10.0 +8.2
NATX LR LR

comp=Z,765nm,20.0s,MS5.5
AAM Ann Arbor 140.04 28 PFAKE 17 51 10.0 +8.4
AAM LR LR

comp=Z,956nm,20.0s,MS5.5
LCO Las Campanas 141.48 164 *e*PKPpre PKPpre 17 50 59.1
LCO LR LR

comp=Z,1µm,21.0s,MS5.6
LONY Lake Ozonia 141.52 17 PFAKE 17 51 10.0 +5.8
LONY LR LR

comp=Z,785nm,22.0s,MS5.4
WCI Wyandotte Cave 141.70 35 PFAKE 17 51 20.0 +15
WCI LR LR

comp=Z,135nm,19.0s,MS4.7
ERPA Erie 141.80 25 PFAKE 17 51 20.0 +15
ERPA LR LR

comp=Z,704nm,19.0s,MS5.4
ACSO Alum Creek Sta 141.97 29 PFAKE 17 51 20.0 +15
ACSO LR LR

comp=Z,908nm,21.0s,MS5.5
PKME Peaks-Kenny Pk 142.19 11 PFAKE 17 51 20.0 +15
PKME LR LR

comp=Z,745nm,19.0s,MS5.5
WVT Waverly 142.21 39 PFAKE 17 51 20.0 +14
WVT LR LR

comp=Z,811nm,19.0s,MS5.5
NCB Newcomb 142.22 17 PFAKE 17 51 20.0 +15
NCB LR LR

comp=Z,763nm,22.0s,MS5.4
LBNH Lisbon 142.59 15 PFAKE 17 51 20.0 +14
LBNH LR LR

comp=Z,696nm,20.0s,MS5.4
VBMS Vicksburg 142.76 46 PFAKE 17 51 20.0 +13
VBMS LR LR

comp=Z,638nm,22.0s,MS5.3
MCWV Mont Chateau 143.89 27 *e*PKPdf PKPdf 17 51 05.2 -3.4
MCWV LR LR

comp=Z,1µm,21.0s,MS5.6
SSPA Standing Stone 143.90 24 *e*PKPpre PKPpre 17 51 03.1
SSPA LR LR

comp=Z,148nm,22.0s,MS4.7
SWET Sewanee 143.97 38 *e*PKP PKPdf 17 51 03.4 -5.5
TZTN Tazewell 144.44 34 *e*PKPdf PKPdf 17 51 04.6 -5.0
CPCT Cooper Cave 144.66 36 *e*PKPdf PKPdf 17 51 05.5 -4.5
LRAL Lakeview Retre 144.70 42 *e*PKPdf PKPdf 17 51 05.3 -4.9
LRAL LR LR

comp=Z,673nm,21.0s,MS5.4
CAM4 Nova Friburgo 145.26 209⇑ *i*P PKPbc 17 51 11.0 -0.1
CAM4 *i* 17 51 11.6
CAM4 *i* 17 51 20.6
CAM4 *i* 17 51 25.5
CAM4 *i* 17 51 42.2
CPUP Villa Florida 145.56 184 PKPbc PKPbc 17 51 11.8 -0.2
comp=Z,30nm,0.7s,baz=155,slow=2.6,SNR=43
CPUP Villa Florida 145.56 184 PKPbc PKPbc 17 51 11.8 -0.2
BLA Blacksburg 145.57 30 PFAKE 17 51 20.0 +8.4
BLA LR LR

comp=Z,916nm,20.0s,MS5.5
BRAL Brewton 145.88 45 PFAKE 17 51 20.0 +7.7
BRAL LR LR

comp=Z,713nm,20.0s,MS5.4
CBN Corbin 146.17 25 PFAKE 17 51 20.0 +7.4
CBN LR LR

comp=Z,910nm,19.0s,MS5.6
GOGA Godfrey 146.69 38 *e*PKIKP PKPdf 17 51 10.6 -3.0
GOGA MLR MLR

comp=Z,747nm,21.0s,MS5.5
PAYG Puerto Ayora 148.26 105 PFAKE 17 51 30.0 +13
PAYG LR LR

comp=Z,874nm,19.0s,MS5.6
NHSC New Hope 148.84 35 PFAKE 17 51 30.0 +13
NHSC LR LR

comp=Z,785nm,20.0s,MS5.5
TEIG Tepich 149.91 64 PFAKE 17 51 30.0 +11
TEIG LR LR

comp=Z,564nm,20.0s,MS5.4
DWPF Disney 151.52 43 PFAKE 17 51 30.0 +8.5
DWPF LR LR

comp=Z,219nm,20.0s,MS5.0
TGUH Tegucigalpa,Un 152.36 75 PFAKE 17 51 30.0 +6.9
TGUH LR LR

comp=Z,611nm,20.0s,MS5.4
RCBR Riachuelo 152.45 240 PFAKE 17 51 30.0 +6.7
RCBR LR LR

comp=Z,809nm,20.0s,MS5.5
NNA Nana 153.66 139 PKPdf PKPdf 17 51 24.7 -0.3
NNA LR LR

comp=Z,987nm,20.0s,MS5.6

LPAZ	**La Paz**	**154.25**	**161**	PKP	PKPdf	17 51 25.8	0.0
	comp=Z,8.7nm,1.3s,baz=250,slow=1.7,SNR=12						
LPAZ				PKPab	PKPab	17 51 49.9	+2.3
	comp=Z,50nm,1.1s,baz=150,slow=1.3,SNR=27						
JTS	**JuntasAbangare**	**155.00**	**83**	PFAKE		17 51 40.0	+13
JTS				LR	LR		
	comp=Z,748nm,20.0s,MS5.5						
BBSR	**BB Station**	**155.54**	**10**	PFAKE		17 51 40.0	+13
BBSR				LR	LR		
	comp=Z,851nm,19.0s,MS5.6						
OTAV	**Otavalo**	**159.70**	**112**	*e*PKPdf	PKPdf	17 51 32.4	-0.4
OTAV				*e*PP	PP	17 55 53.7	+0.7
OTAV				LR	LR		
	comp=Z,593nm,21.0s,MS5.4						
MTDJ	**Mount Denham**	**160.03**	**58**	PFAKE		17 51 40.0	+7.0
MTDJ				LR	LR		
	comp=Z,765nm,20.0s						
BCIP	**Isla Barro Col**	**160.08**	**86**	PFAKE		17 51 40.0	+6.8
BCIP				LR	LR		
	comp=Z,788nm,20.0s						
GTBY	**Guantanamo Bay**	**161.09**	**50**	PFAKE		17 51 40.0	+5.8
GTBY				LR	LR		
	comp=Z,725nm,21.0s						
GRTK	**Grand Turk**	**162.81**	**39**	PFAKE		17 51 50.0	+14
GRTK				LR	LR		
	comp=Z,793nm,20.0s						
SDDR	**Presa de Saban**	**164.50**	**45**	PFAKE		17 51 50.0	+12
SDDR				LR	LR		
	comp=Z,1μm,21.0s						
SJG	**San Juan**	**168.35**	**32**	PFAKE		17 51 50.0	+9.5
SJG				LR	LR		
	comp=Z,3μm,20.0s						
SDV	**Santo Domingo**	**169.17**	**86**	PFAKE		17 51 50.0	+8.8
SDV				LR	LR		
	comp=Z,522nm,21.0s						
ANWB	**Willy Bob**	**170.41**	**12**	PFAKE		17 51 50.0	+8.2
ANWB				LR	LR		
	comp=Z,992nm,20.0s						
FDF	**Fort de France**	**173.39**	**12**	PFAKE		17 51 50.0	+6.8
FDF				LR	LR		
	comp=Z,798nm,22.0s						
BBGH	**Gun Hill**	**175.12**	**358**	PFAKE		17 51 50.0	+6.2
BBGH				LR	LR		
	comp=Z,2μm,21.0s						
GRGR	**Grenville**	**175.68**	**26**	PFAKE		17 51 50.0	+6.0
GRGR				LR	LR		
	comp=Z,823nm,21.0s						

MEX 03 17:50:24.7±1.0, 14°.74N×93°.51W, h16^{km}±16^{km}, MD4.3, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.00**	**17**	*e*P	Pb	17 50 39.7	-3.9
PCIG				*i* S	Sb	17 50 51.5	-5.0
THIG		**1.22**	**82**	*e*P	Pn	17 50 42.8	-4.3
THIG				*i* S	Sb	17 50 57.7	-5.2
CCIG	**Comitan**	**2.02**	**41**	*e*P	Pn	17 50 56.0	-2.1
CCIG				*i* S	Sn	17 51 19.3	-3.8
TGIG		**2.06**	**11**	*e*P	Pn	17 50 56.3	-2.3
TGIG				*i* S	Sn	17 51 19.4	-4.6
SCX	**San Cristobal**	**2.15**	**23**	*i* P	Pn	17 50 58.5	-1.5
SCX				*i* S	Sn	17 51 22.3	-4.1
HUIG	**Huatulco**	**2.70**	**292**	*i* P	Pn	17 51 04.2	-3.4
HUIG				*i* S	Sn	17 51 35.2	-4.7
VHO	**Vista Hermosa**	**3.87**	**307**	*i* P	Pn	17 51 21.1	-2.5
VHO				*i* S	Sn	17 52 05.6	-3.1
PNIG	**Pinotepa**	**4.74**	**291**	*e*P	Pn	17 51 32.9	-2.7
PNIG				*i* S	Sn	17 52 27.7	-2.5

*ISCJB **03** 17:52:49.0±0.7, 25°.13N±0°.04×128°.21E±0°.04, h33^{km}, mb3.5/3, Error ellipse: s-maj=6.6km s-min=3.8km az=139.8*
*JMA **03** 17:52:50.0±0.2, 25°.19N×128°.19E, h67^{km}, M3.4*
*IDC **03** 17:52:54.2±8.4, 25°.87N×127°.64E, h0^{km}, mb3.7/3, mb1 3.7/3, mb1mx3.4/23, mbtmp3.7/3, Error ellipse: s-maj=148.9km s-min=24.8km az=148.0*
ISC 03 17:52:50.4±0.6, 25°.17N±0°.04×128°.21E±0°.04, h35^{km}, n19, σ1°.06/35, mb3.5/3, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT2	**Tamagusuku 2**	**1.05**	**337**	P	**Pn**	**17 53 09.0**	**+0.4**
JJT2				S	**Sn**	**17 53 23.4**	**+1.4**
NAH1	**Naha**	**1.13**	**336**	P	**Pn**	**17 53 09.8**	**+0.1**
NAH1				S	**Sn**	**17 53 23.9**	**-0.1**
JOW	**Kunigami**	**1.66**	**2**	P	**Pn**	**17 53 17.2**	**+0.2**
JOW				*e*S	**Sn**	**17 53 36.3**	**-0.7**
JOW	**Kunigami**	**1.66**	**2**	Pn	**Pn**	**17 53 17.3**	**+0.3**
	35nm,0.3s,baz=178,slow=15,SNR=49						
JOW				Sn	**Sn**	**17 53 34.5**	**-2.5**
	40nm,0.3s,baz=105,slow=22,SNR=7.1						
JAGN	**Aguni-jima**	**1.66**	**329**	P	**Pn**	**17 53 17.3**	**+0.3**
JAGN				S	**Sn**	**17 53 37.0**	**-0.1**
JKE	**Kume jima 2**	**1.73**	**312**	P	**Pn**	**17 53 17.8**	**-0.1**
JKE				S	**Sn**	**17 53 38.2**	**-0.5**
JIH	**Iheya**	**1.87**	**353**	P	**Pn**	**17 53 20.5**	**+0.6**
JIH				S	**Sn**	**17 53 42.4**	**+0.1**
JOGS	**Gusukube**	**2.58**	**262**	P	**Pn**	**17 53 30.4**	**+0.8**
JOGS				S	**Sn**	**17 53 59.6**	**-0.1**
JMJ	**Miyako jima 2**	**2.67**	**263**	P	**Pn**	**17 53 31.3**	**+0.5**
JMJ				*e*S	**Sn**	**17 54 01.4**	**-0.6**
JTK	**Tokunoshima**	**2.69**	**14**	P	**Pn**	**17 53 31.9**	**+0.8**
JTK				S	**Sn**	**17 54 00.6**	**-1.9**
JMZ	**Minamidaito 2**	**2.80**	**76**	P	**Pn**	**17 53 32.2**	**-0.4**
JMZ				S	**Sn**	**17 54 03.3**	**-1.9**
JTJ	**Tarama**	**3.23**	**261**	P	**Pn**	**17 53 38.6**	**+0.1**
JTJ				*e*S	**Sn**	**17 54 14.2**	**-1.5**
JAM	**Amami Oshima**	**3.46**	**21**	P	**Pn**	**17 53 43.3**	**+1.5**
JAM				S	**Sn**	**17 54 19.8**	**-1.8**
JIJ	**Ishigaki jima**	**3.78**	**259**	P	**Pn**	**17 53 46.3**	**+0.1**
JIJ				S	**Sn**	**17 54 25.6**	**-3.8**
JKRS	**Kuro-shima**	**3.93**	**257**	P	**Pn**	**17 53 48.7**	**+0.5**
JKRS				*e*S	**Sn**	**17 54 31.2**	**-1.9**
IRIF	**Iriomote-Funau**	**4.16**	**259**	P	**Pn**	**17 53 51.7**	**+0.4**
IRIF				*e*S	**Sn**	**17 54 37.6**	**-1.1**
SONM	**Songino Array**	**28.44**	**328**	P	**P**	**17 58 43.2**	**+1.5**
	0.4nm,0.5s,mb3.4,baz=134,slow=10,SNR=3.9						
MKAR	**Makanchi Array**	**42.23**	**313**	P	**P**	**18 00 42.3**	**+2.3**
	0.9nm,0.5s,mb3.6,baz=91,slow=12,SNR=8.4						
ZALV	**Zalesovo Beam**	**43.08**	**324**	P	**P**	**18 00 48.3**	**+1.5**
	0.4nm,0.4s,mb3.5,baz=112,slow=8.2,SNR=3.1						

*BJI **03** 17:55:05.1, 8°.57S×120°.66E, h23^{km}, mB5.3/4, mb4.7/8*
*NEIC **03** 17:55:08.8±0.3, 8°.17S×120°.27E, h10^{km}, mb4.7/20, Error ellipse: s-maj=11.6km s-min=5.3km az=57.0*
*ISCJB **03** 17:55:09.8±0.3, 8°.20S±0°.03×120°.37E±0°.04, h27^{km}, mb4.5/32, Error ellipse: s-maj=6.9km s-min=4.2km az=150.1*
*IDC **03** 17:55:11.7±0.6, 8°.13S×120°.38E, h26^{km}±3^{km}, mb4.2/13, mb1 4.3/15, mb1mx4.1/25, mbtmp4.2/15, ML4.1/2, MS3.6/1, Ms1 3.6/1, ms1mx2.7/34, Error ellipse: s-maj=25.9km s-min=11.5km az=69.0*
*DJA **03** 17:55:15, 8°.15S×120°.55E, h44^{km}, mb4.9/22*
ISC 03 17:55:12.0±0.3, 8°.18S±0°.03×120°.36E±0°.04, h29^{km}, h29^{km}±.9^{km}: pP-P, n90, σ1°.11/88, mb4.5/32, 1C, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.48**	**182**	P	**Pn**	**17 55 38.3**	**+1.6**
MMRI	**Maumere**	**1.91**	**104**	P	**Pn**	**17 55 43.8**	**+1.2**
BKSI	**Bulukumba**	**2.85**	**355**	P	**Pn**	**17 55 55.2**	**-0.4**
KAPI	**Kappang**	**3.20**	**349**	Pn	**Pn**	**17 55 58.6**	**-1.8**
	23nm,0.3s,baz=151,slow=9.1,SNR=69						
KAPI				Sn	**Sn**	**17 56 34.9**	**-2.8**
	12nm,0.3s,baz=41,slow=22,SNR=5.9						
KAPI				LR	LR	17 57 48.7	
	comp=Z,948nm,21.0s,baz=117,slow=50						
KAPI	**Kappang**	**3.20**	**349**	P	**Pn**	**17 56 00.2**	**-0.2**
BNSI	**Bone**	**3.77**	**356**	P	**Pn**	**17 56 08.7**	**+0.5**
SPSI	**Sidrap Palu**	**4.23**	**352**	P	**Pn**	**17 56 14.7**	**+0.1**
KHKI	**Kahang-Kahang**	**4.71**	**267**	P	**Pn**	**17 56 26.1**	**+5.0**
KDI	**Kendari**	**4.76**	**28**	P	**Pn**	**17 56 22.9**	**+1.1**
SRBI	**Singaraja**	**5.10**	**271**	P	**Pn**	**17 56 34.9**	**+8.4**
	0.9nm123nm,1.0s						
DNP	**Denpasar**	**5.12**	**264**	P	**Pn**	**17 56 31.5**	**+4.7**
	4.0nm473nm,0.6s						
TTSI	**Tana Toraja**	**5.13**	**354**	P	**Pn**	**17 56 28.8**	**+1.9**
	2μm84nm,0.8s						
IGBI	**Denpasar**	**5.20**	**263**	P	**Pn**	**17 56 31.5**	**+3.7**
	4.0nm894nm,0.6s						
NBBI	**Negara**	**5.68**	**268**	P	**Pn**	**17 56 39.8**	**+5.3**
	1.6nm207nm,0.8s						
BYJI	**Banyuwangi**	**5.94**	**269**	P	**Pn**	**17 56 46.3**	**+8.2**
	268nm,0.7s						
ABJI	**Asem Bagus**	**6.08**	**273**	P	**Pn**	**17 56 48.6**	**+8.6**
	132nm,1.1s						
KMMI	**Kalianget**	**6.44**	**280**	P	**Pn**	**17 56 45.4**	**+0.5**
GMJI	**Gumukmas**	**6.85**	**269**	P	**Pn**	**17 56 51.0**	**+0.5**
	86nm,0.9s						
BBKI	**Banjar Baru**	**7.22**	**310**	P	**Pn**	**17 57 02.8**	**+7.2**
APSI	**Ampana**	**7.34**	**10**	P	**Pn**	**17 57 02.1**	**+4.8**
	0.2nm34nm,0.9s						
LUWI	**Luwuk**	**7.49**	**19**	P	**Pn**	**17 57 03.8**	**+4.4**
	0.3nm72nm,1.2s						
GRJI	**Gresik**	**7.91**	**279**	P	**Pn**	**17 57 11.0**	**+5.8**
	158nm,1.2s						
NLAI	**Namlea**	**8.31**	**54**	P	**Pn**	**17 57 13.8**	**+3.2**
	44nm,0.7s						
PWJI	**Pagerwojo**	**8.47**	**270**	P	**Pn**	**17 57 22.2**	**+9.3**
	45nm,1.8s						
FITZ	**Fitzroy Crossi**	**11.12**	**153**	*e*P	**Pn**	**17 57 48.8**	**-0.3**
	33nm,0.9s						
FITZ				*e*S	**Sn**	**17 59 51.9**	**-0.6**
FITZ	**Fitzroy Crossi**	**11.12**	**153**	Pn	**Pn**	**17 57 49.1**	**0.0**
	1.0nm,0.3s,baz=3.0,slow=5.7,SNR=18						
FITZ				Sn	**Sn**	**17 59 49.9**	**-2.6**
	1.1nm,0.3s,baz=99,slow=19,SNR=3.6						
FITZ	**Fitzroy Crossi**	**11.12**	**153**	P	**Pn**	**17 57 50.8**	**+1.7**
	52nm,1.0s						
KNA	**Kununurra**	**11.14**	**133**	P	**Pn**	**17 57 49.0**	**-0.4**
	1μm202nm,0.9s						
KAKA	**Kakadu**	**12.70**	**112**	*e*P	**Pn**	**17 58 11.4**	**+0.6**
	18nm,0.6s						
KAKA				*e*S	**Sn**	**18 00 29.5**	**-1.9**
KAKA	**Kakadu**	**12.70**	**112**	*e*Pn	**Pn**	**17 58 11.3**	**+0.5**
	59nm,0.6s						
KAKA	**Kakadu**	**12.70**	**112**	P	**Pn**	**17 58 12.2**	**+1.4**
	422nm51nm,0.6s						
MBWA	**Marble Bar**	**12.92**	**183**	*e*Pn	**Pn**	**17 58 12.4**	**-1.3**
	23nm,1.2s						
MBWA				*e*Sn	**Sn**	**18 00 27.4**	**-9.1**
MBWA	**Marble Bar**	**12.92**	**183**	P	**Pn**	**17 58 14.0**	**+0.3**
	20nm,1.2s						
KSM	**Kuching**	**13.87**	**313**	*e*Pn	**Pn**	**17 58 24.0**	**-2.8**
	18nm,1.1s						
WRAB	**Tennant Creek**	**17.89**	**132**	*e*Pn	**Pn**	**17 59 18.5**	**-0.3**
	27nm,0.9s						
WRAB	**Tennant Creek**	**17.89**	**132**	P	**Pn**	**17 59 19.6**	**+0.8**
	29nm,0.7s						
ASAR	**Alice Springs**	**20.14**	**141**	P	**P**	**17 59 44.9**	**+1.0**
	41nm,0.9s,baz=316,slow=11,SNR=272						
TGY	**Tagaytay City**	**22.15**	**1**	pP	pP	18 00 13.2	-0.3
	82nm,0.4s,baz=152,slow=19,SNR=6.8						
COEN	**Coen**	**23.11**	**106**	*e*P	**P**	**18 00 15.1**	**-0.7**
COEN	**Coen**	**23.11**	**106**	*e*P	**P**	**18 00 15.2**	**-0.6**
	153nm,0.9s,mb5.4						
COEN	**Coen**	**23.11**	**106**	P	**P**	**18 00 15.2**	**-0.6**
	106nm,0.9s,mb5.3						
KLBR	**Kellerberrin**	**23.42**	**186**	*e*P	**P**	**18 00 18.2**	**-0.7**
	40nm,1.0s,mb4.8						
FORT	**Forrest**	**23.61**	**163**	*e*P	**P**	**18 00 20.0**	**-0.6**
	41nm,0.8s,mb4.9						
KULM	**Kulim**	**23.78**	**304**	P	**P**	**18 00 21.7**	**-0.7**
	6.0nm,0.9s,mb4.0						
PSI	**Prapat**	**24.00**	**296**	P	**P**	**18 00 25.9**	**+1.4**
	2.4nm,0.4s,mb4.0,baz=156,slow=8.2,SNR=6.1						
NWAO	**Narrogin (SRO)**	**24.79**	**186**	P	**P**	**18 00 31.6**	**+0.2**
	23nm,0.8s,mb4.7,baz=20,slow=10,SNR=9.3						
NWAO				pP		18 00 39.8	
	15nm,0.8s,baz=7.8,slow=11,SNR=4.4						
NWAO	**Narrogin (SRO)**	**24.79**	**186**	*e*P	**P**	**18 00 31.3**	**-0.2**
	26nm,0.9s,mb4.8						
NWAO				*e*		18 00 38.8	
NWAO				pP		18 00 39.8	
MTSU	**Mount Surprise**	**25.31**	**115**	*e*P	**P**	**18 00 37.1**	**+0.8**
	62nm,1.2s,mb5.0						
CTA	**Charters Tower**	**27.71**	**118**	P	**P**	**18 00 56.8**	**-1.2**
	3.4nm,0.8s,mb4.0,baz=266,slow=13,SNR=4.4						
CTAO	**Charters Tower**	**27.71**	**118**	P	**P**	**18 00 56.7**	**-1.3**
	3.8nm,0.8s,mb4.1						
STKA	**Stephens Creek**	**30.76**	**143**	*e*P	**P**	**18 01 25.3**	**+0.4**
	9.0nm,0.6s,mb4.8						
STKA	**Stephens Creek**	**30.76**	**143**	P	**P**	**18 01 25.8**	**+0.8**
	8.2nm,0.5s,mb4.8,baz=314,slow=8.9,SNR=25						
STKA	**Stephens Creek**	**30.76**	**143**	P	**P**	**18 01 25.8**	**+0.8**
CMAR	**Chiang Mai Arr**	**33.87**	**322**	P	**P**	**18 01 53.2**	**+0.9**
	0.9nm,0.9s,mb3.7,baz=121,slow=5.5,SNR=5.0						
TOO	**Toolangi**	**37.06**	**146**	*e*P	**P**	**18 02 21.1**	**+1.5**
WHN	**Wuhan**	**38.93**	**352**	P	pP	18 02 43.4	-0.6
ENH	**Enshi**	**39.63**	**345**	*e*P	**P**	**18 02 42.4**	**+1.2**
	5.9nm,0.6s,mb4.5						
LSA	**Lhasa**	**46.99**	**325**	*e*P	**P**	**18 03 42.0**	**+1.3**
	15nm,1.2s,mb4.8						
GTA	**Gaotai**	**51.04**	**340**	*e*P	**P**	**18 04 12.9**	**+1.3**
GTA				pP	pP	18 04 21.4	+1.0
GTA				sP	sP	18 04 25.2	+1.3
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
ULN	**Ulaanbaatar**	**57.03**	**349**	*e*P	**P**	**18 04 55.6**	**+0.4**
	comp=Z,13nm,1.1s,mb4.9						
ULN	**Ulaanbaatar**	**57.03**	**349**	P	**P**	**18 04 56.3**	**+1.2**
	comp=Z,10.0nm,1.2s,mb4.7						
SONM	**Songino Array**	**57.12**	**349**	P	**P**	**18 04 56.5**	**+0.7**
	comp=Z,3.1nm,0.9s,mb4.3,baz=168,slow=6.3,SNR=8.8						
SONM				pP	pP	18 05 05.0	+0.2
	comp=Z,9.6nm,1.1s,baz=172,slow=8.5,SNR=13						
MKAR	**Makanchi Array**	**64.36**	**332**	P	**P**	**18 05 44.8**	**-0.3**
	comp=Z,2.0nm,0.7s,mb4.3,baz=128,slow=7.9,SNR=15						
MKAR				pP	pP	18 05 53.4	-0.8
	comp=Z,3.1nm,0.7s,baz=115,slow=8.2,SNR=6.3						
TKM2	**Tokmak 2**	**65.14**	**325**	*e*P	**P**	**18 05 49.1**	**-1.1**
	comp=Z,4.6nm,1.1s,mb4.4						
TKM2				*e*	pP	18 05 59.0	-0.4
UCH	**Uchtor**	**65.32**	**324**	*e*P	**P**	**18 05 51.3**	**-0.2**
	comp=Z,2.5nm,0.9s,mb4.2						
AAK	**Ala-Archa**	**65.59**	**324**	*e*P	**P**	**18 05 52.6**	**-0.5**
	comp=Z,9.7nm,1.1s,mb4.8						
AAK	**Ala-Archa**	**65.59**	**324**	P	**P**	**18 05 53.4**	**+0.2**
AML	**Almayashu**	**65.74**	**324**	*e*P	**P**	**18 05 53.4**	**-0.8**
	comp=Z,17nm,1.1s,mb5.0						
EKS2	**Erkin-Say**	**66.02**	**324**	*e*P	**P**	**18 05 54.9**	**-1.1**
	comp=Z,8.5nm,1.1s,mb4.7						
ZALV	**Zalesovo Beam**	**68.77**	**338**	P	**P**	**18 06 12.3**	**-0.8**
	comp=Z,1.6nm,0.6s,mb4.1,baz=140,slow=4.9,SNR=8.8						
ZALV				pP	pP	18 06 20.6	-1.6
	comp=Z,5.9nm,0.7s,baz=139,slow=4.9,SNR=17						
ZALV	**Zalesovo Beam**	**68.77**	**338**	P	**P**	**18 06 12.3**	**-0.8**
ZALV				pP	pP	18 06 20.6	-1.6
PETK	**Petropavlovsk-**	**68.79**	**23**	P	**P**	**18 06 14.3**	**+1.0**
	comp=Z,3.7nm,0.9s,mb4.3,baz=144,slow=5.3,SNR=4.2						
KURK	**Kurchatov**	**68.87**	**333**	*e*P	**P**	**18 06 13.0**	**-0.8**
	comp=Z,8.5nm,0.9s,mb4.7						
KURK				*e*	pP	18 06 21.0	-1.9
MAW	**Mawson**	**70.46**	**200**	P	**P**	**18 06 24.3**	**+1.0**
	comp=Z,5.4nm,0.9s,mb4.5,baz=47,slow=5.1,SNR=6.1						
SBA	**Scott Base**	**73.57**	**171**	*e*P	**P**	**18 06 42.7**	**+0.8**
	comp=Z,4.9nm,0.9s,mb4.4						
BVAR	**Borovoye Array**	**74.22**	**331**	P	**P**	**18 06 44.5**	**-1.5**
	comp=Z,0.5nm,0.7s,mb3.5,baz=113,slow=7.1,SNR=3.9						
BVAR				pP	pP	18 06 53.9	-1.4
	comp=Z,2.4nm,0.9s,baz=139,slow=7.0,SNR=8.5						
BRVK	**Borovoye**	**74.29**	**331**	*e*P	**P**	**18 06 44.7**	**-1.7**
	comp=Z,6.2nm,1.0s,mb4.5						
ABKAR	**Akbulak array**	**77.68**	**324**	*e*P	**P**	**18 07 04.0**	**-1.8**
	comp=Z,0.4nm,0.5s,mb3.6						
SYO	**Syowa Base**	**79.10**	**201**	*e*P	**P**	**18 07 12.7**	**-0.7**
TIXI	**Tiksi**	**79.86**	**3**	*e*P	**P**	**18 07 17.4**	**0.0**
	comp=Z,2.9nm,0.9s,mb4.2						
TIXI				*e*	pP	18 07 24.7	-1.9
KMBO	**Kilima Mbogo**	**83.02**	**270**	P	**P**	**18 07 35.1**	**-0.3**
LSZ	**Lusaka**	**89.95**	**255**	*e*P	**P**	**18 08 07.8**	**-1.6**
	comp=Z,3.2nm,0.7s,mb4.8						
LBTB	**Lobatse**	**90.87**	**245**	P	**P**	**18 08 12.8**	**-0.6**
	comp=Z,2.5nm,0.9s,mb4.5,baz=70,slow=3.6,SNR=3.6						
LBTB	**Lobatse**	**90.87**	**245**	P	**P**	**18 08 12.8**	**-0.6**
VNA2	**Neumayer--Watz**	**93.77**	**195**	*e*P	**P**	**18 08 25.7**	**-0.2**
TORD	**Torodi Ar. Bea**	**119.64**	**280**	PKP	PKPdf	18 13 57.8	-2.4
	comp=Z,0.6nm,0.7s,baz=30,slow=4.2,SNR=4.3						
SSPA	**Standing Stone**	**143.82**	**24**	*e*P	PKPdf	18 14 50.2	+5.4
CPUP	**Villa Florida**	**145.62**	**184**	PKPbc	PKPbc	18 14 49.0	+0.4
	comp=Z,5.8nm,0.8s,baz=143,slow=4.2,SNR=11						
CPUP	**Villa Florida**	**145.62**	**184**	PKPbc	PKPbc	18 14 49.0	+0.4
LPAZ	**La Paz**	**154.28**	**161**	PKPab	PKPab	18 15 26.4	+2.2
	comp=Z,4.8nm,0.8s,baz=179,slow=3.4,SNR=20						

*IDC **03** 17:58:25.9±0.7, 7°.95S×120°.51E, h0^{km}, mb4.2/9, mb1 4.3/11, mb1mx4.1/23, mbtmp4.2/11, ML4.0/2, Error ellipse: s-maj=35.0km s-min=14.0km az=66.0*
*NEIC **03** 17:58:27.3±0.5, 8°.06S×120°.25E, h10^{km}, mb4.6/7, Error ellipse: s-maj=23.3km s-min=9.2km az=65.0*
*ISCJB **03** 17:58:28.2±0.4, 8°.06S±0°.06×120°.5E±0°.1, h33^{km}, mb4.3/15, Error ellipse: s-maj=19.6km s-min=6.0km az=157.8*
ISC 03 17:58:30.8±0.4, 8°.06S±0°.06×120°.4E±0°.1, h35^{km}, n28, σ1°.13/26, mb4.3/15, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**3.08**	**349**	Pn	**Pn**	**17 59 16.3**	**-0.7**
	35nm,0.3s,baz=144,slow=15,SNR=13						
KAPI				Sn	**Sn**	**17 59 51.8**	**-0.9**
	24nm,0.3s,baz=212,slow=19,SNR=4.2						
KAPI	**Kappang**	**3.08**	**349**	Pn	**Pn**	**17 59 16.3**	**-0.7**
KAPI				Sn	**Sn**	**17 59 51.8**	**-0.9**
FITZ	**Fitzroy Crossi**	**11.23**	**153**	Pn	**Pn**	**18 01 09.5**	**+0.6**
	0.7nm,0.3s,baz=74,slow=20,SNR=6.5						
FITZ				Sn	**Sn**	**18 03 11.7**	**-1.5**
	0.9nm,0.3s,baz=222,slow=16,SNR=3.9						
ASAR	**Alice Springs**	**20.24**	**142**	P	**P**	**18 03 03.9**	**+0.8**
	16nm,0.6s,baz=326,slow=11,SNR=14						
KULM	**Kulim**	**23.71**	**303**	P	**P**	**18 03 38.0**	**-1.8**
	5.4nm,0.6s,mb4.2						
PSI	**Prapat**	**23.95**	**296**	P	**P**	**18 03 42.8**	**+0.8**
	2.9nm,0.3s,mb4.1,baz=187,slow=11,SNR=4.1						
NWAO	**Narrogin (SRO)**	**24.91**	**186**	P	**P**	**18 03 50.9**	**+0.3**
	12nm,0.9s,mb4.4,baz=45,slow=14,SNR=3.5						
NWAO	**Narrogin (SRO)**	**24.91**	**186**	*e*P	**P**	**18 03 50.2**	**-0.3**
STKA	**Stephens Creek**	**30.86**	**143**	P	**P**	**18 04 44.7**	**+0.9**
	4.5nm,0.6s,mb4.5,baz=330,slow=9.1,SNR=8.7						
YHNB	**Yeheng**	**32.54**	**2**	P	**P**	**18 05 00.4**	**+1.7**
	21nm,1.1s,mb5.0						
CMAR	**Chiang Mai Arr**	**33.77**	**321**	P	**P**	**18 05 10.8**	**+1.3**
	0.5nm,0.8s,mb3.5,baz=144,slow=6.5,SNR=4.4						
LSA	**Lhasa**	**46.89**	**324**	P	**P**	**18 06 58.0**	**+0.1**
ULN	**Ulaanbaatar**	**56.91**	**349**	*e*P	**P**	**18 08 10.7**	**-1.5**
	6.0nm,1.2s,mb4.5						
ULN				*e*	pP	18 08 22.8	-0.1
SONM	**Songino Array**	**57.01**	**349**	P	**P**	**18 08 14.4**	**+1.5**
	2.2nm,1.1s,mb4.1,baz=173,slow=7.9,SNR=7.0						
MKAR	**Makanchi Array**	**64.25**	**332**	P	**P**	**18 09 03.1**	**+0.8**
	1.2nm,0.8s,mb4.0,baz=131,slow=6.7,SNR=4.0						
TKM2	**Tokmak 2**	**65.04**	**325**	*e*P	**P**	**18 09 08.7**	**+1.1**
AAK	**Ala-Archa**	**65.48**	**324**	*e*P	**P**	**18 09 10.6**	**+0.1**
	5.4nm,1.0s,mb4.5						
AML	**Almayashu**	**65.64**	**324**	*e*P	**P**	**18 09 11.4**	**-0.1**
	4.7nm,0.9s,mb4.5						
EKS2	**Erkin-Say**	**65.92**	**324**	*e*P	**P**	**18 09 14.1**	**+0.9**
	2.3nm,0.7s,mb4.3						
ZALV	**Zalesovo Beam**	**68.65**	**338**	P	**P**	**18 09 30.3**	**0.0**
	2.1nm,0.7s,mb4.2,baz=140,slow=4.1,SNR=7.3						
PETK	**Petropavlovsk-**	**68.68**	**23**	P	**P**	**18 09 28.6**	**-1.9**
	1.9nm,0.9s,mb4.0,baz=182,slow=9.7,SNR=3.0						
KURK	**Kurchatov**	**68.76**	**333**	*e*P	**P**	**18 09 30.0**	**-1.1**
	2.6nm,1.1s,mb4.1						
LSZ	**Lusaka**	**89.98**	**255**	P	**P**	**18 11 25.1**	**-2.2**
TORD	**Torodi Ar. Bea**	**119.61**	**281**	PKP	PKPdf	18 17 16.6	-1.4
	0.3nm,0.7s,baz=80,slow=1.6,SNR=2.7						
TORD	**Torodi Ar. Bea**	**119.61**	**281**	PKP	PKPdf	18 17 16.6	-1.4
CPUP	**Villa Florida**	**145.74**	**184**	PKPbc	PKPbc	18 18 07.2	+0.4
	1.8nm,0.6s,baz=96,slow=1.9,SNR=7.3						
CPUP	**Villa Florida**	**145.74**	**184**	PKPbc	PKPbc	18 18 07.2	+0.4
LPAZ	**La Paz**	**154.39**	**161**	PKPab	PKPab	18 18 44.8	+2.3
	1.7nm,0.6s,baz=187

*MOS **03** 18:24:10.2±1.0, 40°.52N×48°.50E, h23km, mb4.2/8, Error ellipse: s-maj=11.6km s-min=6.2km az=111.5*
*IDC **03** 18:24:11.1±1.8, 40°.87N×48°.47E, h0km, mb3.8/5, mb1 3.7/9, mb1mx3.5/26, mbtmp3.7/9, ML3.2/2, MS3.4/1, Ms1 3.4/1, ms1mx2.8/39, Error ellipse: s-maj=35.2km s-min=13.7km az=152.0*
*ISCJB **03** 18:24:11.8±0.4, 40°.74N±0°.03×48°.70E±0°.04, h28km±3km, mb3.8/9, Error ellipse: s-maj=5.6km s-min=4.0km az=44.4*
*TIF **03** 18:24:12.4, 40°.64N×48°.60E, h15km±1km*
*CSEM **03** 18:24:12.7±0.3, 40°.75N×48°.59E, h24km±2km, mb4.0/6, Error ellipse: s-maj=6.7km s-min=4.7km az=60.0*
*NEIC **03** 18:24:14.9±3.8, 41°.10N×48°.37E, h21km±30km, mb4.0/3, Error ellipse: s-maj=22.2km s-min=10.4km az=167.0*
*TEH **03** 18:24:15.9, 40°.59N×48°.62E, h34km*
ISC 03 18:24:13.4±0.4, 40°.72N±0°.03×48°.62E±0°.04, h23km±3km, n102, σ1°31/121, mb3.8/9, 1C-1D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PQL	**Pirkuli** SNR=626	**0.07**	**340**	P	**Pb**	**18 24 16.4**	**-1.2**
PQL				S	**Sb**	**18 24 20.2**	**-0.3**
IML	**Ismayilli** SNR=58	**0.34**	**282**	P	**Pb**	**18 24 19.2**	**-1.7**
IML				S	**Sb**	**18 24 25.6**	**-0.5**
SIZA	**Siyzn** SNR=694	**0.41**	**30**	P	**Pb**	**18 24 22.7**	**+0.7**
ALIB	**Äli-Bayra** SNR=31	**0.82**	**159**	P	**Pb**	**18 24 30.8**	**+1.9**
AKT	**Akhty**	**1.01**	**319**	⇓*i*PG	**Pn**	**18 24 31.3**	**-0.8**
AKT				*e*S	**Sb**	**18 24 46.0**	**+0.9**
AKT	**Akhty**	**1.01**	**319**	*i* Pg	**Pn**	**18 24 31.3**	**-0.8**
AKT				*e*Sg	**Sb**	**18 24 46.0**	**+0.9**
SEKA	**Sheki** SNR=111	**1.18**	**295**	P	**Pn**	**18 24 33.1**	**-1.3**
BRDA	**Brd** SNR=5.8	**1.19**	**248**	P	**Pn**	**18 24 34.5**	**-0.1**
DRN	**Derbent**	**1.32**	**350**	*i* PG	**Pn**	**18 24 39.5**	**+3.1**
DRN				*e*S	**Sn**	**18 24 59.2**	**+5.9**
DRN	comp=Z,174nm,0.2s			pmax	pmax		
DRN	**Derbent** comp=Z,174nm,0.2s	**1.32**	**350**	*i* Pg	**Pn**	**18 24 39.5**	**+3.1**
GLBA	**Cilabad** SNR=5.8	**1.49**	**187**	P	**Pn**	**18 24 38.0**	**-0.6**
GLBA				S	**Sn**	**18 24 58.2**	**+0.9**
URKR	**Urkarakh**	**1.62**	**333**	*e*PN	**Pn**	**18 24 43.0**	**+2.5**
URKR				*i* S	**Sn**	**18 25 04.5**	**+3.9**
URKR	**Urkarakh**	**1.62**	**333**	*e*Pn	**Pn**	**18 24 43.0**	**+2.5**
URKR				*i* Sg	**Sn**	**18 25 04.5**	**+3.9**
GANJ	**Ganja** SNR=36	**1.75**	**268**	P	**Pn**	**18 24 41.1**	**-1.1**
GANJ				S	**Sn**	**18 25 03.7**	**-0.1**
KMKR	**Kumukh**	**1.82**	**321**	⇑*i*PN	**Pn**	**18 24 46.0**	**+2.9**
KMKR				*i* S	**Sn**	**18 25 15.5**	**+10**
KMKR	comp=Z,158nm,0.4s			pmax	pmax		
MAK	**Makhachkala**	**2.39**	**340**	*e*PN	**Pn**	**18 24 55.1**	**+4.1**
MAK				*e*		18 25 29.3	
MAK	comp=Z,30nm,0.1s			pmax	pmax		
MAK	comp=E,564nm,0.5s			smax			
MAK	comp=N,380nm,0.5s			smax			
DGRG	**David-gareji**	**2.56**	**288**	P	**Pn**	**18 24 54.8**	**+1.4**
DGRG				S	**Sn**	**18 25 32.2**	**+8.4**
IHRS	**Heris**	**2.69**	**208**	*e*Pn	**Pn**	**18 24 55.2**	**0.0**
IHRS	comp=Z,3μm,0.1s			*e*		18 24 56.9	
IHRS	**Heris**	**2.69**	**208**	*e*Pn	**Pn**	**18 24 55.2**	**0.0**
ISRB	**Sarab**	**2.99**	**195**	*e*Pn	**Pn**	**18 24 59.0**	**-0.2**
ISRB	comp=Z,758nm,0.1s			*e*		18 25 02.8	
ISRB	**Sarab**	**2.99**	**195**	*e*Pn	**Pn**	**18 24 59.0**	**-0.2**
IMRD	**Marand**	**3.02**	**229**	*e*Pn	**Pn**	**18 25 00.2**	**+0.6**
IMRD	comp=Z,3μm,0.1s			*e*		18 25 10.0	
IMRD	**Marand**	**3.02**	**229**	*e*Pn	**Pn**	**18 25 00.2**	**+0.6**
GNI	**Garni** comp=Z,4.8nm,0.3s,baz=73,slow=8.4,SNR=12	**3.02**	**260**	Pn	**Pn**	**18 25 02.8**	**+3.1**
GNI				LR	LR	18 26 33.0	
GNI	**Garni** comp=Z,690nm,20.5s,baz=0.9,slow=48	**3.02**	**260**	*i* PN	**Pn**	**18 24 59.3**	**-0.4**
GNI	**Garni**	**3.02**	**260**	*e*Pn	**Pn**	**18 25 00.2**	**+0.6**
GNI	**Garni**	**3.02**	**260**	*i* Pn	**Pn**	**18 24 59.3**	**-0.4**
MTA	**Mtatsminda**	**3.05**	**290**	P	**Pn**	**18 25 00.6**	**+0.5**
MTA				S	**Sn**	**18 25 43.2**	**+7.4**
TBLG	**Delisi**	**3.10**	**290**	*e*PN	**Pn**	**18 25 01.7**	**+0.9**
TBLG				*e*S	**Sb**	**18 25 43.7**	**-1.4**
TBLG	**Delisi**	**3.10**	**290**	P	**Pn**	**18 25 01.7**	**+1.0**
TBLG				S	**Sn**	**18 25 43.7**	**+6.6**
TBLG	**Delisi**	**3.10**	**290**	*e*Pn	**Pn**	**18 25 01.7**	**+0.9**
TBLG				*e*Sb	**Sb**	**18 25 43.7**	**-1.4**
ITBZ	**Tabriz**	**3.14**	**218**	*e*Pn	**Pn**	**18 25 01.4**	**+0.1**
ITBZ	comp=Z,676nm,0.2s			*e*		18 25 10.5	
ITBZ	**Tabriz**	**3.14**	**218**	*e*Pn	**Pn**	**18 25 01.4**	**+0.1**
ISHB	**Shabestar**	**3.37**	**225**	*e*Pn	**Pn**	**18 25 04.6**	**+0.1**
ISHB	**Shabestar** comp=Z,760nm,0.2s	**3.37**	**225**	*e*	**Pb**	**18 25 14.9**	**+2.5**
KEH	**Kehvi**	**3.86**	**296**	P	**Pn**	**18 25 11.3**	**0.0**
KEH				S	**Sn**	**18 25 56.3**	**+0.5**
ZEI	**Tsey**	**4.08**	**302**	*e*PN	**Pn**	**18 25 16.7**	**+2.4**
ZEI				*e*S	**Pb**	**18 25 28.1**	**+3.6**
ZEI	comp=Z,11nm,0.2s			pmax	pmax		
ZEI	**Tsey** comp=Z,11nm,0.2s	**4.08**	**302**	*e*Pn	**Pn**	**18 25 16.7**	**+2.4**
ONI	**Oni**	**4.30**	**297**	P	**Pn**	**18 25 19.0**	**+1.7**
ONI				S	**Pb**	**18 25 31.3**	**+3.1**
IMHD	**Mahdasht**	**5.28**	**162**	*e*Pn	**Pn**	**18 25 30.9**	**+0.1**
IMHD	comp=Z,329nm,0.0s			*e*		18 29 07.0	
IMHD	**Mahdasht**	**5.28**	**162**	*e*Pn	**Pn**	**18 25 30.9**	**+0.1**
IPRN	**Peran**	**5.34**	**146**	*e*Pn	**Pn**	**18 25 30.4**	**-1.2**
IPRN				*e*Sn	**Sn**	**18 26 26.0**	**-6.3**
IPRN	comp=Z,1μm,0.1s			*e*		18 26 32.9	
IPRN	**Peran**	**5.34**	**146**	*e*Pn	**Pn**	**18 25 30.4**	**-1.2**
SHAR	**Shatzhatmas**	**5.35**	**306**	*i* P	**Pn**	**18 25 32.8**	**+1.1**
SHAR	**Shatzhatmas**	**5.35**	**306**	*i* P	**Pn**	**18 25 32.8**	**+1.1**
IRAZ	**Razeghan**	**5.41**	**169**	*e*Pn	**Pn**	**18 25 31.0**	**-1.5**
IRAZ	comp=Z,109nm,0.1s			*e*		18 25 33.7	
IRAZ	**Razeghan**	**5.41**	**169**	*e*Pn	**Pn**	**18 25 31.0**	**-1.5**
KIV	**Kislovodsk**	**5.46**	**308**	*e*P	**Pn**	**18 25 30.0**	**-3.2**
KIV	**Kislovodsk**	**5.46**	**308**	*e*Pn	**Pn**	**18 25 30.0**	**-3.2**
KIV	**Kislovodsk**	**5.46**	**308**	*e*P	**Pn**	**18 25 30.0**	**-3.2**
GUMR	**Gum-Bashi**	**5.63**	**305**	*i* P	**Pn**	**18 25 34.9**	**-0.6**
GUMR	**Gum-Bashi**	**5.63**	**305**	*i* P	**Pn**	**18 25 34.9**	**-0.6**
IALA	**Alasht**	**5.68**	**143**	*e*Pn	**Pn**	**18 25 34.3**	**-1.9**
IALA	comp=Z,460nm,0.1s			*e*		18 25 38.1	
IALA	**Alasht**	**5.68**	**143**	*e*Pn	**Pn**	**18 25 34.3**	**-1.9**
IDMV	**Damavand**	**5.80**	**151**	*e*Pn	**Pn**	**18 25 38.6**	**+0.8**
IDMV	comp=Z,141nm,0.1s			*e*		18 25 39.6	
IDMV	**Damavand**	**5.80**	**151**	*e*Pn	**Pn**	**18 25 38.6**	**+0.8**
IGLO	**Ghaloghah**	**5.86**	**134**	*e*Pn	**Pn**	**18 25 38.5**	**-0.2**
IGLO	comp=Z,401nm,0.1s			*e*		18 27 58.3	
IGLO	**Ghaloghah**	**5.86**	**134**	*e*Pn	**Pn**	**18 25 38.5**	**-0.2**
IKIA	**Kiasar**	**6.01**	**137**	*e*Pn	**Pn**	**18 25 40.5**	**-0.2**
IKIA	comp=Z,298nm,0.1s			*e*		18 25 41.6	
IKIA	**Kiasar**	**6.01**	**137**	*e*Pn	**Pn**	**18 25 40.5**	**-0.2**
IFIR	**Firoozkooh**	**6.03**	**146**	*e*Pn	**Pn**	**18 25 41.5**	**+0.5**
IFIR	comp=Z,304nm,0.1s			*e*		18 25 44.3	
IFIR	**Firoozkooh**	**6.03**	**146**	*e*Pn	**Pn**	**18 25 41.5**	**+0.5**
ISHM	**Shahmirzad**	**6.13**	**142**	*e*Pn	**Pn**	**18 25 42.7**	**+0.3**
ISHM	comp=Z,421nm,0.2s			*e*		18 26 52.2	
ISHM	**Shahmirzad**	**6.13**	**142**	*e*Pn	**Pn**	**18 25 42.7**	**+0.3**
ANN	**Anapa**	**9.18**	**300**	*e*P	**Pn**	**18 26 23.1**	**-1.2**
ANN	comp=Z,8.0nm,0.9s			pmax	pmax		
AKTK	**Aktyubinsk**	**11.72**	**31**	Pn	**Pn**	**18 26 58.2**	**-0.8**
AKTK	**Aktyubinsk**	**11.72**	**31**	P	**Pn**	**18 26 58.2**	**-0.8**
AKTO	**Aktyubinsk**	**11.72**	**31**	Pn	**Pn**	**18 26 58.2**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=238,slow=9.5,SNR=2.6						
AKASG	**Malin Array Be** comp=Z,0.5nm,0.3s,baz=348,slow=15,SNR=6.3	**16.78**	**313**	Pn	**Pn**	**18 28 02.9**	**-3.7**
AKASG	**Malin Array Be**	**16.78**	**313**	P	**Pn**	**18 28 02.9**	**-3.7**
AKASG	comp=Z,1.0nm,0.3s			pmax	pmax		
ARU	**Arti**	**17.01**	**19**	P	**Pn**	**18 28 05.8**	**-3.6**
ARU	**Arti**	**17.01**	**19**	Pn	**Pn**	**18 28 05.8**	**-3.6**
BRVK	**Borovoye**	**19.18**	**43**	*i* P	**Pn**	**18 28 37.1**	**+1.1**
BRVK	comp=Z,1.0nm,0.7s			pmax	pmax		
BVAR	**Borovoye Array** comp=Z,0.1nm,0.3s,baz=233,slow=14,SNR=2.9	**19.21**	**43**	P	**Pn**	**18 28 36.7**	**+0.2**
BVAR	**Borovoye Array**	**19.21**	**43**	*e*P	**Pn**	**18 28 42.5**	**+6.0**
BVAR	comp=Z,1.0nm,0.6s			pmax	pmax		
BVAR	**Borovoye Array**	**19.21**	**43**	P	**Pn**	**18 28 36.7**	**+0.2**
KURK	**Kurchatov**	**23.06**	**54**	*e*P	**P**	**18 29 18.8**	**+2.0**
KURK	comp=Z,4.0nm,1.4s,mb3.7			pmax	pmax		
KURK	**Kurchatov** comp=Z,3.9nm,1.4s,mb3.6	**23.06**	**54**	*e*P	**P**	**18 29 18.8**	**+2.0**
JOF	**Joensuu**	**24.51**	**341**	*e*P	**P**	**18 29 28.6**	**-1.9**
JOF	comp=Z,1.0nm,0.4s,mb3.7			pmax	pmax		
JOF	**Joensuu** comp=Z,1.2nm,0.4s,mb3.8	**24.51**	**341**	*e*p	**P**	**18 29 28.6**	**-1.9**
JOF	**Joensuu** comp=Z,1.0nm,0.4s,mb3.7	**24.51**	**341**	*e*P	**P**	**18 29 28.6**	**-1.9**
FINES	**FINESS Array B** comp=Z,2.3nm,0.5s,mb3.9,baz=136,slow=11,SNR=16	**24.88**	**334**	P	**P**	**18 29 32.5**	**-1.3**
FINES	**FINESS Array B**	**24.88**	**334**	P	**P**	**18 29 32.6**	**-1.3**
FINES	comp=Z,2.0nm,0.5s			pmax	pmax		
FINES	**FINESS Array B** comp=Z,2.0nm,0.5s,mb3.9	**24.88**	**334**	P	**P**	**18 29 32.6**	**-1.3**
MKAR	**Makanchi Array** comp=Z,0.3nm,0.6s,mb3.0,baz=272,slow=6.9,SNR=5.1	**24.93**	**65**	P	**P**	**18 29 35.9**	**+1.3**
MKAR	**Makanchi Array**	**24.93**	**65**	*e*P	**P**	**18 29 35.5**	**+1.0**
MKAR	**Makanchi Array**	**24.93**	**65**	*e*P	**P**	**18 29 35.5**	**+1.0**
KAF	**Kangasniemi**	**25.29**	**335**	*e*P	**P**	**18 29 35.6**	**-2.0**
KAF	comp=Z,3.0nm,0.6s,mb4.0			pmax	pmax		
KAF	**Kangasniemi** comp=Z,2.7nm,0.6s,mb4.0	**25.29**	**335**	*e*p	**P**	**18 29 35.6**	**-2.0**
KAF	**Kangasniemi** comp=Z,2.7nm,0.6s,mb4.0	**25.29**	**335**	*e*P	**P**	**18 29 35.6**	**-2.0**
HFS	**Hagfors** comp=Z,1.7nm,0.6s,mb4.0,baz=113,slow=11,SNR=5.7	**29.02**	**324**	P	**P**	**18 30 09.5**	**-1.6**
HFS	**Hagfors**	**29.02**	**324**	P	**P**	**18 30 09.5**	**-1.6**
HFS	comp=Z,2.0nm,0.6s			pmax	pmax		
HFS	**Hagfors** comp=Z,2.0nm,0.6s,mb4.0	**29.02**	**324**	P	**P**	**18 30 09.5**	**-1.6**
NB2	**NORSAR Subarra** comp=Z,0.7nm,0.5s,mb3.8,baz=115,slow=8.6	**30.51**	**324**	P	**P**	**18 30 22.2**	**-2.1**
NOA	**NORSAR Array B** comp=Z,0.7nm,0.4s,mb3.8,baz=118,slow=8.5,SNR=5.0	**30.51**	**324**	P	**P**	**18 30 22.4**	**-2.0**
NOA	**NORSAR Array B**	**30.51**	**324**	P	**P**	**18 30 22.4**	**-1.9**
NOA	comp=Z,1.0nm,0.4s			pmax	pmax		
NOA	**NORSAR Array B** comp=Z,1.0nm,0.4s,mb4.0	**30.51**	**324**	P	**P**	**18 30 22.4**	**-1.9**
ARCES	**ARCESS Array B** comp=Z,3.0nm,0.9s,mb4.1,baz=142,slow=8.0,SNR=2.5	**31.33**	**345**	P	**P**	**18 30 31.9**	**+0.4**
ARCES	**ARCESS Array B**	**31.33**	**345**	P	**P**	**18 30 31.9**	**+0.5**
ARCES	comp=Z,3.0nm,0.9s			pmax	pmax		
ARCES	**ARCESS Array B** comp=Z,3.0nm,0.9s,mb4.1	**31.33**	**345**	P	**P**	**18 30 31.9**	**+0.5**
RES	**Resolute Bay** comp=Z,2.0nm,0.9s,mb4.2	**62.35**	**350**	P	**P**	**18 34 30.3**	**-3.0**
RES				pmax	pmax		
RES	**Resolute Bay** comp=Z,2.2nm,0.9s,mb4.3	**62.35**	**350**	P	**P**	**18 34 30.3**	**-3.0**

IDC 03 18:25:17.9±1.5, 8°.08S×120°.29E, h0km, mb3.9/4, mb1 4.0/6, mb1mx3.7/21, mbtmp3.9/6, ML3.6/2, MS3.3/1, Ms1 3.3/1, ms1mx2.5/24, Error ellipse: s-maj=133.4km s-min=19.2km az=62.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang** 14nm,0.3s,baz=175,slow=3.1,SNR=74	**3.10**	**350**	Pn	Pn	18 26 08.4	+0.3
KAPI				LR	LR	18 27 04.7	
FITZ	**Fitzroy Crossi** comp=Z,536nm,20.3s,baz=172,slow=34	**11.23**	**153**	Pn	Pn	18 28 01.4	+1.6
ASAR	**Alice Springs** 0.2nm,0.3s,baz=301,slow=14,SNR=5.2	**20.26**	**141**	P	P	18 29 55.0	0.0
STKA	**Stephens Creek** 5.0nm,0.7s,baz=316,slow=11,SNR=110	**30.88**	**143**	P	P	18 31 35.6	-0.5
MKAR	**Makanchi Array** 1.2nm,0.4s,baz=343,slow=6.9,SNR=4.7	**64.24**	**332**	P	P	18 35 54.7	0.0
ZALV	**Zalesovo Beam** 0.4nm,0.6s,baz=124,slow=8.1,SNR=4.8	**68.65**	**338**	P	P	18 36 22.9	+0.1
	0.6nm,0.5s,baz=149,slow=6.1,SNR=2.8						

*BJI **03** 18:25:44.0, 8°.10S×120°.30E, h10km, mB5.0/5, mb4.6/7, Ms4.6/1, Ms7 4.4/1*
*NEIC **03** 18:25:46.1±0.3, 8°.14S×120°.33E, h10km, mb4.6/13, Error ellipse: s-maj=12.4km s-min=5.8km az=55.0*
*ISCJB **03** 18:25:48.9±0.9, 8°.11S±0°.05×120°.44E±0°.06, h46km±8km, mb4.3/27, Error ellipse: s-maj=11.5km s-min=6.1km az=147.2*
*IDC **03** 18:25:50.1±3.0, 8°.12S×120°.29E, h37km±26km, mb4.1/16, mb1 4.2/18, mb1mx4.0/27, mbtmp4.1/18, ML4.1/2, MS3.7/2, Ms1 3.8/2, ms1mx3.0/23, Error ellipse: s-maj=23.2km s-min=9.6km az=61.0*
*DJA **03** 18:25:55, 8°.38S×120°.57E, h26km, mb4.9/14*
ISC 03 18:25:49.7±2.0, 8°.15S±0°.04×120°.34E±0°.06, h34km±15km, h30km±.9km:pP-P, n71, σ1°11/64, mb4.3/27, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.51**	**182**	P	**Pn**	**18 26 14.7**	**+0.4**
MMRI	**Maumere**	**1.94**	**105**	P	**Pn**	**18 26 21.9**	**+1.7**
KAPI	**Kappang** 23nm,0.3s,baz=161,slow=4.9,SNR=16	**3.17**	**349**	Pn	**Pn**	**18 26 36.4**	**-0.7**
KAPI				Sn	**Sn**	**18 27 11.8**	**-2.0**
KAPI	**Kappang** 19nm,0.3s,baz=65,slow=20,SNR=4.6	**3.17**	**349**	Pn	**Pn**	**18 26 36.4**	**-0.7**
KAPI				Sn	**Sn**	**18 27 11.8**	**-2.0**
KAPI	**Kappang**	**3.17**	**349**	P	**Pn**	**18 26 36.5**	**-0.7**
KHKI	**Kahang-Kahang**	**4.69**	**267**	P	Px	18 27 07.3	
KDI	**Kendari**	**4.74**	**29**	P	**Pn**	**18 27 03.4**	**+4.6**
SRBI	**Singaraja** 92nm,0.8s,0.7nm	**5.08**	**270**	P	Px	18 27 11.3	
DNP	**Denpasar** 450nm,0.5s,4.8nm	**5.11**	**264**	P	Px	18 27 13.7	
IGBI	**Denpasar** 4.4nm953nm,0.5s	**5.18**	**262**	P	**Pn**	**18 27 10.0**	**+5.1**
BYJI	**Banyuwangi** 225nm,0.7s,1.1nm	**5.93**	**269**	P	Px	18 27 25.6	
GMJI	**Gumukmas** 78nm,0.9s,2μm0.4nm	**6.83**	**268**	P	Px	18 27 35.6	
APSI	**Ampana** 0.2nm36nm,1.2s	**7.31**	**10**	P	**Pn**	**18 27 39.3**	**+5.2**
NLAI	**Namlea** 58nm,0.9s	**8.31**	**54**	P	**Pn**	**18 27 53.5**	**+5.7**
FITZ	**Fitzroy Crossi** 29nm,0.9s	**11.15**	**153**	*e*P	**Pn**	**18 28 27.6**	**+0.8**
FITZ				*e*S	**Sn**	**18 30 28.8**	**-1.5**
FITZ	**Fitzroy Crossi** 1.1nm,0.3s,baz=345,slow=9.3,SNR=11	**11.15**	**153**	Pn	**Pn**	**18 28 27.5**	**+0.7**
FITZ				Sn	**Sn**	**18 30 28.7**	**-1.6**
FITZ	**Fitzroy Crossi** 1.1nm,0.3s,baz=177,slow=13,SNR=5.0 48nm,1.0s	**11.15**	**153**	P	**Pn**	**18 28 27.9**	**+1.1**
KNA	**Kununurra** 2μm178nm,0.9s	**11.18**	**133**	P	**Pn**	**18 28 26.9**	**-0.2**
TNTI	**Ternate**	**11.30**	**39**	P	Px	18 28 44.7	
KAKA	**Kakadu** 9.7nm,0.3s	**12.73**	**112**	*e*P	**Pn**	**18 28 49.5**	**+1.1**
KAKA	**Kakadu** 38nm,0.6s	**12.73**	**112**	*e*Pn	**Pn**	**18 28 46.6**	**-1.8**
KAKA				*e*Sn	**Sn**	**18 31 07.0**	**-1.9**
KAKA	**Kakadu** 348nm39nm,0.7s	**12.73**	**112**	P	**Pn**	**18 28 52.5**	**+4.1**
MBWA	**Marble Bar**	**12.95**	**183**	*e*Pn	**Pn**	**18 28 49.1**	**-2.1**
MBWA				*e*Sn	Sx	18 31 06.6	
MYLDM	**Lahad Datu** 24nm,1.3s	**13.37**	**352**	P	Px	18 29 10.0	
DBJI	**Dramaga** 33nm,1.9s	**13.57**	**276**	P	Px	18 29 11.9	
KSM	**Kuching**	**13.84**	**313**	*e*P	**Pn**	**18 29 02.5**	**-1.0**
DAV	**Davao City (W)** comp=Z,270nm,22.0s,baz=184,slow=35	**16.00**	**19**	LR	LR	18 35 10.2	
WRAB	**Tennant Creek** 13nm,0.8s	**17.92**	**132**	*e*Pn	**Pn**	**18 29 55.5**	**-0.8**
WRAB				*e*Sn	Sx	18 33 01.8	
WRAB	**Tennant Creek** 19nm,0.9s	**17.92**	**132**	P	**Pn**	**18 29 58.8**	**+2.5**
ASAR	**Alice Springs** 25nm,0.6s,baz=318,slow=11,SNR=42	**20.17**	**141**	P	**P**	**18 30 22.2**	**+0.9**
ASAR	4.8nm,1.0s,baz=334,slow=25,SNR=5.7			S	**S**	**18 34 07.8**	**+1.7**
COEN	**Coen** 144nm,1.0s,mb5.4	**23.13**	**106**	*e*P	**P**	**18 30 51.5**	**-1.6**
COEN	**Coen**	**23.13**	**106**	P	**P**	**18 30 53.6**	**+0.5**
KLBR	**Kellerberrin** 12nm,0.4s,mb4.7	**23.45**	**186**	*e*P	**P**	**18 30 55.2**	**-1.0**
KULM	**Kulim** 15nm,1.1s,mb4.3	**23.75**	**304**	*e*P	**P**	**18 30 59.3**	**+0.1**
PSI	**Prapat** 2.7nm,0.3s,mb4.2,baz=153,slow=14,SNR=4.8	**23.97**	**296**	P	**P**	**18 31 03.0**	**+1.8**
NWAO	**Narrogin (SRO)** 14nm,0.8s,mb4.5,baz=28,slow=13,SNR=17	**24.82**	**186**	P	**P**	**18 31 08.7**	**0.0**
NWAO	**Narrogin (SRO)** 68nm,1.5s,mb5.0	**24.82**	**186**	*e*P	**P**	**18 31 08.4**	**-0.3**
CTA	**Charters Tower** 2.8nm,0.8s,mb4.0,baz=324,slow=5.7,SNR=3.7	**27.74**	**118**	P	**P**	**18 31 36.1**	**+0.9**
CTAO	**Charters Tower** 16nm,1.4s,mb4.5	**27.74**	**118**	*e*P	**P**	**18 31 35.2**	**-0.1**
STKA	**Stephens Creek** 4.5nm,0.4s,mb4.7	**30.79**	**143**	*e*P	**P**	**18 32 02.5**	**+0.3**
STKA	**Stephens Creek** 5.7nm,0.5s,mb4.7,baz=314,slow=9.2,SNR=16	**30.79**	**143**	P	**P**	**18 32 02.7**	**+0.5**
CMAR	**Chiang Mai Arr** 0.7nm,0.6s,mb3.8,baz=164,slow=6.3,SNR=7.3	**33.84**	**322**	P	**P**	**18 32 30.2**	**+1.2**
CMAR	comp=Z,149nm,21.0s,baz=290,slow=35			LR	LR	18 45 41.1	
ENH	**Enshi**	**39.60**	**345**	*e*P	**P**	**18 33 19.7**	**+1.7**
XAN	**Xi'an**	**43.33**	**346**	P	**P**	**18 33 49.3**	**+0.8**
LSA	**Lhasa** 15nm,1.2s,mb4.8	**46.96**	**325**	*e*P	**P**	**18 34 18.9**	**+1.5**
LSA				*e*	pP	18 34 27.7	+0.1
MJAR	**Matsushiro Arr** 1.0nm,0.6s,mb4.0,baz=153,slow=8.2,SNR=4.1	**47.52**	**20**	P	**P**	**18 34 21.6**	**0.0**
GTA	**Gaotai**	**51.01**	**340**	*e*P	**P**	**18 34 50.1**	**+1.9**
GTA				pP	pP	18 34 57.8	-0.8
GTA				sP	sP	18 35 01.7	-1.0
GTA	comp=Z,6.0nm,1.1s,mb4.4			pmax	pmax		
MDJ	**Mudanjiang** comp=Z,8.4nm,0.9s,mb4.7	**53.18**	**8**	*e*P	**P**	**18 35 04.8**	**+0.5**
RPZ	**Rata Peaks** comp=Z,16nm,0.8s,mb5.1,baz=240,slow=5.3,SNR=6.7	**56.52**	**138**	P	**P**	**18 35 29.2**	**+0.6**
ULN	**Ulaanbaatar** comp=Z,7.0nm,1.1s,mb4.6	**57.00**	**349**	*e*P	**P**	**18 35 31.9**	**+0.1**
ULN				*e*	pP	18 35 40.5	-1.8
SONM	**Songino Array** comp=Z,0.4nm,0.5s,mb3.7,baz=165,slow=7.7,SNR=3.8	**57.09**	**349**	P	**P**	**18 35 33.0**	**+0.5**
MKAR	**Makanchi Array** comp=Z,1.6nm,0.7s,mb4.2,baz=129,slow=7.1,SNR=12	**64.32**	**332**	P	**P**	**18 36 22.2**	**+0.5**
UCH	**Uchtor** comp=Z,2.6nm,1.0s,mb4.2	**65.29**	**324**	*e*P	**P**	**18 36 26.6**	**-1.5**
AAK	**Ala-Archa** comp=Z,4.6nm,1.0s,mb4.5	**65.55**	**324**	*e*P	**P**	**18 36 30.4**	**+0.5**
AML	**Almayashu** comp=Z,2.6nm,0.8s,mb4.3	**65.71**	**324**	*e*P	**P**	**18 36 30.7**	**-0.2**
AML				*e*	pP	18 36 39.8	-1.6
EKS2	**Erkin-Say** comp=Z,2.1nm,1.0s,mb4.1	**65.98**	**324**	*e*P	**P**	**18 36 32.4**	**-0.3**
EKS2				*e*	pP	18 36 41.9	-1.4
ZAA0	**Zalesovo Array**	**68.73**	**338**	*e*P	**P**	**18 36 49.3**	**-0.5**
ZALV	**Zalesovo Beam** comp=Z,1.9nm,0.5s,mb4.3,baz=143,slow=4.9,SNR=8.8	**68.73**	**338**	P	**P**	**18 36 49.2**	**-0.6**
ZALV	**Zalesovo Beam**	**68.73**	**338**	P	**P**	**18 36 49.2**	**-0.6**
KURK	**Kurchatov** comp=Z,1.6nm,0.9s,mb4.0,baz=145,slow=5.1,SNR=4.1	**68.84**	**333**	P	**P**	**18 36 50.0**	**-0.5**
KURK	**Kurchatov** comp=Z,3.0nm,0.8s,mb4.3	**68.84**	**333**	*e*P	**P**	**18 36 48.2**	**-2.3**
MAW	**Mawson** comp=Z,3.1nm,0.9s,mb4.2,baz=45,slow=9.4,SNR=3.6	**70.48**	**200**	P	**P**	**18 37 01.2**	**+0.7**
OPO	**Ambohidratompo** comp=Z,0.7nm,0.4s,mb3.9,baz=106,slow=6.3,SNR=5.7	**71.53**	**253**	P	**P**	**18 37 07.8**	**0.0**
BVAR	**Borovoye Array** comp=Z,0.3nm,0.4s,mb3.5,baz=145,slow=8.3,SNR=4.6	**74.19**	**331**	P	**P**	**18 37 22.3**	**-0.4**
AKTK	**Aktyubinsk**	**79.29**	**325**	P	**P**	**18 37 50.0**	**-1.7**
AKTO	**Aktyubinsk** comp=Z,0.5nm,0.4s,mb3.8,baz=40,slow=10.0,SNR=3.6	**79.29**	**325**	P	**P**	**18 37 50.0**	**-1.6**
BOSA	**Boshof** comp=Z,1.3nm,0.4s,mb4.6,baz=45,slow=2.9,SNR=6.5	**90.58**	**241**	P	**P**	**18 38 48.8**	**-0.1**
TORD	**Torodi Ar. Bea** comp=Z,0.4nm,0.5s,baz=56,slow=2.0,SNR=9.4	**119.62**	**280**	PKP	PKPdf	18 44 34.8	-2.2
CPUP	**Villa Florida** comp=Z,1.3nm,0.4s,baz=170,slow=3.9,SNR=6.3	**145.65**	**184**	PKPbc	PKPbc	18 45 26.2	+0.7
CPUP	**Villa Florida**	**145.65**	**184**	PKPbc	PKPbc	18 45 26.2	+0.7
LPAZ	**La Paz** comp=Z,3.3nm,0.7s,baz=165,slow=2.7,SNR=13	**154.31**	**161**	PKPab	PKPab	18 46 02.9	+1.7

**JMA 03 19:01:18.4±0.3, 43°.97N×148°.03E, h0km, M3.7, East of K

ISC 03 19:20:42.4±0.5, 40°.16N±0°.03×26°.87E±0°.05, h9km±5km, n32, σ0°51/44, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPK	Lapseki	0.23	340	ePG	Pg	19 20 46.5	-0.6
LPK	Lapseki	0.23	340	ePg	Pg	19 20 46.5	-0.6
EZN	Ezine	0.53	232	ePG	Pg	19 20 53.1	+0.5
EZN	Ezine	0.53	232	ePg	Pg	19 20 53.1	+0.4
RKY	Sarkoy-Tekirda	0.58	24	ePG	Pg	19 20 53.2	-0.5
RKY	Sarkoy-Tekirda	0.58	24	ePg	Pg	19 20 53.2	-0.5
MFT	Murefte	0.71	27	ePG	Pg	19 20 56.2	+0.2
MFT				eSG	Sg	19 21 05.7	+0.4
MFT	Murefte	0.71	27	ePg	Pg	19 20 56.2	+0.2
MFT				eSg	Sg	19 21 05.7	+0.4
BALY	Balya	0.71	125	iP	Pg	19 20 55.9	-0.3
BALY				iS	Sg	19 21 05.0	-0.4
BALY	Balya	0.71	125	iP	Pg	19 20 55.8	-0.3
BALY				iS	Sg	19 21 05.0	-0.4
EDC	Edincik	0.79	76	ePG	Pg	19 20 58.1	+0.6
EDC	Edincik	0.79	76	ePg	Pg	19 20 58.1	+0.5
ENEZ	Enez	0.80	317	ePG	Pg	19 20 57.2	-0.6
ENEZ	Enez	0.80	317	ePg	Pg	19 20 57.2	-0.5
AYVA	Ayvalik	0.86	189	iP	Pg	19 20 58.5	-0.4
AYVA				iS	Sg	19 21 10.5	+0.5
AYVA	Ayvalik	0.86	189	iP	Pg	19 20 58.5	-0.4
AYVA				iS	Sg	19 21 10.5	+0.5
TKR	Tekirdag	0.98	31	ePG	Pg	19 21 01.0	-0.2
TKR				eSG	Sg	19 21 14.5	+0.6
TKR	Tekirdag	0.98	31	ePg	Pg	19 21 01.0	-0.2
TKR				eSg	Sg	19 21 14.5	+0.6
CRLT	Corlu	1.18	34	ePN	Pn	19 21 04.4	-0.6
CRLT	Corlu	1.18	34	ePn	Pn	19 21 04.4	-0.6
DURS	Dursunbey	1.36	114	iP	Pn	19 21 07.7	+0.2
DURS				iS	Sb	19 21 24.9	-0.5
DURS	Dursunbey	1.36	114	iP	Pn	19 21 07.7	+0.3
DURS				iS	Sb	19 21 24.9	-0.4
SLVT	Silivri	1.48	43	ePN	Pn	19 21 09.9	+0.7
SLVT	Silivri	1.48	43	ePn	Pn	19 21 09.9	+0.7
ELBA	Catalca	1.55	50	iP	Pn	19 21 09.6	-0.5
ELBA				iS	Sn	19 21 29.5	-0.8
ELBA	Catalca	1.55	50	iP	Pn	19 21 09.6	-0.5
ELBA				iS	Sn	19 21 29.5	-0.8
ARMT	Armutlu	1.58	74	ePN	Pn	19 21 11.2	+0.7
ARMT	Armutlu	1.58	74	ePn	Pn	19 21 11.2	+0.7
CTKS	Kestanelik-??a	1.65	49	ePN	Pn	19 21 12.2	+0.8
CTKS	Kestanelik-??a	1.65	49	ePn	Pn	19 21 12.3	+0.8
EDRB	Edirne	1.69	357	ePN	Pn	19 21 12.2	+0.2
EDRB	Edirne	1.69	357	ePn	Pn	19 21 12.3	+0.2

*CSEM **03** 19:22:35.9±0.3, 38°.32N×20°.50E, h2km, MD3.6, Error ellipse: s-maj=5.8km s-min=3.6km az=54.0*
*ATH **03** 19:22:35.6, 38°.28N×20°.44E, h3km, MD3.6/10*
*NEIC **03** 19:22:35.6, 38°.28N×20°.44E, h3km, MD3.6(ATH), After ATH.*
*ISCJB **03** 19:22:35.5±0.6, 38°.33N±0°.02×20°.49E±0°.04, h2km±4km, Error ellipse: s-maj=5.7km s-min=3.0km az=152.5*
*THE **03** 19:22:36.5, 38°.35N×20°.54E, h2km±1km, ML3.6/15, Error ellipse: s-maj=2.1km s-min=0.8km az=247.0*

ISC 03 19:22:35.8±0.6, 38°.32N±0°.02×20°.48E±0°.04, h2km±3km, n84, σ1°01/136, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	Valsamata	0.17	149	ePg	Pg	19 22 39.7	+0.8
VLS				eSg	Sg	19 22 42.4	+1.3
VLS	Valsamata	0.17	149	P	Pg	19 22 39.6	+0.7
VLS				S	Sg	19 22 42.3	+1.2
VLS	Valsamata	0.17	149	ePG	Pg	19 22 39.7	+0.8
VLS				eSG	Sg	19 22 42.4	+1.3
VLS	Valsamata	0.17	149	P	Pg	19 22 39.6	+0.7
VLS				S	Sg	19 22 42.3	+1.2
KFL	Anninata	0.32	131	P	Pg	19 22 41.9	0.0
KFL				S	Sg	19 22 47.4	+1.4
LKD2	Lefkada island	0.49	16	P	Pg	19 22 44.4	-0.8
LKD2				S	Sg	19 22 51.0	-0.5
LKD2	Lefkada island	0.49	16	P	Pg	19 22 44.4	-0.8
LKD2				S	Sg	19 22 51.0	-0.5
RLS	Riolos of Patr	0.82	108	ePg	Pg	19 22 51.3	-0.2
RLS	Riolos of Patr	0.82	108	ePG	Pg	19 22 51.2	-0.3
RLS	Riolos of Patr	0.82	108	ePg	Pg	19 22 51.3	-0.2
UPR	University Cam	1.03	92	P	Pg	19 22 55.2	-0.2
UPR				S	Sg	19 23 09.0	+0.2
UPR	University Cam	1.03	92	P	Pg	19 22 55.2	-0.2
UPR				S	Sg	19 23 09.0	+0.2
EFP	Efpalio	1.12	84	P	Pg	19 22 55.6	-1.7
EFP				S	Sg	19 23 12.1	+0.2
EFP	Efpalio	1.12	84	ePB	Pb	19 22 55.7	-2.2
EFP				eSB	Sb	19 23 13.3	+0.3
EFP	Efpalio	1.12	84	ePb	Pb	19 22 55.7	-2.2
EFP				S	Sg	19 23 12.1	+0.2
EFP				eSb	Sb	19 23 13.3	+0.3
LAKA	Lakka	1.18	93	P	Pg	19 22 56.8	-1.6
LAKA				S	Sg	19 23 14.2	+0.5
LAKA	Lakka	1.18	93	P	Pg	19 22 56.8	-1.6
LAKA				S	Sg	19 23 14.2	+0.5
EVR	Evrytania	1.20	60	ePg	Pg	19 22 58.5	-0.2
EVR	Evrytania	1.20	60	ePG	Pg	19 22 58.5	-0.2
EVR	Evrytania	1.20	60	ePg	Pg	19 22 58.5	-0.2
IGT	Igoumenitsa	1.22	355	P	Pg	19 22 59.3	+0.2
IGT				S	Sg	19 23 16.2	+1.3
IGT	Igoumenitsa	1.22	355	P	Pg	19 22 59.3	+0.2
IGT				S	Sg	19 23 16.2	+1.3
KALE	Kalithea	1.31	86	P	Pg	19 22 58.6	-2.2
KALE				S	Sg	19 23 18.7	+1.0
KALE	Kalithea	1.31	86	P	Pg	19 22 58.6	-2.2
KALE				S	Sg	19 23 18.7	+1.0
JAN	Janina	1.37	12	ePb	Pb	19 23 02.1	+0.1
JAN				eSb	Sb	19 23 21.7	+1.7
JAN	Janina	1.37	12	ePB	Pb	19 23 02.1	+0.1
JAN				eSB	Sb	19 23 21.7	+1.7
JAN	Janina	1.37	12	ePb	Pb	19 23 02.1	+0.1
JAN				eSb	Sb	19 23 21.7	+1.7
KEK	Kerkira	1.49	339	ePn	Pn	19 23 03.9	+0.4
KEK	Kerkira	1.49	339	P	Pn	19 23 02.8	-0.7
KEK				S	Sb	19 23 23.3	-0.2
KEK	Kerkira	1.49	339	ePN	Pn	19 23 03.9	+0.4
KEK	Kerkira	1.49	339	P	Pn	19 23 02.8	-0.7
KEK	Kerkira	1.49	339	ePn	Pn	19 23 03.9	+0.4
KEK				S	Sb	19 23 23.3	-0.2
GUR	Goura	1.52	104	P	Pn	19 23 02.6	-1.3
GUR				S	Sn	19 23 23.9	-0.3
GUR	Goura	1.52	104	ePB	Pb	19 23 02.7	-1.9
GUR				eSB	Sb	19 23 26.0	+1.8
GUR	Goura	1.52	104	P	Pn	19 23 02.6	-1.3
GUR				S	Sn	19 23 23.9	-0.3
GUR				eSb	Sb	19 23 26.0	+1.8
MEV	Metsovon	1.57	21	P	Pn	19 23 05.2	+0.5
MEV				S	Sn	19 23 24.7	-1.0
MEV	Metsovon	1.57	21	P	Pn	19 23 05.2	+0.5
MEV				S	Sn	19 23 24.7	-1.0
AGG	Agios Georgios	1.61	64	P	Pn	19 23 04.2	-1.0
AGG				S	Sn	19 23 26.8	+0.3
AGG	Agios Georgios	1.61	64	P	Pn	19 23 04.2	-1.0
AGG				S	Sn	19 23 26.8	+0.3
DSF	Desfina	1.61	86	P	Pn	19 23 03.4	-1.8
DSF				S	Sn	19 23 26.7	+0.2
DSF	Desfina	1.61	86	P	Pn	19 23 03.4	-1.8
DSF				S	Sn	19 23 26.7	+0.2
ITM	Ithomi	1.61	134	ePb	Pb	19 23 06.0	-0.2
ITM	Ithomi	1.61	134	P	Pn	19 23 05.5	+0.3
ITM				S	Sn	19 23 26.1	-0.5
ITM	Ithomi	1.61	134	ePB	Pb	19 23 06.0	-0.2
ITM	Ithomi	1.61	134	P	Pn	19 23 05.5	+0.3
ITM	Ithomi	1.61	134	ePb	Pb	19 23 06.0	-0.2
ITM				S	Sn	19 23 26.1	-0.5
THL	Klokotos Trika	1.73	43	P	Pn	19 23 06.8	0.0
THL				S	Sn	19 23 29.4	0.0
THL	Klokotos Trika	1.73	43	ePB	Pb	19 23 09.8	+1.6
THL				eSB	Sb	19 23 33.2	+2.9
THL	Klokotos Trika	1.73	43	P	Pn	19 23 06.8	0.0
THL	Klokotos Trika	1.73	43	ePb	Pb	19 23 09.8	+1.6
THL				S	Sn	19 23 29.4	0.0
THL				eSb	Sb	19 23 33.2	+2.9
PYL	PYLOS	1.74	144	P	Pn	19 23 06.8	-0.1
PYL				S	Sn	19 23 30.1	+0.4
PYL	PYLOS	1.74	144	ePN	Pn	19 23 06.8	-0.1
PYL	PYLOS	1.74	144	P	Pn	19 23 06.8	-0.1
PYL				S	Sn	19 23 30.1	+0.4
VLX	Vlachokerasia	1.78	122	P	Pn	19 23 08.9	+1.4
VLX				S	Sn	19 23 31.2	+0.6
VLX	Vlachokerasia	1.78	122	P	Pn	19 23 08.9	+1.4
VLX				S	Sn	19 23 31.2	+0.6
LTK	Loutraki	1.98	98	P	Pn	19 23 10.6	+0.3
LTK	Loutraki	1.98	98	ePN	Pn	19 23 12.6	+2.3
LTK	Loutraki	1.98	98	P	Pn	19 23 10.6	+0.3
LTK	Loutraki	1.98	98	ePn	Pn	19 23 12.6	+2.3
LKR	Lokris	2.00	80	ePn	Pn	19 23 13.1	+2.5
LKR	Lokris	2.00	80	P	Pn	19 23 10.3	-0.3
LKR				S	Sn	19 23 35.1	-1.1
LKR	Lokris	2.00	80	ePN	Pn	19 23 13.1	+2.5
LKR	Lokris	2.00	80	P	Pn	19 23 10.3	-0.3
LKR	Lokris	2.00	80	ePn	Pn	19 23 13.1	+2.5
LKR				S	Sn	19 23 35.1	-1.1
ATAL	Atalanti	2.03	79	P	Pn	19 23 10.7	-0.2
ATAL				S	Sn	19 23 36.6	-0.2
ATAL	Atalanti	2.03	79	P	Pn	19 23 10.7	-0.2
ATAL				S	Sn	19 23 36.6	-0.2
KZN	Kozani	2.22	26	P	Pn	19 23 14.5	+0.9
KZN				S	Sn	19 23 41.5	-0.1
KZN	Kozani	2.22	26	P	Pn	19 23 14.5	+0.9
KZN				S	Sn	19 23 41.5	-0.1
XOR	Xorichti	2.36	63	P	Pn	19 23 15.8	+0.3
XOR	Xorichti	2.36	63	P	Pn	19 23 15.8	+0.3
LIT	Litokhoron	2.37	41	P	Pn	19 23 16.9	+1.3
LIT	Litokhoron	2.37	41	P	Pn	19 23 16.9	+1.3
FNA	Florina	2.56	15	P	Pn	19 23 18.4	+0.2
FNA				S	Sn	19 23 49.4	-0.5
FNA	Florina	2.56	15	P	Pn	19 23 18.4	+0.2
FNA				S	Sn	19 23 49.4	-0.5
OHR	Ohrid	2.80	5	ePn	Pn	19 23 20.5	-1.0
KYTH	Kithira	2.88	134	ePb	Pb	19 23 25.4	-2.4
KYTH	Kithira	2.88	134	ePB	Pb	19 23 25.4	-2.4
PAIG	Paliouri	2.96	56	P	Pn	19 23 23.0	-0.7
PAIG	Paliouri	2.96	56	P	Pn	19 23 23.0	-0.7
TIP	Timpagrande	3.04	288	ePn	Pn	19 23 25.3	+0.5
TIP	Timpagrande	3.04	288	ePn	Pn	19 23 25.3	+0.5
KRUS	Krusevo	3.10	11	ePn	Pn	19 23 25.9	+0.2
OUR	Ouranopolis	3.38	52	P	Pn	19 23 29.2	-0.3
OUR	Ouranopolis	3.38	52	P	Pn	19 23 29.2	-0.3

*BJI **03** 19:38:16.4, 8°.21S×119°.89E, h22km, mB4.9/7, mb4.6/11, Ms4.7/2, Ms7 4.5/2*
*NEIC **03** 19:38:16.1±2.9, 8°.13S×120°.34E, h21km±22km, mb4.5/18, Error ellipse: s-maj=13.7km s-min=7.3km az=61.0*
*IDC **03** 19:38:19.0±2.7, 8°.10S×120°.38E, h40km±24km, mb4.0/12, mb1 4.2/14, mb1mx4.0/24, mbtmp4.1/14, ML4.2/2, MS3.5/4, Ms1 3.5/4, ms1mx3.0/22, Error ellipse: s-maj=28.7km s-min=10.0km az=58.0*
*ISCJB **03** 19:38:18.1±0.6, 8°.20S±0°.04×120°.35E±0°.04, h52km±6km, mb4.3/31, MS3.2/2, Error ellipse: s-maj=7.9km s-min=5.3km az=144.3*
*DJA **03** 19:38:20, 8°.21S×120°.33E, h30km, mb4.9/14*

ISC 03 19:38:20.0±0.5, 8°.20S±0°.04×120°.33E±0°.04, h51km±5km, n71, σ1°12/72, mb4.3/31, MS3.2/2, 1C, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	Waingapu	1.46	181	P	Pn	19 38 44.0	+0.1
MMRI	Maumere	1.93	103	P	Pn	19 38 50.2	-0.3
KAPI	Kappang	3.22	350	Pn	Pn	19 39 03.8	-4.3
	39nm,0.3s,baz=184,slow=4.9,SNR=49						
KAPI				Sn	Sn	19 39 39.3	-6.0
	19nm,0.3s,baz=18,slow=19,SNR=4.3						
KAPI				LR	LR	19 40 40.9	
	comp=Z,3μm,18.1s,baz=210,slow=45						
KHKI	Kahang-Kahang	4.68	268	P	Pn	19 39 30.3	+2.2
KDI	Kendari	4.79	28	P	Pn	19 39 28.9	-0.8
SRBI	Singaraja	5.07	271	P	Pn	19 39 31.7	-1.8
	0.6nm115nm,1.0s						
TTSI	Tana Toraja	5.15	354	P	Pn	19 39 35.3	+0.7
	3μm109nm,0.8s						
IGBI	Denpasar	5.17	263	P	Pn	19 39 38.8	+4.0
	2.8nm9μm767nm,1.1s						
ABJI	Asem Bagus	6.05	273	P	Pn	19 39 47.1	+0.1
	165nm,1.1s						
KMMI	Kalianget	6.41	280	P	Pn	19 39 50.6	-1.3
	3μm104nm,1.1s						
GMJI	Gumukmas	6.82	269	P	Pn	19 39 56.7	-0.8
	59nm,1.1s						
APSI	Ampana	7.36	10	P	Pn	19 40 04.7	-0.3
	52nm,0.9s						
LUWI	Luwuk	7.52	19	P	Pn	19 40 08.4	+1.3
	107nm,1.0s						
NLAI	Namlea	8.35	54	P	Pn	19 40 23.3	+4.8
	725nm56nm,0.8s						
FITZ	Fitzroy Crossi	11.11	153	eP	Pn	19 40 56.7	+0.4
	19nm,0.6s						
FITZ				eS	Sn	19 43 01.4	+2.3
FITZ	Fitzroy Crossi	11.11	153	Pn	Pn	19 40 56.1	-0.2
	0.9nm,0.3s,baz=349,slow=6.0,SNR=22						
FITZ				Sn	Sn	19 42 59.0	-0.1
	0.5nm,0.3s,baz=119,slow=14,SNR=3.3						
FITZ	Fitzroy Crossi	11.11	153	P	Pn	19 40 56.3	0.0
	32nm,0.9s						
KNA	Kununurra	11.15	133	P	Pn	19 40 56.1	-0.7
	1μm175nm,0.9s						
KAKA	Kakadu	12.72	112	eP	Pn	19 41 18.0	-0.3
	14nm,0.6s						
KAKA	Kakadu	12.72	112	ePn	Pn	19 41 15.0	-3.3
	53nm,0.7s						
KAKA	Kakadu	12.72	112	P	Pn	19 41 18.7	+0.4
	42nm,0.8s						
MBWA	Marble Bar	12.89	183	ePn	Pn	19 41 17.0	-3.6
MBWA				eSn	Sn	19 43 34.2	-8.4
CGJI	Cibinong	14.60	275	P	Pn	19 41 45.8	+2.1
	39nm,1.9s						
KKM	Kota Kinabalu	14.74	344	Pn	Pn	19 41 46.8	+1.3
	18nm,1.1s						
DAV	Davao City (W)	16.05	19	LR	LR	19 48 23.2	
	comp=Z,147nm,21.8s,baz=123,slow=38						
WRAB	Tennant Creek	17.89	132	ePn	Pn	19 42 23.7	-1.6
	14nm,0.8s						
WRAB				eSn	Sn	19 45 32.4	-12
ASAR	Alice Springs	20.14	141	P	P	19 42 50.6	+0.7
	38nm,0.9s,baz=313,slow=10,SNR=182						
ASAR				S	S	19 46 34.9	+1.4
	2.7nm,0.9s,baz=317,slow=22,SNR=4.2						
COEN	Coen	23.12	106	eP	P	19 43 21.2	-0.9
	105nm,0.8s,mb5.3						
COEN	Coen	23.12	106	P	P	19 43 22.1	+0.1
KLBR	Kellerberrin	23.39	186	eP	P	19 43 22.7	-1.7
	25nm,1.0s,mb4.6						
KULM	Kulim	23.77	304	eP	P	19 43 29.1	+1.0
PSI	Prapat	23.99	296	P	P	19 43 30.5	+0.4
	2.7nm,0.7s,mb3.8,baz=189,slow=14,SNR=5.1						
PSI	Prapat	23.99	296	P	P	19 43 30.5	+0.4
NWAO	Narrogin (SRO)	24.77	186	P	P	19 43 37.7	+0.8
	19nm,0.9s,mb4.6,baz=14,slow=11,SNR=7.7						
NWAO	Narrogin (SRO)	24.77	186	eP	P	19 43 37.1	+0.1
	43nm,1.2s,mb4.8						
CTA	Charters Tower	27.72	118	P	P	19 44 04.8	+1.0
	4.6nm,1.1s,mb4.0,baz=270,slow=12,SNR=3.6						
CTAO	Charters Tower	27.72	118	P	P	19 44 02.9	-0.9
	8.8nm,1.1s,mb4.3						
BBOO	Buckleboo	28.49	151	eP	P	19 44 10.6	+0.1
	3.5nm,0.5s,mb4.2						
STKA	Stephens Creek	30.76	143	eP	P	19 44 31.2	+0.6
	5.3nm,0.4s,mb4.7						
STKA	Stephens Creek	30.76	143	P	P	19 44 31.5	+0.9
	5.7nm,0.4s,mb4.8,baz=325,slow=8.7,SNR=25						
CMAR	Chiang Mai Arr	33.87	322	P	P	19 44 58.7	+0.7
	0.7nm,0.8s,mb3.6,baz=142,slow=6.9,SNR=4.8						
CMAR				LR	LR	19 59 24.5	
	comp=Z,53nm,18.6s,MS3.3,baz=160,slow=37						
YNG	Young	36.61	139	eP	P	19 45 23.1	+1.6
	13nm,0.9s,mb4.8						
ENH	Enshi	39.65	345	eP	P	19 45 46.1	-0.9
	6.8nm,0.9s,mb4.4						
KSRS	Korea Array	45.97	8	LR	LR	20 04 29.2	
	comp=Z,24nm,21.3s,MS3.1,baz=20,slow=34						
LZH	Lanzhou	46.71	342	eP	P	19 46 45.2	+1.3
LZH				pP	pP	19 46 50.0	-7.6
LZH				sP	sP	19 46 52.8	-11
LZH				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.8						
LSA	Lhasa	46.99	325	eP	P	19 46 46.6	+0.4
	comp=Z,4.4nm,0.8s,mb4.4						
GTA	Gaotai	51.05	340	eP	P	19 47 18.3	+1.2
GTA				pP	pP	19 47 23.2	-7.8
GTA				sP	sP	19 47 25.5	-11
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
MDJ	Mudanjiang	53.23	8	eP	P	19 47 32.9	-0.4
	comp=Z,7.0nm,0.9s,mb4.6						
ULN	Ulaanbaatar	57.05	349	eP	P	19 47 57.9	-2.8
	comp=Z,7.8nm,1.3s,mb4.6						
SONM	Songino Array	57.14	349	P	P	19 48 01.9	+0.6
	comp=Z,1.9nm,1.0s,mb4.1,baz=174,slow=7.5,SNR=11						
MKAR	Makanchi Array	64.36	332	P	P	19 48 50.2	-0.3
	comp=Z,0.6nm,0.4s,mb4.0,baz=118,slow=7.5,SNR=10						
MKAR	Makanchi Array	64.36	332	P	P	19 48 50.2	-0.3
TKM2	Tokmak 2	65.14	325	P	P	19 48 54.9	-0.8
	comp=Z,1.5nm,0.5s,mb4.3						
UCH	Uchtor	65.32	324	P	P	19 48 57.4	+0.5
	comp=Z,1.3nm,0.7s,mb4.1						
AML	Almayashu	65.74	324	eP	P	19 48 59.0	-0.5
	comp=Z,5.1nm,0.8s,mb4.6						
EKS2	Erkin-Say	66.02	324	eP	P	19 48 59.6	-1.7
	comp=Z,1.5nm,0.9s,mb4.0						
ZALV	Zalesovo Beam	68.78	338	P	P	19 49 17.7	-0.8
	comp=Z,0.9nm,0.3s,mb4.1,baz=139,slow=4.2,SNR=8.4						
KURK	Kurchatov	68.88	333	eP	P	19 49 17.0	-2.2
	comp=Z,5.5nm,1.0s,mb4.4						
MAW	Mawson	70.43	200	P	P	19 49 30.1	+1.5
	comp=Z,1.2nm,0.7s,mb3.9,baz=51,slow=11,SNR=3.8						
BVAR	Borovoye Array	74.23	331	P	P	19 49 50.6	-0.8
	comp=Z,0.3nm,0.4s,mb3.6,baz=160,slow=5.5,SNR=4.0						
BRVK	Borovoye	74.30	331	P	P	19 49 56.2	+4.4
	comp=Z,5.4nm,1.2s,mb4.3						
ABKAR	Akbulak array	77.68	324	P	P	19 50 14.2	+3.0
	comp=Z,1.4nm,0.8s,mb3.9						
SYO	Syowa Base	79.07	201	⇑iP	P	19 50 18.0	-0.5
TIXI	Tiksi	79.89	3	eP	P	19 50 23.3	+0.5
	comp=Z,5.1nm,1.0s,mb4.4						
KMBO	Kilima Mbogo	82.99	270	P	P	19 50 40.1	-0.5
	comp=Z,2.5nm,0.9s,mb4.2						
LSZ	Lusaka	89.92	255	eP	P	19 51 13.8	-0.6
	comp=Z,3.5nm,0.8s,mb4.7						
BOSA	Boshof	90.54	241	P	P	19 51 16.9	-0.2
	comp=Z,1.1nm,0.4s,mb4.5,baz=63,slow=9.0,SNR=8.2						
BOSA	Boshof	90.54	241	P	P	19 51 16.9	-0.2
TORD	Torodi Ar. Bea	119.62	280	PKP	PKPdf	19 57 03.3	-1.9
	comp=Z,0.5nm,0.6s,baz=89,slow=2.0,SNR=3.9						
CPUP	Villa Florida	145.60	184	PKPbc	PKPbc	19 57 54.5	+0.8
	comp=Z,6.9nm,0.9s,baz=150,slow=4.0,SNR=6.2						
LPAZ	La Paz	154.26	161	PKPab	PKPab	19 58 31.3	+2.0
	comp=Z,3.2nm,0.8s,baz=191,slow=4.6,SNR=11						

*ISCJB **03** 19:42:47.1±0.3, 47°.67N±0°.01×15°.46E±0°.02, h3km±3km, Error ellipse: s-maj=2.5km s-min=2.1km az=169.0*
*CSEM **03** 19:42:48.5±0.1, 47°.71N×15°.44E, h2km, ML3.3/20, Error ellipse: s-maj=2.7km s-min=2.3km az=168.0*
*VIE **03** 19:42:48.3±0.4, 47°.66N×15°.52E, h14km±6km, mb2.3/8, ML2.8/8, Error ellipse: s-maj=3.7km s-min=2.4km az=132.0 3 km SE of Mrzsteg felt 4 ems98 at Muerzsteg / STYRIA*
*IPEC **03** 19:42:48.7±0.1, 47°.71N×15°.53E, h2km, ML2.7/5, Error ellipse: s-maj=0.9km s-min=0.6km az=112.0*
*NEIC **03** 19:42:49.3±0.9, 47°.65N×15°.43E, h7km±8km, ML3.1(SZGRF), ML2.8(VIE), ML3.0(CLL), Error ellipse: s-maj=6.1km s-min=4.5km az=171.0*
*LDG **03** 19:42:49.6±0.2, 47°.65N×15°.59E, h10km, Ml3.3/4, Error ellipse: s-maj=5.1km s-min=3.3km az=159.0*
*PRU **03** 19:42:49.4, 47°.74N×15°.48E, h0km*
*BGR **03** 19:42:50.8±0.4, 47°.72N×15°.46E, h10km, ML3.1, Error ellipse: s-maj=11.1km s-min=4.4km az=73.0*

ISC 03 19:42:48.3±0.3, 47°.68N±0°.01×15°.47E±0°.02, h7km±3km, n150, σ1°22/258, 24C-13D, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CONA	Conrad Observa	0.36	47	⇓ePg	Pg	19 42 55.8	+0.5
	58nm,0.1s						
CONA				⇑iSg	Sg	19 43 01.8	+1.7
	604nm,0.3s						
CONA	Conrad Observa	0.36	47	Pg	Pg	19 42 55.8	+0.5
	58nm,0.1s						
CONA				Sg	Sg	19 43 01.8	+1.7
	604nm,0.3s						
ARSA	Arzberg	0.43	175	ePg	Pg	19 42 57.5	+0.9
ARSA				eSg	Sg	19 43 03.4	+1.1
ARSA	Arzberg	0.43	175	ePg	Pg	19 42 57.5	+0.9
ARSA				eSg	Sg	19 43 03.3	+1.0
ARSA	Arzberg	0.43	175	⇑iPg	Pg	19 42 57.5	+0.9
	52nm,0.2s						
ARSA				⇑iSg	Sg	19 43 03.4	+1.1
	73nm,0.1s						
ARSA	Arzberg	0.43	175	⇑iPg	Pg	19 42 57.4	+0.8
	baz=0.8						
ARSA				eSg	Sg	19 43 03.3	+1.0
	244nm,0.2s,baz=0.8						
SOP	Sopron	0.74	89	ePn	Pg	19 43 03.0	+0.6
SOP				e		19 44 13.8	
SOP	Sopron	0.74	89	ePg	Pg	19 43 02.2	-0.2
	baz=272						
SOP	Sopron	0.74	89	ePn	Pg	19 43 03.0	+0.6
MOA	Molln	0.83	282	ePg	Pg	19 43 05.0	+0.8
MOA				eSg	Sg	19 43 17.4	+2.5
MOA	Molln	0.83	282	ePg	Pg

KBA	**Koelnbreinsper**	**1.56**	**248**	⇑*i*Pg	**Pg**	**19 43 17.8**	**-0.4**
	comp=Z,15nm,0.2s						
KBA				⇑*i*Sg	**Sg**	**19 43 43.1**	**+4.6**
	comp=Z,39nm,0.4s						
KBA	**Koelnbreinsper**	**1.56**	**248**	Pg	**Pg**	**19 43 17.8**	**-0.4**
	comp=Z,15nm,0.2s						
KBA				*e*Sn	**Sg**	**19 43 40.9**	**+2.4**
	baz=66						
TREC	**Trest**	**1.61**	**0**	*e*PG	**Pb**	**19 43 18.4**	**0.0**
TREC				*e*SG	**Sb**	**19 43 38.9**	**-0.1**
	comp=Z,68nm,0.3s						
TREC	**Trest**	**1.61**	**0**	Pg	**Pb**	**19 43 18.4**	**0.0**
TREC				Sg	**Sb**	**19 43 38.9**	**-0.1**
	comp=Z,68nm,0.3s						
MYKA	**Terra Mystica**	**1.63**	**230**	⇑*i*Pg	**Pg**	**19 43 19.5**	**0.0**
	comp=Z,32nm,0.4s						
MYKA				⇑*e*Sg	**Sg**	**19 43 41.1**	**+0.4**
	comp=Z,11nm,0.4s						
MYKA	**Terra Mystica**	**1.63**	**230**	Pg	**Pg**	**19 43 19.5**	**0.0**
	comp=Z,32nm,0.4s						
MYKA				Sg	**Sg**	**19 43 41.1**	**+0.5**
	comp=Z,11nm,0.4s						
GEC2	**GERESS Array S**	**1.66**	**315**	*e*Pn	**Pb**	**19 43 19.5**	**+0.4**
GEC2				*e*Sg	**Sb**	**19 43 40.6**	**+0.4**
GEC2	**GERESS Array S**	**1.66**	**315**	Pn	**Pb**	**19 43 19.5**	**+0.4**
GEC2				Sg	**Sb**	**19 43 40.6**	**+0.4**
GOLS	**Golise**	**1.68**	**176**	*i* Pn	**Pg**	**19 43 19.8**	**-0.5**
GOLS	**Golise**	**1.68**	**176**	*i* Pn	**Pg**	**19 43 19.8**	**-0.6**
GORS	**Gorjuse**	**1.70**	**217**	*i* Pn	**Pg**	**19 43 20.4**	**-0.3**
GORS	**Gorjuse**	**1.70**	**217**	*i* Pn	**Pg**	**19 43 20.4**	**-0.4**
RMOA	**Moar Alm**	**1.76**	**274**	⇑*i*Pn	**Pb**	**19 43 21.5**	**+0.6**
RMOA				⇑*i*Pg	**Pg**	**19 43 22.7**	**+0.7**
RMOA	**Moar Alm**	**1.76**	**274**	Pn	**Pb**	**19 43 21.5**	**+0.6**
VRAC	**Vranov**	**1.79**	**24**	*e*Pn	**Pb**	**19 43 20.3**	**-1.1**
	baz=204						
VRAC				*e*Sn	**Sb**	**19 43 43.9**	**-0.2**
	comp=Z,113nm,0.5s,baz=204						
RJOB	**Jochberg**	**1.81**	**273**	⇑*i*Pn	**Pb**	**19 43 22.0**	**+0.4**
RJOB	**Jochberg**	**1.81**	**273**	Pn	**Pb**	**19 43 22.0**	**+0.4**
CRES	**Cresnjev**	**1.86**	**180**	*e*Pn	**Pg**	**19 43 22.2**	**-1.6**
	baz=1.5						
CRES				*e*Sn	**Sg**	**19 43 47.1**	**-0.8**
	baz=1.5						
JAVC	**Velka Javorina**	**1.89**	**51**	*e*Pn	**Pb**	**19 43 22.3**	**-0.7**
JAVC				*e*Sg	**Sg**	**19 43 48.2**	**-0.6**
	comp=Z,35nm,0.8s						
KHC	**Kasperske Hory**	**1.92**	**320**	*e*Pn	**Pb**	**19 43 23.1**	**-0.6**
KHC				*e*Sn	**Sb**	**19 43 47.1**	**-0.7**
KHC	**Kasperske Hory**	**1.92**	**320**	*e*PG	**Pb**	**19 43 23.7**	**+0.1**
KHC				*e*SN	**Sn**	**19 43 46.0**	**+0.2**
KHC				*e*SG	**Sb**	**19 43 48.4**	**+0.6**
	comp=Z,52nm,0.2s						
KHC	**Kasperske Hory**	**1.92**	**320**	*e*Pn	**Pb**	**19 43 23.0**	**-0.6**
KHC	**Kasperske Hory**	**1.92**	**320**	Pg	**Pb**	**19 43 23.7**	**+0.1**
KHC				Sn	**Sn**	**19 43 46.0**	**+0.2**
KHC				Sg	**Sb**	**19 43 48.4**	**+0.6**
	comp=Z,52nm,0.2s						
PKSG		**2.00**	**97**	⇓*e*Pn	**Pb**	**19 43 23.4**	**-1.6**
PKSG				*e*Sn	**Sb**	**19 43 47.7**	**-2.4**
WET	**Wettzell**	**2.26**	**311**	*e*Pn	**Pb**	**19 43 28.1**	**-1.3**
WET				*e*Sg	**Sg**	**19 44 00.2**	**-0.7**
WET	**Wettzell**	**2.26**	**311**	Pn	**Pb**	**19 43 28.1**	**-1.3**
WET				Sg	**Sg**	**19 44 00.2**	**-0.7**
PRU	**Pruhonice**	**2.39**	**346**	*e*PG	**Pb**	**19 43 31.9**	**+0.3**
PRU				*e*SG	**Sb**	**19 44 02.5**	**+1.3**
	comp=Z,41nm,0.4s						
PRU	**Pruhonice**	**2.39**	**346**	Pg	**Pb**	**19 43 31.9**	**+0.3**
PRU				Sg	**Sb**	**19 44 02.5**	**+1.3**
	comp=Z,41nm,0.4s						
VYHS	**Vyhne**	**2.40**	**69**	*e*Pn	**Pn**	**19 43 28.6**	**+0.6**
VYHS				*e*Sn	**Sb**	**19 43 58.5**	**-3.1**
VYHS	**Vyhne**	**2.40**	**69**	*e*PN	**Pn**	**19 43 28.6**	**+0.6**
VYHS				*e*SN	**Sb**	**19 43 58.5**	**-3.1**
VYHS	**Vyhne**	**2.40**	**69**	*e*Pn	**Pn**	**19 43 28.6**	**+0.6**
VYHS				*e*Sn	**Sb**	**19 43 58.5**	**-3.1**
MORC	**Moravsky Berou**	**2.51**	**32**	*e*Pn	**Pn**	**19 43 30.3**	**+0.9**
MORC				*e*Sn	**Sn**	**19 43 57.9**	**-2.4**
MORC	**Moravsky Berou**	**2.51**	**32**	*e*Pn	**Pn**	**19 43 30.0**	**+0.6**
	baz=214						
MORC				*e*Sn	**Sn**	**19 43 57.9**	**-2.3**
PKS7	**Kunszentmiklos**	**2.59**	**103**	⇓*e*Pn	**Pb**	**19 43 33.5**	**-1.5**
PKS7				*e*Sn	**Sb**	**19 44 04.9**	**-2.1**
RHK3	**Tenkes**	**2.62**	**132**	⇑*e*Pn	**Pb**	**19 43 32.0**	**-3.6**
PKSM	**Moragy**	**2.62**	**123**	*e*Pn	**Pn**	**19 43 31.5**	**+0.4**
	baz=306						
PKSM				*e*Sn	**Sn**	**19 44 02.1**	**-1.0**
WTTA	**Wattenberg**	**2.63**	**262**	*e*Pn	**Pb**	**19 43 34.8**	**-1.0**
WTTA				*e*Sg	**Sg**	**19 44 14.1**	**+1.3**
WTTA	**Wattenberg**	**2.63**	**262**	⇑*i*Pn	**Pb**	**19 43 34.8**	**-0.9**
	comp=Z,4.3nm,0.2s						
WTTA				⇓*e*Pg	**Pg**	**19 43 39.1**	**+0.4**
	comp=Z,6.6nm,0.2s						
WTTA				⇓*e*Sg	**Sg**	**19 44 14.1**	**+1.4**
	comp=Z,13nm,0.3s						
WTTA	**Wattenberg**	**2.63**	**262**	Pn	**Pb**	**19 43 34.8**	**-0.9**
WATA	**Walderalm**	**2.66**	**264**	⇓*i*Pn	**Pb**	**19 43 34.7**	**-1.5**
	comp=Z,1.2nm,0.1s						
WATA				⇑*i*Pg	**Pg**	**19 43 40.3**	**+1.1**
	comp=Z,4.4nm,0.2s						
WATA				⇑*e*Sg	**Sg**	**19 44 14.9**	**+1.2**
	comp=Z,8.9nm,0.2s						
DPC	**Dobruska-Polom**	**2.73**	**12**	*e*PG	**Pb**	**19 43 37.9**	**+0.5**
DPC				*e*SG	**Sb**	**19 44 12.5**	**+1.5**
	comp=Z,37nm,0.6s						
DPC	**Dobruska-Polom**	**2.73**	**12**	*e*Pn	**Pn**	**19 43 32.8**	**+0.3**
	baz=191						
DPC	**Dobruska-Polom**	**2.73**	**12**	Pg	**Pb**	**19 43 37.9**	**+0.5**
DPC				Sg	**Sb**	**19 44 12.5**	**+1.5**
	comp=Z,37nm,0.6s						
OKC	**Ostrava-Krasne**	**2.79**	**38**	*e*PN	**Pn**	**19 43 34.4**	**+1.0**
OKC				*e*SN	**Sn**	**19 44 06.4**	**-0.9**
OKC	**Ostrava-Krasne**	**2.79**	**38**	Pn	**Pn**	**19 43 34.4**	**+1.0**
OKC				Sn	**Sn**	**19 44 06.4**	**-0.9**
MOTA	**Moosalm**	**2.98**	**265**	⇑*i*Pn	**Pb**	**19 43 38.7**	**-2.9**
	comp=Z,2.1nm,0.2s						
MOTA				⇑*i*Pg	**Pg**	**19 43 44.8**	**-0.5**
	comp=Z,4.6nm,0.2s						
MOTA				⇑*e*Sg	**Sg**	**19 44 24.5**	**+0.6**
	comp=Z,11nm,0.3s						
MOTA	**Moosalm**	**2.98**	**265**	Pn	**Pb**	**19 43 38.7**	**-2.9**
	comp=Z,2.1nm,0.2s						
PSZ	**Piszkesteto**	**2.99**	**84**	*e*Pn	**Pb**	**19 43 41.1**	**-0.8**
PSZ	**Piszkesteto**	**2.99**	**84**	⇑*e*Pn	**Pb**	**19 43 38.9**	**-3.0**
PSZ				*e*Sn	**Sn**	**19 44 11.8**	**-0.4**
PSZ	**Piszkesteto**	**2.99**	**84**	⇑*e*Pn	**Pb**	**19 43 38.9**	**-3.0**
PSZ				*e*Sn	**Sn**	**19 44 11.8**	**-0.4**
ROTZ	**Rotzenmuhle**	**3.00**	**315**	*e*Sg	**Sg**	**19 44 24.2**	**-0.4**
ROTZ	**Rotzenmuhle**	**3.00**	**315**	Sg	**Sg**	**19 44 24.2**	**-0.5**
KSP	**Ksiaz**	**3.21**	**9**	*e*Pg	**Pg**	**19 43 49.7**	**0.0**
KSP				*e*Sg	**Sb**	**19 44 27.6**	**+2.7**
NKC	**Novy Kostel**	**3.24**	**323**	*e*Sg	**Sg**	**19 44 32.3**	**+0.1**
NKC	**Novy Kostel**	**3.24**	**323**	*e*PG	**Pb**	**19 43 44.8**	**-1.2**
NKC				*e*SG	**Sg**	**19 44 30.8**	**-1.4**
	comp=Z,24nm,0.5s						
NKC	**Novy Kostel**	**3.24**	**323**	Pg	**Pb**	**19 43 44.8**	**-1.2**
NKC				Sg	**Sg**	**19 44 30.8**	**-1.4**
	comp=Z,24nm,0.5s						
WERN	**Wernitzgruen**	**3.31**	**323**	*e*Pn	**Pn**	**19 43 43.5**	**+3.0**
WERN	**Wernitzgruen**	**3.31**	**323**	Pn	**Pn**	**19 43 43.5**	**+3.0**
BRG	**Berggiesshubel**	**3.35**	**343**	*e*Sg	**Sg**	**19 44 33.2**	**-2.5**
BRG	**Berggiesshubel**	**3.35**	**343**	Sg	**Sg**	**19 44 33.2**	**-2.5**
TANN	**Tannenbergstha**	**3.38**	**325**	*e*Pn	**Pn**	**19 43 44.7**	**+3.4**
TANN	**Tannenbergstha**	**3.38**	**325**	Pn	**Pn**	**19 43 44.7**	**+3.3**
GUNZ	**Gunzen**	**3.39**	**324**	*e*Sg	**Sg**	**19 44 36.4**	**-0.6**
GUNZ	**Gunzen**	**3.39**	**324**	Sg	**Sg**	**19 44 36.4**	**-0.6**
GRA1	**Grafenberg Arr**	**3.46**	**307**	Pn	**Pn**	**19 43 44.9**	**+2.4**
GRA1				Sg	**Sg**	**19 44 38.7**	**-0.6**
GRF	**Grafenberg Arr**	**3.46**	**307**	*e*Pn	**Pn**	**19 43 44.9**	**+2.4**
GRF				*e*Sg	**Sg**	**19 44 38.7**	**-0.5**
GRF	**Grafenberg Arr**	**3.46**	**307**	*e*Pn	**Pn**	**19 43 44.9**	**+2.4**
GRF				*e*Sg	**Sg**	**19 44 38.7**	**-0.6**
GRF	**Grafenberg Arr**	**3.46**	**307**	*e*Pn	**Pn**	**19 43 44.9**	**+2.4**
GRF				*e*Sg	**Sg**	**19 44 38.7**	**-0.6**
KECS	**Kecovo**	**3.46**	**75**	*e*Pn	**Pn**	**19 43 43.7**	**+1.2**
KECS				*e*Sn	**Sn**	**19 44 23.0**	**-0.7**
KECS	**Kecovo**	**3.46**	**75**	*e*PN	**Pn**	**19 43 43.7**	**+1.2**
KECS				*e*SN	**Sn**	**19 44 23.0**	**-0.7**
DAVA	**Damuels**	**3.81**	**266**	*e*Pn	**Pn**	**19 43 49.7**	**+2.4**
DAVA	**Damuels**	**3.81**	**266**	*e*Pn	**Pn**	**19 43 49.7**	**+2.4**
DAVA	**Damuels**	**3.81**	**266**	⇓*i*Pn	**Pn**	**19 43 49.9**	**+2.6**
	comp=Z,2.0nm,0.2s						
DAVA				⇓*e*Pg	**Pg**	**19 44 01.1**	**-0.1**
	comp=Z,9.2nm,0.3s						
DAVA				⇓*e*Sg	**Sg**	**19 44 51.3**	**+0.7**
	comp=Z,20nm,0.5s						
DAVA	**Damuels**	**3.81**	**266**	Pn	**Pn**	**19 43 49.7**	**+2.4**
MOX	**Moxa**	**3.90**	**321**	*e*PN	**Pn**	**19 43 51.2**	**+2.7**
MOX				*e*PG	**Pg**	**19 44 04.5**	**+1.6**
MOX				*e*SG	**Sg**	**19 44 51.2**	**-2.1**
MOX	**Moxa**	**3.90**	**321**	*e*PN	**Pn**	**19 43 51.2**	**+2.7**
MOX				*e*PG	**Pg**	**19 44 04.5**	**+1.6**
MOX				*e*SG	**Sg**	**19 44 51.2**	**-2.1**
MOX	**Moxa**	**3.90**	**321**	⇓*e*Pn	**Pn**	**19 43 51.2**	**+2.7**
MOX				⇓*e*Pg	**Pg**	**19 44 04.5**	**+1.6**
MOX				*e*Sg	**Sg**	**19 44 51.1**	**-2.2**
MOX	**Moxa**	**3.90**	**321**	*e*Pn	**Pn**	**19 43 51.2**	**+2.7**
MOX				*e*Pg	**Pg**	**19 44 04.5**	**+1.6**
MOX				*e*Sg	**Sg**	**19 44 51.2**	**-2.1**
MOX	**Moxa**	**3.90**	**321**	Pn	**Pn**	**19 43 51.2**	**+2.7**
CLL	**Collm**	**3.97**	**337**	*e*Pn	**Pn**	**19 43 52.0**	**+2.5**
CLL				*e*Pg	**Pg**	**19 44 05.0**	**+0.7**
CLL				*i* Sg	**Sg**	**19 44 53.1**	**-2.6**
CLL	**Collm**	**3.97**	**337**	*e*Pn	**Pn**	**19 43 52.0**	**+2.5**
CLL				*e*Pg	**Pg**	**19 44 05.0**	**+0.7**
CLL				*e*		19 44 42.0	
CLL				*i* Sg	**Sg**	**19 44 53.1**	**-2.6**
	comp=Z,31nm,0.7s						
CLL	**Collm**	**3.97**	**337**	Pn	**Pn**	**19 43 52.0**	**+2.5**
STHS	**Stebnicka Huta**	**4.21**	**64**	*e*Pn	**Pn**	**19 43 55.9**	**+3.0**
STHS				*e*Sn	**Sn**	**19 44 44.3**	**+2.0**
STHS	**Stebnicka Huta**	**4.21**	**64**	*e*PN	**Pn**	**19 43 55.9**	**+3.0**
STHS				*e*SN	**Sn**	**19 44 44.3**	**+2.0**
STHS	**Stebnicka Huta**	**4.21**	**64**	*e*Pn	**Pn**	**19 43 55.9**	**+3.0**
STHS				*e*Sn	**Sn**	**19 44 44.3**	**+2.0**
BFO	**Black Forest**	**4.84**	**280**	*e*Pn	**Pn**	**19 44 01.8**	**+0.4**
BFO				*e*Pg	**Pg**	**19 44 22.3**	**+1.5**
BFO				*e*Sg	**Sg**	**19 45 21.9**	**-1.6**
BFO	**Black Forest**	**4.84**	**280**	*e*Pn	**Pn**	**19 44 01.8**	**+0.4**
CDF	**Champ du Feu**	**5.54**	**281**	*e*Pg	**Pg**	**19 44 31.9**	**-2.5**
CDF				*e*Sg	**Sg**	**19 45 45.5**	**-0.6**
	comp=Z,14nm,0.7s						
CDF	**Champ du Feu**	**5.54**	**281**	*e*Pg	**Pg**	**19 44 31.9**	**-2.5**
CDF				*e*Sg	**Sg**	**19 45 45.5**	**-0.6**
	comp=Z,6.9nm,0.7s						
HINF	**Hinteralfeld**	**5.81**	**275**	*e*Pg	**Pg**	**19 44 37.8**	**-1.7**
HINF				*e*Sn	**Sn**	**19 45 19.4**	**-2.3**
HINF				*e*Sg	**Sg**	**19 45 54.7**	**-0.1**
	comp=Z,7.2nm,0.5s						
HINF	**Hinteralfeld**	**5.81**	**275**	*e*Pn	**Pn**	**19 44 15.1**	**+0.3**
HINF				*e*Pg	**Pg**	**19 44 37.8**	**-1.7**
HINF				*e*Sn	**Sn**	**19 45 19.4**	**-2.3**
HINF				*e*Sg	**Sg**	**19 45 54.7**	**-0.1**
HINF	**Hinteralfeld**	**5.81**	**275**	*e*Pn	**Pn**	**19 44 15.1**	**+0.3**
HINF	**Hinteralfeld**	**5.81**	**275**	*e*Pg	**Pg**	**19 44 37.8**	**-1.7**
HINF				*e*Sg	**Sg**	**19 45 54.7**	**-0.1**
	comp=Z,3.6nm,0.5s						
HAU	**Haudompre**	**6.15**	**276**	*e*Pg	**Pg**	**19 44 43.9**	**-2.1**
HAU				*e*Sg	**Sg**	**19 46 04.6**	**-1.0**
	comp=Z,8.6nm,0.5s						
HAU	**Haudompre**	**6.15**	**276**	*e*Pg	**Pg**	**19 44 43.9**	**-2.1**
HAU				*e*Sg	**Sg**	**19 46 04.6**	**-1.0**
	comp=Z,4.3nm,0.5s						
LPG	**La Plagne**	**6.39**	**253**	*e*Pn	**Pn**	**19 44 23.4**	**+0.6**
LPG	**La Plagne**	**6.39**	**253**	*e*Pn	**Pn**	**19 44 23.4**	**+0.6**
CABF	**La Chapelle**	**6.49**	**264**	*e*Pn	**Pn**	**19 44 23.4**	**-0.7**
CABF	**La Chapelle**	**6.49**	**264**	*e*Pn	**Pn**	**19 44 23.4**	**-0.7**
BNI	**Bardonecchia**	**6.62**	**250**	Pn	**Pn**	**19 44 29.4**	**+3.4**
MBDF	**Montbardon**	**6.72**	**247**	*e*P	**Pn**	**19 44 31.9**	**+4.6**
MEZF	**Maizieres J'vi**	**7.03**	**281**	*e*Pg	**Pg**	**19 45 00.0**	**-2.7**
MEZF				*e*Sg	**Sg**	**19 46 31.1**	**-2.6**
	comp=Z,3.8nm,0.4s						
MEZF	**Maizieres J'vi**	**7.03**	**281**	*e*Pg	**Pg**	**19 45 00.0**	**-2.7**
MEZF				*e*Sg	**Sg**	**19 46 31.1**	**-2.6**
	comp=Z,1.9nm,0.4s						
ORIF	**Oris-en-Rattie**	**7.19**	**251**	*e*Pn	**Pn**	**19 44 33.9**	**+0.1**
ORIF	**Oris-en-Rattie**	**7.19**	**251**	*e*Pn	**Pn**	**19 44 33.9**	**+0.1**
LOR	**Lormes**	**7.88**	**271**	*e*Pn	**Pn**	**19 44 43.0**	**-0.2**
LOR	**Lormes**	**7.88**	**271**	*e*Pn	**Pn**	**19 44 43.0**	**-0.2**
AVF	**Avril sur Loir**	**8.29**	**268**	*e*Pn	**Pn**	**19 44 49.0**	**+0.1**
AVF	**Avril sur Loir**	**8.29**	**268**	*e*Pn	**Pn**	**19 44 49.0**	**+0.1**
BGF	**Bois d'Agland**	**8.68**	**267**	*e*Pn	**Pn**	**19 44 54.1**	**-0.1**
BGF	**Bois d'Agland**	**8.68**	**267**	*e*Pn	**Pn**	**19 44 54.1**	**-0.1**
TCF	**Toulx Ste Croi**	**9.17**	**266**	*e*Pn	**Pn**	**19 45 00.7**	**-0.2**
TCF	**Toulx Ste Croi**	**9.17**	**266**	*e*Pn	**Pn**	**19 45 00.7**	**-0.2**

*ISCJB **03** 20:39:49.6±1.4, 43°.46N±0°.05×126°.6W±0°.1, h10km, Error ellipse: s-maj=14.9km s-min=5.7km az=164.3*
*NEIC **03** 20:39:51.0±2.1, 43°.41N×126°.63W, h10km, ML3.3, Error ellipse: s-maj=26.2km s-min=9.7km az=75.0*
*IDC **03** 20:39:50.0±3.4, 43°.46N×126°.46W, h0km, mb2.9/2, mb1 3.4/5, mb1mx3.3/27, mbtmp3.0/5, ML3.5/3, MS2.9/1, Ms1 2.9/1, ms1mx2.3/10, Error ellipse: s-maj=51.3km s-min=21.8km az=62.0*

ISC 03 20:39:51.9±1.4, 43°.46N±0°.05×126°.5W±0°.1, h10km, n26, σ1§23/33, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RNO	**Roman Nose**	**2.07**	**77**	P	**Pn**	**20 40 26.0**	**-0.7**
HUMO	**Hull Mountain**	**2.76**	**107**	*e*Pn	**Pn**	**20 40 33.7**	**-2.5**
HUMO				*e*Sn	**Sn**	**20 41 08.4**	**-1.0**
BBOR	**Butler Butte**	**2.88**	**100**	P	**Pn**	**20 40 37.0**	**-0.8**
IRO	**Indian Ridge**	**3.15**	**79**	P	**Pn**	**20 40 41.9**	**+0.5**
YBH	**Yreka Blue Hor**	**3.31**	**120**	Pn	**Pn**	**20 40 42.2**	**-1.5**
	2.1nm,0.3s,baz=311,slow=9.7,SNR=20						
YBH				Sn	**Sn**	**20 41 24.3**	**+1.3**
	0.7nm,0.3s,baz=238,slow=22,SNR=4.6						
YBH	**Yreka Blue Hor**	**3.31**	**120**	*e*Pn	**Pn**	**20 40 41.9**	**-1.8**
YBH				*e*Sn	**Sn**	**20 41 22.2**	**-0.8**
YBH				Sn	**Sn**	**20 41 24.3**	**+1.3**
HUOR	**Husband**	**3.45**	**77**	P	**Pn**	**20 40 46.6**	**+0.9**
GT2	**Goat Mountain**	**3.49**	**60**	P	**Pn**	**20 40 47.9**	**+1.6**
LVP	**Lakeview Peak**	**3.92**	**47**	P	**Pn**	**20 40 53.5**	**+1.3**
HOOD	**Mount Hood Mea**	**3.96**	**60**	*e*Pn	**Pn**	**20 40 53.9**	**+1.3**
VFP	**Flag Point**	**4.08**	**61**	P	**Pn**	**20 40 56.3**	**+2.0**
NLWA	**Neilton Lookou**	**4.35**	**25**	*e*Pn	**Pn**	**20 40 57.7**	**-0.3**
NLWA				*e*Sn	**Sn**	**20 41 49.4**	**+0.7**
LON	**Longmire**	**4.69**	**44**	*e*Pn	**Pn**	**20 41 03.5**	**+0.9**
LON				*e*Sn	**Sn**	**20 41 52.7**	**-4.3**
GNW	**Green Mountain**	**4.86**	**31**	*e*Pn	**Pn**	**20 41 03.0**	**-2.0**
GNW				*e*Sn	**Sn**	**20 42 01.1**	**-0.2**
PGC	**Sidney**	**5.61**	**21**	*e*Pn	**Pn**	**20 41 14.9**	**-0.5**
PGC				*e*Sn	**Sn**	**20 42 17.7**	**-2.1**
WVOR	**Wild Horse Val**	**5.88**	**97**	*e*Pn	**Pn**	**20 41 17.3**	**-1.8**
BMO	**Blue Mountains**	**6.78**	**75**	*e*Pn	**Pn**	**20 41 30.8**	**-0.6**
CMB	**Columbia Colle**	**7.15**	**137**	*e*Pn	**Pn**	**20 41 36.6**	**+0.1**
	13nm,1.1s						
NVAR	**Mina Array Bea**	**8.00**	**126**	Pn	**Pn**	**20 41 48.9**	**+0.8**
	0.2nm,0.3s,baz=308,slow=15,SNR=3.4						
NVAR	**Mina Array Bea**	**8.00**	**126**	Pn	**Pn**	**20 41 48.9**	**+0.8**
BBB	**Bella Bella**	**8.79**	**354**	LR	LR	20 44 34.7	
	comp=Z,69nm,19.1s,baz=81,slow=32						
HLID	**Hailey**	**8.81**	**85**	Pn	**Pn**	**20 41 59.4**	**+0.2**
PDAR	**Pinedale Array**	**12.43**	**87**	Pn	**Pn**	**20 42 51.6**	**+2.9**
	0.0nm,0.3s,baz=284,slow=12,SNR=2.8						
YKA	**Yellowknife Ar**	**20.30**	**16**	P	**P**	**20 44 27.6**	**0.0**
	0.7nm,0.7s,baz=205,slow=10.0,SNR=3.8						
YKA	**Yellowknife Ar**	**20.30**	**16**	P	**P**	**20 44 27.6**	**-0.1**
TXAR	**Lajitas Array**	**23.09**	**120**	P	**P**	**20 44 58.7**	**+1.0**
	0.2nm,0.7s,baz=317,slow=7.8,SNR=3.2						

IDC 03 20:41:55.4±7.5, 17°.80S×178°.74W, h599km±88km, mb3.4/4, mb1 3.6/4, mb1mx3.2/16, mbtmp3.4/4, Error ellipse: s-maj=96.3km s-min=37.7km az=162.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.41**	**241**	*e*P	P	20 48 27.2	+0.1
	3.7nm,0.6s						
STKA	**Stephens Creek**	**38.41**	**241**	P	P	20 48 27.2	+0.1
	4.4nm,0.5s,baz=88,slow=8.1,SNR=44						
ASAR	**Alice Springs**	**44.52**	**254**	P	P	20 49 15.1	-0.2
	20nm,0.6s,baz=88,slow=8.4,SNR=261						
ASAR				PcP	PcP	20 50 45.2	-0.1
	0.7nm,0.7s,baz=79,slow=4.8,SNR=4.4						
FITZ	**Fitzroy Crossi**	**52.73**	**261**	P	P	20 50 15.9	-0.1
	0.8nm,0.3s,baz=97,slow=2.1,SNR=14						
TXAR	**Lajitas Array**	**86.20**	**58**	P	P	20 53 34.7	+0.1
	0.2nm,0.6s,baz=272,slow=5.1,SNR=5.1						
BRTR	**Keskin Array B**	**144.48**	**315**	PKP	PKPdf	21 00 22.9	-1.7
	0.7nm,0.8s,baz=93,slow=4.1,SNR=3.9						
MMAI	**Mount Meron Ar**	**145.82**	**303**	PKPbc	PKPbc	21 00 28.7	-0.3
	0.6nm,0.5s,baz=74,slow=5.1,SNR=3.4						
GERES	**GERESS Array B**	**147.42**	**345**	PKPbc	PKPbc	21 00 32.5	-0.2
	0.2nm,0.4s,baz=20,slow=3.1,SNR=3.2						

GUC 03 20:47:55.7±0.5, 22°.43S×68°.75W, h110km±6km, MD3.8, ML3.8, 3C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**0.70**	**283**	⇑*i*P	Pn	20 48 20.8	+6.7
PB04				*i* S	Sn	20 48 40.1	+12
PB04				AML	AML	20 48 43.5	
	comp=N,2μm,0.2s						
PECH	**Pedro de Valdi**	**0.87**	**258**	*i* P	Pn	20 48 16.3	+0.7
PECH				*i* S	Sn	20 48 31.9	+1.3
PECH				AML	AML	20 48 34.5	
	comp=N,4μm,0.3s						
MACH	**Maria Elena**	**0.96**	**284**	⇑*i*P	Pn	20 48 17.1	+0.7
MACH				*i* S	Sn	20 48 33.8	+1.6
CEN1	**Los Morros**	**1.65**	**234**	*i* P	Pn	20 48 27.1	+2.8
CEN1				*i* S	Sn	20 48 51.2	+5.2
CEN1				AML	AML	20 48 54.9	
	comp=N,522nm,1.0s						
ANCH	**Antofagasta**	**1.98**	**230**	*i* P	Pn	20 48 29.2	+0.9
ANCH				*i* S	Sn	20 48 54.2	+0.9
ANCH				AML	AML	20 48 56.8	
	comp=N,698nm,0.1s						
HMBC	**Humberston**	**2.38**	**333**	⇑*i*P	Pn	20 48 33.1	-0.5
HMBC				*i* S	Sn	20 49 03.0	+0.2
HMBC				AML	AML	20 49 31.2	
	comp=N,564nm,0.5s						
PSGC	**Pisagua**	**3.09**	**335**	AML	AML	20 49 39.7	
	comp=E,250nm,0.5s						

IDC 03 20:49:47.6±1.6, 8°.11S×120°.06E, h0km, mb3.7/3, mb1 3.8/5, mb1mx3.5/21, mbtmp3.7/5, ML3.3/2, Error ellipse: s-maj=94.8km s-min=18.7km az=66.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**3.09**	**354**	Pn	Pn	20 50 38.4	+0.8
	7.9nm,0.3s,baz=151,slow=12,SNR=37						
KAPI				Sn	Sn	20 51 14.3	-0.9
	5.7nm,0.3s,baz=94,slow=10,SNR=5.9						
FITZ	**Fitzroy Crossi**	**11.32**	**152**	Pn	Pn	20 52 32.0	+1.3
	0.1nm,0.3s,baz=287,slow=20,SNR=3.1						
FITZ				Sn	Sn	20 54 29.8	-8.1
	0.1nm,0.3s,baz=237,slow=14,SNR=3.6						
ASAR	**Alice Springs**	**20.38**	**141**	P	P	20 54 25.6	-0.4
	1.9nm,0.6s,baz=313,slow=10,SNR=26						
STKA	**

LUWI	**Luwuk**	7.54	19	P	Pn	21 05 38.2 -1.6
	2.8nm8μm863nm,0.8s					
GRJI	**Gresik**	7.83	279	P	Pn	21 05 46.4 +2.7
	3.9nm1μm,0.9s					
PWJI	**Pagerwojo**	8.38	271	P	Pn	21 05 51.3 0.0
	6μm377nm,0.7s					
NLAI	**Namlea**	8.40	54	P	Pn	21 05 53.8 +2.2
	5μm411nm,1.0s					
NGJI	**Ngawi**	8.76	275	P	Pn	21 06 04.9 +8.3
	5.1nm437nm,0.9s					
MRSI	**Marisa**	8.78	11	P	Pn	21 05 56.4 -0.4
	3μm310nm,0.8s					
PCJI	**Pacitan**	9.00	269	P	Pn	21 06 01.1 +1.3
UGM	**Wanagama**	9.65	271	P	Pn	21 06 11.1 +2.3
	8μm420nm,1.3s					
SMRI	**Semarang**	9.81	276	P	Pn	21 06 10.1 -0.8
	10μm389nm,0.8s					
MNI	**Manado**	10.61	26	P	Pn	21 06 24.0 +2.1
	3μm302nm,0.9s					
FITZ	**Fitzroy Crossi**	11.14	153	*e*P	Pn	21 06 28.9 -0.3
	184nm,0.6s					
FITZ				*e*S	Sn	21 08 30.4 -2.0
FITZ	**Fitzroy Crossi**	11.14	153	Pn	Pn	21 06 27.3 -1.9
	2.9nm,0.3s,baz=345,slow=9.1,SNR=60					
FITZ				Sn	Sn	21 08 32.6 +0.2
	12nm,0.3s,baz=208,slow=12,SNR=7.4					
FITZ				LR	LR	21 11 13.5
	comp=Z,10μm,19.5s,baz=334,slow=39					
FITZ	**Fitzroy Crossi**	11.14	153⇑	*e*Pn	Pn	21 06 27.9 -1.3
	31nm,1.1s					
FITZ				*e*Sn	Sn	21 08 33.8 +1.4
FITZ	**Fitzroy Crossi**	11.14	153	P	Pn	21 06 29.2 0.0
	6μm381nm,1.2s					
KNA	**Kununurra**	11.20	133	P	Pn	21 06 28.9 -1.0
	8μm1μm,0.9s					
TNTI	**Ternate**	11.38	39	P	Pn	21 06 37.4 +4.9
	4μm341nm,1.6s					
STKI	**Sintang**	12.01	313	P	Pn	21 06 42.1 +1.1
	5μm156nm,2.1s					
LEM	**Lembang**	12.62	275	P	Px	21 07 01.4
	8μm312nm,0.9s					
TLE	**Tual**	12.64	79	P	Pn	21 06 54.2 +4.6
	6μm182nm,1.2s					
TSM	**Tawau**	12.64	349	P	Pn	21 06 51.4 +1.8
TSM	**Tawau**	12.64	349	P	Pn	21 06 51.4 +1.8
KAKA	**Kakadu**	12.78	112	*e*P	Pn	21 06 49.7 -1.9
	122nm,0.6s					
KAKA				*e*S	Sn	21 09 08.4 -4.1
KAKA	**Kakadu**	12.78	112	*e*Pn	Pn	21 06 50.4 -1.2
	360nm,0.6s					
KAKA				*e*Sn	Sn	21 09 11.3 -1.2
KAKA	**Kakadu**	12.78	112	P	Pn	21 06 50.6 -1.0
	3μm342nm,0.8s					
MBWA	**Marble Bar**	12.89	182	*e*P	Pn	21 06 50.8 -2.3
MBWA				*e*S	Sn	21 09 08.8 -6.4
MBWA	**Marble Bar**	12.89	182	*e*Pn	Pn	21 06 53.3 +0.2
	139nm,1.0s					
MBWA				*e*Sn	Sn	21 09 11.1 -4.1
MBWA	**Marble Bar**	12.89	182	Pn	Pn	21 06 52.9 -0.1
	SNR=15					
MBWA				Pn	Pn	21 06 52.9 -0.1
	SNR=15					
MBWA	**Marble Bar**	12.89	182	P	Pn	21 06 51.5 -1.6
	3μm156nm,1.3s					
SBUM	**Sibu**	13.28	322	P	Pn	21 06 59.9 +1.5
SBUM	**Sibu**	13.28	322	P	Pn	21 06 59.9 +1.5
SBUM	**Sibu**	13.28	322	P	Pn	21 06 58.9 +0.5
	3μm92nm,2.9s					
BTM	**Bintulu**	13.40	327	P	Pn	21 07 00.4 +0.4
BTM	**Bintulu**	13.40	327	P	Pn	21 07 00.4 +0.4
MYLDM	**Lahad Datu**	13.41	352	P	Pn	21 07 02.7 +2.6
MYLDM	**Lahad Datu**	13.41	352	P	Pn	21 07 02.7 +2.6
MYLDM	**Lahad Datu**	13.41	352	P	Pn	21 07 02.9 +2.8
	7μm252nm,1.3s					
TNG	**Tangerang**	13.66	278	P	Pn	21 07 08.4 +4.8
	827nm,0.5s					
KSM	**Kuching**	13.82	314	P	Pn	21 07 05.9 +0.2
KSM	**Kuching**	13.82	314	P	Pn	21 07 05.9 +0.2
KSM	**Kuching**	13.82	314	⇓*i*Pn	Pn	21 07 04.5 -1.3
	190nm,1.4s					
KSM				*e*Sn	Sn	21 09 38.6 +0.7
KSM	**Kuching**	13.82	314	P	Pn	21 07 06.0 +0.3
	4μm105nm,1.2s					
SDKM	**Sandakan**	14.09	347	P	Pn	21 07 10.2 +0.8
CGJI	**Cibinong**	14.54	275	P	Pn	21 07 14.4 -1.1
RBSI	**Rajabasa**	14.60	278	P	Pn	21 07 22.9 +6.6
	4μm306nm,1.0s					
KKM	**Kota Kinabalu**	14.72	344	P	Pn	21 07 18.5 +0.7
KKM	**Kota Kinabalu**	14.72	344	⇓*i*Pn	Pn	21 07 16.6 -1.2
	115nm,1.0s					
KKM				*e*Sn	Sn	21 09 57.0 -2.7
KKM	**Kota Kinabalu**	14.72	344	P	Pn	21 07 19.2 +1.4
	5μm138nm,1.5s					
KLI	**Kotabumi**	15.66	281	P	Pn	21 07 40.0 +10
KASI	**Kota Agung**	15.88	279	P	Pn	21 07 36.7 +3.8
	4μm216nm,1.4s					
DMPH	**Davao City--Mi**	16.06	19	*e*P	Pn	21 07 36.5 +1.4
DAV	**Davao City (W)**	16.07	19	Pn	Pn	21 07 35.6 +0.3
	baz=200,slow=5.6,SNR=2.0					
DAV				LR	LR	21 14 06.0
	comp=Z,4μm,20.2s,baz=339,slow=38					
DAV	**Davao City (W)**	16.07	19	*e*Pn	Pn	21 07 32.8 -2.5
DAV	**Davao City (W)**	16.07	19	⇓*i*P	Pn	21 07 33.9 -1.4
LWLI	**Liwa**	16.41	280	P	Pn	21 07 47.2 +7.6
MDSI	**Maura Dua**	16.41	282	P	Pn	21 07 40.8 +1.2
	5μm100nm,1.7s					
BUKP	**Musuan**	16.67	17	*e*P	Pn	21 07 44.2 +1.3
BATP	**Bataraza**	17.06	352	*e*P	Pn	21 07 50.9 +3.1
WRAB	**Tennant Creek**	17.94	132	Pn	Pn	21 07 57.0 -1.6
	949nm,0.6s,SNR=53					
WRAB	**Tennant Creek**	17.94	132	*e*P	Pn	21 07 57.2 -1.4
WRAB				*e*		21 11 18.6
WRAB				pmax	pmax	
	comp=Z,118nm,0.8s					
WRAB	**Tennant Creek**	17.94	132	*e*Pn	Pn	21 07 57.2 -1.4
	comp=Z,118nm,0.8s					
WRAB				*e*Sn	Sn	21 11 18.6 +0.7
WRAB	**Tennant Creek**	17.94	132	P	Pn	21 07 57.6 -1.0
	comp=Z,4μmcomp=Z,175nm,1.5s					
KSI	**Kapahiang**	18.15	283	P	Pn	21 08 05.8 +4.6
	comp=Z,5μmcomp=Z,269nm,1.4s					
MSLP	**Maasin**	18.78	14	*e*P	Pn	21 08 09.5 +0.7
GUIM	**Jordan**	18.84	7	*e*P	Pn	21 08 09.8 +0.2
CUYO	**Cuyo Island**	18.94	2	*e*P	Pn	21 08 11.4 +0.7
MYKOM	**Kota Tinggi**	19.14	301	P	Pn	21 08 14.1 +0.9
MYKOM	**Kota Tinggi**	19.14	301	P	Pn	21 08 13.9 +0.7
	comp=Z,6μmcomp=Z,145nm,1.9s					
SMPI	**Sarmi**	19.37	72	P	Pn	21 08 16.1 +0.2
	comp=Z,6μmcomp=Z,249nm,1.4s					
KGM	**Kluang**	19.71	300	P	Pn	21 08 21.0 +1.1
KGM	**Kluang**	19.71	300	P	Pn	21 08 21.0 +1.1
BUSP	**Coron**	20.07	360	*e*P	P	21 08 22.9 +0.9
ASAR	**Alice Springs**	20.18	141	P	P	21 08 23.7 +0.5
	comp=Z,197nm,0.8s,baz=312,slow=8.3,SNR=290					
ASAR				S	S	21 12 06.8 -0.6
	comp=Z,47nm,0.9s,baz=315,slow=22,SNR=5.2					
OTRP	**Odiongan**	20.50	5	*e*P	P	21 08 27.5 +0.8
SJMP	**San Jose**	20.54	2	*e*P	P	21 08 27.9 +0.7
BKNI	**Bangkinang**	20.95	293	P	P	21 08 36.3 +4.6
	comp=Z,4μmcomp=Z,210nm,1.2s					
JAY	**Jayapura**	21.11	76	P	P	21 08 36.2 +2.8
PPI	**Padang Panjang**	21.24	290	P	P	21 08 38.0 +3.2
	comp=Z,3μmcomp=Z,98nm,1.2s,mb5.0					
AUQP	**San Andres**	21.52	6	*e*P	P	21 08 46.2 +8.6
KTGM	**Kuala Trenggan**	21.74	308	P	P	21 08 41.7 +1.6
KTGM	**Kuala Trenggan**	21.74	308	P	P	21 08 41.7 +1.6
LUBP	**Lubang**	21.79	360	*e*P	P	21 08 41.3 +0.7
PVCP	**Virac**	22.00	10	*e*P	P	21 08 46.0 +3.2
TGY	**Tagaytay City**	22.17	2	P	P	21 08 45.1 +0.5
	comp=Z,338nm,0.4s,mb6.1,baz=186,slow=4.2,SNR=14					
TGY				LR	LR	21 17 07.0
	comp=Z,19nm,20.5s,baz=154,slow=36					
MNSI	**Mandailing Nat**	22.48	292	P	P	21 08 54.6 +6.6
	comp=Z,3μmcomp=Z,147nm,0.9s,mb5.4					
POLP	**Polilio Island**	22.84	4	*e*P	P	21 08 51.8 +0.1
IPM	**Ipoh**	22.96	303	P	P	21 08 54.3 +1.2
IPM	**Ipoh**	22.96	303	P	P	21 08 54.3 +1.2
IPM	**Ipoh**	22.96	303	P	P	21 08 54.6 +1.6
	comp=Z,6μmcomp=Z,168nm,1.3s,mb5.3					
COEN	**Coen**	23.19	106⇑	*e*P	P	21 08 54.2 -1.3
	comp=Z,2μm,1.3s,mb6.4					
COEN				*e*S	S	21 13 09.2 +5.3
COEN	**Coen**	23.19	106	P	P	21 08 55.1 -0.4
	comp=Z,10μmcomp=Z,570nm,1.3s,mb5.8					
KLBR	**Kellerberrin**	23.39	185	*e*P	P	21 08 56.3 -1.0
	comp=Z,675nm,1.4s,mb5.9					
KLBR				*e*S	S	21 13 11.4 +4.6
COCO	**West Island**	23.39	258	P	P	21 08 56.5 -1.0
COCO						21 12 42.5
COCO				MLR	MLR	
	comp=Z,5μm,21.0s,MS5.0					
FORT	**Forrest**	23.61	163	*e*P	P	21 08 59.3 0.0
	comp=Z,134nm,0.6s,mb5.5					
FORT				*e*S	S	21 13 18.9 +8.4
FORT	**Forrest**	23.61	163	P	P	21 08 59.4 +0.1
	comp=Z,232nm,0.9s,mb5.6					
FORT				S	S	21 13 17.5 +7.0
KULM	**Kulim**	23.71	304	P	P	21 09 00.9 +0.5
KULM	**Kulim**	23.71	304	P	P	21 09 00.9 +0.5
KULM	**Kulim**	23.71	304⇓	*e*P	P	21 09 00.4 -0.1
	comp=Z,116nm,0.9s,mb5.3					
KULM				*e*S	S	21 13 16.8 +4.4
KULM				LR	LR	
	comp=Z,6μm,21.0s,MS5.1					
KULM	**Kulim**	23.71	304	P	P	21 09 00.8 +0.4
	comp=Z,6μmcomp=Z,180nm,1.0s,mb5.5					
BALP	**Baler**	23.82	3	*e*P	P	21 09 09.5 +8.2
PSI	**Prapat**	23.93	296	P	P	21 09 00.7 -1.7
	comp=Z,110nm,1.2s,mb5.2,baz=134,slow=8.6,SNR=31					
PSI				S	S	21 13 23.9 +8.0
	comp=Z,1.7nm,0.4s,baz=90,slow=20,SNR=1.9					
PSI				LR	LR	21 18 50.1
	comp=Z,7μm,18.1s,MS5.2,baz=209,slow=38					
BCPH	**Baguio City Da**	24.43	1⇓	*e*P	P	21 09 04.4 -2.5
BOLP	**Bolinao**	24.43	359	*e*P	P	21 09 05.9 -0.9
GSI	**Gunungsitoli**	24.52	292	P	P	21 09 11.0 +3.2
	comp=Z,2μmcomp=Z,102nm,1.1s,mb5.3					
NWAO	**Narrogin (SRO)**	24.76	186	P	P	21 09 09.5 -0.3
	comp=Z,135nm,0.9s,mb5.5,baz=7.6,slow=14,SNR=32					
NWAO				S	S	21 13 40.0 +11
	comp=Z,35nm,0.9s,baz=132,slow=24,SNR=4.3					
NWAO				LR	LR	21 18 27.0
	comp=Z,30nm,18.3s,baz=17,slow=35					
NWAO	**Narrogin (SRO)**	24.76	186⇑	*e*P	P	21 09 08.8 -1.0
NWAO				*e*S	S	21 13 32.9 +3.9
NWAO				pmax	pmax	
	comp=Z,317nm,1.1s					
NWAO				MLR	MLR	
	comp=Z,7μm,20.0s					
NWAO	**Narrogin (SRO)**	24.76	186⇑	*e*P	P	21 09 08.8 -1.0
	comp=Z,317nm,1.1s,mb5.8					
NWAO				*e*S	S	21 13 32.9 +3.9
NWAO				LR	LR	
	comp=Z,7μm,20.0s,MS5.1					
NWAO	**Narrogin (SRO)**	24.76	186	P	P	21 09 12.0 +2.2
	SNR=13					
NWAO				P		21 09 12.0
	SNR=13					
CAUP	**Cauayan**	25.03	4	*e*P	P	21 09 12.7 +0.4
CTA	**Charters Tower**	27.78	118	*e*P	P	21 09 37.7 +0.5
	comp=Z,24nm,0.9s,mb4.8					
CTA				*e*S	S	21 14 18.8 +1.8
CTA	**Charters Tower**	27.78	118	P	P	21 09 37.3 +0.1
	comp=Z,45nm,1.2s,mb5.0,baz=297,slow=11,SNR=18					
CTA				S	S	21 14 18.2 +1.1
	comp=Z,6.8nm,0.9s,baz=87,slow=18,SNR=1.4					
CTA				LR	LR	21 21 51.9
	comp=Z,7μm,18.5s,MS5.3,baz=293,slow=39					
CTA	**Charters Tower**	27.78	118	P	P	21 09 37.3 +0.1
CTA				S	S	21 14 18.2 +1.2
CTA	**Charters Tower**	27.78	118	P	P	21 09 37.3 +0.1
CTA				S	S	21 14 18.2 +1.1
CTA				LR	LR	21 21 51.9
CTAO	**Charters Tower**	27.78	118⇑	*e*P	P	21 09 37.5 +0.3
CTAO						21 12 57.2
CTAO				*e*S	S	21 14 25.6 +8.6
CTAO				pmax	pmax	
	comp=Z,131nm,1.5s,mb5.3					
CTAO				MLR	MLR	
	comp=Z,7μm,19.0s,MS5.2					
CTAO	**Charters Tower**	27.78	118⇑	*e*P	P	21 09 37.5 +0.3
	comp=Z,131nm,1.5s,mb5.3					
CTAO				PcP	PcP	21 12 57.1 +4.2
CTAO				*e*S	S	21 14 25.6 +8.6
CTAO				LR	LR	
	comp=Z,7μm,19.0s,MS5.2					
CTAO	**Charters Tower**	27.78	118	P	P	21 09 39.0 +1.8
	comp=Z,1μmcomp=Z,49nm,1.1s,mb5.0					
QIZ	**Qiongzhong**	28.94	339	P	P	21 09 46.6 -0.9
QIZ				sP	sP	21 09 59.2 -6.0
QIZ				S	S	21 14 37.5 +2.3
QIZ				sS	sS	21 14 49.4 -6.3
QIZ				pmax	pmax	
	comp=Z,16nm,1.6s,mb4.5					
QIZ				LR	LR	
	comp=N,3μm,16.5s					
QIZ				LR	LR	
	comp=Z,4μm,17.1s,MS5.1					
QIZ	**Qiongzhong**	28.94	339	*e*P	P	21 09 46.8 -0.7
	comp=Z,172nm,1.8s,mb5.5					
QIZ				LR	LR	
	comp=Z,4μm,20.0s,MS5.0					
KKTK	**Khon Kaen**	29.87	325	P	pP	21 10 09.0 +1.0
	comp=Z,432nm,0.7s					
STKA	**Stephens Creek**	30.80	143	*e*P	P	21 10 03.8 0.0
	comp=Z,43nm,0.6s,mb5.5					
STKA				*e*S	S	21 15 00.9 -3.3
STKA	**Stephens Creek**	30.80	143	P	P	21 10 04.2 +0.4
	comp=Z,60nm,0.8s,mb5.5,baz=316,slow=8.9,SNR=47					
STKA				S	S	21 15 07.4 +3.2
	comp=Z,30nm,1.1s,baz=170,slow=19,SNR=2.2					
STKA				LR	LR	21 23 34.4
	comp=Z,6μm,18.0s,MS5.3,baz=313,slow=38					
NST	**Nakhon Sawan**	30.99	320	P	P	21 10 04.3 -1.3
TPUB	**Ta-pu**	31.31	1	*e*P	P	21 10 07.9 -0.5
	comp=Z,86nm,0.9s,mb5.6					
TPUB				*e*PcP	PcP	21 13 05.1 +3.3
TPUB				*e*S	S	21 15 10.4 -1.8
YULB	**Yu-li**	31.41	2	*e*P	P	21 10 08.2 -1.1
	comp=Z,38nm,0.9s,mb5.2					
YULB				*e*PcP	PcP	21 13 11.7 +10
YULB				*e*S	S	21 15 12.4 -1.5
SSLB	**Suanglung**	31.80	1	*e*P	P	21 10 12.0 -0.6
	comp=Z,54nm,0.9s,mb5.4					
SSLB				*e*S	S	21 15 21.3 +1.4
GZH	**Guangzhou**	31.82	348	P	P	21 10 15.6 +2.7
GZH				S	S	21 15 27.6 +7.3
GZH				LR	LR	
	comp=N,4μm,20.2s					
GZH				LR	LR	
	comp=E,2μm,13.6s					
GZH				LR	LR	
	comp=Z,6μm,40.4s					
NACB	**Ninganchiao**	32.20	2	*e*P	P	21 10 14.8 -1.4
NACB				*e*S	S	21 15 26.9 +0.7
GUMO	**Guam**	32.64	49	*e*P	P	21 10 17.2 -3.0
GUMO				*e*S	S	21 15 36.7 +3.5
YHNB	**Yeheng**	32.69	2	*e*P	P	21 10 19.3 -1.2
	comp=Z,72nm,1.0s,mb5.6					
YHNB				*e*PcP	PcP	21 13 05.3 -0.2
YHNB				*e*S	S	21 15 36.0 +2.3
YHNB				LR	LR	
	comp=Z,3μm,20.0s,MS4.9					
BDT	**Bhumibol Dam**	32.88	320	P	P	21 10 22.0 -0.2
	comp=Z,31nm,0.9s,mb5.2					
QZH	**Quanzhou**	32.98	357	⇓P	P	21 10 23.4 +0.4
QZH				S	S	21 15 40.8 +2.5
QZH				LR	LR	
	comp=N,2μm,12.5s,MS5.2					
QZH				LR	LR	
	comp=E,2μm,13.7s,MS5.2					
QZH				LR	LR	
	comp=Z,5μm,16.1s,MS5.3					
TATO	**Taipei**	33.00	2	*e*P	P	21 10 21.8 -1.3
	comp=Z,112nm,1.2s,mb5.7					
TATO				*e*S	S	21 15 39.5 +1.0
TATO				LR	LR	
	comp=Z,2μm,19.0s,MS4.9					
CMAR	**Chiang Mai Arr**	33.83	322	P	P	21 10 30.5 0.0
	comp=Z,7.0nm,0.8s,mb4.6,baz=155,slow=6.8,SNR=36					
CMAR				S	S	21 15 52.6 +1.0
	comp=Z,0.6nm,1.1s,baz=139,slow=8.4,SNR=2.5					
CMAR				LR	LR	21 26 18.1
	comp=Z,4μm,19.2s,MS5.2,baz=160,slow=40					
CMAR	**Chiang Mai Arr**	33.83	322	*c*eP	P	21 10 31.2 +0.7
CMAR				pmax	pmax	
	comp=Z,7.0nm,0.9s					
CHG	**Chiang Mai**	34.10	322	⇓P	P	21 10 33.4 +0.5
	comp=Z,64nm,1.0s,mb5.5					
ARMA	**Armidale**	36.72	131	*e*P	P	21 10 58.3 +3.0
ARMA				*e*S	S	21 16 42.8 +6.9
ARMA	**Armidale**	36.72	131	*e*P	P	21 10 58.8 +3.5
	comp=Z,129nm,1.5s,mb5.5					
GYA	**Guiyang**	36.90	339⇑	*i*P	P	21 10 57.2 +0.4
GYA				PP	PP	21 12 26.3 +4.7
GYA				PcP	PcP	21 13 20.8 +3.1
GYA				S	S	21 16 44.4 +5.9
GYA				ScP	ScP	21 17 05.7 +4.7
GYA				pmax	pmax	
	comp=Z,40nm,0.8s,mb5.3					
GYA				pmax	pmax	
	comp=Z,160nm,5.8s					
GYA				LR	LR	
	comp=N,2μm,16.2s,MS5.2					
GYA				LR	LR	
	comp=E,2μm,15.0s,MS5.2					
GYA				LR	LR	
	comp=Z,4μm,15.4s,MS5.3					
TOO	**Toolangi**	37.10	146	*e*P	P	21 11 00.4 +2.0
KMI	**Kunming**	37.26	333	P	P	21 11 01.4 +1.5
KMI				pP	pP	21 11 10.6 -1.7
KMI				sP	sP	21 11 14.4 -3.3
KMI				PP	PP	21 12 28.2 +2.5
KMI				S	S	21 16 45.1 +1.0
KMI				sS	sS	21 17 01.3 -3.6
KMI				SS	SS	21 19 15.7 -13
KMI				pmax	pmax	
	comp=Z,13nm,1.6s,mb4.5					
KMI				LR	LR	
	comp=N,5μm,13.8s,MS5.6					
KMI				LR	LR	
	comp=E,3μm,14.7s,MS5.6					
KMI				LR	LR	
	comp=Z,7μm,14.7s,MS5.6					
CAN	**Canberra**	37.68	140	*e*P	P	21 11 04.7 +1.3
CAN				*e*		21 12 30.4
CAN				*e*S	S	21 16 53.8 +3.4
CAN				pmax	pmax	
	comp=Z,34nm,0.8s,mb5.1					
CAN				MLR	MLR	
	comp=Z,5μm,19.0s,MS5.3					
CAN	**Canberra**	37.68	140	*e*P	P	21 11 04.7 +1.3
	comp=Z,34nm,0.8s,mb5.1					
CAN				*e*PP	PP	21 12 30.4 +0.3
CAN				*e*S	S	21 16 53.8 +3.4
CAN				LR	LR	
	comp=Z,5μm,19.0s,MS5.3					
CNB	**Canberra Magne**	37.91	140	*e*P	P	21 11 07.3 +2.0
WHN	**Wuhan**	38.94	352	P	P	21 11 10.5 -3.4
WHN				PP	PP	21 12 43.8 -0.1
WHN				LR	LR	
	comp=N,4μm,12.6s,MS5.5					
WHN				LR	LR	
	comp=E,3μm,14.5s,MS5.5					
WHN				LR	LR	
	comp=Z,6μm,17.6s,MS5.5					
SSE	**Sheshan**	39.08	1	P	P	21 11 13.0 -2.1
SSE				sP	sP	21 11 25.8 -7.2
SSE				PP	PP	21 12 43.5 -2.0
SSE				pmax	pmax	
	comp=Z,18nm,0.7s,mb4.9					
SSE				pmax	pmax	
	comp=Z,250nm,5.2s					
SSE				LR	LR	
	comp=N,2μm,23.5s,MS4.8					
SSE				LR	LR	
	comp=E,400nm,24.0s,MS4.8					
SSE				LR	LR	
	comp=Z,2μm,22.2s,MS4.9					
HNR	**Honiara**	39.22	95	PFAKE		21 11 30.0 +13
HNR				LR	LR	
	comp=Z,3μm,19.0s,MS5.1					
ENH	**Enshi**	39.63	345	*e*P	P	21 11 19.0 -0.7
	comp=Z,217nm,1.4s,mb5.7					
ENH				PP	PP	21 12 49.7 -1.8
ENH				*e*S	S	21 17 21.4 +1.7
ENH				LR	LR	
	comp=Z,2μm,20.0s,MS5.0					
NJ2	**Nanjing**	40.05	358	*e*P	P	21 11 24.3 +1.1
NJ2				pP	pP	21 11 28.8 -6.8
NJ2				sP	sP	21 11 31.3 -10
NJ2				PP	PP	21 13 00.6 +4.6
NJ2				S	S	21 17 30.0 +4.1
NJ2				sS	sS	21 17 43.0 -3.8
NJ2				pmax	pmax	
	comp=Z,40nm,0.8s,mb5.2					
NJ2				pmax	pmax	
	comp=Z,750nm,3.9s					
NJ2				LR	LR	
	comp=N,3μm,23.1s,MS5.3					
NJ2				LR	LR	
	comp=E,5μm,22.9s,MS5.3					
NJ2				LR	LR	
	comp=Z,2μm,15.0s					
TAU	**Tasmania Unive**	41.94	150	*e*P	P	21 11 41.6 +3.0
TAU						21 13 16.5
TAU				S	S	21 17 57.5 +3.6
TAU				pmax	pmax	
	comp=Z,83nm,1.4s,mb5.2					
TAU				MLR	MLR	
	comp=Z,5μm,19.0s,MS5.4					
TAU	**Tasmania Unive**	41.94	150	*e*P	P	21 11 41.6 +3.0
	comp=Z,83nm,1.4s,mb5.2					
TAU				PP	PP	21 13 16.5 +0.1
TAU				S	S	21 17 57.5 +3.6
TAU				LR	LR	
	comp=Z,5μm,19.0s,MS5.4					
CD2	**Chengdu**	41.98	339	P	P	21 11 39.7 +0.6
CD2				pP	pP	21 11 49.5 -2.2
CD2				sP	sP	21 11 53.2 -3.9
CD2				PP	PP	21 13 20.6 +3.5
CD2				PcP	PcP	21 13 35.1 +1.3
CD2				PcS	PcS	21 17 25.5 0.0
CD2				S	S	21 17 56.2 +1.4
CD2				SS	SS	21 21 00.3 -3.0
CD2				ScS	ScS	21 21 37.0 -1.0
CD2				pmax	pmax	
	comp=Z,240nm,0.8s,mb5.9					
CD2				pmax	pmax	
	comp=Z,1μm,8.2s					
CD2				LR	LR	
	comp=N,4μm,19.0s,MS5.5					
CD2				LR	LR	
	comp=E,5μm,15.5s,MS5.5					
CD2				LR	LR	
	comp=Z,3μm,16.6s,MS5.2					
AGT	**Agartala**	42.66	319	*e*PKP	P	21 11 42.0 -2.8
XAN	**Xi'an**	43.37	346	P	P	21 11 49.4 -0.9
XAN				pP	pP	21 11 53.9 -8.9
XAN				PP	PP	21 13 29.7 -2.2
XAN				S	S	21 18 16.4 +1.4
XAN				pmax	pmax	
	comp=Z,5.0nm,1.4s					
XAN				pmax	pmax	
	comp=Z,120nm,4.8s					
XAN				LR	LR	
	comp=N,2μm,15.4s,MS5.2					
XAN				LR	LR	
	comp=E,680nm,15.4s,MS5.2					
XAN				LR	LR	
	comp=Z,1μm,16.9s,MS4.8					
SHL	**Shillong**	43.47	321	*ex*	x	21 11 42.0
SHL				*e*S	S	21 18 20.0 +3.3
TIA	**Tai'an**	44.27	356	P	P	21 12 00.0 +2.5
TIA				S	S	21 18 30.0 +1.9
TIA				LR	LR	
	comp=N,440nm,8.0s				

DZM	**Mont Dzumac**	**46.47 113**	*e*P	**P**	**21 12 15.3 +0.1**
	comp=Z,123nm,1.1s,mb5.8				
DZM			*e*S	**S**	**21 19 03.4 +3.0**
	comp=Z,1μm,36.0s				
DZM			*e*LR	LR	21 25 31.6
	comp=Z,3μm,23.1s				
DZM	**Mont Dzumac**	**46.47 113**	*e*P	**P**	**21 12 17.4 +2.2**
DZM	**Mont Dzumac**	**46.47 113**	*e*P	**P**	**21 12 13.8 -1.5**
	comp=Z,52nm,1.0s,mb5.4				
LZH	**Lanzhou**	**46.68 342**	⇓P	**P**	**21 12 17.3 +0.7**
LZH			pP	pP	21 12 22.2 -7.1
LZH			sP	sP	21 12 24.3 -10
LZH			PP	PP	21 14 03.8 -3.3
LZH			S	**S**	**21 19 06.2 +3.3**
LZH			sS	sS	21 19 11.0 -13
LZH			*e*SS	SS	21 22 24.0 -5.9
LZH			pmax	pmax	
	comp=Z,25nm,1.0s,mb5.1				
LZH			pmax	pmax	
	comp=Z,150nm,4.1s				
LZH			LR	LR	
	comp=E,2μm,14.2s				
LZH			LR	LR	
	comp=Z,3μm,16.1s,MS5.4				
DL2	**Dalian**	**46.88 1**	*e*P	**P**	**21 12 13.9 -4.2**
DL2			S	**S**	**21 19 01.5 -4.2**
DL2			pmax	pmax	
	comp=Z,30nm,0.8s,mb5.3				
DL2			pmax	pmax	
	comp=Z,370nm,5.1s				
DL2			LR	LR	
	comp=N,700nm,16.3s,MS4.8				
DL2			LR	LR	
	comp=E,650nm,16.1s,MS4.8				
DL2			LR	LR	
	comp=Z,1μm,15.2s,MS4.9				
LSA	**Lhasa**	**46.95 325**	P	**P**	**21 12 21.0 +2.2**
LSA			pP	pP	21 12 27.8 -3.7
LSA			S	**S**	**21 19 05.6 -1.4**
LSA			pmax	pmax	
	comp=Z,10.0nm,0.9s,mb4.8				
LSA			LR	LR	
	comp=N,800nm,21.0s,MS5.1				
LSA			LR	LR	
	comp=E,2μm,24.0s,MS5.1				
LSA			LR	LR	
	comp=Z,2μm,24.0s,MS4.9				
LSA	**Lhasa**	**46.95 325**	*e*P	**P**	**21 12 18.4 -0.4**
LSA			*e*		21 14 08.8
LSA			*e*S	**S**	**21 19 09.6 +2.6**
LSA			pmax	pmax	
	comp=Z,70nm,1.0s,mb5.5				
LSA			MLR	MLR	
	comp=Z,3μm,19.0s,MS5.3				
LSA	**Lhasa**	**46.95 325**	*e*P	**P**	**21 12 18.4 -0.5**
	comp=Z,70nm,1.0s,mb5.5				
LSA			*e*PP	PP	21 14 08.8 -1.2
LSA			*e*S	**S**	**21 19 09.6 +2.6**
LSA			LR	LR	
	comp=Z,3μm,19.0s,MS5.3				
DGAR	**Diego Garcia**	**47.36 267**	PFAKE		21 12 30.0 +7.7
DGAR			LR	LR	
	comp=Z,3μm,21.0s,MS5.2				
MAJO	**Matsushiro**	**47.59 20**	*e*P	**P**	**21 12 23.4 -0.3**
MAJO			*e*S	**S**	**21 19 16.4 +0.6**
MAJO			pmax	pmax	
	comp=Z,94nm,1.5s,mb5.6				
MAJO			MLR	MLR	
	comp=Z,2μm,19.0s,MS5.0				
MAJO	**Matsushiro**	**47.59 20**	*e*P	**P**	**21 12 23.4 -0.2**
	comp=Z,94nm,1.5s,mb5.6				
MAJO			*e*S	**S**	**21 19 16.4 +0.6**
MAJO			LR	LR	
	comp=Z,2μm,19.0s,MS5.0				
MAT	**Matsushiro**	**47.59 20**	P	**P**	**21 12 23.6 -0.1**
MAT			S	**S**	**21 19 11.0 -4.8**
MJAR	**Matsushiro Arr**	**47.59 20**	P	**P**	**21 12 23.1 -0.6**
	comp=Z,9.6nm,1.0s,mb4.8,baz=194,slow=8.0,SNR=16				
MJAR			LR	LR	21 31 08.2
	comp=Z,1μm,19.7s,MS4.8,baz=200,slow=34				
BJT	**Baijiatuau**	**48.12 356**	*e*P	**P**	**21 12 27.9 +0.2**
BJT			*e*S	**S**	**21 19 22.9 -0.4**
BJT			pmax	pmax	
	comp=Z,37nm,0.6s				
BJT			MLR	MLR	
	comp=Z,2μm,21.0s				
BJT	**Baijiatuau**	**48.12 356**	*e*P	**P**	**21 12 27.9 +0.1**
	comp=Z,37nm,0.6s,mb5.6				
BJT			*e*S	**S**	**21 19 22.9 -0.4**
BJT			LR	LR	
	comp=Z,2μm,21.0s,MS5.0				
BJI	**Beijing**	**48.15 356**	P	**P**	**21 12 27.2 -0.7**
BJI			S	**S**	**21 19 31.0 +7.4**
BJI			pmax	pmax	
	comp=Z,28nm,1.4s,mb5.1				
BJI			pmax	pmax	
	comp=Z,770nm,4.3s				
BJI			LR	LR	
	comp=N,1μm,20.3s,MS5.0				
BJI			LR	LR	
	comp=E,1μm,23.0s,MS5.0				
BJI			LR	LR	
	comp=Z,1μm,27.9s,MS4.8				
HYB	**Hyderabad**	**48.45 302**	*e*P	**P**	**21 12 30.5 -0.1**
HYB			*e*S	**S**	**21 19 24.0 -4.5**
HYB	**Hyderabad**	**48.45 302**	*i* P	**P**	**21 12 30.5 -0.1**
HYB			*e*S	**S**	**21 19 28.0 -0.5**
GUN	**Gumba**	**48.93 318**	*e*P	**P**	**21 12 35.7 +1.5**
	comp=Z,239nm,0.7s,mb6.3				
PKI	**Pulchoki**	**49.02 318**	*e*P	**P**	**21 12 34.9 +0.1**
	comp=Z,68nm,0.7s,mb5.8				
PKI	**Pulchoki**	**49.02 318**	*e*P	**P**	**21 12 34.9 +0.1**
PKI			pmax	pmax	
	comp=Z,68nm,0.7s,mb5.8				
PKIN	**Phulchoki**	**49.03 318**	*e*P	**P**	**21 12 34.8 -0.1**
	comp=Z,99nm,0.6s,mb6.0				
DMN	**Daman**	**49.24 318**	*e*P	**P**	**21 12 36.1 -0.5**
	comp=Z,119nm,0.9s,mb5.9				
KKN	**Kakani**	**49.25 318**	*e*P	**P**	**21 12 36.7 +0.1**
	comp=Z,90nm,0.8s,mb5.9				
KKN	**Kakani**	**49.25 318**	*e*P	**P**	**21 12 36.7 +0.1**
KKN			pmax	pmax	
	comp=Z,90nm,0.8s,mb5.8				
HHC	**Hu-ho-hao-te**	**49.46 351**	*e*P	**P**	**21 12 39.8 +1.8**
HHC			pP	pP	21 12 49.7 -1.0
HHC			sP	sP	21 12 53.6 -2.5
HHC			PcP	PcP	21 14 01.4 +1.8
HHC			PP	PP	21 14 34.8 +2.2
HHC			ScP	ScP	21 17 53.1 +1.7
HHC			PcS	PcS	21 17 56.8 +0.7
HHC			S	**S**	**21 19 44.1 +2.0**
HHC			sS	sS	21 20 00.8 -2.6
HHC			ScS	ScS	21 22 26.1 +0.2
HHC			SS	SS	21 23 13.3 -1.4
HHC			pmax	pmax	
	comp=Z,16nm,0.8s,mb5.1				
HHC			pmax	pmax	
	comp=Z,710nm,6.0s				
HHC			LR	LR	
	comp=N,1μm,19.9s,MS5.0				
HHC			LR	LR	
	comp=E,1μm,19.2s,MS5.0				
HHC			LR	LR	
	comp=Z,1μm,21.1s,MS4.9				
BTO	**Baotou**	**49.47 350**	*e*P	**P**	**21 12 35.9 -2.2**
SNY	**Shenyang**	**49.88 3**	⇓P	**P**	**21 12 40.0 -1.1**
SNY			S	**S**	**21 19 43.2 -4.6**
SNY			pmax	pmax	
	comp=Z,35nm,1.5s,mb5.2				
SNY			pmax	pmax	
	comp=Z,1μm,4.8s				
SNY			LR	LR	
	comp=N,2μm,23.3s,MS5.0				
SNY			LR	LR	
	comp=E,1μm,23.9s,MS5.0				
SNY			LR	LR	
	comp=Z,2μm,27.8s,MS4.9				
NGP	**Nagpur**	**49.89 306**	*e*PKP	**P**	**21 12 37.3 -4.3**
NGP			*ex*	x	21 12 47.4
	comp=Z,84nm,1.7s				
NGP			*e*S	**S**	**21 19 46.1 -2.7**
JBP	**Jabalpur**	**50.24 309**	*e*PKP	**P**	**21 12 43.1 -1.2**
JBP			*ex*	x	21 12 53.9
	comp=Z,140nm,1.1s				
JBP			*i* x	x	21 19 51.4
GTA	**Gaotai**	**51.03 340**	⇑P	**P**	**21 12 50.1 +0.2**
GTA			pP	pP	21 12 53.6 -9.1
GTA			sP	sP	21 12 55.1 -13
GTA			PP	PP	21 14 47.9 +1.0
GTA			S	**S**	**21 20 08.4 +4.5**
GTA			sS	sS	21 20 15.9 -9.4
GTA			SS	SS	21 23 41.3 +1.6
GTA			pmax	pmax	
	comp=Z,17nm,1.6s,mb4.7				
GTA			pmax	pmax	
	comp=Z,300nm,4.8s				
GTA			LR	LR	
	comp=N,1μm,19.2s,MS5.2				
GTA			LR	LR	
	comp=E,2μm,18.6s,MS5.2				
GTA			LR	LR	
	comp=Z,2μm,18.0s,MS5.1				
CN2	**Changchun**	**51.97 5**	*e*P	**P**	**21 12 58.8 +2.0**
CN2			PP	PP	21 14 49.2 -6.2
CN2			*e*S	**S**	**21 20 10.9 -5.8**
CN2			pmax	pmax	
	comp=Z,10.0nm,1.2s,mb4.6				
CN2			pmax	pmax	
	comp=Z,690nm,4.0s				
CN2			LR	LR	
	comp=N,730nm,19.0s,MS4.9				
CN2			LR	LR	
	comp=E,710nm,19.0s,MS4.9				
CN2			LR	LR	
	comp=Z,700nm,19.0s,MS4.7				
KAD	**Karad**	**52.12 299**	*e*PKP	**P**	**21 12 55.7 -2.7**
VLA	**Vladivostok**	**52.16 11**	*e*P	**P**	**21 12 56.0 -2.3**
VLA			*e*S	**S**	**21 20 19.4 0.0**
VLA			pmax	pmax	
	comp=Z,37nm,0.7s,mb5.4				
BHPL	**Bhopal**	**52.26 308**	*e*PKP	**P**	**21 12 56.2 -3.2**
POO	**Poona**	**52.93 301**	*e*PKP	**P**	**21 13 02.5 -1.9**
POO			AMb	AMB	21 13 19.2
	comp=Z,38nm,0.6s,mb5.5				
MDJ	**Mudanjiang**	**53.24 8**	P	**P**	**21 13 06.0 -0.2**
MDJ			PcP	PcP	21 14 13.9 +0.3
MDJ			PP	PP	21 15 05.4 -1.4
MDJ			ScP	ScP	21 18 13.3 +5.7
MDJ			S	**S**	**21 20 33.7 -0.4**
MDJ			ScS	ScS	21 22 56.5 +4.7
MDJ			SS	SS	21 24 14.7 +0.1
MDJ			pmax	pmax	
	comp=Z,19nm,1.0s,mb5.0				
MDJ			pmax	pmax	
	comp=Z,480nm,7.5s				
MDJ			LR	LR	
	comp=N,1μm,34.5s				
MDJ			LR	LR	
	comp=E,900nm,26.4s				
MDJ			LR	LR	
	comp=Z,1μm,42.6s				
MDJ	**Mudanjiang**	**53.24 8**	*e*P	**P**	**21 13 06.0 -0.2**
	comp=Z,32nm,0.8s,mb5.3				
MDJ			*e*PcP	PcP	21 14 13.2 -0.4
MDJ			*e*PP	PP	21 15 05.5 -1.3
MDJ			*e*S	**S**	**21 20 37.0 +3.0**
MDJ			LR	LR	
	comp=Z,1μm,19.0s,MS4.9				
TARA	**Tarawa**	**53.35 82**	PFAKE		21 13 20.0 +12
TARA			LR	LR	
	comp=Z,5.0nm,21.0s				
PTH	**Pithoragarh**	**53.79 316**	*ex*	x	21 13 15.0
ERM	**Erimo**	**54.19 21**	PFAKE		21 13 20.0 +6.8
ERM			LR	LR	
	comp=Z,1μm,22.0s,MS4.8				
DDI	**Dehra Dun**	**55.75 315**	*ex*	pP	21 13 35.0 -2.7
AJM	**Ajmer**	**56.10 309**	*e*PKP	**P**	**21 13 25.0 -2.4**
AJM			AMb	AMB	21 13 36.0
	comp=Z,66nm,1.3s,mb5.5				
RPZ	**Rata Peaks**	**56.54 138**	P	**P**	**21 13 30.8 +0.6**
	comp=Z,59nm,0.9s,mb5.6,baz=315,slow=5.7,SNR=8.5				
RPZ			LR	LR	21 41 06.8
	comp=Z,3μm,18.1s,MS5.5,baz=40,slow=40				
RPZ	**Rata Peaks**	**56.54 138**	*e*P	**P**	**21 13 30.7 +0.5**
	comp=Z,80nm,0.9s,mb5.8				
RPZ			*e*PcP	PcP	21 14 26.0 -0.4
RPZ			PP	PP	21 15 37.0 +0.6
MSVF	**Nonsavu**	**56.91 106**	P	**P**	**21 13 35.1 +1.8**
	comp=Z,242nm,0.9s,mb6.2,SNR=5.0				
MSVF	**Nonsavu**	**56.91 106**	*e*P	**P**	**21 13 33.5 +0.2**
	comp=Z,39nm,0.9s,mb5.4				
MSVF			LR	LR	
	comp=Z,1μm,20.0s,MS5.0				
MSVF	**Nonsavu**	**56.91 106**	P	**P**	**21 13 36.0 +2.7**
	comp=Z,3μm,1.2s,SNR=5.0				
YUK	**Yuzh-Kuril'sk**	**56.92 22**	⇓P	**P**	**21 13 33.6 +0.8**
YUK			*i*		21 15 34.7
YUK			*i* S	**S**	**21 21 23.6 +0.2**
YUK			pmax	pmax	
	comp=E,200nm,1.5s				
YUK			pmax	pmax	
	comp=Z,300nm,1.5s,mb6.1				
YUK			pmax	pmax	
	comp=N,100nm,0.8s				
ULN	**Ulaanbaatar**	**57.03 349**	⇑*e*P	**P**	**21 13 33.6 +0.1**
ULN			*e*S	**S**	**21 21 26.8 +2.1**
ULN			pmax	pmax	
	comp=Z,68nm,1.1s,mb5.6				
ULN			MLR	MLR	
	comp=Z,2μm,22.0s,MS5.2				
ULN	**Ulaanbaatar**	**57.03 349**	⇑*e*P	**P**	**21 13 33.6 +0.1**
	comp=Z,68nm,1.1s,mb5.6				
ULN			*e*S	**S**	**21 21 26.8 +2.1**
ULN			LR	LR	
	comp=Z,2μm,22.0s,MS5.2				
ULN	**Ulaanbaatar**	**57.03 349**	P	**P**	**21 13 33.8 +0.3**
	SNR=48				
ULN			P		21 13 33.8
	SNR=48				
ULN	**Ulaanbaatar**	**57.03 349**	P	**P**	**21 13 33.4 -0.1**
SONM	**Songino Array**	**57.13 349**	P	**P**	**21 13 33.7 -0.4**
	comp=Z,17nm,0.9s,mb5.0,baz=169,slow=7.2,SNR=82				
SONM			LR	LR	21 41 42.9
	comp=Z,1μm,19.2s,MS5.0,baz=193,slow=40				
SONM			PKPPKP		21 43 18.4
	comp=Z,0.3nm,0.5s,baz=325,slow=2.3,SNR=3.7				
HIA	**Hailar**	**57.22 360**	*e*P	**P**	**21 13 34.5 -0.3**
HIA			*e*S	**S**	**21 21 27.7 +0.5**
HIA			pmax	pmax	
	comp=Z,66nm,1.2s				
HIA			MLR	MLR	
	comp=Z,976nm,21.0s				
HIA	**Hailar**	**57.22 360**	*e*P	**P**	**21 13 34.5 -0.3**
	comp=Z,66nm,1.2s,mb5.5				
HIA			*e*S	**S**	**21 21 27.7 +0.5**
HIA			LR	LR	
	comp=Z,976nm,21.0s,MS4.9				
HABR	**Khabarovsk**	**57.91 12**	*e*P	**P**	**21 13 37.4 -2.3**
HABR			*e**PP	pP	21 13 47.3 -5.4
HABR			*e*S	**S**	**21 21 36.0 -0.3**
HABR			*e*		21 21 47.9
HABR			*e**SS	sS	21 21 52.7 -5.3
HABR			*e*		21 23 24.2
HABR			*e*SS	SS	21 25 28.6 +0.5
HABR			pmax	pmax	
	comp=Z,82nm,1.8s,mb5.5				
HABR			pmax	pmax	
	comp=N,24nm,1.8s				
HABR			pmax	pmax	
	comp=E,50nm,1.7s				
HABR			MLR	MLR	
	comp=Z,550nm,17.0s,MS4.7				
KLR	**Kul'dur**	**58.07 9**	*e*P	**P**	**21 13 36.8 -3.9**
KLR			*e*S	**S**	**21 21 34.5 -3.7**
KLR			*e*SS	SS	21 25 22.5 -7.9
KLR			pmax	pmax	
	comp=Z,53nm,1.8s,mb5.3				
SNZO	**South Karori**	**58.20 134**	PFAKE		21 13 50.0 +8.0
SNZO			LR	LR	
	comp=Z,3μm,19.0s,MS5.4				
CASY	**Casey**	**58.38 185**	*e*P	**P**	**21 13 43.4 +0.7**
CASY	**Casey**	**58.38 185**	*e*P	**P**	**21 13 42.9 +0.2**
	comp=Z,38nm,1.3s,mb5.3				
CASY			*e*PcP	PcP	21 14 34.6 +1.5
CASY			LR	LR	
	comp=Z,5μm,19.0s,MS5.6				
YSS	**Yuzh-Sakhalins**	**58.44 18**	PFAKE		21 13 50.0 +6.6
YSS			LR	LR	
	comp=Z,350nm,21.0s,MS4.5				
THN	**Thein Dam**	**58.61 316**	*ex*	**P**	**21 13 41.0 -3.9**
URZ	**Urewera**	**59.10 130**	LR	LR	21 42 25.7
	comp=Z,3μm,18.0s,MS5.5,baz=132,slow=39				
URZ	**Urewera**	**59.10 130**	*e*P	**P**	**21 13 49.2 +1.0**
	comp=Z,55nm,0.9s,mb5.6				
URZ			*e*PP	PP	21 15 58.9 -0.3
WMQ	**Urumqi**	**59.60 333**	P	**P**	**21 13 53.0 +1.5**
WMQ			pP	pP	21 14 03.0 -1.6
WMQ			sP	sP	21 14 07.0 -2.9
WMQ			PP	PP	21 16 07.0 +3.4
WMQ			S	**S**	**21 21 59.0 +0.7**
WMQ			ScS	ScS	21 23 37.0 -0.9
WMQ			SS	SS	21 25 56.0 +1.3
WMQ			pmax	pmax	
	comp=Z,34nm,1.1s,mb5.3				
WMQ			pmax	pmax	
	comp=Z,98nm,6.0s				
WMQ			LR	LR	
	comp=N,2μm,18.0s,MS5.5				
WMQ			LR	LR	
	comp=E,2μm,18.0s,MS5.5				
WMQ			LR	LR	
	comp=Z,1μm,18.0s,MS5.1				
DRV	**Dumont d'Urvil**	**59.92 171**	S	**S**	**21 22 14.0 +12**
DRV			SS	SS	21 26 13.0 +14
DRV			L		21 28 00.0
DRV			R		21 33 00.0
ZAK	**Zakamensk**	**60.18 348**	*e*P	**P**	**21 13 54.9 -0.5**
ZAK			pmax	pmax	
	comp=Z,25nm,1.4s,mb5.0				
CIT	**Chita**	**60.26 355**	*e*P	**P**	**21 13 52.6 -3.2**
CIT			*e*	pP	21 14 04.6 -4.3
NIL	**Nilore**	**61.00 316**	PFAKE		21 14 10.0 +8.7
NIL			LR	LR	
	comp=Z,65nm,20.0s,MS3.8				
MIR	**Mirnyy**	**61.18 192**	⇓*i* P	**P**	**21 14 03.0 +1.0**
MIR			pmax	pmax	
	comp=Z,91nm,1.4s,mb5.7				
MIR			MLR	MLR	
	comp=N,2μm,16.0s,MS5.3				
MIR			MLR	MLR	
	comp=E,1μm,16.0s,MS5.3				
MIR			MLR	MLR	
	comp=Z,2μm,16.0s,MS5.3				
TLY	**Talaya**	**61.34 348**	P	**P**	**21 14 04.2 +1.0**
	comp=Z,240nm,0.8s,mb6.4,SNR=15				
TLY	**Talaya**	**61.34 348**	*e*P	**P**	**21 14 03.6 +0.4**
TLY			*e*		21 14 44.1
TLY			*e*S	**S**	**21 22 20.5 +0.3**
TLY			*e*SS	SS	21 26 23.5 +1.8
TLY			pmax	pmax	
	comp=Z,46nm,0.3s,mb6.1				
TLY			MLR	MLR	
	comp=Z,1μm,19.0s,MS5.0				
TLY	**Talaya**	**61.34 348**	⇓*e*P	**P**	**21 14 03.6 +0.4**
TLY			*e*S	**S**	**21 22 15.3 -5.0**
TLY			LR	LR	
	comp=Z,1μm,19.0s,MS5.0				
TLY	**Talaya**	**61.34 348**	P	**P**	**21 14 04.1 +1.0**
	SNR=36				
TLY			P		21 14 04.1
	SNR=36				
RAO	**Raoul Island**	**61.48 119**	PFAKE		21 14 20.0 +15
RAO			LR	LR	
	comp=Z,3μm,20.0s,MS5.4				
IRK	**Irkutsk**	**61.75 349**	*e*P	**P**	**21 14 06.3 +0.4**
IRK			*e*S	**S**	**21 22 31.8 +6.4**
IRK			pmax	pmax	
	comp=Z,85nm,3.5s				
MOY	**Mondy**	**61.89 347**	*e*P	**P**	**21 14 07.6 +0.7**
MOY			pmax	pmax	
	comp=Z,174nm,3.4s				
KSH	**Kashi**	**62.72 323**	⇑*i* P	**P**	**21 14 12.3 -0.5**
KSH			pP	pP	21 14 16.6 -9.3
KSH			sP	sP	21 14 19.0 -12
KSH			PcP	PcP	21 14 51.2 +0.1
KSH			PP	PP	21 16 31.4 +0.1
KSH			ScP	ScP	21 18 51.3 +1.6
KSH			PcS	PcS	21 18 53.1 -1.3
KSH			S	**S**	**21 22 36.7 -1.6**
KSH			ScS	ScS	21 23 59.9 -1.7
KSH			SS	SS	21 26 42.1 -1.8
KSH			pmax	pmax	
	comp=Z,64nm,0.7s,mb5.9				
KSH			LR	LR	
	comp=N,1μm,14.3s,MS5.3				
KSH			LR	LR	
	comp=E,490nm,12.9s,MS5.3				
KSH			LR	LR	
	comp=Z,1μm,14.0s,MS5.2				
RER	**Riviere de l'E**	**63.36 251**	*e*P	**P**	**21 14 17.5 +0.1**
RER			*e*PcP	PcP	21 14 55.5 +1.3
MKAR	**Makanchi Array**	**64.33 332**	P	**P**	**21 14 22.9 -0.3**
	comp=Z,15nm,0.7s,mb5.2,baz=120,slow=7.2,SNR=76				
MKAR			PKP2bc		21 43 20.0
	comp=Z,0.2nm,0.2s,baz=264,slow=1.3,SNR=4.0				
MKAR	**Makanchi Array**	**64.33 332**	*i* P	**P**	**21 14 23.5 +0.3**
MKAR			pmax	pmax	
	comp=Z,15nm,0.7s				
MKAR	**Makanchi Array**	**64.33 332**	P	**P**	**21 14 22.9 -0.3**
MKAR			⇑*e*		21 43 20.0
MSEY	**Mahe Island**	**64.42 269**	PFAKE		21 14 40.0 +15
MSEY			LR	LR	
	comp=Z,2μm,21.0s,MS5.3				
KZA	**Kyzart**	**64.76 324**	P	**P**	**21 14 26.7 +0.5**
	SNR=35				
CLNS	**Chul'man**	**64.92 3**	*e*P	**P**	**21 14 27.5 +0.7**
CLNS			*e*		21 15 02.3
CLNS			*e*		21 16 50.7
CLNS			*e*PPP		21 18 23.6
CLNS			*e*S	**S**	**21 23 07.7 +2.9**
CLNS			pmax	pmax	
	comp=E,15nm,1.1s				
CLNS			pmax	pmax	
	comp=Z,57nm,1.4s,mb5.4				
CLNS			pmax	pmax	
	comp=N,36nm,1.5s				
CLNS			pmax	pmax	
	comp=E,8.0nm,1.0s				
CLNS			pmax	pmax	
	comp=Z,7.0nm,1.0s,mb4.7				
CLNS			pmax	pmax	
	comp=N,13nm,1.2s				
CLNS			smax		
	comp=N,471nm,10.9s				
CLNS			smax		
	comp=E,224nm,12.0s				
CLNS			MLR	MLR	
	comp=Z,390nm,20.0s,MS4.6				
CLNS			MLR	MLR	
	comp=E,480nm,20.0s,MS5.0				
CLNS			MLR	MLR	
	comp=N,850nm,19.0s,MS5.0				
TKM2	**Tokmak 2**	**65.10 325**	P	**P**	**21 14 28.2 -0.1**
	SNR=20				
TKM2	**Tokmak 2**	**65.10 325**	⇑*e*P	**P**	**21 14 28.0 -0.3**
TKM2			*e*		21 15 00.7
TKM2			*e*S	S	21 23 06.8 -0.9
TKM2			pmax	pmax	
	comp=Z,17nm,0.7s,mb5.2				
TKM2			MLR	MLR	
	comp=Z,2μm,20.0s,MS5.3				
TKM2	**Tokmak 2**	**65.10 325**	⇑*e*P	**P**	**21 14 28.0 -0.3**
	comp=Z,17nm,0.7s,mb5.2				
TKM2			*e*PcP	PcP	21 15 00.7 0.0
TKM2			*e*S	S	21 23 06.8 -0.9
TKM2			LR	LR	
	comp=Z,2μm,20.0s,MS5.3				
UCH	**Uchtor**	**65.28 324**	P	**P**	**21 14 29.9 +0.3**
	SNR=18				
UCH	**Uchtor**	**65.28 324**	⇑*e*P	**P**	**21 14 29.6 +0.1**
	comp=Z,19nm,0.8s,mb5.2				
UCH			*e*S	S	21 23 13.7 +3.8
UCH			LR	LR	
	comp=Z,2μm,20.0s,MS5.3				
KBK	**Karagaybulak**	**65.30 325**	P	**P**	**21 14 29.9 +0.3**
	SNR=24				
AAK	**Ala-Archa**	**65.55 324**	P	**P**	**21 14 31.1 -0.1**
	comp=Z,175nm,0.7s,mb6.2,SNR=14				
AAK	**Ala-Archa**	**65.55 324**	P	**P**	**21 14 31.3 +0.1**
	SNR=17				
AAK	**Ala-Archa**	**65.55 324**	P	**P**	**21 14 31.2 0.0**
	comp=Z,16nm,0.7s,mb5.2,baz=131,slow=6.0,SNR=32				
AAK	**Ala-Archa**	**65.55 324**	*ce*P	**P**	**21 14 31.2 0.0**
AAK			pmax	pmax	
	comp=Z,13nm,0.8s,mb5.0				

AAK Ala-Archa 65.55 324⇑ *e*P P 21 14 31.1 -0.2
comp=Z,23nm,0.7s,mb5.3
AAK *e*S S 21 23 14.1 +1.0
AAK LR LR
comp=Z,2μm,20.0s,MS5.3
AAK Ala-Archa 65.55 324 P **P 21 14 31.5 +0.2**
SNR=27
AAK P 21 14 31.5
SNR=27
FRU Bishkek 65.60 325 *e*P **P 21 14 31.0 -0.6**
FRU *e* 21 23 14.0
FRU pmax pmax
comp=Z,67nm,2.0s,mb5.3
AML Almayashu 65.70 324 P **P 21 14 32.3 0.0**
SNR=62
AML Almayashu 65.70 324⇑ *e*P **P 21 14 32.3 +0.1**
comp=Z,43nm,0.8s,mb5.5
AML *e*S S 21 23 18.7 +3.7
AML LR LR
comp=Z,1μm,19.0s,MS5.1
USP Ospenovka 65.94 325 P **P 21 14 33.7 -0.1**
SNR=8.0
EKS2 Erkin-Say 65.98 324 P **P 21 14 34.1 +0.1**
SNR=27
EKS2 Erkin-Say 65.98 324⇑ *e*P **P 21 14 33.7 -0.3**
comp=Z,27nm,0.9s,mb5.3
EKS2 *e*S S 21 23 21.4 +3.0
EKS2 LR LR
comp=Z,2μm,19.0s,MS5.3
BOD Bodaibo 65.99 356 *e*P **P 21 14 33.8 +0.1**
BOD pmax pmax
comp=Z,142nm,1.3s,mb5.8
SKR Severo-Kuril's 66.35 24 *e*P **P 21 14 36.0 -0.2**
SKR *e* 21 14 43.0
SKR *e* 21 15 06.0
SKR *e*S S 21 23 20.0 -2.6
SKR *e*PS 21 23 43.0
SKR *e* 21 24 04.0
SKR smax
comp=N,3μm,10.0s
SKR smax
comp=E,3μm,10.0s
SKR MLR MLR
comp=Z,2μm,18.0s,MS5.5
ZALV Zalesovo Beam 68.75 338 P **P 21 14 50.0 -1.3**
comp=Z,32nm,0.7s,mb5.4,baz=132,slow=4.2,SNR=106
ZALV S S 21 23 50.7 -0.5
comp=Z,0.5nm,0.5s,baz=160,slow=32,SNR=3.8
ZALV PKP2ab 21 43 06.1
comp=Z,0.6nm,0.5s,baz=288,slow=1.4,SNR=5.1
ZALV LR LR 21 46 15.9
comp=Z,586nm,20.1s,MS4.8,baz=20,slow=37
ZALV Zalesovo Beam 68.75 338 P **P 21 14 50.0 -1.3**
ZALV S S 21 23 50.7 -0.5
ZALV Zalesovo Beam 68.75 338 P **P 21 14 50.0 -1.3**
ZALV S S 21 23 50.7 -0.5
ZALV P'P'ab 21 43 06.1
ZALV LR LR 21 46 15.9
KURK Kurchatov 68.85 333 P **P 21 14 51.0 -1.0**
comp=Z,242nm,0.8s,mb6.2,SNR=34
KURK Kurchatov 68.85 333 P **P 21 14 51.1 -0.9**
comp=Z,23nm,1.1s,mb5.0,baz=144,slow=5.6,SNR=38
KURK S S 21 23 50.1 -2.4
comp=Z,0.4nm,0.2s,baz=150,slow=7.5,SNR=2.7
KURK Kurchatov 68.85 333⇑ *e*P **P 21 14 51.3 -0.7**
KURK *e*PP PP 21 17 23.4 -1.2
KURK *e*S S 21 23 49.7 -2.8
KURK LR LR
comp=Z,2μm,20.0s,MS5.4
KURK Kurchatov 68.85 333 P **P 21 14 51.8 -0.2**
SNR=27
KURK P 21 14 51.8
SNR=27
PETK Petropavlovsk- 68.85 23 P **P 21 14 49.7 -2.2**
comp=Z,16nm,1.1s,mb4.9,baz=200,slow=3.9,SNR=8.9
PETK LR LR 21 43 11.3
comp=Z,446nm,19.6s,MS4.7,baz=231,slow=34
PET Petropavlovsk 69.16 24 *d* *i*P **P 21 14 56.5 +2.7**
PET *i*S S 21 23 59.9 +3.8
PET *e*PS 21 24 22.2
PET *e*PPS 21 24 34.2
PET *e*SS SS 21 28 28.5 +5.1
PET pmax pmax
comp=Z,800nm,5.0s
PET pmax pmax
comp=Z,500nm,5.6s
PET pmax pmax
comp=Z,65nm,1.2s,mb5.4
PET MLR MLR
comp=Z,700nm,18.0s,MS4.9
PET MLR MLR
comp=Z,600nm,15.0s
PET Petropavlovsk 69.16 24 *e*P **P 21 14 53.6 -0.2**
comp=Z,129nm,1.4s,mb5.7
PET LR LR
comp=Z,680nm,21.0s,MS4.9
NVS Novosibirsk 70.03 338⇑ *i*P **P 21 14 57.4 -1.8**
NVS *e*S S 21 24 00.0 -6.3
NVS pmax pmax
comp=N,187nm,2.9s
NVS pmax pmax
comp=Z,296nm,2.9s,mb5.7
NVS pmax pmax
comp=E,188nm,3.0s
NVS smax
comp=E,84nm,2.8s
YAK Yakutsk 70.40 5 *e*P **P 21 15 00.7 -0.6**
YAK *e**PP pP 21 15 09.0 -5.6
YAK *e* 21 15 21.7
YAK *e* 21 17 36.8
YAK *e*PPP 21 19 14.6
YAK *e*S S 21 24 09.7 -0.6
YAK *e* 21 24 57.4
YAK pmax pmax
comp=Z,34nm,1.1s,mb5.2
YAK pmax pmax
comp=E,2.0nm,0.9s
YAK pmax pmax
comp=N,15nm,1.1s
YAK pmax pmax
comp=Z,303nm,5.9s
YAK smax
comp=E,117nm,3.7s
YAK smax
comp=N,874nm,6.2s
YAK Yakutsk 70.40 5 *e*P **P 21 15 00.6 -0.7**
YAK *e*S S 21 24 13.3 +3.0
YAK LR LR
comp=Z,584nm,20.0s,MS4.8
MAW Mawson 70.41 200 *e*P **P 21 15 02.8 +1.4**
comp=Z,39nm,1.1s,mb5.2
MAW Mawson 70.41 200 P **P 21 15 00.1 -1.3**
comp=Z,59nm,1.1s,mb5.4,baz=57,slow=8.2,SNR=34
MAW LR LR 21 44 28.5
comp=Z,2μm,18.7s,MS5.3,baz=61,slow=35
ABPO Ambohimpanom 71.39 253 *e*P **P 21 15 08.7 +0.4**
ABPO *e* 21 15 28.1
ABPO *e* 21 17 44.2
ABPO pmax pmax
comp=Z,19nm,1.0s,mb5.0
ABPO MLR MLR
comp=Z,1μm,20.0s,MS5.1
ABPO Ambohimpanom 71.39 253 *e*P **P 21 15 08.7 +0.4**
comp=Z,20nm,1.0s,mb5.0
ABPO *e*PcP PcP 21 15 28.1 +0.3
ABPO *e*PP PP 21 17 44.2 -2.9
ABPO LR LR
comp=Z,1μm,20.0s,MS5.1
OPO Ambohidratompo 71.45 253 P **P 21 15 09.2 +0.6**
comp=Z,7.9nm,0.8s,mb4.7,baz=96,slow=4.8,SNR=17
ISRO Mashad 72.15 312 *e*P **P 21 15 11.4 -1.0**
SBA Scott Base 73.57 171 *e*P **P 21 15 20.8 +0.6**
SBA *e* pP 21 15 37.4 +3.8
SBA MLR MLR
comp=Z,4μm,19.0s,MS5.7
JOHN Johnston Islan 73.70 70 PFAKE 21 15 30.0 +8.0
JOHN LR LR
comp=Z,1μm,20.0s,MS5.1
ABKT Ailbek 73.80 313 P **P 21 15 21.4 -0.8**
comp=Z,137nm,0.9s,mb5.9,SNR=5.2
BVAR Borovoye Array 74.19 331 P **P 21 15 22.9 -1.3**
comp=Z,6.5nm,0.7s,mb4.6,baz=144,slow=5.5,SNR=34
BVAR LR LR 21 51 06.6
comp=Z,2μm,21.6s,MS5.4,baz=127,slow=38
BRVK Borovoye 74.26 331 P **P 21 15 24.5 0.0**
comp=Z,137nm,1.1s,mb5.8,SNR=14
BRVK Borovoye 74.26 331 *c* *i*P **P 21 15 23.7 -0.8**
BRVK pmax pmax
comp=Z,14nm,1.0s,mb4.8
BRVK Borovoye 74.26 331⇑ *e*P **P 21 15 23.4 -1.1**
BRVK *e*S S 21 24 57.7 +2.9
BRVK LR LR
comp=Z,2μm,20.0s,MS5.3
BRVK Borovoye 74.26 331 P **P 21 15 24.6 +0.1**
SNR=21
BRVK P 21 15 24.6
SNR=21
SEY Seymchan 75.08 15 *c*e**P P 21 15 29.5 +0.5**
ABKAR Akbulak array 77.64 324⇑ *e*P **P 21 15 41.8 -2.1**
comp=Z,20nm,0.8s,mb5.1
ABKAR PcP PcP 21 15 50.6 -3.3
AMKA Amchitka 77.95 33 *e*P **P 21 15 38.4 -7.1**
SYO Syowa Base 79.05 201⇓ *e*P **P 21 15 50.2 -1.2**
AKTK Aktyubinsk 79.29 325 P **P 21 15 51.8 -1.1**
AKTO Aktyubinsk 79.29 325 P **P 21 15 51.8 -1.1**
comp=Z,9.6nm,0.9s,mb4.7,baz=117,slow=6.2,SNR=18
TIXI Tiksi 79.89 3 *c* *i*P **P 21 15 53.9 -1.8**
TIXI *e* 21 18 56.7
TIXI pmax pmax
comp=Z,44nm,1.6s,mb5.1
TIXI MLR MLR
comp=Z,1μm,16.0s,MS5.4
TIXI Tiksi 79.89 3⇑ *e*P **P 21 15 54.0 -1.8**
comp=Z,25nm,1.0s,mb5.1
TIXI PP PP 21 18 56.5 -1.4
TIXI *e*S S 21 25 48.5 -6.9
TIXI LR LR
comp=Z,836nm,21.0s,MS5.1
SVE Sverdlovsk 80.98 331⇓ *e*P **P 21 16 00.1 -1.8**
SVE *e* 21 19 11.5
SVE *e*S S 21 26 04.0 -3.3
SVE pmax pmax
comp=Z,41nm,1.5s,mb5.1
ARU Arti 81.79 330 *c* *i*P **P 21 16 04.3 -1.9**
ARU *e* 21 19 13.0
ARU S S 21 26 14.8 -0.9
ARU SS SS 21 31 32.1 -2.6
ARU SSS 21 34 52.1
ARU pmax pmax
comp=Z,25nm,1.7s,mb4.9
ARU MLR MLR
comp=Z,1μm,18.0s,MS5.4
ARU Arti 81.79 330 *e*P **P 21 16 04.6 -1.6**
ARU *e*PcP PcP 21 16 13.4 +1.6
ARU *e*S S 21 26 19.0 +3.3
ARU LR LR
comp=Z,1μm,21.0s,MS5.3
QSPA South Pole Qui 81.79 180 P **P 21 16 07.3 +1.4**
comp=Z,37nm,1.0s,mb5.3,baz=318,slow=1.6,SNR=95
XMAS Kiritimati 82.66 87 PFAKE 21 16 20.0 +8.2
XMAS LR LR
comp=Z,1μm,20.0s,MS5.3
BILL Bilibino 82.68 16 *d* *i*P **P 21 16 11.1 +0.5**
BILL *i* 21 16 18.1
BILL *e* 21 19 19.9
BILL *i*S S 21 26 18.7 -5.8
BILL pmax pmax
comp=Z,30nm,1.5s,mb5.1
BILL MLR MLR
comp=Z,400nm,19.0s,MS4.8
BILL Bilibino 82.68 16 *e*P **P 21 16 09.1 -1.6**
comp=Z,21nm,1.3s,mb5.0
BILL *e*S S 21 26 26.5 +2.0
BILL LR LR
comp=Z,568nm,22.0s,MS4.9
KMBO Kilima Mbogo 82.93 270⇑ *e*P **P 21 16 13.1 -0.1**
KMBO *e* 21 16 18.4
KMBO *e* 21 19 25.1
KMBO MLR MLR
comp=Z,2μm,20.0s
KMBO Kilima Mbogo 82.93 270⇑ *e*P **P 21 16 13.1 0.0**
KMBO *e*PcP PcP 21 16 18.4 +0.5
KMBO *e*PP PP 21 19 25.1 +0.8
KMBO *e*S S 21 26 41.2 +12
KMBO LR LR
comp=Z,2μm,20.0s,MS5.5
KMBO Kilima Mbogo 82.93 270 P **P 21 16 14.2 +1.0**
SNR=6.0
KMBO P 21 16 14.2
SNR=6.0
MAK Makhachkala 83.16 315 *e*P **P 21 16 10.5 -3.2**
MAK *e* 21 19 32.9
MAK *e*PPP 21 21 11.6
MAK *i*S S 21 26 29.8 -0.5
MAK *e*SS SS 21 31 55.7 0.0
MAK pmax pmax
comp=Z,150nm,1.5s,mb5.8
MAK MLR MLR
comp=Z,965nm,22.0s,MS5.1
SOKR Solikamsk 84.08 333 *c* *i*P **P 21 16 16.2 -1.8**
SOKR S S 21 26 35.0 -3.9
SOKR SS SS 21 32 05.9 -2.7
SOKR pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
DGRG David-gareji 84.23 313 P **P 21 16 19.9 +0.7**
GNI Garni 84.34 312 P **P 21 16 24.2 +4.4**
comp=Z,5.5nm,0.6s,mb4.8,baz=148,slow=13,SNR=4.3
GNI Garni 84.34 312 *c* *i*P **P 21 16 19.6 -0.2**
GNI pmax pmax
comp=Z,29nm,1.3s
GNI Garni 84.34 312 *e*P **P 21 16 20.4 +0.6**
comp=Z,21nm,1.1s,mb5.2
GNI *e*S S 21 26 45.7 +3.4
GNI LR LR
comp=Z,570nm,20.0s,MS5.0
MSL Mosul 84.62 308 *e*P **P 21 16 22.0 +0.7**
MTA Mtatsminda 84.72 313 P **P 21 16 20.6 -1.0**
TBLG Delisi 84.77 313 *e*P **P 21 16 21.3 -0.6**
TBLG Delisi 84.77 313 P **P 21 16 21.3 -0.6**
GOR Gori 85.29 313 P **P 21 16 23.3 -1.2**
KEH Kehvi 85.50 314 P **P 21 16 24.6 -1.0**
ZEI Tsey 85.65 314 *e*P **P 21 16 29.7 +3.4**
ZEI pmax pmax
comp=Z,30nm,1.3s,mb5.4
ONI Oni 85.92 314 P **P 21 16 26.7 -1.0**
KIV Kislovodsk 86.80 315 *e*P **P 21 16 27.0 -5.0**
KIV *e* 21 19 50.9
KIV *e* 21 26 50.2
KIV *e*SS SS 21 32 49.2 -0.1
KIV pmax pmax
comp=Z,4.0nm,0.6s,mb4.8
KIV Kislovodsk 86.80 315 *e*P **P 21 16 31.3 -0.7**
KIV *e*S S 21 26 59.4 -7.0
KIV LR LR
comp=Z,939nm,22.0s,MS5.2
POHA Pohakuloa 87.33 70 PFAKE 21 16 50.0 +15
POHA LR LR
comp=Z,945nm,22.0s,MS5.2
PPT Papeete 87.71 107 *e*S S 21 27 15.6 -0.6
comp=Z,403nm,24.5s
PPT *e*LR LR 21 44 32.3
comp=Z,1μm,27.0s
NVL N'lazarevskaya 88.28 198 *e*P **P 21 16 39.7 +1.1**
NVL *e**PP pP 21 16 45.9 -6.4
NVL *e*S S 21 27 05.2 -14
NVL *e*SP 21 28 27.9
NVL pmax pmax
comp=Z,72nm,1.5s,mb5.7
NVL MLR MLR
comp=Z,1μm,15.0s,MS5.4
MAIT Maitri 88.31 198 *e*P **P 21 16 40.6 +1.9**
ASF Jabal al Asfar 88.75 303 P **P 21 16 41.4 -0.2**
comp=Z,1.6nm,0.6s,mb4.5,baz=77,slow=4.7,SNR=6.4
SOC Sochi 88.81 314 *e*P **P 21 16 39.7 -1.8**
SOC pmax pmax
comp=Z,19nm,0.9s,mb5.4
SOC MLR MLR
comp=Z,552nm,22.0s,MS4.9
VRHR Novokhopersk 89.26 322 *e*P pP 21 16 56.9 -0.3
VRHR *e* 21 20 17.5
VRHR *e* 21 27 23.4
VRHR *e*PS PS 21 28 30.9 -9.2
VRHR pmax pmax
comp=N,5.0nm,0.8s
VRHR pmax pmax
comp=Z,10.0nm,0.8s,mb5.2
VRHR pmax pmax
comp=E,10.0nm,1.0s
VRHR pmax pmax
comp=Z,200nm,4.3s
VRHR pmax pmax
comp=N,120nm,3.6s
VRHR pmax pmax
comp=E,120nm,3.5s
VRHR MLR MLR
comp=Z,760nm,21.0s,MS5.1
VRHR MLR MLR
comp=N,590nm,19.0s,MS5.1
VRHR MLR MLR
comp=E,530nm,22.0s,MS5.1
LSZ Lusaka 89.86 255 *e*P **P 21 16 46.4 -0.7**
LSZ pmax pmax
comp=Z,18nm,0.8s,mb5.5
LSZ MLR MLR
comp=Z,958nm,19.0s,MS5.2
LSZ Lusaka 89.86 255 *e*P **P 21 16 46.4 -0.7**
comp=Z,18nm,0.8s,mb5.4
LSZ LR LR
comp=Z,958nm,19.0s,MS5.2
MMAI Mount Meron Ar 90.14 303 P **P 21 16 47.9 -0.1**
comp=Z,4.8nm,0.8s,mb4.9,baz=93,slow=7.7,SNR=9.1
MMAI LR LR 22 03 06.0
comp=Z,1μm,18.4s,MS5.4,baz=140,slow=40
BOSA Boshof 90.49 241 P **P 21 16 49.6 -0.2**
comp=Z,7.7nm,0.5s,mb5.3,baz=111,slow=4.5,SNR=45
BOSA LR LR 21 51 11.1
comp=Z,1μm,20.3s,MS5.4,baz=103,slow=31
ANN Anapa 90.66 315 *e*P **P 21 16 47.8 -2.4**
ANN *e* 21 20 25.6
ANN *e* 21 27 14.6
ANN *e*SP SP 21 28 51.1 +1.2
ANN pmax pmax
comp=Z,18nm,0.9s,mb5.4
VSR Storozhevoye 90.79 322 *e*P **P 21 16 56.9 +6.3**
VSR *e**PP pP 21 17 07.4 +3.0
VSR *e* 21 20 24.5
VSR *e* 21 27 13.3
VSR *e*S S 21 27 38.3 -5.3
VSR *e*SP SP 21 28 49.1 -1.9
VSR *e*PPS 21 29 26.5
VSR pmax pmax
comp=Z,10.0nm,0.7s,mb5.2
VSR pmax pmax
comp=N,8.0nm,0.8s
VSR pmax pmax
comp=E,10.0nm,1.0s
VSR pmax pmax
comp=Z,230nm,5.3s
VSR pmax pmax
comp=N,10.0nm,1.0s
VSR pmax pmax
comp=E,60nm,3.6s
VSR smax
comp=E,190nm,8.9s
VSR smax
comp=Z,60nm,7.6s
VSR smax
comp=N,50nm,5.4s
VSR MLR MLR
comp=Z,670nm,16.0s,MS5.2
CSS Prodhromos 92.14 305 PFAKE 21 17 10.0 +13
CSS LR LR
comp=Z,883nm,22.0s,MS5.2
BRTR Keskin Array B 92.60 310 P **P 21 16 58.1 -1.1**
comp=Z,1.0nm,0.8s,mb4.3,baz=94,slow=7.9,SNR=6.5
BRTR LR LR 22 08 17.6
comp=Z,658nm,19.1s,MS5.1,baz=250,slow=42
OBN Obninsk 93.07 325 *d* *i*P **P 21 16 58.8 -2.3**
OBN *i* 21 20 45.3
OBN *i*PS PS 21 29 21.7 -0.5
OBN *i*SS SS 21 34 14.0 -5.4
OBN pmax pmax
comp=Z,18nm,1.2s,mb5.4
OBN Obninsk 93.07 325 *e*P **P 21 17 00.8 -0.2**
OBN *e*S S 21 28 07.0 +3.1
OBN LR LR
comp=Z,918nm,20.0s,MS5.2
VNA1 Neumayer--Stat 94.12 195 *e*P **P 21 17 06.8 +1.1**
TTA Tatalina 94.39 27 *e*P pP 21 17 22.9 +2.2
ISP Isparta 94.76 307 *e*P **P 21 17 08.8 -0.5**
ISP *e*S S 21 28 25.5 +6.0
ISP MLR MLR
comp=Z,539nm,19.0s,MS5.0
KDAK Kodiak Island 95.35 33 PFAKE 21 17 20.0 +8.5
KDAK LR LR
comp=Z,841nm,21.0s,MS5.2
LVZ Lovozero 95.89 338 PFAKE 21 17 20.0 +6.3
LVZ LR LR
comp=Z,1μm,22.0s,MS5.3
APA Apatity 96.32 337⇑ *e*P **P 21 17 08.0 -7.7**
APA *i* 21 21 08.0
APA *e*S S 21 28 22.0 -10
APA pmax pmax
comp=Z,13nm,1.0s,mb5.3
APA MLR MLR
comp=Z,1μm,25.0s,MS5.3
KIS Kishinev 96.92 316 *e*PP PP 21 21 12.0 -2.8
KIS Kishinev 96.92 316 *e*PS PS 21 30 00.0 -4.8
AKASG Malin Array Be 96.94 320 P **P 21 17 17.2 -1.7**
comp=Z,0.2nm,0.2s,mb4.1,baz=82,slow=4.9,SNR=3.1
AKASG LR LR 22 08 56.6
comp=Z,686nm,19.4s,MS5.2,baz=40,slow=40
AKASG Malin Array Be 96.94 320 *i* P **P 21 17 27.0 +8.1**
AKASG pmax pmax
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 96.94 320 P **P 21 17 17.2 -1.7**
AKASG LR LR 22 08 56.6
COLD Coldfoot 97.32 23 *e*P **P 21 17 19.9 -0.3**
comp=Z,10nm,1.1s,mb5.2
HARR Harsova 97.36 314⇑ *i*P sP 21 17 38.9 -0.9
TAOE Nuku Hiva Isla 98.12 100 *e*PS PS 21 30 18.0 -1.0
comp=Z,342nm,29.6s
TAOE *e*LR LR 21 49 26.2
comp=Z,624nm,22.2s
COLA College 98.17 26 PFAKE 21 17 30.0 +5.9
COLA LR LR
comp=Z,301nm,20.0s,MS4.8
VRI Vrincioaia 98.28 315⇑ *i*P **P 21 17 26.9 +1.9**
IDID Didziasalis 98.69 325 *e*P **P 21 17 34.0 +7.3**
KEV Kevo 98.77 339 PFAKE 21 17 40.0 +13
KEV LR LR
comp=Z,937nm,20.0s,MS5.3
MLR Muntele Rosu 98.81 315⇓ *i*P **P 21 17 35.2 +7.8**
IIGN Ignalina 98.99 325 *e*P **P 21 17 35.6 +7.6**
ISAL Salakas 99.05 325 *e*P **P 21 17 35.7 +7.5**
FINES FINESS Array B 99.15 331 P **P 21 17 31.0 +2.5**
comp=Z,1.8nm,1.0s,mb4.6,baz=101,slow=7.5,SNR=2.7
FINES FINESS Array B 99.15 331 P **P 21 17 31.0 +2.5**
ARCES ARCESS Array B 99.30 339 PKKPbc PKKPbc 21 33 54.5 -1.5
comp=Z,3.6nm,1.0s,baz=289,slow=2.8,SNR=4.4
BURAR Bucovina Array 99.40 317⇓ *i*P **P 21 17 37.8 +7.8**
RKT Rikitea 100.19 115 *e*PS PS 21 30 39.4 -1.5
comp=Z,360nm,26.8s
RKT *e*LR LR 21 50 24.0
comp=Z,799nm,24.0s
EGAK Eagle 101.03 26 PFAKE 21 17 50.0 +13
EGAK LR LR
comp=Z,393nm,21.0s,MS4.9
KWP Kalwaria Pacla 101.09 319 PFAKE 21 17 50.0 +13
KWP LR LR
comp=Z,637nm,22.0s,MS5.1
KBS Kingsbay 101.49 349 *e*PP PP 21 21 49.4 +0.6
KBS Kingsbay 101.49 349 PFAKE 21 17 50.0 +11
KBS LR LR
comp=Z,915nm,20.0s,MS5.3
TRO Tromso 101.59 339 *e*PP PP 21 21 56.6 +7.0
TRO *e* 21 28 18.1
TRO *e*SS SS 21 36 27.7 +9.1
PSZ Piszkesteto 102.99 317 P Pdif 21 17 46.0 +0.2
PSZ MLR MLR
comp=Z,486nm,20.0s,MS5.0
PSZ Piszkesteto 102.99 317⇑ *i*P Pdif 21 17 49.2 +3.4
TIR Tirane 103.17 310 PFAKE 21 18 00.0 +13
TIR LR LR
comp=Z,551nm,20.0s,MS5.1
INK Inuvik 103.55 22 *e*P Pdif 21 17 47.4 -0.9
BSD Bornholm Skovb 105.46 325 *i*P PKiKP 21 22 26.6 +16
BSD
comp=Z,630nm,22.0s
TIP Timpagrande 105.60 308 PFAKE 21 22 20.0 +9.1
TIP LR LR
comp=Z,443nm,22.0s,MS5.0
CEL Celeste 106.31 307 PFAKE 21 22 20.0 +7.7
CEL LR LR
comp=Z,378nm,22.0s,MS4.9

COP	Copenhagen	106.77	326	*i* P	PP	21 22 33.7	+5.2	
COP	comp=Z,240nm,18.0s							
GERES	GERESS Array B	107.03	319	PP	PP	21 22 27.8	-2.9	
	comp=Z,0.7nm,0.8s,baz=56,slow=6.1,SNR=3.7							
CLL	Collm	107.14	321	*e*PKP	PKiKP	21 22 17.0	+3.6	
CLL				*e*PP	PP	21 22 33.0	+1.6	
CLL				*e*SKS	SKSac	21 28 42.0	+1.4	
CLL				LR	LR			
	comp=Z,900nm,18.0s,MS5.4							
CLL	Collm	107.14	321	*e*PKiKP	PKiKP	21 22 14.0	+0.6	
CLL				LmV		21 18 00.0		
	comp=Z,900nm,18.0s							
CLL				*e*PP	PP	21 22 33.0	+1.6	
CLL				*e*PPP		21 24 49.0		
CLL				*e*SKSac	SKSac	21 28 42.0	+1.4	
CLL				*e*Sdif	Sdif	21 29 58.0	-5.2	
CLL				*e*SP	SP	21 31 46.0	-0.6	
CLL				*e*PPS		21 32 47.0		
CLL				*e*SS	SS	21 37 35.0	-0.6	
PMSA	Palmer Station	107.16	178	PFAKE		21 22 20.0	+6.9	
PMSA				LR	LR			
	comp=Z,2μm,19.0s,MS5.6							
TRI	Trieste	107.35	315	PFAKE		21 22 30.0	+16	
TRI				LR	LR			
	comp=Z,568nm,21.0s,MS5.1							
KONO	Kongsberg	107.43	330	*e*PP	PP	21 22 37.6	+4.4	
KONO	Kongsberg	107.43	330	*e*P	PP	21 22 38.6	+5.4	
KONO				LR	LR			
	comp=Z,862nm,20.0s,MS5.3							
WDD	Wield Dalam	107.51	305	PFAKE		21 22 30.0	+15	
WDD				LR	LR			
	comp=Z,554nm,20.0s,MS5.1							
AQU	L'Aquila	107.94	312	PFAKE		21 22 30.0	+15	
AQU				LR	LR			
	comp=Z,566nm,22.0s,MS5.1							
MUD	Monsted U'grnd	108.40	327	*i* P	PP	21 22 51.7	+11	
MUD								
	comp=Z,720nm,20.0s							
FOO	Floro	109.04	333	*e*PP	PP	21 22 49.8	+5.0	
FOO				*e*SS	SS	21 38 05.4	+4.9	
FOO				AMS	AMS	22 11 49.1		
	comp=Z,952nm,19.4s,MS5.4							
BER	Bergen	109.28	331	*e*PP	PP	21 22 51.0	+4.3	
BER				AMS	AMS	22 18 30.1		
	comp=Z,962nm,12.1s,MS5.6							
JMIC	Jan Mayen	109.70	344	*e*PP	PP	21 22 55.0	+5.6	
VLC	Villacollemand	109.92	314	PFAKE		21 22 30.0	+11	
VLC				LR	LR			
	comp=Z,715nm,19.0s,MS5.3							
BFO	Black Forest	110.63	319	PFAKE		21 22 30.0	+10	
BFO				LR	LR			
	comp=Z,750nm,20.0s,MS5.3							
VSL	Villasalto	111.28	309	PFAKE		21 22 30.0	+8.4	
VSL				LR	LR			
	comp=Z,355nm,19.0s,MS5.0							
ECH	Echery	111.42	319	PFAKE		21 22 30.0	+8.5	
ECH				LR	LR			
	comp=Z,486nm,19.0s,MS5.1							
WLF	Walferdange	111.75	320	PFAKE		21 22 30.0	+7.9	
WLF				LR	LR			
	comp=Z,810nm,19.0s,MS5.3							
BNI	Bardonecchia	112.38	315	*e*PKIKP	PKiKP	21 22 24.1	+0.6	
BNI				MLR	MLR			
	comp=Z,849nm,20.0s,MS5.3							
YKA	Yellowknife Ar	112.95	24	Pdiff	Pdif	21 18 33.9	+3.8	
	comp=Z,0.2nm,0.2s,baz=47,slow=23,SNR=5.1							
YKA				PKiKP	PKiKP	21 22 24.5	+0.5	
	comp=Z,0.5nm,0.6s,baz=297,slow=1.8,SNR=3.6							
YKA				PKKPbc	PKKPbc	21 33 10.6	-3.0	
	comp=Z,0.3nm,0.6s,baz=112,slow=3.5,SNR=3.1							
YKA	Yellowknife Ar	112.95	24	P	Pdif	21 18 33.9	+3.8	
YKA						21 22 24.6		
YKA	Yellowknife Ar	112.95	24	Pdif	Pdif	21 18 33.9	+3.8	
YKA				PKPdf	PKiKP	21 22 24.6	+0.5	
YKA				PKKPbc	PKKPbc	21 33 10.6	-2.9	
NLWA	Neilton Lookou	113.42	42	PFAKE		21 22 40.0	+15	
NLWA				LR	LR			
	comp=Z,445nm,22.0s,MS5.0							
SSB	Saint Sauveur	113.81	316	PFAKE		21 22 40.0	+14	
SSB				LR	LR			
	comp=Z,409nm,21.0s,MS5.0							
COR	Corvallis	114.45	45	PFAKE		21 22 40.0	+13	
COR				LR	LR			
	comp=Z,439nm,19.0s,MS5.1							
HUMO	Hull Mountain	115.14	47	PFAKE		21 22 40.0	+11	
HUMO				LR	LR			
	comp=Z,480nm,20.0s,MS5.1							
ESK	Eskdalemuir	115.36	328	PFAKE		21 22 40.0	+11	
ESK				LR	LR			
	comp=Z,1μm,21.0s,MS5.4							
YBH	Yreka Blue Hor	115.51	48	PFAKE		21 22 40.0	+10	
YBH				LR	LR			
	comp=Z,415nm,21.0s,MS5.0							
HOPS	Hopland	115.78	51	PFAKE		21 22 40.0	+10	
HOPS				LR	LR			
	comp=Z,534nm,19.0s,MS5.2							
WDC	Whiskeytown Da	115.87	49	PFAKE		21 22 40.0	+10	
WDC				LR	LR			
	comp=Z,471nm,20.0s,MS5.1							
TAM	Tamanrasset	115.91	291	PFAKE		21 22 40.0	+9.1	
TAM				LR	LR			
	comp=Z,572nm,19.0s,MS5.2							
MCCM	Marconi Confer	116.09	52	PFAKE		21 22 40.0	+9.2	
MCCM				LR	LR			
	comp=Z,439nm,20.0s,MS5.1							
HAWA	Hanford	116.55	42	PFAKE		21 22 40.0	+8.6	
HAWA				LR	LR			
	comp=Z,462nm,22.0s,MS5.0							
MOD	Modoc	117.22	47	PFAKE		21 22 40.0	+7.1	
MOD				LR	LR			
	comp=Z,526nm,22.0s,MS5.1							
BORG	Borgarnes	117.44	343	PFAKE		21 22 40.0	+7.4	
BORG				LR	LR			
	comp=Z,859nm,20.0s,MS5.4							
NEW	Newport	117.51	39	PFAKE		21 22 50.0	+17	
NEW				LR	LR			
	comp=Z,319nm,21.0s,MS4.9							
CMB	Columbia Colle	118.04	51	PFAKE		21 22 50.0	+15	
CMB				LR	LR			
	comp=Z,761nm,19.0s,MS5.3							
WVOR	Wild Horse Val	118.28	46	PFAKE		21 22 50.0	+15	
WVOR				LR	LR			
	comp=Z,452nm,21.0s,MS5.1							
BMO	Blue Mountains	118.50	43	PFAKE		21 22 50.0	+15	
BMO				LR	LR			
	comp=Z,308nm,19.0s,MS5.0							
NVAR	Mina Array Bea	119.55	50	PKKPab	PKKPab	21 32 50.1	-0.4	
	comp=Z,0.3nm,0.3s,baz=74,slow=3.9,SNR=5.1							
TORD	Torodi Ar. Bea	119.55	280	PKP	PKPdf	21 22 35.8	-2.3	
	comp=Z,2.9nm,0.6s,baz=67,slow=1.7,SNR=34							
BMN	Battle Mountai	119.85	48	PFAKE		21 22 50.0	+12	
BMN				LR	LR			
	comp=Z,493nm,19.0s,MS5.2							
MSO	Missoula	120.04	40	PFAKE		21 22 50.0	+12	
MSO				LR	LR			
	comp=Z,475nm,22.0s,MS5.1							
TPH	Tonopah	120.46	51	PFAKE		21 22 50.0	+11	
TPH				LR	LR			
	comp=Z,596nm,22.0s,MS5.2							
DAC	Darwin (Calif)	120.60	53	PFAKE		21 22 50.0	+10	
DAC				LR	LR			
	comp=Z,600nm,21.0s,MS5.2							
HLID	Hailey	120.89	44	PFAKE		21 22 50.0	+10	
HLID				LR	LR			
	comp=Z,750nm,19.0s,MS5.3							
SFJD	Kangerlussuaq	120.96	356	PFAKE		21 22 50.0	+11	
SFJD				LR	LR			
	comp=Z,607nm,19.0s,MS5.3							
ELK	Elko	121.20	47	PFAKE		21 22 50.0	+9.4	
ELK				LR	LR			
	comp=Z,665nm,20.0s,MS5.3							
PAB	San Pablo	121.65	312	PFAKE		21 22 50.0	+8.5	
PAB				LR	LR			
	comp=Z,550nm,21.0s,MS5.2							
BOZ	Bozeman (W)	121.97	41	PFAKE		21 22 50.0	+8.1	
BOZ				LR	LR			
	comp=Z,389nm,22.0s,MS5.0							
PFO	Pinyon Flat Ob	122.10	55	PFAKE		21 22 50.0	+7.5	
PFO				LR	LR			
	comp=Z,579nm,22.0s,MS5.2							
EGMT	Eagleton	122.14	37	PFAKE		21 22 50.0	+7.9	
EGMT				LR	LR			
	comp=Z,731nm,19.0s,MS5.3							
FFC	Flin Flon	122.72	28	PFAKE		21 22 50.0	+7.0	
FFC				LR	LR			
	comp=Z,712nm,21.0s,MS5.3							
DUG	Dugway	123.13	47	PFAKE		21 23 00.0	+16	
DUG				LR	LR			
	comp=Z,404nm,19.0s,MS5.1							
FCC	Fort Churchill	123.15	21	PKIKP	PKPdf	21 22 44.1	+0.4	
LKWY	Lake	123.20	41	PFAKE		21 23 00.0	+16	
LKWY				LR	LR			
	comp=Z,761nm,21.0s,MS5.3							
AHID	Auburn Hatcher	123.44	44	PFAKE		21 23 00.0	+15	
AHID				LR	LR			
	comp=Z,410nm,22.0s,MS5.0							
HWUT	Hardware Ranch	123.54	45	PFAKE		21 23 00.0	+15	
HWUT				LR	LR			
	comp=Z,394nm,20.0s,MS5.1							
RLMT	Red Lodge	123.70	40	PFAKE		21 23 00.0	+15	
RLMT				LR	LR			
	comp=Z,655nm,22.0s,MS5.2							
MTE	Manteigas	123.71	314	PFAKE		21 23 00.0	+15	
MTE				LR	LR			
	comp=Z,626nm,19.0s,MS5.3							
SFS	San Fernando	123.93	309	PFAKE		21 23 00.0	+14	
SFS				LR	LR			
	comp=Z,911nm,19.0s,MS5.5							
MVU	Marysvale	124.12	49	PFAKE		21 23 00.0	+14	
MVU				LR	LR			
	comp=Z,623nm,19.0s,MS5.3							
MSU	Marysvale	124.14	49	PKIKP	PKPdf	21 22 46.5	+0.2	
BW06	Boulder Array	124.48	43	PFAKE		21 23 00.0	+13	
BW06				LR	LR			
	comp=Z,429nm,22.0s,MS5.1							
PDAR	Pinedale Array	124.48	43	PKKPbc		21 32 29.9		
	comp=Z,0.5nm,0.6s,baz=107,slow=6.1,SNR=4.6							
LAO	LASA Array	124.89	37	PFAKE		21 23 00.0	+13	
LAO				LR	LR			
	comp=Z,436nm,20.0s,MS5.1							
RTC	Rabat Centre	125.12	306	PFAKE		21 23 00.0	+12	
RTC				LR	LR			
	comp=Z,547nm,20.0s,MS5.2							
DGMT	Dagmar	125.17	35	PFAKE		21 23 00.0	+12	
DGMT				LR	LR			
	comp=Z,351nm,19.0s,MS5.0							
DBIC	Dimbokro	125.60	272	PKP	PKPdf	21 22 48.8	-1.0	
	comp=Z,3.4nm,0.8s,baz=159,slow=9.8,SNR=4.6							
WUAZ	Wupatki	125.67	52	PFAKE		21 23 00.0	+11	
WUAZ				LR	LR			
	comp=Z,359nm,20.0s,MS5.0							
TUC	Tucson	127.04	56	PFAKE		21 23 00.0	+8.0	
TUC				LR	LR			
	comp=Z,484nm,22.0s,MS5.1							
MVCO	Mesa Verde	127.32	49	PFAKE		21 23 00.0	+7.6	
MVCO				LR	LR			
	comp=Z,339nm,20.0s,MS5.0							
RSSD	Black Hills	127.48	39	PFAKE		21 23 00.0	+7.5	
RSSD				LR	LR			
	comp=Z,533nm,21.0s,MS5.2							
ISCO	Idaho Springs	128.41	45	PFAKE		21 23 10.0	+16	
ISCO				LR	LR			
	comp=Z,390nm,20.0s,MS5.1							
SDCO	Great Sand Dun	129.33	47	PFAKE		21 23 10.0	+14	
SDCO				LR	LR			
	comp=Z,377nm,20.0s,MS5.1							
ANMO	Albuquerque	129.66	51	PFAKE		21 23 10.0	+13	
ANMO				LR	LR			
	comp=Z,575nm,22.0s,MS5.2							
AGMN	Agassiz Nation	129.75	31	PFAKE		21 23 10.0	+13	
AGMN				LR	LR			
	comp=Z,724nm,22.0s,MS5.3							
PLCA	Paso Flores	130.30	169	PKP	PKPdf	21 22 58.2	+0.1	
	comp=Z,2.1nm,0.9s,baz=171,slow=2.9,SNR=3.5							
PLCA				SKPbc	SKPbc	21 26 20.1	+2.6	
	comp=Z,18nm,1.2s,baz=185,slow=6.2,SNR=8.5							
PLCA	Paso Flores	130.30	169	PKP	PKPdf	21 22 58.2	+0.1	
PLCA				SKPbc	SKPbc	21 26 20.1	+2.6	
OGNE	Ogallala	130.33	42	PFAKE		21 23 10.0	+12	
OGNE				LR	LR			
	comp=Z,436nm,21.0s,MS5.1							
MNTX	Cornudas Mount	131.60	55	*e*PKPdf	PKPdf	21 23 01.0	+0.3	
MNTX				LR	LR			
	comp=Z,503nm,20.0s,MS5.2							
EYMN	Ely	132.13	28	PFAKE		21 23 10.0	+8.8	
EYMN				LR	LR			
	comp=Z,680nm,21.0s,MS5.3							
ECSD	EROS Data Cent	132.19	36	PFAKE		21 23 10.0	+8.5	
ECSD				LR	LR			
	comp=Z,826nm,19.0s,MS5.5							
CBKS	Cedar Bluff	132.91	43	PFAKE		21 23 10.0	+7.0	
CBKS				LR	LR			
	comp=Z,561nm,22.0s,MS5.2							
SCHQ	Schefferville	133.15	6	PKP	PKPdf	21 23 03.5	+0.6	
	comp=Z,2.1nm,0.7s,baz=278,slow=6.5,SNR=2.8							
AMTX	Amarillo	133.31	49	PFAKE		21 23 20.0	+16	
AMTX				LR	LR			
	comp=Z,661nm,19.0s,MS5.4							
TXAR	Lajitas Array	133.75	57	SKPbc	SKPbc	21 26 30.1	0.0	
	comp=Z,3.0nm,1.1s,baz=281,slow=2.0,SNR=8.0							
TRQA	Tornquist	133.94	178	PFAKE		21 23 20.0	+15	
TRQA				LR	LR			
	comp=Z,2μm,20.0s,MS5.8							
COWI	Conover	134.58	29	PFAKE		21 23 20.0	+14	
COWI				LR	LR			
	comp=Z,734nm,20.0s,MS5.4							
KSU1	Kansas State U	134.84	41	PFAKE		21 23 20.0	+13	
KSU1				LR	LR			
	comp=Z,459nm,20.0s,MS5.2							
SCIA	State Center	135.28	36	PFAKE		21 23 20.0	+13	
SCIA				LR	LR			
	comp=Z,596nm,19.0s,MS5.3							
WMOK	Wichita Mounta	135.52	48	*e*PKIKP	PKPdf	21 23 06.8	-1.2	
WMOK				MLR	MLR			
	comp=Z,542nm,21.0s,MS5.2							
JFWS	Jewell Farm	136.28	33	PFAKE		21 23 20.0	+11	
JFWS				LR	LR			
	comp=Z,804nm,20.0s,MS5.5							
JCT	Junction City	136.51	54	PKIKP	PKPdf	21 23 10.7	+0.7	
JCT				MLR	MLR			
	comp=Z,476nm,20.0s,MS5.2							
CMLA	Cha da Macela	137.33	319	PFAKE		21 23 20.0	+8.7	
CMLA				LR	LR			
	comp=Z,745nm,22.0s,MS5.4							
GLMI	Grayling	137.61	26	PFAKE		21 23 20.0	+8.4	
GLMI				LR	LR			
	comp=Z,794nm,20.0s,MS5.5							
HDIL	Hopedale	138.40	34	PFAKE		21 23 30.0	+17	
HDIL				LR	LR			
	comp=Z,628nm,21.0s,MS5.3							
CCM	Cathedral Cave	138.87	39	PFAKE		21 23 30.0	+16	
CCM				LR	LR			
	comp=Z,605nm,21.0s,MS5.3							
KVTX	Kingsville	139.14	57	PFAKE		21 23 30.0	+15	
KVTX				LR	LR			
	comp=Z,880nm,20.0s,MS5.5							
MIAR	Mount Ida	139.35	45	*e*PKIKP	PKPdf	21 23 15.9	+0.8	
MIAR				MLR	MLR			
	comp=Z,500nm,19.0s,MS5.3							
CFAA	Coronel Fontan	139.59	169	PKhKP		21 23 08.7		
	comp=Z,0.2nm,0.3s,baz=245,slow=1.5,SNR=3.5							
HKT	Hockley	139.87	53	PFAKE		21 23 30.0	+14	
HKT				LR	LR			
	comp=Z,635nm,21.0s,MS5.3							
NATX	Nacogdoches	139.96	49	PFAKE		21 23 30.0	+14	
NATX				LR	LR			
	comp=Z,697nm,21.0s,MS5.4							
AAM	Ann Arbor	140.02	28	PFAKE		21 23 30.0	+14	
AAM				LR	LR			
	comp=Z,745nm,19.0s,MS5.5							
LONY	Lake Ozonia	141.49	17	PFAKE		21 23 30.0	+11	
LONY				LR	LR			
	comp=Z,735nm,22.0s,MS5.4							
LCO	Las Campanas	141.52	164	PFAKE		21 23 30.0	+11	
LCO				LR	LR			
	comp=Z,1μm,22.0s,MS5.6							
WCI	Wyandotte Cave	141.69	35	PFAKE		21 23 30.0	+11	
WCI				LR	LR			
	comp=Z,526nm,20.0s,MS5.3							
ERPA	Erie	141.78	25	PFAKE		21 23 30.0	+11	
ERPA				LR	LR			
	comp=Z,568nm,20.0s,MS5.3							
ACSO	Alum Creek Sta	141.95	29	PFAKE		21 23 30.0	+10	
ACSO				LR	LR			
	comp=Z,723nm,20.0s,MS5.4							
PKME	Peaks-Kenny Pk	142.16	11	PFAKE		21 23 30.0	+10	
PKME				LR	LR			
	comp=Z,711nm,19.0s,MS5.5							
NCB	Newcomb	142.19	17	PKPdf	PKPdf	21 23 19.3	-0.6	
NCB				LR	LR			
	comp=Z,628nm,20.0s,MS5.4							
WVT	Waverly	142.20	38	*e*PKIKP	PKPdf	21 23 20.6	+0.4	
WVT				MLR	MLR			
	comp=Z,652nm,21.0s,MS5.4							
LBNH	Lisbon	142.56	14	PFAKE		21 23 30.0	+9.4	
LBNH				LR	LR			
	comp=Z,733nm,19.0s,MS5.5							
VBMS	Vicksburg	142.75	46	PFAKE		21 23 30.0	+8.7	
VBMS				LR	LR			
	comp=Z,587nm,21.0s,MS5.3							
PLAL	Pickwick Lake	142.78	40	PFAKE		21 23 30.0	+8.8	
PLAL				LR	LR			
	comp=Z,657nm,20.0s,MS5.4							
BINY	Binghamton	143.23	20	PFAKE		21 23 30.0	+8.2	
BINY				LR	LR			
	comp=Z,754nm,22.0s,MS5.4							
MCWV	Mont Chateau	143.87	27	PKPdf	PKPdf	21 23 23.5	+0.5	
MCWV				LR	LR			
	comp=Z,880nm,20.0s,MS5.5							
SSPA	Standing Stone	143.88	24	*e*PKPdf	PKPdf	21 23 19.4	-3.6	
SSPA				LR	LR			
	comp=Z,664nm,20.0s,MS5.4							
TZTN	Tazewell	144.42	34	*e*PKPdf	PKPdf	21 23 24.2	+0.1	
CPCT	Cooper Cave	144.65	36	*e*PKPdf	PKPdf	21 23 21.4	-3.1	
LRAL	Lakeview Retre	144.69	42	*e*PKPdf	PKPdf	21 23 21.9	-2.7	
LRAL				LR	LR			
	comp=Z,816nm,21.0s,MS5.5							
CAM4	Nova Friburgo	145.28	209	‖ *i* P	PKPbc	21 23 26.8	+1.1	
CAM4				*i*		21 23 32.1		
CAM4				*i*		21 23 35.5		
CAM4				*i*		21 23 39.1		
CAM4				*i*		21 23 42.5		
CAM4				*i*		21 23 53.2		
CAM4				*i*		21 24 00.8		
CAM4				*i*		21 24 05.4		
CAM4				*i*		21 24 19.6		
ELN	Prospectdale	145.38	30	*e*PKP	PKPdf	21 23 23.6	-2.1	
BLA	Blacksburg	145.56	30	*e*PKIKP	PKPdf	21 23 24.6	-1.4	
BLA				MLR	MLR			
	comp=Z,674nm,22.0s,MS5.4							
CPUP	Villa Florida	145.60	184	PKPbc	PKPbc	21 23 27.4	+0.8	
	comp=Z,17nm,0.6s,baz=167,slow=3.3,SNR=32							
BRAL	Brewton	145.87	45	PFAKE		21 23 40.0	+13	
BRAL				LR	LR			
	comp=Z,712nm,21.0s,MS5.4							
CBN	Corbin	146.15	25	PKPdf	PKPdf	21 23 25.6	-1.4	
CBN				LR	LR			
	comp=Z,591nm,19.0s,MS5.4							
SPB	Sao Paulo	146.19	201	*e*PKPdf	PKPdf	21 23 27.5	0.0	
SPB				LR	LR			
	comp=Z,1μm,20.0s,MS5.6							
GOGA	Godfrey	146.68	38	*e*PKIKP	PKPdf	21 23 27.4	-0.6	
GOGA				MLR	MLR			
	comp=Z,1μm,19.0s,MS5.7							
PAYG	Puerto Ayora	148.29	105	PFAKE		21 23 40.0	+8.7	
PAYG				LR	LR			
	comp=Z,997nm,20.0s,MS5.6							
NHSC	New Hope	148.82	34	PFAKE		21 23 40.0	+8.4	
NHSC				LR	LR			
	comp=Z,739nm,21.0s,MS5.5							
APG	El Apazote	149.17	74	PKPbc	PKPbc	21 23 36.8	0.0	
	comp=Z,5.1nm,0.9s,baz=270,slow=6.1,SNR=4.2							
TEIG	Tepich	149.92	64	PFAKE		21 23 50.0	+16	
TEIG				LR	LR			
	comp=Z,549nm,20.0s,MS5.3							
DWPF	Disney	151.51	43	PFAKE		21 23 50.0	+14	
DWPF				LR	LR			
	comp=Z,848nm,21.0s,MS5.5							
TGUH	Tegucigalpa,Un	152.38	75	PFAKE		21 23 50.0	+12	
TGUH				LR	LR			
	comp=Z,520nm,20.0s,MS5.3							
RCBR	Riachuelo	152.45	240	PFAKE		21 23 50.0	+12	
RCBR				LR	LR			
	comp=Z,732nm,19.0s,MS5.5							
LPAZ	La Paz	154.29	161	PKPbc	PKPbc	21 23 50.4	+1.8	
	comp=Z,4.9nm,1.0s,baz=145,slow=1.8,SNR=3.7							
LPAZ				PKPab	PKPab	21 24 04.3	+1.9	
	comp=Z,26nm,0.9s,baz=177,slow=4.2,SNR=15							
LPAZ	La Paz	154.29	161	PKPbc	PKPbc	21 23 50.4	+1.8	
LPAZ				PKPab	PKPab	21 24 04.3	+1.9	
JTS	JuntasAbangare	155.03	83	PFAKE		21 23 50.0	+8.6	
JTS				LR	LR			
	comp=Z,726nm,19.0s,MS5.5							
BBSR	BB Station	155.51	10	PFAKE		21 23 50.0	+8.4	
BBSR				LR	LR			
	comp=Z,830nm,19.0s,MS5.6							
SIV	San Ignacio	155.93	177	PKPab	PKPab	21 24 10.5	+1.2	
	comp=Z,24nm,0.9s,baz=195,slow=6.6,SNR=9.1							
OTAV	Otavalo	159.74	112	PFAKE		21 24 00.0	+13	
OTAV				LR	LR			
	comp=Z,735nm,20.0s,MS5.5							
MTDJ	Mount Denham	160.03	58	PFAKE		21 24 00.0	+12	
MTDJ				LR	LR			
	comp=Z,1μm,19.0s							
BCIP	Isla Barro Col	160.10	86	PFAKE		21 24 00.0	+12	
BCIP				LR	LR			
	comp=Z,657nm,19.0s							
GTBY	Guantanamo Bay	161.09	50	PFAKE		21 24 00.0	+11	
GTBY				LR	LR			
	comp=Z,651nm,21.0s							
GRTK	Grand Turk	162.80	38	PFAKE		21 24 00.0	+10	
GRTK				LR	LR			
	comp=Z,821nm,19.0s							
SDDR	Presa de Saban	164.49	45	PFAKE		21 24 00.0	+8.0	
SDDR				LR	LR			
	comp=Z,847nm,21.0s							
SJG	San Juan	168.34	32	PFAKE		21 24 10.0	+15	
SJG				LR	LR			
	comp=Z,4μm,20.0s							
SDV	Santo Domingo	169.20	86	PFAKE		21 24 10.0	+14	
SDV				LR	LR			
	comp=Z,448nm,21.0s							
ANWB	Willy Bob	170.38	12	PFAKE		21 24 10.0	+14	
ANWB				LR	LR			
	comp=Z,990nm,20.0s							
FDF	Fort de France	173.36	12	PFAKE		21 24 10.0	+12	
FDF				LR	LR			
	comp=Z,1μm,21.0s							
BBGH	Gun Hill	175.09	358	PFAKE		21 24 10.0	+12	
BBGH				LR	LR			
	comp=Z,3μm,20.0s							
GRGR	Grenville	175.66	26	PFAKE		21 24 10.0	+12	
GRGR				LR	LR			
	comp=Z,2μm,20.0s							

IDC 03 21:14:14.2±0.9, 8°30S×72°40W, h0km, mb4.0/5, mb1 4.2/8, mb1mx4.0/21, mbtmp4.1/8, ML4.3/3, Error ellipse: s-maj=23.3km s-min=19.5km az=35.0, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	5.70	230	Pn	Pn	21 15 41.1	+0.9
	6.1nm,0.3s,baz=40,slow=11,SNR=7.5						
NNA				Sn	Sn	21 16 47.4	+1.0
	36nm,0.3s,baz=212,slow=16,SNR=6.2						
NNA	Nana	5.70	230	*e*Pn	Pn	21 15 40.

NEIC ***03*** *21:14:35.6±1.0, 15°.20S×73°.52W, h50km±10km, mb4.2/2, Error ellipse: s-maj=20.8km s-min=7.7km az=67.0*
ISCJB ***03*** *21:14:38.5±0.9, 15°.20S±0°.07×73°.16W±0°.09, h93km±9km, mb4.1/9, Error ellipse: s-maj=16.9km s-min=7.6km az=139.3*
IDC ***03*** *21:14:42.6±2.5, 15°.31S×72°.93W, h105km±22km, mb4.0/8, mb1 4.0/11, mb1mx3.8/20, mbtmp3.9/11, Error ellipse: s-maj=23.3km s-min=16.3km az=68.0*
ISC 03 21:14:39.6±0.8, 15°.21S±0°.07×73°.11W±0°.09, h86km±8km, **n32**, σ1§**10**/26, **mb4.1**/9, **Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARE	**Arequipa**	**2.00**	**129**	*e*P	**Pn**	**21 15 12.0**	**+0.3**
ARE				*e*S	**Sn**	**21 15 37.0**	**+0.9**
NNA	**Nana**	**4.84**	**311**	P	**Pn**	**21 15 55.8**	**+5.8**
7.6nm,0.3s,baz=139,slow=12,SNR=6.1							
NNA	**Nana**	**4.84**	**311**	*e*Pg	**Pn**	**21 15 58.8**	**+8.8**
NNA				Sn	**Sn**	**21 16 45.5**	**+0.6**
LPAZ	**La Paz**	**4.92**	**103**	P	**Pn**	**21 15 55.8**	**+4.7**
1.9nm,0.3s,baz=284,slow=9.7,SNR=39							
SIV	**San Ignacio**	**11.62**	**95**	P	**Pn**	**21 17 21.8**	**-0.8**
baz=287,slow=16							
LCO	**Las Campanas**	**13.92**	**171**	*e*Pn	**Pn**	**21 17 51.2**	**-1.8**
LCO				*e*Sn	**Sn**	**21 20 17.3**	**-8.8**
OTAV	**Otavalo**	**16.23**	**341**	Pn	**Pn**	**21 18 19.0**	**-3.5**
CFAA	**Coronel Fontan**	**16.92**	**166**	P	**Pn**	**21 18 31.8**	**+0.8**
0.1nm,0.3s,baz=345,slow=11,SNR=9.5							
CPUP	**Villa Florida**	**18.43**	**129**	P	**Pn**	**21 18 47.8**	**-1.5**
0.4nm,0.3s,baz=307,slow=9.5,SNR=3.6							
ROSC	**El Rosal**	**19.97**	**356**	P	**Pn**	**21 19 11.2**	**+3.6**
5.5nm,0.5s,baz=99,slow=22,SNR=4.7							
SDV	**Santo Domingo**	**24.06**	**6**	P	**P**	**21 19 50.4**	**+3.4**
12nm,0.8s,mb4.3,baz=297,slow=6.4,SNR=10.0							
SDV	**Santo Domingo**	**24.06**	**6**	P	**P**	**21 19 48.0**	**+1.0**
12nm,0.8s,mb4.3							
TRQA	**Tornquist**	**24.80**	**159**	*e*P	**P**	**21 19 52.9**	**-0.6**
2.5nm,0.6s,mb3.8							
BCIP	**Isla Barro Col**	**25.11**	**344**	P	**P**	**21 19 55.1**	**-1.5**
PLCA	**Paso Flores**	**25.53**	**175**	P	**P**	**21 20 00.8**	**+0.7**
3.1nm,0.7s,mb3.8,baz=343,slow=11,SNR=5.2							
JTS	**JuntasAbangare**	**27.92**	**334**	P	**P**	**21 20 20.4**	**-1.4**
SDCO	**Great Sand Dun**	**60.83**	**331**	*e*P	**P**	**21 24 42.1**	**-0.8**
DBIC	**Dimbokro**	**71.02**	**77**	P	**P**	**21 25 48.8**	**-0.1**
3.8nm,0.6s,mb4.4,baz=251,slow=6.8,SNR=5.6							
QSPA	**South Pole Qui**	**74.95**	**180**	P	**P**	**21 26 11.7**	**+0.9**
2.5nm,0.7s,mb4.0,baz=142,slow=3.5,SNR=5.8							
TORD	**Torodi Ar. Bea**	**79.19**	**73**	P	**P**	**21 26 36.3**	**+0.6**
3.2nm,0.7s,mb4.3,baz=251,slow=5.1,SNR=7.4							
YKA	**Yellowknife Ar**	**83.98**	**342**	P	**P**	**21 27 01.4**	**+1.5**
2.0nm,0.8s,mb4.0,baz=134,slow=4.9,SNR=11							
ESDC	**Sonseca Array**	**84.29**	**46**	P	**P**	**21 27 02.3**	**+0.3**
0.7nm,0.6s,mb3.7,baz=266,slow=5.1,SNR=3.8							
BOSA	**Boshof**	**89.96**	**120**	P	**P**	**21 27 30.5**	**+0.6**
1.6nm,0.7s,mb4.3,baz=270,slow=6.1,SNR=3.7							
ASAR	**Alice Springs**	**133.20**	**215**	PKhKP		21 33 43.0	
0.8nm,0.8s,baz=140,slow=2.2,SNR=7.8							
ASAR				PKP	PKPdf	21 33 45.4	-0.8
0.8nm,0.7s,baz=133,slow=1.9,SNR=7.9							
ZALV	**Zalesovo Beam**	**137.65**	**19**	PKP	PKPdf	21 33 55.4	+1.9
1.1nm,0.5s,baz=300,slow=2.8,SNR=7.4							
FITZ	**Fitzroy Crossi**	**142.09**	**210**	PKhKP		21 33 56.8	
1.7nm,0.8s,baz=275,slow=19,SNR=3.4							
FITZ				PKP	PKPdf	21 34 02.4	-0.3
3.2nm,0.9s,baz=253,slow=6.3,SNR=4.9							
FITZ	**Fitzroy Crossi**	**142.09**	**210**	PKP	PKPdf	21 34 02.4	-0.3
MKAR	**Makanchi Array**	**142.42**	**28**	PKhKP		21 34 00.1	
0.2nm,0.3s,baz=333,slow=4.4,SNR=3.2							
MJAR	**Matsushiro Arr**	**144.96**	**313**	PKPbc	PKPdf	21 34 06.8	-0.3
1.6nm,0.6s,baz=79,slow=3.0,SNR=5.6							
MJAR	**Matsushiro Arr**	**144.96**	**313**	PKPbc	PKPdf	21 34 06.8	-0.3
SONM	**Songino Array**	**147.46**	**1**	PKPbc	PKPbc	21 34 13.3	-0.3
3.4nm,0.8s,baz=275,slow=1.9,SNR=20							
KSRS	**Korea Array**	**151.04**	**324**	PKPbc	PKPbc	21 34 24.6	+1.6
2.5nm,0.9s,baz=8.4,slow=2.5,SNR=6.0							

IDC ***03*** *22:03:23.0±31.0, 19°.15N×122°.38E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.6/23, mbtmp3.8/6, Error ellipse: s-maj=591.7km s-min=50.2km az=135.0*
ISCJB ***03*** *22:03:38.0±1.6, 20°.17N±0°.08×121°.3E±0°.2, h39km±27km, mb3.7/6, Error ellipse: s-maj=26.4km s-min=8.5km az=25.1*
MAN ***03*** *22:03:38, 20°.16N×121°.32E, h35km, mb4.8, ML3.7, MS3.8*
ISC 03 22:03:38.5±2.2, 20°.17N±0°.05×121°.3E±0°.1, h27km±21km, **n14**, σ0§**64**/17, **mb3.7**/6, **Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBP	**Basco**	**0.70**	**67**	*e*P	**Pb**	**22 03 52.3**	**+0.2**
BBP				*e*S	**Sb**	**22 04 01.1**	**-0.3**
SGCP	**Mt. Cagua**	**2.05**	**159**	*e*P	**Pn**	**22 04 11.1**	**0.0**
APYP	**Conner**	**2.29**	**181**	*e*P	**Pn**	**22 04 14.3**	**-0.2**
APYP				*e*S	**Sn**	**22 04 29.1**	**-13**
CVP	**Callao Caves**	**2.50**	**168**	*e*P	**Pn**	**22 04 17.1**	**-0.3**
CVP				*e*S	**Sn**	**22 04 46.7**	**-0.4**
CAUP	**Cauayan**	**3.25**	**171**	*e*P	**Pn**	**22 04 29.3**	**+1.6**
PALP	**Palanan**	**3.27**	**160**	*e*P	**Pn**	**22 04 28.1**	**0.0**
BOLP	**Bolinao**	**3.98**	**199**	*e*P	**Pn**	**22 04 37.4**	**-0.4**
BALP	**Baler**	**4.41**	**176**	*e*P	**Pn**	**22 04 43.8**	**+0.1**
BALP				*e*S		22 04 47.3	
CMAR	**Chiang Mai Arr**	**21.15**	**269**	P	**P**	**22 08 21.2**	**-0.4**
0.8nm,0.5s,mb3.3,baz=83,slow=10,SNR=7.0							
SONM	**Songino Array**	**30.12**	**340**	P	**P**	**22 09 47.0**	**+1.2**
0.3nm,0.6s,mb3.2,baz=135,slow=9.2,SNR=3.0							
MKAR	**Makanchi Array**	**41.35**	**319**	P	**P**	**22 11 22.4**	**+0.4**
1.1nm,0.5s,mb3.7,baz=104,slow=10,SNR=12							
ZALV	**Zalesovo Beam**	**43.69**	**329**	P	**P**	**22 11 39.6**	**-1.3**
1.2nm,0.6s,mb3.8,baz=117,slow=7.7,SNR=6.1							
KURK	**Kurchatov**	**45.27**	**323**	P	**P**	**22 11 53.3**	**-0.3**
1.7nm,0.5s,mb4.1,baz=121,slow=7.5,SNR=8.7							
BVAR	**Borovoye Array**	**50.87**	**323**	P	**P**	**22 12 37.1**	**+0.2**
0.9nm,0.5s,mb4.0,baz=110,slow=7.1,SNR=3.9							

BJI ***03*** *22:04:19.9, 8°.83S×120°.65E, h14km, mB5.9/55, mb5.3/59, Ms5.7/72, Ms7 5.5/61*
IDC ***03*** *22:04:26.0±0.3, 8°.00S×120°.30E, h0km, mb5.0/23, mb1 5.0/25, mb1mx5.0/27, mbtmp5.0/25, ML4.7/2, MS5.5/18, Ms1 5.5/18, ms1mx5.3/30, Error ellipse: s-maj=14.4km s-min=7.0km az=70.0*
NEIC ***03*** *22:04:27.9±0.1, 8°.10S×120°.23E, h14km, mb5.6/48, MS5.5/185, MW6.0, MW5.8, Error ellipse: s-maj=5.6km s-min=3.5km az=62.0, Moment Tensor Solution. s80 Moment tensor: Scale 10^{17}Nm; M_{rr}3.10; $M_{\theta\theta}$-5.29; $M_{\phi\phi}$2.20; $M_{r\theta}$-5.19; $M_{\theta\phi}$-1.68; $M_{\phi r}$-0.97; Best double couple: $M_0$7.20000×10^{17} NP1:ϕ_s74.00000°, δ20.00000°, λ84.00000°. NP2:ϕ_s260.00000°, δ70.00000°, λ92.00000°. Principal axes: T 5.5900, Plg64.0000°, Azm173.0000°; N 2.5500, Plg2.0000°, Azm79.0000°; P -8.1300, Plg25.0000°, Azm348.0000°;*
NEIC Felt [IV] Labuhanbajo and Ruteng. Also felt [IV] at Waingapu, Sumba and [III] at Raba, Sumbawa.
ISCJB ***03*** *22:04:28.4±0.6, 8°.11S±0°.02×120°.26E±0°.02, h28km±4km, mb5.4/122, MS5.5/236 Error ellipse: s-maj=3.9km s-min=3.1km az=149.8*
MOS ***03*** *22:04:29.5±1.0, 8°.02S×120°.23E, h33km, mb5.7/42, MS5.4/43, Error ellipse: s-maj=9.5km s-min=5.8km az=110.2*
TEH ***03*** *22:04:29.0, 8°.11S×120°.23E, h14km*
GCMT ***03*** *22:04:33.4±0.1, 8°.07S×120°.25E, h19km, MW6.0, Moment Tensor Solution. s112,c229; s85,c123; Moment tensor: Scale 10^{18}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{\phi r}$0.00; Best double couple: $M_0$1.20000×10^{18} NP1:ϕ_s88.00000°, δ23.00000°, λ97.00000°. NP2: ϕ_s259.00000°, δ67.00000°, λ87.00000°. Principal axes: T 1.2200, Plg68.0000°, Azm164.0000°; N 0.0400, Plg3.0000°, Azm261.0000°; P -1.2600, Plg22.0000°, Azm352.0000°; Data Used: II IU CN IC G. Surface waves: sta=116, comp=261, per= 50.*
DJA ***03*** *22:04:33, 8°.22S×120°.30E, h37km, Mw6.1/56*
ISC 03 22:04:32.4±0.3, 8°.13S±0°.02×120°.23E±0°.02, h46km±2km, **h22**km±2.9km:**pP-P, n629**, σ1§**23**/481, **mb5.4**/122, **MS5.5**/235, **41C-28D, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.53**	**178**	P	**Pn**	**22 04 58.0**	**+0.6**
MMRI	**Maumere**	**2.05**	**104**	P	**Pn**	**22 05 03.9**	**-0.5**
KAPI	**Kappang**	**3.13**	**351**	Pn	**Pn**	**22 05 15.8**	**-3.5**
11μm,0.8s							
KAPI	**Kappang**	**3.13**	**351**	Pn	**Pn**	**22 05 14.1**	**-5.2**
60nm,0.3s,baz=199,slow=10.0,SNR=98							
KAPI				Sn	**Sn**	**22 05 51.5**	**-3.9**
181nm,0.3s,baz=160,slow=22,SNR=8.1							
KAPI	**Kappang**	**3.13**	**351**	*j*Pn	**Pn**	**22 05 15.6**	**-3.7**
KAPI				*e*Sn	**Sn**	**22 05 53.3**	**-2.1**
KHKI	**Kahang-Kahang**	**4.58**	**267**	P	**Pn**	**22 05 37.7**	**-1.5**
KDI	**Kendari**	**4.77**	**30**	P	**Pn**	**22 05 41.0**	**-0.9**
SRBI	**Singaraja**	**4.97**	**270**	P	**Pn**	**22 05 42.9**	**-1.7**
38nm2μm,0.9s							
DNP	**Denpasar**	**5.00**	**263**	P	**Pn**	**22 05 49.1**	**+4.1**
TTSI	**Tana Toraja**	**5.07**	**355**	P	**Pn**	**22 05 47.6**	**+1.7**
1μm,0.8s							
IGBI	**Denpasar**	**5.08**	**262**	P	**Pn**	**22 05 47.4**	**+1.3**
NBBI	**Negara**	**5.56**	**267**	P	**Pn**	**22 05 53.7**	**+1.0**
BYJI	**Banyuwangi**	**5.82**	**269**	P	**Pn**	**22 05 57.1**	**+0.9**
4μm,0.8s							
ABJI	**Asem Bagus**	**5.95**	**273**	P	**Pn**	**22 05 57.2**	**-0.8**
KBKI	**Kotabaru**	**6.27**	**320**	P	**Pn**	**22 06 05.9**	**+3.4**
297nm,1.1s							
KMMI	**Kalianget**	**6.30**	**279**	P	**Pn**	**22 06 02.5**	**-0.4**
8.8nm1μm,0.9s							
GMJI	**Gumukmas**	**6.72**	**268**	P	**Pn**	**22 06 09.6**	**+1.0**
18nm2μm,0.9s							
APSI	**Ampana**	**7.31**	**11**	P	**Pn**	**22 06 16.5**	**-0.1**
3.5nm9μm334nm,0.9s							
LUWI	**Luwuk**	**7.48**	**20**	P	**Pn**	**22 06 18.7**	**-0.3**
3.1nm9μm741nm,0.9s							
GRJI	**Gresik**	**7.78**	**278**	P	**Pn**	**22 06 21.8**	**-1.4**
9.6nm2μm,1.1s							
PWJI	**Pagerwojo**	**8.35**	**270**	P	**Pn**	**22 06 32.0**	**+1.1**
655nm,0.7s							
NLAI	**Namlea**	**8.38**	**55**	P	**Pn**	**22 06 34.0**	**+2.6**
7μm508nm,1.2s							
NGJI	**Ngawi**	**8.73**	**274**	P	**Pn**	**22 06 39.2**	**+3.1**
412nm,1.2s							
UGM	**Wanagama**	**9.62**	**271**	P	**Pn**	**22 06 50.9**	**+2.6**
536nm,1.2s							
SMRI	**Semarang**	**9.77**	**276**	P	**Pn**	**22 06 50.9**	**+0.5**
581nm,1.2s							
MNI	**Manado**	**10.56**	**26**	P	**Pn**	**22 07 04.8**	**+3.6**
7μm267nm,0.9s							
FITZ	**Fitzroy Crossi**	**11.22**	**153**	*e*P	**Pn**	**22 07 07.6**	**-2.7**
305nm,0.8s							
FITZ				*e*S	**Sn**	**22 09 14.9**	**+0.5**
FITZ	**Fitzroy Crossi**	**11.22**	**153**	Pn	**Pn**	**22 07 08.0**	**-2.3**
5.3nm,0.3s,baz=342,slow=6.7,SNR=35							
FITZ				Sn	**Sn**	**22 09 14.8**	**+0.4**
13nm,0.3s,baz=246,slow=15,SNR=6.9							
FITZ				LR	LR	22 11 44.7	
comp=Z,22μm,19.7s,baz=333,slow=39							
FITZ	**Fitzroy Crossi**	**11.22**	**153**	*j*ePn	**Pn**	**22 07 08.0**	**-2.3**
30nm,1.2s							
FITZ				*e*Sn	**Sn**	**22 09 15.4**	**+1.1**
FITZ	**Fitzroy Crossi**	**11.22**	**153**	P	**Pn**	**22 07 09.1**	**-1.2**
9μm486nm,0.9s							
KNA	**Kununurra**	**11.27**	**133**	P	**Pn**	**22 07 09.3**	**-1.6**
2μm,0.9s							
TNTI	**Ternate**	**11.35**	**39**	P	**Pn**	**22 07 12.1**	**+0.1**
6μm338nm,1.2s							
STKI	**Sintang**	**11.93**	**313**	P	**Pn**	**22 07 21.5**	**+1.5**
228nm,1.7s							
JCJI	**Jatiwangi**	**11.98**	**277**	P	**Pn**	**22 07 22.4**	**+1.8**
476nm,1.3s							
TSM	**Tawau**	**12.56**	**349**	P	**Pn**	**22 07 30.0**	**+1.4**
LEM	**Lembang**	**12.58**	**275**	P	**Pn**	**22 07 31.0**	**+2.2**
372nm,1.3s							
TLE	**Tual**	**12.66**	**80**	P	**Pn**	**22 07 31.6**	**+1.7**
324nm,1.1s							
KAKA	**Kakadu**	**12.84**	**112**	*e*P	**Pn**	**22 07 31.2**	**-1.2**
197nm,0.6s							
KAKA				*e*S	**Sn**	**22 09 49.3**	**-4.6**
KAKA	**Kakadu**	**12.84**	**112**	*e*Pn	**Pn**	**22 07 30.0**	**-2.4**
11μm,1.8s							
KAKA				*e*Sn	**Sn**	**22 09 53.5**	**-0.5**
KAKA	**Kakadu**	**12.84**	**112**	P	**Pn**	**22 07 31.0**	**-1.4**
5μm616nm,0.7s							
MBWA	**Marble Bar**	**12.96**	**182**	*e*P	**Pn**	**22 07 31.6**	**-2.5**
MBWA				*e*S	**Sn**	**22 09 50.2**	**-6.8**
MBWA	**Marble Bar**	**12.96**	**182**	*e*Pn	**Pn**	**22 07 32.9**	**-1.2**
4.4nm,0.5s							
MBWA				*e*Sn	**Sn**	**22 09 47.1**	**-10**
MBWA	**Marble Bar**	**12.96**	**182**	Pn	**Pn**	**22 07 34.1**	**0.0**
SNR=25							
MBWA				Pn	**Pn**	**22 07 34.1**	**0.0**
SNR=25							
MBWA	**Marble Bar**	**12.96**	**182**	P	**Pn**	**22 07 31.9**	**-2.2**
7μm342nm,1.6s							
SBUM	**Sibu**	**13.20**	**322**	P	**Pn**	**22 07 38.5**	**+1.2**
SBUM	**Sibu**	**13.20**	**322**	P	**Pn**	**22 07 40.9**	**+3.6**
6μm113nm,2.0s							
BTM	**Bintulu**	**13.32**	**327**	P	**Pn**	**22 07 40.3**	**+1.3**
MYLDM	**Lahad Datu**	**13.33**	**352**	P	**Pn**	**22 07 41.6**	**+2.5**
MYLDM	**Lahad Datu**	**13.33**	**352**	P	**Pn**	**22 07 42.8**	**+3.7**
461nm,1.5s							
KSM	**Kuching**	**13.74**	**314**	P	**Pn**	**22 07 45.0**	**+0.3**
KSM	**Kuching**	**13.74**	**314**	*j*Pn	**Pn**	**22 07 43.9**	**-0.9**
767nm,1.8s							
KSM				*e*Sn	**Sn**	**22 10 14.2**	**-1.8**
KSM	**Kuching**	**13.74**	**314**	P	**Pn**	**22 07 44.6**	**-0.2**
7μm148nm,1.8s							
SDKM	**Sandakan**	**14.01**	**347**	P	**Pn**	**22 07 49.5**	**+1.2**
CGJI	**Cibinong**	**14.50**	**275**	P	**Pn**	**22 08 02.2**	**+7.2**
7μm529nm,1.0s							
RBSI	**Rajabasa**	**14.56**	**278**	P	**Pn**	**22 08 00.3**	**+4.5**
7μm417nm,1.9s							
KKM	**Kota Kinabalu**	**14.64**	**344**	P	**Pn**	**22 07 58.1**	**+1.3**
KKM	**Kota Kinabalu**	**14.64**	**344**	*j*Pn	**Pn**	**22 07 55.9**	**-0.9**
172nm,1.0s							
KKM	**Kota Kinabalu**	**14.64**	**344**	P	**Pn**	**22 07 57.6**	**+0.8**
9μm180nm,1.3s							
KDM	**Kudat**	**15.32**	**347**	P	**Pn**	**22 08 06.3**	**+0.6**
KLI	**Kotabumi**	**15.62**	**281**	P	**Pn**	**22 08 13.3**	**+3.7**
422nm,1.1s							
KASI	**Kota Agung**	**15.84**	**278**	P	**Pn**	**22 08 17.3**	**+4.9**
10μm556nm,1.1s							
DMPH	**Davao City--Mi**	**16.00**	**19**	*e*P	**Pn**	**22 08 15.2**	**+0.7**
DAV	**Davao City (W)**	**16.01**	**20**	LR	LR	22 14 46.4	
comp=Z,10μm,19.3s,baz=326,slow=39							
DAV	**Davao City (W)**	**16.01**	**20**	*j*ePn	**Pn**	**22 08 13.7**	**-0.9**
DAV				*e*S	**S**	**22 11 25.0**	**+1.9**
DAV	**Davao City (W)**	**16.01**	**20**	*j*P	**Pn**	**22 08 13.2**	**-1.4**
LWLI	**Liwa**	**16.36**	**280**	P	**Pn**	**22 08 23.1**	**+4.0**
456nm,2.4s							
MDSI	**Maura Dua**	**16.36**	**282**	P	**Pn**	**22 08 19.9**	**+0.8**
192nm,3.7s							
MNAI	**Manna**	**17.58**	**281**	P	**Pn**	**22 08 38.5**	**+4.3**
470nm,1.3s							
WRAB	**Tennant Creek**	**18.02**	**132**	Pn	**Pn**	**22 08 38.6**	**-1.0**
1μm,0.7s,SNR=26							
WRAB	**Tennant Creek**	**18.02**	**132**	*j*eP	**Pn**	**22 08 36.3**	**-3.3**
WRAB				*e*		22 11 49.4	
WRAB				pmax	pmax		
comp=Z,452nm,1.2s							
WRAB	**Tennant Creek**	**18.02**	**132**	*j*ePn	**Pn**	**22 08 36.3**	**-3.3**
comp=Z,452nm,1.2s							
WRAB				*e*Sn	**Sn**	**22 11 49.4**	**-10**
WRAB	**Tennant Creek**	**18.02**	**132**	P	**Pn**	**22 08 38.1**	**-1.5**
comp=Z,7μmcomp=Z,347nm,1.6s							
KSI	**Kapahiang**	**18.10**	**283**	P	**Pn**	**22 08 42.5**	**+1.9**
comp=Z,482nm,0.9s							
MYKOM	**Kota Tinggi**	**19.08**	**300**	P	**Pn**	**22 08 52.0**	**-0.5**
MYKOM	**Kota Tinggi**	**19.08**	**300**	P	**Pn**	**22 08 52.4**	**-0.1**
comp=Z,8μmcomp=Z,185nm,1.7s							
SMPI	**Sarmi**	**19.38**	**73**	P	**Pn**	**22 08 56.2**	**+0.1**
comp=Z,330nm,1.5s							
ASAR	**Alice Springs**	**20.26**	**141**	P	**P**	**22 09 04.2**	**+0.1**
comp=Z,455nm,1.0s,baz=311,slow=9.0,SNR=287							
ASAR				S	**S**	**22 12 51.5**	**+2.5**
comp=Z,90nm,0.9s,baz=325,slow=21,SNR=6.4							
BKNI	**Bangkinang**	**20.89**	**293**	P	**P**	**22 09 14.7**	**+3.6**
comp=Z,7μmcomp=Z,245nm,1.5s							
JAY	**Jayapura**	**21.12**	**76**	P	**P**	**22 09 16.1**	**+2.5**
comp=Z,125nm,1.4s,mb5.0							
PPI	**Padang Panjang**	**21.18**	**290**	P	**P**	**22 09 15.1**	**+0.9**
comp=Z,7μmcomp=Z,152nm,2.2s,mb4.9							
KTGM	**Kuala Trenggan**	**21.67**	**308**	P	**P**	**22 09 20.5**	**+1.1**
KTGM	**Kepong**	**21.72**	**301**	P	**P**	**22 09 21.4**	**+1.4**
TGY	**Tagaytay City**	**22.09**	**2**	P	**P**	**22 09 22.5**	**-1.4**
comp=Z,547nm,0.7s,mb6.1,baz=172,slow=5.7,SNR=14							
TGY				LR	LR	22 17 47.5	
comp=Z,46nm,19.9s,baz=168,slow=36							
MNSI	**Mandailing Nat**	**22.42**	**292**	P	**P**	**22 09 28.1**	**+0.7**
comp=Z,6μmcomp=Z,220nm,1.0s,mb5.5							
IPM	**Ipoh**	**22.89**	**303**	P	**P**	**22 09 33.6**	**+1.3**
IPM	**Ipoh**	**22.89**	**303**	P	**P**	**22 09 34.2**	**+1.8**
comp=Z,297nm,1.7s,mb5.5							
COEN	**Coen**	**23.24**	**106**	*j*P	**P**	**22 09 34.5**	**-1.6**
comp=Z,5μm,1.8s,mb6.6							
COEN				S	**S**	**22 13 48.0**	**+3.2**
COEN	**Coen**	**23.24**	**106**	P	**P**	**22 09 34.8**	**-1.2**
comp=Z,1μm,1.1s,mb6.2							
COCO	**West Island**	**23.38**	**258**	*e*P	**P**	**22 09 37.2**	**-0.2**
COCO				*e*S	**S**	**22 13 49.9**	**+2.8**
COCO				MLR	MLR		
comp=Z,13μm,19.0s,MS5.4							
KLBR	**Kellerberrin**	**23.46**	**185**	*e*P	**P**	**22 09 36.9**	**-1.0**
comp=Z,400nm,0.9s,mb5.8							
KLBR				*e*S	**S**	**22 13 50.2**	**+2.2**
KULM	**Kulim**	**23.65**	**304**	P	**P**	**22 09 40.2**	**+0.4**
KULM	**Kulim**	**23.65**	**304**	*j*P	**P**	**22 09 39.8**	**-0.1**
comp=Z,296nm,1.2s,mb5.6							
KULM				*e*S	**S**	**22 13 56.5**	**+5.1**
KULM				LR	LR		
comp=Z,13μm,19.0s,MS5.4							
KULM	**Kulim**	**23.65**	**304**	P	**P**	**22 09 40.5**	**+0.7**
comp=Z,262nm,1.7s,mb5.4							
FORT	**Forrest**	**23.70**	**163**	*e*P	**P**	**22 09 39.0**	**-1.1**
comp=Z,292nm,0.9s,mb5.7							
FORT	**Forrest**	**23.70**	**163**	*j*eP	**P**	**22 09 39.0**	**-1.1**
comp=Z,892nm,1.2s,mb6.1							
FORT				*e*S	**S**	**22 13 51.6**	**-0.3**
PSI	**Prapat**	**23.87**	**296**	P	**P**	**22 09 41.0**	**-0.8**
comp=Z,53nm,1.0s,mb4.9,baz=147,slow=8.9,SNR=42							
PSI				LR	LR	22 20 43.3	
comp=Z,32μm,18.2s,MS5.8,baz=212,slow=41							
GSI	**Gunungsitoli**	**24.46**	**292**	P	**P**	**22 09 50.5**	**+3.2**
comp=Z,5μmcomp=Z,107nm,1.2s,mb5.1							
NWAO	**Narrogin (SRO)**	**24.83**	**186**	P	**P**	**22 09 50.9**	**+0.4**
comp=Z,522nm,0.9s,mb6.1,baz=7.0,slow=11,SNR=53							
NWAO				S	**S**	**22 14 20.6**	**+10**
comp=Z,51nm,0.9s,baz=358,slow=18,SNR=6.4							
NWAO				LR	LR	22 18 57.8	
comp=Z,70nm,20.0s,baz=7.8,slow=35							
NWAO	**Narrogin (SRO)**	**24.83**	**186**	*j*P	**P**	**22 09 49.7**	**-0.8**
NWAO				*e*S	**S**	**22 14 13.8**	**+3.6**
NWAO				pmax	pmax		
comp=Z,463nm,0.9s							
NWAO				MLR	MLR		
comp=Z,17μm,19.0s							
NWAO	**Narrogin (SRO)**	**24.83**	**186**	*j*P	**P**	**22 09 49.7**	**-0.8**
comp=Z,463nm,0.9s,mb6.0							
NWAO				*e*S	**S**	**22 14 13.8**	**+3.6**
NWAO				LR	LR		
comp=Z,17μm,19.0s,MS5.6							
NWAO	**Narrogin (SRO)**	**24.83**	**186**	P	**P**	**22 09 51.0**	**+0.5**
SNR=21							
NWAO				P		22 09 51.0	
SNR=21							
CTA	**Charters Tower**	**27.84**	**118**	*e*P	**P**	**22 10 18.0**	**+0.2**
comp=Z,28nm,0.9s,mb4.9							
CTA	**Charters Tower**	**27.84**	**118**	P	**P**	**22 10 18.2**	**+0.4**
comp=Z,26nm,0.8s,mb4.9,baz=291,slow=11,SNR=19							
CTA				LR	LR	22 22 33.3	
comp=Z,19μm,18.6s,MS5.7,baz=294,slow=39							
CTA	**Charters Tower**	**27.84**	**118**	P	**P**	**22 10 18.2**	**+0.4**
CTA				LR	LR	22 22 33.3	
CTAO	**Charters Tower**	**27.84**	**118**	*j*eP	**P**	**22 10 17.9**	**+0.1**
CTAO				*e*S	**S**	**22 15 02.6**	**+4.5**
CTAO				pmax	pmax		
comp=Z,106nm,1.2s,mb5.3							
CTAO				MLR	MLR		
comp=Z,17μm,19.0s,MS5.7							
CTAO	**Charters Tower**	**27.84**	**118**	*j*eP	**P**	**22 10 17.9**	**+0.1**
comp=Z,106nm,1.2s,mb5.3							
CTAO				*e*S	**S**	**22 15 02.6**	**+4.5**
CTAO				LR	LR		
comp=Z,17μm,19.0s,MS5.7							
CTAO	**Charters Tower**	**27.84**	**118**	P	**P**	**22 10 19.4**	**+1.6**
comp=Z,3μmcomp=

ARMA	**Armidale**	**36.79 131**	*e*P	**P**	**22 11 38.3 +2.3**
ARMA			*e*S	**S**	**22 17 26.6 +10**
ARMA	**Armidale**	**36.79 131**	P	**P**	**22 11 38.0 +2.0**
	comp=Z,439nm,2.1s,mb5.9				
GYA	**Guiyang**	**36.82 339**⇑	*i*P	**P**	**22 11 36.2 +0.1**
GYA			PP	PP	22 13 04.0 +3.2
GYA			S	**S**	**22 17 22.1 +4.7**
GYA			pmax	pmax	
	comp=Z,80nm,0.9s,mb5.5				
GYA			pmax	pmax	
	comp=Z,180nm,4.9s				
GYA			LR	LR	
	comp=N,4μm,15.0s,MS5.5				
GYA			LR	LR	
	comp=E,4μm,14.8s,MS5.5				
GYA			LR	LR	
	comp=Z,6μm,15.4s,MS5.5				
TOO	**Toolangi**	**37.18 146**	*e*P	**P**	**22 11 40.7 +1.6**
TOO			*e*S	**S**	**22 17 32.9 +10**
KMI	**Kunming**	**37.18 333**	P	**P**	**22 11 39.7 +0.4**
KMI			pP	pP	22 11 47.2 -4.4
KMI			sP	sP	22 11 50.5 -6.5
KMI			PP	PP	22 13 07.1 +2.3
KMI			S	**S**	**22 17 25.2 +2.2**
KMI			sS	sS	22 17 37.9 -5.7
KMI			pmax	pmax	
	comp=Z,13nm,1.5s,mb4.5				
KMI			pmax	pmax	
	comp=Z,670nm,4.9s				
KMI			LR	LR	
	comp=N,14μm,12.6s,MS6.0				
KMI			LR	LR	
	comp=E,7μm,16.1s,MS6.0				
KMI			LR	LR	
	comp=Z,19μm,13.8s,MS6.0				
CAN	**Canberra**	**37.76 140**	*e*P	**P**	**22 11 44.4 +0.3**
CAN			*e*		22 14 00.4
CAN			*e*S	**S**	**22 17 34.0 +2.4**
CAN			pmax	pmax	
	comp=Z,94nm,1.3s,mb5.4				
CAN			MLR	MLR	
	comp=Z,11μm,19.0s,MS5.7				
CAN	**Canberra**	**37.76 140**	*e*P	**P**	**22 11 44.4 +0.3**
	comp=Z,94nm,1.3s,mb5.4				
CAN			*e*PcP	PcP	22 14 00.4 +0.1
CAN			*e*S	**S**	**22 17 34.0 +2.4**
CAN			LR	LR	
	comp=Z,11μm,19.0s,MS5.7				
CNB	**Canberra Magne**	**37.99 140**	*e*P	**P**	**22 11 46.8 +0.8**
WHN	**Wuhan**	**38.86 352**	P	**P**	**22 11 53.1 -0.2**
WHN			LR	LR	
	comp=N,12μm,14.7s,MS5.9				
WHN			LR	LR	
	comp=E,7μm,16.2s,MS5.9				
WHN			LR	LR	
	comp=Z,11μm,15.8s,MS5.8				
SSE	**Sheshan**	**39.01 1**	P	**P**	**22 11 55.4 +0.8**
SSE			sP	sP	22 12 05.6 -6.7
SSE			PP	PP	22 13 26.3 +1.6
SSE			S	**S**	**22 17 54.4 +4.0**
SSE			sS	sS	22 18 09.6 -1.5
SSE			pmax	pmax	
	comp=Z,50nm,0.7s,mb5.3				
SSE			pmax	pmax	
	comp=Z,500nm,5.2s				
SSE			LR	LR	
	comp=N,4μm,25.2s,MS5.1				
SSE			LR	LR	
	comp=E,780nm,25.2s,MS5.1				
SSE			LR	LR	
	comp=Z,5μm,25.2s,MS5.2				
HNR	**Honiara**	**39.26 95**	*e*P	**P**	**22 11 57.3 +0.3**
HNR			*e*		22 13 26.1
HNR			MLR	MLR	
	comp=Z,7μm,19.0s,MS5.5				
ENH	**Enshi**	**39.55 345**	*e*P	**P**	**22 11 58.0 -1.1**
	comp=Z,111nm,1.0s,mb5.5				
ENH			*e*S	**S**	**22 18 01.2 +2.6**
ENH			LR	LR	
	comp=Z,5μm,21.0s,MS5.3				
NJ2	**Nanjing**	**39.97 358**	*e*P	**P**	**22 12 03.8 +1.2**
NJ2			pP	pP	22 12 08.3 -6.7
NJ2			sP	sP	22 12 10.8 -10
NJ2			PP	PP	22 13 39.0 +3.7
NJ2			S	**S**	**22 18 06.0 +1.1**
NJ2			pmax	pmax	
	comp=Z,50nm,1.0s,mb5.2				
NJ2			pmax	pmax	
	comp=Z,2μm,4.3s				
NJ2			LR	LR	
	comp=N,5μm,15.1s,MS5.6				
NJ2			LR	LR	
	comp=E,5μm,16.4s,MS5.6				
NJ2			LR	LR	
	comp=Z,6μm,15.4s,MS5.5				
CBIJ	**Chichi jima**	**40.97 31**	P	**P**	**22 12 10.2 -0.7**
	comp=Z,77nm,0.8s,mb5.4,baz=282,slow=14,SNR=1.7				
CBIJ			LR	LR	22 26 53.8
	comp=Z,2μm,20.7s,MS5.0,baz=212,slow=33				
MOO	**Moorlands**	**41.61 150**	*e*P	**P**	**22 12 18.0 +2.0**
TAU	**Tasmania Unive**	**42.02 150**	*e*P	**P**	**22 12 19.2 -0.1**
TAU			*e*		22 13 57.2
TAU			*e*S	**S**	**22 18 38.2 +3.0**
TAU			pmax	pmax	
	comp=Z,135nm,1.4s,mb5.4				
TAU			MLR	MLR	
	comp=Z,11μm,20.0s,MS5.7				
TAU	**Tasmania Unive**	**42.02 150**	*e*P	**P**	**22 12 19.2 -0.2**
	comp=Z,135nm,1.4s,mb5.4				
TAU			*e*PP	PP	22 13 57.2 -0.1
TAU			*e*S	**S**	**22 18 38.2 +3.1**
TAU			LR	LR	
	comp=Z,11μm,20.0s,MS5.7				
JNU	**Nakatsue**	**42.25 13**	P	**P**	**22 12 27.1 +5.8**
AGT	**Agartala**	**42.59 319**	*e*x	**P**	**22 12 19.0 -5.2**
AGT			*e*x	x	22 13 17.0
XAN	**Xi'an**	**43.28 346**	P	**P**	**22 12 28.9 -0.8**
XAN			pP	pP	22 12 34.6 -7.6
XAN			sP	sP	22 12 35.7 -12
XAN			S	**S**	**22 18 55.1 +1.2**
XAN			SS	SS	22 22 13.0 +4.2
XAN			pmax	pmax	
	comp=Z,7.0nm,1.5s				
XAN			pmax	pmax	
	comp=Z,370nm,10.0s				
XAN			LR	LR	
	comp=N,4μm,14.2s,MS5.5				
XAN			LR	LR	
	comp=E,2μm,16.3s,MS5.5				
XAN			LR	LR	
	comp=Z,2μm,14.9s,MS5.2				
SHL	**Shillong**	**43.39 321**⇓	*i*P	**P**	**22 12 30.0 -0.6**
TIA	**Tai'an**	**44.20 356**	P	**P**	**22 12 38.0 +1.0**
TIA			S	**S**	**22 19 05.0 -2.1**
TIA			LR	LR	
	comp=N,2μm,10.0s,MS5.3				
TIA			LR	LR	
	comp=E,1μm,11.0s,MS5.3				
VIS	**Vishakhapatnam**	**44.59 305**	*i* P	**P**	**22 12 40.0 -0.4**
VIS			*e*x	x	22 12 59.8
	comp=Z,118nm,1.8s				
VIS			*i* x	x	22 19 10.6
JWT	**Wachi**	**45.49 17**	P	**P**	**22 12 56.1 +8.8**
INCN	**Inchon**	**45.76 7**	*e*P	**P**	**22 12 49.4 0.0**
INCN			*e*S	**S**	**22 19 32.2 +2.4**
INCN			LR	LR	
	comp=Z,2μm,21.0s,MS5.1				
KSRS	**Korea Array**	**45.91 9**	P	**P**	**22 12 50.5 0.0**
	comp=Z,20nm,0.9s,mb5.0,baz=181,slow=8.6,SNR=33				
KSRS			S	**S**	**22 19 33.6 +1.8**
	comp=Z,0.8nm,0.5s,baz=188,slow=33,SNR=3.4				
KSRS			LR	LR	22 34 10.3
	comp=Z,2μm,20.2s,MS5.1,baz=45,slow=39				
TIY	**Taiyuan**	**46.18 351**	*e*P	**P**	**22 12 52.9 +0.2**
TIY			S	**S**	**22 19 38.7 +3.0**
TIY			SS	SS	22 22 56.8 -4.9
TIY			LR	LR	
	comp=N,4μm,11.8s,MS5.7				
TIY			LR	LR	
	comp=E,2μm,12.4s,MS5.7				
TIY			LR	LR	
	comp=Z,4μm,13.0s,MS5.5				
NOUC	**Port Laguerre**	**46.40 113**	*e*P	**P**	**22 12 54.8 0.0**
DZM	**Mont Dzumac**	**46.53 113**	*e*P	**P**	**22 12 56.7 +1.0**
	comp=Z,239nm,1.2s,mb6.0				
DZM			*e*S	**S**	**22 19 45.7 +4.4**
	comp=Z,3μm,29.7s				
DZM			*e*LQ		22 24 12.1
	comp=Z,8μm,27.8s				
DZM			*e*LR	LR	22 26 16.0
	comp=Z,7μm,23.2s				
DZM	**Mont Dzumac**	**46.53 113**	*e*P	**P**	**22 12 55.7 0.0**
DZM	**Mont Dzumac**	**46.53 113**	*e*P	**P**	**22 12 56.3 +0.5**
	comp=Z,115nm,1.2s,mb5.7				
LZH	**Lanzhou**	**46.60 342**	*e*P	**P**	**22 12 56.7 +0.7**
LZH			pP	pP	22 13 03.3 -5.4
LZH			sP	sP	22 13 06.0 -8.0
LZH			PP	PP	22 14 46.0 -0.3
LZH			S	**S**	**22 19 41.0 -0.9**
LZH			pmax	pmax	
	comp=Z,74nm,1.3s,mb5.5				
LZH			pmax	pmax	
	comp=Z,490nm,5.4s				
LZH			LR	LR	
	comp=N,5μm,14.0s				
LZH			LR	LR	
	comp=Z,7μm,15.6s,MS5.7				
DL2	**Dalian**	**46.81 1**	P	**P**	**22 12 55.1 -2.5**
DL2			PP	PP	22 14 42.7 -5.7
DL2			S	**S**	**22 19 41.2 -3.5**
DL2			pmax	pmax	
	comp=Z,40nm,1.0s,mb5.3				
DL2			pmax	pmax	
	comp=Z,700nm,6.1s				
DL2			LR	LR	
	comp=N,1μm,17.0s,MS5.2				
DL2			LR	LR	
	comp=E,2μm,16.6s,MS5.2				
DL2			LR	LR	
	comp=Z,3μm,14.9s,MS5.3				
LSA	**Lhasa**	**46.88 325**	P	**P**	**22 12 59.0 +0.7**
LSA			pP	pP	22 13 10.0 -0.9
LSA			PP	PP	22 14 46.7 -2.5
LSA			pmax	pmax	
	comp=Z,40nm,1.3s,mb5.2				
LSA			pmax	pmax	
	comp=Z,710nm,7.6s				
LSA			LR	LR	
	comp=N,2μm,20.0s				
LSA			LR	LR	
	comp=E,5μm,14.0s				
LSA			LR	LR	
	comp=Z,7μm,18.0s,MS5.7				
LSA	**Lhasa**	**46.88 325**⇓	*e*P	**P**	**22 12 59.3 +1.0**
LSA			*e*		22 14 51.3
LSA			*e*S	**S**	**22 19 49.3 +3.3**
LSA			pmax	pmax	
	comp=Z,102nm,0.9s,mb5.8				
LSA			MLR	MLR	
	comp=Z,8μm,19.0s,MS5.7				
LSA	**Lhasa**	**46.88 325**⇓	*e*P	**P**	**22 12 59.3 +1.0**
	comp=Z,102nm,0.9s,mb5.8				
LSA			*e*PP	PP	22 14 51.3 +2.1
LSA			*e*S	**S**	**22 19 49.3 +3.3**
LSA			LR	LR	
	comp=Z,8μm,19.0s,MS5.7				
JRY	**Ryogami san**	**47.29 21**	P	**P**	**22 13 03.8 +2.4**
DGAR	**Diego Garcia**	**47.33 267**	P	**P**	**22 13 01.9 -0.2**
DGAR			*e*S	**S**	**22 19 55.5 +2.5**
DGAR			MLR	MLR	
	comp=Z,6μm,22.0s,MS5.5				
MJAR	**Matsushiro Arr**	**47.53 20**	P	**P**	**22 13 01.5 -1.8**
	comp=Z,10nm,1.0s,mb4.8,baz=193,slow=7.6,SNR=14				
MJAR			LR	LR	22 31 49.0
	comp=Z,2μm,20.0s,MS5.2,baz=205,slow=35				
MJAR	**Matsushiro Arr**	**47.53 20**	P	**P**	**22 13 01.5 -1.8**
MJAR			LR	LR	22 31 49.0
MAJO	**Matsushiro**	**47.53 20**	*e*P	**P**	**22 13 02.1 -1.2**
MAJO			*e*		22 14 55.0
MAJO			*e*S	**S**	**22 19 58.2 +3.1**
MAJO			pmax	pmax	
	comp=Z,158nm,1.6s,mb5.8				
MAJO			MLR	MLR	
	comp=Z,3μm,21.0s,MS5.3				
MAJO	**Matsushiro**	**47.53 20**	*e*P	**P**	**22 13 02.1 -1.2**
	comp=Z,158nm,1.6s,mb5.8				
MAJO			*e*PP	PP	22 14 55.0 -0.1
MAJO			*e*S	**S**	**22 19 58.1 +3.1**
MAJO			LR	LR	
	comp=Z,3μm,21.0s,MS5.3				
MAT	**Matsushiro**	**47.53 20**	P	**P**	**22 13 02.0 -1.3**
MAT			S	**S**	**22 19 52.0 -3.1**
MAT	**Matsushiro**	**47.53 20**	P	**P**	**22 13 03.6 +0.3**
BJT	**Baijiatuau**	**48.05 356**	*e*P	**P**	**22 13 06.9 -0.3**
BJT			*e*S	**S**	**22 20 05.2 +2.9**
BJT			pmax	pmax	
	comp=Z,102nm,0.9s				
BJT			MLR	MLR	
	comp=Z,4μm,21.0s				
BJT	**Baijiatuau**	**48.05 356**	*e*P	**P**	**22 13 06.9 -0.3**
	comp=Z,102nm,0.9s,mb5.8				
BJT			*e*S	**S**	**22 20 05.2 +2.9**
BJT			LR	LR	
	comp=Z,4μm,21.0s,MS5.3				
BJI	**Beijing**	**48.07 356**	P	**P**	**22 13 07.0 -0.4**
BJI			S	**S**	**22 20 03.2 +0.6**
BJI			pmax	pmax	
	comp=Z,52nm,0.9s,mb5.6				
BJI			pmax	pmax	
	comp=Z,2μm,5.9s				
BJI			LR	LR	
	comp=N,5μm,14.6s,MS5.7				
BJI			LR	LR	
	comp=E,3μm,16.1s,MS5.7				
BJI			LR	LR	
	comp=Z,4μm,16.5s,MS5.5				
HYB	**Hyderabad**	**48.38 302**	*e*P	**P**	**22 13 10.0 -0.1**
HYB	**Hyderabad**	**48.38 302**	*i* P	**P**	**22 13 10.0 -0.1**
HYB			*e*S	**S**	**22 20 08.0 +0.3**
HYB			LR	LR	22 35 34.0
	comp=Z,8.9nm,18.0s				
GUN	**Gumba**	**48.85 318**	*e*P	**P**	**22 13 13.7 +0.1**
	comp=Z,299nm,0.9s,mb6.3				
JSD	**Sado**	**48.91 19**	P	**P**	**22 13 18.2 +4.3**
PKI	**Pulchoki**	**48.94 318**	*e*P	**P**	**22 13 13.9 -0.4**
	comp=Z,128nm,1.1s,mb5.9				
PKI	**Pulchoki**	**48.94 318**	*e*P	**P**	**22 13 13.9 -0.4**
PKI			pmax	pmax	
	comp=Z,128nm,1.1s,mb5.9				
PKIN	**Phulchoki**	**48.95 318**	*e*P	**P**	**22 13 13.9 -0.5**
	comp=Z,90nm,0.7s,mb5.9				
DMN	**Daman**	**49.17 318**	*e*P	**P**	**22 13 15.8 -0.2**
	comp=Z,245nm,1.1s,mb6.1				
KKN	**Kakani**	**49.17 318**	*e*P	**P**	**22 13 15.8 -0.3**
	comp=Z,109nm,0.8s,mb5.9				
KKN	**Kakani**	**49.17 318**	*e*P	**P**	**22 13 15.8 -0.3**
KKN			pmax	pmax	
	comp=Z,109nm,0.8s,mb5.9				
HHC	**Hu-ho-hao-te**	**49.38 351**	*e*P	**P**	**22 13 17.4 0.0**
HHC			pP	pP	22 13 22.0 -8.1
HHC			sP	sP	22 13 24.5 -11
HHC			PcP	PcP	22 14 39.2 -0.1
HHC			PP	PP	22 15 12.4 +0.4
HHC			ScP	ScP	22 18 32.5 +1.4
HHC			PcS	PcS	22 18 34.6 -1.2
HHC			S	**S**	**22 20 23.4 +2.4**
HHC			ScS	ScS	22 23 05.5 +0.1
HHC			SS	SS	22 23 52.5 -1.0
HHC			pmax	pmax	
	comp=Z,30nm,0.9s,mb5.3				
HHC			pmax	pmax	
	comp=Z,670nm,5.3s				
HHC			LR	LR	
	comp=N,3μm,18.8s,MS5.4				
HHC			LR	LR	
	comp=E,1μm,17.8s,MS5.4				
HHC			LR	LR	
	comp=Z,3μm,23.3s				
BTO	**Baotou**	**49.40 350**	*e*P	**P**	**22 13 15.9 -1.6**
SNY	**Shenyang**	**49.80 3**	⇓P	**P**	**22 13 19.8 -0.8**
SNY			S	**S**	**22 20 27.1 +0.2**
SNY			pmax	pmax	
	comp=Z,24nm,1.5s,mb5.0				
SNY			pmax	pmax	
	comp=Z,2μm,6.3s				
SNY			LR	LR	
	comp=N,4μm,23.9s				
SNY			LR	LR	
	comp=E,3μm,16.5s				
SNY			LR	LR	
	comp=Z,4μm,27.9s,MS5.3				
NGP	**Nagpur**	**49.82 306**	*e*PKP	**P**	**22 13 15.6 -5.6**
NGP			*e*x	x	22 13 34.5
	comp=Z,146nm,2.3s				
NGP			*e*S	**S**	**22 20 26.2 -1.6**
JYA	**Atsumi**	**49.89 20**	P	**P**	**22 13 10.2 -11**
JBP	**Jabalpur**	**50.17 309**	*i* P	**P**	**22 13 23.9 +0.2**
JBP			*e*x	x	22 13 42.6
	comp=Z,224nm,1.7s				
JBP			*i* x	x	22 20 31.6
GTA	**Gaotai**	**50.95 340**	⇓P	**P**	**22 13 30.2 +0.9**
GTA			pP	pP	22 13 35.0 -7.1
GTA			sP	sP	22 13 37.3 -10
GTA			PP	PP	22 15 28.0 +1.8
GTA			S	**S**	**22 20 47.0 +4.1**
GTA			SS	SS	22 24 20.1 +1.6
GTA			pmax	pmax	
	comp=Z,20nm,1.7s,mb4.8				
GTA			pmax	pmax	
	comp=Z,2μm,8.1s				
GTA			LR	LR	
	comp=N,3μm,18.0s,MS5.6				
GTA			LR	LR	
	comp=E,4μm,18.6s,MS5.6				
GTA			LR	LR	
	comp=Z,4μm,20.4s,MS5.4				
JOM	**Ohasama**	**51.23 21**	P	**P**	**22 13 30.6 -0.8**
GOA	**Goa**	**51.62 297**⇓	*e*x	**P**	**22 13 30.1 -4.6**
CN2	**Changchun**	**51.90 5**	*e*P	**P**	**22 13 39.0 +2.7**
CN2			*e*pP	pP	22 13 43.6 -5.5
CN2			*e*sP	sP	22 13 45.9 -8.5
CN2			*e*S	**S**	**22 20 53.2 -2.6**
CN2			SS	SS	22 24 34.2 +0.8
CN2			pmax	pmax	
	comp=Z,10.0nm,0.7s,mb4.8				
CN2			pmax	pmax	
	comp=Z,1μm,7.0s				
CN2			LR	LR	
	comp=N,2μm,18.0s,MS5.2				
CN2			LR	LR	
	comp=E,1μm,18.0s,MS5.2				
CN2			LR	LR	
	comp=Z,2μm,19.0s,MS5.1				
KAD	**Karad**	**52.05 299**	*e*PKP	**P**	**22 13 36.9 -1.1**
KAD			AMb	AMB	22 13 59.8
	comp=Z,69nm,1.1s,mb5.5				
VLA	**Vladivostok**	**52.09 11**	*e*P	**P**	**22 13 38.1 +0.3**
VLA			*e**PP	pP	22 13 47.7 -2.9
VLA			*e*S	**S**	**22 21 00.6 +2.0**
VLA			pmax	pmax	
	comp=Z,73nm,1.5s,mb5.4				
BHPL	**Bhopal**	**52.19 308**	*e*PKP	**P**	**22 13 38.4 -0.6**
JOT	**Ohata**	**52.85 20**	P	**P**	**22 13 48.8 +5.4**
POO	**Poona**	**52.87 301**	*e*PKP	**P**	**22 13 42.4 -1.6**
MDJ	**Mudanjiang**	**53.17 8**	P	**P**	**22 13 45.2 -0.6**
MDJ			pP	pP	22 13 48.5 -10
MDJ			sP	sP	22 13 49.9 -14
MDJ			PcP	PcP	22 14 53.5 +0.1
MDJ			PP	PP	22 15 43.6 -2.7
MDJ			ScP	ScP	22 18 50.5 +3.1
MDJ			PcS	PcS	22 18 51.8 -0.3
MDJ			S	**S**	**22 21 10.7 -2.5**
MDJ			SS	SS	22 24 51.6 -1.9
MDJ			pmax	pmax	
	comp=Z,29nm,1.0s,mb5.2				
MDJ			pmax	pmax	
	comp=Z,870nm,5.5s				
MDJ			LR	LR	
	comp=E,1μm,27.9s,MS5.2				
MDJ			LR	LR	
	comp=N,2μm,26.4s,MS5.2				
MDJ			LR	LR	
	comp=Z,4μm,26.9s,MS5.3				
MDJ	**Mudanjiang**	**53.17 8**	*e*P	**P**	**22 13 45.2 -0.6**
	comp=Z,76nm,1.0s,mb5.6				
MDJ			PcP	PcP	22 14 52.8 -0.5
MDJ			*e*S	**S**	**22 21 15.6 +2.3**
MDJ			LR	LR	
	comp=Z,3μm,22.0s,MS5.3				
WAKE	**Wake Island**	**53.23 59**	PFAKE		22 14 00.0 +13
WAKE			LR	LR	
	comp=Z,3μm,22.0s,MS5.3				
TARA	**Tarawa**	**53.37 82**	PFAKE		22 14 00.0 +12
TARA			LR	LR	
	comp=Z,7.0nm,19.0s				
JSH	**Shimam**	**53.66 18**	P	**P**	**22 13 58.5 +9.1**
ERM	**Erimo**	**54.13 21**	PFAKE		22 14 00.0 +7.2
ERM			LR	LR	
	comp=Z,2μm,22.0s,MS5.2				
DDI	**Dehra Dun**	**55.67 315**	*e*x	**P**	**22 14 07.5 +3.3**
ASAJ	**Asahikawa**	**55.80 19**	P	**P**	**22 14 14.1 +9.2**
ASAJ	**Asahikawa**	**55.80 19**	P	**P**	**22 14 04.2 -0.7**
	comp=Z,6.2nm,1.0s,mb4.6,baz=244,slow=14,SNR=6.4				
JMP	**Maruseppu**	**55.96 20**	P	**P**	**22 14 15.2 +9.2**
AJM	**Ajmer**	**56.03 309**	*e*PKP	**P**	**22 14 06.0 -0.9**
RPZ	**Rata Peaks**	**56.62 138**	*e*P	**P**	**22 14 11.4 +0.6**
	comp=Z,130nm,1.0s,mb5.9				
RPZ			PcP	PcP	22 15 03.9 -2.9
JWK2	**Keihoku**	**56.65 18**	P	**P**	**22 14 20.3 +9.4**
SMLA	**Simla**	**56.77 316**	*e*PKP	**P**	**22 14 11.1 -0.9**
YUK	**Yuzh-Kuril'sk**	**56.87 22**	P	**P**	**22 14 13.4 +0.9**
YUK			*i*		22 16 15.4
YUK			*i* S	**S**	**22 22 04.2 +1.4**
YUK			*i*		22 23 59.7
YUK			*i* SSS		22 28 06.2
YUK			pmax	pmax	
	comp=Z,200nm,1.4s,mb6.0				
YUK			pmax	pmax	
	comp=N,140nm,1.3s				
YUK			pmax	pmax	
	comp=E,110nm,1.3s				
ULN	**Ulaanbaatar**	**56.95 349**⇓	*i*P	**P**	**22 14 13.0 0.0**
ULN			*e*S	**S**	**22 22 07.0 +3.2**
ULN			MLR	MLR	
	comp=Z,4μm,22.0s,MS5.5				
ULN	**Ulaanbaatar**	**56.95 349**⇓	*i*P	**P**	**22 14 12.9 0.0**
ULN			*e*S	**S**	**22 22 07.0 +3.2**
ULN			LR	LR	
	comp=Z,4μm,22.0s,MS5.5				
ULN	**Ulaanbaatar**	**56.95 349**	P	**P**	**22 14 13.8 +0.8**
	SNR=45				
ULN			P		22 14 13.8
	SNR=45				
ULN	**Ulaanbaatar**	**56.95 349**	P	**P**	**22 14 13.2 +0.2**
	comp=Z,3μmcomp=Z,83nm,1.2s,mb5.6				
MSVF	**Nonsavu**	**56.97 106**	P	**P**	**22 14 15.0 +1.3**
	comp=Z,366nm,1.7s,mb6.1,SNR=5.7				
MSVF	**Nonsavu**	**56.97 106**	*e*P	**P**	**22 14 14.4 +0.7**
	comp=Z,87nm,1.1s,mb5.7				
MSVF			*e*PcP	PcP	22 15 09.3 +0.6
MSVF			LR	LR	
	comp=Z,4μm,20.0s,MS5.5				
MSVF	**Nonsavu**	**56.97 106**	P	**P**	**22 13 58.2 -16**
	comp=Z,3μm,1.2s,mb7.1,SNR=5.7				
SONM	**Songino Array**	**57.05 349**	P	**P**	**22 14 14.0 +0.3**
	comp=Z,31nm,1.0s,mb5.3,baz=168,slow=7.6,SNR=111				
SONM			PKPPKP		22 44 06.1
	comp=Z,0.8nm,0.8s,baz=325,slow=2.3,SNR=3.8				
SONM			PKP2bc		22 44 16.7
	comp=Z,0.9nm,0.8s,baz=343,slow=3.1,SNR=4.2				
SONM	**Songino Array**	**57.05 349**	P	**P**	**22 14 14.0 +0.3**
SONM			P'P'		22 44 06.1
SONM			⇑*e*		22 44 16.7
HIA	**Hailar**	**57.15 360**	*e*P	**P**	**22 14 14.2 -0.1**
HIA			*e*S	**S**	**22 22 08.1 +1.8**
HIA			pmax	pmax	
	comp=Z,74nm,1.3s				
HIA			MLR	MLR	
	comp=Z,3μm,22.0s				
HIA	**Hailar**	**57.15 360**	*e*P	**P**	**22 14 14.2 -0.2**
	comp=Z,74nm,1.3s,mb5.6				
HIA			*e*S	**S**	**22 22 08.1 +1.8**
HIA			LR	LR	
	comp=Z,3μm,22.0s,MS5.3				
HABR	**Khabarovsk**	**57.85 12**	*e*P	**P**	**22 14 18.2 -1.1**
HABR			*e**PP	pP	22 14 27.2 -5.0
HABR			*e**SP	sP	22 14 31.6 -5.9
HABR			*e*		22 16 25.5
HABR			*e*S	**S**	**22 22 17.2 +1.7**
HABR			*e*		22 22 28.0
HABR			*e**SS	sS	22 22 33.0 -4.1
HABR			*e*		22 24 04.4
HABR			*e*SS	SS	22 26 09.1 +2.0
HABR			pmax	pmax	

comp=Z,70nm,1.6s,mb5.4
HABR pmax pmax
comp=E,49nm,1.7s
HABR pmax pmax
comp=N,18nm,0.9s
HABR MLR MLR
comp=Z,1μm,18.0s,MS5.1
KLR Kul'dur 58.00 9 *e*P **P 22 14 13.4 -6.9**
KLR *e*S **S 22 22 09.0 -8.4**
KLR *e*SS SS 22 26 04.0 -5.4
KLR pmax pmax
comp=Z,78nm,1.8s,mb5.4
KLR pmax pmax
comp=Z,2μm,7.0s
KLR smax
comp=N,2μm,11.0s
KLR smax
comp=E,1μm,11.0s
SNZO South Karori 58.28 134 *e*P **P 22 14 25.5 +3.0**
comp=E,446nm,1.5s,mb6.3
SNZO LR LR
comp=Z,8μm,19.0s,MS5.9
FUNA Funafuti 58.29 95 PFAKE 22 14 40.0 +17
FUNA LR LR
comp=Z,12μm,19.0s,MS6.0
YSS Yuzh-Sakhalins 58.38 18 *e*P **P 22 14 23.0 -0.1**
YSS *e* pP 22 14 32.0 -4.0
YSS *e*S **S 22 22 23.0 +0.5**
YSS *e* 22 24 12.0
YSS *e*SS SS 22 26 10.0 -5.6
YSS pmax pmax
comp=Z,700nm,6.0s
YSS MLR MLR
comp=Z,800nm,18.0s,MS4.9
YSS MLR MLR
comp=N,1μm,19.0s
YSS Yuzh-Sakhalins 58.38 18 *e*P **P 22 14 23.8 +0.7**
comp=N,129nm,1.5s,mb5.7
YSS LR LR
comp=Z,641nm,21.0s,MS4.7
CASY Casey 58.45 185 *e*P **P 22 14 21.5 -1.8**
CASY Casey 58.45 185 *e*P **P 22 14 22.5 -0.8**
comp=Z,30nm,0.8s,mb5.4
CASY *e*PcP PcP 22 15 16.0 +2.6
CASY LR LR
comp=Z,8μm,21.0s,MS5.8
PAF Port-aux-Franc 58.52 216 PFAKE 22 14 40.0 +16
PAF LR LR
comp=Z,5μm,19.0s,MS5.7
THN Thein Dam 58.53 316 *e*x **P 22 14 21.6 -2.8**
WMQ Urumqi 59.52 333 P **P 22 14 32.0 +1.0**
WMQ sP sP 22 14 39.0 -10
WMQ PP PP 22 16 46.0 +3.0
WMQ S **S 22 22 40.0 +2.6**
WMQ ScS ScS 22 24 18.0 +0.6
WMQ SS SS 22 26 37.0 +3.5
WMQ pmax pmax
comp=Z,51nm,1.2s,mb5.4
WMQ LR LR
comp=N,5μm,18.0s,MS5.8
WMQ LR LR
comp=E,4μm,18.0s,MS5.8
WMQ LR LR
comp=Z,3μm,17.0s,MS5.5
DRV Dumont d'Urvil 60.00 171 P **P 22 14 35.0 +1.0**
DRV S **S 22 22 44.0 +1.0**
DRV SS SS 22 26 57.0 +17
DRV L 22 29 00.0
ZAK Zakamensk 60.10 348⇑ *e*P **P 22 14 34.1 -0.8**
ZAK pmax pmax
comp=Z,36nm,1.6s,mb5.2
CIT Chita 60.18 355 *e*P **P 22 14 26.8 -8.6**
CIT *e* pP 22 14 35.8 -13
CIT *e* pP 22 14 41.2 -7.2
CIT *e* 22 15 16.2
CIT *e* 22 22 50.7
NIL Nilore 60.92 316 PFAKE 22 14 50.0 +9.2
NIL LR LR
comp=Z,81nm,21.0s
MIR Mirnyy 61.25 192⇑ *i*P **P 22 14 42.8 +0.3**
MIR pmax pmax
comp=Z,82nm,1.2s,mb5.7
MIR MLR MLR
comp=N,3μm,16.0s,MS5.7
MIR MLR MLR
comp=E,2μm,16.0s,MS5.7
MIR MLR MLR
comp=Z,6μm,16.0s,MS5.8
TLY Talaya 61.26 348 P **P 22 14 43.7 +1.0**
comp=Z,278nm,0.8s,mb6.4,SNR=11
TLY Talaya 61.26 348 *e*P **P 22 14 42.9 +0.2**
TLY *e* 22 15 22.4
TLY *e* 22 17 05.7
TLY *e*S **S 22 23 00.1 +0.8**
TLY *e*PS 22 23 13.6
TLY *e*SS SS 22 27 02.7 +2.2
TLY pmax pmax
comp=Z,46nm,0.9s,mb5.6
TLY MLR MLR
comp=Z,2μm,19.0s,MS5.3
TLY Talaya 61.26 348 *e*P **P 22 14 42.7 0.0**
TLY *e*S **S 22 23 02.3 +3.0**
TLY LR LR
comp=Z,2μm,19.0s,MS5.3
TLY Talaya 61.26 348 P **P 22 14 43.8 +1.1**
SNR=16
TLY P 22 14 43.8
SNR=16
RAO Raoul Island 61.54 119 PFAKE 22 15 00.0 +15
RAO LR LR
comp=Z,6μm,19.0s,MS5.7
IRK Irkutsk 61.67 349 *e*P **P 22 14 45.3 -0.2**
IRK *e*S **S 22 23 05.8 +1.3**
IRK pmax pmax
comp=Z,118nm,1.8s,mb5.7
MOY Mondy 61.81 347 *e*P **P 22 14 46.8 +0.3**
MOY pmax pmax
comp=Z,294nm,3.7s
KSH Kashi 62.65 323⇓ *i*P **P 22 14 52.5 +0.2**
KSH pP pP 22 14 56.6 -8.8
KSH sP sP 22 14 59.1 -12
KSH PcP PcP 22 15 31.6 +0.8
KSH PP PP 22 17 11.2 +0.5
KSH ScP ScP 22 19 31.8 +2.4
KSH PcS PcS 22 19 33.4 -0.8
KSH S **S 22 23 15.5 -1.9**
KSH ScS ScS 22 24 39.9 -1.2
KSH pmax pmax
comp=Z,60nm,0.9s,mb5.7
KSH LR LR
comp=N,2μm,13.8s,MS5.6
KSH LR LR
comp=E,2μm,17.2s,MS5.6
KSH LR LR
comp=Z,3μm,14.3s,MS5.6
RER Riviere de l'E 63.36 250 *e*P **P 22 14 59.0 +1.6**
comp=Z,101nm,0.8s,mb6.0
RER LR LR
comp=Z,2μm,19.0s,MS5.3
QUE Quetta 63.75 309 *e*P **P 22 14 50.0 -10**
QUE *e*S **S 22 23 51.0 +19**
MKAR Makanchi Array 64.25 332 P **P 22 15 03.0 +0.2**
comp=Z,23nm,0.8s,mb5.3,baz=125,slow=7.7,SNR=51
MKAR PKPPKP 22 43 50.4
comp=Z,0.2nm,0.3s,baz=316,slow=3.3,SNR=5.2
MKAR PKP2bc 22 43 59.5
comp=Z,0.9nm,0.7s,baz=318,slow=3.3,SNR=5.3
MKAR Makanchi Array 64.25 332 P **P 22 15 03.0 +0.2**
MKAR P'P' 22 43 50.4
MKAR ⇑*e* 22 43 59.5
MSEY Mahe Island 64.39 269 PFAKE 22 15 20.0 +16
MSEY LR LR
comp=Z,5μm,20.0s,MS5.7
KZA Kyzart 64.69 324 P **P 22 15 06.6 +0.9**
SNR=35
CLNS Chul'man 64.85 3 *e*P **P 22 15 06.6 +0.2**
CLNS *e* 22 15 36.3
CLNS *e*S **S 22 23 44.4 +0.4**
CLNS *e* 22 24 51.2
CLNS pmax pmax
comp=Z,60nm,1.4s,mb5.4
CLNS pmax pmax
comp=N,45nm,1.4s
CLNS pmax pmax
comp=E,23nm,1.0s
CLNS smax
comp=E,674nm,11.6s
CLNS smax
comp=N,1μm,11.4s
CLNS MLR MLR
comp=N,396nm,18.0s,MS4.9
CLNS MLR MLR
comp=E,499nm,14.0s,MS4.9
CLNS MLR MLR
comp=Z,1μm,19.0s,MS5.1
TKM2 Tokmak 2 65.02 325 P **P 22 15 08.3 +0.4**
SNR=19
TKM2 Tokmak 2 65.02 325⇑ *e*P **P 22 15 07.8 -0.1**
TKM2 *e*S S 22 23 48.1 +1.3
TKM2 pmax pmax
comp=Z,28nm,0.8s,mb5.3
TKM2 MLR MLR
comp=Z,4μm,21.0s,MS5.6
TKM2 Tokmak 2 65.02 325⇑ *e*P **P 22 15 07.8 -0.1**
comp=Z,28nm,0.8s,mb5.3
TKM2 *e*S S 22 23 48.1 +1.3
TKM2 LR LR
comp=Z,4μm,21.0s,MS5.6
UCH Uchtor 65.20 324 P **P 22 15 09.5 +0.4**
SNR=20
UCH Uchtor 65.20 324⇑ *e*P **P 22 15 09.3 +0.2**
comp=Z,44nm,1.0s,mb5.4
UCH *e*S S 22 23 51.8 +2.8
UCH LR LR
comp=Z,4μm,20.0s,MS5.7
KBK Karagaybulak 65.22 325 P **P 22 15 10.0 +0.8**
SNR=20
AAK Ala-Archa 65.47 324 P **P 22 15 11.5 +0.8**
SNR=18
AAK Ala-Archa 65.47 324 P **P 22 15 11.5 +0.7**
comp=Z,25nm,0.8s,mb5.3,baz=131,slow=4.9,SNR=47
AAK Ala-Archa 65.47 324 *d*P **P 22 15 10.8 0.0**
AAK pmax pmax
comp=Z,51nm,1.7s,mb5.3
AAK Ala-Archa 65.47 324 *e*P **P 22 15 10.9 +0.1**
AAK *e*S S 22 23 55.4 +3.2
AAK LR LR
comp=Z,4μm,20.0s,MS5.6
AAK Ala-Archa 65.47 324 P **P 22 15 11.5 +0.7**
SNR=41
AAK P 22 15 11.5
SNR=41
AAK Ala-Archa 65.47 324 P **P 22 15 11.0 +0.2**
comp=Z,399nmcomp=Z,19nm,0.9s,mb5.1
FRU Bishkek 65.53 325 *e*P **P 22 15 10.5 -0.6**
FRU *e* 22 23 58.0
FRU pmax pmax
comp=Z,256nm,2.2s,mb5.9
CHMS Chumysh 65.55 325 P **P 22 15 11.1 -0.2**
SNR=5.4
AML Almayashu 65.62 324 P **P 22 15 12.2 +0.4**
SNR=71
AML Almayashu 65.62 324⇑ *e*P **P 22 15 11.7 -0.1**
comp=Z,106nm,0.9s,mb5.9
AML *e*S S 22 23 55.2 +1.1
AML LR LR
comp=Z,4μm,22.0s,MS5.6
USP Ospenovka 65.86 325 P **P 22 15 13.4 +0.1**
SNR=26
EKS2 Erkin-Say 65.90 324 P **P 22 15 13.8 +0.2**
SNR=32
EKS2 Erkin-Say 65.90 324⇑ *e*P **P 22 15 13.7 +0.2**
comp=Z,33nm,0.9s,mb5.4
EKS2 *e*S S 22 24 00.6 +3.1
EKS2 LR LR
comp=Z,4μm,19.0s,MS5.6
BOD Bodaibo 65.91 356 *e*P **P 22 15 13.0 -0.3**
BOD pmax pmax
comp=Z,53nm,1.4s,mb5.4
SKR Severo-Kuril's 66.30 24 *e*P **P 22 15 14.0 -1.9**
SKR *e* pP 22 15 22.0 -7.1
SKR *e* 22 15 46.0
SKR *e* 22 17 44.0
SKR *e*PPP 22 19 20.0
SKR *e*S S 22 24 04.0 +2.0
SKR *e*PS 22 24 16.0
SKR *e* 22 24 38.0
SKR smax
comp=N,3μm,10.0s
SKR smax
comp=E,3μm,10.0s
AFI Afiamalu 66.81 102 PFAKE 22 15 30.0 +10
AFI LR LR
comp=Z,2μm,21.0s,MS5.3
ZALV Zalesovo Beam 68.67 338 P **P 22 15 30.2 -0.6**
comp=Z,40nm,0.8s,mb5.4,baz=134,slow=4.3,SNR=86
ZALV PKP2bc 22 43 48.5
comp=Z,1.7nm,0.7s,baz=320,slow=4.4,SNR=7.4
ZALV LR LR 22 46 55.6
comp=Z,1μm,19.8s,MS5.2,baz=277,slow=37
ZALV Zalesovo Beam 68.67 338 P **P 22 15 30.2 -0.6**
ZALV ⇑*e* 22 43 48.5
ZALV LR LR 22 46 55.5
KURK Kurchatov 68.77 333 P **P 22 15 31.0 -0.5**
comp=Z,13nm,0.8s,mb4.9,baz=146,slow=5.4,SNR=36
KURK PcP PcP 22 15 58.4 +2.5
comp=Z,16nm,0.8s,baz=148,slow=5.2,SNR=5.0
KURK Kurchatov 68.77 333⇑ *e*P **P 22 15 31.1 -0.4**
KURK *e*PP PP 22 18 03.8 -0.2
KURK *e*S S 22 24 28.6 -3.0
KURK LR LR
comp=Z,5μm,21.0s,MS5.7
KURK Kurchatov 68.77 333 P **P 22 15 31.5 0.0**
SNR=46
KURK P 22 15 31.5
SNR=46
PETK Petropavlovsk- 68.79 23 P **P 22 15 32.4 +0.8**
comp=Z,20nm,1.0s,mb5.0,baz=208,slow=4.4,SNR=13
PETK LR LR 22 44 47.1
comp=Z,1μm,21.8s,MS5.1,baz=227,slow=35
PET Petropavlovsk 69.10 24⇓ *i*P **P 22 15 34.6 +1.0**
PET *e* 22 18 15.0
PET *i*S S 22 24 39.4 +3.9
PET *e*SP 22 25 01.6
PET pmax pmax
comp=Z,44nm,1.2s,mb5.3
PET pmax pmax
comp=Z,800nm,6.7s
PET pmax pmax
comp=Z,1μm,4.4s
PET pmax pmax
comp=Z,600nm,9.9s
PET pmax pmax
comp=Z,800nm,5.6s
PET Petropavlovsk 69.10 24 *e*P **P 22 15 35.2 +1.6**
PET *e*S S 22 24 38.5 +3.0
PET LR LR
comp=Z,1μm,20.0s,MS5.2
NVS Novosibirsk 69.95 338⇓ *i*P **P 22 15 37.9 -0.8**
NVS *e*S S 22 24 44.7 -0.7
NVS pmax pmax
comp=Z,322nm,2.5s,mb5.8
NVS pmax pmax
comp=N,167nm,1.9s
NVS pmax pmax
comp=E,181nm,2.5s
NVS smax
comp=E,198nm,2.9s
MIDW Midway 70.20 56 PFAKE 22 15 50.0 +9.1
MIDW LR LR
comp=Z,2μm,19.0s,MS5.3
IDAH Dahanechah 70.31 309 *e*P **P 22 15 39.3 -2.1**
YAK Yakutsk 70.33 5 *e*P **P 22 15 39.9 -1.0**
YAK *e**PP pP 22 15 49.2 -5.0
YAK *e* 22 16 01.9
YAK *e* 22 18 15.0
YAK *e*PPP 22 19 57.5
YAK *e*S S 22 24 49.4 -0.2
YAK *e* 22 25 36.6
YAK pmax pmax
comp=Z,53nm,1.1s,mb5.4
YAK pmax pmax
comp=E,4.0nm,1.2s
YAK pmax pmax
comp=N,25nm,1.1s
YAK pmax pmax
comp=Z,785nm,9.9s
YAK smax
comp=E,2μm,16.1s
YAK MLR MLR
comp=Z,1μm,15.0s,MS5.2
YAK MLR MLR
comp=N,1μm,15.0s
YAK Yakutsk 70.33 5 *e*P **P 22 15 40.1 -0.8**
comp=N,69nm,0.9s,mb5.6
YAK *e*S S 22 24 52.1 +2.5
YAK LR LR
comp=Z,1μm,19.0s,MS5.2
MAW Mawson 70.47 200 *e*P **P 22 15 42.6 +0.8**
comp=Z,38nm,1.0s,mb5.3
MAW Mawson 70.47 200 P **P 22 15 42.8 +1.1**
comp=Z,44nm,1.0s,mb5.3,baz=57,slow=8.1,SNR=42
MAW LR LR 22 45 09.4
comp=Z,4μm,19.2s,MS5.6,baz=61,slow=35
FAQ Al Faqa, Dubai 70.91 300 P **P 22 15 45.3 0.0**
SNR=8.4
ITEG Tejag 71.23 309 *e*P **P 22 15 45.1 -2.0**
ABPO Ambohimpanom 71.38 253 *e*P **P 22 15 48.4 +0.1**
ABPO 22 18 27.3
ABPO pmax pmax
comp=Z,26nm,0.9s,mb5.2
ABPO MLR MLR
comp=Z,2μm,20.0s,MS5.5
ABPO Ambohimpanom 71.38 253 *e*P **P 22 15 48.4 +0.1**
comp=Z,26nm,0.9s,mb5.2
ABPO PP PP 22 18 27.3 +0.2
ABPO LR LR
comp=Z,2μm,20.0s,MS5.5
IMYA Miami 71.62 312 *e*P **P 22 15 48.2 -1.2**
ISRO Mashad 72.07 312 *e*P **P 22 15 51.3 -0.7**
IPAY Payeh 72.48 312 *e*P **P 22 15 53.6 -0.9**
IAKL Akhelmad 72.72 312 *e*P **P 22 15 54.1 -1.8**
IKRD Kardeh 72.97 312 *e*P **P 22 15 52.6 -4.8**
IEMG Emamgholi 73.13 313 *e*P **P 22 15 57.4 -0.9**
IBAF Bafgh 73.24 306 *e*P **P 22 15 57.3 -1.8**
ISFR Sfrayin 73.46 312 *e*P **P 22 15 56.9 -3.3**
SBA Scott Base 73.65 171 *e*P **P 22 16 02.4 +1.7**
SBA *e*S S 22 25 30.5 +3.1
SBA MLR MLR
comp=Z,6μm,21.0s,MS5.9
JOHN Johnston Islan 73.70 70 PFAKE 22 16 10.0 +7.9
JOHN LR LR
comp=Z,2μm,20.0s,MS5.5
ABKT Ailbek 73.73 313 P **P 22 16 01.3 -0.5**
comp=Z,250nm,1.1s,mb6.1,SNR=11
BVAR Borovoye Array 74.11 331 P **P 22 16 03.3 -0.4**
comp=Z,7.0nm,0.8s,mb4.7,baz=141,slow=7.6,SNR=36
BVAR LR LR 22 51 46.2
comp=Z,5μm,21.7s,MS5.7,baz=128,slow=38
BRVK Borovoye 74.18 331 P **P 22 16 03.6 -0.5**
comp=Z,143nm,1.4s,mb5.7,SNR=18
BRVK Borovoye 74.18 331 *c i*P **P 22 16 03.6 -0.5**
BRVK pmax pmax
comp=Z,57nm,1.5s,mb5.3
BRVK Borovoye 74.18 331⇑ *e*P **P 22 16 03.1 -1.0**
comp=Z,47nm,1.3s,mb5.2
BRVK *e*S S 22 25 37.2 +3.1
BRVK LR LR
comp=Z,5μm,22.0s,MS5.7
BRVK Borovoye 74.18 331 P **P 22 16 03.7 -0.5**
SNR=27
BRVK P 22 16 03.7
SNR=27
ICHK Chekchek 74.39 307 *e*P **P 22 16 03.6 -2.2**
ISRV Sarvestan 74.49 303 *e*P **P 22 16 04.6 -1.9**
IPAR Pars 74.69 304 *e*P **P 22 16 05.5 -2.1**
SEY Seymchan 75.01 15 *c e*P **P 22 16 09.4 +0.7**
IANJ Anjilo 75.91 310 *e*P **P 22 16 11.9 -2.6**
IGLO Ghaloghah 76.34 311 *e*P **P 22 16 16.2 -0.7**
ISHM Shahmirzad 76.50 310 *e*P **P 22 16 15.8 -2.0**
ISFB Sefidab 76.82 308 *e*P **P 22 16 16.0 -3.7**
IPRN Peran 77.38 310 *e*P **P 22 16 17.1 -5.7**
IDMV Damavand 77.39 309 *e*P **P 22 16 18.7 -4.1**
ABKAR Akbulak array 77.56 324⇑ *e*P **P 22 16 21.8 -1.7**
comp=Z,25nm,0.8s,mb5.2
ABKAR *e*PP PP 22 19 19.0 0.0
IR3 Iran Long-Peri 78.13 309 *e*P **P 22 16 23.2 -3.8**
KBD Kabd 78.95 302 *e*P **P 22 16 29.6 -2.1**
KBD AMb AMB 22 16 48.2
comp=Z,38nm,1.1s,mb5.2
IRAZ Razeghan 78.95 308 *e*P **P 22 16 31.0 -0.5**
SYO Syowa Base 79.11 201⇓ *e*P **P 22 16 31.0 -0.7**
NAY Al-Naaiem 79.35 302 *e*P **P 22 16 31.4 -2.4**
NAY AMb AMB 22 16 52.5
comp=Z,30nm,1.5s,mb5.0
MIB Mutribah 79.42 302 *e*P **P 22 16 32.1 -2.1**
MIB AMb AMB 22 16 44.6
comp=Z,56nm,1.0s,mb5.5
TIXI Tiksi 79.81 3 *e*P **P 22 16 34.7 -0.7**
TIXI pmax pmax
comp=Z,64nm,1.6s,mb5.3
TIXI MLR MLR
comp=Z,3μm,14.0s,MS5.8
TIXI Tiksi 79.81 3 *e*P **P 22 16 34.4 -1.0**
comp=Z,286nm,0.6s,mb6.4
TIXI *e*PP PP 22 19 41.1 +3.8
TIXI S S 22 26 33.7 -1.0
TIXI LR LR
comp=Z,2μm,20.0s,MS5.4
ADK Adak 80.35 34 PFAKE 22 16 50.0 +11
ADK LR LR
comp=Z,429nm,20.0s,MS4.8
SVE Sverdlovsk 80.90 331⇑ *e*P **P 22 16 40.5 -1.0**
SVE *e* 22 19 52.2
SVE *e*S S 22 26 48.3 +1.7
SVE pmax pmax
comp=Z,64nm,1.3s,mb5.4
ISRB Sarab 81.42 310 *e*P **P 22 16 43.1 -1.7**
ARU Arti 81.71 330 P **P 22 16 44.7 -1.1**
comp=Z,109nm,1.2s,mb5.7,SNR=5.2
ARU Arti 81.71 330 *c i*P **P 22 16 43.9 -1.9**
ARU *e* 22 19 52.5
ARU S S 22 26 54.4 -0.6
ARU SP 22 27 43.7
ARU SS SS 22 32 09.9 -3.6
ARU SSS 22 35 31.9
ARU pmax pmax
comp=Z,26nm,1.7s,mb4.9
ARU MLR MLR
comp=Z,3μm,17.0s,MS5.8
ARU Arti 81.71 330⇑ *e*P **P 22 16 43.9 -2.0**
comp=Z,30nm,1.2s,mb5.1
ARU *e*PP PP 22 19 47.0 -6.2
ARU LR LR
comp=Z,3μm,22.0s,MS5.6
ARU Arti 81.71 330 P **P 22 16 44.7 -1.1**
comp=Z,109nm,1.2s,mb5.7,SNR=5.2
QSPA South Pole Qui 81.86 180 PFAKE 22 17 00.0 +14
QSPA LR LR
comp=Z,6μm,21.0s,MS5.9
DESE Dese 82.42 282 *e*P **P 22 16 51.4 +0.9**
DESE *e*S S 22 27 05.2 +1.2
IFTB Fath-abad 82.44 310 *e*P **P 22 16 48.6 -1.5**
BILL Bilibino 82.62 16 *d i*P **P 22 16 51.1 +0.7**
BILL *i* pP 22 16 59.9 -4.0
BILL *e* 22 20 03.1
BILL *i*S S 22 27 05.4 +1.5
BILL pmax pmax
comp=Z,28nm,1.6s,mb5.0
BILL Bilibino 82.62 16 *e*P **P 22 16 49.7 -0.7**
comp=Z,41nm,1.5s,mb5.2
BILL LR LR
comp=Z,1μm,22.0s,MS5.2
ITBZ Tabriz 82.69 310 *e*P **P 22 16 50.0 -1.4**
XMAS Kiritimati 82.69 87 PFAKE 22 17 00.0 +8.0
XMAS LR LR
comp=Z,2μm,20.0s,MS5.6
BHD Baghdad 82.76 305 *e*P **P 22 16 42.0 -10**
BHD *e*S S 22 26 50.0 -17
KMBO Kilima Mbogo 82.89 270⇑ *e*P **P 22 16 52.3 -0.7**
KMBO pmax pmax
comp=Z,34nm,1.1s
KMBO MLR MLR
comp=Z,5μm,20.0s
KMBO Kilima Mbogo 82.89 270⇑ *e*P **P 22 16 52.3 -0.8**
comp=Z,34nm,1.1s,mb5.3
KMBO LR LR
comp=Z,5μm,20.0s,MS5.9
KMBO Kilima Mbogo 82.89 270 P **P 22 16 53.9 +0.8**
SNR=8.7
KMBO P 22 16 53.9
SNR=8.7
MAK Makhachkala 83.08 315 *e*P **P 22 16 52.1 -1.2**
MAK *e* 22 20 11.4
MAK *e*PPP 22 21 55.4
MAK *e*S S 22 27 07.4 -2.2

MAK				pmax	pmax		
	comp=Z,254nm,1.8s,mb6.0						
MAK				MLR	MLR		
	comp=Z,2μm,18.0s,MS5.5						
IMRD	**Marand**	**83.16 311**	*e*P	**P**		**22 16 52.7**	**-1.1**
SOKR	**Solikamsk**	**84.00 333***c*	*i*P	**P**		**22 16 56.9**	**-0.8**
SOKR			S	S		22 27 15.2	-3.0
SOKR			SS	SS		22 32 44.7	-2.8
SOKR			pmax	pmax			
	comp=Z,30nm,1.4s,mb5.2						
DGRG	**David-gareji**	**84.16 313**	P	**P**		**22 16 59.7**	**+0.8**
GNI	**Garni**	**84.27 312**	P	**P**		**22 16 58.5**	**-1.0**
GNI			MLR	MLR			
	comp=Z,1μm,20.0s						
MSL	**Mosul**	**84.55 308**	*e*P	**P**		**22 17 02.0**	**+1.0**
MTA	**Mtatsminda**	**84.64 313**	P	**P**		**22 17 00.1**	**-1.2**
TBLG	**Delisi**	**84.69 313**	P	**P**		**22 17 01.5**	**-0.1**
GOR	**Gori**	**85.21 313**	P	**P**		**22 17 06.0**	**+1.8**
KIP	**Kipapa**	**85.33 68**	PFAKE			22 17 20.0	+15
KIP			LR	LR			
	comp=Z,2μm,20.0s,MS5.4						
KEH	**Kehvi**	**85.42 314**	P	**P**		**22 17 03.8**	**-1.5**
ZEI	**Tsey**	**85.57 314**	*e*P	**P**		**22 17 07.3**	**+1.3**
ZEI			pmax	pmax			
	comp=Z,52nm,1.3s,mb5.6						
ONI	**Oni**	**85.84 314**	P	**P**		**22 17 06.5**	**-0.8**
KIV	**Kislovodsk**	**86.73 315**	*e*P	**P**		**22 17 10.2**	**-1.4**
KIV			*e*			22 20 37.5	
KIV			*e*PPP			22 22 26.4	
KIV			*e*			22 27 32.6	
KIV			*e*SS	SS		22 33 29.1	+0.8
KIV			pmax	pmax			
	comp=Z,7.0nm,1.1s,mb4.8						
KIV			MLR	MLR			
	comp=Z,2μm,20.0s,MS5.4						
KIV	**Kislovodsk**	**86.73 315**	*e*P	**P**		**22 17 10.9**	**-0.8**
	comp=Z,16nm,0.9s,mb5.3						
KIV			LR	LR			
	comp=Z,2μm,21.0s,MS5.5						
MSNA	**Messina**	**87.15 248**	*e*P	**P**		**22 17 14.5**	**+0.3**
MSNA			AMS	AMS		22 52 46.1	
	comp=Z,3μm,18.5s,MS5.7						
POHA	**Pohakuloa**	**87.33 70**	PFAKE			22 17 30.0	+15
POHA			LR	LR			
	comp=Z,1μm,20.0s,MS5.4						
PPT	**Papeete**	**87.77 107**	*e*S	S		22 27 59.1	+2.3
	comp=Z,2μm,27.0s						
PPT			*e*LR	LR		22 45 12.0	
	comp=Z,1μm,21.8s						
ERPM	**east rand prop**	**88.22 244**	*e*P	**P**		**22 17 20.3**	**+1.0**
ERPM			AMS	AMS		22 56 09.5	
	comp=Z,2μm,18.0s,MS5.6						
SLR	**Silverton**	**88.27 244**⇓	*i*P	**P**		**22 17 20.1**	**+0.6**
SLR			AMS	AMS		22 56 32.3	
	comp=Z,2μm,17.8s,MS5.6						
NVL	**N'lazarevskaya**	**88.34 198**	*e*P	**P**		**22 17 19.0**	**+0.1**
NVL			*e**PP	pP		22 17 29.2	-3.4
NVL			*e**SP	sP		22 17 36.2	-1.5
NVL			*i*			22 22 53.3	
NVL			*e*			22 27 59.8	
NVL			*e*			22 34 01.6	
NVL			pmax	pmax			
	comp=Z,100nm,2.3s,mb5.6						
NVL			MLR	MLR			
	comp=Z,2μm,17.0s,MS5.7						
MAIT	**Maitri**	**88.37 198**	*e*P	**P**		**22 17 20.1**	**+1.1**
SEK	**Senekal**	**88.48 242**	*e*P	**P**		**22 17 20.2**	**-0.2**
SEK			AMS	AMS		22 50 50.9	
	comp=Z,2μm,20.3s,MS5.6						
ASF	**Jabal al Asfar**	**88.68 303**	LR	LR		23 02 36.8	
	comp=Z,3μm,18.3s,MS5.7,baz=317,slow=39						
GRM	**Grahamstown**	**88.69 237**	*e*P	**P**		**22 17 21.9**	**+0.5**
GRM			AMS	AMS		22 51 09.5	
	comp=Z,4μm,18.3s,MS5.9						
SOC	**Sochi**	**88.73 314***c*	*i*P	**P**		**22 17 18.1**	**-3.1**
SOC			*e*			22 20 50.3	
SOC			*i*S	SKSac		22 27 43.2	-3.8
SOC			*e**SS	S		22 28 01.8	-3.1
SOC			*e*SSS			22 37 35.1	
SOC			pmax	pmax			
	comp=Z,15nm,0.9s,mb5.3						
PRYS	**Parys**	**88.92 243**⇓	*i*P	**P**		**22 17 22.7**	**+0.2**
PRYS			AMS	AMS		22 53 21.4	
	comp=Z,2μm,18.7s,MS5.6						
VRHR	**Novokhopersk**	**89.18 322**	*e*P	**P**		**22 17 22.1**	**-1.0**
VRHR			*e*			22 20 53.5	
VRHR			*e*			22 27 46.0	
VRHR			*e*S	S		22 28 04.9	-3.9
VRHR			pmax	pmax			
	comp=Z,9.0nm,0.5s,mb5.4						
VRHR			pmax	pmax			
	comp=N,6.0nm,0.6s						
VRHR			pmax	pmax			
	comp=E,5.0nm,1.0s						
VRHR			pmax	pmax			
	comp=Z,730nm,6.8s						
VRHR			pmax	pmax			
	comp=N,250nm,5.9s						
VRHR			pmax	pmax			
	comp=E,560nm,9.4s						
VRHR			smax				
	comp=N,390nm,3.6s						
VRHR			smax				
	comp=Z,270nm,4.2s						
VRHR			smax				
	comp=E,390nm,2.7s						
VRHR			MLR	MLR			
	comp=Z,2μm,24.0s,MS5.5						
VRHR			MLR	MLR			
	comp=N,1μm,21.0s,MS5.4						
VRHR			MLR	MLR			
	comp=E,660nm,19.0s,MS5.4						
KSR	**Koster**	**89.48 244**	*e*P	**P**		**22 17 29.8**	**+4.6**
KSR			AMS	AMS		23 08 41.8	
	comp=Z,1μm,21.7s,MS5.4						
SOE	**Somerset East**	**89.57 237**	*e*P	**P**		**22 17 26.2**	**+0.7**
SOE			AMS	AMS		22 51 46.1	
	comp=Z,2μm,19.9s,MS5.6						
LSZ	**Lusaka**	**89.85 255**⇑	*e*P	**P**		**22 17 26.7**	**-0.4**
LSZ			*e*			22 21 01.4	
LSZ			pmax	pmax			
	comp=Z,115nm,1.6s,mb6.0						
LSZ	**Lusaka**	**89.85 255**⇑	*e*P	**P**		**22 17 26.7**	**-0.4**
	comp=Z,114nm,1.6s,mb6.0						
LSZ			*e*PP	PP		22 21 01.4	+1.3
LSZ	**Lusaka**	**89.85 255**	P	**P**		**22 17 27.3**	**+0.2**
	SNR=7.8						
LSZ			P			22 17 27.3	
	SNR=7.8						
MMAI	**Mount Meron Ar**	**90.07 303**	P	**P**		**22 17 27.8**	**0.0**
	comp=Z,2.8nm,0.8s,mb4.7,baz=83,slow=7.7,SNR=5.9						
MMAI			LR	LR		23 03 45.0	
	comp=Z,3μm,18.1s,MS5.8,baz=75,slow=40						
BOSA	**Boshof**	**90.49 241**	P	**P**		**22 17 30.5**	**+0.6**
	comp=Z,11nm,0.8s,mb5.2,baz=135,slow=4.7,SNR=17						
BOSA			LR	LR		22 53 34.8	
	comp=Z,3μm,18.7s,MS5.8,baz=102,slow=32						
ANN	**Anapa**	**90.59 315**	*e*P	**P**		**22 17 23.5**	**-6.4**
ANN			*e*			22 21 04.7	
ANN			*e*			22 27 50.0	
ANN			*e*			22 28 16.5	
ANN			*e*SP	SP		22 29 25.6	-3.5
ANN			pmax	pmax			
	comp=Z,19nm,1.1s,mb5.3						
ANN			pmax	pmax			
	comp=Z,374nm,6.5s						
VSR	**Storozhevoye**	**90.72 322**	*e*P	**P**		**22 17 29.3**	**-1.0**
VSR			*e*			22 21 10.6	
VSR			*e*			22 27 55.2	
VSR			*e*S	S		22 28 19.5	-3.5
VSR			pmax	pmax			
	comp=Z,9.0nm,0.7s,mb5.2						
VSR			pmax	pmax			
	comp=N,3.0nm,0.6s						
VSR			pmax	pmax			
	comp=E,10.0nm,1.1s						
VSR			pmax	pmax			
	comp=Z,780nm,6.3s						
VSR			pmax	pmax			
	comp=N,150nm,6.5s						
VSR			pmax	pmax			
	comp=E,90nm,5.5s						
VSR			smax				
	comp=N,280nm,3.2s						
VSR			smax				
	comp=Z,60nm,3.8s						
VSR			smax				
	comp=E,210nm,3.2s						
CSS	**Prodhromos**	**92.07 305**	P	**P**		**22 17 37.3**	**+0.2**
CSS			LR	LR			
	comp=Z,2μm,22.0s,MS5.6						
PKA	**Prieska**	**92.46 240**	*e*P	**P**		**22 17 41.2**	**+2.2**
PKA			AMS	AMS		22 59 02.3	
	comp=Z,624nm,17.6s,MS5.1						
MOS	**Moscow**	**92.51 326**	*e*P	**P**		**22 17 33.6**	**-4.9**
MOS			*e*			22 21 17.5	
MOS			*e*PPP			22 23 19.9	
MOS			*e*			22 28 11.3	
MOS			pmax	pmax			
	comp=Z,17nm,0.1s,mb6.4						
BRTR	**Keskin Array B**	**92.52 310**	P	**P**		**22 17 37.8**	**-1.2**
	comp=Z,1.5nm,0.9s,mb4.4,baz=108,slow=4.0,SNR=7.5						
BRTR			LR	LR		23 08 47.4	
	comp=Z,2μm,19.1s,MS5.5,baz=347,slow=42						
OBN	**Obninsk**	**92.99 325**⇑	*i*P	**P**		**22 17 39.5**	**-1.3**
OBN			*i* PS	PS		22 29 59.7	-1.7
OBN			*i* SS	SS		22 34 57.2	-1.2
OBN			pmax	pmax			
	comp=Z,24nm,1.4s,mb5.4						
OBN	**Obninsk**	**92.99 325**⇑	*i*P	**P**		**22 17 39.6**	**-1.2**
OBN			LR	LR			
	comp=Z,2μm,19.0s,MS5.7						
SUR	**Sutherland**	**93.57 237**	PFAKE			22 18 00.0	+16
SUR			LR	LR			
	comp=Z,4μm,20.0s,MS5.8						
UPI	**Upington**	**94.00 241**	*e*P	**P**		**22 17 47.1**	**+0.9**
UPI			AMS	AMS		23 26 17.5	
	comp=Z,10μm,21.2s,MS6.3						
VNA1	**Neumayer--Stat**	**94.19 195**	*e*P	**P**		**22 17 46.8**	**+0.7**
TTA	**Tatalina**	**94.33 27**	*e*P	**P**		**22 17 46.1**	**-0.7**
ISP	**Isparta**	**94.69 307**	PFAKE			22 18 00.0	+11
ISP			LR	LR			
	comp=Z,1μm,19.0s,MS5.4						
KDAK	**Kodiak Island**	**95.31 33**	PFAKE			22 18 00.0	+8.7
KDAK			LR	LR			
	comp=Z,2μm,21.0s,MS5.5						
LVZ	**Lovozero**	**95.80 338**	PFAKE			22 18 00.0	+6.6
LVZ			LR	LR			
	comp=Z,3μm,22.0s,MS5.7						
APA	**Apatity**	**96.24 337**⇑	*e*P	**P**		**22 17 50.4**	**-5.0**
APA			*i*			22 21 58.0	
APA			*e*			22 28 34.0	
APA			*i* PS	PS		22 30 28.0	-8.7
APA			*i* PPS			22 31 16.0	
APA			pmax	pmax			
	comp=Z,9.0nm,0.8s,mb5.2						
APA			MLR	MLR			
	comp=Z,1μm,25.0s,MS5.3						
KIS	**Kishinev**	**96.84 316**	*e*PP	PP		22 21 54.0	-0.2
AKASG	**Malin Array Be**	**96.86 320**	P	**P**		**22 17 58.4**	**-0.2**
	comp=Z,1.0nm,0.6s,mb4.4,baz=77,slow=5.0,SNR=5.2						
AKASG			PP	PP		22 21 58.9	+4.6
	comp=Z,0.5nm,0.5s,baz=78,slow=8.1,SNR=6.3						
AKASG			LR	LR		23 09 35.7	
	comp=Z,2μm,19.2s,MS5.6,baz=65,slow=40						
AKASG	**Malin Array Be**	**96.86 320**	P	**P**		**22 17 58.4**	**-0.2**
AKASG						22 21 58.9	
TIRR	**Tirgusor**	**96.92 314**	P	**P**		**22 17 59.4**	**+0.4**
COLD	**Coldfoot**	**97.26 23**	*e*P	**P**		**22 17 58.6**	**-1.4**
	comp=Z,8.5nm,1.0s,mb5.1						
COLA	**College**	**98.11 26**	PFAKE			22 18 10.0	+6.1
COLA			LR	LR			
	comp=Z,688nm,20.0s,MS5.1						
TAOE	**Nuku Hiva Isla**	**98.16 100**	*e*S	S		22 29 27.5	-2.4
	comp=Z,3μm,25.5s						
TAOE	**Nuku Hiva Isla**	**98.16 100**	*e*PS	PS		22 30 56.2	-3.4
	comp=Z,882nm,29.0s						
TAOE			*e*LR	LR		22 50 07.6	
	comp=Z,1μm,22.6s						
VRI	**Vrincioaia**	**98.21 315**⇑	*i*P	**P**		**22 18 03.4**	**-1.4**
KEV	**Kevo**	**98.69 339**	PFAKE			22 18 20.0	+14
KEV			LR	LR			
	comp=Z,2μm,21.0s,MS5.6						
MLR	**Muntele Rosu**	**98.74 315**⇓	*i*P	**P**		**22 18 13.1**	**+6.0**
FINES	**FINESS Array B**	**99.07 331**	P	**P**		**22 18 09.0**	**+0.8**
	comp=Z,2.4nm,1.1s,mb4.7,baz=96,slow=11,SNR=3.1						
FINES	**FINESS Array B**	**99.07 331**	P	**P**		**22 18 09.0**	**+0.8**
ARCES	**ARCESS Array B**	**99.22 339**	P	**P**		**22 18 08.8**	**+0.1**
	comp=Z,3.3nm,0.9s,mb4.9,baz=43,slow=23,SNR=3.4						
BURAR	**Bucovina Array**	**99.32 317**⇓	*i*P	**P**		**22 18 16.9**	**+7.2**
RKT	**Rikitea**	**100.25 115**	*e*PS	PS		22 31 18.8	-2.8
	comp=Z,1μm,28.8s						
RKT			*e*SS	SS		22 36 47.0	+4.8
	comp=Z,2μm,27.0s						
RKT			*e*LR	LR		22 51 08.3	
	comp=Z,1μm,23.5s						
SUW	**Suwalki**	**100.67 323**	*e*Pdiff	Pdif		22 18 15.0	-0.6
SUW			*e*PP	PP		22 22 30.0	+6.8
SUW			*e*SKSac	SKSac		22 28 49.8	-0.9
SUW			LMZ			23 08 21.6	
	comp=Z,2μm,23.9s						
SUW	**Suwalki**	**100.67 323**	*e*P	Pdif		22 18 15.0	-0.6
SUW			*e*			22 22 30.0	
SUW			*e*			22 28 49.8	
EGAK	**Eagle**	**100.98 26**	PFAKE			22 18 30.0	+13
EGAK			LR	LR			
	comp=Z,855nm,21.0s,MS5.2						
KWP	**Kalwaria Pacla**	**101.01 319**	*e*P	Pdif		22 18 19.3	+2.2
KWP			*e*PP	PP		22 22 19.9	-6.1
KWP			*e*SKSac	SKSac		22 28 52.2	-0.5
KWP			LMZ			23 05 15.7	
	comp=Z,2μm,29.3s						
KWP	**Kalwaria Pacla**	**101.01 319**	P	Pdif		22 18 18.2	+1.1
KWP			pmax	pmax			
	comp=Z,7.0nm,0.6s						
KWP			MLR	MLR			
	comp=Z,1μm,19.0s,MS5.4						
KWP	**Kalwaria Pacla**	**101.01 319**	Pdif	Pdif		22 18 18.2	+1.1
	comp=Z,7.3nm,0.6s						
KWP			LR	LR			
	comp=Z,1μm,19.0s,MS5.4						
UZH	**Uzhgorod**	**101.29 318**	*e*P	Pdif		22 18 19.3	+1.0
UZH			*i*			22 22 28.5	
UZH			*e*S	Sdif		22 29 51.7	-2.8
UZH			*i* PS	PS		22 31 27.0	-4.9
UZH			MLR	MLR			
	comp=N,600nm,17.0s,MS5.4						
UZH			MLR	MLR			
	comp=E,800nm,17.0s,MS5.4						
UZH			MLR	MLR			
	comp=Z,600nm,17.0s,MS5.2						
KBS	**Kingsbay**	**101.41 349**	PFAKE			22 18 30.0	+11
KBS			LR	LR			
	comp=Z,2μm,21.0s,MS5.7						
BZS	**Buzias**	**101.78 315**⇓	*i*P	Pdif		22 18 19.5	-1.0
PSZ	**Piszkesteto**	**102.91 317**	PFAKE			22 18 40.0	+14
PSZ			LR	LR			
	comp=Z,1μm,21.0s,MS5.4						
TIR	**Tirane**	**103.10 310**	PFAKE			22 18 40.0	+14
TIR			LR	LR			
	comp=Z,1μm,19.0s,MS5.5						
INK	**Inuvik**	**103.50 22**	P	Pdif		22 18 28.2	+0.1
OKC	**Ostrava-Krasne**	**103.96 319**	*e*PP	PP		22 22 47.3	-0.7
OKC			*e*SKS			22 28 49.7	
OKC			*e*SP	SP		22 31 39.3	-15
OKC			*e*SS	SS		22 37 30.1	-2.3
OKC			AMS	AMS		23 10 50.0	
	comp=Z,2μm,20.5s						
PTCN	**Pitcairn Islan**	**104.07 118**	PFAKE			22 18 40.0	+9.3
PTCN			LR	LR			
	comp=Z,6.0nm,20.0s						
DPC	**Dobruska-Polom**	**105.09 320**	*e*PP	PP		22 22 47.7	-8.7
DPC			*e*SKS			22 29 10.8	
DPC			*e*SP	SP		22 32 03.4	-2.2
DPC			*e*SS	SS		22 37 43.1	-4.8
DPC			AMS	AMS		23 11 20.0	
	comp=Z,2μm,19.2s						
UPC	**Upice**	**105.27 320**	*e*PP	PP		22 23 00.1	+2.4
TIP	**Timpagrande**	**105.53 308**	PFAKE			22 23 00.0	+9.1
TIP			LR	LR			
	comp=Z,1μm,21.0s,MS5.4						
TREC	**Trest**	**105.73 319**	*e*PP	PP		22 22 57.4	-3.8
TREC			*e*SKS	SKSac		22 29 14.3	-0.3
TREC			*e*SP	SP		22 32 09.2	-3.1
TREC			*ex*	x		22 37 43.0	
TREC			AMS	AMS		23 11 40.0	
	comp=Z,2μm,23.9s						
PVCC	**Panska Ves**	**106.19 320**	*e*PP	PP		22 23 07.1	+2.6
PVCC			*e*SP	SP		22 32 14.2	-2.7
PVCC			*e*SS	SS		22 38 00.2	-2.6
PVCC			AMS	AMS		23 11 50.0	
	comp=Z,1μm,19.1s						
CEL	**Celeste**	**106.24 307**	PFAKE			22 23 00.0	+7.8
CEL			LR	LR			
	comp=Z,789nm,21.0s,MS5.2						
NB2	**NORSAR Subarra**	**106.24 331**	PP	PP		22 23 05.8	+1.3
	comp=Z,18nm,1.4s,baz=77,slow=7.4						
NB2	**NORSAR Subarra**	**106.24 331**	PP	PP		22 23 05.8	+1.3
	baz=77,slow=7.4						
NB2	**NORSAR Subarra**	**106.24 331**	PP	PP		22 23 05.8	+1.3
PRU	**Pruhonice**	**106.27 320**	*e*PP	PP		22 23 01.9	-3.2
PRU			*e*SKS	SKSac		22 29 16.8	-0.1
PRU			*e*SP	SP		22 32 15.2	-2.6
PRU			*e*SS	SS		22 37 59.8	-4.1
PRU			AMS	AMS		23 11 40.0	
	comp=Z,2μm,22.0s						
PRA	**Prague**	**106.33 320**	PP	PP		22 23 12.0	+6.5
BRG	**Berggiesshubel**	**106.54 321**	*e*PP	PP		22 23 11.9	+4.9
BRG			*e*SP	SP		22 32 22.5	+2.0
BRG	**Berggiesshubel**	**106.54 321**	*e*P	PP		22 23 06.5	-0.6
	comp=Z,5.7nm,1.0s						
BRG			PP	PP		22 23 08.0	+1.0
BRG			*i*			22 32 21.0	
BRG			*e*			22 34 29.4	
	comp=Z,16nm,1.9s						
BRG			SS	SS		22 38 06.0	-1.5
BRG							
	comp=N,2μm,17.1s						
BRG							
	comp=E,1μm,16.3s						
BRG							
	comp=Z,2μm,17.9s						
GEC2	**GERESS Array S**	**106.95 319**	*e*PP	PP		22 23 14.0	+3.9
GEC2			*e*SP	SP		22 32 27.1	+2.2
GERES	**GERESS Array B**	**106.95 319**	PKKP	PKKPbc		22 34 26.0	+13
	comp=Z,0.8nm,0.8s,baz=249,slow=3.7,SNR=5.5						
KHC	**Kasperske Hory**	**107.00 319**	*e*PP	PKiKP		22 22 48.0	-5.3
KHC			*e*SKS	SKSac		22 29 19.5	-0.7
KHC			*e*SP	SP		22 32 23.9	-1.5
KHC			*e*SS	SS		22 37 57.9	-16
KHC			AMS	AMS		23 12 20.0	
	comp=Z,2μm,22.8s						
CLL	**Collm**	**107.06 321**	*e*PP	PP		22 23 12.3	+1.4
CLL			*e*SP	SP		22 32 27.4	+1.5
CLL	**Collm**	**107.06 321**	*e*PP	PP		22 23 09.0	-1.9
CLL			*e*			22 23 22.0	
CLL			*e*SKSac	SKSac		22 29 18.0	-2.3
CLL			*e*SP	SP		22 32 26.0	+0.1
CLL			*e*PPS			22 33 24.0	
CLL			*e*SS	SS		22 38 10.0	-4.6
CLL			*e*PPPrev			22 42 00.0	
CLL			*e*			22 43 24.0	
CLL			*e*			22 46 24.0	
DLBC	**Dease Lake**	**107.18 31**	PKiKP	PKiKP		22 22 53.7	+0.4
PMSA	**Palmer Station**	**107.23 178**	PFAKE			22 23 00.0	+6.7
PMSA			LR	LR			
	comp=Z,3μm,19.0s,MS5.8						
TRI	**Trieste**	**107.27 315**	PFAKE			22 23 10.0	+16
TRI			LR	LR			
	comp=Z,1μm,20.0s,MS5.4						
KONO	**Kongsberg**	**107.35 330**	PFAKE			22 23 10.0	+16
KONO			LR	LR			
	comp=Z,2μm,19.0s,MS5.7						
WDD	**Wield Dalam**	**107.44 305**	PFAKE			22 23 10.0	+15
WDD			LR	LR			
	comp=Z,2μm,19.0s,MS5.6						
WET	**Wettzell**	**107.45 319**	*e*PP	PP		22 23 07.4	-6.4
WET			*e*SP	SP		22 32 32.8	+2.8
TANN	**Tannenbergstha**	**107.53 320**	*e*PP	PP		22 23 08.5	-5.9
TANN			*e*SP	SP		22 32 33.2	+2.4
NKC	**Novy Kostel**	**107.57 320**	*e*SKS	SKSac		22 29 22.2	-0.4
NKC			*e*SP	SP		22 32 28.8	-2.4
NKC			*e*SS	SS		22 38 20.8	-0.8
NKC			AMS	AMS		23 16 00.0	
	comp=Z,2μm,19.2s						
RJOB	**Jochberg**	**107.69 317**	*e*PP	PP		22 23 10.6	-5.0
RJOB			*e*SP	SP		22 32 35.5	+2.9
ROTZ	**Rotzenmuhle**	**107.79 320**	*e*PP	PP		22 23 11.7	-4.6
ROTZ			*e*SP	SP		22 32 36.8	+3.3
AQU	**L'Aquila**	**107.86 312**	PFAKE			22 23 10.0	+15
AQU			LR	LR			
	comp=Z,2μm,22.0s,MS5.5						
AQU	**L'Aquila**	**107.86 312**⇑	*i*P	Pdif		22 18 35.3	-12
MOX	**Moxa**	**108.03 321**	*e*PP	PP		22 23 09.9	-8.1
	comp=Z,15nm,1.6s						
MOX			*e*SP	SP		22 32 32.0	-3.9
MOX							
	comp=Z,2μm,19.0s						
MOX	**Moxa**	**108.03 321**	*e*PP	PP		22 23 09.9	-8.1
	comp=Z,15nm,1.6s						
MOX			*e*SP	SP		22 32 32.0	-3.9
MOX							
	comp=Z,2μm,19.0s						
MOX	**Moxa**	**108.03 321**	*e*PP	PP		22 23 13.4	-4.6
MOX			*e*SP	SP		22 32 38.3	+2.4
BSEG	**Bad Segeberg**	**108.22 324**	*e*PP	PP		22 23 15.3	-3.9
BSEG			*e*SP	SP		22 32 40.4	+2.8
GRF	**Grafenberg Arr**	**108.44 320**	*e*PP	PP		22 23 18.5	-2.5
GRF			*e*SP	SP		22 32 43.7	+3.7
GRF			*e*L			23 13 19.8	
	comp=Z,2μm,21.1s						
CLZ	**Clausthal**	**108.59 322**	*e*PP	PP		22 23 18.9	-3.1
CLZ			*e*SP	SP		22 32 44.3	+2.8
NRDL	**Niedersach Rie**	**108.63 323**	*e*PP	PP		22 23 19.2	-3.1
NRDL			*e*SP	SP		22 32 44.5	+2.7
FUR	**Furstenfeldbru**	**108.64 318**	*e*PP	PP		22 23 19.7	-2.8
FUR			*e*SP	SP		22 32 44.9	+2.7
UBBA	**Unterbreizbach**	**109.01 321**	*e*PP	PP		22 23 23.6	-1.5
UBBA			*e*SP	SP		22 32 48.9	+3.1
VLC	**Villacollemand**	**109.84 314**	PFAKE			22 23 10.0	+11
VLC			LR	LR			
	comp=Z,2μm,20.0s,MS5.6						
STU	**Stuttgart**	**109.91 319**	*e*PP	PP		22 23 33.3	+1.7
STU			*e*SP	SP		22 32 58.9	+4.0
IBBN	**Ibbenburen**	**110.08 323**	*e*PP	PP		22 23 33.9	+1.2
IBBN			*e*SP	SP		22 32 59.5	+3.1
TNS	**Taunus Mts**	**110.10 321**	*e*PP	PP		22 23 35.0	+2.0
TNS			*e*SP	SP		22 33 00.6	+3.9
BFO	**Black Forest**	**110.55 319**	*e*PP	PP		22 23 39.9	+3.6
BFO			*e*SP	SP		22 33 06.0	+5.0
BFO	**Black Forest**	**110.55 319**	PFAKE			22 23 10.0	+10
BFO			LR	LR			
	comp=Z,2μm,22.0s,MS5.6						
BUG	**Bochum--Univer**	**110.57 322**	*e*PP	PP		22 23 38.9	+2.6
BUG			*e*SP	SP		22 33 05.1	+4.2
VSL	**Villasalto**	**111.20 309**	PFAKE			22 23 10.0	+8.5
VSL			LR	LR			
	comp=Z,858nm,20.0s,MS5.3						
ECH	**Echery**	**111.34 319**	PFAKE			22 23 10.0	+8.5
ECH			LR	LR			
	comp=Z,1μm,20.0s,MS5.4						
WLF	**Walferdange**	**111.67 320**	*e*PP	PP		22 23 50.4	+6.1
WLF			*e*SP	SP		22 33 17.1	+5.9
WLF	**Walferdange**	**111.67 320**	PFAKE			22 23 10.0	+8.0
WLF			LR	LR			
	comp=Z,1μm,20.0s,MS5.5						
LPG	**La Plagne**	**112.17 316**	*e*PP	PP		22 23 44.6	-3.4
	comp=Z,20nm,1.1s						
LPL	**La Plagne**	**112.18 316**	*e*PP	PP		22 23 44.6	-3.5
	comp=Z,70nm,1

ESK LR LR
comp=Z,2μm,20.0s,MS5.6
YBH Yreka Blue Hor 115.48 48 PFAKE 22 23 20.0 +10
YBH LR LR
comp=Z,1μm,21.0s,MS5.4
HOPS Hopland 115.76 51 PFAKE 22 23 20.0 +10
HOPS LR LR
comp=Z,1μm,19.0s,MS5.5
WDC Whiskeytown Da 115.85 49 PFAKE 22 23 20.0 +10
WDC LR LR
comp=Z,1μm,19.0s,MS5.5
TAM Tamanrasset 115.85 291 PFAKE 22 23 20.0 +9.2
TAM LR LR
comp=Z,1μm,22.0s,MS5.5
MCCM Marconi Confer 116.07 52 PFAKE 22 23 20.0 +9.2
MCCM LR LR
comp=Z,921nm,22.0s,MS5.3
HAWA Hanford 116.51 42 PFAKE 22 23 20.0 +8.6
HAWA LR LR
comp=Z,601nm,22.0s,MS5.2
MOD Modoc 117.19 47 PFAKE 22 23 20.0 +7.1
MOD LR LR
comp=Z,1μm,22.0s,MS5.5
BORG Borgarnes 117.36 343 PFAKE 22 23 20.0 +7.5
BORG LR LR
comp=Z,2μm,20.0s,MS5.8
NEW Newport 117.47 39 PFAKE 22 23 20.0 +6.8
NEW LR LR
comp=Z,980nm,19.0s,MS5.5
CMB Columbia Colle 118.02 51 PFAKE 22 23 30.0 +15
CMB LR LR
comp=Z,917nm,19.0s,MS5.4
WVOR Wild Horse Val 118.25 46 PFAKE 22 23 30.0 +15
WVOR LR LR
comp=Z,1μm,20.0s,MS5.5
BMO Blue Mountains 118.47 43 PFAKE 22 23 30.0 +15
BMO LR LR
comp=Z,690nm,19.0s,MS5.3
BSMT Bassoo Peak 119.08 39 PKPdf PKPdf 22 23 15.9 -0.4
TORD Torodi Ar. Bea 119.51 280 PKP PKPdf 22 23 16.9 -1.1
comp=Z,3.6nm,0.7s,baz=69,slow=1.6,SNR=24
TORD Torodi Ar. Bea 119.51 280 PKP PKPdf 22 23 16.9 -1.1
NVAR Mina Array Bea 119.53 50 PKP PKPdf 22 23 19.3 +1.9
comp=Z,0.7nm,0.6s,baz=247,slow=1.6,SNR=4.1
NVAR PKKPbc PKKPbc 22 33 33.5 +3.6
comp=Z,1.2nm,0.8s,baz=144,slow=4.9,SNR=4.3
BMN Battle Mountai 119.82 48 PFAKE 22 23 30.0 +12
BMN LR LR
comp=Z,1μm,19.0s,MS5.5
MSO Missoula 120.00 40 PFAKE 22 23 30.0 +12
MSO LR LR
comp=Z,472nm,20.0s,MS5.1
SLMT Seeley Lake 120.13 39 *e*PKPdf PKPdf 22 23 18.4 +0.1
TPH Tonopah 120.44 51 PFAKE 22 23 30.0 +11
TPH LR LR
comp=Z,989nm,20.0s,MS5.5
RPN Rapa Nui 120.57 128 PFAKE 22 23 30.0 +10
RPN LR LR
comp=Z,2μm,19.0s,MS5.8
DAC Darwin (Calif) 120.58 53 PFAKE 22 23 30.0 +10
DAC LR LR
comp=Z,1μm,20.0s,MS5.6
HLID Hailey 120.86 44 *e*PKPdf PKPdf 22 23 20.5 +0.7
HLID LR LR
comp=Z,1μm,19.0s,MS5.5
SFJD Kangerlussuaq 120.89 356 PFAKE 22 23 30.0 +11
SFJD LR LR
comp=Z,1μm,21.0s,MS5.5
ELK Elko 121.18 47 PFAKE 22 23 30.0 +9.4
ELK LR LR
comp=Z,951nm,20.0s,MS5.4
ESDC Sonseca Array 121.25 312 PKP PKPdf 22 23 20.8 0.0
comp=Z,0.3nm,0.4s,baz=92,slow=1.2,SNR=6.0
ESDC PKKPbc PKKPbc 22 33 35.2 +12
comp=Z,0.7nm,0.7s,baz=262,slow=5.0,SNR=4.5
ESDC Sonseca Array 121.25 312 PKP PKPdf 22 23 20.8 0.0
ESDC PKKPbc PKKPbc 22 33 35.2 +12
SHEL Horse Pasture 121.41 246 PFAKE 22 23 30.0 +8.3
SHEL LR LR
comp=Z,2μm,20.0s,MS5.8
PAB San Pablo 121.57 312 PFAKE 22 23 30.0 +8.6
PAB LR LR
comp=Z,1μm,21.0s,MS5.5
BOZ Bozeman (W) 121.94 41 *e*PKIKP PKPdf 22 23 22.8 +0.9
BOZ MLR MLR
comp=Z,531nm,19.0s,MS5.2
PFO Pinyon Flat Ob 122.08 55 PFAKE 22 23 30.0 +7.5
PFO LR LR
comp=Z,1μm,21.0s,MS5.6
EGMT Eagleton 122.10 37 PFAKE 22 23 30.0 +7.9
EGMT LR LR
comp=Z,654nm,19.0s,MS5.3
FFC Flin Flon 122.67 28 *i* PKIKP PKPdf 22 23 24.6 +1.6
FFC Flin Flon 122.67 28 PFAKE 22 23 30.0 +7.0
FFC LR LR
comp=Z,909nm,20.0s,MS5.4
DUG Dugway 123.11 47 PKIKP PKPdf 22 23 23.1 -1.2
DUG MLR MLR
comp=Z,841nm,19.0s,MS5.4
LKWY Lake 123.17 41 PFAKE 22 23 40.0 +16
LKWY LR LR
comp=Z,1μm,20.0s,MS5.6
AHID Auburn Hatcher 123.41 44 PFAKE 22 23 40.0 +15
AHID LR LR
comp=Z,901nm,20.0s,MS5.4
HWUT Hardware Ranch 123.51 45 PFAKE 22 23 40.0 +15
HWUT LR LR
comp=Z,996nm,22.0s,MS5.4
MTE Manteigas 123.63 314 PFAKE 22 23 40.0 +15
MTE LR LR
comp=Z,1μm,21.0s,MS5.5
RLMT Red Lodge 123.67 40 PFAKE 22 23 40.0 +15
RLMT LR LR
comp=Z,798nm,20.0s,MS5.4
SFS San Fernando 123.86 309 PFAKE 22 23 40.0 +14
SFS LR LR
comp=Z,2μm,19.0s,MS5.8
MVU Marysvale 124.09 49 PFAKE 22 23 40.0 +14
MVU LR LR
comp=Z,1μm,19.0s,MS5.5
BW06 Boulder Array 124.45 43 PFAKE 22 23 40.0 +13
BW06 LR LR
comp=Z,841nm,21.0s,MS5.4
PDAR Pinedale Array 124.45 43 PKP PKPdf 22 23 26.6 -0.1
comp=Z,0.3nm,0.5s,baz=34,slow=3.4,SNR=3.5
PDAR PKKPbc 22 33 11.1
comp=Z,1.2nm,0.7s,baz=109,slow=4.2,SNR=8.5
LAO LASA Array 124.85 37 PFAKE 22 23 40.0 +13
LAO LR LR
comp=Z,700nm,21.0s,MS5.3
RTC Rabat Centre 125.05 306 PFAKE 22 23 40.0 +12
RTC LR LR
comp=Z,1μm,19.0s,MS5.5
DGMT Dagmar 125.12 35 PFAKE 22 23 40.0 +12
DGMT LR LR
comp=Z,1μm,21.0s,MS5.5
DBIC Dimbokro 125.56 272 PKP PKPdf 22 23 28.2 -1.6
comp=Z,9.3nm,1.0s,baz=35,slow=6.2,SNR=5.5
WUAZ Wupatki 125.65 52 PFAKE 22 23 40.0 +11
WUAZ LR LR
comp=Z,928nm,19.0s,MS5.5
LIC Lamto 125.69 272 *e*PKIKP PKPdf 22 23 28.5 -1.5
PV01 Paradox Valley 126.91 48 PKPdf PKPdf 22 23 32.8 +1.1
TUC Tucson 127.02 56 PFAKE 22 23 40.0 +8.0
TUC LR LR
comp=Z,867nm,19.0s,MS5.5
MVCO Mesa Verde 127.30 49 *e*PKPdf PKPdf 22 23 33.3 +0.9
MVCO LR LR
comp=Z,846nm,19.0s,MS5.4
RSSD Black Hills 127.45 39 *e*PKIKP PKPdf 22 23 30.8 -1.7
RSSD MLR MLR
comp=Z,825nm,21.0s,MS5.4
ISCO Idaho Springs 128.38 45 PFAKE 22 23 50.0 +16
ISCO LR LR
comp=Z,845nm,20.0s,MS5.4
SDCO Great Sand Dun 129.30 47 *e*PKPdf PKPdf 22 23 35.7 -0.6
SDCO LR LR
comp=Z,813nm,20.0s,MS5.4
ANMO Albuquerque 129.64 51 PKIKP PKPdf 22 23 38.0 +1.0
ANMO MLR MLR
comp=Z,1μm,22.0s
AGMN Agassiz Nation 129.70 31 PFAKE 22 23 50.0 +13
AGMN LR LR
comp=Z,931nm,20.0s,MS5.5
OGNE Ogallala 130.29 42 PFAKE 22 23 50.0 +12
OGNE LR LR
comp=Z,930nm,22.0s,MS5.4
PLCA Paso Flores 130.38 169 PKP PKPdf 22 23 39.0 +0.7
comp=Z,2.6nm,0.7s,baz=159,slow=12,SNR=6.5
PLCA SKPbc SKPbc 22 27 00.1 +2.3
comp=Z,43nm,1.4s,baz=179,slow=5.7,SNR=7.1
PLCA Paso Flores 130.38 169 PKP PKPdf 22 23 39.0 +0.7
PLCA SKPbc SKPbc 22 27 00.1 +2.3
MNTX Cornudas Mount 131.59 55 PKPdf PKPdf 22 23 39.4 -1.4
MNTX LR LR
comp=Z,990nm,20.0s,MS5.5
ASCN Ascension 132.01 252 PFAKE 22 23 50.0 +7.9
ASCN LR LR
comp=Z,545nm,19.0s,MS5.3
EYMN Ely 132.08 28 PFAKE 22 23 50.0 +8.8
EYMN LR LR
comp=Z,789nm,20.0s,MS5.4
ECSD EROS Data Cent 132.15 36 PFAKE 22 23 50.0 +8.6
ECSD LR LR
comp=Z,807nm,20.0s,MS5.4
CBKS Cedar Bluff 132.88 43 PFAKE 22 23 50.0 +7.0
CBKS LR LR
comp=Z,1μm,22.0s,MS5.6
AMTX Amarillo 133.29 49 PFAKE 22 24 00.0 +16
AMTX LR LR
comp=Z,1μm,21.0s,MS5.5
TXAR Lajitas Array 133.74 57 PKP PKPdf 22 23 44.9 +0.1
comp=Z,0.5nm,0.7s,baz=270,slow=0.9,SNR=5.8
TXAR SKPbc SKPbc 22 27 13.1 +2.9
comp=Z,3.6nm,1.2s,baz=270,slow=5.0,SNR=4.5
TXAR SKP PP 22 27 22.4
comp=Z,3.6nm,1.0s,baz=270,slow=2.5,SNR=5.9
TXAR Lajitas Array 133.74 57 PKP PKPdf 22 23 44.9 +0.1
TXAR SKPbc SKPbc 22 27 13.1 +2.9
TXAR SKP 22 27 22.4
TRQA Tornquist 134.01 178 PFAKE 22 24 00.0 +15
TRQA LR LR
comp=Z,3μm,22.0s,MS5.9
COWI Conover 134.53 29 PFAKE 22 24 00.0 +14
COWI LR LR
comp=Z,1μm,19.0s,MS5.7
KSU1 Kansas State U 134.81 41 PFAKE 22 24 00.0 +13
KSU1 LR LR
comp=Z,898nm,19.0s,MS5.5
SCIA State Center 135.24 36 PFAKE 22 24 00.0 +13
SCIA LR LR
comp=Z,1μm,21.0s,MS5.5
WMOK Wichita Mounta 135.50 48 PFAKE 22 24 00.0 +12
WMOK LR LR
comp=Z,982nm,20.0s,MS5.5
JFWS Jewell Farm 136.23 33 PFAKE 22 24 00.0 +11
JFWS LR LR
comp=Z,1μm,21.0s,MS5.7
JCT Junction City 136.49 54 *e*PKIKP PKPdf 22 23 51.2 +1.2
JCT MLR MLR
comp=Z,829nm,21.0s,MS5.4
CMLA Cha da Macela 137.25 319 PFAKE 22 24 00.0 +8.8
CMLA LR LR
comp=Z,942nm,22.0s,MS5.5
GLMI Grayling 137.56 26 PFAKE 22 24 00.0 +8.5
GLMI LR LR
comp=Z,1μm,20.0s,MS5.7
HDIL Hopedale 138.36 34 PFAKE 22 24 00.0 +6.9
HDIL LR LR
comp=Z,1μm,19.0s,MS5.6
CCM Cathedral Cave 138.83 39 PFAKE 22 24 10.0 +16
CCM LR LR
comp=Z,989nm,20.0s,MS5.5
KVTX Kingsville 139.13 57 PFAKE 22 24 10.0 +15
KVTX LR LR
comp=Z,1μm,21.0s,MS5.6
MIAR Mount Ida 139.32 45 *e*PKIKP PKPdf 22 23 55.6 +0.5
MIAR MLR MLR
comp=Z,1μm,19.0s,MS5.6
CFAA Coronel Fontan 139.67 169 PKhKP PKPpre 22 23 50.5
comp=Z,0.8nm,0.8s,baz=185,slow=5.3,SNR=9.9
HKT Hockley 139.85 52 PFAKE 22 24 10.0 +14
HKT LR LR
comp=Z,1μm,20.0s,MS5.7
NATX Nacogdoches 139.94 49 PFAKE 22 24 10.0 +14
NATX LR LR
comp=Z,1μm,21.0s,MS5.6
AAM Ann Arbor 139.97 28 PFAKE 22 24 10.0 +14
AAM LR LR
comp=Z,2μm,20.0s,MS5.8
LONY Lake Ozonia 141.43 17 PFAKE 22 24 10.0 +11
LONY LR LR
comp=Z,996nm,22.0s,MS5.5
LCO Las Campanas 141.60 164 *e*PKPdf PKPdf 22 23 54.8 -4.7
LCO *e*SKP 22 27 34.4
LCO LR LR
comp=Z,2μm,19.0s,MS5.8
WCI Wyandotte Cave 141.65 35 PFAKE 22 24 10.0 +11
WCI LR LR
comp=Z,1μm,19.0s,MS5.6
ERPA Erie 141.73 25 PFAKE 22 24 10.0 +11
ERPA LR LR
comp=Z,1μm,20.0s,MS5.6
ACSO Alum Creek Sta 141.90 29 PFAKE 22 24 10.0 +10
ACSO LR LR
comp=Z,1μm,21.0s,MS5.7
PKME Peaks-Kenny Pk 142.09 11 PFAKE 22 24 10.0 +10
PKME LR LR
comp=Z,1μm,20.0s,MS5.7
NCB Newcomb 142.13 17 PFAKE 22 24 10.0 +10
NCB LR LR
comp=Z,1μm,21.0s,MS5.6
WVT Waverly 142.16 38 *e*PKHKP PKPpre 22 23 51.6
WVT *e* 22 24 00.4
WVT MLR MLR
comp=Z,1μm,19.0s,MS5.7
LBNH Lisbon 142.50 14 PFAKE 22 24 10.0 +10
LBNH LR LR
comp=Z,988nm,20.0s,MS5.6
VBMS Vicksburg 142.73 46 PFAKE 22 24 10.0 +8.7
VBMS LR LR
comp=Z,1μm,20.0s,MS5.6
PLAL Pickwick Lake 142.74 40 PKPdf PKPdf 22 23 56.0 -5.3
PLAL LR LR
comp=Z,1μm,21.0s,MS5.6
BINY Binghamton 143.17 20 PFAKE 22 24 10.0 +8.3
BINY LR LR
comp=Z,2μm,22.0s,MS5.8
MCWV Mont Chateau 143.82 27 *e*PKPdf PKPdf 22 24 02.7 -0.3
MCWV LR LR
comp=Z,2μm,21.0s,MS5.8
SSPA Standing Stone 143.82 24 *e*PKPdf PKPdf 22 23 58.6 -4.3
SSPA LR LR
comp=Z,882nm,19.0s,MS5.5
SWET Sewanee 143.92 38 *e*PKPdf PKPdf 22 23 59.1 -4.2
TZTN Tazewell 144.38 34 *e*PKPpre PKPpre 22 23 55.2
TZTN PKPdf PKPdf 22 24 05.1 +1.1
LRAL Lakeview Retre 144.66 42 *e*PKPdf PKPdf 22 24 01.2 -3.4
LRAL LR LR
comp=Z,1μm,20.0s,MS5.6
CAM4 Nova Friburgo 145.33 209 ⇑ *i*P PKPbc 22 24 05.5 -0.4
CAM4 *i* 22 24 07.3
CAM4 *i* 22 24 20.2
CAM4 *i* 22 24 22.9
CAM4 *i* 22 24 31.6
CAM4 *i* 22 24 44.5
CAM4 *i* 22 25 00.5
ELN Prospectdale 145.33 30 *e*PKP PKPdf 22 24 04.6 -1.1
BLA Blacksburg 145.51 30 *e*PKP2 PKPab 22 24 04.5 -1.8
BLA MLR MLR
comp=Z,1μm,20.0s,MS5.7
CPUP Villa Florida 145.67 184 PKPbc PKPbc 22 24 07.3 +0.4
comp=Z,31nm,0.6s,baz=126,slow=1.8,SNR=45
BRAL Brewton 145.84 45 PFAKE 22 24 20.0 +13
BRAL LR LR
comp=Z,1μm,21.0s,MS5.7
CBN Corbin 146.10 25 PFAKE 22 24 20.0 +13
CBN LR LR
comp=Z,2μm,19.0s,MS5.8
SPB Sao Paulo 146.25 201 *e*PKPdf PKPdf 22 24 08.3 +0.7
SPB LR LR
comp=Z,1μm,20.0s,MS5.6
GOGA Godfrey 146.64 38 *e*PKP2 PKPbc 22 24 08.4 -1.2
GOGA MLR MLR
comp=Z,1μm,20.0s,MS5.7
CEN1 Los Morros 147.06 162 ⇓ *i*P PKPdf 22 24 12.3 +3.3
JSC Jenkinsville 147.31 34 *e*PKP2 PKPbc 22 24 09.6 -1.9
CNNC Cliffs of the 148.31 29 PFAKE 22 24 20.0 +9.3
CNNC LR LR
comp=Z,1μm,20.0s,MS5.7
PAYG Puerto Ayora 148.34 105 PFAKE 22 24 20.0 +8.6
PAYG LR LR
comp=Z,1μm,20.0s,MS5.7
NHSC New Hope 148.78 34 PFAKE 22 24 20.0 +8.4
NHSC LR LR
comp=Z,2μm,21.0s,MS5.8
TEIG Tepich 149.92 63 *e*PKPdf PKPdf 22 24 15.1 +1.4
TEIG LR LR
comp=Z,1μm,22.0s,MS5.6
DWPF Disney 151.48 43 PFAKE 22 24 30.0 +14
DWPF LR LR
comp=Z,1μm,20.0s,MS5.7
TGUH Tegucigalpa,Un 152.39 75 PFAKE 22 24 30.0 +12
TGUH LR LR
comp=Z,879nm,21.0s,MS5.5
RCBR Riachuelo 152.46 241 PKPdf PKPdf 22 24 18.3 +0.5
RCBR LR LR
comp=Z,1μm,20.0s,MS5.7
LPAZ La Paz 154.37 161 PKP PKPdf 22 24 20.4 0.0
comp=Z,5.1nm,1.2s,baz=73,slow=3.1,SNR=8.8
JTS JuntasAbangare 155.05 83 PFAKE 22 24 30.0 +8.5
JTS LR LR
comp=Z,1μm,20.0s,MS5.7
BBSR BB Station 155.44 10 PFAKE 22 24 30.0 +8.5
BBSR LR LR
comp=Z,1μm,21.0s,MS5.7
SIV San Ignacio 156.00 177 PKP PKPdf 22 24 22.8 +0.1
comp=Z,1.4nm,0.6s,baz=8.0,slow=1.4,SNR=6.8
SIV PKPab PKPab 22 24 51.5 +1.8
comp=Z,31nm,0.8s,baz=190,slow=3.5,SNR=29
SIV PP PP 22 28 30.8 +5.5
comp=Z,5.1nm,1.0s,baz=217,slow=7.3,SNR=4.2
OTAV Otavalo 159.80 112 PFAKE 22 24 40.0 +13
OTAV LR LR
comp=Z,889nm,21.0s,MS5.6
MTDJ Mount Denham 160.02 58 PFAKE 22 24 40.0 +12
MTDJ LR LR
comp=Z,2μm,19.0s
BCIP Isla Barro Col 160.13 86 *e*PKPdf PKPdf 22 24 27.2 -0.6
BCIP LR LR
comp=Z,1μm,20.0s
GTBY Guantanamo Bay 161.07 50 PFAKE 22 24 40.0 +11
GTBY LR LR
comp=Z,1μm,20.0s
GRTK Grand Turk 162.76 38 PFAKE 22 24 40.0 +10
GRTK LR LR
comp=Z,1μm,19.0s
SDDR Presa de Saban 164.46 45 PFAKE 22 24 40.0 +8.0
SDDR LR LR
comp=Z,1μm,21.0s
SJG San Juan 168.29 31 PFAKE 22 24 50.0 +15
SJG LR LR
comp=Z,6μm,21.0s
SDV Santo Domingo 169.22 85 PKP PKPdf 22 24 35.5 -0.3
comp=Z,0.9nm,0.3s,baz=64,slow=20,SNR=2.3
SDV Santo Domingo 169.22 85 PKP PKPdf 22 24 35.5 -0.3
SDV LR LR
comp=Z,657nm,20.0s
ANWB Willy Bob 170.31 12 PFAKE 22 24 50.0 +14
ANWB LR LR
comp=Z,2μm,21.0s
FDF Fort de France 173.30 12 PFAKE 22 24 50.0 +12
FDF LR LR
comp=Z,1μm,22.0s
BBGH Gun Hill 175.01 358 PFAKE 22 24 50.0 +12
BBGH LR LR
comp=Z,2μm,21.0s
GRGR Grenville 175.61 25 PFAKE 22 24 50.0 +12
GRGR LR LR
comp=Z,1μm,20.0s

MOS ***03*** *22:49:39.5±1.3, 52°.69N×170°.83E, h24km, mb4.2/4, Error ellipse: s-maj=15.5km s-min=12.6km az=44.0*
ISCJB ***03*** *22:49:41.4±0.5, 52°.91N±0°.08×170°.80E±0°.04, h33km, mb3.7/9, Error ellipse: s-maj=12.2km s-min=3.4km az=7.3*
NEIC ***03*** *22:49:42.3±0.9, 52°.60N×170°.88E, h35km, mb4.1/5, Error ellipse: s-maj=22.3km s-min=7.7km az=184.0*
IDC ***03*** *22:49:43.2±5.0, 53°.00N×170°.89E, h29km±44km, mb3.6/8, mb1 3.7/9, mb1mx3.6/28, mbtmp3.6/9, ML3.3/1, Error ellipse: s-maj=55.4km s-min=11.2km az=7.0*
KRSC ***03*** *22:49:43.7±2.0, 52°.99N×170°.33E, h20km±20km, ML4.2*
ISC 03 22:49:43.9±0.5, 52°.96N±0°.08×170°.87E±0°.04, h35km, n47, σ1°34/58, mb3.7/9, Near Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FX1	**Attu Island--F**	**1.39**	**92**	Pn	**Pn**	**22 50 04.6**	**-2.2**
	133nm,0.3s,baz=307,slow=6.2,SNR=773						
FX1				Sn	**Sn**	**22 50 21.4**	**-2.6**
	488nm,0.3s,baz=59,slow=19,SNR=49						
FX1	**Attu Island--F**	**1.39**	**92**	P	**Pn**	**22 50 04.6**	**-2.2**
FX1						22 50 21.4	
FX1				pmax	pmax		
	comp=Z,133nm,0.3s						
FX1				smax			
	comp=N,488nm,0.3s						
SMY	**Shemya**	**1.97**	**95**	*e*Pn	**Pn**	**22 50 13.9**	**-0.8**
SMY				*e*Sn	**Sn**	**22 50 37.7**	**-0.6**
BKI	**Bering**	**3.66**	**310**	*e*P	**Pn**	**22 50 38.3**	**+0.4**
BKI				*i* S	**Sn**	**22 51 18.3**	**-1.4**
MKZ	**Mys Kozlova**	**5.65**	**290**	*e*P	**Pn**	**22 51 05.1**	**-0.2**
MKZ				*i* S	**Sn**	**22 52 04.3**	**-4.6**
KBTR	**Krutoberegovo**	**5.70**	**308**	P	**Pn**	**22 51 05.6**	**-0.3**
KBTR				*i* S	**Sn**	**22 52 05.0**	**-5.0**
SPN	**Mys Shipunski**	**6.54**	**276**	P	**Pn**	**22 51 17.8**	**+0.3**
SPN				*i* S	**Sn**	**22 52 25.1**	**-5.7**
ZLN	**Zelenaya**	**6.62**	**302**	*e*P	**Pn**	**22 51 20.1**	**+1.6**
ZLN				*i* S	**Sn**	**22 52 30.1**	**-2.5**
BZGR	**Bezymyannyi-Gr**	**6.64**	**301**	P	**Pn**	**22 51 20.6**	**+1.8**
BZGR				*i* S	**Sn**	**22 52 31.6**	**-1.6**
SRKR	**Sorokina**	**6.72**	**307**	P	**Pn**	**22 51 20.5**	**+0.6**
KMNR	**Kamenistaya**	**6.82**	**299**	*e*P	**Pn**	**22 51 22.5**	**+1.3**
KMNR				*e*S	**Sn**	**22 52 33.9**	**-3.6**
KPT	**Kopyto**	**6.90**	**300**	P	**Pn**	**22 51 23.4**	**+1.0**
SRDR	**Sredinnyy**	**7.29**	**302**	P	**Pn**	**22 51 29.2**	**+1.4**
AVH	**Avacha**	**7.31**	**277**	*e*P	**Pn**	**22 51 28.9**	**+0.9**
AVH				*e*S	**Sn**	**22 52 45.7**	**-3.9**
ADK	**Adak**	**7.69**	**93**	P	**Pn**	**22 51 30.6**	**-2.6**
GNL	**Ganaly**	**7.78**	**281**	P	**Pn**	**22 51 36.1**	**+1.7**
GNL				*i* S	**Sn**	**22 52 59.1**	**-2.0**
PETK	**Petropavlovsk-**	**7.94**	**276**	Pn	**Pn**	**22 51 35.9**	**-0.8**
	comp=N,0.4nm,0.3s,baz=91,slow=20,SNR=8.1						
PETK				Sn	**Sn**	**22 53 03.9**	**-1.4**
	comp=N,1.2nm,0.3s,baz=83,slow=12,SNR=8.2						
PETK	**Petropavlovsk-**	**7.94**	**276**	P	**Pn**	**22 51 35.9**	**-0.8**
PETK						22 53 03.9	
PETK				smax			
	comp=N,1.0nm,0.3s						
ALID	**Alaid**	**9.70**	**264**	P	**Pn**	**22 52 01.8**	**+1.1**
UNV	**Unalaska Valle**	**13.52**	**77**	Pn	**Pn**	**22 52 52.8**	**-0.2**
BILL	**Bilibino**	**15.29**	**353**	P	**Pn**	**22 53 19.9**	**+3.1**
BILL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BILL	**Bilibino**	**15.29**	**353**	Pn	**Pn**	**22 53 19.9**	**+3.1**
	comp=Z,2.8nm,0.8s						
TNA	**Tin City**	**16.52**	**32**	Pn	**Pn**	**22 53 32.0**	**-0.6**
SDPT	**Sand Point**	**16.90**	**70**	*e*Pn	**Pn**	**22 53 39.8**	**+2.4**
TTA	**Tatalina**	**19.98**	**47**	*e*P	**Pn**	**22 54 15.0**	**+0.3**
TTA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
TTA	**Tatalina**	**19.98**	**47**	*e*P	**Pn**	**22 54 15.0**	**+0.3**
	comp=Z,6.7nm,0.7s						
OHAK	**Old Harbor**	**20.79**	**64**	*e*P	**P**	**22 54 21.4**	**-0.2**
	comp=Z,11nm,0.6s						
MENT	**Mentasta**	**25.54**	**49**	*e*P	**P**	**22 55 11.0**	**+2.2**
EGAK	**Eagle**	**26.75**	**45**	*e*P	**P**	**22 55 19.2**	**-0.6**
	comp=Z,6.5nm,0.8s,mb4.2						
DAWY	**Dawson**	**27.50**	**47**	*e*P	**P**	**22 55 27.3**	**+0.8**
INK	**Inuvik**	**29.98**	**38**	P	**P**	**22 55 49.0**	**+0.6**
	comp=Z,0.5nm,0.5s,mb3.5,baz=275,slow=8.6,SNR=4.6						
INK	**Inuvik**	**29.98**	**38**	*e*P	**P**	**22 55 49.6**	**+1.2**
YKA	**Yellowknife Ar**	**38.73**	**46**	P	**P**	**22 57 05.0**	**+0.9**
	comp=Z,0.5nm,0.8s,mb3.3,baz=298,slow=8.9,SNR=5.1						
YKA	**Yellowknife Ar**	**38.73**	**46**	P	**P**	**22 57 05.0**	**+0.9**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**38.73**	**46**	P	**P**	**22 57 05.0**	**+0.9**
SONM	**Songino Array**	**40.18**	**290**	P	**P**	**22 57 17.9**	**+1.6**
	comp=Z,0.4nm,0.6s,mb3.3,baz=59,slow=8.6,SNR=2.8						
KURK	**Kurchatov**	**53.16**	**307**	P	**P**	**22 58 58.9**	**+1.0**
	comp=Z,1.1nm,0.7s,mb3.9,baz=56,slow=7.5,SNR=8.9						
KURK	**Kurchatov**	**53.16**	**307**	P	**P**	**22 58 58.9**	**+1.0**

KURK pmax pmax
comp=Z,1.0nm,0.7s,mb3.9
KURK Kurchatov 53.16 307 *e*P **P 22 58 57.7 -0.1**
comp=Z,1.1nm,0.7s,mb3.9
BVAR Borovoye Array 55.38 314 P **P 22 59 13.1 -0.9**
comp=Z,0.7nm,0.6s,mb3.9,baz=18,slow=6.6,SNR=4.9
BVAR Borovoye Array 55.38 314 P **P 22 59 13.1 -0.9**
BVAR pmax pmax
comp=Z,1.0nm,0.6s
FINES FINESS Array B 62.56 342 P **P 23 00 01.9 -1.7**
comp=Z,1.1nm,0.6s,mb4.1,baz=150,slow=6.4,SNR=3.5
FINES FINESS Array B 62.56 342 P **P 23 00 01.9 -1.7**
FINES pmax pmax
comp=Z,1.0nm,0.6s
NOA NORSAR Array B 65.20 349 P **P 23 00 19.8 -1.1**
comp=Z,0.5nm,0.4s,mb3.9,baz=358,slow=4.8,SNR=4.3
NOA NORSAR Array B 65.20 349 P **P 23 00 19.8 -1.1**
NOA pmax pmax
comp=Z,1.0nm,0.4s
MICGM Minsk 68.59 338 *e*LR LR 22 59 40.0
GERES GERESS Array B 76.74 345 P **P 23 01 31.7 +0.6**
comp=Z,0.2nm,0.4s,mb3.4,baz=30,slow=8.2,SNR=3.8

BJI ***03*** *22:49:52.9,2.°15S×100.°48E,h31km,mB5.5/27,mb5.4/55, Ms5.0/44,Ms7 4.9/40*
MOS ***03*** *22:49:55.6±0.9,1.°96S×100.°04E,h33km,mb5.6/69, MS4.7/18,Error ellipse: s-maj=8.1km s-min=4.2km az=114.5*
ISCJB ***03*** *22:49:55.3±0.1,2.°05S±0.°02×99.°90E±0.°02,h32km, mb5.4/212,MS4.8/74,Error ellipse: s-maj=3.7km s-min=2.7km az=30.8*
IDC ***03*** *22:49:56.7±0.4,2.°02S×100.°04E,h31km±2km,mb4.9/31, mb1 5.0/33,mb1mx5.0/34,mbtmp4.9/33,ML4.6/2,MS4.7/10, Ms1 4.7/10,ms1mx4.3/30,Error ellipse: s-maj=11.4km s-min=7.7km az=44.0*
NEIC ***03*** *22:49:57.1±0.6,2.°08S×99.°98E,h35km±4km,mb5.4/91, Error ellipse: s-maj=3.7km s-min=2.9km az=221.0*
NEIC Felt [III] at Padang and [II] at Padangpanjang, Sumatra.
TEH ***03*** *22:49:57.0,2.°09S×100.°00E,h35km*
DJA ***03*** *22:49:58,2.°12S×99.°73E,h53km,Mw5.5/19*
GCMT ***03*** *22:49:59.9±0.4,2.°38S×99.°62E,h43km±1km,MW5.2, Moment Tensor Solution. s26,c31; s56,c77; Moment tensor: Scale 10^16^Nm; M_{rr}6.01±.51; $M_{\theta\theta}$-3.38±.29; $M_{\phi\phi}$-2.63±.34; $M_{r\theta}$3.39±.23; $M_{\theta\phi}$2.90±.16; $M_{\phi r}$-1.32±.28; Best double couple: $M_0$7.00000×10^16^ NP1:ϕ_s321.00000°, δ31.00000°,λ107.00000°. NP2:ϕ_s121.00000°,δ61.00000°, λ80.00000°. Principal axes: T 7.1200, Plg73.0000°, Azm8.0000°; N -0.2700, Plg8.0000°, Azm126.0000°; P -6.8500, Plg15.0000°, Azm218.0000°; Data Used: IU IC II G.*
SZGRF ***03*** *22:50:02.9,1.°91S×98.°37E,h39km,mb5.4,Southern Sumatera, Indonesia*
ISC 03 22:49:57.3±0.1,2.°07S±0.°02×99.°89E±0.°02,h35km, h35km±.9km:pP-P,n672,σ0.°95/606,mb5.4/211,MS4.8/74, 83C-26D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase Op	ID	ISC	Time h m s	Res ISC
SISI	**Saibi**	**1.09**	**313**	P		**Pn**	**22 50 16.4**	**+0.3**
PDSI	**Padang**	**1.29**	**26**	P		**Pn**	**22 50 22.2**	**+3.3**
PPI	**Padang Panjang**	**1.69**	**18**	P		**Pn**	**22 50 26.1**	**+1.8**
BKNI	**Bangkinang**	**2.65**	**26**	P		**Pn**	**22 50 40.4**	**+2.8**
MNSI	**Mandailing Nat**	**2.87**	**354**	P		**Pn**	**22 50 41.3**	**+0.7**
KSI	**Kapahiang**	**3.12**	**120**	P		**Pn**	**22 50 45.3**	**+1.2**
MNAI	**Manna**	**3.81**	**127**	P		**Pn**	**22 51 00.1**	**+6.5**
GSI	**Gunungsitoli**	**4.08**	**325**	P		**Pn**	**22 50 56.7**	**-0.5**
TRSI	**Tarutung**	**4.18**	**347**	P		**Pn**	**22 51 00.1**	**+1.5**
MDSI	**Maura Dua**	**4.91**	**119**	P		**Pn**	**22 51 09.8**	**+1.1**
	2.4nm8μm424nm,1.2s							
PSI	**Prapat**	**4.94**	**349**	Pn		**Pn**	**22 51 06.5**	**-2.6**
	9.4nm,0.3s,baz=149,slow=11,SNR=42							
PSI				LR		LR	22 53 32.7	
	comp=Z,13μm,18.5s,baz=156,slow=45							
PMBI	**Palembang**	**4.95**	**100**	P		Px	22 51 21.1	
LWLI	**Liwa**	**5.09**	**125**	P		**Pn**	**22 51 12.3**	**+1.2**
	16nm3μm,0.8s							
KGM	**Kluang**	**5.32**	**40**	P		**Pn**	**22 51 16.8**	**+2.6**
MYKOM	**Kota Tinggi**	**5.51**	**46**	P		**Pn**	**22 51 19.7**	**+2.7**
MYKOM	**Kota Tinggi**	**5.51**	**46**	P		**Pn**	**22 51 19.0**	**+2.0**
	2.0nm8μm528nm,1.0s							
FRIM	**Kepong**	**5.55**	**18**	P		**Pn**	**22 51 20.1**	**+2.5**
KLI	**Kotabumi**	**5.68**	**119**	P		**Pn**	**22 51 21.5**	**+2.2**
	4.6nm876nm,0.8s							
KASI	**Kota Agung**	**5.73**	**127**	P		**Pn**	**22 51 20.9**	**+0.9**
	4.2nm10μm885nm,0.8s							
IPM	**Ipoh**	**6.61**	**10**	P		**Pn**	**22 51 34.8**	**+2.8**
IPM	**Ipoh**	**6.61**	**10**	P		**Pn**	**22 51 34.0**	**+2.0**
	1.5nm3μm341nm,0.8s							
RBSI	**Rajabasa**	**6.94**	**123**	P		**Pn**	**22 51 38.5**	**+1.9**
	1.4nm4μm451nm,1.0s							
CGJI	**Cibinong**	**7.34**	**128**	P		**Pn**	**22 51 41.0**	**-1.0**
	1.1nm3μm309nm,0.8s							
KULM	**Kulim**	**7.35**	**6**	P		**Pn**	**22 51 43.5**	**+1.2**
KULM	**Kulim**	**7.35**	**6**	⇑*e*Pn		**Pn**	**22 51 43.0**	**+0.7**
	318nm,0.9s							
KULM				Sn		**Sn**	**22 53 06.3**	**+1.7**
KTGM	**Kuala Trenggan**	**8.04**	**24**	P		**Pn**	**22 51 54.3**	**+2.7**
BSI	**Banda Aceh**	**8.81**	**329**	P		**Pn**	**22 52 00.1**	**-2.2**
	186nm,0.8s							
JCJI	**Jatiwangi**	**9.44**	**118**	P		Px	22 52 24.9	
COCO	**West Island**	**10.50**	**197**	*i* P		**Pn**	**22 52 27.2**	**+1.8**
COCO	**West Island**	**10.50**	**197**	*e*Pn		**Pn**	**22 52 24.2**	**-1.1**
COCO	**West Island**	**10.50**	**197**	P		**Pn**	**22 52 27.0**	**+1.6**
	288nm,1.1s							
KSM	**Kuching**	**11.00**	**71**	P		**Pn**	**22 52 34.4**	**+2.1**
KSM	**Kuching**	**11.00**	**71**	*e*Pn		**Pn**	**22 52 31.7**	**-0.6**
	89nm,1.1s							
KSM				*e*Sn		**Sn**	**22 54 31.1**	**-3.1**
KSM	**Kuching**	**11.00**	**71**	P		**Pn**	**22 52 35.5**	**+3.2**
	73nm,1.1s							
SMRI	**Semarang**	**11.62**	**116**	P		**Pn**	**22 52 43.0**	**+2.2**
	316nm,1.1s							
STKI	**Sintang**	**11.78**	**80**	P		**Pn**	**22 52 51.0**	**+8.0**
	99nm,0.8s							
NGJI	**Ngawi**	**12.67**	**115**	P		**Pn**	**22 52 58.4**	**+3.2**
	112nm,1.0s							
PCJI	**Pacitan**	**12.78**	**119**	P		**Pn**	**22 53 06.3**	**+10**
SBUM	**Sibu**	**13.12**	**70**	P		**Pn**	**22 53 05.5**	**+4.2**
SBUM	**Sibu**	**13.12**	**70**	P		**Pn**	**22 53 04.9**	**+3.6**
	2μm172nm,1.4s							
PWJI	**Pagerwojo**	**13.25**	**117**	P		**Pn**	**22 53 05.5**	**+2.3**
	89nm,0.9s							
BTM	**Bintulu**	**14.19**	**68**	P		**Pn**	**22 53 16.0**	**0.0**
KMMI	**Kalianget**	**14.88**	**110**	P		**Pn**	**22 53 28.1**	**+2.9**
	142nm,1.3s							
PBA	**Port Blair**	**15.38**	**333**	*e*PKP		**Pn**	**22 53 33.7**	**+1.9**
KBKI	**Kotabaru**	**16.31**	**95**	P		**Pn**	**22 53 44.1**	**+0.3**
	2μm106nm,1.5s							
KHKI	**Kahang-Kahang**	**16.85**	**112**	P		**Pn**	**22 53 58.4**	**+7.7**
KKM	**Kota Kinabalu**	**18.19**	**64**	P		**Pn**	**22 54 08.2**	**+1.0**
KKM	**Kota Kinabalu**	**18.19**	**64**	*e*Pn		**Pn**	**22 54 06.0**	**-1.2**
	3μm,2.3s							
KKM	**Kota Kinabalu**	**18.19**	**64**	P		**Pn**	**22 54 07.8**	**+0.5**
	1μm95nm,0.8s							
SDKM	**Sandakan**	**18.91**	**66**	P		**Pn**	**22 54 16.5**	**+0.5**
TSM	**Tawau**	**19.05**	**71**	P		**Pn**	**22 54 17.9**	**+0.2**
KDM	**Kudat**	**19.12**	**62**	P		**Pn**	**22 54 18.9**	**+0.3**
TTSI	**Tana Toraja**	**19.93**	**93**	P		**Pn**	**22 54 26.9**	**-1.4**
	162nm,0.9s							
MYLDM	**Lahad Datu**	**19.94**	**69**	P		**Pn**	**22 54 28.5**	**+0.2**
MYLDM	**Lahad Datu**	**19.94**	**69**	P		**Pn**	**22 54 28.0**	**-0.3**
	262nm,1.0s							
KAPI	**Kappang**	**20.04**	**99**	P		**P**	**22 54 26.7**	**-0.9**
	2μm,0.8s,SNR=33							
KAPI	**Kappang**	**20.04**	**99**	P		**P**	**22 54 26.4**	**-1.2**
	5.6nm,0.3s,baz=280,slow=9.8,SNR=29							
KAPI				S		**S**	**22 58 08.9**	**-2.2**
	0.5nm,0.3s,baz=195,slow=21,SNR=3.1							
KAPI				LR		LR	23 02 55.9	
	comp=Z,1μm,19.6s,MS4.2,baz=10,slow=39							
CMAR	**Chiang Mai Arr**	**20.42**	**357**	P		**P**	**22 54 29.4**	**-2.3**
	77nm,0.9s,baz=184,slow=9.6,SNR=188							
CMAR				PcP		PcP	22 58 44.5	+1.1
	6.8nm,0.9s,baz=225,slow=3.0,SNR=8.6							
CMAR				LR		LR	23 02 48.6	
	comp=Z,2μm,19.0s,MS4.5,baz=189,slow=38							
CMAR	**Chiang Mai Arr**	**20.42**	**357**	*e*P		**P**	**22 54 29.3**	**-2.3**
CMAR				pmax		pmax		
	comp=Z,77nm,0.9s							
CHTO	**Chiang Mai**	**20.78**	**357**	PFAKE			22 54 50.0	+15
CHTO				LR		LR		
	comp=Z,2μm,21.0s,MS4.4							
PALK	**Pallekele**	**21.28**	**296**	P		**P**	**22 54 41.8**	**+0.8**
	comp=Z,12nm,0.8s,mb4.3,baz=113,slow=9.2,SNR=4.6							
PALK				LR		LR	23 02 06.0	
	comp=Z,2μm,18.2s,MS4.5,baz=108,slow=34							
PALK	**Pallekele**	**21.28**	**296**	*e*P		**P**	**22 54 42.2**	**+1.2**
PALK				pmax		pmax		
	comp=Z,73nm,1.1s,mb4.9							
PALK	**Pallekele**	**21.28**	**296**	*e*P		**P**	**22 54 42.2**	**+1.3**
	comp=Z,73nm,1.1s,mb4.9							
APSI	**Ampana**	**21.78**	**87**	P		**P**	**22 54 47.9**	**+1.5**
	comp=Z,3μmcomp=Z,310nm,0.9s,mb5.7							
MRSI	**Marisa**	**22.19**	**84**	P		**P**	**22 54 50.5**	**-0.3**
	comp=Z,2μmcomp=Z,187nm,1.2s,mb5.4							
KDI	**Kendari**	**22.77**	**95**	P		**P**	**22 54 57.3**	**+0.3**
	comp=Z,2μmcomp=Z,166nm,1.2s,mb5.3							
LUWI	**Luwuk**	**22.90**	**88**	P		**P**	**22 54 58.1**	**-0.2**
	comp=Z,2μmcomp=Z,236nm,1.0s,mb5.6							
QIZ	**Qiongzhong**	**23.14**	**25**	P		**P**	**22 54 59.4**	**-1.3**
QIZ				pP			22 55 09.1	
QIZ				sP		sP	22 55 13.6	-0.8
QIZ				pmax		pmax		
	comp=Z,130nm,0.8s,mb5.4							
QIZ				LR		LR		
	comp=N,2μm,15.9s							
QIZ				LR		LR		
	comp=Z,3μm,15.6s,MS4.8							
QIZ	**Qiongzhong**	**23.14**	**25**	*e*P		**P**	**22 54 59.9**	**-0.8**
	comp=Z,100nm,0.8s,mb5.3							
QIZ				LR		LR		
	comp=Z,2μm,20.0s,MS4.5							
MDRS	**Chennai**	**24.62**	**308**	*e*PKP		**P**	**22 55 15.0**	**+0.3**
MNI	**Manado**	**25.19**	**82**	P		**P**	**22 55 21.9**	**+2.0**
	comp=Z,4μmcomp=Z,439nm,0.9s,mb6.0							
VIS	**Vishakhapatnam**	**25.56**	**321**	*e*PKP		**P**	**22 55 23.8**	**+0.7**
TGY	**Tagaytay City**	**26.33**	**52**	P		**P**	**22 55 28.5**	**-1.7**
	comp=Z,175nm,0.4s,mb5.9,baz=341,slow=2.5,SNR=6.9							
MBWA	**Marble Bar**	**27.09**	**136**	*e*P		**P**	**22 55 35.0**	**-2.0**
	comp=Z,28nm,1.0s,mb4.8							
MBWA				LR		LR		
	comp=Z,2μm,20.0s,MS4.6							
AGT	**Agartala**	**27.14**	**342**	*ex*		**P**	**22 55 32.0**	**-5.3**
AGT				*ex*		x	22 56 17.0	
KMI	**Kunming**	**27.18**	**6**	P		**P**	**22 55 37.8**	**+0.1**
KMI				pP		pP	22 55 48.4	+0.8
KMI				pmax		pmax		
	comp=Z,30nm,1.0s,mb4.8							
KMI				LR		LR		
	comp=N,1μm,18.2s,MS4.7							
KMI				LR		LR		
	comp=E,1μm,15.6s,MS4.7							
KMI				LR		LR		
	comp=Z,2μm,17.7s,MS4.6							
DAV	**Davao City (W)**	**27.20**	**70**	P		**P**	**22 55 36.9**	**-1.2**
	comp=Z,98nm,0.4s,mb5.7,baz=221,slow=14,SNR=6.0							
DAV				LR		LR	23 07 53.8	
	comp=Z,1μm,18.7s,MS4.5,baz=223,slow=40							
DAV	**Davao City (W)**	**27.20**	**70**	*e*P		**P**	**22 55 36.6**	**-1.4**
DAV				LR		LR		
	comp=Z,990nm,20.0s,MS4.4							
TNTI	**Ternate**	**27.62**	**84**	P		**P**	**22 55 41.0**	**-0.9**
	comp=Z,82nm,1.2s,mb5.2							
DGAR	**Diego Garcia**	**27.84**	**258**	P		**P**	**22 55 44.5**	**+0.7**
DGAR				MLR		MLR		
	comp=Z,2μm,20.0s,MS4.7							
SHL	**Shillong**	**28.55**	**345**	⇑*i*P		**P**	**22 55 52.0**	**+2.0**
	comp=Z,41nm,0.8s,mb5.2							
SHL				*e*S		**S**	**23 00 39.0**	**+3.2**
HYB	**Hyderabad**	**28.59**	**313**	*e*P		**P**	**22 55 51.0**	**+0.5**
HYB	**Hyderabad**	**28.59**	**313**	*i* P		**P**	**22 55 51.0**	**+0.5**
GYA	**Guiyang**	**29.11**	**13**	⇑*i*P		**P**	**22 55 53.9**	**-1.0**
GYA				S		**S**	**23 00 45.0**	**+0.4**
GYA				pmax		pmax		
	comp=Z,30nm,0.9s,mb5.0							
GYA				pmax		pmax		
	comp=Z,140nm,5.0s							
GYA				LR		LR		
	comp=N,2μm,15.0s,MS5.0							
GYA				LR		LR		
	comp=E,2μm,14.3s,MS5.0							
GYA				LR		LR		
	comp=Z,4μm,14.7s,MS5.2							
FITZ	**Fitzroy Crossi**	**29.86**	**124**	*e*P		**P**	**22 56 00.5**	**-1.2**
	comp=Z,64nm,0.9s,mb5.3							
FITZ	**Fitzroy Crossi**	**29.86**	**124**	P		**P**	**22 56 00.6**	**-1.2**
	comp=Z,47nm,1.0s,mb5.2,baz=296,slow=7.2,SNR=55							
FITZ	**Fitzroy Crossi**	**29.86**	**124**	*e*P		**P**	**22 56 00.7**	**-1.1**
	comp=Z,46nm,0.9s,mb5.2							
FITZ	**Fitzroy Crossi**	**29.86**	**124**	P		**P**	**22 56 00.7**	**-1.0**
	comp=Z,2μmcomp=Z,107nm,1.0s,mb5.5							
NGP	**Nagpur**	**30.80**	**320**	*ex*		**P**	**22 56 06.5**	**-3.5**
SWI	**Sorong**	**31.38**	**88**	P		**P**	**22 56 13.6**	**-1.7**
	comp=Z,2μmcomp=Z,268nm,0.9s,mb6.1							
KNA	**Kununurra**	**31.53**	**117**	P		**P**	**22 56 14.6**	**-1.9**
	comp=Z,800nmcomp=Z,84nm,0.9s,mb5.6							
KAD	**Karad**	**31.84**	**308**	*e*PKP		**P**	**22 56 20.0**	**+0.9**
TPUB	**Ta-pu**	**32.31**	**38**	*e*P		**P**	**22 56 23.6**	**+0.3**
	comp=Z,101nm,0.8s,mb5.7							
PKI	**Pulchoki**	**32.60**	**336**	*e*P		**P**	**22 56 26.2**	**+0.4**
	comp=Z,61nm,0.8s,mb5.6							
PKI	**Pulchoki**	**32.60**	**336**	*e*P		**P**	**22 56 26.2**	**+0.4**
PKI				pmax		pmax		
	comp=Z,61nm,0.8s,mb5.6							
PKIN	**Phulchoki**	**32.62**	**336**	*e*P		**P**	**22 56 26.2**	**+0.4**
	comp=Z,75nm,0.7s,mb5.8							
LSA	**Lhasa**	**32.68**	**346**	*e*P		**P**	**22 56 27.5**	**+1.1**
LSA	**Lhasa**	**32.68**	**346**	*e*P		**P**	**22 56 27.9**	**+1.5**
LSA				*e*			22 59 12.6	
LSA				MLR		MLR		
	comp=Z,767nm,19.0s,MS4.4							
LSA	**Lhasa**	**32.68**	**346**	*e*P		**P**	**22 56 27.9**	**+1.5**
	comp=Z,134nm,1.0s,mb5.8							
LSA				*e*PcP		PcP	22 59 12.6	+0.8
LSA				LR		LR		
	comp=Z,767nm,19.0s,MS4.4							
GUN	**Gumba**	**32.72**	**337**	*e*P		**P**	**22 56 27.7**	**+1.0**
	comp=Z,263nm,0.6s,mb6.3							
DMN	**Daman**	**32.76**	**335**	*e*P		**P**	**22 56 27.5**	**+0.4**
	comp=Z,132nm,1.1s,mb5.8							
YULB	**Yu-li**	**32.79**	**38**	*e*P		**P**	**22 56 28.1**	**+0.7**
	comp=Z,38nm,0.8s,mb5.4							
POO	**Poona**	**32.80**	**310**	*e*PKP		**P**	**22 56 28.5**	**+1.0**
POO				AMb		AMB	22 56 29.9	
	comp=Z,57nm,0.9s,mb5.5							
KKN	**Kakani**	**32.85**	**336**	*e*P		**P**	**22 56 28.3**	**+0.4**
	comp=Z,162nm,0.9s,mb6.0							
SSLB	**Suanglung**	**32.88**	**37**	*e*P		**P**	**22 56 28.3**	**+0.1**
	comp=Z,38nm,0.8s,mb5.4							
CD2	**Chengdu**	**33.01**	**6**	⇓*i*P		**P**	**22 56 28.0**	**-1.2**
CD2				pP		pP	22 56 37.6	-1.6
CD2				sP		sP	22 56 41.8	-1.6
CD2				PP		PP	22 57 39.6	-4.7
CD2				S		**S**	**23 01 44.5**	**-1.0**
CD2				sS		sS	23 02 00.5	-1.5
CD2				SS		SS	23 03 46.8	-22
CD2				ScS		ScS	23 06 50.0	-4.7
CD2				pmax		pmax		
	comp=Z,40nm,0.8s,mb5.4							
CD2				pmax		pmax		
	comp=Z,120nm,5.4s							
CD2				LR		LR		
	comp=N,2μm,17.8s,MS5.0							
CD2				LR		LR		
	comp=E,2μm,16.7s,MS5.0							
CD2				LR		LR		
	comp=Z,1μm,20.2s,MS4.7							
BHPL	**Bhopal**	**33.35**	**320**	*e*PKP		**P**	**22 56 32.9**	**+0.6**
ENH	**Enshi**	**33.44**	**15**	*e*P		**P**	**22 56 31.6**	**-1.5**
	comp=Z,70nm,0.9s,mb5.6							
ENH				*e*PcP		PcP	22 59 13.5	-0.4
ENH				LR		LR		
	comp=Z,992nm,21.0s,MS4.5							
NACB	**Ninganchiao**	**33.55**	**38**	*e*P		**P**	**22 56 34.5**	**+0.5**
	comp=Z,56nm,0.8s,mb5.5							
YHNB	**Yeheng**	**33.79**	**37**	*e*P		**P**	**22 56 36.4**	**+0.2**
	comp=Z,108nm,1.4s,mb5.6							
YHNB				*e*PcP		PcP	22 59 14.7	-0.3
YHNB				LR		LR		
	comp=Z,1μm,20.0s,MS4.6							
KAKA	**Kakadu**	**33.92**	**110**	*e*P		**P**	**22 56 34.6**	**-2.8**
	comp=Z,8.3nm,0.3s,mb5.1							
KAKA	**Kakadu**	**33.92**	**110**	*e*P		**P**	**22 56 34.8**	**-2.6**
	comp=Z,53nm,0.7s,mb5.6							
KAKA				*e*PcP		PcP	22 59 16.4	+0.8
KAKA	**Kakadu**	**33.92**	**110**	P		**P**	**22 56 35.7**	**-1.7**
	comp=Z,311nmcomp=Z,39nm,0.7s,mb5.4							
TATO	**Taipei**	**34.09**	**37**	*e*P		**P**	**22 56 38.2**	**-0.5**
	comp=Z,72nm,1.1s,mb5.5							
NWAO	**Narrogin (SRO)**	**34.74**	**154**	P		**P**	**22 56 43.3**	**-1.0**
	comp=Z,14nm,0.7s,mb5.0,baz=326,slow=7.7,SNR=12							
NWAO	**Narrogin (SRO)**	**34.74**	**154**	*e*P		**P**	**22 56 44.0**	**-0.3**
NWAO				pmax		pmax		
	comp=Z,50nm,1.4s							
NWAO				MLR		MLR		
	comp=Z,2μm,20.0s							
NWAO	**Narrogin (SRO)**	**34.74**	**154**	*e*P		**P**	**22 56 44.0**	**-0.3**
	comp=Z,50nm,1.4s,mb5.2							
NWAO				LR		LR		
	comp=Z,2μm,20.0s,MS4.8							
WHN	**Wuhan**	**35.25**	**22**	⇓P		**P**	**22 56 41.7**	**-7.0**
WHN				LR		LR		
	comp=N,7μm,18.6s,MS5.5							
WHN				LR		LR		
	comp=E,3μm,14.7s,MS5.5							
WHN				LR		LR		
	comp=Z,6μm,16.3s,MS5.5							
KMBL	**Kambalda**	**35.78**	**147**	*e*P		**P**	**22 56 54.1**	**+0.8**
	comp=Z,99nm,0.7s,mb5.8							
PTH	**Pithoragarh**	**36.65**	**331**	*e*PKP		**P**	**22 57 01.2**	**+0.5**
XAN	**Xi'an**	**36.91**	**13**	P		**P**	**22 57 01.4**	**-1.5**
XAN				pP		pP	22 57 10.5	-2.5
XAN				sP		sP	22 57 15.2	-2.0
XAN				S		**S**	**23 02 45.3**	**-0.3**
XAN				pmax		pmax		
	comp=Z,25nm,0.9s,mb5.0							
XAN				LR		LR		
	comp=N,1μm,17.0s,MS4.7							
XAN				LR		LR		
	comp=E,290nm,15.7s,MS4.7							
XAN				LR		LR		
	comp=Z,700nm,16.3s,MS4.5							
AJM	**Ajmer**	**37.42**	**321**	*e*PKP		**P**	**22 57 07.6**	**+0.3**
WRAB	**Tennant Creek**	**38.06**	**120**	P		**P**	**22 57 11.0**	**-1.8**
	comp=Z,845nm,0.8s,mb6.5,SNR=63							
WRAB	**Tennant Creek**	**38.06**	**120**	*e*P		**P**	**22 57 11.6**	**-1.2**
WRAB				pmax		pmax		
	comp=Z,130nm,1.0s,mb5.6							
WRAB				MLR		MLR		
	comp=Z,784nm,20.0s,MS4.5							
WRAB	**Tennant Creek**	**38.06**	**120**	*e*P		**P**	**22 57 11.6**	**-1.2**
	comp=Z,130nm,1.0s,mb5.6							
WRAB				LR		LR		
	comp=Z,784nm,20.0s,MS4.5							
WRAB	**Tennant Creek**	**38.06**	**120**	P		**P**	**22 57 11.5**	**-1.3**
	comp=Z,151nm,0.8s,mb5.8							
LZH	**Lanzhou**	**38.14**	**5**	*e*P		**P**	**22 57 12.8**	**-0.5**
LZH				pP		pP	22 57 25.2	+1.8
LZH				PP		PP	22 58 45.5	+4.6
LZH				PcP		PcP	22 59 28.9	+1.2
LZH				*e*S		**S**	**23 03 04.5**	**+0.3**
LZH				*e*SS		SS	23 05 45.5	-6.7
LZH				pmax		pmax		
	comp=Z,24nm,1.2s,mb4.8							
LZH				pmax		pmax		
	comp=Z,120nm,5.4s							
LZH				LR		LR		
	comp=E,1μm,14.5s							
LZH				LR		LR		
	comp=Z,2μm,15.8s,MS5.0							
DDI	**Dehra Dun**	**38.36**	**329**	*ex*		x	22 57 22.3	
DDI				*ex*		x	22 59 36.8	
NJ2	**Nanjing**	**38.41**	**26**	*e*P		**P**	**22 57 15.2**	**-0.4**
NJ2				pP		pP	22 57 25.0	-0.7
NJ2				sP		sP	22 57 28.9	-1.0
NJ2				PP		PP	22 58 47.1	+3.2
NJ2				S		**S**	**23 03 07.0**	**-1.4**
NJ2				sS		sS	23 03 23.0	-2.1
NJ2				pmax		pmax		
	comp=Z,40nm,1.0s,mb5.1							
NJ2				pmax		pmax		
	comp=Z,330nm,5.1s							
NJ2				LR		LR		
	comp=N,4μm,22.2s,MS5.3							
NJ2				LR		LR		
	comp=E,4μm,22.7s,MS5.3							
NJ2				LR		LR		
	comp=Z,2μm,13.6s							
SSE	**Sheshan**	**38.72**	**30**	P		**P**	**22 57 18.6**	**+0.4**
SSE				pmax		pmax		
	comp=Z,69nm,0.7s,mb5.5							
SSE				pmax		pmax		
	comp=Z,300nm,8.1s							
FORT	**Forrest**	**39.06**	**140**	*e*P		**P**	**22 57 21.9**	**+0.8**
	comp=Z,32nm,0.7s,mb5.2							
FORT	**Forrest**	**39.06**	**140**	*e*P		**P**	**22 57 20.6**	**-0.5**
	comp=Z,46nm,0.8s,mb5.3							
ASAR	**Alice Springs**	**39.30**	**126**	P		**P**	**22 57 22.6**	**-0.5**
	comp=Z,40nm,0.7s,mb5.2,baz=303,slow=7.9,SNR=244							
ASAR				PcP		PcP	22 59 32.0	+0.4
	comp=Z,12nm,0.7s,baz=297,slow=2.5,SNR=8.8							
ASAR				S		**S**	**23 03 18.9**	**-3.2**
	comp=Z,6.5nm,1.0s,baz=297,slow=16,SNR=9.3							
SMLA	**Simla**	**39.47**	**329**	*e*PKP		**P**	**22 57 24.5**	**+0.1**
THN	**Thein Dam**	**41.25**	**328**	*e*PKP		**P**	**22 57 38.0**	**-1.2**
GTA	**Gaotai**	**41.28**	**360**	⇑P		**P**	**22 57 39.2**	**-0.1**
GTA				pP		pP	22 57 48.8	-0.7
GTA				sP		s

DL2 LR LR
comp=Z,530nm,18.2s,MS4.5
BBOO Buckleboo 45.67 136 *e*P **P** **22 58 14.5 -0.4**
comp=Z,13nm,1.1s,mb4.8
KSH Kashi 46.85 335 *e*P **P** **22 58 22.8 -1.2**
KSH pP pP 22 58 32.9 -1.4
KSH sP sP 22 58 36.8 -1.6
KSH PcP PcP 22 59 57.0 +0.4
KSH PP PP 23 00 12.4 -2.2
KSH ScP ScP 23 03 46.7 -1.2
KSH PcS PcS 23 03 50.5 -1.0
KSH S **S** **23 05 07.7 -4.6**
KSH ScS ScS 23 08 12.6 -3.5
KSH SS SS 23 08 27.4 -12
KSH pmax pmax
comp=Z,25nm,0.9s,mb5.1
KSH pmax pmax
comp=Z,810nm,11.1s
KSH LR LR
comp=N,370nm,11.7s,MS4.8
KSH LR LR
comp=E,470nm,12.6s,MS4.8
KSH LR LR
comp=Z,260nm,7.5s
WMQ Urumqi 46.98 348 P **P** **22 58 26.0 +1.1**
WMQ pP pP 22 58 36.0 +0.8
WMQ sP sP 22 58 40.0 +0.6
WMQ PP PP 23 00 16.0 +0.1
WMQ S **S** **23 05 14.0 0.0**
WMQ SS SS 23 08 34.0 -7.4
WMQ pmax pmax
comp=Z,52nm,1.0s,mb5.4
WMQ pmax pmax
comp=Z,99nm,5.0s
WMQ LR LR
comp=N,470nm,16.0s,MS4.7
WMQ LR LR
comp=E,400nm,16.0s,MS4.7
WMQ LR LR
comp=Z,490nm,16.0s,MS4.6
KSRS Korea Array 47.14 31 P **P** **22 58 25.9 -0.3**
comp=Z,45nm,0.8s,mb5.5,baz=224,slow=8.4,SNR=142
KSRS PcP PcP 22 59 57.5 -0.1
comp=Z,8.3nm,0.9s,baz=231,slow=3.0,SNR=5.7
KSRS LR LR 23 17 32.2
comp=Z,573nm,20.6s,MS4.5,baz=262,slow=35
CTA Charters Tower 48.67 115 *e*P **P** **22 58 37.4 -1.0**
comp=Z,23nm,0.7s,mb5.3
CTAO Charters Tower 48.67 115 *e*P **P** **22 58 37.6 -0.8**
CTAO pmax pmax
comp=Z,44nm,0.9s,mb5.5
CTAO Charters Tower 48.67 115 *e*P **P** **22 58 37.6 -0.9**
comp=Z,44nm,0.9s,mb5.5
CTAO Charters Tower 48.67 115 P **P** **22 58 37.4 -1.0**
comp=Z,62nm,1.1s,mb5.5
SNY Shenyang 48.69 24 ⇑P **P** **22 58 37.0 -1.2**
SNY S **S** **23 05 40.7 +2.3**
SNY pmax pmax
comp=Z,27nm,1.1s,mb5.2
SNY pmax pmax
comp=Z,710nm,10.6s
SNY LR LR
comp=E,1μm,13.1s
SNY LR LR
comp=Z,1μm,13.1s,MS5.0
STKA Stephens Creek 49.18 132 *e*P **P** **22 58 42.3 +0.1**
comp=Z,27nm,0.7s,mb5.4
STKA Stephens Creek 49.18 132 P **P** **22 58 42.4 +0.1**
comp=Z,35nm,0.7s,mb5.5,baz=306,slow=7.8,SNR=61
STKA LR LR 23 21 33.3
comp=Z,1μm,18.7s,MS4.9,baz=283,slow=39
KZA Kyzart 49.29 336 P **P** **22 58 44.2 +1.5**
SNR=40
UCH Uchtor 49.72 335 P **P** **22 58 47.5 +1.4**
SNR=67
UCH Uchtor 49.72 335⇑*e*P **P** **22 58 47.3 +1.3**
comp=Z,50nm,1.0s,mb5.5
UCH *e*PcP PcP 23 00 08.7 +1.9
UCH LR LR
comp=Z,349nm,19.0s,MS4.4
TKM2 Tokmak 2 49.85 337 P **P** **22 58 48.3 +1.2**
SNR=174
TKM2 Tokmak 2 49.85 337 *e*P **P** **22 58 48.3 +1.2**
TKM2 pmax pmax
comp=Z,142nm,0.8s,mb6.0
TKM2 MLR MLR
comp=Z,573nm,20.0s,MS4.6
TKM2 Tokmak 2 49.85 337 *e*P **P** **22 58 48.3 +1.2**
comp=Z,142nm,0.8s,mb6.0
TKM2 LR LR
comp=Z,573nm,20.0s,MS4.6
KBK Karagaybulak 49.89 336 P **P** **22 58 48.9 +1.5**
SNR=70
AML Almayashu 49.98 335 P **P** **22 58 49.5 +1.4**
SNR=91
AML Almayashu 49.98 335 *e*P **P** **22 58 49.1 +1.0**
comp=Z,45nm,0.6s,mb5.7
AML *e*PcP PcP 23 00 07.7 -0.1
SONM Songino Array 50.03 6 P **P** **22 58 48.9 +0.6**
comp=Z,65nm,0.7s,mb5.8,baz=189,slow=8.7,SNR=346
SONM PcP PcP 23 00 08.2 +0.3
comp=Z,28nm,0.8s,baz=188,slow=3.8,SNR=9.2
AAK Ala-Archa 50.06 336 P **P** **22 58 49.4 +0.7**
comp=Z,241nm,0.7s,mb6.3,SNR=15
AAK Ala-Archa 50.06 336 P **P** **22 58 50.0 +1.3**
SNR=23
AAK Ala-Archa 50.06 336 P **P** **22 58 49.9 +1.3**
comp=Z,22nm,0.7s,mb5.3,baz=144,slow=5.8,SNR=60
AAK Ala-Archa 50.06 336*c i*P **P** **22 58 49.7 +1.0**
AAK pmax pmax
comp=Z,16nm,0.8s,mb5.1
AAK Ala-Archa 50.06 336 *e*P **P** **22 58 49.9 +1.3**
comp=Z,27nm,0.7s,mb5.4
AAK LR LR
comp=Z,725nm,20.0s,MS4.7
AAK Ala-Archa 50.06 336 P **P** **22 58 50.2 +1.5**
SNR=24
AAK P 22 58 50.2
SNR=24
AAK Ala-Archa 50.06 336 P **P** **22 58 49.5 +0.8**
comp=Z,11nm,0.8s,mb4.9
ULN Ulaanbaatar 50.13 6⇑*i*P **P** **22 58 49.4 +0.3**
ULN Ulaanbaatar 50.13 6 *e*P **P** **22 58 49.4 +0.4**
comp=Z,46nm,0.7s,mb5.6
ULN LR LR
comp=Z,558nm,20.0s,MS4.6
ULN Ulaanbaatar 50.13 6 P **P** **22 58 49.8 +0.8**
SNR=37
ULN P 22 58 49.8
SNR=37
ULN Ulaanbaatar 50.13 6 P **P** **22 58 49.1 0.0**
comp=Z,75nm,0.8s,mb5.8
FRU Bishkek 50.18 336 *e*P **P** **22 58 50.0 +0.5**
FRU *i* pP 22 58 59.0 -0.9
FRU pmax pmax
comp=Z,115nm,1.4s,mb5.7
CHMS Chumysh 50.26 336 P **P** **22 58 50.7 +0.5**
SNR=56
EKS2 Erkin-Say 50.38 335 P **P** **22 58 52.5 +1.4**
SNR=86
EKS2 Erkin-Say 50.38 335 *e*P **P** **22 58 51.9 +0.8**
comp=Z,107nm,0.8s,mb5.9
EKS2 LR LR
comp=Z,456nm,19.0s,MS4.5
USP Ospenovka 50.58 336 P **P** **22 58 53.2 +0.6**
SNR=166
MKAR Makanchi Array 51.07 345 P **P** **22 58 56.7 +0.5**
comp=Z,208nm,0.7s,mb6.2,baz=135,slow=8.0,SNR=1422
MKAR S **S** **23 06 14.9 +3.5**
comp=Z,1.5nm,0.9s,baz=142,slow=16,SNR=4.2
MKAR LR LR 23 24 22.3
comp=Z,451nm,18.8s,MS4.5,baz=270,slow=40
MKAR Makanchi Array 51.07 345*ce*P **P** **22 58 56.7 +0.5**
CN2 Changchun 51.10 24 *e*P **P** **22 58 55.7 -0.8**
CN2 *e*pP pP 22 59 03.4 -3.5
CN2 *e*S **S** **23 06 10.9 -1.0**
CN2 SS SS 23 09 43.9 -3.7
CN2 pmax pmax
comp=Z,130nm,0.8s,mb5.9
CN2 pmax pmax
comp=Z,310nm,4.0s
CN2 LR LR
comp=N,870nm,15.0s,MS5.0
CN2 LR LR
comp=E,650nm,15.0s,MS5.0
CN2 LR LR
comp=Z,1μm,14.0s,MS5.0

IDAH Dahanechah 51.27 316 *e*P **P** **22 58 57.8 -0.2**
ZAK Zakamensk 52.33 3⇓*e*P **P** **22 59 05.4 -0.2**
ZAK *e* 23 00 16.8
ZAK pmax pmax
comp=Z,38nm,0.9s,mb5.3
MAJO Matsushiro 52.40 39 *e*P **P** **22 59 04.2 -2.2**
MAJO pmax pmax
comp=Z,30nm,0.6s,mb5.4
MAJO MLR MLR
comp=Z,657nm,20.0s,MS4.7
MAJO Matsushiro 52.40 39 *e*P **P** **22 59 04.2 -2.2**
comp=Z,30nm,0.6s,mb5.4
MAJO LR LR
comp=Z,657nm,20.0s,MS4.7
MAT Matsushiro 52.40 39 P **P** **22 59 05.0 -1.4**
MJAR Matsushiro Arr 52.40 39 P **P** **22 59 05.4 -0.9**
comp=Z,34nm,0.9s,mb5.3,baz=223,slow=7.4,SNR=70
VLA Vladivostok 53.41 29 *e*P **P** **22 59 11.6 -2.1**
VLA *e**SP sP 22 59 26.4 -1.8
VLA pmax pmax
comp=Z,34nm,0.7s,mb5.4
MDJ Mudanjiang 53.50 26 P **P** **22 59 14.3 0.0**
MDJ pP pP 22 59 23.5 -1.3
MDJ sP sP 22 59 27.4 -1.5
MDJ PcP PcP 23 00 19.8 -1.1
MDJ S **S** **23 06 47.8 +3.0**
MDJ SS SS 23 10 23.2 -2.4
MDJ pmax pmax
comp=Z,45nm,0.8s,mb5.5
MDJ pmax pmax
comp=Z,1μm,11.8s
MDJ LR LR
comp=N,620nm,18.2s,MS4.8
MDJ LR LR
comp=E,570nm,20.0s,MS4.8
MDJ LR LR
comp=Z,1μm,14.6s
MDJ Mudanjiang 53.50 26 *e*P **P** **22 59 14.0 -0.3**
comp=Z,42nm,0.9s,mb5.4
MDJ LR LR
comp=Z,975nm,20.0s,MS4.9
MOY Mondy 53.55 1 *e*P **P** **22 59 14.9 +0.4**
MOY pmax pmax
comp=Z,53nm,2.4s,mb5.0
TLY Talaya 53.65 3 P **P** **22 59 16.4 +1.2**
comp=Z,708nm,0.7s,mb6.7,SNR=7.8
TLY Talaya 53.65 3*c i*P **P** **22 59 15.9 +0.7**
TLY pmax pmax
comp=Z,94nm,0.8s,mb5.8
TLY MLR MLR
comp=Z,1μm,16.0s,MS5.0
TLY Talaya 53.65 3 *e*P **P** **22 59 16.2 +1.0**
comp=Z,90nm,0.8s,mb5.8
TLY LR LR
comp=Z,507nm,21.0s,MS4.5
TLY Talaya 53.65 3 P **P** **22 59 16.5 +1.2**
SNR=18
TLY P 22 59 16.5
SNR=18
IBAF Bafgh 53.74 312 *e*P **P** **22 59 15.5 -0.8**
HIA Hailar 53.94 16 *e*P **P** **22 59 17.2 -0.3**
HIA pmax pmax
comp=Z,63nm,1.4s
HIA MLR MLR
comp=Z,800nm,20.0s
HIA Hailar 53.94 16 *e*P **P** **22 59 17.2 -0.3**
comp=Z,63nm,1.4s,mb5.3
HIA LR LR
comp=Z,800nm,20.0s,MS4.8
IPAY Payeh 54.00 319 *e*P **P** **22 59 18.3 +0.2**
OPO Ambohidratompo 54.14 249 P **P** **22 59 21.9 +2.4**
comp=Z,5.7nm,1.0s,mb4.4,baz=71,slow=10,SNR=4.7
IRK Irkutsk 54.24 3 *e*P **P** **22 59 19.6 0.0**
IRK pmax pmax
comp=Z,99nm,1.6s,mb5.5
EIDS Eidsvold 54.41 120 *e*P **P** **22 59 19.9 -1.5**
comp=Z,64nm,1.3s,mb5.4
IKRD Kardeh 54.50 319 *e*P **P** **22 59 16.7 -5.1**
IMOK Mouk 54.73 308 *e*P **P** **22 59 23.5 -0.1**
IEMG Emamgholi 54.79 320 *e*P **P** **22 59 23.6 -0.2**
ICHK Chekchek 54.92 312 *e*P **P** **22 59 24.3 -0.6**
CIT Chita 55.12 10 *e*P **P** **22 59 25.0 -1.0**
CIT *e* pP 22 59 33.8 -2.7
ABKT Ailbek 55.43 320 P **P** **22 59 28.1 -0.4**
comp=Z,246nm,0.7s,mb6.3,SNR=10.0
KURK Kurchatov 55.65 344 P **P** **22 59 30.8 +1.0**
comp=Z,1μm,1.0s,mb6.9
KURK Kurchatov 55.65 344 P **P** **22 59 29.0 -0.7**
comp=Z,102nm,0.9s,mb5.9,baz=166,slow=7.2,SNR=266
KURK S **S** **23 07 11.0 -2.4**
comp=Z,0.2nm,0.3s,baz=103,slow=24,SNR=3.9
KURK Kurchatov 55.65 344 *e*P **P** **22 59 30.0 +0.2**
KURK pmax pmax
comp=Z,177nm,0.9s,mb6.1
KURK MLR MLR
comp=Z,514nm,22.0s,MS4.6
KURK Kurchatov 55.65 344 *e*P **P** **22 59 30.0 +0.3**
comp=Z,177nm,0.9s,mb6.1
KURK LR LR
comp=Z,514nm,22.0s,MS4.6
KURK Kurchatov 55.65 344 P **P** **22 59 30.2 +0.5**
SNR=78
KURK P 22 59 30.2
SNR=78
CAN Canberra 56.24 132 *e*P **P** **22 59 34.2 -0.2**
CAN *e* 23 00 31.1
CAN pmax pmax
comp=Z,27nm,1.0s,mb5.2
CAN Canberra 56.24 132 *e*P **P** **22 59 34.2 -0.2**
comp=Z,27nm,1.0s,mb5.2
CAN *e*PcP PcP 23 00 31.1 -0.7
ARMA Armidale 56.45 126 *e*P **P** **22 59 36.9 +1.0**
IZEF Zefreh 56.77 312 *e*P **P** **22 59 33.8 -4.4**
ZALV Zalesovo Beam 57.22 349 P **P** **22 59 40.9 0.0**
comp=Z,110nm,0.8s,mb6.0,baz=174,slow=5.6,SNR=444
ZALV pP pP 22 59 50.2 -1.3
comp=Z,151nm,0.8s,baz=175,slow=5.4,SNR=7.9
ZALV sP sP 22 59 54.2 -1.3
comp=Z,143nm,0.8s,baz=174,slow=6.2,SNR=21
ZALV S **S** **23 07 32.5 -1.7**
comp=Z,1.6nm,0.8s,baz=140,slow=11,SNR=5.2
ZALV Zalesovo Beam 57.22 349 P **P** **22 59 40.9 0.0**
ZALV pP pP 22 59 50.2 -1.3
ZALV sP sP 22 59 54.2 -1.3
ZALV S **S** **23 07 32.5 -1.7**
ISHM Shahmirzad 57.50 316 *e*P **P** **22 59 42.8 -0.5**
ILAS Lasjerd 57.52 315 *e*P **P** **22 59 42.5 -0.9**
IKLH Kolahrood 57.53 312 *e*P **P** **22 59 42.6 -0.9**
ISFB Sefidab 57.53 314 *e*P **P** **22 59 43.0 -0.5**
IPIR Pirpir 57.75 311 *e*P **P** **22 59 45.2 +0.1**
IFIR Firoozkooh 57.80 315 *e*P **P** **22 59 44.6 -0.8**
KLR Kul'dur 58.04 24⇓*i*P **P** **22 59 43.2 -3.6**
KLR pmax pmax
comp=Z,64nm,1.0s,mb5.6
IDMV Damavand 58.28 315 *e*P **P** **22 59 48.4 -0.3**
NVS Novosibirsk 58.37 349⇑*i*P **P** **22 59 48.2 -0.7**
NVS *e* pP 23 00 01.3 +1.8
NVS *e*S **S** **23 07 41.3 -7.8**
NVS pmax pmax
comp=Z,81nm,1.0s,mb5.7
NVS pmax pmax
comp=N,71nm,1.4s
NVS pmax pmax
comp=E,46nm,1.4s
NVS smax
comp=E,21nm,1.6s
NVS smax
comp=N,19nm,1.9s
IPRN Peran 58.39 316 *e*P **P** **22 59 48.5 -1.0**
TAU Tasmania Unive 58.60 141 *e*P **P** **22 59 51.0 +0.2**
TAU pmax pmax
comp=Z,46nm,1.3s,mb5.3
TAU Tasmania Unive 58.60 141 *e*P **P** **22 59 51.0 +0.2**
comp=Z,46nm,1.3s,mb5.3
ERM Erimo 58.78 37 P **P** **22 59 52.7 +0.6**
comp=Z,233nm,0.7s,mb6.3,SNR=6.5
ERM Erimo 58.78 37 *e*P **P** **22 59 51.9 -0.2**
ERM pmax pmax
comp=Z,27nm,0.7s,mb5.4
ERM Erimo 58.78 37 *e*P **P** **22 59 51.9 -0.2**
comp=Z,26nm,0.7s,mb5.4
RDF Al-Radifah 58.80 306 *e*P **P** **22 59 51.4 -1.2**
RDF AMb AMB 22 59 52.8
comp=Z,76nm,0.9s,mb5.7
HABR Khabarovsk 58.88 27 *e*P **P** **22 59 51.4 -1.2**

HABR *e* 23 09 36.5
HABR *e*SS SS 23 11 47.6 -2.5
HABR pmax pmax
comp=E,25nm,0.9s
HABR pmax pmax
comp=Z,71nm,1.2s,mb5.6
HABR pmax pmax
comp=N,28nm,0.8s
HABR MLR MLR
comp=Z,622nm,20.0s,MS4.7
UMR Umm Al-Rimmam 58.91 307 *e*P **P** **22 59 52.0 -1.2**
UMR AMb AMB 22 59 53.7
comp=Z,59nm,0.9s,mb5.6
IR3 Iran Long-Peri 58.95 314 *e*P **P** **22 59 52.4 -1.0**
NAY Al-Naaiem 59.17 306 *e*P **P** **22 59 54.0 -1.1**
NAY AMb AMB 22 59 55.6
comp=Z,29nm,1.3s,mb5.1
MIB Mutribah 59.31 307 *e*P **P** **22 59 55.3 -0.7**
MIB AMb AMB 23 00 12.7
comp=Z,139nm,0.9s,mb6.0
IRAZ Razeghan 59.70 314 *e*P **P** **22 59 58.5 -0.1**
ASAJ Asahikawa 59.74 34 P **P** **22 59 58.3 -0.4**
comp=Z,45nm,0.8s,mb5.5,baz=250,slow=14,SNR=35
HNR Honiara 60.13 100 PFAKE 23 00 10.0 +8.0
HNR LR LR
comp=Z,396nm,21.0s,MS4.5
BVAR Borovoye Array 60.21 340 P **P** **23 00 01.0 -0.7**
comp=Z,9.6nm,0.5s,mb5.1,baz=142,slow=7.5,SNR=96
BRVK Borovoye 60.28 340 P **P** **23 00 01.4 -0.8**
comp=Z,156nm,1.1s,mb6.0,SNR=20
BRVK Borovoye 60.28 340*c i*P **P** **23 00 01.4 -0.8**
BRVK pmax pmax
comp=Z,35nm,1.0s,mb5.3
BRVK Borovoye 60.28 340 *e*P **P** **23 00 01.5 -0.6**
BRVK LR LR
comp=Z,407nm,20.0s,MS4.6
BRVK Borovoye 60.28 340 P **P** **23 00 01.8 -0.4**
SNR=18
BRVK P 23 00 01.8
SNR=18
BOD Bodaibo 60.77 9 *e*P **P** **23 00 04.9 -0.5**
BOD pmax pmax
comp=Z,136nm,1.0s,mb6.0
IKOM Komasi 60.94 311 *e*P **P** **23 00 07.0 -0.1**
YSS Yuzh-Sakhalins 61.60 32⇑*e*P **P** **23 00 11.1 -0.2**
YSS *e* 23 00 29.5
YSS pmax pmax
comp=N,60nm,1.0s
YSS pmax pmax
comp=E,60nm,1.0s
YSS pmax pmax
comp=Z,220nm,1.0s,mb6.2
YSS MLR MLR
comp=Z,400nm,16.0s,MS4.7
YSS MLR MLR
comp=N,400nm,15.0s
YSS Yuzh-Sakhalins 61.60 32 *e*P **P** **23 00 11.7 +0.4**
comp=N,164nm,0.8s,mb6.2
YSS LR LR
comp=Z,155nm,19.0s,MS4.2
ABKAR Akbulak array 61.65 331 *e*P **P** **23 00 10.8 -0.7**
comp=Z,49nm,0.7s,mb5.7
IDHR Dehrash 62.01 311 *e*P **P** **23 00 12.3 -2.0**
CLNS Chul'man 62.11 15 *e*P **P** **23 00 14.8 +0.3**
CLNS *e* 23 00 48.9
CLNS *e* 23 02 29.5
CLNS *e*S **S** **23 08 39.5 +2.4**
CLNS pmax pmax
comp=Z,102nm,0.9s,mb6.0
CLNS pmax pmax
comp=E,47nm,0.9s
CLNS pmax pmax
comp=N,55nm,0.9s
CLNS pmax pmax
comp=E,16nm,1.0s
CLNS pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
CLNS pmax pmax
comp=N,9.0nm,0.9s
CLNS smax
comp=E,393nm,12.8s
CLNS smax
comp=N,465nm,13.3s
CLNS MLR MLR
comp=E,212nm,14.0s,MS4.9
CLNS MLR MLR
comp=Z,574nm,14.0s,MS4.9
CLNS MLR MLR
comp=N,537nm,14.0s,MS4.9
KMBO Kilima Mbogo 62.62 270 *e*P **P** **23 00 20.0 +1.2**
KMBO MLR MLR
comp=Z,659nm,19.0s
IHRS Heris 63.09 315 *e*P **P** **23 00 20.2 -1.3**
AKTK Aktyubinsk 63.37 331 P **P** **23 00 22.2 -0.8**
AKTO Aktyubinsk 63.37 331 P **P** **23 00 22.2 -0.8**
comp=Z,30nm,0.9s,mb5.4,baz=126,slow=8.3,SNR=53
ISHB Shabestar 64.08 315 *e*P **P** **23 00 27.9 -0.1**
IMRD Marand 64.21 315 *e*P **P** **23 00 29.1 +0.3**
CASY Casey 64.52 175 *e*P **P** **23 00 31.5 +1.1**
CASY LR LR
comp=Z,1μm,21.0s,MS5.1
GNI Garni 65.50 316*c i*P **P** **23 00 37.7 +0.5**
GNI pmax pmax
comp=Z,19nm,1.0s
GNI Garni 65.50 316 *e*P **P** **23 00 37.5 +0.3**
comp=Z,23nm,0.9s,mb5.2
GNI LR LR
comp=Z,332nm,20.0s,MS4.5
SVE Sverdlovsk 66.71 338⇓*e*P **P** **23 00 44.6 0.0**
SVE pmax pmax
comp=Z,100nm,1.5s,mb5.6
ZEI Tsey 67.21 319 *e*P **P** **23 00 49.1 +1.0**
ZEI pmax pmax
comp=Z,36nm,0.9s,mb5.4
ARU Arti 67.23 337 P **P** **23 00 47.6 -0.3**
comp=Z,215nm,1.1s,mb6.1,SNR=16
ARU Arti 67.23 337*c i*P **P** **23 00 47.1 -0.8**
ARU S S 23 09 40.3 +0.1
ARU pmax pmax
comp=Z,67nm,1.7s,mb5.4
ARU Arti 67.23 337 *e*P **P** **23 00 47.3 -0.7**
ARU LR LR
comp=Z,624nm,20.0s,MS4.8
YAK Yakutsk 67.84 15*c i*P **P** **23 00 50.5 -1.2**
YAK *e**PP pP 23 00 56.3 -6.1
YAK *e* 23 01 13.4
YAK *e*S S 23 09 47.7 +0.3
YAK *e* 23 10 44.3
YAK *e*SS SS 23 14 09.7 +0.2
YAK pmax pmax
comp=Z,264nm,1.0s,mb6.2
YAK pmax pmax
comp=E,67nm,1.3s
YAK pmax pmax
comp=N,95nm,1.4s
YAK smax
comp=N,7.0nm,0.6s
YAK smax
comp=E,3.0nm,0.6s
YAK MLR MLR
comp=N,397nm,17.0s,MS4.9
YAK MLR MLR
comp=Z,1μm,19.0s,MS5.2
YAK MLR MLR
comp=E,502nm,18.0s,MS4.9
YAK Yakutsk 67.84 15 *e*P **P** **23 00 50.7 -1.0**
YAK LR LR
comp=Z,508nm,19.0s,MS4.8
KIV Kislovodsk 68.53 319 P **P** **23 00 56.6 +0.2**
comp=Z,283nm,0.9s,mb6.2,SNR=14
KIV Kislovodsk 68.53 319 *e*P **P** **23 00 56.4 0.0**
KIV pmax pmax
comp=Z,53nm,1.0s,mb5.4
KIV Kislovodsk 68.53 319 *e*P **P** **23 00 56.6 +0.2**
KIV LR LR
comp=Z,398nm,19.0s,MS4.7
KIV Kislovodsk 68.53 319 P **P** **23 00 56.8 +0.5**
SNR=14
KIV P 23 00 56.8
SNR=14
ASF Jabal al Asfar 68.54 306 P **P** **23 00 57.8 +1.1**
comp=Z,8.4nm,0.9s,mb4.7,baz=8.2,slow=2.8,SNR=17
ASF pP pP 23 01 07.4 -0.1
comp=Z,5.8nm,0.9s,baz=0.2,slow=5.1,SNR=6.0
ASF sP sP 23 01 11.2 -0.3
comp=Z,12nm,0.8s,baz=360,slow=2.8,SNR=11

GOF Gofitskoye 68.78 320 *e*P pP 23 01 08.7 0.0
GOF ⇑pmax pmax
comp=Z,40nm,1.0s,mb5.3
EIL Elat 69.47 303 P **P** **23 01 03.0 +0.4**
comp=Z,16nm,0.9s,mb5.0,baz=112,slow=1.8,SNR=16
MMAI Mount Meron Ar 69.99 306 P **P** **23 01 06.8 +1.1**
comp=Z,10nm,0.7s,mb4.9,baz=99,slow=8.5,SNR=29
SOKR Solikamsk 70.09 338*c i*P **P** **23 01 05.6 -0.1**
SOKR pmax pmax
comp=Z,70nm,1.1s,mb5.5
MAW Mawson 70.19 194 *e*P **P** **23 01 07.1 +0.9**
comp=Z,7.7nm,0.8s,mb4.7
MAW Mawson 70.19 194 P **P** **23 01 07.3 +1.1**
comp=Z,3.0nm,0.8s,mb4.3,baz=28,slow=5.5,SNR=5.3
MAW LR LR 23 24 54.9
comp=Z,742nm,20.7s,MS4.9,baz=319,slow=30
MAW Mawson 70.19 194 *e*P **P** **23 01 06.6 +0.4**
MAW pmax pmax
comp=Z,2.0nm,0.9s
MAW Mawson 70.19 194 *e*P **P** **23 01 06.6 +0.4**
comp=Z,2.3nm,0.9s,mb4.1
SOC Sochi 70.33 318*c i*P **P** **23 01 06.4 -1.2**
SOC *e**PP pP 23 01 16.2 -2.1
SOC *e**SP sP 23 01 20.3 -2.0
SOC *e* 23 01 27.9
SOC *e* 23 03 43.0
SOC *e*PPP 23 05 24.2
SOC *e*S S 23 10 15.5 -2.1
SOC pmax pmax
comp=Z,35nm,0.6s,mb5.5
SKR Severo-Kuril's 70.99 34 *e*P **P** **23 01 03.5 -7.9**
SKR *e* 23 01 08.5
SKR *e* 23 01 25.0
SKR pmax pmax
comp=Z,220nm,1.0s,mb6.0
LSZ Lusaka 71.81 255 PFAKE 23 01 30.0 +13
LSZ LR LR
comp=Z,702nm,19.0s,MS5.0
CSS Prodhromos 72.18 308 *e*P **P** **23 01 18.2 -0.7**
CSS LR LR
comp=Z,32nm,1.1s,mb5.2
CSS LR LR
comp=Z,498nm,20.0s,MS4.8
ANN Anapa 72.32 319 *e*P **P** **23 01 15.4 -4.1**
ANN pmax pmax
comp=Z,102nm,1.1s,mb5.7
VRHR Novokhopersk 72.33 326 *e*P **P** **23 01 18.6 -0.8**
VRHR pmax pmax
comp=Z,110nm,1.0s,mb5.7
VRHR pmax pmax
comp=N,50nm,0.8s
VRHR pmax pmax
comp=E,60nm,1.4s
PEA0B Petropavlovsk- 73.00 32 *e*P **P** **23 01 22.6 -0.8**
PETK Petropavlovsk- 73.00 32 P **P** **23 01 22.9 -0.6**
comp=E,17nm,0.6s,mb5.2,baz=136,slow=0.5,SNR=44
BRTR Keskin Array B 73.29 313 P **P** **23 01 24.5 -0.9**
comp=E,14nm,0.8s,mb4.9,baz=132,slow=7.2,SNR=75
BRTR pP pP 23 01 37.4 +1.1
comp=E,20nm,0.8s,baz=128,slow=7.1,SNR=20
BR131 Keskin Array S 73.29 313 *e*P **P** **23 01 24.3 -1.1**
comp=E,16nm,0.8s,mb5.0
BR131 *e* pP 23 01 37.2 +1.0
PET Petropavlovsk 73.48 33 *i*P **P** **23 01 25.8 -0.4**
PET pmax pmax
comp=Z,94nm,0.7s,mb5.8
PET Petropavlovsk 73.48 33 *e*P **P** **23 01 25.8 -0.5**
VSR Storozhevoye 73.77 325*c i*P **P** **23 01 27.0 -1.0**
VSR *e**PP pP 23 01 35.9 -2.9
VSR pmax pmax
comp=Z,130nm,0.9s,mb5.9
VSR pmax pmax
comp=N,30nm,0.7s
VSR pmax pmax
comp=E,60nm,0.7s
VOR Voronezh 73.97 326⇑*i*P **P** **23 01 29.0 -0.1**
VOR pmax pmax
comp=Z,160nm,1.0s,mb5.9
ISP Isparta 75.11 310 PFAKE 23 01 50.0 +14
ISP LR LR
comp=Z,295nm,19.0s,MS4.6
BOSA Boshof 75.52 241 P **P** **23 01 38.8 +0.1**
comp=Z,2.7nm,1.0s,mb4.2,baz=113,slow=21,SNR=3.3
BOSA LR LR 23 30 10.4
comp=Z,964nm,18.3s,MS5.1,baz=87,slow=32
SEY Seymchan 75.74 22*c i*P **P** **23 01 37.9 -1.2**
TIXI Tiksi 75.95 9*c i*P **P** **23 01 38.8 -1.4**
TIXI *e* pP 23 01 51.7 +0.7
TIXI pmax pmax
comp=Z,73nm,0.9s,mb5.6
TIXI Tiksi 75.95 9 *e*P **P** **23 01 39.0 -1.2**
MOS Moscow 76.50 329 *e*P **P** **23 01 39.7 -3.9**
MOS *e* 23 01 54.6
MOS pmax pmax
comp=Z,104nm,0.8s,mb5.8
MOS pmax pmax
comp=Z,100nm,0.9s,mb5.8
OBN Obninsk 76.80 328*c i*P **P** **23 01 45.2 -0.1**
OBN *i* pP 23 01 52.6 -3.6
OBN pmax pmax
comp=Z,124nm,1.5s,mb5.6
OBN Obninsk 76.80 328 *e*P **P** **23 01 45.3 0.0**
comp=Z,58nm,0.9s,mb5.5
OBN LR LR
comp=Z,311nm,20.0s,MS4.6
KARP Karpathos 77.22 307 *e*P **P** **23 01 48.6 +0.5**
SYO Syowa Base 77.76 199⇓*e*PcP PcP 23 02 01.8 +1.4
TLCR 78.24 317 ⇑P **P** **23 01 52.2 -1.4**
TLCR 78.24 317⇑*i*P **P** **23 01 52.2 -1.4**
PSN Preselentsi 78.30 315 *i*P **P** **23 01 53.9 0.0**
TIRR Tirgusor 78.33 316 P **P** **23 01 53.9 -0.2**
TIRR Tirgusor 78.33 316 *e*P **P** **23 01 53.1 -1.0**
comp=Z,31nm,0.8s,mb5.3
TIRR Tirgusor 78.33 316⇓*i*P **P** **23 01 53.7 -0.4**
CFR Carcaliu 78.70 317 ⇓P **P** **23 01 55.7 -0.4**
CFR Carcaliu 78.70 317⇓*i*P **P** **23 01 55.7 -0.4**
KIS Kishinev 78.71 319 *e*UNK 23 01 53.0
KIS Kishinev 78.71 319 *e*P **P** **23 01 53.0 -3.2**
KIS *e* pP 23 02 04.5 -2.6
KIS *e* 23 02 09.0
HARR Harsova 78.72 316 ⇓P **P** **23 01 56.4 +0.1**
HARR Harsova 78.72 316⇓*i*P **P** **23 01 56.4 +0.1**
LEOM Leova 78.96 318 ⇓P **P** **23 01 57.6 +0.1**
LEOM Leova 78.96 318⇓*i*P **P** **23 01 57.6 +0.1**
AMRR Amara 79.11 316 ⇓P **P** **23 01 58.7 +0.3**
AMRR Amara 79.11 316⇓*i*P **P** **23 01 58.7 +0.3**
AKASG Malin Array Be 79.47 322 P **P** **23 01 59.4 -0.9**
comp=Z,13nm,0.9s,mb4.9,baz=90,slow=4.8,SNR=39
AKASG pP pP 23 02 09.4 -1.8
comp=Z,14nm,0.6s,baz=87,slow=4.9,SNR=16
AKASG Malin Array Be 79.47 322*ce*P **P** **23 01 59.4 -0.8**
AKASG pmax pmax
comp=Z,13nm,0.9s
AKBB Malin Array Si 79.47 322 *e*P **P** **23 01 59.2 -1.0**
AKBB *e* pP 23 02 09.1 -2.0
RDO Rodhopi 79.63 312 *e*P **P** **23 02 00.7 -0.6**
SUR Sutherland 79.67 238 P **P** **23 02 02.9 +1.1**
comp=Z,8.7nm,0.9s,mb4.7,baz=70,slow=12,SNR=3.1
SUR Sutherland 79.67 238 P **P** **23 02 02.3 +0.5**
SUR LR LR
comp=Z,1μm,20.0s,MS5.2
VRI Vrincioaia 79.83 317 P **P** **23 02 02.9 +0.6**
VRI Vrincioaia 79.83 317 ⇑P **P** **23 02 02.8 +0.5**
VRI P 23 02 02.9
VRI Vrincioaia 79.83 317⇑*i*P **P** **23 02 02.8 +0.5**
PLOR Plostina 79.88 317 P **P** **23 02 03.4 +0.9**
PLOR Plostina 79.88 317⇓*i*P **P** **23 02 03.3 +0.8**
MLR Muntele Rosu 80.28 317 ⇑P **P** **23 02 05.1 +0.4**
MLR Muntele Rosu 80.28 317⇑*i*P **P** **23 02 05.1 +0.4**
ZIMR 80.28 315 ⇓P **P** **23 02 04.8 0.0**
ZIMR 80.28 315⇓*i*P **P** **23 02 04.8 0.0**
PTL Penteli 80.30 309 *e*P **P** **23 02 04.3 -0.7**
RZN Rozhen 80.34 313 *i*P **P** **23 02 04.8 -0.4**
PGB Panagyurishte 80.91 314 *i*P **P** **23 02 07.6 -0.6**
PLG Polygyros 81.04 311 *e*P **P** **23 02 08.0 -0.9**
SOH Sokhos 81.19 312 *e*P **P** **23 02 08.9 -0.8**
BURAR Bucovina Array 81.24 319 ⇑P **P** **23 02 11.0 +1.2**
BURAR Bucovina Array 81.24 319⇑*i*P **P** **23 02 10.9 +1.1**
MICGM Minsk 81.32 326 *e* **P** **23 02 08.0 -2.1**
MNK Minsk 81.35 326 *e*P **P** **23 02 08.0 -2.2**
GUR Goura 81.47 309 *e*P **P** **23 02 11.0 -0.2**
VTS Vitosha 81.62 313 *i*P **P** **23 02 11.6 -0.3**
LIT Litokhoron 81.71 311 *e*P **P** **23 02 11.7 -0.8**
VAY Valandovo 81.86 312 *e*P **P** **23 02 10.4 -2.9**
NACGM Naroch 82.05 326 *e* **P** **23 02 12.0 -1.9**

TSUM Tsumeb 82.06 251 PFAKE 23 02 30.0 +15
TSUM LR LR
comp=Z,850nm,19.0s,MS5.1
IDID Didziasalis 82.18 326 *e*P **P** **23 02 15.1 +0.5**
IDID AMB AMB 23 02 16.6
comp=Z,30nm,0.9s,mb5.2
JOF Joensuu 82.23 335 *e*P **P** **23 02 13.9 -0.8**
JOF pmax pmax
comp=Z,23nm,0.7s,mb5.2
JOF Joensuu 82.23 335 *ep* **P** **23 02 13.9 -0.8**
comp=Z,22nm,0.7s,mb5.2
JOF Joensuu 82.23 335 *ep* **P** **23 02 13.9 -0.8**
comp=Z,22nm,0.7s,mb5.2
BMR Baia Mare 82.39 318 P **P** **23 02 16.9 +1.0**
BMR Baia Mare 82.39 318 ⇓P **P** **23 02 16.8 +1.0**
BMR Baia Mare 82.39 318⇓*i*P **P** **23 02 16.8 +0.9**
IIGN Ignalina 82.47 326 *e*P **P** **23 02 16.7 +0.6**
IIGN AMB AMB 23 02 18.2
comp=Z,36nm,1.2s,mb5.2
LVV L'vov 82.48 321 *e*P **P** **23 02 16.4 +0.1**
IZAR Zarasai 82.56 327 *e*P **P** **23 02 16.9 +0.4**
IZAR AMB AMB 23 02 17.9
comp=Z,19nm,0.7s,mb5.2
ISAL Salakas 82.58 327 *e*P **P** **23 02 17.1 +0.4**
ISAL AMB AMB 23 02 18.6
comp=Z,24nm,1.0s,mb5.2
DRGR 82.75 318 P **P** **23 02 18.7 +1.0**
DRGR 82.75 318 ⇓P **P** **23 02 18.6 +0.9**
DRGR 82.75 318⇓*i*P **P** **23 02 18.6 +0.9**
LVZ Lovozero 82.81 340 P **P** **23 02 17.8 +0.2**
comp=Z,218nm,0.6s,mb6.4,SNR=7.8
KRUS Krusevo 82.85 312 *e*P **P** **23 02 16.8 -1.6**
VLS Valsamata 82.87 309 *e*P **P** **23 02 18.1 -0.5**
APA Apatity 83.12 339⇑*i*P **P** **23 02 19.6 +0.4**
APA pmax pmax
comp=Z,26nm,1.0s,mb5.2
OHR Ohrid 83.14 312 *e*P **P** **23 02 18.3 -1.7**
SBA Scott Base 83.21 169 *e*P **P** **23 02 18.8 -0.8**
BILL Bilibino 83.26 20 *e*P **P** **23 02 19.2 -0.8**
BILL pmax pmax
comp=Z,16nm,1.4s,mb4.9
BILL Bilibino 83.26 20 *e*P **P** **23 02 18.8 -1.2**
comp=Z,13nm,0.9s,mb5.0
BILL LR LR
comp=Z,810nm,19.0s,MS5.1
BZS Buzias 83.28 316 ⇑P **P** **23 02 20.4 -0.1**
BZS Buzias 83.28 316⇑*i*P **P** **23 02 20.4 -0.1**
KWP Kalwaria Pacla 83.29 320 *e*P **P** **23 02 20.9 +0.5**
KWP Kalwaria Pacla 83.29 320 *e*P **P** **23 02 20.9 +0.4**
KWP MLR MLR
comp=Z,2μm,29.3s,MS5.4
KWP Kalwaria Pacla 83.29 320 *e*P **P** **23 02 20.5 0.0**
comp=Z,34nm,1.1s,mb5.3
KWP LR LR
comp=Z,615nm,19.0s,MS5.0
UZH Uzhgorod 83.37 319⇑*i*P **P** **23 02 20.7 -0.2**
UZH *i* 23 02 36.0
KOLS Kolonicke sedl 83.44 320 *e*P **P** **23 02 22.3 +1.0**
KOLS pmax pmax
comp=Z,52nm,0.9s,mb5.6
KOLS Kolonicke sedl 83.44 320 *e*P **P** **23 02 22.3 +1.0**
comp=Z,52nm,0.9s,mb5.6
KOLS Kolonicke sedl 83.44 320 *e*P **P** **23 02 22.3 +1.0**
KEK Kerkira 83.70 310 *e*P **P** **23 02 22.4 -0.4**
SUW Suwalki 83.88 325 *e*P **P** **23 02 23.2 -0.2**
SUW Suwalki 83.88 325 *e*P **P** **23 02 23.2 -0.2**
SUW MLR MLR
comp=Z,2μm,23.9s,MS5.4
SUW Suwalki 83.88 325 *e*P **P** **23 02 22.9 -0.5**
comp=Z,160nm,1.0s,mb6.1
FINES FINESS Array B 84.12 332 P **P** **23 02 24.6 +0.2**
comp=Z,24nm,0.6s,mb5.5,baz=103,slow=5.6,SNR=128
FINES pP pP 23 02 33.1 -2.3
comp=Z,16nm,0.6s,baz=89,slow=4.9,SNR=17
STHS Stebnicka Huta 84.19 320 *i*P **P** **23 02 25.6 +0.5**
STHS pmax pmax
comp=Z,22nm,0.8s,mb5.3
STHS Stebnicka Huta 84.19 320 *i*P **P** **23 02 25.6 +0.5**
comp=Z,22nm,0.8s,mb5.3
STHS *e*PP pP 23 02 37.5 +1.4
STHS Stebnicka Huta 84.19 320 *i*P **P** **23 02 25.6 +0.5**
STHS *ep*P pP 23 02 37.4 +1.3
KAF Kangasniemi 84.20 333 *e*P **P** **23 02 24.2 -0.7**
KAF pmax pmax
comp=Z,42nm,0.7s,mb5.7
KAF Kangasniemi 84.20 333 *ep* **P** **23 02 24.2 -0.7**
comp=Z,42nm,0.7s,mb5.7,baz=100,slow=4.6
KAF Kangasniemi 84.20 333 *ep* **P** **23 02 24.2 -0.7**
comp=Z,42nm,0.7s,mb5.7,baz=100,slow=4.6
KECS Kecovo 84.52 319 *e*P **P** **23 02 27.1 +0.3**
KECS pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
KECS Kecovo 84.52 319 *e*P **P** **23 02 27.1 +0.3**
comp=Z,9.6nm,0.8s,mb5.0
KECS *e*PP pP 23 02 38.1 +0.3
KECS Kecovo 84.52 319 *e*P **P** **23 02 27.1 +0.3**
KECS *ep*P pP 23 02 38.1 +0.3
NIE Niedzica 84.79 320 *e*P **P** **23 02 28.8 +0.7**
PSZ Piszkesteto 84.83 318 P **P** **23 02 28.7 +0.4**
PSZ Piszkesteto 84.83 318 *e*P **P** **23 02 28.2 -0.1**
comp=Z,13nm,0.8s,mb5.1
PSZ LR LR
comp=Z,487nm,19.0s,MS4.9
PSZ Piszkesteto 84.83 318⇑*e*P **P** **23 02 28.5 +0.2**
PSZ Piszkesteto 84.83 318⇑*i*P **P** **23 02 28.5 +0.2**
OJC Ojcow 85.24 321 *i*P **P** **23 02 29.6 -0.8**
BUD Budapest 85.34 318⇓*e*P **P** **23 02 31.7 +0.8**
PKSM Moragy 85.43 316 P **P** **23 02 31.5 +0.1**
PKSM Moragy 85.43 316 ⇑P **P** **23 02 31.3 -0.1**
PKSM P 23 02 31.5
PKSM Moragy 85.43 316⇑*i*P **P** **23 02 31.3 -0.1**
VYHS Vyhne 85.61 319 *e*P **P** **23 02 32.5 +0.2**
VYHS pmax pmax
comp=Z,7.0nm,1.2s,mb4.8
VYHS Vyhne 85.61 319 *e*P **P** **23 02 32.5 +0.2**
comp=Z,7.3nm,1.2s,mb4.8
VYHS *e*PP pP 23 02 43.1 -0.1
VYHS Vyhne 85.61 319 *e*P **P** **23 02 32.5 +0.2**
VYHS *ep*P pP 23 02 43.1 -0.1
TIP Timpagrande 85.97 309 *e*P **P** **23 02 35.3 +1.1**
TIP LR LR
comp=Z,734nm,19.0s,MS5.1
KEV Kevo 86.06 341 *e*P **P** **23 02 31.4 -2.6**
KEV pmax pmax
comp=Z,24nm,0.8s,mb5.5
KEV Kevo 86.06 341 *ep* **P** **23 02 31.4 -2.6**
comp=Z,24nm,0.8s,mb5.5
KEV Kevo 86.06 341 *ep* **P** **23 02 31.4 -2.6**
comp=Z,24nm,0.8s,mb5.5
GRI Girifalco 86.19 309 P **P** **23 02 36.5 +1.1**
OKC Ostrava-Krasne 86.24 320 *e*P **P** **23 02 35.8 +0.4**
OKC *e* pP 23 02 46.3 -0.1
OKC Ostrava-Krasne 86.24 320 *e*P **P** **23 02 35.8 +0.4**
OKC *ep*P pP 23 02 46.3 -0.1
ARCES ARCESS Array B 86.50 340 P **P** **23 02 36.6 +0.4**
comp=Z,32nm,0.8s,mb5.6,baz=97,slow=5.0,SNR=59
ARCES PP PP 23 05 58.5 +0.4
comp=Z,4.7nm,0.8s,baz=86,slow=9.8,SNR=3.9
ARCES ARCESS Array B 86.50 340 P **P** **23 02 36.6 +0.4**
ARCES PP PP 23 05 58.5 +0.4
CEL Celeste 86.55 308 *e*P **P** **23 02 37.1 -0.1**
comp=Z,29nm,0.9s,mb5.5
CEL *e* pP 23 02 48.5 +0.4
MORC Moravsky Berou 86.62 320 P **P** **23 02 37.9 +0.7**
MORC Moravsky Berou 86.62 320 *e*P **P** **23 02 37.4 +0.2**
comp=Z,18nm,0.8s,mb5.4
MORC *e* pP 23 02 48.3 +0.1
MORC Moravsky Berou 86.62 320⇑*i*P **P** **23 02 37.7 +0.5**
ZST Bratislava 86.72 318 *e*P **P** **23 02 38.6 +0.9**
ZST pmax pmax
comp=Z,20nm,0.7s,mb5.5
ZST Bratislava 86.72 318 *e*P **P** **23 02 38.6 +0.9**
comp=Z,20nm,0.7s,mb5.4
ZST *e*PP pP 23 02 49.9 +1.2
ZST Bratislava 86.72 318 *e*P **P** **23 02 38.6 +0.9**
ZST *ep*P pP 23 02 49.9 +1.2
SOP Sopron 87.02 318⇑*e*P **P** **23 02 39.2 0.0**
MRLC Muro Lucano 87.09 311 P **P** **23 02 45.3 +5.6**
KOGS Kog 87.10 317 *i*P **P** **23 02 40.0 +0.3**
VRAC Vranov 87.18 319 ⇑P **P** **23 02 40.2 +0.2**
VRAC Vranov 87.18 319⇑*i*P **P** **23 02 40.2 +0.2**
GKP Gorka Klasztor 87.25 323 *e*P **P** **23 02 40.5 +0.3**
MAIT Maitri 87.44 199 *e*P pP 23 02 53.8 +2.0
DPC Dobruska-Polom 87.47 320 *e*P **P** **23 02 42.2 +0.9**

DPC Dobruska-Polom 87.47 320 *e*P **P** **23 02 42.2 +0.9**
GOLS Golise 87.49 316 *e*P **P** **23 02 42.1 +0.6**
KSP Ksiaz 87.54 321 *e*P **P** **23 02 43.0 +1.4**
KSP Ksiaz 87.54 321 *e*P **P** **23 02 42.0 +0.3**
KSP *ep*P pP 23 02 50.1 -2.6
ADK Adak 87.55 38 *e*P **P** **23 02 41.1 -0.6**
ADK pmax pmax
comp=Z,34nm,0.9s,mb5.6
ADK Adak 87.55 38 *e*P **P** **23 02 41.1 -0.6**
comp=Z,34nm,0.9s,mb5.6
ARSA Arzberg 87.68 317⇑*i*P **P** **23 02 42.8 +0.4**
comp=Z,14nm,0.9s,mb5.2,SNR=8.4
UPC Upice 87.68 321 *e*P **P** **23 02 43.4 +1.0**
UPC Upice 87.68 321 *e*P **P** **23 02 43.4 +1.0**
LEGS Legarje 87.69 316 *i*P **P** **23 02 42.8 +0.3**
BOJS Bojanci 87.70 316 *i*P **P** **23 02 42.9 +0.3**
QSPA South Pole Qui 87.89 180 PFAKE 23 02 50.0 +7.2
QSPA LR LR
comp=Z,1μm,19.0s,MS5.3
TREC Trest 87.90 319 *e*P **P** **23 02 44.0 +0.6**
TREC *e* pP 23 02 55.3 +0.9
TREC Trest 87.90 319 *e*P **P** **23 02 44.0 +0.6**
TREC *ep*P pP 23 02 55.3 +0.9
SOKA Soboth 87.96 317⇑*i*P **P** **23 02 44.2 +0.5**
comp=Z,22nm,1.0s,mb5.3
LJU Ljubljana 88.25 316 *i*P **P** **23 02 45.8 +0.7**
OBKA Obir 88.28 316⇑*i*P **P** **23 02 45.8 +0.5**
comp=Z,18nm,1.4s,mb5.1
SDI San Donato 88.43 312 P **P** **23 02 46.0 -0.1**
SDI pmax pmax
comp=Z,15nm,0.7s,mb5.3
SDI San Donato 88.43 312 P **P** **23 02 46.0 -0.1**
comp=Z,15nm,0.7s,mb5.3
PRU Pruhonice 88.57 320 *e*P **P** **23 02 47.7 +1.1**
PRU *e* pP 23 02 59.1 +1.5
PRU Pruhonice 88.57 320 *e*P **P** **23 02 47.7 +1.1**
PRU *ep*P pP 23 02 59.1 +1.5
MOA Molln 88.58 318⇑*i*P **P** **23 02 46.7 0.0**
comp=Z,7.2nm,0.8s,mb5.1
PVCC Panska Ves 88.60 320 *e*P **P** **23 02 47.6 +0.9**
PVCC *e* pP 23 02 58.6 +0.8
PVCC Panska Ves 88.60 320 *e*P **P** **23 02 47.6 +0.9**
PVCC *ep*P pP 23 02 58.6 +0.8
VOY Vojsko 88.69 316 *e*P **P** **23 02 47.3 +0.1**
VOY *e* pP 23 02 59.4 +1.1
AQU L'Aquila 88.78 312 ⇑P **P** **23 02 48.4 +0.6**
AQU L'Aquila 88.78 312 *e*P **P** **23 02 47.3 -0.5**
comp=Z,64nm,0.9s,mb6.0
AQU LR LR
comp=Z,508nm,19.0s,MS5.0
AQU L'Aquila 88.78 312⇑*i*P **P** **23 02 48.4 +0.6**
CADS Cadrg 88.81 316 *i*P **P** **23 02 47.7 -0.1**
MYKA Terra Mystica 88.91 317⇑*i*P **P** **23 02 48.6 +0.3**
comp=Z,8.6nm,0.9s,mb5.1
FIAM Fiamignano 88.99 312 P **P** **23 02 49.0 +0.3**
CING Cingoli 89.00 313 P **P** **23 02 49.3 +0.5**
NRCA Norcia 89.03 313 P **P** **23 02 49.1 +0.2**
comp=Z,21nm,0.8s,mb5.5
BRG Berggiesshubel 89.03 321 *e*P **P** **23 02 48.9 +0.2**
comp=Z,26nm,1.1s,mb5.5
BRG *ep*P pP 23 03 00.1 +0.4
BRG Berggiesshubel 89.03 321 *e*P **P** **23 02 49.4 +0.7**
comp=Z,22nm,0.9s,mb5.5
BRG *i* pP 23 03 00.3 +0.6
comp=Z,17nm,0.8s
GEC2 GERESS Array S 89.03 319 *e*P **P** **23 02 49.0 +0.2**
comp=Z,53nm,1.6s,mb5.6
GERES GERESS Array B 89.03 319 P **P** **23 02 49.2 +0.5**
comp=Z,9.7nm,0.8s,mb5.2,baz=90,slow=4.5,SNR=85
PTCC Patocco-Chiusa 89.09 316 P **P** **23 02 48.9 -0.2**
KHC Kasperske Hory 89.13 319 *e*P **P** **23 02 49.6 +0.4**
KHC *e* pP 23 02 58.8 -1.5
KHC Kasperske Hory 89.13 319 *e*P **P** **23 02 49.3 +0.1**
comp=Z,4.9nm,0.6s,mb5.0
KHC Kasperske Hory 89.13 319 *e*P **P** **23 02 49.6 +0.4**
KHC *ep*P pP 23 02 58.8 -1.5
KBA Koelnbreinsper 89.14 317⇑*i*P **P** **23 02 49.2 -0.2**
comp=Z,14nm,1.5s,mb5.1
SNTG Esanatoglia 89.18 313 P **P** **23 02 50.0 +0.4**
comp=Z,7.8nm,0.7s,mb5.2
RUE Ruedersdorf 89.25 322 *e*P **P** **23 02 50.0 +0.3**
comp=Z,37nm,0.8s,mb5.8
FSSB Fossombrone 89.32 314 P **P** **23 02 51.2 +0.9**
comp=Z,21nm,0.7s,mb5.6
RJOB Jochberg 89.56 318 *e*P **P** **23 02 50.6 -0.7**
comp=Z,16nm,0.8s,mb5.4
WET Wettzell 89.59 319 *e*P **P** **23 02 51.5 +0.1**
comp=Z,24nm,1.0s,mb5.5
CLL Collm 89.65 321 *e*P **P** **23 02 51.4 -0.2**
comp=Z,19nm,1.1s,mb5.3
CLL Collm 89.65 321⇑*i*P **P** **23 02 51.8 +0.2**
CLL pmax pmax
comp=Z,19nm,1.1s,mb5.3
CLL Collm 89.65 321⇑*i*P **P** **23 02 51.8 +0.2**
comp=Z,19nm,1.1s,mb5.3
CLL *i* 23 03 12.2
CLL Collm 89.65 321⇑*i*P **P** **23 02 51.8 +0.2**
comp=Z,19nm,1.1s,mb5.3
ABTA Abfaltersbach 89.69 317⇑*i*P **P** **23 02 51.7 -0.2**
comp=Z,13nm,1.0s,mb5.2
BADI Badiali 89.70 313 P **P** **23 02 52.8 +0.8**
NKC Novy Kostel 89.94 320 *e*P **P** **23 02 53.8 +0.8**
NKC *e* pP 23 03 02.9 -1.1
NKC Novy Kostel 89.94 320 *e*P **P** **23 02 53.8 +0.8**
NKC *ep*P pP 23 03 02.9 -1.1
TANN Tannenbergstha 89.94 320 *e*P **P** **23 02 53.1 +0.1**
comp=Z,13nm,1.0s,mb5.2
TANN *ep*P pP 23 03 04.7 +0.7
ROTZ Rotzenmuhle 90.07 320 *e*P **P** **23 02 54.2 +0.6**
comp=Z,16nm,1.0s,mb5.3
WTTA Wattenberg 90.32 317⇓*i*P **P** **23 02 54.8 0.0**
comp=Z,30nm,0.9s,mb5.7
WATA Walderalm 90.36 317⇑*i*P **P** **23 02 54.7 -0.3**
comp=Z,16nm,0.9s,mb5.3
MOX Moxa 90.49 320 *e*P **P** **23 02 56.0 +0.5**
comp=Z,25nm,1.4s,mb5.3
MOX *e* pP 23 03 04.0 -2.6
MOX Moxa 90.49 320 *e*P **P** **23 02 56.0 +0.5**
comp=Z,25nm,1.4s,mb5.3
MOX *e* pP 23 03 04.0 -2.6
MOX Moxa 90.49 320 *e*P **P** **23 02 55.7 +0.2**
comp=Z,23nm,1.4s,mb5.3
MOX Moxa 90.49 320 *e*P **P** **23 02 56.0 +0.5**
MOX *e* pP 23 03 04.0 -2.6
MOX pmax pmax
comp=Z,25nm,1.4s,mb5.3
FNVD Fontana Vidola 90.54 314 P **P** **23 02 57.1 +1.1**
FUR Furstenfeldbru 90.61 318 *e*P **P** **23 02 55.7 -0.4**
comp=Z,22nm,1.0s,mb5.4
SQTA Sankt Quirin 90.61 317⇑*i*P **P** **23 02 56.2 +0.1**
comp=Z,16nm,0.7s,mb5.5
MOTA Moosalm 90.68 317⇑*i*P **P** **23 02 56.4 -0.1**
comp=Z,27nm,0.9s,mb5.6,SNR=19
GRF Grafenberg Arr 90.70 320 *e*P **P** **23 02 57.1 +0.5**
comp=Z,42nm,1.0s,mb5.7
GRF *ep*P pP 23 03 08.7 +1.1
GRF Grafenberg Arr 90.70 320 *e*P **P** **23 02 57.1 +0.5**
GRF *e**PP pP 23 03 08.7 +1.1
GRF pmax pmax
comp=Z,42nm,1.0s,mb5.7
RETA Reutte 90.92 317⇑*i*P **P** **23 02 57.8 +0.1**
comp=Z,24nm,0.7s,mb5.6
FETA Feichten 90.93 317⇑*i*P **P** **23 02 58.1 +0.5**
comp=Z,19nm,1.0s,mb5.4
MABI Malga Bissina 91.04 316 P **P** **23 02 58.8 +0.6**
VLC Villacollemand 91.07 314 *e*P **P** **23 02 58.0 -0.4**
VLC LR LR
comp=Z,554nm,19.0s,MS5.0
BRMO Bormio 91.15 316 P **P** **23 02 59.6 +0.9**
NB2 NORSAR Subarra 91.15 331 P **P** **23 02 57.8 -0.6**
baz=95,slow=4.6
NB2 NORSAR Subarra 91.15 331 P **P** **23 02 57.8 -0.6**
NB2 NORSAR Subarra 91.15 331 P **P** **23 02 57.8 -0.6**
NOA NORSAR Array B 91.15 331 P **P** **23 02 58.2 -0.1**
comp=Z,6.4nm,0.9s,mb5.0,baz=94,slow=4.6,SNR=20
NOA pP pP 23 03 07.5 -2.0
comp=Z,3.1nm,0.8s,baz=91,slow=4.5,SNR=7.8
CLZ Clausthal 91.31 322 *e*P **P** **23 02 59.8 +0.4**
comp=Z,16nm,1.0s,mb5.3
BSEG Bad Segeberg 91.41 324 *e*P **P** **23 03 00.0 +0.3**
comp=Z,17nm,1.1s,mb5.3
NRDL Niedersach Rie 91.50 322 *e*P **P** **23 03 00.6 +0.4**
comp=Z,21nm,1.2s,mb5.3
DAVA Damuels 91.51 317⇑*i*P **P** **23 03 01.0 +0.6**
comp=Z,47nm,1.0s,mb5.8,SNR=16

UBBA Unterbreizbach 91.52 321 *eP* **P 23 03 00.3 0.0**
comp=Z,21nm,1.8s,mb5.2
KBS Kingsbay 91.62 349 *ceP* **P 23 02 59.8 -0.5**
KBS pmax pmax
comp=Z,11nm,1.2s,mb5.1
KBS Kingsbay 91.62 349⇑ *eP* **P 23 02 59.9 -0.4**
KEST Kesra 91.64 306 P **P 23 03 03.0 +1.7**
comp=Z,12nm,0.9s,mb5.2,baz=48,slow=1.2,SNR=24
VSL Villasalto 91.70 309 *eP* **P 23 03 01.8 +0.3**
VSL LR LR
comp=Z,312nm,19.0s,MS4.8
KONO Kongsberg 91.92 329 *eP* **P 23 03 01.9 -0.1**
STU Stuttgart 92.00 319 *eP* **P 23 03 02.5 -0.1**
comp=Z,21nm,1.2s,mb5.3
PGF Pioggiola 92.05 312 *eP* **P 23 03 03.4 +0.4**
comp=Z,18nm,0.8s,mb5.2
PGF Pioggiola 92.05 312 *eP* **P 23 03 03.4 +0.4**
PGF pmax pmax
comp=Z,9.0nm,0.8s,mb5.2
PGF Pioggiola 92.05 312 *eP* **P 23 03 03.4 +0.4**
comp=Z,9.1nm,0.8s,mb5.2
NIKO Nikolski 92.40 37 *eP* **P 23 03 03.5 -0.8**
comp=Z,82nm,1.2s,mb5.9
TNS Taunus Mts 92.50 320 *eP* **P 23 03 05.1 +0.2**
comp=Z,41nm,0.9s,mb5.9
BFO Black Forest 92.57 318 *eP* **P 23 03 04.7 -0.6**
comp=Z,12nm,1.0s,mb5.3
BFO Black Forest 92.57 318 *i P* **P 23 03 05.5 +0.2**
BFO Black Forest 92.57 318 *eP* **P 23 03 04.9 -0.3**
comp=Z,13nm,1.1s,mb5.3
SBF Sospel 93.20 314 *eP* **P 23 03 08.3 0.0**
comp=Z,95nm,1.2s,mb5.8
SBF Sospel 93.20 314 *eP* **P 23 03 08.3 0.0**
SBF pmax pmax
comp=Z,48nm,1.2s,mb5.8
SBF Sospel 93.20 314 *eP* **P 23 03 08.3 0.0**
comp=Z,48nm,1.2s,mb5.8
CDF Champ du Feu 93.28 318⇑ *i P* **P 23 03 08.3 -0.2**
comp=Z,9.1nm,0.9s,mb4.9
CDF Champ du Feu 93.28 318⇑ *i P* **P 23 03 08.3 -0.2**
CDF pmax pmax
comp=Z,5.0nm,0.9s,mb4.9
CDF Champ du Feu 93.28 318⇑ *i P* **P 23 03 08.3 -0.2**
comp=Z,4.6nm,0.9s,mb4.9
ECH Echery 93.36 318 *eP* **P 23 03 08.5 -0.4**
ECH pmax pmax
comp=Z,8.0nm,1.0s,mb5.1
ECH Echery 93.36 318 *eP* **P 23 03 08.5 -0.4**
comp=Z,8.0nm,1.0s,mb5.1
HINF Hinteralfeld 93.57 318 *eP* **P 23 03 09.2 -0.7**
LPG La Plagne 93.67 315⇑ *i P* **P 23 03 10.7 +0.3**
comp=Z,13nm,0.8s,mb5.2
LPG La Plagne 93.67 315⇑ *i P* **P 23 03 10.7 +0.3**
LPG pmax pmax
comp=Z,7.0nm,0.8s,mb5.1
LPG La Plagne 93.67 315⇑ *i P* **P 23 03 10.7 +0.3**
comp=Z,6.7nm,0.8s,mb5.1
LPL La Plagne 93.68 315⇑ *i P* **P 23 03 10.7 +0.2**
comp=Z,19nm,0.8s,mb5.3
LPL La Plagne 93.68 315⇑ *i P* **P 23 03 10.7 +0.2**
LPL pmax pmax
comp=Z,10.0nm,0.8s,mb5.3
LPL La Plagne 93.68 315⇑ *i P* **P 23 03 10.7 +0.2**
comp=Z,9.6nm,0.8s,mb5.3
BNI Bardonecchia 93.73 315 *eP* **P 23 03 10.6 -0.1**
BNI MLR MLR
comp=Z,721nm,20.0s,MS5.1
HAU Haudompre 93.90 318⇑ *i P* **P 23 03 11.2 -0.2**
comp=Z,21nm,0.9s,mb5.3
HAU Haudompre 93.90 318⇑ *i P* **P 23 03 11.2 -0.2**
HAU pmax pmax
comp=Z,11nm,0.9s,mb5.3
HAU Haudompre 93.90 318⇑ *i P* **P 23 03 11.2 -0.2**
comp=Z,11nm,0.9s,mb5.3
WLF Walferdange 93.99 319 *eP* **P 23 03 12.5 +0.7**
comp=Z,12nm,1.1s,mb5.2
WLF Walferdange 93.99 319 *eP* **P 23 03 11.5 -0.2**
WLF LR LR
comp=Z,458nm,20.0s,MS4.9
CABF La Chapelle 94.11 316 *eP* **P 23 03 12.1 -0.3**
comp=Z,17nm,0.9s,mb5.2
CABF La Chapelle 94.11 316 *eP* **P 23 03 12.1 -0.3**
CABF pmax pmax
comp=Z,8.0nm,0.9s,mb5.2
CABF La Chapelle 94.11 316 *eP* **P 23 03 12.1 -0.3**
comp=Z,8.4nm,0.9s,mb5.2
ORIF Oris-en-Rattie 94.30 315 *eP* **P 23 03 13.3 0.0**
comp=Z,14nm,0.9s,mb5.1
ORIF Oris-en-Rattie 94.30 315 *eP* **P 23 03 13.3 0.0**
ORIF pmax pmax
comp=Z,7.0nm,0.9s,mb5.1
ORIF Oris-en-Rattie 94.30 315 *eP* **P 23 03 13.3 0.0**
comp=Z,6.8nm,0.9s,mb5.1
MEZF Maizieres J'vi 94.75 318 *eP* **P 23 03 15.3 0.0**
comp=Z,19nm,0.9s,mb5.2
MEZF Maizieres J'vi 94.75 318 *eP* **P 23 03 15.3 0.0**
comp=Z,19nm,0.9s,mb5.5
TAM Tamanrasset 94.82 293 *eP* **P 23 03 16.8 +0.6**
TAM pmax pmax
comp=Z,3.0nm,1.3s,mb4.6
TAM Tamanrasset 94.82 293 *eP* **P 23 03 16.8 +0.6**
comp=Z,2.5nm,1.3s,mb4.5
GIVF Givet 94.84 320 *eP* **P 23 03 14.5 -1.1**
SSB Saint Sauveur 95.23 315 *eP* **P 23 03 18.5 +0.9**
SSB pmax pmax
comp=Z,4.0nm,0.8s,mb4.9
SSB Saint Sauveur 95.23 315 *eP* **P 23 03 18.5 +0.9**
comp=Z,4.3nm,0.8s,mb4.9
BAIF Baives 95.23 320 *eP* **P 23 03 17.0 -0.5**
comp=Z,20nm,1.1s,mb5.2
BAIF Baives 95.23 320 *eP* **P 23 03 17.0 -0.5**
BAIF pmax pmax
comp=Z,10.0nm,1.1s,mb5.2
BAIF Baives 95.23 320 *eP* **P 23 03 17.0 -0.5**
comp=Z,10nm,1.1s,mb5.2
LOR Lormes 95.61 317⇑ *i P* **P 23 03 19.1 -0.2**
comp=Z,11nm,0.8s,mb5.0
LOR Lormes 95.61 317⇑ *i P* **P 23 03 19.1 -0.2**
LOR pmax pmax
comp=Z,6.0nm,0.8s,mb5.1
LOR Lormes 95.61 317⇑ *i P* **P 23 03 19.1 -0.2**
comp=Z,5.7nm,0.8s,mb5.0
SMF Signal de Mont 95.66 316 *eP* **P 23 03 19.2 -0.3**
comp=Z,28nm,1.2s,mb5.3
SMF Signal de Mont 95.66 316 *eP* **P 23 03 19.2 -0.3**
SMF pmax pmax
comp=Z,14nm,1.2s,mb5.3
SMF Signal de Mont 95.66 316 *eP* **P 23 03 19.2 -0.3**
comp=Z,14nm,1.2s,mb5.3
SSF Saint Saulge 95.86 317⇑ *i P* **P 23 03 20.3 -0.1**
comp=Z,11nm,1.1s,mb4.9
SSF Saint Saulge 95.86 317⇑ *i P* **P 23 03 20.3 -0.1**
SSF pmax pmax
comp=Z,6.0nm,1.1s,mb4.9
SSF Saint Saulge 95.86 317⇑ *i P* **P 23 03 20.3 -0.1**
comp=Z,5.6nm,1.1s,mb4.9
AVF Avril sur Loir 95.98 317 *eP* **P 23 03 20.6 -0.4**
comp=Z,8.2nm,1.0s,mb4.8
AVF Avril sur Loir 95.98 317 *eP* **P 23 03 20.6 -0.4**
AVF pmax pmax
comp=Z,4.0nm,1.0s,mb4.8
AVF Avril sur Loir 95.98 317 *eP* **P 23 03 20.6 -0.4**
comp=Z,4.1nm,1.0s,mb4.8
BGF Bois d'Agland 96.35 316 *eP* **P 23 03 22.1 -0.5**
comp=Z,6.6nm,0.7s,mb4.9
BGF Bois d'Agland 96.35 316 *eP* **P 23 03 22.1 -0.5**
BGF pmax pmax
comp=Z,3.0nm,0.7s,mb4.8
BGF Bois d'Agland 96.35 316 *eP* **P 23 03 22.1 -0.5**
comp=Z,3.3nm,0.7s,mb4.9
TCF Toulx Ste Croi 96.81 316 *eP* **P 23 03 24.9 +0.2**
MTLF Montolieu 97.00 313 *eP* **P 23 03 25.8 +0.1**
TTA Tatalina 98.24 27 *eP* **P 23 03 31.4 +0.6**
DAG Danmarks Havn 98.33 348⇓ *i P* **P 23 03 29.9 -1.1**
DAG pmax pmax
comp=Z,5.0nm,0.7s,mb5.2
DAG Danmarks Havn 98.33 348⇓ *i P* **P 23 03 29.9 -1.1**
comp=Z,4.8nm,0.7s,mb5.1
FLN La Foliniere 98.39 319 *eP* **P 23 03 31.4 -0.4**
TORD Torodi Ar. Bea 98.44 283 P **P 23 03 31.9 -0.9**
comp=Z,1.1nm,0.9s,mb4.4,baz=89,slow=3.9,SNR=5.7
ESK Eskdalemuir 99.14 326 PFAKE 23 03 50.0 +15
ESK LR LR
comp=Z,291nm,19.0s,MS4.8
CHUM Lake Minchumin 99.64 25 *e*Pdif Pdif 23 03 36.6 -0.6
comp=Z,6.6nm,0.5s
BPAW Bear Paw Mtn. 100.14 25 *e*Pdif Pdif 23 03 38.7 -0.7
comp=Z,15nm,1.0s
COLA College 101.19 24 PFAKE 23 03 50.0 +5.9
COLA LR LR
comp=Z,660nm,20.0s,MS5.2
SFS San Fernando 104.16 307 *eP* Pdif 23 03 57.6 +0.3
SFS MLR MLR
comp=Z,806nm,20.0s,MS5.2
INK Inuvik 104.77 18 *eP* Pdif 23 03 58.6 -1.4
SUMG Summit 105.02 348 *e*PKiKP PKiKP 23 08 14.7 -0.6
YKA Yellowknife Ar 114.47 17 PKP PKiKP 23 08 32.4 -0.9
comp=Z,1.8nm,0.8s,baz=327,slow=2.0,SNR=9.5
YKA PP PP 23 09 25.7 -3.8
comp=Z,2.5nm,0.8s,baz=328,slow=7.3,SNR=7.4
JCW Jim Creek 121.67 32 *e*PKPdf PKPdf 23 08 46.8 -0.8
FCC Fort Churchill 122.42 9 *e*PKIKP PKPdf 23 08 47.6 -1.1
NEW Newport 124.05 29 PKIKP PKPdf 23 08 52.0 -0.2
HUMO Hull Mountain 124.42 37 *e*PKPdf PKPdf 23 08 53.5 +0.4
FFC Flin Flon 124.56 15 *i* PKIKP PKPdf 23 08 52.6 -0.4
FFC Flin Flon 124.56 15 *e*PKPdf PKPdf 23 08 51.9 -1.0
BSMT Bassoo Peak 125.46 28 *e*PKPdf PKPdf 23 08 54.9 0.0
SCHQ Schefferville 126.30 351 PKP PKPdf 23 08 56.4 +0.1
comp=Z,9.2nm,0.9s,baz=5.1,slow=4.4,SNR=9.9
MSO Missoula 126.59 28 *e*PKPdf PKPdf 23 08 57.1 0.0
BOZ Bozeman (W) 128.55 28 *e*PKIKP PKPdf 23 09 01.4 +0.5
HLID Hailey 128.67 32 *e*PKPdf PKPdf 23 09 01.7 +0.5
NVAR Mina Array Bea 129.73 39 PKP PKPdf 23 09 04.6 +1.2
comp=Z,4.1nm,0.7s,baz=274,slow=0.8,SNR=15
NVAR PP PP 23 11 19.2 +5.4
comp=Z,1.5nm,0.8s,baz=294,slow=5.2,SNR=4.1
NVAR Mina Array Bea 129.73 39 PKP PKPdf 23 09 04.6 +1.2
NVAR PP PP 23 11 19.2 +5.4
RLMT Red Lodge 130.04 27 *e*PKPdf PKPdf 23 09 02.8 -0.9
ULM Lac du Bonnet 130.17 13 PKP PKPdf 23 09 03.7 -0.1
comp=Z,9.5nm,0.8s,baz=340,slow=2.8,SNR=7.6
ULM Lac du Bonnet 130.17 13 PKP PKPdf 23 09 03.7 -0.1
M13A Montello 130.31 34 *e*PKPdf PKPdf 23 09 04.9 +0.6
M13A *e*SKPab 23 12 24.6
REDW Red Top Meadow 130.62 29 *e*PKPdf PKPdf 23 09 03.6 -1.3
BGU Big Grassy Mou 131.23 33 *e*PKPdf PKPdf 23 09 05.8 -0.3
BGU *e*SKP 23 12 28.7
HWUT Hardware Ranch 131.54 32 *e*PKPdf PKPdf 23 09 06.1 -0.6
BW06 Boulder Array 131.70 29 *e*PKPdf PKPdf 23 09 06.5 -0.4
BW06 *e* 23 09 16.7
PDAR Pinedale Array 131.70 29 PKP PKPdf 23 09 06.4 -0.5
comp=Z,3.2nm,1.0s,baz=338,slow=1.6,SNR=15
DUG Dugway 131.86 34 *e*PKIKP PKPdf 23 09 07.9 +0.6
DUG *e* 23 11 28.4
DUG Dugway 131.86 34 *e*PKPdf PKPdf 23 09 07.9 +0.6
DUG *e*PP PP 23 11 28.4 +1.0
DUG *e*SKPbc SKPbc 23 12 31.0 +0.2
DAU Daniels Canyon 132.55 32 *e*PKIKP PKPdf 23 09 07.7 -0.9
RSSD Black Hills 133.07 24 *e*PKIKP PKPdf 23 09 09.3 -0.2
MSU Marysvale 133.37 35 *e*PKIKP PKPdf 23 09 10.7 +0.5
ISCO Idaho Springs 135.87 28 *e*PKIKP PKPdf 23 09 15.0 +0.1
ECSD EROS Data Cent 136.00 17 *e*PKPpre 23 09 08.7
ECSD *e*PKPdf PKPdf 23 09 14.4 -0.6
ECSD *e*PP PP 23 11 50.8 -2.4
ECSD *e*SKP 23 12 43.2
MVCO Mesa Verde 136.35 33 *e*PKPdf PKPdf 23 09 16.4 +0.5
SDCO Great Sand Dun 137.53 30 *e*PKPdf PKPdf 23 09 18.4 +0.4
ANMO Albuquerque 139.12 34 *e*PKHKP 23 09 14.1
ANMO *e* 23 09 21.7
ANMO *e* 23 12 13.4
LAZ Ladron 139.14 35 *e*PKPdf PKPdf 23 09 20.6 -0.5
BINY Binghamton 139.88 355 *e*PKPdf PKPdf 23 09 22.4 +0.2
KSU1 Kansas State U 140.19 20 *e*PKPdf PKPdf 23 09 22.3 -0.6
SSPA Standing Stone 141.56 357 PKPdf PKPdf 23 09 25.2 -0.1
MNTX Cornudas Mount 142.10 36 *e*PKPdf PKPdf 23 09 23.1 -3.5
CCM Cathedral Cave 142.76 15 PKHKP 23 09 20.8
OLIL Olney 142.79 10 PKPpre 23 09 21.6
OLIL *e*PKPdf PKPdf 23 09 28.2 +0.6
WMOK Wichita Mounta 143.14 26 PKPpre 23 09 17.1
WMOK *e*PKPdf PKPdf 23 09 24.0 -4.2
WCI Wyandotte Cave 143.57 8 *e*PKIKP PKPdf 23 09 25.1 -3.8
CPUP Villa Florida 144.20 216 PKP PKPdf 23 09 28.9 -1.4
comp=Z,7.1nm,0.7s,baz=104,slow=2.7,SNR=24
TXAR Lajitas Array 144.83 37 PKP PKPdf 23 09 31.0 -0.4
comp=Z,70nm,0.8s,baz=272,slow=1.3,SNR=718
TXAR Lajitas Array 144.83 37 PKP PKPdf 23 09 31.0 -0.4
ELN Prospectdale 145.01 1 *e*PKPdf PKPdf 23 09 29.4 -2.1
BLA Blacksburg 145.03 0 *e*PKIKP PKPdf 23 09 30.1 -1.4
HBAR Harrisburg 145.28 15 *e*PKP PKPdf 23 09 31.6 -0.4
MIAR Mount Ida 145.34 20 *e*PKIKP PKPdf 23 09 31.6 -0.5
WVT Waverly 145.37 11 *e*PKIKP PKPdf 23 09 31.3 -0.8
UALR University of 145.53 18 *e*PKPdf PKPdf 23 09 32.0 -0.4
JCT Junction City 146.14 31 *e*PKP2 PKPab 23 09 33.9 -1.3
PLAL Pickwick Lake 146.43 12 *e*PKPdf PKPdf 23 09 33.8 -0.2
CPCT Cooper Cave 146.54 7 *e*PKPdf PKPdf 23 09 34.4 +0.3
BBSR BB Station 146.55 336 *e*PKPdf PKPdf 23 09 34.6 +0.3
SWET Sewanee 146.58 9 *e*PKPdf PKPdf 23 09 33.6 -0.6
CNNC Cliffs of the 146.94 357 *e*PKPbc PKPbc 23 09 37.2 +0.5
NATX Nacogdoches 147.44 23 *e*PKPbc PKPbc 23 09 38.1 -0.1
LCO Las Campanas 147.80 196 *e*PKPdf PKPdf 23 09 36.1 -0.4
LCO *e*PKPbc PKPbc 23 09 39.8 +0.5
HKT Hockley 148.51 27 *e*PKIKP PKPdf 23 09 36.3 -1.3
HKT *e* 23 09 41.3
LRAL Lakeview Retre 148.53 11 *e*PKPbc PKPbc 23 09 39.9 -1.2
GOGA Godfrey 148.67 5 *e*PKIKP PKPdf 23 09 37.6 -0.1
GOGA *e* 23 09 41.4
GOGA *e* 23 09 44.5
COW Cow Castle Cre 148.85 1 *e*PKPbc PKPbc 23 09 41.7 -0.2
NHSC New Hope 149.13 0 *e*PKPbc PKPbc 23 09 42.2 -0.4
NHSC *e*PKPab PKPab 23 09 46.6 -0.2
KVTX Kingsville 149.48 32 *e*PKPdf PKPdf 23 09 40.0 +0.8
BRAL Brewton 150.48 12 *e*PKPbc PKPbc 23 09 46.0 0.0
DWPF Disney 154.08 3 *e*PKPbc PKPbc 23 09 54.1 0.0
DWPF *e*PKPab PKPab 23 10 06.7 -0.8
LPAZ La Paz 158.25 213 PKP PKPdf 23 09 52.9 +1.1
comp=Z,2.9nm,0.9s,baz=201,slow=0.4,SNR=12
LPAZ La Paz 158.25 213 PKP PKPdf 23 09 52.9 +1.1
SDDR Presa de Saban 161.10 333 *e*PKPab PKPab 23 10 38.6 +0.6
OTAV Otavalo 177.53 222 *e*PKPdf PKPdf 23 10 05.3 0.0

ATH ***03*** *22:53:30.7, 40°.20N×26°.99E, h23km±1km, MD3.5/6*
ISK ***03*** *22:53:31.1, 40°.16N×26°.91E, h7km, MD3.5*
SOF ***03*** *22:53:31.9, 40°.33N×26°.79E, h3km, MD2.9*
DDA ***03*** *22:53:31.1, 40°.16N×26°.93E, h22km±1km, Md3.3*
ISCJB ***03*** *22:53:31.3±0.3, 40°.18N±0°.01×26°.88E±0°.02, h8km±2km, Error ellipse: s-maj=2.3km s-min=2.0km az=21.0*
NEIC ***03*** *22:53:31.0, 40°.16N×26°.92E, h7km, MD3.5(ATH), MD3.4(ISK), After ISK.*
CSEM ***03*** *22:53:32.0±0.1, 40°.18N×26°.88E, h10km, MD3.5, Error ellipse: s-maj=1.4km s-min=1.2km az=17.0*
THE ***03*** *22:53:33.8, 40°.21N×26°.92E, h27km±4km, ML3.4/11, Error ellipse: s-maj=5.0km s-min=0.9km az=76.0*
ISC 03 22:53:32.0±0.3, 40°.17N±0°.01×26°.88E±0°.02, h9km±2km, n163, σ0972/239, 5C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPK	**Lapseki**	**0.23**	**336**	PG	**Pg**	**22 53 36.8**	**+0.2**
LPK				*e*SG	**Sg**	**22 53 40.4**	**+0.7**
LPK	**Lapseki**	**0.23**	**336**	*i* Pg	**Pg**	**22 53 36.8**	**+0.2**
LPK				*e*Sg	**Sg**	**22 53 40.4**	**+0.7**
EZN	**Ezine**	**0.55**	**232**	*e*PG	**Pg**	**22 53 42.5**	**-0.1**
EZN				*e*SG	**Sg**	**22 53 50.2**	**+0.5**
EZN	**Ezine**	**0.55**	**232**	*e*Pg	**Pg**	**22 53 42.5**	**-0.1**
EZN				*e*Sg	**Sg**	**22 53 50.2**	**+0.5**
RKY	**Sarkoy-Tekirda**	**0.57**	**23**	*e*PG	**Pg**	**22 53 42.7**	**-0.3**
RKY				*e*SG	**Sg**	**22 53 50.9**	**+0.5**
RKY	**Sarkoy-Tekirda**	**0.57**	**23**	*e*Pg	**Pg**	**22 53 42.7**	**-0.3**
RKY				*e*Sg	**Sg**	**22 53 50.9**	**+0.4**
SART	**Tekirdag**	**0.57**	**24**	*i* P	**Pg**	**22 53 42.6**	**-0.4**
SART				*i* S	**Sg**	**22 53 50.6**	**0.0**
SART	**Tekirdag**	**0.57**	**24**	*i* P	**Pg**	**22 53 42.6**	**-0.5**
SART				*i* S	**Sg**	**22 53 50.6**	**+0.1**
MFT	**Murefte**	**0.69**	**26**	*e*PG	**Pg**	**22 53 44.9**	**-0.4**
MFT	**Murefte**	**0.69**	**26**	*e*Pg	**Pg**	**22 53 44.9**	**-0.5**
BALY	**Balya**	**0.71**	**127**	*i* P	**Pg**	**22 53 45.2**	**-0.5**
BALY				*i* S	**Sg**	**22 53 54.6**	**-0.4**
BALY	**Balya**	**0.71**	**127**	*i* P	**Pg**	**22 53 45.2**	**-0.5**
BALY				*i* S	**Sg**	**22 53 54.6**	**-0.3**
GADA	**Gvkgeada**	**0.75**	**272**	*e*PG	**Pg**	**22 53 46.7**	**+0.1**
GADA	**Gvkgeada**	**0.75**	**272**	*e*Pg	**Pg**	**22 53 46.7**	**+0.2**
EDC	**Edincik**	**0.77**	**76**	*e*PG	**Pg**	**22 53 45.7**	**-1.2**
EDC				*e*SG	**Sg**	**22 53 56.9**	**-0.1**
EDC	**Edincik**	**0.77**	**76**	*e*Pg	**Pg**	**22 53 45.7**	**-1.2**
EDC				*e*Sg	**Sg**	**22 53 56.9**	**-0.1**
ENEZ	**Enez**	**0.80**	**316**	*e*PG	**Pg**	**22 53 47.1**	**-0.2**
ENEZ	**Enez**	**0.80**	**316**	*e*Pg	**Pg**	**22 53 47.1**	**-0.2**
BNT	**Bandirma**	**0.82**	**76**	*e*PG	**Pg**	**22 53 46.5**	**-1.2**
AYVA	**Ayvalik**	**0.87**	**190**	*i* P	**Pg**	**22 53 48.5**	**-0.2**
AYVA				*i* S	**Sg**	**22 54 00.4**	**+0.4**
AYVA	**Ayvalik**	**0.87**	**190**	*i* P	**Pg**	**22 53 48.5**	**-0.2**
AYVA				*i* S	**Sg**	**22 54 00.4**	**+0.4**
BALB	**Balikesir**	**0.93**	**124**	*e*PG	**Pg**	**22 53 49.0**	**-1.0**
BALB				*e*SG	**Sg**	**22 54 02.0**	**-0.1**
BALB	**Balikesir**	**0.93**	**124**	*e*Pg	**Pg**	**22 53 49.0**	**-0.9**
BALB				*e*Sg	**Sg**	**22 54 02.0**	**0.0**
ALN	**Alexandroupoli**	**0.97**	**319**	*e*Pn	**Pg**	**22 53 49.8**	**-0.8**
ALN				*e*Sn	**Sg**	**22 54 03.7**	**+0.5**
ALN	**Alexandroupoli**	**0.97**	**319**	P	**Pg**	**22 53 49.9**	**-0.7**
ALN				S	**Sg**	**22 54 02.8**	**-0.4**
ALN	**Alexandroupoli**	**0.97**	**319**	*e*PN	**Pg**	**22 53 49.8**	**-0.8**
ALN				*e*SN	**Sg**	**22 54 03.7**	**+0.5**
ALN	**Alexandroupoli**	**0.97**	**319**	P	**Pg**	**22 53 49.9**	**-0.7**
ALN				S	**Sg**	**22 54 02.8**	**-0.4**
ALN				*e*Sn	**Sg**	**22 54 03.7**	**+0.5**
PRK	**Paraskevi**	**1.03**	**207**	*e*Pn	**Pg**	**22 53 51.5**	**-0.3**
PRK				*e*Sn	**Sn**	**22 54 07.4**	**+0.2**
PRK	**Paraskevi**	**1.03**	**207**	P	**Pg**	**22 53 51.4**	**-0.4**
PRK				S	**Sg**	**22 54 06.7**	**+1.5**
PRK	**Paraskevi**	**1.03**	**207**	*e*PN	**Pg**	**22 53 51.5**	**-0.3**
PRK				*e*SN	**Sn**	**22 54 07.4**	**+0.2**
PRK	**Paraskevi**	**1.03**	**207**	P	**Pg**	**22 53 51.4**	**-0.4**
PRK				S	**Sg**	**22 54 06.7**	**+1.5**
PRK				*e*Sn	**Sn**	**22 54 07.4**	**+0.2**
CRLT	**Corlu**	**1.16**	**34**	*e*PN	**Pn**	**22 53 53.5**	**-1.0**
CRLT	**Corlu**	**1.16**	**34**	*e*Pn	**Pn**	**22 53 53.5**	**-0.9**
SIGR	**SIGRI**	**1.24**	**220**	P	**Pn**	**22 53 55.4**	**-0.1**
SIGR				S	**Sb**	**22 54 12.0**	**+0.4**
SIGR	**SIGRI**	**1.24**	**220**	P	**Pn**	**22 53 55.4**	**-0.1**
SIGR				S	**Sb**	**22 54 12.0**	**+0.4**
LIA	**Limnos Island**	**1.33**	**259**	*e*Pn	**Pn**	**22 53 56.9**	**+0.1**
LIA				*e*Sn	**Sn**	**22 54 16.2**	**+1.6**
LIA	**Limnos Island**	**1.33**	**259**	P	**Pn**	**22 53 56.7**	**-0.1**
LIA				S	**Sb**	**22 54 14.9**	**+0.6**
LIA	**Limnos Island**	**1.33**	**259**	*e*PN	**Pn**	**22 53 56.9**	**+0.1**
LIA				*e*SN	**Sn**	**22 54 16.2**	**+1.6**
LIA	**Limnos Island**	**1.33**	**259**	P	**Pn**	**22 53 56.7**	**-0.1**
LIA				S	**Sb**	**22 54 14.9**	**+0.6**
LIA				*e*Sn	**Sn**	**22 54 16.2**	**+1.6**
DURS	**Dursunbey**	**1.35**	**114**	*i* P	**Pn**	**22 53 56.5**	**-0.6**
DURS				*i* S	**Sb**	**22 54 14.2**	**-0.7**
DURS	**Dursunbey**	**1.35**	**114**	*i* P	**Pn**	**22 53 56.5**	**-0.5**
DURS				*i* S	**Sb**	**22 54 14.2**	**-0.6**
RDO	**Rodhopi**	**1.42**	**314**	*e*Pn	**Pn**	**22 53 58.0**	**+0.1**
RDO				*e*Sn	**Sn**	**22 54 17.9**	**+1.2**
RDO	**Rodhopi**	**1.42**	**314**	P	**Pn**	**22 53 57.6**	**-0.3**
RDO				S	**Sn**	**22 54 14.6**	**-2.1**
RDO	**Rodhopi**	**1.42**	**314**	*e*PN	**Pn**	**22 53 58.0**	**+0.1**
RDO				*e*SN	**Sn**	**22 54 17.9**	**+1.2**
RDO	**Rodhopi**	**1.42**	**314**	P	**Pn**	**22 53 57.6**	**-0.3**
RDO	**Rodhopi**	**1.42**	**314**	*e*Pn	**Pn**	**22 53 58.0**	**+0.1**
RDO				S	**Sn**	**22 54 14.6**	**-2.1**
RDO				*e*Sn	**Sn**	**22 54 17.9**	**+1.2**
DST	**Dursunbey**	**1.45**	**112**	*e*PN	**Pn**	**22 53 58.0**	**-0.4**
DST				*e*SN	**Sn**	**22 54 17.6**	**+0.1**
DST	**Dursunbey**	**1.45**	**112**	*e*Pn	**Pn**	**22 53 58.0**	**-0.4**
DST				*e*Sn	**Sn**	**22 54 17.6**	**0.0**
AKS	**Akhisar**	**1.47**	**150**	*e*PN	**Pn**	**22 53 58.4**	**-0.3**
AKS	**Akhisar**	**1.47**	**150**	*e*Pn	**Pn**	**22 53 58.4**	**-0.3**
AKHS	**Akhisar**	**1.48**	**150**	*i* P	**Pn**	**22 53 58.4**	**-0.3**
AKHS				*i* S	**Sn**	**22 54 18.6**	**+0.5**
AKHS	**Akhisar**	**1.48**	**150**	*i* P	**Pn**	**22 53 58.4**	**-0.3**
AKHS				*i* S	**Sn**	**22 54 18.6**	**+0.5**
ELBA	**Catalca**	**1.53**	**50**	*i* P	**Pn**	**22 53 59.2**	**-0.4**
ELBA				*i* S	**Sn**	**22 54 18.4**	**-1.2**
ELBA	**Catalca**	**1.53**	**50**	*i* P	**Pn**	**22 53 59.2**	**-0.4**
ELBA				*i* S	**Sn**	**22 54 18.4**	**-1.2**
ARMT	**Armutlu**	**1.56**	**75**	*e*PN	**Pn**	**22 53 60.0**	**0.0**
ARMT				*e*SN	**Sn**	**22 54 20.9**	**+0.5**
ARMT	**Armutlu**	**1.56**	**75**	*e*Pn	**Pn**	**22 54 00.0**	**0.0**
ARMT				*e*Sn	**Sn**	**22 54 20.9**	**+0.5**
CTKS	**Kestanelik-??a**	**1.63**	**49**	*e*PN	**Pn**	**22 54 00.8**	**-0.2**
CTKS	**Kestanelik-??a**	**1.63**	**49**	*e*Pn	**Pn**	**22 54 00.8**	**-0.1**
EDRB	**Edirne**	**1.68**	**357**	*e*PN	**Pn**	**22 54 01.8**	**+0.2**
EDRB	**Edirne**	**1.68**	**357**	*e*Pn	**Pn**	**22 54 01.8**	**+0.2**
CTYL	**Yal??k??y-??at**	**1.69**	**39**	*e*PN	**Pn**	**22 54 01.8**	**+0.1**
CTYL	**Yal??k??y-??at**	**1.69**	**39**	*e*Pn	**Pn**	**22 54 01.8**	**+0.1**
BGKT	**Bogazkoy**	**1.76**	**54**	*e*PN	**Pn**	**22 54 02.6**	**-0.1**
BGKT	**Bogazkoy**	**1.76**	**54**	*e*Pn	**Pn**	**22 54 02.6**	**-0.1**
BLCB	**Balcova**	**1.78**	**176**	*e*PN	**Pn**	**22 54 03.2**	**+0.2**
BLCB	**Balcova**	**1.78**	**176**	P	**Pn**	**22 54 02.5**	**-0.5**
BLCB				S	**Sn**	**22 54 25.9**	**+0.1**
BLCB	**Balcova**	**1.78**	**176**	P	**Pn**	**22 54 02.5**	**-0.5**
BLCB	**Balcova**	**1.78**	**176**	*e*Pn	**Pn**	**22 54 03.2**	**+0.2**
BLCB				S	**Sn**	**22 54 25.9**	**+0.1**
GEMT	**Gemlik**	**1.79**	**81**	*e*PN	**Pn**	**22 54 02.8**	**-0.3**
GEMT	**Gemlik**	**1.79**	**81**	*e*Pn	**Pn**	**22 54 02.8**	**-0.2**
IZM	**Izmir**	**1.79**	**170**	*e*PN	**Pn**	**22 54 03.7**	**+0.6**
IZM	**Izmir**	**1.79**	**170**	*e*Pn	**Pn**	**22 54 03.7**	**+0.6**
DEMI	**Demirci**	**1.81**	**128**	*i* P	**Pn**	**22 54 03.4**	**0.0**
DEMI				*i* S	**Sn**	**22 54 25.2**	**-1.2**
DEMI	**Demirci**	**1.81**	**128**	*i* P	**Pn**	**22 54 03.4**	**+0.1**
DEMI				*i* S	**Sn**	**22 54 25.2**	**-1.2**
KDZ	**Kurdzhali**	**1.85**	**324**	*i* P	**Pn**	**22 54 04.0**	**+0.1**
KDZ	**Kurdzhali**	**1.85**	**324**	*i* P	**Pn**	**22 54 04.0**	**+0.1**
ISK	**Istanbul-Kandi**	**1.89**	**61**	*e*PN	**Pn**	**22 54 04.5**	**+0.1**
ISK	**Istanbul-Kandi**	**1.89**	**61**	*e*Pn	**Pn**	**22 54 04.5**	**+0.1**
CHOS	**Chios island**	**1.89**	**200**	P	**Pn**	**22 54 04.0**	**-0.4**
CHOS				S	**Sn**	**22 54 28.4**	**0.0**
CHOS	**Chios island**	**1.89**	**200**	*e*PN	**Pn**	**22 54 04.7**	**+0.3**
CHOS	**Chios island**	**1.89**	**200**	P	**Pn**	**22 54 04.0**	**-0.4**
**C

PLG			S	Sn	22 54 46.1	-0.7
SRS	**Serrai**	**2.68 292**	P	Pn	22 54 14.9	-0.4
SRS			S	Sn	22 54 47.3	-0.5
SRS	**Serrai**	**2.68 292**	P	Pn	22 54 14.9	-0.4
SRS			S	Sn	22 54 47.3	-0.5
KHAL	**Karahalli**	**2.71 131**	*i* P	Pn	22 54 16.0	+0.3
KHAL			*i* S	Sn	22 54 49.4	+0.8
KHAL	**Karahalli**	**2.71 131**	*i* P	Pn	22 54 16.0	+0.3
KHAL			*i* S	Sn	22 54 49.3	+0.7
ALT	**Altintas**	**2.73 113**	*e*PN	Pn	22 54 15.6	-0.4
ALT	**Altintas**	**2.73 113**	*e*Pn	Pn	22 54 15.6	-0.4
BORA	**Eskisehir**	**2.76 95**	*i* P	Pn	22 54 16.1	-0.3
BORA			*i* S	Sn	22 54 50.6	+0.8
BORA	**Eskisehir**	**2.76 95**	*i* P	Pn	22 54 16.1	-0.3
BORA			*i* S	Sn	22 54 50.6	+0.8
SOH	**Sokhos**	**2.77 285**	P	Pn	22 54 16.5	0.0
SOH			S	Sn	22 54 49.2	-0.9
SOH	**Sokhos**	**2.77 285**	P	Pn	22 54 16.5	0.0
SOH			S	Sn	22 54 49.2	-0.9
MMB	**Musomiste**	**2.78 302**	*i* P	Pn	22 54 16.9	+0.2
MMB	**Musomiste**	**2.78 302**	*i* P	Pn	22 54 16.9	+0.2
GULT	**Gulveren**	**2.79 83**	*e*PN	Pn	22 54 17.5	+0.6
GULT	**Gulveren**	**2.79 83**	*e*Pn	Pn	22 54 17.5	+0.6
ROIA	**ROIAK**	**2.95 7**	*i* P	Pn	22 54 19.5	+0.5
MLSB	**Milas**	**2.95 166**	*e*PN	Pn	22 54 19.9	+0.8
MLSB	**Milas**	**2.95 166**	*e*Pn	Pn	22 54 19.9	+0.8
XOR	**Xorichti**	**2.95 255**	P	Pn	22 54 18.6	-0.5
XOR	**Xorichti**	**2.95 255**	P	Pn	22 54 18.6	-0.5
ESKT	**Eskisehir**	**3.12 101**	*e*PN	Pn	22 54 21.6	+0.2
ESKT	**Eskisehir**	**3.12 101**	*e*Pn	Pn	22 54 21.6	+0.2
APE	**Apeiranthos**	**3.27 199**	P	Pn	22 54 22.7	-0.7
APE	**Apeiranthos**	**3.27 199**	P	Pn	22 54 22.7	-0.7
SHUT	**Suhut-Afyon**	**3.27 118**	*e*PN	Pn	22 54 24.0	+0.5
SHUT	**Suhut-Afyon**	**3.27 118**	*e*Pn	Pn	22 54 24.0	+0.6
MDU	**Mudurnu**	**3.33 83**	*e*PN	Pn	22 54 24.8	+0.6
MDU	**Mudurnu**	**3.33 83**	*e*Pn	Pn	22 54 24.8	+0.6
VTS	**Vitosha**	**3.67 312**	*e*P	Pn	22 54 30.0	+1.0
THL	**Klokotos Trika**	**3.79 262**	*e*PN	Pn	22 54 31.0	+0.4
THL	**Klokotos Trika**	**3.79 262**	*e*Pn	Pn	22 54 31.0	+0.4
MPEP	**Malo Peshtene**	**3.96 325**	*i* P	Pn	22 54 33.2	+0.3
KIZT	**Kizilcal**	**4.07 107**	*e*PN	Pn	22 54 35.2	+0.7
KIZT	**Kizilcal**	**4.07 107**	*e*Pn	Pn	22 54 35.2	+0.7
ELL	**Elmali**	**4.16 144**	*e*PN	Pn	22 54 37.2	+1.6
ELL	**Elmali**	**4.16 144**	*e*Pn	Pn	22 54 37.2	+1.5
TIRR	**Tirgusor**	**4.44 14⇑**	*i*P	Sg	22 55 57.1	+2.7
BARS	**Barje**	**4.63 306⇑**	*i*P	Pn	22 54 43.2	+1.0
NISS		**4.91 313⇑**	*i*P	Pn	22 54 47.7	+1.8
MLR	**Muntele Rosu**	**5.37 353⇑**	*i*P	Sb	22 56 11.8	+1.4
PLOR	**Plostina**	**5.68 358⇑**	*i*P	Sn	22 56 04.0	+2.1
VRI	**Vrincioaia**	**5.70 359⇓**	*i*P	Sn	22 56 06.7	+4.4
BZS	**Buzias**	**6.68 326**	*e*P	Pn	22 55 09.0	-1.2

IDC 03 23:05:42.6±1.7, 8°.09S×120°.24E, h0km, mb3.7/4, mb1 3.7/5, mb1mx3.6/20, mbtmp3.7/5, ML3.3/1, Error ellipse: s-maj=107.7km s-min=24.7km az=66.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**3.09**	**351**	Pn	Pn	23 06 34.2	+1.5
	3.6nm,0.3s,baz=146,slow=11,SNR=16						
KAPI				Sn	Sn	23 07 09.6	-0.8
	6.0nm,0.3s,baz=254,slow=20,SNR=13						
FITZ	**Fitzroy Crossi**	**11.26**	**153**	Sn	Sn	23 10 26.3	-5.3
	0.1nm,0.3s,baz=88,slow=19,SNR=2.9						
ASAR	**Alice Springs**	**20.29**	**141**	P	P	23 10 20.2	+0.2
	3.5nm,0.5s,baz=333,slow=15,SNR=20						
SONM	**Songino Array**	**57.01**	**349**	P	P	23 15 30.8	+0.7
	0.2nm,0.4s,baz=159,slow=6.2,SNR=3.6						
MKAR	**Makanchi Array**	**64.22**	**332**	P	P	23 16 19.0	-0.3
	0.5nm,0.7s,baz=120,slow=7.2,SNR=5.9						
ZALV	**Zalesovo Beam**	**68.64**	**338**	P	P	23 16 47.1	-0.4
	0.7nm,0.4s,baz=150,slow=4.9,SNR=3.6						

*ISK **03** 23:31:26.3, 38°.80N×32°.38E, h8km, MD2.9*
*DDA **03** 23:31:26.3, 38°.86N×32°.37E, h7km±5km, Md3.0*
*CSEM **03** 23:31:26.7±0.1, 38°.83N×32°.41E, h8km, MD3.0, Error ellipse: s-maj=2.0km s-min=1.6km az=93.0*
*ISCJB **03** 23:31:26.4±0.5, 38°.82N±0°.03×32°.41E±0°.03, h2km±6km, Error ellipse: s-maj=4.6km s-min=4.2km az=147.5*
ISC 03 23:31:27.2±0.5, 38°.82N±0°.03×32°.40E±0°.04, h5km±5km, n30, σ0°78/47, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDHN	**Kadinhani**	**0.37**	**217**	*i* P	Pg	23 31 34.4	+0.2
KDHN				*i* S	Sg	23 31 40.1	+1.0
KDHN	**Kadinhani**	**0.37**	**217**	*i* P	Pg	23 31 34.4	+0.1
KDHN				*i* S	Sg	23 31 40.1	+1.1
KIZT	**Kizilcal**	**0.41**	**279**	*e*PG	Pg	23 31 34.7	-0.3
KIZT				*e*SG	Sg	23 31 40.8	+0.4
LADK	**Ladik-KONYA**	**0.62**	**182**	*e*PG	Pg	23 31 38.6	-0.4
LADK				*e*SG	Sg	23 31 47.2	+0.3
LADK	**Ladik-KONYA**	**0.62**	**182**	*e*Pg	Pg	23 31 38.6	-0.4
LADK				*e*Sg	Sg	23 31 47.3	+0.3
KONT	**Konya--Tatoy**	**0.87**	**182**	*e*PG	Pg	23 31 42.8	-1.0
KONT				*e*SG	Sg	23 31 55.7	+0.5
BBAL	**Bala**	**0.92**	**38**	*i* P	Pg	23 31 44.0	-0.8
BBAL				*i* S	Sg	23 31 56.6	-0.2
BBAL	**Bala**	**0.92**	**38**	*i* P	Pg	23 31 44.0	-0.8
BBAL				*i* S	Sg	23 31 56.6	-0.1
SVRH	**Sivrihisar-ESK**	**0.93**	**313**	*e*PG	Pg	23 31 43.8	-1.1
SVRH				*e*SG	Sg	23 31 58.0	+1.0
SVRH	**Sivrihisar-ESK**	**0.93**	**313**	*e*Pg	Pg	23 31 43.8	-1.1
SVRH				*e*Sg	Sg	23 31 58.0	+1.1
SULT	**Sultanhani-AKS**	**1.07**	**125**	*e*PG	Pg	23 31 47.5	-0.2
SULT				*e*SG	Sg	23 32 02.7	+1.1
SULT	**Sultanhani-AKS**	**1.07**	**125**	*e*Pg	Pg	23 31 47.5	-0.2
SULT				*e*Sg	Sg	23 32 02.7	+1.1
LOD	**Lodumlu**	**1.11**	**15**	*e*PN	Pn	23 31 48.6	-0.6
LOD	**Lodumlu**	**1.11**	**15**	*e*Pn	Pn	23 31 48.6	-0.7
ESKT	**Eskisehir**	**1.39**	**301**	*e*PN	Pn	23 31 52.8	-0.4
ESKT	**Eskisehir**	**1.39**	**301**	*i* P	Pn	23 31 52.9	-0.3
ESKT				*i* S	Sb	23 32 12.8	+1.2
ESKT	**Eskisehir**	**1.39**	**301**	*e*Pn	Pn	23 31 52.8	-0.4
SEYT	**Eskypehyr**	**1.39**	**301**	*i* P	Pn	23 31 52.9	-0.3
SEYT				*i* S	Sb	23 32 12.8	+1.2
SHUT	**Suhut-Afyon**	**1.47**	**260**	*e*PN	Pn	23 31 53.4	-0.8
SHUT	**Suhut-Afyon**	**1.47**	**260**	*e*Pn	Pn	23 31 53.4	-0.8
SUTC	**Sutluce-Ispart**	**1.73**	**220**	*e*PN	Pn	23 31 57.5	-0.4
SUTC	**Sutluce-Ispart**	**1.73**	**220**	*e*Pn	Pn	23 31 57.5	-0.3
ALT	**Altintas**	**1.80**	**278**	*e*PN	Pn	23 31 57.9	-0.8
ALT	**Altintas**	**1.80**	**278**	*e*Pn	Pn	23 31 57.9	-0.8
BORA	**Eskisehir**	**1.84**	**306**	*i* P	Pn	23 31 58.8	-0.6
BORA				*i* S	Sn	23 32 22.9	-0.1
BORA	**Eskisehir**	**1.84**	**306**	*i* P	Pn	23 31 58.8	-0.6
BORA				*i* S	Sn	23 32 23.0	0.0
ELDT	**Eldivan**	**1.85**	**25**	*i* P	Pn	23 31 59.9	+0.4
ELDT				*i* S	Sn	23 32 25.5	+2.3
ELDT	**Eldivan**	**1.85**	**25**	*i* P	Pn	23 31 59.9	+0.4
HDMB	**Hadim**	**1.85**	**178**	*e*PN	Pn	23 31 59.3	-0.2
HDMB	**Hadim**	**1.85**	**178**	*e*Pn	Pn	23 31 59.3	-0.2

*IDC **03** 23:41:13.2±0.9, 22°.04S×174°.30W, h0km, mb4.4/9, mb1 4.6/10, mb1mx4.5/17, mbtmp4.5/10, ML5.3/1, MS4.1/4, Ms1 4.1/4, ms1mx3.8/20, Error ellipse: s-maj=36.1km s-min=19.1km az=143.0*
*ISCJB **03** 23:41:16.9±0.5, 22°.12S±0°.07×174°.38W±0°.09, h33km, mb4.3/14, MS4.3/3, Error ellipse: s-maj=13.5km s-min=8.1km az=31.6*
*NEIC **03** 23:41:21.4±1.2, 22°.06S×174°.40W, h60km±10km, mb4.5/3, Error ellipse: s-maj=11.3km s-min=9.0km az=156.0*
ISC 03 23:41:20.2±1.8, 22°.09S±0°.08×174°.4W±0°.1, h47km±16km, n40, σ0°80/30, mb4.3/14, MS4.3/3, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**7.81**	**203**	Pn	Pn	23 43 09.7	-1.6
	41nm,0.3s,baz=77,slow=23,SNR=3.3						
RAO				Sn	Sn	23 44 39.3	+0.9
	84nm,0.3s,baz=59,slow=21,SNR=7.8						
RAO				LR	LR	23 45 48.1	
	comp=Z,353nm,20.3s,baz=72,slow=35						
RAO	**Raoul Island**	**7.81**	**203**	*e*Pn	Pn	23 43 12.5	+1.2
RAO				*e*Sn	Sn	23 44 38.0	-0.5
MSVF	**Nonsavu**	**8.35**	**300**	*e*Pn	Pn	23 43 19.0	+0.3
	69nm,0.9s						
AFI	**Afiamalu**	**8.50**	**17**	Pn	Pn	23 43 10.5	-10
	5.6nm,0.3s,baz=285,slow=6.1,SNR=4.8						
AFI				Sn	Sx	23 44 37.8	
	9.5nm,0.3s,baz=350,slow=19,SNR=5.0						
AFI	**Afiamalu**	**8.50**	**17**	*e*Pn	Pn	23 43 11.7	-9.2
AFI				S	Sx	23 44 41.5	
RAR	**Rarotonga**	**13.60**	**89**	*e*Pn	Pn	23 44 19.5	-11
PPT	**Papeete**	**23.74**	**83**	LR	LR	23 53 48.8	
	comp=Z,382nm,20.2s,MS3.9,baz=124,slow=32						
HNR	**Honiara**	**27.68**	**293**	*e*P	P	23 47 03.8	-0.3
EIDS	**Eidsvold**	**31.75**	**257**	*e*P	P	23 47 39.3	-0.7
CTA	**Charters Tower**	**36.73**	**266**	*e*P	P	23 48 23.1	-0.1
	3.2nm,0.6s,mb4.3						
CTA	**Charters Tower**	**36.73**	**266**	P	P	23 48 23.1	-0.1
	4.9nm,0.6s,mb4.5,baz=97,slow=9.9,SNR=7.6						
STKA	**Stephens Creek**	**40.20**	**246**	P	P	23 48 53.0	+0.7
	1.7nm,0.8s,mb3.9,baz=131,slow=11,SNR=3.3						
STKA				LR	LR	00 04 28.5	
	comp=Z,476nm,18.1s,MS4.4,baz=28,slow=35						
ASAR	**Alice Springs**	**47.47**	**258**	P	P	23 49 50.8	0.0
	6.8nm,0.8s,mb4.6,baz=88,slow=8.6,SNR=6.7						
WRAB	**Tennant Creek**	**47.74**	**263**	*e*P	P	23 49 51.4	-1.4
MJAR	**Matsushiro Arr**	**73.52**	**322**	P	P	23 52 48.0	-0.1
	2.6nm,0.5s,mb4.4,baz=161,slow=5.9,SNR=6.5						
KSM	**Kuching**	**76.98**	**277**	*e*P	P	23 53 08.2	-0.3
NACB	**Ninganchiao**	**77.38**	**303**	P	P	23 53 09.9	-0.6
CMB	**Columbia Colle**	**78.39**	**41**	*e*P	P	23 53 15.1	-0.7
	5.1nm,1.2s,mb4.3						
PETK	**Petropavlovsk-**	**78.72**	**343**	P	P	23 53 16.9	-0.4
	5.2nm,0.8s,mb4.5,baz=125,slow=8.6,SNR=6.9						
NVAR	**Mina Array Bea**	**79.91**	**41**	P	P	23 53 24.4	+0.3
	2.3nm,0.8s,mb4.1,baz=220,slow=9.4,SNR=9.6						
KSRS	**Korea Array**	**80.34**	**317**	P	P	23 53 27.3	+0.8
	1.1nm,0.6s,mb4.0,baz=126,slow=6.7,SNR=5.0						
TXAR	**Lajitas Array**	**85.10**	**56**	P	P	23 53 51.5	+0.1
	2.2nm,1.0s,mb4.2,baz=212,slow=4.4,SNR=15						
HLID	**Hailey**	**85.37**	**39**	*e*P	P	23 53 52.6	+0.2
	3.6nm,1.0s,mb4.5						
ANMO	**Albuquerque**	**85.80**	**50**	*e*P	P	23 53 54.9	+0.2
	1.5nm,1.0s,mb4.2						
PDAR	**Pinedale Array**	**87.84**	**42**	P	P	23 54 04.4	-0.1
	1.3nm,0.9s,mb4.2,baz=247,slow=3.1,SNR=7.3						
WALA	**Waterton Lakes**	**88.90**	**35**	P	P	23 54 09.0	-0.3
XAN	**Xi'an**	**91.80**	**306**	P	P	23 54 25.1	+1.9
XAN				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.5						
XAN				pmax	pmax		
	comp=Z,43nm,14.1s						
JTS	**JuntasAbangare**	**93.27**	**80**	LR	LR	00 26 13.5	
	comp=Z,237nm,21.1s,MS4.6,baz=348,slow=29						
CMAR	**Chiang Mai Arr**	**93.83**	**288**	P	P	23 54 36.0	+3.1
	comp=Z,1.5nm,0.8s,mb4.5,baz=105,slow=2.8,SNR=8.3						
INK	**Inuvik**	**94.95**	**14**	P	P	23 54 36.3	-0.6
BVAR	**Borovoye Array**	**122.48**	**320**	PKP	PKPdf	00 00 08.1	-1.9
	comp=Z,0.2nm,0.3s,baz=278,slow=10.0,SNR=2.9						
AKASG	**Malin Array Be**	**146.01**	**333**	PKPbc	PKPbc	00 00 53.4	-1.2
	comp=Z,0.3nm,0.3s,baz=37,slow=3.4,SNR=12						
KOLS	**Kolonicke sedl**	**150.13**	**338**	*e*PKP	PKPbc	00 01 08.0	+2.3
CLL	**Collm**	**150.28**	**351**	*e*PKPdf	PKPdf	00 01 00.0	-0.8
CLL				*e*PKPbc	PKPbc	00 01 07.0	+1.0
	comp=Z,31nm,1.9s						
CLL				*i* pPKPdf	pPKPdf	00 01 17.9	+2.6
CLL				*i* pPKPbc	pPKPbc	00 01 22.8	+2.4
BRTR	**Keskin Array B**	**150.41**	**313**	PKPbc	PKPbc	00 01 07.0	+0.4
	comp=Z,1.0nm,0.8s,baz=185,slow=8.7,SNR=3.8						
BRG	**Berggiesshubel**	**150.55**	**349**	*e*P	PKPbc	00 01 07.6	+1.0
	comp=Z,8.0nm,1.2s						
KECS	**Kecovo**	**151.12**	**339**	*e*PKP	PKPdf	00 01 05.5	+3.3
MMAI	**Mount Meron Ar**	**151.55**	**299**	PKPab	PKPab	00 01 17.4	-0.8
	comp=Z,1.6nm,0.7s,baz=45,slow=6.1,SNR=4.9						
VYHS	**Vyhne**	**151.62**	**341**	*e*PKP	PKPbc	00 01 11.3	+2.1
GERES	**GERESS Array B**	**152.54**	**348**	PKPbc	PKPbc	00 01 10.0	-1.3
	comp=Z,0.4nm,0.7s,baz=349,slow=5.4,SNR=4.0						

*IDC **03** 23:43:25.1±0.5, 8°.13S×120°.11E, h0km, mb4.5/19, mb1 4.5/21, mb1mx4.5/28, mbtmp4.5/21, ML4.1/1, MS3.9/6, Ms1 3.9/6, ms1mx3.6/30, Error ellipse: s-maj=19.0km s-min=11.5km az=66.0*
*BJI **03** 23:43:25.8, 8°.24S×120°.11E, h14km, mB5.1/7, mb4.5/10, Ms5.0/2, Ms7 4.6/2*
*NEIC **03** 23:43:26.6±0.2, 8°.14S×120°.13E, h10km, mb4.8/19, Error ellipse: s-maj=8.8km s-min=4.4km az=58.0*
*ISCJB **03** 23:43:28.8±0.6, 8°.15S±0°.03×120°.16E±0°.04, h36km±6km, mb4.6/39, MS3.9/3, Error ellipse: s-maj=6.5km s-min=4.5km az=142.2*
*DJA **03** 23:43:32, 8°.22S×120°.17E, h32km, mb5.2/16*
*GCMT **03** 23:43:32.1±0.4, 8°.14S×120°.45E, h22km±1km, MW5.1, Moment Tensor Solution. s21,c25; s62,c82; Moment tensor: Scale 10^16Nm; Mrr4.15±.45; Mθθ-4.22±.26; Mφφ0.07±.29; Mrθ-1.20±.41; Mrφ-0.63±.20; Mθφ2.94±.59; Best double couple: M0 5.10000×10^16 NP1:φs 59.00000°, δ45.00000°, λ49.00000°. NP2:φs 289.00000°, δ57.00000°, λ123.00000°. Principal axes: T 5.8700, Plg61.0000°, Azm254.0000°; N -1.4700, Plg28.0000°, Azm90.0000°; P -4.4000, Plg7.0000°, Azm356.0000°; Data Used: IU IC II CN G.*
ISC 03 23:43:30.9±0.5, 8°.13S±0°.03×120°.19E±0°.03, h37km±5km, n102, σ1°06/97, mb4.6/39, MS3.9/3, 1C, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.53**	**176**	P	Pn	23 43 57.4	+1.6
MMRI	**Maumere**	**2.09**	**104**	P	Pn	23 44 04.1	+0.6
KAPI	**Kappang**	**3.13**	**352**	Pn	Pn	23 44 15.9	-1.8
	baz=173,slow=9.6						
KAPI				Sn	Sn	23 44 51.1	-2.7
	83nm,0.3s,baz=107,slow=21,SNR=10						
KAPI				LR	LR	23 46 08.4	
	comp=Z,2μm,18.1s,baz=178,slow=52						
KAPI	**Kappang**	**3.13**	**352**	*e*Pn	Pn	23 44 15.3	-2.5
KAPI				*e*Sn	Sn	23 44 54.0	+0.1
KHKI	**Kahang-Kahang**	**4.54**	**267**	P	Pn	23 44 35.5	-1.6
KDI	**Kendari**	**4.80**	**30**	P	Pn	23 44 42.3	+1.5
SRBI	**Singaraja**	**4.92**	**270**	P	Pn	23 44 41.1	-1.3
IGBI	**Denpasar**	**5.03**	**262**	P	Pn	23 44 47.2	+3.3
	3.9nm1μm,0.7s						
TTSI	**Tana Toraja**	**5.07**	**356**	P	Pn	23 44 46.1	+1.7
	0.6nm2μm194nm,0.7s						
BYJI	**Banyuwangi**	**5.77**	**269**	P	Pn	23 44 46.4	-7.7
KMMI	**Kalianget**	**6.26**	**279**	P	Pn	23 45 01.6	+0.8
	0.7nm208nm,0.6s						
GMJI	**Gumukmas**	**6.67**	**268**	P	Pn	23 45 07.0	+0.5
	0.4nm104nm,0.6s						
APSI	**Ampana**	**7.32**	**12**	P	Pn	23 45 19.9	+4.5
PWJI	**Pagerwojo**	**8.30**	**270**	P	Pn	23 45 30.1	+1.3
NLAI	**Namlea**	**8.42**	**55**	P	Pn	23 45 35.4	+4.9
	2μm89nm,0.7s						
UGM	**Wanagama**	**9.57**	**271**	P	Pn	23 45 47.0	+0.7
	183nm,1.8s						
SMRI	**Semarang**	**9.72**	**276**	P	Pn	23 45 48.8	+0.5
	67nm,0.9s						
MSAI	**Masohi**	**9.91**	**62**	P	Pn	23 45 54.9	+3.9
	481nm,0.9s						
FITZ	**Fitzroy Crossi**	**11.24**	**152**	*e*P	Pn	23 46 08.0	-1.1
	32nm,0.4s						
FITZ	**Fitzroy Crossi**	**11.24**	**152**	Pn	Pn	23 46 08.3	-0.8
	1.1nm,0.3s,baz=337,slow=6.6,SNR=40						
FITZ				Sn	Sn	23 48 15.6	+2.1
	2.0nm,0.3s,baz=188,slow=13,SNR=3.3						
FITZ				LR	LR	23 51 57.1	
	comp=Z,594nm,18.5s,baz=314,slow=45						
FITZ	**Fitzroy Crossi**	**11.24**	**152**	*e*Pn	Pn	23 46 08.6	-0.6
	19nm,0.6s						
FITZ				*e*Sn	Sn	23 48 13.2	-0.3
FITZ	**Fitzroy Crossi**	**11.24**	**152**	P	Pn	23 46 09.2	+0.1
	53nm,0.6s						
KNA	**Kununurra**	**11.30**	**133**	P	Pn	23 46 08.6	-1.4
	2μm272nm,0.7s						
KAKA	**Kakadu**	**12.88**	**112**	*e*P	Pn	23 46 30.3	-1.3
	44nm,0.6s						
KAKA	**Kakadu**	**12.88**	**112**	*e*Pn	Pn	23 46 30.2	-1.4
	112nm,0.6s						
KAKA				*e*Sn	Sn	23 48 53.4	-0.4
KAKA	**Kakadu**	**12.88**	**112**	P	Pn	23 46 30.7	-0.9
	810nm102nm,0.6s						
MBWA	**Marble Bar**	**12.96**	**182**	*e*P	Pn	23 46 30.8	-1.8
MBWA	**Marble Bar**	**12.96**	**182**	*e*Pn	Pn	23 46 30.8	-1.8
	15nm,0.7s						
MYLDM	**Lahad Datu**	**13.33**	**353**	P	Px	23 46 48.8	
KSM	**Kuching**	**13.71**	**314**	*e*Pn	Pn	23 46 41.3	-1.7
CGJI	**Cibinong**	**14.45**	**275**	P	Pn	23 46 59.5	+6.5
	58nm,0.8s						
KKM	**Kota Kinabalu**	**14.63**	**344**	*e*Pn	Pn	23 46 53.6	-1.9
DAV	**Davao City (W)**	**16.03**	**20**	LR	LR	23 54 19.5	
	comp=Z,292nm,19.3s,baz=256,slow=41						
WRAB	**Tennant Creek**	**18.05**	**132**	*e*Pn	Pn	23 47 37.2	-1.7
	19nm,0.6s						
WRAB				*e*Sn	Sn	23 50 59.5	+0.1
WRAB	**Tennant Creek**	**18.05**	**132**	P	Pn	23 47 38.6	-0.3
	30nm,0.7s						
MEEK	**Meekatharra**	**18.46**	**184**	*e*P	Pn	23 47 46.3	+2.4
ASAR	**Alice Springs**	**20.28**	**141**	P	P	23 48 03.9	+0.3
	22nm,0.7s,baz=315,slow=9.8,SNR=92						
COEN	**Coen**	**23.28**	**106**	*e*P	P	23 48 34.8	-0.9
COEN	**Coen**	**23.28**	**106**	*e*P	P	23 48 34.3	-1.4
	120nm,0.7s,mb5.4						
COEN				*e*PcP	PcP	23 52 21.8	-0.6
COEN	**Coen**	**23.28**	**106**	P	P	23 48 35.1	-0.6
	91nm,0.9s,mb5.2						
KLBR	**Kellerberrin**	**23.45**	**185**	*e*P	P	23 48 36.3	-0.8
	19nm,0.7s,mb4.6						
KULM	**Kulim**	**23.61**	**304**	*e*Pn	P	23 48 39.1	+0.3
FORT	**Forrest**	**23.70**	**163**	*e*P	P	23 48 38.9	-0.6
	20nm,0.6s,mb4.7						
FORT	**Forrest**	**23.70**	**163**	*e*P	P	23 48 38.7	-0.8
	34nm,0.8s,mb4.8						
FORT				*e*PcP	PcP	23 52 22.8	-0.2
PSI	**Prapat**	**23.83**	**296**	P	P	23 48 37.8	-3.0
	4.9nm,0.4s,mb4.3,baz=250,slow=4.7,SNR=7.9						
PSI				LR	LR	23 57 52.2	
	comp=Z,507nm,19.6s,MS4.0,baz=228,slow=37						
NWAO	**Narrogin (SRO)**	**24.82**	**186**	P	P	23 48 49.1	-0.5
	35nm,0.7s,mb5.0,baz=5.6,slow=11,SNR=24						
NWAO	**Narrogin (SRO)**	**24.82**	**186**	*e*P	P	23 48 49.7	+0.1
	22nm,0.6s,mb4.9						
NWAO				*e*PcP	PcP	23 52 25.4	0.0
RKGY	**Rocky Gully**	**26.52**	**186**	*e*P	P	23 49 06.3	+1.3
	18nm,0.6s,mb4.8						
CTA	**Charters Tower**	**27.89**	**118**	P	P	23 49 16.9	-0.5
	3.6nm,0.6s,mb4.2,baz=281,slow=9.4,SNR=3.5						
CTA	**Charters Tower**	**27.89**	**118**	P	P	23 49 16.9	-0.6
CTAO	**Charters Tower**	**27.89**	**118**	*e*P	P	23 49 17.9	+0.4
QIZ	**Qiongzhong**	**28.85**	**339**	P	P	23 49 26.9	+0.8
STKA	**Stephens Creek**	**30.90**	**143**	*e*P	P	23 49 44.4	+0.3
	8.8nm,0.7s,mb4.7						
STKA	**Stephens Creek**	**30.90**	**143**	P	P	23 49 44.5	+0.5
	9.3nm,0.7s,mb4.8,baz=312,slow=9.0,SNR=20						
STKA	**Stephens Creek**	**30.90**	**143**	*e*P	P	23 49 44.2	+0.1
	1.7nm,0.6s,mb4.0						
GUMO	**Guam**	**32.65**	**49**	P	P	23 50 01.0	+1.3
CMAR	**Chiang Mai Arr**	**33.73**	**322**	P	P	23 50 08.4	-0.6
	1.3nm,0.6s,mb4.0,baz=150,slow=6.7,SNR=8.9						
CMAR				LR	LR	00 05 56.0	
	comp=Z,240nm,21.5s,MS3.9,baz=344,slow=40						
YNG	**Young**	**36.76**	**139**	*e*P	P	23 50 36.1	+1.1
	20nm,0.6s,mb5.1						
KMI	**Kunming**	**37.17**	**333**	P	pP	23 50 52.5	+3.4
KMI				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.8						
ENH	**Enshi**	**39.54**	**345**	*e*P	P	23 50 58.7	+0.3
	comp=Z,7.2nm,0.6s,mb4.6						
TAU	**Tasmania Unive**	**42.04**	**150**	P	P	23 51 19.0	+0.2
KSRS	**Korea Array**	**45.92**	**9**	P	P	23 51 50.4	+0.4
	comp=Z,0.7nm,0.4s,mb3.9,baz=186,slow=9.8,SNR=4.4						
KSRS				LR	LR	00 10 21.3	
	comp=Z,86nm,21.8s,MS3.6,baz=190,slow=35						
LSA	**Lhasa**	**46.85**	**325**	*e*P	P	23 51 58.3	+0.9
	comp=Z,5.9nm,0.7s,mb4.6						
MJAR	**Matsushiro Arr**	**47.55**	**20**

UTMO	**Huajuapan**	**3.54 300**	*e*P	Pn	23 47 01.2	+0.1
UTMO			*i* S	Sn	23 47 40.9	-0.8

*ISCJB **04** 00:05:10.7±0.5, 50.′47N±0.′03×16.′41E±0.′03, h10km, Error ellipse: s-maj=4.0km s-min=2.6km az=32.9*
*CSEM **04** 00:05:11.7±0.1, 50.′47N×16.′43E, h15km, ML2.7/8, Error ellipse: s-maj=2.6km s-min=1.8km az=28.0*
*PRU **04** 00:05:12.3, 50.′49N×16.′42E, h0km, Hronov*
*IPEC **04** 00:05:12.4±0.1, 50.′50N×16.′44E, h3km, ML1.5/4, Error ellipse: s-maj=0.7km s-min=0.4km az=76.0*

ISC 04 00:05:11.5±0.6, 50.′49N±0.′03×16.′42E±0.′03, h16km±6km, n25, σ0°61/44, 1D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DPC	**Dobruska-Polom**	**0.15**	**205**	*e*PG	**Pg**	**00 05 16.3**	**+0.7**
DPC				*e*SG	**Sg**	**00 05 18.1**	**-0.2**
	comp=Z,76nm,0.2s						
DPC	**Dobruska-Polom**	**0.15**	**205**	‖ *i* Pg	**Pg**	**00 05 16.2**	**+0.6**
	baz=28						
DPC				*e*Sg	**Sg**	**00 05 18.3**	**0.0**
	baz=28						
UPC	**Upice**	**0.26**	**274**	*e*PG	**Pg**	**00 05 17.8**	**+0.5**
UPC				*e*SG	**Sg**	**00 05 21.4**	**+0.2**
UPC	**Upice**	**0.26**	**274**	*e*Pg	**Pg**	**00 05 17.7**	**+0.4**
	baz=92						
UPC				*e*Sg	**Sg**	**00 05 21.5**	**+0.3**
	baz=92						
KSP	**Ksiaz**	**0.36**	**347**	*e*Pg	**Pg**	**00 05 19.6**	**+0.6**
KSP				*e*Sg	**Sg**	**00 05 24.3**	**+0.3**
KSP	**Ksiaz**	**0.36**	**347**	*e*Pg	**Pg**	**00 05 19.5**	**+0.5**
	baz=164						
KSP				*e*Sg	**Sg**	**00 05 24.2**	**+0.2**
	baz=164						
MORC	**Moravsky Berou**	**1.01**	**134**	*e*Pg	**Pg**	**00 05 31.3**	**+0.2**
	baz=316						
MORC				*e*Sg	**Sg**	**00 05 44.1**	**-0.3**
	comp=Z,6.6nm,0.2s,baz=316						
PVCC	**Panska Ves**	**1.19**	**273**	*e*PG	**Pg**	**00 05 34.8**	**+0.4**
PVCC	**Panska Ves**	**1.19**	**273**	Pg	**Pg**	**00 05 34.8**	**+0.4**
PVCC				*e*Sg	**Sg**	**00 05 49.9**	**+0.1**
	baz=91						
VRAC	**Vranov**	**1.19**	**175**	*e*Pg	**Pg**	**00 05 34.4**	**0.0**
	baz=355						
VRAC				*e*Sg	**Sg**	**00 05 49.7**	**-0.2**
	comp=Z,12nm,0.2s,baz=355						
OKC	**Ostrava-Krasne**	**1.29**	**120**	*e*PG	**Pg**	**00 05 36.3**	**0.0**
OKC				*e*SG	**Sg**	**00 05 53.2**	**+0.1**
	comp=Z,7.0nm,0.4s						
OKC	**Ostrava-Krasne**	**1.29**	**120**	Pg	**Pg**	**00 05 36.3**	**0.0**
OKC				Sg	**Sg**	**00 05 53.2**	**+0.1**
	comp=Z,7.0nm,0.4s						
PRU	**Pruhonice**	**1.31**	**248**	*e*PG	**Pg**	**00 05 37.3**	**+0.6**
PRU				*e*SG	**Sg**	**00 05 54.6**	**+0.8**
	comp=Z,4.6nm,0.2s						
PRU	**Pruhonice**	**1.31**	**248**	*e*Pg	**Pg**	**00 05 37.2**	**+0.5**
	baz=67						
PRU				*e*Sg	**Sg**	**00 05 53.9**	**+0.1**
	baz=67						
TREC	**Trest**	**1.34**	**207**	*e*PG	**Pg**	**00 05 37.4**	**+0.1**
TREC				*e*SG	**Sg**	**00 05 54.9**	**+0.1**
	comp=Z,13nm,0.2s						
TREC	**Trest**	**1.34**	**207**	Pg	**Pg**	**00 05 37.4**	**+0.1**
TREC				Sg	**Sg**	**00 05 54.9**	**+0.1**
	comp=Z,13nm,0.2s						
KRUC	**Moravsky**	**1.43**	**181**	*e*Pg	**Pg**	**00 05 38.6**	**-0.4**
	baz=1.2						
KRUC				*e*Sg	**Sg**	**00 05 57.0**	**-0.6**
	comp=Z,5.5nm,0.2s,baz=1.2						
BRG	**Berggiesshubel**	**1.62**	**285**	SG	**Sg**	**00 06 03.3**	**-0.5**
	comp=Z,8.5nm,0.4s						
JAVC	**Velka Javorina**	**1.82**	**153**	*e*Sg	**Sg**	**00 06 11.1**	**+0.9**
	comp=Z,1.2nm,0.2s						
OJC	**Ojcow**	**2.18**	**96**	*e*Sg	**Sg**	**00 06 20.7**	**-0.8**
KHC	**Kasperske Hory**	**2.29**	**235**	*e*PN	**Pn**	**00 05 50.0**	**+1.5**
KHC				*e*PG	**Pg**	**00 05 53.8**	**-1.6**
KHC				*ex*	x	00 06 16.0	
KHC				*e*SG	**Sg**	**00 06 24.9**	**-0.2**
	comp=Z,4.2nm,0.3s						
KHC	**Kasperske Hory**	**2.29**	**235**	Pn	**Pn**	**00 05 50.0**	**+1.5**
CLL	**Collm**	**2.31**	**292**	*e*Pg	**Pg**	**00 05 55.0**	**-0.9**
CLL				*e*Sg	**Sg**	**00 06 25.0**	**-0.9**
	comp=Z,3.0nm,0.5s						
NKC	**Novy Kostel**	**2.56**	**266**	*e*SG	**Sg**	**00 06 33.6**	**-0.1**
	comp=Z,4.7nm,0.3s						
NKC	**Novy Kostel**	**2.56**	**266**	Sg	**Sg**	**00 06 33.6**	**-0.1**
	comp=Z,4.7nm,0.3s						

*IDC **04** 00:38:39.8±1.3, 29.′96N×57.′67E, h0km, mb3.9/13, mb1 4.0/14, mb1mx3.9/29, mbtmp3.9/14, ML3.8/1, MS3.4/4, Ms1 3.4/4, ms1mx2.9/39, Error ellipse: s-maj=30.8km s-min=17.0km az=170.0*
*ISCJB **04** 00:38:40.7±0.9, 30.′24N±0.′03×57.′54E±0.′03, h4km±7km, mb3.8/14, Error ellipse: s-maj=4.9km s-min=3.9km az=137.0*
*THR **04** 00:38:42.5±0.4, 30.′31N×57.′38E, h14km±3km, ML3.9*
*CSEM **04** 00:38:43.5±0.2, 30.′27N×57.′55E, h10km, ML4.5, Ms4.0, Error ellipse: s-maj=5.2km s-min=3.8km az=129.0*
*NEIC **04** 00:38:45.0, 30.′30N×57.′60E, h13km, mb3.8/7, ML3.9(THR), MN4.5(TEH), After TEH.*
*TEH **04** 00:38:45.0, 30.′31N×57.′56E, h13km*
*SGS **04** 00:38:49.8, 30.′19N×56.′80E, h14km*

ISC 04 00:38:42.7±0.9, 30.′26N±0.′03×57.′54E±0.′03, h4km±7km, n165, σ1°06/173, mb3.8/14, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRBR	**Kerman**	**0.73**	**248**	*e*Pg	**Pg**	**00 38 54.0**	**-2.8**
KRBR	**Kerman**	**0.73**	**248**	*e*Pg	**Pg**	**00 38 54.9**	**-1.9**
KRBR				AML	AML	00 39 04.8	
	comp=N,7μm,0.2s						
KRBR				AML	AML	00 39 05.2	
	comp=E,7μm,0.5s						
IBAF	**Bafgh**	**2.16**	**309**	Pn	**Pn**	**00 39 20.0**	**+0.5**
IBAF	**Bafgh**	**2.16**	**309**	*e*Pn	**Pn**	**00 39 20.1**	**+0.6**
IBAF				*e*		00 39 22.4	
	comp=Z,37μm,0.2s						
IBAF	**Bafgh**	**2.16**	**309**	*e*Pn	**Pn**	**00 39 20.1**	**+0.6**
IKOO	**Kooshah**	**2.50**	**30**	*e*Pn	**Pn**	**00 39 23.8**	**-0.4**
IKOO				*e*		00 40 10.3	
	comp=Z,38μm,0.2s						
IKOO	**Kooshah**	**2.50**	**30**	*e*Pn	**Pn**	**00 39 23.8**	**-0.4**
IMEH	**Mehriz**	**2.76**	**295**	Pn	**Pn**	**00 39 28.2**	**+0.4**
IMEH	**Mehriz**	**2.76**	**295**	*e*Pn	**Pn**	**00 39 28.2**	**+0.4**
IMEH				*e*		00 39 33.5	
	comp=Z,13μm,0.1s						
IMEH	**Mehriz**	**2.76**	**295**	*e*Pn	**Pn**	**00 39 28.2**	**+0.4**
ITEG	**Tejag**	**2.83**	**21**	*e*Pn	**Pn**	**00 39 28.3**	**-0.4**
ITEG				*e*Sg	**Sg**	**00 40 11.0**	**-2.5**
ITEG				*e*		00 40 20.9	
	comp=Z,27μm,0.2s						
ITEG	**Tejag**	**2.83**	**21**	*e*Pn	**Pn**	**00 39 28.3**	**-0.4**
ITEG				*e*Sg	**Sg**	**00 40 11.0**	**-2.5**
ZHSF	**Zahedan**	**2.88**	**102**	*e*P	**Pn**	**00 39 32.0**	**+2.6**
ZHSF				*e*Sg	**Sg**	**00 40 16.0**	**+0.8**
IBND	**Bandar-abas**	**2.93**	**198**	*e*Pn	**Pn**	**00 39 31.7**	**+1.5**
IBND				*e*Pn	**Pn**	**00 39 32.1**	**+1.9**
IBND				*e*		00 40 29.1	
	comp=Z,21μm,0.7s						
IBND	**Bandar-abas**	**2.93**	**198**	*e*Pn	**Pn**	**00 39 31.7**	**+1.5**
BNDS	**Bandar-Abbas**	**3.09**	**203**	*e*Pn	**Pn**	**00 39 32.0**	**-0.4**
BNDS	**Bandar-Abbas**	**3.09**	**203**	*e*Pn	**Pn**	**00 39 33.1**	**+0.7**
BNDS				AML	AML	00 40 28.0	
	comp=N,329nm,0.3s						
BNDS	**Bandar-Abbas**	**3.09**	**203**	*e*Pn	**Pn**	**00 39 32.9**	**+0.5**
IDAH	**Dahanechah**	**3.17**	**38**	*e*Pn	**Pn**	**00 39 34.3**	**+0.8**
IDAH				*e*		00 40 31.6	
	comp=Z,9μm,0.3s						
IDAH	**Dahanechah**	**3.17**	**38**	*e*Pn	**Pn**	**00 39 34.3**	**+0.8**
ICHK	**Chekchek**	**3.34**	**307**	Pn	**Pn**	**00 39 36.7**	**+1.0**
ICHK	**Chekchek**	**3.34**	**307**	*e*Pn	**Pn**	**00 39 36.8**	**+1.1**
ICHK				*e*		00 40 38.7	
	comp=Z,14μm,0.2s						
ICHK	**Chekchek**	**3.34**	**307**	*e*Pn	**Pn**	**00 39 36.8**	**+1.1**
ISAD	**Sadrabad**	**3.70**	**297**	Pn	**Pn**	**00 39 41.4**	**+0.7**
ISAD	**Sadrabad**	**3.70**	**297**	*e*Pn	**Pn**	**00 39 41.5**	**+0.8**
ISAD				*e*		00 40 49.3	
	comp=Z,7μm,0.2s						
ISAD	**Sadrabad**	**3.70**	**297**	*e*Pn	**Pn**	**00 39 41.5**	**+0.8**
IPAR	**Pars**	**3.92**	**265**	Pn	**Pn**	**00 39 44.8**	**+1.0**
IPAR				Sg	**Sg**	**00 40 48.2**	**-0.5**
IPAR	**Pars**	**3.92**	**265**	*e*Pn	**Pn**	**00 39 44.8**	**+1.0**
IPAR				*e*Sg	**Sg**	**00 40 48.2**	**-0.5**
IPAR				*e*		00 40 54.4	
	comp=Z,4μm,0.4s						
IPAR	**Pars**	**3.92**	**265**	*e*Pn	**Pn**	**00 39 44.8**	**+1.0**
IPAR				*e*Sg	**Sg**	**00 40 48.2**	**-0.5**
ISRV	**Sarvestan**	**3.95**	**258**	Pn	**Pn**	**00 39 45.3**	**+1.2**
ISRV	**Sarvestan**	**3.95**	**258**	*e*Pn	**Pn**	**00 39 45.4**	**+1.3**
ISRV				*e*		00 41 00.5	
	comp=Z,7μm,0.5s						
ISRV	**Sarvestan**	**3.95**	**258**	*e*Pn	**Pn**	**00 39 45.4**	**+1.3**
IMOK	**Mouk**	**4.37**	**255**	Pn	**Pn**	**00 39 50.9**	**+0.9**
IMOK	**Mouk**	**4.37**	**255**	*e*Pn	**Pn**	**00 39 50.9**	**+0.9**
IMOK				*e*		00 41 11.3	
	comp=Z,2μm,0.4s						
IMOK	**Mouk**	**4.37**	**255**	*e*Pn	**Pn**	**00 39 50.9**	**+0.9**
GHIR	**Ghir-Karzin**	**4.44**	**245**	*e*Pn	**Pn**	**00 39 50.0**	**-0.9**
GHIR	**Ghir-Karzin**	**4.44**	**245**	*e*Pn	**Pn**	**00 39 50.3**	**-0.6**
GHIR	**Ghir-Karzin**	**4.44**	**245**	*e*Pn	**Pn**	**00 39 50.3**	**-0.6**
IZEF	**Zefreh**	**5.17**	**302**	Pn	**Pn**	**00 40 01.2**	**+0.3**
IZEF	**Zefreh**	**5.17**	**302**	*e*Pn	**Pn**	**00 40 01.2**	**+0.3**
IZEF	**Zefreh**	**5.17**	**302**	*e*Pn	**Pn**	**00 40 01.2**	**+0.3**
IGAR	**Gharneh**	**5.17**	**296**	*e*Pn	**Pn**	**00 40 01.5**	**+0.6**
NAZ	**Nazwa, Dubai**	**5.51**	**198**	Pn	**Pn**	**00 40 06.5**	**+0.9**
NAZ				Sn	**Sn**	**00 41 06.8**	**-2.6**
HATD	**Hatta, Dubai**	**5.55**	**193**	Pn	**Pn**	**00 40 06.9**	**+0.7**
HATD				Sn	**Sn**	**00 41 10.2**	**-0.4**
FAQ	**Al Faqa, Dubai**	**5.76**	**198**	Pn	**Pn**	**00 40 09.5**	**+0.5**
	SNR=14						
IKLH	**Kolahrood**	**5.92**	**303**	Pn	**Pn**	**00 40 11.3**	**0.0**
IKLH	**Kolahrood**	**5.92**	**303**	*e*Pn	**Pn**	**00 40 11.4**	**+0.1**
IKLH				*e*		00 42 02.0	
	comp=Z,2μm,0.7s						
IKLH	**Kolahrood**	**5.92**	**303**	*e*Pn	**Pn**	**00 40 11.4**	**+0.1**
ASUD	**Al Ashush, Dub**	**5.94**	**200**	Pn	**Pn**	**00 40 12.3**	**+0.7**
	SNR=10						
IANJ	**Anjilo**	**6.03**	**331**	Pn	**Pn**	**00 40 11.9**	**-0.8**
IANJ	**Anjilo**	**6.03**	**331**	*e*Pn	**Pn**	**00 40 12.0**	**-0.7**
IANJ	**Anjilo**	**6.03**	**331**	*e*Pn	**Pn**	**00 40 12.0**	**-0.7**
IMOG	**Moghan**	**6.03**	**14**	Pn	**Pn**	**00 40 13.7**	**+1.0**
IMOG	**Moghan**	**6.03**	**14**	*e*Pn	**Pn**	**00 40 13.7**	**+1.0**
IMOG	**Moghan**	**6.03**	**14**	*e*Pn	**Pn**	**00 40 13.7**	**+1.0**
IPIR	**Pirpir**	**6.17**	**295**	Pn	**Pn**	**00 40 15.7**	**+0.9**
IPIR	**Pirpir**	**6.17**	**295**	*e*Pn	**Pn**	**00 40 15.7**	**+0.9**
IPIR				*e*		00 42 20.1	
	comp=Z,791nm,0.5s						
IPIR	**Pirpir**	**6.17**	**295**	*e*Pn	**Pn**	**00 40 15.7**	**+0.9**
ISRO	**Mashad**	**6.25**	**14**	*e*Pn	**Pn**	**00 40 16.2**	**+0.5**
ISRO	**Mashad**	**6.25**	**14**	*e*Pn	**Pn**	**00 40 16.2**	**+0.5**
IPAY	**Payeh**	**6.29**	**11**	Pn	**Pn**	**00 40 16.5**	**+0.1**
IPAY	**Payeh**	**6.29**	**11**	*e*Pn	**Pn**	**00 40 16.6**	**+0.2**
IPAY	**Payeh**	**6.29**	**11**	*e*Pn	**Pn**	**00 40 16.6**	**+0.2**
ILAS	**Lasjerd**	**6.40**	**324**	Pn	**Pn**	**00 40 17.6**	**-0.3**
ILAS	**Lasjerd**	**6.40**	**324**	*e*Pn	**Pn**	**00 40 17.6**	**-0.3**
ILAS	**Lasjerd**	**6.40**	**324**	*e*Pn	**Pn**	**00 40 17.6**	**-0.3**
IMYA	**Miami**	**6.43**	**19**	Pn	**Pn**	**00 40 17.5**	**-0.8**
IMYA	**Miami**	**6.43**	**19**	*e*Pn	**Pn**	**00 40 17.6**	**-0.7**
IMYA	**Miami**	**6.43**	**19**	*e*Pn	**Pn**	**00 40 17.6**	**-0.7**
IKRD	**Kardeh**	**6.55**	**7**	Pn	**Pn**	**00 40 22.9**	**+3.0**
IKRD	**Kardeh**	**6.55**	**7**	*e*Pn	**Pn**	**00 40 23.0**	**+3.1**
ISHM	**Shahmirzad**	**6.58**	**328**	Pn	**Pn**	**00 40 20.0**	**-0.4**
ISHM	**Shahmirzad**	**6.58**	**328**	*e*Pn	**Pn**	**00 40 20.0**	**-0.4**
ISHM				*e*		00 42 29.7	
	comp=Z,2μm,0.4s						
ISHM	**Shahmirzad**	**6.58**	**328**	*e*Pn	**Pn**	**00 40 20.0**	**-0.4**
IFIR	**Firoozkooh**	**6.71**	**324**	Pn	**Pn**	**00 40 22.4**	**+0.3**
IFIR	**Firoozkooh**	**6.71**	**324**	*e*Pn	**Pn**	**00 40 22.5**	**+0.4**
IFIR	**Firoozkooh**	**6.71**	**324**	*e*Pn	**Pn**	**00 40 22.5**	**+0.4**
IKIA	**Kiasar**	**6.76**	**332**	Pn	**Pn**	**00 40 23.2**	**+0.5**
IKIA	**Kiasar**	**6.76**	**332**	*e*Pn	**Pn**	**00 40 23.2**	**+0.5**
IKIA	**Kiasar**	**6.76**	**332**	*e*Pn	**Pn**	**00 40 23.2**	**+0.5**
ISFR	**Sfrayin**	**6.79**	**3**	Pn	**Pn**	**00 40 23.2**	**0.0**
ISFR	**Sfrayin**	**6.79**	**3**	*e*Pn	**Pn**	**00 40 23.2**	**0.0**
ISFR				*e*		00 42 44.3	
	comp=Z,1μm,0.5s						
IGLO	**Ghaloghah**	**6.96**	**334**	Pn	**Pn**	**00 40 25.4**	**-0.1**
IGLO	**Ghaloghah**	**6.96**	**334**	*e*Pn	**Pn**	**00 40 25.4**	**-0.1**
IGLO				*e*		00 42 40.8	
	comp=Z,2μm,0.4s						
IGLO	**Ghaloghah**	**6.96**	**334**	*e*Pn	**Pn**	**00 40 25.4**	**-0.1**
IALA	**Alasht**	**7.03**	**327**	Pn	**Pn**	**00 40 26.7**	**+0.2**
IALA	**Alasht**	**7.03**	**327**	*e*Pn	**Pn**	**00 40 26.7**	**+0.2**
IALA				*e*		00 42 39.1	
	comp=Z,765nm,0.2s						
IALA	**Alasht**	**7.03**	**327**	*e*Pn	**Pn**	**00 40 26.7**	**+0.2**
IDMV	**Damavand**	**7.04**	**320**	Pn	**Pn**	**00 40 26.4**	**-0.3**
IDMV	**Damavand**	**7.04**	**320**	*e*Pn	**Pn**	**00 40 26.5**	**-0.2**
IDMV				*e*		00 43 04.9	
	comp=Z,921nm,0.4s						
IDMV	**Damavand**	**7.04**	**320**	*e*Pn	**Pn**	**00 40 26.5**	**-0.2**
IEMG	**Emamgholi**	**7.20**	**7**	*e*Pn	**Pn**	**00 40 28.2**	**-0.6**
IEMG	**Emamgholi**	**7.20**	**7**	*e*Pn	**Pn**	**00 40 28.2**	**-0.6**
IPRN	**Peran**	**7.39**	**325**	Pn	**Pn**	**00 40 31.9**	**+0.5**
IPRN	**Peran**	**7.39**	**325**	*e*Pn	**Pn**	**00 40 31.9**	**+0.5**
IPRN				*e*		00 43 06.4	
	comp=Z,1μm,0.4s						
IPRN	**Peran**	**7.39**	**325**	*e*Pn	**Pn**	**00 40 31.9**	**+0.5**
SLWS		**8.19**	**230**	P	**Pn**	**00 40 39.7**	**-2.8**
SLWS		**8.19**	**230**	P	**Pn**	**00 40 39.7**	**-2.7**
IRAZ	**Razeghan**	**8.21**	**311**	Pn	**Pn**	**00 40 42.5**	**-0.2**
IRAZ	**Razeghan**	**8.21**	**311**	*e*Pn	**Pn**	**00 40 42.5**	**-0.2**
IRAZ	**Razeghan**	**8.21**	**311**	*e*Pn	**Pn**	**00 40 42.5**	**-0.2**
QRN	**Al-Qurain**	**8.52**	**262**	*e*P	**Pn**	**00 40 45.9**	**-1.1**
BTHS		**8.59**	**226**	P	**Pn**	**00 40 45.6**	**-2.4**
BTHS		**8.59**	**226**	P	**Pn**	**00 40 45.6**	**-2.4**
MIB	**Mutribah**	**8.86**	**270**	*e*P	**Pn**	**00 40 50.6**	**-1.0**
MIB				AML	AML	00 41 58.6	
	comp=Z,7.8nm,0.6s						
MIB	**Mutribah**	**8.86**	**270**	*e*P	**Pn**	**00 40 50.6**	**-1.0**
NAY	**Al-Naaiem**	**9.01**	**266**	*e*P	**Pn**	**00 40 53.3**	**-0.4**
NAY	**Al-Naaiem**	**9.01**	**266**	*e*P	**Pn**	**00 40 53.3**	**-0.4**
ASYS		**11.89**	**260**	P	**Pn**	**00 41 30.0**	**-3.2**
ASYS		**11.89**	**260**	P	**Pn**	**00 41 30.0**	**-3.2**
LYLS		**12.35**	**231**	P	**Pn**	**00 41 33.1**	**-6.3**
LYLS		**12.35**	**231**	P	**Pn**	**00 41 33.1**	**-6.3**
GNI	**Garni**	**14.37**	**317**	LR	LR	00 48 21.4	
	comp=Z,97nm,19.4s,baz=247,slow=40						
GNI	**Garni**	**14.37**	**317**	Pn	**Pn**	**00 42 08.2**	**+1.3**
GNI	**Garni**	**14.37**	**317**	Pn	**Pn**	**00 42 08.2**	**+1.3**
AML	**Almayashu**	**17.58**	**43**	*e*Pn	**Pn**	**00 42 48.9**	**+0.2**
AML	**Almayashu**	**17.58**	**43**	*e*Pn	**Pn**	**00 42 48.9**	**+0.2**
ASF	**Jabal al Asfar**	**17.76**	**281**	P	**Pn**	**00 42 53.9**	**+2.9**
	comp=Z,0.1nm,0.3s,baz=339,slow=2.9,SNR=5.2						
ASF				LR	LR	00 50 51.9	
	comp=Z,98nm,18.7s,baz=55,slow=41						
EKS2	**Erkin-Say**	**17.95**	**42**	Pn	**Pn**	**00 42 53.2**	**-0.1**
EKS2	**Erkin-Say**	**17.95**	**42**	Pn	**Pn**	**00 42 53.2**	**-0.1**
KIV	**Kislovodsk**	**18.05**	**323**	P	**Pn**	**00 42 55.9**	**+1.5**
	comp=Z,9.4nm,1.1s						
KIV	**Kislovodsk**	**18.05**	**323**	P	**Pn**	**00 42 55.9**	**+1.4**
	comp=Z,9.4nm,1.1s						
UCH	**Uchtor**	**18.13**	**44**	Pn	**Pn**	**00 42 55.2**	**-0.2**
	comp=Z,2.5nm,1.0s						
UCH	**Uchtor**	**18.13**	**44**	Pn	**Pn**	**00 42 55.2**	**-0.2**
	comp=Z,2.5nm,1.0s						
AAK	**Ala-Archa**	**18.36**	**43**	*e*Pn	**Pn**	**00 42 58.7**	**+0.5**
AAK	**Ala-Archa**	**18.36**	**43**	*e*Pn	**Pn**	**00 42 58.7**	**+0.5**
MMAI	**Mount Meron Ar**	**19.05**	**284**	P	**Pn**	**00 43 06.8**	**0.0**
	comp=Z,0.3nm,0.3s,baz=263,slow=40,SNR=2.6						
ABKAR	**Akbulak array**	**19.06**	**5**	*e*P	**Pn**	**00 43 05.6**	**-1.2**
	comp=Z,5.0nm,0.9s						
ABKAR	**Akbulak array**	**19.06**	**5**	*e*P	**Pn**	**00 43 05.6**	**-1.1**
	comp=Z,4.9nm,0.9s						
TKM2	**Tokmak 2**	**19.18**	**44**	*e*P	**Pn**	**00 43 08.0**	**-0.2**
	comp=Z,2.8nm,1.0s						
TKM2	**Tokmak 2**	**19.18**	**44**	*e*P	**Pn**	**00 43 08.0**	**-0.2**
	comp=Z,2.8nm,1.0s						
EIL	**Elat**	**19.58**	**274**	P	**Pn**	**00 43 14.5**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=59,slow=5.2,SNR=8.9						
EIL				LR	LR	00 51 57.5	
	comp=Z,106nm,18.4s,baz=146,slow=40						
EIL	**Elat**	**19.58**	**274**	P	**Pn**	**00 43 14.5**	**+1.4**
EIL				LR	LR	00 51 57.5	
AKTK	**Aktyubinsk**	**20.16**	**1**	P	**P**	**00 43 17.3**	**-0.6**
AKTK	**Aktyubinsk**	**20.16**	**1**	P	**P**	**00 43 17.3**	**-0.7**
AKTO	**Aktyubinsk**	**20.16**	**1**	P	**P**	**00 43 17.3**	**-0.6**
	comp=Z,5.1nm,0.7s,baz=174,slow=12,SNR=8.9						
BRTR	**Keskin Array B**	**21.69**	**302**	P	**P**	**00 43 34.9**	**+0.2**
	comp=Z,5.5nm,0.9s,mb4.0,baz=115,slow=11,SNR=23						
BRTR	**Keskin Array B**	**21.69**	**302**	P	**P**	**00 43 34.8**	**+0.2**
BRVK	**Borovoye**	**24.61**	**19**	*e*P	**P**	**00 44 03.9**	**-0.1**
	comp=Z,3.3nm,0.9s,mb3.9						
BRVK	**Borovoye**	**24.61**	**19**	*e*P	**P**	**00 44 03.8**	**-0.2**
	comp=Z,3.3nm,0.9s,mb3.9						
BVAR	**Borovoye Array**	**24.61**	**19**	P	**P**	**00 44 03.2**	**-0.8**
	comp=Z,3.4nm,0.8s,mb3.9,baz=199,slow=7.3,SNR=17						
BVAR	**Borovoye Array**	**24.61**	**19**	P	**P**	**00 44 03.2**	**-0.8**
MKAR	**Makanchi Array**	**25.29**	**42**	P	**P**	**00 44 09.0**	**-1.2**
	comp=Z,2.9nm,0.7s,mb3.9,baz=230,slow=5.7,SNR=15						
MKAR	**Makanchi Array**	**25.29**	**42**	P	**P**	**00 44 09.0**	**-1.2**
KURK	**Kurchatov**	**25.81**	**32**	P	**P**	**00 44 14.2**	**-0.7**
	comp=Z,1.0nm,0.7s,mb3.5,baz=229,slow=9.4,SNR=6.7						
KURK	**Kurchatov**	**25.81**	**32**	*e*P	**P**	**00 44 13.8**	**-1.1**
	comp=Z,2.2nm,0.9s,mb3.7						
KURK	**Kurchatov**	**25.81**	**32**	*e*P	**P**	**00 44 13.8**	**-1.1**
	comp=Z,2.2nm,0.9s,mb3.7						
ARU	**Arti**	**26.17**	**1**	P	**P**	**00 44 18.6**	**+0.5**
	comp=Z,2.6nm,0.8s,mb3.8						
ARU	**Arti**	**26.17**	**1**	P	**P**	**00 44 18.6**	**+0.5**
	comp=Z,2.6nm,0.8s,mb3.8						
MLR	**Muntele Rosu**	**28.98**	**310**	LR	LR	00 57 02.2	
	comp=Z,85nm,18.3s,baz=191,slow=38						
ZALV	**Zalesovo Beam**	**30.80**	**32**	P	**P**	**00 44 57.7**	**-1.6**
	comp=Z,1.1nm,0.6s,mb3.9,baz=238,slow=8.5,SNR=6.2						
FINES	**FINESS Array B**	**37.41**	**336**	P	**P**	**00 45 57.6**	**+1.0**
	comp=Z,1.0nm,0.8s,mb3.7,baz=109,slow=21,SNR=4.7						
FINES	**FINESS Array B**	**37.41**	**336**	P	**P**	**00 45 57.7**	**+1.1**
GERES	**GERESS Array B**	**37.94**	**312**	P	**P**	**00 46 00.4**	**-0.9**
	comp=Z,0.4nm,0.6s,mb3.4,baz=119,slow=11,SNR=4.1						
GERES	**GERESS Array B**	**37.94**	**312**	P	**P**	**00 46 00.4**	**-0.9**
CMAR	**Chiang Mai Arr**	**39.30**	**98**	P	**P**	**00 46 09.3**	**-3.8**
	comp=Z,0.7nm,0.3s,mb3.8,baz=266,slow=11,SNR=5.1						
SONM	**Songino Array**	**41.06**	**51**	P	**P**	**00 46 25.5**	**-1.8**
	comp=Z,0.5nm,0.9s,mb3.2,baz=260,slow=8.7,SNR=4.3						
SONM	**Songino Array**	**41.06**	**51**	P	**P**	**00 46 25.5**	**-1.8**
TORD	**Torodi Ar. Bea**	**54.09**	**264**	P	**P**	**00 48 06.5**	**-2.6**
	comp=Z,4.7nm,0.7s,mb4.5,baz=60,slow=7.1,SNR=31						
TORD	**Torodi Ar. Bea**	**54.09**	**264**	P	**P**	**00 48 06.5**	**-2.6**
INK	**Inuvik**	**81.39**	**4**	P	**P**	**00 51 01.4**	**+1.0**
	comp=Z,0.9nm,0.7s,mb3.8,baz=320,slow=13,SNR=3.0						
INK	**Inuvik**	**81.39**	**4**	P	**P**	**00 51 01.4**	**+1.0**
YKA	**Yellowknife Ar**	**87.36**	**356**	P	**P**	**00 51 31.0**	**+0.3**
	comp=Z,1.5nm,0.8s,mb4.2,baz=356,slow=5.4,SNR=7.1						

*IDC **04** 00:52:15.6±4.6, 13.′90S×166.′78E, h0km, mb4.4/6, mb1 4.4/6, mb1mx4.1/15, mbtmp4.3/6, MS3.9/1, Ms1 3.9/1, ms1mx2.9/29, Error ellipse: s-maj=139.9km s-min=32.9km az=115.0*
*ISCJB **04** 00:52:25.0±5.8, 14.′4S±0.′2×167.′0E±0

Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.98**	**279**	⇓*i*P	**Pn**	**01 12 43.4**	**-0.9**
GSPH				*i* S	**Sn**	**01 13 04.1**	**-0.4**
MATI	**Mati**	**1.05**	**18**	*e*P	**Pn**	**01 12 44.4**	**-0.6**
MATI				*e*S	**Sn**	**01 12 56.0**	**-10**
DAV	**Davao City (W)**	**1.17**	**343**	P	**Pn**	**01 12 45.9**	**0.0**
	593nm,0.3s,baz=202,slow=1.0,SNR=57						
DAV				S	**Sn**	**01 13 07.1**	**-0.4**
	2μm,0.3s,baz=258,slow=23,SNR=58						
DAV	**Davao City (W)**	**1.17**	**343**	*e*Pn	**Pn**	**01 12 45.5**	**-0.4**
DAV				*e*Sn	**Sn**	**01 13 05.8**	**-1.7**
DMPH	**Davao City--Mi**	**1.21**	**340**	⇑*e*P	**Pn**	**01 12 46.0**	**-0.3**
DMPH				*i* S	**Sn**	**01 13 10.8**	**+2.7**
KCP	**Kidapawan**	**1.35**	**322**	⇓*i*P	**Pn**	**01 12 52.9**	**+5.3**
KCP				*i* S	**Sn**	**01 13 16.4**	**+6.1**
CTBH	**Cotabato--PC H**	**2.10**	**307**	⇑*i*P	**Pn**	**01 12 55.4**	**0.0**
CTBH				*i* S	**Sn**	**01 13 24.1**	**-0.2**
BUKP	**Musuan**	**2.11**	**336**	*e*P	**Pn**	**01 12 56.0**	**+0.6**
BUKP				*e*S	**Sn**	**01 13 12.6**	**-12**
CGP	**Cagayan de Oro**	**2.78**	**334**	⇑*e*P	**Pn**	**01 13 03.1**	**-0.4**
CGP				*i* S	**Sn**	**01 13 39.6**	**+0.9**
BUTP	**Butuan**	**3.02**	**354**	*e*P	**Pn**	**01 13 06.8**	**+0.3**
BUTP				*e*S	**Sn**	**01 13 31.5**	**-13**
PAGZ	**Pagadian**	**3.16**	**307**	*e*P	**Pn**	**01 13 09.3**	**+1.2**
PAGZ				*e*S	**Sn**	**01 13 26.6**	**-20**
ZMPH	**Zamboanga City**	**3.97**	**285**	⇓*i*P	**Pn**	**01 13 18.8**	**+0.5**
ZMPH				*i* S	Sn	01 13 37.7	-28
MSLP	**Maasin**	**4.30**	**346**	*e*P	**Pn**	**01 13 22.0**	**-0.6**
MSLP				*e*S	Sn	01 13 48.1	-25
CNP	**Cataman**	**6.65**	**349**	*e*P	**Pn**	**01 13 54.5**	**+1.1**
KAPI	**Kappang**	**12.51**	**210**	P	**Pn**	**01 15 10.1**	**-0.2**
	12nm,0.3s,baz=30,slow=7.4,SNR=42						
KSM	**Kuching**	**16.20**	**255**	*e*Pn	**Pn**	**01 15 59.1**	**+2.7**
	13nm,0.6s						
KAKA	**Kakadu**	**19.63**	**161**	*e*P	**P**	**01 16 34.8**	**+1.1**
	898nm,1.5s						
KAKA	**Kakadu**	**19.63**	**161**	*e*P	**P**	**01 16 34.9**	**+1.2**
	459nm,0.8s						
JOW	**Kunigami**	**20.90**	**6**	P	**P**	**01 16 47.4**	**+0.2**
	35nm,0.5s,baz=173,slow=10,SNR=14						
FITZ	**Fitzroy Crossi**	**23.89**	**181**	*e*P	**P**	**01 17 12.5**	**-3.8**
	83nm,1.2s,mb5.1						
FITZ	**Fitzroy Crossi**	**23.89**	**181**	P	**P**	**01 17 15.6**	**-0.7**
	33nm,0.6s,mb5.1,baz=5.6,slow=6.9,SNR=64						
FITZ	**Fitzroy Crossi**	**23.89**	**181**	*e*P	**P**	**01 17 16.6**	**+0.3**
	142nm,1.3s,mb5.3						
CBIJ	**Chichi jima**	**26.12**	**35**	P	**P**	**01 17 34.4**	**-2.1**
	133nm,0.4s,baz=223,slow=3.4,SNR=14						
COEN	**Coen**	**26.15**	**139**	*e*P	**P**	**01 17 36.5**	**-0.3**
	91nm,0.8s,mb5.5						
WHN	**Wuhan**	**26.79**	**337**	P	**P**	**01 17 39.2**	**-3.2**
WRAB	**Tennant Creek**	**27.01**	**162**	*e*P	**P**	**01 17 44.0**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,53nm,1.3s,mb5.0						
WRAB	**Tennant Creek**	**27.01**	**162**	*e*P	**P**	**01 17 44.0**	**-0.5**
	comp=Z,53nm,1.3s,mb5.0						
GYA	**Guiyang**	**27.46**	**320**	P	**P**	**01 17 49.8**	**+1.4**
GYA				pP	pP	01 18 24.3	+1.0
GYA				PcP	PcP	01 21 04.0	+1.3
GYA				S	**S**	**01 22 17.5**	**+0.9**
GYA				PcS	PcS	01 24 45.9	+1.2
GYA				ScS	ScS	01 28 18.0	-1.6
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.8						
GYA				pmax	pmax		
	comp=Z,120nm,4.2s						
MBWA	**Marble Bar**	**27.61**	**193**	*e*P	**P**	**01 17 49.4**	**-0.3**
	comp=Z,27nm,0.5s,mb5.2						
CMAR	**Chiang Mai Arr**	**29.10**	**298**	P	**P**	**01 18 01.8**	**-1.3**
	comp=Z,2.0nm,0.3s,mb4.3,baz=120,slow=3.4,SNR=4.5						
CMAR				ScP	ScP	01 24 33.2	+0.3
	comp=Z,1.7nm,0.3s,baz=155,slow=1.1,SNR=15						
KMI	**Kunming**	**29.28**	**313**	P	**P**	**01 18 06.2**	**+1.6**
KMI				sP	sP	01 19 00.5	+1.4
KMI				S	**S**	**01 22 46.6**	**+1.3**
KMI				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.6						
KMI				LR	LR		
	comp=N,120nm,4.7s						
KMI				LR	LR		
	comp=E,74nm,6.0s						
KMI				LR	LR		
	comp=Z,130nm,8.1s						
ASAR	**Alice Springs**	**30.44**	**165**	P	**P**	**01 18 14.8**	**+0.1**
	comp=Z,21nm,0.5s,mb5.2,baz=339,slow=6.8,SNR=177						
ASAR				S	**S**	**01 23 04.1**	**+0.8**
	comp=Z,1.8nm,0.8s,baz=351,slow=16,SNR=4.7						
ASAR				ScP	ScP	01 24 37.5	+0.5
	comp=Z,1.9nm,0.7s,baz=8.7,slow=2.8,SNR=6.5						
ASAR	**Alice Springs**	**30.44**	**165**	P	**P**	**01 18 14.9**	**+0.1**
ASAR				S	**S**	**01 23 04.1**	**+0.7**
KSRS	**Korea Array**	**31.42**	**3**	P	**P**	**01 18 22.3**	**-0.9**
	comp=Z,2.1nm,0.4s,mb4.2,baz=177,slow=12,SNR=12						
XAN	**Xi'an**	**32.09**	**333**	P	**P**	**01 18 28.8**	**-0.4**
XAN				pP	pP	01 19 02.7	-1.8
XAN				sP	sP	01 19 20.5	-3.4
XAN				PP	PP	01 19 44.9	-0.4
XAN				S	**S**	**01 23 29.7**	**+0.7**
XAN				sS	sS	01 24 29.8	-1.5
XAN				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.0						
XAN				pmax	pmax		
	comp=Z,16nm,4.8s						
CD2	**Chengdu**	**32.40**	**323**	*e*P	**P**	**01 18 32.4**	**+0.4**
CD2				pP	pP	01 19 06.3	-1.0
CD2				sP	sP	01 19 25.0	-1.7
CD2				PP	PP	01 19 46.0	-2.7
CD2				S	**S**	**01 23 32.3**	**-1.6**
CD2				sS	sS	01 24 32.2	-4.1
CD2				SS	SS	01 25 39.0	-22
CD2				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.8						
CD2				pmax	pmax		
	comp=Z,30nm,5.2s						
MJAR	**Matsushiro Arr**	**32.47**	**19**	P	**P**	**01 18 31.2**	**-1.2**
	comp=Z,6.1nm,0.9s,mb4.3,baz=192,slow=9.3,SNR=15						
MAJO	**Matsushiro**	**32.47**	**19**	*e*P	**P**	**01 18 31.4**	**-1.0**
MAT	**Matsushiro**	**32.47**	**19**	P	**P**	**01 18 30.7**	**-1.7**
MAT				*e*S	**S**	**01 23 23.0**	**-12**
CTA	**Charters Tower**	**32.69**	**143**	P	**P**	**01 18 35.2**	**+0.6**
	comp=Z,2.7nm,0.5s,mb4.3,baz=339,slow=12,SNR=3.7						
CTAO	**Charters Tower**	**32.69**	**143**	*e*P	**P**	**01 18 35.7**	**+1.1**
CTAO				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.1						
CTAO	**Charters Tower**	**32.69**	**143**	*e*P	**P**	**01 18 35.7**	**+1.1**
	comp=Z,2.4nm,0.5s,mb4.2						
DL2	**Dalian**	**33.05**	**354**	P	**P**	**01 18 38.5**	**+1.1**
DL2				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.1						
BJT	**Baijiatuan**	**35.05**	**347**	*e*P	**P**	**01 18 54.3**	**-0.3**
BJT				pmax	pmax		
	comp=Z,18nm,0.4s						
BJT	**Baijiatuan**	**35.05**	**347**	*e*P	**P**	**01 18 54.3**	**-0.3**
	comp=Z,18nm,0.4s,mb5.1						
BJI	**Beijing**	**35.06**	**347**	P	**P**	**01 18 54.3**	**-0.5**
BJI				pP	pP	01 19 28.4	-2.1
BJI				sP	sP	01 19 48.0	-1.8
BJI				S	**S**	**01 24 16.8**	**+2.1**
BJI				pmax	pmax		
	comp=Z,55nm,0.6s,mb5.4						
BJI				pmax	pmax		
	comp=Z,95nm,3.5s						
SNY	**Shenyang**	**35.80**	**357**	⇓P	**P**	**01 19 01.6**	**+0.6**
SNY				pmax	pmax		
	comp=Z,51nm,0.5s,mb5.4						
LZH	**Lanzhou**	**36.20**	**329**	⇑P	**P**	**01 19 05.5**	**+0.9**
LZH				pP	pP	01 19 41.0	+0.5
LZH				sP	sP	01 19 59.3	-0.4
LZH				PP	PP	01 20 34.6	+4.0
LZH				S	**S**	**01 24 33.2**	**+1.0**
LZH				sS	sS	01 25 33.7	-1.5
LZH				pmax	pmax		
	comp=Z,51nm,1.4s,mb5.0						
LZH				pmax	pmax		
	comp=Z,130nm,6.8s						
FORT	**Forrest**	**36.57**	**177**	⇑*i*P	**P**	**01 19 08.1**	**+0.4**
	comp=Z,27nm,0.5s,mb5.1						
FORT	**Forrest**	**36.57**	**177**	*e*P	**P**	**01 19 08.0**	**+0.3**
	comp=Z,26nm,0.6s,mb5.0						
HHC	**Hu-ho-hao-te**	**37.06**	**342**	*e*P	**P**	**01 19 13.9**	**+2.1**
HHC				pP	pP	01 19 48.7	+1.0
HHC				sP	sP	01 20 07.2	+0.2
HHC				PcP	PcP	01 21 31.2	+2.4
HHC				S	**S**	**01 24 48.0**	**+2.9**
HHC				ScP	ScP	01 25 01.7	+1.6
HHC				PcS	PcS	01 25 17.9	+0.7
HHC				ScS	ScS	01 29 08.2	+0.3
HHC				pmax	pmax		
	comp=Z,15nm,0.7s,mb4.7						
HHC				pmax	pmax		
	comp=Z,100nm,6.1s						
HHC				LR	LR		
	comp=N,76nm,16.8s						
HHC				LR	LR		
	comp=E,160nm,15.6s						
HHC				LR	LR		
	comp=Z,82nm,15.6s						
CN2	**Changchun**	**37.71**	**359**	*e*P	**P**	**01 19 20.3**	**+3.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.4s,mb4.8						
CN2				pmax	pmax		
	comp=Z,60nm,4.0s						
SHL	**Shillong**	**37.95**	**305**	*e*PKP	**P**	**01 19 23.0**	**+3.5**
SHL				*ex*	x	01 20 00.0	
KLBR	**Kellerberrin**	**38.13**	**191**	⇑*i*P	**P**	**01 19 21.1**	**+0.3**
	comp=Z,47nm,0.4s,mb5.5						
MDJ	**Mudanjiang**	**38.66**	**4**	P	**P**	**01 19 26.1**	**+1.0**
MDJ				pP	pP	01 20 00.6	-0.7
MDJ				sP	sP	01 20 19.1	-1.3
MDJ				PcP	PcP	01 21 34.5	+0.8
MDJ				S	**S**	**01 25 11.5**	**+2.5**
MDJ				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.4						
MDJ				pmax	pmax		
	comp=Z,68nm,4.8s						
MDJ	**Mudanjiang**	**38.66**	**4**	*e*P	**P**	**01 19 25.6**	**+0.5**
	comp=Z,8.4nm,0.8s,mb4.4						
ERM	**Erimo**	**39.05**	**21**	*e*P	**P**	**01 19 28.9**	**+0.5**
ERM				pmax	pmax		
	comp=Z,24nm,0.9s,mb4.8						
ERM	**Erimo**	**39.05**	**21**	*e*P	**P**	**01 19 28.9**	**+0.5**
	comp=Z,24nm,0.9s,mb4.8						
NWAO	**Narrogin (SRO)**	**39.52**	**192**	P	**P**	**01 19 33.3**	**+0.9**
	comp=Z,63nm,0.5s,mb5.5,baz=22,slow=8.0,SNR=110						
NWAO	**Narrogin (SRO)**	**39.52**	**192**	*e*P	**P**	**01 19 33.3**	**+0.9**
NWAO				pmax	pmax		
	comp=Z,55nm,0.6s						
NWAO	**Narrogin (SRO)**	**39.52**	**192**	*e*P	**P**	**01 19 33.2**	**+0.8**
	comp=Z,55nm,0.6s,mb5.4						
BBOO	**Buckleboo**	**39.72**	**167**	⇑*i*P	**P**	**01 19 34.6**	**+0.6**
	comp=Z,25nm,0.3s,mb5.3						
STKA	**Stephens Creek**	**40.47**	**159**	⇑*i*P	**P**	**01 19 40.7**	**+0.5**
	comp=Z,9.4nm,0.7s,mb4.5						
STKA	**Stephens Creek**	**40.47**	**159**	P	**P**	**01 19 40.8**	**+0.6**
	comp=Z,12nm,0.6s,mb4.7,baz=334,slow=7.8,SNR=29						
STKA				PP	PP	01 21 17.6	+0.5
	comp=Z,11nm,1.0s,baz=337,slow=11,SNR=4.3						
STKA				ScP	ScP	01 25 13.1	-0.2
	comp=Z,3.9nm,0.9s,baz=336,slow=12,SNR=3.1						
STKA	**Stephens Creek**	**40.47**	**159**	*e*P	**P**	**01 19 40.4**	**+0.2**
STKA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
STKA	**Stephens Creek**	**40.47**	**159**	*e*P	**P**	**01 19 40.4**	**+0.2**
	comp=Z,3.7nm,0.9s,mb4.0						
GTA	**Gaotai**	**40.80**	**329**	⇑P	**P**	**01 19 43.3**	**+0.4**
GTA				pP	pP	01 20 19.9	+0.5
GTA				PP	PP	01 21 23.3	+2.7
GTA				PcP	PcP	01 21 41.9	+1.2
GTA				ScP	ScP	01 25 15.4	+0.8
GTA				S	**S**	**01 25 41.4**	**+0.3**
GTA				SS	SS	01 28 44.0	-5.3
GTA				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.2						
GTA				pmax	pmax		
	comp=Z,62nm,4.5s						
GTA				LR	LR		
	comp=N,97nm,15.9s						
GTA				LR	LR		
	comp=E,100nm,16.2s						
GTA				LR	LR		
	comp=Z,150nm,14.7s						
HABR	**Khabarovsk**	**43.09**	**9**	*e*P	**P**	**01 20 01.0**	**-0.2**
HABR				*e**PP	pP	01 20 38.5	+0.4
HABR				*e*		01 21 45.4	
HABR				S	**S**	**01 26 14.8**	**+0.4**
HABR				*e*		01 29 39.9	
HABR				pmax	pmax		
	comp=E,27nm,1.5s						
HABR				pmax	pmax		
	comp=N,24nm,1.9s						
HABR				pmax	pmax		
	comp=Z,47nm,1.7s,mb4.8						
HABR				MLR	MLR		
	comp=Z,129nm,18.0s						
YSS	**Yuzh-Sakhalins**	**43.35**	**17**	*e*P	**P**	**01 20 03.6**	**+0.2**
YSS	**Yuzh-Sakhalins**	**43.35**	**17**	*e*P	**P**	**01 20 03.9**	**+0.5**
	comp=Z,38nm,0.6s,mb5.2						
KLR	**Kul'dur**	**43.42**	**6**	*e*P	**P**	**01 20 00.0**	**-3.9**
HIA	**Hailar**	**43.49**	**354**	*e*P	**P**	**01 20 05.0**	**+0.5**
HIA				pmax	pmax		
	comp=Z,8.0nm,0.3s						
HIA	**Hailar**	**43.49**	**354**	*e*P	**P**	**01 20 05.0**	**+0.5**
	comp=Z,8.2nm,0.3s,mb4.8						
ULN	**Ulaanbaatar**	**44.78**	**342**	*e*P	**P**	**01 20 14.4**	**-0.4**
ULN				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.3						
ULN	**Ulaanbaatar**	**44.78**	**342**	*e*P	**P**	**01 20 14.4**	**-0.4**
	comp=Z,8.5nm,1.1s,mb4.3						
SONM	**Songino Array**	**44.96**	**341**	P	**P**	**01 20 16.4**	**+0.2**
	comp=Z,1.2nm,0.3s,mb3.9,baz=156,slow=8.3,SNR=13						
SONM				PcP	PcP	01 21 54.5	+0.1
	comp=Z,2.1nm,0.7s,baz=167,slow=3.8,SNR=6.6						
SONM				ScP	ScP	01 25 32.3	+1.1
	comp=Z,0.6nm,0.6s,baz=134,slow=4.2,SNR=4.0						
SONM	**Songino Array**	**44.96**	**341**	P	**P**	**01 20 16.4**	**+0.2**
SONM						01 21 54.5	
TLY	**Talaya**	**49.19**	**342**	*e*P	**P**	**01 20 49.2**	**+0.3**
TLY				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.1						
WMQ	**Urumqi**	**50.47**	**324**	*e*P	pP	01 21 43.0	+6.4
PEA0B	**Petropavlovsk-**	**53.71**	**23**	*e*P	**P**	**01 21 23.2**	**+0.8**
PETK	**Petropavlovsk-**	**53.71**	**23**	P	**P**	**01 21 23.1**	**+0.7**
	comp=Z,24nm,0.6s,mb5.1,baz=197,slow=3.6,SNR=65						
PETK				PcP	PcP	01 22 26.3	0.0
	comp=Z,1.9nm,0.5s,baz=247,slow=1.8,SNR=2.8						
PET	**Petropavlovsk**	**54.03**	**24**	*e*P	**P**	**01 21 25.3**	**+0.6**
PET				pmax	pmax		
	comp=Z,54nm,0.8s,mb5.3						
PET	**Petropavlovsk**	**54.03**	**24**	*e*P	**P**	**01 21 25.1**	**+0.4**
	comp=Z,22nm,0.9s,mb5.2						
MKAR	**Makanchi Array**	**55.30**	**325**	P	**P**	**01 21 33.5**	**-0.5**
	comp=Z,11nm,0.4s,mb4.9,baz=107,slow=8.8,SNR=92						
MKAR				PcP	PcP	01 22 32.4	-0.2
	comp=Z,2.9nm,0.6s,baz=98,slow=6.2,SNR=6.3						
MKAR				ScP	ScP	01 26 14.8	-0.7
	comp=Z,1.2nm,0.6s,baz=97,slow=5.9,SNR=5.3						
MKAR	**Makanchi Array**	**55.30**	**325**	P	**P**	**01 21 33.5**	**-0.5**
MKAR						01 22 32.4	
MKAR	**Makanchi Array**	**55.30**	**325**	P	**P**	**01 21 33.5**	**-0.5**
MKAR				PcP	PcP	01 22 32.4	-0.2
MKAR				ScP	ScP	01 26 14.8	-0.7
YAK	**Yakutsk**	**56.04**	**2**	*e*P	**P**	**01 21 38.6**	**-0.4**
YAK				pmax	pmax		
	comp=Z,49nm,1.0s,mb5.3						
YAK				pmax	pmax		
	comp=E,4.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,21nm,1.2s						
YAK	**Yakutsk**	**56.04**	**2**	*e*P	**P**	**01 21 39.2**	**+0.2**
	comp=N,44nm,0.8s,mb5.3						
KZA	**Kyzart**	**57.46**	**317**	P	**P**	**01 21 50.5**	**+1.1**
	SNR=6.4						
TKM2	**Tokmak 2**	**57.57**	**318**	P	**P**	**01 21 50.1**	**0.0**
	SNR=6.0						
TKM2	**Tokmak 2**	**57.57**	**318**	*e*P	**P**	**01 21 50.0**	**-0.1**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3						
TKM2	**Tokmak 2**	**57.57**	**318**	*e*P	**P**	**01 21 50.0**	**-0.2**
	comp=Z,4.1nm,0.8s,mb4.3						
UCH	**Uchtor**	**58.02**	**317**	P	**P**	**01 21 54.5**	**+1.3**
	SNR=11						
UCH	**Uchtor**	**58.02**	**317**	*e*P	**P**	**01 21 54.3**	**+1.0**
UCH				pmax	pmax		
	comp=Z,14nm,1.4s,mb4.6						
UCH	**Uchtor**	**58.02**	**317**	*e*P	**P**	**01 21 54.3**	**+1.0**
	comp=Z,14nm,1.4s,mb4.6						
ZAA0	**Zalesovo Array**	**58.27**	**333**	*e*P	**P**	**01 21 53.1**	**-1.6**
ZALV	**Zalesovo Beam**	**58.27**	**333**	P	**P**	**01 21 53.2**	**-1.5**
USP	**Ospenovka**	**58.45**	**318**	P	**P**	**01 21 55.9**	**-0.3**
	SNR=7.9						
AML	**Almayashu**	**58.54**	**316**	P	**P**	**01 21 57.3**	**+0.4**
	SNR=6.6						
EKS2	**Erkin-Say**	**58.69**	**317**	*e*P	**P**	**01 21 57.3**	**-0.6**
EKS2				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
EKS2	**Erkin-Say**	**58.69**	**317**	*e*P	**P**	**01 21 57.3**	**-0.6**
	comp=Z,4.2nm,0.9s,mb4.3						
KURK	**Kurchatov**	**59.46**	**327**	P	**P**	**01 22 02.1**	**-0.9**
	comp=Z,9.1nm,0.4s,mb4.9,baz=128,slow=6.5,SNR=86						
KURK				PcP	PcP	01 22 45.7	-3.1
	comp=Z,3.3nm,0.9s,baz=127,slow=6.1,SNR=6.8						
KURK	**Kurchatov**	**59.46**	**327**	*e*P	**P**	**01 22 01.9**	**-1.1**
KURK				pmax	pmax		
	comp=Z,17nm,0.6s,mb5.0						
KURK	**Kurchatov**	**59.46**	**327**	*e*P	**P**	**01 22 01.9**	**-1.1**
	comp=Z,18nm,0.6s,mb5.1						
NVS	**Novosibirsk**	**59.55**	**333**	*e*P	**P**	**01 22 02.1**	**-1.5**
NVS				*e*	pP	01 22 44.4	+1.7
NVS				pmax	pmax		
	comp=Z,18nm,1.7s,mb4.6						
NVS				pmax	pmax		
	comp=N,9.0nm,1.5s						
SEY	**Seymchan**	**60.08**	**14**	*d i*P	**P**	**01 22 07.7**	**+0.7**
BVAR	**Borovoye Array**	**65.04**	**327**	P	**P**	**01 22 39.7**	**-0.4**
	comp=N,3.2nm,0.5s,mb4.4,baz=134,slow=8.7,SNR=28						
BRVK	**Borovoye**	**65.11**	**327**	*c i*P	**P**	**01 22 40.5**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,15nm,1.5s,mb4.6						
BRVK	**Borovoye**	**65.11**	**327**	*e*P	**P**	**01 22 39.4**	**-1.2**
	comp=Z,6.2nm,0.6s,mb4.6						
TIXI	**Tiksi**	**65.66**	**1**	*e*P	**P**	**01 22 42.9**	**-0.8**
BILL	**Biiibino**	**67.64**	**15**	⇑*e*P	**P**	**01 22 56.2**	**-0.1**
BILL				*e*		01 25 24.7	
BILL				pmax	pmax		
	comp=Z,17nm,1.7s,mb4.5						
BILL	**Biiibino**	**67.64**	**15**	*e*P	**P**	**01 22 55.8**	**-0.5**
	comp=Z,2.9nm,0.4s,mb4.4						
ABKAR	**Akbulak array**	**69.94**	**320**	*e*P	**P**	**01 23 09.9**	**-1.1**
	comp=Z,4.0nm,0.7s,mb4.3						
AKTK	**Aktyubinsk**	**71.44**	**321**	P	**P**	**01 23 19.3**	**-0.7**
AKTO	**Aktyubinsk**	**71.44**	**321**	P	**P**	**01 23 19.3**	**-0.7**
	comp=Z,4.2nm,0.5s,mb4.4,baz=100,slow=10,SNR=11						
AKUT	**Akutan**	**72.57**	**35**	*e*P	**P**	**01 23 26.6**	**0.0**
ARU	**Arti**	**72.65**	**328**	*e*P	**P**	**01 23 25.6**	**-1.4**
ARU				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.7						
ARU	**Arti**	**72.65**	**328**	*e*P	**P**	**01 23 25.6**	**-1.5**
	comp=Z,7.3nm,0.5s,mb4.7						
CASY	**Casey**	**72.90**	**186**	*e*P	**P**	**01 23 29.0**	**+0.7**
	comp=Z,6.0nm,0.8s,mb4.4						
SVW2	**Sparrevohn**	**79.27**	**29**	*e*P	**P**	**01 24 05.3**	**+0.9**
ZEI	**Tsey**	**80.15**	**312**	*e*P	**P**	**01 24 08.4**	**-1.1**
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.3						
RSO	**Redoubt South**	**80.58**	**30**	*e*P	**P**	**01 24 11.6**	**+0.2**
KIV	**Kislovodsk**	**81.04**	**313**	*e*P	**P**	**01 24 15.2**	**+0.9**
KIV				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.3						
KIV	**Kislovodsk**	**81.04**	**313**	*e*P	**P**	**01 24 15.2**	**+0.9**
	comp=Z,5.7nm,0.7s,mb4.3						
PPLA	**Purkeypile**	**81.04**	**27**	*e*P	**P**	**01 24 14.2**	**+0.4**
	comp=Z,8.2nm,0.5s,mb4.6						
KTH	**Kantishna Hill**	**81.66**	**27**	*e*P	**P**	**01 24 17.3**	**+0.2**
	comp=Z,42nm,1.2s,mb5.0						
BPAW	**Bear Paw Mtn.**	**81.67**	**26**	*e*P	**P**	**01 24 17.9**	**+0.7**
	comp=Z,68nm,1.2s,mb5.2						
RC01	**Rabbit Creek A**	**82.09**	**29**	*e*P	**P**	**01 24 19.5**	**+0.1**
	comp=Z,17nm,0.5s,mb4.9						
COLD	**Coldfoot**	**82.18**	**23**	*e*P	**P**	**01 24 21.4**	**+1.6**
	comp=Z,5.9nm,0.7s,mb4.3						
SEW	**Seward**	**82.20**	**30**	*e*P	**P**	**01 24 20.0**	**0.0**
	comp=Z,14nm,0.5s,mb4.8						
COLA	**College**	**83.05**	**25**	*e*P	**P**	**01 24 24.2**	**-0.1**
COLA				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.6						
COLA	**College**	**83.05**	**25**	*e*P	**P**	**01 24 24.1**	**-0.1**
	comp=Z,7.7nm,0.7s,mb4.5						
DIV	**Divide**	**84.02**	**29**	*e*P	**P**	**01 24 30.4**	**+1.1**
	comp=Z,39nm,0.9s,mb5.1						
PAX	**Paxson**	**84.12**	**27**	*e*P	**P**	**01 24 30.4**	**+0.7**
PAX				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
PAX	**Paxson**	**84.12**	**27**	*e*P	**P**	**01 24 30.4**	**+0.7**
	comp=Z,4.0nm,0.7s,mb4.3						
BMRM	**Bremner River**	**84.59**	**29**	*e*P	**P**	**01 24 33.2**	**+1.0**
	comp=Z,19nm,0.9s,mb4.8						
OBN	**Obninsk**	**84.81**	**325**	*c i*P	**P**	**01 24 32.6**	**-0.8**
OBN				pmax	pmax		
	comp=Z,30nm,1.3s,mb4.9						
EGAK	**Eagle**	**85.92**	**25**	*e*P	**P**	**01 24 39.9**	**+1.2**
	comp=Z,2.6nm,0.7s,mb4.1						
ASF	**Jabal al Asfar**	**86.06**	**302**	P	**P**	**01 24 40.5**	**+0.4**
	comp=Z,1.0nm,0.3s,mb4.0,baz=145,slow=3.8,SNR=3.1						
DAWY	**Dawson**	**86.75**	**26**	*e*P	**P**	**01 24 43.9**	**+1.2**
JOF	**Joensuu**	**86.86**	**333**	*e*p	**P**	**01 24 41.4

*NEIC **04** 01:23:13.9±0.7, 36.°11N×69.°45E, h157km±15km, mb3.6/2, Error ellipse: s-maj=35.0km s-min=8.5km az=125.0*
*ISCJB **04** 01:23:13.2±0.6, 36.°30N±0.°07×69.°21E±0.°09, h143km±11km, mb3.5/4, Error ellipse: s-maj=15.8km s-min=6.3km az=43.4*
*NNC **04** 01:23:20.6±6.3, 37.°23N×69.°36E, h0km, mb3.5, mpv3.3, Error ellipse: s-maj=53.0km s-min=49.5km az=138.0*
ISC 04 01:23:14.2±0.6, 36.°29N±0.°07×69.°21E±0.°09, h139km±9km, n31, σ0.80/40, mb3.5/4, 1C-5D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**1.75**	**184**	*e*Pn	**Pn**	**01 23 45.8**	**0.0**
KBL				*e*Sn	**Sn**	**01 24 09.8**	**-0.2**
KSH	**Kashi**	**6.24**	**57**	Pn	**Pn**	**01 24 39.9**	**-4.1**
KSH				Sn	**Sn**	**01 25 43.1**	**-11**
KSH				smax			
	comp=N,50nm,0.8s						
KSH				smax			
	comp=E,39nm,0.5s						
AML	**Almayashu**	**6.79**	**29**	P	**Pn**	**01 24 52.0**	**+0.7**
	SNR=28						
AML	**Almayashu**	**6.79**	**29**	*e*Pn	**Pn**	**01 24 51.7**	**+0.3**
	comp=E,9.7nm,0.3s						
AML				*e*Sn	**Sn**	**01 26 05.5**	**-1.8**
KK31	**Karatay Array**	**6.88**	**8**	⇑Pn	**Pn**	**01 24 53.0**	**+0.5**
	comp=E,0.3nm,0.3s,baz=181,slow=11,SNR=20						
KK31				⇓Sn	**Sn**	**01 26 05.7**	**-3.7**
	comp=E,1.1nm,0.3s,baz=192,slow=24,SNR=6.2						
UCH	**Uchtor**	**7.21**	**33**	P	**Pn**	**01 24 57.8**	**+0.7**
	SNR=15						
UCH	**Uchtor**	**7.21**	**33**	*e*Pn	**Pn**	**01 24 57.3**	**+0.3**
	comp=E,6.0nm,0.4s						
UCH				*e*Sn	**Sn**	**01 26 16.3**	**-1.2**
EKS2	**Erkin-Say**	**7.27**	**28**	*e*Pn	**Pn**	**01 24 57.9**	**+0.1**
IMYA	**Miami**	**7.35**	**273**	*e*P	**Pn**	**01 24 59.4**	**+0.5**
KZA	**Kyzart**	**7.44**	**37**	P	**Pn**	**01 25 00.6**	**+0.5**
	SNR=6.7						
AAK	**Ala-Archa**	**7.54**	**31**	P	**Pn**	**01 25 02.3**	**+1.0**
	comp=E,0.0nm,0.3s,baz=176,slow=4.3,SNR=6.3						
AAK				S	**Sn**	**01 26 25.8**	**+0.6**
	comp=E,0.0nm,0.3s,baz=135,slow=22,SNR=6.9						
AAK	**Ala-Archa**	**7.54**	**31**	P	**Pn**	**01 25 02.3**	**+1.0**
AAK				S	**Sn**	**01 26 25.8**	**+0.6**
USP	**Ospenovka**	**8.07**	**29**	P	**Pn**	**01 25 08.9**	**+0.4**
	SNR=6.7						
IPAY	**Payeh**	**8.24**	**274**	*e*P	**Pn**	**01 25 10.5**	**-0.3**
TKM2	**Tokmak 2**	**8.25**	**35**	⇓Pn	**Pn**	**01 25 10.8**	**-0.1**
	comp=E,2.6nm,0.5s						
TKM2				⇓Sn	**Sn**	**01 26 33.7**	**-8.8**
	comp=E,2.1nm,0.7s						
TKM2	**Tokmak 2**	**8.25**	**35**	P	**Pn**	**01 25 11.3**	**+0.4**
	SNR=7.3						
TKM2	**Tokmak 2**	**8.25**	**35**	*e*Pn	**Pn**	**01 25 10.8**	**-0.1**
	comp=E,3.5nm,0.5s						
ISFR	**Sfrayin**	**9.04**	**278**	*e*P	**Pn**	**01 25 21.0**	**-0.5**
MKAR	**Makanchi Array**	**14.33**	**39**	P	**Pn**	**01 26 29.9**	**-0.7**
	comp=E,0.2nm,0.3s,baz=160,slow=43,SNR=3.8						
AB31	**Akbulak array**	**14.62**	**335**	⇓Pn	**Pn**	**01 26 34.4**	**+0.2**
	comp=E,0.3nm,0.5s,baz=225,slow=8.6,SNR=7.4						
AB31				⇓Sn	**Sn**	**01 29 08.5**	**-7.4**
	comp=E,0.7nm,0.7s						
KURK	**Kurchatov**	**15.93**	**22**	P	**Pn**	**01 26 50.9**	**+0.5**
	comp=E,0.1nm,0.3s,baz=212,slow=12,SNR=6.0						
KURK	**Kurchatov**	**15.93**	**22**	*e*P	**Pn**	**01 26 51.4**	**+1.0**
	comp=E,1.0nm,0.5s						
BVAR	**Borovoye Array**	**16.75**	**2**	P	**Pn**	**01 27 01.4**	**+1.0**
	comp=E,0.3nm,0.3s,baz=171,slow=9.7,SNR=5.2						
BRVK	**Borovoye**	**16.78**	**2**	*e*P	**Pn**	**01 27 01.1**	**+0.3**
	comp=E,1.6nm,0.4s						
ZALV	**Zalesovo Beam**	**20.73**	**27**	P	**P**	**01 27 43.0**	**-0.5**
	comp=E,0.8nm,0.4s,baz=224,slow=10,SNR=3.6						
FINES	**FINESS Array B**	**36.86**	**327**	P	**P**	**01 30 09.3**	**+0.6**
	comp=E,1.3nm,0.8s,mb3.6,baz=124,slow=17,SNR=4.8						
ARCES	**ARCESS Array B**	**40.79**	**338**	P	**P**	**01 30 42.0**	**+0.6**
	comp=E,0.6nm,0.5s,mb3.5,baz=106,slow=8.6,SNR=7.7						
ARCES	**ARCESS Array B**	**40.79**	**338**	P	**P**	**01 30 42.0**	**+0.6**
NB2	**NORSAR Subarra**	**43.68**	**323**	P	**P**	**01 31 04.3**	**-0.5**
	comp=Z,0.7nm,0.4s,mb3.6,baz=101,slow=7.9						
NOA	**NORSAR Array B**	**43.68**	**323**	P	**P**	**01 31 04.2**	**-0.6**
	comp=Z,0.7nm,0.4s,mb3.6,baz=99,slow=7.8,SNR=4.2						
TORD	**Torodi Ar. Bea**	**64.27**	**268**	P	**P**	**01 33 32.8**	**-2.1**
	comp=Z,0.5nm,0.7s,mb3.5,baz=53,slow=5.3,SNR=8.7						

*BJI **04** 01:25:17.4, 1.°38S×122.°92E, h46km, mB5.0/38, mb4.9/46, Ms4.7/45, Ms7 4.5/42*
*IDC **04** 01:25:18.2±0.5, 0.°55S×122.°71E, h0km, mb4.6/24, mb1 4.6/26, mb1mx4.6/29, mbtmp4.6/26, ML4.9/3, MS4.4/22, Ms1 4.4/22, ms1mx4.3/29, Error ellipse: s-maj=17.8km s-min=11.0km az=76.0*
*ISCJB **04** 01:25:23.0±0.4, 0.°62S±0.°02×122.°74E±0.°03, h44km±4km, mb5.0/103, MS4.5/38, Error ellipse: s-maj=4.4km s-min=4.0km az=149.6*
*GCMT **04** 01:25:22.0±0.1, 0.°52S×122.°70E, h22km, MW5.3, Moment Tensor Solution. s60,c79; s99,c198; Moment tensor: Scale 10^{17}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{r\phi}$0.00; Best double couple: $M_0$1.00000×10^{17} NP1:φs177.00000°, δ63.00000°, λ-20.00000°. NP2: φs277.00000°, δ72.00000°, λ-151.00000°. Principal axes: T 1.1100, Plg6.0000°, Azm45.0000°; N -0.2200, Plg57.0000°, Azm306.0000°; P -0.8900, Plg33.0000°, Azm139.0000°; Data Used: II IU IC CN G. Surface waves from 108 sta.*
*NEIC **04** 01:25:24.9±0.8, 0.°63S×122.°64E, h46km±7km, mb5.2/43 Error ellipse: s-maj=8.0km s-min=4.3km az=65.0*
NEIC Felt [II] at Luwuk.
*MOS **04** 01:25:24.4±1.4, 0.°49S×122.°71E, h52km, mb5.3/21, Error ellipse: s-maj=13.1km s-min=6.6km az=116.7*
*DJA **04** 01:25:24, 0.°71S×122.°69E, h17km, Mw5.5/28*
*TEH **04** 01:25:27.0, 0.°71S×122.°54E, h69km*
ISC 04 01:25:25.5±0.3, 0.°63S±0.°02×122.°74E±0.°02, h51km±3km, h54km±2.9km: pP-P, n293, σ1s25/279, mb5.0/103, MS4.5/38, 10C-5D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.41**	**175**	P	**Pn**	**01 25 30.6**	**-5.2**
APSI	**Ampana**	**1.12**	**256**	P	**Pn**	**01 25 41.6**	**-3.4**
APSI				S	**Sn**	**01 26 00.6**	**+1.2**
MRSI	**Marisa**	**1.36**	**324**	P	**Pn**	**01 25 42.7**	**-5.5**
PCI	**Palu**	**2.92**	**265**	P	**Pn**	**01 26 10.3**	**+0.9**
MNI	**Manado**	**2.94**	**46**	P	**Pn**	**01 26 09.4**	**-0.4**
KDI	**Kendari**	**3.31**	**182**	P	**Pn**	**01 26 13.3**	**-1.5**
TTSI	**Tana Toraja**	**3.78**	**231**	P	**Pn**	**01 26 19.5**	**-1.8**
LBMI	**Labuha**	**4.76**	**90**	P	**Pn**	**01 26 35.1**	**+0.3**
TNTI	**Ternate**	**4.83**	**73**	P	**Pn**	**01 26 41.0**	**+5.2**
NLAI	**Namlea**	**5.07**	**121**	P	**Pn**	**01 26 39.8**	**+0.8**
	8.1nm2μm,0.6s						
KAPI	**Kappang**	**5.28**	**214**	Pn	**Pn**	**01 26 39.5**	**-2.4**
	8μm,0.6s						
KAPI	**Kappang**	**5.28**	**214**	Pn	**Pn**	**01 26 38.8**	**-3.1**
	160nm,0.3s,baz=28,slow=7.3,SNR=487						
KAPI				Sn	**Sn**	**01 27 37.9**	**-3.6**
	123nm,0.3s,baz=235,slow=20,SNR=7.8						
KAPI	**Kappang**	**5.28**	**214**	*e*Pn	**Pn**	**01 26 39.1**	**-2.8**
	842nm,0.7s						
KAPI				*e*Sn	**Sn**	**01 27 37.8**	**-3.7**
AAI	**Ambon**	**6.24**	**119**	P	**Pn**	**01 26 57.4**	**+2.3**
	3.5nm9μm973nm,0.7s						
TSM	**Tawau**	**6.90**	**315**	P	**Pn**	**01 27 01.6**	**-2.5**
KBKI	**Kotabaru**	**7.08**	**248**	P	**Pn**	**01 27 04.3**	**-2.3**
	3.4nm5μm537nm,0.8s						
MYLDM	**Lahad Datu**	**7.16**	**324**	P	**Pn**	**01 27 08.7**	**+1.0**
MYLDM	**Lahad Datu**	**7.16**	**324**	P	**Pn**	**01 27 07.3**	**-0.4**
	11nm1μm,0.9s						
ZMPH	**Zamboanga City**	**7.56**	**355**	⇓*i*P	**Pn**	**01 27 11.0**	**-2.2**
ZMPH				*i* S	**Sn**	**01 28 32.8**	**-4.9**
MMRI	**Maumere**	**7.97**	**184**	P	**Pn**	**01 27 18.4**	**-0.4**
	1.3nm4μm454nm,0.9s						
DMPH	**Davao City--Mi**	**8.15**	**20**	*e*P	**Pn**	**01 27 23.1**	**+1.9**
DAV	**Davao City (W)**	**8.16**	**20**	Pn	**Pn**	**01 27 19.0**	**-2.4**
	49nm,0.3s,baz=261,slow=4.7,SNR=5.4						
DAV				Sn	**Sn**	**01 28 47.4**	**-4.9**
	29nm,0.3s,baz=81,slow=18,SNR=1.4						
DAV	**Davao City (W)**	**8.16**	**20**	*e*Pn	**Pn**	**01 27 26.9**	**+5.5**
	728nm,1.0s						
DAV				Sn	**Sn**	**01 28 47.4**	**-4.9**
DAV	**Davao City (W)**	**8.16**	**20**	P	**Pn**	**01 27 28.2**	**+6.8**
	8μm764nm,0.9s						
SDKM	**Sandakan**	**8.34**	**318**	P	**Pn**	**01 27 22.9**	**-0.9**
BBKI	**Banjar Baru**	**8.38**	**250**	P	**Pn**	**01 27 23.8**	**-0.6**
	641nm,0.8s						
PAGZ	**Pagadian**	**8.45**	**4**	*e*P	**Pn**	**01 27 23.9**	**-1.5**
PAGZ	**Pagadian**	**8.45**	**4**	*e*S	Px	01 27 32.2	
SWI	**Sorong**	**8.52**	**92**	P	**Pn**	**01 27 28.4**	**+2.0**
	328nm,1.1s						
BUKP	**Musuan**	**8.77**	**15**	*e*P	**Pn**	**01 27 28.8**	**-1.0**
BUKP	**Musuan**	**8.77**	**15**	*e*S	Px	01 27 44.6	
KKM	**Kota Kinabalu**	**9.29**	**316**	P	**Pn**	**01 27 38.7**	**+1.7**
KKM	**Kota Kinabalu**	**9.29**	**316**	*e*Pn	**Pn**	**01 27 35.0**	**-2.0**
KKM				*e*Sn	**Sn**	**01 29 13.1**	**-7.2**
KKM	**Kota Kinabalu**	**9.29**	**316**	P	**Pn**	**01 27 39.0**	**+2.0**
	3μm324nm,1.0s						
KDM	**Kudat**	**9.54**	**322**	P	**Pn**	**01 27 42.3**	**+2.0**
BTM	**Bintulu**	**10.38**	**292**	P	**Pn**	**01 27 53.1**	**+1.4**
KHKI	**Kahang-Kahang**	**10.46**	**223**	P	**Pn**	**01 27 50.5**	**-2.5**
	1μm59nm,1.0s						
SRBI	**Singaraja**	**10.54**	**225**	P	**Pn**	**01 27 52.2**	**-1.8**
	85nm,0.8s						
KMMI	**Kalianget**	**10.82**	**234**	P	**Pn**	**01 27 57.3**	**-0.6**
	94nm,2.0s						
SBUM	**Sibu**	**10.95**	**286**	P	**Pn**	**01 28 01.7**	**+2.0**
SBUM	**Sibu**	**10.95**	**286**	P	**Pn**	**01 28 00.2**	**+0.5**
	2μm91nm,1.8s						
TLE	**Tual**	**11.15**	**117**	P	**Pn**	**01 28 03.5**	**+1.1**
	310nm,0.9s						
NBBI	**Negara**	**11.16**	**226**	P	**Pn**	**01 28 01.0**	**-1.5**
	324nm,1.2s						
STKI	**Sintang**	**11.28**	**273**	P	**Pn**	**01 28 13.6**	**+9.4**
GMJI	**Gumukmas**	**11.97**	**230**	P	**Pn**	**01 28 13.9**	**+0.3**
	126nm,0.9s						
KSM	**Kuching**	**12.60**	**280**	P	**Pn**	**01 28 20.1**	**-2.2**
KSM	**Kuching**	**12.60**	**280**	*e*Pn	**Pn**	**01 28 19.4**	**-2.9**
KSM	**Kuching**	**12.60**	**280**	P	**Pn**	**01 28 22.6**	**+0.3**
	1μm73nm,1.5s						
NGJI	**Ngawi**	**13.08**	**239**	P	**Pn**	**01 28 38.1**	**+9.3**
PWJI	**Pagerwojo**	**13.14**	**236**	P	**Pn**	**01 28 30.3**	**+0.8**
	84nm,1.3s						
SMRI	**Semarang**	**13.82**	**242**	P	**Pn**	**01 28 47.3**	**+8.4**
TGY	**Tagaytay City**	**14.75**	**353**	Pn	**Pn**	**01 28 52.2**	**+1.1**
	101nm,0.3s,baz=210,slow=7.5,SNR=3.6						
KAKA	**Kakadu**	**15.38**	**142**	*e*Pn	**Pn**	**01 28 59.3**	**-0.1**
	153nm,0.8s						
KAKA	**Kakadu**	**15.38**	**142**	P	**Pn**	**01 29 00.1**	**+0.7**
	819nm100nm,1.1s						
SMPI	**Sarmi**	**16.02**	**95**	P	**Pn**	**01 29 09.0**	**+1.3**
KNA	**Kununurra**	**16.16**	**159**	P	**Pn**	**01 29 12.2**	**+2.9**
	1μm117nm,0.9s						
LEM	**Lembang**	**16.29**	**247**	P	**Pn**	**01 29 15.5**	**+4.5**
CBJI	**Citeko**	**16.86**	**250**	P	**Pn**	**01 29 21.9**	**+3.7**
DBJI	**Dramaga**	**17.00**	**249**	P	**Pn**	**01 29 23.3**	**+3.3**
	6μm233nm,1.9s						
FITZ	**Fitzroy Crossi**	**17.59**	**171**	*e*P	**Pn**	**01 29 25.9**	**-1.3**
	28nm,0.6s						
FITZ	**Fitzroy Crossi**	**17.59**	**171**	P	**Pn**	**01 29 25.6**	**-1.6**
	0.5nm,0.3s,baz=6.4,slow=7.4,SNR=30						
FITZ				LR	LR	01 36 32.4	
	comp=Z,680nm,19.1s,baz=352,slow=38						
FITZ	**Fitzroy Crossi**	**17.59**	**171**	*e*P	**Pn**	**01 29 26.9**	**-0.3**
	14nm,0.7s						
FITZ	**Fitzroy Crossi**	**17.59**	**171**	P	**Pn**	**01 29 27.3**	**+0.1**
	43nm,0.9s						
RBSI	**Rajabasa**	**17.74**	**253**	P	**Pn**	**01 29 32.0**	**+3.0**
	3μm245nm,1.1s						
CGJI	**Cibinong**	**18.01**	**250**	P	**Pn**	**01 29 33.4**	**+1.0**
JAY	**Jayapura**	**18.05**	**96**	P	**Pn**	**01 29 36.1**	**+3.2**
	52nm,1.7s						
KASI	**Kota Agung**	**18.85**	**255**	P	**Pn**	**01 29 43.0**	**+0.5**
	3μm243nm,0.9s						
MDSI	**Maura Dua**	**18.93**	**258**	P	**Pn**	**01 29 43.6**	**+0.1**
	2μm166nm,1.2s						
MYKOM	**Kota Tinggi**	**19.04**	**277**	P	**Pn**	**01 29 41.7**	**-3.2**
MYKOM	**Kota Tinggi**	**19.04**	**277**	P	**Pn**	**01 29 45.0**	**+0.2**
	1μm71nm,1.2s						
LWLI	**Liwa**	**19.16**	**257**	P	**Pn**	**01 29 46.9**	**+0.7**
KGM	**Kluang**	**19.59**	**278**	P	**Pn**	**01 29 51.3**	**-0.1**
MNAI	**Manna**	**20.11**	**259**	P	**P**	**01 29 56.8**	**+1.5**
	452nm,1.3s						
KSI	**Kapahiang**	**20.35**	**261**	P	**P**	**01 29 59.9**	**+1.9**
	6μm406nm,1.2s						
KTGM	**Kuala Trenggan**	**20.45**	**287**	P	**P**	**01 29 59.9**	**+0.8**
MBWA	**Marble Bar**	**20.61**	**188**	*e*P	**P**	**01 30 00.7**	**0.0**
	50nm,1.0s						
MBWA	**Marble Bar**	**20.61**	**188**	P	**P**	**01 30 01.1**	**+0.4**
	71nm,1.6s						
FRIM	**Kepong**	**21.45**	**280**	P	**P**	**01 30 11.3**	**+1.5**
BKNI	**Bangkinang**	**21.72**	**272**	P	**P**	**01 30 13.9**	**+1.2**
	3μm334nm,1.1s,mb5.7						
IPM	**Ipoh**	**22.28**	**283**	P	**P**	**01 30 20.3**	**+1.6**
IPM	**Ipoh**	**22.28**	**283**	P	**P**	**01 30 19.9**	**+1.2**
	1μm103nm,1.0s,mb5.2						
WRAB	**Tennant Creek**	**22.30**	**150**	P	**P**	**01 30 19.3**	**+0.5**
	490nm,0.8s,mb6.0,SNR=6.5						
WRAB	**Tennant Creek**	**22.30**	**150**	*e*P	**P**	**01 30 19.9**	**+1.1**
WRAB				pmax	pmax		
	comp=Z,74nm,0.9s,mb5.1						
WRAB	**Tennant Creek**	**22.30**	**150**	*e*P	**P**	**01 30 19.9**	**+1.1**
	comp=Z,74nm,0.9s,mb5.1						
WRAB	**Tennant Creek**	**22.30**	**150**	P	**P**	**01 30 21.0**	**+2.2**
	comp=Z,92nm,1.3s,mb5.0						
PPI	**Padang Panjang**	**22.34**	**270**	P	**P**	**01 30 21.6**	**+2.2**
	comp=Z,3μmcomp=Z,158nm,2.0s,mb5.1						
KULM	**Kulim**	**22.83**	**285**	P	**P**	**01 30 24.8**	**+0.3**
KULM	**Kulim**	**22.83**	**285**	*e*P	**P**	**01 30 23.7**	**-0.9**
	comp=Z,97nm,1.2s,mb5.1						
KULM	**Kulim**	**22.83**	**285**	P	**P**	**01 30 26.4**	**+1.9**
	comp=Z,900nmcomp=Z,60nm,1.2s,mb4.9						
MNSI	**Mandailing Nat**	**23.20**	**273**	P	**P**	**01 30 28.7**	**+0.3**
	comp=Z,8μmcomp=Z,191nm,0.8s,mb5.6						
QIZ	**Qiongzhong**	**23.28**	**328**	P	**P**	**01 30 28.6**	**-0.5**
QIZ				pP		01 30 39.6	
QIZ				S	**S**	**01 34 40.9**	**+3.2**
QIZ				sS	sS	01 34 56.7	-2.6
QIZ				pmax	pmax		
	comp=Z,38nm,1.2s,mb4.7						
QIZ				pmax	pmax		
	comp=Z,360nm,3.9s						
QIZ				LR	LR		
	comp=N,750nm,14.3s						
QIZ				LR	LR		
	comp=Z,1μm,28.1s						
QIZ	**Qiongzhong**	**23.28**	**328**	*e*P	**P**	**01 30 28.4**	**-0.8**
	comp=Z,48nm,1.0s,mb4.9						
TWG	**Pinlang**	**23.37**	**356**	*e*P	**P**	**01 30 30.5**	**+0.7**
	comp=Z,120nm,0.6s,mb5.1						
SNG	**Songkhla**	**23.39**	**290**	P	**P**	**01 30 30.0**	**-0.2**
	comp=Z,120nm,0.8s,mb5.4						
UBT	**Ubonrachathani**	**23.57**	**313**	P	pP	01 30 48.5	+4.3
SISI	**Saibi**	**23.66**	**268**	P	**P**	**01 30 32.3**	**-0.4**
	comp=Z,155nm,2.0s,mb5.1						
TPUB	**Ta-pu**	**23.88**	**355**	*e*P	**P**	**01 30 36.2**	**+1.7**
	comp=Z,221nm,1.0s,mb5.5						
YULB	**Yu-li**	**23.92**	**357**	*e*P	**P**	**01 30 33.5**	**-1.4**
	comp=Z,58nm,0.9s,mb5.0						
PSI	**Prapat**	**24.05**	**278**	P	**P**	**01 30 36.5**	**+0.2**
	comp=Z,82nm,0.9s,mb5.1,baz=115,slow=3.1,SNR=59						
PSI				LR	LR	01 42 36.7	
	comp=Z,1μm,18.0s,MS4.4,baz=104,slow=43						
COEN	**Coen**	**24.17**	**124**	*e*P	**P**	**01 30 37.0**	**-0.3**
COEN	**Coen**	**24.17**	**124**	*e*P	**P**	**01 30 37.2**	**-0.1**
	comp=Z,214nm,0.9s,mb5.6						
COEN	**Coen**	**24.17**	**124**	P	**P**	**01 30 38.6**	**+1.3**
	comp=Z,165nm,1.6s,mb5.2						
SSLB	**Suanglung**	**24.34**	**356**	*e*P	**P**	**01 30 39.2**	**+0.5**
	comp=Z,78nm,0.7s,mb5.2						
YHNB	**Yeheng**	**25.19**	**357**	*e*P	**P**	**01 30 48.8**	**+2.4**
	comp=Z,54nm,0.6s,mb5.2						
GSI	**Gunungsitoli**	**25.23**	**274**	P	**P**	**01 30 46.6**	**-0.5**
	comp=Z,290nm,0.9s,mb5.8						
ASAR	**Alice Springs**	**25.33**	**155**	P	**P**	**01 30 48.0**	**+0.2**
	comp=Z,9.3nm,0.5s,mb4.6,baz=329,slow=7.7,SNR=44						
ASAR				PcP	PcP	01 34 20.8	+1.0
	comp=Z,1.8nm,0.6s,baz=346,slow=2.3,SNR=4.5						
KKTK	**Khon Kaen**	**25.89**	**312**	P	**P**	**01 30 54.5**	**+1.5**
	comp=Z,1μm,1.0s,mb6.3						
NNT	**Nongplab**	**26.34**	**301**	P	**P**	**01 30 57.9**	**+0.9**
NST	**Nakhon Sawan**	**27.59**	**307**	P	**P**	**01 31 09.0**	**+0.8**
JOW	**Kunigami**	**27.82**	**11**	LR	LR	01 41 12.5	
	comp=Z,691nm,20.0s,MS4.2,baz=155,slow=34						
BDT	**Bhumibol Dam**	**29.37**	**308**	P	**P**	**01 31 25.0**	**+1.0**
	comp=Z,16nm,0.8s,mb4.8						
CTA	**Charters Tower**	**30.05**	**132**	P	**P**	**01 31 31.2**	**+1.1**
	comp=Z,6.4nm,0.9s,mb4.4,baz=308,slow=9.2,SNR=5.5						
CTAO	**Charters Tower**	**30.05**	**132**	*e*P	**P**	**01 31 31.3**	**+1.2**
CTAO				pmax	pmax		
	comp=Z,98nm,2.2s,mb5.2						
CTAO	**Charters Tower**	**30.05**	**132**	*e*P	**P**	**01 31 31.2**	**+1.1**
	comp=Z,98nm,2.2s,mb5.2						
CTAO	**Charters Tower**	**30.05**	**132**	P	**P**	**01 31 31.9**	**+1.8**
	comp=Z,15nm,1.6s,mb4.5						
CMAR	**Chiang Mai Arr**	**30.12**	**310**	P	**P**	**01 31 30.6**	**-0.1**
	comp=Z,9.3nm,0.8s,mb4.6,baz=137,slow=6.8,SNR=32						
CMAR				LR	LR	01 44 14.9	
	comp=Z,1μm,21.3s,MS4.5,baz=120,slow=38						
CHG	**Chiang Mai**	**30.33**	**311**	⇓P	**P**	**01 31 33.6**	**+1.1**
	comp=Z,75nm,1.1s,mb5.3						
FORT	**Forrest**	**30.40**	**171**	*e*P	**P**	**01 31 32.9**	**-0.1**
	comp=Z,21nm,0.6s,mb5.0						
FORT	**Forrest**	**30.40**	**171**	*e*P	**P**	**01 31 33.6**	**+0.5**
	comp=Z,39nm,0.9s,mb5.1						
GYA	**Guiyang**	**31.07**	**331**	⇑*i*P	**P**	**01 31 41.0**	**+2.0**
GYA				pP	pP	01 31 54.9	+2.8
GYA				sP	sP	01 31 59.0	+0.9
GYA				PP	PP	01 32 45.4	-4.6
GYA				S	**S**	**01 36 42.9**	**+1.9**
GYA				sS	sS	01 37 05.5	+2.5
GYA				ScP	ScP	01 38 12.1	-0.6
GYA				ScS	ScS	01 42 08.7	-1.2
GYA				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.1						
GYA				pmax	pmax		
	comp=Z,140nm,5.0s						
GYA				LR	LR		
	comp=N,3μm,15.0s,MS5.1						
GYA				LR	LR		
	comp=E,2μm,14.3s,MS5.1						
GYA				LR	LR		
	comp=Z,2μm,14.7s,MS5.0						
KLBR	**Kellerberrin**	**31.15**	**188**	*e*P	**P**	**01 31 37.8**	**-1.8**
	comp=Z,33nm,1.2s,mb5.0						
SSE	**Sheshan**	**31.59**	**357**	*e*P	**P**	**01 31 41.9**	**-1.6**
SSE				sS	sS	01 37 16.9	+6.0
SSE				ScS	ScS	01 42 12.1	-0.2
SSE				pmax	pmax		
	comp=Z,35nm,0.6s,mb5.4						
SSE				pmax	pmax		
	comp=Z,65nm,3.6s						
SSE				LR	LR		
	comp=N,510nm,25.9s,MS4.1						
SSE				LR	LR		
	comp=E,180nm,25.9s,MS4.1						
SSE				LR	LR		
	comp=Z,490nm,17.4s						
WHN	**Wuhan**	**32.01**	**346**	P	**P**	**01 31 49.9**	**+2.7**
WHN				S	**S**	**01 36 57.7**	**+2.2**
WHN				LR	LR		
	comp=N,2μm,18.9s						
WHN				LR	LR		
	comp=E,430nm,11.7s						
WHN				LR	LR		
	comp=Z,2μm,17.2s,MS4.9						
KMI	**Kunming**	**32.10**	**324**	P	**P**	**01 31 50.1**	**+2.1**
KMI				pP	pP	01 32 03.8	+2.7
KMI				sP	sP	01 32 09.3	+2.2
KMI				PP	PP	01 32 58.3	-3.1
KMI				S	**S**	**01 36 58.1**	**+1.1**
KMI				sS	sS	01 37 21.5	+2.5
KMI				PcS	PcS	01 38 21.5	0.0
KMI				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.0						
KMI				LR	LR		
	comp=N,480nm,18.4s,MS4.4						
KMI				LR	LR		
	comp=E,500nm,18.4s,MS4.4						
KMI				LR	LR		
	comp=Z,810nm,27.7s						
NWAO	**Narrogin (SRO)**	**32.54**	**189**	P	**P**	**01 31 51.5**	**-0.3**
	comp=Z,12nm,0.9s,mb4.8,baz=334,slow=9.9,SNR=3.7						
NWAO				LR	LR	01 47 35.7	
	comp=Z,4.0nm,19.0s,baz=14,slow=41						
NWAO	**Narrogin (SRO)**	**32.54**	**189**	P	**P**	**01 31 51.5**	**-0.3**
NWAO				LR	LR	01 47 35.7	
NJ2	**Nanjing**	**32.71**	**354**	*e*P	**P**	**01 31 54.2**	**+0.9**
NJ2				pP	pP	01 32 05.7	-0.7
NJ2				sP	sP	01 32 10.3	-2.1
NJ2				PP	PP	01 33 04.6	-3.5
NJ2				S	**S**	**01 37 08.0**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
NJ2				pmax	pmax		
	comp=Z,160nm,3.6s						
NJ2				LR	LR		
	comp=N,460nm,15.2s,MS4.4						
NJ2

BJI SS SS 01 42 21.1 +6.6
BJI pmax pmax
comp=Z,8.0nm,1.2s,mb4.2
BJI pmax pmax
comp=Z,56nm,5.1s
BJI LR LR
comp=N,280nm,15.6s,MS4.5
BJI LR LR
comp=E,560nm,18.4s,MS4.5
BJI LR LR
comp=Z,260nm,32.6s
TOO Toolangi 42.32 153 *e*P **P 01 33 14.7 +0.2**
HHC Hu-ho-hao-te 42.52 347 *e*P **P 01 33 18.7 +2.6**
HHC PP PP 01 35 01.7 +6.2
HHC PcP PcP 01 35 10.2 +2.2
HHC ScP ScP 01 38 52.9 -1.9
HHC PcS PcS 01 39 00.7 +0.8
HHC S **S 01 39 36.4 +1.6**
HHC pmax pmax
comp=Z,15nm,0.8s,mb4.8
HHC pmax pmax
comp=Z,60nm,4.6s
LSA Lhasa 42.63 318 *e*P **P 01 33 08.6 -8.6**
LSA Lhasa 42.63 318 *e*P **P 01 33 19.0 +1.8**
LSA pmax pmax
comp=Z,35nm,0.6s,mb5.3
LSA Lhasa 42.63 318 *e*P **P 01 33 19.0 +1.8**
comp=Z,35nm,0.6s,mb5.3
PALK Pallekele 42.66 281 LR LR 01 52 10.1
comp=Z,663nm,21.2s,MS4.5,baz=238,slow=38
CN2 Changchun 44.30 3 *e*P **P 01 33 35.1 +4.7**
CN2 *e*S **S 01 39 56.6 -4.2**
CN2 SS SS 01 43 15.8 -5.0
CN2 pmax pmax
comp=Z,10.0nm,0.3s,mb5.0
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,290nm,20.0s,MS4.4
CN2 LR LR
comp=E,320nm,20.0s,MS4.4
CN2 LR LR
comp=Z,200nm,21.0s,MS4.0
GTA Gaotai 45.05 335 ⇑P **P 01 33 37.4 +1.0**
GTA pP pP 01 33 50.0 +0.1
GTA sP sP 01 33 55.2 -0.6
GTA PP PP 01 35 23.9 +1.4
GTA S **S 01 40 13.8 +2.1**
GTA sS sS 01 40 34.1 -0.3
GTA SS SS 01 43 28.1 -7.2
GTA pmax pmax
comp=Z,7.0nm,1.2s,mb4.4
GTA pmax pmax
comp=Z,100nm,5.4s
GTA LR LR
comp=N,390nm,16.4s,MS4.6
GTA LR LR
comp=E,450nm,17.0s,MS4.6
GTA LR LR
comp=Z,580nm,18.5s,MS4.5
GUN Gumba 45.34 312 *e*P **P 01 33 39.0 +0.1**
comp=Z,256nm,0.8s,mb6.1
MDJ Mudanjiang 45.46 7 P **P 01 33 40.7 +1.1**
MDJ pP pP 01 33 52.0 -1.1
MDJ S **S 01 40 20.4 +2.9**
MDJ pmax pmax
comp=Z,19nm,1.2s,mb4.8
MDJ pmax pmax
comp=Z,120nm,9.0s
MDJ LR LR
comp=N,180nm,34.8s,MS4.3
MDJ LR LR
comp=E,610nm,33.4s,MS4.3
MDJ LR LR
comp=Z,410nm,36.1s,MS4.1
MDJ Mudanjiang 45.46 7 *e*P **P 01 33 39.7 +0.2**
comp=Z,24nm,1.1s,mb4.9
PKI Pulchoki 45.51 311 *e*P **P 01 33 40.1 -0.2**
comp=Z,85nm,0.9s,mb5.7
PKI Pulchoki 45.51 311 *e*P **P 01 33 40.1 -0.2**
PKI pmax pmax
comp=Z,85nm,0.9s,mb5.7
PKIN Phulchoki 45.52 311 *e*P **P 01 33 39.8 -0.6**
comp=Z,69nm,0.6s,mb5.8
KKN Kakani 45.72 311 *e*P **P 01 33 41.5 -0.5**
comp=Z,94nm,0.9s,mb5.7
KKN Kakani 45.72 311 *e*P **P 01 33 41.5 -0.5**
KKN pmax pmax
comp=Z,94nm,0.9s,mb5.7
DMN Daman 45.76 311 *e*P **P 01 33 42.2 0.0**
comp=Z,135nm,0.9s,mb5.9
HYB Hyderabad 47.05 295 *e*P **P 01 33 52.5 0.0**
HYB pmax pmax
comp=Z,50nm,1.0s,mb5.4
HYB Hyderabad 47.05 295 *e*P **P 01 33 52.5 0.0**
comp=Z,50nm,1.0s,mb5.4
HYB Hyderabad 47.05 295 *i*P **P 01 33 52.5 0.0**
comp=Z,50nm,1.0s,mb5.4
BHPL Bhopal 50.02 301 *e*PKP **P 01 34 15.4 +0.1**
BHPL AMb AMB 01 34 21.8
comp=Z,43nm,1.1s,mb5.4
ULN Ulaanbaatar 50.20 346 *e*P **P 01 34 16.5 +0.3**
ULN pmax pmax
comp=Z,23nm,0.9s,mb5.2
ULN Ulaanbaatar 50.20 346 *e*P **P 01 34 16.5 +0.3**
comp=Z,22nm,0.9s,mb5.2
ULN Ulaanbaatar 50.20 346 P **P 01 34 16.5 +0.3**
KLR Kul'dur 50.27 8 *e*P **P 01 34 11.8 -4.9**
SONM Songino Array 50.33 346 P **P 01 34 16.4 -0.7**
comp=Z,6.0nm,0.6s,mb4.8,baz=164,slow=8.2,SNR=24
SONM LR LR 01 56 39.2
comp=Z,583nm,19.9s,MS4.6,baz=157,slow=37
KAD Karad 51.02 293 *e*PKP **P 01 34 22.1 -0.9**
AGRA Agra 51.18 306 *e*PKP **P 01 34 23.7 -0.3**
JOSI Joshimath 51.43 311 *e*PKP **P 01 34 25.3 -0.5**
JOSI AMb AMB 01 34 32.5
comp=Z,104nm,1.0s,mb5.7
POO Poona 51.66 294 *ex* **P 01 34 24.0 -3.7**
BISR Bishrakh 52.16 308 *e*PKP **P 01 34 30.2 -1.1**
BISR AMb AMB 01 34 30.6
comp=Z,117nm,0.3s,mb6.3
SONA Sohna 52.31 307 *e*PKP **P 01 34 31.2 -1.2**
SONA AMb AMB 01 34 33.3
comp=Z,16nm,0.6s,mb5.1
AYAN Aya Nagar 52.37 307 *e*PKP **P 01 34 31.1 -1.7**
AYAN AMb AMB 01 34 37.5
comp=Z,22nm,1.2s,mb5.0
DDI Dehra Dun 52.47 310 *ex* **P 01 34 37.5 +4.0**
KLP Kalpa 52.88 311 *e*PKP **P 01 34 37.1 +0.5**
KLP AMb AMB 01 34 43.5
comp=Z,63nm,0.8s,mb5.6
KHET Khetri 53.26 306 *e*PKP **P 01 34 38.8 -0.6**
KHET AMb AMB 01 34 45.0
comp=Z,27nm,1.2s,mb5.0
ZAK Zakamensk 53.47 345 *e*P **P 01 34 40.7 +0.2**
ZAK pmax pmax
comp=Z,11nm,1.4s,mb4.6
SMLA Simla 53.52 310 *e*PKP **P 01 34 41.7 +0.4**
AJM Ajmer 53.58 304 *e*PKP **P 01 34 42.3 +0.5**
WMQ Urumqi 54.20 329 P **P 01 34 48.0 +2.0**
WMQ pP pP 01 35 01.0 +1.2
WMQ sP sP 01 35 06.0 +0.4
WMQ PP PP 01 36 51.0 +2.8
WMQ S **S 01 42 20.0 +0.5**
WMQ ScS ScS 01 44 29.0 -2.0
WMQ SS SS 01 46 01.0 -1.0
WMQ pmax pmax
comp=Z,16nm,1.0s,mb4.9
WMQ pmax pmax
comp=Z,54nm,5.0s
WMQ LR LR
comp=N,410nm,16.0s,MS4.8
WMQ LR LR
comp=E,430nm,16.0s,MS4.8
WMQ LR LR
comp=Z,380nm,16.0s,MS4.5
TLY Talaya 54.57 346 *e*P **P 01 34 48.1 -0.4**
TLY *e* pP 01 35 05.2 +2.8
TLY *e*S **S 01 42 13.4 -11**
TLY pmax pmax
comp=Z,12nm,1.0s,mb4.9
TLY MLR MLR
comp=Z,359nm,20.0s,MS4.4
TLY Talaya 54.57 346 *e*P **P 01 34 48.0 -0.5**
comp=Z,14nm,1.0s,mb5.0

MOY Mondy 55.26 344 *e*P **P 01 34 53.5 0.0**
KSH Kashi 58.47 319 *e*P **P 01 35 16.5 0.0**
KSH PcP PcP 01 36 06.3 -0.4
KSH PP PP 01 37 28.4 +2.0
KSH ScP ScP 01 39 58.3 -4.8
KSH PcS PcS 01 40 06.4 -1.9
KSH S **S 01 43 09.8 -6.6**
KSH sS sS 01 43 45.1 +5.3
KSH ScS ScS 01 44 55.3 -6.9
KSH pmax pmax
comp=Z,90nm,3.6s
KSH LR LR
comp=N,440nm,12.9s,MS4.8
KSH LR LR
comp=E,200nm,12.1s,MS4.8
KSH LR LR
comp=Z,100nm,4.7s
MKAR Makanchi Array 59.01 329 P **P 01 35 19.4 -0.7**
comp=Z,3.8nm,0.3s,mb4.8,baz=111,slow=9.6,SNR=36
MKAR LR LR 02 02 48.8
comp=Z,360nm,19.6s,MS4.5,baz=123,slow=38
MKAR Makanchi Array 59.01 329 *ce*P **P 01 35 19.3 -0.8**
MKAR pmax pmax
comp=Z,4.0nm,0.3s
MKAR Makanchi Array 59.01 329 P **P 01 35 19.4 -0.7**
MKAR LR LR 02 02 48.8
TKM2 Tokmak 2 60.52 322 *e*P **P 01 35 30.4 -0.1**
TKM2 pmax pmax
comp=Z,11nm,0.8s,mb5.0
TKM2 Tokmak 2 60.52 322 *e*P **P 01 35 30.4 -0.2**
comp=Z,11nm,0.8s,mb5.0
RPZ Rata Peaks 60.68 142 P **P 01 35 30.7 -1.0**
comp=Z,16nm,0.8s,mb5.2,baz=33,slow=2.7,SNR=2.9
RPZ Rata Peaks 60.68 142 *e*P **P 01 35 33.0 +1.4**
comp=Z,100nm,1.0s,mb5.9
UCH Uchtor 60.83 321 *e*P **P 01 35 33.1 +0.4**
comp=Z,12nm,1.0s,mb5.0
PETK Petropavlovsk- 60.97 23 P **P 01 35 32.7 -0.7**
comp=Z,4.8nm,0.8s,mb4.7,baz=197,slow=4.6,SNR=4.4
PETK Petropavlovsk- 60.97 23 P **P 01 35 32.7 -0.7**
AAK Ala-Archa 61.05 321 P **P 01 35 34.3 +0.1**
comp=Z,2.1nm,0.5s,mb4.6,baz=133,slow=3.1,SNR=10.0
AAK Ala-Archa 61.05 321 *ce*P **P 01 35 34.4 +0.2**
AAK pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
AAK Ala-Archa 61.05 321 *e*P **P 01 35 35.8 +1.6**
comp=Z,15nm,0.9s,mb5.1
KBL Kabul 61.15 311 *e*P **P 01 35 35.4 +0.4**
KBL pmax pmax
comp=Z,49nm,0.8s,mb5.7
KBL Kabul 61.15 311 *e*P **P 01 35 35.4 +0.4**
comp=Z,49nm,0.8s,mb5.7
PET Petropavlovsk 61.28 24 *e*P **P 01 35 40.5 +5.0**
PET *e*S **S 01 43 59.6 +7.6**
PET pmax pmax
comp=Z,100nm,13.4s
PET smax
comp=N,141nm,0.6s
AML Almayashu 61.30 320 *e*P **P 01 35 36.1 +0.2**
comp=N,17nm,0.9s,mb5.2
EKS2 Erkin-Say 61.52 321 *e*P **P 01 35 37.2 -0.1**
comp=N,21nm,1.1s,mb5.2
URZ Urewera 62.27 134 *e*P **P 01 35 43.3 +0.8**
comp=N,25nm,0.9s,mb5.3
YAK Yakutsk 62.72 4 *e*P **P 01 35 52.7 +7.7**
YAK pmax pmax
comp=Z,32nm,0.9s,mb5.5
YAK pmax pmax
comp=E,2.0nm,1.1s
YAK pmax pmax
comp=N,11nm,1.1s
YAK Yakutsk 62.72 4 *e*P **P 01 35 44.1 -1.0**
ZAA0 Zalesovo Array 62.78 336 *e*P **P 01 35 44.2 -1.3**
ZALV Zalesovo Beam 62.78 336 P **P 01 35 44.2 -1.3**
comp=N,7.9nm,0.9s,mb4.8,baz=122,slow=5.4,SNR=14
ZALV LR LR 02 03 50.2
comp=N,152nm,18.4s,MS4.2,baz=147,slow=37
KURK Kurchatov 63.39 330 P **P 01 35 49.6 -0.1**
comp=N,192nm,0.8s,mb6.3,SNR=19
KURK Kurchatov 63.39 330 P **P 01 35 47.2 -2.5**
comp=N,12nm,0.9s,mb5.0,baz=133,slow=5.8,SNR=31
KURK LR LR 02 05 56.3
comp=N,187nm,18.9s,MS4.3,baz=145,slow=38
KURK Kurchatov 63.39 330 *e*P **P 01 35 48.3 -1.4**
KURK pmax pmax
comp=Z,26nm,0.6s,mb5.5
KURK Kurchatov 63.39 330 *e*P **P 01 35 48.3 -1.4**
comp=Z,26nm,0.6s,mb5.5
NVS Novosibirsk 64.06 336 *e*P **P 01 35 51.8 -2.2**
NVS *e*S **S 01 44 31.6 +4.8**
NVS pmax pmax
comp=N,47nm,1.8s
NVS pmax pmax
comp=Z,58nm,1.8s,mb5.3
NVS pmax pmax
comp=E,27nm,1.3s
NVS smax
comp=N,32nm,2.2s
NVS smax
comp=E,45nm,2.2s
CASY Casey 66.08 185 *e*P **P 01 36 06.9 -0.1**
comp=E,11nm,1.0s,mb4.8
SEY Seymchan 67.18 14 *ce*P **P 01 36 13.2 -0.8**
IMYA Miami 68.62 310 *e*P **P 01 36 18.4 -5.2**
BVAR Borovoye Array 68.89 329 P **P 01 36 23.4 -1.5**
comp=E,2.3nm,0.9s,mb4.1,baz=84,slow=7.5,SNR=13
BVAR LR LR 02 09 37.1
comp=E,198nm,20.4s,MS4.3,baz=4.2,slow=39
BRVK Borovoye 68.96 329 *ce*P **P 01 36 23.6 -1.7**
BRVK pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
BRVK Borovoye 68.96 329 *e*P **P 01 36 24.1 -1.2**
comp=Z,29nm,1.1s,mb5.1
ISRO Mashad 69.09 309 *e*P **P 01 36 20.4 -6.1**
IPAY Payeh 69.50 309 *e*P **P 01 36 27.9 -1.2**
IKRD Kardeh 69.97 310 *e*P **P 01 36 28.2 -3.7**
TIXI Tiksi 72.27 2 *e*P **P 01 36 42.7 -2.4**
ISRV Sarvestan 72.63 301 *e*P **P 01 36 47.2 -1.0**
ISAD Sadrabad 72.65 304 *e*P **P 01 36 48.2 0.0**
IPAR Pars 72.78 301 *e*P **P 01 36 49.4 +0.4**
IMOK Mouk 72.91 301 *e*P **P 01 36 50.5 +0.6**
ABKAR Akbulak array 73.07 322 *e*P **P 01 36 48.3 -2.0**
comp=Z,8.2nm,0.9s,mb4.7
ISFB Sefidab 74.33 306 *e*P **P 01 36 57.3 -0.8**
AKTK Aktyubinsk 74.66 323 P **P 01 36 58.8 -0.8**
AKTK LR LR 02 14 24.7
AKTO Aktyubinsk 74.66 323 P **P 01 36 58.8 -0.8**
comp=Z,2.9nm,0.9s,mb4.2,baz=115,slow=6.0,SNR=7.4
AKTO LR LR 02 14 24.7
comp=Z,183nm,20.1s,MS4.4,baz=212,slow=40
BILL Bilibino 74.78 16⇑ *e*P **P 01 36 58.0 -1.9**
BILL *e**PP pP 01 37 17.3 +2.9
BILL pmax pmax
comp=Z,6.0nm,1.4s,mb4.3
SVE Sverdlovsk 75.64 330⇑ *e*P **P 01 37 04.1 -1.0**
SVE *e*S S 01 46 39.9 -2.5
SVE *e* 01 47 08.6
SVE pmax pmax
comp=Z,16nm,0.8s,mb5.0
OPO Ambohidratompo 76.11 251 P **P 01 37 07.6 -1.0**
comp=Z,4.5nm,0.8s,mb4.5,baz=53,slow=3.4,SNR=6.1
ARU Arti 76.53 329 *c i*P **P 01 37 08.5 -1.7**
ARU *e* 01 40 00.0
ARU S S 01 46 49.0 -3.3
ARU SS SS 01 51 42.9 -5.2
ARU pmax pmax
comp=Z,10.0nm,1.7s,mb4.5
ARU Arti 76.53 329 *e*P **P 01 37 07.9 -2.3**
comp=Z,7.7nm,0.9s,mb4.6
MAW Mawson 78.32 200 P **P 01 37 20.9 +0.9**
comp=Z,6.0nm,0.9s,mb4.5,baz=47,slow=11,SNR=6.0
MAW LR LR 02 09 10.6
comp=Z,349nm,18.5s,MS4.7,baz=59,slow=34
ATD Arta Tunnel 80.22 282 LR LR 02 11 05.1
comp=Z,135nm,21.8s,MS4.3,baz=236,slow=34
GNI Garni 81.24 311 LR LR 02 17 10.5
comp=Z,114nm,21.7s,MS4.2,baz=284,slow=38
ZEI Tsey 82.24 313 *e*P **P 01 37 43.0 +1.4**
ZEI pmax pmax
comp=Z,11nm,1.4s,mb4.6
KIV Kislovodsk 83.27 314 *e*P **P 01 37 46.1 -0.8**
KIV pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
KIV MLR MLR
comp=Z,107nm,20.0s,MS4.2
KMBO Kilima Mbogo 85.48 269 P **P 01 38 02.5 +3.7**
comp=Z,1.3nm,0.9s,mb4.1,baz=76,slow=19,SNR=2.3
KMBO Kilima Mbogo 85.48 269 *e*P **P 01 37 55.9 -2.9**
KMBO pmax pmax
comp=Z,7.0nm,1.4s
KMBO Kilima Mbogo 85.48 269 *e*P **P 01 37 55.9 -2.8**
comp=Z,7.0nm,1.4s,mb4.6
VSR Storozhevoye 86.45 321 *e*P **P 01 38 01.1 -1.6**
VSR pmax pmax
comp=Z,9.0nm,0.5s,mb5.3
VSR pmax pmax
comp=N,3.0nm,0.4s
VSR pmax pmax
comp=E,3.0nm,0.5s
VSR MLR MLR
comp=Z,340nm,21.0s,MS4.7
VSR MLR MLR
comp=N,120nm,17.0s
VSR MLR MLR
comp=E,350nm,23.0s
VOR Voronezh 86.48 322 P **P 01 38 01.0 -1.9**
VOR pmax pmax
comp=Z,120nm,1.2s,mb6.0
ASF Jabal al Asfar 86.81 302 P **P 01 38 06.6 +1.6**
comp=Z,1.0nm,0.5s,mb4.3,baz=181,slow=5.0,SNR=3.5
SYO Syowa Base 86.95 201‖ *e*P **P 01 38 04.6 -0.2**
MMAI Mount Meron Ar 88.10 303 LR LR 02 24 13.2
comp=Z,235nm,19.7s,MS4.6,baz=175,slow=40
OBN Obninsk 88.31 325 *c i*P **P 01 38 11.5 -0.1**
OBN *e**PP pP 01 38 27.7 +1.3
OBN *e* 01 49 52.6
OBN pmax pmax
comp=Z,12nm,1.3s,mb5.0
BPAW Bear Paw Mtn. 88.93 26 *e*P **P 01 38 13.4 -0.9**
comp=Z,2.9nm,0.8s,mb4.7
QSPA South Pole Qui 89.31 180 *e*P **P 01 38 16.9 +1.1**
comp=Z,18nm,1.1s,mb5.3
SIM Simferopol' 89.46 315 P **P 01 38 18.5 +1.2**
SIM pmax pmax
comp=Z,5.0nm,0.9s,mb4.8
BRTR Keskin Array B 89.71 310 P **P 01 38 17.1 -1.4**
comp=Z,0.6nm,0.8s,mb4.0,baz=111,slow=5.4,SNR=4.4
BRTR LR LR 02 23 59.1
comp=Z,91nm,22.0s,MS4.2,baz=243,slow=39
AKASG Malin Array Be 92.72 321 LR LR 02 28 01.0
comp=Z,113nm,20.5s,MS4.3,baz=80,slow=41
ARCES ARCESS Array B 93.13 340 P **P 01 38 33.9 +0.2**
comp=Z,2.7nm,0.8s,mb4.7,baz=79,slow=9.1,SNR=2.4
ARCES ARCESS Array B 93.13 340 P **P 01 38 33.9 +0.2**
FINES FINESS Array B 93.75 331 P **P 01 38 37.3 +0.5**
comp=Z,1.2nm,0.8s,mb4.4,baz=31,slow=7.6,SNR=2.9
DAWY Dawson 94.02 26 *e*P **P 01 38 37.8 -0.1**
MLR Muntele Rosu 95.22 315 LR LR 02 28 24.9
comp=Z,236nm,21.8s,MS4.6,baz=231,slow=40
INK Inuvik 95.65 21 *e*P **P 01 38 44.7 -0.6**
INK pmax pmax
comp=Z,4.0nm,1.1s
INK Inuvik 95.65 21 *e*P **P 01 38 44.6 -0.7**
comp=Z,4.4nm,1.1s,mb4.8
BOSA Boshof 96.27 241 P **P 01 38 49.0 -0.1**
comp=Z,3.1nm,0.9s,mb4.7,baz=98,slow=9.5,SNR=2.6
BOSA LR LR 02 18 28.2
comp=Z,297nm,19.0s,MS4.8,baz=144,slow=33
CLL Collm 102.74 323 *e*Sdif Sdif 01 51 00.0 +1.3
CLL *e*PPS 01 53 36.0
CLL *e*SS SS 01 58 06.0 -1.5
CLL *e* 02 03 18.0
CLL LmV 02 34 00.0
comp=Z,200nm,18.3s
CLL LmV 02 59 00.0
comp=Z,200nm,21.1s
LPG La Plagne 108.42 318 *e*PP PP 01 44 21.2 +7.8
comp=Z,25nm,1.3s
LPL La Plagne 108.42 318 *e*PP PP 01 44 22.3 +8.8
HLID Hailey 113.69 42 *e*PKP PKiKP 01 43 59.5 +0.8
BOZ Bozeman (W) 114.61 39 *e*PKIKP PKiKP 01 44 01.4 +1.0
FFC Flin Flon 114.91 27 *e*PKIKP PKiKP 01 44 00.2 -0.5
RSSD Black Hills 120.05 37 *e*PKIKP PKPdf 01 44 10.5 -0.4
TORD Torodi Ar. Bea 120.32 285 PKP PKPdf 01 44 11.0 -1.2
comp=Z,2.0nm,0.8s,baz=60,slow=1.7,SNR=20
TUC Tucson 120.61 52 *e*PKIKP PKPdf 01 44 12.1 -0.2
ANMO Albuquerque 122.89 48 *e*PKIKP PKPdf 01 44 17.1 +0.5
ECSD EROS Data Cent 124.61 34 *e*PKPdf PKPdf 01 44 18.9 -0.7
MNTX Cornudas Mount 125.08 51 *e*PKPdf PKPdf 01 44 21.7 +0.7
DBIC Dimbokro 127.39 278 PKP PKPdf 01 44 25.1 -0.8
comp=Z,2.1nm,0.6s,baz=127,slow=7.8,SNR=4.1
TXAR Lajitas Array 127.40 53 PKP PKPdf 01 44 26.1 +0.7
comp=Z,0.2nm,0.4s,baz=225,slow=0.9,SNR=6.2
WMOK Wichita Mounta 128.52 44 *e*PKIKP PKPdf 01 44 26.2 -1.2
JCT Junction City 129.91 50 *e*PKIKP PKPdf 01 44 31.2 +1.0
MIAR Mount Ida 132.17 41 *e*PKIKP PKPdf 01 44 34.9 +0.5
HKT Hockley 133.15 48 *e*PKIKP PKPdf 01 44 36.9 +0.5
WCI Wyandotte Cave 134.05 32 *e*PKIKP PKPdf 01 44 38.3 +0.5
WVT Waverly 134.70 35 *e*PKIKP PKPdf 01 44 39.5 +0.4
PLAL Pickwick Lake 135.35 37 *e*PKPdf PKPdf 01 44 39.9 -0.5
TKL Tuckaleechee C 137.31 32 *e*PKIKP PKPdf 01 44 43.9 -0.1
TRQA Tornquist 141.26 174 *e*PKPdf PKPdf 01 44 51.9 +0.9
LCO Las Campanas 147.84 158 *e*PKPbc PKPbc 01 45 06.7 +1.0
JTS JuntasAbangare 150.84 70 *e*PKIKP PKPdf 01 45 08.3 +0.4
CPUP Villa Florida 153.19 180 PKPbc PKPbc 01 45 19.0 +0.4
comp=Z,1.5nm,0.6s,baz=107,slow=2.4,SNR=5.9
CPUP Villa Florida 153.19 180 PKPbc PKPbc 01 45 19.0 +0.4
LPAZ La Paz 160.06 148 PKP PKPdf 01 45 21.9 +1.7
comp=Z,0.9nm,0.9s,baz=206,slow=6.7,SNR=3.8
LPAZ PKPab PKPab 01 46 04.5 +4.5
comp=Z,2.9nm,0.9s,baz=163,slow=2.2,SNR=4.3
LPAZ La Paz 160.06 148 PKP PKPdf 01 45 21.9 +1.7
LPAZ PKPab PKPab 01 46 04.5 +4.5

DDA ***04*** *01:31:27.9, 36.°97N×29.°17E, 7km±4km, Md2.9*
ISK ***04*** *01:31:27.0, 36.°94N×29.°23E, h5km, MD2.8*
CSEM ***04*** *01:31:28.4±0.1, 36.°95N×29.°22E, h5km, MD2.8, Error ellipse: s-maj=3.0km s-min=2.7km az=164.0*
ISCJB ***04*** *01:31:28.5±0.5, 36.°96N±0.°03×29.°24E±0.°03, h10km, Error ellipse: s-maj=4.1km s-min=3.6km az=155.8*
ISC 04 01:31:28.6±0.5, 36.°96N±0.°03×29.°19E±0.°04, h1km±7km, n28, σ0.9 73/46, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.31**	**52**	*e*PG	**Pg**	**01 31 33.9**	**-0.7**
GLHS				*e*SG	**Sg**	**01 31 39.8**	**+1.1**
GLHS	**Glhisar (BURDU**	**0.31**	**52**	*e*Pg	**Pg**	**01 31 33.9**	**-0.7**
GLHS				*e*Sg	**Sg**	**01 31 39.8**	**+1.1**
FETY	**Fethiye**	**0.34**	**195**	*e*PG	**Pg**	**01 31 34.5**	**-0.6**
FETY				*e*SG	**Sg**	**01 31 40.3**	**+0.8**
FETY	**Fethiye**	**0.34**	**195**	*e*Pg	**Pg**	**01 31 34.5**	**-0.6**
FETY				*e*Sg	**Sg**	**01 31 40.3**	**+0.9**
GOLH	**Golhisar**	**0.40**	**47**	*i*P	**Pg**	**01 31 35.7**	**-0.6**
GOLH				*i*S	**Sg**	**01 31 42.8**	**+1.2**
GOLH	**Golhisar**	**0.40**	**47**	*i*P	**Pg**	**01 31 35.7**	**-0.7**
GOLH				*i*S	**Sg**	**01 31 42.8**	**+1.2**
TURN	**Turunc**	**0.48**	**260**	*i*P	**Pg**	**01 31 42.6**	**+4.8**
TURN				*i*S	**Sg**	**01 31 53.4**	**+9.4**
TURN	**Turunc**	**0.48**	**260**	*i*P	**Pg**	**01 31 42.6**	**+4.8**
ELL	**Elmali**	**0.61**	**110**	*e*PG	**Pg**	**01 31 39.8**	**-0.5**
ELL				*e*SG	**Sg**	**01 31 48.4**	**0.0**
ELL	**Elmali**	**0.61**	**110**	*e*Pg	**Pg**	**01 31 39.8**	**-0.6**
ELL				*e*Sg	**Sg**	**01 31 48.4**	**+0.1**
DNZL	**Cakiroluk**	**0.74**	**351**	*i*P	**Pg**	**01 31 41.3**	**-1.4**
DNZL				*i*S	**Sg**	**01 31 52.6**	**+0.3**
DNZL	**Cakiroluk**	**0.74**	**351**	*i*P	**Pg**	**01 31 41.3**	**-1.4**
DNZL				*i*S	**Sg**	**01 31 52.6**	**+0.3**
YER	**Yerkesik**	**0.75**	**284**	*e*PG	**Pg**	**01 31 43.3**	**+0.4**
YER	**Yerkesik**	**0.75**	**284**	*e*Pg	**Pg**	**01 31 43.3**	**+0.4**
AKAS	**Kas**	**0.80**	**155**	*i*P	**Pg**	**01 31 43.7**	**-0.2**
AKAS				*i*S	**Sg**	**01 31 59.2**	**+4.9**
AKAS	**Kas**	**0.80**	**155**	*i*P	**Pg**	**01 31 43.7**	**-0.2**
DENT	**Denizli**	**0.80**	**351**	*e*PG	**Pg**	**01 31 44.2**	**+0.2**
DENT	**Denizli**	**0.80**	**351**	*e*Pg	**Pg**	**01 31 44.2**	**+0.2**
MLSB	**Milas**	**1.18**	**287**	*e*PN	**Pn**	**01 31 51.4**	**-0.8**
MLSB	**Milas**	**1.18**	**287**	*e*Pn	**Pn**	**01 31 51.4**	**-0.8**
AYDN	**Tasoluk**	**1.26**	**304**	*i*P	**Pg**	**01 31 51.8**	**-0.9**
AYDN				*i*S	**Sg**	**01 32 09.7**	**+0.7**
AYDN	**Tasoluk**	**1.26**	**304**	*i*P	**Pg**	**01 31 51.8**	**-0.9**
AYDN				*i*S	**Sg**	**01 32 09.7**	**+0.7**
DAT	**Datca**	**1.31**	**260**	*e*PN	**Pn**	**01 31 54.2**	**+0.1**
DAT				*e*SN	**Sn**	**01 32 13.6**	**+1.3**
DAT	**Datca**	**1.31**	**260**	*e*Pn	**Pn**	**01 31 54.2**	**+0.1**
DAT				*e*Sn	**Sn**	**01 32 13.6**	**+1.3**
BDRM	**Kayabasi**	**1.40**	**275**	*i*P	**Pn**	**01 31 55.1**	**-0.2**
BDRM				*i*S	**Sn**	**01 32 14.2**	**-0.2**
BDRM	**Kayabasi**	**1.40**	**275**	*i*P	**Pn**	**01 31 55.1**	**-0.2**

BDRM				*i* S	Sn	01 32 14.2	-0.2
KULA	**Kula-Manisa**	**1.61**	**345**	*e*PN	Pb	01 31 58.7	-0.3
KULA	**Kula-Manisa**	**1.61**	**345**	*e*Pn	Pb	01 31 58.7	-0.4

DJA 04 01:33:07,0.46S×122.86E, h21km, MLv3.9/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.58**	**189**	P	Pb	01 33 18.0	-0.6
APSI	**Ampana**	**1.29**	**250**	P	Pn	01 33 28.5	-1.3
APSI				S	Sn	01 33 47.1	+0.6
MRSI	**Marisa**	**1.31**	**315**	P	Pn	01 33 30.0	-0.1
TTSI	**Tana Toraja**	**3.98**	**230**	P	Pn	01 34 07.5	+0.7

DJA 04 01:53:43,0.57S×122.71E, h18km, MLv3.8/5, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.47**	**173**	P	Pg	01 53 51.9	-0.7
APSI	**Ampana**	**1.11**	**252**	P	Pn	01 54 03.5	-0.2
APSI				S	Sb	01 54 17.8	-0.1
MRSI	**Marisa**	**1.29**	**324**	P	Pn	01 54 04.9	-1.3
MNI	**Manado**	**2.92**	**47**	P	Pn	01 54 29.5	+0.9
KDI	**Kendari**	**3.37**	**182**	P	Pn	01 54 34.4	-0.3
TTSI	**Tana Toraja**	**3.79**	**230**	P	Pn	01 54 40.8	+0.2
SPSI	**Sidrap Palu**	**4.47**	**221**	P	Pn	01 54 51.0	+1.1

*ISCJB **04** 02:06:50.0±0.7, 27.54N±0.04×102.8E±0.1, h10km, mb3.5/2, Error ellipse: s-maj=16.3km s-min=5.8km az=5.6*
*BJI **04** 02:06:50.6, 27.33N×102.86E, h15km, ML3.3/10, Ms3.7/1*
*IDC **04** 02:07:08.7±3.0, 29.29N×101.70E, h0km, mb3.4/2, mb1 3.6/4, mb1mx3.3/26, mbtmp3.5/4, Error ellipse: s-maj=79.3km s-min=33.4km az=92.0*

ISC 04 02:06:51.9±0.7, 27.47N±0.04×102.7E±0.1, h10km, n8, σ0.96/11, mb3.5/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**2.34**	**180**	Pg	**Pn**	**02 07 29.6**	**-0.8**
KMI				Sg	**Sn**	**02 07 59.6**	**+0.4**
KMI				smax			
	comp=N,130nm,1.1s						
KMI				smax			
	comp=E,180nm,1.0s						
CD2	**Chengdu**	**3.55**	**15**	Pn	**Pn**	**02 07 49.0**	**+2.0**
CD2				Pg	**Pg**	**02 07 59.3**	**-0.6**
CD2				Sn	**Sn**	**02 08 32.3**	**+3.3**
CD2				Sg	**Sg**	**02 08 45.2**	**-0.6**
CD2				smax			
	comp=N,420nm,1.3s						
CD2				smax			
	comp=E,940nm,0.5s						
CD2				LR	LR		
	comp=N,570nm,5.9s						
CD2				LR	LR		
	comp=E,580nm,5.8s						
GYA	**Guiyang**	**3.66**	**105**	Pg	**Pn**	**02 07 48.8**	**+0.2**
XAN	**Xi'an**	**8.44**	**38**	P	**Pn**	**02 08 53.2**	**-1.1**
CMAR	**Chiang Mai Arr**	**9.62**	**202**	Pn	Px	02 09 48.5	
	baz=5.8,slow=16,SNR=6.8						
SONM	**Songino Array**	**20.53**	**7**	P	**P**	**02 11 30.5**	**+0.2**
	comp=E,0.2nm,0.3s,baz=187,slow=12,SNR=4.5						
MKAR	**Makanchi Array**	**25.12**	**326**	P	**P**	**02 12 17.0**	**+0.2**
	comp=E,0.6nm,0.5s,mb3.4,baz=124,slow=11,SNR=4.0						
KURK	**Kurchatov**	**29.57**	**328**	**P**	**P**	**02 12 56.1**	**-0.6**
	comp=E,0.6nm,0.5s,mb3.5,baz=134,slow=10.0,SNR=3.9						

*ISCJB **04** 02:29:02.7±0.4, 38.33N±0.03×122.01W±0.04, h10km, Error ellipse: s-maj=5.0km s-min=3.8km az=33.8*
*NEIC **04** 02:29:04.2, 38.24N×122.18W, h10km, MWG.9(BRK), After NCEDC.*
NEIC Felt [IV] at Fairfield, Suisun City and Walnut Creek; [III] at American Canyon, Benicia, Concord, Napa, Saint Helena, San Pablo, San Rafael, Sonoma, Travis AFB, Vacaville, Vallejo and Yountville; [II] at Clayton, Crockett, Glen Ellen, Hercules, Martinez, Novato, Oakland, Orinda, Pacifica, Petaluma, Pinole, Pittsburg, Pleasant Hill, Rodeo, Rohnert Park, San Francisco, Santa Rosa and Sebastopol. Felt as far north as Calistoga, as far east as Sacramento and as far south as Sunnyvale.

ISC 04 02:29:03.6±0.4, 38.27N±0.03×122.11W±0.03, h10km, n34, σ1.57/57, Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCCM	**Marconi Confer**	**0.62**	**259**	*e*Pg	**Pg**	**02 29 15.3**	**-0.3**
MCCM				*e*Sg	**Sg**	**02 29 22.4**	**-1.4**
SAC	**San Andreas**	**0.73**	**200**	*e*Pb	**Pb**	**02 29 17.5**	**-0.8**
HOPS	**Hopland**	**1.05**	**314**	*e*Pg	**Pg**	**02 29 22.6**	**-1.1**
OHCM	**Honcut**	**1.17**	**24**	*e*Pn	**Pn**	**02 29 24.1**	**-1.8**
CMB	**Columbia Colle**	**1.38**	**99**	*e*Pn	**Pn**	**02 29 28.7**	**-0.1**
CMB				*e*Sg	**Sg**	**02 29 49.4**	**+1.5**
KCPM	**Cahto Peak**	**1.82**	**321**	*e*Pg	**Pg**	**02 29 35.9**	**-2.7**
WAKR	**Walker**	**2.11**	**83**	*e*Pg	**Pg**	**02 29 41.4**	**-2.6**
WDC	**Whiskeytown Da**	**2.33**	**352**	*e*Pn	**Pn**	**02 29 40.4**	**-1.6**
WDC				*e*Pg	**Pg**	**02 29 48.5**	**+0.2**
WDC				*e*Sn	**Sn**	**02 30 11.7**	**+1.1**
PAHR	**Pah Rah Range**	**2.56**	**55**	*e*Pg	**Pg**	**02 29 46.5**	**-6.2**
KHMM	**Horse Mountain**	**2.89**	**335**	*e*Pg	**Pg**	**02 29 52.1**	**-6.8**
MTUM	**Tungsten Hills**	**2.95**	**107**	*e*Pb	**Pb**	**02 29 53.2**	**-3.0**
YBH	**Yreka Blue Hor**	**3.49**	**353**	*e*Pn	**Pn**	**02 29 58.5**	**+0.6**
YBH				*e*Sn	**Sn**	**02 30 39.3**	**+0.1**
YBH				*e*Sg	**Sg**	**02 30 47.8**	**-7.8**
TPH	**Tonopah**	**3.85**	**91**	*e*Pn	**Pn**	**02 30 03.8**	**+0.9**
TPH				*e*Sg	**Sg**	**02 31 07.0**	**-0.4**
MOD	**Modoc**	**3.88**	**20**	*e*Pn	**Pn**	**02 30 05.6**	**+2.3**
MOD				*e*Pg	**Pg**	**02 30 15.2**	**-2.8**
ISA	**Isabella**	**3.90**	**131**	*e*Pn	**Pn**	**02 30 05.6**	**+2.0**
ISA				*e*Sn	**Sn**	**02 30 51.5**	**+2.1**
ISA				*e*Sg	**Sg**	**02 31 07.0**	**-1.9**
BMN	**Battle Mountai**	**4.36**	**59**	*e*Pn	**Pn**	**02 30 12.0**	**+2.2**
BMN				*e*Pg	**Pg**	**02 30 28.0**	**+1.0**
BMN				*e*Sg	**Sg**	**02 31 21.5**	**-2.0**
HUMO	**Hull Mountain**	**4.38**	**352**	*e*Pn	**Pn**	**02 30 10.9**	**+0.9**
WVOR	**Wild Horse Val**	**4.93**	**31**	*e*Pn	**Pn**	**02 30 19.5**	**+1.9**
WVOR				*e*Pg	**Pg**	**02 30 33.8**	**-4.2**
PASC	**Pasadena Art C**	**5.17**	**141**	*e*Pn	**Pn**	**02 30 21.6**	**+0.6**
PASC				*e*Sg	**Sg**	**02 31 46.8**	**-2.9**
GSC	**Goldstone**	**5.18**	**123**	*e*Pn	**Pn**	**02 30 22.6**	**+1.5**
GSC				*e*Pg	**Pg**	**02 30 41.2**	**-1.7**
GSC				*e*Sg	**Sg**	**02 31 44.5**	**-5.5**
MWC	**Mount Wilson**	**5.20**	**140**	*e*Pn	**Pn**	**02 30 22.0**	**+0.7**
ELK	**Elko**	**5.86**	**63**	*e*Pn	**Pn**	**02 30 31.5**	**+1.2**
ELK				*e*Pg	**Pg**	**02 30 46.8**	**-8.9**
ELK				*e*Sg	**Sg**	**02 32 07.8**	**-3.8**
N12A	**Clover Valley,**	**6.04**	**63**	*e*Pn	**Pn**	**02 30 34.5**	**+1.6**
N12A				*e*Sg	**Sg**	**02 32 17.2**	**-0.2**
M13A	**Montello**	**6.85**	**61**	*e*Pg	**Pg**	**02 31 02.4**	**-12**
M13A				*e*Sg	**Sg**	**02 32 42.3**	**-1.0**
CCUT	**Cedar City**	**6.95**	**93**	*e*Pn	**Pn**	**02 30 47.1**	**+1.7**
CCUT				*e*Pg	**Pg**	**02 31 19.2**	**+2.5**
CCUT				*e*Sg	**Sg**	**02 32 44.3**	**-2.4**
DUG	**Dugway**	**7.46**	**72**	*e*Pn	**Pn**	**02 30 54.1**	**+1.7**
DUG				*e*Pg	**Pg**	**02 31 18.1**	**-8.4**
DUG				*e*Sg	**Sg**	**02 33 00.7**	**-2.4**
MSU	**Marysvale**	**7.80**	**85**	*e*Pn	**Pn**	**02 31 00.1**	**+3.0**
HLID	**Hailey**	**7.86**	**45**	*e*Pn	**Pn**	**02 30 59.0**	**+1.1**
SRU	**San Rafael**	**9.10**	**81**	*e*Pn	**Pn**	**02 31 16.4**	**+1.6**
MCMT	**McKenzie Canyo**	**9.54**	**44**	*e*Pn	**Pn**	**02 31 29.4**	**+8.6**
BOZ	**Bozeman (W)**	**10.72**	**43**	*e*Pn	**Pn**	**02 31 43.2**	**+6.1**
MDJ	**Mudanjiang**	**75.21**	**315**	P	**P**	**02 40 45.2**	**-1.0**
MDJ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,33nm,5.8s						
HHC	**Hu-ho-hao-te**	**87.24**	**322**	*e*P	**P**	**02 41 50.2**	**0.0**
HHC				pP	pP	02 41 55.0	+1.4
HHC				sP	sP	02 41 57.2	+2.3
HHC				PP	PP	02 45 16.6	+3.2
HHC				SKS		02 52 15.0	
HHC				S	S	02 52 27.1	-3.0
HHC				sS	sS	02 52 35.5	-0.2
HHC				SS	SS	02 58 12.2	-0.5
HHC				pmax	pmax		
	comp=Z,14nm,0.8s						
HHC				pmax	pmax		
	comp=Z,77nm,6.2s						
HHC				LR	LR		
	comp=N,70nm,22.6s						
HHC				LR	LR		
	comp=E,150nm,22.6s						
HHC				LR	LR		
	comp=Z,55nm,23.8s						
GYA	**Guiyang**	**101.05**	**317**	*e*P	Pdif	02 42 53.2	-0.4
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						

*ISK **04** 02:30:25.1, 36.99N×29.20E, h5km, MD2.9*
*CSEM **04** 02:30:26.8±0.1, 36.99N×29.21E, h8km, MD2.9, Error ellipse: s-maj=3.2km s-min=2.3km az=17.0*
*DDA **04** 02:30:26.8, 36.99N×29.16E, h10km±6km, Md2.9*
*ISCJB **04** 02:30:26.7±0.5, 36.99N±0.02×29.20E±0.03, h3km±5km, Error ellipse: s-maj=4.1km s-min=3.4km az=10.6*

ISC 04 02:30:27.2±0.4, 36.99N±0.02×29.20E±0.03, h7km±4km, n40, σ0.84/65, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.29**	**55**	*e*Pg	**Pg**	**02 30 32.2**	**-0.7**
GLHS				*e*SG	**Sg**	**02 30 37.3**	**+0.5**
GLHS	**Glhisar (BURDU**	**0.29**	**55**	*e*Pg	**Pg**	**02 30 32.2**	**-0.7**
GLHS				*e*Sg	**Sg**	**02 30 37.3**	**+0.5**
FETY	**Fethiye**	**0.36**	**195**	*e*PG	**Pg**	**02 30 33.0**	**-1.3**
FETY				*e*SG	**Sg**	**02 30 39.6**	**+0.5**
FETY	**Fethiye**	**0.36**	**195**	*e*Pg	**Pg**	**02 30 33.0**	**-1.3**
FETY				*e*Sg	**Sg**	**02 30 39.6**	**+0.5**
TURN	**Turunc**	**0.49**	**257**	*i* P	**Pg**	**02 30 41.3**	**+4.6**
TURN				*i* S	**Sg**	**02 30 52.5**	**+9.3**
TURN	**Turunc**	**0.49**	**257**	*i* P	**Pg**	**02 30 41.3**	**+4.5**
ELL	**Elmali**	**0.61**	**113**	*e*PG	**Pg**	**02 30 38.4**	**-0.6**
ELL				*e*SG	**Sg**	**02 30 48.1**	**+1.0**
ELL	**Elmali**	**0.61**	**113**	*e*Pg	**Pg**	**02 30 38.4**	**-0.7**
ELL				*e*Sg	**Sg**	**02 30 48.1**	**+1.0**
DNZL	**Cakiroluk**	**0.71**	**350**	*i* P	**Pg**	**02 30 39.6**	**-1.2**
DNZL				*i* S	**Sg**	**02 30 51.1**	**+0.9**
DNZL	**Cakiroluk**	**0.71**	**350**	*i* P	**Pg**	**02 30 39.7**	**-1.2**
DNZL				*i* S	**Sg**	**02 30 51.1**	**+0.9**
YER	**Yerkesik**	**0.75**	**281**	*e*PG	**Pg**	**02 30 40.8**	**-0.8**
YER				*e*SG	**Sg**	**02 30 52.2**	**+0.8**
YER	**Yerkesik**	**0.75**	**281**	*e*Pg	**Pg**	**02 30 40.8**	**-0.8**
YER				*e*Sg	**Sg**	**02 30 52.2**	**+0.8**
DENT	**Denizli**	**0.78**	**350**	*e*PG	**Pg**	**02 30 41.3**	**-0.9**
DENT	**Denizli**	**0.78**	**350**	*e*Pg	**Pg**	**02 30 41.3**	**-0.8**
AKAS	**Kas**	**0.82**	**157**	*i* P	**Pg**	**02 30 42.5**	**-0.5**
AKAS				*i* S	**Sg**	**02 30 54.6**	**+1.0**
AKAS	**Kas**	**0.82**	**157**	*i* P	**Pg**	**02 30 42.5**	**-0.5**
AKAS				*i* S	**Sg**	**02 30 54.6**	**+1.0**
KORT	**Korkueli**	**0.92**	**89**	*i* P	**Pg**	**02 30 44.7**	**-0.2**
KORT				*i* S	**Sg**	**02 30 59.9**	**+3.1**
KORT	**Korkueli**	**0.92**	**89**	*i* P	**Pg**	**02 30 44.7**	**-0.2**
KORT				*i* S	**Sg**	**02 30 59.9**	**+3.1**
ANTB	**Antalya**	**1.17**	**94**	*e*PN	**Pn**	**02 30 48.6**	**-1.4**
ANTB				*e*SN	**Sn**	**02 31 05.9**	**-0.2**
ANTB	**Antalya**	**1.17**	**94**	*e*Pn	**Pn**	**02 30 48.6**	**-1.4**
ANTB				*e*Sn	**Sn**	**02 31 05.9**	**-0.2**
MLSB	**Milas**	**1.18**	**285**	*e*PN	**Pn**	**02 30 49.2**	**-0.9**
MLSB	**Milas**	**1.18**	**285**	*e*Pn	**Pn**	**02 30 49.2**	**-0.9**
AYDN	**Tasoluk**	**1.25**	**303**	*i* P	**Pn**	**02 30 51.0**	**-0.2**
AYDN				*i* S	**Sg**	**02 31 07.8**	**+0.4**
AYDN	**Tasoluk**	**1.25**	**303**	*i* P	**Pn**	**02 30 51.0**	**-0.1**
AYDN				*i* S	**Sg**	**02 31 07.8**	**+0.4**
DAT	**Datca**	**1.33**	**259**	*e*PN	**Pn**	**02 30 51.6**	**-0.6**
DAT				*e*SN	**Sn**	**02 31 11.0**	**+0.9**
DAT	**Datca**	**1.33**	**259**	*e*Pn	**Pn**	**02 30 51.6**	**-0.6**
DAT				*e*Sn	**Sn**	**02 31 11.0**	**+0.9**
ISP	**Isparta**	**1.34**	**51**	*e*PN	**Pn**	**02 30 52.9**	**+0.5**
ISP	**Isparta**	**1.34**	**51**	*e*Pn	**Pn**	**02 30 52.9**	**+0.5**
KHAL	**Karahalli**	**1.40**	**9**	*i* P	**Pn**	**02 30 52.6**	**-0.6**
KHAL				*i* S	**Sb**	**02 31 13.0**	**+1.3**
KHAL	**Karahalli**	**1.40**	**9**	*i* P	**Pn**	**02 30 52.6**	**-0.6**
KHAL				*i* S	**Sb**	**02 31 13.0**	**+1.3**
BDRM	**Kayabasi**	**1.41**	**274**	*i* P	**Pn**	**02 30 54.0**	**+0.7**
BDRM				*i* S	**Sb**	**02 31 12.9**	**+0.9**
BDRM	**Kayabasi**	**1.41**	**274**	*i* P	**Pn**	**02 30 54.0**	**+0.7**
BDRM				*i* S	**Sb**	**02 31 12.9**	**+0.9**
SUTC	**Sutluce-Ispart**	**1.52**	**71**	*e*PN	**Pn**	**02 30 54.5**	**-0.3**
SUTC	**Sutluce-Ispart**	**1.52**	**71**	*e*Pn	**Pn**	**02 30 54.5**	**-0.3**
KULA	**Kula-Manisa**	**1.58**	**344**	*e*PN	**Pn**	**02 30 55.1**	**-0.6**
KULA	**Kula-Manisa**	**1.58**	**344**	*e*Pn	**Pn**	**02 30 55.1**	**-0.6**
SHUT	**Suhut-Afyon**	**1.89**	**34**	*e*PN	**Pn**	**02 30 59.8**	**-0.1**
SHUT	**Suhut-Afyon**	**1.89**	**34**	*e*Pn	**Pn**	**02 30 59.8**	**-0.2**
HDMB	**Hadim**	**2.63**	**90**	*e*PN	**Pn**	**02 31 10.5**	**+0.4**
HDMB	**Hadim**	**2.63**	**90**	*e*Pn	**Pn**	**02 31 10.5**	**+0.4**

*ISK **04** 02:30:42.1, 37.42N×35.74E, h12km, MD2.5*
*DDA **04** 02:30:42.2, 37.52N×35.73E, h7km±5km, Md2.7*
*CSEM **04** 02:30:42.3±0.3, 37.47N×35.74E, h15km, MD2.7, Error ellipse: s-maj=10.1km s-min=4.6km az=167.0*
*ISCJB **04** 02:30:42.3±0.6, 37.47N±0.07×35.76E±0.04, h14km±4km, Error ellipse: s-maj=11.2km s-min=4.7km az=170.4*

ISC 04 02:30:42.6±0.5, 37.43N±0.06×35.76E±0.04, h13km±4km, n15, σ0.90/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.07**	**44**	*e*PG	**Pg**	**02 30 44.6**	**-0.7**
KOZT				*e*SG	**Sg**	**02 30 47.3**	**-0.1**
KOZT	**Kozan**	**0.07**	**44**	*e*Pg	**Pg**	**02 30 44.6**	**-0.8**
KOZT				*e*Sg	**Sg**	**02 30 47.3**	**-0.1**
KARA	**Karaisali**	**0.59**	**254**	*e*PG	**Pg**	**02 30 53.9**	**-0.1**
KARA				*e*SG	**Sg**	**02 31 02.1**	**+0.3**
KARA	**Karaisali**	**0.59**	**254**	*e*Pg	**Pg**	**02 30 53.9**	**-0.2**
KARA				*e*Sg	**Sg**	**02 31 02.2**	**+0.3**
GULE	**Gulek**	**0.80**	**260**	*i* P	**Pg**	**02 30 57.7**	**-0.3**
GULE				*i* S	**Sg**	**02 31 08.8**	**+0.2**
GULE	**Gulek**	**0.80**	**260**	*i* P	**Pg**	**02 30 57.7**	**-0.4**
GULE				*i* S	**Sg**	**02 31 08.8**	**+0.3**
KMRS	**Kahramanmaras**	**0.91**	**85**	*e*PG	**Pg**	**02 31 00.3**	**+0.2**
KMRS				*e*SG	**Sg**	**02 31 13.8**	**+1.7**
KMRS	**Kahramanmaras**	**0.91**	**85**	*e*Pg	**Pg**	**02 31 00.3**	**+0.1**
KMRS				*e*Sg	**Sg**	**02 31 13.8**	**+1.7**
MERS	**Mersin**	**1.14**	**241**	*e*PN	**Pn**	**02 31 04.1**	**0.0**
MERS				*e*SN	**Sn**	**02 31 20.0**	**+0.5**
MERS	**Mersin**	**1.14**	**241**	*e*Pn	**Pn**	**02 31 04.1**	**0.0**
MERS				*e*Sn	**Sn**	**02 31 20.0**	**+0.5**
KUZU	**Kuzuini**	**1.24**	**121**	*i* P	**Pn**	**02 31 06.7**	**+1.2**
KUZU				*i* S	**Sb**	**02 31 19.8**	**-1.7**
KUZU	**Kuzuini**	**1.24**	**121**	*i* P	**Pn**	**02 31 06.7**	**+1.2**
KUZU				*i* S	**Sb**	**02 31 19.8**	**-1.7**
PINB	**Pinarbasi**	**1.35**	**22**	*i* P	**Pn**	**02 31 05.3**	**-1.7**
PINB				*i* S	**Sn**	**02 31 25.4**	**+0.6**
PINB	**Pinarbasi**	**1.35**	**22**	*i* P	**Pn**	**02 31 05.3**	**-1.7**
PINB				*i* S	**Sn**	**02 31 25.4**	**+0.6**
SARI	**SarD1z-Kayseri**	**1.45**	**30**	*e*PN	**Pn**	**02 31 03.9**	**-4.6**
SARI				*e*SN	**Sn**	**02 31 20.0**	**-7.4**

*CSEM **04** 02:38:28.9±0.1, 36.96N×29.24E, h2km, MD2.8, Error ellipse: s-maj=3.0km s-min=2.7km az=11.0*
*ISK **04** 02:38:28.0, 36.96N×29.21E, h2km, MD2.8*
*ISCJB **04** 02:38:28.8±0.6, 36.96N±0.03×29.23E±0.03, h1km±6km, Error ellipse: s-maj=4.9km s-min=4.3km az=149.4*
*DDA **04** 02:38:29.0, 37.00N×29.19E, h25km±3km, Md2.8*

ISC 04 02:38:29.3±0.5, 36.95N±0.03×29.23E±0.03, h6km±5km, n36, σ0.83/56, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.29**	**46**	PG	**Pg**	**02 38 34.3**	**-0.7**
GLHS				SG	**Sg**	**02 38 40.2**	**+1.3**
GLHS	**Glhisar (BURDU**	**0.29**	**46**	*i* Pg	**Pg**	**02 38 34.3**	**-0.7**
GLHS				*i* Sg	**Sg**	**02 38 40.2**	**+1.3**
FETY	**Fethiye**	**0.34**	**201**	*e*PG	**Pg**	**02 38 35.5**	**-0.4**
FETY				*e*SG	**Sg**	**02 38 41.2**	**+0.8**
FETY	**Fethiye**	**0.34**	**201**	*e*Pg	**Pg**	**02 38 35.5**	**-0.4**
FETY				*e*Sg	**Sg**	**02 38 41.2**	**+0.8**
TURN	**Turunc**	**0.51**	**261**	*i* P	**Pg**	**02 38 43.5**	**+4.3**
TURN				*i* S	**Sg**	**02 38 55.6**	**+10**
TURN	**Turunc**	**0.51**	**261**	*i* P	**Pg**	**02 38 43.5**	**+4.3**
DNZL	**Cakiroluk**	**0.75**	**349**	*i* P	**Pg**	**02 38 41.6**	**-2.1**
DNZL				*i* S	**Sg**	**02 38 54.0**	**+0.5**
DNZL	**Cakiroluk**	**0.75**	**349**	*i* P	**Pg**	**02 38 41.7**	**-2.0**
DNZL				*i* S	**Sg**	**02 38 54.0**	**+0.5**
AKAS	**Kas**	**0.78**	**157**	*i* P	**Pg**	**02 38 44.0**	**+0.2**
AKAS				*i* S	**Sg**	**02 38 59.4**	**+5.1**
AKAS	**Kas**	**0.78**	**157**	*i* P	**Pg**	**02 38 44.4**	**+0.2**
YER	**Yerkesik**	**0.78**	**284**	*e*PG	**Pg**	**02 38 44.0**	**-0.4**
YER				*e*SG	**Sg**	**02 38 54.6**	**+0.1**
YER	**Yerkesik**	**0.78**	**284**	*e*Pg	**Pg**	**02 38 44.0**	**-0.4**
YER				*e*Sg	**Sg**	**02 38 54.7**	**+0.2**
DENT	**Denizli**	**0.81**	**349**	*e*PG	**Pg**	**02 38 44.9**	**-0.1**
DENT	**Denizli**	**0.81**	**349**	*e*Pg	**Pg**	**02 38 44.9**	**-0.1**
KORT	**Korkueli**	**0.90**	**87**	*i* P	**Pg**	**02 38 45.9**	**-0.6**
KORT				*i* S	**Sg**	**02 39 02.1**	**+4.0**
KORT	**Korkueli**	**0.90**	**87**	*i* P	**Pg**	**02 38 45.9**	**-0.6**
KORT				*i* S	**Sg**	**02 39 02.1**	**+4.0**
ANTB	**Antalya**	**1.14**	**92**	*e*PN	**Pn**	**02 38 51.3**	**-0.4**
ANTB	**Antalya**	**1.14**	**92**	*e*Pn	**Pn**	**02 38 51.3**	**-0.4**
MLSB	**Milas**	**1.21**	**287**	*e*PN	**Pn**	**02 38 51.8**	**-1.0**
MLSB	**Milas**	**1.21**	**287**	*e*Pn	**Pn**	**02 38 51.8**	**-1.0**
AYDN	**Tasoluk**	**1.29**	**304**	*i* P	**Pn**	**02 38 53.0**	**-0.8**
AYDN				*i* S	**Sg**	**02 39 11.8**	**+0.9**
AYDN	**Tasoluk**	**1.29**	**304**	*i* P	**Pn**	**02 38 53.0**	**-0.9**
AYDN				*i* S	**Sg**	**02 39 11.8**	**+1.0**
DAT	**Datca**	**1.35**	**261**	*e*PN	**Pn**	**02 38 54.4**	**-0.2**
DAT	**Datca**	**1.35**	**261**	*e*Pn	**Pn**	**02 38 54.4**	**-0.2**
KHAL	**Karahalli**	**1.43**	**8**	*i* P	**Pn**	**02 38 55.2**	**-0.6**
KHAL				*i* S	**Sb**	**02 39 15.2**	**+0.4**
KHAL	**Karahalli**	**1.43**	**8**	*i* P	**Pn**	**02 38 55.2**	**-0.6**
KHAL				*i* S	**Sb**	**02 39 15.2**	**+0.4**
BDRM	**Kayabasi**	**1.44**	**275**	*i* P	**Pn**	**02 38 55.7**	**-0.2**
BDRM				*i* S	**Sb**	**02 39 16.3**	**+1.3**
BDRM	**Kayabasi**	**1.44**	**275**	*i* P	**Pn**	**02 38 55.7**	**-0.2**
BDRM				*i* S	**Sb**	**02 39 16.3**	**+1.3**
SUTC	**Sutluce-Ispart**	**1.50**	**69**	*e*PN	**Pn**	**02 38 57.7**	**+0.9**
SUTC	**Sutluce-Ispart**	**1.50**	**69**	*e*Pn	**Pn**	**02 38 57.7**	**+0.9**
KULA	**Kula-Manisa**	**1.62**	**344**	*e*PN	**Pn**	**02 38 58.0**	**-0.4**
KULA	**Kula-Manisa**	**1.62**	**344**	*e*Pn	**Pn**	**02 38 58.0**	**-0.4**
DEMI	**Demirci**	**2.13**	**349**	*i* P	**Pn**	**02 39 04.4**	**-1.0**
DEMI				*i* S	**Sn**	**02 39 33.0**	**+1.0**
DEMI	**Demirci**	**2.13**	**349**	*i* P	**Pn**	**02 39 04.4**	**-0.9**
DEMI				*i* S	**Sn**	**02 39 33.0**	**+1.0**
HDMB	**Hadim**	**2.60**	**89**	*e*PN	**Pn**	**02 39 12.8**	**+0.9**
HDMB	**Hadim**	**2.60**	**89**	*e*Pn	**Pn**	**02 39 12.8**	**+0.9**

IDC 04 02:43:18.2±8.9, 21.03S×66.52W, h238km±74km, mb3.6/1, mb1 3.7/2, mb1mx3.2/16, mbtmp3.6/2, Error ellipse: s-maj=107.3km s-min=81.5km az=28.0, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**4.95**	**342**	P	Pn	02 44 33.8	+0.6
	6.6nm,0.3s,baz=150,slow=8.8,SNR=148						
LPAZ				S	S	02 45 34.2	+1.5
	baz=27,slow=25,SNR=1.0						
TORD	**Torodi Ar. Bea**	**75.10**	**69**	P	P	02 54 34.6	+0.1
	1.3nm,0.6s,baz=256,slow=5.6,SNR=30						
MKAR	**Makanchi Array**	**143.93**	**37**	PKP	PKPdf	03 02 24.6	-0.5
	0.8nm,0.5s,baz=332,slow=4.1,SNR=5.0						

*CSEM **04** 03:13:43.3±0.2, 38.22N×26.51E, h15km, ML2.9/2, Error ellipse: s-maj=4.6km s-min=4.0km az=34.0*
*DDA **04** 03:13:43.7, 38.28N×26.58E, h7km±6km, Md2.8*
*THE **04** 03:13:43.5, 38.23N×26.54E, h7km±3km, ML2.9/2, Error ellipse: s-maj=3.1km s-min=0.8km az=19.0*
*ISCJB **04** 03:13:43.2±0.8, 38.21N±0.04×26.53E±0.04, h8km±6km, Error ellipse: s-maj=7.0km s-min=4.8km az=43.5*

ISC 04 03:13:43.6±0.7, 38.21N±0.04×26.52E±0.05, h16km±5km, n18, σ0.94/32, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOS	**Chios island**	**0.41**	**297**	P	**Pg**	**03 13 51.9**	**0.0**
CHOS				S	**Sg**	**03 13 57.9**	**+0.4**
CHOS	**Chios island**	**0.41**	**297**	P	**Pg**	**03 13 51.9**	**0.0**
CHOS				S	**Sg**	**03 13 57.9**	**+0.4**
BLCB	**Balcova**	**0.45**	**66**	P	**Pg**	**03 13 52.1**	**-0.5**
BLCB				S	**Sg**	**03 13 58.1**	**-0.6**
BLCB	**Balcova**	**0.45**	**66**	P	**Pg**	**03 13 52.1**	**-0.5**
BLCB				S	**Sg**	**03

Error ellipse: s-maj=10.0km s-min=9.4km az=147.0

ISC 04 03:26:32.2±1.6, 45.66N±0.06×26.67E±0.08, h135km±10km, n50, σ0.35/69, 26C-6D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLOR	**Plostina**	**0.19**	**357**	⇑*i*P	**Pn**	**03 26 50.1**	**-0.4**
PLOR				*i* S	**Sn**	**03 27 04.2**	**-0.2**
PLOR	**Plostina**	**0.19**	**357**	⇑*i*P	**Pn**	**03 26 50.1**	**-0.4**
PLOR	**Plostina**	**0.19**	**357**	S	**Sn**	**03 27 04.2**	**-0.2**
PLOR	**Plostina**	**0.19**	**357**	⇑*i*P	**Pn**	**03 26 50.1**	**-0.4**
PLOR				*i* S	**Sn**	**03 27 04.2**	**-0.2**
VRI	**Vrincioaia**	**0.21**	**12**	⇑P	**Pn**	**03 26 50.3**	**-0.2**
VRI				S	**Sn**	**03 27 04.3**	**-0.2**
VRI	**Vrincioaia**	**0.21**	**12**	⇑*i*P	**Pn**	**03 26 50.3**	**-0.2**
VRI				*i* S	**Sn**	**03 27 04.3**	**-0.2**
VRI	**Vrincioaia**	**0.21**	**12**	⇑*i*P	**Pn**	**03 26 50.3**	**-0.2**
VRI	**Vrincioaia**	**0.21**	**12**	S	**Sn**	**03 27 04.3**	**-0.2**
VRI	**Vrincioaia**	**0.21**	**12**	⇑*i*P	**Pn**	**03 26 50.3**	**-0.2**
VRI				*i* S	**Sn**	**03 27 04.3**	**-0.2**
ODB	**Odobesti**	**0.30**	**68**	⇑P	**Pn**	**03 26 51.6**	**+0.9**
ODB				S	**Sn**	**03 27 05.5**	**+0.6**
ODB	**Odobesti**	**0.30**	**68**	⇑*i*P	**Pn**	**03 26 51.7**	**+0.9**
ODB				*i* S	**Sn**	**03 27 05.5**	**+0.6**
ODB	**Odobesti**	**0.30**	**68**	⇑*i*P	**Pn**	**03 26 51.7**	**+0.9**
ODB	**Odobesti**	**0.30**	**68**	S	**Sn**	**03 27 05.5**	**+0.6**
ODB	**Odobesti**	**0.30**	**68**	⇑*i*P	**Pn**	**03 26 51.7**	**+0.9**
ODB				*i* S	**Sn**	**03 27 05.5**	**+0.6**
MLR	**Muntele Rosu**	**0.53**	**251**	⇑P	**Pn**	**03 26 51.7**	**-0.2**
MLR				S	**Sn**	**03 27 06.7**	**-0.1**
MLR	**Muntele Rosu**	**0.53**	**251**	⇑*i*P	**Pn**	**03 26 51.7**	**-0.2**
MLR				*i* S	**Sn**	**03 27 06.7**	**-0.1**
MLR	**Muntele Rosu**	**0.53**	**251**	⇑*i*P	**Pn**	**03 26 51.7**	**-0.2**
MLR	**Muntele Rosu**	**0.53**	**251**	S	**Sn**	**03 27 06.7**	**-0.1**
MLR	**Muntele Rosu**	**0.53**	**251**	⇑*i*P	**Pn**	**03 26 51.7**	**-0.2**
MLR				*i* S	**Sn**	**03 27 06.7**	**-0.1**
ISR	**Istrita**	**0.55**	**189**	⇑P	**Pn**	**03 26 52.6**	**+0.5**
ISR	**Istrita**	**0.55**	**189**	⇑*i*P	**Pn**	**03 26 52.6**	**+0.6**
ISR	**Istrita**	**0.55**	**189**	⇑*i*P	**Pn**	**03 26 52.6**	**+0.6**
ISR	**Istrita**	**0.55**	**189**	⇑*i*P	**Pn**	**03 26 52.6**	**+0.6**
CFR	**Carcaliu**	**1.14**	**115**	P	**Pn**	**03 26 57.0**	**+0.1**
CFR				S	**Sn**	**03 27 15.5**	**0.0**
CFR	**Carcaliu**	**1.14**	**115**	⇓*i*P	**Pn**	**03 26 57.0**	**+0.2**
CFR				*i* S	**Sn**	**03 27 15.5**	**0.0**
CFR	**Carcaliu**	**1.14**	**115**	⇓*i*P	**Pn**	**03 26 57.0**	**+0.2**
CFR	**Carcaliu**	**1.14**	**115**	S	**Sn**	**03 27 15.5**	**0.0**
CFR	**Carcaliu**	**1.14**	**115**	⇓*i*P	**Pn**	**03 26 57.0**	**+0.2**
CFR				*i* S	**Sn**	**03 27 15.5**	**0.0**
AMRR	**Amara**	**1.16**	**156**	*i* S	**Sn**	**03 27 16.0**	**+0.3**
AMRR	**Amara**	**1.16**	**156**	S	**Sn**	**03 27 16.0**	**+0.3**
AMRR	**Amara**	**1.16**	**156**	*i* S	**Sn**	**03 27 16.0**	**+0.3**
HARR	**Harsova**	**1.32**	**137**	⇑P	**Pn**	**03 26 58.7**	**0.0**
HARR	**Harsova**	**1.32**	**137**	⇑*i*P	**Pn**	**03 26 58.7**	**+0.1**
HARR	**Harsova**	**1.32**	**137**	⇑*i*P	**Pn**	**03 26 58.7**	**+0.1**
HARR	**Harsova**	**1.32**	**137**	⇑*i*P	**Pn**	**03 26 58.7**	**+0.1**
LEOM	**Leova**	**1.37**	**53**	⇓*i*P	**Pn**	**03 26 59.0**	**-0.1**
LEOM				*i* S	**Sn**	**03 27 19.3**	**-0.3**
LEOM	**Leova**	**1.37**	**53**	⇓*i*P	**Pn**	**03 26 59.0**	**-0.1**
LEOM	**Leova**	**1.37**	**53**	S	**Sn**	**03 27 19.3**	**-0.3**
LEOM	**Leova**	**1.37**	**53**	⇓*i*P	**Pn**	**03 26 59.0**	**-0.1**
LEOM				*i* S	**Sn**	**03 27 19.3**	**-0.3**
BUC1	**Bucharest**	**1.39**	**199**	*i* S	**Sn**	**03 27 19.8**	**-0.3**
BUC1	**Bucharest**	**1.39**	**199**	S	**Sn**	**03 27 19.8**	**-0.3**
BUC1	**Bucharest**	**1.39**	**199**	*i* S	**Sn**	**03 27 19.8**	**-0.3**
TLCR		**1.59**	**107**	*i* S	**Sn**	**03 27 23.9**	**0.0**
TLCR		**1.59**	**107**	S	**Sn**	**03 27 23.9**	**0.0**
TLCR		**1.59**	**107**	*i* S	**Sn**	**03 27 23.9**	**0.0**
TIRR	**Tirgusor**	**1.73**	**134**	P	**Pn**	**03 27 03.1**	**-0.1**
TIRR				S	**Sn**	**03 27 26.3**	**-0.5**
TIRR	**Tirgusor**	**1.73**	**134**	⇑*i*P	**Pn**	**03 27 03.0**	**-0.1**
TIRR				*i* S	**Sn**	**03 27 26.3**	**-0.5**
TIRR	**Tirgusor**	**1.73**	**134**	⇑*i*P	**Pn**	**03 27 03.0**	**-0.1**
TIRR	**Tirgusor**	**1.73**	**134**	S	**Sn**	**03 27 26.3**	**-0.5**
TIRR	**Tirgusor**	**1.73**	**134**	⇑*i*P	**Pn**	**03 27 03.0**	**-0.1**
TIRR				*i* S	**Sn**	**03 27 26.3**	**-0.5**

*JMA **04** 03:40:33.4±0.4, 24.74N×122.37E, h0km, M2.6*

TAP 04 03:40:33.9, 24.88N×122.48E, h3km, ML3.5, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.47**	**286**	P	Pg	03 40 42.8	-0.1
TWB1	baz=286			S	Sg	03 40 49.1	+0.2
TWC	**Suao**	**0.64**	**245**	*i* P	Pg	03 40 45.7	-0.4
TWC	baz=244			*e*S	Sg	03 40 54.8	+0.4
YOJ	**Yonaguni jima**	**0.64**	**131**	P	Pg	03 40 46.2	+0.1
YOJ				*e*S	Sg	03 40 55.3	+1.0
NWF	**Wu-fen Shan**	**0.67**	**287**	P	Pg	03 40 46.8	+0.2
NWF	baz=286			*e*S	Sg	03 40 55.6	+0.3
TWE	**Neicheng**	**0.76**	**258**	*e*P	Pg	03 40 48.2	-0.2
TWE	baz=257			*e*S	Sg	03 40 58.7	+0.4
ENA	**Nanau**	**0.81**	**236**	*i* P	Pg	03 40 49.4	0.0
ENA	baz=235			*e*S	Sg	03 41 00.8	+0.8
TWA	**Mucha**	**0.82**	**277**	P	Pg	03 40 49.4	-0.3
TWA	baz=276			S	Sg	03 41 01.1	+0.7
PCYT	**Pengchaiyu**	**0.83**	**334**	P	Pg	03 40 49.9	0.0
PCYT	baz=333			*e*S	Sg	03 41 02.9	+2.2
ENTT	**Nioudou**	**0.87**	**254**	P	Pg	03 40 50.0	-0.6
ENTT	baz=253			*e*S	Sg	03 41 02.9	+1.1
TAP1	**Taipei**	**0.89**	**280**	*e*P	Pg	03 40 51.8	+0.9
TAP1	baz=280			*e*S	Sg	03 41 03.3	+0.9
TWY	**Chenhua**	**0.89**	**296**	*e*P	Pg	03 40 50.2	-0.8
TWY	baz=296			*e*S	Sg	03 41 03.2	+0.6
TWS1	**Kuangyinshan**	**0.99**	**283**	*e*P	Pg	03 40 52.3	-0.6
NSK	**Sanguang**	**1.04**	**259**	P	Pg	03 40 53.4	-0.5
NSK	baz=258			*e*S	Sg	03 41 07.5	+0.1
NNS	**Nan Shan**	**1.10**	**247**	*e*P	Pg	03 40 54.0	-1.0
NNS	baz=246			*e*S	Sg	03 41 09.3	0.0
TWD	**Chiawan**	**1.14**	**226**	*e*P	Pg	03 40 55.2	-0.5
TWD	baz=225			*e*S	Sg	03 41 10.2	-0.2
IRIF	**Iriomote-Funau**	**1.26**	**115**	P	Pg	03 40 58.3	+0.3
WHF	**Hehuan Shan**	**1.33**	**237**	P	Pn	03 40 58.2	-1.1
WHF	baz=236			*e*S	Sg	03 41 15.5	-1.1
TWT	**Tachien**	**1.34**	**243**	*e*P	Pn	03 40 58.9	-0.6
TWT	baz=242			*e*S	Sg	03 41 17.0	-0.1
NSTT	**Nanjuang**	**1.37**	**260**	*e*P	Pn	03 40 58.2	-1.6
NSTT	baz=259			*e*S	Sg	03 41 17.1	-0.8
ESL	**Shilin**	**1.43**	**222**	*e*P	Pn	03 41 00.1	-0.6
ESL	baz=221			*e*S	Sb	03 41 20.0	+0.3
HATJ	**Hateruma jima**	**1.46**	**124**	P	Pn	03 41 01.5	+0.4
HATJ				*e*S	Sb	03 41 21.0	+0.4
JKRS	**Kuro-shima**	**1.53**	**114**	P	Pn	03 41 03.6	+1.5
JKRS				*e*S	Sn	03 41 23.8	+1.3
JIJ	**Ishigaki jima**	**1.60**	**108**	P	Pn	03 41 02.7	-0.3
JIJ				*e*S	Sn	03 41 25.2	+1.1
NSY	**Sanyi**	**1.63**	**254**	*e*P	Pn	03 41 05.4	+1.9
	baz=253						
TWQ1	**Liyutan**	**1.64**	**252**	*e*P	Pn	03 41 05.5	+1.8
	baz=251						
EHY	**Hungye**	**1.73**	**218**	*e*P	Pn	03 41 04.8	0.0
	baz=217						
SMLT	**Sun Moon Lake**	**1.75**	**236**	P	Pn	03 41 05.6	+0.5
	baz=235						
TYC	**Yuchr**	**1.77**	**237**	*e*P	Pn	03 41 05.9	+0.5
	baz=236						
TYC				*e*S	Sn	03 41 30.6	+2.1
	baz=236						
TCU	**Taichung**	**1.80**	**246**	*e*P	Pn	03 41 08.1	+2.3
	baz=245						
TCU				*e*S	Sn	03 41 28.6	-0.6
	baz=245						
TWF1	**Yuli**	**1.87**	**216**	*e*P	Pn	03 41 05.8	-0.9
	baz=215						
YUS	**Yu-Shan**	**1.97**	**226**	*e*P	Pn	03 41 08.3	+0.2
	baz=225						
ALS	**Alishan**	**2.05**	**229**	*e*P	Pn	03 41 10.5	+1.2
	baz=228						
CHN5	**Tsauling**	**2.08**	**233**	*e*P	Pn	03 41 10.9	+1.2
	baz=232						
ELDTW	**Lidau**	**2.15**	**219**	*e*P	Pn	03 41 14.1	+3.4
	baz=218						
WTP	**Ta-pu**	**2.36**	**227**	*e*P	Pn	03 41 14.4	+0.9
	baz=226						
TWK	**Hsinying**	**2.43**	**229**	*e*P	Pn	03 41 16.4	+1.9
	baz=228						
TWK				*e*S	Sn	03 41 45.1	+0.4
	baz=228						
CHN1	**Nanshi**	**2.46**	**227**	*e*P	Pn	03 41 16.3	+1.5
	baz=226						
SGST	**Jiashian**	**2.50**	**225**	*e*P	Pn	03 41 15.1	-0.3
	baz=224						
SSD	**Sandimen**	**2.72**	**219**	*e*P	Pn	03 41 19.4	+1.0
	baz=218						
EAST	**Anshuo**	**2.90**	**211**	*e*P	Pn	03 41 22.1	+1.1
	baz=210						
SCZT	**Fangliau**	**3.02**	**215**	*e*P	Pn	03 41 23.3	+0.7
	baz=214						

GUC 04 03:43:26.0±0.8, 33.02S×72.93W, h26km±9km, MD3.6, ML2.8, 2D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNV	**Longovilo**	**1.57**	**127**	⇓*i*P	Pn	03 43 53.0	+0.8
LNV				*i* S	Sn	03 44 12.9	+1.3
PEL	**Peldehue**	**1.89**	**94**	⇓*i*P	Pn	03 43 57.9	+1.4
PEL				*i* S	Sn	03 44 22.5	+3.1
PEL				AML	AML	03 44 23.9	
	comp=E,173nm,0.6s						
PEL				AML	AML	03 44 24.1	
	comp=N,182nm,0.3s						
CHCH	**Chadas Angostu**	**2.11**	**116**	*e*P	Pn	03 44 00.7	+1.2
CHCH				*i* S	Sn	03 44 27.6	+2.7
CACH	**El Canelo**	**2.23**	**120**	*i* S	Sn	03 44 32.0	+4.1
FCH	**Farellones**	**2.23**	**99**	*e*P	Pn	03 44 03.2	+2.0
FCH				*i* S	Sn	03 44 30.9	+3.0
FCH				AML	AML	03 44 31.7	
	comp=N,68nm,0.3s						
FCH				AML	AML	03 44 33.4	
	comp=E,67nm,0.2s						

JMA 04 04:03:05.1±0.2, 33.23N×140.83E, h53km, M3.5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.86**	**262**	P	Pn	04 03 21.3	+0.3
JHJ2				*e*S	Sn	04 03 32.5	-0.2
JMY	**Miyakejima3**	**1.38**	**308**	P	Pn	04 03 28.5	+0.5
JMY				*e*S	Sn	04 03 45.8	+0.6
BSO2	**Boso 2**	**1.52**	**358**	*e*S	Sn	04 03 50.1	+1.6
BSO3	**Boso 3**	**1.59**	**350**	P	Pn	04 03 31.3	+0.4
BSO3				*e*S	Sn	04 03 52.0	+1.7
JKO	**Kozu shima**	**1.70**	**305**	*e*S	Sn	04 03 53.9	+0.8
BSO4	**Boso 4**	**1.80**	**347**	P	Pn	04 03 34.7	+0.9
BSO4				*e*S	Sn	04 03 57.7	+2.2
JIM2	**Oshima 3**	**1.89**	**322**	P	Pn	04 03 35.4	+0.5
JIM2				*e*S	Sn	04 03 57.6	+0.1
JIZS	**Izushimoda**	**2.20**	**313**	*e*S	Sn	04 04 06.2	+1.0
KTJJ	**Kamata 2**	**2.24**	**320**	P	Pn	04 03 41.1	+1.4
KTJJ				*e*S	Sn	04 04 06.0	-0.1
JOD2	**Odawara 2**	**2.49**	**325**	P	Pn	04 03 44.2	+1.1
JOD2				*e*S	Sn	04 04 12.4	+0.1

DJA 04 04:04:45, 0.47S×122.68E, h8km, MLv3.9/7, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.57**	**171**	P	Pg	04 04 55.4	-0.7
LUWI				S	Sg	04 05 02.3	-1.4
APSI	**Ampana**	**1.12**	**247**	P	Pg	04 05 05.3	-1.2
APSI				S	Sg	04 05 23.3	+2.2
MRSI	**Marisa**	**1.20**	**322**	P	Pb	04 05 06.4	-1.5
PCI	**Palu**	**2.88**	**261**	P	Pn	04 05 31.9	+0.7
MPSI	**Mapaga**	**2.90**	**286**	P	Pn	04 05 32.3	+0.9
KDI	**Kendari**	**3.46**	**181**	P	Pn	04 05 38.2	-1.1
TTSI	**Tana Toraja**	**3.84**	**228**	P	Pn	04 05 43.3	-1.1
SPSI	**Sidrap Palu**	**4.53**	**220**	P	Pn	04 05 54.7	+0.8
LBMI	**Labuha**	**4.82**	**92**	P	Pn	04 05 58.9	+0.9
NLAI	**Namlea**	**5.20**	**122**	P	Pn	04 06 04.9	+1.7

DJA 04 04:07:51, 0.48S×122.80E, h20km, MLv3.5/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.56**	**183**	P	Pb	04 08 01.2	-0.9
APSI	**Ampana**	**1.23**	**250**	P	Pn	04 08 11.2	-1.8
APSI				S	Sb	04 08 29.3	+0.3
MRSI	**Marisa**	**1.28**	**318**	P	Pn	04 08 13.3	-0.5
KDI	**Kendari**	**3.46**	**183**	P	Pn	04 08 44.3	+0.5
TTSI	**Tana Toraja**	**3.92**	**229**	P	Pn	04 08 49.9	-0.2

*ISCJB **04** 04:12:42.8±0.5, 32.53N±0.04×104.99E±0.07, h10km, mb3.7/11, Error ellipse: s-maj=8.6km s-min=5.5km az=160.3*
*IDC **04** 04:12:43.5±1.1, 32.67N×105.17E, h0km, mb3.8/10, mb1 3.9/11, mb1mx3.8/27, mbtmp3.8/11, ML4.5/1, Error ellipse: s-maj=39.5km s-min=22.3km az=58.0*
*NEIC **04** 04:12:45.4±0.5, 32.67N×105.11E, h10km, mb3.7/1, Error ellipse: s-maj=14.0km s-min=8.6km az=60.0*
*BJI **04** 04:12:45.8, 32.45N×105.13E, h10km, ML3.5/12, Ms3.3/3, Ms7 3.3/3*

ISC 04 04:12:44.7±0.5, 32.54N±0.04×105.08E±0.05, h10km, n19, σ1.18/28, mb3.7/11, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.98**	**215**	Pn	**Pn**	**04 13 15.4**	**-2.8**
CD2				Pg	**Pg**	**04 13 16.7**	**-5.9**
CD2				Sn	**Sn**	**04 13 38.4**	**-4.7**
CD2				Sg	**Sg**	**04 13 41.0**	**-7.3**
CD2				smax			
	comp=N,2μm,0.5s						
CD2				smax			
	comp=E,2μm,0.6s						
XAN	**Xi'an**	**3.55**	**64**	Pg	**Pg**	**04 13 50.2**	**-2.5**
XAN				Sn	**Sn**	**04 14 30.1**	**+8.2**
XAN				Sg	**Sg**	**04 14 38.8**	**+0.1**
XAN				smax			
	comp=N,110nm,0.8s						
XAN				smax			
	comp=E,86nm,0.7s						
LZH	**Lanzhou**	**3.69**	**344**	Pg	**Pg**	**04 13 54.6**	**-0.7**
LZH				Sn	**Sn**	**04 14 30.0**	**+4.8**
LZH				Sg	**Sg**	**04 14 43.5**	**+0.4**
LZH				smax			
	comp=N,200nm,0.8s						
LZH				smax			
	comp=E,220nm,0.8s						
LZH				LR	LR		
	comp=E,430nm,6.2s						
LZH				LR	LR		
	comp=Z,470nm,8.6s						
ENH	**Enshi**	**4.39**	**120**	*e*Pn	**Pn**	**04 13 53.0**	**+1.5**
ENH				*e*Pg	**Pg**	**04 14 05.7**	**-3.2**
ENH				*e*Sn	**Sn**	**04 14 43.4**	**+0.7**
GYA	**Guiyang**	**6.21**	**167**	Pn	**Pn**	**04 14 20.8**	**+4.3**
CMAR	**Chiang Mai Arr**	**15.07**	**203**	Pn	**Pn**	**04 16 20.7**	**+2.9**
	comp=Z,0.6nm,0.3s,baz=12,slow=9.3,SNR=3.5						
SONM	**Songino Array**	**15.31**	**3**	Pn	**Pn**	**04 16 20.8**	**0.0**
	baz=181,slow=8.6,SNR=2.0						
MKAR	**Makanchi Array**	**22.49**	**316**	P	**P**	**04 17 45.1**	**+1.0**
	comp=Z,0.7nm,0.5s,mb3.4,baz=104,slow=10,SNR=11						
UCH	**Uchtor**	**26.02**	**301**	*e*P	**P**	**04 18 18.3**	**+0.4**
	comp=Z,2.0nm,1.1s,mb3.6						
KURK	**Kurchatov**	**26.63**	**321**	P	**P**	**04 18 22.6**	**-0.6**
	comp=Z,0.5nm,0.6s,mb3.2,baz=122,slow=12,SNR=3.8						
BVAR	**Borovoye Array**	**32.21**	**320**	P	**P**	**04 19 13.2**	**+0.4**
	comp=Z,0.4nm,0.5s,mb3.5,baz=141,slow=4.8,SNR=3.2						
AKTK	**Aktyubinsk**	**38.79**	**312**	P	**P**	**04 20 10.4**	**+1.0**
AKTO	**Aktyubinsk**	**38.79**	**312**	P	**P**	**04 20 10.4**	**+1.0**
	comp=Z,0.6nm,0.6s,mb3.5,baz=109,slow=16,SNR=3.6						
ARCES	**ARCESS Array B**	**56.30**	**335**	P	**P**	**04 22 25.0**	**-0.1**
	comp=Z,2.7nm,0.7s,mb4.4,baz=74,slow=8.9,SNR=8.5						
BRTR	**Keskin Array B**	**56.77**	**299**	P	**P**	**04 22 28.5**	**-0.4**
	comp=Z,0.6nm,0.8s,mb3.7,baz=104,slow=6.1,SNR=2.9						
FINES	**FINESS Array B**	**56.85**	**326**	P	**P**	**04 22 29.0**	**-0.2**
	comp=Z,1.2nm,0.4s,mb4.2,baz=93,slow=7.6,SNR=7.4						
ASAR	**Alice Springs**	**62.30**	**150**	P	**P**	**04 23 08.5**	**+1.4**
	comp=Z,0.5nm,0.8s,mb3.7,baz=336,slow=7.0,SNR=4.4						
NOA	**NORSAR Array B**	**63.90**	**327**	P	**P**	**04 23 15.9**	**-1.4**
	comp=Z,0.6nm,0.6s,mb3.8,baz=70,slow=6.7,SNR=3.4						
YKA	**Yellowknife Ar**	**80.08**	**18**	P	**P**	**04 24 53.9**	**-0.4**
	comp=Z,0.3nm,0.7s,mb3.3,baz=332,slow=3.7,SNR=2.3						

IDC 04 04:13:45.0±4.9, 32.39N×104.64E, h0km, mb3.7/4, mb1 3.7/6, mb1mx3.5/27, mbtmp3.6/6, ML3.0/2, Error ellipse: s-maj=110.5km s-min=30.7km az=14.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**15.48**	**4**	Pn	Pn	04 17 24.6	0.0
	0.0nm,0.3s,baz=186,slow=12,SNR=1.9						
KSRS	**Korea Array**	**19.73**	**69**	P	Pn	04 18 15.5	-2.1
	0.2nm,0.3s,baz=256,slow=9.4,SNR=3.4						
MKAR	**Makanchi Array**	**22.33**	**317**	P	P	04 18 44.4	+0.2
	0.9nm,0.6s,baz=113,slow=12,SNR=7.3						
ZALV	**Zalesovo Beam**	**25.77**	**333**	P	P	04 19 17.6	+0.2
	1.2nm,0.5s,baz=119,slow=12,SNR=3.8						
KURK	**Kurchatov**	**26.51**	**321**	P	P	04 19 23.4	-0.6
	0.8nm,0.4s,baz=125,slow=10,SNR=4.8						
YKA	**Yellowknife Ar**	**80.33**	**17**	P	P	04 25 58.1	+0.4
	0.5nm,0.5s,baz=325,slow=4.6,SNR=3.7						

*ISCJB **04** 04:17:39.6±0.3, 37.32N±0.02×72.14E±0.05, h224km±4km, mb3.7/13, Error ellipse: s-maj=6.0km s-min=3.5km az=174.8*
*MOS **04** 04:17:40.4±0.7, 37.40N×72.10E, h228km, mb4.0/11, Error ellipse: s-maj=13.8km s-min=6.9km az=80.0*
*BJI **04** 04:17:40.0, 37.49N×72.05E, h209km, mB4.5/3, mb4.8/6*
*NEIC **04** 04:17:41.0±0.6, 37.35N×72.15E, h224km±7km, mb5.0/8, Error ellipse: s-maj=8.0km s-min=5.3km az=60.0*
*IDC **04** 04:17:42.7±1.0, 37.40N×72.24E, h244km±8km, mb3.3/9, mb1 3.5/14, mb1mx3.3/29, mbtmp3.5/14, Error ellipse: s-maj=14.8km s-min=10.8km az=140.0*
*NNC **04** 04:17:46.9±5.9, 37.85N×72.21E, h234km±41km, mb3.3, mpv5.0, Error ellipse: s-maj=53.1km s-min=32.0km az=9.0*

ISC 04 04:17:40.7±0.3, 37.36N±0.02×72.15E±0.05, h217km±4km, h242km±2.6km: pP-P, n95, σ1.16/121, mb3.7/13, 8C-10D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.53**	**183**	⇑P	**Pn**	**04 18 37.8**	**+0.3**
CEP				S	**S**	**04 19 21.0**	**-1.2**
KSH	**Kashi**	**3.70**	**53**	⇓*i*P	**Pn**	**04 18 35.2**	**-4.1**
KSH				S	**S**	**04 19 14.7**	**-11**
KSH				smax			
	comp=N,3μm,1.0s						
KSH				smax			
	comp=E,2μm,0.5s						
KBL	**Kabul**	**3.77**	**223**	*e*PN	**Pn**	**04 18 40.8**	**+0.5**
KBL				*e*S	**S**	**04 19 26.7**	**-0.6**
CHCP	**Chirah Chowk**	**3.80**	**166**	P	**Pn**	**04 18 42.2**	**+1.5**
AML	**Almayashu**	**4.91**	**14**	P	**Pn**	**04 18 55.5**	**+1.2**
	SNR=570						
UCH	**Uchtor**	**5.19**	**20**	P	**Pn**	**04 18 58.9**	**+1.1**
	SNR=201						
UCH	**Uchtor**	**5.19**	**20**	*e*Pn	**Pn**	**04 18 58.6**	**+0.8**
	comp=E,343nm,0.8s						
UCH				*e*S	**S**	**04 19 58.4**	**-0.6**
KZA	**Kyzart**	**5.29**	**26**	P	**Pn**	**04 18 59.5**	**+0.5**
	SNR=41						
EKS2	**Erkin-Say**	**5.44**	**13**	P	**Pn**	**04 19 02.0**	**+1.0**
	SNR=42						
EKS2	**Erkin-Say**	**5.44**	**13**	*e*Pn	**Pn**	**04 19 01.7**	**+0.7**
	comp=E,58nm,0.6s						
EKS2				*e*S	**S**	**04 20 03.7**	**-1.0**
AAK	**Ala-Archa**	**5.57**	**18**	P	**Pn**	**04 19 03.9**	**+1.4**
	SNR=30						
AAK	**Ala-Archa**	**5.57**	**18**	P	**Pn**	**04 19 03.9**	**+1.4**
	comp=E,0.3nm,0.3s,baz=187,slow=6.4,SNR=200						
AAK				S	**S**	**04 20 06.6**	**-1.0**
	comp=E,1.0nm,0.3s,baz=290,slow=22,SNR=26						
AAK	**Ala-Archa**	**5.57**	**18**	*c i*PN	**Pn**	**04 19 03.7**	**+1.1**
AAK				pmax	pmax		
	comp=Z,36nm,0.6s						
AAK	**Ala-Archa**	**5.57**	**18**	P	**Pn**	**04 19 03.9**	**+1.4**
AAK				S	**S**	**04 20 06.6**	**-1.0**
KBK	**Karagaybulak**	**5.71**	**21**	P	**Pn**	**04 19 05.9**	**+1.5**
	SNR=16						
THN	**Thein Dam**	**5.72**	**148**	*ex*	**Pn**	**04 19 03.5**	**-1.2**
THN				*ex*	x	04 20 07.7	
FRU	**Bishkek**	**5.79**	**18**	*e*PN	**Pn**	**04 19 06.0**	**+0.7**
FRU				*i* S	**S**	**04 20 11.0**	**-1.7**
FRU				pmax	pmax		
	comp=Z,90nm,1.2s						
FRU				smax			
	comp=E,1μm,1.6s						
KK31	**Karatay Array**	**5.87**	**348**	⇑P	**Pn**	**04 19 07.3**	**+0.9**
	comp=E,55nm,0.4s,baz=160,slow=11,SNR=495						
KK31				⇓S	**S**	**04 20 11.6**	**-3.1**
	comp=E,200nm,0.3s,baz=170,slow=23						
CHMS	**Chumysh**	**5.98**	**19**	P	**Pn**	**04 19 09.0**	**+1.2**
	SNR=26						
TKM2	**Tokmak 2**	**6.15**	**24**	⇑P	**Pn**	**04 19 10.7**	**+0.7**
	comp=E,118nm,0.5s						
TKM2				⇑S	**S**	**04 20 19.0**	**-2.2**
	comp=E,104nm,1.1s						
TKM2	**Tokmak 2**	**6.15**	**24**	P	**Pn**	**04 19 11.0**	**+1.0**
	SNR=42						
TKM2	**

comp=E,1.6nm,0.3s,baz=226,slow=11,SNR=63
MKAR Makanchi Array 12.06 35 *ce*P **Pn 04 20 24.3 -1.3**
MKAR pmax pmax
comp=Z,8.0nm,0.6s
WMQ Urumqi 13.46 56 *e*P **Pn 04 20 43.4 +0.3**
KURBB Kurchatov Arra 14.03 17 ⇑P **Pn 04 20 49.0 -1.0**
comp=Z,2.5nm,0.6s
KURK Kurchatov 14.13 17 ⇑P **Pn 04 20 50.4 -1.0**
comp=Z,27nm,1.0s
KURK Kurchatov 14.13 17 P **Pn 04 20 48.6 -2.7**
comp=Z,0.5nm,0.3s,baz=206,slow=11,SNR=12
KURK Kurchatov 14.13 17 *e*Pn **Pn 04 20 50.0 -1.3**
KKN Kakani 14.60 127 *e*P **Pn 04 20 58.8 +1.5**
comp=Z,33nm,0.5s
KKN Kakani 14.60 127 *e*P **Pn 04 20 58.8 +1.5**
KKN pmax pmax
comp=Z,33nm,0.5s
DMN Daman 14.62 128 *e*P **Pn 04 20 58.6 +1.1**
comp=Z,28nm,0.5s
AB31 Akbulak array 14.82 327 ⇓P **Pn 04 21 00.0 +0.3**
comp=Z,1.2nm,0.3s,baz=137,slow=13,SNR=68
AB31 ⇓S **S 04 23 37.5 -6.3**
comp=Z,6.1nm,0.7s,baz=129,slow=26,SNR=8.4
ABKAR Akbulak array 14.82 327 *e*P **Pn 04 20 59.8 +0.1**
ABKAR
comp=Z,4.1nm,0.4s
ABKAR *e*S **S 04 23 36.1 -7.7**
PKI Pulchoki 14.84 127 *e*P **Pn 04 21 01.0 +0.8**
GUN Gumba 14.90 125 *e*P **Pn 04 21 01.9 +0.9**
comp=Z,27nm,0.4s
JIRN Jiri 15.28 125 *e*P **Pn 04 21 06.7 +1.2**
comp=Z,15nm,0.2s
VOSK Vostochnaya 15.39 357 ⇓P **Pn 04 21 05.8 -0.8**
comp=Z,2.8nm,0.5s
BVA0 Borovoye Array 15.71 356 P **Pn 04 21 11.2 +0.7**
comp=Z,0.9nm,0.4s,baz=164,slow=13,SNR=39
BVA0 S **S 04 23 59.9 -4.1**
comp=Z,0.8nm,0.7s,baz=181,slow=25,SNR=3.8
BVAR Borovoye Array 15.71 356 P **Pn 04 21 09.9 -0.6**
comp=Z,3.5nm,0.3s,baz=162,slow=10,SNR=43
BVAR S **S 04 24 02.4 -1.6**
comp=Z,0.5nm,0.3s,baz=163,slow=26,SNR=7.6
BVAR Borovoye Array 15.71 356 P **Pn 04 21 09.9 -0.6**
BVAR S **S 04 24 02.4 -1.6**
BVAR pmax pmax
comp=Z,4.0nm,0.3s
BVAR smax
comp=N,1.0nm,0.3s
ZRNK Zerenda 15.75 353 ⇓P **Pn 04 21 12.0 +1.1**
comp=N,5.7nm,0.7s
BRVK Borovoye 15.76 356 *d*P **Pn 04 21 11.6 +0.6**
BRVK pmax pmax
comp=Z,8.0nm,0.8s
BRVK Borovoye 15.76 356 *e*P **Pn 04 21 11.7 +0.7**
comp=Z,4.0nm,0.3s
BRVK *e*S **S 04 23 59.0 -5.9**
RAMN Ramite 16.03 126 *e*P **P 04 21 13.3 -0.5**
comp=Z,52nm,0.5s
TAPN Taplejung 16.49 123 *e*P **P 04 21 18.8 0.0**
comp=Z,17nm,0.6s
AKTK Aktyubinsk 16.53 327 P **P 04 21 20.6 +1.5**
AKTK S **S 04 24 20.1 -0.5**
AKTO Aktyubinsk 16.53 327 ⇓P **P 04 21 20.1 +1.1**
comp=Z,1.3nm,0.7s
AKTO ⇓S **S 04 24 21.6 +1.0**
comp=Z,1.2nm,0.7s
AKTO Aktyubinsk 16.53 327 P **P 04 21 20.6 +1.5**
comp=Z,1.3nm,0.3s,baz=133,slow=9.9,SNR=28
AKTO S **S 04 24 20.1 -0.5**
comp=Z,0.5nm,0.3s,baz=343,slow=20,SNR=5.0
AKTO Aktyubinsk 16.53 327 P **P 04 21 20.6 +1.5**
AKTO S **S 04 24 20.1 -0.5**
AKTO pmax pmax
comp=Z,1.0nm,0.3s
AKTO smax
comp=N,1.0nm,0.3s
ODAN Odare 16.60 125 *e*P **P 04 21 19.5 -0.6**
comp=N,21nm,0.5s
ZALV Zalesovo Beam 18.76 24 P **P 04 21 43.6 +0.3**
comp=N,21nm,0.3s,baz=223,slow=11,SNR=235
ZALV S **S 04 25 01.9 -2.9**
comp=N,0.1nm,0.3s,baz=221,slow=19,SNR=3.7
ZALV Zalesovo Beam 18.76 24 P **P 04 21 43.6 +0.4**
ZALV S **S 04 25 01.9 -2.9**
ZALV pmax pmax
comp=Z,21nm,0.3s
NVS Novosibirsk 19.06 20 *e*P **P 04 21 46.9 +0.4**
NVS *e*S **S 04 25 09.1 -1.6**
NVS pmax pmax
comp=Z,34nm,1.0s
NVS pmax pmax
comp=N,26nm,0.8s
NVS smax
comp=N,56nm,1.8s
GTA Gaotai 21.76 76 *e*P **P 04 22 17.7 +2.7**
MOY Mondy 24.85 46 *e*P **P 04 22 46.1 +3.1**
ZAK Zakamensk 25.74 50 *e*P **P 04 22 52.1 +1.1**
ZAK *e* 04 23 39.8
ZAK pmax pmax
comp=Z,2.0nm,1.3s,mb3.6
SONM Songino Array 27.09 56 P **P 04 23 04.2 +1.1**
comp=Z,2.8nm,0.8s,mb3.9,baz=263,slow=9.1,SNR=16
SONM pP pP 04 23 52.0 +5.5
comp=Z,1.5nm,0.8s,baz=254,slow=10,SNR=5.7
SONM Songino Array 27.09 56 P **P 04 23 04.2 +1.0**
SONM *PP pP 04 23 52.0 +5.5
SONM pmax pmax
comp=Z,3.0nm,0.8s
ULN Ulaanbaatar 27.54 56 *e*P **P 04 23 07.5 +0.4**
ULN pmax pmax
comp=Z,2.0nm,0.6s,mb3.9
ULN Ulaanbaatar 27.54 56 *e*P **P 04 23 07.5 +0.4**
comp=Z,2.4nm,0.6s,mb4.0
OBN Obninsk 29.90 318 *e*P **P 04 23 27.6 -0.3**
OBN pmax pmax
comp=Z,2.0nm,0.6s,mb3.9
BRTR Keskin Array B 30.06 287 P **P 04 23 30.7 +1.2**
comp=Z,0.5nm,0.6s,mb3.3,baz=106,slow=7.0,SNR=3.4
BRTR Keskin Array B 30.06 287 P **P 04 23 30.7 +1.2**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
FINES FINESS Array B 37.30 325 P **P 04 24 31.5 0.0**
comp=Z,0.6nm,0.4s,mb3.5,baz=121,slow=7.7,SNR=4.9
FINES pP pP 04 25 21.2 +4.8
comp=Z,1.7nm,0.6s,baz=123,slow=10,SNR=3.2
FINES FINESS Array B 37.30 325 P **P 04 24 31.5 0.0**
FINES *PP pP 04 25 21.2 +4.8
FINES pmax pmax
comp=Z,1.0nm,0.4s
ARCES ARCESS Array B 40.71 337 P **P 04 25 00.3 +0.7**
comp=Z,0.9nm,0.5s,mb3.4,baz=112,slow=7.9,SNR=11
ARCES pP pP 04 25 50.5 +5.3
comp=Z,1.7nm,0.8s,baz=112,slow=9.3,SNR=1.8
ARCES ARCESS Array B 40.71 337 P **P 04 25 00.4 +0.8**
ARCES *PP pP 04 25 50.6 +5.4
ARCES pmax pmax
comp=Z,1.0nm,0.5s
PSI Prapat 42.28 138 P **P 04 25 11.4 -1.6**
comp=Z,3.2nm,0.5s,mb4.0,baz=326,slow=7.1,SNR=4.4
PSI Prapat 42.28 138 P **P 04 25 11.4 -1.6**
PSI pmax pmax
comp=Z,3.0nm,0.5s,mb4.0
NB2 NORSAR Subarra 44.26 322 P **P 04 25 28.1 -0.1**
comp=Z,0.4nm,0.5s,baz=93,slow=7.9
NOA NORSAR Array B 44.26 322 P **P 04 25 28.4 +0.1**
comp=Z,0.5nm,0.5s,baz=95,slow=7.6,SNR=4.3
NOA pP pP 04 26 18.5 +3.9
comp=Z,1.6nm,0.9s,baz=92,slow=8.1,SNR=4.1
NOA NORSAR Array B 44.26 322 P **P 04 25 28.4 +0.2**
NOA *PP pP 04 26 18.5 +4.0
NOA pmax pmax
comp=Z,1.0nm,0.5s
BILL Bilibino 57.43 26 *e*P **P 04 27 07.1 +0.9**
BILL pmax pmax
comp=Z,2.0nm,1.1s,mb3.7
ESDC Sonseca Array 57.87 298 P **P 04 27 09.0 -0.8**
comp=Z,0.3nm,0.4s,mb3.3,baz=65,slow=6.6,SNR=3.4
TOA0 Torodi Ar. Sit 66.65 269 *e*P **P 04 28 06.9 -1.4**
TORD Torodi Ar. Bea 66.65 269 P **P 04 28 06.8 -1.5**
comp=Z,1.7nm,0.4s,mb4.0,baz=49,slow=5.8,SNR=106
INK Inuvik 72.91 10 *e*P **P 04 28 45.3 -0.2**
INK pmax pmax
comp=Z,1.0nm,0.5s
INK Inuvik 72.91 10 *e*P **P 04 28 45.3 -0.2**
comp=Z,1.0nm,0.5s,mb3.7
YKA Yellowknife Ar 80.34 3 P **P 04 29 26.8 -0.3**
comp=Z,0.7nm,0.5s,mb3.5,baz=350,slow=5.1,SNR=7.0
YKA Yellowknife Ar 80.34 3 P **P 04 29 26.8 -0.4**
YKA pmax pmax
comp=Z,1.0nm,0.5s
YKA Yellowknife Ar 80.34 3 P **P 04 29 26.8 -0.3**

DJA 04 04:47:43,0.60S×123.05E,h62km,MLv3.6/7,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.52**	**212**	P	Pn	04 47 57.0	+1.6
APSI	**Ampana**	**1.44**	**258**	P	Pn	04 48 08.0	+1.1
APSI				S	Sn	04 48 26.7	+1.9
MRSI	**Marisa**	**1.54**	**314**	P	Pn	04 48 09.3	+1.0
MNI	**Manado**	**2.71**	**41**	P	Pn	04 48 25.3	+1.2
KDI	**Kendari**	**3.36**	**187**	P	Pn	04 48 34.1	+1.0
TTSI	**Tana Toraja**	**4.04**	**233**	P	Pn	04 48 46.4	+4.0
LBMI	**Labuha**	**4.45**	**91**	P	Pn	04 48 48.2	+0.2
SPSI	**Sidrap Palu**	**4.68**	**224**	P	Pn	04 48 52.0	+0.8

*ISCJB **04** 06:10:10.6±1.3,31.82N±0.05×51.08E±0.05,h0km±11km, Error ellipse: s-maj=8.8km s-min=6.4km az=155.0*
*KISR **04** 06:10:11.9±1.1,31.55N×51.27E,h23km±999km,ML3.1*
*TEH **04** 06:10:12.5,31.83N×51.11E,h8km*
ISC 04 06:10:11.9±1.4,31.83N±0.05×51.11E±0.05,h0km±11km, n20,σ0.84/25,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPIR	**Pirpir**	**0.87**	**348**	*e*Pg	**Pg**	**06 10 28.5**	**0.0**
IPIR				*e*		06 10 55.0	
comp=Z,5μm,0.2s							
IGAR	**Gharneh**	**0.98**	**54**	*e*Pg	**Pg**	**06 10 30.0**	**-0.6**
IGAR				*e*Sg	**Sg**	**06 10 44.8**	**+1.6**
IGAR				*e*		06 10 50.7	
comp=Z,6μm,0.1s							
IZEF	**Zefreh**	**1.48**	**44**	*e*Pn	**Pn**	**06 10 39.4**	**-0.3**
IZEF				*e*		06 11 17.1	
comp=Z,1μm,0.3s							
IKLH	**Kolahrood**	**1.53**	**15**	*e*Pg	**Pg**	**06 10 40.1**	**-1.2**
IKLH				*e*		06 11 13.4	
comp=Z,3μm,0.3s							
ISAD	**Sadrabad**	**2.19**	**87**	*e*Pn	**Pn**	**06 10 48.9**	**-0.6**
ISAD				*e*		06 11 36.2	
comp=Z,3μm,0.4s							
IPAR	**Pars**	**2.59**	**139**	*e*Pn	**Pn**	**06 10 57.7**	**+2.7**
IPAR				*e*		06 11 47.2	
comp=Z,1μm,0.5s							
ISFB	**Sefidab**	**2.69**	**20**	*e*Pn	**Pn**	**06 10 56.4**	**+0.1**
ISFB				*e*		06 11 49.0	
comp=Z,733nm,0.3s							
ICHK	**Chekchek**	**2.83**	**81**	*e*Pn	**Pn**	**06 10 57.7**	**-0.6**
ICHK				*e*		06 11 41.8	
comp=Z,731nm,0.2s							
ISRV	**Sarvestan**	**2.99**	**144**	*e*Pn	**Pn**	**06 11 00.7**	**+0.2**
ISRV				*e*		06 12 09.3	
comp=Z,1μm,0.4s							
IMEH	**Mehriz**	**3.02**	**97**	*e*Pn	**Pn**	**06 11 00.5**	**-0.4**
IMEH				*e*		06 11 58.4	
comp=Z,516nm,0.3s							
IMOK	**Mouk**	**3.10**	**153**	*e*Pn	**Pn**	**06 11 01.9**	**-0.2**
IMOK				*e*		06 12 09.9	
comp=Z,911nm,0.3s							
IVRN	**Varamin**	**3.20**	**9**	*e*	**Sn**	**06 11 31.6**	**-11**
comp=Z,547nm,0.4s							
IVRN				*e*Pn	**Pn**	**06 11 04.2**	**+0.9**
IRAZ	**Razeghan**	**3.69**	**345**	*e*Pn	**Pn**	**06 11 09.7**	**-0.5**
IRAZ				*e*		06 12 28.4	
comp=Z,491nm,0.4s							
IBAF	**Bafgh**	**3.81**	**92**	*e*Pn	**Pn**	**06 11 11.0**	**-0.7**
IDMV	**Damavand**	**3.81**	**11**	*e*Pn	**Pn**	**06 11 12.3**	**+0.5**
IDMV				*e*		06 12 46.1	
comp=Z,223nm,0.3s							
MIB	**Mutribah**	**3.82**	**239**	*e*P	**Pn**	**06 11 12.1**	**+0.2**
MIB				*e*S	**Sn**	**06 11 58.4**	**+0.8**
MIB				AML	AML	06 12 04.2	
comp=Z,24nm,0.6s							
IMHD	**Mahdasht**	**3.86**	**355**	*e*	**Sg**	**06 12 31.5**	**+16**
comp=Z,452nm,0.1s							
QRN	**Al-Qurain**	**4.13**	**223**	*e*P	**Pn**	**06 11 15.9**	**-0.4**
QRN				*e*S	**Sn**	**06 12 03.5**	**-1.8**
QRN				AML	AML	06 12 10.0	
comp=Z,50nm,0.7s							
NAY	**Al-Naaiem**	**4.21**	**233**	*e*P	**Pn**	**06 11 17.9**	**+0.5**
NAY				*e*S	**Sn**	**06 12 07.5**	**+0.3**
NAY				AML	AML	06 12 13.0	
comp=Z,12nm,0.7s							
RDF	**Al-Radifah**	**4.22**	**228**	*e*P	**Pn**	**06 11 18.1**	**+0.6**

*IDC **04** 06:17:48.7±2.8,37.75N×20.53E,h0km,mb3.3/2, mb1 3.3/3,mb1mx3.1/25,mbtmp3.3/3,ML2.9/1,Error ellipse: s-maj=170.5km s-min=28.8km az=144.0*
*CSEM **04** 06:17:57.7,34.96N×23.13E,h40km,MD3.6,After ATH*
*NEIC **04** 06:17:57.7,34.96N×23.13E,h40km,MD3.6(ATH),After ATH.*
*ATH **04** 06:17:57.7,34.96N×23.13E,h40km±6km,MD3.6/10*
*ISCJB **04** 06:17:58.7±1.1,35.0N±0.1×23.2E±0.1,h66km±13km, mb3.1/2,Error ellipse: s-maj=20.3km s-min=11.2km az=36.6*
ISC 04 06:17:59.9±1.2,35.0N±0.1×23.2E±0.1,h61km±15km,n30, σ0.83/33,mb3.2/2,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARN	**Karanos**	**0.71**	**56**	*e*P	**Pn**	**06 18 13.1**	**-1.2**
KARN	**Karanos**	**0.71**	**56**	*e*P	**Pn**	**06 18 13.1**	**-1.2**
GVD	**Gavdhos**	**0.75**	**102**	*e*P	**Pn**	**06 18 14.1**	**-0.7**
GVD	**Gavdhos**	**0.75**	**102**	*e*P	**Pn**	**06 18 14.1**	**-0.7**
GVD	**Gavdhos**	**0.75**	**102**	*e*P	**Pn**	**06 18 14.1**	**-0.7**
VAM	**Vamos**	**0.92**	**64**	*e*P	**Pn**	**06 18 16.0**	**-0.8**
VAM				*e*S	**Sn**	**06 18 30.8**	**+1.4**
VAM	**Vamos**	**0.92**	**64**	*e*P	**Pn**	**06 18 16.0**	**-0.8**
VAM				*e*S	**Sn**	**06 18 30.8**	**+1.4**
VAM	**Vamos**	**0.92**	**64**	*e*P	**Pn**	**06 18 16.0**	**-0.8**
VAM				*e*S	**Sn**	**06 18 30.8**	**+1.4**
KYTH	**Kithira**	**1.28**	**354**	*e*P	**Pn**	**06 18 21.2**	**-0.4**
KYTH	**Kithira**	**1.28**	**354**	*e*P	**Pn**	**06 18 21.2**	**-0.4**
KYTH	**Kithira**	**1.28**	**354**	*e*P	**Pn**	**06 18 21.2**	**-0.4**
VLI	**Veliai**	**1.72**	**353**	*e*P	**Pn**	**06 18 28.8**	**+1.2**
VLI	**Veliai**	**1.72**	**353**	*e*P	**Pn**	**06 18 28.8**	**+1.2**
VLI	**Veliai**	**1.72**	**353**	*e*P	**Pn**	**06 18 28.8**	**+1.2**
NPS	**Neapolis**	**2.00**	**82**	*e*P	**Pn**	**06 18 32.0**	**+0.7**
NPS	**Neapolis**	**2.00**	**82**	*e*P	**Pn**	**06 18 32.0**	**+0.7**
NPS	**Neapolis**	**2.00**	**82**	*e*P	**Pn**	**06 18 32.0**	**+0.7**
XRY	**Khrisi**	**2.06**	**93**	*e*P	**Pn**	**06 18 31.9**	**-0.2**
XRY	**Khrisi**	**2.06**	**93**	*e*P	**Pn**	**06 18 31.9**	**-0.2**
XRY	**Khrisi**	**2.06**	**93**	*e*P	**Pn**	**06 18 31.9**	**-0.2**
GUR	**Goura**	**3.01**	**347**	*e*P	**Pn**	**06 18 44.9**	**-0.1**
GUR	**Goura**	**3.01**	**347**	*e*P	**Pn**	**06 18 44.9**	**-0.1**
LTK	**Loutraki**	**3.02**	**357**	*e*P	**Pn**	**06 18 44.9**	**-0.3**
LTK	**Loutraki**	**3.02**	**357**	*e*P	**Pn**	**06 18 44.9**	**-0.3**
KARP	**Karpathos**	**3.29**	**79**	*e*P	**Pn**	**06 18 49.4**	**+0.5**
KARP	**Karpathos**	**3.29**	**79**	*e*P	**Pn**	**06 18 49.4**	**+0.5**
KARP	**Karpathos**	**3.29**	**79**	*e*P	**Pn**	**06 18 49.4**	**+0.5**
BRTR	**Keskin Array B**	**9.55**	**57**	Pn	**Pn**	**06 20 19.6**	**+5.0**
0.1nm,0.3s,baz=264,slow=9.4,SNR=2.7							
TORD	**Torodi Ar. Bea**	**29.18**	**227**	P	**P**	**06 23 56.5**	**+0.9**
0.3nm,0.8s,mb3.0,baz=29,slow=9.4,SNR=4.1							
MKAR	**Makanchi Array**	**45.20**	**56**	P	**P**	**06 26 09.7**	**-0.9**
0.2nm,0.4s,mb3.3,baz=276,slow=7.1,SNR=4.3							

*ISCJB **04** 06:51:20.6±0.7,13.75N±0.08×91.49W±0.04,h68km±18km, Error ellipse: s-maj=14.7km s-min=4.2km az=25.0*
*CASC **04** 06:51:21.9±1.7,13.73N×91.25W,h7km±11km,MD3.5*
*MEX **04** 06:51:23.6±0.3,13.70N×91.55W,h28km±7km,MD4.1*
ISC 04 06:51:22.1±0.7,13.76N±0.08×91.46W±0.04,h48km±35km, n19,σ0.82/31,1C,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.58**	**343**	*e*P	**Pn**	**06 51 35.5**	**+1.3**
FUG	**Fuego 3**	**0.91**	**41**	*e*P	**Pn**	**06 51 37.8**	**-0.8**
PCG	**Pacaya**	**1.04**	**53**	*e*P	**Pn**	**06 51 40.2**	**-0.1**
PCG				*e*S	**Sn**	**06 51 52.4**	**-1.4**
TP2	**Tecpan 2**	**1.11**	**23**	*e*P	**Pn**	**06 51 41.9**	**+0.7**
NBG	**Las Nubes**	**1.36**	**52**	*e*P	**Pn**	**06 51 45.3**	**+0.7**
NBG				*e*S	**Sn**	**06 52 01.0**	**-0.6**
THIG		**1.38**	**326**	*e*P	**Pn**	**06 51 44.8**	**-0.2**
THIG				*i*S	**Sn**	**06 52 01.4**	**-0.7**
RBDL	**Robledal**	**1.76**	**78**	*i*P	**Pn**	**06 51 49.4**	**-0.7**
RTR	**El Retiro**	**1.77**	**85**	*e*P	**Pn**	**06 51 49.7**	**-0.6**
SBLS	**San Blas**	**1.79**	**87**	*e*P	**Pn**	**06 51 49.5**	**-1.0**
SBLS				*e*S	**Sn**	**06 52 13.3**	**+1.3**
SNJE	**San Jose**	**1.81**	**86**	*e*P	**Pn**	**06 51 50.2**	**-0.6**
SNJE				*e*S	**Sn**	**06 52 14.3**	**+1.9**
LFRS	**El Faro**	**2.34**	**93**	*e*P	**Pn**	**06 51 57.5**	**-0.6**
LFRS				*e*S	**Sn**	**06 52 25.6**	**0.0**
LBRS	**Las Brisas**	**2.35**	**90**	*e*P	**Pn**	**06 51 57.7**	**-0.5**
SNVI	**San Vicente**	**2.55**	**93**	*e*P	**Pn**	**06 52 01.1**	**+0.1**
SNVI				*e*S	**Sn**	**06 52 30.7**	**-0.2**
PCIG		**2.58**	**319**	*i*P	**Pn**	**06 52 01.4**	**+0.1**
PCIG				*i*S	**Sn**	**06 52 31.4**	**-0.1**
CCIG	**Comitan**	**2.59**	**346**	*e*P	**Pn**	**06 52 02.8**	**+1.2**
CCIG				*i*S	**Sn**	**06 52 32.6**	**+0.7**
TGIG		**3.41**	**332**	*i*P	**Pn**	**06 52 13.6**	**+0.9**
TGIG				*i*S	**Sn**	**06 52 51.4**	**-0.4**
HUIG	**Huatulco**	**4.92**	**295**	*i*P	**Pn**	**06 52 33.2**	**-0.2**
HUIG				*i*S	**Sn**	**06 53 28.1**	**-1.1**
VHO	**Vista Hermosa**	**6.06**	**304**	*i*P	**Pn**	**06 52 50.6**	**+1.5**
VHO				*i*S	**Sn**	**06 53 56.3**	**-0.9**
PNIG	**Pinotepa**	**6.95**	**293**	*e*P	**Pn**	**06 53 01.9**	**+0.5**

*IDC **04** 06:53:32.0±0.8,7.84S×159.77E,h37km±5km,mb4.2/9, mb1 4.4/10,mb1mx4.2/17,mbtmp4.2/10,ML4.9/1,MS3.9/12, Ms1 3.9/12,ms1mx3.8/18,Error ellipse: s-maj=25.6km s-min=18.2km az=113.0*
*NEIC **04** 06:53:34.3±1.6,7.77S×159.68E,h58km±15km,mb4.7/8, Error ellipse: s-maj=12.6km s-min=11.0km az=145.0*
*ISCJB **04** 06:53:34.2±1.9,7.73S±0.09×159.60E±0.09,h67km±19km, mb4.4/18,Error ellipse: s-maj=15.9km s-min=14.0km az=22.1*
ISC 04 06:53:37.6±1.8,7.81S±0.09×159.63E±0.09,h85km±18km, h37km±4.0km:pP-P,n43,σ1.03/36,mb4.4/18,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.64**	**169**	*e*Pn	**Pn**	**06 54 00.1**	**-4.8**
HNR				*e*Sn	**Sn**	**06 54 25.4**	**+0.8**
NOUC	**Port Laguerre**	**15.59**	**156**	*e*P	**Pn**	**06 57 14.4**	**+1.8**
DZM	**Mont Dzumac**	**15.62**	**156**	*e*Pn	**Pn**	**06 57 12.8**	**-0.2**
61nm,0.9s							
COEN	**Coen**	**17.27**	**248**	*e*P	**Pn**	**06 57 34.9**	**+1.5**
COEN	**Coen**	**17.27**	**248**	*e*Pn	**Pn**	**06 57 32.5**	**-1.0**
120nm,1.0s							
CTA	**Charters Tower**	**17.80**	**225**	*e*P	**Pn**	**06 57 41.2**	**+1.3**
30nm,1.0s							
CTA	**Charters Tower**	**17.80**	**225**	P	**Pn**	**06 57 38.8**	**-1.1**
2.8nm,0.3s,baz=48,slow=12,SNR=38							
CTA				LR	LR	07 03 55.6	
comp=Z,762nm,18.4s,baz=52,slow=35							
CTAO	**Charters Tower**	**17.80**	**225**	*e*P	**Pn**	**06 57 40.3**	**+0.4**
72nm,1.2s							
EIDS	**Eidsvold**	**19.27**	**204**	*e*P	**Pn**	**06 57 56.6**	**-0.8**
EIDS	**Eidsvold**	**19.27**	**204**	*e*P	**Pn**	**06 57 55.9**	**-1.5**
61nm,0.9s							
RMQ	**Roma**	**21.25**	**208**	*e*P	**P**	**06 58 17.8**	**+0.8**
129nm,1.1s,mb5.2							
ARMA	**Armidale**	**23.71**	**197**	*e*P	**P**	**06 58 43.0**	**+1.2**
GUMO	**Guam**	**25.82**	**325**	P	**P**	**06 59 01.1**	**-0.1**
80nm,0.8s,mb5.2							
GUMO				LR	LR	07 07 35.4	
comp=Z,264nm,21.7s,slow=32							
GUMO	**Guam**	**25.82**	**325**	*e*P	**P**	**06 59 00.5**	**-0.7**
GUMO				LR	LR	07 07 35.4	
WRAB	**Tennant Creek**	**27.29**	**241**	*e*P	**P**	**06 59 12.5**	**-1.9**
22nm,1.0s,mb4.6							
AFI	**Afiamalu**	**28.71**	**105**	LR	LR	07 08 49.5	
comp=Z,177nm,20.6s,baz=95,slow=32							
STKA	**Stephens Creek**	**29.25**	**213**	*e*P	**P**	**06 59 31.2**	**-0.4**
8.8nm,0.5s,mb4.7							
STKA	**Stephens Creek**	**29.25**	**213**	P	**P**	**06 59 31.2**	**-0.5**
10.0nm,0.5s,mb4.7,baz=3.2,slow=6.4,SNR=27							
STKA				LR	LR	07 11 31.7	
comp=Z,783nm,18.7s,baz=28,slow=37							
STKA	**Stephens Creek**	**29.25**	**213**	*e*P	**P**	**06 59 31.1**	**-0.5**
STKA				LR	LR	07 11 31.7	
ASAR	**Alice Springs**	**29.27**	**234**	P	**P**	**06 59 30.4**	**-1.5**
9.8nm,0.7s,mb4.5,baz=62,slow=9.7,SNR=118							
ASAR				PcP	PcP	07 02 38.5	+1.4
2.2nm,1.0s,baz=65,slow=4.0,SNR=6.0							
ARPS	**Mount Arapiles**	**33.07**	**207**	*e*P	**P**	**07 00 04.8**	**-0.4**
30nm,0.6s,mb5.3							
KSRS	**Korea Array**	**53.91**	**329**	P	**P**	**07 02 52.4**	**0.0**
0.5nm,0.5s,mb3.8,baz=150,slow=8.1,SNR=4.3							
KSRS				LR	LR	07 24 40.5	
comp=Z,93nm,18.2s,baz=144,slow=35							
PETK	**Petropavlovsk-**	**60.70**	**359**	P	**P**	**07 03 39.3**	**-0.6**
1.9nm,0.9s,mb4.1,baz=220,slow=3.8,SNR=2.5							
PETK				pP	pP	07 03 51.3	-10
3.7nm,0.8s,baz=114,slow=3.7,SNR=4.1							
PETK				LR	LR	07 25 01.4	
comp=Z,108nm,22.0s,baz=158,slow=31							
CMAR	**Chiang Mai Arr**	**65.30**	**294**	P	**P**	**07 04 11.8**	**+0.7**
1.8nm,0.3s,mb4.3,baz=111,slow=4.5,SNR=7.7							
LZH	**Lanzhou**	**68.16**	**314**	*e*P	**P**	**07 04 37.4**	**+8.5**
LZH				pP	pP	07 04 42.0	-8.7
LZH				sP	sP	07 04 45.2	-15
LZH				pmax	pmax		
comp=Z,18nm,1.4s,mb4.7							
ULN	**Ulaanbaatar**	**72.20**	**326**	P	**P**	**07 04 54.6**	**+1.2**
comp=Z,10.0nm,1.2s,mb4.5							
GTA	**Gaotai**	**72.51**	**315**	*e*P	**P**	**07 04 56.8**	**+1.4**
GTA				pP	pP	07 05 03.7	-14
GTA				sP	sP	07 05 06.7	-20
GTA				pmax	pmax		
comp=Z,2.0nm,1.2s,mb3.8							
SONM	**Songino Array**	**72.56**	**326**	P	**P**	**07 04 55.9**	**+0.4**
comp=Z,1.5nm,0.6s,mb4.0,baz=136,slow=5.5,SNR=9.3							
SONM				pP	pP	07 05 07.6	-10
comp=Z,3.2nm,0.9s,baz=137,slow=5.2,SNR=9.2							
SONM				LR	LR	07 35 05.2	
comp=Z,60nm,19.2s,baz=97,slow=34							
SHL	**Shillong**	**73.68**	**299**	*e*PKP	**P**	**07 05 05.0**	**+2.4**
BILL	**Bilibino**	**75.81**	**3**	*e*P	**P**	**07 05 13.2**	**-0.8**
comp=Z,3.5nm,0.6s,mb4.3							
COLA	**College**	**82.22**	**20**	*e*P	**P**	**07 05 47.9**	**-1.2**
comp=Z,5.0nm,1.1s,mb4.3							
MK31	**Makanchi Array**	**87.07**	**318**	*e*P	**P**	**07 06 13.6**	**-0.2**
MKAR	**Makanchi Array**	**87.07**	**318**	P	**P**	**07 06 14.1**	**+0.2**
comp=Z,1.0nm,0.7s,mb3.9,baz=87,slow=8.0,SNR=6.3							
ZALV	**Zalesovo Beam**	**87.45**	**325**	LR	LR	07 45 38.6	
comp=Z,28nm,18.4s,baz=69,slow=36							
NVAR	**Mina Array Bea**	**88.63**	**51**	P	**P**	**07 06 21.1**	**-0.4**
comp=Z,2.0nm,1.0s,mb4.1,baz=233,slow=5.1,SNR=7.1							
NVAR				pP	pP	07 06 33.1	-11
comp=Z,1.9nm,1.0s,baz=242,slow=7.1,SNR=5.6							
YKA	**Yellowknife Ar**	**94.91**	**28**	P	**P**	**07 06 49.5**	**-0.5**
comp=Z,0.9nm,0.8s,mb4.2,baz=255,slow=3.8,SNR=5.6							
YKA				pP	pP	07 07 00.7

APSI	Ampana	2.13 239	P	Pn	06 55 52.7 +1.0
MPSI	Mapaga	3.57 272	P	Pn	06 56 12.0 +0.5
PCI	Palu	3.80 253	P	Pn	06 56 15.3 +0.7
TNTI	Ternate	3.94 82	P	Pn	06 56 17.1 +0.6
SGSI	Sangihe	4.02 31	P	Pn	06 56 18.5 +0.8

BJI ***04*** *07:50:49.7, 18.′67N×145.′86E, h195km, mB4.5/10, mb4.5/16*
NEIC ***04*** *07:50:50.8±0.2, 18.′63N×145.′62E, mb4.5/18, Error ellipse: s-maj=8.1km s-min=5.8km az=98.0*
ISCJB ***04*** *07:50:50.1±0.2, 18.′60N±0.′03×145.′54E±0.′04, h187km, mb4.4/44, Error ellipse: s-maj=5.1km s-min=4.6km az=1.6*
IDC ***04*** *07:50:51.4±0.6, 18.′67N×145.′52E, h190km±4km, mb3.9/20, mb1 4.0/22, mb1mx4.0/29, mbtmp3.9/22, Error ellipse: s-maj=12.8km s-min=9.0km az=80.0*
DJA ***04*** *07:50:56, 18.′33N×145.′66E, h215km, mb5.1/24*
ISC 04 07:50:51.6±0.2, 18.′63N±0.′03×145.′57E±0.′04, h189km, h189km±1.9km; pP-P, n221, σ0.61/223, mb4.4/44, 62C-75D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.06**	**188**	*e*Pn	**Pn**	**07 52 06.8**	**+0.3**
GUMO				*e*Sn	**Sn**	**07 53 04.4**	**-1.1**
CBIJ	**Chichi jima**	**8.99**	**340**	P	**Pn**	**07 52 57.5**	**-0.3**
	18nm,0.3s,baz=291,slow=21,SNR=5.2						
CBIJ				S	**Sn**	**07 54 32.8**	**-5.5**
	24nm,0.3s,baz=248,slow=23,SNR=4.7						
JOW	**Kunigami**	**17.91**	**300**	P	**Pn**	**07 54 49.9**	**+0.6**
	24nm,0.3s,baz=133,slow=12,SNR=25						
MJAR	**Matsushiro Arr**	**18.99**	**342**	P	**P**	**07 54 59.2**	**+0.4**
	2.1nm,0.3s,baz=167,slow=10.0,SNR=24						
MJAR				S	**S**	**07 58 22.3**	**-2.0**
	0.1nm,0.3s,baz=170,slow=15,SNR=4.6						
MJAR	**Matsushiro Arr**	**18.99**	**342**	P	**P**	**07 54 59.2**	**+0.4**
MJAR				S	**S**	**07 58 22.3**	**-2.0**
MAJO	**Matsushiro**	**18.99**	**341**	*e*Pn	**P**	**07 54 58.2**	**-0.6**
	18nm,0.5s						
MAT	**Matsushiro**	**18.99**	**341**	P	**P**	**07 54 58.5**	**-0.3**
MAT				S	**S**	**07 58 22.8**	**-1.5**
SSLB	**Suanglung**	**23.50**	**287**	*e*P	**P**	**07 55 46.8**	**+2.2**
KSRS	**Korea Array**	**24.30**	**324**	P	**P**	**07 55 51.4**	**-0.4**
	2.2nm,0.6s,mb3.9,baz=152,slow=8.3,SNR=7.6						
KSRS				pP		07 56 27.6	
	4.8nm,0.8s,baz=145,slow=9.2,SNR=4.8						
ASAJ	**Asahikawa**	**25.53**	**355**	P	**P**	**07 56 02.4**	**-0.4**
	3.8nm,0.4s,mb4.4,baz=197,slow=14,SNR=5.2						
ASAJ				pP	pP	07 56 40.0	-0.9
	12nm,0.8s,baz=186,slow=8.9,SNR=4.5						
NJ2	**Nanjing**	**27.51**	**304**	*e*P	**P**	**07 56 22.5**	**+1.9**
NJ2				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.0						
MDJ	**Mudanjiang**	**29.16**	**336**	P	**P**	**07 56 36.1**	**+1.1**
MDJ				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.0						
MDJ				pmax	pmax		
	comp=Z,52nm,4.9s						
CN2	**Changchun**	**30.27**	**330**	*e*P	**P**	**07 56 47.4**	**+2.6**
CN2				*e*pP	pP	07 57 24.4	+0.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
COEN	**Coen**	**32.47**	**184**	*e*P	**P**	**07 57 03.9**	**-0.4**
COEN	**Coen**	**32.47**	**184**	*e*P	**P**	**07 57 03.2**	**-1.1**
	comp=Z,116nm,0.6s						
KAKA	**Kakadu**	**33.73**	**204**	*e*P	**P**	**07 57 15.2**	**-0.1**
	comp=Z,69nm,0.6s,mb5.6						
KAPI	**Kappang**	**34.63**	**230**	P	**P**	**07 57 22.7**	**-0.4**
	comp=Z,17nm,0.6s,mb4.8,baz=70,slow=4.7,SNR=12						
HHC	**Hu-ho-hao-te**	**36.57**	**315**	*e*P	**P**	**07 57 39.9**	**+0.6**
HHC				pP	pP	07 58 20.2	+1.2
HHC				sP	sP	07 58 42.0	+1.4
HHC				PP	PP	07 59 10.9	+4.3
HHC				PcP	PcP	07 59 59.3	+0.8
HHC				S	**S**	**08 03 07.9**	**+0.2**
HHC				ScP	ScP	08 03 27.1	-0.2
HHC				PcS	PcS	08 03 46.3	-0.2
HHC				sS	sS	08 04 19.1	+1.4
HHC				SS	SS	08 05 48.2	-7.7
HHC				ScS	ScS	08 07 32.2	-2.1
HHC				pmax	pmax		
	comp=Z,21nm,0.7s,mb4.9						
HHC				pmax	pmax		
	comp=Z,52nm,6.1s						
HHC				LR	LR		
	comp=N,77nm,17.8s						
HHC				LR	LR		
	comp=E,120nm,16.6s						
HHC				LR	LR		
	comp=Z,100nm,19.0s						
GYA	**Guiyang**	**36.66**	**289**	P	**P**	**07 57 40.8**	**+0.5**
GYA				pP	pP	07 58 22.0	+2.0
GYA				sP	sP	07 58 42.6	+1.0
GYA				PP	PP	07 59 12.0	+4.1
GYA				PcP	PcP	08 00 01.2	+2.1
GYA				S	**S**	**08 03 10.5**	**+1.0**
GYA				ScP	ScP	08 03 28.7	+0.7
GYA				PcS	PcS	08 03 47.6	+0.2
GYA				ScS	ScS	08 07 34.2	-1.2
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4						
CTA	**Charters Tower**	**38.48**	**179**	*e*P	**P**	**07 57 55.3**	**-0.2**
	comp=Z,6.2nm,0.7s,mb4.3						
CTAO	**Charters Tower**	**38.48**	**179**	*e*P	**P**	**07 57 54.7**	**-0.8**
	comp=Z,8.2nm,0.7s,mb4.5						
WRAB	**Tennant Creek**	**39.87**	**197**	*e*P	**P**	**07 58 06.5**	**-0.5**
	comp=Z,56nm,1.2s,mb5.1						
KMI	**Kunming**	**40.14**	**287**	P	**P**	**07 58 11.2**	**+1.8**
KMI				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.5						
LZH	**Lanzhou**	**40.59**	**304**	P	**P**	**07 58 14.0**	**+1.1**
LZH				pP	pP	07 58 54.3	+1.1
LZH				sP	sP	07 59 15.8	+1.2
LZH				PP	PP	07 59 54.2	+3.8
LZH				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.6						
LZH				pmax	pmax		
	comp=Z,53nm,6.0s						
FITZ	**Fitzroy Crossi**	**41.43**	**209**	*e*P	**P**	**07 58 20.6**	**+0.8**
	comp=Z,38nm,0.8s,mb5.1						
FITZ	**Fitzroy Crossi**	**41.43**	**209**	*e*P	**P**	**07 58 20.5**	**+0.7**
	comp=Z,39nm,0.9s,mb5.0						
SONM	**Songino Array**	**43.12**	**321**	P	**P**	**07 58 32.0**	**-1.2**
	comp=Z,1.1nm,0.5s,mb3.7,baz=135,slow=8.2,SNR=9.5						
SONM				pP	pP	07 59 14.4	+0.4
	comp=Z,1.3nm,0.6s,baz=130,slow=7.4,SNR=2.9						
SONM				ScP	ScP	08 03 49.5	-3.2
	comp=Z,0.6nm,0.8s,baz=155,slow=2.2,SNR=4.0						
ASAR	**Alice Springs**	**43.55**	**196**	P	**P**	**07 58 36.7**	**-0.2**
	comp=Z,4.9nm,0.5s,mb4.4,baz=15,slow=10,SNR=47						
ASAR				PcP	PcP	08 00 20.9	-0.3
	comp=Z,3.0nm,0.7s,baz=11,slow=3.1,SNR=5.6						
ASAR				ScP	ScP	08 03 52.5	-2.3
	comp=Z,0.8nm,0.7s,baz=20,slow=4.0,SNR=4.3						
CMAR	**Chiang Mai Arr**	**44.11**	**278**	P	**P**	**07 58 41.1**	**-0.4**
	comp=Z,1.4nm,0.3s,mb4.0,baz=73,slow=6.8,SNR=5.9						
DZM	**Mont Dzumac**	**45.31**	**152**	*e*P	**P**	**07 58 50.1**	**-0.7**
DZM	**Mont Dzumac**	**45.31**	**152**	*e*P	**P**	**07 58 50.8**	**0.0**
	comp=Z,157nm,1.1s						
MBWA	**Marble Bar**	**46.95**	**214**	*e*P	**P**	**07 59 04.3**	**+0.7**
MBWA	**Marble Bar**	**46.95**	**214**	*e*P	**P**	**07 59 04.1**	**+0.4**
	comp=Z,6.7nm,0.4s,mb4.6						
PSI	**Prapat**	**48.27**	**257**	P	**P**	**07 59 14.4**	**+0.4**
	comp=Z,3.6nm,0.8s,mb4.1,baz=33,slow=8.3,SNR=4.0						
ARMA	**Armidale**	**49.11**	**173**	*e*P	**P**	**07 59 19.0**	**-1.0**
STKA	**Stephens Creek**	**50.36**	**184**	*e*P	**P**	**07 59 28.3**	**-1.1**
	comp=Z,1.8nm,0.3s,mb4.2						
STKA	**Stephens Creek**	**50.36**	**184**	P	**P**	**07 59 28.5**	**-1.0**
	comp=Z,5.6nm,0.8s,mb4.3,baz=349,slow=8.9,SNR=12						
STKA	**Stephens Creek**	**50.36**	**184**	*e*P	**P**	**07 59 28.6**	**-0.9**
	comp=Z,26nm,2.8s,mb4.4						
BILL	**Bilibino**	**51.11**	**10**	*e*P	**P**	**07 59 35.7**	**+1.2**
	comp=Z,6.4nm,0.9s,mb4.2						
WMQ	**Urumqi**	**54.27**	**311**	*e*P	**P**	**08 00 00.0**	**+1.9**
KLBR	**Kellerberrin**	**56.62**	**208**	*e*P	**P**	**08 00 15.1**	**+0.1**
	comp=Z,39nm,1.0s,mb5.2						
NWAO	**Narrogin (SRO)**	**57.98**	**208**	*e*P	**P**	**08 00 24.9**	**+0.4**
	comp=Z,40nm,1.3s,mb5.1						
ZALV	**Zalesovo Beam**	**58.00**	**323**	P	**P**	**08 00 23.8**	**-0.6**
	comp=Z,2.3nm,0.7s,mb4.1,baz=109,slow=6.9,SNR=7.5						
ZALV				pP	pP	08 01 06.5	-1.1
	comp=Z,3.7nm,0.8s,baz=109,slow=8.4,SNR=2.9						
ZALV	**Zalesovo Beam**	**58.00**	**323**	P	**P**	**08 00 23.8**	**-0.6**
ZALV				pP	pP	08 01 06.5	-1.1

MK31	**Makanchi Array**	**58.42**	**314**	*e*P	**P**	**08 00 27.5**	**0.0**
MKAR	**Makanchi Array**	**58.42**	**314**	P	**P**	**08 00 27.2**	**-0.3**
	comp=Z,1.5nm,0.5s,mb4.1,baz=82,slow=9.7,SNR=27						
MKAR				pP	pP	08 01 09.7	-1.0
	comp=Z,1.7nm,0.7s,baz=83,slow=9.9,SNR=4.5						
RSO	**Redoubt South**	**60.08**	**30**	*e*P	**P**	**08 00 32.1**	**-6.4**
KURK	**Kurchatov**	**61.24**	**318**	Pn	**P**	**08 00 44.6**	**-2.0**
	comp=Z,3.2nm,1.0s,mb4.1						
KURK				Lg		08 01 22.6	
	comp=Z,6.7nm,0.8s						
KURK	**Kurchatov**	**61.24**	**318**	P	**P**	**08 00 46.1**	**-0.5**
	comp=Z,3.7nm,0.7s,mb4.3,baz=96,slow=7.5,SNR=14						
KURK				pP	pP	08 01 27.4	-2.8
	comp=Z,6.9nm,0.9s,baz=99,slow=7.5,SNR=4.2						
KURBB	**Kurchatov Arra**	**61.29**	**318**	Pn	**P**	**08 00 45.6**	**-1.3**
	comp=Z,0.6nm,0.7s,mb3.5,baz=305,slow=19						
KURBB				Lg	pP	08 01 26.2	-4.3
	comp=Z,1.7nm,0.6s,baz=309,slow=32						
BPAW	**Bear Paw Mtn.**	**61.87**	**26**	*e*P	**P**	**08 00 50.1**	**-0.4**
	comp=Z,6.4nm,0.8s,mb4.5						
TKM2	**Tokmak 2**	**63.00**	**309**	*e*P	**P**	**08 00 59.1**	**+0.7**
	comp=Z,1.6nm,0.6s,mb4.0						
TKM2				*e*pP	pP	08 01 47.0	+4.6
AAK	**Ala-Archa**	**63.82**	**309**	P	**P**	**08 01 02.8**	**-1.1**
	comp=Z,1.2nm,0.3s,mb4.2,baz=175,slow=11,SNR=3.3						
BVAR	**Borovoye Array**	**66.45**	**320**	P	**P**	**08 01 19.6**	**-1.0**
	comp=Z,4.7nm,0.6s,mb4.5,baz=104,slow=16,SNR=5.7						
BVAR				pP	pP	08 02 04.3	-0.5
	comp=Z,11nm,0.9s,baz=91,slow=7.0,SNR=3.7						
BRVK	**Borovoye**	**66.52**	**320**	*e*P	**P**	**08 01 20.2**	**-0.8**
	comp=Z,4.6nm,0.6s,mb4.5						
HYT	**Haines Junctio**	**67.55**	**31**	*e*P	**P**	**08 01 29.6**	**+2.3**
INK	**Inuvik**	**69.48**	**23**	P	**P**	**08 01 38.8**	**-0.4**
	comp=Z,1.8nm,0.6s,mb4.0,baz=284,slow=8.4,SNR=9.0						
INK				pP	pP	08 02 23.7	-0.2
	comp=Z,1.7nm,0.7s,baz=282,slow=6.8,SNR=2.8						
INK	**Inuvik**	**69.48**	**23**	*e*P	**P**	**08 01 38.4**	**-0.8**
ABKAR	**Akbulak array**	**73.31**	**317**	*e*P	**P**	**08 02 01.1**	**-1.4**
	comp=Z,3.5nm,0.4s,mb4.4						
YKA	**Yellowknife Ar**	**78.11**	**28**	P	**P**	**08 02 28.7**	**-0.7**
	comp=Z,2.1nm,0.6s,mb3.9,baz=290,slow=5.5,SNR=11						
YKA				pP	pP	08 03 11.6	-3.4
	comp=Z,1.8nm,0.6s,baz=293,slow=5.0,SNR=4.0						
YKA	**Yellowknife Ar**	**78.11**	**28**	P	**P**	**08 02 28.7**	**-0.7**
YKA				pP	pP	08 03 11.6	-3.4
RES	**Resolute Bay**	**79.52**	**14**	*e*P	**P**	**08 02 36.8**	**-0.1**
	comp=Z,3.3nm,0.8s,mb4.0						
B08A	**Colville Reser**	**79.61**	**42**	⇑P	**P**	**08 02 37.4**	**-0.4**
	baz=79						
K05A	**Summer Lake**	**80.12**	**48**	⇑P	**P**	**08 02 40.3**	**-0.4**
	baz=80						
J08A	**Circle Bar Ran**	**81.64**	**47**	⇓P	**P**	**08 02 48.2**	**-0.5**
	baz=82						
CMB	**Columbia Colle**	**81.83**	**53**	*e*P	**P**	**08 02 49.2**	**-0.6**
G10A	**Bishop Farm, J**	**81.97**	**45**	⇑P	**P**	**08 02 49.8**	**-0.6**
	baz=82						
G11A	**Walters Elk Ra**	**82.50**	**45**	⇓P	**P**	**08 02 52.6**	**-0.6**
	baz=82						
ARCES	**ARCESS Array B**	**82.52**	**342**	P	**P**	**08 02 52.1**	**-0.7**
	comp=Z,3.4nm,0.9s,mb4.1,baz=80,slow=7.8,SNR=16						
ARCES				pP	pP	08 03 38.7	-0.2
	comp=Z,1.5nm,0.5s,baz=63,slow=8.5,SNR=1.9						
E12A	**Beaver Dam Sad**	**82.63**	**44**	⇑P	**P**	**08 02 53.7**	**-0.2**
	baz=82						
H11A	**Donnelly**	**82.90**	**45**	⇓P	**P**	**08 02 54.6**	**-0.6**
	baz=83						
K10A	**MacKenzie Ranc**	**82.93**	**47**	⇑P	**P**	**08 02 55.8**	**+0.3**
	baz=83						
NVAR	**Mina Array Bea**	**83.28**	**52**	P	**P**	**08 02 58.0**	**+0.6**
	comp=Z,5.0nm,0.7s,mb4.3,baz=266,slow=6.0,SNR=42						
NVAR				pP	pP	08 03 42.8	-0.7
	comp=Z,9.6nm,1.0s,baz=265,slow=6.0,SNR=6.9						
C14A	**Swan Lake**	**83.35**	**42**	⇑P	**P**	**08 02 57.2**	**-0.2**
	baz=83						
L10A	**Juniper Basin**	**83.44**	**48**	⇓P	**P**	**08 02 57.8**	**-0.2**
	baz=83						
MFID	**Camas Ranch**	**83.45**	**46**	⇑P	**P**	**08 02 58.0**	**-0.1**
	baz=83						
K11A	**Parker Ranch,**	**83.52**	**47**	⇑P	**P**	**08 02 58.6**	**+0.2**
	baz=83						
A15A	**Johnson Ranch,**	**83.56**	**40**	⇓P	**P**	**08 02 58.4**	**-0.1**
	baz=83						
F13A	**Darby**	**83.65**	**44**	⇓P	**P**	**08 02 58.6**	**-0.5**
	baz=84						
I12A	**Atlanta**	**83.80**	**46**	⇑P	**P**	**08 02 59.4**	**-0.4**
	baz=84						
B15A	**Bradely Ranch,**	**83.90**	**41**	⇓P	**P**	**08 02 59.9**	**-0.4**
	baz=84,SNR=5.8						
L11A	**Cat Creek Ranc**	**83.91**	**48**	⇑P	**P**	**08 03 00.2**	**-0.2**
	baz=84						
G13A	**Cobalt**	**83.96**	**45**	⇓P	**P**	**08 03 00.3**	**-0.4**
	baz=84,SNR=8.9						
C15A	**Salmond Ranch,**	**84.07**	**42**	⇑P	**P**	**08 03 00.8**	**-0.3**
	baz=84						
H13A	**Challis**	**84.13**	**45**	⇓P	**P**	**08 03 01.5**	**0.0**
	baz=84,SNR=7.6						
M11A	**Holland Ranch,**	**84.13**	**48**	⇑P	**P**	**08 03 01.0**	**-0.6**
	baz=84						
A16A	**West Butte Ran**	**84.27**	**40**	⇑P	**P**	**08 03 01.8**	**-0.2**
	baz=84						
K12A	**Draper Farm, C**	**84.35**	**47**	⇑P	**P**	**08 03 02.7**	**+0.1**
	baz=84						
HLID	**Hailey**	**84.37**	**46**	⇑P	**P**	**08 03 02.6**	**-0.1**
	baz=84						
B16A	**M & M Farms, S**	**84.39**	**41**	⇓P	**P**	**08 03 02.4**	**-0.4**
	baz=84						
L12A	**House Creek Ra**	**84.44**	**47**	⇓P	**P**	**08 03 03.3**	**+0.2**
	baz=84						
I13A	**Wildhorse Cree**	**84.45**	**46**	⇑P	**P**	**08 03 02.8**	**-0.3**
	baz=84						
E15A	**Deer Lodge**	**84.53**	**43**	⇓P	**P**	**08 03 03.3**	**-0.2**
	baz=84,SNR=11						
J13A	**Cove Ranch, Pi**	**84.59**	**46**	⇓P	**P**	**08 03 04.0**	**+0.2**
	baz=84,SNR=5.8						
MPMC	**Manual Prospec**	**84.65**	**54**	⇑P	**P**	**08 03 04.2**	**-0.1**
	baz=84						
H14A	**Leadore**	**84.70**	**45**	⇓P	**P**	**08 03 04.6**	**+0.3**
	baz=84,SNR=10.0						
S10A	**Tonopah Range,**	**84.71**	**52**	⇑P	**P**	**08 03 04.8**	**+0.2**
	baz=84						
M12A	**Wells**	**84.76**	**48**	⇓P	**P**	**08 03 04.8**	**+0.1**
	baz=85						
A17A	**Triple J Farms**	**84.81**	**40**	⇓P	**P**	**08 03 04.7**	**-0.1**
	baz=85						
F15A	**Butte**	**84.84**	**43**	⇓P	**P**	**08 03 04.8**	**-0.2**
	baz=85,SNR=8.6						
LRM	**Limekiln Ridge**	**84.87**	**43**	*e*P	**P**	**08 03 05.2**	**0.0**
I14A	**Mackay**	**84.89**	**45**	⇓P	**P**	**08 03 05.4**	**+0.1**
	baz=85						
K13A	**Stover Farm, H**	**84.91**	**47**	⇑P	**P**	**08 03 05.6**	**+0.2**
	baz=85						
DLMT	**Dillon**	**84.94**	**44**	*e*P	**P**	**08 03 05.4**	**-0.1**
FURC	**Furnace Creek,**	**85.00**	**53**	⇑P	**P**	**08 03 05.9**	**-0.1**
	baz=85						
B17A	**L&G Farms, Che**	**85.00**	**41**	⇑P	**P**	**08 03 05.5**	**-0.3**
	baz=85						
D16A	**Dana Ranch, Ca**	**85.01**	**42**	⇓P	**P**	**08 03 05.8**	**-0.1**
	baz=85						
J14A	**Carey**	**85.06**	**46**	⇓P	**P**	**08 03 06.6**	**+0.4**
	baz=85,SNR=9.0						
G15A	**Dillon**	**85.09**	**44**	⇓P	**P**	**08 03 06.1**	**-0.2**
	baz=85						
E16A	**East Helena**	**85.11**	**43**	⇓P	**P**	**08 03 06.3**	**-0.1**
	baz=85						
L13A	**Double Diamond**	**85.20**	**47**	⇑P	**P**	**08 03 07.2**	**+0.3**
	baz=85						
O12A	**Currie**	**85.27**	**49**	⇓P	**P**	**08 03 07.4**	**0.0**
	baz=85						
M13A	**Montello**	**85.31**	**48**	⇓P	**P**	**08 03 07.6**	**+0.1**
	baz=85,SNR=6.0						
M13A	**Montello**	**85.31**	**48**	*e*P	**P**	**08 03 08.0**	**+0.6**
R11A	**Troy Canyon, C**	**85.32**	**51**	⇑P	**P**	**08 03 07.8**	**+0.2**
	baz=85						
A18A	**Metzger Ranch,**	**85.34**	**40**	⇑P	**P**	**08 03 07.3**	**-0.1**
	baz=85						
U10A	**Ash Meadows, A**	**85.42**	**53**	⇑P	**P**	**08 03 08.2**	**+0.1**
	baz=85						
F16A	**Kennard Place,**	**85.42**	**43**	⇓P	**P**	**08 03 07.7**	**-0.2**
	baz=85,SNR=8.1						
P12A	**McGill**	**85.43**	**50**	⇓P	**P**	**08 03 07.9**	**-0.2**
	baz=85						
S11A	**Rachel**	**85.44**	**52**	⇓P	**P**	**08 03 08.2**	**+0.1**
	baz=85						
BOZ	**Bozeman (W)**	**85.47**	**43**	⇓P	**P**	**08 03 08.1**	**-0.1**
	baz=85						
BOZ	**Bozeman (W)**	**85.47**	**43**	*e*P	**P**	**08 03 08.5**	**+0.3**
D17A	**Six Diamond Ra**	**85.51**	**42**	⇓P	**P**	**08 03 08.2**	**-0.1**
	baz=85						

G16A	**Moss Hill, Enn**	**85.51**	**44**	⇑P	**P**	**08 03 08.3**	**-0.1**
	baz=85,SNR=12						
K14A	**Jones Ranch, D**	**85.57**	**47**	⇓P	**P**	**08 03 08.5**	**-0.3**
	baz=85						
B18A	**Beardsley Farm**	**85.59**	**40**	⇓P	**P**	**08 03 08.4**	**-0.3**
	baz=85						
Q12A	**Willow Creek R**	**85.64**	**50**	⇑P	**P**	**08 03 08.8**	**-0.3**
	baz=86						
E17A	**Martinsdale**	**85.66**	**42**	⇓P	**P**	**08 03 08.9**	**-0.2**
	baz=86						
L14A	**Malta**	**85.71**	**47**	⇓P	**P**	**08 03 09.8**	**+0.3**
	baz=86,SNR=6.0						
J15A	**Blackfoot**	**85.77**	**46**	⇓P	**P**	**08 03 10.5**	**+0.8**
	baz=86,SNR=6.8						
M14A	**Sheep Mountain**	**85.83**	**48**	⇑P	**P**	**08 03 10.3**	**+0.3**
	baz=86						
T11A	**Corn Creek, Al**	**85.97**	**52**	⇑P	**P**	**08 03 10.6**	**-0.2**
	baz=86						
F17A	**Fitzpatrick Pl**	**86.00**	**43**	⇑P	**P**	**08 03 10.7**	**-0.1**
	baz=86						
R12A	**Pony Springs,**	**86.05**	**51**	⇑P	**P**	**08 03 11.4**	**+0.2**
	baz=86						
H16A	**Russell Place,**	**86.08**	**44**	⇓P	**P**	**08 03 11.5**	**+0.3**
	baz=86						
P13A	**Bates Ranch, G**	**86.08**	**50**	⇓P	**P**	**08 03 11.4**	**+0.1**
	baz=86,SNR=5.2						
N14A	**Grayback Hills**	**86.18**	**48**	⇑P	**P**	**08 03 11.8**	**0.0**
	baz=86						
E18A	**Harlowton**	**86.22**	**42**	⇓P	**P**	**08 03 12.0**	**+0.2**
	baz=86,SNR=5.1						
I16A	**Newdale**	**86.23**	**45**	⇑P	**P**	**08 03 12.4**	**+0.4**
	baz=86						
YMR	**Madison River**	**86.28**	**44**	*e*P	**P**	**08 03 13.2**	**+1.1**
	comp=Z,5.0nm,0.8s,mb4.3						
YMR				*e*pP	pP	08 03 58.5	-0.2
L15A	**Malad City**	**86.32**	**47**	⇓P	**P**	**08 03 12.2**	**-0.2**
	baz=86						
R13A	**O'Grain Ranch,**	**86.57**	**51**	⇓P	**P**	**08 03 13.6**	**-0.1**
	baz=86						
F18A	**Big Timber**	**86.61**	**43**	⇑P	**P**	**08 03 13.7**	**0.0**
	baz=86						
DUG	**Dugway**	**86.68**	**49**	⇑P	**P**	**08 03 14.1**	**-0.1**
	baz=86						
DUG	**Dugway**	**86.68**	**49**	*e*P	**P**	**08 03 13.1**	**-1.1**
	comp=Z,4.8nm,1.0s,mb4.3						
DUG				*e*pP	pP	08 03 59.9	-0.9
P14A	**Drum Mountains**	**86.72**	**49**	⇓P	**P**	**08 03 14.4**	**0.0**
	baz=86						
V12A	**Nelson**	**86.78**	**53**	⇓P	**P**	**08 03 14.9**	**+0.1**
	baz=87						
Q14A	**Sevier Lake (B**	**86.79**	**50**	⇓P	**P**	**08 03 15.0**	**+0.2**
	baz=87,SNR=7.5						
S13A	**Holt Ranch, En**	**86.87**	**51**	⇓P	**P**	**08 03 15.1**	**-0.1**
	baz=87						
FINES	**FINESS Array B**	**86.90**	**335**	P	**P**	**08 03 12.8**	**-2.0**
	comp=Z,2.4nm,0.4s,mb4.4,baz=67,slow=4.8,SNR=22						
FINES				pP	pP	08 04 00.5	-0.9
	comp=Z,2.0nm,0.5s,baz=64,slow=4.4,SNR=3.3						
L16A	**Fish Haven**	**86.97**	**47**	⇓P	**P**	**08 03 15.8**	**+0.2**
	baz=87						
T13A	**Saint George**	**87.03**	**52**	⇓P	**P**	**08 03 16.3**	**+0.3**
	baz=87,SNR=5.3						
HWUT	**Hardware Ranch**	**87.03**	**47**	*e*P	**P**	**08 03 14.8**	**-1.1**
ARUT	**Antelope Range**	**87.10**	**51**	*e*P	**P**	**08 03 16.6**	**+0.3**
	comp=Z,5.1nm,0.8s,mb4.4						
U13A	**Pakoon Wash**	**87.20**	**53**	⇑P	**P**	**08 03 17.0**	**+0.1**
	baz=87,SNR=7.6						
CCUT	**Cedar City**	**87.25**	**51**	*e*P	**P**	**08 03 17.6**	**+0.6**
S14A	**Cedar City**	**87.31**	**51**	⇓P	**P**	**08 03 17.5**	**+0.1**
	baz=87						
V13A	**Grand Canyon W**	**87.39**	**53**	⇑P	**P**	**08 03 17.5**	**-0.3**
	baz=87						
Q15A	**Fillmore**	**87.43**	**50**	⇑P	**P**	**08 03 17.9**	**0.0**
	baz=87						
T14A	**Hurricane**	**87.63**	**52**	⇓P	**P**	**08 03 18.7**	**-0.1**
	baz=87						
K18A	**Toltan Ranch,**	**87.68**	**46**	⇑P	**P**	**08 03 19.1**	**+0.1**
	baz=88						
U14A	**Mt Trumbull**	**87.79**	**52**	⇓P	**P**	**08 03 19.6**	**0.0**
	baz=88						
R15A	**Junction**	**87.80**	**50**	⇓P	**P**	**08 03 20.0**	**+0.4**
	baz=88						
S15A	**Panguitch**	**87.94**	**51**	⇓P	**P**	**08 03 20.8**	**+0.5**

baz=92
X20A Quemado 92.04 53 ⇓P P 08 03 40.2 +0.7
baz=92
Y20A Horse Springs, 92.39 53 ⇑P P 08 03 41.9 +0.8
baz=92
Z20A Nine Sixteen R 92.55 54 ⇑P P 08 03 42.8 +0.9
baz=92
X21A Alamocita Cree 92.62 52 ⇓P P 08 03 42.4 +0.3
baz=92
Y21A Point of Rocks 92.88 53 ⇓P P 08 03 44.1 +0.7
baz=93
Z22A Elephant Butte 93.73 53 ⇓P P 08 03 47.7 +0.4
baz=94
W24A Lazy 6 Ranch, 94.06 51 ⇑P P 08 03 49.1 +0.4
baz=94
BRTR Keskin Array B 94.08 314 P **P 08 03 47.8 -0.9**
comp=Z,0.4nm,0.2s,mb4.1,baz=54,slow=7.3,SNR=8.5
Z25A Roswell 95.42 52 ⇑P **P 08 03 54.8 -0.2**
baz=95
Z26A Caprock 95.98 52 ⇓P **P 08 03 56.8 -0.7**
baz=96
PLCA Paso Flores 142.04 133 PKhKP 08 09 56.2
comp=Z,1.9nm,0.8s,baz=202,slow=19,SNR=4.3
LCO Las Campanas 145.37 114 *e*PKPdf PKPdf 08 10 07.7 +0.3
LPAZ La Paz 147.79 91 PKP PKPdf 08 10 12.5 +0.6
comp=Z,38nm,1.3s,baz=350,slow=4.4,SNR=33
LPAZ PKPbc PKPbc 08 10 15.3 +0.4
comp=Z,38nm,1.3s,baz=313,slow=2.7,SNR=35
LPAZ La Paz 147.79 91 *e*PKPdf PKPdf 08 10 12.3 +0.5
CPUP Villa Florida 157.51 114 PKPab PKPab 08 10 58.9 +0.2
comp=Z,2.7nm,0.8s,baz=276,slow=4.5,SNR=6.3

DDA ***04*** *07:54:21.2, 40.°48N×29.°29E, h7km±2km, Md2.8*
ISK ***04*** *07:54:21.9, 40.°45N×29.°21E, h4km, MD2.5*
CSEM ***04*** *07:54:22.6±0.1, 40.°44N×29.°20E, h2km, MD2.5, Error ellipse: s-maj=3.2km s-min=2.4km az=11.0*
ISCJB ***04*** *07:54:22.1±0.5, 40.°45N±0.°03×29.°20E±0.°04, h10km, Error ellipse: s-maj=4.7km s-min=3.9km az=17.3*
ISC 04 07:54:22.6±0.5, 40.°45N±0.°03×29.°21E±0.°04, h10km, n18, σ0.91/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEMT	**Gemlik**	**0.02**	**219**	PG	**Pg**	**07 54 22.9**	**-1.5**
GEMT				*e*SG	**Sg**	**07 54 23.8**	**-1.8**
GEMT	**Gemlik**	**0.02**	**219**	*i* Pg	**Pg**	**07 54 22.9**	**-1.5**
GEMT				*e*Sg	**Sg**	**07 54 23.8**	**-1.8**
YLV	**Yalova**	**0.17**	**48**	*e*PG	**Pg**	**07 54 26.1**	**-0.3**
YLV				*e*SG	**Sg**	**07 54 29.1**	**+0.2**
YLV	**Yalova**	**0.17**	**48**	*e*Pg	**Pg**	**07 54 26.1**	**-0.3**
YLV				*e*Sg	**Sg**	**07 54 29.1**	**+0.2**
ARMT	**Armutlu**	**0.29**	**294**	*e*PG	**Pg**	**07 54 28.3**	**-0.1**
ARMT				*e*SG	**Sg**	**07 54 32.8**	**+0.6**
ARMT	**Armutlu**	**0.29**	**294**	*e*Pg	**Pg**	**07 54 28.3**	**-0.1**
ARMT				*e*Sg	**Sg**	**07 54 32.8**	**+0.5**
ULDT	**Uludag**	**0.31**	**190**	*i* P	**Pg**	**07 54 28.3**	**-0.6**
ULDT	**Uludag**	**0.31**	**190**	*i* P	**Pg**	**07 54 28.3**	**-0.6**
ADVT	**Abdulvahap**	**0.41**	**92**	*e*PG	**Pg**	**07 54 30.8**	**+0.1**
ADVT	**Abdulvahap**	**0.41**	**92**	*e*Pg	**Pg**	**07 54 30.8**	**+0.2**
ELBA	**Catalca**	**0.91**	**320**	*i* P	**Pg**	**07 54 39.4**	**-0.8**
ELBA				*i* S	**Sg**	**07 54 52.3**	**+0.3**
ELBA	**Catalca**	**0.91**	**320**	*i* P	**Pg**	**07 54 39.4**	**-0.8**
ELBA				*i* S	**Sg**	**07 54 52.3**	**+0.2**
CTKS	**Kestanelik-??a**	**0.95**	**326**	*e*PG	**Pg**	**07 54 40.4**	**-0.5**
CTKS				*e*SG	**Sg**	**07 54 54.3**	**+1.1**
CTKS	**Kestanelik-??a**	**0.95**	**326**	*e*Pg	**Pg**	**07 54 40.4**	**-0.5**
CTKS				*e*Sg	**Sg**	**07 54 54.3**	**+1.1**
GULT	**Gulveren**	**1.00**	**91**	*e*PG	**Pg**	**07 54 41.8**	**-0.1**
GULT				*e*SG	**Sg**	**07 54 56.2**	**+1.3**
GULT	**Gulveren**	**1.00**	**91**	*e*Pg	**Pg**	**07 54 41.8**	**-0.1**
GULT				*e*Sg	**Sg**	**07 54 56.2**	**+1.3**
DURS	**Dursunbey**	**1.02**	**214**	*i* P	**Pg**	**07 54 42.4**	**+0.2**
DURS				*i* S	**Sg**	**07 54 57.4**	**+2.0**
DURS	**Dursunbey**	**1.02**	**214**	*i* P	**Pg**	**07 54 42.4**	**+0.2**
DURS				*i* S	**Sg**	**07 54 57.4**	**+2.0**

IDC ***04*** *08:14:32.5±1.8, 5.°35S×103.°14E, h0km, mb4.2/9, mb1 4.2/9, mb1mx4.0/22, mbtmp4.2/9, Error ellipse: s-maj=71.4km s-min=23.3km az=53.0*
NEIC ***04*** *08:14:37.6±0.8, 5.°36S×103.°21E, h35km, Error ellipse: s-maj=28.0km s-min=8.6km az=221.0*
ISCJB ***04*** *08:14:43.2±0.8, 5.°33S±0.°08×103.°46E±0.°08, h106km±5km, mb4.1/9, Error ellipse: s-maj=17.6km s-min=6.7km az=44.5*
DJA ***04*** *08:14:45, 5.°36S×103.°42E, h72km, MLv4.2/7*
ISC 04 08:14:44.3±0.8, 5.°34S±0.°08×103.°45E±0.°08, h98km±6km, n26, σ0.76/28, mb4.1/9, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LWLI	**Liwa**	**0.69**	**62**	P	**Pn**	**08 15 01.5**	**+0.2**
LWLI				S	**Sn**	**08 15 14.0**	**-0.1**
KASI	**Kota Agung**	**1.06**	**100**	P	**Pn**	**08 15 05.4**	**+0.3**
KASI				S	**Sn**	**08 15 20.1**	**-0.7**
MNAI	**Manna**	**1.09**	**333**	P	Px	08 15 21.2	
MDSI	**Maura Dua**	**1.12**	**40**	P	**Pn**	**08 15 06.0**	**+0.1**
MDSI				S	**Sn**	**08 15 21.8**	**-0.3**
BLSI	**Bandar Lampung**	**1.79**	**91**	P	**Pn**	**08 15 15.2**	**+1.2**
KSI	**Kapahiang**	**1.89**	**333**	P	**Sn**	**08 15 40.1**	**+1.1**
RBSI	**Rajabasa**	**2.33**	**102**	P	**Pn**	**08 15 22.5**	**+1.4**
CGJI	**Cibinong**	**2.56**	**120**	P	**Pn**	**08 15 24.4**	**+0.3**
CGJI				S	**Sn**	**08 15 53.0**	**-1.8**
PMBI	**Palembang**	**2.74**	**29**	P	**Pn**	**08 15 27.0**	**+0.5**
SBJI	**Serang**	**2.77**	**106**	P	**Pn**	**08 15 26.5**	**-0.5**
PPSI	**Pulau Pagai**	**4.29**	**307**	P	**Pn**	**08 15 47.2**	**-0.1**
PDSI	**Padang**	**5.32**	**326**	P	**Pn**	**08 16 00.1**	**-1.3**
KAPI	**Kappang**	**16.24**	**90**	*e*Pn	**Pn**	**08 18 26.4**	**-0.4**
CMAR	**Chiang Mai Arr**	**24.07**	**349**	P	**P**	**08 19 50.0**	**-0.7**
3.0nm,0.4s,mb4.0,baz=180,slow=8.8,SNR=10.0							
WRAB	**Tennant Creek**	**33.36**	**119**	*e*P	**P**	**08 21 14.1**	**+0.6**
ASAR	**Alice Springs**	**34.52**	**125**	P	**P**	**08 21 25.1**	**+1.6**
0.8nm,0.6s,mb3.7,baz=296,slow=7.6,SNR=11							
KSRS	**Korea Array**	**48.30**	**26**	P	**P**	**08 23 16.1**	**+0.4**
0.7nm,0.5s,mb3.7,baz=220,slow=9.0,SNR=2.9							
SONM	**Songino Array**	**53.02**	**2**	P	**P**	**08 23 51.3**	**+0.3**
1.3nm,0.5s,mb4.2,baz=190,slow=10,SNR=7.2							
TKM2	**Tokmak 2**	**54.27**	**335**	*e*P	**P**	**08 24 00.4**	**+0.1**
MK31	**Makanchi Array**	**55.20**	**342**	*e*P	**P**	**08 24 06.1**	**-0.8**
MKAR	**Makanchi Array**	**55.20**	**342**	P	**P**	**08 24 06.8**	**-0.1**
2.6nm,0.6s,mb4.5,baz=131,slow=8.0,SNR=21							
KURK	**Kurchatov**	**59.80**	**342**	P	**P**	**08 24 38.3**	**-0.8**
2.2nm,0.8s,mb4.2,baz=161,slow=6.4,SNR=9.6							
ZALV	**Zalesovo Beam**	**61.11**	**348**	P	**P**	**08 24 47.5**	**-0.5**
4.0nm,0.4s,mb4.8,baz=162,slow=3.7,SNR=11							
BVAR	**Borovoye Array**	**64.51**	**339**	P	**P**	**08 25 10.0**	**-0.6**
1.3nm,0.4s,mb4.1,baz=141,slow=9.6,SNR=10							
FINES	**FINESS Array B**	**88.66**	**332**	P	**P**	**08 27 26.9**	**+0.6**
1.0nm,0.8s,mb3.9,baz=132,slow=3.9,SNR=2.4							
TXAR	**Lajitas Array**	**144.98**	**44**	PKPbc	PKPdf	08 34 11.5	+0.7
0.3nm,0.9s,baz=302,slow=1.7,SNR=4.1							

IDC ***04*** *08:19:41.1±0.6, 30.°86N×103.°49E, h0km, mb4.0/17, mb1 4.1/18, mb1mx4.0/28, mbtmp4.0/18, ML3.7/1, MS3.3/9, Ms1 3.3/9, ms1mx3.0/42, Error ellipse: s-maj=25.9km s-min=13.7km az=46.0*
ISCJB ***04*** *08:19:41.2±0.3, 30.°91N±0.°03×103.°46E±0.°04, h10km, mb4.1/23, MS3.1/9, Error ellipse: s-maj=5.5km s-min=4.1km az=168.4*
NEIC ***04*** *08:19:43.1±0.4, 30.°91N×103.°57E, h10km, mb4.8/3, Error ellipse: s-maj=11.5km s-min=7.9km az=50.0*
BJI ***04*** *08:19:43.3, 30.°87N×103.°58E, h12km, mB4.6/2, mb4.4/6, ML4.1/21, Ms3.9/7, Ms7 3.6/7*
MOS ***04*** *08:19:44.4±0.8, 30.°88N×103.°52E, h33km, mb4.3/16, Error ellipse: s-maj=17.0km s-min=8.5km az=101.4*
ISC 04 08:19:43.3±0.3, 30.°93N±0.°03×103.°47E±0.°04, h10km, n70, σ1.04/74, mb4.1/23, MS3.1/9, 1C-2D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.24**	**95**	⇓*i*PG	**Pg**	**08 19 49.3**	**+1.0**
CD2				Sg	**Sg**	**08 19 55.1**	**+3.4**
CD2				smax			
comp=N,50μm,0.7s							
CD2				smax			
comp=E,56μm,0.6s							
LZH	**Lanzhou**	**5.15**	**3**	Pn	**Pn**	**08 21 04.6**	**+4.1**
LZH				Sg	**Sg**	**08 22 33.1**	**+4.4**
LZH				smax			
comp=N,130nm,1.1s							
LZH				smax			
comp=E,110nm,1.0s							
LZH				LR	LR		
comp=N,480nm,6.5s							
LZH				LR	LR		
comp=Z,510nm,8.6s							
ENH	**Enshi**	**5.22**	**96**	*e*Pn	**Pn**	**08 21 01.1**	**-0.4**
comp=Z,92nm,0.6s							
ENH				*e*Sn	**Sn**	**08 22 03.9**	**+2.1**
GYA	**Guiyang**	**5.26**	**147**	Pn	**Pn**	**08 21 01.9**	**-0.1**
GYA				smax			
comp=N,1μm,0.8s							
GYA				smax			
comp=E,1μm,0.9s							
XAN	**Xi'an**	**5.55**	**55**	Pn	**Pn**	**08 21 05.1**	**-0.8**
XAN				Sn	**Sn**	**08 22 09.5**	**-0.3**
XAN				Sg	**Sg**	**08 22 35.2**	**-6.3**
XAN				smax			
comp=N,380nm,0.8s							
XAN				smax			
comp=E,220nm,1.0s							
KMI	**Kunming**	**5.82**	**187**	Pn	**Pn**	**08 21 10.4**	**+0.7**
KMI				Sn	**Sn**	**08 22 17.3**	**+0.8**
KMI				LR	LR		
comp=N,550nm,8.0s							
KMI				LR	LR		
comp=E,930nm,7.2s							
KMI				LR	LR		
comp=Z,380nm,8.8s							
WHN	**Wuhan**	**9.37**	**90**	P	**Pn**	**08 22 04.1**	**+5.7**
WHN				S	**Sn**	**08 23 39.5**	**-4.3**
WHN				LR	LR		
comp=N,1μm,7.3s							
WHN				LR	LR		
comp=E,2μm,7.0s							
WHN				LR	LR		
comp=Z,890nm,6.8s							
LSA	**Lhasa**	**10.72**	**267**	*e*P	**Pn**	**08 22 24.0**	**+7.1**
CMAR	**Chiang Mai Arr**	**13.08**	**199**	Pn	**Pn**	**08 22 50.2**	**+1.0**
baz=7.4,slow=12,SNR=7.0							
NJ2	**Nanjing**	**13.18**	**81**	*e*P	**Pn**	**08 22 53.1**	**+2.6**
NJ2				S	**Sn**	**08 25 21.4**	**+4.3**
NJ2				pmax	pmax		
comp=Z,10.0nm,0.5s							
NJ2				LR	LR		
comp=N,390nm,13.7s							
NJ2				LR	LR		
comp=E,350nm,14.0s							
QIZ	**Qiongzhong**	**13.18**	**153**	P	**Pn**	**08 22 50.0**	**-0.5**
QIZ				S	**Sn**	**08 25 16.9**	**-0.3**
QIZ				LR	LR		
comp=Z,150nm,5.4s							
SONM	**Songino Array**	**17.03**	**7**	P	**Pn**	**08 23 41.8**	**+0.4**
comp=Z,0.2nm,0.3s,baz=191,slow=10,SNR=12							
SONM				LR	LR	08 31 05.1	
comp=Z,94nm,19.5s,baz=98,slow=40							
ZAK	**Zakamensk**	**19.43**	**360**	*e*P	**Pn**	**08 24 11.1**	**+0.2**
ZAK				pmax	pmax		
comp=Z,4.0nm,1.1s							
TLY	**Talaya**	**20.73**	**0**	*e*P	**P**	**08 24 29.0**	**+5.2**
TLY				*e*		08 24 48.4	
TLY				pmax	pmax		
comp=Z,3.0nm,0.6s							
TLY				MLR	MLR		
comp=Z,67nm,22.0s,MS3.0							
MOY	**Mondy**	**20.80**	**356**	*e*P	**P**	**08 24 27.0**	**+2.5**
KSRS	**Korea Array**	**21.21**	**66**	P	**P**	**08 24 27.9**	**-1.2**
comp=Z,2.9nm,0.7s,mb3.7,baz=237,slow=9.2,SNR=13							
KSRS				LR	LR	08 33 18.6	
comp=Z,72nm,18.0s,MS3.1,baz=350,slow=39							
KSRS	**Korea Array**	**21.21**	**66**	P	**P**	**08 24 28.0**	**-1.2**
KSRS				pmax	pmax		
comp=Z,3.0nm,0.7s,mb3.7							
KSRS				MLR	MLR		
comp=Z,72nm,18.0s,MS3.1							
JOW	**Kunigami**	**22.08**	**94**	P	**P**	**08 24 38.7**	**+0.1**
comp=Z,11nm,0.6s,mb4.5,baz=123,slow=9.6,SNR=3.3							
JOW	**Kunigami**	**22.08**	**94**	P	**P**	**08 24 38.7**	**+0.1**
MK31	**Makanchi Array**	**22.76**	**320**	*e*P	**P**	**08 24 48.3**	**+2.7**
MKAR	**Makanchi Array**	**22.76**	**320**	P	**P**	**08 24 47.5**	**+1.9**
comp=Z,0.8nm,0.5s,mb3.4,baz=114,slow=12,SNR=5.2							
MKAR				LR	LR	08 34 33.2	
comp=Z,76nm,18.7s,MS3.2,baz=273,slow=39							
MKAR	**Makanchi Array**	**22.76**	**320**	P	**P**	**08 24 47.5**	**+1.9**
MKAR				pmax	pmax		
comp=Z,1.0nm,0.5s							
MKAR				MLR	MLR		
comp=Z,76nm,18.7s							
AAK	**Ala-Archa**	**25.86**	**305**	P	**P**	**08 25 16.7**	**+1.8**
comp=Z,1.1nm,0.3s,mb3.8,baz=149,slow=8.5,SNR=3.6							
AAK				LR	LR	08 37 02.7	
comp=Z,80nm,20.6s,MS3.2,baz=59,slow=40							
AAK	**Ala-Archa**	**25.86**	**305**	*c i*P	**P**	**08 25 16.8**	**+1.8**
AAK				pmax	pmax		
comp=Z,2.0nm,0.6s,mb3.8							
AAK	**Ala-Archa**	**25.86**	**305**	*e*P	**P**	**08 25 18.3**	**+3.3**
AAK				LR	LR	08 37 02.7	
ZALV	**Zalesovo Beam**	**26.65**	**335**	P	**P**	**08 25 22.1**	**+0.2**
comp=Z,1.9nm,0.3s,mb4.0,baz=139,slow=9.2,SNR=6.8							
ZALV				LR	LR	08 36 33.4	
comp=Z,32nm,20.3s,MS2.9,baz=188,slow=38							
ZALV	**Zalesovo Beam**	**26.65**	**335**	P	**P**	**08 25 22.2**	**+0.2**
ZALV				pmax	pmax		
comp=Z,2.0nm,0.4s,mb4.0							
ZALV				MLR	MLR		
comp=Z,32nm,20.3s,MS2.9							
KURK	**Kurchatov**	**27.07**	**324**	P	**P**	**08 25 25.6**	**-0.1**
comp=Z,1.9nm,0.8s,mb3.7,baz=130,slow=9.4,SNR=13							
KURK				PcP	PcP	08 28 45.9	-0.8
comp=Z,0.6nm,0.6s,baz=113,slow=2.1,SNR=4.6							
KURK	**Kurchatov**	**27.07**	**324**	P	**P**	**08 25 25.7**	**-0.1**
KURK						08 28 45.9	
KURK				pmax	pmax		
comp=Z,2.0nm,0.8s,mb3.7							
MJAR	**Matsushiro Arr**	**29.32**	**70**	LR	LR	08 38 01.0	
comp=Z,84nm,18.4s,MS3.4,baz=40,slow=38							
DAV	**Davao City (W)**	**31.49**	**134**	LR	LR	08 40 54.0	
comp=Z,45nm,18.1s,MS3.2,baz=199,slow=40							
BVAR	**Borovoye Array**	**32.59**	**322**	P	**P**	**08 26 15.0**	**+0.3**
comp=Z,3.3nm,1.2s,mb4.1,baz=140,slow=7.0,SNR=3.0							
BVAR				PcP	PcP	08 29 00.0	-0.8
comp=Z,2.0nm,0.7s,baz=139,slow=3.8,SNR=9.3							
BVAR				LR	LR	08 40 26.0	
comp=Z,58nm,19.2s,MS3.3,baz=360,slow=38							
BVAR	**Borovoye Array**	**32.59**	**322**	P	**P**	**08 26 15.0**	**+0.2**
BVAR						08 29 00.0	
BVAR				pmax	pmax		
comp=Z,3.0nm,1.2s							
BVAR				MLR	MLR		
comp=Z,58nm,19.2s							
BVAR	**Borovoye Array**	**32.59**	**322**	P	**P**	**08 26 15.1**	**+0.3**
BVAR						08 29 00.0	
CBIJ	**Chichi jima**	**33.95**	**87**	LR	LR	08 40 54.1	
comp=Z,38nm,20.8s,MS3.1,baz=149,slow=38							
ARU	**Arti**	**40.24**	**323**	*d i*P	**P**	**08 27 20.0**	**0.0**
ARU				S	**S**	**08 33 25.5**	**-1.4**
ARU				SS	SS	08 36 21.3	-3.5
ARU				pmax	pmax		
comp=Z,8.0nm,1.7s,mb4.2							
PETK	**Petropavlovsk-**	**44.69**	**44**	P	**P**	**08 27 56.3**	**+0.1**
comp=Z,2.0nm,0.7s,mb4.1,baz=300,slow=3.3,SNR=3.9							
PETK	**Petropavlovsk-**	**44.69**	**44**	P	**P**	**08 27 56.3**	**+0.1**
PETK				pmax	pmax		
comp=Z,2.0nm,0.7s,mb4.1							
BILL	**Bilibino**	**51.56**	**25**	*e*P	**P**	**08 28 48.1**	**-1.0**
BILL				pmax	pmax		
comp=Z,3.0nm,1.2s,mb4.1							
OBN	**Obninsk**	**52.25**	**318**	*e*P	**P**	**08 28 54.2**	**-0.2**
OBN				*e*SS	SS	08 39 59.5	+3.2
OBN				pmax	pmax		
comp=Z,6.0nm,1.3s,mb4.4							
AKASG	**Malin Array Be**	**57.11**	**313**	P	**P**	**08 29 28.8**	**-0.9**
comp=Z,0.3nm,0.3s,mb3.8,baz=70,slow=6.6,SNR=3.3							
ARCES	**ARCESS Array B**	**57.20**	**336**	P	**P**	**08 29 29.7**	**-0.4**
comp=Z,3.2nm,0.9s,mb4.3,baz=61,slow=7.5,SNR=3.9							
ARCES				PcP	PcP	08 30 23.6	-0.9
comp=Z,2.5nm,0.9s,baz=87,slow=5.0,SNR=6.2							
ARCES	**ARCESS Array B**	**57.20**	**336**	P	**P**	**08 29 29.7**	**-0.4**
ARCES						08 30 23.6	
ARCES				pmax	pmax		
comp=Z,3.0nm,0.9s							
FINES	**FINESS Array B**	**57.41**	**326**	P	**P**	**08 29 31.4**	**-0.3**
comp=Z,2.3nm,0.8s,mb4.2,baz=102,slow=8.8,SNR=3.8							
FINES	**FINESS Array B**	**57.41**	**326**	P	**P**	**08 29 31.4**	**-0.3**
FINES				pmax	pmax		
comp=Z,2.0nm,0.9s							
WRAB	**Tennant Creek**	**58.63**	**146**	*e*P	**P**	**08 29 39.8**	**-0.9**
WRAB				pmax	pmax		
comp=Z,9.0nm,1.0s,mb4.8							
WRAB	**Tennant Creek**	**58.63**	**146**	*e*P	**P**	**08 29 39.8**	**-1.0**
comp=Z,9.2nm,1.0s,mb4.8							
ASAR	**Alice Springs**	**61.63**	**148**	P	**P**	**08 30 00.8**	**-0.5**
comp=Z,0.6nm,0.5s,mb4.0,baz=334,slow=7.0,SNR=16							
ASAR				PcP	PcP	08 30 42.2	-0.6
comp=Z,0.6nm,0.7s,baz=334,slow=5.6,SNR=3.3							
ASAR	**Alice Springs**	**61.63**	**148**	P	**P**	**08 30 00.8**	**-0.4**
ASAR						08 30 42.2	
ASAR				pmax	pmax		
comp=Z,1.0nm,0.5s							
ASAR	**Alice Springs**	**61.63**	**148**	P	**P**	**08 30 00.8**	**-0.5**
ASAR				PcP	PcP	08 30 42.1	-0.6
NB2	**NORSAR Subarra**	**64.51**	**327**	P	**P**	**08 30 18.5**	**-1.5**
comp=Z,1.7nm,0.8s,mb4.1,baz=72,slow=6.9							
NOA	**NORSAR Array B**	**64.51**	**327**	P	**P**	**08 30 18.7**	**-1.3**
comp=Z,0.6nm,0.6s,mb3.8,baz=61,slow=5.6,SNR=4.3							
NOA	**NORSAR Array B**	**64.51**	**327**	P	**P**	**08 30 18.7**	**-1.3**
NOA				pmax	pmax		
comp=Z,1.0nm,0.6s							
CTA	**Charters Tower**	**65.28**	**135**	P	**P**	**08 30 24.9**	**-0.5**
comp=Z,2.3nm,1.0s,mb4.2,baz=331,slow=5.0,SNR=3.4							
CTA	**Charters Tower**	**65.28**	**135**	P	**P**	**08 30 25.0**	**-0.5**
CTA				pmax	pmax		
comp=Z,2.0nm,1.0s							
COLA	**College**	**69.82**	**26**	*e*P	**P**	**08 30 53.5**	**-0.1**
COLA				pmax	pmax		
comp=Z,5.0nm,0.6s,mb4.6							
COLA	**College**	**69.82**	**26**	*e*P	**P**	**08 30 53.5**	**-0.1**
comp=Z,5.5nm,0.6s,mb4.7							
STKA	**Stephens Creek**	**72.16**	**147**	P	**P**	**08 31 06.6**	**-1.6**
comp=Z,1.4nm,0.4s,mb4.2,baz=336,slow=7.2,SNR=3.7							
STKA	**Stephens Creek**	**72.16**	**147**	P	**P**	**08 31 06.6**	**-1.6**
INK	**Inuvik**	**72.50**	**19**	*e*P	**P**	**08 31 09.0**	**-0.8**
INK				pmax	pmax		
comp=Z,3.0nm,0.6s							
INK	**Inuvik**	**72.50**	**19**	*e*P	**P**	**08 31 09.0**	**-0.7**
comp=Z,3.3nm,0.6s,mb4.4							
DAWY	**Dawson**	**73.32**	**24**	*e*P	**P**	**08 31 13.8**	**-0.9**
YKA	**Yellowknife Ar**	**82.02**	**17**	P	**P**	**08 32 02.7**	**-0.5**
comp=Z,1.9nm,0.6s,mb4.2,baz=330,slow=5.3,SNR=12							
YKA	**Yellowknife Ar**	**82.02**	**17**	P	**P**	**08 32 02.7**	**-0.6**
YKA				pmax	pmax		
comp=Z,2.0nm,0.6s							
YKA	**Yellowknife Ar**	**82.02**	**17**	P	**P**	**08 32 02.7**	**-0.5**
EDM	**Edmonton**	**90.28**	**21**	*e*P	**P**	**08 32 44.6**	**+0.4**
TORD	**Torodi Ar. Bea**	**93.17**	**287**	P	**P**	**08 32 57.4**	**-0.9**
comp=Z,0.2nm,0.7s,mb3.7,baz=53,slow=3.9,SNR=3.4							
TXAR	**Lajitas Array**	**114.74**	**26**	PKP	PKiKP	08 38 23.7	-0.8
comp=Z,0.3nm,0.7s,baz=124,slow=1.4,SNR=4.9							
ROSC	**El Rosal**	**144.35**	**356**	PKP	PKPdf	08 39 19.6	-0.9
comp=Z,11nm,0.6s,baz=264,slow=7.5,SNR=11							
OTAV	**Otavalo**	**148.95**	**4**	*e*PKPdf	PKPdf	08 39 28.4	+0.2

IDC 04 08:33:22.6±7.0, 2.°59N×128.°65E, h234km±69km, mb3.3/6, mb1 3.4/6, mb1mx3.2/20, mbtmp3.3/6, Error ellipse: s-maj=56.9km s-min=17.7km az=80.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**26.59**	**169**	P	P	08 38 39.4	-0.1
0.2nm,0.4s,baz=352,slow=7.7,SNR=5.9							
ASAR				PcP	PcP	08 41 58.0	+0.6
0.3nm,0.4s,baz=350,slow=2.4,SNR=4.5							
KSRS	**Korea Array**	**34.70**	**359**	P	P	08 39 50.8	+0.5
0.8nm,0.6s,baz=54,slow=23,SNR=3.5							
MJAR	**Matsushiro Arr**	**34.92**	**14**	P	P	08 39 51.6	-0.6
0.9nm,0.6s,baz=194,slow=9.4,SNR=4.3							
MKAR	**Makanchi Array**	**59.58**	**325**	P	P	08 43 01.9	+0.2
0.5nm,0.4s,baz=106,slow=8.3,SNR=5.7							
KURK	**Kurchatov**	**63.73**	**327**	P	P	08 43 29.2	-0.1
1.4nm,0.6s,baz=128,slow=6.1,SNR=5.6							
ARCES	**ARCESS Array B**	**92.17**	**340**	P	P	08 46 04.3	-0.9
2.4nm,0.9s,baz=69,slow=8.3,SNR=5.3							
TORD	**Torodi Ar. Bea**	**125.09**	**288**	PKP	PKPdf	08 51 55.8	-0.3
0.1nm,0.3s,baz=104,slow=1.4,SNR=3.2							

DJA 04 08:42:37, 2.°66S×129.°28E, h21km, MLv3.9/7, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**1.49**	**227**	P	Pn	08 43 02.2	-0.3
NLAI	**Namlea**	**2.25**	**255**	P	Pn	08 43 13.3	+0.3
SWI	**Sorong**	**2.67**	**48**	P	Pn	08 43 19.0	+0.3
MNI	**Manado**	**6.03**	**313**	P	Pn	08 44 05.1	+0.1
0.8nm158nm,0.7s							
APSI	**Ampana**	**7.82**	**283**	P	Pn	08 44 30.1	+0.4
0.2nm1μm27nm,0.9s							
MRSI	**Marisa**	**7.97**	**293**	P	Pn	08 44 31.3	-0.4

DJA 04 08:43:30, 0.°06N×98.°64E, h22km, MLv3.3/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**1.19**	**52**	P	Pn	08 43 51.0	-0.3
SISI	**Saibi**	**1.45**	**162**	P	Pn	08 43 55.4	+0.5
GSI	**Gunungsitoli**	**1.63**	**319**	P	Pn	08 43 57.4	0.0
GSI				S	Sn	08 44 19.2	+1.5
PPI	**Padang Panjang**	**1.83**	**106**	P	Pn	08 44 00.6	+0.4
PDSI	**Padang**	**2.06**	**118**

BTKR			*i* Sg		Sg	08 50 39.1	+1.5
KMSR	**Komsomolskaya**	**0.99 334**	*e*PG		Pg	08 50 26.3	-0.5
KMSR			*e*S		Sg	08 50 40.6	+0.9
KMSR	**Komsomolskaya**	**0.99 334**	*e*Pg		Pg	08 50 26.3	-0.5
KMSR			*e*Sg		Sg	08 50 40.6	+0.9
DIGR	**Digorskoe uzhe**	**1.05 293**	⇑*i*PG		Pg	08 50 26.9	-1.2
DIGR			*e*S		Sb	08 50 41.3	-0.5
DIGR	**Digorskoe uzhe**	**1.05 293**	*i* Pg		Pg	08 50 26.9	-1.2
DIGR			*e*Sg		Sb	08 50 41.3	-0.5
ONI	**Oni**	**1.07 276**	P		Pb	08 50 27.5	-0.8
ONI			S		Sb	08 50 42.7	+0.4
ONI	**Oni**	**1.07 276**	P		Pb	08 50 27.5	-0.8
ONI			S		Sb	08 50 42.7	+0.4
DGRG	**David-gareji**	**1.10 161**	P		Pb	08 50 27.6	-1.1
DGRG			S		Sb	08 50 45.0	+2.0
DGRG	**David-gareji**	**1.10 161**	P		Pb	08 50 27.6	-1.1
DGRG			S		Sb	08 50 45.0	+2.0
LSNR	**Lesken**	**1.12 315**	⇑*i*PG		Pg	08 50 28.2	-1.1
LSNR			*e*S		Sg	08 50 43.8	0.0
LSNR	**Lesken**	**1.12 315**	*i* Pg		Pg	08 50 28.2	-1.1
LSNR			*e*Sg		Sg	08 50 43.8	0.0
TRKR	**Terskaya**	**1.24 355**	*e*PG		Pg	08 50 30.8	-0.8
TRKR			*e*S		Sg	08 50 48.7	+0.9
TRKR	**Terskaya**	**1.24 355**	*e*Pg		Pg	08 50 30.8	-0.8
TRKR			*e*Sg		Sg	08 50 48.7	+0.9
PRTR	**Priterechnaya**	**1.34 341**	*e*PG		Pg	08 50 32.4	-1.1
PRTR			*e*S		Sg	08 50 51.2	+0.2
PRTR	**Priterechnaya**	**1.34 341**	*e*Pg		Pg	08 50 32.4	-1.1
PRTR			*e*Sg		Sg	08 50 51.2	+0.2
KUBR	**Kubataba**	**1.70 321**	⇓*i*PN		Pn	08 50 39.0	+1.6
KUBR			*i* S		Sg	08 51 03.2	+0.6
KUBR	**Kubataba**	**1.70 321**	*i* Pn		Pn	08 50 39.0	+1.6
KUBR			*i* Sg		Sg	08 51 03.2	+0.6
SHAR	**Shatzhatmas**	**2.06 308**	⇓*e*PN		Pb	08 50 44.4	-0.7
SHAR			*i* S		Sg	08 51 13.2	-0.7
SHAR	**Shatzhatmas**	**2.06 308**	*e*Pn		Pb	08 50 44.4	-0.7
SHAR			*i* Sb		Sg	08 51 13.2	-0.7
KIV	**Kislovodsk**	**2.18 313**	⇑*e*PN		Pb	08 50 47.2	0.0
KIV			*e*S		Sg	08 51 17.8	-0.1
KIV	**Kislovodsk**	**2.18 313**	*e*Pn		Pb	08 50 47.2	0.0
KIV			*e*Sb		Sg	08 51 17.8	-0.1

ISK ***04*** *09:10:22.0, 36.°99N×29.°20E, h2km, MD3.4*
DDA ***04*** *09:10:22.9, 36.°99N×29.°20E, h15km±3km, Md3.2*
NEIC ***04*** *09:10:22.0, 36.°99N×29.°20E, h3km, MD3.5(ATH), MD3.0(ISK), After ISK.*
CSEM ***04*** *09:10:23.4±0.1, 37.°01N×29.°22E, h2km, MD3.4, Error ellipse: s-maj=2.7km s-min=2.1km az=157.0*
ISCJB ***04*** *09:10:23.2±0.4, 36.°99N±0.°02×29.°21E±0.°02, h4km±4km, mb3.9/2, Error ellipse: s-maj=3.7km s-min=2.7km az=146.9*
THE ***04*** *09:10:23.1, 36.°85N×29.°36E, h0km±1km, Error ellipse: s-maj=6.2km s-min=1.8km az=325.0*
IDC ***04*** *09:10:23.0±1.9, 37.°07N×29.°12E, h0km, mb3.5/1, mb1 3.3/4, mb1mx3.2/25, mbtmp3.3/4, ML3.2/3, Error ellipse: s-maj=49.9km s-min=21.3km az=154.0*
ATH ***04*** *09:10:25.0, 36.°98N×29.°23E, h41km, MD3.5/8*

ISC 04 09:10:23.8±0.4, 37.°00N±0.°02×29.°21E±0.°02, h4km±3km, n104, σ0.°90/139, mb3.9/2, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.28**	**57**	PG	**Pg**	**09 10 28.5**	**-0.6**
GLHS				*e*SG	**Sg**	**09 10 33.6**	**+0.9**
GLHS	**Glhisar (BURDU**	**0.28**	**57**	*i* Pg	**Pg**	**09 10 28.5**	**-0.6**
GLHS				*e*Sg	**Sg**	**09 10 33.6**	**+0.9**
GOLH	**Golhisar**	**0.36**	**50**	*i* P	**Pg**	**09 10 30.4**	**-0.4**
GOLH				*i* S	**Sg**	**09 10 36.8**	**+1.3**
GOLH	**Golhisar**	**0.36**	**50**	*i* P	**Pg**	**09 10 30.4**	**-0.4**
GOLH				*i* S	**Sg**	**09 10 36.8**	**+1.3**
FETY	**Fethiye**	**0.38**	**195**	*e*PG	**Pg**	**09 10 29.9**	**-1.2**
FETY				*e*SG	**Sg**	**09 10 36.0**	**0.0**
FETY	**Fethiye**	**0.38**	**195**	*e*Pg	**Pg**	**09 10 29.9**	**-1.2**
FETY				*e*Sg	**Sg**	**09 10 36.0**	**-0.1**
TURN	**Turunc**	**0.50**	**255**	*i* P	**Pg**	**09 10 37.9**	**+4.5**
TURN				*i* S	**Sg**	**09 10 49.4**	**+9.4**
TURN	**Turunc**	**0.50**	**255**	*i* P	**Pg**	**09 10 37.9**	**+4.5**
TURN				*i* S	**Sg**	**09 10 49.4**	**+9.4**
ELL	**Elmali**	**0.62**	**114**	*e*PG	**Pg**	**09 10 35.0**	**-0.6**
ELL	**Elmali**	**0.62**	**114**	*e*Pg	**Pg**	**09 10 35.0**	**-0.6**
DNZL	**Cakiroluk**	**0.70**	**349**	*i* P	**Pg**	**09 10 36.4**	**-0.7**
DNZL				*i* S	**Sg**	**09 10 46.8**	**+0.6**
DNZL	**Cakiroluk**	**0.70**	**349**	*i* P	**Pg**	**09 10 36.4**	**-0.7**
DNZL				*i* S	**Sg**	**09 10 46.8**	**+0.6**
YER	**Yerkesik**	**0.75**	**280**	*e*PG	**Pg**	**09 10 37.4**	**-0.8**
YER	**Yerkesik**	**0.75**	**280**	*e*Pg	**Pg**	**09 10 37.4**	**-0.8**
DENT	**Denizli**	**0.76**	**349**	*e*PG	**Pg**	**09 10 37.7**	**-0.7**
DENT	**Denizli**	**0.76**	**349**	*e*Pg	**Pg**	**09 10 37.7**	**-0.7**
AKAS	**Kas**	**0.83**	**157**	*i* P	**Pg**	**09 10 39.1**	**-0.6**
AKAS				*i* S	**Sg**	**09 10 50.5**	**0.0**
AKAS	**Kas**	**0.83**	**157**	*i* P	**Pg**	**09 10 39.1**	**-0.6**
AKAS				*i* S	**Sg**	**09 10 50.5**	**0.0**
KSL	**Kastellorizon**	**0.90**	**160**	*e*P	**Pg**	**09 10 42.2**	**+1.1**
KSL	**Kastellorizon**	**0.90**	**160**	*e*P	**Pg**	**09 10 42.2**	**+1.1**
KORT	**Korkueli**	**0.91**	**90**	*i* P	**Pg**	**09 10 40.9**	**-0.4**
KORT				*i* S	**Sg**	**09 10 56.0**	**+2.9**
KORT	**Korkueli**	**0.91**	**90**	*i* P	**Pg**	**09 10 40.9**	**-0.4**
KORT				*i* S	**Sg**	**09 10 56.0**	**+2.9**
ANTB	**Antalya**	**1.16**	**95**	*e*PN	**Pn**	**09 10 45.1**	**-1.8**
ANTB	**Antalya**	**1.16**	**95**	*e*Pn	**Pn**	**09 10 45.1**	**-1.7**
ARG	**Arkhangelos**	**1.17**	**228**	*e*P	**Pg**	**09 10 45.0**	**-1.3**
ARG	**Arkhangelos**	**1.17**	**228**	P	**Pg**	**09 10 44.4**	**-1.9**
ARG				S	**Sg**	**09 11 02.5**	**+1.0**
ARG	**Arkhangelos**	**1.17**	**228**	*e*P	**Pg**	**09 10 45.0**	**-1.3**
ARG	**Arkhangelos**	**1.17**	**228**	*e*P	**Pg**	**09 10 45.0**	**-1.3**
ARG				S	**Sg**	**09 11 02.5**	**+1.0**
MLSB	**Milas**	**1.18**	**285**	*e*PN	**Pn**	**09 10 45.5**	**-1.6**
MLSB	**Milas**	**1.18**	**285**	*e*Pn	**Pn**	**09 10 45.5**	**-1.6**
BCK	**Bucak**	**1.19**	**67**	*e*PN	**Pn**	**09 10 45.9**	**-1.4**
BCK				*e*SN	**Sn**	**09 11 03.4**	**-0.5**
BCK	**Bucak**	**1.19**	**67**	*e*Pn	**Pn**	**09 10 45.9**	**-1.3**
BCK				*e*Sn	**Sn**	**09 11 03.4**	**-0.5**
AYDN	**Tasoluk**	**1.25**	**302**	*i* P	**Pg**	**09 10 47.2**	**-0.4**
AYDN				*i* S	**Sg**	**09 11 04.9**	**+1.0**
AYDN	**Tasoluk**	**1.25**	**302**	*i* P	**Pg**	**09 10 47.2**	**-0.5**
AYDN				*i* S	**Sg**	**09 11 04.9**	**+1.1**
ISP	**Isparta**	**1.33**	**51**	*e*PN	**Pn**	**09 10 48.3**	**-0.8**
ISP	**Isparta**	**1.33**	**51**	*e*Pg	**Pg**	**09 10 48.5**	**-0.7**
ISP				*e*S	**Sg**	**09 11 10.0**	**+3.5**
ISP	**Isparta**	**1.33**	**51**	P	**Pn**	**09 10 48.3**	**-0.9**
ISP				S	**Sg**	**09 11 06.9**	**+0.4**
ISP	**Isparta**	**1.33**	**51**	P	**Pn**	**09 10 48.3**	**-0.9**
ISP				S	**Sg**	**09 11 06.9**	**+0.4**
DAT	**Datca**	**1.34**	**259**	*e*PN	**Pn**	**09 10 48.8**	**-0.4**
DAT	**Datca**	**1.34**	**259**	*e*Pn	**Pn**	**09 10 48.8**	**-0.4**
KHAL	**Karahalli**	**1.38**	**9**	*i* P	**Pn**	**09 10 49.4**	**-0.5**
KHAL				*i* S	**Sg**	**09 11 09.4**	**+1.2**
KHAL	**Karahalli**	**1.38**	**9**	*i* P	**Pn**	**09 10 49.4**	**-0.5**
KHAL				*i* S	**Sg**	**09 11 09.4**	**+1.2**
BDRM	**Kayabasi**	**1.41**	**273**	*i* P	**Pn**	**09 10 49.9**	**-0.4**
BDRM				*i* S	**Sb**	**09 11 09.7**	**+0.6**
BDRM	**Kayabasi**	**1.41**	**273**	*i* P	**Pn**	**09 10 49.9**	**-0.4**
BDRM				*i* S	**Sb**	**09 11 09.7**	**+0.6**
SUTC	**Sutluce-Ispart**	**1.50**	**71**	*e*PN	**Pn**	**09 10 51.6**	**+0.1**
SUTC	**Sutluce-Ispart**	**1.50**	**71**	*e*Pn	**Pn**	**09 10 51.6**	**+0.1**
KULA	**Kula-Manisa**	**1.57**	**344**	*e*PN	**Pn**	**09 10 51.6**	**-0.8**
KULA	**Kula-Manisa**	**1.57**	**344**	*e*Pn	**Pn**	**09 10 51.6**	**-0.8**
NIS1	**Nisyros Isl.**	**1.68**	**257**	P	**Pn**	**09 10 54.0**	**+0.1**
NIS1				S	**Sn**	**09 11 18.5**	**+2.6**
NIS1	**Nisyros Isl.**	**1.68**	**257**	P	**Pn**	**09 10 54.0**	**+0.1**
NIS1				S	**Sn**	**09 11 18.5**	**+2.6**
SHUT	**Suhut-Afyon**	**1.88**	**34**	*e*PN	**Pn**	**09 10 56.3**	**-0.3**
SHUT	**Suhut-Afyon**	**1.88**	**34**	*e*Pn	**Pn**	**09 10 56.3**	**-0.4**
SMG	**Samos**	**2.02**	**291**	*e*P	**Pn**	**09 10 58.5**	**-0.1**
SMG				*e*S	**Sn**	**09 11 23.1**	**-1.2**
SMG	**Samos**	**2.02**	**291**	*e*P	**Pn**	**09 10 58.5**	**-0.1**
SMG				*e*S	**Sn**	**09 11 23.1**	**-1.2**
SMG	**Samos**	**2.02**	**291**	*e*P	**Pn**	**09 10 58.5**	**-0.1**
SMG				*e*S	**Sn**	**09 11 23.1**	**-1.2**
ALT	**Altintas**	**2.17**	**19**	*e*PN	**Pn**	**09 11 00.2**	**-0.4**
ALT	**Altintas**	**2.17**	**19**	*e*Pn	**Pn**	**09 11 00.2**	**-0.5**
AKS	**Akhisar**	**2.17**	**330**	*e*PN	**Pn**	**09 11 00.7**	**0.0**
AKS	**Akhisar**	**2.17**	**330**	*e*Pn	**Pn**	**09 11 00.7**	**0.0**
KARP	**Karpathos**	**2.20**	**229**	*e*P	**Pn**	**09 11 01.6**	**+0.4**
KARP	**Karpathos**	**2.20**	**229**	*e*P	**Pn**	**09 11 01.6**	**+0.4**
KARP	**Karpathos**	**2.20**	**229**	*e*P	**Pn**	**09 11 01.6**	**+0.4**
BLCB	**Balcova**	**2.20**	**309**	*e*PN	**Pn**	**09 11 00.6**	**-0.6**
BLCB	**Balcova**	**2.20**	**309**	P	**Pn**	**09 11 01.3**	**+0.1**
BLCB	**Balcova**	**2.20**	**309**	*e*Pn	**Pn**	**09 11 00.6**	**-0.6**
BLCB	**Balcova**	**2.20**	**309**	P	**Pn**	**09 11 01.3**	**+0.1**
HDMB	**Hadim**	**2.62**	**90**	*e*PN	**Pn**	**09 11 07.3**	**+0.3**
HDMB	**Hadim**	**2.62**	**90**	*e*Pn	**Pn**	**09 11 07.3**	**+0.4**
KONT	**Konya--Tatoy**	**2.68**	**69**	*e*PN	**Pn**	**09 11 07.7**	**0.0**
KONT	**Konya--Tatoy**	**2.68**	**69**	*e*Pn	**Pn**	**09 11 07.7**	**0.0**
LADK	**Ladik-KONYA**	**2.77**	**64**	*e*PN	**Pn**	**09 11 09.1**	**+0.1**
LADK	**Ladik-KONYA**	**2.77**	**64**	*e*Pn	**Pn**	**09 11 09.1**	**+0.1**
KIZT	**Kizilcal**	**2.82**	**48**	*e*PN	**Pn**	**09 11 09.8**	**+0.1**
KIZT	**Kizilcal**	**2.82**	**48**	*e*Pn	**Pn**	**09 11 09.8**	**+0.1**
CHOS	**Chios island**	**2.86**	**300**	P	**Pn**	**09 11 10.3**	**+0.1**
CHOS	**Chios island**	**2.86**	**300**	*e*P	**Pn**	**09 11 10.4**	**+0.2**
CHOS	**Chios island**	**2.86**	**300**	P	**Pn**	**09 11 10.3**	**+0.1**
APE	**Apeiranthos**	**2.94**	**272**	P	**Pn**	**09 11 11.9**	**+0.6**
APE	**Apeiranthos**	**2.94**	**272**	P	**Pn**	**09 11 11.9**	**+0.6**
ZKR	**Zakros**	**3.07**	**233**	*e*P	**Pn**	**09 11 14.3**	**+1.2**
ZKR	**Zakros**	**3.07**	**233**	P	**Pn**	**09 11 14.2**	**+1.1**
ZKR	**Zakros**	**3.07**	**233**	*e*P	**Pn**	**09 11 14.3**	**+1.2**
ZKR	**Zakros**	**3.07**	**233**	P	**Pn**	**09 11 14.2**	**+1.1**
NPS	**Neapolis**	**3.39**	**240**	*e*P	**Pn**	**09 11 18.2**	**+0.7**
NPS	**Neapolis**	**3.39**	**240**	*e*P	**Pn**	**09 11 18.2**	**+0.7**
NPS	**Neapolis**	**3.39**	**240**	*e*P	**Pn**	**09 11 18.2**	**+0.7**
LAST	**Lasithi**	**3.54**	**240**	*e*P	**Pn**	**09 11 19.8**	**+0.3**
LAST	**Lasithi**	**3.54**	**240**	P	**Pn**	**09 11 19.6**	**+0.1**
LAST	**Lasithi**	**3.54**	**240**	*e*P	**Pn**	**09 11 19.8**	**+0.3**
LAST	**Lasithi**	**3.54**	**240**	*e*P	**Pn**	**09 11 19.8**	**+0.3**
IKL	**Isikli**	**3.68**	**101**	*e*PN	**Pn**	**09 11 22.1**	**+0.6**
IKL	**Isikli**	**3.68**	**101**	*e*Pn	**Pn**	**09 11 22.1**	**+0.6**
IDI	**Anoyia**	**3.89**	**245**	Pn	**Pn**	**09 11 25.6**	**+1.2**
	2.2nm,0.3s,baz=56,slow=15,SNR=11						
IDI				Sn	**Sn**	**09 12 10.4**	**-0.2**
	3.7nm,0.3s,baz=286,slow=16,SNR=4.9						
IDI	**Anoyia**	**3.89**	**245**	Pn	**Pn**	**09 11 25.6**	**+1.2**
IDI				Sn	**Sn**	**09 12 10.4**	**-0.2**
BR131	**Keskin Array S**	**4.42**	**51**	*e*Pn	**Pn**	**09 11 28.6**	**-3.0**
BR131	**Keskin Array S**	**4.42**	**51**	*e*Pn	**Pn**	**09 11 28.6**	**-3.0**
BRTR	**Keskin Array B**	**4.42**	**51**	Pn	**Pn**	**09 11 32.1**	**+0.5**
	0.5nm,0.3s,baz=239,slow=17,SNR=9.6						
BRTR				Sn	**Sn**	**09 12 24.8**	**+1.4**
	0.5nm,0.3s,baz=225,slow=25,SNR=11						
BRTR	**Keskin Array B**	**4.42**	**51**	Pn	**Pn**	**09 11 32.1**	**+0.5**
BRTR				Sn	**Sn**	**09 12 24.8**	**+1.4**
KARN	**Karanos**	**4.57**	**251**	P	**Pn**	**09 11 35.8**	**+2.1**
KARN	**Karanos**	**4.57**	**251**	*e*P	**Pn**	**09 11 34.3**	**+0.6**
KARN	**Karanos**	**4.57**	**251**	*e*P	**Pn**	**09 11 34.3**	**+0.6**
MMAI	**Mount Meron Ar**	**6.45**	**126**	Pn	**Pn**	**09 12 00.5**	**+0.9**
	0.9nm,0.3s,baz=303,slow=13,SNR=3.1						
ARU	**Arti**	**27.63**	**36**	*e*P	**P**	**09 16 07.1**	**-5.1**
	5.4nm,0.6s,mb4.3						
TORD	**Torodi Ar. Bea**	**34.20**	**233**	P	**P**	**09 17 09.5**	**-1.0**
	0.3nm,0.5s,mb3.5,baz=33,slow=8.4,SNR=7.5						

ISCJB ***04*** *09:24:52.5±1.0, 30.°20S±0.°04×71.°6W±0.°1, h46km±10km, mb4.1/2, MS3.6/2, Error ellipse: s-maj=17.0km s-min=6.3km az=179.5*
NEIC ***04*** *09:24:54.1, 30.°30S×71.°57W, h33km, ML4.6(GUC), After GUC.*
NEIC Felt [II] at Coquimbo.
GUC ***04*** *09:24:54.1±0.6, 30.°30S×71.°57W, h33km±9km, ML4.6*
IDC ***04*** *09:24:55.2±3.1, 30.°15S×71.°46W, h54km±26km, mb3.8/2, mb1 4.1/7, mb1mx3.8/18, mbtmp3.9/7, ML3.9/5, MS3.2/3, Ms1 3.2/3, ms1mx2.8/20, Error ellipse: s-maj=34.6km s-min=26.6km az=82.0*

ISC 04 09:24:54.1±1.2, 30.°19S±0.°04×71.°6W±0.°1, h42km±15km, n25, σ1.°19/26, mb4.1/2, MS3.6/2, 6C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OVCH	**Ovalle**	**0.52**	**145**	⇑*i*P	**Pn**	**09 25 03.4**	**-1.7**
OVCH				*i* S	**Sn**	**09 25 10.8**	**-2.2**
OVCH	**Ovalle**	**0.52**	**145**	⇑*i*P	**Pn**	**09 25 03.4**	**-1.7**
OVCH				*i* S	**Sn**	**09 25 10.8**	**-2.2**
OVCH				AML	AML	09 25 11.9	
	comp=N,55μm,0.3s						
CMCH	**Combarbala**	**1.09**	**155**	⇑*i*P	**Pn**	**09 25 12.0**	**-0.9**
CMCH				*i* S	**Sn**	**09 25 26.1**	**-0.7**
CMCH	**Combarbala**	**1.09**	**155**	⇑*i*P	**Pn**	**09 25 12.0**	**-0.9**
CMCH				*i* S	**Sn**	**09 25 26.1**	**-0.7**
CMCH				AML	AML	09 25 30.5	
	comp=E,32μm,0.7s						
LCO	**Las Campanas**	**1.39**	**32**	*e*Pn	**Pn**	**09 25 16.2**	**-0.8**
LCO				*e*Sn	**Sn**	**09 25 34.7**	**+0.7**
JACH	**Jahuel**	**2.62**	**162**	⇑*i*P	**Pn**	**09 25 34.4**	**+0.6**
PEL	**Peldehue**	**3.04**	**166**	⇑*i*P	**Pn**	**09 25 40.1**	**+0.5**
PEL				*i* S	**Sn**	**09 26 14.5**	**-0.3**
PEL				AML	AML	09 26 31.2	
	comp=E,2μm,0.6s						
CFAA	**Coronel Fontan**	**3.18**	**117**	P	**Pn**	**09 25 43.9**	**+2.4**
	comp=E,3.7nm,0.3s,baz=304,slow=12,SNR=162						
CFAA				S	**Sn**	**09 26 23.1**	**+5.0**
	comp=E,8.3nm,0.3s,baz=52,slow=22,SNR=17						
CFAA	**Coronel Fontan**	**3.18**	**117**	P	**Pn**	**09 25 43.9**	**+2.4**
CFAA				S	**Sn**	**09 26 23.1**	**+5.0**
FCH	**Farellones**	**3.31**	**161**	AML	AML	09 26 41.6	
	comp=E,599nm,0.6s						
CLCH	**Cerro Calan**	**3.31**	**165**	AML	AML	09 26 47.4	
	comp=N,2μm,0.5s						
PLCA	**Paso Flores**	**10.55**	**176**	P	**Pn**	**09 27 22.9**	**+0.3**
	comp=N,0.1nm,0.3s,baz=8.5,slow=23,SNR=3.0						
TRQA	**Tornquist**	**11.15**	**137**	*e*Pn	**Pn**	**09 27 32.2**	**+1.3**
	comp=N,8.0nm,0.6s						
TRQA				*e*Sn	**Sn**	**09 29 37.4**	**+3.2**
CPUP	**Villa Florida**	**13.11**	**76**	P	**Pn**	**09 27 56.4**	**-1.3**
	comp=N,0.5nm,0.3s,baz=230,slow=8.8,SNR=6.2						
LPAZ	**La Paz**	**14.19**	**14**	P	**Pn**	**09 28 13.0**	**+0.6**
	comp=N,0.2nm,0.3s,baz=183,slow=6.1,SNR=18						
LPAZ				LR	LR	09 32 33.1	
	comp=N,22nm,21.9s,baz=43,slow=32						
LPAZ	**La Paz**	**14.19**	**14**	*e*Pn	**Pn**	**09 28 13.7**	**+1.2**
	comp=N,4.3nm,0.8s						
SIV	**San Ignacio**	**17.09**	**37**	P	**Pn**	**09 28 48.3**	**-1.6**
	comp=N,1.0nm,0.3s,baz=220,slow=11,SNR=65						
ATAH	**Atahualpa**	**23.95**	**343**	LR	LR	09 38 15.6	
	comp=N,64nm,21.3s,MS3.1,baz=1.7,slow=34						
TXAR	**Lajitas Array**	**66.64**	**330**	P	**P**	**09 35 40.8**	**+0.5**
	comp=N,0.9nm,0.8s,mb3.9,baz=149,slow=7.9,SNR=12						
MAW	**Mawson**	**76.71**	**164**	LR	LR	10 08 46.3	
	comp=N,84nm,19.0s,MS4.1,baz=299,slow=34						
TORD	**Torodi Ar. Bea**	**82.52**	**70**	P	**P**	**09 37 12.3**	**-0.5**
	comp=N,2.6nm,0.8s,mb4.3,baz=275,slow=5.9,SNR=23						
ASAR	**Alice Springs**	**121.14**	**207**	PKP	PKPdf	09 43 41.2	-1.6
	comp=N,0.2nm,0.5s,baz=137,slow=1.8,SNR=4.8						
BVAR	**Borovoye Array**	**144.14**	**39**	PKP	PKPdf	09 44 23.7	-1.0
	comp=N,1.1nm,0.8s,baz=251,slow=4.5,SNR=4.6						
ZALV	**Zalesovo Beam**	**150.74**	**29**	PKP	PKPdf	09 44 35.3	-0.3
	comp=N,1.1nm,0.6s,baz=118,slow=37,SNR=3.4						
ZALV				PKPbc	PKPbc	09 44 41.2	0.0
	comp=N,7.4nm,0.7s,baz=304,slow=3.4,SNR=22						
ZALV				pPKP	pPKPdf	09 44 50.9	+2.0
	comp=N,4.7nm,0.6s,baz=306,slow=3.5,SNR=3.9						
ZALV				pPKPbc	pPKPbc	09 44 55.6	+1.2
	comp=N,5.2nm,0.7s,baz=317,slow=3.0,SNR=7.2						
MKAR	**Makanchi Array**	**153.83**	**43**	PKP	PKPdf	09 44 40.1	-0.4
	comp=N,0.1nm,0.3s,baz=9.5,slow=3.7,SNR=2.9						
MKAR				PKPbc	PKPbc	09 44 48.5	+0.1
	comp=N,0.2nm,0.2s,baz=15,slow=5.0,SNR=3.2						
MKAR				PKPab	PKPab	09 44 58.6	-2.9
	comp=N,0.2nm,0.3s,baz=5.7,slow=2.4,SNR=3.4						
MKAR				pPKPbc	pPKPbc	09 45 05.3	+3.7
	comp=N,1.1nm,0.6s,baz=81,slow=7.5,SNR=8.5						
MKAR				pPKPab	pPKPab	09 45 16.1	+1.7
	comp=N,0.9nm,0.7s,baz=301,slow=3.8,SNR=5.4						

DJA 04 09:25:55, 0.°55N×99.°57E, h10km, MLv3.9/12, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**0.24**	**2**	P	Pg	09 26 01.1	+1.1
MNSI				S	Sg	09 26 05.2	+1.8
PPI	**Padang Panjang**	**1.30**	**140**	P	Pn	09 26 18.0	-1.2
BKNI	**Bangkinang**	**1.49**	**99**	P	Pn	09 26 21.7	-0.1
BKNI				S	Sn	09 26 41.7	+0.4
PDSI	**Padang**	**1.70**	**148**	P	Pn	09 26 25.3	+0.5
PDSI				S	Sn	09 26 47.3	+0.6
SISI	**Saibi**	**1.93**	**194**	P	Pn	09 26 28.1	+0.3
GSI	**Gunungsitoli**	**2.13**	**291**	P	Pn	09 26 34.8	+4.1
SDSI	**Sungai Dareh**	**2.37**	**128**	P	Pn	09 26 36.9	+2.9
RGRI	**Rengat**	**2.90**	**108**	P	Pn	09 26 39.4	-1.9
TSI	**Tuntungan**	**3.10**	**341**	P	Pn	09 26 40.6	-3.4
PPSI	**Pulau Pagai**	**3.32**	**172**	P	Pn	09 26 48.3	+1.3
IPM	**Ipoh**	**4.17**	**20**	P	Pn	09 26 59.4	+0.7
MYKOM	**Kota Tinggi**	**4.45**	**74**	P	Pn	09 27 03.0	+0.4
JMBI	**JAMBI**	**4.61**	**118**	P	Pn	09 27 05.4	+0.6
KULM	**Kulim**	**4.83**	**13**	P	Pn	09 27 09.9	+2.1
MNAI	**Manna**	**5.94**	**145**	P	Pn	09 27 24.6	+1.6
	0.9nm200nm,1.5s						
PMBI	**Palembang**	**6.24**	**124**	P	Pn	09 27 28.0	+0.8
	5.7nm486nm,0.4s						
BSI	**Banda Aceh**	**6.51**	**319**	P	Pn	09 27 31.9	+1.0
	0.1nm28nm,1.5s						
SBJI	**Serang**	**9.32**	**135**	P	Pn	09 28 10.2	+0.7

ISK ***04*** *09:48:10.8, 36.°93N×27.°52E, h17km, MD2.9*
DDA ***04*** *09:48:12.4, 36.°97N×27.°60E, h7km±4km, Md2.9*
ATH ***04*** *09:48:12.1, 36.°96N×27.°67E, h67km±15km*
CSEM ***04*** *09:48:12.2±0.2, 36.°93N×27.°56E, h10km, MD2.9, Error ellipse: s-maj=6.2km s-min=4.2km az=78.0*
ISCJB ***04*** *09:48:12.3±0.5, 36.°93N±0.°02×27.°57E±0.°04, h8km±4km, Error ellipse: s-maj=5.6km s-min=3.6km az=165.9*

ISC 04 09:48:12.5±0.5, 36.°93N±0.°02×27.°57E±0.°04, h10km±4km, n34, σ1.°03/58, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.17**	**325**	*i* P	**Pg**	**09 48 16.0**	**-0.3**
BDRM				*i* S	**Sg**	**09 48 18.8**	**0.0**
BDRM	**Kayabasi**	**0.17**	**325**	*i* P	**Pg**	**09 48 16.0**	**-0.3**
BDRM				*i* S	**Sg**	**09 48 18.8**	**0.0**
DAT	**Datca**	**0.20**	**178**	*e*PG	**Pg**	**09 48 16.2**	**-0.5**
DAT				*e*SG	**Sg**	**09 48 19.9**	**+0.4**
DAT	**Datca**	**0.20**	**178**	*e*Pg	**Pg**	**09 48 16.2**	**-0.5**
DAT				*e*Sg	**Sg**	**09 48 19.9**	**+0.4**
MLSB	**Milas**	**0.41**	**24**	*e*PG	**Pg**	**09 48 19.9**	**-0.6**
MLSB				*e*SG	**Sg**	**09 48 26.1**	**+0.2**
MLSB	**Milas**	**0.41**	**24**	*e*Pg	**Pg**	**09 48 19.9**	**-0.6**
MLSB				*e*Sg	**Sg**	**09 48 26.1**	**+0.2**
YER	**Yerkesik**	**0.61**	**70**	*e*PG	**Pg**	**09 48 24.0**	**-0.3**
YER	**Yerkesik**	**0.61**	**70**	*e*Pg	**Pg**	**09 48 24.0**	**-0.3**
AYDN	**Tasoluk**	**0.77**	**19**	*i* P	**Pg**	**09 48 26.7**	**-0.8**
AYDN				*i* S	**Sg**	**09 48 37.1**	**-0.5**
**AYD

TOKT	**Tokat**	**1.99 291**	*e*PN	**Pn**	**09 48 54.3 +0.2**	
TOKT			*e*SN	**Sg**	**09 49 20.6 -3.7**	
TOKT	**Tokat**	**1.99 291**	*e*Pn	**Pn**	**09 48 54.3 +0.3**	
TOKT			*e*Sn	**Sg**	**09 49 20.6 -3.7**	
ERBA	**Erbaa**	**2.00 302**	*i* P	**Pg**	**09 48 55.1 -3.5**	
ERBA			*i* S	**Sg**	**09 49 21.6 -3.0**	
ERBA	**Erbaa**	**2.00 302**	*i* P	**Pg**	**09 48 55.2 -3.5**	
ERBA			*i* S	**Sg**	**09 49 21.6 -3.0**	
SARI	**SarD1z-Kayseri**	**2.01 242**	*e*PN	**Pg**	**09 48 59.8 +0.9**	
TOKA	**Tokat**	**2.04 291**	*i* P	**Pb**	**09 48 55.5 -1.9**	
TOKA			*i* S	**Sb**	**09 49 21.4 -1.5**	
TOKA	**Tokat**	**2.04 291**	*i* P	**Pb**	**09 48 55.5 -1.9**	
TOKA			*i* S	**Sb**	**09 49 21.4 -1.5**	
PZAR	**Pazar-Rize**	**2.13 43**	*e*PN	**Pn**	**09 48 56.1 +0.2**	
PZAR			*e*SN	**Sg**	**09 49 23.9 -4.9**	
PZAR	**Pazar-Rize**	**2.13 43**	*e*Pn	**Pn**	**09 48 56.1 +0.2**	
PZAR			*e*Sn	**Sg**	**09 49 23.9 -4.9**	
PINB	**Pinarbasi**	**2.22 245**	⇑*i*P	**Pn**	**09 48 58.1 +1.0**	
PINB			*i* S	**Sg**	**09 49 28.4 -3.2**	
PINB	**Pinarbasi**	**2.22 245**	*i* P	**Pn**	**09 48 58.1 +1.0**	
PINB			*i* S	**Sg**	**09 49 28.4 -3.1**	
ATAB	**Bozova**	**2.23 194**	*e*P	**Pb**	**09 48 58.8 -1.8**	
ATAB			*e*S	**Sg**	**09 49 29.7 -2.1**	
ATAB	**Bozova**	**2.23 194**	*e*P	**Pb**	**09 48 58.8 -1.8**	
ATAB			*e*S	**Sg**	**09 49 29.7 -2.1**	
HOMI	**Horasan**	**2.29 79**	⇑*i*P	**Pg**	**09 48 59.7 -4.5**	
HOMI			*i* S	**Sg**	**09 49 35.4 +1.4**	
BTMT	**Batman**	**2.43 125**	*e*PN	**Pn**	**09 48 59.9 -0.2**	
DDEM	**Demirkent**	**2.47 58**	*i* P	**Pn**	**09 49 00.9 +0.3**	
DDEM			*i* S	**Sg**	**09 49 35.6 -4.0**	
DDEM	**Demirkent**	**2.47 58**	*i* P	**Pn**	**09 49 00.9 +0.3**	
DDEM			*i* S	**Sg**	**09 49 35.6 -4.0**	
DBAD	**Bademkaya**	**2.50 55**	*i* P	**Pn**	**09 49 01.2 +0.2**	
DBAD			*i* S	**Sb**	**09 49 33.5 -2.5**	
DBAD	**Bademkaya**	**2.50 55**	*i* P	**Pn**	**09 49 01.2 +0.2**	
DBAD			*i* S	**Sb**	**09 49 33.5 -2.5**	
BEST	**Besiri**	**2.50 133**	*i* P	**Pg**	**09 49 04.1 -4.1**	
BEST			*i* S	**Sg**	**09 49 36.0 -4.5**	
GZT	**Gaziantep**	**2.53 206**	*i* P	**Pn**	**09 49 01.6 +0.2**	
GZT			*i* S	**Sg**	**09 49 39.2 -2.4**	
KVT	**Kavak**	**2.67 304**	*e*PN	**Pb**	**09 49 04.1 -4.0**	
KVT			*e*SN	**Sb**	**09 49 37.3 -3.6**	
KVT	**Kavak**	**2.67 304**	*e*Pn	**Pb**	**09 49 04.1 -4.0**	
KVT			*e*Sn	**Sb**	**09 49 37.3 -3.6**	
DAGI	**Agillar**	**2.67 56**	*i* P	**Pn**	**09 49 03.2 -0.1**	
DAGI			*i* S	**Sb**	**09 49 39.6 -1.4**	
KMRS	**Kahramanmaras**	**2.68 218**	*e*PN	**Pn**	**09 49 04.3 +0.9**	
KMRS	**Kahramanmaras**	**2.68 218**	*e*Pn	**Pn**	**09 49 04.3 +0.9**	
BCA	**Borcka**	**2.71 47**	*e*PN	**Pb**	**09 49 04.8 +0.9**	
BCA	**Borcka**	**2.71 47**	*e*Pn	**Pn**	**09 49 04.8 +0.9**	
ARTV	**Artvin**	**2.74 55**	*i* P	**Pb**	**09 49 07.2 -2.1**	
ARTV			*i* S	**Sb**	**09 49 42.7 -0.2**	
ARTV	**Artvin**	**2.74 55**	*i* P	**Pb**	**09 49 07.2 -2.1**	
ARTV			*i* S	**Sb**	**09 49 42.7 -0.2**	
GAZ	**Gaziantep**	**2.82 210**	*e*PN	**Pn**	**09 49 06.6 +1.2**	
GAZ	**Gaziantep**	**2.82 210**	*e*Pn	**Pn**	**09 49 06.6 +1.2**	
YOZ	**Yozgat**	**2.82 271**	*e*PN	**Pn**	**09 49 06.3 +0.9**	
YOZ	**Yozgat**	**2.82 271**	*e*Pn	**Pn**	**09 49 06.3 +0.8**	
AGRB	**Hanur-Agry**	**3.10 90**	*e*PN	**Pn**	**09 49 10.0 +0.7**	
AGRB	**Hanur-Agry**	**3.10 90**	*e*Pn	**Pn**	**09 49 10.0 +0.7**	
KOZT	**Kozan**	**3.27 230**	*e*PN	**Pn**	**09 49 12.8 +1.2**	
KARS	**Kars**	**3.30 71**	*e*PN	**Pn**	**09 49 13.7 +1.7**	
KARS	**Kars**	**3.30 71**	*e*Pn	**Pn**	**09 49 13.7 +1.7**	
CTKT	**Corum**	**3.36 288**	*i* P	**Pb**	**09 49 15.1 -4.9**	
CTKT			*i* S	**Sb**	**09 50 01.9 +1.1**	
CTKT	**Corum**	**3.36 288**	*i* P	**Pb**	**09 49 15.1 -4.8**	
CORM	**Corum**	**3.39 281**	*e*PN	**Pn**	**09 49 14.5 +1.2**	
CORM	**Corum**	**3.39 281**	*e*Pn	**Pn**	**09 49 14.5 +1.3**	
DIKM	**Dikmen**	**3.47 307**	*e*PN	**Pn**	**09 49 16.0 +1.6**	
DIKM	**Dikmen**	**3.47 307**	*e*Pn	**Pn**	**09 49 16.0 +1.6**	
CDAG	**Cicekdag**	**3.56 271**	*i* P	**Pn**	**09 49 16.5 +1.0**	
CDAG			*i* S	**Sg**	**09 50 12.6 -1.9**	
CDAG	**Cicekdag**	**3.56 271**	*i* P	**Pn**	**09 49 16.5 +1.0**	
VANB	**Van**	**3.59 105**	*e*PN	**Pn**	**09 49 17.9 +1.9**	
VANB	**Van**	**3.59 105**	*e*Pn	**Pn**	**09 49 17.9 +2.0**	
BYBT	**Boyabat**	**3.69 301**	*e*PN	**Pn**	**09 49 18.7 +1.3**	
BYBT	**Boyabat**	**3.69 301**	*e*Pn	**Pn**	**09 49 18.7 +1.3**	
CLDR	**Caldiran**	**3.86 96**	*e*PN	**Pn**	**09 49 21.0 +1.3**	
CLDR	**Caldiran**	**3.86 96**	*e*Pn	**Pn**	**09 49 21.0 +1.3**	
KARA	**Karaisali**	**3.88 234**	*e*PN	**Pn**	**09 49 22.0 +2.0**	
KARA	**Karaisali**	**3.88 234**	*e*Pn	**Pn**	**09 49 22.0 +1.9**	
SOC	**Sochi**	**3.99 8**	*c* *i*P	**Pn**	**09 49 22.1 +0.7**	
SOC			*e*		09 50 08.7	
SOC			pmax	pmax		
	comp=Z,51nm,0.6s					
SOC			MLR	MLR		
	comp=Z,106nm,12.0s					
SOC	**Sochi**	**3.99 8**	*i* P	**Pn**	**09 49 22.1 +0.7**	
	comp=Z,51nm,0.6s					
SOC			*e*S	**Sn**	**09 50 08.7 +0.5**	
	comp=Z,106nm,12.0s					
TOS	**Tosya**	**4.04 292**	*e*PN	**Pn**	**09 49 23.4 +1.3**	
TOS	**Tosya**	**4.04 292**	*e*Pn	**Pn**	**09 49 23.4 +1.3**	
BR131	**Keskin Array S**	**4.12 273**	*e*Pn	**Pn**	**09 49 24.7 +1.4**	
BR131	**Keskin Array S**	**4.12 273**	*e*Pn	**Pn**	**09 49 24.7 +1.4**	
BRTR	**Keskin Array B**	**4.12 273**	Pn	**Pn**	**09 49 24.8 +1.5**	
	comp=Z,4.7nm,0.3s,baz=96,slow=14,SNR=103					
BRTR			Lg		09 50 34.4	
	comp=Z,0.4nm,0.3s,baz=97,slow=16,SNR=2.8					
BRTR	**Keskin Array B**	**4.12 273**	Pn	**Pn**	**09 49 24.8 +1.5**	
BRTR			Lg		09 50 34.4	
BRTR	**Keskin Array B**	**4.12 273**	P	**Pn**	**09 49 24.8 +1.5**	
BRTR			Lg		09 50 34.4	
DOMR	**Dombai**	**4.16 28**	⇓*i*P	**Pn**	**09 49 25.8 +1.9**	
DOMR	**Dombai**	**4.16 28**	*i* P	**Pn**	**09 49 25.8 +1.9**	
KRTS	**Karatas**	**4.17 224**	*e*PN	**Pn**	**09 49 25.8 +1.8**	
KRTS	**Karatas**	**4.17 224**	*e*Pn	**Pn**	**09 49 25.8 +1.8**	
HKR	**Hakkari**	**4.26 117**	*e*PN	**Pn**	**09 49 27.4 +2.2**	
HKR	**Hakkari**	**4.26 117**	*e*Pn	**Pn**	**09 49 27.4 +2.2**	
BZK	**Bozkurt**	**4.43 303**	*e*PN	**Pn**	**09 49 29.2 +1.7**	
BZK	**Bozkurt**	**4.43 303**	*e*Pn	**Pn**	**09 49 29.3 +1.7**	
MERS	**Mersin**	**4.46 233**	*e*PN	**Pn**	**09 49 29.7 +1.7**	
MERS	**Mersin**	**4.46 233**	*e*Pn	**Pn**	**09 49 29.7 +1.7**	
GNI	**Garni**	**4.46 82**	*e*PN	**Pn**	**09 49 29.6 +1.6**	
GNI	**Garni**	**4.46 82**	Pg	**Pg**	**09 49 40.6 -5.2**	
	comp=Z,1.7nm,0.3s,baz=354,slow=19,SNR=10					
GNI			Lg		09 50 49.6	
	comp=Z,1.2nm,0.3s,baz=158,slow=12,SNR=1.8					
GNI	**Garni**	**4.46 82**	*c* *i*P	**Pg**	**09 49 40.7 -5.1**	
GNI	**Garni**	**4.46 82**	*e*Pn	**Pn**	**09 49 29.6 +1.6**	
GNI	**Garni**	**4.46 82**	Pg	**Pg**	**09 49 40.6 -5.2**	
ONI	**Oni**	**4.49 47**	*i* P	**Pb**	**09 49 32.9 -6.3**	
ONI			*i* S	**Sb**	**09 50 34.1 +0.7**	
ONI	**Oni**	**4.49 47**	P	**Pb**	**09 49 32.9 -6.3**	
ONI			S	**Sb**	**09 50 34.1 +0.7**	
ONI	**Oni**	**4.49 47**	*i* P	**Pb**	**09 49 32.9 -6.3**	
SULT	**Sultanhani-AKS**	**4.49 253**	*e*PN	**Pn**	**09 49 30.4 +1.9**	
SULT	**Sultanhani-AKS**	**4.49 253**	*e*Pn	**Pn**	**09 49 30.4 +2.0**	
GOR	**Gori**	**4.55 57**	*i* P	**Pg**	**09 49 46.3 -1.1**	
GOR			*i* S	**Sg**	**09 50 46.2 -0.1**	
GOR	**Gori**	**4.55 57**	P	**Pg**	**09 49 46.3 -1.1**	
GOR			S	**Sg**	**09 50 46.2 -0.1**	
MSL	**Mosul**	**4.59 133**	*e*Pn	**Pg**	**09 49 48.0 -0.2**	
MSL			*e*Sn	**Sg**	**09 50 54.0 +6.3**	
KEH	**Kehvi**	**4.61 53**	P	**Pb**	**09 49 40.6 -0.6**	
KEH			S	**Sg**	**09 50 40.6 -7.6**	
TBLG	**Delisi**	**4.86 63**	*e*P	**Pb**	**09 49 46.0 +0.6**	
TBLG	**Delisi**	**4.86 63**	P	**Pb**	**09 49 46.1 +0.7**	
TBLG			S	**Sg**	**09 50 57.7 +1.5**	
ZEI	**Tsey**	**4.86 48**	*e*P	**Pn**	**09 49 34.6 +1.2**	
ZEI			pmax	pmax		
	comp=Z,7.0nm,0.6s					
ZEI	**Tsey**	**4.86 48**	*e*P	**Pn**	**09 49 34.6 +1.2**	
	comp=Z,7.0nm,0.6s					
KIV	**Kislovodsk**	**5.13 31**	*e*P	**Pn**	**09 49 40.3 +3.1**	
KIV			*e*S	**Sn**	**09 50 38.9 +2.5**	
KIV			pmax	pmax		
	comp=Z,14nm,0.8s					
KIV			MLR	MLR		
	comp=Z,49nm,8.0s					
KIV	**Kislovodsk**	**5.13 31**	*e*P	**Pn**	**09 49 40.3 +3.1**	
	comp=Z,14nm,0.8s					
KIV			*e*S	**Sn**	**09 50 38.9 +2.5**	
	comp=Z,49nm,8.0s					
DGRG	**David-gareji**	**5.20 68**	*i* P	**Pb**	**09 49 50.7 -0.6**	
DGRG			*i* S	**Sg**	**09 51 01.3 -6.0**	
DGRG	**David-gareji**	**5.20 68**	P	**Pb**	**09 49 50.7 -0.6**	
DGRG			S	**Sg**	**09 51 01.3 -5.9**	
KUBR	**Kubataba**	**5.32 37**	*e*P	**Pn**	**09 49 44.2 +4.4**	
KUBR	**Kubataba**	**5.32 37**	*e*P	**Pn**	**09 49 44.2 +4.4**	
KONT	**Konya--Tatoy**	**5.44 254**	*e*PN	**Pn**	**09 49 43.8 +2.4**	
KONT	**Konya--Tatoy**	**5.44 254**	*e*Pn	**Pn**	**09 49 43.8 +2.4**	
KIZT	**Kizilcal**	**5.56 264**	*e*PN	**Pn**	**09 49 45.4 +2.4**	
KIZT	**Kizilcal**	**5.56 264**	*e*Pn	**Pn**	**09 49 45.4 +2.3**	
HDMB	**Hadim**	**5.76 244**	*e*PN	**Pn**	**09 49 48.4 +2.6**	
HDMB	**Hadim**	**5.76 244**	*e*Pn	**Pn**	**09 49 48.4 +2.6**	
MMAI	**Mount Meron Ar**	**7.21 205**	Pn	**Pn**	**09 50 06.6 +0.9**	
	comp=Z,0.5nm,0.3s,baz=23,slow=11,SNR=2.1					
MMAI			Lg		09 52 06.5	
	comp=Z,1.6nm,0.3s,baz=257,slow=33,SNR=3.7					
ASF	**Jabal al Asfar**	**7.63 193**	Lg		09 52 21.4	
	comp=Z,0.3nm,0.3s,baz=62,slow=17,SNR=3.2					
BHD	**Baghdad**	**7.70 144**	*e*Pn	**Pn**	**09 50 04.6 -7.8**	
BHD			*e*Pg	**Pg**	**09 50 40.3 -7.4**	
BHD			*e*Sn	**Sn**	**09 51 28.5 -11**	
BHD			*e*Sg	**Sg**	**09 52 10.0 -17**	
EIL	**Elat**	**10.47 200**	Lg		09 53 50.6	
	comp=Z,0.3nm,0.3s,baz=142,slow=15,SNR=1.7					
AKASG	**Malin Array Be**	**13.02 331**	Pn	**Pn**	**09 51 24.7 -0.5**	
	comp=Z,1.6nm,0.3s,baz=136,slow=14,SNR=4.2					
AKASG	**Malin Array Be**	**13.02 331**	P	**Pn**	**09 51 24.7 -0.5**	
OBN	**Obninsk**	**15.57 355**	*e*P	**Pn**	**09 51 57.4 -2.3**	
OBN			pmax	pmax		
	comp=Z,3.0nm,1.4s					
AKTK	**Aktyubinsk**	**17.20 45**	Pn	**Pn**	**09 52 18.1 -2.5**	
AKTO	**Aktyubinsk**	**17.20 45**	Pn	**Pn**	**09 52 18.1 -2.5**	
	baz=198,slow=15,SNR=2.2					
VRAC	**Vranov**	**18.61 309**	LR	LR	10 00 32.9	
	comp=Z,26nm,21.2s,baz=285,slow=39					
GERES	**GERESS Array B**	**20.24 305**	LR	LR	10 02 06.5	
	comp=Z,26nm,20.0s,baz=101,slow=41					
VSU	**Vasula**	**20.42 341**	*e*P	**P**	**09 52 56.0 -1.4**	
VSU			pmax	pmax		
	comp=Z,5.0nm,0.9s					
VSU	**Vasula**	**20.42 341**	*e*P	**P**	**09 52 56.0 -1.4**	
	comp=Z,5.0nm,0.9s					
ARU	**Arti**	**21.18 31**	*d* *i*P	**P**	**09 53 10.2 +4.6**	
ARU			SS		09 57 27.3	
ARU			pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.2					
FINES	**FINESS Array B**	**23.24 344**	P	**P**	**09 53 26.4 -1.1**	
	comp=Z,1.5nm,0.9s,mb3.4,baz=157,slow=7.5,SNR=2.7					
FINES	**FINESS Array B**	**23.24 344**	P	**P**	**09 53 26.4 -1.1**	
ECH	**Echery**	**24.33 301**	*e*P	**P**	**09 53 35.4 -2.6**	
ECH			pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.1					
ECH	**Echery**	**24.33 301**	*e*P	**P**	**09 53 35.4 -2.5**	
	comp=Z,4.7nm,0.6s,mb4.1					
MKAR	**Makanchi Array**	**32.04 63**	P	**P**	**09 54 46.4 -0.5**	
	comp=Z,0.4nm,0.4s,mb3.6,baz=284,slow=5.8,SNR=5.5					
MKAR	**Makanchi Array**	**32.04 63**	*i* P	**P**	**09 54 46.5 -0.4**	
MKAR	**Makanchi Array**	**32.04 63**	*i* P	**P**	**09 54 46.5 -0.4**	
TORD	**Torodi Ar. Bea**	**42.09 242**	P	**P**	**09 56 11.1 -1.4**	
	comp=Z,0.4nm,0.8s,mb3.1,baz=42,slow=6.6,SNR=3.2					

*ISK **04** 10:21:19.2, 39°.03N×31°.16E, h15km, MD2.7*
*CSEM **04** 10:21:19.6±0.1, 39°.01N×31°.15E, h8km, MD3.1, Error ellipse: s-maj=2.5km s-min=2.1km az=37.0*
*ISCJB **04** 10:21:19.7±0.5, 39°.01N±0°.02×31°.16E±0°.03, h6km±4km, Error ellipse: s-maj=3.9km s-min=3.8km az=22.9*
*DDA **04** 10:21:20.1, 38°.99N×31°.06E, h12km±6km, Md3.1*

ISC 04 10:21:20.2±0.4, 39°.01N±0°.02×31°.15E±0°.03, h10km±4km, n32, σ0°80/58, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLV	**Bolvadin**	**0.33**	**208**	*i* P	**Pg**	**10 21 26.7**	**-0.1**
BOLV				*i* S	**Sg**	**10 21 31.7**	**+0.5**
BOLV	**Bolvadin**	**0.33**	**208**	*i* P	**Pg**	**10 21 26.7**	**0.0**
BOLV				*i* S	**Sg**	**10 21 31.7**	**+0.5**
SVRH	**Sivrihisar-ESK**	**0.52**	**33**	*e*PG	**Pg**	**10 21 29.5**	**-0.9**
SVRH				*e*SG	**Sg**	**10 21 37.0**	**-0.3**
SVRH	**Sivrihisar-ESK**	**0.52**	**33**	*e*Pg	**Pg**	**10 21 29.5**	**-0.9**
SVRH				*e*Sg	**Sg**	**10 21 37.0**	**-0.3**
ESKT	**Eskisehir**	**0.56**	**335**	*e*PG	**Pg**	**10 21 30.6**	**-0.5**
ESKT				*e*SG	**Sg**	**10 21 38.8**	**+0.4**
ESKT	**Eskisehir**	**0.56**	**335**	*i* P	**Pg**	**10 21 29.5**	**-1.6**
ESKT				*i* S	**Sg**	**10 21 39.0**	**+0.6**
ESKT	**Eskisehir**	**0.56**	**335**	*e*Pg	**Pg**	**10 21 30.6**	**-0.5**
ESKT				*e*Sg	**Sg**	**10 21 38.8**	**+0.3**
SEYT	**Eskypehyr**	**0.56**	**335**	*i* P	**Pg**	**10 21 29.5**	**-1.6**
SEYT				*i* S	**Sg**	**10 21 39.0**	**+0.5**
KIZT	**Kizilcal**	**0.58**	**103**	*e*PG	**Pg**	**10 21 31.2**	**-0.3**
KIZT				*e*SG	**Sg**	**10 21 39.8**	**+0.7**
KIZT	**Kizilcal**	**0.58**	**103**	*e*Pg	**Pg**	**10 21 31.2**	**-0.3**
KIZT				*e*Sg	**Sg**	**10 21 39.8**	**+0.7**
SHUT	**Suhut-Afyon**	**0.66**	**226**	*e*PG	**Pg**	**10 21 32.9**	**0.0**
SHUT				*e*SG	**Sg**	**10 21 42.8**	**+1.4**
SHUT	**Suhut-Afyon**	**0.66**	**226**	*e*Pg	**Pg**	**10 21 32.9**	**0.0**
SHUT				*e*Sg	**Sg**	**10 21 42.8**	**+1.4**
ALT	**Altintas**	**0.81**	**273**	*e*PG	**Pg**	**10 21 34.8**	**-1.0**
ALT	**Altintas**	**0.81**	**273**	*e*Pg	**Pg**	**10 21 34.8**	**-1.1**
KDHN	**Kadinhani**	**0.90**	**123**	*i* P	**Pg**	**10 21 37.6**	**+0.1**
KDHN				*i* S	**Sg**	**10 21 49.8**	**+0.6**
KDHN	**Kadinhani**	**0.90**	**123**	*i* P	**Pg**	**10 21 37.6**	**+0.1**
KDHN				*i* S	**Sg**	**10 21 49.8**	**+0.6**
BORA	**Eskisehir**	**1.02**	**328**	*i* P	**Pg**	**10 21 39.5**	**-0.4**
BORA				*i* S	**Sg**	**10 21 53.5**	**+0.3**
BORA	**Eskisehir**	**1.02**	**328**	*i* P	**Pg**	**10 21 39.5**	**-0.4**
BORA				*i* S	**Sg**	**10 21 53.5**	**+0.3**
LADK	**Ladik-KONYA**	**1.25**	**130**	*e*PN	**Pn**	**10 21 42.8**	**-0.9**
LADK				*e*SN	**Sn**	**10 21 60.0**	**-0.6**
LADK	**Ladik-KONYA**	**1.25**	**130**	*e*Pn	**Pn**	**10 21 42.8**	**-0.9**
LADK				*e*Sn	**Sn**	**10 22 00.0**	**-0.5**
GDZ	**Gediz**	**1.30**	**274**	*e*P	**Pn**	**10 21 44.0**	**-0.5**
GDZ				*i* S	**Sb**	**10 22 00.7**	**-0.9**
GDZ	**Gediz**	**1.30**	**274**	*e*P	**Pn**	**10 21 44.0**	**-0.5**
GDZ				*i* S	**Sb**	**10 22 00.7**	**-0.9**
KONT	**Konya--Tatoy**	**1.43**	**138**	*e*PN	**Pn**	**10 21 45.4**	**-0.7**
KONT				*e*SN	**Sn**	**10 22 04.5**	**-0.4**
KONT	**Konya--Tatoy**	**1.43**	**138**	*e*Pn	**Pn**	**10 21 45.4**	**-0.7**
KONT				*e*Sn	**Sn**	**10 22 04.5**	**-0.4**
KHAL	**Karahalli**	**1.45**	**244**	*i* P	**Pn**	**10 21 46.6**	**+0.2**
KHAL				*i* S	**Sn**	**10 22 06.5**	**+1.1**
KHAL	**Karahalli**	**1.45**	**244**	*i* P	**Pn**	**10 21 46.6**	**+0.2**
KHAL				*i* S	**Sn**	**10 22 06.5**	**+1.0**
SUTC	**Sutluce-Ispart**	**1.54**	**185**	*e*PN	**Pn**	**10 21 47.3**	**-0.4**
SUTC	**Sutluce-Ispart**	**1.54**	**185**	*e*Pn	**Pn**	**10 21 47.3**	**-0.3**
SGKT	**Sivrigoynuk**	**1.71**	**24**	*i* P	**Pn**	**10 21 52.2**	**+2.2**
SGKT				*i* S	**Sn**	**10 22 13.6**	**+1.6**
SGKT	**Sivrigoynuk**	**1.71**	**24**	*i* P	**Pn**	**10 21 52.2**	**+2.2**
SGKT				*i* S	**Sn**	**10 22 13.6**	**+1.6**
HDMB	**Hadim**	**2.30**	**152**	*e*PN	**Pn**	**10 21 57.7**	**-0.4**
HDMB	**Hadim**	**2.30**	**152**	*e*Pn	**Pn**	**10 21 57.7**	**-0.4**

*IDC **04** 10:21:45.5±3.1, 22°.46N×11°.95W, h0km, mb3.7/1, mb1 3.8/3, mb1mx3.4/26, mbtmp3.7/3, ML3.5/2, Error ellipse: s-maj=82.3km s-min=35.7km az=75.0*
*ISCJB **04** 10:21:46.8±1.6, 22°.7N±0°.1×11°.8W±0°.2, h10km, Error ellipse: s-maj=25.5km s-min=16.2km az=154.7*

ISC 04 10:21:48.7±1.6, 22°.6N±0°.1×11°.8W±0°.2, h10km, n7, σ0°72/7, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**15.89**	**124**	Pn	**Pn**	**10 25 32.5**	**-0.1**
	0.1nm,0.3s,baz=314,slow=12,SNR=7.9						
TORD				Sn	**Sn**	**10 28 29.0**	**0.0**
	0.1nm,0.3s,baz=305,slow=22,SNR=4.5						
TIC	**Toumodi**	**17.17**	**157**	*e*P	**Pn**	**10 25 49.5**	**+0.7**
	17nm,0.3s						
DBIC	**Dimbokro**	**17.20**	**156**	P	**Pn**	**10 25 45.0**	**-4.3**
	0.4nm,0.3s,baz=322,slow=11,SNR=3.6						
KIC	**Kosan Boka**	**17.53**	**156**	*e*P	**Pn**	**10 25 52.0**	**-1.3**
	42nm,1.3s						
LIC	**Lamto**	**17.55**	**157**	*e*P	**Pn**	**10 25 54.3**	**+0.7**
	56nm,1.5s						
GERES	**GERESS Array B**	**33.05**	**31**	P	**P**	**10 28 24.3**	**0.0**
	0.7nm,0.6s,baz=237,slow=10,SNR=4.0						
ASAR	**Alice Springs**	**148.46**	**99**	PKPbc	PKPbc	10 41 35.0	-1.3
	0.4nm,0.6s,baz=298,slow=1.8,SNR=6.3						

*NEIC **04** 10:47:15.0±0.3, 8°.16S×120°.31E, h10km, mb4.6/21, Error ellipse: s-maj=11.9km s-min=5.4km az=59.0*
NEIC Felt [III] at Ruteng.
*ISCJB **04** 10:47:18.9±0.5, 8°.21S±0°.03×120°.45E±0°.04, h56km±5km, mb4.6/43, MS3.9/16, Error ellipse: s-maj=6.7km s-min=4.7km az=140.6*
*IDC **04** 10:47:19.4±1.9, 8°.17S×120°.35E, h42km±18km, mb4.2/17, mb1 4.4/19, mb1mx4.3/26, mbtmp4.3/19, ML4.2/2, MS3.7/11, Ms1 3.7/11, ms1mx3.4/27, Error ellipse: s-maj=21.7km s-min=8.9km az=67.0*
*DJA **04** 10:47:21.8, 8°.21S×120°.46E, h58km, mb5.0/16*

ISC 04 10:47:20.6±0.4, 8°.23S±0°.03×120°.44E±0°.04, h51km±5km, h33km±1.1km; pP-P, n111, σ1°25/111, mb4.6/43, MS3.9/16, 3C, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.43**	**186**	P	**Pn**	**10 47 43.1**	**-1.1**
MMRI	**Maumere**	**1.82**	**103**	P	**Pn**	**10 47 49.4**	**-0.1**
KAPI	**Kappang**	**3.27**	**348**	P	**Pn**	**10 48 05.2**	**-4.3**
	33nm,0.3s,baz=160,slow=8.9,SNR=67						
KAPI				S	**Sn**	**10 48 40.8**	**-6.3**
	30nm,0.3s,baz=24,slow=23,SNR=8.5						
KAPI	**Kappang**	**3.27**	**348**	*e*Pn	**Pn**	**10 48 05.5**	**-3.9**
KDI	**Kendari**	**4.77**	**27**	P	**Pn**	**10 48 30.2**	**+0.3**
KHKI	**Kahang-Kahang**	**4.79**	**268**	P	**Pn**	**10 48 31.5**	**+1.3**
SRBI	**Singaraja**	**5.18**	**271**	P	**Pn**	**10 48 36.5**	**+0.9**
	0.9nm2μm156nm,0.8s						
TTSI	**Tana Toraja**	**5.19**	**353**	P	**Pn**	**10 48 35.0**	**-0.8**
DNP	**Denpasar**	**5.20**	**265**	P	**Pn**	**10 48 38.0**	**+2.2**
	694nm,0.8s						
IGBI	**Denpasar**	**5.27**	**263**	P	**Pn**	**10 48 38.1**	**+1.2**
	4.7nm1μm,0.6s						
NBBI	**Negara**	**5.76**	**268**	P	**Pn**	**10 48 41.1**	**-2.5**
BYJI	**Banyuwangi**	**6.03**	**270**	P	**Pn**	**10 48 47.9**	**+0.7**
	7μm420nm,1.0s						
ABJI	**Asem Bagus**	**6.16**	**274**	P	**Pn**	**10 48 49.7**	**+0.6**
	156nm,1.1s						
KBKI	**Kotabaru**	**6.49**	**319**	P	**Sn**	**10 50 13.0**	**+6.7**
KMMI	**Kalianget**	**6.53**	**280**	P	**Pn**	**10 48 52.5**	**-1.6**
GMJI	**Gumukmas**	**6.93**	**269**	P	**Pn**	**10 48 59.7**	**+0.1**
	81nm,0.9s						
GRJI	**Gresik**	**8.00**	**279**	P	**Pn**	**10 49 20.6**	**+6.3**
PWJI	**Pagerwojo**	**8.56**	**271**	P	**Pn**	**10 49 25.9**	**+4.0**
MRSI	**Marisa**	**8.78**	**10**	P	**Pn**	**10 49 25.1**	**+0.1**
	25nm,1.0s						
LBMI	**Labuha**	**10.31**	**43**	P	**Pn**	**10 49 46.6**	**+0.6**
	65nm,1.0s						
FITZ	**Fitzroy Crossi**	**11.04**	**153**	*e*P	**Pn**	**10 49 55.3**	**-0.5**
	51nm,0.6s						
FITZ				*e*S	**Sn**	**10 51 58.2**	**+0.4**
FITZ	**Fitzroy Crossi**	**11.04**	**153**	P	**Pn**	**10 49 56.1**	**+0.3**
	1.3nm,0.3s,baz=342,slow=9.2,SNR=39						
FITZ				S	**Sn**	**10 51 57.9**	**+0.1**
	1.2nm,0.3s,baz=132,slow=20,SNR=4.6						
FITZ				LR	LR	10 54 47.5	
	comp=Z,210nm,18.5s,baz=85,slow=40						
FITZ	**Fitzroy Crossi**	**11.04**	**153**	*e*Pn	**Pn**	**10 49 55.6**	**-0.2**
FITZ	**Fitzroy Crossi**	**11.04**	**153**	P	**Pn**	**10 49 56.1**	**+0.3**
	94nm,1.0s						
**K

NJ2				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.0						
KSRS	**Korea Array**	**45.98**	**8**	P	**P**	**10 55 39.7**	**+0.9**
	comp=Z,1.9nm,0.8s,mb4.0,baz=178,slow=8.0,SNR=7.2						
KSRS				LR	LR	11 17 20.3	
	comp=Z,51nm,18.1s,MS3.5,baz=327,slow=39						
LZH	**Lanzhou**	**46.77**	**341**	*e*P	**P**	**10 55 45.9**	**+0.9**
LZH				pP	pP	10 55 55.8	-2.9
LZH				sP	sP	10 55 59.7	-4.9
LZH				PP	PP	10 57 35.8	0.0
LZH				pmax	pmax		
	comp=Z,20nm,1.4s,mb4.8						
LZH				pmax	pmax		
	comp=Z,67nm,6.5s						
LZH				LR	LR		
	comp=E,530nm,14.1s						
LZH				LR	LR		
	comp=Z,730nm,18.0s,MS4.7						
MJAR	**Matsushiro Arr**	**47.56**	**19**	P	**P**	**10 55 50.5**	**-0.7**
	comp=Z,4.1nm,0.9s,mb4.4,baz=194,slow=7.7,SNR=7.5						
BJI	**Beijing**	**48.19**	**356**	P	**P**	**10 55 56.8**	**+0.9**
BJI				S	**S**	**11 02 55.4**	**+3.9**
BJI				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.0						
BJI				pmax	pmax		
	comp=Z,79nm,4.0s						
BJI				LR	LR		
	comp=Z,45nm,41.4s,MS3.1						
HHC	**Hu-ho-hao-te**	**49.52**	**351**	*e*P	**P**	**10 56 07.3**	**+1.2**
HHC				pP	pP	10 56 17.2	-2.7
HHC				sP	sP	10 56 21.1	-4.7
HHC				PcP	PcP	10 57 28.8	+1.4
HHC				PP	PP	10 58 02.3	+1.4
HHC				ScP	ScP	11 01 20.3	+1.6
HHC				PcS	PcS	11 01 24.8	+0.8
HHC				S	**S**	**11 03 12.3**	**+2.2**
HHC				sS	sS	11 03 28.4	-4.9
HHC				ScS	ScS	11 05 53.4	0.0
HHC				SS	SS	11 06 40.8	-2.2
HHC				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.0						
HHC				pmax	pmax		
	comp=Z,37nm,5.1s						
HHC				LR	LR		
	comp=N,110nm,16.6s,MS4.2						
HHC				LR	LR		
	comp=E,150nm,16.7s,MS4.2						
HHC				LR	LR		
	comp=Z,90nm,17.8s,MS3.8						
CN2	**Changchun**	**51.99**	**5**	*e*P	**P**	**10 56 27.3**	**+2.7**
CN2				*es*P	sP	10 56 39.0	-5.4
CN2				*e*S	**S**	**11 03 47.3**	**+3.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
CN2				LR	LR		
	comp=N,300nm,15.0s,MS4.7						
CN2				LR	LR		
	comp=E,400nm,15.0s,MS4.7						
CN2				LR	LR		
	comp=Z,400nm,17.0s,MS4.5						
MDJ	**Mudanjiang**	**53.25**	**8**	P	**P**	**10 56 33.5**	**-0.4**
MDJ				pP	pP	10 56 41.7	-6.2
MDJ				S	**S**	**11 04 04.5**	**+3.1**
MDJ				SS	SS	11 07 43.6	+1.6
MDJ				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.6						
MDJ				pmax	pmax		
	comp=Z,67nm,7.0s						
MDJ				LR	LR		
	comp=Z,40nm,31.8s,MS3.3						
RPZ	**Rata Peaks**	**56.40**	**138**	*e*P	**P**	**10 56 55.2**	**-1.6**
	comp=Z,50nm,1.0s,mb5.5						
ULN	**Ulaanbaatar**	**57.10**	**349**	*e*P	**P**	**10 57 01.3**	**-0.3**
	comp=Z,7.7nm,1.1s,mb4.7						
SONM	**Songino Array**	**57.19**	**349**	P	**P**	**10 57 02.6**	**+0.3**
	comp=Z,3.3nm,0.9s,mb4.4,baz=168,slow=7.9,SNR=16						
SONM				LR	LR	11 21 44.5	
	comp=Z,58nm,20.4s,MS3.7,baz=92,slow=36						
SONM	**Songino Array**	**57.19**	**349**	P	**P**	**10 57 02.6**	**+0.3**
SONM				LR	LR	11 21 44.5	
URZ	**Urewera**	**58.94**	**130**	LR	LR	11 23 58.8	
	comp=Z,114nm,19.2s,MS4.0,baz=198,slow=37						
WMQ	**Urumqi**	**59.71**	**333**	*e*P	**P**	**10 57 20.0**	**+0.1**
TLY	**Talaya**	**61.40**	**348**	*e*P	**P**	**10 57 32.1**	**+0.8**
	comp=Z,4.4nm,0.8s,mb4.6						
KSH	**Kashi**	**62.85**	**322**	*e*P	**P**	**10 57 40.0**	**-1.3**
KSH				PcP	PcP	10 58 17.3	-1.9
KSH				PP	PP	11 00 00.5	+0.3
KSH				PcS	PcS	11 02 19.1	-3.5
KSH				S	**S**	**11 06 02.9**	**-4.2**
KSH				SS	SS	11 10 12.4	-0.9
KSH				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.2						
KSH				pmax	pmax		
	comp=Z,63nm,4.8s						
KSH				LR	LR		
	comp=N,170nm,8.9s						
KSH				LR	LR		
	comp=E,110nm,8.3s						
KSH				LR	LR		
	comp=Z,60nm,4.3s						
MK31	**Makanchi Array**	**64.44**	**332**	*e*P	**P**	**10 57 51.0**	**-0.6**
MKAR	**Makanchi Array**	**64.44**	**332**	P	**P**	**10 57 50.6**	**-1.0**
	comp=Z,3.7nm,0.7s,mb4.5,baz=125,slow=7.6,SNR=26						
TKM2	**Tokmak 2**	**65.23**	**325**	*e*P	**P**	**10 57 55.5**	**-1.3**
	comp=Z,2.1nm,0.6s,mb4.3						
TKM2				*e*	pP	10 58 05.0	-6.1
UCH	**Uchtor**	**65.41**	**324**	*e*P	**P**	**10 57 57.7**	**-0.3**
	comp=Z,4.5nm,0.9s,mb4.5						
UCH				*e*	pP	10 58 08.0	-4.4
AAK	**Ala-Archa**	**65.68**	**324**	P	**P**	**10 57 58.2**	**-1.5**
	comp=Z,2.6nm,0.8s,mb4.3,baz=347,slow=2.4,SNR=7.6						
AAK	**Ala-Archa**	**65.68**	**324**	*e*P	**P**	**10 57 59.0**	**-0.7**
	comp=Z,4.8nm,0.8s,mb4.6						
AML	**Almayashu**	**65.83**	**324**	*e*P	**P**	**10 58 00.4**	**-0.3**
	comp=Z,7.2nm,0.8s,mb4.8						
EKS2	**Erkin-Say**	**66.11**	**324**	*e*P	**P**	**10 58 01.8**	**-0.7**
	comp=Z,3.4nm,0.3s,mb4.8						
PETK	**Petropavlovsk-**	**68.81**	**23**	P	**P**	**10 58 20.5**	**+1.2**
	comp=Z,2.2nm,0.8s,mb4.2,baz=151,slow=3.4,SNR=4.3						
ZAA0	**Zalesovo Array**	**68.85**	**338**	*e*P	**P**	**10 58 18.4**	**-1.2**
ZAA0				*e*		10 58 26.4	
ZALV	**Zalesovo Beam**	**68.85**	**338**	P	**P**	**10 58 18.1**	**-1.5**
	comp=Z,5.3nm,0.6s,mb4.6,baz=134,slow=5.2,SNR=17						
KURK	**Kurchatov**	**68.95**	**333**	P	**P**	**10 58 18.7**	**-1.6**
	comp=Z,2.0nm,0.7s,mb4.1,baz=147,slow=5.4,SNR=5.1						
KURK	**Kurchatov**	**68.95**	**333**	*e*P	**P**	**10 58 19.3**	**-0.9**
	comp=Z,6.4nm,0.4s,mb4.9						
MAW	**Mawson**	**70.44**	**200**	P	**P**	**10 58 30.2**	**+1.0**
	comp=Z,8.1nm,0.9s,mb4.7,baz=72,slow=8.0,SNR=9.1						
MAW	**Mawson**	**70.44**	**200**	*e*P	**P**	**10 58 30.1**	**+1.0**
	comp=Z,2.0nm,1.0s,mb4.0						
BVAR	**Borovoye Array**	**74.31**	**331**	P	**P**	**10 58 51.0**	**-1.4**
	comp=Z,2.1nm,0.8s,mb4.1,baz=130,slow=6.4,SNR=8.6						
BVAR				LR	LR	11 34 24.0	
	comp=Z,58nm,19.9s,MS3.9,baz=61,slow=38						
ABKAR	**Akbulak array**	**77.77**	**324**	*e*P	**P**	**10 59 10.4**	**-1.8**
	comp=Z,1.0nm,0.5s,mb4.0						
SYO	**Syowa Base**	**79.08**	**201⇑**	*e*P	**P**	**10 59 18.0**	**-1.2**
AKTK	**Aktyubinsk**	**79.42**	**325**	P	**P**	**10 59 19.4**	**-1.9**
AKTO	**Aktyubinsk**	**79.42**	**325**	P	**P**	**10 59 19.4**	**-1.9**
	comp=Z,2.1nm,0.8s,mb4.2,baz=103,slow=4.5,SNR=8.4						
TIXI	**Tiksi**	**79.91**	**3**	*e*P	**P**	**10 59 22.2**	**-1.3**
	comp=Z,5.0nm,0.9s,mb4.4						
QSPA	**South Pole Qui**	**81.75**	**180**	*e*P	**P**	**10 59 34.6**	**+1.2**
	comp=Z,5.2nm,0.7s,mb4.6						
BOSA	**Boshof**	**90.62**	**241**	P	**P**	**11 00 17.4**	**-0.6**
	comp=Z,3.0nm,0.9s,mb4.6,baz=114,slow=7.0,SNR=4.9						
BRTR	**Keskin Array B**	**92.75**	**310**	LR	LR	11 47 07.6	
	comp=Z,31nm,19.2s,MS3.8,baz=267,slow=39						
TORD	**Torodi Ar. Bea**	**119.73**	**280**	PKP	PKPdf	11 06 03.9	-2.2
	comp=Z,1.4nm,0.6s,baz=62,slow=1.8,SNR=7.0						
LRAL	**Lakeview Retre**	**144.60**	**42**	*e*PKPdf	PKPdf	11 06 49.4	-2.7
TKL	**Tuckaleechee C**	**144.86**	**35**	*e*PKPdf	PKPdf	11 06 50.0	-2.4
CPUP	**Villa Florida**	**145.58**	**184**	PKPbc	PKPbc	11 06 54.7	+0.6
	comp=Z,14nm,1.0s,baz=168,slow=3.5,SNR=16						
LPAZ	**La Paz**	**154.20**	**161**	PKPbc	PKPbc	11 07 14.4	-1.5
	comp=Z,0.6nm,0.6s,baz=292,slow=4.4,SNR=2.6						
LPAZ				PKPab	PKPab	11 07 32.2	+2.6
	comp=Z,9.9nm,0.8s,baz=172,slow=3.5,SNR=31						
LPAZ	**La Paz**	**154.20**	**161**	*e*PKPab	PKPab	11 07 31.9	+2.2
SIV	**San Ignacio**	**155.88**	**176**	PKPab	PKPab	11 07 38.3	+1.5
	comp=Z,7.3nm,0.8s,baz=177,slow=3.9,SNR=30						

*NEIC **04** 10:51:42.7,38°.75N×25°.57E,h21km,MD3.4(ATH),After ATH.*
*CSEM **04** 10:51:42.8±0.1,38°.75N×25°.54E,h5km,ML3.5/8,Error ellipse: s-maj=3.6km s-min=2.9km az=24.0*
*ATH **04** 10:51:42.7,38°.75N×25°.57E,h21km±2km,MD3.4/9*
*ISCJB **04** 10:51:42.2±0.6,38°.75N±0°.02×25°.54E±0°.02,h2km±4km, Error ellipse: s-maj=3.4km s-min=2.9km az=137.2*
*THE **04** 10:51:43.1,38°.74N×25°.57E,h4km±1km,ML3.5/8,Error ellipse: s-maj=2.0km s-min=0.6km az=74.0*
*ISK **04** 10:51:43.6,38°.81N×25°.49E,h27km,MD3.1*
*DDA **04** 10:51:44.1,38°.77N×25°.70E,h18km±2km,Md3.4*
ISC 04 10:51:42.9±0.5,38°.75N±0°.02×25°.53E±0°.03,h5km±3km,
n91,σ0s97/133,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.52**	**28**	P	**Pg**	**10 51 53.3**	**+0.3**
SIGR				S	**Sg**	**10 52 01.1**	**+1.3**
SIGR	**SIGRI**	**0.52**	**28**	P	**Pg**	**10 51 53.3**	**+0.3**
SIGR				S	**Sg**	**10 52 01.1**	**+1.3**
CHOS	**Chios island**	**0.55**	**132**	P	**Pg**	**10 51 53.4**	**0.0**
CHOS				S	**Sg**	**10 52 00.7**	**+0.2**
CHOS	**Chios island**	**0.55**	**132**	*e*PN	**Pg**	**10 51 53.5**	**+0.1**
CHOS				*e*SN	**Sg**	**10 52 00.6**	**+0.1**
CHOS	**Chios island**	**0.55**	**132**	P	**Pg**	**10 51 53.4**	**0.0**
CHOS				S	**Sg**	**10 52 00.7**	**+0.2**
PRK	**Paraskevi**	**0.76**	**49**	*e*Pn	**Pg**	**10 51 57.3**	**-0.2**
PRK				*e*Sn	**Sg**	**10 52 07.7**	**+0.4**
PRK	**Paraskevi**	**0.76**	**49**	P	**Pg**	**10 51 57.2**	**-0.3**
PRK				S	**Sg**	**10 52 07.8**	**+0.5**
PRK	**Paraskevi**	**0.76**	**49**	*e*PN	**Pg**	**10 51 57.3**	**-0.2**
PRK				*e*SN	**Sg**	**10 52 07.7**	**+0.4**
PRK	**Paraskevi**	**0.76**	**49**	P	**Pg**	**10 51 57.2**	**-0.3**
PRK				S	**Sg**	**10 52 07.8**	**+0.5**
URLA	**Izmir**	**0.92**	**115**	*i* P	**Pg**	**10 52 00.3**	**-0.2**
URLA				*i* S	**Sg**	**10 52 11.9**	**-0.5**
URLA	**Izmir**	**0.92**	**115**	*i* P	**Pg**	**10 52 00.3**	**-0.2**
URLA				*i* S	**Sg**	**10 52 11.9**	**-0.5**
AYVA	**Ayvalik**	**1.06**	**58**	*i* P	**Pg**	**10 52 03.1**	**-0.1**
AYVA				*i* S	**Sg**	**10 52 15.8**	**-1.1**
AYVA	**Ayvalik**	**1.06**	**58**	*i* P	**Pg**	**10 52 03.1**	**-0.1**
AYVA				*i* S	**Sg**	**10 52 15.8**	**-1.1**
BOZC	**Bozcaada**	**1.16**	**20**	*i* P	**Pg**	**10 52 04.5**	**-0.7**
BOZC				*i* S	**Sg**	**10 52 20.4**	**+0.2**
LIA	**Limnos Island**	**1.18**	**347**	*e*Pn	**Pn**	**10 52 05.7**	**-0.3**
LIA				*e*Sn	**Sn**	**10 52 21.4**	**-1.1**
LIA	**Limnos Island**	**1.18**	**347**	P	**Pg**	**10 52 05.4**	**-0.1**
LIA				S	**Sg**	**10 52 22.1**	**+1.3**
LIA	**Limnos Island**	**1.18**	**347**	*e*PN	**Pn**	**10 52 05.7**	**-0.3**
LIA				*e*SN	**Sn**	**10 52 21.4**	**-1.1**
LIA	**Limnos Island**	**1.18**	**347**	P	**Pg**	**10 52 05.4**	**-0.1**
LIA	**Limnos Island**	**1.18**	**347**	*e*Pn	**Pn**	**10 52 05.7**	**-0.3**
LIA				*e*Sn	**Sn**	**10 52 21.4**	**-1.1**
LIA				S	**Sg**	**10 52 22.1**	**+1.3**
EZN	**Ezine**	**1.24**	**30**	*e*PN	**Pn**	**10 52 05.2**	**-1.7**
EZN				*e*SN	**Sn**	**10 52 20.9**	**-3.0**
EZN	**Ezine**	**1.24**	**30**	*e*Pn	**Pn**	**10 52 05.2**	**-1.6**
EZN				*e*Sn	**Sn**	**10 52 20.9**	**-3.0**
BLCB	**Balcova**	**1.24**	**107**	*e*PN	**Pn**	**10 52 06.4**	**-0.5**
BLCB				*e*SN	**Sn**	**10 52 22.8**	**-1.1**
BLCB	**Balcova**	**1.24**	**107**	P	**Pg**	**10 52 06.0**	**-0.6**
BLCB				S	**Sg**	**10 52 23.2**	**+0.5**
BLCB	**Balcova**	**1.24**	**107**	P	**Pg**	**10 52 06.0**	**-0.6**
BLCB	**Balcova**	**1.24**	**107**	*e*Pn	**Pn**	**10 52 06.4**	**-0.4**
BLCB				*e*Sn	**Sn**	**10 52 22.8**	**-1.1**
BLCB				S	**Sg**	**10 52 23.2**	**+0.5**
AOS	**Alonnisos**	**1.36**	**288**	P	**Pn**	**10 52 08.4**	**-0.1**
AOS				S	**Sb**	**10 52 27.8**	**+1.4**
AOS	**Alonnisos**	**1.36**	**288**	P	**Pn**	**10 52 08.4**	**-0.1**
AOS				S	**Sb**	**10 52 27.8**	**+1.4**
IZM	**Izmir**	**1.40**	**104**	*e*PN	**Pn**	**10 52 08.7**	**-0.4**
SMG	**Samos**	**1.46**	**135**	*e*Pn	**Pn**	**10 52 10.5**	**+0.6**
SMG				*e*Sn	**Sn**	**10 52 29.4**	**0.0**
SMG	**Samos**	**1.46**	**135**	*e*PN	**Pn**	**10 52 10.5**	**+0.6**
SMG				*e*SN	**Sn**	**10 52 29.4**	**0.0**
SMG	**Samos**	**1.46**	**135**	*e*Pn	**Pn**	**10 52 10.5**	**+0.6**
SMG				*e*Sn	**Sn**	**10 52 29.4**	**0.0**
GADA	**Gvkgeada**	**1.47**	**11**	*e*PN	**Pn**	**10 52 08.3**	**-1.7**
GADA	**Gvkgeada**	**1.47**	**11**	*e*Pn	**Pn**	**10 52 08.3**	**-1.7**
ATHU	**Athens Univers**	**1.58**	**241**	P	**Pn**	**10 52 10.4**	**-1.2**
ATHU	**Athens Univers**	**1.58**	**241**	P	**Pn**	**10 52 10.4**	**-1.2**
APE	**Apeiranthos**	**1.68**	**180**	*e*Pb	**Pb**	**10 52 12.4**	**-1.9**
APE	**Apeiranthos**	**1.68**	**180**	P	**Pn**	**10 52 11.3**	**-1.6**
APE				S	**Sn**	**10 52 34.3**	**-0.5**
APE	**Apeiranthos**	**1.68**	**180**	*e*PB	**Pb**	**10 52 12.4**	**-1.9**
APE	**Apeiranthos**	**1.68**	**180**	P	**Pn**	**10 52 11.3**	**-1.6**
APE	**Apeiranthos**	**1.68**	**180**	*e*Pb	**Pb**	**10 52 12.4**	**-1.9**
APE				S	**Sn**	**10 52 34.3**	**-0.5**
GCAM	**G?zelcaml?**	**1.70**	**128**	*i* P	**Pn**	**10 52 14.7**	**+1.5**
GCAM				*i* S	**Sn**	**10 52 36.9**	**+1.6**
GCAM	**G?zelcaml?**	**1.70**	**128**	*i* P	**Pn**	**10 52 14.7**	**+1.5**
GCAM				*i* S	**Sn**	**10 52 36.9**	**+1.6**
AKHS	**Akhisar**	**1.79**	**85**	*i* P	**Pn**	**10 52 16.3**	**+1.9**
AKHS				*i* S	**Sn**	**10 52 36.7**	**-0.7**
AKHS	**Akhisar**	**1.79**	**85**	*i* P	**Pn**	**10 52 16.3**	**+1.9**
AKHS				*i* S	**Sn**	**10 52 36.7**	**-0.7**
PAIG	**Paliouri**	**1.86**	**310**	P	**Pn**	**10 52 15.5**	**+0.1**
PAIG	**Paliouri**	**1.86**	**310**	P	**Pn**	**10 52 15.5**	**+0.1**
NAIG	**Nisos Aigina**	**1.89**	**239**	*e*Pb	**Pn**	**10 52 15.6**	**-0.2**
NAIG	**Nisos Aigina**	**1.89**	**239**	*e*PB	**Pn**	**10 52 15.6**	**-0.2**
NAIG	**Nisos Aigina**	**1.89**	**239**	*e*Pb	**Pn**	**10 52 15.6**	**-0.2**
BALY	**Balya**	**1.90**	**58**	*i* P	**Pn**	**10 52 15.1**	**-0.8**
BALY				*i* S	**Sn**	**10 52 42.1**	**+1.9**
BALY	**Balya**	**1.90**	**58**	*i* P	**Pn**	**10 52 15.1**	**-0.8**
BALY				*i* S	**Sn**	**10 52 42.1**	**+1.9**
XOR	**Xorichti**	**1.92**	**289**	P	**Pn**	**10 52 15.7**	**-0.6**
XOR	**Xorichti**	**1.92**	**289**	P	**Pn**	**10 52 15.7**	**-0.6**
OUR	**Ouranopolis**	**1.98**	**323**	P	**Pn**	**10 52 17.0**	**-0.1**
OUR	**Ouranopolis**	**1.98**	**323**	P	**Pn**	**10 52 17.0**	**-0.1**
LKR	**Lokris**	**1.99**	**268**	P	**Pn**	**10 52 16.9**	**-0.2**
LKR	**Lokris**	**1.99**	**268**	P	**Pn**	**10 52 16.9**	**-0.2**
BALB	**Balikesir**	**2.03**	**63**	*e*PN	**Pn**	**10 52 17.4**	**-0.4**
BALB	**Balikesir**	**2.03**	**63**	*e*Pn	**Pn**	**10 52 17.4**	**-0.3**
AYDN	**Tasoluk**	**2.14**	**120**	*i* P	**Pn**	**10 52 20.9**	**+1.6**
AYDN				*i* S	**Sn**	**10 52 47.7**	**+1.4**
AYDN	**Tasoluk**	**2.14**	**120**	*i* P	**Pn**	**10 52 20.9**	**+1.6**
AYDN				*i* S	**Sn**	**10 52 47.7**	**+1.4**
LTK	**Loutraki**	**2.15**	**251**	P	**Pn**	**10 52 19.5**	**+0.2**
LTK	**Loutraki**	**2.15**	**251**	*e*PN	**Pn**	**10 52 20.6**	**+1.3**
LTK	**Loutraki**	**2.15**	**251**	P	**Pn**	**10 52 19.5**	**+0.2**
LTK	**Loutraki**	**2.15**	**251**	*e*Pn	**Pn**	**10 52 20.6**	**+1.3**
ALN	**Alexandroupoli**	**2.18**	**10**	*e*Pb	**Pn**	**10 52 19.0**	**-0.8**
ALN	**Alexandroupoli**	**2.18**	**10**	P	**Pn**	**10 52 18.9**	**-0.9**
ALN				S	**Sn**	**10 52 48.1**	**+0.9**
ALN	**Alexandroupoli**	**2.18**	**10**	*e*PB	**Pn**	**10 52 19.0**	**-0.8**
ALN	**Alexandroupoli**	**2.18**	**10**	P	**Pn**	**10 52 18.9**	**-0.9**
ALN				S	**Sn**	**10 52 48.1**	**+0.9**
THR5	**Thira Island,**	**2.33**	**184**	P	**Pn**	**10 52 20.9**	**-1.0**
THR5	**Thira Island,**	**2.33**	**184**	P	**Pn**	**10 52 20.9**	**-1.0**
KAVA	**Kavala**	**2.38**	**341**	P	**Pn**	**10 52 22.1**	**-0.4**
KAVA	**Kavala**	**2.38**	**341**	P	**Pn**	**10 52 22.1**	**-0.4**
KULA	**Kula-Manisa**	**2.46**	**95**	*e*PN	**Pn**	**10 52 23.9**	**+0.3**
KULA	**Kula-Manisa**	**2.46**	**95**	*e*Pn	**Pn**	**10 52 23.9**	**+0.2**
AGG	**Agios Georgios**	**2.52**	**277**	*e*Pn	**Pn**	**10 52 25.4**	**+1.0**
AGG	**Agios Georgios**	**2.52**	**277**	*e*PN	**Pn**	**10 52 25.4**	**+1.0**
AGG	**Agios Georgios**	**2.52**	**277**	*e*Pn	**Pn**	**10 52 25.4**	**+1.0**
DAT	**Datca**	**2.59**	**141**	*e*PN	**Pn**	**10 52 25.4**	**0.0**
DAT	**Datca**	**2.59**	**141**	*e*Pn	**Pn**	**10 52 25.4**	**0.0**
GUR	**Goura**	**2.64**	**253**	P	**Pn**	**10 52 26.5**	**+0.4**
GUR	**Goura**	**2.64**	**253**	*e*PN	**Pn**	**10 52 26.5**	**+0.4**
GUR	**Goura**	**2.64**	**253**	P	**Pn**	**10 52 26.5**	**+0.4**
SOH	**Sokhos**	**2.66**	**322**	P	**Pn**	**10 52 26.2**	**-0.3**
SOH	**Sokhos**	**2.66**	**322**	P	**Pn**	**10 52 26.2**	**-0.3**
YER	**Yerkesik**	**2.71**	**126**	*e*PN	**Pn**	**10 52 28.4**	**+1.3**
YER	**Yerkesik**	**2.71**	**126**	*e*Pn	**Pn**	**10 52 28.4**	**+1.3**
THL	**Klokotos Trika**	**2.85**	**288**	P	**Pn**	**10 52 29.8**	**+0.7**
THL	**Klokotos Trika**	**2.85**	**288**	P	**Pn**	**10 52 29.8**	**+0.7**
PYL	**PYLOS**	**3.53**	**239**	*e*PN	**Pn**	**10 52 40.0**	**+1.6**
PYL	**PYLOS**	**3.53**	**239**	*e*Pn	**Pn**	**10 52 40.0**	**+1.6**

*SKO **04** 11:23:14.7,40°.31N×21°.77E,h19km*
*CSEM **04** 11:23:15.3,40°.43N×21°.84E,h0km,ML2.5/4,After THE*
*ISCJB **04** 11:23:15.1±0.6,40°.43N±0°.03×21°.84E±0.06,h7km±7km, Error ellipse: s-maj=8.1km s-min=4.9km az=149.7*
*THE **04** 11:23:15.3,40°.43N×21°.84E,h0km±2km,ML2.5/4,Error ellipse: s-maj=2.8km s-min=0.7km az=49.0*
ISC 04 11:23:15.5±0.5,40°.42N±0°.03×21°.85E±0°.05,h7km±9km,
n19,σ0s55/26,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZN	**Kozani**	**0.13**	**208**	P	**Pg**	**11 23 17.5**	**-0.7**
KZN				S	**Sg**	**11 23 20.6**	**+0.5**
KZN	**Kozani**	**0.13**	**208**	P	**Pg**	**11 23 17.5**	**-0.7**
KZN				S	**Sg**	**11 23 20.6**	**+0.5**
FNA	**Florina**	**0.51**	**315**	P	**Pg**	**11 23 24.9**	**-0.4**
FNA				S	**Sg**	**11 23 32.0**	**0.0**
FNA	**Florina**	**0.51**	**315**	P	**Pg**	**11 23 24.9**	**-0.4**
FNA				S	**Sg**	**11 23 32.0**	**0.0**
LIT	**Litokhoron**	**0.59**	**123**	P	**Pg**	**11 23 26.4**	**-0.3**
LIT				S	**Sg**	**11 23 35.5**	**+1.1**
LIT	**Litokhoron**	**0.59**	**123**	P	**Pg**	**11 23 26.4**	**-0.3**
LIT				S	**Sg**	**11 23 35.5**	**+1.1**
MEV	**Metsovon**	**0.80**	**217**	P	**Pg**	**11 23 30.8**	**0.0**
MEV	**Metsovon**	**0.80**	**217**	P	**Pg**	**11 23 30.8**	**0.0**
THL	**Klokotos Trika**	**0.87**	**172**	P	**Pg**	**11 23 31.6**	**-0.5**
THL	**Klokotos Trika**	**0.87**	**172**	P	**Pg**	**11 23 31.6**	**-0.5**
HORT	**Hortiatis**	**0.97**	**79**	P	**Pg**	**11 23 33.9**	**-0.1**
HORT	**Hortiatis**	**0.97**	**79**	P	**Pg**	**11 23 33.9**	**-0.1**
KRUS	**Krusevo**	**1.05**	**334**	*e*Pg	**Pg**	**11 23 35.5**	**-0.1**
KRUS				*e*Sg	**Sg**	**11 23 50.1**	**+0.9**
SOH	**Sokhos**	**1.21**	**70**	P	**Pg**	**11 23 38.1**	**-0.6**
SOH	**Sokhos**	**1.21**	**70**	P	**Pg**	**11 23 38.1**	**-0.6**
AGG	**Agios Georgios**	**1.45**	**165**	P	**Pn**	**11 23 42.7**	**+0.6**
AGG	**Agios Georgios**	**1.45**	**165**	P	**Pn**	**11 23 42.7**	**+0.6**
PAIG	**Paliouri**	**1.49**	**109**	P	**Pn**	**11 23 42.2**	**-0.4**
PAIG	**Paliouri**	**1.49**	**109**	P	**Pn**	**11 23 42.2**	**-0.4**

*IDC **04** 11:23:45.1±0.8,31°.31N×103°.99E,h0km,mb4.0/12, mb1 4.1/13,mb1mx3.9/28,mbtmp4.0/13,ML3.0/1,MS3.3/3, Ms1 3.3/3,ms1mx2.7/42,Error ellipse: s-maj=28.0km s-min=16.7km az=58.0*
*NEIC **04** 11:23:47.5±0.6,31°.34N×103°.93E,h10km,mb3.9/4,Error ellipse: s-maj=15.1km s-min=10.0km az=68.0*
*BJI **04** 11:23:47.3,31°.43N×103°.98E,h19km,mB4.7/4,mb4.2/5, ML3.9/16,Ms3.6/7,Ms7 3.6/7*
ISC 04 11:23:46.4±0.8,31°.39N±0°.03×104°.08E±0°.05,h2km±6km,
n32,σ1s17/37,mb4.0/14,MS3.6/4,1D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.55**	**210⇓**	*i*Pg	**Pg**	**11 23 57.6**	**+0.6**
CD2				Sg	**Sg**	**11 24 05.0**	**+0.8**
CD2				smax			
	comp=N,6μm,0.6s						
CD2				smax			
	comp=E,7μm,0.6s						
LZH	**Lanzhou**	**4.69**	**358**	Pg	**Pg**	**11 25 07.1**	**-9.1**
LZH				Sg	**Sg**	**11 26 16.3**	**-0.7**
LZH				smax			
	comp=N,120nm,1.0s						
LZH				smax			
	comp=E,270nm,1.0s						
LZH				LR	LR		
	comp=N,740nm,8.4s						
LZH				LR	LR		
	comp=Z,830nm,9.3s						
ENH	**Enshi**	**4.78**	**102**	*e*Pn	**Pn**	**11 25 03.7**	**+4.3**
ENH				*e*Sn	**Sn**	**11 25 58.1**	**+2.8**
XAN	**Xi'an**	**4.86**	**56**	Pn	**Pn**	**11 25 02.1**	**+1.7**
XAN				Pg	**Pg**	**11 25 19.1**	**-0.4**
XAN				Sn	**Sn**	**11 25 58.9**	**+1.7**
XAN				Sg	**Sg**	**11 26 20.5**	**-2.0**
XAN				smax			
	comp=N,200nm,0.8s						
XAN				smax			
	comp=E,84nm,0.9s						
XAN				LR	LR		
	comp=N,380nm,6.8s						

*IDC **04** 11:45:06.6±5.0, 32.°52N×105.°14E, h0km, mb3.6/5, mb1 3.7/7, mb1mx3.5/27, mbtmp3.6/7, ML3.2/1, Error ellipse: s-maj=114.2km s-min=31.8km az=13.0*
*ISCJB **04** 11:45:07.4±0.5, 32.°63N±0.°05×105.°37E±0.°06, h10km, mb3.5/6, Error ellipse: s-maj=7.1km s-min=6.3km az=41.7*
*NEIC **04** 11:45:08.8±0.8, 32.°72N×105.°51E, h10km, mb3.5/1, Error ellipse: s-maj=25.5km s-min=11.3km az=221.0*
*BJI **04** 11:45:09.1, 32.°73N×105.°34E, h16km, mB4.3/3, mb4.1/3, ML3.9/13, Ms3.6/5, Ms7 3.3/5*

ISC 04 11:45:09.4±0.5, 32.°72N±0.°04×105.°37E±0.°05, h10km, n14, σ1§45/22, mb3.5/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase Op	ID	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.27**	**218**	Pn		**Pn**	**11 45 48.9**	**+2.0**
CD2				Pg		**Pg**	**11 45 51.0**	**-1.8**
CD2				Sg		**Sg**	**11 46 18.4**	**-3.8**
CD2				smax				
	comp=N,2μm,0.6s							
XAN	**Xi'an**	**3.25**	**65**	Pn		**Pn**	**11 46 01.0**	**+0.6**
XAN				Pg		**Pg**	**11 46 10.3**	**-1.4**
XAN				Sn		**Sn**	**11 46 39.5**	**+0.3**
XAN				Sg		**Sg**	**11 46 48.6**	**-5.3**
XAN				smax				
	comp=N,400nm,0.5s							
XAN				smax				
	comp=E,280nm,0.6s							
XAN				LR		LR		
	comp=N,500nm,6.4s							
XAN				LR		LR		
	comp=E,97nm,4.9s							
XAN				LR		LR		
	comp=Z,120nm,7.9s							
LZH	**Lanzhou**	**3.59**	**340**	Pn		**Pn**	**11 46 07.8**	**+2.8**
LZH				Pg		**Pg**	**11 46 16.5**	**-1.6**
LZH				Sn		**Sn**	**11 46 50.2**	**+2.7**
LZH				Sg		**Sg**	**11 47 03.1**	**-1.5**
LZH				smax				
	comp=N,450nm,0.8s							
LZH				smax				
	comp=E,1μm,0.9s							
LZH				LR		LR		
	comp=E,1μm,6.4s							
LZH				LR		LR		
	comp=Z,1μm,8.5s							
ENH	**Enshi**	**4.28**	**124**	*e*Pn		**Pn**	**11 46 12.9**	**-1.7**
GYA	**Guiyang**	**6.34**	**169**	Pn		**Pn**	**11 46 43.9**	**+1.0**
GYA				smax				
	comp=N,130nm,0.8s							
GYA				smax				
	comp=E,80nm,0.8s							
SONM	**Songino Array**	**15.12**	**3**	Pn		**Pn**	**11 48 43.0**	**+0.1**
	comp=E,0.1nm,0.3s,baz=188,slow=15,SNR=4.2							
KSRS	**Korea Array**	**19.04**	**69**	P		**Pn**	**11 49 34.6**	**+2.3**
	comp=E,0.2nm,0.3s,baz=255,slow=10.0,SNR=6.2							
MK31	**Makanchi Array**	**22.52**	**315**	*e*P		**P**	**11 50 10.0**	**+0.8**
MKAR	**Makanchi Array**	**22.52**	**315**	P		**P**	**11 50 09.3**	**+0.2**
	comp=E,0.4nm,0.4s,mb3.2,baz=110,slow=13,SNR=5.4							
ZALV	**Zalesovo Beam**	**25.78**	**332**	P		**P**	**11 50 40.3**	**+0.1**
	comp=E,0.6nm,0.3s,mb3.5,baz=133,slow=10,SNR=2.4							
UCH	**Uchtor**	**26.14**	**300**	P		**P**	**11 50 45.6**	**+1.9**
	comp=E,0.9nm,0.8s,mb3.4							
KURK	**Kurchatov**	**26.64**	**320**	P		**P**	**11 50 46.6**	**-1.4**
	comp=E,0.2nm,0.3s,mb3.1,baz=126,slow=9.4,SNR=3.3							
ARCES	**ARCESS Array B**	**56.24**	**335**	P		**P**	**11 54 48.9**	**-0.5**
	comp=E,1.1nm,0.7s,mb4.0,baz=78,slow=8.7,SNR=4.7							
YKA	**Yellowknife Ar**	**79.83**	**18**	P		**P**	**11 57 16.3**	**-1.4**
	comp=E,0.3nm,0.5s,mb3.5,baz=326,slow=5.5,SNR=3.9							

*IDC **04** 11:49:47.5±0.7, 2.°39S×140.°15E, h0km, mb4.5/13, mb1 4.6/14, mb1mx4.6/17, mbtmp4.5/14, ML4.2/1, MS4.2/12, Ms1 4.2/12, ms1mx3.9/23, Error ellipse: s-maj=27.8km s-min=14.4km az=79.0*
*BJI **04** 11:49:47.7, 2.°95S×140.°39E, h35km, mB5.0/27, mb4.9/41, Ms4.7/29, Ms7 4.4/29*
*DJA **04** 11:49:50, 2.°32S×140.°51E, h25km, mb5.0/22*
*MOS **04** 11:49:50.8±1.3, 2.°42S×140.°20E, h33km, mb5.1/14, Error ellipse: s-maj=16.9km s-min=7.9km az=113.3*
*ISCJB **04** 11:49:51.6±1.0, 2.°53S±0.°05×140.°18E±0.°05, h38km±8km, mb4.8/57, MS4.2/23, Error ellipse: s-maj=8.8km s-min=7.1km az=143.2*
*NEIC **04** 11:49:53.4±0.3, 2.°48S×140.°02E, h35km, mb4.9/21, Error ellipse: s-maj=8.9km s-min=5.9km az=77.0*
NEIC Felt [III] at Jayapura.
*GCMT **04** 11:49:53.3±0.2, 2.°30S×140.°17E, h19km±1km, MW5.0, Moment Tensor Solution. s42,c57; s80,c120; Moment tensor: Scale 10^{16}Nm; M_{rr}=0.22±.16; $M_{\theta\theta}$0.75±.12; $M_{\phi\phi}$-0.53±.15; $M_{r\theta}$-0.46±.26; $M_{\theta\phi}$4.52±.12; $M_{\phi r}$0.80±.29; Best double couple: $M_0$4.70000×10^{16} NP1:φ_s93.00000°, δ80.00000°, λ-7.00000°. NP2:φ_s185.00000°, δ83.00000°, λ-170.00000°. Principal axes: T 4.6800, Plg2.0000°, Azm319.0000°; N -0.0400, Plg78.0000°, Azm219.0000°; P -4.6400, Plg12.0000°, Azm49.0000°; Data Used: II IU IC G CN.*

ISC 04 11:49:55.2±0.9, 2.°59S±0.°04×140.°13E±0.°05, h54km±8km, h35km±1.4km: pP-P, n137, σ1§19/134, mb4.8/56, MS4.2/23, 3C-2D, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase Op	ID	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**0.58**	**83**	P		Px	11 49 56.8	
SMPI	**Sarmi**	**1.54**	**293**	P		**Pn**	**11 50 16.2**	**-4.1**
TLE	**Tual**	**7.97**	**247**	P		**Pn**	**11 51 53.4**	**+4.9**
	130nm,1.5s							
COEN	**Coen**	**11.69**	**165**	*e*Pn		**Pn**	**11 52 40.2**	**+0.9**
	436nm,1.4s							
COEN	**Coen**	**11.69**	**165**	P		**Pn**	**11 52 40.4**	**+1.0**
	113nm,1.3s							
KAKA	**Kakadu**	**12.62**	**217**	*e*P		**Pn**	**11 52 49.2**	**-2.8**
	131nm,0.9s							
KAKA				*e*S		**Sn**	**11 55 08.3**	**-2.7**
KAKA	**Kakadu**	**12.62**	**217**	*e*Pn		**Pn**	**11 52 49.8**	**-2.2**
	423nm,0.8s							
KAKA				*e*Sn		**Sn**	**11 55 08.6**	**-2.4**
KAKA	**Kakadu**	**12.62**	**217**	P		**Pn**	**11 52 50.5**	**-1.5**
	2μm264nm,0.9s							
LBMI	**Labuha**	**12.77**	**279**	P		**Pn**	**11 52 55.1**	**+0.9**
	1μm85nm,1.3s							
TNTI	**Ternate**	**13.19**	**284**	P		**Pn**	**11 52 59.1**	**-0.8**
	1μm104nm,1.6s							
MNI	**Manado**	**15.80**	**285**	P		**Pn**	**11 53 35.4**	**+1.0**
	2μm116nm,0.8s							
SGSI	**Sangihe**	**15.87**	**293**	P		**Pn**	**11 53 36.7**	**+1.4**
KNA	**Kununurra**	**17.21**	**220**	P		**Pn**	**11 53 52.9**	**+0.8**
	3μm498nm,0.8s							
DAV	**Davao City (W)**	**17.41**	**304**	P		**Pn**	**11 53 57.6**	**+3.1**
	49nm,0.3s,baz=183,slow=1.8,SNR=4.3							
DAV				LR		LR	11 59 28.9	
	comp=Z,632nm,18.3s,baz=137,slow=34							
DAV	**Davao City (W)**	**17.41**	**304**	P		**Pn**	**11 53 57.6**	**+3.1**
DAV				LR		LR	11 59 28.9	
LUWI	**Luwuk**	**17.42**	**275**	P		**Pn**	**11 54 01.0**	**+6.4**
KDI	**Kendari**	**17.54**	**265**	P		**Pn**	**11 53 57.4**	**+1.3**
	798nm33nm,1.1s							
WRAB	**Tennant Creek**	**18.14**	**198**	*e*P		**Pn**	**11 54 02.5**	**-0.9**
WRAB				pmax		pmax		
	comp=Z,54nm,0.9s							
WRAB	**Tennant Creek**	**18.14**	**198**	*e*P		**Pn**	**11 54 02.5**	**-0.9**
	comp=Z,54nm,0.9s							
WRAB	**Tennant Creek**	**18.14**	**198**	P		**Pn**	**11 54 03.6**	**+0.2**
	comp=Z,66nm,1.0s							
CTA	**Charters Tower**	**18.39**	**161**	P		**Pn**	**11 54 07.8**	**+1.4**
	comp=Z,0.5nm,0.3s,baz=324,slow=12,SNR=8.3							
CTA				Lg			11 59 39.2	
	comp=Z,0.3nm,0.3s,baz=261,slow=18,SNR=2.6							
CTA	**Charters Tower**	**18.39**	**161**	P		**Pn**	**11 54 07.8**	**+1.4**
CTA				Lg			11 59 39.2	
CTAO	**Charters Tower**	**18.39**	**161**	*e*P		**Pn**	**11 54 09.0**	**+2.6**
CTAO				pmax		pmax		
	comp=Z,15nm,1.0s							
CTAO	**Charters Tower**	**18.39**	**161**	*e*P		**Pn**	**11 54 09.0**	**+2.6**
	comp=Z,15nm,1.0s							
CTAO	**Charters Tower**	**18.39**	**161**	P		**Pn**	**11 54 09.2**	**+2.8**
MRSI	**Marisa**	**18.44**	**279**	P		**Pn**	**11 54 05.5**	**-1.6**
	comp=Z,57nm,1.1s							
APSI	**Ampana**	**18.55**	**275**	P		**Pn**	**11 54 09.2**	**+0.8**
	comp=Z,1μmcomp=Z,94nm,1.2s							
TTSI	**Tana Toraja**	**20.29**	**268**	P		**P**	**11 54 28.7**	**+1.9**
HNR	**Honiara**	**20.83**	**110**	*e*P		**P**	**11 54 32.3**	**-0.3**
HNR				pmax		pmax		
	comp=Z,91nm,0.8s							
HNR	**Honiara**	**20.83**	**110**	*e*P		**P**	**11 54 32.3**	**-0.3**
	comp=Z,91nm,0.8s							
FITZ	**Fitzroy Crossi**	**20.97**	**222**	*e*P		**P**	**11 54 33.8**	**-0.2**
	comp=Z,102nm,1.0s							
FITZ				*e*S		**S**	**11 58 23.2**	**-1.6**
FITZ	**Fitzroy Crossi**	**20.97**	**222**	P		**P**	**11 54 33.6**	**-0.4**
	comp=Z,66nm,1.0s,baz=56,slow=8.9,SNR=15							
FITZ				S		**S**	**11 58 21.0**	**-3.8**
	comp=Z,12nm,0.9s,baz=96,slow=8.9,SNR=2.8							
FITZ	**Fitzroy Crossi**	**20.97**	**222**	*e*P		**P**	**11 54 33.7**	**-0.3**
	comp=Z,75nm,1.0s							
FITZ				*e*S		**S**	**11 58 23.3**	**-1.5**
FITZ	**Fitzroy Crossi**	**20.97**	**222**	P		**P**	**11 54 33.9**	**-0.1**
	comp=Z,154nm,1.0s							
ASAR	**Alice Springs**	**21.80**	**196**	P		**P**	**11 54 42.3**	**-0.6**
	comp=Z,25nm,0.7s,mb4.7,baz=27,slow=10,SNR=72							
ASAR				S		**S**	**11 58 43.3**	**+2.2**
	comp=Z,7.7nm,1.1s,baz=15,slow=19,SNR=5.1							
MYLDM	**Lahad Datu**	**22.95**	**290**	P		**P**	**11 54 57.1**	**+1.9**
	comp=Z,2μmcomp=Z,123nm,1.3s,mb5.2							
EIDS	**Eidsvold**	**24.98**	**156**	*e*P		**P**	**11 55 15.9**	**+1.9**
	comp=Z,251nm,1.8s,mb5.4							
TGY	**Tagaytay City**	**25.24**	**312**	P		**P**	**11 55 15.8**	**-0.6**
	comp=Z,74nm,0.3s,mb5.7,baz=88,slow=16,SNR=7.5							
MBWA	**Marble Bar**	**27.12**	**226**	*e*P		**P**	**11 55 33.1**	**-0.2**
	comp=Z,27nm,0.8s,mb4.8							
SBUM	**Sibu**	**28.35**	**280**	P		**P**	**11 55 36.9**	**-7.6**
STKA	**Stephens Creek**	**29.16**	**177**	*e*P		**P**	**11 55 52.4**	**+1.0**
	comp=Z,6.3nm,1.1s,mb4.3							
STKA	**Stephens Creek**	**29.16**	**177**	P		**P**	**11 55 52.1**	**+0.7**
	comp=Z,3.8nm,0.7s,mb4.2,baz=0.6,slow=7.4,SNR=6.4							
STKA				LR		LR	12 07 25.1	
	comp=Z,628nm,19.2s,MS4.2,baz=355,slow=36							
KSM	**Kuching**	**30.09**	**277**	*e*P		**P**	**11 55 59.0**	**-0.9**
	comp=Z,17nm,1.3s,mb4.6							
JOW	**Kunigami**	**31.41**	**339**	LR		LR	12 06 24.0	
	comp=Z,600nm,19.2s,MS4.3,baz=323,slow=32							
DZM	**Mont Dzumac**	**32.07**	**129**	*e*S		**S**	**12 01 35.0**	**+9.2**
	comp=Z,355nm,29.8s							
DZM				*e*LR		LR	12 04 54.2	
	comp=Z,1μm,23.2s							
JHJ	**Hachijo jima 2**	**35.52**	**359**	LR		LR	12 07 19.0	
	comp=Z,606nm,21.4s,MS4.3,baz=292,slow=30							
MYKOM	**Kota Tinggi**	**36.53**	**276**	P		**P**	**11 56 55.8**	**-0.2**
	comp=Z,12nm,1.3s,mb4.6							
QIZ	**Qiongzhong**	**36.73**	**307**	P		**P**	**11 56 56.9**	**-0.6**
QIZ				S		**S**	**12 02 37.2**	**-0.4**
QIZ				pmax		pmax		
	comp=Z,17nm,1.1s,mb4.8							
QIZ				LR		LR		
	comp=N,330nm,17.4s							
QIZ				LR		LR		
	comp=Z,460nm,28.8s							
SDSI	**Sungai Dareh**	**38.72**	**272**	P		**P**	**11 57 14.6**	**+0.1**
	comp=Z,19nm,1.4s,mb4.6							
MJAR	**Matsushiro Arr**	**38.97**	**358**	P		**P**	**11 57 11.9**	**-4.3**
	comp=Z,2.1nm,0.9s,mb3.9,baz=198,slow=10,SNR=4.5							
BKNI	**Bangkinang**	**39.19**	**274**	P		**P**	**11 57 18.4**	**0.0**
	comp=Z,49nm,1.3s,mb5.1							
PDSI	**Padang**	**39.69**	**272**	P		**P**	**11 57 21.6**	**-1.0**
	comp=Z,35nm,1.6s,mb4.8							
IPM	**Ipoh**	**39.70**	**280**	P		**P**	**11 57 22.1**	**-0.6**
	comp=Z,11nm,1.3s,mb4.4							
NJ2	**Nanjing**	**39.93**	**331**	*e*P		**P**	**11 57 23.4**	**-0.9**
NJ2				pP		pP	11 57 32.9	-5.4
NJ2				sP		sP	11 57 36.4	-8.1
NJ2				PP		PP	11 59 00.5	+3.5
NJ2				S		**S**	**12 03 25.0**	**-0.8**
NJ2				sS		sS	12 03 42.0	-7.3
NJ2				pmax		pmax		
	comp=Z,40nm,1.3s,mb5.0							
NJ2				pmax		pmax		
	comp=Z,230nm,4.0s							
NJ2				LR		LR		
	comp=N,350nm,11.4s,MS4.5							
NJ2				LR		LR		
	comp=E,260nm,14.6s,MS4.5							
NJ2				LR		LR		
	comp=Z,480nm,16.4s,MS4.4							
KULM	**Kulim**	**40.21**	**281**	*e*P		**P**	**11 57 25.9**	**-1.0**
	comp=Z,23nm,1.2s,mb4.8							
KULM	**Kulim**	**40.21**	**281**	P		**P**	**11 57 25.8**	**-1.1**
	comp=Z,304nmcomp=Z,17nm,1.2s,mb4.6							
MNSI	**Mandailing Nat**	**40.68**	**274**	P		**P**	**11 57 30.3**	**-0.5**
	comp=Z,15nm,0.7s,mb4.7							
SISI	**Saibi**	**41.04**	**271**	P		**P**	**11 57 32.8**	**-1.0**
	comp=Z,48nm,1.2s,mb5.0							
KSRS	**Korea Array**	**41.42**	**345**	P		**P**	**11 57 33.9**	**-2.6**
	comp=Z,2.1nm,0.7s,mb3.9,baz=160,slow=8.9,SNR=5.0							
KSRS				LR		LR	12 12 39.6	
	comp=Z,337nm,19.5s,MS4.2,baz=165,slow=33							
GYA	**Guiyang**	**43.35**	**314**	P		**P**	**11 57 54.0**	**+1.6**
GYA				pP		pP	11 58 04.3	-2.2
GYA				sP		sP	11 58 09.6	-3.1
GYA				PP		PP	11 59 37.4	+3.4
GYA				ScP		ScP	12 03 30.0	+2.5
GYA				PcS		PcS	12 03 34.8	+1.7
GYA				S		**S**	**12 04 18.8**	**+2.3**
GYA				sS		sS	12 04 36.2	-4.1
GYA				SS		SS	12 07 25.9	-6.1
GYA				pmax		pmax		
	comp=Z,20nm,1.0s,mb4.8							
GYA				pmax		pmax		
	comp=Z,120nm,4.9s							
GYA				LR		LR		
	comp=N,630nm,17.5s,MS4.7							
GYA				LR		LR		
	comp=E,580nm,17.0s,MS4.7							
GYA				LR		LR		
	comp=Z,720nm,16.8s,MS4.7							
KMI	**Kunming**	**45.53**	**310**	P		**P**	**11 58 10.6**	**+0.8**
KMI				pP		pP	11 58 20.9	-3.1
KMI				sP		sP	11 58 25.0	-5.2
KMI				PP		PP	11 59 57.9	+0.6
KMI				PcS		PcS	12 03 42.6	+0.5
KMI				S		**S**	**12 04 49.1**	**+0.9**
KMI				sS		sS	12 05 06.6	-5.5
KMI				ScS		ScS	12 08 00.7	-1.1
KMI				SS		SS	12 08 04.7	-8.3
KMI				pmax		pmax		
	comp=Z,20nm,1.1s,mb5.0							
KMI				LR		LR		
	comp=N,300nm,21.5s,MS4.3							
KMI				LR		LR		
	comp=E,280nm,22.5s,MS4.3							
KMI				LR		LR		
	comp=Z,460nm,24.5s,MS4.3							
CM31	**Chiang Mai Arr**	**45.62**	**299**	*e*P		**P**	**11 58 10.9**	**+0.3**
CMAR	**Chiang Mai Arr**	**45.62**	**299**	P		**P**	**11 58 08.7**	**-1.9**
	comp=Z,24nm,1.1s,mb5.0,baz=118,slow=6.0,SNR=63							
CMAR				LR		LR	12 15 35.8	
	comp=Z,201nm,20.9s,MS4.0,baz=117,slow=34							
CMAR	**Chiang Mai Arr**	**45.62**	**299**	P		**P**	**11 58 08.7**	**-1.9**
CMAR				LR		LR	12 15 35.8	
CHTO	**Chiang Mai**	**45.75**	**299**	*e*P		**P**	**11 58 11.3**	**-0.4**
CHTO				pmax		pmax		
	comp=Z,17nm,0.5s,mb5.2							
CHTO	**Chiang Mai**	**45.75**	**299**	*e*P		**P**	**11 58 11.3**	**-0.4**
	comp=Z,17nm,0.5s,mb5.2							
CHTO	**Chiang Mai**	**45.75**	**299**	P		**P**	**11 58 10.9**	**-0.8**
VLA	**Vladivostok**	**46.10**	**352**	*e*P		**P**	**11 58 12.8**	**-1.2**
VLA				pmax		pmax		
	comp=Z,32nm,1.8s,mb5.0							
XAN	**Xi'an**	**46.80**	**324**	P		**P**	**11 58 19.2**	**-0.5**
XAN				pP		pP	11 58 28.8	-5.1
XAN				sP		sP	11 58 32.4	-7.7
XAN				PP		PP	12 00 10.4	-0.2
XAN				S		**S**	**12 05 09.5**	**+3.2**
XAN				sS		sS	12 05 24.9	-5.3
XAN				pmax		pmax		
	comp=Z,4.0nm,1.4s,mb4.2							
XAN				pmax		pmax		
	comp=Z,17nm,5.1s							
XAN				LR		LR		
	comp=N,160nm,19.8s,MS4.0							
XAN				LR		LR		
	comp=E,73nm,20.7s,MS4.0							
XAN				LR		LR		
	comp=Z,110nm,24.9s,MS3.7							
BJI	**Beijing**	**47.77**	**335**	P		**P**	**11 58 28.4**	**+1.3**
BJI				S		**S**	**12 05 20.2**	**+0.4**
BJI				pmax		pmax		
	comp=Z,21nm,1.8s,mb4.9							
BJI				pmax		pmax		
	comp=Z,120nm,3.8s							
BJI				LR		LR		
	comp=N,260nm,20.1s,MS4.4							
BJI				LR		LR		
	comp=E,380nm,23.0s,MS4.4							
BJI				LR		LR		
	comp=Z,400nm,24.7s,MS4.3							
MDJ	**Mudanjiang**	**47.93**	**350**	P		**P**	**11 58 29.5**	**+1.3**
MDJ				pP		pP	11 58 39.5	-3.0
MDJ				S		**S**	**12 05 31.1**	**+9.2**
MDJ				pmax		pmax		
	comp=Z,9.0nm,1.4s,mb4.6							
MDJ				pmax		pmax		
	comp=Z,70nm,5.4s							
MDJ				LR		LR		
	comp=N,130nm,26.8s,MS4.3							
MDJ				LR		LR		
	comp=E,370nm,25.3s,MS4.3							
MDJ				LR		LR		
	comp=Z,220nm,29.8s,MS4.0							
CN2	**Changchun**	**48.03**	**346**	*e*P		**P**	**11 58 32.5**	**+3.5**
CN2				*es*P		sP	11 58 47.5	-2.0
CN2				*e*S		**S**	**12 05 27.8**	**+4.5**
CN2				pmax		pmax		
	comp=Z,20nm,0.7s,mb5.3							
CN2				pmax		pmax		
	comp=Z,300nm,4.0s							
CN2				LR		LR		
	comp=N,400nm,15.0s,MS4.7							
CN2				LR		LR		
	comp=E,500nm,15.0s,MS4.7							
CN2				LR		LR		
	comp=Z,600nm,17.0s,MS4.6							
HHC	**Hu-ho-hao-te**	**50.48**	**332**	*e*P		**P**	**11 58 50.1**	**+2.3**
HHC				pP		pP	11 59 00.0	-2.2
HHC				sP		sP	11 59 03.9	-4.4
HHC				PcP		PcP	12 00 07.5	+2.2
HHC				PP		PP	12 00 47.6	+3.6
HHC				ScP		ScP	12 04 01.0	+4.0
HHC				PcS		PcS	12 04 04.4	+1.9
HHC				S		**S**	**12 06 00.4**	**+2.6**
HHC				sS		sS	12 06 18.2	-3.8
HHC				ScS		ScS	12 08 35.4	+1.3
HHC				SS		SS	12 09 33.5	+1.0
HHC				pmax		pmax		
	comp=Z,14nm,0.9s,mb5.0							
HHC				pmax		pmax		
	comp=Z,71nm,7.2s							
HHC				LR		LR		
	comp=N,240nm,17.6s,MS4.4							
HHC				LR		LR		
	comp=E,240nm,18.8s,MS4.4							
HHC				LR		LR		
	comp=Z,290nm,17.3s,MS4.3							
HABR	**Khabarovsk**	**51.05**	**356**	*e*P		pP	11 59 03.4	-2.9
HABR				*e*			12 00 45.4	
HABR				*e*S		**S**	**12 06 02.4**	**-2.9**
HABR				pmax		pmax		
	comp=N,9.0nm,1.2s							
HABR				pmax		pmax		
	comp=Z,14nm,1.1s,mb4.8							
HABR				pmax		pmax		
	comp=E,8.0nm,0.7s							
HABR				MLR		MLR		
	comp=Z,69nm,18.0s,MS3.7							
KLR	**Kul'dur**	**52.12**	**353**	*e*P		**P**	**11 58 55.3**	**-4.6**
SHL	**Shillong**	**54.44**	**304**	*e*PKP		**P**	**11 59 17.0**	**-0.4**
GTA	**Gaotai**	**55.83**	**323**	‖P		**P**	**11 59 27.5**	**+0.4**
GTA				pP		pP	11 59 37.5	-4.2
GTA				sP		sP	11 59 41.7	-6.1
GTA				PP		PP	12 01 33.7	+1.5
GTA				S		**S**	**12 07 12.0**	**+1.5**
GTA				sS		sS	12 07 28.8	-6.2
GTA				SS		SS	12 10 57.5	+0.5
GTA				pmax		pmax		
	comp=Z,12nm,1.2s,mb4.8							
GTA				pmax		pmax		
	comp=Z,67nm,5.4s							
GTA				LR		LR		
	comp=N,180nm,18.3s,MS4.4							
GTA				LR		LR		
	comp=E,190nm,17.1s,MS4.4							
GTA				LR		LR		
	comp=Z,260nm,17.7s,MS4.4							
PETK	**Petropavlovsk-**	**57.42**	**12**	P		**P**	**11 59 36.4**	**-1.8**
	comp=Z,1.8nm,0.7s,mb4.2,baz=207,slow=5.7,SNR=3.0							
ULN	**Ulaanbaatar**	**57.96**	**334**	*e*P		**P**	**11 59 43.4**	**+1.3**
ULN				pmax		pmax		
	comp=Z,6.0nm,1.1s,mb4.5							
ULN	**Ulaanbaatar**	**57.96**	**334**	*e*P		**P**	**11 59 43.4**	**+1.3**
	comp=Z,6.1nm,1.1s,mb4.5							
SONM	**Songino Array**	**58.23**	**334**	P		**P**	**11 59 43.7**	**-0.2**
	comp=Z,0.9nm,0.8s,mb3.9,baz=146,slow=11,SNR=6.6							
SONM				LR		LR	12 22 42.4	
	comp=Z,420nm,19.3s,MS4.6,baz=136,slow=34							
ZAK	**Zakamensk**	**61.49**	**334**	*e*P		**P**	**12 00 05.4**	**-0.9**
ZAK				pmax		pmax		
	comp=Z,8.0nm,1.5s,mb4.6							
TLY	**Talaya**	**62.29**	**335**	*e*P		**P**	**12 00 15.4**	**+3.7**
TLY				*e*S		**S**	**12 08 44.9**	**+11**
TLY				pmax		pmax		
	comp=Z,3.0nm,1.1s,mb4.3							
TLY				MLR		MLR		
	comp=Z,160nm,19.0s,MS4.2							
MOY	**Mondy**	**63.42**	**334**	*e*P		**P**	**12 00 20.4**	**+1.2**
WMQ	**Urumqi**	**65.80**	**321**	P		**P**	**12 00 35.0**	**+0.1**
WMQ				pP		pP	12 00 45.0	-4.8
WMQ				sP		sP	12 00 49.0	-6.8
WMQ				PP		PP	12 03 02.0	+1.7
WMQ				S		S	12 09 17.0	-0.6
WMQ				ScS		ScS	12 10 24.0	-2.4
WMQ				pmax		pmax		
	comp=Z,26nm,1.0s,mb5.2							
WMQ				pmax		pmax		
	comp=Z,68nm,5.0s							
WMQ				LR		LR		
	comp=N,130nm,18.0s,MS4.5							
WMQ				LR		LR		
	comp=E,220nm,18.0s,MS4.5							
WMQ				LR		LR		
	comp=Z,130nm,18.0s,MS4.2							
PPT	**Papeete**	**70.44**	**108**	*e*LR		LR	12 22 37.3	
	comp=Z,343nm,22.8s							
PPT	**Papeete**	**70.44**	**108**	LR		LR	12 26 49.9	
	comp=Z,257nm,20.9s,MS4.5,baz=172,slow=32							
MK31	**Makanchi Array**	**70.56**	**322**	*e*P		**P**	**12 01 04.2**	**-0.5**
MKAR	**Makanchi Array**	**70.56**	**322**	P		**P**	**12 01 04.1**	**-0.6**
	comp=Z,12nm,0.8s,mb4.9,baz=99,slow=7.9,SNR=59						

UCH	Uchtor	73.96	315	*e*P		P	12 01 25.6	+0.5
	comp=Z,43nm,1.4s,mb5.2							
AAK	Ala-Archa	74.11	316	P		P	12 01 25.8	-0.1
	comp=Z,1.3nm,0.4s,mb4.3,baz=186,slow=13,SNR=9.6							
AAK	Ala-Archa	74.11	316	*c i*P		P	12 01 26.3	+0.4
AAK				pmax	pmax			
	comp=Z,5.0nm,1.2s,mb4.3							
AAK	Ala-Archa	74.11	316	*e*P		P	12 01 26.0	+0.1
	comp=Z,25nm,1.4s,mb5.0							
KURK	Kurchatov	74.44	325	P		P	12 01 26.7	-0.9
	comp=Z,11nm,1.0s,mb4.8,baz=112,slow=5.1,SNR=35							
KURK				LR	LR		12 31 59.8	
	comp=Z,61nm,20.1s,MS3.9,baz=100,slow=34							
KURK	Kurchatov	74.44	325	*e*P		P	12 01 26.6	-1.0
KURK				pmax	pmax			
	comp=Z,14nm,0.9s,mb4.9							
KURK	Kurchatov	74.44	325	*e*P		P	12 01 26.6	-1.0
	comp=Z,14nm,0.9s,mb4.9							
AML	Almayashu	74.51	315	*e*P		P	12 01 29.3	+1.1
AML				pmax	pmax			
	comp=Z,22nm,1.0s,mb5.0							
AML	Almayashu	74.51	315	*e*P		P	12 01 29.3	+1.0
	comp=Z,22nm,1.0s,mb5.0							
EKS2	Erkin-Say	74.62	316	*e*P		P	12 01 28.9	0.0
EKS2				pmax	pmax			
	comp=Z,8.0nm,0.9s,mb4.7							
EKS2	Erkin-Say	74.62	316	*e*P		P	12 01 28.9	0.0
	comp=Z,8.2nm,0.9s,mb4.7							
BVAR	Borovoye Array	80.03	325	P		P	12 01 58.2	-0.7
	comp=Z,7.6nm,0.8s,mb4.7,baz=116,slow=6.8,SNR=32							
BRVK	Borovoye	80.10	325	*d i*P		P	12 01 59.4	+0.1
BRVK				pmax	pmax			
	comp=Z,17nm,1.2s,mb4.8							
BRVK	Borovoye	80.10	325	*e*P		P	12 01 59.2	-0.1
TTA	Tatalina	80.71	25	*e*P		P	12 02 02.6	+0.3
CHUM	Lake Minchumin	82.61	24	*e*P		P	12 02 12.3	0.0
	comp=Z,10nm,0.7s,mb5.0							
KTH	Kantishna Hill	83.07	25	*e*P		P	12 02 13.5	-1.3
	comp=Z,7.4nm,1.0s,mb4.7							
COLD	Coldfoot	84.62	22	*e*P		P	12 02 22.1	-0.4
	comp=Z,3.9nm,1.0s,mb4.5							
ABKAR	Akbulak array	85.55	320	*e*P		P	12 02 26.9	-0.7
	comp=Z,5.4nm,0.8s,mb4.8							
ARU	Arti	87.47	327	*c i*P		P	12 02 36.2	-0.7
ARU							12 05 57.0	
ARU				S	SKSac		12 12 58.4	-1.6
ARU				SS	SS		12 18 59.0	-0.8
ARU				pmax	pmax			
	comp=Z,9.0nm,1.2s,mb4.9							
ARU	Arti	87.47	327	*e*P		P	12 02 35.9	-0.9
EGAK	Eagle	87.52	25	*e*P		P	12 02 37.5	+0.6
	comp=Z,17nm,1.7s,mb5.0							
DAWY	Dawson	88.14	26	*e*P		P	12 02 39.4	-0.5
HYT	Haines Junctio	88.51	29	*e*P		P	12 02 44.3	+2.5
YKA	Yellowknife Ar	99.31	27	LR	LR		12 45 32.1	
	comp=Z,18nm,20.0s,MS3.6,baz=5.0,slow=34							
OBN	Obninsk	99.86	325	*e*P		Pdif	12 03 33.0	-0.9
OBN				*e*			12 07 37.1	
OBN				pmax	pmax			
	comp=Z,7.0nm,1.2s,mb5.0							
NVAR	Mina Array Bea	100.66	52	P		Pdif	12 03 36.8	-0.7
	comp=Z,0.7nm,0.8s,baz=254,slow=5.5,SNR=4.1							
TXAR	Lajitas Array	114.02	59	PKiKP	PKiKP		12 08 24.9	-4.1
	comp=Z,0.2nm,0.6s,baz=230,slow=3.1,SNR=4.4							
TORD	Torodi Ar. Bea	137.59	287	PKP	PKPdf		12 09 14.8	+0.5
	comp=Z,1.3nm,0.9s,baz=60,slow=1.5,SNR=6.1							
KIC	Kosan Boka	144.79	277	*e*PKP1	PKPdf		12 09 27.2	-0.1
	comp=Z,82nm,1.0s							
DBIC	Dimbokro	144.88	278	PKP	PKPdf		12 09 27.2	-0.2
	comp=Z,23nm,0.8s,baz=79,slow=3.6,SNR=18							
DBIC	Dimbokro	144.88	278	*e*PKPdf	PKPdf		12 09 27.2	-0.3
TIC	Toumodi	145.04	278	*e*PKP1	PKPbc		12 09 28.0	+0.8
	comp=Z,31nm,0.7s							
LIC	Lamto	145.08	277	*e*PKP1	PKPbc		12 09 28.2	+0.9
	comp=Z,89nm,1.2s							
SDDR	Presa de Saban	145.21	60	*e*PKPbc	PKPbc		12 09 27.4	-0.1
LPAZ	La Paz	146.36	125	PKPbc	PKPbc		12 09 32.1	+1.0
	comp=Z,13nm,1.1s,baz=244,slow=1.7,SNR=24							
LPAZ	La Paz	146.36	125	*e*PKPdf	PKPbc		12 09 32.6	+1.5
CPUP	Villa Florida	146.66	151	PKPbc	PKPbc		12 09 32.1	+0.4
	comp=Z,6.0nm,0.7s,baz=208,slow=3.1,SNR=14							
SDV	Santo Domingo	148.77	77	*e*PKPdf	PKPbc		12 09 36.9	-0.9

DJA 04 11:50:16, 9.75S×118.82E, h26km, mb4.6/7, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	Waingapu	1.46	87	P	Pn	11 50 41.3	+0.6
WSI				S	Sn	11 50 59.3	+0.3
KHKI	Kahang-Kahang	3.46	293	P	Pn	11 51 08.4	+0.2
MMRI	Maumere	3.55	72	P	Pn	11 51 09.3	-0.2
MMRI				S	Sn	11 51 53.2	+2.6
IGBI	Denpasar	3.74	284	P	Pn	11 51 12.4	+0.3
ABJI	Asem Bagus	4.93	293	P	Pn	11 51 28.7	+0.2
TTSI	Tana Toraja	6.74	9	P	Pn	11 51 54.7	+1.4
	34nm,0.7s						
KDI	Kendari	6.88	33	P	Pn	11 51 57.3	+2.0
	0.1nm22nm,0.9s						
PWJI	Pagerwojo	7.14	283	P	Pn	11 51 59.2	+0.3
	31nm,0.8s						
FITZ	Fitzroy Crossi	10.62	142	*e*P	Pn	11 52 47.1	+0.6
	22nm,0.5s						
FITZ	Fitzroy Crossi	10.62	142	P	Pn	11 52 47.2	+0.7
	38nm,0.6s						
MBWA	Marble Bar	11.38	176	*e*P	Pn	11 52 57.1	+0.2
MBWA				*e*S	Sn	11 54 54.1	-9.2
MBWA	Marble Bar	11.38	176	P	Pn	11 52 56.6	-0.3
	13nm,3.0s						
KNA	Kununurra	11.39	123	P	Pn	11 52 57.7	+0.6
	3µm35nm,0.8s						
MEEK	Meekatharra	16.80	181	*e*P	Pn	11 54 09.9	+0.4
MEEK				*e*S	Sn	11 56 59.3	-16

IDC 04 12:02:34.4±1.4, 30.08N×105.32E, h0km, mb3.3/3, mb1 3.6/4, mb1mx3.4/24, mbtmp3.4/4, ML4.2/1, Error ellipse: s-maj=38.0km s-min=29.1km az=63.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	12.94	208	Pn	Pn	12 05 40.0	+0.4
	0.4nm,0.3s,baz=9.5,slow=9.2,SNR=4.3						
KSRS	Korea Array	20.15	63	P	P	12 07 10.1	-0.1
	0.9nm,0.6s,baz=254,slow=9.0,SNR=4.1						
MKAR	Makanchi Array	24.44	319	P	P	12 07 54.7	+0.1
	0.5nm,0.7s,baz=134,slow=8.3,SNR=1.8						
ASAR	Alice Springs	60.08	150	P	P	12 12 43.4	0.0
	0.2nm,0.3s,baz=335,slow=7.0,SNR=11						

MEX 04 12:23:12.0±0.7, 16.05N×100.64W, h16km±14km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	1.05	19	*i*P	Pb	12 23 28.0	-3.9
CAIG				*i*S	Sb	12 23 41.2	-4.2
ACX	Acapulco	1.10	42	*i*P	Pb	12 23 29.0	-3.7
ACX				*i*S	Sb	12 23 41.2	-5.7
ZIIG	Zihuatanejo	1.74	333	*i*P	Pn	12 23 38.4	-3.2
ZIIG				*i*S	Sn	12 23 57.7	-5.7
PNIG	Pinotepa	2.43	82	*i*P	Pn	12 23 47.5	-3.6
PNIG				*i*S	Sn	12 24 15.7	-4.8
YAIG	Yautepec	3.17	28	*e*P	Pn	12 23 59.0	-2.3
YAIG				*e*S	Sn	12 24 34.6	-4.2
UTMO	Huajuapan	3.24	56	*i*P	Pn	12 23 59.9	-2.3
UTMO				*i*S	Sn	12 24 36.4	-4.0
VHO	Vista Hermosa	3.88	74	*i*P	Pn	12 24 09.0	-2.0
VHO				*i*S	Sn	12 24 54.7	-1.5

ATH ***04*** *13:09:38.2, 38.20N×26.38E, h39km±11km, MD2.7/3*
CSEM ***04*** *13:09:38.1±0.5, 38.22N×26.54E, h20km, MD2.7, Error ellipse: s-maj=14.4km s-min=8.7km az=16.0*
ISCJB ***04*** *13:09:39.0±0.8, 38.29N±0.04×26.53E±0.06, h15km±7km, Error ellipse: s-maj=8.2km s-min=5.9km az=140.2*
DDA ***04*** *13:09:40.0, 38.26N×26.67E, h3km±7km, Md2.8*
ISC 04 13:09:39.5±0.8, 38.29N±0.04×26.55E±0.06, h14km±8km, n13, σ0.59/20, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	Izmir	0.09	28	*i*P	Pg	13 09 42.0	-0.4
URLA				*i*S	Sg	13 09 44.4	-0.2
URLA	Izmir	0.09	28	*i*P	Pg	13 09 42.0	-0.4
URLA				*i*S	Sg	13 09 44.4	-0.2
CHOS	Chios island	0.40	285	*e*PB	Pg	13 09 47.2	-0.3
CHOS				*e*SB	Sg	13 09 53.1	+0.2
CHOS	Chios island	0.40	285	*e*Pb	Pg	13 09 47.2	-0.3
CHOS				*e*Sb	Sg	13 09 53.1	+0.2
BLCB	Balcova	0.40	75	*e*PG	Pg	13 09 47.4	-0.1
BLCB	Balcova	0.40	75	*e*Pg	Pg	13 09 47.4	-0.1
IZM	Izmir	0.57	78	*e*PG	Pg	13 09 51.5	+0.8
SMG	Samos	0.62	158	*e*PN	Pg	13 09 50.7	-0.9
SMG				*e*SN	Sg	13 10 00.7	+0.9
SMG	Samos	0.62	158	*e*Pn	Pg	13 09 50.7	-0.9
PRK	Paraskevi	0.98	348	*e*PN	Pg	13 09 57.9	-0.6
PRK				*e*SN	Sg	13 10 12.2	+0.9
PRK	Paraskevi	0.98	348	*e*Pn	Pg	13 09 57.9	-0.6
PRK				*e*Sn	Sg	13 10 12.2	+0.9
KULA	Kula-Manisa	1.68	82	*e*PG	Pb	13 10 09.7	-0.4
KULA	Kula-Manisa	1.68	82	*e*Pg	Pb	13 10 09.7	-0.4

NIED ***04*** *13:12:00, 38.50N×140.20E, h8km, Mw4.1 Best double couple: M0:1.78000×10^15 NP1:φ0=208.00000°, δ49.00000°, λ103.00000°. NP2:φ0=9.00000°, δ43.00000°, λ76.00000°.*
ISCJB ***04*** *13:12:34.3±0.3, 38.48N±0.03×140.20E±0.03, h20km±3km, mb4.2/33, MS3.1/2, Error ellipse: s-maj=4.4km s-min=3.6km az=149.6*
NEIC ***04*** *13:12:34.5±0.3, 38.52N×140.08E, h10km, mb4.5/10, MW4.1(NIED), Error ellipse: s-maj=8.2km s-min=6.2km az=125.0*
NEIC Recorded [3 JMA] in Yamagata and [1 JMA] in Miyagi and Niigata.
JMA ***04*** *13:12:34.6, 38.46N×140.20E, h12km±1km, M4.4 Broadband fault plane solution: P waves. NP1: φ0=200.00000°, δ40.00000°, λ96.00000°. NP2:φ0=13.00000°, δ50.00000°, λ85.00000°. Principal axes: T Plg84.0000°, Azm247.0000°; N Plg4.0000°, Azm16.0000°; P Plg5.0000°, Azm106.0000°;*
JMA Felt III J1.
MOS ***04*** *13:12:36.5±1.1, 38.53N×140.06E, h33km, mb4.5/23 Error ellipse: s-maj=10.8km s-min=6.6km az=96.6*
IDC ***04*** *13:12:39.4±0.8, 38.47N×140.10E, h46km±7km, mb3.9/17, mb1 4.1/20, mb1mx4.0/27, mbtmp3.9/20, ML3.9/3, MS3.1/3, Ms1 3.1/3, ms1mx2.6/33, Error ellipse: s-maj=15.8km s-min=13.8km az=144.0*
ISC 04 13:12:34.4±0.4, 38.47N±0.02×140.22E±0.03, h9km±2km, n96, σ0.95/109, mb4.2/33, MS3.1/2, 6C-7D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYS	Shiratake	0.28	206	⇑P	Pg	13 12 40.1	+0.1
JYS				S	Sg	13 12 44.3	+0.6
JOU	Okura	0.37	107	⇓P	Pg	13 12 41.9	+0.3
JOU				S	Sg	13 12 47.2	+0.7
JYA	Atsumi	0.41	287	⇓P	Pg	13 12 42.6	+0.1
JYA				S	Sg	13 12 48.4	+0.4
JYK	Kaneyama	0.46	14	⇑P	Pg	13 12 43.8	+0.4
JYK				S	Sg	13 12 50.1	+0.7
JMM	Marumori	0.76	143	⇓P	Pg	13 12 48.5	-0.5
JMM				S	Sg	13 12 58.5	-0.3
JAW	Awa shima	0.76	269	⇓P	Pg	13 12 48.9	-0.2
JIO	Ouri	0.89	91	⇓P	Pg	13 12 50.8	-0.7
JIO				S	Sg	13 13 02.8	-0.3
JMK	Ichinoseki	0.92	58	⇓P	Pg	13 12 51.4	-0.7
JMK				S	Sg	13 13 03.9	-0.1
JFT	Otama	0.96	174	⇑P	Pg	13 12 52.4	-0.4
JFT				S	Sg	13 13 05.1	-0.2
JNS	Sasagawa	0.96	228	⇓P	Pg	13 12 52.4	-0.6
JNS				S	Sg	13 13 05.0	-0.5
MJAR	Matsushiro Arr	2.50	220	P	Pn	13 13 15.4	+0.1
	11nm,0.3s,baz=30,slow=14,SNR=90						
MJAR				S	Sn	13 13 49.0	+3.1
	20nm,0.3s,baz=22,slow=30,SNR=6.6						
MJAR	Matsushiro Arr	2.50	220	P	Pn	13 13 15.4	+0.1
MJAR				S	Sn	13 13 49.0	+3.1
MJAR				pmax	pmax		
	comp=Z,11nm,0.3s						
MJAR				smax			
	comp=N,20nm,0.3s						
MAJO	Matsushiro	2.50	220	*e*P	Pn	13 13 15.7	+0.4
MAT	Matsushiro	2.50	220	P	Pn	13 13 15.3	0.0
MAT				S	Sn	13 13 48.8	+2.9
ERM	Erimo	4.19	32	*e*P	Pn	13 13 39.9	+1.4
ASAJ	Asahikawa	5.92	17	P	Pn	13 14 04.5	+2.3
	comp=N,1.7nm,0.3s,baz=222,slow=18,SNR=15						
ASAJ				S	Sn	13 15 23.8	+14
	comp=N,0.3nm,0.3s,baz=209,slow=19,SNR=2.4						
VLA	Vladivostok	7.84	309	*e*P	Pn	13 14 27.7	-0.8
YSS	Yuzh-Sakhalins	8.68	12	*e*P	Pn	13 14 42.8	+2.7
YSS				MLR	MLR		
	comp=Z,300nm,15.0s						
YSS				MLR	MLR		
	comp=N,300nm,14.0s						
YSS				MLR	MLR		
	comp=E,400nm,13.0s						
KSRS	Korea Array	9.76	268	P	Pn	13 14 57.7	+2.7
	comp=E,5.3nm,0.3s,baz=75,slow=14,SNR=34						
KSRS				S	Sn	13 16 47.4	+2.6
	comp=E,1.5nm,0.3s,baz=87,slow=24,SNR=6.1						
KSRS				LR	LR	13 18 37.0	
	comp=E,82nm,18.0s,baz=346,slow=37						
KSRS	Korea Array	9.76	268	P	Pn	13 14 57.7	+2.7
KSRS				S	Sn	13 16 47.4	+2.7
KSRS				pmax	pmax		
	comp=Z,5.0nm,0.3s						
KSRS				smax			
	comp=N,2.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,82nm,18.0s						
HABR	Khabarovsk	10.68	341	*e*P	Pn	13 15 10.4	+3.0
HABR				S	Sn	13 17 01.6	-5.4
HABR				pmax	pmax		
	comp=E,31nm,2.4s						
HABR				pmax	pmax		
	comp=Z,19nm,1.4s						
HABR				pmax	pmax		
	comp=N,17nm,1.3s						
HABR				MLR	MLR		
	comp=Z,37nm,15.0s						
KLR	Kul'dur	12.36	333	*e*P	Pn	13 15 28.8	-1.6
SEY	Seymchan	25.58	13	*e*P	P	13 18 03.2	-0.3
SONM	Songino Array	26.21	302	P	P	13 18 08.5	-0.8
	comp=Z,1.2nm,0.7s,mb3.5,baz=95,slow=9.0,SNR=7.1						
SONM	Songino Array	26.21	302	P	P	13 18 08.5	-0.8
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TIXI	Tiksi	33.75	354	*e*P	P	13 19 14.6	-1.3
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
TIXI	Tiksi	33.75	354	*e*P	P	13 19 14.6	-1.3
	comp=Z,2.2nm,0.8s,mb4.1						
ZAA0	Zalesovo Array	40.25	311	*e*P	P	13 20 10.2	-1.1
ZALV	Zalesovo Beam	40.25	311	P	P	13 20 10.6	-0.7
	comp=Z,3.1nm,0.7s,mb4.1,baz=81,slow=6.4,SNR=14						
ZALV				PcP	PcP	13 22 14.2	-0.8
	comp=Z,1.2nm,0.4s,baz=100,slow=2.9,SNR=5.8						
ZALV				LR	LR	13 39 08.9	
	comp=Z,22nm,18.8s,MS3.0,baz=58,slow=40						
ZALV	Zalesovo Beam	40.25	311	P	P	13 20 10.6	-0.7
ZALV						13 22 14.2	
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
ZALV				MLR	MLR		
	comp=Z,22nm,18.8s,MS3.0						
CMAR	Chiang Mai Arr	40.98	253	P	P	13 20 17.3	-0.5
	comp=Z,0.9nm,0.6s,mb3.6,baz=44,slow=7.7,SNR=7.7						
CMAR				PcP	PcP	13 22 17.9	0.0
	comp=Z,0.6nm,0.4s,baz=50,slow=1.3,SNR=5.5						
CMAR	Chiang Mai Arr	40.98	253	P	P	13 20 17.3	-0.5
CMAR						13 22 17.9	
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MK31	Makanchi Array	42.56	301	*e*P	P	13 20 29.7	-0.7
MKAR	Makanchi Array	42.56	301	P	P	13 20 29.9	-0.5
	comp=Z,2.0nm,0.7s,mb4.0,baz=81,slow=12,SNR=15						
MKAR	Makanchi Array	42.56	301	*i*P	P	13 20 30.1	-0.3
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KURK	Kurchatov	44.31	307	*e*P	P	13 20 42.7	-1.7
KURK				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.6						
KURK	Kurchatov	44.31	307	*e*P	P	13 20 42.7	-1.7
	comp=Z,7.2nm,0.6s,mb4.6						
TKM2	Tokmak 2	48.12	297	*e*P	P	13 21 14.9	+0.3
TKM2				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
TKM2	Tokmak 2	48.12	297	*e*P	P	13 21 14.9	+0.4
	comp=Z,8.9nm,0.9s,mb4.8						
BVAR	Borovoye Array	48.91	311	P	P	13 21 20.1	-0.3
	comp=Z,1.2nm,0.6s,mb4.1,baz=69,slow=8.1,SNR=7.6						
BVAR				pP	pP	13 21 33.8	+11
	comp=Z,0.4nm,0.5s,baz=46,slow=10,SNR=2.2						
BVAR				PcP	PcP	13 22 44.2	-0.4
	comp=Z,2.1nm,0.6s,baz=79,slow=3.8,SNR=9.3						
BVAR	Borovoye Array	48.91	311	P	P	13 21 20.1	-0.4
BVAR				*PP	pP	13 21 33.8	+11
BVAR						13 22 44.2	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRVK	Borovoye	48.97	311	⇑*e*P	P	13 21 20.4	-0.5
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.7s,mb4.3						
AAK	Ala-Archa	48.98	297	LR	LR	13 45 32.5	
	comp=Z,29nm,20.0s,MS3.3,baz=348,slow=40						
AAK	Ala-Archa	48.98	297	⇑*i*P	P	13 21 21.0	-0.2
AAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb4.0						
AML	Almayashu	49.71	297	*e*P	P	13 21 27.3	+0.6
	comp=Z,8.7nm,1.2s,mb4.7						
INK	Inuvik	53.55	27	P	P	13 21 55.5	+0.5
	comp=Z,5.0nm,0.7s,mb4.6,baz=298,slow=8.6,SNR=18						
INK	Inuvik	53.55	27	*e*P	P	13 21 55.3	+0.3
ARU	Arti	54.66	318	*c i*P	P	13 22 02.6	-0.7
ARU				S	S	13 29 35.3	-7.8
ARU				pmax	pmax		
	comp=Z,8.0nm,1.7s,mb4.5						
ABKAR	Akbulak array	56.29	309	*e*P	P	13 22 14.3	-0.9
	comp=Z,2.6nm,0.6s,mb4.4						
WRAB	Tennant Creek	58.35	186	*e*P	P	13 22 29.0	-0.9
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
WRAB	Tennant Creek	58.35	186	*e*P	P	13 22 29.0	-1.0
	comp=Z,3.9nm,0.7s,mb4.5						
ASAR	Alice Springs	62.09	187	P	P	13 22 55.0	-0.5
	comp=Z,2.2nm,0.7s,mb4.4,baz=11,slow=6.2,SNR=27						
ASAR				pP	pP	13 23 08.4	+10
	comp=Z,0.7nm,0.7s,baz=10.0,slow=12,SNR=3.3						
ASAR	Alice Springs	62.09	187	P	P	13 22 55.0	-0.5
ASAR				*PP	pP	13 23 08.4	+10
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARCES	ARCESS Array B	62.32	339	P	P	13 22 56.0	-0.5
	comp=Z,1.8nm,0.6s,mb4.4,baz=66,slow=7.9,SNR=14						
ARCES	ARCESS Array B	62.32	339	P	P	13 22 56.0	-0.5
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
YKA	Yellowknife Ar	63.04	30	P	P	13 23 01.1	-0.3
	comp=Z,1.5nm,0.7s,mb4.2,baz=302,slow=6.8,SNR=6.4						
YKA	Yellowknife Ar	63.04	30	P	P	13 23 01.1	-0.4
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
YKA	Yellowknife Ar	63.04	30	P	P	13 23 01.1	-0.3
JOF	Joensuu	64.25	331	*e*P	P	13 23 06.0	-3.4
JOF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
JOF	Joensuu	64.25	331	*e*p	P	13 23 06.0	-3.4
	comp=Z,1.6nm,0.5s,mb4.3						
EIDS	Eidsvold	64.32	169	P	P	13 23 10.5	+0.3
OBN	Obninsk	66.38	322	*e*P	P	13 23 23.0	-0.4
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
KAF	Kangasniemi	66.60	332	*e*P	P	13 23 23.2	-1.4
KAF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
KAF	Kangasniemi	66.60	332	*e*p	P	13 23 23.2	-1.4
	comp=Z,3.3nm,0.6s,mb4.5						
FINES	FINESS Array B	67.10	332	P	P	13 23 27.1	-0.8
	comp=Z,5.3nm,0.7s,mb4.7,baz=57,slow=7.0,SNR=18						
FINES	FINESS Array B	67.10	332	P	P	13 23 27.1	-0.8
FINES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KIV	Kislovodsk	69.25	310	*e*P	P	13 23 42.8	+1.1
KIV				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.9						
NB2	NORSAR Subarra	72.50	337	P	P	13 24 00.4	-0.7
	comp=Z,1.3nm,0.6s,mb4.0,baz=39,slow=6.5						
NOA	NORSAR Array B	72.50	337	P	P	13 24 00.5	-0.6
	comp=Z,1.5nm,0.6s,mb4.1,baz=38,slow=6.0,SNR=6.8						
NOA				pP	pP	13 24 13.4	+9.4
	comp=Z,0.8nm,0.7s,baz=39,slow=5.9,SNR=2.4						
NOA	NORSAR Array B	72.50	337	P	P	13 24 00.5	-0.6
NOA				*PP	pP	13 24 13.4	+9.4
NOA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKASG	Malin Array Be	72.58	322	P	P	13 24 00.8	-1.0
	comp=Z,1.9nm,0.4s,mb4.4,baz=45,slow=6.3,SNR=10						
AKASG	Malin Array Be	72.58	322	P	P	13 24 00.8	-1.0
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
FFC	Flin Flon	73.01	32	*i*P	P	13 24 04.7	+0.5
DLMT	Dillon	73.99	44	*e*P	P	13 24 11.1	+1.0
	comp=Z,5.9nm,1.4s,mb4.3						
HLID	Hailey	74.08	47	P	P	13 24 12.1	+1.3
	comp=Z,1.3nm,1.0s,mb3.8						
BOZ	Bozeman (W)	74.33	44	*e*P	P	13 24 12.9	+0.7
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
BOZ	Bozeman (W)	74.33	44	*e*P	P	13 24 12.9	+0.7
	comp=Z,1.8nm,0.6s,mb4.2						
NVAR	Mina Array Bea	74.88	53	P	P	13 24 17.0	+1.5
	comp=Z,1.6nm,0.8s,mb4.0,baz=276,slow=4.2,SNR=6.8						
NVAR	Mina Array Bea	74.88	53	P	P	13 24 17.0	+1.5
LVV	L'vov	75.66	323	*e*P	PcP	13 24 32.0	-0.6
BUR08	Bucovina Ar. S	76.59	321	*e*P	P	13

JFT				S	Sg	13 14 04.3	-0.4
JNS	**Sasagawa**	**0.95**	**228**	P	Pg	13 13 52.0	-0.3
JNS				S	Sg	13 14 04.3	-0.4

JMA 04 13:13:48.5,38′.46N×140°.20E,h11km±1km,M3.7,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYS	**Shirataka**	**0.26**	**204**	P	Pg	13 13 54.0	+0.2
JYS				S	Sg	13 13 58.1	+0.7
JOU	**Okura**	**0.38**	**104**	P	Pg	13 13 56.1	+0.2
JOU				S	Sg	13 14 01.1	+0.1
JYA	**Atsumi**	**0.40**	**289**	P	Pg	13 13 56.6	+0.1
JYA				S	Sg	13 14 02.3	+0.4
JYK	**Kaneyama**	**0.47**	**15**	S	Sg	13 14 03.9	-0.2
JMM	**Marumori**	**0.76**	**142**	S	Sg	13 14 12.3	-0.7
JIO	**Ouri**	**0.90**	**90**	S	Sg	13 14 16.8	-0.8
JMK	**Ichinoseki**	**0.94**	**58**	S	Sg	13 14 17.8	-1.0

*IDC **04** 13:23:54.8±2.2,32°.54N×103°.01E,h0km,mb3.4/4, mb1 3.6/5,mb1mx3.4/27,mbtmp3.5/5,ML3.6/1,Error ellipse: s-maj=45.6km s-min=33.1km az=25.0*
*BJI **04** 13:23:57.3,32°.47N×103°.09E,h14km,ML3.3/9*
ISC 04 13:23:55.0±0.9,32°.50N±0°.04×103°.01E±0°.06,h3km±8km, n11,σ0§99/14,mb3.1/3,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.71**	**158**	Pg	**Pg**	**13 24 27.4**	**-0.4**
CD2				Sg	**Sg**	**13 24 50.7**	**+0.7**
CD2	comp=N,670nm,0.7s			smax			
CD2	comp=E,440nm,0.7s			smax			
LZH	**Lanzhou**	**3.64**	**11**	*e*Pg	**Pg**	**13 25 03.4**	**-1.5**
LZH				Sg	**Sg**	**13 25 54.5**	**+2.4**
LZH	comp=N,49nm,1.0s			smax			
LZH	comp=E,120nm,1.1s			smax			
XAN	**Xi'an**	**5.19**	**71**	Pg	**Sn**	**13 26 14.4**	**+0.6**
XAN				Sg	**Sg**	**13 26 41.6**	**0.0**
XAN	comp=N,44nm,0.8s			smax			
XAN	comp=E,20nm,1.0s			smax			
XAN	**Xi'an**	**5.19**	**71**	Pn	**Pn**	**13 25 10.9**	**-2.6**
XAN	comp=N,9.0nm,0.6s			smax			
XAN	comp=E,7.0nm,0.7s			smax			
GTA	**Gaotai**	**7.36**	**340**	*e*P	**Pg**	**13 26 15.9**	**-0.2**
GTA				pP		13 26 20.5	
GTA				sP		13 26 22.9	
GTA	comp=Z,3.0nm,1.0s			pmax	pmax		
CMAR	**Chiang Mai Arr**	**14.46**	**196**	Pn	**Pn**	**13 27 21.2**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=5.7,slow=10.0,SNR=2.0						
SONM	**Songino Array**	**15.53**	**9**	Pn	**Pn**	**13 27 40.6**	**+5.8**
	comp=Z,0.1nm,0.3s,baz=193,slow=12,SNR=3.4						
KSRS	**Korea Array**	**20.98**	**69**	P	**P**	**13 28 39.2**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=248,slow=9.8,SNR=4.5						
MKAR	**Makanchi Array**	**21.32**	**318**	P	**P**	**13 28 42.9**	**0.0**
	comp=Z,0.7nm,0.6s,mb3.1,baz=113,slow=14,SNR=6.4						
ZALV	**Zalesovo Beam**	**25.06**	**334**	P	**P**	**13 29 20.3**	**0.0**
	comp=Z,0.3nm,0.4s,mb3.1,baz=153,slow=13,SNR=2.9						
KURK	**Kurchatov**	**25.57**	**323**	P	**P**	**13 29 25.2**	**+0.1**
	comp=Z,0.1nm,0.2s,mb2.9,baz=123,slow=10,SNR=2.3						

*ISCJB **04** 13:25:52.7±0.5,38°.23N±0°.02×26°.45E±0°.03,h6km±3km, Error ellipse: s-maj=4.0km s-min=2.6km az=159.3*
*ISK **04** 13:25:52.2,38°.17N×26°.45E,h5km,MD3.3*
*CSEM **04** 13:25:52.9±0.2,38°.21N×26°.46E,h5km,MD3.3,Error ellipse: s-maj=4.4km s-min=3.0km az=63.0*
*NEIC **04** 13:25:53.2,38°.23N×26°.45E,h32km,MD3.4(ATH), MD3.3(ISK),After ATH.*
*ATH **04** 13:25:53.2,38°.23N×26°.45E,h32km,MD3.4/6*
*DDA **04** 13:25:53.0,38°.26N×26°.54E,h24km,Md3.3*
*THE **04** 13:25:53.7,38°.23N×26°.55E,h14km±1km,ML3.8/4,Error ellipse: s-maj=1.5km s-min=1.0km az=92.0*
ISC 04 13:25:53.4±0.5,38°.22N±0°.02×26°.46E±0°.03,h8km±3km, n83,σ1§15/132,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.18**	**35**	*i*P	**Pg**	**13 25 56.9**	**-0.2**
URLA				*i*S	**Sg**	**13 25 59.3**	**-0.3**
URLA	**Izmir**	**0.18**	**35**	*i*P	**Pg**	**13 25 56.9**	**-0.2**
URLA				*i*S	**Sg**	**13 25 59.3**	**-0.3**
CHOS	**Chios island**	**0.36**	**298**	P	**Pg**	**13 26 02.0**	**+1.5**
CHOS				S	**Sg**	**13 26 08.2**	**+2.8**
CHOS	**Chios island**	**0.36**	**298**	*e*PB	**Pg**	**13 26 02.1**	**+1.6**
CHOS				*e*SB	**Sg**	**13 26 07.9**	**+2.5**
CHOS	**Chios island**	**0.36**	**298**	P	**Pg**	**13 26 02.0**	**+1.5**
CHOS				S	**Sg**	**13 26 08.2**	**+2.8**
BLCB	**Balcova**	**0.48**	**69**	*e*PG	**Pg**	**13 26 02.3**	**-0.5**
BLCB	**Balcova**	**0.48**	**69**	Pg	**Pg**	**13 26 02.5**	**-0.4**
BLCB	**Balcova**	**0.48**	**69**	P	**Pg**	**13 26 02.2**	**-0.6**
BLCB				S	**Sg**	**13 26 08.2**	**-1.0**
BLCB	**Balcova**	**0.48**	**69**	P	**Pg**	**13 26 02.2**	**-0.6**
BLCB	**Balcova**	**0.48**	**69**	Pg	**Pg**	**13 26 02.5**	**-0.3**
BLCB				S	**Sg**	**13 26 08.2**	**-1.0**
SMG	**Samos**	**0.58**	**150**	*e*Pn	**Pg**	**13 26 05.7**	**+1.0**
SMG				*e*Sn	**Sg**	**13 26 14.9**	**+2.6**
SMG	**Samos**	**0.58**	**150**	*e*PN	**Pg**	**13 26 05.7**	**+1.0**
SMG				*e*SN	**Sg**	**13 26 14.9**	**+2.6**
SMG	**Samos**	**0.58**	**150**	*e*Pn	**Pg**	**13 26 05.7**	**+1.0**
IZM	**Izmir**	**0.65**	**74**	*e*PG	**Pg**	**13 26 06.0**	**-0.1**
IZM				*e*SG	**Sg**	**13 26 15.9**	**+1.4**
IZM	**Izmir**	**0.65**	**74**	Pg	**Pg**	**13 26 07.3**	**+1.3**
IZM				Sg	**Sg**	**13 26 15.3**	**+0.8**
IZM	**Izmir**	**0.65**	**74**	*e*Pg	**Pg**	**13 26 06.0**	**0.0**
IZM				Sg	**Sg**	**13 26 15.4**	**+0.8**
GCAM	**G?zelcaml?**	**0.80**	**130**	*i*P	**Pg**	**13 26 09.0**	**+0.3**
GCAM				*i*S	**Sg**	**13 26 20.1**	**+1.0**
GCAM	**G?zelcaml?**	**0.80**	**130**	*i*P	**Pg**	**13 26 09.0**	**+0.3**
GCAM				*i*S	**Sg**	**13 26 20.0**	**+0.9**
PRK	**Paraskevi**	**1.04**	**352**	*e*Pn	**Pg**	**13 26 12.6**	**-0.8**
PRK				*e*Sn	**Sg**	**13 26 26.9**	**0.0**
PRK	**Paraskevi**	**1.04**	**352**	P	**Pg**	**13 26 12.5**	**-0.9**
PRK				S	**Sg**	**13 26 26.6**	**-0.3**
PRK	**Paraskevi**	**1.04**	**352**	*e*PN	**Pg**	**13 26 12.6**	**-0.8**
PRK				*e*SN	**Sg**	**13 26 26.9**	**0.0**
PRK	**Paraskevi**	**1.04**	**352**	P	**Pg**	**13 26 12.5**	**-0.9**
PRK				S	**Sg**	**13 26 26.6**	**-0.3**
PRK				*e*Sn	**Sg**	**13 26 26.9**	**0.0**
SIGR	**SIGRI**	**1.10**	**335**	P	**Pg**	**13 26 14.1**	**-0.5**
SIGR				S	**Sg**	**13 26 28.5**	**-0.4**
SIGR	**SIGRI**	**1.10**	**335**	P	**Pg**	**13 26 14.1**	**-0.5**
SIGR				S	**Sg**	**13 26 28.5**	**-0.4**
AYVA	**Ayvalik**	**1.11**	**9**	*i*P	**Pg**	**13 26 13.4**	**-1.3**
AYVA				*i*S	**Sg**	**13 26 28.6**	**-0.4**
AYVA	**Ayvalik**	**1.11**	**9**	*i*P	**Pg**	**13 26 13.4**	**-1.3**
AYVA				*i*S	**Sg**	**13 26 28.6**	**-0.4**
AYDN	**Tasoluk**	**1.25**	**116**	*i*P	**Pn**	**13 26 16.2**	**-0.9**
AYDN				*i*S	**Sb**	**13 26 32.4**	**-1.0**
AYDN	**Tasoluk**	**1.25**	**116**	*i*P	**Pn**	**13 26 16.2**	**-0.9**
AYDN				*i*S	**Sb**	**13 26 32.4**	**-1.0**
AKHS	**Akhisar**	**1.25**	**58**	*i*P	**Pn**	**13 26 15.6**	**-1.5**
AKHS				*i*S	**Sb**	**13 26 31.8**	**-1.6**
AKHS	**Akhisar**	**1.25**	**58**	*i*P	**Pn**	**13 26 15.6**	**-1.5**
AKHS				*i*S	**Sb**	**13 26 31.8**	**-1.6**
APE	**Apeiranthos**	**1.36**	**213**	*e*Pn	**Pn**	**13 26 18.1**	**-0.6**
APE	**Apeiranthos**	**1.36**	**213**	P	**Pn**	**13 26 18.0**	**-0.7**
APE				S	**Sb**	**13 26 36.1**	**-0.6**
APE	**Apeiranthos**	**1.36**	**213**	*e*PN	**Pn**	**13 26 18.1**	**-0.6**
APE	**Apeiranthos**	**1.36**	**213**	*e*Pn	**Pn**	**13 26 18.1**	**-0.6**
APE				S	**Sb**	**13 26 36.1**	**-0.6**
BDRM	**Kayabasi**	**1.39**	**146**	*i*P	**Pn**	**13 26 18.7**	**-0.3**
BDRM				*i*S	**Sb**	**13 26 37.8**	**+0.4**
BDRM	**Kayabasi**	**1.39**	**146**	*i*P	**Pn**	**13 26 18.7**	**-0.3**
BDRM				*i*S	**Sb**	**13 26 37.8**	**+0.4**
MLSB	**Milas**	**1.39**	**131**	*e*PN	**Pn**	**13 26 18.9**	**-0.1**
MLSB				*e*SN	**Sn**	**13 26 37.8**	**+0.3**
MLSB	**Milas**	**1.39**	**131**	*e*Pn	**Pn**	**13 26 18.9**	**-0.1**
EZN	**Ezine**	**1.61**	**356**	*e*PN	**Pn**	**13 26 22.6**	**+0.5**
EZN				*e*SN	**Sn**	**13 26 44.7**	**+1.6**
EZN	**Ezine**	**1.61**	**356**	Pn	**Pn**	**13 26 22.6**	**+0.5**
EZN				Sg	**Sg**	**13 26 44.6**	**-0.6**
EZN	**Ezine**	**1.61**	**356**	*e*Pn	**Pn**	**13 26 22.6**	**+0.5**
EZN				Sg	**Sg**	**13 26 44.6**	**-0.6**
BOZC	**Bozcaada**	**1.66**	**349**	*i*P	**Pn**	**13 26 21.3**	**-1.4**
BOZC				*i*S	**Sn**	**13 26 44.2**	**+0.1**
DAT	**Datca**	**1.73**	**149**	*e*Pn	**Pn**	**13 26 23.0**	**-0.7**
DAT				*e*SN	**Sn**	**13 26 45.5**	**-0.5**
DAT	**Datca**	**1.73**	**149**	*e*Pn	**Pn**	**13 26 23.0**	**-0.7**
KULA	**Kula-Manisa**	**1.75**	**79**	*e*PN	**Pn**	**13 26 24.5**	**+0.5**
KULA	**Kula-Manisa**	**1.75**	**79**	*e*Pn	**Pn**	**13 26 24.5**	**+0.5**
BALY	**Balya**	**1.77**	**30**	*i*P	**Pn**	**13 26 24.0**	**-0.3**
BALY				*i*S	**Sn**	**13 26 49.0**	**+2.1**
BALY	**Balya**	**1.77**	**30**	*i*P	**Pn**	**13 26 24.0**	**-0.3**
BALY				*i*S	**Sn**	**13 26 49.0**	**+2.0**
BALB	**Balikesir**	**1.80**	**37**	*e*PN	**Pn**	**13 26 25.3**	**+0.6**
BALB	**Balikesir**	**1.80**	**37**	*e*Pn	**Pn**	**13 26 25.3**	**+0.6**
YER	**Yerkesik**	**1.80**	**126**	*e*PN	**Pn**	**13 26 24.3**	**-0.4**
YER	**Yerkesik**	**1.80**	**126**	*e*Pn	**Pn**	**13 26 24.3**	**-0.4**
LIA	**Limnos Island**	**1.95**	**330**	*e*Pb	**Pb**	**13 26 26.4**	**-2.8**
LIA	**Limnos Island**	**1.95**	**330**	P	**Pn**	**13 26 26.2**	**-0.6**
LIA	**Limnos Island**	**1.95**	**330**	*e*PB	**Pb**	**13 26 26.4**	**-2.8**
LIA	**Limnos Island**	**1.95**	**330**	P	**Pn**	**13 26 26.2**	**-0.6**
GADA	**Gvkgeada**	**2.02**	**348**	*e*PN	**Pn**	**13 26 26.8**	**-1.0**
GADA				*e*SN	**Sn**	**13 26 54.8**	**+1.6**
GADA	**Gvkgeada**	**2.02**	**348**	*e*Pn	**Pn**	**13 26 26.8**	**-1.0**
GADA				*e*Sn	**Sn**	**13 26 54.8**	**+1.6**
DURS	**Dursunbey**	**2.09**	**48**	*i*P	**Pn**	**13 26 27.5**	**-1.2**
DURS				*i*S	**Sn**	**13 26 52.1**	**-2.8**
DURS	**Dursunbey**	**2.09**	**48**	*i*P	**Pn**	**13 26 27.5**	**-1.2**
LPK	**Lapseki**	**2.17**	**6**	*e*PN	**Pn**	**13 26 30.5**	**+0.8**
LPK				*e*SN	**Sn**	**13 26 58.5**	**+1.7**
LPK	**Lapseki**	**2.17**	**6**	Pn	**Pn**	**13 26 30.8**	**+1.1**
LPK	**Lapseki**	**2.17**	**6**	*e*Pn	**Pn**	**13 26 30.5**	**+0.7**
LPK				*e*Sn	**Sn**	**13 26 58.5**	**+1.7**
AOS	**Alonnisos**	**2.24**	**296**	P	**Pn**	**13 26 30.9**	**+0.2**
AOS	**Alonnisos**	**2.24**	**296**	P	**Pn**	**13 26 30.9**	**+0.2**
ARG	**Arkhangelos**	**2.40**	**146**	P	**Pn**	**13 26 30.8**	**-2.1**
ARG	**Arkhangelos**	**2.40**	**146**	P	**Pn**	**13 26 30.8**	**-2.1**
BNT	**Bandirma**	**2.42**	**27**	*e*PN	**Pn**	**13 26 34.1**	**+0.9**
BNT	**Bandirma**	**2.42**	**27**	Pn	**Pn**	**13 26 34.5**	**+1.3**
KCT	**Karacabey**	**2.52**	**35**	*e*PN	**Pn**	**13 26 35.7**	**+1.1**
KCT	**Karacabey**	**2.52**	**35**	*e*Pn	**Pn**	**13 26 35.7**	**+1.1**
ALN	**Alexandroupoli**	**2.70**	**353**	*e*Pn	**Pn**	**13 26 36.5**	**-0.6**
ALN	**Alexandroupoli**	**2.70**	**353**	P	**Pn**	**13 26 36.1**	**-1.0**
ALN				S	**Sn**	**13 27 08.0**	**-1.9**
ALN	**Alexandroupoli**	**2.70**	**353**	*e*PN	**Pn**	**13 26 36.5**	**-0.6**
ALN	**Alexandroupoli**	**2.70**	**353**	P	**Pn**	**13 26 36.1**	**-1.0**
ALN	**Alexandroupoli**	**2.70**	**353**	*e*Pn	**Pn**	**13 26 36.5**	**-0.6**
ALN				S	**Sn**	**13 27 08.0**	**-1.9**
ULDT	**Uludag**	**2.83**	**46**	*i*P	**Pn**	**13 26 43.5**	**+4.7**
ULDT				*i*S	**Sn**	**13 27 21.5**	**+8.4**
ARMT	**Armutlu**	**2.99**	**38**	*e*PN	**Pn**	**13 26 42.3**	**+1.2**
ARMT				*e*SN	**Sn**	**13 27 18.8**	**+1.7**
ARMT	**Armutlu**	**2.99**	**38**	*e*Pn	**Pn**	**13 26 42.3**	**+1.2**
ARMT				*e*Sn	**Sn**	**13 27 18.8**	**+1.6**
YLV	**Yalova**	**3.25**	**43**	*e*PN	**Pn**	**13 26 46.2**	**+1.5**
YLV	**Yalova**	**3.25**	**43**	*e*Pn	**Pn**	**13 26 46.2**	**+1.5**
GULT	**Gulveren**	**3.84**	**54**	*e*PN	**Pn**	**13 26 54.5**	**+1.8**
GULT	**Gulveren**	**3.84**	**54**	*e*Pn	**Pn**	**13 26 54.6**	**+1.8**

*ISCJB **04** 13:41:58.9±0.4,31°.94N±0°.04×104°.57E±0°.05,h10km, mb3.9/10,Error ellipse: s-maj=7.3km s-min=4.8km az=32.2*
*NEIC **04** 13:41:59.8±5.2,31°.91N×104°.58E,h7km±34km,mb4.1/2, Error ellipse: s-maj=14.8km s-min=10.0km az=59.0*
*IDC **04** 13:41:59.9±1.0,31°.94N×104°.26E,h0km,mb3.8/10, mb1 3.9/12,mb1mx3.8/28,mbtmp3.8/12,ML3.2/1,Error ellipse: s-maj=29.4km s-min=19.2km az=56.0*
*BJI **04** 13:42:01.5,31°.93N×104°.45E,h12km,mB4.4/1,mb4.2/2, ML3.7/14,Ms3.5/5,Ms7 3.3/5*
ISC 04 13:42:01.2±0.4,31°.99N±0°.03×104°.44E±0°.06,h10km,n25, σ1§11/32,mb3.9/10,1C,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.22**	**209**	⇑*i*Pg	**Pg**	**13 42 22.1**	**-2.6**
CD2				Sg	**Sg**	**13 42 41.8**	**+1.2**
CD2	comp=E,3μm,0.8s			smax			
CD2	comp=N,1μm,0.8s			smax			
LZH	**Lanzhou**	**4.12**	**353**	Pn	**Pn**	**13 43 06.5**	**+2.4**
LZH				Pg	**Pg**	**13 43 18.9**	**-1.1**
LZH				Sn	**Sn**	**13 43 56.2**	**+3.9**
LZH				Sg	**Sg**	**13 44 12.0**	**-1.4**
LZH	comp=N,610nm,1.0s			smax			
LZH	comp=E,130nm,1.1s			smax			
LZH	comp=N,570nm,6.8s			LR	LR		
LZH	comp=Z,820nm,8.5s			LR	LR		
XAN	**Xi'an**	**4.29**	**60**	Pn	**Pn**	**13 43 11.5**	**+5.0**
XAN				Pg	**Pg**	**13 43 21.3**	**-2.0**
XAN				Sn	**Sn**	**13 44 07.9**	**+11**
XAN				Sg	**Sg**	**13 44 19.1**	**+0.3**
XAN	comp=N,150nm,0.8s			smax			
XAN	comp=E,83nm,0.8s			smax			
XAN	comp=N,250nm,7.9s			LR	LR		
XAN	comp=E,62nm,11.8s			LR	LR		
XAN	comp=Z,64nm,7.9s			LR	LR		
ENH	**Enshi**	**4.66**	**110**	*e*P	**Pn**	**13 43 06.6**	**-5.0**
GYA	**Guiyang**	**5.84**	**160**	Pn	**Pn**	**13 43 27.5**	**-0.4**
GYA	comp=N,80nm,0.8s			smax			
GYA	comp=E,70nm,1.0s			smax			
CMAR	**Chiang Mai Arr**	**14.36**	**202**	Pn	**Pn**	**13 45 24.3**	**-0.3**
	comp=E,0.0nm,0.3s,baz=10,slow=9.1,SNR=3.1						
SONM	**Songino Array**	**15.90**	**5**	Pn	**Pn**	**13 45 46.8**	**+1.9**
	baz=186,slow=9.4,SNR=4.3						
SONM	comp=E,0.1nm,0.3s,baz=199,slow=24,SNR=2.6			Lg		13 50 28.2	
KSRS	**Korea Array**	**20.04**	**68**	P	**P**	**13 46 36.5**	**+2.1**
	comp=E,1.7nm,0.8s,baz=243,slow=11,SNR=4.1						
MK31	**Makanchi Array**	**22.51**	**317**	*e*P	**P**	**13 47 01.1**	**+0.2**
MKAR	**Makanchi Array**	**22.51**	**317**	P	**P**	**13 47 01.1**	**+0.2**
	comp=E,2.4nm,0.8s,mb3.7,baz=104,slow=13,SNR=25						
ZAA0	**Zalesovo Array**	**26.06**	**333**	*e*P	**P**	**13 47 34.9**	**+0.4**
ZALV	**Zalesovo Beam**	**26.06**	**333**	P	**P**	**13 47 34.6**	**+0.1**
	comp=E,1.9nm,0.7s,mb3.8,baz=128,slow=9.3,SNR=10						
KURK	**Kurchatov**	**26.72**	**322**	P	**P**	**13 47 40.9**	**+0.3**
	comp=E,2.6nm,0.7s,mb3.9,baz=128,slow=8.4,SNR=20						
KURK	**Kurchatov**	**26.72**	**322**	*e*P	**P**	**13 47 40.7**	**+0.2**
	comp=E,1.4nm,0.7s,mb3.6						
BVAR	**Borovoye Array**	**32.28**	**321**	P	**P**	**13 48 30.1**	**+0.2**
	comp=E,0.6nm,0.5s,mb3.7,baz=113,slow=11,SNR=5.4						
ABKAR	**Akbulak array**	**37.30**	**311**	*e*P	**P**	**13 49 13.4**	**+0.1**
ARU	**Arti**	**39.91**	**322**	*e*P	**P**	**13 49 35.2**	**+0.1**
	comp=E,6.3nm,0.8s,mb4.4						
TIXI	**Tiksi**	**41.83**	**11**	*e*P	**P**	**13 49 50.4**	**-0.3**
BILL	**Bilibino**	**50.26**	**26**	*e*P	**P**	**13 50 57.4**	**+0.3**
BRTR	**Keskin Array B**	**56.55**	**299**	P	**P**	**13 51 43.0**	**-0.9**
	comp=E,0.5nm,0.4s,mb3.9,baz=81,slow=8.9,SNR=6.2						
FINES	**FINESS Array B**	**56.99**	**326**	P	**P**	**13 51 46.3**	**-0.3**
	comp=E,1.1nm,0.4s,mb4.2,baz=73,slow=8.4,SNR=5.8						
WRAB	**Tennant Creek**	**59.05**	**147**	P	**P**	**13 51 58.5**	**-3.0**
ASAR	**Alice Springs**	**62.10**	**149**	P	**P**	**13 52 23.2**	**+0.9**
	comp=E,0.9nm,0.8s,mb3.9,baz=335,slow=7.0,SNR=6.7						
NOA	**NORSAR Array B**	**64.07**	**327**	P	**P**	**13 52 34.3**	**-0.7**
	comp=E,0.5nm,0.6s,mb3.7,baz=90,slow=4.0,SNR=2.9						
YKA	**Yellowknife Ar**	**80.76**	**17**	P	**P**	**13 54 14.7**	**+0.2**
	comp=E,0.6nm,0.7s,mb3.7,baz=330,slow=5.6,SNR=3.2						

*IDC **04** 14:02:41.5±1.2,36°.61N×106°.25W,h0km,mb1 3.4/3, mb1mx3.3/27,mbtmp2.9/3,ML3.6/3,Error ellipse: s-maj=20.9km s-min=8.1km az=70.0*
*NEIC **04** 14:02:42.7±0.5,36°.51N×106°.36W,h5km,ML3.7, MW3.7(SLM),Error ellipse: s-maj=8.3km s-min=4.1km az=80.0*
NEIC Felt [IV] at Abiquiu and Tierra Amarilla; [II] at El Rito. Also felt at Los Alamos, San Juan Pueblo and Vallecitos.

*ISCJB **04** 14:02:43.5±0.2,36°.54N±0°.01×106°.46W±0°.01,h10km, Error ellipse: s-maj=1.9km s-min=1.4km az=137.2*
ISC 04 14:02:44.5±0.2,36°.50N±0°.01×106°.46W±0°.01,h10km, n143,σ0§90/220,52C-69D,New Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T22A	**Edith**	**0.62**	**326**	⇑P	**Pg**	**14 02 53.7**	**-2.9**
T22A	baz=0.7			⇑S	**Sg**	**14 03 00.9**	**-3.9**
V22A	**San Miguel Ran**	**0.69**	**212**	⇓P	**Pg**	**14 02 56.3**	**-1.4**
V22A	baz=0.7,SNR=534			⇓S	**Sg**	**14 03 04.8**	**-1.8**
V23A	**Ortiz Mt. (NFS**	**0.78**	**163**	P	**Pg**	**14 02 59.2**	**-0.4**
U24A	**Moreno Valley**	**0.96**	**95**	P	**Pg**	**14 03 01.3**	**-1.6**
U24A	baz=0.9,SNR=569			⇑S	**Sg**	**14 03 13.9**	**-1.5**
V21A	**Milan**	**1.18**	**234**	⇓P	**Pb**	**14 03 04.8**	**-2.0**
V21A	baz=1.3,SNR=1000			⇓S	**Sb**	**14 03 20.2**	**-1.9**
W23A	**Werner Place,**	**1.36**	**169**	⇑P	**Pn**	**14 03 09.0**	**-0.5**
W23A	baz=1.4,SNR=1000			⇓S	**Sb**	**14 03 26.5**	**-0.9**
W22A	**Albuquerque**	**1.46**	**193**	⇑P	**Pn**	**14 03 11.0**	**+0.1**
W22A	baz=1.5,SNR=220			⇑S	**Sn**	**14 03 30.6**	**+0.6**
SDCO	**Great Sand Dun**	**1.46**	**31**	*e*Pn	**Pn**	**14 03 08.3**	**-2.6**
SDCO				*e*Sn	**Sn**	**14 03 26.3**	**-3.8**
ANMO	**Albuquerque**	**1.54**	**180**	Pg	**Pg**	**14 03 11.6**	**-2.5**
ANMO	107nm,0.3s,baz=6.1,slow=14,SNR=1176			Lg		14 03 31.9	
ANMO	**Albuquerque**	**1.54**	**180**	*e*Pn	**Pn**	**14 03 11.5**	**-0.5**
ANMO	82nm,0.3s,baz=112,slow=19,SNR=23			*e*Sn	**Sn**	**14 03 32.0**	**-0.1**
W24A	**Lazy 6 Ranch,**	**1.54**	**146**	⇓P	**Pn**	**14 03 12.2**	**+0.2**
W24A	baz=1.5,SNR=543			⇓S	**Sn**	**14 03 31.5**	**-0.6**
S21A	**Coal Bank Pass**	**1.57**	**318**	⇓S	**Sn**	**14 03 31.1**	**-1.8**
V25A	**Rancho No Teng**	**1.63**	**113**	⇓P	**Pn**	**14 03 13.0**	**-0.2**
V25A	baz=1.6,SNR=1000			⇑S	**Sn**	**14 03 33.8**	**-0.5**
U25A	**Circle Dot Ran**	**1.66**	**93**	P	**Pn**	**14 03 13.3**	**-0.3**
U25A	baz=1.6,SNR=1000			⇓S	**Sn**	**14 03 34.7**	**-0.2**
U20A	**Newcomb**	**1.66**	**266**	⇑P	**Pn**	**14 03 13.3**	**-0.4**
U20A	baz=1.7,SNR=1000			⇑S	**Sn**	**14 03 34.9**	**-0.2**
W21A	**San Fidel**	**1.68**	**215**	P	**Pn**	**14 03 14.1**	**+0.2**
W21A	baz=1.7,SNR=475			⇑S	**Sn**	**14 03 36.3**	**+0.8**
R22A	**Saguache, Gunn**	**1.74**	**352**	⇓P	**Pn**	**14 03 14.2**	**-0.5**
V20A	**Brimhall**	**1.77**	**247**	⇑P	**Pn**	**14 03 15.0**	**-0.1**
V20A	baz=1.8,SNR=510			⇑S	**Sn**	**14 03 37.9**	**+0.3**
MVCO	**Mesa Verde**	**1.78**	**294**	⇓P	**Pn**	**14 03 15.0**	**-0.3**
MVCO	baz=1.9,SNR=652			⇓S	**Sn**	**14 03 37.9**	**0.0**
MVCO	**Mesa Verde**	**1.78**	**294**	*e*Pn	**Pn**	**14 03 14.8**	**-0.5**
MVCO				*e*Sn	**Sn**	**14 03 38.0**	**+0.1**
X23A	**Hourglass Bar**	**1.93**	**173**	⇑P	**Pn**	**14 03 17.1**	**-0.1**
X23A	baz=1.9,SNR=686			⇑Sb	**Sb**	**14 03 43.5**	**-0.2**
X22A	**Bernardo**	**2.04**	**193**	⇑P	**Pn**	**14 03 18.9**	**+0.1**
R21A	**Cimarron**	**2.06**	**335**	⇓P	**Pn**	**14 03 18.9**	**-0.2**
R21A	baz=2.1,SNR=17			⇓S	**Sn**	**14 03 45.6**	**+0.7**
W25A	**X Bar L Ranch,**	**2.07**	**128**	⇑P	**Pn**	**14 03 19.4**	**+0.2**
W25A	baz=2.0,SNR=1000			⇑Sb	**Sb**	**14 03 47.5**	**-0.3**
T19A	**Beclabito**	**2.09**	**280**	⇓P	**Pn**	**14 03 19.5**	**0.0**
T19A	baz=2.2,SNR=217			⇓S	**Sn**	**14 03 46.3**	**+0.8**
X24A	**Lazy VL Ranch,**	**2.10**	**156**	⇓P	**Pn**	**14 03 20.1**	**+0.3**
X24A	baz=2.1,SNR=78			⇑Sb	**Sb**	**14 03 48.9**	**+0.1**
LAZ	**Ladron**	**2.16**	**195**	*e*Pn	**Pn**	**14 03 19.9**	**-0.6**
LAZ				*e*Pg	**Pg**	**14 03 23.3**	**-2.7**
LAZ				*e*Sg	**Sg**	**14 03 51.7**	**-2.3**
U26A	**Atchley Ranch,**	**2.19**	**92**	⇓P	**Pn**	**14 03 20.8**	**-0.2**
	baz=2.1,SNR=205						
U19A	**Dine' College,**	**2.23**	**266**	⇓P	**Pn**	**14 03 21.6**	**+0.2**
U19A	baz=2.3,SNR=399			⇑S	**Sn**	**14 03 50.0**	**+1.1**
V26A	**Tequesquite Ra**	**2.28**	**107**	⇑P	**Pn**	**14 03 21.8**	**-0.3**
V26A	baz=2.2,SNR=304			⇓Sb	**Sb**	**14 03 53.5**	**-0.4**
R20A	**Redvale**	**2.28**	**318**	⇓P	**Pn**	**14 03 21.7**	**-0.4**
R20A	baz=2.3,SNR=51			⇓Sb	**Sb**	**14 03 54.0**	**+0.1**
X21A	**Alamocita Cree**	**2.31**	**208**

W19A	**Sanders**	**2.75 241**	⇑P	**Pn**	**14 03 28.5 -0.1**
	baz=2.8,SNR=42				
W19A			⇑Sb	**Sb**	**14 04 07.4 -0.1**
	baz=2.8				
T18A	**Mexican Hat**	**2.81 284**	⇓P	**Pn**	**14 03 29.5 +0.1**
	baz=2.9,SNR=107				
T18A			⇑S	**Sn**	**14 04 03.4 +0.1**
	baz=2.9				
Q20A	**Ridgley Place,**	**2.85 330**	⇑Sb	**Sb**	**14 04 11.6 +1.2**
	baz=2.9				
R19A	**Curley Farm, L**	**2.86 310**	⇓Sb	**Sb**	**14 04 10.9 +0.4**
	baz=2.9				
X26A	**CR and CF Fran**	**2.91 131**	⇑P	**Pn**	**14 03 31.0 +0.2**
	baz=2.9,SNR=9.2				
X26A			⇓Sb	**Sb**	**14 04 12.4 +0.4**
	baz=2.9				
V18A	**Ganado**	**2.92 255**	⇓Sb	**Sb**	**14 04 11.7 -0.6**
	baz=3.0				
Y25A	**Mesa, Roswell**	**2.95 150**	⇑Sb	**Sb**	**14 04 13.7 +0.5**
	baz=2.9				
W18A	**Petrified Fore**	**3.00 244**	⇓P	**Pn**	**14 03 32.1 +0.1**
	baz=3.1,SNR=15				
W18A			⇓Sb	**Sb**	**14 04 13.0 -1.5**
	baz=3.1				
Y20A	**Horse Springs,**	**3.02 212**	P	**Pn**	**14 03 32.5 +0.2**
	baz=3.1,SNR=45				
Y20A			⇓Sb	**Sb**	**14 04 16.1 +0.8**
	baz=3.1				
S18A	**Hurst Farm, Bl**	**3.06 294**	⇓P	**Pn**	**14 03 32.7 -0.2**
	baz=3.1,SNR=125				
X19A	**St. Johns**	**3.10 229**	⇑P	**Pn**	**14 03 33.6 +0.2**
	baz=3.2,SNR=12				
X19A			⇓Sb	**Sb**	**14 04 18.2 +0.8**
	baz=3.2				
W27A	**Bowe Ranch, En**	**3.11 116**	⇓Sb	**Sb**	**14 04 18.9 +1.1**
	baz=3.0				
Z22A	**Elephant Butte**	**3.26 187**	⇑P	**Pn**	**14 03 35.0 -0.6**
	baz=3.3,SNR=9.9				
Z24A	**Sheeppen Canyo**	**3.29 164**	⇑Sb	**Sb**	**14 04 24.6 +1.7**
	baz=3.3				
X27A	**F and S Farms,**	**3.31 123**	⇑Sb	**Sb**	**14 04 24.7 +1.3**
	baz=3.2				
R18A	**Canyonlands Na**	**3.32 306**	⇑P	**Pn**	**14 03 35.9 -0.6**
	baz=3.4,SNR=19				
R18A			⇑Sb	**Sb**	**14 04 24.9 +1.1**
	baz=3.4				
Y26A	**Elida**	**3.36 139**	⇓P	**Pn**	**14 03 37.3 +0.4**
	baz=3.3,SNR=7.9				
Y26A			⇓Sb	**Sb**	**14 04 26.0 +1.1**
	baz=3.3				
ISCO	**Idaho Springs**	**3.36 11**	*e*Pn	**Pn**	**14 03 36.8 -0.2**
U17A	**Shonto**	**3.38 273**	⇓P	**Pn**	**14 03 37.8 +0.5**
	baz=3.5				
Y19A	**Nutrioso**	**3.41 223**	⇓P	**Pn**	**14 03 38.1 +0.4**
	baz=3.5,SNR=19				
Y19A			⇓Sb	**Sb**	**14 04 27.5 +0.9**
	baz=3.5				
X18A	**Snowflake**	**3.46 236**	P	**Pn**	**14 03 38.5 +0.1**
	baz=3.5,SNR=23				
X18A			⇑Sb	**Sb**	**14 04 27.8 0.0**
	baz=3.5				
Z25A	**Roswell**	**3.52 155**	⇓Sb	**Sb**	**14 04 30.8 +1.3**
	baz=3.5				
V17A	**Tonalea, Kykot**	**3.62 257**	⇓P	**Pn**	**14 03 41.0 +0.5**
	baz=3.7,SNR=25				
V17A			⇑Sb	**Sb**	**14 04 32.3 -0.1**
	baz=3.7				
S17A	**Black Ridge (B**	**3.65 289**	⇑P	**Pn**	**14 03 40.8 -0.2**
	baz=3.7,SNR=82				
W17A	**Winslow**	**3.73 249**	⇑P	**Pn**	**14 03 42.9 +0.8**
	baz=3.8,SNR=16				
O21A	**Pagoda**	**3.79 348**	⇓P	**Pn**	**14 03 43.3 +0.4**
	baz=3.8				
Z20A	**Nine Sixteen R**	**3.80 208**	⇓P	**Pn**	**14 03 42.6 -0.5**
	baz=3.9,SNR=9.4				
R17A	**Hanksville Air**	**3.89 301**	⇑P	**Pn**	**14 03 43.7 -0.6**
	baz=3.9,SNR=7.7				
Q18A	**Rafter H Ranch**	**3.90 313**	⇓P	**Pn**	**14 03 44.3 -0.1**
	baz=4.0,SNR=12				
CPRX	**Cap Rock**	**4.07 148**	*e*Pn	**Pn**	**14 03 47.6 +0.9**
CPRX			*e*Pg	**Pg**	**14 03 58.2 -4.2**
CPRX			*e*Sg	**Sg**	**14 04 48.9 -6.1**
WUAZ	**Wupatki**	**4.10 258**	⇓P	**Pn**	**14 03 47.4 +0.2**
	baz=4.2,SNR=47				
WUAZ	**Wupatki**	**4.10 258**	*e*Pn	**Pn**	**14 03 47.4 +0.2**
WUAZ			*e*Pg	**Pg**	**14 03 58.1 -4.9**
WUAZ			*e*Sg	**Sg**	**14 04 46.4 -10**
SRU	**San Rafael**	**4.14 310**	⇑P	**Pn**	**14 03 47.2 -0.6**
	baz=4.2,SNR=46				
SRU	**San Rafael**	**4.14 310**	*e*Pn	**Pn**	**14 03 47.5 -0.3**
SRU			*e*Pg	**Pg**	**14 03 56.9 -6.9**
SRU			*e*Sg	**Sg**	**14 04 50.5 -7.0**
AMTX	**Amarillo**	**4.21 111**	*e*Pg	**Pg**	**14 03 57.8 -7.4**
N22A	**Wattenberg Ran**	**4.30 0**	⇓P	**Pn**	**14 03 50.3 +0.4**
	baz=4.3				
P18A	**Preston Nutter**	**4.32 317**	⇓P	**Pn**	**14 03 50.4 +0.1**
	baz=4.4,SNR=17				
O19A	**Miners Draw (B**	**4.33 332**	⇓P	**Pn**	**14 03 50.7 +0.3**
	baz=4.4				
W16A	**Flagstaff**	**4.35 253**	⇑P	**Pn**	**14 03 50.6 -0.1**
	baz=4.4				
R16A	**Teasdale**	**4.38 296**	⇓P	**Pn**	**14 03 51.0 0.0**
	baz=4.4				
Q16A	**Castle Valley**	**4.45 304**	⇓P	**Pn**	**14 03 51.6 -0.4**
	baz=4.5,SNR=13				
P17A	**Butcher Ranch,**	**4.50 313**	⇑P	**Pn**	**14 03 52.4 -0.2**
	baz=4.5				
X16A	**Lo Mia Camp, P**	**4.56 244**	⇑P	**Pn**	**14 03 53.7 +0.2**
	baz=4.6,SNR=12				
GDL2	**Guadalupe Moun**	**4.62 157**	*e*Pg	**Pg**	**14 04 05.5 -7.6**
GDL2			*e*Sg	**Sg**	**14 05 04.5 -8.5**
V15A	**Kaibab Nationa**	**4.67 263**	⇑P	**Pn**	**14 03 55.6 +0.5**
	baz=4.7,SNR=35				
TMUT	**Trail Mountain**	**4.68 308**	*e*Pn	**Pn**	**14 03 54.7 -0.4**
TMUT			*e*Pg	**Pg**	**14 04 07.0 -7.1**
TMUT			*e*Sg	**Sg**	**14 05 05.5 -9.2**
U15A	**North Rim**	**4.70 271**	⇓P	**Pn**	**14 03 56.2 +0.8**
	baz=4.8,SNR=50				
CLNB	**Carlsbad**	**4.73 152**	*e*Pg	**Pg**	**14 04 08.9 -6.2**
CLNB			*e*Sg	**Sg**	**14 05 09.2 -7.2**
T15A	**Red Dirt Ranch**	**4.78 278**	⇓P	**Pn**	**14 03 56.9 +0.4**
	baz=4.9,SNR=16				
PHWY	**Pilot Hill**	**4.86 9**	*e*Pg	**Pg**	**14 04 09.0 -8.5**
PHWY			*e*Sg	**Sg**	**14 05 13.9 -6.6**
Y16A	**Circle Bar Ran**	**4.87 239**	⇓P	**Pn**	**14 03 57.7 -0.1**
	baz=4.9,SNR=9.2				
MNTX	**Cornudas Mount**	**4.87 169**	*e*Pg	**Pg**	**14 04 11.5 -6.2**
MNTX			*e*Sg	**Sg**	**14 05 13.1 -7.7**
220A	**Playas Peak, P**	**4.89 201**	⇓P	**Pn**	**14 03 57.8 -0.2**
	baz=4.9,SNR=7.0				
219A	**White Tail Can**	**5.05 208**	⇓P	**Pn**	**14 03 59.3 -0.9**
	baz=5.1,SNR=19				
RWWY	**Rawlins**	**5.22 354**	*e*Pg	**Pg**	**14 04 19.4 -4.9**
MPU	**Maple Canyon**	**5.38 312**	*e*Pg	**Pg**	**14 04 20.1 -7.3**
U14A	**Mt Trumbull**	**5.42 271**	⇑P	**Pn**	**14 04 05.8 +0.6**
	baz=5.5,SNR=46				
DAU	**Daniels Canyon**	**5.42 318**	*e*Pn	**Pn**	**14 04 06.2 +0.9**
	48nm,0.7s				
DAU			*e*Pg	**Pg**	**14 04 25.1 -3.2**
V14A	**Boquillas Ranc**	**5.45 263**	⇑P	**Pn**	**14 04 06.5 +0.7**
	baz=5.5,SNR=77				
TUC	**Tucson**	**5.50 222**	Pn	**Pn**	**14 04 06.1 -0.3**
	17nm,0.6s				
TUC			*e*Pg	**Pg**	**14 04 23.4 -6.3**
TUC			*e*Sg	**Sg**	**14 05 30.0 -11**
NLU	**North Lily Min**	**5.61 310**	*e*Pn	**Pn**	**14 04 07.5 -0.3**
	27nm,0.4s				
NLU			*e*Pg	**Pg**	**14 04 24.7 -7.1**
NLU			*e*Sg	**Sg**	**14 05 34.9 -9.5**
CCUT	**Cedar City**	**5.62 283**	*e*Pn	**Pn**	**14 04 07.5 -0.5**
	59nm,0.6s				
CCUT			*e*Pg	**Pg**	**14 04 26.1 -6.0**
OGNE	**Ogallala**	**5.63 37**	Pn	**Pn**	**14 04 07.2 -1.0**
	99nm,0.6s				
OGNE			Pg	**Pg**	**14 04 25.9 -6.4**
JLU	**Jordanelle**	**5.66 318**	*e*Pn	**Pn**	**14 04 08.4 -0.2**
	49nm,0.5s				
JLU			*e*Pg	**Pg**	**14 04 22.6 -10**
CBKS	**Cedar Bluff**	**5.81 65**	*e*Pg	**Pg**	**14 04 30.4 -5.5**
CBKS			*e*Sg	**Sg**	**14 05 38.2 -13**
CTU	**Camp Tracy**	**5.89 317**	*e*Pg	**Pg**	**14 04 30.8 -6.4**
T13A	**Saint George**	**6.00 277**	⇓P	**Pn**	**14 04 14.1 +0.9**
	baz=6.1,SNR=22				
U13A	**Pakoon Wash**	**6.05 271**	⇑P	**Pn**	**14 04 14.8 +0.9**
	baz=6.1,SNR=12				
NOQ	**North Oquirrh**	**6.07 315**	Pg	**Pg**	**14 04 33.9 -6.8**
DUG	**Dugway**	**6.21 308**	*e*Pg	**Pg**	**14 04 35.3 -8.0**
HWUT	**Hardware Ranch**	**6.46 324**	*e*Pn	**Pn**	**14 04 19.0 -0.6**
HWUT			*e*Pg	**Pg**	**14 04 40.9 -7.3**
WMOK	**Wichita Mounta**	**6.50 103**	*e*Pn	**Pn**	**14 04 19.3 -0.8**
WMOK			*e*Sg	**Sg**	**14 06 06.4 -6.7**
SPUT	**South Promonto**	**6.70 318**	Pg	**Pb**	**14 04 42.0 +1.1**
PDAR	**Pinedale Array**	**6.70 340**	Pn	**Pn**	**14 04 22.6 -0.3**
	0.9nm,0.3s,baz=155,slow=14,SNR=13				
PDAR			Lg		14 06 10.1
	1.1nm,0.3s,baz=155,slow=30,SNR=6.7				
BGU	**Big Grassy Mou**	**6.78 313**	*e*Pn	**Pn**	**14 04 24.1 +0.3**
BGU			*e*Pg	**Pg**	**14 04 47.4 -6.8**
BGU			*e*Sg	**Sg**	**14 06 11.7 -10**
LDFC	**Landfair**	**7.17 261**	Pg	**Pg**	**14 04 56.4 -5.3**
HVU	**Hansel Valley**	**7.20 319**	*e*Pg	**Pg**	**14 04 54.2 -8.1**
N13A	**Wendover, West**	**7.46 308**	*e*Pg	**Pg**	**14 04 59.8 -7.4**
TXAR	**Lajitas Array**	**7.52 161**	Pn	**Pn**	**14 04 36.5 +2.4**
	0.0nm,0.3s,baz=352,slow=12,SNR=3.2				
TXAR			Pg	Pg	14 04 47.9 -21
	0.5nm,0.3s,baz=346,slow=17,SNR=13				
TXAR			Lg		14 06 37.8
	2.8nm,0.3s,baz=347,slow=28,SNR=13				
REDW	**Red Top Meadow**	**7.64 335**	*e*Pg	**Pg**	**14 05 03.3 -7.4**
GLA	**Glamis**	**7.69 246**	*e*Pg	**Pg**	**14 05 05.9 -5.8**
M13A	**Montello**	**7.72 311**	*e*Pg	**Pb**	**14 05 01.1 +2.7**
LOHW	**Long Hollow**	**7.78 337**	P	**Pn**	**14 04 39.8 +2.1**
TPAW	**Teton Pass**	**7.79 335**	P	**Pn**	**14 04 40.3 +2.5**
RSSD	**Black Hills**	**7.84 13**	Pn	**Pn**	**14 04 38.8 +0.3**
RSSD			*e*Pg	Pn	14 05 05.7 +27
RSSD			*e*Sg	Sn	14 06 46.7 +40
N12A	**Clover Valley,**	**7.99 306**	*e*Pn	**Pn**	**14 04 44.6 +4.0**
N12A			*e*Pg	Pn	14 05 08.6 +28
ELK	**Elko**	**8.07 304**	Pg	**Pb**	**14 04 59.8 -4.6**
	0.1nm,0.3s,baz=281,slow=11,SNR=3.5				
ELK			Lg		14 06 51.9
	0.2nm,0.3s,baz=192,slow=15,SNR=4.8				
ELK	**Elko**	**8.07 304**	Pg	**Pb**	**14 04 59.8 -4.6**
ELK			Lg		14 06 51.9
IMW	**Indian Meadow**	**8.14 337**	Pn	**Pn**	**14 04 41.9 -0.7**
IMW			*e*Pg	Pn	14 05 13.1 +30
JCT	**Junction City**	**8.18 135**	Pn	**Pn**	**14 04 45.5 +2.2**
JCT			*e*Pg	Pn	14 05 11.6 +28
KSU1	**Kansas State U**	**8.22 69**	*e*Pg	**Pb**	**14 05 13.0 +6.1**
KSU1			*e*Sg	Sn	14 07 02.6 +46
GSC	**Goldstone**	**8.48 265**	Pn	**Pn**	**14 04 50.2 +2.9**
NVAR	**Mina Array Bea**	**9.61 285**	Pn	**Pn**	**14 05 07.5 +4.7**
	0.1nm,0.3s,baz=111,slow=12,SNR=2.2				
NVAR			Pg	Pn	14 05 37.5 +35
	0.9nm,0.3s,baz=98,slow=18,SNR=6.0				
NVAR			Lg		14 07 45.5
	0.3nm,0.3s,baz=94,slow=31,SNR=3.0				
YBH	**Yreka Blue Hor**	**13.65 297**	Pn	**Pn**	**14 06 04.2 +6.2**
	0.2nm,0.3s,baz=96,slow=7.6,SNR=3.0				
ULM	**Lac du Bonnet**	**15.73 26**	Pn	**Pn**	**14 06 31.9 +5.9**
	0.3nm,0.3s,baz=162,slow=6.4,SNR=2.0				

NIED ***04*** *14:33:00,36°.20N×140°.10E,h68km,Mw4.1 Best double couple: M₀1.54000×10¹⁵ NP1:φs359.00000°,δ71.00000°, λ88.00000°. NP2:φs186.00000°,δ20.00000°,λ96.00000°.*
ISCJB ***04*** *14:33:40.8±0.5,36°.11N±0°.03×140°.12E±0°.06,h79km±3km, mb3.7/12,Error ellipse: s-maj=7.9km s-min=5.6km az=13.3*
NEIC ***04*** *14:33:41.7±1.4,36°.05N×140°.10E,h74km±9km,mb4.4/2, Error ellipse: s-maj=19.1km s-min=11.9km az=143.0*
JMA ***04*** *14:33:42.4,36°.14N×140°.10E,h67km±1km,M3.9 Broadband fault plane solution: P waves. NP1: φs222.00000°,δ21.00000°,λ135.00000°. NP2: φs355.00000°,δ75.00000°,λ75.00000°. Principal axes: T Plg57.0000°, Azm245.0000°; N Plg15.0000°, Azm359.0000°; P Plg29.0000°, Azm97.0000°;*
JMA Felt II J1.
IDC ***04*** *14:33:42.2±2.0,36°.16N×140°.15E,h77km±17km,mb3.5/9, mb1 3.6/11,mb1mx3.5/25,mbtmp3.5/11,MS2.9/6, Ms1 2.9/6,ms1mx2.7/26 Error ellipse: s-maj=24.1km s-min=17.9km az=84.0*

ISC 04 14:33:41.9±0.5,36°.12N±0°.03×140°.10E±0°.06,h73km±3km, n34,σ0§87/44,mb3.7/12,2C-6D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.14**	**36**	⇑P	**Pn**	**Sn**	**14 33 52.4**	**-0.2**
JYT				S	S	Sn	14 33 59.6	-0.8
JAG	**Ashikaga**	**0.60**	**301**	⇓P	**Pn**	**Sn**	**14 33 56.0**	**0.0**
JAG				S	S	Sn	14 34 05.8	-0.5
JKT	**Katashina**	**0.94**	**314**	⇓P	**Pn**	**Sn**	**14 33 59.9**	**+0.1**
JKT				S	S	Sn	14 34 13.3	+0.2
JRY	**Ryogami san**	**0.97**	**264**	⇓P	**Pn**	**Sn**	**14 34 00.5**	**+0.3**
JRY				S	S	Sn	14 34 13.9	+0.1
JOD2	**Odawara 2**	**1.18**	**224**	⇓P	**Pn**	**Sn**	**14 34 03.0**	**+0.2**
JOD2				S	S	Sn	14 34 17.7	-0.8
JFY	**Yanaizu**	**1.32**	**346**	⇓P	**Pn**	**Sn**	**14 34 05.0**	**+0.3**
JFY				S	S	Sn	14 34 22.2	+0.5
BSO3	**Boso 3**	**1.35**	**165**	P	**Pn**	**Sn**	**14 34 05.2**	**+0.1**
JFK	**Kawauchi**	**1.40**	**26**	⇑P	**Pn**	**Sn**	**14 34 05.7**	**+0.1**
JYN	**Shimob**	**1.40**	**244**	P	**Pn**	**Sn**	**14 34 06.5**	**+0.8**
JYN				S	S	Sn	14 34 24.6	+1.0
JFT	**Otama**	**1.41**	**8**	P	**Pn**	**Sn**	**14 34 06.2**	**+0.4**
JHK	**Hiroka**	**1.42**	**323**	⇓P	**Pn**	**Sn**	**14 34 06.4**	**+0.5**
MJAR	**Matsushiro Arr**	**1.58**	**286**	P	**Pn**	**Sn**	**14 34 08.0**	**-0.1**
	28nm,0.3s,baz=136,slow=10,SNR=210							
MJAR				S	S	Sn	14 34 24.6	-3.2
	21nm,0.3s,baz=100,slow=23,SNR=16							
MAJO	**Matsushiro**	**1.58**	**286**	*e*P	**Pn**	**Sn**	**14 34 08.6**	**+0.5**
MAT	**Matsushiro**	**1.58**	**286**	P	**Pn**	**Sn**	**14 34 08.8**	**+0.8**
MAT				S	S	Sn	14 34 24.8	-3.0
JHJ	**Hachijo jima 2**	**3.00**	**185**	P	**Pn**	**Sn**	**14 34 28.9**	**+1.8**
	26nm,0.3s,baz=275,slow=23,SNR=6.2							
JHJ				S	S	Sn	14 35 00.9	-1.1
	58nm,0.3s,baz=83,slow=22,SNR=7.0							
ERM	**Erimo**	**6.35**	**21**	*e*P	**Pn**	**Sn**	**14 35 13.4**	**+0.6**
ASAJ	**Asahikawa**	**8.22**	**13**	P	**Pn**	**Sn**	**14 35 37.2**	**-1.0**
	0.7nm,0.3s,baz=228,slow=13,SNR=7.1							
ASAJ				S	S	Sn	14 37 05.8	-3.7
	0.2nm,0.3s,baz=109,slow=18,SNR=2.6							
ASAJ				LR	LR	LR	14 39 00.0	
	comp=Z,40nm,18.4s,baz=91,slow=39							
KSRS	**Korea Array**	**9.86**	**281**	P	**Pn**	**Sn**	**14 36 04.4**	**+3.7**
	0.2nm,0.3s,baz=93,slow=13,SNR=6.0							
KSRS				LR	LR	LR	14 39 41.4	
	comp=Z,52nm,20.5s,baz=352,slow=36							
PETK	**Petropavlovsk-**	**21.01**	**31**	LR	LR	LR	14 45 41.2	
	comp=Z,37nm,19.4s,baz=263,slow=34							
ENH	**Enshi**	**26.20**	**266**	*e*P	**P**		**14 39 07.8**	**-2.1**
	10nm,0.8s,mb4.3							
SONM	**Songino Array**	**27.44**	**306**	P	**P**		**14 39 20.7**	**-0.1**
	0.4nm,0.6s,mb3.1,baz=107,slow=7.7,SNR=3.1							
SONM				LR	LR	LR	14 50 33.5	
	comp=Z,40nm,18.2s,baz=82,slow=37							
CMAR	**Chiang Mai Arr**	**40.24**	**255**	P	**P**		**14 41 11.7**	**0.0**
	0.3nm,0.3s,mb3.6,baz=41,slow=7.0,SNR=4.1							
ZALV	**Zalesovo Beam**	**41.76**	**313**	P	**P**		**14 41 23.8**	**0.0**
	1.0nm,0.4s,mb3.9,baz=72,slow=9.5,SNR=4.5							
ZALV				LR	LR	LR	15 00 24.4	
	comp=Z,17nm,18.1s,baz=257,slow=38							
ZALV	**Zalesovo Beam**	**41.76**	**313**	P	**P**		**14 41 23.8**	**0.0**
ZALV				LR	LR	LR	15 00 24.4	
MK31	**Makanchi Array**	**43.71**	**303**	*e*P	**P**		**14 41 40.0**	**+0.3**
MKAR	**Makanchi Array**	**43.71**	**303**	P	**P**		**14 41 40.0**	**+0.3**
	1.7nm,0.8s,mb3.9,baz=83,slow=12,SNR=19							
MKAR				LR	LR	LR	15 02 26.8	
	comp=Z,23nm,21.2s,baz=225,slow=39							
KURK	**Kurchatov**	**45.67**	**309**	*e*P	**P**		**14 41 54.8**	**-0.3**
	6.0nm,0.9s,mb4.3							
BVAR	**Borovoye Array**	**50.41**	**313**	P	**P**		**14 42 33.9**	**+2.2**
	0.3nm,0.3s,mb3.6,baz=93,slow=5.8,SNR=3.2							
ASAR	**Alice Springs**	**59.74**	**187**	P	**P**		**14 43 38.9**	**-0.2**
	0.3nm,0.7s,mb3.4,baz=22,slow=11.1,SNR=3.3							
YKA	**Yellowknife Ar**	**65.13**	**30**	P	**P**		**14 44 14.2**	**-0.4**
	0.3nm,0.5s,mb3.3,baz=297,slow=6.9,SNR=2.9							
FINES	**FINESS Array B**	**69.13**	**332**	P	**P**		**14 44 39.5**	**-0.5**
	0.8nm,0.7s,mb3.7,baz=112,slow=8.8,SNR=4.3							
AKASG	**Malin Array Be**	**74.37**	**322**	P	**P**		**14 45 11.2**	**-0.4**
	0.5nm,0.4s,mb3.6,baz=49,slow=5.6,SNR=5.5							
NB2	**NORSAR Subarra**	**74.62**	**337**	P	**P**		**14 45 12.6**	**-0.3**
	comp=Z,2.1nm,0.8s,mb3.9,baz=41,slow=5.9							
NOA	**NORSAR Array B**	**74.62**	**337**	P	**P**		**14 45 12.5**	**-0.4**
	comp=Z,1.1nm,0.7s,mb3.7,baz=39,slow=5.8,SNR=4.9							

IDC ***04*** *14:50:53.1±1.2,32°.01N×104°.72E,h0km,mb3.5/6, mb1 3.5/8,mb1mx3.4/27,mbtmp3.5/8,ML3.3/2,Error ellipse: s-maj=43.8km s-min=21.2km az=49.0*
BJI ***04*** *14:50:55.7,32°.25N×105°.13E,h17km,ML3.4/12,Ms3.3/4, Ms7 3.1/4*
NEIC ***04*** *14:50:55.6±6.3,32°.25N×105°.06E,h15km±44km,Error ellipse: s-maj=19.1km s-min=12.1km az=67.0*

ISC 04 14:50:55.5±1.0,32°.26N±0°.04×105°.02E±0°.05,h9km±8km, n17,σ1§23/26,mb3.5/6,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.72**	**219**	Pn	**Pn**		**14 51 25.8**	**+0.2**
CD2				Pg	**Pg**		**14 51 27.2**	**-1.3**
CD2				Sn	**Sn**		**14 51 48.2**	**+0.5**
CD2				Sg	**Sg**		**14 51 51.9**	**+1.0**
CD2				smax				
	comp=N,4μm,0.7s							
CD2				smax				
	comp=E,3μm,0.8s							
XAN	**Xi'an**	**3.72**	**61**	Pn	**Pn**		**14 51 54.4**	**+1.3**
XAN				Pg	**Pg**		**14 52 05.3**	**-1.5**
XAN				Sn	**Sn**		**14 52 36.2**	**-0.9**
XAN				Sg	**Sb**		**14 52 48.0**	**+1.4**
XAN				smax				
	comp=N,120nm,0.6s							
XAN				smax				
	comp=E,60nm,0.8s							
XAN				LR	LR			
	comp=N,320nm,7.5s							
XAN				LR	LR			
	comp=E,43nm,7.0s							
XAN				LR	LR			
	comp=Z,48nm,7.0s							
LZH	**Lanzhou**	**3.94**	**346**	Pn	**Pn**		**14 51 55.1**	**-0.9**
LZH				Pg	**Pb**		**14 52 06.3**	**+1.3**
LZH				Sn	**Sn**		**14 52 41.3**	**-0.9**
LZH				Sg	**Sb**		**14 52 54.9**	**+2.2**
LZH				smax				
	comp=N,250nm,1.0s							
LZH				smax				
	comp=E,320nm,1.0s							
LZH				LR	LR			
	comp=N,580nm,6.4s							
LZH				LR	LR			
	comp=Z,720nm,9.1s							
ENH	**Enshi**	**4.31**	**116**	*e*P	**Pn**		**14 51 59.6**	**-1.6**
GYA	**Guiyang**	**5.96**	**166**	Pn	**Pn**		**14 52 26.5**	**+2.6**
CMAR	**Chiang Mai Arr**	**14.80**	**203**	Pn	**Pn**		**14 54 25.3**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=6.8,slow=9.1,SNR=3.1							
SONM	**Songino Array**	**15.59**	**3**	Pn	**Pn**		**14 54 35.8**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=196,slow=15,SNR=2.5							
KSRS	**Korea Array**	**19.48**	**68**	P	**Pn**		**14 55 25.0**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=268,slow=9.2,SNR=3.1							
MK31	**Makanchi Array**	**22.64**	**316**	*e*P	**P**		**14 55 55.4**	**-1.3**
MKAR	**Makanchi Array**	**22.64**	**316**	P	**P**		**14 55 54.7**	**-2.0**
	comp=Z,0.4nm,0.5s,mb3.1,baz=105,slow=11,SNR=6.7							
MKAR	**Makanchi Array**	**22.64**	**316**	P	**P**		**14 55 54.7**	**-2.0**
ZALV	**Zalesovo Beam**	**26.04**	**332**	P	**P**		**14 56 29.2**	**+0.5**
	comp=Z,0.4nm,0.4s,mb3.3,baz=168,slow=9.7,SNR=2.6							
KURK	**Kurchatov**	**26.81**	**321**	P	**P**		**14 56 34.7**	**-1.0**
	comp=Z,0.7nm,0.7s,mb3.3,baz=124,slow=12,SNR=5.4							
KURK	**Kurchatov**	**26.81**	**321**	P	**P**		**14 56 34.7**	**-1.0**
FINES	**FINESS Array B**	**57.04**	**326**	P	**P**		**15 00 42.3**	**+1.0**
	comp=Z,0.7nm,0.6s,mb3.9,baz=99,slow=12,SNR=3.5							
ASAR	**Alice Springs**	**62.09**	**150**	P	**P**		**15 01 14.9**	**-1.6**
	comp=Z,0.2nm,0.4s,mb3.6,baz=333,slow=6.6,SNR=4.0							
NOA	**NORSAR Array B**	**64.10**	**327**	P	**P**		**15 01 29.4**	**-0.1**
	comp=Z,0.3nm,0.5s,mb3.6,baz=72,slow=5.2,SNR=3.0							

DJA 04 14:55:39,8°.01S×107°.52E,h30km,MLv3.7/3,Jawa

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
LEM	**Lembang**	**1.18**	**5**	P	Pn		14 56 00.3	+0.8
LEM				S	Sn		14 56 16.0	+1.5
CGJI	**Cibinong**	**2.28**	**307**	P	Pn		14 56 15.2	+0.5
CGJI				S	Sn		14 56 39.8	-2.0
UGM	**Wanagama**	**2.98**	**88**	P	Pn		14 56 25.5	+1.3
UGM				S	Sn		14 57 00.2	+1.3
PCJI	**Pacitan**	**3.63**	**93**	P	Pn		14 56 35.5	+2.4
PCJI				S	Sn		14 57 15.0	+0.1

IDC ***04*** *14:59:46.2±1.0,16°.15N×46°.72W,h0km,mb3.8/7, mb1 4.0/7,mb1mx3.7/25,mbtmp3.8/7,MS3.5/13, Ms1 3.5/13,ms1mx3.4/33,Error ellipse: s-maj=26.8km s-min=25.1km az=179.0*
ISCJB ***04*** *14:59:46.2±0.7,16°.2N±0°.1×46°.8W±0°.1,h10km,mb3.8/7, MS3.5/13,

CD2				Sg	Sg	15 01 09.8	+0.7
CD2				smax			
	comp=N,13μm,0.7s						
CD2				smax			
	comp=E,20μm,0.7s						
LZH	**Lanzhou**	4.93	2	*e*Pg	Pg	15 02 37.4	+3.1
LZH				Sg	Sg	15 03 38.3	+0.1
LZH				smax			
	comp=N,39nm,1.0s						
LZH				smax			
	comp=E,68nm,1.0s						
ENH	**Enshi**	5.11	98	*e*P	Pn	15 02 15.8	0.0
	comp=E,23nm,0.6s						
XAN	**Xi'an**	5.31	56	Pn	Pn	15 02 22.8	+4.3
XAN				Pg	Pg	15 02 36.9	-4.6
XAN				Sn	Sn	15 03 26.8	+7.4
XAN				Sg	Sg	15 03 43.9	-6.4
XAN				smax			
	comp=N,73nm,0.7s						
XAN				smax			
	comp=E,37nm,1.1s						
GYA	**Guiyang**	5.37	150	Pg	Pn	15 02 25.1	+5.8
GYA				Sg	Sn	15 03 22.7	+1.8
GYA				smax			
	comp=N,100nm,0.9s						
GYA				smax			
	comp=E,70nm,1.0s						
KMI	**Kunming**	6.05	188	Pn	Pn	15 02 26.5	-2.2
KMI				Sn	Sn	15 03 40.1	+2.4
KMI				smax			
	comp=N,24nm,1.1s						
KMI				smax			
	comp=E,18nm,1.0s						
KMI				LR	LR		
	comp=N,160nm,7.1s						
KMI				LR	LR		
	comp=E,240nm,5.5s						
KMI				LR	LR		
	comp=Z,120nm,8.7s						
CMAR	**Chiang Mai Arr**	13.33	200	Pn	Pn	15 04 07.9	-0.6
	comp=Z,0.1nm,0.3s,baz=15,slow=12,SNR=4.6						
SONM	**Songino Array**	16.80	6	Pn	Pn	15 04 55.0	+0.6
	comp=Z,0.1nm,0.3s,baz=178,slow=8.0,SNR=5.0						
KSRS	**Korea Array**	21.00	66	P	P	15 05 42.1	-0.5
	comp=Z,1.0nm,0.6s,baz=255,slow=10,SNR=6.8						
MK31	**Makanchi Array**	22.69	320	*e*P	P	15 06 02.9	+2.3
MKAR	**Makanchi Array**	22.69	320	P	P	15 06 00.5	-0.1
	comp=Z,0.5nm,0.9s,mb3.0,baz=119,slow=14,SNR=5.4						
ZALV	**Zalesovo Beam**	26.51	335	P	P	15 06 35.5	-1.0
	comp=Z,0.7nm,0.5s,mb3.4,baz=144,slow=10,SNR=3.0						
KURK	**Kurchatov**	26.98	324	P	P	15 06 40.6	-0.1
	comp=Z,0.6nm,0.7s,mb3.3,baz=129,slow=9.7,SNR=6.2						
WRAB	**Tennant Creek**	58.73	146	*e*P	P	15 10 55.4	-1.6
	comp=Z,1.0nm,0.5s,mb4.1						
ASAR	**Alice Springs**	61.73	148	P	P	15 11 15.9	-1.6
	comp=Z,0.1nm,0.3s,mb3.4,baz=336,slow=6.9,SNR=2.9						

*ISCJB **04** 15:01:59.9±0.4, 38°.29N±0°.02×26°.54E±0°.02, h9km±3km, Error ellipse: s-maj=3.5km s-min=2.6km az=144.3*
*ATH **04** 15:01:59.9, 38°.22N×26°.45E, h33km±1km, MD3.5/6*
*DDA **04** 15:01:59.9, 38°.24N×26°.56E, h26km±1km, Md3.1*
*NEIC **04** 15:01:59.9, 38°.22N×26°.45E, h33km, MD3.5(ATH), MD3.4(ISK), After ATH.*
*CSEM **04** 15:02:00.3±0.3, 38°.22N×26°.48E, h2km, MD3.1, Error ellipse: s-maj=7.2km s-min=4.6km az=55.0*
*THE **04** 15:02:00.3, 38°.26N×26°.53E, h10km±1km, ML3.6/5, Error ellipse: s-maj=1.6km s-min=0.9km az=95.0*
*ISK **04** 15:02:01.1, 38°.22N×26°.67E, h5km, MD3.5*

ISC 04 15:02:00.5±0.4, 38°29N±0°.02×26°52E±0°.03, h12km±2km, n100, σ1°06/141, 1C, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	0.09	37	⇑*i*P	Pg	15 02 03.4	+0.1
URLA				*i* S	Sg	15 02 05.8	+0.5
URLA	**Izmir**	0.09	37	*i* P	Pg	15 02 03.4	+0.1
URLA				*i* S	Sg	15 02 05.8	+0.5
CHOS	**Chios island**	0.38	285	P	Pg	15 02 08.5	+0.4
CHOS				S	Sg	15 02 14.3	+1.0
CHOS	**Chios island**	0.38	285	*e*PB	Pg	15 02 08.6	+0.5
CHOS				*e*SB	Sg	15 02 14.9	+1.6
CHOS	**Chios island**	0.38	285	*e*Pb	Pg	15 02 08.6	+0.5
CHOS				S	Sg	15 02 14.3	+1.0
CHOS				*e*Sb	Sg	15 02 14.9	+1.6
BLCB	**Balcova**	0.42	76	PG	Pg	15 02 08.8	0.0
BLCB				*e*SG	Sg	15 02 14.6	+0.1
BLCB	**Balcova**	0.42	76	P	Pg	15 02 08.7	-0.1
BLCB				S	Sg	15 02 14.8	+0.4
BLCB	**Balcova**	0.42	76	*i* Pg	Pg	15 02 08.8	0.0
BLCB				*e*Sg	Sg	15 02 14.6	+0.2
IZM	**Izmir**	0.59	79	PG	Pg	15 02 12.1	+0.1
SMG	**Samos**	0.63	157	*e*Pn	Pg	15 02 12.1	-0.6
SMG				*e*Sn	Sg	15 02 22.0	+1.1
SMG	**Samos**	0.63	157	*e*PN	Pg	15 02 12.1	-0.6
SMG				*e*SN	Sg	15 02 22.0	+1.1
SMG	**Samos**	0.63	157	*e*Pn	Pg	15 02 12.1	-0.6
GCAM	**G?zelcaml?**	0.81	136	*i* P	Pg	15 02 15.7	-0.5
GCAM				*i* S	Sg	15 02 26.4	-0.3
GCAM	**G?zelcaml?**	0.81	136	*i* P	Pg	15 02 15.6	-0.6
GCAM				*i* S	Sg	15 02 26.4	-0.4
PRK	**Paraskevi**	0.98	348	*e*Pn	Pg	15 02 19.1	-0.3
PRK				*e*Sn	Sn	15 02 33.9	+0.1
PRK	**Paraskevi**	0.98	348	P	Pg	15 02 18.6	-0.8
PRK				S	Sg	15 02 33.2	+1.0
PRK	**Paraskevi**	0.98	348	*e*PN	Pg	15 02 19.1	-0.3
PRK				*e*SN	Sn	15 02 33.9	+0.1
PRK	**Paraskevi**	0.98	348	P	Pg	15 02 18.6	-0.8
PRK	**Paraskevi**	0.98	348	*e*Pn	Pg	15 02 19.1	-0.3
PRK				S	Sg	15 02 33.2	+1.0
PRK				*e*Sn	Sn	15 02 33.9	+0.1
AYVA	**Ayvalik**	1.03	7	*i* P	Pg	15 02 20.0	-0.3
AYVA				*i* S	Sg	15 02 35.5	+1.7
AYVA	**Ayvalik**	1.03	7	*i* P	Pg	15 02 20.0	-0.3
AYVA				*i* S	Sg	15 02 35.5	+1.7
SIGR	**SIGRI**	1.06	331	P	Pg	15 02 20.4	-0.6
SIGR				S	Sg	15 02 34.9	+0.1
SIGR	**SIGRI**	1.06	331	P	Pg	15 02 20.4	-0.6
SIGR				S	Sg	15 02 34.9	+0.1
AKS	**Akhisar**	1.17	59	*e*PN	Pn	15 02 22.3	-0.3
AKS	**Akhisar**	1.17	59	*e*Pn	Pn	15 02 22.3	-0.3
AKHS	**Akhisar**	1.17	59	*i* P	Pb	15 02 22.1	-0.5
AKHS				*i* S	Sb	15 02 39.5	+1.7
AKHS	**Akhisar**	1.17	59	*i* P	Pb	15 02 22.1	-0.5
AKHS				*i* S	Sb	15 02 39.5	+1.7
AYDN	**Tasoluk**	1.24	120	*i* P	Pn	15 02 22.9	-0.7
AYDN				*i* S	Sb	15 02 38.6	-1.1
AYDN	**Tasoluk**	1.24	120	*i* P	Pn	15 02 22.9	-0.7
AYDN				*i* S	Sb	15 02 38.6	-1.1
MLSB	**Milas**	1.40	135	*e*PN	Pn	15 02 26.5	+0.7
MLSB	**Milas**	1.40	135	*e*Pn	Pn	15 02 26.5	+0.7
BDRM	**Kayabasi**	1.42	149	*i* P	Pn	15 02 25.2	-0.8
BDRM				*i* S	Sn	15 02 43.3	-1.3
BDRM	**Kayabasi**	1.42	149	*i* P	Pn	15 02 25.2	-0.9
BDRM				*i* S	Sn	15 02 43.3	-1.3
APE	**Apeiranthos**	1.45	213	*e*Pn	Pn	15 02 24.6	-1.8
APE	**Apeiranthos**	1.45	213	P	Pn	15 02 24.7	-1.7
APE				S	Sn	15 02 44.2	-1.1
APE	**Apeiranthos**	1.45	213	*e*PN	Pn	15 02 24.6	-1.8
APE	**Apeiranthos**	1.45	213	P	Pn	15 02 24.7	-1.7
APE				S	Sn	15 02 44.2	-1.1
BOZC	**Bozcaada**	1.60	347	*i* P	Pn	15 02 27.6	-0.9
MANT	**Manisa**	1.61	82	*i* P	Pg	15 02 30.3	-1.1
MANT				*i* S	Sg	15 02 51.7	-0.6
MANT	**Manisa**	1.61	82	*i* P	Pg	15 02 30.3	-1.1
MANT				*i* S	Sg	15 02 51.7	-0.7
BALY	**Balya**	1.69	30	*i* P	Pn	15 02 30.4	+0.7
BALY				*i* S	Sg	15 02 54.5	-0.2
BALY	**Balya**	1.69	30	*i* P	Pn	15 02 30.4	+0.7
BALY				*i* S	Sg	15 02 54.5	-0.2
KULA	**Kula-Manisa**	1.69	82	*e*PN	Pn	15 02 31.4	+1.6
KULA	**Kula-Manisa**	1.69	82	*e*Pn	Pn	15 02 31.4	+1.6
BALB	**Balikesir**	1.72	38	*e*PN	Pg	15 02 33.0	-0.4
BALB	**Balikesir**	1.72	38	*e*Pn	Pg	15 02 33.0	-0.4
DAT	**Datca**	1.77	151	*e*PN	Pn	15 02 32.2	+1.4
DAT	**Datca**	1.77	151	*e*Pn	Pn	15 02 32.2	+1.4
YER	**Yerkesik**	1.81	129	*e*PN	Pn	15 02 32.6	+1.2
YER	**Yerkesik**	1.81	129	*e*Pn	Pn	15 02 32.6	+1.2
DEMI	**Demirci**	1.88	66	*i* P	Pg	15 02 36.0	-0.5
DEMI				*i* S	Sg	15 03 00.4	-0.4
DEMI	**Demirci**	1.88	66	*i* P	Pg	15 02 36.0	-0.5
DEMI				*i* S	Sg	15 03 00.4	-0.4
LIA	**Limnos Island**	1.92	327	*e*Pn	Pn	15 02 32.9	0.0
LIA	**Limnos Island**	1.92	327	P	Pn	15 02 32.9	0.0
LIA				S	Sn	15 02 57.4	+0.5
LIA	**Limnos Island**	1.92	327	*e*PN	Pn	15 02 32.9	0.0
LIA	**Limnos Island**	1.92	327	P	Pn	15 02 32.9	0.0
LIA				S	Sn	15 02 57.4	+0.5
DENT	**Denizli**	2.05	104	*e*PN	Pn	15 02 36.2	+1.4
DENT	**Denizli**	2.05	104	*e*Pn	Pn	15 02 36.2	+1.5
DNZL	**Cakiroluk**	2.08	106	*i* P	Pn	15 02 35.4	+0.2
DNZL				*i* S	Sg	15 03 08.2	+0.9
DNZL	**Cakiroluk**	2.08	106	*i* P	Pn	15 02 35.3	+0.2
LPK	**Lapseki**	2.09	5	*e*PN	Pg	15 02 39.3	-1.3
LPK	**Lapseki**	2.09	5	*e*Pn	Pg	15 02 39.3	-1.3
EDC	**Edincik**	2.31	26	*e*PN	Pb	15 02 41.7	-0.2
EDC	**Edincik**	2.31	26	*e*Pn	Pb	15 02 41.7	-0.3
BNT	**Bandirma**	2.33	27	*e*PN	Pb	15 02 42.3	-0.2
BNT	**Bandirma**	2.33	27	*e*Pn	Pb	15 02 42.3	-0.2
RKY	**Sarkoy-Tekirda**	2.45	12	*e*PN	Pb	15 02 44.1	-0.3
RKY	**Sarkoy-Tekirda**	2.45	12	*e*Pn	Pb	15 02 44.1	-0.4
ENEZ	**Enez**	2.46	353	*e*PN	Pb	15 02 45.0	+0.4
ENEZ	**Enez**	2.46	353	*e*Pn	Pb	15 02 45.1	+0.4
MFT	**Murefte**	2.56	13	*e*PN	Pb	15 02 46.7	+0.3
MFT	**Murefte**	2.56	13	*e*Pn	Pb	15 02 46.7	+0.3
FETY	**Fethiye**	2.62	128	*e*PN	Pn	15 02 44.6	+2.0
FETY	**Fethiye**	2.62	128	*e*Pn	Pn	15 02 44.6	+2.1
ALN	**Alexandroupoli**	2.63	352	*e*Pn	Pn	15 02 42.6	-0.1
ALN	**Alexandroupoli**	2.63	352	P	Pn	15 02 42.6	-0.1
ALN				S	Sn	15 03 15.1	+0.5
ALN	**Alexandroupoli**	2.63	352	*e*PN	Pn	15 02 42.6	-0.1
ALN	**Alexandroupoli**	2.63	352	P	Pn	15 02 42.6	-0.1
ALN				S	Sn	15 03 15.1	+0.5
LTK	**Loutraki**	2.82	266	P	Pn	15 02 45.3	+0.1
LTK	**Loutraki**	2.82	266	P	Pn	15 02 45.3	+0.1
ARMT	**Armutlu**	2.91	38	*e*PN	Pb	15 02 50.6	-1.7
ARMT	**Armutlu**	2.91	38	*e*Pn	Pb	15 02 50.6	-1.6
ALT	**Altintas**	2.91	74	*e*PN	Pn	15 02 49.0	+2.5
ALT	**Altintas**	2.91	74	*e*Pn	Pn	15 02 49.0	+2.5
RDO	**Rodhopi**	2.96	345	P	Pn	15 02 47.4	+0.2
RDO	**Rodhopi**	2.96	345	P	Pn	15 02 47.4	+0.2
ELL	**Elmali**	3.10	119	*e*PN	Pn	15 02 51.0	+1.9
ELL	**Elmali**	3.10	119	*e*Pn	Pn	15 02 51.0	+1.9
YLV	**Yalova**	3.17	43	*e*PN	Pn	15 02 53.7	+3.6
YLV	**Yalova**	3.17	43	*e*Pn	Pn	15 02 53.7	+3.6
SLVT	**Silivri**	3.21	23	*e*PN	Pb	15 02 55.2	-2.3
SLVT	**Silivri**	3.21	23	*e*Pn	Pb	15 02 55.2	-2.3
CTKS	**Kestanelik-??a**	3.32	27	*e*PN	Pb	15 02 57.0	-2.2
CTKS	**Kestanelik-??a**	3.32	27	*e*Pn	Pb	15 02 57.0	-2.2
ISK	**Istanbul-Kandi**	3.40	34	*e*PN	Pb	15 02 57.5	-3.1
ISK	**Istanbul-Kandi**	3.40	34	*e*Pn	Pb	15 02 57.5	-3.1
EDRB	**Edirne**	3.56	3	*e*PN	Pb	15 03 00.3	-3.0
EDRB	**Edirne**	3.56	3	*e*Pn	Pb	15 03 00.3	-3.1
GULT	**Gulveren**	3.76	54	*e*PN	Pn	15 03 02.0	+3.7
GULT	**Gulveren**	3.76	54	*e*Pn	Pn	15 03 02.0	+3.7

GUC 04 15:20:04.0±0.8, 21°06S×69°83W, h35km±6km, ML3.8, 1C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MACH	**Maria Elena**	1.14	177	*e*P	Pn	15 20 24.8	+1.4
MACH				*i* S	Sn	15 20 40.5	+2.7
PB04	**Plate Boundary**	1.25	165	⇓*i*P	Pn	15 20 25.6	+0.6
PB04				*i* S	Sn	15 20 42.4	+1.9
PB04				AML	AML	15 20 45.6	
	comp=E,3μm,0.2s						
PECH	**Pedro de Valdi**	1.54	175	⇑*i*P	Pn	15 20 30.5	+1.5
PECH				*i* S	Sn	15 20 51.0	+3.2
PECH				AML	AML	15 20 53.7	
	comp=E,2μm,0.3s						
MECH	**Mejillones**	2.12	196	*e*P	Pn	15 20 39.2	+2.3
MECH				*i* S	Sn	15 21 05.2	+3.2
MECH				AML	AML	15 21 13.1	
	comp=N,972nm,0.3s						

*ISCJB **04** 15:24:59.9±0.9, 43°.94N±0°.03×88°.85E±0°.03, h3km±5km, mb4.5/56, MS3.7/15, Error ellipse: s-maj=4.9km s-min=3.3km az=30.4*
*IDC **04** 15:25:00.5±0.5, 43°.80N×88°.92E, h0km, mb4.1/18, mb1 4.3/23, mb1mx4.2/32, mbtmp4.2/23, ML4.5/4, MS3.4/9, Ms1 3.4/9, ms1mx3.0/38, Error ellipse: s-maj=17.3km s-min=9.6km az=41.0*
*BJI **04** 15:25:01.3, 43°.75N×88°.84E, h15km, mB4.5/21, mb4.4/28, ML4.3/9, Ms4.1/24, Ms7 3.9/24*
*NNC **04** 15:25:02.4±5.9, 44°.36N×88°.99E, h12km±70km, mb4.4, mpv4.7, Error ellipse: s-maj=76.9km s-min=43.3km az=107.0*
*MOS **04** 15:25:04.3±1.3, 43°.90N×88°.77E, h33km, mb4.8/31, Error ellipse: s-maj=8.3km s-min=5.7km az=117.2*
*NEIC **04** 15:25:04.8±1.4, 43°.89N×88°.82E, h24km±11km, mb4.6/31, Error ellipse: s-maj=5.7km s-min=4.7km az=57.0*

ISC 04 15:25:02.2±0.9, 43°95N±0°.03×88°86E±0°.03, h5km±6km, h22km±3.4km: pP-P, n186, σ1°21/213, mb4.5/56, MS3.7/15, 16C-12D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMQ	**Urumqi**	0.85	262	⇓*i*Pg	Pg	15 25 17.5	-1.0
WMQ				Sg	Sg	15 25 28.6	-0.9
WMQ				smax			
	comp=N,8μm,0.5s						
WMQ				smax			
	comp=E,5μm,0.5s						
MK31	**Makanchi Array**	5.43	304	⇓Pn	Pn	15 26 25.4	+1.6
	comp=E,47nm,0.5s,baz=105,slow=16,SNR=1019						
MK31				⇓Sn	Sn	15 27 28.3	+1.7
	comp=E,149nm,0.6s,baz=107,slow=25						
MK31				⇑Lg		15 27 47.1	
	comp=E,168nm,0.6s,baz=113,slow=29						
MK31	**Makanchi Array**	5.43	304	⇑*e*Pn	Pn	15 26 25.2	+1.5
MK31				*e*S	Sn	15 27 27.9	+1.4
MKAR	**Makanchi Array**	5.43	304	Pn	Pn	15 26 25.2	+1.4
	comp=E,18nm,0.3s,baz=110,slow=15,SNR=698						
MKAR				Sn	Sn	15 27 28.2	+1.6
	comp=E,17nm,0.3s,baz=109,slow=25,SNR=5.6						
MKAR				Lg		15 27 57.7	
	comp=E,26nm,0.3s,baz=119,slow=33,SNR=6.4						
MKAR				LR	LR	15 29 06.4	
	comp=E,306nm,19.6s,baz=151,slow=44						
MKAR	**Makanchi Array**	5.43	304	*i* P	Pn	15 26 24.7	+0.9
MKAR				pmax	pmax		
	comp=Z,112nm,0.7s						
GTA	**Gaotai**	9.36	115	⇑P	Pn	15 27 17.2	-0.5
GTA				pP		15 27 22.9	
GTA				sP		15 27 26.6	
GTA				S	Sn	15 28 58.4	-4.9
GTA				sS		15 29 08.0	
GTA				pmax	pmax		
	comp=Z,16nm,0.7s						
GTA				pmax	pmax		
	comp=Z,62nm,5.4s						
GTA				LR	LR		
	comp=N,410nm,9.3s						
GTA				LR	LR		
	comp=E,370nm,8.7s						
GTA				LR	LR		
	comp=Z,450nm,10.2s						
KURBB	**Kurchatov Arra**	9.68	317	⇑Pn	Pn	15 27 21.7	-0.3
	comp=Z,4.4nm,0.6s						
KURBB				⇓Sn	Sn	15 29 08.0	-3.0
	comp=Z,19nm,0.8s						
KURK	**Kurchatov**	9.70	318	⇓Pn	Pn	15 27 21.8	-0.4
	comp=Z,33nm,0.6s						
KURK				⇑Sn	Sn	15 29 08.0	-3.4
	comp=Z,64nm,0.8s						
KURK	**Kurchatov**	9.70	318	Pn	Pn	15 27 21.9	-0.3
	comp=Z,2.5nm,0.3s,baz=130,slow=13,SNR=121						
KURK				Sn	Sn	15 29 10.1	-1.3
	comp=Z,2.0nm,0.3s,baz=130,slow=28,SNR=8.1						
KURK				Lg		15 30 14.2	
	comp=Z,1.1nm,0.3s,baz=125,slow=29,SNR=3.4						
KURK				LR	LR	15 31 24.4	
	comp=Z,137nm,20.3s,baz=135,slow=39						
KURK	**Kurchatov**	9.70	318	P	Pn	15 27 21.9	-0.3
KURK						15 29 10.1	
KURK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
KURK				smax			
	comp=N,2.0nm,0.3s						
KURK				MLR	MLR		
	comp=Z,137nm,20.3s						
KURK	**Kurchatov**	9.70	318	*e*Pn	Pn	15 27 21.1	-1.2
	comp=Z,37nm,0.5s						
KURK				*e*Sn	Sn	15 29 07.6	-3.8
TKM2	**Tokmak 2**	9.71	269	⇑Pn	Pn	15 27 23.3	+0.9
	comp=Z,7.2nm,0.7s						
TKM2	**Tokmak 2**	9.71	269	*e*P	Pn	15 27 22.9	+0.5
TKM2				pmax	pmax		
	comp=Z,13nm,0.6s						
TKM2	**Tokmak 2**	9.71	269	*e*Pn	Pn	15 27 22.9	+0.5
	comp=Z,13nm,0.6s						
ZAA0	**Zalesovo Array**	10.36	347	*e*Pn	Pn	15 27 31.3	+0.1
ZAA0				S	Sn	15 29 25.7	-1.8
ZALV	**Zalesovo Beam**	10.36	347	Pn	Pn	15 27 31.4	+0.2
	comp=Z,2.1nm,0.3s,baz=167,slow=15,SNR=39						
ZALV				Sn	Sn	15 29 29.3	+1.8
	comp=Z,2.9nm,0.3s,baz=168,slow=22,SNR=5.7						
ZALV				Lg		15 30 35.4	
	comp=Z,2.4nm,0.3s,baz=160,slow=27,SNR=3.2						
ZALV				LR	LR	15 32 03.0	
	comp=Z,253nm,18.5s,baz=344,slow=40						
ZALV	**Zalesovo Beam**	10.36	347	P	Pn	15 27 31.4	+0.2
ZALV						15 29 29.3	
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZALV				smax			
	comp=N,3.0nm,0.3s						
ZALV				MLR	MLR		
	comp=Z,253nm,18.5s						
AAK	**Ala-Archa**	10.56	268	Pn	Pn	15 27 33.6	-0.5
	comp=Z,0.0nm,0.3s,baz=101,slow=10,SNR=3.3						
AAK				Lg		15 30 32.2	
	comp=Z,0.0nm,0.3s,baz=234,slow=17,SNR=2.6						
AAK				LR	LR	15 31 46.4	
	comp=Z,52nm,21.1s,baz=29,slow=38						
AAK	**Ala-Archa**	10.56	268	P	Pn	15 27 35.6	+1.6
AAK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
AAK	**Ala-Archa**	10.56	268	Pn	Pn	15 27 35.5	+1.5
	comp=Z,8.2nm,0.6s						
KSH	**Kashi**	10.60	250	*e*P	Pn	15 27 36.7	+2.1
KSH				*e*S	Sn	15 29 36.6	+3.1
UCH	**Uchtor**	10.63	266	*e*Pn	Pn	15 27 34.7	-0.4
	comp=Z,10nm,0.7s						
EKS2	**Erkin-Say**	11.07	269	*e*Pn	Pn	15 27 42.6	+1.6
	comp=Z,6.0nm,0.6s						
AML	**Almayashu**	11.25	266	*e*Pn	Pn	15 27 44.0	+0.6
	comp=Z,8.7nm,0.8s						
NVS	**Novosibirsk**	11.50	343	*e*P	Pn	15 27 42.3	-4.6
NVS				*e*S	Sn	15 29 53.6	-1.9
ZAK	**Zakamensk**	11.73	52	*e*P	Pn	15 27 54.9	+4.9
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TLY	**Talaya**	12.58	47	*e*P	Pn	15 28 05.6	+4.0
TLY				pmax	pmax		
	comp=Z,2.0nm,1.8s						
TLY				MLR	MLR		
	comp=Z,210nm,12.0s						
SONM	**Songino Array**	12.82	66	Pn	Pn	15 28 07.3	+2.4
	comp=Z,0.1nm,0.3s,baz=257,slow=15,SNR=21						
SONM				Lg		15 31 45.4	
	comp=Z,0.4nm,0.3s,baz=259,slow=28,SNR=7.9						
ULN	**Ulaanbaatar**	13.26	66	*e*P	Pn	15 28 13.2	+2.3
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ULN	**Ulaanbaatar**	13.26	66	*e*Pn	Pn	15 28 13.2	+2.3
	comp=Z,5.3nm,1.0s						
KK31	**Karatay Array**	13.35	273	⇓Pn	Pn	15 28 12.5	+0.3
	comp=Z,6.4nm,0.8s						
LZH	**Lanzhou**	13.90	119	⇑P	Pn	15 28 20.6	+0.9
LZH				pP		15 28 26.2	
LZH				sP		15 28 30.5	
LZH				PP		15 28 31.8	
LZH				S	Sn	15 30 54.3	0.0
LZH				sS		15 31 02.4	
LZH				*e*SS		15 31 09.5	
LZH				pmax	pmax		
	comp=Z,39nm,1.0s						
LZH				pmax	pmax		
	comp=Z,220nm,4.2s						
LZH				LR	LR		
	comp=E,600nm,8.2s						
LZH				LR	LR		
	comp=Z,960nm,10.5s						
LSA	**Lhasa**	14.34	172	P	Pn	15 28 27.3	+1.6
LSA				pmax	pmax		
	comp=Z,18nm,0.8s						
LSA	**Lhasa**	14.34	172	Pn	Pn	15 28 27.3	+1.6
	comp=Z,18nm,0.8s						
VOSK	**Vostochnaya**	14.75	313	⇑Pn	Pn	15 28 28.8	-2.5
	comp=Z,9.6nm,0.6s						
VOSK				⇑Sn	Sn	15 31 07.1	-7.7
	comp=Z,12nm,0.6s						
BVA0	**Borovoye Array**	15.21	313	⇓Pn	Pn	15 28 35.4	-2.0
	comp=Z,2.2nm,0.7s,baz=232,slow=41,SNR=57						
BVA0				⇓Sn	Sn	15 31 20.1	-6.0
	comp=Z,0.9nm,0.5s,baz=108,slow=23,SNR=5.8						
BVAR	**Borovoye Array**	15.21	313	Pn	Pn	15 28 35.5	-1.9
	comp=Z,2.0nm,0.3s,baz=120,slow=14,SNR=38						
BVAR				Sn	Sn	15 31 17.8	-8.3
	comp=Z,1.9nm,0.3s,baz=121,slow=24,SNR=8.8			

comp=Z,10nm,0.6s
XAN Xi'an 18.43 116 P Pn 15 29 16.9 -1.4
XAN pP pP 15 29 24.4 +4.7
XAN S **Sn 15 32 44.6 +0.3**
XAN pmax pmax
comp=Z,12nm,4.0s
XAN LR LR
comp=N,130nm,10.9s
XAN LR LR
comp=E,36nm,13.6s
XAN LR LR
comp=Z,62nm,12.4s
SHL Shillong 18.50 171 *e*PKP **Pn 15 29 18.0 -1.2**
SHL *e*S **Sn 15 32 48.0 +1.8**
AB31 Akbulak array 20.50 295 ⇓Pn **P 15 29 41.1 +0.4**
comp=Z,1.7nm,0.5s
ABKAR Akbulak array 20.50 295 *e*P **P 15 29 39.5 -1.2**
comp=Z,4.0nm,0.6s
BJI Beijing 20.64 91 P **P 15 29 43.2 +0.8**
BJI S **S 15 33 32.0 -1.3**
BJI pmax pmax
comp=Z,22nm,0.8s
BJI pmax pmax
comp=Z,73nm,5.3s
BJI LR LR
comp=N,200nm,9.4s
BJI LR LR
comp=E,100nm,8.9s
ENH Enshi 21.30 123 *e*P **P 15 29 47.3 -2.3**
comp=E,18nm,0.8s,mb4.4
AKTK Aktyubinsk 21.84 298 P **P 15 29 57.3 +2.1**
AKTK S **S 15 33 55.9 -0.9**
AKTO Aktyubinsk 21.84 298 ⇑Pn **P 15 29 57.4 +2.2**
comp=E,1.0nm,1.0s
AKTO Aktyubinsk 21.84 298 P **P 15 29 57.3 +2.1**
comp=E,3.3nm,0.6s,mb3.9,baz=102,slow=12,SNR=13
AKTO S **S 15 33 55.9 -0.9**
comp=E,0.9nm,0.5s,baz=302,slow=17,SNR=2.1
AKTO Aktyubinsk 21.84 298 P **P 15 29 57.3 +2.1**
AKTO S **S 15 33 55.9 -0.8**
AKTO pmax pmax
comp=Z,3.0nm,0.6s,mb3.9
AKTO smax
comp=N,1.0nm,0.5s
KMI Kunming 21.93 144 P **P 15 29 54.8 -1.6**
KMI pP 15 30 02.0
KMI sP sP 15 30 04.7 +6.1
KMI S **S 15 33 48.2 -11**
KMI sS sS 15 34 00.3 -1.0
KMI SS 15 34 25.9
KMI pmax pmax
comp=Z,21nm,0.6s,mb4.7
KMI LR LR
comp=N,120nm,9.2s
KMI LR LR
comp=E,86nm,6.4s
KMI LR LR
comp=Z,160nm,9.9s
SVE Sverdlovsk 21.94 316⇑ *e*P **P 15 29 55.4 -0.9**
SVE pmax pmax
comp=Z,31nm,0.6s,mb4.9
GYA Guiyang 22.64 135 P **P 15 30 04.8 +0.9**
GYA pP 15 30 12.9
GYA PP 15 30 33.8
GYA S **S 15 34 07.2 -5.4**
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.3
GYA pmax pmax
comp=Z,80nm,4.6s
GYA LR LR
comp=N,380nm,14.3s,MS4.1
GYA LR LR
comp=E,350nm,14.0s,MS4.1
GYA LR LR
comp=Z,420nm,14.8s,MS4.0
ARU Arti 22.86 314*d i*P **P 15 30 06.4 +0.4**
ARU *e* 15 30 31.2
ARU *e*PPP 15 30 41.1
ARU S **S 15 34 17.5 +1.6**
ARU SS 15 34 50.0
ARU pmax pmax
comp=Z,33nm,0.8s,mb4.8
ARU Arti 22.86 314 *e*P **P 15 30 05.8 -0.2**
comp=Z,34nm,0.8s,mb4.8
WHN Wuhan 24.19 115 P **P 15 30 16.3 -3.1**
WHN S **S 15 34 30.3 -7.7**
WHN LR LR
comp=Z,430nm,4.0s
CN2 Changchun 26.24 77 *e*P **P 15 30 40.3 +2.3**
CN2 *e*sP sP 15 30 50.8 +11
CN2 *e*S **S 15 35 08.7 -1.9**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.5
CN2 LR LR
comp=N,200nm,12.0s,MS4.0
CN2 LR LR
comp=E,200nm,12.0s,MS4.0
CN2 LR LR
comp=Z,400nm,13.0s,MS4.1
NJ2 Nanjing 26.30 107 *e*P **P 15 30 40.5 +1.9**
NJ2 pP pP 15 30 47.6 +7.4
NJ2 sP sP 15 30 51.0 +10
NJ2 PP 15 31 23.4
NJ2 S **S 15 35 09.7 -2.1**
NJ2 sS sS 15 35 22.1 +7.7
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.5
NJ2 pmax pmax
comp=Z,100nm,3.9s
NJ2 LR LR
comp=N,220nm,9.1s
NJ2 LR LR
comp=E,180nm,9.7s
NJ2 LR LR
comp=Z,5μm,10.4s
CHTO Chiang Mai 26.45 158 *e*P **P 15 30 37.2 -2.8**
CHTO pmax pmax
comp=Z,4.0nm,0.9s,mb4.0
CHTO Chiang Mai 26.45 158 *e*P **P 15 30 37.2 -2.8**
comp=Z,4.2nm,0.9s,mb4.0
CM31 Chiang Mai Arr 26.79 158 *e*P **P 15 30 44.2 +1.1**
comp=Z,8.4nm,0.9s,mb4.3
CMAR Chiang Mai Arr 26.79 158 P **P 15 30 42.2 -0.8**
comp=Z,6.5nm,0.8s,mb4.2,baz=338,slow=9.7,SNR=24
CMAR ScP ScP 15 37 43.5 -3.0
comp=Z,0.8nm,1.0s,baz=318,slow=2.6,SNR=4.8
MDJ Mudanjiang 28.96 74 P **P 15 31 02.7 +0.4**
MDJ pmax pmax
comp=Z,3.0nm,0.9s,mb4.0
MDJ pmax pmax
comp=Z,40nm,5.9s
MDJ LR LR
comp=E,150nm,10.5s
MDJ LR LR
comp=Z,210nm,10.5s,MS4.0
KSRS Korea Array 30.11 89 P **P 15 31 11.6 -1.0**
comp=Z,0.6nm,0.5s,mb3.5,baz=294,slow=7.8,SNR=4.0
KSRS Korea Array 30.11 89 P **P 15 31 11.6 -0.9**
KSRS pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
QIZ Qiongzhong 30.44 138 P **P 15 31 15.4 -0.2**
QIZ S **S 15 36 17.5 +0.5**
QIZ pmax pmax
comp=Z,8.0nm,1.6s,mb4.2
QIZ LR LR
comp=Z,130nm,10.3s,MS3.9
HABR Khabarovsk 31.90 65 *e*P **P 15 31 25.6 -2.7**
HABR *e**PP pP 15 31 33.8 +3.9
HABR 15 32 31.5
HABR 15 34 16.4
HABR *e*SS SS 15 38 26.6 -29
HABR MLR MLR
comp=Z,38nm,20.0s,MS3.1
KIV Kislovodsk 32.91 286 *e*P **P 15 31 34.5 -2.6**
KIV pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
KIV MLR MLR
comp=Z,43nm,15.0s,MS3.3
VSR Storozhevoye 33.74 300 *e*P **P 15 31 42.9 -1.4**
VSR pmax pmax
comp=E,9.0nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VSR pmax pmax
comp=N,5.0nm,0.9s
TIXI Tiksi 33.78 21 *e*P **P 15 31 44.4 0.0**
TIXI pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
TIXI Tiksi 33.78 21 *e*P **P 15 31 44.4 0.0**
comp=Z,7.6nm,1.0s,mb4.6
OBN Obninsk 34.93 307⇑ *e*P **P 15 31 54.6 +0.1**
OBN *e* 15 33 07.5
OBN *e* 15 34 26.8
OBN pmax pmax
comp=Z,13nm,1.2s,mb4.7
OBN MLR MLR
comp=Z,100nm,16.0s,MS3.7
MIB Mutribah 35.70 261 *e*P **P 15 32 00.7 -0.8**
MIB AMb AMB 15 32 01.6
comp=Z,39nm,0.5s,mb5.6
KBD Kabd 35.81 260 *e*P **P 15 32 01.9 -0.5**
KBD AMb AMB 15 32 05.5
comp=Z,28nm,1.5s,mb5.0
NAY Al-Naaiem 36.09 260 *e*P **P 15 32 04.1 -0.7**
NAY AMb AMB 15 32 04.9
comp=Z,20nm,0.6s,mb5.2
ANN Anapa 36.27 290 *e*P **P 15 32 00.5 -5.6**
ANN *e*S **S 15 37 36.8 -10**
ANN pmax pmax
comp=Z,18nm,1.1s,mb4.9
PALK Pallekele 37.22 193 LR LR 15 48 20.8
comp=Z,78nm,19.9s,MS3.5,baz=273,slow=38
APA Apatity 37.27 329⇑ *e*P **P 15 32 18.0 +3.6**
APA pmax pmax
comp=Z,13nm,1.0s,mb4.7
APA MLR MLR
comp=Z,300nm,13.0s,MS4.3
JOF Joensuu 37.60 321 *e*P **P 15 32 17.1 -0.2**
JOF pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
JOF Joensuu 37.60 321 *e*p **P 15 32 17.1 -0.2**
comp=Z,6.3nm,0.6s,mb4.5
JOF Joensuu 37.60 321 *e*p **P 15 32 17.1 -0.2**
comp=Z,6.3nm,0.6s,mb4.5
KAF Kangasniemi 39.93 319 *e*P **P 15 32 36.5 -0.3**
KAF pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
KAF Kangasniemi 39.93 319 *e*p **P 15 32 36.5 -0.3**
comp=Z,5.8nm,0.8s,mb4.4
KAF Kangasniemi 39.93 319 *e*p **P 15 32 36.5 -0.3**
comp=Z,5.8nm,0.8s,mb4.4
AKASG Malin Array Be 40.01 301 P **P 15 32 37.1 -0.6**
comp=Z,4.5nm,0.7s,mb4.3,baz=66,slow=8.5,SNR=7.4
AKASG Malin Array Be 40.01 301 P **P 15 32 37.1 -0.5**
AKASG pmax pmax
comp=Z,5.0nm,0.7s
VSU Vasula 40.02 314*c i*P **P 15 32 37.6 0.0**
VSU pmax pmax
comp=Z,14nm,1.1s,mb4.6
FINES FINESS Array B 40.07 318 P **P 15 32 38.1 +0.1**
comp=Z,4.3nm,0.7s,mb4.3,baz=89,slow=8.2,SNR=18
FINES LR LR 15 50 27.3
comp=Z,83nm,19.9s,MS3.6,baz=113,slow=38
FINES FINESS Array B 40.07 318 P **P 15 32 38.1 +0.1**
FINES pmax pmax
comp=Z,4.0nm,0.7s
FINES MLR MLR
comp=Z,83nm,19.9s
ARCES ARCESS Array B 40.42 331 P **P 15 32 41.3 +0.5**
comp=Z,4.8nm,0.7s,mb4.3,baz=82,slow=8.8,SNR=12
ARCES PcP PcP 15 34 42.8 -0.8
comp=Z,1.4nm,0.5s,baz=92,slow=3.3,SNR=9.0
ARCES ARCESS Array B 40.42 331 P **P 15 32 41.3 +0.5**
ARCES 15 34 42.8
ARCES pmax pmax
comp=Z,5.0nm,0.7s
BRTR Keskin Array B 40.71 284 P **P 15 32 44.4 +0.8**
comp=Z,1.2nm,0.7s,mb3.6,baz=90,slow=7.4,SNR=7.5
BRTR Keskin Array B 40.71 284 P **P 15 32 44.4 +0.8**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
ASF Jabal al Asfar 41.93 272 P **P 15 32 54.0 +0.2**
comp=Z,1.3nm,0.3s,mb4.0,baz=90,slow=1.0,SNR=4.1
ASF Jabal al Asfar 41.93 272 P **P 15 32 54.0 +0.3**
ASF pmax pmax
comp=Z,1.0nm,0.3s
EIL Elat 44.69 270 P **P 15 33 16.2 +0.2**
comp=Z,3.5nm,0.7s,mb4.3,baz=67,slow=13,SNR=4.0
KOLS Kolonicke sedl 44.83 301 *e*P **P 15 33 17.8 +0.9**
KOLS pmax pmax
comp=Z,27nm,2.6s,mb4.6
KOLS Kolonicke sedl 44.83 301 *e*P **P 15 33 17.8 +0.9**
comp=Z,27nm,2.6s,mb4.6
KOLS Kolonicke sedl 44.83 301 *e*P **P 15 33 17.8 +0.9**
PETK Petropavlovsk- 44.85 53 P **P 15 33 17.4 +0.4**
comp=Z,0.7nm,0.7s,mb3.6,baz=286,slow=10,SNR=2.4
STHS Stebnicka Huta 45.30 302 *e*P **P 15 33 21.5 +0.9**
STHS pmax pmax
comp=Z,3.0nm,1.0s,mb4.1
STHS Stebnicka Huta 45.30 302 *e*P **P 15 33 21.5 +0.9**
comp=Z,2.5nm,1.0s,mb4.0
STHS Stebnicka Huta 45.30 302 *e*P **P 15 33 21.5 +0.9**
BILL Bilibino 45.58 31⇑ *e*P **P 15 33 23.9 +1.4**
BILL *e* 15 35 10.8
BILL pmax pmax
comp=Z,14nm,2.5s,mb4.5
BILL MLR MLR
comp=Z,100nm,15.0s,MS3.9
BILL Bilibino 45.58 31 P **P 15 33 23.4 +0.8**
comp=Z,4.3nm,1.1s,mb4.3
OJC Ojcow 45.91 303 *e*P **P 15 33 24.9 -0.5**
VYHS Vyhne 47.12 301 *e*P **P 15 33 35.6 +0.7**
VYHS pmax pmax
comp=Z,31nm,3.2s
VYHS Vyhne 47.12 301 *e*P **P 15 33 35.6 +0.7**
comp=Z,31nm,3.2s
VYHS Vyhne 47.12 301 *e*P **P 15 33 35.6 +0.7**
NB2 NORSAR Subarra 47.21 320 P **P 15 33 35.0 -0.5**
comp=Z,3.5nm,0.5s,mb4.5,baz=72,slow=7.9
NOA NORSAR Array B 47.21 320 P **P 15 33 35.3 -0.1**
comp=Z,4.3nm,0.6s,mb4.5,baz=74,slow=7.9,SNR=14
NOA LR LR 15 54 38.3
comp=Z,60nm,19.8s,MS3.6,baz=70,slow=38
NOA NORSAR Array B 47.21 320 P **P 15 33 35.3 -0.1**
NOA pmax pmax
comp=Z,4.0nm,0.6s
NOA MLR MLR
comp=Z,60nm,19.8s
NOA NORSAR Array B 47.21 320 P **P 15 33 35.3 -0.1**
NOA LR LR 15 54 38.3
DPC Dobruska-Polom 47.94 305 *e*P **P 15 33 42.5 +1.2**
DPC Dobruska-Polom 47.94 305 *e*P **P 15 33 42.5 +1.2**
DPC *e*pP pP 15 33 47.3 +4.3
UPC Upice 48.07 305 *e*P **P 15 33 43.3 +1.0**
UPC Upice 48.07 305 *e*P **P 15 33 43.3 +1.0**
CLL Collm 49.52 307 *e*P **P 15 33 54.0 +0.5**
CLL pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
CLL MLR MLR
comp=Z,100nm,17.9s,MS3.9
CLL Collm 49.52 307 *e*P **P 15 33 54.0 +0.5**
comp=Z,3.0nm,0.8s,mb4.4
CLL *i* pP pP 15 33 58.8 +3.7
CLL LR LR
comp=Z,100nm,17.9s,MS3.9
CLL Collm 49.52 307 *e*P **P 15 33 54.0 +0.5**
comp=Z,3.0nm,0.8s,mb4.4
CLL *i* pP pP 15 33 58.8 +3.7
CLL *e*PP PP 15 35 45.0 -2.4
KHC Kasperske Hory 50.06 304 *e*P **P 15 33 58.3 +0.7**
KHC Kasperske Hory 50.06 304 *e*P **P 15 33 58.3 +0.7**
GERES GERESS Array B 50.10 304 P **P 15 33 57.3 -0.6**
comp=Z,0.2nm,0.2s,mb3.7,baz=96,slow=6.1,SNR=4.0
GERES LR LR 15 56 26.2
comp=Z,84nm,18.6s,MS3.8,baz=230,slow=38
GERES GERESS Array B 50.10 304 P **P 15 33 57.3 -0.6**
GERES LR LR 15 56 26.2
CING Cingoli 52.87 298 Pg **P 15 34 17.6 -1.1**
CING Sg 15 34 18.8
MEZF Maizieres J'vi 55.37 307 *e*P **P 15 34 37.8 +0.9**
LPG La Plagne 55.85 303 *e*P **P 15 34 41.3 +0.9**
comp=Z,23nm,0.9s,mb4.9
LPG La Plagne 55.85 303 *e*P **P 15 34 41.3 +0.9**
LPG pmax pmax
comp=Z,12nm,0.9s,mb4.9
LPG La Plagne 55.85 303 *e*P **P 15 34 41.3 +0.9**
comp=Z,12nm,0.9s,mb4.9
LPL La Plagne 55.85 303 *e*P **P 15 34 41.2 +0.8**
comp=Z,15nm,0.7s,mb4.8
LPL La Plagne 55.85 303 *e*P **P 15 34 41.2 +0.8**
LPL pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
LPL La Plagne 55.85 303 *e*P **P 15 34 41.2 +0.8**
comp=Z,7.6nm,0.7s,mb4.8
MBDF Montbardon 56.23 302 *e*P **P 15 34 44.3 +1.2**
comp=Z,21nm,0.9s,mb4.8
MBDF Montbardon 56.23 302 *e*P **P 15 34 44.3 +1.2**
MBDF pmax pmax
comp=Z,11nm,0.9s,mb4.9
MBDF Montbardon 56.23 302 *e*P **P 15 34 44.3 +1.2**
comp=Z,10nm,0.9s,mb4.9
ORIF Oris-en-Rattie 56.68 302 *e*P **P 15 34 46.0 -0.3**
COLD Coldfoot 60.50 23 *e*P **P 15 35 13.3 +0.8**
comp=Z,16nm,0.8s,mb5.2
BPAW Bear Paw Mtn. 62.49 25 *e*P **P 15 35 26.5 +0.5**
comp=Z,11nm,1.0s,mb4.9
COLA College 62.87 24 *e*P **P 15 35 29.3 +0.8**
COLA pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
COLA College 62.87 24 *e*P **P 15 35 29.3 +0.7**
comp=Z,9.6nm,0.7s,mb5.0
KTH Kantishna Hill 62.90 26 *e*P **P 15 35 29.7 +1.0**
comp=Z,9μm,1.4s
INK Inuvik 63.67 16 *e*P **P 15 35 34.2 +0.4**
INK pmax pmax
comp=Z,9.0nm,0.9s
INK Inuvik 63.67 16 *e*P **P 15 35 34.2 +0.4**
comp=Z,9.1nm,0.9s,mb4.8
KMBO Kilima Mbogo 64.21 240 P **P 15 35 37.1 -1.0**
comp=Z,0.6nm,0.5s,mb3.9,baz=40,slow=13,SNR=5.9
KMBO Kilima Mbogo 64.21 240 P **P 15 35 37.1 -1.0**
KMBO pmax pmax
comp=Z,1.0nm,0.5s
RSO Redoubt South 64.50 29 *e*P **P 15 35 41.1 +1.7**
EGAK Eagle 64.79 21 *e*P **P 15 35 41.5 +0.3**
comp=Z,2.2nm,0.4s,mb4.5
PAX Paxson 65.00 24 *e*P **P 15 35 42.5 -0.1**
PAX pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
PAX Paxson 65.00 24 *e*P **P 15 35 42.5 0.0**
comp=Z,5.1nm,0.9s,mb4.5
ESDC Sonseca Array 65.65 302 P **P 15 35 46.9 -0.3**
comp=Z,0.2nm,0.3s,mb3.7,baz=40,slow=8.1,SNR=2.9
ESDC Sonseca Array 65.65 302 P **P 15 35 46.9 -0.3**
DAWY Dawson 65.82 21 *e*P **P 15 35 48.0 +0.1**
FITZ Fitzroy Crossi 70.32 143 P **P 15 36 15.0 -1.7**
comp=Z,3.1nm,0.8s,mb4.3,baz=300,slow=2.2,SNR=5.3
YKA Yellowknife Ar 72.25 11 P **P 15 36 27.8 0.0**
comp=Z,2.9nm,0.8s,mb4.3,baz=336,slow=5.8,SNR=15
YKA LR LR 16 10 55.8
comp=Z,6.4nm,18.9s,MS2.9,baz=340,slow=38
YKA Yellowknife Ar 72.25 11 P **P 15 36 27.8 -0.1**
YKA pmax pmax
comp=Z,3.0nm,0.8s
YKA MLR MLR
comp=Z,6.0nm,18.9s
YKA Yellowknife Ar 72.25 11 P **P 15 36 27.8 0.0**
YKA LR LR 16 10 55.8
WRAB Tennant Creek 75.99 136 *e*P **P 15 36 48.3 -1.9**
WRAB pmax pmax
comp=Z,12nm,1.0s,mb4.8
WRAB Tennant Creek 75.99 136 *e*P **P 15 36 48.3 -1.9**
comp=Z,12nm,1.0s,mb4.8
ASAR Alice Springs 78.94 139 P **P 15 37 04.8 -1.8**
comp=Z,2.4nm,0.5s,mb4.3,baz=326,slow=5.0,SNR=86
ASAR Alice Springs 78.94 139 P **P 15 37 04.8 -1.8**
ASAR pmax pmax
comp=Z,2.0nm,0.5s
TORD Torodi Ar. Bea 78.98 278 P **P 15 37 05.3 -1.9**
comp=Z,1.2nm,0.9s,mb3.8,baz=44,slow=4.9,SNR=5.9
TORD Torodi Ar. Bea 78.98 278 P **P 15 37 05.3 -1.9**
FFC Flin Flon 81.27 6 *i* P **P 15 37 19.0 +0.1**
STKA Stephens Creek 89.50 137 P **P 15 38 01.1 +1.0**
comp=Z,3.3nm,0.9s,mb4.7,baz=328,slow=7.2,SNR=5.4
LPAZ La Paz 146.23 318 PKPbc PKPbc 15 44 42.7 -1.1
comp=Z,2.3nm,0.7s,baz=49,slow=1.9,SNR=10
LPAZ La Paz 146.23 318 *e*PKPdf PKPbc 15 44 42.9 -0.9
CPUP Villa Florida 147.53 292 PKPbc PKPbc 15 44 45.6 -1.7
comp=Z,5.1nm,0.7s,baz=23,slow=5.0,SNR=6.2
PLCA Paso Flores 164.44 275 PKP PKPdf 15 45 04.3 -2.0
comp=Z,3.9nm,1.1s,baz=2.4,slow=7.2,SNR=3.1
PLCA Paso Flores 164.44 275 PKIKP PKPdf 15 45 04.4 -2.0
PLCA pmax pmax
comp=Z,4.0nm,1.1s

CSEM ***04*** *15:28:02.4±0.9, 36°.91N×27°.73E, h35km±9km, MD2.8,*
Error ellipse: s-maj=18.3km s-min=15.9km az=98.0
ISK ***04*** *15:28:03.1, 36°.99N×27°.67E, h26km, MD2.6*
DDA ***04*** *15:28:05.0, 36°.99N×27°.73E, h7km±2km, Md2.8*
ISCJB ***04*** *15:28:04.1±2.1, 36°.97N±0°.05×27°.66E±0°.09, h28km±16km,*
Error ellipse: s-maj=12.0km s-min=8.3km az=7.9
ISC 04 15:28:04.1±2.0, 36°.97N±0°.05×27°.66E±0°.09, h28km±16km,
n12, σ0°51/24, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.20**	**299**	*i* P	**Pb**	**15 28 09.8**	**-0.2**
BDRM				*i* S	**Sb**	**15 28 14.1**	**+0.1**
BDRM	**Kayabasi**	**0.20**	**299**	*i* P	**Pb**	**15 28 09.8**	**-0.2**
BDRM				*i* S	**Sb**	**15 28 14.1**	**+0.1**
DAT	**Datca**	**0.25**	**195**	*e*PG	**Pb**	**15 28 10.4**	**-0.3**
DAT				*e*SG	**Sb**	**15 28 15.6**	**+0.5**
DAT	**Datca**	**0.25**	**195**	*e*Pg	**Pb**	**15 28 10.4**	**-0.2**
DAT				*e*Sg	**Sb**	**15 28 15.6**	**+0.5**
MLSB	**Milas**	**0.34**	**16**	*e*PG	**Pb**	**15 28 11.0**	**-0.8**
MLSB				*e*SG	**Sb**	**15 28 16.7**	**-0.5**
MLSB	**Milas**	**0.34**	**16**	*e*Pg	**Pb**	**15 28 11.0**	**-0.9**
MLSB				*e*Sg	**Sb**	**15 28 16.7**	**-0.5**
YER	**Yerkesik**	**0.53**	**72**	*e*PG	**Pb**	**15 28 14.3**	**-0.5**
YER				*e*SG	**Sb**	**15 28 22.5**	**+0.4**
YER	**Yerkesik**	**0.53**	**72**	*e*Pg	**Pb**	**15 28 14.3**	**-0.5**
YER				*e*Sg	**Sb**	**15 28 22.5**	**+0.4**
AYDN	**Tasoluk**	**0.71**	**14**	*i* P	**Pb**	**15 28 18.4**	**+0.4**
AYDN				*i* S	**Sb**	**15 28 28.1**	**+0.8**
AYDN	**Tasoluk**	**0.71**	**14**	*i* P	**Pb**	**15 28 18.4**	**+0.5**
AYDN				*i* S	**Sb**	**15 28 28.1**	**+0.8**
TURN	**Turunc**	**0.76**	**97**	*i* P	**Pb**	**15 28 14.0**	**-4.8**
TURN				*i* S	**Sb**	**15 28 21.7**	**-7.1**
TURN	**Turunc**	**0.76**	**97**	*i* P	**Pb**	**15 28 14.0**	**-4.8**
TURN				*i* S	**Sb**	**15 28 21.7**	**-7.1**

DJA ***04*** *15:31:34, 3°.61N×126°.78E, h20km, MLv4.1/5*
ISC 04 15:31:33.5±1.6, 3°.60N±0°.05×126°.74E±0°.06, h5km±12km,
n12, σ0°96/18, 2D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.22**	**274**	P	**Pb**	**15 31 55.4**	**-1.7**
SGSI				S	**Sg**	**15 32 12.8**	**+0.1**
MNI	**Manado**	**2.87**	**222**	P	**Pn**	**15 32 19.9**	**0.0**
MNI				S	**Sn**	**15 32 55.5**	**+0.6**
TNTI	**Ternate**	**2.88**	**167**	P	**Pn**	**15 32 19.0**	**-1.1**
TNTI				S	**Sn**	**15 32 54.0**	**-1.2**
GSPH	**General Santos**	**3.05**	**324**	⇓*i* P	**Pn**	**15 32 21.6**	**-0.9**
MATI	**Mati**	**3.36**	**352**	*e*P	**Pn**	**15 32 26.1**	**-0.7**
MATI				*e*S	**Pg**	**15 32 38.8**	**+0.8**
LBMI	**Labuha**	**4.28**	**170**	P	**Pn**	**15 32 39.5**	**+0.1**
LBMI				S	**Sn**	**15 33 31.5**	**+1.7**
BUKP	**Musuan**	**4.57**	**339**	*e*P	**Pn**	**15 32 44.6**	**+1.2**
BUKP				*e*S	**Pg**	**15 33 01.3**	**+0.1**
PAGZ	**Pagadian**	**5.38**	**322**	*e*P	**Pn**	**15 32 55.3**	**+0.7**
MRSI	**Marisa**	**5.71**	**237**	P	**Pn**	**15 33 00.2**	**+1.0**
	0.2nm43nm,0.5s						
ZMPH	**Zamboanga City**	**5.73**	**306**	⇓*i* P	**Pn**	**15 32 58.6**	**-0.7**
LUWI	**Luwuk**	**6.08**	**221**	P	**Pn**	**15 33 03.7**	**-0.6**
APSI	**Ampana**	**6.78**	**229**	P	**Pn**	**15 33 17.6**	**+3.7**

IDC ***04*** *15:39:21.0±1.0, 34°.20N×81°.74E, h0km, mb3.8/9,*
mb1 4.0/12, mb1mx3.8/28, mbtmp3.8/12, ML3.4/3, MS3.2/2,
Ms1 3.2/2, ms1mx2.5/29, Error ellipse: s-maj=25.6km
s-min=18.4km az=48.0
ISCJB ***04*** *15:39:25.5±0.9, 34°.42N±0°.06×81°.9E±0°.1, h43km±11km,*
mb3.9/13, Error ellipse: s-maj=17.8km s-min=6.4km
az=151.6
NEIC ***04*** *15:39:27.6±0.6, 34°.32N×81°.75E, h47km±8km, mb4.2/6,*
Error ellipse: s-maj=11.1km s-min=4.8km az=58.0
BJI ***04*** *15:39:36.3, 35°.07N×82°.08E, h73km, mB4.2/1, mb4.2/4*
ISC 04 15:39:28.2±0.6, 34°.41N±0°.06×81°.9E±0°.1, h53km±9km, n38,
σ0°92/37, mb3.9/13, Xizang

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

KKN	Kakani	7.20	155	*e*P	Pn	15 41 11.4	+0.5
	16nm,0.5s						
DMN	Daman	7.31	157	*e*P	Pn	15 41 12.9	+0.5
	8.3nm,0.4s						
GUN	Gumba	7.32	151	*e*P	Pn	15 41 13.1	+0.6
	13nm,0.5s						
PKIN	Phulchoki	7.44	155	*e*P	Pn	15 41 14.9	+0.7
	45nm,0.6s						
PKI	Pulchoki	7.45	155	*e*P	Pn	15 41 15.2	+0.9
	20nm,0.5s						
JIRN	Jiri	7.67	150	*e*P	Pn	15 41 17.8	+0.5
	6.4nm,0.2s						
RAMN	Ramite	8.46	150	*e*P	Pn	15 41 27.1	-1.1
	28nm,0.6s						
TAPN	Taplejung	8.62	143	*e*P	Pn	15 41 29.4	-1.0
	18nm,0.8s						
ODAN	Odare	8.88	146	*e*P	Pn	15 41 32.4	-1.5
	9.6nm,0.5s						
LSA	Lhasa	9.14	118	*e*P	Pn	15 41 39.0	+1.6
	3.4nm,0.6s						
UCH	Uchtor	9.73	326	*e*P	Pn	15 41 45.7	+0.3
	6.3nm,0.9s						
AML	Almayashu	10.05	322	*e*P	Pn	15 41 49.4	-0.4
	2.8nm,0.7s						
KBL	Kabul	10.63	274	P	Pn	15 41 53.6	-4.2
MK31	Makanchi Array	12.37	1	*e*P	Pn	15 42 20.8	-0.7
MKAR	Makanchi Array	12.37	1	Pn	Pn	15 42 20.9	-0.6
	0.3nm,0.3s,baz=174,slow=12,SNR=17						
KURK	Kurchatov	16.47	353	Pn	Pn	15 43 13.6	-1.9
	0.1nm,0.3s,baz=176,slow=11,SNR=5.1						
KURK				LR	LR	15 50 22.8	
	comp=Z,59nm,18.8s,baz=125,slow=40						
KURK	Kurchatov	16.47	353	*e*P	Pn	15 43 18.2	+2.7
KURK				LR	LR	15 50 22.8	
ZALV	Zalesovo Beam	19.64	5	P	Pn	15 43 53.1	-0.9
	0.1nm,0.3s,baz=187,slow=12,SNR=4.8						
BVAR	Borovoye Array	20.34	340	P	P	15 44 01.0	+1.2
	5.9nm,0.8s,baz=146,slow=11,SNR=18						
BRVK	Borovoye	20.40	340	*e*P	P	15 44 01.3	+0.9
	23nm,1.2s						
CHTO	Chiang Mai	21.70	131	*e*P	P	15 44 13.8	-1.0
	4.4nm,0.7s,mb4.0						
CM31	Chiang Mai Arr	21.97	132	P	P	15 44 16.7	-1.0
	4.6nm,0.7s,mb4.0						
CMAR	Chiang Mai Arr	21.97	132	P	P	15 44 17.5	-0.2
	8.0nm,0.8s,mb4.2,baz=310,slow=11,SNR=50						
ABKAR	Akbulak array	21.98	319	*e*P	P	15 44 16.6	-0.9
	2.0nm,0.6s,mb3.7						
SONM	Songino Array	22.68	46	P	P	15 44 27.8	+2.9
	0.4nm,0.5s,mb3.1,baz=230,slow=8.9,SNR=7.1						
AKTK	Aktyubinsk	23.67	320	P	P	15 44 34.1	-0.6
AKTO	Aktyubinsk	23.67	320	P	P	15 44 34.1	-0.6
	2.4nm,0.7s,mb3.7,baz=111,slow=8.2,SNR=8.5						
KSRS	Korea Array	37.10	72	LR	LR	16 03 30.1	
	comp=Z,36nm,18.6s,baz=100,slow=39						
BRTR	Keskin Array B	38.51	292	P	P	15 46 46.1	+0.8
	0.6nm,0.7s,mb3.4,baz=57,slow=5.3,SNR=2.9						
FINES	FINESS Array B	44.24	325	P	P	15 47 32.3	+0.3
	1.3nm,0.7s,mb3.8,baz=151,slow=9.5,SNR=3.7						
LPG	La Plagne	56.72	306	*e*P	P	15 49 06.9	+0.6
	8.6nm,0.8s,mb4.5						
LPG	La Plagne	56.72	306	*e*P	P	15 49 06.9	+0.6
	4.3nm,0.8s,mb4.5						
LPL	La Plagne	56.72	306	*e*P	P	15 49 06.9	+0.5
	9.7nm,0.7s,mb4.6						
LPL	La Plagne	56.72	306	*e*P	P	15 49 06.9	+0.5
	4.8nm,0.7s,mb4.6						
SMF	Signal de Mont	58.30	308	*e*P	P	15 49 17.8	+0.4
TORD	Torodi Ar. Bea	74.69	276	P	P	15 51 01.8	-0.8
	1.3nm,0.8s,mb3.9,baz=45,slow=5.3,SNR=8.8						
ASAR	Alice Springs	75.98	132	P	P	15 51 08.9	-0.7
	0.4nm,0.7s,mb3.5,baz=314,slow=6.4,SNR=4.1						
YKA	Yellowknife Ar	82.52	8	P	P	15 51 45.1	+0.3
	0.7nm,0.8s,mb3.8,baz=344,slow=4.1,SNR=5.3						

DDA ***04*** *15:40:09.8, 40°.65N×30°.41E, h7km±1km, Md2.8*
ISK ***04*** *15:40:09.6, 40°.58N×30°.47E, h18km, MD2.9*
ISCJB ***04*** *15:40:09.9±0.5, 40°.63N±0°.03×30°.46E±0°.03, h12km±3km, Error ellipse: s-maj=5.5km s-min=4.0km az=14.6*
CSEM ***04*** *15:40:10.0±0.1, 40°.60N×30°.48E, h15km, MD2.9, Error ellipse: s-maj=1.7km s-min=1.4km az=179.0*

ISC 04 15:40:10.4±0.5, 40°.62N±0°.03×30°.46E±0°.03, h15km±3km, n38, σ0.91/60, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GULT	**Gulveren**	**0.19**	**167**	*e*PG	**Pg**	**15 40 14.2**	**-0.6**
GULT				*e*SG	**Sg**	**15 40 17.5**	**-0.4**
GULT	**Gulveren**	**0.19**	**167**	*e*Pg	**Pg**	**15 40 14.3**	**-0.6**
GULT				*e*Sg	**Sg**	**15 40 17.5**	**-0.4**
GPA	**Golpazari**	**0.35**	**199**	*e*PG	**Pg**	**15 40 16.8**	**-0.8**
GPA				*e*SG	**Sg**	**15 40 22.0**	**-0.4**
GPA	**Golpazari**	**0.35**	**199**	*e*Pg	**Pg**	**15 40 16.8**	**-0.8**
GPA				*e*Sg	**Sg**	**15 40 22.0**	**-0.4**
HENT	**Hendek**	**0.39**	**59**	*i* P	**Pg**	**15 40 18.1**	**-0.2**
HENT	**Hendek**	**0.39**	**59**	*i* P	**Pg**	**15 40 18.1**	**-0.2**
ADVT	**Abdulvahap**	**0.58**	**251**	*e*PG	**Pg**	**15 40 21.4**	**-0.4**
ADVT				*e*SG	**Sg**	**15 40 30.1**	**+0.5**
ADVT	**Abdulvahap**	**0.58**	**251**	*e*Pg	**Pg**	**15 40 21.4**	**-0.4**
ADVT				*e*Sg	**Sg**	**15 40 30.1**	**+0.6**
MDU	**Mudurnu**	**0.60**	**105**	*e*PG	**Pg**	**15 40 21.6**	**-0.5**
MDU				*e*SG	**Sg**	**15 40 30.5**	**+0.5**
MDU	**Mudurnu**	**0.60**	**105**	*e*Pg	**Pg**	**15 40 21.6**	**-0.5**
MDU				*e*Sg	**Sg**	**15 40 30.5**	**+0.5**
BORA	**Eskisehir**	**0.74**	**180**	*i* P	**Pg**	**15 40 24.8**	**0.0**
BORA				*i* S	**Sg**	**15 40 36.8**	**+2.3**
BORA	**Eskisehir**	**0.74**	**180**	*i* P	**Pg**	**15 40 24.8**	**0.0**
BORA				*i* S	**Sg**	**15 40 36.8**	**+2.3**
YLV	**Yalova**	**0.83**	**267**	*e*PG	**Pg**	**15 40 26.0**	**-0.5**
YLV				*e*SG	**Sg**	**15 40 39.1**	**+1.8**
YLV	**Yalova**	**0.83**	**267**	*e*Pg	**Pg**	**15 40 26.0**	**-0.5**
YLV				*e*Sg	**Sg**	**15 40 39.2**	**+1.8**
KDZE	**Karadeniz Ereo**	**1.02**	**47**	*e*PG	**Pg**	**15 40 29.7**	**-0.3**
KDZE	**Karadeniz Ereo**	**1.02**	**47**	*e*Pg	**Pg**	**15 40 29.7**	**-0.3**
ESKT	**Eskisehir**	**1.14**	**165**	*e*PN	**Pn**	**15 40 30.8**	**-1.0**
ESKT				*e*SN	**Sn**	**15 40 46.0**	**-1.1**
ESKT	**Eskisehir**	**1.14**	**165**	*i* P	**Pb**	**15 40 31.9**	**+0.2**
ESKT				*i* S	**Sb**	**15 40 49.1**	**+2.7**
ESKT	**Eskisehir**	**1.14**	**165**	*e*Pn	**Pn**	**15 40 30.8**	**-1.0**
ESKT				*e*Sn	**Sn**	**15 40 46.0**	**-1.1**
SEYT	**Eskypehyr**	**1.14**	**165**	*i* P	**Pb**	**15 40 32.0**	**+0.2**
SEYT				*i* S	**Sb**	**15 40 49.1**	**+2.8**
ISK	**Istanbul-Kandi**	**1.15**	**293**	*e*PN	**Pn**	**15 40 31.6**	**-0.4**
ISK				*e*SN	**Sn**	**15 40 47.8**	**+0.4**
ISK	**Istanbul-Kandi**	**1.15**	**293**	*e*Pn	**Pn**	**15 40 31.6**	**-0.3**
ISK				*e*Sn	**Sn**	**15 40 47.8**	**+0.4**
SGKT	**Sivrigoynuk**	**1.22**	**92**	*i* P	**Pn**	**15 40 33.9**	**+1.1**
SGKT				*i* S	**Sb**	**15 40 51.5**	**+2.9**
SGKT	**Sivrigoynuk**	**1.22**	**92**	*i* P	**Pn**	**15 40 33.9**	**+1.1**
SGKT				*i* S	**Sb**	**15 40 51.5**	**+2.9**
ARMT	**Armutlu**	**1.22**	**268**	*e*PN	**Pn**	**15 40 32.4**	**-0.4**
ARMT				*e*SN	**Sn**	**15 40 49.1**	**+0.1**
ARMT	**Armutlu**	**1.22**	**268**	*e*Pn	**Pn**	**15 40 32.4**	**-0.4**
ARMT				*e*Sn	**Sn**	**15 40 49.1**	**+0.1**
KLYT	**Kilyos**	**1.25**	**301**	*e*PN	**Pn**	**15 40 33.3**	**+0.1**
KLYT	**Kilyos**	**1.25**	**301**	*e*Pn	**Pn**	**15 40 33.3**	**+0.1**
BGKT	**Bogazkoy**	**1.40**	**294**	*e*PN	**Pn**	**15 40 35.4**	**+0.1**
BGKT	**Bogazkoy**	**1.40**	**294**	*e*Pn	**Pn**	**15 40 35.4**	**+0.1**
SVRH	**Sivrihisar-ESK**	**1.43**	**145**	*e*PN	**Pn**	**15 40 34.6**	**-1.1**
SVRH	**Sivrihisar-ESK**	**1.43**	**145**	*e*Pn	**Pn**	**15 40 34.6**	**-1.1**
ALT	**Altintas**	**1.59**	**190**	*e*PN	**Pn**	**15 40 36.9**	**-1.1**
ALT	**Altintas**	**1.59**	**190**	*e*Pn	**Pn**	**15 40 36.9**	**-1.0**
CTKS	**Kestanelik-??a**	**1.60**	**293**	*e*PN	**Pn**	**15 40 38.2**	**+0.1**
CTKS	**Kestanelik-??a**	**1.60**	**293**	*e*Pn	**Pn**	**15 40 38.2**	**+0.1**
BALB	**Balikesir**	**2.21**	**244**	*e*PN	**Pn**	**15 40 46.2**	**-0.2**
BALB	**Balikesir**	**2.21**	**244**	*e*Pn	**Pn**	**15 40 46.3**	**-0.1**

PRE 04 16:38:34.2±1.2, 26°.40S×27°.35E, h2km, ML2.9, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRYS	**Parys**	**0.53**	**179**	*e*P	Pg	16 38 44.9	+0.6
PRYS				*e*S	Sg	16 38 52.0	+0.8
PRYS				AML	AML	16 38 56.9	
	comp=Z,296nm,0.7s						
KSR	**Koster**	**0.68**	**323**	*e*P	Pg	16 38 48.3	+1.2
KSR				*e*S	Sg	16 38 56.8	+0.9
KSR				AML	AML	16 39 07.6	
	comp=Z,143nm,0.1s						
BFSD	**Buffelsfontein**	**0.69**	**227**	*e*P	Pg	16 38 47.8	+0.4
BFSD				*e*S	Sg	16 38 55.2	-1.1
BFSD				AML	AML	16 39 03.0	
	comp=Z,228nm,0.1s						
MOAB	**Moab Khotsong**	**0.77**	**220**	*e*P	Pg	16 38 49.5	+0.5
MOAB				*e*S	Sg	16 38 59.0	+0.1
MOAB				AML	AML	16 39 07.1	
	comp=Z,226nm,0.3s						
ERPM	**east rand prop**	**0.80**	**87**	*e*P	Pg	16 38 50.0	+0.4
ERPM				*e*S	Sg	16 39 01.1	+1.0
ERPM				AML	AML	16 39 02.0	
	comp=Z,96nm,0.5s						
TAUL	**Tau Lekoa**	**0.89**	**228**	*e*P	Pg	16 38 52.2	+0.8
TAUL				*e*S	Sg	16 39 03.3	+0.4
TAUL				AML	AML	16 39 09.7	
	comp=Z,202nm,0.5s						
SLR	**Silverton**	**1.07**	**52**	*e*P	Pg	16 38 55.0	+0.4
SLR				*e*S	Sg	16 39 09.0	+0.5
SLR				AML	AML	16 39 17.1	
	comp=Z,187nm,1.4s						
SEK	**Senekal**	**1.94**	**173**	*e*P	Pn	16 39 09.1	+1.0
SEK				*e*S	Sn	16 39 33.9	+0.9
SEK				AML	AML	16 39 36.1	
	comp=Z,205nm,0.6s						
MOPA	**Mopani**	**4.66**	**53**	*e*P	Pn	16 39 46.4	+0.8
MOPA				*e*S	Sn	16 40 38.5	-1.7
MOPA				AML	AML	16 41 11.9	
	comp=Z,60nm,0.6s						
PKA	**Prieska**	**5.21**	**230**	*e*P	Pn	16 39 53.6	+0.5
PKA				*e*S	Sn	16 40 51.9	-1.9
PKA				AML	AML	16 41 21.8	
	comp=Z,20nm,0.5s						

ISCJB ***04*** *16:55:16.4±0.6, 18°.18S±0°.04×69°.87W±0°.10, h144km±8km, mb4.0/3, Error ellipse: s-maj=15.2km s-min=6.9km az=169.0*
NEIC ***04*** *16:55:17.3±0.8, 18°.21S×69°.80W, h137km±8km, mb4.2/1, Error ellipse: s-maj=14.4km s-min=10.8km az=53.0*
IDC ***04*** *16:55:19.1±2.7, 18°.25S×69°.54W, h141km±19km, mb4.0/3, mb1 3.9/6, mb1mx3.5/19, mbtmp3.8/6, Error ellipse: s-maj=32.2km s-min=30.0km az=161.0*
GUC ***04*** *16:55:23.2±0.6, 18°.51S×69°.70W, h115km, ML3.9*

ISC 04 16:55:17.4±0.6, 18°.18S±0°.04×69°.86W±0°.09, h138km±8km, n15, σ1.9±17/19, mb4.0/3, 2C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARE	**Arequipa**	**2.31**	**317**	⇑*i*P	**Pn**	**16 55 56.2**	**+0.6**
ARE				*i* S	**Sn**	**16 56 23.4**	**-1.6**
LPAZ	**La Paz**	**2.50**	**42**	P	**Pn**	**16 55 59.3**	**+1.3**
	43nm,0.3s,baz=211,slow=6.3,SNR=990						
LPAZ	**La Paz**	**2.50**	**42**	*e*Pn	**Pn**	**16 55 59.2**	**+1.2**
PB01	**Plate Boundary**	**2.87**	**173**	⇓*i*P	**Pn**	**16 56 04.4**	**+1.7**
PB01				AML	AML	16 56 40.8	
	comp=N,526nm,0.2s						
MACH	**Maria Elena**	**4.00**	**179**	*e*S	**Sn**	**16 57 03.3**	**-0.6**
PB04	**Plate Boundary**	**4.08**	**175**	*e*P	**Pn**	**16 56 20.8**	**+2.3**
PB04				*i* S	**Sn**	**16 57 05.4**	**-0.5**
PECH	**Pedro de Valdi**	**4.40**	**178**	⇑*i*P	**Pn**	**16 56 24.3**	**+1.6**
PECH				*i* S	**Sn**	**16 57 11.9**	**-1.5**
SIV	**San Ignacio**	**8.68**	**77**	P	**Pn**	**16 57 18.6**	**-1.3**
	comp=N,2.6nm,0.3s,baz=274,slow=11,SNR=33						
SIV				S	**Sn**	**16 58 49.3**	**-6.9**
	comp=N,0.6nm,0.3s,baz=359,slow=22,SNR=7.7						
CFAA	**Coronel Fontan**	**13.45**	**174**	P	**Pn**	**16 58 22.4**	**-0.3**
	comp=N,0.2nm,0.3s,baz=352,slow=13,SNR=16						
CPUP	**Villa Florida**	**14.15**	**127**	*e*P	**Pn**	**16 58 30.5**	**-1.2**
	comp=N,9.6nm,0.7s						
TKL	**Tuckaleechee C**	**55.14**	**346**	*e*P	**P**	**17 04 34.5**	**-0.9**
DBIC	**Dimbokro**	**68.69**	**75**	P	**P**	**17 06 06.3**	**-0.2**
	comp=N,2.8nm,0.5s,mb4.2,baz=212,slow=6.3,SNR=7.3						
TOA0	**Torodi Ar. Sit**	**77.11**	**71**	*e*P	**P**	**17 06 56.0**	**-0.1**
TORD	**Torodi Ar. Bea**	**77.11**	**71**	P	**P**	**17 06 56.5**	**+0.4**
	comp=N,3.6nm,0.6s,mb4.2,baz=254,slow=5.5,SNR=39						
YKA	**Yellowknife Ar**	**87.77**	**341**	P	**P**	**17 07 51.6**	**+1.2**
	comp=N,0.7nm,0.7s,mb3.6,baz=135,slow=5.0,SNR=5.3						

BJI ***04*** *17:03:00.8, 41°.44N×139°.47E, h200km, mB5.5/31, mb5.6/63*
DJA ***04*** *17:03:00, 41°.82N×139°.36E, h146km, Mw5.5/35*
NIED ***04*** *17:03:00, 41°.50N×139°.20E, h200km, Mw5.7 Best double couple: M0 3.72000×10^17 NP1:φs197.00000°, δ85.00000°, λ58.00000°. NP2:φs99.00000°, δ32.00000°, λ171.00000°.*
MOS ***04*** *17:03:04.9±0.9, 41°.59N×139°.12E, h206km, mb5.6/129, MS4.5/21, Error ellipse: s-maj=9.3km s-min=4.3km az=110.7*
BGS ***04*** *17:03:04.0±1.3, 40°.89N×139°.29E, h213km, mb5.4*
ISCJB ***04*** *17:03:05.9±0.1, 41°.54N±0°.01×139°.06E±0°.02, h208km, mb5.5/445, Error ellipse: s-maj=1.9km s-min=1.5km az=149.6*
IDC ***04*** *17:03:06.2±0.5, 41°.60N×139°.12E, h199km±4km, mb5.1/24, mb1 5.2/28, mb1mx5.2/29, mbtmp5.0/28, MS4.4/10, Ms1 4.4/10, ms1mx4.1/35, Error ellipse: s-maj=7.7km s-min=6.3km az=132.0*
JMA ***04*** *17:03:06.0±0.1, 41°.53N×139°.22E, h201km±1km, M5.7 Broadband fault plane solution: P waves. NP1: φs113.00000°, δ23.00000°, λ179.00000°. NP2: φs205.00000°, δ89.00000°, λ67.00000°. Principal axes: T Plg41.0000°, Azm93.0000°; N Plg23.0000°, Azm205.0000°; P Plg40.0000°, Azm316.0000°;*
JMA Felt II J1.
NEIC ***04*** *17:03:06.7±0.1, 41°.54N×139°.06E, h205km, mb5.5/282, ME5.3, MW5.7, MW5.6, MW5.6(NIED) Error ellipse: s-maj=2.8km s-min=1.9km az=162.0 Broadband fault plane solution: P waves. NP1:φs205.00000°, δ75.00000°, λ90.00000°. NP2:φs25.00000°, δ15.00000°, λ90.00000°. Principal axes: T Plg60.0000°, Azm115.0000°; N Plg0.0000°, Azm0.0000°; P Plg30.0000°, Azm295.0000°; Moment Tensor Solution. s99 Moment tensor: Scale 10^17 Nm; Mrr0.94; Mθθ-0.40; Mφφ-0.54; Mrθ-0.58; Mφθ-1.64; Mφr-3.25; Best double couple: M0 3.80000×10^17 NP1:φs82.00000°, δ25.00000°, λ159.00000°. NP2: φs191.00000°, δ81.00000°, λ67.00000°. Principal axes: T 3.6300, Plg48.0000°, Azm76.0000°; N 0.2800, Plg22.0000°, Azm194.0000°; P -3.9100, Plg32.0000°, Azm300.0000°; Depth from broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Recorded [2 JMA] in south-central and eastern Hokkaido; [1 JMA] in southwestern Hokkaido. Also recorded [2 JMA] in Aomori and Iwate; [1 JMA] in Akita, Fukushima and Miyagi, Honshu.
GCMT ***04*** *17:03:08.0±0.1, 41°.59N×139°.15E, h204km, MW5.7, Moment Tensor Solution. s95,c196; s43,c51; Moment tensor: Scale 10^17Nm; Mrr1.04±.04; Mθθ-1.06±.04; Mφφ0.03±.04; Mrθ-0.66±.04; Mθφ-2.61±.04; Mφr-3.15±.03; Best double couple: M0 4.30000×10^17 NP1:φs92.00000°, δ38.00000°, λ166.00000°. NP2:φs194.00000°, δ81.00000°, λ53.00000°. Principal axes: T 4.0600, Plg42.0000°, Azm69.0000°; N 0.4100, Plg36.0000°, Azm200.0000°; P -4.4600, Plg27.0000°, Azm312.0000°; Data Used: II IU IC G CN. Surface waves: sta=112, comp=244, per= 50.*
SZGRF ***04*** *17:03:12.4, 42°.28N×139°.82E, h219km, mb5.9, Hokkaido, Japan, region*

ISC 04 17:03:07.4±0.1, 41°.52N±0°.01×139°.04E±0°.02, h210km, h210km±1.8km; pP-P, n1664, σ0.80/1690, mb5.5/444, 248C-498D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOSM	**Okushiri--Mats**	**0.65**	**30**	⇓P	**Pn**	**17 03 33.5**	**-2.7**
JOSM				*e*S	**S**	**17 03 54.7**	**-4.0**
JSR	**Shiriuchi**	**1.04**	**89**	⇓P	**Pn**	**17 03 35.3**	**-3.1**
JSR				*e*S	**S**	**17 03 58.1**	**-4.3**
JYM2	**Yakumo 2**	**1.16**	**59**	⇓P	**Pn**	**17 03 36.4**	**-2.8**
JYM2				*e*S	**S**	**17 03 59.0**	**-5.0**
JIW	**Iwasaki**	**1.18**	**141**	⇓P	**Pn**	**17 03 36.8**	**-2.7**
JIW				*e*S	**S**	**17 03 59.9**	**-4.4**
JSH	**Shimam**	**1.35**	**33**	⇓P	**Pn**	**17 03 38.1**	**-2.5**
JOT	**Ohata**	**1.52**	**95**	⇓P	**Pn**	**17 03 38.5**	**-3.6**
JKB	**Kayabe**	**1.54**	**76**	⇓P	**Pn**	**17 03 38.9**	**-3.4**
JKB				*e*S	**S**	**17 04 04.3**	**-5.1**
JNB	**Noboribetsu**	**1.77**	**57**	⇓P	**Pn**	**17 03 41.0**	**-3.3**
JSK	**Shakotan**	**2.12**	**30**	⇓P	**Pn**	**17 03 45.6**	**-2.1**
JSK				*e*S	**S**	**17 04 16.5**	**-2.9**
JANG	**Nango**	**2.20**	**121**	⇓P	**Pn**	**17 03 44.6**	**-4.1**
JANG				*e*S	**S**	**17 04 15.3**	**-5.6**
JEW	**Eniwo**	**2.23**	**53**	⇓P	**Pn**	**17 03 46.3**	**-2.6**
JEW				*e*S	**S**	**17 04 17.4**	**-4.0**
JOM	**Ohasama**	**2.67**	**139**	⇓P	**Pn**	**17 03 49.7**	**-4.1**
JBT2	**Biratori 2**	**2.77**	**62**	⇓P	**Pn**	**17 03 51.6**	**-3.3**
JYK	**Kaneyama**	**2.79**	**158**	⇓P	**Pn**	**17 03 52.7**	**-2.5**
JYK				*e*S	**S**	**17 04 29.6**	**-2.9**
JNBK	**Urakawa-nobuka**	**2.88**	**73**	⇓P	**Pn**	**17 03 52.2**	**-3.8**
JNBK				*e*S	**S**	**17 04 28.2**	**-6.0**
JHR	**Hokuryu**	**2.98**	**41**	⇑P	**Pn**	**17 03 55.4**	**-1.8**
JHR				*e*S	**S**	**17 04 33.3**	**-3.0**
JMK	**Ichinoseki**	**3.06**	**146**	⇓P	**Pn**	**17 03 54.2**	**-4.1**
JAW	**Awa shima**	**3.07**	**177**	⇓P	**Pn**	**17 03 56.7**	**-1.7**
JAW				S	**S**	**17 04 36.3**	**-2.0**
JFR	**Furan**	**3.10**	**57**	⇓P	**Pn**	**17 03 54.9**	**-3.8**
ERM	**Erimo**	**3.12**	**80**	Pn	**Pn**	**17 03 55.6**	**-3.3**
	41μm,0.8s						
ERM	**Erimo**	**3.12**	**80**	⇑*i*Pn	**Pn**	**17 03 55.2**	**-3.7**
ERM				*e*Sn	**S**	**17 04 30.8**	**-8.5**
JEM	**Erimo**	**3.12**	**80**	⇓P	**Pn**	**17 03 55.2**	**-3.7**
JYG	**Yagishiri**	**3.39**	**30**	⇑P	**Pn**	**17 03 59.7**	**-2.4**
JCH	**Churui**	**3.40**	**70**	⇓P	**Pn**	**17 03 58.6**	**-3.6**
JSD	**Sado**	**3.53**	**190**	⇓P	**Pn**	**17 04 03.0**	**-0.9**
JSD				S	**S**	**17 04 46.9**	**-1.3**
JKK2	**Kamakawa 2**	**3.60**	**48**	⇑P	**Pn**	**17 04 01.9**	**-2.7**
ASAJ	**Asahikawa**	**3.69**	**44**	⇑P	**Pn**	**17 04 02.9**	**-2.7**
ASAJ	**Asahikawa**	**3.69**	**44**	P	**Pn**	**17 04 03.0**	**-2.6**
	529nm,0.3s,baz=238,slow=14,SNR=3011						
ASAJ				S	**S**	**17 04 45.6**	**-5.8**
	263nm,0.3s,baz=301,slow=31,SNR=17						
ASAJ				LR	LR	17 05 48.0	
	comp=Z,4μm,21.8s,baz=136,slow=45						
ASAJ	**Asahikawa**	**3.69**	**44**	P	**Pn**	**17 04 03.0**	**-2.6**
ASAJ				S	**S**	**17 04 45.6**	**-5.8**
ASAJ				pmax	pmax		
	comp=Z,529nm,0.3s						
ASAJ				smax			
	comp=N,263nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,4μm,21.8s						
JNS	**Sasagawa**	**3.71**	**177**	⇓P	**Pn**	**17 04 04.0**	**-2.0**
JNS				S	**S**	**17 04 50.1**	**-1.9**
JOB	**Onbets**	**3.82**	**67**	⇓P	**Pn**	**17 04 03.6**	**-3.7**
JAR	**Ashorobuto**	**3.93**	**62**	⇓P	**Pn**	**17 04 04.1**	**-4.5**
JRR	**Rishiri**	**3.98**	**24**	⇑P	**Pn**	**17 04 07.8**	**-1.3**
JIZZ	**Izumozaki**	**3.99**	**184**	⇓P	**Pn**	**17 04 09.0**	**-0.5**
JHG	**Hegura jima**	**4.02**	**205**	⇑P	**Pn**	**17 04 10.0**	**+0.2**
JHG				S	**S**	**17 04 59.2**	**+0.4**
JHK	**Hiroka**	**4.27**	**180**	⇓P	**Pn**	**17 04 11.6**	**-1.3**
JSZ	**Suzu**	**4.27**	**198**	⇓P	**Pn**	**17 04 12.9**	**0.0**
JSE	**Soyaes**	**4.30**	**36**	⇑P	**Pn**	**17 04 10.8**	**-2.4**
JTKR	**Abashiri--Toko**	**4.34**	**54**	⇑P	**Pn**	**17 04 10.3**	**-3.4**
JAK	**Akkeshi**	**4.45**	**69**	⇓P	**Pn**	**17 04 10.2**	**-4.8**
JJN	**Nakama**	**4.46**	**189**	⇓P	**Pn**	**17 04 14.9**	**-0.4**
JSB	**Shiboa**	**4.60**	**171**	⇓P	**Pn**	**17 04 14.5**	**-2.5**
JNK	**Nakash**	**4.68**	**62**	⇑P	**Pn**	**17 04 13.3**	**-4.6**
JKT	**Katashina**	**4.75**	**178**	⇓P	**Pn**	**17 04 17.3**	**-1.6**
JJH	**Hakui**	**4.91**	**202**	P	**Pn**	**17 04 21.7**	**+0.7**
JGK	**Kuni**	**4.96**	**184**	⇓P	**Pn**	**17 04 19.8**	**-1.8**
MAJO	**Matsushiro**	**5.01**	**188**	⇓*i*P	**Pn**	**17 04 21.4**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,2μm,1.0s						
MAJO	**Matsushiro**	**5.01**	**188**	⇓*i*Pn	**Pn**	**17 04 21.4**	**-0.9**
	comp=Z,2μm,1.0s						
MAT	**Matsushiro**	**5.01**	**188**	P	**Pn**	**17 04 21.2**	**-1.0**
MAT				S	**S**	**17 05 20.3**	**-1.1**
MAT	**Matsushiro**	**5.01**	**188**	P	ScP	17 14 23.8	-0.1
MAT	**Matsushiro**	**5.01**	**188**	P	**Pn**	**17 04 21.3**	**-0.9**
MAT				S	**S**	**17 05 20.6**	**-0.8**
MJAR	**Matsushiro Arr**	**5.01**	**188**	P	**Pn**	**17 04 21.4**	**-0.8**
	comp=Z,71nm,0.3s,baz=2.7,slow=14,SNR=814						
MJAR				S	**S**	**17 05 19.9**	**-1.4**
	comp=Z,11nm,0.3s,baz=8.3,slow=19,SNR=5.5						
MJAR				ScP	ScP	17 14 24.3	+0.4
	comp=Z,0.2nm,0.3s,baz=257,slow=0.7,SNR=18						
MJAR	**Matsushiro Arr**	**5.01**	**188**	P	**Pn**	**17 04 21.4**	**-0.8**
MJAR				S	**S**	**17 05 19.9**	**-1.5**
MJAR	**Matsushiro Arr**	**5.01**	**188**	P	**Pn**	**17 04 21.4**	**-0.8**
MJAR				S	**S**	**17 05 19.9**	**-1.4**
MJAR				ScP	ScP	17 14 24.3	+0.4

KUR				MLR	MLR		
	comp=E,10μm,11.0s						
KUR				MLR	MLR		
	comp=Z,8μm,11.0s						
HABR	**Khabarovsk**	**7.50**	**339**	*d iP*	**Pn**	**17 04 52.8**	**-1.2**
HABR				*e*S	**S**	**17 06 18.1**	**-1.0**
HABR				pmax	pmax		
	comp=Z,2μm,1.9s						
HABR				pmax	pmax		
	comp=E,2μm,2.2s						
HABR				pmax	pmax		
	comp=N,2μm,2.1s						
HABR				MLR	MLR		
	comp=Z,686nm,16.0s						
MDJ	**Mudanjiang**	**7.58**	**297**	P	**Pn**	**17 04 55.6**	**+0.6**
MDJ				S	**S**	**17 06 23.8**	**+3.0**
MDJ				PcP	PcP	17 11 14.0	-0.3
MDJ				ScP	ScP	17 14 26.5	+0.7
MDJ				ScS	ScS	17 17 59.4	+0.2
MDJ				pmax	pmax		
	comp=Z,1μm,2.0s						
MDJ				pmax	pmax		
	comp=Z,7μm,5.2s						
MDJ				LR	LR		
	comp=N,16μm,6.7s						
MDJ				LR	LR		
	comp=E,13μm,5.2s						
MDJ				LR	LR		
	comp=Z,16μm,4.9s						
MDJ	**Mudanjiang**	**7.58**	**297**	⇓*iP*	**Pn**	**17 04 55.2**	**+0.2**
	comp=Z,8μm,1.8s						
MDJ				*e*ScP	ScP	17 14 26.6	+0.8
JAD	**Aida**	**7.61**	**212**	⇑P	**Pn**	**17 04 56.4**	**+0.9**
UGL	**Uglegorsk**	**7.85**	**15**	*e*P	**Pn**	**17 04 57.0**	**-1.5**
UGL				*i* S	**S**	**17 06 23.0**	**-4.3**
UGL				*e*S	**S**	**17 06 26.0**	**-1.3**
UGL				pmax	pmax		
	comp=Z,426nm,0.9s						
UGL				smax			
	comp=E,207nm,0.6s						
UGL				smax			
	comp=N,9μm,8.0s						
UGL				smax			
	comp=E,19μm,8.0s						
UGL				MLR	MLR		
	comp=N,4μm,10.0s						
UGL				MLR	MLR		
	comp=E,4μm,10.0s						
JHJ	**Hachijo jima 2**	**8.41**	**176**	P	**Pn**	**17 05 00.3**	**-5.6**
	comp=E,469nm,0.3s,baz=72,slow=5.7,SNR=47						
JHJ				S	**S**	**17 06 30.2**	**-11**
	comp=E,275nm,0.3s,baz=182,slow=24,SNR=8.8						
KLR	**Kul'dur**	**9.25**	**329**	*α iP*	**Pn**	**17 05 11.0**	**-5.7**
KLR				*e*S	**S**	**17 06 55.5**	**-4.9**
KLR				pmax	pmax		
	comp=E,2μm,1.8s						
KLR				pmax	pmax		
	comp=Z,2μm,1.8s						
KLR				pmax	pmax		
	comp=N,6μm,8.0s						
KLR				pmax	pmax		
	comp=E,4μm,8.0s						
KLR				pmax	pmax		
	comp=Z,8μm,8.0s						
KLR				smax			
	comp=N,6μm,11.0s						
KLR				smax			
	comp=E,8μm,11.0s						
KLR				MLR	MLR		
	comp=E,5μm,9.0s						
KLR				MLR	MLR		
	comp=Z,11μm,9.0s						
KSRS	**Korea Array**	**9.50**	**248**	P	**Pn**	**17 05 21.6**	**+1.6**
	comp=Z,1.6nm,0.3s,baz=62,slow=12,SNR=156						
KSRS				S	**S**	**17 07 09.7**	**+3.1**
	baz=66,slow=14,SNR=2.1						
KSRS				ScP	ScP	17 14 28.9	+0.9
	comp=Z,0.5nm,0.3s,baz=100,slow=0.8,SNR=25						
CN2	**Changchun**	**10.27**	**287**	⇓P	**Pn**	**17 05 29.0**	**-0.8**
CN2				*es*P		17 06 15.3	
CN2				*e*S	**S**	**17 07 20.9**	**-3.7**
CN2				pmax	pmax		
	comp=Z,300nm,1.3s						
CN2				pmax	pmax		
	comp=Z,4μm,4.0s						
INCN	**Inchon**	**10.40**	**251**	*e*P	**Pn**	**17 05 32.3**	**+0.7**
	comp=Z,172nm,1.3s						
DL2	**Dalian**	**13.56**	**265**	⇓*iP*	**Pn**	**17 06 12.9**	**+1.5**
DL2				S	**S**	**17 08 41.9**	**-0.4**
DL2				ScP	ScP	17 14 35.2	+1.5
DL2				ScS	ScS	17 18 10.4	-0.2
DL2				pmax	pmax		
	comp=Z,750nm,1.2s						
DL2				pmax	pmax		
	comp=Z,1μm,10.0s						
CBIJ	**Chichi jima**	**14.62**	**169**	P	**Pn**	**17 06 19.1**	**-5.5**
	comp=Z,72nm,0.3s,baz=287,slow=22,SNR=37						
CBIJ				S	**S**	**17 08 52.0**	**-15**
	comp=Z,34nm,0.3s,baz=252,slow=20,SNR=6.0						
SKR	**Severo-Kuril's**	**14.95**	**46**	*e*P	**Pn**	**17 06 21.0**	**-7.3**
SKR				pmax	pmax		
	comp=N,160nm,0.9s						
SKR				pmax	pmax		
	comp=E,130nm,0.9s						
SKR				pmax	pmax		
	comp=Z,390nm,0.9s						
SKR				pmax	pmax		
	comp=Z,4μm,3.0s						
SKR				MLR	MLR		
	comp=N,3μm,16.0s						
SKR				MLR	MLR		
	comp=E,3μm,16.0s						
SKR				MLR	MLR		
	comp=Z,6μm,16.0s						
HIA	**Hailar**	**15.58**	**306**	*i* P	**Pn**	**17 06 34.1**	**-1.9**
HIA	**Hailar**	**15.58**	**306**	*e*P	**Pn**	**17 06 34.0**	**-2.0**
	comp=Z,353nm,0.6s						
HIA				*e*ScP	ScP	17 14 37.9	+0.8
PEA0B	**Petropavlovsk-**	**17.10**	**41**	*e*P	**P**	**17 06 49.6**	**-2.9**
PETK	**Petropavlovsk-**	**17.10**	**41**	P	**P**	**17 06 50.0**	**-2.5**
	comp=Z,4.5nm,0.3s,baz=219,slow=7.4,SNR=89						
PETK				ScP	ScP	17 14 40.4	+0.4
	comp=Z,0.4nm,0.3s,baz=166,slow=2.4,SNR=14						
PETK				ScS	ScS	17 18 15.1	-4.5
	comp=Z,0.4nm,0.3s,baz=290,slow=6.1,SNR=4.5						
PETK	**Petropavlovsk-**	**17.10**	**41**	P	**P**	**17 06 50.0**	**-2.5**
PETK				ScP	ScP	17 14 40.4	+0.4
PETK				ScS	ScS	17 18 15.1	-4.5
JOW	**Kunigami**	**17.12**	**215**	P	**P**	**17 06 53.2**	**+0.3**
	comp=Z,7.2nm,0.3s,baz=64,slow=5.5,SNR=15						
BJI	**Beijing**	**17.37**	**273**	P	**P**	**17 06 55.1**	**-0.5**
BJI				sP	sP	17 07 50.8	-5.4
BJI				S	**S**	**17 10 02.5**	**-2.8**
BJI				pmax	pmax		
	comp=Z,590nm,1.6s						
BJI				LR	LR		
	comp=N,15μm,20.1s						
BJI				LR	LR		
	comp=Z,2μm,19.1s						
BJT	**Baijiatuau**	**17.38**	**273**	*e*P	**P**	**17 06 55.1**	**-0.6**
BJT				pmax	pmax		
	comp=Z,979nm,1.3s						
BJT	**Baijiatuau**	**17.38**	**273**	*e*P	**P**	**17 06 55.1**	**-0.6**
	comp=Z,979nm,1.3s						
PET	**Petropavlovsk**	**17.53**	**42**	*c iP*	**P**	**17 06 53.0**	**-4.1**
PET				*e*S	**S**	**17 10 01.2**	**-6.9**
PET				pmax	pmax		
	comp=Z,2μm,6.3s						
PET				pmax	pmax		
	comp=Z,1μm,15.0s						
PET				pmax	pmax		
	comp=Z,196nm,0.9s						
PET				smax			
	comp=N,121nm,0.6s						
PET				smax			
	comp=E,2μm,21.4s						
PET				smax			
	comp=E,3μm,8.9s						
PET				MLR	MLR		
	comp=Z,2μm,18.0s						
PET				MLR	MLR		
	comp=Z,2μm,12.0s						
PET	**Petropavlovsk**	**17.53**	**42**	*e*P	**P**	**17 06 54.6**	**-2.5**
	comp=Z,185nm,1.0s						
SSE	**Sheshan**	**17.72**	**240**	⇓P	**P**	**17 06 58.6**	**-0.9**
SSE				sP	sP	17 07 55.9	-4.2
SSE				S	**S**	**17 10 08.6**	**-3.8**
SSE				pmax	pmax		
	comp=Z,410nm,0.8s						
SSE				pmax	pmax		
	comp=Z,200nm,3.5s						
SSE				LR	LR		
	comp=N,450nm,11.5s						
SSE				LR	LR		
	comp=E,1μm,11.5s						
SSE				LR	LR		
	comp=Z,2μm,13.1s						
CLNS	**Chul'man**	**17.84**	**334**	*e*P	**P**	**17 06 59.9**	**-0.6**
CLNS				*e*S	**S**	**17 10 14.8**	**+0.6**
CLNS				pmax	pmax		
	comp=Z,493nm,0.9s						
CLNS				pmax	pmax		
	comp=N,287nm,0.9s						
CLNS				pmax	pmax		
	comp=E,167nm,1.0s						
CLNS				smax			
	comp=E,67nm,1.2s						
CLNS				smax			
	comp=N,140nm,1.6s						
CLNS				MLR	MLR		
	comp=E,507nm,11.0s						
CLNS				MLR	MLR		
	comp=Z,1μm,12.0s						
CLNS				MLR	MLR		
	comp=N,869nm,11.0s						
TIA	**Tai'an**	**17.85**	**260**	P	**P**	**17 07 00.0**	**-0.9**
TIA				S	**S**	**17 10 11.5**	**-3.4**
TIA				pmax	pmax		
	comp=Z,460nm,1.4s						
TIA				pmax	pmax		
	comp=Z,1μm,6.0s						
TIA				LR	LR		
	comp=N,8μm,9.0s						
TIA				LR	LR		
	comp=E,2μm,9.0s						
NJ2	**Nanjing**	**18.69**	**246**	*e*P	**P**	**17 07 09.2**	**-0.8**
NJ2				sP	sP	17 08 03.0	-7.8
NJ2				S	**S**	**17 10 28.1**	**-3.5**
NJ2				PcP	PcP	17 11 30.4	+2.1
NJ2				ScP	ScP	17 14 44.8	+1.0
NJ2				pmax	pmax		
	comp=Z,260nm,1.2s						
NJ2				pmax	pmax		
	comp=Z,880nm,3.8s						
NJ2				LR	LR		
	comp=N,2μm,9.1s						
NJ2				LR	LR		
	comp=E,1μm,10.0s						
NJ2				LR	LR		
	comp=Z,18μm,10.0s						
CIT	**Chita**	**20.27**	**310**	*e*P	**P**	**17 07 23.8**	**-2.8**
CIT				*e*		17 11 01.0	
CIT				*e*		17 18 30.2	
CIT				pmax	pmax		
	comp=Z,1μm,1.7s						
HHC	**Hu-ho-hao-te**	**20.66**	**277**	*e*P	**P**	**17 07 29.3**	**-1.6**
HHC				PP		17 08 01.5	
HHC				sP	sP	17 08 27.2	-5.2
HHC				S	**S**	**17 11 03.4**	**-6.3**
HHC				PcP	PcP	17 11 33.2	+1.4
HHC				ScS	ScS	17 18 32.3	+0.8
HHC				pmax	pmax		
	comp=Z,220nm,1.5s						
HHC				pmax	pmax		
	comp=Z,2μm,6.0s						
HHC				LR	LR		
	comp=N,13μm,8.7s						
HHC				LR	LR		
	comp=E,3μm,7.7s						
HHC				LR	LR		
	comp=Z,2μm,9.0s						
TIY	**Taiyuan**	**20.81**	**268**	⇓*iP*	**P**	**17 07 31.1**	**-1.5**
TIY				S	**S**	**17 11 05.0**	**-7.6**
TIY				LR	LR		
	comp=N,2μm,6.7s						
TIY				LR	LR		
	comp=E,890nm,5.0s						
TIY				LR	LR		
	comp=Z,1μm,8.4s						
YAK	**Yakutsk**	**21.30**	**348**	*d iP*	**P**	**17 07 34.1**	**-3.3**
YAK				*e*S	**S**	**17 11 16.5**	**-3.5**
YAK				*e*		17 18 30.2	
YAK				pmax	pmax		
	comp=Z,264nm,0.9s,mb5.8						
YAK				pmax	pmax		
	comp=N,477nm,1.3s						
YAK				pmax	pmax		
	comp=E,161nm,1.3s						
YAK				smax			
	comp=N,10μm,2.3s						
YAK				smax			
	comp=E,2μm,2.0s						
BTO	**Baotou**	**21.86**	**277**	*e*P	**P**	**17 07 41.1**	**-2.2**
BTO				pmax	pmax		
	comp=Z,80nm,1.2s,mb5.1						
TATO	**Taipei**	**22.01**	**227**	*e*P	**P**	**17 07 43.4**	**-1.4**
	comp=Z,273nm,1.0s,mb5.7						
TATO	**Taipei**	**22.01**	**227**	P	**P**	**17 07 45.1**	**+0.3**
	SNR=5.9						
TATO				P		17 07 45.1	
	SNR=5.9						
YHNB	**Yeheng**	**22.32**	**227**	*e*P	**P**	**17 07 46.3**	**-1.3**
	comp=Z,193nm,1.1s,mb5.5						
WHN	**Wuhan**	**22.70**	**249**	P	**P**	**17 07 49.3**	**-1.7**
WHN				sP	sP	17 08 52.8	-1.7
WHN				S	**S**	**17 11 37.9**	**-5.4**
WHN				pmax	pmax		
	comp=Z,1μm,2.1s,mb6.1						
WHN				LR	LR		
	comp=N,4μm,6.8s						
WHN				LR	LR		
	comp=E,10μm,21.8s						
WHN				LR	LR		
	comp=Z,2μm,11.5s						
BOD	**Bodaibo**	**22.78**	**324**	*e*P	**P**	**17 07 48.9**	**-2.6**
BOD				pmax	pmax		
	comp=Z,420nm,1.6s,mb5.7						
SEY	**Seymchan**	**22.86**	**16**	*c iP*	**P**	**17 07 50.7**	**-1.4**
SEY	**Seymchan**	**22.86**	**16**	⇑*iP*	**P**	**17 07 50.8**	**-1.3**
SSLB	**Suanglung**	**23.25**	**226**	*e*P	**P**	**17 07 53.9**	**-2.3**
	comp=Z,119nm,1.2s,mb5.3						
YULB	**Yu-li**	**23.39**	**225**	*e*P	**P**	**17 07 55.7**	**-1.7**
ULN	**Ulaanbaatar**	**23.49**	**297**	*i* P	**P**	**17 07 56.3**	**-1.8**
ULN	**Ulaanbaatar**	**23.49**	**297**	*e*P	**P**	**17 07 56.7**	**-1.4**
	comp=Z,99nm,0.6s,mb5.5						
ULN	**Ulaanbaatar**	**23.49**	**297**	P	**P**	**17 07 57.0**	**-1.0**
	SNR=87						
ULN				P		17 07 57.0	
	SNR=87						
QZH	**Quanzhou**	**23.69**	**232**	⇓*iP*	**P**	**17 08 00.5**	**+0.4**
QZH				pP		17 08 35.4	
QZH				S	**S**	**17 11 55.0**	**-4.4**
QZH				pmax	pmax		
	comp=Z,110nm,0.8s,mb5.5						
QZH				pmax	pmax		
	comp=Z,1μm,8.6s						
QZH				LR	LR		
	comp=N,3μm,10.6s						
QZH				LR	LR		
	comp=E,1μm,6.8s						
QZH				LR	LR		
	comp=Z,3μm,12.2s						
TPUB	**Ta-pu**	**23.82**	**226**	*e*P	**P**	**17 07 59.7**	**-1.6**
	comp=Z,217nm,1.0s,mb5.7						
SONM	**Songino Array**	**23.93**	**296**	P	**P**	**17 08 01.1**	**-1.0**
	comp=Z,59nm,0.6s,mb5.4,baz=98,slow=10,SNR=191						
SONM				pP		17 08 39.2	
	comp=Z,24nm,1.0s,baz=131,slow=18,SNR=2.0						
SONM				PcP	PcP	17 11 39.0	+0.7
	comp=Z,4.9nm,0.6s,baz=118,slow=1.7,SNR=6.6						
SONM				ScP	ScP	17 14 57.0	+0.5
	comp=Z,43nm,1.1s,baz=104,slow=2.6,SNR=22						
SONM				ScS	ScS	17 18 43.7	+0.1
	comp=Z,4.0nm,1.1s,baz=0.0,slow=1.5,SNR=4.1						
SONM	**Songino Array**	**23.93**	**296**	P	**P**	**17 08 01.1**	**-1.0**
SONM				*PP		17 08 39.2	
SONM						17 11 39.0	
SONM						17 18 43.7	
TWG	**Pinlang**	**23.98**	**224**	*e*P	**P**	**17 08 02.2**	**-0.5**
	comp=Z,120nm,1.0s,mb5.5						
XAN	**Xi'an**	**24.86**	**262**	P	**P**	**17 08 08.4**	**-2.2**
XAN				pP		17 08 54.5	
XAN				S	**S**	**17 12 22.3**	**+4.6**
XAN				pmax	pmax		
	comp=Z,58nm,1.7s,mb4.9						
XAN				pmax	pmax		
	comp=Z,170nm,11.5s						
XAN				LR	LR		
	comp=N,2μm,22.0s						
XAN				LR	LR		
	comp=E,450nm,9.9s						
XAN				LR	LR		
	comp=Z,320nm,18.9s						
BBP	**Basco**	**25.52**	**220**	*e*P	**P**	**17 08 17.7**	**+1.0**
FX1	**Attu Island--F**	**25.57**	**52**	P	**P**	**17 08 15.7**	**-1.2**
	comp=Z,112nm,0.7s,mb5.6,baz=295,slow=2.7,SNR=72						
IRK	**Irkutsk**	**25.83**	**306**	⇓*iP*	**P**	**17 08 17.8**	**-1.3**
IRK				*e*	pP	17 08 56.0	-5.0
IRK				pmax	pmax		
	comp=Z,318nm,2.4s,mb5.5						
SMY	**Shemya**	**26.10**	**53**	*e*P	**P**	**17 08 21.4**	**-0.2**
SMY				pmax	pmax		
	comp=Z,594nm,1.6s,mb6.0						
SMY				MLR	MLR		
	comp=Z,500nm,17.0s						
SMY	**Shemya**	**26.10**	**53**	*e*P	**P**	**17 08 21.4**	**-0.2**
	comp=Z,594nm,1.6s,mb6.0						
SMY				LR	LR		
	comp=Z,500nm,17.0s						
TLY	**Talaya**	**26.12**	**305**	P	**P**	**17 08 21.0**	**-0.7**
	comp=Z,788nm,1.1s,mb6.3,SNR=65						
TLY	**Talaya**	**26.12**	**305**	*e*P	**P**	**17 08 20.5**	**-1.2**
TLY				*e*	pP	17 09 02.8	-0.8
TLY				*e*S	**S**	**17 12 44.4**	**+7.2**
TLY				*e*SS	SS	17 13 58.2	-37
TLY				pmax	pmax		
	comp=Z,210nm,1.2s,mb5.6						
TLY				MLR	MLR		
	comp=Z,2μm,14.0s						
TLY	**Talaya**	**26.12**	**305**	*e*P	**P**	**17 08 20.6**	**-1.1**
	comp=Z,218nm,1.2s,mb5.7						
TLY	**Talaya**	**26.12**	**305**	P	**P**	**17 08 21.2**	**-0.6**
	SNR=156						
TLY				P		17 08 21.2	
	SNR=156						
ZAK	**Zakamensk**	**26.18**	**302**	*e*P	**P**	**17 08 20.9**	**-1.4**
ZAK				pmax	pmax		
	comp=Z,100nm,1.2s,mb5.3						
ENH	**Enshi**	**26.32**	**254**	*e*P	**P**	**17 08 21.6**	**-2.1**
	comp=Z,17nm,0.8s,mb4.7						
MOY	**Mondy**	**27.75**	**304**	*e*P	**P**	**17 08 35.1**	**-1.2**
MOY				pmax	pmax		
	comp=Z,101nm,1.5s,mb5.2						
LZH	**Lanzhou**	**27.83**	**270**	⇑P	**P**	**17 08 36.0**	**-1.2**
LZH				pP	pP	17 09 14.6	-4.8
LZH				PP	PP	17 09 34.0	-10
LZH				sP	sP	17 09 36.5	-7.2
LZH				PcP	PcP	17 11 47.0	-0.5
LZH				S	**S**	**17 13 03.5**	**-1.0**
LZH				ScP	ScP	17 15 08.6	+0.5
LZH				ScS	ScS	17 18 59.7	-1.0
LZH				pmax	pmax		
	comp=Z,420nm,1.3s,mb5.9						
LZH				pmax	pmax		
	comp=Z,650nm,4.1s						
LZH				LR	LR		
	comp=N,4μm,12.5s						
LZH				LR	LR		
	comp=Z,4μm,15.0s						
APYP	**Conner**	**28.08**	**218**	*e*P	**P**	**17 08 42.6**	**+3.1**
CAUP	**Cauayan**	**28.62**	**216**	*e*P	**P**	**17 08 49.7**	**+5.4**
GTA	**Gaotai**	**29.74**	**279**	⇓P	**P**	**17 08 53.4**	**-0.7**
GTA				pP	pP	17 09 32.5	-4.0
GTA				sP	sP	17 09 55.5	-5.3
GTA				PP	PP	17 09 58.7	-6.8
GTA				PcP	PcP	17 11 52.2	-0.1
GTA				S	**S**	**17 13 34.8**	**+0.4**
GTA				sS	sS	17 14 44.1	-6.2
GTA				ScP	ScP	17 15 14.9	+0.8
GTA				SS	SS	17 15 27.2	-23
GTA				PcS	PcS	17 15 34.2	-1.5
GTA				ScS	ScS	17 19 09.0	-0.5
GTA				pmax	pmax		
	comp=Z,54nm,1.4s,mb5.0						
GTA				pmax	pmax		
	comp=Z,770nm,7.2s						
GTA				LR	LR		
	comp=N,8μm,17.9s						
GTA				LR	LR		
	comp=E,2μm,16.7s						
GTA				LR	LR		
	comp=Z,2μm,17.0s						
BALP	**Baler**	**29.79**	**216**	*e*P	**P**	**17 08 55.5**	**+0.8**
BILL	**Bilibino**	**30.34**	**20**	*c iP*	**P**	**17 08 57.6**	**-1.3**
BILL				*e*S	**S**	**17 13 42.5**	**-0.6**
BILL				*e*SS	SS	17 15 40.4	-21
BILL				pmax	pmax		
	comp=Z,150nm,2.5s,mb5.2						
BILL	**Bilibino**	**30.34**	**20**	*e*P	**P**	**17 08 57.3**	**-1.7**
	comp=Z,20nm,0.5s,mb5.0						
GYA	**Guiyang**	**30.55**	**251**	⇑*iP*	**P**	**17 08 59.3**	**-2.0**
GYA				pP	pP	17 09 45.3	+1.4
GYA				sP	sP	17 10 05.8	-2.2
GYA				PP	PP	17 10 13.9	-0.7
GYA				PcP	PcP	17 11 57.0	+2.4
GYA				S	**S**	**17 13 41.9**	**-5.4**
GYA				sS	sS	17 15 00.8	-2.4
GYA				ScS	ScS	17 19 15.4	+1.6
GYA				pmax	pmax		
	comp=Z,50nm,0.8s,mb5.2						
GYA				pmax	pmax		
	comp=Z,630nm,4.8s						
GYA				LR	LR		
	comp=N,5μm,15.9s						
GYA				LR	LR		
	comp=E,6μm,14.0s						
GYA				LR	LR		
	comp=Z,8μm,15.4s						
TIXI	**Tiksi**	**30.63**	**354**	*e*P	**P**	**17 09 00.0**	**-1.4**
TIXI				pmax	pmax		
	comp=Z,56nm,0.6s,mb5.4						
TIXI	**Tiksi**	**30.63**	**354**	*e*P	**P**	**17 08 60.0**	**-1.5**
	comp=Z,56nm,0.6s,mb5.4						
PVCP	**Virac**	**30.69**	**209**	*e*P	**P**	**17 09 04.8**	**+2.2**
ADK	**Adak**	**31.63**	**56**	*e*P	**P**	**17 09 08.4**	**-2.0**
ADK				pmax	pmax		
	comp=Z,334nm,1.4s,mb5.7						
ADK	**Adak**	**31.63**	**56**	*e*P	**P**	**17 09 08.4**	**-2.0**
	comp=Z,334nm,1.4s,mb5.7						
BOAC	**Boac**	**31.72**	**213**	*e*P	**P**	**17 09 13.6**	**+2.0**
QIZ	**Qiongzhong**	**33.47**	**237**	P	**P**	**17 09 27.8**	**+1.0**
QIZ				pP	pP	17 10 07.8	-1.9
QIZ				sP	sP	17 10 30.7	-3.1
QIZ				PP	PP	17 10 48.4	+1.4
QIZ				S	**S**	**17 14 34.3**	**+1.7**
QIZ				sS	sS	17 15 46.9	-2.2
QIZ				pmax	pmax		
	comp=Z,76nm,1.4s,mb5.0						
QIZ	**Qiongzhong**	**33.47**	**237**	*e*P	**P**	**17 09 27.9**	**+1.2**
	comp=Z,139nm,1.4s,mb5.3						
BUSP	**Coron**	**33.72**	**215**	*e*P	**P**	**17 09 29.3**	**+0.4**
KMI	**Kunming**	**34.16**	**253**	P	**P**	**17 09 31.2**	**-1.5**
KMI				pP	pP	17 10 13.0	-2.7
KMI				sP	sP	17 10 35.7	-4.1
KMI				PP	PP	17 10 54.2	-0.4
KMI				PcP	PcP	17 12 03.2	-1.4
KMI				S	**S**	**17 14 42.7**	**-0.5**
KMI				ScP	ScP	17 15 28.5	-0.9
KMI				PcS	PcS	17 15 48.9	-2.4
KMI				sS	sS	17 15 55.8	-4.0
KMI				SS	SS	17 17 07.0	-11
KMI				ScS	ScS	17 19 29.6	-2.7
KMI				pmax	pmax		
	comp=Z,67nm,1.2s,mb5.0						
KMI				pmax	pmax		
	comp=Z,340nm,3.5s						
KMI				LR	LR		
	comp=N,1μm,15.4s						
KMI				LR	LR		
	comp=E,1μm,14.8s						
KMI				LR	LR		
	comp=Z,640nm,12.2s						
CUYO	**Cuyo Island**	**34.41**	**213**	*e*P	**P**	**17 09 36.4**	**+1.5**
ENPP	**El Nido**	**34.76**	**215**	*e*P	**P**	**17 09 38.9**	**+1.0**
BUKP	**Musuan**	**35.73**	**204**	*e*P	**P**	**17 09 48.0**	**+2.0**
WMQ	**Urumqi**	**37.33**	**291**	P	**P**	**17 09 59.0**	**-0.3**

WMQ pP pP 17 10 39.0 -4.0
WMQ sP sP 17 11 01.0 -6.0
WMQ PP PP 17 11 33.0 +4.0
WMQ S **S** **17 15 32.0 +1.0**
WMQ SS SS 17 18 15.0 -8.7
WMQ pmax pmax
comp=Z,84nm,1.0s,mb5.2
WMQ pmax pmax
comp=Z,140nm,4.0s
WMQ LR LR
comp=N,3μm,15.0s
WMQ LR LR
comp=E,1μm,15.0s
WMQ LR LR
comp=Z,1μm,15.0s
ZAA0 Zalesovo Array 37.61 308 *e*P **P** **17 10 00.9 -0.6**
ZALV Zalesovo Beam 37.61 308 P **P** **17 10 01.2 -0.3**
comp=Z,370nm,0.6s,mb6.1,baz=89,slow=8.7,SNR=562
ZALV PcP PcP 17 12 14.1 -0.3
comp=Z,43nm,0.5s,baz=89,slow=3.0,SNR=14
ZALV ScP ScP 17 15 42.1 +0.5
comp=Z,66nm,0.8s,baz=90,slow=3.4,SNR=27
ZALV ScS ScS 17 19 49.8 -0.7
comp=Z,3.8nm,1.0s,baz=128,slow=2.4,SNR=4.5
UNV Unalaska Valle 37.76 52 *e*P **P** **17 09 59.3 -3.5**
comp=Z,5μm,1.2s
TNA Tin City 37.97 33 *e*P **P** **17 10 03.4 -1.0**
comp=Z,60nm,0.7s,mb5.2
AKUT Akutan 38.17 51 *e*P **P** **17 10 03.0 -3.2**
comp=Z,37nm,0.8s,mb5.0
NVS Novosibirsk 38.48 310⇓*i*P **P** **17 10 08.5 -0.3**
NVS *i* *PP pP 17 10 51.7 -0.9
NVS *i* S **S** **17 15 44.8 -3.2**
NVS *i* SS ScS 17 19 54.4 -1.0
NVS pmax pmax
comp=Z,474nm,1.1s,mb5.9
NVS pmax pmax
comp=N,258nm,1.8s
NVS pmax pmax
comp=E,728nm,1.8s
NVS smax
comp=N,46nm,1.4s
NVS smax
comp=E,204nm,1.7s
UBT Ubonrachathani 39.34 238⇑P **P** **17 10 18.0 +1.6**
KDM Kudat 39.72 216 P **P** **17 10 21.3 +1.8**
KKTK Khon Kaen 39.98 242⇓P **P** **17 10 22.1 +0.5**
comp=E,2μm,0.9s,mb6.5
LSA Lhasa 40.21 269 P **P** **17 10 24.5 +1.0**
LSA S **S** **17 16 10.3 -4.1**
LSA pmax pmax
comp=Z,120nm,1.0s,mb5.3
LSA LR LR
comp=N,1μm,21.0s
LSA LR LR
comp=E,770nm,28.0s
LSA LR LR
comp=Z,910nm,28.0s
LSA Lhasa 40.21 269 *e*P **P** **17 10 24.2 +0.7**
LSA pmax pmax
comp=Z,466nm,1.6s,mb5.7
LSA Lhasa 40.21 269 *e*P **P** **17 10 24.2 +0.8**
comp=Z,466nm,1.6s,mb5.7
LSA *e*ScP ScP 17 15 53.7 +1.6
MK31 Makanchi Array 40.29 297 *e*P **P** **17 10 23.4 -0.5**
MK31 *e*ScP ScP 17 15 52.3 +0.2
MKAR Makanchi Array 40.29 297 P **P** **17 10 23.6 -0.3**
comp=Z,177nm,0.6s,mb5.7,baz=79,slow=12,SNR=1580
MKAR ScP ScP 17 15 52.4 +0.3
comp=Z,72nm,1.0s,baz=69,slow=6.6,SNR=26
MYLDM Lahad Datu 40.57 212 P **P** **17 10 28.2 +1.7**
SDKM Sandakan 40.70 215 P **P** **17 10 29.1 +1.6**
KKM Kota Kinabalu 40.76 216 P **P** **17 10 29.9 +1.8**
KKM Kota Kinabalu 40.76 216 *e*P **P** **17 10 29.6 +1.5**
comp=Z,44nm,1.0s,mb4.8
CHG Chiang Mai 40.90 249⇓P **P** **17 10 29.0 -0.2**
comp=Z,133nm,0.8s,mb5.4
CHTO Chiang Mai 40.90 249 *e*P **P** **17 10 29.5 +0.3**
CHTO pmax pmax
comp=Z,61nm,0.6s,mb5.2
CHTO Chiang Mai 40.90 249 *e*P **P** **17 10 29.5 +0.3**
comp=Z,61nm,0.6s,mb5.2
CHTO *e*ScP ScP 17 15 56.1 +1.2
CHTO Chiang Mai 40.90 249 P **P** **17 10 30.0 +0.8**
SNR=67
CHTO P 17 10 30.0
SNR=67
SDPT Sand Point 41.12 49 *e*P **P** **17 10 28.6 -1.9**
comp=Z,165nm,1.0s,mb5.4
SDPT LR LR
comp=Z,500nm,18.0s
CM31 Chiang Mai Arr 41.14 248 *e*P **P** **17 10 31.4 +0.2**
comp=Z,22nm,0.6s,mb4.8
CM31 *e*ScP ScP 17 15 57.7 +1.9
CMAR Chiang Mai Arr 41.14 248 P **P** **17 10 31.8 +0.6**
comp=Z,23nm,0.8s,mb4.7,baz=44,slow=6.7,SNR=216
CMAR pP pP 17 11 12.1 -3.4
comp=Z,5.7nm,0.9s,baz=24,slow=7.8,SNR=1.4
CMAR PcP PcP 17 12 26.5 +0.2
comp=Z,11nm,1.1s,baz=12,slow=2.1,SNR=7.3
CMAR ScP ScP 17 15 57.9 +2.0
comp=Z,40nm,1.0s,baz=18,slow=3.4,SNR=47
CMAR S **S** **17 16 30.5 +2.1**
comp=Z,6.6nm,1.1s,baz=34,slow=16,SNR=5.3
CMAR Chiang Mai Arr 41.14 248 P **P** **17 10 31.8 +0.6**
CMAR *PP pP 17 11 12.1 -3.4
CMAR 17 12 26.5
CMAR S **S** **17 16 30.5 +2.1**
TSM Tawau 41.63 213 P **P** **17 10 36.8 +1.7**
KURK Kurchatov 41.80 304 P **P** **17 10 36.1 0.0**
comp=Z,9μm,0.7s
KURK Kurchatov 41.80 304 LR LR 17 28 56.2
comp=Z,655nm,19.4s,baz=55,slow=37
KURK Kurchatov 41.80 304 *e*P **P** **17 10 35.4 -0.7**
KURK pmax pmax
comp=Z,1μm,0.8s,mb6.4
KURK Kurchatov 41.80 304 *e*P **P** **17 10 35.4 -0.7**
comp=Z,1μm,0.8s,mb6.4
KURK *e*ScP ScP 17 15 58.1 +0.1
KURK Kurchatov 41.80 304 P **P** **17 10 36.3 +0.1**
SNR=700
KURK P 17 10 36.3
SNR=700
SHL Shillong 41.87 263 *i* P **P** **17 10 36.5 -0.5**
comp=Z,10.0nm,0.8s
SHL *e*x x 17 16 36.0
BDT Bhumibol Dam 41.93 247⇑P **P** **17 10 38.0 +0.5**
comp=Z,24nm,1.0s,mb4.6
CHGN Chignik 42.16 47 *e*P **P** **17 10 36.0 -2.9**
TTA Tatalina 42.89 38 *e*P **P** **17 10 44.7 0.0**
SVW2 Sparrevohn 43.18 40 *e*P **P** **17 10 47.7 +0.6**
AGT Agartala 43.31 261 *i* x x 17 10 43.0
AGT *i* x x 17 11 31.0
TAPN Taplejung 44.02 268 *e*P **P** **17 10 54.5 +0.3**
comp=Z,172nm,0.6s,mb5.6
TAPN Taplejung 44.02 268 *e*P ScP 17 16 07.9 +0.5
comp=Z,99nm,1.3s
CHUM Lake Minchumin 44.50 36 *e*P **P** **17 10 58.1 +0.6**
comp=Z,341nm,1.3s,mb5.5
ODAN Odare 44.52 268 *e*P **P** **17 10 58.3 +0.1**
comp=Z,1μm,1.4s,mb6.1
ODAN Odare 44.52 268 *e*P ScP 17 16 09.7 +0.3
RSO Redoubt South 44.62 41 *e*P **P** **17 10 58.5 0.0**
comp=Z,137nm,0.6s,mb5.5
RSO *e*ScP ScP 17 16 10.3 +1.0
PPLA Purkeypile 44.64 37 *e*P **P** **17 10 59.4 +0.8**
comp=Z,614nm,1.4s,mb5.7
PPLA *e*ScP ScP 17 16 11.2 +1.9
BTM Bintulu 44.70 218 P **P** **17 11 01.0 +1.3**
OHAK Old Harbor 44.82 46 *e*P **P** **17 10 58.7 -1.4**
comp=Z,259nm,1.1s,mb5.5
OHAK LR LR
comp=Z,700nm,22.0s
AAA Alma-Ata 44.95 294 *i* P **P** **17 11 02.7 +1.4**
AAA pmax pmax
comp=Z,3μm,2.9s,mb6.1
AAA Alma-Ata 44.95 294 *i* P **P** **17 11 02.2 +0.9**
JIRN Jiri 44.99 269 *e*P **P** **17 11 02.3 +0.4**
comp=Z,80nm,0.2s,mb5.6
RAMN Ramite 45.06 268 *e*P **P** **17 11 02.4 -0.1**
comp=Z,541nm,0.7s,mb6.0
RAMN Ramite 45.06 268 *e*P ScP 17 16 11.8 +0.1
comp=Z,125nm,1.1s
BPAW Bear Paw Mtn. 45.07 36 *e*P **P** **17 11 02.2 +0.2**
comp=Z,296nm,1.3s,mb5.5
BPAW *e*ScP ScP 17 16 12.4 +1.4

GUN Gumba 45.09 270 *e*P **P** **17 11 02.9 +0.2**
comp=Z,827nm,0.5s,mb6.3
GUN Gumba 45.09 270 *e*P ScP 17 16 11.0 -0.8
comp=Z,259nm,1.5s
KDAK Kodiak Island 45.10 45 P **P** **17 11 01.2 -1.1**
comp=Z,1μm,0.9s,mb6.2,SNR=34
KDAK Kodiak Island 45.10 45 *e*P **P** **17 11 00.8 -1.5**
KDAK pmax pmax
comp=Z,126nm,0.8s,mb5.3
KDAK Kodiak Island 45.10 45 *e*P **P** **17 11 00.8 -1.5**
comp=Z,126nm,0.8s,mb5.3
KDAK *e*ScP ScP 17 16 12.3 +1.0
KTH Kantishna Hill 45.15 36 *e*P **P** **17 11 02.9 +0.3**
comp=Z,386nm,1.6s,mb5.5
COLD Coldfoot 45.20 31 *e*P **P** **17 11 02.6 -0.4**
comp=Z,70nm,1.0s,mb4.9
COLD *e*ScP ScP 17 16 13.4 +1.9
KKN Kakani 45.61 270 *e*P **P** **17 11 06.6 -0.1**
comp=Z,1μm,1.3s,mb6.1
KKN Kakani 45.61 270 *e*P **P** **17 11 06.6 -0.1**
KKN pmax pmax
comp=Z,1μm,1.3s,mb6.1
PKI Pulchoki 45.62 270 *e*P **P** **17 11 06.8 -0.1**
comp=Z,1μm,1.2s,mb6.1
PKI Pulchoki 45.62 270 *e*P **P** **17 11 06.8 -0.1**
PKI pmax pmax
comp=Z,1μm,1.2s,mb6.1
PKIN Phulchoki 45.63 270 *e*P **P** **17 11 06.6 -0.3**
comp=Z,184nm,0.6s,mb5.6
SBUM Sibu 45.77 219 P **P** **17 11 09.8 +1.7**
FIB Fire Island 45.78 40 *e*P **P** **17 11 07.6 0.0**
DMN Daman 45.83 270 *e*P **P** **17 11 08.4 -0.1**
TKM2 Tokmak 2 45.99 294 P **P** **17 11 10.7 +1.2**
SNR=1412
TKM2 Tokmak 2 45.99 294 *e*P **P** **17 11 10.3 +0.8**
TKM2 pmax pmax
comp=Z,969nm,0.8s,mb6.2
TKM2 Tokmak 2 45.99 294 *e*P **P** **17 11 10.2 +0.7**
comp=Z,969nm,0.8s,mb6.2
PMR Palmer 46.22 39 *e*P **P** **17 11 10.4 -0.6**
PMR pmax pmax
comp=Z,123nm,0.8s,mb5.3
PMR MLR MLR
comp=Z,300nm,21.0s
PMR Palmer 46.22 39 *e*P **P** **17 11 10.4 -0.6**
comp=Z,123nm,0.8s,mb5.3
PMR LR LR
comp=Z,300nm,21.0s
BVAR Borovoye Array 46.26 309 P **P** **17 11 11.7 +0.3**
comp=Z,135nm,0.6s,mb5.5,baz=73,slow=7.9,SNR=1168
BVAR PcP PcP 17 12 43.7 +0.6
comp=Z,20nm,0.5s,baz=97,slow=2.9,SNR=5.0
BVAR ScP ScP 17 16 16.8 +0.6
comp=Z,31nm,1.0s,baz=106,slow=3.2,SNR=13
BVAR S **S** **17 17 42.6 +1.0**
comp=Z,18nm,1.1s,baz=83,slow=12,SNR=6.4
BVAR ScS ScS 17 20 46.2 +2.6
comp=Z,1.8nm,0.8s,baz=116,slow=3.4,SNR=3.6
BVAR Borovoye Array 46.26 309 P **P** **17 11 11.7 +0.3**
BVAR 17 12 43.7
BVAR S **S** **17 17 42.6 +1.0**
BVAR 17 20 46.2
SEW Seward 46.30 41 *e*P **P** **17 11 10.6 -1.1**
comp=Z,5μm,0.9s
BRVK Borovoye 46.31 309 P **P** **17 11 12.3 +0.5**
comp=Z,1μm,0.6s,mb6.4
BRVK Borovoye 46.31 309 *d i*P **P** **17 11 12.0 +0.2**
BRVK pmax pmax
comp=Z,708nm,2.5s,mb5.5
BRVK Borovoye 46.31 309 *e*P **P** **17 11 11.9 +0.1**
comp=Z,134nm,0.6s,mb5.5
BRVK Borovoye 46.31 309 P **P** **17 11 12.5 +0.7**
SNR=134
BRVK P 17 11 12.5
SNR=134
COLA College 46.34 34 *e*P **P** **17 11 12.0 +0.1**
COLA pmax pmax
comp=Z,347nm,0.8s,mb5.7
COLA College 46.34 34 *e*P **P** **17 11 11.9 0.0**
comp=Z,347nm,0.8s,mb5.7
KBK Karagaybulak 46.53 294 P **P** **17 11 14.7 +1.0**
SNR=131
KZA Kyzart 46.54 293 P **P** **17 11 15.6 +1.8**
SNR=520
CHMS Chumysh 46.55 294 P **P** **17 11 14.5 +0.6**
SNR=6.9
USP Ospenovka 46.62 295 P **P** **17 11 14.8 +0.4**
SNR=393
FRU Bishkek 46.70 294⇑*i*P **P** **17 11 16.0 +1.0**
FRU *i* 17 11 56.0
FRU *e* 17 17 50.0
FRU pmax pmax
comp=Z,2μm,2.0s,mb6.1
AAK Ala-Archa 46.85 294 P **P** **17 11 16.1 -0.1**
comp=Z,2μm,0.4s
AAK Ala-Archa 46.85 294 P **P** **17 11 16.9 +0.7**
SNR=60
AAK Ala-Archa 46.85 294 LR LR 17 31 45.5
comp=Z,890nm,18.5s,baz=54,slow=37
AAK Ala-Archa 46.85 294 *e*P **P** **17 11 16.5 +0.3**
AAK pmax pmax
comp=Z,193nm,0.4s,mb5.8
AAK Ala-Archa 46.85 294 *e*P **P** **17 11 16.5 +0.3**
comp=Z,192nm,0.4s,mb5.8
AAK Ala-Archa 46.85 294 P **P** **17 11 17.0 +0.7**
SNR=273
AAK P 17 11 17.0
SNR=273
UCH Uchtor 46.99 294 P **P** **17 11 18.5 +1.2**
SNR=212
UCH Uchtor 46.99 294 *e*P **P** **17 11 18.2 +0.9**
comp=Z,86nm,0.8s,mb5.1
UCH *e*ScP ScP 17 16 21.0 +1.5
KSH Kashi 47.03 290 P **P** **17 11 21.7 +4.1**
KSH pP pP 17 12 03.5 +0.4
KSH sP sP 17 12 24.7 -1.9
KSH PP PP 17 13 14.6 +4.5
KSH S **S** **17 17 58.3 +5.4**
KSH SS SS 17 21 24.2 +1.8
KSH pmax pmax
comp=Z,770nm,1.7s,mb5.8
KSH LR LR
comp=N,820nm,6.3s
KSH LR LR
comp=E,1μm,5.2s
KSH LR LR
comp=Z,630nm,5.7s
EKS2 Erkin-Say 47.34 294 P **P** **17 11 20.5 +0.6**
SNR=525
EKS2 Erkin-Say 47.34 294 *e*P **P** **17 11 20.0 0.0**
comp=Z,226nm,0.6s,mb5.7
KSM Kuching 47.54 221 P **P** **17 11 23.9 +2.1**
KSM Kuching 47.54 221 *e*P **P** **17 11 22.8 +1.0**
comp=Z,134nm,1.0s,mb5.2
KSM *e*ScP ScP 17 16 22.7 +0.6
AML Almayashu 47.59 294 P **P** **17 11 23.3 +1.4**
SNR=610
AML Almayashu 47.59 294 *e*P **P** **17 11 23.1 +1.2**
comp=Z,1μm,1.3s,mb6.0
PAX Paxson 47.67 37 *e*P **P** **17 11 21.5 -0.7**
comp=Z,28nm,0.6s,mb4.8
DIV Divide 47.89 39 *e*P **P** **17 11 23.7 -0.2**
comp=Z,274nm,1.2s,mb5.5
KTGM Kuala Trenggan 48.20 232 P **P** **17 11 28.3 +1.4**
MENT Mentasta 48.46 37 *e*P **P** **17 11 28.7 +0.4**
BMRM Bremner River 48.48 39 *e*P **P** **17 11 28.3 -0.1**
comp=Z,222nm,1.2s,mb5.4
BMRM *e*PcP PcP 17 12 51.6 +0.6
PTH Pithoragarh 48.49 275 *e*PKP **P** **17 11 28.7 -0.2**
PTH *e*x x 17 16 28.2
EGAK Eagle 49.18 34 *e*P **P** **17 11 33.1 -0.6**
comp=Z,155nm,1.1s,mb5.2
KAPI Kappang 49.55 206 P **P** **17 11 37.3 +0.2**
comp=Z,438nm,1.1s,mb5.7,SNR=6.6
KAPI Kappang 49.55 206 LR LR 17 31 35.6
comp=Z,275nm,20.3s,baz=61,slow=34
KAPI Kappang 49.55 206 *e*P **P** **17 11 36.5 -0.6**
comp=Z,111nm,1.1s,mb5.1
KAPI Kappang 49.55 206 P **P** **17 11 37.3 +0.3**
SNR=5.7
KAPI P 17 11 37.3
SNR=5.7
DDI Dehra Dun 49.71 278 *e*x **P** **17 11 40.0 +1.8**
DDI *e*x x 17 16 33.0
KULM Kulim 49.71 234 P **P** **17 11 39.8 +1.4**
KULM Kulim 49.71 234 *e*P **P** **17 11 39.5 +1.2**

comp=Z,218nm,1.0s,mb5.4
SDNR Sundarnagar 49.92 279 *e*PKP **P** **17 11 40.1 +0.3**
DAWY Dawson 50.09 35 *e*P **P** **17 11 40.0 -0.6**
IPM Ipoh 50.13 233 P **P** **17 11 43.0 +1.5**
BHK Bhakra 50.37 280 *e*PKP **P** **17 11 40.8 -2.4**
THN Thein Dam 50.39 281 *e*PKP **P** **17 11 41.5 -1.7**
THN *e*x x 17 18 40.0
SVE Sverdlovsk 50.61 316⇑*e*P **P** **17 11 45.3 +0.8**
SVE *e* 17 12 59.1
SVE *e* 17 13 43.2
SVE *e*PPP 17 14 53.7
SVE *e*S **S** **17 18 42.2 -0.1**
SVE *e* 17 21 08.5
SVE *e*SS SS 17 22 20.0 +1.3
SVE pmax pmax
comp=Z,1μm,1.3s,mb6.2
MYKOM Kota Tinggi 50.66 228 P **P** **17 11 47.5 +2.1**
KGM Kluang 50.77 229 P **P** **17 11 48.0 +1.7**
NDI New Delhi 51.18 276 *e*PKP **P** **17 11 47.0 -2.2**
NDI *e*x x 17 19 48.0
INK Inuvik 51.28 28 *e*P **P** **17 11 49.1 -0.2**
INK pmax pmax
comp=Z,78nm,0.7s
INK Inuvik 51.28 28 *e*P **P** **17 11 49.1 -0.2**
comp=Z,78nm,0.7s,mb5.2
SOKR Solikamsk 51.68 320 *d i*P **P** **17 11 52.7 +0.2**
SOKR 17 13 48.9
SOKR S **S** **17 18 58.2 +1.2**
SOKR SS SS 17 22 33.7 -1.9
SOKR pmax pmax
comp=Z,480nm,1.3s,mb5.8
SOKR MLR MLR
comp=Z,540nm,19.0s
ARU Arti 51.82 316 P **P** **17 11 53.9 +0.4**
comp=Z,5μm,0.7s,mb7.0
ARU Arti 51.82 316 *d i*P **P** **17 11 53.7 +0.2**
ARU *e* 17 13 02.2
ARU *e* 17 13 52.2
ARU *e*PPP 17 14 59.2
ARU S **S** **17 19 01.0 +2.0**
ARU *SS sS 17 20 17.1 -3.1
ARU 17 21 19.1
ARU SS SS 17 22 41.6 +3.7
ARU SSS 17 24 38.6
ARU pmax pmax
comp=Z,1μm,1.2s,mb6.2
ARU Arti 51.82 316 *e*P **P** **17 11 53.6 +0.1**
comp=Z,712nm,0.8s,mb6.2
VIS Vishakhapatnam 52.91 261 *i* P **P** **17 12 03.0 +0.9**
VIS *e*x x 17 12 05.4
comp=Z,220nm,1.8s
VIS *i* x x 17 19 15.6
SKAG Skagway 53.35 39 *e*P **P** **17 12 05.5 +0.9**
comp=Z,146nm,1.6s,mb5.2
SKAG LR LR
comp=Z,400nm,23.0s
ABKAR Akbulak array 53.70 307 *e*P **P** **17 12 07.5 +0.1**
comp=Z,142nm,0.5s,mb5.8
BHPL Bhopal 54.02 270 *e*PKP **P** **17 12 09.4 -0.7**
BHPL AMb AMB 17 12 12.0
comp=Z,519nm,1.3s,mb5.9
BHPL *i* x x 17 12 57.2
NGP Nagpur 54.02 267 *e*x **P** **17 12 05.7 -4.4**
KBL Kabul 54.21 287 *e*P **P** **17 12 10.9 -0.4**
KBL pmax pmax
comp=Z,655nm,1.4s,mb6.0
KBL Kabul 54.21 287 *e*P **P** **17 12 10.9 -0.4**
comp=Z,655nm,1.4s,mb6.0
HNR Honiara 54.23 154 *e*P **P** **17 12 11.1 -0.4**
HNR pmax pmax
comp=Z,249nm,1.0s,mb5.7
HNR Honiara 54.23 154 *e*P **P** **17 12 11.1 -0.4**
comp=Z,249nm,1.0s,mb5.7
SIT Sitka 54.24 42 *e*P **P** **17 12 12.2 +1.0**
SIT pmax pmax
comp=Z,387nm,2.1s,mb5.6
SIT MLR MLR
comp=Z,200nm,17.0s
SIT Sitka 54.24 42 *e*P **P** **17 12 12.2 +1.0**
comp=Z,386nm,2.1s,mb5.6
SIT LR LR
comp=Z,200nm,17.0s
AJM Ajmer 54.29 275 *e*PKP **P** **17 12 11.8 -0.1**
AJM AMb AMB 17 12 14.3
comp=Z,419nm,1.4s,mb5.8
KAKA Kakadu 54.30 188 *e*P **P** **17 12 12.6 +0.6**
comp=Z,36nm,0.7s,mb5.0
KAKA Kakadu 54.30 188 *e*P **P** **17 12 12.6 +0.6**
comp=Z,160nm,0.8s,mb5.6
AKTO Aktyubinsk 54.36 309 LR LR 17 37 53.7
comp=Z,543nm,18.1s,baz=261,slow=38
COEN Coen 55.33 175 *e*P **P** **17 12 19.5 +0.1**
comp=Z,1μm,1.6s,mb6.2
COEN *e*pP pP 17 13 05.7 -0.7
ALE Alert 55.75 3 P **P** **17 12 22.0 +0.4**
comp=Z,177nm,0.7s,mb5.7,SNR=9.8
KBS Kingsbay 55.92 349 *e*P **P** **17 12 23.6 +0.8**
KBS *e*S **S** **17 19 54.5 +1.1**
KBS Kingsbay 55.92 349 *d i*P **P** **17 12 22.7 -0.2**
KBS Kingsbay 55.92 349 *e*P **P** **17 12 22.8 0.0**
comp=Z,23nm,0.6s,mb4.9
CRAG Craig 56.02 43 *e*P **P** **17 12 24.8 +1.0**
comp=Z,160nm,1.2s,mb5.4
CRAG LR LR
comp=Z,200nm,18.0s
KIP Kipapa 56.08 90 *e*P **P** **17 12 24.8 0.0**
KIP pmax pmax
comp=Z,82nm,0.8s,mb5.3
KIP Kipapa 56.08 90 *e*P **P** **17 12 24.8 0.0**
comp=Z,82nm,0.8s,mb5.3
DLBC Dease Lake 56.27 39 *e*P **P** **17 12 26.8 +1.1**
HYB Hyderabad 56.66 264 *e*P **P** **17 12 28.0 -0.9**
HYB *e*S **S** **17 20 06.0 +1.4**
HYB pmax pmax
comp=Z,90nm,1.0s,mb5.3
HYB Hyderabad 56.66 264 *e*P **P** **17 12 28.0 -0.9**
comp=Z,90nm,1.0s,mb5.3
HYB *e*S **S** **17 20 06.0 +1.4**
HYB Hyderabad 56.66 264 *i* P **P** **17 12 28.0 -0.9**
comp=Z,90nm,1.0s,mb5.3
HYB *e*S **S** **17 20 04.0 -0.6**
HSP Hornsund 56.66 347 *e*P **P** **17 12 28.2 +0.1**
LVZ Lovozero 57.27 334 P **P** **17 12 32.7 +0.2**
comp=Z,353nm,0.6s,mb6.2,SNR=10.0
LVZ Lovozero 57.27 334 *c i*P **P** **17 12 32.5 0.0**
LVZ pmax pmax
comp=Z,87nm,1.2s,mb5.3
LVZ Lovozero 57.27 334⇑*i*P **P** **17 12 32.6 +0.1**
APA Apatity 57.85 334⇑*i*P **P** **17 12 36.4 -0.1**
APA *i* *PP pP 17 13 25.2 +1.3
APA *i* 17 13 42.4
APA *i* S **S** **17 20 16.0 -2.8**
APA *i* 17 21 59.0
APA pmax pmax
comp=Z,140nm,1.2s,mb5.5
APA MLR MLR
comp=Z,400nm,14.0s
KEV Kevo 58.60 338 *e*P **P** **17 12 40.6 -1.1**
KEV pmax pmax
comp=Z,52nm,0.7s,mb5.3
KEV Kevo 58.60 338 *ep* **P** **17 12 40.6 -1.1**
comp=Z,52nm,0.7s,mb5.3
KEV Kevo 58.60 338 *ep* **P** **17 12 40.6 -1.1**
comp=Z,52nm,0.7s,mb5.3
RES Resolute Bay 58.72 15 *e*P **P** **17 12 41.7 -0.8**
RES pmax pmax
comp=Z,58nm,1.0s,mb5.2
RES Resolute Bay 58.72 15 *e*P **P** **17 12 41.6 -0.8**
comp=Z,58nm,1.0s,mb5.2
RES *e*ScP ScP 17 17 10.9 +1.0
BHV Bhavnagar 58.85 272 *e*PKP **P** **17 12 43.2 -0.9**
ARCES ARCESS Array B 59.15 338 P **P** **17 12 45.1 -0.3**
comp=Z,15nm,0.5s,mb4.9,baz=54,slow=7.6,SNR=179
ARCES PP PP 17 14 56.9 -1.3
comp=Z,18nm,0.7s,baz=46,slow=8.7,SNR=9.4
ARCES ScP ScP 17 17 12.8 +0.9
comp=Z,7.8nm,0.8s,baz=58,slow=5.0,SNR=3.9
ARCES ARCESS Array B 59.15 338 P **P** **17 12 45.1 -0.4**
ARCES 17 14 56.9
ARCES ARCESS Array B 59.15 338 P **P** **17 12 45.1 -0.3**
ARCES PP PP 17 14 56.9 -1.3
ARCES ScP ScP 17 17 12.8 +0.9
KHU Kahuku 59.18 91 *e*P **P** **17 12 46.4 0.0**
POO Poona 59.50 268 *e*PKP **P** **17 12 48.5 -0.1**

POO AMb AMB 17 12 50.9
comp=Z,252nm,1.2s,mb5.7
BHJ Bhuj 59.84 275 *e*PKP **P 17 12 50.6 -0.3**
BHJ AMb AMB 17 12 53.6
comp=Z,317nm,1.1s,mb5.9
BHJ *i* x x 17 13 16.4
KAD Karad 59.99 267 *e*PKP **P 17 12 51.8 -0.2**
KAD AMb AMB 17 12 53.9
comp=Z,243nm,1.0s,mb5.8
VAN Vannovskaya 60.13 296⇓*i*P **P 17 12 53.0 +0.3**
VAN *i* S **S 17 20 50.9 +1.8**
ABKT Ailbek 60.13 296 P **P 17 12 53.2 +0.5**
comp=Z,1μm,1.1s,mb6.5
FITZ Fitzroy Crossi 60.60 195 *e*P **P 17 12 56.1 +0.2**
comp=Z,40nm,1.0s,mb5.0
FITZ *e*S **S 17 20 54.0 -1.2**
FITZ Fitzroy Crossi 60.60 195 *e*P **P 17 12 56.0 +0.1**
comp=Z,94nm,1.5s,mb5.2
TRO Tromso 60.88 340⇓*i*P **P 17 12 56.7 -0.5**
TRO *e*S **S 17 20 56.8 -0.7**
YKA Yellowknife Ar 60.88 31 P **P 17 12 56.7 -0.6**
comp=Z,17nm,0.6s,mb4.9,baz=304,slow=6.6,SNR=98
YKA PcP PcP 17 13 38.8 +0.2
comp=Z,5.1nm,0.6s,baz=306,slow=4.4,SNR=6.7
YKA ScP ScP 17 17 20.8 +1.2
comp=Z,1.6nm,0.7s,baz=307,slow=4.6,SNR=4.1
YKA PKP2bc 17 42 23.3
comp=Z,0.5nm,0.7s,baz=124,slow=2.7,SNR=3.9
YKA Yellowknife Ar 60.88 31 P **P 17 12 56.7 -0.6**
YKA 17 13 38.9
YKA Yellowknife Ar 60.88 31 P **P 17 12 56.7 -0.6**
YKA PcP PcP 17 13 38.9 +0.2
YKA ScP ScP 17 17 20.8 +1.2
YKA ⇑*e* 17 42 23.3
DAG Danmarks Havn 61.14 354⇑*i*P **P 17 12 58.6 -0.3**
DAG pmax pmax
comp=Z,34nm,0.7s,mb5.1
DAG Danmarks Havn 61.14 354⇑*i*P **P 17 12 58.6 -0.3**
comp=Z,34nm,0.7s,mb5.1
DAG Danmarks Havn 61.14 354⇑*i*P **P 17 12 58.6 -0.3**
comp=Z,34nm,0.7s,mb5.1
JOF Joensuu 61.15 330 *e*P **P 17 12 57.6 -1.5**
JOF pmax pmax
comp=Z,129nm,0.6s,mb5.7
JOF Joensuu 61.15 330 *e*p **P 17 12 57.6 -1.5**
comp=Z,129nm,0.6s,mb5.7
JOF Joensuu 61.15 330 *e*p **P 17 12 57.6 -1.5**
comp=Z,129nm,0.6s,mb5.7
WRAB Tennant Creek 61.29 185 P **P 17 12 59.0 -1.5**
comp=Z,322nm,0.9s,mb6.0,SNR=17
WRAB Tennant Creek 61.29 185 *e*P **P 17 12 59.4 -1.1**
WRAB pmax pmax
comp=Z,65nm,1.1s,mb5.2
WRAB Tennant Creek 61.29 185 *e*P **P 17 12 59.4 -1.1**
comp=Z,39nm,1.1s,mb5.0
CTA Charters Tower 61.66 172 *e*P **P 17 13 02.3 -0.7**
comp=Z,23nm,1.0s,mb4.8
CTAO Charters Tower 61.66 172 *e*P **P 17 13 02.2 -0.8**
CTAO *e**PP pP 17 13 49.5 -1.5
CTAO pmax pmax
comp=Z,95nm,1.5s,mb5.2
CTAO Charters Tower 61.66 172 *e*P **P 17 13 02.2 -0.8**
comp=Z,95nm,1.5s,mb5.2
CTAO *e*pP pP 17 13 49.5 -1.5
PALK Pallekele 61.70 254 P **P 17 13 04.0 +0.5**
comp=Z,577nm,1.3s,mb6.0,SNR=13
PALK Pallekele 61.70 254 *e*P **P 17 13 03.5 0.0**
PALK pmax pmax
comp=Z,217nm,1.3s,mb5.6
PALK Pallekele 61.70 254 *e*P **P 17 13 03.5 0.0**
comp=Z,217nm,1.3s,mb5.6
MOS Moscow 62.58 321 *e*P **P 17 13 04.6 -4.1**
MOS *e* 17 13 41.7
MOS *e**PP pP 17 13 52.1 -4.7
MOS *i* 17 15 27.4
MOS *i* S **S 17 21 17.4 -1.8**
MOS *i* *SS sS 17 22 37.4 -5.9
MOS pmax pmax
comp=E,400nm,1.8s
MOS pmax pmax
comp=Z,1μm,1.8s,mb6.3
MOS pmax pmax
comp=N,500nm,1.7s
MOS pmax pmax
comp=Z,695nm,1.5s,mb6.1
MOS pmax pmax
comp=N,225nm,1.4s
MOS pmax pmax
comp=E,219nm,1.4s
MOS smax
comp=E,2.0nm,3.4s
MOS smax
comp=N,1.0nm,2.6s
STEI Steigen 63.03 339 *e*P **P 17 13 11.1 -0.4**
VRHR Novokhopersk 63.16 316 *e*P **P 17 13 12.1 -0.6**
VRHR *e*S **S 17 21 26.7 0.0**
VRHR *e* 17 22 42.2
VRHR pmax pmax
comp=Z,420nm,1.7s,mb5.8
VRHR pmax pmax
comp=N,140nm,1.4s
VRHR pmax pmax
comp=E,140nm,1.2s
VRHR smax
comp=E,560nm,2.3s
VRHR smax
comp=Z,260nm,2.7s
VRHR smax
comp=N,480nm,1.8s
LOF Lofoten 63.32 340⇓*i*P **P 17 13 14.5 +1.0**
PUL Pulkovo 63.41 328⇑*e*P **P 17 13 14.2 +0.1**
OBN Obninsk 63.42 321 P **P 17 13 14.3 0.0**
comp=N,1μm,0.8s,mb6.7,SNR=28
OBN Obninsk 63.42 321*d i*P **P 17 13 14.0 -0.3**
OBN *e* 17 15 36.1
OBN *e*S **S 17 21 30.5 +0.7**
OBN *e*SS SS 17 25 37.9 -1.9
OBN pmax pmax
comp=Z,653nm,1.7s,mb6.0
OBN Obninsk 63.42 321 *e*P **P 17 13 14.0 -0.3**
comp=Z,509nm,1.3s,mb6.0
KAF Kangasniemi 63.49 331 *e*P **P 17 13 12.9 -1.7**
KAF pmax pmax
comp=Z,209nm,0.6s,mb5.9
KAF Kangasniemi 63.49 331 *e*p **P 17 13 12.9 -1.7**
comp=Z,209nm,0.6s,mb5.9,baz=46,slow=6.2
KAF Kangasniemi 63.49 331 *e*p **P 17 13 12.9 -1.7**
comp=Z,209nm,0.6s,mb5.9,baz=46,slow=6.2
FINES FINESS Array B 64.00 331 P **P 17 13 17.6 -0.3**
comp=Z,173nm,0.5s,mb5.9,baz=46,slow=8.2,SNR=882
FINES PP PP 17 15 39.8 -1.1
comp=Z,24nm,0.7s,baz=54,slow=9.7,SNR=7.0
FINES S **S 17 21 35.4 -1.2**
comp=Z,24nm,1.3s,baz=62,slow=8.9,SNR=9.1
FINES LR LR 17 42 51.4
comp=Z,381nm,19.0s,baz=332,slow=37
FINES FINESS Array B 64.00 331 P **P 17 13 17.6 -0.3**
FINES 17 15 39.8
FINES S **S 17 21 35.4 -1.2**
FINES FINESS Array B 64.00 331 P **P 17 13 17.6 -0.3**
FINES PP PP 17 15 39.8 -1.1
FINES S **S 17 21 35.4 -1.2**
FINES LR LR 17 42 51.4
VOR Voronezh 64.06 317⇓*i*P **P 17 13 17.0 -1.5**
VOR *e* 17 15 37.0
VOR *e*S **S 17 21 36.0 -1.8**
VOR pmax pmax
comp=Z,500nm,1.6s,mb5.9
MAK Makhachkala 64.30 305*d i*P **P 17 13 20.7 +0.5**
MAK *e* 17 13 52.7
MAK *e**PP pP 17 14 07.0 -1.6
MAK *e**SP sP 17 14 31.8 +0.5
MAK *i* S **S 17 21 42.3 +1.4**
MAK *e* 17 22 53.1
MAK *e*SS SS 17 26 02.5 +8.6
MAK pmax pmax
comp=Z,383nm,1.3s,mb5.9
MAK pmax pmax
comp=E,725nm,2.1s
MAK pmax pmax
comp=N,390nm,1.6s
MAK MLR MLR
comp=Z,533nm,11.0s
VSR Storozhevoye 64.38 317*d i*P **P 17 13 20.7 +0.1**
VSR *e*S **S 17 21 41.1 -0.5**
VSR pmax pmax
comp=Z,670nm,1.7s,mb6.0
VSR pmax pmax
comp=N,30nm,2.1s
VSR pmax pmax
comp=E,10.0nm,1.2s
VSR smax
comp=N,380nm,1.5s
VSR smax
comp=Z,130nm,2.0s
VSR smax
comp=E,70nm,0.8s
MOR8 Moi Rana 64.52 338⇓*i*P **P 17 13 19.6 -1.7**
MOR8 AMb AMB 17 13 21.7
comp=Z,133nm,1.1s,mb5.5
MOR8 Moi Rana 64.52 338⇓*i*P **P 17 13 19.6 -1.7**
comp=Z,133nm,1.0s,mb5.5
KONS Konsvik 64.64 339 *e*P **P 17 13 22.0 0.0**
STOK Stokkvaagen 64.79 339 *e*P **P 17 13 22.3 -0.7**
MBWA Marble Bar 64.88 200 *e*P **P 17 13 23.5 -0.6**
MBWA Marble Bar 64.88 200 *e*P **P 17 13 23.5 -0.6**
comp=Z,57nm,1.4s,mb5.0
ASAR Alice Springs 65.03 185 P **P 17 13 24.9 0.0**
comp=Z,24nm,0.8s,mb4.8,baz=7.3,slow=5.9,SNR=171
ASAR pP pP 17 14 11.8 -1.7
comp=Z,14nm,1.0s,baz=5.8,slow=5.2,SNR=2.5
ASAR S S 17 21 51.0 +0.9
comp=Z,3.6nm,1.0s,baz=11,slow=15,SNR=12
ASAR PKP2bc 17 42 10.6
comp=Z,1.1nm,1.0s,baz=170,slow=4.1,SNR=4.3
ASAR Alice Springs 65.03 185 P **P 17 13 25.0 0.0**
ASAR *PP pP 17 14 11.8 -1.7
ASAR S S 17 21 51.0 +1.0
ASAR Alice Springs 65.03 185 P **P 17 13 24.9 0.0**
ASAR pP pP 17 14 11.8 -1.7
ASAR S S 17 21 51.0 +0.9
ASAR ⇑*e* 17 42 10.6
NLWA Neilton Lookou 65.07 48⇓P **P 17 13 25.7 +0.6**
baz=65,SNR=26
NLWA Neilton Lookou 65.07 48 *e*P **P 17 13 25.6 +0.5**
comp=Z,207nm,1.1s,mb5.7
A05A Maple Falls 65.13 46⇑P **P 17 13 25.1 -0.4**
baz=65
A05A ⇑S S 17 21 51.6 +0.8
baz=65
GNW Green Mountain 65.55 47 *e*P **P 17 13 28.4 +0.2**
comp=Z,165nm,1.9s,mb5.3
VSU Vasula 65.67 328 *i* P **P 17 13 28.7 0.0**
VSU Vasula 65.67 328 *i* P **P 17 13 28.7 0.0**
JCW Jim Creek 65.68 46 P **P 17 13 29.2 +0.2**
B06A Marblemount 65.73 46⇑P **P 17 13 28.9 -0.5**
baz=66,SNR=7.6
B06A ⇓S S 17 21 59.3 +1.2
baz=66
RPW Rockport 65.75 46 P **P 17 13 29.2 -0.3**
A07A Ashnola River, 66.01 45⇑P **P 17 13 30.8 -0.2**
baz=66,SNR=25
A07A ⇓S S 17 22 02.7 +1.2
baz=66
F03A Seaside 66.08 49⇓P **P 17 13 32.2 +0.5**
baz=66,SNR=12
SUMG Summit 66.19 359 *e*P **P 17 13 32.5 +0.6**
comp=Z,66nm,0.6s,mb5.4
SUMG Summit 66.19 359⇓*i*P **P 17 13 32.6 +0.7**
comp=Z,64nm,0.8s,mb5.3
SUMG *i* S S 17 22 05.3 +2.3
D05A Enumclaw 66.23 47⇓P **P 17 13 33.4 +0.9**
baz=66,SNR=16
HEBO Mount Hebo 66.39 50 *e*P **P 17 13 34.0 +0.4**
comp=Z,619nm,1.6s,mb6.0
DGRG David-gareji 66.46 305 P **P 17 13 34.2 +0.1**
DGRG S S 17 22 07.9 +0.7
LON Longmire 66.59 48 *e*P **P 17 13 34.5 -0.3**
LON pmax pmax
comp=Z,74nm,1.2s,mb5.2
LON Longmire 66.59 48 *e*P **P 17 13 34.5 -0.3**
comp=Z,74nm,1.2s,mb5.2
ZEI Tsey 66.59 307 *e*P **P 17 13 34.7 -0.2**
ZEI pmax pmax
comp=Z,330nm,1.4s,mb5.8
ZEI pmax pmax
comp=N,335nm,1.9s
ZEI pmax pmax
comp=E,221nm,1.2s
TDL Tradedollar La 66.60 48 P **P 17 13 35.5 +0.7**
KIV Kislovodsk 66.62 309 P **P 17 13 36.9 +1.8**
comp=E,5μm,1.2s,mb7.0
KIV Kislovodsk 66.62 309*d i*P **P 17 13 35.9 +0.8**
KIV *e* 17 13 59.5
KIV *e**PP pP 17 14 25.0 +1.2
KIV *e*PPP 17 17 43.8
KIV *e*S S 17 22 11.4 +2.3
KIV pmax pmax
comp=Z,1μm,1.2s,mb6.4
KIV MLR MLR
comp=Z,388nm,17.0s
KIV Kislovodsk 66.62 309 *e*P **P 17 13 35.4 +0.3**
comp=Z,1μm,1.2s,mb6.4
KIV Kislovodsk 66.62 309 P **P 17 13 36.3 +1.2**
SNR=304
KIV P 17 13 36.3
SNR=304
MTA Mtatsminda 66.67 306 P **P 17 13 35.6 +0.2**
MTA S S 17 22 08.7 -1.1
TBLG Delisi 66.69 306 *i* P **P 17 13 35.9 +0.4**
TBLG *e*S S 17 22 11.5 +1.6
TBLG Delisi 66.69 306 P **P 17 13 35.9 +0.4**
TBLG S S 17 22 11.5 +1.6
F04A Amboy 66.73 49⇑P **P 17 13 35.9 +0.2**
baz=66,SNR=23
WPW White Pass 66.76 48 P **P 17 13 36.3 +0.4**
MTMW Mount Mitchell 66.79 49 P **P 17 13 36.7 +0.6**
KEH Kehvi 66.84 307 P **P 17 13 36.1 -0.4**
ETW Entiat 66.89 46 *e*P **P 17 13 36.6 -0.1**
comp=Z,38nm,0.7s,mb5.1
GOR Gori 66.92 306 P **P 17 13 38.3 +1.3**
ONI Oni 66.96 307 P **P 17 13 38.2 +0.9**
ONI S S 17 22 15.1 +1.9
B08A Colville Reser 66.98 45⇑P **P 17 13 36.9 -0.4**
baz=67,SNR=22
B08A ⇓S S 17 22 13.6 +0.4
baz=67
EDM Edmonton 66.98 39 *e*P **P 17 13 36.7 -0.5**
COR Corvallis 67.02 50 *e*P **P 17 13 37.7 +0.2**
COR pmax pmax
comp=Z,458nm,1.3s,mb6.0
COR Corvallis 67.02 50 *e*P **P 17 13 37.6 +0.1**
comp=Z,458nm,1.3s,mb6.0
G04A Mulno 67.12 49⇑P **P 17 13 38.3 +0.1**
baz=67,SNR=12
SCO Scoresbysund 67.46 353 *i* P **P 17 13 40.2 +0.3**
SCO pmax pmax
comp=Z,16nm,0.7s,mb4.8
SCO Scoresbysund 67.46 353 *i* P **P 17 13 40.2 +0.3**
comp=Z,16nm,0.7s,mb4.8
SCO Scoresbysund 67.46 353 *i* P **P 17 13 40.2 +0.3**
comp=Z,16nm,0.7s,mb4.8
EIDS Eidsvold 67.48 168 *e*P **P 17 13 40.5 0.0**
comp=Z,90nm,1.6s,mb5.2
HOOD Mount Hood Mea 67.52 49 *e*P **P 17 13 41.2 +0.5**
comp=Z,2μm,1.6s,mb6.5
A10A Northport 67.53 44⇑P **P 17 13 40.4 -0.4**
baz=67
B09A Rice 67.57 45⇑P **P 17 13 40.7 -0.2**
baz=67,SNR=29
B09A ⇑S S 17 22 20.5 +0.3
baz=67
H04A Detroit Lake 67.60 50⇓P **P 17 13 41.4 +0.2**
baz=67,SNR=59
GNI Garni 67.60 304*d i*P **P 17 13 42.6 +1.3**
GNI Garni 67.60 304 *e*P **P 17 13 42.4 +1.0**
comp=Z,520nm,1.4s,mb6.0
GNI Garni 67.60 304 P **P 17 13 43.0 +1.7**
SNR=54
GNI P 17 13 43.0
SNR=54
VFP Flag Point 67.63 49 P **P 17 13 41.9 +0.5**
IZAR Zarasai 67.65 326 *e*P **P 17 13 41.8 +0.4**
IZAR AMB AMB 17 13 43.5
comp=Z,69nm,0.6s,mb5.5
IZAR *e*PP PP 17 16 06.7 -6.0
IDID Didziasalis 67.73 325 *e*P **P 17 13 42.3 +0.5**
IDID AMB AMB 17 13 44.3
comp=Z,83nm,1.2s,mb5.2
IDID *e*PP PP 17 16 07.8 -5.7
IDID *e*S S 17 22 22.0 +0.1
MICGM Minsk 67.77 324⇓*i*P **P 17 13 40.0 -2.1**
MNK Minsk 67.79 324⇓*i*P **P 17 13 40.0 -2.2**
MNK *e**PP pP 17 14 32.0 +0.9
MNK *e* 17 16 10.0
MNK *e*PPP 17 17 48.0
MNK *e*S S 17 22 22.0 -0.7
MNK pmax pmax
comp=Z,840nm,1.0s,mb6.3
MNK pmax pmax
comp=E,610nm,1.5s
MNK pmax pmax
comp=N,660nm,1.2s
ISAL Salakas 67.82 326 *e*P **P 17 13 43.0 +0.6**
ISAL AMB AMB 17 13 44.9
comp=Z,112nm,0.9s,mb5.5
ISAL *e*S S 17 22 23.4 +0.4
C09A Chrisman Ranch 67.88 45⇓P **P 17 13 42.5 -0.4**
baz=68,SNR=20
OD2 Odessa Site #2 67.90 46 *e*P **P 17 13 42.4 -0.6**
comp=Z,154nm,1.2s,mb5.5
IIGN Ignalina 67.93 325 *e*P **P 17 13 43.6 +0.6**
IIGN AMB AMB 17 13 45.4
comp=Z,115nm,0.7s,mb5.6
IIGN *e*PP PP 17 16 09.1 -6.0
IIGN *e*S S 17 22 23.8 -0.5
D08A Wollman Farm, 67.99 46⇓P **P 17 13 43.3 -0.3**
baz=68,SNR=16
NACGM Naroch 67.99 325 *e*P **P 17 13 41.0 -2.4**
RSW Rattlesnake Hi 68.03 47 *e*P **P 17 13 44.0 +0.2**
comp=Z,403nm,1.6s,mb5.8
HAWA Hanford 68.06 47 *e*P **P 17 13 43.9 -0.1**
comp=Z,263nm,1.4s,mb5.7
B10A Chitwood Farm, 68.13 44⇓P **P 17 13 44.5 +0.1**
baz=68
F07A Phinny Hill Vi 68.14 48⇑P **P 17 13 44.8 +0.3**
baz=68,SNR=11
G06A Carlson Farm, 68.15 48⇓P **P 17 13 44.6 0.0**
baz=68,SNR=30
A11A Hall Mountain, 68.17 43⇓P **P 17 13 45.2 +0.6**
baz=68,SNR=56
DZM Mont Dzumac 68.18 153 *e*P **P 17 13 46.2 +1.2**
comp=Z,295nm,1.4s,mb5.7
DZM *e*S S 17 22 30.1 +2.2
comp=Z,2μm,33.5s
DZM *e*LQ 17 31 39.1
comp=Z,1μm,25.2s
DZM *e*LR LR 17 34 47.9
comp=Z,547nm,24.5s
DZM Mont Dzumac 68.18 153 *e*P **P 17 13 45.5 +0.6**
comp=Z,181nm,1.4s,mb5.5
NEW Newport 68.20 44 *e*P **P 17 13 44.6 -0.3**
NEW pmax pmax
comp=Z,54nm,0.8s
NEW Newport 68.20 44 *e*P **P 17 13 44.6 -0.3**
comp=Z,54nm,0.8s,mb5.2
E08A Dider Farm, El 68.26 47⇑P **P 17 13 45.1 -0.1**
baz=68,SNR=13
D09A Jones Farm, Ri 68.32 46⇓P **P 17 13 45.3 -0.3**
baz=68,SNR=14
C10A Spilker Farm, 68.38 45⇓P **P 17 13 45.9 -0.2**
baz=68,SNR=6.3
HUMO Hull Mountain 68.39 52 *e*P **P 17 13 46.3 +0.1**
comp=Z,122nm,1.5s,mb5.3
B11A Sandpoint 68.49 44⇓P **P 17 13 47.0 +0.4**
baz=68,SNR=37
A12A Yaak River Ran 68.55 43⇑P **P 17 13 47.0 0.0**
baz=68,SNR=5.1
SOC Sochi 68.58 310*d i*P **P 17 13 47.5 +0.2**
SOC *e* 17 14 09.7
SOC *e**PP pP 17 14 34.4 -1.9
SOC *e* 17 16 18.8
SOC *i* S S 17 22 32.8 +0.5
SOC *i* *SS 17 23 24.4
SOC *e*SSS 17 30 08.6
SOC pmax pmax
comp=Z,407nm,1.2s,mb5.9
VIPM Ingram Point 68.60 49 P **P 17 13 47.8 +0.4**
E09A Wood Farm, Sta 68.74 46⇓P **P 17 13 48.2 0.0**
baz=68,SNR=16
F08A Pendleton 68.84 47⇓P **P 17 13 49.0 +0.1**
baz=69,SNR=9.1
B12A Libby 68.88 43⇓P **P 17 13 49.1 +0.1**
baz=69,SNR=5.5
D10A Wagner Farm, O 68.88 45⇑P **P 17 13 48.4 -0.6**
baz=69,SNR=14
HATD Hatta, Dubai 68.90 285 P **P 17 13 50.8 +1.2**
SNR=36
G08A Pilot Rock 69.05 48⇑P **P 17 13 50.2 0.0**
baz=69,SNR=24
LNOR Lincton Mounta 69.06 47 *e*P **P 17 13 50.3 0.0**
LNOR pmax pmax
comp=Z,170nm,1.4s,mb5.5
LNOR Lincton Mounta 69.06 47 *e*P **P 17 13 50.3 0.0**
comp=Z,170nm,1.4s,mb5.5
YBH Yreka Blue Hor 69.07 52 *e*P **P 17 13 50.8 +0.4**
YBH pmax pmax
comp=Z,142nm,1.4s
YBH Yreka Blue Hor 69.07 52 *e*P **P 17 13 50.8 +0.4**
comp=Z,142nm,1.4s,mb5.4
ANN Anapa 69.13 312*c i*P **P 17 13 50.2 -0.5**
ANN *e* 17 14 12.9
ANN *e**PP pP 17 14 37.7 -2.0
ANN *i* 17 16 25.8
ANN *i* S S 17 22 39.7 +0.9
ANN *e*SS SS 17 27 12.2 +3.7
ANN pmax pmax
comp=N,96nm,1.8s
ANN pmax pmax
comp=E,153nm,1.8s
ANN pmax pmax
comp=Z,533nm,1.8s,mb5.9
MSVF Nonsavu 69.14 140 P **P 17 13 53.0 +2.1**
comp=Z,366nm,1.4s,mb5.8,SNR=5.7
MSVF Nonsavu 69.14 140 *e*P **P 17 13 52.9 +1.9**
comp=Z,177nm,1.5s,mb5.5
MSVF Nonsavu 69.14 140 P **P 17 13 52.5 +1.6**
comp=Z,366nm,1.4s,mb5.8,SNR=5.7
NAZ Nazwa, Dubai 69.14 285 P **P 17 13 52.0 +0.9**
SNR=32
E10A Myers Farm, Un 69.32 46⇓P **P 17 13 51.7 -0.1**
baz=69,SNR=29
FAQ Al Faqa, Dubai 69.34 285 P **P 17 13 52.8 +0.5**
SNR=33
NB2 NORSAR Subarra 69.34 336 P **P 17 13 51.3 -0.4**
comp=Z,102nm,0.8s,mb5.5,baz=40,slow=6.5
NOA NORSAR Array B 69.34 336 P **P 17 13 51.4 -0.3**
comp=Z,65nm,0.7s,mb5.4,baz=39,slow=6.2,SNR=336
NOA PP PP 17 16 21.0 -6.1
comp=Z,7.6nm,0.7s,baz=39,slow=7.8,SNR=4.6
F09A S2 Ranch, Elgi 69.37 47⇑P **P 17 13 52.0 -0.2**
baz=69
D11A Klaveano Farm, 69.38 45⇓P **P 17 13 51.7 -0.5**
baz=69,SNR=32
C12B Naegeli Ranch, 69.42 44⇓P **P 17 13 52.0 -0.4**
baz=69
I07A Izee 69.49 49⇑P **P 17 13 53.0 +0.1**
baz=69,SNR=52
B13A Whitefish 69.51 43⇓P **P 17 13 53.2 +0.3**
baz=69,SNR=37
K05A Summer Lake 69.53 51⇓P **P 17 13 53.9 +0.8**
baz=69,SNR=96
F10A Beach Ranch, E 69.58 46⇑P **P 17 13 53.3 -0.1**
baz=69,SNR=17
NAO01 NORSAR Array S 69.60 336 *e*P **P 17 13 52.5 -0.8**
comp=Z,42nm,0.7s,mb5.2
ASUD Al Ashush, Dub 69.60 285 P **P 17 13 55.2 +1.3**
SNR=43
AKASG Malin Array Be 69.65 320 P **P 17 13 53.4 -0.3**
comp=Z,32nm,0.3s,mb5.4,baz=45,slow=6.4,SNR=442
AKASG pP pP 17 14 41.0 -1.9
comp=Z,14nm,0.7s,baz=46,slow=6.3,SNR=1.8
AKASG PP PP 17 16 32.5 +2.4
comp=Z,6.8nm,0.6s,baz=39,slow=8.9,SNR=5.8
AKASG S S 17 22 44.2 -0.4
comp=Z,0.4nm,0.4s,baz=51,slow=11,SNR=8.9
AKASG Malin Array Be 69.65 320 P **P 17 13 53.4 -0.3**
AKASG pP pP 17 14 41.0 -1.9
AKASG PP PP 17 16 32.5 +2.4
AKASG S S 17 22 44.2 -0.4
AKBB Malin Array Si 69.65 320 *e*P **P 17 13 53.4 -0.3**
A14A Double T Ranch 69.66 42⇓P **P 17 13 53.6 -0.3**
baz=69,SNR=47
KIEV Kiev 69.66 320 *e*P **P 17 13 53.3 -0.5**
KIEV pmax pmax
comp=Z,382nm,1.4s,mb5.8
KIEV Kiev 69.66 320 *e*P **P 17 13 53.3 -0.5**

comp=Z,382nm,1.4s,mb5.8
BSMT Bassoo Peak 69.68 44 *e*P **P 17 13 54.2 +0.2**
comp=Z,215nm,1.7s,mb5.5
H08A Prairie City 69.69 48 ⇓P **P 17 13 54.4 +0.2**
baz=69,SNR=57
WDC Whiskeytown Da 69.87 53 *e*P **P 17 13 55.3 0.0**
WDC pmax pmax
comp=Z,133nm,1.3s,mb5.4
WDC Whiskeytown Da 69.87 53 *e*P **P 17 13 55.3 0.0**
comp=Z,133nm,1.3s,mb5.4
E11A Bogner Ranch, 69.89 46 ⇑P **P 17 13 54.8 -0.5**
baz=70,SNR=37
C13A Hot Springs 69.90 44 ⇓P **P 17 13 55.6 +0.2**
baz=70,SNR=54
A15A Johnson Ranch, 70.00 42 ⇑P **P 17 13 55.4 -0.6**
baz=70,SNR=62
JTMT Jette 70.01 43 *e*P **P 17 13 56.3 +0.3**
comp=Z,93nm,1.0s,mb5.4
G10A Bishop Farm, J 70.06 47 ⇓P **P 17 13 56.3 -0.1**
baz=70,SNR=59
YBMT Yellow Bay 70.08 43 *e*P **P 17 13 56.5 +0.1**
comp=Z,105nm,1.3s,mb5.3
B14A Marquette Ranc 70.13 43 ⇑P **P 17 13 57.1 +0.4**
baz=70,SNR=72
SUW Suwalki 70.13 326 *e*P **P 17 13 56.2 -0.4**
comp=Z,500nm,1.6s,mb5.9
SUW *e*pP pP 17 14 42.2 -3.6
SUW *e*PP PP 17 16 32.2 -1.9
SUW *e*S S 17 22 50.1 -0.1
SUW *e*SKS 17 23 30.8
SUW Suwalki 70.13 326⇓*e*P **P 17 13 56.2 -0.4**
SUW *e**PP pP 17 14 42.2 -3.6
SUW *e* 17 16 32.2
SUW *e*S S 17 22 50.1 0.0
SUW *e* 17 23 30.8
SUW pmax pmax
comp=Z,500nm,1.6s,mb5.9
SUW Suwalki 70.13 326 *e*P **P 17 13 56.1 -0.6**
comp=Z,389nm,1.4s,mb5.8
H09A Durkee 70.16 48 ⇑P **P 17 13 57.3 +0.3**
baz=70,SNR=33
E12A Beaver Dam Sad 70.19 45 ⇑P **P 17 13 57.3 +0.2**
baz=70,SNR=65
F11A Grangeville 70.21 46 ⇑P **P 17 13 57.0 -0.3**
baz=70,SNR=43
BMO Blue Mountains 70.24 47 *e*P **P 17 13 57.4 -0.1**
BMO pmax pmax
comp=Z,26nm,0.6s,mb5.0
BMO Blue Mountains 70.24 47 *e*P **P 17 13 57.4 -0.1**
comp=Z,26nm,0.6s,mb5.0
SWMT Swartz Lake 70.31 44 *e*P **P 17 13 57.8 0.0**
comp=Z,118nm,1.2s,mb5.4
D13A Huson 70.34 44 ⇓P **P 17 13 57.7 -0.3**
baz=70,SNR=57
OSL Oslo 70.36 335 *e*P **P 17 13 57.5 -0.4**
OSL AMb AMB 17 13 59.5
comp=Z,6μm,1.1s
OSL Oslo 70.36 335 *e*P **P 17 13 57.5 -0.4**
comp=Z,6μm,1.1s
MOD Modoc 70.38 51 *e*P **P 17 13 58.2 -0.1**
comp=Z,94nm,1.5s,mb5.2
MEEK Meekatharra 70.40 199 *e*P **P 17 13 58.3 -0.2**
G11A Walters Elk Ra 70.46 46 ⇑P **P 17 13 58.4 -0.4**
baz=70,SNR=102
B15A Bradely Ranch, 70.52 42 ⇑P **P 17 13 59.0 -0.1**
baz=70,SNR=154
J08A Circle Bar Ran 70.53 49 ⇑P **P 17 13 59.5 +0.3**
baz=70,SNR=35
I09A Lost Marbles R 70.55 48 ⇑P **P 17 13 59.7 +0.3**
baz=70,SNR=38
A16A West Butte Ran 70.58 41 ⇑P **P 17 13 58.8 -0.6**
baz=70,SNR=39
HYA Hoyanger 70.73 338⇓*i*P **P 17 14 00.9 +0.8**
HYA AMB AMB 17 14 02.8
comp=Z,94nm,1.0s,mb5.4
SLMT Seeley Lake 70.75 44 *e*P **P 17 14 00.1 -0.3**
comp=Z,63nm,0.6s,mb5.4
F12A Elk City 70.78 46 ⇓P **P 17 14 00.8 +0.1**
baz=70,SNR=138
MSO Missoula 70.78 44 *e*P **P 17 14 00.0 -0.7**
comp=Z,132nm,1.5s,mb5.3
FCC Fort Churchill 70.81 26 *e*P **P 17 13 59.9 -0.7**
comp=Z,4.9nm,1.3s
D14A Greenough 70.84 44 ⇓P **P 17 14 00.8 -0.3**
baz=70,SNR=48
C15A Salmond Ranch, 70.85 43 ⇑P **P 17 14 01.7 +0.6**
baz=71,SNR=174
SIM Simferopol' 70.87 313*d i*P **P 17 14 02.7 +1.4**
SIM *i* *PP pP 17 14 54.0 +3.4
SIM *i* 17 16 42.0
SIM *i*S S 17 23 01.6 +2.6
SIM pmax pmax
comp=Z,345nm,1.6s,mb5.7
B16A M & M Farms, S 70.88 42 ⇓P **P 17 14 00.9 -0.4**
baz=71,SNR=42
E13A Victor 70.90 44 ⇓P **P 17 14 00.6 -0.9**
baz=71,SNR=14
FFC Flin Flon 70.92 32 P **P 17 14 01.7 +0.3**
comp=Z,778nm,0.8s,mb6.4,SNR=57
FFC Flin Flon 70.92 32 *i* P **P 17 14 00.9 -0.5**
FFC Flin Flon 70.92 32 *e*P **P 17 14 00.7 -0.7**
comp=Z,276nm,1.3s,mb5.7
KONO Kongsberg 70.94 335 *e*P **P 17 14 01.7 +0.4**
KONO *e*S S 17 23 00.5 +1.3
KONO Kongsberg 70.94 335 *e*P **P 17 14 01.2 -0.2**
KONO pmax pmax
comp=Z,44nm,0.6s,mb5.3
KONO Kongsberg 70.94 335 *e*P **P 17 14 01.2 -0.2**
comp=Z,44nm,0.6s,mb5.3
J09A Fry Pan Ranch, 70.94 49 ⇓P **P 17 14 01.9 +0.2**
baz=71,SNR=77
I10A Payette 71.00 48 ⇓P **P 17 14 02.3 +0.3**
baz=71,SNR=9.9
WVOR Wild Horse Val 71.02 50 *e*P **P 17 14 02.3 +0.1**
WVOR pmax pmax
comp=Z,218nm,1.5s,mb5.6
WVOR Wild Horse Val 71.02 50 *e*P **P 17 14 02.3 +0.1**
comp=Z,218nm,1.5s,mb5.6
A17A Triple J Farms 71.03 41 ⇑P **P 17 14 02.0 -0.1**
baz=71,SNR=98
H11A Donnelly 71.05 47 ⇓P **P 17 14 01.8 -0.5**
baz=71,SNR=30
CHMT Chamberlain Mo 71.08 44 *e*P **P 17 14 01.8 -0.7**
comp=Z,14nm,0.6s,mb4.8
SUE Sulen 71.22 338 *e*P **P 17 14 03.3 +0.3**
F13A Darby 71.25 45 ⇓P **P 17 14 02.6 -0.9**
baz=71,SNR=17
E14A Clinton 71.28 44 ⇑P **P 17 14 03.3 -0.4**
baz=71,SNR=42
D15A Lincoln 71.38 43 ⇓P **P 17 14 04.0 -0.3**
baz=71,SNR=7.4
B17A L&G Farms, Che 71.42 41 ⇑P **P 17 14 04.3 -0.2**
baz=71,SNR=42
J10A Berg Farm, Mel 71.45 48 ⇑P **P 17 14 04.4 -0.3**
baz=71
A18A Metzger Ranch, 71.46 40 ⇑P **P 17 14 04.4 -0.4**
baz=71,SNR=79
SFJD Kangerlussuaq 71.56 4 *i* P **P 17 14 05.5 +0.5**
SFJD *i* 17 14 19.0
SFJD *i*S S 17 23 04.0 -2.2
SFJD Kangerlussuaq 71.56 4 *e*P **P 17 14 05.0 0.0**
comp=Z,7.7nm,0.8s
SFJD Kangerlussuaq 71.56 4 *i* P **P 17 14 05.5 +0.5**
comp=Z,16nm,0.8s,mb4.7
SFJD *i* 17 14 19.0
SFJD *i*S S 17 23 04.0 -2.2
ASK Askoy 71.57 338 *e*P **P 17 14 05.2 +0.1**
I11A Placerville 71.58 47 ⇓P **P 17 14 05.1 -0.5**
baz=71,SNR=21
E15A Deer Lodge 71.72 44 ⇓P **P 17 14 06.0 -0.3**
baz=71,SNR=62
F14A Wisdom 71.75 45 ⇑P **P 17 14 06.1 -0.4**
baz=72,SNR=16
G13A Cobalt 71.76 46 ⇑P **P 17 14 05.8 -0.7**
baz=72,SNR=25
H12A Diamond D Ranc 71.78 46 ⇑P **P 17 14 06.6 -0.1**
baz=72,SNR=90
K10A MacKenzie Ranc 71.80 49 ⇑P **P 17 14 07.4 +0.5**
baz=72,SNR=76
B18A Beardsley Farm 71.85 41 ⇑P **P 17 14 07.0 -0.1**
baz=72,SNR=114
C17A Wharram Farm, 71.88 42 ⇓P **P 17 14 06.6 -0.6**
baz=72,SNR=32
D16A Dana Ranch, Ca 71.88 43 ⇑P **P 17 14 07.2 -0.1**
baz=72,SNR=53
HRY Holter Researc 71.95 43 *e*P **P 17 14 07.8 +0.1**
comp=Z,120nm,0.7s,mb5.6

MFID Camas Ranch 71.98 48 ⇑P **P 17 14 08.0 +0.1**
baz=72,SNR=57
UMR Umm Al-Rimmam 72.00 294 *e*P **P 17 14 07.6 -0.7**
UMR AMb AMB 17 14 09.5
comp=Z,289nm,0.8s,mb6.0
G14A Jackson 72.07 45 ⇓P **P 17 14 07.5 -1.0**
baz=72
H13A Challis 72.09 46 ⇓P **P 17 14 08.1 -0.4**
baz=72,SNR=66
MIB Mutribah 72.11 294 *e*P **P 17 14 08.2 -0.7**
MIB AMb AMB 17 14 10.5
comp=Z,424nm,1.0s,mb6.0
EGMT Eagleton 72.11 41 ⇑P **P 17 14 08.4 -0.2**
baz=72,SNR=123
EGMT Eagleton 72.11 41 *e*P **P 17 14 08.4 -0.2**
comp=Z,323nm,1.1s,mb5.9
I12A Atlanta 72.11 47 ⇑P **P 17 14 09.0 +0.3**
baz=72,SNR=93
E16A East Helena 72.15 43 ⇑P **P 17 14 08.9 0.0**
baz=72,SNR=23
F15A Butte 72.19 44 ⇑P **P 17 14 09.3 +0.2**
baz=72,SNR=116
LRM Limekiln Ridge 72.22 44 *e*P **P 17 14 09.2 -0.1**
comp=Z,2μm,1.5s,mb6.4
D17A Six Diamond Ra 72.24 42 ⇑P **P 17 14 09.1 -0.3**
baz=72,SNR=55
KBD Kabd 72.25 293 *e*P **P 17 14 08.8 -0.9**
KBD AMb AMB 17 14 11.7
comp=Z,230nm,1.3s,mb5.6
K11A Parker Ranch, 72.28 48 ⇑P **P 17 14 09.6 -0.1**
baz=72,SNR=17
WAR Warsaw 72.31 325 *e*P **P 17 14 10.6 +0.9**
WAR *e*pP pP 17 15 01.9 +2.7
WAR *e*S S 17 23 19.2 +4.1
WAR *e*SKS 17 23 55.3
KIS Kishinev 72.31 318 *i* P **P 17 14 07.0 -2.8**
comp=Z,500nm,1.6s,mb5.9
KIS *i* pP pP 17 14 57.0 -2.3
KIS Kishinev 72.31 318 *i* PP PP 17 16 52.0 -0.9
KIS Kishinev 72.31 318 *e*PPP 17 18 34.0
KIS *i* S S 17 23 11.0 -4.4
KIS *e*SKS 17 23 30.0
KIS *e*sS 17 24 16.0
KIS Kishinev 72.31 318 *e*PS sS 17 24 36.0 -5.8
KIS LRM 17 48 42.0
comp=Z,600nm,18.0s
KIS Kishinev 72.31 318κ *i*P **P 17 14 07.0 -2.8**
KIS *e**PP pP 17 14 57.0 -2.3
KIS *i* 17 16 52.0
KIS *e*PPP 17 18 34.0
KIS *i* S S 17 23 11.0 -4.4
KIS *e* 17 23 50.0
KIS *e**SS 17 24 16.0
KIS pmax pmax
comp=Z,540nm,1.6s,mb5.9
KIS MLR MLR
comp=Z,600nm,18.0s
KIS MLR MLR
comp=Z,600nm,18.0s
WCN Washoe City 72.34 53 ⇓P **P 17 14 10.4 +0.3**
baz=72,SNR=17
QRN Al-Qurain 72.36 293 *e*P **P 17 14 09.6 -0.8**
QRN AMb AMB 17 14 11.8
comp=Z,426nm,0.8s,mb6.2
DLMT Dillon 72.45 45 *e*P **P 17 14 10.7 +0.1**
comp=Z,163nm,0.7s,mb5.8
L10A Juniper Basin 72.48 49 ⇓P **P 17 14 11.3 +0.4**
baz=72,SNR=41
J12A Stokes Ranch, 72.49 47 ⇑P **P 17 14 11.3 +0.4**
baz=72,SNR=51
RDF Al-Radifah 72.50 293 *e*P **P 17 14 09.6 -1.6**
RDF AMb AMB 17 14 13.0
comp=Z,525nm,1.5s,mb6.0
NAY Al-Naaiem 72.52 294 *e*P **P 17 14 10.3 -1.1**
NAY AMb AMB 17 14 12.4
comp=Z,204nm,0.9s,mb5.8
H14A Leadore 72.53 46 ⇓P **P 17 14 10.6 -0.6**
baz=72,SNR=16
I13A Wildhorse Cree 72.59 46 ⇑P **P 17 14 12.0 +0.5**
baz=72,SNR=181
E17A Martinsdale 72.62 43 ⇓P **P 17 14 12.1 +0.5**
baz=72,SNR=118
BSD Bornholm Skovb 72.63 330⇓*i*P **P 17 14 11.1 -0.4**
BSD pmax pmax
comp=Z,86nm,0.9s,mb5.4
BSD MLR MLR
comp=Z,250nm,18.0s
BSD Bornholm Skovb 72.63 330⇓*i*P **P 17 14 11.1 -0.4**
comp=Z,86nm,0.9s,mb5.4
BSD Bornholm Skovb 72.63 330⇓*i*P **P 17 14 11.1 -0.4**
comp=Z,86nm,0.9s,mb5.4
BSD
comp=Z,250nm,18.0s
FORT Forrest 72.65 190 *e*P **P 17 14 12.7 +0.9**
comp=Z,11nm,0.6s,mb4.7
D18A Linhart Farms, 72.65 42 ⇓P **P 17 14 12.0 +0.2**
baz=72,SNR=53
HLID Hailey 72.66 47 ⇓P **P 17 14 12.4 +0.4**
baz=72,SNR=29
HLID Hailey 72.66 47 *e*P **P 17 14 12.1 +0.2**
comp=Z,106nm,1.4s,mb5.3
MCMT McKenzie Canyo 72.67 45 *e*P **P 17 14 11.6 -0.4**
comp=Z,17nm,1.2s,mb4.6
F16A Kennard Place, 72.68 44 ⇓P **P 17 14 12.0 +0.1**
baz=72,SNR=46
LVV L'vov 72.69 322 *e*P **P 17 14 12.6 +0.6**
LVV *e**PP pP 17 15 04.0 +2.5
LVV *e* 17 16 58.2
LVV *e*PPP 17 18 44.0
LVV *e*S S 17 23 21.6 +2.0
LVV *e*SS SS 17 28 01.0 -1.5
LVV MLR MLR
comp=E,300nm,13.0s
LVV MLR MLR
comp=Z,400nm,13.0s
LVV MLR MLR
comp=N,200nm,16.0s
SNART Snartemo 72.73 336⇓*i*P **P 17 14 12.3 +0.3**
SNART AMB AMB 17 14 13.0
comp=Z,91nm,1.7s,mb5.1
CMB Columbia Colle 72.76 54 *e*P **P 17 14 12.5 -0.1**
CMB pmax pmax
comp=Z,238nm,1.3s,mb5.7
CMB Columbia Colle 72.76 54 *e*P **P 17 14 12.4 -0.2**
comp=Z,238nm,1.3s,mb5.7
BOZ Bozeman (W) 72.77 44 ⇑P **P 17 14 13.0 +0.5**
baz=72,SNR=160
BOZ Bozeman (W) 72.77 44 *e*P **P 17 14 12.7 +0.2**
BOZ pmax pmax
comp=Z,189nm,1.3s,mb5.6
BOZ Bozeman (W) 72.77 44 *e*P **P 17 14 12.7 +0.2**
comp=Z,189nm,1.3s,mb5.6
M10A I.L. Ranch, Tu 72.80 50 ⇑P **P 17 14 13.6 +0.8**
baz=72,SNR=76
L11A Cat Creek Ranc 72.83 49 ⇓P **P 17 14 13.5 +0.6**
baz=72,SNR=111
J13A Cove Ranch, Pi 72.90 47 ⇓P **P 17 14 13.8 +0.4**
baz=73,SNR=35
I14A Mackay 72.94 46 ⇓P **P 17 14 13.9 +0.3**
baz=73,SNR=52
G16A Moss Hill, Enn 72.96 44 ⇓P **P 17 14 13.7 +0.1**
baz=73,SNR=41
K12A Draper Farm, C 73.00 48 ⇑P **P 17 14 14.1 +0.2**
baz=73,SNR=26
E18A Harlowton 73.03 42 ⇓P **P 17 14 14.4 +0.4**
baz=73,SNR=102
STKA Stephens Creek 73.07 178 *e*P **P 17 14 14.7 +0.4**
comp=Z,15nm,0.9s,mb4.6
STKA Stephens Creek 73.07 178 P **P 17 14 15.2 +0.9**
comp=Z,18nm,0.9s,mb4.7,baz=346,slow=7.0,SNR=23
STKA Stephens Creek 73.07 178 *e*P **P 17 14 14.5 +0.3**
comp=Z,3.2nm,0.8s
F17A Fitzpatrick Pl 73.09 43 ⇑P **P 17 14 14.7 +0.3**
baz=73,SNR=50
COP Copenhagen 73.10 332⇓*i*P **P 17 14 14.7 +0.4**
COP pmax pmax
comp=Z,56nm,0.8s,mb5.2
COP MLR MLR
comp=Z,110nm,19.0s
COP Copenhagen 73.10 332⇓*i*P **P 17 14 14.7 +0.4**
comp=Z,56nm,0.8s,mb5.2
COP LR LR
comp=Z,110nm,19.0s
COP Copenhagen 73.10 332⇓*i*P **P 17 14 14.7 +0.4**
comp=Z,56nm,0.8s,mb5.2
COP
comp=Z,110nm,19.0s

BMN Battle Mountai 73.11 51 *e*P **P 17 14 15.2 +0.5**
BMN pmax pmax
comp=Z,160nm,1.3s,mb5.5
BMN Battle Mountai 73.11 51 *e*P **P 17 14 15.2 +0.5**
comp=Z,160nm,1.3s,mb5.5
GKP Gorka Klasztor 73.12 328 *i* P **P 17 14 14.6 +0.2**
GKP *e*pP pP 17 15 01.8 -2.2
GKP *e*S S 17 23 25.8 +1.4
GKP Gorka Klasztor 73.12 328⇓*i*P **P 17 14 14.6 +0.1**
GKP *e**PP pP 17 15 01.8 -2.2
GKP *e*S S 17 23 25.7 +1.4
L12A House Creek Ra 73.26 48 ⇑P **P 17 14 16.1 +0.6**
baz=73,SNR=28
M11A Holland Ranch, 73.29 49 ⇓P **P 17 14 16.5 +0.9**
baz=73,SNR=82
J14A Carey 73.31 47 ⇑P **P 17 14 16.9 +1.1**
baz=73,SNR=99
N10A Dunphy 73.34 50 ⇓P **P 17 14 16.4 +0.4**
baz=73
MORW Morawa 73.39 201 *e*P **P 17 14 16.7 +0.5**
I15A Monteview 73.42 46 ⇑P **P 17 14 16.5 +0.1**
baz=73,SNR=5.4
QLMT Earthquake Lak 73.42 44 *e*P **P 17 14 16.7 +0.4**
comp=Z,15nm,0.5s,mb4.9
KWP Kalwaria Pacla 73.43 323 *e*P **P 17 14 17.2 +0.9**
comp=Z,1μm,1.7s,mb6.3
KWP *e*PcP PcP 17 14 29.4 -2.0
KWP *e*S S 17 23 29.5 +1.6
KWP Kalwaria Pacla 73.43 323⇓*e*P **P 17 14 17.2 +0.9**
KWP *e* 17 14 29.4
KWP *e*S S 17 23 29.5 +1.6
KWP pmax pmax
comp=Z,1μm,1.7s,mb6.3
KWP Kalwaria Pacla 73.43 323 *e*P **P 17 14 16.8 +0.4**
comp=Z,714nm,1.4s,mb6.1
KWP Kalwaria Pacla 73.43 323⇓*i*P **P 17 14 17.2 +0.9**
K13A Stover Farm, H 73.44 47 ⇓P **P 17 14 16.9 +0.4**
baz=73,SNR=27
G17A Pierce Place, 73.45 44 ⇑P **P 17 14 17.2 +0.7**
baz=73,SNR=30
F18A Big Timber 73.58 43 ⇓P **P 17 14 17.8 +0.5**
baz=73,SNR=159
H16A Russell Place, 73.60 44 ⇓P **P 17 14 18.0 +0.6**
baz=73,SNR=83
MUD Monsted U'grnd 73.62 334⇓*i*P **P 17 14 17.4 +0.1**
MUD *i* S S 17 23 31.3 +1.6
MUD pmax pmax
comp=Z,42nm,0.7s,mb5.2
MUD Monsted U'grnd 73.62 334⇓*i*P **P 17 14 17.4 +0.1**
comp=Z,42nm,0.7s,mb5.2
MUD *i* S S 17 23 31.3 +1.6
MUD Monsted U'grnd 73.62 334⇓*i*P **P 17 14 17.4 +0.1**
comp=Z,42nm,0.7s,mb5.2
MUD *i* S S 17 23 31.3 +1.6
O10A Cortez Mining, 73.62 51 ⇓P **P 17 14 18.4 +0.7**
baz=73,SNR=27
GCMT Greycliff 73.68 43 *e*P **P 17 14 18.3 +0.4**
comp=Z,158nm,1.2s,mb5.5
N11A Elko Archery C 73.72 50 ⇓P **P 17 14 18.7 +0.6**
baz=73
NVAR Mina Array Bea 73.77 53 P **P 17 14 19.1 +0.6**
comp=Z,58nm,0.8s,mb5.3,baz=289,slow=5.3,SNR=162
YMR Madison River 73.77 44 *e*P **P 17 14 19.0 +0.6**
comp=Z,249nm,1.3s,mb5.7
M12A Wells 73.80 49 ⇑P **P 17 14 19.5 +0.9**
baz=74,SNR=70
J15A Blackfoot 73.85 46 ⇓P **P 17 14 19.5 +0.6**
baz=74,SNR=37
YNR Norris Junctio 73.89 44 *e*P **P 17 14 20.4 +1.3**
comp=Z,102nm,1.3s,mb5.3
L13A Double Diamond 73.89 48 ⇑P **P 17 14 20.2 +1.0**
baz=74,SNR=7.1
MLAC Mammoth Lakes 73.96 54 ⇑P **P 17 14 20.3 +0.7**
baz=74
YFT Old Faithful 73.99 44 *e*P **P 17 14 21.5 +1.8**
comp=Z,85nm,0.9s,mb5.4
K14A Jones Ranch, D 74.02 47 ⇑P **P 17 14 20.5 +0.7**
baz=74,SNR=52
I16A Newdale 74.03 45 ⇓P **P 17 14 21.1 +1.2**
baz=74,SNR=84
ELK Elko 74.05 50 *e*P **P 17 14 20.6 +0.5**
ELK pmax pmax
comp=Z,157nm,1.6s
ELK Elko 74.05 50 *e*P **P 17 14 20.6 +0.5**
G18A Lazy EL Ranch, 74.06 43 ⇑P **P 17 14 19.4 -0.7**
baz=74,SNR=11
P10A Eureka 74.08 51 ⇓P **P 17 14 21.1 +0.8**
baz=74,SNR=20
N12A Clover Valley, 74.10 49 ⇓P **P 17 14 20.9 +0.6**
baz=74,SNR=63
N12A Clover Valley, 74.10 49 *e*P **P 17 14 20.9 +0.6**
comp=Z,178nm,1.2s,mb5.6
KOLS Kolonicke sedl 74.13 322 *e*P **P 17 14 21.0 +0.6**
KOLS *e* 17 17 05.6
KOLS *e*S S 17 23 36.3 +0.6
KOLS *e*SS SS 17 28 24.8 +0.4
KOLS pmax pmax
comp=Z,72nm,1.2s,mb5.2
KOLS Kolonicke sedl 74.13 322 *e*P **P 17 14 21.0 +0.6**
comp=Z,72nm,1.2s,mb5.2
KOLS *e*PP PP 17 17 05.6 -2.6
KOLS *e*S S 17 23 36.3 +0.6
KOLS *e*SS SS 17 28 24.8 +0.4
KOLS Kolonicke sedl 74.13 322 *e*P **P 17 14 21.0 +0.6**
KOLS *e*PP PP 17 17 05.6 -2.6
KOLS *e*S S 17 23 36.3 +0.6
KOLS *e*SS SS 17 28 24.8 +0.4
LKWY Lake 74.14 44 *e*P **P 17 14 22.5 +2.0**
LKWY pmax pmax
comp=Z,96nm,1.3s,mb5.3
LKWY Lake 74.14 44 *e*P **P 17 14 22.5 +2.0**
comp=Z,96nm,1.3s,mb5.3
VRI Vrincioaia 74.14 318 P **P 17 14 21.3 +0.8**
H17A Grant Village 74.16 44 ⇑P **P 17 14 22.7 +2.0**
baz=74,SNR=97
PLOR Plostina 74.19 318 P **P 17 14 21.5 +0.7**
PLOR Plostina 74.19 318⇓*i*P **P 17 14 21.3 +0.5**
TIRR Tirgusor 74.25 316 P **P 17 14 21.6 +0.5**
TIRR Tirgusor 74.25 316 *e*P **P 17 14 21.1 0.0**
comp=Z,95nm,1.3s,mb5.3
TIRR Tirgusor 74.25 316⇓*i*P **P 17 14 21.3 +0.2**
STHS Stebnicka Huta 74.25 323 *e*P **P 17 14 21.9 +0.8**
STHS *e* 17 17 04.5
STHS pmax pmax
comp=Z,145nm,1.6s,mb5.4
STHS Stebnicka Huta 74.25 323 *e*P **P 17 14 21.9 +0.8**
comp=Z,145nm,1.6s,mb5.4
STHS *e*PP PP 17 17 04.5 -4.7
STHS Stebnicka Huta 74.25 323 *e*P **P 17 14 21.9 +0.8**
STHS *e*PP PP 17 17 04.5 -4.7
M13A Montello 74.25 48 ⇓P **P 17 14 21.6 +0.3**
baz=74,SNR=40
M13A Montello 74.25 48 *e*P **P 17 14 21.5 +0.2**
comp=Z,119nm,1.2s,mb5.4
K15A Arbon 74.28 47 ⇑P **P 17 14 22.1 +0.8**
baz=74,SNR=37
OJC Ojcow 74.31 324 *i* P **P 17 14 21.1 -0.3**
OJC *e*PcP PcP 17 14 34.9 -0.2
OJC *e*pP pP 17 15 12.3 +1.2
OJC *e*PP PP 17 17 08.9 -0.8
OJC *e*S S 17 23 37.0 -0.6
OJC *e*SS SS 17 28 27.7 +0.7
OJC L 17 49 01.6
comp=Z,0.5nm,20.8s
IMW Indian Meadow 74.31 45 *e*P **P 17 14 22.5 +0.9**
comp=Z,93nm,0.8s,mb5.5
L14A Malta 74.32 47 ⇑P **P 17 14 22.3 +0.6**
baz=74,SNR=51
UZH Uzhgorod 74.34 322 *e*P **P 17 14 21.7 +0.1**
UZH *e* 17 17 07.0
UZH *e*S S 17 23 38.0 -0.1
UZH MLR MLR
comp=N,200nm,13.0s
UZH MLR MLR
comp=E,400nm,13.0s
UZH MLR MLR
comp=Z,300nm,13.0s
RLMT Red Lodge 74.34 43 ⇑P **P 17 14 22.3 +0.6**
baz=74
RLMT Red Lodge 74.34 43 *e*P **P 17 14 22.0 +0.3**
comp=Z,239nm,1.4s,mb5.6
DCID1 Drake Creek 74.39 45 *e*P **P 17 14 23.2 +1.2**
comp=Z,280nm,1.3s,mb5.7
DGMT Dagmar 74.46 38 ⇑P **P 17 14 22.1 -0.2**
baz=74,SNR=14

DGMT Dagmar 74.46 38 *eP* **P 17 14 22.0 -0.4**
comp=Z,344nm,1.3s,mb5.8
RRI2 Red Ridge 74.48 45 *eP* **P 17 14 23.5 +1.0**
comp=Z,195nm,1.1s,mb5.7
I17A Pilgrim Ck. 74.49 45 ⇑P **P 17 14 24.0 +1.4**
baz=74,SNR=42
BRTR Keskin Array B 74.54 310 P **P 17 14 23.4 +0.5**
comp=Z,25nm,0.6s,mb5.0,baz=82,slow=3.8,SNR=140
BRTR PP PP 17 17 12.1 +0.1
comp=Z,40nm,1.2s,baz=70,slow=5.4,SNR=9.7
BRTR Keskin Array B 74.54 310 *ceP* **P 17 14 23.3 +0.4**
BRTR pmax pmax
comp=Z,25nm,0.6s
P11A Circle Ranch, 74.54 51 ⇑P **P 17 14 23.3 +0.4**
baz=74,SNR=6.5
RCTC Rector, Farmer 74.57 55 ⇑P **P 17 14 22.6 -0.6**
baz=74
N13A Wendover, West 74.57 49 ⇓P **P 17 14 23.6 +0.5**
baz=74,SNR=11
N13A Wendover, West 74.57 49 *eP* **P 17 14 23.5 +0.4**
comp=Z,121nm,1.1s,mb5.4
TPAW Teton Pass 74.58 45 *eP* **P 17 14 24.1 +1.0**
comp=Z,201nm,1.4s,mb5.6
TRPA Tarpa 74.58 322 ⇓*i*P **P 17 14 23.9 +0.9**
M14A Sheep Mountain 74.62 48 ⇑P **P 17 14 23.9 +0.6**
baz=74,SNR=64
Q10A Clear Creek Ra 74.64 52 ⇓P **P 17 14 23.9 +0.4**
baz=74,SNR=33
O12A Currie 74.65 50 ⇑P **P 17 14 23.9 +0.3**
baz=74,SNR=59
NIE Niedzica 74.67 324 *eP* **P 17 14 24.7 +1.2**
LOHW Long Hollow 74.68 45 *eP* **P 17 14 24.4 +0.7**
comp=Z,314nm,1.8s,mb5.6
K16A Soda Springs 74.69 46 ⇑P **P 17 14 24.7 +1.0**
baz=74,SNR=46
TIN Tinemaha 74.70 54 ⇑P **P 17 14 24.2 +0.2**
baz=74,SNR=5.1
SNOW Snow King Moun 74.70 45 *eP* **P 17 14 24.7 +0.9**
comp=Z,71nm,1.2s,mb5.2
REDW Red Top Meadow 74.72 45 *eP* **P 17 14 24.4 +0.5**
comp=Z,144nm,1.3s,mb5.4
SMMC Simmler 74.74 56 ⇓P **P 17 14 24.6 +0.5**
baz=74
HVU Hansel Valley 74.75 47 *eP* **P 17 14 24.6 +0.5**
HVU pmax pmax
comp=Z,149nm,1.3s,mb5.5
HVU Hansel Valley 74.75 47 *eP* **P 17 14 24.6 +0.5**
comp=Z,149nm,1.3s,mb5.5
LAO LASA Array 74.77 40 *eP* **P 17 14 24.1 -0.1**
comp=Z,249nm,1.3s,mb5.7
J17A Brown Place, J 74.80 45 ⇑P **P 17 14 24.8 +0.5**
baz=74,SNR=20
L15A Malad City 74.81 47 ⇑P **P 17 14 24.6 +0.1**
baz=74,SNR=40
VES Vestal, Richgr 74.97 55 ⇑P **P 17 14 24.4 -1.0**
baz=75,SNR=12
AHID Auburn Hatcher 75.00 46 *eP* **P 17 14 25.7 +0.2**
comp=Z,42nm,0.7s,mb5.2
I18A Diamond G Ranc 75.04 44 ⇓P **P 17 14 26.4 +0.7**
baz=75,SNR=32
R10A Warm Springs 75.05 52 ⇓P **P 17 14 26.4 +0.5**
baz=75
Q11A Duckwater 75.07 51 ⇑P **P 17 14 26.1 +0.1**
baz=75,SNR=28
P12A McGill 75.08 50 ⇑P **P 17 14 26.3 +0.3**
baz=75,SNR=43
RUE Ruedersdorf 75.09 329 *eP* **P 17 14 26.6 +0.8**
comp=Z,382nm,1.4s,mb5.8
K17A Gardner Place, 75.10 46 ⇑P **P 17 14 26.2 +0.1**
baz=75,SNR=7.7
S10A Tonopah Range, 75.12 52 ⇑P **P 17 14 26.4 +0.1**
baz=75,SNR=27
PKM Peak Mountain 75.12 57 ⇓P **P 17 14 26.7 +0.4**
baz=75,SNR=18
M15A Larsen Ranch, 75.14 48 ⇑P **P 17 14 26.6 +0.2**
baz=75,SNR=61
N14A Grayback Hills 75.14 48 ⇓P **P 17 14 26.7 +0.3**
baz=75,SNR=40
BGU Big Grassy Mou 75.18 48 *eP* **P 17 14 26.9 +0.4**
comp=Z,144nm,1.5s,mb5.4
CWC Cottonwood Cre 75.19 54 ⇑P **P 17 14 26.2 -0.5**
baz=75,SNR=21
BSEG Bad Segeberg 75.24 332 *eP* **P 17 14 27.0 +0.4**
comp=Z,352nm,1.6s,mb5.7
BSEG *e*S S 17 23 47.4 -0.4
SPUT South Promonto 75.25 48 *eP* **P 17 14 27.4 +0.5**
comp=Z,251nm,1.7s,mb5.6
J18A Kendall Valley 75.27 45 ⇑P **P 17 14 27.4 +0.4**
baz=75,SNR=70
KECS Kecovo 75.27 323 *eP* **P 17 14 27.4 +0.4**
comp=Z,25nm,1.2s,mb4.7
KECS *e*PP PP 17 17 09.2 -8.7
KECS Kecovo 75.27 323 *eP* **P 17 14 27.4 +0.4**
KECS *e*PP PP 17 17 09.2 -8.7
OKC Ostrava-Krasne 75.31 325 ⇓*i*P **P 17 14 27.7 +0.6**
OKC *e**PP pP 17 15 19.0 +2.0
OKC *e*S S 17 23 50.1 +1.4
OKC Ostrava-Krasne 75.31 325 ⇓*i*P **P 17 14 27.7 +0.6**
OKC *e*pP pP 17 15 19.0 +2.0
OKC *e*S S 17 23 50.1 +1.4
OKC *e*x x 17 25 10.1
L16A Fish Haven 75.33 47 ⇓P **P 17 14 27.5 +0.1**
baz=75,SNR=22
KSP Ksiaz 75.33 327 *eP* **P 17 14 28.0 +0.7**
comp=Z,1μm,1.8s,mb6.1
KSP *e*pP pP 17 15 19.3 +2.2
KSP *e*S S 17 23 49.8 +0.8
KSP *e*SKS 17 24 16.2
KSP Ksiaz 75.33 327 ⇓*i*P **P 17 14 27.9 +0.6**
KSP *e*PcP PcP 17 14 40.1 +0.6
KSP *e*pP pP 17 15 19.3 +2.2
KSP *e*S S 17 23 48.5 -0.5
KSP *e*SKS 17 24 16.2
KLBR Kellerberrin 75.35 199 *eP* **P 17 14 27.6 +0.2**
comp=Z,118nm,1.8s,mb5.2
Q12A Willow Creek R 75.42 51 ⇑P **P 17 14 28.3 +0.4**
baz=75,SNR=31
R11A Troy Canyon, C 75.44 52 ⇑P **P 17 14 28.1 0.0**
baz=75,SNR=20
ISA Isabella 75.46 55 ⇑P **P 17 14 27.2 -1.1**
baz=75,SNR=21
ISA Isabella 75.46 55 *eP* **P 17 14 27.0 -1.3**
ISA pmax pmax
comp=Z,76nm,1.2s,mb5.2
ISA Isabella 75.46 55 *eP* **P 17 14 26.9 -1.3**
comp=Z,76nm,1.2s,mb5.2
DRGR 75.46 320 ⇓P **P 17 14 28.5 +0.4**
DRGR 75.46 320 ⇓*i*P **P 17 14 28.5 +0.4**
LIKS Likavka 75.47 324 *eP* **P 17 14 29.0 +0.9**
LIKS pmax pmax
comp=Z,140nm,1.5s,mb5.4
LIKS Likavka 75.47 324 *eP* **P 17 14 29.0 +0.9**
comp=Z,140nm,1.5s,mb5.4
LIKS Likavka 75.47 324 *eP* **P 17 14 29.0 +0.9**
N15A Stansbury Isla 75.49 48 ⇓P **P 17 14 28.7 +0.3**
baz=75,SNR=10
HWUT Hardware Ranch 75.53 47 *eP* **P 17 14 28.8 +0.2**
comp=Z,235nm,1.4s,mb5.6
L17A Cokeville 75.57 46 ⇓P **P 17 14 29.0 +0.2**
baz=75,SNR=11
ARVC Arvin 75.59 56 ⇓P **P 17 14 28.7 -0.4**
baz=75,SNR=5.7
MORC Moravsky Berou 75.61 325 *eP* **P 17 14 29.4 +0.5**
MORC pmax pmax
comp=Z,119nm,0.9s,mb5.5
MORC Moravsky Berou 75.61 325 *eP* **P 17 14 29.4 +0.5**
comp=Z,119nm,0.9s,mb5.5
PRD Provadia 75.64 315 P **P 17 14 29.9 +0.7**
K18A Toltan Ranch, 75.65 45 ⇓P **P 17 14 29.7 +0.5**
baz=75,SNR=33
DPC Dobruska-Polom 75.70 326 ⇓*i*P **P 17 14 30.3 +1.0**
DPC *e**PP pP 17 15 22.0 +2.8
DPC *e* 17 17 21.1
DPC *e*S S 17 23 54.1 +1.1
DPC Dobruska-Polom 75.70 326 ⇓*i*P **P 17 14 30.3 +1.0**
DPC *e*pP pP 17 15 22.0 +2.8
DPC *e*PP PP 17 17 21.1 -0.2
DPC *e*S S 17 23 54.1 +1.1
UPC Upice 75.70 326 ⇓*i*P **P 17 14 30.1 +0.7**
UPC Upice 75.70 326 ⇓*i*P **P 17 14 30.1 +0.7**
UPC *e*PP PP 17 17 09.8 -12
DUG Dugway 75.80 49 ⇑P **P 17 14 30.6 +0.5**
baz=76,SNR=55
DUG Dugway 75.80 49 *eP* **P 17 14 30.5 +0.4**
DUG pmax pmax
comp=Z,194nm,1.3s,mb5.6
DUG Dugway 75.80 49 *eP* **P 17 14 30.5 +0.4**
comp=Z,194nm,1.3s,mb5.6
MPMC Manual Prospec 75.80 54 ⇑P **P 17 14 30.1 -0.1**
baz=76,SNR=73
S11A Rachel 75.81 52 ⇓P **P 17 14 30.7 +0.5**
baz=76
BSC Santa Cruz Isl 75.82 57 ⇑P **P 17 14 30.1 -0.3**
baz=76
BW06 Boulder Array 75.82 45 ⇓P **P 17 14 30.2 0.0**
baz=76
BW06 Boulder Array 75.82 45 *eP* **P 17 14 30.1 0.0**
comp=Z,139nm,0.9s,mb5.6
PDAR Pinedale Array 75.82 45 P **P 17 14 30.1 0.0**
comp=Z,91nm,0.7s,mb5.5,baz=268,slow=1.4,SNR=647
PDAR S S 17 23 53.5 -1.1
comp=Z,0.6nm,0.3s,baz=347,slow=6.5,SNR=4.1
PDAR LR LR 17 49 39.3
comp=Z,121nm,19.7s,baz=143,slow=37
NOQ North Oquirrh 75.88 48 *eP* **P 17 14 30.9 +0.4**
comp=Z,878nm,1.8s,mb6.1
FURC Furnace Creek, 75.92 54 ⇑P **P 17 14 31.0 +0.2**
baz=76,SNR=77
O15A The Old Anders 75.93 48 ⇓P **P 17 14 31.5 +0.6**
baz=76,SNR=12
Q13A Wheeler Ranch, 75.94 50 ⇓P **P 17 14 31.4 +0.5**
baz=76,SNR=72
PSZ Piszkesteto 75.96 323 P **P 17 14 31.9 +1.1**
PSZ Piszkesteto 75.96 323 *eP* **P 17 14 31.5 +0.7**
comp=Z,343nm,1.4s,mb5.8
PSZ Piszkesteto 75.96 323 ⇓*eP* **P 17 14 31.9 +1.1**
PSZ Piszkesteto 75.96 323 ⇓*i*P **P 17 14 31.8 +1.0**
VYHS Vyhne 76.01 324 *eP* **P 17 14 31.8 +0.7**
VYHS *e*S S 17 23 56.9 +0.5
VYHS pmax pmax
comp=Z,78nm,1.4s,mb5.2
VYHS Vyhne 76.01 324 *eP* **P 17 14 31.8 +0.7**
comp=Z,78nm,1.4s,mb5.2
VYHS *e*PP PP 17 17 10.4 -14
VYHS *e*S S 17 23 56.9 +0.5
VYHS Vyhne 76.01 324 *eP* **P 17 14 31.8 +0.7**
VYHS *e*PP PP 17 17 10.4 -14
VYHS *e*S S 17 23 56.9 +0.5
R12A Pony Springs, 76.02 51 ⇓P **P 17 14 31.5 +0.1**
baz=76,SNR=44
P14A Drum Mountains 76.06 49 ⇓P **P 17 14 31.9 +0.3**
baz=76,SNR=24
LRMC Laurel Mountai 76.06 55 ⇓P **P 17 14 31.8 +0.1**
baz=76
N16A Rees Ranch, Co 76.09 47 ⇓P **P 17 14 32.2 +0.5**
baz=76,SNR=7.3
BLG Laguna Peak 76.10 57 ⇑P **P 17 14 31.5 -0.5**
baz=76,SNR=24
M17A Scullys Gap (B 76.12 47 ⇓P **P 17 14 31.8 -0.1**
baz=76,SNR=42
RSC Scourie 76.12 341 ⇓*eP* **P 17 14 31.2 -0.3**
RSC Scourie 76.12 341 P **P 17 14 31.2 -0.3**
L18A Fontenelle, Gr 76.15 46 ⇓P **P 17 14 32.3 +0.3**
baz=76,SNR=59
K19A Absolon Red Bu 76.16 45 ⇓P **P 17 14 31.3 -0.8**
baz=76,SNR=24
BRG Berggiesshubel 76.27 328 *eP* **P 17 14 32.8 +0.3**
comp=Z,212nm,1.7s,mb5.5
BRG *e*S S 17 23 58.5 -0.7
BRG Berggiesshubel 76.27 328 *i* P **P 17 14 32.9 +0.4**
comp=Z,66nm,1.0s,mb5.2
BRG *i* PP PP 17 17 15.9 -10
comp=Z,29nm,1.0s
BRG S S 17 24 00.0 +0.8
BRG *e* 17 24 34.0
comp=Z,43nm,2.0s
BRG *e*PKPPKP 17 42 01.5
comp=Z,1.7nm,0.7s
BRG
comp=N,271nm,15.1s
BRG
comp=E,696nm,26.4s
BRG
comp=Z,394nm,19.1s
EDW2 Edwards Air Fo 76.27 56 ⇓P **P 17 14 33.0 +0.2**
baz=76,SNR=29
U10A Ash Meadows, A 76.27 53 ⇑P **P 17 14 33.4 +0.6**
baz=76,SNR=39
JLU Jordanelle 76.28 48 *eP* **P 17 14 33.1 +0.2**
comp=Z,137nm,1.3s,mb5.4
PVCC Panska Ves 76.28 327 ⇓*i*P **P 17 14 33.3 +0.7**
PVCC *e**PP pP 17 15 26.1 +3.5
PVCC *e*S S 17 24 00.8 +1.4
PVCC Panska Ves 76.28 327 ⇓*i*P **P 17 14 33.3 +0.7**
PVCC *e*pP pP 17 15 26.1 +3.5
PVCC *e*S S 17 24 00.8 +1.4
CLL Collm 76.30 329 *eP* **P 17 14 32.6 -0.1**
comp=Z,108nm,1.0s,mb5.4
CLL *e*S S 17 23 57.6 -1.9
CLL Collm 76.30 329 ⇓*i*P **P 17 14 32.8 +0.1**
CLL *i* pP 17 15 24.5 +1.8
CLL *i* 17 17 26.1
CLL *e*S S 17 24 00.0 +0.5
CLL pmax pmax
comp=Z,321nm,1.7s,mb5.7
CLL Collm 76.30 329 ⇓*i*P **P 17 14 32.8 +0.1**
comp=Z,321nm,1.7s,mb5.7
CLL *e*pP pP 17 15 19.0 -3.7
CLL *i* pP 17 15 24.5 +1.8
CLL *i* PP PP 17 17 26.1 -0.3
CLL *e*S S 17 24 00.0 +0.5
CLL *e*SKPP' 17 45 01.0
CLL Collm 76.30 329 ⇓*i*P **P 17 14 32.8 +0.1**
comp=Z,321nm,1.7s,mb5.7
CLL *e*PcP PcP 17 14 44.0 +0.3
CLL *e*PcPmax 17 14 48.0
CLL *e*pP pP 17 15 19.0 -3.7
CLL *i* pPmax pP 17 15 24.5 +1.8
CLL *e* 17 17 19.0
CLL *i* PP PP 17 17 26.1 -0.3
comp=Z,81nm,1.3s
CLL *e*PPP 17 19 11.0
CLL *e*S S 17 24 00.0 +0.5
comp=N,200nm,20.7s
CLL *e*S S 17 24 00.0 +0.5
comp=E,600nm,20.0s
CLL *e*SKKSac SKKSac 17 24 25.0 +0.9
CLL *e*SP 17 24 34.0
CLL *e*PS 17 25 07.0
CLL *e*SS SS 17 28 48.0 -9.0
CLL *e* 17 29 48.0
CLL *e*SSS 17 32 19.0
CLL *e*SSSS 17 34 30.0
CLL *e*SKPPKPdf 17 45 01.0
CLL LmH 17 46 00.0
comp=N,400nm,19.6s
CLL LmH 17 46 00.0
comp=E,700nm,20.1s
CLL LmV 17 54 00.0
comp=Z,300nm,18.4s
Q14A Sevier Lake (B 76.35 50 ⇑P **P 17 14 33.7 +0.5**
baz=76,SNR=56
S12A Delamar Landin 76.36 52 ⇑P **P 17 14 34.0 +0.7**
baz=76,SNR=31
SZH Strazhica 76.36 316 P **P 17 14 35.0 +1.8**
NLU North Lily Min 76.38 48 *eP* **P 17 14 33.7 +0.3**
comp=Z,83nm,1.0s,mb5.3
L19A Farson 76.39 45 ⇑P **P 17 14 33.3 -0.1**
baz=76,SNR=36
N17A Moffit Pass 76.39 47 ⇓P **P 17 14 33.5 +0.1**
baz=76,SNR=24
NRDL Niedersach Rie 76.46 331 *eP* **P 17 14 33.7 +0.1**
comp=Z,164nm,1.5s,mb5.4
NRDL *e*S S 17 23 59.6 -1.6
DECC Green Verdugo 76.47 56 ⇓P **P 17 14 33.6 -0.4**
baz=76
M18A Lyman 76.47 46 ⇓P **P 17 14 34.0 +0.1**
baz=76,SNR=9.5
FKH Fakeheh 76.48 304 *eP* **P 17 14 34.9 +0.8**
R13A O'Grain Ranch, 76.49 51 ⇑P **P 17 14 34.4 +0.3**
baz=76,SNR=7.5
DAU Daniels Canyon 76.52 48 *eP* **P 17 14 34.6 +0.4**
DAU pmax pmax
comp=Z,180nm,1.5s,mb5.5
DAU Daniels Canyon 76.52 48 *eP* **P 17 14 34.6 +0.5**
comp=Z,180nm,1.5s,mb5.5
P15A Leamington 76.52 49 ⇑P **P 17 14 34.4 +0.2**
baz=76,SNR=23
O16A Springville 76.52 48 ⇑P **P 17 14 34.6 +0.4**
baz=76,SNR=9.7
K20A Yellowstone Ra 76.54 44 ⇓P **P 17 14 33.4 -0.8**
baz=76,SNR=28
MPU Maple Canyon 76.58 48 *eP* **P 17 14 35.0 +0.5**
comp=Z,303nm,1.3s,mb5.8
JMB Yambol 76.58 315 P **P 17 14 35.5 +1.0**
JMB Yambol 76.58 315 P **P 17 14 35.5 +1.0**
JMB Yambol 76.58 315 P **P 17 14 35.3 +0.8**
SMOL Smolenice 76.61 324 *eP* **P 17 14 36.2 +1.7**
SMOL *e*PP PP 17 17 18.4 -11
SMOL Smolenice 76.61 324 *eP* **P 17 14 36.2 +1.7**
SMOL *e*PP PP 17 17 18.4 -11
PASC Pasadena Art C 76.61 56 *eP* **P 17 14 34.4 -0.5**
comp=Z,178nm,1.5s,mb5.5
SHOC Shoshone 76.64 54 ⇓P **P 17 14 34.8 -0.1**
baz=76,SNR=25
MWC Mount Wilson 76.66 56 *eP* **P 17 14 34.6 -0.5**
MWC pmax pmax
comp=Z,239nm,1.5s,mb5.6
MWC Mount Wilson 76.66 56 *eP* **P 17 14 34.6 -0.4**
comp=Z,239nm,1.5s,mb5.6
BUD Budapest 76.67 323 ⇓*eP* **P 17 14 35.8 +0.9**
PRU Pruhonice 76.71 327 ⇓*i*P **P 17 14 36.1 +1.1**
PRU *e**PP pP 17 15 28.0 +2.9
PRU *e* 17 17 31.1
PRU *e*S S 17 24 05.9 +1.9
PRU Pruhonice 76.71 327 ⇓*i*P **P 17 14 36.1 +1.1**
PRU *e*pP pP 17 15 28.0 +2.9
PRU *e*PP PP 17 17 31.1 +1.3
PRU *e*S S 17 24 05.9 +1.9
PRU *e*x x 17 25 22.8
GSC Goldstone 76.72 55 ⇑P **P 17 14 35.5 +0.1**
baz=76,SNR=28
GSC Goldstone 76.72 55 *eP* **P 17 14 35.4 0.0**
GSC pmax pmax
comp=Z,161nm,1.2s,mb5.5
GSC Goldstone 76.72 55 *eP* **P 17 14 35.4 0.0**
comp=Z,161nm,1.2s,mb5.5
HWQ Hawqa 76.74 304 *eP* **P 17 14 35.8 +0.3**
ULM Lac du Bonnet 76.75 33 P **P 17 14 34.3 -0.9**
comp=Z,59nm,0.8s,mb5.2,baz=320,slow=6.8,SNR=51
ULM Lac du Bonnet 76.75 33 *eP* **P 17 14 34.3 -1.0**
comp=Z,138nm,1.2s,mb5.5
NWAO Narrogin (SRO) 76.76 199 *eP* **P 17 14 35.6 +0.3**
NWAO pmax pmax
comp=Z,68nm,1.4s
NWAO Narrogin (SRO) 76.76 199 *eP* **P 17 14 35.6 +0.3**
comp=Z,68nm,1.4s,mb5.1
U11A Corn Creek 76.84 53 ⇓P **P 17 14 36.5 +0.5**
baz=77
BZS Buzias 76.84 320 P **P 17 14 36.1 +0.3**
BZS Buzias 76.84 320 ⇑P **P 17 14 35.7 -0.1**
BZS Buzias 76.84 320 ⇑*i*P **P 17 14 35.7 -0.1**
P16A Fountain Green 76.84 48 ⇑P **P 17 14 36.5 +0.5**
baz=77,SNR=7.8
FMP Fort Macarthur 76.85 57 ⇑P **P 17 14 35.8 -0.3**
baz=77
TREC Trest 76.85 326 ⇓*i*P **P 17 14 36.5 +0.7**
TREC *e**PP pP 17 15 28.7 +2.8
TREC *e* 17 17 33.6
TREC *e*S S 17 24 07.3 +1.7
TREC *e* 17 25 19.0
TREC Trest 76.85 326 ⇓*i*P **P 17 14 36.5 +0.7**
TREC *e*pP pP 17 15 28.7 +2.8
TREC *e*PP PP 17 17 33.6 +2.6
TREC *e*S S 17 24 07.3 +1.7
TREC *e*x x 17 25 19.0
Q15A Fillmore 76.85 49 ⇓P **P 17 14 36.4 +0.3**
baz=77,SNR=36
RRH Rhenigidale 76.86 342 ⇓*eP* **P 17 14 35.6 -0.1**
RRH Rhenigidale 76.86 342 P **P 17 14 35.6 -0.1**
RRX Edison Barstow 76.88 55 ⇓P **P 17 14 36.7 +0.4**
baz=77
CLZ Clausthal 76.89 330 *eP* **P 17 14 36.5 +0.5**
comp=Z,329nm,1.5s,mb5.7
CLZ *e*S S 17 24 04.8 -1.1
BFSC Mount Baldy Ra 76.90 56 ⇓P **P 17 14 36.1 -0.3**
baz=77,SNR=22
KAC Achnashellach 76.91 341 ⇓*eP* **P 17 14 36.1 +0.1**
KAC Achnashellach 76.91 341 P **P 17 14 36.1 +0.1**
M19A Rock Springs 76.91 46 ⇓P **P 17 14 36.0 -0.3**
baz=77,SNR=7.9
O17A Robinson Place 76.96 48 ⇑P **P 17 14 36.9 +0.3**
baz=77,SNR=28
S13A Holt Ranch, En 76.96 51 ⇓P **P 17 14 37.1 +0.4**
baz=77,SNR=47
R14A James Farms, M 76.96 50 ⇑P **P 17 14 37.2 +0.5**
baz=77
CIS Catalina Islan 76.98 57 ⇑P **P 17 14 36.5 -0.3**
baz=77
ZST Bratislava 77.00 324 *eP* **P 17 14 37.8 +1.1**
ZST *e* 17 17 27.0
ZST *e*S S 17 24 09.9 +2.7
ZST pmax pmax
comp=Z,61nm,1.5s,mb5.0
ZST Bratislava 77.00 324 *eP* **P 17 14 37.8 +1.1**
comp=Z,60nm,1.5s,mb5.0
ZST *e*PP PP 17 17 27.0 -5.3
ZST *e*S S 17 24 09.9 +2.7
ZST Bratislava 77.00 324 *eP* **P 17 14 37.8 +1.1**
ZST *e*PP PP 17 17 27.0 -5.3
ZST *e*S S 17 24 09.9 +2.7
L20A Wamsutter 77.00 45 ⇑P **P 17 14 36.7 -0.1**
baz=77,SNR=35
N18A Larsen Ranch, 77.00 46 ⇓P **P 17 14 36.5 -0.4**
baz=77,SNR=14
CAN Canberra 77.01 172 *eP* **P 17 14 38.1 +1.4**
CAN pmax pmax
comp=Z,113nm,1.3s,mb5.3
CAN Canberra 77.01 172 *eP* **P 17 14 38.0 +1.4**
comp=Z,113nm,1.3s,mb5.3
T12A Moapa 77.03 52 ⇑P **P 17 14 37.2 +0.1**
baz=77,SNR=12
KPL Plockton 77.14 341 ⇓*eP* **P 17 14 37.0 -0.3**
KPL AMb AMB 17 14 39.0
comp=Z,145nm,1.0s,mb5.6
KPL Plockton 77.14 341 P **P 17 14 37.0 -0.3**
KPL AMb AMB 17 14 39.0
comp=Z,145nm,1.0s,mb5.6
BHL Bhannes 77.17 304 *eP* **P 17 14 38.0 +0.1**
TUQ Turquoise Moun 77.17 54 ⇑P **P 17 14 38.1 +0.2**
baz=77,SNR=26
KSB Sheil Bridge 77.20 341 ⇓*eP* **P 17 14 37.5 -0.2**
KSB Sheil Bridge 77.20 341 P **P 17 14 37.5 -0.2**
V11A Goodsprings 77.20 53 ⇓P **P 17 14 38.7 +0.7**
baz=77
TANN Tannenbergstha 77.22 328 *eP* **P 17 14 38.2 +0.4**
comp=Z,92nm,1.5s,mb5.2
TANN *e*S S 17 24 09.0 -0.5
S14A Cedar City 77.24 51 ⇓P **P 17 14 38.6 +0.4**
baz=77,SNR=5.3
CCUT Cedar City 77.27 51 *eP* **P 17 14 38.8 +0.4**
comp=Z,133nm,1.6s,mb5.3
O18A Roosevelt 77.31 47 ⇑P **P 17 14 39.3 +0.7**
baz=77,SNR=27
T13A Saint George 77.31 52 ⇑P **P 17 14 39.6 +0.9**
baz=77,SNR=63
TMUT Trail Mountain 77.31 48 *eP* **P 17 14 38.7 +0.1**
comp=Z,103nm,1.2s,mb5.3
HEC Hector,Ludlow 77.33 55 ⇑P **P 17 14 38.8 0.0**
baz=77,SNR=7.3
N19A John Jarvie Ra 77.33 46 ⇑P **P 17 14 38.6 -0.1**
baz=77,SNR=35
U12A Valley of Fire 77.33 52 ⇓P **P 17 14 39.1 +0.3**
baz=77,SNR=11
BBRC Big Bear Solar 77.34 55 ⇑P **P 17 14 39.0 +0.1**
baz=77
RCY Rachaya 77.34 304 *eP* **P 17 14 39.5 +0.7**
NKC Novy Kostel 77.36 328 ⇓*i*P **P 17 14 39.0 +0.3**
NKC *e*S S 17 24 12.2 +1.1
NKC Novy Kostel 77.36 328 ⇓*i*P **P 17 14 39.0 +0.3**
NKC *e*S S 17 24 12.2 +1.1
MOX Moxa 77.37 329 *eP* **P 17 14 38.9 +0.2**
comp=Z,162nm,1.6s,mb5.4
MOX *e* 17 17 18.8
MOX *e*S S 17 24 13.0 +1.9
MOX
comp=Z,400nm,17.0s
MOX Moxa 77.37 329 *eP* **P 17 14 38.9 +0.2**
comp=Z,162nm,1.6s,mb5.4
MOX *e* 17 17 18.8
MOX *e*S S 17 24 13.0 +1.9
MOX
comp=Z,400nm,17.0s
MOX Moxa 77.37 329 *eP* **P 17 14 38.9 +0.2**
comp=Z,126nm,1.5s,mb5.3
MOX *e*S S 17 24 10.0 -1.1
MOX Moxa 77.37 329 *eP* **P 17 14 38.9 +0.2**

MOX *e*S S 17 24 13.0 +1.9
MOX pmax pmax
comp=Z,162nm,1.6s,mb5.4
MOX MLR MLR
comp=Z,400nm,17.0s
WIT Witteveen 77.43 333 *e*P **P 17 14 40.3 +1.3**
comp=Z,600nm,1.1s,mb6.2
M20A Sweetwater, Wa 77.44 45 ⇑P **P 17 14 39.7 +0.4**
baz=77,SNR=34
R15A Junction 77.45 50 ⇑P **P 17 14 40.1 +0.7**
baz=77,SNR=18
P17A Butcher Ranch, 77.45 48 ⇓P **P 17 14 39.8 +0.4**
baz=77,SNR=30
IBBN Ibbenburen 77.46 332 *e*P **P 17 14 39.1 -0.1**
comp=Z,85nm,0.8s,mb5.4
IBBN *e*S S 17 24 09.7 -2.4
L21A Rawlins 77.54 44 ⇓P **P 17 14 39.7 -0.2**
baz=77,SNR=68
KAR1 Arisaig 77.56 341⇓*e*P **P 17 14 39.2 -0.4**
KAR1 Arisaig 77.56 341 P **P 17 14 39.2 -0.4**
EBH Black Hill 77.57 340⇓*e*P **P 17 14 39.7 0.0**
EBH Black Hill 77.57 340 P **P 17 14 39.7 0.0**
Q16A Castle Valley 77.59 49 ⇓P **P 17 14 40.7 +0.5**
baz=77,SNR=32
MURC Murrieta 77.61 56 ⇑P **P 17 14 39.9 -0.4**
baz=77,SNR=10
ISP Isparta 77.62 310 P **P 17 14 40.3 0.0**
ISP Isparta 77.62 310 P **P 17 14 40.1 -0.2**
ISP Isparta 77.62 310 P **P 17 14 40.1 -0.2**
P18A Preston Nutter 77.62 48 ⇓P **P 17 14 40.9 +0.6**
baz=77,SNR=77
SOP Sopron 77.62 324⇓*e*P **P 17 14 42.4 +2.2**
V12A Nelson 77.62 53 ⇓P **P 17 14 40.9 +0.5**
baz=77,SNR=45
ESY Stoneypath 77.63 339⇓*e*P **P 17 14 39.8 -0.2**
ESY Stoneypath 77.63 339 P **P 17 14 39.8 -0.2**
U13A Pakoon Wash 77.69 52 ⇓P **P 17 14 41.3 +0.6**
baz=77,SNR=70
RSSD Black Hills 77.69 41 *e*P **P 17 14 40.0 -0.6**
RSSD pmax pmax
comp=Z,265nm,1.5s,mb5.7
RSSD Black Hills 77.69 41 *e*P **P 17 14 40.0 -0.6**
comp=Z,265nm,1.5s,mb5.7
CONA Conrad Observa 77.74 325⇓*i*P **P 17 14 42.0 +1.2**
comp=Z,167nm,1.4s,mb5.5,SNR=40
CONA ⇑*i*pP pP 17 15 30.7 -0.3
comp=Z,43nm,1.2s
CONA ⇑*i*PP PP 17 17 26.6 -12
comp=Z,109nm,1.7s
S15A Panguitch 77.77 50 ⇑P **P 17 14 42.4 +1.2**
baz=78,SNR=14
T14A Hurricane 77.77 51 ⇑P **P 17 14 41.5 +0.3**
baz=78,SNR=7.3
GMRC Granite Mounta 77.77 54 ⇑P **P 17 14 41.3 +0.1**
baz=78,SNR=55
KHC Kasperske Hory 77.77 327⇓*i*P **P 17 14 41.6 +0.7**
KHC *e**PP pP 17 15 34.5 +3.4
KHC *e* 17 17 35.7
KHC *e*S S 17 24 17.2 +1.7
KHC *e* 17 25 25.7
KHC Kasperske Hory 77.77 327 *e*P **P 17 14 41.3 +0.3**
comp=Z,142nm,1.1s,mb5.5
KHC Kasperske Hory 77.77 327⇓*i*P **P 17 14 41.6 +0.7**
KHC *e*pP pP 17 15 34.5 +3.4
KHC *e*PP PP 17 17 35.7 -3.0
KHC *e*S S 17 24 17.2 +1.7
KHC *e*x x 17 25 25.7
O19A Miners Draw (B 77.77 47 ⇓P **P 17 14 40.8 -0.3**
baz=78,SNR=39
PGB Panagyurishte 77.79 317 P **P 17 14 41.9 +0.7**
M21A Separation Pea 77.80 45 ⇑P **P 17 14 41.1 -0.1**
baz=78,SNR=102
PKSM Moragy 77.80 322 ⇓P **P 17 14 41.4 +0.2**
PKSM Moragy 77.80 322 P **P 17 14 41.3 +0.2**
PKSM Moragy 77.80 322⇓*i*P **P 17 14 41.4 +0.2**
DGAR Diego Garcia 77.80 249 *e*P **P 17 14 40.9 -0.7**
RWWY Rawlins 77.82 45 *e*P **P 17 14 40.9 -0.4**
comp=Z,289nm,1.3s,mb5.8
PLD Plovdiv 77.83 316 P **P 17 14 41.9 +0.5**
PLD Plovdiv 77.83 316 P **P 17 14 41.9 +0.5**
SRU San Rafael 77.83 48 ⇓P **P 17 14 41.8 +0.4**
baz=78
SRU San Rafael 77.83 48 *e*P **P 17 14 41.5 +0.1**
SRU pmax pmax
comp=Z,107nm,1.0s,mb5.4
SRU San Rafael 77.83 48 *e*P **P 17 14 41.5 +0.1**
comp=Z,106nm,1.0s,mb5.4
EAB Aberfoyle 77.84 340⇓*e*P **P 17 14 41.0 -0.2**
EAB Aberfoyle 77.84 340 P **P 17 14 41.0 -0.2**
UBBA Unterbreizbach 77.85 330 *e*P **P 17 14 41.3 0.0**
comp=Z,134nm,1.6s,mb5.3
UBBA *e*S S 17 24 14.7 -1.5
R16A Teasdale 77.86 49 ⇓P **P 17 14 42.8 +1.1**
baz=78,SNR=72
N20A Spence Gulch, 77.86 46 ⇑P **P 17 14 41.9 +0.3**
baz=78,SNR=119
EBL Broad Law 77.87 339⇓*e*P **P 17 14 41.3 0.0**
EBL Broad Law 77.87 339 P **P 17 14 41.3 0.0**
W12A Cal Nev Ari 77.90 53 ⇑P **P 17 14 42.1 +0.2**
baz=78,SNR=6.7
LDFC Landfair 77.90 54 *e*P **P 17 14 42.0 +0.1**
comp=Z,155nm,1.0s,mb5.6
MMAI Mount Meron Ar 77.91 303 P **P 17 14 42.9 +0.9**
comp=Z,57nm,0.7s,mb5.3,baz=45,slow=7.5,SNR=76
MMAI pP pP 17 15 31.2 -1.0
comp=Z,19nm,0.8s,baz=37,slow=7.4,SNR=2.4
MMAI PP PP 17 17 39.5 -0.9
comp=Z,22nm,1.1s,baz=56,slow=9.2,SNR=3.9
EAU Auchinoon 77.91 339⇓*e*P **P 17 14 41.5 -0.1**
EAU Auchinoon 77.91 339 P **P 17 14 41.5 -0.1**
GEC2 GERESS Array S 77.94 327 *e*P **P 17 14 42.1 +0.2**
comp=Z,68nm,1.3s,mb5.1
GEC2 *e*S S 17 24 17.6 +0.3
GEC2 GERESS Array S 77.94 327 *e*P **P 17 14 42.0 0.0**
comp=Z,4μm,0.5s
GERES GERESS Array B 77.94 327 P **P 17 14 42.2 +0.3**
comp=Z,18nm,0.6s,mb4.9,baz=39,slow=5.8,SNR=197
GERES PP PP 17 17 30.3 -10
comp=Z,5.1nm,0.7s,baz=38,slow=7.2,SNR=6.5
ALN Alexandroupoli 77.97 314 P **P 17 14 42.5 +0.3**
ALN Alexandroupoli 77.97 314 P **P 17 14 42.5 +0.3**
WET Wettzell 78.05 327 *e*P **P 17 14 43.2 +0.7**
comp=Z,159nm,1.5s,mb5.4
WET *e*pP pP 17 15 35.3 +2.6
WET *e*S S 17 24 19.0 +0.6
Q18A Rafter H Ranch 78.05 48 ⇓P **P 17 14 42.3 -0.4**
baz=78,SNR=14
V13A Grand Canyon W 78.06 53 ⇑P **P 17 14 43.0 +0.3**
baz=78,SNR=53
PFO Pinyon Flat Ob 78.06 56 P **P 17 14 42.0 -0.8**
comp=Z,503nm,1.1s,mb6.1,SNR=19
PFO Pinyon Flat Ob 78.06 56 ⇓P **P 17 14 42.6 -0.2**
baz=78,SNR=16
PFO Pinyon Flat Ob 78.06 56 *e*P **P 17 14 42.5 -0.3**
PFO pmax pmax
comp=Z,166nm,1.3s,mb5.5
PFO Pinyon Flat Ob 78.06 56 *e*P **P 17 14 42.5 -0.3**
comp=Z,158nm,1.3s,mb5.5
RDO Rodhopi 78.07 315 P **P 17 14 43.4 +0.7**
RDO Rodhopi 78.07 315 P **P 17 14 43.4 +0.7**
WTSB Winterswijk 78.08 332 *e*P **P 17 14 42.3 -0.3**
comp=Z,44nm,1.7s,mb4.8
BELC Belle Mtn. Jos 78.08 55 ⇓P **P 17 14 42.5 -0.4**
baz=78,SNR=30
109C Camp Elliot, M 78.14 57 ⇓P **P 17 14 43.1 -0.2**
baz=78
U14A Mt Trumbull 78.15 52 ⇓P **P 17 14 43.8 +0.5**
baz=78,SNR=36
R17A Hanksville Air 78.20 49 ⇓P **P 17 14 43.5 0.0**
baz=78,SNR=35
T15A Red Dirt Ranch 78.21 51 ⇑P **P 17 14 44.0 +0.4**
baz=78,SNR=23
PGBU Glenifferbraes 78.21 340 *e*P **P 17 14 43.3 0.0**
PGBU AMb AMB 17 14 44.8
comp=Z,145nm,1.6s,mb5.4
PGBU Glenifferbraes 78.21 340 P **P 17 14 43.3 0.0**
PGBU AMb AMB 17 14 44.8
comp=Z,145nm,1.6s,mb5.4
VTS Vitosha 78.25 317 P **P 17 14 44.4 +0.7**
VTS Vitosha 78.25 317 P **P 17 14 44.4 +0.7**
VTS Vitosha 78.25 317 P **P 17 14 43.7 0.0**
AGMN Agassiz Nation 78.27 34 *e*P **P 17 14 42.5 -1.3**
comp=Z,124nm,1.3s,mb5.4
GRF Grafenberg Arr 78.28 328 *e*P **P 17 14 44.4 +0.7**
comp=Z,156nm,0.9s,mb5.6
GRF *e*pP pP 17 15 36.5 +2.5
GRF *e*PP PP 17 17 42.7 -0.2
GRF *e*PPP 17 19 29.3
GRF *e*S S 17 24 21.2 +0.4
GRF Grafenberg Arr 78.28 328 *e*P **P 17 14 44.4 +0.7**
GRF *e**PP pP 17 15 36.5 +2.5
GRF *e* 17 17 42.7
GRF *e*PPP 17 19 29.3
GRF *e*S S 17 24 21.2 +0.4
GRF pmax pmax
comp=Z,156nm,0.9s,mb5.6
N21A Black Mountain 78.31 45 ⇓P **P 17 14 44.2 +0.1**
baz=78,SNR=62
P19A Cripple Cowboy 78.32 47 ⇓P **P 17 14 44.2 0.0**
baz=78,SNR=84
ESK Eskdalemuir 78.32 339 P **P 17 14 44.9 +1.1**
comp=Z,232nm,0.5s,mb6.1,SNR=13
ESK Eskdalemuir 78.32 339 *e*P **P 17 14 43.0 -0.8**
ESK Eskdalemuir 78.32 339 P **P 17 14 43.0 -0.8**
ESK Eskdalemuir 78.32 339 *i*P **P 17 14 44.6 +0.8**
ESK Eskdalemuir 78.32 339 *e*P **P 17 14 43.8 0.0**
comp=Z,57nm,1.0s,mb5.2
BUG Bochum--Univer 78.35 332 *e*P **P 17 14 43.9 -0.2**
comp=Z,194nm,1.5s,mb5.5
BUG *e*S S 17 24 20.6 -0.9
O20A White River Ci 78.37 46 ⇑P **P 17 14 44.2 -0.2**
baz=78,SNR=16
ARSA Arzberg 78.41 325⇓*i*P **P 17 14 45.3 +0.9**
comp=Z,98nm,1.4s,mb5.2,SNR=40
NEE2 Needles Airpor 78.41 54 ⇓P **P 17 14 44.7 -0.1**
baz=78
ECK Cauldkaine Hil 78.42 339⇓*e*P **P 17 14 44.3 -0.1**
ECK Cauldkaine Hil 78.42 339 P **P 17 14 44.3 -0.1**
MOA Molln 78.48 326⇓*i*P **P 17 14 45.6 +0.8**
comp=Z,44nm,0.9s,mb5.1,SNR=19
IRM Iron Mountain 78.50 55 ⇓P **P 17 14 45.5 +0.3**
baz=78,SNR=45
BAR Barrett 78.55 56 *e*P **P 17 14 45.0 -0.5**
comp=Z,288nm,1.8s,mb5.6
MONP Monument Peak 78.56 56 ⇓P **P 17 14 45.6 -0.1**
baz=78,SNR=12
W13A Hualapai Mount 78.63 53 ⇑P **P 17 14 46.1 +0.2**
baz=78,SNR=47
BC3 Big Chuckawall 78.65 55 ⇓P **P 17 14 45.9 -0.2**
baz=78,SNR=40
U15A North Rim 78.66 51 ⇓P **P 17 14 47.2 +1.1**
baz=78,SNR=95
R18A Canyonlands Na 78.68 48 ⇓P **P 17 14 45.8 -0.4**
baz=78,SNR=50
S17A Black Ridge (B 78.69 49 ⇑P **P 17 14 46.5 +0.2**
baz=78,SNR=51
KAVA Kavala 78.72 315 P **P 17 14 46.5 +0.2**
O21A Pagoda 78.73 46 ⇑P **P 17 14 46.5 +0.2**
baz=78,SNR=13
V14A Boquillas Ranc 78.73 52 ⇓P **P 17 14 47.1 +0.7**
baz=78,SNR=44
P20A De Beque 78.73 47 ⇓P **P 17 14 46.2 -0.2**
baz=78,SNR=13
T16A Glen Canyon Da 78.74 50 ⇑P **P 17 14 45.9 -0.6**
baz=78,SNR=9.7
KKB Krupnik 78.84 317 P **P 17 14 47.6 +0.7**
N22A Wattenberg Ran 78.85 45 ⇑P **P 17 14 47.5 +0.5**
baz=78,SNR=44
TNS Taunus Mts 78.91 330 *e*P **P 17 14 47.4 +0.2**
comp=Z,180nm,1.3s,mb5.5
TNS *e*S S 17 24 26.4 -1.2
GCD Castle Douglas 78.92 339⇓*e*P **P 17 14 46.4 -0.7**
GCD Castle Douglas 78.92 339 P **P 17 14 46.4 -0.7**
DVTC Desert V Tower 78.92 56 ⇑P **P 17 14 47.7 +0.1**
baz=79
SWSC Sam W. Stewart 78.92 56 ⇓P **P 17 14 47.1 -0.4**
baz=79,SNR=9.3
TOO Toolangi 78.94 175 *e*P **P 17 14 48.4 +1.2**
PHWY Pilot Hill 79.01 44 *e*P **P 17 14 47.8 -0.1**
comp=Z,141nm,1.4s,mb5.4
PDMCI Parker Dam,Lak 79.02 54 ⇓P **P 17 14 47.9 -0.1**
baz=79,SNR=25
PRK Paraskevi 79.02 313 P **P 17 14 47.8 -0.2**
PRK Paraskevi 79.02 313 P **P 17 14 47.8 -0.2**
W14A Seligman 79.03 53 ⇑P **P 17 14 48.5 +0.4**
baz=79,SNR=47
PERS Pernice 79.06 324 *e*P **P 17 14 48.4 +0.4**
SOKA Soboth 79.06 324⇓*i*P **P 17 14 48.7 +0.7**
comp=Z,268nm,1.3s,mb5.7
SOKA ⇑*i*pP pP 17 15 35.5 -2.9
comp=Z,76nm,1.5s
HPK Haverah Park 79.08 338 *e*P **P 17 14 48.0 0.0**
HPK AMb AMB 17 14 48.9
comp=Z,108nm,1.7s,mb5.2
HPK Haverah Park 79.08 338 P **P 17 14 48.0 0.0**
HPK AMb AMB 17 14 48.9
comp=Z,108nm,1.7s,mb5.2
R19A Curley Farm, L 79.10 48 ⇑P **P 17 14 48.4 -0.1**
baz=79,SNR=33
S18A Hurst Farm, Bl 79.11 49 ⇑P **P 17 14 48.5 0.0**
baz=79,SNR=73
SRS Serrai 79.11 316 P **P 17 14 48.4 -0.1**
SRS Serrai 79.11 316 P **P 17 14 48.4 -0.1**
GAL1 Galloway 79.12 340 AMb AMB 17 14 47.2
comp=Z,104nm,1.0s,mb5.4
GAL1 *e*P 17 14 48.0
T17A Navajo Res., N 79.13 50 ⇑P **P 17 14 48.3 -0.3**
baz=79,SNR=28
LIA Limnos Island 79.15 314 P **P 17 14 48.4 -0.3**
LIA Limnos Island 79.15 314 P **P 17 14 48.4 -0.3**
V15A Kaibab Nationa 79.15 52 ⇓P **P 17 14 49.4 +0.7**
baz=79,SNR=21
Y12C Blythe 79.16 54 ⇓P **P 17 14 48.8 0.0**
baz=79,SNR=18
Q20A Ridgley Place, 79.17 47 ⇓P **P 17 14 48.8 0.0**
baz=79,SNR=31
RJOB Jochberg 79.19 326 *e*P **P 17 14 49.5 +0.8**
comp=Z,267nm,1.8s,mb5.6
RJOB *e*S S 17 24 31.7 +1.1
BLCB Balcova 79.20 312 P **P 17 14 48.8 -0.2**
BLCB Balcova 79.20 312 P **P 17 14 48.8 -0.2**
PV04 Paradox Valley 79.23 48 *e*P **P 17 14 49.4 +0.3**
SIGR SIGRI 79.27 313 P **P 17 14 49.2 -0.1**
SIGR SIGRI 79.27 313 P **P 17 14 49.2 -0.1**
HGN Heimansgroeve 79.38 332 *e*P **P 17 14 49.1 -0.6**
comp=Z,85nm,1.7s,mb5.1
SISC Sisak 79.39 323 P **P 17 14 50.4 +0.5**
SISC Sisak 79.39 323 *i*P **P 17 14 50.4 +0.5**
OBKA Obir 79.40 325⇓*i*P **P 17 14 50.3 +0.4**
comp=Z,32nm,0.6s,mb5.1,SNR=21
OBKA ⇓*e*PP PP 17 17 47.4 -4.9
comp=Z,98nm,1.6s
STIP Stip 79.42 317 P **P 17 14 49.9 -0.2**
GLA Glamis 79.44 55 ⇓P **P 17 14 50.4 +0.1**
baz=79,SNR=26
GLA Glamis 79.44 55 *e*P **P 17 14 50.5 +0.1**
GLA pmax pmax
comp=Z,238nm,1.4s,mb5.6
GLA Glamis 79.44 55 *e*P **P 17 14 50.5 +0.1**
comp=Z,238nm,1.4s,mb5.6
BEBN Eben Emael 79.45 332 P **P 17 14 49.8 -0.3**
comp=Z,24nm,1.5s,mb4.6
SOH Sokhos 79.45 316 P **P 17 14 50.1 -0.2**
SOH Sokhos 79.45 316 P **P 17 14 50.1 -0.2**
FUR Furstenfeldbru 79.47 327 *e*P **P 17 14 50.8 +0.6**
comp=Z,430nm,1.7s,mb5.8
FUR *e*S S 17 24 34.0 +0.5
OUR Ouranopolis 79.47 315 P **P 17 14 50.1 -0.3**
OUR Ouranopolis 79.47 315 P **P 17 14 50.1 -0.3**
KBA Koelnbreinsper 79.48 326⇓*i*P **P 17 14 51.0 +0.7**
comp=Z,194nm,1.5s,mb5.5,SNR=43
KBA ⇑*e*PP PP 17 17 49.0 -3.9
comp=Z,70nm,1.5s
MEM Membach 79.48 332 P **P 17 14 50.1 -0.2**
comp=Z,49nm,1.6s,mb4.9
MEM AP pP 17 15 42.9 +2.2
U17A Shonto 79.49 50 ⇓P **P 17 14 50.9 +0.3**
baz=79,SNR=17
VAY Valandovo 79.50 317 P **P 17 14 50.3 -0.2**
VAY Valandovo 79.50 317 *i*P **P 17 14 50.5 0.0**
comp=Z,274nm,1.5s,mb5.7
VAY Valandovo 79.50 317 P **P 17 14 50.3 -0.2**
LHO Holmfirth 79.50 337⇓*e*P **P 17 14 50.2 -0.1**
LHO Holmfirth 79.50 337 P **P 17 14 50.2 -0.1**
Y13A Salome 79.54 54 ⇑P **P 17 14 51.1 +0.2**
baz=79,SNR=14
W15A Williams 79.54 52 ⇑P **P 17 14 51.5 +0.6**
baz=79,SNR=11
S19A Harvey Farm, M 79.56 48 ⇓P **P 17 14 50.9 0.0**
baz=79,SNR=64
GIM North Isle of 79.57 339 *e*P **P 17 14 50.3 -0.3**
GIM North Isle of 79.57 339 P **P 17 14 50.3 -0.3**
T18A Mexican Hat 79.57 49 ⇓P **P 17 14 50.7 -0.3**
baz=79,SNR=98
SKO Skopje 79.60 318 P **P 17 14 52.4 +1.4**
SKO Skopje 79.60 318 *i*P **P 17 14 52.3 +1.3**
comp=Z,350nm,1.5s,mb5.8
SKO Skopje 79.60 318 P **P 17 14 52.4 +1.4**
PLE Pljevlja 79.60 320⇓*i*P **P 17 14 51.9 +0.9**
PLE Pljevlja 79.60 320⇓*i*P **P 17 14 52.0 +0.9**
PV01 Paradox Valley 79.60 48 *e*P **P 17 14 51.3 +0.2**
comp=Z,10μm,1.3s
Q21A Lamborn Mesa, 79.65 47 ⇑P **P 17 14 51.8 +0.4**
baz=79,SNR=21
X14A Yava 79.65 53 ⇓P **P 17 14 52.1 +0.6**
baz=79,SNR=59
R20A Redvale 79.67 48 ⇑P **P 17 14 52.0 +0.6**
baz=79
IVA Berane 79.70 319⇓*i*P **P 17 14 52.0 +0.4**
IVA Berane 79.70 319⇓*i*P **P 17 14 52.0 +0.5**
MYKA Terra Mystica 79.70 325⇓*i*P **P 17 14 51.7 +0.2**
comp=Z,107nm,1.1s,mb5.4
MYKA ⇓*e*pP pP 17 15 36.8 -5.1
comp=Z,49nm,1.4s
PLG Polygyros 79.73 316 P **P 17 14 51.5 -0.3**
PLG Polygyros 79.73 316 P **P 17 14 51.5 -0.3**
SMCO Snowmass 79.73 46 *e*P **P 17 14 52.4 +0.5**
comp=Z,236nm,1.4s,mb5.6
HORT Hortiatis 79.75 316 P **P 17 14 51.5 -0.4**
HORT Hortiatis 79.75 316 P **P 17 14 51.5 -0.4**
CHOS Chios island 79.75 313 P **P 17 14 52.1 +0.2**
LJU Ljubljana 79.78 324 *i*P **P 17 14 51.7 -0.2**
LJU *i*PP PP 17 17 57.5 +2.2
LJU *e*S S 17 24 35.4 -1.4
THE Thessaloniki 79.79 316 P **P 17 14 51.0 -1.1**
THE Thessaloniki 79.79 316 P **P 17 14 51.0 -1.1**
SMG Samos 79.79 312 *e*P **P 17 14 52.0 -0.2**
STU Stuttgart 79.81 329 *e*P **P 17 14 52.2 +0.2**
comp=Z,309nm,1.6s,mb5.7
STU *e*S S 17 24 36.2 -0.8
STU Stuttgart 79.81 329 *e*P **P 17 14 52.7 +0.7**
STU pmax pmax
comp=Z,216nm,1.4s,mb5.6
STU Stuttgart 79.81 329 *e*P **P 17 14 52.6 +0.6**
comp=Z,216nm,1.4s,mb5.6
WUAZ Wupatki 79.83 51 ⇑P **P 17 14 53.1 +0.6**
baz=80,SNR=26
WUAZ Wupatki 79.83 51 *e*P **P 17 14 53.1 +0.7**
comp=Z,119nm,1.0s,mb5.5
PVY Plav 79.87 319⇓*i*P **P 17 14 52.2 -0.3**
PVY Plav 79.87 319⇓*i*P **P 17 14 52.3 -0.2**
BOJS Bojanci 79.87 324 *e*P **P 17 14 52.3 -0.1**
BOJS *i*PP PP 17 17 56.9 +0.7
BOJS *e*S S 17 24 36.9 -0.9
BCLA Clavier 79.89 332 P **P 17 14 52.2 -0.2**
comp=Z,47nm,1.7s,mb4.8
UCC Uccle 79.90 333 P **P 17 14 52.0 -0.5**
comp=Z,56nm,1.7s,mb4.8
PAIG Paliouri 79.93 315 P **P 17 14 52.6 -0.3**
PAIG Paliouri 79.93 315 P **P 17 14 52.6 -0.3**
UPM Unac-Piva 79.93 320⇓*i*P **P 17 14 52.5 -0.3**
UPM Unac-Piva 79.93 320⇓*i*P **P 17 14 52.6 -0.2**
112A Yuma 79.95 55 ⇑P **P 17 14 53.0 -0.1**
baz=80
Y14A Wickenburg 79.95 53 ⇑P **P 17 14 53.2 +0.1**
baz=80,SNR=15
BCI Bajram Curri 79.99 319 *i*PN **P 17 14 53.9 +0.8**
BCI Bajram Curri 79.99 319 *i*PN S 17 24 49.0 +10
BCI Bajram Curri 79.99 319 *i*Pn S 17 24 49.0 +10
SNR=57
Q22A Crested Butte, 80.00 46 ⇑P **P 17 14 53.7 +0.4**
baz=80,SNR=39
R21A Cimarron 80.00 47 ⇑P **P 17 14 53.9 +0.6**
baz=80,SNR=29
GMM Mts of Mourne 80.00 340⇓*e*P **P 17 14 52.5 -0.4**
GMM Mts of Mourne 80.00 340 P **P 17 14 52.5 -0.4**
WATA Walderalm 80.01 327⇓*i*P **P 17 14 53.7 +0.5**
comp=Z,39nm,0.5s,mb5.2,SNR=22
ISCO Idaho Springs 80.02 45 *e*P **P 17 14 53.7 +0.4**
ISCO pmax pmax
comp=Z,133nm,1.4s,mb5.4
ISCO Idaho Springs 80.02 45 *e*P **P 17 14 53.7 +0.3**
comp=Z,133nm,1.4s,mb5.4
W16A Flagstaff 80.03 52 ⇓P **P 17 14 54.1 +0.6**
baz=80,SNR=14
X15A Humboldt 80.03 53 ⇑P **P 17 14 54.2 +0.7**
baz=80,SNR=60
WTTA Wattenberg 80.04 327⇓*i*P **P 17 14 54.1 +0.8**
comp=Z,85nm,0.7s,mb5.5,SNR=42
CWF Charnwood Fore 80.05 337 *e*P **P 17 14 52.8 -0.5**
CWF AMb AMB 17 14 54.6
comp=Z,85nm,1.0s,mb5.3
CWF Charnwood Fore 80.05 337 P **P 17 14 52.8 -0.5**
CWF AMb AMB 17 14 54.6
comp=Z,85nm,1.0s,mb5.3
VOY Vojsko 80.06 325 *e*P **P 17 14 52.8 -0.6**
VOY *e*PP PP 17 17 51.0 -6.7
Z13A Yuma Proving G 80.06 54 ⇑P **P 17 14 53.9 +0.2**
baz=80,SNR=95
U18A Rough Rock, Ch 80.07 50 ⇓P **P 17 14 54.3 +0.6**
baz=80,SNR=62
ABTA Abfaltersbach 80.09 326⇓*i*P **P 17 14 53.2 -0.4**
comp=Z,66nm,1.4s,mb5.1,SNR=20
JAVS Javornik 80.09 324 *i*P **P 17 14 53.1 -0.5**
V17A Tonalea, Kykot 80.10 51 ⇓P **P 17 14 54.6 +0.7**
baz=80,SNR=111
ARG Arkhangelos 80.11 310 P **P 17 14 53.7 -0.2**
ARG Arkhangelos 80.11 310 P **P 17 14 53.7 -0.2**
ARG Arkhangelos 80.11 310 *e*P **P 17 14 54.0 +0.1**
KRUS Krusevo 80.14 317 *i*P **P 17 14 53.9 -0.1**
LANF Langenberg 80.17 330 *e*P **P 17 14 53.1 -0.9**
SNF Senefte 80.17 333 P **P 17 14 53.8 -0.1**
comp=Z,47nm,1.8s,mb4.8
NKY Niksic 80.18 320⇓*i*P **P 17 14 53.4 -0.7**
NKY Niksic 80.18 320⇓*i*P **P 17 14 53.5 -0.7**
MOTA Moosalm 80.20 327⇓*i*P **P 17 14 54.7 +0.5**
comp=Z,67nm,0.7s,mb5.4,SNR=26
WLF Walferdange 80.22 331 P **P 17 14 53.9 -0.3**
comp=Z,58nm,2.1s,mb4.8
WLF AP pP 17 15 42.7 -2.0
WLF Walferdange 80.22 331 *e*P **P 17 14 54.6 +0.4**
comp=Z,136nm,1.6s,mb5.3
WLF *e*S S 17 24 40.8 -0.5
WLF Walferdange 80.22 331 *e*P **P 17 14 54.0 -0.2**
WLF *e**PP pP 17 15 41.8 -2.9
WLF pmax pmax
comp=Z,136nm,1.7s,mb5.3
WLF Walferdange 80.22 331 *e*P **P 17 14 54.0 -0.2**
comp=Z,136nm,1.7s,mb5.3
WLF *e*pP pP 17 15 41.8 -2.8
RETA Reutte 80.22 327⇓*i*P **P 17 14 55.1 +0.8**
comp=Z,154nm,1.0s,mb5.6,SNR=56
RETA ⇑*i*pP pP 17 15 40.7 -4.1
comp=Z,35nm,1.2s
SQTA Sankt Quirin 80.25 327⇑*i*P **P 17 14 55.0 +0.6**
T19A Beclabito 80.27 49 ⇑P **P 17 14 55.0 +0.3**
baz=80,SNR=38
113A Mohawk Valley, 80.29 55 ⇑P **P 17 14 54.6 -0.3**
baz=80,SNR=21
MVCO Mesa Verde 80.30 48 ⇑P **P 17 14 55.3 +0.4**
baz=80,SNR=53
MVCO Mesa Verde 80.30 48 *e*P **P 17 14 55.0 +0.2**
comp=Z,211nm,1.4s,mb5.6
PHP Peshkopia 80.31 318 *i*PN **P 17 14 54.6 -0.3**
PHP Peshkopia 80.31 318 *i*PN S 17 24 43.1 +0.6
PHP Peshkopia 80.31 318 *i*Pn S 17 24 43.1 +0.6
SNR=57
PUK Puka 80.32 319 *i*PN **P 17 14 55.7 +0.8**
PUK Puka 80.32 319 *i*PN S 17 24 45.0 +2.4
PUK Puka 80.32 319 *i*Pn S 17 24 45.0 +2.4
SNR=57
GIVF Givet 80.33 332⇓*i*P **P 17 14 54.5 -0.3**
EYMN Ely 80.33 32 *e*P **P 17 14 53.7 -1.2**
comp=Z,145nm,1.2s,mb5.5
BRY Bratogost 80.33 320⇓*i*P **P 17 14 54.1 -0.9**
BRY Bratogost 80.33 320⇓*i*P **P 17 14 54.1 -0.8**
TTG Podgorica 80.34 319⇓*i*P **P 17 14 54.4 -0.6**
TTG Podgorica 80.34 319⇓*i*P **P 17 14 54.5 -0.5**
Y15A Casa Rosa Ranc 80.34 53 ⇑P **P 17 14 55.5 +0.4**
baz=80,SNR=65
BIA Bitola 80.36 317 P **P 17 14 54.7 -0.4**
BIA Bitola 80.36 317 P **P 17 14 54.7 -0.4**
S21A Coal Bank Pass 80.37 48 ⇓P **P 17 14 56.1 +0.9**
baz=80,SNR=54
TRI Trieste 80.37 325 *e*P **P 17 14 54.3 -0.8**

TRI e*PP pP 17 15 46.3 +0.7
TRI pmax pmax
comp=Z,93nm,1.0s,mb5.4
TRI Trieste 80.37 325 eP **P 17 14 54.3 -0.8**
comp=Z,93nm,1.0s,mb5.4
TRI epP pP 17 15 46.3 +0.7
AOS Alonnisos 80.37 314 P **P 17 14 54.0 -1.2**
AOS Alonnisos 80.37 314 P **P 17 14 54.0 -1.2**
Z14A Wintersburg 80.38 54 ⇑P **P 17 14 55.2 -0.2**
baz=80,SNR=12
NIS1 Nisyros Isl. 80.38 311 P **P 17 14 54.6 -0.7**
DOU Dourbes 80.41 332 P **P 17 14 54.9 -0.4**
comp=Z,30nm,1.8s,mb4.6
LIT Litokhoron 80.43 316 P **P 17 14 55.0 -0.5**
LIT Litokhoron 80.43 316 P **P 17 14 55.0 -0.5**
WLF1 Llynfaes 80.44 339 eP **P 17 14 54.8 -0.5**
WLF1 AMb AMB 17 14 56.7
comp=Z,194nm,1.6s,mb5.5
WLF1 Llynfaes 80.44 339 P **P 17 14 54.8 -0.5**
WLF1 AMb AMB 17 14 56.7
comp=Z,194nm,1.6s,mb5.5
BFO Black Forest 80.50 329 P **P 17 14 55.2 -0.6**
comp=Z,634nm,1.3s,mb6.1,SNR=42
BFO Black Forest 80.50 329 eP **P 17 14 55.8 +0.1**
comp=Z,240nm,1.4s,mb5.6
BFO eS S 17 24 42.8 -1.5
BFO Black Forest 80.50 329 i P **P 17 14 55.8 +0.1**
BFO Black Forest 80.50 329 eP **P 17 14 55.5 -0.2**
comp=Z,246nm,1.4s,mb5.6
FNA Florina 80.50 317 P **P 17 14 55.5 -0.4**
FNA Florina 80.50 317 P **P 17 14 55.5 -0.4**
W17A Winslow 80.52 51 ⇑P **P 17 14 56.5 +0.4**
baz=80,SNR=7.8
R22A Saguache, Gunn 80.53 47 ⇓P **P 17 14 57.0 +0.9**
baz=80,SNR=43
V18A Ganado 80.53 50 ⇑P **P 17 14 56.8 +0.6**
baz=80,SNR=36
U19A Dine' College, 80.54 50 ⇓P **P 17 14 56.5 +0.3**
baz=80,SNR=14
DMUB Kingscourt 80.55 340 eP **P 17 14 55.2 -0.7**
X16A Lo Mia Camp, P 80.55 52 ⇓P **P 17 14 57.0 +0.7**
baz=80,SNR=66
OHR Ohrid 80.56 318 P **P 17 14 55.6 -0.6**
OHR Ohrid 80.56 318 i P **P 17 14 55.8 -0.4**
comp=Z,139nm,0.8s,mb5.6
OHR Ohrid 80.56 318 P **P 17 14 55.6 -0.6**
MUKL Al Mukalla 80.56 281⇑eP **P 17 14 57.3 +0.7**
BAIF Baives 80.58 332⇓iP **P 17 14 55.8 -0.3**
BAIF epP pP 17 15 47.5 +0.9
XOR Xorichti 80.59 315 P **P 17 14 55.6 -0.8**
XOR Xorichti 80.59 315 P **P 17 14 55.6 -0.8**
FETA Feichten 80.61 327⇓iP **P 17 14 57.0 +0.7**
comp=Z,88nm,1.0s,mb5.3,SNR=38
BUM Brajici-Budva 80.61 319⇓iP **P 17 14 56.1 -0.4**
BUM Brajici-Budva 80.61 319⇓iP **P 17 14 56.1 -0.3**
KZN Kozani 80.65 316 P **P 17 14 56.2 -0.5**
KZN Kozani 80.65 316 P **P 17 14 56.2 -0.5**
ULC Ulcinj 80.69 319⇓iP **P 17 14 56.7 -0.2**
ULC Ulcinj 80.69 319⇓iP **P 17 14 56.7 -0.2**
HCY Herceg Novi 80.70 320⇓iP **P 17 14 56.6 -0.3**
HCY Herceg Novi 80.70 320⇓iP **P 17 14 56.6 -0.3**
HLM1 Long Mynd 80.70 338 eP **P 17 14 56.1 -0.7**
HLM1 Long Mynd 80.70 338 P **P 17 14 56.1 -0.7**
DAVA Damuels 80.74 328⇑iP **P 17 14 57.4 +0.4**
comp=Z,133nm,0.9s,mb5.6,SNR=40
NVLJ Novalja 80.77 323 P **P 17 14 56.2 -1.0**
NVLJ Novalja 80.77 323 i P **P 17 14 56.2 -1.0**
CDF Champ du Feu 80.84 330⇓iP **P 17 14 57.6 +0.1**
comp=Z,280nm,1.3s,mb5.4
CDF epP pP 17 15 49.4 +1.3
CDF Champ du Feu 80.84 330⇓iP **P 17 14 57.6 +0.1**
CDF e*PP pP 17 15 49.4 +1.3
CDF pmax pmax
comp=Z,140nm,1.3s,mb5.4
CDF Champ du Feu 80.84 330⇓iP **P 17 14 57.6 +0.1**
comp=Z,140nm,1.3s,mb5.4
CDF epP pP 17 15 49.4 +1.3
114A Black Gap (USA 80.84 54 ⇑P **P 17 14 58.1 +0.2**
baz=81,SNR=33
TIR Tirane 80.85 318 P **P 17 14 57.8 +0.1**
TIR Tirane 80.85 318 P **P 17 14 57.8 +0.1**
U20A Newcomb 80.87 49 ⇓P **P 17 14 58.3 +0.3**
baz=81,SNR=32
LIENZ Kamor/St.Gall 80.89 328⇓iP **P 17 14 57.6 -0.2**
comp=Z,250nm,1.4s,mb5.6
SLE Schleitheim 80.90 329⇓iP **P 17 14 58.0 +0.1**
comp=Z,385nm,2.8s,mb5.5
Y16A Circle Bar Ran 80.91 53 ⇓P **P 17 14 58.8 +0.6**
baz=81,SNR=47
Z15A Gila River Ind 80.91 53 ⇓P **P 17 14 58.1 -0.1**
baz=81
KBN Korca 80.92 317 i PN **P 17 14 58.5 +0.4**
KBN Korca 80.92 317 i PN S 17 24 37.2 -12
KBN Korca 80.92 317 i Pn S 17 24 37.2 -12
SNR=57
APE Apeiranthos 80.98 312 P **P 17 14 57.0 -1.5**
APE Apeiranthos 80.98 312 P **P 17 14 57.0 -1.5**
APE Apeiranthos 80.98 312⇑iP **P 17 14 57.0 -1.5**
APE Apeiranthos 80.98 312 eP **P 17 14 57.5 -1.0**
FELD Feldberg im Sc 81.00 329 eP **P 17 14 58.1 -0.3**
WILA Wila 81.02 328⇓iP **P 17 14 58.4 -0.1**
comp=Z,261nm,2.0s,mb5.5
OGNE Ogallala 81.03 42 eP **P 17 14 58.3 -0.3**
comp=Z,310nm,1.2s,mb5.8
ECH Echery 81.04 330 eP **P 17 14 57.9 -0.7**
ECH Echery 81.04 330 eP **P 17 14 58.2 -0.4**
ECH e*PP pP 17 15 47.2 -2.0
ECH pmax pmax
comp=Z,89nm,1.2s,mb5.3
ECH Echery 81.04 330 eP **P 17 14 58.2 -0.4**
comp=Z,89nm,1.2s,mb5.3
ECH epP pP 17 15 47.2 -2.0
W18A Petrified Fore 81.07 51 ⇑P **P 17 14 59.5 +0.5**
baz=81
THL Klokotos Trika 81.07 316 P **P 17 14 57.5 -1.4**
FUORN Ofenpass-Fuorn 81.12 327⇓iP **P 17 14 59.2 +0.1**
comp=Z,331nm,0.6s,mb6.1
PLONS Plons/SG 81.13 328⇓iP **P 17 14 59.2 +0.1**
comp=Z,560nm,2.2s,mb5.8
KARP Karpathos 81.14 310 eP **P 17 14 59.0 -0.4**
DCN Croghan 81.15 340 eP **P 17 14 58.2 -0.9**
DAVOX Davos/Dischmat 81.15 327⇓iP **P 17 14 59.6 +0.4**
comp=Z,319nm,1.6s,mb5.7
ATAL Atalanti 81.18 315 P **P 17 14 58.5 -1.0**
ZUR Degenried 81.19 328⇓iP **P 17 14 59.7 +0.3**
comp=Z,300nm,2.3s,mb5.5
BRMO Bormio 81.19 327 P **P 17 15 00.1 +0.7**
HTR Trewern Hill 81.20 338⇓eP **P 17 14 58.8 -0.5**
HTR Trewern Hill 81.20 338 P **P 17 14 58.8 -0.5**
LKR Lokris 81.22 315 P **P 17 14 58.8 -0.9**
LKR Lokris 81.22 315 P **P 17 14 58.8 -0.9**
SULZ Cheisacher 81.24 329⇓iP **P 17 14 59.9 +0.2**
comp=Z,390nm,1.4s,mb5.8
W19A Sanders 81.27 50 ⇑P **P 17 15 00.8 +0.7**
baz=81,SNR=22
115A Sonoran Desert 81.27 54 ⇑P **P 17 15 00.4 +0.3**
baz=81,SNR=16
WOL Wolverton 81.27 336⇓eP **P 17 14 59.3 -0.5**
WOL AMb AMB 17 15 00.6
comp=Z,166nm,1.7s,mb5.4
WOL Wolverton 81.27 336 P **P 17 14 59.3 -0.5**
WOL AMb AMB 17 15 00.6
comp=Z,166nm,1.7s,mb5.4
ATHU Athens Univers 81.29 314 P **P 17 14 58.7 -1.4**
AGG Agios Georgios 81.30 315 P **P 17 14 59.0 -1.2**
AGG Agios Georgios 81.30 315 P **P 17 14 59.0 -1.2**
Z16A Peralta Trail, 81.31 53 ⇓P **P 17 15 00.4 +0.1**
baz=81,SNR=10
V20A Brimhall 81.31 49 ⇓P **P 17 15 00.5 +0.2**
baz=81,SNR=24
MEV Metsovon 81.32 316 P **P 17 15 00.5 +0.3**
MEV Metsovon 81.32 316 P **P 17 15 00.5 +0.3**
ATH Athens Observa 81.33 314 P **P 17 14 58.7 -1.6**
T22A Edith 81.33 48 ⇑P **P 17 15 01.0 +0.7**
baz=81,SNR=56
MOF Molkenrain 81.35 330 eP **P 17 14 59.2 -1.1**
X18A Snowflake 81.36 51 ⇓P **P 17 15 01.1 +0.6**
baz=81,SNR=17
BERNI Berninapass 81.39 327⇓iP **P 17 15 00.9 +0.4**
comp=Z,384nm,1.6s,mb5.8
Y17A Roosevelt 81.41 52 ⇓P **P 17 15 01.3 +0.5**
baz=81,SNR=57
214A Organ Pipe Nat 81.43 55 ⇓P **P 17 15 01.0 +0.1**
baz=81,SNR=16

LLS Linth-Limmern 81.45 328⇓iP **P 17 15 01.0 +0.2**
comp=Z,92nm,0.7s,mb5.5
HGH Gray Hill 81.46 337⇓eP **P 17 14 59.8 -0.9**
HGH Gray Hill 81.46 337 P **P 17 14 59.8 -0.9**
THEF They Montfort 81.47 330 eP **P 17 15 00.6 -0.3**
MABI Malga Bissina 81.47 327 P **P 17 15 00.4 -0.5**
HINF Hinteralfeld 81.49 330⇓iP **P 17 15 00.6 -0.4**
comp=Z,41nm,0.8s,mb4.8
HINF Hinteralfeld 81.49 330⇓iP **P 17 15 00.6 -0.4**
HINF pmax pmax
comp=Z,20nm,0.8s,mb4.8
HINF Hinteralfeld 81.49 330⇓iP **P 17 15 00.6 -0.4**
comp=Z,20nm,0.8s,mb4.8
MUO Muotathal 81.50 328⇓iP **P 17 15 01.2 +0.2**
comp=Z,519nm,2.1s,mb5.8
ECSD EROS Data Cent 81.50 37 eP **P 17 15 00.1 -1.0**
comp=Z,102nm,0.9s,mb5.5
SCHQ Schefferville 81.50 15 P **P 17 15 00.7 -0.2**
comp=Z,8.7nm,0.5s,mb4.6,baz=333,slow=5.4,SNR=17
SCHQ LR LR 17 51 01.3
comp=Z,239nm,20.9s,baz=343,slow=35
SCHQ Schefferville 81.50 15 eP **P 17 15 00.4 -0.5**
comp=Z,9.3nm,0.7s,mb4.5
HAU Haudompre 81.52 330⇓iP **P 17 15 00.9 -0.2**
comp=Z,59nm,0.8s,mb5.0
HAU eMLR MLR
comp=Z,354nm,20.2s
HAU Haudompre 81.52 330⇓iP **P 17 15 00.9 -0.2**
HAU pmax pmax
comp=Z,30nm,0.8s,mb5.0
HAU MLR MLR
comp=Z,350nm,20.3s
HAU Haudompre 81.52 330⇓iP **P 17 15 00.9 -0.2**
comp=Z,30nm,0.8s,mb5.0
HAU LR LR
comp=Z,350nm,20.3s
BALST Balsthal 81.56 329⇓iP **P 17 15 01.7 +0.3**
comp=Z,400nm,1.4s,mb5.9
THR6 Thira Island, 81.56 312 P **P 17 15 00.1 -1.5**
THR6 Thira Island, 81.56 312 P **P 17 15 00.1 -1.5**
VDL Val di Lei 81.56 327⇓iP **P 17 15 01.3 -0.1**
comp=Z,482nm,2.3s,mb5.7
SDCO Great Sand Dun 81.57 46 eP **P 17 15 01.6 +0.1**
comp=Z,54nm,1.1s,mb5.1
MEZF Maizieres J'vi 81.59 331⇓iP **P 17 15 01.6 +0.1**
DSF Desfina 81.65 315 P **P 17 15 00.4 -1.6**
EVR Evrytania 81.66 315 eP **P 17 15 01.0 -1.0**
BNALP Bannalp 81.66 328⇓iP **P 17 15 02.1 +0.2**
comp=Z,197nm,1.2s,mb5.6
116A Eloy 81.69 54 ⇓P **P 17 15 02.5 +0.2**
baz=81,SNR=23
BOURR Bourrignon 81.69 329⇓iP **P 17 15 02.1 +0.1**
comp=Z,293nm,2.1s,mb5.5
LTK Loutraki 81.69 314 P **P 17 15 00.0 -2.2**
V21A Milan 81.78 49 ⇑P **P 17 15 03.3 +0.6**
baz=82,SNR=32
X19A St. Johns 81.81 51 ⇓P **P 17 15 03.9 +0.9**
baz=82,SNR=96
Y18A Canyon Day Jun 81.83 52 ⇑P **P 17 15 03.8 +0.7**
baz=82,SNR=25
HASLI Hasliberg/Brie 81.86 328⇓iP **P 17 15 03.0 +0.1**
comp=Z,523nm,1.6s,mb5.9
KALE Kalithea 81.87 315 P **P 17 15 01.8 -1.3**
SRN Sarande 81.88 317 i PN S 17 24 51.3 -7.5
SRN Sarande 81.88 317 i Pn S 17 24 51.3 -7.5
SNR=57
LOMF Lomont 81.88 329 eP **P 17 15 02.5 -0.5**
FUSIO Fusio 81.90 328⇓iP **P 17 15 03.4 +0.2**
comp=Z,309nm,1.6s,mb5.7
Z17A San Carlos Hig 81.91 52 ⇑P **P 17 15 04.1 +0.6**
baz=82,SNR=21
EFP Efpalio 81.97 315 P **P 17 15 03.2 -0.4**
IGT Igoumenitsa 81.97 317 P **P 17 15 03.2 -0.4**
IGT Igoumenitsa 81.97 317 P **P 17 15 03.2 -0.4**
LAKA Lakka 82.06 315 P **P 17 15 03.5 -0.7**
GUR Goura 82.09 315 P **P 17 15 03.0 -1.3**
KEK Kerkira 82.11 317 P **P 17 15 04.0 -0.3**
KEK Kerkira 82.11 317 P **P 17 15 04.0 -0.3**
KEK Kerkira 82.11 317 eP **P 17 15 04.5 +0.2**
V22A San Miguel Ran 82.11 48 ⇓P **P 17 15 05.0 +0.6**
baz=82,SNR=51
UPR University Cam 82.13 315 P **P 17 14 52.9 -12**
WIMIS Wimmis 82.14 329⇓iP **P 17 15 03.9 -0.5**
comp=Z,740nm,3.8s
Y19A Nutrioso 82.17 51 ⇓P **P 17 15 05.6 +0.8**
baz=82
MUGIO Muggio 82.19 327⇓iP **P 17 15 04.2 -0.4**
comp=Z,579nm,2.4s,mb5.8
X20A Quemado 82.19 50 ⇑P **P 17 15 05.8 +1.0**
baz=82,SNR=102
216A Three Points, 82.23 54 ⇓P **P 17 15 05.3 +0.2**
baz=82,SNR=14
NPS Neapolis 82.23 311 eP **P 17 15 04.5 -0.6**
117A Oracle 82.26 53 ⇓P **P 17 15 05.5 +0.2**
baz=82,SNR=26
W21A San Fidel 82.27 49 ⇓P **P 17 15 05.7 +0.4**
baz=82,SNR=32
TORNY Torny/Romont 82.31 329⇓iP **P 17 15 05.2 -0.1**
comp=Z,421nm,2.3s,mb5.7
Z18A Geronimo 82.32 52 ⇑P **P 17 15 06.2 +0.6**
baz=82,SNR=7.1
VAI Varese 82.34 327 P **P 17 15 05.0 -0.4**
comp=Z,873nm,1.7s,mb6.1
LKD2 Lefkada island 82.35 316 P **P 17 15 05.4 -0.2**
LKBD Leukerbad 82.37 328⇓iP **P 17 15 05.5 -0.1**
LKD Levkas 82.42 316 P **P 17 15 05.4 -0.6**
TUC Tucson 82.42 53 eP **P 17 15 06.2 +0.1**
TUC pmax pmax
comp=Z,101nm,1.4s,mb5.3
TUC Tucson 82.42 53 eP **P 17 15 06.2 +0.1**
comp=Z,101nm,1.4s,mb5.3
CING Cingoli 82.45 323 P **P 17 15 06.2 +0.1**
VLX Vlachokerasia 82.49 314 P **P 17 15 05.0 -1.4**
MMK Mattmark 82.51 328⇓iP **P 17 15 06.4 +0.1**
comp=Z,299nm,2.0s,mb5.7
HTL Hartland 82.52 338 eP **P 17 15 06.0 -0.2**
HTL AMb AMB 17 15 06.5
comp=Z,77nm,1.3s,mb5.3
HTL Hartland 82.52 338 P **P 17 15 06.0 -0.2**
HTL AMb AMB 17 15 06.5
comp=Z,77nm,1.3s,mb5.3
SENIN Lac Senin/Sane 82.52 329⇓iP **P 17 15 06.7 +0.4**
comp=Z,333nm,1.8s,mb5.8
Z19A T-Link Ranch, 82.63 52 ⇑P **P 17 15 07.7 +0.5**
baz=82
V23A Ortiz Mt. (NFS 82.64 48 ⇑P **P 17 15 08.2 +1.0**
baz=82,SNR=11
U24A Moreno Valley 82.66 47 ⇑P **P 17 15 08.0 +0.8**
baz=82
X21A Alamocita Cree 82.67 50 ⇓P **P 17 15 08.5 +1.2**
baz=82,SNR=124
118A Homack Ranch, 82.67 53 ⇑P **P 17 15 07.8 +0.3**
baz=82,SNR=52
RGNG Rignano Grg 82.68 321 P **P 17 15 07.1 -0.2**
GRYON Gryon 82.69 329⇓iP **P 17 15 07.1 -0.1**
DIX Grande Dixence 82.71 328⇓iP **P 17 15 07.7 +0.4**
comp=Z,286nm,1.8s,mb5.7
Y20A Horse Springs, 82.71 51 ⇑P **P 17 15 08.8 +1.2**
baz=82,SNR=66
FNVD Fontana Vidola 82.73 325 P **P 17 15 08.4 +0.9**
W22A Albuquerque 82.75 49 ⇑P **P 17 15 08.6 +0.9**
baz=82,SNR=7.0
COWI Conover 82.77 32 eP **P 17 15 06.7 -1.0**
comp=Z,94nm,1.4s,mb5.3
217A Green Valley 82.77 54 ⇓P **P 17 15 08.3 +0.4**
baz=82,SNR=41
CABF La Chapelle 82.78 329⇓iP **P 17 15 07.6 -0.1**
comp=Z,70nm,1.0s,mb5.1
CABF La Chapelle 82.78 329⇓iP **P 17 15 07.6 -0.1**
CABF pmax pmax
comp=Z,35nm,1.0s,mb5.0
CABF La Chapelle 82.78 329⇓iP **P 17 15 07.6 -0.1**
comp=Z,35nm,1.0s,mb5.0
KFL Anninata 82.79 316 P **P 17 15 07.8 -0.1**
SALAN Lac Salanfe 82.83 329⇓iP **P 17 15 07.9 0.0**
MURB Monte Urbino 82.84 324 P **P 17 15 08.7 +0.6**
VLS Valsamata 82.84 316 P **P 17 15 07.9 -0.3**
VLS Valsamata 82.84 316 P **P 17 15 07.9 -0.3**
VLS Valsamata 82.84 316 eP **P 17 15 08.0 -0.2**
ORO Oropa 82.85 328 P **P 17 15 07.4 -0.7**
ORO pmax pmax
comp=Z,54nm,0.8s,mb5.3
ORO Oropa 82.85 328 P **P 17 15 07.4 -0.7**
comp=Z,54nm,0.8s,mb5.3
ITM Ithomi 82.87 314 P **P 17 15 07.5 -0.9**
ITM Ithomi 82.87 314 P **P 17 15 07.5 -0.9**

ITM Ithomi 82.87 314 eP **P 17 15 07.5 -0.9**
VAM Vamos 82.92 312 eP **P 17 15 08.5 -0.1**
KYTH Kithira 82.93 313 eP **P 17 15 08.5 -0.2**
BOB Bobbio (Coli) 82.96 326 P **P 17 15 08.9 +0.3**
119A Ashpeak Ranch, 82.98 52 ⇓P **P 17 15 09.3 +0.3**
baz=83,SNR=28
Y21A Point of Rocks 83.05 50 ⇓P **P 17 15 10.4 +1.1**
baz=83,SNR=75
VLC Villacollemand 83.06 326 eP **P 17 15 10.4 +1.2**
comp=Z,28nm,0.6s,mb5.2
LOR Lormes 83.06 331⇓iP **P 17 15 08.9 -0.2**
comp=Z,219nm,1.1s,mb5.5
LOR epP pP 17 16 00.6 +0.7
LOR eMLR MLR
comp=Z,273nm,21.2s
LOR Lormes 83.06 331⇓iP **P 17 15 08.9 -0.2**
LOR e*PP pP 17 16 00.6 +0.7
LOR pmax pmax
comp=Z,110nm,1.1s,mb5.5
LOR MLR MLR
comp=Z,270nm,21.3s
LOR Lormes 83.06 331⇓iP **P 17 15 08.9 -0.2**
comp=Z,110nm,1.1s,mb5.5
LOR epP pP 17 16 00.6 +0.7
LOR LR LR
comp=Z,270nm,21.3s
ANMO Albuquerque 83.06 49 eP **P 17 15 10.0 +0.6**
ANMO pmax pmax
comp=Z,35nm,1.3s
ANMO Albuquerque 83.06 49 eP **P 17 15 10.0 +0.6**
comp=Z,35nm,1.3s,mb4.9
X22A Bernardo 83.07 49 ⇓P **P 17 15 10.8 +1.4**
baz=83,SNR=25
LAZ Ladron 83.07 50 eP **P 17 15 10.1 +0.6**
comp=Z,60nm,1.3s,mb5.2
W23A Werner Place, 83.09 49 ⇓P **P 17 15 10.4 +0.9**
baz=83,SNR=27
U25A Circle Dot Ran 83.15 47 ⇓P **P 17 15 09.8 0.0**
baz=83
Z20A Nine Sixteen R 83.15 51 ⇑P **P 17 15 10.4 +0.5**
baz=83,SNR=153
AQU L'Aquila 83.17 323 eP **P 17 15 10.3 +0.6**
comp=Z,290nm,1.3s,mb5.8
PYL PYLOS 83.18 314 P **P 17 15 08.5 -1.4**
CSNT Castellina Chi 83.22 325 P **P 17 15 09.3 -0.7**
FLN La Foliniere 83.27 334 eP **P 17 15 09.7 -0.4**
FLN eMLR MLR
comp=Z,306nm,22.5s
FLN La Foliniere 83.27 334 eP **P 17 15 09.7 -0.4**
FLN LR LR
comp=Z,310nm,22.5s
LDF La Druitiere 83.30 334⇓iP **P 17 15 09.8 -0.5**
comp=Z,83nm,0.7s,mb5.3
LDF La Druitiere 83.30 334⇓iP **P 17 15 09.8 -0.5**
LDF pmax pmax
comp=Z,41nm,0.7s,mb5.3
LDF La Druitiere 83.30 334⇓iP **P 17 15 09.8 -0.5**
comp=Z,41nm,0.7s,mb5.3
MIDA Miranda 83.33 322 P **P 17 15 11.1 +0.5**
LENM Lemitar 83.34 50 eP **P 17 15 11.2 +0.4**
comp=Z,18nm,0.9s,mb4.8
JLP Les Platons 83.36 336⇓eP **P 17 15 10.5 -0.1**
JLP Les Platons 83.36 336 P **P 17 15 10.5 -0.1**
SSF Saint Saulge 83.36 331⇓iP **P 17 15 10.5 -0.2**
comp=Z,121nm,1.1s,mb5.2
SSF epP pP 17 16 02.3 +0.8
SSF Saint Saulge 83.36 331⇓iP **P 17 15 10.5 -0.2**
SSF e*PP pP 17 16 02.3 +0.8
SSF pmax pmax
comp=Z,61nm,1.1s,mb5.2
SSF Saint Saulge 83.36 331⇓iP **P 17 15 10.5 -0.2**
comp=Z,61nm,1.1s,mb5.2
SSF epP pP 17 16 02.3 +0.8
JQE Queens East 83.38 335⇓eP **P 17 15 10.3 -0.4**
JQE Queens East 83.38 335 P **P 17 15 10.3 -0.4**
GVD Gavdhos 83.40 311 P **P 17 15 10.6 -0.5**
GVD Gavdhos 83.40 311 P **P 17 15 10.6 -0.5**
GVD Gavdhos 83.40 311 eP **P 17 15 10.5 -0.6**
JRS Jersey 83.40 336⇓eP **P 17 15 10.3 -0.5**
JRS Jersey 83.40 336 P **P 17 15 10.3 -0.5**
JSA Saint Aubin 83.43 336 eP **P 17 15 10.0 -1.0**
JSA AMb AMB 17 15 12.3
comp=Z,90nm,0.9s,mb5.5
JSA Saint Aubin 83.43 336 P **P 17 15 10.0 -1.0**
JSA AMb AMB 17 15 12.3
comp=Z,90nm,0.9s,mb5.5
BDHA Al Bayda' 83.43 283⇓eP **P 17 15 12.6 +1.0**
BDHA AMb AMB 17 15 13.8
comp=Z,295nm,1.1s,mb5.9
Y22D IRIS PASSCAL I 83.43 50 ⇑P **P 17 15 11.9 +0.6**
baz=83
LPL La Plagne 83.44 328⇓iP **P 17 15 11.6 +0.5**
comp=Z,117nm,0.9s,mb5.3
LPL La Plagne 83.44 328⇓iP **P 17 15 11.6 +0.5**
LPL pmax pmax
comp=Z,59nm,0.9s,mb5.3
LPL La Plagne 83.44 328⇓iP **P 17 15 11.6 +0.5**
comp=Z,59nm,0.9s,mb5.3
V25A Rancho No Teng 83.44 47 ⇓P **P 17 15 11.6 +0.3**
baz=83
LPG La Plagne 83.45 328⇓iP **P 17 15 11.8 +0.7**
comp=Z,194nm,0.9s,mb5.5
LPG epP pP 17 16 03.6 +1.6
LPG La Plagne 83.45 328⇓iP **P 17 15 11.8 +0.7**
LPG e*PP pP 17 16 03.6 +1.6
LPG pmax pmax
comp=Z,97nm,0.9s,mb5.5
LPG La Plagne 83.45 328⇓iP **P 17 15 11.8 +0.7**
comp=Z,97nm,0.9s,mb5.5
LPG epP pP 17 16 03.6 +1.6
W24A Lazy 6 Ranch, 83.47 48 ⇓P **P 17 15 12.2 +0.8**
baz=83,SNR=76
X23A Hourglass Bar 83.48 49 ⇓P **P 17 15 12.2 +0.7**
baz=83,SNR=25
HYF Humbligny 83.50 332 eP **P 17 15 11.6 +0.3**
Y22A Socorro 83.51 50 ⇑P **P 17 15 12.3 +0.7**
baz=83
318A Bisbee 83.51 53 ⇓P **P 17 15 12.1 +0.4**
baz=83,SNR=84
U26A Atchley Ranch, 83.51 46 ⇑P **P 17 15 11.6 -0.1**
baz=83,SNR=34
120A U Bar Ranch, L 83.53 52 ⇑P **P 17 15 12.3 +0.5**
baz=83,SNR=37
BNM Barren Site 83.55 50 eP **P 17 15 12.5 +0.7**
comp=Z,174nm,1.3s,mb5.6
219A White Tail Can 83.55 53 ⇓P **P 17 15 12.4 +0.5**
baz=83,SNR=20
Z21A St. Cloud Mine 83.55 51 ⇑P **P 17 15 12.9 +1.0**
baz=83,SNR=73
SMF Signal de Mont 83.59 331⇓iP **P 17 15 11.7 -0.1**
AVF Avril sur Loir 83.65 331⇓iP **P 17 15 12.1 0.0**
comp=Z,165nm,0.8s,mb5.5
AVF epP pP 17 16 03.9 +0.9
AVF Avril sur Loir 83.65 331⇓iP **P 17 15 12.1 0.0**
AVF e*PP pP 17 16 03.9 +0.9
AVF pmax pmax
comp=Z,83nm,0.8s,mb5.5
AVF Avril sur Loir 83.65 331⇓iP **P 17 15 12.1 0.0**
comp=Z,83nm,0.8s,mb5.5
AVF epP pP 17 16 03.9 +0.9
GRR Gorron 83.72 334⇓iP **P 17 15 12.3 -0.1**
comp=Z,76nm,0.7s,mb5.2
GRR Gorron 83.72 334⇓iP **P 17 15 12.3 -0.1**
GRR pmax pmax
comp=Z,38nm,0.7s,mb5.2
GRR Gorron 83.72 334⇓iP **P 17 15 12.3 -0.1**
comp=Z,38nm,0.7s,mb5.2
RFI Roccamonfina 83.73 322 P **P 17 15 13.9 +1.3**
comp=Z,97nm,1.8s,mb5.2
LBOS 83.73 283 eP **P 17 15 14.1 +1.1**
LBOS AMb AMB 17 15 14.9
comp=Z,180nm,0.8s,mb5.9
CBKS Cedar Bluff 83.79 42 eP **P 17 15 11.9 -1.1**
CBKS pmax pmax
comp=Z,184nm,1.5s,mb5.6
CBKS Cedar Bluff 83.79 42 eP **P 17 15 11.9 -1.1**
comp=Z,184nm,1.5s,mb5.6
BNI Bardonecchia 83.85 328 eP **P 17 15 13.0 -0.2**
BNI pmax pmax
comp=Z,144nm,1.6s,mb5.5
BNI Bardonecchia 83.85 328 eP **P 17 15 13.0 -0.1**
comp=Z,144nm,1.6s,mb5.5
MOO Moorlands 83.90 174 eP **P 17 15 14.3 +1.2**
DHBB Dhamar BB 83.91 284⇓eP **P 17 15 15.0 +1.1**
DHBB AMb AMB 17 15 16.2
comp=Z,279nm,1.3s,mb5.8

X24A Lazy VL Ranch, 83.92 48 ⇓P P 17 15 14.6 +0.9
baz=84,SNR=9.7
V26A Tequesquite Ra 83.93 47 ⇓P P 17 15 13.2 -0.5
baz=84,SNR=11
GDM Grand'Maison 83.94 329 *eP* **P 17 15 13.9 +0.3**
319A Douglas 83.98 53 ⇓P P 17 15 14.5 +0.4
baz=84,SNR=13
W25A X Bar L Ranch, 83.99 47 ⇓P P 17 15 14.4 +0.3
baz=84,SNR=47
Z22A Elephant Butte 84.00 50 ⇓P P 17 15 14.7 +0.5
baz=84,SNR=32
BGF Bois d'Agland 84.03 331 ⇓*iP* **P 17 15 14.0 -0.1**
Y23A Lovelace Mesa, 84.03 49 ⇓P P 17 15 15.2 +0.9
baz=84
TIP Timpagrande 84.04 319 *eP* **P 17 15 14.3 0.0**
comp=Z,198nm,1.3s,mb5.7
121A Cookes Peak, D 84.04 51 ⇓P P 17 15 15.2 +0.8
baz=84,SNR=61
220A Playas Peak, P 84.06 52 ⇓P P 17 15 15.0 +0.6
baz=84,SNR=31
GRN Grenoble 84.06 329 *eP* **P 17 15 14.6 +0.4**
MBDF Montbardon 84.08 328 ⇓*iP* **P 17 15 14.0 -0.3**
comp=Z,78nm,0.6s,mb5.3
MBDF Montbardon 84.08 328 ⇓*iP* **P 17 15 14.0 -0.3**
MBDF pmax pmax
comp=Z,39nm,0.6s,mb5.3
MBDF Montbardon 84.08 328 ⇓*iP* **P 17 15 14.0 -0.3**
comp=Z,39nm,0.6s,mb5.3
PLDF La Plantade 84.25 331 *eP* **P 17 15 16.4 +1.2**
SURF Saint Ours 84.27 328 *eP* **P 17 15 15.1 -0.2**
ORIF Oris-en-Rattie 84.27 329 ⇓*iP* **P 17 15 15.5 +0.2**
comp=Z,98nm,0.7s,mb5.3
ORIF *e*MLR MLR
comp=Z,518nm,18.5s
ORIF Oris-en-Rattie 84.27 329 ⇓*iP* **P 17 15 15.5 +0.2**
ORIF pmax pmax
comp=Z,49nm,0.7s,mb5.3
ORIF Oris-en-Rattie 84.27 329 ⇓*iP* **P 17 15 15.5 +0.2**
comp=Z,49nm,0.7s,mb5.3
AGO Saint Agoulin 84.36 331 *eP* **P 17 15 16.8 +1.1**
SAOF Saorge 84.38 327 *eP* **P 17 15 14.1 -1.8**
SGMF Saint Gilles 84.38 335 ⇓*iP* **P 17 15 15.9 +0.1**
comp=Z,107nm,0.9s,mb5.3
SGMF Saint Gilles 84.38 335 ⇓*iP* **P 17 15 15.9 +0.1**
SGMF pmax pmax
comp=Z,54nm,0.9s,mb5.3
SGMF Saint Gilles 84.38 335 ⇓*iP* **P 17 15 15.9 +0.1**
comp=Z,54nm,0.9s,mb5.3
122A Conniff Cattle 84.38 51 ⇓P P 17 15 16.7 +0.7
baz=84,SNR=10
X25A Clemmons Ranch 84.38 48 ⇑P P 17 15 16.8 +0.7
baz=84,SNR=29
Y24A Capitan 84.39 49 ⇓P P 17 15 16.4 +0.3
baz=84,SNR=51
Z23A Rita Site, Whi 84.42 50 ⇓P P 17 15 16.7 +0.4
baz=84,SNR=17
AUTN L'Aution 84.42 327 *eP* **P 17 15 15.9 -0.2**
221A Mesquite Ranch 84.42 52 ⇓P P 17 15 16.5 +0.2
baz=84
320A Kipp Ranch, An 84.46 53 ⇑P P 17 15 16.9 +0.4
baz=84
W26A Owens Ranch, T 84.47 47 ⇑P P 17 15 16.5 +0.1
baz=84,SNR=10
SCIA State Center 84.47 36 *eP* **P 17 15 16.1 -0.2**
comp=Z,277nm,1.2s,mb5.9
TOUF Mont Tournerai 84.48 327 *eP* **P 17 15 15.5 -0.9**
SSB Saint Sauveur 84.49 330 *eP* **P 17 15 16.3 -0.1**
SSB pmax pmax
comp=Z,32nm,0.6s,mb5.2
SSB Saint Sauveur 84.49 330 *eP* **P 17 15 16.2 -0.1**
comp=Z,32nm,0.6s,mb5.2
TCF Toulx Ste Croi 84.49 332 ⇓*iP* **P 17 15 16.6 +0.2**
comp=Z,193nm,1.2s,mb5.4
TCF *e*pP pP 17 16 08.5 +1.1
TCF Toulx Ste Croi 84.49 332 ⇓*iP* **P 17 15 16.6 +0.2**
TCF *e**PP pP 17 16 08.5 +1.1
TCF pmax pmax
comp=Z,97nm,1.2s,mb5.4
TCF Toulx Ste Croi 84.49 332 ⇓*iP* **P 17 15 16.6 +0.2**
comp=Z,97nm,1.2s,mb5.4
TCF *e*pP pP 17 16 08.5 +1.1
ROSF Rostrenen 84.53 336 ⇓*iP* **P 17 15 16.7 +0.2**
SBF Sospel 84.53 327 ⇓*iP* **P 17 15 15.9 -0.7**
comp=Z,163nm,0.9s,mb5.5
SBF *e*pP pP 17 16 07.9 +0.3
SBF Sospel 84.53 327 ⇓*iP* **P 17 15 15.9 -0.7**
SBF *e**PP pP 17 16 07.9 +0.3
SBF pmax pmax
comp=Z,81nm,0.9s,mb5.5
SBF Sospel 84.53 327 ⇓*iP* **P 17 15 15.9 -0.7**
comp=Z,81nm,0.9s,mb5.5
SBF *e*pP pP 17 16 07.9 +0.3
LUCF Luceram 84.54 327 *eP* **P 17 15 15.9 -0.8**
MVIF Mont Vial 84.61 327 *eP* **P 17 15 16.2 -0.8**
PYM Petit Puy Mans 84.66 331 *eP* **P 17 15 18.3 +1.1**
222A Williams Famil 84.75 51 ⇑P P 17 15 18.3 +0.3
baz=84,SNR=5.6
OCF Saint Nazaire 84.78 329 *eP* **P 17 15 18.0 +0.1**
OG26 St.-Nazaire-De 84.78 329 *eP* **P 17 15 18.0 +0.1**
VIVF Saint-Julien-I 84.79 329 ⇓*iP* **P 17 15 18.1 +0.2**
comp=Z,99nm,0.7s,mb5.3
VIVF Saint-Julien-I 84.79 329 ⇓*iP* **P 17 15 18.1 +0.2**
VIVF pmax pmax
comp=Z,50nm,0.7s,mb5.3
VIVF Saint-Julien-I 84.79 329 ⇓*iP* **P 17 15 18.1 +0.2**
comp=Z,50nm,0.7s,mb5.3
BST Brest 84.80 336 *eP* **P 17 15 18.5 +0.6**
Y25A Mesa, Roswell 84.81 48 ⇓P P 17 15 18.5 +0.3
baz=84
X26A CR and CF Fran 84.84 48 ⇓P P 17 15 18.5 +0.2
baz=84,SNR=17
CALN Calern 84.84 327 *eP* **P 17 15 17.1 -1.1**
123A Bell Site, Whi 84.86 50 ⇓P P 17 15 18.9 +0.4
baz=85
Z24A Sheeppen Canyo 84.86 49 ⇓P P 17 15 18.8 +0.3
baz=85,SNR=15
QUIF Quistinic 84.87 336 ⇓*iP* **P 17 15 18.2 0.0**
comp=Z,122nm,1.1s,mb5.2
QUIF Quistinic 84.87 336 ⇓*iP* **P 17 15 18.2 0.0**
QUIF pmax pmax
comp=Z,61nm,1.1s,mb5.2
QUIF Quistinic 84.87 336 ⇓*iP* **P 17 15 18.2 0.0**
comp=Z,61nm,1.1s,mb5.2
W27A Bowe Ranch, En 84.87 47 ⇓P P 17 15 18.4 -0.1
baz=85,SNR=29
JFWS Jewell Farm 84.94 34 *eP* **P 17 15 17.4 -1.3**
JFWS pmax pmax
comp=Z,95nm,1.1s,mb5.4
JFWS Jewell Farm 84.94 34 *eP* **P 17 15 17.4 -1.3**
comp=Z,95nm,1.1s,mb5.4
PGF Pioggiola 84.95 325 ⇓*iP* **P 17 15 18.3 -0.5**
comp=Z,44nm,0.8s,mb5.0
PGF Pioggiola 84.95 325 ⇓*iP* **P 17 15 18.3 -0.5**
PGF pmax pmax
comp=Z,22nm,0.8s,mb4.9
PGF Pioggiola 84.95 325 ⇓*iP* **P 17 15 18.3 -0.5**
comp=Z,22nm,0.8s,mb5.0
TRBA At Turbah 84.98 283 *eP* **P 17 15 20.3 +0.9**
TRBA AMb AMB 17 15 21.5
comp=Z,114nm,0.7s,mb5.7
LBL Lubilhac 85.01 330 *eP* **P 17 15 19.8 +0.8**
MFF Saint Martin d 85.04 333 ⇓*iP* **P 17 15 19.5 +0.4**
comp=Z,284nm,1.1s,mb5.6
MFF Saint Martin d 85.04 333 ⇓*iP* **P 17 15 19.5 +0.4**
MFF pmax pmax
comp=Z,142nm,1.1s,mb5.6
MFF Saint Martin d 85.04 333 ⇓*iP* **P 17 15 19.5 +0.4**
comp=Z,142nm,1.1s,mb5.6
FRF La Foret Royal 85.10 327 ⇓*iP* **P 17 15 18.7 -0.8**
comp=Z,24nm,0.7s,mb4.8
FRF La Foret Royal 85.10 327 ⇓*iP* **P 17 15 18.7 -0.8**
FRF pmax pmax
comp=Z,12nm,0.7s,mb4.7
FRF La Foret Royal 85.10 327 ⇓*iP* **P 17 15 18.7 -0.8**
comp=Z,12nm,0.7s,mb4.7
KSU1 Kansas State U 85.12 40 *eP* **P 17 15 18.7 -1.0**
comp=Z,46nm,0.6s,mb5.4
X27A F and S Farms, 85.16 47 ⇑P P 17 15 19.9 0.0
baz=85,SNR=11
CEL Celeste 85.18 319 *eP* **P 17 15 19.0 -1.0**
comp=Z,213nm,1.4s,mb5.7
SMRF Simiane la Rot 85.18 328 ⇓*iP* **P 17 15 19.9 0.0**
comp=Z,103nm,1.2s,mb5.1
SMRF Simiane la Rot 85.18 328 ⇓*iP* **P 17 15 19.9 0.0**
comp=Z,103nm,1.2s,mb5.4
223A Chaparral, Ant 85.22 51 ⇓P P 17 15 20.7 +0.4
baz=85
Z25A Roswell 85.27 49 ⇑P P 17 15 21.1 +0.6
baz=85
124A Stringfield Ra 85.27 50 ⇓P P 17 15 20.7 +0.2
baz=85
Y26A Elida 85.30 48 ⇓P P 17 15 20.4 -0.2
baz=85,SNR=18
LMR La Mourre 85.34 327 ⇓*iP* **P 17 15 20.2 -0.5**
comp=Z,55nm,0.7s,mb5.1
LMR La Mourre 85.34 327 ⇓*iP* **P 17 15 20.2 -0.5**
LMR pmax pmax
comp=Z,27nm,0.7s,mb5.1
LMR La Mourre 85.34 327 ⇓*iP* **P 17 15 20.2 -0.5**
comp=Z,27nm,0.7s,mb5.1
GLMI Grayling 85.56 30 *eP* **P 17 15 21.2 -0.6**
comp=Z,50nm,0.6s,mb5.4
RJF Les Rejaudoux 85.58 331 ⇓*iP* **P 17 15 22.2 +0.4**
comp=Z,121nm,0.9s,mb5.3
RJF *e*MLR MLR
comp=Z,220nm,18.5s
RJF Les Rejaudoux 85.58 331 ⇓*iP* **P 17 15 22.2 +0.4**
RJF pmax pmax
comp=Z,61nm,0.9s,mb5.3
RJF MLR MLR
comp=Z,220nm,18.5s
RJF Les Rejaudoux 85.58 331 ⇓*iP* **P 17 15 22.2 +0.4**
comp=Z,61nm,0.9s,mb5.3
RJF LR LR
comp=Z,220nm,18.5s
224A Cornudas Mount 85.69 50 ⇑P P 17 15 22.7 +0.1
baz=85
Z26A Caprock 85.69 48 ⇑P P 17 15 22.8 +0.2
baz=85
Y27A Causey 85.69 48 ⇓P P 17 15 22.4 -0.2
baz=85,SNR=14
CAF Calviac 85.71 331 ⇓*iP* **P 17 15 23.2 +0.8**
comp=Z,244nm,1.2s,mb5.5
CAF *e*pP pP 17 16 15.4 +1.8
CAF Calviac 85.71 331 ⇓*iP* **P 17 15 23.2 +0.8**
CAF *e**PP pP 17 16 15.4 +1.8
CAF pmax pmax
comp=Z,122nm,1.2s,mb5.5
CAF Calviac 85.71 331 ⇓*iP* **P 17 15 23.2 +0.8**
comp=Z,122nm,1.2s,mb5.5
CAF *e*pP pP 17 16 15.4 +1.8
AMTX Amarillo 85.75 46 *eP* **P 17 15 22.9 0.0**
comp=Z,66nm,1.0s,mb5.3
125A Gardner Draw, 85.76 49 ⇑P P 17 15 23.2 +0.3
baz=86
LASF Ste Croix 85.76 329 ⇓*iP* **P 17 15 23.0 +0.3**
comp=Z,56nm,0.8s,mb5.0
MSTX Muleshoe 85.84 47 ⇓P P 17 15 22.9 -0.5
baz=86
MNTX Cornudas Mount 86.05 50 *eP* **P 17 15 24.2 -0.1**
comp=Z,94nm,1.5s,mb5.3
225A Deer Hill, Car 86.07 50 ⇑P P 17 15 24.6 +0.2
baz=86
Z27A Tatum 86.09 48 ⇑P P 17 15 24.5 0.0
baz=86
126A Clayton Basin, 86.13 49 ⇓P P 17 15 24.5 -0.3
baz=86
LFF La Frestale 86.17 332 ⇓*iP* **P 17 15 25.4 +0.7**
comp=Z,218nm,0.9s,mb5.6
LFF *e*pP pP 17 16 17.5 +1.6
LFF La Frestale 86.17 332 ⇓*iP* **P 17 15 25.4 +0.7**
LFF *e**PP pP 17 16 17.5 +1.6
LFF pmax pmax
comp=Z,109nm,0.9s,mb5.6
LFF La Frestale 86.17 332 ⇓*iP* **P 17 15 25.4 +0.7**
comp=Z,109nm,0.9s,mb5.6
LFF *e*pP pP 17 16 17.5 +1.6
324A Moseley Ranch, 86.18 51 ⇑P P 17 15 24.8 -0.2
baz=86
GDL2 Guadalupe Moun 86.26 49 *eP* **P 17 15 25.5 +0.1**
comp=Z,15nm,0.5s,mb5.0
127A Arkansas Junct 86.48 48 ⇑P P 17 15 26.2 -0.2
baz=86
226A Malaga, Loving 86.52 49 ⇓P P 17 15 26.8 +0.1
baz=86
325A Bean Ranch, Si 86.53 50 ⇓P P 17 15 26.6 -0.1
baz=86
425A Indio Mountain 86.95 51 ⇓P P 17 15 28.7 0.0
baz=87
227A Bennet, Jal 87.01 49 ⇑P P 17 15 28.8 -0.2
baz=87
MTLF Montolieu 87.01 330 ⇓*iP* **P 17 15 29.0 +0.2**
326A Caldwell Ranch 87.14 50 ⇓P P 17 15 29.1 -0.6
baz=87
HDIL Hopedale 87.29 35 *eP* **P 17 15 29.6 -0.6**
comp=Z,360nm,1.5s,mb5.9
327A Balmorhea Ranc 87.38 49 ⇑P P 17 15 30.7 -0.1
baz=87
WMOK Wichita Mounta 87.41 44 *eP* **P 17 15 30.2 -0.7**
WMOK pmax pmax
comp=Z,90nm,1.3s,mb5.3
WMOK Wichita Mounta 87.41 44 *eP* **P 17 15 30.2 -0.7**
comp=Z,90nm,1.3s,mb5.3
426A McDonald Obser 87.59 50 ⇑P P 17 15 31.5 -0.3
baz=87
328A Wristen Ranch, 87.75 49 ⇑P P 17 15 32.1 -0.5
baz=88
427A Hayter Ranch, 87.81 50 ⇑P P 17 15 32.6 -0.2
baz=88
EPF Esparros 87.97 331 *eP* **P 17 15 33.2 -0.2**
526A Mary Lane Ranc 88.00 51 ⇑P P 17 15 33.6 -0.1
baz=88
AAM Ann Arbor 88.09 30 *eP* **P 17 15 33.8 -0.1**
AAM pmax pmax
comp=Z,17nm,0.4s,mb5.2
AAM Ann Arbor 88.09 30 *eP* **P 17 15 33.8 -0.1**
comp=Z,17nm,0.4s,mb5.2
527A Woodward Ranch 88.22 50 ⇓P P 17 15 34.6 -0.2
baz=88
PPT Papeete 88.25 115 *e*LR LR 17 44 04.3
comp=Z,414nm,21.5s
428A Kincaid Ranch, 88.31 49 ⇑P P 17 15 35.5 +0.3
baz=88
626A Big Bend Ranch 88.35 51 ⇑P P 17 15 35.2 -0.2
baz=88
ETSF Etsaut 88.41 332 ⇓*iP* **P 17 15 36.2 +0.7**
comp=Z,47nm,0.6s,mb5.2
ETSF Etsaut 88.41 332 ⇓*iP* **P 17 15 36.2 +0.7**
ETSF pmax pmax
comp=Z,23nm,0.6s,mb5.2
ETSF Etsaut 88.41 332 ⇓*iP* **P 17 15 36.2 +0.7**
comp=Z,23nm,0.6s,mb5.2
SLM Saint Louis 88.46 36 *eP* **P 17 15 35.2 -0.5**
SLM pmax pmax
comp=Z,76nm,0.9s,mb5.5
SLM Saint Louis 88.46 36 *eP* **P 17 15 35.2 -0.5**
comp=Z,76nm,0.9s,mb5.5
SJPF Ste Jean 88.46 332 *eP* **P 17 15 36.4 +0.7**
CCM Cathedral Cave 88.48 37 *eP* **P 17 15 35.1 -0.8**
CCM pmax pmax
comp=Z,99nm,1.0s,mb5.6
CCM Cathedral Cave 88.48 37 *eP* **P 17 15 35.1 -0.7**
comp=Z,99nm,1.0s,mb5.6
528A Cox Ranch, San 88.68 50 ⇓P P 17 15 37.0 0.0
baz=88
TXAR Lajitas Array 88.79 51 P P 17 15 37.4 -0.1
comp=Z,27nm,0.7s,mb5.2,baz=294,slow=3.0,SNR=329
TXAR PKKPbc PKKPbc 17 33 16.1 +1.8
comp=Z,0.4nm,0.6s,baz=164,slow=5.5,SNR=4.4
TXAR LR LR 17 55 51.2
comp=Z,152nm,18.7s,baz=300,slow=36
627A Terlingua Ranc 88.86 51 ⇓P P 17 15 37.7 -0.1
baz=89
FVM French Village 88.91 37 *eP* **P 17 15 37.1 -0.8**
FVM pmax pmax
comp=Z,138nm,0.5s,mb6.0
FVM French Village 88.91 37 *eP* **P 17 15 37.1 -0.7**
comp=Z,138nm,0.5s,mb6.0
TAOE Nuku Hiva Isla 89.00 103 *e*LR LR 17 44 22.8
comp=Z,587nm,23.5s
LONY Lake Ozonia 89.10 23 *eP* **P 17 15 37.3 -1.3**
comp=Z,26nm,1.4s,mb4.9
628A Black Gap, Mar 89.12 50 ⇓P P 17 15 38.7 -0.4
baz=89
ERPA Erie 89.59 28 *eP* **P 17 15 40.8 -0.1**
comp=Z,186nm,1.4s,mb5.7
BLO Bloomington 89.61 34 *eP* **P 17 15 40.9 -0.2**
BLO pmax pmax
comp=Z,23nm,0.6s,mb5.2
BLO Bloomington 89.61 34 *eP* **P 17 15 40.9 -0.2**
comp=Z,23nm,0.6s,mb5.2
SIUC Southern Illin 89.67 36 *eP* **P 17 15 41.0 -0.4**
comp=Z,180nm,1.0s,mb5.9
NCB Newcomb 89.80 23 *eP* **P 17 15 41.5 -0.4**
comp=Z,42nm,1.3s,mb5.1
PKME Peaks-Kenny Pk 89.96 20 *eP* **P 17 15 42.4 -0.3**
comp=Z,80nm,1.7s,mb5.3
JCT Junction City 90.12 48 *eP* **P 17 15 43.0 -0.7**
JCT pmax pmax
comp=Z,53nm,0.8s,mb5.4
JCT Junction City 90.12 48 *eP* **P 17 15 43.0 -0.7**
comp=Z,53nm,0.8s,mb5.4
ACSO Alum Creek Sta 90.13 31 *eP* **P 17 15 43.4 -0.1**
comp=Z,99nm,1.0s,mb5.6
MIAR Mount Ida 90.21 41 *eP* **P 17 15 43.6 -0.4**
MIAR pmax pmax
comp=Z,107nm,1.1s,mb5.6
MIAR Mount Ida 90.21 41 *eP* **P 17 15 43.6 -0.4**
comp=Z,108nm,1.1s,mb5.6
LBNH Lisbon 90.21 22 *eP* **P 17 15 42.4 -1.4**
LBNH pmax pmax
comp=Z,43nm,1.4s,mb5.1
LBNH Lisbon 90.21 22 *eP* **P 17 15 42.4 -1.5**
comp=Z,44nm,1.4s,mb5.1
KEST Kesra 90.36 321 P **P 17 15 44.2 -0.4**
comp=Z,4.5nm,0.8s,baz=2.5,slow=2.1,SNR=16
KEST PP PP 17 19 23.3 +2.2
comp=Z,8.1nm,1.0s,baz=42,slow=2.7,SNR=6.0
WCI Wyandotte Cave 90.50 34 *eP* **P 17 15 45.1 -0.2**
WCI pmax pmax
comp=Z,115nm,1.5s,mb5.6
WCI Wyandotte Cave 90.50 34 *eP* **P 17 15 45.1 -0.2**
comp=Z,115nm,1.5s,mb5.6
CMAH Djebel Manchou 90.51 323 P **P 17 15 44.2 -1.2**
UALR University of 90.62 40 *eP* **P 17 15 45.5 -0.5**
comp=Z,7.1nm,0.6s,mb4.8
ABSA Djebel Ababsia 90.78 323 P **P 17 15 45.5 -1.1**
BINY Binghamton 90.86 25 *eP* **P 17 15 46.5 -0.3**
comp=Z,96nm,1.6s,mb5.5
CASM Ain Smara 91.23 323 P **P 17 15 47.7 -1.0**
DFRA Djebel Bou Aff 91.27 324 P **P 17 15 48.3 -0.6**
WVT Waverly 91.60 36 *eP* **P 17 15 49.7 -0.7**
WVT pmax pmax
comp=Z,45nm,1.2s,mb5.3
WVT Waverly 91.60 36 *eP* **P 17 15 49.7 -0.8**
comp=Z,45nm,1.2s,mb5.3
SSPA Standing Stone 91.63 27 *eP* **P 17 15 50.3 -0.1**
comp=Z,105nm,1.6s,mb5.5
SET Setif 91.77 324 P **P 17 15 51.0 -0.2**
MCWV Mont Chateau 91.80 29 *eP* **P 17 15 51.6 +0.3**
comp=Z,4.7nm,0.6s,mb4.6
CKHR Kef el Ahmar 91.87 324 P **P 17 15 51.4 -0.3**
NATX Nacogdoches 91.88 43 *eP* **P 17 15 52.5 +0.7**
comp=Z,124nm,1.3s,mb5.7
PCAB Cabril 91.96 336 *eP* **P 17 15 52.0 0.0**
comp=Z,70nm,1.5s,mb5.4
MVO Moncorvo 92.14 335 *eP* **P 17 15 52.7 -0.1**
comp=Z,70nm,1.3s,mb5.4
PVRL Vila Real 92.26 336 *eP* **P 17 15 53.5 +0.2**
comp=Z,67nm,1.5s,mb5.3
PLAL Pickwick Lake 92.45 37 *eP* **P 17 15 53.4 -0.9**
comp=Z,76nm,1.8s,mb5.3
ESDC Sonseca Array 92.46 332 P **P 17 15 54.0 -0.3**
comp=Z,4.0nm,0.6s,mb4.5,baz=16,slow=4.2,SNR=15
ESDC LR LR 17 56 51.1
comp=Z,219nm,19.4s,baz=35,slow=35
MTE Manteigas 93.00 335 *eP* **P 17 15 59.6 +2.8**
comp=Z,35nm,1.0s,mb5.3
SWET Sewanee 93.20 35 *eP* **P 17 15 56.9 -0.9**
comp=Z,67nm,1.6s,mb5.4
PCBR Castelo Branco 93.49 335 *eP* **P 17 15 58.8 -0.2**
comp=Z,22nm,1.5s,mb5.2
CPCT Cooper Cave 93.61 34 *eP* **P 17 15 59.1 -0.6**
TKL Tuckaleechee C 93.75 34 PP PP 17 19 50.6 +3.1
comp=Z,2.2nm,0.7s,baz=250,slow=3.8,SNR=3.9
TKL Tuckaleechee C 93.75 34 *eP* **P 17 15 59.7 -0.6**
PMRV Marv??o 93.83 335 *eP* **P 17 16 01.0 +0.4**
comp=Z,40nm,1.4s,mb5.3
PESTR Estremoz 94.41 334 *eP* **P 17 16 03.8 +0.5**
comp=Z,29nm,1.6s,mb5.1
LRAL Lakeview Retre 94.56 37 *eP* **P 17 16 03.0 -1.1**
comp=Z,8.1nm,1.0s,mb4.8
PBAR Barrancos 94.86 334 *eP* **P 17 16 05.0 -0.3**
comp=Z,30nm,1.8s,mb5.1
PBEJ Beja 95.26 334 *eP* **P 17 16 07.4 +0.2**
comp=Z,26nm,1.6s,mb5.1
PCVE Castro Verde 95.68 334 *eP* **P 17 16 09.8 +0.7**
comp=Z,40nm,1.7s,mb5.4
PVAQ Vaqueiros 95.78 334 *eP* **P 17 16 09.5 -0.1**
comp=Z,25nm,1.5s,mb5.2
KMBO Kilima Mbogo 99.57 277 P Pdif 17 16 27.6 +1.1
comp=Z,9.2nm,1.1s,baz=28,slow=9.4,SNR=11
KMBO PP PP 17 20 33.3 -0.2
comp=Z,10nm,1.2s,baz=32,slow=11,SNR=5.7
KMBO Kilima Mbogo 99.57 277 *e*P Pdif 17 16 27.5 +0.9
KMBO pmax pmax
comp=Z,14nm,1.2s
KMBO Kilima Mbogo 99.57 277 *e*Pdif Pdif 17 16 27.5 +0.9
comp=Z,14nm,1.2s
RKT Rikitea 102.09 110 *e*LR LR 17 50 18.4
comp=Z,389nm,29.5s
TORD Torodi Ar. Bea 112.87 314 PKiKP PKiKP 17 21 18.4 -1.2
comp=Z,0.8nm,0.4s,baz=27,slow=2.7,SNR=11
TORD PP PP 17 22 08.1 -2.1
comp=Z,35nm,1.2s,baz=24,slow=5.9,SNR=20
TORD PKKPbc PKKPbc 17 32 06.1 +0.4
comp=Z,1.4nm,0.6s,baz=214,slow=2.0,SNR=14
TORD Torodi Ar. Bea 112.87 314 PKPdf PKiKP 17 21 18.4 -1.2
TORD PP PP 17 22 08.1 -2.1
TORD PKKPbc PKKPbc 17 32 06.1 +0.4
DBIC Dimbokro 121.77 316 PKP PKPdf 17 21 36.0 -0.8
comp=Z,8.4nm,0.6s,baz=15,slow=2.4,SNR=23
DBIC PP PP 17 23 07.7 -4.2
comp=Z,9.9nm,0.8s,baz=360,slow=9.4,SNR=4.7
DBIC SKP 17 24 53.8
comp=Z,5.2nm,0.9s,baz=115,slow=2.6,SNR=3.3
DBIC Dimbokro 121.77 316 *e*PKPdf PKPdf 17 21 36.0 -0.8
TIC Toumodi 121.87 317 *e*PKIKP PKPdf 17 21 36.3 -0.6
comp=Z,12nm,0.2s
KIC Kosan Boka 121.97 316 *e*PKIKP PKPdf 17 21 36.5 -0.6
comp=Z,113nm,1.4s
LIC Lamto 122.23 316 *e*PKIKP PKPdf 17 21 36.8 -0.8
comp=Z,104nm,1.2s
LIC Lamto 122.23 316 ⇑*i*PKIKP PKPdf 17 21 37.0 -0.6
comp=Z,32nm,0.9s
LIC *e*MLR MLR
comp=Z,186nm,20.8s
LIC Lamto 122.23 316 ⇑*i*PKPdf PKPdf 17 21 37.0 -0.6
LIC LR LR
comp=Z,90nm,20.8s
MAW Mawson 122.76 206 PKP PKPdf 17 21 37.6 +0.7
comp=Z,2.5nm,0.6s,baz=187,slow=3.4,SNR=7.6
SDV Santo Domingo 122.92 36 PKP PKPdf 17 21 38.8 -0.2
comp=Z,18nm,0.7s,baz=342,slow=1.3,SNR=25
SDV Santo Domingo 122.92 36 *e*PKPdf PKPdf 17 21 38.6 -0.3
LBTB Lobatse 123.28 265 *e*PKIKP PKPdf 17 21 39.4 +0.2
ROSC El Rosal 124.71 42 PKP PKPdf 17 21 43.8 +1.4
comp=Z,5.5nm,0.3s,baz=95,slow=20,SNR=7.9
BOSA Boshof 125.51 261 PKP PKPdf 17 21 44.5 +1.1
comp=Z,1.2nm,0.3s,baz=153,slow=8.1,SNR=3.8
BOSA Boshof 125.51 261 PKP PKPdf 17 21 44.5 +1.1
OTAV Otavalo 126.38 49 *e*PKPdf PKPdf 17 21 45.9 +0.4
MAIT Maitri 140.70 205 *e*PKPdif PKPdf 17 22 04.0 -6.5
ARE Arequipa 143.77 56 *e*PKIKP PKPdf 17 22 15.0 -2.6
RCBR Riachuelo 144.17 351 *e*PKPdf PKPdf 17 22 16.9 -1.6
RCBR *e* 17 25 36.2
LPAZ La Paz 145.66 51 PKPbc PKPbc 17 22 21.8 +0.2
comp=Z,22nm,0.4s,baz=348,slow=4.2,SNR=105
LPAZ SKPbc SKPbc 17 25 40.5 -0.2
comp=Z,11nm,1.0s,baz=344,slow=4.5,SNR=6.4
LPAZ La Paz 145.66 51 PKP2 PKPbc 17 22 21.8 +0.2
LPAZ 17 25 40.5
LPAZ pmax pmax
comp=Z,22nm,0.4s
LPAZ pmax pmax
comp=N,11nm,1.0s
LPAZ La Paz 145.66 51 *e*PKPdf PKPbc 17 22 21.7 +0.1
LPAZ *e*SKPdf SKPdf 17 25 39.0 +4.1
LCO Las Campanas 152.84 72 *e*PKPbc PKPbc 17 22 39.8 +0.4
PLCA Paso Flores 157.74 98 PKP PKPdf 17 22 37.4 -0.8
comp=N,3.6nm,1.0s,baz=96,slow=4.5,SNR=4.0
PLCA PKPab PKPab 17 23 12.1 0.0
comp=N,19nm,0.9s,baz=278,slow=4.7,SNR=19
PLCA PP PP 17 26 48.3 -4.5
comp=N,7.1nm,1.2s,baz=255,slow=8.1,SNR=3.7
PLCA Paso Flores 157.74 98 PKP PKPdf 17 22 37.4 -0.8
PLCA PKPab PKPab 17 23 12.1 0.0
PLCA PP PP 17 26 48.3 -4.5
CPUP Villa Florida 159.71 47 PKP PKPdf 17 22 40.4 -0.7

comp=N,0.2nm,0.3s,baz=204,slow=5.8,SNR=2.8
CPUP PKPab PKPab 17 23 20.3 -0.5
comp=N,1.1nm,0.4s,baz=331,slow=4.6,SNR=5.4

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*GUC **04** 17:05:30.9±0.7,23°.06S×70°.51W,h40km±2km,ML3.9*
*ISCJB **04** 17:05:30.6±1.4,23°.2S±0°.1×70°.5W±0°.2,h40km±7km,Error ellipse: s-maj=27.2km s-min=13.9km az=33.0*
*IDC **04** 17:05:38.5±3.8,22°.94S×70°.11W,h75km±25km,mb3.7/1,mb1 3.5/4,mb1mx3.5/17,mbtmp3.5/4,Error ellipse: s-maj=77.3km s-min=28.4km az=99.0*
ISC 04 17:05:32.0±1.4,**23°.2S**±0°.1×**70°.5W**±0°.2,**h33**km±6km,**n10**,σ0**86**/14,**2C-3D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.05**	**3**	⇑*i*P	**Pb**	**17 05 36.9**	**-0.7**
MECH				*i* S	**Sb**	**17 05 41.6**	**+0.3**
MECH				AML	AML	17 05 42.1	
	comp=E,38μm,0.5s						
PECH	**Pedro de Valdi**	**0.90**	**53**	⇓*i*P	**Pn**	**17 05 47.8**	**-0.6**
PECH				*i* S	**Sn**	**17 06 00.3**	**0.0**
PECH				AML	AML	17 06 03.7	
	comp=N,7μm,0.3s						
MACH	**Maria Elena**	**1.15**	**34**	⇓*i*P	**Pn**	**17 05 51.2**	**-0.6**
MACH				*i* S	**Sn**	**17 06 06.0**	**-0.2**
PB04	**Plate Boundary**	**1.25**	**45**	⇓*i*P	**Pn**	**17 05 46.3**	**-6.9**
PB04				*i* S	**Sn**	**17 05 57.9**	**-11**
PB04				AML	AML	17 05 59.5	
	comp=N,10μm,0.3s						
PB01	**Plate Boundary**	**2.28**	**23**	⇑*i*P	**Pn**	**17 06 07.0**	**-0.4**
PB01				*i* S	**Sn**	**17 06 33.7**	**-0.6**
PB01				AML	AML	17 06 41.1	
	comp=E,882nm,0.6s						
LPAZ	**La Paz**	**7.17**	**18**	P	**Pn**	**17 07 16.6**	**+2.0**
	comp=E,0.3nm,0.3s,baz=188,slow=4.9,SNR=9.4						
CFAA	**Coronel Fontan**	**8.65**	**167**	P	**Pn**	**17 07 42.7**	**+7.9**
	comp=E,0.3nm,0.3s,baz=354,slow=13,SNR=20						
SIV	**San Ignacio**	**11.35**	**53**	P	**Pn**	**17 08 13.5**	**+1.7**
	comp=E,0.4nm,0.3s,baz=228,slow=11,SNR=14						
TORD	**Torodi Ar. Bea**	**79.25**	**71**	P	**P**	**17 17 33.9**	**-0.6**
	comp=E,0.8nm,0.5s,baz=253,slow=5.8,SNR=9.7						
MKAR	**Makanchi Array**	**147.80**	**36**	PKPbc	PKPbc	17 25 13.4	+0.1
	comp=E,0.3nm,0.6s,baz=318,slow=1.9,SNR=3.5						

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*CSEM **04** 17:16:31.8±0.5,37°.80N×21°.03E,h15km,MD3.1,Error ellipse: s-maj=11.2km s-min=7.8km az=45.0*
*ATH **04** 17:16:31.8,37°.80N×21°.04E,h5km,MD3.1/9*
*THE **04** 17:16:31.0,37°.73N×21°.01E,h16km,ML2.9/1,Error ellipse: s-maj=2.5km s-min=0.7km az=217.0*
*NEIC **04** 17:16:31.8,37°.80N×21°.04E,h5km,MD3.1(ATH),After ATH.*
*ISCJB **04** 17:16:31.9±0.8,37°.80N±0°.04×21°.06E±0°.04,h10km,Error ellipse: s-maj=6.8km s-min=4.1km az=32.0*
ISC 04 17:16:31.9±0.9,**37°.7N**±0°.05×**21°.06E**±0°.05,**h2**km±14km,**n29**,σ0**80**/41,**Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KFL	**Anninata**	**0.40**	**328**	P	**Pg**	**17 16 39.5**	**-0.1**
KFL				S	**Sg**	**17 16 45.7**	**+0.9**
RLS	**Riolos of Patr**	**0.43**	**48**	*e*Pg	**Pg**	**17 16 39.7**	**-0.5**
RLS				*e*Sb	**Sg**	**17 16 46.2**	**+0.4**
RLS	**Riolos of Patr**	**0.43**	**48**	*e*PG	**Pg**	**17 16 39.7**	**-0.5**
RLS				*e*SB	**Sg**	**17 16 46.2**	**+0.4**
RLS	**Riolos of Patr**	**0.43**	**48**	*e*Pg	**Pg**	**17 16 39.7**	**-0.5**
RLS				*e*Sb	**Sg**	**17 16 46.2**	**+0.4**
VLS	**Valsamata**	**0.55**	**318**	*e*Pb	**Pg**	**17 16 42.0**	**-0.4**
VLS				*e*Sb	**Sg**	**17 16 50.2**	**+0.6**
VLS	**Valsamata**	**0.55**	**318**	P	**Pg**	**17 16 41.9**	**-0.5**
VLS				S	**Sg**	**17 16 50.2**	**+0.6**
VLS	**Valsamata**	**0.55**	**318**	*e*PB	**Pg**	**17 16 42.0**	**-0.4**
VLS				*e*SB	**Sg**	**17 16 50.2**	**+0.6**
VLS	**Valsamata**	**0.55**	**318**	*e*Pb	**Pg**	**17 16 42.0**	**-0.4**
VLS				S	**Sg**	**17 16 50.2**	**+0.6**
LAKA	**Lakka**	**0.87**	**57**	P	**Pg**	**17 16 48.0**	**-0.5**
LAKA	**Lakka**	**0.87**	**57**	P	**Pg**	**17 16 48.0**	**-0.5**
ITM	**Ithomi**	**0.91**	**130**	*e*Pn	**Pg**	**17 16 51.1**	**+1.8**
ITM	**Ithomi**	**0.91**	**130**	*e*PN	**Pg**	**17 16 51.1**	**+1.8**
ITM	**Ithomi**	**0.91**	**130**	*e*Pn	**Pg**	**17 16 51.1**	**+1.8**
EFP	**Efpalio**	**0.94**	**45**	*e*PG	**Pg**	**17 16 48.8**	**-1.1**
EFP				*e*SB	**Sg**	**17 17 03.1**	**+1.1**
EFP	**Efpalio**	**0.94**	**45**	*e*Pg	**Pg**	**17 16 48.8**	**-1.1**
EFP				*e*Sb	**Sg**	**17 17 03.1**	**+1.1**
GUR	**Goura**	**1.03**	**80**	*e*PG	**Pg**	**17 16 51.0**	**-0.7**
GUR	**Goura**	**1.03**	**80**	*e*Pg	**Pg**	**17 16 51.0**	**-0.7**
PYL	**PYLOS**	**1.03**	**148**	*e*PB	**Pb**	**17 16 52.2**	**-0.3**
PYL	**PYLOS**	**1.03**	**148**	*e*Pb	**Pb**	**17 16 52.3**	**-0.2**
LKD2	**Lefkada island**	**1.06**	**343**	P	**Pg**	**17 16 50.5**	**-1.8**
LKD2				S	**Sg**	**17 17 06.3**	**+0.2**
LKD2	**Lefkada island**	**1.06**	**343**	P	**Pg**	**17 16 50.5**	**-1.8**
LKD2				S	**Sg**	**17 17 06.3**	**+0.2**
EVR	**Evrytania**	**1.29**	**27**	*e*Pb	**Pb**	**17 16 57.0**	**+0.1**
EVR	**Evrytania**	**1.29**	**27**	*e*PB	**Pb**	**17 16 57.0**	**+0.1**
EVR	**Evrytania**	**1.29**	**27**	*e*Pb	**Pb**	**17 16 57.0**	**+0.1**
LTK	**Loutraki**	**1.53**	**80**	*e*PB	**Pb**	**17 17 01.1**	**+0.1**
LTK	**Loutraki**	**1.53**	**80**	*e*Pb	**Pb**	**17 17 01.1**	**+0.1**
AGG	**Agios Georgios**	**1.60**	**38**	*e*Pb	**Pb**	**17 17 02.4**	**+0.2**
AGG	**Agios Georgios**	**1.60**	**38**	*e*PB	**Pb**	**17 17 02.4**	**+0.2**
AGG	**Agios Georgios**	**1.60**	**38**	*e*Pb	**Pb**	**17 17 02.4**	**+0.2**

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*TRN **04** 17:16:43.8,16°.45N×61°.91W,h125km,MD3.5,M3.6(FDF)*
TRN Felt II Guadeloupe.
*NEIC **04** 17:16:44.5,16°.35N×62°.06W,h123km,MD4.0(RSPR),MD3.5(TRN),After TRN.*
*ISCJB **04** 17:16:44.3±0.6,16°.44N±0°.04×61°.98W±0°.06,h126km±5km,Error ellipse: s-maj=10.6km s-min=2.7km az=145.5*
*RSPR **04** 17:16:47.6,16°.63N×62°.05W,h127km±5km,MD4.0/9,MD4.0/9*
ISC 04 17:16:44.9±0.6,**16°.46N**±0°.04×**61°.93W**±0°.06,**h124**km±6km,**n80**,σ0**95**/131,**18C-21D,Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZG	**Guadaloupe-1**	**0.35**	**154**	⇓*i*P	**Pn**	**17 17 02.5**	**-0.1**
BCG	**Bois Riant Cap**	**0.48**	**141**	*e*P	**Pn**	**17 17 03.2**	**0.0**
SCG	**Saint Claude**	**0.49**	**150**	*e*P	**Pn**	**17 17 03.5**	**+0.2**
SCG				*e*S	**Sn**	**17 17 17.1**	**-0.1**
PHG	**Guadaloupe-2**	**0.52**	**148**	⇓*e*P	**Pn**	**17 17 03.7**	**+0.2**
HMG	**Houelmont**	**0.53**	**155**	*e*P	**Pn**	**17 17 03.6**	**+0.1**
HMG				*e*S	**Sn**	**17 17 17.5**	**-0.1**
BPA	**Boggy Peak**	**0.59**	**7**	⇑*i*P	**Pn**	**17 17 04.6**	**+0.7**
BPA				*e*S	**Sn**	**17 17 17.9**	**-0.4**
BPA	**Boggy Peak**	**0.59**	**7**	⇑*i*P	**Pn**	**17 17 04.6**	**+0.7**
BPA				*e*S	**Sn**	**17 17 17.9**	**-0.4**
TBG	**Guadaloupe-3**	**0.66**	**155**	⇑*i*P	**Pn**	**17 17 04.3**	**-0.1**
MGG	**Marie-Galante**	**0.80**	**132**	⇑*i*P	**Pn**	**17 17 05.6**	**+0.1**
DEG	**La Desirade**	**0.85**	**100**	⇓*i*P	**Pn**	**17 17 05.2**	**-0.7**
DWS	**Wesley**	**1.07**	**146**	*e*P	**Pn**	**17 17 10.0**	**+2.0**
DWS				*e*S	**Sn**	**17 17 26.4**	**+0.9**
DWS	**Wesley**	**1.07**	**146**	*e*P	**Pn**	**17 17 10.0**	**+2.0**
DWS				*e*S	**Sn**	**17 17 26.4**	**+0.9**
SKI	**Saint Kitts**	**1.16**	**319**	*e*P	**Pn**	**17 17 09.5**	**+0.5**
SKI				*e*S	**Sn**	**17 17 28.3**	**+1.1**
SKI	**Saint Kitts**	**1.16**	**319**	*e*P	**Pn**	**17 17 09.5**	**+0.5**
SKI				*e*S	**Sn**	**17 17 28.3**	**+1.1**
ANWB	**Willy Bob**	**1.21**	**7**	⇓*e*Pn	**Pn**	**17 17 09.1**	**-0.4**
ANWB				*e*Sn	**Sn**	**17 17 26.5**	**-1.6**
MDN	**Morne-Daniel**	**1.25**	**155**	*e*P	**Pn**	**17 17 10.9**	**+1.0**
MDN				*e*S	**Sn**	**17 17 29.5**	**+0.7**
MDN	**Morne-Daniel**	**1.25**	**155**	*e*P	**Pn**	**17 17 10.9**	**+1.0**
MDN				*e*S	**Sn**	**17 17 29.5**	**+0.7**
DLPL	**La Plaine**	**1.30**	**149**	*e*Pn	**Pn**	**17 17 10.4**	**0.0**
DLPL				*e*S	**Sn**	**17 17 29.6**	**-0.2**
DPMT	**Pointe Michel**	**1.31**	**156**	*e*P	**Pn**	**17 17 11.7**	**+1.2**
DPMT				*e*S	**Sn**	**17 17 30.1**	**+0.2**
DPMT	**Pointe Michel**	**1.31**	**156**	*e*P	**Pn**	**17 17 11.7**	**+1.2**
DPMT				*e*S	**Sn**	**17 17 30.1**	**+0.2**
DFBT	**Forest Bistro**	**1.33**	**155**	*e*P	**Pn**	**17 17 11.6**	**+0.8**
DFBT				*e*S	**Sn**	**17 17 30.0**	**-0.4**
DFBT	**Forest Bistro**	**1.33**	**155**	*e*P	**Pn**	**17 17 11.6**	**+0.8**
DFBT				*e*S	**Sn**	**17 17 30.0**	**-0.4**
DSTT	**Stowe**	**1.35**	**153**	*e*P	**Pn**	**17 17 12.2**	**+1.3**
DSTT				*e*S	**Sn**	**17 17 30.7**	**0.0**
DSTT	**Stowe**	**1.35**	**153**	*e*P	**Pn**	**17 17 12.1**	**+1.1**
DSTT				*e*S	**Sn**	**17 17 30.7**	**0.0**
DSHT	**Scott's Head**	**1.35**	**156**	*e*P	**Pn**	**17 17 12.0**	**+1.1**
DSHT				*e*S	**Sn**	**17 17 30.5**	**-0.2**
DSHT	**Scott's Head**	**1.35**	**156**	*e*P	**Pn**	**17 17 11.5**	**+0.5**
DSHT				*e*S	**Sn**	**17 17 30.5**	**-0.2**
SEUS	**St. Eustatius**	**1.44**	**316**	⇑*e*P	**Pn**	**17 17 12.4**	**+0.5**
SEUS	**St. Eustatius**	**1.44**	**316**	⇑*e*P	**Pn**	**17 17 12.4**	**+0.5**
SEUS				*e*S	**Sn**	**17 17 32.1**	**-0.3**
SABA	**Saba**	**1.70**	**313**	⇓*e*P	**Pn**	**17 17 15.6**	**+0.6**
SABA	**Saba**	**1.70**	**313**	⇓*e*P	**Pn**	**17 17 15.6**	**+0.6**
FDF	**Fort de France**	**1.88**	**156**	⇑*i*Pn	**Pn**	**17 17 16.3**	**-0.8**
FDF				*e*Sn	**Sn**	**17 17 41.6**	**0.0**
FDF	**Fort de France**	**1.88**	**156**	⇑*i*P	**Pn**	**17 17 16.5**	**-0.5**
FDF				⇑*e*S	**Sn**	**17 17 41.4**	**-0.3**
SMRT	**St. Maarten**	**1.92**	**326**	⇑*e*P	**Pn**	**17 17 17.1**	**-0.5**
SMRT	**St. Maarten**	**1.92**	**326**	⇑*e*P	**Pn**	**17 17 17.1**	**-0.5**
SMRT				*e*S	**Sn**	**17 17 40.9**	**-1.8**
BIM	**Bigot**	**2.10**	**157**	⇑*i*P	**Pn**	**17 17 19.7**	**-0.2**
MVM	**Montagne Vaucl**	**2.14**	**152**	⇓*e*P	**Pn**	**17 17 20.1**	**-0.3**
MVM				⇓*e*S	**Sn**	**17 17 47.1**	**-0.4**
SLW	**Petit Monier**	**2.61**	**158**	*e*P	**Pn**	**17 17 25.8**	**-0.5**
SLW				*e*S	**Sn**	**17 17 57.5**	**-0.7**
SLW	**Petit Monier**	**2.61**	**158**	*e*P	**Pn**	**17 17 25.8**	**-0.5**
SLW				*e*S	**Sn**	**17 17 57.5**	**-0.7**
SLPE	**Piton Saint Es**	**2.75**	**161**	*e*P	**Pn**	**17 17 27.6**	**-0.6**
SLPE				*e*S	**Sn**	**17 17 58.2**	**-3.3**
SLPE	**Piton Saint Es**	**2.75**	**161**	*e*P	**Pn**	**17 17 27.6**	**-0.6**
SLPE				*e*S	**Sn**	**17 17 58.2**	**-3.3**
SLB	**Belfond**	**2.75**	**162**	*e*P	**Pn**	**17 17 28.4**	**+0.2**
SLB				*e*S	**Sn**	**17 17 59.7**	**-1.7**
SLB	**Belfond**	**2.75**	**162**	*e*P	**Pn**	**17 17 28.4**	**+0.2**
SLB				*e*S	**Sn**	**17 17 59.7**	**-1.7**
SLDE	**Delcer**	**2.77**	**162**	*e*P	**Pn**	**17 17 28.1**	**-0.3**
SLDE				*e*S	**Sn**	**17 17 58.8**	**-3.2**
SLDE	**Delcer**	**2.77**	**162**	*e*P	**Pn**	**17 17 28.1**	**-0.3**
SLDE				*e*S	**Sn**	**17 18 04.7**	**+2.8**
MCLT	**Moule a Chique**	**2.90**	**161**	*e*P	**Pn**	**17 17 29.6**	**-0.5**
MCLT				*e*S	**Sn**	**17 18 02.9**	**-1.9**
MCLT	**Moule a Chique**	**2.90**	**161**	*e*P	**Pn**	**17 17 29.6**	**-0.5**
MCLT				*e*S	**Sn**	**17 18 02.9**	**-1.9**
SSV	**Crater Summit**	**3.19**	**167**	*e*P	**Pn**	**17 17 34.8**	**+0.8**
SSV				*e*S	**Sn**	**17 17 59.6**	**-12**
SSV	**Crater Summit**	**3.19**	**167**	*e*P	**Pn**	**17 17 34.8**	**+0.8**
SVV	**Soufriere Volc**	**3.20**	**167**	*e*P	**Pn**	**17 17 35.0**	**+1.0**
SVV				*e*S	**Sn**	**17 18 08.3**	**-3.6**
SVV	**Soufriere Volc**	**3.20**	**167**	*e*P	**Pn**	**17 17 35.0**	**+1.0**
ABV	**Anegada**	**3.21**	**315**	⇑*e*P	**Pn**	**17 17 34.1**	**0.0**
ABV				*e*S	**Sn**	**17 18 11.8**	**-0.4**
ABV	**Anegada**	**3.21**	**315**	⇑*e*P	**Pn**	**17 17 34.1**	**0.0**
ABV				*e*S	**Sn**	**17 18 11.8**	**-0.4**
TBVI	**Tortola**	**3.22**	**308**	⇑*e*P	**Pn**	**17 17 33.9**	**-0.3**
TBVI				*e*S	**Sn**	**17 18 09.5**	**-2.7**
TBVI	**Tortola**	**3.22**	**308**	⇑*e*P	**Pn**	**17 17 33.9**	**-0.3**
TBVI				*e*S	**Sn**	**17 18 09.5**	**-2.8**
SVB	**Belmont**	**3.24**	**168**	*e*P	**Pn**	**17 17 33.9**	**-0.6**
SVB	**Belmont**	**3.24**	**168**	*e*P	**Pn**	**17 17 33.9**	**-0.6**
BHS	**Barnard House**	**3.24**	**166**	*e*P	**Pn**	**17 17 35.1**	**+0.6**
BHS				*e*S	**Sn**	**17 17 58.5**	**-14**
BHS	**Barnard House**	**3.24**	**166**	*e*P	**Pn**	**17 17 35.1**	**+0.6**
FCV	**Fort Charlotte**	**3.35**	**168**	*e*P	**Pn**	**17 17 36.5**	**+0.5**
FCV	**Fort Charlotte**	**3.35**	**168**	*e*P	**Pn**	**17 17 36.5**	**+0.5**
STVI	**Saint Thomas**	**3.44**	**304**	⇓*e*P	**Pn**	**17 17 37.3**	**+0.2**
STVI				*e*S	**Sn**	**17 18 17.2**	**-0.3**
STVI	**Saint Thomas**	**3.44**	**304**	⇓*e*P	**Pn**	**17 17 37.3**	**+0.2**
STVI				*e*S	**Sn**	**17 18 17.2**	**-0.3**
MTP	**Monte Pirata**	**3.82**	**296**	⇓*e*P	**Pn**	**17 17 42.7**	**+0.6**
MTP	**Monte Pirata**	**3.82**	**296**	⇓*e*P	**Pn**	**17 17 42.7**	**+0.6**
HUMP	**Col San Antoni**	**4.10**	**295**	⇓*e*P	**Pn**	**17 17 46.3**	**+0.5**
HUMP	**Col San Antoni**	**4.10**	**295**	⇓*e*P	**Pn**	**17 17 46.3**	**+0.5**
CPD	**Cerro la Pandu**	**4.12**	**293**	⇓*e*P	**Pn**	**17 17 48.5**	**+2.4**
CPD	**Cerro la Pandu**	**4.12**	**293**	⇓*e*P	**Pn**	**17 17 48.5**	**+2.4**
CBYP	**Canovanas**	**4.16**	**296**	⇓*e*P	**Pn**	**17 17 47.7**	**+1.1**
CBYP	**Canovanas**	**4.16**	**296**	*e*Pn	**Pn**	**17 17 47.3**	**+0.6**
CBYP				⇓*e*P		17 17 47.7	
CBYP				*e*Sn	**Sn**	**17 18 35.2**	**+0.7**
CBYP	**Canovanas**	**4.16**	**296**	⇓*e*P	**Pn**	**17 17 47.7**	**+1.1**
GRGR	**Grenville**	**4.31**	**176**	*e*Pn	**Pn**	**17 17 48.3**	**-0.5**
GRGR				*e*Sn	**Sn**	**17 18 40.8**	**+2.5**
AOPR	**Arecibo Observ**	**4.97**	**293**	⇓*e*P	**Pn**	**17 17 58.6**	**+1.1**
AOPR				*e*S	**Sn**	**17 18 54.0**	**0.0**
AOPR	**Arecibo Observ**	**4.97**	**293**	⇓*e*P	**Pn**	**17 17 58.6**	**+1.1**
AOPR				*e*S	**Sn**	**17 18 54.3**	**+0.3**
LSP	**Las Mesas**	**5.21**	**290**	⇓*e*P	**Pn**	**17 18 02.7**	**+2.0**
LSP	**Las Mesas**	**5.21**	**290**	⇓*e*P	**Pn**	**17 18 02.7**	**+2.0**
TOSP	**Speyside**	**5.31**	**165**	*e*P	**Pn**	**17 18 01.3**	**-0.8**
TOSP				*e*S	**Sn**	**17 18 57.9**	**-4.3**
AGPR	**Aguadilla, PR**	**5.33**	**293**	*e*Pn	**Pn**	**17 18 02.3**	**-0.1**
AGPR				*e*Sn	**Sn**	**17 19 01.5**	**-1.1**
SDDR	**Presa de Saban**	**9.26**	**287**	*e*Pn	**Pn**	**17 18 54.7**	**-0.8**
SDDR				*e*Sn	**Sn**	**17 20 35.5**	**-2.3**
BCIP	**Isla Barro Col**	**18.89**	**250**	P	**P**	**17 20 51.4**	**-4.5**

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*IDC **04** 17:26:41.3±0.5,32°.29N×105°.17E,h0km,mb4.3/22,mb1 4.3/25,mb1mx4.3/33,mbtmp4.3/25,ML3.7/3,Error ellipse: s-maj=17.8km s-min=11.9km az=55.0*
*BJI **04** 17:26:43.0,32°.28N×105°.30E,h17km,mB4.8/17,mb4.4/23,ML4.4/18,Ms4.2/25,Ms7 3.9/22*
*MOS **04** 17:26:44.2±1.0,32°.24N×105°.12E,h33km,mb4.7/17,Error ellipse: s-maj=9.4km s-min=6.5km az=101.8*
*NEIC **04** 17:26:45.7±1.7,32°.29N×105°.18E,h29km±13km,mb4.5/20,Error ellipse: s-maj=6.0km s-min=4.8km az=63.0*
ISC 04 17:26:42.1±0.8,**32°.28N**±0°.02×**105°.20E**±0°.03,**h1**km±5km,**n132**,σ1**52**/151,**mb4.5**/46,**MS3.8**/3,**6C-1D,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.84**	**222**	Pn	**Pn**	**17 27 15.5**	**+0.7**
CD2				Pg	**Pg**	**17 27 17.6**	**+0.2**
CD2				Sn	**Sn**	**17 27 39.6**	**+0.9**
CD2				Sg	**Sg**	**17 27 41.7**	**+0.4**
CD2				smax			
	comp=N,9μm,1.0s						
XAN	**Xi'an**	**3.58**	**60**	Pn	**Pn**	**17 27 40.1**	**+1.4**
XAN				Sn	**Sn**	**17 28 22.3**	**+0.7**
XAN				Sg	**Sg**	**17 28 36.6**	**-0.5**
XAN				smax			
	comp=N,1μm,0.6s						
XAN				smax			
	comp=E,750nm,0.8s						
LZH	**Lanzhou**	**3.96**	**344**	Pn	**Pn**	**17 27 46.2**	**+2.3**
LZH				Pg	**Pg**	**17 27 55.6**	**-2.3**
LZH				Sn	**Sn**	**17 28 31.5**	**+0.6**
LZH				Sg	**Sg**	**17 28 45.3**	**-3.9**
LZH				smax			
	comp=N,1μm,1.0s						
LZH				smax			
	comp=E,4μm,1.0s						
LZH				LR	LR		
	comp=E,4μm,5.6s						
LZH				LR	LR		
	comp=E,6μm,8.4s						
ENH	**Enshi**	**4.18**	**118**	*e*Pn	**Pn**	**17 27 49.0**	**+1.9**
ENH				*e*Sg	**Sg**	**17 28 55.8**	**-0.7**
GYA	**Guiyang**	**5.94**	**167**	⇑*i*Pn	**Pn**	**17 28 12.4**	**+1.2**
KMI	**Kunming**	**7.45**	**197**	Pn	**Pn**	**17 28 32.2**	**+0.2**
WHN	**Wuhan**	**8.01**	**100**	P	**Pn**	**17 28 40.6**	**+1.0**
WHN				S	**Sn**	**17 30 06.9**	**-4.0**
WHN				LR	LR		
	comp=Z,1μm,7.9s						
GTA	**Gaotai**	**8.35**	**330**	*e*P	**Pn**	**17 28 46.5**	**+2.3**
GTA				pP		17 28 50.1	
GTA				sP		17 28 52.5	
GTA				S	**Sn**	**17 30 21.8**	**+2.8**
GTA				sS		17 30 26.9	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,570nm,5.7s						
GTA				LR	LR		
	comp=N,670nm,10.8s						
GTA				LR	LR		
	comp=E,740nm,9.9s						
GTA				LR	LR		
	comp=Z,780nm,11.1s						
BTO	**Baotou**	**9.16**	**24**	*e*P	**Pn**	**17 28 56.6**	**+1.2**
BTO				S	**Sn**	**17 30 41.4**	**+2.2**
BTO				LR	LR		
	comp=N,160nm,3.9s						
BTO				LR	LR		
	comp=E,110nm,5.3s						
HHC	**Hu-ho-hao-te**	**9.96**	**29**	*e*P	**Pn**	**17 29 08.4**	**+2.1**
HHC				pP		17 29 11.6	
HHC				sP		17 29 14.4	
HHC				S	**Sn**	**17 31 01.2**	**+2.5**
HHC				PcS	PcS	17 38 53.5	+1.9
HHC				ScS	ScS	17 42 25.6	-0.6
HHC				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC				pmax	pmax		
	comp=Z,260nm,5.7s						
HHC				LR	LR		
	comp=N,550nm,9.6s						
HHC				LR	LR		
	comp=E,580nm,6.6s						
HHC				LR	LR		
	comp=Z,380nm,8.3s						
NJ2	**Nanjing**	**11.57**	**88**	*e*P	**Pn**	**17 29 32.4**	**+3.9**
NJ2				pP		17 29 36.1	
NJ2				sP		17 29 38.1	
NJ2				PP		17 29 41.2	
NJ2				S	**Sn**	**17 31 43.8**	**+5.4**
NJ2				sS		17 31 48.5	
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,60nm,3.5s						
NJ2				LR	LR		
	comp=N,170nm,8.8s						
NJ2				LR	LR		
	comp=E,820nm,8.9s						
BJI	**Beijing**	**11.76**	**46**	P	**Pn**	**17 29 30.2**	**-0.8**
BJI				S	**Sn**	**17 31 42.7**	**-0.2**
BJI				pmax	pmax		
	comp=Z,18nm,0.8s						
BJI				pmax	pmax		
	comp=Z,290nm,6.9s						
BJI				LR	LR		
	comp=N,490nm,10.3s						
BJI				LR	LR		
	comp=E,560nm,15.9s						
BJI				LR	LR		
	comp=Z,95nm,16.7s						
LSA	**Lhasa**	**12.33**	**262**	*e*P	**Pn**	**17 29 40.7**	**+1.9**
LSA	**Lhasa**	**12.33**	**262**	*e*P	**Pn**	**17 29 40.3**	**+1.5**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LSA	**Lhasa**	**12.33**	**262**	*e*P	**Pn**	**17 29 40.3**	**+1.5**
	comp=Z,5.4nm,0.8s						
QIZ	**Qiongzhong**	**13.84**	**161**	P	**Pn**	**17 30 00.5**	**+1.0**
QIZ				S	**Sn**	**17 32 36.4**	**+2.5**
QIZ				pmax	pmax		
	comp=Z,11nm,1.4s						
QIZ				LR	LR		
	comp=N,680nm,10.5s						
QIZ				LR	LR		
	comp=Z,670nm,10.1s						
QIZ	**Qiongzhong**	**13.84**	**161**	*e*Pn	**Pn**	**17 29 59.3**	**-0.2**
QZH	**Quanzhou**	**13.84**	**119**	*e*P	**Pn**	**17 29 58.0**	**-1.5**
QZH				S	**Sn**	**17 32 30.0**	**-3.9**
QZH				LR	LR		
	comp=N,1μm,8.0s						
QZH				LR	LR		
	comp=E,2μm,7.6s						
QZH				LR	LR		
	comp=Z,3μm,8.1s						
CHG	**Chiang Mai**	**14.55**	**204**	P	**Pn**	**17 30 11.2**	**+2.1**
CHTO	**Chiang Mai**	**14.55**	**204**	*e*P	**Pn**	**17 30 08.6**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CHTO	**Chiang Mai**	**14.55**	**204**	*e*Pn	**Pn**	**17 30 08.6**	**-0.5**
	comp=Z,8.4nm,1.1s						
CM31	**Chiang Mai Arr**	**14.88**	**204**	*e*P	**Pn**	**17 30 14.0**	**+0.4**
	comp=Z,5.8nm,0.7s						
CMAR	**Chiang Mai Arr**	**14.88**	**204**	Pn	**Pn**	**17 30 13.9**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=16,slow=12,SNR=20						
CMAR				PcP	PcP	17 35 24.6	+0.3
	comp=Z,0.1nm,0.3s,baz=338,slow=1.4,SNR=5.5						
SONM	**Songino Array**	**15.56**	**3**	Pn	**Pn**	**17 30 21.6**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=184,slow=14,SNR=18						
ULN	**Ulaanbaatar**	**15.63**	**5**	*e*P	**Pn**	**17 30 23.7**	**+0.3**
ULN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ULN	**Ulaanbaatar**	**15.63**	**5**	*e*P	**Pn**	**17 30 23.7**	**+0.3**
	comp=Z,8.8nm,1.0s						
TAPN	**Taplejung**	**15.95**	**257**	*e*P	**Pn**	**17 30 30.5**	**+2.7**
	comp=Z,6.3nm,1.2s						
BDT	**Bhumibol Dam**	**15.99**	**202**	P	**Pn**	**17 30 32.5**	**+4.2

comp=Z,7.0nm,0.6s,mb4.5
TKM2 Tokmak 2 25.62 303 *e*P **P** 17 32 12.1 -0.9
comp=Z,7.2nm,0.6s,mb4.5
KZA Kyzart 25.67 301 P **P** 17 32 15.0 +1.5
SNR=8.1
KBK Karagaybulak 26.02 302 P **P** 17 32 20.6 +4.0
SNR=12
ZAA0 Zalesovo Array 26.09 332 *e*P **P** 17 32 16.5 -0.6
ZALV Zalesovo Beam 26.09 332 P **P** 17 32 16.7 -0.4
comp=Z,3.7nm,0.6s,mb4.2,baz=133,slow=10,SNR=17
UCH Uchtor 26.24 301 P **P** 17 32 22.6 +4.0
SNR=13
UCH Uchtor 26.24 301 *e*P **P** 17 32 19.6 +1.0
comp=Z,12nm,1.0s,mb4.5
AAK Ala-Archa 26.34 302 P **P** 17 32 20.9 +1.4
comp=Z,1.3nm,0.4s,mb3.9,baz=129,slow=6.5,SNR=1.9
AAK Ala-Archa 26.34 302*c i*P **P** 17 32 22.4 +2.9
AAK pmax pmax
comp=Z,2.0nm,0.9s,mb3.8
AAK Ala-Archa 26.34 302 *e*P **P** 17 32 24.7 +5.2
USP Ospenovka 26.49 303 P **P** 17 32 24.1 +3.3
SNR=13
AML Almayashu 26.82 301 P **P** 17 32 25.1 +1.3
SNR=5.4
AML Almayashu 26.82 301 *e*P **P** 17 32 23.9 +0.1
comp=Z,7.9nm,0.8s,mb4.5
KURK Kurchatov 26.89 321 P **P** 17 32 24.3 -0.1
comp=Z,3.8nm,0.7s,mb4.2,baz=133,slow=8.0,SNR=13
KURK PcP PcP 17 35 45.2 -1.4
comp=Z,1.4nm,0.4s,baz=115,slow=2.2,SNR=6.3
KURK Kurchatov 26.89 321 P **P** 17 32 24.3 -0.1
KURK PcP PcP 17 35 45.2 -1.4
PSI Prapat 29.92 193 P **P** 17 32 51.7 +0.1
comp=Z,1.9nm,0.5s,mb4.2,baz=9.1,slow=4.6,SNR=4.6
ASAJ Asahikawa 31.41 57 P **P** 17 33 04.2 -0.5
comp=Z,2.4nm,0.7s,mb4.2,baz=282,slow=7.4,SNR=4.1
ASAJ Asahikawa 31.41 57 P **P** 17 33 04.2 -0.5
ASAJ pmax pmax
comp=Z,2.0nm,0.7s
BVAR Borovoye Array 32.47 320 P **P** 17 33 13.6 -0.2
comp=Z,2.7nm,0.6s,mb4.3,baz=114,slow=11,SNR=18
BVAR PcP PcP 17 35 59.5 -1.3
comp=Z,0.9nm,0.6s,baz=119,slow=5.2,SNR=5.1
BRVK Borovoye 32.54 320 ⇑*i*P **P** 17 33 14.5 +0.1
BRVK pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
BRVK Borovoye 32.54 320 *e*P **P** 17 33 14.0 -0.5
comp=Z,3.8nm,0.8s,mb4.4
ABKAR Akbulak array 37.61 310 *e*P **P** 17 33 57.9 -0.3
comp=Z,4.8nm,0.7s,mb4.3
AKTK Aktyubinsk 39.03 312 P **P** 17 34 09.6 -0.6
AKTO Aktyubinsk 39.03 312 P **P** 17 34 09.6 -0.6
comp=Z,3.0nm,0.6s,mb4.1,baz=110,slow=12,SNR=12
SVE Sverdlovsk 39.12 322 *e*P **P** 17 34 10.9 +0.1
SVE pmax pmax
comp=Z,12nm,1.0s,mb4.5
KAPI Kappang 39.59 157 P **P** 17 34 14.3 -0.8
comp=Z,13nm,1.1s,mb4.5,baz=243,slow=2.3,SNR=2.6
KAPI Kappang 39.59 157 P **P** 17 34 14.3 -0.8
ARU Arti 40.09 321*d i*P **P** 17 34 18.8 -0.1
ARU *e* 17 35 49.4
ARU S **S** **17 40 25.3 -0.3**
ARU SS SS 17 43 17.5 -5.0
ARU pmax pmax
comp=Z,17nm,1.2s,mb4.5
ARU Arti 40.09 321 *e*P **P** 17 34 18.6 -0.3
comp=Z,14nm,0.9s,mb4.6
PETK Petropavlovsk- 42.70 45 P **P** 17 34 40.2 -0.2
comp=Z,7.9nm,0.8s,mb4.5,baz=240,slow=3.5,SNR=10
PETK Petropavlovsk- 42.70 45 P **P** 17 34 40.2 -0.2
ZEI Tsey 48.77 301 *e*P **P** 17 35 30.5 +2.0
ZEI pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
KIV Kislovodsk 49.46 303 *e*P **P** 17 35 33.7 -0.1
KIV pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
BILL Bilibino 49.71 26*c i*P **P** 17 35 34.7 -0.6
BILL *e*PP 17 35 48.5
BILL pmax pmax
comp=Z,9.0nm,1.7s,mb4.4
BILL MLR MLR
comp=Z,100nm,15.0s,MS3.9
BILL Bilibino 49.71 26 *e*P **P** 17 35 34.5 -0.8
comp=Z,2.0nm,0.4s,mb4.4
OBN Obninsk 52.24 317 *e*P **P** 17 35 54.3 -0.2
OBN *e*PP 17 36 08.3
OBN *e* 17 37 02.3
OBN *e*SS SS 17 46 53.4 -3.7
OBN pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
KNA Kununurra 52.83 151 *e*P **P** 17 35 59.0 -0.3
comp=Z,18nm,0.9s,mb5.0
APA Apatity 53.67 333⇑*i*P **P** 17 36 06.6 +1.7
APA pmax pmax
comp=Z,20nm,1.0s,mb5.1
APA MLR MLR
comp=Z,200nm,13.0s,MS4.4
APA MLR MLR
comp=Z,100nm,18.0s
FITZ Fitzroy Crossi 53.79 156 *e*P **P** 17 36 05.8 -0.5
comp=Z,9.5nm,1.0s,mb4.8
JOF Joensuu 54.54 327 *e*P **P** 17 36 09.4 -1.9
JOF pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
JOF Joensuu 54.54 327 *ep* **P** 17 36 09.4 -1.9
comp=Z,3.6nm,0.9s,mb4.4
JOF Joensuu 54.54 327 *ep* **P** 17 36 09.4 -1.9
comp=Z,3.6nm,0.9s,mb4.4
KEV Kevo 56.04 336 *e*P **P** 17 36 21.8 -0.2
KEV pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
KEV Kevo 56.04 336 *ep* **P** 17 36 21.8 -0.2
comp=Z,6.0nm,0.7s,mb4.7
KEV Kevo 56.04 336 *ep* **P** 17 36 21.8 -0.2
comp=Z,6.0nm,0.7s,mb4.7
ARCES ARCESS Array B 56.57 336 P **P** 17 36 25.4 -0.5
comp=Z,1.7nm,0.5s,mb4.3,baz=69,slow=6.6,SNR=14
KAF Kangasniemi 56.92 327 *e*P **P** 17 36 25.8 -2.6
KAF pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
KAF Kangasniemi 56.92 327 *ep* **P** 17 36 25.8 -2.6
comp=Z,3.2nm,0.9s,mb4.3
KAF Kangasniemi 56.92 327 *ep* **P** 17 36 25.8 -2.6
comp=Z,3.2nm,0.9s,mb4.3
BRTR Keskin Array B 56.98 299 P **P** 17 36 28.4 -0.8
comp=Z,1.0nm,0.7s,mb4.0,baz=102,slow=7.1,SNR=5.8
BRTR Keskin Array B 56.98 299*ce*P **P** 17 36 28.3 -0.9
BRTR pmax pmax
comp=Z,1.0nm,0.7s
FINES FINESS Array B 57.11 326 P **P** 17 36 28.9 -0.9
comp=Z,2.9nm,0.4s,mb4.6,baz=88,slow=6.8,SNR=15
VSU Vasula 57.23 322 *e*P **P** 17 36 30.6 -0.1
VSU pmax pmax
comp=Z,12nm,1.0s,mb4.9
AKASG Malin Array Be 57.27 313 P **P** 17 36 29.7 -1.4
comp=Z,2.7nm,0.4s,mb4.6,baz=67,slow=7.6,SNR=7.3
COEN Coen 58.61 136 *e*P **P** 17 36 40.8 -0.1
WRAB Tennant Creek 58.95 148 *e*P **P** 17 36 42.9 -0.2
WRAB pmax pmax
comp=Z,17nm,1.0s,mb5.0
WRAB Tennant Creek 58.95 148 *e*P **P** 17 36 42.9 -0.2
comp=Z,17nm,1.0s,mb5.0
LVV L'vov 60.71 313 *e*P **P** 17 36 45.2 -10
ASAR Alice Springs 62.03 150 P **P** 17 37 04.2 0.0
comp=Z,3.8nm,0.8s,mb4.7,baz=327,slow=6.5,SNR=53
MTSU Mount Surprise 62.58 137 *e*P **P** 17 37 07.5 -0.4
comp=Z,12nm,0.6s,mb5.2
NB2 NORSAR Subarra 64.17 327 P **P** 17 37 16.0 -2.0
comp=Z,3.1nm,0.6s,mb4.7,baz=71,slow=6.5
NOA NORSAR Array B 64.17 327 P **P** 17 37 16.1 -1.8
comp=Z,2.4nm,0.5s,mb4.7,baz=71,slow=6.7,SNR=11
DPC Dobruska-Polom 65.24 315 *e*P **P** 17 37 27.4 +2.3
DPC Dobruska-Polom 65.24 315 *e*P **P** 17 37 27.4 +2.3
DPC *ep*P 17 37 31.8
UPC Upice 65.37 315 *e*P **P** 17 37 30.8 +4.8
UPC Upice 65.37 315 *ep*P pP 17 37 30.8 +4.5
SVW2 Sparrevohn 66.50 32 *e*P **P** 17 37 33.3 +0.3
BPAW Bear Paw Mtn. 67.13 28 *e*P **P** 17 37 36.5 -0.5
comp=Z,7.0nm,0.8s,mb4.9
KHC Kasperske Hory 67.35 315 *e*P **P** 17 37 45.5 +6.8
KHC Kasperske Hory 67.35 315 *ep*P pP 17 37 45.5 +6.4
GERES GERESS Array B 67.39 314 P **P** 17 37 37.7 -1.3
comp=Z,0.2nm,0.4s,mb3.7,baz=32,slow=12,SNR=3.2
INK Inuvik 70.73 20 *e*P **P** 17 37 58.5 -0.9
INK pmax pmax
comp=Z,7.0nm,0.9s
INK Inuvik 70.73 20 *e*P **P** 17 37 58.5 -0.9
comp=Z,7.1nm,0.9s,mb4.8
DAWY Dawson 71.48 25 *e*P **P** 17 38 03.0 -0.9
KMBO Kilima Mbogo 72.09 257 P **P** 17 38 08.0 -0.4
comp=Z,0.9nm,0.6s,mb4.0,baz=69,slow=17,SNR=2.9
STKA Stephens Creek 72.50 148 *e*P **P** 17 38 10.1 -0.3
comp=Z,3.9nm,0.9s,mb4.5
STKA Stephens Creek 72.50 148 P **P** 17 38 09.9 -0.5
comp=Z,3.5nm,0.6s,mb4.7,baz=12,slow=5.4,SNR=7.4
CMSA Cobar Meteorol 74.14 145 *e*P **P** 17 38 20.1 0.0
YKA Yellowknife Ar 80.29 18 P **P** 17 38 53.6 -0.7
comp=Z,5.6nm,0.5s,mb4.8,baz=328,slow=5.1,SNR=42
YKA Yellowknife Ar 80.29 18 P **P** 17 38 53.6 -0.7
YKA pmax pmax
comp=Z,6.0nm,0.5s
FFC Flin Flon 90.24 15 *i* P **P** 17 39 44.0 -0.2
SCHQ Schefferville 92.97 355 P **P** 17 39 55.7 -1.2
comp=Z,2.7nm,0.6s,mb4.8,baz=351,slow=0.7,SNR=4.8
TORD Torodi Ar. Bea 94.16 288 P **P** 17 40 01.6 -1.5
comp=Z,0.3nm,0.5s,mb3.9,baz=66,slow=5.0,SNR=4.3

MAN 04 17:40:51,5.86N×125.59E,h38km,mb4.3,ML3.1,MS2.9, 2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.67**	**289**	⇓*i*P	Pn	17 41 03.1	-1.0
GSPH				*i* S	Sn	17 41 11.4	-2.0
DMPH	**Davao City--Mi**	**1.21**	**356**	⇓*i*P	Pn	17 41 13.7	+2.2
DMPH				*i* S	Sn	17 41 35.8	+9.0
MATI	**Mati**	**1.26**	**32**	*e*P	Pn	17 41 12.9	+0.8
MATI				*e*S	Sn	17 41 22.5	-5.4
BUKP	**Musuan**	**2.07**	**345**	*e*P	Pn	17 41 24.4	+1.1
BUKP				*e*S	Sn	17 41 40.2	-7.6

DJA 04 17:42:49,5.65S×103.04E,h70km,MLv3.8/4,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LWLI	**Liwa**	**1.19**	**58**	P	Pn	17 43 11.0	+1.0
LWLI				S	Sn	17 43 27.5	+1.9
MNAI	**Manna**	**1.28**	**356**	P	Pn	17 43 10.3	-0.9
KASI	**Kota Agung**	**1.46**	**85**	P	Pn	17 43 14.6	+1.2
KASI				S	Sn	17 43 32.5	+0.8
MDSI	**Maura Dua**	**1.62**	**44**	P	Pn	17 43 16.6	+1.0
MDSI				S	Sn	17 43 37.6	+2.0
CGJI	**Cibinong**	**2.81**	**110**	P	Pn	17 43 32.5	+0.9
CGJI				S	Sn	17 44 03.5	-0.9

*IDC **04** 17:58:34.5±1.2, 1.02S×122.71E, h0km, mb3.7/6, mb1 3.8/8, mb1mx3.6/22, mbtmp3.7/8, ML3.4/2, MS3.0/3, Ms1 3.1/3, ms1mx2.9/22, Error ellipse: s-maj=34.8km s-min=19.0km az=76.0*
*DJA **04** 17:58:35, 0.68S×122.58E, h9km, MLv4.3/7*
*ISCJB **04** 17:58:35.8±0.9, 0.93S±0.06×122.69E±0.06, h24km±7km, mb3.7/8, Error ellipse: s-maj=10.4km s-min=9.2km az=136.9*
*NEIC **04** 17:58:39.2±0.7, 1.08S×122.72E, h35km, mb4.2/2, Error ellipse: s-maj=21.1km s-min=10.1km az=72.0*

ISC 04 17:58:37.3±1.1,1.05S±0.07×122.58E±0.06,h19km±8km, n22,σ1°22/21,mb3.7/8,Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.19**	**89**	P	**Pg**	**17 58 42.6**	**+0.5**
APSI	**Ampana**	**0.94**	**278**	P	**Pb**	**17 58 53.3**	**-1.8**
MRSI	**Marisa**	**1.64**	**337**	P	Px	17 58 54.1	
KDI	**Kendari**	**2.89**	**179**	P	**Pn**	**17 59 27.1**	**+4.7**
MNI	**Manado**	**3.35**	**42**	P	**Pn**	**17 59 21.9**	**-6.8**
TTSI	**Tana Toraja**	**3.40**	**234**	P	**Pn**	**17 59 30.6**	**+1.2**
KAPI	**Kappang**	**4.85**	**216**	Pn	**Pn**	**17 59 50.7**	**+1.3**
	5.4nm,0.3s,baz=18,slow=5.7,SNR=13						
KAPI				Sn	**Sn**	**18 00 51.2**	**+6.1**
	2.6nm,0.3s,baz=231,slow=22,SNR=8.2						
KAPI				LR	LR	18 01 58.3	
	comp=Z,92nm,20.5s,baz=229,slow=41						
NLAI	**Namlea**	**5.01**	**116**	P	**Pn**	**17 59 51.1**	**-0.5**
	4μm165nm,0.8s						
TNTI	**Ternate**	**5.11**	**69**	P	**Pn**	**17 59 55.7**	**+2.7**
AAI	**Ambon**	**6.19**	**115**	P	**Pn**	**18 00 07.2**	**-0.6**
	1μm119nm,0.7s						
MYLDM	**Lahad Datu**	**7.41**	**327**	P	**Pn**	**18 00 22.6**	**-1.9**
DAV	**Davao City (W)**	**8.60**	**20**	LR	LR	18 04 21.0	
	comp=Z,72nm,18.5s,baz=294,slow=41						
FITZ	**Fitzroy Crossi**	**17.21**	**170**	P	**Pn**	**18 02 36.6**	**-0.2**
	0.1nm,0.3s,baz=306,slow=14,SNR=2.2						
WRAB	**Tennant Creek**	**22.02**	**149**	*e*P	**P**	**18 03 28.6**	**-2.2**
	3.9nm,0.9s,mb3.8						
PSI	**Prapat**	**23.96**	**279**	P	**P**	**18 03 51.6**	**+0.9**
	4.3nm,0.4s,mb4.3,baz=134,slow=14,SNR=3.8						
ASAR	**Alice Springs**	**25.02**	**155**	P	**P**	**18 03 59.8**	**-0.6**
	0.9nm,0.7s,mb3.4,baz=335,slow=8.0,SNR=11						
CMAR	**Chiang Mai Arr**	**30.27**	**311**	P	**P**	**18 04 46.9**	**-0.5**
	0.2nm,0.6s,mb3.0,baz=143,slow=7.9,SNR=4.0						
CMAR				LR	LR	18 17 29.2	
	comp=Z,46nm,18.6s,baz=195,slow=37						
ENH	**Enshi**	**33.55**	**339**	*e*P	**P**	**18 05 15.7**	**-0.4**
SONM	**Songino Array**	**50.69**	**346**	P	**P**	**18 07 35.3**	**-0.3**
	0.6nm,0.7s,mb3.6,baz=159,slow=12,SNR=4.6						
MKAR	**Makanchi Array**	**59.28**	**329**	P	**P**	**18 08 38.2**	**+0.5**
	0.3nm,0.4s,mb3.6,baz=116,slow=6.6,SNR=6.4						
ZALV	**Zalesovo Beam**	**63.09**	**336**	P	**P**	**18 09 05.8**	**+2.4**
	0.2nm,0.3s,mb3.7,baz=128,slow=8.2,SNR=2.2						
BRVK	**Borovoye**	**69.23**	**329**	*e*P	**P**	**18 09 43.8**	**+1.0**
	3.2nm,0.7s,mb4.4						

GUC 04 18:01:53.6±0.4,33.45S×72.93W,h32km±3km,MD3.5,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNV	**Longovilo**	**1.36**	**112**	*e*P	Pn	18 02 16.9	+0.4
LNV				*i* S	Sn	18 02 35.1	+1.7
CHCH	**Chadas Angostu**	**1.96**	**105**	*e*P	Pn	18 02 26.1	+1.5
CHCH				*i* S	Sn	18 02 50.9	+2.8
CACH	**El Canelo**	**2.05**	**110**	*e*P	Pn	18 02 28.3	+2.4
CACH				*i* S	Sn	18 02 54.3	+3.8
FCH	**Farellones**	**2.21**	**88**	*i* S	Sn	18 02 58.0	+3.7

*ISCJB **04** 18:02:22.2±0.8, 36.27N±0.03×21.74E±0.05, h1km±4km, mb3.8/15, Error ellipse: s-maj=6.9km s-min=4.6km az=151.0*
*THE **04** 18:02:23.8, 36.32N×21.71E, h0km±2km, ML4.3/4, Error ellipse: s-maj=3.8km s-min=1.4km az=240.0*
*ATH **04** 18:02:24.3, 36.31N×21.80E, h8km±3km, MD3.9/9, ML3.7*
*NEIC **04** 18:02:24.3, 36.31N×21.80E, h8km, mb4.2/3, MD3.9(ATH), After ATH.*
*CSEM **04** 18:02:24.0±0.3, 36.31N×21.82E, h2km, ML4.3/4, Error ellipse: s-maj=7.8km s-min=6.1km az=52.0*
*IDC **04** 18:02:25.9±1.6, 36.73N×22.28E, h0km, mb3.6/11, mb1 3.7/14, mb1mx3.6/29, mbtmp3.6/14, ML3.5/3, Error ellipse: s-maj=37.8km s-min=17.1km az=39.0*

ISC 04 18:02:23.3±0.9,36.27N±0.03×21.75E±0.05,h1km±4km, n135,σ1°23/155,mb3.9/15,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.62**	**359**	P	**Pg**	**18 02 34.9**	**-0.3**
PYL				S	**Sg**	**18 02 43.1**	**-0.2**
PYL	**PYLOS**	**0.62**	**359**	*e*PB	**Pg**	**18 02 35.1**	**-0.1**
PYL				*e*SB	**Sg**	**18 02 43.1**	**-0.2**
PYL	**PYLOS**	**0.62**	**359**	*e*Pb	**Pg**	**18 02 35.1**	**-0.1**
PYL				S	**Sg**	**18 02 43.1**	**-0.2**
ITM	**Ithomi**	**0.92**	**9**	*e*Pg	**Pg**	**18 02 40.7**	**-0.2**
ITM				*e*Sb	**Sg**	**18 02 53.1**	**+0.4**
ITM	**Ithomi**	**0.92**	**9**	P	**Pg**	**18 02 40.6**	**-0.3**
ITM				S	**Sg**	**18 02 53.7**	**+1.0**
ITM	**Ithomi**	**0.92**	**9**	*e*PG	**Pg**	**18 02 40.7**	**-0.2**
ITM				*e*SB	**Sg**	**18 02 53.1**	**+0.4**
ITM	**Ithomi**	**0.92**	**9**	*e*Pg	**Pg**	**18 02 40.7**	**-0.2**
ITM				*e*Sb	**Sg**	**18 02 53.1**	**+0.4**
ITM				S	**Sg**	**18 02 53.7**	**+1.0**
KYTH	**Kithira**	**1.04**	**89**	*e*Pn	**Pg**	**18 02 44.2**	**+1.0**
KYTH	**Kithira**	**1.04**	**89**	*e*PN	**Pg**	**18 02 44.2**	**+1.0**
KYTH	**Kithira**	**1.04**	**89**	*e*Pn	**Pg**	**18 02 44.2**	**+1.0**
VLI	**Veliai**	**1.05**	**65**	*e*Pb	**Pg**	**18 02 43.5**	**0.0**
VLI				*e*Sb	**Sg**	**18 02 57.1**	**-0.1**
VLI	**Veliai**	**1.05**	**65**	*e*PB	**Pg**	**18 02 43.5**	**0.0**
VLI				*e*SB	**Sg**	**18 02 57.1**	**-0.1**
VLI	**Veliai**	**1.05**	**65**	*e*Pb	**Pg**	**18 02 43.5**	**0.0**
VLI				*e*Sb	**Sg**	**18 02 57.1**	**-0.1**
VLX	**Vlachokerasia**	**1.21**	**25**	P	**Pg**	**18 02 45.6**	**-0.8**
VLX				S	**Sg**	**18 03 02.5**	**+0.4**
VLX	**Vlachokerasia**	**1.21**	**25**	*e*PG	**Pg**	**18 02 45.8**	**-0.6**
VLX	**Vlachokerasia**	**1.21**	**25**	*e*Pg	**Pg**	**18 02 45.8**	**-0.6**
VLX				S	**Sg**	**18 03 02.5**	**+0.4**
GUR	**Goura**	**1.73**	**16**	*e*PG	**Pn**	**18 02 54.9**	**+0.4**
GUR	**Goura**	**1.73**	**16**	*e*Pg	**Pn**	**18 02 54.9**	**+0.4**
RLS	**Riolos of Patr**	**1.79**	**353**	*e*Pn	**Pg**	**18 02 57.7**	**0.0**
RLS	**Riolos of Patr**	**1.79**	**353**	*e*PN	**Pg**	**18 02 57.7**	**0.0**
RLS	**Riolos of Patr**	**1.79**	**353**	*e*Pn	**Pg**	**18 02 57.7**	**0.0**
LTK	**Loutraki**	**2.00**	**29**	*e*PG	**Pg**	**18 03 00.4**	**-1.2**
LTK	**Loutraki**	**2.00**	**29**	*e*Pg	**Pg**	**18 03 00.4**	**-1.2**
UPR	**University Cam**	**2.01**	**1**	P	**Pn**	**18 02 57.4**	**-0.9**
UPR				S	**Sn**	**18 03 23.2**	**-0.9**
UPR	**University Cam**	**2.01**	**1**	P	**Pn**	**18 02 57.4**	**-0.9**
UPR				S	**Sn**	**18 03 23.2**	**-0.9**
NAIG	**Nisos Aigina**	**2.03**	**43**	*e*Pg	**Pg**	**18 03 01.2**	**-1.1**
NAIG	**Nisos Aigina**	**2.03**	**43**	*e*PG	**Pg**	**18 03 01.2**	**-1.1**
NAIG	**Nisos Aigina**	**2.03**	**43**	*e*Pg	**Pg**	**18 03 01.2**	**-1.1**
VLS	**Valsamata**	**2.11**	**334**	P	**Pn**	**18 02 58.4**	**-1.4**
VLS	**Valsamata**	**2.11**	**334**	P	**Pn**	**18 02 58.4**	**-1.4**
KALE	**Kalithea**	**2.14**	**8**	P	**Pn**	**18 02 59.3**	**-0.8**
KALE	**Kalithea**	**2.14**	**8**	P	**Pn**	**18 02 59.3**	**-0.8**
EFP	**Efpalio**	**2.15**	**3**	*e*PG	**Pg**	**18 03 03.5**	**-1.1**
EFP	**Efpalio**	**2.15**	**3**	*e*Pg	**Pg**	**18 03 03.5**	**-1.1**
VAM	**Vamos**	**2.17**	**113**	*e*Pn	**Pn**	**18 03 01.9**	**+1.3**
VAM	**Vamos**	**2.17**	**113**	*e*PN	**Pn**	**18 03 01.9**	**+1.3**
VAM	**Vamos**	**2.17**	**113**	*e*Pn	**Pn**	**18 03 01.9**	**+1.3**
DSF	**Desfina**	**2.22**	**16**	P	**Pn**	**18 03 01.3**	**0.0**
DSF	**Desfina**	**2.22**	**16**	P	**Pn**	**18 03 01.3**	**0.0**
VLY	**Voula,Athens**	**2.27**	**45**	*e*Pn	**Pn**	**18 03 04.0**	**+2.0**
VLY	**Voula,Athens**	**2.27**	**45**	*e*PN	**Pn**	**18 03 04.0**	**+2.0**
VLY	**Voula,Athens**	**2.27**	**45**	*e*Pn	**Pn**	**18 03 04.0**	**+2.0**
ATH	**Athens Observa**	**2.31**	**42**	*e*Pg	**Pb**	**18 03 05.3**	**-0.5**
ATH	**Athens Observa**	**2.31**	**42**	*e*PG	**Pb**	**18 03 05.3**	**-0.5**
ATH	**Athens Observa**	**2.31**	**42**	*e*Pg	**Pb**	**18 03 05.3**	**-0.5**
ATHU	**Athens Univers**	**2.34**	**43**	P	**Pn**	**18 03 02.9**	**-0.1**
ATHU	**Athens Univers**	**2.34**	**43**	P	**Pn**	**18 03 02.9**	**-0.1**
GVD	**Gavdhos**	**2.38**	**126**	*e*Pn	**Pb**	**18 03 08.1**	**+1.1**
GVD	**Gavdhos**	**2.38**	**126**	*e*Pn	**Pb**	**18 03 08.1**	**+1.1**
PTL	**Penteli**	**2.45**	**43**	*e*Pn	**Pn**	**18 03 06.2**	**+1.8**
PTL	**Penteli**	**2.45**	**43**	*e*PN	**Pn**	**18 03 06.2**	**+1.8**
PTL	**Penteli**	**2.45**	**43**	*e*Pn	**Pn**	**18 03 06.2**	**+1.8**
LKR	**Lokris**	**2.57**	**22**	*e*Pb	**Pn**	**18 03 06.0**	**-0.1**
LKR	**Lokris**	**2.57**	**22**	P	**Pn**	**18 03 06.0**	**-0.1**
LKR				S	**Sn**	**18 03 38.8**	**+0.8**
LKR	**Lokris**	**2.57**	**22**	*e*PB	**Pn**	**18 03 06.0**	**-0.1**
LKR	**Lokris**	**2.57**	**22**	P	**Pn**	**18 03 06.0**	**-0.1**
LKR				S	**Sn**	**18 03 38.8**	**+0.8**
ATAL	**Atalanti**	**2.62**	**22**	P	**Pn**	**18 03 06.9**	**+0.2**
ATAL				S	**Sn**	**18 03 40.8**	**+1.6**
ATAL	**Atalanti**	**2.62**	**22**	P	**Pn**	**18 03 06.9**	**+0.2**
ATAL				S	**Sn**	**18 03 40.8**	**+1.6**
IDI	**Anoyia**	**2.74**	**110**	Pn	**Pn**	**18 03 10.2**	**+1.8**
	2.8nm,0.3s,baz=294,slow=14,SNR=24						
IDI	**Anoyia**	**2.74**	**110**	Pn	**Pn**	**18 03 10.2**	**+1.8**
AGG	**Agios Georgios**	**2.78**	**9**	*e*Pn	**Pb**	**18 03 12.2**	**-1.6**
AGG	**Agios Georgios**	**2.78**	**9**	*e*PN	**Pb**	**18 03 12.2**	**-1.6**
AGG	**Agios Georgios**	**2.78**	**9**	*e*Pn	**Pb**	**18 03 12.2**	**-1.6**
SIVA	**Sivas**	**2.79**	**116**	P	**Pn**	**18 03 09.7**	**+0.6**
SIVA	**Sivas**	**2.79**	**116**	P	**Pn**	**18 03 09.7**	**+0.6**
THR5	**Thira Island,**	**2.91**	**86**	P	**Pn**	**18 03 10.7**	**0.0**
THR5	**Thira Island,**	**2.91**	**86**	P	**Pn**	**18 03 10.7**	**0.0**
APE	**Apeiranthos**	**3.14**	**74**	*e*Pn	**Pn**	**18 03 14.7**	**+0.8**
APE	**Apeiranthos**	**3.14**	**74**	P	**Pn**	**18 03 14.6**	**+0.7**
APE	**Apeiranthos**	**3.14**	**74**	*e*PN	**Pn**	**18 03 14.7**	**+0.8**
APE	**Apeiranthos**	**3.14**	**74**	P	**Pn**	**18 03 14.6**	**+0.7**
THL	**Klokotos Trika**	**3.29**	**4**	P	**Pn**	**18 03 16.8**	**+0.8**
THL				S	**Sn**	**18 03 57.2**	**+1.4**
THL	**Klokotos Trika**	**3.29**	**4**	*e*PN	**Pn**	**18 03 17.3**	**+1.3**
THL	**Klokotos Trika**	**3.29**	**4**	P	**Pn**	**18 03 16.8**	**+0.8**
THL	**Klokotos Trika**	**3.29**	**4**	*e*Pn	**Pn**	**18 03 17.3**	**+1.3**
THL				S	**Sn**	**18 03 57.2**	**+1.4**
XOR	**Xorichti**	**3.29**	**20**	P	**Pn**	**18 03 17.2**	**+1.2**
XOR	**Xorichti**	**3.29**	**20**	P	**Pn**	**18 03 17.2**	**+1.2**
AOS	**Alonnisos**	**3.35**	**30**	P	**Pn**	**18 03 17.3**	**+0.5**
AOS	**Alonnisos**	**3.35**	**30**	P	**Pn**	**18 03 17.3**	**+0.5**
IGT	**Igoumenitsa**	**3.44**	**341**	P	**Pn**	**18 03 18.7**	**+0.7**
IGT	**Igoumenitsa**	**3.44**	**341**	P	**Pn**	**18 03 18.7**	**+0.7**
KEK	**Kerkira**	**3.76**	**336**	*e*Pn	**Pn**	**18 03 23.6**	**+1.1**
KEK	**Kerkira**	**3.76**	**336**	*e*PN	**Pn**	**18 03 23.6**	**+1.1**
KEK	**Kerkira**	**3.76**	**336**	*e*Pn	**Pn**	**18 03 23.6**	**+1.1**
LIT	**Litokhoron**	**3.87**	**8**	*e*Pn	**Pn**	**18 03 27.0**	**+3.1**
LIT	**Litokhoron**	**3.87**	**8**	*e*PN	**Pn**	**18 03 27.0**	**+3.1**
LIT	**Litokhoron**	**3.87**	**8**	*e*Pn	**Pn**	**18 03 27.0**	**+3.1**
SOH	**Sokhos**	**4.71**	**15**	*e*Pn	**Pn**	**18 03 38.0**	**+2.5**
SOH	**Sokhos**	**4.71**	**15**	*e*PN	**Pn**	**18 03 38.0**	**+2.5**
SOH	**Sokhos**	**4.71**	**15**	*e*Pn	**Pn**	**18 03 38.0**	**+2.5**
TIP	**Timpagrande**	**4.91**	**308**	*e*Pn	**Pn**	**18 03 39.4**	**+1.3**
TIP	**Timpagrande**	**4.91**	**308**	*e*Pn	**Pn**	**18 03 39.4**	**+1.2**
VAY	**Valandovo**	**5.08**	**7**	*e*Pn	**Pn**	**18 03 37.2**	**-3.3**
KRUS	**Krusevo**	**5.10**	**356**	*e*Pn	**Pn**	**18 03 40.8**	**0.0**
STIP	**Stip**	**5.42**	**3**	*e*Pn	**Pn**	**18 03 47.5**	**+2.2**
TIRR	**Tirgusor**	**9.62**	**30**	Pn	**Pn**	**18 04 41.4**	**-1.5**
	7.6nm,0.9s						
TIRR	**Tirgusor**	**9.62**	**30**	Pn	**Pn**	**18 04 41.4**	**-1.5**
	7.6nm,0.9s						
BRTR	**Keskin Array B**	**9.99**	**66**	Pn	**Pn**	**18 04 49.4**	**+1.3**
	0.1nm,0.3s,baz=249,slow=12,SNR=3.3			

ROM 04 18:03:30.8±1.0, 38°.07N×16°.46E, h10km, Md1.9/3, Ml1.5/2, Error ellipse: s-maj=9.0km s-min=7.4km az=97.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPAZ	**Palizzi**	**0.37**	**252**	Pg	Pg	18 03 38.6	+0.5
MPAZ				Sg	Sg	18 03 45.2	+2.1
	65nm,0.7s						
CEL	**Celeste**	**0.48**	**294**	Pg	Pg	18 03 41.3	+1.1
CEL				Sg	Sg	18 03 47.7	+1.1
	55nm,1.0s						
CEL	**Celeste**	**0.48**	**294**	*e*Pn	Pg	18 03 41.2	+1.0
	34nm,0.6s						
CEL	**Celeste**	**0.48**	**294**	*e*Pn	Pg	18 03 41.2	+1.0
	34nm,0.6s						
MTTG	**Motta San Giov**	**0.60**	**264**	Pg	Pg	18 03 42.2	-0.3
MTTG				Sg	Sg	18 03 51.0	+0.6

DJA 04 18:10:50, 0°.49S×122°.69E, h15km, MLv3.5/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.55**	**172**	P	Pg	18 11 00.2	-0.8
APSI	**Ampana**	**1.12**	**248**	P	Pb	18 11 10.1	-1.0
APSI				S	Sb	18 11 25.9	+0.4
MRSI	**Marisa**	**1.22**	**322**	P	Pn	18 11 11.9	-0.6
TTSI	**Tana Toraja**	**3.83**	**228**	P	Pn	18 11 49.1	+0.6
NLAI	**Namlea**	**5.18**	**122**	P	Pn	18 12 07.7	+0.6

*ATH **04** 18:51:25.7, 38°.91N×26°.05E, h26km±1km, MD3.1/7*
*NEIC **04** 18:51:25.7, 38°.91N×26°.05E, h26km, MD3.1(ATH), MD3.0(ISK), After ATH.*
*ISCJB **04** 18:51:26.1±0.5, 38°.91N±0°.02×25°.99E±0°.03, h6km±4km, Error ellipse: s-maj=4.5km s-min=2.9km az=173.0*
*DDA **04** 18:51:26.6, 38°.94N×26°.05E, h7km±2km, Md2.9*
*CSEM **04** 18:51:26.6±0.2, 38°.90N×26°.00E, h8km, ML2.9/6, Error ellipse: s-maj=4.6km s-min=3.2km az=84.0*
*THE **04** 18:51:27.0, 38°.92N×26°.01E, h8km±1km, ML2.9/6, Error ellipse: s-maj=1.5km s-min=0.6km az=81.0*
*ISK **04** 18:51:29.2, 39°.14N×25°.89E, h5km, MD2.9*
ISC 04 18:51:26.7±0.5, 38°.91N±0°.02×25°.99E±0°.04, h8km±4km, n58, σ1§01/93, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.32**	**341**	P	**Pg**	**18 51 33.5**	**+0.5**
SIGR				S	**Sg**	**18 51 38.2**	**+1.0**
SIGR	**SIGRI**	**0.32**	**341**	P	**Pg**	**18 51 33.5**	**+0.5**
SIGR				S	**Sg**	**18 51 38.2**	**+1.0**
PRK	**Paraskevi**	**0.40**	**33**	*e*Pb	**Pg**	**18 51 34.3**	**-0.2**
PRK				*e*Sb	**Sg**	**18 51 40.0**	**+0.2**
PRK	**Paraskevi**	**0.40**	**33**	P	**Pg**	**18 51 34.2**	**-0.3**
PRK				*e*PB	**Pg**	**18 51 34.2**	**-0.3**
PRK	**Paraskevi**	**0.40**	**33**	*e*SB	**Sg**	**18 51 40.0**	**+0.2**
PRK	**Paraskevi**	**0.40**	**33**	P	**Pg**	**18 51 34.2**	**-0.3**
PRK				*e*Sb	**Sg**	**18 51 40.0**	**+0.2**
PRK				S	**Sg**	**18 51 40.4**	**+0.6**
CHOS	**Chios island**	**0.53**	**174**	P	**Pg**	**18 51 36.7**	**-0.2**
CHOS				S	**Sg**	**18 51 45.4**	**+1.7**
CHOS	**Chios island**	**0.53**	**174**	*e*PN	**Pg**	**18 51 36.8**	**-0.1**
CHOS				*e*SN	**Sg**	**18 51 44.1**	**+0.4**
CHOS	**Chios island**	**0.53**	**174**	P	**Pg**	**18 51 36.7**	**-0.2**
CHOS				S	**Sg**	**18 51 45.4**	**+1.7**
AYVA	**Ayvalik**	**0.68**	**54**	*i* P	**Pg**	**18 51 39.0**	**-0.7**
AYVA				*i* S	**Sg**	**18 51 47.8**	**-0.7**
AYVA	**Ayvalik**	**0.68**	**54**	*i* P	**Pg**	**18 51 39.0**	**-0.7**
AYVA				*i* S	**Sg**	**18 51 47.8**	**-0.7**
URLA	**Izmir**	**0.73**	**139**	*i* P	**Pg**	**18 51 39.8**	**-0.9**
URLA				*i* S	**Sg**	**18 51 51.0**	**+0.8**
URLA	**Izmir**	**0.73**	**139**	*i* P	**Pg**	**18 51 39.8**	**-0.9**
URLA				*i* S	**Sg**	**18 51 51.0**	**+0.9**
BOZC	**Bozcaada**	**0.93**	**3**	*i* P	**Pg**	**18 51 44.0**	**-0.6**
BOZC				*i* S	**Sg**	**18 51 57.1**	**+0.4**
EZN	**Ezine**	**0.95**	**16**	*e*PG	**Pg**	**18 51 44.4**	**-0.5**
EZN				*e*SG	**Sg**	**18 51 56.9**	**-0.4**
EZN	**Ezine**	**0.95**	**16**	*e*Pg	**Pg**	**18 51 44.4**	**-0.6**
EZN				*e*Sg	**Sg**	**18 51 56.9**	**-0.4**
BLCB	**Balcova**	**0.98**	**122**	P	**Pg**	**18 51 44.9**	**-0.6**
BLCB				S	**Sg**	**18 51 59.0**	**+0.9**
BLCB	**Balcova**	**0.98**	**122**	P	**Pg**	**18 51 44.9**	**-0.6**
BLCB				S	**Sg**	**18 51 59.0**	**+0.9**
LIA	**Limnos Island**	**1.17**	**328**	*e*Pn	**Pn**	**18 51 51.9**	**-0.3**
LIA				*e*Sn	**Sn**	**18 52 04.7**	**-0.8**
LIA	**Limnos Island**	**1.17**	**328**	P	**Pg**	**18 51 48.9**	**-0.2**
LIA				S	**Sg**	**18 52 05.1**	**+0.8**
LIA	**Limnos Island**	**1.17**	**328**	*e*PN	**Pn**	**18 51 49.0**	**-0.4**
LIA				*e*SN	**Sn**	**18 52 04.7**	**-0.8**
LIA	**Limnos Island**	**1.17**	**328**	*e*Pn	**Pn**	**18 51 49.0**	**-0.4**
LIA				*e*Sn	**Sn**	**18 52 04.7**	**-0.8**
LIA				S	**Sg**	**18 52 05.1**	**+0.8**
GADA	**Gvkgeada**	**1.28**	**357**	*e*PG	**Pg**	**18 51 50.4**	**-0.9**
GADA				*e*SG	**Sg**	**18 52 06.2**	**-1.7**
GADA	**Gvkgeada**	**1.28**	**357**	*e*Pg	**Pg**	**18 51 50.4**	**-0.9**
GADA				*e*Sg	**Sg**	**18 52 06.2**	**-1.7**
SMG	**Samos**	**1.37**	**151**	*e*Pn	**Pn**	**18 51 51.9**	**-0.3**
SMG				*e*Sn	**Sn**	**18 52 09.0**	**-1.6**
SMG	**Samos**	**1.37**	**151**	*e*PN	**Pn**	**18 51 51.9**	**-0.3**
SMG				*e*SN	**Sn**	**18 52 09.0**	**-1.6**
SMG	**Samos**	**1.37**	**151**	*e*Pn	**Pn**	**18 51 51.9**	**-0.3**
SMG				*e*Sn	**Sn**	**18 52 09.0**	**-1.6**
BALY	**Balya**	**1.51**	**56**	*i* P	**Pn**	**18 51 53.0**	**-1.1**
BALY				*i* S	**Sn**	**18 52 14.1**	**0.0**
BALY	**Balya**	**1.51**	**56**	*i* P	**Pn**	**18 51 53.0**	**-1.1**
BALY				*i* S	**Sn**	**18 52 14.1**	**+0.1**
LPK	**Lapseki**	**1.58**	**22**	*e*PN	**Pn**	**18 51 56.9**	**+1.9**
LPK	**Lapseki**	**1.58**	**22**	*e*Pn	**Pn**	**18 51 56.9**	**+1.9**
BALB	**Balikesir**	**1.64**	**63**	*e*PN	**Pn**	**18 51 60.0**	**+4.1**
BALB	**Balikesir**	**1.64**	**63**	*e*Pn	**Pn**	**18 52 00.0**	**+4.1**
AOS	**Alonnisos**	**1.66**	**280**	P	**Pn**	**18 51 56.3**	**+0.1**
AOS				S	**Sn**	**18 52 17.5**	**-0.2**
AOS	**Alonnisos**	**1.66**	**280**	P	**Pn**	**18 51 56.3**	**+0.1**
AOS				S	**Sn**	**18 52 17.5**	**-0.2**
ENEZ	**Enez**	**1.83**	**4**	*e*PN	**Pn**	**18 51 60.0**	**+1.5**
ENEZ	**Enez**	**1.83**	**4**	*e*Pn	**Pn**	**18 52 00.0**	**+1.5**
APE	**Apeiranthos**	**1.87**	**191**	*e*Pb	**Pb**	**18 51 57.9**	**-3.3**
APE	**Apeiranthos**	**1.87**	**191**	P	**Pn**	**18 51 58.1**	**-1.0**
APE				S	**Sn**	**18 52 23.7**	**+0.8**
APE	**Apeiranthos**	**1.87**	**191**	*e*PB	**Pb**	**18 51 57.9**	**-3.3**
APE	**Apeiranthos**	**1.87**	**191**	P	**Pn**	**18 51 58.1**	**-1.0**
APE				S	**Sn**	**18 52 23.7**	**+0.8**
ALN	**Alexandroupoli**	**1.98**	**1**	S	**Sn**	**18 52 25.2**	**-0.5**
ALN	**Alexandroupoli**	**1.98**	**1**	S	**Sn**	**18 52 25.2**	**-0.5**
RKY	**Sarkoy-Tekirda**	**2.00**	**27**	*e*PN	**Pn**	**18 52 03.6**	**+2.8**
RKY	**Sarkoy-Tekirda**	**2.00**	**27**	*e*Pn	**Pn**	**18 52 03.6**	**+2.8**
BNT	**Bandirma**	**2.08**	**45**	*e*PN	**Pn**	**18 52 05.4**	**+3.5**
KULA	**Kula-Manisa**	**2.13**	**100**	*e*PN	**Pn**	**18 52 09.0**	**+6.5**
ARMT	**Armutlu**	**2.76**	**52**	*e*PN	**Pn**	**18 52 15.4**	**+4.0**
ARMT	**Armutlu**	**2.76**	**52**	*e*Pn	**Pn**	**18 52 15.4**	**+4.1**
EDRB	**Edirne**	**2.99**	**11**	*e*PN	**Pn**	**18 52 16.3**	**+1.9**
EDRB	**Edirne**	**2.99**	**11**	*e*Pn	**Pn**	**18 52 16.3**	**+1.9**
CTKS	**Kestanelik-??a**	**3.02**	**39**	*e*PN	**Pn**	**18 52 19.0**	**+4.1**
CTKS	**Kestanelik-??a**	**3.02**	**39**	*e*Pn	**Pn**	**18 52 19.0**	**+4.1**
GUR	**Goura**	**3.02**	**252**	*e*PN	**Pn**	**18 52 15.1**	**+0.2**
GUR	**Goura**	**3.02**	**252**	*e*Pn	**Pn**	**18 52 15.1**	**+0.2**
VLI	**Veliai**	**3.26**	**229**	*e*Pn	**Pn**	**18 52 17.6**	**-0.6**
VLI	**Veliai**	**3.26**	**229**	*e*PN	**Pn**	**18 52 17.6**	**-0.6**
VLI	**Veliai**	**3.26**	**229**	*e*Pn	**Pn**	**18 52 17.6**	**-0.6**

*IDC **04** 19:14:45.4±1.1, 6°.22N×124°.08E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.5/23, mbtmp3.7/5, Error ellipse: s-maj=20.9km s-min=15.0km az=136.0*
*MAN **04** 19:14:47, 6°.21N×124°.07E, h35km, mb4.9, ML3.8, MS3.9*
*ISCJB **04** 19:14:47.7±1.5, 6°.27N±0°.05×123°.92E±0°.06, h25km±12km, mb3.6/5, Error ellipse: s-maj=10.8km s-min=7.0km az=156.5*
ISC 04 19:14:46.7±1.3, 6°.31N±0°.04×123°.93E±0°.05, h6km±8km, n13, σ1§38/20, mb3.6/5, 3C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.96**	**19**	⇑*i* P	**Pg**	**19 15 04.0**	**-1.1**
CTBH				*i* S	**Sg**	**19 15 15.8**	**-1.8**
GSPH	**General Santos**	**1.04**	**102**	⇑*i* P	**Pg**	**19 15 07.5**	**+0.9**
GSPH				*i* S	**Sg**	**19 15 21.9**	**+1.7**
KCP	**Kidapawan**	**1.34**	**59**	⇑*i* P	**Pn**	**19 15 13.8**	**+1.7**
KCP				*i* S	**Sb**	**19 15 31.2**	**+1.4**
PAGZ	**Pagadian**	**1.62**	**340**	*e*P	**Pn**	**19 15 16.8**	**+1.0**
PAGZ				*e*S	**Sn**	**19 15 36.2**	**-0.8**
DAV	**Davao City (W)**	**1.80**	**65**	Pn	**Pn**	**19 15 17.2**	**-1.1**
	71nm,0.3s,baz=259,slow=2.0,SNR=3.7						
DAV				Lg		19 15 39.5	
	60nm,0.3s,baz=26,slow=23,SNR=14						
BUKP	**Musuan**	**1.92**	**36**	*e*P	**Pn**	**19 15 19.0**	**-0.9**
BUKP				*e*S	**Sn**	**19 15 42.1**	**-2.4**
IPIL	**Ipil**	**1.99**	**317**	*e*P	**Pn**	**19 15 22.8**	**+1.8**
IPIL				*e*S	**Sn**	**19 15 47.6**	**+1.4**
CGP	**Cagayan de Oro**	**2.26**	**20**	*e*P	**Pn**	**19 15 23.9**	**-0.8**
CGP				*i* S	**Sn**	**19 15 54.7**	**+1.9**
FITZ	**Fitzroy Crossi**	**24.32**	**176**	P	**P**	**19 20 04.4**	**-0.9**
	1.0nm,0.4s,mb3.6,baz=348,slow=9.3,SNR=4.4						
ASAR	**Alice Springs**	**31.35**	**162**	P	**P**	**19 21 06.3**	**-1.9**
	0.4nm,0.4s,mb3.6,baz=344,slow=7.7,SNR=21						
STKA	**Stephens Creek**	**41.55**	**157**	P	**P**	**19 22 33.6**	**-1.6**
	2.1nm,0.6s,mb3.9,baz=340,slow=9.2,SNR=5.2						
MKAR	**Makanchi Array**	**53.86**	**326**	P	**P**	**19 24 11.5**	**+0.9**
	0.4nm,0.4s,mb3.7,baz=117,slow=8.8,SNR=3.9						
KURK	**Kurchatov**	**58.08**	**328**	P	**P**	**19 24 41.3**	**+0.6**
	0.1nm,0.3s,mb3.3,baz=125,slow=6.7,SNR=2.8						

*ISCJB **04** 19:15:52.9±0.4, 31°.94N±0°.04×104°.93E±0°.05, h10km, mb3.7/8, Error ellipse: s-maj=6.1km s-min=5.0km az=20.1*
*IDC **04** 19:15:53.2±1.1, 31°.99N×104°.67E, h0km, mb3.6/5, mb1 3.5/8, mb1mx3.4/28, mbtmp3.4/8, ML2.9/3, Error ellipse: s-maj=34.2km s-min=20.6km az=58.0*
*BJI **04** 19:15:53.0, 31°.97N×104°.98E, h10km, mB4.6/1, mb3.9/1, ML3.6/11, Ms3.5/4, Ms7 3.3/4*
*NEIC **04** 19:15:54.4±0.6, 31°.96N×104°.89E, h10km, mb4.1/3, Error ellipse: s-maj=17.0km s-min=10.0km az=63.0*
ISC 04 19:15:54.6±0.4, 31°.97N±0°.03×104°.86E±0°.05, h10km, n21, σ1§16/27, mb3.7/8, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.42**	**222**	⇑*i* Pg	**Pg**	**19 16 20.6**	**-1.2**
CD2				Sg	**Sg**	**19 16 40.9**	**+0.7**
CD2				smax			
	comp=N,3μm,0.8s						
CD2				smax			
	comp=E,3μm,0.6s						
XAN	**Xi'an**	**3.99**	**58**	Pn	**Pn**	**19 16 57.8**	**+2.0**
XAN				Sn	**Sn**	**19 17 51.0**	**+8.4**
XAN				smax			
	comp=N,98nm,0.7s						
XAN				smax			
	comp=E,49nm,0.8s						
LZH	**Lanzhou**	**4.19**	**349**	Pn	**Pn**	**19 16 59.8**	**+1.2**
LZH				Pg	**Pg**	**19 17 12.2**	**-2.7**
LZH				Sn	**Sn**	**19 17 49.1**	**+1.5**
LZH				Sg	**Sg**	**19 18 05.8**	**-3.4**
LZH				smax			
	comp=N,170nm,0.8s						
LZH				smax			
	comp=E,180nm,0.9s						
LZH				LR	LR		
	comp=E,570nm,7.5s						
LZH				LR	LR		
	comp=Z,640nm,8.4s						
ENH	**Enshi**	**4.32**	**112**	*e*Pn	**Pn**	**19 16 58.0**	**-2.3**
GYA	**Guiyang**	**5.71**	**164**	Pn	**Pn**	**19 17 19.8**	**+0.2**
KMI	**Kunming**	**7.07**	**196**	Pn	**Pb**	**19 17 48.5**	**-9.1**
KMI				Sn	**Sn**	**19 19 02.8**	**+4.1**
KMI				smax			
	comp=N,11nm,0.7s						
KMI				smax			
	comp=E,13nm,0.9s						
KMI				LR	LR		
	comp=N,140nm,5.8s						
KMI				LR	LR		
	comp=E,150nm,5.3s						
KMI				LR	LR		
	comp=Z,180nm,6.9s						
WHN	**Wuhan**	**8.25**	**97**	P	**Pn**	**19 17 54.1**	**-0.2**
WHN				S	**Sn**	**19 19 26.7**	**-0.9**
GTA	**Gaotai**	**8.48**	**332**	*e*P	Px	19 18 34.6	
GTA				pP		19 18 40.1	
GTA				sP		19 18 43.0	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**14.48**	**203**	Pn	**Pn**	**19 19 18.9**	**-0.7**
	comp=Z,0.0nm,0.3s,baz=14,slow=9.8,SNR=2.7						
SONM	**Songino Array**	**15.89**	**4**	Pn	**Pn**	**19 19 38.2**	**0.0**
	comp=Z,0.1nm,0.3s,baz=186,slow=10,SNR=3.5						
KSRS	**Korea Array**	**19.71**	**68**	P	**Pn**	**19 20 26.1**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=262,slow=12,SNR=2.8						
MK31	**Makanchi Array**	**22.77**	**317**	*e*P	**P**	**19 20 56.6**	**-0.4**
MKAR	**Makanchi Array**	**22.77**	**317**	P	**P**	**19 20 56.6**	**-0.4**
	comp=Z,0.4nm,0.4s,mb3.2,baz=112,slow=9.6,SNR=7.9						
ZAA0	**Zalesovo Array**	**26.23**	**333**	*e*P	**P**	**19 21 29.6**	**0.0**
ZALV	**Zalesovo Beam**	**26.23**	**333**	P	**P**	**19 21 28.5**	**-1.1**
	comp=Z,2.2nm,0.6s,mb3.9,baz=134,slow=11,SNR=12						
KURK	**Kurchatov**	**26.95**	**322**	P	**P**	**19 21 35.1**	**-1.0**
	comp=Z,0.5nm,0.9s,mb3.0,baz=132,slow=8.8,SNR=3.3						
ARU	**Arti**	**40.15**	**321**	*e*P	**P**	**19 23 32.2**	**+1.7**
	comp=Z,3.7nm,0.9s,mb4.1						
TIXI	**Tiksi**	**41.78**	**11**	*e*P	**P**	**19 23 44.9**	**+1.2**
	comp=Z,3.7nm,1.2s,mb3.9						
WRAB	**Tennant Creek**	**58.84**	**147**	*e*P	**P**	**19 25 54.2**	**+0.7**
	comp=Z,2.5nm,0.8s,mb4.3						
ASAR	**Alice Springs**	**61.90**	**150**	P	**P**	**19 26 15.3**	**+1.0**
	comp=Z,0.4nm,0.6s,mb3.8,baz=333,slow=6.4,SNR=9.4						
YKA	**Yellowknife Ar**	**80.67**	**17**	P	**P**	**19 28 07.5**	**+0.1**
	comp=Z,0.4nm,0.6s,mb3.5,baz=325,slow=7.6,SNR=2.7						

*NEIC **04** 19:24:55.0±2.3, 7°.55S×127°.91E, h146km±25km, mb4.2/3, Error ellipse: s-maj=22.6km s-min=13.5km az=221.0*
*ISCJB **04** 19:24:55.1±2.2, 7°.8S±0°.1×127°.9E±0°.1, h174km±26km, mb3.7/8, Error ellipse: s-maj=21.3km s-min=17.2km az=169.7*
*IDC **04** 19:25:03.7±5.2, 8°.06S×127°.45E, h242km±57km, mb3.4/8, mb1 3.6/10, mb1mx3.4/19, mbtmp3.5/10, MS3.2/1, Ms1 3.2/1, ms1mx2.4/16, Error ellipse: s-maj=48.1km s-min=16.0km az=51.0*
ISC 04 19:24:55.6±2.3, 7°.8S±0°.1×127°.8E±0°.1, h158km±26km, n19, σ0§93/20, mb3.7/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.69**	**138**	*e*P	**Pn**	**19 26 31.4**	**-0.2**
	248nm,0.7s						
KAKA				*e*S	**Sn**	**19 27 40.5**	**-6.5**
FITZ	**Fitzroy Crossi**	**10.48**	**191**	P	**Pn**	**19 27 23.3**	**+1.4**
	3.1nm,0.3s,baz=34,slow=10,SNR=47						
FITZ				S	**Sn**	**19 29 17.0**	**-1.1**
	4.9nm,0.3s,baz=297,slow=23,SNR=10						
WRAB	**Tennant Creek**	**13.65**	**153**	*e*P	**Pn**	**19 28 01.2**	**-1.6**
	12nm,0.8s						
WRAB				*e*S	Sx	19 30 24.0	
MBWA	**Marble Bar**	**15.43**	**210**	*e*P	**Pn**	**19 28 29.9**	**+4.8**
ASAR	**Alice Springs**	**16.85**	**160**	P	**Pn**	**19 28 43.5**	**+1.3**
	2.3nm,0.3s,baz=341,slow=11,SNR=219						
ASAR				S	Sx	19 31 42.2	
	0.6nm,0.3s,baz=323,slow=21,SNR=8.5						
KSM	**Kuching**	**19.73**	**297**	*e*P	**P**	**19 29 13.5**	**+0.2**
	9.4nm,0.6s						
CTA	**Charters Tower**	**21.65**	**126**	P	**P**	**19 29 37.1**	**+3.4**
	4.7nm,1.0s,mb3.9,baz=321,slow=4.8,SNR=3.4						
STKA	**Stephens Creek**	**27.20**	**154**	P	**P**	**19 30 25.2**	**+0.5**
	1.9nm,0.7s,mb3.8,baz=291,slow=11,SNR=5.1						
STKA	**Stephens Creek**	**27.20**	**154**	P	**P**	**19 30 25.2**	**+0.5**
JOW	**Kunigami**	**34.40**	**1**	LR	LR	19 44 30.6	
	2.33nm,18.9s,baz=105,slow=34						
CMAR	**Chiang Mai Arr**	**38.61**	**313**	P	**P**	**19 32 04.3**	**+0.6**
	0.5nm,0.5s,mb3.4,baz=141,slow=7.1,SNR=9.0						
LSA	**Lhasa**	**51.29**	**318**	*e*P	**P**	**19 33 44.3**	**+0.6**
SONM	**Songino Array**	**58.52**	**343**	P	**P**	**19 34 35.0**	**-0.2**
	1.2nm,0.7s,mb3.8,baz=172,slow=6.9,SNR=12						
MKAR	**Makanchi Array**	**67.70**	**328**	P	**P**	**19 35 35.4**	**-0.4**
	0.5nm,0.4s,mb3.6,baz=114,slow=8.4,SNR=6.8						
MKAR	**Makanchi Array**	**67.70**	**328**	P	**P**	**19 35 35.4**	**-0.4**
ZALV	**Zalesovo Beam**	**71.33**	**335**	P	**P**	**19 35 56.9**	**-1.0**
	1.0nm,0.5s,mb3.8,baz=140,slow=6.3,SNR=5.5						
KURK	**Kurchatov**	**72.06**	**330**	P	**P**	**19 36 02.2**	**-0.2**
	0.8nm,0.6s,mb3.6,baz=132,slow=4.9,SNR=4.3						
KURK	**Kurchatov**	**72.06**	**330**	*e*P	**P**	**19 36 01.9**	**-0.4**
	1.2nm,0.8s,mb3.7						
BVAR	**Borovoye Array**	**77.57**	**329**	P	**P**	**19 36 33.6**	**-0.4**
	0.4nm,0.4s,mb3.4,baz=124,slow=9.0,SNR=5.8						

NEIC 04 19:58:42.7, 37°.35S×177°.62E, h115km, MG4.1(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	**White Island**	**0.39**	**242**	P	Pn	19 59 00.0	+0.6
MXZ	**Matakaoa Point**	**0.59**	**112**	P	Pn	19 59 00.6	0.0
MXZ				S	Sn	19 59 15.1	+0.9
PUZ	**Puketiti**	**0.88**	**145**	P	Pn	19 59 03.2	+0.1
MARZ	**Manawahe**	**0.98**	**229**	P	Pn	19 59 04.2	+0.1
MWZ	**Matawai**	**0.99**	**184**	P	Pn	19 59 04.2	+0.1
URZ	**Urewera**	**0.99**	**204**	P	Pn	19 59 03.8	-0.4
TGRZ	**Tauranga**	**1.15**	**250**	P	Pn	19 59 05.9	+0.1
KARZ	**Kaharoa**	**1.28**	**238**	P	Pn	19 59 07.5	+0.2
KNZ	**Kokohu**	**1.67**	**179**	P	Pn	19 59 11.3	-0.5
HATZ	**Hinemaiaia**	**1.96**	**218**	P	Pn	19 59 15.0	-0.3
MKAZ	**Moumakai**	**1.97**	**276**	P	Pn	19 59 16.0	+0.5
BKZ	**Black Stump Fm**	**2.02**	**206**	P	Pn	19 59 15.2	-0.9
NGZ	**Ngauruhoe**	**2.42**	**220**	P	Pn	19 59 21.0	-0.2
TUVZ	**Tukino**	**2.46**	**218**	P	Pn	19 59 21.2	-0.6
HIZ	**Hauiti**	**2.48**	**241**	P	Pn	19 59 22.6	+0.7
FWVZ	**Far West T-bar**	**2.50**	**220**	P	Pn	19 59 22.0	-0.3
MOVZ	**Moawhango**	**2.52**	**215**	P	Pn	19 59 21.2	-1.4
WNVZ	**Wahianoa**	**2.54**	**218**	P	Pn	19 59 21.8	-0.9
TSZ	**Takapari Road**	**3.00**	**205**	P	Pn	19 59 26.5	-2.3
BFZ	**Birch Farm**	**3.50**	**197**	P	Pn	19 59 32.2	-3.1
MRZ	**Mangatainoka R**	**3.67**	**205**	P	Pn	19 59 34.3	-3.4
KIW	**Kapiti Island**	**4.09**	**210**	P	Pn	19 59 39.9	-3.4
MTW	**Mount Morrison**	**4.14**	**203**	P	Pn	19 59 39.9	-4.1
CAW	**Cannon Point**	**4.24**	**207**	P	Pn	19 59 41.6	-3.7
PAWZ	**Paruwai Farm**	**4.37**	**202**	P	Pn	19 59 42.6	-4.4
MSWZ	**Moikau Station**	**4.46**	**204**	P	Pn	19 59 44.1	-4.1
TCW	**Tory Channel**	**4.65**	**213**	P	Pn	19 59 46.6	-4.2
NNZ	**Nelson**	**5.07**	**219**	P	Pn	19 59 52.8	-3.7
BSWZ	**Blackbirch Sta**	**5.23**	**212**	P	Pn	19 59 54.3	-4.3
QRZ	**Quartz Range**	**5.27**	**227**	P	Pn	19 59 55.1	-4.0
THZ	**Tophouse**	**5.72**	**218**	P	Pn	20 00 00.9	-4.3
KHZ	**Kahutara**	**5.96**	**211**	P	Pn	20 00 03.5	-4.9
LTZ	**Lake Taylor**	**6.80**	**215**	P	Pn	20 00 13.9	-5.9
RPZ	**Rata Peaks**	**8.09**	**216**	P	Pn	20 00 31.8	-5.5

*ISCJB **04** 19:58:42.6±0.5, 56°.47S±0°.10×25°.5W±0°.2, h10km, mb4.3/12, MS3.9/6, Error ellipse: s-maj=14.6km s-min=11.2km az=31.1*
*IDC **04** 19:58:43.0±0.6, 56°.46S×25°.54W, h0km, mb4.3/10, mb1 4.3/10, mb1mx4.2/17, mbtmp4.2/10, MS3.9/6, Ms1 3.9/6, ms1mx3.6/19, Error ellipse: s-maj=21.9km s-min=17.3km az=3.0*
*NEIC **04** 19:58:48.3±0.4, 56°.49S×25°.57W, h35km, mb4.6/3, Error ellipse: s-maj=14.6km s-min=10.7km az=186.0*
ISC 04 19:58:44.4±0.5, 56°.49S±0°.09×25°.5W±0°.2, h10km, n30, σ1§12/18, mb4.3/12, MS3.9/6, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**16.03**	**159**	*e*	**Pn**	**20 02 29.5**	**-0.1**
PMSA	**Palmer Station**	**20.34**	**230**	P	**P**	**20 03 21.4**	**+1.0**
	17nm,0.6s,baz=97,slow=5.2,SNR=5.9						
PMSA				LR	LR	20 09 36.1	
	comp=Z,362nm,19.4s,MS3.7,baz=226,slow=32						
MAIT	**Maitri**	**21.34**	**147**	*e*P	**P**	**20 03 27.9**	**-3.3**
USHA	**Ushuaia**	**24.00**	**256**	P	**P**	**20 03 59.1**	**+0.2**
	4.3nm,0.6s,mb4.1,baz=78,slow=8.3,SNR=6.4						
TRQA	**Tornquist**	**30.38**	**292**	*e*P	**P**	**20 04 55.1**	**-1.2**
PLCA	**Paso Flores**	**33.02**	**279**	P	**P**	**20 05 17.7**	**-1.8**
	1.0nm,0.5s,mb4.0,baz=9.1,slow=7.5,SNR=2.9						
PLCA				LR	LR	20 18 12.0	
	comp=Z,212nm,18.5s,MS3.9,baz=287,slow=35						
PLCA	**Paso Flores**	**33.02**	**279**	*e*P	**P**	**20 05 17.9**	**-1.6**
	1.5nm,0.8s,mb4.0						
PLCA				LR	LR	20 18 12.0	
QSPA	**South Pole Qui**	**33.76**	**180**	P	**P**	**20 05 26.4**	**+0.9**
	16nm,0.5s,mb5.2,baz=203,sl

0.2nm710nm77nm,0.9s
BKNI Bangkinang 5.76 113 P **Pn 20 10 58.0 +0.7**
0.4nm730nm53nm,0.8s
PDSI Padang 5.88 127 P **Pn 20 10 59.5 +0.6**
35nm,0.8s
SDSI Sungai Dareh 6.69 122 P **Pn 20 11 10.8 +0.7**
10nm,0.6s
MYKOM Kota Tinggi 8.14 96 P **Pn 20 11 30.6 +0.6**
14nm,1.1s
MNAI Manna 10.00 134 P **Pn 20 11 55.3 -0.2**
280nm,1.3s
MDSI Maura Dua 10.99 130 P **Pn 20 12 08.2 -0.9**
15nm,1.0s
KASI Kota Agung 11.91 133 P **Pn 20 12 19.7 -2.0**
28nm,1.6s
PALK Pallekele 15.68 288 LR LR 20 18 54.7
comp=Z,196nm,18.8s,baz=101,slow=36
STKI Sintang 15.93 99 P **Pn 20 13 21.1 +5.1**
CM31 Chiang Mai Arr 16.05 11 *eP* **P 20 13 20.0 +2.5**
CMAR Chiang Mai Arr 16.05 11 Pn **Pn 20 13 16.1 -1.4**
0.6nm,0.3s,baz=206,slow=13,SNR=10
CMAR LR LR 20 19 27.1
comp=Z,139nm,18.9s,baz=200,slow=37
CHTO Chiang Mai 16.40 11 *eP* **Pn 20 13 20.8 -1.1**
12nm,1.1s
CHTO Chiang Mai 16.40 11 P **Pn 20 13 21.2 -0.7**
12nm,1.1s
SBUM Sibu 16.46 90 P **Pn 20 13 25.7 +2.9**
KKM Kota Kinabalu 20.69 80 P **P 20 14 11.7 -0.1**
14nm,1.2s
MYLDM Lahad Datu 22.84 83 P **P 20 14 35.8 +0.9**
KMI Kunming 23.37 16 P **P 20 14 41.5 +1.2**
KMI PP 20 15 17.0
KMI S **S 20 18 58.6 +7.0**
KMI pmax pmax
comp=Z,8.0nm,1.3s,mb4.0
KMI LR LR
comp=N,280nm,14.3s,MS3.9
KMI LR LR
comp=E,120nm,12.3s,MS3.9
KMI LR LR
comp=Z,240nm,14.3s,MS3.8
LSA Lhasa 27.28 351 *eP* **P 20 15 17.1 +1.2**
comp=Z,12nm,0.8s,mb4.5
LZH Lanzhou 34.13 12 *eP* **P 20 16 15.2 -1.1**
LZH pmax pmax
comp=Z,20nm,1.3s,mb4.9
LZH pmax pmax
comp=Z,89nm,4.8s
SARP Sargodha 36.35 326 P **P 20 16 39.2 +3.7**
GTA Gaotai 36.81 5 P **P 20 16 39.0 -0.2**
GTA pmax pmax
comp=Z,14nm,0.9s,mb4.8
BJI Beijing 41.60 24 P **P 20 17 19.4 +0.1**
BJI pmax pmax
comp=Z,39nm,0.8s,mb5.1
WRAB Tennant Creek 44.02 122 *eP* **P 20 17 38.4 -0.9**
ASAR Alice Springs 45.41 127 P **P 20 17 50.1 -0.2**
comp=Z,0.3nm,0.5s,mb3.4,baz=303,slow=7.8,SNR=11
MKAR Makanchi Array 45.53 347 P **P 20 17 51.6 +0.8**
comp=Z,1.7nm,0.3s,mb4.5,baz=148,slow=7.2,SNR=36
KSRS Korea Array 45.55 36 P **P 20 17 48.6 -2.5**
comp=Z,1.8nm,0.8s,mb4.0,baz=230,slow=9.4,SNR=5.8
SONM Songino Array 45.97 10 P **P 20 17 54.7 +0.4**
comp=Z,5.8nm,0.7s,mb4.6,baz=189,slow=8.9,SNR=42
ULN Ulaanbaatar 46.12 11 *eP* **P 20 17 55.5 0.0**
comp=Z,3.1nm,0.9s,mb4.2
KURK Kurchatov 50.06 346 P **P 20 18 25.6 -0.4**
comp=Z,1.9nm,0.2s,mb4.7,baz=167,slow=6.9,SNR=9.7
KURK Kurchatov 50.06 346 *eP* **P 20 18 25.9 0.0**
MJAR Matsushiro Arr 51.66 44 LR LR 20 42 48.1
comp=Z,84nm,18.6s,MS3.8,baz=235,slow=39
ZAA0 Zalesovo Array 51.95 352 *eP* **P 20 18 40.1 +0.1**
ZALV Zalesovo Beam 51.95 352 P **P 20 18 40.5 +0.4**
comp=Z,6.1nm,0.7s,mb4.7,baz=180,slow=6.7,SNR=32
ZALV Zalesovo Beam 51.95 352 P **P 20 18 40.5 +0.4**
BVAR Borovoye Array 54.45 341 P **P 20 18 58.3 -0.2**
comp=Z,1.7nm,0.7s,mb4.1,baz=143,slow=9.0,SNR=11
BRVK Borovoye 54.51 341 *eP* **P 20 18 59.0 +0.1**
comp=Z,2.7nm,0.7s,mb4.4
AKTK Aktyubinsk 57.30 332 P **P 20 19 15.0 -4.0**
ARU Arti 61.32 338 *eP* **P 20 19 46.4 -0.2**
comp=Z,4.8nm,1.1s,mb4.5
BRTR Keskin Array B 67.08 312 P **P 20 20 29.9 +5.0**
comp=Z,0.6nm,0.9s,mb3.6,baz=116,slow=14,SNR=3.9
TIXI Tiksi 72.06 10 *eP* **P 20 20 53.5 -1.4**
comp=Z,2.4nm,0.7s,mb4.2
FINES FINESS Array B 78.08 333 P **P 20 21 29.4 -0.5**
comp=Z,2.1nm,0.9s,mb4.1,baz=50,slow=3.0,SNR=6.5
ARCES ARCESS Array B 80.72 340 P **P 20 21 44.7 +0.7**
comp=Z,0.9nm,0.5s,mb4.0,baz=97,slow=6.3,SNR=12
ARCES ARCESS Array B 80.72 340 P **P 20 21 44.7 +0.7**
GERES GERESS Array B 82.79 319 P **P 20 21 56.6 +1.1**
comp=Z,0.7nm,0.8s,mb3.8,baz=115,slow=5.0,SNR=7.3

*IDC **04** 20:15:23.2±4.7,36°.32N×71°.43E,h124km±40km,mb3.4/7, mb1 3.6/13,mb1mx3.4/29,mbtmp3.5/13,MS3.0/2, Ms1 3.0/2,ms1mx2.4/29,Error ellipse: s-maj=32.6km s-min=21.2km az=24.0*
*ISCJB **04** 20:15:26.8±0.4,36°.65N±0°.03×71°.55E±0°.06,h161km±6km, mb3.5/7,Error ellipse: s-maj=8.4km s-min=4.2km az=162.4*
*NEIC **04** 20:15:27.0±0.6,36°.61N×71°.54E,h147km±7km,mb4.6/9, Error ellipse: s-maj=8.1km s-min=4.8km az=63.0*
*NNC **04** 20:15:33.5±6.6,37°.20N×71°.17E,h183km±67km,mb2.9, mpv3.8,Error ellipse: s-maj=59.2km s-min=37.7km az=27.0*
ISC 04 20:15:27.8±0.5,**36°.64N**±0°.03×**71°.57E**±0°.06,**h156**km±6km, **n59**,σ0♀95/67,**mb3.5**/7,**2C-7D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.82**	**174**	⇑P	**Pn**	**20 16 14.0**	**+0.8**
CEP				S	**Sn**	**20 16 49.0**	**+0.8**
KBL	**Kabul**	**2.93**	**225**	*eP*	**Pn**	**20 16 13.7**	**-0.8**
CHCP	**Chirah Chowk**	**3.28**	**154**	P	**Pn**	**20 16 20.8**	**+1.8**
KSH	**Kashi**	**4.51**	**49**	⇓*i*Pn	**Pn**	**20 16 31.2**	**-3.6**
KSH				Sn	**Sn**	**20 17 14.7**	**-12**
KSH				smax			
comp=N,440nm,0.4s							
KSH				smax			
comp=E,250nm,0.5s							
THN	**Thein Dam**	**5.41**	**140**	*e*PKP	**Pn**	**20 16 47.0**	**+0.2**
THN				*ex*	**Sn**	**20 17 47.0**	**-1.5**
AML	**Almayashu**	**5.73**	**16**	P	**Pn**	**20 16 50.7**	**-0.1**
SNR=149							
AML	**Almayashu**	**5.73**	**16**	*eP*	**Pn**	**20 16 50.7**	**-0.2**
comp=E,102nm,0.4s							
UCH	**Uchtor**	**6.03**	**21**	P	**Pn**	**20 16 54.8**	**0.0**
SNR=60							
UCH	**Uchtor**	**6.03**	**21**	*eP*	**Pn**	**20 16 54.5**	**-0.3**
comp=E,23nm,0.3s							
UCH				*e*S	**Sn**	**20 17 55.4**	**-7.7**
KZA	**Kyzart**	**6.14**	**27**	P	**Pn**	**20 16 56.9**	**+0.6**
SNR=37							
EKS2	**Erkin-Say**	**6.25**	**15**	P	**Pn**	**20 16 59.7**	**+1.9**
SNR=15							
EKS2	**Erkin-Say**	**6.25**	**15**	*eP*	**Pn**	**20 16 57.6**	**-0.2**
comp=E,8.1nm,0.6s							
AAK	**Ala-Archa**	**6.40**	**20**	P	**Pn**	**20 17 01.2**	**+1.4**
SNR=17							
AAK	**Ala-Archa**	**6.40**	**20**	P	**Pn**	**20 17 00.2**	**+0.4**
comp=E,0.1nm,0.3s,baz=158,slow=5.9,SNR=31							
AAK				S	**Sn**	**20 18 09.2**	**-2.7**
comp=E,0.1nm,0.3s,baz=317,slow=23,SNR=20							
KK31	**Karatay Array**	**6.51**	**353**	⇓P	**Pn**	**20 17 00.1**	**-1.1**
comp=E,1.8nm,0.2s							
KK31				⇓S	**Sn**	**20 18 07.4**	**-7.1**
comp=E,35nm,0.5s							
KBK	**Karagaybulak**	**6.55**	**22**	P	**Pn**	**20 17 02.5**	**+0.7**
SNR=6.6							
SDNR	**Sundarnagar**	**6.81**	**137**	*e*PKP	**Pn**	**20 17 04.5**	**-0.8**
SDNR				*e*S	**Sn**	**20 18 17.5**	**-4.3**
CHMS	**Chumysh**	**6.81**	**20**	P	**Pn**	**20 17 06.3**	**+1.1**
SNR=7.7							
USP	**Ospenovka**	**7.00**	**18**	P	**Pn**	**20 17 08.9**	**+1.2**
SNR=6.8							
TKM2	**Tokmak 2**	**7.00**	**25**	⇓P	**Pn**	**20 17 07.8**	**+0.1**
comp=E,5.0nm,0.6s							
TKM2				⇓S	**Sn**	**20 18 26.3**	**+0.1**
comp=E,7.0nm,0.9s							
TKM2	**Tokmak 2**	**7.00**	**25**	P	**Pn**	**20 17 08.2**	**+0.4**
SNR=12							
TKM2	**Tokmak 2**	**7.00**	**25**	*eP*	**Pn**	**20 17 07.8**	**+0.1**
comp=E,6.5nm,0.6s							
KLP	**Kalpa**	**7.53**	**131**	*ex*	x	20 18 10.2	
KLP				*e*S	**Sn**	**20 18 33.7**	**-5.3**
DDI	**Dehra Dun**	**8.31**	**137**	*ex*	**Sn**	**20 18 57.0**	**-0.8**
JOSI	**Joshimath**	**9.01**	**130**	*ex*	x	20 18 06.4	
JOSI				*e*S	**Sn**	**20 19 08.0**	**-6.7**
KHET	**Khetri**	**9.26**	**156**	*e*S	**Sn**	**20 19 12.2**	**-8.5**
AGRA	**Agra**	**10.83**	**148**	*ex*	x	20 19 41.5	
AGRA				AML	AML	20 19 42.5	
comp=N,88nm,0.2s							
AGRA				AML	AML	20 19 42.7	
comp=E,90nm,0.3s							
MKAR	**Makanchi Array**	**12.92**	**35**	P	**Pn**	**20 18 24.7**	**-0.8**
comp=E,0.1nm,0.3s,baz=212,slow=12,SNR=1.9							
KKN	**Kakani**	**14.57**	**123**	*eP*	**Pn**	**20 18 46.2**	**-0.3**
comp=E,11nm,0.3s							
DMN	**Daman**	**14.57**	**124**	*eP*	**Pn**	**20 18 45.8**	**-0.8**
comp=E,18nm,0.6s							
PKIN	**Phulchoki**	**14.78**	**124**	*eP*	**Pn**	**20 18 49.7**	**+0.5**
comp=E,43nm,0.6s							
PKI	**Pulchoki**	**14.80**	**124**	*eP*	**Pn**	**20 18 49.5**	**+0.1**
comp=E,12nm,0.3s							
PKI	**Pulchoki**	**14.80**	**124**	*eP*	**Pn**	**20 18 49.7**	**+0.3**
comp=E,43nm,0.6s							
GUN	**Gumba**	**14.90**	**122**	*eP*	**Pn**	**20 18 49.9**	**-0.7**
comp=E,20nm,0.7s							
KURK	**Kurchatov**	**14.96**	**18**	P	**Pn**	**20 18 50.1**	**-1.0**
comp=E,0.1nm,0.3s,baz=205,slow=9.4,SNR=5.1							
AB31	**Akbulak array**	**15.19**	**330**	P	**Pn**	**20 18 53.4**	**-0.6**
comp=E,2.1nm,0.6s,baz=146,slow=12,SNR=28							
AB31				S	**S**	**20 21 29.5**	**-14**
comp=E,1.8nm,0.5s,baz=148,slow=22,SNR=6.2							
ABKAR	**Akbulak array**	**15.19**	**330**	*eP*	**Pn**	**20 18 52.2**	**-1.9**
comp=E,2.6nm,0.5s							
ABKAR				*e*S	**S**	**20 21 24.6**	**-19**
JIRN	**Jiri**	**15.27**	**122**	*eP*	**Pn**	**20 18 55.6**	**+0.4**
comp=E,8.0nm,0.2s							
RAMN	**Ramite**	**16.00**	**123**	*eP*	**Pn**	**20 19 03.6**	**-0.6**
BVAR	**Borovoye Array**	**16.41**	**357**	P	**Pn**	**20 19 10.2**	**+1.3**
comp=E,0.4nm,0.3s,baz=153,slow=9.7,SNR=6.8							
ZRNK	**Zerenda**	**16.41**	**355**	⇓P	**Pn**	**20 19 01.8**	**-7.2**
comp=E,5.4nm,1.2s							
TAPN	**Taplejung**	**16.51**	**120**	*eP*	**Pn**	**20 19 11.1**	**+0.7**
ODAN	**Odare**	**16.60**	**121**	*eP*	**Pn**	**20 19 12.3**	**+0.8**
AKTO	**Aktyubinsk**	**16.89**	**329**	⇓P	**Pn**	**20 19 13.4**	**-1.4**
comp=E,0.5nm,0.7s							
AKTO				⇑S	**S**	**20 22 13.8**	**-8.5**
comp=E,0.3nm,0.7s							
AKTO	**Aktyubinsk**	**16.89**	**329**	P	**Pn**	**20 19 15.0**	**+0.2**
comp=E,0.6nm,0.3s,baz=136,slow=9.9,SNR=15							
LSA	**Lhasa**	**17.78**	**107**	*eP*	**Pn**	**20 19 26.0**	**+0.4**
ZAA0	**Zalesovo Array**	**19.61**	**24**	*eP*	**P**	**20 19 44.8**	**+1.0**
ZALV	**Zalesovo Beam**	**19.61**	**24**	P	**P**	**20 19 44.4**	**+0.7**
comp=E,1.2nm,0.3s,baz=209,slow=11,SNR=13							
GNI	**Garni**	**21.29**	**288**	LR	LR	20 29 40.9	
comp=E,24nm,21.6s,baz=90,slow=40							
FINES	**FINESS Array B**	**37.63**	**326**	P	**P**	**20 22 27.4**	**+0.3**
comp=E,0.8nm,0.3s,mb3.8,baz=115,slow=9.1,SNR=9.1							
FINES	**FINESS Array B**	**37.63**	**326**	P	**P**	**20 22 27.4**	**+0.3**
ARCES	**ARCESS Array B**	**41.19**	**337**	P	**P**	**20 22 57.5**	**+1.0**
comp=E,0.9nm,0.5s,mb3.7,baz=110,slow=9.2,SNR=7.0							
GERES	**GERESS Array B**	**43.22**	**305**	P	**P**	**20 23 13.5**	**+0.3**
comp=E,0.1nm,0.3s,mb2.9,baz=63,slow=4.8,SNR=3.1							
NB2	**NORSAR Subarra**	**44.55**	**323**	P	**P**	**20 23 23.5**	**-0.1**
comp=Z,1.2nm,0.4s,mb3.9,baz=96,slow=7.9							
NOA	**NORSAR Array B**	**44.55**	**323**	P	**P**	**20 23 23.9**	**+0.3**
comp=Z,1.4nm,0.5s,mb3.9,baz=96,slow=7.7,SNR=8.2							
JOW	**Kunigami**	**48.60**	**85**	LR	LR	20 48 24.9	
comp=Z,32nm,20.5s,baz=141,slow=41							
TORD	**Torodi Ar. Bea**	**66.17**	**269**	P	**P**	**20 25 55.8**	**-3.0**
comp=Z,0.5nm,0.4s,mb3.7,baz=54,slow=6.2,SNR=8.0							
YKA	**Yellowknife Ar**	**81.09**	**3**	P	**P**	**20 27 25.1**	**+0.1**
comp=Z,0.3nm,0.5s,mb3.2,baz=355,slow=5.2,SNR=3.2							
ASAR	**Alice Springs**	**83.96**	**125**	P	**P**	**20 27 40.0**	**-0.4**
comp=Z,0.6nm,0.6s,mb3.5,baz=308,slow=5.1,SNR=13							

DJA 04 20:36:19,0°.62S×122°.68E,h16km,MLv3.8/9,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.43**	**168**	P	Pg	20 36 27.5	-0.2
LUWI				S	Sg	20 36 33.9	+0.4
APSI	**Ampana**	**1.07**	**254**	P	Pb	20 36 38.9	-0.3
APSI				S	Sb	20 36 54.3	+1.4
MRSI	**Marisa**	**1.32**	**326**	P	Pn	20 36 39.8	-3.0
PCI	**Palu**	**2.86**	**264**	P	Pn	20 37 06.0	+2.0
MNI	**Manado**	**2.98**	**46**	P	Pn	20 37 06.3	+0.7
KDI	**Kendari**	**3.32**	**181**	P	Pn	20 37 09.9	-0.4
TTSI	**Tana Toraja**	**3.74**	**230**	P	Pn	20 37 17.0	+0.9
TNTI	**Ternate**	**4.89**	**74**	P	Pn	20 37 34.8	+2.9
NLAI	**Namlea**	**5.13**	**121**	P	Pn	20 37 35.7	+0.5
0.4nm2μm70nm,0.5s							
NLAI				S	Sn	20 38 36.9	+2.8
0.4nm2μm70nm,0.5s							
KAPI	**Kappang**	**5.25**	**214**	P	Pn	20 37 35.9	-1.0

CASC 04 20:51:39.3±0.8,**12°.68N**×**88°.32W,h33**km±5km,**MD3.5, ML2.8,1D,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSM	**San Miguel**	**0.74**	**3**	*eP*	Pn	20 51 54.1	+0.7
VSM				*e*S	Sn	20 52 05.1	+1.5
CNCH	**Conchagua**	**0.76**	**39**	*eP*	Pn	20 51 53.5	-0.2
CNCH				*e*S	Sn	20 52 04.9	+1.0
BLLM	**Bellamira**	**0.76**	**6**	⇓*eP*	Pn	20 51 53.8	+0.1
BLLM				*e*S	Sn	20 52 04.8	+0.8
SNVI	**San Vicente**	**1.05**	**331**	*eP*	Pn	20 51 57.2	-0.5
SNVI				*e*S	Sn	20 52 12.2	+0.9
CAHU	**Cacacuatique**	**1.08**	**6**	*eP*	Pn	20 51 58.8	+0.6
CAHU				*e*S	Sn	20 52 13.6	+1.5
LFRS	**El Faro**	**1.18**	**322**	*eP*	Pn	20 51 59.7	+0.2
LFRS				*e*S	Sn	20 52 15.2	+0.8
LBRS	**Las Brisas**	**1.26**	**326**	*eP*	Pn	20 52 00.8	+0.2
LBRS				*e*S	Sn	20 52 17.6	+1.1
BOQS	**Boqueron**	**1.40**	**318**	*eP*	Pn	20 52 02.9	+0.3
BOQS				*e*S	Sn	20 52 21.4	+1.5
TEL3	**Telica 3**	**1.44**	**94**	*eP*	Pn	20 52 03.2	+0.1
CNGN	**Cerro Negro**	**1.59**	**96**	*eP*	Pn	20 52 05.0	-0.2
CNGN				*e*S	Sn	20 52 25.8	+1.2
CNGN				AML	AML	20 52 30.8	
comp=E,120nm,0.1s							
SBLS	**San Blas**	**1.71**	**312**	*eP*	Pn	20 52 07.2	+0.3
SBLS				*e*S	Sn	20 52 28.8	+1.2
MOMN	**Momotombo**	**1.76**	**99**	*eP*	Pn	20 52 07.5	0.0
MOMN				*e*S	Sn	20 52 29.7	+1.0
RTR	**El Retiro**	**1.77**	**313**	*eP*	Pn	20 52 07.8	+0.2
RTR				*e*S	Sn	20 52 30.7	+1.8
CSAN		**1.92**	**105**	*eP*	Pn	20 52 09.8	+0.2
RBDL	**Robledal**	**1.95**	**317**	*eP*	Pn	20 52 10.6	+0.5
APYN	**Apoyeque**	**1.98**	**103**	*eP*	Pn	20 52 10.5	+0.1
HUEN		**2.12**	**99**	*eP*	Pn	20 52 12.2	-0.3

*MAN **04** 20:58:17,13°.06N×120°.56E,h13km,mb4.7,ML3.6,MS3.5*
*ISCJB **04** 20:58:17.9±0.5,13°.09N±0°.03×120°.44E±0°.05,h50km±6km, mb3.8/9,Error ellipse: s-maj=8.3km s-min=5.7km az=176.5*
*NEIC **04** 20:58:21.4±1.2,13°.30N×120°.94E,h71km±12km,mb4.1/3, Error ellipse: s-maj=28.4km s-min=11.3km az=62.0*
*IDC **04** 20:58:21.7±1.6,13°.23N×120°.89E,h76km±16km,mb3.3/6, mb1 3.4/6,mb1mx3.2/22,mbtmp3.3/6,MS3.1/1,Ms1 3.1/1, ms1mx2.6/16,Error ellipse: s-maj=45.6km s-min=18.5km az=66.0*
ISC 04 20:58:18.8±0.6,**13°.09N**±0°.03×**120°.45E**±0°.05,**h39**km±8km, **n25**,σ1♀23/31,**mb3.8**/9,**2D,Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.67**	**343**	*eP*	**Pn**	**20 58 30.4**	**-1.4**
LUBP				*e*S	**Sn**	**20 58 40.0**	**-1.2**
SJMP	**San Jose**	**0.90**	**134**	*eP*	**Pn**	**20 58 33.8**	**-1.1**
SJMP				*e*S	**Sn**	**20 58 45.7**	**-1.1**
BUSP	**Coron**	**1.10**	**193**	*eP*	**Pn**	**20 58 38.6**	**+0.8**
BUSP				*e*S	**Sn**	**20 58 54.5**	**+2.8**
TGY	**Tagaytay City**	**1.11**	**25**	P	**Pn**	**20 58 37.6**	**-0.3**
1μm,0.3s,baz=208,slow=3.2,SNR=110							
TGY				S	**Sn**	**20 58 53.0**	**+0.9**
542nm,0.3s,baz=165,slow=23,SNR=14							
TGY	**Tagaytay City**	**1.11**	**25**	*eP*	**Pn**	**20 58 37.1**	**-0.8**
TGY				*i* S	**Sn**	**20 58 54.0**	**+2.0**
BOAC	**Boac**	**1.41**	**75**	*eP*	**Pn**	**20 58 40.2**	**-1.7**
BOAC				*e*S	**Sn**	**20 58 59.0**	**-0.2**
OTRP	**Odiongan**	**1.69**	**115**	*eP*	**Pn**	**20 58 45.0**	**-0.9**
GQP	**Guinayangan**	**2.10**	**67**	⇓*eP*	**Pn**	**20 58 51.0**	**-0.5**
GQP				*i* S	**Sn**	**20 59 19.5**	**+3.1**
ENPP	**El Nido**	**2.12**	**208**	*eP*	**Pn**	**20 58 52.1**	**+0.3**
AUQP	**San Andres**	**2.18**	**84**	*eP*	**Pn**	**20 58 54.8**	**+2.3**
POLP	**Polilio Island**	**2.18**	**41**	*eP*	**Pn**	**20 58 54.0**	**+1.5**
CUYO	**Cuyo Island**	**2.29**	**166**	*eP*	**Pn**	**20 58 53.5**	**-0.6**
PCPH	**Palayan**	**2.54**	**14**	⇓*eP*	**Pn**	**20 58 56.4**	**-1.0**
BALP	**Baler**	**2.85**	**22**	*eP*	**Pn**	**20 59 02.8**	**+1.0**
CAUP	**Cauayan**	**4.06**	**19**	*eP*	**Pn**	**20 59 21.1**	**+2.8**
KAPI	**Kappang**	**18.00**	**182**	LR	LR	21 11 12.9	
comp=Z,53nm,19.4s,baz=53,slow=42							
CMAR	**Chiang Mai Arr**	**21.37**	**287**	P	**P**	**21 03 07.2**	**+4.2**
0.4nm,0.8s,mb2.8,baz=97,slow=7.4,SNR=3.7							
WRAB	**Tennant Creek**	**35.55**	**157**	*eP*	**P**	**21 05 12.4**	**0.0**
1.3nm,0.7s,mb4.0							
SONM	**Songino Array**	**36.58**	**344**	P	**P**	**21 05 19.7**	**-1.2**
0.7nm,0.7s,mb3.6,baz=158,slow=9.2,SNR=7.1							
ASAR	**Alice Springs**	**38.83**	**160**	P	**P**	**21 05 39.6**	**-0.5**
0.8nm,0.6s,mb3.7,baz=339,slow=7.4,SNR=19							
MKAR	**Makanchi Array**	**46.38**	**324**	P	**P**	**21 06 42.0**	**+0.8**
1.2nm,0.7s,mb3.9,baz=112,slow=9.3,SNR=11							
ZALV	**Zalesovo Beam**	**49.49**	**333**	P	**P**	**21 07 03.6**	**-1.6**
0.5nm,0.4s,mb3.9,baz=122,slow=6.8,SNR=4.4							
KURK	**Kurchatov**	**50.56**	**327**	*eP*	**P**	**21 07 14.0**	**+0.7**
10nm,0.9s,mb4.8							
BVAR	**Borovoye Array**	**56.14**	**326**	P	**P**	**21 07 54.6**	**+0.3**
0.3nm,0.4s,mb3.7,baz=132,slow=8.0,SNR=3.3							
ABKAR	**Akbulak array**	**61.04**	**319**	*eP*	**P**	**21 08 28.8**	**+0.4**
1.0nm,0.8s,mb4.0							

*NEIC **04** 21:16:50.6±0.6,40°.78N×116°.17W,h0km,ML2.5,Error ellipse: s-maj=8.4km s-min=6.0km az=184.0,Suspected Mining explosion.*
NEIC 35 km [20 miles] W of Elko.
*ISCJB **04** 21:16:51.2±0.3,40°.72N±0°.02×116°.17W±0°.02,h0km,Error ellipse: s-maj=2.6km s-min=2.3km az=150.4*
ISC 04 21:16:51.8±0.3,**40°.74N**±0°.02×**116°.20W**±0°.02,**h0**km,**n54**, σ1♀16/91,**24C-27D,Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
N10A	**Dunphy**	**0.24**	**265**	⇓P	**Pg**	**21 16 56.4**	**+0.1**
baz=0.3							
N11A	**Elko Archery C**	**0.36**	**78**	⇓P	**Pg**	**21 16 59.1**	**+0.5**
baz=0.3,SNR=9.9							
N11A				⇓S	**Sg**	**21 17 05.3**	**+2.0**
baz=0.3							
O10A	**Cortez Mining,**	**0.51**	**208**	⇓P	**Pg**	**21 17 02.3**	**+0.8**
baz=0.5,SNR=28							
O10A				⇓S	**Sg**	**21 17 10.2**	**+2.2**
baz=0.5							
ELK	**Elko**	**0.73**	**89**	*eP*	**Pg**	**21 17 04.6**	**-1.1**
ELK				*e*S	**Sg**	**21 17 15.9**	**+0.8**
M11A	**Holland Ranch,**	**0.75**	**24**	⇓P	**Pg**	**21 17 06.5**	**+0.2**
baz=0.7,SNR=16							
M11A				⇑S	**Sg**	**21 17 17.2**	**+1.2**
baz=0.7							
M10A	**I.L. Ranch, Tu**	**0.82**	**342**	⇑P	**Pg**	**21 17 07.4**	**-0.2**
baz=0.8,SNR=82							
BMN	**Battle Mountai**	**0.84**	**249**	*eP*	**Pg**	**21 17 08.0**	**+0.1**
BMN				*e*S	**Sg**	**21 17 22.5**	**+3.7**
N12A	**Clover Valley,**	**0.89**	**82**	*eP*	**Pg**	**21 17 08.8**	**+0.1**
N12A				*e*S	**Sg**	**21 17 23.4**	**+3.3**
N12A	**Clover Valley,**	**0.89**	**82**	⇑P	**Pg**	**21 17 08.7**	**0.0**
baz=0.9,SNR=27							
N12A				⇑S	**Sg**	**21 17 21.4**	**+1.2**
baz=0.9							
P10A	**Eureka**	**1.14**	**191**	⇓P	**Pg**	**21 17 14.4**	**+0.8**
baz=1.2							
M12A	**Wells**	**1.18**	**55**	⇑P	**Pg**	**21 17 14.0**	**-0.4**
baz=1.1,SNR=12							
M12A				⇓S	**Sg**	**21 17 30.4**	**+0.8**
baz=1.1							
O12A	**Currie**	**1.20**	**113**	P	**Pg**	**21 17 15.3**	**+0.5**
baz=1.2,SNR=50							
P11A	**Circle Ranch,**	**1.23**	**164**	⇑P	**Pg**	**21 17 16.1**	**+0.7**
baz=1.3							
L10A	**Juniper Basin**	**1.35**	**351**	⇑P	**Pg**	**21 17 16.5**	**-1.2**
baz=1.3,SNR=15							
L10A				⇓S	**Sg**	**21 17 35.0**	**-0.2**
baz=1.3							
L11A	**Cat Creek Ranc**	**1.46**	**13**	⇓P	**Pn**	**21 17 18.4**	**-1.1**
baz=1.4,SNR=108							
L11A				⇓S	**Sg**	**21 17 37.8**	**-1.0**
baz=1.4							
N13A	**Wendover, West**	**1.52**	**85**	*e*Pn	**Pn**	**21 17 19.0**	**-1.1**
N13A				*e*S	**Sg**	**21 17 39.5**	**-0.9**
N13A	**Wendover, West**	**1.52**	**85**	⇑P	**Pn**	**21 17 19.1**	**-1.0**
baz=1.5							
N13A				⇓S	**Sg**	**21 17 39.8**	**-0.6**
baz=1.5							
P12A	**McGill**	**1.60**	**142**	⇑P	**Pn**	**21 17 20.9**	**-0.5**
baz=1.6,SNR=34							
M13A	**Montello**	**1.66**	**67**	*e*Pn	**Pn**	**21 17 21.0**	**-1.1**
M13A				*e*S	**Sn**	**21 17 44.7**	**+0.7**
M13A	**Montello**	**1.66**	**67**	⇓P	**Pn**	**21 17 21.1**	**-1.0**
baz=1.6							
L12A	**House Creek Ra**	**1.66**	**32**	⇑P	**Pn**	**21 17 21.6**	**-0.5**
baz=1.6							
L12A				⇑S	**Sn**	**21 17 43.6**	**-0.5**
baz=1.6							
K11A	**Parker Ranch,**	**2.03**	**3**	⇑P	**Pn**	**21 17 26.9**	**-0.3**
baz=2.0							
K11A				⇑Sb	**Sb**

NLU	**North Lily Min**	**3.25**	**103**	Pn		**Pn**	**21 17 43.0**	**-0.9**
NLU				*e*S		**Sg**	**21 18 36.3**	**+0.3**
MOD	**Modoc**	**3.31**	**292**	*e*Pn		**Pn**	**21 17 44.7**	**0.0**
MOD				S		**Sg**	**21 18 51.4**	**+13**
I09A	**Lost Marbles R**	**3.43**	**341**	⇓Sb		**Sb**	**21 18 37.5**	**+2.0**
baz=3.4								
I13A	**Wildhorse Cree**	**3.53**	**25**	⇓Sb		**Sb**	**21 18 39.6**	**+1.2**
baz=3.5								
HWUT	**Hardware Ranch**	**3.60**	**75**	*e*Pn		**Pn**	**21 17 46.4**	**-2.4**
DAU	**Daniels Canyon**	**3.77**	**93**	*e*Pn		**Pn**	**21 17 50.4**	**-0.8**
DAU				*e*Pg		**Pg**	**21 18 06.6**	**+2.4**
DAU				*e*S		**Sg**	**21 18 52.5**	**-0.6**
MSU	**Marysvale**	**3.82**	**124**	Pn		**Pn**	**21 17 49.6**	**-2.2**
MSU				*e*S		**Sg**	**21 18 57.3**	**+2.9**
CCUT	**Cedar City**	**3.87**	**144**	*e*Pn		**Pn**	**21 17 50.2**	**-2.4**
CCUT				Sb		**Sb**	**21 18 53.2**	**+4.9**
BMO	**Blue Mountains**	**4.19**	**349**	*e*Pn		**Pn**	**21 17 54.0**	**-2.9**
BMO				*e*S		**Sg**	**21 19 07.1**	**+0.7**
REDW	**Red Top Meadow**	**4.76**	**55**	Pn		**Pn**	**21 18 01.4**	**-3.3**
MCMT	**McKenzie Canyo**	**4.77**	**30**	Pn		**Pn**	**21 18 03.1**	**-1.8**
MCMT				*e*S		**Sg**	**21 19 21.9**	**-3.0**
IMW	**Indian Meadow**	**5.01**	**49**	*e*Pn		**Pn**	**21 18 06.9**	**-1.3**
IMW				Sn		**Sn**	**21 19 05.4**	**-1.4**

*IDC **04** 21:21:37.0±0.9, 30°.95N×103°.35E, h0km, mb3.8/8, mb1 3.9/10, mb1mx3.7/26, mbtmp3.8/10, ML3.3/2, MS3.4/8, Ms1 3.4/8, ms1mx3.0/34, Error ellipse: s-maj=31.8km s-min=16.5km az=59.0*

*BJI **04** 21:21:38.8, 31°.15N×103°.58E, h13km, mB4.5/5, mb4.3/10, ML4.3/20, Ms3.9/12, Ms7 3.8/12*

*NEIC **04** 21:21:40.2±2.0, 30°.97N×103°.38E, h22km±16km, mb4.3/14, Error ellipse: s-maj=7.5km s-min=6.7km az=186.0*

NEIC Felt at Chengdu.

*ISCJB **04** 21:21:40.0±0.6, 31°.01N±0°.05×103°.41E±0°.04, h34km±7km, mb4.0/15, MS3.4/7, Error ellipse: s-maj=9.1km s-min=5.3km az=0.0*

ISC 04 21:21:40.3±0.7, 31°.14N±0°.04×103°.41E±0°.03, h19km±5km, n49, σ1.13/57, mb4.0/15, MS3.4/7, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.37**	**127**	⇑*i*Pg	**Pg**	**21 21 47.8**	**-0.4**
CD2				Sg	**Sg**	**21 21 54.1**	**+0.7**
CD2				smax			
comp=N,48μm,0.6s							
CD2				smax			
comp=E,72μm,0.7s							
LZH	**Lanzhou**	**4.95**	**4**	Pg	**Pb**	**21 23 01.0**	**-5.4**
LZH				Sg	**Sg**	**21 24 18.0**	**-1.3**
LZH				smax			
comp=N,350nm,1.0s							
LZH				smax			
comp=E,440nm,1.0s							
LZH				LR	LR		
comp=E,1μm,6.0s							
LZH				LR	LR		
comp=Z,2μm,9.2s							
ENH	**Enshi**	**5.30**	**98**	*e*Pn	**Pn**	**21 22 58.2**	**-0.4**
comp=Z,153nm,0.5s							
ENH				*e*Sn	**Sn**	**21 23 58.5**	**-0.7**
GYA	**Guiyang**	**5.46**	**148**	Pn	**Pn**	**21 23 01.6**	**+0.8**
GYA				Pg	**Pg**	**21 23 18.4**	**-6.6**
GYA				Sn	**Sn**	**21 24 06.5**	**+3.3**
GYA				Sg	**Sg**	**21 24 27.4**	**-8.4**
GYA				smax			
comp=N,400nm,0.7s							
GYA				smax			
comp=E,340nm,0.6s							
XAN	**Xi'an**	**5.48**	**57**	Pn	**Pn**	**21 22 59.5**	**-1.5**
XAN				Sn	**Sn**	**21 24 00.8**	**-2.7**
XAN				Sg	**Sg**	**21 24 26.7**	**-9.5**
XAN				smax			
comp=N,460nm,0.8s							
XAN				smax			
comp=E,180nm,0.6s							
XAN				LR	LR		
comp=N,500nm,10.8s							
XAN				LR	LR		
comp=E,130nm,8.1s							
XAN				LR	LR		
comp=Z,120nm,10.8s							
KMI	**Kunming**	**6.02**	**186**	Pn	**Pn**	**21 23 09.4**	**+1.0**
GTA	**Gaotai**	**8.76**	**341**	*e*P	**Pn**	**21 23 49.6**	**+3.6**
GTA				pP		21 23 53.3	
GTA				sP		21 23 55.5	
GTA				S	**Sn**	**21 25 32.8**	**+8.5**
GTA				sS		21 25 37.9	
GTA				pmax	pmax		
comp=Z,2.0nm,1.4s							
GTA				pmax	pmax		
comp=Z,50nm,3.9s							
GTA				LR	LR		
comp=N,390nm,10.5s							
GTA				LR	LR		
comp=E,320nm,11.6s							
GTA				LR	LR		
comp=Z,340nm,13.7s							
WHN	**Wuhan**	**9.42**	**91**	P	**Pn**	**21 23 54.2**	**-0.9**
WHN				S	**Sn**	**21 25 32.9**	**-7.7**
WHN				LR	LR		
comp=Z,560nm,4.3s							
LSA	**Lhasa**	**10.68**	**265**	*e*P	**Pn**	**21 24 14.5**	**+2.1**
LSA				S	**Sn**	**21 26 26.7**	**+15**
LSA				LR	LR		
comp=N,90nm,8.0s							
LSA				LR	LR		
comp=E,280nm,10.0s							
LSA				LR	LR		
comp=Z,460nm,11.0s							
LSA	**Lhasa**	**10.68**	**265**	*e*Pn	**Pn**	**21 24 13.0**	**+0.6**
comp=Z,3.8nm,0.7s							
SHL	**Shillong**	**11.57**	**244**	*e*PKP	**Pn**	**21 24 29.0**	**+4.5**
NJ2	**Nanjing**	**13.20**	**82**	*e*P	**Pn**	**21 24 48.8**	**+2.0**
NJ2				pP		21 24 52.2	
NJ2				sP		21 24 54.4	
NJ2				PP		21 24 58.0	
NJ2				S	**Sn**	**21 27 16.1**	**+3.0**
NJ2				sS		21 27 21.6	
NJ2				pmax	pmax		
comp=Z,10.0nm,0.6s							
NJ2				pmax	pmax		
comp=Z,40nm,3.6s							
NJ2				LR	LR		
comp=N,220nm,7.8s							
NJ2				LR	LR		
comp=E,190nm,9.8s							
CMAR	**Chiang Mai Arr**	**13.26**	**199**	Pn	**Pn**	**21 24 42.8**	**-4.9**
comp=E,0.0nm,0.3s,baz=8.0,slow=12,SNR=2.9							
TAPN	**Taplejung**	**14.22**	**259**	*e*P	**Pn**	**21 25 00.6**	**-0.1**
comp=E,7.7nm,0.7s							
ODAN	**Odare**	**14.65**	**257**	*e*P	**Pn**	**21 25 06.4**	**-0.2**
comp=E,11nm,0.5s							
RAMN	**Ramite**	**15.28**	**258**	*e*P	**Pn**	**21 25 15.1**	**0.0**
comp=E,14nm,0.9s							
GUN	**Gumba**	**15.60**	**263**	*e*P	**Pn**	**21 25 17.7**	**-1.5**
comp=E,28nm,0.7s							
PKI	**Pulchoki**	**16.09**	**262**	*e*P	**Pn**	**21 25 24.8**	**-0.8**
comp=E,15nm,0.6s							
PKIN	**Phulchoki**	**16.10**	**262**	*e*P	**Pn**	**21 25 24.7**	**-1.0**
comp=E,42nm,0.6s							
KKN	**Kakani**	**16.14**	**263**	*e*P	**Pn**	**21 25 25.0**	**-1.2**
comp=E,22nm,0.7s							
DMN	**Daman**	**16.34**	**262**	*e*P	**Pn**	**21 25 27.8**	**-1.0**
comp=E,30nm,0.8s							
SONM	**Songino Array**	**16.83**	**7**	P	**Pn**	**21 25 36.2**	**+1.3**
comp=E,0.2nm,0.3s,baz=192,slow=12,SNR=11							
SONM				LR	LR	21 33 05.2	
comp=E,49nm,18.7s,baz=5.2,slow=40							
ULN	**Ulaanbaatar**	**16.94**	**8**	*e*Pn	**Pn**	**21 25 38.5**	**+2.3**
comp=E,3.2nm,0.8s							
WMQ	**Urumqi**	**17.73**	**320**	*e*P	**Pn**	**21 25 48.0**	**+1.8**
WMQ				pmax	pmax		
comp=Z,15nm,1.0s							
KSRS	**Korea Array**	**21.18**	**66**	P	**P**	**21 26 24.2**	**-0.4**
comp=Z,7.2nm,0.7s,mb4.1,baz=263,slow=10,SNR=23							
KSRS				LR	LR	21 35 00.2	
comp=Z,57nm,19.2s,MS3.0,baz=250,slow=38							
JOW	**Kunigami**	**22.15**	**95**	LR	LR	21 34 54.7	
comp=Z,320nm,19.4s,MS3.8,baz=172,slow=36							
MKAR	**Makanchi Array**	**22.57**	**320**	P	**P**	**21 26 40.5**	**+1.1**
comp=Z,0.5nm,0.3s,mb3.5,baz=115,slow=12,SNR=9.7							
TKM2	**Tokmak 2**	**25.01**	**306**	*e*P	**P**	**21 27 01.4**	**-1.7**
comp=Z,1.1nm,0.4s,mb3.7							
UCH	**Uchtor**	**25.57**	**304**	*e*P	**P**	**21 27 08.4**	**+0.3**
comp=Z,10nm,1.1s,mb4.3							
AAK	**Ala-Archa**	**25.70**	**305**	LR	LR	21 38 50.0	
comp=Z,194nm,19.0s,MS3.6,baz=291,slow=40							
AAK	**Ala-Archa**	**25.70**	**305**	*e*P	**P**	**21 27 10.4**	**+1.2**
comp=Z,5.6nm,0.8s,mb4.2							
AML	**Almayashu**	**26.13**	**303**	*e*P	**P**	**21 27 14.2**	**+1.1**
comp=Z,6.0nm,1.0s,mb4.1							
EKS2	**Erkin-Say**	**26.21**	**304**	*e*P	**P**	**21 27 13.7**	**-0.2**
comp=Z,7.7nm,1.2s,mb4.1							
ZAA0	**Zalesovo Array**	**26.44**	**335**	*e*P	**P**	**21 27 15.9**	**+0.1**
ZALV	**Zalesovo Beam**	**26.44**	**335**	*e*P	**P**	**21 27 16.3**	**+0.5**
comp=Z,1.8nm,0.7s,mb3.7,baz=138,slow=9.0,SNR=9.9							
ZALV				LR	LR	21 38 30.9	
comp=Z,62nm,21.3s,MS3.1,baz=81,slow=38							
KURK	**Kurchatov**	**26.87**	**324**	P	**P**	**21 27 20.5**	**+0.8**
comp=Z,2.0nm,0.8s,mb3.7,baz=238,slow=5.5,SNR=12							
KURK				LR	LR	21 38 32.2	
comp=Z,107nm,18.2s,MS3.4,baz=120,slow=38							
KURK	**Kurchatov**	**26.87**	**324**	*e*P	**P**	**21 27 20.0**	**+0.3**
comp=Z,6.8nm,1.1s,mb4.1							
KURK				LR	LR	21 38 32.2	
KBL	**Kabul**	**28.99**	**286**	*e*P	**P**	**21 27 38.0**	**-1.0**
MJAR	**Matsushiro Arr**	**29.30**	**70**	LR	LR	21 39 50.1	
comp=Z,59nm,18.3s,MS3.2,baz=95,slow=37							
BVAR	**Borovoye Array**	**32.40**	**322**	P	**P**	**21 28 08.6**	**-0.2**
comp=Z,0.3nm,0.6s,mb3.3,baz=80,slow=10,SNR=3.2							
ARU	**Arti**	**40.04**	**322**	*e*P	**P**	**21 29 14.1**	**+0.1**
comp=Z,2.1nm,0.6s,mb4.0							
TIRR	**Tirgusor**	**58.80**	**306**	P	**P**	**21 31 37.1**	**-0.3**
WRAB	**Tennant Creek**	**58.83**	**146**	*e*P	**P**	**21 31 37.2**	**-0.5**
comp=Z,6.2nm,0.7s,mb4.8							
ASAR	**Alice Springs**	**61.83**	**148**	P	**P**	**21 31 57.6**	**-0.6**
comp=Z,1.0nm,0.8s,mb4.0,baz=340,slow=6.7,SNR=11							
PSZ	**Piszkesteto**	**63.52**	**312**	P	**P**	**21 32 09.7**	**+0.4**
NOA	**NORSAR Array B**	**64.31**	**327**	LR	LR	22 02 44.9	
comp=Z,22nm,18.9s,MS3.4,baz=115,slow=38							
MORC	**Moravsky Berou**	**64.42**	**314**	P	**P**	**21 32 15.1**	**-0.2**
STKA	**Stephens Creek**	**72.36**	**147**	P	**P**	**21 33 03.6**	**-1.4**
comp=Z,1.8nm,0.6s,mb4.2,baz=13,slow=11,SNR=8.7							
YKA	**Yellowknife Ar**	**81.83**	**17**	P	**P**	**21 33 59.6**	**+1.7**
comp=Z,0.6nm,0.7s,mb3.7,baz=332,slow=5.2,SNR=4.4							

*ISCJB **04** 21:25:41.0±0.2, 70°.89N±0°.03×6°.67W±0°.05, h10km, mb4.1/69, MS3.6/28, Error ellipse: s-maj=3.7km s-min=2.5km az=10.4*

*IDC **04** 21:25:40.7±0.6, 70°.87N×7°.18W, h0km, mb3.8/17, mb1 4.1/21, mb1mx4.0/34, mbtmp4.0/21, ML4.0/3, MS3.6/21, Ms1 3.6/21, ms1mx3.5/33, Error ellipse: s-maj=17.1km s-min=9.8km az=21.0*

*BJI **04** 21:25:40.8, 70°.90N×6°.60W, h10km, mB4.6/4, mb4.4/7, Ms4.3/2, Ms7 4.0/2*

*NAO **04** 21:25:40.8±4.6, 70°.87N×6°.66W, h5km±55km, ML3.1*

*MOS **04** 21:25:41.4±1.2, 70°.97N×6°.61W, h10km, mb4.5/33, Error ellipse: s-maj=15.9km s-min=4.2km az=99.6*

*CSEM **04** 21:25:41.0±0.2, 70°.86N×6°.61W, h2km, mb4.3/5, Ms3.1*

*NEIC **04** 21:25:42.9±0.2, 70°.92N×6°.61W, h10km, mb4.3/42, Error ellipse: s-maj=5.1km s-min=3.9km az=205.0*

*BER **04** 21:25:43.7±3.7, 70°.95N×6°.83W, h10km, MD3.3, ML3.8*

*SZGRF **04** 21:25:45.2, 70°.34N×8°.98W, h26km, mb4.2, MS3.5, Jan Mayen Island region*

*REY **04** 21:25:47.8, 70°.55N×7°.96W, h8km, ML3.5, ML3.8*

ISC 04 21:25:42.9±0.2, 70°.87N±0°.02×6°.72W±0°.05, h10km, (h20km±5.6km:pP-P), n346, σ1.21/374, mb4.1/69, MS3.6/28, 10C-6D, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNE	**Jan Mayen East**	**0.53**	**284**	⇑*i*P	**Pg**	**21 25 52.2**	**-1.0**
JNE	**Jan Mayen East**	**0.53**	**284**	⇑*i*P	**Pg**	**21 25 52.2**	**-1.0**
SNR=101							
JNW	**Jan Mayen West**	**0.58**	**287**	⇑*i*P	**Pg**	**21 25 52.8**	**-1.3**
JNW	**Jan Mayen West**	**0.58**	**287**	⇑*i*P	**Pg**	**21 25 52.8**	**-1.3**
SNR=100							
JMIC	**Jan Mayen**	**0.60**	**282**	Pg	**Pg**	**21 25 53.1**	**-1.4**
JMIC				Lg		21 26 00.9	
JMIC	**Jan Mayen**	**0.60**	**282**	⇑*i*P	**Pg**	**21 25 53.0**	**-1.5**
JMIC				*e*S	**Sg**	**21 26 00.7**	**-1.7**
JMIC				AML	AML	21 26 01.6	
comp=Z,23μm,0.3s							
JMIC	**Jan Mayen**	**0.60**	**282**	Pn	**Pg**	**21 25 53.0**	**-1.5**
comp=Z,1μm,0.3s,baz=54,slow=2.3,SNR=3923							
JMIC				Sn	**Sg**	**21 26 00.7**	**-1.6**
comp=Z,8μm,0.3s,baz=131,slow=19,SNR=492							
JMIC	**Jan Mayen**	**0.60**	**282**	Pg	**Pg**	**21 25 53.1**	**-1.4**
JMIC				*e*S	**Sg**	**21 26 00.7**	**-1.7**
comp=Z,23μm,0.3s,SNR=99							
JMIC				Lg		21 26 00.9	
JMI	**Jan Mayen**	**0.67**	**276**	⇓*i*P	**Pg**	**21 25 54.5**	**-1.1**
JMI				*e*S	**Sg**	**21 26 03.3**	**-1.0**
JMI				AML	AML	21 26 05.8	
comp=Z,15μm,0.5s							
JMI	**Jan Mayen**	**0.67**	**276**	⇓*i*P	**Pg**	**21 25 54.5**	**-1.1**
JMI				*e*S	**Sg**	**21 26 03.3**	**-1.0**
JMI	**Jan Mayen**	**0.67**	**276**	⇓*i*P	**Pg**	**21 25 54.5**	**-1.2**
SNR=70							
JMI				*e*S	**Sg**	**21 26 03.3**	**-1.0**
comp=Z,15μm,0.5s,SNR=70							
SCO	**Scoresbysund**	**5.07**	**273**	*i*P	**Pn**	**21 27 00.2**	**+1.4**
SCO				MLR	MLR		
comp=Z,330nm,17.0s							
SCO	**Scoresbysund**	**5.07**	**273**	*i*P	**Pn**	**21 27 00.2**	**+1.4**
SCO							
comp=Z,320nm,17.0s							
SCO	**Scoresbysund**	**5.07**	**273**	*i*P	**Pn**	**21 27 00.2**	**+1.4**
ILEI	**Leirhofn**	**5.72**	**223**	P	**Pn**	**21 27 06.2**	**-1.5**
IGIL	**Gilhagi**	**5.97**	**221**	P	**Pn**	**21 27 11.3**	**+0.2**
IGRI	**Grimsey**	**5.98**	**229**	P	**Pn**	**21 27 11.6**	**+0.4**
IHED	**Heoinshofoi**	**6.18**	**224**	P	**Pn**	**21 27 14.0**	**0.0**
IGRS	**Grimsstaoir**	**6.30**	**218**	P	**Pn**	**21 27 15.0**	**-0.7**
IGRS				S	**Sn**	**21 28 25.4**	**-2.2**
IGRA	**Granastaoir**	**6.38**	**224**	P	**Pn**	**21 27 16.3**	**-0.4**
IKVO	**Krokottuvotn**	**6.40**	**221**	P	**Pn**	**21 27 18.3**	**+1.4**
IREN	**Reynihlio**	**6.46**	**221**	P	**Pn**	**21 27 16.8**	**-1.0**
IHLA	**Hella**	**6.55**	**227**	P	**Pn**	**21 27 17.5**	**-1.5**
IGLU	**Glumsstadir**	**6.70**	**212**	P	**Pn**	**21 27 20.0**	**-1.0**
IGLU				S	**Sn**	**21 28 34.6**	**-2.6**
IADA	**Aoalbol**	**6.75**	**214**	P	**Pn**	**21 27 21.1**	**-0.7**
DAG	**Danmarks Havn**	**6.78**	**336**	⇓*i*P	**Pn**	**21 27 19.1**	**-3.1**
DAG				pmax	pmax		
comp=Z,51nm,0.7s							
DAG	**Danmarks Havn**	**6.78**	**336**	⇓*i*P	**Pn**	**21 27 19.1**	**-3.1**
comp=Z,51nm,0.7s							
IHVA	**Hvannstoosfjol**	**6.86**	**215**	P	**Pn**	**21 27 22.3**	**-1.0**
IMKO	**Mokollar**	**6.93**	**216**	P	**Pn**	**21 27 23.8**	**-0.5**
IVSH	**V-Sauoahnukur**	**6.97**	**214**	P	**Pn**	**21 27 23.7**	**-1.1**
IBRU	**Bruarjokull**	**7.02**	**215**	P	**Pn**	**21 27 24.5**	**-0.9**
LOF	**Lofoten**	**7.61**	**101**	*e*Pn	**Pn**	**21 27 33.1**	**-0.4**
LOF				*e*Sn	**Sn**	**21 28 53.6**	**-6.0**
LOF				AML	AML	21 29 03.4	
comp=Z,63nm,0.5s							
LOF	**Lofoten**	**7.61**	**101**	*e*Pn	**Pn**	**21 27 33.1**	**-0.4**
LOF				*e*Sn	**Sn**	**21 28 53.6**	**-6.0**
LOF	**Lofoten**	**7.61**	**101**	*e*Pn	**Pn**	**21 27 33.1**	**-0.4**
SNR=50							
BORG	**Borgarnes**	**8.24**	**229**	LR	LR	21 30 09.5	
comp=Z,591nm,18.4s,baz=330,slow=33							
STEI	**Steigen**	**8.26**	**100**	*e*Pn	**Pn**	**21 27 40.6**	**-1.9**
STEI				*e*Sn	**Sn**	**21 29 07.7**	**-7.9**
STEI				AML	AML	21 29 14.8	
comp=Z,42nm,0.6s							
KONS	**Konsvik**	**8.42**	**112**	*e*P	**Pn**	**21 27 43.3**	**-1.4**
KONS				*e*S	**Sn**	**21 29 10.9**	**-8.7**
KONS				AML	AML	21 29 16.3	
comp=Z,77nm,0.4s							
BJO1	**Bjornoya**	**8.43**	**53**	*e*Pn	**Pn**	**21 27 45.1**	**+0.3**
BJO1	**Bjornoya**	**8.43**	**53**	*e*Pn	**Pn**	**21 27 45.1**	**+0.3**
BJO	**Bjornoya**	**8.48**	**53**	*e*Pn	**Pn**	**21 27 45.1**	**-0.4**
STOK	**Stokkvaagen**	**8.50**	**113**	*e*P	**Pn**	**21 27 43.8**	**-2.0**
STOK				*e*S	**Sn**	**21 29 12.5**	**-9.0**
STOK	**Stokkvaagen**	**8.50**	**113**	*e*P	**Pn**	**21 27 43.8**	**-2.0**
FLOS	**Flostrand**	**8.60**	**112**	*e*P	**Pn**	**21 27 45.8**	**-1.4**
HSP	**Hornsund**	**8.65**	**35**	*e*P	**Pn**	**21 27 47.2**	**-0.5**
TRO	**Tromso**	**8.74**	**86**	*e*P	**Pn**	**21 27 45.2**	**-3.8**
TRO				*e*S	**Sn**	**21 29 18.9**	**-8.5**
TRO				AML	AML	21 29 27.5	
comp=Z,37nm,0.7s							
TRO	**Tromso**	**8.74**	**86**	*e*Pn	**Pn**	**21 27 45.2**	**-3.8**
TRO				*e*Sn	**Sn**	**21 29 18.9**	**-8.5**
TRO	**Tromso**	**8.74**	**86**	*e*P	**Pn**	**21 27 45.2**	**-3.8**
SNR=47							
MOR8	**Moi Rana**	**9.04**	**111**	*e*P	**Pn**	**21 27 51.6**	**-1.5**
MOR8				*e*Sn	**Sn**	**21 29 30.0**	**-4.9**
MOR8				AML	AML	21 29 36.8	
comp=Z,86nm,0.5s							
MOR8	**Moi Rana**	**9.04**	**111**	*e*P	**Pn**	**21 27 51.6**	**-1.5**
MOR8				*e*S	**Sn**	**21 29 28.1**	**-6.7**
MOR8	**Moi Rana**	**9.04**	**111**	*e*P	**Pn**	**21 27 51.6**	**-1.6**
SNR=47							
KBS	**Kingsbay**	**9.37**	**22**	Pn	**Pn**	**21 27 56.2**	**-1.4**
KBS				Sn	**Sn**	**21 29 37.4**	**-5.4**
KBS	**Kingsbay**	**9.37**	**22**	*c i*P	**Pn**	**21 27 56.4**	**-1.2**
KBS				pmax	pmax		
comp=Z,54nm,0.6s							
KBS	**Kingsbay**	**9.37**	**22**	*e*Pn	**Pn**	**21 27 55.1**	**-2.5**
KBS	**Kingsbay**	**9.37**	**22**	Pn	**Pn**	**21 27 56.2**	**-1.4**
SNR=50							
KBS	**Kingsbay**	**9.37**	**22**	*i* P	**Pn**	**21 27 56.7**	**-0.9**
SNR=47							
SPA0	**Spitsbergen Ar**	**9.48**	**29**	Pn	**Pn**	**21 27 59.0**	**-0.2**
baz=232,slow=10							
SPA0	**Spitsbergen Ar**	**9.48**	**29**	Pn	**Pn**	**21 27 59.0**	**-0.2**
baz=232,slow=10,SNR=50							
SPITS	**Spitsbergen Ar**	**9.48**	**29**	Pn	**Pn**	**21 27 59.4**	**+0.2**
baz=220,slow=16,SNR=262							
SPITS				LR	LR	21 30 57.4	
comp=Z,190nm,18.5s,baz=260,slow=33							
SPITS	**Spitsbergen Ar**	**9.48**	**29**	P	**Pn**	**21 27 59.4**	**+0.2**
NSS	**Namsos**	**9.49**	**123**	*e*P	**Pn**	**21 27 57.3**	**-2.0**
NSS				*e*S	**Sn**	**21 29 34.8**	**-11**
NSS				AML	AML	21 29 44.8	
comp=Z,127nm,0.4s							
NSS	**Namsos**	**9.49**	**123**	*e*P	**Pn**	**21 27 57.3**	**-2.0**
NSS				*e*S	**Sn**	**21 29 34.8**	**-11**
NSS	**Namsos**	**9.49**	**123**	*e*P	**Pn**	**21 27 57.3**	**-2.0**
SNR=47							
SUMG	**Summit**	**10.04**	**295**	*e*P	**Pn**	**21 28 08.2**	**+1.5**
SUMG	**Summit**	**10.04**	**295**	*i* P	**Pn**	**21 28 06.5**	**-0.2**
SUMG	**Summit**	**10.04**	**295**	*i* P	**Pn**	**21 28 06.5**	**-0.2**
SNR=47							
SUMG	**Summit**	**10.04**	**295**	*e*Pn	**Pn**	**21 28 08.2**	**+1.5**
KTK1	**Kautokeino**	**10.39**	**86**	*e*Pn	**Pn**	**21 28 09.9**	**-1.8**
KTK1	**Kautokeino**	**10.39**	**86**	*e*Pn	**Pn**	**21 28 09.9**	**-1.7**
SNR=50							
FOO	**Floro**	**10.42**	**147**	*e*P	**Pn**	**21 28 08.2**	**-3.8**
FOO				*e*S	**Sn**	**21 29 56.5**	**-12**
FOO				AML	AML	21 30 04.9	
comp=Z,42nm,0.5s							
FOO	**Floro**	**10.42**	**147**	*e*P	**Pn**	**21 28 08.2**	**-3.8**
FOO				*e*S	**Sn**	**21 29 56.5**	**-12**
FOO	**Floro**	**10.42**	**147**	*e*P	**Pn**	**21 28 08.2**	**-3.9**
SNR=47							
SUE	**Sulen**	**10.88**	**149**	*e*P	**Pn**	**21 28 15.8**	**-2.5**
SUE				*e*S	**Sn**	**21 30 09.0**	**-11**
SUE				AML	AML	21 30 15.5	
comp=Z,15nm,0.4s							
SUE	**Sulen**	**10.88**	**149**	*e*P	**Pn**	**21 28 15.8**	**-2.5**
SUE				*e*S	**Sn**	**21 30 09.0**	**-11**
SUE	**Sulen**	**10.88**	**149**	*e*P	**Pn**	**21 28 15.8**	**-2.5**
SNR=47							
ARA0	**ARCESS Array S**	**10.93**	**82**	Pn	**Pn**	**21 28 16.5**	**-2.5**
baz=290,slow=12							
ARA0	**ARCESS Array S**	**10.93**	**82**	Pn	**Pn**	**21 28 16.5**	**-2.5**
baz=290,slow=12,SNR=50							
ARCES	**ARCESS Array B**	**10.93**	**82**	Pn	**Pn**	**21 28 17.4**	**-1.5**
comp=Z,3.0nm,0.3s,baz=292,slow=12,SNR=168							
ARCES				Sn	**Sn**	**21 30 14.0**	**-7.1**
comp=Z,0.9nm,0.3s,baz=291,slow=23,SNR=4.2							
ARCES	**ARCESS Array B**	**10.93**	**82**	Pn	**Pn**	**21 28 17.4**	**-1.6**
ARCES				Sn	**Sn**	**21 30 14.0**	**-7.1**
ARCES	**ARCESS Array B**	**10.93**	**82**	P	**Pn**	**21 28 17.4**	**-1.6**
HYA	**Hoyanger**	**11.03**	**146**	*e*P	**Pn**	**21 28 19.1**	**-1.3**
HYA				*e*S	**Sn**	**21 30 14.8**	**-8.8**
HYA				AML	AML	21 30 22.6	
comp=Z,26nm,0.3s							
HYA	**Hoyanger**	**11.03**	**146**	*e*P	**Pn**	**21 28 19.1**	**-1.3**
HYA				*e*S	**Sn**	**21 30 14.8**	**-8.8**
HYA	**Hoyanger**	**11.03**	**146**	*e*P	**Pn**	**21 28 19.1**	**-1.3**
SNR=47							
KEV	**Kevo**	**11.34**	**80**	*e*P	**Pn**	**21 28 22.0**	**-2.5**
KEV				pmax	pmax		
comp=Z,7.0nm,0.4s							
KEV	**Kevo**	**11.34**	**80**	*e*p	**Pn**	**21 28 22.0**	**-2.5**
comp=Z,6.5nm,0.4s							
KEV	**Kevo**	**11.34**	**80**	*e*p	**Pn**	**21 28 22.0**	**-2.5**
comp=Z,6.5nm,0.4s							
KEV	**Kevo**	**11.34**	**80**	*e*P	**Pn**	**21 28 22.0**	**-2.5**
comp=Z,6.5nm,0.4s							
ASK	**Askoy**	**11.49**	**149**	*e*P	**Pn**	**21 28 24.9**	**-1.8**
NB2	**NORSAR Subarra**	**12.21**	**135**	Pn	**Pn**	**21 28 36.8**	**+0.4**
NB2	**NORSAR Subarra**	**12.21**	**135**	P	**Pn**	**21 28 36.8**	**+0.3**
NOA	**NORSAR Array B**	**12.21**	**135**	Pn	**Pn**	**21 28 34.3**	**-2.2**

FINES LR LR 21 34 35.5
FINES FINESS Array B 16.03 110 Pn **Pn 21 29 26.5 -1.5**
VSTU Vaestervik 16.48 132 P **Pn 21 29 32.9 -0.8**
JOF Joensuu 16.61 100 *ep* **Pn 21 29 31.5 -3.9**
comp=Z,3.0nm,0.3s
JOF Joensuu 16.61 100 *ep* **Pn 21 29 31.5 -3.9**
comp=Z,3.0nm,0.3s
ASPU Aespoe 16.71 132 P **Pn 21 29 39.6 +2.9**
OSKU Oskarshamn 16.79 133 P **Pn 21 29 40.8 +3.1**
BYXU Byxelkrok 16.93 131 P **Pn 21 29 40.1 +0.7**
GOTU Gotland 16.97 128 P **Pn 21 29 40.1 +0.1**
BSEG Bad Segeberg 18.60 147 *eP* **Pn 21 30 00.1 0.0**
comp=Z,26nm,1.1s
VSU Vasula 18.61 115*c iP* **Pn 21 30 00.2 +0.1**
VSU pmax pmax
comp=Z,8.0nm,0.6s
VSU Vasula 18.61 115 *i* P **Pn 21 30 00.2 +0.1**
comp=Z,8.0nm,0.6s
WTSB Winterswijk 19.94 155 *eP* **Pn 21 30 15.0 -1.2**
comp=Z,9.7nm,0.5s
WTSB Winterswijk 19.94 155 *eP* **Pn 21 30 15.0 -1.2**
comp=Z,9.7nm,0.5s
NRDL Niedersach Rie 19.95 149 *eP* **Pn 21 30 15.9 -0.3**
comp=Z,6.0nm,0.9s
IZAR Zarasai 20.76 120 *eP* **P 21 30 24.4 +1.1**
IZAR Zarasai 20.76 120 *eP* **P 21 30 24.4 +1.1**
SNR=33
ISAL Salakas 20.88 120 *eP* **P 21 30 24.7 +0.1**
ISAL Salakas 20.88 120 *eP* **P 21 30 24.7 +0.1**
SNR=33
HGN Heimansgroeve 21.00 157 *eP* **P 21 30 26.2 +0.2**
IIGN Ignalina 21.10 120 *eP* **P 21 30 27.0 0.0**
IIGN Ignalina 21.10 120 *eP* **P 21 30 27.0 0.0**
SNR=29
MEM Membach 21.16 157 P **P 21 30 28.9 +1.1**
comp=Z,8.2nm,1.2s,mb3.9
MEM Membach 21.16 157 P **P 21 30 28.9 +1.1**
comp=Z,8.2nm,1.2s,mb3.9
BCLA Clavier 21.26 158 P **P 21 30 32.3 +3.4**
IDID Didziasalis 21.27 120 *eP* **P 21 30 29.1 +0.2**
IDID Didziasalis 21.27 120 *eP* **P 21 30 29.1 +0.2**
SNR=28
SUW Suwalki 21.44 126 *eP* **P 21 30 34.4 +3.7**
SUW pmax pmax
comp=Z,23nm,1.0s,mb4.5
SUW Suwalki 21.44 126 *eP* **P 21 30 34.4 +3.7**
comp=Z,23nm,1.0s,mb4.5
BAIF Baives 21.49 161 *eP* **P 21 30 31.5 +0.2**
comp=Z,24nm,1.1s,mb4.1
BAIF Baives 21.49 161 *eP* **P 21 30 31.5 +0.2**
BAIF pmax pmax
comp=Z,12nm,1.1s,mb4.1
BAIF Baives 21.49 161 *eP* **P 21 30 31.5 +0.2**
comp=Z,12nm,1.1s,mb4.1
BAIF Baives 21.49 161 *eP* **P 21 30 31.5 +0.2**
comp=Z,12nm,1.1s,mb4.1
CLL Collm 21.61 145 *eP* **P 21 30 34.0 +1.5**
comp=Z,12nm,1.4s,mb4.1
CLL Collm 21.61 145 *i* P **P 21 30 33.4 +0.9**
CLL *eS* **S 21 34 38.0 +6.6**
CLL pmax pmax
comp=Z,5.0nm,1.0s,mb3.9
CLL MLR MLR
comp=Z,200nm,14.2s,MS3.7
CLL Collm 21.61 145 *i* P **P 21 30 33.4 +0.9**
comp=Z,5.0nm,1.0s,mb3.9
CLL *i* 21 30 43.0
CLL *eS* **S 21 34 38.0 +6.6**
CLL LR LR
comp=Z,200nm,14.2s,MS3.7
CLL Collm 21.61 145 *i* P **P 21 30 33.4 +0.9**
comp=Z,5.0nm,1.0s,mb3.9
CLL *i* 21 30 43.0
comp=Z,21nm,1.6s
CLL *eS* **S 21 34 38.0 +6.6**
CLL Collm 21.61 145 *i* P **P 21 30 33.4 +0.9**
comp=Z,200nm,14.2s
MOX Moxa 21.99 148 *eP* **P 21 30 37.8 +1.2**
comp=Z,16nm,1.1s,mb4.4
MOX Moxa 21.99 148 *eP* **P 21 30 37.8 +1.2**
MOX pmax pmax
comp=Z,16nm,1.1s,mb4.4
MOX Moxa 21.99 148 *eP* **P 21 30 37.8 +1.2**
comp=Z,16nm,1.1s,mb4.4
BRG Berggiesshubel 22.20 144 *eP* **P 21 30 40.2 +1.4**
comp=Z,3.8nm,1.1s,mb3.7
BRG *e* 21 30 40.2
comp=Z,9.2nm,1.4s
BRG
comp=N,157nm,15.7s
BRG
comp=E,145nm,15.8s
BRG
comp=Z,276nm,15.6s
MNK Minsk 22.30 119 *eP* **P 21 30 40.0 +0.1**
MNK Minsk 22.30 119 *eP* **P 21 30 40.0 +0.1**
MICGM Minsk 22.31 119 *e* **P 21 30 40.0 0.0**
TANN Tannenbergstha 22.36 146 *eP* **P 21 30 41.9 +1.3**
comp=Z,22nm,1.6s,mb4.3
FLN La Foliniere 22.37 169 *eP* **P 21 30 39.7 -1.0**
FLN *e*MLR MLR
comp=Z,249nm,22.0s,MS3.3
FLN La Foliniere 22.37 169 *eP* **P 21 30 39.7 -1.0**
FLN LR LR
comp=Z,250nm,22.0s,MS3.6
FLN La Foliniere 22.37 169 *eP* **P 21 30 39.7 -1.0**
NKC Novy Kostel 22.53 147 *eP* **P 21 30 43.0 +0.6**
NKC *e**PP 21 30 50.0
NKC MLR MLR
comp=Z,300nm,9.6s
NKC Novy Kostel 22.53 147 *eP* **P 21 30 43.0 +0.6**
NKC *e*pP 21 30 50.0
NKC *e*sP sP 21 30 55.1 +8.6
NKC AMS AMS 21 41 40.0
comp=Z,300nm,9.6s
NKC Novy Kostel 22.53 147 *eP* **P 21 30 43.0 +0.6**
LDF La Druitiere 22.57 169 *eP* **P 21 30 43.1 +0.3**
comp=Z,34nm,0.8s,mb4.5
LDF La Druitiere 22.57 169 *eP* **P 21 30 43.1 +0.3**
LDF pmax pmax
comp=Z,17nm,0.8s,mb4.5
LDF La Druitiere 22.57 169 *eP* **P 21 30 43.1 +0.3**
comp=Z,17nm,0.8s,mb4.5
LDF La Druitiere 22.57 169 *eP* **P 21 30 43.1 +0.3**
comp=Z,17nm,0.8s,mb4.5
PVCC Panska Ves 22.65 143 AMS AMS 21 40 40.0
comp=Z,200nm,12.3s
GRR Gorron 22.73 170 *eP* **P 21 30 44.2 -0.2**
GRR Gorron 22.73 170 *eP* **P 21 30 44.2 -0.2**
GRF Grafenberg Arr 22.84 149 *eP* **P 21 30 47.5 +1.9**
comp=Z,21nm,1.4s,mb4.4
GRF *e*pP 21 30 53.8
GRF *e*L 21 40 54.3
comp=Z,175nm,18.0s
GRF Grafenberg Arr 22.84 149 *eP* **P 21 30 47.5 +1.9**
GRF *e**PP 21 30 53.8
GRF pmax pmax
comp=Z,21nm,1.4s,mb4.4
GRF MLR MLR
comp=Z,200nm,18.0s,MS3.6
ROTZ Rotzenmuhle 22.94 147 *eP* **P 21 30 48.2 +1.5**
comp=Z,14nm,1.3s,mb4.2
PRU Pruhonice 23.16 143 *eP* **P 21 30 51.8 +2.7**
PRU *e**PP 21 30 58.8
PRU MLR MLR
comp=Z,200nm,11.2s,MS3.8
PRU Pruhonice 23.16 143 *eP* **P 21 30 51.8 +2.7**
PRU *e*pP 21 30 58.8
PRU *e*sP sP 21 31 04.1 +11
PRU AMS AMS 21 41 40.0
comp=Z,200nm,11.2s
DPC Dobruska-Polom 23.18 140 *eP* **P 21 30 50.0 +0.8**
DPC *e**PP 21 30 57.8
DPC MLR MLR
comp=Z,200nm,14.3s,MS3.7
DPC Dobruska-Polom 23.18 140 *eP* **P 21 30 50.0 +0.8**
DPC *e*pP 21 30 57.8
DPC *e*sP sP 21 31 04.2 +11
DPC AMS AMS 21 41 40.0
comp=Z,200nm,14.3s
DPC Dobruska-Polom 23.18 140 *eP* **P 21 30 50.0 +0.8**
STU Stuttgart 23.41 153 *eP* **P 21 30 53.5 +1.9**
CDF Champ du Feu 23.49 156 *eP* **P 21 30 53.8 +1.3**
comp=Z,18nm,1.1s,mb4.1
CDF Champ du Feu 23.49 156 *eP* **P 21 30 53.8 +1.3**
CDF pmax pmax
comp=Z,9.0nm,1.1s,mb4.1
CDF Champ du Feu 23.49 156 *eP* **P 21 30 53.8 +1.3**
comp=Z,8.9nm,1.1s,mb4.1
WET Wettzell 23.66 147 *eP* **P 21 30 54.5 +0.4**
comp=Z,7.0nm,1.1s,mb4.0
ECH Echery 23.66 156 *eP* **P 21 30 54.6 +0.4**
ECH pmax pmax
comp=Z,21nm,1.5s,mb4.3
ECH Echery 23.66 156 *eP* **P 21 30 54.6 +0.4**
comp=Z,21nm,1.5s,mb4.3
HAU Haudompre 23.77 158 *eP* **P 21 30 55.8 +0.7**
HAU *e*MLR MLR
comp=Z,268nm,21.0s,MS3.4
HAU Haudompre 23.77 158 *eP* **P 21 30 55.8 +0.7**
HAU LR LR
comp=Z,270nm,21.0s,MS3.7
KHC Kasperske Hory 23.80 146 *eP* **P 21 30 57.1 +1.7**
KHC *e**PP 21 31 04.4
KHC MLR MLR
comp=Z,300nm,8.0s
KHC Kasperske Hory 23.80 146 *eP* **P 21 30 57.1 +1.7**
KHC *e*pP 21 31 04.4
KHC *e*sP sP 21 31 09.3 +10
KHC AMS AMS 21 42 30.0
comp=Z,300nm,8.0s
FRB Frobisher Bay 23.82 284 LR LR 21 39 33.0
comp=Z,165nm,19.1s,MS3.5,baz=23,slow=35
MORC Moravsky Berou 23.98 139 *eP* **P 21 30 57.7 +0.7**
comp=Z,1.0nm,0.5s,mb3.5
TREC Trest 24.01 143 *eP* **P 21 30 59.0 +1.7**
TREC MLR MLR
comp=Z,300nm,7.5s
TREC Trest 24.01 143 *eP* **P 21 30 59.0 +1.7**
TREC AMS AMS 21 42 00.0
comp=Z,300nm,7.5s
OKC Ostrava-Krasne 24.06 138 AMS AMS 21 42 20.0
comp=Z,300nm,13.7s
OJC Ojcow 24.07 135 *eP* **P 21 30 58.6 +0.7**
RES Resolute Bay 24.09 319 LR LR 21 39 58.1
comp=Z,251nm,18.3s,MS3.7,baz=297,slow=36
RES Resolute Bay 24.09 319 *eP* **P 21 31 05.3 +7.5**
RES pmax pmax
comp=Z,3.0nm,0.7s,mb3.8
RES Resolute Bay 24.09 319 *eP* **P 21 31 05.3 +7.5**
comp=Z,2.8nm,0.7s,mb3.8
GEC2 GERESS Array S 24.10 146 *eP* **P 21 30 59.8 +1.7**
comp=Z,5.0nm,0.9s,mb3.9
GEC2 GERESS Array S 24.10 146 *eP* **P 21 30 59.8 +1.6**
comp=Z,704nm,0.8s
GERES GERESS Array B 24.10 146 P **P 21 30 59.5 +1.4**
comp=Z,3.5nm,0.8s,mb3.8,baz=345,slow=8.4,SNR=22
GERES LR LR 21 40 38.2
comp=Z,75nm,18.9s,MS3.2,baz=192,slow=37
LOR Lormes 24.21 162 *eP* **P 21 30 59.5 +0.3**
comp=Z,14nm,0.8s,mb4.2
LOR *e*MLR MLR
comp=Z,162nm,22.5s,MS3.1
LOR Lormes 24.21 162 *eP* **P 21 30 59.5 +0.3**
LOR pmax pmax
comp=Z,7.0nm,0.8s,mb4.1
LOR MLR MLR
comp=Z,160nm,22.5s,MS3.5
LOR Lormes 24.21 162 *eP* **P 21 30 59.5 +0.3**
comp=Z,7.2nm,0.8s,mb4.2
LOR LR LR
comp=Z,160nm,22.5s,MS3.5
VRAC Vranov 24.22 141 P **P 21 30 58.0 -1.2**
comp=Z,2.1nm,0.7s,mb3.7,baz=322,slow=9.2,SNR=3.6
VRAC LR LR 21 40 28.2
comp=Z,107nm,19.2s,MS3.3,baz=333,slow=36
FUR Furstenfeldbru 24.32 150 *eP* **P 21 30 59.4 -0.8**
comp=Z,8.0nm,0.6s,mb4.3
SSF Saint Saulge 24.38 163 *eP* **P 21 31 00.6 -0.1**
comp=Z,14nm,0.9s,mb4.1
SSF Saint Saulge 24.38 163 *eP* **P 21 31 00.6 -0.1**
SSF pmax pmax
comp=Z,7.0nm,0.9s,mb4.1
SSF Saint Saulge 24.38 163 *eP* **P 21 31 00.6 -0.1**
comp=Z,7.3nm,0.9s,mb4.1
OBN Obninsk 24.41 108⅊ *eP* **P 21 31 00.7 -0.2**
OBN *e* 21 31 33.6
OBN pmax pmax
comp=Z,15nm,1.7s,mb4.2
OBN MLR MLR
comp=Z,100nm,13.0s,MS3.5
MFF Saint Martin d 24.55 169 *eP* **P 21 31 02.5 +0.3**
comp=Z,25nm,1.1s,mb4.3
MFF Saint Martin d 24.55 169 *eP* **P 21 31 02.5 +0.3**
MFF pmax pmax
comp=Z,13nm,1.1s,mb4.4
MFF Saint Martin d 24.55 169 *eP* **P 21 31 02.5 +0.3**
comp=Z,13nm,1.1s,mb4.4
AVF Avril sur Loir 24.64 163 *eP* **P 21 31 02.9 -0.1**
BGF Bois d'Agland 24.82 164 *eP* **P 21 31 04.9 +0.2**
comp=Z,16nm,0.7s,mb4.4
BGF Bois d'Agland 24.82 164 *eP* **P 21 31 04.9 +0.2**
BGF pmax pmax
comp=Z,8.0nm,0.7s,mb4.4
BGF Bois d'Agland 24.82 164 *eP* **P 21 31 04.9 +0.2**
comp=Z,7.8nm,0.7s,mb4.3
SMF Signal de Mont 24.83 162 *eP* **P 21 31 06.0 +1.2**
NIE Niedzica 24.94 135 *eP* **P 21 31 07.7 +1.9**
RJOB Jochberg 25.00 148 *eP* **P 21 31 08.0 +1.7**
comp=Z,8.0nm,0.9s,mb4.2
TCF Toulx Ste Croi 25.03 165 *eP* **P 21 31 06.6 0.0**
comp=Z,22nm,1.2s,mb4.3
TCF Toulx Ste Croi 25.03 165 *eP* **P 21 31 06.6 0.0**
TCF pmax pmax
comp=Z,11nm,1.2s,mb4.3
TCF Toulx Ste Croi 25.03 165 *eP* **P 21 31 06.6 0.0**
comp=Z,11nm,1.2s,mb4.3
CABF La Chapelle 25.11 159 *eP* **P 21 31 08.2 +0.9**
comp=Z,16nm,0.8s,mb4.3
CABF La Chapelle 25.11 159 *eP* **P 21 31 08.2 +0.9**
CABF pmax pmax
comp=Z,8.0nm,0.8s,mb4.3
CABF La Chapelle 25.11 159 *eP* **P 21 31 08.2 +0.9**
comp=Z,8.3nm,0.8s,mb4.3
STHS Stebnicka Huta 25.16 134 *eP* **P 21 31 06.8 -1.0**
STHS pmax pmax
comp=Z,2.0nm,1.3s,mb3.5
STHS Stebnicka Huta 25.16 134 *eP* **P 21 31 06.8 -1.0**
comp=Z,2.1nm,1.3s,mb3.5
STHS *e* 21 31 16.6
STHS Stebnicka Huta 25.16 134 *eP* **P 21 31 06.8 -1.0**
STHS *e*pP pP 21 31 16.6 +5.8
KWP Kalwaria Pacla 25.32 132 *eP* **P 21 31 09.8 +0.6**
KWP Kalwaria Pacla 25.32 132 *eP* **P 21 31 11.1 +1.9**
KWP pmax pmax
comp=Z,22nm,1.2s,mb4.6
KWP Kalwaria Pacla 25.32 132 *eP* **P 21 31 11.1 +2.0**
comp=Z,22nm,1.2s,mb4.6
DAVOX Dass/Dischmat 25.45 153 P **P 21 31 10.9 +0.4**
comp=Z,2.3nm,0.9s,mb3.7,baz=304,slow=16,SNR=2.4
DAVOX LR LR 21 41 14.9
comp=Z,115nm,20.0s,MS3.4,baz=267,slow=37
VYHS Vyhne 25.48 138 *eP* **P 21 31 12.3 +1.7**
VYHS pmax pmax
comp=Z,2.0nm,1.3s,mb3.5
VYHS Vyhne 25.48 138 *eP* **P 21 31 12.3 +1.7**
comp=Z,2.3nm,1.3s,mb3.5
VYHS Vyhne 25.48 138 *eP* **P 21 31 12.3 +1.7**
KECS Kecovo 25.86 136 *eP* **P 21 31 15.6 +1.5**
KECS pmax pmax
comp=Z,2.0nm,0.9s,mb3.6
KECS Kecovo 25.86 136 *eP* **P 21 31 15.6 +1.5**
comp=Z,2.1nm,0.9s,mb3.7
KECS Kecovo 25.86 136 *eP* **P 21 31 15.6 +1.5**
KOLS Kolonicke sedl 25.86 133 *eP* **P 21 31 16.0 +1.9**
KOLS pmax pmax
comp=Z,4.0nm,1.3s,mb3.8
KOLS Kolonicke sedl 25.86 133 *eP* **P 21 31 16.0 +1.9**
comp=Z,4.0nm,1.3s,mb3.8
KOLS Kolonicke sedl 25.86 133 *eP* **P 21 31 16.0 +1.9**
RJF Les Rejaudoux 25.95 167 *eP* **P 21 31 15.5 +0.5**
comp=Z,22nm,0.9s,mb4.4
RJF *e*MLR MLR
comp=Z,196nm,18.8s,MS3.4
RJF Les Rejaudoux 25.95 167 *eP* **P 21 31 15.5 +0.5**
RJF pmax pmax
comp=Z,11nm,0.9s,mb4.4
RJF MLR MLR
comp=Z,200nm,18.8s,MS3.7
RJF Les Rejaudoux 25.95 167 *eP* **P 21 31 15.5 +0.5**
comp=Z,11nm,0.9s,mb4.4
RJF LR LR
comp=Z,200nm,18.8s,MS3.7
AKASG Malin Array Be 26.06 122 P **P 21 31 15.2 -0.7**
comp=Z,5.9nm,0.7s,mb4.2,baz=331,slow=9.7,SNR=4.2
AKBB Malin Array Si 26.06 122 P **P 21 31 15.9 0.0**
UZH Uzhgorod 26.14 133 *eP* **P 21 31 17.4 +0.7**
UZH *i* 21 31 59.6
LFF La Frestale 26.26 168 *eP* **P 21 31 18.1 +0.3**
LPL La Plagne 26.26 158 *eP* **P 21 31 19.4 +1.6**
LPG La Plagne 26.28 158 *eP* **P 21 31 19.2 +1.2**
comp=Z,14nm,1.0s,mb4.1
LPG La Plagne 26.28 158 *eP* **P 21 31 19.2 +1.2**
LPG pmax pmax
comp=Z,7.0nm,1.0s,mb4.2
LPG La Plagne 26.28 158 *eP* **P 21 31 19.2 +1.2**
comp=Z,7.1nm,1.0s,mb4.2
CAF Calviac 26.37 166 *eP* **P 21 31 19.0 +0.2**
VIVF Saint-Julien-l 26.68 162 *eP* **P 21 31 21.7 +0.1**
ORIF Oris-en-Rattie 26.75 160 *eP* **P 21 31 24.2 +2.0**
ORIF *e*MLR MLR
comp=Z,209nm,23.0s,MS3.3
MBDF Montbardon 27.05 159 *eP* **P 21 31 26.7 +1.8**
comp=Z,8.7nm,0.6s,mb4.2
MBDF Montbardon 27.05 159 *eP* **P 21 31 26.7 +1.8**
MBDF pmax pmax
comp=Z,4.0nm,0.6s,mb4.1
MBDF Montbardon 27.05 159 *eP* **P 21 31 26.7 +1.8**
comp=Z,4.3nm,0.6s,mb4.2
LASF Ste Croix 27.37 163 *eP* **P 21 31 29.1 +1.3**
MTLF Montolieu 27.96 166 *eP* **P 21 31 34.0 +0.9**
EPF Esparros 28.14 169 *eP* **P 21 31 35.2 +0.6**
comp=Z,18nm,0.9s,mb4.4
EPF Esparros 28.14 169 *eP* **P 21 31 35.2 +0.6**
EPF pmax pmax
comp=Z,9.0nm,0.9s,mb4.4
EPF Esparros 28.14 169 *eP* **P 21 31 35.2 +0.6**
comp=Z,8.9nm,0.9s,mb4.4
ETSF Etsaut 28.21 170 *eP* **P 21 31 37.0 +1.7**
VSR Storozhevoye 28.56 109 *eP* **P 21 31 38.2 -0.1**
VSR pmax pmax
comp=Z,10.0nm,0.7s,mb4.7
VSR pmax pmax
comp=N,7.0nm,0.5s
VSR pmax pmax
comp=E,3.0nm,0.9s
MLR Muntele Rosu 29.97 131 LR LR 21 44 50.5
comp=E,620nm,18.1s,MS4.3,baz=162,slow=38
SCHQ Schefferville 30.11 270 LR LR 21 42 19.1
comp=E,164nm,21.6s,MS3.6,baz=354,slow=33
AQU L'Aquila 30.33 150 P **P 21 31 56.8 +2.7**
ARU Arti 30.50 84*d iP* **P 21 31 55.7 +0.2**
ARU *e* 21 32 52.2
ARU S **S 21 36 55.2 -1.2**
ARU SS ScP 21 38 30.4 -5.7
ARU pmax pmax
comp=Z,17nm,2.5s,mb4.4
ARU Arti 30.50 84 *eP* **P 21 31 56.1 +0.6**
comp=Z,5.8nm,0.9s,mb4.4
ESDC Sonseca Array 31.30 176 LR LR 21 45 02.6
comp=Z,70nm,20.3s,MS3.3,baz=20,slow=37
AKTK Aktyubinsk 35.34 90 P **P 21 32 38.5 +0.7**
AKTO Aktyubinsk 35.34 90 P **P 21 32 38.5 +0.8**
comp=Z,1.4nm,0.5s,mb4.2,baz=329,slow=8.8,SNR=6.4
KIV Kislovodsk 36.11 111 *eP* **P 21 32 45.1 +0.7**
KIV pmax pmax
comp=Z,15nm,1.1s,mb4.8
KIV MLR MLR
comp=Z,70nm,14.0s,MS3.6
KIV Kislovodsk 36.11 111 *eP* **P 21 32 46.0 +1.5**
comp=Z,10nm,0.8s,mb4.8
KEST Kesra 36.23 158 LR LR 21 48 27.1
comp=Z,50nm,18.3s,MS3.3,baz=316,slow=38
INK Inuvik 36.58 330 P **P 21 32 47.8 -0.4**
comp=Z,4.9nm,1.2s,mb4.2,baz=24,slow=9.8,SNR=3.9
INK LR LR 21 47 31.8
comp=Z,116nm,21.8s,MS3.6,baz=71,slow=36
ABKAR Akbulak array 36.99 90 *eP* **P 21 32 51.8 0.0**
comp=Z,5.7nm,0.9s,mb4.4
BRVK Borovoye 37.11 77⅊ *eP* **P 21 32 52.9 0.0**
BRVK pmax pmax
comp=Z,4.0nm,1.2s,mb4.1
BRVK Borovoye 37.11 77 *eP* **P 21 32 53.0 +0.1**
comp=Z,3.0nm,0.7s,mb4.2
BVAR Borovoye Array 37.17 77 P **P 21 32 54.3 +0.9**
comp=Z,2.0nm,0.6s,mb4.1,baz=319,slow=8.3,SNR=17
BR131 Keskin Array S 37.37 125 *eP* **P 21 32 57.5 +2.3**
BRTR Keskin Array B 37.37 125 P **P 21 32 57.4 +2.2**
comp=Z,1.7nm,0.8s,mb3.9,baz=340,slow=5.8,SNR=8.5
BRTR LR LR 21 48 36.9
comp=Z,102nm,20.3s,MS3.6,baz=168,slow=37
ZEI Tsey 37.55 111 *eP* **P 21 32 58.0 +1.3**
ZEI pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
YKA Yellowknife Ar 37.90 314 P **P 21 32 59.0 -0.4**
comp=Z,0.4nm,0.6s,mb3.3,baz=27,slow=8.9,SNR=3.3
YKA LR LR 21 48 09.8
comp=Z,20nm,18.6s,MS2.9,baz=200,slow=36
GNI Garni 40.20 112 *eP* **P 21 33 21.0 +2.1**
GNI pmax pmax
comp=Z,3.0nm,0.7s
GNI Garni 40.20 112 *eP* **P 21 33 21.0 +2.1**
comp=Z,3.2nm,0.7s,mb4.2
ZALV Zalesovo Beam 40.86 65 P **P 21 33 23.5 -0.7**
comp=Z,0.4nm,0.4s,mb3.4,baz=332,slow=12,SNR=4.7
ZALV Zalesovo Beam 40.86 65 P **P 21 33 23.5 -0.7**
FFC Flin Flon 41.28 299 *i* P **P 21 33 29.3 +1.6**
KURK Kurchatov 41.77 72 P **P 21 33 31.6 -0.1**
comp=Z,1.5nm,0.8s,mb3.7,baz=326,slow=7.8,SNR=8.6
KURK LR LR 21 51 25.8
comp=Z,84nm,20.9s,MS3.6,baz=355,slow=37
KURK Kurchatov 41.77 72 *eP* **P 21 33 31.2 -0.6**
KURK pmax pmax
comp=Z,2.0nm,0.9s,mb3.8
KURK Kurchatov 41.77 72 *eP* **P 21 33 31.2 -0.5**
comp=Z,2.4nm,0.9s,mb3.8
MMAI Mount Meron Ar 44.16 126 LR LR 21 52 32.7
comp=Z,101nm,19.1s,MS3.8,baz=275,slow=36
MKAR Makanchi Array 46.38 72 P **P 21 34 08.1 -0.6**
comp=Z,0.2nm,0.3s,mb3.6,baz=355,slow=9.1,SNR=4.9
MKAR Makanchi Array 46.38 72*c eP* **P 21 34 09.6 +0.9**
EKS2 Erkin-Say 47.34 82 *eP* **P 21 34 16.8 +0.5**
EKS2 pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
EKS2 Erkin-Say 47.34 82 *eP* **P 21 34 16.8 +0.5**
comp=Z,1.6nm,0.6s,mb4.1
AAK Ala-Archa 47.60 81 *eP* **P 21 34 20.0 +1.7**
AAK pmax pmax
comp=Z,1.0nm,1.2s,mb3.7
AAK Ala-Archa 47.60 81 *eP* **P 21 34 18.4 +0.1**
comp=Z,2.9nm,0.8s,mb4.4
TKM2 Tokmak 2 47.70 80 P **P 21 34 21.0 +1.9**
TKM2 pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
TKM2 Tokmak 2 47.70 80 P **P 21 34 21.0 +1.9**
comp=Z,2.0nm,0.8s,mb4.2
AML Almayashu 47.79 82 P **P 21 34 21.0 +1.2**
AML pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
AML Almayashu 47.79 82 P **P 21 34 20.9 +1.1**
comp=Z,4.4nm,0.8s,mb4.5
UCH Uchtor 47.97 81 *eP* **P 21 34 21.6 +0.4**
UCH pmax pmax
comp=Z,1.0nm,0.9s,mb3.9
UCH Uchtor 47.97 81 *eP* **P 21 34 21.6 +0.4**
comp=Z,1.2nm,0.9s,mb3.9
EGMT Eagleton 49.47 301 *eP* **P 21 34 32.5 -0.2**
comp=Z,15nm,1.3s,mb4.9
BLA Blacksburg 50.03 269 *eP* **P 21 34 39.2 +2.2**
comp=Z,25nm,0.5s
WMQ Urumqi 50.73 69 *eP* **P 21 34 43.0 +0.8**
WMQ pmax pmax
comp=Z,16nm,1.0s,mb4.9
WCI Wyandotte Cave 51.04 275 *eP* **P 21 34 46.2 +1.5**
comp=Z,21nm,0.4s
CHMT Chamberlain Mo 51.46 303 *eP* **P 21 34 47.8 +0.1**
MSO Missoula 51.73 303 *eP* **P 21 34 50.6 +0.9**
SONM Songino Array 52.38 51 P **P 21 34 56.1 +1.6**
comp=Z,0.3nm,0.6s,mb3.4,baz=339,slow=12,SNR=3.7
KBL Kabul 53.15 90 P **P 21 35 00.9 +0.5**
PDAR Pinedale Array 54.21 298 P **P 21 35 08.1 0.0**
comp=Z,0.8nm,0.7s,mb3.8,baz=34,slow=5.6,SNR=5.0
GOGA Godfrey 54.51 270 *eP* **P 21 35 11.0 +0.7**
GOGA pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
GOGA Godfrey 54.51 270 *eP* **P 21 35 11.0 +0.7**
comp=Z,8.4nm,0.6s,mb5.0

HLID	Hailey	54.87	302	eP		P	21 35 13.3	+0.5
TOA0	Torodi Ar. Sit	57.92	170	eP		P	21 35 34.2	-0.6
TORD	Torodi Ar. Bea	57.92	170	P		P	21 35 35.3	+0.5
	comp=Z,2.5nm,0.8s,mb4.3,baz=352,slow=6.8,SNR=16							
TORD				LR		LR	22 01 00.9	
	comp=Z,92nm,18.1s,MS3.9,baz=335,slow=37							
GTA	Gaotai	58.38	61	eP		P	21 35 41.1	+3.3
GTA				pP		pP	21 35 45.4	+4.4
GTA				sP		sP	21 35 47.9	+5.6
GTA				pmax		pmax		
	comp=Z,3.0nm,1.1s,mb4.2							
HHC	Hu-ho-hao-te	60.22	50	eP		P	21 35 50.7	+0.1
HHC				pP		pP	21 35 55.3	+1.5
HHC				sP		sP	21 35 57.7	+2.7
HHC				PcP		PcP	21 36 37.0	+1.1
HHC				PP		PP	21 38 04.6	+1.8
HHC				ScP		ScP	21 40 35.7	-0.9
HHC				PcS		PcS	21 40 37.7	-0.5
HHC				S		S	21 44 01.3	-2.6
HHC				ScS		ScS	21 45 36.7	-4.0
HHC				SS		SS	21 47 56.7	-3.6
HHC				pmax		pmax		
	comp=Z,12nm,1.1s,mb4.8							
HHC				pmax		pmax		
	comp=Z,72nm,5.6s							
HHC				LR		LR		
	comp=N,120nm,18.0s,MS4.2							
HHC				LR		LR		
	comp=E,95nm,18.0s,MS4.2							
HHC				LR		LR		
	comp=Z,110nm,22.8s,MS3.9							
MDJ	Mudanjiang	60.62	34	P		P	21 35 51.8	-1.4
MDJ				pmax		pmax		
	comp=Z,3.0nm,0.8s,mb4.5							
MDJ				pmax		pmax		
	comp=Z,45nm,5.7s							
DBIC	Dimbokro	64.14	178	LR		LR	22 03 04.3	
	comp=Z,75nm,19.9s,MS3.9,baz=300,slow=35							
TXAR	Lajitas Array	64.83	287	P		P	21 36 21.0	-0.4
	comp=Z,0.4nm,0.7s,mb3.6,baz=54,slow=6.4,SNR=4.0							
CHTO	Chiang Mai	77.39	69	eP		P	21 37 38.0	+0.3
CHTO				pmax		pmax		
	comp=Z,5.0nm,1.4s,mb4.2							
CHTO	Chiang Mai	77.39	69	eP		P	21 37 38.0	+0.4
	comp=Z,5.1nm,1.4s,mb4.3							
CMAR	Chiang Mai Arr	77.72	69	P		P	21 37 40.0	+0.5
	comp=Z,0.5nm,0.9s,mb3.5,baz=319,slow=8.7,SNR=4.6							

IDC **04** *21:28:19.5±0.5,22°.49S×175°.03W,h0km,mb5.1/18, mb1 5.2/20,mb1mx5.1/23,mbtmp5.0/20,ML5.0/2,MS4.6/17, Ms1 4.6/17,ms1mx4.3/25,Error ellipse: s-maj=20.4km s-min=14.3km az=130.0*

DJA **04** *21:28:23,23°.09S×175°.21W,h18km,mb5.5/27*

ISCJB **04** *21:28:23.6±0.1,22°.59S±0°.05×175°.12W±0°.03,h33km, mb5.2/120,MS4.8/42,Error ellipse: s-maj=7.5km s-min=3.5km az=153.1*

MOS **04** *21:28:24.3±1.1,22°.41S×175°.19W,h33km,mb5.3/38, MS4.9/18,Error ellipse: s-maj=10.8km s-min=9.0km az=60.2*

GCMT **04** *21:28:24.4±0.2,22°.72S×174°.36W,h18km,MW5.2, Moment Tensor Solution. s52,c88; s83,c139; Moment tensor: Scale 10^16Nm; Mrr5.06±.18; Mθθ-1.79±.12; Mφφ-3.27±.12; Mrθ2.49±.29; Mθφ-2.66±.09; Mrφ4.07±.30; Best double couple: M0 7.00000×10^16 NP1:φs222.00000°, δ24.00000°,λ98.00000°. NP2:φs33.00000°,δ66.00000°, λ87.00000°. Principal axes: T 6.9400, Plg68.0000°, Azm297.0000°; N 0.2100, Plg3.0000°, Azm35.0000°; P -7.1400, Plg21.0000°, Azm126.0000°; Data Used: II IU IC G CN.*

NEIC **04** *21:28:25.0±2.2,22°.57S×175°.10W,h34km±15km,mb5.2/87, MS5.0/3 Error ellipse: s-maj=6.7km s-min=4.2km az=155.0*

SZGRF **04** *21:28:25.7,22°.35S×176°.22W,h33km,mb5.0,South of Fiji Islands*

BJI **04** *21:28:26.4,22°.03S×175°.30W,h34km,mB5.5/32, mb5.3/41,Ms5.0/28,Ms7 4.7/28*

ISC 04 21:28:25.5±0.1,22°.57S±0°.05×175°.09W±0°.03,h35km, (h47km±2.1km:pP-P),n697,σ0s69/492,mb5.2/120, MS4.8/42,161C-146D,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RAO	Raoul Island	7.12	200	Pn			Pn	21 30 06.2	-1.0
	112nm,0.3s,baz=98,slow=22,SNR=4.6								
RAO					Sn		Sn	21 31 23.0	-4.0
	207nm,0.3s,baz=276,slow=23,SNR=9.7								
MSVF	Nonsavu	8.04	306	Pn			Pn	21 30 26.0	+6.2
	2μm,0.9s,SNR=20								
MSVF	Nonsavu	8.04	306	Pn			Pn	21 30 24.5	+4.7
	316nm,0.9s								
MSVF	Nonsavu	8.04	306	Pn			Pn	21 30 26.3	+6.5
	365nm,1.5s,SNR=20								
AFI	Afiamalu	9.17	21	Pn			Pn	21 30 27.4	-8.0
	16nm,0.3s,baz=256,slow=1.5,SNR=16								
AFI					Sn		Sn	21 31 51.5	-26
	25nm,0.3s,baz=13,slow=23,SNR=4.3								
AFI	Afiamalu	9.17	21	eP			Pn	21 30 27.4	-7.9
AFI				pmax			pmax		
	comp=Z,294nm,1.0s								
AFI	Afiamalu	9.17	21	ePn			Pn	21 30 27.4	-8.0
	comp=Z,294nm,1.0s								
AFI					Sn		Sn	21 31 52.6	-25
RAR	Rarotonga	14.29	87	ePn			Pn	21 31 33.2	-12
RAR				eSn			Sn	21 34 03.1	-19
URZ	Urewera	17.01	201	P			Pn	21 32 18.8	-1.8
	comp=Z,1.3nm,0.3s,baz=328,slow=14,SNR=4.5								
URZ					S		S	21 35 13.0	-25
	comp=Z,1.4nm,0.3s,baz=128,slow=22,SNR=6.9								
URZ	Urewera	17.01	201	ePn			Pn	21 32 19.1	-1.6
	comp=Z,25nm,0.8s								
URZ				eSn			Sn	21 35 17.6	-11
DZM	Mont Dzumac	17.09	268	eP			Pn	21 32 25.2	+3.4
	comp=Z,230nm,1.1s								
DZM				eLR			LR	21 36 05.4	
	comp=Z,2μm,20.3s								
DZM				eLQ				21 36 14.9	
	comp=Z,5μm,25.8s								
DZM	Mont Dzumac	17.09	268	eP			Pn	21 32 25.5	+3.7
DZM	Mont Dzumac	17.09	268	eP			Pn	21 32 22.1	+0.3
	comp=Z,90nm,1.0s								
NOUC	Port Laguerre	17.22	268	eP			Pn	21 32 28.9	+5.5
SNZO	South Karori	20.57	202	eP			P	21 33 01.7	+0.5
RPZ	Rata Peaks	24.00	205	P			P	21 33 33.2	-3.7
	comp=Z,27nm,0.8s,mb4.7,baz=358,slow=2.7,SNR=6.1								
RPZ					LR		LR	21 42 54.7	
	comp=Z,2μm,18.6s,MS4.6,baz=22,slow=36								
PPT	Papeete	24.46	83	eS			S	21 38 02.1	+2.7
	comp=Z,3μm,24.0s								
PPT				eLR			LR	21 39 51.3	
	comp=Z,1μm,22.0s,baz=259								
PPT	Papeete	24.46	83	LR			LR	21 41 02.6	
	comp=Z,1μm,19.7s,MS4.4,baz=266,slow=31								
HNR	Honiara	27.26	295	P			P	21 34 06.6	-0.1
ARMA	Armidale	30.71	248	eP			P	21 34 38.2	+1.0
ARMA	Armidale	30.71	248	eP			P	21 34 38.5	+1.3
	comp=Z,36nm,0.8s,mb5.2								
EIDS	Eidsvold	30.99	258	eP			P	21 34 39.4	-0.3
EIDS	Eidsvold	30.99	258	eP			P	21 34 40.2	+0.5
	comp=Z,22nm,0.9s,mb5.0								
CMSA	Cobar Meteorol	35.90	247	eP			P	21 35 21.3	-1.1
CTA	Charters Tower	36.03	267	eP			P	21 35 23.5	-0.1
	comp=Z,12nm,0.6s,mb5.0								
CTA	Charters Tower	36.03	267	P			P	21 35 23.7	0.0
	comp=Z,15nm,0.6s,mb5.1,baz=98,slow=10,SNR=28								
CTA	Charters Tower	36.03	267	P			P	21 35 23.7	0.0
CTAO	Charters Tower	36.03	267	eP			P	21 35 23.3	-0.3
CTAO				pmax			pmax		
	comp=Z,18nm,0.8s,mb5.0								
CTAO	Charters Tower	36.03	267	eP			P	21 35 23.3	-0.3
	comp=Z,18nm,0.8s,mb5.1								
TAOE	Nuku Hiva Isla	36.18	73	eLR			LR	21 44 57.8	
	comp=Z,607nm,23.2s								
RKT	Rikitea	36.90	99	eLR			LR	21 44 50.9	
	comp=Z,998nm,32.2s								
TOO	Toolangi	36.96	237	eP			P	21 35 32.5	+1.1
MOO	Moorlands	37.08	229	eP			P	21 35 33.6	+1.3
TAU	Tasmania Unive	37.16	228	eP			P	21 35 32.8	-0.2
TAU				pmax			pmax		
	comp=Z,7.0nm,0.5s,mb4.8								
TAU	Tasmania Unive	37.16	228	eP			P	21 35 32.8	-0.2
	comp=Z,6.9nm,0.5s,mb4.7								
STKA	Stephens Creek	39.40	247	eP			P	21 35 51.2	-0.8
	comp=Z,11nm,1.1s,mb4.5								
STKA	Stephens Creek	39.40	247	P			P	21 35 51.3	-0.7
	comp=Z,12nm,0.7s,mb4.8,baz=97,slow=9.8,SNR=21								
STKA					LR		LR	21 51 39.5	
	comp=Z,2μm,18.6s,MS4.9,baz=317,slow=36								
STKA	Stephens Creek	39.40	247	eP			P	21 35 51.4	-0.6
	comp=Z,3.3nm,0.8s,mb4.1								
ARPS	Mount Arapiles	39.58	239	eP			P	21 35 54.8	+0.5
	comp=Z,139nm,1.2s,mb5.6								
COEN	Coen	40.44	275	eP			P	21 36 00.2	-0.6
	comp=Z,152nm,0.9s,mb5.7								
ASAR	Alice Springs	46.72	258	P			P	21 36 50.1	-1.2
	comp=Z,41nm,0.9s,mb5.4,baz=91,slow=8.2,SNR=201								
ASAR					S		S	21 43 34.2	-4.7
	comp=Z,1.1nm,0.8s,baz=101,slow=14,SNR=6.8								
WRAB	Tennant Creek	47.02	263	P			P	21 36 52.0	-1.7
	comp=Z,197nm,0.7s,mb6.2,SNR=14								
WRAB	Tennant Creek	47.02	263	eP			P	21 36 52.2	-1.5
WRAB				pmax			pmax		
	comp=Z,24nm,0.8s,mb5.2								
WRAB	Tennant Creek	47.02	263	eP			P	21 36 52.2	-1.5
	comp=Z,24nm,0.8s,mb5.2								
KAKA	Kakadu	50.74	272	eP			P	21 37 21.9	-0.4
	comp=Z,18nm,0.6s,mb5.2								
KAKA	Kakadu	50.74	272	eP			P	21 37 21.9	-0.4
	comp=Z,38nm,0.6s,mb5.5								
FORT	Forrest	51.00	248	eP			P	21 37 24.3	+0.2
	comp=Z,31nm,0.6s,mb5.4								
FORT	Forrest	51.00	248	eP			P	21 37 23.7	-0.4
	comp=Z,36nm,0.7s,mb5.4								
GUMO	Guam	53.20	309	LR			LR	21 57 10.0	
	comp=Z,257nm,19.5s,MS4.3,baz=41,slow=32								
GUMO	Guam	53.20	309	eP			P	21 37 39.9	-0.7
GUMO				pmax			pmax		
	comp=Z,74nm,0.7s,mb5.7								
GUMO	Guam	53.20	309	eP			P	21 37 39.9	-0.7
	comp=Z,74nm,0.7s,mb5.7								
FITZ	Fitzroy Crossi	55.45	263	eP			P	21 37 56.0	-1.0
	comp=Z,23nm,0.9s,mb5.2								
FITZ	Fitzroy Crossi	55.45	263	P			P	21 37 56.2	-0.8
	comp=Z,13nm,0.9s,mb5.0,baz=63,slow=6.4,SNR=12								
FITZ					LR		LR	22 01 56.0	
	comp=Z,1μm,18.7s,MS5.1,baz=87,slow=36								
FITZ	Fitzroy Crossi	55.45	263	eP			P	21 37 56.4	-0.6
	comp=Z,25nm,1.2s,mb5.1								
SBA	Scott Base	56.02	185	eP			P	21 38 01.9	+1.7
SBA				pmax			pmax		
	comp=Z,395nm,2.6s,mb6.0								
SBA	Scott Base	56.02	185	eP			P	21 38 01.9	+1.8
	comp=Z,395nm,2.6s,mb6.0								
KLBR	Kellerberrin	59.66	246	eP			P	21 38 25.5	-1.0
	comp=Z,15nm,0.7s,mb5.1								
NWAO	Narrogin (SRO)	59.88	244	P			P	21 38 28.0	0.0
	comp=Z,7.5nm,0.9s,mb4.7,baz=146,slow=16,SNR=3.9								
MBWA	Marble Bar	60.06	258	eP			P	21 38 27.9	-1.5
MBWA	Marble Bar	60.06	258	eP			P	21 38 27.9	-1.4
	comp=Z,40nm,1.4s,mb5.2								
MBWA					PcP		PcP	21 39 15.2	0.0
MORW	Morawa	61.56	248	eP			P	21 38 38.7	-0.8
CBIJ	Chichi jima	64.38	318	LR			LR	22 03 19.7	
	comp=Z,342nm,18.2s,MS4.6,baz=126,slow=33								
DAV	Davao City (W)	65.08	290	LR			LR	22 05 51.2	
	comp=Z,175nm,19.4s,MS4.3,baz=301,slow=35								
DAV	Davao City (W)	65.08	290	P			P	21 39 02.3	-0.7
KAPI	Kappang	65.17	275	LR			LR	22 07 07.2	
	comp=Z,309nm,18.8s,MS4.5,baz=128,slow=36								
QSPA	South Pole Qui	67.51	180	P			P	21 39 18.6	+1.1
	comp=Z,23nm,1.0s,mb5.1,baz=36,slow=3.6,SNR=26								
MIR	Mirnyy	70.28	205	⇑iP			P	21 39 35.6	+0.7
MIR				pmax			pmax		
	comp=Z,135nm,2.0s,mb5.5								
MIR				MLR			MLR		
	comp=N,500nm,18.0s,MS5.1								
MIR				MLR			MLR		
	comp=E,800nm,18.0s,MS5.1								
MIR				MLR			MLR		
	comp=Z,600nm,18.0s,MS4.9								
TSM	Tawau	70.66	283	P			P	21 39 38.4	+0.3
SDKM	Sandakan	71.84	284	P			P	21 39 46.4	+1.2
KDM	Kudat	72.72	285	P			P	21 39 51.5	+0.9
KKM	Kota Kinabalu	72.90	284	P			P	21 39 52.5	+0.9
KKM	Kota Kinabalu	72.90	284	eP			P	21 39 50.6	-0.9
	comp=Z,26nm,1.1s,mb5.1								
MJAR	Matsushiro Arr	73.48	322	P			P	21 39 54.4	-0.1
	comp=Z,6.8nm,0.8s,mb4.7,baz=158,slow=5.9,SNR=22								
MJAR	Matsushiro Arr	73.48	322	P			P	21 39 54.4	-0.1
MJAR	Matsushiro Arr	73.48	322	P			P	21 39 54.4	-0.1
MAJO	Matsushiro	73.48	322	eP			P	21 39 54.6	+0.1
MAJO				pmax			pmax		
	comp=Z,11nm,0.7s,mb4.9								
MAJO	Matsushiro	73.48	322	eP			P	21 39 54.6	+0.1
	comp=Z,11nm,0.7s,mb4.9								
MAT	Matsushiro	73.48	322	P			P	21 39 54.1	-0.4
MAT				eS			S	21 49 12.6	-9.1
JOW	Kunigami	73.56	309	LR			LR	22 12 20.2	
	comp=Z,284nm,18.1s,MS4.6,baz=134,slow=36								
BTM	Bintulu	74.53	280	P			P	21 40 02.3	+1.1
SBUM	Sibu	75.01	279	P			P	21 40 04.6	+0.6
KSM	Kuching	76.37	277	P			P	21 40 12.6	+0.8
KSM	Kuching	76.37	277	eP			P	21 40 12.0	+0.2
	comp=Z,22nm,1.0s,mb5.0								
UNV	Unalaska Valle	76.46	5	eP			P	21 40 10.4	-0.8
	comp=Z,63nm,1.1s,mb5.5								
TWG	Pinlang	76.77	302	eP			P	21 40 11.7	-2.0
ASAJ	Asahikawa	76.84	330	LR			LR	22 11 50.4	
	comp=Z,464nm,19.2s,MS4.8,baz=179,slow=34								
YULB	Yu-li	76.89	302	eP			P	21 40 13.3	-1.1
NACB	Ninganchiao	77.07	303	eP			P	21 40 13.5	-1.9
	comp=Z,33nm,0.9s,mb5.3								
SSLB	Suanglung	77.36	302	eP			P	21 40 15.2	-1.9
	comp=Z,21nm,1.0s,mb5.0								
TPUB	Ta-pu	77.36	302	eP			P	21 40 15.3	-1.7
	comp=Z,59nm,0.9s,mb5.5								
YHNB	Yeheng	77.50	303	eP			P	21 40 16.5	-1.3
	comp=Z,27nm,0.9s,mb5.2								
TATO	Taipei	77.58	304	eP			P	21 40 17.2	-1.0
MURC	Murrieta	78.47	46	⇑P			P	21 40 23.2	+0.2
	baz=79								
BFSC	Mount Baldy Ra	78.55	45	⇑P			P	21 40 23.3	-0.2
	baz=79								
MONP	Monument Peak	78.57	47	⇑P			P	21 40 23.5	-0.1
	baz=79								
SDPT	Sand Point	78.60	8	eP			P	21 40 22.3	-0.8
	comp=Z,60nm,1.0s,mb5.5								
PET	Petropavlovsk	78.66	344	eP			P	21 40 22.9	-0.6
PET				eS			S	21 50 18.1	+0.2
PET				pmax			pmax		
	comp=Z,26nm,1.2s,mb5.0								
PET				pmax			pmax		
	comp=Z,400nm,4.7s								
PET				pmax			pmax		
	comp=Z,200nm,6.1s								
PET				MLR			MLR		
	comp=Z,300nm,18.0s,MS4.7								
PET	Petropavlovsk	78.66	344	⇑iP			P	21 40 22.9	-0.6
EDW2	Edwards Air Fo	78.72	45	⇑P			P	21 40 23.7	-0.6
	baz=79								
ISA	Isabella	78.89	44	⇓P			P	21 40 25.5	+0.3
	baz=79,SNR=5.5								
ISA	Isabella	78.89	44	eP			P	21 40 25.1	-0.2
ISA				pmax			pmax		
	comp=Z,23nm,1.3s,mb5.0								
ISA	Isabella	78.89	44	eP			P	21 40 25.1	-0.2
	comp=Z,23nm,1.3s,mb5.0								
YSS	Yuzh-Sakhalins	78.96	332	⇑eP			P	21 40 26.9	+1.5
YSS				e			pP	21 40 38.0	+1.6
YSS				eS			S	21 50 32.0	+11
YSS				pmax			pmax		
	comp=Z,70nm,1.0s,mb5.5								
YSS	Yuzh-Sakhalins	78.96	332	eP			P	21 40 25.4	+0.1
	comp=Z,118nm,1.1s,mb5.7								
PFO	Pinyon Flat Ob	78.97	47	eP			P	21 40 25.3	-0.5
PFO				pmax			pmax		
	comp=Z,16nm,1.0s,mb4.9								
PFO	Pinyon Flat Ob	78.97	47	eP			P	21 40 25.3	-0.5
	comp=Z,16nm,1.0s,mb4.9								
PEA0B	Petropavlovsk-	78.98	344	eP			P	21 40 24.9	-0.4
PETK	Petropavlovsk-	78.98	344	P			P	21 40 25.4	+0.1
	comp=Z,33nm,0.9s,mb5.3,baz=111,slow=8.1,SNR=27								
PETK					LR		LR	22 10 57.2	
	comp=Z,172nm,19.2s,MS4.4,baz=144,slow=32								
CMB	Columbia Colle	79.19	41	eP			P	21 40 26.7	-0.1
CMB				pmax			pmax		
	comp=Z,20nm,1.0s,mb5.0								
CMB	Columbia Colle	79.19	41	eP			P	21 40 26.7	-0.1
	comp=Z,20nm,1.0s,mb5.0								
BELC	Belle Mtn. Jos	79.51	46	⇓P			P	21 40 28.7	0.0
	baz=80,SNR=5.3								
WDC	Whiskeytown Da	79.58	38	eP			P	21 40 29.1	+0.2
WDC				pmax			pmax		
	comp=Z,22nm,1.0s,mb5.0								
WDC	Whiskeytown Da	79.58	38	eP			P	21 40 29.1	+0.2
	comp=Z,22nm,1.0s,mb5.0								
BC3	Big Chuckawall	79.68	47	⇓P			P	21 40 29.4	-0.2
	baz=80,SNR=7.5								
GSC	Goldstone	79.75	45	⇓P			P	21 40 29.6	-0.4
	baz=80								
GSC	Goldstone	79.75	45	eP			P	21 40 29.7	-0.3
GSC				pmax			pmax		
	comp=Z,24nm,1.3s,mb5.0								
GSC	Goldstone	79.75	45	eP			P	21 40 29.6	-0.3
	comp=Z,24nm,1.3s,mb5.0								
MPMC	Manual Prospec	79.77	44	⇓P			P	21 40 29.7	-0.4
	baz=80,SNR=14								
CHGN	Chignik	79.82	9	eP			P	21 40 29.5	-0.3
WAKR	Walker	80.06	41	eP			P	21 40 32.0	+0.4
KEBM	Edson Butte	80.14	35	eP			P	21 40 31.9	+0.1
	comp=Z,72nm,1.2s,mb5.5								
KEBM				epP			pP	21 40 44.9	+2.0
IRM	Iron Mountain	80.17	47	⇑P			P	21 40 32.0	-0.3
	baz=80,SNR=7.2								
GMRC	Granite Mounta	80.20	46	⇑P			P	21 40 31.8	-0.6
	baz=80								
KSRS	Korea Array	80.23	317	P			P	21 40 31.6	-0.9
	comp=Z,8.6nm,1.0s,mb4.7,baz=136,slow=6.2,SNR=21								
KSRS				LR			LR	22 12 18.3	
	comp=Z,225nm,18.7s,MS4.5,baz=137,slow=33								
KSRS	Korea Array	80.23	317	P			P	21 40 31.6	-0.9
KSRS				pmax			pmax		
	comp=Z,9.0nm,1.0s,mb4.7								
KSRS				MLR			MLR		
	comp=Z,225nm,18.7s,MS4.5								
YBH	Yreka Blue Hor	80.25	37	eP			P	21 40 32.8	+0.3
YBH				pmax			pmax		
	comp=Z,17nm,0.9s								
YBH	Yreka Blue Hor	80.25	37	eP			P	21 40 32.8	+0.3
	comp=Z,17nm,0.9s,mb5.0								
113A	Mohawk Valley,	80.32	49	⇑P			P	21 40 32.4	-0.7
	baz=80								
Y12C	Blythe	80.36	47	⇓P			P	21 40 33.7	+0.4
	baz=80								
WCN	Washoe City	80.38	40	⇑P			P	21 40 34.1	+0.9
	baz=81								
FURC	Furnace Creek,	80.42	44	⇓P			P	21 40 34.3	+0.7
	baz=81								
SHOC	Shoshone	80.45	45	⇑P			P	21 40 34.3	+0.6
	baz=81								
MAW	Mawson	80.53	199	eP			P	21 40 34.4	+0.7
	comp=Z,20nm,0.9s,mb5.0								
MAW	Mawson	80.53	199	P			P	21 40 34.5	+0.8
	comp=Z,20nm,0.9s,mb5.0,baz=130,slow=6.3,SNR=22								
MAW				LR			LR	22 17 13.3	
	comp=Z,436nm,19.3s,MS4.8,baz=119,slow=36								
MAW	Mawson	80.53	199	eP			P	21 40 34.7	+0.9
214A	Organ Pipe Nat	80.53	50	⇓P			P	21 40 34.6	+0.3
	baz=81								
Z13A	Yuma Proving G	80.64	48	⇓P			P	21 40 35.2	+0.3
	baz=81								
HUMO	Hull Mountain	80.71	36	eP			P	21 40 35.2	+0.3
	comp=Z,30nm,1.2s,mb5.1								
NVAR	Mina Array Bea	80.71	42	P			P	21 40 35.0	0.0
	comp=Z,17nm,1.0s,mb5.0,baz=224,slow=7.9,SNR=24								
U10A	Ash Meadows, A	80.73	44	⇑P			P	21 40 35.6	+0.4
	baz=81								
Y13A	Salome	80.87	48	⇓P			P	21 40 35.9	-0.1
	baz=81								
PDMCI	Parker Dam,Lak	80.94	47	⇓P			P	21 40 36.5	+0.1
	baz=81								
V12A	Nelson	81.29	46	⇓P			P	21 40 38.8	+0.6
	baz=82								
S10A	Tonopah Range,	81.46	43	⇑P			P	21 40 39.2	+0.1
	baz=82								
Y14A	Wickenburg	81.51	48	⇑P			P	21 40 39.4	0.0
	baz=82								
VLA	Vladivostok	81.53	324	eP			P	21 40 39.8	+0.5
VLA				pmax			pmax		
	comp=Z,46nm,1.0s,mb5.4								
VLA	Vladivostok	81.53	324	eP			P	21 40 40.5	+1.2
SHPR	Sheep Range	81.54	45	eP			P	21 40 39.9	+0.3
OHAK	Old Harbor	81.57	12	eP			P	21 40 39.3	+0.2
MOD	Modoc	81.72	38	eP			P	21 40 40.2	-0.1
R10A	Warm Springs	81.87	43	⇓P			P	21 40 42.0	+0.8
	baz=82,SNR=14								
X14A	Yava	81.88	48	⇑P			P	21 40 41.7	+0.3
	baz=82,SNR=6.6								
K05A	Summer Lake	81.92	37	⇓P			P	21 40 41.9	+0.5
	baz=82								
V13A	Grand Canyon W	81.93	46	⇓P			P	21 40 41.8	+0.2
	baz=82								
Y15A	Casa Rosa Ranc	81.98	48	⇓P			P	21 40 42.1	+0.2
	baz=82								
Q10A	Clear Creek Ra	82.13	42	⇑P			P	21 40 43.1	+0.5
	baz=82								
W14A	Seligman	82.17	47	⇓P			P	21 40 43.0	+0.1
	baz=82,SNR=7.6								
KDAK	Kodiak Island	82.23	12	eP			P

comp=Z,19nm,1.0s,mb5.1
FL2 Flat Top 2 83.44 34 P P 21 40 49.9 +0.7
P12A McGill 83.45 43 ⇑P P 21 40 49.9 +0.5
baz=84,SNR=8.6
Y18A Canyon Day Jun 83.48 49 ⇓P P 21 40 49.9 +0.1
baz=84
NLWA Neilton Lookou 83.49 32 ⇑P P 21 40 50.0 +0.6
baz=84,SNR=6.5
NLWA Neilton Lookou 83.49 32 *e*P P 21 40 49.1 -0.3
comp=Z,40nm,1.1s,mb5.4
ERK Elk Rock 83.52 34 P P 21 40 50.3 +0.7
S14A Cedar City 83.56 45 ⇑P P 21 40 50.3 +0.3
baz=84
OOW Octopus West 83.57 32 P P 21 40 50.9 +1.1
I07A Izee 83.57 37 ⇓P P 21 40 49.9 -0.1
baz=84,SNR=15
HABR Khabarovsk 83.58 329⇑ *e*P P 21 40 48.8 -1.1
HABR *e**PP pP 21 41 05.1 +4.2
HABR *e* 21 44 00.5
HABR *e*S S 21 51 04.8 -4.5
HABR *e*SS SS 21 56 34.3 -2.5
HABR *e*SSS 22 00 04.3
HABR MLR MLR
comp=Z,232nm,18.0s,MS4.6
T15A Red Dirt Ranch 83.66 46 ⇓P P 21 40 50.9 +0.4
baz=84,SNR=18
COCO West Island 83.66 259 P P 21 40 50.5 -0.6
M10A I.L. Ranch, Tu 83.68 40 ⇑P P 21 40 50.9 +0.3
baz=84,SNR=13
J08A Circle Bar Ran 83.69 38 ⇓P P 21 40 50.8 +0.3
baz=84,SNR=18
Q13A Wheeler Ranch, 83.70 43 ⇑P P 21 40 50.9 +0.2
baz=84,SNR=8.2
G06A Carlson Farm, 83.70 35 ⇑P P 21 40 50.8 +0.2
baz=84
MDJ Mudanjiang 83.77 324 P P 21 40 52.3 +1.4
MDJ pP pP 21 41 05.3 +3.3
MDJ PP PP 21 44 05.7 +1.0
MDJ S S 21 51 13.1 +1.8
MDJ pmax pmax
comp=Z,54nm,1.2s,mb5.5
MDJ pmax pmax
comp=Z,280nm,5.6s
MDJ LR LR
comp=N,200nm,20.4s,MS4.6
MDJ LR LR
comp=E,190nm,20.4s,MS4.6
MDJ LR LR
comp=Z,390nm,19.4s,MS4.8
MDJ Mudanjiang 83.77 324 *e*P P 21 40 50.6 -0.3
comp=Z,54nm,1.0s,mb5.6
120A U Bar Ranch, L 83.83 51 ⇓P P 21 40 51.6 +0.1
baz=84
V17A Tonalea, Kykot 83.95 48 ⇑P P 21 40 52.9 +0.8
baz=84,SNR=15
ELK Elko 83.99 41 *e*P P 21 40 52.2 0.0
ELK pmax pmax
comp=Z,14nm,1.0s
ELK Elko 83.99 41 *e*P P 21 40 52.2 +0.1
comp=Z,14nm,1.0s,mb5.0
P13A Bates Ranch, G 84.00 43 ⇑P P 21 40 52.1 -0.1
baz=84,SNR=11
O12A Currie 84.02 42 ⇓P P 21 40 52.2 -0.1
baz=84,SNR=16
L10A Juniper Basin 84.06 40 ⇓P P 21 40 52.5 +0.1
baz=84,SNR=15
M11A Holland Ranch, 84.07 41 ⇑P P 21 40 52.5 -0.1
baz=84,SNR=7.4
LON Longmire 84.09 34 *e*P P 21 40 51.6 -0.9
LON pmax pmax
comp=Z,17nm,1.2s,mb5.0
LON Longmire 84.09 34 *e*P P 21 40 51.6 -0.9
comp=Z,17nm,1.2s,mb5.0
J09A Fry Pan Ranch, 84.09 38 ⇑P P 21 40 52.9 +0.3
baz=84,SNR=23
GNW Green Mountain 84.13 33 *e*P P 21 40 52.2 -0.4
comp=Z,12nm,1.1s,mb4.9
Z20A Nine Sixteen R 84.15 51 ⇑P P 21 40 53.6 +0.5
baz=84
QIZ Qiongzhong 84.16 293 P P 21 40 52.8 -0.7
QIZ S S 21 51 18.0 +1.6
QIZ pmax pmax
comp=Z,13nm,1.5s,mb4.8
QIZ LR LR
comp=E,170nm,19.6s
QIZ LR LR
comp=Z,360nm,19.3s,MS4.8
N12A Clover Valley, 84.18 41 ⇓P P 21 40 53.3 +0.2
baz=84,SNR=18
N12A Clover Valley, 84.18 41 *e*P P 21 40 52.4 -0.7
comp=Z,24nm,1.0s,mb5.3
Q14A Sevier Lake (B 84.19 44 ⇓P P 21 40 53.3 +0.1
baz=84
T16A Glen Canyon Da 84.22 46 ⇑P P 21 40 53.8 +0.4
baz=84,SNR=6.5
K10A MacKenzie Ranc 84.25 39 ⇑P P 21 40 53.9 +0.5
baz=84,SNR=10.0
D05A Enumclaw 84.29 33 ⇓P P 21 40 53.9 +0.4
baz=84
H08A Prairie City 84.31 37 ⇓P P 21 40 53.7 +0.1
baz=84,SNR=6.9
X19A St. Johns 84.35 49 ⇑P P 21 40 54.8 +0.6
baz=84
R15A Junction 84.40 45 ⇓P P 21 40 55.2 +0.9
baz=85,SNR=8.1
121A Cookes Peak, D 84.43 52 ⇑P P 21 40 54.4 -0.2
baz=85
KTGM Kuala Trenggan 84.46 278 P P 21 40 57.0 +1.8
I09A Lost Marbles R 84.49 38 ⇓P P 21 40 54.5 -0.1
baz=85
F07A Phinny Hill Vi 84.51 35 ⇑P P 21 40 55.5 +0.8
baz=85
L11A Cat Creek Ranc 84.53 40 ⇑P P 21 40 54.9 +0.1
baz=85,SNR=21
U17A Shonto 84.58 47 ⇓P P 21 40 55.1 -0.2
baz=85,SNR=8.1
M12A Wells 84.59 41 ⇑P P 21 40 55.0 -0.2
baz=85,SNR=7.7
V18A Ganado 84.59 48 ⇓P P 21 40 55.9 +0.5
baz=85,SNR=11
MSU Marysvale 84.63 45 *e*P P 21 40 56.0 +0.5
G08A Pilot Rock 84.64 36 ⇓P P 21 40 55.7 +0.3
baz=85,SNR=18
W19A Sanders 84.64 49 ⇑P P 21 40 55.4 -0.2
baz=85
P14A Drum Mountains 84.67 43 ⇓P P 21 40 55.8 +0.2
baz=85
N13A Wendover, West 84.69 42 ⇓P P 21 40 56.0 +0.3
baz=85
N13A Wendover, West 84.69 42 *e*P P 21 40 55.0 -0.8
comp=Z,34nm,1.0s,mb5.4
T17A Navajo Res., N 84.70 46 ⇓P P 21 40 56.4 +0.6
baz=85,SNR=9.5
Y20A Horse Springs, 84.72 50 ⇓P P 21 40 56.6 +0.6
baz=85,SNR=7.9
K11A Parker Ranch, 84.73 39 ⇑P P 21 40 55.6 -0.3
baz=85,SNR=8.0
Q15A Fillmore 84.78 44 ⇓P P 21 40 56.1 -0.1
baz=85
SVW2 Sparrevohn 84.85 9 *e*P P 21 40 55.8 -0.2
Z21A St. Cloud Mine 84.91 51 ⇓P P 21 40 57.1 +0.1
baz=85
R16A Teasdale 84.96 45 ⇑P P 21 40 57.5 +0.4
baz=85
L12A House Creek Ra 84.96 40 ⇑P P 21 40 57.3 +0.3
baz=85,SNR=11
H09A Durkee 84.96 37 ⇓P P 21 40 57.0 0.0
baz=85,SNR=9.4
X20A Quemado 84.97 50 ⇑P P 21 40 57.2 0.0
baz=85
JCW Jim Creek 85.00 33 *e*P P 21 40 56.7 -0.4
comp=Z,15nm,1.0s,mb5.1
RSW Rattlesnake Hi 85.01 35 *e*P P 21 40 57.2 0.0
comp=Z,28nm,1.0s,mb5.3
M13A Montello 85.01 41 ⇓P P 21 40 57.8 +0.5
baz=85
U18A Rough Rock, Ch 85.01 47 ⇑P P 21 40 57.7 +0.3
baz=85,SNR=8.2
HAWA Hanford 85.04 35 *e*P P 21 40 58.1 +0.7
comp=Z,44nm,1.4s,mb5.4
S17A Black Ridge (B 85.05 46 ⇓P P 21 40 58.1 +0.5
baz=85
F08A Pendleton 85.06 36 ⇑P P 21 40 57.6 +0.2
baz=85
I10A Payette 85.09 38 ⇓P P 21 40 58.0 +0.4
baz=85
P15A Leamington 85.16 44 ⇓P P 21 40 58.2 +0.1
baz=85
DUG Dugway 85.18 43 ⇓P P 21 40 58.5 +0.3
baz=85
DUG Dugway 85.18 43 *e*P P 21 40 58.5 +0.3
DUG pmax pmax
comp=Z,9.0nm,1.3s,mb4.7
DUG Dugway 85.18 43 *e*P P 21 40 58.5 +0.3
comp=Z,8.9nm,1.3s,mb4.7
MFID Camas Ranch 85.24 39 ⇑P P 21 40 59.1 +0.7
baz=85
Y21A Point of Rocks 85.27 50 ⇑P P 21 40 59.6 +0.8
baz=85,SNR=7.3
BMO Blue Mountains 85.28 37 *e*P P 21 40 57.8 -0.8
BMO pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
BMO Blue Mountains 85.28 37 *e*P P 21 40 57.8 -0.8
comp=Z,9.6nm,0.9s,mb4.9
SYO Syowa Base 85.29 192⇓ *e*P P 21 40 56.4 -2.0
SYO Syowa Base 85.29 192⇓ *i*P pP 21 41 18.0 +8.6
K12A Draper Farm, C 85.32 40 ⇑P P 21 40 59.1 +0.3
baz=86,SNR=6.6
T18A Mexican Hat 85.40 47 ⇑P P 21 40 59.8 +0.4
baz=86,SNR=34
U19A Dine' College, 85.40 48 ⇓P P 21 40 59.9 +0.5
baz=86,SNR=9.0
ETW Entiat 85.41 34 *e*P P 21 40 58.6 -0.5
comp=Z,48nm,1.2s,mb5.5
X21A Alamocita Cree 85.42 50 ⇓P P 21 40 59.8 +0.3
baz=86,SNR=7.6
I11A Placerville 85.47 38 ⇓P P 21 40 59.6 +0.1
baz=86
Q16A Castle Valley 85.51 45 ⇓P P 21 41 00.2 +0.4
baz=86
J12A Stokes Ranch, 85.57 39 ⇓P P 21 41 00.1 +0.1
baz=86,SNR=15
324A Moseley Ranch, 85.57 53 ⇓P P 21 40 59.8 -0.5
baz=86,SNR=8.2
L13A Double Diamond 85.57 41 ⇑P P 21 41 00.1 0.0
baz=86
P16A Fountain Green 85.58 44 ⇓P P 21 41 00.2 0.0
baz=86
CN2 Changchun 85.59 321 ⇑P P 21 41 01.6 +1.5
CN2 *es*P sP 21 41 20.6 +5.4
CN2 *e*S S 21 51 29.1 -0.4
CN2 pmax pmax
comp=Z,50nm,1.2s,mb5.6
CN2 pmax pmax
comp=Z,400nm,7.0s
CN2 LR LR
comp=N,200nm,17.0s,MS4.8
CN2 LR LR
comp=E,300nm,17.0s,MS4.8
CN2 LR LR
comp=Z,500nm,19.0s,MS4.9
M14A Sheep Mountain 85.60 42 ⇓P P 21 40 60.0 -0.3
baz=86,SNR=8.7
425A Indio Mountain 85.62 54 ⇑P P 21 41 00.4 -0.2
baz=86,SNR=9.7
V20A Brimhall 85.65 48 ⇓P P 21 41 00.6 0.0
baz=86
G10A Bishop Farm, J 85.66 37 ⇑P P 21 41 00.7 +0.3
baz=86,SNR=5.4
WTV Waterville 85.67 34 P P 21 41 00.7 +0.3
626A Big Bend Ranch 85.67 56 ⇓P P 21 41 00.4 -0.5
baz=86,SNR=18
KLR Kul'dur 85.69 328 *e*P P 21 40 57.2 -3.3
KLR pmax pmax
comp=Z,50nm,1.7s,mb5.5
TMUT Trail Mountain 85.70 44 *e*P P 21 41 00.7 -0.1
comp=Z,26nm,1.0s,mb5.4
Y22A Socorro 85.74 51 ⇓P P 21 41 01.2 +0.1
baz=86
MNTX Cornudas Mount 85.77 53 *e*P P 21 40 58.6 -2.7
comp=Z,8.3nm,1.1s,mb4.9
T19A Beclabito 85.81 47 ⇓P P 21 41 01.6 +0.2
baz=86,SNR=9.8
K13A Stover Farm, H 85.82 40 ⇓P P 21 41 01.8 +0.5
baz=86
WHN Wuhan 85.84 305 P P 21 40 59.1 -2.6
WHN S S 21 51 25.8 -6.8
LENM Lemitar 85.85 50 *e*P P 21 41 00.5 -1.1
LENM *e* 21 41 19.9
LAZ Ladron 85.85 50 *e*P P 21 41 01.8 +0.1
comp=Z,6.6nm,1.1s,mb4.8
W21A San Fidel 85.86 49 ⇓P P 21 41 01.8 +0.1
baz=86
I12A Atlanta 85.87 39 ⇓P P 21 41 01.7 +0.2
baz=86,SNR=12
PLCA Paso Flores 85.89 132 LR LR 22 11 39.0
comp=Z,350nm,18.8s,MS4.8,baz=273,slow=30
U20A Newcomb 85.91 48 ⇓P P 21 41 01.8 -0.1
baz=86,SNR=10
H11A Donnelly 85.92 38 ⇑P P 21 41 01.5 -0.3
baz=86,SNR=7.9
325A Bean Ranch, Si 85.92 54 ⇓P P 21 41 01.5 -0.6
baz=86
TXAR Lajitas Array 85.92 56 P P 21 41 00.7 -1.5
comp=Z,15nm,1.1s,mb5.1,baz=210,slow=6.8,SNR=31
TXAR PKKPbc PKKPbc 21 59 02.5 -0.8
comp=Z,0.2nm,0.4s,baz=107,slow=4.3,SNR=6.5
526A Mary Lane Ranc 85.95 55 ⇓P P 21 41 01.5 -0.7
baz=86,SNR=12
X22A Bernardo 86.00 50 ⇑P P 21 41 03.1 +0.7
baz=86
O16A Springville 86.01 43 ⇓P P 21 41 02.6 +0.3
baz=86
F10A Beach Ranch, E 86.02 36 ⇑P P 21 41 01.9 -0.3
baz=86,SNR=11
SRU San Rafael 86.04 45 ⇑P P 21 41 02.5 0.0
baz=86
SRU San Rafael 86.04 45 *e*P P 21 41 02.0 -0.5
SRU pmax pmax
comp=Z,40nm,1.5s,mb5.4
SRU San Rafael 86.04 45 *e*P P 21 41 02.0 -0.5
comp=Z,40nm,1.5s,mb5.4
R18A Canyonlands Na 86.06 46 ⇓P P 21 41 02.4 -0.1
baz=86
IPM Ipoh 86.07 276 P P 21 41 04.4 +1.2
BNM Barren Site 86.09 51 *e*P P 21 41 02.8 0.0
comp=Z,18nm,1.4s,mb5.1
HVU Hansel Valley 86.11 42 *e*P P 21 41 03.1 +0.4
HVU pmax pmax
comp=Z,23nm,1.4s,mb5.2
HVU Hansel Valley 86.11 42 *e*P P 21 41 03.1 +0.4
comp=Z,23nm,1.4s,mb5.2
OD2 Odessa Site #2 86.11 35 *e*P P 21 41 03.1 +0.5
HLID Hailey 86.16 39 ⇑P P 21 41 02.5 -0.4
baz=86,SNR=9.2
HLID Hailey 86.16 39 *e*P P 21 41 02.8 -0.1
comp=Z,7.8nm,1.1s,mb4.8
627A Terlingua Ranc 86.19 56 ⇑P P 21 41 02.5 -1.0
baz=86,SNR=18
G11A Walters Elk Ra 86.20 37 ⇓P P 21 41 02.8 -0.2
baz=86,SNR=17
J13A Cove Ranch, Pi 86.20 40 ⇑P P 21 41 02.8 -0.3
baz=86,SNR=7.1
124A Stringfield Ra 86.21 52 ⇓P P 21 41 03.0 -0.5
baz=86
S19A Harvey Farm, M 86.22 47 ⇓P P 21 41 03.3 -0.1
baz=86
V21A Milan 86.22 49 ⇑P P 21 41 03.1 -0.4
baz=86
426A McDonald Obser 86.28 55 ⇓P P 21 41 02.9 -1.0
baz=86,SNR=9.7
DAU Daniels Canyon 86.28 43 *e*P P 21 41 03.0 -0.6
Q18A Rafter H Ranch 86.29 45 ⇑P P 21 41 03.3 -0.4
baz=86
K14A Jones Ranch, D 86.30 41 ⇑P P 21 41 03.3 -0.4
baz=86
A07A Ashnola River, 86.33 33 ⇓P P 21 41 03.8 +0.1
baz=86,SNR=6.4
527A Woodward Ranch 86.35 55 ⇓P P 21 41 03.4 -0.9
baz=86,SNR=16
MVCO Mesa Verde 86.36 47 ⇑P P 21 41 04.2 0.0
baz=86
MVCO Mesa Verde 86.36 47 *e*P P 21 41 05.2 +1.1
comp=Z,12nm,1.2s,mb5.0
MVCO *e*pP pP 21 41 21.5 +6.3
225A Deer Hill, Car 86.39 53 ⇓P P 21 41 04.1 -0.3
baz=86
E10A Myers Farm, Un 86.40 36 ⇓P P 21 41 04.2 +0.2
baz=87
B08A Colville Reser 86.41 34 ⇓P P 21 41 04.3 +0.2
baz=87
R19A Curley Farm, L 86.43 46 ⇓P P 21 41 04.1 -0.3
baz=87
PMR Palmer 86.43 12 *e*P P 21 41 03.9 +0.1
N16A Rees Ranch, Co 86.43 43 ⇑P P 21 41 04.3 -0.1
baz=87
L15A Malad City 86.47 42 ⇓P P 21 41 04.1 -0.4
baz=87
H12A Diamond D Ranc 86.48 38 ⇓P P 21 41 04.4 -0.2
baz=87,SNR=8.6
O17A Robinson Place 86.49 44 ⇑P P 21 41 04.7 0.0
baz=87,SNR=16
P18A Preston Nutter 86.50 44 ⇓P P 21 41 04.5 -0.2
baz=87
TTA Tatalina 86.54 9 *e*P P 21 41 04.7 +0.4
VNA1 Neumayer--Stat 86.57 176 *e*Pdiff P 21 41 05.7 +1.0
C09A Chrisman Ranch 86.60 34 ⇑P P 21 41 05.1 +0.1
baz=87
ANMO Albuquerque 86.61 50 *e*P P 21 41 05.3 -0.1
ANMO pmax pmax
comp=Z,8.0nm,1.4s
ANMO Albuquerque 86.61 50 *e*P P 21 41 05.3 -0.1
comp=Z,8.3nm,1.4s,mb4.8
326A Caldwell Ranch 86.63 54 ⇓P P 21 41 05.3 -0.3
baz=87
D10A Wagner Farm, O 86.66 35 ⇓P P 21 41 05.8 +0.4
baz=87
DIV Divide 86.70 14 *e*P P 21 41 05.5 +0.3
comp=Z,25nm,1.0s,mb5.4
KULM Kulim 86.72 277 P P 21 41 07.7 +1.3
KULM Kulim 86.72 277 *e*P P 21 41 02.4 -4.1
comp=Z,50nm,1.1s,mb5.7
HWUT Hardware Ranch 86.76 42 *e*P P 21 41 08.1 +2.1
comp=Z,4.6nm,0.8s,mb4.8
GDL2 Guadalupe Moun 86.77 53 *e*P P 21 41 06.2 -0.1
Q19A Hogan Spring (86.78 45 ⇓P P 21 41 06.0 -0.2
baz=87
V22A San Miguel Ran 86.79 49 ⇑P P 21 41 06.3 +0.1
baz=87
Y24A Capitan 86.83 51 ⇑P P 21 41 06.5 0.0
baz=87,SNR=17
427A Hayter Ranch, 86.84 55 ⇓P P 21 41 06.3 -0.4
baz=87,SNR=8.7
PNT Penticton 86.89 33 P P 21 41 05.9 -0.5
226A Malaga, Loving 86.90 54 ⇓P P 21 41 06.6 -0.3
baz=87
I14A Mackay 86.94 40 ⇑P P 21 41 07.3 +0.5
baz=87
W23A Werner Place, 86.94 50 ⇑P P 21 41 07.3 +0.3
baz=87
F12A Elk City 86.98 37 ⇓P P 21 41 06.3 -0.6
baz=87,SNR=6.4
528A Cox Ranch, San 86.98 56 ⇑P P 21 41 06.7 -0.6
baz=87,SNR=11
L16A Fish Haven 87.07 42 ⇑P P 21 41 07.1 -0.3
baz=87
S21A Coal Bank Pass 87.08 47 ⇑P P 21 41 07.4 -0.2
baz=87
J15A Blackfoot 87.24 40 ⇑P P 21 41 08.2 0.0
baz=87
126A Clayton Basin, 87.24 53 ⇑P P 21 41 08.2 -0.3
baz=87
M17A Scullys Gap (B 87.24 43 ⇓P P 21 41 07.9 -0.5
baz=87
P19A Cripple Cowboy 87.33 45 ⇑P P 21 41 08.1 -0.7
baz=88
428A Kincaid Ranch, 87.33 55 ⇑P P 21 41 08.7 -0.3
baz=88,SNR=8.4
T22A Edith 87.35 48 ⇓P P 21 41 08.6 -0.4
baz=88
PSI Prapat 87.36 274 P P 21 41 09.4 -0.2
comp=Z,66nm,1.0s,mb5.8,baz=160,slow=3.2,SNR=52
Y25A Mesa, Roswell 87.37 52 ⇑P P 21 41 08.6 -0.5
baz=88,SNR=16
Q20A Ridgley Place, 87.42 46 ⇓P P 21 41 09.2 -0.1
baz=88
SNG Songkhla 87.49 279 P P 21 41 11.0 +0.8
comp=Z,140nm,0.8s,mb6.2
W24A Lazy 6 Ranch, 87.49 50 ⇑P P 21 41 09.4 -0.2
baz=88
F13A Darby 87.52 38 ⇑P P 21 41 09.7 +0.2
baz=88
328A Wristen Ranch, 87.54 55 ⇓P P 21 41 09.3 -0.7
baz=88
O19A Miners Draw (B 87.59 44 ⇓P P 21 41 09.7 -0.3
baz=88
M18A Lyman 87.59 43 ⇓P P 21 41 09.6 -0.4
baz=88
N18A Larsen Ranch, 87.60 44 ⇓P P 21 41 10.5 +0.5
baz=88
X25A Clemmons Ranch 87.69 51 ⇑P P 21 41 10.5 -0.1
baz=88,SNR=7.4
K17A Gardner Place, 87.79 42 ⇓P P 21 41 11.3 +0.4
baz=88
MCMT McKenzie Canyo 87.81 39 *e*P P 21 41 10.2 -0.8
comp=Z,3.2nm,1.1s,mb4.5
Q21A Lamborn Mesa, 87.84 46 ⇓P P 21 41 11.5 +0.3
baz=88
N19A John Jarvie Ra 87.87 44 ⇑P P 21 41 11.7 +0.4
baz=88
KTH Kantishna Hill 87.91 11 *e*P P 21 41 09.9 -1.1
comp=Z,2μm,0.7s
CHUM Lake Minchumin 87.99 10 *e*P P 21 41 10.2 -1.1
comp=Z,48nm,1.5s,mb5.5
B11A Sandpoint 88.00 35 ⇓P P 21 41 12.3 +0.5
baz=88
Y26A Elida 88.00 52 ⇓P P 21 41 12.3 +0.2
baz=88
SKAG Skagway 88.01 19 *e*P P 21 41 11.2 -0.3
R22A Saguache, Gunn 88.07 47 ⇑P P 21 41 12.9 +0.5
baz=88
Z27A Tatum 88.16 53 ⇑P P 21 41 13.3 +0.4
baz=88
W25A X Bar L Ranch, 88.17 51 ⇓P P 21 41 13.0 +0.1
baz=88
REDW Red Top Meadow 88.17 41 *e*P P 21 41 12.1 -0.6
comp=Z,13nm,1.3s,mb5.0
TPAW Teton Pass 88.18 41 *e*P P 21 41 12.6 -0.2
comp=Z,17nm,1.4s,mb5.1
M19A Rock Springs 88.21 43 ⇓P P 21 41 12.8 -0.1
baz=88
K18A Toltan Ranch, 88.27 42 ⇓P P 21 41 13.2 0.0
baz=88,SNR=11
Q22A Crested Butte, 88.30 46 ⇑P P 21 41 13.0 -0.4
baz=88
X26A CR and CF Fran 88.31 51 ⇓P P 21 41 13.3 -0.3
baz=88
A11A Hall Mountain, 88.32 34 ⇓P P 21 41 13.4 +0.2
baz=88
MSO Missoula 88.35 37 *e*P P 21 41 13.8 +0.3
comp=Z,4.1nm,1.0s,mb4.6
E14A Clinton 88.36 38 ⇑P P 21 41 13.6 +0.1
baz=89
V25A Rancho No Teng 88.36 50 ⇓P P 21 41 13.4 -0.4
baz=88
L19A Farson 88.41 43 ⇑P P 21 41 13.2 -0.6
baz=89,SNR=8.6
BPAW Bear Paw Mtn. 88.41 10 *e*P P 21 41 11.8 -1.5
comp=Z,9.5nm,1.2s,mb4.9
SMCO Snowmass 88.41 46 *e*P P 21 41 14.0 +0.1
comp=Z,12nm,1.2s,mb5.0
IMW Indian Meadow 88.41 41 *e*P P 21 41 14.5 +0.6
comp=Z,9.0nm,1.2s,mb4.9
N20A Spence Gulch, 88.43 44 ⇑P P 21 41 13.3 -0.7
baz=89,SNR=20
LOHW Long Hollow 88.46 41 *e*P P 21 41 13.6 -0.4
comp=Z,10nm,1.4s,mb4.9
BSMT Bassoo Peak 88.49 36 *e*P P 21 41 14.2 +0.1
BSMT *e*pP pP 21 41 25.4 +0.2
J18A Kendall Valley 88.59 42 ⇑P P 21 41 14.1 -0.6
baz=89,SNR=16
LRM Limekiln Ridge 88.61 38 *e*P P 21 41 14.4 -0.3
BW06 Boulder Array 88.64 42 ⇓P P 21 41 14.1 -0.8
baz=89,SNR=8.5
BW06 Boulder Array 88.64 42 *e*P P 21 41 13.8 -1.2
comp=Z,9.1nm,1.2s,mb5.0
PDAR Pinedale Array 88.64 42 P P 21 41 13.2 -1.7
comp=Z,5.1nm,1.1s,mb4.8,baz=242,slow=3.2,SNR=8.1
PDAR LR LR 22 15 54.5
comp=Z,323nm,18.3s,MS4.8,baz=246,slow=32
SDCO Great Sand Dun 88.69 48 *e*P P 21 41 15.0 -0.3
comp=Z,14nm,1.4s,mb5.1
MENT Mentasta 88.76 14 *e*P P 21 41 14.5 -0.5
CHMT Chamberlain Mo 88.78 37 *e*P P 21 41 14.3 -1.2
M20A Sweetwater, Wa 88.82 44 ⇓P P 21 41 15.8 0.0
baz=89
E15A Deer Lodge 88.84 38 ⇓P P 21 41 15.8 0.0
baz=89
N21A Black Mountain 88.87 45 ⇑P P 21 41 15.9 -0.2
baz=89,SNR=7.8
X27A F and S Farms, 88.88 52 ⇓P P 21 41 16.1 -0.2
baz=89

BOZ Bozeman (W) 88.98 39 ⇑P P 21 41 16.1 -0.4
baz=89,SNR=7.5
BOZ Bozeman (W) 88.98 39 eP P 21 41 16.2 -0.3
BOZ pmax pmax
comp=Z,22nm,1.8s,mb5.2
BOZ Bozeman (W) 88.98 39 eP P 21 41 16.2 -0.2
comp=Z,22nm,1.8s,mb5.2
I18A Diamond G Ranc 88.99 41 ⇓P P 21 41 16.5 -0.1
baz=89
L20A Wamsutter 89.00 43 ⇓P P 21 41 16.5 -0.1
baz=89,SNR=11
SEY Seymchan 89.01 346⇑i P P 21 41 16.0 -0.2
KKTK Khon Kaen 89.11 288 ⇑P P 21 41 19.5 +1.8
comp=Z,556nm,0.9s
K19A Absolon Red Bu 89.11 42 ⇑P P 21 41 16.8 -0.4
baz=89
BJT Baijiatuau 89.26 314 P P 21 41 17.3 -0.6
BJI Beijing 89.26 314 P P 21 41 18.8 +0.9
BJI sP sP 21 41 36.0 +2.9
BJI PP PP 21 44 54.7 +5.5
BJI S S 21 52 00.5 -4.5
BJI SS SS 21 57 57.1 -3.3
BJI pmax pmax
comp=Z,22nm,1.1s,mb5.4
BJI pmax pmax
comp=Z,300nm,4.2s
BJI LR LR
comp=N,260nm,17.3s,MS4.8
BJI LR LR
comp=E,140nm,19.3s,MS4.8
BJI LR LR
comp=Z,95nm,17.3s,MS4.3
M21A Separation Pea 89.41 44 ⇓P P 21 41 18.7 +0.1
baz=90
ENH Enshi 89.43 303 eP P 21 41 20.1 +1.2
N22A Wattenberg Ran 89.59 45 ⇓P P 21 41 19.6 +0.2
baz=90
L21A Rawlins 89.59 44 ⇓P P 21 41 19.0 -0.4
baz=90
B14A Marquette Ranc 89.61 36 ⇓P P 21 41 18.5 -0.8
baz=90,SNR=10
COLA College 89.67 11 eP P 21 41 17.9 -1.3
COLA pmax pmax
comp=Z,35nm,1.1s,mb5.6
COLA College 89.67 11 eP P 21 41 17.9 -1.3
comp=Z,35nm,1.1s,mb5.6
WALA Waterton Lakes 89.67 35 eP P 21 41 19.4 -0.2
comp=Z,1.1nm,1.5s,mb4.0
F17A Fitzpatrick Pl 89.69 39 ⇓P P 21 41 19.6 -0.1
baz=90
E17A Martinsdale 89.88 39 ⇑P P 21 41 20.7 0.0
baz=90
A14A Double T Ranch 89.89 35 ⇓P P 21 41 20.0 -0.6
baz=90,SNR=14
G18A Lazy EL Ranch, 90.01 40 ⇓P P 21 41 21.3 0.0
baz=90
GYA Guiyang 90.02 299 P P 21 41 23.0 +1.2
GYA pP pP 21 41 37.6 +4.7
GYA PP PP 21 44 59.7 +4.2
GYA SKS 21 51 48.0
GYA S S 21 52 10.7 -1.9
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.4
GYA pmax pmax
comp=Z,130nm,5.8s
GYA LR LR
comp=N,620nm,20.8s,MS5.1
GYA LR LR
comp=E,530nm,21.6s,MS5.1
GYA LR LR
comp=Z,740nm,22.7s,MS5.1
RLMT Red Lodge 90.08 40 eP P 21 41 21.8 +0.2
comp=Z,13nm,1.4s,mb5.0
F18A Big Timber 90.24 39 ⇓P P 21 41 21.8 -0.5
baz=90
A15A Johnson Ranch, 90.26 36 ⇑P P 21 41 21.7 -0.7
baz=90,SNR=13
D17A Six Diamond Ra 90.36 38 ⇑P P 21 41 22.3 -0.6
baz=91,SNR=13
E18A Harlowton 90.49 39 ⇑P P 21 41 23.0 -0.5
baz=91,SNR=10
C17A Wharram Farm, 90.59 38 ⇑P P 21 41 23.7 -0.2
baz=91,SNR=6.0
DAWY Dawson 90.72 15 eP P 21 41 24.6 +0.5
A16A West Butte Ran 90.86 36 ⇑P P 21 41 24.8 -0.3
baz=91,SNR=18
D18A Linhart Farms, 90.89 38 ⇑P P 21 41 25.5 +0.1
baz=91
EGAK Eagle 90.93 14 eP P 21 41 25.6 +0.6
comp=Z,34nm,1.3s,mb5.5
B17A L&G Farms, Che 90.93 37 ⇑P P 21 41 25.5 0.0
baz=91
NST Nakhon Sawan 91.22 286 P P 21 41 30.0 +2.4
A17A Triple J Farms 91.35 36 ⇓P P 21 41 27.1 -0.3
baz=92,SNR=12
EGMT Eagleton 91.37 38 ⇓P P 21 41 27.7 +0.1
baz=92
EGMT Eagleton 91.37 38 eP P 21 41 26.9 -0.7
comp=Z,20nm,1.4s,mb5.3
BILL Billbino 91.38 353⇑eP P 21 41 27.3 +0.2
COLD Coldfoot 91.44 9 eP P 21 41 26.9 -0.5
comp=Z,14nm,1.1s,mb5.2
XAN Xi'an 91.53 306 P P 21 41 29.8 +1.1
XAN pP pP 21 41 42.1 +2.3
XAN sP sP 21 41 46.9 +3.1
XAN PP PP 21 45 08.2 +0.8
XAN S S 21 52 27.0 +0.9
XAN pmax pmax
comp=Z,22nm,1.1s,mb5.4
XAN pmax pmax
comp=Z,31nm,4.7s
XAN LR LR
comp=N,83nm,12.9s,MS4.3
XAN LR LR
comp=E,40nm,17.2s,MS4.3
XAN LR LR
comp=Z,63nm,22.6s
B18A Beardsley Farm 91.56 37 ⇑P P 21 41 28.2 -0.2
baz=92
A18A Metzger Ranch, 91.80 37 ⇑P P 21 41 29.4 -0.1
baz=92,SNR=16
WMOK Wichita Mounta 92.08 53 eP P 21 41 30.8 -0.4
WMOK pmax pmax
comp=Z,15nm,0.9s,mb5.3
WMOK Wichita Mounta 92.08 53 eP P 21 41 30.8 -0.4
comp=Z,15nm,0.9s,mb5.3
EDM Edmonton 92.39 32 eP P 21 41 31.7 -0.4
KMI Kunming 92.69 296 P P 21 41 36.1 +1.9
KMI pP pP 21 41 49.7 +4.3
KMI sP sP 21 41 54.8 +5.4
KMI PP PP 21 45 21.3 +4.6
KMI SKS 21 52 04.6
KMI S S 21 52 35.4 -1.5
KMI sS sS 21 52 57.8 +2.4
KMI pmax pmax
comp=Z,48nm,1.1s,mb5.8
KMI pmax pmax
comp=Z,140nm,3.5s
KMI LR LR
comp=N,110nm,16.6s,MS4.7
KMI LR LR
comp=E,190nm,18.9s,MS4.7
KMI LR LR
comp=Z,250nm,18.2s,MS4.7
LAO LASA Array 92.72 40 eP P 21 41 33.2 -0.6
comp=Z,22nm,1.1s,mb5.5
HHC Hu-ho-hao-te 92.73 313 eP P 21 41 34.7 +0.7
HHC pP pP 21 41 48.2 +3.0
HHC sP sP 21 41 53.5 +4.3
HHC PP PP 21 45 20.0 +3.4
HHC SKS 21 52 02.5
HHC S S 21 52 33.8 -2.8
HHC sS sS 21 52 56.9 +1.8
HHC pmax pmax
comp=Z,11nm,0.9s,mb5.3
HHC pmax pmax
comp=Z,160nm,4.8s
HHC LR LR
comp=N,100nm,19.2s,MS4.6
HHC LR LR
comp=E,160nm,18.9s,MS4.6
HHC LR LR
comp=Z,150nm,19.2s,MS4.5
RSSD Black Hills 92.79 43 eP P 21 41 33.8 -0.4
RSSD pmax pmax
comp=Z,14nm,1.2s,mb5.3
RSSD Black Hills 92.79 43 eP P 21 41 33.8 -0.4
comp=Z,14nm,1.2s,mb5.3
BDT Bhumibol Dam 92.83 287 P P 21 41 37.0 +2.0
comp=Z,22nm,1.0s,mb5.5
CM31 Chiang Mai Arr 93.34 288 eP P 21 41 38.2 +0.8
comp=Z,41nm,1.0s,mb5.8
CMAR Chiang Mai Arr 93.34 288 P P 21 41 38.8 +1.4
comp=Z,33nm,0.9s,mb5.7,baz=125,slow=3.0,SNR=154
CMAR LR LR 22 21 22.8
comp=Z,196nm,18.9s,MS4.6,baz=147,slow=34
CHG Chiang Mai 93.48 289 PG P 21 41 39.6 +1.6
comp=Z,34nm,0.9s,mb5.8
CHTO Chiang Mai 93.48 289 eP P 21 41 39.1 +1.1
JTS JuntasAbangare 94.01 81 eP P 21 41 40.7 +0.1
JTS pmax pmax
comp=Z,31nm,1.2s
JTS JuntasAbangare 94.01 81 eP P 21 41 40.7 +0.1
comp=Z,31nm,1.2s,mb5.6
DGMT Dagmar 94.79 39 ⇓P P 21 41 43.3 0.0
baz=95
DGMT Dagmar 94.79 39 eP P 21 41 43.1 -0.2
comp=Z,67nm,1.3s,mb5.9
YAK Yakutsk 95.05 337 eP P 21 41 43.6 -0.6
INK Inuvik 95.57 14 P P 21 41 44.6 -1.8
comp=Z,5.5nm,1.0s,mb4.9,baz=212,slow=7.8,SNR=6.2
INK Inuvik 95.57 14 eP P 21 41 46.3 -0.1
INK pmax pmax
comp=Z,8.0nm,1.1s
INK Inuvik 95.57 14 eP P 21 41 46.2 -0.2
comp=Z,8.2nm,1.1s,mb5.1
LZH Lanzhou 96.17 306 eP P 21 41 51.6 +1.7
LZH pP pP 21 42 05.2 +4.1
LZH sP sP 21 42 10.3 +5.2
LZH PP PP 21 45 47.5 +3.9
LZH SKS 21 52 23.0
LZH eS S 21 53 04.6 -2.2
LZH pmax pmax
comp=Z,22nm,1.5s,mb5.4
LZH pmax pmax
comp=Z,110nm,9.3s
LZH LR LR
comp=E,500nm,17.5s
LZH LR LR
comp=Z,800nm,19.0s,MS5.2
YKA Yellowknife Ar 97.27 24 P P 21 41 53.7 -0.5
comp=Z,2.3nm,0.9s,mb4.6,baz=236,slow=4.4,SNR=12
YKA Yellowknife Ar 97.27 24 P P 21 41 53.7 -0.5
ECSD EROS Data Cent 97.41 46 eP P 21 41 54.9 -0.5
comp=Z,14nm,1.3s,mb5.2
ULN Ulaanbaatar 98.69 318 eP P 21 42 02.0 +1.0
SONM Songino Array 99.09 318 P P 21 42 01.2 -1.6
comp=Z,1.0nm,0.9s,mb4.4,baz=64,slow=3.4,SNR=6.2
SONM PP PP 21 46 02.7 -3.0
comp=Z,0.6nm,0.8s,baz=98,slow=8.0,SNR=3.6
SONM LR LR 22 28 13.3
comp=Z,161nm,18.1s,MS4.6,baz=89,slow=36
SONM Songino Array 99.09 318 P P 21 42 01.2 -1.6
SONM 21 46 02.7
GTA Gaotai 100.37 308⇓eP Pdif 21 42 10.3 +1.7
GTA pP 21 42 23.9
GTA sP 21 42 29.2
GTA PP PP 21 46 20.0 +4.3
GTA SKS 21 52 43.9
GTA S Sdif 21 53 39.2 -3.0
GTA pmax pmax
comp=Z,4.0nm,1.4s
GTA pmax pmax
comp=Z,60nm,5.7s
GTA LR LR
comp=N,140nm,19.2s,MS4.7
GTA LR LR
comp=E,170nm,19.8s,MS4.7
GTA LR LR
comp=Z,210nm,21.0s,MS4.6
ZAK Zakamensk 101.94 320 eP Pdif 21 42 14.6 -1.0
ZAK pmax pmax
comp=Z,2.0nm,1.2s
ERPA Erie 108.43 51 ePdif Pdif 21 42 50.7 +6.3
ZALV Zalesovo Beam 113.80 321 PKiKP PKiKP 21 46 57.4 -2.6
comp=Z,1.4nm,0.7s,baz=130,slow=2.3,SNR=6.0
ZALV PP PP 21 47 56.6 +2.9
comp=Z,1.5nm,0.8s,baz=87,slow=6.4,SNR=4.3
MKAR Makanchi Array 114.58 312 PKP PKiKP 21 47 01.0 -0.8
comp=Z,1.6nm,0.7s,baz=68,slow=0.7,SNR=15
NVS Novosibirsk 114.80 321 ePKIKP PKiKP 21 46 55.1 -6.9
KURK Kurchatov 117.35 317 PKP PKPdf 21 47 05.7 -1.3
comp=Z,0.8nm,0.4s,baz=92,slow=2.0,SNR=12
KURK Kurchatov 117.35 317 PKIKP PKPdf 21 47 05.7 -1.3
KURK pmax pmax
comp=Z,1.0nm,0.4s
KURK Kurchatov 117.35 317 ePKPdf PKPdf 21 47 05.5 -1.5
TKM2 Tokmak 2 118.91 308 ePKIKP PKPdf 21 47 09.6 -0.7
UCH Uchtor 119.65 307 ePKPdf PKPdf 21 47 11.9 +0.1
UCH ePP PP 21 48 34.6 -0.5
AAK Ala-Archa 119.70 307 PKP PKPdf 21 47 10.9 -0.9
comp=Z,1.2nm,0.4s,baz=210,slow=10,SNR=4.7
AAK Ala-Archa 119.70 307c iPKIKP PKPdf 21 47 11.5 -0.3
AAK Ala-Archa 119.70 307 ePKPdf PKPdf 21 47 10.7 -1.1
EKS2 Erkin-Say 120.23 307 ePKPdf PKPdf 21 47 12.0 -0.8
AML Almayashu 120.25 307 ePKPdf PKPdf 21 47 12.8 -0.1
AML ePP PP 21 48 38.2 -1.0
BVAR Borovoye Array 122.40 319 PKP PKPdf 21 47 16.1 -0.5
comp=Z,3.6nm,0.8s,baz=90,slow=3.0,SNR=18
BVAR PP PP 21 48 54.2 +0.9
comp=Z,1.9nm,0.8s,baz=72,slow=7.7,SNR=4.0
BRVK Borovoye 122.46 319c iPKIKP PKPdf 21 47 15.8 -1.0
BRVK Borovoye 122.46 319 ePKPdf PKPdf 21 47 15.7 -1.1
KBL Kabul 123.25 297 ePKIKP PKPdf 21 47 19.1 +0.2
SUMG Summit 124.49 15 ePKPdf PKPdf 21 47 18.9 -1.2
SUMG Summit 124.49 15 i P PKPdf 21 47 19.9 -0.3
comp=Z,5.3nm,1.1s
SVE Sverdlovsk 127.22 325⇑iPKIKP PKPdf 21 47 25.7 -0.1
SVE pmax pmax
comp=Z,11nm,1.0s
SVE MLR MLR
comp=Z,272nm,19.0s,MS5.0
ARU Arti 128.44 325 i PKIKP PKPdf 21 47 28.1 0.0
ARU S SKSac 21 54 29.1 -3.8
ARU MLR MLR
comp=Z,236nm,20.0s,MS4.9
ARU Arti 128.44 325 ePKPdf PKPdf 21 47 27.6 -0.5
ABKAR Abkulak array 129.45 316 ePKPdf PKPdf 21 47 29.8 -0.4
ARCES ARCESS Array B 131.42 351 PKP PKPdf 21 47 32.1 -1.3
comp=Z,2.2nm,0.6s,baz=349,slow=1.2,SNR=11
FINES FINESS Array B 138.49 345 PKhKP 21 47 39.1
comp=Z,4.2nm,1.1s,baz=0.0,slow=1.9,SNR=5.8
MAK Makhachkala 139.34 310 i PKIKP PKPdf 21 47 46.0 -3.0
MAK e 21 50 39.4
MAK ePPP 21 53 45.6
MAK e 21 54 48.5
MAK MLR MLR
comp=Z,204nm,16.0s,MS5.0
OBN Obninsk 139.85 332⇑iPKIKP PKPdf 21 47 51.7 +2.2
OBN e 21 48 06.9
OBN e 21 54 51.7
OBN pmax pmax
comp=Z,7.0nm,0.4s
OBN Obninsk 139.85 332⇑ePKP PKPdf 21 47 51.7 +2.2
VSR Storozhevoye 141.00 326 ePKIKP PKPdf 21 47 50.2 -1.5
VSR pmax pmax
comp=Z,10.0nm,1.2s
VSR pmax pmax
comp=N,5.0nm,0.6s
VSR pmax pmax
comp=E,7.0nm,0.8s
NOA NORSAR Array B 141.31 355 PKhKP 21 47 45.8
comp=E,0.5nm,0.7s,baz=15,slow=2.8,SNR=3.8
ZEI Tsey 141.93 311 ePKHKP PKPdf 21 47 48.7 -5.0
ZEI pmax pmax
comp=Z,6.0nm,0.9s
GNI Garni 142.11 307 PKIKP PKPdf 21 47 53.9 -0.2
KIV Kislovodsk 142.33 314 i PKIKP PKPdf 21 47 51.6 -2.7
KIV pmax pmax
comp=Z,7.0nm,1.1s
KIV Kislovodsk 142.33 314 ePKPdf PKPdf 21 47 50.3 -4.1
IZAR Zarasai 143.28 340 eP PKPdf 21 47 52.9 -2.7
IZAR AMB AMB 21 47 54.5
comp=Z,4.0nm,0.9s
ISAL Salakas 143.46 340 eP PKPdf 21 47 53.4 -2.6
ISAL AMB AMB 21 47 55.1
comp=Z,5.8nm,1.1s
IDID Didziasalis 143.48 339 eP PKPdf 21 47 53.2 -2.7
IDID AMB AMB 21 47 54.9
comp=Z,3.9nm,1.1s
IIGN Ignalina 143.62 340 eP PKPdf 21 47 53.9 -2.4
IIGN AMB AMB 21 47 55.6
comp=Z,6.6nm,1.2s
MICGM Minsk 143.74 337 e PKPdf 21 47 51.0 -5.5
MNK Minsk 143.76 337 ePKHKP PKPdf 21 47 51.0 -5.5
SOC Sochi 144.45 314 i PKIKP PKPdf 21 47 56.0 -2.1
SOC pmax pmax
comp=Z,20nm,0.9s
DESE Dese 144.96 257 eP PKPdf 21 48 01.7 +1.8
DESE Dese 144.96 257 eP PKPdf 21 48 01.7 +1.8
ANN Anapa 145.37 318 i PKHKP PKPbc 21 47 55.9 -3.7
ANN e 21 55 04.1
ANN pmax pmax
comp=Z,193nm,1.3s
ANN MLR MLR
comp=Z,273nm,21.0s,MS5.0
SUW Suwalki 145.70 341 ePKP PKPdf 21 48 00.2 +0.3
SUW Suwalki 145.70 341 ePKPdf PKPdf 21 48 00.1 +0.2
MUD Monsted U'grnd 146.01 356⇑iPKP2 PKPdf 21 48 00.2 -0.1
MUD pmax pmax
comp=Z,25nm,1.0s
MUD Monsted U'grnd 146.01 356⇑i P PKPdf 21 48 00.2 -0.1
comp=Z,25nm,1.0s
AKASG Malin Array Be 146.11 332 PKPbc PKPbc 21 48 00.9 -0.8
comp=Z,23nm,0.8s,baz=39,slow=4.2,SNR=72
AKBB Malin Array Si 146.11 332 ePKP2 PKPdf 21 48 00.3 -0.4
KIEV Kiev 146.13 332 ePKP2 PKPab 21 48 00.5 -1.9
ESK Eskdalemuir 146.74 8 i PKP2 PKPab 21 48 03.5 -1.1
ESK Eskdalemuir 146.74 8 ePKPdf PKPdf 21 48 01.7 +0.1
SIM Simferopol' 147.31 320c iPKP2 PKPab 21 48 07.4 +0.2
SIM pmax pmax
comp=Z,49nm,0.8s
WAR Warsaw 147.88 341 ePKP PKPbc 21 48 07.4 +0.7
GKP Gorka Klasztor 147.94 346 ePKP PKPbc 21 48 06.9 +0.2
BSEG Bad Segeberg 148.41 354 ePKPbc PKPbc 21 48 08.1 +0.1
LVV L'vov 148.92 336 ePKP2 PKPbc 21 48 09.5 +0.1
KIS Kishinev 148.94 327 ePKP PKPdf 21 48 07.0 +1.5
KIS eL 22 43 00.0
KIS Kishinev 148.94 327 ePKIKP PKPdf 21 48 07.0 +1.5
KIS e 21 48 11.5
KIS e 21 48 21.0
IAS Iasi 149.41 329 PKP2 PKPbc 21 48 10.9 +0.2
KWP Kalwaria Pacla 149.56 337 ePKP PKPbc 21 48 11.2 +0.2
KWP Kalwaria Pacla 149.56 337 ePKPbc PKPbc 21 48 10.6 -0.4
KWP Kalwaria Pacla 149.56 337⇑iP PKPbc 21 48 11.1 +0.1
WIT Witteveen 149.78 358 ePKP PKPbc 21 48 12.5 +1.0
comp=Z,211nm,1.2s
NRDL Niedersach Rie 149.86 354 ePKPbc PKPbc 21 48 11.4 -0.2
OJC Ojcow 150.03 341 ePKPbc PKPbc 21 48 11.3 -0.8
OJC ePKPab PKPab 21 48 15.8 -2.1
OJC epPKPdf pPKPdf 21 48 23.6 +5.0
OJC Ojcow 150.03 341 ePKPbc PKPbc 21 48 11.3 -0.8
OJC ePKPab PKPab 21 48 15.8 -2.1
OJC epPKPdf pPKPdf 21 48 23.6 +5.0
TLCR 150.16 325 ⇓PKHKP PKPdf 21 48 09.3 +1.8
TLCR 150.16 325⇓iP PKPdf 21 48 09.3 +1.8
BR131 Keskin Array S 150.23 312 ePKPbc PKPbc 21 48 12.2 -0.8
BRTR Keskin Array B 150.23 312 PKPbc PKPbc 21 48 12.9 -0.1
comp=Z,15nm,0.9s,baz=128,slow=2.0,SNR=59
STHS Stebnicka Huta 150.26 338 ePKIKP PKPbc 21 48 13.6 +0.9
STHS Stebnicka Huta 150.26 338 ePKP PKPbc 21 48 13.6 +0.9
KOLS Kolonicke sedl 150.30 337 ePKIKP PKPdf 21 48 08.1 +0.5
KOLS i 21 48 13.5
KOLS Kolonicke sedl 150.30 337 ePKP PKPdf 21 48 08.1 +0.5
KOLS i 21 48 13.5
KSP Ksiaz 150.41 345 ePKP PKPbc 21 48 13.6 +0.5
KSP Ksiaz 150.41 345 ePKP PKPbc 21 48 12.9 -0.1
HWQ Hawqa 150.43 300 eP PKPbc 21 48 13.9 +0.3
CLZ Clausthal 150.47 353 ePKPbc PKPbc 21 48 13.5 +0.4
UZH Uzhgorod 150.54 336⇑iPKIKP PKPbc 21 48 13.7 +0.3
UZH e 21 48 18.0
UZH e 21 48 26.4
UZH eSS 22 11 54.5
NIE Niedzica 150.57 339 ePKPab PKPbc 21 48 13.4 0.0
NIE Niedzica 150.57 339 ePKPab PKPbc 21 48 13.4 0.0
WTSB Winterswijk 150.62 358 ePKP PKPbc 21 48 12.5 -1.0
comp=Z,49nm,1.1s
CLL Collm 150.63 350 ePKPbc PKPbc 21 48 13.5 0.0
CLL Collm 150.63 350⇑iPKIKP PKPbc 21 48 13.5 0.0
CLL i 21 48 18.6
CLL e 21 48 27.0
CLL MLR MLR
comp=Z,200nm,18.0s,MS5.0
CLL Collm 150.63 350⇑iPKP PKPbc 21 48 13.5 0.0
CLL ⇑iPKP PKPab 21 48 18.6 -1.8
CLL epPKP pPKPbc 21 48 27.0 +2.0
CLL LR LR
comp=Z,200nm,18.0s,MS5.0
CLL Collm 150.63 350⇑iPKPbc PKPbc 21 48 13.5 0.0
comp=Z,57nm,1.4s
CLL ⇑i(PKPab) PKPab 21 48 18.6 -1.8
comp=Z,42nm,1.0s
CLL epPKPbc pPKPbc 21 48 25.0 +0.1
CLL epPKPab pPKPab 21 48 31.0 -0.6
CLL e(PSKS) 22 02 31.0
CLL eSKKSdf SKKSdf 22 04 06.0 +0.5
CLL eSS SS 22 11 18.0 +12
CLL eSSS 22 16 36.0
CLL eSSSS 22 20 36.0
VRI Vrincioaia 150.76 328 ⇑P PKPbc 21 48 13.7 -0.3
VRI P 21 48 14.3
VRI Vrincioaia 150.76 328⇑iP PKPbc 21 48 13.7 -0.3
BHL Bhannes 150.76 299 eP PKPbc 21 48 14.9 +0.5
UPC Upice 150.79 345 ePKIKP PKPbc 21 48 14.4 +0.5
UPC Upice 150.79 345⇑ePKP PKPbc 21 48 14.4 +0.5
PLOR Plostina 150.81 328 PKIKP PKPbc 21 48 15.0 +0.9
TIRR Tirgusor 150.85 324 ⇑PKIKP PKPbc 21 48 11.6 -2.7
TIRR Tirgusor 150.85 324⇑iP PKPbc 21 48 11.6 -2.7
OKC Ostrava-Krasne 150.85 342 ePKIKP PKPbc 21 48 14.7 +0.6
OKC MLR MLR
comp=Z,200nm,18.4s,MS5.0
OKC Ostrava-Krasne 150.85 342⇑ePKP PKPbc 21 48 14.7 +0.6
OKC AMS AMS 23 04 40.0
comp=Z,200nm,18.4s
TRPA Tarpa 150.86 335⇑iP PKPbc 21 48 14.0 -0.2
DPC Dobruska-Polom 150.86 345 ePKIKP PKPbc 21 48 15.1 +1.0
DPC e 21 48 23.3
DPC MLR MLR
comp=Z,300nm,22.3s,MS5.0
DPC Dobruska-Polom 150.86 345⇑ePKP PKPbc 21 48 15.1 +1.0
DPC ePKPAB PKPab 21 48 23.3 +2.0
DPC AMS AMS 23 06 50.0
comp=Z,300nm,22.3s
BRG Berggiesshubel 150.88 348 ePKPbc PKPbc 21 48 13.1 -1.0
BRG Berggiesshubel 150.88 348 ePKP PKPdf 21 48 08.7 +0.2
comp=Z,2.3nm,0.9s
BRG i 21 48 14.3
comp=Z,25nm,1.0s
BRG i 21 48 19.2
comp=Z,29nm,1.0s
BRG ePP PP 21 51 48.7 -2.1
comp=Z,16nm,1.8s
BRG e 21 52 02.7
comp=Z,22nm,2.0s
BRG
comp=N,157nm,15.7s
BRG
comp=E,122nm,20.1s
BRG
comp=Z,339nm,19.8s
MORC Moravsky Berou 151.08 343 ⇑PKIKP PKPbc 21 48 14.9 +0.3
MORC Moravsky Berou 151.08 343 ePKPdf PKPdf 21 48 09.1 +0.3
MORC ePKPbc PKPbc 21 48 14.8 +0.2
MORC Moravsky Berou 151.08 343⇑iP PKPbc 21 48 14.9 +0.3
PVCC Panska Ves 151.09 347 ePKIKP PKPbc 21 48 15.1 +0.5
PVCC MLR MLR
comp=Z,300nm,18.8s,MS5.1
PVCC Panska Ves 151.09 347⇑ePKP PKPbc 21 48 15.1 +0.5
PVCC AMS AMS 23 07 50.0
comp=Z,300nm,18.8s
BUG Bochum--Univer 151.12 357 ePKPbc PKPbc 21 48 14.1 -0.6
MMAI Mount Meron Ar 151.18 298 PKPbc PKPbc 21 48 16.2 +0.8
comp=Z,49nm,1.0s,baz=74,slow=6.2,SNR=35
KECS Kecovo 151.32 338 i PKIKP PKPbc 21 48 16.1 +0.9
KECS e 21 48 24.6
KECS Kecovo 151.32 338 i PKP PKPbc 21 48 16.1 +0.9
KECS e 21 48 24.6
MLR Muntele Rosu 151.41 328 PKPbc PKPbc 21 48 14.6 -1.0
baz=71,slow=4.5
MOX Moxa 151.49 351 ePKP PKPbc 21 48 15.5 -0.1
comp=Z,47nm,1.6s
MOX
comp=Z,300nm,19.0s
MOX Moxa 151.49 351 ePKPbc PKPbc 21 48 15.6 0.0

UBBA	Unterbreizbach	151.52	353	ePKPbc	PKPbc	21 48 15.2	-0.4
PRA	Prague	151.55	347	⇑PKP	PKPbc	21 48 16.0	+0.3
TANN	Tannenbergstha	151.58	350	ePKPbc	PKPbc	21 48 15.6	-0.2
PRU	Pruhonice	151.60	347	ePKIKP	PKPbc	21 48 16.5	+0.7
PRU				MLR	MLR		
	comp=Z,200nm,16.6s,MS5.0						
PRU	Pruhonice	151.60	347	⇑ePKP	PKPbc	21 48 16.5	+0.7
PRU				AMS	AMS	23 00 10.0	
	comp=Z,200nm,16.6s						
VRAC	Vranov	151.76	344	PKPbc	PKPbc	21 48 14.9	-1.3
	comp=Z,2.7nm,0.4s,baz=306,slow=1.2,SNR=9.1						
NKC	Novy Kostel	151.76	350	ePKIKP	PKPbc	21 48 16.3	+0.1
NKC				e		21 48 25.4	
NKC				MLR	MLR		
	comp=Z,300nm,15.8s,MS5.2						
NKC	Novy Kostel	151.76	350	⇑ePKP	PKPbc	21 48 16.3	+0.1
NKC				ePKPAB	PKPab	21 48 25.4	+0.3
NKC				AMS	AMS	23 04 20.0	
	comp=Z,300nm,15.8s						
BEBN	Eben Emael	151.82	359	PKPbc	PKPbc	21 48 15.8	-0.5
UCC	Uccle	151.82	1	PKPbc	PKPbc	21 48 16.2	-0.1
HGN	Heimansgroeve	151.85	359	ePKP	PKPab	21 48 25.2	-0.2
	comp=Z,29nm,1.4s						
VYHS	Vyhne	151.85	340	ePKIKP	PKPdf	21 48 10.5	+0.5
VYHS				i		21 48 16.5	
VYHS				e		21 48 25.7	
VYHS	Vyhne	151.85	340	ePKP	PKPdf	21 48 10.5	+0.5
VYHS				i		21 48 16.5	
VYHS				e		21 48 25.7	
DRGR		151.88	334	PKIKP	PKPbc	21 48 17.0	+0.4
DRGR		151.88	334	⇓PKP	PKPbc	21 48 16.9	+0.3
DRGR		151.88	334	⇓iP	PKPbc	21 48 16.9	+0.3
MEM	Membach	152.00	359	PKPbc	PKPbc	21 48 16.3	-0.4
PSZ	Piszkesteto	152.00	338	ePKIKP	PKPbc	21 48 16.8	0.0
PSZ	Piszkesteto	152.00	338	⇑epPKP	PKPbc	21 48 16.8	0.0
PSZ	Piszkesteto	152.00	338	⇑iP	PKPbc	21 48 17.5	+0.7
TREC	Trest	152.04	345	ePKIKP	PKPbc	21 48 16.9	0.0
TREC				MLR	MLR		
	comp=Z,300nm,14.2s,MS5.2						
TREC	Trest	152.04	345	⇑ePKP	PKPbc	21 48 16.9	0.0
TREC				AMS	AMS	23 06 00.0	
	comp=Z,300nm,14.2s						
BCLA	Clavier	152.20	359	PKPab	PKPab	21 48 26.6	-0.3
ROTZ	Rotzenmuhle	152.25	350	ePKPbc	PKPbc	21 48 17.4	+0.1
SMOL	Smolenice	152.25	342	ePKIKP	PKPbc	21 48 18.6	+1.2
SMOL	Smolenice	152.25	342	ePKP	PKPbc	21 48 18.5	+1.1
TNS	Taunus Mts	152.26	355	ePKPbc	PKPbc	21 48 18.0	+0.7
GRF	Grafenberg Arr	152.48	351	ePKPbc	PKPbc	21 48 17.7	-0.1
GRF				eL		23 02 19.4	
	comp=Z,239nm,19.7s						
DOU	Dourbes	152.53	0	PKPbc	PKPbc	21 48 17.7	-0.2
BAIF	Baives	152.56	1	ePKIKP	PKPdf	21 48 10.7	-0.3
KHC	Kasperske Hory	152.62	348	ePKIKP	PKPbc	21 48 18.5	+0.4
KHC				e		21 48 23.0	
KHC				e		21 48 29.4	
KHC				MLR	MLR		
	comp=Z,300nm,15.1s,MS5.2						
KHC	Kasperske Hory	152.62	348	ePKPdf	PKPdf	21 48 11.2	0.0
KHC	Kasperske Hory	152.62	348	⇑ePKP	PKPbc	21 48 18.5	+0.4
KHC				epPKP	pPKPdf	21 48 23.0	+0.4
KHC				ePKPAB	PKPab	21 48 29.4	+0.7
KHC				AMS	AMS	23 01 30.0	
	comp=Z,300nm,15.1s						
ZST	Bratislava	152.63	342	ePKP	PKPab	21 48 30.0	+1.2
ZST	Bratislava	152.63	342	ePKP	PKPab	21 48 30.0	+1.2
GEC2	GERESS Array S	152.86	347	ePKPbc	PKPbc	21 48 18.2	-0.5
GEC2	GERESS Array S	152.86	347	ePKPdf	PKPdf	21 48 11.5	0.0
GEC2				ePKPbc	PKPbc	21 48 18.6	-0.1
GERES	GERESS Array B	152.86	347	PKP	PKPdf	21 48 11.4	-0.1
	comp=Z,1.0nm,0.9s,baz=153,slow=0.9,SNR=6.5						
GERES				PKPbc	PKPbc	21 48 17.6	-1.1
	comp=Z,3.5nm,1.0s,baz=17,slow=1.4,SNR=14						
WLF	Walferdange	152.94	358	PKPbc	PKPbc	21 48 19.5	+0.7
WLF				PKPab	PKPab	21 48 30.1	+0.1
WLF	Walferdange	152.94	358	ePKPbc	PKPbc	21 48 19.0	+0.2
WLF				ePKPab	PKPab	21 48 29.8	-0.3
GZR	Gura Zlata	152.96	332	PKIKP	PKPbc	21 48 18.9	-0.1
GZR	Gura Zlata	152.96	332	⇓iP	PKPbc	21 48 19.0	0.0
CONA	Conrad Observa	153.22	344	⇑iPKPdf	PKPdf	21 48 10.3	-1.8
	comp=Z,3.8nm,1.3s						
CONA				⇓ePKIKP	PKiKP	21 48 20.1	+0.5
	comp=Z,13nm,1.1s						
CONA				⇑epPKiKP		21 48 32.9	
	comp=Z,29nm,1.3s						
SOP	Sopron	153.25	342	⇑ePKP	PKPbc	21 48 16.6	-3.0
BZS	Buzias	153.28	333	PKIKP	PKPbc	21 48 19.6	-0.1
BZS	Buzias	153.28	333	⇑P	PKPbc	21 48 19.5	-0.2
BZS	Buzias	153.28	333	⇑iP	PKPbc	21 48 19.5	-0.2
MOA	Molln	153.68	346	⇑iPKPdf	PKPdf	21 48 11.0	-1.7
	comp=Z,4.0nm,1.1s						
MOA				⇑iPKPdf	pPKPdf	21 48 25.1	+0.9
	comp=Z,21nm,1.5s						
PKSM	Moragy	153.91	338	⇓PKIKP	PKPbc	21 48 20.1	-1.0
PKSM	Moragy	153.91	338	⇓iP	PKPbc	21 48 20.1	-1.0
ARSA	Arzberg	153.93	343	⇑iPKPdf	PKPdf	21 48 12.0	-1.1
	comp=Z,5.7nm,1.5s						
ARSA				⇑iPKiKP	PKiKP	21 48 21.5	+0.3
ARSA				⇓iPKPab	PKPab	21 48 35.2	+0.9
	comp=Z,16nm,1.1s						
RJOB	Jochberg	154.10	348	ePKPbc	PKPbc	21 48 21.1	-0.3
MEZF	Maizieres J'vi	154.12	360	ePKIKP	PKPdf	21 48 12.9	-0.4
CDF	Champ du Feu	154.14	356	ePKIKP	PKPdf	21 48 12.9	-0.5
BFO	Black Forest	154.15	355	ePKIKP	PKPbc	21 48 21.5	0.0
ECH	Echery	154.34	357	ePKP2	PKPab	21 48 35.5	-0.5
SOKA	Soboth	154.59	344	⇓iPKPdf	PKPdf	21 48 13.4	-0.6
SOKA				⇑iPKPab	PKPab	21 48 37.2	+0.1
	comp=Z,24nm,1.1s						
PERS	Pernice	154.61	343	iPKPab	PKPab	21 48 37.1	-0.1
KBA	Koelnbreinsper	154.62	346	⇓iPKPdf	PKPdf	21 48 13.0	-1.0
	comp=Z,4.8nm,1.0s						
RETA	Reutte	154.70	351	⇑iPKPdf	pPKPdf	21 48 27.3	+1.6
	comp=Z,5.2nm,1.2s						
RZN	Rozhen	154.72	324	eP	PKPab	21 48 37.0	-0.9
HINF	Hinterlaifeld	154.76	357	ePKIKP	PKPdf	21 48 13.6	-0.6
MOTA	Moosalm	154.78	350	⇑iPKPdf	pPKPdf	21 48 27.7	+1.9
	comp=Z,12nm,1.1s						
VTS	Vitosha	154.87	327	eP	PKPab	21 48 38.2	-0.3
DAVA	Damuels	155.01	352	⇓iPKPdf	pPKPdf	21 48 23.9	-2.2
	comp=Z,7.3nm,1.8s						
ABTA	Abfaltersbach	155.11	348	⇑iPKPdf	PKPdf	21 48 13.4	-1.4
	comp=Z,5.7nm,1.1s						
ABTA				⇓iPKPdf	pPKPdf	21 48 28.2	+2.0
	comp=Z,11nm,1.3s						
FETA	Feichten	155.16	350	⇓iPKPdf	PKPdf	21 48 14.6	-0.2
	comp=Z,8.8nm,1.4s						
FETA				⇑iPKPbc	pPKPbc	21 48 33.0	-2.2
	comp=Z,8.7nm,0.8s						
MMB	Musomiste	155.32	325	eP	PKPab	21 48 40.4	-0.1
LOR	Lormes	155.34	2	ePKIKP	PKPdf	21 48 14.6	-0.5
	comp=Z,34nm,1.4s						
SSF	Saint Saulge	155.54	2	ePKIKP	PKPdf	21 48 15.1	-0.2
JAVS	Javornik	155.57	344	e	PKPdf	21 48 18.3	+2.9
JAVS				iPKPab	PKPab	21 48 40.9	-0.5
BOJS	Bojanci	155.61	342	iPKPdf	PKPdf	21 48 14.5	-0.9
BOJS				i		21 48 24.7	
BOJS				iPKPab	PKPab	21 48 41.7	+0.2
CABF	La Chapelle	156.00	358	ePKIKP	PKPdf	21 48 15.8	-0.1
TCF	Toulx Ste Croi	156.24	5	ePKIKP	PKPdf	21 48 15.7	-0.6
MBDF	Montbardon	157.84	356	ePKIKP	PKPdf	21 48 18.3	-0.1
AQU	L'Aquila	159.03	342	ePKP2	PKPab	21 48 54.6	-1.8
ESDC	Sonseca Array	161.35	22	PKP	PKPdf	21 48 22.0	-0.6
	comp=Z,0.2nm,0.3s,baz=1.4,slow=5.9,SNR=4.7						
ESDC				PKPab	PKPab	21 49 05.9	-0.7
	comp=Z,1.0nm,0.7s,baz=322,slow=5.2,SNR=5.8						
KEST	Kesra	166.33	345	PKPab	PKPab	21 49 28.8	+0.4
	comp=Z,3.6nm,1.0s,baz=312,slow=4.8,SNR=5.9						
TORD	Torodi Ar. Bea	170.14	161	PKP	PKPdf	21 48 29.1	-1.4
	comp=Z,1.8nm,1.1s,baz=114,slow=1.1,SNR=5.0						
TORD				PKPab	PKPab	21 49 45.5	-0.3
	comp=Z,3.2nm,1.0s,baz=212,slow=3.7,SNR=6.1						
TAM	Tamanrasset	179.39	291	ePKIKP	PKPdf	21 48 33.1	+0.1

*IDC **04** 21:46:32.2±0.9, 0.°09S×123.°03E, h0km, mb3.9/9, mb1 3.9/10, mb1mx3.8/21, mbtmp3.9/10, ML3.4/1, Error ellipse: s-maj=28.8km s-min=19.0km az=93.0*
*ISCJB **04** 21:46:42.9±0.5, 0.°27S±0.°05×122.°98E±0.°05, h104km±6km, mb4.0/20, Error ellipse: s-maj=8.0km s-min=7.4km az=156.2*
*NEIC **04** 21:46:43.9±1.3, 0.°24S×123.°06E, h101km±13km, mb4.3/12, Error ellipse: s-maj=15.6km s-min=7.1km az=67.0*
*DJA **04** 21:46:45, 0.°29S×122.°97E, h69km, MLv4.6/10*

ISC 04 21:46:44.2±0.5, 0.°29S±0.°05×122.°98E±0.°05, h100km±6km, n45, σ1°07/46, mb4.0/20, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	Luwuk	0.78	195	P	Pn	21 47 00.6	-1.8
MRSI	Marisa	1.28	306	P	Pn	21 47 04.7	-3.2
APSI	Ampana	1.47	245	P	Pn	21 47 09.2	-0.9
MNI	Manado	2.53	47	P	Pn	21 47 24.0	+0.2
KDI	Kendari	3.66	186	P	Pn	21 47 38.9	0.0
TTSI	Tana Toraja	4.18	229	P	Pn	21 47 46.5	+0.6
TNTI	Ternate	4.51	77	P	Pn	21 47 51.2	+0.9
NLAI	Namlea	5.06	125	P	Pn	21 47 57.8	+0.1
	0.7nm3μm162nm,0.8s						
KAPI	Kappang	5.70	214	Pn	Pn	21 48 01.0	-5.4
	0.9nm,0.3s,baz=62,slow=12,SNR=2.8						
KAPI				Sn	Sn	21 49 08.9	-1.6
	5.2nm,0.3s,baz=40,slow=21,SNR=6.3						
KAPI	Kappang	5.70	214	ePn	Pn	21 48 05.9	-0.5
AAI	Ambon	6.21	123	P	Pn	21 48 14.5	+1.1
	0.5nm3μm141nm,0.6s						
MYLDM	Lahad Datu	7.04	321	P	Pn	21 48 25.7	+1.1
	0.5nm2μm49nm,0.9s						
KBKI	Kotabaru	7.44	246	P	Pn	21 48 31.6	+1.5
KKM	Kota Kinabalu	9.23	313	ePn	Pn	21 48 55.4	+1.0
KKM				Sn	Sn	21 50 20.3	-16
KKM	Kota Kinabalu	9.23	313	P	Pn	21 48 55.5	+1.0
SBUM	Sibu	11.09	284	P	Pn	21 49 21.8	+1.9
FITZ	Fitzroy Crossi	17.90	172	ePn	Pn	21 50 46.9	+0.2
MBWA	Marble Bar	20.99	188	P	P	21 51 20.6	+1.0
	21nm,1.1s						
WRAB	Tennant Creek	22.48	151	eP	P	21 51 34.9	-0.5
	2.8nm,0.8s,mb3.6						
KULM	Kulim	22.98	284	eP	P	21 51 40.0	-0.5
	4.4nm,1.0s,mb3.7						
QIZ	Qiongzhong	23.12	327	P	P	21 51 40.5	-1.3
YHNB	Yeheng	24.86	357	eP	P	21 51 58.3	+0.8
ASAR	Alice Springs	25.55	156	P	P	21 52 05.5	+1.8
	0.2nm,0.3s,mb3.0,baz=345,slow=16,SNR=3.4						
CMAR	Chiang Mai Arr	30.08	310	P	P	21 52 44.5	+0.1
	1.2nm,0.8s,mb3.5,baz=132,slow=7.1,SNR=12						
CHTO	Chiang Mai	30.29	310	eP	P	21 52 47.3	+1.1
	3.6nm,1.0s,mb4.0						
CHTO	Chiang Mai	30.29	310	P	P	21 52 48.3	+2.1
ENH	Enshi	32.99	338	eP	P	21 53 10.0	+0.2
	8.4nm,0.9s,mb4.6						
MJAR	Matsushiro Arr	39.28	20	P	P	21 54 00.9	-2.3
	1.5nm,0.6s,mb4.0,baz=192,slow=9.1,SNR=7.5						
LSA	Lhasa	42.54	317	eP	P	21 54 30.8	+0.6
	3.3nm,0.6s,mb4.2						
ODAN	Odare	43.59	311	eP	P	21 54 38.4	-0.3
	4.7nm,0.6s,mb4.4						
TAPN	Taplejung	43.62	312	eP	P	21 54 33.4	-5.5
RAMN	Ramite	44.24	311	eP	P	21 54 44.6	+0.7
	9.1nm,0.7s,mb4.6						
JIRN	Jiri	44.92	311	eP	P	21 54 50.5	+1.2
GUN	Gumba	45.29	311	eP	P	21 54 52.6	+0.4
	9.7nm,0.4s,mb4.8						
ASAJ	Asahikawa	47.55	19	P	P	21 55 09.1	-0.5
	2.4nm,0.5s,mb4.3,baz=223,slow=14,SNR=5.2						
ULN	Ulaanbaatar	49.92	346	eP	P	21 55 27.5	-0.2
	1.5nm,0.5s,mb4.2						
SONM	Songino Array	50.05	345	P	P	21 55 28.5	-0.1
	1.5nm,0.7s,mb4.1,baz=165,slow=7.5,SNR=12						
MKAR	Makanchi Array	58.84	328	P	P	21 56 32.1	-0.2
	1.2nm,0.3s,mb4.4,baz=114,slow=9.2,SNR=14						
TKM2	Tokmak 2	60.40	322	P	P	21 56 43.9	+0.8
PETK	Petropavlovsk-	60.56	23	P	P	21 56 42.1	-1.8
	1.3nm,0.7s,mb4.0,baz=301,slow=12,SNR=4.4						
ZALV	Zalesovo Beam	62.56	336	P	P	21 56 56.4	-1.0
	0.4nm,0.4s,mb3.7,baz=134,slow=6.2,SNR=3.0						
KURK	Kurchatov	63.21	330	eP	P	21 57 00.5	-1.3
	1.7nm,0.6s,mb4.2						
BVAR	Borovoye Array	68.72	329	P	P	21 57 35.4	-1.6
	0.4nm,0.7s,mb3.3,baz=163,slow=10,SNR=3.3						
BRVK	Borovoye	68.79	329	eP	P	21 57 37.0	-0.5
	0.8nm,0.6s,mb3.7						
TORD	Torodi Ar. Bea	120.46	285	PKP	PKPdf	22 05 24.5	-0.6
	0.5nm,0.7s,baz=48,slow=1.3,SNR=4.9						

*ATH **04** 22:01:06.7, 39.°80N×25.°59E, h25km, MD3.4/8*
*DDA **04** 22:01:06.8, 39.°76N×25.°59E, h31km±1km, Md3.3*
*SKO **04** 22:01:06.4, 39.°81N×25.°66E, h12km*
*ISK **04** 22:01:06.1, 39.°78N×25.°63E, h5km, MD3.3, ML3.5*
*ISCJB **04** 22:01:06.5±0.4, 39.°79N±0.°02×25.°57E±0.°02, h4km±3km, Error ellipse: s-maj=3.1km s-min=2.3km az=37.0*
*THE **04** 22:01:07.5, 39.°79N×25.°59E, h10km, ML3.5/8, Error ellipse: s-maj=1.0km s-min=0.4km az=188.0*
*CSEM **04** 22:01:07.1±0.1, 39.°77N×25.°54E, h5km, MD3.4, Error ellipse: s-maj=2.9km s-min=2.4km az=34.0*
*NEIC **04** 22:01:07.5, 39.°79N×25.°59E, h10km, MD3.4(ATH), ML3.5(THE), After THE.*

ISC 04 22:01:07.4±0.4, 39.°79N±0.°02×25.°56E±0.°02, h6km±3km, n137, σ0°91/183, 4C-8D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIA	Limnos Island	0.31	291	ePb	Pg	22 01 14.3	+0.8
LIA				eSb	Sg	22 01 19.7	+2.1
LIA	Limnos Island	0.31	291	P	Pg	22 01 14.2	+0.7
LIA				S	Sg	22 01 19.1	+1.5
LIA	Limnos Island	0.31	291	ePB	Pg	22 01 14.3	+0.8
LIA				eSB	Sg	22 01 19.7	+2.1
LIA	Limnos Island	0.31	291	P	Pg	22 01 14.2	+0.7
LIA				S	Sg	22 01 19.1	+1.5
LIA				eSb	Sg	22 01 19.7	+2.1
GADA	Gvkgeada	0.48	33	ePG	Pg	22 01 15.8	-0.9
GADA	Gvkgeada	0.48	33	ePg	Pg	22 01 15.8	-0.8
EZN	Ezine	0.59	86	ePG	Pg	22 01 17.6	-1.2
EZN	Ezine	0.59	86	ePg	Pg	22 01 17.6	-1.1
SIGR	SIGRI	0.62	158	P	Pg	22 01 19.0	-0.3
SIGR				S	Sg	22 01 28.4	+1.1
SIGR	SIGRI	0.62	158	P	Pg	22 01 19.0	-0.3
SIGR				S	Sg	22 01 28.4	+1.1
PRK	Paraskevi	0.77	134	ePn	Pg	22 01 21.8	-0.4
PRK				eSn	Sg	22 01 32.6	+0.4
PRK	Paraskevi	0.77	134	P	Pg	22 01 21.7	-0.5
PRK				S	Sg	22 01 32.6	+0.4
PRK	Paraskevi	0.77	134	ePN	Pg	22 01 21.8	-0.4
PRK				eSN	Sg	22 01 32.6	+0.4
PRK	Paraskevi	0.77	134	P	Pg	22 01 21.7	-0.5
PRK				S	Sg	22 01 32.6	+0.4
AYVA	Ayvalik	1.00	118	iP	Pg	22 01 26.1	-0.4
AYVA				iS	Sg	22 01 39.1	-0.3
AYVA	Ayvalik	1.00	118	iP	Pg	22 01 26.0	-0.5
AYVA				iS	Sg	22 01 39.1	-0.3
ENEZ	Enez	1.05	25	ePG	Pg	22 01 26.7	-0.9
ENEZ	Enez	1.05	25	ePg	Pg	22 01 26.7	-0.8
LPK	Lapseki	1.09	57	ePG	Pg	22 01 27.4	-0.9
LPK				eSG	Sg	22 01 42.7	+0.3
LPK	Lapseki	1.09	57	ePg	Pg	22 01 27.4	-0.9
LPK				eSg	Sg	22 01 42.7	+0.3
ALN	Alexandroupoli	1.17	18	ePn	Pg	22 01 28.4	-1.4
ALN				eSn	Sn	22 01 44.4	-2.1
ALN	Alexandroupoli	1.17	18	P	Pg	22 01 28.4	-1.4
ALN				S	Sg	22 01 45.0	0.0
ALN	Alexandroupoli	1.17	18	ePN	Pg	22 01 28.4	-1.4
ALN				eSN	Sn	22 01 44.4	-2.1
ALN	Alexandroupoli	1.17	18	P	Pg	22 01 28.4	-1.4
ALN				eSn	Sn	22 01 44.4	-2.1
ALN				S	Sg	22 01 45.0	0.0
OUR	Ouranopolis	1.33	295	P	Pn	22 01 31.3	-1.1
OUR				S	Sb	22 01 49.1	-0.9
OUR	Ouranopolis	1.33	295	P	Pn	22 01 31.3	-1.1
OUR				S	Sb	22 01 49.1	-0.9
RDO	Rodhopi	1.36	359	ePn	Pn	22 01 31.6	-1.2
RDO	Rodhopi	1.36	359	P	Pn	22 01 31.5	-1.3
RDO				S	Sb	22 01 50.2	-0.6
RDO	Rodhopi	1.36	359	ePN	Pn	22 01 31.6	-1.2
RDO	Rodhopi	1.36	359	ePn	Pn	22 01 31.6	-1.2
RDO				S	Sb	22 01 50.2	-0.6
AOS	Alonnisos	1.44	245	P	Pn	22 01 33.5	-0.5
AOS				S	Sb	22 01 52.7	-0.4
AOS	Alonnisos	1.44	245	P	Pn	22 01 33.5	-0.5
AOS				S	Sb	22 01 52.7	-0.4
KAVA	Kavala	1.45	327	P	Pn	22 01 33.2	-0.9
KAVA				S	Sb	22 01 52.6	-0.8
KAVA	Kavala	1.45	327	P	Pn	22 01 33.2	-0.9
KAVA				S	Sb	22 01 52.6	-0.8
CHOS	Chios island	1.45	164	P	Pn	22 01 33.0	-1.1
CHOS				S	Sb	22 01 52.9	-0.6
CHOS	Chios island	1.45	164	ePN	Pn	22 01 33.2	-0.9
CHOS				eSN	Sn	22 01 52.7	-0.7
CHOS	Chios island	1.45	164	ePn	Pn	22 01 33.2	-0.9
CHOS				eSn	Sn	22 01 52.7	-0.7
PAIG	Paliouri	1.46	276	P	Pn	22 01 33.4	-0.8
PAIG	Paliouri	1.46	276	P	Pn	22 01 33.4	-0.8
RKY	Sarkoy-Tekirda	1.53	54	ePN	Pn	22 01 35.1	-0.1
RKY	Sarkoy-Tekirda	1.53	54	ePn	Pn	22 01 35.1	-0.1
SART	Tekirdag	1.53	54	iP	Pn	22 01 34.1	-1.1
SART				iS	Sn	22 01 56.1	+0.7
SART	Tekirdag	1.53	54	iP	Pn	22 01 34.1	-1.1
SART				iS	Sn	22 01 56.1	+0.7
BALY	Balya	1.59	91	iP	Pn	22 01 35.3	-0.7
BALY				iS	Sn	22 01 55.3	-1.5
BALY	Balya	1.59	91	iP	Pn	22 01 35.3	-0.7
BALY				iS	Sn	22 01 55.3	-1.5
URLA	Izmir	1.64	150	iP	Pn	22 01 35.6	-1.1
URLA				iS	Sn	22 02 00.1	+2.1
URLA	Izmir	1.64	150	iP	Pn	22 01 35.6	-1.1
URLA				iS	Sn	22 02 00.1	+2.1
MFT	Murefte	1.65	52	ePN	Pn	22 01 36.9	0.0
MFT	Murefte	1.65	52	ePn	Pn	22 01 36.9	0.0
PLG	Polygyros	1.73	291	ePn	Pn	22 01 37.2	-0.7
PLG	Polygyros	1.73	291	P	Pn	22 01 36.9	-1.0
PLG				S	Sn	22 02 00.4	+0.2
PLG	Polygyros	1.73	291	ePN	Pn	22 01 37.2	-0.7
PLG	Polygyros	1.73	291	P	Pn	22 01 36.9	-1.0
PLG	Polygyros	1.73	291	ePn	Pn	22 01 37.2	-0.7
PLG				S	Sn	22 02 00.4	+0.2
BALB	Balikesir	1.79	94	ePN	Pn	22 01 38.7	-0.1
BALB	Balikesir	1.79	94	ePn	Pn	22 01 38.7	-0.1
BLCB	Balcova	1.81	140	ePN	Pn	22 01 38.7	-0.4
BLCB	Balcova	1.81	140	P	Pn	22 01 38.7	-0.4
BLCB				S	Sn	22 02 02.5	+0.1
BLCB	Balcova	1.81	140	P	Pn	22 01 38.7	-0.4
BLCB				S	Sn	22 02 02.5	+0.1
EDC	Edincik	1.85	72	ePN	Pn	22 01 39.6	0.0
EDC	Edincik	1.85	72	ePn	Pn	22 01 39.6	0.0
XOR	Xorichti	1.88	258	P	Pn	22 01 39.4	-0.6
XOR	Xorichti	1.88	258	P	Pn	22 01 39.4	-0.6
BNT	Bandirma	1.90	72	ePN	Pn	22 01 40.1	-0.1
IZM	Izmir	1.92	136	ePN	Pn	22 01 40.8	+0.3
TKR	Tekirdag	1.93	51	ePN	Pn	22 01 41.0	+0.3
TKR	Tekirdag	1.93	51	ePn	Pn	22 01 41.0	+0.3
AKS	Akhisar	1.97	117	ePN	Pn	22 01 41.2	0.0
AKS	Akhisar	1.97	117	ePn	Pn	22 01 41.2	0.0
AKHS	Akhisar	1.97	117	iP	Pn	22 01 40.7	-0.5
AKHS				iS	Sg	22 02 09.2	-1.5
AKHS	Akhisar	1.97	117	iP	Pn	22 01 40.7	-0.5
AKHS				iS	Sg	22 02 09.2	-1.4
SOH	Sokhos	1.98	302	ePn	Pn	22 01 41.2	-0.2
SOH	Sokhos	1.98	302	P	Pn	22 01 41.1	-0.3
SOH	Sokhos	1.98	302	ePN	Pn	22 01 41.2	-0.2
SOH	Sokhos	1.98	302	P	Pn	22 01 41.1	-0.3
NVR	Nevrokopi	2.03	321	ePb	Pn	22 01 42.3	+0.3
NVR	Nevrokopi	2.03	321	ePB	Pn	22 01 42.3	+0.3
CRLT	Corlu	2.13	50	ePN	Pn	22 01 43.9	+0.4
CRLT	Corlu	2.13	50	ePn	Pn	22 01 43.9	+0.4
EDRB	Edirne	2.24	23	ePN	Pn	22 01 46.3	+1.2
EDRB	Edirne	2.24	23	ePn	Pn	22 01 46.3	+1.3
DURS	Dursunbey	2.26	94	iP	Pn	22 01 45.1	-0.1
DURS	Dursunbey	2.26	94	iP	Pn	22 01 45.1	-0.1
DST	Dursunbey	2.37	93	ePN	Pn	22 01 46.7	0.0
DST	Dursunbey	2.37	93	ePn	Pn	22 01 46.7	0.0
SLVT	Silivri	2.48	54	ePN	Pn	22 01 49.0	+0.7
SLVT	Silivri	2.48	54	ePn	Pn	22 01 49.0	+0.7
DEMI	Demirci	2.56	106	iP	Pn	22 01 49.5	+0.2
DEMI				iS	Sn	22 02 18	-2.0
DEMI

LWLI	Liwa	1.41	100	P	Pn	22 37 44.1 +0.6
MDSI	Maura Dua	1.53	79	P	Pn	22 37 46.3 +1.1
MDSI				S	Sn	22 38 05.1 +1.1
KASI	Kota Agung	1.97	112	P	Pn	22 37 51.7 +0.5
KASI				S	Sn	22 38 14.4 -0.5
PPSI	Pulau Pagai	3.32	307	P	Pn	22 38 10.5 +0.7
CGJI	Cibinong	3.52	121	P	Pn	22 38 13.0 +0.4
PDSI	Padang	4.42	330	P	Pn	22 38 25.7 +0.7
PPI	Padang Panjang	4.85	332	P	Pn	22 38 31.7 +0.8

*IDC **04** 22:52:27.0±1.9, 30.°59N×103.°63E, h0km, mb3.7/7, mb1 3.7/9, mb1mx3.5/27, mbtmp3.6/9, ML3.5/1, Error ellipse: s-maj=53.1km s-min=34.9km az=84.0*
*NEIC **04** 22:52:30.9±0.7, 30.°62N×103.°25E, h10km, mb3.8/2, Error ellipse: s-maj=14.7km s-min=12.4km az=59.0*
*ISCJB **04** 22:52:31.8±1.2, 30.°87N±0.°05×103.°35E±0.°07, h22km±10km, mb3.5/8, Error ellipse: s-maj=10.4km s-min=8.4km az=157.6*
*BJI **04** 22:52:34.1, 30.°65N×103.°29E, h7km, ML3.4/15, Ms3.5/2, Ms7 3.3/2*

ISC 04 22:52:32.6±1.2, 30.°88N±0.°05×103.°35E±0.°06, h13km±7km, n23, σ1.9±16/29, mb3.5/8, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.35**	**84**	⇓*i*Pg	**Pg**	**22 52 38.6**	**-1.1**
CD2				Sg	**Sg**	**22 52 44.7**	**+0.2**
CD2				smax			
	comp=N,7μm,0.7s						
CD2				smax			
	comp=E,5μm,0.8s						
LZH	**Lanzhou**	**5.21**	**4**	*e*Pg	**Pg**	**22 54 15.0**	**+2.6**
LZH				Sg	**Sg**	**22 55 20.1**	**+0.1**
LZH				smax			
	comp=N,33nm,1.0s						
LZH				smax			
	comp=E,46nm,1.0s						
GYA	**Guiyang**	**5.28**	**146**	Pn	**Pn**	**22 53 54.3**	**+3.2**
ENH	**Enshi**	**5.33**	**95**	*e*Pn	**Pn**	**22 53 52.3**	**+0.4**
	comp=E,38nm,0.6s						
ENH				Sn	**Sn**	**22 54 53.6**	**+0.6**
XAN	**Xi'an**	**5.67**	**55**	Pn	**Pn**	**22 53 56.7**	**+0.2**
XAN				Pg	**Pg**	**22 54 20.0**	**-1.1**
XAN				Sg	**Sg**	**22 55 30.1**	**-4.4**
XAN				smax			
	comp=N,70nm,1.1s						
XAN				smax			
	comp=E,29nm,1.1s						
KMI	**Kunming**	**5.75**	**186**	Pn	**Pn**	**22 53 57.3**	**-0.4**
KMI				Sn	**Sn**	**22 55 04.3**	**+0.7**
KMI				smax			
	comp=N,22nm,1.1s						
KMI				smax			
	comp=E,24nm,1.0s						
KMI				LR	LR		
	comp=N,180nm,4.6s						
KMI				LR	LR		
	comp=E,180nm,5.8s						
KMI				LR	LR		
	comp=Z,100nm,5.9s						
CMAR	**Chiang Mai Arr**	**12.99**	**199**	Pn	**Pn**	**22 55 31.4**	**-5.6**
	baz=13,slow=11,SNR=2.8						
SONM	**Songino Array**	**17.10**	**7**	Pn	**Pn**	**22 56 32.3**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=186,slow=10,SNR=2.9						
MKAR	**Makanchi Array**	**22.73**	**320**	P	**P**	**22 57 36.2**	**+2.0**
	comp=Z,0.3nm,0.3s,mb3.3,baz=115,slow=11,SNR=9.1						
AAK	**Ala-Archa**	**25.80**	**305**	P	**P**	**22 58 03.6**	**+0.3**
EKS2	**Erkin-Say**	**26.31**	**305**	P	**P**	**22 58 07.3**	**-0.6**
ZALV	**Zalesovo Beam**	**26.65**	**335**	P	**P**	**22 58 11.4**	**+0.6**
	comp=Z,0.4nm,0.4s,mb3.3,baz=146,slow=11,SNR=3.5						
KURK	**Kurchatov**	**27.05**	**324**	P	**P**	**22 58 13.8**	**-0.7**
	comp=Z,0.7nm,0.6s,mb3.4,baz=129,slow=9.4,SNR=6.0						
KURK	**Kurchatov**	**27.05**	**324**	*e*P	**P**	**22 58 14.3**	**-0.2**
	comp=Z,0.7nm,0.5s,mb3.5						
BVAR	**Borovoye Array**	**32.57**	**322**	P	**P**	**22 59 02.6**	**-0.8**
	comp=Z,0.1nm,0.3s,mb3.2,baz=103,slow=4.6,SNR=2.7						
BVAR				PcP	PcP	23 01 48.3	-1.3
	comp=Z,0.6nm,0.7s,baz=60,slow=5.8,SNR=4.2						
BVAR	**Borovoye Array**	**32.57**	**322**	P	**P**	**22 59 02.6**	**-0.8**
BVAR				PcP	PcP	23 01 48.3	-1.3
ARU	**Arti**	**40.22**	**323**	*e*P	**P**	**23 00 08.9**	**+0.3**
	comp=Z,3.6nm,1.3s,mb3.9						
KWP	**Kalwaria Pacla**	**61.39**	**313**	*e*P	**P**	**23 02 48.8**	**+0.6**
HFS	**Hagfors**	**63.60**	**326**	P	**P**	**23 03 00.4**	**-2.4**
	comp=Z,1.3nm,0.8s,mb4.0,baz=108,slow=9.5,SNR=4.3						
NOA	**NORSAR Array B**	**64.50**	**327**	P	**P**	**23 03 06.2**	**-2.5**
	comp=Z,0.4nm,0.7s,mb3.6,baz=90,slow=7.3,SNR=3.0						
AQU	**L'Aquila**	**69.92**	**308**	P	**P**	**23 03 43.6**	**+0.2**
WLF	**Walferdange**	**71.45**	**317**	*e*P	**P**	**23 03 52.9**	**+0.3**
YKA	**Yellowknife Ar**	**82.10**	**17**	P	**P**	**23 04 50.1**	**-2.4**
	comp=Z,0.4nm,0.5s,mb3.6,baz=332,slow=5.4,SNR=4.0						

*ISK **04** 23:07:16.6, 36.°98N×29.°17E, h5km, MD3.2*
*NEIC **04** 23:07:16.0, 36.°98N×29.°17E, h6km, MD3.1(ISK), After ISK.*
*IDC **04** 23:07:16.3±1.9, 36.°89N×29.°19E, h0km, mb3.3/1, mb1 3.1/4, mb1mx3.0/25, mbtmp3.1/4, ML3.0/3, Error ellipse: s-maj=50.5km s-min=21.3km az=154.0*
*DDA **04** 23:07:17.0, 37.°00N×29.°16E, h15km±3km, Md3.1*
*CSEM **04** 23:07:17.2±0.1, 36.°99N×29.°17E, h2km, MD3.2, Error ellipse: s-maj=3.0km s-min=2.4km az=8.0*
*ISCJB **04** 23:07:17.1±0.4, 36.°99N±0.°02×29.°17E±0.°02, h2km±3km, Error ellipse: s-maj=3.2km s-min=2.6km az=173.5*

ISC 04 23:07:17.8±0.4, 37.°00N±0.°02×29.°17E±0.°02, h4km±3km, n82, σ1.9±07/126, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.37**	**191**	PG	**Pg**	**23 07 23.4**	**-1.4**
FETY				*e*SG	**Sg**	**23 07 29.6**	**0.0**
FETY	**Fethiye**	**0.37**	**191**	*i* Pg	**Pg**	**23 07 23.5**	**-1.3**
FETY				*e*Sg	**Sg**	**23 07 29.6**	**0.0**
GOLH	**Golhisar**	**0.39**	**52**	*i* P	**Pg**	**23 07 24.3**	**-1.1**
GOLH				*i* S	**Sg**	**23 07 31.2**	**+0.8**
GOLH	**Golhisar**	**0.39**	**52**	*i* P	**Pg**	**23 07 24.3**	**-1.1**
GOLH				*i* S	**Sg**	**23 07 31.2**	**+0.8**
GOLH	**Golhisar**	**0.39**	**52**	*i* P	**Pg**	**23 07 24.3**	**-1.1**
GOLH				*i* S	**Sg**	**23 07 31.2**	**+0.7**
TURN	**Turunc**	**0.47**	**255**	*i* P	**Pg**	**23 07 31.4**	**+4.5**
TURN				*i* S	**Sg**	**23 07 42.6**	**+10**
TURN	**Turunc**	**0.47**	**255**	*i* P	**Pg**	**23 07 31.4**	**+4.5**
ELL	**Elmali**	**0.64**	**113**	PG	**Pg**	**23 07 29.4**	**-0.6**
ELL				*e*SG	**Sg**	**23 07 38.6**	**+0.3**
ELL	**Elmali**	**0.64**	**113**	*i* Pg	**Pg**	**23 07 29.5**	**-0.5**
ELL				*e*Sg	**Sg**	**23 07 38.6**	**+0.3**
DNZL	**Cakiroluk**	**0.70**	**352**	*i* P	**Pg**	**23 07 29.8**	**-1.5**
DNZL				*i* S	**Sg**	**23 07 41.3**	**+0.9**
DNZL	**Cakiroluk**	**0.70**	**352**	*i* P	**Pg**	**23 07 29.8**	**-1.5**
DNZL				*i* S	**Sg**	**23 07 41.3**	**+0.9**
DNZL	**Cakiroluk**	**0.70**	**352**	*i* P	**Pg**	**23 07 29.8**	**-1.4**
DNZL				*i* S	**Sg**	**23 07 41.3**	**+1.0**
YER	**Yerkesik**	**0.73**	**281**	PG	**Pg**	**23 07 31.3**	**-0.5**
YER				*e*SG	**Sg**	**23 07 41.7**	**+0.5**
YER	**Yerkesik**	**0.73**	**281**	*i* Pg	**Pg**	**23 07 31.3**	**-0.4**
YER				*e*Sg	**Sg**	**23 07 41.7**	**+0.6**
DENT	**Denizli**	**0.77**	**352**	*e*PG	**Pg**	**23 07 32.0**	**-0.5**
DENT				*e*SG	**Sg**	**23 07 43.3**	**+0.9**
DENT	**Denizli**	**0.77**	**352**	*e*Pg	**Pg**	**23 07 32.0**	**-0.5**
DENT				*e*Sg	**Sg**	**23 07 43.3**	**+0.9**
AKAS	**Kas**	**0.84**	**155**	*i* P	**Pg**	**23 07 33.2**	**-0.6**
AKAS				*i* S	**Sg**	**23 07 46.3**	**+1.7**
AKAS	**Kas**	**0.84**	**155**	*i* P	**Pg**	**23 07 33.2**	**-0.6**
AKAS				*i* S	**Sg**	**23 07 46.3**	**+1.7**
AKAS	**Kas**	**0.84**	**155**	*i* P	**Pg**	**23 07 33.2**	**-0.6**
AKAS				*i* S	**Sg**	**23 07 46.3**	**+1.7**
KSL	**Kastellorizon**	**0.91**	**159**	*e*P	**Pg**	**23 07 35.0**	**-0.2**
KORT	**Korkueli**	**0.94**	**89**	*i* P	**Pg**	**23 07 34.8**	**-1.0**
KORT				*i* S	**Sg**	**23 07 49.7**	**+1.7**
KORT	**Korkueli**	**0.94**	**89**	*i* P	**Pg**	**23 07 34.8**	**-1.1**
KORT				*i* S	**Sg**	**23 07 49.7**	**+1.6**
ARG	**Arkhangelos**	**1.15**	**228**	*e*P	**Pg**	**23 07 38.2**	**-1.6**
MLSB	**Milas**	**1.16**	**285**	*e*PN	**Pn**	**23 07 39.3**	**-1.4**
MLSB				*e*SN	**Sn**	**23 07 55.7**	**-1.2**
MLSB	**Milas**	**1.16**	**285**	*e*Pn	**Pn**	**23 07 39.3**	**-1.4**
MLSB				*e*Sn	**Sn**	**23 07 55.7**	**-1.3**
ANTB	**Antalya**	**1.19**	**94**	*e*PN	**Pn**	**23 07 39.8**	**-1.4**
ANTB				*e*SN	**Sn**	**23 07 56.8**	**-1.0**
ANTB	**Antalya**	**1.19**	**94**	*e*Pn	**Pn**	**23 07 39.8**	**-1.4**
ANTB				*e*Sn	**Sn**	**23 07 56.8**	**-1.0**
BCK	**Bucak**	**1.22**	**67**	*e*PN	**Pn**	**23 07 40.7**	**-0.9**
BCK				*e*SN	**Sn**	**23 07 57.5**	**-1.1**
BCK	**Bucak**	**1.22**	**67**	*e*Pn	**Pn**	**23 07 40.7**	**-0.9**
BCK				*e*Sn	**Sn**	**23 07 57.5**	**-1.1**
AYDN	**Tasoluk**	**1.23**	**303**	*i* P	**Pg**	**23 07 40.5**	**-0.9**
AYDN				*i* S	**Sg**	**23 07 58.8**	**+1.6**
AYDN	**Tasoluk**	**1.23**	**303**	*i* P	**Pg**	**23 07 40.5**	**-0.9**
AYDN				*i* S	**Sg**	**23 07 58.8**	**+1.6**
AYDN	**Tasoluk**	**1.23**	**303**	*i* P	**Pg**	**23 07 40.5**	**-0.8**
AYDN				*i* S	**Sg**	**23 07 58.8**	**+1.6**
DAT	**Datca**	**1.31**	**259**	*e*PN	**Pn**	**23 07 41.9**	**-0.9**
DAT	**Datca**	**1.31**	**259**	*e*Pn	**Pn**	**23 07 41.9**	**-0.9**
ISP	**Isparta**	**1.35**	**52**	*e*PN	**Pn**	**23 07 43.4**	**-0.1**
ISP	**Isparta**	**1.35**	**52**	*e*Pn	**Pn**	**23 07 43.2**	**-0.3**
ISP				S	**Sg**	**23 08 02.8**	**+1.4**
ISP	**Isparta**	**1.35**	**52**	*e*Pn	**Pn**	**23 07 43.4**	**-0.1**
ISP				S	**Sg**	**23 08 02.8**	**+1.5**
BDRM	**Kayabasi**	**1.39**	**273**	*i* P	**Pn**	**23 07 43.6**	**-0.2**
BDRM				*i* S	**Sb**	**23 08 01.9**	**-0.4**
BDRM	**Kayabasi**	**1.39**	**273**	*i* P	**Pn**	**23 07 43.6**	**-0.2**
BDRM				*i* S	**Sb**	**23 08 01.9**	**-0.4**
BDRM	**Kayabasi**	**1.39**	**273**	*i* P	**Pn**	**23 07 43.6**	**-0.3**
BDRM				*i* S	**Sb**	**23 08 01.9**	**-0.4**
KHAL	**Karahalli**	**1.40**	**10**	*i* P	**Pn**	**23 07 43.3**	**-0.7**
KHAL				*i* S	**Sb**	**23 08 02.8**	**+0.3**
KHAL	**Karahalli**	**1.40**	**10**	*i* P	**Pn**	**23 07 43.3**	**-0.7**
KHAL				*i* S	**Sb**	**23 08 02.8**	**+0.2**
SUTC	**Sutluce-Ispart**	**1.53**	**71**	*e*PN	**Pn**	**23 07 45.9**	**-0.1**
SUTC	**Sutluce-Ispart**	**1.53**	**71**	*e*Pn	**Pn**	**23 07 45.9**	**0.0**
KULA	**Kula-Manisa**	**1.57**	**345**	*e*PN	**Pn**	**23 07 45.3**	**-1.1**
KULA	**Kula-Manisa**	**1.57**	**345**	*e*Pn	**Pn**	**23 07 45.3**	**-1.1**
SHUT	**Suhut-Afyon**	**1.90**	**35**	*e*PN	**Pn**	**23 07 50.5**	**-0.4**
SHUT	**Suhut-Afyon**	**1.90**	**35**	*e*Pn	**Pn**	**23 07 50.5**	**-0.4**
SMG	**Samos**	**1.99**	**292**	*e*P	**Pn**	**23 07 51.8**	**-0.4**
IZM	**Izmir**	**2.06**	**313**	*e*PN	**Pn**	**23 07 53.2**	**0.0**
DEMI	**Demirci**	**2.08**	**350**	*i* P	**Pn**	**23 07 52.4**	**-1.0**
DEMI				*i* S	**Sn**	**23 08 19.9**	**+0.2**
DEMI	**Demirci**	**2.08**	**350**	*i* P	**Pn**	**23 07 52.4**	**-1.0**
DEMI				*i* S	**Sn**	**23 08 19.9**	**+0.2**
KARP	**Karpathos**	**2.18**	**229**	*e*P	**Pn**	**23 07 55.5**	**+0.8**
ALT	**Altintas**	**2.19**	**19**	*e*PN	**Pn**	**23 07 54.9**	**0.0**
ALT	**Altintas**	**2.19**	**19**	*e*Pn	**Pn**	**23 07 54.9**	**0.0**
BLCB	**Balcova**	**2.19**	**310**	*e*PN	**Pn**	**23 07 54.6**	**-0.3**
BLCB	**Balcova**	**2.19**	**310**	*e*Pn	**Pn**	**23 07 54.6**	**-0.3**
GAZI	**Gazipasa**	**2.64**	**106**	*i* P	**Pn**	**23 08 01.7**	**+0.6**
GAZI	**Gazipasa**	**2.64**	**106**	*i* P	**Pn**	**23 08 01.7**	**+0.6**
GAZI				*i* S	**Sn**	**23 08 36.6**	**+3.1**
GAZI	**Gazipasa**	**2.64**	**106**	*i* P	**Pn**	**23 08 01.7**	**+0.6**
GAZI				*i* S	**Sn**	**23 08 36.6**	**+3.0**
HDMB	**Hadim**	**2.65**	**90**	*e*PN	**Pn**	**23 08 01.4**	**+0.1**
HDMB	**Hadim**	**2.65**	**90**	*e*Pn	**Pn**	**23 08 01.4**	**+0.1**
KONT	**Konya--Tatoy**	**2.71**	**69**	*e*PN	**Pn**	**23 08 02.2**	**+0.2**
KONT	**Konya--Tatoy**	**2.71**	**69**	*e*Pn	**Pn**	**23 08 02.2**	**+0.1**
LADK	**Ladik-KONYA**	**2.81**	**64**	*e*PN	**Pn**	**23 08 03.7**	**+0.3**
LADK	**Ladik-KONYA**	**2.81**	**64**	*e*Pn	**Pn**	**23 08 03.7**	**+0.3**
CHOS	**Chios island**	**2.84**	**300**	*e*P	**Pn**	**23 08 03.9**	**+0.1**
KIZT	**Kizilcal**	**2.85**	**48**	*e*PN	**Pn**	**23 08 04.3**	**+0.3**
KIZT	**Kizilcal**	**2.85**	**48**	*e*Pn	**Pn**	**23 08 04.3**	**+0.3**
APE	**Apeiranthos**	**2.92**	**273**	*e*P	**Pn**	**23 08 04.8**	**-0.1**
ZKR	**Zakros**	**3.04**	**233**	*e*P	**Pn**	**23 08 08.1**	**+1.4**
NPS	**Neapolis**	**3.36**	**240**	*e*P	**Pn**	**23 08 11.9**	**+0.8**
LAST	**Lasithi**	**3.51**	**240**	*e*P	**Pn**	**23 08 14.1**	**+1.0**
IDI	**Anoyia**	**3.86**	**245**	Pn	**Pn**	**23 08 18.7**	**+0.7**
	1.4nm,0.3s,baz=48,slow=15,SNR=15						
IDI				Sn	**Sn**	**23 09 04.9**	**+1.1**
	1.9nm,0.3s,baz=298,slow=18,SNR=7.5						
IDI	**Anoyia**	**3.86**	**245**	Pn	**Pn**	**23 08 18.7**	**+0.7**
IDI				Sn	**Sn**	**23 09 04.9**	**+1.1**
VAM	**Vamos**	**4.32**	**250**	*e*P	**Pn**	**23 08 26.7**	**+2.4**
BRTR	**Keskin Array B**	**4.44**	**51**	Pn	**Pn**	**23 08 25.9**	**0.0**
	0.2nm,0.3s,baz=234,slow=15,SNR=7.3						
BRTR				Sn	**Sn**	**23 09 20.6**	**+2.5**
	0.4nm,0.3s,baz=218,slow=26,SNR=9.0						
BRTR	**Keskin Array B**	**4.44**	**51**	Pn	**Pn**	**23 08 25.9**	**0.0**
BRTR				Sn	**Sn**	**23 09 20.6**	**+2.5**
KARN	**Karanos**	**4.54**	**251**	*e*P	**Pn**	**23 08 29.9**	**+2.7**
KYTH	**Kithira**	**4.99**	**264**	*e*P	**Pn**	**23 08 36.1**	**+2.7**
MMAI	**Mount Meron Ar**	**6.47**	**126**	Pn	**Pn**	**23 08 52.5**	**-1.3**
	1.1nm,0.3s,baz=310,slow=12,SNR=7.0						
TORD	**Torodi Ar. Bea**	**34.17**	**233**	P	**P**	**23 14 01.8**	**-2.4**
	0.2nm,0.4s,baz=32,slow=8.9,SNR=7.7						

*ISK **04** 23:13:24.8, 36.°98N×29.°16E, h9km, MD3.2*
*IDC **04** 23:13:24.4±1.9, 36.°88N×29.°20E, h0km, mb3.3/1, mb1 3.1/4, mb1mx3.0/25, mbtmp3.1/4, ML3.0/3, MS3.0/1, Ms1 3.0/1, ms1mx2.4/29, Error ellipse: s-maj=49.9km s-min=21.5km az=154.0*
*ISCJB **04** 23:13:25.1±0.5, 36.°99N±0.°02×29.°17E±0.°02, h3km±4km, Error ellipse: s-maj=3.5km s-min=3.0km az=153.8*
*DDA **04** 23:13:25.1, 37.°01N×29.°16E, h20km±2km, Md3.0*
*CSEM **04** 23:13:25.1±0.1, 36.°98N×29.°19E, h5km, MD3.2, Error ellipse: s-maj=2.8km s-min=2.4km az=2.0*
*NEIC **04** 23:13:25.0, 36.°99N×29.°17E, h10km, MD3.1(ISK), After ISK.*

ISC 04 23:13:25.7±0.4, 37.°00N±0.°02×29.°17E±0.°02, h4km±3km, n82, σ0.9±96/118, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.37**	**191**	PG	**Pg**	**23 13 31.5**	**-1.4**
FETY				SG	**Sg**	**23 13 37.6**	**-0.1**
FETY	**Fethiye**	**0.37**	**191**	*i* Pg	**Pg**	**23 13 31.5**	**-1.3**
FETY				*i* Sg	**Sg**	**23 13 37.6**	**0.0**
GOLH	**Golhisar**	**0.39**	**53**	*i* P	**Pg**	**23 13 32.4**	**-0.9**
GOLH				*i* S	**Sg**	**23 13 39.4**	**+1.1**
GOLH	**Golhisar**	**0.39**	**53**	*i* P	**Pg**	**23 13 32.4**	**-0.9**
GOLH				*i* S	**Sg**	**23 13 39.4**	**+1.1**
GOLH	**Golhisar**	**0.39**	**53**	*i* P	**Pg**	**23 13 32.4**	**-0.9**
GOLH				*i* S	**Sg**	**23 13 39.4**	**+1.0**
TURN	**Turunc**	**0.47**	**255**	*i* P	**Pg**	**23 13 39.3**	**+4.5**
TURN				*i* S	**Sg**	**23 13 50.7**	**+10**
ELL	**Elmali**	**0.64**	**113**	*e*PG	**Pg**	**23 13 37.8**	**-0.3**
ELL	**Elmali**	**0.64**	**113**	*e*Pg	**Pg**	**23 13 37.8**	**-0.2**
DNZL	**Cakiroluk**	**0.70**	**352**	*i* P	**Pg**	**23 13 37.8**	**-1.3**
DNZL				*i* S	**Sg**	**23 13 49.1**	**+1.0**
DNZL	**Cakiroluk**	**0.70**	**352**	*i* P	**Pg**	**23 13 37.8**	**-1.2**
DNZL				*i* S	**Sg**	**23 13 49.1**	**+1.0**
DNZL	**Cakiroluk**	**0.70**	**352**	*i* P	**Pg**	**23 13 37.8**	**-1.3**
DNZL				*i* S	**Sg**	**23 13 49.1**	**+1.0**
YER	**Yerkesik**	**0.72**	**281**	*e*PG	**Pg**	**23 13 39.1**	**-0.5**
YER				*e*SG	**Sg**	**23 13 49.5**	**+0.5**
YER	**Yerkesik**	**0.72**	**281**	*e*Pg	**Pg**	**23 13 39.1**	**-0.5**
YER				*e*Sg	**Sg**	**23 13 49.5**	**+0.5**
DENT	**Denizli**	**0.76**	**352**	*e*PG	**Pg**	**23 13 40.2**	**-0.1**
DENT	**Denizli**	**0.76**	**352**	*e*Pg	**Pg**	**23 13 40.2**	**-0.1**
AKAS	**Kas**	**0.84**	**155**	*i* P	**Pg**	**23 13 40.5**	**-1.3**
AKAS				*i* S	**Sg**	**23 13 55.2**	**+2.5**
AKAS	**Kas**	**0.84**	**155**	*i* P	**Pg**	**23 13 40.5**	**-1.3**
AKAS				*i* S	**Sg**	**23 13 55.2**	**+2.5**
AKAS	**Kas**	**0.84**	**155**	*i* P	**Pg**	**23 13 40.5**	**-1.3**
AKAS				*i* S	**Sg**	**23 13 55.2**	**+2.5**
KSL	**Kastellorizon**	**0.91**	**158**	*e*P	**Pg**	**23 13 44.0**	**+0.8**
KORT	**Korkueli**	**0.94**	**90**	*i* P	**Pg**	**23 13 42.6**	**-1.2**
KORT				*i* S	**Sg**	**23 13 58.4**	**+2.3**
KORT	**Korkueli**	**0.94**	**90**	*i* P	**Pg**	**23 13 42.6**	**-1.2**
KORT				*i* S	**Sg**	**23 13 58.4**	**+2.3**
ARG	**Arkhangelos**	**1.15**	**227**	*e*P	**Pg**	**23 13 46.4**	**-1.3**
MLSB	**Milas**	**1.15**	**285**	*e*PN	**Pn**	**23 13 47.5**	**-1.2**
MLSB				*e*SN	**Sn**	**23 14 03.9**	**-1.0**
MLSB	**Milas**	**1.15**	**285**	*e*Pn	**Pn**	**23 13 47.5**	**-1.2**
MLSB				*e*Sn	**Sn**	**23 14 03.9**	**-1.0**
ANTB	**Antalya**	**1.19**	**94**	*e*PN	**Pn**	**23 13 49.0**	**-0.2**
ANTB	**Antalya**	**1.19**	**94**	*e*Pn	**Pn**	**23 13 49.0**	**-0.2**
BCK	**Bucak**	**1.22**	**67**	*e*PN	**Pn**	**23 13 48.8**	**-0.8**
BCK	**Bucak**	**1.22**	**67**	*e*Pn	**Pn**	**23 13 48.8**	**-0.8**
AYDN	**Tasoluk**	**1.22**	**303**	*i* P	**Pg**	**23 13 49.0**	**-0.2**
AYDN				*i* S	**Sg**	**23 14 06.0**	**+1.0**
AYDN	**Tasoluk**	**1.22**	**303**	*i* P	**Pg**	**23 13 49.0**	**-0.2**
AYDN				*i* S	**Sg**	**23 14 06.1**	**+1.0**
AYDN	**Tasoluk**	**1.22**	**303**	*i* P	**Pg**	**23 13 49.0**	**-0.2**
AYDN				*i* S	**Sg**	**23 14 06.1**	**+1.1**
DAT	**Datca**	**1.31**	**259**	*e*PN	**Pn**	**23 13 49.9**	**-0.9**
DAT	**Datca**	**1.31**	**259**	*e*Pn	**Pn**	**23 13 49.9**	**-0.9**
ISP	**Isparta**	**1.35**	**52**	*e*PN	**Pn**	**23 13 51.5**	**+0.1**
ISP	**Isparta**	**1.35**	**52**	*e*Pn	**Pn**	**23 13 50.6**	**-0.9**
ISP				S	**Sg**	**23 14 13.9**	**+4.7**
ISP	**Isparta**	**1.35**	**52**	*e*Pn	**Pn**	**23 13 50.6**	**-0.8**
BDRM	**Kayabasi**	**1.38**	**273**	*i* P	**Pn**	**23 13 52.1**	**+0.2**
BDRM				*i* S	**Sg**	**23 14 10.1**	**-0.1**
BDRM	**Kayabasi**	**1.38**	**273**	*i* P	**Pn**	**23 13 52.1**	**+0.2**
BDRM				*i* S	**Sg**	**23 14 10.1**	**-0.1**
BDRM	**Kayabasi**	**1.38**	**273**	*i* P	**Pn**	**23 13 52.1**	**+0.3**
BDRM				*i* S	**Sg**	**23 14 10.1**	**-0.1**
KHAL	**Karahalli**	**1.39**	**10**	*i* P	**Pn**	**23 13 51.1**	**-0.8**
KHAL				*i* S	**Sg**	**23 14 11.3**	**+0.8**
KHAL	**Karahalli**	**1.39**	**10**	*i* P	**Pn**	**23 13 51.1**	**-0.8**
KHAL				*i* S	**Sg**	**23 14 11.3**	**+0.8**
SUTC	**Sutluce-Ispart**	**1.54**	**71**	*e*PN	**Pn**	**23 13 53.6**	**-0.4**
SUTC	**Sutluce-Ispart**	**1.54**	**71**	*e*Pn	**Pn**	**23 13 53.6**	**-0.3**
KULA	**Kula-Manisa**	**1.56**	**345**	*e*PN	**Pn**	**23 13 53.6**	**-0.8**
KULA	**Kula-Manisa**	**1.56**	**345**	*e*Pn	**Pn**	**23 13 53.6**	**-0.7**
MANT	**Manisa**	**1.57**	**342**	*i* P	**Pn**	**23 13 54.3**	**0.0**
MANT				*i* S	**Sn**	**23 14 15.1**	**0.0**
MANT	**Manisa**	**1.57**	**342**	*i* P	**Pn**	**23 13 54.3**	**0.0**
MANT				*i* S	**Sn**	**23 14 15.1**	**0.0**
GCAM	**G?zelcaml?**	**1.69**	**295**	*e*P	**Pn**	**23 13 56.2**	**+0.1**
GCAM				*i* S	**Sn**	**23 14 18.6**	**+0.3**
GCAM	**G?zelcaml?**	**1.69**	**295**	*e*P	**Pn**	**23 13 56.2**	**+0.1**
GCAM				*i* S	**Sn**	**23 14 18.6**	**+0.3**
SHUT	**Suhut-Afyon**	**1.90**	**35**	*e*PN	**Pn**	**23 13 58.2**	**-0.7**
SHUT	**Suhut-Afyon**	**1.90**	**35**	*e*Pn	**Pn**	**23 13 58.2**	**-0.7**
SMG	**Samos**	**1.99**	**292**	*e*P	**Pn**	**23 13 59.7**	**-0.5**
IZM	**Izmir**	**2.06**	**313**	*e*PN	**Pn**	**23 14 01.5**	**+0.4**
DEMI	**Demirci**	**2.07**	**350**	*i* P	**Pn**	**23 14 00.6**	**-0.6**
DEMI				*i* S	**Sn**	**23 14 28.0**	**+0.4**
DEMI	**Demirci**	**2.07**	**350**	*i* P	**Pn**	**23 14 00.6**	**-0.7**
DEMI				*i* S	**Sn**	**23 14 28.0**	**+0.4**
AKS	**Akhisar**	**2.16**	**331**	*e*PN	**Pn**	**23 14 02.2**	**-0.4**
AKS	**Akhisar**	**2.16**	**331**	*e*Pn	**Pn**	**23 14 02.2**	**-0.3**
KARP	**Karpathos**	**2.18**	**229**	*e*P	**Pn**	**23 14 03.6**	**+0.9**
ALT	**Altintas**	**2.18**	**20**	*e*PN	**Pn**	**23 14 02.3**	**-0.5**
ALT	**Altintas**	**2.18**	**20**	*e*Pn	**Pn**	**23 14 02.3**	**-0.5**
BLCB	**Balcova**	**2.18**	**310**	*e*PN	**Pn**	**23 14 02.2**	**-0.6**
BLCB	**Balcova**	**2.18**	**310**	*e*Pn	**Pn**	**23 14 02.2**	**-0.6**
HDMB	**Hadim**	**2.66**	**90**	*e*PN	**Pn**	**23 14 09.3**	**0.0**
HDMB	**Hadim**	**2.66**	**90**	*e*Pn	**Pn**	**23 14 09.3**	**0.0**
CHOS	**Chios island**	**2.83**	**300**	*e*P	**Pn**	**23 14 12.0**	**+0.2**
KIZT	**Kizilcal**	**2.85**	**48**	*e*PN	**Pn**	**23 14 11.9**	**0.0**
KIZT	**Kizilcal**	**2.85**	**48**	*e*Pn	**Pn**	**23 14 12.0**	**0.0**
ZKR	**Zakros**	**3.04**	**233**	*e*P	**Pn**	**23 14 16.4**	**+1.7**
PRK	**Paraskevi

WUAZ	Wupatki	1.32	134	*e*P	Pn	23 32 59.8	-0.7
WUAZ				*e*S	Sb	23 33 15.9	-2.0
S14A	Cedar City	1.41	339	Pb	Pb	23 33 01.9	-0.5
S14A	baz=1.4,SNR=270			⇑S	Sn	23 33 19.9	-0.4
T17A	Navajo Res., N	1.49	68	Pb	Pb	23 33 02.8	-1.1
T17A	baz=1.4 baz=1.6,SNR=1000			⇑S	Sn	23 33 21.5	-1.0
U17A	Shonto	1.51	84	Pb	Pb	23 33 03.0	-1.3
U17A	baz=1.6 baz=1.6,SNR=700			⇓S	Sn	23 33 22.2	-0.8
ARUT	Antelope Range	1.52	332	*e*P	Pn	23 33 03.8	+0.4
ARUT				*e*S	Sn	23 33 23.7	+0.4
S13A	Holt Ranch, En	1.55	317	⇓Pb	Pb	23 33 04.4	-0.5
S13A	baz=1.6 baz=1.6,SNR=838			⇓S	Sn	23 33 24.2	+0.2
W16A	Flagstaff	1.57	149	Pb	Pb	23 33 04.5	-0.7
W16A	baz=1.6 baz=1.6,SNR=456			⇓S	Sn	23 33 23.9	-0.5
U12A	Valley of Fire	1.62	270	⇓Pb	Pb	23 33 05.2	-0.8
U12A	baz=1.6 baz=1.6			⇓Sb	Sb	23 33 27.3	+0.8
V17A	Tonalea, Kykot	1.63	120	⇑Pb	Pb	23 33 05.1	-1.1
V17A	baz=1.6 baz=1.6			⇓Sb	Sb	23 33 26.3	-0.5
W13A	Hualapai Mount	1.74	220	⇓P	Pn	23 33 06.1	-0.2
W13A	baz=1.7,SNR=101 baz=1.7			⇑Sb	Sb	23 33 30.3	+0.4
R15A	Junction	1.77	7	Pb	Pb	23 33 08.0	-0.6
R15A	baz=1.8,SNR=149 baz=1.8			⇓Sb	Sb	23 33 31.5	+0.5
T12A	Moapa	1.78	280	⇑Sb	Sb	23 33 31.4	+0.3
S17A	Black Ridge (B	1.82	49	⇑Pb	Pb	23 33 08.2	-1.3
R14A	baz=1.7 baz=1.9,SNR=672 James Farms, M	1.89	348	⇑Pb	Pb	23 33 09.6	-1.0
R14A	baz=1.9,SNR=182 baz=1.9			⇓Sb	Sb	23 33 35.0	+0.6
X15A	Humboldt	1.97	173	⇓P	Pn	23 33 09.5	0.0
X15A	baz=1.9,SNR=269 baz=1.9			⇑Sb	Sb	23 33 36.8	+0.2
X14A	Yava	1.99	189	P	Pn	23 33 09.7	-0.1
X14A	baz=1.9,SNR=80 baz=1.9			⇓Sb	Sb	23 33 38.0	+0.7
V12A	Nelson	2.01	250	⇑Pb	Pb	23 33 12.1	-0.6
V12A	baz=1.9,SNR=241 baz=1.9			⇑Sb	Sb	23 33 38.5	+0.7
W17A	Winslow	2.01	132	⇑Pb	Pb	23 33 11.2	-1.5
W17A	baz=2.0,SNR=100 baz=2.0			⇑Sb	Sb	23 33 37.4	-0.4
R16A	Teasdale	2.02	24	⇓Pb	Pb	23 33 11.5	-1.3
R13A	baz=2.1,SNR=266 O'Grain Ranch,	2.08	327	⇓Pb	Pb	23 33 12.1	-1.7
R13A	baz=2.1,SNR=103 baz=2.1			⇓Sb	Sb	23 33 41.1	+1.4
MSU	Marysvale	2.08	8	*e*Pn	Pn	23 33 12.8	+1.8
MSU				*e*S	Sn	23 33 40.6	+3.6
X13A	Yucca	2.13	210	⇓P	Pn	23 33 11.1	-0.6
X13A	baz=2.1,SNR=21 baz=2.1			⇑Sb	Sb	23 33 42.6	+1.4
U18A	Rough Rock, Ch	2.15	90	⇑Pb	Pb	23 33 13.2	-1.9
U18A	baz=2.2,SNR=176 baz=2.2			⇓Sb	Sb	23 33 41.1	-0.6
S12A	Delamar Landin	2.19	303	⇓Sb	Sb	23 33 44.1	+1.2
X16A	baz=2.2 Lo Mia Camp, P	2.21	156	⇑P	Pn	23 33 13.2	+0.5
X16A	baz=2.2,SNR=40 baz=2.2			⇓Sb	Sb	23 33 44.3	+0.7
W12A	Cal Nev Ari	2.22	240	⇓Sb	Sb	23 33 45.1	+1.5
V18A	baz=2.1 Ganado	2.23	108	⇓Pb	Pb	23 33 14.3	-2.2
V18A	baz=2.3,SNR=139 baz=2.3			⇑Sb	Sb	23 33 43.6	-0.4
T18A	Mexican Hat	2.24	71	⇓Pb	Pb	23 33 14.9	-1.8
S18A	baz=2.3,SNR=894 Hurst Farm, Bl	2.38	58	⇓Pb	Pb	23 33 16.6	-2.3
S18A	baz=2.4,SNR=884 baz=2.4			⇑Sb	Sb	23 33 47.9	-0.4
NEE2	Needles Airpor	2.39	226	⇓P	Pn	23 33 14.7	-0.6
NEE2	baz=2.3,SNR=13 baz=2.3			⇓Sb	Sb	23 33 49.8	+1.2
V11A	Goodsprings	2.42	256	⇓Sb	Sb	23 33 51.6	+1.9
Y15A	baz=2.4 Casa Rosa Ranc	2.49	176	⇓P	Pn	23 33 16.6	-0.1
Y15A	baz=2.4,SNR=51 baz=2.4			⇑Sb	Sb	23 33 52.7	+1.1
X17A	Forest Lakes	2.53	146	⇓P	Pn	23 33 18.2	+1.0
X17A	baz=2.5,SNR=12 baz=2.5			⇑Sb	Sb	23 33 53.6	+0.8
Q15A	Fillmore	2.55	3	⇓Sb	Sb	23 33 54.7	+1.4
Q14A	baz=2.6 Sevier Lake (B	2.61	347	⇑P	Pn	23 33 18.7	+0.4
Q14A	baz=2.7,SNR=21 baz=2.7			⇓Sb	Sb	23 33 56.0	+1.0
W18A	Petrified Fore	2.63	119	⇑Sb	Sb	23 33 56.4	+0.8
U19A	baz=2.6 Dine' College,	2.69	92	⇑Sb	Sb	23 33 56.9	-0.4
Q16A	baz=2.7 Castle Valley	2.69	23	⇑Pb	Pb	23 33 23.1	-1.2
Q16A	baz=2.8 baz=2.8			⇑Sb	Sb	23 33 57.6	+0.2
Y16A	Circle Bar Ran	2.70	161	⇑P	Pn	23 33 19.8	+0.2
Q13A	baz=2.7,SNR=13 Wheeler Ranch,	2.77	335	⇑P	Pn	23 33 21.4	+1.0
Y13A	baz=2.8,SNR=32 Salome	2.83	202	P	Pn	23 33 21.1	-0.3
X18A	baz=2.8,SNR=41 Snowflake	2.84	131	⇓Sb	Sb	23 34 01.8	0.0
T19A	baz=2.8 Beclabito	2.85	81	⇓Pb	Pb	23 33 24.9	-2.1
R18A	baz=2.9,SNR=16 Canyonlands Na	2.86	47	⇑P	Pn	23 33 22.6	+0.9
R18A	baz=2.9,SNR=28 baz=2.9			⇑Sb	Sb	23 34 02.0	-0.2
W19A	Sanders	2.88	117	⇓Sb	Sb	23 34 03.9	+1.0
V19A	baz=2.9 Window Rock	2.92	103	⇑Sb	Sb	23 34 04.3	+0.5
S19A	baz=2.9 Harvey Farm, M	3.01	63	⇓P	Pn	23 33 24.7	+0.9
S19A	baz=3.1,SNR=69 baz=3.1			⇓Sb	Sb	23 34 07.0	+0.5
TMUT	Trail Mountain	3.03	20	*e*Pn	Pn	23 33 26.3	+2.2
TMUT				*e*Pg	Pg	23 33 32.5	-1.7
TMUT				*e*S	Sn	23 34 08.4	+7.9
GMRC	Granite Mounta	3.04	238	⇑P	Pn	23 33 24.0	-0.2
Y17A	baz=3.0,SNR=16 Roosevelt	3.07	153	⇑P	Pn	23 33 25.0	+0.3
SRU	baz=3.0,SNR=10 San Rafael	3.10	30	⇓P	Pn	23 33 26.3	+1.3
SRU	baz=3.2,SNR=174 San Rafael	3.10	30	*e*Pn	Pn	23 33 26.6	+1.6
Q12A	Willow Creek R	3.17	326	⇑P	Pn	23 33 26.8	+0.9
P14A	baz=3.2,SNR=18 Drum Mountains	3.17	352	P	Pn	23 33 26.7	+0.7
MVCO	baz=3.2,SNR=7.1 Mesa Verde	3.33	76	⇑P	Pn	23 33 29.3	+1.2
MVCO	baz=3.4 Mesa Verde	3.33	76	*e*Pn	Pn	23 33 29.7	+1.6
MVCO				*e*Pg	Pg	23 33 39.8	0.0
MVCO				*e*S	Sn	23 34 19.1	+11
V20A	Brimhall	3.35	100	⇑P	Pn	23 33 29.5	+1.0
	baz=3.4,SNR=6.1						
Z13A	Yuma Proving G	3.37	196	⇑P	Pn	23 33 28.5	-0.2
	baz=3.3,SNR=32						
NLU	North Lily Min	3.52	6	*e*Pn	Pn	23 33 32.3	+1.5
NLU				*e*Pg	Pg	23 33 40.6	-3.0
NLU				*e*S	Sn	23 34 26.6	+14
P12A	McGill	3.56	329	⇑P	Pn	23 33 32.4	+1.1
	baz=3.6,SNR=12						
Q19A	Hogan Spring (	3.60	45	⇓P	Pn	23 33 33.8	+1.8
	baz=3.7,SNR=7.8						
MPU	Maple Canyon	3.63	11	*e*Pn	Pn	23 33 33.6	+1.3
MPU				*e*Pg	Pg	23 33 41.9	-3.8
MPU				*e*S	Sb	23 34 27.9	+3.4
GSC	Goldstone	3.65	253	*e*Pn	Pn	23 33 32.2	-0.4
GSC				*e*Pg	Pg	23 33 43.7	-2.4
GSC				*e*S	Sg	23 34 31.2	-2.2
P18A	Preston Nutter	3.65	29	⇓P	Pn	23 33 34.7	+2.0
	baz=3.7,SNR=12						
R20A	Redvale	3.74	61	⇑P	Pn	23 33 35.3	+1.5
	baz=3.8,SNR=14						
DUG	Dugway	3.75	357	*e*Pn	Pn	23 33 38.0	+4.0
DUG				Pg	Pg	23 33 44.5	-3.4
DUG				*e*S	Sg	23 34 34.9	-1.6
S21A	Coal Bank Pass	3.98	71	⇓P	Pn	23 33 38.7	+1.5
	baz=4.0						
V21A	Milan	4.01	98	⇑P	Pn	23 33 38.9	+1.3
	baz=4.0,SNR=18						
DAU	Daniels Canyon	4.08	14	*e*Pn	Pn	23 33 41.5	+2.9
DAU				Pg	Pg	23 33 54.6	+0.3
DAU				*e*S	Sg	23 34 45.5	-1.8
Q20A	Ridgley Place,	4.19	52	⇓P	Pn	23 33 41.4	+1.4
	baz=4.3,SNR=6.8						
NOQ	North Oquirrh	4.21	4	Pn	Pn	23 33 44.0	+3.6
NOQ				*e*Pg	Pg	23 33 53.1	-3.6
JLU	Jordanelle	4.24	11	*e*Pn	Pn	23 33 42.1	+1.5
JLU				*e*Pg	Pg	23 33 53.5	-3.7
JLU				*e*S	Sg	23 34 49.4	-2.7
P19A	Cripple Cowboy	4.24	40	⇑P	Pn	23 33 42.3	+1.6
	baz=4.3,SNR=8.4						
118A	Homack Ranch,	4.34	150	⇓P	Pn	23 33 42.4	+0.2
	baz=4.3,SNR=6.0						
TUC	Tucson	4.37	160	*e*Pn	Pn	23 33 42.7	+0.2
TUC				*e*Pg	Pg	23 33 55.1	-4.7
TUC				*e*S	Sg	23 34 50.2	-6.2
P20A	De Beque	4.47	46	⇑P	Pn	23 33 45.4	+1.5
	baz=4.5,SNR=7.9						
BGU	Big Grassy Mou	4.49	355	*e*Pn	Pn	23 33 47.4	+3.2
BGU				*e*Pg	Pg	23 34 01.6	-0.4
BGU				*e*S	Sg	23 34 58.5	-1.8
T22A	Edith	4.56	81	⇓P	Pn	23 33 46.4	+1.4
	baz=4.6,SNR=15						
V22A	San Miguel Ran	4.58	95	⇑P	Pn	23 33 46.8	+1.4
	baz=4.6,SNR=6.0						
N13A	Wendover, West	4.59	344	*e*Pn	Pn	23 33 45.7	+0.2
N13A				*e*Pg	Pg	23 34 01.4	-2.6
N13A				*e*S	Sg	23 35 02.1	-1.4
Q21A	Lamborn Mesa,	4.60	57	⇑P	Pn	23 33 47.3	+1.7
	baz=4.7,SNR=6.6						
N12A	Clover Valley,	4.82	337	⇑P	Pn	23 33 49.5	+0.8
	baz=4.9						
N12A	Clover Valley,	4.82	337	*e*Pn	Pn	23 33 49.8	+1.1
N12A				*e*Pg	Pg	23 34 05.1	-3.2
N12A				*e*S	Sg	23 35 09.8	-0.9
LAZ	Ladron	4.85	113	*e*Pn	Pn	23 33 48.8	-0.3
LAZ				*e*Pg	Pg	23 34 06.0	-3.0
LAZ				*e*S	Sb	23 35 04.3	+4.8
217A	Green Valley	4.87	163	⇑P	Pn	23 33 49.7	+0.3
	baz=4.8,SNR=15						
ISA	Isabella	4.88	263	*e*Pn	Pn	23 33 49.4	-0.1
ISA				*e*Pg	Pg	23 34 05.4	-4.1
ISA				*e*S	Sb	23 34 58.5	-1.7
218A	Dragoon	4.91	155	⇓P	Pn	23 33 50.4	+0.4
	baz=4.9,SNR=11						
O20A	White River Ci	5.00	41	⇓P	Pn	23 33 52.8	+1.7
	baz=5.1,SNR=7.6						
ANMO	Albuquerque	5.16	105	*e*Pn	Pn	23 33 54.0	+0.7
ANMO				*e*Pg	Pg	23 34 09.5	-5.4
ANMO				*e*S	Sb	23 35 14.3	+5.9
SMCO	Snowmass	5.18	57	*e*Pn	Pn	23 33 55.4	+1.8
SMCO				*e*Pg	Pg	23 34 09.9	-5.3
SMCO				*e*S	Sb	23 35 11.4	+2.5
HWUT	Hardware Ranch	5.21	8	*e*Pn	Pn	23 33 56.2	+2.2
HWUT				*e*Pg	Pg	23 34 15.1	-0.7
HWUT				*e*S	Sg	23 35 18.2	-5.0
BNM	Barren Site	5.34	114	*e*Pn	Pn	23 33 56.8	+1.0
BNM				*e*Pg	Pg	23 34 15.9	-2.6
BNM				*e*S	Sg	23 35 19.2	-8.5
SDCO	Great Sand Dun	5.77	75	*e*Pn	Pn	23 34 03.0	+1.3
W24A	Lazy 6 Ranch,	5.92	100	⇓P	Pn	23 34 04.8	+1.1
	baz=5.9,SNR=7.0						
ISCO	Idaho Springs	6.40	56	*e*Pn	Pn	23 34 12.4	+2.1
ISCO				*e*Pg	Pg	23 34 33.1	-5.4
ISCO				*e*S	Sb	23 35 50.7	+6.7
RWWY	Rawlins	6.67	37	*e*Pn	Pn	23 34 15.1	+1.0
RWWY				*e*Pg	Pg	23 34 40.0	-3.8
RWWY				*e*S	Sg	23 36 03.6	-6.7
BW06	Boulder Array	6.72	19	*e*Pb	Pb	23 34 36.4	+3.5
HLID	Hailey	7.25	349	Pn	Pn	23 34 22.1	0.0

*ISK **04** 23:43:17.8, 40°.75N×26°.91E, h5km, MD2.6*
*DDA **04** 23:43:18.7, 40°.63N×26°.96E, h11km, Md2.5*
*CSEM **04** 23:43:18.6±0.2, 40°.71N×26°.96E, h15km, MD2.5, Error ellipse: s-maj=5.5km s-min=4.2km az=172.0*
*ISCJB **04** 23:43:18.6±0.5, 40°.70N±0°.04×26°.92E±0°.04, h13km±4km, Error ellipse: s-maj=6.9km s-min=5.0km az=10.2*
ISC 04 23:43:18.9±0.5, 40°.70N±0°.04×26°.94E±0°.04, h15km±4km, n18, σ0s70/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKY	Sarkoy-Tekirda	0.18	93	*e*PG	Pg	23 43 22.7	-0.5
RKY	Sarkoy-Tekirda	0.18	93	*e*Pg	Pg	23 43 22.7	-0.5
SART	Tekirdag	0.18	93	*i* P	Pg	23 43 22.9	-0.4
SART				*i* S	Sg	23 43 26.2	-0.1
SART	Tekirdag	0.18	93	*i* P	Pg	23 43 22.9	-0.4
SART				*i* S	Sg	23 43 26.2	-0.1
MFT	Murefte	0.28	71	*e*PG	Pg	23 43 24.9	+0.2
MFT				*e*SG	Sg	23 43 29.4	+0.7
MFT	Murefte	0.28	71	*e*Pg	Pg	23 43 24.9	+0.1
MFT				*e*Sg	Sg	23 43 29.4	+0.7
ENEZ	Enez	0.60	274	*e*PG	Pg	23 43 30.2	-0.5
ENEZ				*e*SG	Sg	23 43 38.8	+0.1
ENEZ	Enez	0.60	274	*e*Pg	Pg	23 43 30.2	-0.5
ENEZ				*e*Sg	Sg	23 43 38.8	+0.2
GADA	Gvkgeada	0.94	238	*e*PG	Pg	23 43 37.6	+0.4
GADA	Gvkgeada	0.94	238	*e*Pg	Pg	23 43 37.6	+0.4
EZN	Ezine	0.99	209	*e*PG	Pg	23 43 38.9	+0.9
EZN	Ezine	0.99	209	*e*Pg	Pg	23 43 38.9	+0.8
BALY	Balya	1.09	151	*i* P	Pb	23 43 38.4	-1.1
BALY				*i* S	Sb	23 43 52.3	-1.2
BALY	Balya	1.09	151	*i* P	Pb	23 43 38.4	-1.1
BALY				*i* S	Sb	23 43 52.3	-1.2
EDRB	Edirne	1.16	353	*e*PN	Pn	23 43 40.0	-0.7
EDRB				*e*SN	Sn	23 43 56.3	0.0
EDRB	Edirne	1.16	353	*e*Pn	Pn	23 43 40.0	-0.7
EDRB				*e*Sn	Sn	23 43 56.3	+0.1
DURS	Dursunbey	1.61	132	*i* P	Pn	23 43 47.8	+0.9
DURS				*i* S	Sn	23 44 08.4	+1.1
DURS	Dursunbey	1.61	132	*i* P	Pn	23 43 47.8	+1.0
DURS				*i* S	Sn	23 44 08.4	+1.1

KRSC 04 23:56:48.2±0.3, 51°.51N×159°.81E, h5km±5km, ML3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	Gorelyy	1.50	315	*e*P	Pn	23 57 17.0	+1.3
GRL				*e*S	Sn	23 57 37.4	+1.8
SPN	Mys Shipunski	1.60	5	*e*P	Pn	23 57 20.1	+3.1
SPN				*e*S	Sn	23 57 43.7	+5.7
PET	Petropavlovsk	1.68	335	*e*P	Pn	23 57 18.9	+0.8
PET				*i* S	Sn	23 57 41.3	+1.3
NLC	Nalytchevo	1.69	350	*e*P	Pn	23 57 18.5	+0.2
AVH	Avacha	1.88	340	*e*P	Pn	23 57 22.5	+1.6
MIPR	Malaya Ipel'ka	2.04	293	*e*P	Pn	23 57 23.9	+0.7
MIPR				*i* S	Sn	23 57 50.8	+1.8
GNL	Ganaly	2.47	333	*e*P	Pn	23 57 30.5	+1.5
ALID	Alaid	2.76	258	*e*P	Pn	23 57 33.1	+0.1
MKZ	Mys Kozlova	3.26	20	*e*P	Pn	23 57 40.0	0.0
MKZ				*e*S	Sn	23 58 17.9	-1.2
KBTR	Krutoberegovo	5.03	20	*e*P	Pn	23 58 05.5	+1.3

*DDA **05** 00:09:20.8, 36°.99N×29°.17E, h8km×3km, Md2.7*
*ISK **05** 00:09:20.1, 36°.97N×29°.22E, h9km, MD2.7*
*CSEM **05** 00:09:20.7±0.1, 36°.96N×29°.21E, h5km, MD2.7, Error ellipse: s-maj=2.9km s-min=2.2km az=170.0*
*ISCJB **05** 00:09:20.7±0.5, 36°.97N±0°.03×29°.19E±0°.03, h1km±7km, Error ellipse: s-maj=4.9km s-min=4.0km az=155.8*
ISC 05 00:09:21.3±0.5, 36°.97N±0°.03×29°.20E±0°.03, h7km±6km, n23, σ0s74/46, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.30	52	*e*PG	Pg	00 09 26.5	-0.8
GLHS				*e*SG	Sg	00 09 31.2	-0.1
GLHS	Glhisar (BURDU	0.30	52	*e*Pg	Pg	00 09 26.5	-0.7
GLHS				*e*Sg	Sg	00 09 31.2	-0.1
FETY	Fethiye	0.34	195	*e*PG	Pg	00 09 27.3	-0.7
FETY				*e*SG	Sg	00 09 33.1	+0.6
FETY	Fethiye	0.34	195	*e*Pg	Pg	00 09 27.3	-0.7
FETY				*e*Sg	Sg	00 09 33.1	+0.6
GOLH	Golhisar	0.40	47	*i* P	Pg	00 09 28.2	-0.8
GOLH				*i* S	Sg	00 09 34.9	+0.8
GOLH	Golhisar	0.40	47	*i* P	Pg	00 09 28.2	-0.7
GOLH				*i* S	Sg	00 09 34.9	+0.7
TURN	Turunc	0.49	259	*i* P	Pg	00 09 35.4	+4.8
TURN				*i* S	Sg	00 09 46.4	+9.3
ELL	Elmali	0.61	111	*e*PG	Pg	00 09 31.9	-1.1
ELL				*e*SG	Sg	00 09 41.1	+0.1
ELL	Elmali	0.61	111	*e*Pg	Pg	00 09 31.9	-1.1
ELL				*e*Sg	Sg	00 09 41.1	+0.1
DNZL	Cakiroluk	0.73	351	*i* P	Pg	00 09 35.1	-0.2
DNZL				*i* S	Sg	00 09 44.1	-0.7
DNZL	Cakiroluk	0.73	351	*i* P	Pg	00 09 35.1	-0.2
DNZL				*i* S	Sg	00 09 44.1	-0.7
YER	Yerkesik	0.75	283	*e*PG	Pg	00 09 35.1	-0.6
YER				*e*SG	Sg	00 09 46.6	+1.1
YER	Yerkesik	0.75	283	*e*Pg	Pg	00 09 35.1	-0.6
YER				*e*Sg	Sg	00 09 46.6	+1.1
KORT	Korkueli	0.92	88	*i* P	Pg	00 09 39.1	+0.1
KORT				*i* S	Sg	00 09 53.1	+2.1
KORT	Korkueli	0.92	88	*i* P	Pg	00 09 39.1	+0.1
KORT				*i* S	Sg	00 09 53.1	+2.1
AYDN	Tasoluk	1.26	304	*i* P	Pn	00 09 44.7	-0.5
AYDN				*i* S	Sg	00 10 02.2	+0.5
AYDN	Tasoluk	1.26	304	*i* P	Pn	00 09 44.7	-0.5
AYDN				*i* S	Sg	00 10 02.2	+0.5
DAT	Datca	1.32	260	*e*PN	Pn	00 09 46.0	0.0
DAT				*e*SN	Sn	00 10 03.9	0.0
DAT	Datca	1.32	260	*e*Pn	Pn	00 09 46.0	-0.1
DAT				*e*Sn	Sn	00 10 03.9	0.0
BDRM	Kayabasi	1.41	274	*e*P	Pn	00 09 46.7	-0.5
BDRM				*i* S	Sb	00 10 06.6	+0.6
BDRM	Kayabasi	1.41	274	*e*P	Pn	00 09 46.7	-0.5
BDRM				*i* S	Sb	00 10 06.6	+0.7
KHAL	Karahalli	1.42	9	*i* P	Pn	00 09 47.0	-0.5
KHAL				*i* S	Sb	00 10 07.1	+0.8
KHAL	Karahalli	1.42	9	*i* P	Pn	00 09 47.0	-0.4
KHAL				*i* S	Sb	00 10 07.1	+0.8

*ISCJB **05** 00:11:57.6±1.8, 15°.82S±0°.09×167°.9E±0°.1, h183km±18km, mb4.2/21, Error ellipse: s-maj=20.7km s-min=14.1km az=10.6*
*NEIC **05** 00:11:59.4±1.5, 15°.82S×167°.93E, h187km±14km, mb4.2/11, Error ellipse: s-maj=11.8km s-min=9.4km az=91.0*
*IDC **05** 00:12:04.9±8.3, 15°.84S×167°.84E, h231km±68km, mb3.9/16, mb1 3.9/16, mb1mx3.9/21, mbtmp3.9/16, Error ellipse: s-maj=45.7km s-min=16.4km az=98.0*
ISC 05 00:11:58.6±1.6, 15°.83S±0°.09×167°.9E±0°.1, h176km±16km, n63, σ0s77/43, mb4.2/22, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.36	192	*i* P	Pn	00 13 31.1	+0.9
DZM	Mont Dzumac	6.36	192	*e*Pn	Pn	00 13 31.3	+1.1
	56nm,0.6s						
DZM				*e*Sn	Sn	00 14 41.5	-1.0
NOUC	Port Laguerre	6.42	193	*e*P	Pn	00 13 31.1	0.0
CTA	Charters Tower	21.02	255	P	P	00 16 31.6	+3.0
	6.7nm,0.7s,mb4.1,baz=82,slow=10.0,SNR=9.5						
CTAO	Charters Tower	21.02	255	*e*P	P	00 16 31.2	+2.5
	5.3nm,0.6s,mb4.0						
SNZO	South Karori	26.06	168	P	P	00 17 15.3	-0.3
STKA	Stephens Creek	28.77	232	P	P	00 17 41.4	+1.4
	1.3nm,0.4s,mb4.0,baz=55,slow=10.0,SNR=6.2						
STKA				PcP	PcP	00 20 45.1	-0.3
	2.2nm,0.6s,baz=108,slow=3.9,SNR=6.5						
STKA	Stephens Creek	28.77	232	*e*P	P	00 17 40.0	+0.1
	0.3nm,0.5s,mb3.3						
STKA				PcP	PcP	00 20 45.1	-0.3
WRAB	Tennant Creek	32.16	258	*e*P	P	00 18 09.0	-0.9
	4.3nm,1.1s,mb4.1						
WRA	Warramunga Arr	32.17	258	P	P	00 18 09.2	-0.8
	0.9nm,0.5s,mb3.7,baz=84,slow=8.1,SNR=4.7						
WRA				PcP	PcP	00 20 54.5	-0.2
	0.6nm,0.6s,baz=89,slow=3.4,SNR=4.6						
TAU	Tasmania Unive	32.23	209	P	P	00 18 10.9	+0.8
ASAR	Alice Springs	32.88	251	P	P	00 18 15.9	-0.2
	5.6nm,0.5s,mb4.5,baz=78,slow=9.0,SNR=75						
ASAR				PcP	PcP	00 20 56.5	-0.1
	1.0nm,0.7s,baz=91,slow=3.1,SNR=7.0						
MCQ	Macquarie Isla	39.21	188	*e*P	P	00 19 09.0	-0.4
	10μm,0.8s						
FITZ	Fitzroy Crossi	40.43	261	P	P	00 19 20.4	+0.4
	5.7nm,0.5s,mb4.4,baz=90,slow=8.1,SNR=16						
FITZ	Fitzroy Crossi	40.43	261	*e*P	P	00 19 19.9	0.0
	5.1nm,0.6s,mb4.3						
MBWA	Marble Bar	45.86	256	*e*P	P	00 20 03.1	-0.4
	5.5nm,0.4s,mb4.5						
MIDW	Midway	46.05	18	*e*P	P	00 20 04.4	-0.4
KAPI	Kappang	48.45	277	P	P	00 20 23.2	-0.4
	6.6nm,0.7s,mb4.4,baz=129,slow=13,SNR=3.5						
NWAO	Narrogin (SRO)	48.72	240	P	P	00 20 25.3	-0.1
	6.8nm,0.7s,mb4.4,baz=54,slow=8.7,SNR=3.9						
NWAO	Narrogin (SRO)	48.72	240	*e*P	P	00 20 25.6	+0.1
	5.1nm,0.7s,mb4.3						
KKM	Kota Kinabalu	55.59	289	P	P	00 21 16.5	+0.1
JOW	Kunigami	57.27	317	P	P	00 21 29.1	+1.2
	34nm,0.7s,mb5.3,baz=124,slow=5.4						
MJAR	Matsushiro Arr	59.16	332	P	P	00 21 40.1	-0.8
	1.3nm,0.6s,mb4.0,baz=163,slow=8.5,SNR=6.1						
MAJO	Matsushiro	59.16	332	*e*P	P	00 21 40.0	-0.9
KSM	Kuching	59.42	281	*e*P	P	00 21 42

BRTR	**Keskin Array B**	**133.69 310**	PKP	PKPdf	00 30 54.8	+0.3
CDF	**Champ du Feu**	**143.82 338**	*e*PKP1	PKPdf	00 31 11.5	-1.2
	comp=Z,3.7nm,0.6s					
HINF	**Hinteralfeld**	**144.47 338**	*e*PKP1	PKPdf	00 31 13.2	-0.7
HAU	**Haudompre**	**144.50 339**	*e*PKP1	PKPdf	00 31 12.7	-1.2
MEZF	**Maizieres J'vi**	**144.51 340**	*e*PKP1	PKPdf	00 31 13.5	-0.4
FLN	**La Foliniere**	**145.81 346**	*e*PKP1	PKPbc	00 31 16.5	-0.5
	comp=Z,4.4nm,0.4s					
LDF	**La Druitiere**	**145.88 346**	*e*PKP1	PKPbc	00 31 17.2	0.0
LOR	**Lormes**	**145.97 340**	*e*PKP1	PKPbc	00 31 17.4	-0.1
GRR	**Gorron**	**146.24 346**	*e*PKP1	PKPbc	00 31 18.0	-0.3
SSF	**Saint Saulge**	**146.27 341**	*e*PKP1	PKPbc	00 31 18.5	+0.1
	comp=Z,6.6nm,0.5s					
LPL	**La Plagne**	**146.44 336**	*e*PKP1	PKPbc	00 31 19.5	+0.6
LPG	**La Plagne**	**146.45 336**	*e*PKP1	PKPbc	00 31 19.6	+0.6
ORIF	**Oris-en-Rattie**	**147.28 336**	*e*PKP1	PKPbc	00 31 21.3	0.0
	comp=Z,7.4nm,0.8s					
TCF	**Toulx Ste Croi**	**147.37 341**	*e*PKP1	PKPbc	00 31 20.6	-0.9
MFF	**Saint Martin d**	**147.74 344**	*e*PKP1	PKPbc	00 31 22.2	-0.3
ETSF	**Etsaut**	**151.27 342**	*e*PKP1	PKPbc	00 31 31.5	+0.2
	comp=Z,4.5nm,0.6s					
KEST	**Kesra**	**152.45 320**	PKPbc	PKPbc	00 31 33.1	-1.0
	comp=Z,0.6nm,0.6s,baz=72,slow=3.2,SNR=4.6					
TORD	**Torodi Ar. Bea**	**166.38 260**	PKP	PKPdf	00 31 41.1	-2.5
	comp=Z,0.5nm,0.8s,baz=124,slow=1.4,SNR=3.8					
TORD			PKPab	PKPab	00 32 46.0	-0.2
	comp=Z,0.4nm,0.6s,baz=86,slow=3.1,SNR=10					

*JMA **05** 00:16:13.2±0.4, 23°.88N×122°.53E, h0km, M2.0*
*ISCJB **05** 00:16:13.7±1.0, 23°.93N±0°.05×122°.50E±0°.02, h5km±7km, Error ellipse: s-maj=8.5km s-min=3.3km az=5.8*
*TAP **05** 00:16:14.6, 23°.96N×122°.45E, h17km±1km, ML2.9, D*
ISC 05 00:16:14.1±0.9, 23°.94N±0°.05×122°.51E±0°.02, h11km±5km, n17, σ0°.79/30, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.70**	**41**	P	**Pg**	**00 16 27.8**	**+0.2**
YOJ				*e*S	**Sg**	**00 16 37.9**	**+1.2**
TWD	**Chiawan**	**0.84**	**280**	*e*P	**Pg**	**00 16 30.1**	**-0.2**
	baz=261						
TWD				*e*S	**Sg**	**00 16 41.2**	**-0.1**
	baz=261						
ENA	**Nanau**	**0.85**	**305**	P	**Pg**	**00 16 30.3**	**-0.2**
	baz=317						
ENA				*e*S	**Sg**	**00 16 42.5**	**+0.8**
	baz=317						
TWC	**Suao**	**0.90**	**318**	P	**Pg**	**00 16 30.6**	**-0.8**
	baz=320						
TWC				S	**Sg**	**00 16 42.0**	**-1.2**
	baz=320						
TWE	**Neicheng**	**1.09**	**316**	*e*P	**Pg**	**00 16 35.8**	**+0.7**
	baz=317						
TWE				*e*S	**Sg**	**00 16 49.9**	**+0.5**
	baz=317						
ENTT	**Nioudou**	**1.11**	**309**	*i* P	**Pb**	**00 16 35.0**	**-0.2**
	baz=309						
ENTT				S	**Sg**	**00 16 50.2**	**+0.4**
	baz=309						
NNS	**Nan Shan**	**1.15**	**296**	*e*P	**Pb**	**00 16 35.4**	**-0.6**
	baz=282						
NNS				S	**Sb**	**00 16 50.9**	**0.0**
	baz=282						
WHF	**Hehuan Shan**	**1.15**	**281**	*e*P	**Pb**	**00 16 35.2**	**-0.8**
	baz=263						
WHF				*e*S	**Sb**	**00 16 51.0**	**0.0**
	baz=263						
TWB1	**Santiao Chiao**	**1.17**	**336**	*e*P	**Pb**	**00 16 35.1**	**-1.2**
	baz=337						
IRIF	**Iriomote-Funau**	**1.19**	**70**	P	**Pb**	**00 16 35.6**	**-1.0**
IRIF				*e*S	**Sb**	**00 16 51.9**	**-0.1**
HATJ	**Hateruma jima**	**1.19**	**84**	P	**Pb**	**00 16 36.1**	**-0.6**
HATJ				*e*S	**Sb**	**00 16 52.3**	**+0.1**
NSK	**Sanguang**	**1.28**	**305**	P	**Pn**	**00 16 37.3**	**-0.6**
	baz=287						
NSK				*e*S	**Sb**	**00 16 53.6**	**-1.0**
	baz=287						
NWF	**Wu-fen Shan**	**1.31**	**330**	*e*P	**Pn**	**00 16 38.5**	**+0.2**
	baz=331						
NWF				*e*S	**Sb**	**00 16 55.2**	**-0.3**
	baz=331						
TWA	**Mucha**	**1.34**	**321**	*e*S	**Sb**	**00 16 57.5**	**+1.2**
	baz=335						
JKRS	**Kuro-shima**	**1.41**	**77**	P	**Pn**	**00 16 39.5**	**-0.1**
JKRS				*e*S	**Sn**	**00 16 58.5**	**+0.3**
SMLT	**Sun Moon Lake**	**1.47**	**268**	*e*P	**Pn**	**00 16 42.3**	**+1.7**
	baz=254						
TYC	**Yuchr**	**1.51**	**269**	*e*P	**Pn**	**00 16 43.2**	**+2.1**
	baz=267						

*ISCJB **05** 00:16:37.9±0.7, 23°.95N±0°.03×122°.52E±0°.02, h1km±5km, Error ellipse: s-maj=4.8km s-min=2.9km az=173.0*
*TAP **05** 00:16:40.0, 23°.98N×122°.44E, h18km±1km, ML3.1, D*
*JMA **05** 00:16:40.1±0.4, 23°.99N×122°.61E, h0km, M2.4*
ISC 05 00:16:38.5±0.6, 23°.96N±0°.03×122°.52E±0°.02, h4km±4km, n31, σ0°.84/52, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.67**	**41**	P	**Pg**	**00 16 52.2**	**+0.8**
YOJ				*e*S	**Sg**	**00 17 00.4**	**+0.2**
ENA	**Nanau**	**0.85**	**304**	P	**Pg**	**00 16 55.1**	**+0.2**
	baz=316						
ENA				S	**Sg**	**00 17 06.7**	**+0.7**
	baz=316						
TWD	**Chiawan**	**0.86**	**279**	*e*P	**Pg**	**00 16 55.2**	**+0.3**
	baz=259						
TWD				*e*S	**Sg**	**00 17 06.2**	**+0.2**
	baz=259						
TWC	**Suao**	**0.90**	**317**	P	**Pg**	**00 16 55.5**	**-0.2**
	baz=319						
TWC				S	**Sg**	**00 17 06.6**	**-0.7**
	baz=319						
TWE	**Neicheng**	**1.09**	**314**	*e*P	**Pg**	**00 16 59.9**	**+0.5**
	baz=316						
TWE				*e*S	**Sg**	**00 17 14.1**	**+0.5**
	baz=316						
ENTT	**Nioudou**	**1.11**	**308**	P	**Pg**	**00 16 59.6**	**-0.2**
	baz=318						
ENTT				*e*S	**Sg**	**00 17 14.9**	**+0.8**
	baz=318						
NNS	**Nan Shan**	**1.16**	**295**	*e*P	**Pg**	**00 16 59.9**	**-0.7**
	baz=280						
NNS				*e*S	**Sg**	**00 17 15.5**	**-0.2**
	baz=280						
TWB1	**Santiao Chiao**	**1.16**	**335**	*e*P	**Pg**	**00 17 00.3**	**-0.3**
	baz=339						
TWB1				*e*S	**Sg**	**00 17 16.1**	**+0.4**
	baz=339						
WHF	**Hehuan Shan**	**1.17**	**280**	*e*P	**Pg**	**00 16 59.4**	**-1.5**
	baz=277						
WHF				*e*S	**Sg**	**00 17 15.2**	**-0.8**
	baz=277						
IRIF	**Iriomote-Funau**	**1.17**	**71**	P	**Pg**	**00 17 01.4**	**+0.6**
IRIF				*e*S	**Sg**	**00 17 16.5**	**+0.5**
HATJ	**Hateruma jima**	**1.18**	**85**	P	**Pg**	**00 17 00.7**	**-0.4**
HATJ				*e*S	**Sg**	**00 17 16.3**	**0.0**
TWF1	**Yuli**	**1.27**	**242**	*e*P	**Pg**	**00 17 01.7**	**-1.2**
	baz=238						
NSK	**Sanguang**	**1.28**	**304**	*e*P	**Pg**	**00 17 02.6**	**-0.5**
	baz=304						
NSK				*e*S	**Sg**	**00 17 19.4**	**-0.3**
	baz=304						
NWF	**Wu-fen Shan**	**1.30**	**329**	*e*P	**Pn**	**00 17 03.2**	**-0.2**
	baz=331						
NWF				*e*S	**Sg**	**00 17 19.8**	**-0.5**
	baz=331						
TWA	**Mucha**	**1.33**	**320**	*e*P	**Pn**	**00 17 04.3**	**+0.5**
	baz=335						
TWA				*e*S	**Sg**	**00 17 21.8**	**+0.5**
	baz=335						
JKRS	**Kuro-shima**	**1.39**	**78**	*e*S	**Sb**	**00 17 23.0**	**0.0**
SMLT	**Sun Moon Lake**	**1.49**	**268**	*e*P	**Pn**	**00 17 06.8**	**+0.8**
	baz=253						
YUS	**Yu-Shan**	**1.51**	**252**	*e*P	**Pn**	**00 17 05.2**	**-1.0**
	baz=248						
YUS				*e*S	**Sn**	**00 17 23.8**	**-2.6**
	baz=248						
TWS1	**Kuangyinshan**	**1.52**	**319**	*e*P	**Pn**	**00 17 06.8**	**+0.4**
	baz=299						
TYC	**Yuchr**	**1.52**	**268**	*e*P	**Pn**	**00 17 06.2**	**-0.3**
	baz=265						
JIJ	**Ishigaki jima**	**1.54**	**74**	*e*S	**Sn**	**00 17 25.3**	**-1.7**
NSTT	**Nanjuang**	**1.54**	**296**	*e*P	**Pn**	**00 17 06.8**	**+0.1**
	baz=295						
NSTT				*e*S	**Sn**	**00 17 26.4**	**-0.8**
	baz=295						
TWY	**Chenhua**	**1.56**	**328**	*e*P	**Pn**	**00 17 05.2**	**-1.7**
	baz=329						
ALS	**Alishan**	**1.64**	**255**	*e*S	**Sn**	**00 17 27.9**	**-1.6**
	baz=251						
TWQ1	**Liyutan**	**1.65**	**284**	*e*P	**Pn**	**00 17 08.7**	**+0.5**
	baz=269						
CHN5	**Tsauling**	**1.73**	**258**	*e*P	**Pn**	**00 17 09.8**	**+0.5**
	baz=242						
CHN5				*e*S	**Sn**	**00 17 32.5**	**+0.8**
	baz=242						
WTP	**Ta-pu**	**1.89**	**248**	*e*P	**Pn**	**00 17 12.4**	**+0.9**
	baz=244						
WTP				*e*S	**Sn**	**00 17 36.5**	**+0.8**
	baz=244						
SGST	**Jiashian**	**1.98**	**244**	*e*P	**Pn**	**00 17 14.1**	**+1.4**
	baz=240						
SGST				*e*S	**Sn**	**00 17 39.0**	**+1.0**
	baz=240						
CHN1	**Nanshi**	**1.98**	**248**	*e*P	**Pn**	**00 17 13.6**	**+0.8**
	baz=244						
CHN1				*e*S	**Sn**	**00 17 38.7**	**+0.6**
	baz=244						
TWK	**Hsinying**	**1.99**	**250**	*e*P	**Pn**	**00 17 14.0**	**+1.2**
	baz=246						
TWK				*e*S	**Sn**	**00 17 38.6**	**+0.4**
	baz=246						
LAY	**Lan-yu**	**2.11**	**205**	*e*P	**Pn**	**00 17 11.4**	**-3.1**
	baz=203						

IDC 05 00:21:52.2±4.1, 2°.15S×100°.45E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.4/23, mbtmp3.6/5, MS3.2/1, Ms1 3.4/1, ms1mx2.4/34, Error ellipse: s-maj=175.7km s-min=22.2km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**1.23**	**1**	P	Pg	00 22 22.2	+6.4
SDSI	**Sungai Dareh**	**1.56**	**39**	P	Pn	00 22 30.3	+9.1
PPI	**Padang Panjang**	**1.69**	**358**	P	Pn	00 22 28.4	+5.5
BKNI	**Bangkinang**	**2.53**	**14**	P	Pn	00 22 42.0	+7.4
CMAR	**Chiang Mai Arr**	**20.53**	**356**	LR	LR	00 35 14.6	
	comp=Z,64nm,18.2s,baz=170,slow=39						
WRA	**Warramunga Arr**	**37.53**	**121**	P	P	00 29 07.7	-0.5
	0.3nm,0.4s,baz=305,slow=8.8,SNR=2.6						
ASAR	**Alice Springs**	**38.80**	**126**	P	P	00 29 19.3	+0.4
	0.2nm,0.5s,baz=301,slow=8.4,SNR=3.4						
SONM	**Songino Array**	**50.05**	**5**	P	P	00 30 49.8	+1.3
	0.7nm,0.7s,baz=170,slow=8.8,SNR=4.0						
MKAR	**Makanchi Array**	**51.30**	**344**	P	P	00 30 57.8	-0.2
	0.5nm,0.6s,baz=159,slow=7.8,SNR=5.6						
ZALV	**Zalesovo Beam**	**57.40**	**349**	P	P	00 31 41.5	-0.8
	0.5nm,0.4s,baz=180,slow=5.8,SNR=3.6						

*IDC **05** 00:22:01.4±1.1, 2°.76S×99°.66E, h0km, mb4.2/12, mb1 4.2/13, mb1mx4.0/24, mbtmp4.2/13, ML3.5/1, MS3.1/1, Ms1 3.1/1, ms1mx2.4/33, Error ellipse: s-maj=42.9km s-min=17.0km az=53.0*
*ISCJB **05** 00:22:03.3±2.5, 2°.58S±0°.05×99°.75E±0°.06, h21km±18km, mb4.3/22, Error ellipse: s-maj=11.4km s-min=8.2km az=152.4*
*NEIC **05** 00:22:06.1±2.1, 2°.60S×99°.76E, h28km±15km, mb4.3/12, Error ellipse: s-maj=7.6km s-min=5.7km az=70.0*
*DJA **05** 00:22:08, 1°.65S×100°.38E, h27km, MLv3.9/4*
ISC 05 00:22:06.7±2.3, 2°.58S±0°.05×99°.76E±0°.06, h31km±17km, n50, σ0°.88/48, mb4.3/22, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**1.41**	**332**	P	**Pn**	**00 22 31.0**	**+0.7**
KSI	**Kapahiang**	**3.02**	**111**	P	**Pn**	**00 22 54.4**	**+1.9**
MNSI	**Mandailing Nat**	**3.35**	**357**	P	**Pn**	**00 22 47.9**	**-9.2**
MDSI	**Maura Dua**	**4.80**	**113**	P	**Pn**	**00 23 16.8**	**-0.2**
PSI	**Prapat**	**5.41**	**351**	Pn	**Pn**	**00 23 23.9**	**-1.4**
	1.6nm,0.3s,baz=166,slow=14,SNR=2.6						
KULM	**Kulim**	**7.87**	**6**	*e*Pn	**Pn**	**00 23 58.7**	**-0.4**
COCO	**West Island**	**9.98**	**197**	Pn	**Pn**	**00 24 28.6**	**+0.5**
KKM	**Kota Kinabalu**	**18.53**	**62**	*e*P	**Pn**	**00 26 20.5**	**-0.8**
	8.8nm,0.6s						
KAPI	**Kappang**	**20.09**	**98**	LR	LR	00 36 27.4	
	comp=Z,55nm,18.1s,baz=307,slow=43						
CMAR	**Chiang Mai Arr**	**20.92**	**358**	P	**P**	**00 26 46.9**	**0.0**
	1.9nm,0.4s,baz=184,slow=10,SNR=13						
CHTO	**Chiang Mai**	**21.27**	**358**	P	**P**	**00 26 49.7**	**-1.0**
PALK	**Pallekele**	**21.39**	**297**	*e*P	**P**	**00 26 51.7**	**-0.3**
DGAR	**Diego Garcia**	**27.61**	**259**	P	**P**	**00 27 52.1**	**+0.3**
YHNB	**Yeheng**	**34.27**	**37**	P	**P**	**00 28 50.2**	**0.0**
XAN	**Xi'an**	**37.43**	**13**	P	**P**	**00 29 16.2**	**-1.0**
XAN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.2						
XAN				pmax	pmax		
	comp=Z,86nm,4.0s						
WRA	**Warramunga Arr**	**37.91**	**120**	P	**P**	**00 29 20.6**	**-0.9**
	comp=Z,2.2nm,0.6s,mb4.0,baz=299,slow=9.2,SNR=10						
WRAB	**Tennant Creek**	**37.92**	**120**	*e*P	**P**	**00 29 21.1**	**-0.5**
	comp=Z,2.3nm,0.5s,mb4.2						
ASAR	**Alice Springs**	**39.11**	**125**	P	**P**	**00 29 30.3**	**-1.3**
	comp=Z,2.7nm,0.7s,mb4.1,baz=302,slow=8.0,SNR=14						
BJT	**Baijiatuan**	**44.98**	**18**	P	**P**	**00 30 18.8**	**-0.4**
KSRS	**Korea Array**	**47.63**	**31**	P	**P**	**00 30 39.9**	**-0.2**
	comp=Z,2.8nm,0.9s,mb4.3,baz=216,slow=9.4,SNR=6.9						
STKA	**Stephens Creek**	**48.95**	**131**	P	**P**	**00 30 52.6**	**+2.2**
	comp=Z,3.7nm,0.7s,mb4.5,baz=323,slow=7.5,SNR=5.2						
STKA	**Stephens Creek**	**48.95**	**131**	P	**P**	**00 30 49.8**	**-0.6**
	comp=Z,0.7nm,0.7s,mb3.8						
UCH	**Uchtor**	**50.12**	**336**	*e*P	**P**	**00 31 00.3**	**+1.2**
	comp=Z,1.1nm,0.5s,mb4.1						
TKM2	**Tokmak 2**	**50.27**	**337**	*e*P	**P**	**00 31 01.2**	**+1.0**
	comp=Z,4.4nm,0.7s,mb4.6						
AML	**Almayashu**	**50.38**	**335**	*e*P	**P**	**00 31 02.2**	**+1.2**
	comp=Z,2.1nm,0.6s,mb4.3						
AAK	**Ala-Archa**	**50.46**	**336**	P	**P**	**00 31 01.8**	**+0.2**
SONM	**Songino Array**	**50.54**	**6**	P	**P**	**00 31 03.4**	**+1.2**
	comp=Z,2.9nm,0.5s,mb4.5,baz=187,slow=9.3,SNR=21						
ULN	**Ulaanbaatar**	**50.64**	**6**	*e*P	**P**	**00 31 03.7**	**+0.8**
	comp=Z,2.4nm,0.8s,mb4.2						
EKS2	**Erkin-Say**	**50.78**	**335**	*e*P	**P**	**00 31 05.6**	**+1.5**
	comp=Z,4.4nm,0.6s,mb4.6						
MK31	**Makanchi Array**	**51.52**	**345**	*e*P	**P**	**00 31 09.3**	**-0.2**
MKAR	**Makanchi Array**	**51.52**	**345**	P	**P**	**00 31 10.6**	**+1.1**
	comp=Z,3.9nm,0.6s,mb4.5,baz=138,slow=8.5,SNR=36						
KURK	**Kurchatov**	**56.09**	**344**	P	**P**	**00 31 43.7**	**+0.8**
	comp=Z,2.2nm,0.3s,mb4.7,baz=163,slow=6.5,SNR=1.4						
KURK	**Kurchatov**	**56.09**	**344**	*e*P	**P**	**00 31 43.1**	**+0.2**
	comp=Z,2.3nm,0.6s,mb4.4						
ZALV	**Zalesovo Beam**	**57.69**	**350**	P	**P**	**00 31 54.7**	**+0.6**
	comp=Z,4.0nm,0.7s,mb4.6,baz=173,slow=5.5,SNR=16						
ZALV	**Zalesovo Beam**	**57.69**	**350**	P	**P**	**00 31 54.7**	**+0.6**
TAU	**Tasmania Unive**	**58.29**	**140**	*e*P	**P**	**00 31 58.0**	**-0.6**
HNR	**Honiara**	**60.18**	**99**	*e*P	**P**	**00 32 13.7**	**+1.5**
	comp=Z,132nm,0.8s						
BVAR	**Borovoye Array**	**60.64**	**340**	P	**P**	**00 32 14.6**	**0.0**
	comp=Z,0.7nm,0.4s,mb4.1,baz=144,slow=8.8,SNR=7.0						
BRVK	**Borovoye**	**60.70**	**340**	*e*P	**P**	**00 32 14.7**	**-0.3**
	comp=Z,1.2nm,0.4s,mb4.4						
ABKAR	**Akbulak array**	**62.03**	**332**	*e*P	**P**	**00 32 23.7**	**-0.4**
	comp=Z,2.5nm,0.7s,mb4.5						
KMBO	**Kilima Mbogo**	**62.49**	**270**	P	**P**	**00 32 26.1**	**-1.8**
ARU	**Arti**	**67.64**	**337**	P	**P**	**00 32 59.4**	**-1.1**
LSZ	**Lusaka**	**71.55**	**255**	P	**P**	**00 33 25.8**	**+0.3**
BRTR	**Keskin Array B**	**73.53**	**313**	P	**P**	**00 33 36.1**	**-0.8**
	comp=Z,0.5nm,0.8s,mb3.5,baz=116,slow=6.7,SNR=3.2						
BOSA	**Boshof**	**75.17**	**241**	P	**P**	**00 33 46.0**	**-0.6**
TIRR	**Tirgusor**	**78.60**	**316**	*e*P	**P**	**00 34 05.1**	**-0.5**
	comp=Z,3.7nm,0.8s,mb4.4						
FINES	**FINESS Array B**	**84.51**	**332**	P	**P**	**00 34 37.4**	**+0.9**
	comp=Z,0.4nm,0.5s,mb3.9,baz=125,slow=12,SNR=4.1						
ARCES	**ARCESS Array B**	**86.93**	**340**	P	**P**	**00 34 48.0**	**-0.3**
	comp=Z,2.7nm,1.0s,mb4.4,baz=108,slow=4.8,SNR=2.9						
RGN	**Rugen**	**90.01**	**324**	*e*P	**P**	**00 35 02.6**	**-0.6**
TXAR	**Lajitas Array**	**145.30**	**38**	PKPbc	PKPbc	00 41 43.0	+1.0
	comp=Z,3.1nm,0.8s,baz=318,slow=1.2,SNR=22						

*NEIC **05** 00:42:16.3, 19°.06N×68°.73W, h162km, MD3.7(RSPR), After RSPR.*
RSPR 05 00:42:16.3, 19°.06N×68°.73W, h162km±3km, MD3.7/9, MD3.7/9, 9C-1D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**0.64**	**149**	*e*P	Pn	00 42 38.6	-1.2
PCDR	**Punta Cana, DR**	**0.64**	**149**	*e*S	Sn	00 42 57.0	-0.7
AGPR	**Aguadilla, PR**	**1.65**	**111**	*e*P	Pn	00 42 49.7	+1.4
AGPR				*e*S	Sn	00 43 14.6	+1.8
LSP	**Las Mesas**	**1.79**	**119**	*e*P	Pn	00 42 50.4	+0.5
LSP				*e*S	Sn	00 43 16.1	+0.4
CRPR	**Cabo Rojo, PR**	**1.86**	**124**	*e*P	Pn	00 42 49.7	-1.0
CRPR				*e*S	Sn	00 43 18.0	+0.9
AOPR	**Arecibo Observ**	**2.01**	**111**	*e*P	Pn	00 42 53.1	+0.9
AOPR				*e*S	Sn	00 43 19.8	-0.1
OBIP	**Obispado Ponce**	**2.26**	**116**	*e*S	Sn	00 43 24.8	-0.3
SDDR	**Presa de Saban**	**2.42**	**268**	*e*Pn	Pn	00 42 53.4	-3.7
SDDR				*e*Sn	Sn	00 43 24.4	-4.0
SJG	**San Juan**	**2.63**	**111**	*e*P	Pn	00 43 00.8	+1.2
SJG				*e*S	Sn	00 43 33.3	+0.3
CBYP	**Canovanas**	**2.84**	**106**	*e*P	Pn	00 43 01.7	-0.4
CBYP				*e*S	Sn	00 43 37.1	-0.5
CPD	**Cerro la Pandu**	**2.86**	**110**	*e*P	Pn	00 43 02.1	-0.3
CPD				*e*S	Sn	00 43 37.6	-0.5
HUMP	**Col San Antoni**	**2.88**	**108**	*e*P	Pn	00 43 02.8	0.0
HUMP				*e*S	Sn	00 43 37.9	-0.8
MTP	**Monte Pirata**	**3.17**	**107**	*e*P	Pn	00 43 06.6	+0.3
MTP				*e*S	Sn	00 43 45.5	+0.6

*ISK **05** 00:42:20.8, 40°.19N×26°.90E, h3km, MD3.3*
*DDA **05** 00:42:21.5, 40°.16N×26°.93E, h7km±3km, Md3.0*
*NEIC **05** 00:42:21.0, 40°.19N×26°.90E, h3km, MD3.1(ISK), MD3.1(ATH), After ISK.*
*ISCJB **05** 00:42:21.3±0.4, 40°.18N±0°.02×26°.88E±0°.02, h4km±3km, Error ellipse: s-maj=2.7km s-min=2.6km az=36.4*
*ATH **05** 00:42:21.6, 40°.16N×26°.93E, h33km±3km, MD3.1/4*
*CSEM **05** 00:42:21.7±0.1, 40°.19N×26°.88E, h5km, MD3.3, Error ellipse: s-maj=2.2km s-min=2.0km az=152.0*
*THE **05** 00:42:23.3, 40°.19N×26°.74E, h2km±1km, ML3.2/4, Error ellipse: s-maj=1.5km s-min=0.6km az=257.0*
ISC 05 00:42:21.9±0.3, 40°.18N±0°.02×26°.88E±0°.02, h7km±3km, n117, σ0°.82/163, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPK	**Lapseki**	**0.21**	**334**	PG	**Pg**	**00 42 26.6**	**+0.4**
LPK	**Lapseki**	**0.21**	**334**	*i* Pg	**Pg**	**00 42 26.6**	**+0.4**
RKY	**Sarkoy-Tekirda**	**0.55**	**24**	*e*PG	**Pg**	**00 42 32.2**	**-0.4**
RKY				*e*SG	**Sg**	**00 42 40.5**	**+0.6**
RKY	**Sarkoy-Tekirda**	**0.55**	**24**	*e*Pg	**Pg**	**00 42 32.2**	**-0.4**
RKY				*e*Sg	**Sg**	**00 42 40.5**	**+0.7**
EZN	**Ezine**	**0.56**	**230**	*e*PG	**Pg**	**00 42 31.9**	**-0.7**
EZN	**Ezine**	**0.56**	**230**	*e*Pg	**Pg**	**00 42 31.9**	**-0.7**
SART	**Tekirdag**	**0.56**	**24**	*i* P	**Pg**	**00 42 32.6**	**-0.1**
SART				*i* S	**Sg**	**00 42 40.6**	**+0.7**
SART	**Tekirdag**	**0.56**	**24**	*i* P	**Pg**	**00 42 32.6**	**0.0**
SART				*i* S	**Sg**	**00 42 40.6**	**+0.7**
MFT	**Murefte**	**0.68**	**27**	*e*PG	**Pg**	**00 42 33.6**	**-1.3**
MFT				*e*SG	**Sg**	**00 42 45.2**	**+1.4**
MFT	**Murefte**	**0.68**	**27**	*e*Pg	**Pg**	**00 42 33.6**	**-1.3**
MFT				*e*Sg	**Sg**	**00 42 45.2**	**+1.4**
BALY	**Balya**	**0.72**	**128**	*i* P	**Pg**	**00 42 34.9**	**-0.9**
BALY				*i* S	**Sg**	**00 42 44.6**	**-0.4**
BALY	**Balya**	**0.72**	**128**	*i* P	**Pg**	**00 42 34.9**	**-0.8**
BALY				*i* S	**Sg**	**00 42 44.6**	**-0.4**
GADA	**Gvkgeada**	**0.75**	**271**	*e*PG	**Pg**	**00 42 36.6**	**+0.2**
GADA				*e*SG	**Sg**	**00 42 47.5**	**+1.4**
GADA	**Gvkgeada**	**0.75**	**271**	*e*Pg	**Pg**	**00 42 36.6**	**+0.2**
GADA				*e*Sg	**Sg**	**00 42 47.6**	**+1.4**
EDC	**Edincik**	**0.77**	**77**	*e*PG	**Pg**	**00 42 36.4**	**-0.3**
EDC	**Edincik**	**0.77**	**77**	*e*Pg	**Pg**	**00 42 36.4**	**-0.3**
ENEZ	**Enez**	**0.79**	**315**	*e*PG	**Pg**	**00 42 37.0**	**0.0**
ENEZ				*e*SG	**Sg**	**00 42 48.6**	**+1.4**
ENEZ	**Enez**	**0.79**	**315**	*e*Pg	**Pg**	**00 42 37.0**	**0.0**
ENEZ				*e*Sg	**Sg**	**00 42 48.6**	**+1.4**
BNT	**Bandirma**	**0.81**	**77**	*e*PG	**Pg**	**00 42 36.3**	**-1.2**
AYVA	**Ayvalik**	**0.89**	**190**	*i* P	**Pg**	**00 42 38.4**	**-0.5**
AYVA				*i* S	**Sg**	**00 42 50.3**	**-0.1**
AYVA	**Ayvalik**	**0.89**	**190**	*i* P	**Pg**	**00 42 38.4**	**-0.5**
AYVA				*i* S	**Sg**	**00 42 50.3**	**-0.1**
BALB	**Balikesir**	**0.94**	**125**	*e*PG	**Pg**	**00 42 39.7**	**-0.3**
BALB				*e*SG	**Sg**	**00 42 53.0**	**+0.9**
BALB	**Balikesir**	**0.94**	**125**	*e*Pg	**Pg**	**00 42 39.7**	**-0.2**
TKR	**Tekirdag**	**0.95**	**31**	*e*PG	**Pg**	**00 42 39.4**	**-0.7**
TKR	**Tekirdag**	**0.95**	**31**	*e*Pg	**Pg**	**00 42 39.4**	**-0.7**
ALN	**Alexandroupoli**	**0.96**	**319**	*e*Pb	**Pg**	**00 42 39.8**	**-0

CHOS	**Chios island**	**1.90 200**	*e*Pb	**Pb**	**00 42 54.3**	**-2.7**
CHOS	**Chios island**	**1.90 200**	P	**Pn**	**00 42 54.7**	**-0.1**
CHOS			S	**Sn**	**00 43 20.6**	**+1.5**
YLV	**Yalova**	**1.94 78**	*e*PN	**Pn**	**00 42 56.5**	**+1.1**
YLV	**Yalova**	**1.94 78**	*e*Pn	**Pn**	**00 42 56.5**	**+1.2**
KLYT	**Kilyos**	**1.96 56**	*e*PN	**Pn**	**00 42 55.7**	**+0.1**
KLYT	**Kilyos**	**1.96 56**	*e*Pn	**Pn**	**00 42 55.7**	**+0.1**
KAVA	**Kavala**	**1.98 295**	P	**Pn**	**00 42 55.6**	**-0.3**
KAVA			S	**Sn**	**00 43 19.8**	**-1.1**
KAVA	**Kavala**	**1.98 295**	P	**Pn**	**00 42 55.6**	**-0.3**
KAVA			S	**Sn**	**00 43 19.8**	**-1.1**
KULA	**Kula-Manisa**	**2.16 140**	*e*PN	**Pn**	**00 42 59.5**	**+1.2**
KULA	**Kula-Manisa**	**2.16 140**	*e*Pn	**Pn**	**00 42 59.5**	**+1.1**
ADVT	**Abdulvahap**	**2.20 83**	*e*PN	**Pn**	**00 42 58.9**	**0.0**
ADVT	**Abdulvahap**	**2.20 83**	*e*Pn	**Pn**	**00 42 58.9**	**0.0**
OUR	**Ouranopolis**	**2.22 275**	P	**Pn**	**00 42 58.3**	**-0.9**
OUR	**Ouranopolis**	**2.22 275**	P	**Pn**	**00 42 58.3**	**-0.9**
JMB	**Yambol**	**2.29 354**	P	**Pn**	**00 43 00.7**	**+0.5**
JMB	**Yambol**	**2.29 354**	P	**Pn**	**00 43 00.7**	**+0.5**
SILT	**Sile**	**2.31 64**	*e*PN	**Pn**	**00 43 00.8**	**+0.3**
SILT	**Sile**	**2.31 64**	*e*Pn	**Pn**	**00 43 00.8**	**+0.3**
SMG	**Samos**	**2.47 181**	*e*Pn	**Pn**	**00 43 01.0**	**-1.6**
SMG	**Samos**	**2.47 181**	*e*PN	**Pn**	**00 43 01.0**	**-1.6**
SMG	**Samos**	**2.47 181**	*e*Pn	**Pn**	**00 43 01.0**	**-1.6**
PAIG	**Paliouri**	**2.47 265**	P	**Pn**	**00 43 02.0**	**-0.6**
PAIG	**Paliouri**	**2.47 265**	P	**Pn**	**00 43 02.0**	**-0.6**
GPA	**Golpazari**	**2.63 87**	*e*PN	**Pn**	**00 43 05.5**	**+0.8**
GPA	**Golpazari**	**2.63 87**	*e*Pn	**Pn**	**00 43 05.5**	**+0.7**
PLG	**Polygyros**	**2.64 275**	*e*Pn	**Pn**	**00 43 04.4**	**-0.5**
PLG	**Polygyros**	**2.64 275**	*e*PN	**Pn**	**00 43 04.4**	**-0.5**
PLG	**Polygyros**	**2.64 275**	*e*Pn	**Pn**	**00 43 04.4**	**-0.5**
SRS	**Serrai**	**2.67 292**	P	**Pn**	**00 43 04.9**	**-0.5**
SRS	**Serrai**	**2.67 292**	P	**Pn**	**00 43 04.9**	**-0.5**
ALT	**Altintas**	**2.73 113**	*e*PN	**Pn**	**00 43 06.8**	**+0.6**
ALT	**Altintas**	**2.73 113**	*e*Pn	**Pn**	**00 43 06.8**	**+0.5**
SOH	**Sokhos**	**2.77 285**	*e*Pn	**Pn**	**00 43 06.3**	**-0.4**
SOH	**Sokhos**	**2.77 285**	P	**Pn**	**00 43 06.3**	**-0.4**
SOH	**Sokhos**	**2.77 285**	*e*PN	**Pn**	**00 43 06.3**	**-0.4**
SOH	**Sokhos**	**2.77 285**	P	**Pn**	**00 43 06.3**	**-0.4**
GULT	**Gulveren**	**2.79 84**	*e*PN	**Pn**	**00 43 07.8**	**+0.8**
GULT	**Gulveren**	**2.79 84**	*e*Pn	**Pn**	**00 43 07.8**	**+0.8**
ESKT	**Eskisehir**	**3.12 101**	*e*PN	**Pn**	**00 43 12.3**	**+0.7**
ESKT	**Eskisehir**	**3.12 101**	*e*Pn	**Pn**	**00 43 12.3**	**+0.7**
LIT	**Litokhoron**	**3.37 270**	*e*Pn	**Pn**	**00 43 15.6**	**+0.7**
LIT	**Litokhoron**	**3.37 270**	*e*PN	**Pn**	**00 43 15.6**	**+0.7**
LIT	**Litokhoron**	**3.37 270**	*e*Pn	**Pn**	**00 43 15.6**	**+0.7**

NEIC ***05*** *00:48:49.5±3.7, 49°.70N×88°.33E, h10km, mb4.0/1, Error ellipse: s-maj=49.6km s-min=17.3km az=103.0*
IDC ***05*** *00:48:50.2±2.7, 49°.94N×88°.32E, h0km, mb1 3.3/4, mb1mx3.1/29, mbtmp3.3/4, ML3.2/4, Error ellipse: s-maj=26.9km s-min=14.3km az=95.0*
NNC ***05*** *00:48:53.3±2.4, 49°.85N×88°.08E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=17.9km s-min=11.2km az=74.0*

ISC 05 00:48:50.0±1.8, 49°.89N±0°.06×88°.6E±0°.2, h10km, n10, σ1§11/21, 2C-7D, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**4.68**	**332**	Pn	**Pn**	**00 50 01.7**	**+1.1**
	0.7nm,0.3s,baz=145,slow=13,SNR=9.1						
ZALV				Pg	**Pg**	**00 50 13.0**	**-6.5**
	0.8nm,0.3s,baz=149,slow=17,SNR=6.8						
ZALV				Sn	**Sn**	**00 50 55.1**	**+0.3**
	0.9nm,0.3s,baz=153,slow=19,SNR=3.7						
ZALV				Lg		00 51 14.4	
	2.0nm,0.3s,baz=146,slow=30,SNR=9.6						
MK31	**Makanchi Array**	**5.19**	**236**	Pn	**Pn**	**00 50 09.2**	**+1.6**
	0.2nm,0.2s,baz=49,slow=14,SNR=47						
MK31				⇓Pg	**Pg**	**00 50 23.3**	**-6.1**
	2.5nm,0.6s,baz=51,slow=17,SNR=6.8						
MK31				⇑Sn	**Sn**	**00 51 07.3**	**-0.2**
	2.4nm,0.5s,baz=57,slow=21,SNR=8.0						
MK31				⇓Lg		00 51 28.0	
	2.4nm,0.3s,baz=50,slow=30,SNR=4.7						
MK31	**Makanchi Array**	**5.19**	**236**	*e*Pn	**Pn**	**00 50 04.1**	**-3.6**
MK31				*e*Sn	**Sn**	**00 51 07.1**	**-0.4**
MKAR	**Makanchi Array**	**5.19**	**236**	Pn	**Pn**	**00 50 09.2**	**+1.5**
	0.8nm,0.3s,baz=55,slow=15,SNR=31						
MKAR				Pg	**Pg**	**00 50 23.3**	**-6.1**
	1.1nm,0.3s,baz=53,slow=19,SNR=12						
MKAR				Sn	**Sn**	**00 51 07.9**	**+0.3**
	1.8nm,0.3s,baz=52,slow=22,SNR=12						
MKAR				Lg		00 51 27.6	
	2.4nm,0.3s,baz=45,slow=31,SNR=6.7						
KURK	**Kurchatov**	**6.41**	**281**	⇓Pn	**Pn**	**00 50 23.8**	**-0.7**
	1.6nm,0.5s						
KURK				⇓Sn	**Sn**	**00 51 36.7**	**-1.0**
	2.3nm,0.6s						
KURK				⇓Lg		00 52 04.1	
	7.4nm,0.6s						
KURK	**Kurchatov**	**6.41**	**281**	Pn	**Pn**	**00 50 24.4**	**0.0**
	0.4nm,0.3s,baz=95,slow=15,SNR=4.5						
KURK				Sn	**Sn**	**00 51 37.5**	**-0.1**
	0.4nm,0.3s,baz=88,slow=28,SNR=4.8						
KURK				Lg		00 52 08.0	
	0.4nm,0.3s,baz=86,slow=34,SNR=4.7						
KURK	**Kurchatov**	**6.41**	**281**	*e*Pn	**Pn**	**00 50 23.4**	**-1.0**
KURK				Sn	**Sn**	**00 51 34.2**	**-3.4**
KURBB	**Kurchatov Arra**	**6.47**	**280**	⇓Pn	**Pn**	**00 50 25.5**	**+0.3**
	0.3nm,0.3s						
KURBB				⇓Sn	**Sn**	**00 51 39.7**	**+0.9**
	1.5nm,0.5s						
KURBB				⇑Lg		00 52 09.2	
	4.4nm,0.6s						
BVAR	**Borovoye Array**	**11.75**	**292**	Pn	**Pn**	**00 51 35.5**	**-2.0**
	0.2nm,0.3s,baz=93,slow=13,SNR=3.5						
GNI	**Garni**	**32.05**	**269**	*e*P	**P**	**00 55 15.2**	**-1.4**
	1.1nm,0.5s						

DJA 05 01:18:53, 0°.50S×122°.82E, h24km, MLv3.7/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.54**	**185**	P	Pb	01 19 03.7	-0.2
LUWI				S	Sb	01 19 10.6	-0.7
APSI	**Ampana**	**1.24**	**251**	P	Pn	01 19 14.4	-0.4
APSI				S	Sn	01 19 31.5	+0.7
MRSI	**Marisa**	**1.31**	**318**	P	Pn	01 19 15.6	-0.2
KDI	**Kendari**	**3.44**	**183**	P	Pn	01 19 46.1	+1.0
TTSI	**Tana Toraja**	**3.92**	**230**	P	Pn	01 19 52.4	+0.6
KAPI	**Kappang**	**5.43**	**214**	P	Pn	01 20 12.2	-0.3

KRSC 05 01:20:02.3±0.8, 55°.85N×163°.92E, h10km±10km, ML3.8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.71**	**301**	*i* P	Pg	01 20 15.6	-0.5
KBTR				*e*S	Sg	01 20 25.4	0.0
SRKR	**Sorokina**	**1.73**	**299**	P	Pn	01 20 32.6	+0.2
SRKR				S	Sn	01 20 54.4	-0.2
ZLN	**Zelenaya**	**1.76**	**277**	*e*P	Pn	01 20 34.3	+1.5
ZLN				*e*S	Sn	01 20 57.2	+2.0
MKZ	**Mys Kozlova**	**1.81**	**225**	*i* P	Pn	01 20 32.8	-0.6
MKZ				*e*S	Sn	01 20 55.2	-1.1
BZGR	**Bezymyannyi-Gr**	**1.82**	**274**	P	Pn	01 20 35.1	+1.5
BZGR				S	Sn	01 20 58.7	+2.1
KLY	**Klyuchi**	**1.89**	**286**	*e*P	Pn	01 20 33.8	-0.8
KLY				*e*S	Sn	01 20 56.6	-1.8
KMNR	**Kamenistaya**	**2.08**	**269**	*i* P	Pn	01 20 39.2	+2.0
KMNR				S	Sn	01 21 06.1	+3.0
KPT	**Kopyto**	**2.08**	**275**	P	Pn	01 20 39.1	+1.8
KPT				S	Sn	01 21 05.7	+2.5
KOZ	**Kozyrevsk**	**2.29**	**277**	P	Pn	01 20 42.6	+2.6
KOZ				S	Sn	01 21 12.5	+4.3
SRDR	**Sredinnyy**	**2.40**	**283**	P	Pn	01 20 43.5	+1.9
SRDR				S	Sn	01 21 13.1	+2.1
SPN	**Mys Shipunski**	**3.57**	**221**	S	Sn	01 21 38.4	-1.5
NLC	**Nalytchevo**	**3.78**	**227**	P	Pn	01 21 01.4	+0.8
NLC				*e*S	Sn	01 21 45.8	+0.7
AVH	**Avacha**	**3.98**	**231**	*e*P	Pn	01 21 05.3	+2.1
GNL	**Ganaly**	**4.08**	**241**	P	Pn	01 21 06.6	+1.9

NEIC ***05*** *01:40:56.5±0.8, 2°.17N×127°.96E, h35km, mb4.5/1, Error ellipse: s-maj=21.3km s-min=12.4km az=67.0*

IDC 05 01:41:07.2±1.0, 1°.79N×127°.31E, h133km±8km, mb3.6/5, mb1 3.8/6, mb1mx3.5/21, mbtmp3.7/6, Error ellipse: s-maj=44.2km s-min=15.1km az=69.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**10.13**	**228**	P	Pn	01 43 29.6	+0.2
	2.8nm,0.3s,baz=49,slow=6.2,SNR=10						
KAPI	**Kappang**	**10.13**	**228**	P	Pn	01 43 29.6	+0.2
WRAB	**Tennant Creek**	**22.66**	**163**	*e*P	P	01 45 56.3	-1.3
	8.2nm,0.4s						
WRA	**Warramunga Arr**	**22.67**	**163**	P	P	01 45 57.2	-0.4
	8.7nm,0.5s,baz=342,slow=11,SNR=36						
WRA	**Warramunga Arr**	**22.67**	**163**	P	P	01 45 57.2	-0.4
ASAR	**Alice Springs**	**26.10**	**166**	P	P	01 46 28.9	+0.1
	0.6nm,0.5s,baz=342,slow=7.4,SNR=6.9						
STKA	**Stephens Creek**	**36.12**	**159**	P	P	01 47 56.7	+0.2
	2.5nm,0.4s,baz=348,slow=10.0,SNR=6.4						
STKA	**Stephens Creek**	**36.12**	**159**	P	P	01 47 56.7	+0.2
MKAR	**Makanchi Array**	**59.48**	**326**	P	P	01 50 57.1	+0.8
	0.2nm,0.2s,baz=107,slow=10.0,SNR=2.9						
MKAR				pP	pP	01 51 26.5	-1.4
	0.2nm,0.2s,baz=108,slow=7.7,SNR=1.2						
KURK	**Kurchatov**	**63.68**	**328**	P	P	01 51 23.8	-0.6
	0.4nm,0.3s,baz=130,slow=6.4,SNR=3.5						
KURK				pP	pP	01 51 56.5	+0.1
	0.3nm,0.3s,baz=119,slow=7.0,SNR=3.0						
KURK				sP	sP	01 52 12.3	+1.5
	0.4nm,0.4s,baz=121,slow=6.5,SNR=2.5						
KURK	**Kurchatov**	**63.68**	**328**	P	P	01 51 23.8	-0.6
KURK				pP	pP	01 51 56.5	+0.1
KURK				sP	sP	01 52 12.3	+1.5

GUC 05 01:43:23.5±0.9, 22°.15S×70°.63W, h53km±9km, ML3.6, 4C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACH	**Maria Elena**	**0.81**	**94**	⇑*i*P	Pn	01 43 40.0	+1.3
MACH				*i* S	Sn	01 43 51.6	+1.6
MECH	**Mejillones**	**0.97**	**170**	⇓*i*P	Pn	01 43 41.1	+0.3
MECH				*i* S	Sn	01 43 54.3	+0.7
MECH				AML	AML	01 44 00.2	
	comp=N,1μm,0.4s						
PECH	**Pedro de Valdi**	**0.99**	**117**	⇓*i*P	Pn	01 43 42.4	+1.2
PECH				*i* S	Sn	01 43 55.6	+1.4
PECH				AML	AML	01 43 56.8	
	comp=E,7μm,0.4s						
HMBC	**Humberston**	**1.98**	**21**	⇑*i*P	Pn	01 43 55.6	+0.9
HMBC				AML	AML	01 44 24.8	
	comp=N,795nm,0.5s						
PSGC	**Pisagua**	**2.58**	**11**	⇑*i*P	Pn	01 44 03.7	+0.9
PSGC				AML	AML	01 44 34.5	
	comp=N,212nm,0.3s						
MNMC	**Miæe Miæ**	**3.15**	**18**	⇑*i*P	Pn	01 44 12.2	+1.6

DJA 05 01:43:40, 0°.48S×122°.74E, h3km, MLv3.5/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.56**	**177**	P	Pg	01 43 48.6	-2.2
LUWI				S	Sg	01 43 55.5	-2.5
APSI	**Ampana**	**1.17**	**249**	P	Pg	01 44 00.4	-2.1
APSI				S	Sg	01 44 18.2	+0.5
MRSI	**Marisa**	**1.24**	**320**	P	Pg	01 44 02.1	-1.7
PCI	**Palu**	**2.93**	**262**	P	Pn	01 44 28.7	+1.1
TTSI	**Tana Toraja**	**3.88**	**229**	P	Pn	01 44 39.0	-1.5
NLAI	**Namlea**	**5.15**	**122**	P	Pn	01 44 58.1	+0.1

NIED ***05*** *01:45:00, 42°.00N×145°.10E, h23km, Mw4.5 Best double couple: M₀5.78000×10¹⁵ NP1:φ₀9.00000°, δ69.00000°, λ65.00000°. NP2:φ₀240.00000°, δ32.00000°, λ137.00000°.*
ISCJB ***05*** *01:45:26.4±1.0, 41°.99N±0°.04×144°.88E±0°.05, h25km±6km, mb4.6/97, MS3.8/15, Error ellipse: s-maj=7.7km s-min=4.1km az=136.4*
SZGRF ***05*** *01:45:26.8, 42°.30N×147°.40E, h33km, mb4.9, Off southeast coast of Hokkaido, Japan*
BJI ***05*** *01:45:26.7, 42°.17N×144°.80E, h21km, mB4.9/27, mb4.8/35, Ms4.2/28, Ms7 4.0/27*
JMA ***05*** *01:45:27.0±0.1, 42°.02N×145°.07E, h30km±1km, M4.6*
JMA Felt I J1.
MOS ***05*** *01:45:27.8±1.0, 41°.97N×144°.80E, h35km, mb5.0/39, Error ellipse: s-maj=8.7km s-min=5.3km az=114.9*
IDC ***05*** *01:45:28.9±0.7, 41°.98N×144°.85E, h33km±4km, mb4.2/27, mb1 4.3/30, mb1mx4.3/34, mbtmp4.2/30, ML4.0/3, MS3.6/6, Ms1 3.7/6, ms1mx3.4/30, Error ellipse: s-maj=14.9km s-min=11.8km az=158.0*
NEIC ***05*** *01:45:29.8±0.7, 41°.97N×144°.85E, h39km±5km, mb4.8/48, MW4.4(NIED), Error ellipse: s-maj=6.1km s-min=4.4km az=148.0*
NEIC Recorded [1 JMA] in the Kushiro area.
SKHL ***05*** *01:45:33.0±0.3, 42°.37N×144°.83E, h48km±18km, mb5.2/2, Ms4.1/1, msh5.3/1*

ISC 05 01:45:29.2±1.0, 42°.08N±0°.04×144°.83E±0°.05, h30km±6km, h32km±1.5km: pP-P, n250, σ0§86/269, mb4.6/97, MS3.8/15, 21C-5D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAK	**Akkeshi**	**0.92**	**354**	⇑P	**Pn**	**01 45 45.6**	**-0.5**
JAK				*e*S	**Sb**	**01 45 59.4**	**+0.9**
JOB	**Onbets**	**1.10**	**318**	⇑P	**Pn**	**01 45 49.0**	**+0.3**
JCH	**Churui**	**1.21**	**297**	⇑P	**Pn**	**01 45 50.4**	**+0.2**
ERM	**Erimo**	**1.25**	**268**	*e*P	**Pn**	**01 45 51.7**	**+1.0**
ERM	**Erimo**	**1.25**	**268**	*e*P	**Pn**	**01 45 51.8**	**+1.1**
JEM	**Erimo**	**1.25**	**268**	P	**Pn**	**01 45 51.0**	**+0.4**
NEM2	**Nemuro 2**	**1.45**	**27**	⇑P	**Pn**	**01 45 51.9**	**-1.5**
NEM2				*e*S	**Sn**	**01 46 09.8**	**-1.5**
YUK	**Yuzh-Kuril'sk**	**2.09**	**21**	*e*S	**Sn**	**01 46 25.8**	**-1.5**
YUK				A		01 46 44.0	
	15μm,1.0s						
YUK				A		01 46 44.0	
	10μm,1.0s						
YUK				A		01 46 44.3	
	8μm,0.6s						
YUK				A		01 46 44.3	
	3μm,0.6s						
YUK				AMS	AMS	01 47 10.0	
	800nm,11.0s						
YUK				AMS	AMS	01 47 10.0	
	2μm,11.0s						
YUK				AMS	AMS	01 47 10.0	
	1μm,11.0s						
ASAJ	**Asahikawa**	**2.61**	**322**	Pn	**Pn**	**01 46 10.2**	**+0.8**
	20nm,0.3s,baz=172,slow=15,SNR=60						
ASAJ				Sn	**Sn**	**01 46 50.2**	**+10**
	58nm,0.3s,baz=201,slow=13,SNR=30						
ASAJ				LR	LR	01 47 30.3	
	comp=Z,1μm,18.9s,baz=147,slow=45						
ASAJ	**Asahikawa**	**2.61**	**322**	P	**Pn**	**01 46 10.2**	**+0.8**
ASAJ						01 46 50.2	
ASAJ				pmax	pmax		
	comp=Z,20nm,0.3s						
ASAJ				smax			
	comp=N,58nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,1μm,18.9s						
KUR	**Kuril'sk**	**3.84**	**34**	*e*P	**Pn**	**01 46 26.0**	**-0.3**
KUR				S	**Sn**	**01 47 06.0**	**-4.4**
KUR				pmax	pmax		
	comp=N,110nm,0.5s						
KUR				pmax	pmax		
	comp=E,80nm,0.5s						
KUR				pmax	pmax		
	comp=Z,230nm,0.5s						
KUR				smax			
	comp=N,550nm,0.7s						
KUR				smax			
	comp=E,170nm,0.7s						
KUR				smax			
	comp=N,3μm,2.0s						
KUR				smax			
	comp=E,2μm,2.0s						
KUR	**Kuril'sk**	**3.84**	**34**	*e*P	**Pn**	**01 46 26.0**	**-0.3**
KUR				AMB	AMB	01 46 37.3	
	comp=E,110nm,0.5s						
KUR				AMB	AMB	01 46 37.3	
	comp=E,80nm,0.5s						
KUR				AMB	AMB	01 46 37.3	
	comp=E,230nm,0.5s						
KUR				*e*S	**Sn**	**01 47 06.0**	**-4.4**
KUR				A		01 47 34.5	
	comp=E,550nm,0.7s						
KUR				A		01 47 34.5	
	comp=E,170nm,0.7s						
KUR				A		01 47 44.6	
	comp=E,3μm,2.0s						
KUR				A		01 47 44.6	
	comp=E,2μm,2.0s						
YSS	**Yuzh-Sakhalins**	**5.09**	**344**	*e*P	**Pn**	**01 46 44.0**	**+0.5**
YSS				*e*S	**Sn**	**01 47 37.0**	**-4.2**
YSS				smax			
	comp=N,50nm,0.7s						
YSS				MLR	MLR		
	comp=Z,1μm,15.0s						
YSS				MLR	MLR		
	comp=E,2μm,14.0s						
YSS	**Yuzh-Sakhalins**	**5.09**	**344**	*e*Pn	**Pn**	**01 46 45.3**	**+1.8**
YSS	**Yuzh-Sakhalins**	**5.09**	**344**	*e*P	**Pn**	**01 46 44.0**	**+0.5**
YSS				*e*S	**Sn**	**01 47 37.0**	**-4.2**
YSS				A		01 47 40.0	
	comp=E,50nm,0.7s						
YSS				*e*LQ		01 48 16.0	
YSS				*e*LR	LR	01 48 48.0	
YSS				AMS	AMS	01 49 13.0	
	comp=E,2μm,14.0s						
YSS				AMS	AMS	01 49 13.0	
	comp=E,1μm,15.0s						
TEY	**Ternei**	**6.67**	**299**	*e*P	**Pn**	**01 47 10.0**	**+4.9**
MAJO	**Matsushiro**	**7.55**	**225**	*e*P	**Pn**	**01 47 16.0**	**-1.2**
MAT	**Matsushiro**	**7.55**	**225**	P	**Pn**	**01 47 15.7**	**-1.5**
MAT				S	**Sn**	**01 48 43.8**	**+2.1**
MJAR	**Matsushiro Arr**	**7.55**	**225**	Pn	**Pn**	**01 47 15.6**	**-1.6**
	comp=E,8.1nm,0.3s,baz=29,slow=13,SNR=41						
HABR	**Khabarovsk**	**9.40**	**316**	P	**Pn**	**01 47 43.7**	**+1.2**
HABR				MLR	MLR		
	comp=Z,692nm,16.0s						
VLA	**Vladivostok**	**9.60**	**281**	*e*P	**Pn**	**01 47 45.6**	**+0.3**
VLA						01 49 39.0	
VLA				pmax	pmax		
	comp=Z,28nm,0.8s						
VLA				MLR	MLR		
	comp=Z,600nm,15.7s						
MDJ	**Mudanjiang**	**11.39**	**288**	P	**Pn**	**01 48 08.8**	**-0.9**
MDJ				pP		01 48 15.8	
MDJ				sP		01 48 20.0	
MDJ				S	**Sn**	**01 50 14.5**	**-1.3**
MDJ				ScP	ScP	01 57 32.7	+0.5
MDJ				PcS	PcS	01 57 36.3	+0.7
MDJ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MDJ				LR	LR		
	comp=N,180nm,15.0s						
MDJ				LR	LR		
	comp=E,340nm,14.5s						
MDJ				LR	LR		
	comp=Z,530nm,16.4s						
MDJ	**Mudanjiang**	**11.39**	**288**	*e*Pn	**Pn**	**01 48 11.7**	**+2.0**
	comp=Z,14nm,0.9s						
KLR	**Kul'dur**	**11.61**	**312**	*e*P	**Pn**	**01 48 10.0**	**-2.7**
KLR				pmax	pmax		
	comp=E,67nm,1.4s						
KLR				pmax	pmax		
	comp=Z,38nm,1.4s						
KLR				MLR	MLR		
	comp=E,800nm,14.0s						
KLR				MLR	MLR		
	comp=Z,1μm,14.0s						
KSRS	**Korea Array**	**13.80**	**256**	Pn	**Pn**	**01 48 42.3**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=73,slow=12,SNR=9.6						
KSRS				LR	LR	01 53 51.4	
	comp=Z,286nm,19.1s,baz=70,slow=36						
CN2	**Changchun**	**14.31**	**283**	*e*P	**Pn**	**01 48 48.4**	**-1.2**
CN2				*e*pP	pP	01 49 00.8	-3.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,80nm,4.0s						
ZEA	**Zeya**	**16.53**	**321**	*e*P	**Pn**	**01 49 16.5**	**-2.1**
ZEA				AMB	AMB	01 49 17.2	
	comp=Z,50nm,0.7s						
HIA	**Hailar**	**18.89**	**301**	*e*P	**Pn**	**01 49 45.4**	**-2.4**
HIA				pmax	pmax		
	comp=Z,27nm,0.6s						
HIA	**Hailar**	**18.89**	**301**	*e*P	**Pn**	**01 49 45.4**	**-2.5**
	comp=Z,27nm,0.6s						
JOW	**Kunigami**	**20.39**	**227**	P	**P**	**01 50 02.5**	**-1.0**
	comp=Z,9.3nm,0.5s,baz=34,slow=7.3,SNR=5.8						
SEY	**Seymchan**	**21.36**	**9**	*ce*P	**P**	**01 50 14.4**	**+0.7**
BJI	**Beijing**	**21.67**	**274**	P	**P**	**01 50 21.2**	**+3.9**
BJI				pmax	pmax		
	comp=Z,37nm,0.9s,mb4.8						
BJI				LR	LR		
	comp=N,190nm,14.4s,MS4.0						
BJI				LR	LR		
	comp=E,390nm,16.1s,MS4.0						
BJI				LR	LR		
	comp=Z,210nm,17.7s,MS3.6						
BJT	**Baijiatuau**	**21.68**	**274**	*e*P	**P**	**01 50 16.8**	**-0.6**
FX1	**Attu Island--F**	**21.84**	**51**	P	**P**	**01 50 19.8**	**+0.8**
	comp=Z,15nm,0.7s,mb4.5,baz=270,slow=4.0,SNR=5.1						
FX1				S	**S**	**01 54 10.7**	**-7.9**
	comp=Z,3.8nm,0.6s,baz=248,slow=18,SNR=2.6						
FX1				LR	LR	01 57 24.2	
	comp=Z,57nm,20.0s,MS3.0,baz=106,slow=33						
FX1	**Attu Island--F**	**21.84**	**51**	P	**P**	**01 50 19.8**	**+0.8**
FX1				S	**S**	**01 54 10.7**	**-7.9**
YAK	**Yakutsk**	**21.94**	**341**	*e*P	**P**	**01 50 13.9**	**-6.0**
YAK				*e**PP		01 50 27.0	
YAK				*e*S	**S**	**01 54 08.9**	**-11**
YAK				*e*		01 54 19.3	
YAK				pmax	pmax		
	comp=Z,31nm,0.9s,mb4.7						
YAK				pmax	pmax		
	comp=N,7.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,5.0nm,0.9s						
YAK				smax			
	comp=N,19nm,0.9s						
YAK				smax			
	comp=E,28nm,1.3s						
YAK				MLR	MLR		
	comp=Z,305nm,15.0s,MS3.8						
YAK				MLR	MLR		
	comp=N,264nm,15.0s,MS3.9						
YAK				MLR	MLR		
	comp=E,163nm,14.0s,MS3.9						
NJ2	**Nanjing**	**22.94**	**253**	*e*P	**P**	**01 50 28.7**	**-2.2**
NJ2				pP		01 50 36.0	
NJ2				sP	sP	01 50 40.4	-2.4
NJ2				PP		01 50 56.8	
NJ2				S	**S**	**01

comp=Z,29nm,1.3s,mb4.7
SONM Songino Array 27.59 295 P **P** **01 51 13.8 +0.2**
comp=Z,22nm,1.0s,mb4.8,baz=86,slow=7.6,SNR=15
SONM LR LR 02 03 20.9
comp=Z,206nm,19.0s,MS3.7,baz=243,slow=39
BILL Bilibino 28.44 17⇑ *e*P **P** **01 51 18.8 -2.1**
BILL *e* 01 52 15.9
BILL *e*S **S** **01 56 05.6 -0.4**
BILL pmax pmax
comp=Z,16nm,2.4s,mb4.2
BILL MLR MLR
comp=Z,100nm,18.0s,MS3.5
XAN Xi'an 29.23 266 P **P** **01 51 27.7 -0.6**
XAN pP pP 01 51 36.5 -0.5
XAN sP sP 01 51 40.4 -0.2
XAN S **S** **01 56 18.3 -0.7**
XAN sS sS 01 56 30.5 -2.9
XAN pmax pmax
comp=Z,2.0nm,0.7s,mb4.0
XAN pmax pmax
comp=Z,16nm,7.7s
XAN LR LR
comp=N,75nm,13.5s,MS3.6
XAN LR LR
comp=E,46nm,11.5s,MS3.6
XAN LR LR
comp=Z,32nm,11.5s,MS3.2
TLY Talaya 29.39 303 *e*P **P** **01 51 30.7 +1.1**
TLY *e* 01 52 23.6
TLY pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
TLY MLR MLR
comp=Z,134nm,15.0s,MS3.7
ZAK Zakamensk 29.59 301 *e*P **P** **01 51 31.1 -0.2**
ENH Enshi 30.66 259 *e*P **P** **01 51 41.1 +0.1**
comp=Z,7.4nm,0.5s,mb4.8
MOY Mondy 31.04 303 *e*P **P** **01 51 45.0 +0.9**
LZH Lanzhou 32.15 273 *e*P **P** **01 51 55.5 +1.5**
LZH pP pP 01 52 05.1 +2.4
LZH sP sP 01 52 09.0 +2.6
LZH PP PP 01 53 02.1 -4.7
LZH *e*S **S** **01 57 03.5 -1.2**
LZH sS sS 01 57 19.6 +0.5
LZH *e*SS SS 01 58 57.2 -26
LZH pmax pmax
comp=Z,26nm,1.2s,mb4.9
LZH pmax pmax
comp=Z,100nm,5.0s
LZH LR LR
comp=E,700nm,13.2s
LZH LR LR
comp=Z,950nm,17.0s,MS4.5
GTA Gaotai 33.92 281 *e*P **P** **01 52 10.3 +0.8**
GTA pP pP 01 52 19.7 +1.5
GTA sP sP 01 52 24.1 +2.3
GTA S **S** **01 57 33.8 +1.7**
GTA pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
GTA pmax pmax
comp=Z,89nm,6.2s
GTA LR LR
comp=N,130nm,15.5s,MS4.0
GTA LR LR
comp=E,220nm,19.0s,MS4.0
GTA LR LR
comp=Z,250nm,16.6s,MS4.0
GYA Guiyang 34.86 256 P **P** **01 52 18.0 +0.2**
GYA pP pP 01 52 28.5 +2.0
GYA sP sP 01 52 33.6 +3.5
GYA PP PP 01 53 36.0 -1.0
GYA S **S** **01 57 44.3 -2.6**
GYA sS sS 01 58 01.9 +0.5
GYA ScP ScP 01 58 33.4 -0.1
GYA SS SS 01 59 58.9 -20
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
GYA pmax pmax
comp=Z,90nm,4.8s
GYA LR LR
comp=N,530nm,16.5s,MS4.5
GYA LR LR
comp=E,470nm,16.0s,MS4.5
GYA LR LR
comp=Z,510nm,15.8s,MS4.4
KMI Kunming 38.49 257 P **P** **01 52 49.5 +0.8**
KMI pP pP 01 52 58.2 +0.7
KMI sP sP 01 53 01.6 +0.4
KMI PP PP 01 54 21.0 +4.0
KMI S **S** **01 58 41.9 -0.5**
KMI sS sS 01 58 57.0 +0.1
KMI SS SS 02 01 21.9 -10
KMI ScS ScS 02 02 56.0 -1.4
KMI pmax pmax
comp=Z,16nm,1.0s,mb4.7
KMI pmax pmax
comp=Z,99nm,5.0s
KMI LR LR
comp=N,140nm,13.6s,MS4.1
KMI LR LR
comp=E,130nm,15.0s,MS4.1
KMI LR LR
comp=Z,170nm,18.0s,MS3.9
ZALV Zalesovo Beam 40.67 308 P **P** **01 53 05.7 -0.8**
comp=Z,11nm,0.7s,mb4.6,baz=92,slow=7.6,SNR=27
ZALV PcP PcP 01 55 07.8 +0.1
comp=Z,3.1nm,0.6s,baz=85,slow=3.9,SNR=5.8
ZALV LR LR 02 11 09.9
comp=Z,83nm,18.4s,MS3.6,baz=84,slow=38
ZALV Zalesovo Beam 40.67 308 P **P** **01 53 05.7 -0.8**
ZALV 01 55 07.8
ZALV Zalesovo Beam 40.67 308 P **P** **01 53 05.7 -0.8**
ZALV PcP PcP 01 55 07.8 +0.1
ZALV LR LR 02 11 09.9
WMQ Urumqi 41.14 292 *e*P **P** **01 53 11.5 +1.0**
WMQ pmax pmax
comp=Z,16nm,1.0s,mb4.6
NVS Novosibirsk 41.46 310 *i*P **P** **01 53 12.3 -0.6**
COLD Coldfoot 42.47 31 *e*P **P** **01 53 20.7 -0.4**
comp=Z,3.4nm,0.9s,mb4.0
MK31 Makanchi Array 43.87 298 *e*P **P** **01 53 32.6 0.0**
MKAR Makanchi Array 43.87 298 P **P** **01 53 32.5 -0.1**
comp=Z,7.3nm,0.8s,mb4.5,baz=76,slow=12,SNR=21
KURK Kurchatov 45.07 305 P **P** **01 53 42.6 +0.4**
comp=Z,11nm,0.6s,mb4.9,baz=73,slow=8.9,SNR=46
KURK Kurchatov 45.07 305 P **P** **01 53 42.6 +0.4**
KURK pmax pmax
comp=Z,11nm,0.6s,mb4.9
KURK Kurchatov 45.07 305 *e*P **P** **01 53 41.8 -0.4**
comp=Z,11nm,0.7s,mb4.8
CHTO Chiang Mai 45.18 253 *e*P **P** **01 53 43.2 -0.2**
CHTO pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
CHTO Chiang Mai 45.18 253 *e*P **P** **01 53 43.1 -0.3**
comp=Z,3.5nm,0.7s,mb4.3
CMAR Chiang Mai Arr 45.42 253 P **P** **01 53 45.1 -0.2**
comp=Z,1.7nm,0.5s,mb4.1,baz=45,slow=6.7,SNR=8.8
CMAR LR LR 02 13 51.7
comp=Z,85nm,19.6s,MS3.7,baz=224,slow=38
EGAK Eagle 46.28 35 *e*P **P** **01 53 50.8 -0.7**
comp=Z,70nm,2.6s,mb5.1
TAPN Taplejung 48.35 271 *e*Pn **P** **01 54 08.9 +0.7**
comp=Z,9.9nm,0.6s,mb5.0
INK Inuvik 48.70 29 P **P** **01 54 10.4 +0.1**
comp=Z,3.9nm,0.5s,mb4.7,baz=308,slow=7.3,SNR=29
INK Inuvik 48.70 29 *e*P **P** **01 54 10.5 +0.2**
INK pmax pmax
comp=Z,5.0nm,0.6s
INK Inuvik 48.70 29 *e*P **P** **01 54 10.5 +0.2**
comp=Z,4.7nm,0.6s,mb4.7
HYT Haines Junctio 48.70 40 *e*P **P** **01 54 14.8 +4.4**
ODAN Odare 48.86 271 *e*Pn **P** **01 54 12.3 +0.2**
comp=Z,14nm,0.8s,mb5.0
BVAR Borovoye Array 49.26 310 P **P** **01 54 14.8 +0.1**
comp=Z,6.7nm,0.4s,mb5.1,baz=79,slow=9.1,SNR=68
BRVK Borovoye 49.30 310 *c i*P **P** **01 54 14.0 -1.1**
BRVK pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
BRVK Borovoye 49.30 310 *e*P **P** **01 54 15.6 +0.4**
comp=Z,4.3nm,0.4s,mb4.8
RAMN Ramite 49.40 272 *e*Pn **P** **01 54 16.3 +0.1**
comp=Z,26nm,0.8s,mb5.3
GUN Gumba 49.41 273 *e*Pn **P** **01 54 16.6 +0.3**
comp=Z,34nm,0.4s,mb5.7
TKM2 Tokmak 2 49.69 296 P **P** **01 54 18.9 +0.6**
SNR=22

TKM2 Tokmak 2 49.69 296 *e*P **P** **01 54 18.7 +0.5**
TKM2 pmax pmax
comp=Z,16nm,0.8s,mb5.1
TKM2 Tokmak 2 49.69 296 *e*P **P** **01 54 18.7 +0.5**
comp=Z,16nm,0.8s,mb5.1
KKN Kakani 49.92 273 *e*Pn **P** **01 54 20.2 0.0**
comp=Z,14nm,0.6s,mb5.2
KKN Kakani 49.92 273 *e*P **P** **01 54 20.2 0.0**
KKN pmax pmax
comp=Z,14nm,0.6s,mb5.2
KBK Karagaybulak 50.24 296 P **P** **01 54 23.0 +0.6**
SNR=16
KZA Kyzart 50.27 295 P **P** **01 54 24.2 +1.5**
SNR=8.8
AAK Ala-Archa 50.55 296 P **P** **01 54 24.8 +0.1**
comp=Z,3.6nm,0.5s,mb4.6,baz=125,slow=4.5,SNR=8.1
AAK Ala-Archa 50.55 296 *e*P **P** **01 54 25.0 +0.3**
AAK pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
AAK Ala-Archa 50.55 296 *e*P **P** **01 54 25.0 +0.2**
comp=Z,4.0nm,0.8s,mb4.4
UCH Uchtor 50.71 295 *e*P **P** **01 54 26.9 +1.0**
comp=Z,3.2nm,0.9s,mb4.2
KSH Kashi 50.89 292 *e*P **P** **01 54 31.5 +4.1**
KSH PcP PcP 01 55 45.0 +1.4
KSH PP PP 01 56 30.0 +6.4
KSH ScP ScP 01 59 36.4 -1.2
KSH PcS PcS 01 59 41.6 +0.6
KSH S **S** **02 01 47.0 +5.3**
KSH ScS ScS 02 04 14.6 -1.2
KSH pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
KSH pmax pmax
comp=Z,75nm,5.3s
KSH LR LR
comp=N,77nm,7.4s
KSH LR LR
comp=E,62nm,4.9s
KSH LR LR
comp=Z,94nm,4.5s
EKS2 Erkin-Say 51.02 296 P **P** **01 54 28.7 +0.4**
SNR=8.3
EKS2 Erkin-Say 51.02 296 *e*P **P** **01 54 28.4 +0.2**
comp=Z,4.4nm,0.6s,mb4.6
AML Almayashu 51.30 296 P **P** **01 54 31.5 +1.1**
SNR=9.4
AML Almayashu 51.30 296 *e*P **P** **01 54 31.4 +1.0**
comp=Z,11nm,1.0s,mb4.7
SVE Sverdlovsk 53.19 317⇓ *e*P **P** **01 54 44.2 0.0**
SVE pmax pmax
comp=Z,24nm,0.9s,mb5.1
ARU Arti 54.40 317 *c i*P **P** **01 54 52.6 -0.5**
ARU S **S** **02 02 27.8 -1.4**
ARU SS SS 02 06 04.9 -6.2
ARU pmax pmax
comp=Z,17nm,0.7s,mb5.1
ARU Arti 54.40 317 *e*P **P** **01 54 52.6 -0.4**
comp=Z,9.8nm,0.7s,mb4.8
ABKAR Akbulak array 56.78 309 *e*P **P** **01 55 10.2 -0.1**
comp=Z,5.4nm,0.6s,mb4.8
RES Resolute Bay 57.05 16 P **P** **01 55 11.5 -0.3**
comp=Z,10nm,0.8s,mb4.9,baz=301,slow=7.0,SNR=25
RES Resolute Bay 57.05 16 P **P** **01 55 11.5 -0.3**
RES pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
RES Resolute Bay 57.05 16 *e*P **P** **01 55 11.2 -0.6**
comp=Z,9.6nm,0.8s,mb4.9
AKTK Aktyubinsk 57.33 311 P **P** **01 55 13.9 -0.3**
AKTO Aktyubinsk 57.33 311 P **P** **01 55 13.9 -0.3**
comp=Z,3.4nm,0.7s,mb4.5,baz=52,slow=6.9,SNR=11
YKA Yellowknife Ar 58.13 33 P **P** **01 55 19.3 -0.2**
comp=Z,1.3nm,0.8s,mb4.0,baz=301,slow=6.5,SNR=7.0
YKA pP pP 01 55 29.8 +1.1
comp=Z,14nm,1.3s,baz=302,slow=7.1,SNR=9.2
YKA Yellowknife Ar 58.13 33 P **P** **01 55 19.3 -0.2**
YKA pP pP 01 55 29.8 +1.1
KBL Kabul 58.15 290 *e*P **P** **01 55 19.3 -0.8**
KBL pmax pmax
comp=Z,14nm,0.8s,mb5.0
KBL Kabul 58.15 290 *e*P **P** **01 55 19.3 -0.8**
comp=Z,14nm,0.8s,mb5.0
KEV Kevo 59.67 339 *e*P **P** **01 55 29.4 -0.7**
KEV pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
KEV Kevo 59.67 339 *e*p **P** **01 55 29.4 -0.7**
comp=Z,2.1nm,0.4s,mb4.5
ARCES ARCESS Array B 60.21 339 P **P** **01 55 33.2 -0.6**
comp=Z,3.7nm,0.8s,mb4.5,baz=44,slow=7.1,SNR=11
WRA Warramunga Arr 62.47 191 P **P** **01 55 47.7 -1.9**
comp=Z,1.1nm,0.7s,mb4.1,baz=8.6,slow=6.8,SNR=7.1
JOF Joensuu 62.76 332 *e*p **P** **01 55 49.8 -1.4**
comp=Z,6.7nm,0.5s,mb5.0
JOF Joensuu 62.76 332 *e*p **P** **01 55 49.8 -1.4**
comp=Z,6.7nm,0.5s,mb5.0
KAF Kangasniemi 65.03 333 *e*P **P** **01 56 04.1 -2.0**
KAF pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
KAF Kangasniemi 65.03 333 *e*p **P** **01 56 04.1 -2.0**
comp=Z,9.9nm,0.6s,mb5.0
KAF Kangasniemi 65.03 333 *e*p **P** **01 56 04.1 -2.0**
comp=Z,9.9nm,0.6s,mb5.0
FINES FINESS Array B 65.58 332 P **P** **01 56 09.2 -0.4**
comp=Z,20nm,0.5s,mb5.4,baz=46,slow=8.0,SNR=150
FINES pP pP 01 56 19.5 +0.6
comp=Z,9.9nm,0.5s,baz=38,slow=6.8,SNR=8.9
FINES FINESS Array B 65.58 332 P **P** **01 56 09.2 -0.4**
FINES pP pP 01 56 19.5 +0.6
SUMG Summit 65.62 1 *e*P **P** **01 56 10.6 +0.8**
comp=Z,15nm,0.8s,mb5.1
SUMG Summit 65.62 1⇑ *i*P **P** **01 56 10.3 +0.5**
comp=Z,12nm,0.9s,mb4.9
OBN Obninsk 65.64 323⇑ *i*P **P** **01 56 09.4 -0.8**
OBN *e*S S 02 04 46.1 -7.5
OBN pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
OBN MLR MLR
comp=Z,100nm,17.0s,MS4.1
VRHR Novokhopersk 65.74 318 *e*P **P** **01 56 08.9 -1.9**
VRHR pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
VRHR pmax pmax
comp=N,2.0nm,0.4s
VRHR pmax pmax
comp=E,3.0nm,0.4s
ASAR Alice Springs 66.19 191 P **P** **01 56 12.3 -1.6**
comp=E,0.7nm,0.7s,mb3.8,baz=7.7,slow=5.1,SNR=5.6
SWMT Swartz Lake 66.85 46 *e*P **P** **01 56 18.8 +0.7**
comp=E,1.8nm,0.6s,mb4.3
VSR Storozhevoye 66.88 319 *e*P **P** **01 56 17.8 -0.4**
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
VSR pmax pmax
comp=N,3.0nm,0.4s
VSR pmax pmax
comp=E,1.0nm,0.3s
VSU Vasula 67.44 330 *e*P **P** **01 56 20.9 -0.7**
VSU pmax pmax
comp=Z,17nm,1.1s,mb5.0
FFC Flin Flon 68.05 35 *i*P **P** **01 56 26.2 +0.7**
LRM Limekiln Ridge 68.73 47 *e*P **P** **01 56 30.7 +0.8**
comp=Z,23nm,0.7s,mb5.2
EGMT Eagleton 68.77 44 *e*P **P** **01 56 30.6 +0.4**
comp=Z,4.4nm,0.6s,mb4.6
BOZ Bozeman (W) 69.29 47 *e*P **P** **01 56 34.3 +0.9**
BOZ pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
BOZ Bozeman (W) 69.29 47 *e*P **P** **01 56 34.3 +0.9**
comp=Z,3.8nm,0.6s,mb4.5
IZAR Zarasai 69.56 328 *e*P **P** **01 56 34.9 +0.1**
KIV Kislovodsk 69.59 311 *e*P **P** **01 56 36.1 +0.8**
KIV pmax pmax
comp=Z,29nm,1.1s,mb5.1
KIV Kislovodsk 69.59 311 *e*P **P** **01 56 36.1 +0.8**
comp=Z,29nm,1.1s,mb5.1
ZEI Tsey 69.65 310 *e*P **P** **01 56 34.5 -1.2**
ZEI pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
IDID Didziasalis 69.67 327 *e*P **P** **01 56 35.5 -0.1**
IDID AMB AMB 01 56 37.2
comp=Z,4.0nm,1.1s,mb4.2
ISAL Salakas 69.73 328 *e*P **P** **01 56 36.0 +0.1**
ISAL AMB AMB 01 56 37.5
comp=Z,4.3nm,1.1s,mb4.3
IIGN Ignalina 69.85 328 *e*P **P** **01 56 36.8 +0.1**
IIGN AMB AMB 01 56 38.3
comp=Z,5.7nm,1.0s,mb4.5

NVAR Mina Array Bea 69.92 56 P **P** **01 56 36.5 -0.9**
comp=Z,0.3nm,0.3s,mb3.7,baz=291,slow=7.6,SNR=1.6
NB2 NORSAR Subarra 70.53 338 P **P** **01 56 40.2 -0.5**
comp=Z,4.6nm,0.6s,mb4.6,baz=33,slow=6.5
NOA NORSAR Array B 70.53 338 P **P** **01 56 40.3 -0.5**
comp=Z,6.3nm,0.8s,mb4.6,baz=35,slow=6.1,SNR=24
GNI Garni 70.80 307⇑ *e*P **P** **01 56 42.7 -0.1**
GNI pmax pmax
comp=Z,7.0nm,1.2s
DAGI Agillar 71.87 309 *i*P **P** **01 56 49.7 +0.5**
AKASG Malin Array Be 71.90 323 P **P** **01 56 48.7 -0.5**
comp=Z,10nm,0.5s,mb5.0,baz=41,slow=6.5,SNR=35
AKASG Malin Array Be 71.90 323 P **P** **01 56 48.7 -0.5**
AKBB Malin Array Si 71.90 323 *e*P **P** **01 56 48.8 -0.4**
KIEV Kiev 71.91 323 *e*P **P** **01 56 48.9 -0.4**
KIEV pmax pmax
comp=Z,12nm,0.9s,mb4.8
KIEV Kiev 71.91 323 *e*P **P** **01 56 48.9 -0.4**
comp=Z,12nm,0.9s,mb4.8
DBAD Bademkaya 72.03 309 *i*P **P** **01 56 50.8 +0.6**
DDEM Demirkent 72.08 309 *i*P **P** **01 56 51.5 +1.0**
PDAR Pinedale Array 72.29 48 P **P** **01 56 51.8 +0.1**
comp=Z,0.7nm,0.4s,mb3.9,baz=317,slow=2.4,SNR=6.2
PDAR pP pP 01 57 02.0 +0.9
comp=Z,1.3nm,0.6s,baz=288,slow=1.3,SNR=6.6
LVV L'vov 74.83 325 *e*P **P** **01 57 06.7 +0.2**
KWP Kalwaria Pacla 75.53 325 *e*P **P** **01 57 11.2 +0.6**
KWP Kalwaria Pacla 75.53 325 *e*P **P** **01 57 11.0 +0.5**
comp=Z,28nm,1.0s,mb5.2
KWP Kalwaria Pacla 75.53 325⇑ *i*P **P** **01 57 11.1 +0.6**
KOLS Kolonicke sedl 76.25 325 *e*P **P** **01 57 15.1 +0.5**
KOLS pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
KOLS Kolonicke sedl 76.25 325 *e*P **P** **01 57 15.1 +0.5**
comp=Z,3.6nm,0.7s,mb4.4
KOLS Kolonicke sedl 76.25 325 *e*P **P** **01 57 15.1 +0.5**
OJC Ojcow 76.28 327 *e*P **P** **01 57 14.2 -0.6**
STHS Stebnicka Huta 76.31 326 *e*P **P** **01 57 16.4 +1.4**
STHS *e* 01 57 28.7
STHS pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
STHS Stebnicka Huta 76.31 326 *e*P **P** **01 57 16.4 +1.4**
comp=Z,3.7nm,0.6s,mb4.5
STHS *e* 01 57 28.7
STHS Stebnicka Huta 76.31 326 *e*P **P** **01 57 16.4 +1.4**
STHS *e*pP pP 01 57 28.6 +4.2
VRI Vrincioaia 76.55 321⇑ *i*P **P** **01 57 17.4 +1.0**
NIE Niedzica 76.69 326 *e*P **P** **01 57 18.0 +0.9**
TRPA Tarpa 76.75 324⇓ *i*P **P** **01 57 18.3 +0.8**
OKC Ostrava-Krasne 77.24 328 *e*P **P** **01 57 20.4 +0.2**
OKC *e* pP 01 57 27.6 -2.1
OKC Ostrava-Krasne 77.24 328 *e*P **P** **01 57 20.4 +0.2**
OKC *e*pP pP 01 57 27.6 -2.1
KECS Kecovo 77.35 326 *e*P **P** **01 57 21.3 +0.5**
KECS pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
KECS Kecovo 77.35 326 *e*P **P** **01 57 21.3 +0.5**
comp=Z,1.9nm,1.1s,mb3.9
KECS Kecovo 77.35 326 *e*P **P** **01 57 21.3 +0.5**
BRTR Keskin Array B 77.44 313 P **P** **01 57 20.8 -0.7**
comp=Z,1.0nm,0.7s,mb3.9,baz=42,slow=4.5,SNR=6.2
MORC Moravsky Berou 77.53 328⇑ *i*P **P** **01 57 22.4 +0.6**
UPC Upice 77.53 329 *e*P **P** **01 57 22.4 +0.6**
UPC Upice 77.53 329 *e*P **P** **01 57 22.4 +0.6**
DPC Dobruska-Polom 77.54 329 *e*P **P** **01 57 22.6 +0.7**
DPC *e* pP 01 57 30.3 -1.0
DPC Dobruska-Polom 77.54 329 *e*P **P** **01 57 22.6 +0.7**
DPC *e*pP pP 01 57 30.3 -1.0
CLL Collm 77.99 331⇑ *i*P **P** **01 57 24.1 -0.2**
CLL *e* 01 57 31.0
CLL *e* pP 01 57 34.0 +0.2
CLL pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
CLL Collm 77.99 331⇑ *i*P **P** **01 57 24.1 -0.2**
comp=Z,9.0nm,0.9s,mb4.7
CLL *e* 01 57 31.0
CLL *e* pP 01 57 34.0 +0.2
CLL Collm 77.99 331⇑ *i*P **P** **01 57 24.1 -0.2**
comp=Z,9.0nm,0.9s,mb4.7
CLL *e* 01 57 31.0
CLL *e*PcP PcP 01 57 34.0 0.0
BRG Berggiesshubel 78.01 331 *e*P **P** **01 57 24.2 -0.3**
comp=Z,2.8nm,0.9s,mb4.2
BRG Berggiesshubel 78.01 331 *e*P **P** **01 57 24.2 -0.3**
BRG pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
VYHS Vyhne 78.03 327 *e*P **P** **01 57 25.3 +0.7**
VYHS *e* 01 57 31.1
VYHS *e* pP 01 57 35.0 +0.9
VYHS pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
VYHS Vyhne 78.03 327 *e*P **P** **01 57 25.3 +0.7**
comp=Z,2.7nm,0.8s,mb4.2
VYHS *e*PP pP 01 57 31.1 -3.0
VYHS *e* pP 01 57 35.0 +0.9
VYHS Vyhne 78.03 327 *e*P **P** **01 57 25.3 +0.7**
VYHS *e*PCP PcP 01 57 31.1 -3.1
VYHS *e*pP pP 01 57 35.0 +0.9
PVCC Panska Ves 78.06 330 *e*P **P** **01 57 25.2 +0.4**
PVCC *e* pP 01 57 33.4 -0.8
PVCC Panska Ves 78.06 330 *e*P **P** **01 57 25.2 +0.4**
PVCC *e*pP pP 01 57 33.4 -0.8
PRU Pruhonice 78.51 330 *e*P **P** **01 57 28.1 +0.8**
PRU *e* 01 57 34.3
PRU Pruhonice 78.51 330 *e*P **P** **01 57 28.1 +0.8**
PRU *e*pP pP 01 57 34.3 -2.4
SMOL Smolenice 78.58 327 *e*P **P** **01 57 29.2 +1.5**
SMOL Smolenice 78.58 327 *e*P **P** **01 57 29.2 +1.5**
TREC Trest 78.72 329 *e*P **P** **01 57 28.6 +0.2**
TREC Trest 78.72 329 *e*P **P** **01 57 28.6 +0.2**
ZST Bratislava 78.97 327 *e*P **P** **01 57 33.2 +3.4**
ZST pmax pmax
comp=Z,8.0nm,0.5s,mb4.9
ZST Bratislava 78.97 327 *e*P **P** **01 57 33.2 +3.4**
comp=Z,7.8nm,0.5s,mb4.9
ZST Bratislava 78.97 327 *e*P **P** **01 57 33.2 +3.4**
BZS Buzias 79.08 323⇑ *i*P **P** **01 57 30.3 -0.2**
KHC Kasperske Hory 79.57 330 *e*P **P** **01 57 33.6 +0.5**
KHC pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
KHC Kasperske Hory 79.57 330 *e*P **P** **01 57 33.6 +0.5**
comp=Z,6.5nm,0.8s,mb4.6
KHC Kasperske Hory 79.57 330 *e*P **P** **01 57 33.4 +0.3**
KHC *e*pP pP 01 57 42.1 -0.5
CONA Conrad Observa 79.67 328⇓ *e*P **P** **01 57 34.9 +1.2**
comp=Z,4.3nm,0.7s,mb4.5
SCHQ Schefferville 79.75 18 P **P** **01 57 33.4 -0.6**
comp=Z,1.4nm,0.7s,mb4.0,baz=310,slow=7.9,SNR=3.0
GERES GERESS Array B 79.76 330 P **P** **01 57 34.1 0.0**
comp=Z,1.5nm,0.6s,mb4.1,baz=32,slow=5.1,SNR=15
GRF Grafenberg Arr 79.97 331 *e*P **P** **01 57 35.0 -0.2**
comp=Z,22nm,1.6s,mb4.8
GROS Grobnik 81.01 327 *i*P **P** **01 57 40.9 0.0**
GROS *e* pP 01 57 50.9 +0.5
SOKA Soboth 81.02 328⇓ *i*P **P** **01 57 41.6 +0.7**
comp=Z,8.7nm,1.0s,mb4.6
MMAI Mount Meron Ar 81.14 307 P **P** **01 57 42.8 +1.0**
comp=Z,1.6nm,0.5s,mb4.2,baz=38,slow=9.7,SNR=6.1
GOLS Golise 81.33 327 *i*P **P** **01 57 42.4 -0.1**
GOLS *i* pP 01 57 52.4 +0.3
KBA Koelnbreinsper 81.35 329⇑ *i*PcP PcP 01 57 44.1 -4.6
comp=Z,7.8nm,1.0s
LEGS Legarje 81.50 327 *e*P **P** **01 57 43.2 -0.3**
WTTA Wattenberg 81.85 330⇑ *e*P **P** **01 57 45.9 +0.6**
comp=Z,5.0nm,0.7s,mb4.6
MOTA Moosalm 81.98 330⇓ *i*P **P** **01 57 46.6 +0.7**
comp=Z,6.5nm,0.8s,mb4.6
CDF Champ du Feu 82.42 333 *e*P **P** **01 57 48.3 0.0**
CABF La Chapelle 84.39 333 *e*P **P** **01 57 58.4 0.0**
FLN La Foliniere 84.52 338 *e*P **P** **01 57 58.0 -1.1**
LOR Lormes 84.55 334 *e*P **P** **01 57 58.9 -0.3**
comp=Z,6.9nm,0.7s,mb4.6
LOR Lormes 84.55 334 *e*P **P** **01 57 58.9 -0.3**
LOR pmax pmax
comp=Z,3.0nm,0.7s,mb4.5
LOR Lormes 84.55 334 *e*P **P** **01 57 58.9 -0.3**
comp=Z,3.5nm,0.7s,mb4.6
SSF Saint Saulge 84.84 335 *e*P **P** **01 58 00.5 -0.2**
comp=Z,16nm,1.1s,mb4.8
SSF Saint Saulge 84.84 335 *e*P **P** **01 58 00.5 -0.2**
SSF pmax pmax
comp=Z,8.0nm,1.1s,mb4.8
SSF Saint Saulge 84.84 335 *e*P **P** **01 58 00.5 -0.2**
comp=Z,8.1nm,1.1s,mb4.8

GRR	Gorron	84.96	338	*eP*		P		01 58 01.3	0.0
TXAR	Lajitas Array	85.00	55	P		P		01 58 01.8	0.0
	comp=Z,0.3nm,0.5s,mb3.7,baz=284,slow=3.6,SNR=8.4								
SMF	Signal de Mont	85.10	334	*eP*		P		01 58 02.0	0.0
	comp=Z,8.7nm,0.8s,mb4.6								
SMF	Signal de Mont	85.10	334	*eP*		P		01 58 02.0	0.0
SMF				pmax		pmax			
	comp=Z,4.0nm,0.8s,mb4.6								
SMF	Signal de Mont	85.10	334	*eP*		P		01 58 02.0	0.0
	comp=Z,4.3nm,0.8s,mb4.6								
LPL	La Plagne	85.11	332	*eP*		P		01 58 02.7	+0.6
LPG	La Plagne	85.12	332	*eP*		P		01 58 02.9	+0.7
AVF	Avril sur Loir	85.13	335	*eP*		P		01 58 02.2	0.0
	comp=Z,8.2nm,0.7s,mb4.7								
AVF	Avril sur Loir	85.13	335	*eP*		P		01 58 02.2	0.0
AVF				pmax		pmax			
	comp=Z,4.0nm,0.7s,mb4.7								
AVF	Avril sur Loir	85.13	335	*eP*		P		01 58 02.2	0.0
	comp=Z,4.1nm,0.7s,mb4.7								
ORIF	Oris-en-Rattie	85.93	332	*eP*		P		01 58 06.6	+0.4
	comp=Z,7.2nm,0.6s,mb4.8								
ORIF	Oris-en-Rattie	85.93	332	*eP*		P		01 58 06.6	+0.4
ORIF				pmax		pmax			
	comp=Z,4.0nm,0.6s,mb4.8								
ORIF	Oris-en-Rattie	85.93	332	*eP*		P		01 58 06.6	+0.4
	comp=Z,3.6nm,0.6s,mb4.8								
TCF	Toulx Ste Croi	85.94	335	*eP*		P		01 58 06.5	+0.3
MFF	Saint Martin d	86.38	337	*eP*		P		01 58 08.6	+0.2
VIVF	Saint-Julien-l	86.40	333	*eP*		P		01 58 08.9	+0.4
	comp=Z,10.0nm,0.8s,mb4.8								
VIVF	Saint-Julien-l	86.40	333	*eP*		P		01 58 08.9	+0.4
VIVF				pmax		pmax			
	comp=Z,5.0nm,0.8s,mb4.8								
VIVF	Saint-Julien-l	86.40	333	*eP*		P		01 58 08.9	+0.4
	comp=Z,5.0nm,0.8s,mb4.8								
RJF	Les Rejaudoux	87.04	335	*eP*		P		01 58 12.1	+0.5
CAF	Calviac	87.20	335	*eP*		P		01 58 13.3	+0.9
	comp=Z,18nm,1.1s,mb4.9								
CAF	Calviac	87.20	335	*eP*		P		01 58 13.3	+0.9
CAF				pmax		pmax			
	comp=Z,9.0nm,1.1s,mb4.9								
CAF	Calviac	87.20	335	*eP*		P		01 58 13.3	+0.9
	comp=Z,8.9nm,1.1s,mb4.9								
EPF	Esparros	89.45	335	*eP*		P		01 58 23.0	-0.1
ETSF	Etsaut	89.85	335	*eP*		P		01 58 26.4	+1.4
	comp=Z,8.7nm,0.8s,mb4.8								
ETSF	Etsaut	89.85	335	*eP*		P		01 58 26.4	+1.4
ETSF				pmax		pmax			
	comp=Z,4.0nm,0.8s,mb4.8								
ETSF	Etsaut	89.85	335	*eP*		P		01 58 26.4	+1.4
	comp=Z,4.3nm,0.8s,mb4.8								
ESDC	Sonseca Array	93.83	336	P		P		01 58 43.2	-0.3
	comp=Z,0.2nm,0.3s,mb4.0,baz=31,slow=4.2,SNR=3.7								
TORD	Torodi Ar. Bea	115.42	320	PKP		PKPdf		02 04 07.0	-1.5
	comp=Z,0.3nm,0.5s,baz=32,slow=1.0,SNR=11								
TORD				pPKP		pPKPdf		02 04 17.6	-0.7
	comp=Z,0.5nm,0.8s,baz=40,slow=1.2,SNR=2.8								
PLCA	Paso Flores	153.54	99	PKPab		PKPab		02 05 36.7	-0.3
	comp=Z,1.8nm,0.9s,baz=256,slow=4.2,SNR=3.6								
PLCA	Paso Flores	153.54	99	PKPab		PKPab		02 05 36.7	-0.3

MAN 05 01:48:27,19°.03N×121°.05E,h33km,mb4.8,ML3.7,MS3.7, 1C,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	Pasuquin	0.81	210	↑*iP*	Pn	01 48 42.4	+0.2
PIP				*eS*	Sn	01 48 54.3	+1.2
APYP	Conner	1.18	171	*eP*	Pn	01 48 49.2	+2.0
APYP				*eS*	Sn	01 49 02.4	+0.3
BBP	Basco	1.64	31	*eP*	Pn	01 48 54.2	+0.6
BBP				*eS*	Sn	01 49 10.9	-2.6

DJA 05 01:54:43,0°.50S×122°.68E,h8km,MLv3.1/3,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	Luwuk	0.55	170	P	Pg	01 54 51.5	-2.1
LUWI				S	Sg	01 54 58.9	-1.8
APSI	Ampana	1.11	248	P	Pg	01 55 03.3	-1.0
APSI				S	Sg	01 55 18.2	-0.5
MRSI	Marisa	1.22	323	P	Pb	01 55 04.5	-1.8
NLAI	Namlea	5.19	122	P	Pn	01 56 00.8	-0.2

*IDC **05** 02:10:24.8±1.0,38°.42N×20°.55E,h0km,mb3.9/9, mb1 3.8/17,mb1mx3.7/34,mbtmp3.7/17,ML3.4/6,MS3.0/3, Ms1 3.0/3,ms1mx2.5/43,Error ellipse: s-maj=17.4km s-min=15.0km az=40.0*
*NEIC **05** 02:10:25.3,38°.32N×20°.44E,h16km,ML3.9(ATH), ML3.9(PDG),After ATH.*
NEIC Felt at Ithaki.
*ATH **05** 02:10:25.2,38°.32N×20°.44E,h16km,MD4.0/10,ML3.9*
*ISCJB **05** 02:10:25.6±0.4,38°.34N±0°.02×20°.43E±0°.02,h9km±2km, mb3.8/9,Error ellipse: s-maj=3.1km s-min=1.7km az=37.3*
*CSEM **05** 02:10:26.7±0.1,38°.35N×20°.49E,h5km,ML4.4/8,Error ellipse: s-maj=3.1km s-min=1.8km az=35.0*
*THE **05** 02:10:27.2,38°.34N×20°.54E,h2km±1km,ML4.4/8,Error ellipse: s-maj=1.2km s-min=0.6km az=233.0*
*PDG **05** 02:10:28.3±0.1,38°.47N×19°.70E,h12km±11km,ML3.9/10, Error ellipse: s-maj=54.7km s-min=6.4km az=90.0*
*SKO **05** 02:10:31.7,38°.72N×20°.56E,h0km*

ISC 05 02:10:27.0±0.4,38°.35N±0°.02×20°.48E±0°.02,h7km±2km, n345,σ1°.11/497,mb3.8/9,26C-10D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	Valsamata	0.19	153	*ePb*	Pg	02 10 30.3	-0.5
VLS				*eSb*	Sg	02 10 33.3	0.0
VLS	Valsamata	0.19	153	P	Pg	02 10 30.3	-0.5
VLS				S	Sg	02 10 33.4	+0.1
VLS	Valsamata	0.19	153	*ePB*	Pg	02 10 30.3	-0.5
VLS				*eSB*	Sg	02 10 33.3	0.0
VLS	Valsamata	0.19	153	P	Pg	02 10 30.3	-0.5
VLS				S	Sg	02 10 33.4	+0.1
KFL	Anninata	0.34	134	P	Pg	02 10 32.7	-0.9
KFL				S	Sg	02 10 38.1	+0.1
LKD2	Lefkada island	0.46	17	P	Pg	02 10 35.2	-0.8
LKD2				S	Sg	02 10 42.1	0.0
LKD2	Lefkada island	0.46	17	P	Pg	02 10 35.2	-0.8
LKD2				S	Sg	02 10 42.1	0.0
RLS	Riolos of Patr	0.83	110	*ePn*	Pg	02 10 41.2	-1.7
RLS				*eSn*	Sg	02 10 53.5	-0.1
RLS	Riolos of Patr	0.83	110	*ePN*	Pg	02 10 41.2	-1.7
RLS				*eSN*	Sg	02 10 53.5	-0.1
RLS	Riolos of Patr	0.83	110	*ePn*	Pg	02 10 41.2	-1.7
RLS				*eSn*	Sg	02 10 53.5	-0.1
UPR	University Cam	1.03	93	P	Pg	02 10 45.8	-0.9
UPR				S	Sg	02 11 00.3	+0.2
UPR	University Cam	1.03	93	*ePN*	Pg	02 10 45.8	-0.9
UPR	University Cam	1.03	93	P	Pg	02 10 45.8	-0.9
UPR				S	Sg	02 11 00.3	+0.2
EFP	Efpalio	1.12	85	P	Pg	02 10 46.3	-2.2
EFP				S	Sg	02 11 03.4	+0.3
EFP	Efpalio	1.12	85	*ePB*	Pg	02 10 46.3	-2.2
EFP				*eSN*	Sg	02 11 03.6	+0.5
EFP	Efpalio	1.12	85	P	Pg	02 10 46.3	-2.2
EFP				S	Sg	02 11 03.4	+0.3
LAKA	Lakka	1.18	95	P	Pg	02 10 47.5	-2.2
LAKA				S	Sg	02 11 05.5	+0.5
LAKA	Lakka	1.18	95	P	Pg	02 10 47.5	-2.2
LAKA				S	Sg	02 11 05.5	+0.5
EVR	Evrytania	1.19	61	*ePn*	Pn	02 10 47.8	-2.2
EVR	Evrytania	1.19	61	*ePN*	Pn	02 10 47.8	-2.2
EVR	Evrytania	1.19	61	*ePn*	Pn	02 10 47.8	-2.2
IGT	Igoumenitsa	1.19	354	P	Pg	02 10 50.0	+0.1
IGT				S	Sg	02 11 07.1	+1.8
IGT	Igoumenitsa	1.19	354	P	Pg	02 10 50.0	+0.1
IGT				S	Sg	02 11 07.1	+1.8
KALE	Kalithea	1.30	87	P	Pn	02 10 49.5	-2.1
KALE				S	Sb	02 11 09.8	+1.1
KALE	Kalithea	1.30	87	P	Pn	02 10 49.5	-2.1
KALE				S	Sb	02 11 09.8	+1.1
JAN	Janina	1.34	12	*ePn*	Pn	02 10 50.8	-1.3
JAN				*eSn*	Sn	02 11 09.5	-0.7
JAN	Janina	1.34	12	*ePN*	Pn	02 10 50.8	-1.3
JAN				*eSN*	Sn	02 11 09.5	-0.7
JAN	Janina	1.34	12	*ePn*	Pn	02 10 50.8	-1.3
JAN				*eSn*	Sn	02 11 09.5	-0.7
KEK	Kerkira	1.47	339	*ePn*	Pn	02 10 53.3	-0.5
KEK				*eSn*	Sn	02 11 13.9	+0.6
KEK	Kerkira	1.47	339	P	Pn	02 10 53.5	-0.3
KEK				S	Sn	02 11 15.2	+1.9
KEK	Kerkira	1.47	339	*ePN*	Pn	02 10 53.3	-0.5
KEK				*eSN*	Sn	02 11 13.9	+0.6
KEK	Kerkira	1.47	339	P	Pn	02 10 53.5	-0.3
KEK				*eSn*	Sn	02 11 13.9	+0.6
KEK				S	Sn	02 11 15.2	+1.9
GUR	Goura	1.52	105	P	Pn	02 10 52.9	-1.7
GUR				S	Sn	02 11 14.6	-0.1
GUR	Goura	1.52	105	*ePB*	Pn	02 10 53.0	-1.6
GUR				*eSN*	Sn	02 11 14.9	+0.2
GUR	Goura	1.52	105	P	Pn	02 10 52.9	-1.7
GUR				S	Sn	02 11 14.6	-0.1
GUR				*eSn*	Sn	02 11 14.9	+0.2
MEV	Metsovon	1.55	22	P	Pn	02 10 55.7	+0.7
MEV	Metsovon	1.55	22	P	Pn	02 10 55.7	+0.7
SRN	Sarande	1.58	346	*i* PN	Pn	02 10 56.7	+1.3
SRN				*i* SN	Sn	02 11 18.4	+2.4
SRN	Sarande	1.58	346	*i* Pn	Pn	02 10 56.7	+1.3
SRN				*i* Sn	Sn	02 11 18.4	+2.4
AGG	Agios Georgios	1.60	64	*ePn*	Pn	02 10 55.3	-0.3
AGG				*eSn*	Sn	02 11 16.9	+0.4
AGG	Agios Georgios	1.60	64	P	Pn	02 10 55.5	-0.1
AGG				S	Sn	02 11 16.1	-0.4
AGG	Agios Georgios	1.60	64	*ePN*	Pn	02 10 55.3	-0.3
AGG				*eSN*	Sn	02 11 16.9	+0.4
AGG	Agios Georgios	1.60	64	P	Pn	02 10 55.5	-0.1
AGG				S	Sn	02 11 16.1	-0.4
AGG				*eSn*	Sn	02 11 16.9	+0.4
DSF	Desfina	1.61	87	P	Pn	02 10 54.6	-1.2
DSF	Desfina	1.61	87	P	Pn	02 10 54.6	-1.2
ITM	Ithomi	1.63	135	*ePn*	Pn	02 10 56.1	0.0
ITM				*eSn*	Sn	02 11 17.9	+0.5
ITM	Ithomi	1.63	135	P	Pn	02 10 56.5	+0.4
ITM				S	Sn	02 11 16.9	-0.5
ITM	Ithomi	1.63	135	*ePN*	Pn	02 10 56.1	0.0
ITM				*eSN*	Sn	02 11 17.9	+0.5
ITM	Ithomi	1.63	135	*ePn*	Pn	02 10 56.1	0.0
ITM	Ithomi	1.63	135	P	Pn	02 10 56.5	+0.4
ITM				S	Sn	02 11 16.9	-0.5
ITM				*eSn*	Sn	02 11 17.9	+0.5
THL	Klokotos Trika	1.71	44	P	Pn	02 10 57.3	+0.2
THL				S	Sn	02 11 20.4	+1.2
THL	Klokotos Trika	1.71	44	*ePN*	Pn	02 10 57.2	+0.1
THL				*eSN*	Sn	02 11 19.3	+0.1
THL	Klokotos Trika	1.71	44	P	Pn	02 10 57.3	+0.2
THL				*eSn*	Sn	02 11 19.3	+0.1
THL				S	Sn	02 11 20.4	+1.2
PYL	PYLOS	1.76	145	P	Pn	02 10 57.2	-0.7
PYL				S	Sn	02 11 21.0	+0.5
PYL	PYLOS	1.76	145	*ePN*	Pn	02 10 57.2	-0.7
PYL				*eSN*	Sn	02 11 20.4	-0.1
PYL	PYLOS	1.76	145	P	Pn	02 10 57.2	-0.7
PYL				*eSn*	Sn	02 11 20.4	-0.1
PYL				S	Sn	02 11 21.0	+0.5
VLX	Vlachokerasia	1.79	122	P	Pn	02 10 59.8	+1.5
VLX				S	Sn	02 11 21.4	+0.1
VLX	Vlachokerasia	1.79	122	*ePN*	Pn	02 10 58.7	+0.4
VLX				*eSN*	Sn	02 11 20.9	-0.4
VLX	Vlachokerasia	1.79	122	*ePn*	Pn	02 10 58.7	+0.4
VLX	Vlachokerasia	1.79	122	P	Pn	02 10 59.8	+1.5
VLX				*eSn*	Sn	02 11 20.9	-0.4
VLX				S	Sn	02 11 21.4	+0.1
LTK	Loutraki	1.98	99	P	Pn	02 11 01.2	+0.2
LTK	Loutraki	1.98	99	*ePN*	Pn	02 11 00.9	-0.1
LTK				*eSN*	Sn	02 11 27.3	+1.2
LTK	Loutraki	1.98	99	*ePn*	Pn	02 11 00.9	-0.1
LTK	Loutraki	1.98	99	P	Pn	02 11 01.2	+0.2
LTK				*eSn*	Sn	02 11 27.3	+1.2
LKR	Lokris	2.00	80	*ePn*	Pn	02 11 01.6	+0.4
LKR				*eSn*	Sn	02 11 27.7	+1.3
LKR	Lokris	2.00	80	P	Pn	02 11 01.8	+0.6
LKR				S	Sn	02 11 27.9	+1.5
LKR	Lokris	2.00	80	*ePN*	Pn	02 11 01.6	+0.4
LKR				*eSN*	Sn	02 11 27.7	+1.3
LKR	Lokris	2.00	80	*ePn*	Pn	02 11 01.6	+0.4
LKR				*eSn*	Sn	02 11 27.7	+1.3
ATAL	Atalanti	2.02	79	P	Pn	02 11 02.1	+0.6
ATAL				S	Sn	02 11 27.4	+0.4
ATAL	Atalanti	2.02	79	P	Pn	02 11 02.1	+0.6
ATAL				S	Sn	02 11 27.4	+0.4
KZN	Kozani	2.20	27	*ePn*	Pn	02 11 04.8	+0.9
KZN				*eSn*	Sn	02 11 32.7	+1.3
KZN	Kozani	2.20	27	P	Pn	02 11 05.0	+1.1
KZN				S	Sn	02 11 32.7	+1.3
KZN	Kozani	2.20	27	*ePN*	Pn	02 11 04.8	+0.9
KZN				*eSN*	Sn	02 11 32.7	+1.3
KZN	Kozani	2.20	27	*ePn*	Pn	02 11 04.8	+0.9
KZN				S	Sn	02 11 32.7	+1.3
SCTE	Santa Cesarea	2.33	318	*ePN*	Pn	02 11 05.3	-0.4
SCTE				*eSN*	Sn	02 11 34.1	-0.5
SCTE	Santa Cesarea	2.33	318	*ePn*	Pn	02 11 05.3	-0.4
SCTE				*eSn*	Sn	02 11 34.1	-0.5
LIT	Litokhoron	2.35	41	*ePn*	Pn	02 11 06.6	+0.6
LIT	Litokhoron	2.35	41	P	Pn	02 11 06.6	+0.6
LIT	Litokhoron	2.35	41	*ePN*	Pn	02 11 06.6	+0.6
LIT	Litokhoron	2.35	41	P	Pn	02 11 06.6	+0.6
XOR	Xorichti	2.35	63	P	Pn	02 11 06.5	+0.5
XOR	Xorichti	2.35	63	P	Pn	02 11 06.5	+0.5
NAIG	Nisos Aigina	2.44	103	*ePn*	Pn	02 11 07.1	-0.2
NAIG	Nisos Aigina	2.44	103	*ePN*	Pn	02 11 07.1	-0.2
NAIG	Nisos Aigina	2.44	103	*ePn*	Pn	02 11 07.1	-0.2
FNA	Florina	2.53	16	P	Pn	02 11 09.1	+0.6
FNA				S	Sn	02 11 41.7	+2.1
FNA	Florina	2.53	16	P	Pn	02 11 09.1	+0.6
FNA				S	Sn	02 11 41.7	+2.1
VLI	Veliai	2.54	129	*ePb*	Pn	02 11 09.5	+0.9
VLI				*eSn*	Sn	02 11 39.5	-0.3
VLI	Veliai	2.54	129	*ePB*	Pn	02 11 09.5	+0.9
VLI				*eSN*	Sn	02 11 39.5	-0.3
VLI	Veliai	2.54	129	*ePb*	Pn	02 11 09.5	+0.9
VLI				*eSn*	Sn	02 11 39.5	-0.3
ATH	Athens Observa	2.58	97	*ePb*	Pn	02 11 09.4	+0.3
ATH				*eSn*	Sn	02 11 41.1	+0.4
ATH	Athens Observa	2.58	97	*ePB*	Pn	02 11 09.4	+0.3
ATH				*eSN*	Sn	02 11 41.1	+0.4
ATH	Athens Observa	2.58	97	*ePb*	Pn	02 11 09.4	+0.3
ATH				*eSn*	Sn	02 11 41.1	+0.4
ATHU	Athens Univers	2.63	97	P	Pn	02 11 09.8	-0.1
ATHU				S	Sn	02 11 41.7	-0.3
ATHU	Athens Univers	2.63	97	P	Pn	02 11 09.8	-0.1
ATHU				S	Sn	02 11 41.7	-0.3
VLY	Voula,Athens	2.66	100	*ePn*	Pn	02 11 10.1	-0.1
VLY				*eSn*	Sn	02 11 42.5	-0.2
VLY	Voula,Athens	2.66	100	*ePN*	Pn	02 11 10.1	-0.1
VLY				*eSN*	Sn	02 11 42.5	-0.2
VLY	Voula,Athens	2.66	100	*ePn*	Pn	02 11 10.1	-0.1
VLY				*eSn*	Sn	02 11 42.5	-0.2
PTL	Penteli	2.68	95	*ePb*	Pn	02 11 10.7	+0.1
PTL				*eSn*	Sn	02 11 42.4	-0.9
PTL	Penteli	2.68	95	*ePB*	Pn	02 11 10.7	+0.1
PTL				*eSN*	Sn	02 11 42.4	-0.9
PTL	Penteli	2.68	95	*ePb*	Pn	02 11 10.7	+0.1
PTL				*eSn*	Sn	02 11 42.4	-0.9
BIA	Bitola	2.75	13	*ePn*	Pn	02 11 12.0	+0.5
BIA	Bitola	2.75	13	P	Pn	02 11 11.9	+0.4
BIA				S	Sn	02 11 46.4	+1.5
BIA	Bitola	2.75	13	P	Pn	02 11 11.9	+0.4
BIA				S	Sn	02 11 46.4	+1.5
OHR	Ohrid	2.77	5	*ePg*	Pn	02 11 13.8	+2.0
OHR	Ohrid	2.77	5	P	Pn	02 11 12.7	+0.9
OHR				S	Sn	02 11 46.8	+1.3
OHR	Ohrid	2.77	5	P	Pn	02 11 12.7	+0.9
OHR				S	Sn	02 11 46.8	+1.3
AOS	Alonnisos	2.78	72	P	Pn	02 11 11.7	-0.2
AOS	Alonnisos	2.78	72	P	Pn	02 11 11.7	-0.2
PAIG	Paliouri	2.95	57	P	Pn	02 11 13.7	-0.5
PAIG	Paliouri	2.95	57	P	Pn	02 11 13.7	-0.5
THE	Thessaloniki	2.98	39	P	Pn	02 11 15.3	+0.6
THE	Thessaloniki	2.98	39	P	Pn	02 11 15.3	+0.6
HORT	Hortiatis	3.03	41	P	Pn	02 11 15.3	0.0
HORT	Hortiatis	3.03	41	P	Pn	02 11 15.3	0.0
TIP	Timpagrande	3.03	287	*ePn*	Pn	02 11 15.0	-0.3
TIP	Timpagrande	3.03	287	*ePn*	Pn	02 11 15.0	-0.3
TIR	Tirane	3.04	351	*ePn*	Pn	02 11 13.9	-1.5
TIR				*eS*	Sn	02 11 54.0	+2.0
TIR	Tirane	3.04	351	P	Pn	02 11 15.5	+0.1
TIR	Tirane	3.04	351	*ePN*	Pn	02 11 15.6	+0.2
TIR				*eSN*	Sn	02 11 51.7	-0.3
TIR	Tirane	3.04	351	*ePn*	Pn	02 11 15.6	+0.2
TIR				*eSn*	Sn	02 11 51.7	-0.3
TIR				*eS*	Sn	02 11 54.0	+2.0
PLG	Polygyros	3.06	48	*ePn*	Pn	02 11 15.2	-0.6
PLG				*eSn*	Sn	02 11 52.7	0.0
PLG	Polygyros	3.06	48	P	Pn	02 11 15.2	-0.6
PLG				S	Sn	02 11 52.9	+0.2
PLG	Polygyros	3.06	48	*ePN*	Pn	02 11 15.2	-0.6
PLG				*eSN*	Sn	02 11 52.7	0.0
PLG	Polygyros	3.06	48	P	Pn	02 11 15.2	-0.6
PLG				S	Sn	02 11 52.9	+0.2
KRUS	Krusevo	3.08	11	*ePn*	Pn	02 11 16.2	+0.2
GRI	Girifalco	3.22	280	Pn	Pn	02 11 17.9	0.0
GRI	Girifalco	3.22	280	Pn	Pn	02 11 17.9	0.0
SOH	Sokhos	3.32	41	*ePn*	Pn	02 11 19.9	+0.5
SOH				*eSn*	Sn	02 11 58.8	-0.3
SOH	Sokhos	3.32	41	P	Pn	02 11 19.9	+0.5
SOH	Sokhos	3.32	41	*ePN*	Pn	02 11 19.9	+0.5
SOH				*eSN*	Sn	02 11 58.8	-0.3
SOH	Sokhos	3.32	41	P	Pn	02 11 19.9	+0.5
SOH				*eSn*	Sn	02 11 58.8	-0.3
PHP	Peshkopia	3.33	359	*i* PN	Pn	02 11 20.3	+0.8
PHP				*i* SN	Sn	02 11 59.9	+0.5
PHP	Peshkopia	3.33	359	*i* Pn	Pn	02 11 20.3	+0.8
PHP				*i* Sn	Sn	02 11 59.9	+0.5
OUR	Ouranopolis	3.36	53	P	Pn	02 11 19.7	-0.2
OUR	Ouranopolis	3.36	53	P	Pn	02 11 19.7	-0.2
VAY	Valandovo	3.38	28	*ePn*	Pn	02 11 20.6	+0.5
VAY	Valandovo	3.38	28	P	Pn	02 11 19.7	-0.4
VAY	Valandovo	3.38	28	P	Pn	02 11 19.7	-0.4
STIP	Stip	3.59	21	*ePn*	Pn	02 11 23.9	+0.8
STIP	Stip	3.59	21	P	Pn	02 11 23.6	+0.5
STIP	Stip	3.59	21	P	Pn	02 11 23.6	+0.5
CEL	Celeste	3.61	270	*ePn*	Pn	02 11 23.1	-0.2
CEL				*eS*	Sn	02 11 58.5	-7.7
CEL	Celeste	3.61	270	*ePn*	Pn	02 11 23.1	-0.2
LTRZ	Laterza	3.62	310	Pn	Pn	02 11 23.1	-0.4
LTRZ	Laterza	3.62	310	Pn	Pn	02 11 23.1	-0.4
SRS	Serrai	3.66	40	P	Pn	02 11 23.9	-0.1
SRS	Serrai	3.66	40	P	Pn	02 11 23.9	-0.1
PUK	Puka	3.72	353	*i* PN	Pn	02 11 24.6	-0.2
PUK				*i* SN	Sn	02 12 07.5	-1.4
PUK	Puka	3.72	353	*i* Pn	Pn	02 11 24.6	-0.2
PUK				*i* Sn	Sn	02 12 07.5	-1.4
ULC	Ulcinj	3.73	346	↑*i* Pn	Pn	02 11 24.0	-1.0
ULC				*eSn*	Sn	02 12 06.4	-2.9
ULC	Ulcinj	3.73	346	↑*i* Pn	Pn	02 11 24.0	-1.0
ULC				*eSn*	Sn	02 12 06.4	-2.9
SG1	Sgolgore (BA)	3.85	311	*ePn*	Pn	02 11 26.5	-0.1
SG1				*eSn*	Sn	02 12 10.5	-1.6
BAI	Bari	3.91	316	*ePn*	Pn	02 11 27.3	-0.2
BAI				*eSn*	Sn	02 12 12.0	-1.7
LIA	Limnos Island	3.97	66	P	Pn	02 11 28.7	+0.4
LIA	Limnos Island	3.97	66	P	Pn	02 11 28.7	+0.4
NVR	Nevrokopi	3.97	40	P	Pn	02 11 29.6	+1.3
NVR	Nevrokopi	3.97	40	P	Pn	02 11 29.6	+1.3
KARN	Karanos	4.03	136	P	Pn	02 11 29.6	+0.5
KARN	Karanos	4.03	136	*ePn*	Pn	02 11 29.5	+0.4
KARN				*eSN*	Sn	02 12 15.0	-1.5
KARN	Karanos	4.03	136	*ePn*	Pn	02 11 29.5	+0.4
KARN				*eSn*	Sn	02 12 15.0	-1.5
BCI	Bajram Curri	4.03	356	*i* PN	Pn	02 11 29.6	+0.5
BCI				*i* SN	Sn	02 12 16.8	+0.3
BCI	Bajram Curri	4.03	356	*i* Pn	Pn	02 11 29.6	+0.5
BCI				*i* Sn	Sn	02 12 16.8	+0.3
KAVA	Kavala	4.08	48	P	Pn	02 11 29.5	-0.3
KAVA	Kavala	4.08	48	P	Pn	02 11 29.5	-0.3
BUM	Brajici-Budva	4.13	343	↑*i* Pn	Pn	02 11 29.0	-1.5
BUM				*eSn*	Sn	02 12 15.3	-3.7
BUM	Brajici-Budva	4.13	343	↑*i* Pn	Pn	02 11 29.0	-1.5
BUM				*eSn*	Sn	02 12 15.3	-3.7
VAM	Vamos	4.18	133	*ePn*	Pn	02 11 31.9	+0.7
VAM				*eSn*	Sn	02 12 19.6	-0.7
VAM	Vamos	4.18	133	*ePn*	Pn	02 11 31.9	+0.7
VAM				*eSn*	Sn	02 12 19.6	-0.7
VAM	Vamos	4.18	133	*ePn*

PLE	Pljevlja	5.05 351	⇑iPn	Pn	02 11 42.7	-0.4
PLE			eSn	Sn	02 12 39.1	-2.5
SMG	Samos	5.06 95	P	Pn	02 11 44.6	+1.4
SMG	Samos	5.06 95	P	Pn	02 11 44.6	+1.4
LAST	Lasithi	5.12 127	ePn	Pn	02 11 44.5	+0.4
LAST	Lasithi	5.12 127	P	Pn	02 11 43.9	-0.2
LAST	Lasithi	5.12 127	ePN	Pn	02 11 44.5	+0.4
LAST	Lasithi	5.12 127	P	Pn	02 11 43.9	-0.2
LAST	Lasithi	5.12 127	ePn	Pn	02 11 44.5	+0.4
NPS	Neapolis	5.14 125	ePn	Pn	02 11 44.8	+0.5
NPS	Neapolis	5.14 125	ePN	Pn	02 11 44.8	+0.5
NPS	Neapolis	5.14 125	ePn	Pn	02 11 44.8	+0.5
FG2	Serracapriola 1um,1.6s	5.35 312	Pn	Pn	02 11 47.4	+0.2
WDD	Wield Dalam 104nm,0.8s	5.37 244	ePn	Pn	02 11 46.6	-0.9
WDD			eS	Sn	02 12 42.6	-6.9
WDD	Wield Dalam 104nm,0.8s	5.37 244	ePn	Pn	02 11 46.6	-0.9
SGG	Gregorio Mates 36nm,0.6s	5.59 305	Pn	Pn	02 11 51.6	+1.1
SGG	Gregorio Mates 36nm,0.6s	5.59 305	Pn	Pn	02 11 51.6	+1.1
ZKR	Zakros	5.62 123	ePn	Pn	02 11 52.2	+1.2
ZKR	Zakros	5.62 123	ePN	Pn	02 11 52.2	+1.2
ZKR	Zakros	5.62 123	ePn	Pn	02 11 52.2	+1.2
SDI	San Donato 70nm,1.6s	6.12 305	Pn	Pn	02 11 58.5	+0.7
SDI	San Donato 70nm,1.6s	6.12 305	Pn	Pn	02 11 58.5	+0.7
INTR	Introdacqua 54nm,0.6s	6.23 308	Pn	Pn	02 12 00.9	+1.6
INTR	Introdacqua 54nm,0.6s	6.23 308	Pn	Pn	02 12 00.9	+1.6
VVLD	Villa Vallelon 72nm,1.2s	6.33 306	Pn	Pn	02 12 02.2	+1.5
VVLD	Villa Vallelon 72nm,1.2s	6.33 306	Pn	Pn	02 12 02.2	+1.5
ARG	Arkhangelos	6.46 107	P	Pn	02 12 07.3	+4.9
AQU	L'Aquila 31nm,0.8s	6.73 309	ePn	Pn	02 12 04.8	-1.4
AQU	L'Aquila 31nm,0.8s	6.73 309	ePn	Pn	02 12 04.8	-1.3
NRCA	Norcia 6.4nm,0.5s	7.18 311	Pn	Pn	02 12 13.7	+1.4
NRCA	Norcia 6.4nm,0.5s	7.18 311	Pn	Pn	02 12 13.7	+1.4
BZS	Buzias	7.32 6	⇓iP	Pn	02 12 10.8	-3.4
CING	Cingoli 30nm,1.0s	7.46 315	Pn	Pn	02 12 17.7	+1.5
CING	Cingoli 30nm,1.0s	7.46 315	Pn	Pn	02 12 17.7	+1.5
NVLJ	Novalja	7.50 328	ePn	Pn	02 12 17.2	+0.4
NVLJ			Sn	Sn	02 13 37.3	-4.8
NVLJ	Novalja	7.50 328	ePn	Pn	02 12 17.2	+0.4
SNTG	Esanatoglia 4.0nm,0.4s	7.53 313	Pn	Pn	02 12 17.6	+0.4
SNTG	Esanatoglia 4.0nm,0.4s	7.53 313	Pn	Pn	02 12 17.6	+0.4
ASS	Assisi 3.8nm,0.4s	7.59 311	Pn	Pn	02 12 19.4	+1.5
ASS	Assisi 3.8nm,0.4s	7.59 311	Pn	Pn	02 12 19.4	+1.5
FSSB	Fossombrone 4.1nm,0.5s	7.90 315	Pn	Pn	02 12 22.1	-0.1
FSSB	Fossombrone 4.1nm,0.5s	7.90 315	Pn	Pn	02 12 22.1	-0.1
PKSM	Moragy	7.98 351	⇓iP	Pn	02 12 23.4	+0.1
PKSM	Moragy	7.98 351	⇓iP	Pn	02 12 23.4	+0.1
BOJS	Bojanci	8.14 333	ePn	Pn	02 12 24.6	-0.9
BOJS			eSn	Sn	02 13 52.5	-5.4
BOJS	Bojanci	8.14 333	ePn	Pn	02 12 24.6	-1.0
MLR	Muntele Rosu	8.22 28	Pn	Pn	02 12 26.3	-0.3
MLR	Muntele Rosu	8.22 28	Pn	Pn	02 12 26.3	-0.3
KNDS	Knezji Dol	8.49 330	ePn	Pn	02 12 29.5	-0.9
KNDS			eSn	Sn	02 14 01.5	-4.9
KNDS	Knezji Dol	8.49 330	ePn	Pn	02 12 29.5	-0.9
VISS	Visnje	8.55 332	ePn	Pn	02 12 30.3	-0.8
VISS			eSn	Sn	02 14 02.2	-5.6
VISS	Visnje	8.55 332	ePn	Pn	02 12 30.3	-0.8
VRI	Vrincioaia	8.83 30	⇑iP	Pn	02 12 37.4	+2.4
VRI	Vrincioaia	8.83 30	⇑iP	Pn	02 12 37.4	+2.4
TRI	Trieste	8.89 328	ePn	Pn	02 12 35.7	-0.1
TRI	Trieste	8.89 328	ePn	Pn	02 12 35.7	-0.1
VOY	Vojsko	9.10 330	ePn	Pn	02 12 37.6	-1.1
VOY			eSn	Sn	02 14 15.4	-5.9
VOY	Vojsko	9.10 330	ePn	Pn	02 12 37.6	-1.1
SOKA	Soboth 10nm,0.6s	9.24 336	⇑iPn	Pn	02 12 39.0	-1.7
SOKA			⇓iSn	Sn	02 14 18.0	-6.8
SOKA	Soboth 10nm,0.6s	9.24 336	Pn	Pn	02 12 39.0	-1.7
KEST	Kesra 0.1nm,0.3s,baz=73,slow=14,SNR=4.8	9.28 257	Pn	Pn	02 12 41.8	+0.6
PSZ	Piszkesteto	9.58 358	ePn	Pn	02 12 46.1	+0.9
PSZ	Piszkesteto	9.58 358	ePn	Pn	02 12 46.2	+1.0
KECS	Kecovo	10.13 0	ePn	Pn	02 12 53.8	+1.0
KECS	Kecovo	10.13 0	ePn	Pn	02 12 53.8	+1.0
VYHS	Vyhne	10.21 354	ePn	Pn	02 12 54.9	+1.0
VYHS			eSn	Sn	02 14 40.9	-7.7
VYHS	Vyhne	10.21 354	ePn	Pn	02 12 54.9	+1.0
ABTA	Abfaltersbach 5.1nm,0.9s	10.24 328	⇑iP	Pn	02 12 56.1	+1.7
ABTA	9.5nm,1.3s		⇑iSn	Sn	02 14 42.6	-6.8
ABTA	Abfaltersbach 5.1nm,0.9s	10.24 328	P	Pn	02 12 56.1	+1.8
BRTR	Keskin Array B 0.1nm,0.3s,baz=114,slow=42,SNR=2.2	10.33 78	Pn	Pn	02 12 52.6	-2.9
MOA	Molln 6.2nm,0.6s	10.53 336	⇑eP	Pn	02 13 00.1	+1.9
MOA	3.3nm,0.6s		⇓iSn	Sn	02 14 55.8	-0.4
MOA	Molln 6.2nm,0.6s	10.53 336	P	Pn	02 13 00.1	+1.9
MOA	3.3nm,0.6s		Sn	Sn	02 14 55.8	-0.5
WTTA	Wattenberg 6.9nm,0.9s	11.02 327	⇑iP	Pn	02 13 06.5	+1.5
WTTA	12nm,0.9s		⇓iSn	Sn	02 15 07.0	-1.5
WTTA	Wattenberg 6.9nm,0.9s	11.02 327	P	Pn	02 13 06.5	+1.5
WTTA	12nm,0.9s		Sn	Sn	02 15 07.0	-1.4
DAVOX	Davos/Dischmat 0.3nm,0.3s,baz=9.9,slow=5.9,SNR=2.3	11.49 321	Pn	Pn	02 13 08.6	-2.7
DAVOX	comp=Z,85nm,18.1s,baz=116,slow=41		LR	LR	02 18 13.7	
GERES	GERESS Array B 0.3nm,0.3s,baz=153,slow=15,SNR=8.5	11.58 337	Pn	Pn	02 13 11.0	-1.6
GERES	GERESS Array B	11.58 337	Pn	Pn	02 13 11.0	-1.6
KHC	Kasperske Hory 200nm,10.2s	11.87 337	eP	Pn	02 13 17.7	+1.1
KHC			AMS	AMS	02 18 30.0	
KHC	Kasperske Hory 200nm,11.1s	11.87 337	P	Pn	02 13 17.7	+1.1
DPC	Dobruska-Polom 200nm,11.7s	12.36 347	AMS	AMS	02 18 50.0	
PRU	Pruhonice 200nm,11.7s	12.39 342	AMS	AMS	02 19 00.0	
LPG	La Plagne 6.5nm,0.8s	12.47 309	eP	Pn	02 13 31.7	+7.0
LPG	La Plagne 3.3nm,0.8s	12.47 309	eP	Pn	02 13 31.7	+7.0
MMAI	Mount Meron Ar 0.7nm,0.3s,baz=341,slow=12,SNR=4.5	13.24 109	Pn	Pn	02 13 31.7	-3.7
CABF	La Chapelle	13.44 313	eP	Pn	02 13 40.0	+1.9
CABF	La Chapelle	13.44 313	eP	Pn	02 13 40.0	+1.9
HINF	Hinteralfeld	13.72 318	eP	Pn	02 13 45.8	+3.9
CDF	Champ du Feu	13.89 321	eP	Pn	02 13 45.7	+1.6
CDF	Champ du Feu	13.89 321	eP	Pn	02 13 45.7	+1.6
EIL	Elat 0.2nm,0.3s,baz=9.3,slow=18,SNR=3.7	14.78 122	Pn	Pn	02 13 57.6	+1.2
EIL	Elat	14.78 122	Pn	Pn	02 13 57.6	+1.2
TCF	Toulx Ste Croi	15.65 306	eP	Pn	02 14 11.4	+3.5
TCF	Toulx Ste Croi	15.65 306	eP	Pn	02 14 11.4	+3.5
BAIF	Baives	16.49 320	eP	Pn	02 14 24.0	+5.4
GNI	Garni 0.5nm,0.3s,baz=0.0,slow=20,SNR=2.2	18.86 77	Pn	Pn	02 14 49.0	+0.8
GNI	Garni	18.86 77	Pn	Pn	02 14 49.0	+0.8
ESDC	Sonseca Array 0.1nm,0.3s,baz=76,slow=11,SNR=4.3	19.03 282	Pn	Pn	02 14 52.2	+2.0
ESDC	Sonseca Array	19.03 282	Pn	Pn	02 14 52.2	+2.0
ESDC	Sonseca Array	19.03 282	Pn	Pn	02 14 52.2	+2.0
HFS	Hagfors 1.4nm,0.5s,mb3.7,baz=156,slow=11,SNR=12	22.23 351	P	P	02 15 22.7	-1.2
HFS			LR	LR	02 23 50.8	
HFS	Hagfors 0.7nm,0.8s,mb3.2,baz=212,slow=24,SNR=2.8	22.23 351	P	P	02 15 22.7	-1.2
EKA	Eskdalemuir Ar 1.7nm,0.5s,mb3.7,baz=174,slow=12,SNR=8.3	23.27 325	P	P	02 15 33.3	-1.7
EKA	Eskdalemuir Ar	23.27 325	P	P	02 15 33.3	-1.7
FINES	FINESS Array B 1.2nm,0.9s,mb3.6,baz=31,slow=8.9,SNR=9.8	23.39 7	P	P	02 15 33.5	-2.7
FINES	FINESS Array B	23.39 7	P	P	02 15 33.5	-2.7
NB2	NORSAR Subarra 23.45 349		P	P	02 15 36.6	-0.2
NB2	NORSAR Subarra 23.45 349		P	P	02 15 36.6	-0.2
NOA	NORSAR Array B 23.45 349		P	P	02 15 36.5	-0.3
NOA			LR	LR	02 25 34.7	
NOA	NORSAR Array B 23.45 349		P	P	02 15 36.5	-0.3
NOA			LR	LR	02 25 34.8	
NOA	NORSAR Array B 23.45 349		P	P	02 15 36.5	-0.3
AKTK	Aktyubinsk	29.11 53	P	P	02 16 24.4	-3.7
AKTO	Aktyubinsk 0.2nm,0.4s,mb3.8,baz=90,slow=3.0,SNR=2.5	29.11 53	P	P	02 16 24.4	-3.7
TORD	Torodi Ar. Bea 0.2nm,0.9s,mb3.6,baz=31,slow=8.9,SNR=9.8	30.14 219	P	P	02 16 36.9	-0.7
TORD	Torodi Ar. Bea	30.14 219	P	P	02 16 36.9	-0.7
ARCES	ARCESS Array B 0.2nm,0.6s,mb4.0,baz=192,slow=11,SNR=3.5	31.37 3	P	P	02 16 46.7	-1.2
ARCES	ARCESS Array B	31.37 3	P	P	02 16 46.7	-1.2
ARCES	ARCESS Array B	31.37 3	P	P	02 16 46.7	-1.2
MKAR	Makanchi Array 0.2nm,0.9s,mb4.0,baz=288,slow=6.4,SNR=11	45.24 59	P	P	02 18 43.4	-1.4
ZALV	Zalesovo Beam 0.2nm,2.5nm,0.4s,mb4.5,baz=269,slow=8.6,SNR=4.5	45.60 48	P	P	02 18 46.0	-1.5
ZALV	Zalesovo Beam	45.60 48	P	P	02 18 46.0	-1.5

IDC ***05*** *02:16:45.1±0.5,38°.81S×91°.62W,h0km,mb4.9/19, mb1 4.9/20,mb1mx4.9/21,mbtmp4.9/20,ML4.0/1,MS5.7/19, Ms1 5.6/19,ms1mx5.5/25,Error ellipse: s-maj=19.4km s-min=14.3km az=96.0*

ISCJB ***05*** *02:16:45.8±0.3,38°.76S±0°.06×91°.54W±0°.06,h10km, mb5.2/80,MS5.7/218,Error ellipse: s-maj=8.6km s-min=6.1km az=31.0*

NEIC ***05*** *02:16:46.9±0.2,38°.84S×91°.62W,h10km,mb5.4/69, MS5.6/201,MW6.0,MW5.9,Error ellipse: s-maj=7.0km s-min=5.7km az=58.0,Moment Tensor Solution. s85 Moment tensor: Scale 10^{17}Nm; M_{rr}=1.38; $M_{\theta\theta}$-0.42; $M_{\phi\phi}$-0.95; $M_{r\theta}$1.19; $M_{\theta\phi}$-7.76; $M_{\phi r}$-0.01; Best double couple: $M_0$7.90000×10^{17} NP1:ϕ_s179.00000°,δ81.00000°, λ3.00000°. NP2:ϕ_s89.00000°,δ87.00000°,λ171.00000°. Principal axes: T 7.2000, Plg8.0000°, Azm43.0000°; N 1.3200, Plg80.0000°, Azm253.0000°; P -8.5200, Plg4.0000°, Azm134.0000°;*

TEH ***05*** *02:16:48.0,38°.77S×91°.44W,h10km*

BJI ***05*** *02:16:48.5,38°.80S×91°.60W,h10km,mB5.6/19,Ms6.0/23, Ms7 5.8/23*

GCMT ***05*** *02:16:50.1±0.1,39°.01S×91°.85W,h12km,MW6.0, Moment Tensor Solution. s113,c240; s94,c152; Moment tensor: Scale 10^{18}Nm; M_{rr}-0.09±.01; $M_{\theta\theta}$0.18±.01; $M_{\phi\phi}$-0.10±.01; $M_{r\theta}$-0.02±.02; $M_{\theta\phi}$-1.18±.01; $M_{\phi r}$-0.30±.02; Best double couple: $M_0$1.20000×10^{18} NP1:ϕ_s87.00000°,δ76.00000°,λ-177.00000°. NP2: ϕ_s356.00000°,δ87.00000°,λ-14.00000°. Principal axes: T 1.2600, Plg8.0000°, Azm42.0000°; N -0.0600, Plg75.0000°, Azm165.0000°; P -1.2000, Plg12.0000°, Azm311.0000°; Data Used: II IU IC G CN. Surface waves: sta=118, comp=265, per= 50.*

ISC 05 02:16:47.3±0.3,38°.83S±0°.05×91°.57W±0°.06,h10km,n733, σ0:63/413,mb5.2/80,MS5.7/218,157C-154D,West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCHI	Chillan	15.59	88	iP	Pn	02 20 28.3	+1.3
PLCA	Paso Flores 0.1nm,0.3s,baz=247,slow=7.7,SNR=12	16.27	103	Pn	Pn	02 20 36.4	+0.6
PLCA				LR	LR	02 24 22.6	
PLCA	Paso Flores 415nm,1.7s	16.27	103	ePn	Pn	02 20 37.9	+2.0
RPN	Rapa Nui 372nm,1.4s	18.89	303	eP	Pn	02 21 06.8	-1.6
TLL	Tololo Astrono	19.14	69	iP	Pn	02 21 12.2	+0.7
LCO	Las Campanas 240nm,1.3s	19.86	67	ePn	Pn	02 21 19.6	-0.4
LCO	Las Campanas	19.86	67	iP	Pn	02 21 19.6	-0.5
CFAA	Coronel Fontan 18nm,1.1s,baz=243,slow=9.4,SNR=84	20.35	76	P	P	02 21 24.4	+0.6
CFAA				LR	LR	02 27 34.7	
USHA	Ushuaia 32nm,1.2s,mb4.6,baz=286,slow=9.0,SNR=8.4	22.36	143	P	P	02 21 45.0	-0.2
USHA				LR	LR	02 28 41.7	
TRQA	Tornquist 193nm,1.5s,mb5.3	23.15	97	eP	P	02 21 54.0	+0.3
TRQA				LR	LR		
ARE	Arequipa	28.38	44	eP	P	02 22 43.0	+1.2
NNA	Nana 0.2nm,0.5s,mb4.5,baz=204,slow=13,SNR=4.8	29.77	30	P	P	02 22 53.3	-0.9
NNA				LR	LR	02 31 42.1	
LPAZ	La Paz 0.2nm,0.9s,mb4.6,baz=209,slow=6.8,SNR=72	30.43	49	P	P	02 23 01.5	+1.6
LPAZ				LR	LR	02 32 41.1	
LPAZ	La Paz 0.2nm,1.9s,MS5.5,baz=143,slow=31	30.43	49	eP	P	02 23 01.5	+1.6
LPAZ				LR	LR		
PMSA	Palmer Station 0.2nm,1.3s,MS5.6,baz=309,slow=30	30.57	157	LR	LR	02 31 53.4	
PMSA	Palmer Station 0.2nm,1.5s,MS5.6,baz=309,slow=30	30.57	157	PFAKE	LR	02 23 10.0	+9.2
PMSA				LR	LR		
ATAH	Atahualpa 0.2nm,0.7s,mb5.5,baz=202,slow=4.7,SNR=37	33.72	24	P	P	02 23 30.4	+1.5
ATAH				LR	LR	02 33 57.0	
SIV	San Ignacio 0.2nm,0.9s,mb5.0,baz=239,slow=9.9,SNR=70	35.09	58	P	P	02 23 40.5	-0.2
PAYG	Puerto Ayora 0.2nm,1.0s,mb5.7	37.98	2	PFAKE	LR	02 24 20.0	+15
PAYG				LR	LR		
RKT	Rikitea 0.2nm,3.1s	39.98	280	eS	S	02 30 37.6	+10
RKT				eLQ		02 33 26.8	
RKT	0.2nm,29.8s			eLR	LR	02 35 07.5	
SPB	Sao Paulo 0.2nm,1.4s,mb5.2	40.29	81	eP	P	02 24 24.9	+0.2
SPB				LR	LR		
OTAV	Otavalo 0.2nm,1.3s,mb5.3	40.70	20	eP	P	02 24 28.3	+0.2
OTAV				LR	LR		
ROSC	El Rosal 0.2nm,0.6s,mb4.9,baz=171,slow=1.4,SNR=24	46.30	24	P	P	02 25 11.4	-1.9
ROSC				LR	LR	02 42 54.1	
ROSC	El Rosal 0.2nm,1.8s,MS5.9,baz=189,slow=34	46.30	24	eP	P	02 25 15.7	+2.4
ROSC				LR	LR	02 42 54.1	
BCIP	Isla Barro Col 0.2nm,2.5s,mb5.8	48.98	15	eP	P	02 25 34.0	-0.1
BCIP				LR	LR		
JTS	JuntasAbangare 0.2nm,1.5s,mb5.7	49.25	9	eP	P	02 25 36.6	+0.5
JTS				LR	LR		
SDV	Santo Domingo 0.2nm,1.1s,mb5.1,baz=238,slow=13,SNR=23	51.31	27	P	P	02 25 50.3	-1.4
SDV	Santo Domingo 0.2nm,1.0s,mb5.2	51.31	27	eP	P	02 25 51.0	-0.8
SDV				LR	LR		
QSPA	South Pole Qui 0.2nm,1.0s,mb4.9,baz=132,slow=3.3,SNR=18	51.40	180	P	P	02 25 51.8	+0.1
QSPA	South Pole Qui 0.2nm,1.7s,mb5.4	51.40	180	eP	P	02 25 51.8	+0.1
QSPA				LR	LR		
TAOE	Nuku Hiva Isla 0.2nm,1.4s,mb5.8	52.68	291	eS	S	02 33 38.1	+8.2
TAOE				eLQ		02 39 08.5	
TAOE				eLR	LR	02 41 21.7	
TGUH	Tegucigalpa,Un 0.2nm,0.9s,mb5.5	52.76	5	eP	P	02 26 02.8	+0.4
TGUH				LR	LR		
APG	El Apazote 0.2nm,1.1s,mb4.6,baz=218,slow=8.3,SNR=7.2	53.55	1	P	P	02 26 08.6	+0.3
PPT	Papeete 0.2nm,0.9s	54.40	276	eS	S	02 34 00.6	+7.4
PPT				eLQ		02 39 50.8	
PPT				eLR	LR	02 42 05.1	
PPT	Papeete 0.2nm,1.9s,MS5.5,baz=124,slow=30	54.40	276	LR	LR	02 43 46.9	
SBA	Scott Base 0.2nm,0.9s,mb5.7	54.78	195	eP	P	02 26 15.6	-1.0
SBA				LR	LR		
GRGR	Grenville 0.2nm,1.9s,MS5.7	57.88	35	PFAKE	LR	02 26 50.0	+11
GRGR				LR	LR		
MAIT	Maitri 0.2nm,1.9s,MS5.7	58.02	158	eP	P	02 26 38.9	-0.9
MTDJ	Mount Denham	58.25	16	PFAKE	LR	02 26 50.0	+8.0
MTDJ				LR	LR		
TEIG	Tepich 0.2nm,1.1s,mb5.5	58.82	4	eP	P	02 26 45.8	-0.1
TEIG				LR	LR		
BBGH	Gun Hill 0.2nm,1.9s,MS5.5	59.73	37	PFAKE	LR	02 27 00.0	+7.7
BBGH				LR	LR		
RCBR	Riachuelo 0.2nm,1.9s,MS5.6	59.92	72	PFAKE	LR	02 27 10.0	+16
RCBR				LR	LR		
RAR	Rarotonga 0.2nm,1.9s,MS5.6	60.31	266	PFAKE	LR	02 27 10.0	+14
RAR				LR	LR		
FDF	Fort de France 0.2nm,1.9s,MS5.5	60.40	34	PFAKE	LR	02 27 10.0	+13
FDF				LR	LR		
GTBY	Guantanamo Bay 0.2nm,1.9s,MS5.6	60.44	18	eP	P	02 26 57.5	+0.4
GTBY				LR	LR		
SDDR	Presa de Saban 0.2nm,1.9s,MS5.7	60.56	22	PFAKE	LR	02 27 10.0	+12
SDDR				LR	LR		
OBIP	Obispado Ponce 0.2nm,1.2s,mb5.8	61.21	27	eP	P	02 27 01.8	-0.6
SJG	San Juan 0.2nm,1.8s,mb6.3	61.44	28	eP	P	02 27 02.1	-1.8
SJG				LR	LR		
CBYP	Canovanas 0.2nm,1.4s,mb5.8	61.70	28	eP	P	02 27 02.9	-2.7
ANWB	Willy Bob 0.2nm,1.9s,MS5.6	62.74	32	PFAKE	LR	02 27 20.0	+7.3
ANWB				LR	LR		
GRTK	Grand Turk 0.2nm,1.9s,MS5.7	63.00	21	PFAKE	LR	02 27 30.0	+16
GRTK				LR	LR		
KVTX	Kingsville 0.2nm,1.9s,MS5.5	66.29	354	PFAKE	LR	02 27 50.0	+14
KVTX				LR	LR		
DWPF	Disney 0.2nm,1.9s,mb5.7	67.26	10	eP	P	02 27 41.0	-0.8
DWPF				LR	LR		
SNZO	South Karori 0.2nm,1.9s,MS6.0	68.14	234	PFAKE	LR	02 28 00.0	+13
SNZO				LR	LR		
URZ	Urewera 0.2nm,1.9s,MS6.0,baz=119,slow=30	68.23	238	LR	LR	02 50 22.3	
HKT	Hockley 0.2nm,1.7s,mb5.3	68.53	356	eP	P	02 27 49.6	-0.2
HKT				LR	LR		
TXAR	Lajitas Array 0.2nm,1.9s,mb4.5,baz=173,slow=8.2,SNR=47	68.74	349	P	P	02 27 51.1	0.0
TXAR				LR	LR	02 52 13.3	
628A	Black Gap, Mar baz=69	68.77	349	⇑P	P	02 27 50.8	-0.5
627A	Terlingua Ranc baz=69,SNR=12	68.81	349	⇓P	P	02 27 51.1	-0.5
626A	Big Bend Ranch baz=69,SNR=14	69.03	348	⇑P	P	02 27 52.8	-0.2
RPZ	Rata Peaks 0.2nm,1.7s,MS5.9,baz=96,slow=29	69.07	230	LR	LR	02 50 22.8	
JCT	Junction City 0.2nm,1.4s,mb5.4	69.37	352	eP	P	02 27 54.8	-0.3
JCT				LR	LR		
528A	Cox Ranch, San baz=70	69.42	350	⇑P	P	02 27 54.7	-0.6
526A	Mary Lane Ranc baz=70,SNR=19	69.52	348	⇑P	P	02 27 55.6	-0.4
527A	Woodward Ranch baz=70,SNR=24	69.53	349	⇑P	P	02 27 55.5	-0.5
BRAL	Brewton 0.2nm,1.9s,MS5.3	69.60	4	PFAKE	LR	02 28 10.0	+14
BRAL				LR	LR		
RAO	Raoul Island 0.2nm,1.9s,MS5.8	69.69	248	PFAKE	LR	02 28 10.0	+13
RAO				LR	LR		
428A	Kincaid Ranch, baz=70	69.96	350	⇑P	P	02 27 57.8	-0.9
426A	McDonald Obser baz=70,SNR=12	70.10	349	⇑P	P	02 27 59.0	-0.5
427A	Hayter Ranch, baz=70,SNR=21	70.19	349	⇓P	P	02 27 59.3	-0.7
NATX	Nacogdoches 0.2nm,0.8s,mb5.2	70.28	357	eP	P	02 28 00.7	+0.1
NATX				LR	LR		
425A	Indio Mountain baz=71,SNR=8.8	70.37	348	⇓P	P	02 27 59.9	-1.2
328A	Wristen Ranch, baz=71,SNR=8.1	70.63	350	⇑P	P	02 28 01.9	-0.9
VBMS	Vicksburg 0.2nm,1.9s,MS5.7	70.69	1	PFAKE	LR	02 28 10.0	+6.9
VBMS				LR	LR		
327A	Balmorhea Ranc baz=71	70.71	349	⇑P	P	02 28 02.3	-1.0
326A	Caldwell Ranch baz=71,SNR=11	70.73	349	⇓P	P	02 28 02.3	-1.1
325A	Bean Ranch, Si baz=71,SNR=8.8	70.94	348	⇑P	P	02 28 03.9	-0.7
324A	Moseley Ranch, baz=72,SNR=10	71.10	347	⇓P	P	02 28 03.9	-1.7
227A	Bennet, Jal baz=72	71.31	350	⇑P	P	02 28 05.7	-1.2
MNTX	Cornudas Mount 0.2nm,1.9s,mb4.8	71.33	348	eP	P	02 28 05.5	-1.5
MNTX				LR	LR		
226A	Malaga, Loving baz=72	71.48	349	⇑P	P	02 28 07.1	-0.8
320A	Kipp Ranch, An baz=72	71.57	345	⇑P	P	02 28 07.7	-0.7
LRAL	Lakeview Retre 0.2nm,1.8s,mb5.4	71.62	4	eP	P	02 28 08.3	-0.4
LRAL				LR	LR		
225A	Deer Hill, Car baz=72	71.64	348	⇓P	P	02 28 08.3	-0.6
GDL2	Guadalupe Moun	71.66	349	eP	P	02 28 08.9	-0.1
224A	Cornudas Mount baz=72,SNR=18	71.72	348	⇑P	P	02 28 08.3	-1.1
319A	Douglas baz=72	71.76	344	⇓P	P	02 28 08.1	-1.5
223A	Chaparral, Ant baz=72	71.81	347	⇑P	P	02 28 09.4	-0.5
127A	Arkansas Junct baz=72	71.98	350	⇓P	P	02 28 10.0	-0.8

318A Bisbee 71.98 344 ⇓P P 02 28 10.2 -0.7
baz=72
222A Williams Famil 72.03 346 ⇓P P 02 28 11.3 +0.1
baz=72
221A Mesquite Ranch 72.07 346 ⇑P P 02 28 11.6 +0.1
baz=72
220A Playas Peak, P 72.11 345 ⇑P P 02 28 11.4 -0.4
baz=72,SNR=10
MAW Mawson 72.14 170 P P 02 28 10.9 -0.7
comp=Z,4.9nm,0.6s,mb4.6,baz=174,slow=12,SNR=5.2
MAW LR LR 02 59 11.7
comp=Z,3μm,18.1s,MS5.6,baz=202,slow=35
MAW Mawson 72.14 170 *eP* **P 02 28 11.6 0.0**
comp=Z,9.8nm,1.1s,mb4.7
MAW LR LR
comp=Z,5μm,19.0s,MS5.8
125A Gardner Draw, 72.15 348 ⇑P P 02 28 12.0 0.0
baz=72
GOGA Godfrey 72.26 7 *eP* **P 02 28 12.2 -0.3**
comp=Z,73nm,1.4s,mb5.4
GOGA LR LR
comp=Z,3μm,21.0s,MS5.5
124A Stringfield Ra 72.32 348 ⇓P P 02 28 12.3 -0.6
baz=73,SNR=8.0
NHSC New Hope 72.34 10 *eP* **P 02 28 12.7 -0.3**
comp=Z,111nm,1.0s,mb5.8
NHSC LR LR
comp=Z,6μm,21.0s,MS5.8
219A White Tail Can 72.36 344 ⇓P P 02 28 12.2 -1.0
baz=73
CPRX Cap Rock 72.40 349 *eP* **P 02 28 14.0 +0.6**
comp=Z,6.3nm,1.1s,mb4.5
217A Green Valley 72.49 343 ⇓P P 02 28 13.2 -0.7
baz=73
218A Dragoon 72.50 344 ⇓P P 02 28 13.4 -0.6
baz=73
COW Cow Castle Cre 72.55 10 *eP* **P 02 28 14.2 0.0**
Z27A Tatum 72.58 350 ⇓P P 02 28 13.5 -1.0
baz=73,SNR=12
122A Conniff Cattle 72.59 346 ⇑P P 02 28 14.2 -0.3
baz=73
Z26A Caprock 72.65 349 ⇑P P 02 28 14.7 -0.2
baz=73
XMAS Kiritimati 72.72 287 PFAKE 02 28 30.0 +14
XMAS LR LR
comp=Z,2μm,21.0s,MS5.4
120A U Bar Ranch, L 72.76 345 ⇓P P 02 28 15.6 0.0
baz=73,SNR=9.6
Z25A Roswell 72.77 348 ⇓P P 02 28 15.4 -0.2
baz=73
216A Three Points, 72.85 342 ⇑P P 02 28 16.0 -0.1
baz=73
Z24A Sheeppen Canyo 72.92 348 ⇑P P 02 28 16.9 +0.4
baz=73
TUC Tucson 72.99 343 *eP* **P 02 28 17.2 +0.3**
comp=Z,26nm,1.2s,mb5.0
TUC LR LR
comp=Z,3μm,20.0s,MS5.5
Z23A Rita Site, Whi 73.00 347 ⇑P P 02 28 17.4 +0.4
baz=73
MIAR Mount Ida 73.03 358 *eP* **P 02 28 16.3 -0.7**
comp=Z,47nm,1.3s,mb5.3
MIAR LR LR
comp=Z,2μm,19.0s,MS5.3
119A Ashpeak Ranch, 73.11 344 ⇓P P 02 28 17.8 +0.1
baz=74
Z22A Elephant Butte 73.13 347 ⇓P P 02 28 17.5 -0.2
baz=74
118A Homack Ranch, 73.13 344 ⇓P P 02 28 17.9 +0.1
baz=74
Y27A Causey 73.14 350 ⇑P P 02 28 16.7 -1.1
baz=74,SNR=8.8
214A Organ Pipe Nat 73.14 341 ⇑P P 02 28 17.4 -0.4
baz=74
MSTX Muleshoe 73.17 350 ⇓P P 02 28 17.0 -0.9
baz=74,SNR=20
117A Oracle 73.23 343 ⇓P P 02 28 18.4 0.0
baz=74
UALR University of 73.23 359 *eP* **P 02 28 17.4 -0.9**
comp=Z,39nm,1.3s,mb5.2
Y26A Elida 73.27 349 ⇑P P 02 28 18.1 -0.4
baz=74
Z20A Nine Sixteen R 73.30 345 ⇓P P 02 28 18.6 -0.1
baz=74
Z21A St. Cloud Mine 73.31 346 ⇑P P 02 28 18.9 +0.2
baz=74
JSC Jenkinsville 73.36 9 *eP* **P 02 28 18.8 -0.3**
Y25A Mesa, Roswell 73.40 349 ⇑P P 02 28 19.2 -0.1
baz=74
116A Eloy 73.45 342 ⇓P P 02 28 19.4 -0.2
baz=74
WMOK Wichita Mounta 73.50 354 *eP* **P 02 28 18.7 -1.1**
comp=Z,15nm,0.8s,mb5.0
WMOK LR LR
comp=Z,1μm,19.0s,MS5.2
PLAL Pickwick Lake 73.51 3 *eP* **P 02 28 18.0 -1.9**
comp=Z,25nm,1.1s,mb5.0
PLAL LR LR
comp=Z,2μm,20.0s,MS5.3
Y24A Capitan 73.52 348 ⇑P P 02 28 20.0 0.0
baz=74,SNR=14
Z19A T-Link Ranch, 73.61 345 ⇑P P 02 28 20.7 +0.2
baz=74
Y23A Lovelace Mesa, 73.62 347 ⇑P P 02 28 20.8 +0.2
baz=74
115A Sonoran Desert 73.71 342 ⇓P P 02 28 21.6 +0.5
baz=74
Y22A Socorro 73.79 347 ⇑P P 02 28 21.9 +0.3
baz=74
CASY Casey 73.85 189 *eP* **P 02 28 20.6 -1.0**
comp=Z,46nm,1.4s,mb5.2
CASY LR LR
comp=Z,10μm,20.0s,MS6.1
AFI Afiamalu 73.85 265 PFAKE 02 28 30.0 +7.5
AFI LR LR
comp=Z,3μm,22.0s,MS5.6
SWET Sewanee 73.86 5 *eP* **P 02 28 21.3 -0.6**
X27A F and S Farms, 73.88 350 ⇑P P 02 28 21.9 -0.2
baz=74
X26A CR and CF Fran 73.88 350 ⇑P P 02 28 21.4 -0.7
baz=74,SNR=12
AMTX Amarillo 73.93 351 *eP* **P 02 28 21.9 -0.6**
comp=Z,54nm,1.0s,mb5.4
AMTX LR LR
comp=Z,3μm,20.0s,MS5.6
BNM Barren Site 73.94 347 *eP* **P 02 28 23.6 +1.2**
comp=Z,13nm,1.4s,mb4.7
X25A Clemmons Ranch 73.98 349 ⇓P P 02 28 22.8 +0.1
baz=74
Y21A Point of Rocks 73.99 346 ⇓P P 02 28 22.8 0.0
baz=74,SNR=11
LPM Los Pinos Moun 74.10 347 *eP* **P 02 28 24.5 +1.1**
Z16A Peralta Trail, 74.13 343 ⇓P P 02 28 23.8 +0.1
baz=74
113A Mohawk Valley, 74.16 341 ⇑P P 02 28 24.0 +0.2
baz=74
CPCT Cooper Cave 74.19 6 *eP* **P 02 28 23.4 -0.6**
Y19A Nutrioso 74.25 345 ⇓P P 02 28 25.1 +0.8
baz=75
LAZ Ladron 74.27 347 P P 02 28 22.4 -2.0
comp=Z,11nm,1.4s,mb4.6
X23A Hourglass Bar 74.28 348 ⇓P P 02 28 25.0 +0.6
baz=75
W27A Bowe Ranch, En 74.28 350 ⇓P P 02 28 24.9 +0.4
baz=75
Y17A Roosevelt 74.34 343 ⇓P P 02 28 25.0 +0.2
baz=75
W26A Owens Ranch, T 74.41 350 ⇓P P 02 28 25.4 +0.2
baz=75
X21A Alamocita Cree 74.44 346 ⇑P P 02 28 25.4 +0.1
baz=75,SNR=7.4
TKL Tuckaleechee C 74.46 7 *eP* **P 02 28 24.8 -0.6**
Z13A Yuma Proving G 74.54 341 ⇑P P 02 28 25.9 -0.1
baz=75
W25A X Bar L Ranch, 74.63 349 ⇓P P 02 28 26.3 -0.2
baz=75
Y16A Circle Bar Ran 74.66 343 ⇑P P 02 28 27.1 +0.4
baz=75
WVT Waverly 74.66 3 *eP* **P 02 28 24.8 -1.8**
comp=Z,36nm,1.3s,mb5.1
WVT LR LR
comp=Z,2μm,21.0s,MS5.3
X20A Quemado 74.66 346 ⇑P P 02 28 26.4 -0.3
baz=75
ANMO Albuquerque 74.69 347 *eP* **P 02 28 26.7 -0.1**
comp=Z,2.8nm,1.1s,mb4.1
ANMO LR LR
comp=Z,1μm,20.0s,MS5.3

GLA Glamis 74.70 340 ⇑P P 02 28 27.3 +0.4
baz=75
W24A Lazy 6 Ranch, 74.77 348 ⇓P P 02 28 26.7 -0.6
baz=75,SNR=13
CNNC Cliffs of the 74.77 12 PFAKE 02 28 40.0 +13
CNNC LR LR
comp=Z,4μm,20.0s,MS5.8
W23A Werner Place, 74.84 348 ⇓P P 02 28 26.9 -0.8
baz=75
Y15A Casa Rosa Ranc 74.93 342 ⇓P P 02 28 28.4 +0.2
baz=75
X18A Snowflake 74.95 344 ⇓P P 02 28 28.6 +0.3
baz=75
Y14A Wickenburg 75.08 342 ⇑P P 02 28 28.6 -0.5
baz=75
V26A Tequesquite Ra 75.10 350 ⇓P P 02 28 28.2 -1.0
baz=76,SNR=9.4
BBSR BB Station 75.11 23 PFAKE 02 28 40.0 +11
BBSR LR LR
comp=Z,3μm,21.0s,MS5.6
PARMO Parma 75.13 2 *eP* **P 02 28 30.9 +1.6**
X16A Lo Mia Camp, P 75.17 343 ⇑P P 02 28 29.0 -0.6
baz=76
V25A Rancho No Teng 75.26 349 ⇑P P 02 28 29.4 -0.7
baz=76
TZTN Tazewell 75.36 7 *eP* **P 02 28 30.3 -0.4**
comp=Z,60nm,1.2s,mb5.4
X15A Humboldt 75.42 342 ⇑P P 02 28 31.3 +0.3
baz=76,SNR=14
X14A Yava 75.55 342 ⇓P P 02 28 31.9 0.0
baz=76
PFO Pinyon Flat Ob 75.68 339 LR LR 02 52 35.3
comp=Z,43nm,19.9s,baz=140,slow=28
PFO Pinyon Flat Ob 75.68 339 PFAKE 02 28 40.0 +7.4
PFO LR LR
comp=Z,3μm,20.0s,MS5.6
U26A Atchley Ranch, 75.69 350 ⇑P P 02 28 32.5 0.0
baz=76
V22A San Miguel Ran 75.71 347 ⇓P P 02 28 32.9 +0.2
baz=76,SNR=6.8
U25A Circle Dot Ran 75.78 349 ⇑P P 02 28 32.9 -0.2
baz=76
W16A Flagstaff 75.83 343 ⇓P P 02 28 33.6 +0.2
baz=76,SNR=7.7
V20A Brimhall 75.88 346 ⇓P P 02 28 33.7 +0.1
baz=76
MURC Murrieta 75.88 338 ⇓P P 02 28 33.6 -0.1
baz=76
X13A Yucca 75.91 341 ⇑P P 02 28 34.2 +0.4
baz=76
V19A Window Rock 75.91 345 ⇓P P 02 28 34.0 +0.2
baz=76
V18A Ganado 76.08 345 ⇓P P 02 28 35.1 +0.3
baz=76
V17A Tonalea, Kykot 76.18 344 ⇑P P 02 28 35.4 +0.1
baz=76
SIUC Southern Illin 76.19 2 *eP* **P 02 28 34.4 -1.0**
comp=Z,29nm,1.0s,mb5.2
WUAZ Wupatki 76.20 343 ⇓P P 02 28 35.7 +0.2
baz=77
WUAZ Wupatki 76.20 343 PFAKE 02 28 50.0 +14
WUAZ LR LR
comp=Z,2μm,19.0s,MS5.5
W14A Seligman 76.31 342 ⇑P P 02 28 37.2 +1.0
baz=77
ELN Prospectdale 76.33 9 *eP* **P 02 28 35.5 -0.7**
BLA Blacksburg 76.36 9 PFAKE 02 28 50.0 +14
BLA LR LR
comp=Z,8μm,20.0s,MS6.0
W13A Hualapai Mount 76.40 341 ⇓P P 02 28 37.5 +0.9
baz=77
FVM French Village 76.44 1 *eP* **P 02 28 35.8 -1.0**
comp=Z,38nm,1.0s,mb5.3
U20A Newcomb 76.45 346 ⇑P P 02 28 36.3 -0.5
baz=77
USIN University of 76.50 3 *eP* **P 02 28 36.8 -0.4**
comp=Z,40nm,0.9s,mb5.3
CCM Cathedral Cave 76.50 0 *eP* **P 02 28 36.3 -0.9**
CCM LR LR
comp=Z,2μm,20.0s,MS5.5
GMRC Granite Mounta 76.56 340 ⇑P P 02 28 38.1 +0.5
baz=77
BFSC Mount Baldy Ra 76.61 338 ⇓P P 02 28 38.5 +0.6
baz=77
V15A Kaibab Nationa 76.67 343 ⇑P P 02 28 39.1 +0.9
baz=77
V14A Boquillas Ranc 76.72 342 ⇑P P 02 28 39.0 +0.5
baz=77,SNR=15
U18A Rough Rock, Ch 76.75 345 ⇓P P 02 28 39.4 +0.8
baz=77
WCI Wyandotte Cave 76.83 4 *eP* **P 02 28 37.9 -1.1**
comp=Z,30nm,0.9s,mb5.2
WCI LR LR
comp=Z,1μm,19.0s,MS5.3
SHEL Horse Pasture 76.98 100 PFAKE 02 28 50.0 +10
SHEL LR LR
comp=Z,2μm,21.0s,MS5.5
T19A Beclabito 76.98 346 ⇓P P 02 28 40.6 +0.7
baz=77
SLM Saint Louis 77.09 1 *eP* **P 02 28 40.1 -0.4**
comp=Z,19nm,1.0s,mb5.0
V13A Grand Canyon W 77.14 341 ⇓P P 02 28 41.1 +0.3
baz=78
JSRW J. Sargeant Re 77.18 11 *eP* **P 02 28 40.3 -0.7**
V12A Nelson 77.24 341 ⇑P P 02 28 41.8 +0.4
baz=78
OLIL Olney 77.25 3 *eP* **P 02 28 39.9 -1.4**
comp=Z,130nm,1.6s,mb5.6
MVCO Mesa Verde 77.25 346 ⇑P P 02 28 41.5 +0.1
baz=78
MVCO Mesa Verde 77.25 346 *eP* **P 02 28 41.9 +0.5**
comp=Z,56nm,1.6s,mb5.2
MVCO LR LR
comp=Z,2μm,21.0s,MS5.5
SDCO Great Sand Dun 77.27 349 *eP* **P 02 28 41.9 +0.4**
comp=Z,15nm,1.2s,mb4.8
SDCO LR LR
comp=Z,3μm,21.0s,MS5.6
U15A North Rim 77.28 343 ⇑P P 02 28 42.0 +0.4
baz=78
GSC Goldstone 77.36 339 ⇓P P 02 28 42.1 0.0
baz=78
GSC Goldstone 77.36 339 *eP* **P 02 28 44.2 +2.2**
comp=Z,17nm,1.2s,mb4.8
T18A Mexican Hat 77.45 345 ⇑P P 02 28 42.6 +0.1
baz=78
U14A Mt Trumbull 77.48 342 ⇓P P 02 28 42.9 +0.2
baz=78,SNR=12
T17A Navajo Res., N 77.50 344 ⇓P P 02 28 43.1 +0.3
baz=78
S21A Coal Bank Pass 77.56 347 ⇓P P 02 28 43.2 +0.1
baz=78
CBKS Cedar Bluff 77.62 353 *eP* **P 02 28 43.5 0.0**
CBKS LR LR
comp=Z,2μm,19.0s,MS5.5
T16A Glen Canyon Da 77.64 344 ⇓P P 02 28 43.5 -0.1
baz=78
KSU1 Kansas State U 77.69 356 *eP* **P 02 28 43.7 -0.1**
comp=Z,17nm,0.7s,mb5.1
KSU1 LR LR
comp=Z,2μm,20.0s,MS5.4
CBN Corbin 77.76 11 PFAKE 02 29 00.0 +16
CBN LR LR
comp=Z,2μm,21.0s,MS5.5
T15A Red Dirt Ranch 77.87 343 ⇑P P 02 28 44.8 -0.1
baz=78,SNR=10
R22A Saguache, Gunn 77.94 348 ⇓P P 02 28 45.8 +0.6
baz=78,SNR=9.8
S18A Hurst Farm, Bl 78.01 345 ⇓P P 02 28 45.2 -0.4
baz=78,SNR=16
SHPR Sheep Range 78.06 341 *eP* **P 02 28 47.0 +1.1**
T14A Hurricane 78.07 343 ⇑P P 02 28 46.0 +0.1
baz=78
S17A Black Ridge (B 78.12 345 ⇓P P 02 28 46.3 +0.1
baz=78
ISA Isabella 78.18 338 ⇑P P 02 28 46.4 -0.2
baz=78
R20A Redvale 78.18 347 ⇓P P 02 28 47.0 +0.5
baz=78
R21A Cimarron 78.21 347 ⇓P P 02 28 47.7 +1.0
baz=79
T13A Saint George 78.23 342 ⇑P P 02 28 47.3 +0.4
baz=79
MPMC Manual Prospec 78.27 339 ⇑P P 02 28 47.1 0.0
baz=79
R19A Curley Farm, L 78.44 346 ⇓P P 02 28 48.5 +0.5
baz=79
S15A Panguitch 78.50 343 ⇓P P 02 28 48.7 +0.4
baz=79
DAC Darwin (Calif) 78.50 339 PFAKE 02 29 00.0 +12
DAC LR LR
comp=Z,1μm,21.0s,MS5.3
Q22A Crested Butte, 78.58 348 ⇑P P 02 28 48.7 0.0
baz=79
CCUT Cedar City 78.61 342 *eP* **P 02 28 50.1 +1.2**
comp=Z,25nm,1.1s,mb5.1
R18A Canyonlands Na 78.66 345 ⇓P P 02 28 49.3 +0.1
baz=79,SNR=8.5
Q21A Lamborn Mesa, 78.67 347 ⇑P P 02 28 49.6 +0.3
baz=79,SNR=11
S13A Holt Ranch, En 78.75 342 ⇑P P 02 28 51.0 +1.3
baz=79
S14A Cedar City 78.76 343 ⇑P P 02 28 50.6 +0.8
baz=79
T11A Corn Creek, Al 78.77 341 ⇓P P 02 28 50.7 +0.9
baz=79
MCWV Mont Chateau 78.84 9 PFAKE 02 29 00.0 +10
MCWV LR LR
comp=Z,7μm,21.0s,MS6.0
R17A Hanksville Air 78.85 345 ⇓P P 02 28 50.0 -0.3
baz=79,SNR=15
R16A Teasdale 78.89 344 ⇓P P 02 28 51.1 +0.7
baz=79
SMCO Snowmass 78.90 348 *eP* **P 02 28 51.3 +0.8**
comp=Z,54nm,1.3s,mb5.3
Q20A Ridgley Place, 78.91 347 ⇑P P 02 28 51.4 +0.8
baz=79
R15A Junction 78.99 344 ⇑P P 02 28 51.1 +0.1
baz=79
SDMD Soldier's Deli 79.02 12 *eP* **P 02 28 51.1 -0.1**
comp=Z,82nm,1.6s,mb5.4
S12A Delamar Landin 79.02 341 ⇓P P 02 28 51.5 +0.3
baz=79
HDIL Hopedale 79.03 2 *eP* **P 02 28 50.8 -0.4**
comp=Z,80nm,1.5s,mb5.4
HDIL LR LR
comp=Z,2μm,19.0s,MS5.4
ACSO Alum Creek Sta 79.07 7 *eP* **P 02 28 50.7 -0.7**
comp=Z,54nm,1.4s,mb5.3
ACSO LR LR
comp=Z,4μm,22.0s,MS5.7
R14A James Farms, M 79.24 343 ⇑P P 02 28 52.4 +0.1
baz=80
MVU Marysvale 79.25 344 PFAKE 02 29 00.0 +7.5
MVU LR LR
comp=Z,1μm,22.0s,MS5.3
MSU Marysvale 79.26 344 *eP* **P 02 28 53.3 +0.8**
S11A Rachel 79.28 341 ⇑P P 02 28 52.9 +0.3
baz=80
ISCO Idaho Springs 79.30 349 *eP* **P 02 28 53.3 +0.6**
ISCO LR LR
comp=Z,3μm,21.0s,MS5.6
R13A O'Grain Ranch, 79.35 342 ⇓P P 02 28 53.5 +0.6
baz=80
MSVF Nonsavu 79.39 256 PFAKE 02 29 00.0 +6.1
MSVF LR LR
comp=Z,2μm,19.0s,MS5.5
Q18A Rafter H Ranch 79.40 345 ⇓P P 02 28 53.1 -0.2
baz=80,SNR=9.0
Q16A Castle Valley 79.43 345 ⇑P P 02 28 53.3 0.0
baz=80,SNR=19
P20A De Beque 79.46 347 ⇓P P 02 28 54.0 +0.5
baz=80
SRU San Rafael 79.48 345 ⇓P P 02 28 54.3 +0.6
baz=80
SRU San Rafael 79.48 345 *eP* **P 02 28 54.5 +0.8**
comp=Z,30nm,1.2s,mb5.1
R12A Pony Springs, 79.64 342 ⇓P P 02 28 55.1 +0.5
baz=80
MVL Millersville 79.67 12 *eP* **P 02 28 54.5 -0.2**
comp=Z,53nm,1.4s,mb5.3
P19A Cripple Cowboy 79.69 346 ⇓P P 02 28 55.0 +0.2
baz=80,SNR=9.8
Q15A Fillmore 79.77 344 ⇑P P 02 28 55.5 +0.3
baz=80
S10A Tonopah Range, 79.77 340 ⇓P P 02 28 55.0 -0.2
baz=80
TMUT Trail Mountain 79.80 345 *eP* **P 02 28 56.3 +0.9**
comp=Z,38nm,1.3s,mb5.2
P17A Butcher Ranch, 79.88 345 ⇑P P 02 28 56.1 +0.3
baz=80
R11A Troy Canyon, C 79.91 341 ⇑P P 02 28 56.5 +0.5
baz=80
P18A Preston Nutter 79.93 345 ⇓P P 02 28 56.0 0.0
baz=80,SNR=10.0
Q14A Sevier Lake (B 79.96 343 ⇑P P 02 28 56.4 +0.2
baz=80
OGNE Ogallala 79.96 352 *eP* **P 02 28 56.2 -0.1**
comp=Z,116nm,1.3s,mb5.7
OGNE LR LR
comp=Z,3μm,20.0s,MS5.6
R10A Warm Springs 80.03 340 ⇓P P 02 28 57.1 +0.4
baz=80
O20A White River Ci 80.05 347 ⇑P P 02 28 56.9 +0.2
baz=80,SNR=12
SSPA Standing Stone 80.06 11 *eP* **P 02 28 58.5 +1.7**
SSPA LR LR
comp=Z,3μm,19.0s,MS5.7
TPH Tonopah 80.08 340 PFAKE 02 29 10.0 +13
TPH LR LR
comp=Z,1μm,21.0s,MS5.3
P16A Fountain Green 80.20 344 ⇑P P 02 28 58.4 +0.8
baz=81
P15A Leamington 80.29 344 ⇓P P 02 28 58.5 +0.4
baz=81
O19A Miners Draw (B 80.36 346 ⇓P P 02 28 58.8 +0.3
baz=81
SCIA State Center 80.36 359 *eP* **P 02 28 59.6 +1.2**
comp=Z,49nm,0.8s,mb5.5
SCIA LR LR
comp=Z,2μm,21.0s,MS5.4
Q12A Willow Creek R 80.37 342 ⇓P P 02 28 58.6 0.0
baz=81
Q11A Duckwater 80.39 341 ⇓P P 02 28 58.4 -0.2
baz=81
N22A Wattenberg Ran 80.41 349 ⇑P P 02 28 58.2 -0.4
baz=81
P14A Drum Mountains 80.49 343 ⇑P P 02 28 58.8 -0.3
baz=81
O18A Roosevelt 80.50 346 ⇓P P 02 28 59.2 +0.1
baz=81,SNR=18
N21A Black Mountain 80.53 348 ⇑P P 02 28 59.9 +0.6
baz=81
Q10A Clear Creek Ra 80.56 341 ⇑P P 02 28 59.8 +0.3
baz=81
O17A Robinson Place 80.57 345 ⇑P P 02 28 59.7 +0.2
baz=81
P13A Bates Ranch, G 80.57 343 ⇓P P 02 29 00.1 +0.6
baz=81
MPU Maple Canyon 80.58 345 *eP* **P 02 29 00.8 +1.2**
comp=Z,48nm,1.4s,mb5.2
NVAR Mina Array Bea 80.71 339 P P 02 29 00.6 +0.2
comp=Z,7.0nm,1.0s,mb4.5,baz=171,slow=6.2,SNR=12
N20A Spence Gulch, 80.73 347 ⇓P P 02 29 00.6 +0.2
baz=81,SNR=13
O16A Springville 80.74 345 ⇑P P 02 29 00.8 +0.3
baz=81
PHWY Pilot Hill 80.75 349 *eP* **P 02 29 01.0 +0.5**
comp=Z,14nm,1.0s,mb4.8
ALLY Alegheny Colle 80.77 9 *eP* **P 02 28 60.0 -0.6**
comp=Z,124nm,1.4s,mb5.7
CMB Columbia Colle 80.95 337 PFAKE 02 29 10.0 +8.4
CMB LR LR
comp=Z,4μm,20.0s,MS5.8
N19A John Jarvie Ra 80.95 347 ⇓P P 02 29 00.9 -0.7
baz=81,SNR=5.8
DUG Dugway 81.01 344 ⇓P P 02 29 01.9 +0.1
baz=81,SNR=13
DUG Dugway 81.01 344 PFAKE 02 29 10.0 +8.1
DUG LR LR
comp=Z,1μm,19.0s,MS5.2
AAM Ann Arbor 81.06 6 PFAKE 02 29 10.0 +7.9
AAM LR LR
comp=Z,3μm,20.0s,MS5.7
JLU Jordanelle 81.11 345 *eP* **P 02 29 07.7 +5.3**
comp=Z,25nm,1.6s,mb4.9
N18A Larsen Ranch, 81.12 346 ⇓P P 02 29 02.3 -0.2
baz=82
O13A Hicks Ranch, I 81.21 343 ⇓P P 02 29 02.4 -0.6
baz=82
ERPA Erie 81.25 9 PFAKE 02 29 10.0 +6.9
ERPA LR LR
comp=Z,6μm,20.0s,MS6.0
N17A Moffit Pass 81.31 345 ⇓P P 02 29 03.4 -0.1
baz=82
M21A Separation Pea 81.33 348 ⇑P P 02 29 03.3 -0.3

baz=82
M20A Sweetwater, Wa 81.36 347 ⇓P P 02 29 03.9 +0.2
baz=82
JFWS Jewell Farm 81.37 1 PFAKE 02 29 10.0 +6.3
JFWS LR LR
comp=Z,2µm,19.0s,MS5.4
N16A Rees Ranch, Co 81.38 345 ⇑P P 02 29 03.7 -0.2
baz=82
O12A Currie 81.52 342 ⇑P P 02 29 05.0 +0.4
baz=82
M19A Rock Springs 81.54 347 ⇓P P 02 29 04.4 -0.3
baz=82
L22A Ellis Ranch, M 81.60 349 ⇑P P 02 29 05.3 +0.3
baz=82
O11A Cowboy Ranch, 81.61 342 ⇑P P 02 29 05.0 -0.1
baz=82
M18A Lyman 81.63 346 ⇓P P 02 29 05.2 +0.1
baz=82
L21A Rawlins 81.68 348 ⇑P P 02 29 05.4 0.0
baz=82
N14A Grayback Hills 81.72 344 ⇑P P 02 29 05.3 -0.3
baz=82
M17A Scullys Gap (B 81.79 346 ⇑P P 02 29 05.4 -0.5
baz=82
MCCM Marconi Confer 81.83 336 PFAKE 02 29 20.0 +14
MCCM LR LR
comp=Z,4µm,19.0s,MS5.8
M16A Huntsville 81.83 345 ⇑P P 02 29 05.8 -0.4
baz=82
BINY Binghamton 81.88 12 PFAKE 02 29 20.0 +14
BINY LR LR
comp=Z,1µm,20.0s,MS5.2
L20A Wamsutter 81.89 347 ⇓P P 02 29 06.2 -0.3
baz=82
WCN Washoe City 81.93 338 ⇑P P 02 29 06.9 +0.1
baz=82
N13A Wendover, West 81.95 343 ⇑P P 02 29 06.5 -0.3
baz=82
O10A Cortez Mining, 81.97 341 ⇑P P 02 29 06.5 -0.5
baz=82
ELK Elko 82.09 342 PFAKE 02 29 20.0 +12
ELK LR LR
comp=Z,3µm,19.0s,MS5.7
HWUT Hardware Ranch 82.10 345 PFAKE 02 29 20.0 +12
HWUT LR LR
comp=Z,3µm,21.0s,MS5.7
L18A Fontenelle, Gr 82.11 346 ⇑P P 02 29 07.1 -0.5
baz=82
M15A Larsen Ranch, 82.14 344 ⇑P P 02 29 07.8 -0.1
baz=82
N12A Clover Valley, 82.14 342 ⇑P P 02 29 07.8 -0.1
baz=82
L19A Farson 82.16 347 ⇑P P 02 29 08.1 +0.2
baz=82
BMN Battle Mountai 82.29 341 PFAKE 02 29 20.0 +11
BMN LR LR
comp=Z,2µm,21.0s,MS5.5
ECSD EROS Data Cent 82.30 356 PFAKE 02 29 20.0 +11
ECSD LR LR
comp=Z,1µm,20.0s,MS5.3
M14A Sheep Mountain 82.38 344 ⇑P P 02 29 09.1 +0.1
baz=83
L17A Cokeville 82.44 346 ⇓P P 02 29 08.9 -0.4
baz=83
L16A Fish Haven 82.47 345 ⇑P P 02 29 09.2 -0.3
baz=83,SNR=13
K20A Yellowstone Ra 82.52 348 ⇓P P 02 29 09.4 -0.4
baz=83,SNR=15
BEKR Beckworth 82.63 338 ⇓P P 02 29 09.9 -0.5
baz=83
M12A Wells 82.65 343 ⇑P P 02 29 10.3 -0.2
baz=83
L15A Malad City 82.65 345 ⇓P P 02 29 10.3 -0.2
baz=83
HOPS Hopland 82.66 336 PFAKE 02 29 20.0 +9.4
HOPS LR LR
comp=Z,5µm,20.0s,MS5.9
TAU Tasmania Unive 82.70 219 PFAKE 02 29 20.0 +8.9
TAU LR LR
comp=Z,7µm,20.0s,MS6.0
K19A Absolon Red Bu 82.77 347 ⇓P P 02 29 10.8 -0.3
baz=83,SNR=11
K18A Toltan Ranch, 82.80 346 ⇓P P 02 29 11.8 +0.6
baz=83
PDAR Pinedale Array 82.84 347 P P 02 29 11.2 -0.2
comp=Z,11nm,0.9s,mb4.9,baz=146,slow=6.6,SNR=29
BW06 Boulder Array 82.84 347 ⇓P P 02 29 11.3 -0.2
baz=83,SNR=24
BW06 Boulder Array 82.84 347 PFAKE 02 29 20.0 +8.6
BW06 LR LR
comp=Z,2µm,20.0s,MS5.5
L14A Malta 82.86 344 ⇓P P 02 29 11.6 +0.1
baz=83
M11A Holland Ranch, 82.87 342 ⇓P P 02 29 11.6 -0.1
baz=83
L13A Double Diamond 83.07 343 ⇑P P 02 29 13.1 +0.4
baz=83
AHID Auburn Hatcher 83.12 346 PFAKE 02 29 20.0 +7.1
AHID LR LR
comp=Z,2µm,22.0s,MS5.5
M10A I.L. Ranch, Tu 83.14 341 ⇓P P 02 29 13.3 +0.3
baz=84
K16A Soda Springs 83.28 345 ⇓P P 02 29 14.0 +0.3
baz=84
RSSD Black Hills 83.33 351 PFAKE 02 29 30.0 +16
RSSD LR LR
comp=Z,2µm,19.0s,MS5.5
K15A Arbon 83.33 345 ⇓P P 02 29 14.3 +0.3
baz=84
K14A Jones Ranch, D 83.33 344 ⇑P P 02 29 14.2 +0.2
baz=84
J18A Kendall Valley 83.35 347 ⇓P P 02 29 14.4 +0.3
baz=84
L12A House Creek Ra 83.36 343 ⇑P P 02 29 14.7 +0.5
baz=84
POHA Pohakuloa 83.50 302 PFAKE 02 29 30.0 +15
POHA LR LR
comp=Z,4µm,22.0s,MS5.7
GLMI Grayling 83.50 5 PFAKE 02 29 30.0 +15
GLMI LR LR
comp=Z,3µm,20.0s,MS5.6
L11A Cat Creek Ranc 83.56 342 ⇓P P 02 29 15.5 +0.3
baz=84,SNR=12
J17A Brown Place, J 83.62 346 ⇑P P 02 29 16.2 +0.7
baz=84
K13A Stover Farm, H 83.63 343 ⇑P P 02 29 15.7 +0.2
baz=84
L10A Juniper Basin 83.65 342 ⇑P P 02 29 16.3 +0.6
baz=84
RRI2 Red Ridge 83.73 346 eP P 02 29 16.2 +0.2
I18A Diamond G Ranc 83.79 347 ⇓P P 02 29 16.5 +0.2
baz=84,SNR=13
K12A Draper Farm, C 83.80 343 ⇑P P 02 29 17.1 +0.7
baz=84
NCB Newcomb 83.89 13 PFAKE 02 29 30.0 +13
NCB LR LR
comp=Z,3µm,20.0s,MS5.7
WDC Whiskeytown Da 83.94 337 PFAKE 02 29 30.0 +13
WDC LR LR
comp=Z,3µm,21.0s,MS5.6
J15A Blackfoot 84.00 345 ⇓P P 02 29 17.9 +0.5
baz=84
FUNA Funafuti 84.13 264 PFAKE 02 29 30.0 +11
FUNA LR LR
comp=Z,17µm,20.0s,MS6.4
K11A Parker Ranch, 84.20 342 ⇑P P 02 29 18.6 +0.1
baz=85,SNR=5.8
I16A Newdale 84.27 346 ⇑P P 02 29 19.4 +0.7
baz=85
J13A Cove Ranch, Pi 84.36 344 ⇑P P 02 29 19.5 +0.3
baz=85,SNR=12
K10A MacKenzie Ranc 84.41 342 ⇓P P 02 29 19.5 0.0
baz=85
J12A Stokes Ranch, 84.43 343 ⇑P P 02 29 19.8 +0.1
baz=85,SNR=6.6
LONY Lake Ozonia 84.47 12 PFAKE 02 29 30.0 +10
LONY LR LR
comp=Z,3µm,19.0s,MS5.7
MOD Modoc 84.50 339 PFAKE 02 29 30.0 +10
MOD LR LR
comp=Z,1µm,19.0s,MS5.4
WVOR Wild Horse Val 84.54 340 eP P 02 29 20.4 +0.3
comp=Z,25nm,1.3s,mb5.2
WVOR LR LR
comp=Z,2µm,21.0s,MS5.4
LBNH Lisbon 84.57 14 PFAKE 02 29 30.0 +10
LBNH LR LR
comp=Z,3µm,19.0s,MS5.8
COWI Conover 84.57 2 eP P 02 29 20.1 -0.1
comp=Z,49nm,1.4s,mb5.5
COWI LR LR
comp=Z,2µm,22.0s,MS5.5
HLID Hailey 84.58 344 ⇓P P 02 29 20.7 +0.4
baz=85,SNR=23
HLID Hailey 84.58 344 PFAKE 02 29 30.0 +10
HLID LR LR
comp=Z,2µm,19.0s,MS5.5
I15A Monteview 84.58 345 ⇑P P 02 29 20.9 +0.5
baz=85
I14A Mackay 84.72 344 ⇑P P 02 29 21.8 +0.8
baz=85,SNR=15
LKWY Lake 84.73 347 PFAKE 02 29 30.0 +8.9
LKWY LR LR
comp=Z,2µm,21.0s,MS5.6
MFID Camas Ranch 84.76 343 ⇑P P 02 29 21.5 +0.3
baz=85
I13A Wildhorse Cree 84.84 344 ⇓P P 02 29 21.9 +0.3
baz=85,SNR=10
YMR Madison River 84.93 346 eP P 02 29 23.3 +1.2
comp=Z,104nm,1.5s,mb5.7
I12A Atlanta 84.96 343 ⇑P P 02 29 22.6 +0.4
baz=85
YBH Yreka Blue Hor 85.05 337 LR LR 02 59 30.6
comp=Z,2µm,19.5s,MS5.5,baz=160,slow=30
YBH Yreka Blue Hor 85.05 337 PFAKE 02 29 30.0 +7.3
YBH LR LR
comp=Z,3µm,20.0s,MS5.6
RLMT Red Lodge 85.07 348 ⇑P P 02 29 24.2 +1.4
baz=85
RLMT Red Lodge 85.07 348 PFAKE 02 29 30.0 +7.2
RLMT LR LR
comp=Z,3µm,20.0s,MS5.7
DZM Mont Dzumac 85.25 246 eLQ 02 52 33.5
comp=Z,7µm,30.4s
DZM eLR LR 02 56 35.9
comp=Z,13µm,27.9s
G18A Lazy EL Ranch, 85.31 347 ⇓P P 02 29 24.1 +0.2
baz=86
SUR Sutherland 85.35 128 PFAKE 02 29 40.0 +15
SUR LR LR
comp=Z,4µm,20.0s,MS5.8
H14A Leadore 85.36 345 ⇑P P 02 29 24.6 +0.4
baz=86
J08A Circle Bar Ran 85.36 341 ⇓P P 02 29 24.5 +0.2
baz=86
K05A Summer Lake 85.42 339 ⇑P P 02 29 24.8 +0.2
baz=86
MCMT McKenzie Canyo 85.45 345 eP P 02 29 25.6 +0.9
comp=Z,18nm,1.6s,mb4.9
H13A Challis 85.49 344 ⇓P P 02 29 25.1 +0.1
baz=86
G17A Pierce Place, 85.52 347 ⇓P P 02 29 25.2 +0.2
baz=86
H12A Diamond D Ranc 85.61 344 ⇓P P 02 29 25.5 0.0
baz=86
G16A Moss Hill, Enn 85.63 346 ⇓P P 02 29 25.2 -0.3
baz=86
G15A Dillon 85.70 345 ⇑P P 02 29 26.1 +0.2
baz=86,SNR=9.3
I09A Lost Marbles R 85.75 341 ⇓P P 02 29 26.0 -0.1
baz=86
F18A Big Timber 85.91 347 ⇓P P 02 29 26.6 -0.3
baz=86
HUMO Hull Mountain 85.92 337 PFAKE 02 29 40.0 +13
HUMO LR LR
comp=Z,4µm,19.0s,MS5.8
G13A Cobalt 85.99 344 ⇑P P 02 29 27.3 -0.1
baz=86
BOZ Bozeman (W) 86.00 346 ⇑P P 02 29 27.7 +0.3
baz=86,SNR=8.5
BOZ Bozeman (W) 86.00 346 PFAKE 02 29 40.0 +13
BOZ LR LR
comp=Z,2µm,20.0s,MS5.5
H11A Donnelly 86.02 343 ⇑P P 02 29 27.0 -0.5
baz=86
F17A Fitzpatrick Pl 86.07 347 ⇑P P 02 29 28.4 +0.7
baz=86,SNR=8.7
H10A Noah's Angus R 86.08 342 ⇓P P 02 29 27.5 -0.4
baz=86
F16A Kennard Place, 86.13 346 ⇓P P 02 29 28.1 0.0
baz=86
LAO LASA Array 86.14 350 eP P 02 29 28.3 +0.3
comp=Z,31nm,1.0s,mb5.5
LAO LR LR
comp=Z,2µm,20.0s,MS5.5
G12A Big Creek, Yel 86.27 343 ⇑P P 02 29 29.0 +0.3
baz=87,SNR=11
I07A Izee 86.30 340 ⇓P P 02 29 29.4 +0.5
baz=87,SNR=15
KIP Kipapa 86.32 301 PFAKE 02 29 40.0 +10
KIP LR LR
comp=Z,4µm,20.0s,MS5.8
F15A Butte 86.35 346 ⇓P P 02 29 29.9 +0.8
baz=87,SNR=8.9
H09A Durkee 86.38 342 ⇓P P 02 29 29.5 +0.2
baz=87
EYMN Ely 86.39 0 PFAKE 02 29 40.0 +11
EYMN LR LR
comp=Z,2µm,19.0s,MS5.5
BMO Blue Mountains 86.47 342 PFAKE 02 29 40.0 +10
BMO LR LR
comp=Z,2µm,20.0s,MS5.4
H08A Prairie City 86.49 341 ⇑P P 02 29 30.1 +0.2
baz=87
E18A Harlowton 86.58 347 ⇑P P 02 29 30.5 +0.3
baz=87,SNR=11
E17A Martinsdale 86.65 347 ⇓P P 02 29 30.6 0.0
baz=87
F13A Darby 86.68 344 ⇑P P 02 29 31.0 +0.3
baz=87,SNR=7.5
G11A Waters Elk Ra 86.74 343 ⇑P P 02 29 31.1 +0.1
baz=87
AGMN Agassiz Nation 86.83 357 PFAKE 02 29 40.0 +8.6
AGMN LR LR
comp=Z,2µm,20.0s,MS5.5
G10A Bishop Farm, J 86.83 342 ⇑P P 02 29 31.5 0.0
baz=87
F12A Elk City 86.85 344 ⇓P P 02 29 31.8 +0.2
baz=87,SNR=12
E16A East Helena 86.86 346 ⇑P P 02 29 31.5 -0.1
baz=87
E15A Deer Lodge 86.94 346 ⇑P P 02 29 32.9 +0.9
baz=87,SNR=8.4
E14A Clinton 87.10 345 ⇑P P 02 29 33.0 +0.3
baz=88
F11A Grangeville 87.17 343 ⇑P P 02 29 33.2 +0.1
baz=88
D18A Linhart Farms, 87.17 348 ⇑P P 02 29 33.4 +0.3
baz=88
E13A Victor 87.27 345 ⇓P P 02 29 33.7 +0.1
baz=88
D17A Six Diamond Ra 87.28 347 ⇑P P 02 29 34.3 +0.6
baz=88,SNR=23
G08A Pilot Rock 87.29 341 ⇑P P 02 29 33.8 +0.1
baz=88
D16A Dana Ranch, Ca 87.32 346 ⇑P P 02 29 34.4 +0.6
baz=88,SNR=8.4
CAN Canberra 87.39 225 PFAKE 02 29 50.0 +15
CAN LR LR
comp=Z,7µm,22.0s,MS6.0
F10A Beach Ranch, E 87.50 342 ⇑P P 02 29 34.3 -0.4
baz=88
D15A Lincoln 87.51 346 ⇓P P 02 29 34.7 0.0
baz=88
MSO Missoula 87.59 345 PFAKE 02 29 50.0 +15
MSO LR LR
comp=Z,1µm,22.0s,MS5.2
E11A Bogner Ranch, 87.63 343 ⇓P P 02 29 34.8 -0.5
baz=88
DGMT Dagmar 87.64 352 ⇑P P 02 29 34.7 -0.6
baz=88
DGMT Dagmar 87.64 352 PFAKE 02 29 50.0 +15
DGMT LR LR
comp=Z,1µm,22.0s,MS5.3
G06A Carlson Farm, 87.67 340 ⇓P P 02 29 35.1 -0.4
baz=88
D14A Greenough 87.74 345 ⇑P P 02 29 36.4 +0.6
baz=88,SNR=11
C17A Wharram Farm, 87.76 347 ⇑P P 02 29 35.7 -0.3
baz=88
COR Corvallis 87.83 338 PFAKE 02 29 50.0 +14
COR LR LR
comp=Z,4µm,21.0s,MS5.8
D13A Huson 87.95 345 ⇑P P 02 29 36.7 -0.2
baz=88
EGMT Eagleton 87.97 348 ⇑P P 02 29 37.0 +0.1
baz=88
EGMT Eagleton 87.97 348 PFAKE 02 29 50.0 +13
EGMT LR LR
comp=Z,1µm,20.0s,MS5.4
C16A Fuhringer Ranc 88.10 347 ⇓P P 02 29 37.8 +0.2
baz=88
C15A Salmond Ranch, 88.23 346 ⇑P P 02 29 38.9 +0.7
baz=89,SNR=7.5
D11A Klaveano Farm, 88.31 343 ⇓P P 02 29 38.5 0.0
baz=89
B18A Beardsley Farm 88.33 348 ⇓P P 02 29 38.4 -0.3
baz=89
B17A L&G Farms, Che 88.41 347 ⇓P P 02 29 38.7 -0.3
baz=89
E08A Dider Farm, El 88.43 341 ⇓P P 02 29 39.2 +0.1
baz=89
C14A Swan Lake 88.45 345 ⇓P P 02 29 39.1 0.0
baz=89
HAWA Hanford 88.46 341 PFAKE 02 29 50.0 +11
HAWA LR LR
comp=Z,2µm,19.0s,MS5.5
C13A Hot Springs 88.53 345 ⇓P P 02 29 39.4 -0.2
baz=89
B16A M & M Farms, S 88.68 347 ⇓P P 02 29 40.2 0.0
baz=89
B15A Bradely Ranch, 88.74 346 ⇓P P 02 29 40.8 +0.2
baz=89
ULM Lac du Bonnet 88.78 357 P P 02 29 39.4 -1.3
comp=Z,6.3nm,0.7s,mb5.0,baz=190,slow=2.9,SNR=5.6
ULM LR LR 03 06 33.2
comp=Z,2µm,19.3s,MS5.6,baz=176,slow=34
ULM Lac du Bonnet 88.78 357 PFAKE 02 29 50.0 +9.3
ULM LR LR
comp=Z,3µm,20.0s,MS5.6
A18A Metzger Ranch, 88.85 348 ⇓P P 02 29 41.5 +0.5
baz=89
B14A Marquette Ranc 88.92 346 ⇓P P 02 29 41.2 -0.2
baz=89
D08A Wollman Farm, 88.92 342 ⇓P P 02 29 41.5 +0.1
baz=89
A17A Triple J Farms 89.02 348 ⇑P P 02 29 42.2 +0.4
baz=89
A16A West Butte Ran 89.18 347 ⇓P P 02 29 43.3 +0.7
baz=90
A15A Johnson Ranch, 89.41 346 ⇓P P 02 29 44.4 +0.7
baz=90
NEW Newport 89.64 343 PFAKE 02 30 00.0 +15
NEW LR LR
comp=Z,3µm,19.0s,MS5.7
WALA Waterton Lakes 89.71 346 eP P 02 29 46.6 +1.5
comp=Z,0.6nm,1.5s
D05A Enumclaw 89.84 340 ⇓P P 02 29 46.5 +0.8
baz=90
B09A Rice 90.02 343 ⇑P P 02 29 46.7 +0.2
baz=90
NLWA Neilton Lookou 90.54 339 PFAKE 02 30 00.0 +11
NLWA LR LR
comp=Z,2µm,22.0s,MS5.5
BOSA Boshof 90.72 128 P P 02 29 48.6 -2.0
comp=Z,5.2nm,0.9s,mb4.9,baz=95,slow=13,SNR=2.7
BOSA LR LR 03 04 26.1
comp=Z,3µm,21.1s,MS5.8,baz=223,slow=32
PAF Port-aux-Franc 90.74 168 PFAKE 02 30 00.0 +10
PAF LR LR
comp=Z,4µm,19.0s,MS5.8
A07A Ashnola River, 91.14 342 ⇓P P 02 29 51.9 +0.2
baz=92
JOHN Johnston Islan 91.29 290 PFAKE 02 30 00.0 +6.8
JOHN LR LR
comp=Z,3µm,19.0s,MS5.8
DBIC Dimbokro 91.58 83 P P 02 29 53.3 -1.4
comp=Z,4.5nm,0.9s,mb4.8,baz=274,slow=8.2,SNR=3.8
DBIC LR LR 03 10 37.3
comp=Z,2µm,18.9s,MS5.5,baz=214,slow=35
TSUM Tsumeb 92.18 117 PFAKE 02 30 10.0 +12
TSUM LR LR
comp=Z,2µm,19.0s,MS5.5
LBTB Lobatse 93.50 126 LR LR 03 05 12.3
comp=Z,3µm,21.2s,MS5.7,baz=232,slow=31
LBTB Lobatse 93.50 126 PFAKE 02 30 10.0 +6.5
LBTB LR LR
comp=Z,3µm,20.0s,MS5.7
FFC Flin Flon 93.61 354 PFAKE 02 30 10.0 +7.0
FFC LR LR
comp=Z,2µm,21.0s,MS5.6
STKA Stephens Creek 94.03 223 P P 02 30 06.8 +0.9
comp=Z,7.9nm,1.2s,mb5.0,baz=65,slow=8.1,SNR=2.9
STKA LR LR 03 05 55.6
comp=Z,6µm,18.0s,MS6.1,baz=310,slow=31
SCHQ Schefferville 95.67 14 P P 02 30 11.0 -1.4
comp=Z,1.3nm,0.6s,mb4.5,baz=256,slow=6.1,SNR=3.0
SCHQ LR LR 03 09 56.3
comp=Z,3µm,21.4s,MS5.7,baz=208,slow=33
SCHQ Schefferville 95.67 14 P P 02 30 11.0 -1.4
SCHQ LR LR 03 09 56.3
PDA Ponta Delgada 97.35 47 eLR LR 03 03 00.0
CMLA Cha da Macela 97.44 47 eLQ 02 53 19.9
CMLA eLR LR 03 02 39.4
CMLA Cha da Macela 97.44 47 PFAKE 02 30 30.0 +9.0
CMLA LR LR
comp=Z,4µm,21.0s,MS5.9
HNR Honiara 98.20 251 PFAKE 02 30 40.0 +15
HNR LR LR
comp=Z,1µm,21.0s,MS5.4
CTAO Charters Tower 100.24 234 PFAKE 02 30 40.0 +6.2
CTAO LR LR
comp=Z,5µm,20.0s,MS6.0
TORD Torodi Ar. Bea 100.63 82 P Pdif 02 30 34.6 -0.9
comp=Z,1.1nm,1.0s,baz=230,slow=2.6,SNR=6.1
YKA Yellowknife Ar 102.66 349 P Pdif 02 30 43.6 -0.9
comp=Z,0.2nm,0.7s,baz=257,slow=9.6,SNR=3.0
NWAO Narrogin (SRO) 103.76 205 PFAKE 02 31 00.0 +11
NWAO LR LR
comp=Z,2µm,20.0s,MS5.7
MIDW Midway 104.07 295 PFAKE 02 31 00.0 +9.2
MIDW LR LR
comp=Z,4µm,20.0s,MS5.9
ASAR Alice Springs 104.66 223 Pdiff Pdif 02 30 54.1 +0.8
comp=Z,0.7nm,0.9s,baz=223,slow=27,SNR=3.6
ASAR PP PP 02 35 19.6 +7.4
comp=Z,1.0nm,1.0s,baz=140,slow=6.9,SNR=4.7
RTC Rabat Centre 106.72 60 PFAKE 02 35 20.0 +7.3
RTC LR LR
comp=Z,3µm,21.0s,MS5.8
WRAB Tennant Creek 107.44 225 PFAKE 02 35 30.0 +15
WRAB LR LR
comp=Z,6µm,20.0s,MS6.1
MORF Marmelete 107.46 56 eSS SS 02 50 51.6 +8.0
MORF Marmelete 107.46 56 eLR LR 03 08 42.3
comp=Z,2µm,23.9s
PBDV Barranco-do-Ve 107.89 56 ePP PP 02 35 37.2 +0.2
PBDV Barranco-do-Ve 107.89 56 eSS SS 02 50 59.9 +10
PBDV Barranco-do-Ve 107.89 56 eLR LR 03 08 28.5
comp=Z,2µm,22.0s
PMAFR Mafra 108.01 54 ePP PP 02 35 38.3 +0.4
PMAFR Mafra 108.01 54 eSS SS 02 51 00.4 +9.3
PMAFR Mafra 108.01 54 eLR LR 03 08 28.5
comp=Z,4µm,21.1s
PCVE Castro Verde 108.05 56 ePP PP 02 35 42.6 +4.5
PCVE Castro Verde 108.05 56 eSS SS 02 51 02.2 +11
PCVE Castro Verde 108.05 56 eLR LR 03 08 31.6
comp=Z,2µm,23.2s
PVAQ Vaqueiros 108.12 56 ePP PP 02 35 39.3 +0.6
PVAQ Vaqueiros 108.12 56 eSS SS 02 51 01.5 +8.9
PVAQ Vaqueiros 108.12 56 eLR LR 03 08 25.4
comp=Z,2µm,23.9s
SFS San Fernando 108.58 58 PFAKE 02 35 30.0 +14
SFS LR LR
comp=Z,2µm,20.0s,MS5.7
KDAK Kodiak Island 108.93 330 PFAKE 02 35 30.0 +14
KDAK LR LR
comp=Z,4µm,19.0s,MS6.0
PBAR Barrancos 109.00 56 ePP PP 02 35 45.4 +0.3
PBAR Barrancos 109.00 56 eSS SS 02 51 17.6 +13
PBAR Barrancos 109.00 56 eLR LR 03 08 56.6
comp=Z,2µm,24.0s
PESTR Estremoz 109.04 55 ePP PP 02 35 45.7 +0.3
PESTR Estremoz 109.04 55 eSS SS 02 51 14.2 +9.2
PESTR Estremoz 109.04 55 eLR LR 03 08 56.6
comp=Z,3µm,19.5s
TAM Tamanrasset 109.24 76 PFAKE 02 35 30.0 +12
TAM LR LR
comp=Z,3µm,19.0s,MS5.9
PMRV Marv??o 109.49 55 ePP PP 02 35 50.2 +1.6
PMRV Marv??o 109.49 55 eSS SS 02 51 18.4 +7.4

PMRV	Marv??o	109.49	55	eLR	LR	03 09 02.8		
	comp=Z,3µm,22.1s							
MTE	Manteigas	109.94	54	PFAKE		02 35 30.0	+11	
MTE				LR	LR			
	comp=Z,3µm,22.0s,MS5.8							
MTE	Manteigas	109.94	54	ePP	PP	02 35 59.7	+7.8	
MTE	Manteigas	109.94	54	eSS	SS	02 51 29.8	+13	
MTE	Manteigas	109.94	54	eLR	LR	03 09 08.7		
	comp=Z,3µm,21.1s							
SFJD	Kangerlussuaq	110.01	16	PFAKE		02 35 30.0	+12	
SFJD				LR	LR			
	comp=Z,3µm,20.0s,MS5.8							
EGAK	Eagle	110.31	340	PFAKE		02 35 30.0	+12	
EGAK				LR	LR			
	comp=Z,2µm,22.0s,MS5.7							
MVO	Moncorvo	110.69	53	ePP	PP	02 36 06.7	+9.4	
MVO	Moncorvo	110.69	53	eSS	SS	02 51 35.7	+8.7	
MVO	Moncorvo	110.69	53	eLR	LR	03 09 45.7		
	comp=Z,2µm,21.9s							
ABPO	Ambohimpanom	110.72	138	PFAKE		02 35 30.0	+9.2	
ABPO				LR	LR			
	comp=Z,3µm,21.0s,MS5.9							
WAKE	Wake Island	110.83	278	PFAKE		02 35 30.0	+9.2	
WAKE				LR	LR			
	comp=Z,2µm,20.0s,MS5.7							
PAB	San Pablo	111.51	56	PFAKE		02 35 30.0	+8.5	
PAB				LR	LR			
	comp=Z,3µm,20.0s,MS5.8							
ESLA	Sonseca Array	111.83	56	PFAKE		02 35 30.0	+7.9	
ESLA				LR	LR			
	comp=Z,13µm,20.0s,MS6.5							
COLA	College	112.30	337	PFAKE		02 35 30.0	+7.8	
COLA				LR	LR			
	comp=Z,2µm,22.0s,MS5.6							
MBWA	Marble Bar	113.51	212	PFAKE		02 35 40.0	+14	
MBWA				LR	LR			
	comp=Z,4µm,20.0s,MS6.0							
ADK	Adak	116.66	316	PFAKE		02 35 40.0	+9.0	
ADK				LR	LR			
	comp=Z,2µm,22.0s,MS5.8							
BORG	Borgarnes	116.79	27	PFAKE		02 35 40.0	+9.2	
BORG				LR	LR			
	comp=Z,2µm,21.0s,MS5.6							
KMBO	Kilima Mbogo	118.52	118	PFAKE		02 35 50.0	+14	
KMBO				LR	LR			
	comp=Z,2µm,21.0s,MS5.7							
ESK	Eskdalemuir	119.97	41	PFAKE		02 35 50.0	+13	
ESK				LR	LR			
	comp=Z,1µm,20.0s,MS5.5							
AVF	Avril sur Loir	119.98	52	ePKIKP	PKPdf	02 35 35.5	-2.0	
EKA	Eskdalemuir Ar	120.00	41	PKP	PKPdf	02 35 35.2	-2.1	
	comp=Z,0.6nm,0.6s,baz=212,slow=1.3,SNR=5.8							
SSB	Saint Sauveur	120.06	54	PFAKE		02 35 50.0	+12	
SSB				LR	LR			
	comp=Z,2µm,21.0s,MS5.7							
SMRF	Simiane la Rot	120.14	56	ePKIKP	PKPdf	02 35 39.0	+1.0	
	comp=Z,46nm,1.4s							
LMR	La Mourre	120.47	57	ePKIKP	PKPdf	02 35 39.3	+0.7	
	comp=Z,42nm,1.4s							
FRF	La Foret Royal	120.66	57	ePKIKP	PKPdf	02 35 40.1	+1.1	
	comp=Z,19nm,0.9s							
VSL	Villasalto	120.69	62	PFAKE		02 35 50.0	+11	
VSL				LR	LR			
	comp=Z,1µm,21.0s,MS5.6							
BNI	Bardonecchia	121.32	55	PFAKE		02 35 50.0	+10	
BNI				LR	LR			
	comp=Z,4µm,22.0s,MS6.0							
LPL	La Plagne	121.55	55	ePKIKP	PKPdf	02 35 42.8	+2.2	
LPG	La Plagne	121.56	55	ePKIKP	PKPdf	02 35 41.3	+0.7	
MEZF	Maizieres J'vi	121.75	51	ePKIKP	PKPdf	02 35 39.5	-1.4	
	comp=Z,33nm,1.1s							
WDD	Wield Dalam	122.69	68	PFAKE		02 35 50.0	+6.9	
WDD				LR	LR			
	comp=Z,3µm,20.0s,MS6.0							
WLF	Walferdange	122.88	50	PFAKE		02 35 50.0	+7.0	
WLF				LR	LR			
	comp=Z,3µm,22.0s,MS6.0							
ECH	Echery	122.92	52	PFAKE		02 35 50.0	+6.9	
ECH				LR	LR			
	comp=Z,1µm,21.0s,MS5.6							
VLC	Villacollemand	123.36	57	PFAKE		02 36 00.0	+16	
VLC				LR	LR			
	comp=Z,2µm,22.0s,MS5.7							
BFO	Black Forest	123.69	52	PFAKE		02 36 00.0	+15	
BFO				LR	LR			
	comp=Z,1µm,21.0s,MS5.6							
JMIC	Jan Mayen	123.98	23	e	PS	02 47 31.5	+4.7	
DAVA	Damuels	124.26	54	⇓iPKPdf	pPKPdf	02 35 48.2	-0.9	
DAVA								
	comp=Z,8.5nm,0.8s							
				⇓iPP	PP	02 37 30.0	-1.6	
	comp=Z,16nm,2.0s							
GUMO	Guam	124.45	259	PFAKE		02 36 00.0	+13	
GUMO				LR	LR			
	comp=Z,2µm,21.0s,MS5.7							
AQU	L'Aquila	124.66	61	PFAKE		02 36 00.0	+13	
AQU				LR	LR			
	comp=Z,2µm,22.0s,MS5.7							
FETA	Feichten	124.70	54	⇑iPKPdf	PKPdf	02 35 46.5	0.0	
	comp=Z,6.7nm,0.9s							
CEL	Celeste	124.72	66	PFAKE		02 36 00.0	+13	
CEL				LR	LR			
	comp=Z,3µm,21.0s,MS5.9							
RETA	Reutte	124.89	54	⇓iPKPdf	PKPdf	02 35 46.1	-0.9	
	comp=Z,15nm,1.2s							
MOTA	Moosalm	125.05	54	⇑iPKPdf	PKPdf	02 35 46.9	-0.4	
	comp=Z,14nm,1.0s							
WTTA	Wattenberg	125.36	54	⇑iPKPdf	PKPdf	02 35 48.1	+0.2	
	comp=Z,5.3nm,0.7s							
WTTA				⇑ipPKiKP		02 35 54.7		
	comp=Z,34nm,1.8s							
TIP	Timpagrande	125.72	65	PFAKE		02 36 00.0	+11	
TIP				LR	LR			
	comp=Z,3µm,21.0s,MS5.9							
ABTA	Abfaltersbach	125.73	55	⇑iPKPdf	PKPdf	02 35 48.0	-0.6	
	comp=Z,3.7nm,1.0s							
ABTA				⇑ipPKiKP		02 35 54.8		
	comp=Z,15nm,1.4s							
ABTA				⇓iPP	PP	02 37 40.2	-1.3	
	comp=Z,11nm,1.8s							
BER	Bergen	126.06	38	e	PS	02 47 56.7	+11	
BER				eSS	SS	02 54 47.3	+2.1	
TRI	Trieste	126.17	57	PFAKE		02 36 00.0	+11	
TRI				LR	LR			
	comp=Z,2µm,20.0s,MS5.7							
FOO	Floro	126.26	36	AMS	AMS	03 20 12.2		
	comp=Z,2µm,32.4s,MS5.5							
MOX	Moxa	126.51	50	ePKP	PKPdf	02 35 48.5	-1.4	
	comp=Z,25nm,1.6s							
MOX				eSS	SS	02 55 11.0	+20	
MOX								
	comp=Z,2µm,22.0s							
NKC	Novy Kostel	126.88	51	ePKPdf	PKPdf	02 35 50.6	-0.1	
NKC				epPKP	pPKPdf	02 35 57.3	+3.2	
NKC				AMS	AMS	03 24 20.0		
	comp=Z,2µm,21.1s							
MSEY	Mahe Island	127.07	137	PFAKE		02 36 00.0	+7.7	
MSEY				LR	LR			
	comp=Z,2µm,22.0s,MS5.8							
GEC2	GERESS Array S	127.20	53	ePKPdf	PKPdf	02 35 50.6	-0.7	
GERES	GERESS Array B	127.20	53	PKP	PKPdf	02 35 50.7	-0.6	
	comp=Z,1.1nm,0.7s,baz=186,slow=1.3,SNR=10.0							
KHC	Kasperske Hory	127.22	53	ePKPdf	PKPdf	02 35 50.5	-0.9	
KHC	Kasperske Hory	127.22	53	ePKPdf	PKPdf	02 35 49.9	-1.4	
KHC				epPKP	pPKPdf	02 35 56.6	+1.8	
KHC				ex	x	02 49 23.3		
KHC				eSS	SS	02 55 10.5	+10	
KHC				AMS	AMS	03 30 20.0		
	comp=Z,1µm,19.7s							
MOA	Molln	127.23	54	⇑iPKPdf	PKPdf	02 35 50.7	-0.7	
	comp=Z,13nm,1.6s							
SOKA	Soboth	127.34	56	⇑iPKPdf	PKPdf	02 35 51.2	-0.4	
	comp=Z,4.1nm,1.4s							
SOKA				⇓ipPKiKP		02 36 00.2		
	comp=Z,15nm,1.8s							
CLL	Collm	127.55	50	ePdif	Pdif	02 32 26.0	-9.2	
CLL				ePKP	PKPdf	02 35 53.0	+1.1	
CLL				i		02 36 00.3		
CLL				ePP	PP	02 37 50.0	-3.4	
CLL				ePKS		02 39 15.0		
CLL				eSKKS	SKKSac	02 44 49.0	-1.1	
CLL				LR	LR			
	comp=Z,3µm,21.0s,MS5.9							
KAPI	Kappang	127.63	221	PFAKE		02 36 00.0	+6.7	
KAPI				LR	LR			
	comp=Z,3µm,21.0s,MS6.0							
ARSA	Arzberg	127.84	56	⇑ePKPdf	PKPdf	02 35 51.9	-0.7	
	comp=Z,13nm,1.7s							
KONO	Kongsberg	127.93	39	e		02 49 33.8		
KONO				eSS	SS	02 55 17.6	+9.0	
KONO				AMS	AMS	03 20 40.6		
	comp=Z,2µm,26.1s,MS5.7							
KONO	Kongsberg	127.93	39	PFAKE		02 36 00.0	+7.6	
KONO				LR	LR			
	comp=Z,894nm,20.0s,MS5.5							
PRU	Pruhonice	128.08	52	ePKPdf	PKPdf	02 35 52.8	-0.2	
PRU				ex	x	02 36 02.1		
PRU				ex	x	02 49 24.7		
PRU				eSS	SS	02 55 20.1	+9.0	
PRU				AMS	AMS	03 30 20.0		
	comp=Z,1µm,18.4s							
PVCC	Panska Ves	128.26	51	epPKP	pPKPdf	02 36 00.7	+4.0	
PVCC				AMS	AMS	03 26 10.0		
	comp=Z,2µm,22.2s							
CONA	Conrad Observa	128.28	55	⇓ePKPdf	PKPdf	02 35 51.8	-1.6	
	comp=Z,6.5nm,1.0s							
TREC	Trest	128.46	53	ePKPdf	PKPdf	02 35 54.2	+0.5	
TREC				epPKP	pPKPdf	02 36 00.8	+3.7	
TREC				eSS	SS	02 55 22.3	+6.5	
TREC				AMS	AMS	03 24 50.0		
	comp=Z,2µm,24.9s							
COCO	West Island	128.65	191	PFAKE		02 36 10.0	+15	
COCO				LR	LR			
	comp=Z,2µm,20.0s,MS5.8							
TIR	Tirane	128.75	64	PFAKE		02 36 10.0	+15	
TIR				LR	LR			
	comp=Z,2µm,22.0s,MS5.8							
NAO01	NORSAR Array S	128.82	38	PFAKE		02 36 10.0	+16	
NAO01				LR	LR			
	comp=Z,1µm,19.0s,MS5.7							
NB2	NORSAR Subarra	129.02	38	PKPdf	PKPdf	02 35 52.8	-1.6	
	comp=Z,28nm,2.0s,baz=270,slow=1.9							
NB2	NORSAR Subarra	129.02	38	PKPdf	PKPdf	02 35 52.8	-1.6	
	baz=270,slow=1.9							
NOA	NORSAR Array B	129.02	38	PKP	PKPdf	02 35 53.3	-1.1	
	comp=Z,0.7nm,0.7s,baz=203,slow=10.0,SNR=2.9							
UPC	Upice	129.14	52	ePKPdf	PKPdf	02 35 53.1	-1.9	
UPC				epPKP	pPKPdf	02 36 01.8	+3.4	
DPC	Dobruska-Polom	129.28	52	ePKPdf	PKPdf	02 35 56.3	+1.1	
DPC				epPKP	pPKPdf	02 36 01.2	+2.5	
DPC				ePKKS		02 49 41.7		
DPC				ex	x	02 55 42.0		
DPC				AMS	AMS	03 26 10.0		
	comp=Z,1µm,21.9s							
BILL	Bilibino	129.82	331	PFAKE		02 36 10.0	+14	
BILL				LR	LR			
	comp=Z,4µm,22.0s,MS6.0							
OKC	Ostrava-Krasne	130.28	53	ePKPdf	PKPdf	02 35 57.7	+0.6	
OKC				ex	x	02 49 52.7		
OKC				eSS	SS	02 55 44.0	+5.9	
OKC				AMS	AMS	03 31 20.0		
	comp=Z,1µm,21.5s							
VYHS	Vyhne	130.34	55	ePKP	PKPdf	02 35 55.9	-1.4	
VYHS				e		02 39 22.4		
KBS	Kingsbay	130.38	14	ePP	PP	02 38 16.9	+5.7	
KBS				e		02 48 19.6		
KBS				eSS	SS	02 55 41.6	+3.7	
KBS				AMS	AMS	03 27 08.0		
	comp=Z,2µm,25.2s,MS5.6							
KBS	Kingsbay	130.38	14	PFAKE		02 36 10.0	+13	
KBS				LR	LR			
	comp=Z,1µm,19.0s,MS5.6							
PSZ	Piszkesteto	130.87	56	PFAKE		02 36 10.0	+12	
PSZ				LR	LR			
	comp=Z,2µm,22.0s,MS5.7							
PET	Petropavlovsk	131.09	311	ePKP	PKPdf	02 35 59.1	+0.5	
PET				LR	LR			
	comp=Z,1µm,20.0s,MS5.6							
KECS	Kecovo	131.40	55	ePKP	PKPdf	02 35 59.0	-0.3	
DGAR	Diego Garcia	131.66	159	PFAKE		02 36 10.0	+9.0	
DGAR				LR	LR			
	comp=Z,2µm,20.0s,MS5.7							
PETK	Petropavlovsk-	131.67	311	PKP	PKPdf	02 35 59.2	-0.5	
	comp=Z,5.5nm,1.1s,baz=67,slow=11,SNR=3.5							
PETK	Petropavlovsk-	131.67	311	PKP	PKPdf	02 35 59.2	-0.5	
STHS	Stebnicka Huta	132.12	54	eP	PKPdf	02 36 08.3	+7.7	
KOLS	Kolonicke sedl	132.66	55	ePKP	PKPdf	02 36 01.8	+0.1	
TRO	Tromso	132.89	27	ePP	PP	02 38 27.6	+0.1	
TRO				eSS	SS	02 56 04.0	-5.0	
TRO				AMS	AMS	03 27 16.1		
	comp=Z,1µm,26.9s,MS5.4							
KWP	Kalwaria Pacla	133.09	54	ePKP	PKPdf	02 36 04.0	+1.5	
KWP				epPKP	pPKPdf	02 36 11.8	+5.9	
KWP	Kalwaria Pacla	133.09	54	ePKPdf	PKPdf	02 36 01.7	-0.7	
KWP				LR	LR			
	comp=Z,1µm,22.0s,MS5.5							
DAV	Davao City (W)	133.97	236	PFAKE		02 36 20.0	+15	
DAV				LR	LR			
	comp=Z,1µm,20.0s,MS5.6							
ARCES	ARCESS Array B	135.20	26	PKP	PKPdf	02 36 04.2	-1.7	
	comp=Z,1.6nm,0.8s,baz=85,slow=28,SNR=2.4							
ISP	Isparta	135.23	72	PFAKE		02 36 20.0	+13	
ISP				LR	LR			
	comp=Z,952nm,21.0s,MS5.5							
KEV	Kevo	135.68	26	PFAKE		02 36 20.0	+13	
KEV				LR	LR			
	comp=Z,1µm,22.0s,MS5.5							
FINES	FINESS Array B	136.20	38	PKP	PKPdf	02 36 04.8	-3.1	
	comp=Z,0.3nm,0.3s,baz=329,slow=40,SNR=3.2							
MMAI	Mount Meron Ar	137.17	81	PKP	PKPdf	02 36 09.4	-1.2	
	comp=Z,3.5nm,1.0s,baz=160,slow=2.7,SNR=3.5							
KIEV	Kiev	137.40	54	PFAKE		02 36 20.0	+10	
KIEV				LR	LR			
	comp=Z,2µm,22.0s,MS5.7							
AKASG	Malin Array Be	137.41	54	PKP	PKPdf	02 36 10.1	-0.4	
	comp=Z,0.8nm,0.4s,baz=269,slow=2.7,SNR=5.5							
AKBB	Malin Array Si	137.41	54	ePKPdf	PKPdf	02 36 11.1	+0.6	
KSM	Kuching	137.78	214	PFAKE		02 36 20.0	+7.6	
KSM				LR	LR			
	comp=Z,1µm,21.0s,MS5.7							
BR131	Keskin Array S	138.14	71	PFAKE		02 36 20.0	+7.8	
BR131				LR	LR			
	comp=Z,549nm,19.0s,MS5.3							
BRTR	Keskin Array B	138.14	71	PKP	PKPdf	02 36 12.4	+0.2	
	comp=Z,1.5nm,0.9s,baz=179,slow=6.8,SNR=5.8							
ERM	Erimo	138.81	293	PFAKE		02 36 20.0	+6.6	
ERM				LR	LR			
	comp=Z,2µm,21.0s,MS5.9							
KKM	Kota Kinabalu	138.81	225	PFAKE		02 36 30.0	+16	
KKM				LR	LR			
	comp=Z,3µm,21.0s,MS5.9							
LVZ	Lovozero	138.82	28	PFAKE		02 36 20.0	+7.4	
LVZ				LR	LR			
	comp=Z,1µm,20.0s,MS5.6							
YSS	Yuzh-Sakhalins	140.08	300	PFAKE		02 36 30.0	+14	
YSS				LR	LR			
	comp=Z,1µm,19.0s,MS5.7							
MJAR	Matsushiro Arr	140.93	283	PKP	PKPdf	02 36 16.3	-1.1	
	comp=Z,0.9nm,0.3s,baz=316,slow=41,SNR=2.8							
MJAR	Matsushiro Arr	140.93	283	PKP	PKPdf	02 36 16.3	-1.1	
MAJO	Matsushiro	140.93	283	PFAKE		02 36 30.0	+13	
MAJO				LR	LR			
	comp=Z,2µm,22.0s,MS5.7							
TIXI	Tiksi	141.31	341	PFAKE		02 36 30.0	+13	
TIXI				LR	LR			
	comp=Z,2µm,22.0s,MS5.7							
OBN	Obninsk	142.02	47	PFAKE		02 36 30.0	+11	
OBN				LR	LR			
	comp=Z,2µm,20.0s,MS5.8							
NAY	Al-Naaiem	144.81	93	eP	PKPdf	02 36 22.4	-2.1	
KULM	Kulim	144.82	201	ePKPdf	PKPdf	02 36 24.8	-0.2	
KULM				LR	LR			
	comp=Z,2µm,20.0s,MS5.8							
RDF	Al-Radifah	144.90	94	eP	PKPdf	02 36 23.4	-1.3	
RDF				AMb	AMB	02 36 38.4		
	comp=Z,333nm,1.2s							
MIB	Mutribah	145.13	92	eP	PKPbc	02 36 23.4	-1.2	
MIB				AMb	AMB	02 36 38.0		
	comp=Z,466nm,1.2s							
UMR	Umm Al-Rimmam	145.31	93	eP	PKPbc	02 36 23.9	-1.3	
UMR				AMb	AMB	02 36 38.6		
	comp=Z,471nm,1.2s							
KIV	Kislovodsk	145.65	66	ePKPdf	PKPdf	02 36 25.5	0.0	
KIV				LR	LR			
	comp=Z,992nm,22.0s,MS5.5							
YAK	Yakutsk	145.84	326	ePKPdf	PKPdf	02 36 24.0	-1.2	
YAK				LR	LR			
	comp=Z,2µm,20.0s,MS5.8							
IDHR	Dehrash	146.28	84	eP	PKPdf	02 36 28.2	+1.3	
GNI	Garni	146.51	74	ePKPbc	PKPbc	02 36 28.6	0.0	
GNI				LR	LR			
	comp=Z,762nm,21.0s,MS5.5							
IVIS	Veis	146.59	84	eP	PKPdf	02 36 27.4	0.0	
ISHB	Shabestar	146.74	77	eP	PKPdf	02 36 27.4	-0.1	
ILIN	Lien	146.80	84	eP	PKPdf	02 36 29.0	+1.3	
IAZR	Azarshahr	146.86	78	eP	PKPdf	02 36 28.2	+0.5	
IMRD	Marand	146.91	76	eP	PKPdf	02 36 28.2	+0.4	
IKOM	Komasi	146.98	85	eP	PKPdf	02 36 29.8	+1.7	
ITBZ	Tabriz	147.13	77	eP	PKPdf	02 36 28.6	+0.4	
PALK	Pallekele	147.82	165	ePKPbc	PKPbc	02 36 33.4	+0.4	
IHRS	Heris	147.84	78	eP	PKPdf	02 36 30.0	+0.7	
ISRB	Sarab	148.19	79	eP	PKPdf	02 36 29.8	-0.2	
YHNB	Yeheng	148.82	253	PFAKE		02 36 40.0	+8.6	
YHNB				LR	LR			
	comp=Z,2µm,22.0s,MS5.9							
TATO	Taipei	148.91	253	PFAKE		02 36 40.0	+8.5	
TATO				LR	LR			
	comp=Z,935nm,20.0s,MS5.6							
IMOK	Mouk	148.97	97	eP	PKPdf	02 36 34.7	+3.2	
MDJ	Mudanjiang	148.98	294	PKPbc	PKPbc	02 36 32.7	-2.4	
MDJ				PP	PP	02 40 08.3	+1.6	
MDJ				SKS	SKSdf	02 43 36.6	-2.4	
MDJ				AMB	AMB			
	comp=Z,140nm,4.5s							
MDJ				LR	LR			
	comp=Z,540nm,36.8s,MS5.1							
MDJ	Mudanjiang	148.98	294	ePKPbc	PKPbc	02 36 33.7	-1.3	
MDJ				LR	LR			
	comp=Z,1µm,19.0s,MS5.8							
KSRS	Korea Array	149.07	280	PKP	PKPdf	02 36 29.9	-1.5	
	comp=Z,0.4nm,0.3s,baz=103,slow=5.3,SNR=2.8							
KSRS				PKPbc	PKPbc	02 36 35.4	-0.1	
	comp=Z,5.6nm,0.9s,baz=126,slow=3.7,SNR=11							
IPIR	Pirpir	149.08	90	eP	PKPbc	02 36 34.9	-0.8	
IRAZ	Razeghan	149.26	84	eP	PKPbc	02 36 34.8	-1.3	
ISRV	Sarvestan	149.44	97	eP	PKPbc	02 36 35.9	-0.8	
IPAR	Pars	149.59	96	eP	PKPbc	02 36 36.0	-1.1	
IKLH	Kolahrood	149.85	89	eP	PKPbc	02 36 35.8	-1.8	
IGAR	Gharneh	149.88	91	eP	PKPbc	02 36 36.7	-1.0	
INCN	Inchon	150.07	280	PFAKE	PKPbc	02 36 40.0	+2.0	
INCN				LR	LR			
	comp=Z,977nm,21.0s,MS5.6							
IR3	Iran Long-Peri	150.13	85	eP	PKPbc	02 36 39.8	+1.6	
IZEF	Zefreh	150.28	90	eP	PKPbc	02 36 36.2	-2.5	
ISFB	Sefidab	150.73	87	eP	PKPbc	02 36 37.0	-2.7	
IDMV	Damavand	150.95	85	eP	PKPab	02 36 44.4	-3.2	
ISAD	Sadrabad	150.97	93	eP	PKPbc	02 36 42.8	+2.5	
IPRN	Peran	151.38	84	eP	PKPbc	02 36 44.7	+3.6	
IMEH	Mehriz	151.48	95	eP	PKPbc	02 36 39.7	-1.8	
ICHK	Chekchek	151.66	93	eP	PKPbc	02 36 45.0	+3.1	
CN2	Changchun	151.91	292	PKPbc	PKPbc	02 36 39.7	-2.4	
CN2				PP	PP	02 40 30.4	+6.8	
CN2				SS	SS	02 59 48.6	-2.2	
CN2				AMB	AMB			
	comp=Z,290nm,4.0s							
CN2				LR	LR			
	comp=N,830nm,21.0s,MS5.7							
CN2				LR	LR			
	comp=E,960nm,21.0s,MS5.7							
CN2				LR	LR			
	comp=Z,1µm,18.0s,MS5.7							
SSE	Sheshan	152.18	264	ePKPbc	PKPdf	02 36 37.3	+0.9	
SSE				PP	PP	02 40 29.4	+4.1	
SSE				SS	SS	02 59 50.6	-3.5	
SSE				LR	LR			
	comp=N,630nm,30.5s,MS5.3							
SSE				LR	LR			
	comp=E,400nm,30.5s,MS5.3							
SSE				LR	LR			
	comp=Z,850nm,26.4s,MS5.4							
IBAF	Bafgh	152.30	95	eP	PKPbc	02 36 40.3	-3.1	
QIZ	Qiongzhong	152.91	229	PKPbc	PKPbc	02 36 40.9	-4.2	
QIZ				PP	PP	02 40 32.0	+3.2	
QIZ				SS	SS	03 00 07.2	+6.2	
QIZ				AMB	AMB			
	comp=Z,340nm,8.9s							
QIZ				LR	LR			
	comp=N,490nm,26.0s							
QIZ				LR	LR			
	comp=Z,1µm,39.2s							
QIZ	Qiongzhong	152.91	229	PFAKE		02 36 50.0	+12	
QIZ				LR	LR			
	comp=Z,764nm,21.0s,MS5.5							
ARU	Arti	153.57	38	ePKPbc	PKPbc	02 36 44.4	-1.0	
ARU				LR	LR			
	comp=Z,2µm,20.0s,MS5.9							
ITEG	Tejag	155.29	95	eP	PKPdf	02 36 40.0	-0.8	
HIA	Hailar	155.35	305	PFAKE		02 36 50.0	+10	
HIA				LR	LR			
	comp=Z,4µm,20.0s,MS6.2							
AKTK	Aktyubinsk	155.62	52	PKP	PKPdf	02 36 40.2	-0.4	
AKTK				PKPab	PKPab	02 37 06.3	-0.6	
AKTO	Aktyubinsk	155.62	52	PKP	PKPdf	02 36 40.2	-0.4	
	comp=Z,1.1nm,0.8s,baz=3.5,slow=19,SNR=2.1							
AKTO				PKPab	PKPab	02 37 06.3	-0.6	
	comp=Z,16nm,1.2s,baz=299,slow=7.0,SNR=16							
IKRD	Kardeh	156.32	86	eP	PKPdf	02 36 45.3	+3.2	
ISRO	Mashad	156.95	87	eP	PKPdf	02 36 41.8	-1.1	
ABKAR	Akbulak array	157.15	54	ePKPdf	PKPdf	02 36 42.5	-0.2	
IMYA	Miami	157.45	87	eP	PKPdf	02 36 41.8	-1.7	
CM31	Chiang Mai Arr	157.74	207	PFAKE		02 36 50.0	+5.6	
CM31				LR	LR			
	comp=Z,1µm,19.0s,MS5.7							
CMAR	Chiang Mai Arr	157.74	207	PKP	PKPdf	02 36 45.7	+1.3	
	comp=Z,1.4nm,0.3s,baz=245,slow=2.6,SNR=7.2							
CHTO	Chiang Mai	158.07	208	PFAKE		02 37 00.0	+15	
CHTO				LR	LR			
	comp=Z,1µm,20.0s,MS5.7							
BJI	Beijing	158.56	282	PKP	PKPdf	02 36 45.5	+0.7	
BJI				SS	SS	03 01 05

SONM				PKPab	PKPab	02 37 40.7	-3.4
	comp=Z,5.0nm,1.1s,baz=99,slow=1.9,SNR=9.6						
ZALV	**Zalesovo Beam**	**164.67**	**8**	PKP	PKPdf	02 36 49.4	-1.2
	comp=Z,2.6nm,0.8s,baz=270,slow=1.5,SNR=5.6						
ZALV				PKPab	PKPab	02 37 44.4	-1.7
	comp=Z,0.6nm,0.3s,baz=55,slow=49,SNR=3.1						
ZALV	**Zalesovo Beam**	**164.67**	**8**	PKP	PKPdf	02 36 49.4	-1.2
ZALV				PKPab	PKPab	02 37 44.4	-1.7
KURK	**Kurchatov**	**166.24**	**27**	PP	PP	02 41 40.8	+0.3
	comp=Z,0.9nm,0.9s,baz=321,slow=4.4,SNR=3.7						
KURK	**Kurchatov**	**166.24**	**27**	PFAKE		02 37 00.0	+8.0
KURK				LR	LR		
	comp=Z,2μm,20.0s						
NIL	**Nilore**	**166.71**	**108**	PFAKE		02 37 00.0	+7.0
NIL				LR	LR		
	comp=Z,94nm,21.0s						
LZH	**Lanzhou**	**167.45**	**262**	*e*PKP	PKPdf	02 36 56.0	+2.6
LZH				pPKP	pPKPdf	02 36 59.3	+2.4
LZH				sPKP		02 37 00.5	
LZH				PP	PP	02 41 53.5	+5.5
LZH				SKS	SKSdf	02 43 55.7	-1.6
LZH				SKKS	SKKSac	02 48 36.5	+1.6
LZH				SS	SS	03 02 37.4	+2.2
LZH				AMB	AMB		
	comp=Z,660nm,8.6s						
LZH				LR	LR		
	comp=N,2μm,18.3s						
LZH				LR	LR		
	comp=Z,2μm,20.1s						
EKS2	**Erkin-Say**	**168.25**	**66**	PFAKE		02 37 00.0	+6.2
EKS2				LR	LR		
	comp=Z,2μm,20.0s						
AML	**Almayashu**	**168.30**	**69**	PFAKE		02 37 00.0	+6.2
AML				LR	LR		
	comp=Z,3μm,21.0s						
AAK	**Ala-Archa**	**168.76**	**66**	PFAKE		02 37 00.0	+5.9
AAK				LR	LR		
	comp=Z,3μm,21.0s						
UCH	**Uchtor**	**168.88**	**68**	*e*PKPdf	PKPdf	02 36 54.2	0.0
UCH				LR	LR		
	comp=Z,3μm,22.0s						
TKM2	**Tokmak 2**	**169.46**	**63**	PFAKE		02 37 10.0	+15
TKM2				LR	LR		
	comp=Z,2μm,20.0s						
LSA	**Lhasa**	**170.62**	**195**	PFAKE		02 37 10.0	+14
LSA				LR	LR		
	comp=Z,3μm,22.0s						
MK31	**Makanchi Array**	**170.85**	**28**	*e*PKPdf	PKPdf	02 36 56.5	+1.3
MKAR	**Makanchi Array**	**170.85**	**28**	PKP	PKPdf	02 36 55.6	+0.4
	comp=Z,0.2nm,0.2s,baz=64,slow=5.5,SNR=3.7						
MKAR				PKPab	PKPab	02 38 11.9	-1.6
	comp=Z,0.3nm,0.3s,baz=18,slow=4.3,SNR=2.7						
MKAR				PP	PP	02 42 14.1	+10
	comp=Z,0.2nm,0.4s,baz=308,slow=3.5,SNR=4.2						
GTA	**Gaotai**	**171.13**	**277**	*e*PKP	PKPdf	02 36 56.4	+0.8
GTA				PKS		02 40 27.4	
GTA				PP	PP	02 42 08.9	+2.3
GTA				SKS	SKSdf	02 44 00.3	+1.4
GTA				SKKS	SKKSac	02 48 53.2	+0.4
GTA				SS	SS	03 03 11.2	-0.7
GTA				AMB	AMB		
	comp=Z,120nm,6.0s						
GTA				LR	LR		
	comp=N,970nm,23.1s						
GTA				LR	LR		
	comp=E,1μm,24.6s						
GTA				LR	LR		
	comp=Z,2μm,24.0s						
WMQ	**Urumqi**	**174.98**	**6**	*e*PKP	PKPdf	02 36 59.0	+2.0

ISCJB ***05*** *02:34:45.1±1.3, 51°.12N±0°.03×171°.13W±0°.03, h9km±8km, mb4.6/132, MS4.5/6, Error ellipse: s-maj=6.1km s-min=3.0km az=17.3*

BJI ***05*** *02:34:46.6, 51°.53N×171°.22W, h17km, mB5.1/13, mb4.8/19, Ms4.9/10, Ms7 4.6/10*

NEIC ***05*** *02:34:47.6±1.8, 51°.08N×171°.15W, h17km±10km, mb4.7/92, ML4.5(AEIC), Error ellipse: s-maj=6.8km s-min=3.2km az=185.0*

MOS ***05*** *02:34:48.5±0.9, 51°.12N×171°.17W, h33km, mb5.0/49, Error ellipse: s-maj=9.9km s-min=5.4km az=90.8*

SZGRF ***05*** *02:34:50.9, 50°.80N×173°.60W, h33km, mb5.1, Andreanof Islands, Aleutian Islands, United States*

IDC ***05*** *02:34:52.2±0.5, 51°.06N×171°.14W, h55km±3km, mb4.1/30, mb1 4.3/32, mb1mx4.2/36, mbtmp4.1/32, Error ellipse: s-maj=15.0km s-min=9.4km az=179.0*

ISC 05 02:34:48.3±1.4, 51°.15N±0°.03×171°.14W±0°.03, h19km±8km, h48km±2.0km; pP-P, n622, σ0.66/620, mb4.6/132, MS4.5/6, 153C-162D, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**2.31**	**37**	P	**Pn**	**02 35 24.1**	**-1.3**
NIKO				S	**Sn**	**02 35 49.5**	**-3.6**
OKFG	**Magazine Ridge**	**3.01**	**40**	P	**Pn**	**02 35 35.1**	**+0.2**
OKFG				S	**Sn**	**02 36 09.8**	**-0.6**
GSTR	**Great Sitkin T**	**3.21**	**289**	*e*Pn	**Pn**	**02 35 37.9**	**+0.3**
ADK	**Adak**	**3.54**	**284**	P	**Pn**	**02 35 41.2**	**-1.0**
ADK				S	**Sn**	**02 36 20.9**	**-2.6**
ADK	**Adak**	**3.54**	**284**	P	**Pn**	**02 35 41.2**	**-1.0**
ADK				S	**Sn**	**02 36 20.9**	**-2.6**
UNV	**Unalaska Valle**	**3.92**	**45**	P	**Pn**	**02 35 47.5**	**+0.1**
AKGG	**Akutan Green G**	**4.38**	**44**	P	**Pn**	**02 35 54.8**	**+1.1**
AKUT	**Akutan**	**4.43**	**45**	*e*Pn	**Pn**	**02 35 55.3**	**+0.9**
FALS	**False Pass**	**5.96**	**48**	P	**Pn**	**02 36 16.6**	**+1.2**
AMKA	**Amchitka**	**6.01**	**276**	*e*P	**Pn**	**02 36 15.1**	**-1.0**
SDPT	**Sand Point**	**7.65**	**53**	*e*P	**Pn**	**02 36 38.9**	**+0.2**
CHGN	**Chignik**	**9.13**	**51**	P	**Pn**	**02 36 59.4**	**+0.5**
FX1	**Attu Island--F**	**9.83**	**286**	P	**Pn**	**02 37 09.4**	**+0.9**
	3.0nm,0.3s,baz=185,slow=18,SNR=16						
FX1				S	**Sn**	**02 38 55.7**	**-2.6**
	4.1nm,0.3s,baz=266,slow=21,SNR=3.4						
FX1	**Attu Island--F**	**9.83**	**286**	P	**Pn**	**02 37 09.6**	**+1.1**
OHAK	**Old Harbor**	**12.08**	**53**	*e*Pn	**Pn**	**02 37 36.9**	**-2.3**
KDAK	**Kodiak Island**	**12.65**	**51**	*e*P	**Pn**	**02 37 44.7**	**-2.3**
SVW2	**Sparrevohn**	**13.18**	**35**	*e*P	**Pn**	**02 37 57.1**	**+2.9**
RSO	**Redoubt South**	**13.87**	**41**	*e*Pn	**Pn**	**02 38 04.7**	**+1.0**
TTA	**Tatalina**	**14.34**	**29**	*e*P	**Pn**	**02 38 11.1**	**+1.0**
TNA	**Tin City**	**14.55**	**5**	*e*Pn	**Pn**	**02 38 14.7**	**+1.8**
SEW	**Seward**	**15.11**	**45**	*e*Pn	**Pn**	**02 38 17.9**	**-2.7**
RC01	**Rabbit Creek A**	**15.46**	**42**	*e*Pn	**Pn**	**02 38 22.9**	**-2.2**
PPLA	**Purkeypile**	**15.57**	**34**	*e*Pn	**Pn**	**02 38 28.3**	**+1.8**
	8.6nm,0.5s						
CHUM	**Lake Minchumin**	**16.19**	**31**	*e*Pn	**Pn**	**02 38 35.5**	**+1.0**
	16nm,0.6s						
KTH	**Kantishna Hill**	**16.43**	**33**	*e*Pn	**Pn**	**02 38 37.8**	**+0.3**
	20nm,0.8s						
BPAW	**Bear Paw Mtn.**	**16.77**	**32**	*e*Pn	**Pn**	**02 38 41.9**	**+0.1**
	43nm,1.0s						
DIV	**Divide**	**17.19**	**45**	*e*Pn	**Pn**	**02 38 45.0**	**-2.1**
	22nm,0.7s						
BMRM	**Bremner River**	**17.65**	**46**	*e*Pn	**Pn**	**02 38 51.3**	**-1.6**
	441nm,0.6s						
PAX	**Paxson**	**18.14**	**39**	*e*P	**Pn**	**02 38 57.7**	**-1.2**
PAX				pmax	pmax		
	comp=Z,7.0nm,0.6s						
PAX	**Paxson**	**18.14**	**39**	*e*Pn	**Pn**	**02 38 57.6**	**-1.2**
	comp=Z,7.0nm,0.6s						
COLA	**College**	**18.31**	**33**	*e*P	**Pn**	**02 38 59.7**	**-1.2**
COLA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
COLA	**College**	**18.31**	**33**	*e*P	**Pn**	**02 38 59.7**	**-1.2**
	comp=Z,9.9nm,0.8s						
PET	**Petropavlovsk**	**18.59**	**288**	*e*P	**Pn**	**02 39 22.9**	**+18**
MENT	**Mentasta**	**18.84**	**41**	*e*P	**Pn**	**02 39 06.8**	**-0.6**
PETK	**Petropavlovsk-**	**19.16**	**288**	P	**Pn**	**02 39 10.1**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=84,slow=16,SNR=5.2						
COLD	**Coldfoot**	**19.19**	**25**	*e*P	**Pn**	**02 39 11.0**	**-0.5**
	comp=Z,6.4nm,0.7s						
PNL	**Peninsula**	**19.76**	**52**	*e*P	**Pn**	**02 39 18.5**	**0.0**
	comp=Z,40nm,0.6s						
BILL	**Bilibino**	**20.21**	**335**	⇑*e*P	**P**	**02 39 21.5**	**-0.2**
BILL				*e*		02 39 36.9	
BILL				*e*S	**S**	**02 43 07.6**	**+0.2**
BILL				pmax	pmax		
	comp=Z,60nm,0.8s						
BILL				MLR	MLR		
	comp=Z,200nm,16.0s,MS3.6						
BILL	**Bilibino**	**20.21**	**335**	*e*P	**P**	**02 39 22.5**	**+0.8**
	comp=Z,56nm,0.6s						
EGAK	**Eagle**	**20.68**	**37**	*e*P	**P**	**02 39 27.4**	**+0.6**
	comp=Z,21nm,0.8s						
HYT	**Haines Junctio**	**20.93**	**49**	*e*P	**P**	**02 39 34.7**	**+5.2**
DAWY	**Dawson**	**21.07**	**40**	*e*P	**P**	**02 39 30.8**	**-0.3**
SKAG	**Skagway**	**21.78**	**54**	*e*P	**P**	**02 39 39.2**	**+0.6**
	comp=Z,48nm,0.9s,mb4.9						
SEY	**Seymchan**	**22.73**	**315**	*e*P	**P**	**02 39 46.4**	**-2.3**
DLBC	**Dease Lake**	**24.47**	**57**	P	**P**	**02 40 07.1**	**+1.4**
	comp=Z,15nm,0.7s,mb4.5,baz=277,slow=10.0,SNR=32						
DLBC	**Dease Lake**	**24.47**	**57**	*e*P	**P**	**02 40 07.3**	**+1.5**
INK	**Inuvik**	**24.97**	**33**	P	**P**	**02 40 10.3**	**+0.1**
	comp=Z,20nm,0.8s,mb4.7,baz=244,slow=11,SNR=65						
INK				PcP	PcP	02 43 43.5	-1.2
	comp=Z,2.5nm,0.7s,baz=209,slow=3.0,SNR=4.0						
INK	**Inuvik**	**24.97**	**33**	*e*P	**P**	**02 40 10.1**	**-0.1**
INK				pmax	pmax		
	comp=Z,23nm,0.6s						
INK	**Inuvik**	**24.97**	**33**	*e*P	**P**	**02 40 10.1**	**-0.1**
	comp=Z,23nm,0.6s,mb4.9						
B06A	**Marblemount**	**31.65**	**75**	⇓P	**P**	**02 41 09.9**	**-0.1**
	baz=32						
YKA	**Yellowknife Ar**	**31.88**	**47**	P	**P**	**02 41 12.3**	**+0.5**
	comp=Z,8.6nm,0.5s,mb4.8,baz=272,slow=7.6,SNR=103						
YKA				PcP	PcP	02 44 01.0	-0.9
	comp=Z,2.2nm,0.7s,baz=284,slow=2.7,SNR=14						
YKA				pPcP		02 44 16.3	
	comp=Z,1.0nm,0.7s,baz=280,slow=2.9,SNR=5.4						
YKA	**Yellowknife Ar**	**31.88**	**47**	P	**P**	**02 41 12.3**	**+0.4**
YKA						02 44 01.0	
YKA				pmax	pmax		
	comp=Z,9.0nm,0.5s						
YKA	**Yellowknife Ar**	**31.88**	**47**	P	**P**	**02 41 12.3**	**+0.5**
YKA				PcP	PcP	02 44 01.0	-0.9
YKA				pPcP		02 44 16.3	
D05A	**Enumclaw**	**31.90**	**78**	⇑P	**P**	**02 41 13.4**	**+1.2**
	baz=32						
A07A	**Ashnola River,**	**32.10**	**73**	⇓P	**P**	**02 41 14.3**	**+0.3**
	baz=32,SNR=5.7						
H04A	**Detroit Lake**	**32.93**	**82**	⇓P	**P**	**02 41 21.7**	**+0.5**
	baz=33						
B08A	**Colville Reser**	**33.02**	**74**	⇓P	**P**	**02 41 22.0**	**-0.1**
	baz=33,SNR=5.6						
B09A	**Rice**	**33.71**	**73**	⇓P	**P**	**02 41 28.6**	**+0.5**
	baz=34						
OD2	**Odessa Site #2**	**33.82**	**75**	*e*P	**P**	**02 41 29.2**	**+0.2**
D08A	**Wollman Farm,**	**33.84**	**76**	⇑P	**P**	**02 41 29.4**	**+0.3**
	baz=34						
C09A	**Chrisman Ranch**	**33.90**	**74**	⇑P	**P**	**02 41 29.6**	**-0.1**
	baz=34						
YBH	**Yreka Blue Hor**	**34.12**	**87**	P	**P**	**02 41 31.8**	**+0.2**
	comp=Z,2.4nm,1.0s,mb4.1,baz=254,slow=1.3,SNR=4.6						
D09A	**Jones Farm, Ri**	**34.21**	**76**	⇓P	**P**	**02 41 32.5**	**+0.1**
	baz=34						
NEW	**Newport**	**34.40**	**73**	*e*P	**P**	**02 41 33.8**	**-0.2**
NEW				pmax	pmax		
	comp=Z,14nm,0.8s						
NEW	**Newport**	**34.40**	**73**	*e*P	**P**	**02 41 33.8**	**-0.2**
	comp=Z,14nm,0.8s,mb4.9						
A11A	**Hall Mountain,**	**34.56**	**72**	⇑P	**P**	**02 41 35.9**	**+0.5**
	baz=34,SNR=10						
EDM	**Edmonton**	**34.67**	**63**	*e*P	**P**	**02 41 36.7**	**+0.4**
K05A	**Summer Lake**	**34.73**	**84**	⇓P	**P**	**02 41 38.3**	**+1.4**
	baz=35						
B11A	**Sandpoint**	**34.78**	**73**	⇑P	**P**	**02 41 37.3**	**0.0**
	baz=35						
D10A	**Wagner Farm, O**	**34.84**	**75**	⇓P	**P**	**02 41 37.8**	**0.0**
	baz=35						
I07A	**Izee**	**34.90**	**81**	⇓P	**P**	**02 41 38.8**	**+0.5**
	baz=35,SNR=6.9						
A12A	**Yaak River Ran**	**34.99**	**71**	⇑P	**P**	**02 41 39.6**	**+0.5**
	baz=35						
H08A	**Prairie City**	**35.19**	**80**	⇓P	**P**	**02 41 41.0**	**+0.1**
	baz=35						
E10A	**Myers Farm, Un**	**35.20**	**76**	⇓P	**P**	**02 41 41.0**	**0.0**
	baz=35						
D11A	**Klaveano Farm,**	**35.42**	**75**	⇓P	**P**	**02 41 41.8**	**-1.0**
	baz=35,SNR=5.7						
MOD	**Modoc**	**35.54**	**85**	*e*P	**P**	**02 41 45.1**	**+1.2**
	comp=Z,5.4nm,0.6s,mb4.7						
A13A	**Flathead Natio**	**35.73**	**71**	⇓P	**P**	**02 41 45.0**	**-0.4**
	baz=35						
H09A	**Durkee**	**35.74**	**79**	⇑P	**P**	**02 41 46.6**	**+1.0**
	baz=36						
G10A	**Bishop Farm, J**	**35.77**	**78**	⇓P	**P**	**02 41 46.2**	**+0.3**
	baz=36,SNR=7.0						
E11A	**Bogner Ranch,**	**35.82**	**76**	⇑P	**P**	**02 41 45.7**	**-0.5**
	baz=36,SNR=6.5						
J08A	**Circle Bar Ran**	**35.91**	**81**	⇑P	**P**	**02 41 47.3**	**+0.2**
	baz=36,SNR=7.2						
B13A	**Whitefish**	**35.94**	**72**	⇑P	**P**	**02 41 47.2**	**-0.1**
	baz=36						
WALA	**Waterton Lakes**	**35.97**	**70**	*e*P	**P**	**02 41 47.9**	**+0.3**
	comp=Z,0.3nm,0.9s						
BSMT	**Bassoo Peak**	**35.99**	**73**	*e*P	**P**	**02 41 47.8**	**+0.1**
D12A	**Red Ives Fores**	**36.01**	**74**	⇑P	**P**	**02 41 47.3**	**-0.6**
	baz=36						
F11A	**Grangeville**	**36.07**	**76**	⇓P	**P**	**02 41 47.8**	**-0.7**
	baz=36						
C13A	**Hot Springs**	**36.19**	**73**	⇑P	**P**	**02 41 49.2**	**-0.2**
	baz=36,SNR=7.4						
G11A	**Walters Elk Ra**	**36.24**	**77**	⇑P	**P**	**02 41 49.7**	**-0.2**
	baz=36						
WVOR	**Wild Horse Val**	**36.29**	**83**	*e*P	**P**	**02 41 51.3**	**+0.9**
WVOR				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
WVOR	**Wild Horse Val**	**36.29**	**83**	*e*P	**P**	**02 41 51.3**	**+1.0**
	comp=Z,12nm,1.0s,mb4.8						
A14A	**Double T Ranch**	**36.30**	**70**	⇑P	**P**	**02 41 50.2**	**-0.2**
	baz=36,SNR=13						
H10A	**Noah's Angus R**	**36.35**	**79**	⇑P	**P**	**02 41 51.0**	**+0.2**
	baz=36,SNR=12						
J09A	**Fry Pan Ranch,**	**36.36**	**81**	⇑P	**P**	**02 41 51.4**	**+0.5**
	baz=36						
D13A	**Huson**	**36.53**	**74**	⇑P	**P**	**02 41 51.6**	**-0.7**
	baz=36						
BEKR	**Beckworth**	**36.64**	**88**	⇓P	**P**	**02 41 53.7**	**+0.4**
	baz=36						
C14A	**Swan Lake**	**36.65**	**72**	⇓P	**P**	**02 41 53.0**	**-0.3**
	baz=36						
B14A	**Marquette Ranc**	**36.66**	**71**	⇑P	**P**	**02 41 53.7**	**+0.3**
	baz=36,SNR=21						
F12A	**Elk City**	**36.69**	**76**	⇓P	**P**	**02 41 53.4**	**-0.3**
	baz=36,SNR=12						
A15A	**Johnson Ranch,**	**36.71**	**70**	⇓P	**P**	**02 41 53.2**	**-0.6**
	baz=36,SNR=7.5						
H11A	**Donnelly**	**36.74**	**78**	⇑P	**P**	**02 41 53.9**	**-0.3**
	baz=37						
G12A	**Big Creek, Yel**	**36.95**	**77**	⇓P	**P**	**02 41 55.6**	**-0.3**
	baz=37						
MSO	**Missoula**	**36.97**	**74**	*e*P	**P**	**02 41 55.2**	**-0.9**
	comp=Z,4.8nm,0.9s,mb4.3						
E13A	**Victor**	**37.00**	**74**	⇓P	**P**	**02 41 56.0**	**-0.3**
	baz=37						
SLMT	**Seeley Lake**	**37.04**	**73**	*e*P	**P**	**02 41 56.4**	**-0.3**
B15A	**Bradely Ranch,**	**37.11**	**71**	⇑P	**P**	**02 41 56.5**	**-0.7**
	baz=37,SNR=7.2						
D14A	**Greenough**	**37.11**	**73**	⇓P	**P**	**02 41 56.7**	**-0.6**
	baz=37,SNR=18						
I11A	**Placerville**	**37.18**	**79**	⇓P	**P**	**02 41 57.7**	**-0.2**
	baz=37,SNR=5.4						
K10A	**MacKenzie Ranc**	**37.21**	**81**	⇑P	**P**	**02 41 58.6**	**+0.4**
	baz=37,SNR=8.0						
F13A	**Darby**	**37.23**	**75**	⇑P	**P**	**02 41 58.1**	**-0.2**
	baz=37,SNR=8.1						
C15A	**Salmond Ranch,**	**37.33**	**72**	⇑P	**P**	**02 41 59.1**	**0.0**
	baz=37,SNR=27						
CHMT	**Chamberlain Mo**	**37.34**	**73**	*e*P	**P**	**02 41 58.8**	**-0.5**
PAHR	**Pah Rah Range**	**37.34**	**87**	*e*P	**P**	**02 42 00.3**	**+1.0**
	comp=Z,7.4nm,1.0s,mb4.5						
WCN	**Washoe City**	**37.35**	**88**	⇑P	**P**	**02 41 59.7**	**+0.4**
	baz=37						
A16A	**West Butte Ran**	**37.39**	**69**	⇑P	**P**	**02 41 58.5**	**-1.1**
	baz=37,SNR=6.1						
E14A	**Clinton**	**37.44**	**74**	⇓P	**P**	**02 41 59.7**	**-0.4**
	baz=37,SNR=6.3						
MFID	**Camas Ranch**	**37.52**	**80**	⇓P	**P**	**02 42 01.0**	**+0.2**
	baz=37						
H12A	**Diamond D Ranc**	**37.53**	**77**	⇓P	**P**	**02 42 00.8**	**-0.1**
	baz=37						
B16A	**M & M Farms, S**	**37.57**	**70**	⇓P	**P**	**02 42 00.4**	**-0.7**
	baz=37,SNR=7.0						
G13A	**Cobalt**	**37.64**	**76**	⇑P	**P**	**02 42 01.3**	**-0.5**
	baz=38						
D15A	**Lincoln**	**37.72**	**73**	⇓P	**P**	**02 42 02.0**	**-0.5**
	baz=38,SNR=17						
K11A	**Parker Ranch,**	**37.74**	**81**	⇑P	**P**	**02 42 02.9**	**+0.3**
	baz=38,SNR=5.7						
I12A	**Atlanta**	**37.75**	**79**	⇑P	**P**	**02 42 02.5**	**-0.2**
	baz=38,SNR=6.7						
F14A	**Wisdom**	**37.81**	**75**	⇑P	**P**	**02 42 02.8**	**-0.4**
	baz=38,SNR=6.9						
C16A	**Fuhringer Ranc**	**37.83**	**71**	⇑P	**P**	**02 42 03.0**	**-0.4**
	baz=38,SNR=7.7						
L10A	**Juniper Basin**	**37.84**	**82**	⇑P	**P**	**02 42 03.5**	**0.0**
	baz=38,SNR=5.4						
H13A	**Challis**	**37.90**	**77**	⇑P	**P**	**02 42 04.0**	**0.0**
	baz=38						
A17A	**Triple J Farms**	**37.92**	**69**	⇓P	**P**	**02 42 03.3**	**-0.8**
	baz=38,SNR=11						
RES	**Resolute Bay**	**37.95**	**25**	P	**P**	**02 42 04.2**	**+0.2**
	comp=Z,3.0nm,0.9s,mb4.0,baz=252,slow=12,SNR=14						
RES	**Resolute Bay**	**37.95**	**25**	*e*P	**P**	**02 42 02.7**	**-1.4**
E15A	**Deer Lodge**	**37.95**	**74**	⇑P	**P**	**02 42 03.9**	**-0.5**
	baz=38,SNR=10						
J12A	**Stokes Ranch,**	**38.06**	**79**	⇑P	**P**	**02 42 05.8**	**+0.4**
	baz=38,SNR=7.0						
M10A	**L.L. Ranch, Tu**	**38.10**	**83**	⇑P	**P**	**02 42 06.1**	**+0.4**
	baz=38,SNR=6.3						
B17A	**L&G Farms, Che**	**38.16**	**70**	⇑P	**P**	**02 42 05.6**	**-0.5**
	baz=38,SNR=5.4						
L11A	**Cat Creek Ranc**	**38.24**	**81**	⇓P	**P**	**02 42 07.3**	**+0.4**
	baz=38,SNR=10						
HRY	**Holter Researc**	**38.30**	**73**	*e*P	**P**	**02 42 07.6**	**+0.3**
I13A	**Wildhorse Cree**	**38.32**	**78**	⇑P	**P**	**02 42 07.9**	**+0.4**
	baz=38,SNR=9.9						
HLID	**Hailey**	**38.32**	**79**	⇓P	**P**	**02 42 07.7**	**+0.1**
	baz=38,SNR=8.3						
HLID	**Hailey**	**38.32**	**79**	*e*P	**P**	**02 42 07.7**	**+0.2**
	comp=Z,5.2nm,1.1s,mb4.2						
F15A	**Butte**	**38.33**	**74**	⇑P	**P**	**02 42 07.3**	**-0.3**
	baz=38						
LRM	**Limekiln Ridge**	**38.36**	**74**	*e*P	**P**	**02 42 08.2**	**+0.4**
H14A	**Leadore**	**38.41**	**76**	⇑P	**P**	**02 42 08.2**	**-0.1**
	baz=38						
A18A	**Metzger Ranch,**	**38.43**	**69**	⇑P	**P**	**02 42 07.5**	**-0.9**
	baz=38						
E16A	**East Helena**	**38.48**	**73**	⇓P	**P**	**02 42 08.3**	**-0.5**
	baz=38						
C17A	**Wharram Farm,**	**38.49**	**71**	⇑P	**P**	**02 42 08.0**	**-0.9**
	baz=38						
K12A	**Draper Farm, C**	**38.51**	**80**	⇑P	**P**	**02 42 09.5**	**+0.4**
	baz=38						
MJAR	**Matsushiro Arr**	**38.55**	**268**	P	**P**	**02 42 11.0**	**+1.5**
	comp=Z,0.8nm,0.3s,mb3.9,baz=252,slow=32,SNR=2.8						
J13A	**Cove Ranch, Pi**	**38.55**	**79**	⇓P	**P**	**02 42 10.1**	**+0.6**
	baz=38,SNR=12						
M11A	**Holland Ranch,**	**38.62**	**82**	⇓P	**P**	**02 42 10.2**	**+0.2**
	baz=38						
MCMT	**McKenzie Canyo**	**38.62**	**76**	*e*P	**P**	**02 42 10.0**	**0.0**
	comp=Z,4.6nm,0.6s,mb4.4						
G15A	**Dillon**	**38.67**	**75**	⇑P	**P**	**02 42 10.3**	**-0.1**
	baz=38,SNR=12						
L12A	**House Creek Ra**	**38.71**	**81**	⇓P	**P**	**02 42 11.4**	**+0.6**
	baz=39,SNR=9.5						
B18A	**Beardsley Farm**	**38.72**	**69**	⇑P	**P**	**02 42 10.7**	**-0.2**
	baz=38,SNR=6.6						
I14A	**Mackay**	**38.72**	**77**	⇑P	**P**	**02 42 11.1**	**+0.2**
	baz=39,SNR=9.4						
D17A	**Six Diamond Ra**	**38.77**	**71**	⇓P	**P**	**02 42 11.2**	**0.0**
	baz=39						
NVAR	**Mina Array Bea**	**38.77**	**88**	P	**P**	**02 42 11.9**	**+0.5**
	comp=Z,3.7nm,0.8s,mb4.1,baz=291,slow=9.0,SNR=10						
NVAR				PcP	PcP	02 44 21.7	-0.9
	comp=Z,1.5nm,0.7s,baz=331,slow=2.7,SNR=3.6						
NVAR	**Mina Array Bea**	**38.77**	**88**	P	**P**	**02 42 11.9**	**+0.5**
NVAR				PcP	PcP	02 44 21.7	-0.9
O10A	**Cortez Mining,**	**38.82**	**84**	⇓P	**P**	**02 42 12.6**	**+0.8**
	baz=39,SNR=6.1						
F16A	**Kennard Place,**	**38.88**	**74**	⇓P	**P**	**02 42 12.3**	**+0.1**
	baz=39						
EGMT	**Eagleton**	**38.91**	**70**	⇑P	**P**	**02 42 12.5**	**+0.1**
	baz=39,SNR=17						
EGMT	**Eagleton**	**38.91**	**70**	*e*P	**P**	**02 42 12.2**	**-0.2**
	comp=Z,22nm,0.8s,mb4.9						
BOZ	**Bozeman (W)**	**38.95**	**74**	⇑P	**P**	**02 42 12.6**	**-0.2**
	baz=39,SNR=16						
BOZ	**Bozeman (W)**	**38.95**	**74**	*e*P	**P**	**02 42 12.4**	**-0.4**
BOZ				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
BOZ	**Bozeman (W)**	**38.95**	**74**	*e*P	**P**	**02 42 12.4**	**-0.4**
	comp=Z,7.5nm,0.8s,mb4.5						
J14A	**Carey**	**39.00**	**78**	⇑P	**P**	**02 42 13.8**	**+0.6**
	baz=39						
N11A	**Elko Archery C**	**39.00**	**83**	⇑P	**P**	**02 42 13.7**	**+0.4**
	baz=39						
E17A	**Martinsdale**	**39.01**	**73**	⇓P	**P**	**02 42 13.3**	**+0.1**
	baz=39,SNR=16						
K13A	**Stover Farm, H**	**39.01**	**

baz=40,SNR=8.5
REDW Red Top Meadow 40.62 77 *e*P **P 02 42 27.5 +0.8**
LOHW Long Hollow 40.63 76 *e*P **P 02 42 27.3 +0.4**
comp=Z,1.6nm,0.8s,mb3.7
RLMT Red Lodge 40.65 73 ⇑P **P 02 42 26.9 +0.1**
baz=40,SNR=16
RLMT Red Lodge 40.65 73 *e*P **P 02 42 26.9 0.0**
comp=Z,19nm,0.9s,mb4.7
M15A Larsen Ranch, 40.68 80 ⇑P **P 02 42 27.6 +0.3**
baz=40
MPMC Manual Prospec 40.74 90 ⇓P **P 02 42 28.0 +0.2**
baz=41
P13A Bates Ranch, G 40.86 84 ⇑P **P 02 42 28.8 0.0**
baz=41,SNR=9.8
L16A Fish Haven 41.00 79 ⇑P **P 02 42 29.7 -0.2**
baz=41
R12A Pony Springs, 41.16 85 ⇓P **P 02 42 31.5 +0.3**
baz=41,SNR=5.8
DUG Dugway 41.18 82 ⇓P **P 02 42 31.4 0.0**
baz=41,SNR=7.8
DUG Dugway 41.18 82 *e*P **P 02 42 31.6 +0.2**
DUG pmax pmax
comp=Z,15nm,1.1s,mb4.5
DUG Dugway 41.18 82 *e*P **P 02 42 31.6 +0.3**
comp=Z,15nm,1.1s,mb4.5
J18A Kendall Valley 41.21 76 ⇑P **P 02 42 31.5 -0.1**
baz=41,SNR=6.3
M16A Huntsville 41.27 80 ⇓P **P 02 42 32.0 -0.2**
baz=41,SNR=6.3
L17A Cokeville 41.30 78 ⇑P **P 02 42 32.3 -0.1**
baz=41
P14A Drum Mountains 41.37 83 ⇓P **P 02 42 33.1 +0.1**
baz=41,SNR=7.9
T11A Corn Creek, Al 41.44 87 ⇑P **P 02 42 33.8 +0.3**
baz=41
S12A Delamar Landin 41.44 86 ⇓P **P 02 42 34.1 +0.5**
baz=41,SNR=5.4
K18A Toltan Ranch, 41.51 77 ⇑P **P 02 42 34.5 +0.4**
baz=41
Q14A Sevier Lake (B 41.60 84 ⇑P **P 02 42 34.9 +0.1**
baz=42,SNR=13
R13A O'Grain Ranch, 41.65 85 ⇑P **P 02 42 35.5 +0.3**
baz=42
LAO LASA Array 41.65 70 *e*P **P 02 42 35.0 -0.1**
comp=Z,5.5nm,0.8s,mb4.2
BW06 Boulder Array 41.74 77 ⇑P **P 02 42 35.4 -0.4**
baz=42,SNR=19
BW06 Boulder Array 41.74 77 *e*P **P 02 42 35.6 -0.2**
PDAR Pinedale Array 41.74 77 P **P 02 42 35.6 -0.2**
comp=Z,11nm,0.9s,mb4.5,baz=308,slow=5.1,SNR=65
M17A Scullys Gap (B 41.78 79 ⇑P **P 02 42 36.0 -0.3**
baz=42,SNR=5.6
NLU North Lily Min 41.78 82 *e*P **P 02 42 36.9 +0.6**
JLU Jordanelle 41.79 81 *e*P **P 02 42 37.1 +0.7**
BFSC Mount Baldy Ra 41.80 93 ⇓P **P 02 42 36.6 +0.1**
baz=42
P15A Leamington 41.88 82 ⇑P **P 02 42 37.2 +0.1**
baz=42
L18A Fontenelle, Gr 41.91 78 ⇑P **P 02 42 37.4 +0.1**
baz=42
O16A Springville 41.99 81 ⇓P **P 02 42 37.8 -0.2**
baz=42,SNR=6.0
MPU Maple Canyon 42.02 81 *e*P **P 02 42 38.7 +0.5**
DAU Daniels Canyon 42.02 81 *e*P **P 02 42 39.4 +1.1**
S13A Holt Ranch, En 42.08 86 ⇑P **P 02 42 38.8 0.0**
baz=42,SNR=9.3
K19A Absolon Red Bu 42.14 76 ⇑P **P 02 42 38.5 -0.7**
baz=42,SNR=14
Q15A Fillmore 42.15 83 ⇑P **P 02 42 39.1 -0.3**
baz=42,SNR=7.6
M18A Lyman 42.18 79 ⇓P **P 02 42 39.2 -0.3**
baz=42
L19A Farson 42.23 77 ⇓P **P 02 42 40.0 0.0**
baz=42
CN2 Changchun 42.28 286 *e*P **P 02 42 40.5 +0.2**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.6
T13A Saint George 42.40 87 ⇑P **P 02 42 41.8 +0.4**
baz=42,SNR=10.0
S14A Cedar City 42.41 85 ⇑P **P 02 42 41.6 +0.1**
baz=42
CCUT Cedar City 42.41 85 *e*P **P 02 42 42.0 +0.5**
comp=Z,4.5nm,0.6s,mb4.3
O17A Robinson Place 42.47 81 ⇓P **P 02 42 42.4 +0.4**
baz=42,SNR=5.6
K20A Yellowstone Ra 42.54 76 ⇑P **P 02 42 41.7 -0.7**
baz=42,SNR=7.6
FCC Fort Churchill 42.57 49 *e*P **P 02 42 42.6 +0.1**
MSU Marysvale 42.57 84 *e*P **P 02 42 43.3 +0.5**
N18A Larsen Ranch, 42.68 79 ⇑P **P 02 42 43.2 -0.4**
baz=42
R15A Junction 42.69 84 ⇓P **P 02 42 43.9 +0.1**
baz=42
GMRC Granite Mounta 42.70 90 ⇓P **P 02 42 44.2 +0.3**
baz=43
TMUT Trail Mountain 42.71 82 *e*P **P 02 42 44.8 +0.9**
U13A Pakoon Wash 42.74 87 ⇓P **P 02 42 44.4 +0.3**
baz=43,SNR=8.0
O18A Roosevelt 42.88 80 ⇓P **P 02 42 46.0 +0.7**
baz=43
T14A Hurricane 42.89 86 ⇑P **P 02 42 45.6 +0.3**
baz=43,SNR=16
P17A Butcher Ranch, 42.90 81 ⇓P **P 02 42 46.0 +0.6**
baz=43
Q16A Castle Valley 42.96 82 ⇑P **P 02 42 46.3 +0.5**
baz=43,SNR=12
S15A Panguitch 42.96 85 ⇓P **P 02 42 46.6 +0.6**
baz=43
V13A Grand Canyon W 43.08 88 ⇓P **P 02 42 46.9 0.0**
baz=43
P18A Preston Nutter 43.11 81 ⇓P **P 02 42 47.7 +0.6**
baz=43,SNR=20
R16A Teasdale 43.15 83 ⇓P **P 02 42 48.1 +0.7**
baz=43,SNR=18
U14A Mt Trumbull 43.23 87 ⇓P **P 02 42 48.6 +0.5**
baz=43,SNR=9.1
SRU San Rafael 43.25 82 ⇓P **P 02 42 48.8 +0.6**
baz=43,SNR=6.7
M20A Sweetwater, Wa 43.30 77 ⇑P **P 02 42 48.5 -0.1**
baz=43
T15A Red Dirt Ranch 43.36 85 ⇓P **P 02 42 49.4 +0.2**
baz=43,SNR=11
O19A Miners Draw (B 43.41 79 ⇑P **P 02 42 49.3 -0.2**
baz=43,SNR=6.1
Q18A Rafter H Ranch 43.49 81 ⇓P **P 02 42 50.2 -0.1**
baz=43,SNR=12
L21A Rawlins 43.53 76 ⇓P **P 02 42 50.1 -0.4**
baz=43,SNR=6.0
R17A Hanksville Air 43.55 83 ⇓P **P 02 42 50.7 +0.1**
baz=43
W13A Hualapai Mount 43.62 89 ⇓P **P 02 42 51.2 -0.1**
baz=44,SNR=8.3
N20A Spence Gulch, 43.63 78 ⇓P **P 02 42 51.0 -0.3**
baz=44
M21A Separation Pea 43.74 77 ⇑P **P 02 42 51.9 -0.2**
baz=44
V14A Boquillas Ranc 43.77 87 ⇓P **P 02 42 53.0 +0.5**
baz=44,SNR=8.5
P19A Cripple Cowboy 43.89 80 ⇓P **P 02 42 53.4 -0.1**
baz=44,SNR=8.5
S17A Black Ridge (B 43.97 84 ⇓P **P 02 42 54.0 0.0**
baz=44,SNR=15
PDMCI Parker Dam,Lak 43.97 90 ⇑P **P 02 42 53.6 -0.5**
baz=44
X13A Yucca 43.98 89 ⇑P **P 02 42 54.1 -0.1**
baz=44
W14A Seligman 44.05 88 ⇑P **P 02 42 54.5 -0.2**
baz=44,SNR=5.2
O20A White River Ci 44.05 79 ⇑P **P 02 42 54.4 -0.3**
baz=44,SNR=11
L22A Ellis Ranch, M 44.06 76 ⇓P **P 02 42 54.9 +0.1**
baz=44,SNR=5.9
R18A Canyonlands Na 44.08 82 ⇑P **P 02 42 54.0 -0.9**
baz=44,SNR=7.4
Y12C Blythe 44.09 91 ⇑P **P 02 42 54.4 -0.7**
baz=44
N21A Black Mountain 44.13 78 ⇓P **P 02 42 54.7 -0.6**
baz=44
V15A Kaibab Nationa 44.24 87 ⇓P **P 02 42 56.5 +0.3**
baz=44,SNR=13
RSSD Black Hills 44.33 72 *e*P **P 02 42 55.8 -1.1**
RSSD pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
RSSD Black Hills 44.33 72 *e*P **P 02 42 55.8 -1.0**
comp=Z,1.7nm,0.8s,mb3.8
P20A De Beque 44.34 80 ⇑P **P 02 42 56.8 -0.2**
baz=44
T17A Navajo Res., N 44.36 84 ⇓P **P 02 42 56.9 -0.3**
baz=44,SNR=9.9
S18A Hurst Farm, Bl 44.44 83 ⇓P **P 02 42 57.5 -0.3**
baz=44,SNR=19
KSRS Korea Array 44.45 277 P **P 02 42 58.8 +0.8**
comp=Z,0.6nm,0.4s,mb3.6,baz=110,slow=18,SNR=3.1
KSRS Korea Array 44.45 277 P **P 02 42 58.8 +0.9**
KSRS pmax pmax
comp=Z,1.0nm,0.4s,mb3.9
Y13A Salome 44.48 90 ⇓P **P 02 42 57.7 -0.6**
baz=44
R19A Curley Farm, L 44.53 82 ⇓P **P 02 42 58.1 -0.4**
baz=44,SNR=6.0
W15A Williams 44.59 87 ⇓P **P 02 42 58.9 -0.1**
baz=44
X14A Yava 44.65 89 ⇓P **P 02 42 59.4 -0.1**
baz=44,SNR=6.6
PV04 Paradox Valley 44.69 81 *e*P **P 02 42 59.8 0.0**
Q20A Ridgway Place, 44.73 80 ⇓P **P 02 42 59.3 -0.8**
baz=45,SNR=6.1
N22A Wattenberg Ran 44.76 77 ⇑P **P 02 42 59.6 -0.7**
baz=45
T18A Mexican Hat 44.85 83 ⇓P **P 02 43 00.2 -0.9**
baz=45,SNR=26
Y14A Wickenburg 44.92 89 ⇑P **P 02 43 01.4 -0.3**
baz=45,SNR=5.4
WUAZ Wupatki 44.93 86 ⇑P **P 02 43 01.9 +0.1**
baz=45
S19A Harvey Farm, M 44.94 82 ⇓P **P 02 43 01.3 -0.6**
baz=45,SNR=14
Z13A Yuma Proving G 44.99 91 ⇓P **P 02 43 02.0 -0.3**
baz=45
X15A Humboldt 45.05 88 ⇑P **P 02 43 02.9 +0.1**
baz=45,SNR=6.4
PV01 Paradox Valley 45.05 81 *e*P **P 02 43 02.4 -0.3**
comp=Z,2μm,1.0s
W16A Flagstaff 45.10 87 ⇓P **P 02 43 03.6 +0.5**
baz=45,SNR=6.6
R20A Redvale 45.14 81 ⇓P **P 02 43 02.8 -0.6**
baz=45,SNR=7.4
V17A Tonalea, Kykot 45.23 86 ⇑P **P 02 43 04.3 +0.1**
baz=45,SNR=14
U18A Rough Rock, Ch 45.31 84 ⇓P **P 02 43 04.8 +0.1**
baz=45,SNR=5.4
Y15A Casa Rosa Ranc 45.34 89 ⇑P **P 02 43 05.0 0.0**
baz=45
SMCO Snowmass 45.41 79 *e*P **P 02 43 05.4 -0.1**
comp=Z,1.7nm,0.6s,mb4.0
T19A Beclabito 45.58 83 ⇑P **P 02 43 06.6 -0.3**
baz=45,SNR=9.2
X16A Lo Mia Camp, P 45.59 88 ⇓P **P 02 43 07.1 0.0**
baz=46,SNR=6.7
Q22A Crested Butte, 45.64 80 ⇑P **P 02 43 07.0 -0.3**
baz=46
MVCO Mesa Verde 45.67 82 ⇓P **P 02 43 07.8 +0.2**
baz=46
MVCO Mesa Verde 45.67 82 *e*P **P 02 43 07.7 +0.1**
comp=Z,8.7nm,0.5s,mb4.9
ULM Lac du Bonnet 45.70 60 P **P 02 43 06.5 -1.2**
comp=Z,9.1nm,0.7s,mb4.8,baz=297,slow=6.9,SNR=9.4
ULM Lac du Bonnet 45.70 60 *e*P **P 02 43 06.7 -1.1**
comp=Z,7.8nm,0.9s,mb4.6
114A Black Gap (USA 45.78 90 ⇓P **P 02 43 08.7 +0.2**
baz=46
U19A Dine' College, 45.80 84 ⇓P **P 02 43 08.4 -0.3**
baz=46
S21A Coal Bank Pass 45.83 81 ⇑P **P 02 43 08.8 -0.1**
baz=46,SNR=7.6
Y16A Circle Bar Ran 45.92 88 ⇓P **P 02 43 10.3 +0.6**
baz=46
R22A Saguache, Gunn 46.12 80 ⇑P **P 02 43 11.7 +0.5**
baz=46,SNR=6.9
U20A Newcomb 46.18 83 ⇑P **P 02 43 11.9 +0.3**
baz=46
W18A Petrified Fore 46.22 86 ⇓P **P 02 43 12.5 +0.6**
baz=46
115A Sonoran Desert 46.23 90 ⇓P **P 02 43 12.6 +0.5**
baz=46
V19A Window Rock 46.27 84 ⇓P **P 02 43 12.8 +0.5**
baz=46
Y17A Roosevelt 46.44 88 ⇓P **P 02 43 13.9 +0.1**
baz=46
X18A Snowflake 46.46 86 ⇑P **P 02 43 14.0 +0.1**
baz=46
V20A Brimhall 46.58 84 ⇓P **P 02 43 14.8 +0.1**
baz=46
AGMN Agassiz Nation 46.76 62 *e*P **P 02 43 14.6 -1.5**
comp=Z,11nm,1.0s,mb4.8
T22A Edith 46.79 82 ⇓P **P 02 43 16.9 +0.5**
baz=47,SNR=11
Y18A Canyon Day Jun 46.90 87 ⇓P **P 02 43 17.7 +0.4**
baz=47
X20A Quemado 47.37 85 ⇓P **P 02 43 21.5 +0.6**
baz=47,SNR=11
TUC Tucson 47.39 89 *e*P **P 02 43 20.9 -0.3**
TUC pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
TUC Tucson 47.39 89 *e*P **P 02 43 20.9 -0.3**
comp=Z,5.3nm,0.8s,mb4.5
V22A San Miguel Ran 47.48 83 ⇑P **P 02 43 21.5 -0.3**
baz=47,SNR=7.0
W21A San Fidel 47.53 84 ⇓P **P 02 43 21.8 -0.4**
baz=47
118A Homack Ranch, 47.69 88 ⇓P **P 02 43 23.2 -0.2**
baz=48,SNR=5.7
X21A Alamocita Cree 47.87 85 ⇑P **P 02 43 25.5 +0.6**
baz=48,SNR=11
119A Ashpeak Ranch, 48.02 88 ⇓P **P 02 43 25.9 -0.1**
baz=48
V23A Ortiz Mt. (NFS 48.04 82 ⇓P **P 02 43 26.6 +0.4**
baz=48,SNR=5.6
W22A Albuquerque 48.04 84 ⇑P **P 02 43 26.3 +0.1**
baz=48
218A Dragoon 48.08 89 ⇓P **P 02 43 26.3 -0.2**
baz=48
Y21A Point of Rocks 48.23 85 ⇑P **P 02 43 28.1 +0.5**
baz=48,SNR=7.3
Z20A Nine Sixteen R 48.24 87 ⇓P **P 02 43 27.9 +0.1**
baz=48,SNR=5.3
LAZ Ladron 48.31 84 *e*P **P 02 43 28.6 +0.4**
comp=Z,10nm,1.2s,mb4.7
X22A Bernardo 48.32 84 ⇑P **P 02 43 29.0 +0.7**
baz=48,SNR=7.6
ANMO Albuquerque 48.38 83 P **P 02 43 28.9 +0.2**
comp=Z,7.8nm,1.1s,mb4.7,baz=313,slow=8.3,SNR=17
ANMO Albuquerque 48.38 83 *e*P **P 02 43 28.5 -0.3**
ANMO pmax pmax
comp=Z,3.0nm,1.2s
ANMO Albuquerque 48.38 83 *e*P **P 02 43 28.5 -0.3**
comp=Z,3.0nm,1.2s,mb4.2
W23A Werner Place, 48.44 83 ⇓P **P 02 43 29.2 -0.1**
baz=48
318A Bisbee 48.48 89 ⇓P **P 02 43 29.3 -0.3**
baz=48
120A U Bar Ranch, L 48.59 87 ⇑P **P 02 43 30.8 +0.4**
baz=48
Z21A St. Cloud Mine 48.69 86 ⇓P **P 02 43 31.4 +0.2**
baz=49,SNR=7.2
Y22A Socorro 48.72 85 ⇑P **P 02 43 31.8 +0.3**
baz=49,SNR=17
U25A Circle Dot Ran 48.73 80 ⇓P **P 02 43 31.5 0.0**
baz=49
BNM Barren Site 48.79 84 *e*P **P 02 43 32.3 +0.3**
comp=Z,17nm,1.1s,mb5.0
W24A Lazy 6 Ranch, 48.87 82 ⇓P **P 02 43 32.5 -0.1**
baz=49,SNR=7.9
ECSD EROS Data Cent 48.94 68 *e*P **P 02 43 31.2 -1.7**
comp=Z,3.2nm,0.8s,mb4.4
V25A Rancho No Teng 48.96 81 ⇓P **P 02 43 33.2 0.0**
baz=49
220A Playas Peak, P 49.09 88 ⇑P **P 02 43 34.0 -0.2**
baz=49,SNR=6.8
121A Cookes Peak, D 49.13 87 ⇓P **P 02 43 34.6 0.0**
baz=49,SNR=5.8
U26A Atchley Ranch, 49.14 80 ⇓P **P 02 43 34.4 -0.2**
baz=49,SNR=10
Y23A Lovelace Mesa, 49.30 84 ⇓P **P 02 43 36.0 +0.2**
baz=49,SNR=5.1
EYMN Ely 49.38 61 *e*P **P 02 43 34.8 -1.5**
comp=Z,12nm,1.0s,mb4.9
W25A X Bar L Ranch, 49.45 82 ⇑P **P 02 43 37.1 0.0**
baz=49,SNR=11
320A Kipp Ranch, An 49.47 88 ⇓P **P 02 43 37.0 -0.2**
baz=49,SNR=5.3
V26A Tequesquite Ra 49.50 81 ⇓P **P 02 43 37.4 0.0**
baz=49,SNR=9.8
122A Conniff Cattle 49.52 86 ⇑P **P 02 43 37.8 +0.2**
baz=49
Y24A Capitan 49.69 84 ⇓P **P 02 43 39.1 +0.3**
baz=50,SNR=17
Z24A Sheeppen Canyo 50.12 84 ⇑P **P 02 43 42.1 0.0**
baz=50,SNR=10
Y25A Mesa, Roswell 50.15 83 ⇑P **P 02 43 41.9 -0.4**
baz=50,SNR=5.6
TLY Talaya 50.17 306 *e*P **P 02 43 42.5 +0.3**
TLY *e*S **S 02 51 07.4 +15**
TLY pmax pmax
comp=Z,15nm,1.7s,mb4.8
X26A CR and CF Fran 50.29 82 ⇓P **P 02 43 43.0 -0.5**
baz=50
223A Chaparral, Ant 50.34 86 ⇑P **P 02 43 43.7 -0.1**
baz=50
W27A Bowe Ranch, En 50.42 81 ⇓P **P 02 43 44.0 -0.3**
baz=50
124A Stringfield Ra 50.48 85 ⇑P **P 02 43 44.6 -0.3**
baz=50,SNR=6.4
Z25A Roswell 50.56 84 ⇓P **P 02 43 44.8 -0.7**
baz=50
Y26A Elida 50.70 83 ⇓P **P 02 43 46.3 -0.2**
baz=50
SPITS Spitsbergen Ar 50.86 358 P **P 02 43 47.6 +0.5**
comp=Z,4.9nm,0.9s,mb4.5,baz=39,slow=5.4,SNR=9.1
SPITS pP pP 02 44 01.7 +8.7
comp=Z,1.8nm,0.5s,baz=37,slow=4.4,SNR=3.0
SPITS PcP PcP 02 45 02.1 -1.4
comp=Z,1.9nm,0.6s,baz=46,slow=5.6,SNR=2.9
224A Cornudas Mount 50.86 86 ⇑P **P 02 43 47.5 -0.3**
baz=51,SNR=18
SONM Songino Array 50.98 301 P **P 02 43 48.1 -0.3**
comp=Z,1.4nm,0.6s,mb4.1,baz=44,slow=7.6,SNR=6.7
SONM pP pP 02 44 03.2 +8.8
comp=Z,2.4nm,0.7s,baz=44,slow=7.7,SNR=6.7
125A Gardner Draw, 51.01 84 ⇓P **P 02 43 48.8 0.0**
baz=51,SNR=8.7
Z26A Caprock 51.03 83 ⇑P **P 02 43 48.6 -0.4**
baz=51,SNR=12
ZAK Zakamensk 51.12 305 *e*P **P 02 43 44.9 -4.5**
ZAK pmax pmax
comp=Z,8.0nm,1.5s,mb4.4
Y27A Causey 51.13 82 ⇓P **P 02 43 49.4 -0.3**
baz=51,SNR=12
DAG Danmarks Havn 51.16 8⇑*i*P **P 02 43 49.3 -0.1**
DAG pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
DAG Danmarks Havn 51.16 8⇑*i*P **P 02 43 49.3 -0.1**
comp=Z,3.4nm,0.7s,mb4.4
MNTX Cornudas Mount 51.20 86 *e*P **P 02 43 50.0 -0.3**
comp=Z,11nm,0.8s,mb4.8
225A Deer Hill, Car 51.28 85 ⇑P **P 02 43 50.9 +0.1**
baz=51,SNR=13
324A Moseley Ranch, 51.31 86 ⇓P **P 02 43 50.6 -0.5**
baz=51,SNR=9.4
MSTX Muleshoe 51.32 82 ⇑P **P 02 43 50.6 -0.6**
baz=51,SNR=7.0
126A Clayton Basin, 51.42 84 ⇓P **P 02 43 51.3 -0.7**
baz=51,SNR=11
Z27A Tatum 51.48 83 ⇓P **P 02 43 51.4 -0.9**
baz=51,SNR=8.0
MOY Mondy 51.52 307 *e*P sP 02 44 07.1 +6.4
325A Bean Ranch, Si 51.68 86 ⇑P **P 02 43 53.8 -0.1**
baz=52,SNR=25
226A Malaga, Loving 51.76 84 ⇓P **P 02 43 54.1 -0.4**
baz=52,SNR=19
127A Arkansas Junct 51.81 83 ⇓P **P 02 43 54.3 -0.6**
baz=52
425A Indio Mountain 52.07 86 ⇓P **P 02 43 56.7 -0.1**
baz=52,SNR=18
SUMG Summit 52.27 16 *e*P **P 02 43 58.9 +1.2**
comp=Z,18nm,0.9s,mb5.0
HHC Hu-ho-hao-te 52.33 291 *e*P **P 02 44 01.9 +3.3**
HHC PcP PcP 02 45 13.0 +3.5
HHC PP PP 02 46 01.5 +4.5
HHC ScP ScP 02 49 06.3 +0.9
HHC PcS PcS 02 49 10.0 +2.2
HHC S **S 02 51 25.0 +2.1**
HHC ScS ScS 02 53 46.0 -1.3
HHC SS SS 02 54 59.0 -1.1
326A Caldwell Ranch 52.34 85 ⇑P **P 02 43 58.3 -0.5**
baz=52,SNR=22
426A McDonald Obser 52.75 86 ⇓P **P 02 44 01.2 -0.6**
baz=53,SNR=15
427A Hayter Ranch, 53.02 85 ⇑P **P 02 44 03.1 -0.8**
baz=53
328A Wristen Ranch, 53.03 84 ⇓P **P 02 44 02.9 -1.0**
baz=53,SNR=12
526A Mary Lane Ranc 53.13 86 ⇑P **P 02 44 04.2 -0.5**
baz=53,SNR=14
527A Woodward Ranch 53.37 86 ⇑P **P 02 44 05.7 -0.7**
baz=53,SNR=20
626A Big Bend Ranch 53.45 87 ⇓P **P 02 44 06.4 -0.6**
baz=53,SNR=18
428A Kincaid Ranch, 53.55 85 ⇑P **P 02 44 07.4 -0.4**
baz=53,SNR=16
NJ2 Nanjing 53.62 278 *e*P **P 02 44 10.2 +1.9**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
528A Cox Ranch, San 53.88 85 ⇑P **P 02 44 09.5 -0.6**
baz=54,SNR=15
TXAR Lajitas Array 53.90 87 P **P 02 44 09.6 -0.7**
comp=Z,17nm,0.7s,mb5.1,baz=301,slow=5.9,SNR=256
627A Terlingua Ranc 53.99 86 ⇑P **P 02 44 10.2 -0.7**
baz=54,SNR=16
628A Black Gap, Mar 54.28 86 ⇑P **P 02 44 12.1 -1.0**
baz=54
JCT Junction City 55.53 83 *e*P **P 02 44 20.7 -1.4**
JCT pmax pmax
comp=Z,14nm,1.1s,mb4.9
JCT Junction City 55.53 83 *e*P **P 02 44 20.7 -1.4**
comp=Z,14nm,1.1s,mb4.9
SCHQ Schefferville 57.08 42 P **P 02 44 32.3 -0.5**
comp=Z,9.9nm,0.9s,mb4.9,baz=319,slow=6.8,SNR=15
SCHQ Schefferville 57.08 42 *e*P **P 02 44 32.8 0.0**
comp=Z,10nm,0.9s,mb4.9
ZALV Zalesovo Beam 57.58 317 P **P 02 44 36.7 +0.4**
comp=Z,1.0nm,0.4s,mb4.2,baz=29,slow=3.4,SNR=3.6
ZALV pPcP 02 45 46.4
comp=Z,2.4nm,0.6s,baz=37,slow=4.5,SNR=4.5
ZALV Zalesovo Beam 57.58 317 P **P 02 44 36.7 +0.4**
ZALV pPcP 02 45 46.4
ARCES ARCESS Array B 59.01 353 P **P 02 44 46.0 -0.2**
comp=Z,2.0nm,0.7s,mb4.3,baz=14,slow=7.6,SNR=11
ARCES pPcP 02 45 51.0
comp=Z,1.9nm,0.6s,baz=28,slow=5.5,SNR=4.7
ARCES ARCESS Array B 59.01 353 P **P 02 44 46.0 -0.2**
ARCES pPcP 02 45 51.0
PLAL Pickwick Lake 59.62 71 *e*P **P 02 44 48.5 -2.3**
comp=Z,5.7nm,1.0s,mb4.6
LZH Lanzhou 60.01 291 *e*P **P 02 44 54.7 +1.2**
LZH pP pP 02 45 04.8 +5.2
LZH sP sP 02 45 08.9 +7.0
LZH PP PP 02 47 08.5 +2.9
LZH pmax pmax
comp=Z,19nm,1.3s,mb5.0
LZH pmax pmax
comp=Z,65nm,7.6s
LZH LR LR
comp=N,430nm,15.2s
LZH LR LR
comp=Z,630nm,18.3s,MS4.8
KURK Kurchatov 62.55 318 P **P 02 45 11.1 +0.6**
comp=Z,8.9nm,0.7s,mb5.0,baz=46,slow=6.9,SNR=30
KURK pP pP 02 45 26.0 +9.4
comp=Z,5.7nm,0.5s,baz=45,slow=7.5,SNR=12
KURK Kurchatov 62.55 318 *e*P **P 02 45 10.0 -0.5**
KURK pmax pmax
comp=Z,16nm,0.8s,mb5.2
KURK Kurchatov 62.55 318 *e*P **P 02 45 10.0 -0.4**
comp=Z,16nm,0.8s,mb5.2
WMQ Urumqi 63.41 307 *e*P **P 02 45 18.0 +1.7**
WMQ pP pP 02 45 28.0 +5.6
WMQ sP sP 02 45 32.0 +7.3
WMQ PP PP 02 47 39.0 +3.7
WMQ S **S 02 53 47.0 -0.8**
WMQ ScS ScS 02 55 05.0 -3.2
WMQ SS SS 02 57 56.0 +2.1
WMQ pmax pmax
comp=Z,17nm,1.0s,mb5.1
WMQ LR LR
comp=N,2μm,18.0s,MS5.5
WMQ LR LR
comp=E,2μm,20.0s,MS5.5
WMQ LR LR
comp=Z,590nm,18.0s,MS4.8
CD2 Chengdu 63.69 287 *e*P **P 02 45 19.5 +1.1**
CD2 pP pP 02 45 29.2 +4.8
CD2 sP sP 02 45 33.6 +6.9

CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
CD2 pmax pmax
comp=Z,60nm,5.8s
MK31 Makanchi Array 63.84 313 *e*P **P 02 45 18.2 -0.9**
MKAR Makanchi Array 63.84 313 P **P 02 45 18.4 -0.7**
comp=Z,6.0nm,0.7s,mb4.4,baz=48,slow=7.8,SNR=16
MKAR pP pP 02 45 33.1 +8.0
comp=Z,3.7nm,0.4s,baz=46,slow=8.7,SNR=9.2
MKAR Makanchi Array 63.84 313 *c*e*P* **P 02 45 18.3 -0.8**
MKAR pmax pmax
comp=Z,3.0nm,0.7s
BVAR Borovoye Array 64.05 324 P **P 02 45 20.6 +0.3**
comp=Z,10nm,0.6s,mb5.0,baz=54,slow=7.3,SNR=35
BVAR pP pP 02 45 35.6 +9.2
comp=Z,9.8nm,0.5s,baz=51,slow=6.2,SNR=11
BRVK Borovoye 64.06 324 ⇓*i*P **P 02 45 20.2 -0.2**
BRVK pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
BRVK Borovoye 64.06 324 *e*P **P 02 45 20.5 +0.1**
comp=Z,8.5nm,0.9s,mb4.8
JOF Joensuu 64.90 349 *e*p **P 02 45 24.7 -1.1**
comp=Z,3.6nm,0.4s,mb4.8
JOF Joensuu 64.90 349 *e*p **P 02 45 24.7 -1.1**
comp=Z,3.6nm,0.4s,mb4.8
GYA Guiyang 65.11 282 P **P 02 45 27.8 +0.1**
GYA pP pP 02 45 38.7 +4.9
GYA sP sP 02 45 44.0 +7.9
GYA PP PP 02 47 52.3 +1.6
GYA ScP 02 49 59.0
GYA S S 02 54 05.3 -4.1
GYA SKS 02 55 16.9
GYA SS SS 02 58 19.0 -2.3
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
GYA pmax pmax
comp=Z,80nm,5.3s
GYA LR LR
comp=N,430nm,18.9s,MS4.8
GYA LR LR
comp=E,410nm,19.0s,MS4.8
GYA LR LR
comp=Z,460nm,18.7s,MS4.7
ARU Arti 65.20 332 *d i*P **P 02 45 27.5 -0.3**
ARU *e* 02 45 56.5
ARU *e* 02 47 48.0
ARU S S 02 54 10.1 +0.6
ARU pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
KAF Kangasniemi 66.24 351 *e*P **P 02 45 33.4 -1.0**
KAF pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
KAF Kangasniemi 66.24 351 *e*p **P 02 45 33.4 -1.0**
comp=Z,3.0nm,0.5s,mb4.6
KAF Kangasniemi 66.24 351 *e*p **P 02 45 33.4 -1.0**
comp=Z,3.0nm,0.5s,mb4.6
FINES FINESS Array B 66.92 351 P **P 02 45 38.2 -0.6**
comp=Z,2.4nm,0.6s,mb4.4,baz=12,slow=7.8,SNR=14
FINES pP pP 02 45 53.4 +8.5
comp=Z,3.9nm,0.8s,baz=17,slow=7.7,SNR=6.8
NB2 NORSAR Subarra 68.15 359 P **P 02 45 46.6 +0.1**
comp=Z,4.0nm,0.6s,mb4.6,baz=2.1,slow=6.5
NOA NORSAR Array B 68.15 359 P **P 02 45 46.9 +0.3**
comp=Z,4.0nm,0.7s,mb4.6,baz=0.7,slow=6.3,SNR=20
KMI Kunming 68.50 284 P **P 02 45 51.0 +1.7**
KMI pP pP 02 46 01.8 +6.4
KMI sP sP 02 46 06.0 +8.3
KMI pmax pmax
comp=Z,11nm,0.5s,mb5.1
VSU Vasula 69.78 350 *e*P **P 02 45 56.8 +0.1**
VSU pmax pmax
comp=Z,12nm,0.9s,mb4.8
TKM2 Tokmak 2 69.86 314 *e*P **P 02 45 57.8 +0.3**
TKM2 pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
TKM2 Tokmak 2 69.86 314 *e*P **P 02 45 57.8 +0.3**
comp=Z,9.8nm,0.9s,mb4.7
AKTK Aktyubinsk 70.51 329 P **P 02 46 01.3 -0.1**
AKTK pP pP 02 46 16.6 +9.1
AKTO Aktyubinsk 70.51 329 P **P 02 46 01.3 0.0**
comp=Z,13nm,0.7s,mb5.0,baz=53,slow=6.8,SNR=57
AKTO pP pP 02 46 16.6 +9.1
comp=Z,19nm,0.5s,baz=71,slow=8.8,SNR=19
AAK Ala-Archa 70.59 315 P **P 02 46 02.5 +0.6**
comp=Z,3.4nm,0.6s,mb4.5,baz=179,slow=5.7,SNR=5.5
AAK pP pP 02 46 17.1 +9.0
comp=Z,11nm,0.7s,baz=115,slow=4.0,SNR=7.7
AAK Ala-Archa 70.59 315 *c i*P **P 02 46 02.4 +0.5**
AAK pmax pmax
comp=Z,16nm,2.5s,mb4.5
AAK Ala-Archa 70.59 315 *e*P **P 02 46 02.0 +0.1**
comp=Z,17nm,0.8s,mb5.0
EKS2 Erkin-Say 70.89 315 *e*P **P 02 46 03.7 -0.1**
comp=Z,13nm,0.8s,mb4.9
UCH Uchtor 70.90 314 *e*P **P 02 46 05.0 +1.2**
comp=Z,5.6nm,0.9s,mb4.5
AML Almayashu 71.34 315 *e*P **P 02 46 07.0 +0.4**
comp=Z,12nm,0.9s,mb4.8
OBN Obninsk 71.62 344 ⇑*i*P **P 02 46 07.0 -1.0**
OBN *e*S S 02 55 23.8 -2.2
OBN pmax pmax
comp=Z,18nm,2.5s,mb4.6
OBN MLR MLR
comp=Z,200nm,21.0s,MS4.4
IZAR Zarasai 72.50 350 *e*P **P 02 46 13.4 +0.2**
IZAR AMB AMB 02 46 13.7
comp=Z,4.7nm,0.7s,mb4.5
ISAL Salakas 72.68 350 *e*P **P 02 46 14.4 +0.1**
ISAL AMB AMB 02 46 15.7
comp=Z,4.1nm,1.0s,mb4.3
IDID Didziasalis 72.87 349 *e*P **P 02 46 15.6 +0.2**
IDID AMB AMB 02 46 16.7
comp=Z,5.5nm,1.0s,mb4.5
IIGN Ignalina 72.89 350 *e*P **P 02 46 15.8 +0.3**
IIGN AMB AMB 02 46 16.0
comp=Z,6.6nm,0.8s,mb4.6
VRHR Novokhopersk 74.41 339 *e*P **P 02 46 24.2 -0.3**
VRHR *e* 02 46 39.4
VRHR pmax pmax
comp=Z,20nm,0.6s,mb5.2
VRHR pmax pmax
comp=N,4.0nm,0.4s
VRHR pmax pmax
comp=E,10.0nm,0.9s
SUW Suwalki 74.53 351 *e*P **P 02 46 24.4 -0.7**
VSR Storozhevoye 74.82 341 *e*P **P 02 46 27.0 +0.1**
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VSR pmax pmax
comp=N,3.0nm,0.4s
VSR pmax pmax
comp=E,10.0nm,0.8s
BSEG Bad Segeberg 75.28 359 *e*P **P 02 46 30.8 +1.2**
TAPN Taplejung 75.72 296 *e*P **P 02 46 31.4 -1.1**
comp=E,18nm,0.8s,mb5.1
CMAR Chiang Mai Arr 75.80 282 P **P 02 46 32.2 -0.8**
comp=E,0.8nm,0.6s,mb3.8,baz=28,slow=5.7,SNR=4.3
CMAR pP pP 02 46 47.0 +7.8
comp=E,2.2nm,0.8s,baz=26,slow=6.2,SNR=2.6
GUN Gumba 76.32 297 *e*P **P 02 46 41.1 +5.1**
comp=E,16nm,0.4s,mb5.3
RAMN Ramite 76.66 296 *e*P **P 02 46 35.0 -2.9**
comp=E,26nm,0.8s,mb5.2
NRDL Niedersach Rie 76.73 359 *e*P **P 02 46 38.4 +0.6**
DMN Daman 76.99 298 *e*P **P 02 46 43.6 +3.9**
comp=E,16nm,0.8s,mb5.0
AKASG Malin Array Be 77.06 347 P **P 02 46 38.9 -0.8**
comp=E,8.3nm,0.6s,mb4.9,baz=11,slow=5.3,SNR=20
AKASG pP pP 02 46 54.2 +8.3
comp=E,4.1nm,0.6s,baz=15,slow=5.5,SNR=7.4
AKASG Malin Array Be 77.06 347 P **P 02 46 38.9 -0.8**
AKASG pP pP 02 46 54.2 +8.2
AKBB Malin Array Si 77.06 347 *e*P **P 02 46 38.9 -0.8**
KIEV Kiev 77.07 347 *e*P **P 02 46 38.8 -1.0**
KIEV pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
KIEV Kiev 77.07 347 *e*P **P 02 46 38.8 -1.0**
comp=Z,7.0nm,0.6s,mb4.8
CLZ Clausthal 77.38 359 *e*P **P 02 46 42.5 +1.0**
CLL Collm 77.86 357 *e*P **P 02 46 44.1 -0.1**
CLL Collm 77.86 357 ⇓*i*P **P 02 46 44.3 +0.1**
CLL *i* *PP pP 02 46 59.6 +9.2
CLL pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
CLL Collm 77.86 357 ⇓*i*P **P 02 46 44.3 +0.1**
comp=Z,8.0nm,0.9s,mb4.7
CLL *i* pP pP 02 46 59.6 +9.2
CLL Collm 77.86 357 ⇓*i*P **P 02 46 44.3 +0.1**
comp=Z,8.0nm,0.9s,mb4.7
CLL *i* pPcP 02 46 59.6
comp=Z,9.0nm,1.0s
BRG Berggiesshubel 78.26 357 *e*P **P 02 46 46.7 +0.3**
BRG Berggiesshubel 78.26 357 PKP **P 02 46 46.0 -0.4**
BRG *i* 02 47 02.2
comp=Z,11nm,1.0s
BRG PP PP 02 49 28.0 -14
UPC Upice 78.54 355 *e*P **P 02 46 48.2 +0.2**
UPC *e* 02 47 03.8
UPC Upice 78.54 355 ⇓*e*P **P 02 46 48.2 +0.2**
UPC *ex* x 02 47 03.8
MOX Moxa 78.56 358 *e*P **P 02 46 48.7 +0.6**
comp=Z,18nm,1.0s,mb5.0
MOX *e* 02 47 03.8
MOX Moxa 78.56 358 *e*P **P 02 46 48.5 +0.4**
MOX Moxa 78.56 358 *e*P **P 02 46 48.7 +0.6**
MOX *e* 02 47 03.8
MOX pmax pmax
comp=Z,18nm,1.0s,mb5.0
PVCC Panska Ves 78.58 356 *e*P **P 02 46 48.7 +0.5**
PVCC *e* 02 47 04.0
PVCC Panska Ves 78.58 356 ⇓*e*P **P 02 46 48.7 +0.5**
PVCC *ex* x 02 47 04.0
MEM Membach 78.59 2 P **P 02 46 48.9 +0.7**
comp=Z,3.9nm,1.2s,mb4.2
SNF Seneffe 78.65 3 P **P 02 46 49.3 +0.7**
DPC Dobruska-Polom 78.68 355 ⇓*i*P **P 02 46 49.4 +0.7**
DPC *e* 02 47 04.8
DPC Dobruska-Polom 78.68 355 ⇓*i*P **P 02 46 49.4 +0.7**
DPC *ex* x 02 47 04.8
BCLA Clavier 78.76 2 P **P 02 46 49.5 +0.3**
comp=Z,5.5nm,1.1s,mb4.4
KWP Kalwaria Pacla 78.91 351 *e*P **P 02 46 50.2 +0.2**
KWP *e* 02 47 06.0
KWP Kalwaria Pacla 78.91 351 *e*P **P 02 46 50.1 +0.1**
KWP pmax pmax
comp=Z,26nm,1.0s,mb5.1
KWP Kalwaria Pacla 78.91 351 *e*P **P 02 46 50.1 +0.1**
comp=Z,26nm,1.0s,mb5.1
KWP Kalwaria Pacla 78.91 351 ⇑*i*P **P 02 46 50.4 +0.4**
NKC Novy Kostel 78.95 358 ⇓*i*P **P 02 46 50.9 +0.7**
NKC *e* 02 47 06.3
NKC Novy Kostel 78.95 358 ⇓*i*P **P 02 46 50.9 +0.7**
NKC *ex* x 02 47 06.3
TNS Taunus Mts 79.01 0 *e*P **P 02 46 51.1 +0.6**
DOU Dourbes 79.07 3 P **P 02 46 51.6 +0.7**
comp=Z,4.8nm,1.4s,mb4.2
GIVF Givet 79.07 3 *e*P **P 02 46 51.4 +0.5**
OKC Ostrava-Krasne 79.08 354 *e*P **P 02 46 51.0 0.0**
OKC *e* 02 47 06.4
OKC Ostrava-Krasne 79.08 354 ⇓*e*P **P 02 46 51.0 0.0**
OKC *ex* x 02 47 06.4
BAIF Baives 79.09 3 *e*P **P 02 46 51.4 +0.4**
comp=Z,16nm,0.8s,mb4.7
BAIF Baives 79.09 3 *e*P **P 02 46 51.4 +0.4**
BAIF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
BAIF Baives 79.09 3 *e*P **P 02 46 51.4 +0.4**
comp=Z,8.3nm,0.8s,mb4.7
PRU Pruhonice 79.12 356 ⇓*i*P **P 02 46 51.7 +0.5**
PRU *e* 02 47 07.4
PRU Pruhonice 79.12 356 ⇓*i*P **P 02 46 51.7 +0.5**
PRU *ex* x 02 47 07.4
MORC Moravsky Berou 79.18 354 ⇓*i*P **P 02 46 51.3 -0.2**
STHS Stebnicka Huta 79.26 352 *e*P **P 02 46 53.0 +1.1**
STHS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
STHS Stebnicka Huta 79.26 352 *e*P **P 02 46 53.0 +1.1**
comp=Z,3.0nm,0.9s,mb4.2
STHS Stebnicka Huta 79.26 352 *e*P **P 02 46 53.0 +1.1**
GRF Grafenberg Arr 79.52 358 *e*P **P 02 46 54.3 +1.0**
comp=Z,30nm,1.1s,mb5.1
GRF *e* 02 47 09.3
KOLS Kolonicke sedl 79.64 351 *e*P **P 02 46 54.6 +0.6**
KOLS *e* pP 02 47 00.4 +0.2
KOLS pmax pmax
comp=Z,10.0nm,1.8s,mb4.4
KOLS Kolonicke sedl 79.64 351 *e*P **P 02 46 54.6 +0.6**
comp=Z,9.9nm,1.8s,mb4.4
KOLS *e* pP 02 47 00.4 +0.2
KOLS Kolonicke sedl 79.64 351 *e*P **P 02 46 54.6 +0.6**
KOLS *e*pP pP 02 47 00.4 +0.2
VRAC Vranov 79.70 355 ⇑*i*P **P 02 47 10.4 +16**
GOF Gofitskoye 79.71 336 *e*P **P 02 46 41.6 -13**
GOF pmax pmax
comp=Z,40nm,0.8s,mb5.4
TREC Trest 79.78 356 *e*P **P 02 46 54.7 0.0**
TREC *e* 02 47 10.3
TREC Trest 79.78 356 ⇓*e*P **P 02 46 54.7 0.0**
TREC *ex* x 02 47 10.3
KHC Kasperske Hory 80.02 357 ⇓*i*P **P 02 46 56.9 +0.8**
KHC *e* 02 47 12.2
KHC Kasperske Hory 80.02 357 *e*P **P 02 46 57.0 +0.9**
comp=Z,17nm,1.5s,mb4.8
KHC Kasperske Hory 80.02 357 ⇓*i*P **P 02 46 56.9 +0.8**
KHC *ex* x 02 47 12.2
FLN La Foliniere 80.15 6 *e*P **P 02 46 56.5 -0.3**
comp=Z,6.5nm,0.6s,mb4.5
FLN La Foliniere 80.15 6 *e*P **P 02 46 56.5 -0.3**
FLN pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
FLN La Foliniere 80.15 6 *e*P **P 02 46 56.5 -0.3**
comp=Z,3.3nm,0.6s,mb4.4
KECS Kecovo 80.25 352 *e*P **P 02 46 58.0 +0.7**
KECS *e* 02 47 11.6
KECS pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
KECS Kecovo 80.25 352 *e*P **P 02 46 58.0 +0.7**
comp=Z,2.5nm,1.1s,mb4.1
KECS *e* 02 47 11.6
KECS Kecovo 80.25 352 *e*P **P 02 46 58.0 +0.7**
KECS *e* 02 47 11.6
GEC2 GERESS Array S 80.30 357 *e*P **P 02 46 57.6 0.0**
GEC2 GERESS Array S 80.30 357 *e*P **P 02 46 57.8 +0.2**
comp=Z,792nm,0.9s
GERES GERESS Array B 80.30 357 P **P 02 46 58.1 +0.5**
comp=Z,3.3nm,0.8s,mb4.3,baz=15,slow=5.5,SNR=29
GERES pP pP 02 47 13.3 +9.5
comp=Z,2.1nm,0.7s,baz=28,slow=6.0,SNR=6.3
LDF La Druitiere 80.34 6 *e*P **P 02 46 57.5 -0.3**
comp=Z,28nm,0.8s,mb5.0
LDF La Druitiere 80.34 6 *e*P **P 02 46 57.5 -0.3**
LDF pmax pmax
comp=Z,14nm,0.8s,mb4.9
LDF La Druitiere 80.34 6 *e*P **P 02 46 57.5 -0.3**
comp=Z,14nm,0.8s,mb5.0
ROSF Rostrenen 80.35 8 *e*P **P 02 46 58.3 +0.4**
comp=Z,97nm,1.3s,mb5.3
ROSF Rostrenen 80.35 8 *e*P **P 02 46 58.3 +0.4**
ROSF pmax pmax
comp=Z,48nm,1.3s,mb5.3
ROSF Rostrenen 80.35 8 *e*P **P 02 46 58.3 +0.4**
comp=Z,48nm,1.3s,mb5.3
VYHS Vyhne 80.37 353 *e*P **P 02 46 58.5 +0.5**
VYHS *e* 02 47 13.7
VYHS pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
VYHS Vyhne 80.37 353 *e*P **P 02 46 58.5 +0.5**
comp=Z,1.8nm,0.9s,mb4.0
VYHS *e* 02 47 13.7
VYHS Vyhne 80.37 353 *e*P **P 02 46 58.4 +0.4**
VYHS *e* 02 47 13.7
GRR Gorron 80.49 7 *e*P **P 02 46 58.6 0.0**
comp=Z,16nm,0.6s,mb4.8
GRR Gorron 80.49 7 *e*P **P 02 46 58.6 0.0**
GRR pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
GRR Gorron 80.49 7 *e*P **P 02 46 58.6 0.0**
comp=Z,7.9nm,0.6s,mb4.8
SGMF Saint Gilles 80.49 8 *e*P **P 02 46 58.7 +0.1**
comp=Z,14nm,0.7s,mb4.7
SGMF Saint Gilles 80.49 8 *e*P **P 02 46 58.7 +0.1**
SGMF pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
SGMF Saint Gilles 80.49 8 *e*P **P 02 46 58.7 +0.1**
comp=Z,6.9nm,0.7s,mb4.7
MEZF Maizieres J'vi 80.68 3 *e*P **P 02 46 59.4 -0.2**
comp=Z,7.3nm,0.7s,mb4.4
MEZF Maizieres J'vi 80.68 3 *e*P **P 02 46 59.4 -0.2**
comp=Z,7.3nm,0.7s,mb4.7
QUIF Quistinic 80.78 8 *e*P **P 02 47 00.9 +0.7**
CDF Champ du Feu 80.81 1 *e*P **P 02 47 00.6 +0.3**
comp=Z,9.3nm,0.7s,mb4.5
CDF Champ du Feu 80.81 1 *e*P **P 02 47 00.6 +0.3**
CDF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
CDF Champ du Feu 80.81 1 *e*P **P 02 47 00.6 +0.3**
comp=Z,4.7nm,0.7s,mb4.5
KIV Kislovodsk 80.83 336 *e*P **P 02 47 00.1 -0.4**
KIV pmax pmax
comp=Z,11nm,1.1s,mb4.7
BFO Black Forest 80.90 0 *e*P **P 02 47 01.3 +0.5**
BFO Black Forest 80.90 0 *c e*P **P 02 47 02.0 +1.2**
CONA Conrad Observa 81.12 355 ⇑*i*pP pP 02 47 03.3 -5.0
comp=Z,7.6nm,1.3s
HAU Haudompre 81.20 2 *e*P **P 02 47 02.5 +0.1**
comp=Z,16nm,1.0s,mb4.6
HAU Haudompre 81.20 2 *e*P **P 02 47 02.5 +0.1**
HAU pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
HAU Haudompre 81.20 2 *e*P **P 02 47 02.5 +0.1**
comp=Z,7.9nm,1.0s,mb4.6
HINF Hinteralfeld 81.40 1 *e*P **P 02 47 03.5 0.0**
comp=Z,7.2nm,0.6s,mb4.5
HINF Hinteralfeld 81.40 1 *e*P **P 02 47 03.5 0.0**
HINF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
HINF Hinteralfeld 81.40 1 *e*P **P 02 47 03.5 0.0**
comp=Z,3.6nm,0.6s,mb4.5
LOR Lormes 81.87 3 *e*P **P 02 47 06.0 0.0**
comp=Z,21nm,0.9s,mb4.8
LOR Lormes 81.87 3 *e*P **P 02 47 06.0 0.0**
LOR pmax pmax
comp=Z,11nm,0.9s,mb4.8
LOR Lormes 81.87 3 *e*P **P 02 47 06.0 0.0**
comp=Z,11nm,0.9s,mb4.8
WTTA Wattenberg 81.94 358 ⇑*i*PcP PcP 02 47 07.7 -4.2
comp=Z,6.1nm,0.6s
SSF Saint Saulge 82.06 4 *e*P **P 02 47 07.2 +0.2**
comp=Z,18nm,0.7s,mb4.8
SSF Saint Saulge 82.06 4 *e*P **P 02 47 07.2 +0.2**
SSF pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
SSF Saint Saulge 82.06 4 *e*P **P 02 47 07.2 +0.2**
comp=Z,8.9nm,0.7s,mb4.8
KBA Koelnbreinsper 82.08 357 ⇑*i*PcP PcP 02 47 08.6 -3.9
comp=Z,10nm,0.7s
FETA Feichten 82.20 359 ⇑*i*PcP PcP 02 47 08.9 -4.1
comp=Z,8.4nm,0.9s
MFF Saint Martin d 82.32 6 *e*P **P 02 47 08.5 +0.1**
comp=Z,11nm,0.7s,mb4.6
MFF Saint Martin d 82.32 6 *e*P **P 02 47 08.5 +0.1**
MFF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
MFF Saint Martin d 82.32 6 *e*P **P 02 47 08.5 +0.1**
comp=Z,5.4nm,0.7s,mb4.6
AVF Avril sur Loir 82.33 4 *e*P **P 02 47 08.4 0.0**
comp=Z,17nm,0.7s,mb4.8
AVF Avril sur Loir 82.33 4 *e*P **P 02 47 08.4 0.0**
AVF pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
AVF Avril sur Loir 82.33 4 *e*P **P 02 47 08.4 0.0**
comp=Z,8.6nm,0.7s,mb4.8
SOKA Soboth 82.41 356 ⇑*i*P **P 02 47 09.6 +0.8**
comp=Z,7.9nm,1.1s,mb4.6
SMF Signal de Mont 82.49 3 *e*P **P 02 47 09.3 +0.1**
comp=Z,22nm,0.8s,mb4.9
SMF Signal de Mont 82.49 3 *e*P **P 02 47 09.3 +0.1**
SMF pmax pmax
comp=Z,11nm,0.8s,mb4.8
SMF Signal de Mont 82.49 3 *e*P **P 02 47 09.3 +0.1**
comp=Z,11nm,0.8s,mb4.8
BGF Bois d'Agland 82.54 4 *e*P **P 02 47 09.5 0.0**
comp=Z,16nm,0.9s,mb4.8
BGF Bois d'Agland 82.54 4 *e*P **P 02 47 09.5 0.0**
BGF pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
BGF Bois d'Agland 82.54 4 *e*P **P 02 47 09.5 0.0**
comp=Z,7.9nm,0.9s,mb4.7
CABF La Chapelle 82.59 2 *e*P **P 02 47 10.5 +0.7**
comp=Z,24nm,0.9s,mb4.9
CABF La Chapelle 82.59 2 *e*P **P 02 47 10.5 +0.7**
CABF pmax pmax
comp=Z,12nm,0.9s,mb4.9
CABF La Chapelle 82.59 2 *e*P **P 02 47 10.5 +0.7**
comp=Z,12nm,0.9s,mb4.9
TCF Toulx Ste Croi 82.78 5 *e*P **P 02 47 10.6 -0.1**
comp=Z,7.5nm,0.9s,mb4.4
TCF Toulx Ste Croi 82.78 5 *e*P **P 02 47 10.6 -0.1**
TCF pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
TCF Toulx Ste Croi 82.78 5 *e*P **P 02 47 10.6 -0.1**
comp=Z,3.8nm,0.9s,mb4.4
BZS Buzias 82.99 351 ⇑*i*P **P 02 47 11.5 -0.3**
TIRR Tirgusor 83.28 346 ⇑*i*P **P 02 47 13.6 +0.2**
RJF Les Rejaudoux 83.72 5 *e*P **P 02 47 15.3 -0.3**
GNI Garni 83.82 333 *e*P **P 02 47 16.7 +0.5**
GNI pmax pmax
comp=Z,6.0nm,1.2s
LFF La Frestale 84.03 6 *e*P **P 02 47 17.3 +0.1**
ORIF Oris-en-Rattie 84.28 2 *e*P **P 02 47 19.1 +0.6**
comp=Z,4.9nm,0.6s,mb4.5
ORIF Oris-en-Rattie 84.28 2 *e*P **P 02 47 19.1 +0.6**
ORIF pmax pmax
comp=Z,2.0nm,0.6s,mb4.4
ORIF Oris-en-Rattie 84.28 2 *e*P **P 02 47 19.1 +0.6**
comp=Z,2.5nm,0.6s,mb4.5
VIVF Saint-Julien-I 84.31 3 *e*P **P 02 47 19.1 +0.5**
comp=Z,11nm,0.8s,mb4.7
VIVF Saint-Julien-I 84.31 3 *e*P **P 02 47 19.1 +0.5**
VIVF pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
VIVF Saint-Julien-I 84.31 3 *e*P **P 02 47 19.1 +0.5**
comp=Z,5.7nm,0.8s,mb4.8
MBDF Montbardon 84.49 1 *e*P **P 02 47 20.7 +1.1**
comp=Z,15nm,0.8s,mb4.9
MBDF Montbardon 84.49 1 *e*P **P 02 47 20.7 +1.1**
MBDF pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
MBDF Montbardon 84.49 1 *e*P **P 02 47 20.7 +1.1**
comp=Z,7.5nm,0.8s,mb4.9
WRA Warramunga Arr 85.38 230 P **P 02 47 21.6 -2.5**
comp=Z,1.2nm,0.8s,mb4.0,baz=33,slow=5.5,SNR=3.0
BR131 Keskin Array S 86.94 341 *e*P **P 02 47 31.8 0.0**
comp=Z,1.3nm,0.8s,mb4.2
BRTR Keskin Array B 86.94 341 P **P 02 47 31.6 -0.2**
comp=Z,1.4nm,0.8s,mb4.3,baz=16,slow=1.8,SNR=7.4
BRTR pP pP 02 47 48.5 +10
comp=Z,2.1nm,0.5s,baz=17,slow=4.3,SNR=8.5
ASAR Alice Springs 88.76 229 P **P 02 47 39.0 -1.6**
comp=Z,1.0nm,0.8s,mb4.2,baz=26,slow=5.1,SNR=7.7
ASAR pP pP 02 47 55.5 +8.7
comp=Z,4.1nm,0.6s,baz=29,slow=4.8,SNR=12
ESDC Sonseca Array 88.86 10 P **P 02 47 39.3 -1.7**
comp=Z,0.3nm,0.6s,mb3.8,baz=122,slow=25,SNR=3.2
ESDC pP pP 02 47 57.4 +10
comp=Z,0.8nm,0.6s,baz=352,slow=4.5,SNR=3.6
ESDC Sonseca Array 88.86 10 P **P 02 47 39.3 -1.7**
ESDC pP pP 02 47 57.4 +10
MMAI Mount Meron Ar 92.99 338 pP pP 02 48 16.0 +9.4
comp=Z,2.1nm,0.6s,baz=358,slow=5.4,SNR=4.8
TORD Torodi Ar. Bea 115.67 8 PKP PKPdf 02 53 27.0 -2.5
comp=Z,0.6nm,0.7s,baz=333,slow=2.4,SNR=11
PLCA Paso Flores 126.36 112 PKP PKPdf 02 53 47.3 -1.8
comp=Z,2.0nm,0.8s,baz=39,slow=1.7,SNR=6.3
MAW Mawson 149.23 217 PKPbc PKPbc 02 54 32.6 -1.5
comp=Z,8.1nm,0.9s,baz=83,slow=2.1,SNR=14
MAW Mawson 149.23 217 *e*PKPbc PKPbc 02 54 32.8 -1.3
LBTB Lobatse 150.91 327 PKPbc PKPbc 02 54 38.6 -0.8
comp=Z,5.7nm,0.6s,baz=108,slow=1.4,SNR=11
BOSA Boshof 154.33 325 PKPbc PKPbc 02 54 48.6 +1.6
comp=Z,1.9nm,0.9s,baz=13,slow=16,SNR=1.8

KRSC 05 02:45:19.9±1.0, 51°53N×159°71E, h11km±10km, ML3.8,
Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
GRL	**Gorelyy**	**1.44**	**316**	P		Pn	02 45 46.9	+1.0
GRL				*i* S		Sn	02 46 06.7	+2.0
SPN	**Mys Shipunski**	**1.58**	**7**	P		Pn	02 45 48.0	+0.2
SPN				*i* S		Sn	02 46 08.4	+0.1
PET	**Petropavlovsk**	**1.63**	**337**	P		Pn	02 45 48.2	-0.3
PET				*i* S		Sn	02 46 08.8	-0.7
NLC	**Nalytchevo**	**1.66**	**352**	*e*P		Pn	02 45 48.3	-0.6
NLC				*e*S		Sn	02 46 09.0	-1.2
AVH	**Avacha**	**1.84**	**341**	P		Pn	02 45 53.1	+1.8

AVH *i* S Sn 02 46 17.2 +2.7
MIPR Malaya Ipel'ka 1.98 293 *e*P Pn 02 45 53.4 +0.2
MIPR *e*S Sn 02 46 17.9 -0.1
GNL Ganaly 2.42 334 P Pn 02 46 01.2 +1.8
GNL *i* S Sn 02 46 31.5 +2.5
ALID Alaid 2.70 257 *e*P Pn 02 46 02.5 -0.7
ALID *e*S Sn 02 46 33.6 -2.2
MKZ Mys Kozlova 3.27 21 P Pn 02 46 09.4 -1.6
KBTR Krutoberegovo 5.04 20 P Pn 02 46 37.5 +2.3

*IDC **05** 02:50:01.9±0.5, 55°.36S×158°.80E, h0km, mb4.6/15, mb1 4.7/16, mb1mx4.7/20, mbtmp4.6/16, ML4.5/1, MS5.2/5, Ms1 5.2/5, ms1mx4.6/22, Error ellipse: s-maj=19.9km s-min=14.4km az=75.0*
*ISCJB **05** 02:50:02.8±0.4, 55°.30S±0°.04×158°.7E±0°.1, h10km, mb4.7/24, MS5.1/6, Error ellipse: s-maj=10.5km s-min=4.9km az=14.8*
*BJI **05** 02:50:03.8, 55°.58S×157°.97E, h16km, mB5.4/5, mb5.1/4, Ms4.9/1, Ms7 4.7/1*
*NEIC **05** 02:50:03.8±0.3, 55°.31S×158°.68E, h10km, mb4.5/7, Error ellipse: s-maj=9.3km s-min=6.5km az=94.0*
ISC 05 02:50:04.5±0.4, 55°29S±0°.04×158°.7E±0°.1, h10km, n133, σ0°88/45, mb4.7/24, MS5.1/6, 9C-3D, Macquarie Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**0.81**	**13**	*e*P	**Pg**	**02 50 18.6**	**-1.5**
MCQ				*e*S	**Sg**	**02 50 29.9**	**-0.8**
MCQ	**Macquarie Isla**	**0.81**	**13**	*e*Pg	**Pg**	**02 50 19.1**	**-1.1**
MCQ				*e*Sg	**Sg**	**02 50 30.5**	**-0.2**
ODZ	**Otahua Downs**	**12.80**	**42**	*e*Pn	**Pn**	**02 53 06.1**	**-0.2**
ODZ				*e*S	**Sn**	**02 55 23.1**	**-5.6**
RPZ	**Rata Peaks**	**14.08**	**40**	Pn	**Pn**	**02 53 24.3**	**+0.4**
TAU	**Tasmania Unive**	**14.42**	**325**	*e*Pn	**Pn**	**02 53 26.9**	**-1.5**
TAU				*e*Sn	**Sn**	**02 55 59.2**	**-9.1**
MOO	**Moorlands**	**14.88**	**325**	*e*P	**Pn**	**02 53 33.9**	**-0.8**
TOO	**Toolangi**	**19.85**	**328**	*e*P	**Pn**	**02 54 37.4**	**+0.5**
CNB	**Canberra Magne**	**20.98**	**338**	*e*P	**P**	**02 54 49.1**	**+1.4**
CAN	**Canberra**	**21.05**	**338**	*e*P	**P**	**02 54 48.7**	**+0.3**
URZ	**Urewera**	**21.10**	**44**	P	**P**	**02 54 49.1**	**+0.2**
URZ				PcP	PcP	02 58 52.5	-2.3
SBA	**Scott Base**	**22.84**	**176**	*e*P	**P**	**02 55 07.9**	**+0.7**
CMSA	**Cobar Meteorol**	**25.46**	**334**	*e*P	**P**	**02 55 33.3**	**+0.9**
STKA	**Stephens Creek**	**26.32**	**326**	*e*P	**P**	**02 55 41.0**	**+0.8**
STKA	**Stephens Creek**	**26.32**	**326**	P	**P**	**02 55 42.0**	**+1.8**
EIDS	**Eidsvold**	**30.41**	**346**	*e*P	**P**	**02 56 16.9**	**+0.3**
FORT	**Forrest**	**32.71**	**306**	*e*P	**P**	**02 56 36.1**	**-0.8**
QSPA	**South Pole Qui**	**34.82**	**180**	P	**P**	**02 56 54.7**	**-0.1**
QSPA				PcP	PcP	02 59 26.7	-0.8
QSPA	**South Pole Qui**	**34.82**	**180**	*e*P	**P**	**02 56 55.5**	**+0.8**
QSPA				*e*PcP	PcP	02 59 27.2	-0.3
CTA	**Charters Tower**	**36.38**	**340**	P	**P**	**02 57 09.1**	**+0.4**
CTAO	**Charters Tower**	**36.38**	**340**	*e*P	**P**	**02 57 09.2**	**+0.5**
NWAO	**Narrogin (SRO)**	**36.44**	**290**	P	**P**	**02 57 08.9**	**-0.3**
NWAO				LR	LR	03 07 38.3	
ASAR	**Alice Springs**	**36.52**	**320**	P	**P**	**02 57 10.1**	**+0.2**
ASAR				PcP	PcP	02 59 32.1	-1.3
WRA	**Warramunga Arr**	**39.78**	**323**	P	**P**	**02 57 36.6**	**-0.8**
WRA				PcP	PcP	02 59 42.1	-1.5
WRAB	**Tennant Creek**	**39.78**	**323**	*e*P	**P**	**02 57 36.6**	**-0.8**
MAW	**Mawson**	**42.65**	**214**	P	**P**	**02 57 59.4**	**-1.1**
MAW	**Mawson**	**42.65**	**214**	*e*P	**P**	**02 57 59.9**	**-0.6**
FITZ	**Fitzroy Crossi**	**44.80**	**313**	*e*P	**P**	**02 58 18.2**	**-0.2**
FITZ	**Fitzroy Crossi**	**44.80**	**313**	P	**P**	**02 58 18.5**	**+0.2**
FITZ				PcP	PcP	02 59 59.2	-1.0
FITZ				LR	LR	03 16 18.6	
FITZ	**Fitzroy Crossi**	**44.80**	**313**	*e*P	**P**	**02 58 18.0**	**-0.4**
KAKA	**Kakadu**	**47.15**	**324**	*e*P	**P**	**02 58 37.3**	**+0.4**
SYO	**Syowa Base**	**48.31**	**205**	⇑*i*P	**P**	**02 58 43.4**	**-1.9**
PPT	**Papeete**	**54.29**	**67**	LR	LR	03 17 57.0	
KAPI	**Kappang**	**59.02**	**313**	LR	LR	03 24 37.4	
PLCA	**Paso Flores**	**75.57**	**144**	P	**P**	**03 01 48.1**	**-0.9**
PSI	**Prapat**	**75.63**	**297**	LR	LR	03 34 55.5	
OPO	**Ambohidratompo**	**86.50**	**242**	P	**P**	**03 02 47.9**	**+0.4**
BOSA	**Boshof**	**87.41**	**220**	P	**P**	**03 02 51.0**	**-0.8**
CMAR	**Chiang Mai Arr**	**89.10**	**305**	P	**P**	**03 03 00.2**	**+0.5**
CMAR				LR	LR	03 41 57.8	
LBTB	**Lobatse**	**90.54**	**222**	P	**P**	**03 03 06.0**	**-0.6**
GYA	**Guiyang**	**92.73**	**315**	P	**P**	**03 03 17.8**	**+1.3**
GYA				pmax	pmax		
KMI	**Kunming**	**93.19**	**311**	P	**P**	**03 03 20.7**	**+2.1**
KMI				pmax	pmax		
NJ2	**Nanjing**	**93.44**	**327**	*e*P	**P**	**03 03 19.4**	**-0.2**
NJ2				pmax	pmax		
CD2	**Chengdu**	**97.85**	**315**	*e*P	**P**	**03 03 40.9**	**+1.2**
CD2				pP	pP	03 03 45.8	+2.7
CD2				sP	sP	03 03 48.5	+4.3
CD2				pmax	pmax		
LSZ	**Lusaka**	**98.25**	**228**	P	**P**	**03 03 41.8**	**-0.3**
LZH	**Lanzhou**	**102.36**	**317**	*e*P	Pdif	03 04 01.6	+1.3
LZH				pP		03 04 04.8	
LZH				sP		03 04 06.3	
LZH				PP	PP	03 08 17.5	+4.7
LZH				pmax	pmax		
LZH				LR	LR		
LZH				LR	LR		
CN2	**Changchun**	**102.66**	**336**	*e*P	Pdif	03 04 03.4	+1.7
WMQ	**Urumqi**	**115.52**	**311**	*e*PKP	PKPdf	03 08 47.0	+1.3
TXAR	**Lajitas Array**	**117.81**	**78**	PKP	PKPdf	03 08 49.6	-1.0
PDAR	**Pinedale Array**	**124.62**	**63**	PKP	PKPdf	03 09 03.0	-0.2
KURK	**Kurchatov**	**124.77**	**310**	*e*PKPdf	PKPdf	03 09 01.9	-1.3
DLMT	**Dillon**	**124.96**	**59**	*e*PKPdf	PKPdf	03 09 04.1	+0.4
RLMT	**Red Lodge**	**126.44**	**62**	*e*PKPdf	PKPdf	03 09 07.6	+1.0
LIC	**Lamto**	**129.35**	**201**	*e*P	PKPdf	03 09 10.3	-2.9
KIC	**Kosan Boka**	**129.43**	**202**	*e*P	PKPdf	03 09 11.5	-1.9
DBIC	**Dimbokro**	**129.75**	**202**	PKP	PKPdf	03 09 11.9	-2.1
TIC	**Toumodi**	**129.76**	**201**	*e*P	PKPdf	03 09 09.3	-4.7
BVAR	**Borovoye Array**	**130.03**	**308**	PKP	PKPdf	03 09 12.4	-0.8
PLAL	**Pickwick Lake**	**130.82**	**85**	*e*PKPdf	PKPdf	03 09 13.4	-1.9
WCI	**Wyandotte Cave**	**134.13**	**84**	*e*PKPdf	PKPdf	03 09 20.5	-0.9
TORD	**Torodi Ar. Bea**	**134.28**	**212**	PKhKP		03 09 11.7	
TORD				PKP	PKPdf	03 09 19.3	-3.1
MMAI	**Mount Meron Ar**	**135.10**	**264**	PKP	PKPdf	03 09 20.7	-2.7
YKA	**Yellowknife Ar**	**135.35**	**41**	PKP	PKPdf	03 09 19.3	-3.6
BRTR	**Keskin Array B**	**140.83**	**270**	PKP	PKPdf	03 09 34.8	+1.1
LONY	**Lake Ozonia**	**144.95**	**85**	*e*PKPdf	PKPdf	03 09 39.4	-1.5
LTK	**Loutraki**	**145.73**	**258**	P	PKPdf	03 09 41.0	-1.4
LIA	**Limnos Island**	**145.77**	**263**	P	PKPdf	03 09 41.3	-1.1
ALN	**Alexandroupoli**	**145.94**	**265**	P	PKPdf	03 09 42.1	-0.6
AOS	**Alonnisos**	**146.01**	**261**	P	PKPdf	03 09 42.3	-0.6
GUR	**Goura**	**146.02**	**258**	P	PKPdf	03 09 42.6	-0.3
RDO	**Rodhopi**	**146.40**	**265**	P	PKPdf	03 09 43.2	-0.3
RES	**Resolute Bay**	**146.49**	**27**	*e*PKPbc	PKPbc	03 09 43.6	-0.4
XOR	**Xorichti**	**146.53**	**260**	P	PKPdf	03 09 43.6	-0.1
PRD	**Provadia**	**146.65**	**269**	P	PKPdf	03 09 44.2	+0.4
AGG	**Agios Georgios**	**146.78**	**259**	P	PKPdf	03 09 44.5	+0.3
TIRR	**Tirgusor**	**146.84**	**272**	⇑*i*P	PKPdf	03 09 44.5	+0.4
TLCR		**147.04**	**273**	⇑*i*P	PKPdf	03 09 45.7	+1.3
HARR	**Harsova**	**147.25**	**272**	⇓*i*P	PKPdf	03 09 46.0	+1.2
THL	**Klokotos Trika**	**147.33**	**260**	P	PKPdf	03 09 45.5	+0.4
MMB	**Musomiste**	**147.72**	**264**	P	PKPdf	03 09 46.7	+1.1
OBN	**Obninsk**	**147.77**	**294**	*e*PKPbc	PKPbc	03 09 48.1	0.0
VAY	**Valandovo**	**148.20**	**262**	*e*PKP	PKPdf	03 09 47.8	+1.3
KKB	**Krupnik**	**148.26**	**264**	P	PKPdf	03 09 47.3	+0.8
VRI	**Vrincioaia**	**148.63**	**273**	⇑*i*P	PKPbc	03 09 50.8	+0.1
VTS	**Vitosha**	**148.66**	**265**	P	PKPdf	03 09 49.5	+2.3
STIP	**Stip**	**148.66**	**263**	*e*PKP	PKPdf	03 09 48.7	+1.5
PLOR	**Plostina**	**148.67**	**273**	⇑*i*P	PKPdf	03 09 49.2	+2.1
BIA	**Bitola**	**148.70**	**261**	*e*PKP	PKPdf	03 09 49.0	+1.7
KRUS	**Krusevo**	**148.98**	**261**	*e*PKP	PKPdf	03 09 49.1	+1.4
OHR	**Ohrid**	**149.06**	**260**	*e*PKP	PKPdf	03 09 49.2	+1.3
AKASG	**Malin Array Be**	**149.77**	**283**	PKPbc	PKPbc	03 09 52.1	-1.3
AKBB	**Malin Array Si**	**149.77**	**283**	*e*PKPbc	PKPbc	03 09 52.1	-1.4
KIEV	**Kiev**	**149.78**	**283**	*e*PKPbc	PKPbc	03 09 52.0	-1.4
TIP	**Timpagrande**	**149.99**	**254**	*e*PKPbc	PKPbc	03 09 54.4	+0.1
KEST	**Kesra**	**151.29**	**240**	PKPbc	PKPbc	03 09 58.0	+0.4
BZS	**Buzias**	**151.41**	**268**	⇓*i*P	PKPbc	03 09 57.4	-0.1
DIVS	**Divibare**	**151.43**	**264**	P	PKPbc	03 09 56.5	-1.1
DRGR		**151.45**	**271**	⇑*i*P	PKPbc	03 09 57.3	-0.2
MICGM	**Minsk**	**152.15**	**289**	*e*	PKPdf	03 09 56.0	+3.8
TRPA	**Tarpa**	**152.27**	**274**	⇓*i*P	PKPbc	03 09 59.0	-0.3
JOF	**Joensuu**	**152.63**	**308**	*e*p	PKPbc	03 09 57.5	-2.2
JOF	**Joensuu**	**152.63**	**308**	*e*p	PKPbc	03 09 57.5	-2.2
KOLS	**Kolonicke sedl**	**152.83**	**275**	*e*PKP	PKPbc	03 10 01.0	+0.4
KOLS				*e*		03 10 12.0	
KWP	**Kalwaria Pacla**	**152.93**	**276**	*e*PKP	PKPbc	03 10 00.5	-0.3
KWP	**Kalwaria Pacla**	**152.93**	**276**	*e*PKPbc	PKPbc	03 10 00.3	-0.5
KWP	**Kalwaria Pacla**	**152.93**	**276**	⇑*i*P	PKPbc	03 10 00.3	-0.5
IDID	**Didziasalis**	**153.05**	**290**	*e*P	PKPbc	03 10 00.5	-0.4
IDID				AMB	AMB	03 10 01.8	
IIGN	**Ignalina**	**153.34**	**290**	*e*P	PKPbc	03 10 00.9	-0.6
IIGN				AMB	AMB	03 10 01.4	
PKSM	**Moragy**	**153.45**	**267**	⇑*i*P	PKPbc	03 10 00.9	-1.1
IZAR	**Zarasai**	**153.46**	**291**	*e*P	PKPbc	03 10 01.0	-0.7
IZAR				AMB	AMB	03 10 01.5	
ISAL	**Salakas**	**153.47**	**290**	*e*P	PKPbc	03 10 01.3	-0.5
ISAL				AMB	AMB	03 10 01.7	
KECS	**Kecovo**	**153.62**	**273**	*e*PKP	PKPbc	03 10 02.6	+0.3
KECS				*e*		03 10 14.2	
STHS	**Stebnicka Huta**	**153.66**	**275**	*e*PKP	PKPbc	03 10 02.2	-0.2
STHS				*e*		03 10 16.6	
NIE	**Niedzica**	**154.19**	**274**	*e*PKP	PKPbc	03 10 02.5	-1.0
SCHQ	**Schefferville**	**154.30**	**72**	PKPbc	PKPbc	03 10 01.7	-1.9
SCHQ				PKPab	PKPab	03 10 16.4	-1.3
SCHQ	**Schefferville**	**154.30**	**72**	PKPbc	PKPbc	03 10 01.7	-1.9
SCHQ				PKPab	PKPab	03 10 16.4	-1.3
SUW	**Suwalki**	**154.53**	**286**	*e*PKP	PKPbc	03 10 01.9	-2.2
SUW				*ep*PKP	pPKPbc	03 10 03.4	-4.1
VYHS	**Vyhne**	**154.57**	**271**	*e*PKP	PKPdf	03 09 56.4	+0.5
VYHS				*e*		03 10 03.3	
VYHS				*e*		03 10 18.1	
KAF	**Kangasniemi**	**154.84**	**305**	*ep*	PKPab	03 10 18.9	-0.9
KAF	**Kangasniemi**	**154.84**	**305**	*ep*	PKPab	03 10 18.9	-0.9
FINES	**FINESS Array B**	**154.86**	**304**	PKPbc	PKPbc	03 10 03.7	-0.8
FINES				PKPab	PKPab	03 10 19.5	-0.5
OJC	**Ojcow**	**154.87**	**276**	*e*PKP	PKPbc	03 10 03.3	-1.6
ARCES	**ARCESS Array B**	**154.88**	**323**	PKPbc	PKPbc	03 10 03.7	-0.7
ARCES				PKPab	PKPab	03 10 18.7	-1.2
ARCES	**ARCESS Array B**	**154.88**	**323**	PKPbc	PKPbc	03 10 03.7	-0.7
ARCES				PKPab	PKPab	03 10 18.7	-1.2
OKC	**Ostrava-Krasne**	**155.63**	**274**	AMS	AMS	04 25 00.0	
DPC	**Dobruska-Polom**	**156.91**	**273**	*e*PKPAB	PKPab	03 10 27.9	-1.2
DPC				*ex*	x	03 10 38.8	
DPC				AMS	AMS	04 25 40.0	
GERES	**GERESS Array B**	**157.69**	**268**	PKP	PKPdf	03 09 57.6	-2.4
GERES				PKPab	PKPab	03 10 31.2	-1.3
PRU	**Pruhonice**	**157.76**	**271**	l*e*PKP	PKPab	03 10 22.0	-11
PRU				AMS	AMS	04 17 30.0	
KHC	**Kasperske Hory**	**157.90**	**268**	*e*PKPAB	PKPab	03 10 30.8	-2.6
KHC				AMS	AMS	04 28 20.0	
PVCC	**Panska Ves**	**157.99**	**273**	AMS	AMS	04 17 00.0	
BRG	**Berggiesshubel**	**158.50**	**273**	*e*PKP	PKPab	03 10 35.4	-0.6
CLL	**Collm**	**159.22**	**273**	*e*PKPab	PKPab	03 10 37.0	-2.1
CLL				*e*(pPKPab)		03 10 46.0	
CLL				LmV		03 22 00.0	
ESDC	**Sonseca Array**	**160.54**	**224**	PKPab	PKPab	03 10 43.8	-1.3
NOA	**NORSAR Array B**	**162.02**	**302**	PKPab	PKPab	03 10 49.8	-1.3

*ISCJB **05** 02:56:38.4±2.3, 6°.86S±0°.06×150°.81E±0°.07, h19km±16km, mb4.8/31, MS4.8/4, Error ellipse: s-maj=12.6km s-min=9.8km az=18.4*
*BJI **05** 02:56:39.0, 7°.02S×151°.22E, h44km, mB5.0/15, mb4.8/21, Ms5.1/17, Ms7 4.9/15*
*IDC **05** 02:56:41.8±3.5, 6°.84S×150°.78E, h33km±25km, mb4.4/15, mb1 4.5/16, mb1mx4.4/19, mbtmp4.4/16, MS4.7/1, Ms1 4.7/1, ms1mx3.2/16, Error ellipse: s-maj=21.0km s-min=12.3km az=106.0*
*NEIC **05** 02:56:44.2±1.9, 6°.87S×150°.74E, h54km±17km, mb5.0/16, Error ellipse: s-maj=10.6km s-min=8.9km az=95.0*
*DJA **05** 02:56:49, 7°.11S×151°.22E, h146km, mb5.1/13*
ISC 05 02:56:42.8±1.4, 6°.89S±0°.06×150°.85E±0°.07, h39km±13km, h35km±1.3km: pP-P, n69, σ0°89/60, mb4.8/31, MS4.8/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**13.86**	**198**	Pn	**Pn**	**02 59 57.9**	**+1.2**
	baz=63,slow=4.5,SNR=2.6						
EIDS	**Eidsvold**	**18.38**	**179**	*e*P	**Pn**	**03 00 54.8**	**+0.2**
EIDS	**Eidsvold**	**18.38**	**179**	*e*P	**Pn**	**03 00 54.9**	**+0.2**
	22nm,1.3s						
KAKA	**Kakadu**	**19.03**	**251**	*e*P	**Pn**	**03 01 01.7**	**-1.0**
	35nm,0.7s						
KAKA	**Kakadu**	**19.03**	**251**	*e*P	**Pn**	**03 01 01.5**	**-1.2**
	70nm,0.6s						
WRAB	**Tennant Creek**	**20.60**	**229**	P	**P**	**03 01 18.0**	**-0.7**
	194nm,0.8s,SNR=18						
WRAB	**Tennant Creek**	**20.60**	**229**	*e*P	**P**	**03 01 18.4**	**-0.3**
	30nm,0.8s						
WRA	**Warramunga Arr**	**20.61**	**229**	P	**P**	**03 01 19.0**	**+0.1**
	18nm,0.7s,baz=54,slow=11,SNR=64						
WRA				PcP	PcP	03 05 29.7	+1.0
	3.2nm,0.8s,baz=51,slow=1.8,SNR=7.8						
ASAR	**Alice Springs**	**23.30**	**222**	P	**P**	**03 01 47.6**	**0.0**
	18nm,0.6s,mb4.7,baz=55,slow=9.0,SNR=83						
ASAR				S	**S**	**03 05 58.3**	**+1.1**
	2.7nm,0.9s,baz=37,slow=22,SNR=7.1						
ARMA	**Armidale**	**23.42**	**178**	*e*P	**P**	**03 01 47.8**	**-0.8**
STKA	**Stephens Creek**	**26.32**	**198**	*e*P	**P**	**03 02 14.1**	**-0.8**
	12nm,0.6s,mb4.6						
STKA	**Stephens Creek**	**26.32**	**198**	P	**P**	**03 02 14.1**	**-0.8**
	18nm,0.6s,mb4.8,baz=6.3,slow=10,SNR=34						
STKA	**Stephens Creek**	**26.32**	**198**	*e*P	**P**	**03 02 14.1**	**-0.8**
	4.5nm,0.8s,mb4.0						
FITZ	**Fitzroy Crossi**	**26.97**	**243**	*e*P	**P**	**03 02 21.3**	**+0.2**
	31nm,0.6s,mb5.0						
FITZ	**Fitzroy Crossi**	**26.97**	**243**	P	**P**	**03 02 20.7**	**-0.4**
	13nm,0.7s,mb4.6,baz=65,slow=7.3,SNR=47						
FITZ	**Fitzroy Crossi**	**26.97**	**243**	*e*P	**P**	**03 02 21.4**	**+0.3**
	16nm,0.6s,mb4.7						
MBWA	**Marble Bar**	**33.26**	**242**	*e*P	pP	03 03 27.0	-0.5
TAU	**Tasmania Unive**	**36.01**	**184**	*e*P	**P**	**03 03 40.8**	**+0.7**
	12nm,0.6s,mb5.0						
MEEK	**Meekatharra**	**36.40**	**234**	*e*P	**P**	**03 03 43.8**	**+0.1**
URZ	**Urewera**	**39.25**	**147**	P	**P**	**03 04 06.3**	**-1.3**
	3.8nm,0.5s,mb4.3,baz=332,slow=8.9,SNR=3.0						
JOW	**Kunigami**	**40.03**	**328**	P	**P**	**03 04 12.8**	**-1.4**
	16nm,0.8s,mb4.8,baz=96,slow=14,SNR=3.5						
KSRS	**Korea Array**	**49.04**	**336**	P	**P**	**03 05 25.7**	**-0.3**
	2.9nm,1.0s,mb4.3,baz=150,slow=8.1,SNR=7.4						
NJ2	**Nanjing**	**49.30**	**324**	*e*P	**P**	**03 05 28.6**	**+0.5**
NJ2				pP	pP	03 05 37.6	-1.7
NJ2				sP	sP	03 05 41.3	-2.6
NJ2				PP	PP	03 07 22.9	+0.5
NJ2				S	**S**	**03 12 31.0**	**-0.9**
NJ2				sS	sS	03 12 48.5	-2.0
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
NJ2				pmax	pmax		
	comp=Z,130nm,4.5s						
NJ2				LR	LR		
	comp=N,730nm,19.9s,MS4.9						
NJ2				LR	LR		
	comp=E,940nm,17.4s,MS4.9						
NJ2				LR	LR		
	comp=Z,1μm,17.8s,MS4.9						
ASAJ	**Asahikawa**	**51.31**	**352**	LR	LR	03 25 03.1	
	comp=Z,824nm,20.8s,MS4.7,baz=189,slow=33						
KULM	**Kulim**	**51.54**	**282**	*e*P	**P**	**03 05 44.8**	**-0.6**
GYA	**Guiyang**	**54.16**	**310**	P	**P**	**03 06 05.4**	**+0.9**
GYA				pP	pP	03 06 16.5	+0.6
GYA				sP	sP	03 06 21.9	+1.5
GYA				PP	PP	03 08 09.3	+2.7
GYA				ScP	ScP	03 11 04.6	+0.5
GYA				S	**S**	**03 13 39.0**	**0.0**
GYA				SS	SS	03 17 21.5	+0.1
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
GYA				pmax	pmax		
	comp=Z,130nm,5.4s						
GYA				LR	LR		
	comp=N,750nm,18.9s,MS4.9						
GYA				LR	LR		
	comp=E,620nm,18.0s,MS4.9						
GYA				LR	LR		
	comp=Z,580nm,17.6s,MS4.7						
CN2	**Changchun**	**55.44**	**338**	*e*P	**P**	**03 06 17.0**	**+3.6**
BJI	**Beijing**	**56.60**	**328**	P	**P**	**03 06 21.9**	**+0.1**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.9						
CMAR	**Chiang Mai Arr**	**57.05**	**297**	P	**P**	**03 06 24.1**	**-1.2**
	comp=Z,1.1nm,0.3s,mb4.3,baz=118,slow=5.9,SNR=6.6						
CD2	**Chengdu**	**58.66**	**313**	*e*P	**P**	**03 06 38.2**	**+1.7**
CD2				pP	pP	03 06 48.3	+0.3
CD2				sP	sP	03 06 52.8	+0.3
CD2				PP	PP	03 08 50.0	+3.3
CD2				S	**S**	**03 14 39.5**	**+1.0**
CD2				sS	sS	03 14 56.3	-1.2
CD2				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.4						
HHC	**Hu-ho-hao-te**	**59.65**	**326**	*e*P	**P**	**03 06 45.2**	**+2.1**
HHC				sP	sP	03 06 59.1	0.0
HHC				PcP	PcP	03 07 31.4	+1.5
HHC				PP	PP	03 08 59.2	+4.0
HHC				ScP	ScP	03 11 28.1	+0.1
HHC				PcS	PcS	03 11 31.5	-0.5
HHC				S	**S**	**03 14 56.0**	**+5.1**
HHC				ScS	ScS	03 16 29.5	-0.9
HHC				SS	SS	03 18 50.1	+2.9
PETK	**Petropavlovsk-**	**60.05**	**5**	P	**P**	**03 06 45.0**	**-0.6**
	comp=Z,2.3nm,0.7s,mb4.3,baz=92,slow=10,SNR=5.3						
LZH	**Lanzhou**	**61.41**	**318**	*e*P	**P**	**03 06 56.2**	**+1.0**
LZH				pP	pP	03 07 06.5	-0.3
LZH				sP	sP	03 07 10.3	-1.0
LZH				*e*PP	PP	03 09 13.7	+2.8
LZH				*e*S	**S**	**03 15 13.2**	**-0.4**
LZH				sS	sS	03 15 30.3	-2.4
LZH				*e*SS	SS	03 19 16.5	+1.4
LZH				pmax	pmax		
	comp=Z,19nm,1.3s,mb5.1						
LZH				pmax	pmax		
	comp=Z,97nm,7.0s						
LZH				LR	LR		
	comp=E,640nm,14.5s						
LZH				LR	LR		
	comp=Z,850nm,19.5s,MS4.9						
SONM	**Songino Array**	**67.08**	**329**	P	**P**	**03 07 31.7**	**-0.5**
	comp=Z,2.9nm,0.9s,mb4.3,baz=139,slow=4.7,SNR=10						
WMQ	**Urumqi**	**75.98**	**318**	*e*P	**P**	**03 08 27.0**	**+1.2**
SVW2	**Sparrevohn**	**79.50**	**23**	*e*P	**P**	**03 08 46.2**	**+1.1**
TTA	**Tatalina**	**80.42**	**22**	*e*P	**P**	**03 08 50.4**	**+0.4**
	comp=Z,16nm,1.2s,mb4.8						
MK31	**Makanchi Array**	**80.63**	**320**	*e*P	**P**	**03 08 51.2**	**-0.3**
MKAR	**Makanchi Array**	**80.63**	**320**	P	**P**	**03 08 50.8**	**-0.7**
	comp=Z,2.9nm,0.8s,mb4.2,baz=92,slow=8.9,SNR=18						
MKAR	**Makanchi Array**	**80.63**	**320**	P	**P**	**03 08 50.8**	**-0.7**
ZALV	**Zalesovo Beam**	**81.82**	**327**	P	**P**	**03 08 55.2**	**-2.5**
	comp=Z,1.8nm,0.6s,mb4.2,baz=118,slow=5.4,SNR=5.6						
ZALV	**Zalesovo Beam**	**81.82**	**327**	P	**P**	**03 08 55.2**	**-2.5**
CHUM	**Lake Minchumin**	**82.33**	**22**	*e*P	**P**	**03 09 00.1**	**0.0**
	comp=Z,34nm,1.1s,mb5.2						
PMR	**Palmer**	**82.38**	**25**	*e*P	**P**	**03 09 00.4**	**-0.1**
	comp=Z,32nm,1.4s,mb5.0						
KTH	**Kantishna Hill**	**82.67**	**23**	*e*P	**P**	**03 09 01.5**	**-0.5**
	comp=Z,16nm,1.1s,mb5.0						
KSH	**Kashi**	**82.83**	**311**	*e*P	**P**	**03 09 03.1**	**-0.2**
KSH				pP	pP	03 09 13.5	-1.7
KSH				sP	sP	03 09 17.4	-2.2
KSH				PP	PP	03 12 14.7	+0.7
KSH				S	S	03 19 14.8	-4.2
KSH				SKS		03 19 17.4	
KSH				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
KSH				pmax	pmax		
	comp=Z,84nm,5.1s						
KSH				LR	LR		
	comp=N,85nm,4.1s						
KSH				LR	LR		
	comp=E,110nm,5.5s						
KSH				LR	LR		
	comp=Z,110nm,5.1s						
MAW	**Mawson**	**82.91**	**203**	P	**P**	**03 09 03.4**	**+0.3**
	comp=Z,3.5nm,0.6s,mb4.6,baz=161,slow=16,SNR=17						
BPAW	**Bear Paw Mtn.**	**82.94**	**22**	*e*P	**P**	**03 09 02.6**	**-0.7**
	comp=Z,32nm,1.6s,mb5.1						
QSPA	**South Pole Qui**	**83.08**	**180**	*e*P	**P**	**03 09 04.1**	**+0.3**
	comp=

GERES	**GERESS Array B**	**124.77 327**	PKP	PKPdf	03 15 38.8	+0.3
	comp=Z,0.8nm,0.8s,baz=96,slow=1.3,SNR=6.6					
ROSC	**El Rosal**	**135.03 90**	PKP	PKPdf	03 15 59.7	+0.8
	comp=Z,3.0nm,0.8s,baz=224,slow=16,SNR=3.8					
LPAZ	**La Paz**	**135.07 121**	PKP	PKPdf	03 15 60.0	+1.0
	comp=Z,0.6nm,0.7s,baz=72,slow=4.0,SNR=4.2					
LPAZ	**La Paz**	**135.07 121**	PKP	PKPdf	03 15 60.0	+1.0
TOA0	**Torodi Ar. Sit**	**149.01 284**	*e*PKPbc	PKPbc	03 16 27.7	-0.1
TORD	**Torodi Ar. Bea**	**149.01 284**	PKPbc	PKPbc	03 16 27.6	-0.2
	comp=Z,8.9nm,0.8s,baz=84,slow=2.4,SNR=82					
KIC	**Kosan Boka**	**155.75 270**	*e*PKP2	PKPab	03 17 00.7	+0.4
	comp=Z,91nm,1.5s					
DBIC	**Dimbokro**	**155.87 271**	PKPab	PKPab	03 16 57.5	-3.3
	comp=Z,4.8nm,0.9s,baz=355,slow=4.0,SNR=3.4					
DBIC	**Dimbokro**	**155.87 271**	PKPab	PKPab	03 16 57.5	-3.3
LIC	**Lamto**	**156.03 270**	*e*PKP2	PKPab	03 17 01.8	+0.3
	comp=Z,42nm,1.5s					
TIC	**Toumodi**	**156.03 271**	*e*PKP2	PKPab	03 17 01.8	+0.3
	comp=Z,40nm,1.3s					

DJA 05 03:12:56.0±88N×126°99E, h100km, MLv3.7/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.39**	**106**	P	Pn	03 13 12.7	+1.6
LBMI	**Labuha**	**1.59**	**161**	P	Pn	03 13 24.2	+0.8
LBMI				S	Sn	03 13 54.5	+10
MNI	**Manado**	**2.22**	**285**	P	Pn	03 13 31.8	+0.3
NLAI	**Namlea**	**4.09**	**178**	P	Pn	03 13 54.8	-1.7
NLAI				S	Sn	03 14 45.8	+2.4

*IDC **05** 03:21:50.8±0.8, 30°84N×103°40E, h0km, mb3.8/14, mb1 3.9/16, mb1mx3.8/28, mbtmp3.8/16, ML4.3/1, Error ellipse: s-maj=26.3km s-min=16.0km az=56.0*
*NEIC **05** 03:21:52.5±0.4, 30°85N×103°40E, h10km, mb4.0/2, Error ellipse: s-maj=10.8km s-min=7.9km az=55.0*
*ISCJB **05** 03:21:52.7±0.9, 30°87N±0°04×103°42E±0°06, h23km±7km, mb3.8/17, Error ellipse: s-maj=8.8km s-min=5.9km az=153.0*
*BJI **05** 03:21:54.2, 30°79N×103°62E, h19km, mB4.2/1, mb4.1/2, ML3.8/21, Ms3.9/8, Ms7 3.8/5*

ISC 05 03:21:53.1±1.1, 30°88N±0°03×103°42E±0°05, h12km±7km, n30, σ0°96/40, mb3.8/17, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.29**	**85**	↓*i*Pg	**Pg**	**03 21 58.7**	**-0.4**
CD2				Sg	**Sg**	**03 22 04.1**	**+1.0**
CD2				smax			
	comp=N,40μm,1.0s						
CD2				smax			
	comp=E,29μm,1.1s						
LZH	**Lanzhou**	**5.20**	**4**	Pg	**Pg**	**03 23 26.8**	**-6.0**
LZH				Sg	**Sg**	**03 24 42.6**	**+2.4**
LZH				smax			
	comp=N,110nm,1.0s						
LZH				smax			
	comp=E,69nm,1.0s						
LZH				LR	LR		
	comp=E,1μm,8.7s						
LZH				LR	LR		
	comp=Z,1μm,9.5s						
GYA	**Guiyang**	**5.25**	**146**	Pn	**Pn**	**03 23 11.1**	**-0.4**
GYA				Sn	**Sn**	**03 24 12.8**	**+0.8**
GYA				Sg	**Sg**	**03 24 40.5**	**-1.2**
GYA				smax			
	comp=N,310nm,1.0s						
GYA				smax			
	comp=E,340nm,0.9s						
ENH	**Enshi**	**5.27**	**95**	*e*Pn	**Pn**	**03 23 12.7**	**+0.9**
	comp=E,67nm,0.7s						
ENH				*e*S	**Sn**	**03 24 13.3**	**+0.9**
XAN	**Xi'an**	**5.62**	**54**	Pn	**Pn**	**03 23 15.7**	**-0.8**
XAN				Pg	**Pg**	**03 23 36.7**	**-4.0**
XAN				Sn	**Sn**	**03 24 28.9**	**+8.0**
XAN				Sg	**Sg**	**03 24 52.2**	**-1.2**
XAN				smax			
	comp=N,180nm,1.0s						
XAN				smax			
	comp=E,78nm,1.0s						
KMI	**Kunming**	**5.77**	**186**	Pn	**Pn**	**03 23 19.9**	**+1.3**
KMI				Sn	**Sn**	**03 24 24.7**	**-0.1**
KMI				smax			
	comp=N,50nm,0.8s						
KMI				smax			
	comp=E,66nm,0.7s						
KMI				LR	LR		
	comp=N,620nm,6.3s						
KMI				LR	LR		
	comp=E,620nm,4.9s						
KMI				LR	LR		
	comp=Z,410nm,6.6s						
GTA	**Gaotai**	**9.00**	**342**	*e*P	**Pn**	**03 24 07.3**	**+4.3**
GTA				pP		03 24 11.7	
GTA				sP		03 24 15.1	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**13.02**	**199**	Pn	**Pn**	**03 24 57.6**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=10,slow=11,SNR=8.5						
QIZ	**Qiongzhong**	**13.16**	**152**	P	**Pn**	**03 25 02.8**	**+2.9**
QIZ				S	**Sn**	**03 27 30.4**	**+4.2**
QIZ				LR	LR		
	comp=N,460nm,24.5s						
QIZ				LR	LR		
	comp=Z,1μm,38.6s						
SONM	**Songino Array**	**17.08**	**7**	P	**Pn**	**03 25 51.4**	**-0.3**
	baz=183,slow=10,SNR=3.9						
KSRS	**Korea Array**	**21.28**	**65**	P	**P**	**03 26 39.3**	**-0.2**
	comp=Z,2.7nm,0.8s,mb3.6,baz=243,slow=10,SNR=7.3						
MKAR	**Makanchi Array**	**22.77**	**320**	P	**P**	**03 26 56.6**	**+1.3**
	comp=Z,0.6nm,0.7s,mb3.1,baz=113,slow=8.0,SNR=4.2						
TKM2	**Tokmak 2**	**25.16**	**306**	*e*P	**P**	**03 27 20.2**	**+1.9**
	comp=Z,3.7nm,1.1s,mb3.8						
UCH	**Uchtor**	**25.71**	**304**	*e*P	**P**	**03 27 23.1**	**-0.1**
AAK	**Ala-Archa**	**25.84**	**305**	P	**P**	**03 27 24.5**	**+0.1**
	comp=Z,1.1nm,0.4s,mb3.7,baz=280,slow=11,SNR=3.1						
AML	**Almayashu**	**26.27**	**304**	*e*P	**P**	**03 27 28.7**	**+0.3**
	comp=Z,4.6nm,1.1s,mb3.9						
ZALV	**Zalesovo Beam**	**26.67**	**335**	P	**P**	**03 27 32.0**	**+0.3**
	comp=Z,1.3nm,0.5s,mb3.7,baz=147,slow=8.6,SNR=5.8						
KURK	**Kurchatov**	**27.08**	**324**	P	**P**	**03 27 35.0**	**-0.5**
	comp=Z,1.8nm,1.0s,mb3.6,baz=127,slow=9.6,SNR=6.1						
BRTR	**Keskin Array B**	**56.34**	**300**	P	**P**	**03 31 33.8**	**-0.2**
	comp=Z,0.8nm,0.8s,mb3.8,baz=21,slow=12,SNR=2.5						
ARCES	**ARCESS Array B**	**57.22**	**336**	P	**P**	**03 31 39.3**	**-0.6**
	comp=Z,1.7nm,0.9s,mb4.1,baz=24,slow=18,SNR=3.6						
FINES	**FINESS Array B**	**57.42**	**326**	P	**P**	**03 31 40.4**	**-1.0**
	comp=Z,0.3nm,0.4s,mb3.7,baz=96,slow=7.7,SNR=3.5						
WRA	**Warramunga Arr**	**58.62**	**146**	P	**P**	**03 31 49.5**	**-0.8**
	comp=Z,2.5nm,0.8s,mb4.3,baz=338,slow=7.6,SNR=10						
ASAR	**Alice Springs**	**61.61**	**148**	P	**P**	**03 32 10.4**	**-0.2**
	comp=Z,0.6nm,0.5s,mb4.0,baz=337,slow=6.8,SNR=5.5						
NOA	**NORSAR Array B**	**64.53**	**327**	P	**P**	**03 32 28.6**	**-1.1**
	comp=Z,1.3nm,0.9s,mb3.9,baz=71,slow=6.8,SNR=3.1						
CLL	**Collm**	**66.82**	**317**	*e*P	**P**	**03 32 45.0**	**+0.4**
GERES	**GERESS Array B**	**67.28**	**314**	P	**P**	**03 32 47.7**	**+0.1**
	comp=Z,0.3nm,0.7s,mb3.4,baz=232,slow=30,SNR=2.3						
INK	**Inuvik**	**72.56**	**19**	P	**P**	**03 33 19.1**	**-0.6**
	comp=Z,1.8nm,1.0s,mb4.0,baz=0.0,slow=6.1,SNR=2.5						
YKA	**Yellowknife Ar**	**82.07**	**17**	P	**P**	**03 34 12.9**	**-0.2**
	comp=Z,1.7nm,1.1s,mb3.9,baz=325,slow=4.7,SNR=5.5						
YKA	**Yellowknife Ar**	**82.07**	**17**	P	**P**	**03 34 12.9**	**-0.2**
BOSA	**Boshof**	**95.06**	**240**	P	**P**	**03 35 14.6**	**-1.6**
	comp=Z,2.0nm,0.9s,mb4.5,baz=179,slow=11,SNR=3.1						

DJA 05 03:37:44.0±47S×122°76E, h4km, MLv3.8/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.57**	**179**	P	Pg	03 37 53.5	-1.4
LUWI				S	Sg	03 38 01.1	-1.2
APSI	**Ampana**	**1.19**	**248**	P	Pg	03 38 05.2	-1.7
APSI				S	Sg	03 38 24.1	+1.7
MRSI	**Marisa**	**1.25**	**319**	P	Pg	03 38 06.3	-1.7
MPSI	**Mapaga**	**2.97**	**286**	P	Pn	03 38 35.1	+3.1
KDI	**Kendari**	**3.47**	**182**	P	Pn	03 38 40.1	+1.3
TTSI	**Tana Toraja**	**3.90**	**229**	P	Pn	03 38 43.4	-1.3
NLAI	**Namlea**	**5.14**	**122**	P	Pn	03 39 02.6	+0.9

*SOF **05** 03:46:32.6, 40°15N×23°43E, h2km, MD3.1*
*ATH **05** 03:46:34.6, 40°16N×23°38E, h11km±1km, MD3.3/4*
*NEIC **05** 03:46:34.6, 40°16N×23°38E, h11km, MD3.3(ATH), After ATH.*
*ISCJB **05** 03:46:35.1±0.4, 40°21N±0°01×23°34E±0°02, h4km±3km, Error ellipse: s-maj=2.8km s-min=2.3km az=18.4*
*CSEM **05** 03:46:35.4±0.1, 40°20N×23°36E, h8km, ML3.5/13, Error ellipse: s-maj=3.0km s-min=2.2km az=118.0*
*THE **05** 03:46:35.8, 40°21N×23°33E, h1km±1km, ML3.5/13, Error ellipse: s-maj=1.8km s-min=0.5km az=79.0*
*SKO **05** 03:46:37.7, 40°31N×23°27E, h10km, M2.5, ML2.9*

ISC 05 03:46:35.7±0.3, 40°21N±0°01×23°34E±0°02, h6km±2km, n109, σ0°83/180, 2C-1D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLG	**Polygyros**	**0.18**	**27**	*e*Pg	**Pg**	**03 46 39.5**	**+0.1**
PLG				*e*Sg	**Sg**	**03 46 42.1**	**+0.2**
PLG	**Polygyros**	**0.18**	**27**	P	**Pg**	**03 46 39.4**	**0.0**
PLG				S	**Sg**	**03 46 42.0**	**+0.1**
PLG	**Polygyros**	**0.18**	**27**	*e*PG	**Pg**	**03 46 39.5**	**+0.1**
PLG				*e*SG	**Sg**	**03 46 42.1**	**+0.2**
PLG	**Polygyros**	**0.18**	**27**	P	**Pg**	**03 46 39.4**	**0.0**
PLG				S	**Sg**	**03 46 42.0**	**+0.1**
PAIG	**Paliouri**	**0.39**	**137**	P	**Pg**	**03 46 43.7**	**+0.5**
PAIG				S	**Sg**	**03 46 49.6**	**+1.3**
PAIG	**Paliouri**	**0.39**	**137**	P	**Pg**	**03 46 43.7**	**+0.5**
HORT	**Hortiatis**	**0.43**	**335**	P	**Pg**	**03 46 44.1**	**+0.1**
HORT				S	**Sg**	**03 46 49.6**	**0.0**
HORT	**Hortiatis**	**0.43**	**335**	P	**Pg**	**03 46 44.1**	**+0.1**
HORT				S	**Sg**	**03 46 49.6**	**0.0**
THE	**Thessaloniki**	**0.51**	**326**	P	**Pg**	**03 46 45.4**	**-0.1**
THE				S	**Sg**	**03 46 52.1**	**0.0**
THE	**Thessaloniki**	**0.51**	**326**	P	**Pg**	**03 46 45.4**	**-0.1**
THE				S	**Sg**	**03 46 52.1**	**0.0**
OUR	**Ouranopolis**	**0.51**	**76**	P	**Pg**	**03 46 45.6**	**0.0**
OUR				S	**Sg**	**03 46 52.7**	**+0.5**
OUR	**Ouranopolis**	**0.51**	**76**	P	**Pg**	**03 46 45.6**	**0.0**
OUR				S	**Sg**	**03 46 52.7**	**+0.5**
SOH	**Sokhos**	**0.61**	**1**	*e*Pb	**Pg**	**03 46 47.5**	**0.0**
SOH				*e*Sb	**Sg**	**03 46 56.3**	**+0.8**
SOH	**Sokhos**	**0.61**	**1**	P	**Pg**	**03 46 47.5**	**0.0**
SOH				S	**Sg**	**03 46 56.7**	**+1.2**
SOH	**Sokhos**	**0.61**	**1**	*e*PB	**Pg**	**03 46 47.5**	**0.0**
SOH				*e*SB	**Sg**	**03 46 56.3**	**+0.8**
SOH	**Sokhos**	**0.61**	**1**	P	**Pg**	**03 46 47.5**	**0.0**
SOH				*e*Sb	**Sg**	**03 46 56.3**	**+0.8**
SOH				S	**Sg**	**03 46 56.7**	**+1.2**
LIT	**Litokhoron**	**0.66**	**261**	*e*Pb	**Pg**	**03 46 48.2**	**-0.1**
LIT				*e*Sb	**Sg**	**03 46 56.9**	**0.0**
LIT	**Litokhoron**	**0.66**	**261**	P	**Pg**	**03 46 48.8**	**+0.5**
LIT				S	**Sg**	**03 46 57.9**	**+1.0**
LIT	**Litokhoron**	**0.66**	**261**	*e*PB	**Pg**	**03 46 48.2**	**-0.1**
LIT				*e*SB	**Sg**	**03 46 56.9**	**0.0**
LIT	**Litokhoron**	**0.66**	**261**	*e*Pb	**Pg**	**03 46 48.2**	**-0.1**
LIT	**Litokhoron**	**0.66**	**261**	P	**Pg**	**03 46 48.8**	**+0.5**
LIT				*e*Sb	**Sg**	**03 46 56.9**	**0.0**
LIT				S	**Sg**	**03 46 57.9**	**+1.0**
XOR	**Xorichti**	**0.85**	**187**	P	**Pg**	**03 46 52.2**	**+0.2**
XOR				S	**Sg**	**03 47 05.1**	**+2.1**
XOR	**Xorichti**	**0.85**	**187**	P	**Pg**	**03 46 52.2**	**+0.2**
SRS	**Serrai**	**0.93**	**12**	P	**Pg**	**03 46 53.0**	**-0.5**
SRS				S	**Sg**	**03 47 06.1**	**+0.5**
SRS	**Serrai**	**0.93**	**12**	P	**Pg**	**03 46 53.0**	**-0.5**
SRS				S	**Sg**	**03 47 06.1**	**+0.5**
AOS	**Alonnisos**	**1.12**	**158**	P	**Pg**	**03 46 56.8**	**-0.4**
AOS				S	**Sg**	**03 47 12.4**	**+0.7**
AOS	**Alonnisos**	**1.12**	**158**	P	**Pg**	**03 46 56.8**	**-0.4**
KAVA	**Kavala**	**1.19**	**48**	P	**Pg**	**03 46 57.9**	**-0.7**
KAVA				S	**Sg**	**03 47 14.7**	**+0.6**
KAVA	**Kavala**	**1.19**	**48**	P	**Pg**	**03 46 57.9**	**-0.7**
KAVA				S	**Sg**	**03 47 14.7**	**+0.6**
KZN	**Kozani**	**1.20**	**275**	*e*Pb	**Pg**	**03 46 58.1**	**-0.6**
KZN				*e*Sb	**Sb**	**03 47 14.5**	**-0.1**
KZN	**Kozani**	**1.20**	**275**	P	**Pg**	**03 46 58.1**	**-0.6**
KZN				S	**Sg**	**03 47 14.7**	**+0.4**
KZN	**Kozani**	**1.20**	**275**	*e*PB	**Pg**	**03 46 58.1**	**-0.6**
KZN				*e*SB	**Sb**	**03 47 14.5**	**-0.1**
KZN	**Kozani**	**1.20**	**275**	P	**Pg**	**03 46 58.1**	**-0.6**
KZN				*e*Sb	**Sb**	**03 47 14.5**	**-0.1**
THL	**Klokotos Trika**	**1.20**	**238**	P	**Pg**	**03 46 57.9**	**-0.9**
THL				S	**Sg**	**03 47 14.9**	**+0.5**
THL	**Klokotos Trika**	**1.20**	**238**	*e*PB	**Pg**	**03 46 57.9**	**-0.9**
THL				*e*SB	**Sb**	**03 47 14.1**	**-0.6**
THL	**Klokotos Trika**	**1.20**	**238**	P	**Pg**	**03 46 57.9**	**-0.9**
THL				*e*Sb	**Sb**	**03 47 14.1**	**-0.6**
THL				S	**Sg**	**03 47 14.9**	**+0.5**
NVR	**Nevrokopi**	**1.21**	**19**	*e*Pb	**Pb**	**03 46 58.1**	**-0.9**
NVR				*e*Sb	**Sb**	**03 47 15.3**	**+0.4**
NVR	**Nevrokopi**	**1.21**	**19**	*e*PB	**Pb**	**03 46 58.1**	**-0.9**
NVR				*e*SB	**Sb**	**03 47 15.3**	**+0.4**
NVR	**Nevrokopi**	**1.21**	**19**	*e*Pb	**Pb**	**03 46 58.1**	**-0.9**
NVR				*e*Sb	**Sb**	**03 47 15.3**	**+0.4**
VAY	**Valandovo**	**1.25**	**333**	*i*Pg	**Pg**	**03 46 58.9**	**-0.9**
VAY				*i*Sg	**Sg**	**03 47 14.6**	**-1.4**
VAY				*e*Lg		03 47 16.0	
	comp=E,175nm,0.4s						
VAY				*e*Lg		03 47 18.7	
	comp=N,235nm,0.8s						
VAY	**Valandovo**	**1.25**	**333**	P	**Pg**	**03 46 58.8**	**-1.0**
VAY				S	**Sg**	**03 47 17.1**	**+1.1**
VAY	**Valandovo**	**1.25**	**333**	P	**Pg**	**03 46 58.8**	**-1.0**
VAY				S	**Sg**	**03 47 17.1**	**+1.1**
MMB	**Musomiste**	**1.41**	**12**	Pg	**Pn**	**03 47 01.0**	**-0.9**
MMB	**Musomiste**	**1.41**	**12**	Pg	**Pn**	**03 47 01.0**	**-0.9**
AGG	**Agios Georgios**	**1.42**	**214**	*e*Pb	**Pn**	**03 47 01.3**	**-0.7**
AGG				*e*Sb	**Sb**	**03 47 19.9**	**-1.0**
AGG	**Agios Georgios**	**1.42**	**214**	P	**Pn**	**03 47 01.4**	**-0.6**
AGG	**Agios Georgios**	**1.42**	**214**	*e*PB	**Pn**	**03 47 01.3**	**-0.7**
AGG				*e*SB	**Sb**	**03 47 19.9**	**-1.0**
AGG	**Agios Georgios**	**1.42**	**214**	P	**Pn**	**03 47 01.4**	**-0.6**
AGG				*e*Sb	**Sb**	**03 47 19.9**	**-1.0**
LIA	**Limnos Island**	**1.45**	**102**	*e*Pb	**Pn**	**03 47 01.6**	**-0.9**
LIA				*e*Sb	**Sn**	**03 47 20.1**	**-1.8**
LIA	**Limnos Island**	**1.45**	**102**	P	**Pn**	**03 47 01.7**	**-0.8**
LIA	**Limnos Island**	**1.45**	**102**	*e*PB	**Pn**	**03 47 01.6**	**-0.9**
LIA				*e*SB	**Sn**	**03 47 20.1**	**-1.8**
LIA	**Limnos Island**	**1.45**	**102**	P	**Pn**	**03 47 01.7**	**-0.8**
LIA				*e*Sb	**Sn**	**03 47 20.1**	**-1.8**
ATAL	**Atalanti**	**1.54**	**189**	P	**Pn**	**03 47 02.9**	**-0.7**
ATAL	**Atalanti**	**1.54**	**189**	P	**Pn**	**03 47 02.9**	**-0.7**
LKR	**Lokris**	**1.58**	**190**	*e*Pg	**Pn**	**03 47 03.1**	**-1.2**
LKR				*e*Sb	**Sn**	**03 47 23.6**	**-1.4**
LKR	**Lokris**	**1.58**	**190**	P	**Pn**	**03 47 03.5**	**-0.8**
LKR				S	**Sn**	**03 47 26.2**	**+1.2**
LKR	**Lokris**	**1.58**	**190**	*e*PG	**Pn**	**03 47 03.1**	**-1.2**
LKR				*e*SB	**Sn**	**03 47 23.6**	**-1.4**
LKR	**Lokris**	**1.58**	**190**	*e*Pg	**Pn**	**03 47 03.1**	**-1.2**
LKR	**Lokris**	**1.58**	**190**	P	**Pn**	**03 47 03.5**	**-0.8**
LKR				*e*Sb	**Sn**	**03 47 23.6**	**-1.4**
LKR				S	**Sn**	**03 47 26.2**	**+1.2**
FNA	**Florina**	**1.60**	**292**	P	**Pn**	**03 47 04.8**	**+0.2**
FNA				S	**Sn**	**03 47 26.9**	**+1.4**
FNA	**Florina**	**1.60**	**292**	P	**Pn**	**03 47 04.8**	**+0.2**
FNA				S	**Sn**	**03 47 26.9**	**+1.4**
KKB	**Krupnik**	**1.67**	**354**	P	**Pn**	**03 47 05.1**	**-0.4**
KKB	**Krupnik**	**1.67**	**354**	P	**Pn**	**03 47 05.1**	**-0.4**
STIP	**Stip**	**1.72**	**330**	*e*Pg	**Pg**	**03 47 06.8**	**-1.9**
STIP	**Stip**	**1.72**	**330**	P	**Pn**	**03 47 06.9**	**+0.7**
STIP	**Stip**	**1.72**	**330**	P	**Pn**	**03 47 06.9**	**+0.7**
EVR	**Evrytania**	**1.75**	**223**	*e*Pn	**Pn**	**03 47 06.3**	**-0.3**
EVR				*e*SN	**Sn**	**03 47 30.4**	**+1.2**
EVR	**Evrytania**	**1.75**	**223**	*e*PN	**Pn**	**03 47 06.3**	**-0.3**
EVR				*e*SN	**Sn**	**03 47 30.4**	**+1.2**
EVR	**Evrytania**	**1.75**	**223**	*e*Pn	**Pn**	**03 47 06.3**	**-0.3**
EVR				*e*Sn	**Sn**	**03 47 30.4**	**+1.2**
RZN	**Rozhen**	**1.81**	**35**	P	**Pn**	**03 47 07.0**	**-0.4**
RZN	**Rozhen**	**1.81**	**35**	P	**Pn**	**03 47 07.0**	**-0.4**
DSF	**Desfina**	**1.90**	**199**	P	**Pn**	**03 47 08.0**	**-0.7**
DSF	**Desfina**	**1.90**	**199**	P	**Pn**	**03 47 08.0**	**-0.7**
RDO	**Rodhopi**	**1.92**	**60**	*e*Pg	**Pn**	**03 47 09.8**	**+0.9**
RDO				*e*Sn	**Sn**	**03 47 34.5**	**+1.1**
RDO	**Rodhopi**	**1.92**	**60**	*e*PG	**Pn**	**03 47 09.8**	**+0.9**
RDO				*e*SN	**Sn**	**03 47 34.5**	**+1.1**
RDO	**Rodhopi**	**1.92**	**60**	*e*Pg	**Pn**	**03 47 09.8**	**+0.9**
RDO				*e*Sn	**Sn**	**03 47 34.5**	**+1.1**
KRUS	**Krusevo**	**1.96**	**307**	*e*Pn	**Pn**	**03 47 09.4**	**-0.1**
JAN	**Janina**	**1.99**	**255**	*e*Pn	**Pn**	**03 47 10.0**	**+0.1**
JAN				*e*Sn	**Sn**	**03 47 36.6**	**+1.5**
JAN	**Janina**	**1.99**	**255**	*e*PN	**Pn**	**03 47 10.0**	**+0.1**
JAN				*e*SN	**Sn**	**03 47 36.6**	**+1.5**
JAN	**Janina**	**1.99**	**255**	*e*Pn	**Pn**	**03 47 10.0**	**+0.1**
JAN				*e*Sn	**Sn**	**03 47 36.6**	**+1.5**
KALE	**Kalithea**	**2.04**	**207**	P	**Pn**	**03 47 10.3**	**-0.3**
KALE				S	**Sn**	**03 47 36.5**	**+0.1**
KALE	**Kalithea**	**2.04**	**207**	P	**Pn**	**03 47 10.3**	**-0.3**
KALE				S	**Sn**	**03 47 36.5**	**+0.1**
KDZ	**Kurdzhali**	**2.13**	**47**	P	**Pn**	**03 47 10.0**	**-1.9**
KDZ	**Kurdzhali**	**2.13**	**47**	P	**Pn**	**03 47 10.0**	**-1.9**
PLD	**Plovdiv**	**2.16**	**28**	P	**Pn**	**03 47 13.0**	**+0.8**
PLD				S	**Sn**	**03 47 41.3**	**+2.0**
PLD	**Plovdiv**	**2.16**	**28**	P	**Pn**	**03 47 13.0**	**+0.8**
PLD				S	**Sn**	**03 47 41.3**	**+2.0**
ALN	**Alexandroupoli**	**2.18**	**71**	*e*Pn	**Pn**	**03 47 12.7**	**+0.2**
ALN				*e*Sn	**Sn**	**03 47 40.5**	**+0.7**
ALN	**Alexandroupoli**	**2.18**	**71**	P	**Pn**	**03 47 11.9**	**-0.6**
ALN	**Alexandroupoli**	**2.18**	**71**	*e*PN	**Pn**	**03 47 12.7**	**+0.2**
ALN				*e*SN	**Sn**	**03 47 40.5**	**+0.7**
ALN	**Alexandroupoli**	**2.18**	**71**	P	**Pn**	**03 47 11.9**	**-0.6**
ALN	**Alexandroupoli**	**2.18**	**71**	*e*Pn	**Pn**	**03 47 12.7**	**+0.2**
ALN				*e*Sn	**Sn**	**03 47 40.5**	**+0.7**
LTK	**Loutraki**	**2.20**	**188**	P	**Pn**	**03 47 12.4**	**-0.4**
LTK	**Loutraki**	**2.20**	**188**	P	**Pn**	**03 47 12.4**	**-0.4**
VTS	**Vitosha**	**2.38**	**358**	P	**Pn**	**03 47 16.1**	**+0.8**
VTS	**Vitosha**	**2.38**	**358**	P	**Pn**	**03 47 16.1**	**+0.8**
VTS	**Vitosha**	**2.38**	**358**	P	**Pn**	**03 47 16.1**	**+0.8**
IGT	**Igoumenitsa**	**2.41**	**255**	P	**Pn**	**03 47 16.3**	**+0.6**
IGT	**Igoumenitsa**	**2.41**	**255**	P	**Pn**	**03 47 16.3**	**+0.6**
PGB	**Panagyurishte**	**2.42**	**15**	P	**Pn**	**03 47 16.3**	**+0.5**
PGB				*e*Pg	**Pg**	**03 47 20.9**	**-1.2**
PGB	**Panagyurishte**	**2.42**	**15**	P	**Pn**	**03 47 16.3**	**+0.5**
BARS	**Barje**	**2.84**	**337**	↑*i*Pn	**Pn**	**03 47 21.9**	**+0.3**
MPEP	**Malo Peshtene**	**3.16**	**5**	P	**Pn**	**03 47 26.2**	**+0.2**
NISS		**3.35**	**342**	↑*i*Pn	**Pn**	**03 47 28.2**	**-0.5**
PVL	**Pavlikeni**	**3.36**	**26**	P	**Pn**	**03 47 27.3**	**-1.4**
PVL	**Pavlikeni**	**3.36**	**26**	P	**Pn**	**03 47 27.3**	**-1.4**
SZH	**Strazhica**	**3.62**	**32**	P	**Pn**	**03 47 32.2**	**-0.1**
SZH	**Strazhica**	**3.62**	**32**	P	**Pn**	**03 47 32.2**	**-0.1**
GRUS	**Gruza**	**4.16**	**333**	*e*Pn	**Pn**	**03 47 39.3**	**-0.5**
DIVS	**Divibare**	**4.61**	**328**	↓*i*Pn	**Pn**	**03 47 46.4**	**+0.5**

*IDC **05** 03:56:45.5±1.7, 8°64S×124°72E, h0km, mb3.8/1, mb1 4.4/4, mb1mx3.9/18, mbtmp4.2/4, ML4.4/2, MS3.3/2, Ms1 3.3/2, ms1mx2.7/25, Error ellipse: s-maj=103.8km s-min=26.3km az=65.0*
*NEIC **05** 03:56:50.5±1.0, 8°84S×124°47E, h35km, mb4.5/1, Error ellipse: s-maj=34.4km s-min=12.9km az=58.0*
*ISCJB **05** 03:56:55.7±1.3, 9°52S±0°10×124°31E±0°09, h60km±20km, mb4.1/2, Error ellipse: s-maj=19.1km s-min=11.0km az=40.7*

ISC 05 03:56:56.2±1.1, 9°3S±0°1×124°34E±0°09, h84km±16km, n13, σ1°58/18, mb4.0/2, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**2.18**	**288**	P	**Pn**	**03 57 29.9**	**-0.7**
KAPI	**Kappang**	**6.24**	**313**	LR	LR	04 00 31.5	
	comp=Z,204nm,20.9s,baz=246,slow=37						
KNA	**Kununurra**	**7.72**	**146**	*e*P	**Pn**	**03 58 47.6**	**+1.7**
	17nm,0.2s						
KNA				*e*S	**Sn**	**04 00 09.8**	**-2.0**
KAKA	**Kakadu**	**8.64**	**114**	*e*P	**Pn**	**03 59 01.0**	**+2.5**
	12nm,0.4s						
KAKA				*e*S	**Sn**	**04 00 34.0**	**-0.4**
KAKA	**Kakadu**	**8.64**	**114**	*e*Pn	**Pn**	**03 59 00.2**	**+1.7**
	27nm,0.4s						
KAKA				*e*S	**Sn**	**04 00 31.9**	**-2.4**
FITZ	**Fitzroy Crossi**	**8.83**	**172**	*e*P	**Pn**	**03 59 02.1**	**+1.1**
	17nm,0.3s						
FITZ				*e*S	**Sn**	**04 00 36.4**	**-2.4**
FITZ	**Fitzroy Crossi**	**8.83**	**172**	Pn	**Pn**	**03 59 02.1**	**+1.1**
	3.0nm,0.3s,baz=8.2,slow=8.2,SNR=165						
FITZ				Sn	**Sn**	**04 00 36.5**	**-2.3**
	5.6nm,0.3s,baz=143,slow=12,SNR=15						
FITZ				LR	LR	04 03 03.7	
	comp=Z,277nm,18.4s,baz=303,slow=40						
FITZ	**Fitzroy Crossi**	**8.83**	**172**	*e*Pn	**Pn**	**03 59 02.1**	**+1.1**
FITZ				*e*S	**Sn**	**04 00 35.1**	**-3

AKASG	**Malin Array Be**	**152.06 322**	PKPbc	PKPbc	04 18 58.0	+1.0
	1.7nm,0.5s,baz=53,slow=2.5,SNR=8.4					
AKASG			pPKPbc	pPKPbc	04 19 15.7	-1.6
	1.0nm,0.6s,baz=61,slow=2.3,SNR=2.8					
BRTR	**Keskin Array B**	**153.05 297**	PKPbc	PKPbc	04 19 00.6	+1.0
	1.0nm,0.6s,baz=132,slow=3.5,SNR=5.8					
TORD	**Torodi Ar. Bea**	**161.89 179**	PKPab	PKPab	04 19 50.0	+0.1
	0.5nm,0.8s,baz=180,slow=3.5,SNR=7.3					
TORD			pPKPab	pPKPab	04 20 07.0	-2.4
	0.8nm,0.8s,baz=179,slow=3.2,SNR=3.1					

DJA 05 04:03:42,0.51S×122.94E,h28km,MLv3.8/3,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.55**	**198**	P	Pb	04 03 54.1	+0.8
LUWI				S	Sb	04 04 00.9	0.0
APSI	**Ampana**	**1.35**	**253**	P	Pn	04 04 04.8	-0.2
APSI				S	Sn	04 04 23.6	+1.6
MRSI	**Marisa**	**1.40**	**314**	P	Pn	04 04 06.3	+0.6
TTSI	**Tana Toraja**	**4.01**	**231**	P	Pn	04 04 42.6	+1.0

IDC 05 04:37:49.6±17.0,21.68S×174.53W,h0km,mb4.3/5, mb1 4.5/5,mb1mx4.1/19,mbtmp4.3/5,Error ellipse: s-maj=327.4km s-min=149.9km az=80.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**36.61**	**265**	P	P	04 44 59.0	+1.2
	6.0nm,0.4s,baz=92,slow=12,SNR=10.0						
STKA	**Stephens Creek**	**40.23**	**246**	P	P	04 45 27.5	-0.7
	1.5nm,0.4s,baz=67,slow=7.7,SNR=3.9						
ASAR	**Alice Springs**	**47.42**	**257**	P	P	04 46 25.4	-0.8
	2.0nm,0.5s,baz=100,slow=6.9,SNR=21						
WRA	**Warramunga Arr**	**47.65**	**262**	P	P	04 46 27.4	-0.6
	2.1nm,0.3s,baz=94,slow=8.5,SNR=106						
FITZ	**Fitzroy Crossi**	**56.09**	**262**	P	P	04 47 31.7	+0.7
	0.8nm,0.5s,baz=84,slow=14,SNR=5.9						

IDC ***05*** *04:41:03.6±0.4,32.33N×105.09E,h0km,mb5.0/31, mb1 5.0/34,mb1mx5.0/37,mbtmp5.0/34,ML3.9/3,MS4.3/13, Ms1 4.3/13,ms1mx3.9/38,Error ellipse: s-maj=14.2km s-min=9.3km az=54.0*

NEIC ***05*** *04:41:05.5±0.1,32.35N×105.01E,h10km,mb5.2/122, Error ellipse: s-maj=3.0km s-min=2.6km az=194.0*

NEIC Felt at Wenxian.

ISCJB ***05*** *04:41:05.4±0.1,32.31N±0.02×104.99E±0.02,h20km, mb5.1/184,MS4.5/39,Error ellipse: s-maj=2.8km s-min=2.3km az=175.9*

BJI ***05*** *04:41:05.7,32.36N×105.06E,h16km,mB4.9/18,mb5.0/37, ML5.0/18,Ms4.8/49,Ms7 4.7/42*

MOS ***05*** *04:41:07.0±0.8,32.34N×105.06E,h33km,mb5.3/76, MS4.5/21,Error ellipse: s-maj=6.1km s-min=3.9km az=115.1*

DJA ***05*** *04:41:09,32.40N×105.00E,h19km,mb5.3/33*

SZGRF ***05*** *04:41:13.7,32.87N×104.67E,h33km,mb5.7,Sichuan, China*

ISC 05 04:41:05.8±0.7,32.34N±0.02×105.02E±0.02,h10km±4km, h20km±1.3km:pP-P,n614,σ0.89/639,mb5.1/184,MS4.5/39, 147C-62D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.79**	**217**	Pn	**Pn**	**04 41 37.9**	**+1.3**
CD2				Sn	**Sn**	**04 42 02.5**	**+3.1**
CD2				Sg	**Sg**	**04 42 04.7**	**+1.5**
CD2				smax			
	comp=N,59μm,0.6s						
CD2				smax			
	comp=E,55μm,0.7s						
XAN	**Xi'an**	**3.69**	**62**	Pn	**Pn**	**04 42 03.0**	**+0.2**
XAN				Sn	**Sn**	**04 42 47.4**	**+1.2**
XAN				Sg	**Sg**	**04 43 01.2**	**-3.0**
XAN				smax			
	comp=N,5μm,1.1s						
XAN				smax			
	comp=E,2μm,0.9s						
XAN				LR	LR		
	comp=N,7μm,4.9s						
XAN				LR	LR		
	comp=E,2μm,4.8s						
XAN				LR	LR		
	comp=Z,2μm,8.8s						
LZH	**Lanzhou**	**3.86**	**346**	Pn	**Pn**	**04 42 08.2**	**+3.0**
LZH				Pg	**Pg**	**04 42 18.9**	**-0.8**
LZH				Sn	**Sn**	**04 42 52.7**	**+2.2**
LZH				Sg	**Sg**	**04 43 08.8**	**-1.0**
LZH				smax			
	comp=N,6μm,1.0s						
LZH				LR	LR		
	comp=E,33μm,5.8s						
LZH				LR	LR		
	comp=Z,37μm,9.2s						
ENH	**Enshi**	**4.35**	**117**	*e*Pn	**Pn**	**04 42 12.7**	**+0.9**
ENH				*e*Sg	**Sg**	**04 43 26.4**	**+1.0**
GYA	**Guiyang**	**6.04**	**166**	Pn	**Pn**	**04 42 35.8**	**+0.7**
GYA				Pg	**Pg**	**04 42 57.5**	**-3.9**
GYA				Sn	**Sn**	**04 43 41.0**	**-3.2**
GYA				Sg	**Sg**	**04 44 11.8**	**-7.8**
GYA				smax			
	comp=N,3μm,1.0s						
GYA				smax			
	comp=E,3μm,0.7s						
GYA				LR	LR		
	comp=N,6μm,5.4s						
GYA				LR	LR		
	comp=E,9μm,4.8s						
GYA				LR	LR		
	comp=Z,8μm,5.7s						
KMI	**Kunming**	**7.46**	**196**	Pn	**Pn**	**04 42 55.1**	**+0.4**
TIY	**Taiyuan**	**8.11**	**47**	*e*P	**Pn**	**04 43 06.5**	**+3.0**
TIY				S	**Sn**	**04 44 38.2**	**+3.1**
TIY				LR	LR		
	comp=Z,4μm,12.8s						
WHN	**Wuhan**	**8.17**	**100**	⇑P	**Pn**	**04 43 03.9**	**-0.5**
WHN				sP		04 43 16.0	
WHN				S	**Sn**	**04 44 30.0**	**-6.8**
GTA	**Gaotai**	**8.22**	**331**	P	**Pn**	**04 43 06.2**	**+1.2**
GTA				pP		04 43 10.2	
GTA				sP		04 43 13.8	
GTA				S	**Sn**	**04 44 40.4**	**+2.5**
GTA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,180nm,6.3s						
GTA				LR	LR		
	comp=N,8μm,9.5s						
GTA				LR	LR		
	comp=E,3μm,13.8s						
GTA				LR	LR		
	comp=Z,8μm,11.4s						
BTO	**Baotou**	**9.18**	**25**	*e*P	**Pn**	**04 43 17.3**	**-0.8**
BTO				S	**Sn**	**04 45 02.4**	**+1.0**
BTO				LR	LR		
	comp=N,1μm,7.7s						
BTO				LR	LR		
	comp=E,1μm,10.0s						
HHC	**Hu-ho-hao-te**	**9.98**	**30**	*e*P	**Pn**	**04 43 30.5**	**+1.3**
HHC				pP		04 43 33.7	
HHC				sP		04 43 36.5	
HHC				PP		04 43 38.8	
HHC				S	**Sn**	**04 45 22.7**	**+1.4**
HHC				PcS	PcS	04 53 15.7	+1.9
HHC				ScS	ScS	04 56 47.2	-0.1
TIA	**Tai'an**	**10.73**	**66**	*e*P	**Pn**	**04 43 45.0**	**+5.5**
TIA				S	**Sn**	**04 45 46.0**	**+6.3**
TIA				LR	LR		
	comp=N,2μm,7.0s						
TIA				LR	LR		
	comp=E,2μm,7.0s						
NJ2	**Nanjing**	**11.73**	**88**	*e*P	**Pn**	**04 43 55.4**	**+2.3**
NJ2				pP		04 44 03.4	
NJ2				PP		04 44 04.9	
NJ2				sP		04 44 06.8	
NJ2				S	**Sn**	**04 46 05.5**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,30nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,120nm,7.0s						
NJ2				LR	LR		
	comp=N,1μm,10.2s						
NJ2				LR	LR		
	comp=E,4μm,9.7s						
NJ2				LR	LR		
	comp=Z,4μm,10.5s						
GZH	**Guangzhou**	**11.80**	**139**	P	**Pn**	**04 43 49.6**	**-4.6**
GZH				S	**Sn**	**04 45 52.0**	**-14**
GZH				LR	LR		
	comp=N,5μm,10.8s						
GZH				LR	LR		
	comp=E,5μm,11.6s						
GZH				LR	LR		
	comp=Z,9μm,14.1s						
BJT	**Baijiatuau**	**11.82**	**46**	*e*P	**Pn**	**04 43 53.1**	**-1.2**
BJI	**Beijing**	**11.84**	**46**	P	**Pn**	**04 43 53.1**	**-1.5**
BJI				pmax	pmax		
	comp=Z,11nm,0.7s						
BJI				pmax	pmax		
	comp=Z,57nm,3.6s						
BJI				LR	LR		
	comp=N,3μm,4.5s						
BJI				LR	LR		
	comp=E,3μm,5.3s						
BJI				LR	LR		
	comp=Z,770nm,21.0s						
LSA	**Lhasa**	**12.18**	**261**	*e*P	**Pn**	**04 44 12.0**	**+13**
LSA				S	Sn	04 46 42.2	+27
LSA				LR	LR		
	comp=N,2μm,12.0s						
LSA				LR	LR		
	comp=E,700nm,12.0s						
LSA				LR	LR		
	comp=Z,2μm,11.0s						
LSA	**Lhasa**	**12.18**	**261**	*e*P	**Pn**	**04 44 01.4**	**+2.0**
LSA				pmax	pmax		
	comp=Z,22nm,0.7s						
LSA	**Lhasa**	**12.18**	**261**	*e*Pn	**Pn**	**04 44 01.4**	**+2.1**
	comp=Z,22nm,0.7s						
SHL	**Shillong**	**13.33**	**243**	*i* P	**Pn**	**04 44 13.0**	**-2.0**
SHL				*i* x	x	04 48 07.0	
QIZ	**Qiongzhong**	**13.95**	**161**	P	**Pn**	**04 44 24.1**	**+0.6**
QIZ				S	**Sn**	**04 47 00.3**	**+1.8**
QIZ				pmax	pmax		
	comp=Z,34nm,1.3s						
QIZ				pmax	pmax		
	comp=Z,140nm,2.5s						
QIZ				LR	LR		
	comp=N,6μm,12.0s						
QIZ				LR	LR		
	comp=Z,8μm,11.5s						
QIZ	**Qiongzhong**	**13.95**	**161**	*e*Pn	**Pn**	**04 44 23.1**	**-0.5**
QZH	**Quanzhou**	**14.01**	**118**	*e*P	**Pn**	**04 44 25.1**	**+0.8**
QZH				*e*S	**Sn**	**04 47 02.3**	**+2.4**
QZH				LR	LR		
	comp=N,9μm,7.8s						
QZH				LR	LR		
	comp=E,12μm,8.6s						
QZH				LR	LR		
	comp=Z,20μm,9.7s						
CHTO	**Chiang Mai**	**14.54**	**204**	*e*P	**Pn**	**04 44 32.6**	**+1.0**
CHTO	**Chiang Mai**	**14.54**	**204**	Pn	**Pn**	**04 44 32.8**	**+1.2**
	SNR=24						
CHTO				Pn	**Pn**	**04 44 32.8**	**+1.2**
	SNR=24						
CM31	**Chiang Mai Arr**	**14.87**	**203**	*e*Pn	**Pn**	**04 44 36.5**	**+0.4**
CMAR	**Chiang Mai Arr**	**14.87**	**203**	Pn	**Pn**	**04 44 36.5**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=14,slow=12,SNR=66						
CMAR				PcP	PcP	04 49 47.0	+0.6
	baz=326,slow=2.2,SNR=5.2						
CMAR				LR	LR	04 51 04.3	
	comp=Z,1μm,19.4s,baz=241,slow=40						
DL2	**Dalian**	**15.00**	**59**	P	**Pn**	**04 44 36.0**	**-1.8**
DL2				S	**Sn**	**04 47 18.6**	**-5.4**
DL2				pmax	pmax		
	comp=Z,40nm,1.2s						
DL2				pmax	pmax		
	comp=Z,110nm,4.9s						
DL2				LR	LR		
	comp=N,630nm,12.6s						
DL2				LR	LR		
	comp=E,580nm,16.3s						
DL2				LR	LR		
	comp=Z,810nm,12.9s						
SONM	**Songino Array**	**15.51**	**3**	Pn	**Pn**	**04 44 44.1**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=185,slow=13,SNR=89						
SONM				Lg		04 49 15.3	
	baz=191,slow=22,SNR=3.2						
SONM				LR	LR	04 51 23.2	
	comp=Z,2μm,19.9s,baz=178,slow=40						
SONM				P3KPbc		05 20 16.1	
	comp=Z,0.2nm,0.3s,baz=349,slow=4.4,SNR=6.2						
SONM	**Songino Array**	**15.51**	**3**	Pn	**Pn**	**04 44 44.1**	**-0.4**
SONM				Lg		04 49 15.3	
SONM				LR	LR	04 51 23.2	
ULN	**Ulaanbaatar**	**15.58**	**5**	*e*P	**Pn**	**04 44 45.5**	**+0.1**
ULN				pmax	pmax		
	comp=Z,52nm,1.0s						
ULN	**Ulaanbaatar**	**15.58**	**5**	*e*Pn	**Pn**	**04 44 45.5**	**+0.1**
	comp=Z,52nm,1.0s						
ULN	**Ulaanbaatar**	**15.58**	**5**	Pn	**Pn**	**04 44 45.5**	**+0.2**
	SNR=42						
ULN				Pn	**Pn**	**04 44 45.5**	**+0.2**
	SNR=42						
TAPN	**Taplejung**	**15.82**	**256**	*e*P	**Pn**	**04 44 47.2**	**-1.3**
	comp=Z,192nm,1.0s						
ODAN	**Odare**	**16.27**	**255**	*e*P	**Pn**	**04 44 52.6**	**-1.8**
	comp=Z,111nm,0.7s						
YHNB	**Yeheng**	**16.27**	**114**	*e*Pn	**Pn**	**04 44 54.2**	**-0.2**
	comp=Z,66nm,1.0s						
SSLB	**Suanglung**	**16.43**	**117**	*e*Pn	**Pn**	**04 44 56.9**	**+0.4**
	comp=Z,222nm,1.1s						
NACB	**Ninganchiao**	**16.71**	**115**	*e*Pn	**Pn**	**04 45 02.1**	**+2.1**
	comp=Z,110nm,1.1s						
RAMN	**Ramite**	**16.88**	**256**	*e*P	**Pn**	**04 45 00.5**	**-1.7**
	comp=Z,233nm,1.0s						
YULB	**Yu-li**	**16.92**	**118**	*e*Pn	**Pn**	**04 45 03.5**	**+0.9**
	comp=Z,34nm,0.9s						
JIRN	**Jiri**	**16.96**	**259**	*e*P	**Pn**	**04 45 02.0**	**-1.1**
	comp=Z,147nm,0.9s						
TWG	**Pinlang**	**17.09**	**120**	*e*Pn	**Pn**	**04 45 07.3**	**+2.5**
	comp=Z,80nm,0.9s						
GUN	**Gumba**	**17.13**	**260**	*e*P	**Pn**	**04 45 04.2**	**-1.1**
	comp=Z,487nm,1.3s						
SNY	**Shenyang**	**17.55**	**52**	⇑P	**Pn**	**04 45 10.6**	**+0.2**
SNY				S	**Sn**	**04 48 25.5**	**-0.2**
SNY				pmax	pmax		
	comp=Z,17nm,0.5s						
SNY				pmax	pmax		
	comp=Z,270nm,8.0s						
SNY				LR	LR		
	comp=N,620nm,7.6s						
SNY				LR	LR		
	comp=E,1μm,15.9s						
SNY				LR	LR		
	comp=Z,1μm,17.1s						
PKI	**Pulchoki**	**17.64**	**259**	*e*P	**Pn**	**04 45 10.1**	**-1.5**
	comp=Z,164nm,0.8s						
PKI	**Pulchoki**	**17.64**	**259**	*e*P	**Pn**	**04 45 10.2**	**-1.4**
PKI				pmax	pmax		
	comp=Z,184nm,0.7s						
PKI	**Pulchoki**	**17.64**	**259**	*e*P	**Pn**	**04 45 10.2**	**-1.4**
	comp=Z,184nm,0.7s						
PKIN	**Phulchoki**	**17.65**	**259**	*e*P	**Pn**	**04 45 10.2**	**-1.5**
	comp=Z,184nm,0.7s						
KKN	**Kakani**	**17.67**	**260**	*e*P	**Pn**	**04 45 10.6**	**-1.4**
	comp=Z,152nm,0.9s						
KKN	**Kakani**	**17.67**	**260**	*e*P	**Pn**	**04 45 10.6**	**-1.4**
KKN				pmax	pmax		
	comp=Z,152nm,0.9s						
WMQ	**Urumqi**	**17.77**	**315**	*e*P	**Pn**	**04 45 15.0**	**+1.8**
WMQ				sP	sP	04 45 22.0	+3.8
WMQ				PP		04 45 30.0	
WMQ				S	**Sn**	**04 48 33.0**	**+1.8**
WMQ				SS		04 48 57.0	
WMQ				pmax	pmax		
	comp=Z,19nm,1.0s						
WMQ				LR	LR		
	comp=N,920nm,6.0s						
WMQ				LR	LR		
	comp=E,810nm,6.0s						
WMQ				LR	LR		
	comp=Z,1μm,7.0s						
DMN	**Daman**	**17.88**	**260**	*e*P	**Pn**	**04 45 12.9**	**-1.7**
	comp=Z,212nm,1.0s						
ZAK	**Zakamensk**	**18.07**	**356**	⇑*e*P	**Pn**	**04 45 17.0**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,37nm,1.5s						
TLY	**Talaya**	**19.35**	**357**	Pn	**Pn**	**04 45 33.8**	**+1.5**
	comp=Z,146nm,1.0s,SNR=11						
TLY	**Talaya**	**19.35**	**357**	*e*P	**Pn**	**04 45 33.5**	**+1.2**
TLY				*e*S	**Sn**	**04 49 07.7**	**-1.5**
TLY				pmax	pmax		
	comp=Z,32nm,1.1s						
TLY				MLR	MLR		
	comp=Z,2μm,16.0s						
TLY	**Talaya**	**19.35**	**357**	*e*Pn	**Pn**	**04 45 32.5**	**+0.2**
	comp=Z,33nm,1.1s						
TLY	**Talaya**	**19.35**	**357**	P	**Pn**	**04 45 34.0**	**+1.7**
	SNR=16						
TLY				P		04 45 34.0	
	SNR=16						
KSRS	**Korea Array**	**19.45**	**68**	P	**Pn**	**04 45 32.5**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=253,slow=9.7,SNR=36						
KSRS				LR	LR	04 52 54.0	
	comp=Z,342nm,18.2s,baz=260,slow=37						
CN2	**Changchun**	**19.68**	**49**	‖P	**Pn**	**04 45 36.2**	**-0.1**
CN2				*es*P	sP	04 45 50.5	+11
CN2				*e*S	**Sn**	**04 49 13.0**	**-4.3**
CN2				pmax	pmax		
	comp=Z,80nm,1.2s						
CN2				LR	LR		
	comp=N,670nm,11.0s						
CN2				LR	LR		
	comp=E,670nm,11.0s						
CN2				LR	LR		
	comp=Z,880nm,10.0s						
IRK	**Irkutsk**	**19.90**	**359**	*e*P	**Pn**	**04 45 39.7**	**+0.9**
IRK				pmax	pmax		
	comp=Z,255nm,1.2s						
HIA	**Hailar**	**20.19**	**29**	*e*P	**P**	**04 45 41.4**	**+1.0**
HIA				pmax	pmax		
	comp=Z,234nm,1.8s						
HIA	**Hailar**	**20.19**	**29**	*e*P	**P**	**04 45 41.4**	**+1.0**
	comp=Z,234nm,1.8s						
CIT	**Chita**	**20.63**	**15**	*e*P	**P**	**04 45 46.7**	**+1.6**
CIT				*e*		04 46 03.5	
JOSI	**Joshimath**	**21.78**	**272**	*e*PKP	**P**	**04 45 57.8**	**+0.1**
MK31	**Makanchi Array**	**22.59**	**316**	*e*P	**P**	**04 46 07.1**	**+0.9**
MKAR	**Makanchi Array**	**22.59**	**316**	P	**P**	**04 46 07.1**	**+0.9**
	comp=Z,66nm,0.8s,mb5.1,baz=101,slow=12,SNR=233						
MKAR				PcP	PcP	04 49 58.4	-0.9
	comp=Z,3.7nm,0.8s,baz=118,slow=5.5,SNR=3.5						
MKAR				LR	LR	04 55 41.1	
	comp=Z,2μm,18.1s,MS4.5,baz=120,slow=39						
MKAR	**Makanchi Array**	**22.59**	**316**	P	**P**	**04 46 07.1**	**+0.9**
MKAR						04 49 58.4	
MKAR	**Makanchi Array**	**22.59**	**316**	P	**P**	**04 46 07.1**	**+0.9**
MKAR				PcP	PcP	04 49 58.4	-0.9
MKAR				LR	LR	04 55 41.1	
KLP	**Kalpa**	**22.71**	**275**	*e*PKP	**P**	**04 46 08.3**	**+0.6**
MDJ	**Mudanjiang**	**22.71**	**50**	P	**P**	**04 46 07.6**	**0.0**
MDJ				pP		04 46 10.0	
MDJ				S	**S**	**04 50 16.5**	**+0.2**
MDJ				ScP	ScP	04 53 37.4	+0.1
MDJ				PcS	PcS	04 53 38.6	+0.3
MDJ				pmax	pmax		
	comp=Z,64nm,1.5s,mb4.8						
MDJ				LR	LR		
	comp=N,430nm,15.7s,MS4.1						
MDJ				LR	LR		
	comp=E,380nm,17.2s,MS4.1						
MDJ				LR	LR		
	comp=Z,780nm,13.9s,MS4.3						
MDJ	**Mudanjiang**	**22.71**	**50**	*e*P	**P**	**04 46 07.7**	**+0.1**
	comp=Z,99nm,1.2s,mb5.1						
DDI	**Dehra Dun**	**23.10**	**272**	*ex*	**P**	**04 46 06.0**	**-5.8**
DDI				*ex*	x	04 47 54.0	
TGY	**Tagaytay City**	**23.26**	**138**	P	**P**	**04 46 14.6**	**+1.1**
	comp=Z,97nm,0.3s,mb5.7,baz=256,slow=4.2,SNR=2.1						
VLA	**Vladivostok**	**23.73**	**55**	*e*P	**P**	**04 46 16.9**	**-1.1**
VLA				pmax	pmax		
	comp=Z,54nm,0.8s,mb5.0						
VLA				MLR	MLR		
	comp=Z,700nm,17.1s,MS4.2						
VLA	**Vladivostok**	**23.73**	**55**	⇑*i*P	**P**	**04 46 18.6**	**+0.6**
SDNR	**Sundarnagar**	**23.80**	**276**	*e*PKP	**P**	**04 46 17.1**	**-1.7**
AGRA	**Agra**	**24.01**	**265**	*e*PKP	**P**	**04 46 19.8**	**-1.0**
AGRA				AMb	AMB	04 46 21.8	
	comp=Z,113nm,0.9s,mb5.3						
NDI	**New Delhi**	**24.20**	**269**	*e*PKP	**P**	**04 46 21.0**	**-1.5**
NDI				*e*PKP		04 46 21.0	
BHK	**Bhakra**	**24.28**	**276**	*e*PKP	**P**	**04 46 22.0**	**-1.2**
AYAN	**Aya Nagar**	**24.33**	**268**	*e*PKP	**P**	**04 46 23.1**	**-0.5**
AYAN				AMb	AMB	04 46 26.2	
	comp=Z,76nm,1.0s,mb5.1						
SONA	**Sohna**	**24.43**	**268**	*e*PKP	**P**	**04 46 24.6**	**0.0**
SONA				AMb	AMB	04 46 27.4	
	comp=Z,85nm,1.0s,mb5.1						
KSH	**Kashi**	**24.51**	**295**	⇑*i*P	**P**	**04 46 29.4**	**+4.2**
KSH				pP		04 46 33.6	
KSH				sP	sP	04 46 36.4	+6.7
KSH				PP		04 47 06.2	
KSH				PcP	PcP	04 50 06.8	+3.3
KSH				S	**S**	**04 50 48.7**	**+3.0**
KSH				sS	sS	04 50 55.6	+4.7
KSH				ScP	ScP	04 53 43.9	+1.6
KSH				PcS	PcS	04 53 45.5	+2.1
KSH				ScS	ScS	04 57 30.7	+0.8
KSH				LR	LR		
	comp=N,470nm,10.5s,MS4.5						
KSH				LR	LR		
	comp=E,670nm,11.5s,MS4.5						
KSH				LR	LR		
	comp=Z,1μm,12.4s,MS4.6						
TKM2	**Tokmak 2**	**25.46**	**303**	P	**P**	**04 46 35.5**	**+1.7**
	SNR=75						
TKM2	**Tokmak 2**	**25.46**	**303**	*e*P	**P**	**04 46 35.3**	**+1.5**
TKM2				*e*		04 50 05.4	
TKM2				pmax	pmax		
	comp=Z,37nm,0.6s,mb5.1						
TKM2	**Tokmak 2**	**25.46**	**303**	*e*P	**P**	**04 46 35.3**	**+1.5**
	comp=Z,37nm,0.6s,mb5.1						
TKM2				*e*PcP	PcP	04 50 05.4	-0.2
KZA	**Kyzart**	**25.51**	**301**	P	**P**	**04 46 36.7**	**+2.4**
	SNR=71						
KHET	**Khetri**	**25.56**	**268**	*e*PKP	**P**	**04 46 35.0**	**+0.2**
KBK	**Karagaybulak**	**25.86**	**302**	P	**P**	**04 46 39.4**	**+2.0**
	SNR=44						
ZALV	**Zalesovo Beam**	**25.97**	**332**	P	**P**	**04 46 38.6**	**+0.3**
	comp=Z,14nm,0.5s,mb4.7,baz=127,slow=9.5,SNR=58						
BHPL	**Bhopal**	**25.98**	**257**	*e*PKP	**P**	**04 46 38.5**	**-0.2**
UCH	**Uchtor**	**26.08**	**301**	P	**P**	**04 46 41.9**	**+2.5**
	SNR=112						
UCH	**Uchtor**	**26.08**	**301**	*e*P	**P**	**04 46 41.9**	**+2.5**
	comp=Z,118nm,1.1s,mb5.3						
UCH				*e*PcP	PcP	04 50 08.1	+1.2
CHMS	**Chumysh**	**26.08**	**303**	P	**P**	**04 46 40.8**	**+1.4**
	SNR=8.8						
KLR	**Kul'dur**	**26.15**	**42**	*e*P	**P**	**04 46 32.8**	**-7.2**
KLR				pmax	pmax		
	comp=E,72nm,1.4s						
KLR				pmax	pmax		
	comp=Z,55nm,1.4s,mb4.9						
KLR				MLR	MLR		
	comp=E,1μm,12.0s						
KLR				MLR	MLR		
	comp=Z,3μm,12.0s,MS5.0						
AAK	**Ala-Archa**	**26.18**	**302**	P	**P**	**04 46 42.7**	**+2.4**
	comp=Z,135nm,0.7s,mb5.6,SNR=8.2						
AAK	**Ala-Archa**	**26.18**	**302**	P	**P**	**04 46 42.1**	**+1.8**
	SNR=12						
AAK	**Ala-Archa**	**26.18**	**302**	P	**P**	**04 46 41.1**	**+0.8**
	comp=Z,8.5nm,0.6s,mb4.4,baz=104,slow=6.5,SNR=17						
AAK	**Ala-Archa**	**26.18**	**302***c*	*i*P	**P**	**04 46 41.8**	**+1.5**
AAK				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.5						
AAK	**Ala-Archa**	**26.18**	**302**	*e*P	**P**	**04 46 42.0**	**+1.7**
	comp=Z,35nm,1.2s,mb4.8						
AAK	**Ala-Archa**	**26.18**	**302**	P	**P**	**04 46 42.4**	**+2.0**
	SNR=25						
AAK				P		04 46 42.4	
	SNR=25						
USP	**Ospenovka**	**26.33**	**303**	P	**P**	**04 46 43.0**	**+1.4**
	SNR=50						
AML	**Almayashu**	**26.66**	**300**	P	**P**	**04 46 46.9**	**+2.2**
	SNR=46						
AML	**Almayashu**	**26.66**	**300**	*e*P	**P**	**04 46 46.8**	**+2.1**
	comp=Z,40nm,0.9s,mb5.0						
AML				*e*PcP	PcP	04 50 09.1	+0.8
EKS2	**Erkin-Say**	**26.70**	**302**	P	**P**	**04 46 46.6**	**+1.5**
	SNR=19						

EKS2 Erkin-Say 26.70 302 *e*P **P 04 46 46.4 +1.3**
comp=Z,12nm,0.8s,mb4.5
EKS2 *e*PcP PcP 04 50 08.4 0.0
KURK Kurchatov 26.75 321 P **P 04 46 46.3 +0.9**
comp=Z,384nm,0.9s,mb5.9,SNR=14
KURK Kurchatov 26.75 321 P **P 04 46 45.6 +0.3**
comp=Z,37nm,0.9s,mb4.9,baz=133,slow=8.2,SNR=120
KURK PcP PcP 04 50 07.3 -1.0
comp=Z,7.3nm,0.7s,baz=110,slow=2.6,SNR=4.6
KURK LR LR 04 58 02.6
comp=Z,440nm,18.5s,MS4.0,baz=115,slow=38
KURK Kurchatov 26.75 321 *e*P **P 04 46 45.8 +0.4**
KURK pmax pmax
comp=Z,50nm,0.8s,mb5.1
KURK Kurchatov 26.75 321 *e*P **P 04 46 45.8 +0.4**
comp=Z,50nm,0.8s,mb5.1
KURK Kurchatov 26.75 321 P **P 04 46 46.2 +0.9**
SNR=34
KURK P 04 46 46.2
SNR=34
AJM Ajmer 27.04 265 *e*PKP **P 04 46 49.0 +0.7**
KULM Kulim 27.22 190 *e*P **P 04 46 49.7 -0.2**
NVS Novosibirsk 27.25 332 *e*P **P 04 46 49.6 -0.3**
NVS *e*S **S 04 51 22.5 -6.3**
NVS pmax pmax
comp=N,30nm,1.4s
NVS pmax pmax
comp=E,32nm,1.4s
NVS pmax pmax
comp=Z,28nm,1.4s,mb4.6
NVS smax
comp=N,16nm,1.5s
NVS smax
comp=E,10.0nm,1.1s
MAJO Matsushiro 27.61 72 *e*P **P 04 46 51.7 -1.6**
MAJO pmax pmax
comp=Z,11nm,0.8s,mb4.5
MAJO Matsushiro 27.61 72 *e*P **P 04 46 51.7 -1.6**
comp=Z,11nm,0.8s,mb4.5
MAT Matsushiro 27.61 72 P **P 04 46 51.3 -2.0**
MAT S **S 04 51 28.6 -6.2**
MJAR Matsushiro Arr 27.61 72 P **P 04 46 51.3 -2.0**
comp=Z,7.5nm,0.8s,mb4.4,baz=274,slow=9.9,SNR=18
MJAR LR LR 04 56 38.3
comp=Z,264nm,21.9s,MS3.8,baz=290,slow=34
HABR Khabarovsk 27.74 46 *e*P **P 04 46 53.6 -0.7**
HABR *e**SP sP 04 47 06.3 +7.5
HABR *e* 04 47 39.1
HABR S **S 04 51 34.4 -2.2**
HABR *e**SS sS 04 51 50.1 +8.3
HABR *e*SS 04 52 48.6
HABR pmax pmax
comp=Z,57nm,2.2s,mb4.8
HABR pmax pmax
comp=E,72nm,2.0s
HABR pmax pmax
comp=N,41nm,2.7s
HABR MLR MLR
comp=Z,459nm,16.0s,MS4.2
KKM Kota Kinabalu 28.18 156 *e*P **P 04 46 58.1 -0.3**
comp=Z,33nm,1.1s,mb4.9
KBL Kabul 30.00 284 *e*P **P 04 47 15.9 +1.3**
KBL *e* 04 50 16.5
KBL pmax pmax
comp=Z,27nm,0.8s,mb5.0
KBL Kabul 30.00 284 *e*P **P 04 47 15.9 +1.3**
comp=Z,27nm,0.8s,mb5.0
KBL *e*PcP PcP 04 50 16.5 -0.2
JASL Jaisalmer 30.06 269 *e*PKP **P 04 47 15.3 +0.2**
ASAJ Asahikawa 31.51 57 P **P 04 47 27.1 -0.7**
comp=Z,8.0nm,0.8s,mb4.6,baz=262,slow=17,SNR=7.7
ASAJ Asahikawa 31.51 57 P **P 04 47 27.2 -0.6**
ASAJ pmax pmax
comp=Z,8.0nm,0.8s
KAD Karad 31.59 249 *e*x x 04 47 38.8
DAV Davao City (W) 31.60 138 LR LR 05 02 23.6
comp=Z,549nm,18.4s,MS4.3,baz=14,slow=41
YSS Yuzh-Sakhalins 32.17 52⇓ *e*P **P 04 47 33.0 -0.6**
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.1
YSS MLR MLR
comp=Z,500nm,15.0s,MS4.3
YSS MLR MLR
comp=N,500nm,14.0s
YSS Yuzh-Sakhalins 32.17 52⇑ *i*P **P 04 47 33.2 -0.4**
BVAR Borovoye Array 32.32 320 P **P 04 47 35.6 +0.8**
comp=N,16nm,0.7s,mb5.0,baz=114,slow=9.9,SNR=77
BVAR PcP PcP 04 50 22.0 -0.6
comp=N,6.0nm,0.7s,baz=132,slow=4.4,SNR=8.3
BRVK Borovoye 32.40 320 P **P 04 47 36.8 +1.4**
comp=N,198nm,0.7s,mb6.0,SNR=9.7
BRVK Borovoye 32.40 320*c i*P **P 04 47 36.2 +0.8**
BRVK pmax pmax
comp=Z,25nm,0.7s,mb5.2
BRVK Borovoye 32.40 320 *e*P **P 04 47 36.3 +0.8**
comp=Z,27nm,0.8s,mb5.1
BRVK Borovoye 32.40 320 P **P 04 47 36.5 +1.1**
SNR=12
BRVK P 04 47 36.5
SNR=12
CBIJ Chichi jima 32.59 89 LR LR 05 00 47.2
comp=Z,228nm,18.6s,MS3.9,baz=149,slow=36
PALK Pallekele 33.67 227 *e*P **P 04 47 47.8 +0.8**
PALK pmax pmax
comp=Z,58nm,1.1s,mb5.4
PALK Pallekele 33.67 227 *e*P **P 04 47 47.8 +0.8**
comp=Z,58nm,1.1s,mb5.4
YAK Yakutsk 33.67 21 *e*P **P 04 47 46.1 -0.4**
YAK pmax pmax
comp=Z,18nm,0.9s,mb5.0
YAK pmax pmax
comp=N,6.0nm,0.9s
YAK pmax pmax
comp=E,8.0nm,1.0s
YAK MLR MLR
comp=E,336nm,12.0s,MS4.5
YAK MLR MLR
comp=Z,748nm,14.0s,MS4.6
YAK MLR MLR
comp=N,566nm,16.0s,MS4.5
YAK Yakutsk 33.67 21⇑ *e*P **P 04 47 46.8 +0.3**
ABKAR Akbulak array 37.45 310 *e*P **P 04 48 19.8 +0.7**
comp=N,17nm,0.6s,mb5.0
IAKL Akhelmad 38.09 290 *e*P **P 04 48 26.4 +1.7**
ABKT Ailbek 38.44 292 P **P 04 48 29.2 +1.6**
comp=N,228nm,1.1s,mb5.8,SNR=6.8
AKTO Aktyubinsk 38.88 312 LR LR 05 05 53.8
comp=N,636nm,18.5s,MS4.5,baz=287,slow=38
SVE Sverdlovsk 38.98 322⇓ *e*P **P 04 48 33.0 +1.1**
SVE pmax pmax
comp=Z,89nm,1.1s,mb5.4
SVE MLR MLR
comp=Z,544nm,18.0s,MS4.4
KAPI Kappang 39.70 157 P **P 04 48 37.2 -1.2**
comp=Z,24nm,0.8s,mb5.0,baz=354,slow=5.3,SNR=8.9
ARU Arti 39.95 321 P **P 04 48 40.0 +0.1**
comp=Z,712nm,0.7s,SNR=9.3
ARU Arti 39.95 321*d i*P **P 04 48 40.6 +0.7**
ARU *e* 04 50 09.3
ARU S **S 04 54 45.3 +0.4**
ARU SS SS 04 57 41.6 +0.3
ARU pmax pmax
comp=Z,144nm,1.0s,mb5.7
ARU Arti 39.95 321 *e*P **P 04 48 40.5 +0.6**
comp=Z,115nm,0.9s,mb5.6
TIXI Tiksi 41.39 11 *e*P **P 04 48 50.6 -1.1**
TIXI pmax pmax
comp=Z,39nm,1.4s,mb4.8
TIXI Tiksi 41.39 11 *e*P **P 04 48 50.6 -1.1**
comp=Z,39nm,1.4s,mb4.8
SOKR Solikamsk 41.81 325*c i*P **P 04 48 55.0 -0.3**
SOKR pmax pmax
comp=Z,60nm,1.0s,mb5.2
SOKR MLR MLR
comp=Z,360nm,17.0s,MS4.3
SEY Seymchan 42.63 30⇑ *e*P **P 04 49 01.9 0.0**
SEY Seymchan 42.63 30⇑ *e*P **P 04 49 01.0 -0.9**
PEA0B Petropavlovsk- 42.77 45 *e*P **P 04 49 02.3 -0.9**
PETK Petropavlovsk- 42.77 45 P **P 04 49 02.5 -0.7**
comp=Z,29nm,0.8s,mb5.1,baz=222,slow=4.0,SNR=30
PETK LR LR 05 08 31.7
comp=Z,361nm,19.3s,MS4.3,baz=261,slow=39
PET Petropavlovsk 43.33 45 *e*P **P 04 49 07.4 -0.3**
PET pmax pmax
comp=Z,40nm,0.9s,mb5.2
PET Petropavlovsk 43.33 45 *e*P **P 04 49 07.4 -0.3**
comp=Z,40nm,0.9s,mb5.2
IDMV Damavand 43.63 289 *e*P **P 04 49 12.1 +1.7**
COCO West Island 44.97 191 *e*P **P 04 49 22.2 +1.0**
COCO pmax pmax
comp=Z,301nm,1.4s,mb5.9
COCO West Island 44.97 191 *e*P **P 04 49 22.1 +1.0**
comp=Z,301nm,1.4s,mb5.9
DGRG David-gareji 47.73 299 P **P 04 49 43.0 +0.3**
MTA Mtatsminda 48.12 299 P **P 04 49 48.4 +2.7**
GNI Garni 48.42 297*c i*P **P 04 49 49.5 +1.4**
GNI pmax pmax
comp=Z,48nm,1.7s
GNI Garni 48.42 297 *e*P **P 04 49 49.8 +1.7**
comp=Z,17nm,0.8s,mb5.1
GNI Garni 48.42 297 P **P 04 49 50.1 +1.9**
SNR=8.4
GNI P 04 49 50.1
SNR=8.4
ZEI Tsey 48.60 301 *e*P **P 04 49 48.3 -1.2**
ZEI pmax pmax
comp=Z,22nm,1.0s,mb5.1
GOF Gofitskoye 48.90 304⇓ *i*P **P 04 49 39.2 -13**
GOF pmax pmax
comp=Z,90nm,1.2s,mb5.7
MIB Mutribah 48.95 283 *e*P **P 04 49 51.0 -1.4**
MIB AMb AMB 04 49 53.4
comp=Z,80nm,1.0s,mb5.7
ONI Oni 48.95 301 P **P 04 49 53.3 +1.1**
RDF Al-Radifah 49.06 282 *e*P **P 04 49 52.1 -1.1**
RDF AMb AMB 04 49 58.2
comp=Z,81nm,1.4s,mb5.6
NAY Al-Naaiem 49.21 282 *e*P **P 04 49 53.0 -1.4**
NAY AMb AMB 04 49 55.1
comp=Z,59nm,1.3s,mb5.5
KIV Kislovodsk 49.30 302 P **P 04 49 56.2 +1.4**
comp=Z,326nm,1.1s,mb6.3,SNR=6.1
KIV Kislovodsk 49.30 302*c i*P **P 04 49 55.6 +0.8**
KIV pmax pmax
comp=Z,61nm,1.0s,mb5.6
KIV MLR MLR
comp=Z,337nm,16.0s,MS4.4
KIV Kislovodsk 49.30 302 *e*P **P 04 49 56.1 +1.3**
comp=Z,58nm,1.0s,mb5.6
KIV Kislovodsk 49.30 302 P **P 04 49 55.7 +0.9**
SNR=18
KIV P 04 49 55.7
SNR=18
BILL Bilibino 49.73 26⇑ *e*P **P 04 49 57.2 -0.5**
BILL pmax pmax
comp=Z,40nm,1.7s,mb5.2
BILL MLR MLR
comp=Z,900nm,17.0s,MS4.8
BILL Bilibino 49.73 26 *e*P **P 04 49 56.9 -0.8**
comp=Z,38nm,1.3s,mb5.3
MOS Moscow 51.46 318 *e*P **P 04 50 10.0 -0.9**
MOS *e* 04 52 07.4
MOS *e*PPP 04 53 03.9
MOS pmax pmax
comp=Z,200nm,1.0s,mb6.0
MOS pmax pmax
comp=Z,152nm,0.9s,mb5.9
SOC Sochi 51.48 302 *e*P **P 04 50 10.8 -0.5**
SOC *e**PP pP 04 50 19.3 +4.7
SOC *e*S **S 04 57 27.6 -3.7**
SOC pmax pmax
comp=Z,21nm,0.8s,mb5.1
SOC MLR MLR
comp=Z,280nm,11.0s,MS4.5
KAKA Kakadu 51.92 145 *e*P **P 04 50 12.5 -2.3**
comp=Z,14nm,0.9s,mb4.9
FX1 Attu Island--F 52.09 45 P **P 04 50 15.9 +0.2**
comp=Z,36nm,0.7s,mb5.4,baz=267,slow=3.1,SNR=15
FX1 LR LR 05 14 05.3
comp=Z,220nm,18.5s,MS4.2,baz=43,slow=38
OBN Obninsk 52.09 317⇓ *e*P **P 04 50 15.5 -0.2**
OBN *i* 04 52 13.0
OBN *e*S **S 04 57 38.7 -0.7**
OBN *e*SS SS 05 01 11.6 -4.6
OBN pmax pmax
comp=Z,87nm,1.2s,mb5.6
OBN MLR MLR
comp=Z,500nm,17.0s,MS4.6
OBN Obninsk 52.09 317 *e*P **P 04 50 16.1 +0.4**
comp=Z,64nm,1.0s,mb5.5
SMY Shemya 52.67 46 *e*P **P 04 50 18.9 -1.1**
SMY pmax pmax
comp=Z,110nm,0.8s,mb5.8
SMY Shemya 52.67 46 *e*P **P 04 50 18.9 -1.1**
comp=Z,110nm,0.8s,mb5.8
ANN Anapa 52.87 304 *e*P **P 04 50 21.2 -0.4**
ANN *e*S **S 04 57 49.3 -1.0**
ANN pmax pmax
comp=Z,53nm,0.8s,mb5.5
LVZ Lovozero 53.10 334⇑ *e*P **P 04 50 22.3 -0.6**
FITZ Fitzroy Crossi 53.91 156 *e*P **P 04 50 28.8 -0.6**
comp=Z,30nm,0.9s,mb5.2
FITZ Fitzroy Crossi 53.91 156 P **P 04 50 28.6 -0.8**
comp=Z,20nm,0.9s,mb5.0,baz=1.7,slow=5.4,SNR=19
FITZ Fitzroy Crossi 53.91 156 *e*P **P 04 50 28.7 -0.7**
comp=Z,22nm,0.9s,mb5.1
JOF Joensuu 54.40 327 *e*p **P 04 50 32.4 -0.2**
comp=Z,36nm,0.8s,mb5.3
JOF Joensuu 54.40 327 *e*p **P 04 50 32.4 -0.2**
comp=Z,36nm,0.8s,mb5.3
MBWA Marble Bar 55.03 163 *e*P **P 04 50 36.9 -0.6**
MBWA Marble Bar 55.03 163 *e*P **P 04 50 37.3 -0.2**
comp=Z,76nm,1.3s,mb5.6
SIM Simferopol' 55.14 305 P **P 04 50 40.1 +1.9**
SIM pmax pmax
comp=Z,28nm,0.8s,mb5.3
SIM MLR MLR
comp=Z,310nm,19.8s,MS4.4
KEV Kevo 55.92 336 *e*P **P 04 50 43.0 -0.4**
KEV pmax pmax
comp=Z,41nm,0.8s,mb5.5
KEV Kevo 55.92 336 *e*p **P 04 50 43.0 -0.4**
comp=Z,40nm,0.8s,mb5.5
KEV Kevo 55.92 336 *e*p **P 04 50 43.0 -0.4**
comp=Z,40nm,0.8s,mb5.5
AMKA Amchitka 56.04 47 *e*P **P 04 50 43.9 -0.7**
ARCES ARCESS Array B 56.46 335 P **P 04 50 47.1 -0.1**
comp=Z,21nm,0.8s,mb5.2,baz=79,slow=8.8,SNR=45
KAF Kangasniemi 56.78 327 *e*P **P 04 50 49.1 -0.6**
KAF pmax pmax
comp=Z,23nm,0.7s,mb5.3
KAF Kangasniemi 56.78 327 *e*p **P 04 50 49.1 -0.6**
comp=Z,22nm,0.7s,mb5.3
KAF Kangasniemi 56.78 327 *e*p **P 04 50 49.1 -0.6**
comp=Z,22nm,0.7s,mb5.3
BR131 Keskin Array S 56.81 299 *e*P **P 04 50 50.6 +0.4**
BRTR Keskin Array B 56.81 299 P **P 04 50 50.2 0.0**
comp=Z,11nm,0.8s,mb5.0,baz=100,slow=6.8,SNR=4.1
FINES FINESS Array B 56.98 326 P **P 04 50 50.9 -0.2**
comp=Z,32nm,0.8s,mb5.4,baz=89,slow=8.0,SNR=93
VSU Vasula 57.09 322*c i*P **P 04 50 51.7 -0.2**
VSU pmax pmax
comp=Z,115nm,1.1s,mb5.8
AKASG Malin Array Be 57.11 313 P **P 04 50 51.7 -0.5**
comp=Z,14nm,0.7s,mb5.1,baz=70,slow=6.4,SNR=29
AKBB Malin Array Si 57.11 313 *e*P **P 04 50 51.6 -0.6**
KIEV Kiev 57.12 313 *e*P **P 04 50 51.6 -0.7**
KIEV pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
KIEV Kiev 57.12 313 *e*P **P 04 50 51.6 -0.7**
comp=Z,8.6nm,0.6s,mb5.0
MICGM Minsk 57.16 317⇓ *e*P **P 04 50 49.0 -3.4**
MNK Minsk 57.18 317⇓ *e*P **P 04 50 49.0 -3.6**
MNK pmax pmax
comp=Z,110nm,1.0s,mb5.8
MMAI Mount Meron Ar 57.56 291 P **P 04 50 55.5 -0.1**
comp=Z,6.5nm,0.8s,mb4.7,baz=62,slow=11,SNR=11
IDID Didziasalis 57.65 319 *e*P **P 04 50 56.5 +0.6**
IDID AMB AMB 04 50 57.3
comp=Z,22nm,1.0s,mb5.1
IZAR Zarasai 57.84 319 *e*P **P 04 50 57.7 +0.5**
IZAR AMB AMB 04 50 58.6
comp=Z,16nm,1.3s,mb4.9
IIGN Ignalina 57.93 319 *e*P **P 04 50 58.5 +0.7**
IIGN AMB AMB 04 50 59.4
comp=Z,25nm,0.9s,mb5.2
ISAL Salakas 57.94 319 *e*P **P 04 50 58.5 +0.6**
ISAL AMB AMB 04 50 59.4
comp=Z,18nm,1.0s,mb5.1
KIS Kishinev 58.24 309 *e*P **P 04 50 58.0 -2.2**
KIS LRM 05 17 48.0
comp=Z,300nm,16.0s
KIS Kishinev 58.24 309 *e*P **P 04 50 58.0 -2.2**
KIS *e* 04 54 34.0
KIS MLR MLR
comp=Z,300nm,15.0s,MS4.5
KIS MLR MLR
comp=Z,300nm,16.0s
KIS Kishinev 58.24 309 *e*P **P 04 50 58.0 -2.2**
COEN Coen 58.76 135 *e*P **P 04 51 04.0 -0.1**
comp=Z,272nm,1.1s
WRAB Tennant Creek 59.08 148 P **P 04 51 06.0 -0.3**
comp=Z,429nm,0.8s,SNR=19
WRAB Tennant Creek 59.08 148 *e*P **P 04 51 05.7 -0.6**
WRAB pmax pmax
comp=Z,74nm,1.0s,mb5.7
WRAB Tennant Creek 59.08 148 *e*P **P 04 51 05.7 -0.6**
comp=Z,74nm,1.0s,mb5.7
WRA Warramunga Arr 59.08 148 P **P 04 51 05.5 -0.7**
comp=Z,36nm,0.8s,mb5.5,baz=339,slow=7.4,SNR=155
WRA PKPPKP 05 20 41.0
comp=Z,0.5nm,0.8s,baz=187,slow=2.8,SNR=4.6
WRA Warramunga Arr 59.08 148 P **P 04 51 05.5 -0.7**
WRA P'P' 05 20 41.0
KBS Kingsbay 59.10 347⇑ *e*P **P 04 51 05.2 -0.5**
TIRR Tirgusor 59.20 306⇑ P **P 04 51 06.6 -0.3**
TIRR Tirgusor 59.20 306⇑ *i*P **P 04 51 06.6 -0.3**
ISP Isparta 59.72 298 *e*P **P 04 51 10.4 -0.2**
ISP pmax pmax
comp=Z,37nm,0.7s,mb5.5
ISP Isparta 59.72 298 *e*P **P 04 51 10.4 -0.2**
comp=Z,37nm,0.7s,mb5.5
VRI Vrincioaia 59.94 308⇓ P **P 04 51 13.0 +1.0**
VRI Vrincioaia 59.94 308⇓ *i*P **P 04 51 13.0 +1.0**
SUW Suwalki 59.95 318 *e*P **P 04 51 11.8 -0.1**
SUW Suwalki 59.95 318 *e*P **P 04 51 11.8 -0.1**
comp=Z,81nm,1.0s,mb5.7
PLOR Plostina 60.00 308⇑ P **P 04 51 13.9 +1.5**
PLOR Plostina 60.00 308⇑ *i*P **P 04 51 13.9 +1.5**
MEEK Meekatharra 60.06 166 *e*P **P 04 51 12.5 -0.4**
KWP Kalwaria Pacla 61.44 313 *e*P **P 04 51 22.8 +0.7**
KWP Kalwaria Pacla 61.44 313⇓ P **P 04 51 23.0 +0.9**
KWP Kalwaria Pacla 61.44 313 *e*P **P 04 51 22.3 +0.1**
comp=Z,76nm,1.1s,mb5.7
KWP Kalwaria Pacla 61.44 313⇓ *i*P **P 04 51 23.0 +0.9**
KOLS Kolonicke sedl 61.92 312 *e*P **P 04 51 25.7 +0.3**
KOLS pmax pmax
comp=Z,11nm,1.5s,mb4.8
KOLS Kolonicke sedl 61.92 312 *e*P **P 04 51 25.7 +0.3**
comp=Z,11nm,1.5s,mb4.8
KOLS Kolonicke sedl 61.92 312 *e*P **P 04 51 25.7 +0.3**
TRPA Tarpa 62.00 311⇓ *i*P **P 04 51 27.8 +1.8**
UZH Uzhgorod 62.00 312⇑ *i*P **P 04 51 25.5 -0.5**
UZH *i* 04 51 32.3
UZH *e* 04 52 05.0
UZH *e* 04 53 46.0
UZH *e*S **S 04 59 47.5 -2.7**
UZH *e*PS 05 00 07.5
ASAR Alice Springs 62.16 150 P **P 04 51 26.8 -0.4**
comp=Z,13nm,0.8s,mb5.2,baz=331,slow=6.0,SNR=109
ASAR PKPPKP 05 20 40.6
comp=Z,0.6nm,0.7s,baz=145,slow=2.8,SNR=4.9
DRGR 62.31 310⇑ P **P 04 51 28.7 +0.6**
DRGR 62.31 310⇑ *i*P **P 04 51 28.6 +0.5**
STHS Stebnicka Huta 62.41 313 *e*P **P 04 51 29.2 +0.5**
STHS pmax pmax
comp=Z,6.0nm,1.1s,mb4.6
STHS Stebnicka Huta 62.41 313 *e*P **P 04 51 29.2 +0.5**
comp=Z,6.3nm,1.1s,mb4.7
STHS Stebnicka Huta 62.41 313 *e*P **P 04 51 29.2 +0.5**
NIE Niedzica 62.98 313 *e*P **P 04 51 33.4 +0.9**
OJC Ojcow 63.04 314 *e*P **P 04 51 31.9 -1.0**
KECS Kecovo 63.18 312 *e*P **P 04 51 34.4 +0.5**
KECS pmax pmax
comp=Z,4.0nm,1.0s,mb4.5
KECS Kecovo 63.18 312 *e*P **P 04 51 34.4 +0.5**
comp=Z,3.8nm,1.0s,mb4.5
KECS Kecovo 63.18 312 *e*P **P 04 51 34.4 +0.5**
APE Apeiranthos 63.70 299⇓ P **P 04 51 36.5 -1.0**
APE Apeiranthos 63.70 299⇓ *i*P **P 04 51 36.5 -1.0**
PSZ Piszkesteto 63.75 312⇓ P **P 04 51 37.9 +0.3**
PSZ Piszkesteto 63.75 312 *e*P **P 04 51 38.3 +0.7**
comp=Z,33nm,1.6s,mb5.1
PSZ Piszkesteto 63.75 312⇓ *e*P **P 04 51 38.0 +0.4**
PSZ Piszkesteto 63.75 312⇓ *i*P **P 04 51 37.9 +0.3**
NB2 NORSAR Subarra 64.04 327 P **P 04 51 38.3 -1.0**
comp=Z,39nm,1.0s,mb5.4,baz=70,slow=6.5
NOA NORSAR Array B 64.04 327 P **P 04 51 38.2 -1.1**
comp=Z,22nm,0.9s,mb5.2,baz=69,slow=6.5,SNR=54
NOA LR LR 05 20 59.2
comp=Z,167nm,20.9s,MS4.2,baz=85,slow=37
NOA NORSAR Array B 64.04 327 P **P 04 51 38.2 -1.1**
NOA LR LR 05 20 59.2
OKC Ostrava-Krasne 64.17 314 *e*P **P 04 51 40.7 +0.3**
OKC *e**PP pP 04 51 46.5 +2.8
OKC MLR MLR
comp=Z,500nm,17.1s,MS4.8
OKC Ostrava-Krasne 64.17 314 *e*P **P 04 51 40.7 +0.3**
OKC *e*pP pP 04 51 46.5 +2.8
OKC AMS AMS 05 20 40.0
comp=Z,500nm,17.1s
VYHS Vyhne 64.21 313 *i*P **P 04 51 41.3 +0.6**
VYHS *e* 04 51 47.1
VYHS pmax pmax
comp=Z,15nm,1.4s,mb4.8
VYHS Vyhne 64.21 313 *i*P **P 04 51 41.3 +0.6**
comp=Z,15nm,1.4s,mb4.8
VYHS *e* 04 51 47.1
VYHS Vyhne 64.21 313 *i*P **P 04 51 41.3 +0.6**
VYHS *e*pP pP 04 51 47.1 +3.1
NAO01 NORSAR Array S 64.26 327 *e*P **P 04 51 39.5 -1.3**
comp=Z,11nm,0.9s,mb4.9
MORC Moravsky Berou 64.56 314 *e*P **P 04 51 43.2 +0.3**
MORC pmax pmax
comp=Z,28nm,1.4s,mb5.1
MORC Moravsky Berou 64.56 314 *e*P **P 04 51 43.1 +0.2**
comp=Z,28nm,1.4s,mb5.1
MORC Moravsky Berou 64.56 314⇑ *i*P **P 04 51 43.1 +0.2**
KLBR Kellerberrin 64.72 168 *e*P **P 04 51 43.9 -0.1**
comp=Z,29nm,1.0s,mb5.3
KSP Ksiaz 64.93 316 *e*P **P 04 51 45.8 +0.5**
KSP Ksiaz 64.93 316 *e*P **P 04 51 45.5 +0.2**
KSP *e**PP pP 04 51 51.1 +2.4
KSP MLR MLR
comp=Z,1μm,18.0s,MS5.2
KSP Ksiaz 64.93 316 *e*P **P 04 51 45.5 +0.2**
KSP *e*pP pP 04 51 51.1 +2.4
KSP LR LR
comp=Z,1μm,18.0s,MS5.2
DPC Dobruska-Polom 65.09 315 *e*P **P 04 51 46.9 +0.5**
DPC MLR MLR
comp=Z,600nm,17.2s,MS4.8
DPC Dobruska-Polom 65.09 315 *e*P **P 04 51 46.9 +0.5**
DPC *e*pP pP 04 51 51.3 +1.6
DPC AMS AMS 05 21 00.0
comp=Z,600nm,17.2s
PKSM Moragy 65.15 310⇑ P **P 04 51 46.7 -0.1**
PKSM Moragy 65.15 310⇑ *i*P **P 04 51 46.7 -0.1**
UPC Upice 65.22 315 *e*P **P 04 51 47.6 +0.4**
UPC *e**PP pP 04 51 53.0 +2.4
UPC Upice 65.22 315 *e*P **P 04 51 47.6 +0.4**
UPC *e*pP pP 04 51 53.0 +2.4
KONO Kongsberg 65.29 326 *e*P **P 04 51 46.6 -0.9**
KONO pmax pmax
comp=Z,22nm,1.1s,mb5.1
KONO Kongsberg 65.29 326 *e*P **P 04 51 46.6 -0.9**
comp=Z,22nm,1.1s,mb5.1
CTA Charters Tower 65.39 137 *e*P **P 04 51 47.9 -0.7**
comp=Z,6.9nm,1.0s,mb4.6
CTA Charters Tower 65.39 137 P **P 04 51 47.7 -0.9**
comp=Z,6.8nm,0.9s,mb4.7,baz=305,slow=7.0,SNR=6.7
CTA Charters Tower 65.39 137 P **P 04 51 47.7 -0.9**
CTAO Charters Tower 65.39 137 *e*P **P 04 51 48.3 -0.3**
CTAO pmax pmax
comp=Z,68nm,1.8s,mb5.4
CTAO Charters Tower 65.39 137 *e*P **P 04 51 48.3 -0.3**
comp=Z,68nm,1.8s,mb5.4
TTA Tatalina 65.61 30 *e*P **P 04 51 49.3 -0.2**
DAG Danmarks Havn 65.80 348⇑ *i*P **P 04 51 49.8 -0.7**
DAG pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
DAG Danmarks Havn 65.80 348⇑ *i*P **P 04 51 49.8 -0.7**
comp=Z,4.0nm,1.0s,mb4.4
NWAO Narrogin (SRO) 65.93 169 P **P 04 51 51.8 -0.1**
comp=Z,20nm,0.8s,mb5.2,baz=355,slow=7.5,SNR=12
NWAO Narrogin (SRO) 65.93 169 P **P 04 51 51.8 0.0**

NWAO pmax pmax
comp=Z,20nm,0.8s
NWAO Narrogin (SRO) 65.93 169 *eP* **P 04 51 51.9 0.0**
comp=Z,27nm,1.0s,mb5.2
TREC Trest 65.98 314 *eP* **P 04 51 52.4 +0.2**
TREC MLR MLR
comp=Z,500nm,15.3s,MS4.8
TREC Trest 65.98 314 *eP* **P 04 51 52.4 +0.2**
TREC AMS AMS 05 21 40.0
comp=Z,500nm,15.3s
COLD Coldfoot 66.03 24 *eP* **P 04 51 51.7 -0.4**
comp=Z,34nm,1.3s,mb5.2
PVCC Panska Ves 66.07 316 *eP* **P 04 51 53.0 +0.3**
PVCC *e**PP pP 04 51 58.4 +2.4
PVCC MLR MLR
comp=Z,500nm,18.9s,MS4.7
PVCC Panska Ves 66.07 316 *eP* **P 04 51 53.0 +0.3**
PVCC *e*pP pP 04 51 58.4 +2.4
PVCC AMS AMS 05 21 40.0
comp=Z,500nm,18.9s
CONA Conrad Observa 66.27 313⇑ *iP* **P 04 51 54.6 +0.5**
comp=Z,17nm,1.4s,mb4.9
CSNA Conrad Observa 66.27 313⇑ *iP* **P 04 51 54.6 +0.5**
comp=Z,15nm,1.4s,mb4.8
PRU Pruhonice 66.29 315 *eP* **P 04 51 54.7 +0.6**
PRU *e**PP pP 04 52 00.6 +3.1
PRU MLR MLR
comp=Z,600nm,15.6s,MS4.9
PRU Pruhonice 66.29 315 *eP* **P 04 51 54.7 +0.6**
PRU *e*pP pP 04 52 00.6 +3.1
PRU AMS AMS 05 22 00.0
comp=Z,600nm,15.6s
BRG Berggiesshubel 66.31 316 *i* P **P 04 51 54.2 0.0**
comp=Z,11nm,0.9s,mb4.9
BRG
comp=N,242nm,17.2s
BRG
comp=E,448nm,16.4s
BRG
comp=Z,533nm,15.1s
FORT Forrest 66.46 158 *eP* **P 04 51 55.2 -0.1**
comp=Z,33nm,0.7s,mb5.5
SVW2 Sparrevohn 66.54 32 *eP* **P 04 51 56.2 +0.7**
CLL Collm 66.69 317 *i* P **P 04 51 55.8 -0.8**
CLL *i* 04 52 02.6
CLL pmax pmax
comp=Z,18nm,1.2s,mb5.0
CLL MLR MLR
comp=Z,400nm,17.5s,MS4.7
CLL Collm 66.69 317 *i* P **P 04 51 55.8 -0.8**
comp=Z,18nm,1.2s,mb5.0
CLL *i* 04 52 02.6
CLL LR LR
comp=Z,400nm,17.5s,MS4.7
CLL Collm 66.69 317 *i* P **P 04 51 55.8 -0.8**
comp=Z,18nm,1.2s,mb5.0
CLL *i* sP sP 04 52 02.6 +1.4
CLL *e* 04 52 20.0
CLL *e*(PP) 04 54 36.0
CHUM Lake Minchumin 66.72 28 *eP* **P 04 51 56.8 +0.2**
comp=Z,29nm,0.8s,mb5.4
MUD Monsted U'grnd 66.74 323 *i* P **P 04 51 57.2 +0.4**
MUD pmax pmax
comp=Z,26nm,1.0s,mb5.2
MUD Monsted U'grnd 66.74 323 *i* P **P 04 51 57.2 +0.4**
comp=Z,26nm,1.0s,mb5.2
ARSA Arzberg 66.74 312⇑ *iP* **P 04 51 57.0 -0.1**
comp=Z,8.0nm,1.1s,mb4.7
GROS Grobnik 67.07 311 *i* P **P 04 51 58.9 -0.3**
BPAW Bear Paw Mtn. 67.15 28 *eP* **P 04 51 58.9 -0.4**
comp=Z,29nm,0.9s,mb5.3
CHGN Chignik 67.17 37 *eP* **P 04 51 58.8 -0.8**
KHC Kasperske Hory 67.20 315 *eP* **P 04 52 00.2 +0.3**
KHC pmax pmax
comp=Z,15nm,1.4s,mb4.8
KHC Kasperske Hory 67.20 315 *eP* **P 04 52 00.2 +0.2**
comp=Z,15nm,1.4s,mb4.8
KHC Kasperske Hory 67.20 315 *eP* **P 04 51 59.9 0.0**
KHC *e*pP pP 04 52 06.6 +3.3
KHC AMS AMS 05 22 30.0
comp=Z,600nm,19.4s
PPLA Purkeypile 67.21 29 *eP* **P 04 51 60.0 +0.2**
comp=Z,123nm,1.3s,mb5.8
GEC2 GERESS Array S 67.24 314 *eP* **P 04 52 00.4 +0.2**
comp=Z,2um,1.0s
GERES GERESS Array B 67.24 314 P **P 04 52 00.1 -0.1**
comp=Z,6.1nm,0.9s,mb4.6,baz=75,slow=5.7,SNR=25
GERES LR LR 05 23 07.3
comp=Z,403nm,18.5s,MS4.7,baz=296,slow=38
SOKA Soboth 67.28 312⇑ *iP* **P 04 52 00.5 0.0**
comp=Z,10nm,0.9s,mb4.9
MOA Molln 67.29 313⇑ *iP* **P 04 52 00.9 +0.4**
comp=Z,18nm,1.6s,mb4.8
KTH Kantishna Hill 67.42 28 *eP* **P 04 52 00.7 -0.3**
comp=Z,50nm,1.3s,mb5.4
NKC Novy Kostel 67.44 316 *eP* **P 04 52 01.9 +0.5**
NKC MLR MLR
comp=Z,500nm,17.0s,MS4.8
NKC Novy Kostel 67.44 316 *eP* **P 04 52 01.9 +0.5**
NKC AMS AMS 05 22 40.0
comp=Z,500nm,17.0s
BOJS Bojanci 67.61 310 *eP* **P 04 52 02.7 +0.1**
MOX Moxa 67.75 317 *eP* **P 04 52 03.7 +0.3**
comp=Z,27nm,1.8s,mb5.0
MOX
comp=Z,300nm,18.0s
MOX Moxa 67.75 317 *eP* **P 04 52 03.7 +0.3**
MOX pmax pmax
comp=Z,27nm,1.8s,mb5.0
MOX MLR MLR
comp=Z,300nm,18.0s,MS4.6
COLA College 67.98 26 *eP* **P 04 52 04.0 -0.6**
COLA pmax pmax
comp=Z,53nm,1.0s,mb5.5
COLA College 67.98 26 *eP* **P 04 52 04.0 -0.5**
comp=Z,54nm,1.0s,mb5.5
RSO Redoubt South 68.06 31 *eP* **P 04 52 04.9 -0.3**
CADS Cadrg 68.28 312 *eP* **P 04 52 05.7 -1.1**
GRF Grafenberg Arr 68.38 316 *eP* **P 04 52 07.5 +0.2**
comp=Z,81nm,1.8s,mb5.5
ROBS Robic 68.42 312 *i* P **P 04 52 06.6 -1.1**
ABTA Abfaltersbach 68.83 313⇑ *iP* **P 04 52 09.3 -0.9**
comp=Z,6.2nm,0.9s,mb4.5
PMR Palmer 69.08 30 *eP* **P 04 52 10.5 -1.0**
PMR pmax pmax
comp=Z,37nm,0.7s,mb5.4
PMR Palmer 69.08 30 *eP* **P 04 52 10.5 -1.0**
comp=Z,37nm,0.7s,mb5.4
WTTA Wattenberg 69.16 313⇑ *iP* **P 04 52 12.4 +0.2**
comp=Z,16nm,1.3s,mb4.8
TIP Timpagrande 69.21 304 *eP* **P 04 52 12.6 -0.1**
comp=Z,30nm,1.3s,mb5.1
OHAK Old Harbor 69.31 35 *eP* **P 04 52 12.6 -0.4**
KDAK Kodiak Island 69.38 34 P **P 04 52 12.6 -0.8**
comp=Z,334nm,0.8s,mb6.3,SNR=5.2
KDAK Kodiak Island 69.38 34 *eP* **P 04 52 12.7 -0.7**
KDAK pmax pmax
comp=Z,52nm,0.9s,mb5.5
KDAK Kodiak Island 69.38 34 *eP* **P 04 52 12.7 -0.7**
comp=Z,52nm,0.9s,mb5.5
MOTA Moosalm 69.45 314⇓ *iP* **P 04 52 14.1 +0.1**
comp=Z,14nm,1.1s,mb4.8
RETA Reutte 69.60 314⇑ *iP* **P 04 52 12.6 -2.3**
comp=Z,7.8nm,0.8s,mb4.7
SEW Seward 69.68 31 *eP* **P 04 52 14.2 -1.0**
comp=Z,28nm,0.9s,mb5.2
FETA Feichten 69.82 313⇑ *iP* **P 04 52 16.0 -0.3**
comp=Z,14nm,1.1s,mb4.8
PAX Paxson 69.86 27 *eP* **P 04 52 15.1 -1.2**
PAX pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
PAX Paxson 69.86 27 *eP* **P 04 52 15.1 -1.1**
comp=Z,6.5nm,0.8s,mb4.6
EGAK Eagle 70.46 25 *eP* **P 04 52 19.1 -0.9**
comp=Z,9.7nm,0.8s,mb4.8
BFO Black Forest 70.69 315 *eP* **P 04 52 21.1 -0.5**
BFO pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
BFO Black Forest 70.69 315 *eP* **P 04 52 21.1 -0.6**
comp=Z,4.1nm,1.0s,mb4.3
DIV Divide 70.71 29 *eP* **P 04 52 21.4 -0.1**
comp=Z,28nm,1.0s,mb5.2
INK Inuvik 70.73 20 P **P 04 52 20.7 -0.8**
comp=Z,28nm,0.8s,mb5.2,baz=316,slow=7.4,SNR=46
INK Inuvik 70.73 20 P **P 04 52 20.7 -0.9**
INK pmax pmax
comp=Z,28nm,0.9s
INK Inuvik 70.73 20 *eP* **P 04 52 21.0 -0.5**
comp=Z,37nm,0.9s,mb5.3
MEM Membach 70.98 318 P **P 04 52 23.9 +0.5**
comp=Z,6.2nm,1.6s,mb4.3
CDF Champ du Feu 71.27 316⇑ *iP* **P 04 52 24.7 -0.5**
comp=Z,28nm,1.0s,mb4.8
CDF Champ du Feu 71.27 316⇑ *iP* **P 04 52 24.7 -0.5**
CDF pmax pmax
comp=Z,14nm,1.0s,mb4.8
CDF Champ du Feu 71.27 316⇑ *iP* **P 04 52 24.7 -0.5**
comp=Z,14nm,1.0s,mb4.8
BMRM Bremner River 71.28 29 *eP* **P 04 52 25.3 +0.3**
comp=Z,53nm,0.9s,mb5.5
WLF Walferdange 71.34 317 P **P 04 52 26.5 +0.9**
comp=Z,39nm,1.6s,mb5.1
WLF Walferdange 71.34 317 *eP* **P 04 52 26.2 +0.6**
WLF pmax pmax
comp=Z,31nm,1.0s,mb5.2
WLF Walferdange 71.34 317 *eP* **P 04 52 26.2 +0.6**
comp=Z,31nm,1.0s,mb5.2
BCLA Clavier 71.47 318 P **P 04 52 26.6 +0.3**
HINF Hinteralfeld 71.80 315⇑ *iP* **P 04 52 27.6 -0.8**
comp=Z,30nm,1.1s,mb4.8
HINF Hinteralfeld 71.80 315⇑ *iP* **P 04 52 27.6 -0.8**
HINF pmax pmax
comp=Z,15nm,1.1s,mb4.8
HINF Hinteralfeld 71.80 315⇑ *iP* **P 04 52 27.6 -0.8**
comp=Z,15nm,1.1s,mb4.8
GIVF Givet 71.89 318 *eP* **P 04 52 28.5 -0.4**
KMBO Kilima Mbogo 71.95 257 *eP* **P 04 52 30.5 +0.7**
KMBO pmax pmax
comp=Z,17nm,1.2s
KMBO Kilima Mbogo 71.95 257 *eP* **P 04 52 30.5 +0.7**
comp=Z,17nm,1.2s,mb4.8
HAU Haudompre 72.01 316⇑ *iP* **P 04 52 28.9 -0.8**
comp=Z,10nm,0.8s,mb4.5
HAU *e*MLR MLR
comp=Z,483nm,20.0s,MS4.5
HAU Haudompre 72.01 316⇑ *iP* **P 04 52 28.9 -0.8**
HAU pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
HAU MLR MLR
comp=Z,480nm,20.0s,MS4.8
HAU Haudompre 72.01 316⇑ *iP* **P 04 52 28.9 -0.8**
comp=Z,5.1nm,0.8s,mb4.5
HAU LR LR
comp=Z,480nm,20.0s,MS4.8
DOU Dourbes 72.02 318 P **P 04 52 29.6 -0.1**
comp=Z,8.2nm,1.6s,mb4.4
BAIF Baives 72.26 318 *eP* **P 04 52 30.7 -0.4**
EIDS Eidsvold 72.27 137 *eP* **P 04 52 31.3 -0.1**
comp=Z,37nm,1.3s,mb5.2
SUMG Summit 72.38 349 *eP* **P 04 52 31.3 -0.1**
comp=Z,24nm,1.2s,mb5.0
SUMG Summit 72.38 349 *i* P **P 04 52 30.6 -0.8**
comp=Z,10nm,1.0s,mb4.7
STKA Stephens Creek 72.63 148 *eP* **P 04 52 32.6 -0.8**
comp=Z,14nm,0.9s,mb4.9
STKA Stephens Creek 72.63 148 P **P 04 52 32.6 -0.7**
comp=Z,17nm,0.8s,mb5.0,baz=332,slow=7.4,SNR=19
STKA Stephens Creek 72.63 148 *eP* **P 04 52 32.7 -0.7**
comp=Z,4.4nm,1.0s,mb4.3
CABF La Chapelle 72.84 315⇑ *iP* **P 04 52 34.0 -0.6**
comp=Z,20nm,1.0s,mb4.7
CABF La Chapelle 72.84 315⇑ *iP* **P 04 52 34.0 -0.6**
CABF pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
CABF La Chapelle 72.84 315⇑ *iP* **P 04 52 34.0 -0.6**
comp=Z,10nm,1.0s,mb4.7
PGF Pioggiola 72.95 310⇑ *iP* **P 04 52 35.3 -0.1**
comp=Z,80nm,1.1s,mb5.3
PGF Pioggiola 72.95 310⇑ *iP* **P 04 52 35.3 -0.1**
PGF pmax pmax
comp=Z,40nm,1.1s,mb5.3
PGF Pioggiola 72.95 310⇑ *iP* **P 04 52 35.3 -0.1**
comp=Z,40nm,1.1s,mb5.3
LPG La Plagne 72.97 313⇑ *iP* **P 04 52 35.7 +0.3**
comp=Z,54nm,0.7s,mb5.3
LPG La Plagne 72.97 313⇑ *iP* **P 04 52 35.7 +0.3**
LPG pmax pmax
comp=Z,27nm,0.7s,mb5.3
LPG La Plagne 72.97 313⇑ *iP* **P 04 52 35.7 +0.3**
comp=Z,27nm,0.7s,mb5.3
LPL La Plagne 72.97 313⇑ *iP* **P 04 52 35.6 +0.2**
comp=Z,44nm,0.7s,mb5.2
LPL La Plagne 72.97 313⇑ *iP* **P 04 52 35.6 +0.2**
LPL pmax pmax
comp=Z,22nm,0.7s,mb5.2
LPL La Plagne 72.97 313⇑ *iP* **P 04 52 35.6 +0.2**
comp=Z,22nm,0.7s,mb5.2
BNI Bardonecchia 73.23 313 *eP* **P 04 52 37.2 +0.2**
BNI pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
BNI Bardonecchia 73.23 313 *eP* **P 04 52 37.2 +0.2**
comp=Z,6.7nm,0.6s,mb4.8
MBDF Montbardon 73.33 313 *eP* **P 04 52 36.6 -1.0**
comp=Z,23nm,0.8s,mb4.8
MBDF Montbardon 73.33 313 *eP* **P 04 52 36.6 -1.0**
MBDF pmax pmax
comp=Z,12nm,0.8s,mb4.9
MBDF Montbardon 73.33 313 *eP* **P 04 52 36.6 -1.0**
comp=Z,12nm,0.8s,mb4.9
SBF Sospel 73.33 312⇑ *iP* **P 04 52 37.0 -0.6**
comp=Z,46nm,0.9s,mb5.1
SBF Sospel 73.33 312⇑ *iP* **P 04 52 37.0 -0.6**
SBF pmax pmax
comp=Z,23nm,0.9s,mb5.1
SBF Sospel 73.33 312⇑ *iP* **P 04 52 37.0 -0.6**
comp=Z,23nm,0.9s,mb5.1
ESK Eskdalemuir 73.41 325 *i* P **P 04 52 39.5 +1.7**
ORIF Oris-en-Rattie 73.79 313⇑ *iP* **P 04 52 39.9 -0.4**
comp=Z,27nm,0.8s,mb4.9
ORIF *e*MLR MLR
comp=Z,323nm,18.2s,MS4.3
ORIF Oris-en-Rattie 73.79 313⇑ *iP* **P 04 52 39.9 -0.4**
ORIF pmax pmax
comp=Z,14nm,0.8s,mb4.9
ORIF Oris-en-Rattie 73.79 313⇑ *iP* **P 04 52 39.9 -0.4**
comp=Z,14nm,0.8s,mb4.9
LOR Lormes 73.84 316⇑ *iP* **P 04 52 39.4 -1.1**
comp=Z,9.7nm,0.8s,mb4.5
LOR *e*MLR MLR
comp=Z,382nm,20.5s,MS4.4
LOR Lormes 73.84 316⇑ *iP* **P 04 52 39.4 -1.1**
LOR pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
LOR MLR MLR
comp=Z,380nm,20.5s,MS4.7
LOR Lormes 73.84 316⇑ *iP* **P 04 52 39.4 -1.1**
comp=Z,4.8nm,0.8s,mb4.5
LOR LR LR
comp=Z,380nm,20.5s,MS4.7
FRF La Foret Royal 73.98 312 *eP* **P 04 52 40.6 -0.8**
SSF Saint Saulge 74.15 316⇑ *iP* **P 04 52 41.4 -0.9**
comp=Z,14nm,1.0s,mb4.6
SSF Saint Saulge 74.15 316⇑ *iP* **P 04 52 41.4 -0.9**
SSF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
SSF Saint Saulge 74.15 316⇑ *iP* **P 04 52 41.4 -0.9**
comp=Z,7.3nm,1.0s,mb4.6
SMF Signal de Mont 74.17 315⇑ *iP* **P 04 52 41.6 -0.8**
comp=Z,31nm,0.9s,mb4.9
SMF Signal de Mont 74.17 315⇑ *iP* **P 04 52 41.6 -0.8**
SMF pmax pmax
comp=Z,15nm,0.9s,mb4.9
SMF Signal de Mont 74.17 315⇑ *iP* **P 04 52 41.6 -0.8**
comp=Z,15nm,0.9s,mb4.9
HYT Haines Junctio 74.17 27 *eP* **P 04 52 45.3 +3.1**
LMR La Mourre 74.18 311⇑ *iP* **P 04 52 41.8 -0.7**
comp=Z,62nm,1.2s,mb5.1
LMR La Mourre 74.18 311⇑ *iP* **P 04 52 41.8 -0.7**
LMR pmax pmax
comp=Z,31nm,1.2s,mb5.1
LMR La Mourre 74.18 311⇑ *iP* **P 04 52 41.8 -0.7**
comp=Z,31nm,1.2s,mb5.1
AVF Avril sur Loir 74.38 316⇑ *iP* **P 04 52 42.9 -0.8**
comp=Z,56nm,1.3s,mb5.0
AVF Avril sur Loir 74.38 316⇑ *iP* **P 04 52 42.9 -0.8**
AVF pmax pmax
comp=Z,28nm,1.3s,mb5.0
AVF Avril sur Loir 74.38 316⇑ *iP* **P 04 52 42.9 -0.8**
comp=Z,28nm,1.3s,mb5.0
SMRF Simiane la Rot 74.45 312 *eP* **P 04 52 43.3 -0.8**
VIVF Saint-Julien-I 74.57 313⇑ *iP* **P 04 52 44.2 -0.6**
comp=Z,14nm,0.7s,mb4.7
VIVF Saint-Julien-I 74.57 313⇑ *iP* **P 04 52 44.2 -0.6**
VIVF pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
VIVF Saint-Julien-I 74.57 313⇑ *iP* **P 04 52 44.2 -0.6**
comp=Z,6.8nm,0.7s,mb4.7
BGF Bois d'Agland 74.80 316 *eP* **P 04 52 45.3 -0.8**
TCF Toulx Ste Croi 75.32 316⇑ *iP* **P 04 52 48.7 -0.4**
comp=Z,23nm,1.1s,mb4.7
TCF Toulx Ste Croi 75.32 316⇑ *iP* **P 04 52 48.7 -0.4**
TCF pmax pmax
comp=Z,11nm,1.1s,mb4.7
TCF Toulx Ste Croi 75.32 316⇑ *iP* **P 04 52 48.7 -0.4**
comp=Z,11nm,1.1s,mb4.7
LDF La Druitiere 75.44 319⇑ *iP* **P 04 52 49.2 -0.6**
comp=Z,16nm,0.8s,mb4.7
LDF La Druitiere 75.44 319⇑ *iP* **P 04 52 49.2 -0.6**
LDF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
LDF La Druitiere 75.44 319⇑ *iP* **P 04 52 49.2 -0.6**
comp=Z,8.0nm,0.8s,mb4.7
LASF Ste Croix 75.47 313⇑ *iP* **P 04 52 49.8 -0.2**
comp=Z,63nm,1.3s,mb5.1
FLN La Foliniere 75.55 319 *eP* **P 04 52 49.1 -1.3**
FLN *e*MLR MLR
comp=Z,326nm,21.0s,MS4.3
FLN La Foliniere 75.55 319 *eP* **P 04 52 49.1 -1.3**
FLN LR LR
comp=Z,330nm,21.0s,MS4.6
SKAG Skagway 75.89 27 *eP* **P 04 52 52.8 +0.7**
comp=Z,74nm,0.8s,mb5.7
GRR Gorron 75.97 319⇑ *iP* **P 04 52 52.2 -0.6**
comp=Z,27nm,0.8s,mb4.9
GRR Gorron 75.97 319⇑ *iP* **P 04 52 52.2 -0.6**
GRR pmax pmax
comp=Z,13nm,0.8s,mb4.9
GRR Gorron 75.97 319⇑ *iP* **P 04 52 52.2 -0.6**
comp=Z,13nm,0.8s,mb4.9
KEST Kesra 76.03 303 P **P 04 52 53.2 -0.1**
comp=Z,2.5nm,1.1s,mb4.1,baz=21,slow=3.8,SNR=4.5
CAF Calviac 76.12 315 *eP* **P 04 52 53.6 -0.1**
RJF Les Rejaudoux 76.25 315⇑ *iP* **P 04 52 54.4 0.0**
RJF *e*MLR MLR
comp=Z,206nm,17.2s,MS4.2
RJF Les Rejaudoux 76.25 315⇑ *iP* **P 04 52 54.4 0.0**
RJF LR LR
comp=Z,210nm,17.3s,MS4.5
ARMA Armidale 76.46 140 *eP* **P 04 52 56.6 +0.9**
MFF Saint Martin d 76.53 317⇑ *iP* **P 04 52 55.7 -0.3**
comp=Z,74nm,1.4s,mb5.1
MFF Saint Martin d 76.53 317⇑ *iP* **P 04 52 55.7 -0.3**
MFF pmax pmax
comp=Z,37nm,1.4s,mb5.1
MFF Saint Martin d 76.53 317⇑ *iP* **P 04 52 55.7 -0.3**
comp=Z,37nm,1.4s,mb5.1
MTLF Montolieu 76.86 313⇑ *iP* **P 04 52 57.7 -0.3**
comp=Z,17nm,1.2s,mb4.5
MTLF Montolieu 76.86 313⇑ *iP* **P 04 52 57.7 -0.3**
MTLF pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
MTLF Montolieu 76.86 313⇑ *iP* **P 04 52 57.7 -0.3**
comp=Z,8.7nm,1.2s,mb4.6
LFF La Frestale 76.91 315 *eP* **P 04 52 58.2 0.0**
SGMF Saint Gilles 76.98 319 *eP* **P 04 52 58.2 -0.3**
comp=Z,27nm,0.9s,mb4.9
SGMF Saint Gilles 76.98 319 *eP* **P 04 52 58.2 -0.3**
SGMF pmax pmax
comp=Z,13nm,0.9s,mb4.9
SGMF Saint Gilles 76.98 319 *eP* **P 04 52 58.2 -0.3**
comp=Z,13nm,0.9s,mb4.9
ROSF Rostrenen 77.33 320 *eP* **P 04 53 00.1 -0.4**
comp=Z,51nm,1.0s,mb5.1
ROSF Rostrenen 77.33 320 *eP* **P 04 53 00.1 -0.4**
ROSF pmax pmax
comp=Z,26nm,1.0s,mb5.1
ROSF Rostrenen 77.33 320 *eP* **P 04 53 00.1 -0.4**
comp=Z,26nm,1.0s,mb5.1
EPF Esparros 78.19 314 *eP* **P 04 53 04.5 -0.9**
ETSF Etsaut 78.81 314⇑ *iP* **P 04 53 09.1 +0.3**
comp=Z,9.1nm,0.7s,mb4.5
ETSF Etsaut 78.81 314⇑ *iP* **P 04 53 09.1 +0.3**
ETSF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
ETSF Etsaut 78.81 314⇑ *iP* **P 04 53 09.1 +0.3**
comp=Z,4.6nm,0.7s,mb4.5
SJPF Ste Jean 79.09 314 *eP* **P 04 53 10.8 +0.4**
comp=Z,43nm,1.3s,mb4.9
SJPF Ste Jean 79.09 314 *eP* **P 04 53 10.8 +0.4**
SJPF pmax pmax
comp=Z,21nm,1.3s,mb4.9
SJPF Ste Jean 79.09 314 *eP* **P 04 53 10.8 +0.4**
comp=Z,21nm,1.3s,mb4.9
YKA Yellowknife Ar 80.28 17 P **P 04 53 15.9 -0.5**
comp=Z,15nm,0.6s,mb5.1,baz=329,slow=5.2,SNR=142
YKA PKKPbc PKKPbc 05 11 56.2 -3.3
comp=Z,1.2nm,0.6s,baz=146,slow=2.2,SNR=14
YKA Yellowknife Ar 80.28 17 P **P 04 53 15.9 -0.5**
YKA PKKPbc PKKPbc 05 11 56.2 -3.3
ESDC Sonseca Array 82.76 313 P **P 04 53 30.0 0.0**
comp=Z,2.8nm,0.8s,mb4.3,baz=36,slow=5.9,SNR=11
MVO Moncorvo 83.73 315 *eP* **P 04 53 35.5 +0.5**
comp=Z,20nm,1.6s,mb5.0
PCBR Castelo Branco 84.81 314 *eP* **P 04 53 41.2 +0.7**
comp=Z,17nm,1.5s,mb5.0
PMRV Marv??o 85.02 314 *eP* **P 04 53 41.9 +0.3**
comp=Z,22nm,1.3s,mb5.1
PTOM Tomar 85.52 315 *eP* **P 04 53 44.2 +0.2**
comp=Z,29nm,1.2s,mb5.4
PBAR Barrancos 85.58 313 *eP* **P 04 53 44.6 +0.2**
comp=Z,27nm,1.4s,mb5.3
TAM Tamanrasset 85.63 294 *eP* **P 04 53 45.3 +0.4**
TAM pmax pmax
comp=Z,8.0nm,1.0s,mb4.9
TAM Tamanrasset 85.63 294 *eP* **P 04 53 45.3 +0.4**
comp=Z,7.9nm,1.0s,mb4.9
PBEJ Beja 86.18 313 *eP* **P 04 53 47.6 +0.2**
comp=Z,26nm,1.3s,mb5.3
FCC Fort Churchill 87.85 10 *eP* **P 04 53 54.3 -0.7**
comp=Z,0.9nm,1.0s
EDM Edmonton 88.49 22 *eP* **P 04 53 58.4 +0.2**
A05A Maple Falls 88.79 29 ⇓P **P 04 53 59.1 -0.6**
baz=88
NLWA Neilton Lookou 89.29 31 ⇑P **P 04 54 02.7 +0.6**
baz=89
NLWA Neilton Lookou 89.29 31 *eP* **P 04 54 03.4 +1.3**
comp=Z,37nm,1.5s,mb5.5
B06A Marblemount 89.41 29 ⇑P **P 04 54 02.8 +0.1**
baz=89
A07A Ashnola River, 89.43 28 ⇑P **P 04 54 02.6 -0.1**
baz=89
RPW Rockport 89.45 29 *eP* **P 04 54 02.8 0.0**
JCW Jim Creek 89.48 29 P **P 04 54 03.5 +0.5**
FFC Flin Flon 90.22 15 P **P 04 54 05.2 -1.1**
comp=Z,190nm,0.8s,SNR=18
FFC Flin Flon 90.22 15 *i* P **P 04 54 05.9 -0.4**
FFC Flin Flon 90.22 15 *eP* **P 04 54 05.7 -0.6**
comp=Z,24nm,0.8s,mb5.6
D05A Enumclaw 90.25 30 ⇓P **P 04 54 07.6 +1.0**
baz=90
B08A Colville Reser 90.40 28 ⇓P **P 04 54 07.4 +0.1**
baz=90
F03A Seaside 90.55 32 ⇓P **P 04 54 09.0 +1.0**
baz=90
ETW Entiat 90.61 29 *eP* **P 04 54 09.0 +0.7**
LON Longmire 90.67 30 *eP* **P 04 54 08.8 +0.2**
LON pmax pmax
comp=Z,6.0nm,0.9s,mb4.9
LON Longmire 90.67 30 *eP* **P 04 54 08.8 +0.2**
comp=Z,6.3nm,0.9s,mb5.0
WTV Waterville 90.69 29 P **P 04 54 09.0 +0.4**
B09A Rice 90.81 27 ⇑P **P 04 54 09.8 +0.6**
baz=90
FL2 Flat Top 2 90.87 31 P **P 04 54 10.9 +1.4**
A11A Hall Mountain, 91.05 26 ⇑P **P 04 54 11.3 +1.0**
baz=91
F04A Amboy 91.05 31 ⇑P **P 04 54 10.7 +0.3**
baz=91
C09A Chrisman Ranch 91.27 28 ⇑P **P 04 54 11.7 +0.4**
baz=91
NEW Newport 91.34 27 *eP* **P 04 54 12.0 +0.4**
NEW pmax pmax
comp=Z,10.0nm,1.0s
NEW Newport 91.34 27 *eP* **P 04 54 12.0 +0.4**
comp=Z,9.6nm,1.0s,mb5.1
B11A Sandpoint 91.48 26 ⇓P **P 04 54 13.1 +0.9**
baz=91
D08A Wollman Farm, 91.62 28 ⇓P **P 04 54 13.5 +0.6**
baz=91
A13A Flathead Natio 91.77 25 ⇓P **P 04 54 14.0 +0.4**

baz=91
WALA Waterton Lakes 91.84 24 *e*P **P 04 54 14.1 +0.2**
comp=Z,0.7nm,1.4s
D09A Jones Farm, Ri 91.86 28 ⇓P **P 04 54 14.3 +0.2**
baz=92
A14A Double T Ranch 92.09 24 ⇓P **P 04 54 15.3 +0.2**
baz=92
H04A Detroit Lake 92.13 32 ⇑P **P 04 54 15.8 +0.4**
baz=92
B13A Whitefish 92.23 25 ⇓P **P 04 54 16.3 +0.6**
baz=92,SNR=7.4
D10A Wagner Farm, O 92.27 27 ⇑P **P 04 54 16.2 +0.2**
baz=92
A15A Johnson Ranch, 92.32 24 ⇓P **P 04 54 16.5 +0.4**
baz=92
G06A Carlson Farm, 92.37 30 ⇑P **P 04 54 16.9 +0.4**
baz=92
C12B Naegeli Ranch, 92.42 26 ⇓P **P 04 54 17.1 +0.5**
baz=92
BSMT Bassoo Peak 92.55 26 *e*P **P 04 54 17.9 +0.7**
D11A Klaveano Farm, 92.64 27 ⇓P **P 04 54 17.5 -0.2**
baz=92,SNR=8.2
A16A West Butte Ran 92.73 23 ⇓P **P 04 54 17.4 -0.6**
baz=92,SNR=11
C13A Hot Springs 92.77 26 ⇓P **P 04 54 19.0 +0.7**
baz=92,SNR=6.0
SCHQ Schefferville 92.90 355 P **P 04 54 18.0 -0.7**
comp=Z,14nm,0.8s,mb5.4,baz=22,slow=5.9,SNR=21
SCHQ Schefferville 92.90 355 *e*P **P 04 54 18.0 -0.7**
comp=Z,14nm,0.9s,mb5.4
B15A Bradely Ranch, 92.95 24 ⇑P **P 04 54 18.3 -0.8**
baz=93,SNR=7.2
VIPM Ingram Point 92.96 31 P **P 04 54 19.7 +0.5**
C14A Swan Lake 93.00 25 ⇑P **P 04 54 19.6 +0.3**
baz=93
D12A Red Ives Fores 93.01 26 ⇑P **P 04 54 18.9 -0.4**
baz=93
A17A Triple J Farms 93.03 23 ⇓P **P 04 54 19.0 -0.4**
baz=93,SNR=11
B16A M & M Farms, S 93.16 24 ⇑P **P 04 54 20.0 0.0**
baz=93
F10A Beach Ranch, E 93.18 28 ⇑P **P 04 54 20.4 +0.2**
baz=93
E11A Bogner Ranch, 93.26 27 ⇑P **P 04 54 20.2 -0.3**
baz=93,SNR=6.8
D13A Huson 93.31 26 ⇓P **P 04 54 20.3 -0.4**
baz=93
A18A Metzger Ranch, 93.33 22 ⇑P **P 04 54 20.1 -0.7**
baz=93,SNR=8.7
C15A Salmond Ranch, 93.39 24 ⇓P **P 04 54 20.8 -0.3**
baz=93,SNR=8.7
SLMT Seeley Lake 93.53 25 *e*P **P 04 54 21.8 0.0**
B17A L&G Farms, Che 93.56 23 ⇓P **P 04 54 21.5 -0.4**
baz=93,SNR=6.5
D14A Greenough 93.67 25 ⇓P **P 04 54 22.1 -0.3**
baz=93,SNR=8.0
C16A Fuhringer Ranc 93.67 24 ⇑P **P 04 54 22.1 -0.3**
baz=93
F11A Grangeville 93.67 27 ⇓P **P 04 54 22.6 +0.2**
baz=93
MSO Missoula 93.72 26 *e*P **P 04 54 22.4 -0.2**
comp=Z,3.3nm,0.8s,mb4.8
I07A Izee 93.78 30 ⇓P **P 04 54 23.5 +0.5**
baz=93
H08A Prairie City 93.78 30 ⇓P **P 04 54 23.4 +0.4**
baz=93
G10A Bishop Farm, J 93.78 28 ⇓P **P 04 54 22.6 -0.3**
baz=93,SNR=6.1
B18A Beardsley Farm 93.81 22 ⇑P **P 04 54 22.7 -0.3**
baz=93
CHMT Chamberlain Mo 93.90 25 *e*P **P 04 54 23.5 0.0**
E13A Victor 93.96 26 ⇓P **P 04 54 23.2 -0.6**
baz=94,SNR=7.0
TORD Torodi Ar. Bea 94.00 288 P **P 04 54 23.9 -0.5**
comp=Z,2.6nm,0.8s,mb4.7,baz=44,slow=3.8,SNR=17
BMO Blue Mountains 94.07 29 *e*P **P 04 54 25.1 +0.8**
F12A Elk City 94.13 27 ⇑P **P 04 54 24.1 -0.5**
baz=94
EGMT Eagleton 94.14 23 ⇓P **P 04 54 23.6 -0.9**
baz=94,SNR=7.2
EGMT Eagleton 94.14 23 *e*P **P 04 54 24.7 +0.1**
comp=Z,12nm,1.0s,mb5.3
C17A Wharram Farm, 94.15 23 ⇓P **P 04 54 23.5 -1.1**
baz=94
K05A Summer Lake 94.25 32 ⇑P **P 04 54 25.8 +0.6**
baz=94,SNR=5.3
D16A Dana Ranch, Ca 94.40 24 ⇑P **P 04 54 25.3 -0.5**
baz=94,SNR=7.5
F13A Darby 94.45 26 ⇑P **P 04 54 26.2 +0.1**
baz=94
H10A Noah's Angus R 94.51 29 ⇓P **P 04 54 26.3 0.0**
baz=94
E15A Deer Lodge 94.54 25 ⇓P **P 04 54 26.2 -0.2**
baz=94
D17A Six Diamond Ra 94.59 24 ⇑P **P 04 54 26.5 -0.1**
baz=94
H11A Donnelly 94.71 28 ⇑P **P 04 54 27.1 -0.1**
baz=94
E16A East Helena 94.79 24 ⇓P **P 04 54 28.1 +0.5**
baz=94
F14A Wisdom 94.79 26 ⇓P **P 04 54 27.4 -0.2**
baz=94
J08A Circle Bar Ran 94.80 30 ⇑P **P 04 54 28.2 +0.5**
baz=94,SNR=6.1
D18A Linhart Farms, 94.85 23 ⇑P **P 04 54 27.7 -0.1**
baz=94
G13A Cobalt 95.08 27 ⇓P **P 04 54 28.8 -0.1**
baz=95
F15A Butte 95.09 25 ⇓P **P 04 54 28.8 -0.1**
baz=95
J09A Fry Pan Ranch, 95.12 30 ⇓P **P 04 54 29.0 -0.1**
baz=95
E17A Martinsdale 95.13 24 ⇑P **P 04 54 29.1 0.0**
baz=95
H12A Diamond D Ranc 95.30 27 ⇓P **P 04 54 29.2 -0.8**
baz=95
E18A Harlowton 95.36 23 ⇑P **P 04 54 30.1 -0.1**
baz=95
I11A Placerville 95.39 28 ⇑P **P 04 54 29.8 -0.5**
baz=95
DGMT Dagmar 95.41 19 ⇑P **P 04 54 30.0 -0.3**
baz=95
DGMT Dagmar 95.41 19 *e*P **P 04 54 30.7 +0.3**
comp=Z,12nm,0.8s,mb5.4
F16A Kennard Place, 95.45 25 ⇑P **P 04 54 30.3 -0.3**
baz=95
DLMT Dillon 95.46 26 *e*P **P 04 54 30.8 +0.1**
comp=Z,7.9nm,1.2s,mb5.0
H13A Challis 95.52 27 ⇑P **P 04 54 30.7 -0.3**
baz=95
BOZ Bozeman (W) 95.57 25 ⇑P **P 04 54 31.0 -0.1**
baz=95
BOZ Bozeman (W) 95.57 25 *e*P **P 04 54 30.9 -0.2**
BOZ pmax pmax
comp=Z,3.0nm,1.3s,mb4.6
BOZ Bozeman (W) 95.57 25 *e*P **P 04 54 30.9 -0.3**
comp=Z,3.2nm,1.3s,mb4.6
G15A Dillon 95.67 26 ⇓P **P 04 54 31.3 -0.3**
baz=95,SNR=6.6
F17A Fitzpatrick Pl 95.68 24 ⇑P **P 04 54 31.8 +0.1**
baz=95,SNR=6.9
ULM Lac du Bonnet 95.71 13 P **P 04 54 30.1 -1.6**
comp=Z,3.4nm,1.0s,mb4.7,baz=341,slow=9.8,SNR=3.3
I12A Atlanta 95.82 28 ⇑P **P 04 54 32.3 0.0**
baz=96
MCMT McKenzie Canyo 95.83 26 *e*P **P 04 54 32.4 +0.1**
comp=Z,2.2nm,1.0s,mb4.5
G16A Moss Hill, Enn 95.86 25 ⇓P **P 04 54 32.1 -0.4**
baz=96
F18A Big Timber 96.01 24 ⇓P **P 04 54 32.6 -0.5**
baz=96
I13A Wildhorse Cree 96.12 27 ⇓P **P 04 54 33.4 -0.3**
baz=96
J12A Stokes Ranch, 96.29 28 ⇓P **P 04 54 34.3 -0.2**
baz=96
HLID Hailey 96.30 28 ⇑P **P 04 54 35.1 +0.6**
baz=96,SNR=7.5
J13A Cove Ranch, Pi 96.53 28 ⇓P **P 04 54 35.6 +0.1**
baz=96
L10A Juniper Basin 96.70 30 ⇓P **P 04 54 36.1 -0.2**
baz=96
BEKR Beckworth 96.76 33 ⇓P **P 04 54 37.0 +0.3**
baz=96
RLMT Red Lodge 96.84 24 ⇑P **P 04 54 36.6 -0.3**
baz=96
J14A Carey 96.85 27 ⇓P **P 04 54 37.3 +0.3**
baz=96
K12A Draper Farm, C 96.88 28 ⇑P **P 04 54 37.2 0.0**
baz=96
L11A Cat Creek Ranc 96.92 29 ⇑P **P 04 54 37.5 +0.2**
baz=97
BOSA Boshof 96.97 241 P **P 04 54 36.5 -1.1**
comp=Z,5.6nm,1.0s,mb5.0,baz=90,slow=11,SNR=5.7
IMW Indian Meadow 97.33 25 *e*P **P 04 54 39.9 +0.8**
comp=Z,1.2nm,0.6s,mb4.5
M14A Sheep Mountain 98.46 28 ⇑P **P 04 54 44.5 +0.2**
baz=98
PDAR Pinedale Array 98.81 25 PP PP 04 58 45.5 -0.6
comp=Z,1.1nm,1.1s,baz=355,slow=5.1,SNR=4.9
PDAR PKKPbc PKKPbc 05 11 10.6 -2.7
comp=Z,0.3nm,0.7s,baz=150,slow=6.3,SNR=3.7
RSSD Black Hills 99.42 21 *e*P **P 04 54 48.9 +0.4**
RSSD pmax pmax
comp=Z,6.0nm,1.0s,mb5.1
RSSD Black Hills 99.42 21 *e*P **P 04 54 48.9 +0.4**
comp=Z,5.8nm,1.0s,mb5.1
TXAR Lajitas Array 112.89 27 PKiKP PKiKP 04 59 41.0 -2.3
comp=Z,0.1nm,0.4s,baz=0.0,slow=3.6,SNR=4.6
TXAR PP PP 05 00 30.1 -0.2
comp=Z,0.1nm,0.4s,baz=346,slow=4.1,SNR=4.1
TXAR PKKPbc PKKPbc 05 10 29.4 -0.7
comp=Z,1.1nm,0.8s,baz=142,slow=4.6,SNR=6.8
TXAR Lajitas Array 112.89 27 PKIKP PKiKP 04 59 41.0 -2.3
TXAR 05 00 30.1
QSPA South Pole Qui 122.11 180 *e*PKPdf PKPdf 04 59 58.3 -1.1
ROSC El Rosal 143.00 359 PKiKP PKPpre 05 00 36.6
comp=Z,6.8nm,0.8s,baz=94,slow=10,SNR=7.2
OTAV Otavalo 147.43 6 *e*PKPbc PKPbc 05 00 50.8 +0.3
LPAZ La Paz 162.85 337 PKP PKPdf 05 01 09.3 +0.6
comp=Z,2.6nm,0.8s,baz=47,slow=1.6,SNR=14
LPAZ PKPab PKPab 05 01 56.4 -1.2
comp=Z,1.3nm,0.8s,baz=52,slow=10,SNR=2.4
PLCA Paso Flores 170.90 202 PKP PKPdf 05 01 14.1 0.0
comp=Z,8.3nm,1.3s,baz=187,slow=5.1,SNR=3.6
PLCA PKPab PKPab 05 02 31.0 -1.5
comp=Z,1.9nm,0.8s,baz=140,slow=3.8,SNR=5.1
PLCA Paso Flores 170.90 202 PKP PKPdf 05 01 14.1 0.0
PLCA PKPab PKPab 05 02 31.0 -1.5

NIED ***05*** *04:41:00,26.°10N×129.°50E,h5km,Mw4.0 Best double couple: Ms1.19000×1015 NP1:φs84.00000°,δ76.00000°, λ-73.00000°. NP2:φs211.00000°,δ22.00000°, λ-141.00000°.*

JMA 05 04:41:30.3±0.1,26.°13N×129.°46E,h44km,M3.8,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOW	**Kunigami**	**1.27**	**304**	P	Pn	04 41 52.3	+0.7
JOW				S	Sn	04 42 07.3	-0.2
JJT2	**Tamagusuku 2**	**1.54**	**271**	P	Pn	04 41 56.3	+1.0
JJT2				S	Sn	04 42 14.5	+0.5
NAH1	**Naha**	**1.59**	**273**	P	Pn	04 41 57.0	+1.0
NAH1				S	Sn	04 42 15.7	+0.3
JIH	**Iheya**	**1.61**	**304**	P	Pn	04 41 57.3	+1.0
JIH				S	Sn	04 42 15.8	-0.1
JMZ	**Minamidaito 2**	**1.61**	**101**	P	Pn	04 41 57.0	+0.7
JMZ				S	Sn	04 42 15.3	-0.6
JTK	**Tokunoshima**	**1.71**	**345**	P	Pn	04 41 58.7	+1.1
JTK				S	Sn	04 42 18.1	-0.2
JAGN	**Aguni-jima**	**2.04**	**283**	P	Pn	04 42 03.4	+1.2
JAGN				S	Sn	04 42 26.5	+0.1
JZK	**Kikaishima**	**2.22**	**12**	P	Pn	04 42 06.7	+2.0
JZK				S	Sn	04 42 32.6	+1.7
JAM	**Amami Oshima**	**2.28**	**3**	P	Pn	04 42 06.5	+1.1
JAM				*e*S	Sn	04 42 31.4	-0.8
JKE	**Kume jima 2**	**2.41**	**275**	P	Pn	04 42 07.6	+0.4
JKE				S	Sn	04 42 34.1	-1.4

DDA ***05*** *04:48:56.5,39.°39N×33.°10E,h8km±5km,Md3.0*
CSEM ***05*** *04:48:57.1±0.1,39.°42N×33.°03E,h5km,MD3.0,Error ellipse: s-maj=3.2km s-min=2.7km az=140.0*
ISK ***05*** *04:48:57.0,39.°42N×33.°00E,h8km,MD3.5*
ISCJB ***05*** *04:48:57.0±0.6,39.°42N±0.°03×33.°03E±0.°03,h5km±5km, Error ellipse: s-maj=4.6km s-min=3.7km az=150.5*

ISC 05 04:48:57.5±0.5,39.°42N±0.°03×33.°04E±0.°03,h7km±4km, n51,σ0=76/70,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBAL	**Bala**	**0.14**	**27**	*i* P	**Pg**	**04 48 59.9**	**-0.5**
BBAL				*i* S	**Sg**	**04 49 02.1**	**-0.2**
BBAL	**Bala**	**0.14**	**27**	*i* P	**Pg**	**04 48 59.9**	**-0.5**
BBAL				*i* S	**Sg**	**04 49 02.1**	**-0.3**
LOD	**Lodumlu**	**0.52**	**336**	*e*PG	**Pg**	**04 49 07.1**	**-0.4**
LOD				*e*SG	**Sg**	**04 49 14.9**	**+0.7**
LOD	**Lodumlu**	**0.52**	**336**	*e*Pg	**Pg**	**04 49 07.1**	**-0.4**
LOD				*e*Sg	**Sg**	**04 49 14.9**	**+0.7**
CDAG	**Cicekdag**	**1.05**	**78**	*i* P	**Pg**	**04 49 15.7**	**-1.9**
CDAG				*i* S	**Sg**	**04 49 31.6**	**+0.4**
CDAG	**Cicekdag**	**1.05**	**78**	*i* P	**Pg**	**04 49 15.7**	**-1.9**
CDAG				*i* S	**Sg**	**04 49 31.6**	**+0.4**
KIZT	**Kizilcal**	**1.05**	**240**	*e*PG	**Pg**	**04 49 17.2**	**-0.4**
KIZT				*e*SG	**Sg**	**04 49 31.7**	**+0.4**
KIZT	**Kizilcal**	**1.05**	**240**	*e*Pg	**Pg**	**04 49 17.2**	**-0.4**
KIZT				*e*Sg	**Sg**	**04 49 31.7**	**+0.4**
ELDT	**Eldivan**	**1.11**	**15**	*i* P	**Pg**	**04 49 18.4**	**-0.4**
ELDT				*i* S	**Sg**	**04 49 33.4**	**+0.2**
ELDT	**Eldivan**	**1.11**	**15**	*i* P	**Pg**	**04 49 18.4**	**-0.4**
ELDT				*i* S	**Sg**	**04 49 33.4**	**+0.2**
KDHN	**Kadinhani**	**1.15**	**219**	*i* P	**Pg**	**04 49 19.1**	**-0.5**
KDHN				*i* S	**Sg**	**04 49 35.6**	**+1.1**
KDHN	**Kadinhani**	**1.15**	**219**	*i* P	**Pg**	**04 49 19.1**	**-0.4**
KDHN				*i* S	**Sg**	**04 49 35.6**	**+1.1**
SVRH	**Sivrihisar-ESK**	**1.18**	**272**	*e*PN	**Pn**	**04 49 19.3**	**-1.1**
SVRH				*e*SN	**Sn**	**04 49 35.6**	**-1.1**
SVRH	**Sivrihisar-ESK**	**1.18**	**272**	*e*Pn	**Pn**	**04 49 19.3**	**-1.1**
SVRH				*e*Sn	**Sn**	**04 49 35.6**	**-1.1**
CANT	**Cankiri**	**1.27**	**20**	*e*PN	**Pn**	**04 49 21.6**	**0.0**
SULT	**Sultanhani-AKS**	**1.27**	**163**	*e*PN	**Pn**	**04 49 21.9**	**+0.3**
SULT	**Sultanhani-AKS**	**1.27**	**163**	*e*Pn	**Pn**	**04 49 22.0**	**+0.3**
LADK	**Ladik-KONYA**	**1.33**	**204**	*e*PN	**Pn**	**04 49 22.3**	**-0.2**
LADK	**Ladik-KONYA**	**1.33**	**204**	*e*Pn	**Pn**	**04 49 22.3**	**-0.1**
SGKT	**Sivrigoynuk**	**1.38**	**327**	*i* P	**Pn**	**04 49 23.1**	**-0.1**
SGKT				*i* S	**Sb**	**04 49 44.4**	**+2.9**
SGKT	**Sivrigoynuk**	**1.38**	**327**	*i* P	**Pn**	**04 49 23.1**	**-0.1**
CORM	**Corum**	**1.44**	**58**	*e*PN	**Pn**	**04 49 23.7**	**-0.3**
CORM	**Corum**	**1.44**	**58**	*e*Pn	**Pn**	**04 49 23.7**	**-0.3**
AVNT	**Avonos**	**1.55**	**114**	*i* P	**Pn**	**04 49 25.3**	**-0.1**
AVNT				*i* S	**Sn**	**04 49 44.7**	**-1.2**
AVNT	**Avonos**	**1.55**	**114**	*i* P	**Pn**	**04 49 25.3**	**-0.2**
AVNT				*i* S	**Sn**	**04 49 44.7**	**-1.1**
KONT	**Konya--Tatoy**	**1.56**	**200**	*e*PN	**Pn**	**04 49 25.6**	**-0.1**
KONT	**Konya--Tatoy**	**1.56**	**200**	*e*Pn	**Pn**	**04 49 25.7**	**0.0**
ESKT	**Eskisehir**	**1.70**	**274**	*e*PN	**Pn**	**04 49 27.2**	**-0.3**
ESKT	**Eskisehir**	**1.70**	**274**	*i* P	**Pn**	**04 49 27.9**	**+0.3**
ESKT				*i* S	**Sn**	**04 49 48.6**	**-1.0**
ESKT	**Eskisehir**	**1.70**	**274**	*e*Pn	**Pn**	**04 49 27.2**	**-0.4**
SEYT	**Eskypehyr**	**1.70**	**274**	*i* P	**Pn**	**04 49 27.9**	**+0.3**
SEYT				*i* S	**Sn**	**04 49 48.6**	**-1.0**
MDU	**Mudurnu**	**1.75**	**307**	*e*PN	**Pn**	**04 49 28.5**	**+0.2**
MDU	**Mudurnu**	**1.75**	**307**	*e*Pn	**Pn**	**04 49 28.5**	**+0.2**
YOZ	**Yozgat**	**1.78**	**82**	*e*PN	**Pn**	**04 49 29.3**	**+0.7**
YOZ	**Yozgat**	**1.78**	**82**	*e*Pn	**Pn**	**04 49 29.3**	**+0.7**
TOS	**Tosya**	**1.78**	**25**	*e*PN	**Pn**	**04 49 29.6**	**+0.9**
TOS	**Tosya**	**1.78**	**25**	*e*Pn	**Pn**	**04 49 29.6**	**+0.9**
SAFT	**Safranbolu**	**1.84**	**352**	*e*PN	**Pn**	**04 49 30.0**	**+0.5**
SAFT	**Safranbolu**	**1.84**	**352**	*e*Pn	**Pn**	**04 49 30.0**	**+0.5**
GULT	**Gulveren**	**2.19**	**298**	*e*PN	**Pn**	**04 49 33.7**	**-0.6**
GULT	**Gulveren**	**2.19**	**298**	*e*Pn	**Pn**	**04 49 33.7**	**-0.6**
KDZE	**Karadeniz Ereo**	**2.25**	**328**	*e*PN	**Pn**	**04 49 35.1**	**0.0**
KDZE	**Karadeniz Ereo**	**2.25**	**328**	*e*Pn	**Pn**	**04 49 35.2**	**0.0**
HDMB	**Hadim**	**2.49**	**190**	*e*PN	**Pn**	**04 49 39.3**	**+0.9**
HDMB	**Hadim**	**2.49**	**190**	*e*Pn	**Pn**	**04 49 39.3**	**+0.9**
SUTC	**Sutluce-Ispart**	**2.52**	**220**	*e*PN	**Pn**	**04 49 38.9**	**+0.1**
SUTC	**Sutluce-Ispart**	**2.52**	**220**	*e*Pn	**Pn**	**04 49 38.9**	**+0.1**
KOZT	**Kozan**	**2.92**	**131**	*e*PN	**Pn**	**04 49 45.8**	**+1.5**
SARI	**SarD1z-Kayseri**	**2.94**	**103**	*e*PN	**Pn**	**04 49 44.5**	**-0.1**
SVSK	**Karacayir**	**3.09**	**79**	*e*PN	**Pn**	**04 49 47.5**	**+0.8**
SVSK	**Karacayir**	**3.09**	**79**	*e*Pn	**Pn**	**04 49 47.5**	**+0.8**

IDC ***05*** *05:01:44.8±0.7,56.°15N×153.°53W,h0km,mb4.0/17, mb1 4.2/20,mb1mx4.0/33,mbtmp4.0/20,ML3.8/3,MS3.7/4, Ms1 3.7/4,ms1mx3.3/33,Error ellipse: s-maj=24.0km s-min=13.0km az=24.0*

ISCJB ***05*** *05:01:44.3±1.8,56.°19N±0.°04×153.°48W±0.°08, h10km±11km,mb4.1/22,MS3.7/3,Error ellipse: s-maj=7.8km s-min=6.9km az=16.3*
NEIC ***05*** *05:01:45.8,55.°97N×153.°24W,h14km,mb4.3/6, ML3.8(AEIC),After AEIC.*

ISC 05 05:01:46.5±1.4,56.°16N±0.°04×153.°56W±0.°07,h13km±8km, n51,σ0=93/53,mb4.1/22,MS3.7/3,Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**1.08**	**8**	P	**Pg**	**05 02 06.6**	**-0.7**
OHAK				S	**Sg**	**05 02 22.9**	**+1.5**
KDAK	**Kodiak Island**	**1.72**	**18**	P	**Pn**	**05 02 15.4**	**-0.6**
KDAK				S	**Sn**	**05 02 37.9**	**+0.1**
CHGN	**Chignik**	**2.71**	**275**	*e*Pn	**Pn**	**05 02 29.0**	**-0.7**
SDPT	**Sand Point**	**3.99**	**261**	*e*Pn	**Pn**	**05 02 43.2**	**-4.1**
SDPT				*e*Sn	**Sn**	**05 03 31.9**	**-2.0**
SEW	**Seward**	**4.52**	**27**	P	**Pn**	**05 02 53.1**	**-1.3**
SLKM	**Skilak Lake**	**4.71**	**21**	P	**Pn**	**05 02 56.0**	**-1.0**
SVW2	**Sparrevohn**	**5.07**	**349**	P	**Pn**	**05 03 02.9**	**+0.9**
RC01	**Rabbit Creek A**	**5.34**	**20**	*e*Pn	**Pn**	**05 03 05.3**	**-0.4**
	43nm,0.8s						
RC01				*e*Sn	**Sn**	**05 04 05.2**	**-1.7**
SKT	**Skwentna**	**5.94**	**9**	P	**Pn**	**05 03 14.4**	**+0.5**
EYAK	**Cordova Ski Ar**	**6.02**	**40**	P	**Pn**	**05 03 13.7**	**-1.5**
SML	**Sawmill**	**6.28**	**23**	P	**Pn**	**05 03 18.2**	**-0.5**
BMRM	**Bremner River**	**6.72**	**40**	P	**Pn**	**05 03 23.1**	**-1.6**
TT01	**Tatalina**	**6.89**	**351**	P	**Pn**	**05 03 27.9**	**+0.9**
TTA	**Tatalina**	**6.91**	**351**	*e*Pn	**Pn**	**05 03 28.1**	**+0.8**
	15nm,0.7s						
KTH	**Kantishna Hill**	**7.54**	**9**	P	**Pn**	**05 03 35.7**	**-0.2**
CHUM	**Lake Minchumin**	**7.78**	**4**	*e*Pn	**Pn**	**05 03 40.5**	**+1.3**
	10nm,0.7s						
PAX	**Paxson**	**7.97**	**28**	*e*Pn	**Pn**	**05 03 42.0**	**+0.2**
	9.2nm,0.7s						
PAX				*e*Sn	**Sn**	**05 05 12.5**	**+0.9**
IL1	**Eielson Array**	**9.24**	**18**	P	**Pn**	**05 03 57.4**	**-1.9**
DIB	**Dawson Inlet,**	**12.54**	**95**	T		05 17 15.4	
	SNR=26						
DLBC	**Dease Lake**	**12.91**	**70**	Pn	**Pn**	**05 04 49.0**	**-0.3**
	0.3nm,0.3s,baz=292,slow=11,SNR=3.1						
INK	**Inuvik**	**15.24**	**29**	Pn	**Pn**	**05 05 23.9**	**+3.0**
	0.2nm,0.3s,baz=243,slow=15,SNR=11						
INK				LR	LR	05 11 16.3	
	comp=Z,177nm,18.0s,baz=26,slow=38						
FX1	**Attu Island--F**	**19.48**	**274**	P	**Pn**	**05 06 14.0**	**-0.1**
	1.1nm,0.3s,baz=266,slow=19,SNR=3.2						
YKA	**Yellowknife Ar**	**20.60**	**56**	P	**P**	**05 06 24.9**	**+0.1**
	3.9nm,0.8s,baz=269,slow=10,SNR=28						
YKA	**Yellowknife Ar**	**20.60**	**56**	P	**P**	**05 06 24.9**	**+0.1**
YBH	**Yreka Blue Hor**	**24.61**	**113**	P	**P**	**05 07 07.4**	**+1.3**
	4.2nm,1.0s,mb3.9,baz=340,slow=0.4,SNR=4.4						
YBH				LR	LR	05 14 52.3	
	comp=Z,120nm,19.1s,MS3.4,baz=320,slow=32						
MOD	**Modoc**	**25.74**	**110**	*e*P	**P**	**05 07 17.3**	**+0.9**
	16nm,1.4s,mb4.4						
WVOR	**Wild Horse Val**	**26.26**	**107**	*e*P	**P**	**05 07 20.9**	**-0.2**
	5.2nm,1.0s,mb4.0						
PETK	**Petropavlovsk-**	**27.91**	**284**	LR	LR	05 19 30.6	
	comp=Z,96nm,19.6s,MS3.4,baz=308,slow=38						
ELK	**Elko**	**29.26**	**105**	P	**P**	**05 07 48.4**	**+0.4**
	0.6nm,0.4s,mb3.6,baz=315,slow=7.1,SNR=3.6						
NVAR	**Mina Array Bea**	**29.32**	**112**	P	**P**	**05 07 49.3**	**+0.8**
	2.3nm,0.9s,mb3.9,baz=293,slow=9.8,SNR=9.9						
PDAR	**Pinedale Array**	**31.00**	**97**	P	**P**	**05 08 03.3**	**-0.1**
	0.8nm,0.9s,mb3.5,baz=309,slow=4.7,SNR=5.0						
MSU	**Marysvale**	**32.51**	**105**	*e*P	**P**	**05 08 16.6**	**0.0**
	7.2nm,1.5s,mb4.4						
AGMN	**Agassiz Nation**	**35.25**	**78**	*e*P	**P**	**05 08 38.8**	**-1.5**
	4.5nm,1.0s,mb4.3						
TXAR	**Lajitas Array**	**44.05**	**106**	P	**P**	**05 09 54.3**	**+0.5**
	2.5nm,0.9s,mb3.9,baz=310,slow=6.2,SNR=16						
SCHQ	**Schefferville**	**46.01**	**53**	P	**P**	**05 10 09.1**	**0.0**
	1.6nm,0.6s,mb4.1,baz=305,slow=10,SNR=3.5						
SCHQ	**Schefferville**	**46.01**	**53**	P	**P**	**05 10 09.1**	**0.0**
PLAL	**Pickwick Lake**	**48.42**	**87**	*e*P	**P**	**05 10 27.2**	**-0.9**
	9.2nm,1.2s,mb4.7						
ARCES	**ARCESS Array B**	**54.61**	**0**	P	**P**	**05 11 14.6**	**+0.6**
	1.2nm,0.8s,mb4.0,baz=0.0,slow=7.9,SNR=6.4						
SONM	**Songino Array**	**56.86**	**308**	P	**P**	**05 11 31.6**	**+1.2**
	1.5nm,0.6s,mb4.2,baz=49,slow=6.7,SNR=9.5						
SONM				PcP	PcP	05 12 27.0	+1.1
	1.2nm,0.7s,baz=41,slow=4.3,SNR=3.8						
SONM				LR	LR	05 38 16.1	
	comp=Z,193nm,19.9s,MS4.2,baz=212,slow=38						
ZALV	**Zalesovo Beam**	**60.33**	**325**	P	**P**	**05 11 55.3**	**+0.9**
	1.7nm,0.6s,mb4.3,baz=69,slow=6.2,SNR=4.7						
NB2	**NORSAR Subarra**	**62.53**	**8**	P	**P**	**05 12 09.4**	**+0.2**
	comp=Z,0.7nm,0.6s,mb4.0,baz=351,slow=6.9						
NOA	**NORSAR Array B**	**62.53**	**8**	P	**P**	**05 12 09.8**	**+0.6**
	comp=Z,0.6nm,0.5s,mb4.0,baz=351,slow=6.7,SNR=4.0						
FINES	**FINESS Array B**	**62.74**	**0**	P	**P**	**05 12 10.9**	**+0.3**
	comp=Z,0.7nm,0.6s,mb3.9,baz=6.7,slow=13,SNR=2.9						
KURK	**Kurchatov**	**65.06**	**326**	P	**P**	**05 12 27.2**	**+1.1**
	comp=Z,0.6nm,0.5s,mb3.9,baz=30,slow=6.5,SNR=3.5						
BVAR	**Borovoye Array**	**65.34**	**333**	P	**P**	**05 12 28.1**	**+0.3**
	comp=Z,1.7nm,0.5s,mb4.3,baz=37,slow=7.9,SNR=9.1						
MKAR	**Makanchi Array**	**67.27**	**322**	P	**P**	**05 12 39.9**	**-0.3**
	comp=Z,0.4nm,0.3s,mb4.0,baz=47,slow=8.8,SNR=2.5						
AKTK	**Aktyubinsk**	**70.59**	**339**	P	**P**	**05 13 00.6**	**-0.2**
AKTO	**Aktyubinsk**	**70.59**	**339**	P	**P**	**05 13 00.6**	**-0.2**
	comp=Z,1.3nm,0.6s,mb4.0,baz=13,slow=6.1,SNR=5.7						
ABKAR	**Akbulak array**	**71.31**	**338**	*e*P	**P**	**05 13 05.4**	**+0.1**
	comp=Z,0.9nm,0.5s,mb4.0						
CMAR	**Chiang Mai Arr**	**84.20**	**295**	P	**P**	**05 14 17.8**	**+0.3**
	comp=Z,1.4nm,0.3s,mb4.5,baz=17,slow=5.7,SNR=11						
QSPA	**South Pole Qui**	**145.94**	**180**	PKPbc	PKPbc	05 21 22.8	-0.9
	comp=Z,11nm,1.0s,baz=71,slow=1.0,SNR=21						

IDC 05 05:06:36.9±1.1,32.°43N×105.°31E,h0km,mb3.5/5, mb1 3.7/5,mb1mx3.5/26,mbtmp3.5/5,Error ellipse: s-maj=71.9km s-min=22.0km az=56.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.05**	**204**	Pn	Pn	05 10 16.9	+6.1
	0.2nm,0.3s,baz=5.2,slow=11,SNR=3.5						
MKAR	**Makanchi Array**	**22.70**	**316**	P	P	05 11 40.6	+0.7
	0.4nm,0.4s,baz=116,slow=12,SNR=6.8						
KURK	**Kurchatov**	**26.84**	**321**	P	P	05 12 18.4	-0.

mb4.7/106, Error ellipse: s-maj=5.3km s-min=2.5km az=36.4
GCMT ***05*** *05:11:28.2±0.3, 15°.79N×93°.64W, h100km±2km, MW5.3, Moment Tensor Solution. s55,c75; s74,c117; Moment tensor: Scale 10^{17}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{r\phi}$0.00; $M_{\theta\phi}$0.00; Best double couple: $M_0$1.10000×10^{17} NP1:ϕ_s212.00000°, δ25.00000°, λ-19.00000°. NP2:ϕ_s319.00000°, δ82.00000°, λ-114.00000°. Principal axes: T 1.1100, Plg33.0000°, Azm69.0000°; N -0.0800, Plg24.0000°, Azm323.0000°; P -1.0400, Plg48.0000°, Azm204.0000°; Data Used: IU II IC G CN.*
BJI ***05*** *05:11:29.9, 15°.80N×93°.70W, h99km, mB4.9/5*
CASC ***05*** *05:11:36.1±1.9, 16°.46N×92°.28W, h20km±557km, MD4.7, mb4.9(NEIC)*
ISC 05 05:11:28.5±0.2, 15°.97N±0°.03×93°.38W±0°.02, h102km±2km, h101km±.9km:pP-P, n559, σ1°.00/568, mb4.7/106, 130C-141D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.30**	**149**	*eP*	**Pn**	**05 11 40.4**	**-3.0**
PCIG				*i* S	**Sn**	**05 11 52.0**	**-2.5**
TGIG		**0.85**	**17**	*i P*	**Pn**	**05 11 47.3**	**-0.2**
TGIG				*i* S	**Sn**	**05 12 03.4**	**+1.6**
SCX	**San Cristobal**	**1.05**	**43**	*eP*	**Pn**	**05 11 51.4**	**+1.7**
SCX				*i* S	**Sn**	**05 12 10.0**	**+8.3**
CCIG	**Comitan**	**1.24**	**75**	*eP*	**Pn**	**05 11 52.5**	**+0.7**
CCIG				*i* S	**Sn**	**05 12 13.7**	**+7.5**
THIG		**1.51**	**134**	*i P*	**Pn**	**05 11 53.0**	**-2.0**
THIG				*eS*	**Sn**	**05 12 14.5**	**+1.7**
CMIG	**Matias Romero**	**1.82**	**308**	P	**Pn**	**05 11 54.9**	**-4.1**
	516nm,0.3s,baz=136,slow=11,SNR=2740						
CMIG				S	**Sn**	**05 12 16.6**	**-3.9**
	2μm,0.3s,baz=54,slow=18,SNR=42						
TUIG	**Tuzandepetl**	**2.29**	**334**	*i* P	**Pn**	**05 12 02.7**	**-2.2**
TUIG				*i* S	**Sn**	**05 12 31.0**	**-0.8**
JAT	**Jato**	**2.35**	**134**	*eP*	**Pn**	**05 12 05.9**	**+0.1**
TP2	**Tecpan 2**	**2.56**	**117**	*eP*	**Pn**	**05 12 10.6**	**+2.1**
HUIG	**Huatulco**	**2.63**	**266**	*i P*	**Pn**	**05 12 00.4**	**-9.0**
HUIG				*i* S	**Sn**	**05 12 27.3**	**-13**
FG6		**2.79**	**120**	*eP*	**Pn**	**05 12 14.4**	**+2.9**
FUG	**Fuego 3**	**2.88**	**121**	*eP*	**Pn**	**05 12 14.0**	**+1.2**
APG	**El Apazote**	**2.97**	**108**	P	**Pn**	**05 12 13.6**	**-0.3**
	323nm,0.3s,baz=287,slow=12,SNR=1529						
APG				S	**Sn**	**05 12 40.4**	**-8.0**
	276nm,0.3s,baz=295,slow=14,SNR=15						
APG				LR	LR	05 13 18.0	
	comp=Z,5μm,20.3s,baz=122,slow=41						
GCG	**Guatemala City**	**3.07**	**116**	*eP*	**Pn**	**05 12 16.6**	**+1.3**
GCG				*e*S	**Sn**	**05 12 47.2**	**-3.7**
PCG	**Pacaya**	**3.10**	**120**	*eP*	**Pn**	**05 12 17.8**	**+2.1**
NBG	**Las Nubes**	**3.23**	**115**	*eP*	**Pn**	**05 12 19.5**	**+2.0**
OXX	**Oaxaca**	**3.39**	**290**	*eP*	**Pn**	**05 12 12.8**	**-6.7**
OXX				*i* S	**Sn**	**05 12 48.4**	**-10**
VHO	**Vista Hermosa**	**3.40**	**289**	*i P*	**Pn**	**05 12 13.2**	**-6.5**
VHO				*i* S	**Sn**	**05 12 50.1**	**-8.7**
SCIG	**Sabancuy**	**3.65**	**35**	*eP*	**Pn**	**05 12 24.3**	**+1.3**
SCIG				*i* S	**Sn**	**05 13 08.7**	**+3.8**
RBDL	**Robledal**	**4.02**	**117**	*eP*	**Pn**	**05 12 28.7**	**+0.7**
RTR	**El Retiro**	**4.16**	**119**	*eP*	**Pn**	**05 12 30.8**	**+0.9**
SBLS	**San Blas**	**4.20**	**120**	*eP*	**Pn**	**05 12 31.6**	**+1.0**
SNJE	**San Jose**	**4.20**	**119**	*eP*	**Pn**	**05 12 31.3**	**+0.7**
TPIG	**Tehuac#an**	**4.52**	**303**	*eP*	**Pn**	**05 12 29.5**	**-5.3**
TPIG				*i* S	**Sn**	**05 13 19.1**	**-7.1**
BOQS	**Boqueron**	**4.54**	**119**	*eP*	**Pn**	**05 12 36.1**	**+1.0**
PNIG	**Pinotepa**	**4.58**	**276**	*i P*	**Pn**	**05 12 27.9**	**-7.7**
PNIG				*i* S	**Sn**	**05 13 15.1**	**-12**
LVIG	**Laguna Verde**	**4.72**	**323**	*eP*	**Pn**	**05 12 32.9**	**-4.6**
LVIG				*i* S	**Sn**	**05 13 27.1**	**-4.0**
LBRS	**Las Brisas**	**4.74**	**117**	*eP*	**Pn**	**05 12 38.4**	**+0.6**
LFRS	**El Faro**	**4.78**	**119**	*eP*	**Pn**	**05 12 39.1**	**+0.7**
LFRS				*e*S	**Sn**	**05 13 19.4**	**-13**
SNVI	**San Vicente**	**4.98**	**117**	*eP*	**Pn**	**05 12 42.0**	**+1.0**
CAHU	**Cacacuatique**	**5.46**	**113**	*eP*	**Pn**	**05 12 48.6**	**+1.1**
CNCH	**Conchagua**	**6.00**	**116**	*eP*	**Pn**	**05 12 56.1**	**+1.3**
YAIG	**Yautepec**	**6.14**	**299**	*i P*	**Pn**	**05 12 53.1**	**-3.7**
YAIG				*i* S	**Sn**	**05 13 55.8**	**-10**
TGUH	**Tegucigalpa,Un**	**6.20**	**107**	*e*Pn	**Pn**	**05 12 57.6**	**0.0**
IIO	**Organos**	**6.24**	**306**	*eP*	**Pn**	**05 12 57.1**	**-1.0**
IIO				*i* S	**Sn**	**05 14 00.5**	**-7.4**
ACX	**Acapulco**	**6.28**	**279**	*i P*	**Pn**	**05 12 51.8**	**-6.9**
ACX				*i* S	**Sn**	**05 13 58.5**	**-11**
PLIG	**Platanillo**	**6.33**	**293**	*eP*	**Pn**	**05 12 54.4**	**-4.9**
PLIG				*i* S	**Sn**	**05 13 58.3**	**-12**
MZVM		**6.43**	**301**	*eP*	**Pn**	**05 12 59.1**	**-1.7**
MZVM				*i* S	**Sn**	**05 14 03.7**	**-9.0**
PBVM	**Pinon**	**6.44**	**303**	*i P*	**Pn**	**05 12 55.2**	**-5.6**
PBVM				*i* S	**Sn**	**05 14 04.4**	**-8.5**
TEIG	**Tepich**	**6.44**	**48**	*e*Pn	**Pn**	**05 13 01.2**	**+0.3**
UNM	**Universidad Na**	**6.46**	**302**	*i P*	**Pn**	**05 12 59.8**	**-1.3**
PTVM	**Pico Tres Padr**	**6.54**	**304**	*eP*	**Pn**	**05 13 01.2**	**-1.0**
PTVM				*i* S	**Sn**	**05 14 06.7**	**-8.7**
CAIG	**El Cayaco**	**6.69**	**280**	*i P*	**Pn**	**05 12 55.8**	**-8.4**
CAIG				*e*S	**Sn**	**05 14 07.2**	**-12**
DEIG	**Demacu**	**6.89**	**310**	*i P*	**Pn**	**05 13 03.9**	**-3.0**
CNGN	**Cerro Negro**	**7.34**	**117**	*eP*	**Pn**	**05 13 13.2**	**+0.1**
MOMN	**Momotombo**	**7.52**	**117**	*eP*	**Pn**	**05 13 16.4**	**+0.8**
CSAN		**7.73**	**118**	*eP*	**Pn**	**05 13 18.9**	**+0.5**
XAVN	**Gruta Xavier**	**7.83**	**118**	*eP*	**Pn**	**05 13 20.0**	**+0.3**
HUEN		**7.87**	**116**	*eP*	**Pn**	**05 13 21.0**	**+0.7**
ZIIG	**Zihuatanejo**	**7.91**	**283**	*i P*	**Pn**	**05 13 15.6**	**-5.3**
ZIIG				*i* S	**Sn**	**05 14 37.1**	**-12**
CRUN	**El Crucero**	**7.93**	**119**	*eP*	**Pn**	**05 13 20.8**	**-0.3**
WILN	**Americas 2**	**7.94**	**118**	*eP*	**Pn**	**05 13 21.1**	**-0.1**
APON	**Apoyo**	**8.16**	**119**	*eP*	**Pn**	**05 13 23.6**	**-0.7**
SSN	**San Juan del S**	**8.66**	**121**	*eP*	**Pn**	**05 13 31.2**	**+0.1**
CONN	**Concepcion**	**8.71**	**119**	*eP*	**Pn**	**05 13 31.0**	**-0.8**
MMIG	**Aquila**	**9.80**	**285**	*eP*	**Pn**	**05 13 38.9**	**-7.7**
MMIG				*i* S	**Sn**	**05 15 21.6**	**-13**
JTS	**JuntasAbangare**	**9.96**	**123**	P	**Pn**	**05 13 48.5**	**-0.3**
	35nm,0.3s,baz=309,slow=18,SNR=107						
JTS	**JuntasAbangare**	**9.96**	**123**	*e*Pn	**Pn**	**05 13 47.5**	**-1.2**
EZ5V		**10.35**	**291**	*i P*	**Pn**	**05 13 52.8**	**-1.1**
LNIG	**Linares**	**10.56**	**328**	*i P*	**Pn**	**05 13 56.8**	**0.0**
R15V		**10.60**	**289**	*i* S	**Sn**	**05 15 46.0**	**-8.1**
ANIG	**Ahuacatlan**	**11.71**	**297**	*i P*	**Pn**	**05 14 10.7**	**-1.7**
HKT	**Hockley**	**14.10**	**351**	*e*Pn	**Pn**	**05 14 44.2**	**+0.6**
	65nm,1.5s						
BCIP	**Isla Barro Col**	**14.84**	**115**	*e*Pn	**Pn**	**05 14 50.1**	**-3.2**
MTDJ	**Mount Denham**	**15.32**	**79**	*eP*	**Pn**	**05 15 02.2**	**+2.9**
	468nm,1.4s						
JCT	**Junction City**	**15.60**	**339**	*e*Pn	**Pn**	**05 15 02.7**	**0.0**
	104nm,1.1s						
JCT				*e*Sn	**Sn**	**05 17 41.9**	**-13**
628A	**Black Gap, Mar**	**16.05**	**329**	⇓P	**Pn**	**05 15 08.5**	**+0.2**
	baz=16						
BRAL	**Brewton**	**16.05**	**20**	*eP*	**Pn**	**05 15 11.3**	**+3.0**
	4μm,2.4s						
LMGC	**Las Mercedes**	**16.10**	**73**	*eP*	**Pn**	**05 15 10.0**	**+1.0**
	baz=251						
LMGC				*e*S	**S**	**05 18 07.8**	**-6.3**
	comp=N,2μm,19.0s						
LMGC				*e*			
	comp=E,2μm,21.1s						
627A	**Terlingua Ranc**	**16.28**	**327**	⇑P	**Pn**	**05 15 10.8**	**-0.4**
	baz=16,SNR=38						
TXAR	**Lajitas Array**	**16.33**	**326**	P	**Pn**	**05 15 11.9**	**+0.1**
	comp=E,0.5nm,0.3s,baz=150,slow=14,SNR=40						
DWPF	**Disney**	**16.38**	**40**	*e*Pn	**Pn**	**05 15 13.7**	**+1.3**
	comp=E,72nm,0.6s						
VBMS	**Vicksburg**	**16.39**	**9**	*e*Pn	**Pn**	**05 15 13.5**	**+1.0**
	comp=E,73nm,0.4s						
528A	**Cox Ranch, San**	**16.55**	**330**	⇓P	**Pn**	**05 15 14.2**	**-0.4**
	baz=17,SNR=14						
626A	**Big Bend Ranch**	**16.75**	**326**	⇑P	**Pn**	**05 15 16.7**	**-0.3**
	baz=17,SNR=27						
527A	**Woodward Ranch**	**16.95**	**328**	⇑P	**Pn**	**05 15 19.2**	**-0.2**
	baz=17,SNR=29						
428A	**Kincaid Ranch,**	**16.98**	**332**	⇓P	**Pn**	**05 15 19.8**	**0.0**
	baz=17,SNR=9.6						
526A	**Mary Lane Ranc**	**17.13**	**327**	⇑P	**Pn**	**05 15 21.5**	**-0.1**
	baz=17,SNR=15						
RCC	**Rio Carpintero**	**17.29**	**74**	*eP*	**Pn**	**05 15 23.5**	**-0.2**
427A	**Hayter Ranch,**	**17.42**	**330**	⇓P	**Pn**	**05 15 25.0**	**-0.1**
	baz=18,SNR=15						
426A	**McDonald Obser**	**17.58**	**328**	⇑P	**Pn**	**05 15 27.5**	**+0.4**
	baz=18,SNR=18						
328A	**Wristen Ranch,**	**17.59**	**332**	⇑P	**Pn**	**05 15 26.7**	**-0.5**
	baz=18,SNR=12						
GTBY	**Guantanamo Bay**	**17.82**	**75**	*e*Pn	**Pn**	**05 15 29.9**	**-0.1**
	comp=E,214nm,1.0s						
LRAL	**Lakeview Retre**	**17.95**	**18**	*e*Pn	**Pn**	**05 15 32.5**	**+1.0**
	comp=E,62nm,0.9s						
326A	**Caldwell Ranch**	**18.08**	**330**	⇑P	**Pn**	**05 15 32.7**	**-0.4**
	baz=18,SNR=19						
MOAC	**Moa**	**18.10**	**72**	*eP*	**Pn**	**05 15 31.5**	**-1.9**
425A	**Indio Mountain**	**18.17**	**326**	⇓P	**Pn**	**05 15 33.5**	**-0.7**
	baz=18,SNR=15						
227A	**Bennet, Jal**	**18.34**	**332**	⇓P	**Pn**	**05 15 36.0**	**-0.2**
	baz=18,SNR=12						
MIAR	**Mount Ida**	**18.50**	**360**	*eP*	**Pn**	**05 15 36.8**	**-1.3**
	comp=E,64nm,0.7s						
325A	**Bean Ranch, Si**	**18.63**	**327**	⇓P	**Pn**	**05 15 38.6**	**-1.0**
	baz=19						
UALR	**University of**	**18.75**	**3**	*eP*	**Pn**	**05 15 39.5**	**-1.5**
	comp=E,131nm,0.9s						
226A	**Malaga, Loving**	**18.76**	**331**	⇓P	**Pn**	**05 15 40.2**	**-0.9**
	baz=19						
CLNB	**Carlsbad**	**18.82**	**331**	P	**Pn**	**05 15 40.2**	**-1.7**
	comp=E,44nm,0.8s						
127A	**Arkansas Junct**	**18.94**	**333**	⇑P	**Pn**	**05 15 42.0**	**-1.3**
	baz=19,SNR=12						
324A	**Moseley Ranch,**	**18.95**	**327**	⇑P	**Pn**	**05 15 41.1**	**-2.3**
	baz=19,SNR=10						
GDL2	**Guadalupe Moun**	**19.00**	**330**	*e*Pn	**Pn**	**05 15 43.4**	**-0.6**
MNTX	**Cornudas Mount**	**19.10**	**327**	*eP*	**Pn**	**05 15 42.9**	**-2.3**
	comp=E,8.7nm,0.7s						
225A	**Deer Hill, Car**	**19.14**	**329**	⇑P	**Pn**	**05 15 43.5**	**-2.2**
	baz=19,SNR=11						
126A	**Clayton Basin,**	**19.21**	**332**	⇑P	**Pn**	**05 15 44.4**	**-2.0**
	baz=19,SNR=30						
WMOK	**Wichita Mounta**	**19.31**	**346**	*eP*	**Pn**	**05 15 44.7**	**-3.0**
	comp=E,34nm,0.8s						
Z27A	**Tatum**	**19.43**	**335**	⇓P	**Pn**	**05 15 46.4**	**-2.6**
	baz=20,SNR=109						
CPRX	**Cap Rock**	**19.46**	**333**	*eP*	**Pn**	**05 15 47.9**	**-1.5**
	comp=E,80nm,1.1s						
224A	**Cornudas Mount**	**19.47**	**328**	⇓P	**Pn**	**05 15 46.9**	**-2.6**
	baz=20,SNR=25						
125A	**Gardner Draw,**	**19.51**	**330**	⇓P	**Pn**	**05 15 48.0**	**-2.1**
	baz=20,SNR=13						
PLAL	**Pickwick Lake**	**19.53**	**13**	*eP*	**Pn**	**05 15 48.0**	**-2.1**
GOGA	**Godfrey**	**19.55**	**26**	*eP*	**Pn**	**05 15 48.5**	**-1.9**
	comp=E,89nm,0.7s						
HBAR	**Harrisburg**	**19.66**	**7**	*eP*	**Pn**	**05 15 49.2**	**-2.5**
Z26A	**Caprock**	**19.72**	**333**	⇑P	**Pn**	**05 15 50.0**	**-2.4**
	baz=20,SNR=27						
MSTX	**Muleshoe**	**19.82**	**336**	⇑P	**Pn**	**05 15 51.0**	**-2.7**
	baz=20,SNR=14						
Y27A	**Causey**	**19.90**	**335**	⇑P	**Pn**	**05 15 51.5**	**-3.0**
	baz=20,SNR=12						
124A	**Stringfield Ra**	**19.93**	**329**	⇑P	**Pn**	**05 15 52.2**	**-2.7**
	baz=20,SNR=13						
Y26A	**Elida**	**20.21**	**334**	⇑P	**P**	**05 15 55.2**	**-0.1**
	baz=20						
AMTX	**Amarillo**	**20.26**	**340**	*eP*	**P**	**05 15 55.8**	**0.0**
	comp=E,91nm,0.6s						
SWET	**Sewanee**	**20.30**	**18**	*eP*	**P**	**05 15 56.7**	**+0.5**
222A	**Williams Famil**	**20.34**	**325**	⇑P	**P**	**05 15 56.9**	**+0.2**
	baz=20						
Z24A	**Sheeppen Canyo**	**20.40**	**330**	⇓P	**P**	**05 15 57.7**	**+0.3**
	baz=20,SNR=25						
X27A	**F and S Farms,**	**20.55**	**337**	⇓P	**P**	**05 15 58.5**	**-0.4**
	baz=21,SNR=30						
GLAT	**Glass**	**20.55**	**9**	*eP*	**P**	**05 15 58.0**	**-0.8**
Y25A	**Mesa, Roswell**	**20.58**	**332**	⇑P	**P**	**05 15 59.6**	**+0.3**
	baz=21,SNR=68						
320A	**Kipp Ranch, An**	**20.62**	**321**	⇑P	**P**	**05 15 60.0**	**+0.3**
	baz=21,SNR=8.1						
WVT	**Waverly**	**20.68**	**13**	*eP*	**P**	**05 15 59.8**	**-0.6**
	comp=E,192nm,1.7s						
UTMT	**University of**	**20.69**	**10**	*eP*	**P**	**05 16 00.4**	**0.0**
	comp=E,342nm,0.9s						
X26A	**CR and CF Fran**	**20.74**	**335**	⇑P	**P**	**05 16 00.4**	**-0.7**
	baz=21,SNR=14						
Z23A	**Rita Site, Whi**	**20.77**	**328**	⇓P	**P**	**05 16 02.1**	**+0.8**
	baz=21						
COW	**Cow Castle Cre**	**20.79**	**31**	*eP*	**P**	**05 16 03.0**	**+1.5**
NHSC	**New Hope**	**20.83**	**33**	*eP*	**P**	**05 16 03.0**	**+1.0**
	comp=E,175nm,1.0s						
PARMO	**Parma**	**20.87**	**8**	*eP*	**P**	**05 16 03.2**	**+0.9**
W27A	**Bowe Ranch, En**	**20.90**	**337**	⇑P	**P**	**05 16 02.3**	**-0.5**
	baz=21,SNR=52						
Y24A	**Capitan**	**20.93**	**331**	⇑P	**P**	**05 16 03.3**	**+0.3**
	baz=21,SNR=31						
CPCT	**Cooper Cave**	**20.96**	**21**	*eP*	**P**	**05 16 03.3**	**0.0**
220A	**Playas Peak, P**	**21.02**	**322**	⇓P	**P**	**05 16 04.3**	**+0.3**
	baz=21,SNR=17						
121A	**Cookes Peak, D**	**21.04**	**324**	⇓P	**P**	**05 16 05.0**	**+0.8**
	baz=21,SNR=15						
X25A	**Clemmons Ranch**	**21.08**	**333**	⇑P	**P**	**05 16 04.8**	**+0.2**
	baz=21,SNR=5.8						
319A	**Douglas**	**21.11**	**319**	⇓P	**P**	**05 16 05.2**	**+0.2**
	baz=21,SNR=8.0						
Z22A	**Elephant Butte**	**21.15**	**327**	⇓P	**P**	**05 16 06.1**	**+0.7**
	baz=21,SNR=8.0						
W26A	**Owens Ranch, T**	**21.20**	**336**	⇑P	**P**	**05 16 06.2**	**+0.3**
	baz=21,SNR=7.2						
Y23A	**Lovelace Mesa,**	**21.22**	**330**	⇑P	**P**	**05 16 07.0**	**+0.8**
	baz=21,SNR=26						
JSC	**Jenkinsville**	**21.25**	**29**	*eP*	**P**	**05 16 07.2**	**+0.8**
JSC				*e*S	**S**	**05 20 01.5**	**+4.7**
SDDR	**Presa de Saban**	**21.29**	**79**	*eP*	**P**	**05 16 07.0**	**0.0**
	comp=E,648nm,2.3s,mb5.5						
TKL	**Tuckaleechee C**	**21.41**	**22**	P	**P**	**05 16 04.9**	**-3.2**
	comp=E,2.1nm,0.4s,mb3.8,baz=212,slow=16,SNR=4.3						
TKL				S	**S**	**05 20 07.2**	**+7.3**
	comp=E,18nm,0.7s,baz=59,slow=2.0,SNR=6.4						
TKL				LR	LR	05 25 22.4	
	comp=E,271nm,18.4s,baz=218,slow=39						
TKL	**Tuckaleechee C**	**21.41**	**22**	*eP*	**P**	**05 16 07.7**	**-0.5**
TKL				*e*S	**S**	**05 20 01.6**	**+1.7**
X24A	**Lazy VL Ranch,**	**21.45**	**332**	⇓P	**P**	**05 16 08.9**	**+0.2**
	baz=22,SNR=14						
219A	**White Tail Can**	**21.52**	**321**	⇓P	**P**	**05 16 09.8**	**+0.4**
	baz=22,SNR=9.1						
120A	**U Bar Ranch, L**	**21.54**	**323**	⇓P	**P**	**05 16 10.4**	**+0.8**
	baz=22						
Z21A	**St. Cloud Mine**	**21.56**	**326**	⇑P	**P**	**05 16 11.4**	**+1.6**
	baz=22						
W25A	**X Bar L Ranch,**	**21.59**	**335**	⇑P	**P**	**05 16 10.1**	**+0.1**
	baz=22,SNR=14						
318A	**Bisbee**	**21.60**	**318**	⇓P	**P**	**05 16 10.1**	**-0.2**
	baz=22,SNR=9.0						
BNM	**Barren Site**	**21.68**	**329**	*eP*	**P**	**05 16 12.2**	**+1.2**
	comp=E,14nm,0.8s,mb4.4						
Y22A	**Socorro**	**21.68**	**328**	⇑P	**P**	**05 16 11.4**	**+0.4**
	baz=22						
ROSC	**El Rosal**	**21.72**	**118**	P	**P**	**05 16 11.2**	**-0.5**
	comp=E,40nm,0.8s,mb4.8,baz=84,slow=0.9,SNR=45						
ROSC	**El Rosal**	**21.72**	**118**	*eP*	**P**	**05 16 11.8**	**+0.1**
GRTK	**Grand Turk**	**21.77**	**72**	*eP*	**P**	**05 16 13.0**	**+0.8**
	comp=E,281nm,1.5s,mb5.4						
LPM	**Los Pinos Moun**	**21.81**	**329**	*eP*	**P**	**05 16 13.4**	**+1.0**
V26A	**Tequesquite Ra**	**21.82**	**337**	⇓P	**P**	**05 16 13.3**	**+0.7**
	baz=22,SNR=13						
Z20A	**Nine Sixteen R**	**21.93**	**324**	⇓P	**P**	**05 16 14.7**	**+1.0**
	baz=22						
SIUC	**Southern Illin**	**21.98**	**9**	*eP*	**P**	**05 16 14.9**	**+0.8**
	comp=E,124nm,0.8s,mb5.3						
W24A	**Lazy 6 Ranch,**	**21.98**	**333**	⇓P	**P**	**05 16 15.0**	**+0.8**
	baz=22,SNR=16						
218A	**Dragoon**	**21.99**	**319**	⇑P	**P**	**05 16 15.0**	**+0.6**
	baz=22						
CCM	**Cathedral Cave**	**22.09**	**4**	*eP*	**P**	**05 16 13.2**	**-2.1**
	comp=E,61nm,0.6s,mb5.1						
CCM				*e*pP		05 16 36.2	
FVM	**French Village**	**22.09**	**6**	*eP*	**P**	**05 16 14.9**	**-0.4**
	comp=E,20nm,0.8s,mb4.5						
119A	**Ashpeak Ranch,**	**22.09**	**322**	⇓P	**P**	**05 16 16.0**	**+0.6**
	baz=22						
Y21A	**Point of Rocks**	**22.10**	**327**	⇓P	**P**	**05 16 16.7**	**+1.2**
	baz=22						
LAZ	**Ladron**	**22.14**	**329**	*eP*	**P**	**05 16 16.8**	**+1.0**
	comp=E,14nm,1.0s,mb4.2						
LAZ				*e*pP		05 16 37.0	
X22A	**Bernardo**	**22.15**	**329**	⇑P	**P**	**05 16 18.2**	**+2.2**
	baz=22						
V25A	**Rancho No Teng**	**22.19**	**335**	⇓P	**P**	**05 16 16.6**	**+0.2**
	baz=22						
ANMO	**Albuquerque**	**22.25**	**331**	P	**P**	**05 16 16.8**	**-0.2**
	comp=E,7.8nm,0.7s,mb4.2,baz=158,slow=12,SNR=23						
ANMO				pP		05 16 37.6	
	comp=E,12nm,0.8s,baz=142,slow=13,SNR=8.0						
ANMO				sP	sP	05 16 47.8	-1.8
	comp=E,12nm,0.6s,baz=141,slow=14,SNR=5.9						
ANMO	**Albuquerque**	**22.25**	**331**	*eP*	**P**	**05 16 17.1**	**0.0**
	comp=E,3.4nm,0.8s,mb3.7						
W23A	**Werner Place,**	**22.27**	**331**	⇓P	**P**	**05 16 17.3**	**0.0**
	baz=22						
TZTN	**Tazewell**	**22.28**	**21**	*eP*	**P**	**05 16 16.3**	**-1.1**
	comp=E,272nm,1.8s,mb5.3						
U26A	**Atchley Ranch,**	**22.34**	**338**	⇓P	**P**	**05 16 17.7**	**-0.2**
	baz=22,SNR=34						
217A	**Green Valley**	**22.35**	**318**	⇑P	**P**	**05 16 17.8**	**-0.3**
	baz=22,SNR=11						
118A	**Homack Ranch,**	**22.40**	**321**	⇑P	**P**	**05 16 18.6**	**-0.1**
	baz=22,SNR=9.6						
Y20A	**Horse Springs,**	**22.40**	**326**	⇑P	**P**	**05 16 19.4**	**+0.7**
	baz=22						
Z19A	**T-Link Ranch,**	**22.44**	**323**	⇓P	**P**	**05 16 19.4**	**+0.2**
	baz=23						
USIN	**University of**	**22.49**	**12**	*eP*	**P**	**05 16 18.6**	**-0.9**
	comp=E,140nm,0.8s,mb5.3						
X21A	**Alamocita Cree**	**22.50**	**328**	⇑P	**P**	**05 16 19.7**	**0.0**
	baz=23						
U25A	**Circle Dot Ran**	**22.59**	**336**	⇓P	**P**	**05 16 21.0**	**+0.4**
	baz=23						
TUC	**Tucson**	**22.68**	**319**	*eP*	**P**	**05 16 21.8**	**+0.1**
	comp=E,41nm,1.1s,mb4.7						
Z18A	**Geronimo**	**22.75**	**322**	⇓P	**P**	**05 16 22.2**	**-0.1**
	baz=23						
SLM	**Saint Louis**	**22.75**	**6**	*eP*	**P**	**05 16 20.3**	**-2.0**
	comp=E,69nm,0.7s,mb5.1						
SLM				*e*pP		05 16 42.8	
V23A	**Ortiz Mt. (NFS**	**22.77**	**332**	⇑P	**P**	**05 16 23.7**	**+1.1**
	baz=23,SNR=11						
117A	**Oracle**	**22.83**	**320**	⇓P	**P**	**05 16 22.4**	**-0.7**
	baz=23						
216A	**Three Points,**	**22.91**	**317**	⇑P	**P**	**05 16 23.6**	**-0.3**
	baz=23						
Y19A	**Nutrioso**	**22.92**	**324**	⇓P	**P**	**05 16 24.2**	**+0.3**
	baz=23						
X20A	**Quemado**	**22.95**	**326**	⇓P	**P**	**05 16 24.6**	**+0.5**
	baz=23,SNR=9.6						
U24A	**Moreno Valley**	**22.95**	**335**	⇓P	**P**	**05 16 24.9**	**+0.8**
	baz=23						
WCI	**Wyandotte Cave**	**23.04**	**14**	*eP*	**P**	**05 16 22.7**	**-2.2**
	comp=E,289nm,0.7s,mb5.7						
OLIL	**Olney**	**23.15**	**11**	*eP*	**P**	**05 16 24.4**	**-1.5**
	comp=E,134nm,0.6s,mb5.5						
KSU1	**Kansas State U**	**23.22**	**354**	*eP*	**P**	**05 16 25.4**	**-1.1**
	comp=E,45nm,0.8s,mb4.8						
Y18A	**Canyon Day Jun**	**23.24**	**323**	⇓P	**P**	**05 16 27.1**	**+0.3**
	baz=23,SNR=6.1						
V22A	**San Miguel Ran**	**23.25**	**331**	⇑P	**P**	**05 16 27.7**	**+0.9**
	baz=23,SNR=5.9						
SDV	**Santo Domingo**	**23.29**	**105**	P	**P**	**05 16 24.2**	**-3.3**
	comp=E,17nm,0.9s,mb4.4,baz=62,slow=4.0,SNR=11						
SDV				PcP	PcP	05 20 11.3	-0.8
	comp=E,2.7nm,0.5s,baz=358,slow=4.6,SNR=2.7						
SDV				LR	LR	05 26 14.7	
	comp=E,367nm,21.8s,baz=66,slow=38						
SDV	**Santo Domingo**	**23.29**	**105**	*eP*	**P**	**05 16 24.4**	**-3.1**
	comp=E,33nm,0.8s,mb4.7						
X19A	**St. Johns**	**23.29**	**325**	⇓P	**P**	**05 16 27.8**	**+0.6**
	baz=23,SNR=6.8						
CBKS	**Cedar Bluff**	**23.44**	**347**	*eP

Q20A **Ridgley Place,** 26.37 333 ⇓P P 05 16 56.3 +1.0
baz=26
U15A **North Rim** 26.42 324 ⇑P P 05 16 56.8 +1.2
baz=27
W13A **Hualapai Mount** 26.46 320 ⇓P P 05 16 56.5 +0.4
baz=27
BC3 **Big Chuckawall** 26.58 316 ⇓P P 05 16 57.6 +0.5
baz=27
R18A **Canyonlands Na** 26.64 330 ⇑P P 05 16 58.4 +0.7
baz=27
IRM **Iron Mountain** 26.68 317 ⇓P P 05 16 58.3 +0.3
baz=27
MTP **Monte Pirata** 26.68 81 eP P 05 16 55.0 -3.2
comp=E,14nm,0.8s,mb4.5
MONP **Monument Peak** 26.81 313 ⇑P P 05 16 59.0 -0.2
baz=27
P20A **De Beque** 26.87 334 ⇓P P 05 17 00.1 +0.4
baz=27
T15A **Red Dirt Ranch** 26.90 325 ⇑P P 05 17 00.6 +0.7
baz=27
U14A **Mt Trumbull** 26.92 323 ⇑P P 05 17 00.5 +0.3
baz=27
JFWS **Jewell Farm** 26.99 5 eP P 05 16 58.8 -1.9
comp=E,85nm,0.6s,mb5.5
V13A **Grand Canyon W** 27.02 321 ⇓P P 05 17 01.2 +0.2
baz=27
R17A **Hanksville Air** 27.07 329 ⇑P P 05 17 01.9 +0.4
baz=27
W12A **Cal Nev Ari** 27.20 319 ⇑P P 05 17 02.6 -0.1
baz=27
N22A **Wattenberg Ran** 27.22 338 ⇓P P 05 17 04.2 +1.4
baz=27
PFO **Pinyon Flat Ob** 27.23 314 ⇑P P 05 17 03.0 0.0
baz=27
P19A **Cripple Cowboy** 27.23 333 ⇓P P 05 17 03.8 +0.9
baz=27
PHWY **Pilot Hill** 27.32 340 eP P 05 17 03.9 +0.3
Q18A **Rafter H Ranch** 27.33 331 ⇓P P 05 17 04.1 +0.4
baz=28
ATAH **Atahualpa** 27.33 146 P P 05 17 04.3 +0.3
comp=E,10nm,1.0s,mb4.3,baz=293,slow=8.1,SNR=4.4
O20A **White River Ci** 27.34 335 ⇓P P 05 17 04.6 +0.7
baz=28
R16A **Teasdale** 27.35 328 ⇑P P 05 17 04.8 +0.8
baz=28
S15A **Panguitch** 27.36 326 ⇑P P 05 17 04.6 +0.5
baz=28
U13A **Pakoon Wash** 27.38 322 ⇓P P 05 17 05.0 +0.7
baz=28
GMRC **Granite Mounta** 27.39 317 ⇑P P 05 17 04.6 +0.2
baz=28
V12A **Nelson** 27.47 320 ⇑P P 05 17 05.7 +0.7
baz=28
SRU **San Rafael** 27.52 330 ⇑P P 05 17 06.3 +0.8
baz=28
SRU **San Rafael** 27.52 330 eP P 05 17 07.6 +2.1
comp=E,11nm,0.8s,mb4.4
SRU epP pP 05 17 28.1 0.0
AAM **Ann Arbor** 27.54 16 eP P 05 17 04.0 -1.6
comp=E,29nm,0.8s,mb4.9
AAM epP pP 05 17 26.3 -2.0
AAM esP sP 05 17 38.8 -1.5
N21A **Black Mountain** 27.58 336 ⇓P P 05 17 07.1 +1.1
baz=28,SNR=7.5
ECSD **EROS Data Cent** 27.81 355 eP P 05 17 05.9 -2.2
comp=E,33nm,0.8s,mb4.9
CCUT **Cedar City** 27.82 324 eP P 05 17 08.3 +0.1
comp=E,8.8nm,1.6s,mb4.0
CCUT epP pP 05 17 31.1 +0.2
HEC **Hector,Ludlow** 27.86 317 ⇑P P 05 17 09.0 +0.5
baz=28
S14A **Cedar City** 27.86 325 ⇓P P 05 17 09.3 +0.7
baz=28
P17A **Butcher Ranch,** 27.91 330 ⇑P P 05 17 09.8 +0.9
baz=28,SNR=5.7
N20A **Spence Gulch,** 27.94 335 ⇓P P 05 17 10.3 +1.1
baz=28,SNR=11
ARUT **Antelope Range** 28.03 325 eP P 05 17 10.8 +0.7
comp=E,2.3nm,0.3s,mb4.2
ARUT epP pP 05 17 33.1 +0.3
S13A **Holt Ranch, En** 28.12 324 ⇓P P 05 17 11.8 +0.9
baz=28,SNR=8.0
SHPR **Sheep Range** 28.16 321 eP P 05 17 11.8 +0.5
O18A **Roosevelt** 28.20 332 ⇑P P 05 17 12.6 +1.0
baz=28,SNR=6.9
M21A **Separation Pea** 28.26 337 ⇑P P 05 17 12.9 +0.9
baz=28,SNR=14
RWWY **Rawlins** 28.27 338 eP P 05 17 13.1 +0.9
comp=E,14nm,0.8s,mb4.5
RWWY epP pP 05 17 34.4 -0.5
L22A **Ellis Ranch, M** 28.30 339 ⇑P P 05 17 13.2 +0.8
baz=28
Q15A **Fillmore** 28.35 328 ⇓P P 05 17 13.7 +0.8
baz=28,SNR=6.9
N19A **John Jarvie Ra** 28.36 334 ⇑P P 05 17 13.9 +1.0
baz=28
P16A **Fountain Green** 28.46 329 ⇓P P 05 17 14.8 +0.9
baz=29
M20A **Sweetwater, Wa** 28.47 336 ⇓P P 05 17 14.4 +0.5
baz=29,SNR=5.2
O17A **Robinson Place** 28.48 331 ⇓P P 05 17 14.9 +0.9
baz=29,SNR=8.7
PCRV **Puerto La Cruz** 28.57 98 LR LR 05 29 04.2
comp=E,228nm,21.9s,baz=286,slow=37
L21A **Rawlins** 28.57 338 ⇓P P 05 17 15.5 +0.7
baz=29,SNR=9.4
R13A **O'Grain Ranch,** 28.61 325 ⇓P P 05 17 16.2 +1.1
baz=29
N18A **Larsen Ranch,** 28.64 334 ⇑P P 05 17 16.5 +1.1
baz=29,SNR=6.5
T11A **Corn Creek, Al** 28.68 322 ⇓P P 05 17 16.7 +0.8
baz=29
O16A **Springville** 28.84 330 ⇑P P 05 17 17.9 +0.6
baz=29
DAU **Daniels Canyon** 28.89 331 eP P 05 17 21.5 +3.9
comp=E,6.0nm,0.9s,mb4.2
L20A **Wamsutter** 28.97 337 ⇑P P 05 17 19.2 +0.9
baz=29
R12A **Pony Springs,** 29.07 324 ⇓P P 05 17 20.2 +0.9
baz=29,SNR=5.3
M18A **Lyman** 29.18 334 ⇑P P 05 17 21.1 +0.9
baz=29
MPMC **Manual Prospec** 29.35 318 ⇓P P 05 17 21.9 +0.1
baz=30
N16A **Rees Ranch, Co** 29.35 331 ⇓P P 05 17 22.5 +0.8
baz=30
L19A **Farson** 29.45 335 ⇑P P 05 17 23.0 +0.5
baz=30
M17A **Scullys Gap (B** 29.48 333 ⇓P P 05 17 23.1 +0.3
baz=30
RSSD **Black Hills** 29.49 344 eP P 05 17 22.6 -0.3
comp=E,6.4nm,0.9s,mb4.2
K20A **Yellowstone Ra** 29.53 337 ⇑P P 05 17 23.8 +0.5
baz=30
L18A **Fontenelle, Gr** 29.58 334 ⇑P P 05 17 24.2 +0.5
baz=30
R11A **Troy Canyon, C** 29.64 323 ⇓P P 05 17 24.9 +0.6
baz=30
K19A **Absolon Red Bu** 29.86 337 ⇓P P 05 17 26.5 +0.3
baz=30
S10A **Tonopah Range,** 29.95 321 ⇓P P 05 17 27.7 +0.6
baz=30
HWUT **Hardware Ranch** 29.98 332 eP P 05 17 29.0 +1.7
comp=E,5.4nm,0.8s,mb4.2
Q11A **Duckwater** 30.02 324 ⇑P P 05 17 28.2 +0.5
baz=30
R10A **Warm Springs** 30.02 322 ⇓P P 05 17 28.3 +0.6
baz=30
L17A **Cokeville** 30.08 333 ⇑P P 05 17 28.4 +0.3
baz=30,SNR=9.0
BW06 **Boulder Array** 30.09 336 ⇑P P 05 17 28.2 0.0
baz=30
BW06 **Boulder Array** 30.09 336 eP P 05 17 28.2 0.0
comp=E,7.3nm,1.1s,mb4.2
BW06 epP pP 05 17 51.2 +0.1
PDAR **Pinedale Array** 30.09 336 P P 05 17 28.1 -0.1
comp=E,1.5nm,0.7s,mb3.7,baz=140,slow=7.8,SNR=15
PDAR pP pP 05 17 49.9 -1.2
comp=E,1.4nm,0.6s,baz=135,slow=8.6,SNR=4.4
PDAR pPcP 05 20 52.4
comp=E,0.9nm,0.5s,baz=136,slow=5.0,SNR=4.4
K18A **Toltan Ranch,** 30.17 335 ⇑P P 05 17 30.4 +1.5
baz=30,SNR=14
L16A **Fish Haven** 30.25 333 ⇓P P 05 17 30.2 +0.5
baz=30
VES **Vestal, Richgr** 30.28 316 ⇓P P 05 17 30.0 0.0
baz=30,SNR=5.0
O12A **Currie** 30.52 327 ⇑P P 05 17 32.0 0.0
baz=31
K17A **Gardner Place,** 30.63 334 ⇓P P 05 17 33.3 +0.3
baz=31,SNR=8.6
J18A **Kendall Valley** 30.65 336 ⇑P P 05 17 33.7 +0.6
baz=31,SNR=9.6
RCTC **Rector, Farmer** 30.65 316 ⇓P P 05 17 33.0 -0.2
baz=31,SNR=7.2
L15A **Malad City** 30.67 332 ⇓P P 05 17 33.7 +0.4
baz=31
N13A **Wendover, West** 30.67 328 eP P 05 17 37.5 +4.1
comp=E,14nm,0.8s,mb4.8
N13A epP pP 05 17 56.5 +0.3
AHID **Auburn Hatcher** 30.72 334 eP P 05 17 33.1 -0.7
comp=E,5.4nm,0.4s,mb4.6
M14A **Sheep Mountain** 30.73 330 ⇓P P 05 17 34.2 +0.3
baz=31
O11A **Cowboy Ranch,** 30.91 326 ⇓P P 05 17 36.0 +0.4
baz=31
I18A **Diamond G Ranc** 30.98 337 ⇓P P 05 17 36.3 +0.2
baz=31,SNR=6.0
J17A **Brown Place, J** 31.05 335 ⇑P P 05 17 37.6 +1.0
baz=31,SNR=9.1
L14A **Malta** 31.09 331 ⇓P P 05 17 37.5 +0.5
baz=31
N12A **Clover Valley,** 31.10 327 ⇓P P 05 17 37.9 +0.7
baz=31
REDW **Red Top Meadow** 31.11 335 eP P 05 17 37.7 +0.5
comp=E,23nm,0.7s,mb5.0
ELK **Elko** 31.12 327 P P 05 17 37.8 +0.4
comp=E,2.1nm,0.6s,mb4.0,baz=150,slow=10,SNR=6.7
ELK pP pP 05 18 00.2 0.0
comp=E,6.2nm,0.7s,baz=132,slow=7.0,SNR=8.2
ELK pPcP 05 20 55.9
comp=E,1.5nm,0.6s,baz=208,slow=3.9,SNR=4.0
ELK LR LR 05 30 45.9
comp=E,128nm,19.5s,baz=133,slow=37
SNOW **Snow King Moun** 31.15 335 eP P 05 17 38.6 +1.0
comp=E,44nm,0.7s,mb5.3
LOHW **Long Hollow** 31.21 335 eP P 05 17 38.8 +0.6
comp=E,9.6nm,0.8s,mb4.6
TPAW **Teton Pass** 31.25 335 eP P 05 17 39.4 +0.9
comp=E,19nm,0.9s,mb4.8
K15A **Arbon** 31.27 332 ⇑P P 05 17 39.0 +0.4
baz=31,SNR=7.1
NVAR **Mina Array Bea** 31.31 320 P P 05 17 39.8 +0.7
comp=E,6.7nm,0.9s,mb4.4,baz=138,slow=8.9,SNR=32
NVAR pP pP 05 18 02.1 +0.2
comp=E,17nm,0.8s,baz=134,slow=9.4,SNR=20
NVAR pPcP 05 20 57.6
comp=E,2.5nm,0.8s,baz=136,slow=3.7,SNR=5.7
N11A **Elko Archery C** 31.44 326 ⇑P P 05 17 41.0 +0.8
baz=32
M12A **Wells** 31.45 328 ⇑P P 05 17 40.8 +0.6
baz=32
K14A **Jones Ranch, D** 31.46 331 ⇑P P 05 17 41.1 +0.8
baz=32
I17A **Pilgrim Ck.** 31.46 336 ⇑P P 05 17 41.6 +1.3
baz=32
IMW **Indian Meadow** 31.59 335 eP P 05 17 42.1 +0.7
comp=E,8.0nm,0.6s,mb4.6
IMW epP pP 05 18 07.1 +2.8
I16A **Newdale** 31.79 335 ⇑P P 05 17 43.9 +0.7
baz=32
J15A **Blackfoot** 31.80 333 ⇓P P 05 17 43.7 +0.4
baz=32
H17A **Grant Village** 31.86 336 ⇓P P 05 17 44.4 +0.6
baz=32
EYMN **Ely** 31.93 2 eP P 05 17 41.7 -2.6
comp=E,7.1nm,0.9s,mb4.4
EYMN epP pP 05 18 05.9 -1.3
RLMT **Red Lodge** 32.00 339 ⇓P P 05 17 44.8 -0.2
baz=32,SNR=6.6
RLMT **Red Lodge** 32.00 339 eP P 05 17 45.1 +0.1
comp=E,96nm,2.4s,mb5.1
J14A **Carey** 32.22 332 ⇓P P 05 17 47.6 +0.6
baz=32
YMR **Madison River** 32.24 336 eP P 05 17 48.0 +0.9
comp=E,14nm,0.9s,mb4.7
YMR epP pP 05 18 10.2 +0.1
G18A **Lazy EL Ranch,** 32.27 338 ⇓P P 05 17 47.4 0.0
baz=32,SNR=11
AGMN **Agassiz Nation** 32.31 357 eP P 05 17 45.6 -2.1
comp=E,45nm,1.0s,mb5.2
K12A **Draper Farm, C** 32.35 330 ⇓P P 05 17 48.8 +0.8
baz=32
M10A **I.L. Ranch, Tu** 32.37 327 ⇑P P 05 17 49.3 +1.1
baz=32
H16A **Russell Place,** 32.38 336 ⇑P P 05 17 49.5 +1.2
baz=32
L11A **Cat Creek Ranc** 32.42 328 ⇑P P 05 17 49.1 +0.4
baz=33
LAO **LASA Array** 32.45 343 eP P 05 17 48.0 -0.8
comp=E,18nm,1.0s,mb4.8
LAO epP pP 05 18 11.8 0.0
LAO esP sP 05 18 25.2 +1.6
LAO ePP PP 05 19 03.2 -0.9
J13A **Cove Ranch, Pi** 32.58 331 ⇓P P 05 17 50.3 +0.2
baz=33,SNR=6.1
I14A **Mackay** 32.67 333 ⇓P P 05 17 51.7 +0.8
baz=33
G17A **Pierce Place,** 32.70 337 ⇓P P 05 17 51.7 +0.6
baz=33
GCMT **Greycliff** 32.72 339 eP P 05 17 50.9 -0.4
comp=E,5.4nm,0.6s,mb4.5
GCMT epP pP 05 18 12.6 -1.6
L10A **Juniper Basin** 32.73 327 ⇓P P 05 17 52.0 +0.6
baz=33
HLID **Hailey** 32.82 331 ⇓P P 05 17 53.0 +0.8
baz=33,SNR=7.6
HLID **Hailey** 32.82 331 eP P 05 17 53.0 +0.8
comp=E,8.2nm,0.9s,mb4.6
F18A **Big Timber** 32.83 339 ⇑P P 05 17 52.3 0.0
baz=33,SNR=13
J12A **Stokes Ranch,** 32.90 330 ⇓P P 05 17 53.8 +0.9
baz=33
I13A **Wildhorse Cree** 32.96 332 ⇑P P 05 17 54.2 +0.8
baz=33
G16A **Moss Hill, Enn** 33.04 336 ⇑P P 05 17 55.0 +0.9
baz=33,SNR=7.9
MCMT **McKenzie Canyo** 33.13 334 eP P 05 17 56.5 +1.6
comp=E,6.8nm,0.8s,mb4.5
MCMT epP pP 05 18 19.0 +1.1
MCMT esP sP 05 18 30.3 +0.6
F17A **Fitzpatrick Pl** 33.17 338 ⇑P P 05 17 55.8 +0.6
baz=33,SNR=36
H14A **Leadore** 33.18 334 ⇓P P 05 17 56.1 +0.7
baz=33,SNR=9.4
G15A **Dillon** 33.26 335 ⇓P P 05 17 56.9 +0.9
baz=33,SNR=15
BOZ **Bozeman (W)** 33.32 336 ⇑P P 05 17 56.7 +0.2
baz=34,SNR=11
BOZ **Bozeman (W)** 33.32 336 eP P 05 17 56.2 -0.3
comp=E,7.9nm,1.2s,mb4.4
I12A **Atlanta** 33.33 331 ⇓P P 05 17 56.8 +0.2
baz=34
F16A **Kennard Place,** 33.43 337 ⇑P P 05 17 57.8 +0.3
baz=34
BEKR **Beckworth** 33.45 321 ⇑P P 05 17 58.2 +0.5
baz=34
DLMT **Dillon** 33.46 335 eP P 05 17 58.6 +0.8
comp=E,14nm,0.8s,mb4.8
E18A **Harlowton** 33.48 339 ⇑P P 05 17 57.7 -0.1
baz=34,SNR=8.8
H13A **Challis** 33.53 333 ⇓P P 05 17 59.0 +0.7
baz=34,SNR=22
DGMT **Dagmar** 33.61 347 ⇓P P 05 17 58.6 -0.4
baz=34,SNR=16
DGMT **Dagmar** 33.61 347 eP P 05 17 58.5 -0.5
comp=E,38nm,0.8s,mb5.3
E17A **Martinsdale** 33.72 338 ⇓P P 05 18 00.1 +0.1
baz=34,SNR=9.6
LRM **Limekiln Ridge** 33.78 336 eP P 05 18 01.0 +0.5
H12A **Diamond D Ranc** 33.78 332 ⇓P P 05 18 01.1 +0.6
baz=34,SNR=12
I11A **Placerville** 33.81 330 ⇑P P 05 18 01.2 +0.4
baz=34,SNR=16
F15A **Butte** 33.81 336 ⇓P P 05 18 01.3 +0.5
baz=34,SNR=11
G13A **Cobalt** 33.93 333 ⇓P P 05 18 02.3 +0.5
baz=34
D18A **Linhart Farms,** 33.99 340 ⇑P P 05 18 02.4 +0.1
baz=34,SNR=8.3
E16A **East Helena** 34.08 337 ⇑P P 05 18 03.3 +0.2
baz=34,SNR=7.7
WVOR **Wild Horse Val** 34.12 326 eP P 05 18 04.3 +0.8
comp=E,3.1nm,0.9s,mb4.1
WVOR epP pP 05 18 25.4 -1.2
D17A **Six Diamond Ra** 34.25 339 ⇑P P 05 18 04.8 +0.2
baz=34,SNR=22
ULM **Lac du Bonnet** 34.26 357 P P 05 18 01.7 -2.8
comp=E,20nm,0.8s,mb5.0,baz=179,slow=9.0,SNR=19
ULM PcP PcP 05 20 36.9 -1.9
comp=E,6.0nm,0.7s,baz=191,slow=8.1,SNR=3.5
ULM LR LR 05 33 27.9
comp=E,182nm,21.4s,baz=53,slow=39
ULM **Lac du Bonnet** 34.26 357 eP P 05 18 01.9 -2.6
comp=E,23nm,0.9s,mb5.0
J09A **Fry Pan Ranch,** 34.29 328 ⇑P P 05 18 05.3 +0.3
baz=34,SNR=13
E15A **Deer Lodge** 34.35 336 ⇓P P 05 18 05.5 0.0
baz=34,SNR=8.3
H11A **Donnelly** 34.43 331 ⇓P P 05 18 05.9 -0.2
baz=35
D16A **Dana Ranch, Ca** 34.45 338 ⇓P P 05 18 06.1 -0.2
baz=35
F13A **Darby** 34.53 334 ⇓P P 05 18 06.7 -0.3
baz=35
J08A **Circle Bar Ran** 34.67 327 ⇑P P 05 18 08.3 0.0
baz=35,SNR=13
E14A **Clinton** 34.68 335 ⇑P P 05 18 08.6 +0.3
baz=35
C17A **Wharram Farm,** 34.69 339 ⇓P P 05 18 08.3 0.0
baz=35,SNR=6.1
H10A **Noah's Angus R** 34.70 330 ⇑P P 05 18 07.5 -0.9
baz=35
EGMT **Eagleton** 34.70 341 ⇑P P 05 18 08.5 +0.1
baz=35,SNR=15
EGMT **Eagleton** 34.70 341 eP P 05 18 08.6 +0.2
comp=E,27nm,1.0s,mb5.0
MOD **Modoc** 34.70 324 eP P 05 18 07.6 -0.9
comp=E,1.8nm,0.8s,mb4.0
MOD epP pP 05 18 30.0 -1.6
I09A **Lost Marbles R** 34.73 328 ⇑P P 05 18 08.5 -0.3
baz=35
D15A **Lincoln** 34.82 337 ⇑P P 05 18 09.4 -0.1
baz=35,SNR=6.6
F12A **Elk City** 34.90 333 ⇓P P 05 18 10.1 -0.1
baz=35,SNR=21
E13A **Victor** 34.99 335 ⇑P P 05 18 10.7 -0.3
baz=35,SNR=8.3
CHMT **Chamberlain Mo** 35.00 336 eP P 05 18 11.0 0.0
B18A **Beardsley Farm** 35.03 341 ⇑P P 05 18 11.1 -0.1
baz=35,SNR=7.0
G11A **Walters Elk Ra** 35.08 332 ⇑P P 05 18 11.2 -0.5
baz=35
BMO **Blue Mountains** 35.16 330 eP P 05 18 11.7 -0.7
comp=E,2.4nm,0.8s,mb4.1
BMO epP pP 05 18 33.5 -2.0
C16A **Fuhringer Ranc** 35.18 338 ⇑P P 05 18 12.3 -0.2
baz=35,SNR=17
MSO **Missoula** 35.20 335 eP P 05 18 12.8 +0.1
comp=E,11nm,1.3s,mb4.5
D14A **Greenough** 35.23 336 ⇓P P 05 18 12.5 -0.5
baz=35,SNR=7.2
SLMT **Seeley Lake** 35.36 336 eP P 05 18 13.8 -0.3
SLMT epP pP 05 18 36.4 -0.9
G10A **Bishop Farm, J** 35.40 331 ⇑P P 05 18 14.3 -0.1
baz=36
C15A **Salmond Ranch,** 35.47 337 ⇓P P 05 18 14.9 -0.1
baz=36,SNR=8.4
A18A **Metzger Ranch,** 35.52 341 ⇓P P 05 18 15.3 -0.1
baz=36,SNR=38
H08A **Prairie City** 35.59 328 ⇓P P 05 18 15.3 -0.8
baz=36
D13A **Huson** 35.62 335 ⇓P P 05 18 15.8 -0.5
baz=36,SNR=9.4
B16A **M & M Farms, S** 35.69 339 ⇓P P 05 18 16.7 -0.2
baz=36
I07A **Izee** 35.71 327 ⇑P P 05 18 16.9 -0.3
baz=36
SWMT **Swartz Lake** 35.78 336 eP P 05 18 17.5 -0.1
SWMT epP pP 05 18 43.6 +2.7
E11A **Bogner Ranch,** 35.78 333 ⇑P P 05 18 17.2 -0.6
baz=36
A17A **Triple J Farms** 35.81 340 ⇓P P 05 18 17.5 -0.4
baz=36,SNR=14
B15A **Bradely Ranch,** 35.90 338 ⇑P P 05 18 18.0 -0.7
baz=36,SNR=6.3
F10A **Beach Ranch, E** 35.95 331 ⇑P P 05 18 18.8 -0.4
baz=36
D12A **Red Ives Fores** 35.96 334 ⇑P P 05 18 19.1 -0.2
baz=36
YBH **Yreka Blue Hor** 36.00 321 P P 05 18 15.4 -4.3
comp=E,4.1nm,0.7s,mb4.5
YBH epP pP 05 18 40.3 -2.6
A16A **West Butte Ran** 36.11 340 ⇓P P 05 18 19.9 -0.5
baz=36
C13A **Hot Springs** 36.14 336 ⇓P P 05 18 20.4 -0.4
baz=36
B14A **Marquette Ranc** 36.20 337 ⇑P P 05 18 21.5 +0.3
baz=36
A15A **Johnson Ranch,** 36.52 338 ⇓P P 05 18 24.1 0.0
baz=37,SNR=15
B13A **Whitefish** 36.66 336 ⇑P P 05 18 25.2 0.0
baz=37,SNR=8.1
A14A **Double T Ranch** 36.77 338 ⇓P P 05 18 26.2 +0.1
baz=37,SNR=11
D10A **Wagner Farm, O** 36.79 332 ⇑P P 05 18 26.6 +0.3
baz=37
WALA **Waterton Lakes** 37.02 337 eP P 05 18 28.6 +0.5
comp=E,0.9nm,1.8s
NEW **Newport** 37.65 334 eP P 05 18 32.5 -1.0
comp=E,6.1nm,0.6s,mb4.6
NEW epP pP 05 18 54.8 -2.1
NEW esP sP 05 19 07.1 -1.5
HOOD **Mount Hood Mea** 37.68 327 P P 05 18 33.5 -0.3
HOOD epP pP 05 18 56.9 -0.3
HOOD esP sP 05 19 08.1 -0.8
OD2 **Odessa Site #2** 37.69 332 eP P 05 18 30.8 -3.1
OD2 epP pP 05 18 56.0 -1.2
A11A **Hall Mountain,** 37.88 335 ⇓P P 05 18 35.7 +0.2
baz=38
LON **Longmire** 38.73 328 eP P 05 18 40.5 -2.1
LON epP pP 05 19 04.3 -1.7
HEBO **Mount Hebo** 38.74 325 eP P 05 18 42.2 -0.6
HEBO epP pP 05 19 05.6 -0.6
FFC **Flin Flon** 39.25 352 eP P 05 18 45.7 -1.2
RPW **Rockport** 39.76 331 eP P 05 18 52.4 +1.2
RPW epP pP 05 19 12.4 -2.3
NLWA **Neilton Lookou** 40.20 328 eP P 05 18 54.0 -0.8
NLWA epP pP 05 19 17.0 -1.4
NLWA esP sP 05 19 29.0 -1.1
EDM **Edmonton** 40.35 342 eP P 05 18 55.2 -0.9
LPAZ **La Paz** 40.59 141 P P 05 18 57.1 -1.4
comp=E,2.7nm,0.5s,mb4.3,baz=323,slow=6.4,SNR=17
LPAZ PcP PcP 05 20 57.9 -0.9
comp=E,5.5nm,1.1s,baz=46,slow=4.4,SNR=5.2
LPAZ **La Paz** 40.59 141 eP P 05 18 57.4 -1.1
comp=E,4.6nm,0.8s,mb4.4
FCC **Fort Churchill** 42.73 359 eP P 05 19 13.2 -2.1
comp=E,0.4nm,0.8s
FCC epP pP 05 19 36.3 -2.8
SCHQ **Schefferville** 43.88 22 P P 05 19 22.5 -2.1
comp=E,1.4nm,0.6s,mb3.9,baz=245,slow=11,SNR=6.5
SCHQ pP pP 05 19 46.5 -2.0
comp=E,4.1nm,0.7s,baz=232,slow=6.8,SNR=5.0
SCHQ PcP PcP 05 21 07.8 -1.3
comp=E,6.1nm,0.8s,baz=201,slow=3.8,SNR=4.6
SCHQ LR LR 05 39 10.1
comp=E,263nm,19.1s,baz=78,slow=38
YKA **Yellowknife Ar** 48.82 347 P P 05 20 01.7 -1.4
comp=E,20nm,0.6s,mb5.2,baz=150,slow=7.4,SNR=170
YKA pP pP 05 20 24.8 -2.6
comp=E,7.4nm,0.5s,baz=153,slow=7.3,SNR=6.3
YKA sP sP 05 20 34.6 -4.3
comp=E,5.8nm,0.6s,baz=152,slow=7.3,SNR=3.6
YKA **Yellowknife Ar** 48.82 347 P P 05 20 01.8 -1.4
YKA pP pP 05 20 24.8 -2.6
YKA sP sP 05 20 34.6 -4.3
DLBC **Dease Lake** 50.32 336 eP P 05 20 15.5 +0.8
DLBC epP pP 05 20 39.8 +0.7
DAWY **Dawson** 57.37 338 eP P 05 21 04.7 -1.1
DAWY epP pP 05 21 28.5 -2.3
BMRM **Bremner River** 57.83 333 P P 05 21 09.5 +0.4
comp=E,11nm,0.5s,mb5.1
BMRM epP pP 05 21 32.7 -1.3
INK **Inuvik** 58.19 344 eP P 05 21 10.6 -0.9
comp=E,12nm,0.6s,mb5.1
EGAK **Eagle** 58.40 338 eP P 05 21 11.9 -1.1
comp=E,3.9nm,0.9s,mb4.4
EGAK epP pP 05 21 35.8 -2.3
RES **Resolute Bay** 58.73 360 P P 05 21 13.3 -1.8
comp=E,13nm,0.7s,mb5.1,baz=182,slow=9.5,SNR=32
RES **Resolute Bay** 58.73 360 eP P 05 21 13.4 -1.8

PAX Paxson 59.12 335 *e*P P **05 21 17.6 -0.4**
comp=E,9.1nm,1.1s,mb4.7
PAX *e*pP pP 05 21 41.0 -2.1
PLCA Paso Flores 60.26 160 P P **05 21 24.2 -1.9**
comp=E,17nm,1.1s,mb5.0,baz=330,slow=7.9,SNR=16
PLCA Paso Flores 60.26 160 *e*P P **05 21 23.9 -2.2**
comp=E,36nm,1.3s,mb5.2
RSO Redoubt South 61.30 331 *e*P P **05 21 32.2 -0.8**
RSO *e*pP pP 05 21 57.6 -0.5
KTH Kantishna Hill 61.60 335 *e*P P **05 21 33.9 -1.0**
comp=E,30nm,0.9s,mb5.3
KTH *e*pP pP 05 21 57.9 -2.3
KTH *e*sP sP 05 22 09.5 -1.9
BPAW Bear Paw Mtn. 61.84 335 *e*P P **05 21 35.0 -1.5**
comp=E,7.1nm,0.9s,mb4.7
BPAW *e*pP pP 05 21 59.3 -2.4
PPLA Purkeypile 61.89 334 *e*P P **05 21 36.7 -0.2**
comp=E,66nm,1.5s,mb5.4
PPLA *e*pP pP 05 22 00.8 -1.3
CHUM Lake Minchumin 62.30 335 P P **05 21 38.4 -1.2**
comp=E,19nm,1.3s,mb5.0
CHUM *e*pP pP 05 22 03.3 -1.6
COLD Coldfoot 62.82 339 *e*P P **05 21 43.1 0.0**
comp=E,7.3nm,1.2s,mb4.5
COLD *e*pP pP 05 22 07.3 -1.0
CHGN Chignik 63.05 325 *e*P P **05 21 44.6 -0.1**
CHGN *e*pP pP 05 22 08.7 -1.3
TTA Tatalina 63.55 333 *e*P P **05 21 46.7 -1.2**
DAG Danmarks Havn 71.07 14⇑*i*P P **05 22 34.3 -0.9**
comp=E,26nm,1.2s,mb4.9
USHA Ushuaia 73.64 165 P P **05 22 48.7 -1.9**
comp=E,7.4nm,1.1s,mb4.3,baz=332,slow=15,SNR=3.2
EVO Evora 76.67 53 *e*P P **05 23 05.1 -3.4**
comp=E,15nm,1.1s,mb4.3
KBS Kingsbay 77.35 11 *e*P P **05 23 11.6 0.0**
comp=E,97nm,1.4s,mb5.3
KBS *e*pP pP 05 23 38.5 +0.7
BILL Bilibino 79.15 338 *e*P P **05 23 20.2 -1.4**
comp=E,4.4nm,0.6s,mb4.5
BILL *e*pP pP 05 23 46.6 -1.3
ESDC Sonseca Array 79.55 52 P P **05 23 21.8 -2.7**
comp=E,0.2nm,0.3s,baz=291,slow=6.2,SNR=5.2
ESDC Sonseca Array 79.55 52 P P **05 23 21.8 -2.7**
GRR Gorron 79.89 43 *e*pP pP 05 23 50.5 -1.9
GRR Gorron 79.89 43 *e*P P **05 23 24.9 -1.2**
comp=E,16nm,0.9s,mb4.5
GRR Gorron 79.89 43 *e*P P **05 23 24.9 -1.2**
comp=E,7.9nm,0.9s,mb4.5
GRR *e*pP pP 05 23 50.5 -1.9
FLN La Foliniere 80.05 42 *e*pP pP 05 23 51.5 -1.8
FLN La Foliniere 80.05 42 *e*P P **05 23 26.0 -0.9**
comp=E,9.5nm,0.6s,mb4.5
FLN La Foliniere 80.05 42 *e*P P **05 23 26.0 -0.9**
comp=E,4.8nm,0.6s,mb4.5
FLN *e*pP pP 05 23 51.5 -1.8
LDF La Druitiere 80.32 42 *e*P P **05 23 27.0 -1.4**
TCF Toulx Ste Croi 82.42 44 *e*P P **05 23 38.0 -1.5**
BGF Bois d'Agland 82.77 44 *e*P P **05 23 39.8 -1.5**
comp=E,17nm,0.9s,mb4.6
BGF Bois d'Agland 82.77 44 *e*P P **05 23 39.8 -1.5**
comp=E,8.6nm,0.9s,mb4.6
AVF Avril sur Loir 83.05 43 *e*P P **05 23 40.7 -2.0**
comp=E,11nm,1.0s,mb4.3
AVF Avril sur Loir 83.05 43 *e*P P **05 23 40.7 -2.0**
comp=E,5.7nm,1.0s,mb4.4
NB2 NORSAR Subarra 83.06 28 P P **05 23 41.2 -1.3**
comp=Z,54nm,1.7s,mb5.1,baz=288,slow=5.1
NB2 NORSAR Subarra 83.06 28 P P **05 23 41.2 -1.3**
NOA NORSAR Array B 83.06 28 P P **05 23 41.5 -1.0**
comp=Z,6.9nm,0.9s,mb4.5,baz=294,slow=4.1,SNR=16
SSF Saint Saulge 83.07 43 *e*P P **05 23 41.1 -1.8**
comp=Z,8.5nm,0.9s,mb4.3
SSF Saint Saulge 83.07 43 *e*P P **05 23 41.1 -1.8**
comp=Z,4.3nm,0.9s,mb4.3
MTLF Montolieu 83.20 47 *e*P P **05 23 41.9 -1.7**
LOR Lormes 83.25 43 *e*P P **05 23 42.4 -1.4**
comp=Z,16nm,1.1s,mb4.5
LOR Lormes 83.25 43 *e*P P **05 23 42.4 -1.4**
comp=Z,8.3nm,1.1s,mb4.5
SMF Signal de Mont 83.41 43 *e*P P **05 23 42.7 -1.9**
LASF Ste Croix 84.14 46 *e*P P **05 23 46.4 -2.0**
VIVF Saint-Julien-I 84.47 45 *e*P P **05 23 49.4 -0.7**
HAU Haudompre 84.64 42 *e*P P **05 23 49.5 -1.3**
ARCES ARCESS Array B 84.70 18 P P **05 23 49.6 -1.1**
comp=Z,6.2nm,0.4s,mb4.9,baz=284,slow=5.1,SNR=110
ARCES pP pP 05 24 15.6 -1.7
comp=Z,3.1nm,0.5s,baz=296,slow=6.2,SNR=3.2
KEV Kevo 85.02 18 *e*p P **05 23 50.8 -1.5**
comp=Z,7.5nm,0.5s,mb4.9
KEV Kevo 85.02 18 *e*p P **05 23 50.8 -1.5**
comp=Z,7.5nm,0.5s,mb4.9
HINF Hinteralfeld 85.02 42 *e*P P **05 23 51.3 -1.5**
CDF Champ du Feu 85.11 41 *e*P P **05 23 51.8 -1.4**
MBDF Montbardon 85.94 45 *e*P P **05 23 56.6 -0.8**
MOX Moxa 87.00 38 *e*P P **05 24 03.0 +0.6**
CLL Collm 87.57 37⇓*i*P P **05 24 04.8 -0.3**
comp=Z,26nm,2.0s,mb4.9
CLL *e*S S 05 34 42.0 +3.9
CLL Collm 87.57 37⇓*i*P P **05 24 04.8 -0.3**
comp=Z,26nm,2.0s,mb4.9
CLL *e*S S 05 34 42.0 +3.9
CLL *e*SSS 05 44 18.0
NKC Novy Kostel 87.65 38 *e*P P **05 24 07.2 +1.6**
TIXI Tiksi 88.07 348 *e*P P **05 24 04.9 -2.2**
comp=Z,3.7nm,0.7s,mb4.5
TIXI *e*pP pP 05 24 31.1 -2.8
BRG Berggiesshubel 88.28 37 *e*P P **05 24 08.0 -0.6**
comp=Z,1.3nm,0.6s,mb4.2
KHC Kasperske Hory 88.75 39 *e*P P **05 24 10.6 -0.2**
GERES GERESS Array B 88.94 39 P P **05 24 10.4 -1.2**
comp=Z,1.3nm,0.7s,mb4.1,baz=270,slow=6.1,SNR=8.0
FINES FINESS Array B 89.29 25 P P **05 24 12.0 -1.0**
comp=Z,3.3nm,0.7s,mb4.5,baz=318,slow=5.1,SNR=10
FINES FINESS Array B 89.29 25 P P **05 24 12.0 -1.0**
DPC Dobruska-Polom 89.88 37 *e*P P **05 24 14.7 -1.3**
JOF Joensuu 90.43 22 *e*p P **05 24 15.8 -2.5**
comp=Z,9.0nm,0.8s,mb5.0
JOF Joensuu 90.43 22 *e*p P **05 24 15.8 -2.5**
comp=Z,9.0nm,0.8s,mb5.0
TORD Torodi Ar. Bea 91.21 76 P P **05 24 18.5 -4.4**
comp=Z,0.3nm,0.4s,mb3.7,baz=300,slow=5.0,SNR=15
TORD Torodi Ar. Bea 91.21 76 P P **05 24 18.5 -4.4**
SUW Suwalki 91.90 32 *e*P P **05 24 24.2 -1.2**
OJC Ojcow 91.93 36 *e*P P **05 24 23.6 -2.0**
NIE Niedzica 92.60 37 *e*P P **05 24 28.3 -0.4**
KWP Kalwaria Pacla 93.86 36 *e*P P **05 24 34.1 -0.4**
MDJ Mudanjiang 108.14 329 Pdif Pdif 05 25 36.9 -1.4
MDJ LR LR
comp=N,160nm,33.6s
MDJ LR LR
comp=E,190nm,37.4s
MDJ LR LR
comp=Z,250nm,28.6s
CN2 Changchun 110.73 331 *e*Pdif Pdif 05 25 47.7 -2.1
CN2 PP PP 05 30 29.1 +2.0
CN2 AMB AMB
comp=Z,120nm,5.0s
CN2 LR LR
comp=N,330nm,20.0s
CN2 LR LR
comp=E,340nm,20.0s
CN2 LR LR
comp=Z,310nm,21.0s
MKAR Makanchi Array 117.41 3 PKP PKPdf 05 29 59.7 -2.6
comp=Z,0.5nm,0.4s,baz=20,slow=3.9,SNR=6.9
HHC Hu-ho-hao-te 118.92 339 *e*PKP PKPdf 05 30 03.4 -2.0
HHC sPKP 05 30 40.8
HHC PP PP 05 31 27.0 +2.5
HHC PKS 05 33 38.4
HHC SKS SKSdf 05 37 04.4 -3.9
HHC SKKS SKKSac 05 38 09.5 -6.6
HHC SS SS 05 47 34.9 -0.6
HHC LR LR
comp=N,4.0nm,20.2s
HHC LR LR
comp=E,15nm,20.2s
HHC LR LR
comp=Z,11nm,21.4s
WMQ Urumqi 120.50 359 *e*PKP PKPdf 05 30 08.0 -0.4
BOSA Boshof 122.38 114 PKP PKPdf 05 30 10.6 -1.8
comp=Z,6.4nm,0.8s,baz=278,slow=6.7,SNR=7.0
BOSA pPKP pPKPdf 05 30 37.0 -3.4
comp=Z,3.9nm,0.8s,baz=55,slow=5.3,SNR=2.4
BOSA Boshof 122.38 114 PKP PKPdf 05 30 10.6 -1.8
BOSA pPKP pPKPdf 05 30 37.0 -3.4

NJ2 Nanjing 123.13 327 *e*PKP PKPdf 05 30 20.4 +6.6
LZH Lanzhou 125.73 343 *e*PKP PKPdf 05 30 17.5 -1.1
LZH *e*PP PP 05 32 13.4 +2.9
LZH SKKS SKKSac 05 38 54.6 -5.7
LZH *e*SS SS 05 49 01.7 -0.1
LZH AMB AMB
comp=Z,97nm,8.3s
LZH LR LR
comp=N,140nm,18.4s
LZH LR LR
comp=Z,200nm,20.3s
MAW Mawson 126.15 169 PKP PKPdf 05 30 16.4 -2.0
comp=Z,2.8nm,1.0s,baz=207,slow=6.8,SNR=2.9
MAW pPKP pPKPdf 05 30 42.3 -4.1
comp=Z,1.4nm,0.6s,baz=150,slow=4.2,SNR=2.3
STKA Stephens Creek 127.83 242 PKP PKPdf 05 30 20.9 -1.8
comp=Z,2.4nm,0.7s,baz=123,slow=12,SNR=5.1
STKA pPKP pPKPdf 05 30 48.2 -2.5
comp=Z,2.9nm,0.7s,baz=351,slow=17,SNR=2.7
STKA Stephens Creek 127.83 242 PKP PKPdf 05 30 20.9 -1.8
STKA pPKP pPKPdf 05 30 48.2 -2.5
CD2 Chengdu 130.57 341 *e*PKP PKPdf 05 30 26.1 -1.9
CD2 sPKP 05 31 03.6
CD2 PP PP 05 32 45.5 +3.2
CD2 SKS SKSdf 05 37 26.0 -4.5
CD2 SKKS SKKSac 05 39 26.2 -4.5
CD2 SS SS 05 50 01.5 -0.4
CD2 AMB AMB
comp=Z,90nm,10.2s
CD2 LR LR
comp=N,120nm,21.4s
CD2 LR LR
comp=Z,160nm,19.1s
GYA Guiyang 133.54 335 *e*Pdif Pdif 05 27 30.0 -1.2
GYA sPKP 05 31 10.8
GYA PP PP 05 33 04.2 +2.6
GYA PKS 05 34 07.2
GYA SKKS SKKSac 05 39 45.0 -4.1
GYA SS SS 05 50 39.0 +0.6
GYA AMB AMB
comp=Z,120nm,7.9s
GYA LR LR
comp=N,130nm,20.9s
GYA LR LR
comp=E,110nm,21.4s
GYA LR LR
comp=Z,140nm,22.8s
WRA Warramunga Arr 134.54 258 PKhKP 05 30 27.8
comp=Z,0.3nm,0.6s,baz=87,slow=0.7,SNR=4.7
WRA PKP PKPdf 05 30 33.7 -2.0
comp=Z,1.4nm,0.7s,baz=83,slow=2.4,SNR=11
WRA pPKP pPKPdf 05 31 01.7 -2.0
comp=Z,1.4nm,0.6s,baz=82,slow=1.9,SNR=4.7
WRA Warramunga Arr 134.54 258 PKP PKPdf 05 30 33.7 -2.0
WRA pPKP pPKPdf 05 31 01.7 -2.0
ASAR Alice Springs 135.02 252 PKhKP 05 30 25.4
comp=Z,0.3nm,0.5s,baz=102,slow=2.9,SNR=2.8
ASAR PKP PKPdf 05 30 35.0 -1.5
comp=Z,0.7nm,0.6s,baz=78,slow=1.1,SNR=7.3
ASAR pPKP pPKPdf 05 31 02.0 -2.5
comp=Z,0.6nm,0.6s,baz=88,slow=2.0,SNR=2.9
ASAR Alice Springs 135.02 252 PKP PKPdf 05 30 35.0 -1.5
ASAR pPKP pPKPdf 05 31 02.0 -2.5
CMAR Chiang Mai Arr 143.71 340 PKP PKPdf 05 30 49.4 -3.1
comp=Z,1.3nm,0.4s,baz=351,slow=3.2,SNR=12
CMAR pPKP pPKPdf 05 31 15.7 -4.8
comp=Z,2.6nm,0.6s,baz=332,slow=2.1,SNR=3.6
HYB Hyderabad 145.89 14 *e*P PKPdf 05 30 55.0 -1.3

IDC ***05*** *05:22:24.5±0.6,38°.75S×91°.84W, h0km, mb4.5/14, mb1 4.7/15, mb1mx4.6/19, mbtmp4.5/15, ML3.5/1, MS5.6/16, Ms1 5.5/16, ms1mx5.5/18, Error ellipse: s-maj=23.2km s-min=12.4km az=71.0*
ISCJB ***05*** *05:22:25.4±0.3,38°.86S±0°.06×91°.56W±0°.06, h10km, mb5.2/93, MS5.5/188, Error ellipse: s-maj=9.0km s-min=6.4km az=30.1*
NEIC ***05*** *05:22:26.5±0.3,38°.87S×91°.61W, h7km, mb5.3/85, MS5.5/172, MW5.8, Error ellipse: s-maj=9.9km s-min=6.9km az=53.0, Moment Tensor Solution. s40 Moment tensor: Scale 10^17 Nm; Mrr 1.75; Mθθ -0.61; Mφφ -1.14; Mrθ -0.03; Mθφ -5.47; Mφr -1.30; Best double couple: M0 5.80000×10^17 NP1:φ88.00000°, δ74.00000°, λ173.00000°. NP2:φ180.00000°, δ84.00000°, λ16.00000°. Principal axes: T 4.8500, Plg16.0000°, Azm45.0000°; N 1.6100, Plg72.0000°, Azm201.0000°; P -6.4600, Plg6.0000°, Azm313.0000°;*
TEH ***05*** *05:22:27.0,38°.86S×91°.55W, h10km*
GCMT ***05*** *05:22:28.1±0.1,39°.02S×91°.72W, h12km, MW5.8, Moment Tensor Solution. s113,c227; s52,c61; Moment tensor: Scale 10^17 Nm; Mrr -0.38±.06; Mθθ 0.94±.06; Mφφ -0.56±.07; Mrθ -0.01±.16; Mθφ -7.15±.05; Mφr -1.59±.16; Best double couple: M0 7.40000×10^17 NP1:φ87.00000°, δ77.00000°, λ-178.00000°. NP2:φ357.00000°, δ88.00000°, λ-13.00000°. Principal axes: T 7.5200, Plg8.0000°, Azm43.0000°; N -0.3100, Plg77.0000°, Azm170.0000°; P -7.2100, Plg10.0000°, Azm311.0000°; Data Used: II IU IC G CN. Surface waves: sta=114, comp=248, per= 50.*
BJI ***05*** *05:22:28.0,38°.90S×91°.60W, h17km, mB5.6/20, Ms5.8/24, Ms7 5.8/23*
ISC 05 05:22:26.9±2.0,38°.91S±0°.06×91°.59W±0°.07, h10km±12km, n350,σ1°07/141, mb5.2/93, MS5.5/188, 3C, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCHI	**Chillan**	**15.61**	**88**	*i* P	**Pn**	**05 26 08.2**	**+1.3**
PLCA	**Paso Flores**	**16.27**	**103**	Pn	**Pn**	**05 26 15.5**	**+0.1**
	0.0nm,0.3s,baz=282,slow=13,SNR=6.1						
PLCA				Sn	**Sn**	**05 29 22.2**	**+6.4**
	0.0nm,0.3s,baz=278,slow=14,SNR=1.4						
PLCA				LR	LR	05 31 00.1	
	comp=Z,8μm,21.9s,baz=270,slow=31						
FCH	**Farellones**	**18.07**	**79**	*i* P	**Pn**	**05 26 36.9**	**-1.2**
RPN	**Rapa Nui**	**18.92**	**303**	*e*P	**Pn**	**05 26 45.1**	**-3.3**
	189nm,1.2s						
RPN				*e*S	**Sn**	**05 30 12.9**	**-7.4**
LCO	**Las Campanas**	**19.90**	**67**	*e*P	**Pn**	**05 26 57.4**	**-2.8**
	94nm,1.3s						
CFAA	**Coronel Fontan**	**20.38**	**76**	P	**P**	**05 27 00.1**	**-3.6**
	3.0nm,1.0s,baz=242,slow=9.4,SNR=23						
CFAA				S	**S**	**05 30 54.0**	**+1.9**
	0.1nm,0.4s,baz=170,slow=12,SNR=1.9						
CFAA				LR	LR	05 33 26.9	
	comp=Z,1μm,18.2s,baz=245,slow=32						
USHA	**Ushuaia**	**22.30**	**143**	P	**P**	**05 27 26.5**	**+2.3**
	22nm,1.2s,mb4.5,baz=279,slow=8.6,SNR=5.8						
USHA				S	**S**	**05 31 36.5**	**+7.1**
	3.0nm,0.9s,baz=57,slow=15,SNR=1.6						
USHA				LR	LR	05 34 18.2	
	comp=Z,46μm,19.6s,MS5.9,baz=275,slow=32						
TRQA	**Tornquist**	**23.15**	**97**	*e*P	**P**	**05 27 33.0**	**-0.4**
	158nm,1.7s,mb5.2						
LPA	**La Plata**	**27.12**	**92**	*ce*P	**P**	**05 28 10.0**	**0.0**
LPA	**La Plata**	**27.12**	**92**	*e*P	**P**	**05 28 17.0**	**+7.0**
LPA				*e*S	**S**	**05 32 50.0**	**+1.8**
NNA	**Nana**	**29.85**	**30**	LR	LR	05 37 18.1	
	comp=Z,19μm,20.7s,MS5.7,baz=192,slow=30						
LPAZ	**La Paz**	**30.49**	**49**	P	**P**	**05 28 39.3**	**-0.8**
	11nm,1.1s,mb4.5,baz=214,slow=7.5,SNR=26						
LPAZ				LR	LR	05 38 16.1	
	comp=Z,11μm,19.3s,MS5.5,baz=140,slow=31						
LPAZ	**La Paz**	**30.49**	**49**	*e*P	**P**	**05 28 40.5**	**+0.4**
	63nm,1.6s,mb5.1						
LPAZ				LR	LR		
	comp=Z,13μm,20.0s,MS5.6						
PMSA	**Palmer Station**	**30.50**	**157**	LR	LR	05 37 30.4	
	comp=Z,14μm,19.5s,MS5.6,baz=307,slow=30						
PMSA	**Palmer Station**	**30.50**	**157**	PFAKE		05 28 50.0	+10
PMSA				LR	LR		
	comp=Z,15μm,22.0s,MS5.6						
ATAH	**Atahualpa**	**33.80**	**24**	P	**P**	**05 29 09.8**	**+0.6**
	comp=Z,15nm,0.7s,mb5.0,baz=178,slow=6.3,SNR=14						
ATAH				LR	LR	05 39 33.5	
	comp=Z,17μm,21.4s,MS5.7,baz=207,slow=30						
PAYG	**Puerto Ayora**	**38.07**	**2**	PFAKE		05 30 00.0	+14
PAYG				LR	LR		
	comp=Z,7μm,21.0s,MS5.5						
RKT	**Rikitea**	**39.98**	**280**	*e*S	**S**	**05 36 07.2**	**-0.1**
	comp=Z,2μm,31.2s						

RKT *e*LQ 05 39 12.7
comp=Z,11μm,34.2s
RKT *e*LR LR 05 40 48.7
comp=Z,5μm,27.8s,baz=130
SPB Sao Paulo 40.32 81 PFAKE 05 30 20.0 +15
SPB LR LR
comp=Z,7μm,20.0s,MS5.5
OTAV Otavalo 40.78 20 *e*P P **05 30 08.7 +0.3**
comp=Z,70nm,1.5s,mb5.1
OTAV LR LR
comp=Z,6μm,20.0s,MS5.5
ROSC El Rosal 46.38 24 P P **05 30 54.6 +1.1**
comp=Z,4.1nm,0.8s,mb4.4,baz=268,slow=22,SNR=14
ROSC S S **05 37 39.3 -1.8**
comp=Z,0.9nm,0.4s,baz=304,slow=10,SNR=2.1
ROSC LR LR 05 48 30.7
comp=Z,10μm,18.4s,MS5.8,baz=187,slow=34
ROSC El Rosal 46.38 24 *e*P P **05 30 56.8 +3.3**
BCIP Isla Barro Col 49.06 15 PFAKE 05 31 30.0 +16
BCIP LR LR
comp=Z,8μm,21.0s,MS5.7
JTS JuntasAbangare 49.33 9 *e*P P **05 31 17.9 +1.5**
comp=Z,134nm,1.7s,mb5.7
JTS LR LR
comp=Z,13μm,22.0s,MS5.9
QSPA South Pole Qui 51.32 180 P P **05 31 30.4 -0.3**
comp=Z,4.8nm,0.9s,mb4.4,baz=130,slow=4.6,SNR=9.5
QSPA South Pole Qui 51.32 180 P P **05 31 30.4 -0.3**
QSPA LR LR
comp=Z,5μm,19.0s,MS5.6
SDV Santo Domingo 51.39 27 P P **05 31 30.0 -2.0**
comp=Z,9.4nm,1.0s,mb4.7,baz=223,slow=12,SNR=8.3
SDV Santo Domingo 51.39 27 *e*P P **05 31 31.6 -0.3**
comp=Z,41nm,1.4s,mb5.2
TAOE Nuku Hiva Isla 52.70 291 *e*S S **05 39 09.4 -0.4**
comp=Z,2μm,24.8s
TAOE *e*LQ 05 44 39.3
comp=Z,5μm,26.6s
TAOE *e*LR LR 05 46 51.6
comp=Z,5μm,23.7s,baz=142
TGUH Tegucigalpa,Un 52.84 5 *e*P P **05 31 42.7 0.0**
comp=Z,52nm,1.1s,mb5.4
PPT Papeete 54.39 276 *e*S S **05 39 30.1 -2.6**
comp=Z,4μm,27.2s
PPT *e*LQ 05 45 17.9
comp=Z,5μm,24.5s
PPT *e*LR LR 05 47 34.5
comp=Z,5μm,24.2s,baz=123
PPT Papeete 54.39 276 LR LR 05 49 35.5
comp=Z,3μm,18.2s,MS5.3,baz=124,slow=30
SBA Scott Base 54.70 195 *e*P P **05 31 57.2 +1.6**
comp=Z,199nm,2.0s,mb5.8
PCRV Puerto La Cruz 54.91 33 P P **05 31 56.8 -1.1**
comp=Z,6.0nm,0.7s,mb4.7,baz=0.0,slow=1.0,SNR=2.3
PCRV S S **05 39 35.2 -4.3**
comp=Z,25nm,1.1s,baz=36,slow=17,SNR=2.0
GRGR Grenville 57.95 35 PFAKE 05 32 30.0 +10
GRGR LR LR
comp=Z,5μm,19.0s,MS5.6
MAIT Maitri 57.95 158 *e*P P **05 32 18.1 -0.8**
MTDJ Mount Denham 58.34 16 PFAKE 05 32 30.0 +7.8
MTDJ LR LR
comp=Z,3μm,21.0s,MS5.3
BBGH Gun Hill 59.80 37 PFAKE 05 32 40.0 +7.6
BBGH LR LR
comp=Z,5μm,20.0s,MS5.7
RAR Rarotonga 60.29 266 PFAKE 05 32 50.0 +14
RAR LR LR
comp=Z,3μm,22.0s,MS5.4
FDF Fort de France 60.48 34 PFAKE 05 32 50.0 +13
FDF LR LR
comp=Z,4μm,20.0s,MS5.5
GTBY Guantanamo Bay 60.53 18 PFAKE 05 32 50.0 +13
GTBY LR LR
comp=Z,3μm,19.0s,MS5.5
ANWB Willy Bob 62.82 32 PFAKE 05 33 00.0 +7.2
ANWB LR LR
comp=Z,3μm,20.0s,MS5.5
GRTK Grand Turk 63.08 21 PFAKE 05 33 10.0 +16
GRTK LR LR
comp=Z,4μm,20.0s,MS5.6
KVTX Kingsville 66.37 354 PFAKE 05 33 30.0 +14
KVTX LR LR
comp=Z,1μm,22.0s,MS5.1
SYO Syowa Base 66.53 163⇑*e*P P **05 33 14.0 -2.4**
DWPF Disney 67.34 10 PFAKE 05 33 30.0 +8.0
DWPF LR LR
comp=Z,5μm,21.0s,MS5.7
DRV Dumont d'Urvil 67.63 200 S S 05 42 20.0 -0.1
DRV L 05 51 00.0
DRV R 05 54 00.0
HKT Hockley 68.62 356 PFAKE 05 33 40.0 +10
HKT LR LR
comp=Z,1μm,19.0s,MS5.2
TXAR Lajitas Array 68.82 349 P P **05 33 28.6 -2.6**
comp=Z,2.7nm,0.6s,mb4.3,baz=166,slow=7.2,SNR=22
TXAR LR LR 05 57 51.0
comp=Z,4μm,20.9s,MS5.6,baz=115,slow=31
JCT Junction City 69.45 352 *e*P P **05 33 35.2 0.0**
comp=Z,45nm,1.4s,mb5.2
JCT LR LR
comp=Z,759nm,19.0s,MS5.0
RAO Raoul Island 69.65 248 PFAKE 05 33 50.0 +13
RAO LR LR
comp=Z,4μm,22.0s,MS5.6
BRAL Brewton 69.69 4 PFAKE 05 33 50.0 +13
BRAL LR LR
comp=Z,1μm,19.0s,MS5.2
NATX Nacogdoches 70.36 357 *e*P P **05 33 41.2 +0.4**
comp=Z,56nm,1.1s,mb5.4
NATX LR LR
comp=Z,815nm,22.0s,MS4.9
VBMS Vicksburg 70.77 1 PFAKE 05 33 50.0 +6.8
VBMS LR LR
comp=Z,2μm,22.0s,MS5.4
MNTX Cornudas Mount 71.41 348 *e*P P **05 33 44.4 -2.7**
comp=Z,5.1nm,1.0s,mb4.4
MNTX LR LR
comp=Z,1μm,20.0s,MS5.1
LRAL Lakeview Retre 71.70 4 *e*P P **05 33 48.3 -0.5**
comp=Z,15nm,0.9s,mb4.9
LRAL LR LR
comp=Z,1μm,20.0s,MS5.2
MAW Mawson 72.06 170 P P **05 33 49.3 -1.4**
comp=Z,12nm,1.0s,mb4.8,baz=220,slow=6.1,SNR=12
MAW LR LR 06 04 59.5
comp=Z,3μm,18.2s,MS5.5,baz=205,slow=35
MAW Mawson 72.06 170 *e*P P **05 33 49.6 -1.1**
comp=Z,12nm,1.4s,mb4.6
MAW LR LR
comp=Z,4μm,20.0s,MS5.7
GOGA Godfrey 72.35 7 *e*P P **05 33 51.7 -1.0**
comp=Z,80nm,2.0s,mb5.3
GOGA LR LR
comp=Z,2μm,20.0s,MS5.4
NHSC New Hope 72.43 10 PFAKE 05 34 00.0 +6.8
NHSC LR LR
comp=Z,4μm,20.0s,MS5.7
XMAS Kiritimati 72.74 287 PFAKE 05 34 10.0 +14
XMAS LR LR
comp=Z,3μm,22.0s,MS5.5
TUC Tucson 73.07 343 *e*P P **05 33 57.7 +0.7**
comp=Z,52nm,1.6s,mb5.2
MIAR Mount Ida 73.11 358 *e*P P **05 33 56.6 -0.6**
comp=Z,32nm,1.4s,mb5.1
MIAR LR LR
comp=Z,966nm,20.0s,MS5.1
UALR University of 73.32 359 *e*P P **05 33 58.8 +0.4**
comp=Z,266nm,2.6s,mb5.7
JSC Jenkinsville 73.45 9 *e*P P **05 33 58.8 -0.4**
WMOK Wichita Mounta 73.58 354 *e*P P **05 34 01.6 +1.7**
comp=Z,63nm,2.0s,mb5.2
PLAL Pickwick Lake 73.59 3 *e*P P **05 33 58.6 -1.4**
comp=Z,13nm,1.1s,mb4.8
PLAL LR LR
comp=Z,1μm,20.0s,MS5.2
CASY Casey 73.76 189 PFAKE 05 34 10.0 +9.2
CASY LR LR
comp=Z,7μm,19.0s,MS6.0
AFI Afiamalu 73.83 265 PFAKE 05 34 10.0 +8.0
AFI LR LR
comp=Z,2μm,21.0s,MS5.4
SWET Sewanee 73.94 5 *e*P P **05 34 01.0 -1.1**
AMTX Amarillo 74.01 351 *e*P P **05 34 03.1 +0.6**
comp=Z,28nm,0.9s,mb5.2
AMTX LR LR
comp=Z,2μm,21.0s,MS5.5

BNM Barren Site 74.01 347 *e*P P 05 33 58.2 -4.3
comp=Z,4.4nm,0.6s,mb4.6
CPCT Cooper Cave 74.27 6 *e*P P 05 34 03.1 -0.9
LAZ Ladron 74.35 347 *e*P P 05 34 05.1 +0.6
comp=Z,25nm,1.9s,mb4.8
GNAR Gosnell 74.51 1 *e*P P 05 34 05.5 +0.1
comp=Z,388nm,0.4s
TKL Tuckaleechee C 74.55 7 P P 05 34 03.1 -2.4
comp=Z,1.3nm,0.5s,mb4.1,baz=153,slow=6.8,SNR=5.3
TKL Tuckaleechee C 74.55 7 *e*P P 05 34 05.8 +0.2
WVT Waverly 74.75 3 *e*P P 05 34 05.5 -1.3
comp=Z,19nm,1.2s,mb4.9
ANMO Albuquerque 74.77 347 P P 05 34 05.7 -1.2
comp=Z,1.8nm,0.6s,mb4.2,baz=170,slow=5.9,SNR=10
ANMO Albuquerque 74.77 347 *e*P P 05 34 04.9 -2.0
comp=Z,24nm,2.5s,mb4.7
ANMO LR LR
comp=Z,1μm,20.0s,MS5.2
CNNC Cliffs of the 74.86 12 PFAKE 05 34 20.0 +13
CNNC LR LR
comp=Z,3μm,20.0s,MS5.6
BBSR BB Station 75.19 23 PFAKE 05 34 20.0 +11
BBSR LR LR
comp=Z,3μm,21.0s,MS5.5
TZTN Tazewell 75.44 7 *e*P P 05 34 10.8 +0.1
comp=Z,214nm,2.4s,mb5.7
PFO Pinyon Flat Ob 75.75 339 PFAKE 05 34 20.0 +7.4
PFO LR LR
comp=Z,3μm,19.0s,MS5.5
SIUC Southern Illin 76.28 2 *e*P P 05 34 15.1 -0.4
comp=Z,7.8nm,0.6s,mb4.8
WUAZ Wupatki 76.28 343 *e*P P 05 34 17.1 +1.5
comp=Z,15nm,1.4s,mb4.7
ELN Prospectdale 76.42 9 *e*P P 05 34 16.3 0.0
BLA Blacksburg 76.44 9 PFAKE 05 34 30.0 +14
BLA LR LR
comp=Z,6μm,20.0s,MS5.9
FVM French Village 76.52 1 *e*P P 05 34 16.1 -0.8
comp=Z,125nm,2.1s,mb5.5
CCM Cathedral Cave 76.59 0 *e*P P 05 34 14.1 -3.1
comp=Z,33nm,0.9s,mb5.3
CCM LR LR
comp=Z,1μm,20.0s,MS5.2
SHEL Horse Pasture 76.98 100 PFAKE 05 34 30.0 +10
SHEL LR LR
comp=Z,2μm,20.0s,MS5.4
JSRW J. Sargeant Re 77.26 11 *e*P P 05 34 21.6 +0.5
MVCO Mesa Verde 77.33 346 *e*P P 05 34 22.3 +0.9
comp=Z,121nm,2.1s,mb5.5
MVCO LR LR
comp=Z,2μm,19.0s,MS5.4
OLIL Olney 77.33 3 *e*P P 05 34 22.1 +0.7
comp=Z,18nm,0.9s,mb5.0
SDCO Great Sand Dun 77.34 349 *e*P P 05 34 20.4 -1.1
comp=Z,33nm,1.8s,mb5.0
SDCO LR LR
comp=Z,2μm,20.0s,MS5.4
CBKS Cedar Bluff 77.70 353 *e*P P 05 34 23.1 -0.4
comp=Z,36nm,0.3s,mb5.8
CBKS LR LR
comp=Z,1μm,20.0s,MS5.2
KSU1 Kansas State U 77.77 356 *e*P P 05 34 25.4 +1.6
comp=Z,35nm,0.7s,mb5.4
KSU1 LR LR
comp=Z,1μm,19.0s,MS5.2
CBN Corbin 77.84 11 PFAKE 05 34 40.0 +16
CBN LR LR
comp=Z,2μm,22.0s,MS5.4
SHPR Sheep Range 78.13 341 *e*P P 05 34 26.7 +0.8
PV01 Paradox Valley 78.24 346 *e*P P 05 34 26.6 +0.1
comp=Z,1μm,1.2s
ISA Isabella 78.25 338 *e*P P 05 34 25.9 -0.7
comp=Z,4.0nm,0.9s,mb4.3
PV04 Paradox Valley 78.55 346 *e*P P 05 34 27.7 -0.5
DAC Darwin (Calif) 78.57 339 PFAKE 05 34 40.0 +12
DAC LR LR
comp=Z,913nm,19.0s,MS5.1
CCUT Cedar City 78.68 343 *e*P P 05 34 29.5 +0.6
comp=Z,157nm,2.3s,mb5.5
MCWV Mont Chateau 78.92 9 PFAKE 05 34 40.0 +10
MCWV LR LR
comp=Z,5μm,20.0s,MS5.8
ARUT Antelope Range 78.92 343 *e*P P 05 34 31.0 +0.7
comp=Z,112nm,2.1s,mb5.4
ARUT *e*PcP PcP 05 34 41.1 +2.2
SMCO Snowmass 78.98 348 *e*P P 05 34 30.6 +0.1
comp=Z,66nm,1.8s,mb5.3
HDIL Hopedale 79.11 2 *e*P P 05 34 30.5 -0.7
comp=Z,6.5nm,0.6s,mb4.7
HDIL LR LR
comp=Z,1μm,21.0s,MS5.1
ACSO Alum Creek Sta 79.15 7 *e*P P 05 34 31.6 +0.2
comp=Z,103nm,1.9s,mb5.4
ACSO LR LR
comp=Z,3μm,22.0s,MS5.5
MVU Marysvale 79.33 344 PFAKE 05 34 40.0 +7.5
MVU LR LR
comp=Z,863nm,20.0s,MS5.1
MSU Marysvale 79.33 344 *e*P P 05 34 33.8 +1.3
MSVF Nonsavu 79.36 256 PFAKE 05 34 40.0 +6.7
MSVF LR LR
comp=Z,2μm,22.0s,MS5.3
ISCO Idaho Springs 79.37 349 *e*P P 05 34 33.1 +0.5
comp=Z,151nm,2.6s,mb5.5
ISCO LR LR
comp=Z,2μm,21.0s,MS5.4
SRU San Rafael 79.56 345 *e*P P 05 34 33.5 -0.2
comp=Z,36nm,1.5s,mb5.1
MVL Millersville 79.76 12 *e*P P 05 34 35.0 +0.3
comp=Z,56nm,1.8s,mb5.2
TMUT Trail Mountain 79.88 345 *e*P P 05 34 37.0 +1.6
comp=Z,121nm,1.8s,mb5.5
OGNE Ogallala 80.04 352 PFAKE 05 34 50.0 +14
OGNE LR LR
comp=Z,2μm,20.0s,MS5.5
SSPA Standing Stone 80.15 11 *e*P P 05 34 39.9 +3.0
comp=Z,130nm,2.3s,mb5.5
TPH Tonopah 80.15 340 PFAKE 05 34 50.0 +13
TPH LR LR
comp=Z,1μm,20.0s,MS5.2
MPU Maple Canyon 80.66 345 *e*P P 05 34 40.7 +1.1
comp=Z,35nm,1.5s,mb5.1
NLU North Lily Min 80.69 344 *e*P P 05 34 41.0 +1.2
comp=Z,100nm,1.9s,mb5.4
NVAR Mina Array Bea 80.78 339 P P 05 34 39.6 -0.7
comp=Z,1.5nm,0.7s,baz=168,slow=5.7,SNR=8.7
PHWY Pilot Hill 80.82 349 *e*P P 05 34 41.2 +0.8
comp=Z,74nm,2.0s,mb5.3
ALLY Alegheny Colle 80.85 9 *e*P P 05 34 40.0 -0.6
comp=Z,47nm,1.0s,mb5.4
DAU Daniels Canyon 80.96 345 *e*P P 05 34 40.8 -0.5
CMB Columbia Colle 81.02 337 *e*P P 05 34 41.8 +0.2
comp=Z,42nm,1.7s,mb5.1
CMB LR LR
comp=Z,3μm,20.0s,MS5.6
DUG Dugway 81.08 344 *e*P P 05 34 43.0 +1.1
comp=Z,209nm,2.5s,mb5.6
DUG LR LR
comp=Z,620nm,19.0s,MS5.0
AAM Ann Arbor 81.15 6 PFAKE 05 34 50.0 +7.8
AAM LR LR
comp=Z,2μm,20.0s,MS5.5
JLU Jordanelle 81.18 345 *e*P P 05 34 42.5 +0.1
comp=Z,248nm,2.8s,mb5.7
ERPA Erie 81.33 9 PFAKE 05 34 50.0 +6.9
ERPA LR LR
comp=Z,5μm,21.0s,MS5.8
JFWS Jewell Farm 81.45 1 *e*P P 05 34 43.5 -0.3
comp=Z,25nm,1.2s,mb5.0
JFWS LR LR
comp=Z,2μm,19.0s,MS5.4
RWWY Rawlins 81.47 348 *e*P P 05 34 40.0 -3.9
comp=Z,58nm,1.9s,mb5.2
MCCM Marconi Confer 81.89 336 PFAKE 05 35 00.0 +14
MCCM LR LR
comp=Z,3μm,19.0s,MS5.7
BINY Binghamton 81.96 12 *e*P P 05 34 41.3 -5.2
comp=Z,52nm,1.5s,mb5.2
BINY LR LR
comp=Z,1μm,22.0s,MS5.2
ELK Elko 82.16 342 *e*P P 05 34 48.1 +0.5
comp=Z,3.9nm,0.4s,mb4.7
ELK LR LR
comp=Z,2μm,19.0s,MS5.6
HWUT Hardware Ranch 82.17 345 P P 05 34 47.1 -0.5
comp=Z,138nm,2.5s,mb5.4
HWUT LR LR
comp=Z,2μm,20.0s,MS5.5
BMN Battle Mountai 82.36 341 PFAKE 05 35 00.0 +11
BMN LR LR
comp=Z,2μm,20.0s,MS5.4
ECSD EROS Data Cent 82.39 356 *e*P P 05 34 48.3 -0.3
comp=Z,69nm,1.6s,mb5.3
ECSD LR LR
comp=Z,1μm,19.0s,MS5.2
OHCM Honcut 82.55 337 *e*P P 05 34 49.4 -0.2
TAU Tasmania Unive 82.63 219 PFAKE 05 35 00.0 +10
TAU LR LR
comp=Z,5μm,19.0s,MS5.9
HOPS Hopland 82.73 336 PFAKE 05 35 00.0 +9.4
HOPS LR LR
comp=Z,4μm,20.0s,MS5.8
PDAR Pinedale Array 82.91 347 P P 05 34 49.4 -2.0
comp=Z,3.7nm,0.8s,mb4.5,baz=160,slow=5.5,SNR=13
PDAR LR LR 06 06 09.3
comp=Z,1μm,18.4s,MS5.2,baz=170,slow=32
BW06 Boulder Array 82.91 347 *e*P P 05 34 50.5 -0.9
comp=Z,22nm,1.1s,mb5.1
BW06 LR LR
comp=Z,1μm,21.0s,MS5.3
AHID Auburn Hatcher 83.20 346 *e*P P 05 34 52.0 -0.9
comp=Z,4.3nm,0.3s,mb5.0
AHID LR LR
comp=Z,2μm,21.0s,MS5.4
RSSD Black Hills 83.41 351 *e*P P 05 34 53.4 -0.5
comp=Z,29nm,1.3s,mb5.1
ACCN Adirondack Com 83.50 13 *e*P P 05 34 52.8 -1.6
comp=Z,63nm,1.7s,mb5.5
POHA Pohakuloa 83.53 302 PFAKE 05 35 10.0 +15
POHA LR LR
comp=Z,3μm,22.0s,MS5.6
GLMI Grayling 83.59 5 *e*P P 05 34 56.1 +1.2
comp=Z,34nm,0.6s,mb5.7
GLMI LR LR
comp=Z,2μm,21.0s,MS5.5
REDW Red Top Meadow 83.73 346 *e*P P 05 34 56.4 +0.8
comp=Z,228nm,2.6s,mb5.8
TPAW Teton Pass 83.87 346 *e*P P 05 34 55.6 -0.7
comp=Z,20nm,1.1s,mb5.2
LOHW Long Hollow 83.92 346 *e*P P 05 34 55.7 -0.9
comp=Z,85nm,2.3s,mb5.5
NCB Newcomb 83.98 13 PFAKE 05 35 10.0 +13
NCB LR LR
comp=Z,2μm,20.0s,MS5.6
WDC Whiskeytown Da 84.01 337 *e*P P 05 34 57.6 +0.5
comp=Z,36nm,1.6s,mb5.2
WDC LR LR
comp=Z,2μm,20.0s,MS5.6
FUNA Funafuti 84.11 264 PFAKE 05 35 10.0 +12
FUNA LR LR
comp=Z,22μm,19.0s,MS6.6
IMW Indian Meadow 84.26 346 *e*P P 05 34 59.3 +0.9
comp=Z,38nm,1.6s,mb5.3
LONY Lake Ozonia 84.55 12 *e*P P 05 34 58.2 -1.5
comp=Z,15nm,1.0s,mb5.1
LONY LR LR
comp=Z,2μm,20.0s,MS5.5
MOD Modoc 84.57 339 *e*P P 05 35 00.4 +0.4
comp=Z,5.7nm,1.0s,mb4.7
MOD LR LR
comp=Z,1μm,21.0s,MS5.2
WVOR Wild Horse Val 84.61 340 *e*P P 05 35 01.1 +0.9
comp=Z,107nm,2.4s,mb5.5
WVOR LR LR
comp=Z,1μm,22.0s,MS5.3
HLID Hailey 84.65 344 PFAKE 05 35 10.0 +10
HLID LR LR
comp=Z,1μm,19.0s,MS5.3
LBNH Lisbon 84.65 14 PFAKE 05 35 10.0 +10
LBNH LR LR
comp=Z,3μm,19.0s,MS5.7
LKWY Lake 84.81 347 PFAKE 05 35 10.0 +8.9
LKWY LR LR
comp=Z,2μm,20.0s,MS5.5
FRNY Flat Rock 84.92 13 *e*P P 05 35 01.1 -0.6
comp=Z,39nm,1.6s,mb5.3
YNR Norris Junctio 85.00 346 *e*P P 05 35 03.5 +1.5
YMR Madison River 85.01 346 *e*P P 05 35 03.4 +1.3
comp=Z,81nm,1.6s,mb5.6
YBH Yreka Blue Hor 85.11 337 PFAKE 05 35 10.0 +7.3
YBH LR LR
comp=Z,2μm,19.0s,MS5.6
RLMT Red Lodge 85.15 348 *e*P P 05 35 03.2 +0.4
comp=Z,11nm,1.2s,mb4.9
RLMT LR LR
comp=Z,2μm,21.0s,MS5.6
DZM Mont Dzumac 85.20 246 *e*S S 05 45 27.4 -6.8
comp=Z,2μm,26.1s
DZM *e*SS SS 05 51 02.9 -4.6
comp=Z,515nm,29.9s
DZM *e*LQ 05 58 09.9
comp=Z,5μm,31.6s
DZM *e*LR LR 06 01 44.2
comp=Z,7μm,28.1s
QLMT Earthquake Lak 85.25 346 P P 05 35 06.9 +3.6
SUR Sutherland 85.31 128 PFAKE 05 35 20.0 +16
SUR LR LR
comp=Z,4μm,20.0s,MS5.8
MCMT McKenzie Canyo 85.53 345 *e*P P 05 35 05.5 +0.8
comp=Z,21nm,1.8s,mb5.1
HUMO Hull Mountain 85.99 337 PFAKE 05 35 20.0 +13
HUMO LR LR
comp=Z,3μm,19.0s,MS5.7
DLMT Dillon 85.99 345 *e*P P 05 35 08.1 +1.1
comp=Z,72nm,1.7s,mb5.6
BOZ Bozeman (W) 86.08 346 PFAKE 05 35 20.0 +13
BOZ LR LR
comp=Z,1μm,20.0s,MS5.3
LAO LASA Array 86.22 350 *e*P P 05 35 07.6 -0.5
comp=Z,27nm,1.2s,mb5.4
LAO LR LR
comp=Z,1μm,20.0s,MS5.3
KIP Kipapa 86.35 301 PFAKE 05 35 20.0 +11
KIP LR LR
comp=Z,4μm,22.0s,MS5.8
LRM Limekiln Ridge 86.40 346 *e*P P 05 35 10.4 +1.4
EYMN Ely 86.47 0 *e*P P 05 35 07.7 -1.6
comp=Z,12nm,1.0s,mb5.1
EYMN LR LR
comp=Z,1μm,19.0s,MS5.3
BMO Blue Mountains 86.54 342 *e*P P 05 35 10.8 +1.2
comp=Z,72nm,2.3s,mb5.5
BMO LR LR
comp=Z,1μm,19.0s,MS5.4
AGMN Agassiz Nation 86.91 357 *e*P P 05 35 11.1 -0.3
comp=Z,14nm,1.0s,mb5.2
AGMN LR LR
comp=Z,1μm,20.0s,MS5.4
CAN Canberra 87.33 225 PFAKE 05 35 30.0 +16
CAN LR LR
comp=Z,4μm,22.0s,MS5.7
CHMT Chamberlain Mo 87.61 345 *e*P P 05 35 14.7 -0.1
MSO Missoula 87.67 345 *e*P P 05 35 14.8 -0.3
comp=Z,41nm,1.9s,mb5.3
MSO LR LR
comp=Z,781nm,19.0s,MS5.1
DGMT Dagmar 87.72 352 *e*P P 05 35 15.8 +0.6
comp=Z,376nm,2.9s,mb6.1
DGMT LR LR
comp=Z,855nm,20.0s,MS5.2
COR Corvallis 87.90 338 PFAKE 05 35 30.0 +14
COR LR LR
comp=Z,3μm,21.0s,MS5.6
SLMT Seeley Lake 87.97 345 *e*P P 05 35 17.9 +1.3
EGMT Eagleton 88.05 348 *e*P P 05 35 17.4 +0.5
comp=Z,86nm,2.0s,mb5.6
EGMT LR LR
comp=Z,1μm,19.0s,MS5.3
HAWA Hanford 88.53 341 PFAKE 05 35 30.0 +11
HAWA LR LR
comp=Z,932nm,19.0s,MS5.2
ULM Lac du Bonnet 88.86 357 P P 05 35 19.6 -1.0
comp=Z,2.1nm,0.7s,mb4.6,baz=202,slow=1.3,SNR=3.7
ULM LR LR 06 12 10.6
comp=Z,2μm,19.1s,MS5.5,baz=175,slow=34
ULM Lac du Bonnet 88.86 357 *e*P P 05 35 20.8 +0.1
NEW Newport 89.71 343 P P 05 35 28.1 +3.4
NEW LR LR
comp=Z,2μm,19.0s,MS5.6
WALA Waterton Lakes 89.79 346 P P 05 35 26.1 +1.1
comp=Z,0.5nm,1.5s
NLWA Neilton Lookou 90.61 339 PFAKE 05 35 40.0 +11
NLWA LR LR
comp=Z,2μm,21.0s,MS5.4
PAF Port-aux-Franc 90.66 168 PFAKE 05 35 40.0 +10
PAF LR LR
comp=Z,3μm,22.0s,MS5.7
BOSA Boshof 90.67 128 P P 05 35 29.1 -0.9
comp=Z,12nm,1.3s,mb5.1,baz=212,slow=9.8,SNR=3.9
BOSA LR LR 06 09 51.5
comp=Z,3μm,20.7s,MS5.7,baz=222,slow=31
JOHN Johnston Islan 91.31 290 PFAKE 05 35 40.0 +7.1
JOHN LR LR
comp=Z,3μm,19.0s,MS5.7
DBIC Dimbokro 91.61 83 LR LR 06 16 12.8
comp=Z,2μm,18.9s,MS5.5,baz=214,slow=35
DBIC Dimbokro 91.61 83 PFAKE 05 35 50.0 +16
DBIC LR LR
comp=Z,2μm,22.0s,MS5.6
LBTB Lobatse 93.46 126 *e*P P 05 35 42.5 -0.5
comp=Z,128nm,2.6s,mb5.9
LBTB LR LR
comp=Z,3μm,21.0s,MS5.7
FFC Flin Flon 93.69 354 PFAKE 05 35 50.0 +7.0
FFC LR LR
comp=Z,2μm,22.0s,MS5.5
STKA Stephens Creek 93.96 223 LR LR 06 12 20.1
comp=Z,4μm,18.5s,MS6.0,baz=170,slow=32
SCHQ Schefferville 95.75 14 LR LR 06 16 43.8
comp=Z,2μm,20.7s,MS5.6,baz=203,slow=34
CMLA Cha da Macela 97.50 47 PFAKE 05 36 10.0 +9.1
CMLA LR LR
comp=Z,4μm,22.0s,MS5.8
HNR Honiara 98.16 251 PFAKE 05 36 20.0 +15
HNR LR LR
comp=Z,936nm,22.0s,MS5.2
CTAO Charters Tower 100.18 234 PFAKE 05 36 20.0 +6.9
CTAO LR LR
comp=Z,4μm,22.0s,MS5.9
TORD Torodi Ar. Bea 100.66 82 P Pdif 05 36 15.7 +0.5
comp=Z,0.6nm,0.9s,baz=220,slow=5.1,SNR=3.2
NWAO Narrogin (SRO) 103.68 205 PFAKE 05 36 40.0 +11
NWAO LR LR
comp=Z,1μm,20.0s,MS5.4
MIDW Midway 104.09 295 PFAKE 05 36 40.0 +10
MIDW LR LR
comp=Z,4μm,21.0s,MS5.9
RTC Rabat Centre 106.77 60 PFAKE 05 41 00.0 +7.6
RTC LR LR
comp=Z,2μm,21.0s,MS5.7
WRAB Tennant Creek 107.37 225 PFAKE 05 41 10.0 +16
WRAB LR LR
comp=Z,3μm,21.0s,MS5.9
MORF Marmelete 107.52 56 *e*SS SS 05 56 36.0 +12
MORF Marmelete 107.52 56 *e*LR LR 06 13 26.3
comp=Z,2μm,24.0s
PBDV Barranco-do-Ve 107.95 56 *e*SS SS 05 56 42.6 +13
PBDV Barranco-do-Ve 107.95 56 *e*LR LR 06 13 47.1
comp=Z,2μm,18.0s
PMAFR Mafra 108.07 54 *e*SS SS 05 56 34.3 +2.8
PMAFR Mafra 108.07 54 *e*LR LR 06 13 48.4
comp=Z,4μm,20.0s
PCVE Castro Verde 108.10 56 *e*SS SS 05 56 43.2 +11
PCVE Castro Verde 108.10 56 *e*LR LR 06 14 03.2
comp=Z,2μm,24.0s
PVAQ Vaqueiros 108.18 56 *e*SS SS 05 56 27.5 -5.5
PVAQ Vaqueiros 108.18 56 *e*LR LR 06 13 48.3
comp=Z,2μm,24.0s
SFS San Fernando 108.63 58 PFAKE 05 41 10.0 +14
SFS LR LR
comp=Z,2μm,20.0s,MS5.7
KDAK Kodiak Island 109.00 330 PFAKE 05 41 10.0 +14
KDAK LR LR
comp=Z,3μm,19.0s,MS5.9
PBAR Barrancos 109.06 56 *e*SS SS 05 56 52.2 +7.3
PBAR Barrancos 109.06 56 *e*LR LR 06 14 31.8
comp=Z,2μm,24.0s
PESTR Estremoz 109.10 55 *e*SS SS 05 56 57.9 +13
PESTR Estremoz 109.10 55 *e*LR LR 06 14 07.4
comp=Z,3μm,20.0s
TAM Tamanrasset 109.27 76 PFAKE 05 41 10.0 +13
TAM LR LR
comp=Z,3μm,20.0s,MS5.8
PMRV Marv??o 109.55 55 *e*SS SS 05 56 59.0 +7.6
PMRV Marv??o 109.55 55 *e*LR LR 06 14 33.0
comp=Z,3μm,20.0s
MTE Manteigas 110.00 54 PFAKE 05 41 10.0 +12
MTE LR LR
comp=Z,3μm,22.0s,MS5.8
MTE Manteigas 110.00 54 *e*SS SS 05 57 05.0 +7.6
MTE Manteigas 110.00 54 *e*LR LR 06 14 25.5
comp=Z,2μm,22.0s
EGAK Eagle 110.39 340 PFAKE 05 41 10.0 +12
EGAK LR LR
comp=Z,1μm,20.0s,MS5.5
ABPO Ambohimpanom 110.67 138 PFAKE 05 41 10.0 +10
ABPO LR LR
comp=Z,3μm,21.0s,MS5.8
MVO Moncorvo 110.75 53 *e*SS SS 05 57 10.8 +3.3
MVO Moncorvo 110.75 53 *e*LR LR 06 14 46.1
comp=Z,2μm,22.0s
PAB San Pablo 111.57 56 PFAKE 05 41 10.0 +8.8
PAB LR LR
comp=Z,2μm,20.0s,MS5.8
ESLA Sonseca Array 111.89 56 PFAKE 05 41 10.0 +8.1
ESLA LR LR
comp=Z,13μm,20.0s,MS6.5
COLA College 112.37 337 PFAKE 05 41 10.0 +8.0
COLA LR LR
comp=Z,1μm,21.0s,MS5.5
MBWA Marble Bar 113.43 212 PFAKE 05 41 20.0 +14
MBWA LR LR
comp=Z,3μm,20.0s,MS5.8
ADK Adak 116.71 316 PFAKE 05 41 20.0 +9.3
ADK LR LR
comp=Z,2μm,22.0s,MS5.6
KMBO Kilima Mbogo 118.49 118 PFAKE 05 41 30.0 +15
KMBO LR LR
comp=Z,2μm,20.0s,MS5.7
ESK Eskdalemuir 120.04 41 PFAKE 05 41 30.0 +13
ESK LR LR
comp=Z,2μm,22.0s,MS5.6
SSB Saint Sauveur 120.12 54 PFAKE 05 41 30.0 +13
SSB LR LR
comp=Z,1μm,20.0s,MS5.6
VSL Villasalto 120.74 62 PFAKE 05 41 30.0 +11
VSL LR LR
comp=Z,1μm,21.0s,MS5.5
BNI Bardonecchia 121.38 55 PFAKE 05 41 30.0 +10
BNI LR LR
comp=Z,3μm,20.0s,MS5.9
WDD Wield Dalam 122.73 68 PFAKE 05 41 30.0 +7.2
WDD LR LR
comp=Z,3μm,20.0s,MS5.9
WLF Walferdange 122.94 50 PFAKE 05 41 30.0 +7.3
WLF LR LR
comp=Z,3μm,21.0s,MS5.9
ECH Echery 122.98 52 PFAKE 05 41 30.0 +7.1
ECH LR LR
comp=Z,981nm,20.0s,MS5.5
VLC Villacollemand 123.42 58 PFAKE 05 41 40.0 +16
VLC LR LR
comp=Z,1μm,21.0s,MS5.6
BFO Black Forest 123.75 52 PFAKE 05 41 40.0 +16
BFO LR LR
comp=Z,1μm,21.0s,MS5.5
GUMO Guam 124.42 259 PFAKE 05 41 40.0 +13
GUMO LR LR
comp=Z,1μm,20.0s,MS5.6
AQU L'Aquila 124.71 61 PFAKE 05 41 40.0 +14
AQU LR LR
comp=Z,2μm,22.0s,MS5.7
CEL Celeste 124.77 66 PFAKE 05 41 40.0 +13
CEL LR LR
comp=Z,2μm,21.0s,MS5.8
TIP Timpagrande 125.76 65 PFAKE 05 41 40.0 +11
TIP LR LR
comp=Z,2μm,21.0s,MS5.8
TRI Trieste 126.23 57 PFAKE 05 41 40.0 +11
TRI LR LR
comp=Z,1μm,21.0s,MS5.6
MOX Moxa 126.57 51 *e*PKP PKPdf 05 41 35.9 +6.2
comp=Z,32nm,1.9s
MOX
comp=Z,2μm,21.0s
MSEY Mahe Island 127.02 137 PFAKE 05 41 40.0 +8.2
MSEY LR LR
comp=Z,1μm,20.0s,MS5.6
GERES GERESS Array B 127.27 53 PKP PKPdf 05 41 31.6 +0.5
comp=Z,0.4nm,0.4s,baz=241,slow=2.7,SNR=7.0

KAPI	**Kappang**	**127.56**	**221**	PFAKE		05 41 40.0	+7.2
KAPI				LR	LR		
	comp=Z,2μm,22.0s,MS5.8						
CLL	**Collm**	**127.61**	**50**	*e*PKP	PKPdf	05 41 35.0	+3.4
CLL				LR	LR		
	comp=Z,2μm,21.0s,MS5.8						
CLL	**Collm**	**127.61**	**50**	*e*(PKPdf)	PKPdf	05 41 35.0	+3.4
CLL				*e*PP	PP	05 43 33.0	-0.4
CLL				*e*		05 52 42.0	
CLL				*e*PPS		05 55 12.0	
CLL				*e*		05 56 44.0	
CLL				*e*SS	SS	06 01 00.0	+15
CLL				*e*PPPPrev		06 02 18.0	
CLL				*e*SSS		06 05 24.0	
CLL				LmV		06 31 00.0	
	comp=Z,2μm,21.0s						
KONO	**Kongsberg**	**128.00**	**39**	PFAKE		05 41 40.0	+7.9
KONO				LR	LR		
	comp=Z,890nm,21.0s,MS5.4						
BRG	**Berggiesshubel**	**128.05**	**51**	*e*PKP	PKPdf	05 41 35.1	+2.7
	comp=Z,14nm,1.6s						
COCO	**West Island**	**128.57**	**191**	PFAKE		05 41 50.0	+15
COCO				LR	LR		
	comp=Z,2μm,19.0s,MS5.8						
TIR	**Tirane**	**128.79**	**64**	PFAKE		05 41 50.0	+16
TIR				LR	LR		
	comp=Z,2μm,22.0s,MS5.8						
NAO01	**NORSAR Array S**	**128.90**	**38**	PFAKE		05 41 50.0	+16
NAO01				LR	LR		
	comp=Z,1μm,20.0s,MS5.6						
NOA	**NORSAR Array B**	**129.09**	**38**	PKP	PKPdf	05 41 37.5	+3.4
	comp=Z,0.8nm,0.9s,baz=256,slow=1.9,SNR=2.4						
BILL	**Bilibino**	**129.89**	**331**	PFAKE		05 41 50.0	+15
BILL				LR	LR		
	comp=Z,3μm,20.0s,MS5.9						
VYHS	**Vyhne**	**130.40**	**55**	*e*PKP	PKPdf	05 41 41.6	+4.6
VYHS				*e*		05 45 02.7	
VYHS	**Vyhne**	**130.40**	**55**	*e*PKP	PKPdf	05 41 41.6	+4.6
VYHS				*e*SKP		05 45 02.7	
KBS	**Kingsbay**	**130.47**	**14**	PFAKE		05 41 50.0	+14
KBS				LR	LR		
	comp=Z,1μm,20.0s,MS5.5						
PSZ	**Piszkesteto**	**130.92**	**56**	PFAKE		05 41 50.0	+12
PSZ				LR	LR		
	comp=Z,1μm,22.0s,MS5.6						
PET	**Petropavlovsk**	**131.13**	**311**	PFAKE		05 41 50.0	+12
PET				LR	LR		
	comp=Z,909nm,20.0s,MS5.5						
DGAR	**Diego Garcia**	**131.59**	**159**	PFAKE		05 41 50.0	+10
DGAR				LR	LR		
	comp=Z,2μm,19.0s,MS5.8						
KWP	**Kalwaria Pacla**	**133.15**	**54**	*e*PKPdf	PKPdf	05 41 42.9	+0.7
KWP				LR	LR		
	comp=Z,1μm,21.0s,MS5.5						
DAV	**Davao City (W)**	**133.91**	**236**	PFAKE		05 42 00.0	+15
DAV				LR	LR		
	comp=Z,860nm,20.0s,MS5.5						
ISP	**Isparta**	**135.27**	**72**	PFAKE		05 42 00.0	+13
ISP				LR	LR		
	comp=Z,807nm,20.0s,MS5.4						
KEV	**Kevo**	**135.75**	**26**	PFAKE		05 42 00.0	+14
KEV				LR	LR		
	comp=Z,869nm,21.0s,MS5.5						
FINES	**FINESS Array B**	**136.27**	**38**	PKP	PKPdf	05 41 47.4	-0.2
	comp=Z,0.9nm,0.7s,baz=225,slow=1.0,SNR=2.5						
KIEV	**Kiev**	**137.46**	**54**	PFAKE		05 42 00.0	+10
KIEV				LR	LR		
	comp=Z,1μm,22.0s,MS5.6						
AKASG	**Malin Array Be**	**137.47**	**54**	PKP	PKPdf	05 41 47.7	-2.5
	comp=Z,0.7nm,0.5s,baz=287,slow=2.2,SNR=3.8						
KSM	**Kuching**	**137.70**	**214**	PFAKE		05 42 00.0	+8.1
KSM				LR	LR		
	comp=Z,1μm,21.0s,MS5.6						
BR131	**Keskin Array S**	**138.18**	**71**	PFAKE		05 42 00.0	+8.1
BR131				LR	LR		
	comp=Z,520nm,20.0s,MS5.3						
KKM	**Kota Kinabalu**	**138.75**	**225**	PFAKE		05 42 10.0	+16
KKM				LR	LR		
	comp=Z,2μm,22.0s,MS5.8						
ERM	**Erimo**	**138.82**	**292**	PFAKE		05 42 00.0	+7.0
ERM				LR	LR		
	comp=Z,2μm,20.0s,MS5.8						
MAJO	**Matsushiro**	**140.93**	**283**	PFAKE		05 42 10.0	+13
MAJO				LR	LR		
	comp=Z,922nm,21.0s,MS5.5						
TIXI	**Tiksi**	**141.38**	**341**	*e*PKPdf	PKPdf	05 41 51.7	-5.0
OBN	**Obninsk**	**142.08**	**47**	PFAKE		05 42 10.0	+12
OBN				LR	LR		
	comp=Z,2μm,21.0s,MS5.8						
KULM	**Kulim**	**144.74**	**201**	*e*PKPdf	PKPdf	05 42 02.1	-2.4
KULM				LR	LR		
	comp=Z,1μm,20.0s,MS5.6						
NAY	**Al-Naaiem**	**144.82**	**93**	*e*P	PKPdf	05 42 01.9	-2.2
NAY				AMb	AMB	05 42 10.5	
	comp=Z,53nm,1.3s						
MIB	**Mutribah**	**145.14**	**92**	*e*P	PKPbc	05 42 02.5	-1.7
MIB				AMb	AMB	05 42 12.5	
	comp=Z,162nm,1.7s						
KIV	**Kislovodsk**	**145.69**	**67**	*e*PKPbc	PKPbc	05 42 06.4	+0.8
KIV				LR	LR		
	comp=Z,660nm,22.0s,MS5.4						
ONI	**Oni**	**146.04**	**69**	P	PKPdf	05 42 04.6	-1.2
GOR	**Gori**	**146.43**	**70**	P	PKPdf	05 42 07.7	+1.2
GNI	**Garni**	**146.54**	**74**	*e*PKPdf	PKPdf	05 42 08.5	+1.7
GNI				LR	LR		
	comp=Z,647nm,20.0s,MS5.4						
ISHB	**Shabestar**	**146.77**	**77**	*e*P	PKPdf	05 42 06.9	-0.3
MTA	**Mtatsminda**	**146.88**	**71**	P	PKPdf	05 42 08.9	+1.6
ITBZ	**Tabriz**	**147.16**	**78**	*e*P	PKPdf	05 42 08.0	+0.2
DGRG	**David-gareji**	**147.26**	**72**	P	PKPdf	05 42 09.7	+1.8
YHNB	**Yeheng**	**148.78**	**253**	PFAKE		05 42 20.0	+9.1
YHNB				LR	LR		
	comp=Z,1μm,22.0s,MS5.7						
IMOK	**Mouk**	**148.97**	**98**	*e*P	PKPdf	05 42 12.6	+1.5
MDJ	**Mudanjiang**	**149.00**	**294**	PKPbc	PKPdf	05 42 10.7	+0.1
MDJ				PP	PP	05 45 46.5	+0.1
MDJ				SS	SS	06 05 00.7	+2.6
MDJ				AMB	AMB		
	comp=Z,160nm,7.5s						
MDJ				LR	LR		
	comp=N,630nm,19.8s,MS5.5						
MDJ				LR	LR		
	comp=E,580nm,19.8s,MS5.5						
MDJ				LR	LR		
	comp=Z,860nm,25.5s						
MDJ	**Mudanjiang**	**149.00**	**294**	*e*PKPbc	PKPbc	05 42 14.6	-0.1
MDJ				LR	LR		
	comp=Z,1μm,20.0s,MS5.7						
KSRS	**Korea Array**	**149.07**	**280**	PKPbc	PKPbc	05 42 15.4	+0.3
	comp=Z,5.0nm,1.0s,baz=126,slow=3.2,SNR=6.2						
IPIR	**Pirpir**	**149.10**	**90**	*e*P	PKPbc	05 42 14.0	-1.4
ISRV	**Sarvestan**	**149.44**	**97**	*e*P	PKPdf	05 42 13.5	+1.6
IPAR	**Pars**	**149.60**	**96**	*e*P	PKPbc	05 42 15.9	-0.8
IKLH	**Kolahrood**	**149.87**	**89**	*e*P	PKPbc	05 42 15.9	-1.3
IGAR	**Gharneh**	**149.89**	**91**	*e*P	PKPbc	05 42 16.4	-0.9
INCN	**Inchon**	**150.07**	**279**	PFAKE		05 42 20.0	+7.4
INCN				LR	LR		
	comp=Z,942nm,22.0s,MS5.5						
IPRN	**Peran**	**151.40**	**84**	*e*P	PKPbc	05 42 23.0	+2.2
IMEH	**Mehriz**	**151.48**	**95**	*e*P	PKPbc	05 42 21.0	-0.1
CN2	**Changchun**	**151.93**	**292**	*e*PKPbc	PKPbc	05 42 18.7	-3.0
CN2				AMB	AMB		
	comp=Z,270nm,6.0s						
CN2				LR	LR		
	comp=N,730nm,18.0s,MS5.7						
CN2				LR	LR		
	comp=E,800nm,18.0s,MS5.7						
CN2				LR	LR		
	comp=Z,930nm,19.0s,MS5.6						
IGLO	**Ghaloghah**	**152.63**	**84**	*e*P	PKPab	05 42 35.7	+1.5
QIZ	**Qiongzhong**	**152.85**	**229**	*e*PKPbc	PKPbc	05 42 24.6	+0.1
QIZ				LR	LR		
	comp=Z,695nm,20.0s,MS5.5						
SNY	**Shenyang**	**153.16**	**288**	⇑PKPbc	PKPab	05 42 40.7	+4.4
SNY				PP	PP	05 46 07.4	-3.0
SNY				SS	SS	06 05 40.8	-3.5
SNY				AMB	AMB		
	comp=Z,160nm,8.4s						
SNY				LR	LR		
	comp=N,340nm,26.0s,MS5.3						
SNY				LR	LR		
	comp=E,620nm,30.4s,MS5.3						
SNY				LR	LR		
	comp=Z,1μm,26.7s,MS5.6						
ARU	**Arti**	**153.64**	**39**	PFAKE		05 42 30.0	+13
ARU				LR	LR		
	comp=Z,2μm,21.0s,MS5.8						
NJ2	**Nanjing**	**154.36**	**264**	*e*PKPbc	PKPdf	05 42 15.2	-4.0
NJ2				pPKP	pPKPdf	05 42 25.9	+3.4
NJ2				sPKP		05 42 30.2	
NJ2				PKPab	PKPab	05 42 42.9	+1.2
NJ2				PKS		05 45 48.0	
NJ2				PP	PP	05 46 16.0	-1.3
NJ2				AMB	AMB		
	comp=Z,340nm,6.5s						
NJ2				LR	LR		
	comp=N,2μm,25.0s,MS6.1						
NJ2				LR	LR		
	comp=E,2μm,24.0s,MS6.1						
NJ2				LR	LR		
	comp=Z,3μm,23.8s,MS6.1						
HIA	**Hailar**	**155.39**	**305**	PFAKE		05 42 30.0	+10
HIA				LR	LR		
	comp=Z,2μm,20.0s,MS6.0						
ABKAR	**Akbulak array**	**157.21**	**54**	*e*PKPdf	PKPdf	05 42 20.6	-1.8
ABKAR				*e*PKPab	PKPab	05 42 53.3	-0.1
CM31	**Chiang Mai Arr**	**157.66**	**207**	PFAKE		05 42 40.0	+16
CM31				LR	LR		
	comp=Z,804nm,20.0s,MS5.5						
CMAR	**Chiang Mai Arr**	**157.66**	**207**	PKP	PKPdf	05 42 26.7	+2.8
	comp=Z,0.4nm,0.4s,baz=225,slow=3.2,SNR=4.3						
CHTO	**Chiang Mai**	**157.99**	**208**	PFAKE		05 42 40.0	+16
CHTO				LR	LR		
	comp=Z,764nm,20.0s,MS5.5						
BJI	**Beijing**	**158.57**	**282**	PKP	PKPdf	05 42 24.0	-0.4
BJI				PP	PP	05 46 39.0	-1.5
BJI				SS	SS	06 06 41.7	-1.1
BJI				AMB	AMB		
	comp=Z,200nm,6.4s						
BJI				LR	LR		
	comp=N,370nm,22.4s,MS5.6						
BJI				LR	LR		
	comp=E,880nm,23.4s,MS5.6						
BJI				LR	LR		
	comp=Z,960nm,27.4s,MS5.5						
BJT	**Baijiatuau**	**158.57**	**282**	PFAKE		05 42 40.0	+16
BJT				LR	LR		
	comp=Z,1μm,20.0s,MS5.8						
GYA	**Guiyang**	**160.29**	**236**	PKP	PKPdf	05 42 26.0	-0.8
GYA				PKPab	PKPab	05 43 08.9	+1.6
GYA				PKS		05 45 58.3	
GYA				PP	PP	05 46 52.7	+3.2
GYA				SKKS	SKKSac	05 53 37.2	-1.2
GYA				LR	LR		
	comp=N,3μm,25.4s						
GYA				LR	LR		
	comp=E,1μm,24.3s						
GYA				LR	LR		
	comp=Z,3μm,25.0s						
ENH	**Enshi**	**160.66**	**250**	PFAKE		05 42 40.0	+13
ENH				LR	LR		
	comp=Z,1μm,20.0s						
BRVK	**Borovoye**	**161.13**	**36**	PFAKE		05 42 40.0	+13
BRVK				LR	LR		
	comp=Z,3μm,21.0s						
KMI	**Kunming**	**161.69**	**226**	PKP	PKPdf	05 42 28.3	0.0
HHC	**Hu-ho-hao-te**	**162.13**	**284**	*e*PKP	PKPdf	05 42 27.8	-0.5
HHC				PKS		05 45 59.8	
HHC				PP	PP	05 46 57.9	-1.8
HHC				SKS	SKSdf	05 49 31.9	-1.1
HHC				SKKS	SKKSac	05 53 48.1	+0.6
HHC				SS	SS	06 07 19.0	-1.3
XAN	**Xi'an**	**162.81**	**260**	PKPbc	PKPdf	05 42 22.7	-6.5
XAN				PP	PP	05 46 50.6	-13
XAN				SS	SS	06 07 50.5	+23
XAN				AMB	AMB		
	comp=Z,62nm,11.1s						
XAN				LR	LR		
	comp=N,680nm,23.0s						
XAN				LR	LR		
	comp=E,280nm,23.0s						
XAN				LR	LR		
	comp=Z,310nm,25.7s						
XAN	**Xi'an**	**162.81**	**260**	PKP	PKPdf	05 42 29.2	0.0
BTO	**Baotou**	**163.30**	**283**	*e*P	PKPdf	05 42 36.2	+6.8
TLY	**Talaya**	**163.37**	**325**	PFAKE		05 42 40.0	+11
TLY				LR	LR		
	comp=Z,1μm,21.0s						
SONM	**Songino Array**	**164.20**	**310**	PKP	PKPdf	05 42 31.0	+1.0
	comp=Z,0.2nm,0.3s,baz=108,slow=4.7,SNR=2.9						
SONM				PKPab	PKPab	05 43 20.4	-3.5
	comp=Z,1.5nm,0.9s,baz=49,slow=4.5,SNR=5.7						
ZAA0	**Zalesovo Array**	**164.76**	**8**	*e*PKPdf	PKPdf	05 42 31.1	+0.8
ZALV	**Zalesovo Beam**	**164.76**	**8**	PKP	PKPdf	05 42 31.1	+0.9
	comp=Z,0.8nm,0.3s,baz=0.0,slow=1.7,SNR=2.7						
CD2	**Chengdu**	**165.11**	**242**	*e*PKP	PKPdf	05 42 30.9	-0.5
CD2				pPKP	pPKPdf	05 42 42.0	+7.2
CD2				PKPab	PKPab	05 43 31.2	+2.8
CD2				PP	PP	05 47 18.4	+3.2
CD2				AMB	AMB		
	comp=Z,280nm,10.8s						
CD2				LR	LR		
	comp=N,1μm,20.2s						
CD2				LR	LR		
	comp=E,820nm,20.2s						
CD2				LR	LR		
	comp=Z,2μm,20.6s						
KURK	**Kurchatov**	**166.32**	**27**	*e*PKPdf	PKPdf	05 42 32.6	+0.9
KURK				*e*PKPab	PKPab	05 43 32.6	-0.4
KURK				LR	LR		
	comp=Z,1μm,20.0s						
NIL	**Nilore**	**166.70**	**109**	PFAKE		05 42 40.0	+7.4
NIL				LR	LR		
	comp=Z,91nm,21.0s						
LZH	**Lanzhou**	**167.42**	**262**	*e*PKP	PKPdf	05 42 33.9	+0.9
LZH				pPKP	pPKPdf	05 42 37.2	+0.8
LZH				sPKP		05 42 38.3	
LZH				PP	PP	05 47 31.0	+3.5
LZH				SKS	SKSdf	05 49 33.5	-3.4
LZH				SKKS	SKKSac	05 54 13.0	-1.4
LZH				SS	SS	06 08 12.7	-1.9
LZH				AMB	AMB		
	comp=Z,360nm,5.4s						
LZH				LR	LR		
	comp=N,2μm,18.3s						
LZH				LR	LR		
	comp=Z,2μm,20.1s						
EKS2	**Erkin-Say**	**168.29**	**67**	PFAKE		05 42 40.0	+6.6
EKS2				LR	LR		
	comp=Z,1μm,20.0s						
AML	**Almayashu**	**168.34**	**69**	PFAKE		05 42 40.0	+6.5
AML				LR	LR		
	comp=Z,2μm,22.0s						
AAK	**Ala-Archa**	**168.81**	**66**	PFAKE		05 42 40.0	+6.2
AAK				LR	LR		
	comp=Z,2μm,22.0s						
UCH	**Uchtor**	**168.92**	**68**	*e*PKPdf	PKPdf	05 42 34.5	+0.6
UCH				LR	LR		
	comp=Z,2μm,21.0s						
TKM2	**Tokmak 2**	**169.51**	**63**	PFAKE		05 42 50.0	+16
TKM2				LR	LR		
	comp=Z,2μm,21.0s						
LSA	**Lhasa**	**170.54**	**195**	PFAKE		05 42 50.0	+15
LSA				LR	LR		
	comp=Z,2μm,21.0s						
MKAR	**Makanchi Array**	**170.93**	**28**	PKP	PKPdf	05 42 34.9	+0.1
	comp=Z,0.2nm,0.3s,baz=93,slow=2.9,SNR=2.9						
MKAR				PKPab	PKPab	05 43 52.6	-1.0
	comp=Z,0.3nm,0.2s,baz=18,slow=5.0,SNR=2.2						
GTA	**Gaotai**	**171.13**	**277**	*e*PKP	PKPdf	05 42 40.5	+5.3
GTA				AMB	AMB		
	comp=Z,140nm,6.9s						
GTA				LR	LR		
	comp=N,690nm,23.7s						
GTA				LR	LR		
	comp=E,1μm,25.5s						
GTA				LR	LR		
	comp=Z,2μm,24.3s						
WMQ	**Urumqi**	**175.06**	**6**	*e*PKP	PKPdf	05 42 38.5	+1.9

CASC 05 05:50:50.9±1.9, 8°.43N×82°.89W, h3km, MD3.5, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.41**	**29**	*e*P	Pg	05 51 00.5	+1.8
BRU2				*e*S	Sg	05 51 08.8	+4.7
BAR1		**0.91**	**333**	*e*P	Pg	05 51 07.4	-0.9
CNI	**Changuinola**	**1.04**	**21**	*e*P	Pg	05 51 10.4	-0.6
BUS	**Buena Vista**	**1.41**	**322**	*e*P	Pn	05 51 16.6	-0.8
BUS				*e*S	Sg	05 51 37.2	+1.1
QCR	**Quepos**	**1.60**	**308**	*e*P	Pn	05 51 20.2	+0.1
QCR				*e*S	Sn	05 51 42.6	+1.3
URSC	**Urasca**	**1.65**	**328**	*e*P	Pn	05 51 21.1	+0.4
URSC				*e*S	Sn	05 51 43.3	+0.9

IDC 05 05:56:03.5±3.6, 33°.88S×178°.77W, h0km, mb4.0/2, mb1 4.3/2, mb1mx3.9/14, mbtmp4.0/2, Error ellipse: s-maj=196.9km s-min=50.7km az=167.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.40**	**271**	P	P	06 03 58.8	-1.2
	1.2nm,0.7s,baz=109,slow=7.5,SNR=11						
WRA	**Warramunga Arr**	**43.70**	**276**	P	P	06 04 11.4	+0.9
	1.6nm,0.5s,baz=117,slow=7.5,SNR=17						
FINES	**FINESS Array B**	**148.15**	**338**	PKPbc	PKPbc	06 15 50.0	-0.5
	1.7nm,0.6s,baz=26,slow=4.9,SNR=6.5						
BRTR	**Keskin Array B**	**153.50**	**292**	PKPbc	PKPbc	06 16 04.0	+0.1
	0.8nm,0.7s,baz=139,slow=7.7,SNR=3.7						

CSEM ***05*** *05:57:36.9±0.8, 41°.65N×32°.47E, h10km, MD2.7, Error ellipse: s-maj=13.9km s-min=7.5km az=131.0*
DDA ***05*** *05:57:44.7, 41°.43N×33°.04E, h7km±6km, Md2.7*
ISC 05 05:57:37.0±2.6, 41°.62N±0°.09×32°.4E±0°.1, h10km±11km, n10, σ0°.51/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAFT	**Safranbolu**	**0.42**	**153**	*e*PG	**Pg**	**05 57 45.7**	**+0.4**
SAFT				*e*SG	**Sg**	**05 57 50.8**	**-0.1**
SAFT	**Safranbolu**	**0.42**	**153**	*e*Pg	**Pg**	**05 57 45.7**	**+0.4**
SAFT				*e*Sg	**Sg**	**05 57 50.8**	**-0.1**
BALT	**Daday**	**0.72**	**96**	*i* P	**Pg**	**05 57 50.2**	**-0.7**
BALT				*i* S	**Sg**	**05 58 00.7**	**+0.4**
BALT	**Daday**	**0.72**	**96**	*i* P	**Pg**	**05 57 50.2**	**-0.7**
BALT				*i* S	**Sg**	**05 58 00.7**	**+0.4**
ILGA	**Ilgaz**	**1.12**	**120**	*i* P	**Pg**	**05 57 58.2**	**-0.3**
ILGA				*i* S	**Sg**	**05 58 13.5**	**+0.5**
ILGA	**Ilgaz**	**1.12**	**120**	*i* P	**Pg**	**05 57 58.2**	**-0.3**
ILGA				*i* S	**Sg**	**05 58 13.5**	**+0.5**
TOS	**Tosya**	**1.33**	**115**	*e*PG	**Pg**	**05 58 02.2**	**-0.3**
TOS	**Tosya**	**1.33**	**115**	*e*Pg	**Pg**	**05 58 02.2**	**-0.4**
ELDT	**Eldivan**	**1.35**	**146**	*i* P	**Pn**	**05 58 02.8**	**+0.8**
ELDT				*i* S	**Sb**	**05 58 19.2**	**-0.7**
ELDT	**Eldivan**	**1.35**	**146**	*i* P	**Pn**	**05 58 02.8**	**+0.8**
ELDT				*i* S	**Sb**	**05 58 19.2**	**-0.6**

ISCJB ***05*** *06:02:27.7±0.2, 32°.63N±0°.02×105°.57E±0°.03, h10km, mb4.6/60, MS4.7/6, Error ellipse: s-maj=3.4km s-min=3.2km az=149.4*
IDC ***05*** *06:02:28.0±0.5, 32°.67N×105°.55E, h0km, mb4.4/20, mb1 4.5/23, mb1mx4.4/31, mbtmp4.4/23, ML4.1/3, MS4.5/2, Ms1 4.5/2, ms1mx3.3/33, Error ellipse: s-maj=18.4km s-min=11.7km az=58.0*
NEIC ***05*** *06:02:29.7±0.2, 32°.64N×105°.52E, h10km, mb4.7/45, Error ellipse: s-maj=5.0km s-min=4.3km az=171.0*
BJI ***05*** *06:02:30.2, 32°.68N×105°.54E, h17km, mB4.6/14, mb4.6/25, ML4.4/21, Ms4.3/28, Ms7 4.2/27*
MOS ***05*** *06:02:31.0±0.8, 32°.61N×105°.54E, h33km, mb5.0/22, Error ellipse: s-maj=8.9km s-min=5.7km az=118.5*
ISC 05 06:02:29.9±0.2, 32°.64N±0°.02×105°.54E±0°.03, h10km, n165, σ0°.97/175, mb4.6/60, MS4.7/6, 3C-3D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.30**	**222**	Pn	**Pn**	**06 03 08.8**	**+1.0**
CD2				Pg	**Pg**	**06 03 12.1**	**-1.9**
CD2				Sg	**Sg**	**06 03 43.4**	**-0.4**
CD2				smax			
	comp=N,6μm,0.7s						
CD2				smax			
	comp=E,7μm,0.9s						
XAN	**Xi'an**	**3.15**	**63**	Pn	**Pn**	**06 03 20.6**	**+1.1**
XAN				Pg	**Pg**	**06 03 29.1**	**-1.2**
XAN				Sn	**Sn**	**06 03 55.2**	**-2.0**
XAN				Sg	**Sg**	**06 04 07.3**	**-3.8**
XAN				smax			
	comp=N,4μm,0.8s						
XAN				smax			
	comp=E,2μm,0.9s						
XAN				LR	LR		
	comp=N,1μm,9.2s						
XAN				LR	LR		
	comp=E,1μm,6.6s						
XAN				LR	LR		
	comp=Z,1μm,7.9s						
LZH	**Lanzhou**	**3.71**	**338**	Pn	**Pn**	**06 03 28.8**	**+1.5**
LZH				Pg	**Pg**	**06 03 37.3**	**-3.7**
LZH				Sn	**Sn**	**06 04 11.2**	**+0.1**
LZH				Sg	**Sg**	**06 04 24.2**	**-4.9**
LZH				smax			
	comp=N,2μm,0.8s						
LZH				smax			
	comp=E,3μm,0.9s						
LZH				LR	LR		
	comp=E,6μm,6.4s						
LZH				LR	LR		
	comp=Z,7μm,8.7s						
ENH	**Enshi**	**4.11**	**124**	*e*Pn	**Pn**	**06 03 34.7**	**+1.9**
ENH				*e*Sg	**Sg**	**06 04 42.2**	**+0.2**
GYA	**Guiyang**	**6.24**	**171**	Pn	**Pn**	**06 04 02.6**	**+0.6**
GYA				LR	LR		
	comp=N,2μm,4.8s						
GYA				LR	LR		
	comp=E,2μm,4.9s						
GYA				LR	LR		
	comp=Z,2μm,4.0s						
WHN	**Wuhan**	**7.80**	**103**	⇓Pn	**Pn**	**06 04 23.6**	**+0.2**
WHN				Sn	**Sn**	**06 05 50.0**	**-1.7**
WHN				LR	LR		
	comp=Z,3μm,4.8s						
KMI	**Kunming**	**7.88**	**199**	P	**Pn**	**06 04 26.2**	**+1.6**
GTA	**Gaotai**	**8.19**	**327**	*e*P	**Pn**	**06 04 27.4**	**-1.4**
GTA				pP		06 04 31.7	
GTA				sP		06 04 34.8	
GTA				S	**Sn**	**06 05 55.9**	**-5.5**
GTA				SS		06 06 17.1	
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,140nm,6.0s						
GTA				LR	LR		
	comp=N,960nm,8.7s						
GTA				LR	LR		
	comp=E,690nm,9.0s						
GTA				LR	LR		
	comp=Z,1μm,8.4s						
HHC	**Hu-ho-hao-te**	**9.51**	**29**	*e*P	**Pn**	**06 04 48.3**	**+1.5**
HHC				pP		06 04 51.5	
HHC				sP		06 04 54.3	
HHC				S	**Sn**	**06 06 35.8**	**+2.1**
HHC				sS		06 06 42.4	
HHC				PcS	PcS	06 14 35.6	-1.7
HHC				ScS	ScS	06 18 07.5	-3.1
BJI	**Beijing**	**11.31**	**46**	P	**Pn**	**06 05 11.8**	**+0.4**
BJI				pmax	pmax		
	comp=Z,22nm,0.5s						
BJI				LR	LR		
	comp=N,590nm,5.0s						
BJI				LR	LR		
	comp=E,710nm,3.9s						
BJI				LR	LR		
	comp=Z,140nm,13.0s						
LSA	**Lhasa**	**12.67**	**260**	*e*P	**Pn**	**06 05 30.8**	**+0.7**
QIZ	**Qiongzhong**	**14.09**	**163**	P	**Pn**	**06 05 49.6**	**0.0**
QIZ				S	**Sn**	**06 08 28.9**	**+2.8**
QIZ				pmax	pmax		
	comp=Z,21nm,1.3s						
QIZ				LR	LR		
	comp=N,990nm,23.7s						
QIZ				LR	LR		
	comp=Z,740nm

ULN Ulaanbaatar 15.25 4 *e*P **Pn 06 06 04.6 -0.5**
ULN pmax pmax
comp=Z,6.0nm,0.8s
ULN Ulaanbaatar 15.25 4 *e*Pn **Pn 06 06 04.6 -0.5**
comp=Z,6.3nm,0.8s
ULN Sn **Sn 06 08 43.6 -10**
CMAR Chiang Mai Arr 15.32 204 Pn **Pn 06 06 06.1 -0.1**
comp=Z,0.4nm,0.3s,baz=13,slow=11,SNR=8.8
CMAR PcP PcP 06 11 12.0 +0.8
baz=319,slow=1.6,SNR=6.4
YHNB Yeheng 15.99 116 P **Pn 06 06 18.4 +3.4**
comp=Z,28nm,0.8s
SSLB Suanglung 16.18 119 *e*Pn **Pn 06 06 17.3 -0.1**
comp=Z,56nm,1.1s
TAPN Taplejung 16.32 256 *e*P **Pn 06 06 20.4 +1.2**
comp=Z,51nm,0.8s
YULB Yu-li 16.67 120 *e*P **Pn 06 06 28.2 +4.6**
comp=Z,20nm,0.9s
ODAN Odare 16.78 255 *e*P **Pn 06 06 23.2 -1.8**
comp=Z,40nm,0.8s
RAMN Ramite 17.39 256 *e*P **Pn 06 06 30.0 -2.6**
comp=Z,38nm,0.9s
GUN Gumba 17.62 260 *e*P **Pn 06 06 36.3 +0.8**
comp=Z,86nm,0.9s
ZAK Zakamensk 17.80 355 *e*P **Pn 06 06 38.6 +1.0**
ZAK pmax pmax
comp=Z,4.0nm,1.1s
WMQ Urumqi 17.88 314 P **Pn 06 06 41.0 +2.4**
WMQ pP pP 06 06 48.0 +5.9
WMQ PP 06 06 56.0
WMQ S **Sn 06 09 59.0 +1.0**
WMQ SS 06 10 23.0
WMQ pmax pmax
comp=Z,18nm,1.0s
WMQ LR LR
comp=N,890nm,6.0s
WMQ LR LR
comp=E,1μm,6.0s
WMQ LR LR
comp=Z,590nm,6.0s
PKI Pulchoki 18.13 259 *e*P **Pn 06 06 40.3 -1.5**
comp=Z,38nm,0.7s
PKI Pulchoki 18.13 259 *e*P **Pn 06 06 40.5 -1.3**
PKI pmax pmax
comp=Z,53nm,0.7s
PKI Pulchoki 18.13 259 *e*P **Pn 06 06 40.5 -1.3**
comp=Z,53nm,0.7s
PKIN Phulchoki 18.14 259 *e*P **Pn 06 06 40.5 -1.4**
comp=Z,53nm,0.7s
KKN Kakani 18.16 260 *e*P **Pn 06 06 41.3 -0.9**
comp=Z,52nm,0.8s
KKN Kakani 18.16 260 *e*P **Pn 06 06 41.3 -0.9**
KKN pmax pmax
comp=Z,52nm,0.8s
DMN Daman 18.37 260 *e*P **Pn 06 06 43.0 -1.8**
comp=Z,38nm,0.9s
KSRS Korea Array 18.93 69 P **Pn 06 06 51.5 0.0**
comp=Z,0.8nm,0.3s,baz=259,slow=10,SNR=21
KSRS Korea Array 18.93 69 P **Pn 06 06 51.5 0.0**
KSRS pmax pmax
comp=Z,1.0nm,0.3s
TLY Talaya 19.08 356 P **Pn 06 06 53.9 +0.8**
TLY pmax pmax
comp=Z,4.0nm,0.7s
TLY Talaya 19.08 356 P **Pn 06 06 53.9 +0.8**
comp=Z,4.0nm,0.7s
CN2 Changchun 19.15 49 *e*P **Pn 06 06 54.7 +0.6**
CN2 pmax pmax
comp=Z,20nm,0.9s
CN2 pmax pmax
comp=Z,410nm,4.0s
CN2 LR LR
comp=N,640nm,19.0s
CN2 LR LR
comp=E,300nm,19.0s
CN2 LR LR
comp=Z,470nm,18.0s
MDJ Mudanjiang 22.18 50 P **P 06 07 26.3 +0.3**
MDJ pP 06 07 29.0
MDJ S **S 06 11 31.5 +1.2**
MDJ ScP ScP 06 15 00.1 0.0
MDJ PcS PcS 06 15 01.3 +0.2
MDJ pmax pmax
comp=Z,4.0nm,0.8s,mb3.9
MDJ LR LR
comp=N,140nm,31.7s,MS3.5
MDJ LR LR
comp=E,270nm,31.4s,MS3.5
MDJ LR LR
comp=Z,130nm,10.5s
MDJ Mudanjiang 22.18 50 *e*P **P 06 07 28.2 +2.2**
comp=Z,17nm,1.0s,mb4.4
MK31 Makanchi Array 22.69 315 *e*P **P 06 07 31.8 +0.4**
MKAR Makanchi Array 22.69 315 P **P 06 07 31.9 +0.5**
comp=Z,6.1nm,0.7s,mb4.1,baz=108,slow=13,SNR=39
KLR Kul'dur 25.63 42 *e*P **P 06 07 55.4 -4.0**
KLR pmax pmax
comp=E,67nm,1.4s
KLR pmax pmax
comp=Z,50nm,1.4s,mb4.8
TKM2 Tokmak 2 25.68 302 *e*P **P 06 08 01.1 +1.2**
TKM2 *e* 06 11 30.2
TKM2 pmax pmax
comp=Z,8.0nm,0.9s,mb4.2
TKM2 Tokmak 2 25.68 302 *e*P **P 06 08 01.1 +1.2**
comp=Z,7.7nm,0.9s,mb4.2
TKM2 *e*PcP PcP 06 11 30.2 +0.1
ZALV Zalesovo Beam 25.92 331 P **P 06 08 01.0 -0.9**
comp=Z,3.5nm,0.6s,mb4.0,baz=137,slow=10,SNR=7.1
UCH Uchtor 26.31 300 *e*P **P 06 08 08.0 +2.3**
comp=Z,13nm,1.2s,mb4.3
AAK Ala-Archa 26.41 301 *e*P **P 06 08 06.5 0.0**
AAK pmax pmax
comp=Z,2.0nm,0.4s,mb4.0
AAK Ala-Archa 26.41 301 *e*P **P 06 08 06.5 0.0**
comp=Z,1.8nm,0.4s,mb4.0
KURK Kurchatov 26.80 320 P **P 06 08 09.6 -0.4**
comp=Z,2.1nm,0.6s,mb3.8,baz=127,slow=11,SNR=17
KURK PcP PcP 06 11 31.9 -0.6
comp=Z,2.7nm,0.7s,baz=112,slow=2.3,SNR=8.3
KURK Kurchatov 26.80 320 *e*P **P 06 08 10.4 +0.5**
KURK *e* 06 11 31.9
KURK pmax pmax
comp=Z,4.0nm,0.6s,mb4.1
KURK Kurchatov 26.80 320 *e*P **P 06 08 10.4 +0.4**
comp=Z,3.7nm,0.6s,mb4.1
KURK *e*PcP PcP 06 11 31.9 -0.7
AML Almayashu 26.89 300 *e*P **P 06 08 11.9 +1.0**
comp=Z,8.9nm,1.0s,mb4.2
AML *e*PcP PcP 06 11 34.0 +1.0
MJAR Matsushiro Arr 27.10 73 P **P 06 08 12.2 -0.6**
comp=Z,1.9nm,0.5s,mb3.9,baz=274,slow=11,SNR=4.4
PSI Prapat 30.33 193 P **P 06 08 42.4 +0.7**
comp=Z,8.8nm,0.8s,mb4.6,baz=16,slow=4.1,SNR=11
KBL Kabul 30.36 284 *e*P **P 06 08 43.2 +1.3**
KBL pmax pmax
comp=Z,9.0nm,0.6s,mb4.7
KBL Kabul 30.36 284 *e*P **P 06 08 43.2 +1.3**
comp=Z,9.2nm,0.6s,mb4.7
BVAR Borovoye Array 32.38 320 P **P 06 08 59.7 +0.3**
comp=Z,1.7nm,0.8s,mb3.9,baz=115,slow=10.0,SNR=7.1
BVAR PcP PcP 06 11 46.6 -0.2
comp=Z,2.0nm,0.7s,baz=98,slow=3.0,SNR=5.9
BRVK Borovoye 32.46 320⇑ *e*P **P 06 09 00.3 +0.2**
BRVK pmax pmax
comp=Z,4.0nm,1.0s,mb4.2
BRVK Borovoye 32.46 320 *e*P **P 06 09 00.7 +0.6**
comp=Z,3.2nm,0.8s,mb4.2
ABKAR Akbulak array 37.60 310 *e*P **P 06 09 44.4 -0.1**
comp=Z,1.5nm,0.6s,mb3.9
SVE Sverdlovsk 39.02 322 *e*P **P 06 09 57.9 +1.5**
KAPI Kappang 39.81 158 P **P 06 10 02.6 -0.8**
comp=Z,14nm,0.7s,mb4.8,baz=2.6,slow=6.4,SNR=6.4
KAPI Kappang 39.81 158 *e*P **P 06 10 02.5 -0.8**
comp=Z,11nm,0.7s,mb4.7
ARU Arti 39.99 321 *d i*P **P 06 10 04.8 +0.3**
ARU S **S 06 16 10.3 +0.5**
ARU SS SS 06 19 06.1 -0.3
ARU pmax pmax
comp=Z,15nm,1.2s,mb4.6
ARU Arti 39.99 321 *e*P **P 06 10 04.5 +0.1**
comp=Z,9.1nm,0.2s,mb5.2
TIXI Tiksi 41.01 11 *e*P **P 06 10 12.1 -0.6**
SEY Seymchan 42.15 30⇑ *e*P **P 06 10 21.4 -0.7**
PETK Petropavlovsk- 42.24 45 P **P 06 10 22.6 -0.4**
comp=Z,8.1nm,0.8s,mb4.4,baz=236,slow=4.5,SNR=12
PETK LR LR 06 27 27.1
comp=Z,475nm,21.8s,MS4.3,baz=279,slow=36
PETK Petropavlovsk- 42.24 45 P **P 06 10 22.6 -0.4**
PETK LR LR 06 27 27.1
BILL Bilibino 49.27 26⇑ *e*P **P 06 11 18.1 -0.2**
BILL *e* 06 13 07.9
BILL pmax pmax
comp=Z,22nm,1.2s,mb5.1
BILL Bilibino 49.27 26 *e*P **P 06 11 17.9 -0.4**
comp=Z,12nm,0.6s,mb5.1
VSR Storozhevoye 50.95 312 *e*P **P 06 11 30.8 -0.5**
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VSR pmax pmax
comp=N,3.0nm,0.4s
VSR pmax pmax
comp=E,3.0nm,0.5s
SOC Sochi 51.70 302 *e*P **P 06 11 37.0 -0.1**
SOC *e*S **S 06 19 03.0 +4.5**
SOC pmax pmax
comp=Z,9.0nm,0.4s,mb5.0
OBN Obninsk 52.17 317⇓ *e*P **P 06 11 40.1 -0.3**
OBN *e* 06 13 39.7
OBN *e*S **S 06 18 56.9 -7.8**
OBN pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
ANN Anapa 53.07 304 *e*P **P 06 11 45.8 -1.4**
ANN *e*S **S 06 19 14.5 -2.7**
ANN pmax pmax
comp=Z,26nm,1.3s,mb5.0
JOF Joensuu 54.39 327 *e*p **P 06 11 56.4 -0.2**
comp=Z,13nm,0.8s,mb4.9
KEV Kevo 55.83 336 *e*p **P 06 12 06.3 -0.6**
ARCES ARCESS Array B 56.37 335 P **P 06 12 10.4 -0.4**
comp=Z,2.3nm,0.7s,mb4.3,baz=73,slow=8.1,SNR=13
ARCES PcP PcP 06 13 07.5 -0.3
comp=Z,1.2nm,0.7s,baz=73,slow=5.4,SNR=5.1
ARCES ARCESS Array B 56.37 335 P **P 06 12 10.4 -0.4**
ARCES PcP PcP 06 13 07.5 -0.3
KAF Kangasniemi 56.78 326 *e*P **P 06 12 12.5 -1.3**
KAF pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
KAF Kangasniemi 56.78 326 *e*p **P 06 12 12.5 -1.3**
comp=Z,7.1nm,0.6s,mb4.9
FINES FINESS Array B 56.98 326 P **P 06 12 14.8 -0.5**
comp=Z,7.7nm,0.7s,mb4.9,baz=91,slow=7.2,SNR=32
BR131 Keskin Array S 57.06 299 *e*P **P 06 12 16.1 0.0**
comp=Z,0.8nm,0.6s,mb3.9
BRTR Keskin Array B 57.06 299 P **P 06 12 16.2 +0.1**
comp=Z,2.1nm,0.8s,mb4.2,baz=101,slow=6.7,SNR=8.4
VSU Vasula 57.13 322 *e*P **P 06 12 16.3 0.0**
VSU pmax pmax
comp=Z,15nm,1.1s,mb4.9
AKASG Malin Array Be 57.24 313 P **P 06 12 16.4 -0.9**
comp=Z,5.5nm,0.6s,mb4.8,baz=68,slow=6.6,SNR=14
AKASG LR LR 06 40 03.5
comp=Z,720nm,21.7s,MS4.7,baz=225,slow=39
AKBB Malin Array Si 57.24 313 *e*P **P 06 12 16.7 -0.5**
KIEV Kiev 57.25 313 *e*P **P 06 12 16.6 -0.7**
KIEV pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
KIEV Kiev 57.25 313 *e*P **P 06 12 16.6 -0.7**
comp=Z,4.7nm,0.8s,mb4.6
WRAB Tennant Creek 59.09 148 *e*P **P 06 12 29.9 -0.6**
WRAB pmax pmax
comp=Z,13nm,0.8s,mb5.0
WRAB Tennant Creek 59.09 148 *e*P **P 06 12 29.9 -0.6**
comp=Z,13nm,0.8s,mb5.0
WRA Warramunga Arr 59.10 148 P **P 06 12 30.6 +0.1**
comp=Z,10.0nm,0.8s,mb4.9,baz=341,slow=7.5,SNR=52
KWP Kalwaria Pacla 61.56 313 *e*P **P 06 12 47.5 +0.4**
KWP pmax pmax
comp=Z,33nm,1.0s,mb5.4
KWP Kalwaria Pacla 61.56 313 *e*P **P 06 12 47.5 +0.4**
comp=Z,33nm,1.0s,mb5.4
KOLS Kolonicke sedl 62.05 312 *e*P **P 06 12 50.9 +0.5**
KOLS pmax pmax
comp=Z,2.0nm,0.7s,mb4.4
KOLS Kolonicke sedl 62.05 312 *e*P **P 06 12 50.9 +0.5**
comp=Z,1.8nm,0.7s,mb4.3
ASAR Alice Springs 62.19 151 P **P 06 12 51.9 +0.3**
comp=Z,4.1nm,0.6s,mb4.7,baz=334,slow=6.2,SNR=38
STHS Stebnicka Huta 62.53 313 *e*P **P 06 12 54.5 +0.9**
STHS pmax pmax
comp=Z,4.0nm,1.1s,mb4.5
STHS Stebnicka Huta 62.53 313 *e*P **P 06 12 54.5 +0.9**
comp=Z,3.7nm,1.1s,mb4.4
NIE Niedzica 63.11 313 *e*P **P 06 12 58.6 +1.1**
OJC Ojcow 63.15 314 *e*P **P 06 12 56.9 -0.9**
KECS Kecovo 63.31 312 *e*P **P 06 12 59.5 +0.6**
KECS pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
KECS Kecovo 63.31 312 *e*P **P 06 12 59.5 +0.6**
comp=Z,1.7nm,0.8s,mb4.2
NB2 NORSAR Subarra 64.03 327 P **P 06 13 02.2 -1.1**
comp=Z,5.4nm,0.7s,mb4.7,baz=70,slow=6.5
NOA NORSAR Array B 64.03 327 P **P 06 13 02.2 -1.1**
comp=Z,6.8nm,0.9s,mb4.7,baz=70,slow=6.6,SNR=14
NOA NORSAR Array B 64.03 327 P **P 06 13 02.2 -1.1**
OKC Ostrava-Krasne 64.29 314 AMS AMS 06 37 00.0
comp=Z,800nm,18.9s
VYHS Vyhne 64.34 313 *e*P **P 06 13 05.6 0.0**
VYHS pmax pmax
comp=Z,7.0nm,1.5s,mb4.5
VYHS Vyhne 64.34 313 *e*P **P 06 13 05.6 0.0**
comp=Z,7.3nm,1.5s,mb4.5
MORC Moravsky Berou 64.67 314 *e*P **P 06 13 07.7 -0.1**
MORC pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
MORC Moravsky Berou 64.67 314 *e*P **P 06 13 07.7 -0.1**
comp=Z,4.0nm,0.9s,mb4.5
DPC Dobruska-Polom 65.20 315 *e*P **P 06 13 11.6 +0.4**
DPC MLR MLR
comp=Z,1μm,29.1s,MS4.8
DPC Dobruska-Polom 65.20 315 *e*P **P 06 13 11.6 +0.4**
DPC AMS AMS 06 28 10.0
comp=Z,1μm,29.1s
UPC Upice 65.32 315 *e*P **P 06 13 12.7 +0.7**
UPC Upice 65.32 315 *e*P **P 06 13 12.7 +0.7**
TREC Trest 66.10 314 AMS AMS 06 30 40.0
comp=Z,1μm,22.1s
PVCC Panska Ves 66.17 316 AMS AMS 06 31 50.0
comp=Z,2μm,20.0s
CHUM Lake Minchumin 66.25 28 *e*P **P 06 13 18.1 +0.4**
comp=Z,8.4nm,0.7s,mb4.9
PRU Pruhonice 66.39 315 AMS AMS 06 28 00.0
comp=Z,900nm,29.4s
BPAW Bear Paw Mtn. 66.68 28 *e*P **P 06 13 20.3 -0.2**
comp=Z,6.8nm,0.8s,mb4.7
BPAW *e*PP PP 06 15 47.1 +0.3
PPLA Purkeypile 66.73 29 *e*P **P 06 13 21.2 +0.4**
comp=Z,12nm,0.6s,mb5.1
CLL Collm 66.77 317 *e*P **P 06 13 21.0 -0.3**
KHC Kasperske Hory 67.31 315 *e*P **P 06 13 25.9 +1.1**
KHC MLR MLR
comp=Z,1μm,17.8s,MS5.1
KHC Kasperske Hory 67.31 315 *e*P **P 06 13 25.9 +1.1**
KHC AMS AMS 06 36 00.0
comp=Z,1μm,17.8s
GEC2 GERESS Array S 67.35 314 *e*P **P 06 13 25.2 +0.2**
comp=Z,606nm,0.8s
GERES GERESS Array B 67.35 314 P **P 06 13 25.1 +0.1**
comp=Z,2.6nm,0.9s,mb4.2,baz=68,slow=4.9,SNR=11
COLA College 67.51 26 *e*P **P 06 13 25.3 -0.5**
COLA pmax pmax
comp=Z,18nm,1.1s,mb5.0
COLA College 67.51 26 *e*P **P 06 13 25.3 -0.5**
comp=Z,18nm,1.1s,mb5.0
NKC Novy Kostel 67.53 316 AMS AMS 06 29 50.0
comp=Z,2μm,21.3s
RSO Redoubt South 67.58 32 *e*P **P 06 13 25.4 -0.8**
PMR Palmer 68.61 30 *e*P **P 06 13 31.8 -0.9**
PMR pmax pmax
comp=Z,12nm,0.6s,mb5.0
PMR Palmer 68.61 30 *e*P **P 06 13 31.8 -0.9**
comp=Z,12nm,0.6s,mb5.0
INK Inuvik 70.30 20 *e*P **P 06 13 42.8 -0.3**
INK pmax pmax
comp=Z,8.0nm,0.8s
INK Inuvik 70.30 20 *e*P **P 06 13 42.8 -0.2**
comp=Z,7.5nm,0.8s,mb4.7
BMRM Bremner River 70.80 29 *e*P **P 06 13 45.9 -0.4**
comp=Z,21nm,0.9s,mb5.1
DAWY Dawson 71.04 25 *e*P **P 06 13 47.1 -0.5**
CDF Champ du Feu 71.37 316 *e*P **P 06 13 49.5 -0.4**
SUMG Summit 72.17 349 *e*P **P 06 13 54.4 +0.1**
comp=Z,7.7nm,1.0s,mb4.6
KMBO Kilima Mbogo 72.45 257 *e*P **P 06 13 57.2 +0.3**
KMBO pmax pmax
comp=Z,5.0nm,0.8s
KMBO Kilima Mbogo 72.45 257 *e*P **P 06 13 57.2 +0.2**
comp=Z,4.9nm,0.8s,mb4.5
LPG La Plagne 73.09 313 *e*P **P 06 14 00.6 +0.4**
comp=Z,21nm,0.7s,mb4.9
LPG La Plagne 73.09 313 *e*P **P 06 14 00.6 +0.4**
LPG pmax pmax
comp=Z,11nm,0.7s,mb4.9
LPG La Plagne 73.09 313 *e*P **P 06 14 00.6 +0.4**
comp=Z,11nm,0.7s,mb4.9
LPL La Plagne 73.09 313 *e*P **P 06 14 00.5 +0.2**
comp=Z,37nm,1.0s,mb5.0
LPL La Plagne 73.09 313 *e*P **P 06 14 00.5 +0.2**
LPL pmax pmax
comp=Z,19nm,1.0s,mb5.0
LPL La Plagne 73.09 313 *e*P **P 06 14 00.5 +0.2**
comp=Z,19nm,1.0s,mb5.0
HYT Haines Junctio 73.71 27 *e*P **P 06 14 07.2 +3.6**
AVF Avril sur Loir 74.48 316 *e*P **P 06 14 07.7 -0.7**
comp=Z,8.5nm,0.9s,mb4.4
AVF Avril sur Loir 74.48 316 *e*P **P 06 14 07.7 -0.7**
AVF pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
AVF Avril sur Loir 74.48 316 *e*P **P 06 14 07.7 -0.7**
comp=Z,4.3nm,0.9s,mb4.4
SKAG Skagway 75.42 27 *e*P **P 06 14 13.3 -0.2**
comp=Z,17nm,1.0s,mb4.9
CAF Calviac 76.23 315 *e*P **P 06 14 18.5 0.0**
KEST Kesra 76.23 304 P **P 06 14 18.9 +0.2**
comp=Z,2.4nm,1.0s,mb4.1,baz=90,slow=3.0,SNR=3.6
SFJD Kangerlussuaq 79.03 351 PFAKE 06 14 40.0 +6.3
SFJD LR LR
comp=Z,2μm,20.0s,MS5.5
YKA Yellowknife Ar 79.86 18 P **P 06 14 37.5 -0.8**
comp=Z,2.7nm,0.7s,mb4.3,baz=329,slow=5.2,SNR=20
YKA Yellowknife Ar 79.86 18 P **P 06 14 37.5 -0.8**
FFC Flin Flon 89.82 16 *i*P **P 06 15 28.5 0.0**
FFC Flin Flon 89.82 16 *e*P **P 06 15 28.2 -0.3**
comp=Z,3.1nm,0.7s,mb4.8
SCHQ Schefferville 92.64 356 P **P 06 15 41.5 -0.2**
comp=Z,3.3nm,0.6s,mb4.9,baz=2.1,slow=1.2,SNR=8.6
TORD Torodi Ar. Bea 94.33 288 P **P 06 15 49.8 -0.4**
comp=Z,0.4nm,0.6s,mb4.0,baz=53,slow=4.9,SNR=7.0
SNOW Snow King Moun 97.31 26 *e*P **P 06 15 57.1 -6.1**
TXAR Lajitas Array 112.42 27 PKiKP PKiKP 06 21 06.0 -0.5
comp=Z,0.3nm,0.6s,baz=174,slow=1.6,SNR=5.0
OTAV Otavalo 147.08 7 *e*PKPbc PKPbc 06 22 13.5 -0.2
LPAZ La Paz 162.74 339 PKP PKPdf 06 22 33.4 +0.6
comp=Z,1.5nm,0.8s,baz=275,slow=3.2,SNR=5.8
PLCA Paso Flores 171.34 200 PKP PKPdf 06 22 38.9 +0.5
comp=Z,5.7nm,1.2s,baz=244,slow=2.2,SNR=3.3

IDC 05 06:15:09.2±3.9, 30°.23S×138°.43E, h0km, mb1 3.1/3, mb1mx3.0/14, mbtmp2.8/3, ML2.4/3, Error ellipse: s-maj=104.5km s-min=16.5km az=44.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**3.17**	**122**	Pn	Pn	06 16 01.0	+0.7
	0.1nm,0.3s,baz=305,slow=16,SNR=4.0						
STKA				Pg	Pg	06 16 08.7	-1.3
	1.1nm,0.3s,baz=292,slow=13,SNR=13						
STKA				Lg		06 16 47.4	
	2.4nm,0.3s,baz=192,slow=21,SNR=8.7						
ASAR	**Alice Springs**	**7.68**	**327**	Pn	Pn	06 17 01.4	-0.9
	0.1nm,0.3s,baz=153,slow=13,SNR=3.5						
WRA	**Warramunga Arr**	**10.89**	**339**	Pn	Pn	06 17 47.4	+1.0
	0.0nm,0.3s,baz=153,slow=13,SNR=3.7						
WRA				Sn	Sn	06 19 48.1	-0.9
	0.0nm,0.3s,baz=163,slow=24,SNR=2.9						

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*IDC **05** 06:35:26.3±1.1, 30°.80N×103°.46E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.6/25, mbtmp3.6/7, Error ellipse: s-maj=43.5km s-min=19.7km az=54.0*
*ISCJB **05** 06:35:26.7±0.5, 30°.86N±0°.04×103°.58E±0°.05, h10km, mb3.6/8, Error ellipse: s-maj=6.3km s-min=5.5km az=179.1*
*NEIC **05** 06:35:28.4±0.5, 30°.97N×103°.64E, h10km, mb4.4/1, Error ellipse: s-maj=15.2km s-min=9.3km az=55.0*
*BJI **05** 06:35:29.4, 30°.81N×103°.59E, h14km, mb4.0/1, ML3.6/15, Ms3.6/1, Ms7 3.6/1*

ISC 05 06:35:28.6±0.5, 30°.88N±0°.03×103°.48E±0°.05, h10km, n19, σ1 810/27, mb3.6/8, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.24**	**83**⇓	*i*Pg	**Pg**	**06 35 34.5**	**+1.0**
CD2				Sg	**Sg**	**06 35 40.0**	**+3.1**
CD2				smax			
	comp=N,22μm,0.7s						
CD2				smax			
	comp=E,31μm,0.7s						
LZH	**Lanzhou**	**5.20**	**3**	Pg	**Pg**	**06 37 11.5**	**+3.3**
LZH				Sg	**Sg**	**06 38 15.5**	**0.0**
LZH				smax			
	comp=N,130nm,1.1s						
LZH				smax			
	comp=E,62nm,1.2s						
LZH				LR	LR		
	comp=N,370nm,6.4s						
LZH				LR	LR		
	comp=Z,400nm,9.2s						
ENH	**Enshi**	**5.22**	**95**	*e*Pn	**Pn**	**06 36 45.8**	**-0.9**
	comp=Z,73nm,0.7s						
ENH				*e*Sg	**Sg**	**06 38 16.3**	**+0.2**
GYA	**Guiyang**	**5.22**	**147**	Pn	**Pn**	**06 36 46.9**	**+0.2**
GYA				Sn	**Sn**	**06 37 46.8**	**-0.2**
GYA				Sg	**Sg**	**06 38 09.9**	**-6.4**
GYA				smax			
	comp=N,150nm,0.7s						
GYA				smax			
	comp=E,130nm,0.6s						
XAN	**Xi'an**	**5.57**	**54**	Pn	**Pn**	**06 36 50.2**	**-1.4**
XAN				Sn	**Sn**	**06 37 56.9**	**+1.2**
XAN				Sg	**Sg**	**06 38 24.6**	**-3.0**
XAN				smax			
	comp=N,130nm,1.0s						
XAN				smax			
	comp=E,48nm,0.9s						
KMI	**Kunming**	**5.77**	**187**	Pn	**Pn**	**06 36 54.9**	**+0.6**
KMI				Sn	**Sn**	**06 38 00.6**	**0.0**
KMI				smax			
	comp=N,32nm,0.8s						
KMI				smax			
	comp=E,46nm,0.8s						
CMAR	**Chiang Mai Arr**	**13.04**	**199**	Pn	**Pn**	**06 38 36.6**	**+2.7**
	comp=E,0.3nm,0.3s,baz=8.5,slow=13,SNR=5.8						
SONM	**Songino Array**	**17.08**	**7**	Pn	**Pn**	**06 39 31.0**	**+3.7**
	comp=E,0.1nm,0.3s,baz=185,slow=14,SNR=2.4						
KSRS	**Korea Array**	**21.23**	**65**	P	**P**	**06 40 14.3**	**-0.3**
	comp=E,1.0nm,0.5s,mb3.4,baz=252,slow=11,SNR=5.8						
MK31	**Makanchi Array**	**22.80**	**320**	P	**P**	**06 40 31.3**	**0.0**
MKAR	**Makanchi Array**	**22.80**	**320**	P	**P**	**06 40 31.9**	**+0.6**
	comp=E,0.6nm,0.8s,mb3.1,baz=125,slow=11,SNR=5.2						
ZALV	**Zalesovo Beam**	**26.69**	**335**	P	**P**	**06 41 07.1**	**-0.6**
	comp=E,0.9nm,0.4s,mb3.6,baz=140,slow=9.4,SNR=4.7						
ZALV	**Zalesovo Beam**	**26.69**	**335**	P	**P**	**06 41 07.1**	**-0.6**
KURK	**Kurchatov**	**27.11**	**324**	P	**P**	**06 41 11.2**	**-0.2**
	comp=E,0.7nm,0.7s,mb3.3,baz=127,slow=11,SNR=5.7						
WRAB	**Tennant Creek**	**58.59**	**146**	*e*P	**P**	**06 45 25.3**	**-0.4**
	comp=E,3.0nm,0.9s,mb4.3						
WRA	**Warramunga Arr**	**58.59**	**146**	P	**P**	**06 45 24.9**	**-0.8**
	comp=E,0.9nm,0.5s,mb4.1,baz=338,slow=7.8,SNR=12						
WRA	**Warramunga Arr**	**58.59**	**146**	P	**P**	**06 45 24.9**	**-0.8**
ASAR	**Alice Springs**	**61.58**	**148**	P	**P**	**06 45 44.8**	**-1.5**
	comp=E,0.2nm,0.3s,mb3.7,baz=333,slow=7.0,SNR=3.0						
YKA	**Yellowknife Ar**	**82.06**	**17**	P	**P**	**06 47 48.3**	**-0.4**
	comp=E,0.4nm,0.7s,mb3.5,baz=331,slow=4.5,SNR=3.9						

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*BJI **05** 06:44:23.1, 53°.25N×174°.77W, h241km, mB4.3/6, mb4.5/20*
*ISCJB **05** 06:44:24.8±0.1, 53°.05N±0°.04×174°.50W±0°.03, h258km, mb4.4/148, Error ellipse: s-maj=5.0km s-min=2.3km az=5.3*
*NEIC **05** 06:44:26.2±0.2, 53°.03N×174°.56W, mb4.5/118, Error ellipse: s-maj=5.7km s-min=3.0km az=184.0*
*IDC **05** 06:44:26.5±0.6, 53°.05N×174°.50W, h264km±3km, mb4.0/27,*

mb1 4.1/29,mb1mx4.1/34,mbtmp4.0/29,Error ellipse: s-maj=13.2km s-min=7.5km az=177.0

ISC 05 06:44:26.4±0.2,**53°07N**±0°04×**174°50W**±0°03,**h260**km, **h260**km±2.3km:**pP-P,n654,**c0±**74**/657,**mb4.4**/148, **212C-181D,Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**1.37**	**225**	*e*Pn	**Pn**	**06 45 00.2**	**-4.5**
GSTR				*e*Sn	**S**	**06 45 27.9**	**-7.0**
ADK	**Adak**	**1.79**	**229**	P	**Pn**	**06 45 02.6**	**-5.3**
ADK				S	**S**	**06 45 33.4**	**-7.2**
NIKO	**Nikolski**	**3.41**	**89**	P	**Pn**	**06 45 19.9**	**-3.9**
NIKO				*e*Sn	**S**	**06 46 02.8**	**-6.7**
NIKO				S	**S**	**06 46 03.9**	**-5.6**
AMKA	**Amchitka**	**4.17**	**249**	*e*P	**Pn**	**06 45 27.8**	**-4.8**
UNV	**Unalaska Valle**	**4.84**	**78**	P	**Pn**	**06 45 38.2**	**-2.3**
UNV				S	**S**	**06 46 36.7**	**-2.9**
AKUT	**Akutan**	**5.30**	**75**	*e*P	**Pn**	**06 45 43.9**	**-2.2**
FALS	**False Pass**	**6.78**	**70**	P	**Pn**	**06 46 02.5**	**-1.7**
FALS				S	**S**	**06 47 23.3**	**+0.4**
SMY	**Shemya**	**6.91**	**272**	P	**Pn**	**06 46 06.0**	**+0.1**
FX1	**Attu Island--F**	**7.46**	**273**	P	**Pn**	**06 46 10.8**	**-1.9**
	12nm,0.3s,baz=245,slow=1.5,SNR=95						
FX1				S	**S**	**06 47 32.7**	**-5.7**
	15nm,0.3s,baz=169,slow=22,SNR=10						
FX1	**Attu Island--F**	**7.46**	**273**	P	**Pn**	**06 46 10.8**	**-2.0**
SDPT	**Sand Point**	**8.53**	**69**	*e*P	**Pn**	**06 46 22.7**	**-3.5**
	91nm,0.4s						
CHGN	**Chignik**	**9.86**	**64**	*e*P	**Pn**	**06 46 39.8**	**-3.1**
OHAK	**Old Harbor**	**12.80**	**63**	*e*Pn	**Pn**	**06 47 15.4**	**-4.0**
OHAK				S	**S**	**06 49 34.0**	**-7.5**
TNA	**Tin City**	**12.96**	**12**	*e*Pn	**Pn**	**06 47 21.4**	**+0.2**
SVW2	**Sparrevohn**	**13.01**	**44**	*e*Pn	**Pn**	**06 47 22.4**	**+0.5**
KDAK	**Kodiak Island**	**13.28**	**60**	*e*Pn	**Pn**	**06 47 22.5**	**-2.8**
TTA	**Tatalina**	**13.86**	**37**	*e*Pn	**Pn**	**06 47 32.9**	**+0.7**
RSO	**Redoubt South**	**13.98**	**49**	*e*Pn	**Pn**	**06 47 35.2**	**+1.6**
SLKM	**Skilak Lake**	**15.17**	**51**	*e*Pn	**Pn**	**06 47 46.1**	**-1.9**
PPLA	**Purkeypile**	**15.30**	**41**	*e*P	**Pn**	**06 47 50.9**	**+1.4**
	384nm,1.0s						
FIB	**Fire Island**	**15.42**	**49**	*e*P	**Pn**	**06 47 48.6**	**-2.3**
	522nm,0.9s						
SEW	**Seward**	**15.42**	**53**	*e*P	**Pn**	**06 47 49.9**	**-1.0**
	406nm,0.8s						
RC01	**Rabbit Creek A**	**15.59**	**49**	*e*P	**Pn**	**06 47 51.8**	**-1.1**
	52nm,0.3s						
RC01				*e*S	**S**	**06 50 36.7**	**-5.7**
CHUM	**Lake Minchumin**	**15.77**	**38**	*e*P	**Pn**	**06 47 55.3**	**+0.3**
	103nm,0.9s						
PMR	**Palmer**	**16.04**	**48**	*e*Pn	**Pn**	**06 47 56.1**	**-2.1**
KTH	**Kantishna Hill**	**16.12**	**40**	*e*P	**P**	**06 47 59.0**	**+1.4**
	4.8nm,1.4s						
BPAW	**Bear Paw Mtn.**	**16.38**	**38**	*e*P	**P**	**06 48 01.7**	**+1.2**
	6.5nm,0.6s						
PETK	**Petropavlovsk-**	**16.66**	**281**	P	**P**	**06 48 03.9**	**+0.2**
	5.6nm,0.3s,baz=87,slow=13,SNR=79						
DIV	**Divide**	**17.44**	**51**	*e*Pn	**Pn**	**06 48 14.0**	**-0.5**
	169nm,1.2s						
BILL	**Bilibino**	**17.60**	**336**	*e*P	**P**	**06 48 14.9**	**+1.2**
	33nm,0.8s						
COLA	**College**	**17.94**	**38**	*e*P	**P**	**06 48 16.4**	**-1.0**
	66nm,0.8s						
PAX	**Paxson**	**18.12**	**45**	*e*P	**P**	**06 48 19.4**	**0.0**
	112nm,0.9s						
COLD	**Coldfoot**	**18.45**	**30**	*e*P	**P**	**06 48 24.0**	**+1.2**
	71nm,0.8s						
MENT	**Mentasta**	**18.87**	**46**	*e*P	**P**	**06 48 27.9**	**+0.5**
PNL	**Peninsula**	**20.34**	**57**	*e*P	**P**	**06 48 43.2**	**+0.2**
	82nm,0.5s						
EGAK	**Eagle**	**20.52**	**42**	*e*P	**P**	**06 48 44.5**	**-0.4**
	156nm,0.9s						
DAWY	**Dawson**	**21.05**	**45**	*e*P	**P**	**06 48 50.1**	**-0.3**
HYT	**Haines Junctio**	**21.36**	**54**	*e*P	**P**	**06 48 55.4**	**+2.1**
SKAG	**Skagway**	**22.40**	**58**	*e*P	**P**	**06 49 03.9**	**+1.0**
	17nm,1.1s,mb4.3						
INK	**Inuvik**	**24.54**	**36**	P	**P**	**06 49 22.1**	**-0.1**
	14nm,0.7s,mb4.5,baz=237,slow=7.2,SNR=80						
INK				pP		06 50 08.9	
	28nm,1.1s,baz=242,slow=9.8,SNR=4.1						
INK				ScP	ScP	06 56 04.8	-1.0
	2.4nm,0.9s,baz=259,slow=7.1,SNR=4.4						
INK	**Inuvik**	**24.54**	**36**	*e*P	**P**	**06 49 22.1**	**-0.1**
	55nm,1.2s,mb4.9						
DLBC	**Dease Lake**	**25.22**	**60**	P	**P**	**06 49 26.5**	**-1.8**
	1.8nm,0.4s,mb3.9,baz=210,slow=7.4,SNR=5.7						
DLBC	**Dease Lake**	**25.22**	**60**	*e*P	**P**	**06 49 29.1**	**+0.7**
TIXI	**Tiksi**	**30.52**	**329**	*e*P	**P**	**06 50 14.9**	**-0.3**
	3.9nm,0.7s,mb4.0						
YKA	**Yellowknife Ar**	**32.13**	**49**	P	**P**	**06 50 28.7**	**-0.6**
	28nm,0.8s,mb4.8,baz=281,slow=8.5,SNR=116						
YKA				PcP	PcP	06 53 10.8	-0.6
	1.4nm,0.7s,baz=285,slow=2.7,SNR=4.8						
YKA				ScP	ScP	06 56 29.1	-0.5
	1.4nm,0.9s,baz=288,slow=2.9,SNR=5.9						
NLWA	**Neilton Lookou**	**32.31**	**79**	⇓P	**P**	**06 50 32.0**	**+0.9**
	baz=32,SNR=6.1						
NLWA	**Neilton Lookou**	**32.31**	**79**	*e*P	**P**	**06 50 32.2**	**+1.2**
	9.0nm,0.7s,mb4.4						
A05A	**Maple Falls**	**32.60**	**76**	⇓P	**P**	**06 50 33.5**	**0.0**
	baz=32						
GNW	**Green Mountain**	**32.84**	**78**	*e*P	**P**	**06 50 36.5**	**+0.9**
	16nm,1.2s,mb4.4						
JCW	**Jim Creek**	**33.07**	**77**	*e*P	**P**	**06 50 38.1**	**+0.5**
JCW				*e*ScP	ScP	06 56 34.0	+0.8
B06A	**Marblemount**	**33.17**	**76**	⇓P	**P**	**06 50 38.5**	**0.0**
	baz=33						
RPW	**Rockport**	**33.19**	**76**	*e*P	**P**	**06 50 38.7**	**+0.1**
D05A	**Enumclaw**	**33.52**	**78**	⇑P	**P**	**06 50 42.6**	**+1.1**
	baz=34,SNR=13						
A07A	**Ashnola River,**	**33.57**	**75**	⇑P	**P**	**06 50 41.4**	**-0.4**
	baz=34,SNR=8.3						
LON	**Longmire**	**33.85**	**79**	*e*P	**P**	**06 50 45.3**	**+1.0**
	10nm,0.6s,mb4.5						
F04A	**Amboy**	**33.91**	**81**	⇑P	**P**	**06 50 45.2**	**+0.3**
	baz=34,SNR=11						
COR	**Corvallis**	**34.10**	**83**	*e*P	**P**	**06 50 48.0**	**+1.5**
	40nm,1.0s,mb4.9						
G04A	**Mulino**	**34.26**	**82**	⇑P	**P**	**06 50 48.8**	**+0.9**
	baz=34						
B08A	**Colville Reser**	**34.51**	**75**	⇑P	**P**	**06 50 49.9**	**-0.1**
	baz=34,SNR=8.2						
HOOD	**Mount Hood Mea**	**34.69**	**81**	*e*P	**P**	**06 50 52.8**	**+1.2**
	182nm,1.3s,mb5.5						
H04A	**Detroit Lake**	**34.71**	**82**	⇑P	**P**	**06 50 52.3**	**+0.5**
	baz=35,SNR=19						
VFP	**Flag Point**	**34.80**	**81**	P	**P**	**06 50 53.4**	**+0.9**
E07A	**Sunnyside**	**35.10**	**78**	⇑P	**P**	**06 50 55.4**	**+0.4**
	baz=35						
B09A	**Rice**	**35.16**	**74**	⇓P	**P**	**06 50 55.5**	**0.0**
	baz=35						
G06A	**Carlson Farm,**	**35.34**	**81**	⇑P	**P**	**06 50 57.3**	**+0.2**
	baz=35						
RSW	**Rattlesnake Hi**	**35.34**	**78**	*e*P	**P**	**06 50 58.2**	**+1.1**
OD2	**Odessa Site #2**	**35.35**	**76**	*e*P	**P**	**06 50 56.8**	**-0.3**
HAWA	**Hanford**	**35.38**	**78**	*e*P	**P**	**06 50 58.2**	**+0.8**
	30nm,0.8s,mb4.9						
D08A	**Wollman Farm,**	**35.40**	**77**	⇓P	**P**	**06 50 57.2**	**-0.3**
	baz=35						
C09A	**Chrisman Ranch**	**35.40**	**75**	⇓P	**P**	**06 50 57.1**	**-0.5**
	baz=35						
F07A	**Phinny Hill Vi**	**35.41**	**79**	⇑P	**P**	**06 50 58.2**	**+0.5**
	baz=35						
HUMO	**Hull Mountain**	**35.42**	**86**	*e*P	**P**	**06 50 59.5**	**+1.7**
	24nm,1.2s,mb4.6						
BBOR	**Butler Butte**	**35.42**	**85**	P	**P**	**06 50 59.5**	**+1.7**
E08A	**Dider Farm, El**	**35.61**	**78**	⇑P	**P**	**06 50 59.4**	**+0.1**
	baz=36						
EDM	**Edmonton**	**35.68**	**65**	*e*P	**P**	**06 50 59.1**	**-0.8**
VIPM	**Ingram Point**	**35.75**	**82**	P	**P**	**06 51 01.3**	**+0.8**
D09A	**Jones Farm, Ri**	**35.76**	**76**	⇑P	**P**	**06 50 59.9**	**-0.6**
	baz=36						
B10A	**Chitwood Farm,**	**35.76**	**74**	⇑P	**P**	**06 51 00.5**	**-0.1**
	baz=36						
NEW	**Newport**	**35.84**	**74**	*e*P	**P**	**06 51 01.2**	**0.0**
	18nm,1.1s,mb4.5						
A11A	**Hall Mountain,**	**35.94**	**73**	⇑P	**P**	**06 51 02.5**	**+0.5**
	baz=36,SNR=6.4						
C10A	**Spilker Farm,**	**35.95**	**75**	⇑P	**P**	**06 51 02.1**	**-0.1**
	baz=36						
KHMM	**Horse Mountain**	**35.98**	**89**	*e*P	**P**	**06 51 04.8**	**+2.3**
	32nm,0.8s,mb4.9						
YBH	**Yreka Blue Hor**	**36.08**	**87**	*e*P	**P**	**06 51 04.5**	**+1.1**
	21nm,0.9s,mb4.7						
E09A	**Wood Farm, Sta**	**36.13**	**77**	⇓P	**P**	**06 51 03.6**	**-0.2**
	baz=36						
F08A	**Pendleton**	**36.14**	**79**	⇓P	**P**	**06 51 03.8**	**-0.1**
	baz=36						
B11A	**Sandpoint**	**36.19**	**73**	⇓P	**P**	**06 51 04.1**	**-0.1**
	baz=36						
G08A	**Pilot Rock**	**36.31**	**79**	⇑P	**P**	**06 51 04.8**	**-0.4**
	baz=36,SNR=7.5						
A12A	**Yaak River Ran**	**36.36**	**72**	⇓P	**P**	**06 51 05.6**	**0.0**
	baz=36						
D10A	**Wagner Farm, O**	**36.36**	**76**	⇓P	**P**	**06 51 05.3**	**-0.4**
	baz=36						
K05A	**Summer Lake**	**36.59**	**84**	⇓P	**P**	**06 51 09.2**	**+1.6**
	baz=36,SNR=26						
B12A	**Libby**	**36.62**	**73**	⇑P	**P**	**06 51 07.8**	**0.0**
	baz=36						
I07A	**Izee**	**36.65**	**81**	⇑P	**P**	**06 51 08.8**	**+0.6**
	baz=37,SNR=26						
F09A	**S2 Ranch, Elgi**	**36.70**	**78**	⇑P	**P**	**06 51 08.8**	**+0.2**
	baz=37						
E10A	**Myers Farm, Un**	**36.76**	**77**	⇓P	**P**	**06 51 08.4**	**-0.6**
	baz=37,SNR=7.4						
WDC	**Whiskeytown Da**	**36.87**	**88**	*e*P	**P**	**06 51 10.8**	**+0.7**
	22nm,0.9s,mb4.6						
MDJ	**Mudanjiang**	**36.90**	**280**	P	**P**	**06 51 08.9**	**-1.3**
MDJ				pP	pP	06 51 56.0	-6.5
MDJ				sP	sP	06 52 22.6	-10
MDJ				S	**S**	**06 56 35.9**	**+0.9**
MDJ				ScP	ScP	06 56 50.4	+3.3
MDJ				PcS	PcS	06 57 14.4	+0.5
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.0						
MDJ				LR	LR		
	comp=N,410nm,18.0s						
MDJ				LR	LR		
	comp=E,330nm,19.9s						
MDJ				LR	LR		
	comp=Z,860nm,21.4s						
H08A	**Prairie City**	**36.90**	**80**	⇓P	**P**	**06 51 10.3**	**0.0**
	baz=37,SNR=9.7						
D11A	**Klaveano Farm,**	**36.92**	**75**	⇑P	**P**	**06 51 09.1**	**-1.2**
	baz=37,SNR=7.9						
F10A	**Beach Ranch, E**	**36.96**	**77**	⇑P	**P**	**06 51 10.7**	**-0.1**
	baz=37						
A13A	**Flathead Natio**	**37.07**	**71**	⇑P	**P**	**06 51 10.7**	**-0.8**
	baz=37						
C12B	**Naegeli Ranch,**	**37.08**	**74**	⇓P	**P**	**06 51 11.3**	**-0.3**
	baz=37						
WALA	**Waterton Lakes**	**37.29**	**71**	*e*P	**P**	**06 51 12.8**	**-0.7**
	comp=Z,0.7nm,1.4s						
B13A	**Whitefish**	**37.32**	**72**	⇑P	**P**	**06 51 13.3**	**-0.4**
	baz=37						
E11A	**Bogner Ranch,**	**37.36**	**76**	⇓P	**P**	**06 51 12.8**	**-1.2**
	baz=37,SNR=5.1						
G10A	**Bishop Farm, J**	**37.39**	**78**	⇓P	**P**	**06 51 14.1**	**-0.3**
	baz=37,SNR=26						
BSMT	**Bassoo Peak**	**37.40**	**73**	*e*P	**P**	**06 51 14.8**	**+0.4**
H09A	**Durkee**	**37.42**	**79**	⇑P	**P**	**06 51 14.8**	**+0.2**
	baz=37,SNR=7.0						
MOD	**Modoc**	**37.43**	**85**	*e*P	**P**	**06 51 15.9**	**+1.2**
D12A	**Red Ives Fores**	**37.49**	**75**	⇓P	**P**	**06 51 14.3**	**-0.8**
	baz=37						
BMO	**Blue Mountains**	**37.53**	**79**	*e*P	**P**	**06 51 15.8**	**+0.3**
	comp=Z,22nm,1.3s,mb4.4						
HOPS	**Hopland**	**37.54**	**91**	*e*P	**P**	**06 51 16.9**	**+1.2**
	comp=Z,52nm,1.1s,mb4.9						
C13A	**Hot Springs**	**37.61**	**73**	⇓P	**P**	**06 51 15.6**	**-0.6**
	baz=38,SNR=5.9						
A14A	**Double T Ranch**	**37.61**	**71**	⇓P	**P**	**06 51 15.5**	**-0.6**
	baz=38,SNR=19						
F11A	**Grangeville**	**37.64**	**77**	⇑P	**P**	**06 51 15.3**	**-1.1**
	baz=38						
J08A	**Circle Bar Ran**	**37.67**	**82**	⇓P	**P**	**06 51 17.4**	**+0.7**
	baz=38						
JTMT	**Jette**	**37.74**	**73**	*e*P	**P**	**06 51 17.3**	**+0.1**
I09A	**Lost Marbles R**	**37.76**	**80**	⇓P	**P**	**06 51 17.3**	**-0.1**
	baz=38						
G11A	**Walters Elk Ra**	**37.84**	**78**	⇑P	**P**	**06 51 17.6**	**-0.5**
	baz=38,SNR=9.0						
D13A	**Huson**	**37.98**	**74**	⇑P	**P**	**06 51 18.6**	**-0.7**
	baz=38						
A15A	**Johnson Ranch,**	**38.00**	**71**	⇑P	**P**	**06 51 18.1**	**-1.3**
	baz=38,SNR=7.7						
H10A	**Noah's Angus R**	**38.00**	**79**	⇑P	**P**	**06 51 19.2**	**-0.3**
	baz=38,SNR=26						
B14A	**Marquette Ranc**	**38.01**	**72**	⇓P	**P**	**06 51 18.8**	**-0.6**
	baz=38						
SWMT	**Swartz Lake**	**38.03**	**73**	*e*P	**P**	**06 51 19.4**	**-0.3**
C14A	**Swan Lake**	**38.04**	**73**	⇓P	**P**	**06 51 18.9**	**-0.9**
	baz=38						
J09A	**Fry Pan Ranch,**	**38.11**	**81**	⇑P	**P**	**06 51 20.5**	**+0.2**
	baz=38						
WVOR	**Wild Horse Val**	**38.11**	**83**	*e*P	**P**	**06 51 21.1**	**+0.7**
	comp=Z,19nm,0.7s,mb4.6						
F12A	**Elk City**	**38.24**	**76**	⇓P	**P**	**06 51 21.1**	**-0.3**
	baz=38,SNR=24						
I10A	**Payette**	**38.25**	**80**	⇓P	**P**	**06 51 21.7**	**+0.2**
	baz=38						
OHCM	**Honcut**	**38.28**	**89**	*e*P	**P**	**06 51 22.2**	**+0.4**
H11A	**Donnelly**	**38.38**	**78**	⇓P	**P**	**06 51 22.0**	**-0.5**
	baz=38,SNR=16						
MSO	**Missoula**	**38.43**	**74**	*e*P	**P**	**06 51 22.6**	**-0.3**
	comp=Z,10.0nm,1.1s,mb4.2						
MSO				*e*PcP	PcP	06 53 30.7	+0.4
B15A	**Bradely Ranch,**	**38.44**	**71**	⇑P	**P**	**06 51 22.0**	**-1.1**
	baz=38,SNR=10.0						
SLMT	**Seeley Lake**	**38.47**	**73**	*e*P	**P**	**06 51 22.6**	**-0.6**
SLMT				*e*ScP	ScP	06 56 53.4	+0.5
E13A	**Victor**	**38.49**	**75**	⇓P	**P**	**06 51 22.8**	**-0.7**
	baz=38,SNR=5.8						
D14A	**Greenough**	**38.54**	**74**	⇑P	**P**	**06 51 22.6**	**-1.3**
	baz=38,SNR=12						
BEKR	**Beckworth**	**38.63**	**88**	⇑P	**P**	**06 51 25.0**	**+0.3**
	baz=39						
J10A	**Berg Farm, Mel**	**38.65**	**80**	⇓P	**P**	**06 51 24.5**	**-0.4**
	baz=39						
A16A	**West Butte Ran**	**38.66**	**70**	⇓P	**P**	**06 51 23.2**	**-1.7**
	baz=39,SNR=8.8						
C15A	**Salmond Ranch,**	**38.70**	**72**	⇓P	**P**	**06 51 24.5**	**-0.6**
	baz=39,SNR=25						
F13A	**Darby**	**38.76**	**76**	⇑P	**P**	**06 51 25.1**	**-0.6**
	baz=39,SNR=6.5						
CHMT	**Chamberlain Mo**	**38.78**	**74**	*e*P	**P**	**06 51 25.4**	**-0.4**
I11A	**Placerville**	**38.85**	**79**	⇓P	**P**	**06 51 26.1**	**-0.4**
	baz=39						
E14A	**Clinton**	**38.91**	**74**	⇑P	**P**	**06 51 26.5**	**-0.5**
	baz=39,SNR=7.9						
K10A	**MacKenzie Ranc**	**38.97**	**81**	⇓P	**P**	**06 51 27.5**	**0.0**
	baz=39						
D15A	**Lincoln**	**39.13**	**73**	⇓P	**P**	**06 51 28.1**	**-0.7**
	baz=39,SNR=6.1						
H12A	**Diamond D Ranc**	**39.15**	**78**	⇓P	**P**	**06 51 28.4**	**-0.5**
	baz=39,SNR=10						
A17A	**Triple J Farms**	**39.17**	**69**	⇓P	**P**	**06 51 27.9**	**-1.2**
	baz=39,SNR=25						
C16A	**Fuhringer Ranc**	**39.18**	**72**	⇓P	**P**	**06 51 28.2**	**-0.9**
	baz=39,SNR=5.7						
G13A	**Cobalt**	**39.20**	**77**	⇓P	**P**	**06 51 28.6**	**-0.8**
	baz=39,SNR=17						
MFID	**Camas Ranch**	**39.22**	**80**	⇓P	**P**	**06 51 29.3**	**-0.3**
	baz=39,SNR=11						
F14A	**Wisdom**	**39.31**	**75**	⇓P	**P**	**06 51 29.6**	**-0.6**
	baz=39						
PAHR	**Pah Rah Range**	**39.32**	**87**	*e*P	**P**	**06 51 31.3**	**+1.0**
	comp=Z,40nm,1.1s,mb4.8						
WCN	**Washoe City**	**39.35**	**88**	⇑P	**P**	**06 51 31.9**	**+1.3**
	baz=39,SNR=12						
E15A	**Deer Lodge**	**39.40**	**74**	⇓P	**P**	**06 51 30.1**	**-0.9**
	baz=39,SNR=7.7						
I12A	**Atlanta**	**39.41**	**79**	⇓P	**P**	**06 51 30.8**	**-0.3**
	baz=39,SNR=29						
B17A	**L&G Farms, Che**	**39.46**	**70**	⇓P	**P**	**06 51 30.4**	**-1.0**
	baz=39						
K11A	**Parker Ranch,**	**39.47**	**81**	⇑P	**P**	**06 51 31.9**	**+0.3**
	baz=39						
H13A	**Challis**	**39.49**	**77**	⇑P	**P**	**06 51 31.3**	**-0.5**
	baz=39,SNR=12						
G14A	**Jackson**	**39.57**	**76**	⇓P	**P**	**06 51 31.8**	**-0.6**
	baz=40						
L10A	**Juniper Basin**	**39.62**	**82**	⇑P	**P**	**06 51 33.2**	**+0.4**
	baz=40						
A18A	**Metzger Ranch,**	**39.67**	**69**	⇑P	**P**	**06 51 31.4**	**-1.8**
	baz=40,SNR=6.2						
D16A	**Dana Ranch, Ca**	**39.70**	**73**	⇑P	**P**	**06 51 32.7**	**-0.7**
	baz=40						
J12A	**Stokes Ranch,**	**39.75**	**80**	⇑P	**P**	**06 51 33.9**	**+0.1**
	baz=40,SNR=25						
CMB	**Columbia Colle**	**39.77**	**90**	*e*P	**P**	**06 51 35.1**	**+1.0**
	comp=Z,14nm,1.0s,mb4.2						
F15A	**Butte**	**39.81**	**75**	⇑P	**P**	**06 51 33.2**	**-1.1**
	baz=40						
CN2	**Changchun**	**39.82**	**282**	*e*P	**P**	**06 51 35.2**	**+0.8**
C17A	**Wharram Farm,**	**39.83**	**71**	⇓P	**P**	**06 51 33.3**	**-1.2**
	baz=40						
LRM	**Limekiln Ridge**	**39.84**	**75**	*e*P	**P**	**06 51 34.5**	**-0.1**
E16A	**East Helena**	**39.90**	**73**	⇑P	**P**	**06 51 34.3**	**-0.7**
	baz=40						
M10A	**I.L. Ranch, Tu**	**39.91**	**83**	⇓P	**P**	**06 51 35.5**	**+0.2**
	baz=40						
I13A	**Wildhorse Cree**	**39.94**	**78**	⇑P	**P**	**06 51 35.6**	**+0.1**
	baz=40,SNR=27						
HLID	**Hailey**	**39.97**	**79**	⇓P	**P**	**06 51 35.2**	**-0.5**
	baz=40,SNR=31						
HLID	**Hailey**	**39.97**	**79**	*e*P	**P**	**06 51 35.8**	**+0.1**
	comp=Z,25nm,1.1s,mb4.5						
HLID				*e*ScP	ScP	06 57 00.4	+1.6
H14A	**Leadore**	**39.98**	**77**	⇑P	**P**	**06 51 35.5**	**-0.3**
	baz=40,SNR=8.9						
B18A	**Beardsley Farm**	**39.98**	**70**	⇓P	**P**	**06 51 34.8**	**-0.9**
	baz=40						
L11A	**Cat Creek Ranc**	**39.99**	**81**	⇑P	**P**	**06 51 36.2**	**+0.3**
	baz=40						
DLMT	**Dillon**	**40.01**	**75**	*e*P	**P**	**06 51 35.9**	**-0.1**
	comp=Z,21nm,1.9s,mb4.2						
DLMT				*e*PcP	PcP	06 53 30.9	-4.5
WAKR	**Walker**	**40.04**	**89**	*e*P	**P**	**06 51 37.6**	**+1.3**
D17A	**Six Diamond Ra**	**40.13**	**72**	⇓P	**P**	**06 51 36.0**	**-1.0**
	baz=40,SNR=11						
MCMT	**McKenzie Canyo**	**40.17**	**76**	*e*P	**P**	**06 51 37.0**	**-0.3**
	comp=Z,7.3nm,0.8s,mb4.1						
BMN	**Battle Mountai**	**40.17**	**85**	*e*P	**P**	**06 51 38.2**	**+0.9**
	comp=Z,12nm,0.8s,mb4.3						
G15A	**Dillon**	**40.19**	**75**	⇑P	**P**	**06 51 36.4**	**-1.1**
	baz=40,SNR=9.0						
EGMT	**Eagleton**	**40.19**	**70**	⇓P	**P**	**06 51 36.3**	**-1.1**
	baz=40,SNR=6.3						
EGMT	**Eagleton**	**40.19**	**70**	*e*P	**P**	**06 51 36.6**	**-0.9**
	comp=Z,82nm,2.3s,mb4.7						
J13A	**Cove Ranch, Pi**	**40.21**	**79**	⇑P	**P**	**06 51 37.6**	**0.0**
	baz=40,SNR=50						
K12A	**Draper Farm, C**	**40.22**	**80**	⇓P	**P**	**06 51 37.8**	**0.0**
	baz=40,SNR=27						
I14A	**Mackay**	**40.33**	**78**	⇑P	**P**	**06 51 38.8**	**+0.2**
	baz=40,SNR=23						
F16A	**Kennard Place,**	**40.34**	**74**	⇓P	**P**	**06 51 37.7**	**-1.0**
	baz=40						
E17A	**Martinsdale**	**40.41**	**73**	⇓P	**P**	**06 51 39.0**	**-0.3**
	baz=40,SNR=8.5						
M11A	**Holland Ranch,**	**40.41**	**82**	⇑P	**P**	**06 51 39.9**	**+0.6**
	baz=40						
BOZ	**Bozeman (W)**	**40.42**	**74**	⇑P	**P**	**06 51 38.6**	**-0.7**
	baz=40,SNR=17						
BOZ	**Bozeman (W)**	**40.42**	**74**	*e*P	**P**	**06 51 38.8**	**-0.5**
	comp=Z,13nm,1.1s,mb4.2						
N10A	**Dunphy**	**40.42**	**84**	⇑P	**P**	**06 51 39.7**	**+0.3**
	baz=40						
L12A	**House Creek Ra**	**40.45**	**81**	⇑P	**P**	**06 51 40.0**	**+0.4**
	baz=40						
G16A	**Moss Hill, Enn**	**40.55**	**75**	⇓P	**P**	**06 51 39.3**	**-1.1**
	baz=40,SNR=17						
D18A	**Linhart Farms,**	**40.61**	**71**	⇑P	**P**	**06 51 40.5**	**-0.4**
	baz=40,SNR=8.3						
J14A	**Carey**	**40.64**	**78**	⇑P	**P**	**06 51 41.5**	**+0.3**
	baz=41						
O10A	**Cortez Mining,**	**40.69**	**84**	⇓P	**P**	**06 51 42.1**	**+0.5**
	baz=41						
K13A	**Stover Farm, H**	**40.70**	**80**	⇑P	**P**	**06 51 41.9**	**+0.2**
	baz=41,SNR=7.5						
NVAR	**Mina Array Bea**	**40.77**	**88**	P	**P**	**06 51 43.2**	**+0.9**
	comp=Z,12nm,0.7s,mb4.2,baz=300,slow=7.5,SNR=71						
NVAR				ScP	ScP	06 57 03.0	+0.9
	comp=Z,1.7nm,0.9s,baz=275,slow=3.5,SNR=4.7						
NVAR	**Mina Array Bea**	**40.77**	**88**	P	**P**	**06 51 43.2**	**+0.9**
NVAR				ScP	ScP	06 57 03.0	+0.8
N11A	**Elko Archery C**	**40.82**	**83**	⇓P	**P**	**06 51 43.2**	**+0.5**
	baz=41						
F17A	**Fitzpatrick Pl**	**40.83**	**73**	⇑P	**P**	**06 51 41.9**	**-0.8**
	baz=41,SNR=7.0						
**I15A

comp=Z,13nm,1.4s,mb4.0
REDW Red Top Meadow 42.19 77 eP P 06 51 53.9 +0.2
comp=Z,6.3nm,1.1s,mb3.8
PKM Peak Mountain 42.19 93 ⇓P P 06 51 54.6 +0.7
baz=42
KSRS Korea Array 42.24 272 P P 06 51 53.5 -0.7
comp=Z,2.3nm,1.0s,mb3.4,baz=38,slow=8.3,SNR=4.1
KSRS pP pP 06 52 45.8 -2.0
comp=Z,3.0nm,0.7s,baz=52,slow=7.3,SNR=5.9
J17A Brown Place, J 42.27 77 ⇓P P 06 51 54.6 +0.3
baz=42
O13A Hicks Ranch, I 42.30 83 ⇓P P 06 51 54.9 +0.3
baz=42
N14A Grayback Hills 42.33 81 ⇑P P 06 51 54.8 0.0
baz=42,SNR=11
BGU Big Grassy Mou 42.37 81 eP P 06 51 55.2 0.0
comp=Z,25nm,1.3s,mb4.3
M15A Larsen Ranch, 42.39 80 ⇑P P 06 51 55.3 0.0
baz=42
AHID Auburn Hatcher 42.40 78 eP P 06 51 55.9 +0.5
comp=Z,8.0nm,0.6s,mb4.1
R11A Troy Canyon, C 42.46 86 ⇓P P 06 51 56.2 +0.2
baz=42
Q12A Willow Creek R 42.48 84 ⇑P P 06 51 56.2 +0.1
baz=42,SNR=14
ISA Isabella 42.48 91 ⇑P P 06 51 55.5 -0.7
baz=42,SNR=5.9
ISA Isabella 42.48 91 eP P 06 51 56.4 +0.2
comp=Z,14nm,1.0s,mb4.1
I18A Diamond G Ranc 42.59 76 ⇑P P 06 51 56.8 -0.1
baz=42,SNR=5.3
L16A Fish Haven 42.66 79 ⇑P P 06 51 57.5 0.0
baz=43,SNR=6.1
N15A Stansbury Isla 42.70 81 ⇓P P 06 51 58.0 +0.1
baz=43
P13A Bates Ranch, G 42.70 83 ⇑P P 06 51 57.9 0.0
baz=43,SNR=16
J18A Kendall Valley 42.77 76 ⇓P P 06 51 58.1 -0.2
baz=43
S11A Rachel 42.82 87 ⇓P P 06 51 59.4 +0.5
baz=43
HWUT Hardware Ranch 42.83 79 eP P 06 51 59.3 +0.4
comp=Z,9.7nm,0.8s,mb4.1
FCC Fort Churchill 42.86 49 eP P 06 51 57.9 -1.0
comp=Z,1.3nm,1.4s,mb3.0
LAO LASA Array 42.93 70 eP P 06 51 59.4 -0.2
comp=Z,5.6nm,0.5s,mb4.0
L17A Cokeville 42.93 78 ⇓P P 06 51 59.1 -0.6
baz=43,SNR=6.2
DUG Dugway 42.96 82 ⇑P P 06 51 59.9 0.0
baz=43,SNR=34
DUG Dugway 42.96 82 eP P 06 52 00.4 +0.5
comp=Z,37nm,0.9s,mb4.6
M16A Huntsville 42.97 80 ⇑P P 06 51 59.8 -0.2
baz=43,SNR=14
OSI Osito Adit 43.04 92 eP P 06 52 02.1 +1.5
comp=Z,21nm,0.6s,mb4.5
R12A Pony Springs, 43.06 85 ⇓P P 06 52 00.9 +0.1
baz=43,SNR=8.2
DGMT Dagmar 43.07 67 ⇓P P 06 51 59.7 -1.0
baz=43
NOQ North Oquirrh 43.08 81 eP P 06 52 01.6 +0.7
comp=Z,33nm,1.0s,mb4.5
K18A Toltan Ranch, 43.10 77 ⇑P P 06 52 01.2 +0.2
baz=43
O15A The Old Anders 43.11 81 ⇓P P 06 52 01.4 +0.3
baz=43
P14A Drum Mountains 43.18 83 ⇑P P 06 52 02.1 +0.4
baz=43
U10A Ash Meadows, A 43.27 89 ⇓P P 06 52 02.9 +0.5
baz=43
BW06 Boulder Array 43.30 77 ⇑P P 06 52 01.8 -0.8
baz=43,SNR=26
BW06 Boulder Array 43.30 77 eP P 06 52 02.4 -0.2
comp=Z,22nm,1.0s,mb4.3
PDAR Pinedale Array 43.30 77 P P 06 52 02.3 -0.3
comp=Z,11nm,0.8s,mb4.2,baz=307,slow=3.8,SNR=73
PDAR pP pP 06 52 53.8 -2.7
comp=Z,1.3nm,0.5s,baz=302,slow=2.8,SNR=2.1
PDAR ScP ScP 06 57 12.2 0.0
comp=Z,0.9nm,1.0s,baz=318,slow=2.0,SNR=4.9
EDW2 Edwards Air Fo 43.30 92 ⇓P P 06 52 03.0 +0.3
baz=43
N16A Rees Ranch, Co 43.34 80 ⇑P P 06 52 02.7 -0.3
baz=43,SNR=6.7
S12A Delamar Landin 43.39 86 ⇓P P 06 52 04.4 +1.0
baz=43,SNR=16
T11A Corn Creek, Al 43.40 87 ⇓P P 06 52 03.8 +0.4
baz=43
M17A Scullys Gap (B 43.44 79 ⇓P P 06 52 03.5 -0.3
baz=43
Q14A Sevier Lake (B 43.44 83 ⇑P P 06 52 03.9 +0.1
baz=43,SNR=38
JLU Jordanelle 43.52 80 eP P 06 52 04.5 +0.2
comp=Z,23nm,1.1s,mb4.3
L18A Fontenelle, Gr 43.53 78 ⇓P P 06 52 04.3 -0.2
baz=43
R13A O'Grain Ranch, 43.55 85 ⇓P P 06 52 05.0 +0.4
baz=44
NLU North Lily Min 43.55 81 eP P 06 52 05.2 +0.6
comp=Z,15nm,0.9s,mb4.2
N17A Moffit Pass 43.67 79 ⇑P P 06 52 04.9 -0.6
baz=44
P15A Leamington 43.67 82 ⇓P P 06 52 05.7 +0.2
baz=44,SNR=23
K19A Absolon Red Bu 43.69 76 ⇑P P 06 52 04.6 -1.1
baz=44,SNR=22
MWC Mount Wilson 43.71 92 eP P 06 52 07.3 +1.4
comp=Z,57nm,1.4s,mb4.6
O16A Springville 43.73 81 ⇑P P 06 52 06.0 -0.1
baz=44,SNR=16
GSC Goldstone 43.73 90 ⇓P P 06 52 06.4 +0.2
baz=44,SNR=15
GSC Goldstone 43.73 90 eP P 06 52 07.0 +0.9
comp=Z,28nm,0.8s,mb4.5
DAU Daniels Canyon 43.75 80 eP P 06 52 07.1 +0.9
MPU Maple Canyon 43.77 81 eP P 06 52 07.3 +0.9
comp=Z,12nm,0.8s,mb4.2
M18A Lyman 43.82 78 ⇑P P 06 52 05.8 -0.9
baz=44,SNR=7.0
L19A Farson 43.83 77 ⇑P P 06 52 06.2 -0.5
baz=44,SNR=8.0
SHPR Sheep Range 43.92 88 eP P 06 52 07.7 +0.1
BFSC Mount Baldy Ra 43.94 92 ⇑P P 06 52 08.0 +0.2
baz=44,SNR=6.6
Q15A Fillmore 43.97 83 ⇓P P 06 52 08.1 +0.2
baz=44,SNR=8.2
S13A Holt Ranch, En 44.00 85 ⇓P P 06 52 08.5 +0.3
baz=44,SNR=36
P16A Fountain Green 44.01 82 ⇓P P 06 52 08.7 +0.4
baz=44,SNR=6.2
R14A James Farms, M 44.04 84 ⇓P P 06 52 08.6 +0.1
baz=44
K20A Yellowstone Ra 44.08 76 ⇑P P 06 52 07.4 -1.4
baz=44,SNR=15
ARUT Antelope Range 44.12 85 eP P 06 52 09.4 +0.2
comp=Z,13nm,0.9s,mb4.2
O17A Robinson Place 44.19 80 ⇑P P 06 52 10.0 +0.3
baz=44,SNR=12
V11A Goodsprings 44.20 88 ⇓P P 06 52 10.2 +0.4
baz=44,SNR=14
S14A Cedar City 44.30 85 ⇓P P 06 52 10.6 0.0
baz=44,SNR=9.3
M19A Rock Springs 44.31 78 ⇑P P 06 52 09.7 -0.9
baz=44
CCUT Cedar City 44.32 85 eP P 06 52 11.4 +0.7
comp=Z,72nm,1.9s,mb4.6
N18A Larsen Ranch, 44.34 79 ⇓P P 06 52 09.8 -1.0
baz=44,SNR=12
T13A Saint George 44.34 86 ⇓P P 06 52 11.7 +0.8
baz=44,SNR=25
HEC Hector,Ludlow 44.34 90 ⇑P P 06 52 10.9 0.0
baz=44,SNR=8.0
U12A Valley of Fire 44.35 87 ⇑P P 06 52 11.3 +0.3
baz=44,SNR=9.4
BBRC Big Bear Solar 44.37 91 ⇓P P 06 52 11.6 +0.4
baz=44
MSU Marysvale 44.41 83 eP P 06 52 12.2 +0.8
L20A Wamsutter 44.48 77 ⇓P P 06 52 11.2 -0.8
baz=44
TMUT Trail Mountain 44.48 82 eP P 06 52 13.0 +1.0
comp=Z,36nm,0.8s,mb4.7
TMUT eScP ScP 06 57 18.4 +1.4
R15A Junction 44.54 84 ⇓P P 06 52 13.1 +0.6
baz=44,SNR=14
O18A Roosevelt 44.58 80 ⇑P P 06 52 13.2 +0.4
baz=44,SNR=16
V12A Nelson 44.63 88 ⇑P P 06 52 13.7 +0.5
baz=44,SNR=6.6
P17A Butcher Ranch, 44.65 81 ⇑P P 06 52 13.5 +0.2
baz=45,SNR=8.0
MURC Murrieta 44.66 92 ⇑P P 06 52 13.0 -0.4
baz=45
N19A John Jarvie Ra 44.68 78 ⇑P P 06 52 12.6 -0.9
baz=45,SNR=6.6
U13A Pakoon Wash 44.70 87 ⇑P P 06 52 14.4 +0.7
baz=45
Q16A Castle Valley 44.75 82 ⇓P P 06 52 14.4 +0.3
baz=45,SNR=28
GMRC Granite Mounta 44.78 90 ⇓P P 06 52 14.3 0.0
baz=45,SNR=14
T14A Hurricane 44.81 85 ⇓P P 06 52 15.2 +0.6
baz=45,SNR=7.3
S15A Panguitch 44.84 84 ⇑P P 06 52 15.7 +0.9
baz=45,SNR=11
P18A Preston Nutter 44.84 81 ⇓P P 06 52 15.2 +0.4
baz=45,SNR=23
M20A Sweetwater, Wa 44.89 77 ⇓P P 06 52 14.5 -0.6
baz=45
W12A Cal Nev Ari 44.90 89 ⇑P P 06 52 15.5 +0.1
baz=45
R16A Teasdale 44.97 83 ⇑P P 06 52 16.5 +0.6
baz=45,SNR=35
SRU San Rafael 45.01 81 ⇑P P 06 52 16.4 +0.2
baz=45,SNR=36
SRU San Rafael 45.01 81 eP P 06 52 16.6 +0.4
comp=Z,76nm,1.5s,mb4.7
V13A Grand Canyon W 45.07 87 ⇓P P 06 52 17.0 +0.4
baz=45
L21A Rawlins 45.08 76 ⇑P P 06 52 15.8 -0.8
baz=45
O19A Miners Draw (B 45.09 79 ⇑P P 06 52 16.2 -0.5
baz=45,SNR=34
U14A Mt Trumbull 45.17 86 ⇓P P 06 52 18.4 +0.9
baz=45
Q18A Rafter H Ranch 45.25 81 ⇓P P 06 52 17.4 -0.6
baz=45,SNR=20
T15A Red Dirt Ranch 45.26 85 ⇑P P 06 52 18.4 +0.3
baz=45,SNR=25
N20A Spence Gulch, 45.26 78 ⇓P P 06 52 17.9 -0.2
baz=45,SNR=10
M21A Separation Pea 45.30 76 ⇓P P 06 52 17.6 -0.8
baz=45
RWWY Rawlins 45.34 76 eP P 06 52 18.3 -0.4
comp=Z,25nm,1.2s,mb4.3
R17A Hanksville Air 45.34 82 ⇓P P 06 52 19.1 +0.3
baz=45,SNR=29
NEE2 Needles Airpor 45.41 89 ⇑P P 06 52 19.4 +0.1
baz=45
IRM Iron Mountain 45.51 90 ⇓P P 06 52 19.8 -0.3
baz=45
L22A Ellis Ranch, M 45.58 75 ⇓P P 06 52 20.3 -0.3
baz=46
P19A Cripple Cowboy 45.59 80 ⇓P P 06 52 20.4 -0.3
baz=46
W13A Hualapai Mount 45.63 88 ⇑P P 06 52 21.2 +0.1
baz=46,SNR=11
RSSD Black Hills 45.69 72 eP P 06 52 20.4 -0.9
comp=Z,25nm,1.8s,mb4.2
U15A North Rim 45.70 85 ⇓P P 06 52 22.5 +0.9
baz=46
O20A White River Ci 45.71 79 ⇓P P 06 52 20.8 -0.8
baz=46,SNR=14
N21A Black Mountain 45.74 77 ⇓P P 06 52 21.2 -0.6
baz=46,SNR=12
V14A Boquillas Ranc 45.74 87 ⇑P P 06 52 22.3 +0.4
baz=46,SNR=22
S17A Black Ridge (B 45.80 83 ⇓P P 06 52 22.2 -0.1
baz=46,SNR=46
T16A Glen Canyon Da 45.81 84 ⇓P P 06 52 22.0 -0.4
baz=46
R18A Canyonlands Na 45.85 82 ⇑P P 06 52 21.9 -0.8
baz=46,SNR=24
X13A Yucca 46.01 89 ⇑P P 06 52 23.9 -0.1
baz=46
PDMCI Parker Dam,Lak 46.02 89 ⇑P P 06 52 23.8 -0.3
baz=46
P20A De Beque 46.03 79 ⇑P P 06 52 23.4 -0.7
baz=46,SNR=15
W14A Seligman 46.04 87 ⇓P P 06 52 24.3 +0.1
baz=46,SNR=9.5
Y12C Blythe 46.17 90 ⇓P P 06 52 24.6 -0.6
baz=46,SNR=7.9
V15A Kaibab Nationa 46.18 86 ⇑P P 06 52 25.8 +0.5
baz=46,SNR=53
T17A Navajo Res., N 46.22 84 ⇓P P 06 52 24.8 -0.8
baz=46,SNR=17
S18A Hurst Farm, Bl 46.25 82 ⇑P P 06 52 25.2 -0.6
baz=46,SNR=58
R19A Curley Farm, L 46.29 81 ⇑P P 06 52 25.3 -0.9
baz=46,SNR=35
N22A Wattenberg Ran 46.34 77 ⇑P P 06 52 26.1 -0.4
baz=46,SNR=10
PV04 Paradox Valley 46.44 81 eP P 06 52 27.1 -0.1
GLA Glamis 46.47 91 ⇓P P 06 52 27.8 +0.2
baz=46
GLA Glamis 46.47 91 eP P 06 52 28.2 +0.6
comp=Z,17nm,0.8s,mb4.4
ULM Lac du Bonnet 46.54 60 P P 06 52 26.2 -1.6
comp=Z,2.9nm,0.6s,mb3.8,baz=300,slow=9.3,SNR=4.2
Y13A Salome 46.54 89 ⇓P P 06 52 27.9 -0.2
baz=46,SNR=6.9
W15A Williams 46.55 87 ⇓P P 06 52 28.9 +0.7
baz=46,SNR=9.2
X14A Yava 46.66 88 ⇑P P 06 52 29.4 +0.3
baz=47,SNR=18
T18A Mexican Hat 46.68 83 ⇓P P 06 52 28.1 -1.1
baz=47,SNR=38
S19A Harvey Farm, M 46.72 82 ⇑P P 06 52 28.6 -0.8
baz=47,SNR=24
PV01 Paradox Valley 46.81 81 eP P 06 52 30.0 -0.1
comp=Z,2μm,0.8s
PV01 eScP ScP 06 57 28.3 +1.5
PV01 eS S 06 59 03.4 +3.4
WUAZ Wupatki 46.86 86 ⇑P P 06 52 30.7 +0.1
baz=47,SNR=11
WUAZ Wupatki 46.86 86 eP P 06 52 31.4 +0.8
comp=Z,26nm,0.9s,mb4.6
R20A Redvale 46.88 81 ⇑P P 06 52 30.1 -0.6
baz=47,SNR=16
Q21A Lamborn Mesa, 46.94 80 ⇓P P 06 52 30.5 -0.6
baz=47
Y14A Wickenburg 46.95 89 ⇑P P 06 52 31.4 +0.1
baz=47
X15A Humboldt 47.04 87 ⇓P P 06 52 32.2 +0.2
baz=47,SNR=15
W16A Flagstaff 47.05 86 ⇑P P 06 52 32.9 +0.8
baz=47,SNR=13
Z13A Yuma Proving G 47.07 90 ⇓P P 06 52 31.5 -0.7
baz=47,SNR=6.4
SMCO Snowmass 47.08 79 eP P 06 52 32.4 +0.2
comp=Z,13nm,1.4s,mb4.1
V17A Tonalea, Kykot 47.14 85 ⇓P P 06 52 33.3 +0.6
baz=47,SNR=20
U18A Rough Rock, Ch 47.16 84 ⇑P P 06 52 32.5 -0.4
baz=47,SNR=11
R21A Cimarron 47.26 80 ⇓P P 06 52 33.6 0.0
baz=47,SNR=9.0
Q22A Crested Butte, 47.32 79 ⇑P P 06 52 33.9 -0.2
baz=47,SNR=8.7
Z14A Wintersburg 47.39 89 ⇓P P 06 52 34.3 -0.4
baz=47
T19A Beclabito 47.40 83 ⇑P P 06 52 34.4 -0.3
baz=47,SNR=57
MVCO Mesa Verde 47.46 82 ⇑P P 06 52 34.8 -0.3
baz=47,SNR=7.8
MVCO Mesa Verde 47.46 82 eP P 06 52 35.3 +0.2
comp=Z,40nm,1.4s,mb4.6
ISCO Idaho Springs 47.48 77 eP P 06 52 35.8 +0.6
comp=Z,30nm,1.6s,mb4.4
W17A Winslow 47.56 86 ⇑P P 06 52 36.3 +0.4
baz=48
X16A Lo Mia Camp, P 47.57 87 ⇓P P 06 52 36.6 +0.6
baz=48,SNR=16
S21A Coal Bank Pass 47.58 81 ⇓P P 06 52 36.2 +0.1
baz=48,SNR=13
V18A Ganado 47.60 84 ⇑P P 06 52 36.6 +0.4
baz=48,SNR=19
U19A Dine' College, 47.64 83 ⇑P P 06 52 36.4 -0.1
baz=48
AGMN Agassiz Nation 47.70 62 eP P 06 52 35.0 -1.8
comp=Z,11nm,1.3s,mb4.0
R22A Saguache, Gunn 47.82 80 ⇑P P 06 52 38.3 +0.4
baz=48,SNR=9.7
114A Black Gap (USA 47.85 90 ⇓P P 06 52 38.4 +0.2
baz=48
Y16A Circle Bar Ran 47.91 87 ⇓P P 06 52 39.0 +0.4
baz=48,SNR=7.0
U20A Newcomb 48.00 83 ⇓P P 06 52 39.2 -0.1
baz=48
X17A Forest Lakes 48.01 86 ⇓P P 06 52 40.3 +1.0
baz=48
W18A Petrified Fore 48.12 85 ⇓P P 06 52 40.6 +0.4
baz=48,SNR=5.3
V19A Window Rock 48.13 84 ⇓P P 06 52 40.6 +0.3
baz=48,SNR=15
KBS Kingsbay 48.21 358 eP P 06 52 42.0 +1.6
comp=Z,9.3nm,0.8s,mb4.2
SONM Songino Array 48.23 297 P P 06 52 40.9 0.0
comp=Z,1.0nm,0.4s,mb3.5,baz=54,slow=8.1,SNR=15
SONM pP pP 06 53 37.2 +1.3
comp=Z,1.5nm,0.8s,baz=55,slow=8.0,SNR=4.1
SONM PcP PcP 06 54 02.9 -0.6
comp=Z,1.3nm,0.7s,baz=45,slow=4.4,SNR=3.8
SONM ScP ScP 06 57 31.8 -0.8
comp=Z,1.0nm,0.8s,baz=84,slow=2.8,SNR=5.8
115A Sonoran Desert 48.28 89 ⇑P P 06 52 42.0 +0.5
baz=48
Z16A Peralta Trail, 48.32 88 ⇑P P 06 52 41.9 +0.1
baz=48
W19A Sanders 48.33 85 ⇑P P 06 52 42.3 +0.5
baz=48
X18A Snowflake 48.39 86 ⇓P P 06 52 42.9 +0.6
baz=48,SNR=19
V20A Brimhall 48.42 83 ⇓P P 06 52 42.4 -0.1
baz=48,SNR=11
Y17A Roosevelt 48.42 87 ⇑P P 06 52 42.8 +0.2
baz=48,SNR=13
T22A Edith 48.54 81 ⇑P P 06 52 44.1 +0.7
baz=48,SNR=36
116A Eloy 48.69 89 ⇑P P 06 52 43.9 -0.7
baz=49
OGNE Ogallala 48.83 74 eP P 06 52 45.6 0.0
comp=Z,29nm,1.0s,mb4.6
Y18A Canyon Day Jun 48.86 86 ⇑P P 06 52 46.4 +0.6
baz=49,SNR=17
X19A St. Johns 48.86 85 ⇓P P 06 52 46.2 +0.4
baz=49,SNR=9.5
SDCO Great Sand Dun 48.89 79 eP P 06 52 46.2 +0.2
comp=Z,30nm,1.3s,mb4.5
V21A Milan 48.91 83 ⇑P P 06 52 46.2 0.0
baz=49
Z17A San Carlos Hig 48.92 87 ⇓P P 06 52 46.8 +0.5
baz=49
Y19A Nutrioso 49.20 86 ⇓P P 06 52 49.7 +1.3
baz=49,SNR=7.4
216A Three Points, 49.23 89 ⇓P P 06 52 49.1 +0.4
baz=49
X20A Quemado 49.26 84 ⇑P P 06 52 49.1 +0.3
baz=49,SNR=12
117A Oracle 49.27 88 ⇑P P 06 52 49.3 +0.4
baz=49
V22A San Miguel Ran 49.27 82 ⇑P P 06 52 48.7 -0.2
baz=49,SNR=9.9
Z18A Geronimo 49.33 87 ⇓P P 06 52 49.9 +0.5
baz=49
W21A San Fidel 49.37 83 ⇑P P 06 52 49.8 +0.1
baz=49
TUC Tucson 49.42 88 eP P 06 52 50.5 +0.4
comp=Z,23nm,1.0s,mb4.5
Z19A T-Link Ranch, 49.65 86 ⇓P P 06 52 52.4 +0.5
baz=50
118A Homack Ranch, 49.68 87 ⇑P P 06 52 52.2 +0.2
baz=50,SNR=15
HHC Hu-ho-hao-te 49.74 287 eP P 06 52 52.6 +0.2
HHC pP pP 06 53 41.5 -6.3
HHC sP sP 06 54 06.1 -11
HHC PcP PcP 06 54 11.4 +2.2
HHC PP PP 06 54 49.6 +0.2
HHC ScP ScP 06 57 43.5 +4.3
HHC PcS PcS 06 58 08.0 +1.7
HHC S S 06 59 40.6 -0.3
HHC sS sS 07 01 06.9 -12
HHC ScS ScS 07 02 17.7 +1.9
HHC SS SS 07 03 12.8 -3.6
HHC pmax pmax
comp=Z,12nm,5.1s
HHC LR LR
comp=N,7.0nm,20.2s
HHC LR LR
comp=E,14nm,19.0s
HHC LR LR
comp=Z,22nm,19.0s
X21A Alamocita Cree 49.75 84 ⇑P P 06 52 53.2 +0.6
baz=50,SNR=29
Y20A Horse Springs, 49.76 85 ⇑P P 06 52 53.6 +0.9
baz=50,SNR=6.2
V23A Ortiz Mt. (NFS 49.82 82 ⇓P P 06 52 53.8 +0.7
baz=50,SNR=12
W22A Albuquerque 49.87 83 ⇓P P 06 52 53.8 +0.4
baz=50,SNR=5.8
U24A Moreno Valley 49.91 80 ⇑P P 06 52 54.2 +0.5
baz=50
119A Ashpeak Ranch, 50.00 87 ⇓P P 06 52 54.5 +0.1
baz=50,SNR=9.3
218A Dragoon 50.10 88 ⇑P P 06 52 55.4 +0.2
baz=50,SNR=14
Y21A Point of Rocks 50.12 84 ⇑P P 06 52 56.5 +1.2
baz=50,SNR=9.1
ECSD EROS Data Cent 50.12 67 eP P 06 52 53.1 -2.2
comp=Z,9.0nm,1.4s,mb3.9
LAZ Ladron 50.17 84 eP P 06 52 56.4 +0.7
comp=Z,8.5nm,0.8s,mb4.1
X22A Bernardo 50.17 83 ⇑P P 06 52 56.8 +1.1
baz=50,SNR=8.1
Z20A Nine Sixteen R 50.18 86 ⇑P P 06 52 56.3 +0.5
baz=50,SNR=11
ANMO Albuquerque 50.20 83 eP P 06 52 56.3 +0.4
comp=Z,3.7nm,1.2s,mb3.6
ANMO ePcP PcP 06 54 12.6 +1.7
W23A Werner Place, 50.24 82 ⇓P P 06 52 56.2 0.0
baz=50,SNR=9.8
U25A Circle Dot Ran 50.44 80 ⇑P P 06 52 57.5 -0.1
baz=50
318A Bisbee 50.51 89 ⇑P P 06 52 58.3 0.0
baz=50,SNR=6.1
LPM Los Pinos Moun 50.53 83 eP P 06 52 58.9 +0.5
120A U Bar Ranch, L 50.55 86 ⇓P P 06 52 59.0 +0.4
baz=50,SNR=9.4
219A White Tail Can 50.56 87 ⇑P P 06 52 58.8 +0.2
baz=50
Y22A Socorro 50.59 84 ⇑P P 06 52 59.3 +0.4
baz=50,SNR=20
Z21A St. Cloud Mine 50.60 85 ⇓P P 06 52 59.5 +0.6
baz=50
X23A Hourglass Bar 50.61 83 ⇑P P 06 52 59.0 0.0
baz=50,SNR=22
BNM Barren Site 50.65 83 eP P 06 52 59.9 +0.7
comp=Z,18nm,0.9s,mb4.4
W24A Lazy 6 Ranch, 50.65 82 ⇑P P 06 52 59.4 +0.1
baz=51,SNR=20
V25A Rancho No Teng 50.69 80 ⇑P P 06 52 59.7 +0.1
baz=51
U26A Atchley Ranch, 50.83 79 ⇑P P 06 53 00.3 -0.3
baz=51,SNR=26
SUMG Summit 50.99 16 eP P 06 53 02.5 +1.3
comp=Z,25nm,1.5s,mb4.3
319A Douglas 50.99 88 ⇑P P 06 53 01.8 0.0
baz=51,SNR=5.6
Z22A Elephant Butte 51.06 85 ⇓P P 06 53 03.0 +0.7
baz=51
220A Playas Peak, P 51.07 87 ⇓P P 06 53 02.5 +0.1
baz=51,SNR=18
121A Cookes Peak, D 51.08 86 ⇓P P 06 53 02.7 +0.3
baz=51,SNR=6.6
X24A Lazy VL Ranch, 51.08 82 ⇓P P 06 53 02.7 +0.3
baz=51
Y23A Lovelace Mesa, 51.14 83 ⇓P P 06 53 03.1 +0.2
baz=51,SNR=20
W25A X Bar L Ranch, 51.21 81 ⇓P P 06 53 03.3 -0.1
baz=51,SNR=27
V26A Tequesquite Ra 51.22 80 ⇓P P 06 53 03.1 -0.4
baz=51,SNR=16
122A Conniff Cattle 51.43 85 ⇑P P 06 53 06.4 +1.3
baz=51,SNR=5.2
221A Mesquite Ranch 51.45 86 ⇓P P 06 53 05.6 +0.4
baz=51
320A Kipp Ranch, An 51.47 87 ⇑P P 06 53 05.8 +0.5
baz=51,SNR=10
Z23A Rita Site, Whi 51.50 84 ⇑P P 06 53 05.6 +0.1
baz=51
Y24A Capitan 51.52 83 ⇓P P 06 53 05.6 -0.1
baz=51,SNR=32
X25A Clemmons Ranch 51.56 82 ⇓P P 06 53 05.9 -0.1

baz=52,SNR=5.2
W26A Owens Ranch, T 51.71 81 ⇓P **P 06 53 07.0 -0.1**
baz=52
222A Williams Famil 51.79 86 ⇓P **P 06 53 08.0 +0.3**
baz=52,SNR=5.5
Y25A Mesa, Roswell 51.96 82 ⇑P **P 06 53 09.0 0.0**
baz=52,SNR=33
Z24A Sheeppen Canyo 51.97 83 ⇑P **P 06 53 09.0 0.0**
baz=52,SNR=8.9
X26A CR and CF Fran 52.05 81 ⇑P **P 06 53 09.3 -0.4**
baz=52,SNR=5.0
W27A Bowe Ranch, En 52.15 80 ⇑P **P 06 53 09.5 -0.8**
baz=52,SNR=5.0
223A Chaparral, Ant 52.26 85 ⇓P **P 06 53 11.6 +0.4**
baz=52
124A Stringfield Ra 52.36 84 ⇑P **P 06 53 12.0 +0.1**
baz=52
Z25A Roswell 52.40 83 ⇑P **P 06 53 12.1 -0.1**
baz=52
X27A F and S Farms, 52.41 80 ⇑P **P 06 53 11.9 -0.4**
baz=52
Y26A Elida 52.48 82 ⇓P **P 06 53 12.4 -0.3**
baz=52
224A Cornudas Mount 52.76 85 ⇑P **P 06 53 14.4 -0.4**
baz=53,SNR=14
Z26A Caprock 52.84 82 ⇑P **P 06 53 15.2 -0.2**
baz=53,SNR=18
125A Gardner Draw, 52.87 83 ⇓P **P 06 53 15.7 +0.1**
baz=53,SNR=10
Y27A Causey 52.90 81 ⇓P **P 06 53 15.2 -0.6**
baz=53,SNR=22
MSTX Muleshoe 53.08 81 ⇑P **P 06 53 16.2 -0.9**
baz=53,SNR=13
CPRX Cap Rock 53.08 82 *e*P **P 06 53 17.1 0.0**
comp=Z,8.1nm,0.7s,mb4.2
AMTX Amarillo 53.09 79 P **P 06 53 17.4 +0.2**
comp=Z,10nm,0.4s,mb4.5
MNTX Cornudas Mount 53.11 85 *e*P **P 06 53 17.5 +0.2**
comp=Z,20nm,0.9s,mb4.4
225A Deer Hill, Car 53.15 84 ⇑P **P 06 53 17.9 +0.2**
baz=53,SNR=5.8
324A Moseley Ranch, 53.23 85 ⇑P **P 06 53 18.3 0.0**
baz=53,SNR=6.6
126A Clayton Basin, 53.26 83 ⇑P **P 06 53 17.7 -0.7**
baz=53,SNR=6.7
Z27A Tatum 53.27 82 ⇑P **P 06 53 18.1 -0.5**
baz=53,SNR=14
GDL2 Guadalupe Moun 53.36 84 *e*P **P 06 53 19.2 0.0**
325A Bean Ranch, Si 53.59 85 ⇑P **P 06 53 20.7 -0.2**
baz=54,SNR=25
226A Malaga, Loving 53.62 83 ⇑P **P 06 53 20.8 -0.3**
baz=54,SNR=10
127A Arkansas Junct 53.63 82 ⇓P **P 06 53 20.3 -0.8**
baz=54,SNR=5.0
425A Indio Mountain 53.99 85 ⇑P **P 06 53 23.9 +0.1**
baz=54,SNR=13
227A Bennet, Jal 54.14 83 ⇑P **P 06 53 23.9 -0.9**
baz=54,SNR=5.2
326A Caldwell Ranch 54.22 84 ⇑P **P 06 53 24.9 -0.5**
baz=54,SNR=13
327A Balmorhea Ranc 54.47 84 ⇓P **P 06 53 26.7 -0.6**
baz=54
426A McDonald Obser 54.65 85 ⇑P **P 06 53 28.0 -0.5**
baz=55,SNR=11
ZALV Zalesovo Beam 54.76 315 P **P 06 53 27.1 -1.8**
comp=Z,0.4nm,0.3s,mb3.4,baz=76,slow=6.1,SNR=3.0
ZALV PcP PcP 06 54 27.2 -0.7
comp=Z,0.8nm,0.3s,baz=3.4,slow=4.9,SNR=3.3
328A Wristen Ranch, 54.87 83 ⇑P **P 06 53 29.4 -0.7**
baz=55,SNR=18
427A Hayter Ranch, 54.90 84 ⇑P **P 06 53 29.7 -0.6**
baz=55,SNR=12
WMOK Wichita Mounta 54.91 77 *e*P **P 06 53 29.4 -0.8**
comp=Z,11nm,0.9s,mb4.3
526A Mary Lane Ranc 55.05 85 ⇓P **P 06 53 30.9 -0.5**
baz=55,SNR=25
527A Woodward Ranch 55.28 85 ⇓P **P 06 53 32.7 -0.3**
baz=55,SNR=9.1
626A Big Bend Ranch 55.39 86 ⇓P **P 06 53 33.5 -0.3**
baz=55,SNR=22
428A Kincaid Ranch, 55.42 84 ⇓P **P 06 53 33.8 -0.2**
baz=55,SNR=30
528A Cox Ranch, San 55.76 84 ⇑P **P 06 53 36.0 -0.4**
baz=56,SNR=20
TXAR Lajitas Array 55.83 85 P **P 06 53 36.6 -0.3**
comp=Z,11nm,0.6s,mb4.4,baz=302,slow=4.7,SNR=99
TXAR PcP PcP 06 54 32.8 +0.4
comp=Z,1.3nm,0.6s,baz=292,slow=2.7,SNR=3.7
TXAR ScP ScP 06 58 07.1 +1.2
comp=Z,1.2nm,0.8s,baz=280,slow=3.6,SNR=6.5
TXAR Lajitas Array 55.83 85 P **P 06 53 36.6 -0.3**
TXAR PcP PcP 06 54 32.8 +0.4
TXAR ScP ScP 06 58 07.1 +1.2
627A Terlingua Ranc 55.91 85 ⇑P **P 06 53 36.9 -0.6**
baz=56,SNR=19
628A Black Gap, Mar 56.19 85 ⇓P **P 06 53 39.0 -0.4**
baz=56
ARCES ARCESS Array B 56.84 352 P **P 06 53 43.3 -0.1**
comp=Z,1.8nm,0.6s,mb3.7,baz=30,slow=7.4,SNR=10
ARCES PcP PcP 06 54 35.2 -0.5
comp=Z,6.4nm,0.7s,baz=15,slow=5.3,SNR=14
ARCES PP PP 06 55 40.2 -12
comp=Z,3.5nm,0.7s,baz=17,slow=8.9,SNR=4.7
ARCES ARCESS Array B 56.84 352 P **P 06 53 43.3 -0.1**
ARCES PcP PcP 06 54 35.2 -0.5
ARCES PP PP 06 55 40.2 -12
CCM Cathedral Cave 56.94 69 *e*P **P 06 53 42.0 -2.6**
comp=Z,2.2nm,0.6s,mb3.8
CCM *e*PcP PcP 06 54 35.5 -1.2
SCHQ Schefferville 57.01 41 P **P 06 53 44.4 -0.4**
comp=Z,8.7nm,0.8s,mb4.2,baz=311,slow=8.7,SNR=13
SCHQ pP pP 06 54 42.8 +1.0
comp=Z,8.3nm,0.9s,baz=322,slow=8.2,SNR=5.6
SCHQ Schefferville 57.01 41 P **P 06 53 44.4 -0.4**
SCHQ pP pP 06 54 42.8 +1.0
JCT Junction City 57.32 82 *e*P **P 06 53 45.8 -1.5**
comp=Z,21nm,0.6s,mb4.7
GTA Gaotai 57.36 293 *e*P **P 06 53 47.1 -0.4**
GTA pP pP 06 54 37.6 -7.0
GTA pmax pmax
comp=Z,7.0nm,0.7s,mb4.2
LZH Lanzhou 57.42 288 ⇑P **P 06 53 48.0 0.0**
LZH pP pP 06 54 38.5 -6.5
LZH sP sP 06 55 03.2 -10
LZH pmax pmax
comp=Z,21nm,1.3s,mb4.4
LZH pmax pmax
comp=Z,58nm,6.7s
MIAR Mount Ida 58.08 74 *e*P **P 06 53 51.8 -0.8**
comp=Z,16nm,0.8s,mb4.5
KURK Kurchatov 59.73 315 P **P 06 54 04.2 +0.7**
comp=Z,6.9nm,0.7s,mb4.3,baz=46,slow=6.7,SNR=14
KURK pP pP 06 55 03.4 +2.3
comp=Z,1.7nm,0.6s,baz=46,slow=6.8,SNR=3.7
KURK PP PP 06 56 15.4 -2.7
comp=Z,0.5nm,0.2s,baz=47,slow=9.3,SNR=3.2
PLAL Pickwick Lake 60.92 70 *e*P **P 06 54 09.6 -2.3**
comp=Z,7.5nm,1.0s,mb4.2
MK31 Makanchi Array 61.01 310 *e*P **P 06 54 11.5 -0.8**
MKAR Makanchi Array 61.01 310 P **P 06 54 11.5 -0.8**
comp=Z,3.7nm,0.8s,mb4.0,baz=52,slow=8.4,SNR=20
MKAR pP pP 06 55 11.0 +0.9
comp=Z,1.6nm,0.8s,baz=52,slow=7.9,SNR=3.6
CD2 Chengdu 61.18 284 *e*P **P 06 54 14.2 +0.5**
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.5
CD2 pmax pmax
comp=Z,30nm,4.2s
BVAR Borovoye Array 61.26 321 P **P 06 54 14.1 +0.2**
comp=Z,9.2nm,0.5s,mb4.5,baz=51,slow=7.2,SNR=46
BVAR PcP PcP 06 54 53.1 -0.5
comp=Z,2.0nm,0.6s,baz=44,slow=2.2,SNR=5.1
BVAR pP pP 06 55 13.9 +2.2
comp=Z,2.2nm,0.4s,baz=50,slow=6.7,SNR=4.5
BRVK Borovoye 61.28 321 *e*P **P 06 54 14.5 +0.6**
comp=Z,5.0nm,0.8s,mb4.1
BINY Binghamton 62.14 56 *e*P **P 06 54 18.7 -1.2**
comp=Z,35nm,1.4s,mb4.8
SSPA Standing Stone 62.33 59 *e*P **P 06 54 19.7 -1.5**
comp=Z,9.2nm,1.0s,mb4.4
CPCT Cooper Cave 62.57 67 P **P 06 54 21.1 -1.8**
GYA Guiyang 62.74 278 P **P 06 54 24.0 -0.1**
GYA pP pP 06 55 18.4 -3.8
GYA sP sP 06 55 44.7 -5.7
GYA PP PP 06 56 47.3 +2.1
GYA ScP ScP 06 58 39.2 +2.6
GYA PcS PcS 06 59 02.4 -1.5

GYA S **S 07 02 31.8 +0.2**
GYA SKS 07 03 49.0
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
ELN Prospectdale 63.33 63 *e*P **P 06 54 27.1 -0.7**
FINES FINESS Array B 64.67 349 P **P 06 54 36.2 +0.2**
comp=Z,1.6nm,0.6s,mb3.8,baz=19,slow=8.1,SNR=7.2
FINES PcP PcP 06 55 06.9 -0.5
comp=Z,2.5nm,0.6s,baz=26,slow=4.9,SNR=6.3
FINES pP pP 06 55 35.0 +0.5
comp=Z,3.2nm,1.0s,baz=23,slow=7.5,SNR=2.9
FINES FINESS Array B 64.67 349 P **P 06 54 36.2 +0.2**
FINES PcP PcP 06 55 06.9 -0.5
FINES pP pP 06 55 35.0 +0.5
JSC Jenkinsville 65.24 66 *e*P **P 06 54 39.0 -1.1**
KMI Kunming 66.07 280 P **P 06 54 43.7 -1.9**
KMI pmax pmax
comp=Z,7.0nm,0.6s,mb4.6
NOA NORSAR Array B 66.15 357 P **P 06 54 45.9 +0.4**
comp=Z,1.5nm,0.8s,mb3.8,baz=5.6,slow=6.5,SNR=6.0
NOA pP pP 06 55 45.5 +1.3
comp=Z,1.1nm,0.6s,baz=3.9,slow=6.6,SNR=4.0
NHSC New Hope 66.71 66 *e*P **P 06 54 49.4 -0.2**
TKM2 Tokmak 2 67.04 311 P **P 06 54 52.1 +0.7**
SNR=6.0
USP Ospenovka 67.26 312 P **P 06 54 52.8 0.0**
SNR=13
AAK Ala-Archa 67.76 312 P **P 06 54 56.8 +0.8**
SNR=7.6
AAK Ala-Archa 67.76 312 P **P 06 54 56.6 +0.7**
comp=Z,6.3nm,0.5s,mb4.6,baz=104,slow=3.1,SNR=20
AAK pP pP 06 55 56.9 +1.9
comp=Z,1.7nm,0.5s,baz=79,slow=5.2,SNR=1.9
KZA Kyzart 67.86 311 P **P 06 54 57.8 +1.3**
SNR=8.5
EKS2 Erkin-Say 68.06 312 P **P 06 54 58.5 +0.6**
SNR=15
UCH Uchtor 68.07 312 P **P 06 54 58.9 +1.0**
SNR=5.3
ABKAR Akbulak array 68.13 325 *e*P **P 06 54 58.2 0.0**
comp=Z,4.8nm,0.6s,mb4.4
AML Almayashu 68.52 312 P **P 06 55 01.8 +1.2**
SNR=7.1
LSA Lhasa 69.31 292 *e*P **P 06 55 06.8 +1.1**
comp=Z,12nm,0.5s,mb4.9
TAPN Taplejung 73.05 293 *e*P **P 06 55 26.7 -1.4**
comp=Z,23nm,0.7s,mb4.9
CMAR Chiang Mai Arr 73.42 279 P **P 06 55 30.0 -0.4**
comp=Z,2.9nm,0.7s,mb4.0,baz=24,slow=6.5,SNR=11
ODAN Odare 73.60 293 *e*P **P 06 55 29.9 -1.4**
comp=Z,4.3nm,0.4s,mb4.5
GUN Gumba 73.62 295 *e*P **P 06 55 30.4 -1.0**
comp=Z,25nm,0.6s,mb5.0
JIRN Jiri 73.64 294 *e*P **P 06 55 30.7 -0.8**
comp=Z,6.2nm,0.3s,mb4.8
RAMN Ramite 73.97 293 *e*P **P 06 55 32.1 -1.4**
comp=Z,33nm,0.7s,mb5.1
KKN Kakani 74.04 295 *e*P **P 06 55 33.0 -0.8**
comp=Z,9.4nm,0.5s,mb4.7
PKI Pulchoki 74.14 295 *e*P **P 06 55 33.6 -0.8**
comp=Z,12nm,0.6s,mb4.7
PKI Pulchoki 74.14 295 *e*P **P 06 55 33.7 -0.7**
comp=Z,11nm,0.4s,mb4.8
PKIN Phulchoki 74.14 295 *e*P **P 06 55 33.7 -0.7**
comp=Z,11nm,0.4s,mb4.8
DMN Daman 74.28 295 *e*P **P 06 55 34.4 -0.8**
comp=Z,6.0nm,0.4s,mb4.5
AKASG Malin Array Be 74.69 345 P **P 06 55 36.3 -0.8**
comp=Z,4.4nm,0.4s,mb4.4,baz=15,slow=5.7,SNR=13
AKASG pP pP 06 56 37.6 +0.2
comp=Z,0.6nm,0.4s,baz=18,slow=6.2,SNR=1.9
CLL Collm 75.81 355 *e*P **P 06 55 43.0 -0.5**
comp=Z,7.0nm,1.1s,mb4.2
CLL Collm 75.81 355 *e*P **P 06 55 43.0 -0.5**
comp=Z,7.0nm,1.1s,mb4.2
CLL *e*(pP) pP 06 56 49.0 +5.1
CLL LV 07 27 00.0
comp=Z,300nm,21.1s
BRG Berggiesshubel 76.19 355 *e*P **P 06 55 46.2 +0.6**
comp=Z,7.8nm,1.3s,mb4.2
BRG *e* pP 06 56 47.5 +1.4
comp=Z,4.8nm,0.8s
DPC Dobruska-Polom 76.55 353 *e*P **P 06 55 48.7 +1.0**
OKC Ostrava-Krasne 76.91 352 *e*P **P 06 55 49.8 +0.1**
KHC Kasperske Hory 77.94 355 *e*P **P 06 55 56.3 +0.9**
comp=Z,4.6nm,1.1s,mb4.1
KHC Kasperske Hory 77.94 355 *e*P **P 06 55 56.3 +0.9**
GERES GERESS Array B 78.22 354 P **P 06 55 57.4 +0.5**
comp=Z,1.8nm,0.8s,mb3.9,baz=9.5,slow=4.1,SNR=12
GERES pP pP 06 56 58.3 +0.5
comp=Z,0.6nm,0.5s,baz=46,slow=4.4,SNR=2.3
BURAR Bucovina Array 78.30 347 ⇑*i*P **P 06 55 57.6 +0.2**
FLN La Foliniere 78.42 4 *e*P **P 06 55 58.1 +0.1**
LDF La Druitiere 78.60 4 ⇑*i*P **P 06 55 59.2 +0.2**
comp=Z,18nm,0.8s,mb4.5
LDF La Druitiere 78.60 4 ⇑*i*P **P 06 55 59.2 +0.2**
comp=Z,9.2nm,0.8s,mb4.6
GRR Gorron 78.77 4 *e*P **P 06 56 00.5 +0.5**
SGMF Saint Gilles 78.82 5 *e*P **P 06 56 00.8 +0.6**
CDF Champ du Feu 78.88 359 *e*P **P 06 56 01.3 +0.7**
HAU Haudompre 79.30 359 *e*P **P 06 56 03.5 +0.7**
comp=Z,18nm,0.9s,mb4.5
HAU Haudompre 79.30 359 *e*P **P 06 56 03.5 +0.7**
comp=Z,8.8nm,0.9s,mb4.5
HINF Hinteralfeld 79.48 359 *e*P **P 06 56 04.3 +0.5**
KAKA Kakadu 79.66 232 *e*P **P 06 56 04.4 -0.7**
comp=Z,9.1nm,0.6s,mb4.7
KAKA Kakadu 79.66 232 *e*P **P 06 56 04.2 -0.9**
LOR Lormes 80.03 1 ⇑*i*P **P 06 56 07.2 +0.5**
comp=Z,18nm,0.9s,mb4.5
LOR Lormes 80.03 1 ⇑*i*P **P 06 56 07.2 +0.5**
comp=Z,9.1nm,0.9s,mb4.5
TLCR 80.10 343 ⇓*i*P **P 06 56 08.1 +0.9**
CFR Carcaliu 80.22 344 ⇓*i*P **P 06 56 10.8 +3.0**
SSF Saint Saulge 80.23 1 ⇑*i*P **P 06 56 08.5 +0.7**
comp=Z,8.3nm,0.5s,mb4.4
SSF Saint Saulge 80.23 1 ⇑*i*P **P 06 56 08.5 +0.7**
comp=Z,4.2nm,0.5s,mb4.4
CTA Charters Tower 80.39 217 *e*P **P 06 56 07.8 -1.1**
comp=Z,3.7nm,0.5s,mb4.4
AVF Avril sur Loir 80.50 1 ⇑*i*P **P 06 56 09.8 +0.6**
comp=Z,19nm,0.9s,mb4.5
MFF Saint Martin d 80.59 4 ⇑*i*P **P 06 56 10.3 +0.6**
comp=Z,52nm,1.2s,mb4.8
MFF Saint Martin d 80.59 4 ⇑*i*P **P 06 56 10.3 +0.6**
comp=Z,26nm,1.2s,mb4.8
SMF Signal de Mont 80.65 1 ⇑*i*P **P 06 56 10.6 +0.5**
comp=Z,15nm,0.7s,mb4.5
CABF La Chapelle 80.70 360 *e*P **P 06 56 11.4 +1.1**
comp=Z,22nm,1.1s,mb4.5
CABF La Chapelle 80.70 360 *e*P **P 06 56 11.4 +1.1**
comp=Z,11nm,1.1s,mb4.5
BGF Bois d'Agland 80.72 2 *e*P **P 06 56 11.2 +0.8**
TIRR Tirgusor 80.88 344 ⇑*i*P **P 06 56 11.9 +0.6**
TCF Toulx Ste Croi 80.98 2 ⇑*i*P **P 06 56 12.3 +0.5**
comp=Z,7.9nm,0.7s,mb4.3
RJF Les Rejaudoux 81.94 3 *e*P **P 06 56 17.7 +0.9**
CAF Calviac 82.34 2 *e*P **P 06 56 19.8 +0.9**
VIVF Saint-Julien-l 82.45 1 *e*P **P 06 56 20.3 +0.8**
LASF Ste Croix 83.22 1 *e*P **P 06 56 24.5 +1.1**
SMRF Simiane la Rot 83.33 360 ⇑*i*P **P 06 56 25.6 +1.6**
comp=Z,26nm,0.9s,mb4.8
EIDS Eidsvold 83.65 211 *e*P **P 06 56 25.1 -0.6**
FRF La Foret Royal 83.74 359 *e*P **P 06 56 26.7 +0.6**
MTLF Montolieu 83.92 2 *e*P **P 06 56 27.9 +0.9**
comp=Z,10.0nm,0.9s,mb4.4
MTLF Montolieu 83.92 2 *e*P **P 06 56 27.9 +0.9**
comp=Z,5.0nm,0.9s,mb4.3
SJPF Ste Jean 84.02 5 ⇑*i*P **P 06 56 28.6 +1.1**
comp=Z,7.9nm,0.6s,mb4.4
SJPF Ste Jean 84.02 5 ⇑*i*P **P 06 56 28.6 +1.1**
comp=Z,4.0nm,0.6s,mb4.4
ETSF Etsaut 84.27 4 *e*P **P 06 56 29.8 +1.1**
comp=Z,7.7nm,0.7s,mb4.3
ETSF Etsaut 84.27 4 *e*P **P 06 56 29.8 +1.1**
comp=Z,3.8nm,0.7s,mb4.3
BR131 Keskin Array S 84.42 339 *e*P **P 06 56 30.3 +0.7**
BRTR Keskin Array B 84.42 339 P **P 06 56 30.2 +0.7**
comp=Z,3.3nm,0.8s,mb4.2,baz=38,slow=2.8,SNR=12
BRTR pP pP 06 57 31.0 -0.3
comp=Z,1.2nm,0.7s,baz=35,slow=4.5,SNR=3.8
PGF Pioggiola 84.71 357 *e*P **P 06 56 31.3 +0.3**
WRAB Tennant Creek 85.08 227 *e*P **P 06 56 31.5 -1.4**
comp=Z,6.1nm,0.8s,mb4.5
WRA Warramunga Arr 85.09 227 P **P 06 56 31.5 -1.4**
comp=Z,5.0nm,0.5s,mb4.6,baz=35,slow=5.9,SNR=87
WRA Warramunga Arr 85.09 227 P **P 06 56 31.5 -1.4**

PSI Prapat 85.72 269 P **P 06 56 35.5 -0.9**
comp=Z,13nm,0.7s,mb4.9,baz=316,slow=1.7,SNR=7.7
ESDC Sonseca Array 87.27 7 P **P 06 56 43.0 -0.4**
comp=Z,1.0nm,0.4s,mb4.0,baz=1.6,slow=4.9,SNR=6.3
FITZ Fitzroy Crossi 87.60 235 *e*P **P 06 56 43.9 -1.3**
comp=Z,7.9nm,0.6s,mb4.7
ARMA Armidale 88.22 209 *e*P **P 06 56 48.7 +0.9**
ASAR Alice Springs 88.55 226 P **P 06 56 48.6 -0.9**
comp=Z,9.4nm,0.7s,mb4.7,baz=21,slow=4.7,SNR=78
CMSA Cobar Meteorol 91.11 213 *e*P **P 06 57 00.9 -0.3**
STKA Stephens Creek 92.82 216 P **P 06 57 08.8 -0.4**
comp=Z,1.9nm,0.6s,mb4.2,baz=310,slow=12,SNR=5.6
TORD Torodi Ar. Bea 113.97 4 PKiKP PKiKP 07 02 32.9 -1.7
comp=Z,0.3nm,0.4s,baz=6.7,slow=2.5,SNR=5.9
PLCA Paso Flores 128.97 108 PKP PKPdf 07 03 02.5 +0.1
comp=Z,3.5nm,0.8s,baz=257,slow=3.2,SNR=7.1
PLCA SKPbc 07 05 58.7
comp=Z,7.1nm,1.1s,baz=353,slow=2.2,SNR=8.9
PLCA Paso Flores 128.97 108 PKP PKPdf 07 03 02.5 +0.1
PLCA SKPbc 07 05 58.7
QSPA South Pole Qui 142.83 180 *e*P PKPdf 07 03 23.2 -3.8
TSUM Tsumeb 144.92 340 PKP PKPdf 07 03 32.0 -0.4
comp=Z,11nm,0.8s,baz=0.6,slow=6.8,SNR=19
TSUM pPKP pPKPdf 07 04 37.6 -0.6
comp=Z,3.7nm,0.8s,baz=333,slow=6.3,SNR=3.6
TSUM Tsumeb 144.92 340 *e*PKPbc PKPdf 07 03 32.2 -0.2
LBTB Lobatse 148.16 324 PKPbc PKPbc 07 03 40.8 -0.5
comp=Z,3.2nm,0.5s,baz=350,slow=3.5,SNR=6.2
LBTB pPKPbc pPKPbc 07 04 47.2 +0.8
comp=Z,5.1nm,0.5s,baz=24,slow=2.5,SNR=6.1
MAW Mawson 149.46 219 PKPbc PKPbc 07 03 42.8 -0.4
comp=Z,14nm,0.7s,baz=87,slow=2.3,SNR=40
MAW Mawson 149.46 219 *e*PKPbc PKPbc 07 03 42.8 -0.4
MAW *e*PKPab PKPab 07 03 48.7 -0.4
BOSA Boshof 151.55 321 PKPbc PKPbc 07 03 47.5 -1.8
comp=Z,1.9nm,0.5s,baz=338,slow=13,SNR=6.3
BOSA PKPab PKPab 07 03 58.6 -0.3
comp=Z,4.4nm,0.8s,baz=24,slow=1.8,SNR=5.8

CSEM ***05*** *06:53:01.9±0.3, 38°.32N×20°.46E, h0km±2km, ML3.5, Error ellipse: s-maj=4.9km s-min=3.1km az=36.0*
ATH ***05*** *06:53:01.9, 38°.31N×20°.50E, h15km±1km, MD3.9/20, ML3.5*
NEIC ***05*** *06:53:01.9, 38°.31N×20°.50E, h15km, ML3.5(ATH), After ATH.*
ISCJB ***05*** *06:53:02.3±0.4, 38°.31N±0°.02×20°.43E±0°.03, h10km, Error ellipse: s-maj=3.9km s-min=2.4km az=34.7*
THE ***05*** *06:53:03.1, 38°.34N×20°.52E, h0km±1km, ML4.1/12, Error ellipse: s-maj=1.9km s-min=0.7km az=247.0*
ISC 05 06:53:02.2±0.5, 38°.32N±0°.02×20°.45E±0°.03, h2km±3km, n107, σ0°.92/156, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.18**	**141**	*e*Pb	**Pg**	**06 53 06.4**	**+0.8**
VLS				*e*Sb	**Sg**	**06 53 09.5**	**+1.6**
VLS	**Valsamata**	**0.18**	**141**	P	**Pg**	**06 53 06.4**	**+0.8**
VLS				S	**Sg**	**06 53 09.4**	**+1.5**
VLS	**Valsamata**	**0.18**	**141**	*e*PB	**Pg**	**06 53 06.4**	**+0.8**
VLS				*e*SB	**Sg**	**06 53 09.5**	**+1.6**
VLS	**Valsamata**	**0.18**	**141**	P	**Pg**	**06 53 06.4**	**+0.8**
VLS				S	**Sg**	**06 53 09.4**	**+1.5**
KFL	**Anninata**	**0.34**	**127**	P	**Pg**	**06 53 08.7**	**+0.1**
KFL				S	**Sg**	**06 53 14.1**	**+1.1**
LKD2	**Lefkada island**	**0.50**	**19**	P	**Pg**	**06 53 11.2**	**-0.6**
LKD2				S	**Sg**	**06 53 18.3**	**0.0**
LKD2	**Lefkada island**	**0.50**	**19**	P	**Pg**	**06 53 11.2**	**-0.6**
LKD2				S	**Sg**	**06 53 18.3**	**0.0**
RLS	**Riolos of Patr**	**0.84**	**107**	*e*Pn	**Pg**	**06 53 17.2**	**-1.1**
RLS				*e*Sn	**Sg**	**06 53 28.5**	**-0.8**
RLS	**Riolos of Patr**	**0.84**	**107**	*e*PN	**Pg**	**06 53 17.2**	**-1.1**
RLS				*e*SN	**Sg**	**06 53 28.5**	**-0.8**
UPR	**University Cam**	**1.05**	**91**	P	**Pg**	**06 53 21.3**	**-1.1**
UPR				S	**Sg**	**06 53 36.6**	**+0.6**
UPR	**University Cam**	**1.05**	**91**	*e*PN	**Pg**	**06 53 21.2**	**-1.2**
UPR	**University Cam**	**1.05**	**91**	P	**Pg**	**06 53 21.3**	**-1.1**
UPR				S	**Sg**	**06 53 36.6**	**+0.6**
EFP	**Efpalio**	**1.15**	**84**	P	**Pg**	**06 53 22.4**	**-1.8**
EFP				S	**Sg**	**06 53 40.0**	**+0.8**
EFP	**Efpalio**	**1.15**	**84**	*e*PN	**Pg**	**06 53 22.4**	**-1.8**
EFP				*e*SN	**Sn**	**06 53 38.4**	**-3.3**
EFP	**Efpalio**	**1.15**	**84**	P	**Pg**	**06 53 22.4**	**-1.8**
EFP				S	**Sg**	**06 53 40.0**	**+0.8**
LAKA	**Lakka**	**1.21**	**93**	P	**Pg**	**06 53 23.3**	**-2.0**
LAKA				S	**Sg**	**06 53 41.4**	**+0.4**
LAKA	**Lakka**	**1.21**	**93**	P	**Pg**	**06 53 23.3**	**-2.0**
LAKA				S	**Sg**	**06 53 41.4**	**+0.4**
IGT	**Igoumenitsa**	**1.22**	**356**	P	**Pg**	**06 53 25.4**	**-0.1**
IGT				S	**Sg**	**06 53 42.6**	**+1.2**
IGT	**Igoumenitsa**	**1.22**	**356**	P	**Pg**	**06 53 25.4**	**-0.1**
IGT				S	**Sg**	**06 53 42.6**	**+1.2**
EVR	**Evrytania**	**1.22**	**60**	*e*Pn	**Pn**	**06 53 24.0**	**-2.3**
EVR	**Evrytania**	**1.22**	**60**	*e*PN	**Pn**	**06 53 24.0**	**-2.3**
EVR	**Evrytania**	**1.22**	**60**	*e*Pn	**Pn**	**06 53 24.0**	**-2.3**
KALE	**Kalithea**	**1.33**	**86**	P	**Pg**	**06 53 25.1**	**-2.6**
KALE				S	**Sg**	**06 53 45.7**	**+0.7**
KALE	**Kalithea**	**1.33**	**86**	P	**Pg**	**06 53 25.1**	**-2.6**
KALE				S	**Sg**	**06 53 45.7**	**+0.7**
JAN	**Janina**	**1.38**	**13**	*e*Pn	**Pn**	**06 53 28.1**	**-0.3**
JAN	**Janina**	**1.38**	**13**	*e*PN	**Pn**	**06 53 28.1**	**-0.3**
JAN	**Janina**	**1.38**	**13**	*e*Pn	**Pn**	**06 53 28.1**	**-0.3**
KEK	**Kerkira**	**1.48**	**340**	*e*Pn	**Pn**	**06 53 30.0**	**+0.1**
KEK	**Kerkira**	**1.48**	**340**	P	**Pn**	**06 53 29.9**	**0.0**
KEK				S	**Sg**	**06 53 52.1**	**+2.2**
KEK	**Kerkira**	**1.48**	**340**	*e*PN	**Pn**	**06 53 30.0**	**+0.1**
KEK	**Kerkira**	**1.48**	**340**	*e*Pn	**Pn**	**06 53 30.0**	**+0.1**
KEK				S	**Sg**	**06 53 52.1**	**+2.2**
GUR	**Goura**	**1.54**	**104**	P	**Pn**	**06 53 29.1**	**-1.6**
GUR				S	**Sn**	**06 53 51.7**	**+0.4**
GUR	**Goura**	**1.54**	**104**	*e*PN	**Pn**	**06 53 29.4**	**-1.3**
GUR	**Goura**	**1.54**	**104**	P	**Pn**	**06 53 29.1**	**-1.6**
GUR	**Goura**	**1.54**	**104**	*e*Pn	**Pn**	**06 53 29.4**	**-1.3**
GUR				S	**Sn**	**06 53 51.7**	**+0.4**
MEV	**Metsovon**	**1.59**	**22**	P	**Pn**	**06 53 32.2**	**+0.8**
MEV	**Metsovon**	**1.59**	**22**	P	**Pn**	**06 53 32.2**	**+0.8**
SRN	**Sarande**	**1.60**	**348**	*i* PN	**Pn**	**06 53 32.1**	**+0.6**
SRN				*i* SN	**Sn**	**06 53 52.1**	**-0.7**
SRN	**Sarande**	**1.60**	**348**	*i* Pn	**Pn**	**06 53 32.1**	**+0.6**
SRN				*i* Sn	**Sn**	**06 53 52.1**	**-0.7**
ITM	**Ithomi**	**1.63**	**134**	*e*Pn	**Pn**	**06 53 32.0**	**+0.1**
ITM	**Ithomi**	**1.63**	**134**	P	**Pn**	**06 53 31.9**	**0.0**
ITM				S	**Sn**	**06 53 54.2**	**+0.7**
ITM	**Ithomi**	**1.63**	**134**	*e*PN	**Pn**	**06 53 32.0**	**+0.1**
ITM	**Ithomi**	**1.63**	**134**	*e*Pn	**Pn**	**06 53 32.0**	**+0.1**
ITM				S	**Sn**	**06 53 54.2**	**+0.7**
AGG	**Agios Georgios**	**1.63**	**64**	*e*Pn	**Pn**	**06 53 31.3**	**-0.7**
AGG				*e*Sn	**Sn**	**06 53 53.7**	**+0.1**
AGG	**Agios Georgios**	**1.63**	**64**	P	**Pn**	**06 53 31.3**	**-0.7**
AGG	**Agios Georgios**	**1.63**	**64**	*e*PN	**Pn**	**06 53 31.2**	**-0.8**
AGG				*e*SN	**Sn**	**06 53 53.7**	**+0.1**
AGG	**Agios Georgios**	**1.63**	**64**	P	**Pn**	**06 53 31.3**	**-0.7**
AGG				*e*Sn	**Sn**	**06 53 53.7**	**+0.1**
DSF	**Desfina**	**1.64**	**86**	P	**Pn**	**06 53 31.6**	**-0.4**
DSF				S	**Sn**	**06 53 54.4**	**+0.7**
DSF	**Desfina**	**1.64**	**86**	P	**Pn**	**06 53 31.6**	**-0.4**
DSF				S	**Sn**	**06 53 54.4**	**+0.7**
THL	**Klokotos Trika**	**1.75**	**44**	P	**Pn**	**06 53 33.0**	**-0.5**
THL				S	**Sn**	**06 53 57.0**	**+0.6**
THL	**Klokotos Trika**	**1.75**	**44**	*e*PN	**Pn**	**06 53 33.3**	**-0.2**
THL	**Klokotos Trika**	**1.75**	**44**	P	**Pn**	**06 53 33.0**	**-0.5**
THL	**Klokotos Trika**	**1.75**	**44**	*e*Pn	**Pn**	**06 53 33.3**	**-0.2**
THL				S	**Sn**	**06 53 57.0**	**+0.6**
PYL	**PYLOS**	**1.75**	**144**	P	**Pn**	**06 53 33.1**	**-0.5**
PYL	**PYLOS**	**1.75**	**144**	*e*PN	**Pn**	**06 53 33.0**	**-0.6**
PYL	**PYLOS**	**1.75**	**144**	P	**Pn**	**06 53 33.1**	**-0.5**
VLX	**Vlachokerasia**	**1.80**	**121**	P	**Pn**	**06 53 35.3**	**+1.1**
VLX	**Vlachokerasia**	**1.80**	**

ATAL				S	Sn	06 54 04.1	+0.1
ATAL	**Atalanti**	2.05	79	P	Pn	06 53 38.0	+0.3
ATAL				S	Sn	06 54 04.1	+0.1
KZN	**Kozani**	2.24	27	*e*Pn	Pn	06 53 41.1	+0.8
KZN	**Kozani**	2.24	27	P	Pn	06 53 41.1	+0.8
KZN	**Kozani**	2.24	27	*e*PN	Pn	06 53 41.1	+0.8
KZN	**Kozani**	2.24	27	P	Pn	06 53 41.1	+0.8
KBN	**Korca**	2.32	6	*i* PN	Pg	06 53 47.0	+0.4
KBN				*i* SN	Sg	06 54 16.2	-0.5
XOR	**Xorichti**	2.39	63	P	Pn	06 53 42.0	-0.3
XOR	**Xorichti**	2.39	63	P	Pn	06 53 42.0	-0.3
NAIG	**Nisos Aigina**	2.46	102	*e*Pn	Pn	06 53 43.5	+0.1
NAIG	**Nisos Aigina**	2.46	102	*e*PN	Pn	06 53 43.5	+0.1
NAIG	**Nisos Aigina**	2.46	102	*e*Pn	Pn	06 53 43.5	+0.1
FNA	**Florina**	2.57	16	P	Pn	06 53 44.8	0.0
FNA	**Florina**	2.57	16	P	Pn	06 53 44.8	0.0
ATH	**Athens Observa**	2.60	97	*e*Pn	Pn	06 53 45.2	0.0
ATH	**Athens Observa**	2.60	97	*e*PN	Pn	06 53 45.2	0.0
ATH	**Athens Observa**	2.60	97	*e*Pn	Pn	06 53 45.2	0.0
VLY	**Voula,Athens**	2.68	99	*e*Pn	Pn	06 53 46.1	-0.3
VLY	**Voula,Athens**	2.68	99	*e*PN	Pn	06 53 46.1	-0.3
VLY	**Voula,Athens**	2.68	99	*e*Pn	Pn	06 53 46.1	-0.3
OHR	**Ohrid**	2.81	5	*e*Pn	Pn	06 53 49.6	+1.5
AOS	**Alonnisos**	2.82	71	P	Pn	06 53 48.0	-0.2
AOS				S	Sn	06 54 21.9	-0.9
AOS	**Alonnisos**	2.82	71	P	Pn	06 53 48.0	-0.2
AOS				S	Sn	06 54 21.9	-0.9
KYTH	**Kithira**	2.90	134	*e*Pb	Pn	06 53 51.5	+2.2
KYTH	**Kithira**	2.90	134	*e*PB	Pn	06 53 51.5	+2.2
TIP	**Timpagrande**	3.01	288	Pn	Pn	06 53 51.2	+0.3
TIP				Sn	Sn	06 54 27.8	+0.3
TIP	**Timpagrande**	3.01	288	Pn	Pn	06 53 51.2	+0.3
TIP				Sn	Sn	06 54 27.8	+0.3
KRUS	**Krusevo**	3.11	11	*e*Pn	Pn	06 53 52.6	+0.3
PHP	**Peshkopia**	3.37	360	*i* PN	Pn	06 53 56.3	+0.5
PHP				*i* SN	Sn	06 54 40.1	+3.8
PHP	**Peshkopia**	3.37	360	*i* Pn	Pn	06 53 56.3	+0.5
PHP				*i* Sn	Sn	06 54 40.1	+3.8
CEL	**Celeste**	3.58	271	Pn	Pn	06 53 59.0	+0.2
CEL				Sn	Sn	06 54 40.2	-1.5
CEL	**Celeste**	3.58	271	Pn	Pn	06 53 59.0	+0.2
CEL				Sn	Sn	06 54 40.2	-1.5
LTRZ	**Laterza**	3.62	310	Pn	Pn	06 53 59.1	-0.2
LTRZ	**Laterza**	3.62	310	Pn	Pn	06 53 59.1	-0.2
PUK	**Puka**	3.75	354	*i* PN	Pn	06 54 00.5	-0.5
PUK	**Puka**	3.75	354	*i* Pn	Pn	06 54 00.5	-0.5
BCI	**Bajram Curri**	4.06	356	*i* PN	Pn	06 54 05.3	0.0
BCI	**Bajram Curri**	4.06	356	*i* Pn	Pn	06 54 05.3	0.0
NVLJ	**Novalja**	7.52	328	*i* Pn	Pn	06 54 51.5	-1.2
NVLJ				Sn	Sn	06 56 11.0	-7.5
NVLJ	**Novalja**	7.52	328	*i* Pn	Pn	06 54 51.5	-1.3

CSEM ***05*** *06:57:32.5±0.3, 38°.35N×20°.55E, h2km, ML3.9/10, Error ellipse: s-maj=6.9km s-min=4.2km az=57.0*
ATH ***05*** *06:57:32.1, 38°.35N×20°.53E, h6km±2km, MD3.7/11*
THE ***05*** *06:57:32.8, 38°.35N×20°.55E, h0km±2km, ML3.9/10, Error ellipse: s-maj=2.6km s-min=0.9km az=243.0*
NEIC ***05*** *06:57:32.1, 38°.35N×20°.53E, h6km, MD3.7(ATH), After ATH.*
ISCJB ***05*** *06:57:32.7±0.6, 38°.32N±0°.03×20°.51E±0°.04, h10km, Error ellipse: s-maj=5.3km s-min=3.1km az=146.9*

ISC 05 06:57:32.4±0.6, 38°.34N±0°.03×20°.51E±0°.04, h1km±4km, n73, σ0s99/100, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.17**	**160**	*e*Pg	**Pg**	**06 57 36.2**	**+0.5**
VLS				*e*Sg	**Sg**	**06 57 39.1**	**+1.1**
VLS	**Valsamata**	**0.17**	**160**	P	**Pg**	**06 57 36.0**	**+0.3**
VLS				S	**Sg**	**06 57 39.1**	**+1.1**
VLS	**Valsamata**	**0.17**	**160**	*e*PG	**Pg**	**06 57 36.2**	**+0.5**
VLS				*e*SG	**Sg**	**06 57 39.1**	**+1.1**
VLS	**Valsamata**	**0.17**	**160**	*e*Pg	**Pg**	**06 57 36.2**	**+0.5**
VLS				S	**Sg**	**06 57 39.1**	**+1.1**
KFL	**Anninata**	**0.32**	**137**	P	**Pg**	**06 57 38.4**	**-0.1**
KFL				S	**Sg**	**06 57 43.7**	**+1.2**
LKD2	**Lefkada island**	**0.46**	**14**	P	**Pg**	**06 57 40.9**	**-0.4**
LKD2				S	**Sg**	**06 57 47.6**	**+0.3**
LKD2	**Lefkada island**	**0.46**	**14**	P	**Pg**	**06 57 40.9**	**-0.4**
LKD2				S	**Sg**	**06 57 47.6**	**+0.3**
RLS	**Riolos of Patr**	**0.80**	**110**	*e*Pg	**Pg**	**06 57 46.8**	**-1.0**
RLS	**Riolos of Patr**	**0.80**	**110**	*e*PG	**Pg**	**06 57 46.8**	**-1.0**
RLS	**Riolos of Patr**	**0.80**	**110**	*e*Pg	**Pg**	**06 57 46.8**	**-1.0**
UPR	**University Cam**	**1.00**	**93**	P	**Pg**	**06 57 52.6**	**+1.0**
UPR	**University Cam**	**1.00**	**93**	*e*PG	**Pg**	**06 57 50.3**	**-1.3**
UPR				*e*SB	**Sg**	**06 58 05.0**	**+0.4**
UPR	**University Cam**	**1.00**	**93**	*e*Pg	**Pg**	**06 57 50.3**	**-1.3**
UPR	**University Cam**	**1.00**	**93**	P	**Pg**	**06 57 52.6**	**+1.0**
UPR				*e*Sb	**Sg**	**06 58 05.0**	**+0.4**
EFP	**Efpalio**	**1.10**	**85**	P	**Pg**	**06 57 52.0**	**-1.4**
EFP				S	**Sg**	**06 58 09.4**	**+1.7**
EFP	**Efpalio**	**1.10**	**85**	*e*PG	**Pg**	**06 57 51.8**	**-1.6**
EFP				*e*SB	**Sg**	**06 58 08.4**	**+0.7**
EFP	**Efpalio**	**1.10**	**85**	P	**Pg**	**06 57 52.0**	**-1.4**
EFP				*e*Sb	**Sg**	**06 58 08.4**	**+0.7**
EFP				S	**Sg**	**06 58 09.4**	**+1.7**
LAKA	**Lakka**	**1.16**	**95**	P	**Pg**	**06 57 53.1**	**-1.5**
LAKA				S	**Sg**	**06 58 10.1**	**+0.5**
LAKA	**Lakka**	**1.16**	**95**	P	**Pg**	**06 57 53.1**	**-1.5**
LAKA				S	**Sg**	**06 58 10.1**	**+0.5**
EVR	**Evrytania**	**1.17**	**60**	*e*Pg	**Pg**	**06 57 53.5**	**-1.3**
EVR	**Evrytania**	**1.17**	**60**	*e*PG	**Pg**	**06 57 53.5**	**-1.3**
EVR	**Evrytania**	**1.17**	**60**	*e*Pg	**Pg**	**06 57 53.5**	**-1.3**
IGT	**Igoumenitsa**	**1.20**	**353**	P	**Pg**	**06 57 55.6**	**+0.2**
IGT				S	**Sg**	**06 58 12.3**	**+1.3**
IGT	**Igoumenitsa**	**1.20**	**353**	P	**Pg**	**06 57 55.6**	**+0.2**
IGT				S	**Sg**	**06 58 12.3**	**+1.3**
KALE	**Kalithea**	**1.28**	**87**	P	**Pg**	**06 57 54.8**	**-2.1**
KALE				S	**Sg**	**06 58 15.3**	**+1.8**
KALE	**Kalithea**	**1.28**	**87**	P	**Pg**	**06 57 54.8**	**-2.1**
JAN	**Janina**	**1.34**	**11**	*e*Pb	**Pb**	**06 57 57.7**	**-0.7**
JAN	**Janina**	**1.34**	**11**	*e*PB	**Pb**	**06 57 57.7**	**-0.7**
JAN	**Janina**	**1.34**	**11**	*e*Pb	**Pb**	**06 57 57.7**	**-0.7**
KEK	**Kerkira**	**1.48**	**338**	*e*Pb	**Pb**	**06 57 59.8**	**-0.9**
KEK	**Kerkira**	**1.48**	**338**	P	**Pn**	**06 58 00.2**	**0.0**
KEK				S	**Sg**	**06 58 21.7**	**+1.7**
KEK	**Kerkira**	**1.48**	**338**	*e*PB	**Pb**	**06 57 59.8**	**-0.9**
KEK	**Kerkira**	**1.48**	**338**	*e*Pb	**Pb**	**06 57 59.8**	**-0.9**
KEK	**Kerkira**	**1.48**	**338**	P	**Pn**	**06 58 00.2**	**0.0**
GUR	**Goura**	**1.50**	**105**	P	**Pn**	**06 57 58.7**	**-1.7**
GUR				S	**Sb**	**06 58 20.9**	**+0.4**
GUR	**Goura**	**1.50**	**105**	P	**Pn**	**06 57 58.7**	**-1.7**
GUR				S	**Sb**	**06 58 20.9**	**+0.4**
MEV	**Metsovon**	**1.55**	**21**	P	**Pn**	**06 58 01.8**	**+0.7**
MEV	**Metsovon**	**1.55**	**21**	P	**Pn**	**06 58 01.8**	**+0.7**
AGG	**Agios Georgios**	**1.58**	**64**	*e*Pg	**Pg**	**06 58 01.2**	**-1.4**
AGG	**Agios Georgios**	**1.58**	**64**	P	**Pn**	**06 58 01.0**	**-0.5**
AGG				S	**Sn**	**06 58 23.3**	**+0.7**
AGG	**Agios Georgios**	**1.58**	**64**	*e*PG	**Pg**	**06 58 01.2**	**-1.4**
AGG	**Agios Georgios**	**1.58**	**64**	P	**Pn**	**06 58 01.0**	**-0.5**
AGG				S	**Sn**	**06 58 23.3**	**+0.7**
DSF	**Desfina**	**1.58**	**87**	P	**Pn**	**06 58 00.6**	**-1.0**
DSF				S	**Sn**	**06 58 23.6**	**+0.8**
DSF	**Desfina**	**1.58**	**87**	P	**Pn**	**06 58 00.6**	**-1.0**
DSF				S	**Sn**	**06 58 23.6**	**+0.8**
ITM	**Ithomi**	**1.61**	**136**	*e*Pg	**Pn**	**06 58 01.8**	**-0.2**
ITM	**Ithomi**	**1.61**	**136**	P	**Pn**	**06 58 02.0**	**0.0**
ITM	**Ithomi**	**1.61**	**136**	*e*PG	**Pn**	**06 58 01.8**	**-0.2**
ITM	**Ithomi**	**1.61**	**136**	P	**Pn**	**06 58 02.0**	**0.0**
THL	**Klokotos Trika**	**1.69**	**43**	P	**Pn**	**06 58 02.6**	**-0.5**
THL	**Klokotos Trika**	**1.69**	**43**	*e*PB	**Pb**	**06 58 03.9**	**-0.5**
THL	**Klokotos Trika**	**1.69**	**43**	P	**Pn**	**06 58 02.6**	**-0.5**
THL	**Klokotos Trika**	**1.69**	**43**	*e*Pb	**Pb**	**06 58 03.9**	**-0.5**
PYL	**PYLOS**	**1.74**	**146**	P	**Pn**	**06 58 02.9**	**-0.9**
PYL	**PYLOS**	**1.74**	**146**	P	**Pn**	**06 58 02.9**	**-0.9**
LTK	**Loutraki**	**1.96**	**99**	P	**Pn**	**06 58 07.1**	**+0.3**
LTK	**Loutraki**	**1.96**	**99**	P	**Pn**	**06 58 07.1**	**+0.3**
LKR	**Lokris**	**1.98**	**80**	*e*Pn	**Pn**	**06 58 07.6**	**+0.6**
LKR	**Lokris**	**1.98**	**80**	P	**Pn**	**06 58 07.2**	**+0.2**
LKR	**Lokris**	**1.98**	**80**	*e*PN	**Pn**	**06 58 07.6**	**+0.6**
LKR	**Lokris**	**1.98**	**80**	P	**Pn**	**06 58 07.2**	**+0.2**
LKR	**Lokris**	**1.98**	**80**	*e*Pn	**Pn**	**06 58 07.6**	**+0.6**
XOR	**Xorichti**	**2.33**	**63**	P	**Pn**	**06 58 11.7**	**-0.2**
XOR	**Xorichti**	**2.33**	**63**	P	**Pn**	**06 58 11.7**	**-0.2**
LIT	**Litokhoron**	**2.33**	**41**	*e*Pn	**Pn**	**06 58 13.5**	**+1.6**
LIT	**Litokhoron**	**2.33**	**41**	*e*PN	**Pn**	**06 58 13.5**	**+1.6**
LIT	**Litokhoron**	**2.33**	**41**	*e*Pn	**Pn**	**06 58 13.5**	**+1.6**
VLI	**Veliai**	**2.52**	**129**	*e*Pn	**Pn**	**06 58 16.4**	**+1.9**
VLI	**Veliai**	**2.52**	**129**	*e*PN	**Pn**	**06 58 16.4**	**+1.9**
VLI	**Veliai**	**2.52**	**129**	*e*Pn	**Pn**	**06 58 16.4**	**+1.9**
AOS	**Alonnisos**	**2.76**	**71**	P	**Pn**	**06 58 17.8**	**0.0**
AOS				S	**Sn**	**06 58 51.1**	**-0.7**
AOS	**Alonnisos**	**2.76**	**71**	P	**Pn**	**06 58 17.8**	**0.0**
AOS				S	**Sn**	**06 58 51.1**	**-0.7**
OHR	**Ohrid**	**2.78**	**4**	*e*Pn	**Pn**	**06 58 18.0**	**-0.1**
KRUS	**Krusevo**	**3.08**	**10**	*e*Pn	**Pn**	**06 58 22.3**	**+0.1**

NEIC 05 07:13:14.8±0.3, 38°.44N×87°.84W, h5km, MN3.6, MW3.4(SLM), Error ellipse: s-maj=4.7km s-min=4.0km az=200.0, Southern Indiana

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OLIL	**Olney**	**0.35**	**325**	*e*Pg	Pg	07 13 22.3	+0.6
OLIL				*e*Sg	Sg	07 13 27.4	+1.1
USIN	**University of**	**0.50**	**164**	*e*Pg	Pg	07 13 25.0	+0.6
USIN				*e*Sg	Sg	07 13 32.1	+1.3
WCI	**Wyandotte Cave**	**1.23**	**100**	*e*Pg	Pg	07 13 37.6	-0.8
WCI				*e*Sg	Sg	07 13 54.7	+0.2
SIUC	**Southern Illin**	**1.31**	**237**	*e*Pn	Pn	07 13 38.0	-1.7
SIUC				*e*Sn	Sn	07 13 54.2	-3.4
SLM	**Saint Louis**	**1.89**	**277**	*e*Pn	Pn	07 13 47.5	-0.2
SLM				*e*Sn	Sn	07 14 12.1	+0.1
FVM	**French Village**	**2.09**	**258**	*e*Pn	Pn	07 13 50.5	0.0
FVM				*e*Sn	Sn	07 14 18.5	+1.6
UTMT	**University of**	**2.25**	**202**	*e*Pn	Pn	07 13 53.2	+0.5
UTMT				*e*Sn	Sn	07 14 21.9	+1.1
WVT	**Waverly**	**2.31**	**180**	*e*Pn	Pn	07 13 53.7	+0.2
WVT				*e*Sn	Sn	07 14 22.5	+0.2
PARMO	**Parma**	**2.34**	**221**	*e*Pn	Pn	07 13 54.2	+0.3
PARMO				*e*Sn	Sn	07 14 24.7	+1.7
HDIL	**Hopedale**	**2.39**	**332**	*e*Pn	Pn	07 13 55.0	+0.4
HDIL				*e*Sn	Sn	07 14 24.4	+0.1
GLAT	**Glass**	**2.46**	**208**	*e*Pn	Pn	07 13 56.8	+1.3
GLAT				*e*Sn	Sn	07 14 27.2	+1.2
CCM	**Cathedral Cave**	**2.71**	**263**	*e*Pn	Pn	07 13 59.3	+0.3
CCM				*e*Sn	Sn	07 14 32.9	+0.8
HALT	**Halls**	**2.80**	**206**	*e*Pn	Pn	07 14 00.5	+0.3
HALT				*e*Sn	Sn	07 14 38.1	+3.8
GNAR	**Gosnell**	**3.02**	**216**	Pn	Pn	07 14 06.8	+3.4
PLAL	**Pickwick Lake**	**3.46**	**183**	*e*Pn	Pn	07 14 08.6	-0.7
PLAL				*e*Sn	Sn	07 14 49.5	-1.2
SWET	**Sewanee**	**3.57**	**154**	*e*Pn	Pn	07 14 10.8	0.0
SWET				*e*Sn	Sn	07 14 53.5	+0.2
HBAR	**Harrisburg**	**3.66**	**219**	Pn	Pn	07 14 12.7	+0.7
TZTN	**Tazewell**	**3.90**	**118**	*e*Pn	Pn	07 14 16.3	+0.9
TZTN				*e*Sn	Sn	07 15 01.6	0.0
CPCT	**Cooper Cave**	**4.00**	**137**	*e*Pn	Pn	07 14 17.1	+0.3
CPCT				*e*Sn	Sn	07 15 03.7	-0.3
ACSO	**Alum Creek Sta**	**4.17**	**63**	*e*Pn	Pn	07 14 20.9	+1.9
ACSO				*e*Sn	Sn	07 15 08.1	-0.1
TKL	**Tuckaleechee C**	**4.28**	**129**	*e*Pn	Pn	07 14 20.4	-0.1
TKL				*e*Sn	Sn	07 15 08.1	-2.8
JFWS	**Jewell Farm**	**4.83**	**338**	*e*Pn	Pn	07 14 26.7	-1.4
JFWS				*e*Sn	Sn	07 15 21.8	-2.6
UALR	**University of**	**5.15**	**226**	*e*Pn	Pn	07 14 33.2	+0.7
SCIA	**State Center**	**5.38**	**312**	*e*Pn	Pn	07 14 35.5	-0.1
SCIA				*e*Sn	Sn	07 15 36.2	-1.7
LRAL	**Lakeview Retre**	**5.44**	**173**	*e*Pn	Pn	07 14 34.7	-1.8
LRAL				*e*Sn	Sn	07 15 35.9	-3.6
ELN	**Prospectdale**	**5.74**	**100**	*e*Pn	Pn	07 14 40.0	-0.6
ELN				*e*Sn	Sn	07 15 43.3	-3.6
BLA	**Blacksburg**	**6.00**	**100**	*e*Pn	Pn	07 14 44.1	-0.2
	14nm,0.4s						
MIAR	**Mount Ida**	**6.04**	**232**	*e*Pn	Pn	07 14 44.6	-0.1
MIAR				*e*Sn	Sn	07 15 53.6	-0.6
MCWV	**Mont Chateau**	**6.34**	**76**	Pn	Pn	07 14 48.8	-0.1
ALLY	**Alegheny Colle**	**6.71**	**59**	*e*Sg	Sg	07 16 42.5	-7.8
JSC	**Jenkinsville**	**6.74**	**126**	*e*Pn	Pn	07 14 53.1	-1.2
JSC				*e*Sn	Sn	07 16 06.8	-4.7
GLMI	**Grayling**	**6.82**	**20**	*e*Pn	Pn	07 14 53.8	-1.6
GLMI				*e*Sn	Sn	07 16 12.4	-1.0
ERPA	**Erie**	**7.03**	**56**	*e*Pn	Pn	07 14 56.6	-1.8
ERPA				*e*Sg	Sg	07 16 47.5	-13
JSRW	**J. Sargeant Re**	**7.89**	**92**	*e*Pg	Pg	07 15 36.6	-9.3
JSRW				*e*Sg	Sg	07 17 17.2	-11
SSPA	**Standing Stone**	**8.00**	**71**	*e*Pn	Pn	07 15 10.9	-0.7
SSPA				*e*Sn	Sn	07 16 42.8	+0.4
ECSD	**EROS Data Cent**	**8.47**	**311**	*e*Pn	Pn	07 15 16.3	-1.9
ECSD				*e*Sn	Sn	07 16 45.9	-8.2

JMA 05 07:32:38.7±0.1, 33°.40N×140°.47E, h38km±5km, M3.6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.62**	**242**	P	Pn	07 32 50.6	-0.4
JHJ2				S	Sn	07 32 59.7	0.0
BSO1	**Boso 1**	**1.32**	**19**	P	Pn	07 33 00.8	+0.2
BSO1				S	Sn	07 33 17.8	+0.8
JKO	**Kozu shima**	**1.36**	**306**	P	Pn	07 33 02.0	+0.8
JKO				S	Sn	07 33 18.8	+0.8
BSO2	**Boso 2**	**1.37**	**10**	S	Sn	07 33 20.1	+1.9
BSO3	**Boso 3**	**1.40**	**1**	P	Pn	07 33 02.7	+1.0
BSO3				S	Sn	07 33 21.1	+2.2
JIM2	**Oshima 3**	**1.57**	**327**	P	Pn	07 33 04.8	+0.7
JIM2				S	Sn	07 33 23.5	+0.3
BSO4	**Boso 4**	**1.59**	**356**	P	Pn	07 33 05.9	+1.6
BSO4				S	Sn	07 33 26.1	+2.5
JIZS	**Izushimoda**	**1.86**	**315**	P	Pn	07 33 09.3	+1.2
KTJJ	**Kamata 2**	**1.92**	**323**	P	Pn	07 33 09.8	+1.0
KTJJ				S	Sn	07 33 32.1	+0.4
MAT	**Matsushiro**	**3.64**	**330**	P	Pn	07 33 35.2	+2.6
MAT				S	Sn	07 34 16.8	+2.5

CASC 05 07:44:18.6±1.6, 8°.46N×83°.03W, h4km, MD4.0, 1C-1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.47**	**45**	⇑*i* P	Pg	07 44 29.1	+1.4
BRU2				*i* Sg	Sg	07 44 37.4	+3.6
BAR1		**0.82**	**340**	⇓*e*P	Pg	07 44 34.5	0.0
BUS	**Buena Vista**	**1.30**	**326**	*e*P	Pn	07 44 42.5	-1.2
QCR	**Quepos**	**1.48**	**311**	*e*P	Pn	07 44 44.9	-1.1
QCR				*e*S	Sn	07 45 04.7	-1.0
URSC	**Urasca**	**1.55**	**332**	*e*P	Pn	07 44 46.0	-1.0
LAJ	**Bijagual**	**1.76**	**322**	*e*P	Pn	07 44 52.8	+2.8
CGA2	**Cerro Gallo 2**	**2.10**	**318**	*e*P	Pn	07 44 55.1	+0.6
JCR	**Jicaral**	**2.48**	**304**	*e*P	Pn	07 45 00.8	+1.1
BCIP	**Isla Barro Col**	**3.23**	**77**	*e*P	Pn	07 45 10.4	+0.2
BCIP				*e*S	Sn	07 45 56.4	+7.3

IDC ***05*** *08:03:11.1±2.5, 53°.49N×87°.80E, h0km, mb1 3.7/3, mb1mx3.4/29, mbtmp3.7/3, ML3.7/3, Error ellipse: s-maj=23.1km s-min=13.4km az=57.0*
NNC ***05*** *08:03:13.6±3.3, 53°.34N×87°.57E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=26.9km s-min=17.9km az=24.0*

ISC 05 08:03:14.5±2.0, 53°.64N±0°.08×87°.8E±0°.2, h35km, n8, σ0s73/13, 4C-5D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.76**	**281**	Pn	**Pn**	**08 03 42.0**	**-0.6**
	7.5nm,0.3s,baz=103,slow=16,SNR=30						
ZALV				Lg		08 04 08.2	
	9.4nm,0.3s,baz=104,slow=24,SNR=12						
KURK	**Kurchatov**	**6.33**	**246**	⇑Pn	**Pn**	**08 04 45.0**	**-0.3**
	4.9nm,0.7s						
KURK				⇓Sn	**Sn**	**08 05 56.3**	**0.0**
	2.7nm,0.7s						
KURK				⇓Lg		08 06 28.5	
	12nm,0.9s						
KURK	**Kurchatov**	**6.33**	**246**	Pn	**Pn**	**08 04 46.3**	**+1.1**
	0.8nm,0.3s,baz=62,slow=14,SNR=62						
KURK				Sn	**Sn**	**08 05 58.7**	**+2.4**
	0.0nm,0.3s,baz=59,slow=22,SNR=2.9						
KURK				Lg		08 06 34.9	
	0.2nm,0.3s,baz=66,slow=32,SNR=7.3						
KURBB	**Kurchatov Arra**	**6.43**	**246**	⇑Pn	**Pn**	**08 04 46.4**	**-0.2**
	1.5nm,0.5s						
KURBB				⇓Sn	**Sn**	**08 05 58.3**	**-0.3**
	1.1nm,0.5s						
KURBB				⇑Lg		08 06 30.4	
	2.0nm,0.6s						
MK31	**Makanchi Array**	**7.70**	**209**	⇑Pn	**Pn**	**08 05 03.8**	**-0.2**
	1.0nm,0.5s,baz=28,slow=14,SNR=19						
MK31				⇓Sn	**Sn**	**08 06 29.3**	**-0.5**
	2.2nm,0.8s,baz=26,slow=31,SNR=2.9						
MK31				⇓Lg		08 07 07.8	
	3.2nm,0.8s,baz=28,slow=36,SNR=3.8						
MKAR	**Makanchi Array**	**7.70**	**209**	Pn	**Pn**	**08 05 03.7**	**-0.3**
	0.8nm,0.3s,baz=32,slow=14,SNR=22						
MKAR				Sn	**Sn**	**08 06 30.3**	**+0.4**
	0.3nm,0.3s,baz=30,slow=26,SNR=7.6						
MKAR				Lg		08 07 10.7	
	0.3nm,0.3s,baz=26,slow=33,SNR=6.2						
BVAR	**Borovoye Array**	**10.40**	**274**	Pn	**Pn**	**08 05 42.2**	**+1.2**
	0.4nm,0.3s,baz=78,slow=14,SNR=6.5						
BVAR				Sn	**Sn**	**08 07 35.4**	**-0.8**
	0.4nm,0.3s,baz=80,slow=26,SNR=5.4						
SONM	**Songino Array**	**13.15**	**109**	Lg		08 10 01.6	
	0.3nm,0.3s,baz=307,slow=36,SNR=3.9						

MEX 05 08:08:51.1±1.0, 16°.22N×98°.67W, h10km±31km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.55**	**72**	*i* P	Pg	08 09 01.0	-0.7
PNIG				*i* S	Sg	08 09 08.6	-0.3
VHO	**Vista Hermosa**	**2.04**	**65**	*i* P	Pn	08 09 23.2	-2.2
VHO				*i* S	Sn	08 09 45.8	-5.2
PLIG	**Platanillo**	**2.30**	**340**	*i* P	Pn	08 09 25.4	-3.7
PLIG				*i* S	Sn	08 09 53.0	-4.5
HUIG	**Huatulco**	**2.50**	**100**	*i* P	Pn	08 09 27.6	-4.2
HUIG				*i* S	Sn	08 09 58.3	-4.2
TPIG	**Tehuac#an**	**2.52**	**30**	*i* P	Pn	08 09 27.1	-5.0
TPIG				*i* S	Sn	08 09 58.0	-4.7
YAIG	**Yautepec**	**2.65**	**352**	*i* P	Pn	08 09 32.5	-1.4
YAIG				*i* S	Sn	08 10 02.2	-3.9
ZIIG	**Zihuatanejo**	**3.01**	**298**	*i* P	Pn	08 09 36.9	-2.0
TGIG		**5.35**	**83**	*i* P	Pn	08 10 09.3	-1.7
TGIG				*i* S	Sn	08 11 08.9	-3.8

ISCJB ***05*** *08:23:28.6±0.7, 31°.12N±0°.05×104°.20E±0°.08, h10km, mb3.6/3, Error ellipse: s-maj=10.9km s-min=6.1km az=30.3*
IDC ***05*** *08:23:29.1±1.4, 30°.97N×103°.75E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.4/25, mbtmp3.4/5, ML3.5/1, Error ellipse: s-maj=45.1km s-min=25.7km az=63.0*
BJI ***05*** *08:23:54.6, 32°.97N×105°.62E, h15km, ML2.9/5*

ISC 05 08:23:29.7±0.7, 31°.24N±0°.06×104°.07E±0°.09, h10km, n10, σ1s08/15, mb3.6/3, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.43**	**219**	⇑*i*Pg	**Pg**	**08 23 37.4**	**-0.6**
CD2				Sg	**Sg**	**08 23 43.0**	**-0.7**
CD2				smax			
	comp=N,7μm,0.7s						
CD2				smax			
	comp=E,17μm,0.6s						
LZH	**Lanzhou**	**4.83**	**358**	*e*Pg	**Pb**	**08 24 54.3**	**-0.1**
LZH				Sg	**Sn**	**08 25 43.5**	**+5.0**
LZH				smax			
	comp=N,51nm,0.7s						
LZH				smax			
	comp=E,42nm,0.6s						
XAN	**Xi'an**	**4.95**	**54**	Pn	**Pn**	**08 24 41.8**

ZHSF				*e*Sg	**Sg**	**08 41 41.0**	**+0.4**
ZHSF	**Zahedan**	**3.27**	**107**	*e*Pn	**Pn**	**08 40 50.9**	**+3.7**
ZHSF				*e*Sg	**Sg**	**08 41 41.1**	**+0.5**
ZHSF				AML	AML	08 41 48.1	
	comp=N,103nm,0.6s						
ZHSF	**Zahedan**	**3.27**	**107**	*e*Pn	**Pn**	**08 40 50.9**	**+3.7**
ZHSF				*e*Sg	**Sg**	**08 41 41.1**	**+0.5**
BNDS	**Bandar-Abbas**	**3.32**	**196**	*e*Pn	**Pn**	**08 40 49.0**	**+1.2**
BNDS	**Bandar-Abbas**	**3.32**	**196**	*e*Pn	**Pn**	**08 40 49.2**	**+1.4**
BNDS				AML	AML	08 41 50.8	
	comp=N,125nm,0.7s						
BNDS	**Bandar-Abbas**	**3.32**	**196**	*e*Pn	**Pn**	**08 40 49.2**	**+1.4**
IPAR	**Pars**	**3.66**	**259**	*e*Pn	**Pn**	**08 40 56.1**	**+3.6**
IPAR				*e*		08 42 06.3	
	comp=Z,1μm,0.3s						
IPAR	**Pars**	**3.66**	**259**	*e*Pn	**Pn**	**08 40 56.1**	**+3.6**
ISRV	**Sarvestan**	**3.73**	**252**	*e*Pn	**Pn**	**08 40 58.9**	**+5.4**
ISRV				*e*		08 42 05.7	
	comp=Z,2μm,0.4s						
ISRV	**Sarvestan**	**3.73**	**252**	*e*Pn	**Pn**	**08 40 58.9**	**+5.4**
GHIR	**Ghir-Karzin**	**4.33**	**239**	*e*Pn	**Pn**	**08 41 02.0**	**+0.3**
GHIR	**Ghir-Karzin**	**4.33**	**239**	*e*Pn	**Pn**	**08 41 02.7**	**+1.0**
GHIR	**Ghir-Karzin**	**4.33**	**239**	*e*Pn	**Pn**	**08 41 02.7**	**+1.0**
IZEF	**Zefreh**	**4.72**	**300**	*e*Pn	**Pn**	**08 41 08.0**	**+1.0**
IZEF	**Zefreh**	**4.72**	**300**	*e*Pn	**Pn**	**08 41 08.0**	**+1.0**
IMOG	**Moghan**	**5.77**	**18**	*e*Pn	**Pn**	**08 41 22.2**	**+0.6**
IMOG				*e*		08 43 14.3	
	comp=Z,137nm,0.2s						
IMOG	**Moghan**	**5.77**	**18**	*e*Pn	**Pn**	**08 41 22.2**	**+0.6**
IDMV	**Damavand**	**6.57**	**320**	*e*Pn	**Pn**	**08 41 33.3**	**+0.8**
IDMV				*e*		08 42 04.8	
	comp=Z,194nm,0.2s						
IDMV	**Damavand**	**6.57**	**320**	*e*Pn	**Pn**	**08 41 33.3**	**+0.8**
DAMV	**Damavand**	**6.64**	**320**	*e*Pn	**Pn**	**08 41 34.0**	**+0.5**
DAMV	**Damavand**	**6.64**	**320**	*e*Pn	**Pn**	**08 41 34.9**	**+1.4**
DAMV				AML	AML	08 43 54.0	
	comp=N,10nm,0.6s						
DAMV				AML	AML	08 43 56.1	
	comp=E,15nm,0.6s						
DAMV	**Damavand**	**6.64**	**320**	*e*Pn	**Pn**	**08 41 34.9**	**+1.4**
ABKAR	**Abkulak array**	**18.74**	**6**	*e*P	**Pn**	**08 44 15.1**	**0.0**
	comp=E,0.7nm,0.6s						
ABKAR	**Abkulak array**	**18.74**	**6**	*e*P	**Pn**	**08 44 15.1**	**0.0**
	comp=E,0.7nm,0.6s						
AKTK	**Aktyubinsk**	**19.81**	**2**	P	**Pn**	**08 44 26.6**	**-1.3**
AKTK	**Aktyubinsk**	**19.81**	**2**	P	**Pn**	**08 44 26.6**	**-1.4**
AKTO	**Aktyubinsk**	**19.81**	**2**	P	**Pn**	**08 44 26.6**	**-1.3**
	comp=E,1.6nm,0.6s,baz=178,slow=11,SNR=6.8						
BRTR	**Keskin Array B**	**21.23**	**302**	P	**P**	**08 44 42.1**	**+0.1**
	comp=E,1.2nm,0.7s,mb3.3,baz=119,slow=11,SNR=7.6						
BRTR	**Keskin Array B**	**21.23**	**302**	P	**P**	**08 44 42.1**	**+0.1**
BVAR	**Borovoye Array**	**24.39**	**20**	P	**P**	**08 45 14.1**	**0.0**
	comp=E,1.3nm,0.6s,mb3.6,baz=212,slow=5.3,SNR=8.9						
BVAR	**Borovoye Array**	**24.39**	**20**	P	**P**	**08 45 14.1**	**0.0**
MKAR	**Makanchi Array**	**25.24**	**43**	P	**P**	**08 45 21.8**	**-0.2**
	comp=E,1.0nm,0.7s,mb3.5,baz=230,slow=5.7,SNR=6.0						
MKAR	**Makanchi Array**	**25.24**	**43**	P	**P**	**08 45 21.8**	**-0.2**
KURK	**Kurchatov**	**25.68**	**32**	P	**P**	**08 45 24.8**	**-1.1**
	comp=E,0.7nm,0.4s,mb3.5,baz=231,slow=9.5,SNR=5.1						
KURK	**Kurchatov**	**25.68**	**32**	P	**P**	**08 45 24.8**	**-1.1**
ZALV	**Zalesovo Beam**	**30.67**	**33**	P	**P**	**08 46 09.6**	**-0.9**
	comp=E,1.5nm,0.4s,mb4.2,baz=238,slow=8.5,SNR=6.3						
GERES	**GERESS Array B**	**37.47**	**312**	P	**P**	**08 47 08.3**	**-1.3**
	comp=E,0.3nm,0.3s,mb3.6,baz=153,slow=12,SNR=3.5						
GERES	**GERESS Array B**	**37.47**	**312**	P	**P**	**08 47 08.3**	**-1.2**
TORD	**Torodi Ar. Bea**	**53.81**	**264**	P	**P**	**08 49 16.7**	**-2.5**
	comp=E,1.0nm,0.7s,mb3.8,baz=56,slow=6.8,SNR=5.4						

NEIC 05 08:39:59.3, 38°48S×175°83E, *h*174km, MG3.7(WEL), **After WEL., North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RATZ	**Rangitukua**	**0.39**	**187**	P	Pn	08 40 22.9	0.0
WTVZ	**West Tongariro**	**0.66**	**196**	P	Pn	08 40 24.2	+0.1
TWVZ	**Taurewa**	**0.67**	**207**	P	Pn	08 40 24.2	+0.1
TWVZ				S	Sn	08 40 43.0	-0.4
NGZ	**Ngauruhoe**	**0.72**	**194**	P	Pn	08 40 24.5	+0.1
HIZ	**Hauiti**	**0.77**	**267**	P	Pn	08 40 24.5	-0.2
TUVZ	**Tukino**	**0.80**	**190**	P	Pn	08 40 25.3	+0.4
FWVZ	**Far West T-bar**	**0.81**	**196**	P	Pn	08 40 25.1	+0.1
BKZ	**Black Stump Fm**	**0.86**	**143**	P	Pn	08 40 25.3	0.0
BKZ				S	Sn	08 40 44.1	-1.4
WNVZ	**Wahianoa**	**0.87**	**192**	P	Pn	08 40 25.7	+0.3
MOVZ	**Moawhango**	**0.93**	**184**	P	Pn	08 40 25.7	-0.1
URZ	**Urewera**	**1.03**	**78**	P	Pn	08 40 26.0	-0.6
VRZ	**Vera Road**	**1.06**	**232**	P	Pn	08 40 26.7	-0.1
MWZ	**Matawai**	**1.34**	**84**	P	Pn	08 40 28.8	-0.4
RAEZ	**Rainy Point**	**1.38**	**234**	P	Pn	08 40 29.7	+0.1
WAZ	**Wanganui**	**1.43**	**207**	P	Pn	08 40 29.9	-0.2
KNZ	**Kokohu**	**1.54**	**111**	P	Pn	08 40 31.5	+0.4
NEZ	**North Egmont**	**1.57**	**239**	P	Pn	08 40 31.6	+0.2
TSZ	**Takapari Road**	**1.58**	**176**	P	Pn	08 40 31.3	-0.2
PKE	**Pukeiti**	**1.61**	**243**	P	Pn	08 40 31.7	0.0
NWEZ	**Newall Road**	**1.73**	**242**	P	Pn	08 40 32.8	-0.2
PUZ	**Puketiti**	**1.95**	**79**	P	Pn	08 40 34.8	-0.6
MRZ	**Mangatainoka R**	**2.19**	**185**	P	Pn	08 40 36.9	-1.1
BFZ	**Birch Farm**	**2.22**	**172**	P	Pn	08 40 37.5	-0.9
KIW	**Kapiti Island**	**2.48**	**196**	P	Pn	08 40 39.8	-1.6
MTW	**Mount Morrison**	**2.69**	**185**	P	Pn	08 40 42.0	-1.8
CAW	**Cannon Point**	**2.69**	**192**	P	Pn	08 40 42.1	-1.7
MRW	**Makara Radio**	**2.88**	**197**	P	Pn	08 40 44.1	-2.0
PAWZ	**Paruwai Farm**	**2.92**	**186**	P	Pn	08 40 44.5	-2.0
WEL	**Wellington**	**2.92**	**196**	P	Pn	08 40 44.6	-2.0
SNZO	**South Karori**	**2.96**	**197**	P	Pn	08 40 44.9	-2.1
MSWZ	**Moikau Station**	**2.97**	**188**	P	Pn	08 40 45.1	-2.1
TCW	**Tory Channel**	**2.98**	**203**	P	Pn	08 40 45.4	-1.9
BHW	**Baring Head**	**3.02**	**194**	P	Pn	08 40 45.6	-2.2
NNZ	**Nelson**	**3.32**	**214**	P	Pn	08 40 49.0	-2.6
QRZ	**Quartz Range**	**3.46**	**226**	P	Pn	08 40 50.0	-3.3
BSWZ	**Blackbirch Sta**	**3.56**	**204**	P	Pn	08 40 52.3	-2.3
THZ	**Tophouse**	**3.97**	**213**	P	Pn	08 40 56.7	-3.1
KHZ	**Kahutara**	**4.30**	**203**	P	Pn	08 41 01.4	-2.6
DSZ	**Denniston Nort**	**4.49**	**222**	P	Pn	08 41 02.6	-3.8
LTZ	**Lake Taylor**	**5.08**	**211**	P	Pn	08 41 10.4	-3.7
MQZ	**McQueen's Vall**	**5.75**	**204**	P	Pn	08 41 18.2	-4.6
WVZ	**Waitaha Valley**	**6.00**	**218**	P	Pn	08 41 22.5	-3.6
RPZ	**Rata Peaks**	**6.35**	**213**	P	Pn	08 41 27.3	-3.4
FOZ	**Fox Glacier**	**6.88**	**220**	P	Pn	08 41 32.7	-5.0
LBZ	**Lake Benmore**	**7.27**	**214**	P	Pn	08 41 38.6	-4.2
ODZ	**Otahua Downs**	**7.62**	**209**	P	Pn	08 41 43.4	-4.0

FUNV 05 08:50:56.7, 6°83N×73°15W, *h*177km, MW4.1, 4D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.32**	**39**	||*i*P	Pn	08 51 26.1	-0.6
CAPV				*e*S	Sn	08 51 47.7	-2.1
VIGV	**El Vigia**	**2.66**	**41**	*e*P	Pn	08 51 40.6	-0.6
VIGV				*e*S	Sn	08 52 12.4	-3.3
SOCV	**Socops**	**2.69**	**57**	||*e*P	Pn	08 51 40.5	-0.9
SOCV				*e*S	Sn	08 52 13.0	-3.2
ELOV	**Elorza**	**3.64**	**87**	||*e*P	Pn	08 51 52.0	-1.1
VIRV	**Villa del Rosa**	**3.72**	**11**	*e*P	Pn	08 51 53.0	-1.2
VIRV				*e*S	Sn	08 52 34.1	-5.0
QARV	**Quebrada Arrib**	**4.24**	**38**	||*i*P	Pn	08 52 00.4	-0.4
SANV	**Sanarito**	**4.45**	**53**	*e*P	Pn	08 52 02.7	-0.8
CURV	**Curarigua**	**4.46**	**45**	*e*P	Pn	08 52 02.6	-1.0
TEPV	**Terepaima**	**5.00**	**51**	*e*P	Pn	08 52 09.1	-1.5
SIQV	**Siquisique**	**5.03**	**41**	*e*P	Pn	08 52 09.4	-1.6
BAUV	**El Baul**	**5.47**	**67**	*e*P	Pn	08 52 14.3	-2.5
MONV	**Montecano**	**5.98**	**31**	*e*P	Pn	08 52 20.8	-2.5
TURV	**Turiamo**	**6.36**	**55**	*e*P	Pn	08 52 25.6	-2.8
CAOV	**Caicara del Or**	**6.79**	**85**	*e*P	Pn	08 52 31.4	-2.7
BIRV	**Birongo**	**7.70**	**61**	*e*P	Pn	08 52 44.2	-1.9
CUPV	**Cœpira**	**7.95**	**66**	*e*P	Pn	08 52 47.7	-1.7

*IDC **05** 09:10:53.4±2.2, 8°03S×129°82E, h0km, mb3.8/1, mb1 4.0/4, mb1mx3.7/18, mbtmp3.8/4, ML3.7/3, MS2.8/1, Ms1 2.8/1, ms1mx2.1/27, Error ellipse: s-maj=93.1km s-min=27.8km az=77.0*
*ISCJB **05** 09:11:03.2±1.7, 8°42S±0°07×129°78E±0°09, h113km±22km, Error ellipse: s-maj=14.1km s-min=11.6km az=163.0*
*NEIC **05** 09:11:04.7±2.7, 8°47S×129°78E, h111km±38km, mb4.4/1, Error ellipse: s-maj=26.7km s-min=20.3km az=210.0*
ISC 05 09:11:03.2±1.7, 8°36S±0°08×129°78E±0°08, h98km±25km, n11, σ1°16/18, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**5.05**	**149**	*e*P	**Pn**	**09 12 18.4**	**+1.7**
	7.2nm,0.4s						
KAKA	**Kakadu**	**5.05**	**149**	*e*Pn	**Pn**	**09 12 18.0**	**+1.3**
KAKA				*e*Sn	**Sn**	09 13 13.8	0.0
KNA	**Kununurra**	**7.41**	**188**	*e*P	**Pn**	09 12 50.2	+1.4
	5.6nm,0.2s						
KNA				*e*S	**Sn**	09 14 12.9	+1.6
FITZ	**Fitzroy Crossi**	**10.49**	**202**	*e*P	**Pn**	09 13 30.3	-0.3
	5.1nm,0.4s						
FITZ				*e*S	**Sn**	09 15 25.1	-1.1
FITZ	**Fitzroy Crossi**	**10.49**	**202**	Pn	**Pn**	09 13 30.0	-0.6
	0.8nm,0.3s,baz=28,slow=10,SNR=15						
FITZ				Sn	**Sn**	09 15 24.7	-1.5
	0.7nm,0.3s,baz=89,slow=22,SNR=8.7						
FITZ				LR	LR	09 17 11.1	
	comp=Z,59nm,21.8s,baz=22,slow=35						
WRAB	**Tennant Creek**	**12.33**	**159**	*e*Pn	**Pn**	09 13 53.9	-1.4
WRAB				*e*Sn	**Sn**	09 16 10.8	-0.1
WRA	**Warramunga Arr**	**12.33**	**160**	Pn	**Pn**	09 13 53.8	-1.6
	0.4nm,0.3s,baz=334,slow=12,SNR=24						
WRA				Sn	**Sn**	09 16 09.6	-1.4
	0.4nm,0.3s,baz=338,slow=20,SNR=7.0						
COEN	**Coen**	**14.27**	**114**	Pn	**Pn**	09 14 20.5	-0.3
ASAR	**Alice Springs**	**15.72**	**166**	Pn	**Pn**	09 14 40.8	+1.5
	0.2nm,0.3s,baz=342,slow=9.7,SNR=14						
ASAR				Sn	**Sn**	09 17 33.6	+0.5
	0.1nm,0.3s,baz=347,slow=25,SNR=6.0						
KKM	**Kota Kinabalu**	**19.69**	**316**	*e*P	**Pn**	09 15 26.2	-1.1
	22nm,1.2s						
MKAR	**Makanchi Array**	**69.24**	**327**	P	**P**	**09 22 00.7**	**+1.1**
	0.3nm,0.2s,baz=134,slow=6.2,SNR=4.1						

*IDC **05** 09:17:17.5±0.8, 56°09N×153°63W, h0km, mb3.8/13, mb1 4.0/16, mb1mx3.8/32, mbtmp3.8/16, ML3.7/3, Error ellipse: s-maj=24.6km s-min=14.7km az=20.0*
*ISCJB **05** 09:17:18.1±1.3, 56°06N±0°04×153°45W±0°08, h18km±9km, mb3.8/13, Error ellipse: s-maj=8.0km s-min=6.2km az=39.4*
*NEIC **05** 09:17:20.2, 55°99N×153°32W, h20km, mb3.7/1, ML3.6(AEIC), After AEIC.*
ISC 05 09:17:18.0±1.3, 56°05N±0°04×153°48W±0°08, h3km±8km, n41, σ1°02/47, mb3.8/13, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**1.18**	**5**	P	**Pg**	**09 17 40.4**	**-0.2**
OHAK				S	**Sg**	09 17 56.0	+0.1
KDAK	**Kodiak Island**	**1.81**	**15**	P	**Pn**	09 17 49.0	-1.0
KDAK				S	**Sn**	09 18 11.2	-2.1
CHGN	**Chignik**	**2.77**	**277**	*e*Pn	**Pn**	09 18 02.8	-0.4
SDPT	**Sand Point**	**4.02**	**263**	P	**Pn**	09 18 20.3	-0.1
SDPT				S	**Sn**	09 19 08.6	+0.7
RSO	**Redoubt South**	**4.44**	**5**	*e*Pn	**Pn**	09 18 26.9	+0.7
RSO				*e*Sn	**Sn**	09 19 19.8	+1.5
SEW	**Seward**	**4.59**	**26**	*e*Pn	**Pn**	09 18 26.5	-1.8
SLKM	**Skilak Lake**	**4.79**	**20**	P	**Pn**	09 18 29.6	-1.3
SVW2	**Sparrevohn**	**5.18**	**349**	P	**Pn**	09 18 36.1	-0.2
RC01	**Rabbit Creek A**	**5.42**	**20**	*e*Pn	**Pn**	09 18 40.2	+0.7
PMR	**Palmer**	**6.00**	**20**	*e*Pn	**Pn**	09 18 49.2	+1.7
	9.4nm,0.6s						
BMRM	**Bremner River**	**6.78**	**40**	*e*Pn	**Pn**	09 18 57.1	-1.1
	13nm,0.5s						
BMRM				*e*Sn	**Sn**	09 20 11.4	-4.3
PPLA	**Purkeypile**	**6.90**	**5**	*e*Pn	**Pn**	09 19 01.0	+1.1
	14nm,0.9s						
PPLA				*e*Sn	**Sn**	09 20 19.2	+0.4
TT01	**Tatalina**	**7.00**	**350**	P	**Pn**	09 19 00.6	-0.7
TTA	**Tatalina**	**7.02**	**350**	*e*Pn	**Pn**	09 19 03.2	+1.7
	16nm,1.0s						
TTA				*e*Sn	**Sn**	09 20 22.3	+0.5
KTH	**Kantishna Hill**	**7.64**	**9**	*e*Pn	**Pn**	09 19 11.4	+1.4
CHUM	**Lake Minchumin**	**7.88**	**4**	*e*Pn	**Pn**	09 19 13.7	+0.4
	8.5nm,0.8s						
BPAW	**Bear Paw Mtn.**	**8.17**	**8**	*e*Pn	**Pn**	09 19 17.9	+0.6
	4.5nm,0.7s						
PNL	**Peninsula**	**8.34**	**58**	*e*Pn	**Pn**	09 19 18.9	-0.6
PNL				*e*Sn	**Sn**	09 20 50.7	-3.4
IL1	**Eielson Array**	**9.33**	**18**	P	**Pn**	09 19 31.4	-1.7
DIB	**Dawson Inlet,**	**12.49**	**94**	T		09 32 59.6	
	SNR=7.7						
DLBC	**Dease Lake**	**12.91**	**70**	Pn	**Pn**	09 20 22.2	+0.2
	0.2nm,0.3s,baz=270,slow=5.1,SNR=3.7						
INK	**Inuvik**	**15.31**	**29**	Pn	**Pn**	09 20 57.1	+2.4
	0.1nm,0.3s,baz=326,slow=9.6,SNR=5.0						
INK	**Inuvik**	**15.31**	**29**	*e*P	**Pn**	09 20 58.1	+3.4
FX1	**Attu Island--F**	**19.53**	**275**	P	**Pn**	09 21 46.1	-1.3
	1.0nm,0.3s,baz=80,slow=11,SNR=3.0						
YKA	**Yellowknife Ar**	**20.62**	**56**	P	**P**	09 21 58.2	+0.2
	1.0nm,0.7s,baz=268,slow=9.1,SNR=8.2						
YKA	**Yellowknife Ar**	**20.62**	**56**	P	**P**	09 21 58.2	+0.2
RES	**Resolute Bay**	**28.87**	**28**	P	**P**	09 23 17.8	+0.6
	2.6nm,0.9s,mb4.0,baz=267,slow=11,SNR=3.3						
NVAR	**Mina Array Bea**	**29.24**	**112**	P	**P**	09 23 22.5	+1.6
	0.7nm,0.7s,mb3.5,baz=318,slow=9.4,SNR=5.2						
PDAR	**Pinedale Array**	**30.95**	**97**	P	**P**	09 23 36.8	+0.9
	0.2nm,0.5s,mb3.2,baz=333,slow=5.0,SNR=3.0						
KHU	**Kahuku**	**36.78**	**183**	*e*P	**P**	09 24 26.3	-0.3
TXAR	**Lajitas Array**	**43.98**	**106**	P	**P**	09 25 27.5	+1.2
	0.5nm,0.7s,mb3.4,baz=270,slow=6.0,SNR=10						
TXAR				PcP	PcP	09 27 11.6	-0.3
	0.1nm,0.4s,baz=169,slow=2.3,SNR=4.2						
ARCES	**ARCESS Array B**	**54.72**	**0**	P	**P**	09 26 47.3	-0.5
	1.0nm,0.7s,mb4.0,baz=353,slow=6.8,SNR=3.6						
SONM	**Songino Array**	**56.96**	**308**	P	**P**	09 27 02.5	-1.6
	0.4nm,0.4s,mb3.8,baz=47,slow=8.5,SNR=2.8						
ZALV	**Zalesovo Beam**	**60.44**	**325**	P	**P**	09 27 28.6	+0.3
	0.9nm,0.5s,mb4.1,baz=61,slow=7.1,SNR=2.5						
HFS	**Hagfors**	**63.72**	**7**	P	**P**	09 27 50.4	+0.2
	0.7nm,0.6s,mb3.9,baz=107,slow=5.0,SNR=4.2						
KURK	**Kurchatov**	**65.17**	**326**	P	**P**	09 27 59.3	-0.6
	0.4nm,0.3s,mb3.9,baz=30,slow=6.1,SNR=3.4						
BVAR	**Borovoye Array**	**65.46**	**333**	P	**P**	09 28 01.6	0.0
	0.8nm,0.5s,mb4.0,baz=35,slow=6.0,SNR=5.4						
MKAR	**Makanchi Array**	**67.38**	**322**	P	**P**	09 28 13.6	-0.5
	0.2nm,0.2s,mb3.7,baz=33,slow=5.8,SNR=2.8						
ABKAR	**Abkulak array**	**71.43**	**338**	*e*P	**P**	09 28 38.8	-0.3
	0.3nm,0.5s,mb3.5						
CMAR	**Chiang Mai Arr**	**84.28**	**295**	P	**P**	09 29 50.7	-0.4
	0.9nm,0.3s,mb4.4,baz=29,slow=7.6,SNR=3.5						
QSPA	**South Pole Qui**	**145.84**	**180**	PKPbc	PKPbc	09 36 56.2	-0.5
	2.7nm,1.0s,baz=35,slow=0.3,SNR=13						

*CSEM **05** 09:18:10.9±0.1, 39°16N×24°15E, h15km, ML3.5/9, Error ellipse: s-maj=2.9km s-min=2.2km az=107.0*
*ISCJB **05** 09:18:10.3±0.5, 39°15N±0°02×24°17E±0°03, h12km±3km, Error ellipse: s-maj=4.0km s-min=2.9km az=17.4*
*ATH **05** 09:18:11.2, 39°16N×24°15E, h36km±2km, MD3.3/17, ML3.5*
*THE **05** 09:18:11.5, 39°17N×24°14E, h14km±1km, ML3.5/9, Error ellipse: s-maj=1.4km s-min=0.7km az=282.0*
*NEIC **05** 09:18:11.2, 39°16N×24°15E, h36km, MD3.6(ATH), After ATH.*
ISC 05 09:18:11.0±0.5, 39°15N±0°02×24°17E±0°03, h14km±3km, n101, σ0°55/140, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOS	**Alonnisos**	**0.23**	**276**	P	**Pg**	09 18 15.7	-0.3
AOS				S	**Sg**	09 18 19.2	-0.2
AOS	**Alonnisos**	**0.23**	**276**	P	**Pg**	09 18 15.7	-0.3
AOS				S	**Sg**	09 18 19.2	-0.2
NEO	**Neokhori**	**0.75**	**282**	*e*Pn	**Pg**	09 18 26.2	+0.6
NEO				*e*Sn	**Sg**	09 18 36.0	+0.5
NEO	**Neokhori**	**0.75**	**282**	*e*PN	**Pg**	09 18 26.2	+0.6
NEO				*e*SN	**Sg**	09 18 36.0	+0.5
NEO	**Neokhori**	**0.75**	**282**	*e*Pn	**Pg**	09 18 26.2	+0.6
XOR	**Xorichti**	**0.79**	**286**	P	**Pg**	09 18 26.6	+0.2
XOR				S	**Sg**	09 18 36.9	+0.2
XOR	**Xorichti**	**0.79**	**286**	P	**Pg**	09 18 26.6	+0.2
XOR				S	**Sg**	09 18 36.9	+0.2
PAIG	**Paliouri**	**0.86**	**334**	P	**Pg**	09 18 28.2	+0.4
PAIG				S	**Sg**	09 18 40.0	+0.8
PAIG	**Paliouri**	**0.86**	**334**	P	**Pg**	09 18 28.2	+0.4
PAIG				S	**Sg**	09 18 40.0	+0.8
ATAL	**Atalanti**	**1.00**	**243**	P	**Pg**	09 18 29.8	-0.6
ATAL	**Atalanti**	**1.00**	**243**	P	**Pg**	09 18 29.8	-0.6
LKR	**Lokris**	**1.04**	**242**	*e*Pn	**Pg**	09 18 30.2	-0.9
LKR	**Lokris**	**1.04**	**242**	P	**Pg**	09 18 30.6	-0.5
LKR				S	**Sg**	09 18 44.8	+0.1
LKR	**Lokris**	**1.04**	**242**	*e*PN	**Pg**	09 18 30.2	-0.9
LKR	**Lokris**	**1.04**	**242**	*e*Pn	**Pg**	09 18 30.2	-0.9
LKR	**Lokris**	**1.04**	**242**	P	**Pg**	09 18 30.6	-0.5
LKR				S	**Sg**	09 18 44.8	+0.1
LIA	**Limnos Island**	**1.08**	**46**	*e*Pn	**Pg**	09 18 31.7	-0.3
LIA				*e*Sn	**Sg**	09 18 46.7	+0.6
LIA	**Limnos Island**	**1.08**	**46**	P	**Pg**	09 18 31.6	-0.4
LIA				S	**Sg**	09 18 46.7	+0.6
LIA	**Limnos Island**	**1.08**	**46**	*e*PN	**Pg**	09 18 31.7	-0.3
LIA				*e*SN	**Sg**	09 18 46.7	+0.6
LIA	**Limnos Island**	**1.08**	**46**	*e*Pn	**Pg**	09 18 31.7	-0.3
LIA				S	**Sg**	09 18 46.7	+0.6
PTL	**Penteli**	**1.12**	**192**	*e*Pn	**Pg**	09 18 31.7	-1.0
PTL				*e*Sn	**Sg**	09 18 46.7	-0.6
PTL	**Penteli**	**1.12**	**192**	*e*PN	**Pg**	09 18 31.7	-1.0
PTL				*e*SN	**Sg**	09 18 46.7	-0.6
PTL	**Penteli**	**1.12**	**192**	*e*Pn	**Pg**	09 18 31.7	-1.0
PTL				*e*Sn	**Sg**	09 18 46.7	-0.6
OUR	**Ouranopolis**	**1.19**	**353**	P	**Pn**	09 18 32.8	-0.5
OUR				S	**Sb**	09 18 48.4	-0.3
OUR	**Ouranopolis**	**1.19**	**353**	P	**Pn**	09 18 32.8	-0.5
OUR				S	**Sb**	09 18 48.4	-0.3
ATHU	**Athens Univers**	**1.22**	**194**	P	**Pn**	09 18 33.3	-0.3
ATHU				S	**Sb**	09 18 50.0	+0.6
ATHU	**Athens Univers**	**1.22**	**194**	P	**Pn**	09 18 33.3	-0.3
ATHU				S	**Sb**	09 18 50.0	+0.6
ATH	**Athens Observa**	**1.23**	**197**	*e*Pn	**Pn**	09 18 34.0	+0.3
ATH				*e*Sn	**Sn**	09 18 50.1	+0.1
ATH	**Athens Observa**	**1.23**	**197**	*e*PN	**Pn**	09 18 34.0	+0.3
ATH				*e*SN	**Sn**	09 18 50.1	+0.1
ATH	**Athens Observa**	**1.23**	**197**	*e*Pn	**Pn**	09 18 34.0	+0.3
ATH				*e*Sn	**Sn**	09 18 50.1	+0.1
VLY	**Voula,Athens**	**1.33**	**193**	*e*Pb	**Pn**	09 18 34.6	-0.5
VLY	**Voula,Athens**	**1.33**	**193**	*e*PB	**Pn**	09 18 34.6	-0.5
VLY	**Voula,Athens**	**1.33**	**193**	*e*Pb	**Pn**	09 18 34.6	-0.5
PLG	**Polygyros**	**1.34**	**336**	*e*Pb	**Pn**	09 18 34.3	-1.1
PLG				*e*Sn	**Sn**	09 18 51.3	-1.7
PLG	**Polygyros**	**1.34**	**336**	P	**Pn**	09 18 34.3	-1.1
PLG				S	**Sn**	09 18 51.6	-1.4
PLG	**Polygyros**	**1.34**	**336**	*e*PB	**Pn**	09 18 34.3	-1.1
PLG				*e*SN	**Sn**	09 18 51.3	-1.7
PLG	**Polygyros**	**1.34**	**336**	P	**Pn**	09 18 34.3	-1.1
PLG				*e*Sn	**Sn**	09 18 51.3	-1.7
PLG				S	**Sn**	09 18 51.6	-1.4
AGG	**Agios Georgios**	**1.44**	**266**	*e*Pn	**Pn**	09 18 36.4	-0.2
AGG	**Agios Georgios**	**1.44**	**266**	P	**Pn**	09 18 36.4	-0.2
AGG	**Agios Georgios**	**1.44**	**266**	*e*PN	**Pn**	09 18 36.4	-0.2
AGG	**Agios Georgios**	**1.44**	**266**	P	**Pn**	09 18 36.4	-0.2
LTK	**Lout

19nm,0.9s
CHUM *e*Sn Sn 09 25 18.1 +3.6
PAX Paxson 8.01 27 *e*Pn Pn 09 23 48.8 +0.8
5.2nm,0.6s
BPAW Bear Paw Mtn. 8.13 8 *e*Pn Pn 09 23 50.6 +1.1
COLA College 9.23 15 P Pn 09 24 03.6 -1.1
IL1 Eielson Array 9.29 18 P Pn 09 24 02.6 -2.9
SKAG Skagway 10.28 63 *e*Pn Pn 09 24 19.8 +0.8
10nm,0.7s
DIB Dawson Inlet, 12.52 95 T 09 37 21.8
SNR=8.1
DLBC Dease Lake 12.91 70 Pn Pn 09 24 55.4 +0.4
0.4nm,0.3s,baz=274,slow=23,SNR=5.5
DLBC Dease Lake 12.91 70 Pn Pn 09 24 55.4 +0.4
INK Inuvik 15.28 29 Pn Pn 09 25 30.1 +3.0
0.2nm,0.3s,baz=265,slow=12,SNR=7.1
INK LR LR 09 31 46.5
comp=Z,181nm,21.6s,baz=256,slow=39
INK Inuvik 15.28 29 *e*Pn Pn 09 25 30.4 +3.2
INK LR LR 09 31 46.5
YKA Yellowknife Ar 20.61 56 P P 09 26 30.6 -0.2
2.2nm,0.7s,baz=269,slow=9.5,SNR=17
YKA LR LR 09 34 49.6
comp=Z,22nm,18.0s,MS2.6,baz=25,slow=38
JCW Jim Creek 20.79 99 *e*P P 09 26 32.9 0.0
8.6nm,1.0s
A07A Ashnola River, 21.18 95 ⇓P P 09 26 37.4 +0.3
baz=21
B08A Colville Reser 22.14 96 ⇑P P 09 26 47.6 +0.2
baz=22
G04A Mulino 22.30 106 ⇑P P 09 26 49.3 +0.2
baz=22
B09A Rice 22.77 95 ⇑P P 09 26 54.2 +0.2
baz=22
H04A Detroit Lake 22.80 107 ⇑P P 09 26 53.2 -1.2
baz=22,SNR=6.2
C09A Chrisman Ranch 23.04 96 ⇑P P 09 26 56.9 0.0
baz=23
D08A Wollman Farm, 23.11 98 ⇓P P 09 26 57.7 +0.1
baz=23
A11A Hall Mountain, 23.48 92 ⇓P P 09 27 01.3 -0.2
baz=23
G08A Pilot Rock 24.16 102 ⇓P P 09 27 07.9 -0.1
baz=24
E10A Myers Farm, Un 24.45 98 ⇓P P 09 27 09.9 -0.7
baz=24
D11A Klaveano Farm, 24.55 96 ⇓P P 09 27 10.8 -0.7
baz=24,SNR=6.0
YBH Yreka Blue Hor 24.57 113 P P 09 27 11.5 -0.2
3.9nm,0.9s,mb3.9,baz=0.7,slow=2.5,SNR=6.0
YBH LR LR 09 34 28.6
comp=Z,102nm,20.5s,MS3.3,baz=326,slow=31
I07A Izee 24.64 105 ⇓P P 09 27 12.5 +0.2
baz=24,SNR=7.9
F10A Beach Ranch, E 24.69 99 ⇓P P 09 27 12.8 +0.1
baz=24
H08A Prairie City 24.81 103 ⇑P P 09 27 13.4 -0.4
baz=25,SNR=6.7
K05A Summer Lake 24.82 109 ⇓P P 09 27 14.7 +0.8
baz=25,SNR=7.3
B13A Whitefish 24.85 92 ⇓P P 09 27 13.3 -0.9
baz=25
E11A Bogner Ranch, 25.03 97 ⇓P P 09 27 14.9 -0.9
baz=25
D12A Red Ives Fores 25.10 95 ⇑P P 09 27 16.5 +0.1
baz=25
A14A Double T Ranch 25.12 89 ⇑P P 09 27 16.1 -0.5
baz=25
G10A Bishop Farm, J 25.17 100 ⇓P P 09 27 17.1 -0.1
baz=25,SNR=5.4
C13A Hot Springs 25.18 93 ⇓P P 09 27 16.7 -0.4
baz=25
H09A Durkee 25.27 102 ⇑P P 09 27 17.4 -0.6
baz=25
F11A Grangeville 25.34 98 ⇑P P 09 27 18.3 -0.3
baz=25
BMO Blue Mountains 25.35 101 *e*P P 09 27 19.2 +0.5
4.7nm,1.2s,mb3.9
A15A Johnson Ranch, 25.50 89 ⇑P P 09 27 18.8 -1.3
baz=25,SNR=6.4
D13A Huson 25.57 94 ⇓P P 09 27 20.4 -0.3
baz=25
G11A Walters Elk Ra 25.58 99 ⇓P P 09 27 21.7 +0.9
baz=25,SNR=6.6
C14A Swan Lake 25.59 92 ⇑P P 09 27 21.1 +0.2
baz=25
SWMT Swartz Lake 25.59 93 *e*P P 09 27 20.9 -0.1
5.5nm,1.1s,mb4.0
I09A Lost Marbles R 25.68 103 ⇑P P 09 27 21.9 +0.2
baz=25
J08A Circle Bar Ran 25.68 105 ⇓P P 09 27 22.1 +0.3
baz=25
MOD Modoc 25.70 109 *e*P P 09 27 22.8 +0.8
8.5nm,1.1s,mb4.2
H10A Noah's Angus R 25.82 101 ⇑P P 09 27 22.7 -0.3
baz=26,SNR=7.3
F12A Elk City 25.92 97 ⇑P P 09 27 23.6 -0.3
baz=26
B15A Bradely Ranch, 25.95 90 ⇑P P 09 27 23.9 -0.3
baz=26,SNR=7.4
MSO Missoula 26.02 94 *e*P P 09 27 25.1 +0.3
1.2nm,0.8s,mb3.5
J09A Fry Pan Ranch, 26.08 104 ⇑P P 09 27 25.8 +0.4
baz=26
E13A Victor 26.10 95 ⇓P P 09 27 25.1 -0.5
baz=26
D14A Greenough 26.11 93 ⇑P P 09 27 25.1 -0.6
baz=26
A16A West Butte Ran 26.15 88 ⇓P P 09 27 25.4 -0.6
baz=26
H11A Donnelly 26.15 100 ⇑P P 09 27 25.8 -0.2
baz=26
C15A Salmond Ranch, 26.22 91 ⇑P P 09 27 25.9 -0.7
baz=26
WVOR Wild Horse Val 26.22 107 *e*P P 09 27 27.5 +0.8
9.4nm,1.0s,mb4.3
F13A Darby 26.41 96 ⇓P P 09 27 27.7 -0.7
baz=26
E14A Clinton 26.51 94 ⇑P P 09 27 28.5 -0.7
baz=26
A17A Triple J Farms 26.66 87 ⇑P P 09 27 29.4 -1.2
baz=26,SNR=5.3
I11A Placerville 26.69 101 ⇓P P 09 27 30.9 0.0
baz=26
H12A Diamond D Ranc 26.89 99 ⇑P P 09 27 32.7 0.0
baz=27
G13A Cobalt 26.90 97 ⇓P P 09 27 32.9 +0.1
baz=27
F14A Wisdom 26.94 95 ⇓P P 09 27 33.2 +0.1
baz=27
K10A MacKenzie Ranc 26.94 104 ⇑P P 09 27 33.7 +0.5
baz=27
B17A L&G Farms, Che 26.95 89 ⇓P P 09 27 33.2 0.0
baz=27
E15A Deer Lodge 26.98 94 ⇓P P 09 27 33.5 0.0
baz=27
A18A Metzger Ranch, 27.15 87 ⇓P P 09 27 34.3 -0.7
baz=27
BEKR Beckworth 27.15 113 ⇓P P 09 27 34.5 -0.6
baz=27
H13A Challis 27.21 98 ⇓P P 09 27 34.9 -0.7
baz=27
I12A Atlanta 27.22 101 ⇑P P 09 27 35.1 -0.6
baz=27
D16A Dana Ranch, Ca 27.24 92 ⇑P P 09 27 35.2 -0.6
baz=27
B18A Beardsley Farm 27.47 88 ⇓P P 09 27 37.2 -0.6
baz=27
J12A Stokes Ranch, 27.60 101 ⇑P P 09 27 38.7 -0.4
baz=27
D17A Six Diamond Ra 27.65 91 ⇓P P 09 27 39.2 -0.2
baz=27
H14A Leadore 27.67 97 ⇓P P 09 27 39.5 -0.2
baz=27
EGMT Eagleton 27.68 88 ⇑P P 09 27 39.3 -0.5
baz=27
I13A Wildhorse Cree 27.70 99 ⇑P P 09 27 39.6 -0.4
baz=27
HLID Hailey 27.77 100 ⇑P P 09 27 39.9 -0.6
baz=28
HLID Hailey 27.77 100 *e*P P 09 27 41.2 +0.7
2.1nm,1.0s,mb3.7
G15A Dillon 27.82 96 ⇑P P 09 27 40.8 -0.2
baz=28
PETK Petropavlovsk- 27.94 285 LR LR 09 38 54.9
comp=Z,77nm,18.8s,MS3.3,baz=80,slow=37
E17A Martinsdale 27.95 92 ⇓P P 09 27 42.1 -0.1
baz=28

L11A Cat Creek Ranc 27.96 104 ⇓P P 09 27 42.3 0.0
baz=28
M10A I.L. Ranch, Tu 27.98 106 ⇓P P 09 27 42.7 +0.3
baz=28
BOZ Bozeman (W) 28.01 94 ⇑P P 09 27 42.9 +0.2
baz=28
J13A Cove Ranch, Pi 28.01 100 ⇑P P 09 27 42.5 -0.3
baz=28
I14A Mackay 28.06 99 ⇓P P 09 27 42.9 -0.3
baz=28
K12A Draper Farm, C 28.11 102 ⇑P P 09 27 43.8 +0.1
baz=28
D18A Linhart Farms, 28.12 90 ⇑P P 09 27 43.9 +0.3
baz=28,SNR=5.5
G16A Moss Hill, Enn 28.16 95 ⇑P P 09 27 44.1 0.0
baz=28
F17A Fitzpatrick Pl 28.40 93 ⇓P P 09 27 46.3 +0.1
baz=28
J14A Carey 28.42 100 ⇓P P 09 27 46.4 0.0
baz=28
M11A Holland Ranch, 28.45 105 ⇓P P 09 27 46.9 +0.2
baz=28
RES Resolute Bay 28.84 28 P P 09 27 49.8 0.0
1.1nm,0.7s,mb3.7,baz=280,slow=6.1,SNR=3.8
M12A Wells 28.94 104 ⇓P P 09 27 50.7 -0.3
baz=29
J15A Blackfoot 28.97 98 ⇑P P 09 27 51.4 +0.1
baz=29
ELK Elko 29.23 105 P P 09 27 54.5 +0.9
2.2nm,0.9s,mb3.9,baz=307,slow=7.4,SNR=7.9
N12A Clover Valley, 29.26 105 ⇓P P 09 27 54.1 +0.2
baz=29
N12A Clover Valley, 29.26 105 *e*P P 09 27 55.0 +1.1
2.1nm,0.7s,mb4.0
NVAR Mina Array Bea 29.28 112 P P 09 27 54.6 +0.5
2.9nm,0.8s,mb4.0,baz=294,slow=9.3,SNR=15
M13A Montello 29.38 103 ⇑P P 09 27 55.0 +0.1
baz=29
K15A Arbon 29.39 100 ⇑P P 09 27 55.5 +0.6
baz=29
O11A Cowboy Ranch, 29.44 107 ⇑P P 09 27 55.7 +0.2
baz=29
O12A Currie 29.83 106 ⇑P P 09 27 59.2 +0.2
baz=30
L15A Malad City 29.92 101 ⇓P P 09 27 59.9 +0.2
baz=30
N14A Grayback Hills 30.27 103 ⇓P P 09 28 02.9 +0.1
baz=30
P12A McGill 30.31 107 ⇑P P 09 28 02.9 -0.3
baz=30
O13A Hicks Ranch, I 30.34 105 ⇑P P 09 28 03.5 +0.1
baz=30
Q11A Duckwater 30.37 109 ⇓P P 09 28 03.7 0.0
baz=30
J18A Kendall Valley 30.43 96 ⇓P P 09 28 04.3 +0.1
baz=30
Q12A Willow Creek R 30.66 107 ⇓P P 09 28 06.3 0.0
baz=30
R11A Troy Canyon, C 30.77 109 ⇑P P 09 28 07.0 -0.3
baz=30
P13A Bates Ranch, G 30.80 106 ⇓P P 09 28 07.2 -0.3
baz=30
PDAR Pinedale Array 30.98 97 P P 09 28 08.8 -0.3
0.9nm,0.8s,mb3.6,baz=328,slow=5.3,SNR=6.5
M17A Scullys Gap (B 31.23 100 ⇓P P 09 28 11.2 -0.1
baz=31
R12A Pony Springs, 31.30 108 ⇓P P 09 28 12.4 +0.5
baz=31
MPMC Manual Prospec 31.51 114 ⇓P P 09 28 13.9 +0.2
baz=31
Q14A Sevier Lake (B 31.54 106 ⇑P P 09 28 14.0 0.0
baz=31
S12A Delamar Landin 31.71 109 ⇓P P 09 28 15.9 +0.3
baz=31
R13A O'Grain Ranch, 31.75 108 ⇓P P 09 28 16.0 +0.1
baz=32
T11A Corn Creek, Al 31.79 110 ⇑P P 09 28 16.7 +0.5
baz=32
P16A Fountain Green 31.97 103 ⇓P P 09 28 17.6 -0.2
baz=32
Q15A Fillmore 32.01 105 ⇑P P 09 28 18.5 +0.3
baz=32
BSC Santa Cruz Isl 32.07 119 ⇓P P 09 28 19.4 +0.7
baz=32
S13A Holt Ranch, En 32.25 108 ⇓P P 09 28 20.6 +0.3
baz=32,SNR=5.6
ARUT Antelope Range 32.32 107 *e*P P 09 28 22.1 +1.2
4.4nm,1.0s,mb4.2
O18A Roosevelt 32.42 101 ⇓P P 09 28 22.0 +0.3
baz=32
GSC Goldstone 32.45 114 ⇑P P 09 28 22.0 0.0
baz=32
MSU Marysvale 32.48 105 *e*P P 09 28 23.8 +1.6
10nm,1.5s,mb4.4
S14A Cedar City 32.49 107 ⇑P P 09 28 22.6 +0.2
baz=32
P17A Butcher Ranch, 32.57 102 ⇑P P 09 28 23.5 +0.4
baz=32
T13A Saint George 32.65 109 ⇑P P 09 28 24.6 +0.8
baz=32
L21A Rawlins 32.73 96 ⇑P P 09 28 23.9 -0.5
baz=32
Q16A Castle Valley 32.73 104 ⇓P P 09 28 24.1 -0.3
baz=32
V11A Goodsprings 32.74 112 ⇑P P 09 28 24.6 0.0
baz=32
O19A Miners Draw (B 32.88 100 ⇓P P 09 28 25.8 0.0
baz=33
SRU San Rafael 32.95 103 ⇑P P 09 28 26.0 -0.3
baz=33,SNR=8.9
SRU San Rafael 32.95 103 *e*P P 09 28 27.0 +0.7
10nm,1.1s,mb4.7
N20A Spence Gulch, 32.99 98 ⇑P P 09 28 27.0 +0.2
baz=33
R16A Teasdale 33.02 105 ⇑P P 09 28 27.4 +0.4
baz=33
T14A Hurricane 33.05 108 ⇑P P 09 28 27.6 +0.3
baz=33
U13A Pakoon Wash 33.07 110 ⇓P P 09 28 27.4 -0.1
baz=33,SNR=6.0
V12A Nelson 33.13 112 ⇑P P 09 28 27.7 -0.3
baz=33,SNR=5.3
Q18A Rafter H Ranch 33.16 102 ⇑P P 09 28 28.8 +0.5
baz=33
L22A Ellis Ranch, M 33.20 95 ⇓P P 09 28 28.9 +0.4
baz=33
R17A Hanksville Air 33.34 104 ⇓P P 09 28 29.2 -0.6
baz=33,SNR=5.1
P19A Cripple Cowboy 33.42 100 ⇑P P 09 28 30.8 +0.2
baz=33
T15A Red Dirt Ranch 33.46 107 ⇑P P 09 28 30.9 0.0
baz=33,SNR=6.1
U14A Mt Trumbull 33.48 109 ⇑P P 09 28 31.4 +0.3
baz=33,SNR=6.5
O20A White River Ci 33.48 99 ⇓P P 09 28 30.9 -0.1
baz=33
V13A Grand Canyon W 33.49 110 ⇑P P 09 28 31.3 +0.2
baz=33
R18A Canyonlands Na 33.81 103 ⇓P P 09 28 33.5 -0.4
baz=34
S17A Black Ridge (B 33.86 105 ⇓P P 09 28 34.7 +0.4
baz=34
U15A North Rim 33.95 108 ⇓P P 09 28 35.4 +0.3
baz=34
N22A Wattenberg Ran 34.02 97 ⇑P P 09 28 35.9 +0.2
baz=34
W13A Hualapai Mount 34.11 111 ⇓P P 09 28 36.8 +0.2
baz=34
V14A Boquillas Ranc 34.12 110 ⇑P P 09 28 36.9 +0.3
baz=34
ULM Lac du Bonnet 34.15 75 P P 09 28 36.0 -0.7
1.7nm,0.5s,mb4.2,baz=287,slow=6.3,SNR=2.9
ULM LR LR 09 42 34.4
comp=Z,106nm,18.6s,MS3.6,baz=257,slow=36
IRM Iron Mountain 34.19 114 ⇑P P 09 28 37.5 +0.2
baz=34
R19A Curley Farm, L 34.22 102 ⇓P P 09 28 37.3 -0.1
baz=34
S18A Hurst Farm, Bl 34.25 104 ⇑P P 09 28 37.5 -0.3
baz=34,SNR=6.7
BC3 Big Chuckawall 34.43 115 ⇑P P 09 28 39.4 +0.1
baz=34
W14A Seligman 34.45 110 ⇓P P 09 28 40.0 +0.5
baz=34
V15A Kaibab Nationa 34.47 108 ⇓P P 09 28 39.9 +0.3
baz=34,SNR=5.4
X13A Yucca 34.53 112 ⇓P P 09 28 40.1 -0.1
baz=34

S19A Harvey Farm, M 34.68 103 ⇓P P 09 28 41.3 -0.1
baz=34
T18A Mexican Hat 34.72 104 ⇓P P 09 28 41.4 -0.4
baz=34
Q21A Lamborn Mesa, 34.76 100 ⇓P P 09 28 42.1 0.0
baz=34
R20A Redvale 34.78 102 ⇑P P 09 28 42.2 0.0
baz=34
SWSC Sam W. Stewart 34.82 116 ⇓P P 09 28 42.8 +0.1
baz=35
Y12C Blythe 34.83 113 ⇓P P 09 28 42.7 -0.1
baz=35
X14A Yava 35.12 111 ⇑P P 09 28 45.3 0.0
baz=35
WUAZ Wupatki 35.12 108 ⇑P P 09 28 44.7 -0.6
baz=35
Y13A Salome 35.14 112 ⇓P P 09 28 45.5 +0.1
baz=35
AGMN Agassiz Nation 35.25 78 *e*P P 09 28 45.9 -0.3
4.8nm,1.0s,mb4.4
V17A Tonalea, Kykot 35.35 107 ⇑P P 09 28 47.1 -0.1
baz=35,SNR=5.7
T19A Beclabito 35.41 104 ⇓P P 09 28 47.5 -0.3
baz=35,SNR=7.3
MVCO Mesa Verde 35.42 103 ⇑P P 09 28 47.8 0.0
baz=35
X15A Humboldt 35.45 110 ⇑P P 09 28 48.3 +0.2
baz=35
Y14A Wickenburg 35.47 111 ⇑P P 09 28 48.0 -0.3
baz=35
V18A Ganado 35.75 106 ⇓P P 09 28 50.9 +0.2
baz=36
X16A Lo Mia Camp, P 35.92 109 ⇓P P 09 28 52.8 +0.6
baz=36
T22A Edith 36.44 102 ⇑P P 09 28 57.2 +0.7
baz=36
114A Black Gap (USA 36.46 113 ⇓P P 09 28 57.2 +0.4
baz=36
V20A Brimhall 36.48 105 ⇓P P 09 28 57.2 +0.3
baz=36
W19A Sanders 36.49 106 ⇓P P 09 28 57.3 +0.2
baz=36
X18A Snowflake 36.63 107 ⇑P P 09 28 58.2 0.0
baz=36
Z16A Peralta Trail, 36.76 110 ⇓P P 09 28 59.6 +0.3
baz=36
Y17A Roosevelt 36.79 109 ⇑P P 09 28 59.9 +0.3
baz=36
X19A St. Johns 37.06 107 ⇑P P 09 29 02.1 +0.2
baz=37
214A Organ Pipe Nat 37.13 113 ⇓P P 09 29 03.0 +0.5
baz=37
Y18A Canyon Day Jun 37.16 108 ⇑P P 09 29 02.8 +0.1
baz=37
V22A San Miguel Ran 37.24 103 ⇓P P 09 29 03.6 +0.2
baz=37,SNR=5.8
V23A Ortiz Mt. (NFS 37.76 102 ⇓P P 09 29 08.3 +0.5
baz=38
X21A Alamocita Cree 37.86 105 ⇑P P 09 29 09.0 +0.3
baz=38,SNR=8.4
ANMO Albuquerque 38.20 103 LR LR 09 44 16.1
comp=Z,47nm,18.6s,MS3.3,baz=156,slow=35
W23A Werner Place, 38.21 103 ⇑P P 09 29 11.5 -0.1
baz=38
Y21A Point of Rocks 38.25 106 ⇓P P 09 29 11.4 -0.5
baz=38
U25A Circle Dot Ran 38.26 100 ⇑P P 09 29 11.4 -0.6
baz=38
217A Green Valley 38.31 111 ⇓P P 09 29 12.1 -0.4
baz=38
Z20A Nine Sixteen R 38.44 108 ⇑P P 09 29 13.8 +0.2
baz=38
V25A Rancho No Teng 38.55 101 ⇓P P 09 29 14.6 +0.1
baz=38
218A Dragoon 38.55 110 ⇓P P 09 29 14.8 +0.3
baz=38
W24A Lazy 6 Ranch, 38.58 102 ⇓P P 09 29 14.9 +0.2
baz=38
U26A Atchley Ranch, 38.63 99 ⇑P P 09 29 15.2 +0.1
baz=38,SNR=7.0
318A Bisbee 39.00 111 ⇑P P 09 29 18.4 +0.1
baz=39
V26A Tequesquite Ra 39.04 100 ⇓P P 09 29 18.8 +0.3
baz=39,SNR=17
W25A X Bar L Ranch, 39.09 101 ⇑P P 09 29 19.3 +0.3
baz=39,SNR=5.5
Y23A Lovelace Mesa, 39.18 104 ⇑P P 09 29 20.3 +0.5
baz=39
Z22A Elephant Butte 39.20 106 ⇓P P 09 29 20.5 +0.6
baz=39
X25A Clemmons Ranch 39.50 102 ⇓P P 09 29 22.2 -0.2
baz=39
Y24A Capitan 39.52 104 ⇓P P 09 29 22.8 +0.2
baz=39
W26A Owens Ranch, T 39.57 101 ⇑P P 09 29 23.1 +0.1
baz=39
320A Kipp Ranch, An 39.85 109 ⇓P P 09 29 25.4 0.0
baz=40
Y25A Mesa, Roswell 39.93 103 ⇓P P 09 29 26.1 0.0
baz=40,SNR=9.0
X26A CR and CF Fran 39.95 101 ⇑P P 09 29 26.0 -0.1
baz=40
W27A Bowe Ranch, En 39.98 100 ⇓P P 09 29 26.8 +0.4
baz=40
X27A F and S Farms, 40.27 101 ⇓P P 09 29 28.3 -0.5
baz=40
124A Stringfield Ra 40.45 105 ⇑P P 09 29 30.0 -0.3
baz=40
Y27A Causey 40.80 101 ⇓P P 09 29 33.0 -0.2
baz=40,SNR=7.0
Z26A Caprock 40.81 103 ⇓P P 09 29 33.1 -0.2
baz=40
224A Cornudas Mount 40.89 105 ⇑P P 09 29 33.6 -0.3
baz=41
MSTX Muleshoe 40.95 101 ⇑P P 09 29 34.0 -0.5
baz=41
Z27A Tatum 41.20 102 ⇓P P 09 29 36.1 -0.4
baz=41
324A Moseley Ranch, 41.40 106 ⇓P P 09 29 38.1 -0.1
baz=41
226A Malaga, Loving 41.67 104 ⇑P P 09 29 40.3 -0.1
baz=41
325A Bean Ranch, Si 41.73 106 ⇓P P 09 29 41.0 +0.2
baz=42,SNR=6.9
425A Indio Mountain 42.17 106 ⇑P P 09 29 44.8 +0.3
baz=42
326A Caldwell Ranch 42.31 105 ⇓P P 09 29 46.0 +0.4
baz=42
426A McDonald Obser 42.78 105 ⇓P P 09 29 49.5 +0.1
baz=42
427A Hayter Ranch, 42.98 105 ⇑P P 09 29 50.9 -0.2
baz=43
526A Mary Lane Ranc 43.22 106 ⇑P P 09 29 53.2 +0.2
baz=43
527A Woodward Ranch 43.41 105 ⇑P P 09 29 54.8 +0.2
baz=43
428A Kincaid Ranch, 43.47 104 ⇑P P 09 29 55.2 +0.2
baz=43,SNR=5.6
626A Big Bend Ranch 43.59 106 ⇓P P 09 29 56.1 +0.1
baz=43
528A Cox Ranch, San 43.85 105 ⇑P P 09 29 58.2 +0.2
baz=44,SNR=6.2
TXAR Lajitas Array 44.02 106 P P 09 29 59.7 +0.3
3.5nm,0.9s,mb4.1,baz=311,slow=5.5,SNR=26
TXAR Lajitas Array 44.02 106 P P 09 29 59.7 +0.3
627A Terlingua Ranc 44.07 106 ⇓P P 09 29 59.9 -0.1
baz=44
628A Black Gap, Mar 44.32 105 ⇑P P 09 30 01.8 -0.1
baz=44
JCT Junction City 45.23 101 *e*P P 09 30 08.8 -0.3
11nm,1.1s,mb4.6
SPITS Spitsbergen Ar 45.84 3 P P 09 30 12.9 -0.4
1.0nm,0.6s,mb3.9,baz=353,slow=5.0,SNR=5.4
SPITS LR LR 09 48 50.4
comp=Z,91nm,19.7s,MS3.7,baz=310,slow=35
SCHQ Schefferville 46.03 53 P P 09 30 14.8 -0.4
1.5nm,0.7s,mb4.1,baz=288,slow=13,SNR=3.4
MJAR Matsushiro Arr 48.84 276 P P 09 30 37.1 -0.2
0.6nm,0.5s,mb3.9,baz=34,slow=7.9,SNR=3.1
KSRS Korea Array 53.84 285 P P 09 31 14.6 -0.1
0.8nm,0.6s,mb3.8,baz=43,slow=7.3,SNR=3.2
ARCES ARCESS Array B 54.67 0 P P 09 31 20.6 +0.3
1.3nm,0.9s,mb4.0,baz=28,slow=10,SNR=3.1
SONM Songino Array 56.91 308 P P 09 31 36.7 0.0
1.8nm,0.8s,mb4.1,baz=48,slow=6.8,SNR=7.5
ZALV Zalesovo Beam 60.38 325 P P 09 32 00.9 +0.1
0.6nm,0.3s,mb4.1,baz=38,slow=7.5,SNR=2.7
NOA NORSAR Array B 62.59 8 P P 09 32 14.9 -0.7

0.7nm,0.6s,mb4.0,baz=350,slow=6.7,SNR=3.8
HFS Hagfors 63.67 7 P **P 09 32 22.7 -0.1**
HFS 0.6nm,0.5s,mb3.9,baz=97,slow=6.0,SNR=4.7
LR LR 10 01 04.6
comp=Z,39nm,18.5s,MS3.6,baz=357,slow=37
KURK Kurchatov 65.12 326 P **P 09 32 32.8 +0.4**
0.7nm,0.9s,mb3.7,baz=29,slow=5.8,SNR=2.0
BVAR Borovoye Array 65.40 333 P **P 09 32 33.5 -0.7**
1.2nm,0.6s,mb4.1,baz=32,slow=8.7,SNR=5.0
MKAR Makanchi Array 67.33 322 P **P 09 32 45.9 -0.8**
0.3nm,0.2s,mb3.9,baz=37,slow=9.8,SNR=2.2
ABKAR Akbulak array 71.37 338 *e*P **P 09 33 11.3 -0.3**
0.7nm,0.6s,mb3.8
TKM2 Tokmak 2 72.99 324 *e*P **P 09 33 22.7 +1.3**
2.0nm,0.6s,mb4.2
CMAR Chiang Mai Arr 84.24 295 P **P 09 34 23.2 -0.5**
1.6nm,0.3s,mb4.6,baz=7.5,slow=6.0,SNR=3.7
QSPA South Pole Qui 145.88 180 PKPbc PKPbc 09 41 28.2 -1.4
9.4nm,1.0s,baz=83,slow=1.3,SNR=21

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*ISCJB **05** 09:30:34.9±0.5,23°.20N±0°.01×121°.89E±0°.02,h8km±3km,*
Error ellipse: s-maj=2.8km s-min=2.0km az=38.1
*NEIC **05** 09:30:36.2±2.2,23°.24N×121°.82E,h10km,MG3.0(JMA),*
Error ellipse: s-maj=22.6km s-min=8.7km az=126.0
*TAP **05** 09:30:37.2,23°.23N×121°.83E,h16km,ML3.7,C*
*JMA **05** 09:30:37.2±0.3,23°.19N×121°.83E,h48km,M3.0*
ISC 05 09:30:35.4±0.4,23°.20N±0°.01×121°.87E±0°.02,h10km±2km,
n63,σ0°82/120,8C-1D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWF1	**Yuli** baz=284	**0.55**	**286**	⇑*i*P	**Pg**	**09 30 46.9**	**+0.8**
TWF1	baz=284			*e*S	**Sg**	**09 30 54.5**	**+1.1**
YULB	**Yu-li**	**0.56**	**290**	*e*Pg	**Pg**	**09 30 46.7**	**+0.3**
YULB				*e*Sg	**Sg**	**09 30 52.9**	**-0.9**
EHY	**Hungye** baz=300	**0.59**	**301**	⇑*i*P	**Pg**	**09 30 47.4**	**+0.5**
EHY	baz=300			S	**Sg**	**09 30 55.4**	**+0.8**
ESL	**Shilin** baz=328	**0.73**	**327**	P	**Pg**	**09 30 49.7**	**+0.2**
ESL	baz=328			S	**Sg**	**09 31 00.0**	**+0.9**
ELDTW	**Lidau** baz=267	**0.79**	**269**	⇑*i*P	**Pg**	**09 30 50.5**	**-0.1**
ELDTW	baz=267			*e*S	**Sg**	**09 31 00.2**	**-0.7**
TTN	**Taitung** baz=233	**0.80**	**237**	*e*P	**Pg**	**09 30 50.9**	**0.0**
TTN	baz=233			*e*S	**Sg**	**09 31 01.5**	**+0.1**
HWA	**Hwalien** baz=344	**0.81**	**342**	*e*P	**Pg**	**09 30 50.9**	**-0.2**
HWA	baz=344			*e*S	**Sg**	**09 31 01.7**	**0.0**
TWG	**Pinlang**	**0.83**	**243**	*e*Pg	**Pg**	**09 30 51.4**	**0.0**
TWG				*e*Sg	**Sg**	**09 31 02.5**	**+0.3**
TWG	**Pinlang** baz=229	**0.83**	**243**	⇑*i*P	**Pg**	**09 30 51.6**	**+0.1**
TWG	baz=229			*e*S	**Sg**	**09 31 02.2**	**0.0**
YUS	**Yu-Shan** baz=288	**0.89**	**289**	⇑*i*P	**Pg**	**09 30 53.2**	**+0.5**
TWD	**Chiawan** baz=345	**0.91**	**344**	*i*P	**Pg**	**09 30 52.8**	**-0.2**
TWD	baz=345			*i*S	**Sg**	**09 31 04.8**	**0.0**
NACB	**Ninganchiao**	**1.00**	**345**	*e*Pg	**Pg**	**09 30 53.9**	**-0.9**
NACB				*e*Sg	**Sg**	**09 31 06.5**	**-1.2**
SSLB	**Suanglung**	**1.03**	**305**	*e*Pg	**Pg**	**09 30 54.5**	**-0.7**
SSLB				*e*Sg	**Sg**	**09 31 07.9**	**-0.7**
ALS	**Alishan** baz=276	**1.03**	**288**	⇑*i*P	**Pg**	**09 30 55.5**	**+0.3**
ALS	baz=276			*e*S	**Sg**	**09 31 08.9**	**+0.3**
ECL	**Taimali** baz=232	**1.04**	**235**	*e*P	**Pg**	**09 30 54.3**	**-1.1**
ECL	baz=232			*e*S	**Sg**	**09 31 07.0**	**-1.9**
WHF	**Hehuan Shan** baz=330	**1.09**	**329**	P	**Pg**	**09 30 55.9**	**-0.5**
WHF	baz=330			S	**Sg**	**09 31 10.2**	**-0.5**
SMLT	**Sun Moon Lake** baz=307	**1.12**	**307**	⇓*i*P	**Pb**	**09 30 56.5**	**-0.4**
SMLT	baz=307			*e*S	**Sg**	**09 31 12.2**	**+0.6**
TPUB	**Ta-pu**	**1.15**	**275**	*e*Pg	**Pg**	**09 30 57.1**	**-0.3**
TPUB				*e*Sg	**Sg**	**09 31 12.2**	**-0.2**
WTP	**Ta-pu** baz=271	**1.16**	**272**	⇑*i*P	**Pb**	**09 30 57.8**	**+0.2**
WTP	baz=271			S	**Sb**	**09 31 12.4**	**-0.3**
TYC	**Yuchr** baz=320	**1.17**	**307**	P	**Pb**	**09 30 57.3**	**-0.4**
CHN5	**Tsauling** baz=289	**1.17**	**290**	P	**Pb**	**09 30 58.0**	**+0.2**
CHN5	baz=289			*e*S	**Sb**	**09 31 13.0**	**0.0**
SGST	**Jiashian** baz=257	**1.19**	**265**	*i*P	**Pb**	**09 30 58.3**	**+0.1**
SGST	baz=257			*e*S	**Sb**	**09 31 13.4**	**-0.3**
LAY	**Lan-yu** baz=193	**1.19**	**194**	P	**Pb**	**09 30 56.2**	**-2.0**
LAY	baz=193			*e*S	**Sb**	**09 31 10.9**	**-2.8**
TWT	**Tachien** baz=328	**1.23**	**329**	P	**Pn**	**09 30 58.5**	**-0.2**
TWT	baz=328			S	**Sb**	**09 31 13.1**	**-1.6**
ENA	**Nanau** baz=355	**1.23**	**354**	P	**Pn**	**09 30 57.9**	**-0.8**
ENA	baz=355			*e*S	**Sb**	**09 31 14.1**	**-0.6**
SSD	**Sandimen** baz=246	**1.23**	**249**	*e*P	**Pn**	**09 30 57.8**	**-0.9**
SSD	baz=246			*e*S	**Sb**	**09 31 14.7**	**0.0**
CHN1	**Nanshi** baz=268	**1.24**	**270**	⇑*i*P	**Pn**	**09 30 59.4**	**+0.5**
CHN1	baz=268			*e*S	**Sb**	**09 31 14.7**	**-0.3**
EAST	**Anshuo** baz=227	**1.25**	**229**	*e*P	**Pn**	**09 30 57.7**	**-1.3**
EAST	baz=227			*e*S	**Sb**	**09 31 13.1**	**-2.1**
TWK	**Hsinying** baz=271	**1.28**	**273**	P	**Pn**	**09 30 59.5**	**+0.2**
TWK	baz=271			*e*S	**Sb**	**09 31 15.2**	**-0.8**
WNT	**Mingjian** baz=301	**1.28**	**302**	*e*P	**Pn**	**09 30 59.6**	**+0.2**
WNT	baz=301			*e*S	**Sb**	**09 31 16.9**	**+0.6**
WGK	**Gukeng** baz=291	**1.30**	**292**	*e*P	**Pn**	**09 31 00.7**	**+1.1**
WGK	baz=291			*e*S	**Sb**	**09 31 17.1**	**+0.4**
NNS	**Nan Shan** baz=340	**1.32**	**340**	*i*P	**Pn**	**09 30 59.7**	**-0.2**
NNS	baz=340			*e*S	**Sb**	**09 31 15.4**	**-1.8**
SGLT	**Jiouru** baz=248	**1.36**	**250**	*e*P	**Pn**	**09 31 00.1**	**-0.4**
SGLT	baz=248			*e*S	**Sb**	**09 31 21.1**	**+2.7**
CHY	**Chiayi** baz=282	**1.36**	**283**	*e*P	**Pn**	**09 31 01.2**	**+0.7**
TWM1	**Shoushan** baz=254	**1.39**	**255**	*e*P	**Pn**	**09 31 01.8**	**+0.9**
CHN3	**Shinhua** baz=264	**1.39**	**265**	*e*P	**Pn**	**09 31 02.6**	**+1.7**
CHN3	baz=264			*e*S	**Sb**	**09 31 22.1**	**+2.7**
TWC	**Suao** baz=360	**1.40**	**359**	*i*P	**Pn**	**09 31 01.1**	**0.0**
TWC	baz=360			S	**Sn**	**09 31 18.4**	**-1.3**
SCZT	**Fangliau** baz=225	**1.42**	**235**	*e*P	**Pn**	**09 31 01.7**	**+0.3**
SCZT	baz=225			*e*S	**Sn**	**09 31 20.0**	**-0.1**
TCU	**Taichung** baz=310	**1.45**	**311**	*e*P	**Pn**	**09 31 02.4**	**+0.6**
TCU	baz=310			*e*S	**Sn**	**09 31 21.2**	**+0.4**
ENTT	**Nioudou** baz=349	**1.46**	**349**	P	**Pn**	**09 31 01.6**	**-0.3**
ENTT	baz=349			*e*S	**Sn**	**09 31 20.4**	**-0.7**
TWQ1	**Liyutan** baz=330	**1.52**	**319**	*e*P	**Pn**	**09 31 04.3**	**+1.6**
TWQ1	baz=330			*e*S	**Sn**	**09 31 23.1**	**+0.4**
TWE	**Neicheng** baz=353	**1.52**	**353**	P	**Pn**	**09 31 02.8**	**0.0**
TWE	baz=353			*e*S	**Sn**	**09 31 22.1**	**-0.6**
YHNB	**Yeheng**	**1.53**	**343**	*e*Pn	**Pn**	**09 31 02.8**	**-0.1**
YHNB				*e*Sn	**Sn**	**09 31 21.7**	**-1.2**
CHN8	**Yiju** baz=274	**1.54**	**276**	*e*P	**Pn**	**09 31 03.9**	**+0.9**
CHN8	baz=274			*e*S	**Sn**	**09 31 23.0**	**0.0**
NSK	**Sanguang** baz=342	**1.54**	**342**	*i*P	**Pn**	**09 31 03.2**	**+0.1**
NSK	baz=342			S	**Sn**	**09 31 21.4**	**-1.7**
TSEB	**Hengchuen, Pin** baz=215	**1.58**	**215**	*e*P	**Pn**	**09 31 03.3**	**-0.2**
TSEB	baz=215			*e*S	**Sn**	**09 31 24.4**	**+0.4**
NSY	**Sanyi** baz=335	**1.58**	**320**	*e*P	**Pn**	**09 31 05.1**	**+1.5**
NSY	baz=335			*e*S	**Sn**	**09 31 25.0**	**+0.9**
HEN	**Hengchun** baz=220	**1.59**	**222**	*e*P	**Pn**	**09 31 05.0**	**+1.3**
HEN	baz=220			*e*S	**Sn**	**09 31 23.4**	**-0.8**
TWK1	**Hengchun** baz=217	**1.59**	**218**	*e*P	**Pn**	**09 31 04.0**	**+0.2**
TWK1	baz=217			*e*S	**Sn**	**09 31 24.0**	**-0.4**
YOJ	**Yonaguni jima**	**1.63**	**39**	P	**Pn**	**09 31 04.6**	**+0.3**
YOJ				S	**Sn**	**09 31 25.1**	**-0.2**
NSTT	**Nanjuang** baz=330	**1.63**	**331**	*e*P	**Pn**	**09 31 05.1**	**+0.9**
NSTT	baz=330			*e*S	**Sn**	**09 31 24.6**	**-0.7**
TWA	**Mucha** baz=351	**1.79**	**352**	*e*P	**Pn**	**09 31 06.8**	**+0.3**
TWA	baz=351			*e*S	**Sn**	**09 31 29.3**	**0.0**
TATO	**Taipei**	**1.80**	**349**	*e*Pn	**Pn**	**09 31 07.5**	**+0.9**
TWB1	**Santiao Chiao** baz=3.0	**1.80**	**3**	P	**Pn**	**09 31 07.4**	**+0.8**
TWB1	baz=3.0			S	**Sn**	**09 31 29.5**	**0.0**
NWF	**Wu-fen Shan** baz=357	**1.86**	**357**	*e*P	**Pn**	**09 31 08.9**	**+1.5**
NWF	baz=357			*e*S	**Sn**	**09 31 31.2**	**+0.1**
TWS1	**Kuangyinshan** baz=1.0	**1.94**	**348**	*e*P	**Pn**	**09 31 08.6**	**+0.1**
TWS1	baz=1.0			*e*S	**Sn**	**09 31 33.3**	**+0.4**
HATJ	**Hateruma jima**	**1.97**	**64**	P	**Pn**	**09 31 09.5**	**+0.6**
HATJ				S	**Sn**	**09 31 33.1**	**-0.5**
IRIF	**Iriomote-Funau**	**2.04**	**56**	P	**Pn**	**09 31 11.0**	**+1.1**
IRIF				S	**Sn**	**09 31 35.9**	**+0.4**
PNG	**Penghu** baz=264	**2.16**	**280**	P	**Pn**	**09 31 12.0**	**+0.4**
PNG	baz=264			*e*S	**Sn**	**09 31 38.0**	**-0.5**
JKRS	**Kuro-shima**	**2.21**	**62**	P	**Pn**	**09 31 13.3**	**+1.0**
JKRS				S	**Sn**	**09 31 39.8**	**+0.1**
JIJ	**Ishigaki jima**	**2.38**	**60**	P	**Pn**	**09 31 14.9**	**+0.4**
JIJ				S	**Sn**	**09 31 42.8**	**-1.0**
JTJ	**Tarama**	**2.96**	**60**	P	**Pn**	**09 31 23.7**	**+1.2**
JTJ				S	**Sn**	**09 31 58.1**	**0.0**
JOGS	**Gusukube**	**3.58**	**64**	*e*S	**Sn**	**09 32 12.9**	**-0.7**

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*IDC **05** 09:33:52.2±1.8,2°.42N×95°.54E,h0km,mb3.7/7,mb1 3.8/9,*
mb1mx3.6/26,mbtmp3.7/9,ML4.0/2,Error ellipse:
s-maj=57.4km s-min=19.9km az=52.0
*NEIC **05** 09:33:57.6±1.1,2°.47N×95°.67E,h35km,Error ellipse:*
s-maj=22.2km s-min=12.9km az=223.0
*ISCJB **05** 09:33:58.9±3.3,2°.6N±0°.1×95°.9E±0°.2,h58km±28km,*
mb3.8/7,Error ellipse: s-maj=28.2km s-min=18.1km
az=151.1
ISC 05 09:33:59.4±3.4,2°.5N±0°.1×95°.8E±0°.2,h47km±29km,n11,
σ0°79/12,mb3.8/7,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat** 2.6nm,0.3s,baz=332,slow=9.8,SNR=9.5	**3.13**	**85**	Pn	**Pn**	**09 34 46.1**	**-0.2**
KULM	**Kulim** 21nm,0.8s	**5.55**	**60**	*e*Pn	**Pn**	**09 35 19.2**	**-0.4**
KULM				*e*Sn	**Sn**	**09 36 22.0**	**-0.1**
CMAR	**Chiang Mai Arr** 0.6nm,0.3s,baz=198,slow=11,SNR=4.1	**16.11**	**11**	Pn	**Pn**	**09 37 44.0**	**+1.2**
WRA	**Warramunga Arr** 0.3nm,0.5s,mb3.3,baz=298,slow=9.5,SNR=4.6	**43.93**	**122**	P	**P**	**09 42 02.0**	**0.0**
ASAR	**Alice Springs** 0.2nm,0.5s,mb3.2,baz=302,slow=8.0,SNR=5.6	**45.31**	**127**	P	**P**	**09 42 13.7**	**+0.6**
MKAR	**Makanchi Array** 0.8nm,0.5s,mb4.0,baz=158,slow=6.4,SNR=8.4	**45.62**	**347**	P	**P**	**09 42 15.5**	**+0.4**
MKAR	**Makanchi Array**	**45.62**	**347**	P	**P**	**09 42 15.5**	**+0.4**
SONM	**Songino Array** 0.5nm,0.5s,mb3.7,baz=185,slow=10,SNR=4.2	**46.04**	**10**	P	**P**	**09 42 18.8**	**+0.4**
KURK	**Kurchatov** 0.8nm,0.4s,mb4.1,baz=170,slow=6.2,SNR=3.6	**50.15**	**346**	P	**P**	**09 42 47.4**	**-2.7**
ZALV	**Zalesovo Beam** 0.9nm,0.3s,mb4.1,baz=187,slow=5.8,SNR=2.5	**52.03**	**352**	P	**P**	**09 43 03.9**	**-0.3**
BVAR	**Borovoye Array** 0.7nm,0.6s,mb3.9,baz=133,slow=8.7,SNR=5.3	**54.54**	**341**	P	**P**	**09 43 22.5**	**-0.1**

MEX 05 09:35:07.5±0.6,17°.14N×101°.44W,h5km±5km,MD3.8,
Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.46**	**357**	*i*P	Pg	09 35 15.8	-0.7
ZIIG				*i*S	Sg	09 35 23.1	+0.7
CAIG	**El Cayaco**	**1.12**	**95**	*e*P	Pg	09 35 26.1	-3.0
CAIG				*i*S	Sg	09 35 40.9	-2.8
ACX	**Acapulco**	**1.48**	**100**	*i*P	Pn	09 35 31.4	-3.4
ACX				*i*S	Sn	09 35 49.1	-5.5
MMIG	**Aquila**	**2.15**	**302**	*i*P	Pn	09 35 41.0	-2.9
MMIG				*i*S	Sn	09 36 06.0	-4.9
PLIG	**Platanillo**	**2.23**	**56**	*i*P	Pn	09 35 42.1	-2.9
PLIG				*i*S	Sn	09 36 07.8	-5.1
MOIG	**Morelia**	**2.53**	**5**	*i*P	Pn	09 35 46.9	-2.3
MOIG				*i*S	Sn	09 36 16.7	-3.8
PNIG	**Pinotepa**	**3.26**	**103**	*e*P	Pn	09 35 57.2	-2.1
PNIG				*i*S	Sn	09 36 33.5	-5.0

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*IDC **05** 09:39:34.9±0.5,56°.14N×153°.54W,h0km,mb4.2/31,*
mb1 4.3/34,mb1mx4.3/39,mbtmp4.2/34,ML3.9/3,MS3.8/14,
Ms1 3.8/14,ms1mx3.5/43,Error ellipse: s-maj=16.7km
s-min=10.0km az=18.0
*BJI **05** 09:39:34.3,56°.00N×153°.30W,h11km,mB4.7/4,mb4.8/10,*
Ms4.6/4,Ms7 4.4/4
*NEIC **05** 09:39:35.8,55°.98N×153°.34W,h12km,mb4.3/35,*
ML4.1(AEIC),After AEIC.
ISC 05 09:39:35.5±1.2,56°.13N±0°.02×153°.58W±0°.04,h3km±7km,
n386,σ0°71/391,mb4.2/67,MS3.8/13,127C-131D,Kodiak
Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**1.10**	**8**	P	**Pg**	**09 39 56.7**	**0.0**
OHAK				S	**Sg**	**09 40 13.2**	**+2.3**
KDAK	**Kodiak Island**	**1.74**	**18**	P	**Pn**	**09 40 05.5**	**-1.0**
KDAK				S	**Sn**	**09 40 28.3**	**-1.0**
CHGN	**Chignik**	**2.71**	**276**	*e*Pn	**Pn**	**09 40 18.9**	**-0.9**
CHGN				*e*Sn	**Sn**	**09 40 52.7**	**-0.3**
SDPT	**Sand Point**	**3.98**	**261**	*e*Pn	**Pn**	**09 40 36.0**	**-1.3**
SDPT				*e*Sn	**Sn**	**09 41 22.7**	**-1.7**
RSO	**Redoubt South**	**4.36**	**5**	*e*Pn	**Pn**	**09 40 43.3**	**+0.7**
RSO				*e*Sn	**Sn**	**09 41 37.2**	**+3.4**
SEW	**Seward**	**4.54**	**27**	P	**Pn**	**09 40 43.9**	**-1.1**
SLKM	**Skilak Lake**	**4.73**	**21**	P	**Pn**	**09 40 46.9**	**-0.7**
SVW2	**Sparrevohn**	**5.09**	**349**	*e*Pn	**Pn**	**09 40 52.8**	**+0.3**
RC01	**Rabbit Creek A**	**5.36**	**20**	*e*Pn	**Pn**	**09 40 55.5**	**-0.7**
PMR	**Palmer** 47nm,0.8s	**5.94**	**21**	*e*Pn	**Pn**	**09 41 03.0**	**-1.2**
EYAK	**Cordova Ski Ar**	**6.05**	**40**	P	**Pn**	**09 41 04.0**	**-1.7**
DIV	**Divide**	**6.46**	**36**	*e*Pn	**Pn**	**09 41 10.2**	**-1.1**
DIV				*e*Sn	**Sn**	**09 42 20.0**	**-5.4**
BMRM	**Bremner River**	**6.75**	**40**	*e*Pn	**Pn**	**09 41 14.3**	**-0.9**
BMRM				*e*Sn	**Sn**	**09 42 30.9**	**-1.7**
PPLA	**Purkeypile** 48nm,0.9s	**6.82**	**5**	*e*Pn	**Pn**	**09 41 17.9**	**+1.6**
PPLA				*e*Sn	**Sn**	**09 42 36.2**	**+1.8**
TTA	**Tatalina** 63nm,1.0s	**6.93**	**351**	*e*Pn	**Pn**	**09 41 18.7**	**+0.9**
KTH	**Kantishna Hill**	**7.56**	**9**	*e*Pn	**Pn**	**09 41 28.5**	**+2.0**
KTH				*e*Sn	**Sn**	**09 42 59.8**	**+7.2**
CHUM	**Lake Minchumin** 32nm,0.8s	**7.80**	**4**	*e*Pn	**Pn**	**09 41 31.3**	**+1.6**
CHUM				*e*Sn	**Sn**	**09 43 04.3**	**+5.9**
PAX	**Paxson** 23nm,0.8s	**7.99**	**28**	*e*Pn	**Pn**	**09 41 33.9**	**+1.5**
PAX				*e*Sn	**Sn**	**09 43 04.6**	**+1.5**
BPAW	**Bear Paw Mtn.**	**8.10**	**8**	P	**Pn**	**09 41 33.1**	**-0.7**
PNL	**Peninsula** 62nm,0.7s	**8.34**	**59**	*e*Pn	**Pn**	**09 41 36.2**	**-0.9**
PNL				*e*Sn	**Sn**	**09 43 07.6**	**-4.1**
MENT	**Mentasta**	**8.46**	**32**	*e*Pn	**Pn**	**09 41 39.4**	**+0.7**
COLA	**College** 14nm,0.8s	**9.21**	**15**	*e*Pn	**Pn**	**09 41 48.6**	**-0.4**
COLA				*e*Sn	**Sn**	**09 43 26.7**	**-6.2**
IL1	**Eielson Array**	**9.27**	**18**	P	**Pn**	**09 41 47.4**	**-2.4**
IM3	**Indian Mountai**	**9.89**	**360**	P	**Pn**	**09 41 57.9**	**-0.3**
SKAG	**Skagway** 26nm,0.7s	**10.29**	**64**	*e*Pn	**Pn**	**09 42 03.2**	**-0.5**
EGAK	**Eagle** 10nm,0.8s	**10.60**	**30**	*e*Pn	**Pn**	**09 42 08.6**	**+0.7**
DAWY	**Dawson**	**10.62**	**36**	*e*Pn	**Pn**	**09 42 09.1**	**+0.8**
WHY	**Whitehorse**	**10.79**	**57**	P	**Pn**	**09 42 07.2**	**-3.5**
COLD	**Coldfoot** 7.5nm,1.0s	**11.25**	**7**	*e*Pn	**Pn**	**09 42 19.6**	**+2.7**
BM3	**Burnt Mountain**	**12.07**	**17**	P	**Pn**	**09 42 26.6**	**-1.6**
DIB	**Dawson Inlet,** SNR=37	**12.55**	**95**	T		09 55 11.2	
DLBC	**Dease Lake** 0.5nm,0.3s,baz=264,slow=12,SNR=6.9	**12.93**	**70**	Pn	**Pn**	**09 42 40.8**	**+0.9**
INK	**Inuvik** 0.2nm,0.3s,baz=234,slow=14,SNR=9.1	**15.27**	**29**	Pn	**Pn**	**09 43 12.8**	**+1.2**
INK	comp=Z,324nm,20.3s,baz=248,slow=39			LR	LR	09 49 30.9	
FX1	**Attu Island--F** 1.0nm,0.3s,baz=41,slow=6.3,SNR=5.3	**19.47**	**274**	P	**Pn**	**09 44 03.5**	**-0.7**
NLWA	**Neilton Lookou** baz=20	**20.23**	**103**	⇓P	**P**	**09 44 10.9**	**-0.5**
NLWA	**Neilton Lookou** 8.1nm,0.8s	**20.23**	**103**	*e*P	**P**	**09 44 08.6**	**-2.8**
YKA	**Yellowknife Ar** 6.1nm,0.7s,baz=270,slow=9.7,SNR=45	**20.62**	**56**	P	**P**	**09 44 15.3**	**-0.2**
JCW	**Jim Creek** 17nm,1.0s	**20.83**	**99**	*e*P	**P**	**09 44 16.2**	**-1.7**
A07A	**Ashnola River,** baz=21	**21.22**	**95**	⇑P	**P**	**09 44 21.2**	**-0.9**
LON	**Longmire** 9.8nm,1.1s,mb4.2	**21.74**	**102**	*e*P	**P**	**09 44 27.9**	**+0.2**
WPW	**White Pass**	**21.91**	**102**	P	**P**	**09 44 34.0**	**+4.5**
B08A	**Colville Reser** baz=22,SNR=5.9	**22.18**	**96**	⇓P	**P**	**09 44 31.6**	**-0.8**
G04A	**Mulino** baz=22	**22.34**	**106**	⇑P	**P**	**09 44 33.0**	**-1.1**
HOOD	**Mount Hood Mea**	**22.71**	**105**	*e*P	**P**	**09 44 38.3**	**+0.2**
B09A	**Rice** baz=23	**22.80**	**95**	⇓P	**P**	**09 44 38.0**	**-1.0**
VFP	**Flag Point**	**22.82**	**105**	P	**P**	**09 44 39.1**	**-0.1**
H04A	**Detroit Lake** baz=23,SNR=8.8	**22.84**	**107**	⇑P	**P**	**09 44 38.3**	**-1.1**
E07A	**Sunnyside** baz=23	**22.93**	**100**	⇑P	**P**	**09 44 39.3**	**-1.1**
OD2	**Odessa Site #2** 14nm,1.0s,mb4.3	**23.07**	**98**	*e*P	**P**	**09 44 41.8**	**0.0**
D08A	**Wollman Farm,** baz=23	**23.14**	**98**	⇓P	**P**	**09 44 41.5**	**-1.2**
EDM	**Edmonton**	**23.21**	**80**	*e*P	**P**	**09 44 42.4**	**-0.9**
E08A	**Dider Farm, El** baz=23	**23.41**	**100**	⇑P	**P**	**09 44 44.3**	**-1.1**
A11A	**Hall Mountain,** baz=23	**23.51**	**92**	⇑P	**P**	**09 44 45.9**	**-0.6**
B11A	**Sandpoint** baz=24	**23.79**	**93**	⇑P	**P**	**09 44 48.2**	**-0.9**
VIPM	**Ingram Point**	**23.80**	**105**	P	**P**	**09 44 49.6**	**+0.4**
BBOR	**Butler Butte**	**23.80**	**111**	P	**P**	**09 44 50.4**	**+1.1**
HUMO	**Hull Mountain** 8.1nm,1.1s,mb4.1	**23.86**	**112**	*e*P	**P**	**09 44 50.7**	**+0.9**
F08A	**Pendleton** baz=24	**23.98**	**101**	⇓P	**P**	**09 44 49.6**	**-1.3**
D10A	**Wagner Farm, O** baz=24	**24.06**	**97**	⇓P	**P**	**09 44 50.4**	**-1.2**
G08A	**Pilot Rock** baz=24	**24.20**	**102**	⇓P	**P**	**09 44 52.1**	**-0.8**
E10A	**Myers Farm, Un** baz=24	**24.49**	**98**	⇓P	**P**	**09 44 54.7**	**-0.8**
D11A	**Klaveano Farm,** baz=24,SNR=8.7	**24.59**	**96**	⇓P	**P**	**09 44 55.3**	**-1.2**
YBH	**Yreka Blue Hor** 6.8nm,0.9s,mb4.2,baz=301,slow=4.1,SNR=12	**24.61**	**113**	P	**P**	**09 44 57.9**	**+1.2**
YBH	comp=Z,133nm,21.2s,MS3.4,baz=313,slow=30			LR	LR	09 51 56.0	
YBH	**Yreka Blue Hor**	**24.61**	**113**	*e*P	**P**	**09 44 57.9**	**+1.3**
YBH				LR	LR	09 51 56.0	
A13A	**Flathead Natio** baz=24	**24.61**	**90**	⇓P	**P**	**09 44 55.4**	**-1.2**
I07A	**Izee** baz=24,SNR=9.4	**24.68**	**105**	⇑P	**P**	**09 44 56.7**	**-0.6**
C12B	**Naegeli Ranch,** baz=24	**24.69**	**94**	⇑P	**P**	**09 44 57.1**	**-0.3**
F10A	**Beach Ranch, E** baz=24,SNR=5.2	**24.73**	**99**	⇑P	**P**	**09 44 57.2**	**-0.6**
WALA	**Waterton Lakes** 0.3nm,1.1s	**24.83**	**90**	*e*P	**P**	**09 44 59.0**	**+0.4**
H08A	**Prairie City** baz=25,SNR=11	**24.85**	**103**	⇑P	**P**	**09 44 58.2**	**-0.6**
K05A	**Summer Lake** baz=25,SNR=10	**24.86**	**109**	⇓P	**P**	**09 44 58.5**	**-0.4**
B13A	**Whitefish** baz=25	**24.88**	**92**	⇑P	**P**	**09 44 58.1**	**-1.0**
BSMT	**Bassoo Peak** 6.0nm,1.0s,mb4.1	**24.99**	**93**	*e*P	**P**	**09 45 00.7**	**+0.6**
E11A	**Bogner Ranch,** baz=25	**25.06**	**97**	⇓P	**P**	**09 44 59.7**	**-1.1**
D12A	**Red Ives Fores** baz=25	**25.13**	**95**	⇓P	**P**	**09 45 00.8**	**-0.5**
A14A	**Double T Ranch** baz=25,SNR=7.3	**25.15**	**89**	⇓P	**P**	**09 45 00.7**	**-0.8**
C13A	**Hot Springs** baz=25,SNR=5.3	**25.21**	**93**	⇑P	**P**	**09 45 01.3**	**-0.8**
G10A	**Bishop Farm, J** baz=25,SNR=9.9	**25.21**	**100**	⇓P	**P**	**09 45 01.5**	**-0.6**
H09A	**Durkee** baz=25	**25.31**	**102**	⇓P	**P**	**09 45 02.6**	**-0.4**
JTMT	**Jette** 6.8nm,1.1s,mb4.1	**25.33**	**93**	*e*P	**P**	**09 45 03.4**	**+0.2**
F11A	**Grangeville** baz=25,SNR=8.1	**25.38**	**98**	⇓P	**P**	**09 45 02.7**	**-0.9**
BMO	**Blue Mountains** 6.1nm,1.1s,mb4.0	**25.39**	**101**	*e*P	**P**	**09 45 03.4**	**-0.3**
YBMT	**Yellow Bay** 6.2nm,0.9s,mb4.1	**25.42**	**92**	*e*P	**P**	**09 45 04.2**	**+0.2**
A15A	**Johnson Ranch,** baz=25,SNR=9.4	**25.53**	**89**	⇓P	**P**	**09 45 04.3**	**-0.7**
D13A	**Huson** baz=25	**25.61**	**94**	⇓P	**P**	**09 45 04.5**	**-1.2**
G11A	**Walters Elk Ra** baz=25,SNR=7.9	**25.61**	**99**	⇑P	**P**	**09 45 05.1**	**-0.7**
C14A	**Swan Lake** baz=25	**25.62**	**92**	⇓P	**P**	**09 45 05.2**	**-0.6**
SWMT	**Swartz Lake** 7.5nm,1.2s,mb4.1	**25.63**	**93**	*e*P	**P**	**09 45 05.5**	**-0.3**
I09A	**Lost Marbles R** baz=26	**25.71**	**103**	⇑P	**P**	**09 45 06.3**	**-0.4**
J08A	**Circle Bar Ran** baz=26	**25.72**	**105**	⇓P	**P**	**09 45 06.3**	**-0.5**
MOD	**Modoc** 11nm,1.0s,mb4.3	**25.75**	**109**	*e*P	**P**	**09 45

baz=26,SNR=8.2
MSO Missoula 26.05 94 eP P 09 45 09.0 -0.7
3.2nm,1.1s,mb3.8
SLMT Seeley Lake 26.06 93 eP P 09 45 07.8 -2.0
6.9nm,1.2s,mb4.1
J09A Fry Pan Ranch, 26.12 104 ⇑P P 09 45 09.2 -1.1
baz=26
E13A Victor 26.14 95 ⇑P P 09 45 09.9 -0.6
baz=26
D14A Greenough 26.15 93 ⇓P P 09 45 10.2 -0.4
baz=26
A16A West Butte Ran 26.18 88 ⇓P P 09 45 10.0 -0.9
baz=26,SNR=7.3
H11A Donnelly 26.19 100 ⇑P P 09 45 10.0 -1.0
baz=26,SNR=12
C15A Salmond Ranch, 26.26 91 ⇑P P 09 45 10.9 -0.6
baz=26,SNR=5.0
WVOR Wild Horse Val 26.26 107 eP P 09 45 12.5 +0.8
11nm,0.9s,mb4.4
B16A M & M Farms, S 26.41 89 ⇓P P 09 45 12.6 -0.4
baz=26
F13A Darby 26.45 96 ⇑P P 09 45 12.9 -0.5
baz=26
E14A Clinton 26.54 94 ⇓P P 09 45 13.6 -0.6
baz=26
A17A Triple J Farms 26.69 87 ⇓P P 09 45 14.8 -0.6
baz=26,SNR=6.7
D15A Lincoln 26.72 92 ⇑P P 09 45 15.6 -0.2
baz=26
C16A Fuhringer Ranc 26.72 90 ⇑P P 09 45 15.9 +0.1
baz=26
I11A Placerville 26.73 101 ⇑P P 09 45 15.9 0.0
baz=26
H12A Diamond D Ranc 26.93 99 ⇓P P 09 45 18.2 +0.5
baz=27
G13A Cobalt 26.93 97 ⇑P P 09 45 18.0 +0.3
baz=27
F14A Wisdom 26.97 95 ⇑P P 09 45 18.4 +0.4
baz=27
K10A MacKenzie Ranc 26.98 104 ⇓P P 09 45 18.6 +0.5
baz=27
E15A Deer Lodge 27.01 94 ⇑P P 09 45 18.2 -0.2
baz=27
MFID Camas Ranch 27.13 102 ⇑P P 09 45 19.2 -0.3
baz=27
A18A Metzger Ranch, 27.18 87 ⇑P P 09 45 19.1 -0.7
baz=27
H13A Challis 27.25 98 ⇑P P 09 45 20.2 -0.4
baz=27
I12A Atlanta 27.26 101 ⇑P P 09 45 20.8 +0.1
baz=27
D16A Dana Ranch, Ca 27.27 92 ⇓P P 09 45 20.4 -0.3
baz=27,SNR=6.3
K11A Parker Ranch, 27.44 103 ⇓P P 09 45 22.7 +0.4
baz=27
B18A Beardsley Farm 27.50 88 ⇑P P 09 45 22.5 -0.3
baz=27
J12A Stokes Ranch, 27.64 101 ⇑P P 09 45 24.1 +0.1
baz=27
L10A Juniper Basin 27.68 105 ⇓P P 09 45 24.4 0.0
baz=27
D17A Six Diamond Ra 27.68 91 ⇑P P 09 45 24.0 -0.4
baz=27
H14A Leadore 27.71 97 ⇑P P 09 45 24.4 -0.2
baz=28,SNR=5.5
EGMT Eagleton 27.71 88 ⇑P P 09 45 24.2 -0.5
baz=28
EGMT Eagleton 27.71 88 eP P 09 45 24.1 -0.5
5.0nm,0.9s,mb4.1
I13A Wildhorse Cree 27.74 99 ⇑P P 09 45 24.5 -0.5
baz=28
HLID Hailey 27.81 100 ⇓P P 09 45 25.5 0.0
baz=28
HLID Hailey 27.81 100 eP P 09 45 23.4 -2.1
2.4nm,0.9s,mb3.8
G15A Dillon 27.86 96 ⇑P P 09 45 25.9 -0.1
baz=28
MCMT McKenzie Canyo 27.87 97 eP P 09 45 25.0 -1.1
1.2nm,0.9s,mb3.5
PETK Petropavlovsk- 27.90 284 P P 09 45 28.4 +2.1
2.2nm,0.7s,mb3.9,baz=82,slow=11,SNR=3.7
PETK LR LR 09 57 40.7
comp=Z,144nm,19.3s,MS3.6,baz=274,slow=39
WCN Washoe City 27.92 113 ⇓P P 09 45 26.8 +0.2
baz=28
L11A Cat Creek Ranc 28.00 104 ⇓P P 09 45 27.4 +0.1
baz=28
M10A I.L. Ranch, Tu 28.02 106 ⇓P P 09 45 27.3 -0.1
baz=28
BOZ Bozeman (W) 28.04 94 ⇓P P 09 45 27.7 0.0
baz=28
J13A Cove Ranch, Pi 28.05 100 ⇑P P 09 45 27.7 0.0
baz=28
I14A Mackay 28.10 99 ⇓P P 09 45 28.0 -0.1
baz=28
K12A Draper Farm, C 28.15 102 ⇓P P 09 45 28.4 -0.3
baz=28
D18A Linhart Farms, 28.15 90 ⇓P P 09 45 28.4 -0.2
baz=28,SNR=7.1
G16A Moss Hill, Enn 28.20 95 ⇓P P 09 45 28.7 -0.3
baz=28,SNR=5.2
L12A House Creek Ra 28.42 103 ⇓P P 09 45 31.0 0.0
baz=28
F17A Fitzpatrick Pl 28.43 93 ⇑P P 09 45 30.9 -0.2
baz=28
E18A Harlowton 28.45 91 ⇓P P 09 45 31.6 +0.3
baz=28
J14A Carey 28.46 100 ⇓P P 09 45 31.5 +0.1
baz=28
M11A Holland Ranch, 28.49 105 ⇓P P 09 45 32.0 +0.3
baz=28
RES Resolute Bay 28.82 28 P P 09 45 34.6 +0.4
2.4nm,0.7s,mb4.0,baz=266,slow=12,SNR=7.4
H16A Russell Place, 28.84 95 ⇓P P 09 45 35.0 +0.3
baz=29
N11A Elko Archery C 28.95 106 ⇑P P 09 45 36.3 +0.6
baz=29
F18A Big Timber 28.96 92 ⇑P P 09 45 36.1 +0.3
baz=29
M12A Wells 28.98 104 ⇑P P 09 45 36.4 +0.5
baz=29
J15A Blackfoot 29.01 98 ⇓P P 09 45 36.8 +0.6
baz=29,SNR=6.9
I16A Newdale 29.23 97 ⇑P P 09 45 38.8 +0.6
baz=29
ELK Elko 29.27 105 P P 09 45 39.2 +0.6
3.8nm,1.0s,mb4.1,baz=306,slow=8.4,SNR=14
ELK Elko 29.27 105 P P 09 45 39.2 +0.6
N12A Clover Valley, 29.30 105 ⇓P P 09 45 39.7 +0.8
baz=29,SNR=5.1
N12A Clover Valley, 29.30 105 eP P 09 45 39.7 +0.9
4.9nm,0.8s,mb4.3
NVAR Mina Array Bea 29.33 112 P P 09 45 39.2 +0.1
4.2nm,0.8s,mb4.2,baz=301,slow=8.7,SNR=28
NVAR PcP PcP 09 48 44.9 -0.6
1.1nm,0.8s,baz=297,slow=2.8,SNR=5.3
M13A Montello 29.42 103 ⇓P P 09 45 40.4 +0.5
baz=29
K15A Arbon 29.42 100 ⇑P P 09 45 41.0 +1.1
baz=29
L14A Malta 29.47 101 ⇓P P 09 45 40.9 +0.6
baz=29
O11A Cowboy Ranch, 29.48 107 ⇑P P 09 45 40.9 +0.5
baz=29
RLMT Red Lodge 29.68 93 ⇓P P 09 45 43.1 +0.9
baz=29
N13A Wendover, West 29.75 104 ⇑P P 09 45 43.8 +1.0
baz=30
M14A Sheep Mountain 29.77 102 ⇓P P 09 45 43.9 +0.8
baz=30
O12A Currie 29.87 106 ⇓P P 09 45 44.5 +0.6
baz=30
L15A Malad City 29.96 101 ⇓P P 09 45 45.3 +0.6
baz=30
Q10A Clear Creek Ra 30.03 109 ⇑P P 09 45 45.8 +0.5
baz=30
I18A Diamond G Ranc 30.27 96 ⇑P P 09 45 48.0 +0.6
baz=30
N14A Grayback Hills 30.31 103 ⇓P P 09 45 48.2 +0.5
baz=30
P12A McGill 30.35 107 ⇓P P 09 45 48.8 +0.6
baz=30
Q11A Duckwater 30.41 109 ⇑P P 09 45 49.1 +0.5
baz=30
J18A Kendall Valley 30.47 96 ⇓P P 09 45 49.4 +0.2
baz=30
R10A Warm Springs 30.48 110 ⇑P P 09 45 50.0 +0.7
baz=30
S10A Tonopah Range, 30.60 111 ⇑P P 09 45 50.3 0.0
baz=30
Q12A Willow Creek R 30.71 107 ⇑P P 09 45 51.6 +0.3
baz=30
R11A Troy Canyon, C 30.81 109 ⇓P P 09 45 52.4 +0.2
baz=31
M16A Huntsville 30.84 101 ⇓P P 09 45 52.6 +0.1
baz=31
P13A Bates Ranch, G 30.84 106 ⇑P P 09 45 52.5 0.0
baz=31
DUG Dugway 30.97 104 ⇑P P 09 45 54.1 +0.5
baz=31
BW06 Boulder Array 31.02 97 ⇑P P 09 45 53.6 -0.4
baz=31
PDAR Pinedale Array 31.02 97 P P 09 45 53.6 -0.4
1.7nm,0.7s,mb4.0,baz=320,slow=6.0,SNR=13
R12A Pony Springs, 31.34 108 ⇑P P 09 45 56.8 -0.2
baz=31
MPMC Manual Prospec 31.55 114 ⇓P P 09 45 59.3 +0.5
baz=31
FURC Furnace Creek, 31.56 113 ⇑P P 09 45 59.4 +0.6
baz=31
Q14A Sevier Lake (B 31.58 106 ⇓P P 09 45 59.5 +0.6
baz=31,SNR=6.3
M18A Lyman 31.62 99 ⇓P P 09 45 59.7 +0.3
baz=31
S12A Delamar Landin 31.75 109 ⇑P P 09 46 01.2 +0.7
baz=32,SNR=7.6
R13A O'Grain Ranch, 31.79 108 ⇓P P 09 46 01.5 +0.6
baz=32
T11A Corn Creek, Al 31.83 110 ⇑P P 09 46 01.8 +0.6
baz=32
U10A Ash Meadows, A 31.87 112 ⇓P P 09 46 02.0 +0.4
baz=32
Q15A Fillmore 32.05 105 ⇑P P 09 46 04.2 +1.1
baz=32
R14A James Farms, M 32.22 106 ⇑P P 09 46 05.1 +0.6
baz=32
S13A Holt Ranch, En 32.29 108 ⇑P P 09 46 05.6 +0.3
baz=32,SNR=10
ARUT Antelope Range 32.37 107 eP P 09 46 06.8 +0.9
9.2nm,1.0s,mb4.6
O18A Roosevelt 32.45 101 ⇑P P 09 46 07.4 +0.7
baz=32
N19A Jon Jarvie Ra 32.48 99 ⇑P P 09 46 07.1 +0.2
baz=32
MSU Marysvale 32.51 105 eP P 09 46 08.3 +1.1
5.9nm,1.1s,mb4.4
S14A Cedar City 32.53 107 ⇑P P 09 46 07.8 +0.4
baz=32,SNR=6.3
T13A Saint George 32.69 109 ⇓P P 09 46 09.3 +0.6
baz=32,SNR=5.9
L21A Rawlins 32.76 96 ⇓P P 09 46 09.3 -0.1
baz=32
Q16A Castle Valley 32.77 104 ⇓P P 09 46 09.5 0.0
baz=32
V11A Goodsprings 32.78 112 ⇓P P 09 46 10.4 +0.8
baz=32
U12A Valley of Fire 32.80 110 ⇓P P 09 46 10.0 +0.3
baz=32
O19A Miners Draw (B 32.92 100 ⇓P P 09 46 11.0 +0.3
baz=33
SRU San Rafael 32.98 103 ⇓P P 09 46 11.6 +0.3
baz=33,SNR=13
SRU San Rafael 32.98 103 eP P 09 46 12.2 +0.9
16nm,1.2s,mb4.8
M21A Separation Pea 33.01 96 ⇓P P 09 46 11.5 +0.1
baz=33
S15A Panguitch 33.02 106 ⇑P P 09 46 12.7 +1.0
baz=33
N20A Spence Gulch, 33.03 98 ⇓P P 09 46 12.1 +0.4
baz=33,SNR=5.1
R16A Teasale 33.05 105 ⇓P P 09 46 12.0 0.0
baz=33,SNR=5.8
T14A Hurricane 33.09 108 ⇑P P 09 46 12.6 +0.3
baz=33,SNR=6.9
HEC Hector,Ludlow 33.10 114 ⇑P P 09 46 12.9 +0.5
baz=33
U13A Pakoon Wash 33.11 110 ⇓P P 09 46 12.6 +0.2
baz=33,SNR=7.8
V12A Nelson 33.17 111 ⇓P P 09 46 13.4 +0.4
baz=33,SNR=5.4
Q18A Rafter H Ranch 33.20 102 ⇓P P 09 46 13.6 +0.4
baz=33
RSSD Black Hills 33.23 90 eP P 09 46 11.2 -2.3
1.1nm,0.6s,mb4.0
L22A Ellis Ranch, M 33.24 95 ⇓P P 09 46 13.7 +0.2
baz=33
R17A Hanksville Air 33.38 104 ⇓P P 09 46 15.0 +0.3
baz=33
P19A Cripple Cowboy 33.46 100 ⇓P P 09 46 15.4 -0.1
baz=33,SNR=8.1
GMRC Granite Mounta 33.48 114 ⇓P P 09 46 15.1 -0.6
baz=33
N21A Black Mountain 33.49 98 ⇓P P 09 46 15.8 0.0
baz=33
T15A Red Dirt Ranch 33.50 107 ⇑P P 09 46 16.0 +0.2
baz=33,SNR=6.9
O20A White River Ci 33.52 99 ⇑P P 09 46 16.0 0.0
baz=33,SNR=5.3
U14A Mt Trumbull 33.52 109 ⇑P P 09 46 16.3 +0.3
baz=33,SNR=8.4
V13A Grand Canyon W 33.53 110 ⇓P P 09 46 16.4 +0.3
baz=33
R18A Canyonlands Na 33.84 103 ⇓P P 09 46 18.7 -0.1
baz=34
S17A Black Ridge (B 33.90 105 ⇑P P 09 46 19.6 +0.3
baz=34,SNR=6.5
U15A North Rim 33.99 108 ⇑P P 09 46 20.6 +0.5
baz=34
N22A Wattenberg Ran 34.05 97 ⇑P P 09 46 20.4 -0.2
baz=34
V14A Boquillas Ranc 34.16 110 ⇑P P 09 46 21.6 0.0
baz=34
W13A Hualapai Mount 34.16 111 ⇑P P 09 46 22.0 +0.4
baz=34,SNR=5.5
ULM Lac du Bonnet 34.18 75 P P 09 46 21.3 -0.3
4.1nm,0.7s,mb4.4,baz=294,slow=8.5,SNR=4.5
ULM LR LR 09 59 59.7
comp=Z,192nm,18.6s,MS3.9,baz=247,slow=36
IRM Iron Mountain 34.23 114 ⇓P P 09 46 22.6 +0.3
baz=34
R19A Curley Farm, L 34.26 102 ⇑P P 09 46 22.8 +0.4
baz=34
S18A Hurst Farm, Bl 34.29 104 ⇑P P 09 46 22.9 +0.1
baz=34,SNR=9.1
T17A Navajo Res., N 34.36 106 ⇑P P 09 46 23.2 -0.1
baz=34
BC3 Big Chuckawall 34.47 115 ⇓P P 09 46 24.4 +0.1
baz=34
W14A Seligman 34.49 110 ⇑P P 09 46 24.9 +0.4
baz=34,SNR=5.4
TIXI Tiksi 34.50 327 eP P 09 46 24.5 +0.3
9.8nm,1.1s,mb4.7
V15A Kaibab Nationa 34.51 108 ⇑P P 09 46 25.1 +0.5
baz=34,SNR=10
X13A Yucca 34.58 112 ⇑P P 09 46 25.4 +0.2
baz=34
S19A Harvey Farm, M 34.72 103 ⇑P P 09 46 26.4 0.0
baz=34
PV01 Paradox Valley 34.75 102 eP P 09 46 27.3 +0.6
440nm,1.2s
T18A Mexican Hat 34.76 104 ⇑P P 09 46 26.4 -0.4
baz=34,SNR=8.0
R20A Redvale 34.81 102 ⇑P P 09 46 27.3 0.0
baz=35
Y12C Blythe 34.87 113 ⇑P P 09 46 28.1 +0.3
baz=35
DVTC Desert V Tower 34.94 116 ⇑P P 09 46 29.0 +0.7
baz=35
W15A Williams 34.95 109 ⇓P P 09 46 29.3 +0.9
baz=35
R21A Cimarron 35.14 101 ⇑P P 09 46 30.4 +0.4
baz=35
X14A Yava 35.16 111 ⇓P P 09 46 31.0 +0.8
baz=35,SNR=8.2
WUAZ Wupatki 35.16 108 ⇓P P 09 46 30.9 +0.6
baz=35
AGMN Agassiz Nation 35.27 78 eP P 09 46 30.2 -0.8
11nm,0.9s,mb4.8
V17A Tonalea, Kykot 35.39 107 ⇑P P 09 46 32.4 +0.1
baz=35,SNR=6.9
T19A Beclabito 35.45 104 ⇓P P 09 46 33.0 +0.2
baz=35,SNR=12
MVCO Mesa Verde 35.46 103 ⇑P P 09 46 32.7 -0.1
baz=35
X15A Humboldt 35.49 110 ⇑P P 09 46 33.1 0.0
baz=35
Y14A Wickenburg 35.51 111 ⇑P P 09 46 33.3 0.0
baz=35
U19A Dine' College, 35.75 105 ⇓P P 09 46 35.3 0.0
baz=36
Z13A Yuma Proving G 35.75 113 ⇑P P 09 46 35.5 +0.2
baz=36
V18A Ganado 35.79 106 ⇑P P 09 46 35.8 +0.1
baz=36
112A Yuma 35.80 115 ⇓P P 09 46 35.9 +0.1
baz=36
X16A Lo Mia Camp, P 35.96 109 ⇓P P 09 46 37.7 +0.5
baz=36
Z14A Wintersburg 35.99 112 ⇑P P 09 46 37.9 +0.5
baz=36
113A Mohawk Valley, 36.04 114 ⇑P P 09 46 38.3 +0.5
baz=36
Y16A Circle Bar Ran 36.36 110 ⇓P P 09 46 41.3 +0.8
baz=36
X17A Forest Lakes 36.36 109 ⇑P P 09 46 41.3 +0.8
baz=36
T22A Edith 36.47 102 ⇑P P 09 46 42.1 +0.6
baz=36
V20A Brimhall 36.51 105 ⇑P P 09 46 42.1 +0.2
baz=36
X18A Snowflake 36.67 107 ⇓P P 09 46 43.0 -0.2
baz=36
SDCO Great Sand Dun 36.72 99 eP P 09 46 44.0 +0.4
1.5nm,1.0s,mb3.8
Y17A Roosevelt 36.84 109 ⇓P P 09 46 44.5 -0.1
baz=37
214A Organ Pipe Nat 37.17 113 ⇑P P 09 46 48.0 +0.5
baz=37
Y18A Canyon Day Jun 37.20 108 ⇑P P 09 46 48.7 +1.0
baz=37,SNR=6.4
116A Eloy 37.27 111 ⇑P P 09 46 48.9 +0.7
baz=37
V22A San Miguel Ran 37.28 103 ⇓P P 09 46 49.2 +0.9
baz=37
W21A San Fidel 37.47 104 ⇑P P 09 46 50.2 +0.2
baz=37
Y19A Nutrioso 37.48 107 ⇑P P 09 46 51.0 +0.9
baz=37
V23A Ortiz Mt. (NFS 37.80 102 ⇓P P 09 46 53.5 +0.7
baz=38
U24A Moreno Valley 37.81 101 ⇓P P 09 46 53.7 +0.8
baz=38
EYMN Ely 37.85 76 eP P 09 46 52.7 -0.4
4.5nm,0.7s,mb4.3
X21A Alamocita Cree 37.90 105 ⇑P P 09 46 54.5 +0.9
baz=38,SNR=14
118A Homack Ranch, 38.12 109 ⇑P P 09 46 55.4 -0.1
baz=38
ANMO Albuquerque 38.24 103 P P 09 46 56.3 -0.1
1.1nm,0.8s,mb3.7,baz=315,slow=7.5,SNR=4.2
ANMO PcP PcP 09 49 10.2 -0.5
0.3nm,0.3s,baz=278,slow=5.7,SNR=4.2
W23A Werner Place, 38.25 103 ⇓P P 09 46 56.6 0.0
baz=38
Y21A Point of Rocks 38.29 106 ⇑P P 09 46 57.5 +0.6
baz=38
U25A Circle Dot Ran 38.29 100 ⇓P P 09 46 57.4 +0.5
baz=38
217A Green Valley 38.35 111 ⇓P P 09 46 58.1 +0.7
baz=38
119A Ashpeak Ranch, 38.37 109 ⇓P P 09 46 58.1 +0.5
baz=38
Z20A Nine Sixteen R 38.48 108 ⇓P P 09 46 59.2 +0.6
baz=38
V25A Rancho No Teng 38.59 101 ⇓P P 09 47 00.0 +0.6
baz=38
218A Dragoon 38.59 110 ⇑P P 09 47 00.0 +0.5
baz=38
W24A Lazy R Ranch, 38.62 102 ⇓P P 09 47 00.0 +0.4
baz=38,SNR=5.8
X23A Hourglass Bar 38.66 104 ⇑P P 09 47 00.2 +0.1
baz=38
U26A Atchley Ranch, 38.66 99 ⇓P P 09 47 00.4 +0.3
baz=38,SNR=11
Y22A Socorro 38.73 105 ⇑P P 09 47 01.2 +0.6
baz=38
120A U Bar Ranch, L 38.90 108 ⇑P P 09 47 02.0 0.0
baz=39
219A White Tail Can 38.99 109 ⇑P P 09 47 03.1 +0.3
baz=39
318A Bisbee 39.04 111 ⇑P P 09 47 03.3 0.0
baz=39
V26A Tequesquite Ra 39.08 100 ⇓P P 09 47 04.0 +0.5
baz=39,SNR=30
W25A X Bar L Ranch, 39.13 101 ⇓P P 09 47 04.1 +0.1
baz=39,SNR=7.4
Y23A Lovelace Mesa, 39.22 104 ⇓P P 09 47 04.7 0.0
baz=39
Z22A Elephant Butte 39.24 106 ⇑P P 09 47 05.3 +0.4
baz=39
121A Cookes Peak, D 39.36 107 ⇑P P 09 47 05.9 0.0
baz=39
220A Playas Peak, P 39.45 109 ⇑P P 09 47 06.6 -0.1
baz=39
X25A Clemmons Ranch 39.53 102 ⇓P P 09 47 07.6 +0.2
baz=39
Y24A Capitan 39.56 104 ⇑P P 09 47 07.8 +0.2
baz=39
W26A Owens Ranch, T 39.61 101 ⇑P P 09 47 08.3 +0.4
baz=39
320A Kipp Ranch, An 39.89 109 ⇑P P 09 47 10.8 +0.4
baz=40
Y25A Mesa, Roswell 39.97 103 ⇓P P 09 47 11.0 0.0
baz=40,SNR=13
X26A CR and CF Fran 39.98 101 ⇑P P 09 47 11.2 +0.1
baz=40
W27A Bowe Ranch, En 40.02 100 ⇓P P 09 47 11.2 -0.1
baz=40
Z24A Sheeppen Canyo 40.05 104 ⇓P P 09 47 11.8 +0.1
baz=40
X27A F and S Farms, 40.30 100 ⇓P P 09 47 13.5 -0.3
baz=40
124A Stringfield Ra 40.48 105 ⇓P P 09 47 15.4 +0.1
baz=40
Y27A Causey 40.84 101 ⇓P P 09 47 18.0 -0.1
baz=41,SNR=9.7
224A Cornudas Mount 40.93 105 ⇑P P 09 47 18.4 -0.5
baz=41,SNR=5.1
125A Gardner Draw, 40.95 104 ⇓P P 09 47 18.7 -0.4
baz=41
MSTX Muleshoe 40.99 101 ⇓P P 09 47 19.1 -0.3
baz=41
ASAJ Asahikawa 41.18 281 P P 09 47 20.6 -0.3
3.8nm,0.8s,mb4.1,baz=90,slow=4.0,SNR=3.3
Z27A Tatum 41.24 102 ⇓P P 09 47 21.1 -0.4
baz=41
MNTX Cornudas Mount 41.29 106 eP P 09 47 22.2 +0.3
5.8nm,1.3s,mb4.0
126A Clayton Basin, 41.30 103 ⇓P P 09 47 21.9 -0.1
baz=41
324A Moseley Ranch, 41.44 106 ⇓P P 09 47 22.8 -0.4
baz=41
127A Arkansas Junct 41.64 103 ⇓P P 09 47 24.4 -0.4
baz=41
226A Malaga, Loving 41.71 104 ⇓P P 09 47 25.0 -0.4
baz=41
325A Bean Ranch, Si 41.77 106 ⇓P P 09 47 25.7 -0.1
baz=42
227A Bennet, Jal 42.18 103 ⇓P P 09 47 28.7 -0.5
baz=42
326A Caldwell Ranch 42.35 105 ⇓P P 09 47 30.1 -0.5
baz=42
426A McDonald Obser 42.82 105 ⇑P P 09 47 34.1 -0.3
baz=43
427A Hayter Ranch, 43.02 104 ⇓P P 09 47 35.8 -0.2
baz=43
526A Mary Lane Ranc 43.26 106 ⇑P P 09 47 37.8 -0.2
baz=43,SNR=6.5
428A Kincaid Ranch, 43.50 104 ⇓P P 09 47 39.8 -0.1
baz=43,SNR=9.3
626A Big Bend Ranch 43.63 106 ⇑P P 09 47 40.6 -0.4
baz=43,SNR=5.4
528A Cox Ranch, San 43.89 105 ⇑P P 09 47 42.8 -0.2
baz=44,SNR=9.0
TXAR Lajitas Array 44.06 106 P P 09 47 44.1 -0.3
6.1nm,0.9s,mb4.3,baz=314,slow=5.6,SNR=50
TXAR PcP PcP 09 49 28.6 -1.1
0.8nm,0.8s,baz=283,slow=1.6,SNR=4.3
TXAR LR LR 10 04 04.5
comp=Z,76nm,18.7s,MS3.6,baz=0.0,slow=33
SUMG Summit 44.07 23 eP P 09 47 45.2 +1.2
17nm,1.0s,mb4.7
627A Terlingua Ranc 44.11 106 ⇑P P 09 47 44.7 -0.2
baz=44,SNR=8.5

628A	**Black Gap, Mar**	44.36	105	⇓P	P	09 47 46.6	-0.2
	baz=44						
JCT	**Junction City**	45.27	101	*e*P	P	09 47 53.5	-0.6
	23nm,1.0s,mb5.0						
MIAR	**Mount Ida**	45.67	92	*e*P	P	09 47 56.5	-0.8
	10nm,1.0s,mb4.7						
SPITS	**Spitsbergen Ar**	45.80	3	P	P	09 47 57.9	+0.2
	1.3nm,0.5s,mb4.1,baz=15,slow=3.5,SNR=8.3						
SCHQ	**Schefferville**	46.04	53	P	P	09 47 59.1	-0.7
	4.6nm,0.9s,mb4.4,baz=319,slow=7.2,SNR=7.1						
MDJ	**Mudanjiang**	47.85	290	P	P	09 48 11.9	-2.2
MDJ				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
PLAL	**Pickwick Lake**	48.43	87	*e*P	P	09 48 17.6	-1.2
	comp=Z,29nm,1.4s,mb5.1						
MJAR	**Matsushiro Arr**	48.81	276	P	P	09 48 21.3	-0.3
	comp=Z,1.1nm,0.6s,mb4.0,baz=161,slow=6.0,SNR=3.0						
BINY	**Binghamton**	49.92	72	*e*P	P	09 48 29.4	-0.7
	comp=Z,32nm,1.6s,mb5.1						
CN2	**Changchun**	50.57	292	*e*P	P	09 48 33.0	-2.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
KSRS	**Korea Array**	53.80	285	P	P	09 48 59.7	+0.6
	comp=Z,1.8nm,0.7s,mb4.1,baz=43,slow=6.0,SNR=6.0						
KSRS				LR	LR	10 12 54.3	
	comp=Z,46nm,20.1s,MS3.5,baz=56,slow=37						
ARCES	**ARCESS Array B**	54.64	0	P	P	09 49 03.9	-0.9
	comp=Z,1.2nm,0.6s,mb4.1,baz=12,slow=6.2,SNR=4.7						
SONM	**Songino Array**	56.86	308	P	P	09 49 21.8	+0.8
	comp=Z,3.0nm,0.8s,mb4.4,baz=46,slow=6.5,SNR=14						
SONM				PcP	PcP	09 50 17.0	+0.5
	comp=Z,1.7nm,0.7s,baz=67,slow=4.0,SNR=3.8						
SONM				LR	LR	10 15 33.5	
	comp=Z,264nm,19.4s,MS4.3,baz=253,slow=38						
ZAA0	**Zalesovo Array**	60.34	325	*e*P	P	09 49 45.5	+0.4
ZALV	**Zalesovo Beam**	60.34	325	P	P	09 49 45.2	+0.1
	comp=Z,1.8nm,0.3s,mb4.5,baz=38,slow=5.8,SNR=7.3						
ZALV				LR	LR	10 19 08.0	
	comp=Z,142nm,18.4s,MS4.1,baz=49,slow=39						
ZALV	**Zalesovo Beam**	60.34	325	P	P	09 49 45.2	+0.1
ZALV				LR	LR	10 19 08.0	
NB2	**NORSAR Subarra**	62.56	8	P	P	09 50 00.0	0.0
	comp=Z,1.2nm,0.6s,mb4.2,baz=350,slow=6.9						
NOA	**NORSAR Array B**	62.56	8	P	P	09 49 59.9	-0.1
	comp=Z,1.7nm,0.7s,mb4.3,baz=351,slow=6.7,SNR=8.8						
NOA				LR	LR	10 19 51.2	
	comp=Z,43nm,18.4s,MS3.6,baz=345,slow=39						
NOA	**NORSAR Array B**	62.56	8	P	P	09 49 59.9	-0.1
NOA				LR	LR	10 19 51.2	
FINES	**FINESS Array B**	62.76	0	P	P	09 50 00.9	-0.4
	comp=Z,0.7nm,0.5s,mb4.0,baz=96,slow=7.7,SNR=4.5						
HFS	**Hagfors**	63.64	7	P	P	09 50 07.2	0.0
	comp=Z,1.7nm,0.6s,mb4.2,baz=12,slow=3.5,SNR=7.0						
KURK	**Kurchatov**	65.07	326	P	P	09 50 16.9	+0.2
	comp=Z,1.2nm,0.6s,mb4.1,baz=30,slow=6.1,SNR=6.7						
BVAR	**Borovoye Array**	65.36	333	P	P	09 50 18.5	-0.1
	comp=Z,2.7nm,0.6s,mb4.4,baz=31,slow=6.7,SNR=17						
EKA	**Eskdalemuir Ar**	66.31	18	P	P	09 50 25.0	+0.4
	comp=Z,1.2nm,0.6s,mb4.1,baz=346,slow=4.7,SNR=5.7						
GTA	**Gaotai**	66.42	306	*e*P	P	09 50 26.0	+0.4
GTA				pP	pP	09 50 30.2	+3.6
GTA				sP	sP	09 50 33.2	+6.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.2						
MK31	**Makanchi Array**	67.28	322	*e*P	P	09 50 39.7	+8.7
MKAR	**Makanchi Array**	67.28	322	P	P	09 50 30.9	-0.1
	comp=Z,0.7nm,0.4s,mb4.0,baz=50,slow=8.8,SNR=7.2						
MKAR				LR	LR	10 22 42.1	
	comp=Z,108nm,18.1s,MS4.1,baz=204,slow=38						
AKTK	**Aktyubinsk**	70.61	339	P	P	09 50 51.2	-0.4
AKTO	**Aktyubinsk**	70.61	339	P	P	09 50 51.2	-0.4
	comp=Z,2.2nm,0.7s,mb4.2,baz=9.4,slow=6.4,SNR=8.8						
ABKAR	**Akbulak array**	71.33	338	*e*P	P	09 50 56.1	+0.1
	comp=Z,2.0nm,0.6s,mb4.2						
TKM2	**Tokmak 2**	72.94	324	*e*P	P	09 51 07.1	+1.4
	comp=Z,2.3nm,0.9s,mb4.1						
PPT	**Papeete**	73.49	176	LR	LR	10 15 54.1	
	comp=Z,142nm,20.2s,MS4.2,baz=91,slow=30						
AKASG	**Malin Array Be**	73.51	358	P	P	09 51 08.1	-0.9
	comp=Z,0.8nm,0.3s,mb4.1,baz=359,slow=5.0,SNR=5.1						
AKASG	**Malin Array Be**	73.51	358	P	P	09 51 08.1	-0.9
GYA	**Guiyang**	73.61	293	*e*P	P	09 51 10.0	0.0
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
EKS2	**Erkin-Say**	73.76	326	*e*P	P	09 51 11.5	+1.0
	comp=Z,10nm,1.4s,mb4.6						
GERES	**GERESS Array B**	74.85	9	P	P	09 51 17.2	+0.3
	comp=Z,0.4nm,0.3s,mb3.9,baz=331,slow=5.9,SNR=5.1						
ESDC	**Sonseca Array**	81.13	23	P	P	09 51 52.1	+0.2
	comp=Z,0.4nm,0.4s,mb3.7,baz=350,slow=6.6,SNR=4.8						
CMAR	**Chiang Mai Arr**	84.19	294	P	P	09 52 08.0	-0.2
	comp=Z,4.7nm,0.8s,mb4.7,baz=16,slow=5.7,SNR=19						
BRTR	**Keskin Array B**	84.31	354	P	P	09 52 08.4	0.0
	comp=Z,0.3nm,0.5s,mb3.6,baz=23,slow=5.2,SNR=3.8						
KEST	**Kesra**	87.35	14	LR	LR	10 33 49.4	
	comp=Z,23nm,19.2s,MS3.6,baz=210,slow=37						
ASF	**Jabal al Asfar**	91.59	351	LR	LR	10 39 14.8	
	comp=Z,22nm,18.6s,MS3.6,baz=91,slow=39						
EIL	**Elat**	94.23	353	LR	LR	10 44 12.9	
	comp=Z,46nm,19.0s,MS4.0,baz=47,slow=41						
QSPA	**South Pole Qui**	145.92	180	PKPbc	PKPbc	09 59 13.1	-1.3
	comp=Z,16nm,0.9s,baz=62,slow=0.8,SNR=49						
LBTB	**Lobatse**	148.91	1	PKPbc	PKPbc	09 59 23.2	-1.0
	comp=Z,4.5nm,0.7s,baz=53,slow=3.5,SNR=8.7						
BOSA	**Boshof**	152.49	2	PKPbc	PKPbc	09 59 32.1	-0.5
	comp=Z,2.1nm,0.9s,baz=63,slow=2.3,SNR=4.2						

ISCJB ***05*** *09:59:44.0±1.8,56°.10N±0°.03×153°.58W±0°.06,h8km±12km, mb4.1/34,MS3.5/5,Error ellipse: s-maj=6.2km s-min=4.4km az=138.6*

IDC ***05*** *09:59:44.9±0.7,56°.17N×153°.59W,h0km,mb4.0/20, mb1 4.2/23,mb1mx4.1/33,mbtmp4.0/23,ML3.5/3,MS3.4/7, Ms1 3.4/7,ms1mx3.0/42,Error ellipse: s-maj=22.1km s-min=11.5km az=18.0*

NEIC ***05*** *09:59:45.8,55°.88N×153°.19W,h20km,mb4.2/14, ML4.1(PMR),ML3.9(AEIC),After AEIC.*

ISC 05 09:59:45.1±1.5,56°.09N±0°.03×153°.59W±0°.06,h4km±10km, n224,σ0s59/223,mb4.1/34,MS3.5/5,85C-77D,Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	1.15	8	*e*P	Pg	10 00 07.5	+0.3
KDAK	**Kodiak Island**	1.79	18	*e*Pn	Pn	10 00 16.2	-0.5
KDAK				*e*Sn	Sx	10 00 36.4	
KDAK				S	Sn	10 00 38.8	-1.1
CHGN	**Chignik**	2.70	277	*e*P	Pn	10 00 29.2	-0.1
SDPT	**Sand Point**	3.96	262	*e*P	Pn	10 00 45.4	-1.2
RSO	**Redoubt South**	4.41	5	*e*Pn	Pn	10 00 54.0	+1.3
RSO				*e*Sn	Sx	10 01 48.0	
SEW	**Seward**	4.59	27	P	Pn	10 00 54.1	-1.1
SVW2	**Sparrevohn**	5.13	349	*e*P	Pn	10 01 03.2	+0.5
RC01	**Rabbit Creek A**	5.41	20	*e*Pn	Pn	10 01 05.8	-0.7
	64nm,1.0s						
PMR	**Palmer**	5.99	21	*e*Pn	Pn	10 01 13.5	-0.9
	43nm,1.2s						
BMRM	**Bremner River**	6.79	40	*e*Pn	Pn	10 01 23.9	-1.4
PPLA	**Purkeypile**	6.87	5	*e*Pn	Pn	10 01 30.3	+3.8
	66nm,1.4s						
PPLA				*e*Sn	Sx	10 02 48.8	
TTA	**Tatalina**	6.97	351	*e*Pn	Pn	10 01 28.8	+0.9
	31nm,1.1s						
KTH	**Kantishna Hill**	7.61	9	P	Pn	10 01 37.2	+0.5
PAX	**Paxson**	8.04	28	*e*Pn	Pn	10 01 42.4	-0.2
	15nm,1.1s						
PAX				*e*Sn	Sn	10 03 14.9	+1.2
BPAW	**Bear Paw Mtn.**	8.14	8	*e*Pn	Pn	10 01 45.4	+1.5
IL1	**Eielson Array**	9.31	18	P	Pn	10 01 58.2	-1.8
DIB	**Dawson Inlet,**	12.56	94	T		10 15 24.5	
	SNR=10						
DLBC	**Dease Lake**	12.95	70	Pn	Pn	10 02 50.5	+0.8
	0.1nm,0.3s,baz=270,slow=10,SNR=3.4						
INK	**Inuvik**	15.31	29	Pn	Pn	10 03 21.0	-0.7
	0.0nm,0.3s,baz=221,slow=9.2,SNR=2.0						
INK				LR	LR	10 09 41.5	
	comp=Z,116nm,21.1s,baz=275,slow=39						
INK	**Inuvik**	15.31	29	*e*Pn	Pn	10 03 21.7	0.0
INK				LR	LR	10 09 41.5	
BBB	**Bella Bella**	15.40	94	LR	LR	10 09 16.9	
	comp=Z,72nm,18.2s,baz=44,slow=37						
FX1	**Attu Island--F**	19.47	274	P	Pn	10 04 13.5	-0.3
	0.8nm,0.3s,baz=65,slow=4.3,SNR=3.7						
YKA	**Yellowknife Ar**	20.65	56	P	P	10 04 25.3	-0.1
	3.0nm,0.8s,baz=268,slow=10.0,SNR=16						
YKA	**Yellowknife Ar**	20.65	56	P	P	10 04 25.3	-0.1
LON	**Longmire**	21.73	102	*e*P	P	10 04 33.5	-3.7
	4.0nm,0.9s,mb3.9						
BILL	**Bilibino**	21.80	319	*e*P	P	10 04 39.2	+1.5
	12nm,1.3s,mb4.2						
ETW	**Entiat**	22.05	99	*e*P	P	10 04 36.0	-4.6
	11nm,1.2s,mb4.2						
B08A	**Colville Reser**	22.18	96	⇑P	P	10 04 41.5	-0.4
	baz=22						
H04A	**Detroit Lake**	22.84	107	⇓P	P	10 04 48.3	-0.7
	baz=22						
G08A	**Pilot Rock**	24.20	102	⇓P	P	10 05 01.7	-0.8
	baz=24						
E10A	**Myers Farm, Un**	24.49	98	⇑P	P	10 05 04.7	-0.4
	baz=24						
D11A	**Klaveano Farm,**	24.59	96	⇑P	P	10 05 05.5	-0.5
	baz=24						
YBH	**Yreka Blue Hor**	24.60	113	P	P	10 05 07.5	+1.4
	3.5nm,0.9s,mb3.9,baz=334,slow=5.3,SNR=6.8						
YBH				LR	LR	10 13 51.7	
	comp=Z,55nm,18.3s,MS3.1,baz=309,slow=34						
I07A	**Izee**	24.68	105	⇓P	P	10 05 07.1	+0.3
	baz=24						
F10A	**Beach Ranch, E**	24.73	99	⇓P	P	10 05 07.5	+0.2
	baz=24						
H08A	**Prairie City**	24.85	103	⇑P	P	10 05 09.1	+0.7
	baz=24,SNR=5.8						
K05A	**Summer Lake**	24.85	109	⇓P	P	10 05 09.3	+0.9
	baz=24,SNR=5.6						
D12A	**Red Ives Fores**	25.14	95	⇓P	P	10 05 10.6	-0.3
	baz=25						
A14A	**Double T Ranch**	25.16	89	⇑P	P	10 05 10.4	-0.8
	baz=25						
G10A	**Bishop Farm, J**	25.21	100	⇓P	P	10 05 11.1	-0.5
	baz=25						
C13A	**Hot Springs**	25.21	93	⇓P	P	10 05 11.5	-0.2
	baz=25						
H09A	**Durkee**	25.30	102	⇓P	P	10 05 12.5	0.0
	baz=25						
F11A	**Grangeville**	25.38	98	⇓P	P	10 05 13.0	-0.1
	baz=25						
BMO	**Blue Mountains**	25.38	101	*e*P	P	10 05 10.2	-3.0
	2.3nm,1.0s,mb3.7						
A15A	**Johnson Ranch,**	25.54	89	⇓P	P	10 05 14.5	-0.1
	baz=25						
B14A	**Marquette Ranc**	25.57	90	⇓P	P	10 05 15.2	+0.3
	baz=25						
G11A	**Walters Elk Ra**	25.61	99	⇑P	P	10 05 16.7	+1.3
	baz=25,SNR=5.5						
C14A	**Swan Lake**	25.63	92	⇑P	P	10 05 15.6	+0.2
	baz=25						
J08A	**Circle Bar Ran**	25.72	105	⇑P	P	10 05 16.3	0.0
	baz=25						
MOD	**Modoc**	25.74	109	*e*P	P	10 05 12.2	-4.3
	7.9nm,1.1s,mb4.2						
H10A	**Noah's Angus R**	25.86	101	⇓P	P	10 05 17.5	0.0
	baz=26,SNR=5.1						
F12A	**Elk City**	25.96	97	⇑P	P	10 05 18.3	-0.1
	baz=26						
B15A	**Bradely Ranch,**	25.99	90	⇑P	P	10 05 18.9	+0.2
	baz=26						
J09A	**Fry Pan Ranch,**	26.12	104	⇑P	P	10 05 20.4	+0.5
	baz=26						
E13A	**Victor**	26.14	95	⇑P	P	10 05 20.2	+0.1
	baz=26						
D14A	**Greenough**	26.15	93	⇓P	P	10 05 20.2	0.0
	baz=26						
H11A	**Donnelly**	26.19	100	⇑P	P	10 05 20.6	+0.1
	baz=26,SNR=5.0						
A16A	**West Butte Ran**	26.19	88	⇓P	P	10 05 20.4	-0.1
	baz=26						
WVOR	**Wild Horse Val**	26.26	107	*e*P	P	10 05 21.9	+0.7
	8.0nm,1.1s,mb4.2						
C15A	**Salmond Ranch,**	26.26	91	⇑P	P	10 05 21.1	-0.1
	baz=26						
E14A	**Clinton**	26.55	94	⇓P	P	10 05 23.7	0.0
	baz=26						
A17A	**Triple J Farms**	26.70	87	⇑P	P	10 05 25.1	0.0
	baz=26						
D15A	**Lincoln**	26.73	92	⇓P	P	10 05 24.9	-0.5
	baz=26						
H12A	**Diamond D Ranc**	26.93	99	⇑P	P	10 05 27.3	+0.1
	baz=27						
G13A	**Cobalt**	26.93	97	⇓P	P	10 05 27.3	+0.1
	baz=27						
K10A	**MacKenzie Ranc**	26.98	104	⇓P	P	10 05 28.2	+0.5
	baz=27						
E15A	**Deer Lodge**	27.02	94	⇑P	P	10 05 28.2	+0.3
	baz=27						
A18A	**Metzger Ranch,**	27.19	87	⇑P	P	10 05 29.2	-0.3
	baz=27						
H13A	**Challis**	27.25	98	⇑P	P	10 05 29.7	-0.4
	baz=27						
D16A	**Dana Ranch, Ca**	27.28	91	⇑P	P	10 05 30.1	-0.2
	baz=27						
C17A	**Wharram Farm,**	27.38	90	⇑P	P	10 05 30.9	-0.3
	baz=27						
K11A	**Parker Ranch,**	27.44	103	⇑P	P	10 05 31.3	-0.5
	baz=27						
B18A	**Beardsley Farm**	27.51	88	⇓P	P	10 05 32.1	-0.3
	baz=27						
L10A	**Juniper Basin**	27.67	105	⇓P	P	10 05 33.4	-0.5
	baz=27						
D17A	**Six Diamond Ra**	27.69	91	⇓P	P	10 05 33.5	-0.5
	baz=27						
H14A	**Leadore**	27.71	97	⇓P	P	10 05 33.9	-0.3
	baz=27						
EGMT	**Eagleton**	27.72	88	⇑P	P	10 05 33.9	-0.4
	baz=27						
HLID	**Hailey**	27.80	100	⇓P	P	10 05 34.9	-0.2
	baz=28						
HLID	**Hailey**	27.80	100	*e*P	P	10 05 31.4	-3.7
	1.4nm,0.9s,mb3.6						
G15A	**Dillon**	27.86	96	⇓P	P	10 05 35.6	+0.1
	baz=28						
PETK	**Petropavlovsk-**	27.91	285	P	P	10 05 36.0	+0.1
	1.9nm,0.8s,mb3.8,baz=71,slow=14,SNR=2.8						
PETK				LR	LR	10 17 32.8	
	comp=Z,49nm,19.4s,MS3.1,baz=76,slow=38						
L11A	**Cat Creek Ranc**	28.00	104	⇑P	P	10 05 37.3	+0.5
	baz=28						
M10A	**I.L. Ranch, Tu**	28.02	106	⇓P	P	10 05 37.6	+0.6
	baz=28						
K12A	**Draper Farm, C**	28.15	102	⇓P	P	10 05 38.2	0.0
	baz=28						
D18A	**Linhart Farms,**	28.16	90	⇑P	P	10 05 38.4	+0.2
	baz=28						
G16A	**Moss Hill, Enn**	28.20	95	⇓P	P	10 05 38.6	0.0
	baz=28						
F17A	**Fitzpatrick Pl**	28.43	93	⇓P	P	10 05 40.8	+0.1
	baz=28						
J14A	**Carey**	28.46	100	⇑P	P	10 05 41.2	+0.3
	baz=28						
RES	**Resolute Bay**	28.86	28	P	P	10 05 45.0	+0.8
	1.6nm,0.9s,mb3.8,baz=266,slow=13,SNR=2.3						
F18A	**Big Timber**	28.96	92	⇑P	P	10 05 45.0	-0.4
	baz=29						
J15A	**Blackfoot**	29.01	98	⇑P	P	10 05 45.7	-0.1
	baz=29						
ELK	**Elko**	29.26	105	P	P	10 05 49.1	+1.0
	2.0nm,0.8s,mb3.9,baz=288,slow=11,SNR=9.2						
N12A	**Clover Valley,**	29.30	105	⇓P	P	10 05 48.4	0.0
	baz=29						
NVAR	**Mina Array Bea**	29.32	112	P	P	10 05 49.6	+1.0
	2.2nm,0.8s,mb3.9,baz=300,slow=9.1,SNR=13						
NVAR				PcP	PcP	10 08 54.9	0.0
	0.5nm,0.7s,baz=293,slow=1.1,SNR=4.4						
M13A	**Montello**	29.42	103	⇓P	P	10 05 49.3	-0.1
	baz=29						
K15A	**Arbon**	29.42	100	⇓P	P	10 05 49.5	0.0
	baz=29						
L14A	**Malta**	29.46	101	⇓P	P	10 05 49.9	0.0
	baz=29						
O11A	**Cowboy Ranch,**	29.47	107	⇑P	P	10 05 50.0	+0.1
	baz=29						
RLMT	**Red Lodge**	29.69	93	⇓P	P	10 05 51.6	-0.2
	baz=29						
N13A	**Wendover, West**	29.75	104	⇓P	P	10 05 52.2	-0.1
	baz=29						
M14A	**Sheep Mountain**	29.77	102	⇑P	P	10 05 52.9	+0.4
	baz=29						
O12A	**Currie**	29.86	105	⇓P	P	10 05 52.9	-0.5
	baz=30						
Q11A	**Duckwater**	30.40	108	⇓P	P	10 05 58.3	+0.1
	baz=30						
R10A	**Warm Springs**	30.47	110	⇓P	P	10 05 58.9	+0.1
	baz=30						
Q12A	**Willow Creek R**	30.70	107	⇓P	P	10 06 00.4	-0.4
	baz=30						
R11A	**Troy Canyon, C**	30.80	109	⇑P	P	10 06 01.6	-0.1
	baz=30						
P13A	**Bates Ranch, G**	30.84	106	⇑P	P	10 06 02.1	+0.1
	baz=30						
BW06	**Boulder Array**	31.02	97	⇑P	P	10 06 03.0	-0.6
	baz=31						
PDAR	**Pinedale Array**	31.02	97	P	P	10 06 03.8	+0.2
	1.5nm,1.1s,mb3.7,baz=317,slow=6.1,SNR=6.6						
ISA	**Isabella**	31.35	116	⇓P	P	10 06 06.4	-0.2
	baz=31						
MPMC	**Manual Prospec**	31.54	114	⇓P	P	10 06 08.1	-0.1
	baz=31						
Q14A	**Sevier Lake (B**	31.57	106	⇑P	P	10 06 08.1	-0.4
	baz=31						
SBC	**Santa Barbara**	31.70	119	⇓P	P	10 06 09.1	-0.5
	baz=31						
S12A	**Delamar Landin**	31.74	109	⇑P	P	10 06 09.6	-0.4
	baz=31						
T11A	**Corn Creek, Al**	31.82	110	⇑P	P	10 06 10.5	-0.2
	baz=32						
Q15A	**Fillmore**	32.05	105	⇓P	P	10 06 12.4	-0.3
	baz=32						
S13A	**Holt Ranch, En**	32.29	108	⇑P	P	10 06 14.7	-0.1
	baz=32						
ARUT	**Antelope Range**	32.36	107	*e*P	P	10 06 16.6	+1.2
	3.5nm,0.9s,mb4.2						
MSU	**Marysvale**	32.51	105	*e*P	P	10 06 18.0	+1.2
	4.1nm,1.1s,mb4.3						
S14A	**Cedar City**	32.52	107	⇓P	P	10 06 17.2	+0.3
	baz=32						
T13A	**Saint George**	32.68	109	⇓P	P	10 06 18.2	-0.1
	baz=32,SNR=5.1						
SRU	**San Rafael**	32.98	103	⇑P	P	10 06 20.9	+0.1
	baz=33,SNR=6.7						
N20A	**Spence Gulch,**	33.03	98	⇓P	P	10 06 21.2	0.0
	baz=33						
R16A	**Teasdale**	33.05	105	⇑P	P	10 06 21.8	+0.3
	baz=33						
T14A	**Hurricane**	33.09	108	⇑P	P	10 06 22.1	+0.3
	baz=33						
U13A	**Pakoon Wash**	33.10	110	⇑P	P	10 06 22.7	+0.8
	baz=33						
V12A	**Nelson**	33.16	111	⇑P	P	10 06 23.2	+0.8
	baz=33						
CIS	**Catalina Islan**	33.18	118	⇓P	P	10 06 22.5	-0.1
	baz=33						
Q18A	**Rafter H Ranch**	33.20	102	⇓P	P	10 06 22.8	+0.1
	baz=33						
L22A	**Ellis Ranch, M**	33.24	95	⇑P	P	10 06 23.2	+0.1
	baz=33						
R17A	**Hanksville Air**	33.37	104	⇑P	P	10 06 24.0	-0.3
	baz=33						
P19A	**Cripple Cowboy**	33.46	100	⇑P	P	10 06 25.2	+0.2
	baz=33						
N21A	**Black Mountain**	33.49	97	⇑P	P	10 06 24.5	-0.8
	baz=33						
T15A	**Red Dirt Ranch**	33.49	107	⇑P	P	10 06 24.6	-0.7
	baz=33						
U14A	**Mt Trumbull**	33.52	109	⇑P	P	10 06 26.1	+0.5
	baz=33,SNR=5.3						
V13A	**Grand Canyon W**	33.52	110	⇓P	P	10 06 25.2	-0.3
	baz=33						
O20A	**White River Ci**	33.52	99	⇑P	P	10 06 24.9	-0.7
	baz=33						
R18A	**Canyonlands Na**	33.84	103	⇑P	P	10 06 27.9	-0.5
	baz=34						
S17A	**Black Ridge (B**	33.89	105	⇓P	P	10 06 28.6	-0.2
	baz=34						
U15A	**North Rim**	33.98	108	⇓P	P	10 06 29.1	-0.5
	baz=34						
W13A	**Hualapai Mount**	34.15	111	⇑P	P	10 06 31.2	+0.2
	baz=34						
IRM	**Iron Mountain**	34.22	114	⇑P	P	10 06 31.5	-0.2
	baz=34						
R19A	**Curley Farm, L**	34.26	102	⇑P	P	10 06 31.4	-0.6
	baz=34						
S18A	**Hurst Farm, Bl**	34.29	104	⇑P	P	10 06 32.5	+0.3
	baz=34,SNR=5.2						
BC3	**Big Chuckawall**	34.46	114	⇓P	P	10 06 33.3	-0.5
	baz=34						
W14A	**Seligman**	34.48	110	⇑P	P	10 06 34.0	0.0
	baz=34						
V15A	**Kaibab Nationa**	34.50	108	⇑P	P	10 06 34.5	+0.4
	baz=34,SNR=5.8						
X13A	**Yucca**	34.56	112	⇑P	P	10 06 34.7	0.0
	baz=34						
S19A	**Harvey Farm, M**	34.72	103	⇑P	P	10 06 35.6	-0.3
	baz=34						
T18A	**Mexican Hat**	34.76	104	⇑P	P	10 06 36.0	-0.3
	baz=34						
Y12C	**Blythe**	34.86	113	⇑P	P	10 06 36.8	-0.5
	baz=34						
W15A	**Williams**	34.94	109	⇓P	P	10 06 38.3	+0.4
	baz=35						
X14A	**Yava**	35.15	111	⇑P	P	10 06 39.4	-0.3
	baz=35						
WUAZ	**Wupatki**	35.16	108	⇓P	P	10 06 38.9	-0.8
	baz=35						
AGMN	**Agassiz Nation**	35.29	78	*e*P	P	10 06 41.0	+0.2
	3.1nm,0.7s,mb4.3						
V17A	**Tonalea, Kykot**	35.39	107	⇓P	P	10 06 42.0	+0.3
	baz=35						
T

226A	Malaga, Loving	41.70	104	⇓P	P	10 07 34.8	0.0
	baz=41						
325A	Bean Ranch, Si	41.76	105	⇑P	P	10 07 35.4	+0.1
	baz=41						
227A	Bennet, Jal	42.18	103	⇑P	P	10 07 38.9	+0.1
	baz=42						
425A	Indio Mountain	42.21	106	⇑P	P	10 07 39.5	+0.5
	baz=42						
326A	Caldwell Ranch	42.34	105	⇑P	P	10 07 40.4	+0.4
	baz=42						
426A	McDonald Obser	42.81	105	⇓P	P	10 07 44.4	+0.5
	baz=42						
526A	Mary Lane Ranc	43.26	106	⇑P	P	10 07 48.2	+0.8
	baz=43						
527A	Woodward Ranch	43.45	105	⇑P	P	10 07 49.4	+0.4
	baz=43						
428A	Kincaid Ranch,	43.50	104	⇓P	P	10 07 49.8	+0.4
	baz=43,SNR=5.6						
626A	Big Bend Ranch	43.63	106	⇓P	P	10 07 51.1	+0.6
	baz=43						
528A	Cox Ranch, San	43.88	104	⇑P	P	10 07 52.7	+0.1
	baz=44						
TXAR	Lajitas Array	44.05	106	P	P	10 07 54.5	+0.6
	2.9nm,0.8s,mb4.0,baz=306,slow=6.1,SNR=28						
TXAR				PcP	PcP	10 09 39.0	-0.3
	0.4nm,0.8s,baz=2.9,slow=5.4,SNR=3.7						
TXAR				LR	LR	10 25 39.5	
	comp=Z,55nm,18.2s,MS3.5,baz=265,slow=35						
627A	Terlingua Ranc	44.11	106	⇓P	P	10 07 54.5	+0.1
	baz=44						
628A	Black Gap, Mar	44.35	105	⇑P	P	10 07 56.2	-0.1
	baz=44						
JCT	Junction City	45.27	101	*e*P	P	10 08 00.5	-3.1
	5.2nm,0.7s,mb4.5						
MIAR	Mount Ida	45.68	92	*e*P	P	10 08 02.6	-4.2
	7.4nm,1.1s,mb4.5						
SCHQ	Scheferville	46.07	53	P	P	10 08 09.9	+0.3
	2.2nm,0.8s,mb4.2,baz=283,slow=14,SNR=3.7						
CN2	Changchun	50.58	292	*e*P	P	10 08 45.0	+0.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
KSRS	Korea Array	53.80	285	P	P	10 09 08.2	-0.5
	comp=Z,1.0nm,0.9s,mb3.8,baz=41,slow=6.5,SNR=4.8						
SONM	Songino Array	56.89	308	P	P	10 09 31.7	+1.0
	comp=Z,2.1nm,0.7s,mb4.3,baz=47,slow=6.9,SNR=12						
SONM				PcP	PcP	10 10 26.9	+0.8
	comp=Z,1.8nm,0.8s,baz=69,slow=4.9,SNR=3.8						
SONM				LR	LR	10 35 43.9	
	comp=Z,124nm,18.2s,MS4.0,baz=251,slow=38						
ZALV	Zalesovo Beam	60.37	325	P	P	10 09 55.1	+0.3
	comp=Z,1.3nm,0.5s,mb4.2,baz=38,slow=5.6,SNR=5.6						
ZALV				LR	LR	10 40 06.7	
	comp=Z,33nm,19.6s,MS3.5,baz=2.8,slow=40						
NOA	NORSAR Array B	62.60	8	P	P	10 10 09.8	0.0
	comp=Z,1.4nm,0.8s,mb4.1,baz=351,slow=6.7,SNR=3.7						
NOA	NORSAR Array B	62.60	8	P	P	10 10 09.8	0.0
KURK	Kurchatov	65.11	326	P	P	10 10 27.4	+0.9
	comp=Z,0.4nm,0.3s,mb3.9,baz=25,slow=6.1,SNR=7.5						
BVAR	Borovoye Array	65.39	333	P	P	10 10 28.3	0.0
	comp=Z,1.9nm,0.8s,mb4.2,baz=33,slow=5.7,SNR=11						
MKAR	Makanchi Array	67.31	322	P	P	10 10 40.7	0.0
	comp=Z,0.3nm,0.2s,mb3.9,baz=52,slow=7.9,SNR=6.4						
MKAR	Makanchi Array	67.31	322	P	P	10 10 40.7	0.0
ABKAR	Akbulak array	71.37	338	*e*P	P	10 11 05.6	-0.1
	comp=Z,1.3nm,0.6s,mb4.0						
AKASG	Malin Array Be	73.55	358	P	P	10 11 18.1	-0.7
	comp=Z,0.5nm,0.4s,mb3.8,baz=1.3,slow=6.1,SNR=4.7						
GERES	GERESS Array B	74.90	9	P	P	10 11 25.9	-0.8
	comp=Z,0.4nm,0.2s,mb4.0,baz=348,slow=4.4,SNR=5.1						
ESDC	Sonseca Array	81.18	23	P	P	10 12 02.1	+0.4
	comp=Z,0.6nm,0.2s,mb4.2,baz=352,slow=7.9,SNR=4.8						
CMAR	Chiang Mai Arr	84.21	294	P	P	10 12 17.7	0.0
	comp=Z,3.1nm,0.8s,mb4.5,baz=13,slow=5.9,SNR=18						
BR131	Keskin Array S	84.36	354	*e*P	P	10 12 15.3	-3.0
	comp=Z,1.5nm,0.4s,mb4.5						
URZ	Urewera	97.23	203	*e*P	P	10 13 16.2	-2.2
	comp=Z,21nm,1.2s						
QSPA	South Pole Qui	145.87	180	*e*PKPdf	PKPdf	10 19 23.3	+0.1

DJA 05 10:01:42.0, 46S×122.77E, h19km, MLv3.7/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	Luwuk	0.58	180	P	Pb	10 01 53.1	-0.4
LUWI				S	Sb	10 01 59.9	-1.5
APSI	Ampana	1.21	248	P	Pn	10 02 02.8	-1.1
APSI				S	Sb	10 02 19.9	+0.4
MRSI	Marisa	1.25	318	P	Pn	10 02 03.9	-0.5
TTSI	Tana Toraja	3.91	229	P	Pn	10 02 41.6	+0.5

*CSEM **05** 10:11:05.9±0.2, 39.10N×40.33E, h8km, MD2.8, Error ellipse: s-maj=5.7km s-min=4.1km az=163.0*
*ISK **05** 10:11:05.1, 39.12N×40.33E, h4km, MD2.8*
*ISCJB **05** 10:11:05.6±1.1, 39.09N±0.04×40.33E±0.04, h2km±9km, Error ellipse: s-maj=6.9km s-min=5.6km az=166.2*
*DDA **05** 10:11:06.0, 39.09N×40.34E, h7km±3km, Md2.9*
ISC 05 10:11:06.5±1.1, 39.09N±0.05×40.33E±0.05, h9km±8km, n12, σ0.89/23, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTK	Pertek	0.76	255	*e*PG	Pg	10 11 20.2	-0.9
PTK				*e*SG	Sg	10 11 31.9	+0.8
PTK	Pertek	0.76	255	*e*Pg	Pg	10 11 20.3	-0.9
PTK				*e*Sg	Sg	10 11 31.9	+0.8
EZC	Erzincan	0.77	329	*e*PG	Pg	10 11 25.1	+3.8
EZC				*e*SG	Sg	10 11 39.1	+7.8
SVRC	Sivrice-ELAZID	1.07	229	*e*PN	Pn	10 11 26.8	-0.9
SVRC				*e*SN	Sn	10 11 42.5	-0.2
SVRC	Sivrice-ELAZID	1.07	229	*e*Pn	Pn	10 11 26.8	-0.9
SVRC				*e*Sn	Sn	10 11 42.5	-0.2
EZM	Erzurum	1.14	44	*e*PN	Pn	10 11 27.1	-1.4
ERZM	Erzurum	1.14	44	*i* P	Pb	10 11 27.4	-1.0
ERZM				*i* S	Sb	10 11 44.4	+1.2
ERZM	Erzurum	1.14	44	*i* P	Pb	10 11 27.4	-1.0
ERZM				*i* S	Sb	10 11 44.4	+1.2
BTMT	Batman	1.28	134	*e*PN	Pn	10 11 29.9	-0.6
BTMT				*e*SN	Sn	10 11 47.8	+0.1
BEST	Besiri	1.41	148	*i* P	Pn	10 11 32.2	-0.1
BEST				*i* S	Sn	10 11 52.4	+1.5
KEMA	Kemaliye	1.44	278	*i* P	Pn	10 11 32.9	+0.2
KEMA				*i* S	Sn	10 11 51.9	+0.2
KEMA	Kemaliye	1.44	278	*i* P	Pn	10 11 32.9	+0.2
KEMA				*i* S	Sn	10 11 51.9	+0.2

NEIC 05 10:15:44.0, 38.57S×175.72E, h183km, MG3.8(WEL), After WEL., North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WATZ	Wairara	0.14	176	P	Pn	10 16 08.2	+0.1
WATZ				S	Sn	10 16 26.2	-0.7
RATZ	Rangitukua	0.30	172	P	Pn	10 16 08.4	0.0
KATZ	Kakaramea	0.41	183	P	Pn	10 16 08.8	+0.1
TWVZ	Taurewa	0.55	204	P	Pn	10 16 09.3	0.0
WTVZ	West Tongariro	0.56	191	P	Pn	10 16 09.4	+0.1
WTVZ				S	Sn	10 16 28.1	-0.9
NGZ	Ngauruhoe	0.61	189	P	Pn	10 16 09.7	+0.1
HIZ	Hauiti	0.68	274	P	Pn	10 16 09.9	0.0
HIZ				S	Sn	10 16 29.5	-0.4
FWVZ	Far West T-bar	0.70	191	P	Pn	10 16 10.2	+0.2
TUVZ	Tukino	0.70	184	P	Pn	10 16 10.4	+0.4
WNVZ	Wahianoa	0.76	187	P	Pn	10 16 10.7	+0.3
MOVZ	Moawhango	0.84	178	P	Pn	10 16 10.7	-0.1
BKZ	Black Stump Fm	0.85	135	P	Pn	10 16 10.9	0.0
VRZ	Vera Road	0.93	233	P	Pn	10 16 11.4	-0.1
URZ	Urewera	1.14	75	P	Pn	10 16 12.3	-0.7
WAZ	Wanganui	1.31	206	P	Pn	10 16 14.3	-0.2
MWZ	Matawai	1.44	81	P	Pn	10 16 15.3	-0.3
NEZ	North Egmont	1.45	241	P	Pn	10 16 15.9	+0.2
DFE	Dawson Falls	1.47	239	P	Pn	10 16 16.0	+0.1
PKE	Pukeiti	1.49	245	P	Pn	10 16 16.0	-0.1
TSZ	Takapari Road	1.50	173	P	Pn	10 16 16.0	-0.1
KNZ	Kokohu	1.59	107	P	Pn	10 16 17.1	+0.1
NWEZ	Newall Road	1.61	243	P	Pn	10 16 17.1	-0.1
PUZ	Puketiti	2.06	77	P	Pn	10 16 21.5	-0.3
MRZ	Mangatainoka R	2.09	183	P	Pn	10 16 21.2	-1.0
BFZ	Birch Farm	2.15	169	P	Pn	10 16 22.1	-0.7
MXZ	Matakaoa Point	2.27	65	P	Pn	10 16 24.4	+0.1
KIW	Kapiti Island	2.37	195	P	Pn	10 16 24.0	-1.3
CAW	Cannon Point	2.58	191	P	Pn	10 16 26.4	-1.4
MTW	Mount Morrison	2.59	184	P	Pn	10 16 26.2	-1.6
MRW	Makara Radio	2.77	196	P	Pn	10 16 28.4	-1.5
WEL	Wellington	2.81	195	P	Pn	10 16 28.8	-1.6
PAWZ	Paruwai Farm	2.82	185	P	Pn	10 16 28.7	-1.8
SNZO	South Karori	2.85	196	P	Pn	10 16 29.0	-1.8
TCW	Tory Channel	2.86	202	P	Pn	10 16 29.4	-1.7
MSWZ	Moikau Station	2.87	187	P	Pn	10 16 29.2	-1.9
BHW	Baring Head	2.91	193	P	Pn	10 16 29.8	-1.8
NNZ	Nelson	3.20	214	P	Pn	10 16 32.7	-2.4
QRZ	Quartz Range	3.34	227	P	Pn	10 16 33.8	-3.0
BSWZ	Blackbirch Sta	3.44	204	P	Pn	10 16 36.2	-1.9
THZ	Tophouse	3.85	213	P	Pn	10 16 40.4	-2.8
KHZ	Kahutara	4.19	203	P	Pn	10 16 45.3	-2.2
DSZ	Dennistoun Nort	4.37	222	P	Pn	10 16 46.3	-3.5
LTZ	Lake Taylor	4.96	211	P	Pn	10 16 54.1	-3.3
MQZ	McQueen's Vall	5.63	203	P	Pn	10 17 02.1	-4.0
WVZ	Waitaha Valley	5.88	218	P	Pn	10 17 05.0	-4.3
RPZ	Rata Peaks	6.23	213	P	Pn	10 17 10.6	-3.3
LBZ	Lake Benmore	7.14	214	P	Pn	10 17 21.8	-4.1
ODZ	Otahua Downs	7.50	209	P	Pn	10 17 27.0	-3.5
EAZ	Earnscleugh	8.19	214	P	Pn	10 17 35.1	-4.5
TUZ	Tuapeka	8.65	209	P	Pn	10 17 43.0	-2.6

*IDC **05** 10:35:52.8±3.4, 14.10N×144.82E, h166km±31km, mb3.4/13, mb1 3.6/13, mb1mx3.5/25, mbtmp3.4/13, Error ellipse: s-maj=25.6km s-min=11.6km az=88.0*
*ISCJB **05** 10:35:52.3±0.7, 14.06N±0.08×144.6E±0.2, h173km±6km, mb3.7/15, Error ellipse: s-maj=27.5km s-min=13.4km az=2.1*
*NEIC **05** 10:35:53.4±0.9, 14.08N×144.71E, h169km±8km, mb3.9/1, Error ellipse: s-maj=21.1km s-min=10.9km az=96.0*
ISC 05 10:35:53.5±0.7, 14.07N±0.08×144.7E±0.2, h170km±6km, n17, σ0.83/17, mb3.7/15, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	0.49	164	*e*Pn	Pn	10 36 17.1	-0.1
GUMO				*e*Sn	Sn	10 36 35.3	0.0
MJAR	Matsushiro Arr	23.13	347	P	P	10 40 43.2	-1.4
	0.5nm,0.4s,mb3.3,baz=164,slow=9.8,SNR=5.6						
KSRS	Korea Array	27.68	330	P	P	10 41 26.3	+0.6
	0.6nm,0.6s,mb3.5,baz=153,slow=8.4,SNR=2.8						
WRAB	Tennant Creek	35.29	197	*e*P	P	10 42 32.6	+0.2
	1.6nm,0.6s,mb3.8						
WRA	Warramunga Arr	35.31	197	P	P	10 42 32.5	0.0
	1.6nm,0.5s,mb3.9,baz=22,slow=10.0,SNR=35						
WRA				ScP	ScP	10 48 28.6	-0.5
	0.5nm,0.9s,baz=19,slow=3.8,SNR=4.5						
FITZ	Fitzroy Crossi	37.09	211	P	P	10 42 47.8	+0.1
	2.2nm,0.9s,mb3.8,baz=41,slow=11,SNR=3.5						
ASAR	Alice Springs	38.97	196	P	P	10 43 03.1	-0.2
	0.5nm,0.4s,mb3.5,baz=17,slow=13,SNR=9.4						
STKA	Stephens Creek	45.78	184	P	P	10 43 58.0	-0.2
	1.1nm,0.3s,mb3.9,baz=3.2,slow=9.3,SNR=6.6						
SONM	Songino Array	46.26	325	P	P	10 44 02.4	+0.6
	0.4nm,0.6s,mb3.2,baz=139,slow=11,SNR=2.3						
MKAR	Makanchi Array	61.05	316	P	P	10 45 49.5	+0.2
	0.5nm,0.4s,mb3.7,baz=78,slow=11,SNR=5.6						
OHAK	Old Harbor	63.22	33	*e*P	P	10 46 05.7	+2.1
	9.8nm,0.6s,mb4.8						
KURK	Kurchatov	64.13	320	P	P	10 46 09.8	+0.2
	1.2nm,0.6s,mb3.9,baz=101,slow=7.2,SNR=5.9						
BVAR	Borovoye Array	69.47	322	P	P	10 46 42.9	-0.5
	0.6nm,0.4s,mb3.6,baz=57,slow=5.3,SNR=3.4						
YKA	Yellowknife Ar	82.50	27	P	P	10 47 54.7	-2.2
	0.4nm,0.5s,mb3.4,baz=288,slow=5.4,SNR=3.5						
NVAR	Mina Array Bea	86.73	51	P	P	10 48 18.2	-0.4
	0.3nm,0.6s,mb3.5,baz=235,slow=3.2,SNR=2.6						
PDAR	Pinedale Array	91.73	45	P	P	10 48 42.7	+0.7
	0.5nm,0.4s,baz=252,slow=3.0,SNR=4.9						
LPAZ	La Paz	148.23	98	PKPbc	PKPbc	10 55 21.6	+1.1

DJA 05 10:49:38, 6.42S×123.57E, h70km, MLv3.9/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	Maumere	2.57	211	P	Pn	10 50 22.1	+4.8
MMRI				S	Sn	10 50 46.5	-1.0
BKSI	Bulukumba	3.60	287	P	Pn	10 50 33.4	+2.0
KAPI	Kappang	4.05	290	P	Pn	10 50 36.1	-1.4
NLAI	Namlea	4.73	48	P	Pn	10 50 46.2	-0.6

*IDC **05** 11:00:45.0±1.2, 32.54N×105.53E, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.5/26, mbtmp3.7/5, ML3.3/1, Error ellipse: s-maj=93.9km s-min=22.9km az=60.0*
*ISCJB **05** 11:00:44.6±1.0, 32.55N±0.04×105.40E±0.07, h8km±7km, mb3.8/4, Error ellipse: s-maj=9.9km s-min=6.8km az=18.6*
*BJI **05** 11:00:46.5, 32.43N×105.47E, h10km, ML3.6/11, Ms3.5/2, Ms7 3.5/1*
*NEIC **05** 11:00:46.4±0.8, 32.40N×105.02E, h10km, Error ellipse: s-maj=29.5km s-min=11.3km az=53.0*
ISC 05 11:00:47.0±1.0, 32.56N±0.04×105.38E±0.06, h9km±7km, n14, σ1.12/23, mb3.8/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	2.15	221	Pn	Pn	11 01 24.3	+1.3
CD2				Pg	Pg	11 01 28.0	-0.2
CD2				Sg	Sg	11 01 56.0	0.0
CD2				smax			
	comp=N,1μm,0.7s						
CD2				smax			
	comp=E,1μm,0.9s						
XAN	Xi'an	3.31	63	Pn	Pn	11 01 38.7	-0.3
XAN				Pg	Pg	11 01 50.2	-0.3
XAN				Sn	Sn	11 02 11.8	-6.7
XAN				Sg	Sg	11 02 27.1	-6.4
XAN				smax			
	comp=N,190nm,0.7s						
XAN				smax			
	comp=E,73nm,0.7s						
LZH	Lanzhou	3.74	341	Pn	Pn	11 01 47.8	+2.9
LZH				Pg	Pg	11 01 58.3	-0.5
LZH				Sn	Sn	11 02 29.4	+0.3
LZH				Sg	Sg	11 02 42.7	-4.6
LZH				smax			
	comp=N,200nm,1.0s						
LZH				smax			
	comp=E,260nm,1.0s						
LZH				LR	LR		
	comp=E,460nm,5.6s						
LZH				LR	LR		
	comp=Z,560nm,9.3s						
ENH	Enshi	4.18	122	*e*Pn	Pn	11 01 53.8	+2.8
ENH				*e*Sn	Sn	11 02 54.7	+15
GYA	Guiyang	6.18	169	Pn	Pn	11 02 18.5	+0.1
WHN	Wuhan	7.91	102	P	Pb	11 03 08.5	+4.2
SONM	Songino Array	15.28	3	Pn	Pn	11 04 23.9	+1.1
	comp=Z,0.1nm,0.3s,baz=186,slow=12,SNR=2.2						
MK31	Makanchi Array	22.65	316	P	P	11 05 45.4	-2.9
MKAR	Makanchi Array	22.65	316	P	P	11 05 48.8	+0.5
	comp=Z,0.4nm,0.5s,mb3.1,baz=101,slow=12,SNR=5.8						
ARCES	ARCESS Array B	56.39	335	P	P	11 10 27.6	-0.6
	comp=Z,0.8nm,0.7s,mb3.9,baz=82,slow=8.7,SNR=3.7						
WRAB	Tennant Creek	59.09	148	*e*P	P	11 10 47.1	-0.7
WRA	Warramunga Arr	59.10	148	P	P	11 10 46.7	-1.1
	comp=Z,1.5nm,0.5s,mb4.3,baz=342,slow=7.6,SNR=4.9						
WRA	Warramunga Arr	59.10	148	P	P	11 10 46.7	-1.1
ASAR	Alice Springs	62.19	150	P	P	11 11 07.9	-0.9
	comp=Z,0.7nm,0.5s,mb4.1,baz=334,slow=6.9,SNR=4.2						

*ISCJB **05** 11:02:02.2±1.1, 12.14N±0.03×143.87E±0.03, h2km±7km, mb5.0/138, MS4.4/35, Error ellipse: s-maj=5.5km s-min=4.1km az=169.7*
*BJI **05** 11:02:02.5, 11.75N×143.88E, h10km, mB5.0/27, mb4.8/39, Ms4.7/38, Ms7 4.4/37*
*IDC **05** 11:02:03.2±0.4, 12.13N×143.97E, h0km, mb4.8/32, mb1 4.8/32, mb1mx4.8/34, mbtmp4.8/32, MS4.3/22, Ms1 4.3/22, ms1mx4.2/30, Error ellipse: s-maj=16.8km s-min=10.6km az=81.0*
*NEIC **05** 11:02:04.9±0.1, 12.15N×143.87E, h10km, mb5.1/79, Error ellipse: s-maj=4.9km s-min=4.4km az=112.0*
*MOS **05** 11:02:06.8±1.0, 12.16N×143.79E, h33km, mb5.2/33, MS4.5/5, Error ellipse: s-maj=10.2km s-min=6.6km az=99.1*

*GCMT **05** 11:02:08.1±0.2, 12.08N×143.82E, h17km, MW5.1, Moment Tensor Solution. s28,c36; s83,c139; Moment tensor: Scale 10^16Nm; Mrr=3.80±.19; Mθθ=1.57±.10; Mφφ=5.37±.14; Mrθ=0.07±.32; Mrφ=-2.32±.08; Mθφ=0.24±.27; Best double couple: M0=4.90000×10^16 NP1:φs=343.00000°, δ=44.00000°, λ=-90.00000°. NP2:φs=163.00000°, δ=46.00000°, λ=-90.00000°. Principal axes: T 6.0800, Plg1.0000°, Azm253.0000°; N -2.2700, Plg0.0000°, Azm163.0000°; P -3.8100, Plg89.0000°, Azm71.0000°; Data Used: IU IC II CN G.*
*DJA **05** 11:02:10, 12.33N×144.19E, h63km, Mw5.5/16*
ISC 05 11:02:05.9±1.3, 12.14N±0.03×143.93E±0.02, h15km±7km, h15km±1.4km: pP-P, n429, σ0.76/422, mb5.0/138, MS4.4/35, 91C-89D, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.71	32	Pn	Pn	11 02 33.9	-1.2
GUMO				Sn	Sn	11 02 54.2	-2.5
GUMO	Guam	1.71	32	*e*Pn	Pn	11 02 33.8	-1.3
GUMO				*e*Sn	Sn	11 02 56.0	-0.7
CBIJ	Chichi jima	14.97	354	LR	LR	11 10 24.5	
	comp=Z,803nm,20.5s,baz=141,slow=33						
DAV	Davao City (W)	18.78	256	P	Pn	11 06 28.6	+3.3
	45nm,0.3s,baz=268,slow=11,SNR=5.4						
DAV				LR	LR	11 12 15.2	
	comp=Z,1μm,21.8s,baz=67,slow=32						
DAV	Davao City (W)	18.78	256	*e*P	Pn	11 06 25.8	+0.6
JHJ	Hachijo jima 2	21.22	350	LR	LR	11 13 41.1	
	comp=Z,700nm,21.8s,MS4.0,baz=127,slow=33						
TGY	Tagaytay City	22.48	278	P	P	11 07 05.6	+0.7
	163nm,0.5s,mb5.7,baz=110,slow=14,SNR=5.7						
SSLB	Suanglung	24.69	301	*e*P	P	11 07 27.5	+0.9
	89nm,1.3s,mb5.1						
YHNB	Yeheng	24.71	303	*e*P	P	11 07 30.6	+3.9
MJAR	Matsushiro Arr	24.83	349	P	P	11 07 25.7	-2.0
	4.3nm,0.8s,mb4.0,baz=170,slow=9.6,SNR=9.0						
MJAR				LR	LR	11 16 26.3	
	comp=Z,868nm,18.3s,MS4.3,baz=185,slow=35						
MAJO	Matsushiro	24.84	349	*e*P	P	11 07 26.6	-1.1
MAJO				pmax	pmax		
	comp=Z,26nm,1.2s,mb4.6						
MAJO	Matsushiro	24.84	349	*e*P	P	11 07 26.6	-1.1
	comp=Z,26nm,1.2s,mb4.6						
MAT	Matsushiro	24.84	349	P	P	11 07 26.9	-0.8
MAT				S	S	11 11 48.0	-2.0
COEN	Coen	25.94	182	*e*P	P	11 07 37.6	-0.3
COEN	Coen	25.94	182	*e*P	P	11 07 37.4	-0.4
	comp=Z,507nm,1.2s,mb5.9						
MYLDM	Lahad Datu	26.06	257	P	P	11 07 42.0	+3.0
TSM	Tawau	26.92	255	P	P	11 07 48.3	+1.5
SDKM	Sandakan	27.18	259	P	P	11 07 50.5	+1.4
KAKA	Kakadu	27.20	205	*e*P	P	11 07 48.8	-0.4
	comp=Z,43nm,0.8s,mb5.0						
KAKA	Kakadu	27.20	205	*e*P	P	11 07 48.6	-0.6
	comp=Z,126nm,0.8s,mb5.5						
KSRS	Korea Array	29.00	333	P	P	11 08 06.0	+0.8
	comp=Z,2.3nm,0.7s,mb4.0,baz=145,slow=9.1,SNR=11						
KSRS				PcP	PcP	11 11 14.8	+1.2
	comp=Z,0.7nm,0.5s,baz=176,slow=1.6,SNR=5.5						
KSRS				LR	LR	11 18 48.2	
	comp=Z,102nm,19.3s,MS3.5,baz=152,slow=35						
NJ2	Nanjing	30.40	315	*e*P	P	11 08 19.0	+1.4
NJ2				pP	pP	11 08 22.6	+0.5
NJ2				sP	sP	11 08 24.9	+0.9
NJ2				PP	PP	11 09 18.2	-8.1
NJ2				S	S	11 13 17.0	-0.9
NJ2				sS	sS	11 13 26.5	+1.2
NJ2				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.9						
NJ2				pmax	pmax		
	comp=Z,40nm,5.5s						
NJ2				LR	LR		
	comp=N,720nm,15.3s,MS4.5						
NJ2				LR	LR		
	comp=E,590nm,17.7s,MS4.5						
NJ2				LR	LR		
	comp=Z,380nm,18.4s,MS4.1						
BTM	Bintulu	31.80	256	P	P	11 08 31.0	+0.8
ASAJ	Asahikawa	31.88	358	P	P	11 08 31.4	+0.9
	comp=Z,5.5nm,0.7s,mb4.5,baz=144,slow=11,SNR=6.3						
CTA	Charters Tower	32.11	176	*e*P	P	11 08 32.6	-0.1
	comp=Z,22nm,0.9s,mb5.0						
CTA	Charters Tower	32.11	176	P	P	11 08 32.6	-0.1
	comp=Z,26nm,0.9s,mb5.1,baz=348,slow=9.8,SNR=24						
CTAO	Charters Tower	32.11	176	*e*P	P	11 08 32.5	-0.2
CTAO				pmax	pmax		
	comp=Z,45nm,1.1s,mb5.2						
CTAO	Charters Tower	32.11	176	*e*P	P	11 08 32.5	-0.2
	comp=Z,45nm,1.1s,mb5.2						
SBUM	Sibu	32.85	255	P	P	11 08 40.5	+1.1
WHN	Wuhan	32.92	308	P	P	11 08 41.9	+2.0
WHN				S	S	11 14 06.1	+8.7
WHN				LR	LR		
	comp=N,1μm,11.2s						
WHN				LR	LR		
	comp=E,320nm,8.3s						
WHN				LR	LR		
	comp=Z,1μm,18.2s						
WRAB	Tennant Creek	33.24	197	P	P	11 08 42.0	-0.6
	comp=Z,193nm,0.7s,mb6.1,SNR=11						
WRAB	Tennant Creek	33.24	197	*e*P	P	11 08 41.9	-0.7
WRAB				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.2						
WRAB	Tennant Creek	33.24	197	*e*P	P	11 08 41.9	-0.7
	comp=Z,27nm,0.9s,mb5.2						
WRA	Warramunga Arr	33.25	197	P	P	11 08 42.2	-0.6
	comp=Z,20nm,0.9s,mb5.0,baz=18,slow=9.5,SNR=108						
WRA	Warramunga Arr	33.25	197	P	P	11 08 42.2	-0.6
QIZ	Qiongzhong	33.50	286	P	P

comp=Z,270nm,18.5s,MS4.1
GYA Guiyang 37.79 298 P P 11 09 22.0 +0.2
GYA pP pP 11 09 25.8 -0.5
GYA PP PP 11 10 51.0 +2.8
GYA PcP PcP 11 11 40.0 +1.5
GYA S **S 11 15 12.7 +0.4**
GYA ScP ScP 11 15 26.6 +0.8
GYA SS SS 11 17 46.5 -12
GYA pmax pmax
comp=Z,20nm,1.0s,mb4.8
GYA pmax pmax
comp=Z,130nm,4.9s
GYA LR LR
comp=N,670nm,15.8s,MS4.8
GYA LR LR
comp=E,870nm,16.4s,MS4.8
GYA LR LR
comp=Z,740nm,16.0s,MS4.6
EIDS Eidsvold 37.93 169 *e*P **P 11 09 22.1 -0.8**
EIDS Eidsvold 37.93 169 *e*P **P 11 09 22.3 -0.6**
comp=Z,32nm,0.8s,mb5.1
KLR Kul'dur 38.33 347 *e*P **P 11 09 21.6 -4.4**
KLR *e* 11 11 36.9
KLR MLR MLR
comp=Z,700nm,13.0s,MS4.7
HHC Hu-ho-hao-te 40.29 321 *e*P **P 11 09 43.8 +1.3**
HHC pP pP 11 09 48.3 +1.2
HHC sP sP 11 09 50.8 +1.9
HHC PP PP 11 11 20.4 +5.1
HHC PcP PcP 11 11 48.1 +2.0
HHC ScP ScP 11 15 34.3 -0.8
HHC PcS PcS 11 15 36.8 +0.3
HHC S **S 11 15 50.9 +1.3**
HHC sS sS 11 15 59.0 +1.9
HHC SS SS 11 18 43.9 -4.3
HHC ScS ScS 11 19 48.0 -0.8
HHC pmax pmax
comp=Z,12nm,0.9s,mb4.6
HHC pmax pmax
comp=Z,68nm,5.4s
HHC LR LR
comp=N,370nm,15.4s,MS4.5
HHC LR LR
comp=E,430nm,18.4s,MS4.5
HHC LR LR
comp=Z,670nm,18.6s,MS4.5
DZM Mont Dzumac 40.55 147 *e*P **P 11 09 41.2 -3.6**
comp=Z,172nm,1.1s,mb5.6
DZM *e*LR LR 11 20 51.6
comp=Z,438nm,25.6s
DZM Mont Dzumac 40.55 147 *e*P **P 11 09 44.7 -0.1**
DZM Mont Dzumac 40.55 147 *e*P **P 11 09 45.0 +0.2**
comp=Z,70nm,0.9s,mb5.3
MBWA Marble Bar 40.75 216 *e*P **P 11 09 46.0 -0.5**
KTGM Kuala Trenggan 40.85 264 P **P 11 09 49.2 +1.7**
KMI Kunming 40.94 294 P **P 11 09 49.3 +1.1**
KMI pP pP 11 09 52.6 -0.2
KMI sP sP 11 09 54.1 -0.5
KMI PP PP 11 11 27.4 +4.7
KMI PcP PcP 11 11 50.4 +1.8
KMI S **S 11 16 00.6 +0.8**
KMI sS sS 11 16 06.2 -1.1
KMI SS SS 11 18 56.1 -5.6
KMI pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
KMI pmax pmax
comp=Z,79nm,4.5s
KMI LR LR
comp=N,410nm,18.7s,MS4.4
KMI LR LR
comp=E,240nm,15.8s,MS4.4
KMI LR LR
comp=Z,400nm,18.2s,MS4.3
MYKOM Kota Tinggi 41.03 259 P **P 11 09 49.7 +0.7**
KGM Kluang 41.48 259 P **P 11 09 52.8 +0.1**
CD2 Chengdu 41.49 303 ⇓*i*P **P 11 09 52.4 -0.2**
CD2 pP pP 11 09 56.7 -0.5
CD2 sP sP 11 09 59.4 +0.4
CD2 PP PP 11 11 31.5 +3.0
CD2 PcP PcP 11 11 51.0 +0.8
CD2 PcS PcS 11 15 41.0 -0.6
CD2 S **S 11 16 06.6 -1.2**
CD2 SS SS 11 19 05.6 -6.8
CD2 ScS ScS 11 19 53.8 -2.6
CD2 pmax pmax
comp=Z,60nm,0.8s,mb5.3
CD2 pmax pmax
comp=Z,120nm,4.8s
CD2 LR LR
comp=N,710nm,17.8s,MS4.7
CD2 LR LR
comp=E,440nm,13.1s,MS4.7
CD2 LR LR
comp=Z,430nm,15.5s,MS4.4
PETK Petropavlovsk- 42.32 12 P **P 11 09 59.9 +0.9**
comp=Z,3.4nm,1.0s,mb3.9,baz=215,slow=12,SNR=3.4
PETK PcP PcP 11 11 52.6 +0.1
comp=Z,4.3nm,1.0s,baz=178,slow=7.1,SNR=3.9
FRIM Kepong 42.79 262 P **P 11 10 04.1 +0.6**
ARMA Armidale 42.96 170 *e*P **P 11 10 04.1 -0.3**
ARMA Armidale 42.96 170 *e*P **P 11 10 04.3 -0.1**
comp=Z,141nm,1.5s,mb5.5
IPM Ipoh 43.08 264 P **P 11 10 06.9 +1.1**
LZH Lanzhou 43.23 310 *e*P **P 11 10 07.1 +0.4**
LZH pP pP 11 10 11.6 +0.3
LZH sP sP 11 10 14.2 +1.1
LZH PP PP 11 11 50.0 +2.8
LZH *e*S **S 11 16 33.2 -0.1**
LZH *e*SS SS 11 19 39.3 -7.3
LZH pmax pmax
comp=Z,35nm,1.1s,mb5.0
LZH pmax pmax
comp=Z,170nm,7.0s
LZH LR LR
comp=E,560nm,11.8s
LZH LR LR
comp=Z,950nm,17.5s
KULM Kulim 43.27 265 P **P 11 10 09.0 +1.7**
KULM Kulim 43.27 265 *e*P **P 11 10 07.7 +0.3**
comp=Z,23nm,1.1s,mb4.8
CM31 Chiang Mai Arr 43.76 284 *e*P **P 11 10 11.6 +0.4**
CMAR Chiang Mai Arr 43.76 284 P **P 11 10 12.2 +1.0**
comp=Z,8.6nm,0.8s,mb4.5,baz=87,slow=6.3,SNR=32
CMAR PcP PcP 11 11 58.0 +0.1
comp=Z,2.7nm,0.8s,baz=109,slow=2.1,SNR=4.4
CMAR LR LR 11 27 14.7
comp=Z,357nm,19.3s,MS4.3,baz=101,slow=34
CMAR Chiang Mai Arr 43.76 284 P **P 11 10 12.2 +1.0**
CMAR 11 11 58.1
STKA Stephens Creek 43.82 183 *e*P **P 11 10 10.1 -1.3**
comp=Z,16nm,0.7s,mb4.8
STKA Stephens Creek 43.82 183 P **P 11 10 10.3 -1.1**
comp=Z,28nm,0.9s,mb5.0,baz=354,slow=8.3,SNR=30
STKA LR LR 11 28 39.6
comp=Z,445nm,20.1s,MS4.4,baz=358,slow=36
STKA Stephens Creek 43.82 183 *e*P **P 11 10 10.3 -1.1**
comp=Z,8.9nm,1.1s,mb4.4
MSVF Nonsavu 44.90 131 *e*P **P 11 10 20.4 +0.1**
comp=Z,66nm,1.0s,mb5.4
FORT Forrest 45.32 199 *e*P **P 11 10 23.3 -0.1**
comp=Z,53nm,0.8s,mb5.4
FORT Forrest 45.32 199 *e*P **P 11 10 23.6 +0.2**
comp=Z,67nm,0.8s,mb5.5
MEEK Meekatharra 45.73 212 *e*P **P 11 10 25.9 -0.8**
ULN Ulaanbaatar 47.06 326 *e*P **P 11 10 35.9 -1.0**
ULN pmax pmax
comp=Z,15nm,1.4s,mb4.7
ULN Ulaanbaatar 47.06 326 *e*P **P 11 10 35.9 -1.1**
comp=Z,15nm,1.4s,mb4.7
SONM Songino Array 47.40 326 P **P 11 10 39.6 0.0**
comp=Z,2.6nm,0.6s,mb4.4,baz=147,slow=9.3,SNR=9.0
SONM PcP PcP 11 12 11.7 +1.7
comp=Z,1.8nm,0.6s,baz=156,slow=4.6,SNR=3.2
SONM LR LR 11 31 10.9
comp=Z,569nm,18.0s,MS4.6,baz=273,slow=37
SONM Songino Array 47.40 326 P **P 11 10 39.6 0.0**
SONM 11 12 11.7
GTA Gaotai 47.46 313 *e*P **P 11 10 40.5 +0.3**
GTA pP pP 11 10 45.0 +0.1
GTA sP sP 11 10 48.2 +1.5
GTA PcP PcP 11 12 13.8 +3.3
GTA S **S 11 17 35.0 +0.6**
GTA SS SS 11 20 57.1 -5.1
GTA pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
GTA pmax pmax
comp=Z,85nm,3.9s
GTA LR LR
comp=N,270nm,14.4s,MS4.4
GTA LR LR
comp=E,240nm,18.9s,MS4.4
GTA LR LR
comp=Z,340nm,15.0s,MS4.4
ARPS Mount Arapiles 48.69 182 *e*P **P 11 10 49.6 0.0**
comp=Z,53nm,0.7s,mb5.7
KLBR Kellerberrin 50.21 209 *e*P **P 11 11 00.5 -0.8**
comp=Z,34nm,0.9s,mb5.4
ZAK Zakamensk 50.54 327 ⇓*i*P **P 11 11 03.5 -0.1**
ZAK pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
SHL Shillong 50.73 293 *e*PKP **P 11 11 04.0 -1.5**
YAK Yakutsk 50.86 351 *e*P **P 11 11 04.6 -1.3**
YAK *e**PP pP 11 11 13.3 +2.8
YAK *e* 11 12 58.0
YAK *e*S **S 11 18 19.7 -1.7**
YAK pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
YAK pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
YAK smax
comp=N,67nm,16.9s
YAK MLR MLR
comp=E,134nm,18.0s
YAK Yakutsk 50.86 351 *e*P **P 11 11 04.9 -1.0**
AFI Afiamalu 50.97 119 LR LR 11 28 12.3
comp=E,249nm,19.8s,MS4.2,baz=303,slow=31
SEY Seymchan 51.07 5*c e*P **P 11 11 08.2 +0.8**
TLY Talaya 51.10 329 *e*P **P 11 11 08.1 +0.3**
TLY pmax pmax
comp=Z,10.0nm,1.6s,mb4.5
TLY MLR MLR
comp=Z,245nm,18.0s,MS4.3
TLY Talaya 51.10 329 *e*P **P 11 11 08.5 +0.7**
comp=Z,8.7nm,1.2s,mb4.6
LSA Lhasa 51.85 298 *e*P **P 11 11 14.6 +0.7**
LSA pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
LSA Lhasa 51.85 298 *e*P **P 11 11 14.6 +0.8**
comp=Z,10nm,0.6s,mb4.9
MOY Mondy 52.45 328 *e*P **P 11 11 18.4 +0.5**
TAPN Taplejung 54.61 295 *e*P **P 11 11 33.3 -0.9**
comp=Z,26nm,0.8s,mb5.3
OUZ Omahuta 54.85 150 *e*P **P 11 11 36.8 +1.1**
comp=Z,34nm,1.2s,mb5.3
ODAN Odare 54.86 294 *e*P **P 11 11 35.0 -1.0**
comp=Z,100nm,1.5s,mb5.6
RAO Raoul Island 55.22 139 LR LR 11 31 49.4
comp=Z,345nm,19.5s,MS4.4,baz=337,slow=32
RAMN Ramite 55.57 294 *e*P **P 11 11 40.1 -1.0**
comp=Z,37nm,1.0s,mb5.4
JIRN Jiri 55.98 295 *e*P **P 11 11 42.8 -1.3**
comp=Z,41nm,0.8s,mb5.5
GUN Gumba 56.27 295 *e*P **P 11 11 45.4 -0.8**
comp=Z,63nm,0.8s,mb5.7
PKI Pulchoki 56.66 295 *e*P **P 11 11 47.9 -1.1**
comp=Z,49nm,1.2s,mb5.4
PKI Pulchoki 56.66 295 *e*P **P 11 11 47.9 -1.1**
PKI pmax pmax
comp=Z,49nm,1.2s,mb5.4
PKIN Phulchoki 56.67 295 *e*P **P 11 11 47.8 -1.3**
comp=Z,25nm,0.7s,mb5.4
DMN Daman 56.94 295 *e*P **P 11 11 49.8 -1.1**
comp=Z,30nm,0.9s,mb5.3
WMQ Urumqi 57.48 314 *e*P **P 11 11 55.0 +0.6**
WMQ sP sP 11 12 02.0 +1.1
WMQ PP PP 11 14 04.0 +2.0
WMQ S **S 11 19 50.0 -1.4**
WMQ ScS ScS 11 21 40.0 -3.6
WMQ SS SS 11 23 40.0 -1.2
WMQ pmax pmax
comp=Z,18nm,1.0s,mb5.1
WMQ pmax pmax
comp=Z,690nm,6.0s
WMQ LR LR
comp=N,530nm,18.0s,MS4.8
WMQ LR LR
comp=E,290nm,18.0s,MS4.8
WMQ LR LR
comp=Z,210nm,18.0s,MS4.3
BILL Bilibino 57.73 10 *e*P **P 11 11 55.9 +0.1**
BILL pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
BILL Bilibino 57.73 10 *e*P **P 11 11 55.9 +0.1**
comp=Z,7.2nm,0.8s,mb4.8
URZ Urewera 58.97 150 P **P 11 12 04.0 -0.9**
comp=Z,25nm,0.8s,mb5.3,baz=328,slow=3.8,SNR=10.0
TIXI Tiksi 60.17 355 *e*P **P 11 12 12.0 -0.7**
TIXI pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
TIXI Tiksi 60.17 355 *e*P **P 11 12 11.9 -0.8**
comp=Z,3.1nm,0.8s,mb4.4
RPZ Rata Peaks 60.84 158 P **P 11 12 16.0 -1.6**
comp=Z,25nm,0.9s,mb5.3,baz=28,slow=5.4,SNR=13
MK31 Makanchi Array 61.90 317 *e*P **P 11 12 24.1 -0.8**
MKAR Makanchi Array 61.90 317 P **P 11 12 24.9 +0.1**
comp=Z,6.3nm,0.8s,mb4.8,baz=83,slow=10,SNR=34
MKAR LR LR 11 40 51.8
comp=Z,132nm,18.4s,MS4.1,baz=109,slow=38
ZAA0 Zalesovo Array 62.27 325 *e*P **P 11 12 26.4 -0.8**
ZALV Zalesovo Beam 62.27 325 P **P 11 12 26.7 -0.5**
comp=Z,4.1nm,0.6s,mb4.7,baz=105,slow=6.0,SNR=9.6
ZALV LR LR 11 38 02.5
comp=Z,184nm,21.1s,MS4.2,baz=117,slow=35
NVS Novosibirsk 63.43 326 *i* P **P 11 12 34.5 -0.4**
NVS pmax pmax
comp=Z,36nm,1.8s,mb5.2
NVS pmax pmax
comp=N,14nm,1.6s
NVS pmax pmax
comp=E,27nm,1.6s
KURK Kurchatov 65.10 320 P **P 11 12 45.3 -0.7**
comp=E,166nm,0.9s,mb6.1,SNR=24
KURK Kurchatov 65.10 320 P **P 11 12 45.4 -0.6**
comp=E,17nm,0.7s,mb5.2,baz=105,slow=6.7,SNR=6.3
SVW2 Sparrevohn 65.37 28 *e*P **P 11 12 49.8 +2.3**
KSH Kashi 65.39 308 *e*P **P 11 12 50.6 +2.5**
KSH *e*pP pP 11 12 55.4 +2.5
KSH *e*sP sP 11 12 57.5 +2.9
KSH *e*PcP PcP 11 13 22.2 +2.1
KSH *e*PP PP 11 15 17.3 +5.3
KSH *e*ScP 11 17 23.3
KSH *e*PcS 11 17 25.2
KSH *e*S S 11 21 33.5 +1.4
KSH *e*ScS ScS 11 22 41.6 -1.7
KSH *e*SS SS 11 25 49.7 +4.4
KSH pmax pmax
comp=Z,2.0nm,0.3s,mb4.6
KSH LR LR
comp=N,590nm,14.3s
KSH LR LR
comp=E,190nm,7.2s
KSH LR LR
comp=Z,90nm,5.3s
TKM2 Tokmak 2 65.98 312 *e*P **P 11 12 51.6 -0.2**
TKM2 pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
TKM2 Tokmak 2 65.98 312 *e*P **P 11 12 51.6 -0.2**
comp=Z,5.2nm,0.8s,mb4.6
RSO Redoubt South 66.48 29 *e*P **P 11 12 57.4 +2.7**
UCH Uchtor 66.72 311 *e*P **P 11 12 57.8 +1.2**
comp=Z,8.7nm,1.0s,mb4.7
AAK Ala-Archa 66.76 311*c e*P **P 11 12 58.5 +1.7**
AAK pmax pmax
comp=Z,4.0nm,1.6s,mb4.2
EKS2 Erkin-Say 67.29 311 *e*P **P 11 13 00.2 0.0**
comp=Z,5.5nm,1.0s,mb4.5
AML Almayashu 67.31 311 *e*P **P 11 13 00.6 +0.3**
PPLA Purkeypile 67.48 26 *e*P **P 11 13 01.7 +0.7**
comp=Z,24nm,1.2s,mb5.1
CHUM Lake Minchumin 67.74 25 *e*P **P 11 13 02.1 -0.5**
comp=Z,12nm,1.0s,mb4.9
SEW Seward 67.96 30 *e*P **P 11 13 03.0 -1.0**
comp=Z,82nm,1.6s,mb5.5
RC01 Rabbit Creek A 68.07 29 *e*P **P 11 13 03.2 -1.6**
comp=Z,39nm,1.1s,mb5.3
KTH Kantishna Hill 68.23 26 *e*P **P 11 13 04.6 -1.1**
comp=Z,10μm,1.4s
BPAW Bear Paw Mtn. 68.37 25 *e*P **P 11 13 05.5 -1.0**
comp=Z,7.6nm,0.8s,mb4.8
PMR Palmer 68.49 28 *e*P **P 11 13 05.6 -1.7**
COLD Coldfoot 69.63 22 *e*P **P 11 13 13.8 -0.5**
comp=Z,11nm,1.0s,mb4.8
COLA College 69.89 25 *e*P **P 11 13 17.1 +1.2**
COLA pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
COLA College 69.89 25 *e*P **P 11 13 17.1 +1.1**
comp=Z,4.1nm,0.8s,mb4.4
DIV Divide 69.96 29 *e*P **P 11 13 16.5 0.0**
comp=Z,20nm,1.0s,mb5.0
PAX Paxson 70.47 27 *e*P **P 11 13 18.4 -1.2**
PAX pmax pmax
comp=Z,13nm,1.0s,mb4.8
PAX Paxson 70.47 27 *e*P **P 11 13 18.4 -1.2**
comp=Z,13nm,1.0s,mb4.8
BMRM Bremner River 70.48 29 *e*P **P 11 13 19.2 -0.5**
comp=Z,28nm,1.1s,mb5.1
BVAR Borovoye Array 70.49 322 P **P 11 13 19.6 -0.3**
comp=Z,24nm,0.6s,mb5.3,baz=102,slow=7.2,SNR=39
BRVK Borovoye 70.56 322*c e*P **P 11 13 20.1 -0.2**
BRVK pmax pmax
comp=Z,18nm,0.6s,mb5.2
BRVK Borovoye 70.56 322 *e*P **P 11 13 19.3 -1.0**
comp=Z,19nm,0.6s,mb5.2
KBL Kabul 70.83 302 *e*P **P 11 13 22.5 +0.2**
KBL pmax pmax
comp=Z,19nm,1.0s,mb5.0
KBL Kabul 70.83 302 *e*P **P 11 13 22.4 +0.1**
comp=Z,19nm,1.0s,mb5.0
PPT Papeete 71.98 113 *e*S S 11 22 46.1 -4.8
PPT *e*LQ 11 32 17.3
comp=Z,124nm,24.5s
PPT *e*LR LR 11 35 00.5
comp=Z,432nm,23.8s
PPT LR LR 11 39 30.1
comp=Z,366nm,22.0s
PPT Papeete 71.98 113 LR LR 11 39 30.1
comp=Z,396nm,18.5s,MS4.7,baz=185,slow=31
EGAK Eagle 72.67 26 *e*P **P 11 13 32.4 -0.4**
comp=Z,30nm,1.4s,mb5.0
DAWY Dawson 73.33 27 *e*P **P 11 13 36.5 -0.2**
INK Inuvik 76.05 22 *e*P **P 11 13 51.5 -0.9**
INK pmax pmax
comp=Z,27nm,1.1s
INK Inuvik 76.05 22 *e*P **P 11 13 51.5 -0.9**
comp=Z,27nm,1.1s,mb5.1
SVE Sverdlovsk 76.27 326 *e*P **P 11 13 52.5 -1.4**
SVE *e* 11 14 02.3
SVE pmax pmax
comp=Z,21nm,1.1s,mb5.0
SVE MLR MLR
comp=Z,350nm,17.0s,MS4.7
ABKAR Akbulak array 77.00 318 *e*P **P 11 13 57.2 -0.9**
comp=Z,8.8nm,0.7s,mb4.8
ARU Arti 77.43 325*c i*P **P 11 14 00.4 0.0**
ARU S S 11 23 50.3 -0.2
ARU pmax pmax
comp=Z,14nm,0.7s,mb5.0
ARU Arti 77.43 325 *e*P **P 11 13 59.6 -0.8**
comp=Z,15nm,0.8s,mb5.0
DLBC Dease Lake 77.69 32 LR LR 11 50 49.7
comp=Z,186nm,18.2s,MS4.5,baz=310,slow=38
DLBC Dease Lake 77.69 32 *e*P **P 11 14 02.0 +0.1**
TAOE Nuku Hiva Isla 78.28 102 *e*LR LR 11 38 22.7
comp=Z,585nm,23.4s
BBB Bella Bella 79.27 39 LR LR 11 41 54.0
comp=Z,389nm,21.1s,MS4.7,baz=250,slow=30
NLWA Neilton Lookou 82.66 43 ⇓P **P 11 14 28.8 -0.1**
baz=83
F03A Seaside 83.12 45 ⇑P **P 11 14 32.2 +0.8**
baz=83
GNW Green Mountain 83.32 43 *e*P **P 11 14 33.7 +1.4**
comp=Z,3.7nm,0.9s,mb4.4
A05A Maple Falls 83.54 41 ⇓P **P 11 14 34.2 +0.7**
baz=84
JCW Jim Creek 83.80 42 *e*P **P 11 14 34.8 +0.1**
comp=Z,27nm,1.0s,mb5.3
F04A Amboy 83.90 44 ⇓P **P 11 14 34.9 -0.4**
baz=84
D05A Enumclaw 83.95 43 ⇑P **P 11 14 36.2 +0.6**
baz=84
RPW Rockport 84.02 42 *e*P **P 11 14 36.4 +0.5**
comp=Z,5.1nm,0.7s,mb4.8
B06A Marblemount 84.02 42 ⇓P **P 11 14 35.6 -0.3**
baz=84
HUMO Hull Mountain 84.16 48 *e*P **P 11 14 37.7 +1.0**
comp=Z,14nm,1.1s,mb5.0
H04A Detroit Lake 84.31 46 ⇑P **P 11 14 37.0 -0.5**
baz=84
YBH Yreka Blue Hor 84.51 49 P **P 11 14 39.1 +0.5**
comp=Z,8.9nm,0.9s,mb4.9,baz=299,slow=3.4,SNR=8.0
YKA Yellowknife Ar 84.56 27 P **P 11 14 38.1 -0.2**
comp=Z,4.4nm,0.5s,mb4.8,baz=289,slow=5.5,SNR=27
A07A Ashnola River, 84.63 41 ⇓P **P 11 14 38.4 -0.5**
baz=85
ALE Alert 84.72 3 P **P 11 14 39.0 +0.1**
comp=Z,77nm,0.9s,mb5.8,SNR=9.5
WDC Whiskeytown Da 84.86 50 *e*P **P 11 14 40.7 +0.4**
WDC pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
WDC Whiskeytown Da 84.86 50 *e*P **P 11 14 40.7 +0.4**
comp=Z,6.2nm,0.8s,mb4.8
ETW Entiat 84.97 43 *e*P **P 11 14 40.3 -0.4**
comp=Z,16nm,1.0s,mb5.1
SPITS Spitsbergen Ar 85.32 351 P **P 11 14 41.5 -0.5**
comp=Z,6.4nm,0.9s,mb4.7,baz=83,slow=8.5,SNR=4.6
SPITS LR LR 11 53 27.5
comp=Z,178nm,20.4s,MS4.5,baz=335,slow=36
VIPM Ingram Point 85.44 46 P **P 11 14 44.6 +1.5**
B08A Colville Reser 85.46 42 ⇑P **P 11 14 43.2 +0.1**
baz=85,SNR=7.9
K05A Summer Lake 85.63 47 ⇓P **P 11 14 43.5 -0.6**
baz=86
LBCM Butte Creek Ri 85.69 49 P **P 11 14 45.0 +0.6**
OD2 Odessa Site #2 86.09 42 *e*P **P 11 14 46.8 +0.5**
comp=Z,9.7nm,0.9s,mb5.0
RES Resolute Bay 86.16 13 P **P 11 14 45.6 -0.5**
comp=Z,12nm,0.8s,mb5.2,baz=323,slow=4.7,SNR=19
B09A Rice 86.21 41 ⇓P **P 11 14 46.5 -0.3**
baz=86
C09A Chrisman Ranch 86.28 42 ⇑P **P 11 14 47.2 0.0**
baz=86
I07A Izee 86.31 46 ⇑P **P 11 14 47.5 0.0**
baz=86
G08A Pilot Rock 86.41 45 ⇑P **P 11 14 48.2 +0.2**
baz=86
D09A Jones Farm, Ri 86.43 43 ⇑P **P 11 14 48.4 +0.4**
baz=86
APA Apatity 86.48 339⇑*e*P **P 11 14 47.0 -0.8**
APA pmax MLR MLR
comp=Z,200nm,20.0s,MS4.5
H08A Prairie City 86.79 45 ⇓P **P 11 14 49.1 -0.8**
baz=87
MIR Mirnyy 86.83 198 *e*P **P 11 14 48.0 -1.4**
MIR pmax pmax
comp=Z,30nm,1.2s,mb5.4
B10A Chitwood Farm, 86.84 41 ⇓P **P 11 14 49.7 -0.2**
baz=87
NEW Newport 86.91 41 *e*P **P 11 14 50.2 -0.1**
NEW pmax pmax
comp=Z,18nm,0.9s
NEW Newport 86.91 41 *e*P **P 11 14 50.1 -0.2**
comp=Z,18nm,0.9s,mb5.3
CMB Columbia Colle 87.03 52 *e*P **P 11 14 51.8 +0.7**
CMB pmax pmax
comp=Z,4.0nm,0.7s,mb4.8
CMB Columbia Colle 87.03 52 *e*P **P 11 14 51.8 +0.6**
comp=Z,4.2nm,0.7s,mb4.8
J08A Circle Bar Ran 87.21 46 ⇓P **P 11 14 52.0 +0.1**
baz=87
A11A Hall Mountain, 87.22 41 ⇑P **P 11 14 51.1 -0.7**
baz=87
WCN Washoe City 87.23 51 ⇑P **P 11 14 51.8 -0.2**
baz=87
WVOR Wild Horse Val 87.32 47 *e*P **P 11 14 53.0 +0.6**
WVOR pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
WVOR Wild Horse Val 87.32 47 *e*P **P 11 14 53.0 +0.6**
comp=Z,6.5nm,0.9s,mb4.9
B11A Sandpoint 87.36 41 ⇑P **P 11 14 52.7 +0.3**
baz=87
E10A Myers Farm, Un 87.37 43 ⇓P **P 11 14 52.5 -0.1**
baz=87
F10A Beach Ranch, E 87.42 44 ⇑P **P 11 14 52.6 -0.3**
baz=87
H09A Durkee 87.46 45 ⇑P **P 11 14 52.8 -0.3**
baz=87
I09A Lost Marbles R 87.58 46 ⇓P **P 11 14 54.1 +0.4**
baz=88
KEV Kevo 87.61 342 *e*p **P 11 14 53.0 -0.2**

KEV Kevo 87.61 342 ep P 11 14 53.0 -0.2
BMO Blue Mountains 87.66 45 eP P 11 14 54.0 0.0
BMO pmax pmax
comp=Z,9.0nm,0.9s,mb5.0
BMO Blue Mountains 87.66 45 eP P 11 14 54.0 0.0
comp=Z,8.8nm,0.9s,mb5.0
G10A Bishop Farm, J 87.67 44 ⇑P P 11 14 54.4 +0.3
baz=88,SNR=20
J09A Fry Pan Ranch, 87.72 46 ⇑P P 11 14 54.8 +0.4
baz=88,SNR=8.9
D11A Klaveano Farm, 87.74 42 ⇑P P 11 14 54.5 +0.1
baz=88,SNR=6.7
EDM Edmonton 87.85 36 eP P 11 14 54.8 +0.1
E11A Bogner Ranch, 88.01 43 ⇑P P 11 14 55.5 -0.2
baz=88,SNR=6.2
H10A Noah's Angus R 88.11 45 ⇓P P 11 14 55.7 -0.4
baz=88,SNR=16
ARCES ARCESS Array B 88.17 342 P P 11 14 54.5 -1.4
comp=Z,1.9nm,0.5s,mb4.6,baz=51,slow=6.4,SNR=19
F11A Grangeville 88.17 44 ⇑P P 11 14 56.2 -0.2
baz=88,SNR=5.1
PKM Peak Mountain 88.20 55 ⇓P P 11 14 57.5 +0.7
baz=88
I10A Payette 88.20 45 ⇑P P 11 14 56.5 -0.1
baz=88
G11A Walters Elk Ra 88.22 44 ⇑P P 11 14 56.4 -0.3
baz=88,SNR=11
VRHR Novokhopersk 88.24 322 eP P 11 14 54.3 -2.3
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb5.2
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,20nm,1.2s
A13A Flathead Natio 88.46 40 ⇑P P 11 14 58.2 +0.5
baz=88
K10A MacKenzie Ranc 88.49 47 ⇑P P 11 14 58.0 0.0
baz=88,SNR=12
BSMT Bassoo Peak 88.53 41 P P 11 14 59.8 +1.7
NVAR Mina Array Bea 88.54 51 P P 11 14 59.4 +1.1
comp=E,10.0nm,0.8s,mb5.2,baz=261,slow=5.8,SNR=70
VES Vestal, Richgr 88.56 54 ⇓P P 11 14 58.8 +0.3
baz=89
H11A Donnelly 88.58 45 ⇑P P 11 14 58.3 -0.1
baz=89,SNR=12
C13A Hot Springs 88.72 41 ⇓P P 11 14 59.3 +0.3
baz=89
F12A Elk City 88.81 43 ⇓P P 11 14 59.3 -0.2
baz=89
I11A Placerville 88.83 45 ⇓P P 11 14 59.6 0.0
baz=89,SNR=7.5
L10A Juniper Basin 88.96 47 ⇓P P 11 15 00.8 +0.5
baz=89,SNR=14
D13A Huson 88.96 42 ⇓P P 11 14 60.0 -0.2
baz=89
M10A I.L. Ranch, Tu 89.06 48 ⇑P P 11 15 00.8 +0.1
baz=89
MFID Camas Ranch 89.06 46 ⇑P P 11 15 01.1 +0.4
baz=89,SNR=13
A14A Double T Ranch 89.08 40 ⇓P P 11 15 00.5 -0.2
baz=89
ISA Isabella 89.08 54 ⇑P P 11 15 01.0 +0.1
baz=89
ISA Isabella 89.08 54 eP P 11 15 01.5 +0.5
ISA pmax pmax
comp=Z,5.0nm,1.0s,mb4.8
ISA Isabella 89.08 54 eP P 11 15 01.5 +0.6
comp=Z,5.3nm,1.0s,mb4.8
ZEI Tsey 89.08 314 eP P 11 14 58.6 -2.2
ZEI pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
K11A Parker Ranch, 89.09 46 ⇑P P 11 15 01.0 +0.1
baz=89
CWC Cottonwood Cre 89.20 53 ⇑P P 11 15 01.6 +0.1
baz=89
JOF Joensuu 89.22 335 ep P 11 14 58.7 -2.3
comp=Z,5.5nm,0.5s,mb5.1
JOF Joensuu 89.22 335 ep P 11 14 58.7 -2.3
comp=Z,5.5nm,0.5s,mb5.1
B14A Marquette Ranc 89.36 41 ⇑P P 11 15 02.3 +0.3
baz=89
O10A Cortez Mining, 89.41 49 ⇓P P 11 15 02.6 +0.2
baz=89
H12A Diamond D Ranc 89.42 45 ⇑P P 11 15 03.1 +0.8
baz=89
F13A Darby 89.42 43 ⇑P P 11 15 02.7 +0.4
baz=89
I12A Atlanta 89.44 45 ⇑P P 11 15 02.4 -0.1
baz=89
L11A Cat Creek Ranc 89.45 47 ⇓P P 11 15 02.9 +0.4
baz=89,SNR=6.7
A15A Johnson Ranch, 89.51 40 ⇓P P 11 15 03.3 +0.7
baz=90
D14A Greenough 89.59 42 ⇓P P 11 15 03.1 0.0
baz=90
J12A Stokes Ranch, 89.62 46 ⇓P P 11 15 03.8 +0.5
baz=90,SNR=8.4
M11A Holland Ranch, 89.62 48 ⇓P P 11 15 03.6 +0.2
baz=90,SNR=5.3
VSR Storozhevoye 89.67 323 eP P 11 15 01.3 -2.1
VSR pmax pmax
comp=Z,9.0nm,0.6s,mb5.3
VSR pmax pmax
comp=N,6.0nm,0.4s
VSR pmax pmax
comp=E,7.0nm,0.6s
VSR MLR MLR
comp=Z,270nm,17.0s,MS4.7
VSR MLR MLR
comp=N,530nm,21.0s,MS5.0
VSR MLR MLR
comp=E,270nm,17.0s,MS5.0
G13A Cobalt 89.69 44 ⇓P P 11 15 03.7 +0.1
baz=90,SNR=10
MPMC Manual Prospec 89.76 53 ⇑P P 11 15 04.2 +0.1
baz=90,SNR=9.7
CHMT Chamberlain Mo 89.81 42 eP P 11 15 04.5 +0.5
comp=E,6.6nm,1.5s,mb4.7
OBN Obninsk 89.81 327 ⇓eP P 11 15 03.3 -0.6
OBN e 11 18 36.0
OBN eS SKSac 11 25 31.8 -2.3
OBN pmax pmax
comp=Z,51nm,1.6s,mb5.6
B15A Bradely Ranch, 89.82 40 ⇑P P 11 15 03.7 -0.4
baz=90
H13A Challis 89.83 44 ⇑P P 11 15 04.1 -0.1
baz=90,SNR=6.8
K12A Draper Farm, C 89.93 46 ⇑P P 11 15 04.9 +0.1
baz=90
C15A Salmond Ranch, 89.96 41 ⇑P P 11 15 05.0 +0.2
baz=90
S10A Tonopah Range, 89.97 51 ⇓P P 11 15 05.4 +0.3
baz=90,SNR=21
L12A House Creek Ra 89.98 47 ⇓P P 11 15 05.3 +0.2
baz=90,SNR=7.0
HLID Hailey 90.01 45 ⇑P P 11 15 04.7 -0.4
baz=90,SNR=11
HLID Hailey 90.01 45 eP P 11 15 05.7 +0.6
comp=Z,5.5nm,0.9s,mb4.9
O11A Cowboy Ranch, 90.08 49 ⇑P P 11 15 05.7 +0.2
baz=90
R10A Warm Springs 90.09 51 ⇓P P 11 15 05.6 -0.1
baz=90
I13A Wildhorse Cree 90.11 45 ⇑P P 11 15 05.5 -0.1
baz=90,SNR=11
FURC Furnace Creek, 90.14 53 ⇓P P 11 15 05.8 -0.1
baz=90,SNR=11
J13A Cove Ranch, Pi 90.22 46 ⇓P P 11 15 06.4 +0.2
baz=90,SNR=7.1
A16A West Butte Ran 90.23 40 ⇓P P 11 15 06.2 +0.2
baz=90
M12A Wells 90.26 48 ⇑P P 11 15 06.8 +0.5
baz=90
N12A Clover Valley, 90.33 48 eP P 11 15 08.3 +1.7
comp=Z,11nm,1.1s,mb5.1
B16A M & M Farms, S 90.33 40 ⇑P P 11 15 06.6 0.0
baz=90
E15A Deer Lodge 90.36 42 ⇓P P 11 15 06.7 0.0
baz=90
H14A Leadore 90.42 44 ⇓P P 11 15 07.4 +0.4
baz=90,SNR=7.2
Q11A Duckwater 90.43 50 ⇑P P 11 15 07.1 -0.1
baz=90,SNR=5.3
GSC Goldstone 90.49 54 ⇓P P 11 15 07.7 +0.2
baz=90,SNR=6.4
GSC Goldstone 90.49 54 eP P 11 15 08.2 +0.6
GSC pmax pmax
comp=Z,12nm,0.9s,mb5.2
GSC Goldstone 90.49 54 eP P 11 15 08.2 +0.7
comp=Z,12nm,0.9s,mb5.2
C16A Fuhringer Ranc 90.50 41 ⇑P P 11 15 07.6 +0.3
baz=90
I14A Mackay 90.57 45 ⇑P P 11 15 07.8 +0.1
baz=90
U10A Ash Meadows, A 90.57 53 ⇓P P 11 15 07.3 -0.6
baz=91
R11A Troy Canyon, C 90.62 51 ⇑P P 11 15 08.0 -0.1
baz=91
F15A Butte 90.63 43 ⇓P P 11 15 08.0 0.0
baz=91
LRM Limekiln Ridge 90.67 43 eP P 11 15 08.2 +0.1
comp=Z,24nm,1.0s,mb5.5
S11A Rachel 90.69 51 ⇓P P 11 15 08.2 -0.2
baz=91
J14A Carey 90.70 45 ⇓P P 11 15 08.6 +0.2
baz=91
MCMT McKenzie Canyo 90.71 44 eP P 11 15 08.9 +0.6
comp=Z,2.1nm,1.1s,mb4.4
O12A Currie 90.71 49 ⇑P P 11 15 09.2 +0.7
baz=91,SNR=7.1
DLMT Dillon 90.71 43 eP P 11 15 09.1 +0.7
comp=Z,5.6nm,1.1s,mb4.8
L13A Double Diamond 90.77 47 ⇓P P 11 15 08.9 +0.2
baz=91
A17A Triple J Farms 90.79 39 ⇓P P 11 15 08.9 +0.3
baz=91
M13A Montello 90.82 47 ⇓P P 11 15 09.3 +0.3
baz=91
M13A Montello 90.82 47 eP P 11 15 09.6 +0.7
comp=Z,7.3nm,1.0s,mb5.0
G15A Dillon 90.85 43 ⇓P P 11 15 09.1 +0.1
baz=91
109C Camp Elliot, M 90.88 56 ⇓P P 11 15 09.5 +0.1
baz=91
D16A Dana Ranch, Ca 90.88 41 ⇓P P 11 15 08.5 -0.6
baz=91
B17A L&G Farms, Che 90.94 40 ⇑P P 11 15 09.3 -0.1
baz=91
HEC Hector,Ludlow 90.99 54 ⇑P P 11 15 09.6 -0.2
baz=91
Q12A Willow Creek R 91.00 50 ⇓P P 11 15 09.5 -0.3
baz=91
K14A Jones Ranch, D 91.17 46 ⇓P P 11 15 10.5 0.0
baz=91
C17A Wharram Farm, 91.19 41 ⇑P P 11 15 10.4 -0.1
baz=91
T11A Corn Creek, Al 91.20 52 ⇓P P 11 15 10.2 -0.6
baz=91
PFO Pinyon Flat Ob 91.21 55 ⇑P P 11 15 10.6 -0.4
baz=91
F16A Kennard Place, 91.23 43 ⇑P P 11 15 10.6 -0.1
baz=91
BOZ Bozeman (W) 91.27 43 ⇓P P 11 15 10.9 0.0
baz=91
BOZ Bozeman (W) 91.27 43 eP P 11 15 12.0 +1.1
BOZ pmax pmax
comp=Z,4.0nm,1.0s,mb4.7
BOZ Bozeman (W) 91.27 43 eP P 11 15 12.0 +1.0
comp=Z,3.8nm,1.0s,mb4.7
L14A Malta 91.28 47 ⇓P P 11 15 11.4 +0.3
baz=91
G16A Moss Hill, Enn 91.28 43 ⇑P P 11 15 10.8 -0.3
baz=91
A18A Metzger Ranch, 91.33 39 ⇑P P 11 15 11.4 +0.3
baz=91
R12A Pony Springs, 91.36 50 ⇑P P 11 15 11.5 -0.1
baz=91
M14A Sheep Mountain 91.36 47 ⇓P P 11 15 11.4 -0.1
baz=91
S12A Delamar Landin 91.38 51 ⇓P P 11 15 11.6 -0.1
baz=91
D17A Six Diamond Ra 91.39 41 ⇓P P 11 15 11.4 -0.1
baz=91
V11A Goodsprings 91.43 53 ⇑P P 11 15 12.2 +0.3
baz=91,SNR=5.2
J15A Blackfoot 91.43 45 ⇓P P 11 15 11.8 +0.1
baz=91,SNR=7.3
MONP Monument Peak 91.43 56 ⇑P P 11 15 12.0 0.0
baz=91
P13A Bates Ranch, G 91.48 49 ⇓P P 11 15 11.7 -0.3
baz=92
E17A Martinsdale 91.51 42 ⇓P P 11 15 12.0 0.0
baz=92
GMRC Granite Mounta 91.53 54 ⇑P P 11 15 11.9 -0.5
baz=92,SNR=6.3
B18A Beardsley Farm 91.55 40 ⇓P P 11 15 12.2 0.0
baz=92
K15A Arbon 91.58 46 ⇓P P 11 15 12.2 -0.3
baz=92
KAF Kangasniemi 91.65 335 eP P 11 15 09.7 -2.6
KAF pmax pmax
comp=Z,7.0nm,0.7s,mb5.1
KAF Kangasniemi 91.65 335 ep P 11 15 09.7 -2.6
comp=Z,6.9nm,0.7s,mb5.1
KAF Kangasniemi 91.65 335 ep P 11 15 09.7 -2.6
comp=Z,6.9nm,0.7s,mb5.1
F17A Fitzpatrick Pl 91.83 42 ⇓P P 11 15 13.6 +0.1
baz=92
R13A O'Grain Ranch, 91.89 50 ⇓P P 11 15 13.9 -0.1
baz=92
LDFC Landfair 91.89 54 P P 11 15 15.6 +1.6
L15A Malad City 91.90 46 ⇓P P 11 15 13.7 -0.2
baz=92
V12A Nelson 91.91 53 ⇓P P 11 15 14.4 +0.3
baz=92,SNR=8.9
I16A Newdale 91.93 44 ⇑P P 11 15 14.0 0.0
baz=92
BC3 Big Chuckawall 92.01 55 ⇓P P 11 15 14.6 0.0
baz=92
YMR Madison River 92.03 44 eP P 11 15 15.4 +0.9
comp=Z,5.5nm,0.6s,mb5.1
FINES FINESS Array B 92.08 335 P P 11 15 12.2 -2.1
comp=Z,5.2nm,0.5s,mb5.2,baz=68,slow=6.6,SNR=28
FINES LR LR 12 01 41.4
comp=Z,171nm,18.3s,MS4.5,baz=9.5,slow=39
E18A Harlowton 92.09 42 ⇓P P 11 15 14.7 0.0
baz=92
IRM Iron Mountain 92.11 55 ⇑P P 11 15 14.9 -0.2
baz=92
S13A Holt Ranch, En 92.14 51 ⇑P P 11 15 14.8 -0.4
baz=92
DUG Dugway 92.15 48 ⇑P P 11 15 14.7 -0.5
baz=92
DUG Dugway 92.15 48 eP P 11 15 16.1 +1.0
DUG pmax pmax
comp=Z,6.0nm,1.1s,mb4.8
DUG Dugway 92.15 48 eP P 11 15 16.1 +0.9
comp=Z,5.7nm,1.1s,mb4.8
N15A Stansbury Isla 92.15 48 ⇑P P 11 15 15.0 -0.1
baz=92
Q14A Sevier Lake (B 92.17 50 ⇑P P 11 15 14.7 -0.6
baz=92
YFT Old Faithful 92.19 44 eP P 11 15 18.5 +3.3
comp=Z,5.6nm,0.7s,mb5.0
T13A Saint George 92.27 52 ⇓P P 11 15 15.8 0.0
baz=92
IMW Indian Meadow 92.30 44 eP P 11 15 17.0 +1.2
comp=Z,3.3nm,0.7s,mb4.8
O15A The Old Anders 92.37 48 ⇑P P 11 15 16.2 0.0
baz=92
ARUT Antelope Range 92.40 51 eP P 11 15 18.3 +1.9
ARUT pmax pmax
comp=Z,5.0nm,0.9s,mb4.8
ARUT Antelope Range 92.40 51 eP P 11 15 18.2 +1.9
comp=Z,5.1nm,0.9s,mb4.8
U13A Pakoon Wash 92.40 52 ⇑P P 11 15 16.1 -0.3
baz=92
F18A Big Timber 92.45 42 ⇑P P 11 15 15.8 -0.5
baz=92
GCMT Greycliff 92.52 42 eP P 11 15 17.8 +1.0
comp=Z,4.0nm,0.8s,mb4.9
V13A Grand Canyon W 92.55 53 ⇓P P 11 15 16.8 -0.3
baz=92,SNR=5.4
L16A Fish Haven 92.57 46 ⇑P P 11 15 17.0 -0.1
baz=92
HWUT Hardware Ranch 92.61 47 eP P 11 15 17.6 +0.4
comp=Z,3.0nm,0.7s,mb4.8
GLA Glamis 92.68 56 ⇑P P 11 15 17.7 0.0
baz=93
Y12C Blythe 92.72 55 ⇓P P 11 15 18.2 +0.2
baz=93
G18A Lazy EL Ranch, 92.75 43 ⇓P P 11 15 18.1 +0.3
baz=93
Q15A Fillmore 92.83 49 ⇓P P 11 15 18.4 +0.1
baz=93
W13A Hualapai Mount 92.84 53 ⇓P P 11 15 18.2 -0.3
baz=93
PDMCI Parker Dam,Lak 92.87 54 ⇑P P 11 15 18.6 0.0
baz=93
T14A Hurricane 92.89 51 ⇑P P 11 15 19.0 +0.4
baz=93
U14A Mt Trumbull 93.01 52 ⇑P P 11 15 19.5 +0.3
baz=93
RLMT Red Lodge 93.01 43 ⇑P P 11 15 18.9 -0.1
baz=93
RLMT Red Lodge 93.01 43 eP P 11 15 20.0 +1.0
comp=Z,5.2nm,0.8s,mb5.0
X13A Yucca 93.03 54 ⇓P P 11 15 19.3 0.0
baz=93
I18A Diamond G Ranc 93.13 44 ⇑P P 11 15 19.9 +0.3
baz=93
J18A Kendall Valley 93.16 45 ⇑P P 11 15 20.1 +0.4
baz=93
V14A Boquillas Ranc 93.30 53 ⇓P P 11 15 20.4 -0.2
baz=93,SNR=5.3
K18A Toltan Ranch, 93.34 45 ⇑P P 11 15 20.6 0.0
baz=93
T15A Red Dirt Ranch 93.44 51 ⇑P P 11 15 21.1 0.0
baz=93
W14A Seligman 93.44 53 ⇑P P 11 15 21.0 -0.2
baz=93
FFC Flin Flon 93.52 32 iP P 11 15 22.0 +0.9
FFC Flin Flon 93.52 32 eP P 11 15 21.0 -0.1
comp=Z,3.2nm,0.8s,mb4.8
Z13A Yuma Proving G 93.58 55 ⇓P P 11 15 21.9 +0.1
baz=94
L18A Fontenelle, Gr 93.58 46 ⇓P P 11 15 21.7 0.0
baz=94
PDAR Pinedale Array 93.63 45 P P 11 15 21.6 -0.3
comp=Z,0.6nm,0.6s,mb4.2,baz=299,slow=1.5,SNR=4.6
PDAR LR LR 11 50 06.6
comp=Z,224nm,21.6s,MS4.6,baz=294,slow=31
U15A North Rim 93.69 52 ⇓P P 11 15 22.3 0.0
baz=94
X14A Yava 93.81 54 ⇓P P 11 15 23.0 +0.1
baz=94
Y14A Wickenburg 93.88 54 ⇑P P 11 15 22.9 -0.3
baz=94
V15A Kaibab Nationa 93.97 52 ⇓P P 11 15 23.7 +0.1
baz=94
L19A Farson 94.00 46 ⇓P P 11 15 23.5 -0.1
baz=94
Z14A Wintersburg 94.10 55 ⇑P P 11 15 24.6 +0.3
baz=94
K19A Absolon Red Bu 94.10 45 ⇓P P 11 15 23.8 -0.3
baz=94
SRU San Rafael 94.17 49 ⇓P P 11 15 24.4 0.0
baz=94
R17A Hanksville Air 94.25 49 ⇑P P 11 15 25.1 +0.2
baz=94
X15A Humboldt 94.32 54 ⇑P P 11 15 25.6 +0.3
baz=94
LAO LASA Array 94.42 40 eP P 11 15 25.4 -0.1
comp=Z,17nm,0.9s,mb5.5
S17A Black Ridge (B 94.44 50 ⇑P P 11 15 25.8 +0.1
baz=94
Q18A Rafter H Ranch 94.45 49 ⇑P P 11 15 26.1 +0.3
baz=94
K20A Yellowstone Ra 94.51 45 ⇑P P 11 15 25.8 -0.1
baz=94
R18A Canyonlands Na 94.87 49 ⇓P P 11 15 27.4 -0.3
baz=95
S18A Hurst Farm, Bl 95.03 50 ⇓P P 11 15 28.4 -0.1
baz=95
FCC Fort Churchill 95.25 26 eP P 11 15 29.2 +0.2
comp=Z,0.2nm,1.0s
AKASG Malin Array Be 95.66 325 P P 11 15 29.4 -1.7
comp=Z,0.6nm,0.3s,mb4.5,baz=51,slow=4.5,SNR=4.4
R20A Redvale 96.06 49 ⇑P P 11 15 33.1 0.0
baz=96
Y18A Canyon Day Jun 96.28 54 ⇓P P 11 15 34.6 +0.3
baz=96
217A Green Valley 96.29 56 ⇓P P 11 15 34.4 +0.1
baz=96
SMCO Snowmass 96.73 48 eP P 11 15 37.0 +0.9
comp=Z,5.1nm,1.2s,mb4.8
BR131 Keskin Array S 97.38 313 eP P 11 15 38.5 -0.6
BRTR Keskin Array B 97.38 313 P P 11 15 39.1 0.0
comp=Z,1.6nm,0.9s,mb4.5,baz=75,slow=4.0,SNR=5.4
ASF Jabal al Asfar 97.59 305 P P 11 15 39.5 -0.7
comp=Z,1.3nm,0.6s,mb4.6,baz=272,slow=1.6,SNR=3.5
MAW Mawson 97.75 202 LR LR 11 57 57.8
comp=Z,273nm,18.9s,MS4.8,baz=235,slow=34
HFS Hagfors 97.77 337 P P 11 15 39.5 -0.9
comp=Z,1.3nm,0.7s,mb4.5,baz=48,slow=4.6,SNR=4.4
NOA NORSAR Array B 98.06 339 P P 11 15 40.0 -1.7
comp=Z,0.5nm,0.7s,mb4.2,baz=45,slow=5.7,SNR=2.9
NOA LR LR 12 02 15.9
comp=Z,135nm,20.9s,MS4.4,baz=40,slow=37
MMAI Mount Meron Ar 98.50 306 P P 11 15 43.3 -0.9
comp=Z,0.9nm,0.5s,mb4.6,baz=92,slow=16,SNR=3.7
MMAI LR LR 12 05 05.3
comp=Z,75nm,18.3s,MS4.2,baz=70,slow=38
ULM Lac du Bonnet 98.95 34 P P 11 15 45.9 +0.1
comp=Z,1.8nm,0.6s,mb4.8,baz=110,slow=0.9,SNR=2.3
ULM Lac du Bonnet 98.95 34 P P 11 15 45.9 0.0
BUR08 Bucovina Ar. S 99.43 323 eP P 11 15 47.4 -0.7
TXAR Lajitas Array 102.92 56 P Pdif 11 16 04.9 +1.5
comp=Z,0.2nm,0.6s,baz=268,slow=4.4,SNR=3.6
LSZ Lusaka 117.69 259 PKP PKPdf 11 20 53.5 +1.0
comp=Z,2.1nm,0.6s,baz=259,slow=5.2,SNR=5.2
TORD Torodi Ar. Bea 134.90 303 PKP PKPdf 11 21 24.1 -1.3
comp=Z,1.1nm,0.7s,baz=48,slow=1.7,SNR=3.2
PLCA Paso Flores 138.46 140 PKP PKPdf 11 21 30.4 -0.8
comp=Z,4.4nm,0.9s,baz=11,slow=1.5,SNR=4.5
PLCA Paso Flores 138.46 140 PKP PKPdf 11 21 30.4 -0.8
DBIC Dimbokro 143.77 299 PKP PKPdf 11 21 39.3 -2.3
comp=Z,8.4nm,0.8s,baz=30,slow=3.1,SNR=12
KIC Kosan Boka 143.83 299 eP PKPdf 11 21 38.1 -3.6
comp=Z,52nm,1.2s
TIC Toumodi 143.92 300 eP PKPdf 11 21 38.4 -3.5
comp=Z,28nm,0.8s
LIC Lamto 144.14 299 eP PKPdf 11 21 39.9 -2.4
comp=Z,70nm,0.7s
TRQA Tornquist 145.35 143 ePKPdf PKPdf 11 21 42.8 -0.9
BBTS Babate 147.08 323 PKPbc PKPbc 11 21 50.0 +0.7
comp=Z,34nm,0.8s,baz=75,slow=2.0,SNR=5.3
BBTS Babate 147.08 323 PKPbc PKPbc 11 21 50.0 +0.7
LPAZ La Paz 148.67 101 PKPbc PKPbc 11 21 53.2 -0.3
comp=Z,4.8nm,0.8s,baz=289,slow=2.1,SNR=16

*IDC **05** 11:07:08.5±1.0, 12°.12N×144°.03E, h0km, mb4.0/9, mb1 4.2/9, mb1mx3.9/24, mbtmp4.0/9, Error ellipse: s-maj=30.6km s-min=18.0km az=111.0*
*NEIC **05** 11:07:09.9±0.6, 12°.09N×143°.98E, h10km, Error ellipse: s-maj=19.3km s-min=11.5km az=118.0*
*ISCJB **05** 11:07:11.4±0.7, 12°.09N±0°.09×144°.0E±0°.1, h33km, mb4.1/10, Error ellipse: s-maj=19.6km s-min=8.1km az=33.9*

ISC 05 11:07:13.4±0.7, 12°.12N±0°.09×144°.0E±0°.1, h35km, n17, σ1.25/19, mb4.1/10, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
GUMO	Guam	1.69	31	Pn	Pn	Pn	11 07 38.8	-1.7
GUMO				Sn	Sn	Sn	11 08 00.3	-0.7
GUMO	Guam	1.69	31	ePn	Pn	Pn	11 07 38.5	-2.0
GUMO				eSn	Sn	Sn	11 08 00.1	-0.9
DAV	Davao City (W)	18.82	256	P	Pn	Pn	11 11 29.3	-1.7
WRAB	Tennant Creek	33.24	197	P	P	P	11 13 46.8	-0.5
WRA	Warramunga Arr	33.25	197	P	P	P	11 13 47.3	-0.2
	1.1nm,0.6s,mb4.0,baz=20,slow=10.0,SNR=5.9							
KSM	Kuching	35.02	255	P	P	P	11 14 01.7	-1.3
	14nm,1.1s,mb4.8							
ENH	Enshi	36.68	305	P	P	P	11 14 21.6	+4.6
ASAR	Alice Springs	36.91	195	P	P	P	11 14 19.1	+0.1
	0.6nm,0.8s,mb3.5,baz=17,slow=11,SNR=4.4							
CMAR	Chiang Mai Arr	43.81	284	P	P	P	11 15 17.4	+1.2
	0.6nm,0.3s,mb3.8,baz=81,slow=4.6,SNR=4.1							
SONM	Songino Array	47.44	326	P	P	P	11 15 47.0	+2.4
	0.4nm,0.5s,mb3.6,baz=147,slow=8.6,SNR=2.9							
KURK	Kurchatov	65.15	320	P	P	P	11 17 50.5	-0.3
	2.4nm,0.8s,mb4.2,baz=105,slow=6.6,SNR=5.1							
KURK	Kurchatov	65.15	320	P	P	P	11 17 50.5	-0.3
BVAR	Borovoye Array	70.54	322	P	P	P	11 18 24.2	-0.5
	1.3nm,0.4s,mb4.2,baz=98,slow=8.3,SNR=5.2							
YKA	Yellowknife Ar	84.55	27	P	P	P	11 19 43.0	+0.3
	1.3nm,0.9s,mb4.1,baz=290,slow=5.7,SNR=4.3							
YKA	Yellowknife Ar	84.55	27	P	P	P	11 19 43.0	+0.3
ARCES	ARCESS Array B	88.20	342	P	P	P	11 20 02.2	+1.7
	1.6nm,0.8s,mb4.3,baz=71,slow=7.9,SNR=4.6							

NVAR	Mina Array Bea	88.51	51	P	P	11 20 04.7	+2.1
	1.0nm,0.6s,mb4.3,baz=264,slow=5.8,SNR=6.3						

IDC 05 11:07:24.9±3.6, 13°.85S×166°.99E, h229km±32km, mb3.6/5, mb1 3.8/5, mb1mx3.5/16, mbtmp3.6/5, Error ellipse: s-maj=38.4km s-min=22.5km az=146.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	29.37	228	P	P	11 13 07.6	+0.8
	4.6nm,0.6s,baz=57,slow=12,SNR=5.6						
WRA	Warramunga Arr	31.79	254	P	P	11 13 27.6	-0.6
	1.5nm,0.7s,baz=82,slow=8.7,SNR=7.0						
ASAR	Alice Springs	32.74	248	P	P	11 13 35.8	-0.7
	1.9nm,0.6s,baz=74,slow=9.2,SNR=24						
ASAR				S	S	11 18 36.8	+0.7
	1.1nm,1.0s,baz=80,slow=17,SNR=5.4						
CMAR	Chiang Mai Arr	74.35	294	P	P	11 18 39.1	+1.2
	1.6nm,0.8s,baz=128,slow=3.6,SNR=7.1						
MAW	Mawson	82.59	202	P	P	11 19 22.4	+0.4
	2.1nm,0.8s,baz=111,slow=8.6,SNR=4.1						
ARCES	ARCESS Array B	119.34	345	PKP	PKPdf	11 25 45.1	-1.2
	1.2nm,0.8s,baz=103,slow=2.9,SNR=3.3						
TORD	Torodi Ar. Bea	165.69	269	PKP	PKPdf	11 27 02.2	-0.9
	0.9nm,0.9s,baz=54,slow=2.5,SNR=3.4						
TORD				PKPab	PKPab	11 28 03.3	-0.2
	0.7nm,0.8s,baz=117,slow=3.1,SNR=3.1						

IDC 05 11:16:35.2±2.2, 54°.32N×86°.59E, h0km, mb1 3.6/3, mb1mx3.3/29, mbtmp3.6/3, ML3.2/3, Error ellipse: s-maj=18.6km s-min=3.1km az=70.0
NNC 05 11:16:36.8±3.1, 54°.15N×86°.51E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=26.8km s-min=20.5km az=170.0

ISC 05 11:16:38.0±2.3, 54°.25N±0°.10×86°.4E±0°.2, h10km, n7, σ0=91/13, 6C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	Zalesovo Beam	1.00	253	Pg	Pg	11 16 54.9	-2.2
	1.8nm,0.3s,baz=68,slow=16,SNR=40						
ZALV				Lg		11 17 11.4	
	2.5nm,0.3s,baz=71,slow=19,SNR=9.9						
KURK	Kurchatov	5.94	237	⇓Pn	Pn	11 18 05.8	-0.1
	6.8nm,0.7s						
KURK				⇑Sn	Sn	11 19 15.4	+1.4
	3.2nm,0.8s						
KURK				⇑Lg		11 19 47.8	
	16nm,0.9s						
KURK	Kurchatov	5.94	237	Pn	Pn	11 18 07.7	+1.8
	0.2nm,0.3s,baz=54,slow=14,SNR=32						
KURK				Sn	Sn	11 19 19.0	+5.1
	0.1nm,0.3s,baz=40,slow=20,SNR=5.1						
KURK				Lg		11 19 54.5	
	0.1nm,0.3s,baz=145,slow=29,SNR=8.4						
KURBB	Kurchatov Arra	6.04	236	⇑Pn	Pn	11 18 07.3	0.0
	1.7nm,0.7s						
KURBB				⇓Sn	Sn	11 19 16.8	+0.3
	1.8nm,0.8s						
KURBB				⇓Lg		11 19 50.6	
	5.9nm,0.8s						
MK31	Makanchi Array	7.91	201	⇑Pn	Pn	11 18 32.6	-0.4
	1.1nm,0.7s,baz=22,slow=12,SNR=16						
MK31				⇑Sn	Sn	11 20 01.9	-0.6
	0.9nm,0.6s,baz=26,slow=27,SNR=3.9						
MK31				⇑Lg		11 20 50.3	
	10nm,0.9s,baz=28,slow=30,SNR=5.7						
MKAR	Makanchi Array	7.91	201	Pn	Pn	11 18 33.2	+0.2
	0.2nm,0.3s,baz=20,slow=12,SNR=11						
MKAR				Sn	Sn	11 20 02.8	+0.3
	0.3nm,0.3s,baz=24,slow=27,SNR=9.9						
MKAR				Lg		11 20 51.3	
	0.1nm,0.3s,baz=30,slow=32,SNR=8.2						
BVAR	Borovoye Array	9.61	269	Pn	Pn	11 18 56.8	+0.6
	0.2nm,0.3s,baz=80,slow=10,SNR=3.1						
BVAR				Sn	Sn	11 20 39.6	-4.5
	0.4nm,0.3s,baz=74,slow=22,SNR=10						

IDC 05 11:20:54.5±3.5, 28°.64N×142°.26E, h0km, mb3.7/4, mb1 3.7/6, mb1mx3.5/25, mbtmp3.6/6, ML3.2/2, MS2.8/1, Ms1 2.8/1, ms1mx2.5/29, Error ellipse: s-maj=127.5km s-min=16.9km az=76.0
ISCJB 05 11:20:54.6±1.2, 28°.84N±0°.04×142°.7E±0°.3, h33km, mb3.8/4, Error ellipse: s-maj=34.1km s-min=5.6km az=175.0
NEIC 05 11:20:55.4±2.9, 28°.69N×142°.36E, h10km, MG3.4(JMA), Error ellipse: s-maj=135.0km s-min=11.4km az=78.0
JMA 05 11:20:55.6±0.1, 28°.46N×141°.02E, h50km, M3.8

ISC 05 11:20:57.4±1.2, 28°.78N±0°.04×142°.6E±0°.3, h35km, n19, σ1=20/22, mb3.8/4, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.71	193	eS	Sn	11 21 44.0	-1.4
CBIJ	Chichi jima	1.71	193	Pn	Pn	11 21 23.1	-1.6
	4.1nm,0.3s,baz=270,slow=20,SNR=2.6						
CBIJ				Sn	Sn	11 21 44.0	-1.4
	18nm,0.3s,baz=278,slow=22,SNR=7.4						
JHJ	Hachijo jima 2	4.96	331	LR	LR	11 23 15.9	
	comp=Z,113nm,20.3s,baz=117,slow=29						
BSO2	Boso 2	6.16	346	eS	Sn	11 23 33.0	-2.1
BSO3	Boso 3	6.27	344	eS	Sn	11 23 38.3	+0.7
JHU	Hanno	7.59	339	P	Pn	11 22 45.8	+0.3
JHU				eS	Sn	11 24 06.6	-3.7
JRY	Ryogami san	7.87	338	P	Pn	11 22 49.7	+0.4
JHO	Hitachi	8.00	348	P	Pn	11 22 48.8	-2.3
JHO				eS	Sn	11 24 13.2	-7.1
JAG	Ashikaga	8.08	342	P	Pn	11 22 51.7	-0.4
JAG				eS	Sn	11 24 14.4	-7.8
MJAR	Matsushiro Arr	8.58	336	Pn	Pn	11 22 59.5	+0.5
	0.7nm,0.3s,baz=150,slow=9.4,SNR=7.0						
MAJO	Matsushiro	8.58	336	ePn	Pn	11 22 59.7	+0.6
JFK	Kawauchi	8.69	351	eS	Sn	11 24 29.3	-7.9
JMK	Ichinoseki	10.21	354	eS	Sn	11 25 05.2	-9.5
KSRS	Korea Array	15.03	309	Pn	Pn	11 24 27.6	+0.5
	0.1nm,0.3s,baz=111,slow=11,SNR=3.0						
WRAB	Tennant Creek	49.07	190	eP	P	11 29 41.3	+0.1
WRA	Warramunga Arr	49.09	190	P	P	11 29 41.6	+0.3
	1.0nm,0.5s,mb4.1,baz=13,slow=8.7,SNR=13						
MKAR	Makanchi Array	49.71	309	P	P	11 29 46.9	+1.0
	0.6nm,0.7s,mb3.7,baz=95,slow=9.9,SNR=5.8						
ASAR	Alice Springs	52.81	190	P	P	11 30 11.4	+2.2
	0.2nm,0.5s,mb3.4,baz=7.6,slow=6.8,SNR=4.6						
BVAR	Borovoye Array	57.07	317	P	P	11 30 41.3	+1.5
	0.9nm,0.5s,mb4.0,baz=99,slow=7.7,SNR=4.9						

ISK 05 11:32:23.9, 38°.58N×30°.16E, h6km, MD2.7
CSEM 05 11:32:24.6±0.1, 38°.60N×30°.17E, h10km, MD2.7, Error ellipse: s-maj=3.6km s-min=3.2km az=29.0
ISCJB 05 11:32:24.5±0.7, 38°.59N±0°.05×30°.18E±0°.05, h10km±7km, Error ellipse: s-maj=8.5km s-min=6.0km az=177.5

ISC 05 11:32:24.9±0.7, 38°.60N±0°.05×30°.18E±0°.05, h12km±7km, n12, σ0=39/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHUT	Suhut-Afyon	0.29	99	ePG	Pg	11 32 30.5	-0.4
SHUT				eSG	Sg	11 32 35.1	+0.3
SHUT	Suhut-Afyon	0.29	99	ePg	Pg	11 32 30.5	-0.4
SHUT				eSg	Sg	11 32 35.1	+0.2
ALT	Altintas	0.46	353	ePG	Pg	11 32 33.6	-0.3
ALT	Altintas	0.46	353	ePg	Pg	11 32 33.6	-0.3
KHAL	Karahalli	0.59	247	iP	Pg	11 32 36.3	-0.1
KHAL				iS	Sg	11 32 44.8	+0.7
ISP	Isparta	0.82	161	ePG	Pg	11 32 40.4	-0.4
ISP				eSG	Sg	11 32 51.5	0.0
KULA	Kula-Manisa	1.20	266	ePN	Pn	11 32 47.0	-0.4
KULA				eSN	Sn	11 33 03.4	-0.2
KULA	Kula-Manisa	1.20	266	ePn	Pn	11 32 47.0	-0.4
KULA				eSn	Sn	11 33 03.4	-0.2
SUTC	Sutluce-Ispart	1.29	150	ePN	Pn	11 32 48.9	+0.1
SUTC	Sutluce-Ispart	1.29	150	ePn	Pn	11 32 48.9	+0.1
SVRH	Sivrihisar-ESK	1.34	51	ePN	Pn	11 32 50.2	+0.8
SVRH	Sivrihisar-ESK	1.34	51	ePn	Pn	11 32 50.2	+0.7

NEIC 05 11:33:05.9, 36°.06N×21°.86E, h5km, MD3.4(ATH), After ATH.
ATH 05 11:33:06.0, 36°.07N×21°.87E, h5km, MD3.4/6
ISCJB 05 11:33:07.5±1.3, 36°.18N±0°.06×21°.92E±0°.07, h5km±6km, Error ellipse: s-maj=11.5km s-min=6.9km az=44.3
CSEM 05 11:33:09.7±0.7, 36°.27N×21°.99E, h2km, ML3.7/2, Error ellipse: s-maj=13.8km s-min=8.3km az=45.0
THE 05 11:33:13.2, 36°.43N×21°.99E, h2km±1km, ML3.7/2, Error ellipse: s-maj=2.6km s-min=1.9km az=87.0

ISC 05 11:33:07.1±1.4, 36°.16N±0°.06×21°.89E±0°.07, h2km±6km, n34, σ1=01/53, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.75	351	P	Pg	11 33 21.7	+0.3
PYL				S	Sg	11 33 30.3	-0.8
PYL	PYLOS	0.75	351	ePG	Pg	11 33 21.8	+0.4
PYL				eSB	Sg	11 33 34.5	+3.4
PYL	PYLOS	0.75	351	ePg	Pg	11 33 21.8	+0.4
PYL				S	Sg	11 33 30.3	-0.8
KYTH	Kithira	0.94	82	ePn	Pg	11 33 25.3	+0.3
KYTH	Kithira	0.94	82	ePN	Pg	11 33 25.3	+0.3
VLI	Veliai	1.01	56	ePg	Pg	11 33 26.5	0.0
VLI				eSb	Sg	11 33 41.8	+2.2
VLI	Veliai	1.01	56	ePG	Pg	11 33 26.5	0.0
VLI				eSB	Sg	11 33 41.8	+2.2
VLI	Veliai	1.01	56	ePg	Pg	11 33 26.5	0.0
VLI				eSb	Sg	11 33 41.8	+2.2
ITM	Ithomi	1.02	2	ePn	Pg	11 33 27.1	+0.5
ITM				eSb	Sb	11 33 43.4	+2.1
ITM	Ithomi	1.02	2	P	Pg	11 33 27.0	+0.4
ITM				S	Sg	11 33 38.8	-1.1
ITM	Ithomi	1.02	2	ePN	Pg	11 33 27.1	+0.5
ITM				eSB	Sb	11 33 43.4	+2.1
ITM	Ithomi	1.02	2	P	Pg	11 33 27.0	+0.4
ITM				S	Sg	11 33 38.8	-1.1
ITM				eSb	Sb	11 33 43.4	+2.1
VLX	Vlachokerasia	1.27	18	P	Pn	11 33 31.3	-0.5
VLX				S	Sg	11 33 46.2	-1.8
VLX	Vlachokerasia	1.27	18	ePG	Pg	11 33 31.4	-0.1
VLX	Vlachokerasia	1.27	18	ePg	Pg	11 33 31.4	-0.1
VLX				S	Sg	11 33 46.2	-1.8
GUR	Goura	1.81	11	P	Pb	11 33 41.1	+0.2
GUR				S	Sn	11 34 01.8	-0.9
GUR	Goura	1.81	11	ePG	Pb	11 33 41.1	+0.2
GUR	Goura	1.81	11	P	Pb	11 33 41.1	+0.2
GUR				S	Sn	11 34 01.8	-0.9
KARN	Karanos	1.81	114	ePN	Pb	11 33 40.0	-0.9
KARN	Karanos	1.81	114	ePn	Pb	11 33 40.0	-0.9
RLS	Riolos of Patr	1.93	350	ePg	Pb	11 33 43.4	+0.5
RLS	Riolos of Patr	1.93	350	ePG	Pb	11 33 43.4	+0.5
RLS	Riolos of Patr	1.93	350	ePg	Pb	11 33 43.4	+0.5
LTK	Loutraki	2.05	25	ePG	Pb	11 33 45.7	+0.7
LTK	Loutraki	2.05	25	ePg	Pb	11 33 45.7	+0.7
LAKA	Lakka	2.08	2	P	Pb	11 33 45.7	+0.2
LAKA				S	Sn	11 34 08.5	-0.8
LAKA	Lakka	2.08	2	P	Pb	11 33 45.7	+0.2
LAKA				S	Sn	11 34 08.5	-0.8
KALE	Kalithea	2.24	5	P	Pb	11 33 46.6	-1.6
KALE	Kalithea	2.24	5	P	Pb	11 33 46.6	-1.6
VLS	Valsamata	2.27	333	P	Pb	11 33 48.6	-0.1
VLS				S	Sn	11 34 15.6	+1.6
VLS	Valsamata	2.27	333	P	Pb	11 33 48.6	-0.1
VLS				S	Sn	11 34 15.6	+1.6
VLY	Voula,Athens	2.28	41	ePn	Pb	11 33 48.4	-0.4
VLY	Voula,Athens	2.28	41	ePN	Pb	11 33 48.4	-0.4
VLY	Voula,Athens	2.28	41	ePn	Pb	11 33 48.4	-0.4

IDC 05 11:35:05.5±0.8, 52°.07N×174°.94W, h68km±7km, mb3.7/14, mb1 3.9/15, mb1mx3.7/30, mbtmp3.7/15, MS2.7/1, Ms1 2.7/1, ms1mx2.3/29, Error ellipse: s-maj=20.5km s-min=12.3km az=180.0
ISCJB 05 11:35:06.3±0.5, 52°.07N±0°.06×175°.03W±0°.05, h92km±4km, mb4.2/43, Error ellipse: s-maj=9.4km s-min=4.5km az=173.0
NEIC 05 11:35:07.5±0.5, 52°.05N×175°.02W, h89km±4km, mb4.3/35, Error ellipse: s-maj=8.5km s-min=4.4km az=166.0
BJI 05 11:35:08.0, 52°.00N×175°.00W, h68km, mB4.6/5, mb4.4/8, Ms3.9/3, Ms7 3.8/3

ISC 05 11:35:07.4±0.5, 52°.07N±0°.06×174°.99W±0°.04, h85km±4km, h67km±2.0km: pP-P, n300, σ0=63/302, mb4.2/43, 112C-103D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	Great Sitkin T	0.66	272	ePn	Pn	11 35 21.9	-1.1
ADK	Adak	1.06	260	P	Pn	11 35 25.9	-1.6
ADK				S	Sn	11 35 42.1	-0.4
AMKA	Amchitka	3.62	261	eP	Pn	11 36 01.8	+0.7
NIKO	Nikolski	3.86	74	P	Pn	11 36 04.7	+0.4
NIKO				eSn	Sn	11 36 51.8	+3.4
OKFG	Magazine Ridge	4.51	70	P	Pn	11 36 13.6	+0.5
UNV	Unalaska Valle	5.43	68	P	Pn	11 36 26.7	+1.0
AKUT	Akutan	5.92	66	ePn	Pn	11 36 33.6	+1.2
FX1	Attu Island--F	7.28	281	P	Pn	11 36 49.9	-1.1
	1.2nm,0.3s,baz=169,slow=10,SNR=6.2						
FX1				S	Sn	11 38 11.6	-0.4
	0.8nm,0.3s,baz=255,slow=20,SNR=2.2						
FX1				LR	LR	11 39 19.8	
	comp=Z,51nm,18.3s,baz=196,slow=35						
FX1	Attu Island--F	7.28	281	P	Pn	11 36 51.7	+0.7
SDPT	Sand Point	9.21	63	P	Pn	11 37 17.2	0.0
OHAK	Old Harbor	13.56	59	ePn	Pn	11 38 17.8	+2.0
SVW2	Sparrevohn	13.95	42	ePn	Pn	11 38 22.1	+1.2
KDAK	Kodiak Island	14.06	57	ePn	Pn	11 38 25.1	+2.8
	39nm,0.5s						
TTA	Tatalina	14.84	36	eP	Pn	11 38 32.9	+0.5
PPLA	Purkeypile	16.26	39	ePn	Pn	11 38 51.2	+1.0
	12nm,0.8s						
SEW	Seward	16.28	50	ePn	Pn	11 38 47.4	-3.1
	17nm,0.7s						
CHUM	Lake Minchumin	16.75	36	ePn	Pn	11 38 58.2	+1.9
	7.7nm,0.5s						
PMR	Palmer	16.94	46	ePn	Pn	11 38 56.2	-2.5
KTH	Kantishna Hill	17.09	38	ePn	Pn	11 39 01.3	+0.8
	2um,0.7s						
BPAW	Bear Paw Mtn.	17.36	37	eP	Pn	11 39 04.6	+0.8
	12nm,0.5s						
BILL	Bilibino	18.40	337	eP	Pn	11 39 16.4	0.0
	14nm,1.2s						
BMRM	Bremner River	18.82	50	eP	Pn	11 39 19.3	-2.1
	8.4nm,0.7s						
COLA	College	18.92	37	eP	Pn	11 39 18.6	-4.0
	7.3nm,0.7s						
PAX	Paxson	19.05	44	eP	Pn	11 39 17.1	-7.0
	14nm,0.8s						
COLD	Coldfoot	19.46	29	eP	Pn	11 39 27.5	-1.4
	20nm,0.9s						
MENT	Mentasta	19.79	45	eP	Pn	11 39 29.8	-3.0
EGAK	Eagle	21.47	41	eP	P	11 39 47.8	-0.8
	11nm,0.8s,mb4.2						
DAWY	Dawson	21.98	43	eP	P	11 39 53.3	-0.7
INK	Inuvik	25.53	35	P	P	11 40 26.1	-1.6
	3.4nm,0.6s,mb4.0,baz=217,slow=9.8,SNR=12						
INK	Inuvik	25.53	35	eP	P	11 40 26.8	-0.9
	3.5nm,0.6s,mb4.0						
YKA	Yellowknife Ar	33.02	48	P	P	11 41 33.6	-0.4
	0.5nm,0.5s,mb3.6,baz=283,slow=6.7,SNR=5.5						
YKA				PcP	PcP	11 44 16.2	+0.6
	1.6nm,0.8s,baz=288,slow=2.6,SNR=8.5						
YKA	Yellowknife Ar	33.02	48	P	P	11 41 33.6	-0.4
YKA				PcP	PcP	11 44 16.2	+0.5
A07A	Ashnola River,	34.14	73	⇑P	P	11 41 44.5	+0.6
	baz=34						
LON	Longmire	34.35	77	eP	P	11 41 46.5	+0.8
	3.5nm,0.8s,mb4.2						
F04A	Amboy	34.38	79	⇑P	P	11 41 46.7	+0.7
	baz=34						
B08A	Colville Reser	35.07	73	⇓P	P	11 41 52.6	+0.7
	baz=35						
H04A	Detroit Lake	35.16	81	⇓P	P	11 41 53.8	+1.0
	baz=35						
E07A	Sunnyside	35.62	76	⇑P	P	11 41 57.3	+0.7
	baz=36						
G06A	Carlson Farm,	35.82	79	⇑P	P	11 41 58.9	+0.5
	baz=36						
HAWA	Hanford	35.90	77	eP	P	11 41 59.7	+0.7
	7.2nm,0.8s,mb4.7						
D08A	Wollman Farm,	35.93	75	⇑P	P	11 41 59.5	+0.2
	baz=36						
MJAR	Matsushiro Arr	36.23	263	P	P	11 42 02.7	+0.8
	1.6nm,0.6s,mb4.2,baz=36,slow=8.0,SNR=5.1						
EDM	Edmonton	36.40	63	eP	P	11 42 02.9	-0.3
NEW	Newport	36.42	72	eP	P	11 42 03.5	0.0
	5.5nm,0.6s,mb4.7						
A11A	Hall Mountain,	36.54	71	⇓P	P	11 42 05.0	+0.6
	baz=36,SNR=6.5						
MDJ	Mudanjiang	36.78	281	P	P	11 42 07.0	+0.4
MDJ				S	S	11 47 46.0	+1.8
MDJ				PcS	PcS	11 48 15.8	+0.9
MDJ				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
MDJ				pmax	pmax		
	comp=Z,26nm,3.6s						
MDJ				LR	LR		
	comp=N,51nm,10.8s						
MDJ				LR	LR		
	comp=E,44nm,14.7s						
MDJ				LR	LR		
	comp=Z,79nm,10.4s						
K05A	Summer Lake	37.01	83	⇑P	P	11 42 09.5	+1.0
	baz=37						
I07A	Izee	37.11	80	⇓P	P	11 42 09.5	+0.1
	baz=37,SNR=8.7						
H08A	Prairie City	37.38	79	⇓P	P	11 42 11.8	+0.1
	baz=37						
D11A	Klaveano Farm,	37.48	74	⇓P	P	11 42 11.6	-0.8
	baz=37						
MOD	Modoc	37.83	83	eP	P	11 42 16.0	+0.5
G10A	Bishop Farm, J	37.91	77	⇑P	P	11 42 16.1	0.0
	baz=38,SNR=8.2						
BSMT	Bassoo Peak	37.99	72	eP	P	11 42 16.9	+0.2
J08A	Circle Bar Ran	38.13	80	⇓P	P	11 42 18.1	+0.1
	baz=38,SNR=9.0						
C13A	Hot Springs	38.20	72	⇓P	P	11 42 18.3	-0.2
	baz=38						
A14A	Double T Ranch	38.24	69	⇓P	P	11 42 19.0	+0.2
	baz=38,SNR=10						
H10A	Noah's Angus R	38.51	77	⇑P	P	11 42 20.8	-0.3
	baz=38,SNR=7.5						
WVOR	Wild Horse Val	38.55	81	eP	P	11 42 21.5	0.0
	comp=Z,5.9nm,0.8s,mb4.5						
J09A	Fry Pan Ranch,	38.57	80	⇓P	P	11 42 21.4	-0.3
	baz=38,SNR=6.2						
B14A	Marquette Ranc	38.62	70	⇑P	P	11 42 21.3	-0.7
	baz=38						
A15A	Johnson Ranch,	38.63	69	⇓P	P	11 42 21.3	-0.8
	baz=38						
I10A	Payette	38.74	78	⇑P	P	11 42 22.7	-0.4
	baz=39						
F12A	Elk City	38.78	75	⇓P	P	11 42 22.7	-0.6
	baz=39,SNR=5.4						
H11A	Donnelly	38.89	77	⇓P	P	11 42 23.3	-1.0
	baz=39						
E13A	Victor	39.05	73	⇑P	P	11 42 24.8	-0.9
	baz=39						
B15A	Bradely Ranch,	39.06	70	⇑P	P	11 42 24.6	-1.1
	baz=39,SNR=5.7						
D14A	Greenough	39.13	72	⇑P	P	11 42 25.5	-0.7
	baz=39						
A16A	West Butte Ran	39.30	69	⇓P	P	11 42 26.2	-1.5
	baz=39						
C15A	Salmond Ranch,	39.30	71	⇓P	P	11 42 27.6	-0.1
	baz=39,SNR=19						
F13A	Darby	39.31	74	⇑P	P	11 42 27.1	-0.8
	baz=39						
K10A	MacKenzie Ranc	39.43	80	⇑P	P	11 42 29.0	+0.2
	baz=39,SNR=11						
H12A	Diamond D Ranc	39.66	76	⇓P	P	11 42 29.8	-0.9
	baz=40						
MFID	Camas Ranch	39.70	78	⇓P	P	11 42 30.8	-0.3
	baz=40						
D15A	Lincoln	39.73	72	⇑P	P	11 42 30.5	-0.8
	baz=40						
CN2	Changchun	39.73	282	eP	P	11 42 33.1	+1.8
CN2				epP	pP	11 42 48.5	-2.8
CN2				eS	S	11 48 31.5	+2.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
CN2				pmax	pmax		
	comp=Z,80nm,4.0s						
G13A	Cobalt	39.74	75	⇑P	P	11 42 31.2	-0.2
	baz=40						
C16A	Fuhringer Ranc	39.79	70	⇓P	P	11 42 31.1	-0.6
	baz=40,SNR=6.9						
A17A	Triple J Farms	39.82	68	⇓P	P	11 42 31.1	-0.9
	baz=40,SNR=9.0						
F14A	Wisdom	39.87	74	⇑P	P	11 42 32.5	+0.1
	baz=40						
I12A	Atlanta	39.91	77	⇓P	P	11 42 32.8	-0.1
	baz=40,SNR=7.1						
K11A	Parker Ranch,	39.94	79	⇓P	P	11 42 33.1	+0.1
	baz=40,SNR=5.1						
E15A	Deer Lodge	39.98	73	⇑P	P	11 42 32.9	-0.4
	baz=40						
H13A	Challis	40.02	76	⇑P	P	11 42 33.5	-0.2
	baz=40						
L10A	Juniper Basin	40.07	81	⇓P	P	11 42 34.2	0.0
	baz=40,SNR=7.5						
CMB	Columbia Colle	40.09	88	eP	P	11 42 33.6	-0.8
	comp=Z,6.5nm,1.2s,mb4.3						
J12A	Stokes Ranch,	40.24	78	⇑P	P	11 42 35.8	+0.3
	baz=40						
D16A	Dana Ranch, Ca	40.30	71	⇓P	P	11 42 35.8	-0.1
	baz=40						
M10A	I.L. Ranch, Tu	40.35	81	⇑P	P	11 42 36.8	+0.3
	baz=40						
I13A	Wildhorse Cree	40.46	77	⇑P	P	11 42 37.4	+0.1
	baz=40,SNR=8.7						
L11A	Cat Creek Ranc	40.46	80	⇓P	P	11 42 37.6	+0.3
	baz=40,SNR=9.5						
HLID	Hailey	40.47	77	⇓P	P	11 42 37.5	+0.1
	baz=40,SNR=6.2						
HLID	Hailey	40.47	77	eP	P	11 42 37.7	+0.2
	comp=Z,2.6nm,0.8s,mb4.1						
H14A	Leadore	40.52	75	⇓P	P	11 42 37.9	+0.1
	baz=40						
B18A	Beardsley Farm	40.62	68	⇓P	P	11 42 38.1	-0.5
	baz=40						
K12A	Draper Farm, C	40.70	79	⇓P	P	11 42 39.7	+0.3
	baz=40,SNR=7.4						
J13A	Cove Ranch, Pi	40.71	77	⇑P	P	11 42 39.5	+0.1
	baz=40,SNR=11						
MCMT	McKenzie Canyo	40.71	75	eP	P	11 42 39.1	-0.3
	comp=Z,1.9nm,0.5s,mb4.2						
D17A	Six Diamond Ra	40.74	70	⇓P	P	11 42 40.2	+0.6
	baz=41						
G15A	Dillon	40.74	74	⇑P	P	11 42 39.1	-0.5
	baz=41						
EGMT	Eagleton	40.83

N13A	Wendover, West	42.17	80	⇑P	P	11 42 51.1	-0.2
baz=42							
O12A	Currie	42.19	82	⇓P	P	11 42 51.8	+0.3
baz=42,SNR=14							
VES	Vestal, Richgr	42.29	90	⇓P	P	11 42 52.0	-0.4
baz=42							
M14A	Sheep Mountain	42.30	79	⇑P	P	11 42 52.5	0.0
baz=42							
R10A	Warm Springs	42.45	85	⇑P	P	11 42 53.7	0.0
baz=42							
PKM	Peak Mountain	42.45	92	⇓P	P	11 42 54.3	+0.6
baz=42							
S10A	Tonopah Range,	42.50	86	⇑P	P	11 42 53.9	-0.1
baz=42							
Q11A	Duckwater	42.50	84	⇑P	P	11 42 54.3	+0.3
baz=42							
P12A	McGill	42.57	83	⇑P	P	11 42 54.7	0.0
baz=42,SNR=5.8							
K16A	Soda Springs	42.59	76	⇓P	P	11 42 55.8	+1.0
baz=42							
RLMT	Red Lodge	42.67	72	⇓P	P	11 42 55.5	+0.2
baz=42							
RLMT	Red Lodge	42.67	72	eP	P	11 42 55.3	-0.1
comp=Z,2.3nm,0.7s,mb4.0							
N14A	Grayback Hills	42.79	80	⇑P	P	11 42 56.2	-0.2
baz=43							
R11A	Troy Canyon, C	42.85	84	⇑P	P	11 42 56.8	-0.1
baz=43,SNR=6.3							
Q12A	Willow Creek R	42.89	83	⇑P	P	11 42 57.5	+0.3
baz=43							
P13A	Bates Ranch, G	43.13	82	⇑P	P	11 42 58.7	-0.5
baz=43							
MPMC	Manual Prospec	43.13	88	⇓P	P	11 42 58.7	-0.5
baz=43							
L16A	Fish Haven	43.16	77	⇑P	P	11 42 58.9	-0.5
baz=43							
FURC	Furnace Creek,	43.26	87	⇓P	P	11 43 00.2	0.0
baz=43							
J18A	Kendall Valley	43.31	75	⇑P	P	11 43 00.8	+0.3
baz=43							
DUG	Dugway	43.41	80	⇑P	P	11 43 01.6	+0.1
baz=43,SNR=7.4							
DUG	Dugway	43.41	80	eP	P	11 43 01.7	+0.3
comp=Z,6.4nm,0.8s,mb4.4							
L17A	Cokeville	43.45	77	⇓P	P	11 43 01.7	0.0
baz=43							
M16A	Huntsville	43.45	78	⇑P	P	11 43 02.1	+0.4
baz=43,SNR=7.6							
R12A	Pony Springs,	43.46	84	⇓P	P	11 43 02.2	+0.4
baz=43							
LAO	LASA Array	43.57	69	eP	P	11 43 01.9	-0.7
comp=Z,3.5nm,0.6s,mb4.3							
K18A	Toltan Ranch,	43.63	76	⇑P	P	11 43 03.3	+0.1
baz=43,SNR=5.5							
S12A	Delamar Landin	43.77	85	⇑P	P	11 43 04.6	+0.2
baz=44							
T11A	Corn Creek, Al	43.77	85	⇓P	P	11 43 04.5	+0.1
baz=44,SNR=7.0							
N16A	Rees Ranch, Co	43.83	79	⇑P	P	11 43 04.8	0.0
baz=44							
BW06	Boulder Array	43.84	75	⇑P	P	11 43 04.6	-0.2
baz=44,SNR=12							
BW06	Boulder Array	43.84	75	eP	P	11 43 04.8	-0.1
comp=Z,4.8nm,0.8s,mb4.3							
PDAR	Pinedale Array	43.84	75	P	P	11 43 04.7	-0.2
comp=Z,4.9nm,0.7s,mb4.3,baz=310,slow=4.2,SNR=37							
Q14A	Sevier Lake (B	43.87	82	⇑P	P	11 43 04.9	-0.2
baz=44,SNR=8.8							
M17A	Scullys Gap (B	43.94	77	⇑P	P	11 43 05.4	-0.2
baz=44							
R13A	O'Grain Ranch,	43.95	83	⇑P	P	11 43 06.4	+0.6
baz=44							
GSC	Goldstone	44.05	89	⇑P	P	11 43 06.6	0.0
baz=44							
L18A	Fontenelle, Gr	44.05	77	⇑P	P	11 43 06.0	-0.5
baz=44							
P15A	Leamington	44.12	81	⇓P	P	11 43 07.3	+0.3
baz=44,SNR=5.1							
O16A	Springville	44.20	79	⇑P	P	11 43 07.7	0.0
baz=44							
BFSC	Mount Baldy Ra	44.22	91	⇓P	P	11 43 07.6	-0.4
baz=44							
K19A	Absolon Red Bu	44.23	75	⇓P	P	11 43 07.4	-0.6
baz=44,SNR=8.8							
M18A	Lyman	44.33	77	⇓P	P	11 43 08.5	-0.2
baz=44							
L19A	Farson	44.35	76	⇑P	P	11 43 08.7	-0.2
baz=44							
S13A	Holt Ranch, En	44.39	84	⇓P	P	11 43 09.7	+0.4
baz=44,SNR=5.3							
Q15A	Fillmore	44.41	81	⇓P	P	11 43 09.3	-0.1
baz=44							
V11A	Goodsprings	44.55	87	⇑P	P	11 43 10.2	-0.4
baz=44							
K20A	Yellowstone Ra	44.63	75	⇑P	P	11 43 10.4	-0.7
baz=44							
U12A	Valley of Fire	44.71	86	⇑P	P	11 43 12.3	+0.5
baz=44							
MSU	Marysvale	44.84	82	eP	P	11 43 13.0	+0.2
TMUT	Trail Mountain	44.94	80	eP	P	11 43 14.5	+0.9
comp=Z,9.0nm,0.7s,mb4.6							
V12A	Nelson	44.98	87	⇑P	P	11 43 14.1	+0.1
baz=45							
U13A	Pakoon Wash	45.07	85	⇑P	P	11 43 15.2	+0.5
baz=45							
GMRC	Granite Mounta	45.10	88	⇓P	P	11 43 14.9	0.0
baz=45							
P17A	Butcher Ranch,	45.11	80	⇓P	P	11 43 14.9	-0.1
baz=45,SNR=5.7							
N19A	John Jarvie Ra	45.19	77	⇓P	P	11 43 15.5	-0.1
baz=45							
Q16A	Castle Valley	45.20	81	⇑P	P	11 43 15.4	-0.3
baz=45							
S15A	Panguitch	45.25	83	⇑P	P	11 43 16.5	+0.4
baz=45							
P18A	Preston Nutter	45.32	79	⇓P	P	11 43 17.1	+0.5
baz=45							
R16A	Teasdale	45.40	82	⇑P	P	11 43 17.7	+0.4
baz=45							
M20A	Sweetwater, Wa	45.42	76	⇑P	P	11 43 17.5	+0.1
baz=45							
V13A	Grand Canyon W	45.43	86	⇑P	P	11 43 17.9	+0.4
baz=45							
SRU	San Rafael	45.47	80	⇑P	P	11 43 18.0	+0.1
baz=45,SNR=11							
SRU	San Rafael	45.47	80	eP	P	11 43 18.4	+0.6
comp=Z,7.1nm,0.7s,mb4.5							
U14A	Mt Trumbull	45.55	85	⇑P	P	11 43 18.8	+0.2
baz=45							
O19A	Miners Draw (B	45.58	78	⇑P	P	11 43 18.5	-0.2
baz=45,SNR=18							
L21A	Rawlins	45.62	75	⇓P	P	11 43 18.8	-0.2
baz=45							
T15A	Red Dirt Ranch	45.66	84	⇑P	P	11 43 19.5	+0.1
baz=46							
Q18A	Rafter H Ranch	45.71	80	⇑P	P	11 43 19.6	-0.1
baz=46,SNR=6.6							
N20A	Spence Gulch,	45.77	77	⇓P	P	11 43 20.4	+0.2
baz=46							
R17A	Hanksville Air	45.79	81	⇓P	P	11 43 20.4	0.0
baz=46,SNR=5.9							
M21A	Separation Pea	45.84	75	⇑P	P	11 43 20.4	-0.4
baz=46							
W13A	Hualapai Mount	45.98	87	⇓P	P	11 43 21.7	-0.2
baz=46							
P19A	Cripple Cowboy	46.08	78	⇑P	P	11 43 22.5	-0.1
baz=46,SNR=7.2							
U15A	North Rim	46.09	84	⇓P	P	11 43 23.3	+0.5
baz=46							
V14A	Boquillas Ranc	46.11	86	⇑P	P	11 43 22.7	-0.2
baz=46							
O20A	White River Ci	46.22	77	⇓P	P	11 43 23.3	-0.4
baz=46,SNR=12							
S17A	Black Ridge (B	46.23	82	⇑P	P	11 43 24.1	+0.2
baz=46,SNR=10							
N21A	Black Mountain	46.27	76	⇑P	P	11 43 23.9	-0.1
baz=46,SNR=7.3							
R18A	Canyonlands Na	46.31	80	⇑P	P	11 43 23.7	-0.8
baz=46							
X13A	Yucca	46.35	87	⇓P	P	11 43 24.4	-0.4
baz=46							
W14A	Seligman	46.40	86	⇓P	P	11 43 25.4	+0.2
baz=46							
Y12C	Blythe	46.48	89	⇓P	P	11 43 25.9	0.0
baz=46							
V15A	Kaibab Nationa	46.56	85	⇓P	P	11 43 26.4	0.0
baz=46							
O21A	Pagoda	46.63	77	⇓P	P	11 43 26.7	-0.3
baz=46							
T17A	Navajo Res., N	46.64	82	⇑P	P	11 43 26.8	-0.3
baz=46							
S18A	Hurst Farm, Bl	46.69	81	⇑P	P	11 43 27.2	-0.3
baz=46,SNR=17							
R19A	Curley Farm, L	46.75	80	⇑P	P	11 43 27.8	-0.1
baz=47							
N22A	Wattenberg Ran	46.88	75	⇓P	P	11 43 28.7	-0.1
baz=47							
PV04	Paradox Valley	46.91	80	eP	P	11 43 29.3	+0.2
T18A	Mexican Hat	47.12	82	⇓P	P	11 43 30.0	-0.8
baz=47,SNR=8.0							
S19A	Harvey Farm, M	47.18	80	⇑P	P	11 43 31.1	-0.1
baz=47,SNR=10.0							
PV01	Paradox Valley	47.27	80	eP	P	11 43 31.6	-0.3
comp=Z,741nm,0.7s							
R20A	Redvale	47.35	80	⇓P	P	11 43 32.4	-0.1
baz=47							
X15A	Humboldt	47.40	86	⇑P	P	11 43 33.2	+0.2
baz=47							
Q21A	Lamborn Mesa,	47.43	78	⇓P	P	11 43 33.2	0.0
baz=47							
V17A	Tonalea, Kykot	47.54	84	⇓P	P	11 43 34.5	+0.5
baz=47							
SMCO	Snowmass	47.58	78	eP	P	11 43 34.4	+0.1
comp=Z,2.5nm,0.6s,mb4.2							
U18A	Rough Rock, Ch	47.58	82	⇑P	P	11 43 34.8	+0.4
baz=47							
Q22A	Crested Butte,	47.81	78	⇓P	P	11 43 36.1	0.0
baz=48,SNR=6.1							
T19A	Beclabito	47.83	81	⇓P	P	11 43 36.1	-0.3
baz=48,SNR=20							
MVCO	Mesa Verde	47.91	81	⇓P	P	11 43 37.4	+0.5
baz=48							
MVCO	Mesa Verde	47.91	81	eP	P	11 43 36.4	-0.5
comp=Z,22nm,1.8s,mb4.7							
S21A	Coal Bank Pass	48.05	80	⇑P	P	11 43 38.3	+0.4
baz=48							
U19A	Dine' College,	48.07	82	⇓P	P	11 43 38.1	0.0
baz=48							
R22A	Saguache, Gunn	48.31	78	⇑P	P	11 43 40.7	+0.7
baz=48							
SONM	Songino Array	48.43	298	ScP	ScP	11 48 55.5	+3.0
comp=Z,0.4nm,0.3s,baz=35,slow=5.3,SNR=2.9							
X18A	Snowflake	48.78	84	⇑P	P	11 43 44.0	+0.4
baz=49							
Y17A	Roosevelt	48.79	86	⇓P	P	11 43 43.9	+0.3
baz=49							
V20A	Brimhall	48.85	82	⇑P	P	11 43 44.2	+0.1
baz=49							
T22A	Edith	49.01	80	⇓P	P	11 43 45.2	-0.1
baz=49,SNR=7.6							
X19A	St. Johns	49.25	84	⇑P	P	11 43 47.7	+0.5
baz=49							
SDCO	Great Sand Dun	49.38	78	eP	P	11 43 48.5	+0.4
comp=Z,2.3nm,0.7s,mb4.2							
X20A	Quemado	49.66	83	⇑P	P	11 43 50.7	+0.4
baz=50							
SPITS	Spitsbergen Ar	49.83	357	P	P	11 43 51.9	+0.9
comp=Z,0.6nm,0.4s,mb3.9,baz=20,slow=5.3,SNR=7.8							
118A	Homack Ranch,	50.04	86	⇑P	P	11 43 53.3	0.0
baz=50							
Y20A	Horse Springs,	50.16	84	⇓P	P	11 43 54.6	+0.5
baz=50							
X21A	Alamocita Cree	50.16	83	⇓P	P	11 43 54.8	+0.6
baz=50							
V23A	Ortiz Mt. (NFS	50.28	80	⇑P	P	11 43 55.6	+0.6
baz=50							
119A	Ashpeak Ranch,	50.37	86	⇑P	P	11 43 55.9	+0.3
baz=50							
U24A	Moreno Valley	50.39	79	⇓P	P	11 43 56.7	+0.9
baz=50							
Z20A	Nine Sixteen R	50.57	85	⇓P	P	11 43 57.8	+0.6
baz=50							
LAZ	Ladron	50.59	82	eP	P	11 43 57.7	+0.4
comp=Z,1.2nm,0.7s,mb4.0							
X22A	Bernardo	50.60	82	⇑P	P	11 43 58.5	+1.1
baz=50							
ANMO	Albuquerque	50.64	81	eP	P	11 43 58.7	+1.0
comp=Z,6.5nm,1.6s,mb4.4							
318A	Bisbee	50.85	87	⇓P	P	11 43 59.4	0.0
baz=51							
U25A	Circle Dot Ran	50.92	79	⇑P	P	11 44 00.2	+0.4
baz=51							
Y22A	Socorro	51.01	83	⇓P	P	11 44 01.0	+0.5
baz=51,SNR=5.4							
W24A	Lazy 6 Ranch,	51.10	80	⇑P	P	11 44 01.6	+0.4
baz=51							
V25A	Rancho No Teng	51.17	79	⇓P	P	11 44 01.8	+0.1
baz=51							
U26A	Atchley Ranch,	51.33	78	⇑P	P	11 44 02.7	-0.1
baz=51,SNR=13							
319A	Douglas	51.33	87	⇑P	P	11 44 03.2	+0.3
baz=51							
220A	Playas Peak, P	51.43	86	⇓P	P	11 44 04.0	+0.3
baz=51							
121A	Cookes Peak, D	51.46	85	⇓P	P	11 44 04.2	+0.3
baz=51							
Y23A	Lovelace Mesa,	51.57	82	⇑P	P	11 44 04.9	+0.3
baz=51,SNR=7.1							
W25A	X Bar L Ranch,	51.67	80	⇑P	P	11 44 05.5	0.0
baz=52,SNR=9.3							
V26A	Tequesquite Ra	51.70	79	⇓P	P	11 44 05.4	-0.2
baz=52,SNR=9.5							
Y24A	Capitan	51.95	82	⇑P	P	11 44 07.7	+0.1
baz=52,SNR=15							
X25A	Clemmons Ranch	52.02	81	⇑P	P	11 44 07.8	-0.2
baz=52							
Y25A	Mesa, Roswell	52.41	81	⇓P	P	11 44 10.4	-0.5
baz=52,SNR=5.6							
X26A	CR and CF Fran	52.52	80	⇓P	P	11 44 11.2	-0.5
baz=52							
W27A	Bowe Ranch, En	52.63	79	⇑P	P	11 44 12.3	-0.2
baz=52							
124A	Stringfield Ra	52.77	83	⇑P	P	11 44 13.5	-0.1
baz=53							
Z25A	Roswell	52.83	82	⇑P	P	11 44 13.8	-0.2
baz=53							
Y27A	Causey	53.36	80	⇓P	P	11 44 17.6	-0.4
baz=53,SNR=11							
MNTX	Cornudas Mount	53.51	84	eP	P	11 44 19.0	0.0
comp=Z,2.1nm,0.8s,mb4.2							
MSTX	Muleshoe	53.54	80	⇓P	P	11 44 18.6	-0.6
baz=53							
126A	Clayton Basin,	53.69	82	⇑P	P	11 44 20.0	-0.3
baz=54							
Z27A	Tatum	53.72	81	⇑P	P	11 44 19.8	-0.7
baz=54,SNR=6.5							
GDL2	Guadalupe Moun	53.78	82	eP	P	11 44 21.1	+0.1
comp=Z,1.6nm,0.8s,mb4.1							
325A	Bean Ranch, Si	53.99	84	⇓P	P	11 44 22.3	-0.2
baz=54							
226A	Malaga, Loving	54.04	82	⇓P	P	11 44 22.7	-0.2
baz=54							
425A	Indio Mountain	54.39	84	⇓P	P	11 44 25.3	-0.1
baz=54							
326A	Caldwell Ranch	54.63	83	⇓P	P	11 44 27.3	0.0
baz=54							
426A	McDonald Obser	55.05	84	⇑P	P	11 44 29.9	-0.3
baz=55							
328A	Wristen Ranch,	55.30	82	⇓P	P	11 44 31.3	-0.7
baz=55,SNR=5.5							
427A	Hayter Ranch,	55.31	83	⇑P	P	11 44 31.4	-0.7
baz=55							
526A	Mary Lane Ranc	55.45	84	⇓P	P	11 44 32.3	-0.8
baz=55							
527A	Woodward Ranch	55.68	84	⇑P	P	11 44 34.4	-0.3
baz=56							
626A	Big Bend Ranch	55.77	85	⇑P	P	11 44 35.3	-0.2
baz=56							
428A	Kincaid Ranch,	55.84	83	⇑P	P	11 44 35.6	-0.3
baz=56,SNR=7.8							
528A	Cox Ranch, San	56.17	83	⇓P	P	11 44 37.7	-0.6
baz=56,SNR=5.4							
TXAR	Lajitas Array	56.22	84	P	P	11 44 38.2	-0.3
comp=Z,2.8nm,0.8s,mb4.3,baz=301,slow=6.4,SNR=28							
627A	Terlingua Ranc	56.30	84	⇑P	P	11 44 38.8	-0.4
baz=56							
628A	Black Gap, Mar	56.59	84	⇓P	P	11 44 40.5	-0.7
baz=56							
LZH	Lanzhou	57.44	288	eP	P	11 44 53.6	+6.4
LZH				pP	pP	11 45 09.5	+1.2
LZH				sP	sP	11 45 16.7	-1.0
LZH				ePP	PP	11 47 02.8	+7.7
LZH				pmax	pmax		
comp=Z,15nm,1.3s,mb4.9							
LZH				pmax	pmax		
comp=Z,49nm,7.3s							
LZH				LR	LR		
comp=N,210nm,16.7s							
LZH				LR	LR		
comp=Z,260nm,19.0s							
FVM	French Village	58.10	68	eP	P	11 44 50.1	-1.7
MIAR	Mount Ida	58.66	73	eP	P	11 44 54.7	-1.0
KURK	Kurchatov	60.22	315	P	P	11 45 06.9	+0.7
comp=Z,0.3nm,0.5s,mb3.6,baz=43,slow=6.9,SNR=2.4							
KURK				pP	pP	11 45 25.5	-2.0
comp=Z,0.6nm,0.5s,baz=40,slow=6.1,SNR=2.9							
MKAR	Makanchi Array	61.43	310	P	P	11 45 15.6	+1.2
comp=Z,0.3nm,0.3s,mb3.8,baz=78,slow=12,SNR=5.0							
MKAR	Makanchi Array	61.43	310	P	P	11 45 15.6	+1.2
BVAR	Borovoye Array	61.86	321	P	P	11 45 17.8	+0.7
comp=Z,0.9nm,0.4s,mb4.1,baz=67,slow=7.0,SNR=4.9							
GYA	Guiyang	62.58	278	P	P	11 45 23.8	+1.3
GYA				pmax	pmax		
comp=Z,10.0nm,1.0s,mb4.7							
NOA	NORSAR Array B	67.13	357	P	P	11 45 50.4	-1.0
comp=Z,1.1nm,0.8s,mb3.7,baz=4.3,slow=6.6,SNR=3.0							
AKASG	Malin Array Be	75.57	344	P	P	11 46 40.5	-1.8
comp=Z,0.6nm,0.4s,mb3.6,baz=27,slow=6.4,SNR=2.5							
WRA	Warramunga Arr	84.19	227	P	P	11 47 28.5	-0.7
comp=Z,2.9nm,1.4s,mb3.9,baz=32,slow=5.9,SNR=6.0							
WRA				pP	pP	11 47 47.0	-4.6
comp=Z,0.3nm,0.6s,baz=34,slow=5.8,SNR=3.0							
WRA	Warramunga Arr	84.19	227	P	P	11 47 28.5	-0.7
WRA				pP	pP	11 47 47.0	-4.6
ASAR	Alice Springs	87.63	226	P	P	11 47 46.3	+0.2
comp=Z,0.7nm,0.7s,mb3.8,baz=21,slow=5.0,SNR=7.2							
ASAR				pP	pP	11 48 05.0	-3.7
comp=Z,1.1nm,0.7s,baz=24,slow=4.9,SNR=8.2							
LBTB	Lobatse	148.77	322	PKPbc	PKPbc	11 54 43.8	-1.0
comp=Z,2.6nm,0.7s,baz=54,slow=3.8,SNR=4.1							
BOSA	Boshof	152.13	319	PKPbc	PKPbc	11 54 52.3	-0.4
comp=Z,2.4nm,0.6s,baz=72,slow=7.8,SNR=6.2							

NIED ***05*** *11:37:00, 36°.10N×140°.10E, h77km, Mw3.7 Best double couple: M0:3.78000×10^14 NP1:φ=347.00000°, δ70.00000°, λ67.00000°. NP2:φ=218.00000°, δ30.00000°, λ137.00000°.*
IDC ***05*** *11:37:16.2±5.1, 37°.29N×139°.88E, h132km±36km, mb3.1/2, mb1 3.4/2, mb1mx2.9/25, mbtmp3.1/2, Error ellipse: s-maj=75.7km s-min=60.7km az=113.0*
ISCJB ***05*** *11:37:17.1±0.6, 36°.08N±0°.04×140°.17E±0°.06, h75km±6km, mb3.5/2, Error ellipse: s-maj=8.4km s-min=5.9km az=39.3*
NEIC ***05*** *11:37:18.7, 36°.14N×140°.10E, h66km, MG3.6(JMA), After JMA.*
JMA ***05*** *11:37:18.7±0.1, 36°.14N×140°.10E, h66km±1km, M3.6 Broadband fault plane solution: P waves. NP1: φ=204.00000°, δ28.00000°, λ94.00000°. NP2:φ=19.00000°, δ62.00000°, λ88.00000°. Principal axes: T Plg73.0000°, Azm284.0000°; N Plg2.0000°, Azm20.0000°; P Plg17.0000°, Azm111.0000°;*
JMA Felt II J1.
ISC 05 11:37:18.1±0.6, 36°.08N±0°.04×140°.16E±0°.05, h68km±6km, n15, σ0°.60/27, mb3.5/2, 2C-6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYT	Yasato	0.15	10	⇑P	Pn	11 37 28.6	+0.3
JYT				S	Sn	11 37 35.8	+0.1
JAG	Ashikaga	0.67	301	⇓P	Pn	11 37 32.3	-0.2
JAG				eS	Sn	11 37 42.0	-1.2
JKT	Katashina	1.00	313	⇓P	Pn	11 37 36.1	-0.5
JKT				eS	Sn	11 37 49.6	-0.7
JRY	Ryogami san	1.02	267	⇓P	Pn	11 37 36.7	-0.1
JRY				eS	Sn	11 37 50.3	-0.4
JOD2	Odawara 2	1.20	227	⇓P	Pn	11 37 39.4	+0.3
JOD2				eS	Sn	11 37 54.0	-0.7
BSO3	Boso 3	1.31	167	P	Pn	11 37 41.3	+0.8
JFY	Yanaizu	1.37	345	⇓P	Pn	11 37 41.3	0.0
JFY				S	Sn	11 37 58.5	-0.3
JFK	Kawauchi	1.40	24	⇑P	Pn	11 37 41.9	+0.2
JFK				eS	Sn	11 37 59.7	+0.2
JFT	Otama	1.44	6	⇓P	Pn	11 37 42.6	+0.4
JFT				eS	Sn	11 38 00.4	0.0
JYN	Shimob	1.44	247	P	Pn	11 37 42.7	+0.5
JYN				eS	Sn	11 38 00.4	0.0
MJAR	Matsushiro Arr	1.64	287	P	Pn	11 37 44.4	-0.5
21nm,0.3s,baz=60,slow=13,SNR=144							
MJAR				S	Sn	11 38 06.4	+1.2
12nm,0.3s,baz=36,slow=26,SNR=9.0							
MAJO	Matsushiro	1.65	287	ePn	Pn	11 37 44.8	-0.1
MAJO				eSn	Sn	11 38 07.2	+2.0
MAT	Matsushiro	1.65	287	P	Pn	11 37 45.1	+0.1
MAT				S	Sn	11 38 05.2	0.0
WRA	Warramunga Arr	55.99	187	P	P	11 46 49.0	-0.6
0.4nm,0.5s,mb3.7,baz=2.2,slow=7.6,SNR=19							
ASAR	Alice Springs	59.72	187	P	P	11 47 15.2	-0.4
0.2nm,0.6s,mb3.3,baz=0.2,slow=5.4,SNR=3.2							

ISCJB ***05*** *11:49:51.7±1.8, 15°.1S±0°.1×76°.3W±0°.2, h45km±16km, mb3.8/6, Error ellipse: s-maj=32.0km s-min=13.2km az=149.4*
IDC ***05*** *11:49:53.0±1.8, 15°.33S×76°.42W, h48km±7km, mb3.6/6, mb1 3.9/8, mb1mx3.7/19, mbtmp3.7/8, MS2.9/1, Ms1 2.9/1, ms1mx2.6/19, Error ellipse: s-maj=57.5km s-min=23.8km az=32.0*
NEIC ***05*** *11:49:53.7±1.5, 14°.83S×76°.34W, h35km, mb4.3/1, ML4.0(LIM), Error ellipse: s-maj=41.9km s-min=13.5km az=218.0*
NEIC Felt [III] at Ica.
ISC 05 11:49:52.5±1.8, 15°.1S±0°.1×76°.4W±0°.2, h35km±17km, n16, σ1°.20/15, mb3.8/6, 1D, Off coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	3.08	353	P	Pn	11 50 37.8	-1.0
28nm,0.3s,baz=124,slow=12,SNR=30							
NNA				S	Sx	11 51 19.6	
312nm,0.3s,baz=179,slow=13,SNR=12							
ARE	Arequipa	4.96	107	eP	Pn	11 51 08.0	+3.5
ARE				eS	Sx	11 52 04.0	
LPAZ	La Paz	8.09	100	P	Pn	11 51 48.3	+0.7
2.3nm,0.3s,baz=282,slow=7.6,SNR=71							
LPAZ	La Paz	8.09	100	‖ePn	Pn	11 51 48.0	+0.4
ATAH	Atahualpa	8.11	346	P	Pn	11 51 52.7	+4.8
0.7nm,0.3s,baz=198,slow=6.4,SNR=3.4							
ATAH				S	Sx	11 53 33.1	
2.6nm,0.3s,baz=78,slow=21,SNR=3.8							
ATAH				LR	LR	11 55 32.7	
comp=Z,75nm,20.9s,baz=197,slow=41							
SIV	San Ignacio	14.84	96	P	Pn	11 53 12.5	-7.4
baz=270,slow=16							
LCO	Las Campanas	14.86	160	ePn	Pn	11 53

mb1 3.7/12, mb1mx3.5/23, mbtmp3.6/12, Error ellipse: s-maj=27.1km s-min=9.9km az=67.0

ISC 05 12:00:13.0±0.4, 7°83S±0°07×117°47E±0°05, h287km±5km, n31, σ1°08/31, mb4.0/11, Bali Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHKI	Kahang-Kahang	1.91	254	P	Pn	12 00 56.7	-1.2
SRBI	Singaraja	2.25	263	P	Pn	12 01 00.1	-0.5
DNP	Denpasar	2.38	249	P	Pn	12 00 56.5	-5.4
WSI	Waingapu	3.34	123	P	Pn	12 01 09.8	-1.6
KMMI	Kalianget	3.56	282	P	Pn	12 01 14.5	+0.9
KAPI	Kappang	3.61	39	P	Pn	12 01 13.7	-0.5
	1.7nm,0.3s,baz=206,slow=13,SNR=13						
BKSI	Bulukumba	3.63	47	P	Pn	12 01 16.0	+1.5
GMJI	Gumukmas	4.01	263	P	Pn	12 01 17.8	-0.8
MMRI	Maumere	4.79	100	P	Pn	12 01 27.4	-0.2
GRJI	Gresik	5.03	280	P	Pn	12 01 31.4	+1.0
PWJI	Pagerwojo	5.61	268	P	Pn	12 01 36.9	-0.4
	2μm35nm,0.6s						
SJI	Sawahan	5.65	271	P	Pn	12 01 39.4	+1.7
PCJI	Pacitan	6.24	266	P	Pn	12 01 44.3	-0.6
KSM	Kuching	11.68	322	eP	Pn	12 02 53.7	+1.7
	12nm,0.9s						
FITZ	Fitzroy Crossi	12.94	143	P	Pn	12 03 08.2	+0.9
	1.1nm,0.3s,baz=276,slow=5.2,SNR=24						
FITZ				S	S	12 05 35.6	+5.0
	0.8nm,0.3s,baz=172,slow=15,SNR=5.7						
WRA	Warramunga Arr	20.30	128	P	P	12 04 27.6	-0.4
	2.6nm,0.5s,baz=299,slow=13,SNR=45						
WRAB	Tennant Creek	20.30	128	eP	P	12 04 27.6	-0.4
	4.1nm,0.6s						
KULM	Kulim	21.24	307	eP	P	12 04 35.5	-1.8
ASAR	Alice Springs	22.28	137	P	P	12 04 47.7	+1.1
	12nm,0.8s,mb4.3,baz=312,slow=10.0,SNR=121						
ASAR				ScP	ScP	12 11 41.0	-1.2
	0.7nm,0.7s,baz=325,slow=1.7,SNR=4.9						
NWAO	Narrogin (SRO)	24.97	180	P	P	12 05 11.5	+0.6
	3.1nm,0.4s,mb4.1,baz=341,slow=9.4,SNR=7.2						
COEN	Coen	25.95	106	eP	P	12 05 19.7	-0.3
YULB	Yu-li	31.26	7	eP	P	12 06 09.5	+2.9
	19nm,0.6s,mb4.8						
CMAR	Chiang Mai Arr	31.88	325	P	P	12 06 12.6	+0.5
	1.3nm,0.5s,mb3.7,baz=153,slow=6.8,SNR=6.7						
STKA	Stephens Creek	32.81	140	P	P	12 06 21.4	+1.3
	5.8nm,0.9s,mb4.1,baz=303,slow=9.2,SNR=6.7						
KSRS	Korea Array	46.10	12	P	P	12 08 09.3	+0.3
	3.4nm,0.9s,mb3.7,baz=193,slow=8.3,SNR=11						
MJAR	Matsushiro Arr	48.25	22	P	P	12 08 24.1	-1.3
	1.2nm,0.4s,mb3.6,baz=198,slow=8.9,SNR=6.7						
GTA	Gaotai	49.77	342	eP	P	12 08 37.4	+0.5
GTA				pP	pP	12 08 41.8	-56
GTA				sP		12 08 44.7	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.5						
SONM	Songino Array	56.28	351	P	P	12 09 23.6	-0.4
	comp=Z,4.9nm,0.7s,mb4.1,baz=170,slow=8.2,SNR=22						
MKAR	Makanchi Array	62.74	334	P	P	12 10 06.8	-1.1
	comp=Z,0.5nm,0.3s,mb3.6,baz=126,slow=7.6,SNR=7.9						
ZALV	Zalesovo Beam	67.42	340	P	P	12 10 35.9	-1.9
	comp=Z,1.0nm,0.3s,mb4.0,baz=150,slow=6.0,SNR=2.8						
TORD	Torodi Ar. Bea	116.76	281	PKP	PKPdf	12 18 22.6	-1.7
	comp=Z,0.3nm,0.5s,baz=45,slow=2.1,SNR=4.1						

*ISCJB **05** 12:07:00.5±1.0, 32°71N±0°06×105°43E±0°06, h10km, mb3.5/4, Error ellipse: s-maj=9.7km s-min=7.2km az=23.7*
*IDC **05** 12:07:01.0±1.3, 32°48N×105°36E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/25, mbtmp3.5/4, Error ellipse: s-maj=193.4km s-min=22.5km az=56.0*

ISC 05 12:07:02.9±0.9, 32°65N±0°06×105°40E±0°06, h10km, n6, σ1°22/11, mb3.5/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	Xi'an	3.25	64	Pn	Pn	12 07 56.8	+2.9
XAN				Pg	Pg	12 08 05.4	+0.2
XAN				Sn	Sn	12 08 33.9	+1.2
XAN				Sg	Sg	12 08 45.8	-1.6
XAN				smax			
	comp=N,99nm,0.6s						
XAN				smax			
	comp=E,68nm,0.5s						
LZH	Lanzhou	3.66	340	ePn	Pn	12 08 03.2	+3.7
LZH				Pg	Pg	12 08 12.4	-0.6
LZH				Sg	Sg	12 08 59.7	-0.7
LZH				smax			
	comp=N,200nm,1.0s						
LZH				smax			
	comp=E,260nm,1.0s						
LZH				LR	LR		
	comp=E,450nm,5.0s						
LZH				LR	LR		
	comp=Z,540nm,9.1s						
MKAR	Makanchi Array	22.59	315	P	P	12 12 03.7	+0.3
	comp=Z,0.3nm,0.3s,mb3.1,baz=107,slow=12,SNR=4.1						
ZALV	Zalesovo Beam	25.85	332	P	P	12 12 35.6	+1.3
	comp=Z,0.5nm,0.3s,mb3.5,baz=134,slow=12,SNR=1.9						
WRA	Warramunga Arr	59.17	148	P	P	12 17 02.8	-1.2
	comp=Z,0.7nm,0.7s,mb3.8,baz=335,slow=8.4,SNR=5.2						
ASAR	Alice Springs	62.26	150	P	P	12 17 24.1	-0.9
	comp=Z,0.4nm,0.8s,mb3.6,baz=331,slow=6.6,SNR=4.2						

*ISCJB **05** 12:16:56.3±2.3, 44°10N±0°07×128°5W±0°1, h6km±18km, mb3.5/2, MS2.9/2, Error ellipse: s-maj=15.9km s-min=9.8km az=148.5*
*IDC **05** 12:16:57.5±2.5, 44°10N×128°38W, h0km, mb3.5/3, mb1 3.7/10, mb1mx3.6/30, mbtmp3.5/10, ML3.5/7, MS3.1/2, Ms1 3.0/2, ms1mx2.4/22, Error ellipse: s-maj=47.5km s-min=17.0km az=56.0*
*NEIC **05** 12:16:57.6±2.3, 44°05N×128°57W, h10km, ML3.0, Error ellipse: s-maj=27.8km s-min=10.6km az=70.0*

ISC 05 12:16:58.4±2.9, 44°09N±0°07×128°5W±0°1, h7km±21km, n24, σ1°04/25, mb3.5/2, MS2.9/2, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COR	Corvallis	3.76	81	ePn	Pn	12 17 55.9	-0.9
COR				eSn	Sn	12 18 41.9	+0.6
HUMO	Hull Mountain	4.31	108	ePn	Pn	12 18 02.2	-2.1
HUMO				eSn	Sn	12 18 53.2	-1.6
RVW	Rose Valley	4.56	61	P	Pn	12 18 07.4	-0.4
NLWA	Neilton Lookou	4.63	43	ePn	Pn	12 18 08.1	-0.6
MTMW	Mount Mitchell	4.86	64	P	Pn	12 18 12.2	+0.3
YBH	Yreka Blue Hor	4.86	117	Pn	Pn	12 18 10.4	-1.5
	0.6nm,0.3s,baz=308,slow=10,SNR=9.3						
YBH				Sn	Sn	12 19 08.9	+0.4
	0.2nm,0.3s,baz=331,slow=19,SNR=2.7						
HOOD	Mount Hood Mea	5.03	73	ePn	Pn	12 18 13.4	-0.8
VFP	Flag Point	5.16	74	P	Pn	12 18 16.8	+0.7
LON	Longmire	5.41	58	ePn	Pn	12 18 19.2	-0.2
	15nm,0.8s						
JCW	Jim Creek	6.14	46	ePn	Pn	12 18 30.6	+1.2
	9.1nm,0.4s						
RPW	Rockport	6.51	46	ePn	Pn	12 18 34.1	-0.5
	7.1nm,0.6s						
BBB	Bella Bella	8.10	2	Pn	Pn	12 18 55.5	-0.9
	0.3nm,0.3s,baz=29,slow=16,SNR=7.3						
BBB	Bella Bella	8.10	2	Pn	Pn	12 18 55.5	-0.9
NVAR	Mina Array Bea	9.53	123	Pn	Pn	12 19 17.2	+1.1
	0.1nm,0.3s,baz=287,slow=14,SNR=6.0						
NVAR	Mina Array Bea	9.53	123	Pn	Pn	12 19 17.2	+1.1
ELK	Elko	10.36	104	Pn	Pn	12 19 29.6	+2.2
	0.1nm,0.3s,baz=295,slow=9.6,SNR=4.5						
PDAR	Pinedale Array	13.83	89	Pn	Pn	12 20 17.0	+2.2
	0.1nm,0.3s,baz=260,slow=8.4,SNR=4.5						
DLBC	Dease Lake	14.40	357	Pn	Pn	12 20 22.5	+0.1
	0.1nm,0.3s,baz=168,slow=19,SNR=3.1						
ANMO	Albuquerque	19.25	111	P	Pn	12 21 24.4	+0.2
	0.1nm,0.3s,baz=301,slow=12,SNR=4.0						
YKA	Yellowknife Ar	20.14	19	P	P	12 21 33.4	+0.7
	1.0nm,0.7s,baz=199,slow=10,SNR=4.6						
ULM	Lac du Bonnet	22.89	63	LR	LR	12 30 47.5	
	comp=Z,44nm,20.6s,MS2.9,baz=342,slow=36						
INK	Inuvik	24.42	355	LR	LR	12 31 01.0	
	comp=Z,40nm,19.1s,MS2.9,baz=74,slow=35						
TXAR	Lajitas Array	24.64	118	P	P	12 22 20.0	+0.5
	0.5nm,0.9s,mb3.1,baz=289,slow=7.8,SNR=5.2						
LPAZ	La Paz	81.44	122	P	P	12 29 16.0	-0.2
	0.9nm,0.6s,mb3.9,baz=5.5,slow=4.8,SNR=3.3						

NEIC 05 12:23:16.9, 38°37S×176°00E, h177km, MG4.7(WEL), After WEL., North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHTZ	Whakaora	0.30	186	P	Pn	12 23 41.0	+0.4
KARZ	Kaharoa	0.40	29	P	Pn	12 23 40.9	-0.1
KARZ				S	Sn	12 23 59.9	+0.6
WATZ	Wairara	0.40	212	P	Pn	12 23 41.2	+0.3
HATZ	Hinemaiaia	0.53	172	P	Pn	12 23 41.4	0.0
RATZ	Rangitukua	0.53	200	P	Pn	12 23 41.6	+0.2
RITZ	Rihia Road	0.62	190	P	Pn	12 23 41.7	-0.1
EDRZ	Edgecumbe	0.64	66	P	Pn	12 23 41.8	-0.2
KATZ	Kakaramea	0.65	201	P	Pn	12 23 42.2	+0.2
TGRZ	Tauranga	0.67	18	P	Pn	12 23 41.9	-0.3
WTVZ	West Tongariro	0.81	203	P	Pn	12 23 43.1	+0.2
TWVZ	Taurewa	0.83	212	P	Pn	12 23 43.2	+0.2
NGZ	Ngauruhoe	0.86	201	P	Pn	12 23 43.3	0.0
URZ	Urewera	0.88	83	P	Pn	12 23 42.6	-0.8
BKZ	Black Stump Fm	0.88	154	P	Pn	12 23 43.2	-0.2
HIZ	Hauiti	0.91	261	P	Pn	12 23 43.5	-0.1
TUVZ	Tukino	0.94	197	P	Pn	12 23 44.1	+0.3
FWVZ	Far West T-bar	0.95	201	P	Pn	12 23 44.2	+0.3
WNVZ	Wahianoa	1.01	198	P	Pn	12 23 44.6	+0.3
MOVZ	Moawhango	1.05	190	P	Pn	12 23 44.5	-0.2
MWZ	Matawai	1.20	89	P	Pn	12 23 45.9	0.0
VRZ	Vera Road	1.23	232	P	Pn	12 23 45.8	-0.3
MKAZ	Moumakai	1.42	332	P	Pn	12 23 47.4	-0.5
KNZ	Kokohu	1.46	117	P	Pn	12 23 48.6	+0.4
WAZ	Wanganui	1.59	209	P	Pn	12 23 49.1	-0.4
TSZ	Takapari Road	1.69	181	P	Pn	12 23 49.9	-0.5
NEZ	North Egmont	1.74	238	P	Pn	12 23 51.3	+0.4
DFE	Dawson Falls	1.76	237	P	Pn	12 23 51.4	+0.2
PUZ	Puketiti	1.80	81	P	Pn	12 23 51.1	-0.5
DVHZ	Dannevirke	1.93	176	P	Pn	12 23 52.5	-0.4
MXZ	Matakaoa Point	1.99	67	P	Pn	12 23 53.4	-0.2
MRZ	Mangatainoka R	2.31	188	P	Pn	12 23 55.7	-1.5
KIW	Kapiti Island	2.63	198	P	Pn	12 23 59.1	-1.7
MTW	Mount Morrison	2.81	188	P	Pn	12 24 01.1	-1.9
CAW	Cannon Point	2.83	194	P	Pn	12 24 01.4	-1.8
MRW	Makara Radio	3.03	199	P	Pn	12 24 03.6	-2.0
PAWZ	Paruwai Farm	3.04	188	P	Pn	12 24 03.7	-2.1
WEL	Wellington	3.06	198	P	Pn	12 24 04.1	-2.0
MSWZ	Moikau Station	3.10	191	P	Pn	12 24 04.3	-2.2
SNZO	South Karori	3.10	198	P	Pn	12 24 04.2	-2.3
TCW	Tory Channel	3.13	205	P	Pn	12 24 04.9	-2.1
BHW	Baring Head	3.16	196	P	Pn	12 24 05.0	-2.2
NNZ	Nelson	3.49	215	P	Pn	12 24 08.5	-2.8
QRZ	Quartz Range	3.63	226	eP	Pn	12 24 10.0	-3.2
BSWZ	Blackbirch Sta	3.72	205	P	Pn	12 24 11.8	-2.4
THZ	Tophouse	4.14	214	P	Pn	12 24 16.7	-2.9
KHZ	Kahutara	4.46	204	P	Pn	12 24 20.9	-2.8
LTZ	Lake Taylor	5.24	212	P	Pn	12 24 30.7	-3.1
CRLZ	Canterbury Las	5.80	205	P	Pn	12 24 37.1	-3.9
MQZ	McQueen's Vall	5.90	204	P	Pn	12 24 37.9	-4.5
WVZ	Waitaha Valley	6.17	219	P	Pn	12 24 42.3	-3.7
RPZ	Rata Peaks	6.52	213	P	Pn	12 24 47.3	-3.2
FOZ	Fox Glacier	7.05	221	P	Pn	12 24 52.2	-5.3
LBZ	Lake Benmore	7.43	214	P	Pn	12 24 57.9	-4.6
ODZ	Otahua Downs	7.78	209	P	Pn	12 25 03.5	-3.6
JCZ	Jackson Bay	7.89	221	P	Pn	12 25 03.6	-5.0
EAZ	Earnscleugh	8.48	214	P	Pn	12 25 11.5	-4.9

IDC 05 12:37:14.5±8.0, 5°94S×150°65E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.5/15, mbtmp3.7/3, Error ellipse: s-maj=125.2km s-min=88.2km az=10.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.10	227	P	P	12 42 01.0	+0.2
	0.6nm,0.4s,baz=54,slow=11,SNR=5.9						
ASAR	Alice Springs	23.88	221	P	P	12 42 29.9	-0.2
	1.1nm,0.7s,baz=54,slow=9.1,SNR=11						
STKA	Stephens Creek	27.16	197	P	P	12 42 59.8	+0.1
	3.0nm,1.0s,baz=7.1,slow=8.1,SNR=3.0						

*IDC **05** 12:48:25.7±1.0, 39°29N×72°66E, h0km, mb3.8/7, mb1 3.8/13, mb1mx3.6/31, mbtmp3.7/13, ML3.4/6, MS2.8/1, Ms1 2.8/1, ms1mx2.1/28, Error ellipse: s-maj=19.3km s-min=15.7km az=128.0*
*NEIC **05** 12:48:28.9±1.9, 39°46N×72°35E, h10km, Error ellipse: s-maj=26.9km s-min=12.6km az=168.0*
*ISCJB **05** 12:48:28.8±2.1, 39°26N±0°05×72°49E±0°06, h32km±16km, mb3.7/7, Error ellipse: s-maj=8.3km s-min=8.0km az=44.0*
*NNC **05** 12:48:29.7±6.2, 39°61N×72°69E, h0km, mb3.6, mpv3.8, Error ellipse: s-maj=57.5km s-min=34.3km az=178.0*

ISC 05 12:48:29.1±2.0, 39°25N±0°05×72°47E±0°06, h21km±16km, n41, σ1°07/47, mb3.7/7, 9C-3D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	2.73	83	⇑iPn	Pn	12 49 10.4	-1.1
KSH				Sn	Sn	12 49 42.5	-1.3
KSH				smax			
	comp=N,430nm,0.8s						
KSH				smax			
	comp=E,330nm,0.6s						
AML	Almayashu	3.02	17	P	Pn	12 49 16.3	+0.7
	SNR=46						
AML	Almayashu	3.02	17	ePn	Pn	12 49 15.2	-0.3
AML				eSn	Sn	12 50 9.0	-0.2
UCH	Uchtor	3.35	27	P	Pn	12 49 20.5	+0.4
	SNR=49						
UCH	Uchtor	3.35	27	ePn	Pn	12 49 20.3	+0.2
UCH				eSn	Sn	12 57.8	-1.4
KZA	Kyzart	3.52	36	P	Pn	12 49 23.4	+0.9
	SNR=10						
EKS2	Erkin-Say	3.54	16	P	Pn	12 49 24.8	+2.0
	SNR=12						
EKS2	Erkin-Say	3.54	16	ePn	Pn	12 49 23.1	+0.3
EKS2				eSn	Sn	12 50 05.8	+1.8
AAK	Ala-Archa	3.71	24	P	Pn	12 49 26.0	+1.0
	SNR=14						
AAK	Ala-Archa	3.71	24	Pn	Pn	12 49 25.9	+0.9
	comp=E,0.1nm,0.3s,baz=183,slow=5.6,SNR=18						
AAK				Sn	Sn	12 50 08.7	+0.7
	comp=E,0.2nm,0.3s,baz=119,slow=22,SNR=8.7						
AAK	Ala-Archa	3.71	24	Pn	Pn	12 49 25.9	+0.9
AAK				Sn	Sn	12 50 08.7	+0.7
KBK	Karagaybulak	3.88	28	P	Pn	12 49 28.9	+1.5
	SNR=12						
CHMS	Chumysh	4.12	24	P	Pn	12 49 31.0	+0.3
	SNR=8.8						
KK31	Karatay Array	4.12	340	⇑Pn	Pn	12 49 31.0	+0.4
	comp=E,10nm,0.5s,baz=157,slow=14,SNR=20						
KK31				⇓Sn	Sn	12 50 17.3	-0.9
	comp=E,9.3nm,0.3s,baz=155,slow=24,SNR=5.8						
ULHL	Ulahol	4.14	43	P	Pn	12 49 31.4	+0.4
	SNR=17						
TKM2	Tokmak 2	4.36	32	⇑Pn	Pn	12 49 34.1	+0.1
	comp=E,11nm,0.6s						
TKM2				⇑Lg		12 50 35.7	
	comp=E,19nm,0.5s						
TKM2	Tokmak 2	4.36	32	P	Pn	12 49 34.2	+0.2
	SNR=13						
TKM2	Tokmak 2	4.36	32	ePn	Pn	12 49 34.0	+0.1
MKAR	Makanchi Array	10.41	40	Pn	Pn	12 50 56.2	-0.7
	comp=E,0.1nm,0.3s,baz=218,slow=11,SNR=4.3						
MKAR				Lg		12 53 46.7	
	comp=E,0.0nm,0.3s,baz=205,slow=20,SNR=3.3						
KURBB	Kurchatov Arra	12.14	19	⇑P	Pn	12 51 14.0	-6.7
	comp=E,0.1nm,0.6s						
KURK	Kurchatov	12.25	19	⇑P	Pn	12 51 14.4	-7.7
	comp=E,0.3nm,0.7s						
KURK	Kurchatov	12.25	19	Pn	Pn	12 51 17.0	-5.2
	comp=E,0.1nm,0.3s,baz=210,slow=12,SNR=4.2						
KURK				Lg		12 54 42.5	
	comp=E,0.1nm,0.3s,baz=203,slow=27,SNR=5.1						
AB31	Akbulak array	13.42	322	⇑P	Pn	12 51 34.3	-3.8
	comp=E,0.6nm,0.4s,baz=130,slow=13,SNR=6.5						
ABKAR	Akbulak array	13.42	322	ePn	Pn	12 51 34.2	-3.8
	comp=E,1.1nm,0.4s						
VOSK	Vostochnaya	13.51	356	⇑P	Pn	12 51 42.8	+3.5
	comp=E,1.0nm,0.7s						
BVA0	Borovoye Array	13.85	355	⇑P	Pn	12 51 40.4	-3.5
	comp=E,0.2nm,0.6s,baz=173,slow=6.7,SNR=5.7						
BVAR	Borovoye Array	13.85	355	Pn	Pn	12 51 40.5	-3.4
	comp=E,0.2nm,0.3s,baz=157,slow=13,SNR=4.6						
ZRNK	Zerenda	13.91	351	⇓P	Pn	12 51 42.4	-2.3
	comp=E,0.6nm,0.5s						
AKTK	Aktyubinsk	15.14	322	Pn	Pn	12 52 00.7	-0.7
AKTO	Aktyubinsk	15.14	322	⇓P	Pn	12 52 07.4	+6.0
	comp=E,0.6nm,0.5s						
AKTO	Aktyubinsk	15.14	322	Pn	Pn	12 52 00.7	-0.7
	comp=E,0.2nm,0.3s,baz=119,slow=15,SNR=3.5						
ZALV	Zalesovo Beam	16.93	26	Pn	Pn	12 52 23.9	-0.5
	comp=E,0.6nm,0.3s,baz=213,slow=12,SNR=5.8						
GTA	Gaotai	21.12	81	eP	P	12 53 13.1	+0.8
GTA				pP		12 53 17.3	
GTA				sP	sP	12 53 20.7	-0.4
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.7						
SONM	Songino Array	25.87	60	P	P	12 53 59.1	0.0
	comp=Z,0.5nm,0.5s,baz=262,slow=10,SNR=3.5						
BRTR	Keskin Array B	29.82	283	P	P	12 54 36.2	+1.8
	comp=Z,0.6nm,0.7s,mb3.4,baz=61,slow=10,SNR=3.3						
ARCES	ARCESS Array B	39.08	336	P	P	12 55 54.1	0.0
	comp=Z,0.8nm,0.6s,mb3.6,baz=90,slow=8.1,SNR=3.5						
KSRS	Korea Array	42.94	74	LR	LR	13 17 18.8	
	comp=Z,12nm,19.5s,baz=130,slow=40						
TORD	Torodi Ar. Bea	66.96	268	P	P	12 59 20.7	+0.5
	comp=Z,0.5nm,0.3s,mb4.0,baz=53,slow=5.3,SNR=15						
YKA	Yellowknife Ar	78.44	3	P	P	13 00 27.3	-0.4
	comp=Z,0.8nm,0.6s,mb3.8,baz=344,slow=5.3,SNR=4.6						
WRA	Warramunga Arr	82.49	123	P	P	13 00 50.0	-0.1
	comp=Z,0.6nm,0.6s,mb3.7,baz=328,slow=5.0,SNR=6.9						
ASAR	Alice Springs	84.90	126	P	P	13 01 02.1	-0.2
	comp=Z,0.3nm,0.7s,mb3.5,baz=320,slow=4.1,SNR=4.2						

*CSEM **05** 13:17:39.9±0.1, 38°28N×38°10E, h10km, MD2.9, Error ellipse: s-maj=3.3km s-min=2.4km az=151.0*
*ISK **05** 13:17:39.8, 38°23N×38°11E, h9km, MD2.9*
*DDA **05** 13:17:40.8, 38°36N×38°12E, h7km±4km, Md2.9*
*ISCJB **05** 13:17:40.5±0.6, 38°36N±0°03×38°11E±0°04, h1km±7km, Error ellipse: s-maj=5.0km s-min=4.5km az=135.1*

ISC 05 13:17:40.9±0.5, 38°35N±0°03×38°11E±0°04, h9km±5km, n25, σ1°35/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKCD	Akcadag	0.16	249	iP	Pg	13 17 44.0	-0.3
AKCD				iS	Sg	13 17 46.9	+0.4
AKCD	Akcadag	0.16	249	iP	Pg	13 17 44.0	-0.3
AKCD				iS	Sg	13 17 46.9	+0.3
MYA	Malataya	0.25	96	PG	Pg	13 17 45.8	-0.1
MYA				eSG	Sg	13 17 49.8	+0.5
MYA	Malataya	0.25	96	iPg	Pg	13 17 45.8	-0.1
MYA				eSg	Sg	13 17 49.8	+0.5
DARE	Darende-Malaty	0.65	338	ePG	Pg	13 17 51.8	-1.6
DARE				eSG	Sg	13 18 00.9	-0.9
DARE	Darende-Malaty	0.65	338	ePg	Pg	13 17 51.8	-1.5
DARE				eSg	Sg	13 18 00.9	-0.9
ELZG	Elazig	0.70	78	iP	Pg	13 17 53.9	-0.6
ELZG				iS	Sg	13 18 05.5	+1.9
ELZG	Elazig	0.70	78	iP	Pg	13 17 53.9	-0.5
ELZG				iS	Sg	13 18 05.5	+1.9
ATAB	Bozova	0.89	170	iP	Pg	13 17 59.3	+1.3
ATAB				iS	Sg	13 18 11.0	+1.3
SVRC	Sivrice-ELAZID	0.94	88	ePG	Pg	13 17 58.3	-0.7
SVRC	Sivrice-ELAZID	0.94	88	ePg	Pg	13 17 58.3	-0.7
KEMA	Kemaliye	0.96	18	iP	Pg	13 17 59.7	+0.3
KEMA				iS	Sg	13 18 15.3	+3.3
KEMA	Kemaliye	0.96	18	iP	Pg	13 17 59.7	+0.3
KEMA				iS	Sg	13 18 15.3	+3.4
URFA	Urfa	1.07	148	ePG	Pg	13 17 59.1	-2.3
URFA				eSG	Sg	13 18 12.7	-2.6
URFA	Urfa	1.07	148	ePg	Pg	13 17 59.1	-2.3
URFA				eSg	Sg	13 18 12.7	-2.6
GZT	Gaziantep	1.08	204	iP	Pb	13 18 02.6	+0.9
GZT				iS	Sb	13 18 17.1	+1.1
PTK	Pertek	1.14	61	ePN	Pn	13 18 02.0	-1.0
PTK	Pertek	1.14	61	ePn	Pn	13 18 02.0	-1.0
SARI	SarD1z-Kayseri	1.16	287	ePN	Pn	13 18 05.5	+2.3
KMRS	Kahramanmaras	1.28	229	ePN	Pn	13 18 03.4	-1.4
KMRS	Kahramanmaras	1.28	229	ePn	Pn	13 18 03.4	-1.4
GAZ	Gaziantep	1.38	211	ePN	Pn	13 18 04.4	-1.8
GAZ	Gaziantep	1.38	211	ePn	Pn	13 18 04.4	-1.8
SVSK	Karacayir	1.79	331	ePN	Pn	13 18 13.4	+1.6
SVSK	Karacayir	1.79	331	ePn	Pn	13 18 13.4	+1.6

*MOS **05** 13:37:36.6±0.9, 8°54S×76°43W, h105km, mb5.4/84, Error ellipse: s-maj=7.9km s-min=4.8km az=96.2*
*ISCJB **05** 13:37:38.2±0.2, 8°70S±0°03×76°47W±0°03, h126km, mb5.3/261, Error ellipse: s-maj=5.2km s-min=3.0km az=32.3*
*NEIC **05** 13:37:39.5±0.7, 8°73S×76°45W, h126km±6km, mb5.4/218, Error ellipse: s-maj=5.1km s-min=3.4km az=47.0*
*IDC **05** 13:37:40.0±0.4, 8°76S×76°46W, h128km±3km, mb4.8/17, mb1 4.9/21, mb1mx4.9/23, mbtmp4.8/21, MS4.0/8, Ms1 4.0/8, ms1mx3.5/30, Error ellipse: s-maj=11.3km s-min=6.8km az=67.0*
*GCMT **05** 13:37:42.7±0.2, 8°68S×76°33W, h132km±1km, MW5.2, Moment Tensor Solution. s63,c79; s88,c138; Moment tensor: Scale 1016Nm; Mrr-3.68±.15; Mθθ-2.23±.17; Mφφ5

APG **El Apazote** 27.41 329 P P 13 43 15.1 +1.3
37nm,0.9s,mb4.9,baz=157,slow=7.3,SNR=29
SDDR **Presa de Saban** 27.99 10 eP P 13 43 18.7 -0.3
45nm,0.8s,mb5.0
OBIP **Obispado Ponce** 28.30 20 eP P 13 43 22.0 +0.3
CELP **Cerrillos** 28.34 20 eP P 13 43 22.4 +0.3
LRS **Lares** 28.45 19 eP P 13 43 23.9 +0.8
GTBY **Guantanamo Bay** 28.50 2 eP P 13 43 25.1 +1.5
SJG **San Juan** 28.52 21 P P 13 43 23.5 -0.2
243nm,0.6s,mb6.0,baz=355,slow=24,SNR=5.9
AOPR **Arecibo Observ** 28.53 19 eP P 13 43 23.8 0.0
CDVI **St. Croix** 28.70 24 eP P 13 43 25.4 0.0
MTP **Monte Pirata** 28.72 22 eP P 13 43 24.4 -1.1
67nm,0.9s,mb5.3
GRTK **Grand Turk** 30.49 10 eP P 13 43 39.2 -1.9
234nm,1.0s,mb5.8
TEIG **Tepich** 31.07 338 eP P 13 43 46.1 -0.1
188nm,0.8s,mb5.9
TRQA **Tornquist** 31.95 158 eP P 13 43 53.3 -0.5
5.2nm,1.1s,mb4.2
PLCA **Paso Flores** 32.29 172 P P 13 43 57.4 +0.8
3.9nm,1.0s,mb4.1,baz=274,slow=4.9,SNR=3.0
PLCA pP pP 13 44 25.2 +0.7
9.9nm,0.9s,baz=347,slow=11,SNR=8.1
PLCA PcP PcP 13 46 42.0 0.0
6.0nm,0.8s,baz=341,slow=5.0,SNR=6.5
PLCA **Paso Flores** 32.29 172 eP P 13 43 57.2 +0.5
7.0nm,1.1s,mb4.3
PLCA PcP PcP 13 46 42.0 0.0
RCBR **Riachuelo** 40.23 89 eP P 13 45 02.7 -2.0
21nm,0.8s,mb5.0
KVTX **Kingsville** 41.65 331 eP P 13 45 17.4 +1.4
602nm,1.2s,mb6.2
NHSC **New Hope** 41.76 355 eP P 13 45 16.4 -0.4
286nm,1.1s,mb5.9
COW **Cow Castle Cre** 42.08 355 eP P 13 45 18.3 -1.1
GOGA **Godfrey** 42.45 351 eP P 13 45 21.0 -1.4
GOGA pmax pmax
comp=Z,37nm,0.9s,mb5.1
GOGA **Godfrey** 42.45 351 eP P 13 45 21.0 -1.3
comp=Z,37nm,0.9s,mb5.1
LRAL **Lakeview Retre** 42.75 347 eP P 13 45 23.1 -1.7
comp=Z,42nm,0.9s,mb5.2
HKT **Hockley** 42.77 335 eP P 13 45 24.5 -0.5
HKT pmax pmax
comp=Z,216nm,1.6s,mb5.6
HKT **Hockley** 42.77 335 eP P 13 45 24.5 -0.6
comp=Z,216nm,1.6s,mb5.6
JSC **Jenkinsville** 43.03 354 eP P 13 45 26.3 -0.7
NATX **Nacogdoches** 43.90 337 eP P 13 45 34.5 +0.5
comp=Z,475nm,0.8s,mb6.3
CPCT **Cooper Cave** 44.61 351 eP P 13 45 37.0 -2.6
SWET **Sewanee** 44.63 349 eP P 13 45 37.7 -2.2
TKL **Tuckaleechee C** 44.70 351 eP P 13 45 38.7 -1.6
PLAL **Pickwick Lake** 44.86 346 eP P 13 45 39.2 -2.5
comp=Z,71nm,1.0s,mb5.3
JCT **Junction City** 45.01 331 eP P 13 45 42.8 -0.1
JCT pmax pmax
comp=Z,37nm,0.9s,mb5.1
JCT **Junction City** 45.01 331 eP P 13 45 42.8 -0.2
comp=Z,37nm,0.9s,mb5.1
TZTN **Tazewell** 45.54 352 eP P 13 45 45.0 -1.9
628A **Black Gap, Mar** 45.78 327 ⇓P P 13 45 49.8 +0.8
baz=46,SNR=75
UALR **University of** 45.83 342⇓iP P 13 45 48.4 -0.9
comp=Z,113nm,0.8s,mb5.7
BLA **Blacksburg** 45.86 355⇓eP P 13 45 48.9 -0.6
BLA pmax pmax
comp=Z,65nm,1.3s,mb5.2
BLA **Blacksburg** 45.86 355⇓eP P 13 45 48.9 -0.6
comp=Z,65nm,1.3s,mb5.2
WVT **Waverly** 45.91 347⇓iP P 13 45 47.4 -2.5
WVT pmax pmax
comp=Z,82nm,1.1s,mb5.4
WVT **Waverly** 45.91 347⇓iP P 13 45 47.4 -2.4
comp=Z,82nm,1.1s,mb5.4
MIAR **Mount Ida** 46.02 340⇓iP P 13 45 50.0 -0.8
MIAR e 13 46 31.0
MIAR pmax pmax
comp=Z,65nm,1.0s,mb5.3
MIAR **Mount Ida** 46.02 340⇓iP P 13 45 50.0 -0.9
comp=Z,65nm,1.0s,mb5.3
MIAR e 13 46 31.0
627A **Terlingua Ranc** 46.03 327 ⇑P P 13 45 51.2 +0.3
baz=46,SNR=46
TXAR **Lajitas Array** 46.09 326 P P 13 45 51.5 +0.1
comp=Z,34nm,0.7s,mb5.2,baz=147,slow=9.2,SNR=359
TXAR PcP PcP 13 47 25.6 -0.1
comp=Z,5.5nm,0.8s,baz=152,slow=7.6,SNR=5.0
528A **Cox Ranch, San** 46.26 328 ⇑P P 13 45 52.7 -0.1
baz=46,SNR=83
626A **Big Bend Ranch** 46.51 326 ⇑P P 13 45 55.3 +0.5
baz=47,SNR=244
527A **Woodward Ranch** 46.69 327 ⇑P P 13 45 56.3 +0.2
baz=47,SNR=93
CBN **Corbin** 46.70 359 eP P 13 45 56.1 +0.1
comp=Z,102nm,0.5s,mb5.8
PARMO **Parma** 46.87 345 eP P 13 45 56.0 -1.4
526A **Mary Lane Ranc** 46.88 326 ⇓P P 13 45 58.0 +0.4
baz=47,SNR=51
427A **Hayter Ranch,** 47.13 328 ⇓P P 13 45 59.4 -0.1
baz=47,SNR=27
328A **Wristen Ranch,** 47.24 329 ⇓P P 13 46 00.4 0.0
baz=48,SNR=56
426A **McDonald Obser** 47.32 327 ⇓P P 13 46 01.4 +0.4
baz=48
327A **Balmorhea Ranc** 47.58 328 ⇓P P 13 46 03.1 0.0
baz=48
USIN **University of** 47.64 348 eP P 13 46 00.3 -3.0
comp=Z,166nm,1.3s,mb5.7
SIUC **Southern Illin** 47.74 346 eP P 13 46 02.3 -1.8
comp=Z,235nm,1.0s,mb6.0
326A **Caldwell Ranch** 47.80 328 ⇓P P 13 46 04.6 -0.1
baz=48,SNR=58
425A **Indio Mountain** 47.93 326 ⇑P P 13 46 05.7 0.0
baz=48,SNR=87
227A **Bennet, Jal** 47.99 329 ⇑P P 13 46 06.3 +0.2
baz=48,SNR=21
FVM **French Village** 48.29 345⇓iP P 13 46 06.5 -1.8
FVM pmax pmax
comp=Z,155nm,0.8s,mb5.9
FVM **French Village** 48.29 345⇓iP P 13 46 06.5 -1.8
comp=Z,155nm,0.8s,mb5.9
325A **Bean Ranch, Si** 48.37 327 ⇓P P 13 46 08.9 -0.2
baz=49,SNR=65
226A **Malaga, Loving** 48.45 328 ⇓P P 13 46 10.3 +0.6
baz=49,SNR=59
OLIL **Olney** 48.47 348 eP P 13 46 07.5 -2.1
comp=Z,92nm,1.0s,mb5.6
127A **Arkansas Junct** 48.55 329 ⇓P P 13 46 10.2 -0.3
baz=49,SNR=20
CCM **Cathedral Cave** 48.57 344⇓iP P 13 46 08.5 -2.0
CCM e 13 47 33.0
CCM pmax pmax
comp=Z,64nm,0.7s,mb5.7
CCM **Cathedral Cave** 48.57 344⇓iP P 13 46 08.5 -2.0
comp=Z,64nm,0.7s,mb5.7
CCM ePcP PcP 13 47 33.0 -1.4
GDL2 **Guadalupe Moun** 48.69 328 eP P 13 46 12.0 +0.5
comp=Z,34nm,0.7s,mb5.4
324A **Moseley Ranch,** 48.71 326 ⇑P P 13 46 11.1 -0.6
baz=49,SNR=69
MNTX **Cornudas Mount** 48.85 327⇓iP P 13 46 12.0 -0.7
comp=Z,80nm,1.3s,mb5.5
SLM **Saint Louis** 48.86 346 eP P 13 46 10.8 -1.9
SLM pmax pmax
comp=Z,86nm,1.0s,mb5.6
SLM **Saint Louis** 48.86 346 eP P 13 46 10.8 -1.9
comp=Z,86nm,1.0s,mb5.6
225A **Deer Hill, Car** 48.87 328 ⇓P P 13 46 13.1 +0.2
baz=49,SNR=23
126A **Clayton Basin,** 48.87 329 ⇑P P 13 46 13.2 +0.3
baz=49,SNR=21
Z27A **Tatum** 48.99 330 ⇓P P 13 46 13.3 -0.5
baz=49,SNR=75
CPRX **Cap Rock** 49.09 329 eP P 13 46 15.0 +0.4
comp=Z,135nm,1.2s,mb5.8
ACSO **Alum Creek Sta** 49.10 353 eP P 13 46 12.6 -1.8
comp=Z,88nm,1.1s,mb5.6
SSPA **Standing Stone** 49.14 358⇓iP P 13 46 14.6 -0.2
comp=Z,90nm,0.9s,mb5.7
SSPA epP pP 13 46 39.9 -4.5
125A **Gardner Draw,** 49.21 328 ⇑P P 13 46 15.4 -0.1
baz=49,SNR=45
224A **Cornudas Mount** 49.21 327 ⇓P P 13 46 14.9 -0.6
baz=49,SNR=41
MSTX **Muleshoe** 49.31 331 ⇑P P 13 46 15.7 -0.5
baz=50,SNR=20
Z26A **Caprock** 49.34 329 ⇓P P 13 46 16.3 -0.1
baz=50,SNR=63
Y27A **Causey** 49.43 330 ⇑P P 13 46 16.4 -0.7
baz=50,SNR=24
AMTX **Amarillo** 49.55 332 eP P 13 46 17.2 -0.8
comp=Z,52nm,0.8s,mb5.5
223A **Chaparral, Ant** 49.65 326 ⇓P P 13 46 18.4 -0.5
baz=50
124A **Stringfield Ra** 49.66 327 ⇓P P 13 46 19.1 +0.2
baz=50,SNR=28
Z25A **Roswell** 49.73 329 ⇑P P 13 46 19.1 -0.2
baz=50,SNR=42
Y26A **Elida** 49.78 330 ⇑P P 13 46 19.2 -0.6
baz=50,SNR=7.7
X27A **F and S Farms,** 50.01 331 ⇑P P 13 46 21.2 -0.3
baz=50,SNR=18
123A **Bell Site, Whi** 50.04 327 ⇓P P 13 46 21.8 0.0
baz=50
Z24A **Sheeppen Canyo** 50.10 328 ⇑P P 13 46 22.4 +0.2
baz=50
222A **Williams Famil** 50.10 326 ⇓P P 13 46 22.2 0.0
baz=50
Y25A **Mesa, Roswell** 50.22 329 ⇑P P 13 46 22.6 -0.5
baz=50,SNR=11
X26A **CR and CF Fran** 50.28 330 ⇓P P 13 46 23.3 -0.3
baz=50,SNR=44
W27A **Bowe Ranch, En** 50.34 331 ⇑P P 13 46 23.6 -0.4
baz=51,SNR=59
320A **Kipp Ranch, An** 50.35 324 ⇓P P 13 46 24.8 +0.7
baz=51,SNR=24
221A **Mesquite Ranch** 50.41 325 ⇑P P 13 46 25.2 +0.6
baz=51
HDIL **Hopedale** 50.47 347 eP P 13 46 22.7 -2.2
comp=Z,256nm,0.7s,mb6.3
122A **Conniff Cattle** 50.49 326 ⇑P P 13 46 25.8 +0.6
baz=51,SNR=7.4
Z23A **Rita Site, Whi** 50.51 327 ⇓P P 13 46 25.5 +0.2
baz=51,SNR=21
Y24A **Capitan** 50.60 328 ⇓P P 13 46 25.6 -0.4
baz=51,SNR=14
BINY **Binghamton** 50.68 0 eP P 13 46 26.4 0.0
comp=Z,105nm,0.9s,mb5.9
X25A **Clemmons Ranch** 50.68 330 ⇑P P 13 46 26.0 -0.5
baz=51,SNR=18
W26A **Owens Ranch, T** 50.69 331 ⇓P P 13 46 26.5 -0.1
baz=51,SNR=19
ERPA **Erie** 50.71 357 eP P 13 46 24.8 -1.8
comp=Z,60nm,1.0s,mb5.6
220A **Playas Peak, P** 50.76 324 ⇓P P 13 46 27.7 +0.5
baz=51,SNR=68
121A **Cookes Peak, D** 50.81 325 ⇑P P 13 46 28.4 +0.9
baz=51,SNR=28
319A **Douglas** 50.82 323 ⇑P P 13 46 28.6 +0.9
baz=51,SNR=54
Z22A **Elephant Butte** 50.90 327 ⇓P P 13 46 28.8 +0.6
baz=51,SNR=21
Y23A **Lovelace Mesa,** 50.93 328 ⇑P P 13 46 28.4 -0.1
baz=51,SNR=37
X24A **Lazy VL Ranch,** 51.10 329 ⇑P P 13 46 29.3 -0.4
baz=51,SNR=10
W25A **X Bar L Ranch,** 51.13 330 ⇑P P 13 46 29.7 -0.2
baz=51,SNR=30
KSU1 **Kansas State U** 51.17 340 eP P 13 46 28.7 -1.4
comp=Z,66nm,0.6s,mb5.8
AAM **Ann Arbor** 51.22 353 eP P 13 46 29.0 -1.4
AAM pmax pmax
comp=Z,35nm,0.7s,mb5.5
AAM **Ann Arbor** 51.22 353 eP P 13 46 29.0 -1.4
comp=Z,35nm,0.7s,mb5.5
219A **White Tail Can** 51.26 324 ⇓P P 13 46 31.5 +0.6
baz=52,SNR=47
V26A **Tequesquite Ra** 51.27 331 ⇓P P 13 46 30.7 -0.3
baz=52,SNR=39
318A **Bisbee** 51.29 323 ⇑P P 13 46 31.6 +0.4
baz=52,SNR=45
120A **U Bar Ranch, L** 51.30 325 ⇑P P 13 46 31.8 +0.6
baz=52,SNR=16
Z21A **St. Cloud Mine** 51.32 326 ⇑P P 13 46 32.1 +0.7
baz=52,SNR=26
BNM **Barren Site** 51.40 328 eP P 13 46 32.0 +0.1
comp=Z,23nm,1.1s,mb5.1
Y22A **Socorro** 51.41 327 ⇑P P 13 46 32.3 +0.2
baz=52,SNR=20
Y22D **IRIS PASSCAL I** 51.50 327 ⇑P P 13 46 32.9 +0.2
baz=52
X23A **Hourglass Bar** 51.50 328 ⇓P P 13 46 32.6 0.0
baz=52,SNR=21
LENM **Lemitar** 51.59 327 eP P 13 46 33.6 +0.2
comp=Z,23nm,1.1s,mb5.1
W24A **Lazy 6 Ranch,** 51.60 330 ⇑P P 13 46 33.2 -0.2
baz=52,SNR=23
Z20A **Nine Sixteen R** 51.69 325 ⇓P P 13 46 34.8 +0.7
baz=52,SNR=44
218A **Dragoon** 51.70 323 ⇑P P 13 46 34.7 +0.5
baz=52,SNR=26
V25A **Rancho No Teng** 51.71 331 ⇑P P 13 46 34.2 0.0
baz=52
U26A **Atchley Ranch,** 51.74 332 ⇑P P 13 46 34.2 -0.2
baz=52,SNR=58
119A **Ashpeak Ranch,** 51.84 324 ⇓P P 13 46 35.7 +0.5
baz=52,SNR=19
Y21A **Point of Rocks** 51.85 327 ⇓P P 13 46 36.4 +1.1
baz=52,SNR=61
LAZ **Ladron** 51.86 327 eP P 13 46 35.9 +0.5
comp=Z,31nm,1.1s,mb5.2
X22A **Bernardo** 51.87 328 ⇑P P 13 46 36.1 +0.6
baz=52,SNR=12
ANMO **Albuquerque** 51.93 328⇓iP P 13 46 35.9 0.0
ANMO pmax pmax
comp=Z,15nm,1.1s
ANMO **Albuquerque** 51.93 328⇓iP P 13 46 35.9 0.0
comp=Z,15nm,1.1s,mb5.0
W23A **Werner Place,** 51.93 329 ⇑P P 13 46 36.0 +0.1
baz=52,SNR=14
217A **Green Valley** 52.02 322 ⇓P P 13 46 37.0 +0.4
baz=52,SNR=28
U25A **Circle Dot Ran** 52.06 331 ⇑P P 13 46 36.6 -0.1
baz=52
CBKS **Cedar Bluff** 52.06 337 eP P 13 46 36.5 -0.2
CBKS pmax pmax
comp=Z,237nm,1.1s,mb6.1
CBKS **Cedar Bluff** 52.06 337 eP P 13 46 36.5 -0.2
comp=Z,237nm,1.1s,mb6.1
118A **Homack Ranch,** 52.14 324 ⇓P P 13 46 37.8 +0.4
baz=52,SNR=35
Y20A **Horse Springs,** 52.16 326 ⇑P P 13 46 38.4 +0.8
baz=52,SNR=18
Z19A **T-Link Ranch,** 52.20 325 ⇓P P 13 46 38.6 +0.6
baz=52,SNR=10
W22A **Albuquerque** 52.23 328 ⇑P P 13 46 38.7 +0.6
baz=52,SNR=8.6
X21A **Alamocita Cree** 52.24 327 ⇑P P 13 46 39.0 +0.9
baz=52,SNR=120
TUC **Tucson** 52.38 323⇓iP P 13 46 39.4 +0.1
TUC pmax pmax
comp=Z,47nm,0.9s,mb5.5
TUC **Tucson** 52.38 323⇓iP P 13 46 39.4 +0.1
comp=Z,47nm,0.9s,mb5.5
V23A **Ortiz Mt. (NFS** 52.41 329 ⇑P P 13 46 39.7 +0.3
baz=53,SNR=5.9
U24A **Moreno Valley** 52.48 331 ⇓P P 13 46 40.3 +0.4
baz=53
NCB **Newcomb** 52.49 2⇓iP P 13 46 39.5 -0.3
comp=Z,30nm,0.8s,mb5.4
Z18A **Geronimo** 52.50 324 ⇓P P 13 46 40.3 +0.2
baz=53
117A **Oracle** 52.54 323 ⇓P P 13 46 40.7 +0.3
baz=53,SNR=18
216A **Three Points,** 52.57 322 ⇑P P 13 46 40.9 +0.2
baz=53,SNR=15
W21A **San Fidel** 52.68 328 ⇓P P 13 46 42.1 +0.7
baz=53,SNR=19
Y19A **Nutrioso** 52.69 325 ⇑P P 13 46 42.4 +0.9
baz=53,SNR=32
SCIA **State Center** 52.70 344 eP P 13 46 39.6 -1.9
comp=Z,34nm,0.8s,mb5.4
LBNH **Lisbon** 52.87 4⇓iP P 13 46 42.8 +0.2
LBNH pmax pmax
comp=Z,60nm,0.9s,mb5.6
LBNH **Lisbon** 52.87 4⇓iP P 13 46 42.8 +0.1
comp=Z,60nm,0.9s,mb5.6
Z17A **San Carlos Hig** 52.90 324 ⇑P P 13 46 43.0 -0.1
baz=53
V22A **San Miguel Ran** 52.91 329 ⇓P P 13 46 43.6 +0.5
baz=53
JFWS **Jewell Farm** 52.93 347⇓iP P 13 46 41.0 -2.1
JFWS pmax pmax
comp=Z,16nm,0.6s,mb5.2
JFWS **Jewell Farm** 52.93 347⇓iP P 13 46 41.0 -2.1
comp=Z,16nm,0.6s,mb5.2
Y18A **Canyon Day Jun** 53.00 325 ⇓P P 13 46 44.2 +0.4
baz=53
X19A **St. Johns** 53.05 326 ⇑P P 13 46 44.4 +0.3
baz=53,SNR=24
116A **Eloy** 53.11 322 ⇓P P 13 46 44.9 +0.3
baz=53,SNR=7.3
LONY **Lake Ozonia** 53.12 2⇓iP P 13 46 43.9 -0.6
comp=Z,77nm,1.4s,mb5.5
V21A **Milan** 53.20 328 ⇓P P 13 46 45.9 +0.7
baz=53
214A **Organ Pipe Nat** 53.37 321 ⇓P P 13 46 47.0 +0.5
baz=54,SNR=11
Y17A **Roosevelt** 53.40 324 ⇓P P 13 46 47.0 +0.3
baz=54,SNR=16
Z16A **Peralta Trail,** 53.49 323 ⇓P P 13 46 47.6 +0.2
baz=54,SNR=5.5
X18A **Snowflake** 53.50 325 ⇓P P 13 46 47.9 +0.5
baz=54,SNR=30
W19A **Sanders** 53.61 326 ⇓P P 13 46 48.8 +0.5
baz=54,SNR=31
V20A **Brimhall** 53.63 328 ⇑P P 13 46 48.4 0.0
baz=54,SNR=15
SDCO **Great Sand Dun** 53.66 331⇓iP P 13 46 48.9 +0.4
comp=Z,132nm,0.8s,mb6.0
T22A **Edith** 53.76 330 ⇑P P 13 46 49.5 +0.2
baz=54,SNR=25
W18A **Petrified Fore** 53.81 326 ⇓P P 13 46 50.3 +0.7
baz=54,SNR=16
X17A **Forest Lakes** 53.84 325 ⇓P P 13 46 50.9 +1.0
baz=54,SNR=31
V19A **Window Rock** 53.88 327 ⇑P P 13 46 50.5 +0.3
baz=54,SNR=9.1
Z15A **Gila River Ind** 53.89 323 ⇑P P 13 46 50.6 +0.3
baz=54
Y16A **Circle Bar Ran** 53.91 324 ⇑P P 13 46 51.1 +0.7
baz=54,SNR=24
114A **Black Gap (USA** 53.96 322 ⇓P P 13 46 51.3 +0.5
baz=54,SNR=5.5
U20A **Newcomb** 54.10 328 ⇓P P 13 46 51.6 -0.1
baz=54,SNR=19
X16A **Lo Mia Camp, P** 54.27 324 ⇓P P 13 46 53.6 +0.6
baz=54,SNR=44
W17A **Winslow** 54.33 325 ⇑P P 13 46 53.6 +0.2
baz=55,SNR=6.5
V18A **Ganado** 54.35 326 ⇑P P 13 46 53.4 -0.2
baz=55,SNR=6.9
U19A **Dine' College,** 54.40 327 ⇑P P 13 46 53.1 -0.8
baz=55,SNR=7.1
Z14A **Wintersburg** 54.42 322 ⇑P P 13 46 54.2 +0.1
baz=55
113A **Mohawk Valley,** 54.52 321 ⇑P P 13 46 55.0 +0.1
baz=55
R22A **Saguache, Gunn** 54.64 331 ⇑P P 13 46 55.9 +0.2
baz=55,SNR=26
T19A **Beclabito** 54.70 328 ⇓P P 13 46 55.7 -0.5
baz=55,SNR=29
S21A **Coal Bank Pass** 54.71 330 ⇓P P 13 46 56.1 0.0
baz=55,SNR=13
MVCO **Mesa Verde** 54.72 329 ⇓P P 13 46 56.1 -0.1
baz=55,SNR=19
MVCO **Mesa Verde** 54.72 329⇓iP P 13 46 55.9 -0.3
comp=Z,71nm,1.3s,mb5.5
Z13A **Yuma Proving G** 54.74 322 ⇑P P 13 46 56.5 +0.1
baz=55
V17A **Tonalea, Kykot** 54.77 326 ⇑P P 13 46 57.1 +0.5
baz=55,SNR=94
X15A **Humboldt** 54.78 324 ⇑P P 13 46 57.2 +0.5
baz=55,SNR=15
OGNE **Ogallala** 54.79 336⇓iP P 13 46 56.4 -0.3
comp=Z,149nm,0.9s,mb6.0
W16A **Flagstaff** 54.80 325 ⇓P P 13 46 57.8 +0.9
baz=55,SNR=14
U18A **Rough Rock, Ch** 54.84 327 ⇓P P 13 46 57.2 0.0
baz=55,SNR=18
Y14A **Wickenburg** 54.85 323 ⇑P P 13 46 57.2 0.0
baz=55
112A **Yuma** 54.87 320 ⇓P P 13 46 57.6 +0.2
baz=55
WUAZ **Wupatki** 55.01 325 ⇓P P 13 46 58.9 +0.5
baz=55,SNR=23
WUAZ **Wupatki** 55.01 325⇓iP P 13 46 59.1 +0.7
comp=Z,132nm,1.2s,mb5.8
R21A **Cimarron** 55.14 330 ⇓P P 13 46 59.5 +0.3
baz=55
X14A **Yava** 55.15 323 ⇑P P 13 46 60.0 +0.6
baz=55
Q22A **Crested Butte,** 55.22 331 ⇑P P 13 47 00.2 +0.4
baz=56,SNR=30
Y13A **Salome** 55.26 322 ⇓P P 13 47 00.4 +0.2
baz=56
W15A **Williams** 55.28 324 ⇓P P 13 47 00.9 +0.6
baz=56,SNR=6.3
ECSD **EROS Data Cent** 55.36 342⇓iP P 13 46 59.0 -1.6
comp=Z,88nm,0.8s,mb5.8
ECSD ePcP PcP 13 47 57.1 -2.5
ISCO **Idaho Springs** 55.36 333⇓iP P 13 47 00.8 0.0
ISCO pmax pmax
comp=Z,54nm,1.2s,mb5.5
ISCO **Idaho Springs** 55.36 333⇓iP P 13 47 00.8 0.0
comp=Z,54nm,1.2s,mb5.5
GLA **Glamis** 55.37 321 ⇓P P 13 47 01.1 +0.1
baz=56
T18A **Mexican Hat** 55.38 328 ⇓P P 13 47 00.5 -0.5
baz=56,SNR=53
R20A **Redvale** 55.41 330 ⇑P P 13 47 01.6 +0.4
baz=56,SNR=70
S19A **Harvey Farm, M** 55.46 329 ⇓P P 13 47 01.4 -0.1
baz=56,SNR=101
PV01 **Paradox Valley** 55.46 329⇓iP P 13 47 01.9 +0.4
comp=Z,8μm,0.8s
Q21A **Lamborn Mesa,** 55.51 331 ⇑P P 13 47 01.8 -0.1
baz=56,SNR=18
Y12C **Blythe** 55.65 321 ⇓P P 13 47 03.2 +0.3
baz=56
V15A **Kaibab Nationa** 55.68 325 ⇓P P 13 47 03.8 +0.6
baz=56,SNR=11
COWI **Conover** 55.77 349⇓iP P 13 47 02.0 -1.6
comp=Z,59nm,1.0s,mb5.6
COWI ePcP PcP 13 47 59.8 -1.4
T17A **Navajo Res., N** 55.78 327 ⇑P P 13 47 04.4 +0.6
baz=56,SNR=89
PDMCI **Parker Dam,Lak** 55.78 322 ⇑P P 13 47 03.9 0.0
baz=56
W14A **Seligman** 55.78 324 ⇑P P 13 47 04.4 +0.5
baz=56,SNR=7.9
X13A **Yucca** 55.80 323 ⇓P P 13 47 04.2 +0.2
baz=56
PV04 **Paradox Valley** 55.83 329⇓eP P 13 47 04.0 -0.2
S18A **Hurst Farm, Bl** 55.86 328 ⇓P P 13 47 04.6 +0.2
baz=56
SWSC **Sam W. Stewart** 55.91 320 ⇓P P 13 47 05.1 +0.3
baz=56
DVTC **Desert V Tower** 55.92 319 ⇑P P 13 47 05.0 +0.1
baz=56
R19A **Curley Farm, L** 55.93 329 ⇑P P 13 47 04.8 -0.1
baz=56,SNR=27
V14A **Boquillas Ranc** 56.09 324 ⇑P P 13 47 06.9 +0.8
baz=56,SNR=22
T16A **Glen Canyon Da** 56.15 326 ⇓P P 13 47 06.9 +0.4
baz=56,SNR=8.7
BC3 **Big Chuckawall** 56.16 321 ⇓P P 13 47 06.9 +0.3
baz=56,SNR=5.4
W13A **Hualapai Mount** 56.18 323 ⇑P P 13 47 07.4 +0.7
baz=56,SNR=6.1
U15A **North Rim** 56.19 325 ⇓P P 13 47 07.4 +0.7
baz=56,SNR=35
S17A **Black Ridge (B** 56.25 327 ⇑P P 13 47 07.3 +0.1
baz=56,SNR=30
MONP **Monument Peak** 56.27 319 ⇓P P 13 47 07.9 +0.4
baz=56
IRM **Iron Mountain** 56.31 321 ⇑P P 13 47 08.0 +0.4
baz=56,SNR=13
R18A **Canyonlands Na** 56.33 329 ⇑P P 13 47 07.2 -0.6
baz=57,SNR=49
NEE2 **Needles Airpor** 56.39 322 ⇑P P 13 47 08.4 +0.1
baz=57
Q19A **Hogan Spring (** 56.44 329 ⇓P P 13 47 08.4 -0.1
baz=57
PHWY **Pilot Hill** 56.51 334⇓iP P 13 47 08.8 -0.2
comp=Z,49nm,1.1s,mb5.5
PHWY ePcP PcP 13 48 03.4 -0.8
O21A **Pagoda** 56.55 332 ⇓P P 13 47 09.6 +0.3
baz=57,SNR=26
N22A **Wattenberg Ran** 56.55 333 ⇑P P 13 47 09.3 +0.1
baz=57,SNR=14

PMSA **Palmer Station** 56.62 174 *e*P P 13 47 08.4 -1.0
comp=Z,6.2nm,0.6s,mb4.8
T15A **Red Dirt Ranch** 56.66 326 ⇑P P 13 47 10.7 +0.6
baz=57,SNR=42
U14A **Mt Trumbull** 56.68 325 ⇓P P 13 47 11.0 +0.8
baz=57,SNR=34
109C **Camp Elliot, M** 56.72 319 ⇓P P 13 47 10.8 +0.2
baz=57
BELC **Belle Mtn. Jos** 56.73 321 ⇓P P 13 47 11.2 +0.6
baz=57
V13A **Grand Canyon W** 56.75 324 ⇓P P 13 47 11.3 +0.6
baz=57
PFO **Pinyon Flat Ob** 56.76 320 ⇓P P 13 47 11.2 +0.3
baz=57
R17A **Hanksville Air** 56.78 328 ⇑P P 13 47 10.9 0.0
baz=57,SNR=56
P19A **Cripple Cowboy** 56.82 330 ⇓P P 13 47 11.0 -0.2
baz=57,SNR=80
O20A **White River Ci** 56.85 331 ⇑P P 13 47 11.4 +0.1
baz=57,SNR=17
LDFC **Landfair** 56.90 322 *e*P P 13 47 12.7 +0.9
comp=Z,74nm,1.1s,mb5.6
W12A **Cal Nev Ari** 56.90 323 ⇓P P 13 47 12.0 +0.1
baz=57
Q18A **Rafter H Ranch** 56.99 329 ⇑P P 13 47 12.4 +0.1
baz=57,SNR=70
N21A **Black Mountain** 57.00 332 ⇓P P 13 47 12.9 +0.5
baz=57,SNR=83
GMRC **Granite Mounta** 57.03 322 ⇓P P 13 47 13.3 +0.5
baz=57,SNR=11
T14A **Hurricane** 57.08 325 ⇓P P 13 47 13.9 +0.8
baz=57,SNR=25
R16A **Teasdale** 57.09 327 ⇑P P 13 47 13.3 +0.2
baz=57,SNR=22
S15A **Panguitch** 57.12 326 ⇓P P 13 47 13.6 +0.3
baz=57,SNR=7.7
U13A **Pakoon Wash** 57.13 324 ⇓P P 13 47 14.0 +0.5
baz=57,SNR=13
V12A **Nelson** 57.18 323 ⇓P P 13 47 13.8 0.0
baz=57,SNR=10
SRU **San Rafael** 57.20 329 ⇓P P 13 47 14.0 +0.1
baz=57
SRU **San Rafael** 57.20 329 *e*P P 13 47 13.5 -0.3
SRU pmax pmax
comp=Z,81nm,0.9s,mb5.8
SRU **San Rafael** 57.20 329 *e*P P 13 47 13.5 -0.4
comp=Z,81nm,0.9s,mb5.8
MURC **Murrieta** 57.23 320 ⇑P P 13 47 14.6 +0.4
baz=58
Q16A **Castle Valley** 57.39 328 ⇓P P 13 47 15.2 0.0
baz=58,SNR=27
O19A **Miners Draw (B** 57.40 331 ⇓P P 13 47 15.2 0.0
baz=58,SNR=37
N20A **Spence Gulch,** 57.41 332 ⇓P P 13 47 15.2 0.0
baz=58,SNR=59
P18A **Preston Nutter** 57.45 329 ⇑P P 13 47 15.8 +0.2
baz=58,SNR=48
R15A **Junction** 57.46 327 ⇓P P 13 47 16.0 +0.3
baz=58,SNR=16
U12A **Valley of Fire** 57.48 324 ⇑P P 13 47 16.1 +0.2
baz=58,SNR=9.2
BBRC **Big Bear Solar** 57.48 320 ⇓P P 13 47 17.0 +1.1
baz=58
HEC **Hector,Ludlow** 57.48 321 ⇑P P 13 47 16.5 +0.6
baz=58,SNR=13
T13A **Saint George** 57.52 325 ⇓P P 13 47 16.7 +0.6
baz=58,SNR=17
L22A **Ellis Ranch, M** 57.53 334 ⇑P P 13 47 16.5 +0.4
baz=58,SNR=20
P17A **Butcher Ranch,** 57.58 329 ⇑P P 13 47 16.5 0.0
baz=58,SNR=50
CCUT **Cedar City** 57.59 325 ⇓*i*P P 13 47 17.6 +1.0
comp=Z,64nm,1.1s,mb5.6
CCUT *e*PcP PcP 13 48 08.3 -0.2
RWWY **Rawlins** 57.60 333 *e*P P 13 47 16.6 0.0
comp=Z,156nm,1.1s,mb6.0
M21A **Separation Pea** 57.60 333 ⇓P P 13 47 16.8 +0.2
baz=58,SNR=43
MSU **Marysvale** 57.63 327 ⇓*i*P P 13 47 17.2 +0.4
MSU pmax pmax
comp=Z,19nm,0.9s,mb5.1
MSU **Marysvale** 57.63 327 ⇓*i*P P 13 47 17.2 +0.3
comp=Z,19nm,0.9s,mb5.1
S14A **Cedar City** 57.63 326 ⇑P P 13 47 17.3 +0.4
baz=58,SNR=14
TUQ **Turquoise Moun** 57.63 322 ⇓P P 13 47 17.4 +0.4
baz=58
TMUT **Trail Mountain** 57.69 328 *e*P P 13 47 17.4 +0.1
comp=Z,36nm,1.1s,mb5.3
T12A **Moapa** 57.78 324 ⇓P P 13 47 18.3 +0.3
baz=58
ARUT **Antelope Range** 57.80 326 *e*P P 13 47 18.7 +0.6
ARUT pmax pmax
comp=Z,116nm,1.0s,mb5.9
ARUT **Antelope Range** 57.80 326 *e*P P 13 47 18.7 +0.6
comp=Z,116nm,1.0s,mb5.9
O18A **Roosevelt** 57.81 330 ⇑P P 13 47 18.4 +0.3
baz=58,SNR=23
S13A **Holt Ranch, En** 57.89 325 ⇓P P 13 47 19.5 +0.8
baz=58,SNR=34
CIS **Catalina Islan** 57.89 319 ⇓P P 13 47 19.1 +0.3
baz=58
M20A **Sweetwater, Wa** 57.89 332 ⇑P P 13 47 18.6 0.0
baz=58,SNR=56
N19A **John Jarvie Ra** 57.89 331 ⇑P P 13 47 18.2 -0.4
baz=58,SNR=66
L21A **Rawlins** 57.89 333 ⇑P P 13 47 18.4 -0.3
baz=58,SNR=36
RRX **Edison Barstow** 57.93 321 ⇓P P 13 47 19.4 +0.3
baz=58
R14A **James Farms, M** 57.93 326 ⇓P P 13 47 19.2 +0.3
baz=58,SNR=10.0
BFSC **Mount Baldy Ra** 57.93 320 ⇑P P 13 47 19.1 0.0
baz=58,SNR=5.4
U11A **Corn Creek** 57.97 323 ⇑P P 13 47 20.0 +0.7
baz=58
EYMN **Ely** 58.00 348 ⇓*i*P P 13 47 17.3 -2.0
comp=Z,67nm,1.0s,mb5.6
FMP **Fort Macarthur** 58.01 319 ⇑P P 13 47 20.1 +0.4
baz=58
GSC **Goldstone** 58.08 321 ⇓P P 13 47 20.5 +0.4
baz=58,SNR=9.0
GSC **Goldstone** 58.08 321 *e*P P 13 47 20.7 +0.6
GSC pmax pmax
comp=Z,72nm,1.4s,mb5.5
GSC **Goldstone** 58.08 321 *e*P P 13 47 20.7 +0.6
comp=Z,72nm,1.4s,mb5.5
Q15A **Fillmore** 58.09 327 ⇑P P 13 47 20.2 +0.2
baz=58,SNR=17
O17A **Robinson Place** 58.12 329 ⇑P P 13 47 20.6 +0.4
baz=58,SNR=60
SHOC **Shoshone** 58.15 322 ⇓P P 13 47 20.9 +0.3
baz=58,SNR=6.6
P16A **Fountain Green** 58.16 328 ⇓P P 13 47 20.9 +0.4
baz=58
MWC **Mount Wilson** 58.18 320 *e*P P 13 47 21.2 +0.4
MWC pmax pmax
comp=Z,112nm,1.6s,mb5.7
MWC **Mount Wilson** 58.18 320 *e*P P 13 47 21.1 +0.4
comp=Z,112nm,1.6s,mb5.7
PASC **Pasadena Art C** 58.23 319 *e*P P 13 47 21.9 +0.7
comp=Z,54nm,0.4s,mb5.9
RSSD **Black Hills** 58.27 337 ⇓*i*P P 13 47 21.1 -0.1
RSSD pmax pmax
comp=Z,77nm,1.0s,mb5.7
RSSD **Black Hills** 58.27 337 ⇓*i*P P 13 47 21.1 -0.1
comp=Z,77nm,1.0s,mb5.7
M19A **Rock Springs** 58.35 331 ⇓P P 13 47 21.3 -0.5
baz=59,SNR=14
L20A **Wamsutter** 58.37 332 ⇑P P 13 47 21.7 -0.2
baz=59,SNR=14
DECC **Green Verdugo** 58.37 319 ⇑P P 13 47 22.7 +0.6
baz=59
R13A **O'Grain Ranch,** 58.37 326 ⇓P P 13 47 23.0 +0.9
baz=59,SNR=54
T11A **Corn Creek, Al** 58.43 324 ⇑P P 13 47 23.0 +0.5
baz=59,SNR=25
MPU **Maple Canyon** 58.44 329 *e*P P 13 47 22.4 -0.2
comp=Z,58nm,1.0s,mb5.6
P15A **Leamington** 58.45 328 ⇑P P 13 47 22.6 0.0
baz=59,SNR=25
S12A **Delamar Landin** 58.47 325 ⇑P P 13 47 23.6 +0.9
baz=59
O16A **Springville** 58.52 329 ⇑P P 13 47 23.2 +0.1
baz=59,SNR=30
U10A **Ash Meadows, A** 58.53 323 ⇑P P 13 47 24.0 +0.8
baz=59
DAU **Daniels Canyon** 58.55 329 *e*P P 13 47 23.7 +0.5
DAU pmax pmax
comp=Z,100nm,0.9s,mb5.8
DAU **Daniels Canyon** 58.55 329 *e*P P 13 47 23.7 +0.5
comp=Z,100nm,0.9s,mb5.8
EDW2 **Edwards Air Fo** 58.55 320 ⇓P P 13 47 23.5 +0.1
baz=59,SNR=6.7
Q14A **Sevier Lake (B** 58.56 327 ⇑P P 13 47 24.1 +0.7
baz=59,SNR=138
NLU **North Lily Min** 58.63 328 *e*P P 13 47 23.8 0.0
comp=Z,47nm,1.1s,mb5.4
M18A **Lyman** 58.73 331 ⇓P P 13 47 23.9 -0.6
baz=59,SNR=22
N17A **Moffit Pass** 58.73 330 ⇓P P 13 47 24.8 +0.3
baz=59,SNR=29
LRMC **Laurel Mountai** 58.74 321 ⇑P P 13 47 25.2 +0.5
baz=59
BLG **Laguna Peak** 58.76 319 ⇑P P 13 47 25.0 +0.2
baz=59,SNR=5.2
JLU **Jordanelle** 58.79 329 ⇓*i*P P 13 47 25.1 +0.2
comp=Z,95nm,0.9s,mb5.8
R12A **Pony Springs,** 58.83 325 ⇓P P 13 47 26.2 +1.0
baz=59,SNR=37
K20A **Yellowstone Ra** 58.88 333 ⇓P P 13 47 24.9 -0.6
baz=59,SNR=52
FURC **Furnace Creek,** 58.88 322 ⇑P P 13 47 26.0 +0.3
baz=59,SNR=15
P14A **Drum Mountains** 58.88 327 ⇓P P 13 47 26.4 +0.8
baz=59,SNR=63
L19A **Farson** 58.91 332 ⇓P P 13 47 25.4 -0.3
baz=59,SNR=52
Q13A **Wheeler Ranch,** 58.95 326 ⇓P P 13 47 26.7 +0.7
baz=59
N16A **Rees Ranch, Co** 58.99 329 ⇑P P 13 47 26.8 +0.5
baz=59,SNR=25
MPMC **Manual Prospec** 59.00 322 ⇓P P 13 47 26.3 -0.2
baz=59,SNR=11
S11A **Rachel** 59.01 324 ⇓P P 13 47 27.2 +0.7
baz=59,SNR=11
M17A **Scullys Gap (B** 59.05 330 ⇓P P 13 47 26.2 -0.5
baz=59,SNR=88
BSC **Santa Cruz Isl** 59.06 318 ⇓P P 13 47 27.1 +0.2
baz=59
O15A **The Old Anders** 59.07 328 ⇓P P 13 47 27.2 +0.4
baz=59,SNR=5.4
L18A **Fontenelle, Gr** 59.09 331 ⇓P P 13 47 26.5 -0.5
baz=59,SNR=34
NOQ **North Oquirrh** 59.16 329 *e*P P 13 47 27.3 -0.2
comp=Z,64nm,0.9s,mb5.7
DUG **Dugway** 59.19 328 ⇑P P 13 47 28.1 +0.5
baz=59,SNR=106
DUG **Dugway** 59.19 328 ⇓*i*P P 13 47 28.1 +0.4
DUG pmax pmax
comp=Z,131nm,0.9s,mb6.0
DUG **Dugway** 59.19 328 ⇓*i*P P 13 47 28.1 +0.4
comp=Z,131nm,0.9s,mb6.0
ARVC **Arvin** 59.24 320 ⇓P P 13 47 28.4 +0.2
baz=60
K19A **Absolon Red Bu** 59.24 333 ⇓P P 13 47 27.2 -0.8
baz=60,SNR=78
P13A **Bates Ranch, G** 59.30 327 ⇓P P 13 47 29.1 +0.7
baz=60,SNR=74
AGMN **Agassiz Nation** 59.33 345 ⇓*i*P P 13 47 27.4 -1.1
comp=Z,96nm,0.7s,mb5.9
ISA **Isabella** 59.35 321 ⇓P P 13 47 29.1 +0.2
baz=60,SNR=11
ISA **Isabella** 59.35 321 *e*P P 13 47 29.2 +0.3
ISA pmax pmax
comp=Z,54nm,1.6s,mb5.3
ISA **Isabella** 59.35 321 *e*P P 13 47 29.1 +0.2
comp=Z,54nm,1.6s,mb5.3
SBC **Santa Barbara** 59.38 319 ⇑P P 13 47 28.9 -0.2
baz=60
R11A **Troy Canyon, C** 59.40 325 ⇑P P 13 47 29.8 +0.7
baz=60,SNR=60
M16A **Huntsville** 59.41 330 ⇑P P 13 47 28.9 -0.2
baz=60,SNR=59
Q12A **Willow Creek R** 59.45 326 ⇑P P 13 47 30.0 +0.4
baz=60,SNR=51
BW06 **Boulder Array** 59.52 332 ⇑P P 13 47 29.4 -0.5
baz=60
PDAR **Pinedale Array** 59.52 332 P P 13 47 29.2 -0.7
comp=Z,34nm,0.7s,mb5.5,baz=130,slow=8.5,SNR=226
PDAR PcP PcP 13 48 14.9 -1.1
comp=Z,5.8nm,0.7s,baz=102,slow=3.6,SNR=3.7
N15A **Stansbury Isla** 59.55 329 ⇑P P 13 47 30.2 +0.1
baz=60
HWUT **Hardware Ranch** 59.60 330 *e*P P 13 47 30.2 -0.2
comp=Z,190nm,0.7s,mb6.2
CWC **Cottonwood Cre** 59.61 322 ⇓P P 13 47 30.8 +0.2
baz=60,SNR=7.1
L17A **Cokeville** 59.63 331 ⇑P P 13 47 29.9 -0.7
baz=60,SNR=122
K18A **Toltan Ranch,** 59.65 332 ⇓P P 13 47 30.9 +0.2
baz=60,SNR=82
S10A **Tonopah Range,** 59.69 324 ⇑P P 13 47 31.7 +0.5
baz=60,SNR=59
PKM **Peak Mountain** 59.73 319 ⇑P P 13 47 31.8 +0.3
baz=60,SNR=5.5
O13A **Hicks Ranch, I** 59.76 327 ⇑P P 13 47 32.2 +0.6
baz=60,SNR=9.0
R10A **Warm Springs** 59.77 324 ⇓P P 13 47 32.6 +0.9
baz=60,SNR=22
Q11A **Duckwater** 59.78 325 ⇓P P 13 47 32.4 +0.6
baz=60,SNR=112
P12A **McGill** 59.80 326 ⇑P P 13 47 32.6 +0.7
baz=60,SNR=134
SPUT **South Promonto** 59.82 329 *e*P P 13 47 31.2 -0.7
comp=Z,92nm,0.9s,mb5.8
BGU **Big Grassy Mou** 59.83 328 *e*P P 13 47 32.0 -0.1
comp=Z,62nm,0.9s,mb5.6
L16A **Fish Haven** 59.84 330 ⇓P P 13 47 31.6 -0.5
baz=60,SNR=33
VES **Vestal, Richgr** 59.85 320 ⇑P P 13 47 32.7 +0.4
baz=60
N14A **Grayback Hills** 59.86 328 ⇓P P 13 47 32.3 0.0
baz=60,SNR=25
M15A **Larsen Ranch,** 59.93 329 ⇑P P 13 47 32.2 -0.5
baz=60,SNR=11
J18A **Kendall Valley** 60.08 332 ⇑P P 13 47 33.0 -0.7
baz=60,SNR=123
TIN **Tinemaha** 60.09 322 ⇑P P 13 47 34.5 +0.6
baz=60
SMMC **Simmler** 60.10 319 ⇓P P 13 47 34.7 +0.6
baz=60
K17A **Gardner Place,** 60.15 331 ⇑P P 13 47 33.6 -0.6
baz=60,SNR=38
Q10A **Clear Creek Ra** 60.19 325 ⇑P P 13 47 35.4 +0.9
baz=60,SNR=36
RCTC **Rector, Farmer** 60.24 321 ⇑P P 13 47 34.7 -0.3
baz=60
AHID **Auburn Hatcher** 60.25 331 *e*P P 13 47 33.9 -0.9
comp=Z,108nm,0.8s,mb5.9
O12A **Currie** 60.27 327 ⇑P P 13 47 35.5 +0.4
baz=60,SNR=137
L15A **Malad City** 60.30 330 ⇑P P 13 47 34.7 -0.5
baz=60,SNR=98
P11A **Circle Ranch,** 60.32 326 ⇓P P 13 47 35.6 +0.1
baz=61,SNR=5.3
HVU **Hansel Valley** 60.33 329 *e*P P 13 47 34.9 -0.5
HVU pmax pmax
comp=Z,93nm,1.0s,mb5.8
HVU **Hansel Valley** 60.33 329 *e*P P 13 47 34.9 -0.6
comp=Z,93nm,1.0s,mb5.8
I18A **Diamond G Ranc** 60.37 333 ⇑P P 13 47 35.4 -0.3
baz=61,SNR=71
N13A **Wendover, West** 60.40 328 ⇑P P 13 47 36.0 0.0
baz=61,SNR=36
N13A **Wendover, West** 60.40 328 *e*Pn P 13 47 34.6 -1.3
comp=Z,97nm,1.0s,mb5.8
M14A **Sheep Mountain** 60.42 329 ⇑P P 13 47 35.8 -0.2
baz=61,SNR=70
J17A **Brown Place, J** 60.52 332 ⇑P P 13 47 36.6 -0.1
baz=61,SNR=19
K16A **Soda Springs** 60.53 331 ⇑P P 13 47 36.8 0.0
baz=61,SNR=41
REDW **Red Top Meadow** 60.58 332 *e*P P 13 47 36.3 -0.8
comp=Z,68nm,1.0s,mb5.6
SNOW **Snow King Moun** 60.62 332 *e*P P 13 47 36.9 -0.4
comp=Z,40nm,0.6s,mb5.6
LOHW **Long Hollow** 60.66 332 *e*P P 13 47 37.0 -0.6
comp=Z,51nm,0.8s,mb5.6
O11A **Cowboy Ranch,** 60.67 326 ⇓P P 13 47 38.1 +0.3
baz=61,SNR=42
TPAW **Teton Pass** 60.73 332 *e*P P 13 47 37.6 -0.5
comp=Z,44nm,0.6s,mb5.7
M13A **Montello** 60.74 328 ⇓P P 13 47 37.8 -0.4
baz=61,SNR=41
M13A **Montello** 60.74 328 *e*Pn P 13 47 37.6 -0.7
comp=Z,73nm,1.0s,mb5.7
L14A **Malta** 60.75 329 ⇑P P 13 47 37.9 -0.4
baz=61,SNR=109
P10A **Eureka** 60.77 325 ⇓P P 13 47 39.3 +0.9
baz=61
RRI2 **Red Ridge** 60.79 331 ⇓*i*P P 13 47 38.5 0.0
comp=Z,224nm,0.8s,mb6.2
MLAC **Mammoth Lakes** 60.84 322 ⇓P P 13 47 39.2 +0.3
baz=61
N12A **Clover Valley,** 60.84 327 ⇑P P 13 47 38.7 -0.2
baz=61,SNR=12
N12A **Clover Valley,** 60.84 327 *e*Pn P 13 47 38.5 -0.4
comp=Z,33nm,1.0s,mb5.3
ELK **Elko** 60.87 327 ⇓*i*P P 13 47 39.2 +0.1
ELK pmax pmax
comp=Z,65nm,1.0s
ELK **Elko** 60.87 327 ⇓*i*P P 13 47 39.2 0.0
comp=Z,65nm,1.0s,mb5.6
K15A **Arbon** 60.88 330 ⇑P P 13 47 38.9 -0.3
baz=61,SNR=48
I17A **Pilgrim Ck.** 60.88 332 ⇑P P 13 47 39.4 +0.2
baz=61,SNR=19
IMW **Indian Meadow** 61.03 332 ⇓*i*P P 13 47 40.1 0.0
comp=Z,61nm,0.8s,mb5.7
NVAR **Mina Array Bea** 61.04 323 P P 13 47 40.8 +0.4
comp=Z,20nm,0.8s,mb5.2,baz=141,slow=6.9,SNR=112
NVAR PcP PcP 13 48 21.5 -0.7
comp=Z,6.2nm,0.8s,baz=158,slow=5.4,SNR=5.2
K14A **Jones Ranch, D** 61.10 330 ⇓P P 13 47 40.1 -0.5
baz=61,SNR=61
ULM **Lac du Bonnet** 61.14 346 P P 13 47 39.3 -1.4
comp=Z,130nm,0.7s,mb6.1,baz=160,slow=6.8,SNR=109
L13A **Double Diamond** 61.15 329 ⇑P P 13 47 40.9 -0.1
baz=61,SNR=36
M12A **Wells** 61.17 328 ⇓P P 13 47 40.7 -0.4
baz=61,SNR=40
N11A **Elko Archery C** 61.19 327 ⇑P P 13 47 41.5 +0.2
baz=61,SNR=7.0
O10A **Cortez Mining,** 61.25 326 ⇓P P 13 47 42.4 +0.7
baz=62,SNR=55
H17A **Grant Village** 61.25 333 ⇓P P 13 47 42.1 +0.5
baz=62,SNR=7.4
LAO **LASA Array** 61.26 337 ⇓*i*P P 13 47 40.8 -0.8
comp=Z,58nm,1.0s,mb5.6
I16A **Newdale** 61.27 332 ⇑P P 13 47 41.6 -0.1
baz=62,SNR=19
LKWY **Lake** 61.30 333 *e*P P 13 47 42.7 +0.7
LKWY pmax pmax
comp=Z,45nm,0.7s,mb5.6
LKWY **Lake** 61.30 333 *e*P P 13 47 42.7 +0.7
comp=Z,45nm,0.7s,mb5.6
J15A **Blackfoot** 61.37 331 ⇑P P 13 47 42.6 +0.2
baz=62,SNR=113
YFT **Old Faithful** 61.41 333 *e*P P 13 47 43.8 +1.0
comp=Z,73nm,0.9s,mb5.7
G18A **Lazy EL Ranch,** 61.52 334 ⇓P P 13 47 43.1 -0.3
baz=62,SNR=88
N10A **Dunphy** 61.55 326 ⇓P P 13 47 44.0 +0.3
baz=62
YNR **Norris Junctio** 61.55 333 *e*P P 13 47 44.0 +0.4
comp=Z,28nm,0.7s,mb5.4
K13A **Stover Farm, H** 61.63 329 ⇑P P 13 47 44.0 -0.2
baz=62,SNR=14
YMR **Madison River** 61.64 333 ⇓*i*P P 13 47 45.0 +0.7
comp=Z,114nm,0.8s,mb6.0
M11A **Holland Ranch,** 61.65 327 ⇓P P 13 47 44.4 0.0
baz=62,SNR=40
BMN **Battle Mountai** 61.75 325 *e*P P 13 47 44.7 -0.3
BMN pmax pmax
comp=Z,60nm,1.1s,mb5.5
BMN **Battle Mountai** 61.75 325 *e*P P 13 47 44.7 -0.3
comp=Z,60nm,1.1s,mb5.5
L12A **House Creek Ra** 61.75 328 ⇑P P 13 47 44.9 -0.1
baz=62,SNR=38
H16A **Russell Place,** 61.80 332 ⇓P P 13 47 46.0 +0.7
baz=62,SNR=101
J14A **Carey** 61.84 330 ⇓P P 13 47 46.0 +0.4
baz=62,SNR=136
I15A **Monteview** 61.84 331 ⇓P P 13 47 46.0 +0.5
baz=62,SNR=33
GCMT **Greycliff** 61.94 334 *e*P P 13 47 46.0 -0.2
comp=Z,142nm,0.9s,mb6.0
QLMT **Earthquake Lak** 61.98 332 *e*P P 13 47 47.1 +0.6
comp=Z,27nm,0.9s,mb5.3
DGMT **Dagmar** 62.01 339 ⇓P P 13 47 46.6 0.0
baz=62,SNR=11
DGMT **Dagmar** 62.01 339 *e*P P 13 47 46.4 -0.2
comp=Z,133nm,1.1s,mb5.9
K12A **Draper Farm, C** 62.04 329 ⇓P P 13 47 47.1 +0.2
baz=62,SNR=71
CMB **Columbia Colle** 62.04 322 *e*P P 13 47 46.7 -0.4
CMB pmax pmax
comp=Z,14nm,0.9s,mb5.0
CMB **Columbia Colle** 62.04 322 *e*P P 13 47 46.7 -0.3
comp=Z,14nm,0.9s,mb5.0
G17A **Pierce Place,** 62.04 333 ⇓P P 13 47 47.6 +0.7
baz=62,SNR=28
F18A **Big Timber** 62.05 334 ⇑P P 13 47 46.9 -0.1
baz=62,SNR=150
M10A **I.L. Ranch, Tu** 62.12 327 ⇓P P 13 47 47.5 0.0
baz=62,SNR=15
L11A **Cat Creek Ranc** 62.15 328 ⇑P P 13 47 47.7 +0.1
baz=62,SNR=75
J13A **Cove Ranch, Pi** 62.22 330 ⇓P P 13 47 48.2 +0.1
baz=62,SNR=57
I14A **Mackay** 62.25 331 ⇓P P 13 47 48.9 +0.5
baz=62,SNR=90
G16A **Moss Hill, Enn** 62.45 332 ⇑P P 13 47 49.8 +0.1
baz=63,SNR=86
HLID **Hailey** 62.46 330 ⇑P P 13 47 50.2 +0.4
baz=63
HLID **Hailey** 62.46 330 ⇓*i*P P 13 47 49.9 +0.2
comp=Z,56nm,0.8s,mb5.6
F17A **Fitzpatrick Pl** 62.46 334 ⇓P P 13 47 49.9 +0.2
baz=63,SNR=92
WCN **Washoe City** 62.46 323 ⇓P P 13 47 50.5 +0.6
baz=63,SNR=23
L10A **Juniper Basin** 62.47 327 ⇑P P 13 47 49.9 +0.1
baz=63,SNR=90
I13A **Wildhorse Cree** 62.57 330 ⇑P P 13 47 50.9 +0.5
baz=63,SNR=169
J12A **Stokes Ranch,** 62.58 329 ⇓P P 13 47 50.5 0.0
baz=63,SNR=35
MCMT **McKenzie Canyo** 62.63 332 P P 13 47 51.4 +0.5
E18A **Harlowton** 62.66 335 ⇑P P 13 47 50.9 -0.1
baz=63,SNR=82
BOZ **Bozeman (W)** 62.69 333 ⇓P P 13 47 50.9 -0.3
baz=63
BOZ **Bozeman (W)** 62.69 333 ⇓*i*P P 13 47 50.9 -0.3
BOZ pmax pmax
comp=Z,64nm,1.0s,mb5.5
BOZ **Bozeman (W)** 62.69 333 ⇓*i*P P 13 47 50.9 -0.4
comp=Z,64nm,1.0s,mb5.5
G15A **Dillon** 62.72 332 ⇓P P 13 47 51.4 0.0
baz=63,SNR=34
K11A **Parker Ranch,** 62.72 328 ⇓P P 13 47 51.5 +0.1
baz=63,SNR=54
H14A **Leadore** 62.72 331 ⇓P P 13 47 51.8 +0.3
baz=63,SNR=64
F16A **Kennard Place,** 62.80 333 ⇓P P 13 47 51.8 -0.1
baz=63,SNR=41
DLMT **Dillon** 62.92 332 ⇓*i*P P 13 47 52.6 -0.1
comp=Z,56nm,0.9s,mb5.5
LCCM **Lewis and Clar** 62.95 333 P P 13 47 52.8 -0.1
E17A **Martinsdale** 62.98 334 ⇓P P 13 47 52.9 -0.2
baz=63,SNR=90
I12A **Atlanta** 62.99 329 ⇑P P 13 47 53.5 +0.3
baz=63,SNR=62
MFID **Camas Ranch** 63.07 329 ⇑P P 13 47 54.2 +0.4
baz=63,SNR=181
D18A **Linhart Farms,** 63.11 335 ⇓P P 13 47 54.0 0.0
baz=63,SNR=41
H13A **Challis** 63.11 331 ⇑P P 13 47 53.9 -0.1
baz=63,SNR=82
K10A **MacKenzie Ranc** 63.16 328 ⇑P P 13 47 54.6 +0.2
baz=63,SNR=97
LRM **Limekiln Ridge** 63.20 333 ⇓*i*P P 13 47 54.4 -0.1
comp=Z,176nm,0.9s,mb6.0
F15A **Butte** 63.23 333 ⇑P P 13 47 54.5 -0.3
baz=64,SNR=31
G14A **Jackson** 63.23 331 ⇑P P 13 47 54.7 -0.1
baz=64,SNR=8.6
E16A **East Helena** 63.39 333 ⇑P P 13 47 55.6 -0.2
baz=64,SNR=27
H12A **Diamond D Ranc** 63.39 330 ⇑P P 13 47 56.1 +0.2
baz=64,SNR=79
D17A **Six Diamond Ra** 63.45 335 ⇓P P 13 47 55.9 -0.2
baz=64,SNR=66

G13A **Cobalt** 63.49 331 ⇓P P 13 47 56.4 -0.1
baz=64,SNR=78
I11A **Placerville** 63.49 329 ⇓P P 13 47 56.4 -0.2
baz=64,SNR=58
J10A **Berg Farm, Mel** 63.56 328 ⇓P P 13 47 56.7 -0.4
baz=64,SNR=6.8
HRY **Holter Researc** 63.60 334 eP P 13 47 57.0 -0.2
comp=Z,49nm,0.9s,mb5.3
F14A **Wisdom** 63.61 332 ⇑P P 13 47 57.4 0.0
baz=64,SNR=18
D16A **Dana Ranch, Ca** 63.72 334 ⇓P P 13 47 57.9 -0.1
baz=64,SNR=19
E15A **Deer Lodge** 63.74 333 ⇑P P 13 47 57.8 -0.4
baz=64,SNR=27
EGMT **Eagleton** 63.74 336 ⇓P P 13 47 57.7 -0.5
baz=64
EGMT **Eagleton** 63.74 336 ⇓iP P 13 47 57.5 -0.6
comp=Z,77nm,1.0s,mb5.5
SCHQ **Schefferville** 63.83 6 P P 13 47 57.9 -0.6
comp=Z,60nm,0.9s,mb5.4,baz=198,slow=5.1,SNR=76
SCHQ **Schefferville** 63.83 6 P P 13 47 57.9 -0.6
C17A **Wharram Farm,** 63.85 335 ⇑P P 13 47 58.4 -0.4
baz=64,SNR=29
J09A **Fry Pan Ranch,** 64.03 328 ⇓P P 13 47 59.8 -0.3
baz=64,SNR=54
I10A **Payette** 64.04 329 ⇑P P 13 47 59.9 -0.2
baz=64,SNR=8.8
F13A **Darby** 64.05 331 ⇑P P 13 47 59.9 -0.2
baz=64,SNR=47
B18A **Beardsley Farm** 64.05 336 ⇓P P 13 48 00.0 -0.1
baz=64,SNR=44
H11A **Donnelly** 64.08 330 ⇓P P 13 47 59.7 -0.7
baz=64,SNR=30
E14A **Clinton** 64.12 332 ⇓P P 13 48 00.7 0.0
baz=64,SNR=53
D15A **Lincoln** 64.16 333 ⇑P P 13 48 00.6 -0.2
baz=64,SNR=17
H10A **Noah's Angus R** 64.37 329 ⇑P P 13 48 01.2 -1.1
baz=65,SNR=21
B17A **L&G Farms, Che** 64.39 335 ⇓P P 13 48 01.5 -0.8
baz=65,SNR=5.2
CHMT **Chamberlain Mo** 64.39 333 P P 13 48 02.2 -0.1
C16A **Fuhringer Rac** 64.40 334 ⇓P P 13 48 02.4 -0.1
baz=65,SNR=60
J08A **Circle Bar Ran** 64.42 327 ⇓P P 13 48 02.1 -0.5
baz=65,SNR=42
I09A **Lost Marbles R** 64.45 328 ⇑P P 13 48 02.4 -0.4
baz=65
MOD **Modoc** 64.46 325 ⇑iP P 13 48 03.0 0.0
comp=Z,106nm,1.1s,mb5.6
E13A **Victor** 64.46 332 ⇓P P 13 48 02.9 0.0
baz=65,SNR=42
F12A **Elk City** 64.46 331 ⇑P P 13 48 02.7 -0.2
baz=65,SNR=77
A18A **Metzger Ranch,** 64.50 336 ⇑P P 13 48 02.5 -0.5
baz=65,SNR=49
D14A **Greenough** 64.63 333 ⇓P P 13 48 03.7 -0.2
baz=65,SNR=32
MSO **Missoula** 64.64 332 ⇓iP P 13 48 04.1 +0.1
comp=Z,121nm,1.1s,mb5.6
G11A **Walters Elk Ra** 64.70 330 ⇑P P 13 48 03.9 -0.5
baz=65,SNR=45
SLMT **Seeley Lake** 64.74 333 ⇓iP P 13 48 04.4 -0.2
comp=Z,34nm,1.0s,mb5.1
C15A **Salmond Ranch,** 64.75 334 ⇑P P 13 48 05.0 +0.3
baz=65
BMO **Blue Mountains** 64.84 329 eP P 13 48 04.1 -1.2
BMO pmax pmax
comp=Z,19nm,1.0s,mb4.9
BMO **Blue Mountains** 64.84 329 eP P 13 48 04.1 -1.2
comp=Z,19nm,1.0s,mb4.9
A17A **Triple J Farms** 64.86 336 ⇑P P 13 48 05.0 -0.4
baz=65
B16A **M & M Farms, S** 64.86 335 ⇑P P 13 48 04.8 -0.6
baz=65,SNR=10
H09A **Durkee** 64.89 329 ⇑P P 13 48 05.0 -0.7
baz=65,SNR=11
WDC **Whiskeytown Da** 64.93 323 eP P 13 48 03.7 -2.3
WDC pmax pmax
comp=Z,9.0nm,0.7s,mb4.7
WDC **Whiskeytown Da** 64.93 323 eP P 13 48 03.7 -2.3
comp=Z,8.6nm,0.7s,mb4.7
F11A **Grangeville** 65.00 330 ⇓P P 13 48 05.7 -0.6
baz=65,SNR=77
G10A **Bishop Farm, J** 65.05 329 ⇓P P 13 48 06.6 -0.1
baz=65,SNR=76
D13A **Huson** 65.07 332 ⇑P P 13 48 06.8 0.0
baz=65
B15A **Bradely Ranch,** 65.15 334 ⇑P P 13 48 06.8 -0.4
baz=65,SNR=50
SWMT **Swartz Lake** 65.17 333 eP P 13 48 07.4 0.0
comp=Z,41nm,1.1s,mb5.2
H08A **Prairie City** 65.31 328 ⇓P P 13 48 08.6 +0.2
baz=66,SNR=118
K05A **Summer Lake** 65.33 325 ⇓P P 13 48 09.3 +0.7
baz=66,SNR=52
E11A **Bogner Ranch,** 65.36 331 ⇓P P 13 48 08.2 -0.5
baz=66
YBMT **Yellow Bay** 65.44 333 ⇓iP P 13 48 09.4 +0.2
comp=Z,35nm,0.8s,mb5.2
I07A **Izee** 65.46 327 ⇑P P 13 48 09.7 +0.3
baz=66,SNR=125
JTMT **Jette** 65.47 333 ⇓iP P 13 48 09.7 +0.3
comp=Z,54nm,1.2s,mb5.2
B14A **Marquette Ranc** 65.49 334 ⇑P P 13 48 09.4 -0.1
baz=66,SNR=79
C13A **Hot Springs** 65.56 333 ⇓P P 13 48 09.9 0.0
baz=66,SNR=58
F10A **Beach Ranch, E** 65.58 330 ⇑P P 13 48 09.9 -0.2
baz=66
A15A **Johnson Ranch,** 65.73 335 ⇓P P 13 48 10.1 -0.9
baz=66,SNR=18
F09A **S2 Ranch, Elgi** 65.74 329 ⇓P P 13 48 11.5 +0.4
baz=66
YBH **Yreka Blue Hor** 65.74 324 eP P 13 48 09.0 -2.2
YBH pmax pmax
comp=Z,23nm,0.9s
YBH **Yreka Blue Hor** 65.74 324 eP P 13 48 09.0 -2.2
comp=Z,23nm,0.9s,mb5.0
BSMT **Bassoo Peak** 65.78 333 ⇓iP P 13 48 11.6 +0.3
comp=Z,50nm,0.9s,mb5.3
E10A **Myers Farm, Un** 65.89 330 ⇓P P 13 48 11.8 -0.3
baz=66,SNR=17
D11A **Klaveano Farm,** 65.91 331 ⇑P P 13 48 11.6 -0.6
baz=66
G08A **Pilot Rock** 65.99 328 ⇓P P 13 48 12.8 +0.1
baz=66,SNR=20
C12B **Naegeli Ranch,** 65.99 332 ⇓P P 13 48 13.0 +0.3
baz=66,SNR=20
A14A **Double T Ranch** 66.02 334 ⇓P P 13 48 12.2 -0.6
baz=66,SNR=39
B13A **Whitefish** 66.03 333 ⇑P P 13 48 12.8 -0.1
baz=66,SNR=13
LNOR **Lincton Mounta** 66.04 329 eP P 13 48 12.3 -0.7
LNOR pmax pmax
comp=Z,43nm,1.0s,mb5.2
LNOR **Lincton Mounta** 66.04 329 eP P 13 48 12.3 -0.8
comp=Z,44nm,1.0s,mb5.2
F08A **Pendleton** 66.24 329 ⇓P P 13 48 13.9 -0.4
baz=66
WALA **Waterton Lakes** 66.29 334 ⇓iP P 13 48 14.4 -0.2
comp=Z,2.2nm,0.8s,mb4.0
VIPM **Ingram Point** 66.34 327 P P 13 48 15.5 +0.5
D10A **Wagner Farm, O** 66.37 331 ⇓P P 13 48 14.5 -0.6
baz=67,SNR=25
E09A **Wood Farm, Sta** 66.42 330 ⇓P P 13 48 15.1 -0.4
baz=67
HUMO **Hull Mountain** 66.43 324 eP P 13 48 13.8 -1.8
comp=Z,5.4nm,0.6s,mb4.5
B12A **Libby** 66.60 333 ⇓P P 13 48 16.8 +0.2
baz=67,SNR=13
FFC **Flin Flon** 66.78 344 P P 13 48 16.6 -0.9
comp=Z,320nm,0.8s,mb6.2,SNR=24
FFC **Flin Flon** 66.78 344 iP P 13 48 16.5 -1.0
FFC **Flin Flon** 66.78 344 eP P 13 48 16.2 -1.3
comp=Z,44nm,0.8s,mb5.3
G06A **Carlson Farm,** 66.83 328 ⇑P P 13 48 18.7 +0.6
baz=67
E08A **Dider Farm, El** 66.86 329 ⇓P P 13 48 17.7 -0.6
baz=67
D09A **Jones Farm, Ri** 66.88 330 ⇑P P 13 48 18.2 -0.1
baz=67,SNR=9.8
F07A **Phinny Hill Vi** 66.90 328 ⇓P P 13 48 19.0 +0.5
baz=67
C10A **Spilker Farm,** 66.93 331 ⇑P P 13 48 18.5 -0.1
baz=67
B11A **Sandpoint** 66.93 332 ⇓P P 13 48 18.5 -0.1
baz=67,SNR=15

A12A **Yaak River Ran** 66.97 333 ⇓P P 13 48 19.2 +0.3
baz=67
HAWA **Hanford** 67.03 329 eP P 13 48 18.9 -0.4
comp=Z,30nm,0.9s,mb5.1
RSW **Rattlesnake Hi** 67.06 329 eP P 13 48 19.7 +0.2
comp=Z,49nm,0.9s,mb5.3
NEW **Newport** 67.16 332 eP P 13 48 19.5 -0.6
NEW pmax pmax
comp=Z,43nm,0.9s
NEW **Newport** 67.16 332 eP P 13 48 19.5 -0.6
comp=Z,44nm,0.9s,mb5.3
D08A **Wollman Farm,** 67.18 330 ⇓P P 13 48 20.2 -0.1
baz=67
B10A **Chitwood Farm,** 67.23 332 ⇑P P 13 48 20.3 -0.2
baz=68
OD2 **Odessa Site #2** 67.30 330 P P 13 48 21.2 +0.2
H04A **Detroit Lake** 67.31 326 ⇑P P 13 48 20.7 -0.4
baz=68
E07A **Sunnyside** 67.31 329 ⇓P P 13 48 21.7 +0.7
baz=68
A11A **Hall Mountain,** 67.31 333 ⇑P P 13 48 21.2 +0.2
baz=68
C09A **Chrisman Ranch** 67.38 331 ⇑P P 13 48 21.5 0.0
baz=68
HOOD **Mount Hood Mea** 67.43 327 eP P 13 48 20.8 -1.0
comp=Z,100nm,0.8s,mb5.7
B09A **Rice** 67.75 331 ⇓P P 13 48 23.6 -0.2
baz=68
G04A **Mulino** 67.80 327 ⇓P P 13 48 24.0 -0.2
baz=68
COR **Corvallis** 67.86 326 eP P 13 48 24.7 +0.1
COR pmax pmax
comp=Z,210nm,1.4s,mb5.8
COR **Corvallis** 67.86 326 eP P 13 48 24.7 +0.1
comp=Z,210nm,1.4s,mb5.8
A10A **Northport** 67.87 332 ⇓P P 13 48 24.3 -0.2
baz=68
WTV **Waterville** 68.13 330 P P 13 48 26.5 +0.3
MTMW **Mount Mitchell** 68.18 327 P P 13 48 26.7 +0.1
F04A **Amboy** 68.23 327 ⇓P P 13 48 26.7 -0.2
baz=68
ETW **Entiat** 68.25 330 P P 13 48 27.4 +0.4
B08A **Colville Reser** 68.28 331 ⇓P P 13 48 26.7 -0.4
baz=68
LON **Longmire** 68.44 328 eP P 13 48 27.4 -0.8
LON pmax pmax
comp=Z,26nm,0.8s,mb5.1
LON **Longmire** 68.44 328 eP P 13 48 27.4 -0.7
comp=Z,26nm,0.8s,mb5.1
FCC **Fort Churchill** 68.77 350 ⇓iP P 13 48 28.8 -1.2
FCC e 13 48 52.6
FCC pmax pmax
comp=Z,3.0nm,1.0s,mb4.1
FCC **Fort Churchill** 68.77 350 ⇓iP P 13 48 28.8 -1.2
comp=Z,3.2nm,1.0s,mb4.1
FCC ePcP PcP 13 48 52.6 -1.1
F03A **Seaside** 68.84 327 ⇓P P 13 48 30.0 -0.7
baz=69
EDM **Edmonton** 69.25 337 ⇓iP P 13 48 31.8 -1.2
A07A **Ashnola River,** 69.25 331 ⇑P P 13 48 34.0 +0.9
baz=70
RPW **Rockport** 69.41 330 eP P 13 48 33.4 -0.7
comp=Z,34nm,0.9s,mb5.2
B06A **Marblemount** 69.44 330 ⇓P P 13 48 34.0 -0.3
baz=70
JCW **Jim Creek** 69.45 329 eP P 13 48 33.7 -0.7
comp=Z,93nm,1.1s,mb5.5
GNW **Green Mountain** 69.50 328 eP P 13 48 33.9 -0.8
comp=Z,23nm,1.0s,mb5.0
CMW **Cultus Mountai** 69.69 329 P P 13 48 35.5 -0.3
NLWA **Neilton Lookou** 69.93 328 ⇑P P 13 48 38.0 +0.7
baz=70
NLWA **Neilton Lookou** 69.93 328 eP P 13 48 37.8 +0.5
comp=Z,84nm,1.0s,mb5.5
A05A **Maple Falls** 70.06 330 ⇓P P 13 48 38.0 -0.1
baz=70
PGC **Sidney** 70.52 329 eP P 13 48 40.8 -0.1
comp=Z,3.5nm,1.1s,mb4.1
PPT **Papeete** 71.47 254 LR LR 14 12 40.5
comp=Z,231nm,20.3s,baz=157,slow=29
PPT **Papeete** 71.47 254 eS S 13 58 02.7 +6.6
comp=Z,200nm,24.2s
PPT eLR LR 14 11 00.7
comp=Z,349nm,25.5s
LIC **Lamto** 72.65 81 eP P 13 48 54.2 -0.3
comp=Z,42nm,0.4s,mb5.7
LIC **Lamto** 72.65 81 eP P 13 48 54.5 0.0
LIC eMLR MLR
comp=Z,152nm,20.2s
LIC **Lamto** 72.65 81 eP P 13 48 54.5 0.0
LIC LR LR
comp=Z,80nm,20.3s
TIC **Toumodi** 72.74 80 eP P 13 48 54.9 -0.1
comp=Z,63nm,0.7s,mb5.6
DBIC **Dimbokro** 72.91 80 P P 13 48 56.4 +0.5
comp=Z,12nm,0.5s,mb5.0,baz=243,slow=6.0,SNR=29
DBIC LR LR 14 19 41.0
comp=Z,66nm,18.6s,baz=193,slow=34
KIC **Kosan Boka** 72.96 81 eP P 13 48 56.4 +0.1
comp=Z,81nm,0.4s,mb5.9
YKA **Yellowknife Ar** 76.88 343 P P 13 49 16.7 -1.0
comp=Z,33nm,0.6s,mb5.2,baz=140,slow=6.0,SNR=176
SFJD **Kangerlussuaq** 77.80 10 iP P 13 49 21.3 -1.5
SFJD pmax pmax
comp=Z,27nm,0.8s,mb5.0
SFJD **Kangerlussuaq** 77.80 10 eP P 13 49 20.9 -1.9
comp=Z,35nm,1.0s,mb5.0
SFJD **Kangerlussuaq** 77.80 10 iP P 13 49 21.3 -1.5
comp=Z,27nm,0.8s,mb5.0
MORF **Marmelete** 78.00 49 eP P 13 49 26.2 +1.6
comp=Z,62nm,1.2s,mb5.2
PBDV **Barranco-do-Ve** 78.52 49 eP P 13 49 28.7 +1.3
comp=Z,53nm,1.5s,mb5.2
PCVE **Castro Verde** 78.57 49 eP P 13 49 30.3 +2.6
comp=Z,43nm,1.4s,mb5.1
PVAQ **Vaqueiros** 78.73 49 eP P 13 49 30.9 +2.3
comp=Z,25nm,1.6s,mb4.8
PBEJ **Beja** 78.84 49 eP P 13 49 30.3 +1.2
comp=Z,24nm,1.9s,mb4.7
EVO **Evora** 78.91 48 eP P 13 49 29.8 +0.3
EVO pmax pmax
comp=Z,77nm,1.2s,mb5.1
EVO eMLR MLR
comp=Z,77nm,22.8s
EVO **Evora** 78.91 48 eP P 13 49 30.5 +1.0
comp=Z,24nm,1.2s,mb4.9
EGRO **El Granado** 78.95 49 P P 13 49 29.5 -0.3
comp=Z,123nm,2.1s,mb5.4
PTOM **Tomar** 79.00 47 eP P 13 49 30.4 +0.4
comp=Z,49nm,1.4s,mb5.1
PBAR **Barrancos** 79.50 49 eP P 13 49 33.6 +0.8
comp=Z,32nm,1.6s,mb4.9
DLBC **Dease Lake** 79.64 334 eP P 13 49 32.9 -0.1
EMIN **Mina Concepcio** 79.64 49 P P 13 49 34.6 +1.1
comp=Z,64nm,1.7s,mb5.2
PMRV **Marv??o** 79.67 47 eP P 13 49 34.1 +0.5
comp=Z,32nm,2.0s,mb4.8
MDT **Midelt** 79.67 54 LR LR 14 26 27.9
comp=Z,73nm,18.9s,baz=314,slow=37
EBAD **Badajoz** 79.72 48 P P 13 49 36.2 +2.3
comp=Z,118nm,3.0s
PCBR **Castelo Branco** 79.75 47 eP P 13 49 34.6 +0.5
comp=Z,27nm,2.0s,mb4.7
PVIS **Viseu** 79.76 46 eP P 13 49 34.7 +0.6
comp=Z,54nm,1.6s,mb5.1
MTE **Manteigas** 79.90 46 eP P 13 49 40.1 +5.2
comp=Z,31nm,2.6s,mb4.7
ESPR **Espera** 79.96 50 P P 13 49 37.1 +1.9
comp=Z,139nm,3.5s
PCAB **Cabril** 80.03 45 eP P 13 49 35.7 +0.2
comp=Z,38nm,1.1s,mb5.1
PVRL **Vila Real** 80.09 45 eP P 13 49 36.2 +0.4
comp=Z,30nm,1.8s,mb4.8
EJIF **Jimena Fronter** 80.12 51 P P 13 49 37.1 +1.0
EJIF pmax pmax
comp=Z,26nm,1.0s,mb5.0
EJIF **Jimena Fronter** 80.12 51 P P 13 49 37.1 +0.9
comp=Z,26nm,1.0s,mb5.0
TORD **Torodi Ar. Bea** 80.50 75 P P 13 49 38.5 -0.1
comp=Z,21nm,0.9s,mb4.9,baz=284,slow=4.9,SNR=69
TORD pP pP 13 50 10.5 -0.4
comp=Z,9.7nm,0.7s,baz=258,slow=5.2,SNR=3.4
TORD LR LR 14 24 14.1
comp=Z,88nm,18.3s,baz=250,slow=35
MVO **Moncorvo** 80.53 46 P P 13 49 38.7 +0.4
MVO **Moncorvo** 80.53 46 eP P 13 49 38.9 +0.7
comp=Z,45nm,0.9s,mb5.3
EMIJ **Mijas** 80.69 51 P P 13 49 40.4 +1.3

comp=Z,37nm,0.8s,mb5.3
ERUA **La Rua** 80.89 45 P P 13 49 40.3 +0.2
ECAL **Calabor** 81.01 45 P P 13 49 41.7 +1.0
comp=Z,37nm,1.0s,mb5.2
MAIT **Maitri** 81.19 160 eP P 13 49 41.9 +0.7
MAIT eE pP 13 50 13.6 0.0
EADA **Adamuz** 81.33 49 P P 13 49 43.8 +1.3
comp=Z,28nm,1.1s,mb5.0
ELOJ **Sierra Loja** 81.34 50 P P 13 49 44.7 +2.1
ELOJ pmax pmax
comp=Z,86nm,1.1s,mb5.5
ELOJ **Sierra Loja** 81.34 50 P P 13 49 44.7 +2.1
comp=Z,86nm,1.1s,mb5.5
ELUQ **Luque** 81.38 50 P P 13 49 43.5 +0.7
ELUQ pmax pmax
comp=Z,8.0nm,0.3s,mb5.0
ELUQ **Luque** 81.38 50 P P 13 49 43.5 +0.7
comp=Z,7.7nm,0.3s,mb5.0
ERON **Agron** 81.57 51 P P 13 49 45.0 +1.2
comp=Z,57nm,0.8s,mb5.5
EGUA **Guajares** 81.69 51 P P 13 49 45.7 +1.2
EGUA pmax pmax
comp=Z,161nm,1.2s,mb5.7
EGUA **Guajares** 81.69 51 P P 13 49 45.7 +1.2
comp=Z,161nm,1.2s,mb5.7
ECOG **Cogollos-Vega** 81.83 50 P P 13 49 47.0 +1.8
ECOG pmax pmax
comp=Z,25nm,0.5s,mb5.3
ECOG **Cogollos-Vega** 81.83 50 P P 13 49 47.0 +1.8
comp=Z,25nm,0.5s,mb5.3
EBAN **Banos Encina** 81.93 49 P P 13 49 47.1 +1.4
EBAN pmax pmax
comp=Z,14nm,0.6s,mb5.0
EBAN **Banos Encina** 81.93 49 P P 13 49 47.1 +1.4
comp=Z,14nm,0.6s,mb5.0
PAB **San Pablo** 81.94 48 eP P 13 49 46.3 +0.6
PAB pmax pmax
comp=Z,78nm,1.4s,mb5.3
PAB **San Pablo** 81.94 48 eP P 13 49 46.3 +0.7
comp=Z,78nm,1.4s,mb5.3
EBER **Berja** 82.23 51 P P 13 49 48.5 +1.2
comp=Z,93nm,1.0s,mb5.6
ESDC **Sonseca Array** 82.26 48 P P 13 49 48.3 +1.0
comp=Z,17nm,0.9s,mb4.9,baz=259,slow=5.4,SNR=40
ESDC pP pP 13 50 21.7 +1.9
comp=Z,3.5nm,0.7s,baz=249,slow=6.2,SNR=2.9
ESDC **Sonseca Array** 82.26 48 P P 13 49 48.4 +1.0
comp=Z,37nm,0.9s,mb5.2
ESLA **Sonseca Array** 82.26 48 eP P 13 49 47.7 +0.3
comp=Z,18nm,1.4s,mb4.7
EQES **Quesada** 82.36 50 P P 13 49 49.2 +1.3
comp=Z,75nm,1.0s,mb5.5
GUD **Guadarrama** 82.42 47 P P 13 49 48.9 +0.7
GUD pmax pmax
comp=Z,18nm,0.8s,mb5.0
GUD **Guadarrama** 82.42 47 P P 13 49 48.9 +0.8
comp=Z,18nm,0.8s,mb4.9
SKAG **Skagway** 82.49 334 eP P 13 49 48.2 +0.1
comp=Z,18nm,0.9s,mb4.9
EARI **Arriondas** 82.53 44 P P 13 49 49.6 +1.0
comp=Z,23nm,0.7s,mb5.1
EHUE **Huescar** 82.72 50 P P 13 49 50.0 +0.2
EHUE pmax pmax
comp=Z,18nm,0.6s,mb5.1
EHUE **Huescar** 82.72 50 P P 13 49 50.0 +0.1
comp=Z,18nm,0.6s,mb5.1
ENIJ **Nijar** 82.78 51 P P 13 49 50.3 +0.2
ENIJ pmax pmax
comp=Z,29nm,0.8s,mb5.2
ENIJ **Nijar** 82.78 51 P P 13 49 50.3 +0.1
comp=Z,29nm,0.8s,mb5.2
EVIA **Vianos** 83.03 49 P P 13 49 52.8 +1.4
EVIA pmax pmax
comp=Z,87nm,0.7s,mb5.7
EVIA **Vianos** 83.03 49 P P 13 49 52.8 +1.4
comp=Z,87nm,0.7s,mb5.7
ELAN **Lanestosa** 83.74 45 P P 13 49 55.4 +0.6
comp=Z,103nm,1.1s,mb5.6
ETOB **Tobarra** 83.75 49 P P 13 49 56.0 +0.9
comp=Z,26nm,0.8s,mb5.1
BORG **Borgarnes** 83.87 21 eP P 13 49 55.6 +0.5
BORG pmax pmax
comp=Z,308nm,1.8s
BORG **Borgarnes** 83.87 21 eP P 13 49 55.6 +0.5
comp=Z,308nm,1.8s,mb5.8
ETOR **Torete** 83.99 47 P P 13 49 56.6 +0.3
ETOR pmax pmax
comp=Z,56nm,0.7s,mb5.5
ETOR **Torete** 83.99 47 P P 13 49 56.6 +0.3
comp=Z,56nm,0.7s,mb5.5
RES **Resolute Bay** 84.05 355 eP P 13 49 54.4 -1.4
RES pmax pmax
comp=Z,17nm,1.0s,mb4.8
RES **Resolute Bay** 84.05 355 eP P 13 49 54.4 -1.4
comp=Z,17nm,1.0s,mb4.8
ECRI **Cripan** 84.19 45 P P 13 49 58.2 +1.0
ECRI pmax pmax
comp=Z,40nm,0.7s,mb5.4
ECRI **Cripan** 84.19 45 P P 13 49 58.2 +1.0
comp=Z,40nm,0.7s,mb5.4
SUMG **Summit** 84.77 11 ⇓iP P 13 49 59.8 +0.3
SUMG pmax pmax
comp=Z,102nm,0.8s
SUMG **Summit** 84.77 11 ⇓iP P 13 49 59.8 +0.3
comp=Z,102nm,0.8s,mb5.8
SUMG **Summit** 84.77 11 ⇓iP P 13 49 59.6 +0.1
comp=Z,81nm,0.8s,mb5.7
EMOS **Mosqueruela** 85.02 48 P P 13 50 03.5 +2.0
comp=Z,54nm,1.0s,mb5.4
ELIZ **Elizondo** 85.05 45 P P 13 50 01.6 +0.1
ELIZ pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
ELIZ **Elizondo** 85.05 45 P P 13 50 01.6 +0.1
comp=Z,6.4nm,0.6s,mb4.7
EALK **Alkurruntz** 85.08 45 P P 13 50 02.9 +1.2
comp=Z,101nm,1.4s,mb5.6
SJPF **Ste Jean** 85.25 45 eP P 13 50 03.0 +0.5
comp=Z,71nm,0.7s,mb5.4
SJPF epP pP 13 50 36.1 +1.0
SJPF **Ste Jean** 85.25 45 eP P 13 50 03.0 +0.5
SJPF pmax pmax
comp=Z,36nm,0.7s,mb5.4
SJPF **Ste Jean** 85.25 45 eP P 13 50 03.0 +0.5
comp=Z,36nm,0.7s,mb5.4
SJPF epP pP 13 50 36.1 +1.0
QUIF **Quistinic** 85.38 40 eP P 13 50 03.0 0.0
comp=Z,23nm,0.8s,mb4.8
QUIF **Quistinic** 85.38 40 eP P 13 50 03.0 0.0
QUIF pmax pmax
comp=Z,11nm,0.8s,mb4.8
QUIF **Quistinic** 85.38 40 eP P 13 50 03.0 0.0
comp=Z,11nm,0.8s,mb4.8
ESAC **San Caprasio** 85.39 47 P P 13 50 06.1 +2.9
comp=Z,10nm,0.5s,mb5.0
ROSF **Rostrenen** 85.44 40 eP P 13 50 03.3 0.0
ETSF **Etsaut** 85.65 46 eP P 13 50 04.9 +0.4
comp=Z,23nm,0.8s,mb4.9
ETSF **Etsaut** 85.65 46 eP P 13 50 04.9 +0.4
ETSF pmax pmax
comp=Z,12nm,0.8s,mb4.9
ETSF **Etsaut** 85.65 46 eP P 13 50 04.9 +0.4
comp=Z,12nm,0.8s,mb4.9
ERTA **Horta de San J** 85.77 48 P P 13 50 07.0 +1.9
comp=Z,21nm,0.7s,mb5.2
SGMF **Saint Gilles** 85.87 40 eP P 13 50 04.7 -0.8
TAM **Tamanrasset** 85.95 66 eP P 13 50 07.5 +1.0
TAM pmax pmax
comp=Z,41nm,1.4s,mb5.2
TAM **Tamanrasset** 85.95 66 eP P 13 50 07.5 +1.0
comp=Z,41nm,1.4s,mb5.2
EBIE **Bielsa** 86.09 46 P P 13 50 06.3 -0.4
comp=Z,18nm,0.9s,mb5.0
EPF **Esparros** 86.33 46 eP P 13 50 07.8 0.0
comp=Z,25nm,0.7s,mb4.9
EPF **Esparros** 86.33 46 eP P 13 50 07.8 0.0
EPF pmax pmax
comp=Z,13nm,0.7s,mb5.0
EPF **Esparros** 86.33 46 eP P 13 50 07.8 0.0
comp=Z,13nm,0.7s,mb5.0
DAWY **Dawson** 86.46 337 ⇓iP P 13 50 07.3 -0.6
INK **Inuvik** 86.60 342 ⇓iP P 13 50 07.9 -0.7
INK pmax pmax
comp=Z,82nm,1.1s
INK **Inuvik** 86.60 342 ⇓iP P 13 50 07.9 -0.7
comp=Z,82nm,1.1s,mb5.6
MFF **Saint Martin d** 86.96 42 eP P 13 50 10.2 -0.6
comp=Z,35nm,0.9s,mb5.0

MFF *e*pP pP 13 50 42.8 -0.8
MFF Saint Martin d 86.96 42 *e*P **P 13 50 10.2 -0.6**
MFF *e*PP* pP 13 50 42.8 -0.8
MFF pmax pmax
comp=Z,18nm,0.9s,mb5.0
MFF Saint Martin d 86.96 42 *e*P **P 13 50 10.2 -0.6**
comp=Z,18nm,0.9s,mb5.0
MFF *e*pP pP 13 50 42.8 -0.8
GRR Gorron 86.99 40 *e*P **P 13 50 10.2 -0.7**
comp=Z,18nm,0.7s,mb4.8
GRR *e*pP pP 13 50 42.8 -0.9
GRR Gorron 86.99 40 *e*P **P 13 50 10.2 -0.7**
GRR *e*PP* pP 13 50 42.8 -0.9
GRR pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
GRR Gorron 86.99 40 *e*P **P 13 50 10.2 -0.7**
comp=Z,9.1nm,0.7s,mb4.8
GRR *e*pP pP 13 50 42.8 -0.9
SCO Scoresbysund 87.06 16 *i* P **P 13 50 10.6 -0.2**
SCO pmax pmax
comp=Z,15nm,0.8s,mb5.0
SCO Scoresbysund 87.06 16 *i* P **P 13 50 10.6 -0.2**
comp=Z,15nm,0.8s,mb5.0
LFF La Frestale 87.11 44 *e*P **P 13 50 11.2 -0.4**
comp=Z,40nm,0.6s,mb5.2
LFF La Frestale 87.11 44 *e*P **P 13 50 11.2 -0.4**
LFF pmax pmax
comp=Z,20nm,0.6s,mb5.2
LFF La Frestale 87.11 44 *e*P **P 13 50 11.2 -0.4**
comp=Z,20nm,0.6s,mb5.2
BMRM Bremner River 87.30 333 *e*P **P 13 50 11.1 -1.0**
comp=Z,81nm,1.4s,mb5.5
FLN La Foliniere 87.34 40 *e*P **P 13 50 12.1 -0.5**
comp=Z,43nm,0.8s,mb5.1
FLN *e*pP pP 13 50 44.7 -0.7
FLN *e*MLR MLR
comp=Z,40nm,17.8s
FLN La Foliniere 87.34 40 *e*P **P 13 50 12.1 -0.5**
FLN *e*PP* pP 13 50 44.7 -0.7
FLN pmax pmax
comp=Z,21nm,0.8s,mb5.1
FLN MLR MLR
comp=Z,40nm,17.8s
FLN La Foliniere 87.34 40 *e*P **P 13 50 12.1 -0.5**
comp=Z,22nm,0.8s,mb5.1
FLN *e*pP pP 13 50 44.7 -0.7
FLN LR LR
comp=Z,40nm,17.8s
CLLI Llivia 87.35 46 P **P 13 50 15.5 +2.7**
EGAK Eagle 87.47 337⇓ *i* P **P 13 50 12.2 -0.6**
comp=Z,73nm,0.8s,mb5.7
LDF La Druitiere 87.52 40 *e*P **P 13 50 12.8 -0.7**
comp=Z,36nm,0.8s,mb5.2
LDF La Druitiere 87.52 40 *e*P **P 13 50 12.8 -0.7**
LDF pmax pmax
comp=Z,18nm,0.8s,mb5.2
LDF La Druitiere 87.52 40 *e*P **P 13 50 12.8 -0.7**
comp=Z,18nm,0.8s,mb5.2
MENT Mentasta 87.71 335 *e*P **P 13 50 13.2 -0.8**
ESK Eskdalemuir 87.71 33 *i* P **P 13 50 14.6 +0.4**
MTLF Montolieu 87.73 46 *e*P **P 13 50 14.0 -0.6**
MTLF *e*pP pP 13 50 46.8 -0.6
MTLF Montolieu 87.73 46 *e*P **P 13 50 14.0 -0.6**
MTLF *e*PP* pP 13 50 46.8 -0.6
MTLF pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
MTLF Montolieu 87.73 46 *e*P **P 13 50 14.0 -0.6**
comp=Z,9.0nm,0.7s,mb4.9
MTLF *e*pP pP 13 50 46.8 -0.6
RJF Les Rejaudoux 87.73 44 *e*P **P 13 50 13.9 -0.7**
comp=Z,34nm,0.9s,mb5.1
RJF *e*pP pP 13 50 46.7 -0.7
RJF *e*MLR MLR
comp=Z,63nm,18.2s
RJF Les Rejaudoux 87.73 44 *e*P **P 13 50 13.9 -0.7**
RJF *e*PP* pP 13 50 46.7 -0.7
RJF pmax pmax
comp=Z,17nm,0.9s,mb5.1
RJF MLR MLR
comp=Z,60nm,18.3s
RJF Les Rejaudoux 87.73 44 *e*P **P 13 50 13.9 -0.7**
comp=Z,17nm,0.9s,mb5.1
RJF *e*pP pP 13 50 46.7 -0.7
RJF LR LR
comp=Z,60nm,18.3s
DIV Divide 87.88 333 *e*P **P 13 50 13.9 -0.9**
comp=Z,40nm,0.9s,mb5.5
CAF Calviac 88.01 44 *e*P **P 13 50 15.4 -0.5**
comp=Z,32nm,0.7s,mb5.2
CAF Calviac 88.01 44 *e*P **P 13 50 15.4 -0.5**
CAF pmax pmax
comp=Z,16nm,0.7s,mb5.2
CAF Calviac 88.01 44 *e*P **P 13 50 15.4 -0.5**
comp=Z,16nm,0.7s,mb5.2
TCF Toulx Ste Croi 88.45 43 *e*P **P 13 50 17.0 -0.9**
comp=Z,24nm,1.1s,mb4.8
TCF *e*pP pP 13 50 50.0 -0.8
TCF Toulx Ste Croi 88.45 43 *e*P **P 13 50 17.0 -0.9**
TCF *e*PP* pP 13 50 50.0 -0.8
TCF pmax pmax
comp=Z,12nm,1.1s,mb4.8
TCF Toulx Ste Croi 88.45 43 *e*P **P 13 50 17.0 -0.9**
comp=Z,12nm,1.1s,mb4.8
TCF *e*pP pP 13 50 50.0 -0.8
PAX Paxson 88.45 335⇓ *i* P **P 13 50 16.6 -0.9**
PAX pmax pmax
comp=Z,39nm,0.8s,mb5.5
PAX Paxson 88.45 335⇓ *i* P **P 13 50 16.6 -1.0**
comp=Z,39nm,0.8s,mb5.5
BGF Bois d'Agland 88.94 43 *e*P **P 13 50 19.5 -0.7**
comp=Z,26nm,0.7s,mb5.1
BGF Bois d'Agland 88.94 43 *e*P **P 13 50 19.5 -0.7**
BGF pmax pmax
comp=Z,13nm,0.7s,mb5.1
BGF Bois d'Agland 88.94 43 *e*P **P 13 50 19.5 -0.7**
comp=Z,13nm,0.7s,mb5.1
LASF Ste Croix 89.06 45 *e*P **P 13 50 20.6 -0.2**
comp=Z,18nm,0.8s,mb4.8
AVF Avril sur Loir 89.33 43 *e*P **P 13 50 21.0 -1.1**
comp=Z,24nm,1.0s,mb4.9
AVF Avril sur Loir 89.33 43 *e*P **P 13 50 21.0 -1.1**
AVF pmax pmax
comp=Z,12nm,1.0s,mb4.9
AVF Avril sur Loir 89.33 43 *e*P **P 13 50 21.0 -1.1**
comp=Z,12nm,1.0s,mb4.9
SSF Saint Saulge 89.50 42 *e*P **P 13 50 21.6 -1.2**
comp=Z,12nm,1.1s,mb4.6
SSF Saint Saulge 89.50 42 *e*P **P 13 50 21.6 -1.2**
SSF pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
SSF Saint Saulge 89.50 42 *e*P **P 13 50 21.6 -1.2**
comp=Z,6.2nm,1.1s,mb4.5
PMR Palmer 89.56 333 *e*P **P 13 50 21.8 -1.0**
PMR pmax pmax
comp=Z,6.0nm,0.7s,mb4.8
PMR Palmer 89.56 333 *e*P **P 13 50 21.8 -1.0**
comp=Z,6.1nm,0.7s,mb4.8
SMF Signal de Mont 89.63 43 *e*P **P 13 50 22.6 -0.8**
comp=Z,52nm,1.1s,mb5.3
SMF *e*pP pP 13 50 55.4 -0.9
SMF Signal de Mont 89.63 43 *e*P **P 13 50 22.6 -0.8**
SMF *e*PP* pP 13 50 55.4 -0.9
SMF pmax pmax
comp=Z,26nm,1.1s,mb5.3
SMF Signal de Mont 89.63 43 *e*P **P 13 50 22.6 -0.8**
comp=Z,26nm,1.1s,mb5.3
SMF *e*pP pP 13 50 55.4 -0.9
RC01 Rabbit Creek A 89.67 332 *e*P **P 13 50 22.2 -1.1**
comp=Z,27nm,0.8s,mb5.4
LOR Lormes 89.78 42 *e*P **P 13 50 23.0 -1.1**
comp=Z,20nm,0.9s,mb4.9
LOR *e*pP pP 13 50 55.9 -1.1
LOR *e*MLR MLR
comp=Z,63nm,20.0s
LOR Lormes 89.78 42 *e*P **P 13 50 23.0 -1.1**
LOR *e*PP* pP 13 50 55.9 -1.1
LOR pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
LOR MLR MLR
comp=Z,60nm,20.0s
LOR Lormes 89.78 42 *e*P **P 13 50 23.0 -1.1**
comp=Z,9.9nm,0.9s,mb4.9
LOR *e*pP pP 13 50 55.9 -1.1
LOR LR LR
comp=Z,60nm,20.0s

VIVF Saint-Julien-l 89.80 45 *e*P **P 13 50 24.2 -0.1**
comp=Z,38nm,1.0s,mb5.2
VIVF Saint-Julien-l 89.80 45 *e*P **P 13 50 24.2 -0.1**
VIVF pmax pmax
comp=Z,19nm,1.0s,mb5.2
VIVF Saint-Julien-l 89.80 45 *e*P **P 13 50 24.2 -0.1**
comp=Z,19nm,1.0s,mb5.2
COLA College 90.13 336 *e*P **P 13 50 24.5 -0.9**
COLA pmax pmax
comp=Z,74nm,1.4s,mb5.6
COLA College 90.13 336 *e*P **P 13 50 24.5 -0.9**
comp=Z,74nm,1.4s,mb5.6
SMRF Simiane la Rot 90.25 46 *e*P **P 13 50 25.5 -0.9**
comp=Z,36nm,1.2s,mb5.1
SMRF Simiane la Rot 90.25 46 *e*P **P 13 50 25.5 -0.9**
comp=Z,36nm,1.2s,mb5.4
OHAK Old Harbor 90.28 328 *e*P **P 13 50 25.2 -1.0**
comp=Z,40nm,1.2s,mb5.4
BAIF Baives 90.63 39 *e*P **P 13 50 27.3 -0.7**
comp=Z,12nm,0.8s,mb4.8
BAIF Baives 90.63 39 *e*P **P 13 50 27.3 -0.7**
BAIF pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
BAIF Baives 90.63 39 *e*P **P 13 50 27.3 -0.7**
comp=Z,6.1nm,0.8s,mb4.8
ORIF Oris-en-Rattie 90.65 45 *e*P **P 13 50 28.6 +0.3**
comp=Z,38nm,0.9s,mb5.2
ORIF *e*pP pP 13 51 01.3 +0.1
ORIF *e*MLR MLR
comp=Z,49nm,20.5s
ORIF Oris-en-Rattie 90.65 45 *e*P **P 13 50 28.6 +0.3**
ORIF *e*PP* pP 13 51 01.3 +0.1
ORIF pmax pmax
comp=Z,19nm,0.9s,mb5.2
ORIF Oris-en-Rattie 90.65 45 *e*P **P 13 50 28.6 +0.3**
comp=Z,19nm,0.9s,mb5.2
ORIF *e*pP pP 13 51 01.3 +0.1
LMR La Mourre 90.79 46 *e*P **P 13 50 27.7 -1.2**
comp=Z,102nm,1.4s,mb5.5
LMR La Mourre 90.79 46 *e*P **P 13 50 27.7 -1.2**
LMR pmax pmax
comp=Z,51nm,1.4s,mb5.5
LMR La Mourre 90.79 46 *e*P **P 13 50 27.7 -1.2**
comp=Z,51nm,1.4s,mb5.5
SYO Syowa Base 90.88 161⇑ *e*P **P 13 50 27.4 -1.5**
SYO Syowa Base 90.88 161⇑ *e*sP sP 13 51 11.3 -4.0
DOU Dourbes 90.88 40 P **P 13 50 28.8 -0.4**
comp=Z,8.5nm,1.1s,mb4.8
DOU AP pP 13 51 00.5 -1.6
RSO Redoubt South 90.90 331 *e*P **P 13 50 28.2 -0.8**
FRF La Foret Royal 90.93 46 *e*P **P 13 50 29.2 -0.4**
comp=Z,53nm,1.0s,mb5.3
FRF La Foret Royal 90.93 46 *e*P **P 13 50 29.2 -0.4**
FRF pmax pmax
comp=Z,27nm,1.0s,mb5.3
FRF La Foret Royal 90.93 46 *e*P **P 13 50 29.2 -0.4**
comp=Z,26nm,1.0s,mb5.3
KTH Kantishna Hill 90.97 334 *e*P **P 13 50 27.9 -1.3**
comp=Z,16nm,0.8s,mb5.2
GIVF Givet 91.03 40 *e*P **P 13 50 29.4 -0.5**
comp=Z,52nm,1.0s,mb5.3
GIVF *e*pP pP 13 51 02.4 -0.4
GIVF Givet 91.03 40 *e*P **P 13 50 29.4 -0.5**
GIVF *e*PP* pP 13 51 02.4 -0.4
GIVF pmax pmax
comp=Z,26nm,1.0s,mb5.3
GIVF Givet 91.03 40 *e*P **P 13 50 29.4 -0.5**
comp=Z,26nm,1.0s,mb5.3
GIVF *e*pP pP 13 51 02.4 -0.4
CABF La Chapelle 91.13 43 *e*P **P 13 50 30.0 -0.4**
comp=Z,28nm,1.0s,mb5.1
CABF La Chapelle 91.13 43 *e*P **P 13 50 30.0 -0.4**
CABF pmax pmax
comp=Z,14nm,1.0s,mb5.0
CABF La Chapelle 91.13 43 *e*P **P 13 50 30.0 -0.4**
comp=Z,14nm,1.0s,mb5.0
BPAW Bear Paw Mtn. 91.16 335⇓ *i* P **P 13 50 29.3 -0.9**
comp=Z,39nm,0.9s,mb5.5
MBDF Montbardon 91.24 45 *e*P **P 13 50 29.4 -1.6**
PPLA Purkeypile 91.32 334 *e*P **P 13 50 30.2 -0.7**
comp=Z,31nm,0.9s,mb5.4
ALE Alert 91.35 2 P **P 13 50 30.0 -0.8**
comp=Z,116nm,1.0s,mb6.0,SNR=8.8
LPL La Plagne 91.36 44 *e*P **P 13 50 31.9 +0.4**
comp=Z,33nm,1.1s,mb5.1
LPL *e*pP pP 13 51 04.8 +0.3
LPL La Plagne 91.36 44 *e*P **P 13 50 31.9 +0.4**
LPL *e*PP* pP 13 51 04.8 +0.3
LPL pmax pmax
comp=Z,17nm,1.1s,mb5.1
LPL La Plagne 91.36 44 *e*P **P 13 50 31.9 +0.4**
comp=Z,16nm,1.1s,mb5.1
LPL *e*pP pP 13 51 04.8 +0.3
LPG La Plagne 91.37 44 *e*P **P 13 50 32.2 +0.6**
comp=Z,32nm,1.1s,mb5.1
LPG La Plagne 91.37 44 *e*P **P 13 50 32.2 +0.6**
LPG pmax pmax
comp=Z,16nm,1.1s,mb5.1
LPG La Plagne 91.37 44 *e*P **P 13 50 32.2 +0.6**
comp=Z,16nm,1.1s,mb5.1
BCLA Clavier 91.39 39 P **P 13 50 31.6 0.0**
comp=Z,8.5nm,1.5s,mb4.7
DAG Danmarks Havn 91.44 11⇑ *i* P **P 13 50 30.5 -0.7**
DAG pmax pmax
comp=Z,13nm,0.8s,mb5.1
DAG Danmarks Havn 91.44 11⇑ *i* P **P 13 50 30.5 -0.7**
comp=Z,13nm,0.8s,mb5.1
SBF Sospel 91.55 46 *e*P **P 13 50 31.9 -0.5**
HAU Haudompre 91.58 42 *e*P **P 13 50 31.5 -1.0**
HAU *e*MLR MLR
comp=Z,49nm,19.0s
HAU Haudompre 91.58 42 *e*P **P 13 50 31.5 -1.0**
HAU LR LR
comp=Z,50nm,19.0s
KEST Kesra 91.58 54 P **P 13 50 33.4 +0.6**
comp=Z,3.1nm,0.9s,mb4.5,baz=265,slow=4.1,SNR=8.1
KEST pP pP 13 51 06.9 +1.2
comp=Z,3.7nm,0.8s,baz=113,slow=2.1,SNR=4.3
CHUM Lake Minchumin 91.66 335 *e*P **P 13 50 31.0 -1.5**
comp=Z,8.9nm,0.6s,mb5.2
WLF Walferdange 91.78 40 P **P 13 50 33.7 +0.3**
comp=Z,11nm,1.1s,mb5.0
COLD Coldfoot 91.82 338⇓ *e*P **P 13 50 33.1 0.0**
comp=Z,11nm,0.7s,mb5.2
HINF Hinteralfeld 91.88 42 *e*P **P 13 50 32.0 -1.9**
ECH Echery 92.16 42 *e*P **P 13 50 34.7 -0.4**
ECH pmax pmax
comp=Z,4.0nm,0.9s,mb4.7
ECH Echery 92.16 42 *e*P **P 13 50 34.7 -0.5**
comp=Z,4.4nm,0.9s,mb4.7
CDF Champ du Feu 92.27 42 *e*P **P 13 50 34.9 -0.7**
comp=Z,16nm,0.8s,mb5.0
CDF *e*pP pP 13 51 08.0 -0.6
CDF Champ du Feu 92.27 42 *e*P **P 13 50 34.9 -0.7**
CDF *e*PP* pP 13 51 08.0 -0.6
CDF pmax pmax
comp=Z,8.0nm,0.8s,mb5.0
CDF Champ du Feu 92.27 42 *e*P **P 13 50 34.9 -0.7**
comp=Z,7.8nm,0.8s,mb5.0
CDF *e*pP pP 13 51 08.0 -0.6
SVW2 Sparrevohn 92.40 331 *e*P **P 13 50 33.7 -2.3**
MUD Monsted U'grnd 94.75 34 *i* P **P 13 50 46.9 0.0**
MUD pmax pmax
comp=Z,13nm,0.8s,mb5.4
MUD Monsted U'grnd 94.75 34 *i* P **P 13 50 46.9 0.0**
comp=Z,13nm,0.8s,mb5.4
BOSA Boshof 95.93 120 P **P 13 50 53.0 0.0**
comp=Z,2.6nm,1.0s,mb4.6,baz=277,slow=12,SNR=4.4
CLL Collm 96.35 39⇓ *i* P **P 13 50 54.1 -0.2**
CLL pmax pmax
comp=Z,6.0nm,1.0s,mb5.0
CLL Collm 96.35 39⇓ *i* P **P 13 50 54.1 -0.2**
comp=Z,6.0nm,1.0s,mb5.0
CLL Collm 96.35 39⇓ *i* P **P 13 50 54.1 -0.2**
comp=Z,6.0nm,1.0s,mb5.0
NB2 NORSAR Subarra 96.40 29 P **P 13 50 54.2 -0.1**
comp=Z,6.8nm,1.0s,mb5.0,baz=263,slow=4.4
NB2 NORSAR Subarra 96.40 29 P **P 13 50 54.2 -0.1**
NB2 NORSAR Subarra 96.40 29 P **P 13 50 54.2 -0.1**
NOA NORSAR Array B 96.40 29 P **P 13 50 54.8 +0.5**
comp=Z,4.8nm,1.1s,mb4.9,baz=263,slow=4.8,SNR=5.1
KHC Kasperske Hory 96.50 41 *e*P **P 13 50 55.9 +0.9**
KHC Kasperske Hory 96.50 41 *e*P **P 13 50 55.9 +0.9**
GERES GERESS Array B 96.55 42 P **P 13 50 55.3 0.0**
comp=Z,0.6nm,0.5s,mb4.3,baz=247,slow=2.8,SNR=7.4
CRNS Crni Vrh 96.65 44 *i* P **P 13 50 55.8 0.0**

CRNS *i* 13 58 00.6
MOZS Mozjanca 96.80 44 *i* P **P 13 50 57.0 +0.6**
LJU Ljubljana 96.83 45 *i* P **P 13 50 57.2 +0.6**
BRG Berggiesshubel 96.90 40 *e*P **P 13 50 57.1 +0.3**
comp=Z,12nm,1.4s,mb5.1
PRU Pruhonice 97.20 41 *e*P **P 13 50 58.9 +0.7**
PRU Pruhonice 97.20 41 *e*P **P 13 50 58.9 +0.7**
ZAVS Zavodnje 97.21 44 *e*P **P 13 50 58.6 +0.3**
UPC Upice 98.18 40 *e*P **P 13 51 03.2 +0.7**
UPC Upice 98.18 40 *e*P **P 13 51 03.2 +0.7**
DPC Dobruska-Polom 98.37 40 *e*P **P 13 51 03.7 +0.3**
DPC Dobruska-Polom 98.37 40 *e*P **P 13 51 03.7 +0.3**
MAW Mawson 98.49 165 LR LR 14 31 09.9
comp=Z,105nm,21.4s,baz=107,slow=33
RPZ Rata Peaks 99.86 223 *e*P Pdif 13 51 10.5 +0.5
comp=Z,108nm,1.8s
BRTR Keskin Array B 110.91 51 PKiKP PKiKP 13 55 58.1 -0.3
comp=Z,0.8nm,0.8s,baz=228,slow=1.5,SNR=6.0
ABKAR Akbulak array 125.61 34 *e*PKPdf PKPdf 13 56 26.2 -0.2
STKA Stephens Creek 125.72 220 *e*PKP PKPdf 13 56 26.6 -0.6
comp=Z,5.8nm,0.6s
STKA Stephens Creek 125.72 220 PKP PKPdf 13 56 26.9 -0.3
comp=Z,11nm,0.7s,baz=120,slow=1.7,SNR=16
BRVK Borovoye 128.22 25 *e*PKIKP PKPdf 13 56 31.3 +0.1
BVAR Borovoye Array 128.29 25 PKP PKPdf 13 56 31.8 +0.4
comp=Z,7.5nm,0.8s,baz=288,slow=1.4,SNR=38
BVAR PP PP 13 58 36.8 +0.3
comp=Z,1.6nm,0.8s,baz=330,slow=5.1,SNR=4.4
CTA Charters Tower 129.21 235 *e*PKP PKPdf 13 56 33.7 -0.4
comp=Z,8.2nm,0.8s
CTA Charters Tower 129.21 235 PKP PKPdf 13 56 34.2 +0.1
comp=Z,15nm,1.0s,baz=291,slow=1.9,SNR=9.9
CTAO Charters Tower 129.21 235 *e*PKIKP PKPdf 13 56 33.8 -0.3
YSS Yuzh-Sakhalins 129.44 326⇑ *i*PKIKP PKPdf 13 56 32.5 -1.2
YSS pmax pmax
comp=Z,30nm,1.0s
YSS Yuzh-Sakhalins 129.44 326 *e*PKPdf PKPdf 13 56 33.2 -0.6
ASAJ Asahikawa 131.16 323 PKP PKPdf 13 56 37.0 -0.1
comp=Z,11nm,0.9s,baz=264,slow=12,SNR=6.0
NVS Novosibirsk 131.22 16 *i* PKIKP PKPdf 13 56 36.4 -0.5
NVS pmax pmax
comp=Z,30nm,1.5s
NVS pmax pmax
comp=E,8.0nm,1.3s
HABR Khabarovsk 132.37 332 *d i*PKIKP PKPdf 13 56 38.9 -0.4
HABR *e* 13 57 08.6
HABR 13 59 02.5
HABR pmax pmax
comp=Z,32nm,1.4s
ZALV Zalesovo Beam 132.44 15 PKP PKPdf 13 56 39.0 -0.2
comp=Z,20nm,0.8s,baz=270,slow=2.3,SNR=37
ZALV pPKP pPKPdf 13 57 09.7 -3.9
comp=Z,3.0nm,0.3s,baz=289,slow=2.4,SNR=4.2
ZALV sPKP 13 57 25.5
comp=Z,5.3nm,0.8s,baz=282,slow=1.4,SNR=4.1
ZALV SKPbc SKPbc 13 59 55.3 +0.9
comp=Z,2.2nm,0.7s,baz=333,slow=4.6,SNR=3.7
ZALV Zalesovo Beam 132.44 15 PKIKP PKPdf 13 56 39.0 -0.2
ZALV 13 57 09.7
ZALV Zalesovo Beam 132.44 15 PKP PKPdf 13 56 39.0 -0.2
ZALV pPKP pPKPdf 13 57 09.7 -3.9
ZALV sPKP 13 57 25.5
ZALV SKPbc SKPbc 13 59 55.3 +0.9
KLR Kul'dur 133.27 335 *e*PKIKP PKPdf 13 56 36.0 -4.9
KURK Kurchatov 133.31 22 PKP PKPdf 13 56 41.2 +0.2
comp=Z,13nm,1.0s,baz=318,slow=2.3,SNR=44
KURK pPKP pPKPdf 13 57 11.3 -4.0
comp=Z,1.7nm,0.6s,baz=310,slow=2.7,SNR=2.9
KURK SKPbc SKPbc 13 59 58.1 +0.6
comp=Z,1.5nm,0.7s,baz=319,slow=3.8,SNR=5.0
KURK Kurchatov 133.31 22 PKIKP PKPdf 13 56 41.2 +0.2
KURK 13 57 11.3
KURK Kurchatov 133.31 22 PKP PKPdf 13 56 41.2 +0.2
KURK pPKP pPKPdf 13 57 11.3 -4.0
KURK SKPbc SKPbc 13 59 58.1 +0.6
ASAR Alice Springs 136.27 222 PKhKP 13 56 40.9
comp=Z,0.9nm,0.6s,baz=120,slow=3.5,SNR=6.2
ASAR PKP PKPdf 13 56 46.4 -1.0
comp=Z,16nm,0.9s,baz=123,slow=1.9,SNR=40
ASAR pPKP pPKPdf 13 57 20.1 -1.7
comp=Z,4.1nm,0.9s,baz=139,slow=2.4,SNR=3.2
ASAR SKPbc SKPbc 14 00 07.2 -0.7
comp=Z,1.7nm,1.0s,baz=139,slow=3.6,SNR=5.0
ASAR Alice Springs 136.27 222 PKIKP 13 56 40.9
ASAR 13 57 20.1
MOY Mondy 137.14 2 *e*PKIKP PKPdf 13 56 49.1 +1.0
TLY Talaya 137.18 360 *e*PKIKP PKPdf 13 56 48.1 0.0
TLY pmax pmax
comp=Z,6.0nm,0.7s
USP Ospenovka 137.20 32 P PKPdf 13 56 49.4 +0.9
SNR=6.9
EKS2 Erkin-Say 137.25 33 P PKPdf 13 56 50.2 +1.6
SNR=6.1
EKS2 Erkin-Say 137.25 33 *e*PKPdf PKPdf 13 56 49.7 +1.2
AAK Ala-Archa 137.65 32 PKP PKPdf 13 56 49.4 +0.1
comp=Z,9.2nm,0.9s,baz=232,slow=7.7,SNR=9.3
AAK Ala-Archa 137.65 32 *c i*PKIKP PKPdf 13 56 50.8 +1.5
MDJ Mudanjiang 137.76 332 PKP PKPdf 13 56 48.7 -0.7
MDJ LR LR
comp=N,14nm,38.1s
MDJ LR LR
comp=E,27nm,44.2s
MDJ LR LR
comp=Z,20nm,35.1s
MK31 Makanchi Array 137.92 22 *e*PKIKP PKPdf 13 56 49.2 -0.5
MKAR Makanchi Array 137.92 22 PKhKP 13 56 42.1
comp=Z,0.5nm,0.3s,baz=14,slow=3.6,SNR=8.4
MKAR PKP PKPdf 13 56 49.2 -0.4
comp=Z,5.7nm,0.8s,baz=20,slow=3.9,SNR=25
MKAR SKPbc SKPbc 14 00 11.8 -0.2
comp=Z,0.5nm,0.3s,baz=25,slow=6.7,SNR=4.7
MKAR Makanchi Array 137.92 22 PKHKP 13 56 42.1
MKAR 13 56 49.2
MKAR Makanchi Array 137.92 22 PKP 13 56 42.1
MKAR PKP PKPdf 13 56 49.2 -0.4
MKAR SKPbc SKPbc 14 00 11.8 -0.2
UCH Uchtor 137.94 33 P PKPdf 13 56 51.8 +1.9
SNR=8.7
TKM2 Tokmak 2 138.01 31 P PKPdf 13 56 51.0 +1.0
SNR=7.1
TKM2 Tokmak 2 138.01 31 *e*PKPdf PKPdf 13 56 50.7 +0.7
MJAR Matsushiro Arr 138.15 317 PKhKP 13 56 41.9
comp=Z,2.8nm,0.7s,baz=58,slow=2.4,SNR=6.8
MJAR PKP PKPdf 13 56 49.7 -0.8
comp=Z,2.3nm,0.6s,baz=47,slow=0.9,SNR=6.2
MJAR Matsushiro Arr 138.15 317 PKP PKPdf 13 56 49.7 -0.8
MAT Matsushiro 138.15 317 PKP 13 56 41.6
WRAB Tennant Creek 138.46 226 *e*PKIKP PKPdf 13 56 50.7 -0.8
WRA Warramunga Arr 138.46 226 PKP PKPdf 13 56 51.0 -0.5
comp=Z,14nm,0.7s,baz=128,slow=1.6,SNR=43
WRA pPKP pPKPdf 13 57 25.1 -0.8
comp=Z,3.4nm,0.9s,baz=119,slow=1.6,SNR=2.8
ZAK Zakamensk 138.48 0 *e*PKHKP 13 56 42.1
ZAK pmax pmax
comp=Z,4.0nm,1.1s
ULHL Ulahol 138.83 31 P PKPdf 13 56 53.1 +1.6
SNR=10
CN2 Changchun 140.22 335 PKP PKPdf 13 56 57.3 +3.3
CN2 PP PP 13 59 55.1 +3.0
CN2 AMB AMB
comp=Z,540nm,6.0s
KSH Kashi 140.62 34 *e*PKP PKPdf 13 56 56.1 +1.3
KSH *e*PKS 14 00 30.6
KSH *e*SKS SKSdf 14 03 54.6 +1.3
KSH *e*SKKS SKKSac 14 06 34.5 -2.2
KSH AMB AMB
comp=Z,67nm,3.7s
KSH LR LR
comp=N,60nm,4.8s
KSH LR LR
comp=E,74nm,4.4s
KSH LR LR
comp=Z,87nm,5.8s
SONM Songino Array 140.96 357 PKhKP 13 56 47.7
comp=Z,2.2nm,0.5s,baz=331,slow=2.3,SNR=14
SONM PKP PKPdf 13 56 55.4 +0.2
comp=Z,8.5nm,0.9s,baz=7.7,slow=2.6,SNR=14
SONM PP PP 13 59 49.9 -6.2
comp=Z,2.8nm,0.9s,baz=353,slow=6.0,SNR=6.1
SONM SKPbc SKPbc 14 00 21.0 +0.8
comp=Z,2.3nm,0.9s,baz=191,slow=0.5,SNR=4.1
SONM Songino Array 140.96 357 PKHKP 13 56 47.7
SONM 13 56 55.4
WMQ Urumqi 142.38 19 *e*PKP PKPdf 13 57 00.0 +2.2
KSRS Korea Array 143.94 326 PKP PKPdf 13 56 57.8 -3.0

comp=Z,11nm,0.7s,baz=54,slow=2.8,SNR=44
KSRS pPKP pPKPdf 13 57 34.7 -0.5
comp=Z,6.0nm,1.0s,baz=36,slow=2.3,SNR=2.9
KAKA Kakadu 144.32 234 *e*PKP PKPdf 13 57 00.2 -1.9
comp=Z,32nm,0.8s
THN Thein Dam 145.01 44 *e*PKP PKPbc 13 57 01.0 -1.4
FITZ Fitzroy Crossi 145.60 219 *e*PKP PKPdf 13 57 04.2 0.0
comp=Z,45nm,0.4s
FITZ *e*pPKP pPKPdf 13 57 38.2 -0.5
FITZ Fitzroy Crossi 145.60 219 PKPbc PKPbc 13 57 04.3 -0.3
comp=Z,40nm,0.6s,baz=168,slow=3.7,SNR=55
FITZ pPKPbc pPKPbc 13 57 38.4 -0.2
comp=Z,50nm,0.9s,baz=161,slow=2.9,SNR=11
MBWA Marble Bar 146.35 208 *e*PKP PKPdf 13 57 05.9 +0.5
MBWA Marble Bar 146.35 208 *e*PKPdf PKPdf 13 57 04.8 -0.6
BJI Beijing 146.87 342 PKPbc PKPbc 13 57 06.2 -1.6
BJI PP PP 14 00 33.5 +1.8
BJI SS SS 14 19 24.0 +3.5
BJI LR LR
comp=Z,32nm,61.8s
BJT Baijiatuan 146.90 342 *e*PKIKP PKPdf 13 57 05.9 +0.1
HHC Hu-ho-hao-te 147.25 349 *e*PKPbc PKPdf 13 57 05.4 -0.9
HHC PP PP 14 00 34.8 +1.0
HHC PKS 14 00 39.0
HHC SKS SKSdf 14 04 02.6 -0.7
HHC SKKS SKKSac 14 07 15.4 +1.0
HHC SS SS 14 19 27.8 +3.3
HHC AMB AMB
comp=Z,52nm,4.3s
HHC LR LR
comp=N,63nm,22.6s
HHC LR LR
comp=E,91nm,22.6s
HHC LR LR
comp=Z,80nm,22.6s
BTO Baotou 147.75 351 *e*PKPbc PKPdf 13 57 07.2 0.0
NDI New Delhi 148.20 48 *e*PKP PKPdf 13 57 06.5 -1.8
GTA Gaotai 149.26 6 PKPbc PKPdf 13 57 09.9 +0.2
GTA PKS 14 00 45.4
GTA PP PP 14 00 50.8 +5.3
GTA SKS SKSdf 14 04 06.6 +0.5
GTA SKKS SKKSac 14 07 28.6 +3.0
GTA AMB AMB
comp=Z,66nm,5.7s
GTA LR LR
comp=N,24nm,11.1s
GTA LR LR
comp=E,32nm,12.9s
GTA LR LR
comp=Z,30nm,12.0s
LZH Lanzhou 152.77 360 *e*PKPbc PKPdf 13 57 15.8 +0.6
LZH pPKP pPKPdf 13 57 43.1 -6.6
LZH PP PP 14 01 05.0 -0.5
LZH SKKS SKKSac 14 07 43.5 -1.4
LZH AMB AMB
comp=Z,280nm,8.2s
LZH LR LR
comp=E,440nm,18.1s
LZH LR LR
comp=Z,490nm,20.4s
NJ2 Nanjing 152.83 331 *e*PKPbc PKPdf 13 57 18.2 +2.8
KKN Kakani 154.32 40 *e*P PKPdf 13 57 17.3 -0.3
comp=Z,31nm,0.7s
DMN Daman 154.33 41 *e*P PKPdf 13 57 17.3 -0.3
comp=Z,69nm,0.9s
PKIN Phulchoki 154.54 40 *e*P PKPdf 13 57 17.4 -0.5
comp=Z,40nm,0.6s
PKI Pulchoki 154.55 40 *e*P PKPdf 13 57 17.6 -0.4
comp=Z,40nm,0.8s
GUN Gumba 154.61 39 *e*P PKPdf 13 57 18.0 0.0
comp=Z,138nm,0.9s
JIRN Jiri 154.98 39 *e*P PKPdf 13 57 18.1 -0.4
comp=Z,66nm,1.3s
RAMN Ramite 155.74 40 *e*P PKPdf 13 57 18.4 -1.2
comp=Z,58nm,0.8s
LSA Lhasa 156.08 28 *e*PKIKP PKPdf 13 57 20.2 +0.2
TAPN Taplejung 156.13 37 *e*P PKPdf 13 57 18.3 -1.8
comp=Z,31nm,1.2s
ODAN Odare 156.30 38 *e*P PKPdf 13 57 18.6 -1.7
comp=Z,29nm,0.9s
CD2 Chengdu 157.93 360 *e*PKP PKPdf 13 57 23.4 +1.1
CD2 pPKP pPKPdf 13 57 50.2 -6.6
CD2 PP PP 14 01 39.5 +5.3
CD2 SKS SKSdf 14 04 17.6 +1.1
CD2 SKKS SKKSac 14 08 16.6 +3.9
CD2 SS SS 14 21 26.7 +5.3
CD2 AMB AMB
comp=Z,180nm,10.2s
CD2 LR LR
comp=N,110nm,13.0s
CD2 LR LR
comp=Z,90nm,9.6s
GYA Guiyang 162.13 351 PKP PKPdf 13 57 27.0 -0.1
GYA pPKP pPKPdf 13 57 58.0 -3.7
GYA sPKP 13 58 10.8
GYA PKPab PKPab 13 58 16.9 +2.8
GYA PKS 14 00 59.4
GYA PP PP 14 02 01.6 +4.7
GYA SKKS SKKSac 14 08 36.4 +1.8
GYA SS SS 14 22 08.7 +3.0
GYA AMB AMB
comp=Z,160nm,8.0s
GYA LR LR
comp=N,460nm,24.5s
GYA LR LR
comp=E,240nm,25.0s
GYA LR LR
comp=Z,480nm,24.0s
KMI Kunming 163.68 3 PKP PKPdf 13 57 28.4 -0.2
KMI pPKP pPKPdf 13 58 01.6 -1.6
KMI PKPab PKPab 13 58 19.7 -1.2
KMI PP PP 14 02 08.4 +3.4
KMI LR LR
comp=Z,41nm,21.2s
CMAR Chiang Mai Arr 169.31 25 PKP PKPdf 13 57 32.9 -0.3
comp=Z,5.4nm,0.9s,baz=287,slow=1.8,SNR=37
CMAR PKPab PKPab 13 58 45.2 -0.7
comp=Z,7.0nm,0.9s,baz=326,slow=5.5,SNR=23
CMAR pPKPab pPKPab 13 59 24.4 +5.4
comp=Z,3.9nm,0.8s,baz=316,slow=5.6,SNR=7.7
CMAR Chiang Mai Arr 169.31 25 PKIKP PKPdf 13 57 32.9 -0.2
CMAR 13 58 45.3
PSI Prapat 172.48 141 PKP PKPdf 13 57 33.6 -1.3
comp=Z,4.5nm,0.6s,baz=181,slow=22,SNR=7.0

NNC ***05*** *13:38:33.8±6.0, 39°.43N×73°.15E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=55.9km s-min=31.5km az=6.0*
ISC 05 13:38:31.3±2.0, 39°.0N±0°.1×73°.09E±0°.10, h35km, n11, σ1§07/14, 1C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**2.30**	**76**	*e*Pn	**Pn**	**13 39 06.0**	**-0.7**
KSH				Sn	**Sn**	**13 39 34.2**	**+0.4**
KSH	comp=N,120nm,0.5s			smax			
KSH	comp=E,120nm,0.6s			smax			
AML	**Almayashu** SNR=23	**3.18**	**8**	P	**Pn**	**13 39 19.7**	**+0.9**
UCH	**Uchtor** SNR=23	**3.42**	**18**	P	**Pn**	**13 39 22.1**	**0.0**
KZA	**Kyzart** SNR=19	**3.50**	**27**	P	**Pn**	**13 39 20.1**	**-3.2**
AAK	**Ala-Archa** SNR=11	**3.80**	**16**	P	**Pn**	**13 39 28.0**	**+0.7**
KBK	**Karagaybulak** SNR=6.7	**3.93**	**20**	P	**Pn**	**13 39 34.7**	**+5.5**
CHMS	**Chumysh** SNR=7.3	**4.21**	**17**	P	**Pn**	**13 39 33.1**	**+0.2**
TKM2	**Tokmak 2** comp=E,7.5nm,0.9s	**4.37**	**25**	⇓Pn	**Pn**	**13 39 35.5**	**+0.4**
TKM2	comp=E,6.4nm,0.5s			⇓Sn	**Sn**	**13 40 24.2**	**-0.6**
USP	**Ospenovka** SNR=6.4	**4.41**	**13**	P	**Pn**	**13 39 35.6**	**-0.2**
KK31	**Karatay Array** comp=E,0.9nm,0.3s,baz=155,slow=12,SNR=4.0	**4.56**	**335**	⇓Pn	**Pn**	**13 39 39.8**	**+2.1**
KK31	comp=E,10nm,0.7s,baz=144,slow=28,SNR=3.9			⇓Sn	**Sn**	**13 40 29.2**	**-0.2**
AB31	**Akbulak array** comp=E,0.3nm,0.5s,baz=134,slow=11,SNR=6.5	**13.93**	**322**	⇑P	**Pn**	**13 41 43.7**	**-2.4**

DJA 05 13:47:44, 8°.69S×121°.60E, h10km, MLv4.0/7, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**0.63**	**85**	P	Pg	13 47 54.8	-1.5
MMRI				S	Sg	13 48 06.1	+1.5
WSI	**Waingapu**	**1.61**	**233**	P	Pn	13 48 11.5	-1.0
WSI				S	Sn	13 48 37.5	+4.1
BKSI	**Bulukumba**	**3.65**	**336**	P	Pn	13 48 38.9	-1.7
BKSI				S		13 48 40.3	
KAPI	**Kappang**	**4.09**	**333**	P	Pn	13 48 47.3	+0.7
SRBI	**Singaraja** 0.3nm50nm,1.8s	**6.35**	**275**	P	Pn	13 49 18.4	+0.7
IGBI	**Denpasar** 0.5nm3μm70nm,1.1s	**6.38**	**268**	P	Pn	13 49 17.1	-1.1
BYJI	**Banyuwangi** 200nm,0.9s	**7.18**	**273**	P	Pn	13 49 28.9	-0.3
NLAI	**Namlea**	**7.70**	**46**	P	Pn	13 49 36.3	+0.1

ISCJB ***05*** *13:55:06.2±1.8, 22°.2S±0°.3×70°.3W±0°.3, h61km±11km, mb3.7/2, Error ellipse: s-maj=58.8km s-min=12.3km az=44.9*
GUC ***05*** *13:55:09.1±0.7, 22°.45S×70°.19W, h63km±6km, ML3.6*
IDC ***05*** *13:55:09.3±1.3, 22°.61S×69°.67W, h55km±7km, mb3.5/2, mb1 3.6/4, mb1mx3.4/17, mbtmp3.5/4, Error ellipse: s-maj=61.3km s-min=23.0km az=114.0*
ISC 05 13:55:06.0±2.0, 22°.1S±0°.1×70°.4W±0°.2, h43km±18km, n9, σ0§89/10, mb3.7/2, 2C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PECH	**Pedro de Valdi**	**0.79**	**125**	⇑*i*P	**Pn**	**13 55 21.9**	**+1.3**
PECH				*i* S	**Sn**	**13 55 31.5**	**+0.2**
PECH	comp=E,5μm,0.3s			AML	AML	13 55 32.6	
PB04	**Plate Boundary**	**0.83**	**99**	⇓*i*P	**Pn**	**13 55 19.0**	**-2.2**
PB04				*i* S	**Sn**	**13 55 26.2**	**-6.0**
PB04	comp=N,7μm,0.1s			AML	AML	13 55 27.6	
MECH	**Mejillones**	**0.96**	**184**	⇑*i*P	**Pn**	**13 55 23.3**	**+0.3**
MECH				*i* S	**Sn**	**13 55 35.1**	**-0.4**
MECH	comp=N,3μm,0.3s			AML	AML	13 55 36.0	
LPAZ	**La Paz** comp=N,0.7nm,0.3s,baz=194,slow=8.9,SNR=9.2	**6.20**	**20**	P	**Pn**	**13 56 44.2**	**+9.3**
SIV	**San Ignacio** comp=N,0.4nm,0.3s,baz=238,slow=20,SNR=6.8	**10.71**	**57**	P	**Pn**	**13 57 37.3**	**+0.5**
QSPA	**South Pole Qui** comp=N,0.7nm,0.6s,mb3.9,baz=152,slow=0.8,SNR=6.8	**68.05**	**180**	P	**P**	**14 06 00.6**	**+0.2**
QSPA	comp=N,0.5nm,0.7s,baz=197,slow=2.3,SNR=1.5			pP	pP	14 06 16.1	+3.0
TORD	**Torodi Ar. Bea** comp=N,0.3nm,0.4s,mb3.5,baz=247,slow=6.2,SNR=5.3	**78.85**	**71**	P	**P**	**14 07 04.8**	**-0.3**
TORD	comp=N,0.6nm,0.3s,baz=257,slow=5.8,SNR=5.4			pP	pP	14 07 18.8	+0.9
WRA	**Warramunga Arr** comp=N,0.4nm,1.1s,baz=144,slow=1.6,SNR=2.4	**131.71**	**212**	PKP	PKPdf	14 14 14.7	-0.3
MKAR	**Makanchi Array** comp=N,0.2nm,0.2s,baz=330,slow=2.0,SNR=4.5	**146.94**	**35**	PKPbc	PKPbc	14 14 44.9	+1.2
MKAR	comp=N,0.2nm,0.2s,baz=292,slow=4.2,SNR=1.2			pPKPbc	pPKPbc	14 15 01.5	+4.4

DDA 05 14:20:19.8, 37°.39N×27°.63E, h7km±4km, Md2.5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYDN	**Tasoluk**	**0.34**	**36**	*i* P	Pg	14 20 27.0	+0.6
AYDN				*i* S	Sg	14 20 32.7	+1.9
BDRM	**Kayabasi**	**0.35**	**204**	*i* P	Pg	14 20 26.4	-0.3
BDRM				*i* S	Sg	14 20 33.1	+1.7

NEIC ***05*** *14:21:32.0, 45°.79N×26°.27E, h170km, MG3.4(BUC), After BUC.*
BUC ***05*** *14:21:38.2±1.1, 45°.54N×26°.48E, h112km±10km, MD3.9/3, Error ellipse: s-maj=9.0km s-min=6.2km az=33.0*
ISCJB ***05*** *14:21:38.3±1.1, 45°.56N±0°.04×26°.55E±0°.07, h111km±8km, Error ellipse: s-maj=8.3km s-min=5.7km az=150.1*
CSEM ***05*** *14:21:39.0±0.3, 45°.53N×26°.51E, h107km±2km, MD3.9/3, Error ellipse: s-maj=5.3km s-min=3.2km az=48.0*
ISC 05 14:21:38.8±1.2, 45°.56N±0°.04×26°.54E±0°.07, h111km±8km, n54, σ0§64/78, 17C-16D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLOR	**Plostina**	**0.30**	**15**	⇑*i*P	**Pn**	**14 21 54.5**	**-0.1**
PLOR				*i* S	**Sn**	**14 22 07.0**	**+0.5**
PLOR	**Plostina**	**0.30**	**15**	⇑*i*P	**Pn**	**14 21 54.5**	**-0.1**
PLOR	**Plostina**	**0.30**	**15**	S	**Sn**	**14 22 07.0**	**+0.5**
PLOR	**Plostina**	**0.30**	**15**	⇑*i*P	**Pn**	**14 21 54.5**	**-0.1**
PLOR				*i* S	**Sn**	**14 22 07.0**	**+0.5**
VRI	**Vrincioaia**	**0.34**	**23**	⇑P	**Pn**	**14 21 54.9**	**+0.1**
VRI				*i* S	**Sn**	**14 22 07.1**	**+0.3**
VRI	**Vrincioaia**	**0.34**	**23**	⇑*i*P	**Pn**	**14 21 54.9**	**+0.1**
VRI				*i* S	**Sn**	**14 22 07.1**	**+0.3**
VRI	**Vrincioaia**	**0.34**	**23**	⇑*i*P	**Pn**	**14 21 54.9**	**+0.1**
VRI	**Vrincioaia**	**0.34**	**23**	S	**Sn**	**14 22 07.1**	**+0.3**
VRI	**Vrincioaia**	**0.34**	**23**	⇑*i*P	**Pn**	**14 21 54.9**	**+0.1**
VRI				*i* S	**Sn**	**14 22 07.1**	**+0.3**
MLR	**Muntele Rosu**	**0.42**	**261**	⇑P	**Pn**	**14 21 54.8**	**-0.4**
MLR				P		14 21 54.9	
MLR				S	**Sn**	**14 22 07.1**	**-0.5**
MLR	**Muntele Rosu**	**0.42**	**261**	⇑*i*P	**Pn**	**14 21 54.8**	**-0.4**
MLR				*i* S	**Sn**	**14 22 07.1**	**-0.4**
MLR	**Muntele Rosu**	**0.42**	**261**	⇑*i*P	**Pn**	**14 21 54.8**	**-0.4**
MLR	**Muntele Rosu**	**0.42**	**261**	S	**Sn**	**14 22 07.1**	**-0.4**
MLR	**Muntele Rosu**	**0.42**	**261**	P	**Pn**	**14 21 54.9**	**-0.3**
MLR				*i* S	**Sn**	**14 22 07.1**	**-0.4**
ODB	**Odobesti**	**0.42**	**59**	P	**Pn**	**14 21 56.4**	**+1.2**
ODB	**Odobesti**	**0.42**	**59**	P	**Pn**	**14 21 56.4**	**+1.2**
AMRR	**Amara**	**1.10**	**149**	*i* S	**Sn**	**14 22 18.7**	**+0.7**
AMRR	**Amara**	**1.10**	**149**	S	**Sn**	**14 22 18.7**	**+0.7**
CFR	**Carcaliu**	**1.19**	**108**	⇑P	**Pn**	**14 22 02.2**	**+0.1**
CFR				P		14 22 02.3	
CFR				S	**Sn**	**14 22 19.4**	**-0.2**
CFR	**Carcaliu**	**1.19**	**108**	⇑*i*P	**Pn**	**14 22 02.2**	**+0.2**
CFR				*i* S	**Sn**	**14 22 19.4**	**-0.2**
CFR	**Carcaliu**	**1.19**	**108**	⇑*i*P	**Pn**	**14 22 02.2**	**+0.2**
CFR	**Carcaliu**	**1.19**	**108**	S	**Sn**	**14 22 19.4**	**-0.2**
CFR	**Carcaliu**	**1.19**	**108**	⇑*i*P	**Pn**	**14 22 02.2**	**+0.2**
CFR				*i* S	**Sn**	**14 22 19.4**	**-0.2**
BUC1	**Bucharest**	**1.26**	**197**	*i* S	**Sn**	**14 22 20.4**	**-0.7**
BUC1	**Bucharest**	**1.26**	**197**	S	**Sn**	**14 22 20.4**	**-0.7**
BUC1	**Bucharest**	**1.26**	**197**	*i* S	**Sn**	**14 22 20.4**	**-0.7**
HARR	**Harsova**	**1.31**	**131**	⇓P	**Pn**	**14 22 03.7**	**+0.3**
HARR				S	**Sn**	**14 22 21.9**	**-0.2**
HARR	**Harsova**	**1.31**	**131**	⇓*i*P	**Pn**	**14 22 03.7**	**+0.2**
HARR				*i* S	**Sn**	**14 22 21.9**	**-0.2**
HARR	**Harsova**	**1.31**	**131**	⇓*i*P	**Pn**	**14 22 03.7**	**+0.2**
HARR	**Harsova**	**1.31**	**131**	S	**Sn**	**14 22 21.9**	**-0.2**
HARR	**Harsova**	**1.31**	**131**	⇓*i*P	**Pn**	**14 22 03.7**	**+0.2**
HARR				*i* S	**Sn**	**14 22 21.9**	**-0.2**
LEOM	**Leova**	**1.50**	**52**	⇓*i*P	**Pn**	**14 22 06.0**	**+0.4**
LEOM				*i* S	**Sn**	**14 22 26.0**	**0.0**
LEOM	**Leova**	**1.50**	**52**	⇓*i*P	**Pn**	**14 22 06.0**	**+0.4**
LEOM	**Leova**	**1.50**	**52**	S	**Sn**	**14 22 26.0**	**0.0**
LEOM	**Leova**	**1.50**	**52**	⇓*i*P	**Pn**	**14 22 06.0**	**+0.4**
LEOM				*i* S	**Sn**	**14 22 26.0**	**0.0**
CVD	**Cernavoda**	**1.64**	**139**	*i* S	**Sn**	**14 22 28.3**	**-0.6**
CVD	**Cernavoda**	**1.64**	**139**	S	**Sn**	**14 22 28.3**	**-0.6**
CVD	**Cernavoda**	**1.64**	**139**	*i* S	**Sn**	**14 22 28.3**	**-0.6**
TLCR		**1.65**	**102**	⇓P	**Pn**	**14 22 07.9**	**+0.5**
TLCR				S	**Sn**	**14 22 29.9**	**+0.7**
TLCR		**1.65**	**102**	⇑*i*P	**Pn**	**14 22 07.9**	**+0.5**
TLCR				*i* S	**Sn**	**14 22 29.9**	**+0.7**
TLCR		**1.65**	**102**	⇑*i*P	**Pn**	**14 22 07.9**	**+0.5**
TLCR		**1.65**	**102**	S	**Sn**	**14 22 29.9**	**+0.7**
TLCR		**1.65**	**102**	⇑*i*P	**Pn**	**14 22 07.9**	**+0.5**
TLCR				*i* S	**Sn**	**14 22 29.9**	**+0.7**
TIRR	**Tirgusor**	**1.73**	**129**	⇓P	**Pn**	**14 22 08.6**	**+0.3**
TIRR				S	**Sn**	**14 22 30.2**	**-0.7**
TIRR	**Tirgusor**	**1.73**	**129**	⇓*i*P	**Pn**	**14 22 08.6**	**+0.2**
TIRR				*i* S	**Sn**	**14 22 30.2**	**-0.7**
TIRR	**Tirgusor**	**1.73**	**129**	⇓*i*P	**Pn**	**14 22 08.6**	**+0.2**
TIRR	**Tirgusor**	**1.73**	**129**	S	**Sn**	**14 22 30.2**	**-0.7**
TIRR	**Tirgusor**	**1.73**	**129**	⇓*i*P	**Pn**	**14 22 08.6**	**+0.2**
TIRR				*i* S	**Sn**	**14 22 30.2**	**-0.7**
KIS	**Kishinev**	**2.14**	**47**	*e*	**Sn**	**14 22 38.0**	**-2.1**
BURAR	**Bucovina Array**	**2.25**	**337**	⇓P	**Pn**	**14 22 15.5**	**+0.6**
BURAR	**Bucovina Array**	**2.25**	**337**	⇓*i*P	**Pn**	**14 22 15.5**	**+0.6**
BURAR				*i* S	**Sn**	**14 22 42.2**	**-0.4**
BURAR	**Bucovina Array**	**2.25**	**337**	⇓*i*P	**Pn**	**14 22 15.5**	**+0.6**
BURAR	**Bucovina Array**	**2.25**	**337**	S	**Sn**	**14 22 42.2**	**-0.4**
BURAR	**Bucovina Array**	**2.25**	**337**	⇓*i*P	**Pn**	**14 22 15.5**	**+0.6**
BURAR				*i* S	**Sn**	**14 22 42.2**	**-0.4**

ATH ***05*** *14:29:18.8, 38°.22N×20°.43E, h18km±1km, MD3.5/8*
NEIC ***05*** *14:29:18.8, 38°.22N×20°.43E, h18km, MD3.5(ATH), After ATH.*
NEIC Felt at Ithaki.
CSEM ***05*** *14:29:19.9±0.4, 38°.34N×20°.54E, h10km, MD3.5, Error ellipse: s-maj=9.4km s-min=5.9km az=65.0*
THE ***05*** *14:29:19.5, 38°.35N×20°.53E, h10km, ML3.5/4, Error ellipse: s-maj=1.5km s-min=0.5km az=253.0*
ISCJB ***05*** *14:29:19.6±0.7, 38°.35N±0°.03×20°.55E±0°.05, h6km±5km, Error ellipse: s-maj=7.1km s-min=4.7km az=163.2*
ISC 05 14:29:19.7±0.8, 38°.34N±0°.03×20°.52E±0°.06, h9km±5km, n45, σ0§79/64, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.17**	**161**	*e*Pb	**Pg**	**14 29 23.2**	**-0.2**
VLS				*e*Sb	**Sg**	**14 29 26.4**	**+0.6**
VLS	**Valsamata**	**0.17**	**161**	P	**Pg**	**14 29 23.2**	**-0.2**
VLS				S	**Sg**	**14 29 26.1**	**+0.3**
VLS	**Valsamata**	**0.17**	**161**	*e*PB	**Pg**	**14 29 23.2**	**-0.2**
VLS				*e*SB	**Sg**	**14 29 26.4**	**+0.6**
VLS	**Valsamata**	**0.17**	**161**	P	**Pg**	**14 29 23.2**	**-0.2**
VLS				S	**Sg**	**14 29 26.1**	**+0.3**
VLS				*e*Sb	**Sg**	**14 29 26.4**	**+0.6**
KFL	**Anninata**	**0.32**	**137**	P	**Pg**	**14 29 25.6**	**-0.3**
KFL				S	**Sg**	**14 29 30.5**	**+0.3**
LKD2	**Lefkada island**	**0.46**	**14**	P	**Pg**	**14 29 28.0**	**-0.7**
LKD2				S	**Sg**	**14 29 35.1**	**+0.4**
LKD2	**Lefkada island**	**0.46**	**14**	P	**Pg**	**14 29 28.0**	**-0.7**
LKD2				S	**Sg**	**14 29 35.1**	**+0.4**
RLS	**Riolos of Patr**	**0.80**	**110**	*e*Pb	**Pg**	**14 29 34.5**	**-0.6**
RLS				*e*Sn	**Sg**	**14 29 46.2**	**+0.6**
RLS	**Riolos of Patr**	**0.80**	**110**	*e*PB	**Pg**	**14 29 34.5**	**-0.6**
RLS				*e*SN	**Sg**	**14 29 46.2**	**+0.6**
RLS	**Riolos of Patr**	**0.80**	**110**	*e*Pb	**Pg**	**14 29 34.5**	**-0.6**
RLS				*e*Sn	**Sg**	**14 29 46.2**	**+0.6**
EFP	**Efpalio**	**1.10**	**85**	P	**Pg**	**14 29 39.3**	**-1.5**
EFP				S	**Sg**	**14 29 55.8**	**+0.8**
EFP	**Efpalio**	**1.10**	**85**	*e*PN	**Pg**	**14 29 41.2**	**+0.4**
EFP	**Efpalio**	**1.10**	**85**	P	**Pg**	**14 29 39.3**	**-1.5**
EFP	**Efpalio**	**1.10**	**85**	*e*Pn	**Pg**	**14 29 41.2**	**+0.4**
EFP				S	**Sg**	**14 29 55.8**	**+0.8**
LAKA	**Lakka**	**1.16**	**95**	P	**Pg**	**14 29 40.6**	**-1.3**
LAKA				S	**Sg**	**14 29 56.9**	**0.0**
LAKA	**Lakka**	**1.16**	**95**	P	**Pg**	**14 29 40.6**	**-1.3**
LAKA				S	**Sg**	**14 29 56.9**	**0.0**
EVR	**Evrytania**	**1.16**	**60**	*e*Pn	**Pg**	**14 29 42.8**	**+0.7**
EVR				*e*Sn	**Sg**	**14 30 01.4**	**+4.2**
EVR	**Evrytania**	**1.16**	**60**	*e*PN	**Pg**	**14 29 42.8**	**+0.7**
EVR				*e*SN	**Sg**	**14 30 01.4**	**+4.2**
EVR	**Evrytania**	**1.16**	**60**	*e*Pn	**Pg**	**14 29 42.8**	**+0.7**
IGT	**Igoumenitsa**	**1.20**	**353**	P	**Pb**	**14 29 41.8**	**-0.8**
IGT	**Igoumenitsa**	**1.20**	**353**	P	**Pb**	**14 29 41.8**	**-0.8**
KEK	**Kerkira**	**1.48**	**338**	*e*Pn	**Pn**	**14 29 48.1**	**+1.6**
KEK	**Kerkira**	**1.48**	**338**	*e*PN	**Pn**	**14 29 48.1**	**+1.6**
KEK	**Kerkira**	**1.48**	**338**	*e*Pn	**Pn**	**14 29 48.1**	**+1.6**
GUR	**Goura**	**1.50**	**105**	P	**Pn**	**14 29 45.5**	**-1.3**
GUR				S	**Sn**	**14 30 05.9**	**-0.5**
GUR	**Goura**	**1.50**	**105**	P	**Pn**	**14 29 45.5**	**-1.3**
GUR				S	**Sn**	**14 30 05.9**	**-0.5**
AGG	**Agios Georgios**	**1.57**	**64**	*e*Pn	**Pn**	**14 29 49.1**	**+1.3**
AGG	**Agios Georgios**	**1.57**	**64**	P	**Pn**	**14 29 48.5**	**+0.7**
AGG	**Agios Georgios**	**1.57**	**64**	*e*PN	**Pn**	**14 29 49.1**	**+1.3**
AGG	**Agios Georgios**	**1.57**	**64**	P	**Pn**	**14 29 48.5**	**+0.7**
AGG	**Agios Georgios**	**1.57**	**64**	*e*Pn	**Pn**	**14 29 49.1**	**+1.3**
ITM	**Ithomi**	**1.61**	**136**	*e*Pn	**Pn**	**14 29 48.3**	**-0.1**
ITM	**Ithomi**	**1.61**	**136**	*e*PN	**Pn**	**14 29 48.2**	**-0.2**
ITM	**Ithomi**	**1.61**	**136**	*e*Pn	**Pn**	**14 29 48.3**	**-0.1**
THL	**Klokotos Trika**	**1.69**	**43**	*e*PB	**Pb**	**14 29 50.8**	**-0.2**
THL	**Klokotos Trika**	**1.69**	**43**	*e*Pb	**Pb**	**14 29 50.8**	**-0.2**
PYL	**PYLOS**	**1.74**	**146**	P	**Pn**	**14 29 50.1**	**0.0**
PYL	**PYLOS**	**1.74**	**146**	*e*PN	**Pn**	**14 29 50.2**	**+0.1**
PYL	**PYLOS**	**1.74**	**146**	P	**Pn**	**14 29 50.1**	**0.0**
VLX	**Vlachokerasia**	**1.77**	**123**	*e*PN	**Pn**	**14 29 50.9**	**+0.4**
VLX	**Vlachokerasia**	**1.77**	**123**	*e*Pn	**Pn**	**14 29 50.9**	**+0.4**
LTK	**Loutraki**	**1.96**	**99**	*e*PN	**Pn**	**14 29 54.3**	**+1.2**
LTK	**Loutraki**	**1.96**	**99**	*e*Pn	**Pn**	**14 29 54.3**	**+1.2**
NEO	**Neokhori**	**2.32**	**65**	*e*Pb	**Pb**	**14 30 00.6**	**-1.2**
NEO	**Neokhori**	**2.32**	**65**	*e*PB	**Pb**	**14 30 00.6**	**-1.2**

IDC ***05*** *15:20:23.4±0.9, 30°.78N×103°.42E, h0km, mb3.6/9, mb1 3.7/11, mb1mx3.6/26, mbtmp3.5/11, ML3.2/2, MS3.5/3, Ms1 3.5/3, ms1mx2.6/30, Error ellipse: s-maj=34.2km s-min=17.2km az=60.0*
NEIC ***05*** *15:20:24.9±0.5, 30°.77N×103°.52E, h10km, Error ellipse: s-maj=13.7km s-min=8.9km az=63.0*
BJI ***05*** *15:20:27.7, 30°.73N×103°.42E, h13km, ML3.6/15*
ISC 05 15:20:25.0±1.2, 30°.79N±0°.04×103°.44E±0°.06, h8km±7km, n25, σ1§16/30, mb3.5/9, MS3.5/3, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.30**	**66**	⇓*i*Pg	**Pg**	**15 20 31.5**	**+0.7**
CD2				Sg	**Sg**	**15 20 37.0**	**+2.2**
CD2	comp=N,12μm,0.5s			smax			
CD2	comp=E,12μm,0.7s			smax			
GYA	**Guiyang**	**5.16**	**146**	Pn	**Pn**	**15 21 43.4**	**+0.9**
GYA				Pg	**Pg**	**15 22 02.7**	**-1.1**
GYA				Sn	**Sn**	**15 22 42.2**	**0.0**
GYA				Sg	**Sg**	**15 23 05.2**	**-5.5**
GYA	comp=N,100nm,0.7s			smax			
GYA	comp=E,100nm,0.8s			smax			
ENH	**Enshi** comp=E,34nm,0.6s	**5.24**	**94**	*e*Pn	**Pn**	**15 21 42.5**	**-1.1**
LZH	**Lanzhou**	**5.29**	**4**	*e*Pg	**Pg**	**15 22 06.2**	**-0.2**
LZH				Sg	**Sg**	**15 23 15.0**	**0.0**
LZH	comp=N,28nm,1.0s			smax			
LZH	comp=E,39nm,1.0s			smax			
XAN	**Xi'an**	**5.65**	**54**	Pn	**Pn**	**15 21 47.8**	**-1.5**
XAN				Pg	**Pg**	**15 22 09.9**	**-3.3**
XAN				Sn	**Sn**	**15 22 57.8**	**+3.4**
XAN				Sg	**Sg**	**15 23 25.2**	**-1.3**
XAN	comp=N,100nm,1.1s			smax			
XAN	comp=E,32nm,0.9s			smax			
KMI	**Kunming**	**5.68**	**186**	Pn	**Pn**	**15 21 52.5**	**+2.9**
KMI				Sn	**Sn**	**15 22 58.6**	**+3.6**
KMI	comp=N,18nm,0.6s			smax		

MLR	**Muntele Rosu**	**60.46**	**308**	LR	LR	15 59 17.5	
	comp=E,162nm,20.6s,MS4.2,slow=39						
ASAR	**Alice Springs**	**61.52**	**148**	P	**P**	**15 30 42.3**	**-0.2**
	comp=E,0.3nm,0.6s,mb3.6,baz=330,slow=6.7,SNR=5.1						
HFS	**Hagfors**	**63.72**	**326**	LR	LR	15 59 28.4	
	comp=E,52nm,18.7s,MS3.7,baz=12,slow=37						
NOA	**NORSAR Array B**	**64.62**	**327**	P	**P**	**15 31 01.7**	**-0.9**
	comp=E,0.3nm,0.5s,mb3.6,baz=71,slow=5.4,SNR=3.5						
YKA	**Yellowknife Ar**	**82.16**	**17**	P	**P**	**15 32 44.2**	**-1.8**
	comp=E,0.5nm,0.7s,mb3.6,baz=330,slow=4.4,SNR=2.6						

*IDC **05** 15:31:52.6±0.5, 9.75S×114.16E, h0km, mb4.3/17, mb1 4.4/18, mb1mx4.3/26, mbtmp4.3/18, ML4.3/1, MS3.5/8, Ms1 3.5/8, ms1mx3.1/28, Error ellipse: s-maj=22.7km s-min=10.7km az=53.0*

*NEIC **05** 15:31:56.7±3.0, 9.75S×114.16E, h28km±21km, mb4.7/23, Error ellipse: s-maj=11.3km s-min=5.4km az=55.0*

*BJI **05** 15:31:57.1, 9.78S×113.59E, h28km, mB5.0/2, mb4.8/8, Ms4.8/2, Ms7 4.4/1*

*DJA **05** 15:31:58, 9.78S×114.08E, h10km, MLv4.8/18*

*ISCJB **05** 15:31:58.5±0.6, 9.88S±0.04×114.13E±0.03, h63km±5km, mb4.6/37, Error ellipse: s-maj=6.8km s-min=4.2km az=13.6*

ISC 05 15:31:59.9±0.5, 9.88S±0.04×114.15E±0.03, h58km±4km, n114, σ1°13/121, mb4.6/37, MS3.4/5, 1D, South of Bali

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGBI	**Denpasar**	**1.44**	**43**	P	**Pn**	**15 32 21.4**	**-2.3**
IGBI				S	**Sn**	**15 32 40.4**	**-1.2**
NBBI	**Negara**	**1.57**	**17**	P	**Pn**	**15 32 24.2**	**-1.3**
NBBI				S	**Sn**	**15 32 45.2**	**+0.4**
DNP	**Denpasar**	**1.59**	**41**	P	**Pn**	**15 32 24.4**	**-1.3**
DNP				S	**Sn**	**15 32 45.9**	**+0.7**
BYJI	**Banyuwangi**	**1.67**	**7**	P	**Pn**	**15 32 25.8**	**-1.0**
BYJI				S	**Sn**	**15 32 48.5**	**+1.4**
GMJI	**Gumukmas**	**1.74**	**336**	P	**Pn**	**15 32 24.9**	**-2.9**
SRBI	**Singaraja**	**2.07**	**31**	P	**Pn**	**15 32 31.6**	**-0.7**
SRBI				S	**Sn**	**15 32 59.6**	**+2.7**
ABJI	**Asem Bagus**	**2.07**	**2**	P	**Pn**	**15 32 32.4**	**+0.1**
KHKI	**Kahang-Kahang**	**2.08**	**44**	P	**Pn**	**15 32 31.6**	**-0.8**
KHKI				S	**Sn**	**15 33 02.4**	**+5.2**
KMMI	**Kalianget**	**2.82**	**356**	P	**Pn**	**15 32 42.5**	**0.0**
PWJI	**Pagerwojo**	**2.96**	**308**	P	**Pn**	**15 32 44.4**	**-0.1**
PWJI				S	**Sn**	**15 33 18.4**	**-0.5**
SJI	**Sawahan**	**3.18**	**312**	P	**Pn**	**15 32 46.1**	**-1.3**
GRJI	**Gresik**	**3.38**	**331**	P	**Pn**	**15 32 50.2**	**0.0**
PCJI	**Pacitan**	**3.38**	**299**	P	**Pn**	**15 32 49.0**	**-1.2**
PCJI				S	**Sn**	**15 33 30.0**	**+0.9**
NGJI	**Ngawi**	**3.65**	**313**	P	**Pn**	**15 32 54.2**	**+0.3**
NGJI				S	Sx	15 32 59.5	
UGM	**Wanagama**	**4.08**	**298**	P	**Pn**	**15 32 59.5**	**-0.3**
UGM				S	**Sn**	**15 33 48.7**	**+2.3**
SMRI	**Semarang**	**4.62**	**307**	P	**Pn**	**15 33 07.4**	**+0.1**
WSI	**Waingapu**	**6.06**	**89**	P	**Pn**	**15 33 29.3**	**+2.4**
	3.2nm7μm289nm,0.9s						
KBKI	**Kotabaru**	**6.83**	**17**	P	**Pn**	**15 33 38.8**	**+1.2**
	0.2nm1μm34nm,0.8s						
KAPI	**Kappang**	**7.36**	**49**	Pn	**Pn**	**15 33 41.2**	**-3.6**
	4.7nm,0.3s,baz=212,slow=13,SNR=7.9						
KAPI				Sn	**Sn**	**15 35 06.2**	**-0.7**
	6.0nm,0.3s,baz=258,slow=20,SNR=3.9						
KAPI				LR	LR	15 37 02.8	
	comp=Z,306nm,18.9s,baz=243,slow=43						
BKSI	**Bulukumba**	**7.45**	**53**	P	**Pn**	**15 33 45.5**	**-0.5**
	0.2nm488nm53nm,0.6s						
MMRI	**Maumere**	**8.08**	**82**	P	**Pn**	**15 33 54.8**	**+0.2**
	1μm83nm,0.9s						
TTSI	**Tana Toraja**	**8.82**	**40**	P	**Pn**	**15 34 06.8**	**+2.1**
	31nm,0.8s						
CGJI	**Cibinong**	**8.98**	**291**	P	**Pn**	**15 34 06.9**	**0.0**
	1μm122nm,0.6s						
STKI	**Sintang**	**10.23**	**345**	P	**Pn**	**15 34 27.5**	**+3.4**
	44nm,1.1s						
KASI	**Kota Agung**	**10.50**	**294**	P	**Pn**	**15 34 27.6**	**-0.2**
LWLI	**Liwa**	**11.11**	**295**	P	Px	15 34 50.5	
MDSI	**Maura Dua**	**11.25**	**298**	P	**Pn**	**15 34 38.7**	**+0.7**
	12nm,1.0s						
APSI	**Ampana**	**11.62**	**40**	P	**Pn**	**15 34 50.2**	**+7.2**
KSM	**Kuching**	**11.91**	**341**	*e*Pn	**Pn**	**15 34 46.9**	**-0.1**
	11nm,0.9s						
KSM	**Kuching**	**11.91**	**341**	P	**Pn**	**15 34 48.2**	**+1.2**
	14nm,1.1s						
LUWI	**Luwuk**	**12.27**	**45**	P	**Pn**	**15 34 59.5**	**+7.6**
SBUM	**Sibu**	**12.40**	**351**	P	**Pn**	**15 34 56.0**	**+2.3**
	21nm,1.0s						
MBWA	**Marble Bar**	**12.43**	**155**	*e*P	**Pn**	**15 34 48.3**	**-5.8**
MBWA				*e*S	**Sn**	**15 36 54.6**	**-16**
MBWA	**Marble Bar**	**12.43**	**155**	*e*Pn	**Pn**	**15 34 47.7**	**-6.4**
MBWA				*e*Sn	**Sn**	**15 36 55.3**	**-16**
MBWA	**Marble Bar**	**12.43**	**155**	P	**Pn**	**15 34 49.3**	**-4.8**
KSI	**Kapahiang**	**13.04**	**298**	P	**Pn**	**15 35 01.9**	**-0.5**
	136nm,0.8s						
FITZ	**Fitzroy Crossi**	**13.82**	**128**	*e*P	**Pn**	**15 35 06.9**	**-6.0**
	10nm,0.4s						
FITZ				*e*S	**Sn**	**15 37 30.6**	**-14**
FITZ	**Fitzroy Crossi**	**13.82**	**128**	Pn	**Pn**	**15 35 07.0**	**-6.0**
	1.3nm,0.3s,baz=300,slow=8.2,SNR=42						
FITZ				Sn	**Sn**	**15 37 32.8**	**-12**
	1.3nm,0.3s,baz=299,slow=19,SNR=7.0						
FITZ				LR	LR	15 40 39.5	
	comp=Z,167nm,19.4s,baz=309,slow=38						
FITZ	**Fitzroy Crossi**	**13.82**	**128**	P	**Pn**	**15 35 08.3**	**-4.6**
AAI	**Ambon**	**15.23**	**67**	P	**Pn**	**15 35 36.9**	**+5.3**
	44nm,1.1s						
KNA	**Kununurra**	**15.39**	**114**	P	**Pn**	**15 35 30.7**	**-2.9**
MYLDM	**Lahad Datu**	**15.57**	**16**	P	**Pn**	**15 35 41.7**	**+5.8**
KKM	**Kota Kinabalu**	**15.95**	**7**	*e*Pn	**Pn**	**15 35 43.7**	**+3.0**
MEEK	**Meekatharra**	**17.20**	**166**	*e*P	**Pn**	**15 35 54.1**	**-2.1**
KAKA	**Kakadu**	**18.15**	**101**	*e*Pn	**Pn**	**15 36 08.8**	**+0.8**
	7.9nm,0.6s						
KAKA	**Kakadu**	**18.15**	**101**	*e*Pn	**Pn**	**15 36 05.8**	**-2.2**
	26nm,0.6s						
KAKA	**Kakadu**	**18.15**	**101**	P	**Pn**	**15 36 09.5**	**+1.5**
	208nm20nm,0.7s						
MORW	**Morawa**	**19.17**	**175**	*e*P	**Pn**	**15 36 22.0**	**+1.9**
MORW				*e*S	**S**	**15 39 33.1**	**-20**
IPM	**Ipoh**	**19.35**	**317**	P	**Pn**	**15 36 23.0**	**+0.6**
	11nm,0.9s						
PSI	**Prapat**	**19.72**	**309**	LR	LR	15 46 26.8	
	comp=Z,152nm,18.6s,baz=251,slow=45						
KULM	**Kulim**	**20.20**	**318**	*e*P	**P**	**15 36 29.7**	**-0.3**
	3.4nm,0.6s						
KULM	**Kulim**	**20.20**	**318**	P	**P**	**15 36 30.5**	**+0.5**
DAV	**Davao City (W)**	**20.32**	**34**	LR	LR	15 46 04.3	
	comp=Z,76nm,18.6s,MS3.1,baz=252,slow=42						
WRA	**Warramunga Arr**	**21.90**	**119**	P	**P**	**15 36 48.6**	**+0.4**
	5.2nm,0.7s,mb4.1,baz=294,slow=12,SNR=43						
WRA				S	**S**	**15 40 41.2**	**-5.8**
	0.3nm,0.4s,baz=292,slow=25,SNR=2.6						
WRA	**Warramunga Arr**	**21.90**	**119**	P	**P**	**15 36 48.6**	**+0.4**
WRA				S	**S**	**15 40 41.2**	**-5.8**
WRAB	**Tennant Creek**	**21.90**	**119**	*e*P	**P**	**15 36 48.5**	**+0.1**
	5.5nm,0.5s,mb4.2						
NWAO	**Narrogin (SRO)**	**23.11**	**173**	P	**P**	**15 37 01.9**	**+0.9**
	4.1nm,0.7s,mb4.0,baz=42,slow=15,SNR=2.6						
NWAO				S	**S**	**15 41 06.0**	**-1.7**
	3.4nm,0.4s,baz=9.5,slow=6.1,SNR=3.8						
ASAR	**Alice Springs**	**23.31**	**128**	P	**P**	**15 37 03.7**	**+0.7**
	7.5nm,0.5s,mb4.4,baz=302,slow=8.5,SNR=215						
ASAR				PcP	PcP	15 40 50.7	+2.0
	0.9nm,0.6s,baz=299,slow=1.9,SNR=5.8						
ASAR				S	**S**	**15 41 17.0**	**+5.7**
	0.9nm,0.7s,baz=299,slow=22,SNR=2.8						
CM31	**Chiang Mai Arr**	**31.91**	**332**	*e*P	**P**	**15 38 18.2**	**-1.8**
	4.0nm,0.8s,mb4.3						
CMAR	**Chiang Mai Arr**	**31.91**	**332**	P	**P**	**15 38 19.4**	**-0.6**
	2.4nm,0.6s,mb4.2,baz=164,slow=9.6,SNR=22						
CMAR				PcP	PcP	15 41 11.9	+2.4
	0.5nm,0.8s,baz=184,slow=3.2,SNR=4.1						
CMAR				LR	LR	15 53 01.9	
	comp=Z,72nm,18.1s,MS3.4,baz=170,slow=40						
CHTO	**Chiang Mai**	**32.22**	**332**	P	**P**	**15 38 22.1**	**-0.6**
	2.6nm,0.8s,mb4.1						
CTA	**Charters Tower**	**32.57**	**112**	*e*P	**P**	**15 38 28.2**	**+2.3**
	6.6nm,0.6s,mb4.7						
CTA	**Charters Tower**	**32.57**	**112**	LR	LR	15 52 58.8	
	comp=Z,160nm,18.6s,MS3.8,baz=111,slow=39						
CTAO	**Charters Tower**	**32.57**	**112**	*e*P	**P**	**15 38 28.0**	**+2.2**
	9.1nm,0.6s,mb4.9						
STKA	**Stephens Creek**	**33.53**	**135**	*e*P	**P**	**15 38 35.8**	**+1.7**
	5.5nm,0.4s,mb4.8						
STKA	**Stephens Creek**	**33.53**	**135**	P	**P**	**15 38 35.9**	**+1.7**
	6.2nm,0.4s,mb4.9,baz=318,slow=8.5,SNR=55						
STKA				LR	LR	15 51 16.2	
	comp=Z,110nm,19.6s,MS3.6,baz=310,slow=35						
STKA	**Stephens Creek**	**33.53**	**135**	*e*P	**P**	**15 38 34.8**	**+0.6**
	1.3nm,0.5s,mb4.1						
STKA				LR	LR	15 51 16.2	
YNG	**Young**	**39.65**	**133**	*e*P	**P**	**15 39 28.6**	**+2.4**
	13nm,1.6s,mb4.4						
SHL	**Shillong**	**41.37**	**329**	*e*PKP	**P**	**15 39 40.0**	**-0.4**
HYB	**Hyderabad**	**44.42**	**307**	*i* P	**P**	**15 40 04.0**	**-1.2**
ODAN	**Odare**	**44.81**	**325**	*e*P	**P**	**15 40 07.2**	**-1.1**
	27nm,0.8s,mb5.1						
TAPN	**Taplejung**	**45.02**	**326**	*e*P	**P**	**15 40 09.3**	**-0.6**
	46nm,0.9s,mb5.3						
LSA	**Lhasa**	**45.16**	**331**	*e*P	**P**	**15 40 12.5**	**+1.6**
	7.8nm,0.7s,mb4.7						
RAMN	**Ramite**	**45.33**	**325**	*e*P	**P**	**15 40 11.2**	**-1.2**
	15nm,0.8s,mb4.9						
JIRN	**Jiri**	**46.11**	**325**	*e*P	**P**	**15 40 18.5**	**0.0**
	25nm,0.6s,mb5.3						
GUN	**Gumba**	**46.48**	**325**	*e*P	**P**	**15 40 21.3**	**-0.1**
	44nm,0.8s,mb5.5						
DMN	**Daman**	**46.70**	**324**	*e*P	**P**	**15 40 22.6**	**-0.5**
	39nm,0.8s,mb5.4						
KKN	**Kakani**	**46.73**	**324**	*e*P	**P**	**15 40 23.4**	**+0.1**
	28nm,0.8s,mb5.2						
KSRS	**Korea Array**	**48.82**	**15**	LR	LR	16 02 59.8	
	comp=Z,18nm,19.1s,MS3.1,baz=215,slow=38						
GTA	**Gaotai**	**50.81**	**346**	*e*P	**P**	**15 40 55.4**	**+0.9**
GTA				pP	pP	15 41 00.6	-9.2
GTA				sP	sP	15 41 03.6	-13
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
ULN	**Ulaanbaatar**	**57.83**	**354**	*e*P	**P**	**15 41 44.7**	**-0.6**
	comp=Z,4.3nm,0.8s,mb4.5						
SONM	**Songino Array**	**57.87**	**354**	P	**P**	**15 41 45.1**	**-0.4**
	comp=Z,2.4nm,0.6s,mb4.4,baz=178,slow=8.4,SNR=18						
TLY	**Talaya**	**61.98**	**353**	*e*P	**P**	**15 42 13.1**	**-0.5**
	comp=Z,2.1nm,0.7s,mb4.4						
MK31	**Makanchi Array**	**63.18**	**336**	*e*P	**P**	**15 42 21.2**	**-0.6**
MKAR	**Makanchi Array**	**63.18**	**336**	P	**P**	**15 42 21.7**	**-0.1**
	comp=Z,2.4nm,0.5s,mb4.6,baz=132,slow=7.7,SNR=23						
MKAR	**Makanchi Array**	**63.18**	**336**	P	**P**	**15 42 21.7**	**-0.1**
TKM2	**Tokmak 2**	**63.23**	**329**	*e*P	**P**	**15 42 20.6**	**-1.6**
	comp=Z,5.6nm,0.8s,mb4.8						
UCH	**Uchtor**	**63.29**	**328**	*e*P	**P**	**15 42 21.5**	**-1.1**
AAK	**Ala-Archa**	**63.59**	**328**	P	**P**	**15 42 24.6**	**+0.1**
	comp=Z,3.1nm,0.6s,mb4.5,baz=182,slow=3.2,SNR=7.2						
AML	**Almayashu**	**63.65**	**327**	*e*P	**P**	**15 42 25.6**	**+0.6**
	comp=Z,3.4nm,0.6s,mb4.5						
EKS2	**Erkin-Say**	**63.98**	**328**	*e*P	**P**	**15 42 28.1**	**+0.9**
	comp=Z,4.6nm,1.0s,mb4.5						
MAW	**Mawson**	**66.82**	**199**	P	**P**	**15 42 45.2**	**+0.1**
	comp=Z,2.7nm,0.8s,mb4.3,baz=55,slow=11,SNR=4.0						
KURK	**Kurchatov**	**67.78**	**336**	P	**P**	**15 42 50.8**	**-0.6**
	comp=Z,0.8nm,0.7s,mb3.9,baz=152,slow=5.0,SNR=7.2						
KURK	**Kurchatov**	**67.78**	**336**	*e*P	**P**	**15 42 50.5**	**-0.9**
	comp=Z,3.3nm,0.7s,mb4.5						
ZAA0	**Zalesovo Array**	**68.27**	**342**	*e*P	**P**	**15 42 54.5**	**+0.1**
ZAA0				*e*		15 43 04.7	
ZALV	**Zalesovo Beam**	**68.27**	**342**	P	**P**	**15 42 53.2**	**-1.1**
	comp=Z,1.7nm,0.5s,mb4.3,baz=154,slow=4.3,SNR=9.5						
BVAR	**Borovoye Array**	**72.90**	**334**	P	**P**	**15 43 22.8**	**+0.1**
	comp=Z,1.9nm,0.7s,mb4.2,baz=139,slow=9.8,SNR=10						
SYO	**Syowa Base**	**75.31**	**201**	*e*P	**P**	**15 43 36.4**	**-0.1**
AKTK	**Aktyubinsk**	**77.28**	**327**	P	**P**	**15 43 48.9**	**+0.9**
AKTO	**Aktyubinsk**	**77.28**	**327**	P	**P**	**15 43 48.9**	**+0.9**
	comp=Z,1.9nm,0.5s,mb4.2,baz=101,slow=6.6,SNR=7.3						
TIXI	**Tiksi**	**81.94**	**5**	*e*P	**P**	**15 44 11.1**	**-1.7**
	comp=Z,8.0nm,0.8s,mb4.7						
LSZ	**Lusaka**	**83.59**	**256**	P	**P**	**15 44 22.6**	**0.0**
BOSA	**Boshof**	**84.38**	**242**	P	**P**	**15 44 28.0**	**+1.6**
	comp=Z,2.3nm,0.8s,mb4.3,baz=140,slow=14,SNR=3.9						
BOSA	**Boshof**	**84.38**	**242**	*e*P	**P**	**15 44 27.2**	**+0.8**
	comp=Z,9.9nm,1.1s,mb4.8						
ASF	**Jabal al Asfar**	**84.60**	**304**	P	**P**	**15 44 28.8**	**+1.4**
	comp=Z,3.0nm,0.8s,mb4.5,baz=73,slow=0.5,SNR=3.9						
BRTR	**Keskin Array B**	**89.04**	**310**	P	**P**	**15 44 49.1**	**+0.3**
	comp=Z,1.9nm,0.8s,mb4.5,baz=131,slow=5.7,SNR=9.8						
FINES	**FINESS Array B**	**97.68**	**331**	P	**P**	**15 45 28.7**	**+0.7**
	comp=Z,1.4nm,0.7s,mb4.6,baz=35,slow=7.0,SNR=6.3						
YKA	**Yellowknife Ar**	**116.91**	**23**	PKP	PKPdf	15 50 38.1	+0.5
	comp=Z,0.5nm,0.7s,baz=279,slow=1.8,SNR=4.2						
TXAR	**Lajitas Array**	**139.71**	**56**	PKhKP		15 51 15.1	
	comp=Z,0.2nm,0.7s,baz=214,slow=4.4,SNR=2.9						
TXAR				PKP	PKPdf	15 51 23.4	+1.6
	comp=Z,0.4nm,0.7s,baz=102,slow=0.9,SNR=4.7						
MIAR	**Mount Ida**	**144.71**	**42**	*e*PKPdf	PKPdf	15 51 30.6	+0.1
WVT	**Waverly**	**147.12**	**34**	*e*PKPbc	PKPbc	15 51 37.7	+0.9
LRAL	**Lakeview Retre**	**149.82**	**37**	*e*PKPbc	PKPbc	15 51 45.1	+1.2
LPAZ	**La Paz**	**153.91**	**175**	PKPab	PKPab	15 52 10.3	+3.6
	comp=Z,3.7nm,0.7s,baz=196,slow=2.5,SNR=16						
LPAZ	**La Paz**	**153.91**	**175**	PKPab	PKPab	15 52 10.3	+3.6

BJI 05 15:54:32.0, 32.67N×105.64E, h19km, ML3.5/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
XAN	**Xi'an**	**3.07**	**63**	Pn	Pn	15 55 20.3	+0.9
XAN				Pg	Pg	15 55 25.8	-5.0
XAN				Sn	Sn	15 55 56.4	+0.8
XAN				Sg	Sg	15 56 03.5	-7.1
XAN				smax			
	comp=N,79nm,0.4s						
XAN				smax			
	comp=E,26nm,0.4s						
LZH	**Lanzhou**	**3.72**	**337**	*e*Pg	Pg	15 55 37.0	-6.2
LZH				Sg	Sg	15 56 25.0	-6.4
LZH				smax			
	comp=N,81nm,1.0s						
LZH				smax			
	comp=E,140nm,1.0s						

*ISCJB **05** 15:56:06.5±0.6, 6.86N±0.07×73.02W±0.07, h163km±6km, mb3.6/3, Error ellipse: s-maj=14.8km s-min=7.0km az=42.3*

*FUNV **05** 15:56:07.5, 6.82N×73.15W, h163km, MW3.6*

*NEIC **05** 15:56:07.6±0.8, 6.72N×72.96W, h164km±8km, Error ellipse: s-maj=28.0km s-min=12.3km az=128.0*

*IDC **05** 15:56:07.1±0.7, 6.74N×72.93W, h157km±9km, mb3.4/3, mb1 3.7/5, mb1mx3.3/21, mbtmp3.5/5, Error ellipse: s-maj=34.6km s-min=7.4km az=131.0*

ISC 05 15:56:07.6±0.6, 6.83N±0.07×73.00W±0.07, h158km±7km, n25, σ0°67/29, mb3.6/3, 2C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**1.23**	**33**	*e*S	**Sn**	**15 56 57.2**	**+1.0**
ROSC	**El Rosal**	**2.37**	**214**	P	**Pn**	**15 56 47.4**	**-0.1**
	65nm,0.3s,baz=302,slow=3.7,SNR=67						
ROSC				S	**Sn**	**15 57 18.2**	**-0.1**
	55nm,0.3s,baz=86,slow=19,SNR=16						
ROSC	**El Rosal**	**2.37**	**214**	P	**Pn**	**15 56 47.4**	**-0.1**
ROSC				*e*Sn	**Sn**	**15 57 17.8**	**-0.6**
SOCV	**Socops**	**2.57**	**56**	*i e*P	**Pn**	**15 56 50.7**	**+0.8**
SOCV				*e*S	**Sn**	**15 57 22.7**	**+0.1**
VIGV	**El Vigia**	**2.57**	**39**	*i* P	**Pn**	**15 56 50.5**	**+0.6**
VIGV				*e*S	**Sn**	**15 57 21.8**	**-0.8**
SDV	**Santo Domingo**	**3.11**	**49**	P	**Pn**	**15 56 57.7**	**+1.1**
	16nm,0.3s,baz=251,slow=5.2,SNR=71						
SDV				S	**Sn**	**15 57 34.8**	**+0.2**
	51nm,0.3s,baz=268,slow=22,SNR=56						
SDV	**Santo Domingo**	**3.11**	**49**	P	**Pn**	**15 56 57.7**	**+1.1**
SDV				S	**Sn**	**15 57 34.8**	**+0.2**
ELOV	**Elorza**	**3.50**	**87**	*e*P	**Pn**	**15 57 02.2**	**+0.7**
VIRV	**Villa del Rosa**	**3.69**	**9**	*e*P	**Pn**	**15 57 02.9**	**-1.2**
VIRV				*e*S	**Sn**	**15 57 44.3**	**-3.8**
CURV	**Curarigua**	**4.36**	**43**	*e*P	**Pn**	**15 57 12.8**	**+0.1**
DABV	**Dabajuro**	**4.69**	**30**	*e*P	**Pn**	**15 57 17.3**	**+0.3**
TEPV	**Terepaima**	**4.88**	**50**	*e*P	**Pn**	**15 57 19.7**	**+0.1**
SIQV	**Siquisique**	**4.93**	**40**	*e*P	**Pn**	**15 57 20.1**	**-0.2**
BAUV	**El Baul**	**5.34**	**67**	*e*P	**Pn**	**15 57 24.8**	**-0.8**
MONV	**Montecano**	**5.90**	**30**	*e*P	**Pn**	**15 57 32.1**	**-1.0**
TURV	**Turiamo**	**6.24**	**54**	*e*P	**Pn**	**15 57 37.9**	**+0.3**
CAOV	**Caicara del Or**	**6.64**	**85**	*e*P	**Pn**	**15 57 42.0**	**-0.9**
BIRV	**Birongo**	**7.57**	**61**	*e*P	**Pn**	**15 57 55.3**	**0.0**
CUPV	**Cœpira**	**7.82**	**65**	*e*P	**Pn**	**15 57 58.0**	**-0.6**
TXAR	**Lajitas Array**	**36.54**	**312**	P	**P**	**16 02 58.8**	**+0.6**
	0.3nm,0.6s,mb3.1,baz=122,slow=9.4,SNR=4.6						
SCHQ	**Schefferville**	**48.12**	**5**	P	**P**	**16 04 31.8**	**+0.5**
	3.1nm,0.6s,mb4.1,baz=149,slow=5.9,SNR=5.7						
YKA	**Yellowknife Ar**	**63.29**	**340**	P	**P**	**16 06 19.3**	**+0.1**
	0.6nm,0.5s,mb3.7,baz=133,slow=6.6,SNR=6.9						
MKAR	**Makanchi Array**	**122.27**	**20**	PKP	PKPdf	16 14 43.2	-0.7
	0.1nm,0.3s,baz=297,slow=2.3,SNR=2.7						
ASAR	**Alice Springs**	**149.22**	**234**	PKP	PKPdf	16 15 34.0	+0.1
	0.4nm,0.6s,baz=120,slow=3.2,SNR=10.0						
ASAR				PKPbc	PKPbc	16 15 37.3	-1.0
	0.4nm,0.5s,baz=119,slow=3.5,SNR=11						
WRA	**Warramunga Arr**	**150.45**	**241**	PKPbc	PKPbc	16 15 40.4	-1.0
	0.2nm,0.4s,baz=106,slow=3.1,SNR=5.2						

IDC 05 16:02:59.7±8.6, 31.37S×179.11W, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.5/14, mbtmp3.4/2, MS2.9/1, Ms1 2.9/1, ms1mx2.8/5, Error ellipse: s-maj=370.5km s-min=58.3km az=158.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.35**	**26**	LR	LR	16 04 11.2	
	comp=Z,242nm,19.2s,baz=344,slow=30						
ASAR	**Alice Springs**	**42.12**	**269**	P	P	16 10 53.7	-0.2
	0.4nm,1.0s,baz=111,slow=7.6,SNR=4.6						
WRA	**Warramunga Arr**	**43.20**	**274**	P	P	16 11 02.7	0.0
	0.3nm,0.3s,baz=112,slow=8.1,SNR=12						
FINES	**FINESS Array B**	**145.72**	**339**	PKPbc	PKPbc	16 22 39.0	-0.8
	0.5nm,0.4s,baz=48,slow=4.1,SNR=6.5						

*ISCJB **05** 16:18:14.9±0.9, 31.89N±0.04×104.60E±0.05, h0km±6km, mb3.5/6, Error ellipse: s-maj=7.7km s-min=5.5km az=138.5*

*IDC **05** 16:18:16.6±1.0, 31.71N×104.40E, h0km, mb3.4/6, mb1 3.5/8, mb1mx3.4/29, mbtmp3.4/8, ML2.9/1, Error ellipse: s-maj=37.2km s-min=19.0km az=60.0*

*NEIC **05** 16:18:18.3±0.6, 31.72N×104.41E, h10km, mb3.8/1, Error ellipse: s-maj=14.2km s-min=9.0km az=66.0*

*BJI **05** 16:18:19.1, 31.76N×104.58E, h14km, ML3.2/8*

ISC 05 16:18:17.6±0.8, 31.88N±0.03×104.54E±0.04, h4km±6km, n14, σ1°26/23, mb3.4/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**1.18**	**215**	Pn	**Pn**	**16 18 38.4**	**-2.3**
CD2				Pg	**Pg**	**16 18 40.6**	**+0.5**
CD2				Sn	**Sn**	**16 18 53.8**	**-3.3**
CD2				Sg	**Sg**	**16 18 57.9**	**+2.6**
CD2				smax			
	comp=N,4μm,0.6s						
CD2				smax			
	comp=E,5μm,0.7s						
LZH	**Lanzhou**	**4.23**	**352**	*e*Pg	**Pg**	**16 19 38.6**	**-0.1**
LZH				Sg	**Sg**	**16 20 33.0**	**-0.6**
LZH				smax			
	comp=N,57nm,1.0s						
LZH				smax			
	comp=E,45nm,1.0s						
XAN	**Xi'an**	**4.27**	**59**	Pn	**Pn**	**16 19 24.2**	**+0.9**
XAN				Sn	**Sn**	**16 20 13.3**	**-0.2**
XAN				Sg	**Sg**	**16 20 33.6**	**-1.1**
XAN				smax			
	comp=N,100nm,0.8s						
XAN				smax			
	comp=E,50nm,0.9s						
ENH	**Enshi**	**4.54**	**109**	*e*Pn	**Pn**	**16 19 27.9**	**+0.9**
ENH				*e*Pg	**Pg**	**16 19 45.4**	**+0.8**
ENH				*e*Sn	**Sn**	**16 20 23.1**	**+2.9**
ENH				*e*Sg	**Sg**	**16 20 42.1**	**-1.3**
GYA	**Guiyang**	**5.71**	**160**	Pn	**Pn**	**16 19 43.2**	**0.0**
CMAR	**Chiang Mai Arr**	**14.29**	**202**	Pn	**Pn**	**16 21 38.8**	**-1.9**
	comp=E,0.1nm,0.3s,baz=8.1,slow=9.9,SNR=

FETY				*i* Sg		**Sg**	**16 37 21.8**	**+1.1**
GOLH	**Golhisar**	**0.41**	**54**	*i* P		**Pg**	**16 37 16.2**	**-0.4**
GOLH				*i* S		**Sg**	**16 37 23.3**	**+1.3**
GOLH	**Golhisar**	**0.41**	**54**	*i* P		**Pg**	**16 37 16.2**	**-0.4**
GOLH				*i* S		**Sg**	**16 37 23.3**	**+1.3**
TURN	**Turunc**	**0.46**	**254**	*i* P		**Pg**	**16 37 23.4**	**+5.8**
TURN				*i* S		**Sg**	**16 37 35.6**	**+12**
TURN	**Turunc**	**0.46**	**254**	*i* P		**Pg**	**16 37 23.4**	**+5.8**
TURN				*i* S		**Sg**	**16 37 35.6**	**+12**
ELL	**Elmali**	**0.66**	**112**	*e*PG		**Pg**	**16 37 20.5**	**-0.9**
ELL				*e*SG		**Sg**	**16 37 30.8**	**+0.9**
ELL	**Elmali**	**0.66**	**112**	*e*Pg		**Pg**	**16 37 20.5**	**-0.9**
ELL				*e*Sg		**Sg**	**16 37 30.8**	**+0.9**
DNZL	**Cakiroluk**	**0.69**	**353**	*i* P		**Pg**	**16 37 21.9**	**-0.2**
DNZL				*i* S		**Sg**	**16 37 33.5**	**+2.3**
DNZL	**Cakiroluk**	**0.69**	**353**	*i* P		**Pg**	**16 37 21.9**	**-0.2**
DNZL				*i* S		**Sg**	**16 37 33.5**	**+2.3**
YER	**Yerkesik**	**0.71**	**281**	*e*PG		**Pg**	**16 37 21.4**	**-0.9**
YER	**Yerkesik**	**0.71**	**281**	*e*Pg		**Pg**	**16 37 21.4**	**-1.0**
DENT	**Denizli**	**0.76**	**353**	*e*PG		**Pg**	**16 37 21.9**	**-1.4**
DENT				*e*SG		**Sg**	**16 37 32.4**	**-0.9**
DENT	**Denizli**	**0.76**	**353**	*e*Pg		**Pg**	**16 37 21.9**	**-1.5**
DENT				*e*Sg		**Sg**	**16 37 32.4**	**-0.9**
AKAS	**Kas**	**0.85**	**154**	*i* P		**Pg**	**16 37 24.7**	**-0.3**
AKAS				*i* S		**Sg**	**16 37 40.0**	**+4.0**
AKAS	**Kas**	**0.85**	**154**	*i* P		**Pg**	**16 37 24.7**	**-0.3**
AKAS				*i* S		**Sg**	**16 37 40.0**	**+4.0**
KORT	**Korkueli**	**0.96**	**89**	*i* P		**Pg**	**16 37 26.9**	**-0.2**
KORT				*i* S		**Sg**	**16 37 43.3**	**+3.7**
KORT	**Korkueli**	**0.96**	**89**	*i* P		**Pg**	**16 37 26.9**	**-0.3**
KORT				*i* S		**Sg**	**16 37 43.3**	**+3.7**
MLSB	**Milas**	**1.14**	**286**	*e*PN		**Pn**	**16 37 29.0**	**-1.9**
MLSB	**Milas**	**1.14**	**286**	*e*Pn		**Pn**	**16 37 29.0**	**-1.8**
ANTB	**Antalya**	**1.21**	**94**	*e*PN		**Pn**	**16 37 31.4**	**-0.4**
ANTB	**Antalya**	**1.21**	**94**	*e*Pn		**Pn**	**16 37 31.4**	**-0.4**
AYDN	**Tasoluk**	**1.21**	**304**	*i* P		**Pb**	**16 37 32.8**	**+1.0**
AYDN				*i* S		**Sb**	**16 37 51.2**	**+3.7**
AYDN	**Tasoluk**	**1.21**	**304**	*i* P		**Pb**	**16 37 32.8**	**+1.0**
AYDN				*i* S		**Sb**	**16 37 51.2**	**+3.7**
BCK	**Bucak**	**1.24**	**68**	*e*PN		**Pn**	**16 37 31.7**	**-0.5**
BCK	**Bucak**	**1.24**	**68**	*e*Pn		**Pn**	**16 37 31.7**	**-0.5**
DAT	**Datca**	**1.29**	**258**	*e*PN		**Pn**	**16 37 32.2**	**-0.7**
DAT	**Datca**	**1.29**	**258**	*e*Pn		**Pn**	**16 37 32.2**	**-0.7**
BDRM	**Kayabasi**	**1.37**	**273**	*i* P		**Pn**	**16 37 36.1**	**+2.1**
BDRM				*i* S		**Sb**	**16 37 55.6**	**+3.6**
BDRM	**Kayabasi**	**1.37**	**273**	*i* P		**Pn**	**16 37 36.1**	**+2.1**
BDRM				*i* S		**Sb**	**16 37 55.7**	**+3.6**
ISP	**Isparta**	**1.37**	**52**	*e*PN		**Pn**	**16 37 33.2**	**-0.9**
ISP	**Isparta**	**1.37**	**52**	*e*Pn		**Pn**	**16 37 33.2**	**-0.8**
KHAL	**Karahalli**	**1.40**	**11**	*i* P		**Pn**	**16 37 35.4**	**+1.0**
KHAL				*i* S		**Sb**	**16 37 55.7**	**+2.8**
KHAL	**Karahalli**	**1.40**	**11**	*i* P		**Pn**	**16 37 35.4**	**+1.0**
KHAL				*i* S		**Sb**	**16 37 55.7**	**+2.8**
SUTC	**Sutluce-Ispart**	**1.55**	**72**	*e*PN		**Pn**	**16 37 36.8**	**+0.3**
SUTC	**Sutluce-Ispart**	**1.55**	**72**	*e*Pn		**Pn**	**16 37 36.8**	**+0.3**
KULA	**Kula-Manisa**	**1.56**	**346**	*e*PN		**Pn**	**16 37 35.4**	**-1.3**
KULA	**Kula-Manisa**	**1.56**	**346**	*e*Pn		**Pn**	**16 37 35.4**	**-1.3**
SHUT	**Suhut-Afyon**	**1.91**	**35**	*e*PN		**Pn**	**16 37 40.9**	**-0.5**
SHUT	**Suhut-Afyon**	**1.91**	**35**	*e*Pn		**Pn**	**16 37 40.9**	**-0.5**
BLCB	**Balcova**	**2.17**	**310**	*e*PN		**Pn**	**16 37 44.1**	**-0.9**
BLCB	**Balcova**	**2.17**	**310**	*e*Pn		**Pn**	**16 37 44.1**	**-0.9**
HDMB	**Hadim**	**2.67**	**90**	*e*PN		**Pn**	**16 37 52.4**	**+0.5**
HDMB	**Hadim**	**2.67**	**90**	*e*Pn		**Pn**	**16 37 52.4**	**+0.5**
LADK	**Ladik-KONYA**	**2.82**	**64**	*e*PN		**Pn**	**16 37 53.8**	**-0.2**
LADK	**Ladik-KONYA**	**2.82**	**64**	*e*Pn		**Pn**	**16 37 53.8**	**-0.2**

IDC 05 16:41:08.6±9.5, 2°.02N×127°.02E, h264km±92km, mb2.9/4, mb1 3.1/4, mb1mx2.8/19, mbtmp2.9/4, Error ellipse: s-maj=161.3km s-min=21.5km az=63.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.98**	**162**	P	P	16 45 50.0	-0.5
	0.2nm,0.3s,baz=340,slow=11,SNR=9.3						
ASAR	**Alice Springs**	**26.39**	**166**	P	P	16 46 22.1	+0.9
	0.3nm,0.4s,baz=352,slow=8.0,SNR=10						
ASAR				PcP	PcP	16 49 39.4	-0.2
	0.3nm,0.6s,baz=358,slow=1.8,SNR=8.1						
STKA	**Stephens Creek**	**36.44**	**159**	P	P	16 47 48.0	-0.5
	1.0nm,0.4s,baz=338,slow=10,SNR=5.7						
MKAR	**Makanchi Array**	**59.12**	**326**	P	P	16 50 41.6	0.0
	0.2nm,0.2s,baz=118,slow=5.2,SNR=2.4						

MOS ***05*** *16:56:20.5±1.1, 52°.11N×169°.67W, h33km, mb5.3/102, MS4.4/15, Error ellipse: s-maj=8.5km s-min=4.2km az=94.8*

ISCJB ***05*** *16:56:20.0±0.1, 51°.99N±0°.03×169°.54W±0°.02, h35km, mb4.9/229, MS4.4/47, Error ellipse: s-maj=4.3km s-min=2.1km az=7.5*

BJI ***05*** *16:56:21.2, 52°.20N×169°.50W, h43km, mB5.0/30, mb5.0/51, Ms4.8/38, Ms7 4.5/37*

GCMT ***05*** *16:56:22.9±0.3, 51°.98N×169°.55W, h21km, MW5.0, Moment Tensor Solution. s42,c59; s76,c118; Moment tensor: Scale 10^{16}Nm; M_{rr}2.64±.13; $M_{\theta\theta}$-1.95±.09; $M_{\phi\phi}$-0.69±.08; $M_{r\theta}$2.17±.18; $M_{r\phi}$-1.20±.06; $M_{\theta\phi}$0.50±.15; Best double couple: $M_0$3.50000×10^{16} NP1:ϕ_s228.00000°, δ27.00000°, λ70.00000°. NP2:ϕ_s70.00000°, δ65.00000°, λ100.00000°. Principal axes: T 3.5000, Plg68.0000°, Azm359.0000°; N -0.0700, Plg9.0000°, Azm246.0000°; P -3.4300, Plg20.0000°, Azm153.0000°; Data Used: II IC IU G CN.*

IDC ***05*** *16:56:22.7±0.7, 52°.14N×169°.63W, h41km±6km, mb4.5/27, mb1 4.7/29, mb1mx4.6/32, mbtmp4.5/29, ML4.8/2, MS4.3/18, Ms1 4.3/18, ms1mx4.1/34 Error ellipse: s-maj=15.3km s-min=9.2km az=173.0*

NEIC ***05*** *16:56:23.2±0.2, 52°.18N×169°.49W, mb4.9/154, MS4.5/5, ML4.3(AEIC), Error ellipse: s-maj=6.0km s-min=3.1km az=176.0*

SZGRF ***05*** *16:56:23.2, 52°.06N×169°.89W, h33km, mb5.3, Fox Islands, Aleutian Islands, United States*

ISC 05 16:56:22.2±0.1, 52°.06N±0°.03×169°.54W±0°.02, h37km, h37km±1.2km: pP-P, n689, σ0°90/701, mb4.9/229, MS4.4/47, 194C-86D, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**1.01**	**24**	P	**Pn**	**16 56 37.4**	**-2.4**
NIKO				S	**Sn**	**16 56 49.7**	**-3.0**
OKFG	**Magazine Ridge**	**1.68**	**36**	P	**Pn**	**16 56 48.0**	**-1.0**
OKFG				S	**Sn**	**16 57 10.4**	**+1.1**
UNV	**Unalaska Valle**	**2.57**	**45**	P	**Pn**	**16 57 00.0**	**-1.2**
UNV				S	**Sn**	**16 57 32.4**	**+1.2**
AKLV	**Akutan Long Va**	**3.02**	**44**	P	**Pn**	**16 57 07.8**	**+0.4**
AKGG	**Akutan Green G**	**3.03**	**44**	P	**Pn**	**16 57 08.2**	**+0.7**
AKUT	**Akutan**	**3.08**	**46**	P	**Pn**	**16 57 08.7**	**+0.5**
AKUT				S	**Sn**	**16 57 48.0**	**+4.2**
ADK	**Adak**	**4.42**	**271**	P	**Pn**	**16 57 26.9**	**+0.3**
SDPT	**Sand Point**	**6.31**	**55**	*e*P	**Pn**	**16 57 53.0**	**+0.5**
	118nm,0.7s						
CHGN	**Chignik**	**7.79**	**53**	*e*P	**Pn**	**16 58 13.8**	**+1.0**
FX1	**Attu Island--F**	**10.59**	**281**	P	**Pn**	**16 58 51.6**	**+0.5**
	12nm,0.3s,baz=201,slow=2.8,SNR=67						
FX1				LR	LR	17 02 37.6	
	comp=Z,1μm,20.8s,baz=117,slow=36						
FX1	**Attu Island--F**	**10.59**	**281**	P	**Pn**	**16 58 51.6**	**+0.5**
FX1				LR	LR	17 02 37.6	
OHAK	**Old Harbor**	**10.73**	**55**	*e*P	**Pn**	**16 58 50.4**	**-2.8**
	89nm,1.3s						
KDAK	**Kodiak Island**	**11.30**	**53**	*e*P	**Pn**	**16 58 58.3**	**-2.6**
KDAK				pmax	pmax		
	comp=Z,13nm,0.4s						
KDAK	**Kodiak Island**	**11.30**	**53**	*e*P	**Pn**	**16 58 58.3**	**-2.6**
	comp=Z,13nm,0.4s						
SVW2	**Sparrevohn**	**11.86**	**35**	*e*P	**Pn**	**16 59 11.0**	**+2.5**
RSO	**Redoubt South**	**12.53**	**41**	Pn	**Pn**	**16 59 17.0**	**-0.7**
TTA	**Tatalina**	**13.06**	**28**	*e*P	**Pn**	**16 59 23.8**	**-1.1**
TTA				pmax	pmax		
	comp=Z,82nm,1.4s						
TTA	**Tatalina**	**13.06**	**28**	*e*P	**Pn**	**16 59 23.8**	**-1.1**
	comp=Z,82nm,1.4s						
SEW	**Seward**	**13.76**	**46**	*e*P	**Pn**	**16 59 31.6**	**-2.9**
	comp=Z,24nm,0.5s						
PMR	**Palmer**	**14.63**	**41**	*e*P	**Pn**	**16 59 43.1**	**-3.2**
PMR				pmax	pmax		
	comp=Z,34nm,1.2s						
PMR	**Palmer**	**14.63**	**41**	*e*P	**Pn**	**16 59 43.1**	**-3.2**
	comp=Z,34nm,1.2s						
CHUM	**Lake Minchumin**	**14.89**	**31**	P	**Pn**	**16 59 47.3**	**-2.5**
	comp=Z,55nm,1.2s						
KTH	**Kantishna Hill**	**15.12**	**33**	*e*P	**Pn**	**16 59 50.4**	**-2.4**
	comp=Z,54nm,1.1s						
BPAW	**Bear Paw Mtn.**	**15.47**	**32**	*e*P	**Pn**	**16 59 58.3**	**+1.0**
	comp=Z,80nm,1.1s						
DIV	**Divide**	**15.84**	**46**	*e*P	**Pn**	**16 59 58.1**	**-4.1**
	comp=Z,23nm,0.7s						
BMRM	**Bremner River**	**16.30**	**47**	*e*P	**Pn**	**17 00 04.2**	**-3.8**
	comp=Z,98nm,1.1s						
COLA	**College**	**17.01**	**33**	*e*P	**Pn**	**17 00 14.9**	**-1.9**
COLA				pmax	pmax		
	comp=Z,29nm,1.0s						
COLA	**College**	**17.01**	**33**	*e*P	**Pn**	**17 00 14.9**	**-1.9**
	comp=Z,29nm,1.0s						
MENT	**Mentasta**	**17.50**	**42**	*e*P	**Pn**	**17 00 21.3**	**-1.6**
COLD	**Coldfoot**	**17.94**	**25**	*e*P	**Pn**	**17 00 27.6**	**-0.7**
	comp=Z,23nm,1.0s						
PNL	**Peninsula**	**18.42**	**54**	*e*P	**Pn**	**17 00 31.4**	**-2.9**
	comp=Z,41nm,0.8s						
PET	**Petropavlovsk**	**19.29**	**285**	*e*P	**Pn**	**17 00 43.2**	**-1.6**
PET				*e*S	**S**	**17 04 12.5**	**-7.2**
PET				pmax	pmax		
	comp=Z,35nm,1.2s						
PET				pmax	pmax		
	comp=Z,100nm,13.2s						
PET				pmax	pmax		
	comp=Z,200nm,11.8s						
PET				MLR	MLR		
	comp=Z,500nm,21.0s						
PET				MLR	MLR		
	comp=Z,400nm,21.0s						
PET				smax			
	comp=N,30nm,0.5s						
EGAK	**Eagle**	**19.35**	**38**	*e*P	**Pn**	**17 00 41.7**	**-3.7**
	comp=N,16nm,0.6s						
DAWY	**Dawson**	**19.73**	**41**	*e*P	**Pn**	**17 00 46.6**	**-3.4**
BILL	**Bilibino**	**19.83**	**333↑**	*e*P	**Pn**	**17 00 49.5**	**-1.5**
BILL				*e*S	**S**	**17 04 29.6**	**-0.7**
BILL				pmax	pmax		
	comp=Z,43nm,1.0s						
BILL				MLR	MLR		
	comp=Z,700nm,16.0s						
BILL	**Bilibino**	**19.83**	**333**	*e*P	**Pn**	**17 00 49.4**	**-1.7**
	comp=Z,54nm,1.1s						
PEA0B	**Petropavlovsk-**	**19.84**	**286**	*e*P	**Pn**	**17 00 49.5**	**-1.8**
PETK	**Petropavlovsk-**	**19.84**	**286**	P	**Pn**	**17 00 49.7**	**-1.7**
	comp=Z,14nm,0.3s,baz=86,slow=13,SNR=398						
PETK	**Petropavlovsk-**	**19.84**	**286**	P	**Pn**	**17 00 49.7**	**-1.7**
SKAG	**Skagway**	**20.44**	**55**	*e*P	**P**	**17 00 56.3**	**+0.3**
	comp=Z,39nm,0.6s						
SKR	**Severo-Kuril's**	**21.37**	**280**	*e*P	**P**	**17 01 02.8**	**-3.3**
SKR				MLR	MLR		
	comp=N,1μm,18.0s,MS4.4						
SKR				MLR	MLR		
	comp=E,1μm,18.0s,MS4.4						
SKR				MLR	MLR		
	comp=Z,1μm,18.0s,MS4.3						
CRAG	**Craig**	**21.64**	**66**	*e*P	**P**	**17 01 11.3**	**+2.4**
	comp=Z,140nm,1.6s,mb5.1						
DIB	**Dawson Inlet,**	**22.37**	**72**	T		17 24 30.3	
SEY	**Seymchan**	**22.80**	**313**	*ce*P	**P**	**17 01 20.7**	**-0.5**
DLBC	**Dease Lake**	**23.14**	**58**	P	**P**	**17 01 26.1**	**+1.2**
	comp=Z,11nm,1.0s,mb4.3,baz=258,slow=11,SNR=12						
DLBC	**Dease Lake**	**23.14**	**58**	*e*P	**P**	**17 01 25.7**	**+0.9**
INK	**Inuvik**	**23.67**	**33**	P	**P**	**17 01 27.7**	**-2.1**
	comp=Z,16nm,0.6s,mb4.6,baz=244,slow=8.6,SNR=47						
INK				S	**S**	**17 05 38.4**	**-3.3**
	comp=Z,4.1nm,1.0s,baz=252,slow=15,SNR=3.5						
INK	**Inuvik**	**23.67**	**33**	*e*P	**P**	**17 01 27.1**	**-2.8**
INK				pmax	pmax		
	comp=Z,16nm,0.6s						
INK	**Inuvik**	**23.67**	**33**	*e*P	**P**	**17 01 27.1**	**-2.7**
	comp=Z,16nm,0.6s,mb4.6						
JCW	**Jim Creek**	**30.33**	**78**	*e*P	**P**	**17 02 31.8**	**+1.9**
RPW	**Rockport**	**30.48**	**77**	*e*P	**P**	**17 02 33.5**	**+2.3**
	comp=Z,6.5nm,1.0s,mb4.3						
YKA	**Yellowknife Ar**	**30.53**	**48**	P	**P**	**17 02 31.6**	**+0.1**
	comp=Z,11nm,0.8s,mb4.7,baz=276,slow=10.0,SNR=50						
YKA				PcP	PcP	17 05 29.5	+0.1
	comp=Z,1.3nm,0.9s,baz=282,slow=1.5,SNR=4.6						
YKA				ScP	ScP	17 09 09.6	+0.8
	comp=Z,1.4nm,1.0s,baz=276,slow=2.9,SNR=5.4						
YKA				LR	LR	17 17 02.6	
	comp=Z,94nm,18.6s,MS3.5,baz=180,slow=41						
YKA	**Yellowknife Ar**	**30.53**	**48**	P	**P**	**17 02 31.6**	**+0.1**
YKA						17 05 29.5	
YKA						17 09 09.7	
YKA	**Yellowknife Ar**	**30.53**	**48**	P	**P**	**17 02 31.6**	**+0.1**
YKA				PcP	PcP	17 05 29.5	+0.1
YKA				ScP	ScP	17 09 09.7	+0.8
YKA				LR	LR	17 17 02.6	
A07A	**Ashnola River,**	**30.90**	**76**	⇓P	**P**	**17 02 35.3**	**+0.4**
	baz=31						
YSS	**Yuzh-Sakhalins**	**30.94**	**280**	*e*P	**P**	**17 02 35.0**	**-0.3**
YSS				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.9						
YSS				MLR	MLR		
	comp=Z,400nm,17.0s,MS4.2						
YSS	**Yuzh-Sakhalins**	**30.94**	**280**	*e*P	**P**	**17 02 35.2**	**-0.1**
	comp=Z,26nm,1.1s,mb5.0						
ETW	**Entiat**	**31.56**	**78**	*e*P	**P**	**17 02 41.5**	**+0.7**
	comp=Z,31nm,1.2s,mb5.0						
B08A	**Colville Reser**	**31.83**	**76**	⇑P	**P**	**17 02 44.3**	**+1.2**
	baz=32						
H04A	**Detroit Lake**	**31.83**	**84**	⇑P	**P**	**17 02 43.5**	**+0.3**
	baz=32						
B09A	**Rice**	**32.51**	**76**	⇑P	**P**	**17 02 50.3**	**+1.2**
	baz=32						
OD2	**Odessa Site #2**	**32.63**	**78**	P	**P**	**17 02 51.0**	**+0.9**
	comp=Z,33nm,1.2s,mb5.1						
TIXI	**Tiksi**	**32.95**	**329**	*e*P	**P**	**17 02 51.4**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
TIXI	**Tiksi**	**32.95**	**329**	*e*P	**P**	**17 02 51.4**	**-1.2**
	comp=Z,8.5nm,0.9s,mb4.7						
NEW	**Newport**	**33.19**	**75**	*e*P	**P**	**17 02 55.3**	**+0.3**
NEW				pmax	pmax		
	comp=Z,21nm,1.1s						
NEW	**Newport**	**33.19**	**75**	*e*P	**P**	**17 02 55.3**	**+0.3**
	comp=Z,21nm,1.1s,mb5.0						
YAK	**Yakutsk**	**33.30**	**311**	*e*P	**P**	**17 02 53.0**	**-2.8**
YAK				*e*PP	pP	17 03 05.1	-1.1
YAK				*e*PPP		17 04 10.3	
YAK				*e*		17 05 36.3	
YAK				*e*S	**S**	**17 08 06.4**	**-7.0**
YAK				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
YAK				pmax	pmax		
	comp=E,9.0nm,1.1s						
YAK				smax			
	comp=E,182nm,20.5s						
YAK				smax			
	comp=N,19nm,11.3s						
YAK				MLR	MLR		
	comp=Z,590nm,18.0s,MS4.3						
YAK				MLR	MLR		
	comp=E,404nm,16.0s,MS4.2						
YAK				MLR	MLR		
	comp=N,249nm,20.0s,MS4.2						
YAK	**Yakutsk**	**33.30**	**311**	*e*P	**P**	**17 02 53.8**	**-2.0**
	comp=N,26nm,1.0s,mb5.1						
A11A	**Hall Mountain,**	**33.34**	**74**	⇑P	**P**	**17 02 57.4**	**+1.1**
	baz=33						
EDM	**Edmonton**	**33.37**	**65**	*e*P	**P**	**17 02 56.8**	**+0.3**
B11A	**Sandpoint**	**33.56**	**75**	⇓P	**P**	**17 02 58.8**	**+0.5**
	baz=33						
D11A	**Klaveano Farm,**	**34.23**	**77**	⇑P	**P**	**17 03 04.6**	**+0.6**
	baz=34						
MOD	**Modoc**	**34.48**	**87**	P	**P**	**17 03 09.5**	**+3.2**
	comp=N,16nm,1.2s,mb4.8						
E11A	**Bogner Ranch,**	**34.64**	**78**	⇓P	**P**	**17 03 07.2**	**-0.4**
	baz=34						
WALA	**Waterton Lakes**	**34.74**	**72**	*e*P	**P**	**17 03 09.6**	**+1.1**
	comp=N,0.4nm,0.9s						
BSMT	**Bassoo Peak**	**34.77**	**75**	*e*P	**P**	**17 03 09.1**	**+0.4**
	comp=N,16nm,1.1s,mb4.8						
HABR	**Khabarovsk**	**34.87**	**287**	*de*P	**P**	**17 03 07.1**	**-2.5**
HABR				*e*PP	pP	17 03 16.3	-3.7
HABR				*e*SP	sP	17 03 20.8	-3.6
HABR				*e*		17 04 23.6	
HABR				*e*		17 05 39.9	
HABR				S	**S**	**17 08 36.0**	**-2.0**
HABR				*e*SS	sS	17 08 52.0	-3.2
HABR				*e*SS	SS	17 10 51.8	-18
HABR				pmax	pmax		
	comp=E,39nm,1.0s						
HABR				pmax	pmax		
	comp=Z,61nm,1.0s,mb5.5						
HABR				pmax	pmax		
	comp=N,17nm,1.1s						
C13A	**Hot Springs**	**34.98**	**75**	⇑P	**P**	**17 03 10.4**	**-0.2**
	baz=35						
E12A	**Beaver Dam Sad**	**34.99**	**77**	⇓P	**P**	**17 03 10.1**	**-0.5**
	baz=35						
A14A	**Double T Ranch**	**35.07**	**72**	⇑P	**P**	**17 03 11.2**	**-0.1**
	baz=35,SNR=10.0						
G11A	**Walters Elk Ra**	**35.08**	**79**	⇑P	**P**	**17 03 11.8**	**+0.4**
	baz=35						
JTMT	**Jette**	**35.12**	**75**	*e*P	**P**	**17 03 11.7**	**0.0**
	comp=N,4.1nm,0.8s,mb4.4						
H10A	**Noah's Angus R**	**35.20**	**81**	⇑P	**P**	**17 03 13.1**	**+0.6**
	baz=35						
WVOR	**Wild Horse Val**	**35.21**	**85**	*e*P	**P**	**17 03 11.9**	**-0.7**
WVOR				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
WVOR	**Wild Horse Val**	**35.21**	**85**	*e*P	**P**	**17 03 11.9**	**-0.7**
	comp=Z,14nm,1.1s,mb4.8						
YBMT	**Yellow Bay**	**35.23**	**74**	*e*P	**P**	**17 03 13.0**	**+0.3**
	comp=Z,9.6nm,1.1s,mb4.6						
B14A	**Marquette Ranc**	**35.43**	**73**	⇓P	**P**	**17 03 14.2**	**-0.2**
	baz=35,SNR=8.8						
A15A	**Johnson Ranch,**	**35.47**	**72**	⇓P	**P**	**17 03 14.2**	**-0.5**
	baz=35,SNR=6.7						
F12A	**Elk City**	**35.51**	**78**	⇑P	**P**	**17 03 14.9**	**-0.2**
	baz=35,SNR=8.4						
H11A	**Donnelly**	**35.59**	**80**	⇑P	**P**	**17 03 15.9**	**+0.1**
	baz=35						
MSO	**Missoula**	**35.77**	**76**	*e*P	**P**	**17 03 18.4**	**+1.1**
	comp=Z,16nm,1.4s,mb4.8						
SLMT	**Seeley Lake**	**35.83**	**75**	*e*P	**P**	**17 03 18.7**	**+0.8**
	comp=Z,23nm,1.3s,mb5.0						
B15A	**Bradely Ranch,**	**35.88**	**73**	⇓P	**P**	**17 03 18.1**	**-0.2**
	baz=36,SNR=5.3						
D14A	**Greenough**	**35.90**	**75**	⇓P	**P**	**17 03 18.2**	**-0.3**
	baz=36						
F13A	**Darby**	**36.05**	**78**	⇓P	**P**	**17 03 19.6**	**-0.1**
	baz=36						
C15A	**Salmond Ranch,**	**36.10**	**74**	⇓P	**P**	**17 03 20.2**	**0.0**
	baz=36						
CHMT	**Chamberlain Mo**	**36.14**	**75**	*e*P	**P**	**17 03 20.2**	**-0.3**
	comp=Z,5.8nm,1.1s,mb4.4						
B16A	**M & M Farms, S**	**36.33**	**72**	⇓P	**P**	**17 03 21.5**	**-0.6**
	baz=36						
H12A	**Diamond D Ranc**	**36.38**	**80**	⇓P	**P**	**17 03 22.1**	**-0.5**
	baz=36						
KLR	**Kul'dur**	**36.46**	**290**	*e*P	**P**	**17 03 17.0**	**-6.2**
KLR				pmax	pmax		
	comp=E,20nm,1.0s						
KLR				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.1						
KLR				MLR	MLR		
	comp=E,600nm,17.0s						
KLR				MLR	MLR		
	comp=Z,800nm,17.0s,MS4.6						
G13A	**Cobalt**	**36.47**	**78**	⇓P	**P**	**17 03 22.7**	**-0.6**
	baz=36						
D15A	**Lincoln**	**36.51**	**75**	⇑P	**P**	**17 03 23.0**	**-0.6**
	baz=36						
C16A	**Fuhringer Ranc**	**36.60**	**73**	⇓P	**P**	**17 03 23.6**	**-0.8**
	baz=36,SNR=6.6						
I12A	**Atlanta**	**36.61**	**81**	⇓P	**P**	**17 03 23.9**	**-0.6**
	baz=36						
F14A	**Wisdom**	**36.62**	**77**	⇑P	**P**	**17 03 23.7**	**-0.9**
	baz=36						
A17A	**Triple J Farms**	**36.67**	**71**	⇓P	**P**	**17 03 24.4**	**-0.6**
	baz=36,SNR=16						
H13A	**Challis**	**36.73**	**79**	⇓P	**P**	**17 03 25.4**	**-0.2**
	baz=37						
E15A	**Deer Lodge**	**36.75**	**76**	⇓P	**P**	**17 03 25.3**	**-0.3**
	baz=37						
B17A	**L&G Farms, Che**	**36.92**	**72**	⇑P	**P**	**17 03 26.5**	**-0.6**
	baz=37						
D16A	**Dana Ranch, Ca**	**37.09**	**74**	⇑P	**P**	**17 03 28.2**	**-0.4**
	baz=37						
L11A	**Cat Creek Ranc**	**37.13**	**84**	⇓P	**P**	**17 03 28.3**	**-0.7**
	baz=37						
I13A	**Wildhorse Cree**	**37.16**	**80**	⇑P	**P**	**17 03 28.5**	**-0.7**
	baz=37						
LRM	**Limekiln Ridge**	**37.17**	**76**	*e*P	**P**	**17 03 29.0**	**-0.3**
	comp=Z,77nm,1.6s,mb5.3						
HLID	**Hailey**	**37.17**	**81**	⇓P	**P**	**17 03 28.5**	**-0.8**
	baz=37						
HLID	**Hailey**	**37.17**	**81**	*e*P	**P**	**17 03 30.3**	**+1.0**
	comp=Z,26nm,1.6s,mb4.8						
A18A	**Metzger Ranch,**	**37.18**	**70**	⇑P	**P**	**17 03 29.0**	**-0.4**
	baz=37						
H14A	**Leadore**	**37.24**	**79**	⇓P	**P**	**17 03 30.0**	**+0.1**
	baz=37						
MCMT	**McKenzie Canyo**

VLA e*PP pP 17 03 54.4 -5.1
VLA e*SP sP 17 03 58.8 -5.0
VLA pmax pmax
comp=Z,19nm,1.1s,mb4.7
VLA MLR MLR
comp=Z,200nm,17.4s,MS4.0
MAJO Matsushiro 39.58 268 eP **P 17 03 49.1 -0.5**
MAJO pmax pmax
comp=Z,22nm,0.9s,mb4.9
MAJO Matsushiro 39.58 268 eP **P 17 03 49.1 -0.5**
comp=Z,22nm,0.9s,mb4.9
MAT Matsushiro 39.58 268 P **P 17 03 49.4 -0.2**
MAT S **S 17 09 57.0 +7.3**
MJAR Matsushiro Arr 39.58 268 P **P 17 03 48.6 -1.0**
comp=Z,5.6nm,0.9s,mb4.3,baz=50,slow=8.0,SNR=10
MJAR PcP PcP 17 05 56.4 +0.1
comp=Z,2.3nm,0.9s,baz=51,slow=1.7,SNR=4.3
MJAR LR LR 17 19 20.5
comp=Z,406nm,19.7s,MS4.3,baz=70,slow=35
MJAR Matsushiro Arr 39.58 268 P **P 17 03 48.6 -1.0**
MJAR 17 05 56.4
J18A Kendall Valley 40.04 78 ⇓P **P 17 03 52.6 -0.7**
baz=40
MDJ Mudanjiang 40.07 284 P **P 17 03 51.8 -1.8**
MDJ pP pP 17 04 00.7 -3.4
MDJ S **S 17 09 53.4 -3.5**
MDJ pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
MDJ pmax pmax
comp=Z,49nm,5.0s
MDJ LR LR
comp=N,230nm,20.7s,MS4.1
MDJ LR LR
comp=E,250nm,23.8s,MS4.1
MDJ LR LR
comp=Z,500nm,19.1s,MS4.4
DUG Dugway 40.08 84 eP **P 17 03 54.6 +0.9**
DUG pmax pmax
comp=Z,14nm,1.1s,mb4.6
DUG Dugway 40.08 84 eP **P 17 03 54.6 +0.9**
comp=Z,14nm,1.1s,mb4.6
R12A Pony Springs, 40.11 88 ⇑P **P 17 03 53.4 -0.6**
baz=40
L17A Cokeville 40.15 80 ⇑P **P 17 03 54.2 -0.1**
baz=40
K18A Toltan Ranch, 40.35 79 ⇑P **P 17 03 55.6 -0.3**
baz=40
BW06 Boulder Array 40.57 79 ⇑P **P 17 03 57.2 -0.5**
baz=40,SNR=9.1
PDAR Pinedale Array 40.57 79 P **P 17 03 58.3 +0.6**
comp=Z,3.2nm,0.6s,mb4.1,baz=305,slow=5.2,SNR=20
PDAR pP pP 17 04 11.4 +3.1
comp=Z,6.4nm,0.6s,baz=295,slow=4.0,SNR=9.5
PDAR S **S 17 10 06.6 +2.2**
comp=Z,0.2nm,0.3s,baz=292,slow=9.5,SNR=3.9
M17A Scullys Gap (B 40.64 81 ⇓P **P 17 03 57.8 -0.6**
baz=40
NLU North Lily Min 40.68 84 eP **P 17 03 58.7 0.0**
comp=Z,6.2nm,0.9s,mb4.2
GSC Goldstone 40.68 93 P **P 17 04 00.8 +2.0**
GSC pmax pmax
comp=Z,13nm,0.9s,mb4.6
GSC Goldstone 40.68 93 P **P 17 04 00.8 +2.0**
comp=Z,13nm,0.9s,mb4.5
DAU Daniels Canyon 40.91 83 eP **P 17 04 03.2 +2.6**
DAU pmax pmax
comp=Z,16nm,1.2s,mb4.5
DAU Daniels Canyon 40.91 83 eP **P 17 04 03.2 +2.6**
comp=Z,16nm,1.2s,mb4.5
K19A Absolon Red Bu 40.97 78 ⇓P **P 17 04 00.5 -0.5**
baz=41,SNR=8.0
L19A Farson 41.07 79 ⇑P **P 17 04 01.4 -0.6**
baz=41
ARUT Antelope Range 41.17 87 P **P 17 04 00.5 -2.2**
ARUT pmax pmax
comp=Z,20nm,1.5s,mb4.5
ARUT Antelope Range 41.17 87 P **P 17 04 00.5 -2.2**
comp=Z,20nm,1.5s,mb4.5
HEC Hector,Ludlow 41.29 93 ⇓P **P 17 04 03.1 -0.6**
baz=41
CCUT Cedar City 41.37 88 eP **P 17 04 05.3 +0.9**
comp=Z,12nm,1.5s,mb4.3
K20A Yellowstone Ra 41.37 78 ⇓P **P 17 04 03.4 -0.9**
baz=41
MSU Marysvale 41.49 86 eP **P 17 04 07.9 +2.5**
MSU pmax pmax
comp=Z,10.0nm,1.2s,mb4.3
MSU Marysvale 41.49 86 eP **P 17 04 07.8 +2.4**
comp=Z,9.9nm,1.2s,mb4.3
TMUT Trail Mountain 41.61 84 eP **P 17 04 08.1 +1.7**
comp=Z,11nm,0.9s,mb4.5
U13A Pakoon Wash 41.72 89 ⇓P **P 17 04 07.1 -0.2**
baz=42
GMRC Granite Mounta 41.73 93 ⇓P **P 17 04 06.9 -0.5**
baz=42
P18A Preston Nutter 42.00 83 ⇓P **P 17 04 09.0 -0.5**
baz=42
R16A Teasdale 42.06 85 ⇓P **P 17 04 09.6 -0.5**
baz=42
BOD Bodaibo 42.11 309 eP **P 17 04 06.4 -3.8**
BOD pmax pmax
comp=Z,19nm,0.9s,mb4.7
M20A Sweetwater, Wa 42.14 79 ⇑P **P 17 04 09.9 -0.8**
baz=42
SRU San Rafael 42.14 84 ⇓P **P 17 04 10.2 -0.5**
baz=42
SRU San Rafael 42.14 84 eP **P 17 04 10.9 +0.2**
SRU pmax pmax
comp=Z,15nm,0.9s,mb4.6
SRU San Rafael 42.14 84 eP **P 17 04 10.9 +0.2**
comp=Z,15nm,0.9s,mb4.6
U14A Mt Trumbull 42.20 89 ⇓P **P 17 04 11.2 +0.1**
baz=42
O19A Miners Draw (B 42.28 81 ⇑P **P 17 04 11.2 -0.6**
baz=42
L21A Rawlins 42.35 78 ⇑P **P 17 04 12.1 -0.3**
baz=42
Q18A Rafter H Ranch 42.39 83 ⇑P **P 17 04 12.7 0.0**
baz=42
IRM Iron Mountain 42.46 93 ⇓P **P 17 04 12.9 -0.5**
baz=42
M21A Separation Pea 42.57 79 ⇑P **P 17 04 13.7 -0.4**
baz=42
U15A North Rim 42.74 88 ⇓P **P 17 04 14.9 -0.7**
baz=43
S17A Black Ridge (B 42.89 86 ⇑P **P 17 04 16.7 0.0**
baz=43
O20A White River Ci 42.91 81 ⇓P **P 17 04 16.3 -0.7**
baz=43
R18A Canyonlands Na 42.98 84 ⇑P **P 17 04 16.9 -0.6**
baz=43
N21A Black Mountain 42.98 80 ⇑P **P 17 04 16.9 -0.6**
baz=43
X13A Yucca 42.99 91 ⇓P **P 17 04 17.6 -0.1**
baz=43
CN2 Changchun 42.99 286 eP **P 17 04 17.0 -0.6**
CN2 epP pP 17 04 26.8 -1.4
CN2 eS **S 17 10 39.8 -0.4**
CN2 pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,320nm,16.0s,MS4.6
CN2 LR LR
comp=E,470nm,16.0s,MS4.6
CN2 LR LR
comp=Z,510nm,20.0s,MS4.4
V15A Kaibab Nationa 43.21 89 ⇓P **P 17 04 19.3 -0.1**
baz=43
HIA Hailar 43.29 296 eP **P 17 04 18.7 -1.2**
HIA pmax pmax
comp=Z,24nm,1.1s
HIA Hailar 43.29 296 eP **P 17 04 18.7 -1.1**
comp=Z,24nm,1.1s,mb4.8
T17A Navajo Res., N 43.29 86 ⇑P **P 17 04 20.1 +0.1**
baz=43
S18A Hurst Farm, Bl 43.35 85 ⇓P **P 17 04 20.0 -0.5**
baz=43
PV04 Paradox Valley 43.58 83 eP **P 17 04 21.5 -0.8**
N22A Wattenberg Ran 43.60 79 ⇑P **P 17 04 21.6 -0.9**
baz=43
X14A Yava 43.65 91 ⇓P **P 17 04 23.0 +0.1**
baz=44
T18A Mexican Hat 43.78 86 ⇓P **P 17 04 23.7 -0.3**
baz=44
S19A Harvey Farm, M 43.84 84 ⇑P **P 17 04 24.2 -0.3**
baz=44
PV01 Paradox Valley 43.95 83 eP **P 17 04 25.3 0.0**
comp=Z,1μm,0.8s
R20A Redvale 44.03 83 ⇑P **P 17 04 25.9 0.0**
baz=44
V17A Tonalea, Kykot 44.19 88 ⇑P **P 17 04 27.1 -0.2**
baz=44
ULM Lac du Bonnet 44.39 62 P **P 17 04 28.3 -0.4**
comp=Z,7.7nm,0.7s,mb4.5,baz=305,slow=8.8,SNR=6.2
ULM LR LR 17 24 30.5
comp=Z,528nm,19.4s,MS4.5,baz=275,slow=38
ULM Lac du Bonnet 44.39 62 eP **P 17 04 27.1 -1.6**
ULM pmax pmax
comp=Z,10.0nm,0.9s
ULM Lac du Bonnet 44.39 62 eP **P 17 04 27.1 -1.6**
comp=Z,9.6nm,0.9s,mb4.5
T19A Beclabito 44.49 85 ⇑P **P 17 04 29.3 -0.4**
baz=44
Q22A Crested Butte, 44.51 82 ⇑P **P 17 04 29.7 -0.1**
baz=44
X16A Lo Mia Camp, P 44.58 90 ⇓P **P 17 04 30.4 0.0**
baz=44
S21A Coal Bank Pass 44.72 83 ⇓P **P 17 04 31.0 -0.5**
baz=45
U19A Dine' College, 44.73 86 ⇓P **P 17 04 31.1 -0.5**
baz=45
SNY Shenyang 45.27 285 ⇓P **P 17 04 36.4 +0.6**
SNY pmax pmax
comp=Z,20nm,1.1s,mb4.9
SNY LR LR
comp=N,580nm,18.1s,MS4.7
SNY LR LR
comp=E,350nm,16.2s,MS4.7
SNY LR LR
comp=Z,350nm,21.3s
KSRS Korea Array 45.34 277 P **P 17 04 36.8 +0.4**
comp=Z,17nm,0.8s,mb4.9,baz=56,slow=7.5,SNR=64
KSRS LR LR 17 21 37.7
comp=Z,209nm,20.4s,MS4.1,baz=35,slow=33
Y17A Roosevelt 45.43 90 ⇓P **P 17 04 37.6 +0.4**
baz=45
AGMN Agassiz Nation 45.46 64 eP **P 17 04 36.2 -1.0**
comp=Z,16nm,0.9s,mb4.8
T22A Edith 45.68 84 ⇓P **P 17 04 39.4 +0.3**
baz=46
SDCO Great Sand Dun 46.07 82 P **P 17 04 45.2 +3.0**
comp=Z,13nm,1.1s,mb4.8
INCN Inchon 46.11 278 eP **P 17 04 42.6 +0.2**
comp=Z,40nm,0.9s,mb5.3
TUC Tucson 46.40 91 eP **P 17 04 45.3 +0.4**
TUC pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
TUC Tucson 46.40 91 eP **P 17 04 45.3 +0.4**
comp=Z,10.0nm,1.3s,mb4.6
118A Homack Ranch, 46.68 90 ⇓P **P 17 04 47.4 +0.4**
baz=47
Y20A Horse Springs, 46.81 88 ⇑P **P 17 04 47.3 -0.7**
baz=47
119A Ashpeak Ranch, 47.01 90 ⇑P **P 17 04 50.0 +0.4**
baz=47
Z20A Nine Sixteen R 47.21 89 ⇑P **P 17 04 51.7 +0.5**
baz=47
LAZ Ladron 47.24 86 eP **P 17 04 51.0 -0.4**
comp=Z,6.4nm,1.3s,mb4.4
ANMO Albuquerque 47.30 85 P **P 17 04 55.0 +3.2**
ANMO pmax pmax
comp=Z,2.0nm,1.2s
ANMO Albuquerque 47.30 85 P **P 17 04 55.0 +3.2**
comp=Z,2.2nm,1.2s,mb4.0
318A Bisbee 47.49 92 ⇓P **P 17 04 53.3 0.0**
baz=47
U25A Circle Dot Ran 47.61 82 ⇓P **P 17 04 53.6 -0.6**
baz=47
Y22A Socorro 47.66 87 ⇑P **P 17 04 54.6 0.0**
baz=48
ECSD EROS Data Cent 47.68 70 eP **P 17 04 52.6 -2.1**
comp=Z,18nm,1.1s,mb5.0
BNM Barren Site 47.73 86 eP **P 17 04 54.2 -1.0**
comp=Z,8.0nm,0.9s,mb4.8
U26A Atchley Ranch, 48.02 82 ⇑P **P 17 04 57.4 0.0**
baz=48
EYMN Ely 48.06 62 eP **P 17 04 55.6 -2.0**
220A Playas Peak, P 48.07 90 ⇑P **P 17 04 57.8 -0.1**
baz=48
W25A X Bar L Ranch, 48.35 84 ⇑P **P 17 04 59.7 -0.2**
baz=48
Y24A Capitan 48.61 86 ⇑P **P 17 05 02.0 0.0**
baz=48
KBS Kingsbay 49.27 360 *ce*P **P 17 05 07.6 +1.1**
KBS pmax pmax
comp=Z,15nm,1.0s,mb5.0
KBS Kingsbay 49.27 360 eP **P 17 05 06.7 +0.2**
comp=Z,13nm,0.9s,mb5.0
IRK Irkutsk 49.79 307 eP **P 17 05 09.7 -1.0**
IRK pmax pmax
comp=Z,40nm,1.1s,mb5.4
224A Cornudas Mount 49.81 87 ⇓P **P 17 05 10.9 -0.3**
baz=50
Z26A Caprock 49.95 85 ⇑P **P 17 05 11.9 -0.3**
baz=50
Y27A Causey 50.03 84 ⇓P **P 17 05 13.2 +0.3**
baz=50
DAG Danmarks Havn 50.12 8 ⇓*i*P **P 17 05 11.9 -1.0**
DAG pmax pmax
comp=Z,24nm,0.8s,mb5.3
DAG Danmarks Havn 50.12 8 ⇓*i*P **P 17 05 11.9 -1.0**
comp=Z,24nm,0.8s,mb5.3
MNTX Cornudas Mount 50.16 88 eP **P 17 05 13.7 -0.1**
comp=Z,6.4nm,0.8s,mb4.7
324A Moseley Ranch, 50.27 88 ⇓P **P 17 05 14.9 +0.2**
baz=50
126A Clayton Basin, 50.35 86 ⇑P **P 17 05 15.0 -0.2**
baz=50
Z27A Tatum 50.39 85 ⇓P **P 17 05 15.2 -0.3**
baz=50
TLY Talaya 50.44 306 eP **P 17 05 15.8 +0.1**
TLY eS S 17 12 46.7 +20
TLY pmax pmax
comp=Z,26nm,0.9s,mb5.3
TLY MLR MLR
comp=Z,325nm,18.0s,MS4.4
TLY Talaya 50.44 306 eP **P 17 05 15.6 0.0**
comp=Z,31nm,1.1s,mb5.3
TLY Talaya 50.44 306 P **P 17 05 16.3 +0.7**
SNR=10
TLY P 17 05 16.3
SNR=10
TLY Talaya 50.44 306 P **P 17 05 16.3 +0.7**
SNR=10
TLY P 17 05 16.3
SNR=10
GDL2 Guadalupe Moun 50.44 86 eP **P 17 05 16.5 +0.6**
comp=Z,35nm,0.7s,mb5.5
COWI Conover 50.46 63 eP **P 17 05 14.5 -1.4**
comp=Z,9.0nm,0.6s,mb5.0
325A Bean Ranch, Si 50.63 88 ⇑P **P 17 05 17.6 +0.1**
baz=50
BJI Beijing 50.77 287 P **P 17 05 18.3 0.0**
BJI pP pP 17 05 27.2 -1.9
BJI pmax pmax
comp=Z,22nm,0.5s,mb5.3
BJI pmax pmax
comp=Z,170nm,4.6s
BJI LR LR
comp=N,550nm,18.0s,MS4.7
BJI LR LR
comp=E,350nm,16.8s,MS4.7
BJI LR LR
comp=Z,300nm,17.4s,MS4.4
ULN Ulaanbaatar 51.00 301 eP **P 17 05 19.6 -0.4**
ULN pmax pmax
comp=Z,16nm,0.9s,mb5.0
ULN Ulaanbaatar 51.00 301 eP **P 17 05 19.6 -0.4**
comp=Z,16nm,0.9s,mb5.0
ULN Ulaanbaatar 51.00 301 P **P 17 05 20.3 +0.3**
SNR=8.0
ULN P 17 05 20.3
SNR=8.0
ULN Ulaanbaatar 51.00 301 P **P 17 05 20.3 +0.3**
SNR=8.0
ULN P 17 05 20.3
SNR=8.0
425A Indio Mountain 51.03 88 ⇓P **P 17 05 20.7 +0.3**
baz=51
326A Caldwell Ranch 51.28 87 ⇓P **P 17 05 22.5 +0.1**
baz=51
SONM Songino Array 51.37 301 P **P 17 05 22.8 0.0**
comp=Z,14nm,1.0s,mb4.8,baz=55,slow=7.5,SNR=55
SONM PcP PcP 17 06 36.7 -0.3
comp=Z,3.8nm,0.9s,baz=53,slow=3.3,SNR=4.1
SONM LR LR 17 29 16.7
comp=Z,670nm,18.4s,MS4.7,baz=56,slow=38
SONM Songino Array 51.37 301 P **P 17 05 22.8 +0.1**
SONM 17 06 36.7
ZAK Zakamensk 51.41 305 ⇑*i*P **P 17 05 22.8 -0.2**
ZAK e 17 06 38.6
ZAK pmax pmax
comp=Z,12nm,1.2s,mb4.7
426A McDonald Obser 51.70 88 ⇓P **P 17 05 24.9 -0.5**
baz=52
MOY Mondy 51.75 308 eP **P 17 05 25.6 +0.1**
MOY pmax pmax
comp=Z,17nm,1.1s,mb4.9
328A Wristen Ranch, 51.96 86 ⇓P **P 17 05 27.1 -0.3**
baz=52
427A Hayter Ranch, 51.96 87 ⇓P **P 17 05 26.7 -0.7**
baz=52
526A Mary Lane Ranc 52.09 88 ⇑P **P 17 05 28.6 +0.3**
baz=52
527A Woodward Ranch 52.33 88 ⇓P **P 17 05 30.0 -0.1**
baz=52
626A Big Bend Ranch 52.42 89 ⇓P **P 17 05 30.8 +0.1**
baz=52
SFJD Kangerlussuaq 52.70 26 eP **P 17 05 32.1 -0.3**
SFJD pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
SFJD Kangerlussuaq 52.70 26 eP **P 17 05 32.1 -0.3**
comp=Z,7.4nm,0.8s,mb4.7
528A Cox Ranch, San 52.82 87 ⇑P **P 17 05 33.7 -0.1**
baz=53
TXAR Lajitas Array 52.86 89 P **P 17 05 34.1 0.0**
comp=Z,3.6nm,0.6s,mb4.5,baz=298,slow=5.3,SNR=43
TXAR pP pP 17 05 46.1 +1.2
comp=Z,7.4nm,0.7s,baz=299,slow=5.7,SNR=16
TXAR LR LR 17 27 41.6
comp=Z,213nm,18.4s,MS4.2,baz=5.0,slow=36
TXAR Lajitas Array 52.86 89 P **P 17 05 34.1 0.0**
TXAR *PP pP 17 05 46.1 +1.2
HHC Hu-ho-hao-te 52.93 291 eP **P 17 05 35.4 +1.0**
HHC pP pP 17 05 45.5 +0.2
HHC sP sP 17 05 49.3 -0.3
HHC PcP PcP 17 06 45.2 +2.2
HHC PP PP 17 07 35.7 +1.8
HHC ScP ScP 17 10 39.3 +2.0
HHC PcS PcS 17 10 42.5 +0.9
HHC S **S 17 13 00.0 -0.9**
HHC sS sS 17 13 15.8 -3.0
HHC ScS ScS 17 15 19.6 -1.2
HHC pmax pmax
comp=Z,17nm,1.0s,mb4.9
HHC pmax pmax
comp=Z,150nm,5.7s
HHC LR LR
comp=N,280nm,18.7s,MS4.5
HHC LR LR
comp=E,290nm,17.1s,MS4.5
HHC LR LR
comp=Z,290nm,18.6s,MS4.3
627A Terlingua Ranc 52.95 88 ⇑P **P 17 05 34.6 -0.1**
baz=53
628A Black Gap, Mar 53.23 88 ⇑P **P 17 05 36.2 -0.6**
baz=53,SNR=6.9
BTO Baotou 53.98 292 eP **P 17 05 41.9 -0.2**
CCM Cathedral Cave 54.43 72 eP **P 17 05 42.7 -2.7**
CCM pmax pmax
comp=Z,29nm,1.6s,mb5.0
CCM Cathedral Cave 54.43 72 eP **P 17 05 42.7 -2.7**
comp=Z,29nm,1.6s,mb5.0
JCT Junction City 54.44 85 eP **P 17 05 45.0 -0.6**
JCT pmax pmax
comp=Z,17nm,1.0s,mb4.9
JCT Junction City 54.44 85 eP **P 17 05 45.0 -0.6**
comp=Z,17nm,1.0s,mb4.9
NJ2 Nanjing 54.49 278 eP **P 17 05 48.6 +2.7**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
MIAR Mount Ida 55.42 77 eP **P 17 05 50.8 -1.8**
MIAR pmax pmax
comp=Z,15nm,1.0s,mb5.0
MIAR Mount Ida 55.42 77 eP **P 17 05 50.8 -1.8**
comp=Z,15nm,1.0s,mb5.0
SCHQ Schefferville 55.74 43 P **P 17 05 54.2 -0.4**
comp=Z,14nm,1.0s,mb5.0,baz=315,slow=7.1,SNR=12
SCHQ LR LR 17 32 35.4
comp=Z,320nm,18.7s,MS4.4,baz=306,slow=39
SCHQ Schefferville 55.74 43 eP **P 17 05 54.2 -0.4**
comp=Z,31nm,1.3s,mb5.2
USIN University of 56.58 70 eP **P 17 05 59.5 -1.4**
ZAA0 Zalesovo Array 57.58 318 eP **P 17 06 06.2 -1.5**
ZALV Zalesovo Beam 57.58 318 P **P 17 06 06.2 -1.5**
comp=Z,3.6nm,0.5s,mb4.7,baz=43,slow=7.2,SNR=16
ZALV PcP PcP 17 07 00.6 -0.1
comp=Z,8.0nm,0.9s,baz=40,slow=4.8,SNR=6.9
ZALV LR LR 17 31 57.6
comp=Z,143nm,19.6s,MS4.1,baz=17,slow=37
ZALV Zalesovo Beam 57.58 318 P **P 17 06 06.2 -1.5**
ZALV 17 07 00.6
ZALV Zalesovo Beam 57.58 318 P **P 17 06 06.2 -1.5**
ZALV PcP PcP 17 07 00.6 -0.1
ZALV LR LR 17 31 57.6
NVS Novosibirsk 57.59 319 eP **P 17 06 06.5 -1.3**
NVS e pP 17 06 18.6 -0.1
NVS e 17 07 00.8
NVS pmax pmax
comp=N,15nm,1.4s
NVS pmax pmax
comp=E,18nm,1.4s
NVS pmax pmax
comp=Z,26nm,1.4s,mb5.1
WVT Waverly 57.74 71 eP **P 17 06 08.3 -0.8**
WVT pmax pmax
comp=Z,14nm,1.0s,mb5.0
WVT Waverly 57.74 71 eP **P 17 06 08.3 -0.8**
comp=Z,14nm,1.0s,mb5.0
KEV Kevo 57.90 353 eP **P 17 06 08.4 -1.3**
comp=Z,43nm,1.4s,mb5.3
KEV Kevo 57.90 353 ep **P 17 06 09.0 -0.7**
KEV Kevo 57.90 353 ep **P 17 06 09.0 -0.7**
ARCES ARCESS Array B 58.22 354 P **P 17 06 11.2 -0.8**
comp=Z,12nm,0.8s,mb5.0,baz=11,slow=6.8,SNR=15
WHN Wuhan 58.29 280 ⇓P **P 17 06 12.5 -0.5**
WHN LR LR
comp=N,260nm,4.3s
WHN LR LR
comp=E,140nm,3.0s
WHN LR LR
comp=Z,400nm,20.4s,MS4.5
PLAL Pickwick Lake 58.39 72 P **P 17 06 13.0 -0.6**
comp=Z,10nm,0.9s,mb4.8
LVZ Lovozero 59.00 350 *de*P **P 17 06 16.7 -0.7**
LVZ pmax pmax
comp=Z,46nm,1.0s,mb5.5
XAN Xi'an 59.09 287 P **P 17 06 17.3 -1.2**
XAN pP pP 17 06 31.6 +2.1
XAN pmax pmax
comp=Z,11nm,1.5s,mb4.7
XAN pmax pmax
comp=Z,25nm,5.5s
XAN LR LR
comp=N,140nm,19.8s,MS4.1
XAN LR LR
comp=E,81nm,22.9s,MS4.1
XAN LR LR
comp=Z,100nm,22.9s,MS3.9
SSLB Suanglung 59.10 270 eP **P 17 06 18.1 -0.7**
comp=Z,11nm,0.8s,mb5.0
SSPA Standing Stone 60.22 61 eP **P 17 06 24.2 -2.0**
comp=Z,16nm,1.1s,mb5.0
GTA Gaotai 60.53 297 P **P 17 06 27.8 -0.5**
GTA pP pP 17 06 37.4 -1.9
GTA S **S 17 14 35.7 -5.5**
GTA SS SS 17 18 34.3 -4.7
GTA pmax pmax
comp=Z,13nm,0.7s,mb5.2
GTA pmax pmax
comp=Z,84nm,6.3s
GTA LR LR
comp=N,390nm,19.2s,MS4.7
GTA LR LR
comp=E,430nm,19.2s,MS4.7
GTA LR LR
comp=Z,520nm,18.6s,MS4.7
LZH Lanzhou 60.60 292 ⇑P **P 17 06 29.3 +0.4**
LZH pP pP 17 06 39.5 -0.4

LZH sP sP 17 06 43.2 -1.0
LZH PP PP 17 08 44.2 +1.8
LZH eS **S** **17 14 39.3 -3.0**
LZH pmax pmax
comp=Z,53nm,1.4s,mb5.5
LZH pmax pmax
comp=Z,110nm,5.7s
LZH LR LR
comp=E,430nm,14.5s
LZH LR LR
comp=Z,630nm,18.0s,MS4.8
BLA Blacksburg 61.23 66 eP **P** **17 06 32.4 -0.8**
BLA pmax pmax
comp=Z,22nm,0.9s,mb5.3
BLA Blacksburg 61.23 66 eP **P** **17 06 32.4 -0.8**
comp=Z,22nm,0.9s,mb5.3
ENH Enshi 61.42 283 eP **P** **17 06 33.8 -0.7**
comp=Z,36nm,1.0s,mb5.5
KURK Kurchatov 62.53 318 LR LR 17 35 03.4
comp=Z,259nm,20.3s,MS4.4,baz=35,slow=37
KURK Kurchatov 62.53 318 eP **P** **17 06 40.8 -0.9**
KURK pmax pmax
comp=Z,26nm,0.8s,mb5.4
KURK Kurchatov 62.53 318 eP **P** **17 06 40.8 -0.9**
comp=Z,26nm,0.8s,mb5.4
KURK Kurchatov 62.53 318 P **P** **17 06 41.5 -0.2**
SNR=12
KURK P 17 06 41.5
SNR=12
KURK Kurchatov 62.53 318 P **P** **17 06 41.5 -0.2**
SNR=12
KURK P 17 06 41.5
SNR=12
SOKR Solikamsk 62.61 335d iP **P** **17 06 41.8 -0.2**
SOKR pmax pmax
comp=Z,30nm,1.1s,mb5.3
WMQ Urumqi 63.64 308 eP **P** **17 06 49.0 -0.1**
WMQ pP pP 17 06 59.0 -1.2
WMQ sP sP 17 07 03.0 -1.5
WMQ PP PP 17 09 10.0 +1.1
WMQ S **S** **17 15 18.0 -2.4**
WMQ ScS ScS 17 16 36.0 -3.4
WMQ pmax pmax
comp=Z,220nm,1.0s,mb6.1
WMQ pmax pmax
comp=Z,150nm,6.0s
WMQ LR LR
comp=N,450nm,18.0s,MS4.8
WMQ LR LR
comp=E,320nm,18.0s,MS4.8
WMQ LR LR
comp=Z,300nm,17.0s,MS4.5
BVAR Borovoye Array 63.89 324 P **P** **17 06 50.5 -0.2**
comp=Z,25nm,0.8s,mb5.3,baz=54,slow=7.5,SNR=126
BRVK Borovoye 63.91 324ce**P** **P** **17 06 50.8 +0.1**
BRVK pmax pmax
comp=Z,38nm,1.0s,mb5.4
BRVK Borovoye 63.91 324 eP **P** **17 06 50.0 -0.8**
comp=Z,43nm,1.1s,mb5.4
BRVK Borovoye 63.91 324 P **P** **17 06 50.4 -0.3**
SNR=17
BRVK P 17 06 50.4
SNR=17
BRVK Borovoye 63.91 324 P **P** **17 06 50.4 -0.3**
SNR=17
BRVK P 17 06 50.4
SNR=17
SVE Sverdlovsk 63.91 332⇓ eP **P** **17 06 50.5 -0.2**
SVE pmax pmax
comp=Z,28nm,1.1s,mb5.2
MKAR Makanchi Array 63.94 313 P **P** **17 06 50.2 -0.9**
comp=Z,3.3nm,0.6s,mb4.5,baz=52,slow=8.6,SNR=34
MKAR LR LR 17 39 45.1
comp=Z,280nm,18.3s,MS4.5,baz=32,slow=41
MKAR Makanchi Array 63.94 313 P **P** **17 06 50.2 -0.9**
MKAR LR LR 17 39 45.1
JOF Joensuu 64.19 350 ep **P** **17 06 51.6 -0.9**
comp=Z,25nm,0.8s,mb5.3
JOF Joensuu 64.19 350 ep **P** **17 06 51.6 -0.9**
comp=Z,25nm,0.8s,mb5.3
CD2 Chengdu 64.36 288⇑ iP **P** **17 06 54.7 +0.6**
CD2 pP pP 17 07 05.0 -0.2
CD2 sP sP 17 07 08.9 -0.5
CD2 PP PP 17 09 17.3 +1.7
CD2 S **S** **17 15 27.2 -2.5**
CD2 SS SS 17 19 37.3 -2.1
CD2 pmax pmax
comp=Z,60nm,0.8s,mb5.7
CD2 pmax pmax
comp=Z,140nm,7.2s
CD2 LR LR
comp=N,220nm,21.4s,MS4.7
CD2 LR LR
comp=E,410nm,16.6s,MS4.7
CD2 LR LR
comp=Z,240nm,19.0s,MS4.4
ARU Arti 64.85 333c iP **P** **17 06 56.2 -0.6**
ARU e 17 07 28.7
ARU e 17 09 18.5
ARU S **S** **17 15 36.0 +1.1**
ARU SS SS 17 19 42.9 -2.7
ARU SSS 17 22 45.0
ARU pmax pmax
comp=Z,29nm,1.0s,mb5.3
ARU Arti 64.85 333 eP **P** **17 06 55.9 -0.9**
comp=Z,34nm,1.1s,mb5.3
KAF Kangasniemi 65.48 352 eP **P** **17 07 00.1 -0.8**
KAF pmax pmax
comp=Z,35nm,0.7s,mb5.5
KAF Kangasniemi 65.48 352 ep **P** **17 07 00.1 -0.8**
comp=Z,35nm,0.7s,mb5.5
KAF Kangasniemi 65.48 352 ep **P** **17 07 00.1 -0.8**
comp=Z,35nm,0.7s,mb5.5
GYA Guiyang 65.89 282 P **P** **17 07 05.8 +1.7**
GYA pP pP 17 07 15.7 +0.5
GYA sP sP 17 07 21.2 +1.8
GYA PcP PcP 17 07 37.9 +3.1
GYA PP PP 17 09 32.0 +2.9
GYA ScP 17 11 36.8
GYA S S 17 15 48.0 -0.6
GYA sS sS 17 16 05.0 -1.9
GYA SKS 17 16 55.2
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,120nm,4.9s
GYA LR LR
comp=N,540nm,18.0s,MS4.9
GYA LR LR
comp=E,470nm,17.9s,MS4.9
GYA LR LR
comp=Z,580nm,18.0s,MS4.8
FINES FINESS Array B 66.16 352 P **P** **17 07 04.2 -1.0**
comp=Z,20nm,0.7s,mb5.3,baz=19,slow=8.1,SNR=60
FINES FINESS Array B 66.16 352 P **P** **17 07 04.2 -1.0**
NB2 NORSAR Subarra 67.25 360 P **P** **17 07 11.7 -0.5**
comp=Z,17nm,0.8s,mb5.1,baz=0.8,slow=6.2
NB2 NORSAR Subarra 67.25 360 P **P** **17 07 11.7 -0.5**
NB2 NORSAR Subarra 67.25 360 P **P** **17 07 11.7 -0.5**
NOA NORSAR Array B 67.25 360 P **P** **17 07 11.6 -0.6**
comp=Z,14nm,0.8s,mb5.0,baz=0.6,slow=6.3,SNR=46
NOA LR LR 17 35 53.2
comp=Z,116nm,21.8s,MS4.1,baz=0.0,slow=35
NOA NORSAR Array B 67.25 360 P **P** **17 07 11.6 -0.6**
NOA LR LR 17 35 53.2
KONO Kongsberg 68.65 0 eP **P** **17 07 20.5 -0.5**
KONO pmax pmax
comp=Z,28nm,1.0s,mb5.2
KONO Kongsberg 68.65 0 eP **P** **17 07 20.5 -0.5**
comp=Z,28nm,1.0s,mb5.2
KMI Kunming 69.24 284 P **P** **17 07 25.8 +0.6**
KMI pP pP 17 07 36.2 -0.2
KMI sP sP 17 07 40.1 -0.5
KMI PP PP 17 09 59.8 +1.6
KMI S S 17 16 25.4 -3.4
KMI SKS 17 17 18.4
KMI ScS ScS 17 17 19.5 -3.8
KMI pmax pmax
comp=Z,26nm,1.0s,mb5.1
KMI pmax pmax
comp=Z,180nm,4.2s
KMI LR LR
comp=N,180nm,17.6s,MS4.5
KMI LR LR
comp=E,140nm,18.6s,MS4.5
KMI LR LR
comp=Z,170nm,16.6s,MS4.4
QIZ Qiongzhong 69.50 275 P **P** **17 07 28.2 +1.3**
QIZ pmax pmax
comp=Z,14nm,1.7s,mb4.6
QIZ LR LR
comp=Z,150nm,20.1s,MS4.2
TKM2 Tokmak 2 69.94 315 P **P** **17 07 29.7 +0.5**
SNR=22
TKM2 Tokmak 2 69.94 315 eP **P** **17 07 28.2 -1.1**
TKM2 pmax pmax
comp=Z,26nm,1.1s,mb5.1
TKM2 Tokmak 2 69.94 315 eP **P** **17 07 28.1 -1.1**
comp=Z,26nm,1.1s,mb5.1
USP Ospenovka 70.14 316 P **P** **17 07 30.9 +0.4**
SNR=25
ULHL Ulahol 70.19 314 P **P** **17 07 31.1 +0.3**
SNR=18
MOS Moscow 70.24 344 eP **P** **17 07 33.9 +3.0**
MOS e 17 10 12.5
MOS pmax pmax
comp=Z,40nm,0.7s,mb5.5
CHMS Chumysh 70.24 315 P **P** **17 07 31.6 +0.4**
SNR=9.4
KBK Karagaybulak 70.43 315 P **P** **17 07 33.0 +0.7**
SNR=7.5
FRU Bishkek 70.43 315 eP **P** **17 07 32.0 -0.3**
FRU e pP 17 07 45.0 +1.5
FRU pmax pmax
comp=Z,80nm,1.0s,mb5.6
ABKAR Akbulak array 70.64 328 eP **P** **17 07 33.0 -0.5**
comp=Z,26nm,1.0s,mb5.1
AAK Ala-Archa 70.65 315 P **P** **17 07 34.1 +0.5**
SNR=19
AAK Ala-Archa 70.65 315 LR LR 17 41 06.9
comp=Z,263nm,18.7s,MS4.5,baz=16,slow=38
AAK Ala-Archa 70.65 315ce**P** **P** **17 07 33.9 +0.3**
AAK pmax pmax
comp=Z,25nm,1.2s,mb5.0
AAK Ala-Archa 70.65 315 eP **P** **17 07 33.8 +0.2**
comp=Z,35nm,1.0s,mb5.2
AAK Ala-Archa 70.65 315 P **P** **17 07 34.3 +0.7**
SNR=15
AAK P 17 07 34.3
SNR=15
AAK Ala-Archa 70.65 315 P **P** **17 07 34.3 +0.7**
SNR=15
AAK P 17 07 34.3
SNR=15
KZA Kyzart 70.77 314 P **P** **17 07 35.3 +0.9**
SNR=16
EKS2 Erkin-Say 70.94 316 P **P** **17 07 35.9 +0.5**
SNR=39
EKS2 Erkin-Say 70.94 316 eP **P** **17 07 35.5 +0.1**
EKS2 pmax pmax
comp=Z,22nm,0.8s,mb5.1
EKS2 Erkin-Say 70.94 316 eP **P** **17 07 35.5 +0.2**
comp=Z,22nm,0.8s,mb5.2
UCH Uchtor 70.97 315 P **P** **17 07 36.2 +0.6**
SNR=14
UCH Uchtor 70.97 315 eP **P** **17 07 35.9 +0.3**
UCH pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
UCH Uchtor 70.97 315 eP **P** **17 07 35.9 +0.3**
comp=Z,9.9nm,1.0s,mb4.7
OBN Obninsk 71.02 344⇑ eP **P** **17 07 34.6 -1.0**
OBN e 17 10 09.6
OBN pmax pmax
comp=Z,32nm,1.1s,mb5.2
AML Almayashu 71.40 316 P **P** **17 07 39.3 +1.1**
SNR=31
AML Almayashu 71.40 316 eP **P** **17 07 38.9 +0.7**
AML pmax pmax
comp=Z,28nm,1.0s,mb5.2
AML Almayashu 71.40 316 eP **P** **17 07 38.9 +0.7**
comp=Z,28nm,1.0s,mb5.1
IZAR Zarasai 71.77 351 eP **P** **17 07 40.0 -0.1**
IZAR AMB AMB 17 07 41.4
comp=Z,9.7nm,1.0s,mb4.7
ISAL Salakas 71.95 351 eP **P** **17 07 41.3 0.0**
ISAL AMB AMB 17 07 42.7
comp=Z,7.7nm,1.1s,mb4.5
IDID Didziasalis 72.14 350 eP **P** **17 07 42.2 -0.2**
IDID AMB AMB 17 07 43.6
comp=Z,8.9nm,0.9s,mb4.7
IIGN Ignalina 72.16 351 eP **P** **17 07 42.5 0.0**
IIGN AMB AMB 17 07 43.3
comp=Z,11nm,1.2s,mb4.7
ESK Eskdalemuir 72.39 8 i P **P** **17 07 44.7 +0.8**
LSA Lhasa 72.49 296 eP **P** **17 07 45.9 +1.0**
LSA Lhasa 72.49 296 eP **P** **17 07 45.7 +0.8**
LSA pmax pmax
comp=Z,40nm,1.0s,mb5.3
LSA Lhasa 72.49 296 eP **P** **17 07 45.7 +0.8**
comp=Z,40nm,1.0s,mb5.3
KSH Kashi 72.51 312 eP **P** **17 07 48.3 +3.4**
KSH epP pP 17 07 58.6 +2.5
KSH esP sP 17 08 02.7 +2.4
KSH ePcP PcP 17 08 05.9 +3.5
KSH eS S 17 17 07.5 +1.2
KSH pmax pmax
comp=Z,20nm,0.8s,mb5.1
KSH LR LR
comp=N,110nm,5.7s
KSH LR LR
comp=E,110nm,6.1s
KSH LR LR
comp=Z,330nm,14.4s,MS4.8
SUW Suwalki 73.77 352 eP **P** **17 07 51.6 -0.4**
VRHR Novokhopersk 73.90 340 eP **P** **17 07 52.1 -0.7**
VRHR pmax pmax
comp=Z,7.0nm,0.4s,mb4.9
VRHR pmax pmax
comp=N,10.0nm,1.0s
VRHR pmax pmax
comp=E,7.0nm,0.4s
VRHR MLR MLR
comp=Z,170nm,19.0s,MS4.3
VRHR MLR MLR
comp=N,490nm,18.0s,MS4.9
VRHR MLR MLR
comp=E,360nm,17.0s,MS4.9
VSR Storozhevoye 74.28 342 eP **P** **17 07 54.4 -0.7**
VSR pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
VSR pmax pmax
comp=N,10.0nm,1.4s
VSR pmax pmax
comp=E,8.0nm,1.2s
VSR MLR MLR
comp=Z,250nm,19.0s,MS4.5
VSR MLR MLR
comp=N,120nm,16.0s,MS4.4
VSR MLR MLR
comp=E,90nm,17.0s,MS4.4
SHL Shillong 75.26 293 ePKP **P** **17 08 00.0 -1.2**
TAPN Taplejung 76.21 297 eP **P** **17 08 06.5 -0.1**
comp=E,89nm,1.3s,mb5.5
CHTO Chiang Mai 76.31 283 eP **P** **17 08 06.7 -0.5**
CHTO pmax pmax
comp=Z,24nm,1.3s,mb5.0
CHTO Chiang Mai 76.31 283 eP **P** **17 08 06.7 -0.5**
comp=Z,24nm,1.3s,mb5.0
AKASG Malin Array Be 76.39 348 P **P** **17 08 06.1 -1.1**
comp=Z,11nm,0.7s,mb4.9,baz=12,slow=5.7,SNR=39
AKASG LR LR 17 50 25.1
comp=Z,162nm,18.0s,MS4.4,baz=5.0,slow=42
AKBB Malin Array Si 76.39 348 eP **P** **17 08 05.7 -1.5**
KIEV Kiev 76.40 348 eP **P** **17 08 05.8 -1.5**
KIEV pmax pmax
comp=Z,22nm,1.1s,mb5.0
KIEV Kiev 76.40 348 eP **P** **17 08 05.8 -1.5**
comp=Z,22nm,1.1s,mb5.0
CMAR Chiang Mai Arr 76.58 283 P **P** **17 08 09.2 +0.4**
comp=Z,12nm,1.1s,mb4.8,baz=26,slow=6.3,SNR=47
CMAR LR LR 17 46 40.1
comp=Z,224nm,18.3s,MS4.5,baz=242,slow=39
ODAN Odare 76.77 297 eP **P** **17 08 09.6 -0.2**
comp=Z,65nm,1.3s,mb5.4
GUN Gumba 76.78 298 eP **P** **17 08 09.9 +0.1**
comp=Z,46nm,0.8s,mb5.5
JIRN Jiri 76.81 298 eP **P** **17 08 10.1 +0.2**
comp=Z,29nm,0.5s,mb5.5
CLL Collm 76.99 358⇑ iP **P** **17 08 10.3 -0.3**
CLL pmax pmax
comp=Z,13nm,1.3s,mb4.7
CLL MLR MLR
comp=Z,100nm,20.4s,MS4.1
CLL Collm 76.99 358⇑ iP **P** **17 08 10.3 -0.3**
comp=Z,13nm,1.3s,mb4.7
CLL i 17 08 43.4
CLL LR LR
comp=Z,100nm,20.4s,MS4.1
CLL Collm 76.99 358⇑ iP **P** **17 08 10.3 -0.3**
comp=Z,13nm,1.3s,mb4.7
CLL i 17 08 43.4
CLL ePP PP 17 11 06.0 +2.8
CLL eSS SS 17 23 12.0 +20
RAMN Ramite 77.14 297 eP **P** **17 08 11.5 -0.3**
comp=Z,107nm,1.1s,mb5.7
KKN Kakani 77.20 299 eP **P** **17 08 12.1 -0.1**
comp=Z,17nm,0.6s,mb5.2
KKN Kakani 77.20 299 eP **P** **17 08 12.1 -0.1**
KKN pmax pmax
comp=Z,17nm,0.6s,mb5.2
PKI Pulchoki 77.30 299 eP **P** **17 08 12.7 0.0**
comp=Z,77nm,1.2s,mb5.5
PKI Pulchoki 77.30 299 eP **P** **17 08 12.7 0.0**
PKI pmax pmax
comp=Z,77nm,1.2s,mb5.5
KSP Ksiaz 77.36 356 eP **P** **17 08 12.8 +0.1**
KSP Ksiaz 77.36 356 eP **P** **17 08 12.6 0.0**
BRG Berggiesshubel 77.40 358 eP **P** **17 08 12.9 0.0**
comp=Z,13nm,1.1s,mb4.8
BRG e pP 17 08 22.0 -2.2
comp=Z,12nm,1.3s
BRG
comp=N,119nm,15.1s
BRG
comp=E,109nm,25.3s
BRG
comp=Z,130nm,17.0s
DMN Daman 77.43 299 eP **P** **17 08 13.4 -0.1**
comp=Z,57nm,1.1s,mb5.4
MEM Membach 77.64 3 P **P** **17 08 14.4 +0.2**
comp=Z,10nm,1.2s,mb4.6
MOX Moxa 77.67 359 eP **P** **17 08 14.7 +0.3**
comp=Z,19nm,1.3s,mb4.9
MOX Moxa 77.67 359 eP **P** **17 08 14.7 +0.3**
MOX pmax pmax
comp=Z,19nm,1.3s,mb4.9
SNF Seneffe 77.67 4 P **P** **17 08 14.9 +0.5**
comp=Z,5.2nm,1.3s,mb4.3
UPC Upice 77.70 356 eP **P** **17 08 14.8 +0.2**
UPC e*PP pP 17 08 26.8 +0.9
UPC Upice 77.70 356 eP **P** **17 08 14.8 +0.2**
UPC epP pP 17 08 26.8 +0.9
PVCC Panska Ves 77.73 357 eP **P** **17 08 15.6 +0.9**
PVCC e*PP pP 17 08 24.8 -1.2
PVCC Panska Ves 77.73 357 eP **P** **17 08 15.6 +0.9**
PVCC epP pP 17 08 24.8 -1.2
OJC Ojcow 77.79 354 eP **P** **17 08 14.4 -0.7**
BCLA Clavier 77.81 3 P **P** **17 08 15.5 +0.3**
comp=Z,7.1nm,1.6s,mb4.3
LVV L'vov 77.85 351 i P **P** **17 08 16.5 +1.1**
DPC Dobruska-Polom 77.85 356 eP **P** **17 08 16.2 +0.8**
DPC e*PP pP 17 08 27.7 +1.0
DPC Dobruska-Polom 77.85 356 eP **P** **17 08 16.2 +0.8**
DPC epP pP 17 08 27.7 +1.0
NKC Novy Kostel 78.07 359 eP **P** **17 08 17.2 +0.6**
NKC Novy Kostel 78.07 359 eP **P** **17 08 17.2 +0.6**
DOU Dourbes 78.10 4 P **P** **17 08 16.7 -0.1**
comp=Z,10nm,1.4s,mb4.6
GIVF Givet 78.10 4⇑ iP **P** **17 08 17.1 +0.3**
comp=Z,43nm,1.2s,mb5.0
GIVF Givet 78.10 4⇑ iP **P** **17 08 17.1 +0.3**
GIVF pmax pmax
comp=Z,21nm,1.2s,mb4.9
GIVF Givet 78.10 4⇑ iP **P** **17 08 17.1 +0.3**
comp=Z,22nm,1.2s,mb5.0
BAIF Baives 78.12 4 eP **P** **17 08 17.3 +0.4**
comp=Z,25nm,1.1s,mb4.8
BAIF Baives 78.12 4 eP **P** **17 08 17.3 +0.4**
BAIF pmax pmax
comp=Z,13nm,1.0s,mb4.8
BAIF Baives 78.12 4 eP **P** **17 08 17.3 +0.4**
comp=Z,13nm,1.0s,mb4.8
KWP Kalwaria Pacla 78.15 352 eP **P** **17 08 17.5 +0.4**
KWP Kalwaria Pacla 78.15 352 ⇓ iP **P** **17 08 17.4 +0.3**
KWP Kalwaria Pacla 78.15 352 ⇓ iP **P** **17 08 17.4 +0.3**
OKC Ostrava-Krasne 78.27 355 eP **P** **17 08 18.5 +0.7**
OKC e*PP pP 17 08 28.0 -1.1
OKC Ostrava-Krasne 78.27 355 eP **P** **17 08 18.5 +0.7**
OKC epP pP 17 08 28.0 -1.1
PRU Pruhonice 78.27 357 eP **P** **17 08 18.7 +0.9**
PRU e*PP pP 17 08 28.7 -0.4
PRU Pruhonice 78.27 357 eP **P** **17 08 18.7 +0.9**
PRU epP pP 17 08 28.7 -0.4
MORC Moravsky Berou 78.36 355 ⇑ iP **P** **17 08 18.5 +0.2**
MORC Moravsky Berou 78.36 355⇑ iP **P** **17 08 18.5 +0.2**
STHS Stebnicka Huta 78.49 353 eP **P** **17 08 20.1 +1.2**
STHS e 17 08 27.5
STHS pmax pmax
comp=Z,15nm,1.1s,mb4.8
STHS Stebnicka Huta 78.49 353 eP **P** **17 08 20.1 +1.2**
comp=Z,15nm,1.1s,mb4.8
STHS e 17 08 27.5
STHS Stebnicka Huta 78.49 353 eP **P** **17 08 20.1 +1.2**
STHS ePCP PcP 17 08 27.5 -0.5
NIE Niedzica 78.55 353 eP **P** **17 08 19.9 +0.6**
GRF Grafenberg Arr 78.62 359 eP **P** **17 08 20.1 +0.4**
comp=Z,30nm,1.0s,mb5.2
VRAC Vranov 78.88 356 ⇑ iP **P** **17 08 21.8 +0.7**
VRAC Vranov 78.88 356⇑ iP **P** **17 08 21.8 +0.7**
KOLS Kolonicke sedl 78.88 352 eP **P** **17 08 21.5 +0.4**
KOLS pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
KOLS Kolonicke sedl 78.88 352 eP **P** **17 08 21.5 +0.4**
comp=Z,8.6nm,1.2s,mb4.6
KOLS Kolonicke sedl 78.88 352 eP **P** **17 08 21.5 +0.4**
TREC Trest 78.93 357 eP **P** **17 08 21.6 +0.2**
TREC e*PP pP 17 08 31.9 -0.8
TREC Trest 78.93 357 eP **P** **17 08 21.6 +0.2**
TREC epP pP 17 08 31.9 -0.8
CRVS Cervenica-Dubn 78.98 353 eP **P** **17 08 22.0 +0.3**
CRVS pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
CRVS Cervenica-Dubn 78.98 353 eP **P** **17 08 22.0 +0.3**
comp=Z,6.4nm,1.1s,mb4.5
CRVS Cervenica-Dubn 78.98 353 eP **P** **17 08 22.0 +0.3**
FLN La Foliniere 79.12 7 eP **P** **17 08 22.3 -0.2**
comp=Z,76nm,1.4s,mb5.1
FLN eMLR MLR
comp=Z,230nm,18.5s,MS4.2
FLN La Foliniere 79.12 7 eP **P** **17 08 22.3 -0.2**
FLN pmax pmax
comp=Z,38nm,1.4s,mb5.1
FLN MLR MLR
comp=Z,230nm,18.5s,MS4.5
FLN La Foliniere 79.12 7 eP **P** **17 08 22.3 -0.2**
comp=Z,38nm,1.4s,mb5.1
FLN LR LR
comp=Z,230nm,18.5s,MS4.5
KHC Kasperske Hory 79.15 358 eP **P** **17 08 23.5 +0.9**
KHC e*PP pP 17 08 35.2 +1.3
KHC Kasperske Hory 79.15 358 eP **P** **17 08 23.1 +0.5**
comp=Z,21nm,1.2s,mb4.9
KHC Kasperske Hory 79.15 358 eP **P** **17 08 23.5 +0.9**
KHC epP pP 17 08 35.2 +1.3
UZH Uzhgorod 79.18 352 eP **P** **17 08 22.8 0.0**
UZH e 17 11 23.0
UZH eS S 17 18 20.0 +0.5
UZH ePS 17 19 12.0
ROSF Rostrenen 79.30 9 eP **P** **17 08 22.7 -0.7**
LDF La Druitiere 79.32 7⇑ iP **P** **17 08 23.3 -0.2**
comp=Z,28nm,1.0s,mb4.9
LDF La Druitiere 79.32 7⇑ iP **P** **17 08 23.3 -0.2**
LDF pmax pmax
comp=Z,14nm,1.0s,mb4.8
LDF La Druitiere 79.32 7⇑ iP **P** **17 08 23.3 -0.2**
comp=Z,14nm,1.0s,mb4.8
GEC2 GERESS Array S 79.44 358 eP **P** **17 08 24.9 +0.7**
comp=Z,3μm,1.1s
GERES GERESS Array B 79.44 358 P **P** **17 08 24.5 +0.3**
comp=Z,2.1nm,0.6s,mb4.2,baz=7.8,slow=3.0,SNR=28
SGMF Saint Gilles 79.45 9 eP **P** **17 08 24.3 +0.1**
comp=Z,43nm,1.2s,mb5.0
SGMF Saint Gilles 79.45 9 eP **P** **17 08 24.3 +0.1**
SGMF pmax pmax
comp=Z,22nm,1.2s,mb5.0
SGMF Saint Gilles 79.45 9 eP **P** **17 08 24.3 +0.1**
comp=Z,22nm,1.2s,mb5.0

GRR	Gorron	79.47	8⇑	iP		P	17 08 24.3	0.0
	comp=Z,45nm,1.2s,mb5.0							
GRR	Gorron	79.47	8⇑	iP		P	17 08 24.3	0.0
GRR					pmax	pmax		
	comp=Z,23nm,1.2s,mb5.0							
GRR	Gorron	79.47	8⇑	iP		P	17 08 24.3	0.0
	comp=Z,23nm,1.2s,mb5.0							
KECS	Kecovo	79.47	353	eP		P	17 08 24.9	+0.5
KECS					pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6							
KECS	Kecovo	79.47	353	eP		P	17 08 24.9	+0.5
	comp=Z,7.8nm,1.1s,mb4.5							
KECS	Kecovo	79.47	353	eP		P	17 08 24.9	+0.5
VYHS	Vyhne	79.57	354	eP		P	17 08 25.6	+0.7
VYHS				e			17 08 30.8	
VYHS					pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7							
VYHS	Vyhne	79.57	354	eP		P	17 08 25.6	+0.7
	comp=Z,11nm,1.1s,mb4.7							
VYHS				eP	P	PcP	17 08 30.8	-1.9
VYHS	Vyhne	79.57	354	eP		P	17 08 25.6	+0.7
VYHS				eP	CP	PcP	17 08 30.8	-1.9
SMOL	Smolenice	79.63	355	eP		P	17 08 26.9	+1.7
SMOL	Smolenice	79.63	355	eP		P	17 08 26.9	+1.7
TRPA	Tarpa	79.66	352	⇓	iP	P	17 08 25.5	+0.1
MEZF	Maizieres J'vi	79.71	4	eP		P	17 08 26.5	+0.8
	comp=Z,20nm,0.8s,mb4.8							
MEZF	Maizieres J'vi	79.71	4	eP		P	17 08 26.5	+0.8
	comp=Z,20nm,0.8s,mb5.1							
QUIF	Quistinic	79.72	9	eP		P	17 08 26.8	+1.1
	comp=Z,84nm,1.4s,mb5.2							
QUIF	Quistinic	79.72	9	eP		P	17 08 26.8	+1.1
QUIF					pmax	pmax		
	comp=Z,42nm,1.4s,mb5.2							
QUIF	Quistinic	79.72	9	eP		P	17 08 26.8	+1.1
	comp=Z,42nm,1.4s,mb5.2							
KBL	Kabul	79.73	314	eP		P	17 08 25.1	-0.9
KBL					pmax	pmax		
	comp=Z,41nm,1.1s,mb5.3							
KBL	Kabul	79.73	314	eP		P	17 08 25.1	-0.9
	comp=Z,41nm,1.1s,mb5.3							
CDF	Champ du Feu	79.87	2⇑	iP		P	17 08 26.9	+0.4
	comp=Z,37nm,1.3s,mb4.9							
CDF	Champ du Feu	79.87	2⇑	iP		P	17 08 26.9	+0.4
CDF					pmax	pmax		
	comp=Z,19nm,1.3s,mb4.9							
CDF	Champ du Feu	79.87	2⇑	iP		P	17 08 26.9	+0.4
	comp=Z,19nm,1.3s,mb4.9							
BURAR	Bucovina Array	79.91	350	⇓	P	P	17 08 26.5	-0.2
BURAR	Bucovina Array	79.91	350	⇓	iP	P	17 08 26.5	-0.2
BFO	Black Forest	79.97	1	ceP		P	17 08 27.8	+0.7
BFO	Black Forest	79.97	1	eP		P	17 08 26.7	-0.4
	comp=Z,13nm,1.1s,mb4.8							
ECH	Echery	80.06	2	eP		P	17 08 27.5	-0.1
ECH					pmax	pmax		
	comp=Z,19nm,1.0s,mb5.0							
ECH	Echery	80.06	2	eP		P	17 08 27.5	-0.1
	comp=Z,19nm,1.0s,mb5.0							
KIS	Kishinev	80.07	347	eP		P	17 08 24.0	-3.7
KIS					LRM		17 47 34.0	
	comp=Z,400nm,20.0s							
PSZ	Piszkesteto	80.08	354	⇑	P	P	17 08 28.4	+0.8
PSZ	Piszkesteto	80.08	354	⇑	eP	P	17 08 28.6	+1.0
PSZ	Piszkesteto	80.08	354	⇑	iP	P	17 08 28.4	+0.8
SPAK	Spaichingen-Ko	80.21	1	eP		P	17 08 29.8	+1.4
HAU	Haudompre	80.25	3	⇑	iP	P	17 08 29.0	+0.4
	comp=Z,32nm,1.1s,mb4.9							
HAU				eMLR		MLR		
	comp=Z,191nm,20.5s,MS4.1							
HAU	Haudompre	80.25	3	⇑	iP	P	17 08 29.0	+0.4
HAU					pmax	pmax		
	comp=Z,16nm,1.1s,mb4.9							
HAU					MLR	MLR		
	comp=Z,190nm,20.5s,MS4.4							
HAU	Haudompre	80.25	3	⇑	iP	P	17 08 29.0	+0.4
	comp=Z,16nm,1.1s,mb4.9							
HAU					LR	LR		
	comp=Z,190nm,20.5s,MS4.4							
CONA	Conrad Observa	80.28	356	⇑	iP	P	17 08 29.8	+1.0
	comp=Z,29nm,1.0s,mb5.2,SNR=21							
CSNA	Conrad Observa	80.28	356	⇑	iP	P	17 08 29.8	+1.0
	comp=Z,27nm,1.0s,mb5.1							
KIV	Kislovodsk	80.39	337	c	iP	P	17 08 30.2	+0.8
KIV				eS		S	17 18 33.1	+0.6
KIV				eSS		SS	17 23 45.0	+1.9
KIV					pmax	pmax		
	comp=Z,43nm,4.8s							
KIV					pmax	pmax		
	comp=Z,42nm,1.0s,mb5.3							
KIV	Kislovodsk	80.39	337	eP		P	17 08 29.8	+0.4
	comp=Z,34nm,0.8s,mb5.3							
KIV	Kislovodsk	80.39	337		P	P	17 08 30.2	+0.8
	SNR=12							
KIV					P		17 08 30.2	
	SNR=12							
KIV	Kislovodsk	80.39	337		P	P	17 08 30.2	+0.8
	SNR=12							
KIV					P		17 08 30.2	
	SNR=12							
MOA	Molln	80.42	357	⇑	iP	P	17 08 29.6	+0.2
	comp=Z,11nm,1.1s,mb4.7,SNR=8.6							
MOF	Molkenrain	80.43	2	eP		P	17 08 29.2	-0.3
HINF	Hinteralfeld	80.46	2	⇑	iP	P	17 08 29.9	+0.2
	comp=Z,24nm,1.1s,mb4.8							
HINF	Hinteralfeld	80.46	2	⇑	iP	P	17 08 29.9	+0.2
HINF					pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8							
HINF	Hinteralfeld	80.46	2	⇑	iP	P	17 08 29.9	+0.2
	comp=Z,12nm,1.0s,mb4.8							
SOP	Sopron	80.50	356	⇑	eP	P	17 08 31.2	+1.3
BUD	Budapest	80.57	354	⇑	eP	P	17 08 31.4	+1.1
ANN	Anapa	80.75	341	eP		P	17 08 30.0	-1.4
ANN					pmax	pmax		
	comp=Z,29nm,1.0s,mb5.2							
BBS	Basel-Blauen	80.82	2	eP		P	17 08 32.7	+1.0
RETA	Reutte	80.83	360	⇑	iP	P	17 08 32.4	+0.7
	comp=Z,12nm,1.0s,mb4.8							
LOR	Lormes	80.89	5	⇑	iP	P	17 08 32.4	+0.4
	comp=Z,47nm,1.2s,mb5.0							
LOR				eMLR		MLR		
	comp=Z,220nm,18.5s,MS4.2							
LOR	Lormes	80.89	5	⇑	iP	P	17 08 32.4	+0.4
LOR					pmax	pmax		
	comp=Z,24nm,1.2s,mb5.0							
LOR					MLR	MLR		
	comp=Z,220nm,18.5s,MS4.5							
LOR	Lormes	80.89	5	⇑	iP	P	17 08 32.4	+0.4
	comp=Z,24nm,1.2s,mb5.0							
LOR					LR	LR		
	comp=Z,220nm,18.5s,MS4.5							
DRGR		80.97	352	⇓	P	P	17 08 31.9	-0.6
DRGR		80.97	352	⇓	iP	P	17 08 31.9	-0.6
ARSA	Arzberg	80.97	357	⇑	iP	P	17 08 33.6	+1.2
	comp=Z,16nm,0.9s,mb5.0,SNR=6.5							
MOTA	Moosalm	80.97	360	⇑	iP	P	17 08 33.2	+0.7
	comp=Z,25nm,1.1s,mb5.0,SNR=9.2							
WATA	Walderalm	80.98	359	⇑	iP	P	17 08 33.5	+0.9
	comp=Z,9.1nm,0.8s,mb4.8							
DAVA	Damuels	81.03	0	⇑	iP	P	17 08 33.5	+0.8
	comp=Z,9.0nm,1.1s,mb4.6							
WTTA	Wattenberg	81.05	359	i	P	P	17 08 34.1	+1.2
	comp=Z,17nm,0.8s,mb5.1,SNR=8.8							
SSF	Saint Saulge	81.08	5	⇑	iP	P	17 08 33.4	+0.4
	comp=Z,48nm,1.1s,mb5.0							
SSF	Saint Saulge	81.08	5	⇑	iP	P	17 08 33.4	+0.4
SSF					pmax	pmax		
	comp=Z,24nm,1.1s,mb5.0							
SSF	Saint Saulge	81.08	5	⇑	iP	P	17 08 33.4	+0.4
	comp=Z,24nm,1.1s,mb5.0							
SQTA	Sankt Quirin	81.10	359	⇑	iPcP	P	17 08 34.5	+1.4
ZEI	Tsey	81.21	336	eP		P	17 08 32.3	-1.5
ZEI					pmax	pmax		
	comp=Z,20nm,1.2s,mb4.9							
KBA	Koelnbreinsper	81.21	358	⇑	iPcP	P	17 08 35.2	+1.4
	comp=Z,53nm,1.1s,mb5.4,SNR=16							
MFF	Saint Martin d	81.30	7	⇑	iP	P	17 08 34.7	+0.5
	comp=Z,62nm,1.1s,mb5.1							
MFF	Saint Martin d	81.30	7	⇑	iP	P	17 08 34.7	+0.5
MFF					pmax	pmax		
	comp=Z,31nm,1.1s,mb5.2							
MFF	Saint Martin d	81.30	7	⇑	iP	P	17 08 34.7	+0.5
	comp=Z,31nm,1.1s,mb5.2							
FETA	Feichten	81.30	360	⇑	iPcP	P	17 08 35.5	+1.3
	comp=Z,29nm,1.1s,mb5.1,SNR=12							
AVF	Avril sur Loir	81.34	5	⇑	iP	P	17 08 34.7	+0.3
	comp=Z,48nm,1.1s,mb5.0							
AVF	Avril sur Loir	81.34	5	⇑	iP	P	17 08 34.7	+0.3
AVF					pmax	pmax		
	comp=Z,24nm,1.1s,mb5.0							
AVF	Avril sur Loir	81.34	5	⇑	iP	P	17 08 34.7	+0.3
	comp=Z,24nm,1.1s,mb5.0							
SOC	Sochi	81.43	339	eP		P	17 08 35.3	+0.3
SOC				e*PP		pP	17 08 44.3	-2.0
SOC				ePPP			17 13 33.4	
SOC				eS		S	17 18 40.8	-2.5
SOC				eSS		SS	17 24 03.3	+4.7
SOC					pmax	pmax		
	comp=Z,33nm,1.1s,mb5.2							
SOC					MLR	MLR		
	comp=Z,348nm,21.0s,MS4.7							
ONI	Oni	81.49	336	P		P	17 08 35.8	+0.5
SMF	Signal de Mont	81.51	5	⇑	iP	P	17 08 35.7	+0.4
	comp=Z,60nm,1.1s,mb5.1							
SMF	Signal de Mont	81.51	5	⇑	iP	P	17 08 35.7	+0.4
SMF					pmax	pmax		
	comp=Z,30nm,1.1s,mb5.1							
SMF	Signal de Mont	81.51	5	⇑	iP	P	17 08 35.7	+0.4
	comp=Z,30nm,1.1s,mb5.1							
CTA	Charters Tower	81.52	221	P		P	17 08 35.5	0.0
	comp=Z,6.3nm,0.8s,mb4.6,baz=27,slow=9.0,SNR=5.3							
BGF	Bois d'Agland	81.55	5	⇑	iP	P	17 08 35.8	+0.3
	comp=Z,51nm,1.2s,mb5.0							
BGF	Bois d'Agland	81.55	5	⇑	iP	P	17 08 35.8	+0.3
BGF					pmax	pmax		
	comp=Z,26nm,1.2s,mb5.0							
BGF	Bois d'Agland	81.55	5	⇑	iP	P	17 08 35.8	+0.3
	comp=Z,26nm,1.2s,mb5.0							
ABTA	Abfaltersbach	81.56	359	⇑	iP	P	17 08 36.3	+0.7
	comp=Z,23nm,1.3s,mb5.0,SNR=10.0							
SOKA	Soboth	81.56	357	⇑	iP	P	17 08 36.6	+1.0
	comp=Z,35nm,1.1s,mb5.2							
KEH	Kehvi	81.63	336	P		P	17 08 35.6	-0.5
CABF	La Chapelle	81.64	3	⇑	iP	P	17 08 36.9	+0.9
	comp=Z,73nm,1.2s,mb5.2							
CABF	La Chapelle	81.64	3	⇑	iP	P	17 08 36.9	+0.9
CABF					pmax	pmax		
	comp=Z,36nm,1.2s,mb5.2							
CABF	La Chapelle	81.64	3	⇑	iP	P	17 08 36.9	+0.9
	comp=Z,36nm,1.2s,mb5.2							
MYKA	Terra Mystica	81.65	358	⇑	eP	P	17 08 37.0	+1.0
	comp=Z,9.0nm,1.0s,mb4.6							
OBKA	Obir	81.75	357	⇑	iP	P	17 08 37.6	+1.0
	comp=Z,12nm,0.8s,mb4.9							
GROS	Grobnik	81.77	356	eP		P	17 08 37.0	+0.3
GROS				e		pP	17 08 46.9	-1.1
TCF	Toulx Ste Croi	81.78	6	⇑	iP	P	17 08 36.9	+0.2
	comp=Z,25nm,1.0s,mb4.8							
TCF	Toulx Ste Croi	81.78	6	⇑	iP	P	17 08 36.9	+0.2
TCF					pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8							
TCF	Toulx Ste Croi	81.78	6	⇑	iP	P	17 08 36.9	+0.2
	comp=Z,12nm,1.0s,mb4.8							
ZAVS	Zavodnje	81.81	357	eP		P	17 08 37.9	+1.0
TLCR		81.85	347	⇑	P	P	17 08 37.6	+0.4
TLCR		81.85	347	⇑	iP	P	17 08 37.5	+0.3
PKSM	Moragy	81.86	354	⇑	P	P	17 08 37.0	-0.2
PKSM	Moragy	81.86	354	⇑	iP	P	17 08 37.0	-0.2
MLR	Muntele Rosu	81.92	349	⇓	P	P	17 08 38.2	+0.7
MLR	Muntele Rosu	81.92	349	⇓	iP	P	17 08 38.2	+0.7
TBLG	Delisi	81.97	335	P		P	17 08 38.2	+0.4
MTA	Mtatsminda	81.99	335	P		P	17 08 38.2	+0.3
CADS	Cadrg	82.05	358	eP		P	17 08 37.9	-0.3
DGRG	David-gareji	82.06	334	P		P	17 08 38.4	0.0
AGO	Saint Agoulin	82.07	5	eP		P	17 08 39.2	+0.9
PLDF	La Plantade	82.17	5	eP		P	17 08 39.9	+1.1
BZS	Buzias	82.23	352	⇑	P	P	17 08 38.6	-0.5
BZS	Buzias	82.23	352	⇑	iP	P	17 08 38.6	-0.5
PYM	Petit Puy Mans	82.36	5	eP		P	17 08 40.6	+0.8
VAI	Varese	82.44	1	P		P	17 08 41.1	+0.9
VAI					pmax	pmax		
	comp=Z,14nm,0.6s,mb5.1							
VAI	Varese	82.44	1	P		P	17 08 41.1	+0.9
	comp=Z,14nm,0.6s,mb5.1							
HARR	Harsova	82.46	348	⇑	P	P	17 08 40.8	+0.5
HARR	Harsova	82.46	348	⇑	iP	P	17 08 40.8	+0.5
TRI	Trieste	82.57	358	eP		P	17 08 38.7	-2.2
TIRR	Tirgusor	82.62	347	⇑	P	P	17 08 41.5	+0.3
TIRR	Tirgusor	82.62	347	⇑	iP	P	17 08 41.5	+0.3
ORO	Oropa	82.67	2	P		P	17 08 42.8	+1.4
ORO					pmax	pmax		
	comp=Z,50nm,1.4s,mb5.3							
ORO	Oropa	82.67	2	P		P	17 08 42.8	+1.4
	comp=Z,50nm,1.4s,mb5.3							
RJF	Les Rejaudoux	82.71	6	⇑	iP	P	17 08 41.8	+0.1
	comp=Z,20nm,1.1s,mb4.8							
RJF				eMLR		MLR		
	comp=Z,301nm,19.8s,MS4.4							
RJF	Les Rejaudoux	82.71	6	⇑	iP	P	17 08 41.8	+0.1
RJF					pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8							
RJF					MLR	MLR		
	comp=Z,300nm,19.8s,MS4.7							
RJF	Les Rejaudoux	82.71	6	⇑	iP	P	17 08 41.8	+0.1
	comp=Z,9.9nm,1.1s,mb4.8							
RJF					LR	LR		
	comp=Z,300nm,19.8s,MS4.7							
BOJS	Bojanci	82.73	357	eP		P	17 08 41.9	+0.1
BOJS				e		pP	17 08 52.7	-0.4
LPL	La Plagne	82.75	3	⇑	iP	P	17 08 43.6	+1.7
LPG	La Plagne	82.77	3	⇑	iP	P	17 08 44.0	+2.0
LBL	Lubilhac	82.89	5	eP		P	17 08 43.5	+0.9
SSB	Saint Sauveur	82.91	4	eP		P	17 08 42.9	+0.2
SSB					pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8							
SSB	Saint Sauveur	82.91	4	eP		P	17 08 42.9	+0.3
	comp=Z,9.5nm,1.0s,mb4.8							
LFF	La Frestale	83.02	7	⇑	iP	P	17 08 43.8	+0.5
	comp=Z,23nm,0.8s,mb5.0							
LFF	La Frestale	83.02	7	⇑	iP	P	17 08 43.8	+0.5
LFF					pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9							
LFF	La Frestale	83.02	7	⇑	iP	P	17 08 43.8	+0.5
	comp=Z,11nm,0.8s,mb5.0							
CAF	Calviac	83.12	6	eP		P	17 08 44.4	+0.6
	comp=Z,33nm,1.1s,mb5.0							
CAF	Calviac	83.12	6	eP		P	17 08 44.4	+0.6
CAF					pmax	pmax		
	comp=Z,17nm,1.1s,mb5.0							
CAF	Calviac	83.12	6	eP		P	17 08 44.4	+0.6
	comp=Z,16nm,1.1s,mb5.0							
RSP	Reno Superiore	83.13	2	P		P	17 08 42.7	-1.1
BNI	Bardonecchia	83.21	3	eP		P	17 08 45.9	+1.6
BNI					pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2							
BNI	Bardonecchia	83.21	3	eP		P	17 08 45.9	+1.6
	comp=Z,20nm,0.9s,mb5.2							
ORIF	Oris-en-Rattie	83.32	3	⇑	iP	P	17 08 46.0	+1.2
	comp=Z,12nm,0.8s,mb4.7							
ORIF				eMLR		MLR		
	comp=Z,164nm,21.2s,MS4.1							
ORIF	Oris-en-Rattie	83.32	3	⇑	iP	P	17 08 46.0	+1.2
ORIF					pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7							
ORIF	Oris-en-Rattie	83.32	3	⇑	iP	P	17 08 46.0	+1.2
	comp=Z,6.3nm,0.8s,mb4.7							
VIVF	Saint-Julien-l	83.34	4	⇑	iP	P	17 08 45.7	+0.8
	comp=Z,12nm,0.7s,mb4.7							
VIVF	Saint-Julien-l	83.34	4	⇑	iP	P	17 08 45.7	+0.8
VIVF					pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7							
VIVF	Saint-Julien-l	83.34	4	⇑	iP	P	17 08 45.7	+0.8
	comp=Z,5.8nm,0.7s,mb4.7							
GNI	Garni	83.44	334	ceP		P	17 08 47.1	+1.6
GNI					pmax	pmax		
	comp=Z,5.0nm,0.8s							
GNI	Garni	83.44	334	eP		P	17 08 46.5	+1.0
	comp=Z,22nm,1.1s,mb5.1							
MBDF	Montbardon	83.54	3	⇑	iP	P	17 08 47.7	+1.7
	comp=Z,48nm,1.0s,mb5.3							
MBDF	Montbardon	83.54	3	⇑	iP	P	17 08 47.7	+1.7
MBDF					pmax	pmax		
	comp=Z,24nm,1.0s,mb5.3							
MBDF	Montbardon	83.54	3	⇑	iP	P	17 08 47.7	+1.7
	comp=Z,24nm,1.0s,mb5.3							
LASF	Ste Croix	84.08	5	⇑	iP	P	17 08 49.8	+1.1
	comp=Z,36nm,1.1s,mb5.1							
FNVD	Fontana Vidola	84.15	360	P		P	17 08 50.4	+1.3
SMRF	Simiane la Rot	84.25	4	eP		P	17 08 51.1	+1.5
	comp=Z,48nm,1.2s,mb5.2							
SMRF	Simiane la Rot	84.25	4	eP		P	17 08 51.1	+1.5
	comp=Z,48nm,1.2s,mb5.5							
TOUF	Mont Tournerai	84.27	2	eP		P	17 08 50.4	+0.7
AUTN	L'Aution	84.29	2	eP		P	17 08 50.9	+1.1
LUCF	Luceram	84.39	2	eP		P	17 08 50.0	-0.3
SBF	Sospel	84.42	2	⇑	iP	P	17 08 50.6	+0.1
	comp=Z,80nm,1.1s,mb5.5							
SBF	Sospel	84.42	2	⇑	iP	P	17 08 50.6	+0.1
SBF					pmax	pmax		
	comp=Z,40nm,1.1s,mb5.5							
SBF	Sospel	84.42	2	⇑	iP	P	17 08 50.6	+0.1
	comp=Z,40nm,1.1s,mb5.5							
FSSB	Fossombrone	84.61	358	P		P	17 08 52.1	+0.7
SJPF	Ste Jean	84.67	9	⇑	iP	P	17 08 52.8	+1.1
	comp=Z,16nm,0.8s,mb4.9							
SJPF	Ste Jean	84.67	9	⇑	iP	P	17 08 52.8	+1.1
SJPF					pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.9							
SJPF	Ste Jean	84.67	9	⇑	iP	P	17 08 52.8	+1.1
	comp=Z,7.9nm,0.8s,mb4.9							
FRF	La Foret Royal	84.70	3	⇑	iP	P	17 08 52.5	+0.6
	comp=Z,51nm,1.0s,mb5.3							
FRF	La Foret Royal	84.70	3	⇑	iP	P	17 08 52.5	+0.6
FRF					pmax	pmax		
	comp=Z,25nm,1.0s,mb5.3							
FRF	La Foret Royal	84.70	3	⇑	iP	P	17 08 52.5	+0.6
	comp=Z,25nm,1.0s,mb5.3							
MTLF	Montolieu	84.71	6	⇑	iP	P	17 08 52.8	+0.9
	comp=Z,34nm,1.0s,mb5.1							
MTLF	Montolieu	84.71	6	⇑	iP	P	17 08 52.8	+0.9
MTLF					pmax	pmax		
	comp=Z,17nm,1.0s,mb5.1							
MTLF	Montolieu	84.71	6	⇑	iP	P	17 08 52.8	+0.9
	comp=Z,17nm,1.0s,mb5.1							
EPF	Esparros	84.89	7	⇑	iP	P	17 08 52.8	0.0
	comp=Z,24nm,1.0s,mb5.0							
EPF	Esparros	84.89	7	⇑	iP	P	17 08 52.8	0.0
EPF					pmax	pmax		
	comp=Z,12nm,1.0s,mb5.0							
EPF	Esparros	84.89	7	⇑	iP	P	17 08 52.8	0.0
	comp=Z,12nm,1.0s,mb5.0							
LMR	La Mourre	84.93	3	⇑	iP	P	17 08 53.9	+0.9
	comp=Z,57nm,1.1s,mb5.3							
LMR	La Mourre	84.93	3	⇑	iP	P	17 08 53.9	+0.9
LMR					pmax	pmax		
	comp=Z,28nm,1.1s,mb5.3							
LMR	La Mourre	84.93	3	⇑	iP	P	17 08 53.9	+0.9
	comp=Z,28nm,1.1s,mb5.3							
ETSF	Etsaut	84.94	8	⇑	iP	P	17 08 54.1	+1.0
	comp=Z,46nm,1.1s,mb5.2							
ETSF	Etsaut	84.94	8	⇑	iP	P	17 08 54.1	+1.0
ETSF					pmax	pmax		
	comp=Z,23nm,1.1s,mb5.2							
ETSF	Etsaut	84.94	8	⇑	iP	P	17 08 54.1	+1.0
	comp=Z,23nm,1.1s,mb5.2							
SNTG	Esanatoglia	85.04	358	P		P	17 08 55.0	+1.4
	comp=Z,66nm,1.3s,mb5.6							
RESF	Ens	85.11	7	eP		P	17 08 54.9	+1.0
ASS	Assisi	85.24	358	P		P	17 08 55.3	+0.7
NRCA	Norcia	85.46	358	P		P	17 08 56.7	+1.0
	comp=Z,19nm,0.9s,mb5.2							
PGF	Pioggiola	85.76	1	eP		P	17 08 57.9	+0.7
	comp=Z,102nm,1.1s,mb5.7							
PGF	Pioggiola	85.76	1	eP		P	17 08 57.9	+0.7
PGF					pmax	pmax		
	comp=Z,51nm,1.1s,mb5.7							
PGF	Pioggiola	85.76	1	eP		P	17 08 57.9	+0.7
	comp=Z,51nm,1.1s,mb5.7							
AQU	L'Aquila	85.93	358	⇑	P	P	17 08 58.6	+0.6
AQU	L'Aquila	85.93	358	⇑	iP	P	17 08 58.6	+0.6
BR131	Keskin Array S	86.39	342	eP		P	17 09 00.5	+0.2
	comp=Z,2.0nm,0.7s,mb4.5							
BRTR	Keskin Array B	86.39	342	P		P	17 09 00.7	+0.4
	comp=Z,2.4nm,0.7s,mb4.6,baz=16,slow=3.3,SNR=11							
WRA	Warramunga Arr	86.73	231	P		P	17 09 01.3	-0.8
	comp=Z,4.7nm,0.8s,mb4.8,baz=39,slow=5.7,SNR=30							
ESDC	Sonseca Array	87.78	11	P		P	17 09 07.2	+0.1
	comp=Z,4.9nm,0.8s,mb4.8,baz=351,slow=4.4,SNR=18							
ESDC					LR	LR	17 48 25.8	
	comp=Z,124nm,19.8s,MS4.3,baz=325,slow=36							
HYB	Hyderabad	89.19	298	eP		P	17 09 14.0	-0.1
HYB	Hyderabad	89.19	298	i	P	P	17 09 14.0	-0.1
ASAR	Alice Springs	90.11	230	P		P	17 09 17.9	-0.1
	comp=Z,3.4nm,0.8s,mb5.2,baz=27,slow=4.8,SNR=121							
MMAI	Mount Meron Ar	92.51	339	P		P	17 09 29.4	+0.1
	comp=Z,4.4nm,0.8s,mb5.0,baz=17,slow=9.0,SNR=7.6							
MMAI					LR	LR	17 59

ARG	**Arkhangelos**	**1.90**	**65**	P	**Pn**	**17 08 35.1**	**-0.8**
ARG				S	**Sn**	**17 09 01.5**	**+1.5**
ARG	**Arkhangelos**	**1.90**	**65**	P	**Pn**	**17 08 35.1**	**-0.8**
ARG				S	**Sn**	**17 09 01.5**	**+1.5**
SMG	**Samos**	**2.38**	**16**	*e*Pn	**Pn**	**17 08 44.3**	**+1.8**
SMG	**Samos**	**2.38**	**16**	*e*PN	**Pn**	**17 08 44.3**	**+1.8**
SMG	**Samos**	**2.38**	**16**	*e*Pn	**Pn**	**17 08 44.3**	**+1.8**

ISCJB ***05*** *17:10:00.9±3.7, 6°.4S±0°.1×154°.5E±0°.1, h75km±38km, mb3.8/13, Error ellipse: s-maj=25.7km s-min=14.6km az=138.7*
NEIC ***05*** *17:10:01.3±0.5, 6°.33S×154°.44E, mb4.0/2, Error ellipse: s-maj=13.5km s-min=11.0km az=100.0*
IDC ***05*** *17:10:02.5±4.4, 6°.50S×154°.60E, h80km±45km, mb3.7/11, mb1 3.8/12, mb1mx3.8/17, mbtmp3.7/12, ML4.3/1, MS3.0/1, Ms1 3.0/1, ms1mx2.5/19, Error ellipse: s-maj=33.4km s-min=19.6km az=128.0*

ISC 05 17:10:03.8±3.2, 6°.4S±0°.1×154°.5E±0°.1, h87km±34km, n19, σ0877/19, mb3.8/13, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.16**	**119**	P	**Pn**	**17 11 29.2**	**-3.0**
	8.2nm,0.3s,baz=315,slow=1.4,SNR=4.6						
HNR				S	**Sn**	**17 12 43.3**	**+2.1**
	3.9nm,0.3s,baz=342,slow=19,SNR=3.1						
HNR	**Honiara**	**6.16**	**119**	*e*Pn	**Pn**	**17 11 32.1**	**-0.1**
HNR				*e*S	**Sn**	**17 12 47.2**	**+6.0**
CTA	**Charters Tower**	**15.75**	**210**	LR	LR	17 17 50.7	
	comp=Z,62nm,21.7s,baz=303,slow=30						
EIDS	**Eidsvold**	**19.10**	**189**	*e*P	**Pn**	**17 14 21.2**	**-0.3**
WRAB	**Tennant Creek**	**23.72**	**234**	*e*P	**P**	**17 15 08.8**	**+0.8**
	13nm,1.0s,mb4.2						
WRAB				*e*pP		17 15 22.5	
WRA	**Warramunga Arr**	**23.74**	**234**	P	**P**	**17 15 08.6**	**+0.5**
	6.3nm,0.8s,mb4.0,baz=57,slow=9.6,SNR=28						
WRA				pP		17 15 22.6	
	1.5nm,0.7s,baz=56,slow=9.7,SNR=6.5						
ASAR	**Alice Springs**	**26.18**	**227**	P	**P**	**17 15 29.8**	**-0.5**
	1.6nm,0.7s,mb3.6,baz=56,slow=9.4,SNR=41						
ASAR				pP	pP	17 15 46.1	-4.0
	1.4nm,0.7s,baz=56,slow=9.4,SNR=10						
ASAR				pPcP		17 19 09.6	
	0.2nm,0.6s,baz=54,slow=3.3,SNR=4.7						
STKA	**Stephens Creek**	**28.03**	**204**	P	**P**	**17 15 46.2**	**-0.5**
	2.5nm,0.9s,mb3.7,baz=2.3,slow=5.9,SNR=3.3						
KSRS	**Korea Array**	**50.23**	**332**	P	**P**	**17 18 50.8**	**-0.3**
	1.2nm,0.7s,mb3.9,baz=154,slow=7.0,SNR=6.0						
PETK	**Petropavlovsk-**	**59.39**	**2**	P	**P**	**17 19 56.9**	**0.0**
	1.7nm,0.7s,mb4.2,baz=168,slow=7.4,SNR=2.9						
CMAR	**Chiang Mai Arr**	**60.11**	**295**	P	**P**	**17 20 02.5**	**+0.1**
	0.4nm,0.7s,mb3.6,baz=123,slow=5.9,SNR=4.2						
ULN	**Ulaanbaatar**	**68.28**	**328**	*e*P	**P**	**17 20 55.5**	**+0.1**
	0.8nm,0.7s,mb3.7						
SONM	**Songino Array**	**68.61**	**327**	P	**P**	**17 20 58.5**	**+1.0**
	0.3nm,0.5s,mb3.4,baz=130,slow=6.0,SNR=3.6						
BILL	**Bilibino**	**74.77**	**5**	*e*P	**P**	**17 21 33.7**	**-0.3**
MKAR	**Makanchi Array**	**82.67**	**319**	P	**P**	**17 22 18.9**	**+1.2**
	0.5nm,0.4s,mb3.7,baz=84,slow=8.0,SNR=7.3						
BVAR	**Borovoye Array**	**91.56**	**323**	P	**P**	**17 22 59.6**	**-1.2**
	0.4nm,0.5s,mb3.9,baz=99,slow=4.5,SNR=3.6						
NVAR	**Mina Array Bea**	**91.76**	**52**	P	**P**	**17 23 02.2**	**+0.2**
	0.6nm,0.7s,mb4.0,baz=263,slow=5.4,SNR=4.9						
YKA	**Yellowknife Ar**	**96.08**	**28**	P	**P**	**17 23 20.6**	**-0.7**
	0.4nm,0.6s,mb4.0,baz=268,slow=9.2,SNR=2.5						
TORD	**Torodi Ar. Bea**	**152.41**	**286**	PKPbc	PKPbc	17 29 50.0	-0.8
	0.2nm,0.3s,baz=64,slow=3.4,SNR=4.4						

NEIC ***05*** *17:18:37.3±0.6, 22°.32S×173°.12W, h10km, mb4.6/2, Error ellipse: s-maj=15.2km s-min=11.1km az=154.0*
ISCJB ***05*** *17:18:38.6±1.3, 22°.06S±0°.09×173°.2W±0°.2, h33km, mb4.3/6, MS3.6/5, Error ellipse: s-maj=26.3km s-min=8.6km az=23.7*
IDC ***05*** *17:18:39.6±1.4, 21°.97S×173°.85W, h0km, mb4.2/5, mb1 4.4/7, mb1mx4.1/20, mbtmp4.3/7, ML2.7/1, MS3.6/7, Ms1 3.5/7, ms1mx3.4/22, Error ellipse: s-maj=48.7km s-min=18.7km az=146.0*

ISC 05 17:18:41.0±1.3, 22°.13S±0°.09×173°.2W±0°.2, h35km, n26, σ0896/19, mb4.3/6, MS3.6/5, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**8.27**	**210**	Sn	Sx	17 21 55.9	
	21nm,0.3s,baz=336,slow=20,SNR=3.0						
AFI	**Afiamalu**	**8.29**	**10**	Pn	**Pn**	**17 20 39.4**	**+0.7**
	5.3nm,0.3s,baz=163,slow=4.1,SNR=7.0						
AFI				Sn	**Sn**	**17 22 09.9**	**-1.1**
	9.9nm,0.3s,baz=162,slow=20,SNR=3.9						
AFI				LR	LR	17 23 01.1	
	comp=Z,276nm,21.5s,baz=259,slow=32						
AFI	**Afiamalu**	**8.29**	**10**	*e*P	**Pn**	**17 20 40.2**	**+1.6**
AFI				Sn	**Sn**	**17 22 09.9**	**-1.1**
AFI				LR	LR	17 23 01.1	
MSVF	**Nonsavu**	**9.31**	**296**	Pn	**Pn**	**17 20 52.9**	**+0.2**
	34nm,1.0s						
RAR	**Rarotonga**	**12.53**	**88**	*e*P	Px	17 21 33.4	
	34nm,0.6s						
URZ	**Urewera**	**18.11**	**205**	P	**Pn**	**17 22 49.7**	**+0.1**
	1.0nm,0.3s,baz=69,slow=9.4,SNR=9.2						
URZ				S	Sx	17 25 50.9	
	0.8nm,0.3s,baz=125,slow=18,SNR=4.9						
URZ				LR	LR	17 28 47.0	
	comp=Z,243nm,19.5s,baz=47,slow=34						
URZ	**Urewera**	**18.11**	**205**	*e*P	**Pn**	**17 22 47.6**	**-2.0**
URZ				S	Sx	17 25 50.9	
URZ				LR	LR	17 28 47.0	
PPT	**Papeete**	**22.68**	**83**	LR	LR	17 29 41.0	
	comp=Z,370nm,20.3s,MS3.8,baz=37,slow=28						
HNR	**Honiara**	**28.69**	**292**	LR	LR	17 34 29.1	
	comp=Z,87nm,18.2s,MS3.4,baz=115,slow=34						
EIDS	**Eidsvold**	**32.78**	**257**	*e*P	**P**	**17 25 10.5**	**-0.5**
CTA	**Charters Tower**	**37.79**	**265**	P	**P**	**17 25 54.5**	**+0.4**
	3.8nm,0.4s,mb4.5,baz=102,slow=11,SNR=5.6						
CTAO	**Charters Tower**	**37.79**	**265**	*e*P	**P**	**17 25 54.4**	**+0.2**
	3.8nm,0.4s,mb4.5						
STKA	**Stephens Creek**	**41.17**	**246**	P	**P**	**17 26 22.4**	**+0.2**
	2.0nm,0.6s,mb3.9,baz=93,slow=8.4,SNR=6.4						
ASAR	**Alice Springs**	**48.51**	**257**	P	**P**	**17 27 21.0**	**+0.3**
	3.4nm,0.8s,mb4.4,baz=81,slow=7.5,SNR=62						
ASAR				S	**S**	**17 34 18.6**	**-1.3**
	0.2nm,0.7s,baz=98,slow=14,SNR=3.1						
WRAB	**Tennant Creek**	**48.80**	**262**	*e*P	**P**	**17 27 22.6**	**-0.4**
	6.3nm,1.0s,mb4.6						
WRA	**Warramunga Arr**	**48.81**	**262**	P	**P**	**17 27 22.7**	**-0.4**
	1.0nm,0.3s,mb4.4,baz=95,slow=8.4,SNR=48						
WRA	**Warramunga Arr**	**48.81**	**262**	P	**P**	**17 27 22.7**	**-0.4**
KAKA	**Kakadu**	**52.47**	**271**	*e*P	**P**	**17 27 53.6**	**+2.9**
PETK	**Petropavlovsk-**	**79.06**	**343**	LR	LR	17 58 02.4	
	comp=Z,31nm,20.9s,MS3.6,baz=278,slow=30						
NVAR	**Mina Array Bea**	**79.23**	**41**	P	**P**	**17 30 48.3**	**+5.8**
	1.1nm,0.6s,mb3.9,baz=211,slow=8.9,SNR=6.3						
NVAR	**Mina Array Bea**	**79.23**	**41**	P	**P**	**17 30 48.3**	**+5.8**
PDAR	**Pinedale Array**	**87.15**	**41**	LR	LR	18 03 30.5	
	comp=Z,57nm,19.1s,MS4.0,baz=60,slow=31						
YKA	**Yellowknife Ar**	**96.17**	**23**	LR	LR	18 11 56.2	
	comp=Z,5.3nm,19.4s,MS3.0,baz=85,slow=33						
AKASG	**Malin Array Be**	**146.51**	**334**	PKPbc	PKPbc	17 38 20.4	+2.1
	0.5nm,0.5s,baz=36,slow=4.3,SNR=4.5						
AKASG	**Malin Array Be**	**146.51**	**334**	PKPbc	PKPbc	17 38 20.4	+2.1
BRTR	**Keskin Array B**	**151.21**	**314**	PKPbc	PKPbc	17 38 33.7	+3.0
	0.2nm,0.4s,baz=47,slow=6.3,SNR=2.5						

CASC 05 17:20:45.0±1.6, 9°.18N×83°.80W, h11km±14km, MD3.6, 2C-4D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUS	**Buena Vista**	**0.38**	**6⇓**	*e*P	Pg	17 20 54.1	+1.6
QCR	**Quepos**	**0.44**	**304⇓**	*e*P	Pg	17 20 53.7	0.0
QCR				*e*S	Sg	17 21 00.3	+0.8
BAR1		**0.48**	**82⇑**	*e*P	Pg	17 20 54.6	+0.1
BAR1				*e*S	Sg	17 21 02.3	+1.4
URSC	**Urasca**	**0.66**	**2⇓**	*e*P	Pg	17 20 58.1	+0.4
URSC				*e*S	Sg	17 21 07.8	+1.4
LAJ	**Bijagual**	**0.76**	**335⇑**	*e*P	Pg	17 21 02.1	+2.5
CGA2	**Cerro Gallo 2**	**1.06**	**322⇓**	*e*P	Pb	17 21 04.3	-1.2
CGA2				*e*S	Sg	17 21 19.5	+0.1
BRU2	**Volcan**	**1.16**	**109**	*i* P	Pb	17 21 09.5	+2.5
BRU2				*e*S	Sb	17 21 21.3	-0.7

TEH ***05*** *17:24:43.6, 31°.84N×50°.17E, h5km*
KISR ***05*** *17:24:43.7±1.0, 31°.77N×50°.49E, h42km±821km, ML3.0*
ISCJB ***05*** *17:24:44.0±0.4, 31°.88N±0°.04×50°.25E±0°.06, h10km, Error ellipse: s-maj=8.4km s-min=3.3km az=39.8*
CSEM ***05*** *17:24:44.6±0.4, 31°.88N×50°.22E, h2km, ML2.9, Error ellipse: s-maj=24.5km s-min=4.3km az=114.0*

ISC 05 17:24:45.1±0.4, 31°.91N±0°.03×50°.25E±0°.05, h10km, n27, σ1900/37, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IPIR	**Pirpir**	**0.95**	**35**	*e*Pg	**Pg**	**17 24 59.7**	**-3.7**
IPIR				*e*Sg	**Sg**	**17 25 15.3**	**-0.5**
IPIR				*e*		17 25 17.7	
	comp=Z,3μm,0.2s						
IGAR	**Gharneh**	**1.60**	**71**	*e*Pn	**Pn**	**17 25 12.4**	**-1.1**
IGAR				*e*		17 25 39.2	
	comp=Z,2μm,0.2s						
IKLH	**Kolahrood**	**1.80**	**38**	*e*Pn	**Pn**	**17 25 16.4**	**+0.2**
IKLH				*e*		17 25 17.9	
	comp=Z,2μm,0.2s						
IKLH				*e*Lg		17 25 43.5	
IZEF	**Zefreh**	**2.02**	**60**	*e*Pn	**Pn**	**17 25 19.0**	**-0.2**
IZEF				*e*		17 25 22.2	
	comp=Z,801nm,0.3s						
IZEF				*e*Sn	**Sn**	**17 25 46.0**	**+1.5**
ASAO	**Ashtian**	**2.64**	**356**	*e*Pn	**Pn**	**17 25 29.6**	**+1.8**
ASAO				*e*Sg	**Sg**	**17 26 08.6**	**-1.4**
GHVR	**GHOM**	**2.71**	**19**	*e*Pn	**Pn**	**17 25 30.2**	**+1.4**
GHVR				*e*Sg	**Sg**	**17 26 10.5**	**-1.8**
ISFB	**Sefidab**	**2.96**	**34**	*e*Pn	**Pn**	**17 25 32.0**	**-0.1**
ISFB				*e*		17 26 23.2	
	comp=N,379nm,0.2s						
UMR	**Umm Al-Rimmam**	**3.20**	**224**	*e*P	**Pn**	**17 25 35.0**	**-0.5**
UMR	**Umm Al-Rimmam**	**3.20**	**224**	*e*P	**Pn**	**17 25 35.0**	**-0.4**
MIB	**Mutribah**	**3.26**	**231**	*e*P	**Pn**	**17 25 36.3**	**0.0**
MIB				*e*S	**Sn**	**17 26 15.8**	**+0.6**
MIB				AML	AML	17 26 19.0	
	comp=Z,69nm,0.5s						
MIB	**Mutribah**	**3.26**	**231**	*e*P	**Pn**	**17 25 36.3**	**0.0**
MIB				*e*S	**Sn**	**17 26 15.8**	**+0.7**
IVRN	**Varamin**	**3.32**	**21**	*e*Pn	**Pn**	**17 25 37.3**	**+0.2**
IVRN				*e*		17 25 50.8	
	comp=Z,505nm,0.2s						
IRAZ	**Razeghan**	**3.50**	**356**	*e*Pn	**Pn**	**17 25 41.1**	**+1.5**
IRAZ				*e*		17 26 54.3	
	comp=Z,490nm,0.3s						
KBD	**Kabd**	**3.50**	**220**	*e*P	**Pn**	**17 25 39.7**	**+0.2**
KBD				*e*S	**Sn**	**17 26 20.4**	**-0.6**
KBD				AML	AML	17 26 24.3	
	comp=Z,25nm,0.6s						
KBD	**Kabd**	**3.50**	**220**	*e*P	**Pn**	**17 25 39.7**	**+0.1**
KBD				*e*S	**Sn**	**17 26 20.4**	**-0.6**
ISRV	**Sarvestan**	**3.53**	**135**	*e*Pn	**Pn**	**17 25 38.7**	**-1.2**
ISRV				*e*		17 27 08.2	
	comp=Z,396nm,0.4s						
NAY	**Al-Naaiem**	**3.70**	**225**	*e*P	**Pn**	**17 25 42.4**	**+0.1**
NAY				*e*S	**Sn**	**17 26 26.9**	**+0.8**
NAY				AML	AML	17 26 28.4	
	comp=Z,13nm,0.6s						
NAY	**Al-Naaiem**	**3.70**	**225**	*e*P	**Pn**	**17 25 42.4**	**0.0**
NAY				*e*S	**Sn**	**17 26 26.9**	**+0.8**
QRN	**Al-Qurain**	**3.74**	**213**	*e*P	**Pn**	**17 25 42.0**	**-0.9**
IMEH	**Mehriz**	**3.76**	**97**	*e*Pn	**Pn**	**17 25 43.1**	**0.0**
IMEH				*e*		17 26 55.5	
	comp=Z,143nm,0.3s						
RDF	**Al-Radifah**	**3.77**	**219**	*e*P	**Pn**	**17 25 42.8**	**-0.6**
RDF				AML	AML	17 26 29.6	
	comp=Z,29nm,0.4s						
RDF	**Al-Radifah**	**3.77**	**219**	*e*P	**Pn**	**17 25 42.8**	**-0.5**
IDMV	**Damavand**	**3.95**	**22**	*e*Pn	**Pn**	**17 25 46.1**	**+0.3**
IDMV				*e*		17 26 10.7	
	comp=Z,166nm,0.2s						
CHTH	**Charan**	**4.06**	**10**	*e*Pn	**Pn**	**17 25 49.1**	**+1.9**
IDHR	**Dehrash**	**4.27**	**312**	*e*Pn	**Pn**	**17 25 48.5**	**-1.6**
IDHR				*e*		17 26 48.7	
	comp=E,399nm,0.2s						
IFIR	**Firoozkooh**	**4.27**	**29**	*e*Pn	**Pn**	**17 25 50.8**	**+0.6**
IFIR				*e*		17 27 16.2	
	comp=N,135nm,0.3s						
IGLO	**Ghaloghah**	**5.46**	**32**	*e*	Px	17 26 13.3	
	comp=Z,109nm,0.1s						
IGLO				*e*Pn	**Pn**	**17 26 06.3**	**-0.2**

IDC ***05*** *18:07:53.8±0.8, 29°.59N×68°.29E, h0km, mb3.9/18, mb1 4.0/19, mb1mx3.9/32, mbtmp3.9/19, MS3.0/1, Ms1 3.0/1, ms1mx2.3/35, Error ellipse: s-maj=18.6km s-min=16.1km az=51.0*
BJI ***05*** *18:07:56.9, 29°.60N×68°.30E, h42km, mB4.5/2, mb4.4/5*
ISCJB ***05*** *18:07:57.3±0.6, 29°.72N±0°.07×68°.31E±0°.07, h33km, mb3.9/19, Error ellipse: s-maj=10.8km s-min=7.3km az=34.6*
NEIC ***05*** *18:07:59.5±1.6, 29°.61N×68°.30E, h42km±15km, mb4.2/8, Error ellipse: s-maj=13.1km s-min=6.6km az=222.0*

ISC 05 18:07:59.3±0.6, 29°.70N±0°.07×68°.32E±0°.07, h35km, n51, σ0891/50, mb3.9/19, Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**4.87**	**7**	*e*P	**Pn**	**18 09 13.2**	**+3.1**
DDI	**Dehra Dun**	**8.47**	**83**	*ex*	x	18 10 46.5	
AML	**Almayashu**	**13.14**	**18**	*e*P	**Pn**	**18 11 02.4**	**-1.0**
	12nm,0.4s						
EKS2	**Erkin-Say**	**13.66**	**17**	*e*P	**Pn**	**18 11 09.9**	**-0.6**
	4.7nm,0.6s						
AAK	**Ala-Archa**	**13.83**	**19**	Pn	**Pn**	**18 11 12.1**	**-0.7**
	0.0nm,0.3s,baz=183,slow=3.9,SNR=7.8						
AAK				LR	LR	18 17 27.4	
	comp=Z,65nm,21.6s,baz=194,slow=41						
AAK	**Ala-Archa**	**13.83**	**19**	*e*P	**Pn**	**18 11 11.9**	**-0.8**
	5.8nm,0.7s						
TKM2	**Tokmak 2**	**14.43**	**22**	*e*P	**Pn**	**18 11 19.8**	**-1.1**
	8.0nm,0.6s						
DMN	**Daman**	**14.89**	**94**	*e*P	**Pn**	**18 11 27.2**	**-0.1**
	18nm,0.9s						
DMN	**Daman**	**14.89**	**94**	*e*P	**Pn**	**18 11 27.2**	**-0.1**
	18nm,0.9s						
KKN	**Kakani**	**15.00**	**93**	*e*P	**Pn**	**18 11 21.9**	**-6.9**
KKN	**Kakani**	**15.00**	**93**	*e*P	**Pn**	**18 11 21.9**	**-6.9**
GUN	**Gumba**	**15.50**	**92**	*e*P	**Pn**	**18 11 29.3**	**-6.0**
	41nm,0.8s						
GUN	**Gumba**	**15.50**	**92**	*e*P	**Pn**	**18 11 29.3**	**-6.0**
	41nm,0.8s						
JIRN	**Jiri**	**15.82**	**93**	*e*P	**Pn**	**18 11 35.4**	**-4.0**
	17nm,0.7s						
JIRN	**Jiri**	**15.82**	**93**	*e*P	**Pn**	**18 11 35.4**	**-4.0**
	17nm,0.7s						
RAMN	**Ramite**	**16.33**	**95**	*e*P	**Pn**	**18 11 45.7**	**-0.3**
RAMN	**Ramite**	**16.33**	**95**	*e*P	**Pn**	**18 11 45.7**	**-0.3**
ODAN	**Odare**	**17.04**	**95**	*e*P	**Pn**	**18 11 55.5**	**+0.6**
	14nm,0.8s						
ODAN	**Odare**	**17.04**	**95**	*e*P	**Pn**	**18 11 55.5**	**+0.6**
	14nm,0.8s						
TAPN	**Taplejung**	**17.20**	**93**	*e*P	**Pn**	**18 11 56.4**	**-0.5**
	15nm,0.7s						
TAPN	**Taplejung**	**17.20**	**93**	*e*P	**Pn**	**18 11 56.4**	**-0.5**
	15nm,0.7s						
LSA	**Lhasa**	**19.83**	**84**	*e*P	**Pn**	**18 12 28.0**	**-0.9**
	2.0nm,0.6s						
MK31	**Makanchi Array**	**20.24**	**29**	*e*P	**P**	**18 12 31.3**	**0.0**
MKAR	**Makanchi Array**	**20.24**	**29**	P	**P**	**18 12 31.7**	**+0.4**
	2.2nm,0.5s,baz=207,slow=9.1,SNR=39						
MKAR	**Makanchi Array**	**20.24**	**29**	P	**P**	**18 12 31.7**	**+0.4**
ABKAR	**Akbulak array**	**20.55**	**344**	*e*P	**P**	**18 12 35.1**	**+0.5**
	5.1nm,0.6s						
AKTK	**Aktyubinsk**	**22.12**	**342**	P	**P**	**18 12 51.8**	**+0.2**
AKTO	**Aktyubinsk**	**22.12**	**342**	P	**P**	**18 12 51.8**	**+0.2**
	1.1nm,0.6s,mb3.5,baz=158,slow=15,SNR=3.4						
KURK	**Kurchatov**	**22.37**	**17**	P	**P**	**18 12 52.8**	**-1.5**
	4.4nm,0.7s,mb4.0,baz=209,slow=10,SNR=17						
KURK	**Kurchatov**	**22.37**	**17**	*e*P	**P**	**18 12 54.6**	**+0.3**
	1.4nm,0.6s,mb3.6						
BVAR	**Borovoye Array**	**23.35**	**3**	P	**P**	**18 13 04.8**	**+0.2**
	4.9nm,0.6s,mb4.1,baz=183,slow=10,SNR=35						
ZALV	**Zalesovo Beam**	**27.04**	**22**	P	**P**	**18 13 38.2**	**+0.2**
	1.2nm,0.4s,mb3.8,baz=227,slow=10,SNR=7.7						
CMAR	**Chiang Mai Arr**	**30.03**	**105**	P	**P**	**18 14 05.2**	**+0.1**
	0.3nm,0.6s,mb3.2,baz=283,slow=12,SNR=4.2						
KMI	**Kunming**	**30.82**	**90**	P	**P**	**18 14 14.3**	**+2.2**
KMI				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.4						
SONM	**Songino Array**	**34.34**	**47**	P	**P**	**18 14 43.7**	**+1.1**
	comp=Z,1.7nm,0.7s,mb4.1,baz=250,slow=9.3,SNR=18						
AKASG	**Malin Array Be**	**35.92**	**317**	P	**P**	**18 14 56.6**	**+0.4**
	comp=Z,0.4nm,0.5s,mb3.6,baz=104,slow=7.8,SNR=2.8						
BUR08	**Bucovina Ar. S**	**37.57**	**311**	*e*P	**P**	**18 15 08.1**	**-2.1**
FINES	**FINESS Array B**	**42.11**	**331**	P	**P**	**18 15 47.9**	**+0.2**
	comp=Z,1.4nm,0.8s,mb3.6,baz=144,slow=6.8,SNR=4.4						
ARCES	**ARCESS Array B**	**46.69**	**341**	P	**P**	**18 16 25.3**	**+1.1**
	comp=Z,1.7nm,0.6s,mb4.2,baz=120,slow=7.2,SNR=6.7						
HFS	**Hagfors**	**47.24**	**326**	P	**P**	**18 16 28.2**	**-0.5**
	comp=Z,1.4nm,0.7s,mb4.0,baz=145,slow=5.4,SNR=4.7						
NB2	**NORSAR Subarra**	**48.65**	**327**	P	**P**	**18 16 39.4**	**-0.2**
	comp=Z,1.1nm,0.7s,mb4.0,baz=107,slow=7.9						
NOA	**NORSAR Array B**	**48.65**	**327**	P	**P**	**18 16 39.7**	**+0.1**
	comp=Z,1.1nm,0.7s,mb4.0,baz=107,slow=7.5,SNR=5.7						
NOA	**NORSAR Array B**	**48.65**	**327**	P	**P**	**18 16 39.7**	**+0.1**
KSRS	**Korea Array**	**49.55**	**64**	P	**P**	**18 16 47.4**	**+0.6**
	comp=Z,1.7nm,0.7s,mb4.2,baz=272,slow=8.1,SNR=10.0						
TIXI	**Tiksi**	**52.91**	**20**	*e*P	**P**	**18 17 12.0**	**+0.6**
	comp=Z,2.5nm,0.8s,mb4.2						
TORD	**Torodi Ar. Bea**	**63.41**	**270**	P	**P**	**18 18 25.0**	**-0.7**
	comp=Z,0.9nm,0.7s,mb4.0,baz=62,slow=5.6,SNR=6.1						
TORD	**Torodi Ar. Bea**	**63.41**	**270**	P	**P**	**18 18 25.0**	**-0.7**
BOSA	**Boshof**	**71.09**	**219**	P	**P**	**18 19 14.3**	**+0.3**
	comp=Z,2.2nm,0.9s,mb4.1,baz=9.5,slow=3.3,SNR=3.4						
WRA	**Warramunga Arr**	**80.47**	**119**	P	**P**	**18 20 06.0**	**-1.9**
	comp=Z,0.5nm,0.7s,mb3.6,baz=318,slow=4.9,SNR=7.4						
ASAR	**Alice Springs**	**82.36**	**123**	P	**P**	**18 20 17.8**	**-0.1**
	comp=Z,0.8nm,0.6s,mb3.9,baz=308,slow=5.4,SNR=30						
YKA	**Yellowknife Ar**	**88.10**	**1**	P	**P**	**18 20 47.1**	**+1.2**
	comp=Z,0.6nm,0.7s,mb4.0,baz=347,slow=5.2,SNR=5.1						

IDC ***05*** *18:12:38.1±0.5, 38°.36N×20°.56E, h0km, mb4.2/23, mb1 4.2/32, mb1mx4.2/39, mbtmp4.1/32, ML3.9/8, MS3.3/11, Ms1 3.3/11, ms1mx3.1/40, Error ellipse: s-maj=11.7km s-min=11.2km az=124.0*
ATH ***05*** *18:12:38.6, 38°.32N×20°.41E, h16km, MD4.3/14, ML4.3*
THE ***05*** *18:12:39.9, 38°.34N×20°.44E, h3km, ML4.9/6, Error ellipse: s-maj=0.9km s-min=0.3km az=256.0*
ISCJB ***05*** *18:12:39.5±0.4, 38°.33N±0°.01×20°.40E±0°.02, h18km±3km, mb4.2/48, MS3.4/11, Error ellipse: s-maj=2.8km s-min=2.1km az=38.5*
NEIC ***05*** *18:12:40.6±0.8, 38°.29N×20°.50E, h17km±6km, mb4.3/6, ML4.9(THE), ML4.3(PDG), ML4.3(ATH), Error ellipse: s-maj=4.3km s-min=3.0km az=210.0*
CSEM ***05*** *18:12:40.5±0.1, 38°.32N×20°.45E, h13km, mb4.2/19, Error ellipse: s-maj=3.5km s-min=2.4km az=30.0*
MOS ***05*** *18:12:40.9±1.2, 38°.31N×20°.48E, h33km, mb4.5/12, Error ellipse: s-maj=5.4km s-min=3.2km az=88.5*
PDG ***05*** *18:12:40.5±1.1, 38°.35N×20°.50E, h18km±3km, MD4.4/2, ML4.3/10, Error ellipse: s-maj=1.7km s-min=1.4km az=90.0*
HLW ***05*** *18:12:42.6, 38°.15N×21°.22E, h10km±23km*
PRU ***05*** *18:12:43.3, 38°.28N×20°.32E, h72km, M4.3*
BJI ***05*** *18:12:46.7, 39°.26N×21°.22E, h16km, mB4.7/2, mb4.3/5, Ms7 4.0/1*
BEO ***05*** *18:13:09.0±0.6, 40°.52N×19°.74E, h0km, ML4.0/8*

ISC 05 18:12:40.2±0.4, 38°.34N±0°.01×20°.46E±0°.02, h8km±3km, n578, σ1824/681, mb4.2/48, MS3.4/11, 50C-38D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.19**	**147⇑**	*i*Pb	**Pg**	**18 12 44.0**	**0.0**
VLS				*e*Sb	**Sg**	**18 12 47.1**	**+0.5**
VLS	**Valsamata**	**0.19**	**147**	P	**Pg**	**18 12 44.0**	**0.0**
VLS				S	**Sg**	**18 12 47.0**	**+0.4**
VLS	**Valsamata**	**0.19**	**147⇑**	*i*PB	**Pg**	**18 12 44.0**	**0.0**
VLS				*e*SB	**Sg**	**18 12 47.1**	**+0.5**
VLS	**Valsamata**	**0.19**	**147**	P	**Pg**	**18 12 44.0**	**0.0**
VLS				*e*Sb	**Sg**	**18 12 47.1**	**+0.5**
LKD2	**Lefkada island**	**0.48**	**19**	P	**Pg**	**18 12 48.7**	**-0.8**
LKD2				S	**

LTK	Loutraki	2.00	98	ePN	Pn	18 13 15.1	+0.9
LTK	Loutraki	2.00	98	P	Pn	18 13 14.8	+0.6
LTK	Loutraki	2.00	98	ePn	Pn	18 13 15.1	+0.9
LKR	Lokris	2.02	80	ePn	Pn	18 13 15.3	+0.8
LKR	Lokris	2.02	80	P	Pn	18 13 15.2	+0.7
LKR	Lokris	2.02	80	ePN	Pn	18 13 15.3	+0.8
LKR	Lokris	2.02	80	P	Pn	18 13 15.2	+0.7
ATAL	Atalanti	2.04	79	P	Pn	18 13 15.7	+0.9
ATAL	Atalanti	2.04	79	P	Pn	18 13 15.7	+0.9
KZN	Kozani	2.21	27	ePn	Pn	18 13 18.3	+1.1
KZN				P	Pg	18 13 21.7	-0.9
KZN	Kozani	2.21	27	ePN	Pn	18 13 18.3	+1.1
KZN	Kozani	2.21	27	ePn	Pn	18 13 18.3	+1.1
KBN	Korca	2.30	6	i PN	Pn	18 13 20.5	+2.1
KBN				i SN	Sn	18 13 49.3	+2.5
KBN	Korca	2.30	6	i Pn	Pn	18 13 20.5	+2.1
KBN				i Sn	Sn	18 13 49.3	+2.5
SCTE	Santa Cesarea	2.33	319	ePN	Pn	18 13 18.2	-0.5
SCTE	Santa Cesarea	2.33	319	ePn	Pn	18 13 18.2	-0.5
LIT	Litokhoron	2.36	41	P	Pn	18 13 19.2	-0.1
LIT	Litokhoron	2.36	41	ePN	Pn	18 13 19.9	+0.6
LIT	Litokhoron	2.36	41	P	Pn	18 13 19.2	-0.1
LIT	Litokhoron	2.36	41	ePn	Pn	18 13 19.9	+0.6
NEO	Neokhori	2.37	65	ePn	Pn	18 13 19.7	+0.4
NEO	Neokhori	2.37	65	ePN	Pn	18 13 19.7	+0.4
NEO	Neokhori	2.37	65	ePn	Pn	18 13 19.7	+0.4
XOR	Xorichti	2.37	63	P	Pn	18 13 19.7	+0.4
XOR	Xorichti	2.37	63	P	Pn	18 13 19.0	-0.3
XOR				S	Sn	18 13 49.8	+1.3
XOR	Xorichti	2.37	63	P	Pn	18 13 19.7	+0.4
XOR				S	Sn	18 13 49.8	+1.3
NAIG	Nisos Aigina	2.46	103	ePb	Pn	18 13 21.2	+0.6
NAIG	Nisos Aigina	2.46	103	ePB	Pn	18 13 21.2	+0.6
FNA	Florina	2.54	16	P	Pn	18 13 22.0	+0.2
FNA	Florina	2.54	16	P	Pn	18 13 21.7	-0.1
FNA	Florina	2.54	16	P	Pn	18 13 22.0	+0.2
VLI	Veliai	2.55	129	ePb	Pn	18 13 23.8	+2.0
VLI	Veliai	2.55	129	ePB	Pn	18 13 23.8	+2.0
ATH	Athens Observa	2.59	97	ePn	Pn	18 13 22.9	+0.5
ATH				P		18 13 23.5	
ATH	Athens Observa	2.59	97	ePN	Pn	18 13 22.9	+0.5
ATH	Athens Observa	2.59	97	ePn	Pn	18 13 22.9	+0.5
ATHU	Athens Univers	2.65	97	P	Pn	18 13 23.4	+0.3
ATHU	Athens Univers	2.65	97	P	Pn	18 13 23.4	+0.3
VLY	Voula,Athens	2.67	99	ePn	Pn	18 13 24.0	+0.5
VLY	Voula,Athens	2.67	99	ePN	Pn	18 13 24.0	+0.5
VLY	Voula,Athens	2.67	99	ePn	Pn	18 13 24.0	+0.5
PTL	Penteli	2.70	95	ePb	Pn	18 13 24.5	+0.7
PTL	Penteli	2.70	95	ePB	Pn	18 13 24.5	+0.7
BIA	Bitola	2.76	14	ePn	Pn	18 13 25.0	+0.3
OHR	Ohrid	2.78	5	ePn	Pn	18 13 25.9	+0.9
OHR	Ohrid	2.78	5	P	Pn	18 13 25.8	+0.8
OHR	Ohrid	2.78	5	P	Pn	18 13 25.8	+0.8
AOS	Alonnisos	2.80	72	P	Pn	18 13 25.0	-0.2
AOS	Alonnisos	2.80	72	P	Pn	18 13 25.0	-0.2
AOS	Alonnisos	2.80	72	P	Pn	18 13 25.0	-0.2
KYTH	Kithira	2.90	134	ePb	Pn	18 13 29.0	+2.3
KYTH	Kithira	2.90	134	ePB	Pn	18 13 29.0	+2.3
PAIG	Paliouri	2.96	57	P	Pn	18 13 27.1	-0.4
PAIG	Paliouri	2.96	57	P	Pn	18 13 27.1	-0.4
THE	Thessaloniki	3.00	39	P	Pn	18 13 28.2	+0.2
THE	Thessaloniki	3.00	39	P	Pn	18 13 28.2	+0.2
TIP	Timpagrande	3.02	287	ePn	Pn	18 13 28.1	-0.2
TIP	Timpagrande	3.02	287	ePn	Pn	18 13 28.1	-0.1
TIR	Tirane	3.04	352	P	Pn	18 13 28.9	+0.3
TIR	Tirane	3.04	352	P	Pn	18 13 28.9	+0.3
TIR	Tirane	3.04	352	ePN	Pn	18 13 29.0	+0.4
TIR	Tirane	3.04	352	P	Pn	18 13 28.9	+0.3
HORT	Hortiatis	3.04	41	P	Pn	18 13 28.4	-0.2
HORT	Hortiatis	3.04	41	P	Pn	18 13 28.4	-0.2
PLG	Polygyros	3.08	48	P	Pn	18 13 28.4	-0.7
PLG	Polygyros	3.08	48	ePN	Pn	18 13 28.3	-0.8
PLG	Polygyros	3.08	48	P	Pn	18 13 28.4	-0.7
KRUS	Krusevo	3.09	11	ePn	Pn	18 13 29.2	0.0
SOH	Sokhos	3.34	41	P	Pn	18 13 33.1	+0.4
SOH	Sokhos	3.34	41	ePN	Pn	18 13 33.2	+0.5
SOH	Sokhos	3.34	41	P	Pn	18 13 33.1	+0.4
PHP	Peshkopia	3.34	360	i PN	Pn	18 13 33.3	+0.6
PHP				i SN	Sn	18 14 13.1	+0.5
PHP	Peshkopia	3.34	360	i Pn	Pn	18 13 33.3	+0.6
PHP				i Sn	Sn	18 14 13.1	+0.5
OUR	Ouranopolis	3.38	53	P	Pn	18 13 33.7	+0.5
OUR	Ouranopolis	3.38	53	P	Pn	18 13 33.7	+0.5
VAY	Valandovo	3.40	28	ePn	Pn	18 13 33.0	-0.5
VAY	Valandovo	3.40	28	P	Pn	18 13 33.8	+0.4
VAY	Valandovo	3.40	28	P	Pn	18 13 33.8	+0.4
CEL	Celeste	3.59	270	ePn	Pn	18 13 35.9	-0.3
CEL	Celeste	3.59	270	ePn	Pn	18 13 35.8	-0.4
STIP	Stip	3.61	21	ePn	Pn	18 13 36.6	+0.3
STIP	Stip	3.61	21	P	Pn	18 13 36.7	+0.4
STIP	Stip	3.61	21	P	Pn	18 13 36.7	+0.4
SRS	Serrai	3.68	40	P	Pn	18 13 36.8	-0.5
SRS	Serrai	3.68	40	P	Pn	18 13 36.9	-0.4
SRS	Serrai	3.68	40	P	Pn	18 13 36.9	-0.4
SKO	Skopje	3.71	11	ePn	Pn	18 13 37.9	+0.1
PUK	Puka	3.73	353	i PN	Pn	18 13 37.5	-0.5
PUK	Puka	3.73	353	i Pn	Pn	18 13 37.5	-0.5
ULC	Ulcinj	3.74	346	⇓i Pn	Pn	18 13 37.3	-0.9
ULC				eSn	Sn	18 14 22.3	-0.1
ULC	Ulcinj	3.74	346	⇓i Pn	Pn	18 13 37.3	-0.9
ULC				eSn	Sn	18 14 22.3	-0.1
SG1	Sgolgore (BA)	3.85	312	ePn	Pn	18 13 34.6	-5.0
BAI	Bari	3.91	316	ePn	Pn	18 13 40.2	-0.3
NVR	Nevrokopi	3.99	40	ePn	Pn	18 13 41.8	+0.2
NVR				P		18 13 46.3	
NVR	Nevrokopi	3.99	40	ePN	Pn	18 13 41.8	+0.2
NVR	Nevrokopi	3.99	40	ePn	Pn	18 13 41.8	+0.2
KARN	Karanos	4.03	136	P	Pn	18 13 42.9	+0.7
KARN	Karanos	4.03	136	ePN	Pn	18 13 43.0	+0.8
KARN	Karanos	4.03	136	P	Pn	18 13 42.9	+0.7
BCI	Bajram Curri	4.04	356	i PN	Pn	18 13 43.3	+1.0
BCI	Bajram Curri	4.04	356	i Pn	Pn	18 13 43.3	+1.0
KAVA	Kavala	4.10	48	P	Pn	18 13 43.1	-0.1
KAVA	Kavala	4.10	48	P	Pn	18 13 43.1	-0.1
BUM	Brajici-Budva	4.14	344	⇓i Pn	Pn	18 13 42.2	-1.4
BUM				eSn	Sn	18 14 28.1	-4.1
BUM	Brajici-Budva	4.14	344	⇓i Pn	Pn	18 13 42.2	-1.4
BUM				eSn	Sn	18 14 28.1	-4.1
VAM	Vamos	4.19	133	ePN	Pn	18 13 44.1	-0.2
VAM	Vamos	4.19	133	ePn	Pn	18 13 44.1	-0.2
PDG	Podgorica	4.19	348	⇑i Pn	Pn	18 13 43.9	-0.5
PDG				eSn	Sn	18 14 32.9	-0.6
TTG	Podgorica	4.19	348	⇑i Pn	Pn	18 13 43.9	-0.5
TTG				eSn	Sn	18 14 32.9	-0.6
TTG	Podgorica	4.19	348	i P	Pn	18 13 43.9	-0.5
TTG				eS	Sn	18 14 32.9	-0.6
APE	Apeiranthos	4.21	106	⇑P	Pn	18 13 44.2	-0.5
APE	Apeiranthos	4.21	106	⇑i P	Pn	18 13 44.2	-0.5
APE	Apeiranthos	4.21	106	P	Pn	18 13 44.2	-0.5
PVY	Plav	4.27	355	⇓i Pn	Pn	18 13 45.7	+0.2
PVY				eSn	Sn	18 14 35.1	-0.4
PVY	Plav	4.27	355	⇓i Pn	Pn	18 13 45.7	+0.2
PVY				eSn	Sn	18 14 35.1	-0.4
HCY	Herceg Novi	4.37	341	⇓i Pn	Pn	18 13 46.5	-0.4
HCY				eSn	Sn	18 14 33.1	-4.9
HCY	Herceg Novi	4.37	341	⇓i Pn	Pn	18 13 46.5	-0.4
HCY				eSn	Sn	18 14 33.1	-4.9
CHOS	Chios island	4.40	88	P	Pn	18 13 48.1	+0.9
CHOS	Chios island	4.40	88	ePN	Pn	18 13 47.8	+0.6
CHOS	Chios island	4.40	88	ePn	Pn	18 13 47.8	+0.6
CHOS	Chios island	4.40	88	P	Pn	18 13 48.1	+0.9
HAVL	Avola	4.45	254	Pn	Pn	18 13 45.6	-2.4
HAVL				Sn	Sn	18 14 35.6	-4.4
HAVL	Avola	4.45	254	Pn	Pn	18 13 45.6	-2.4
HAVL				Sn	Sn	18 14 35.6	-4.4
BEY	Berane	4.55	355	⇑i Pn	Pn	18 13 49.8	+0.5
BEY				eSn	Sn	18 14 41.6	-0.8
IVA	Berane	4.55	355	⇑i Pn	Pn	18 13 49.8	+0.5
IVA				eSn	Sn	18 14 41.6	-0.8
IVA	Berane	4.55	355	⇑i Pn	Pn	18 13 49.8	+0.5
IVA				eSn	Sn	18 14 41.6	-0.8
BARS	Barje	4.59	13	ePn	Pn	18 13 54.0	+4.1
BARS				eSn	Sn	18 14 28.6	-15
BARS	Barje	4.59	13	ePn	Pn	18 13 54.0	+4.1
NKY	Niksic	4.61	346	⇑i Pn	Pn	18 13 49.9	-0.2
NKY				eSn	Sn	18 14 43.0	-0.8
NKY	Niksic	4.61	346	⇑i Pn	Pn	18 13 49.9	-0.2
NKY				eSn	Sn	18 14 43.0	-0.8
IDI	Anoyia	4.68	129	Pn	Pn	18 13 51.1	0.0
	2.3nm,0.3s,baz=309,slow=11,SNR=15						
IDI				Sn	Sn	18 14 44.6	-0.9
	13nm,0.3s,baz=336,slow=23,SNR=7.0						
IDI				LR	LR	18 15 42.5	
	comp=Z,272nm,18.2s,baz=140,slow=40						
IDI	Anoyia	4.68	129	ePN	Pn	18 13 51.1	0.0
IDI	Anoyia	4.68	129	ePn	Pn	18 13 51.1	0.0
HVZN	Vizzini	4.70	258	Pn	Pn	18 13 49.4	-2.0
HVZN				Sn	Sn	18 14 41.4	-4.6
HVZN	Vizzini	4.70	258	Pn	Pn	18 13 49.4	-2.0
HVZN				Sn	Sn	18 14 41.4	-4.6
BRY	Bratogost	4.79	343	⇓i Pn	Pn	18 13 52.2	-0.4
BRY				eSn	Sn	18 14 46.7	-1.5
BRY	Bratogost	4.79	343	⇓i Pn	Pn	18 13 52.2	-0.4
BRY				eSn	Sn	18 14 46.7	-1.5
SIVA	Sivas	4.81	132	ePn	Pn	18 13 52.7	-0.3
SIVA	Sivas	4.81	132	ePN	Pn	18 13 52.7	-0.3
SIVA	Sivas	4.81	132	ePn	Pn	18 13 52.7	-0.3
RDO	Rodhopi	4.81	53	ePn	Pn	18 13 53.1	+0.2
RDO	Rodhopi	4.81	53	ePN	Pn	18 13 53.1	+0.2
RDO	Rodhopi	4.81	53	ePn	Pn	18 13 53.1	+0.2
URLA	Izmir	4.82	88	i P	Pn	18 13 54.2	+1.1
URLA	Izmir	4.82	88	i P	Pn	18 13 54.2	+1.1
MS1	Monte Sant'Ang	4.83	316	ePn	Pn	18 13 53.4	+0.2
VAE	Valguarnera	4.86	262	Pn	Pn	18 13 57.3	+3.7
	2.0nm,0.3s,baz=19,slow=3.9,SNR=4.2						
VAE				Sn	Sn	18 14 52.4	+2.4
	10nm,0.3s,baz=207,slow=20,SNR=6.4						
VAE	Valguarnera	4.86	262	Pn	Pn	18 13 57.3	+3.7
VAE				Sn	Sn	18 14 52.4	+2.4
VAE	Valguarnera	4.86	262	Pn	Pn	18 13 57.3	+3.7
VAE				Sn	Sn	18 14 52.4	+2.4
CSSN	Cassano Irpino	4.90	303	Pn	Pn	18 13 56.1	+2.0
CSSN	Cassano Irpino	4.90	303	Pn	Pn	18 13 56.1	+2.0
SJES	Sjenica	4.93	356	ePn	Pn	18 13 54.6	0.0
SJES				eSn	Sn	18 14 28.4	-23
RAFF	Raffo Rosso	4.96	259	Pn	Pn	18 13 53.4	-1.5
RAFF	Raffo Rosso	4.96	259	Pn	Pn	18 13 53.4	-1.5
AYVA	Ayvalik	4.96	77	⇑i P	Pn	18 13 58.1	+3.1
AYVA	Ayvalik	4.96	77	i P	Pn	18 13 58.1	+3.1
UPM	Unac-Piva	5.00	347	⇓i Pn	Pn	18 13 55.7	+0.2
UPM				eSn	Sn	18 14 52.7	-0.8
UPM	Unac-Piva	5.00	347	⇓i Pn	Pn	18 13 55.7	+0.2
UPM				eSn	Sn	18 14 52.7	-0.8
RGNG	Rignano Grg	5.01	313	Pn	Pn	18 13 55.4	-0.3
RGNG	Rignano Grg	5.01	313	Pn	Pn	18 13 55.4	-0.3
ALN	Alexandroupoli	5.01	58	ePN	Pn	18 13 55.5	-0.2
ALN	Alexandroupoli	5.01	58	ePn	Pn	18 13 55.5	-0.2
PLE	Pljevlja	5.05	351	⇑i Pn	Pn	18 13 56.6	+0.4
PLE				eSn	Sn	18 14 53.3	-1.5
PLE	Pljevlja	5.05	351	⇑i Pn	Pn	18 13 56.6	+0.4
PLE				eSn	Sn	18 14 53.3	-1.5
SMG	Samos	5.07	95	ePn	Pn	18 13 56.6	+0.1
SMG	Samos	5.07	95	ePN	Pn	18 13 56.6	+0.1
SMG	Samos	5.07	95	ePn	Pn	18 13 56.6	+0.1
LAST	Lasithi	5.12	127	ePn	Pn	18 13 57.0	-0.2
LAST	Lasithi	5.12	127	ePN	Pn	18 13 57.0	-0.2
LAST	Lasithi	5.12	127	ePn	Pn	18 13 57.0	-0.2
NISS		5.19	12	⇑i Pn	Pn	18 14 01.9	+3.9
NISS				eSg	Sn	18 14 54.8	-3.2
NISS		5.19	12	⇑i Pn	Pn	18 14 01.9	+3.9
ZAPS	Zavoj	5.20	18	ePn	Pn	18 14 04.2	+6.0
WDD	Wield Dalam	5.35	244	ePn	Pn	18 13 58.6	-1.7
	425nm,0.8s						
WDD				eSn	Sn	18 14 59.6	-2.5
WDD	Wield Dalam	5.35	244	ePn	Pn	18 13 58.6	-1.7
	425nm,0.8s						
WDD				eSn	Sn	18 14 59.6	-2.4
GRUS	Gruza	5.55	2	ePn	Pn	18 14 03.6	+0.6
GRUS				eSg	Sn	18 14 58.2	-8.8
BBLS	Lazići	5.58	352	ePn	Pn	18 14 02.5	-1.0
BBLS				eSg	Sn	18 14 55.2	-13
SGG	Gregorio Mates	5.58	305	Pn	Pn	18 14 05.1	+1.6
	102nm,0.5s						
SGG	Gregorio Mates	5.58	305	Pn	Pn	18 14 05.1	+1.6
	102nm,0.5s						
ZKR	Zakros	5.63	123	ePn	Pn	18 14 05.5	+1.3
ZKR	Zakros	5.63	123	ePN	Pn	18 14 05.5	+1.3
ZKR	Zakros	5.63	123	ePn	Pn	18 14 05.5	+1.3
DIVS	Divibare	5.77	357	⇓i Pn	Pn	18 14 05.8	-0.2
DIVS				eSg	Sn	18 15 02.1	-10
MIDA	Miranda	5.80	307	Pn	Pn	18 14 08.0	+1.5
	141nm,1.0s						
MIDA	Miranda	5.80	307	Pn	Pn	18 14 08.0	+1.5
	141nm,1.0s						
TRUS	Trudelj	5.88	360	⇑i Pn	Pn	18 14 08.1	+0.5
TRUS				eSg	Sn	18 15 07.2	-8.0
AYDN	Tasoluk	5.90	94	⇑i P	Pn	18 14 13.9	+6.1
SVIS	Svilajnac	5.95	5	ePn	Pn	18 14 09.9	+1.4
SVIS				eSg	Sn	18 15 13.7	-3.2
KARP	Karpathos	6.04	115	ePn	Pn	18 14 11.5	+1.6
KARP	Karpathos	6.04	115	ePN	Pn	18 14 11.5	+1.6
KARP	Karpathos	6.04	115	ePn	Pn	18 14 11.5	+1.6
INTR	Introdacqua	6.22	308	Pn	Pn	18 14 13.6	+1.4
	170nm,0.7s						
INTR	Introdacqua	6.22	308	Pn	Pn	18 14 13.6	+1.4
	170nm,0.7s						
DURS	Dursunbey	6.37	76	⇑i P	Pn	18 14 15.6	+1.3
DURS	Dursunbey	6.37	76	i P	Pn	18 14 15.6	+1.3
TURN	Turunc	6.63	100	⇑i P	Pn	18 14 09.2	-8.7
AQU	L'Aquila	6.72	309	eP	Pn	18 14 20.4	+1.3
AQU				pmax	pmax		
	comp=Z,96nm,0.8s						
AQU	L'Aquila	6.72	309	ePn	Pn	18 14 20.4	+1.3
	comp=Z,96nm,0.8s						
AQU	L'Aquila	6.72	309	⇓i P	Pn	18 14 20.7	+1.6
AQU	L'Aquila	6.72	309	eP	Pn	18 14 20.4	+1.3
	comp=Z,96nm,0.8s						
FRGS	Fruska Gora	6.83	356	ePn	Pn	18 14 19.6	-1.1
FRGS				eSg	Sn	18 15 36.4	-2.2
ULDT	Uludag	6.97	72	⇓i P	Pn	18 14 20.0	-2.6
KHAL	Karahalli	7.10	87	⇑i P	Pn	18 14 24.1	-0.2
KHAL	Karahalli	7.10	87	i P	Pn	18 14 24.1	-0.2
GOLH	Golhisar	7.29	96	⇑i P	Pn	18 14 32.3	+5.3
NVLJ	Novalja	7.50	328	ePn	Pn	18 14 29.2	-0.7
NVLJ				Sn	Sn	18 15 49.4	-5.7
NVLJ	Novalja	7.50	328	ePn	Pn	18 14 29.2	-0.7
AKAS	Kas	7.58	103	⇑i P	Pn	18 14 33.4	+2.4
AKAS	Kas	7.58	103	i P	Pn	18 14 33.4	+2.4
SLUM		7.86	149	P	Pn	18 14 28.2	-6.6
	baz=152						
SLUM				S	Sn	18 15 49.6	-14
	baz=152						
SLUM		7.86	149	P	Pn	18 14 28.2	-6.6
SLUM				S	Sn	18 15 49.6	-14
PKSM	Moragy	7.99	351	⇑P	Pn	18 14 36.9	+0.4
PKSM	Moragy	7.99	351	⇑i P	Pn	18 14 36.9	+0.4
PKSM	Moragy	7.99	351	⇓eP	Pn	18 14 36.6	+0.1
BOJS	Bojanci	8.14	333	ePn	Pn	18 14 37.5	-1.2
BOJS				eSn	Sn	18 16 04.5	-6.3
BOJS	Bojanci	8.14	333	ePn	Pn	18 14 37.5	-1.2
MLR	Muntele Rosu	8.23	28	Pn	Pn	18 14 40.7	+0.8
	comp=Z,0.2nm,0.3s,baz=237,slow=5.8,SNR=12						
MLR	Muntele Rosu	8.23	28	⇓P	Pn	18 14 41.2	+1.4
MLR	Muntele Rosu	8.23	28	⇓i P	Pn	18 14 41.3	+1.4
MLR	Muntele Rosu	8.23	28	P	Pn	18 14 40.7	+0.8
HARR	Harsova	8.46	39	⇑P	Pn	18 14 43.2	+0.2
HARR	Harsova	8.46	39	⇑i P	Pn	18 14 43.2	+0.2
HARR	Harsova	8.46	39	P	Pn	18 14 43.2	+0.2
KNDS	Knezji Dol	8.49	330	ePn	Pn	18 14 42.0	-1.4
KNDS				eSn	Sn	18 16 13.9	-5.5
KNDS	Knezji Dol	8.49	330	ePn	Pn	18 14 42.0	-1.4
TIRR	Tirgusor	8.55	42	⇓P	Pn	18 14 44.0	-0.2
TIRR	Tirgusor	8.55	42	⇓i P	Pn	18 14 44.0	-0.2
TIRR	Tirgusor	8.55	42	P	Pn	18 14 44.0	-0.2
VISS	Visnje	8.55	333	ePn	Pn	18 14 43.5	-0.7
VISS				eSn	Sn	18 16 15.1	-5.7
VISS	Visnje	8.55	333	ePn	Pn	18 14 43.5	-0.7
PLOR	Plostina	8.80	29	⇓P	Pn	18 14 48.7	+1.0
PLOR	Plostina	8.80	29	⇓i P	Pn	18 14 48.7	+1.0
PLOR	Plostina	8.80	29	P	Pn	18 14 48.7	+1.0
VRI	Vrincioaia	8.85	30	⇓P	Pn	18 14 49.2	+0.9
VRI	Vrincioaia	8.85	30	⇓i P	Pn	18 14 49.2	+0.9
VRI	Vrincioaia	8.85	30	P	Pn	18 14 49.2	+0.9
TRI	Trieste	8.89	328	eP	Pn	18 14 48.3	-0.6
TRI				pmax	pmax		
	comp=Z,27nm,0.6s						
TRI	Trieste	8.89	328	eP	Pn	18 14 48.3	-0.6
	comp=Z,27nm,0.6s						
TRI	Trieste	8.89	328	eP	Pn	18 14 48.3	-0.6
	comp=Z,27nm,0.6s						
HMAT	Matruh	9.05	141	S	Sn	18 16 17.0	-16
	baz=143						
HMAT	Matruh	9.05	141	S	Sn	18 16 17.0	-16
VOY	Vojsko	9.10	330	ePn	Pn	18 14 50.3	-1.5
VOY				eSn	Sn	18 16 28.3	-6.0
VOY	Vojsko	9.10	330	ePn	Pn	18 14 50.3	-1.5
BUD	Budapest	9.20	354	e	Pn	18 14 55.7	+2.6
BUD	Budapest	9.20	354	eP	Pn	18 14 55.7	+2.6
SOKA	Soboth	9.25	336	⇓i Pn	Pn	18 14 51.7	-2.1
	comp=Z,24nm,0.6s						
SOKA				⇑eSn	Sn	18 16 31.2	-6.7
	comp=Z,7.2nm,0.5s						
SOKA	Soboth	9.25	336	Pn	Pn	18 14 51.7	-2.1
	comp=Z,24nm,0.6s						
KEST	Kesra	9.26	257	Pn	Pn	18 14 56.0	+2.0
	comp=Z,0.2nm,0.3s,baz=47,slow=4.0,SNR=8.7						
OBKA	Obir	9.26	334	⇓i Pn	Pn	18 14 53.8	-0.1
	comp=Z,5.1nm,0.3s,SNR=7.3						
OBKA				⇑i Sn	Sn	18 16 33.5	-4.7
	comp=Z,43nm,0.8s						
OBKA	Obir	9.26	334	Pn	Pn	18 14 53.8	-0.1
	comp=Z,5.1nm,0.3s,SNR=7.3						
PSZ	Piszkesteto	9.59	358	P	Pn	18 14 59.7	+1.3
PSZ				pmax	pmax		
	comp=Z,15nm,0.9s						
PSZ	Piszkesteto	9.59	358	P	Pn	18 14 59.7	+1.3
	comp=Z,15nm,0.9s						
PSZ	Piszkesteto	9.59	358	⇑ePn	Pn	18 15 01.1	+2.7
PSZ	Piszkesteto	9.59	358	⇑i P	Pn	18 15 00.3	+1.9
PSZ	Piszkesteto	9.59	358	P	Pn	18 14 59.7	+1.3
	comp=Z,15nm,0.9s						
ARSA	Arzberg	9.62	339	⇑i Pn	Pn	18 14 59.6	+0.7
	comp=Z,3.3nm,0.3s						
ARSA				⇓eSn	Sn	18 16 40.5	-6.5
	comp=Z,4.3nm,0.4s						
ARSA	Arzberg	9.62	339	Pn	Pn	18 14 59.6	+0.8
	comp=Z,3.3nm,0.3s						
MYKA	Terra Mystica	9.70	331	⇑i Pn	Pn	18 15 01.6	+1.7
	comp=Z,4.6nm,0.4s						
MYKA				⇑i Sn	Sn	18 16 43.1	-5.8
	comp=Z,9.5nm,0.4s						
MYKA	Terra Mystica	9.70	331	Pn	Pn	18 15 01.6	+1.7
	comp=Z,4.6nm,0.4s						
PGF	Pioggiola	9.70	299	eP	Pn	18 15 02.7	+2.8
	comp=Z,63nm,1.2s						
BURAR	Bucovina Array	9.90	19	⇑P	Pn	18 15 03.7	+1.0
BURAR	Bucovina Array	9.90	19	⇑i P	Pn	18 15 03.7	+1.0
BURAR	Bucovina Array	9.90	19	⇑P	Pn	18 15 03.7	+1.0
SWA2		9.97	154	P	Pn	18 14 58.4	-5.4
	baz=157						
SWA2				S	Sn	18 16 41.6	-14
	baz=157						
SWA2		9.97	154	P	Pn	18 14 58.4	-5.4
SWA2				S	Sn	18 16 41.6	-14
KECS	Kecovo	10.14	0	ePn	Pn	18 15 08.2	+2.2
KECS				eSn	Sn	18 16 52.2	-7.7
KECS	Kecovo	10.14	0	ePN	Pn	18 15 08.2	+2.2
KECS				eSN	Sn	18 16 52.2	-7.7
KECS	Kecovo	10.14	0	eP	Pn	18 15 08.2	+2.2
KBA	Koelnbreinsper	10.18	331	⇑ePn	Pn	18 15 06.4	-0.1
	comp=Z,3.5nm,0.4s						
KBA				⇓e

comp=Z,400nm,11.4s
MORC Moravsky Berou 11.63 351 ⇑P Pn 18 15 27.1 +0.8
MORC Moravsky Berou 11.63 351 *e*P Pn 18 15 26.6 +0.3
comp=Z,3.8nm,0.8s
MORC Moravsky Berou 11.63 351⇑ *i*P Pn 18 15 27.1 +0.8
MORC Moravsky Berou 11.63 351 *e*P Pn 18 15 26.6 +0.3
comp=Z,3.8nm,0.8s
KHC Kasperske Hory 11.88 338 P Pn 18 15 27.5 -2.2
KHC pmax pmax
comp=Z,6.0nm,0.8s
KHC Kasperske Hory 11.88 338 P Pn 18 15 27.5 -2.2
comp=Z,5.6nm,0.8s
KHC Kasperske Hory 11.88 338 *e*P Pn 18 15 27.3 -2.4
KHC *e*S Sn 18 17 28.5 -14
KHC AMS AMS 18 21 00.0
comp=Z,700nm,9.5s
KHC Kasperske Hory 11.88 338 P Pn 18 15 27.5 -2.2
comp=Z,5.6nm,0.8s
MBDF Montbardon 12.08 306 *e*P Pn 18 15 34.3 +1.8
comp=Z,89nm,1.4s
MBDF Montbardon 12.08 306 *e*P Pn 18 15 34.3 +1.8
MBDF pmax pmax
comp=Z,44nm,1.4s
MBDF Montbardon 12.08 306 *e*P Pn 18 15 34.3 +1.8
comp=Z,44nm,1.4s
MBDF Montbardon 12.08 306 *e*P Pn 18 15 34.3 +1.8
comp=Z,44nm,1.4s
DPC Dobruska-Polom 12.37 348 AMS AMS 18 21 10.0
comp=Z,600nm,12.0s
PRU Pruhonice 12.39 342 AMS AMS 18 21 20.0
comp=Z,500nm,9.2s
LPG La Plagne 12.46 309 *e*P Pn 18 15 39.7 +2.0
comp=Z,20nm,0.9s
LPG La Plagne 12.46 309 *e*P Pn 18 15 39.7 +2.0
LPG pmax pmax
comp=Z,10.0nm,0.9s
LPG La Plagne 12.46 309 *e*P Pn 18 15 39.7 +2.0
comp=Z,10nm,0.9s
LPG La Plagne 12.46 309 *e*P Pn 18 15 39.7 +2.0
comp=Z,10nm,0.9s
LPL La Plagne 12.48 309 *e*P Pn 18 15 40.3 +2.3
comp=Z,27nm,1.0s
LPL La Plagne 12.48 309 *e*P Pn 18 15 40.3 +2.3
LPL pmax pmax
comp=Z,14nm,1.0s
LPL La Plagne 12.48 309 *e*P Pn 18 15 40.3 +2.3
comp=Z,14nm,1.0s
LPL La Plagne 12.48 309 *e*P Pn 18 15 40.3 +2.3
comp=Z,14nm,1.0s
ORIF Oris-en-Rattie 12.73 306 *e*P Pn 18 15 43.3 +1.9
comp=Z,41nm,1.2s
ORIF Oris-en-Rattie 12.73 306 *e*P Pn 18 15 43.3 +1.9
ORIF pmax pmax
comp=Z,20nm,1.2s
ORIF Oris-en-Rattie 12.73 306 *e*P Pn 18 15 43.3 +1.9
comp=Z,20nm,1.2s
ORIF Oris-en-Rattie 12.73 306 *e*P Pn 18 15 43.3 +1.9
comp=Z,20nm,1.2s
PVCC Panska Ves 12.89 343 AMS AMS 18 21 40.0
comp=Z,300nm,10.9s
NKC Novy Kostel 13.20 337 AMS AMS 18 21 40.0
comp=Z,500nm,13.1s
MMAI Mount Meron Ar 13.25 109 Pn **Pn 18 15 43.5 -5.2**
comp=Z,1.6nm,0.3s,baz=310,slow=12,SNR=9.7
MMAI Sn **Sn 18 18 05.4 -11**
comp=Z,1.2nm,0.3s,baz=297,slow=29,SNR=4.9
CABF La Chapelle 13.44 313 *e*P Pn 18 15 52.3 +1.3
comp=Z,13nm,0.7s
CABF La Chapelle 13.44 313 *e*P Pn 18 15 52.3 +1.3
CABF pmax pmax
comp=Z,7.0nm,0.7s
CABF La Chapelle 13.44 313 *e*P Pn 18 15 52.3 +1.3
comp=Z,6.7nm,0.7s
CABF La Chapelle 13.44 313 *e*P Pn 18 15 52.3 +1.3
comp=Z,6.7nm,0.7s
ECH Echery 13.82 320 *e*P Pn 18 15 57.8 +1.6
ECH pmax pmax
comp=Z,16nm,1.3s
ECH Echery 13.82 320 *e*P Pn 18 15 57.8 +1.6
comp=Z,16nm,1.3s
ECH Echery 13.82 320 *e*P Pn 18 15 57.8 +1.6
comp=Z,16nm,1.3s
MOX Moxa 13.82 336 *e*PN Pn 18 15 55.1 -1.1
MOX
comp=Z,400nm,13.0s
MOX Moxa 13.82 336 *e*Pn Pn 18 15 55.1 -1.1
AKASG Malin Array Be 13.84 24 Pn **Pn 18 15 54.4 -2.2**
comp=Z,0.6nm,0.3s,baz=212,slow=13,SNR=7.4
AKASG Malin Array Be 13.84 24 *i*P Pn 18 15 58.2 +1.7
AKASG pmax pmax
comp=Z,2.0nm,0.8s
AKASG Malin Array Be 13.84 24 Pn **Pn 18 15 54.3 -2.2**
AKASG Malin Array Be 13.84 24 *i*P Pn 18 15 58.2 +1.7
comp=Z,2.0nm,0.8s
CLL Collm 14.00 340⇓ *i*P Px 18 16 10.2
CLL pmax pmax
comp=Z,12nm,1.4s
CLL Collm 14.00 340 *e*P Pn 18 15 59.0 +0.3
CLL ⇓ *i*PP 18 16 10.2
comp=Z,12nm,1.4s
CLL *i* 18 16 24.5
CLL *e* 18 16 33.0
CLL Lmax 18 22 00.0
HAU Haudompre 14.10 318 *e*P Pn 18 15 58.8 -1.3
comp=Z,23nm,0.8s
HAU Haudompre 14.10 318 *e*P Pn 18 15 58.8 -1.3
HAU pmax pmax
comp=Z,11nm,0.8s
HAU Haudompre 14.10 318 *e*P Pn 18 15 58.8 -1.3
comp=Z,11nm,0.8s
ASF Jabal al Asfar 14.76 110 Pn **Pn 18 16 07.0 -2.3**
comp=Z,0.2nm,0.3s,baz=225,slow=2.9,SNR=3.2
SMF Signal de Mont 14.79 309 *e*P Pn 18 16 11.4 +1.9
comp=Z,18nm,1.0s
SMF Signal de Mont 14.79 309 *e*P Pn 18 16 11.4 +1.9
SMF pmax pmax
comp=Z,9.0nm,1.0s
SMF Signal de Mont 14.79 309 *e*P Pn 18 16 11.4 +1.9
comp=Z,8.9nm,1.0s
EIL Elat 14.79 121 Pn **Pn 18 16 05.0 -4.6**
comp=Z,0.3nm,0.3s,baz=306,slow=5.1,SNR=4.9
HDK1 Dakhla 14.83 147 P Pn 18 16 05.3 -4.9
baz=149
HDK1 Dakhla 14.83 147 P Pn 18 16 05.3 -4.9
LOR Lormes 15.08 312 *e*P Pn 18 16 14.2 +0.7
comp=Z,8.4nm,0.7s
LOR Lormes 15.08 312 *e*P Pn 18 16 14.2 +0.7
LOR pmax pmax
comp=Z,4.0nm,0.7s
LOR Lormes 15.08 312 *e*P Pn 18 16 14.2 +0.7
comp=Z,4.2nm,0.7s
SSF Saint Saulge 15.19 310 *e*P Pn 18 16 15.5 +0.6
WLF Walferdange 15.28 322 P Px 18 16 26.1
comp=Z,32nm,1.4s
WLF Walferdange 15.28 322 *e*P Px 18 16 25.9
WLF pmax pmax
comp=Z,94nm,1.5s
WLF Walferdange 15.28 322 *e*P Px 18 16 25.9
comp=Z,94nm,1.5s
GTR Jabal at Tayr 15.38 143 P Pn 18 16 12.2 -5.3
baz=145
GTR Jabal at Tayr 15.38 143 P Pn 18 16 12.2 -5.3
SOC Sochi 15.45 64 *e*P Pn 18 16 20.4 +2.0
SOC *e* 18 19 15.5
SOC pmax pmax
comp=Z,9.0nm,0.9s
MEM Membach 15.99 325 P Pn 18 16 27.3 +2.0
comp=Z,11nm,1.1s
MEM Membach 15.99 325 P Pn 18 16 27.3 +1.9
comp=Z,11nm,1.1s
GIVF Givet 16.21 322 *e*P Pn 18 16 33.2 +5.1
GIVF Givet 16.21 322 *e*P Pn 18 16 33.2 +5.1
DOU Dourbes 16.32 321 P Pn 18 16 37.2 +7.7
comp=Z,13nm,1.3s
BAIF Baives 16.49 321 *e*P Pn 18 16 35.8 +4.1
comp=Z,22nm,0.8s
BAIF Baives 16.49 321 *e*P Pn 18 16 35.8 +4.1
BAIF pmax pmax
comp=Z,11nm,0.8s
BAIF Baives 16.49 321 *e*P Pn 18 16 35.8 +4.1
comp=Z,11nm,0.8s
BAIF Baives 16.49 321 *e*P Pn 18 16 35.8 +4.1
comp=Z,11nm,0.8s
UCC Uccle 16.89 323 P Pn 18 16 43.7 +6.9
MNK Minsk 16.93 15 *e*P Pn 18 16 30.0 -7.3
KIV Kislovodsk 17.64 64 *e*P Pn 18 16 44.2 -1.9

KIV *e*S **Sn 18 19 55.6 -7.0**
KIV pmax pmax
comp=Z,13nm,1.1s
KIV MLR MLR
comp=Z,24nm,11.0s
KIV Kislovodsk 17.64 64 *e*P Pn 18 16 46.3 +0.1
comp=Z,27nm,1.3s
KIV Kislovodsk 17.64 64 *e*P Pn 18 16 46.3 +0.2
comp=Z,27nm,1.3s
ZEI Tsey 18.33 69 *e*P Pn 18 16 53.2 -1.6
ZEI pmax pmax
comp=Z,10.0nm,1.0s
ZEI Tsey 18.33 69 *e*P Pn 18 16 53.2 -1.6
comp=Z,10.0nm,1.0s
VSR Storozhevoye 18.43 40 *e*P Pn 18 16 53.6 -2.2
VSR pmax pmax
comp=Z,4.0nm,0.4s
VSR pmax pmax
comp=N,8.0nm,0.5s
VSR pmax pmax
comp=E,3.0nm,0.5s
VSR MLR MLR
comp=Z,200nm,12.0s
VSR MLR MLR
comp=N,50nm,9.0s
VSR MLR MLR
comp=E,110nm,11.0s
VSR Storozhevoye 18.43 40 *e*P Pn 18 16 53.6 -2.2
comp=E,50nm,9.0s
GNI Garni 18.88 77 P **Pn 18 16 57.7 -3.7**
comp=E,0.6nm,0.3s,baz=83,slow=13,SNR=3.1
GNI LR LR 18 24 23.9
comp=E,182nm,18.7s,baz=68,slow=38
GNI Garni 18.88 77*ce*P Pn 18 17 00.5 -0.9
GNI pmax pmax
comp=Z,26nm,1.7s
GNI Garni 18.88 77 *e*P Pn 18 17 00.5 -0.9
comp=Z,26nm,1.7s
ESDC Sonseca Array 19.02 282 P **Pn 18 17 02.2 -0.9**
comp=Z,0.5nm,0.3s,baz=77,slow=11,SNR=4.5
ESDC Sonseca Array 19.02 282 P **Pn 18 17 02.2 -0.9**
OBN Obninsk 20.00 28⇓ *e*P P 18 17 13.8 +0.8
OBN *e* 18 17 30.1
OBN *e*S **S 18 21 01.1 +3.2**
OBN pmax pmax
comp=Z,21nm,1.2s
OBN MLR MLR
comp=Z,100nm,16.0s,MS3.3
OBN Obninsk 20.00 28 *e*P P 18 17 13.8 +0.8
comp=Z,21nm,1.2s
TAM Tamanrasset 20.09 224 P **P 18 17 12.7 -1.5**
TAM pmax pmax
comp=Z,7.0nm,1.2s
TAM Tamanrasset 20.09 224 P **P 18 17 12.7 -1.5**
comp=Z,6.9nm,1.2s
TAM Tamanrasset 20.09 224 P **P 18 17 12.7 -1.5**
comp=Z,6.9nm,1.2s
VSU Vasula 20.55 9 *e*P P 18 17 17.4 -1.5
VSU pmax pmax
comp=Z,37nm,1.2s
VSU Vasula 20.55 9 *e*P P 18 17 17.4 -1.5
comp=Z,37nm,1.2s
MOS Moscow 20.87 28 *e*P P 18 17 23.9 +1.5
MOS pmax pmax
comp=Z,44nm,0.9s
MOS Moscow 20.87 28 *e*P P 18 17 23.9 +1.5
comp=Z,44nm,0.9s
MDT Midelt 21.10 263 P **P 18 17 25.5 +0.4**
comp=Z,4.5nm,1.0s,mb3.8,baz=107,slow=7.4,SNR=6.3
MDT Midelt 21.10 263 P **P 18 17 25.5 +0.4**
MVO Moncorvo 21.29 286 *e*P P 18 17 26.4 -0.7
comp=Z,4.2nm,0.7s,mb3.9
MVO Moncorvo 21.29 286 *e*P P 18 17 26.4 -0.7
comp=Z,4.2nm,0.7s,mb3.9
PBAR Barrancos 21.57 278 *e*P P 18 17 31.0 +0.9
comp=Z,21nm,1.5s,mb4.3
PBAR Barrancos 21.57 278 *e*P P 18 17 31.0 +0.9
comp=Z,21nm,1.5s,mb4.3
PMRV Marv??o 21.68 282 *e*P P 18 17 30.4 -0.9
comp=Z,31nm,1.4s,mb4.5
PMRV Marv??o 21.68 282 *e*P P 18 17 30.4 -0.9
comp=Z,31nm,1.4s,mb4.5
PCBR Castelo Branco 21.71 283 *e*P P 18 17 31.7 +0.1
comp=Z,16nm,1.2s,mb4.3
PCBR Castelo Branco 21.71 283 *e*P P 18 17 31.7 +0.1
comp=Z,16nm,1.2s,mb4.3
PESTR Estremoz 21.90 280 *e*P P 18 17 32.2 -1.5
comp=Z,13nm,2.7s,mb3.9
PESTR Estremoz 21.90 280 *e*P P 18 17 32.2 -1.5
comp=Z,13nm,2.7s,mb3.9
PVIS Viseu 21.96 285 *e*P P 18 17 36.6 +2.3
comp=Z,24nm,1.7s,mb4.4
PVAQ Vaqueiros 22.23 276 *e*P P 18 17 40.4 +3.2
comp=Z,16nm,1.4s,mb4.3
HFS Hagfors 22.24 351 P **P 18 17 35.6 -1.5**
comp=Z,2.4nm,0.5s,mb3.9,baz=170,slow=11,SNR=14
HFS LR LR 18 26 37.8
comp=Z,98nm,18.8s,MS3.2,baz=168,slow=38
HFS Hagfors 22.24 351 P **P 18 17 35.6 -1.5**
HFS LR LR 18 26 37.8
HFS Hagfors 22.24 351 P **P 18 17 35.6 -1.4**
PBEJ Beja 22.24 278 *e*P P 18 17 42.6 +5.3
comp=Z,11nm,1.5s,mb4.1
PUL Pulkovo 22.35 13*ce*P P 18 17 41.1 +2.8
PUL pmax pmax
comp=Z,76nm,0.6s,mb5.3
EKA Eskdalemuir Ar 23.27 325 P **P 18 17 47.5 -0.6**
comp=Z,6.8nm,0.8s,mb4.1,baz=122,slow=9.3,SNR=19
EKA Eskdalemuir Ar 23.27 325 P **P 18 17 47.5 -0.6**
NAO01 NORSAR Array S 23.32 348 *e*P P 18 17 49.8 +1.3
comp=Z,5.7nm,0.7s,mb4.1
NAO01 NORSAR Array S 23.32 348 *e*P P 18 17 49.8 +1.3
comp=Z,5.7nm,0.7s,mb4.1
FINES FINESS Array B 23.40 7 P **P 18 17 47.2 -2.1**
comp=Z,8.7nm,0.8s,mb4.3,baz=166,slow=8.8,SNR=16
FINES FINESS Array B 23.40 7 P **P 18 17 47.2 -2.1**
FINES FINESS Array B 23.40 7 P **P 18 17 47.2 -2.1**
NB2 NORSAR Subarra 23.45 349 P **P 18 17 47.8 -2.1**
comp=Z,6.1nm,0.8s,mb4.1,baz=160,slow=11
NB2 NORSAR Subarra 23.45 349 P **P 18 17 47.8 -2.1**
comp=Z,6.1nm,0.8s,mb4.1,baz=160,slow=10,SNR=4.1
NOA NORSAR Array B 23.45 349 P **P 18 17 48.4 -1.5**
comp=Z,4.8nm,0.8s,mb4.0,baz=160,slow=9.8,SNR=14
NOA LR LR 18 27 47.5
comp=Z,84nm,18.5s,MS3.2,baz=170,slow=39
NOA NORSAR Array B 23.45 349 P **P 18 17 48.4 -1.5**
KAF Kangasniemi 24.08 7 *e*P P 18 17 52.5 -3.2
KAF pmax pmax
comp=Z,3.0nm,0.5s,mb4.0
KAF Kangasniemi 24.08 7 *e*p P 18 17 52.5 -3.2
comp=Z,3.1nm,0.5s,mb4.0
KAF Kangasniemi 24.08 7 *e*p P 18 17 52.5 -3.2
comp=Z,3.1nm,0.5s,mb4.0
JOF Joensuu 25.48 12 *e*p P 18 18 07.2 -1.3
comp=Z,3.3nm,0.5s,mb4.1
JOF Joensuu 25.48 12 *e*p P 18 18 07.2 -1.3
comp=Z,3.3nm,0.5s,mb4.1
JOF Joensuu 25.48 12 *e*P P 18 18 07.2 -1.3
comp=Z,3.3nm,0.5s,mb4.1
AKTK Aktyubinsk 29.12 53 P **P 18 18 39.0 -2.3**
AKTK LR LR 18 33 24.6
AKTK Aktyubinsk 29.12 53 P **P 18 18 39.0 -2.3**
AKTO Aktyubinsk 29.12 53 P **P 18 18 39.0 -2.3**
comp=Z,1.0nm,0.4s,mb3.9,baz=244,slow=4.7,SNR=6.4
AKTO LR LR 18 33 24.6
comp=Z,53nm,19.5s,MS3.2,baz=165,slow=43
TORD Torodi Ar. Bea 30.12 219 P **P 18 18 49.6 -0.8**
comp=Z,4.9nm,0.9s,mb4.2,baz=31,slow=9.1,SNR=17
ABKAR Akbulak array 30.19 56 P **P 18 18 48.9 -1.9**
comp=Z,1.4nm,0.5s,mb4.0
ABKAR Akbulak array 30.19 56 P **P 18 18 48.9 -1.9**
comp=Z,1.4nm,0.5s,mb4.0
ARU Arti 30.97 42*d i*P P 18 18 59.2 +1.6
ARU *e* 18 19 53.9
ARU S **S 18 24 01.7 -0.4**
ARU SS SS 18 25 39.3 -35
ARU pmax pmax
comp=Z,6.0nm,1.2s,mb4.3
ARU Arti 30.97 42 *i*P P 18 18 59.2 +1.6
comp=Z,6.0nm,1.2s,mb4.3
ARU S **S 18 24 01.7 -0.4**
ARCES ARCESS Array B 31.38 3 P **P 18 19 00.5 -0.6**
comp=Z,0.9nm,0.5s,mb3.9,baz=186,slow=9.8,SNR=6.2
ARCES ARCESS Array B 31.38 3 P **P 18 19 00.5 -0.6**
ARCES ARCESS Array B 31.38 3 P **P 18 19 00.5 -0.5**
SVE Sverdlovsk 32.19 42⇓ *e*P P 18 19 09.1 +0.8
SVE *e*S **S 18 24 25.3 +4.2**

SVE pmax pmax
comp=Z,16nm,1.4s,mb4.7
SVE MLR MLR
comp=Z,107nm,15.0s,MS3.7
SVE Sverdlovsk 32.19 42 *e*P P 18 19 09.1 +0.8
comp=Z,16nm,1.4s,mb4.7
BRVK Borovoye 36.99 50*ce*P P 18 19 50.1 +0.2
BRVK pmax pmax
comp=Z,7.0nm,1.2s,mb4.4
BRVK Borovoye 36.99 50 *e*P P 18 19 50.1 +0.2
comp=Z,7.0nm,1.2s,mb4.4
BVAR Borovoye Array 37.05 50 P **P 18 19 49.2 -1.2**
comp=Z,1.0nm,0.6s,mb3.8,baz=258,slow=7.1,SNR=8.4
BVAR Borovoye Array 37.05 50 P **P 18 19 49.2 -1.2**
DBIC Dimbokro 38.98 222 P **P 18 20 06.0 -1.0**
comp=Z,2.1nm,0.6s,mb4.1,baz=28,slow=11,SNR=4.4
DBIC Dimbokro 38.98 222 P **P 18 20 06.1 -0.9**
TIC Toumodi 39.09 223 *e*PKP2 P 18 20 08.5 +0.6
comp=Z,42nm,0.2s
KIC Kosan Boka 39.18 222 *e*PKP2 P 18 20 07.1 -1.6
comp=Z,26nm,1.1s,mb4.9
LIC Lamto 39.44 222 *e*PKP2 P 18 20 07.9 -3.0
comp=Z,20nm,0.7s,mb5.0
LIC Lamto 39.44 222 *e*P P 18 20 10.3 -0.6
comp=Z,12nm,0.7s,mb4.4
LIC Lamto 39.44 222 *e*P P 18 20 10.3 -0.6
comp=Z,6.3nm,0.7s,mb4.5
LIC Lamto 39.44 222 *e*P P 18 20 10.3 -0.6
comp=Z,6.2nm,0.7s,mb4.5
EKS2 Erkin-Say 40.22 66 *e*P P 18 20 15.7 -1.3
comp=Z,4.1nm,0.7s,mb4.3
EKS2 Erkin-Say 40.22 66 *e*P P 18 20 15.7 -1.4
comp=Z,4.1nm,0.7s,mb4.3
AAK Ala-Archa 40.74 66 P **P 18 20 20.2 -1.2**
comp=Z,1.1nm,0.3s,mb3.9,baz=180,slow=5.1,SNR=2.8
AAK Ala-Archa 40.74 66*ce*P P 18 20 23.3 +1.9
AAK pmax pmax
comp=Z,2.0nm,1.0s,mb3.7
AAK Ala-Archa 40.74 66 P **P 18 20 20.2 -1.2**
KURK Kurchatov 42.22 53 P **P 18 20 31.5 -2.0**
comp=Z,2.1nm,0.7s,mb3.9,baz=282,slow=8.8,SNR=13
KURK Kurchatov 42.22 53 P **P 18 20 31.5 -2.0**
NVS Novosibirsk 44.60 47 *i*P P 18 20 51.3 -1.3
NVS *e* 18 22 35.7
NVS pmax pmax
comp=Z,12nm,1.2s,mb4.6
NVS pmax pmax
comp=N,4.0nm,1.0s
NVS pmax pmax
comp=E,6.0nm,1.3s
NVS Novosibirsk 44.60 47 *i*P P 18 20 51.3 -1.3
comp=E,4.0nm,1.0s,mb4.2
NVS Novosibirsk 44.60 47 *e*PcP PcP 18 22 35.7 +0.4
MK31 Makanchi Array 45.26 59 *e*P P 18 20 55.7 -2.3
MK31 Makanchi Array 45.26 59 *e*P P 18 20 55.7 -2.3
MKAR Makanchi Array 45.26 59 P **P 18 20 56.2 -1.8**
comp=E,2.6nm,0.6s,mb4.3,baz=292,slow=6.3,SNR=34
MKAR LR LR 18 44 03.2
comp=E,32nm,18.9s,MS3.3,baz=173,slow=42
MKAR Makanchi Array 45.26 59 P **P 18 20 56.2 -1.8**
MKAR LR LR 18 44 03.2
ZAA0 Zalesovo Array 45.62 48 *e*P P 18 20 58.3 -2.4
ZAA0 Zalesovo Array 45.62 48 *e*P P 18 20 58.3 -2.4
ZALV Zalesovo Beam 45.62 48 P **P 18 20 59.3 -1.4**
comp=E,9.2nm,0.6s,mb4.9,baz=276,slow=9.2,SNR=23
ZALV Zalesovo Beam 45.62 48 P **P 18 20 59.3 -1.4**
TLY Talaya 57.22 47 *e*P P 18 22 28.1 +0.5
TLY pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
TLY MLR MLR
comp=Z,45nm,15.0s,MS3.7
TLY Talaya 57.22 47 *e*P P 18 22 28.1 +0.5
comp=Z,45nm,15.0s
ZAK Zakamensk 57.49 49 *e*P P 18 22 31.3 +1.7
ZAK pmax pmax
comp=Z,2.0nm,1.2s,mb4.0
ZAK Zakamensk 57.49 49 *e*P P 18 22 31.3 +1.7
comp=Z,2.0nm,1.2s,mb4.0
SCHQ Schefferville 58.31 317 P **P 18 22 35.1 -0.2**
comp=Z,2.1nm,0.5s,mb4.4,baz=49,slow=9.1,SNR=6.1
SCHQ Schefferville 58.31 317 P **P 18 22 35.1 -0.2**
GTA Gaotai 59.79 62 *e*P P 18 22 47.3 +1.5
GTA pP pP 18 22 53.2 +4.8
GTA sP sP 18 22 56.5 +7.2
GTA pmax pmax
comp=Z,3.0nm,1.1s,mb4.2
SONM Songino Array 60.40 51 P **P 18 22 48.7 -1.1**
comp=Z,1.4nm,0.8s,mb4.0,baz=282,slow=8.2,SNR=13
SONM Songino Array 60.40 51 P **P 18 22 48.7 -1.1**
OPO Ambohidratompo 61.92 151 P **P 18 23 01.0 +0.6**
comp=Z,4.0nm,0.9s,mb4.6,baz=327,slow=6.5,SNR=6.3
OPO Ambohidratompo 61.92 151 P **P 18 23 01.0 +0.7**
BOSA Boshof 66.75 175 P **P 18 23 31.4 -0.5**
comp=Z,6.3nm,1.2s,mb4.5,baz=217,slow=16,SNR=3.0
BOSA Boshof 66.75 175 P **P 18 23 31.4 -0.4**
CMAR Chiang Mai Arr 69.91 82 P **P 18 23 50.0 -2.0**
comp=Z,0.6nm,0.4s,mb3.9,baz=317,slow=6.4,SNR=6.0
CMAR LR LR 18 57 36.3
comp=Z,17nm,18.3s,MS3.3,baz=205,slow=39
CMAR Chiang Mai Arr 69.91 82 P **P 18 23 50.1 -1.9**
BILL Bilibino 70.87 13⇑ *e*P P 18 23 59.6 +2.5
BILL *e* 18 26 30.8
BILL *e*S S 18 33 03.3 -8.9
BILL pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
BILL MLR MLR
comp=Z,100nm,19.0s,MS4.1
BILL Bilibino 70.87 13 *e*P P 18 23 59.6 +2.5
comp=Z,2.0nm,0.8s,mb4.1
YKA Yellowknife Ar 73.23 340 P **P 18 24 11.5 +0.2**
comp=Z,1.5nm,0.9s,mb3.9,baz=25,slow=5.4,SNR=5.2
YKA LR LR 18 55 30.4
comp=Z,4.6nm,20.0s,MS2.8,baz=90,slow=35
YKA Yellowknife Ar 73.23 340 P **P 18 24 11.6 +0.3**
KLR Kul'dur 73.78 40 *e*P P 18 24 11.3 -3.5
CN2 Changchun 73.81 47 *e*P P 18 24 17.2 +2.1
CN2 pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
DAWY Dawson 76.70 351 *e*P P 18 24 34.2 +2.9
KSRS Korea Array 79.27 51 P **P 18 24 46.4 +0.2**
comp=Z,0.7nm,0.6s,mb3.8,baz=322,slow=5.4,SNR=5.1
KSRS Korea Array 79.27 51 P **P 18 24 46.4 +0.3**
KSRS pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
KSRS Korea Array 79.27 51 P **P 18 24 46.4 +0.3**
comp=Z,1.0nm,0.6s,mb3.9
YSS Yuzh-Sakhalins 80.67 36 *e*P P 18 24 55.0 +1.5
YSS Yuzh-Sakhalins 80.67 36 *e*P P 18 24 55.0 +1.5
PETK Petropavlovsk- 81.68 24 LR LR 19 08 07.9
comp=Z,45nm,19.8s,MS3.8,baz=112,slow=41
NVAR Mina Array Bea 94.71 329 P **P 18 26 03.0 +0.9**
comp=Z,0.1nm,0.3s,mb3.7,baz=10,slow=5.5,SNR=2.1
TXAR Lajitas Array 94.83 313 P **P 18 26 02.0 -0.7**
comp=Z,0.1nm,0.3s,mb3.7,baz=256,slow=3.6,SNR=2.9
WRA Warramunga Arr 120.59 92 PKP PKPdf 18 31 29.8 -3.0
comp=Z,0.4nm,0.8s,baz=324,slow=2.0,SNR=4.0
ASAR Alice Springs 122.24 96 PKP PKPdf 18 31 33.9 -2.0
comp=Z,0.1nm,0.4s,baz=306,slow=1.5,SNR=7.5

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*IDC **05** 18:35:14.8±1.4, 33°.25N×142°.49E, h0km, mb3.5/5, mb1 3.7/8, mb1mx3.5/27, mbtmp3.6/8, ML3.8/2, Error ellipse: s-maj=37.0km s-min=20.6km az=63.0*
*NEIC **05** 18:35:16.5±1.0, 33°.59N×142°.73E, h10km, MG3.3(JMA), Error ellipse: s-maj=22.1km s-min=16.0km az=59.0*
*ISCJB **05** 18:35:16.2±0.7, 33°.38N±0°.05×142°.53E±0°.07, h33km, mb3.6/5, Error ellipse: s-maj=9.4km s-min=5.9km az=145.6*
*JMA **05** 18:35:18.0±0.4, 33°.38N×142°.33E, h89km, M3.3*
ISC 05 18:35:16.8±1.9, 33°.38N±0°.05×142°.46E±0°.08, h19km±14km, n25, σ1.912/36, mb3.6/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**1.77**	**316**	P	**Pn**	**18 35 46.6**	**+0.2**
BSO1				*e*S	**Sn**	**18 36 08.6**	**+0.2**
BSO2	**Boso 2**	**1.97**	**314**	*e*S	**Sn**	**18 36 13.3**	**0.0**
BSO3	**Boso 3**	**2.15**	**312**	P	**Pn**	**18 35 51.9**	**+0.3**
BSO3				*e*S	**Sn**	**18 36 18.1**	**+0.3**
JHJ2	**Mitsune**	**2.23**	**264**	P	**Pn**	**18 35 52.8**	**+0.1**
JHJ	**Hachijo jima 2**	**2.26**	**264**	Pn	**Pn**	**18 35 52.7**	**-0.4**
	71nm,0.3s,baz=117,slow=16,SNR=23						
JHJ				Sn	**Sn**	**18 36 19.1**	**-1.4**
	61nm,0.3s,baz=66,slow=23,SNR=9.7						
BSO4	**Boso 4**	**2.38**	**313**	P	**Pn**	**18 35 55.5**	**+0.7**

JOD2	**Odawara 2**	**3.36**	**305**	P	**Pn**	**18 36 07.9**	**-0.4**
JOD2				*e*S	**Sn**	**18 36 46.8**	**-0.9**
JYN	**Shimob**	**3.86**	**304**	P	**Pn**	**18 36 15.7**	**+0.5**
JYN				*e*S	**Sn**	**18 36 59.1**	**-1.0**
JAG	**Ashikaga**	**3.92**	**322**	P	**Pn**	**18 36 15.9**	**0.0**
JRY	**Ryogami san**	**3.94**	**313**	P	**Pn**	**18 36 17.2**	**+1.0**
JRY				*e*S	**Sn**	**18 37 02.4**	**+0.5**
JMM	**Marumori**	**4.68**	**344**	P	**Pn**	**18 36 24.8**	**-1.6**
JMM				*e*S	**Sn**	**18 37 14.2**	**-5.9**
MJAR	**Matsushiro Arr**	**4.70**	**313**	Pn	**Pn**	**18 36 27.9**	**+1.2**
	1.5nm,0.3s,baz=207,slow=9.7,SNR=21						
MAJO	**Matsushiro**	**4.71**	**313**	*e*P	**Pn**	**18 36 28.1**	**+1.3**
MAT	**Matsushiro**	**4.71**	**313**	P	**Pn**	**18 36 28.5**	**+1.7**
MAT				S	**Sn**	**18 37 20.6**	**-0.2**
MAT	**Matsushiro**	**4.71**	**313**	P	**Pn**	**18 36 28.3**	**+1.5**
MAT				*e*S	**Sn**	**18 37 20.4**	**-0.4**
JMK	**Ichinoseki**	**5.65**	**350**	P	**Pn**	**18 36 37.9**	**-1.8**
JMK				*e*S	**Sn**	**18 37 37.7**	**-6.4**
JSD	**Sado**	**5.77**	**325**	P	**Pn**	**18 36 40.8**	**-0.5**
CBIJ	**Chichi jima**	**6.27**	**182**	Pn	**Pn**	**18 36 46.9**	**-1.4**
	9.5nm,0.3s,baz=283,slow=19,SNR=6.7						
CBIJ				Sn	**Sn**	**18 37 52.8**	**-6.6**
	7.2nm,0.3s,baz=272,slow=21,SNR=1.6						
ERM	**Erimo**	**8.64**	**3**	*e*Pn	**Pn**	**18 37 17.4**	**-3.3**
ASAJ	**Asahikawa**	**10.72**	**1**	Pn	**Pn**	**18 37 47.9**	**-1.4**
	1.4nm,0.3s,baz=223,slow=8.4,SNR=13						
SONM	**Songino Array**	**30.64**	**309**	P	**P**	**18 41 32.5**	**+2.8**
	0.5nm,0.6s,mb3.5,baz=97,slow=3.3,SNR=5.0						
MKAR	**Makanchi Array**	**46.85**	**305**	P	**P**	**18 43 46.9**	**+1.4**
	0.6nm,0.6s,mb3.7,baz=80,slow=13,SNR=8.3						
WRA	**Warramunga Arr**	**53.59**	**190**	P	**P**	**18 44 35.2**	**-1.4**
	0.4nm,0.4s,mb3.7,baz=6.0,slow=7.6,SNR=8.6						
ASAR	**Alice Springs**	**57.31**	**189**	P	**P**	**18 45 05.4**	**+2.0**
	0.3nm,0.7s,mb3.4,baz=10,slow=7.5,SNR=5.2						
TXAR	**Lajitas Array**	**91.65**	**53**	P	**P**	**18 48 24.2**	**+1.1**
	0.4nm,0.6s,mb3.9,baz=326,slow=4.7,SNR=2.5						

*IDC **05** 18:46:34.4±0.9,32°.15N×105°.00E,h0km,mb3.7/7, mb1 3.7/10,mb1mx3.5/29,mbtmp3.6/10,ML3.2/2,Error ellipse: s-maj=34.2km s-min=17.1km az=58.0*
*ISCJB **05** 18:46:34.5±0.6,32°.13N±0°.05×105°.02E±0°.07,h10km, mb3.7/8,Error ellipse: s-maj=8.6km s-min=7.2km az=155.1*
*NEIC **05** 18:46:36.2±0.5,32°.19N×104°.99E,h10km,mb4.3/1,Error ellipse: s-maj=14.0km s-min=7.9km az=65.0*
*BJI **05** 18:46:38.3,32°.21N×105°.04E,h10km,ML3.4/13,Ms3.4/4, Ms7 3.1/3*

ISC 05 18:46:36.4±0.6,32°.24N±0°.04×105°.04E±0°.05,h10km,n16,σ1$25/22,mb3.7/8,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.72**	**60**	Pn	**Pn**	**18 47 34.4**	**+0.5**
XAN				Pg	**Pg**	**18 47 46.3**	**-1.4**
XAN				Sn	**Sn**	**18 48 20.5**	**+2.7**
XAN				Sg	**Sg**	**18 48 35.0**	**-0.9**
XAN				smax			
	comp=N,160nm,0.4s						
XAN				smax			
	comp=E,67nm,0.8s						
LZH	**Lanzhou**	**3.97**	**346**	Pn	**Pn**	**18 47 40.4**	**+3.1**
LZH				Pg	**Pg**	**18 47 50.5**	**-1.9**
LZH				Sn	**Sn**	**18 48 26.0**	**+2.1**
LZH				Sg	**Sg**	**18 48 41.6**	**-2.2**
LZH				smax			
	comp=N,260nm,1.0s						
LZH				smax			
	comp=E,320nm,1.0s						
LZH				LR	LR		
	comp=E,610nm,7.6s						
LZH				LR	LR		
	comp=Z,660nm,8.7s						
ENH	**Enshi**	**4.28**	**116**	*e*Pn	**Pn**	**18 47 42.9**	**+1.3**
GYA	**Guiyang**	**5.93**	**166**	Pn	**Pn**	**18 48 07.7**	**+3.5**
GYA				smax			
	comp=N,70nm,0.8s						
GYA				smax			
	comp=E,50nm,0.7s						
GTA	**Gaotai**	**8.32**	**331**	*e*P	**Pn**	**18 48 41.3**	**+4.2**
GTA				pP		18 48 45.7	
GTA				sP		18 48 48.6	
CMAR	**Chiang Mai Arr**	**14.78**	**203**	Pn	**Pn**	**18 50 05.1**	**-0.4**
	comp=E,0.0nm,0.3s,baz=15,slow=8.7,SNR=2.7						
SONM	**Songino Array**	**15.62**	**3**	Pn	**Pn**	**18 50 17.1**	**+0.6**
	baz=192,slow=13,SNR=3.8						
KSRS	**Korea Array**	**19.48**	**68**	P	**Pn**	**18 51 04.6**	**+0.1**
	comp=E,0.1nm,0.3s,baz=255,slow=11,SNR=5.2						
MKAR	**Makanchi Array**	**22.68**	**316**	P	**P**	**18 51 38.1**	**+0.2**
	comp=E,0.7nm,0.8s,mb3.2,baz=105,slow=14,SNR=8.7						
ZALV	**Zalesovo Beam**	**26.07**	**332**	P	**P**	**18 52 09.7**	**-0.2**
	comp=E,0.5nm,0.5s,mb3.3,baz=138,slow=9.3,SNR=3.2						
KURK	**Kurchatov**	**26.84**	**321**	P	**P**	**18 52 17.4**	**+0.5**
	comp=E,1.0nm,0.7s,mb3.5,baz=123,slow=11,SNR=8.7						
FINES	**FINESS Array B**	**57.08**	**326**	P	**P**	**18 56 22.3**	**-0.1**
	comp=E,1.1nm,0.7s,mb4.0,baz=80,slow=10.0,SNR=2.8						
WRAB	**Tennant Creek**	**58.98**	**147**	*e*P	**P**	**18 56 35.4**	**-0.8**
	comp=E,1.7nm,0.7s,mb4.2						
WRA	**Warramunga Arr**	**58.98**	**148**	P	**P**	**18 56 34.9**	**-1.3**
	comp=E,0.8nm,0.7s,mb3.8,baz=341,slow=7.4,SNR=5.3						
ASAR	**Alice Springs**	**62.05**	**150**	P	**P**	**18 56 56.8**	**-0.4**
	comp=E,0.4nm,0.6s,mb3.7,baz=330,slow=6.5,SNR=8.2						
YKA	**Yellowknife Ar**	**80.38**	**17**	P	**P**	**18 58 47.3**	**-0.4**
	comp=E,0.6nm,0.6s,mb3.7,baz=329,slow=4.8,SNR=3.8						

*IDC **05** 18:53:08.3±0.5,33°.51S×179°.08W,h0km,mb4.5/12, mb1 4.7/15,mb1mx4.7/18,mbtmp4.6/15,ML4.6/3,MS4.3/12, Ms1 4.3/12,ms1mx4.0/29,Error ellipse: s-maj=16.6km s-min=14.5km az=171.0*
*NEIC **05** 18:53:11.3±4.4,33°.76S×178°.64W,h23km±29km,mb5.0/9, Error ellipse: s-maj=17.1km s-min=12.7km az=215.0*
*ISCJB **05** 18:53:11.6±0.5,33°.72S±0°.05×178°.84W±0°.09,h33km, mb4.7/23,MS4.3/12,Error ellipse: s-maj=11.7km s-min=5.9km az=24.3*
*GCMT **05** 18:53:13.3±0.4,33°.63S×178°.27W,h21km±1km,MW5.0, Moment Tensor Solution. s31,c38; s63,c85; Moment tensor: Scale 10^{16}Nm; M_{rr}2.73±.21; $M_{\theta\theta}$-0.38±.13; $M_{\phi\phi}$-2.35±.13; $M_{r\theta}$0.44±.24; $M_{\theta\phi}$-0.69±.08; $M_{r\phi}$2.64±.23; Best double couple: $M_0$3.80000×10^{16} NP1:ϕ_s202.00000°, δ23.00000°,λ99.00000°. NP2:ϕ_s12.00000°,δ68.00000°, λ86.00000°. Principal axes: T 3.8600, Plg67.0000°, Azm275.0000°; N -0.1800, Plg4.0000°, Azm13.0000°; P -3.6700, Plg23.0000°, Azm105.0000°; Data Used: II G IU IC CN.*

ISC 05 18:53:13.6±0.5,33°.67S±0°.05×178°.82W±0°.09,h35km, n120,σ1$20/55,mb4.7/23,MS4.3/12,2C-6D,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.47**	**10**	Pn	**Pn**	**18 54 14.9**	**-3.9**
	34nm,0.3s,baz=276,slow=23,SNR=1.9						
RAO				Sn	**Sn**	**18 55 02.9**	**-6.7**
	143nm,0.3s,baz=89,slow=21,SNR=6.8						
PUZ	**Puketiti**	**4.99**	**207**	P	**Pn**	**18 54 24.3**	**-1.7**
PUZ				S	**Sn**	**18 55 24.4**	**+1.9**
KUZ	**Kuaotunu**	**5.42**	**234**	P	**Pn**	**18 54 33.9**	**+2.0**
MWZ	**Matawai**	**5.52**	**211**	P	**Pn**	**18 54 31.7**	**-1.5**
URZ	**Urewera**	**5.64**	**215**	Pn	**Pn**	**18 54 34.8**	**-0.1**
	38nm,0.3s,baz=36,slow=4.7,SNR=114						
URZ				Sn	**Sn**	**18 55 39.4**	**+0.9**
	40nm,0.3s,baz=181,slow=19,SNR=8.0						
URZ	**Urewera**	**5.64**	**215**	P	**Pn**	**18 54 34.4**	**-0.5**
MKAZ	**Moumakai**	**5.99**	**233**	P	**Pn**	**18 54 43.0**	**+3.3**
KNZ	**Kokohu**	**6.04**	**207**	P	**Pn**	**18 54 38.2**	**-2.2**
OUZ	**Omahuta**	**6.45**	**254**	*e*P	**Pn**	**18 54 49.7**	**+3.6**
	155nm,1.0s						
MOVZ	**Moawhango**	**7.20**	**216**	P	**Pn**	**18 54 55.3**	**-1.0**
MRZ	**Mangatainoka R**	**8.29**	**211**	P	**Pn**	**18 55 07.1**	**-4.1**
QRZ	**Quartz Range**	**9.92**	**221**	P	**Pn**	**18 55 29.1**	**-4.5**
RPZ	**Rata Peaks**	**12.76**	**215**	Pn	**Pn**	**18 56 10.4**	**-2.0**
	1.7nm,0.3s,baz=26,slow=17,SNR=7.0						
RPZ				Sn	**Sn**	**18 58 23.6**	**-10**
	2.1nm,0.3s,baz=317,slow=21,SNR=8.6						
DZM	**Mont Dzumac**	**17.39**	**308**	*e*P	**Pn**	**18 57 20.1**	**+6.7**
	74nm,0.8s						
DZM				*e*LR	LR	19 01 19.7	
	2μm,22.9s						
DZM	**Mont Dzumac**	**17.39**	**308**	*e*P	**Pn**	**18 57 18.2**	**+4.8**
DZM	**Mont Dzumac**	**17.39**	**308**	*e*P	**Pn**	**18 57 11.3**	**-2.1**
	36nm,0.8s						
EIDS	**Eidsvold**	**27.39**	**280**	*e*P	**P**	**18 58 57.6**	**+1.9**
EIDS	**Eidsvold**	**27.39**	**280**	*e*P	**P**	**18 58 57.2**	**+1.5**
	25nm,0.9s,mb4.8						
PPT	**Papeete**	**30.72**	**66**	*e*LQ		19 05 24.6	
	510nm,22.8s						
PPT				*e*LR	LR	19 07 08.1	
	370nm,22.2s,baz=232						
PPT	**Papeete**	**30.72**	**66**	LR	LR	19 09 10.4	
	comp=Z,352nm,21.3s,MS4.0,baz=250,slow=31						
STKA	**Stephens Creek**	**33.19**	**262**	P	**P**	**18 59 46.7**	**-0.3**
	4.3nm,1.0s,mb4.3,baz=107,slow=9.1,SNR=4.2						
STKA				PcP	PcP	19 02 29.1	-0.1
	6.6nm,0.9s,baz=82,slow=4.7,SNR=5.2						
STKA				LR	LR	19 13 01.5	
	comp=Z,2μm,18.4s,MS4.7,baz=46,slow=36						
CTA	**Charters Tower**	**33.79**	**285**	*e*P	**P**	**18 59 54.1**	**+1.9**
	12nm,0.8s,mb4.9						
CTA	**Charters Tower**	**33.79**	**285**	P	**P**	**18 59 53.4**	**+1.1**
	13nm,0.7s,mb5.0,baz=111,slow=10,SNR=15						
CTA				LR	LR	19 11 25.7	
	comp=Z,321nm,18.2s,MS4.1,baz=59,slow=33						
CTAO	**Charters Tower**	**33.79**	**285**	*e*P	**P**	**18 59 53.3**	**+1.0**
	78nm,1.4s,mb5.4						
RKT	**Rikitea**	**39.73**	**86**	*e*LR	LR	19 11 23.3	
	436nm,23.5s						
ASAR	**Alice Springs**	**42.35**	**271**	P	**P**	**19 01 04.4**	**0.0**
	19nm,0.8s,mb4.8,baz=112,slow=7.4,SNR=160						
ASAR				S	**S**	**19 07 21.5**	**-1.8**
	1.5nm,0.9s,baz=113,slow=14,SNR=7.1						
WRAB	**Tennant Creek**	**43.63**	**276**	*e*P	**P**	**19 01 14.4**	**-0.3**
	24nm,0.8s,mb5.0						
WRA	**Warramunga Arr**	**43.63**	**276**	P	**P**	**19 01 14.6**	**-0.2**
	26nm,0.8s,mb5.0,baz=118,slow=7.6,SNR=6.5						
WRA				S	**S**	**19 07 41.4**	**-0.7**
	1.7nm,0.9s,baz=118,slow=14,SNR=4.8						
WRA				LR	LR	19 18 23.7	
	comp=Z,444nm,20.8s,MS4.3,baz=115,slow=35						
KNA	**Kununurra**	**50.30**	**277**	*e*P	**P**	**19 02 06.8**	**-0.1**
	27nm,1.0s,mb5.2						
FITZ	**Fitzroy Crossi**	**51.74**	**273**	*e*P	**P**	**19 02 17.2**	**-0.5**
	21nm,0.8s,mb5.1						
FITZ	**Fitzroy Crossi**	**51.74**	**273**	LR	LR	19 24 06.6	
	comp=Z,781nm,18.2s,MS4.8,baz=119,slow=36						
FITZ	**Fitzroy Crossi**	**51.74**	**273**	*e*P	**P**	**19 02 17.3**	**-0.4**
	12nm,0.8s,mb4.9						
CASY	**Casey**	**51.94**	**209**	*e*P	**P**	**19 02 18.8**	**+0.3**
CASY	**Casey**	**51.94**	**209**	*e*P	**P**	**19 02 18.8**	**+0.3**
	21nm,0.8s,mb5.1						
KLBR	**Kellerberrin**	**52.69**	**254**	*e*P	**P**	**19 02 23.6**	**-1.1**
	21nm,0.8s,mb5.1						
QSPA	**South Pole Qui**	**56.45**	**180**	P	**P**	**19 02 53.4**	**+2.2**
	9.5nm,0.9s,mb4.8,baz=38,slow=2.3,SNR=29						
KAPI	**Kappang**	**63.56**	**282**	LR	LR	19 32 21.8	
	comp=Z,282nm,18.6s,MS4.5,baz=128,slow=37						
MAW	**Mawson**	**69.02**	**201**	*e*P	**P**	**19 04 15.1**	**+0.1**
	6.5nm,1.1s,mb4.5						
MAW	**Mawson**	**69.02**	**201**	P	**P**	**19 04 15.6**	**+0.5**
	9.3nm,1.1s,mb4.6,baz=107,slow=9.3,SNR=8.0						
SYO	**Syowa Base**	**73.78**	**193**	⇑*i*P	**P**	**19 04 43.0**	**-0.8**
SYO	**Syowa Base**	**73.78**	**193**	⇑*i*P	**P**	**19 04 52.4**	**+8.6**
MJAR	**Matsushiro Arr**	**80.54**	**326**	P	**P**	**19 05 21.3**	**-0.7**
	1.3nm,0.7s,mb3.9,baz=184,slow=8.4,SNR=3.1						
MJAR				LR	LR	19 39 00.6	
	comp=Z,122nm,18.5s,MS4.3,baz=55,slow=34						
PLCA	**Paso Flores**	**80.80**	**133**	P	**P**	**19 05 26.8**	**+3.2**
	7.6nm,1.2s,mb4.5,baz=209,slow=7.5,SNR=3.5						
PLCA				LR	LR	19 36 56.6	
	comp=Z,152nm,18.4s,MS4.4,baz=287,slow=32						
KSRS	**Korea Array**	**86.39**	**320**	P	**P**	**19 05 52.6**	**+0.6**
	1.8nm,0.8s,mb4.4,baz=140,slow=5.5,SNR=9.1						
KSRS				LR	LR	19 41 11.2	
	comp=Z,68nm,19.1s,MS4.1,baz=342,slow=34						
YSS	**Yuzh-Sakhalins**	**87.38**	**335**	*e*P	**P**	**19 05 57.3**	**+0.6**
	11nm,0.9s,mb5.1						
PEA0B	**Petropavlovsk-**	**88.80**	**346**	*e*P	**P**	**19 06 03.8**	**+0.6**
PETK	**Petropavlovsk-**	**88.80**	**346**	P	**P**	**19 06 03.1**	**-0.1**
	10nm,0.8s,mb5.2,baz=125,slow=5.3,SNR=11						
ISA	**Isabella**	**89.10**	**45**	*e*P	**P**	**19 06 05.4**	**+0.3**
	9.0nm,1.1s,mb5.0						
GSC	**Goldstone**	**89.85**	**46**	*e*P	**P**	**19 06 08.0**	**-0.6**
	11nm,1.3s,mb5.0						
NVAR	**Mina Array Bea**	**91.10**	**43**	P	**P**	**19 06 14.3**	**-0.1**
	0.4nm,0.4s,mb4.1,baz=218,slow=8.0,SNR=5.1						
NVAR	**Mina Array Bea**	**91.10**	**43**	P	**P**	**19 06 14.3**	**-0.1**
CN2	**Changchun**	**92.32**	**323**	*e*P	**P**	**19 06 23.7**	**+3.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.3						
CMAR	**Chiang Mai Arr**	**93.82**	**290**	P	**P**	**19 06 27.8**	**+0.4**
	comp=Z,0.5nm,0.8s,mb4.0,baz=150,slow=3.3,SNR=3.6						
CMAR				PP	PP	19 10 11.2	-2.2
	comp=Z,1.1nm,0.9s,baz=150,slow=8.4,SNR=6.8						
CMAR				LR	LR	19 50 40.9	
	comp=Z,48nm,18.9s,MS4.0,baz=343,slow=37						
TXAR	**Lajitas Array**	**94.73**	**58**	P	**P**	**19 06 30.8**	**-0.5**
	comp=Z,0.3nm,0.8s,mb3.8,baz=198,slow=5.4,SNR=3.7						
TXAR				LR	LR	19 44 52.5	
	comp=Z,162nm,18.7s,MS4.5,baz=15,slow=33						
PDAR	**Pinedale Array**	**98.97**	**44**	LR	LR	19 49 03.0	
	comp=Z,151nm,18.3s,MS4.5,baz=61,slow=34						
MKAR	**Makanchi Array**	**119.30**	**309**	PKP	PKPdf	19 11 57.8	-0.8
	comp=Z,0.8nm,0.6s,baz=59,slow=4.7,SNR=12						
ZALV	**Zalesovo Beam**	**119.98**	**317**	PKP	PKPdf	19 11 58.5	-1.2
	comp=Z,1.6nm,0.7s,baz=106,slow=1.6,SNR=7.8						
KZA	**Kyzart**	**122.60**	**302**	P	PKPdf	19 12 06.9	+1.7
	SNR=6.6						
TKM2	**Tokmak 2**	**122.61**	**303**	P	PKPdf	19 12 05.8	+0.7
	SNR=6.8						
TKM2	**Tokmak 2**	**122.61**	**303**	*e*PKPdf	PKPdf	19 12 05.5	+0.4
KURK	**Kurchatov**	**122.76**	**312**	PKP	PKPdf	19 12 04.1	-1.1
	comp=Z,3.1nm,0.7s,baz=113,slow=1.8,SNR=18						
UCH	**Uchtor**	**123.17**	**302**	P	PKPdf	19 12 08.0	+1.8
	SNR=10						
UCH	**Uchtor**	**123.17**	**302**	*e*PKPdf	PKPdf	19 12 07.7	+1.5
CHMS	**Chumysh**	**123.23**	**303**	P	PKPdf	19 12 06.2	-0.1
	SNR=5.3						
AAK	**Ala-Archa**	**123.30**	**302**	PKP	PKPdf	19 12 07.6	+1.1
	comp=Z,1.3nm,0.4s,baz=206,slow=4.8,SNR=5.0						
AAK	**Ala-Archa**	**123.30**	**302**	PKP	PKPdf	19 12 07.5	+1.1
AML	**Almayashu**	**123.72**	**301**	P	PKPdf	19 12 08.9	+1.6
	SNR=12						
AML	**Almayashu**	**123.72**	**301**	*e*PKPdf	PKPdf	19 12 07.6	+0.3
EKS2	**Erkin-Say**	**123.81**	**302**	P	PKPdf	19 12 08.5	+1.1
	SNR=7.6						
EKS2	**Erkin-Say**	**123.81**	**302**	*e*PKPdf	PKPdf	19 12 08.3	+0.8
KBL	**Kabul**	**124.81**	**291**	*e*PKPdf	PKPdf	19 12 10.7	+1.1
BVAR	**Borovoye Array**	**128.21**	**314**	PKP	PKPdf	19 12 14.9	-0.6
	comp=Z,1.9nm,0.7s,baz=90,slow=1.5,SNR=14						
BRVK	**Borovoye**	**128.28**	**314**	*e*PKPdf	PKPdf	19 12 16.1	+0.5
KMBO	**Kilima Mbogo**	**131.54**	**232**	SKPbc	SKPbc	19 15 49.8	+3.9
	comp=Z,2.5nm,0.9s,baz=71,slow=5.4,SNR=6.8						
ARU	**Arti**	**135.11**	**318**	*e*PKPdf	PKPdf	19 12 28.7	+0.3
ARCES	**ARCESS Array B**	**141.61**	**347**	PKP	PKPdf	19 12 38.7	-1.3
	comp=Z,1.7nm,0.7s,baz=59,slow=3.3,SNR=6.1						
DGRG	**David-gareji**	**144.43**	**296**	P	PKPdf	19 12 45.4	-0.4
MTA	**Mtatsminda**	**144.87**	**296**	P	PKPdf	19 12 46.1	-0.5
TBLG	**Delisi**	**144.91**	**296**	P	PKPdf	19 12 46.3	-0.4
JOF	**Joensuu**	**145.16**	**336**	*e*p	PKPbc	19 12 45.4	-0.7
JOF	**Joensuu**	**145.16**	**336**	*e*p	PKPbc	19 12 45.4	-0.7
HAKT	**HAKKARI**	**145.42**	**289**	⇓*i*P	PKPdf	19 12 47.9	+0.2
KEH	**Kehvi**	**145.51**	**297**	P	PKPbc	19 12 52.3	+4.4
MSL	**Mosul**	**145.75**	**287**	*e*P	PKPbc	19 12 50.5	+1.7
MSL				*e*S		19 23 31.0	
ONI	**Oni**	**145.87**	**298**	P	PKPdf	19 12 49.0	+0.7
KIV	**Kislovodsk**	**146.38**	**300**	*e*PKPdf	PKPdf	19 12 50.6	+1.5
ARTV	**Artvin**	**147.01**	**295**	⇓*i*P	PKPbc	19 12 53.1	+0.8
DAGI	**Agillar**	**147.02**	**295**	⇓*i*P	PKPbc	19 12 52.7	+0.3
KAF	**Kangasniemi**	**147.35**	**338**	*e*p	PKPdf	19 12 51.1	+0.9
	comp=Z,12nm,0.7s						
KAF	**Kangasniemi**	**147.35**	**338**	*e*p	PKPdf	19 12 51.1	+0.9
	comp=Z,12nm,0.7s						
FINES	**FINESS Array B**	**147.93**	**338**	PKPbc	PKPbc	19 12 53.5	-0.8
	comp=Z,18nm,0.7s,baz=77,slow=4.1,SNR=67						
KEMA	**Kemaliye**	**149.62**	**291**	*i* P	PKPbc	19 13 00.2	+1.0
YAYL	**Yayladag**	**151.33**	**285**	⇓*i*P	PKPbc	19 13 04.1	+0.7
MMAI	**Mount Meron Ar**	**151.47**	**278**	PKPbc	PKPbc	19 13 04.6	+0.8
	comp=Z,34nm,0.8s,baz=77,slow=4.4,SNR=44						
YURE	**YUREGIR**	**151.77**	**286**	⇓*i*P	PKPbc	19 13 05.3	+0.8
NOA	**NORSAR Array B**	**151.85**	**350**	PKPbc	PKPbc	19 13 03.0	-0.8
	comp=Z,6.8nm,0.8s,baz=14,slow=4.1,SNR=26						
IZAR	**Zarasai**	**151.91**	**329**	*e*P	PKPbc	19 13 04.2	+0.1
IZAR				AMB	AMB	19 13 04.9	
	comp=Z,7.5nm,1.0s						
IDID	**Didziasalis**	**151.98**	**328**	*e*P	PKPbc	19 13 04.4	+0.2
IDID				AMB	AMB	19 13 05.0	
	comp=Z,7.0nm,1.0s						
ISAL	**Salakas**	**152.08**	**329**	*e*P	PKPbc	19 13 04.5	+0.1
ISAL				AMB	AMB	19 13 05.2	
	comp=Z,5.7nm,0.8s						
NAO01	**NORSAR Array S**	**152.09**	**350**	*e*PKPbc	PKPbc	19 13 04.3	0.0
LIC	**Lamto**	**152.09**	**167**	*e*P	PKPbc	19 13 04.3	-1.5
	comp=Z,51nm,0.8s						
IIGN	**Ignalina**	**152.19**	**329**	*e*P	PKPbc	19 13 04.8	+0.1
IIGN				AMB	AMB	19 13 05.6	
	comp=Z,8.5nm,0.8s						
NACGM	**Naroch**	**152.23**	**328**	*e*	PKPbc	19 13 02.0	-2.8
KIC	**Kosan Boka**	**152.28**	**167**	*e*P	PKPbc	19 13 05.3	-1.0
	comp=Z,43nm,1.0s						
TIC	**Toumodi**	**152.50**	**167**	*e*P	PKPbc	19 13 06.5	-0.3
	comp=Z,77nm,1.3s						
DBIC	**Dimbokro**	**152.56**	**167**	PKPbc	PKPbc	19 13 06.9	0.0
	comp=Z,3.0nm,0.8s,baz=225,slow=11,SNR=4.0						
DBIC				PKPab	PKPab	19 13 16.0	-1.2
	comp=Z,9.5nm,1.0s,baz=134,slow=3.4,SNR=5.0						
AKASG	**Malin Array Be**	**153.37**	**318**	PKPbc	PKPbc	19 13 06.9	-0.6
	comp=Z,4.1nm,0.7s,baz=61,slow=2.3,SNR=20						
AKBB	**Malin Array Si**	**153.37**	**318**	*e*PKPbc	PKPbc	19 13 08.0	+0.5
BR131	**Keskin Array S**	**153.37**	**293**	*e*PKPbc	PKPbc	19 13 07.8	0.0
BRTR	**Keskin Array B**	**153.37**	**293**	PKPbc	PKPbc	19 13 07.4	-0.5
	comp=Z,9.1nm,0.8s,baz=133,slow=3.8,SNR=45						
BRTR				PKPab	PKPab	19 13 20.1	0.0
	comp=Z,3.2nm,0.7s,baz=142,slow=6.3,SNR=5.8						
KIEV	**Kiev**	**153.38**	**318**	*e*PKPbc	PKPbc	19 13 06.8	-0.8
KOLS	**Kolonicke sedl**	**158.11**	**320**	*e*PKP	PKPab	19 13 40.1	0.0
STHS	**Stebnicka Huta**	**158.35**	**323**	*e*PKP	PKPab	19 13 45.9	+4.8
CRVS	**Cervenica-Dubn**	**158.56**	**321**	*e*PKP	PKPab	19 13 46.8	+4.8
KECS	**Kecovo**	**159.32**	**321**	*e*PKP	PKPab	19 13 49.8	+4.5
TORD	**Torodi Ar. Bea**	**159.57**	**181**	PKP	PKPdf	19 13 08.7	-0.4
	comp=Z,0.7nm,1.0s,baz=5.9,slow=1.2,SNR=2.8						
TORD				PKPab	PKPab	19 13 47.0	-0.1
	comp=Z,1.9nm,0.7s,baz=173,slow=3.7,SNR=9.0						
VYHS	**Vyhne**	**160.16**	**324**	*e*PKP	PKPab	19 13 49.0	0.0
CLL	**Collm**	**160.38**	**337**	⇓*i*PKPab	PKPab	19 13 48.9	-0.9
	comp=Z,9.0nm,1.0s						
BRG	**Berggiesshubel**	**160.43**	**335**	*e*P	PKPab	19 13 45.8	-4.2
	comp=Z,3.2nm,0.9s						
GERES	**GERESS Array B**	**162.19**	**332**	PKPab	PKPab	19 13 57.3	-0.5
	comp=Z,0.6nm,0.8s,baz=72,slow=4.3,SNR=4.8						

*BEO **05** 18:58:29.3±0.9,43°.63N×16°.57E,h0km±6km,ML3.5/6*
*ISCJB **05** 18:58:33.8±0.6,43°.81N±0°.02×17°.02E±0°.03,h11km±4km, Error ellipse: s-maj=4.5km s-min=2.3km az=44.7*
*NEIC **05** 18:58:34.6,43°.85N×17°.26E,h2km,ML3.3(PDG),After PDG.*
*PDG **05** 18:58:34.6±0.4,43°.85N×17°.26E,h2km±1km,MD3.4/1, ML3.3/10,Error ellipse: s-maj=0.8km s-min=0.9km az=0.0*
*LDG **05** 18:58:35.4±0.1,43°.85N×17°.25E,h10km,Ml3.4/9,Error ellipse: s-maj=3.9km s-min=2.6km az=20.0*
*PRU **05** 18:58:35.2,43°.88N×17°.32E,h0km*
*CSEM **05** 18:58:35.6±0.1,43°.87N×17°.24E,h2km,ML3.5,Error ellipse: s-maj=5.0km s-min=2.9km az=35.0*

**

3.7nm,0.2s
SOKA ⇑eSg Sg 19 00 16.3 -2.0
14nm,0.6s
SOKA Soboth 3.20 332 Pn **Pn 18 59 26.6 +0.2**
3.7nm,0.2s
SOKA Sg Sg 19 00 16.3 -2.0
14nm,0.6s
VOY Vojsko 3.20 313 ePn **Pn 18 59 27.8 +1.4**
VOY e 18 59 37.3
VOY eSn Sb 19 00 10.1 -2.0
VOY Vojsko 3.20 313 ePn **Pn 18 59 27.8 +1.4**
VOY eSn Sb 19 00 10.1 -2.0
SDI San Donato 3.32 230 Pn **Pn 18 59 27.5 -0.5**
SDI San Donato 3.32 230 Pn **Pn 18 59 27.5 -0.5**
FIAM Fiamignano 3.41 243 Pn **Pn 18 59 30.2 +0.9**
FIAM Fiamignano 3.41 243 Pn **Pn 18 59 30.2 +0.9**
ASS Assisi 3.43 258 Pn **Pn 18 59 29.8 +0.3**
ASS Assisi 3.43 258 Pn **Pn 18 59 29.8 +0.3**
BARS Barje 3.51 106⇑iPn **Pn 18 59 29.9 -0.7**
BARS eSn Sb 19 00 16.5 -4.4
BARS Barje 3.51 106⇑iPn **Pn 18 59 29.9 -0.7**
BZS Buzias 3.58 59⇓iP **Pn 18 59 30.1 -1.5**
BZS Buzias 3.58 59⇓iP **Pn 18 59 30.1 -1.5**
ARSA Arzberg 3.58 341⇓iPn **Pn 18 59 31.9 +0.3**
12nm,0.3s,SNR=26
ARSA ⇓iSn **Sn 19 00 12.9 -1.4**
7.2nm,0.5s
ARSA Arzberg 3.58 341 Pn **Pn 18 59 31.9 +0.3**
12nm,0.3s,SNR=26
ARSA Sn **Sn 19 00 12.9 -1.4**
7.2nm,0.5s
PTCC Patocco-Chiusa 3.73 314 Pn **Pn 18 59 35.2 +1.6**
PTCC Patocco-Chiusa 3.73 314 Pn **Pn 18 59 35.2 +1.6**
BUD Budapest 3.82 19 ePg **Sg 19 00 38.9 +0.7**
SOP Sopron 3.84 353 ePg **Sn 19 00 17.9 -2.7**
SOP Sopron 3.84 353 eSn **Sn 19 00 17.9 -2.7**
ZAPS Zavoj 3.97 97⇑iPn **Pn 18 59 37.4 +0.4**
CONA Conrad Observa 4.17 347 iPn **Pn 18 59 40.2 +0.6**
SNR=13
CONA ⇑iSn **Sn 19 00 28.1 -0.5**
5.5nm,0.5s
CONA Conrad Observa 4.17 347 Pn **Pn 18 59 40.2 +0.6**
SNR=13
CONA Sn **Sn 19 00 28.1 -0.5**
5.5nm,0.5s
ABTA Abfaltersbach 4.39 312⇑iPn **Pn 18 59 43.7 +0.9**
3.9nm,0.5s,SNR=8.5
ABTA ⇓iSn **Sn 19 00 38.3 +4.0**
ABTA Abfaltersbach 4.39 312 Pn **Pn 18 59 43.7 +0.9**
3.9nm,0.5s,SNR=8.5
ABTA Sn **Sn 19 00 38.3 +4.0**
PSZ Piszkesteto 4.45 24 ePg **Sg 19 00 58.3 -0.1**
PSZ Piszkesteto 4.45 24⇑iP **Pn 18 59 43.1 -0.4**
PSZ Piszkesteto 4.45 24⇑iP **Pn 18 59 43.1 -0.4**
MOA Molln 4.48 334⇑iPn **Pn 18 59 45.3 +1.4**
3.2nm,0.3s,SNR=12
MOA ⇑iSn **Sn 19 00 37.8 +1.4**
6.7nm,0.4s
MOA Molln 4.48 334 Pn **Pn 18 59 45.3 +1.4**
3.2nm,0.3s,SNR=12
MOA Sn **Sn 19 00 37.8 +1.4**
6.7nm,0.4s
SMOL Smolenice 4.64 2 eSN **Sn 19 00 40.8 +0.4**
SMOL Smolenice 4.64 2 eSn **Sn 19 00 40.8 +0.4**
VYHS Vyhne 4.75 13 ePn **Pn 18 59 50.2 +2.5**
VYHS eSn **Sn 19 00 40.8 -2.3**
VYHS Vyhne 4.75 13 ePN **Pn 18 59 50.2 +2.5**
VYHS eSN **Sn 19 00 40.8 -2.3**
VYHS Vyhne 4.75 13 ePn **Pn 18 59 50.2 +2.5**
VYHS eSn **Sn 19 00 40.8 -2.3**
APPI Appiano 4.98 304 Pn **Pn 18 59 51.8 +1.0**
19nm,0.4s
APPI Appiano 4.98 304 Pn **Pn 18 59 51.8 +1.0**
19nm,0.4s
KECS Kecovo 5.13 25 e **Sn 19 00 53.7 +1.2**
KECS e 19 13 25.9
WTTA Wattenberg 5.19 313 iPn **Pn 18 59 55.6 +1.9**
18nm,0.4s,SNR=14
WTTA ⇓iSn **Sn 19 00 58.7 +4.9**
14nm,0.8s
WTTA Wattenberg 5.19 313 Pn **Pn 18 59 55.6 +2.0**
18nm,0.4s,SNR=14
WTTA Sn **Sn 19 00 58.7 +4.9**
14nm,0.8s
WATA Walderalm 5.26 313⇑iPn **Pn 18 59 57.2 +2.5**
11nm,0.3s
WATA Walderalm 5.26 313 Pn **Pn 18 59 57.2 +2.5**
11nm,0.3s
SQTA Sankt Quirin 5.39 310⇓iPn **Pn 18 59 59.3 +2.8**
SQTA Sankt Quirin 5.39 310 Pn **Pn 18 59 59.3 +2.9**
MOTA Moosalm 5.52 311 iPn **Pn 19 00 00.4 +2.1**
8.4nm,0.4s,SNR=10.0
MOTA ⇓iSn **Sn 19 01 08.3 +6.2**
3.7nm,0.4s
MOTA Moosalm 5.52 311 Pn **Pn 19 00 00.4 +2.2**
8.4nm,0.4s,SNR=10.0
FETA Feichten 5.55 307⇑iPn **Pn 19 00 01.0 +2.4**
4.5nm,0.6s
FETA ⇑eSg **Sg 19 01 39.3 +5.8**
7.7nm,0.8s
FETA Feichten 5.55 307 Pn **Pn 19 00 01.0 +2.4**
4.5nm,0.6s
KHC Kasperske Hory 5.83 336 ePn **Pn 19 00 00.3 -2.1**
1.9nm,0.6s
KHC Kasperske Hory 5.83 336 ePN **Pn 19 00 02.7 +0.2**
KHC eSN **Sn 19 01 07.7 -1.9**
KHC Kasperske Hory 5.83 336 Pn **Pn 19 00 02.7 +0.2**
KHC Sn **Sn 19 01 07.7 -1.9**
PGF Pioggiola 6.16 260 eP **Pn 19 00 09.0 +2.0**
PGF eSn **Sn 19 01 10.8 -7.0**
4.5nm,0.5s
PGF Pioggiola 6.16 260 eP **Pn 19 00 09.0 +2.0**
DAVA Damuels 6.18 306⇑iPn **Pn 19 00 09.5 +2.2**
3.3nm,0.4s
DAVA Damuels 6.18 306 Pn **Pn 19 00 09.5 +2.2**
3.3nm,0.4s
DPC Dobruska-Polom 6.51 355 eSN **Sn 19 01 23.8 -2.5**
MBDF Montbardon 7.55 280 ePn **Pn 19 00 23.5 -2.6**
MBDF eSn **Sn 19 01 43.9 -8.1**
7.8nm,0.6s
BFO Black Forest 7.62 309 eP **Pn 19 00 26.8 -0.2**
3.7nm,0.6s
BFO Black Forest 7.62 309 eP **Pn 19 00 26.8 -0.2**
3.7nm,0.6s
LPG La Plagne 7.64 286 eP **Pn 19 00 28.8 +1.5**
LPG eSn **Sn 19 01 46.9 -7.3**
12nm,0.7s
LPG La Plagne 7.64 286 eP **Pn 19 00 28.8 +1.5**
LPL La Plagne 7.66 286 ePn **Pn 19 00 24.7 -2.9**
LPL La Plagne 7.66 286 eP **Pn 19 00 30.2 +2.6**
LPL eSn **Sn 19 01 46.3 -8.3**
6.7nm,0.4s
LPL La Plagne 7.66 286 eP **Pn 19 00 30.2 +2.6**
FRF La Foret Royal 7.67 271 ePn **Pn 19 00 25.6 -2.2**
FRF eSn **Sn 19 01 47.6 -7.4**
3.4nm,0.4s
LMR La Mourre 7.80 270 ePn **Pn 19 00 25.7 -3.8**
ORIF Oris-en-Rattie 8.20 281 ePn **Pn 19 00 32.7 -2.2**
ORIF eSn **Sn 19 01 59.0 -8.9**
12nm,0.8s
HINF Hinteralfeld 8.24 302 ePn **Pn 19 00 33.3 -2.3**
HINF eSn **Sn 19 02 01.4 -7.7**
3.2nm,0.4s
CDF Champ du Feu 8.27 307 ePn **Pn 19 00 35.0 -0.9**
CDF eSn **Sn 19 02 01.6 -8.0**
1.0nm,0.3s
CDF Champ du Feu 8.27 307 ePn **Pn 19 00 35.0 -0.9**
CABF La Chapelle 8.32 293 ePn **Pn 19 00 33.9 -2.8**
HAU Haudompre 8.63 302 ePn **Pn 19 00 38.7 -2.2**
VIVF Saint-Julien-l 9.05 281 eSn **Sn 19 02 19.5 -9.4**
1.4nm,0.4s
LOR Lormes 9.97 295 ePn **Pn 19 00 59.1 -0.1**
baz=113
LOR Lormes 9.97 295 ePn **Pn 19 00 59.1 -0.1**
baz=113

IDC 05 19:03:36.9±4.8, 56°.61S×148°.82E, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.7/10, mbtmp3.6/2, MS4.2/1, Ms1 4.2/1, ms1mx3.1/18, Error ellipse: s-maj=297.1km s-min=49.8km az=81.0, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QSPA	**South Pole Qui**	**33.49**	**180**	LR	LR	19 24 03.8	
	comp=Z,397nm,18.9s,baz=224,slow=37						
ASAR	**Alice Springs**	**34.67**	**335**	P	P	19 10 27.9	0.0
	0.6nm,0.7s,baz=162,slow=9.1,SNR=5.0						
WRA	**Warramunga Arr**	**38.17**	**338**	P	P	19 10 57.6	-0.2
	0.7nm,0.5s,baz=165,slow=7.5,SNR=12						
FINES	**FINESS Array B**	**150.98**	**304**	PKPbc	PKPbc	19 23 30.9	+1.0
	1.1nm,0.7s,baz=56,slow=3.5,SNR=4.0						
GERES	**GERESS Array B**	**152.17**	**273**	PKPbc	PKPbc	19 23 32.1	-1.0
	0.3nm,0.6s,baz=108,slow=5.3,SNR=3.2						

*ISCJB **05** 19:21:30.5±2.5, 33°.78S±0°.07×178°.4W±0°.2, h12km±17km, mb4.4/8, MS3.9/5, Error ellipse: s-maj=26.6km s-min=8.7km az=18.7*
*IDC **05** 19:21:31.7±0.8, 33°.24S×178°.65W, h0km, mb4.4/7, mb1 4.5/7, mb1mx4.2/16, mbtmp4.4/7, MS3.8/6, Ms1 3.8/6, ms1mx3.5/20, Error ellipse: s-maj=29.0km s-min=24.9km az=55.0*
*NEIC **05** 19:21:31.5±0.5, 33°.75S×178°.35W, h10km, mb4.5/2, Error ellipse: s-maj=14.1km s-min=6.2km az=115.0*
ISC 05 19:21:30.6±2.9, 33°.79S±0°.07×178°.3W±0°.2, h5km±20km, n45, σ1º11/27, mb4.4/8, MS3.9/5, 1D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.54**	**4**	Pn	**Pn**	**19 22 39.9**	**-0.1**
	90nm,0.3s,baz=95,slow=22,SNR=6.6						
RAO				Sn	**Sn**	**19 23 26.3**	**-6.9**
	40nm,0.3s,baz=270,slow=20,SNR=2.0						
MXZ	**Matakaoa Point**	**4.66**	**215**	P	**Pn**	**19 22 42.0**	**+0.4**
MXZ				S	**Sn**	**19 23 36.3**	**+0.2**
PUZ	**Puketiti**	**5.09**	**212**	P	**Pn**	**19 22 47.5**	**-0.1**
MWZ	**Matawai**	**5.64**	**215**	P	**Pn**	**19 22 55.4**	**+0.2**
URZ	**Urewera**	**5.80**	**218**	Pn	**Pn**	**19 22 58.4**	**+1.1**
	26nm,0.3s,baz=28,slow=3.8,SNR=106						
URZ				Sn	**Sn**	**19 24 03.9**	**-0.2**
	19nm,0.3s,baz=119,slow=23,SNR=8.5						
URZ				LR	LR	19 25 26.5	
	comp=Z,400nm,19.4s,baz=29,slow=39						
URZ	**Urewera**	**5.80**	**218**	P	**Pn**	**19 22 58.2**	**+1.0**
KNZ	**Kokohu**	**6.14**	**211**	P	**Pn**	**19 23 03.1**	**+1.2**
OUZ	**Omahuta**	**6.83**	**256**	eP	**Pn**	**19 23 12.6**	**+1.1**
	31nm,0.7s						
SNZO	**South Karori**	**9.32**	**214**	ePn	**Pn**	**19 23 42.9**	**-2.7**
KHZ	**Kahutara**	**10.73**	**214**	P	**Pn**	**19 24 01.3**	**-3.6**
RPZ	**Rata Peaks**	**12.91**	**217**	Pn	**Pn**	**19 24 32.5**	**-2.2**
	1.6nm,0.3s,baz=37,slow=7.9,SNR=5.6						
RPZ				Sn	**Sn**	**19 26 45.6**	**-13**
	2.4nm,0.3s,baz=332,slow=20,SNR=6.3						
EIDS	**Eidsvold**	**27.83**	**279**	eP	**P**	**19 27 21.6**	**+0.6**
	8.4nm,0.9s,mb4.4						
HNR	**Honiara**	**31.42**	**315**	LR	LR	19 38 33.3	
	comp=Z,98nm,18.3s,MS3.5,baz=156,slow=33						
STKA	**Stephens Creek**	**33.59**	**262**	P	**P**	**19 28 12.9**	**+1.1**
	1.5nm,0.6s,mb4.1,baz=127,slow=8.9,SNR=3.0						
STKA				LR	LR	19 40 37.8	
	comp=Z,320nm,18.5s,MS4.1,baz=29,slow=34						
STKA	**Stephens Creek**	**33.59**	**262**	P	**P**	**19 28 14.2**	**+2.4**
STKA				LR	LR	19 40 37.8	
CTA	**Charters Tower**	**34.23**	**284**	P	**P**	**19 28 16.6**	**-0.8**
	4.1nm,0.5s,mb4.6,baz=121,slow=9.1,SNR=8.0						
CTAO	**Charters Tower**	**34.23**	**284**	eP	**P**	**19 28 17.4**	**0.0**
	3.3nm,0.5s,mb4.5						
ASAR	**Alice Springs**	**42.77**	**271**	P	**P**	**19 29 27.9**	**-1.4**
	6.5nm,0.7s,mb4.5,baz=113,slow=7.6,SNR=42						
WRA	**Warramunga Arr**	**44.07**	**276**	P	**P**	**19 29 38.3**	**-1.4**
	6.7nm,0.5s,mb4.6,baz=119,slow=7.3,SNR=10						
QSPA	**South Pole Qui**	**56.33**	**180**	P	**P**	**19 31 17.2**	**+5.3**
	3.1nm,0.7s,mb4.5,baz=47,slow=4.3,SNR=13						
MAW	**Mawson**	**69.05**	**201**	P	**P**	**19 32 42.2**	**+5.2**
	0.6nm,0.4s,mb3.9,baz=154,slow=1.2,SNR=5.4						
SYO	**Syowa Base**	**73.76**	**193**⇓	eP	**P**	**19 33 06.0**	**+0.7**
KSRS	**Korea Array**	**86.76**	**320**	LR	LR	20 09 13.2	
	comp=Z,20nm,19.5s,MS3.5,baz=120,slow=33						
PETK	**Petropavlovsk-**	**89.03**	**346**	P	**P**	**19 34 26.4**	**+0.4**
	3.5nm,0.7s,mb4.8,baz=148,slow=7.6,SNR=5.2						
PETK	**Petropavlovsk-**	**89.03**	**346**	P	**P**	**19 34 26.4**	**+0.4**
YBH	**Yreka Blue Hor**	**90.86**	**38**	LR	LR	20 08 20.5	
	comp=Z,72nm,19.1s,MS4.1,baz=317,slow=31						
TXAR	**Lajitas Array**	**94.43**	**58**	LR	LR	20 13 07.5	
	comp=Z,73nm,18.0s,MS4.2,baz=260,slow=33						
MK31	**Makanchi Array**	**119.71**	**309**	ePKPdf	PKPdf	19 40 21.4	+0.1
MKAR	**Makanchi Array**	**119.71**	**309**	PKP	PKPdf	19 40 21.2	-0.2
	0.2nm,0.3s,baz=155,slow=1.7,SNR=4.2						
MKAR	**Makanchi Array**	**119.71**	**309**	PKP	PKPdf	19 40 21.2	-0.2
ZALV	**Zalesovo Beam**	**120.36**	**317**	PKP	PKPdf	19 40 21.2	-1.2
	0.5nm,0.4s,baz=127,slow=3.9,SNR=3.7						
KURK	**Kurchatov**	**123.16**	**312**	ePKPdf	PKPdf	19 40 27.8	-0.1
BVAR	**Borovoye Array**	**128.60**	**314**	PKP	PKPdf	19 40 37.5	-0.7
	0.8nm,0.6s,baz=120,slow=1.3,SNR=8.9						
JOF	**Joensuu**	**145.44**	**336**	ep	PKPdf	19 41 08.7	-0.2
	1.6nm,0.5s						
JOF	**Joensuu**	**145.44**	**336**	ep	PKPdf	19 41 08.7	-0.2
	1.6nm,0.5s						
KAF	**Kangasniemi**	**147.63**	**339**	ep	PKPdf	19 41 14.7	+2.1
	3.6nm,0.6s						
KAF	**Kangasniemi**	**147.63**	**339**	ep	PKPdf	19 41 14.7	+2.1
	3.6nm,0.6s						
FINES	**FINESS Array B**	**148.21**	**338**	PKPbc	PKPbc	19 41 17.1	+0.2
	7.0nm,0.6s,baz=33,slow=3.4,SNR=32						
MMAI	**Mount Meron Ar**	**151.91**	**278**	PKPbc	PKPbc	19 41 28.2	+1.4
	8.6nm,0.7s,baz=101,slow=3.8,SNR=16						
NOA	**NORSAR Array B**	**152.05**	**350**	PKPbc	PKPbc	19 41 26.8	+0.7
	2.0nm,0.6s,baz=14,slow=4.1,SNR=13						
AKASG	**Malin Array Be**	**153.75**	**318**	PKPbc	PKPbc	19 41 30.9	+0.6
	0.6nm,0.4s,baz=62,slow=2.4,SNR=8.2						
AKASG	**Malin Array Be**	**153.75**	**318**	PKPbc	PKPbc	19 41 30.9	+0.6
BR131	**Keskin Array S**	**153.81**	**292**	ePKPbc	PKPbc	19 41 30.8	0.0
BRTR	**Keskin Array B**	**153.81**	**292**	PKPbc	PKPbc	19 41 31.1	+0.3
	2.9nm,0.8s,baz=138,slow=4.3,SNR=15						
TORD	**Torodi Ar. Bea**	**159.45**	**180**	PKPab	PKPab	19 42 14.1	+5.6
	0.6nm,0.6s,baz=171,slow=3.7,SNR=6.7						

PRE 05 19:36:26.7±1.1, 20°.93S×33°.08E, h10km, ML3.6, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOPA	**Mopani**	**3.01**	**211**	eP	Pn	19 37 15.2	+0.7
MOPA				eS	Sn	19 37 51.0	+0.3
MOPA				AML	AML	19 37 56.5	
	comp=Z,449nm,0.2s						
MSNA	**Messina**	**3.17**	**243**	eP	Pn	19 37 18.4	+1.7
MSNA				eS	Sn	19 37 55.2	+0.7
MSNA				AML	AML	19 38 07.5	
	comp=Z,97nm,0.5s						
POGA	**Pongola**	**6.55**	**191**	eP	Pn	19 38 03.3	+0.1
POGA				eS	Sn	19 39 14.3	-3.7
POGA				AML	AML	19 40 01.6	
	comp=Z,10nm,0.5s						
PRYS	**Parys**	**7.94**	**220**	eP	Pn	19 38 22.8	+0.7
PRYS				eS	Sn	19 39 47.9	-4.2
PRYS				AML	AML	19 40 40.3	
	comp=Z,5.1nm,0.6s						

*ATH **05** 19:48:02.1, 35°.68N×25°.96E, h25km±2km, MD3.2/7*
*NEIC **05** 19:48:02.1, 35°.68N×25°.96E, h25km, MD3.2(ATH), After ATH.*
*CSEM **05** 19:48:02.8±0.1, 35°.63N×26°.02E, h15km, MD3.2, Error ellipse: s-maj=2.7km s-min=2.2km az=112.0*
*THE **05** 19:48:03.2, 35°.62N×26°.00E, h9km±1km, Error ellipse: s-maj=1.4km s-min=0.6km az=158.0*
*ISCJB **05** 19:48:03.2±0.5, 35°.63N±0°.03×26°.03E±0°.04, h22km±6km, Error ellipse: s-maj=5.5km s-min=4.6km az=28.5*
ISC 05 19:48:02.9±0.7, 35°.65N±0°.04×26°.01E±0°.04, h14km±6km, n42, σ0º49/67, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NPS	**Neapolis**	**0.50**	**220**	ePn	**Pg**	**19 48 12.3**	**-0.6**
NPS				eSn	**Sg**	**19 48 19.5**	**-0.1**
NPS	**Neapolis**	**0.50**	**220**	ePN	**Pg**	**19 48 12.3**	**-0.6**
NPS				eSN	**Sg**	**19 48 19.5**	**-0.1**
NPS	**Neapolis**	**0.50**	**220**	ePn	**Pg**	**19 48 12.3**	**-0.6**
NPS				eSn	**Sg**	**19 48 19.5**	**-0.1**
ZKR	**Zakros**	**0.56**	**162**	ePn	**Pg**	**19 48 14.0**	**0.0**
ZKR				eSn	**Sg**	**19 48 23.1**	**+1.6**
ZKR	**Zakros**	**0.56**	**162**	P	**Pg**	**19 48 14.0**	**0.0**
ZKR				S	**Sg**	**19 48 21.9**	**+0.4**
ZKR	**Zakros**	**0.56**	**162**	ePN	**Pg**	**19 48 14.0**	**0.0**
ZKR				eSN	**Sg**	**19 48 23.1**	**+1.6**
ZKR	**Zakros**	**0.56**	**162**	P	**Pg**	**19 48 14.0**	**0.0**
ZKR				S	**Sg**	**19 48 21.9**	**+0.4**
LAST	**Lasithi**	**0.65**	**222**	ePn	**Pg**	**19 48 14.8**	**-0.9**
LAST				eSn	**Sg**	**19 48 24.9**	**+0.6**
LAST	**Lasithi**	**0.65**	**222**	P	**Pg**	**19 48 14.8**	**-0.9**
LAST				S	**Sg**	**19 48 24.6**	**+0.3**
LAST	**Lasithi**	**0.65**	**222**	ePN	**Pg**	**19 48 14.8**	**-0.9**
LAST				eSN	**Sg**	**19 48 24.9**	**+0.6**
LAST	**Lasithi**	**0.65**	**222**	P	**Pg**	**19 48 14.8**	**-0.9**
LAST				S	**Sg**	**19 48 24.6**	**+0.3**
LAST				eSn	**Sg**	**19 48 24.9**	**+0.6**
THR1	**Thera Island**	**0.84**	**328**	P	**Pb**	**19 48 19.7**	**+0.4**
THR1	**Thera Island**	**0.84**	**328**	P	**Pb**	**19 48 19.7**	**+0.4**
THR3	**Thira Island,**	**0.90**	**327**	P	**Pb**	**19 48 20.5**	**+0.2**
THR3	**Thira Island,**	**0.90**	**327**	P	**Pb**	**19 48 20.5**	**+0.2**
THR2	**Thira island,**	**0.92**	**330**	P	**Pb**	**19 48 20.8**	**+0.2**
THR2	**Thira island,**	**0.92**	**330**	P	**Pb**	**19 48 20.8**	**+0.2**
THR5	**Thira Island,**	**0.93**	**325**	P	**Pb**	**19 48 21.5**	**+0.7**
THR5	**Thira Island,**	**0.93**	**325**	P	**Pb**	**19 48 21.5**	**+0.7**
KARP	**Karpathos**	**0.95**	**96**	ePn	**Pn**	**19 48 21.2**	**-0.6**
KARP	**Karpathos**	**0.95**	**96**	ePN	**Pn**	**19 48 21.2**	**-0.6**
KARP	**Karpathos**	**0.95**	**96**	ePn	**Pn**	**19 48 21.2**	**-0.6**
IDI	**Anoyia**	**0.98**	**249**	P	**Pb**	**19 48 21.2**	**-0.5**
IDI	**Anoyia**	**0.98**	**249**	P	**Pb**	**19 48 21.2**	**-0.5**
SIVA	**Sivas**	**1.17**	**237**	ePn	**Pn**	**19 48 24.5**	**-0.2**
SIVA				eSn	**Sn**	**19 48 40.3**	**-0.1**
SIVA	**Sivas**	**1.17**	**237**	P	**Pn**	**19 48 24.5**	**-0.2**
SIVA				S	**Sb**	**19 48 40.0**	**+0.3**
SIVA	**Sivas**	**1.17**	**237**	ePN	**Pn**	**19 48 24.5**	**-0.2**
SIVA				eSN	**Sn**	**19 48 40.3**	**-0.1**
SIVA	**Sivas**	**1.17**	**237**	P	**Pn**	**19 48 24.5**	**-0.2**
SIVA				S	**Sb**	**19 48 40.0**	**+0.3**
SIVA				eSn	**Sn**	**19 48 40.3**	**-0.1**
APE	**Apeiranthos**	**1.47**	**345**	P	**Pn**	**19 48 28.5**	**-0.4**
APE	**Apeiranthos**	**1.47**	**345**	P	**Pn**	**19 48 28.5**	**-0.4**
KARN	**Karanos**	**1.72**	**262**	P	**Pn**	**19 48 31.7**	**-0.7**
KARN				S	**Sn**	**19 48 54.6**	**+0.4**
KARN	**Karanos**	**1.72**	**262**	ePN	**Pn**	**19 48 31.9**	**-0.5**
KARN	**Karanos**	**1.72**	**262**	ePn	**Pn**	**19 48 31.9**	**-0.5**
KARN				S	**Sn**	**19 48 54.6**	**+0.4**
ARG	**Arkhangelos**	**1.81**	**71**	P	**Pn**	**19 48 33.4**	**-0.2**
ARG				S	**Sn**	**19 48 56.6**	**+0.3**
ARG	**Arkhangelos**	**1.81**	**71**	P	**Pn**	**19 48 33.4**	**-0.2**
ARG				S	**Sn**	**19 48 56.6**	**+0.3**
SMG	**Samos**	**2.16**	**18**	ePn	**Pn**	**19 48 38.0**	**-0.4**
SMG				eSn	**Sn**	**19 49 05.1**	**+0.1**
SMG	**Samos**	**2.16**	**18**	ePN	**Pn**	**19 48 38.0**	**-0.4**
SMG				eSN	**Sn**	**19 49 05.1**	**+0.1**
SMG	**Samos**	**2.16**	**18**	ePn	**Pn**	**19 48 38.0**	**-0.4**
SMG				eSn	**Sn**	**19 49 05.1**	**+0.1**
VLI	**Veliai**	**2.70**	**294**	P	**Pn**	**19 48 46.4**	**+0.5**
VLI	**Veliai**	**2.70**	**294**	P	**Pn**	**19 48 46.4**	**+0.5**
ITM	**Ithomi**	**3.63**	**296**	P	**Pn**	**19 49 03.2**	**+4.6**
ITM	**Ithomi**	**3.63**	**296**	P	**Pn**	**19 49 03.2**	**+4.6**

*IDC **05** 20:37:23.6±2.0, 8°.08S×120°.19E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.5/21, mbtmp3.6/6, ML3.2/1, Error ellipse: s-maj=154.1km s-min=23.7km az=56.0*
*NEIC **05** 20:37:24.9±0.9, 8°.18S×120°.10E, h10km, Error ellipse: s-maj=49.4km s-min=10.2km az=60.0*
*DJA **05** 20:37:27, 8°.03S×120°.26E, h10km, MLv4.2/5*
ISC 05 20:37:29.5±2.7, 8°.02S±0°.05×120°.26E±0°.06, h34km±23km, n16, σ1º14/18, mb3.6/4, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.64**	**179**	P	**Pn**	**20 37 54.0**	**-2.0**
WSI				S	**Sn**	**20 38 17.6**	**+1.7**
MMRI	**Maumere**	**2.05**	**108**	P	**Pn**	**20 38 01.8**	**+0.2**
MMRI				S	**Sn**	**20 38 27.7**	**+1.7**
BKSI	**Bulukumba**	**2.68**	**357**	P	**Pn**	**20 38 10.9**	**+0.6**
KAPI	**Kappang**	**3.03**	**350**	ePn	**Pn**	**20 38 15.2**	**+0.2**
KAPI	**Kappang**	**3.03**	**350**	P	**Pn**	**20 38 15.0**	**0.0**
SPSI	**Sidrap Palu**	**4.06**	**353**	P	**Pn**	**20 38 29.6**	**+0.4**
KHKI	**Kahang-Kahang**	**4.62**	**265**	P	**Pn**	**20 38 39.6**	**+2.7**
IGBI	**Denpasar**	**5.12**	**261**	P	**Pn**	**20 38 44.2**	**+0.3**
	2μm99nm,0.9s						
KBKI	**Kotabaru**	**6.21**	**319**	P	**Pn**	**20 38 49.8**	**-9.0**
KMMI	**Kalianget**	**6.31**	**278**	P	**Pn**	**20 39 00.0**	**-0.2**
WRA	**Warramunga Arr**	**18.07**	**132**	P	**Pn**	**20 41 35.8**	**-2.1**
	0.1nm,0.3s,baz=306,slow=12,SNR=2.9						
ASAR	**Alice Springs**	**20.33**	**141**	P	**P**	**20 42 01.9**	**-1.0**
	1.6nm,0.8s,baz=316,slow=10,SNR=17						
SONM	**Songino Array**	**56.95**	**349**	P	**P**	**20 47 11.1**	**-0.2**
	0.5nm,0.9s,mb3.5,baz=152,slow=6.5,SNR=3.5						
MKAR	**Makanchi Array**	**64.17**	**332**	P	**P**	**20 47 59.9**	**-0.7**
	0.2nm,0.5s,mb3.4,baz=118,slow=8.7,SNR=2.9						
ZALV	**Zalesovo Beam**	**68.58**	**338**	P	**P**	**20 48 28.1**	**-0.7**
	0.7nm,0.5s,mb3.9,baz=138,slow=6.0,SNR=4.3						
KURK	**Kurchatov**	**68.68**	**333**	P	**P**	**20 48 29.5**	**+0.1**
	0.3nm,0.5s,mb3.5,baz=140,slow=5.0,SNR=2.2						

TRN 05 20:38:34.7, 16°.91N×62°.24W, h3km, MD3.2, M3.8(FDF), Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BPA	**Boggy Peak**	**0.39**	**70**	eP	Pg	20 38 45.1	+2.8
BPA				eS	Sg	20 38 53.1	+5.7
SKI	**Saint Kitts**	**0.63**	**312**	eP	Pg	20 38 50.5	+3.7
SKI				eS	Sg	20 39 07.6	+13
LZG	**Guadaloupe-1**	**0.89**	**150**	eP	Pg	20 38 56.4	+4.6
BCG	**Bois Riant Cap**	**1.02**	**144**	eP	Pg	20 38 58.0	+3.7
PHG	**Guadaloupe-2**	**1.06**	**147**	eP	Pg	20 38 58.6	+3.5
TBG	**Guadaloupe-3**	**1.20**	**151**	eP	Pg	20 39 01.4	+3.6
DEG	**La Desirade**	**1.28**	**118**	eP	Pg	20 38 53.9	-5.4
MGG	**Marie-Galante**	**1.33**	**138**	eP	Pn	20 39 01.4	+1.3

KRSC 05 20:51:40.0±0.2, 51°.68N×159°.75E, h12km±11km, ML3.9, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	**Gorelyy**	**1.35**	**311**	P	Pn	20 52 06.5	+1.8
GRL				iS	Sb	20 52 25.3	+2.8
SPN	**Mys Shipunski**	**1.43**	**7**	P	Pn	20 52 07.1	+1.4
SPN				iS	Sn	20 52 26.3	+1.9
PET	**Petropavlovsk**	**1

comp=E,5μm,0.7s
GYA Guiyang 5.19 144 Pn **Pn 21 06 20.8 +2.0**
GYA Sn **Sn 21 07 19.8 +0.6**
GYA Sg **Sg 21 07 40.3 -6.9**
GYA smax
comp=N,110nm,0.9s
GYA smax
comp=E,140nm,0.9s
LZH Lanzhou 5.36 5 *e*Pg Px 21 06 54.1
LZH Sg **Sg 21 07 51.3 -1.0**
LZH smax
comp=N,48nm,1.2s
LZH smax
comp=E,43nm,1.1s
ENH Enshi 5.37 93 *e*Pn **Pn 21 06 20.6 -0.7**
comp=E,54nm,0.7s
ENH *e*Sn **Sn 21 07 22.3 -1.3**
KMI Kunming 5.61 185 Pn **Pn 21 06 28.7 +4.1**
KMI Sn **Sn 21 07 36.1 +6.5**
KMI smax
comp=N,22nm,1.2s
KMI smax
comp=E,17nm,0.8s
KMI LR LR
comp=N,140nm,5.1s
KMI LR LR
comp=E,210nm,5.6s
KMI LR LR
comp=Z,120nm,5.6s
XAN Xi'an 5.79 54 Pn **Pn 21 06 24.9 -2.1**
XAN Pg **Pb 21 06 44.3 +2.4**
XAN Sn **Sn 21 07 34.7 +0.8**
XAN Sg **Sb 21 07 57.3 +5.6**
XAN smax
comp=N,110nm,0.8s
XAN smax
comp=E,35nm,0.9s
XAN LR LR
comp=N,130nm,5.1s
XAN LR LR
comp=E,48nm,6.3s
XAN LR LR
comp=Z,33nm,5.5s
CHTO Chiang Mai 12.51 199 Pn **Pn 21 07 58.0 -1.1**
CMAR Chiang Mai Arr 12.85 199 Pn **Pn 21 08 02.7 -1.1**
comp=Z,0.0nm,0.3s,baz=4.1,slow=9.2,SNR=3.2
BJT Baijiatuau 13.99 45 *e*Pn **Pn 21 08 18.9 -0.5**
SONM Songino Array 17.24 7 P **Pn 21 09 02.8 +0.9**
comp=Z,0.1nm,0.3s,baz=186,slow=11,SNR=3.8
ULN Ulaanbaatar 17.35 9 *e*Pn **Pn 21 09 03.8 +0.5**
comp=Z,0.7nm,0.4s
KSRS Korea Array 21.44 65 P **P 21 09 49.0 -0.6**
comp=Z,1.5nm,0.7s,mb3.4,baz=243,slow=8.8,SNR=7.6
MKAR Makanchi Array 22.81 321 P **P 21 10 05.5 +1.5**
comp=Z,0.3nm,0.2s,mb3.3,baz=107,slow=12,SNR=5.1
TKM2 Tokmak 2 25.16 307 *e*P **P 21 10 26.9 +0.2**
comp=Z,1.6nm,0.7s,mb3.7
UCH Uchtor 25.70 304 P **P 21 10 32.3 +0.8**
ZALV Zalesovo Beam 26.75 335 P **P 21 10 40.6 -0.3**
comp=Z,2.0nm,1.0s,mb3.6,baz=128,slow=9.6,SNR=4.0
KURK Kurchatov 27.13 324 *e*P **P 21 10 43.1 -1.2**
comp=Z,0.9nm,0.8s,mb3.4,baz=131,slow=9.8,SNR=8.5
KURK LR LR 21 22 05.8
comp=Z,18nm,18.3s,MS2.7,baz=205,slow=38
KURK Kurchatov 27.13 324 *e*P **P 21 10 44.1 -0.3**
comp=Z,0.8nm,0.5s,mb3.5
KURK LR LR 21 22 05.8
BVAR Borovoye Array 32.65 323 P **P 21 11 34.1 +0.9**
comp=Z,0.3nm,0.6s,mb3.4,baz=279,slow=36,SNR=2.4
AKTO Aktyubinsk 38.88 314 LR LR 21 28 23.2
comp=Z,37nm,21.1s,MS3.2,baz=100,slow=36
ARU Arti 40.30 323 *e*P **P 21 12 37.4 -1.0**
comp=Z,1.5nm,0.6s,mb3.9
KIV Kislovodsk 48.93 303 *e*P **P 21 13 47.8 +0.3**
comp=Z,5.2nm,1.0s,mb4.5
OBN Obninsk 52.28 318 P **P 21 14 12.8 +0.1**
WRA Warramunga Arr 58.56 145 P **P 21 14 57.9 -0.4**
comp=Z,0.5nm,0.5s,mb3.8,baz=338,slow=7.7,SNR=8.7
ASAR Alice Springs 61.55 148 P **P 21 15 19.4 +0.7**
comp=Z,0.3nm,0.7s,mb3.5,baz=329,slow=8.2,SNR=3.2
NOA NORSAR Array B 64.59 327 P **P 21 15 37.9 -0.6**
comp=Z,0.5nm,0.6s,mb3.7,baz=75,slow=4.6,SNR=3.3
VSL Villasalto 73.94 307 P **P 21 16 36.7 -0.1**
YKA Yellowknife Ar 82.25 17 P **P 21 17 22.2 -0.3**
comp=Z,0.2nm,0.4s,mb3.4,baz=330,slow=5.9,SNR=4.3

*IDC **05** 21:10:35.8±2.1, 12°.88S×168°.84E, h616km±22km, mb3.5/16, mb1 3.7/16, mb1mx3.6/20, mbtmp3.5/16, Error ellipse: s-maj=27.3km s-min=14.7km az=133.0*
*NEIC **05** 21:10:36.4±0.5, 12°.87S×168°.81E, h626km±7km, mb4.2/16, Error ellipse: s-maj=9.5km s-min=5.9km az=160.0*
*ISCJB **05** 21:10:36.1±0.7, 12°.87S±0°.08×168°.75E±0°.07, h638km±11km, mb4.1/30, Error ellipse: s-maj=13.4km s-min=8.8km az=149.7*
ISC 05 21:10:36.5±0.7,**12°.90S**±0°.08×**168°.80E**±0°.07,
h625km±10km,**n56**,σ0°.68/57,**mb4.2**/30,**2D,Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**9.34**	**291**	P	**P**	**21 12 48.7**	**-0.8**
DZM	**Mont Dzumac**	**9.39**	**193**	*e*P	**P**	**21 12 50.8**	**+1.0**
DZM	**Mont Dzumac**	**9.39**	**193**	*e*P	**P**	**21 12 51.4**	**+1.6**
DZM	113nm,1.4s			*e*S	**S**	**21 14 38.3**	**-0.8**
NOUC	**Port Laguerre**	**9.45**	**194**	*e*P	**P**	**21 12 50.9**	**+0.5**
MSVF	**Nonsavu**	**10.13**	**119**	*e*P	**P**	**21 12 58.0**	**+0.9**
	31nm,0.6s						
FUNA	**Funafuti**	**11.10**	**68**	P	**P**	**21 13 05.3**	**-1.4**
AFI	**Afiamalu**	**18.93**	**95**	*e*P	**P**	**21 14 18.9**	**-0.7**
	33nm,0.7s						
EIDS	**Eidsvold**	**20.80**	**231**	*e*P	**P**	**21 14 35.8**	**-0.5**
	1.3nm,0.3s						
CTA	**Charters Tower**	**22.75**	**249**	P	**P**	**21 14 54.0**	**+0.3**
	1.8nm,0.3s,mb4.1,baz=206,slow=1.0,SNR=4.0						
CTAO	**Charters Tower**	**22.75**	**249**	*e*P	**P**	**21 14 52.9**	**-0.9**
	2.9nm,0.5s,mb4.2						
COEN	**Coen**	**24.94**	**265**	*e*P	**P**	**21 15 13.8**	**+0.6**
	39nm,0.4s						
STKA	**Stephens Creek**	**31.31**	**228**	*e*P	**P**	**21 16 08.8**	**+0.8**
	2.2nm,0.3s,mb4.3						
STKA	**Stephens Creek**	**31.31**	**228**	P	**P**	**21 16 09.0**	**+0.9**
	2.3nm,0.3s,mb4.2,baz=44,slow=8.3,SNR=44						
STKA	**Stephens Creek**	**31.31**	**228**	*e*P	**P**	**21 16 08.6**	**+0.6**
	0.6nm,0.3s,mb3.7						
WRAB	**Tennant Creek**	**33.73**	**253**	*e*P	**P**	**21 16 27.7**	**-0.9**
	21nm,0.9s,mb4.8						
WRA	**Warramunga Arr**	**33.74**	**253**	P	**P**	**21 16 28.4**	**-0.2**
	14nm,0.3s,mb5.0,baz=84,slow=8.7,SNR=183						
WRA				S	**S**	**21 21 06.2**	**-3.8**
	1.3nm,0.7s,baz=87,slow=15,SNR=8.4						
WRA				ScP	ScP	21 21 37.2	+1.4
	0.8nm,0.8s,baz=82,slow=3.8,SNR=3.5						
ASAR	**Alice Springs**	**34.73**	**247**	P	**P**	**21 16 36.9**	**0.0**
	19nm,0.5s,mb5.0,baz=73,slow=9.7,SNR=331						
ASAR				PcP	PcP	21 18 51.7	-0.4
	1.4nm,0.8s,baz=87,slow=3.2,SNR=7.2						
ASAR				S	**S**	**21 21 22.3**	**-2.4**
	1.9nm,0.8s,baz=80,slow=16,SNR=10						
ASAR				ScP	ScP	21 21 40.4	+1.1
	1.4nm,0.7s,baz=85,slow=3.7,SNR=9.1						
KAKA	**Kakadu**	**35.44**	**266**	⇓*i*P	**P**	**21 16 43.7**	**+0.9**
	27nm,0.3s						
KAKA	**Kakadu**	**35.44**	**266**	*e*P	**P**	**21 16 43.5**	**+0.7**
	57nm,0.3s						
BBOO	**Buckleboo**	**35.87**	**231**	*e*P	**P**	**21 16 46.6**	**+0.5**
	9.3nm,0.4s,mb4.7						
KNA	**Kununurra**	**38.85**	**261**	⇓*i*P	**P**	**21 17 10.6**	**+0.1**
	9.8nm,0.2s,mb5.0						
FORT	**Forrest**	**41.51**	**238**	*e*P	**P**	**21 17 31.5**	**+0.1**
	24nm,0.6s,mb4.9						
FITZ	**Fitzroy Crossi**	**41.84**	**257**	*e*P	**P**	**21 17 34.4**	**+0.2**
	5.7nm,0.4s,mb4.5						
FITZ	**Fitzroy Crossi**	**41.84**	**257**	*e*P	**P**	**21 17 34.4**	**+0.2**
	2.9nm,0.4s,mb4.2						
KMBL	**Kambalda**	**46.79**	**239**	*e*P	**P**	**21 18 11.6**	**-0.3**
	25nm,0.3s,mb5.2						
MBWA	**Marble Bar**	**47.48**	**253**	*e*P	**P**	**21 18 17.3**	**+0.2**
	13nm,0.7s,mb4.6						
MEEK	**Meekatharra**	**48.87**	**246**	*e*P	**P**	**21 18 27.5**	**+0.1**
MORW	**Morawa**	**51.40**	**243**	*e*P	**P**	**21 18 45.8**	**+0.1**
KKM	**Kota Kinabalu**	**55.53**	**287**	*e*P	**P**	**21 19 15.3**	**+0.3**
	6.0nm,0.4s,mb4.2						
MJAR	**Matsushiro Arr**	**57.01**	**331**	P	**P**	**21 19 24.3**	**-0.4**
	0.5nm,0.4s,mb3.1,baz=164,slow=7.1,SNR=4.9						
TPUB	**Ta-pu**	**59.29**	**307**	*e*P	**P**	**21 19 39.9**	**-0.4**
	18nm,0.9s,mb4.2						
KSM	**Kuching**	**59.75**	**279**	P	**P**	**21 19 43.3**	**-0.2**
KSRS	**Korea Array**	**63.10**	**324**	P	**P**	**21 20 05.5**	**+0.8**
	1.2nm,0.9s,mb3.2,baz=131,slow=6.8,SNR=4.6						
CASY	**Casey**	**65.77**	**202**	*e*P	**P**	**21 20 20.9**	**-0.1**
	2.3nm,0.6s,mb3.8						
PETK	**Petropavlovsk-**	**66.43**	**353**	P	**P**	**21 20 25.9**	**+0.7**
	1.5nm,0.6s,mb3.6,baz=159,slow=9.3,SNR=3.1						
MDJ	**Mudanjiang**	**67.40**	**331**	P	**P**	**21 20 31.5**	**+0.2**
COCO	**West Island**	**70.02**	**262**	P	**P**	**21 20 47.2**	**-0.5**
KULM	**Kulim**	**70.06**	**281**	*e*P	**P**	**21 20 48.1**	**+0.2**
	2.1nm,0.5s,mb3.8						
PSI	**Prapat**	**71.07**	**278**	P	**P**	**21 20 52.8**	**-1.1**
	6.0nm,0.5s,mb4.4,baz=210,slow=2.3,SNR=5.7						
CMAR	**Chiang Mai Arr**	**75.58**	**293**	P	**P**	**21 21 20.6**	**+1.2**
	5.4nm,0.9s,mb4.0,baz=124,slow=4.0,SNR=28						
CM31	**Chiang Mai Arr**	**75.58**	**293**	*e*P	**P**	**21 21 19.7**	**+0.3**
	4.7nm,0.8s,mb4.0						
CHTO	**Chiang Mai**	**75.70**	**293**	*e*P	**P**	**21 21 21.1**	**+1.1**
	6.9nm,1.1s,mb4.0						
BILL	**Bilibino**	**80.74**	**359**	P	**P**	**21 21 45.6**	**-0.1**
ULN	**Ulaanbaatar**	**81.56**	**323**	*e*P	**P**	**21 21 50.0**	**-0.4**
	3.9nm,1.0s,mb3.9						
SONM	**Songino Array**	**81.93**	**323**	P	**P**	**21 21 52.5**	**+0.3**
	1.3nm,0.6s,mb3.6,baz=144,slow=5.3,SNR=12						
YBH	**Yreka Blue Hor**	**83.08**	**45**	P	**P**	**21 21 57.7**	**-0.4**
	2.2nm,0.7s,mb3.8,baz=177,slow=1.9,SNR=4.8						
MAW	**Mawson**	**84.12**	**202**	*e*P	**P**	**21 22 02.4**	**-0.5**
NVAR	**Mina Array Bea**	**84.96**	**49**	P	**P**	**21 22 07.5**	**+0.1**
	0.6nm,0.5s,mb3.5,baz=228,slow=6.9,SNR=5.9						
ELK	**Elko**	**87.97**	**48**	P	**P**	**21 22 22.9**	**+1.3**
	0.6nm,0.4s,mb3.7,baz=194,slow=1.5,SNR=3.9						
YKA	**Yellowknife Ar**	**95.25**	**27**	P	**P**	**21 22 53.8**	**-0.7**
	1.9nm,0.9s,mb4.2,baz=256,slow=4.4,SNR=7.3						
YKA	**Yellowknife Ar**	**95.25**	**27**	P	**P**	**21 22 53.8**	**-0.7**
ZALV	**Zalesovo Beam**	**96.80**	**324**	P	**P**	**21 23 00.6**	**-1.0**
	0.3nm,0.4s,mb3.9,baz=96,slow=7.4,SNR=3.7						
MK31	**Makanchi Array**	**96.91**	**316**	*e*P	**P**	**21 23 02.4**	**+0.1**
MKAR	**Makanchi Array**	**96.91**	**316**	P	**P**	**21 23 02.2**	**-0.1**
	0.9nm,0.6s,mb4.2,baz=86,slow=7.8,SNR=7.8						
KEST	**Kesra**	**150.67**	**324**	PKPbc	PKPbc	21 29 19.3	-0.5
	0.7nm,0.6s,baz=104,slow=4.7,SNR=4.3						
TORD	**Torodi Ar. Bea**	**167.43**	**273**	PKP	PKPdf	21 29 32.1	-1.0
	0.8nm,1.0s,baz=333,slow=2.1,SNR=3.5						
TORD				PKPab	PKPab	21 30 43.1	-0.2
	1.4nm,1.0s,baz=93,slow=4.7,SNR=6.8						

*ISCJB **05** 21:13:04.5±0.5, 28°.46N±0°.05×103°.21E±0°.05, h10km, mb3.7/5, Error ellipse: s-maj=7.1km s-min=6.0km az=41.7*
*IDC **05** 21:13:05.2±1.1, 28°.41N×103°.25E, h0km, mb3.6/5, mb1 3.7/7, mb1mx3.5/26, mbtmp3.5/7, ML3.2/1, Error ellipse: s-maj=34.7km s-min=21.4km az=69.0*
*NEIC **05** 21:13:06.4±0.4, 28°.42N×103°.26E, h10km, mb3.2/1, Error ellipse: s-maj=9.4km s-min=6.7km az=108.0*
*BJI **05** 21:13:11.3, 28°.06N×103°.49E, h15km, ML3.3/8*
ISC 05 21:13:06.4±0.5,**28°.46N**±0°.04×**103°.23E**±0°.05,**h10**km,**n19,**
σ0°.71/22,**mb3.7/5,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**3.35**	**188**	Pg	**Pb**	**21 14 04.9**	**-1.0**
GYA	**Guiyang**	**3.65**	**122**	Pn	**Pn**	**21 14 04.5**	**+1.7**
GYA				Sn	**Sn**	**21 14 45.9**	**0.0**
GYA				Sg	**Sb**	**21 14 55.1**	**-0.1**
GYA				smax			
	comp=N,90nm,0.7s						
GYA				smax			
	comp=E,110nm,0.8s						
ENH	**Enshi**	**5.75**	**70**	*e*Pn	**Pn**	**21 14 31.3**	**-0.5**
	comp=E,14nm,0.6s						
ENH				*e*Sn	**Sn**	**21 15 38.5**	**+0.6**
XAN	**Xi'an**	**7.39**	**40**	Pg	**Pg**	**21 15 25.9**	**-2.0**
XAN				Sn	**Sn**	**21 16 29.8**	**+12**
XAN				smax			
	comp=N,27nm,1.1s						
XAN				smax			
	comp=E,16nm,0.9s						
CHTO	**Chiang Mai**	**10.38**	**203**	Pn	**Pn**	**21 15 34.6**	**-0.7**
CMAR	**Chiang Mai Arr**	**10.71**	**202**	Pn	**Pn**	**21 15 40.0**	**+0.2**
	comp=E,0.0nm,0.3s,baz=18,slow=12,SNR=3.4						
BJT	**Baijiatuau**	**15.71**	**39**	P	**Pn**	**21 16 47.3**	**-0.3**
SONM	**Songino Array**	**19.50**	**6**	P	**Pn**	**21 17 35.3**	**+0.6**
	comp=E,0.1nm,0.3s,baz=182,slow=12,SNR=3.8						
ULN	**Ulaanbaatar**	**19.60**	**8**	*e*P	**Pn**	**21 17 35.5**	**-0.4**
	comp=E,1.2nm,0.9s						
KSRS	**Korea Array**	**22.53**	**60**	P	**P**	**21 18 06.2**	**-0.1**
	comp=E,0.8nm,0.7s,mb3.3,baz=242,slow=9.7,SNR=4.0						
MKAR	**Makanchi Array**	**24.57**	**324**	P	**P**	**21 18 27.1**	**+0.8**
	comp=E,1.0nm,0.6s,mb3.5,baz=108,slow=11,SNR=9.2						
KSH	**Kashi**	**25.05**	**303**	P	Px	21 18 46.9	
EKS2	**Erkin-Say**	**27.67**	**309**	P	**P**	**21 18 54.0**	**-0.4**
MAJO	**Matsushiro**	**30.45**	**66**	P	**P**	**21 19 19.4**	**+0.2**
ARU	**Arti**	**42.09**	**324**	P	**P**	**21 20 58.9**	**+0.6**
WRA	**Warramunga Arr**	**56.74**	**144**	P	**P**	**21 22 50.6**	**+0.1**
	comp=E,0.9nm,0.7s,mb3.9,baz=334,slow=7.6,SNR=3.5						
KEV	**Kevo**	**58.84**	**337**	P	**P**	**21 23 04.5**	**-0.2**
ASAR	**Alice Springs**	**59.66**	**147**	P	**P**	**21 23 11.1**	**+0.1**
	comp=E,0.5nm,0.4s,mb3.9,baz=325,slow=6.9,SNR=5.7						
NOA	**NORSAR Array B**	**66.48**	**328**	P	**P**	**21 23 56.5**	**+0.7**
	comp=E,0.5nm,0.6s,mb3.7,baz=70,slow=1.7,SNR=3.5						

*BJI **05** 21:27:02.4, 15°.94S×173°.19W, h35km, mB4.9/9, mb4.8/13, Ms4.8/6, Ms7 4.5/7*
*IDC **05** 21:27:03.2±0.5, 15°.26S×173°.61W, h0km, mb4.6/14, mb1 4.8/14, mb1mx4.6/19, mbtmp4.6/14, MS4.0/13, Ms1 4.0/13, ms1mx3.9/18, Error ellipse: s-maj=25.5km s-min=14.5km az=134.0*
*ISCJB **05** 21:27:06.7±0.2, 15°.17S±0°.07×173°.72W±0°.06, h33km, mb4.6/46, MS4.2/21, Error ellipse: s-maj=12.3km s-min=4.5km az=144.7*
*NEIC **05** 21:27:08.8±0.2, 15°.13S×173°.76W, h35km, mb4.7/28, Error ellipse: s-maj=11.2km s-min=4.8km az=139.0*
*GCMT **05** 21:27:14.9±0.3, 15°.15S×173°.32W, h75km±5km, MW4.9, Moment Tensor Solution. s23,c29; s78,c106; Moment tensor: Scale 10^16^Nm; M_{rr}-0.04±.16; $M_{\theta\theta}$0.07±.18; $M_{\phi\phi}$-0.02±.16; $M_{r\theta}$-2.67±.07; $M_{\theta\phi}$1.07±.21; $M_{\phi r}$0.45±.07; Best double couple: $M_0$2.90000×10^16^ NP1:ϕ_s186.00000°, δ21.00000°, λ179.00000°. NP2:ϕ_s277.00000°, δ90.00000°, λ69.00000°. Principal axes: T 2.7600, Plg42.0000°, Azm167.0000°; N 0.2800, Plg21.0000°, Azm277.0000°; P -3.0400, Plg41.0000°, Azm26.0000°; Data Used: II CN IU IC G.*
ISC 05 21:27:08.7±0.2,**15°.16S**±0°.07×**173°.72W**±0°.06,**h35**km,
n401,σ0°.68/287,**mb4.6**/46,**MS4.2**/21,**118C-107D,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.26**	**57**	Pn	**Pn**	**21 27 38.6**	**-5.0**
	407nm,0.3s,baz=74,slow=0.9,SNR=296						
AFI				Sn	**Sn**	**21 28 01.3**	**-8.9**
	911nm,0.3s,baz=195,slow=20,SNR=19						
AFI				LR	LR	21 28 22.7	
	comp=Z,3μm,20.2s,baz=281,slow=36						
AFI	**Afiamalu**	**2.26**	**57**	*e*Pn	**Pn**	**21 27 38.5**	**-5.1**
AFI				*e*Sn	**Sn**	**21 28 01.5**	**-8.7**
FUNA	**Funafuti**	**9.57**	**313**	Pn	**Pn**	**21 29 18.6**	**-5.4**
DZM	**Mont Dzumac**	**20.00**	**247**	*e*P	**P**	**21 31 46.3**	**+7.9**
	181nm,1.3s						
DZM				*e*LR	LR	21 36 46.3	
	1μm,26.9s						
DZM	**Mont Dzumac**	**20.00**	**247**	*e*P	**P**	**21 31 40.8**	**+2.4**
DZM	**Mont Dzumac**	**20.00**	**247**	*e*P	**P**	**21 31 41.4**	**+2.9**
	92nm,1.3s						
NOUC	**Port Laguerre**	**20.14**	**247**	*e*P	**P**	**21 31 47.2**	**+7.3**
PPT	**Papeete**	**23.29**	**99**	*e*LR	LR	21 37 42.9	
	168nm,26.5s						
PAE	**Paea**	**23.29**	**99**	*e*T		21 55 52.1	
	3.2nm,0.3s						
URZ	**Urewera**	**24.39**	**198**	P	**P**	**21 32 23.4**	**-0.2**
	14nm,0.5s,mb4.6,baz=334,slow=3.7,SNR=9.9						
URZ				LR	LR	21 41 09.7	
	comp=Z,593nm,19.8s,MS4.1,baz=36,slow=35						
URZ	**Urewera**	**24.39**	**198**	*e*P	**P**	**21 32 23.6**	**-0.1**
	18nm,0.7s,mb4.6						
HNR	**Honiara**	**26.34**	**279**	LR	LR	21 41 47.4	
	comp=Z,83nm,18.5s,MS3.3,baz=127,slow=33						
RPZ	**Rata Peaks**	**31.28**	**202**	P	**P**	**21 33 24.2**	**-1.1**
	8.1nm,0.6s,mb4.7,baz=34,slow=3.6,SNR=3.7						
TAOE	**Nuku Hiva Isla**	**33.40**	**83**	*e*LR	LR	21 42 26.0	
	428nm,24.8s						
EIDS	**Eidsvold**	**34.45**	**247**	*e*P	**P**	**21 33 52.5**	**-0.7**
	3.3nm,0.8s,mb4.3						
ARMA	**Armidale**	**35.20**	**238**	*e*P	**P**	**21 33 59.7**	**+0.1**
RKT	**Rikitea**	**37.36**	**108**	*e*T		22 13 03.6	
	3.6nm,0.3s						
CTA	**Charters Tower**	**38.40**	**257**	P	**P**	**21 34 26.4**	**-0.5**
	2.7nm,0.7s,mb4.1,baz=103,slow=9.1,SNR=3.6						
CNB	**Canberra Magne**	**38.65**	**232**	*e*P	**P**	**21 34 29.0**	**+0.1**
MTSU	**Mount Surprise**	**40.25**	**260**	*e*P	**P**	**21 34 43.3**	**+0.8**
	22nm,0.7s,mb5.0						
CMSA	**Cobar Meteorol**	**40.41**	**239**	*e*P	**P**	**21 34 43.3**	**-0.3**
TOO	**Toolangi**	**42.38**	**230**	*e*P	**P**	**21 34 59.4**	**-0.3**
TAU	**Tasmania Unive**	**43.28**	**222**	P	**P**	**21 35 05.0**	**-2.0**
STKA	**Stephens Creek**	**43.89**	**240**	*e*P	**P**	**21 35 12.3**	**+0.3**
	4.8nm,0.8s,mb4.3						
STKA	**Stephens Creek**	**43.89**	**240**	P	**P**	**21 35 12.4**	**+0.4**
	5.2nm,0.6s,mb4.5,baz=97,slow=8.7,SNR=20						
STKA				LR	LR	21 51 34.3	
	comp=Z,213nm,21.4s,MS4.0,baz=26,slow=34						
STKA	**Stephens Creek**	**43.89**	**240**	*e*P	**P**	**21 35 12.9**	**+0.9**
	18nm,2.0s,mb4.4						
MCQ	**Macquarie Isla**	**44.64**	**202**	P	**P**	**21 35 19.8**	**+2.1**
WRAB	**Tennant Creek**	**49.59**	**257**	*e*P	**P**	**21 35 56.2**	**-0.6**
	10nm,0.8s,mb4.9						
WRA	**Warramunga Arr**	**49.60**	**257**	P	**P**	**21 35 56.4**	**-0.5**
	4.6nm,0.3s,mb5.0,baz=96,slow=5.9,SNR=72						
ASAR	**Alice Springs**	**49.89**	**252**	P	**P**	**21 35 58.9**	**-0.2**
	31nm,0.7s,mb5.5,baz=86,slow=8.3,SNR=220						
FORT	**Forrest**	**55.25**	**243**	*e*P	**P**	**21 36 37.8**	**-0.8**
	6.0nm,0.5s,mb4.9						
FITZ	**Fitzroy Crossi**	**57.96**	**258**	*e*P	**P**	**21 36 59.5**	**+1.4**
MBWA	**Marble Bar**	**63.13**	**254**	P	**P**	**21 37 32.8**	**-0.5**
SBA	**Scott Base**	**63.46**	**185**	*e*P	**P**	**21 37 36.7**	**+2.2**
	8.6nm,0.7s,mb5.0						
MJAR	**Matsushiro Arr**	**68.56**	**320**	P	**P**	**21 38 08.6**	**+0.7**
	2.2nm,0.9s,mb4.1,baz=168,slow=5.0,SNR=4.6						
MJAR				LR	LR	22 02 26.5	
	comp=Z,143nm,19.6s,MS4.2,baz=190,slow=31						
MAJO	**Matsushiro**	**68.56**	**320**	P	**P**	**21 38 06.1**	**-1.9**
CASY	**Casey**	**70.49**	**205**	*e*P	**P**	**21 38 18.9**	**-0.5**
	4.8nm,0.9s,mb4.4						
PETK	**Petropavlovsk-**	**72.31**	**342**	P	**P**	**21 38 30.9**	**+0.4**
	5.9nm,0.7s,mb4.6,baz=118,slow=8.5,SNR=10						
PETK				LR	LR	22 09 47.7	
	comp=Z,40nm,19.0s,MS3.7,baz=210,slow=35						
EDW2	**Edwards Air Fo**	**72.60**	**45**	⇓P	**P**	**21 38 32.9**	**+0.3**
	baz=73						
MONP	**Monument Peak**	**72.64**	**48**	⇓P	**P**	**21 38 33.3**	**+0.4**
	baz=73						
ISA	**Isabella**	**72.70**	**44**	⇓P	**P**	**21 38 32.9**	**-0.3**
	baz=73						
ISA	**Isabella**	**72.70**	**44**	*e*P	**P**	**21 38 33.4**	**+0.2**
	18nm,1.7s,mb4.7						
CMB	**Columbia Colle**	**72.79**	**42**	*e*P	**P**	**21 38 33.4**	**-0.3**
	6.4nm,0.9s,mb4.5						
PFO	**Pinyon Flat Ob**	**72.99**	**47**	⇓P	**P**	**21 38 35.3**	**+0.4**
	baz=73						
LRMC	**Laurel Mountai**	**73.13**	**45**	⇓P	**P**	**21 38 36.1**	**+0.3**
	baz=73						
BELC	**Belle Mtn. Jos**	**73.52**	**47**	⇑P	**P**	**21 38 38.4**	**+0.3**
	baz=74						
MTUM	**Tungsten Hills**	**73.58**	**43**	*e*P	**P**	**21 38 39.4**	**+1.0**
MPMC	**Manual Prospec**	**73.59**	**45**	⇓P	**P**	**21 38 38.8**	**+0.4**
	baz=74						
YBH	**Yreka Blue Hor**	**73.60**	**37**	*e*P	**P**	**21 38 38.7**	**+0.4**
	30nm,1.4s,mb5.0						
WAKR	**Walker**	**73.67**	**42**	*e*P	**P**	**21 38 39.8**	**+1.0**
HEC	**Hector,Ludlow**	**73.72**	**46**	⇓P	**P**	**21 38 39.4**	**+0.2**
	baz=74						
BC3	**Big Chuckawall**	**73.73**	**48**	⇓P	**P**	**21 38 39.6**	**+0.3**
	baz=74						
GLA	**Glamis**	**73.87**	**48**	⇑P	**P**	**21 38 40.0**	**-0.2**
	baz=74						
GLA	**Glamis**	**73.87**	**48**	*e*P	**P**	**21 38 39.5**	**-0.7**
	9.7nm,1.1s,mb4.7						
BEKR	**Beckworth**	**73.89**	**40**	⇓P	**P**	**21 38 39.9**	**-0.2**
	baz=74						
WCN	**Washoe City**	**73.93**	**41**	⇓P	**P**	**21 38 39.6**	**-0.8**
	baz=74						
HUMO	**Hull Mountain**	**74.00**	**37**	*e*P	**P**	**21 38 42.0**	**+1.3**
GMRC	**Granite Mounta**	**74.16**	**47**	⇑P	**P**	**21 38 41.6**	**-0.3**
	baz=74						
GRAC	**Grapevine Rang**	**74.18**	**44**	⇓P	**P**	**21 38 41.9**	**0.0**
	baz=74						
IRM	**Iron Mountain**	**74.20**	**47**	⇑P	**P**	**21 38 42.4**	**+0.4**
	baz=74						
FURC	**Furnace Creek,**	**74.24**	**45**	⇓P	**P**	**21 38 41.4**	**-0.9**
	baz=74						
TUQ	**Turquoise Moun**	**74.32**	**46**	⇓P	**P**	**21 38 43.0**	**+0.3**
	baz=74						
NVAR	**Mina Array Bea**	**74.36**	**42**	P	**P**	**21 38 43.4**	**+0.5**
	7.1nm,0.8s,mb4.6,baz=228,slow=10,SNR=33						
Y12C	**Blythe**	**74.44**	**48**	⇓P	**P**	**21 38 43.9**	**+0.4**
	baz=75						
113A	**Mohawk Valley,**	**74.50**	**49**	⇓P	**P**	**21 38 44.1**	**+0.3**
	baz=75						
Z13A	**Yuma Proving G**	**74.79**	**49**	⇑P	**P**	**21 38 45.7**	**+0.2**
	baz=75						
214A	**Organ Pipe Nat**	**74.80**	**50**	⇓P	**P**	**21 38 45.7**	**0.0**
	baz=75	

S13A **Holt Ranch, En** 76.86 45 ⇓P P 21 38 57.5 +0.3
baz=77,SNR=5.6
218A **Dragoon** 76.88 51 ⇓P P 21 38 57.7 +0.3
baz=77
I07A **Izee** 76.90 37 ⇑P P 21 38 57.3 0.0
baz=77,SNR=7.8
Q12A **Willow Creek R** 76.97 43 ⇓P P 21 38 57.4 -0.4
baz=77
X16A **Lo Mia Camp, P** 76.99 49 ⇑P P 21 38 58.1 0.0
baz=77,SNR=6.4
J08A **Circle Bar Ran** 77.08 38 ⇑P P 21 38 58.2 -0.1
baz=77
Y17A **Roosevelt** 77.08 50 ⇓P P 21 38 58.8 +0.2
baz=77
R13A **O'Grain Ranch,** 77.09 44 ⇑P P 21 38 58.1 -0.5
baz=77
T14A **Hurricane** 77.13 46 ⇓P P 21 38 58.8 0.0
baz=77
V15A **Kaibab Nationa** 77.15 47 ⇓P P 21 38 59.6 +0.7
baz=77,SNR=7.5
CCUT **Cedar City** 77.18 45 eP P 21 39 00.3 +1.2
319A **Douglas** 77.19 52 ⇓P P 21 38 59.4 +0.2
baz=77
118A **Homack Ranch,** 77.24 51 ⇓P P 21 38 59.9 +0.3
baz=77,SNR=6.6
U15A **North Rim** 77.36 47 ⇑P P 21 39 00.2 +0.1
baz=78,SNR=9.7
X17A **Forest Lakes** 77.42 49 ⇑P P 21 39 00.5 0.0
baz=78
Q13A **Wheeler Ranch,** 77.46 44 ⇑P P 21 38 59.6 -0.9
baz=78,SNR=6.2
219A **White Tail Can** 77.49 52 ⇓P P 21 39 00.3 -0.6
baz=78
J09A **Fry Pan Ranch,** 77.50 38 ⇓P P 21 39 00.5 -0.2
baz=78,SNR=7.2
L10A **Juniper Basin** 77.56 40 ⇓P P 21 39 01.0 -0.1
baz=78
WUAZ **Wupatki** 77.57 48 ⇑P P 21 39 01.2 -0.1
baz=78
T15A **Red Dirt Ranch** 77.59 46 ⇑P P 21 39 02.0 +0.6
baz=78
K10A **MacKenzie Ranc** 77.71 39 ⇑P P 21 39 02.3 +0.5
baz=78,SNR=10
Y18A **Canyon Day Jun** 77.72 50 ⇑P P 21 39 03.0 +0.8
baz=78
P13A **Bates Ranch, G** 77.72 43 ⇓P P 21 39 01.5 -0.5
baz=78,SNR=7.6
119A **Ashpeak Ranch,** 77.80 51 ⇑P P 21 39 02.5 -0.2
baz=78
I09A **Lost Marbles R** 77.87 38 ⇓P P 21 39 00.6 -2.2
baz=78
G08A **Pilot Rock** 77.93 36 ⇑P P 21 39 03.5 +0.5
baz=78
Q14A **Sevier Lake (B** 77.97 44 ⇑P P 21 39 03.5 +0.1
baz=78,SNR=10
220A **Playas Peak, P** 78.00 52 ⇑P P 21 39 03.6 -0.2
baz=78,SNR=6.1
V17A **Tonalea, Kykot** 78.03 48 ⇑P P 21 39 03.5 -0.4
baz=78,SNR=9.2
L11A **Cat Creek Ranc** 78.06 40 ⇑P P 21 38 56.5 -7.3
baz=78,SNR=5.8
M12A **Wells** 78.18 41 ⇑P P 21 39 04.2 -0.4
baz=78
120A **U Bar Ranch, L** 78.21 51 ⇓P P 21 39 05.6 +0.7
baz=78
K11A **Parker Ranch,** 78.22 39 ⇑P P 21 39 04.4 -0.3
baz=78,SNR=6.1
R15A **Junction** 78.26 45 ⇑P P 21 39 05.6 +0.6
baz=78
H09A **Durkee** 78.31 37 ⇓P P 21 39 05.2 0.0
baz=78
Y19A **Nutrioso** 78.38 50 ⇑P P 21 39 06.0 +0.2
baz=78,SNR=6.8
P14A **Drum Mountains** 78.42 43 ⇑P P 21 39 06.0 +0.1
baz=79,SNR=13
MSU **Marysvale** 78.48 45 eP P 21 39 07.7 +1.4
Z20A **Nine Sixteen R** 78.49 51 ⇑P P 21 39 06.9 +0.5
baz=79
L12A **House Creek Ra** 78.51 40 ⇓P P 21 38 59.7 -6.6
baz=79,SNR=5.7
X19A **St. Johns** 78.57 50 ⇑P P 21 39 00.5 -6.3
baz=79
X19A ⇓P 21 39 07.8
baz=79
U17A **Shonto** 78.59 47 ⇑P P 21 39 06.8 -0.1
baz=79
BMO **Blue Mountains** 78.62 37 eP P 21 39 06.5 -0.4
11nm,1.6s,mb4.5
M13A **Montello** 78.63 41 ⇓P P 21 39 02.5 -4.5
baz=79
M13A **Montello** 78.63 41 P P 21 39 03.1 -3.9
4.8nm,0.7s,mb4.5
MDJ **Mudanjiang** 78.65 323 P P 21 39 07.5 +0.5
MDJ pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
T17A **Navajo Res., N** 78.68 47 ⇓P P 21 39 07.8 +0.4
baz=79,SNR=8.1
V18A **Ganado** 78.69 48 ⇑P P 21 39 08.0 +0.5
baz=79
MFID **Camas Ranch** 78.70 39 ⇑P P 21 39 07.5 +0.2
baz=79
H10A **Noah's Angus R** 78.80 38 ⇑P P 21 39 07.8 -0.1
baz=79,SNR=5.2
W19A **Sanders** 78.81 49 ⇑P P 21 39 07.6 -0.6
baz=79
K12A **Draper Farm, C** 78.84 40 ⇓P P 21 39 08.6 +0.5
baz=79
121A **Cookes Peak, D** 78.84 52 ⇑P P 21 39 09.0 +0.6
baz=79
DUG **Dugway** 78.90 43 ⇑P P 21 39 08.6 0.0
baz=79,SNR=6.2
DUG **Dugway** 78.90 43 eP P 21 39 08.7 +0.2
comp=Z,6.3nm,1.0s,mb4.5
Y20A **Horse Springs,** 79.01 50 ⇑P P 21 39 10.4 +1.2
baz=79
J12A **Stokes Ranch,** 79.05 39 ⇑P P 21 39 08.6 -0.7
baz=79,SNR=7.2
U18A **Rough Rock, Ch** 79.07 48 ⇓P P 21 39 09.1 -0.5
baz=79
L13A **Double Diamond** 79.15 41 ⇓P P 21 39 10.3 +0.4
baz=79
X20A **Quemado** 79.20 50 ⇓P P 21 39 10.6 +0.3
baz=79
M14A **Sheep Mountain** 79.22 42 ⇑P P 21 39 10.1 -0.1
baz=79,SNR=18
Z21A **St. Cloud Mine** 79.27 51 ⇑P P 21 39 10.7 0.0
baz=79
H11A **Donnelly** 79.30 38 ⇑P P 21 39 11.2 +0.6
baz=80
I12A **Atlanta** 79.33 39 ⇓P P 21 39 10.6 -0.2
baz=80,SNR=7.8
D09A **Jones Farm, Ri** 79.33 35 ⇓P P 21 39 11.3 +0.6
baz=80
K13A **Stover Farm, H** 79.36 40 ⇑P P 21 39 10.9 0.0
baz=80
Q16A **Castle Valley** 79.36 45 ⇑P P 21 39 11.3 +0.2
baz=80
BMRM **Bremner River** 79.36 14 eP P 21 39 10.0 -0.6
comp=Z,13nm,0.9s,mb4.9
T18A **Mexican Hat** 79.40 47 ⇑P P 21 39 11.7 +0.4
baz=80,SNR=19
R17A **Hanksville Air** 79.43 45 ⇓P P 21 39 10.9 -0.6
baz=80,SNR=7.3
G11A **Walters Elk Ra** 79.54 37 ⇑P P 21 39 12.0 +0.1
baz=80
L14A **Malta** 79.57 41 ⇓P P 21 39 11.7 -0.5
baz=80
S18A **Hurst Farm, Bl** 79.58 46 ⇓P P 21 39 12.3 0.0
baz=80
HLID **Hailey** 79.64 39 ⇓P P 21 39 12.2 -0.3
baz=80,SNR=11
HLID **Hailey** 79.64 39 eP P 21 39 12.1 -0.4
comp=Z,6.0nm,0.9s,mb4.5
J13A **Cove Ranch, Pi** 79.70 40 ⇓P P 21 39 13.4 +0.6
baz=80,SNR=5.1
HVU **Hansel Valley** 79.73 42 eP P 21 39 13.7 +0.6
NJ2 **Nanjing** 79.78 307 eP P 21 39 14.4 +0.9
NJ2 pmax pmax
comp=Z,20nm,0.6s,mb5.2
T19A **Beclabito** 79.86 47 ⇓P P 21 39 13.7 -0.1
baz=80,SNR=7.7
K14A **Jones Ranch, D** 79.88 41 ⇑P P 21 39 13.8 0.0
baz=80
SRU **San Rafael** 79.89 45 ⇓P P 21 39 14.6 +0.6
baz=80
SRU **San Rafael** 79.89 45 eP P 21 39 14.3 +0.3
comp=Z,4.2nm,0.8s,mb4.4
H12A **Diamond D Ranc** 79.91 38 ⇓P P 21 39 14.2 +0.3
baz=80
P17A **Butcher Ranch,** 79.92 44 ⇑P P 21 39 14.8 +0.7
baz=80
G12A **Big Creek, Yel** 79.94 38 ⇓P P 21 39 13.5 -0.6
baz=80
R18A **Canyonlands Na** 79.98 46 ⇑P P 21 39 14.4 -0.1
baz=80,SNR=7.7
J14A **Carey** 80.07 40 ⇑P P 21 39 14.7 -0.1
baz=80,SNR=7.2
Y22A **Socorro** 80.07 51 ⇑P P 21 39 15.9 +0.8
baz=80
L15A **Malad City** 80.10 42 ⇑P P 21 39 15.3 +0.3
baz=80
Q18A **Rafter H Ranch** 80.16 45 ⇓P P 21 39 14.8 -0.5
baz=80
S19A **Harvey Farm, M** 80.21 47 ⇓P P 21 39 14.6 -1.1
baz=80
M16A **Huntsville** 80.24 42 ⇓P P 21 39 15.7 -0.1
baz=80
425A **Indio Mountain** 80.27 54 ⇓P P 21 39 15.6 -0.6
baz=80
H13A **Challis** 80.28 39 ⇑P P 21 39 15.7 -0.2
baz=80,SNR=5.7
O17A **Robinson Place** 80.28 44 ⇓P P 21 39 15.7 -0.4
baz=80
F12A **Elk City** 80.33 37 ⇓P P 21 39 15.2 -1.0
baz=80,SNR=6.6
P18A **Preston Nutter** 80.33 45 ⇓P P 21 39 16.4 0.0
baz=80
K15A **Arbon** 80.36 41 ⇓P P 21 39 15.9 -0.5
baz=80,SNR=6.1
I14A **Mackay** 80.43 40 ⇑P P 21 39 17.1 +0.4
baz=81
626A **Big Bend Ranch** 80.45 56 ⇑P P 21 39 17.1 -0.1
baz=81
325A **Bean Ranch, Si** 80.52 54 ⇑P P 21 39 17.3 -0.3
baz=81
G13A **Cobalt** 80.57 38 ⇑P P 21 39 16.5 -0.9
baz=81
U21A **Nageezi** 80.66 48 ⇓P P 21 39 18.4 +0.2
baz=81
PV04 **Paradox Valley** 80.67 46 eP P 21 39 19.5 +1.4
Q19A **Hogan Spring (** 80.68 45 ⇓P P 21 39 18.5 +0.3
baz=81,SNR=5.7
526A **Mary Lane Ranc** 80.69 55 ⇓P P 21 39 17.3 -1.2
baz=81
CN2 **Changchun** 80.71 320 eP P 21 39 19.6 +1.4
CN2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
L16A **Fish Haven** 80.72 42 ⇓P P 21 39 16.8 -1.6
baz=81
TXAR **Lajitas Array** 80.74 56 P P 21 39 19.3 +0.5
comp=Z,2.3nm,1.0s,mb4.1,baz=224,slow=5.2,SNR=16
TXAR LR LR 22 09 11.7
comp=Z,99nm,18.7s,MS4.2,baz=0.0,slow=31
TXAR **Lajitas Array** 80.74 56 P P 21 39 19.3 +0.5
TXAR LR LR 22 09 11.7
Y23A **Lovelace Mesa,** 80.75 51 ⇑P P 21 39 17.6 -1.1
baz=81
J15A **Blackfoot** 80.78 40 ⇓P P 21 39 18.4 -0.2
baz=81,SNR=5.9
PV01 **Paradox Valley** 80.78 46 eP P 21 39 19.6 +0.8
comp=Z,1μm,1.5s
H14A **Leadore** 80.84 39 ⇓P P 21 39 19.2 +0.2
baz=81,SNR=6.6
ANMO **Albuquerque** 80.89 50 eP P 21 39 19.8 +0.4
comp=Z,4.4nm,1.8s,mb4.1
F13A **Darby** 80.89 38 ⇑P P 21 39 18.9 -0.2
baz=81
M17A **Scullys Gap (B** 80.95 43 ⇑P P 21 39 18.7 -0.8
baz=81
426A **McDonald Obser** 80.98 55 ⇓P P 21 39 19.6 -0.4
baz=81
627A **Terlingua Ranc** 81.01 56 ⇑P P 21 39 19.5 -0.7
baz=81
K16A **Soda Springs** 81.03 41 ⇑P P 21 39 20.5 +0.6
baz=81
527A **Woodward Ranch** 81.10 56 ⇑P P 21 39 19.5 -1.2
baz=81
S21A **Coal Bank Pass** 81.12 47 ⇑P P 21 39 21.6 +1.0
baz=81
L17A **Cokeville** 81.12 42 ⇑P P 21 39 19.9 -0.6
baz=81
W23A **Werner Place,** 81.21 50 ⇑P P 21 39 22.1 +1.0
baz=81
Y24A **Capitan** 81.22 51 ⇓P P 21 39 20.4 -0.8
baz=81
MCMT **McKenzie Canyo** 81.27 39 eP P 21 39 21.7 +0.5
comp=Z,3.0nm,1.1s,mb4.1
H15A **Lima** 81.28 39 ⇑P P 21 39 21.4 +0.2
baz=82
GDL2 **Guadalupe Moun** 81.33 53 eP P 21 39 23.1 +1.3
628A **Black Gap, Mar** 81.42 56 ⇑P P 21 39 22.6 +0.2
baz=82
RRI2 **Red Ridge** 81.46 41 eP P 21 39 23.8 +1.6
226A **Malaga, Loving** 81.48 54 ⇑P P 21 39 22.3 -0.3
baz=82
D13A **Huson** 81.52 36 ⇓P P 21 39 21.5 -1.0
baz=82
427A **Hayter Ranch,** 81.54 55 ⇑P P 21 39 21.1 -1.9
baz=82
G15A **Dillon** 81.66 39 ⇓P P 21 39 23.6 +0.3
baz=82
U23A **El Rito** 81.68 49 ⇑P P 21 39 23.1 -0.5
baz=82
DLMT **Dillon** 81.70 39 eP P 21 39 24.2 +0.8
E14A **Clinton** 81.72 37 ⇑P P 21 39 22.3 -1.3
baz=82
BSMT **Bassoo Peak** 81.75 36 eP P 21 39 24.5 +0.9
TPAW **Teton Pass** 81.76 41 eP P 21 39 24.3 +0.4
528A **Cox Ranch, San** 81.76 56 ⇓P P 21 39 24.6 +0.4
baz=82
W24A **Lazy 6 Ranch,** 81.78 50 ⇑P P 21 39 24.4 +0.3
baz=82
Q21A **Lamborn Mesa,** 81.80 46 ⇑P P 21 39 24.6 +0.5
baz=82
K18A **Toltan Ranch,** 81.92 42 ⇓P P 21 39 25.3 +0.6
baz=82
M19A **Rock Springs** 81.96 43 ⇑P P 21 39 25.2 +0.3
baz=82
IMW **Indian Meadow** 81.97 40 eP P 21 39 25.9 +1.0
F15A **Butte** 82.01 38 ⇓P P 21 39 25.2 +0.1
baz=82
LRM **Limekiln Ridge** 82.02 38 eP P 21 39 26.5 +1.3
428A **Kincaid Ranch,** 82.06 55 ⇓P P 21 39 25.1 -0.6
baz=82
D14A **Greenough** 82.06 37 ⇓P P 21 39 24.8 -0.6
baz=82
L19A **Farson** 82.11 43 ⇑P P 21 39 24.2 -1.5
baz=82
CHMT **Chamberlain Mo** 82.12 37 eP P 21 39 26.1 +0.4
H16A **Russell Place,** 82.18 40 ⇓P P 21 39 26.6 +0.6
baz=82,SNR=11
COLA **College** 82.19 11 eP P 21 39 25.0 -0.6
comp=Z,12nm,0.8s,mb4.9
J18A **Kendall Valley** 82.22 41 ⇓P P 21 39 26.2 0.0
baz=82
328A **Wristen Ranch,** 82.22 55 ⇑P P 21 39 26.1 -0.5
baz=82
N20A **Spence Gulch,** 82.24 44 ⇑P P 21 39 26.0 -0.4
baz=82
BW06 **Boulder Array** 82.30 42 ⇓P P 21 39 26.0 -0.7
baz=82,SNR=6.6
PDAR **Pinedale Array** 82.30 42 P P 21 39 26.6 -0.1
comp=Z,2.9nm,0.8s,mb4.3,baz=222,slow=2.6,SNR=19
PDAR LR LR 22 10 10.0
comp=Z,149nm,19.3s,MS4.4,baz=253,slow=31
SMCO **Snowmass** 82.37 46 eP P 21 39 27.1 0.0
comp=Z,3.5nm,0.8s,mb4.3
BOZ **Bozeman (W)** 82.43 39 eP P 21 39 27.4 +0.1
F16A **Kennard Place,** 82.50 39 ⇑P P 21 39 26.7 -1.0
baz=83
QIZ **Qiongzhong** 82.53 292 P P 21 39 27.8 -0.6
QIZ S S 21 49 43.1 -0.2
QIZ pmax pmax
comp=Z,14nm,1.8s,mb4.7
QIZ LR LR
comp=Z,130nm,27.7s,MS4.2
M20A **Sweetwater, Wa** 82.59 44 ⇑P P 21 39 27.5 -0.7
baz=83
D15A **Lincoln** 82.62 37 ⇓P P 21 39 28.0 -0.2
baz=83
V25A **Rancho No Teng** 82.63 50 ⇑P P 21 39 27.9 -0.7
baz=83
Z27A **Tatum** 82.66 53 ⇓P P 21 39 27.5 -1.3
baz=83
L20A **Wamsutter** 82.73 43 ⇓P P 21 39 28.8 -0.2
baz=83
SDCO **Great Sand Dun** 82.79 48 eP P 21 39 29.7 +0.3
comp=Z,5.9nm,1.5s,mb4.4
E16A **East Helena** 82.85 38 ⇑P P 21 39 27.0 -2.4
baz=83
C15A **Salmond Ranch,** 82.95 37 ⇓P P 21 39 28.0 -2.0
baz=83
K20A **Yellowstone Ra** 83.03 43 ⇓P P 21 39 30.4 -0.2
baz=83
A14A **Double T Ranch** 83.12 35 ⇑P P 21 39 30.2 -0.6
baz=83
D16A **Dana Ranch, Ca** 83.18 38 ⇑P P 21 39 30.7 -0.4
baz=83
M21A **Separation Pea** 83.20 44 ⇑P P 21 39 30.4 -1.0
baz=83
DAWY **Dawson** 83.27 14 eP P 21 39 31.9 +0.7
RWWY **Rawlins** 83.34 44 eP P 21 39 32.2 +0.1
comp=Z,6.1nm,0.8s,mb4.7
L21A **Rawlins** 83.36 43 ⇓P P 21 39 31.9 -0.3
baz=84
N22A **Wattenberg Ran** 83.45 45 ⇓P P 21 39 32.9 +0.2
baz=84
EGAK **Eagle** 83.46 13 eP P 21 39 31.9 -0.3
comp=Z,3.7nm,0.8s,mb4.5
BILL **Bilibino** 84.24 353 eP P 21 39 36.0 -0.1
comp=Z,2.8nm,0.8s,mb4.4
A17A **Triple J Farms** 84.64 36 ⇑P P 21 39 37.3 -1.3
baz=85
RSSD **Black Hills** 86.50 43 P P 21 39 49.1 +1.2
comp=Z,5.4nm,0.5s,mb5.0
MAW **Mawson** 87.92 199 P P 21 39 55.1 +0.6
comp=Z,11nm,0.6s,mb5.2,baz=128,slow=6.7,SNR=33
MAW LR LR 22 14 30.6
comp=Z,256nm,19.5s,MS4.6,baz=98,slow=32
MAW **Mawson** 87.92 199 eP P 21 39 54.8 +0.3
comp=Z,1.5nm,0.7s,mb4.3
HHC **Hu-ho-hao-te** 88.64 313 eP P 21 39 57.8 -0.5
HHC pP pP 21 40 08.4 -1.0
HHC sP sP 21 40 12.3 -1.1
HHC PP PP 21 43 29.5 +2.1
HHC SKS 21 50 22.6
HHC S S 21 50 39.6 -2.9
HHC pmax pmax
comp=Z,20nm,1.0s,mb5.4
HHC pmax pmax
comp=Z,48nm,5.3s
HHC LR LR
comp=N,67nm,21.6s,MS4.3
HHC LR LR
comp=E,100nm,20.4s,MS4.3
HHC LR LR
comp=Z,55nm,20.4s,MS4.0
PLCA **Paso Flores** 89.90 132 LR LR 22 11 29.1
comp=Z,122nm,21.5s,MS4.3,baz=287,slow=30
YKA **Yellowknife Ar** 90.00 23 P P 21 40 04.0 -0.2
comp=Z,1.5nm,0.7s,mb4.4,baz=246,slow=4.2,SNR=9.3
YKA LR LR 22 15 09.0
comp=Z,15nm,19.4s,MS3.4,baz=355,slow=32
YKA **Yellowknife Ar** 90.00 23 P P 21 40 04.0 -0.2
YKA LR LR 22 15 09.0
CMAR **Chiang Mai Arr** 92.25 288 P P 21 40 16.8 +1.1
comp=Z,0.6nm,0.7s,mb4.0,baz=104,slow=3.8,SNR=5.3
LZH **Lanzhou** 92.84 306 eP P 21 40 18.5 +0.5
LZH pP pP 21 40 29.2 +0.1
LZH sP sP 21 40 33.1 0.0
LZH ePP PP 21 44 03.6 +2.8
LZH pmax pmax
comp=Z,16nm,1.5s,mb5.2
LZH pmax pmax
comp=Z,85nm,5.0s
LZH LR LR
comp=N,200nm,17.8s
LZH LR LR
comp=Z,250nm,19.7s,MS4.7
ULM **Lac du Bonnet** 93.94 39 LR LR 22 17 29.0
comp=Z,187nm,18.8s,MS4.6,baz=248,slow=32
AML **Almayashu** 116.72 310 ePKPdf PKPdf 21 45 50.1 +0.7
ARU **Arti** 122.98 328 ePKPdf PKPdf 21 46 01.2 +0.2
ARCES **ARCESS Array B** 124.33 352 PKP PKPdf 21 46 02.7 -0.6
comp=Z,6.2nm,0.8s,baz=29,slow=2.8,SNR=13
ARCES **ARCESS Array B** 124.33 352 PKP PKPdf 21 46 02.7 -0.6
FINES **FINESS Array B** 131.65 347 PKP PKPdf 21 46 17.1 -0.3
comp=Z,1.3nm,0.7s,baz=127,slow=12,SNR=4.3
NOA **NORSAR Array B** 134.05 357 PKP PKPdf 21 46 22.1 +0.1
comp=Z,1.2nm,0.9s,baz=18,slow=4.2,SNR=4.5
HFS **Hagfors** 134.77 355 PKP PKPdf 21 46 21.5 -1.9
comp=Z,1.1nm,0.6s,baz=70,slow=1.7,SNR=4.0
AKASG **Malin Array Be** 140.00 337 PKP PKPdf 21 46 32.5 -0.8
comp=Z,0.4nm,0.5s,baz=36,slow=1.7,SNR=5.1
AKASG **Malin Array Be** 140.00 337 PKP PKPdf 21 46 32.5 -0.8
CLL **Collm** 143.54 353 i PKPpre 21 46 36.8
comp=Z,4.0nm,0.9s
CLL i PKPdf PKPdf 21 46 40.1 +0.5
CLL i PKiKP PKiKP 21 46 43.5 +0.5
CLL es PKiKP 21 46 58.0
CLL LmV 21 51 00.0
comp=Z,100nm,20.0s
STHS **Stebnicka Huta** 143.72 343 ePKP PKPdf 21 46 37.7 -2.3
STHS e 21 46 56.4
BRG **Berggiesshubel** 143.85 352 eP PKPdf 21 46 43.9 +3.8
comp=Z,4.2nm,1.0s
BRG
comp=N,87nm,18.3s
BRG
comp=E,134nm,15.7s
BRG
comp=Z,200nm,17.1s
KOLS **Kolonicke sedl** 143.86 342 ePKP PKPdf 21 46 39.5 -0.7
KOLS e 21 46 51.8
KOLS e 21 47 00.0
UPC **Upice** 143.88 349 epPKP pPKPdf 21 46 56.5 +4.8
NIE **Niedzica** 143.96 344 ePKP PKPdf 21 46 39.5 -0.9
DPC **Dobruska-Polom** 143.97 349 ePKP PKPdf 21 46 39.2 -1.2
DPC epPKP pPKPdf 21 46 52.3 +0.4
DPC AMS AMS 22 47 30.0
comp=Z,200nm,5.7s
BURAR **Bucovina Array** 144.04 338 ⇓i P PKPdf 21 46 41.8 +1.2
OKC **Ostrava-Krasne** 144.09 347 AMS AMS 22 45 30.0
comp=Z,100nm,6.3s
PVCC **Panska Ves** 144.09 351 AMS AMS 22 49 00.0
comp=Z,100nm,28.5s
CRVS **Cervenica-Dubn** 144.12 343 ePKP PKPdf 21 46 40.0 -0.7
CRVS e 21 46 50.6
CRVS e 21 46 59.0
MORC **Moravsky Berou** 144.28 347 ePKPdf PKPdf 21 46 39.9 -1.0
MORC **Moravsky Berou** 144.28 347 ⇓i P PKPdf 21 46 40.6 -0.3
UCC **Uccle** 144.42 2 P PKPdf 21 46 41.8 +0.6
TRPA **Tarpa** 144.49 341 ⇑i P PKPdf 21 46 41.0 -0.4
PRU **Pruhonice** 144.62 351 ePKP PKPdf 21 46 42.4 +0.9
PRU epPKP pPKPdf 21 46 55.9 +2.9
PRU AMS AMS 22 49 10.0
comp=Z,100nm,14.9s
MEM **Membach** 144.65 0 PKP PKPdf 21 46 42.9 +1.3
NKC **Novy Kostel** 144.67 353 ePKP PKPdf 21 46 41.3 -0.3
NKC epPKP pPKPdf 21 46 54.5 +1.4
NKC AMS AMS 22 47 40.0
comp=Z,100nm,6.1s
KECS **Kecovo** 144.77 344 ePKP PKPdf 21 46 42.1 +0.3
VRI **Vrincioaia** 144.90 335 ⇑i P PKPdf 21 46 41.4 -0.8
VRAC **Vranov** 144.92 348 PKPbc PKPdf 21 46 42.4 +0.3
comp=Z,2.8nm,0.7s,baz=65,slow=14,SNR=5.4
PLOR **Plostina** 144.95 335 ⇓i P PKPdf 21 46 41.7 -0.5
DOU **Dourbes** 145.13 2 PKP PKPdf 21 46 44.1 +1.7
GIVF **Givet** 145.13 2 ePKP1 PKPbc 21 46 42.4 +0.5
TREC **Trest** 145.14 349 AMS AMS 22 48 30.0
comp=Z,100nm,19.8s
BAIF **Baives** 145.16 2 ePKP1 PKPbc 21 46 42.9 +0.9
comp=Z,21nm,1.0s
VYHS **Vyhne** 145.19 345 ePKP PKPdf 21 46 43.1 +0.5
VYHS e 21 46 56.3
TIRR **Tirgusor** 145.28 332 ⇑i P PKPbc 21 46 43.1 +0.5
HARR **Harsova** 145.32 332 ⇑i P PKPbc 21 46 43.8 +1.1
KMBO **Kilima Mbogo** 145.36 245 PKPbc PKPbc 21 46 44.7 +0.9
comp=Z,2.2nm,0.8s,baz=51,slow=6.9,SNR=5.2
PSZ **Piszkesteto** 145.45 344 ⇑es PKP/F 21 46 57.4
PSZ **Piszkesteto** 145.45 344 ⇓i P PKPdf 21 46 40.4 -2.6
SMOL **Smolenice** 145.50 347 ePKP PKPdf 21 46 45.0 +1.9
SMOL e 21 46 58.6
SMOL e 21 47 07.4
MLR **Muntele Rosu** 145.53 335 PKPbc PKPbc 21 46 44.2 +0.8
comp=Z,14nm,0.8s,baz=249,slow=1.2,SNR=39
MLR **Muntele Rosu** 145.53 335 ⇓i P PKPdf 21 46 44.4 +1.2
ISR **Istrita** 145.58 334 ⇓i P PKPdf 21 46 45.0 +1.7
WLF **Walferdange** 145.59 0 PKP PKPdf 21 46 42.2 -1.0
WLF **Walferdange** 145.59 0 ePKPbc PKPbc 21 46 43.9 +0.5
KHC **Kasperske Hory** 145.60 352 ePKPbc PKPbc 21 46 43.6 +0.1

KHC	Kasperske Hory	145.60	352	*e*PKP	PKPdf	21 46 43.5	+0.3		
KHC				*ep*PKP	pPKPdf	21 46 57.5	+2.8		
KHC				AMS	AMS	22 50 10.0			
comp=Z,200nm,23.9s									
DRGR		145.61	340	⇓*i*P	PKPdf	21 46 44.5	+1.2		
BR131	Keskin Array S	145.78	321	*e*PKPbc	PKPbc	21 46 44.6	+0.3		
BRTR	Keskin Array B	145.78	321	PKPbc	PKPbc	21 46 45.2	+0.8		
comp=Z,7.1nm,0.7s,baz=97,slow=2.5,SNR=47									
GEC2	GERESS Array S	145.86	351	*e*PKPbc	PKPbc	21 46 44.1	-0.2		
GERES	GERESS Array B	145.86	351	PKPbc	PKPbc	21 46 44.8	+0.5		
comp=Z,2.3nm,0.8s,baz=29,slow=3.0,SNR=15									
ROSF	Rostrenen	146.00	11	*e*PKP1	PKPbc	21 46 44.4	-0.3		
comp=Z,30nm,1.2s									
FLN	La Foliniere	146.04	8	*e*PKP1	PKPbc	21 46 44.6	-0.2		
comp=Z,18nm,0.8s									
FLN				*e*MLR	MLR				
comp=Z,195nm,21.8s,MS4.5									
SGMF	Saint Gilles	146.21	11	*e*PKP1	PKPbc	21 46 45.0	-0.4		
comp=Z,24nm,0.9s									
LDF	La Drutiiere	146.25	8	*e*PKP1	PKPbc	21 46 45.0	-0.5		
GRR	Gorron	146.35	9	*e*PKP1	PKPbc	21 46 45.7	-0.1		
comp=Z,22nm,0.9s									
CONA	Conrad Observa	146.38	348	⇑*i*PKPab	PKPab	21 46 45.6	-1.1		
comp=Z,6.9nm,0.8s									
CONA				⇓*i*pPKiKP		21 47 01.1			
comp=Z,27nm,1.6s									
CSNA	Conrad Observa	146.38	348	⇑*i*PKPab	PKPab	21 46 45.7	-1.0		
comp=Z,6.7nm,0.8s									
QUIF	Quistinic	146.42	12	*e*PKP1	PKPbc	21 46 45.0	-1.0		
SOP	Sopron	146.47	347	⇑*es*PKP/B		21 47 00.5			
MEZF	Maizieres J'vi	146.74	1	*e*PKP1	PKPbc	21 46 47.4	+0.5		
comp=Z,8.4nm,0.7s									
MOA	Molln	146.75	350	⇑*i*PKPab	PKPab	21 46 47.7	-0.5		
comp=Z,6.1nm,0.8s									
CDF	Champ du Feu	146.84	359	*e*PKP1	PKPbc	21 46 47.7	+0.5		
comp=Z,34nm,1.2s									
BFO	Black Forest	146.89	357	*e*PKPdf	PKPdf	21 46 45.9	+0.5		
BZS	Buzias	147.01	340	⇑*i*P	PKPbc	21 46 47.9	+0.1		
ECH	Echery	147.03	359	*e*PKPdf	PKPdf	21 46 45.8	+0.1		
HAU	Haudompre	147.25	360	*e*PKP1	PKPbc	21 46 48.8	+0.4		
comp=Z,13nm,0.7s									
HAU				*e*MLR	MLR				
comp=Z,95nm,19.5s,MS4.3									
HINF	Hinteralfeld	147.44	359	*e*PKP1	PKPbc	21 46 49.9	+1.0		
comp=Z,3.0nm,0.6s									
RETA	Reutte	147.56	354	⇑*i*PKPab	PKPab	21 46 49.7	-1.6		
comp=Z,6.4nm,1.0s									
MOTA	Moosalm	147.66	354	⇑*i*PKPab	PKPab	21 46 50.5	-1.2		
comp=Z,3.1nm,0.6s									
WTTA	Wattenberg	147.69	353	⇑*i*PKPab	PKPab	21 46 50.3	-1.6		
comp=Z,7.0nm,0.5s									
SOKA	Soboth	147.74	349	⇑*i*PKPbc	PKPbc	21 46 49.8	0.0		
comp=Z,11nm,1.0s									
PERS	Pernice	147.77	349	*i*PKPbc	PKPbc	21 46 49.9	0.0		
DAVA	Damuels	147.83	355	⇑*i*PKPdf	PKPdf	21 46 46.7	-0.4		
comp=Z,12nm,1.1s									
DAVA				⇓*i*pPKiKP		21 47 04.8			
comp=Z,21nm,1.2s									
HYF	Humbligny	147.85	5	*e*PKP1	PKPbc	21 46 50.3	+0.3		
LOR	Lormes	147.93	3	*e*PKP1	PKPbc	21 46 50.0	-0.2		
comp=Z,34nm,1.3s									
LOR				*e*MLR	MLR				
comp=Z,154nm,22.8s,MS4.4									
OBKA	Obir	147.99	349	⇑*e*PKPbc	PKPbc	21 46 49.2	-1.2		
comp=Z,5.9nm,0.9s									
MYKA	Terra Mystica	148.03	350	⇑*i*PKPbc	PKPbc	21 46 50.3	-0.3		
comp=Z,7.9nm,0.9s									
ABTA	Abfaltersbach	148.09	352	⇑*i*PKPbc	PKPbc	21 46 50.8	+0.1		
comp=Z,12nm,1.0s									
SSF	Saint Saulge	148.12	4	*e*PKP1	PKPbc	21 46 50.9	+0.2		
comp=Z,42nm,1.3s									
MMAI	Mount Meron Ar	148.18	309	PKPbc	PKPbc	21 46 52.1	+0.7		
comp=Z,2.5nm,0.7s,baz=64,slow=5.7,SNR=5.3									
MFF	Saint Martin d	148.20	8	*e*PKP1	PKPbc	21 46 50.9	-0.1		
DAVOX	Davos/Dischmat	148.34	355	PKPbc	PKPbc	21 46 52.3	+1.0		
comp=Z,6.2nm,0.6s,baz=314,slow=4.9,SNR=12									
AVF	Avril sur Loir	148.38	4	*e*PKP1	PKPbc	21 46 51.6	+0.2		
comp=Z,12nm,1.1s									
LJU	Ljubljana	148.45	349	*e*PKPbc	PKPbc	21 46 51.7	+0.1		
BGF	Bois d'Agland	148.57	5	*e*PKP1	PKPbc	21 46 52.0	0.0		
comp=Z,11nm,0.7s									
CABF	La Chapelle	148.65	0	*e*PKP1	PKPbc	21 46 53.3	+1.1		
CEY	Cerknica	148.76	349	*e*PKPbc	PKPbc	21 46 52.5	0.0		
CEY				*i*		21 47 06.5			
BOJS	Bojanci	148.82	348	*e*PKPbc	PKPbc	21 46 53.0	+0.4		
BOJS				*e*		21 47 06.8			
RJF	Les Rejaudoux	149.69	7	*e*PKP1	PKPbc	21 46 55.3	+0.5		
RJF				*e*MLR	MLR				
comp=Z,180nm,22.8s,MS4.5									
LPL	La Plagne	149.74	359	*e*PKP1	PKPbc	21 46 56.4	+1.5		
comp=Z,11nm,0.8s									
LPG	La Plagne	149.76	359	*e*PKP1	PKPbc	21 46 56.6	+1.6		
comp=Z,15nm,0.8s									
EIL	Elat	149.93	304	PKPbc	PKPbc	21 46 56.4	+0.5		
comp=Z,3.5nm,0.7s,baz=65,slow=7.3,SNR=4.5									
BNI	Bardonecchia	150.21	359	*e*PKPdf	PKPdf	21 46 51.7	+0.7		
BNI				*e*PKPbc	PKPbc	21 46 57.6	+1.5		
BNI				*e*PKPab	PKPab	21 47 01.5	-0.6		
ORIF	Oris-en-Rattie	150.34	1	*e*PKP1	PKPbc	21 46 57.4	+1.0		
comp=Z,22nm,1.1s									
ORIF				*e*MLR	MLR				
comp=Z,101nm,22.2s,MS4.3									
VIVF	Saint-Julien-l	150.37	2	*e*PKP1	PKPbc	21 46 57.3	+0.8		
comp=Z,20nm,1.1s									
MBDF	Montbardon	150.53	359	*e*PKP1	PKPbc	21 46 57.8	+0.9		
comp=Z,16nm,0.9s									
LASF	Ste Croix	151.11	4	*e*PKP1	PKPbc	21 46 59.0	+0.8		
comp=Z,21nm,1.0s									
SMRF	Simiane la Rot	151.28	1	*e*PKP1	PKPbc	21 46 59.7	+1.1		
SBF	Sospel	151.38	358	*e*PKP1	PKPbc	21 47 00.3	+1.4		
FRF	La Foret Royal	151.70	359	*e*PKP1	PKPbc	21 46 59.2	-0.4		
comp=Z,33nm,1.1s									
LMR	La Mourre	151.93	360	*e*PKP1	PKPbc	21 47 00.4	+0.3		
EVO	Evora	153.53	26	*e*PKP2	PKPab	21 47 16.2	0.0		
comp=Z,22nm,1.2s									
EVO				*e*MLR	MLR				
comp=Z,128nm,20.5s,MS4.4									
ESDC	Sonseca Array	153.99	18	PKPab	PKPab	21 47 17.6	-0.4		
comp=Z,0.9nm,0.7s,baz=320,slow=3.7,SNR=5.5									
TORD	Torodi Ar. Bea	175.12	114	PKPdf	PKPdf	21 47 13.8	-2.0		
comp=Z,1.5nm,1.1s,baz=325,slow=2.7,SNR=4.4									
TORD				PKPab	PKPab	21 48 49.0	-2.6		
comp=Z,0.5nm,0.9s,baz=202,slow=2.7,SNR=3.2									

*ISK **05** 21:31:37.4, 37°.80N×26°.87E, h16km, MD3.3*
*CSEM **05** 21:31:39.4±0.2, 37°.84N×27°.08E, h10km, MD3.0, Error ellipse: s-maj=6.1km s-min=3.7km az=68.0*
*ISCJB **05** 21:31:39.6±0.5, 37°.87N±0°.02×27°.09E±0°.04, h12km±4km, Error ellipse: s-maj=5.1km s-min=3.0km az=159.3*
*DDA **05** 21:31:40.2, 37°.86N×27°.12E, h6km, Md3.0*
*THE **05** 21:31:42.1, 38°.00N×26°.98E, h9km±1km, ML3.1/2, Error ellipse: s-maj=2.3km s-min=0.9km az=87.0*
ISC 05 21:31:39.8±0.4, 37°.86N±0°.02×27°.08E±0°.04, h11km±3km, n48, σ1°25/76, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	G?zelcaml?	0.20	144	*i* P	Pg	21 31 43.8	-0.3
GCAM				*i* S	Sg	21 31 46.8	-0.1
GCAM	G?zelcaml?	0.20	144	*i* P	Pg	21 31 43.8	-0.3
GCAM				*i* S	Sg	21 31 46.8	-0.1
BLCB	Balcova	0.52	356	*e*PG	Pg	21 31 49.7	-0.3
BLCB	Balcova	0.52	356	P	Pg	21 31 49.9	-0.1
BLCB				S	Sg	21 31 55.7	-1.2
BLCB	Balcova	0.52	356	*e*Pg	Pg	21 31 49.7	-0.3
BLCB	Balcova	0.52	356	P	Pg	21 31 49.9	-0.1
BLCB				S	Sg	21 31 55.7	-1.2
IZM	Izmir	0.55	15	*e*PG	Pg	21 31 52.0	+1.4
IZM				*e*SG	Sg	21 32 00.6	+2.7
IZM	Izmir	0.55	15	*e*Pg	Pg	21 31 52.0	+1.4
IZM				*e*Sg	Sg	21 32 00.6	+2.7
URLA	Izmir	0.63	322	*i* P	Pg	21 31 52.2	+0.2
URLA				*i* S	Sg	21 32 01.8	+1.6
URLA	Izmir	0.63	322	*i* P	Pg	21 31 52.2	+0.2
URLA				*i* S	Sg	21 32 01.8	+1.5
AYDN	Tasoluk	0.66	107	*i* P	Pg	21 31 51.9	-0.7
AYDN				*i* S	Sg	21 31 59.9	-1.4
AYDN	Tasoluk	0.66	107	*i* P	Pg	21 31 51.9	-0.7
AYDN				*i* S	Sg	21 31 59.8	-1.5
MLSB	Milas	0.79	136	*e*PG	Pg	21 31 54.8	-0.2
MLSB				*e*SG	Sg	21 32 07.7	+2.4
MLSB	Milas	0.79	136	*e*Pg	Pg	21 31 54.8	-0.2
MLSB				*e*Sg	Sg	21 32 07.7	+2.4
BDRM	Kayabasi	0.84	160	*i* P	Pg	21 31 55.4	-0.7
BDRM				*i* S	Sg	21 32 07.1	0.0
BDRM	Kayabasi	0.84	160	*i* P	Pg	21 31 55.4	-0.7
BDRM				*i* S	Sg	21 32 07.1	0.0
CHOS	Chios island	0.97	303	P	Pg	21 31 58.4	0.0
CHOS				S	Sg	21 32 09.7	-1.3
CHOS	Chios island	0.97	303	P	Pg	21 31 58.4	0.0
CHOS				S	Sg	21 32 09.7	-1.3
AKS	Akhisar	1.17	29	*e*PN	Pn	21 32 01.5	-0.5
AKS	Akhisar	1.17	29	*e*Pn	Pn	21 32 01.5	-0.5
AKHS	Akhisar	1.17	29	*i* P	Pb	21 32 00.6	-1.3
AKHS				*i* S	Sb	21 32 17.9	+0.8
AKHS	Akhisar	1.17	29	*i* P	Pb	21 32 00.6	-1.3
AKHS				*i* S	Sb	21 32 17.9	+0.9
DAT	Datca	1.20	161	*e*PN	Pn	21 32 00.0	-2.4
DAT				*e*SN	Sn	21 32 16.8	-1.8
DAT	Datca	1.20	161	*e*Pn	Pn	21 32 00.0	-2.4
DAT				*e*Sn	Sn	21 32 16.8	-1.8
YER	Yerkesik	1.20	127	*e*PN	Pn	21 32 01.7	-0.7
YER	Yerkesik	1.20	127	*e*Pn	Pn	21 32 01.7	-0.7
NIS1	Nisyros Isl.	1.26	177	P	Pn	21 32 04.6	+1.3
NIS1				S	Sb	21 32 21.8	+2.1
NIS1	Nisyros Isl.	1.26	177	P	Pn	21 32 04.6	+1.3
NIS1				S	Sb	21 32 21.8	+2.1
KULA	Kula-Manisa	1.40	62	*e*PN	Pn	21 32 05.1	-0.2
KULA	Kula-Manisa	1.40	62	*e*Pn	Pn	21 32 05.1	-0.2
APE	Apeiranthos	1.47	238	P	Pn	21 32 07.0	+0.9
APE				S	Sn	21 32 27.4	+2.1
APE	Apeiranthos	1.47	238	P	Pn	21 32 07.0	+0.9
APE				S	Sn	21 32 27.4	+2.1
PRK	Paraskevi	1.52	336	P	Pn	21 32 06.4	-0.5
PRK				S	Sn	21 32 24.5	-2.2
PRK	Paraskevi	1.52	336	P	Pn	21 32 06.4	-0.5
PRK				S	Sn	21 32 24.5	-2.2
DEMI	Demirci	1.74	47	*i* P	Pn	21 32 11.5	+1.6
DEMI				*i* S	Sn	21 32 33.7	+1.6
DEMI	Demirci	1.74	47	*i* P	Pn	21 32 11.5	+1.6
DEMI				*i* S	Sn	21 32 33.7	+1.6
FETY	Fethiye	2.01	127	*e*PN	Pn	21 32 13.2	-0.5
FETY	Fethiye	2.01	127	*e*Pn	Pn	21 32 13.2	-0.4
DST	Dursunbey	2.12	34	*e*PN	Pn	21 32 15.8	+0.7
DST	Dursunbey	2.12	34	*e*Pn	Pn	21 32 15.8	+0.7
GADA	Gvkgeada	2.50	339	*e*PN	Pn	21 32 18.5	-1.9
GADA	Gvkgeada	2.50	339	*e*Pn	Pn	21 32 18.5	-1.9
RKY	Sarkoy-Tekirda	2.82	1	*e*PN	Pn	21 32 24.8	0.0
RKY	Sarkoy-Tekirda	2.82	1	*e*Pn	Pn	21 32 24.8	0.0
ENEZ	Enez	2.96	346	*e*PN	Pn	21 32 25.4	-1.2
ENEZ	Enez	2.96	346	*e*Pn	Pn	21 32 25.4	-1.3
ARMT	Armutlu	3.03	27	*e*PN	Pn	21 32 28.7	+1.1
ARMT	Armutlu	3.03	27	*e*Pn	Pn	21 32 28.7	+1.0

*ISK **05** 21:45:25.0, 36°.98N×29°.18E, h5km, MD3.1*
*DDA **05** 21:45:26.0, 36°.98N×29°.20E, h22km±1km, Md3.1*
*NEIC **05** 21:45:26.0, 36°.98N×29°.19E, h7km, MD3.0(ISK), After ISK.*
*CSEM **05** 21:45:26.2±0.1, 36°.97N×29°.20E, h2km, MD3.1, Error ellipse: s-maj=3.1km s-min=2.8km az=176.0*
*IDC **05** 21:45:26.2±2.1, 36°.90N×29°.15E, h0km, mb3.4/1, mb1 3.2/5, mb1mx3.1/26, mbtmp3.2/5, ML3.1/4, Error ellipse: s-maj=42.5km s-min=23.3km az=167.0*
*ISCJB **05** 21:45:26.2±0.5, 36°.96N±0°.02×29°.21E±0°.03, h3km±4km, Error ellipse: s-maj=3.9km s-min=3.2km az=34.4*
ISC 05 21:45:26.8±0.4, 36°.97N±0°.02×29°.21E±0°.03, h4km±4km, n76, σ0°95/106, 2D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.30	52	PG	Pg	21 45 31.9	-0.6
GLHS				*e*SG	Sg	21 45 37.5	+1.1
GLHS	Glhisar (BURDU	0.30	52	*i* Pg	Pg	21 45 31.9	-0.7
GLHS				*e*Sg	Sg	21 45 37.5	+1.0
FETY	Fethiye	0.35	196	*e*PG	Pg	21 45 33.0	-0.6
FETY				*e*SG	Sg	21 45 39.2	+1.1
FETY	Fethiye	0.35	196	*e*Pg	Pg	21 45 33.0	-0.5
FETY				*e*Sg	Sg	21 45 39.2	+1.1
GOLH	Golhisar	0.39	47	*i* P	Pg	21 45 33.8	-0.5
GOLH				*i* S	Sg	21 45 40.7	+1.4
GOLH	Golhisar	0.39	47	*i* P	Pg	21 45 33.8	-0.5
GOLH				*i* S	Sg	21 45 40.7	+1.4
GOLH	Golhisar	0.39	47	*i* P	Pg	21 45 33.8	-0.5
GOLH				*i* S	Sg	21 45 40.7	+1.3
TURN	Turunc	0.49	259	*i* P	Pg	21 45 41.2	+4.9
TURN				*i* S	Sg	21 45 53.0	+10
ELL	Elmali	0.61	111	*e*PG	Pg	21 45 38.3	-0.2
ELL	Elmali	0.61	111	*e*Pg	Pg	21 45 38.3	-0.2
DNZL	Cakiroluk	0.73	350	*i* P	Pg	21 45 39.4	-1.3
DNZL				*i* S	Sg	21 45 51.9	+1.7
DNZL	Cakiroluk	0.73	350	*i* P	Pg	21 45 39.4	-1.3
DNZL				*i* S	Sg	21 45 51.9	+1.7
DNZL	Cakiroluk	0.73	350	*i* P	Pg	21 45 39.4	-1.4
DNZL				*i* S	Sg	21 45 51.9	+1.7
YER	Yerkesik	0.76	283	*e*PG	Pg	21 45 40.4	-0.9
YER	Yerkesik	0.76	283	*e*Pg	Pg	21 45 40.4	-0.9
DENT	Denizli	0.79	350	*e*PG	Pg	21 45 41.2	-0.9
DENT	Denizli	0.79	350	*e*Pg	Pg	21 45 41.2	-0.8
AKAS	Kas	0.80	156	*i* P	Pg	21 45 42.2	0.0
AKAS				*i* S	Sg	21 45 51.2	-1.4
AKAS	Kas	0.80	156	*i* P	Pg	21 45 42.3	0.0
AKAS				*i* S	Sg	21 45 51.2	-1.4
AKAS	Kas	0.80	156	*i* P	Pg	21 45 42.2	0.0
AKAS				*i* S	Sg	21 45 51.2	-1.5
KSL	Kastellorizon	0.88	160	*e*P	Pg	21 45 44.5	+0.9
KORT	Korkueli	0.92	88	*i* P	Pg	21 45 43.9	-0.5
KORT				*i* S	Sg	21 45 59.9	+3.6
KORT	Korkueli	0.92	88	*i* P	Pg	21 45 43.9	-0.5
KORT				*i* S	Sg	21 45 59.9	+3.6
ARG	Arkhangelos	1.15	229	*e*P	Pg	21 45 48.0	-0.9
ANTB	Antalya	1.16	93	*e*PN	Pn	21 45 49.1	-0.8
ANTB	Antalya	1.16	93	*e*Pn	Pn	21 45 49.1	-0.8
MLSB	Milas	1.19	286	*e*PN	Pn	21 45 48.8	-1.4
MLSB	Milas	1.19	286	*e*Pn	Pn	21 45 48.8	-1.4
BCK	Bucak	1.21	66	*e*PN	Pn	21 45 50.1	-0.4
BCK	Bucak	1.21	66	*e*Pn	Pn	21 45 50.1	-0.4
AYDN	Tasoluk	1.26	303	*i* P	Pg	21 45 50.3	-0.7
AYDN				*i* S	Sg	21 46 07.1	-0.2
AYDN	Tasoluk	1.26	303	*i* P	Pg	21 45 50.3	-0.7
AYDN				*i* S	Sg	21 46 07.1	-0.2
AYDN	Tasoluk	1.26	303	*i* P	Pg	21 45 50.3	-0.7
AYDN				*i* S	Sg	21 46 07.1	-0.2
DAT	Datca	1.33	260	*e*PN	Pn	21 45 51.1	-1.0
DAT	Datca	1.33	260	*e*Pn	Pn	21 45 51.1	-1.1
ISP	Isparta	1.35	51	*e*PN	Pn	21 45 53.0	+0.5
ISP	Isparta	1.35	51	*e*Pn	Pn	21 45 51.9	-0.6
ISP				*e*S	Sg	21 46 13.8	+3.6
ISP	Isparta	1.35	51	⇓*i*P	Pn	21 45 51.9	-0.6
ISP	Isparta	1.35	51	⇓*i*P	Pn	21 45 51.9	-0.6
ISP				*e*S	Sg	21 46 13.8	+3.6
BDRM	Kayabasi	1.41	274	*i* P	Pn	21 45 53.7	+0.4
BDRM				*i* S	Sg	21 46 13.4	+1.2
BDRM	Kayabasi	1.41	274	*i* P	Pn	21 45 53.7	+0.4
BDRM				*i* S	Sg	21 46 13.4	+1.2
BDRM	Kayabasi	1.41	274	*i* P	Pn	21 45 53.7	+0.4
BDRM				*i* S	Sg	21 46 13.4	+1.2
KHAL	Karahalli	1.41	9	*i* P	Pn	21 45 52.4	-1.0
KHAL				*i* S	Sg	21 46 12.8	+0.5
KHAL	Karahalli	1.41	9	*i* P	Pn	21 45 52.4	-1.0
KHAL				*i* S	Sg	21 46 12.8	+0.5
SUTC	Sutluce-Ispart	1.52	70	*e*PN	Pn	21 45 55.0	+0.2
SUTC	Sutluce-Ispart	1.52	70	*e*Pn	Pn	21 45 55.0	+0.2
KULA	Kula-Manisa	1.60	345	*e*PN	Pn	21 45 55.0	-0.9
KULA	Kula-Manisa	1.60	345	*e*Pn	Pn	21 45 55.0	-0.9
SHUT	Suhut-Afyon	1.91	34	*e*PN	Pn	21 46 00.0	-0.1
SHUT	Suhut-Afyon	1.91	34	*e*Pn	Pn	21 46 00.0	-0.1
SMG	Samos	2.02	292	*e*P	Pn	21 46 01.5	-0.3
IZM	Izmir	2.10	313	*e*PN	Pn	21 46 02.6	-0.2
DEMI	Demirci	2.10	350	*i* P	Pn	21 46 01.4	-1.5
DEMI				*i* S	Sn	21 46 29.9	+0.4
DEMI	Demirci	2.10	350	*i* P	Pn	21 46 01.4	-1.4
DEMI				*i* S	Sn	21 46 29.9	+0.4
KARP	Karpathos	2.18	230	*e*P	Pn	21 46 05.5	+1.6
ALT	Altintas	2.20	19	*e*PN	Pn	21 46 04.0	-0.2
ALT	Altintas	2.20	19	*e*Pn	Pn	21 46 04.0	-0.2
BLCB	Balcova	2.22	310	*e*PN	Pn	21 46 04.3	-0.2
BLCB	Balcova	2.22	310	*e*Pn	Pn	21 46 04.3	-0.2
HDMB	Hadim	2.63	89	*e*PN	Pn	21 46 10.5	+0.5
HDMB	Hadim	2.63	89	*e*Pn	Pn	21 46 10.5	+0.5
KONT	Konya--Tatoy	2.69	68	*e*PN	Pn	21 46 11.1	+0.2
KONT	Konya--Tatoy	2.69	68	*e*Pn	Pn	21 46 11.1	+0.2
APE	Apeiranthos	2.94	273	*e*P	Pn	21 46 15.5	+1.1
ZKR	Zakros	3.05	233	*e*P	Pn	21 46 17.5	+1.7
NPS	Neapolis	3.37	241	*e*P	Pn	21 46 21.0	+0.7
LAST	Lasithi	3.52	240	*e*P	Pn	21 46 24.0	+1.7
IDI	Anoyia	3.88	246	Pn	Pn	21 46 27.8	+0.6
1.0nm,0.3s,baz=36,slow=14,SNR=7.2							
IDI				Sn	Sn	21 47 13.5	+0.3
1.3nm,0.3s,baz=72,slow=21,SNR=3.2							
IDI	Anoyia	3.88	246	Pn	Pn	21 46 27.8	+0.6
IDI				Sn	Sn	21 47 13.5	+0.3
BRTR	Keskin Array B	4.44	50	Pn	Pn	21 46 36.2	+1.2
0.3nm,0.3s,baz=237,slow=16,SNR=8.7							
BRTR	Keskin Array B	4.44	50	Pn	Pn	21 46 36.2	+1.2
BRTR	Keskin Array B	4.44	50	Pn	Pn	21 46 36.2	+1.3
MMAI	Mount Meron Ar	6.44	126	Pn	Pn	21 47 02.3	-0.1
1.2nm,0.3s,baz=302,slow=13,SNR=8.5							
EIL	Elat	8.72	145	Pn	Pn	21 47 33.4	-0.4
0.4nm,0.3s,baz=27,slow=18,SNR=3.3							
EIL	Elat	8.72	145	Pn	Pn	21 47 33.4	-0.4
TORD	Torodi Ar. Bea	34.18	233	P	P	21 52 11.8	-1.6
0.3nm,0.5s,baz=37,slow=9.5,SNR=4.7							

*IDC **05** 21:59:12.6±0.6, 33°.41S×178°.92W, h0km, mb4.5/7, mb1 4.6/8, mb1mx4.4/17, mbtmp4.6/8, ML4.4/1, MS3.9/2, Ms1 3.9/2, ms1mx3.1/25, Error ellipse: s-maj=22.3km s-min=19.2km az=179.0*
*ISCJB **05** 21:59:12.8±2.4, 33°.63S±0°.06×178°.8W±0°.1, h15km±17km, mb4.5/10, MS3.8/2, Error ellipse: s-maj=16.6km s-min=8.8km az=24.1*
*NEIC **05** 21:59:15.6±3.3, 33°.60S×178°.72W, h23km±22km, mb4.5/7, Error ellipse: s-maj=12.9km s-min=11.9km az=188.0*
ISC 05 21:59:13.9±2.6, 33°.59S±0°.06×178°.9W±0°.1, h7km±17km, n55, σ1°17/33, mb4.5/10, MS3.8/2, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	4.39	11	Pn	Pn	22 00 14.0	-7.0
82nm,0.3s,baz=112,slow=19,SNR=3.2							
MXZ	Matakaoa Point	4.59	209	P	Pn	22 00 23.3	-0.4
MXZ				S	Sn	22 01 14.3	-3.0
PUZ	Puketiti	5.05	207	P	Pn	22 00 28.7	-1.4
PUZ				S	Sn	22 01 29.4	+0.7
MWZ	Matawai	5.57	211	P	Pn	22 00 36.1	-1.1
URZ	Urewera	5.70	214	Pn	Pn	22 00 38.8	-0.1
11nm,0.3s,baz=45,slow=3.7,SNR=99							
URZ				Sn	Sn	22 01 45.3	+0.7
14nm,0.3s,baz=140,slow=22,SNR=7.0							
OUZ	Omahuta	6.44	253	*e*Pn	Pn	22 00 53.1	+3.9
31nm,0.7s							
SNZO	South Karori	9.25	212	Pn	Pn	22 01 29.9	+2.2
SNZO				*e*Sn	Sn	22 03 06.7	-5.3
RPZ	Rata Peaks	12.81	215	Pn	Pn	22 02 13.6	-2.8
1.1nm,0.3s,baz=75,slow=4.4,SNR=2.9							
RPZ				Sn	Sn	22 04 26.2	-13
1.0nm,0.3s,baz=12,slow=17,SNR=6.0							
RAR	Rarotonga	20.91	59	*e*P	P	22 03 55.9	-1.2
255nm,1.9s							
EIDS	Eidsvold	27.34	279	*e*P	P	22 05 01.2	+1.5
7.7nm,0.9s,mb4.2

n145, σ1♀07/208, **mb3.7**/7, **MS2.9**/3, **3C-4D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.29**	**53**	*e*PG	**Pg**	**22 03 12.7**	**-0.7**
GLHS				*e*SG	**Sg**	**22 03 18.3**	**+1.0**
FETY	**Fethiye**	**0.36**	**196**	*e*PG	**Pg**	**22 03 13.5**	**-1.2**
FETY				*e*SG	**Sg**	**22 03 20.2**	**+0.8**
FETY	**Fethiye**	**0.36**	**196**	*e*Pg	**Pg**	**22 03 13.5**	**-1.1**
FETY				*e*Sg	**Sg**	**22 03 20.2**	**+0.9**
GOLH	**Golhisar**	**0.38**	**48**	*i* P	**Pg**	**22 03 14.5**	**-0.6**
GOLH				*i* S	**Sg**	**22 03 21.4**	**+1.3**
GOLH	**Golhisar**	**0.38**	**48**	*i* P	**Pg**	**22 03 14.5**	**-0.6**
GOLH				*i* S	**Sg**	**22 03 21.4**	**+1.3**
GOLH	**Golhisar**	**0.38**	**48**	*i* P	**Pg**	**22 03 14.5**	**-0.6**
GOLH				*i* S	**Sg**	**22 03 21.5**	**+1.4**
TURN	**Turunc**	**0.50**	**258**	*i* P	**Pg**	**22 03 21.9**	**+4.6**
TURN				*i* S	**Sg**	**22 03 32.7**	**+9.0**
TURN	**Turunc**	**0.50**	**258**	*i* P	**Pg**	**22 03 21.9**	**+4.6**
ELL	**Elmali**	**0.61**	**112**	*e*PG	**Pg**	**22 03 18.9**	**-0.4**
ELL	**Elmali**	**0.61**	**112**	*e*Pg	**Pg**	**22 03 18.9**	**-0.5**
DNZL	**Cakiroluk**	**0.72**	**350**	*i* P	**Pg**	**22 03 20.2**	**-1.3**
DNZL				*i* S	**Sg**	**22 03 31.7**	**+0.8**
DNZL	**Cakiroluk**	**0.72**	**350**	*i* P	**Pg**	**22 03 20.2**	**-1.3**
DNZL				*i* S	**Sg**	**22 03 29.7**	**-1.2**
DNZL	**Cakiroluk**	**0.72**	**350**	*i* P	**Pg**	**22 03 20.2**	**-1.3**
DNZL				*i* S	**Sg**	**22 03 31.7**	**+0.8**
YER	**Yerkesik**	**0.76**	**282**	*e*PG	**Pg**	**22 03 21.6**	**-0.6**
YER				*e*SG	**Sg**	**22 03 32.3**	**+0.3**
YER	**Yerkesik**	**0.76**	**282**	*e*Pg	**Pg**	**22 03 21.6**	**-0.6**
YER				*e*Sg	**Sg**	**22 03 32.3**	**+0.3**
DENT	**Denizli**	**0.79**	**350**	*e*PG	**Pg**	**22 03 21.4**	**-1.4**
AKAS	**Kas**	**0.81**	**157**	*i* P	**Pg**	**22 03 22.8**	**-0.4**
AKAS				*i* S	**Sg**	**22 03 33.0**	**-0.7**
AKAS	**Kas**	**0.81**	**157**	*i* P	**Pg**	**22 03 22.8**	**-0.4**
AKAS	**Kas**	**0.81**	**157**	*i* P	**Pg**	**22 03 22.8**	**-0.4**
AKAS				*i* S	**Sg**	**22 03 33.0**	**-0.7**
KORT	**Korkueli**	**0.91**	**88**	*i* P	**Pg**	**22 03 24.2**	**-1.0**
KORT				*i* S	**Sg**	**22 03 38.6**	**+1.5**
KORT	**Korkueli**	**0.91**	**88**	*i* P	**Pg**	**22 03 24.2**	**-1.0**
KORT				*i* S	**Sg**	**22 03 38.6**	**+1.5**
ARG	**Arkhangelos**	**1.16**	**229**	P	**Pg**	**22 03 28.2**	**-1.7**
ARG				S	**Sg**	**22 03 49.0**	**+4.1**
ARG	**Arkhangelos**	**1.16**	**229**	P	**Pg**	**22 03 28.2**	**-1.7**
ARG				S	**Sg**	**22 03 49.0**	**+4.1**
ANTB	**Antalya**	**1.16**	**94**	*e*PN	**Pn**	**22 03 29.9**	**-0.4**
ANTB	**Antalya**	**1.16**	**94**	*e*Pn	**Pn**	**22 03 29.9**	**-0.4**
MLSB	**Milas**	**1.19**	**286**	*e*PN	**Pn**	**22 03 29.8**	**-0.9**
MLSB				*e*SN	**Sn**	**22 03 46.4**	**-0.7**
MLSB	**Milas**	**1.19**	**286**	*e*Pn	**Pn**	**22 03 29.8**	**-0.9**
MLSB				*e*Sn	**Sn**	**22 03 46.4**	**-0.6**
BCK	**Bucak**	**1.20**	**66**	*e*PN	**Pn**	**22 03 30.4**	**-0.5**
BCK	**Bucak**	**1.20**	**66**	*e*Pn	**Pn**	**22 03 30.4**	**-0.5**
AYDN	**Tasoluk**	**1.26**	**303**	*i* P	**Pn**	**22 03 30.8**	**-0.9**
AYDN				*i* S	**Sb**	**22 03 48.4**	**+0.3**
AYDN	**Tasoluk**	**1.26**	**303**	*i* P	**Pn**	**22 03 30.8**	**-0.9**
AYDN				*i* S	**Sb**	**22 03 48.4**	**+0.3**
AYDN	**Tasoluk**	**1.26**	**303**	*i* P	**Pn**	**22 03 30.8**	**-0.9**
AYDN				*i* S	**Sb**	**22 03 48.4**	**+0.3**
DAT	**Datca**	**1.33**	**260**	*e*PN	**Pn**	**22 03 32.0**	**-0.7**
DAT	**Datca**	**1.33**	**260**	*e*Pn	**Pn**	**22 03 32.0**	**-0.7**
ISP	**Isparta**	**1.34**	**51**	*e*PN	**Pn**	**22 03 32.3**	**-0.5**
ISP	**Isparta**	**1.34**	**51**	*e*Pn	**Pn**	**22 03 32.8**	**0.0**
ISP				Sn	**Sn**	**22 03 52.6**	**+1.7**
ISP	**Isparta**	**1.34**	**51**	P	**Pn**	**22 03 31.5**	**-1.3**
ISP				S	**Sb**	**22 03 47.9**	**-2.6**
ISP	**Isparta**	**1.34**	**51**	P	**Pn**	**22 03 31.5**	**-1.3**
ISP	**Isparta**	**1.34**	**51**	*e*Pn	**Pn**	**22 03 32.8**	**0.0**
ISP				S	**Sb**	**22 03 47.9**	**-2.6**
ISP				Sn	**Sn**	**22 03 52.6**	**+1.7**
KHAL	**Karahalli**	**1.41**	**9**	*i* P	**Pn**	**22 03 32.6**	**-1.1**
KHAL				*i* S	**Sb**	**22 03 53.4**	**+1.0**
KHAL	**Karahalli**	**1.41**	**9**	*i* P	**Pn**	**22 03 32.6**	**-1.1**
KHAL				*i* S	**Sb**	**22 03 53.3**	**+0.9**
BDRM	**Kayabasi**	**1.42**	**274**	*i* P	**Pn**	**22 03 33.5**	**-0.2**
BDRM				*i* S	**Sb**	**22 03 52.5**	**-0.1**
BDRM	**Kayabasi**	**1.42**	**274**	*i* P	**Pn**	**22 03 33.9**	**+0.1**
BDRM				*i* S	**Sb**	**22 03 52.5**	**-0.1**
BDRM	**Kayabasi**	**1.42**	**274**	*i* P	**Pn**	**22 03 33.5**	**-0.3**
BDRM				*i* S	**Sb**	**22 03 52.5**	**-0.1**
SUTC	**Sutluce-Ispart**	**1.51**	**70**	*e*PN	**Pn**	**22 03 35.1**	**0.0**
SUTC	**Sutluce-Ispart**	**1.51**	**70**	*e*Pn	**Pn**	**22 03 35.1**	**-0.1**
KULA	**Kula-Manisa**	**1.59**	**344**	*e*PN	**Pn**	**22 03 35.9**	**-0.4**
KULA	**Kula-Manisa**	**1.59**	**344**	*e*Pn	**Pn**	**22 03 35.9**	**-0.3**
MANT	**Manisa**	**1.59**	**341**	*i* P	**Pn**	**22 03 36.0**	**-0.2**
MANT				*i* S	**Sn**	**22 03 57.3**	**+0.2**
MANT	**Manisa**	**1.59**	**341**	*i* P	**Pn**	**22 03 36.0**	**-0.3**
MANT				*i* S	**Sn**	**22 03 57.3**	**+0.2**
NIS1	**Nisyros Isl.**	**1.67**	**258**	P	**Pn**	**22 04 29.5**	**+1.2**
NIS1				S	**Sn**	**22 03 58.6**	**-0.4**
NIS1	**Nisyros Isl.**	**1.67**	**258**	P	**Pn**	**22 03 38.5**	**+1.2**
NIS1				S	**Sn**	**22 03 58.6**	**-0.4**
GCAM	**G?zelcaml?**	**1.73**	**295**	*i* P	**Pn**	**22 03 37.5**	**-0.6**
GCAM				*i* S	**Sn**	**22 04 00.3**	**-0.2**
GCAM	**G?zelcaml?**	**1.73**	**295**	*i* P	**Pn**	**22 03 37.5**	**-0.6**
GCAM				*i* S	**Sn**	**22 04 00.3**	**-0.2**
SHUT	**Suhut-Afyon**	**1.90**	**34**	*e*PN	**Pn**	**22 03 40.7**	**+0.3**
SHUT	**Suhut-Afyon**	**1.90**	**34**	*e*Pn	**Pn**	**22 03 40.7**	**+0.3**
IZM	**Izmir**	**2.09**	**313**	*e*PN	**Pn**	**22 03 43.1**	**0.0**
IZM	**Izmir**	**2.09**	**313**	*e*Pn	**Pn**	**22 03 43.2**	**+0.1**
DEMI	**Demirci**	**2.10**	**349**	*i* P	**Pn**	**22 03 43.0**	**-0.2**
DEMI				*i* S	**Sn**	**22 04 10.6**	**+1.1**
DEMI	**Demirci**	**2.10**	**349**	*i* P	**Pn**	**22 03 43.0**	**-0.2**
DEMI				*i* S	**Sn**	**22 04 10.6**	**+1.1**
ALT	**Altintas**	**2.19**	**19**	*e*PN	**Pn**	**22 03 44.6**	**+0.1**
ALT	**Altintas**	**2.19**	**19**	*e*Pn	**Pn**	**22 03 44.6**	**+0.1**
AKHS	**Akhisar**	**2.19**	**330**	*i* P	**Pn**	**22 03 44.1**	**-0.4**
AKHS				*i* S	**Sn**	**22 04 11.5**	**-0.4**
AKHS	**Akhisar**	**2.19**	**330**	*i* P	**Pn**	**22 03 44.1**	**-0.4**
AKHS				*i* S	**Sn**	**22 04 11.5**	**-0.4**
AKHS	**Akhisar**	**2.19**	**330**	*i* P	**Pn**	**22 03 44.1**	**-0.4**
AKHS				*i* S	**Sn**	**22 04 11.5**	**-0.4**
AKS	**Akhisar**	**2.19**	**330**	*e*PN	**Pn**	**22 03 44.2**	**-0.3**
AKS	**Akhisar**	**2.19**	**330**	*e*Pn	**Pn**	**22 03 44.2**	**-0.3**
BOLV	**Bolvadin**	**2.22**	**38**	*i* P	**Pn**	**22 03 45.0**	**+0.1**
BOLV				*i* S	**Sn**	**22 04 12.2**	**-0.2**
BOLV	**Bolvadin**	**2.22**	**38**	*i* P	**Pn**	**22 03 45.0**	**+0.2**
BOLV				*i* S	**Sn**	**22 04 12.2**	**-0.3**
BLCB	**Balcova**	**2.22**	**310**	*e*PN	**Pn**	**22 03 45.1**	**+0.2**
BLCB	**Balcova**	**2.22**	**310**	P	**Pn**	**22 03 44.7**	**-0.2**
BLCB				S	**Sn**	**22 04 10.7**	**-1.8**
BLCB	**Balcova**	**2.22**	**310**	P	**Pn**	**22 03 44.7**	**-0.2**
BLCB	**Balcova**	**2.22**	**310**	*e*Pn	**Pn**	**22 03 45.1**	**+0.2**
BLCB				S	**Sn**	**22 04 10.7**	**-1.8**
HDMB	**Hadim**	**2.62**	**89**	*e*PN	**Pn**	**22 03 51.2**	**+0.8**
HDMB	**Hadim**	**2.62**	**89**	*e*Pn	**Pn**	**22 03 51.2**	**+0.8**
DST	**Dursunbey**	**2.66**	**350**	*e*PN	**Pn**	**22 03 51.4**	**+0.4**
DST	**Dursunbey**	**2.66**	**350**	*e*Pn	**Pn**	**22 03 51.4**	**+0.5**
KONT	**Konya--Tatoy**	**2.69**	**68**	*e*PN	**Pn**	**22 03 52.4**	**+1.1**
KONT	**Konya--Tatoy**	**2.69**	**68**	*e*Pn	**Pn**	**22 03 52.4**	**+1.1**
LADK	**Ladik-KONYA**	**2.79**	**63**	*e*PN	**Pn**	**22 03 52.9**	**+0.2**
LADK	**Ladik-KONYA**	**2.79**	**63**	*e*Pn	**Pn**	**22 03 52.9**	**+0.2**
KIZT	**Kizilcal**	**2.84**	**47**	*e*PN	**Pn**	**22 03 54.2**	**+0.9**
KIZT	**Kizilcal**	**2.84**	**47**	*e*Pn	**Pn**	**22 03 54.2**	**+0.8**
BALB	**Balikesir**	**2.85**	**339**	*e*PN	**Pn**	**22 03 54.2**	**+0.6**
BALB	**Balikesir**	**2.85**	**339**	*e*Pn	**Pn**	**22 03 54.2**	**+0.6**
CHOS	**Chios island**	**2.87**	**300**	P	**Pn**	**22 03 54.4**	**+0.6**
CHOS				S	**Sn**	**22 04 27.1**	**-1.5**
CHOS	**Chios island**	**2.87**	**300**	P	**Pn**	**22 03 54.4**	**+0.6**
CHOS				S	**Sn**	**22 04 27.1**	**-1.5**
APE	**Apeiranthos**	**2.94**	**273**	P	**Pn**	**22 03 55.2**	**+0.4**
APE				S	**Sn**	**22 04 29.0**	**-1.4**
APE	**Apeiranthos**	**2.94**	**273**	‖*i*P	**Sn**	**22 04 31.4**	**+1.0**
APE	**Apeiranthos**	**2.94**	**273**	P	**Pn**	**22 03 55.2**	**+0.4**
APE				S	**Sn**	**22 04 29.0**	**-1.4**
ZKR	**Zakros**	**3.06**	**233**	P	**Pn**	**22 03 58.3**	**+1.9**
ZKR				S	**Sn**	**22 04 34.0**	**+0.8**
ZKR	**Zakros**	**3.06**	**233**	P	**Pn**	**22 03 58.3**	**+1.9**
ZKR				S	**Sn**	**22 04 34.0**	**+0.8**
SVRH	**Sivrihisar-ESK**	**3.06**	**36**	*e*PN	**Pn**	**22 03 57.0**	**+0.5**
SVRH	**Sivrihisar-ESK**	**3.06**	**36**	*e*Pn	**Pn**	**22 03 57.0**	**+0.5**
THR1	**Thera Island**	**3.08**	**260**	P	**Pn**	**22 03 58.2**	**+1.6**
THR1	**Thera Island**	**3.08**	**260**	P	**Pn**	**22 03 58.2**	**+1.6**
THR2	**Thira island,**	**3.08**	**261**	P	**Pn**	**22 03 58.2**	**+1.5**
THR2	**Thira island,**	**3.08**	**261**	P	**Pn**	**22 03 58.2**	**+1.5**
THR3	**Thira Island,**	**3.11**	**261**	P	**Pn**	**22 03 58.4**	**+1.3**
THR3	**Thira Island,**	**3.11**	**261**	P	**Pn**	**22 03 58.4**	**+1.3**
PRK	**Paraskevi**	**3.24**	**315**	P	**Pn**	**22 03 59.3**	**+0.4**
PRK				S	**Sn**	**22 04 34.0**	**-3.7**
PRK	**Paraskevi**	**3.24**	**315**	P	**Pn**	**22 03 59.3**	**+0.4**
PRK				S	**Sn**	**22 04 34.0**	**-3.7**
LAST	**Lasithi**	**3.52**	**240**	P	**Pn**	**22 04 04.1**	**+1.3**
LAST	**Lasithi**	**3.52**	**240**	P	**Pn**	**22 04 04.1**	**+1.3**
SULT	**Sultanhani-AKS**	**3.63**	**69**	*e*PN	**Pn**	**22 04 05.2**	**+1.0**
SULT	**Sultanhani-AKS**	**3.63**	**69**	*e*Pn	**Pn**	**22 04 05.2**	**+0.9**
IKL	**Isikli**	**3.68**	**100**	*e*PN	**Pn**	**22 04 06.1**	**+1.2**
IKL	**Isikli**	**3.68**	**100**	*e*Pn	**Pn**	**22 04 06.1**	**+1.2**
IDI	**Anoyia**	**3.88**	**246**	P	**Pn**	**22 04 09.5**	**+1.8**
IDI	5.5nm,0.3s,baz=57,slow=16,SNR=43			S	**Sn**	**22 04 54.4**	**+0.8**
IDI	**Anoyia**	**3.88**	**246**	P	**Pn**	**22 04 09.5**	**+1.8**
IDI	14nm,0.3s,baz=280,slow=14,SNR=4.3			S	**Sn**	**22 04 54.4**	**+0.9**
SIVA	**Sivas**	**4.07**	**243**	P	**Pn**	**22 04 12.9**	**+2.6**
SIVA	**Sivas**	**4.07**	**243**	P	**Pn**	**22 04 12.9**	**+2.6**
LIA	**Limnos Island**	**4.30**	**314**	P	**Pn**	**22 04 13.8**	**+0.4**
LIA	**Limnos Island**	**4.30**	**314**	P	**Pn**	**22 04 13.8**	**+0.4**
BRTR	**Keskin Array B**	**4.43**	**50**	P	**Pn**	**22 04 16.3**	**+1.0**
BRTR	2.0nm,0.3s,baz=239,slow=17,SNR=36			S	**Sn**	**22 05 09.3**	**+2.3**
BRTR	**Keskin Array B**	**4.43**	**50**	P	**Pn**	**22 04 16.3**	**+1.0**
BRTR	5.9nm,0.3s,baz=305,slow=13,SNR=38			S	**Sn**	**22 05 09.4**	**+2.3**
BR131	**Keskin Array S**	**4.43**	**50**	*e*Pn	**Pn**	**22 04 16.6**	**+1.3**
BR131				*e*Sn	**Sn**	**22 05 07.2**	**+0.1**
BR131	**Keskin Array S**	**4.43**	**50**	*e*Pn	**Pn**	**22 04 16.6**	**+1.3**
BR131				*e*Sn	**Sn**	**22 05 07.2**	**+0.1**
KARN	**Karanos**	**4.56**	**251**	P	**Pn**	**22 04 19.5**	**+2.5**
KARN	**Karanos**	**4.56**	**251**	P	**Pn**	**22 04 19.5**	**+2.5**
MMAI	**Mount Meron Ar**	**6.44**	**126**	P	**Pn**	**22 04 42.3**	**-0.6**
MMAI	0.1nm,0.3s,baz=302,slow=27,SNR=2.0			S	**Sn**	**22 05 53.8**	**-2.9**
TIRR	**Tirgusor**	**7.50**	**356**	‖↑*i*P	**Pn**	**22 04 57.4**	**+0.1**
TIRR	**Tirgusor**	**7.50**	**356**	‖↑*i*P	**Pn**	**22 04 57.4**	**+0.1**
ASF	**Jabal al Asfar**	**7.95**	**125**	P	**Pn**	**22 05 03.4**	**-0.2**
ASF	0.2nm,0.3s,baz=236,slow=7.3,SNR=3.7			S	**Sn**	**22 06 30.3**	**-3.5**
TLCR		**8.20**	**358**	‖*i*P	**Pn**	**22 05 07.7**	**+0.7**
TLCR		**8.20**	**358**	‖*i*P	**Pn**	**22 05 07.7**	**+0.7**
EIL	**Elat**	**8.73**	**145**	P	**Pn**	**22 05 13.6**	**-0.7**
EIL	1.3nm,0.3s,baz=256,slow=3.2,SNR=11			S	**Sn**	**22 06 48.8**	**-4.2**
EIL	**Elat**	**8.73**	**145**	P	**Pn**	**22 05 13.6**	**-0.7**
EIL				S	**Sn**	**22 06 48.8**	**-4.2**
MLR	**Muntele Rosu**	**8.85**	**345**	P	**Pn**	**22 05 17.0**	**+1.1**
MLR	baz=212,slow=8.7			LR	LR	22 09 19.6	
MLR	**Muntele Rosu**	**8.85**	**345**	‖*i*P	**Pn**	**22 05 17.4**	**+1.5**
MLR	**Muntele Rosu**	**8.85**	**345**	P	**Pn**	**22 05 17.0**	**+1.1**
VRI	**Vrincioaia**	**9.07**	**349**	↑*i*P	**Pn**	**22 05 23.8**	**+4.9**
FINES	**FINESS Array B**	**24.57**	**356**	P	**P**	**22 08 26.6**	**-1.2**
FINES	**FINESS Array B**	**24.57**	**356**	P	**P**	**22 08 26.6**	**-1.2**
HFS	**Hagfors**	**25.21**	**342**	P	**P**	**22 08 31.0**	**-2.7**
HFS	1.6nm,0.8s,mb3.6,baz=129,slow=12,SNR=4.5			LR	LR	22 20 18.2	
ESDC	**Sonseca Array**	**26.08**	**286**	P	**P**	**22 08 40.5**	**-1.3**
ESDC	**Sonseca Array**	**26.08**	**286**	P	**P**	**22 08 40.5**	**-1.3**
NOA	**NORSAR Array B**	**26.63**	**340**	LR	LR	22 20 10.0	
TORD	**Torodi Ar. Bea**	**34.19**	**233**	P	**P**	**22 09 53.1**	**-0.7**
KURK	**Kurchatov**	**37.48**	**53**	P	**P**	**22 10 19.5**	**-2.2**
KURK	**Kurchatov**	**37.48**	**53**	P	**P**	**22 10 19.5**	**-2.2**
MKAR	**Makanchi Array**	**40.03**	**59**	P	**P**	**22 10 39.6**	**-3.5**
KSRS	**Korea Array**	**74.57**	**55**	LR	LR	22 48 24.6	
YKA	**Yellowknife Ar**	**76.68**	**344**	P	**P**	**22 14 58.1**	**-0.8**
YKA	**Yellowknife Ar**	**76.68**	**344**	P	**P**	**22 14 58.1**	**-0.8**

CSEM ***05*** *22:05:48.5±0.3, 50°.35N×18°.81E, h2km, ML2.6/7, Error ellipse: s-maj=7.4km s-min=2.8km az=3.0*
ISCJB ***05*** *22:05:48.5±0.6, 50°.30N±0°.04×18°.75E±0°.03, h0km, Error ellipse: s-maj=6.3km s-min=2.6km az=12.0*
IPEC ***05*** *22:05:49.5±0.1, 50°.24N×18°.85E, h3km±1km, ML1.6/3, Error ellipse: s-maj=1.5km s-min=0.8km az=174.0*
WAR ***05*** *22:05:49.9, 50°.28N×18°.83E*
PRU ***05*** *22:05:50.3, 50°.32N×18°.75E, h0km*
ISC 05 22:05:49.6±0.5, 50°.28N±0°.04×18°.77E±0°.03, h0km, n25, σ1♀21/48, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.59**	**223**	*e*PG	**Pg**	**22 06 02.0**	**+1.1**
OKC				*e*SG	**Sg**	**22 06 11.9**	**+3.3**
OKC	**Ostrava-Krasne**	**0.59**	**223**	Pg	**Pg**	**22 06 02.0**	**+1.1**
OKC				Sg	**Sg**	**22 06 11.9**	**+3.3**
OJC	**Ojcow**	**0.66**	**94**	*e*Pg	**Pg**	**22 06 01.2**	**-1.0**
OJC				*e*Sg	**Sg**	**22 06 09.7**	**-1.1**
OJC	**Ojcow**	**0.66**	**94**	*e*Pg	**Pg**	**22 06 01.2**	**-1.0**
OJC	baz=272			*e*Sg	**Sg**	**22 06 08.9**	**-1.9**
MORC	**Moravsky Berou**	**0.94**	**238**	*e*Pg	**Pg**	**22 06 07.9**	**+0.4**
MORC	baz=61			*e*Sg	**Sg**	**22 06 19.9**	**+0.3**
NIE	**Niedzica**	**1.31**	**130**	*e*Pg	**Pg**	**22 06 14.6**	**-0.1**
NIE				*e*Sg	**Sg**	**22 06 31.7**	**-0.1**
NIE	**Niedzica**	**1.31**	**130**	*e*Pg	**Pg**	**22 06 14.6**	**-0.1**
NIE				*e*Sg	**Sg**	**22 06 31.7**	**-0.1**
DPC	**Dobruska-Polom**	**1.57**	**274**	*e*PG	**Pg**	**22 06 18.8**	**-0.9**
DPC				*e*SG	**Sg**	**22 06 40.0**	**0.0**
DPC	**Dobruska-Polom**	**1.57**	**274**	*e*Pn	**Pn**	**22 06 18.6**	**-0.1**
DPC	baz=93			Sg	**Sg**	**22 06 40.0**	**0.0**
KSP	**Ksiaz**	**1.68**	**291**	*e*Pg	**Pg**	**22 06 22.0**	**+0.3**
KSP				*e*Sg	**Sg**	**22 06 44.9**	**+1.4**
VRAC	**Vranov**	**1.71**	**236**	*e*Pn	**Pn**	**22 06 21.0**	**+0.4**
VRAC	baz=57			*e*Sg	**Sg**	**22 06 44.0**	**-0.5**
VYHS	**Vyhne**	**1.78**	**179**	*e*PN	**Pn**	**22 06 21.9**	**+0.3**
VYHS				*e*SN	**Sn**	**22 06 44.0**	**-0.9**
VYHS	**Vyhne**	**1.78**	**179**	*e*Pn	**Pn**	**22 06 21.2**	**-0.4**
VYHS	baz=0.3			*e*Sn	**Sn**	**22 06 44.0**	**-0.9**
STHS	**Stebnicka Huta**	**1.82**	**117**	*e*PN	**Pn**	**22 06 23.6**	**+1.6**
STHS				*e*SN	**Sn**	**22 06 48.1**	**+2.4**
STHS	**Stebnicka Huta**	**1.82**	**117**	*e*Pn	**Pn**	**22 06 23.6**	**+1.6**
KRUC	**Moravsky**	**1.96**	**233**	*e*Pn	**Pn**	**22 06 24.4**	**+0.3**
KRUC	baz=53			*e*Sn	**Sn**	**22 06 49.9**	**+0.5**
KECS	**Kecovo**	**2.11**	**147**	*e*PN	**Pn**	**22 06 27.7**	**+1.6**
KECS				*e*SN	**Sn**	**22 06 51.2**	**-1.9**
CRVS	**Cervenica-Dubn**	**2.23**	**127**	*e*PN	**Pn**	**22 06 31.4**	**+3.8**
CRVS				*e*SN	**Sn**	**22 06 59.0**	**+3.2**
CRVS	**Cervenica-Dubn**	**2.23**	**127**	*e*Pn	**Pn**	**22 06 31.4**	**+3.8**
CRVS				*e*Sn	**Sn**	**22 06 59.0**	**+3.2**
KOLS	**Kolonicke sedl**	**2.64**	**119**	*e*PG	**Pg**	**22 06 38.4**	**-1.8**
KOLS				*e*SN	**Sn**	**22 07 06.8**	**+0.7**
KOLS	**Kolonicke sedl**	**2.64**	**119**	*e*Pg	**Pg**	**22 06 38.4**	**-1.8**
KOLS				*e*Sn	**Sn**	**22 07 06.8**	**+0.7**
PRU	**Pruhonice**	**2.74**	**266**	*e*PG	**Pg**	**22 06 40.0**	**-2.0**
PRU				*e*SG	**Sg**	**22 07 16.8**	**-0.6**
PRU	**Pruhonice**	**2.74**	**266**	Pg	**Pg**	**22 06 40.0**	**-2.0**
PRU				Sg	**Sg**	**22 07 16.8**	**-0.6**
BRG	**Berggiesshubel**	**3.14**	**283**	SG	**Sg**	**22 07 31.1**	**+0.8**
KHC	**Kasperske Hory**	**3.56**	**253**	*e*PG	**Pg**	**22 06 55.1**	**-2.7**
KHC				*e*SG	**Sg**	**22 07 42.9**	**-1.0**

CSEM ***05*** *22:09:10.7, 37°.11N×27°.38E, h17km, MD3.1, After ATH*
ATH 05 22:09:10.7, 37°.11N×27°.38E, h17km±6km, MD3.1/6,

Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.74**	**324**	*e*PN	Pg	22 09 24.9	-0.2
SMG	**Samos**	**0.74**	**324**	*e*Pn	Pg	22 09 24.9	-0.2
ARG	**Arkhangelos**	**1.07**	**146**	*e*PN	Pn	22 09 31.3	+0.3
ARG	**Arkhangelos**	**1.07**	**146**	*e*Pn	Pn	22 09 31.3	+0.3
APE	**Apeiranthos**	**1.48**	**269**	*e*PN	Pn	22 09 39.1	+2.6
APE	**Apeiranthos**	**1.48**	**269**	*e*Pn	Pn	22 09 39.1	+2.6
KARP	**Karpathos**	**1.57**	**187**	*e*PN	Pn	22 09 40.3	+2.5
KARP	**Karpathos**	**1.57**	**187**	*e*Pn	Pn	22 09 40.3	+2.5
ZKR	**Zakros**	**2.20**	**206**	*e*PB	Pn	22 09 48.3	+1.8
ZKR	**Zakros**	**2.20**	**206**	*e*Pb	Pn	22 09 48.3	+1.8
NPS	**Neapolis**	**2.33**	**218**	*e*PN	Pn	22 09 50.1	+1.8
NPS	**Neapolis**	**2.33**	**218**	*e*Pn	Pn	22 09 50.1	+1.8
LAST	**Lasithi**	**2.48**	**219**	*e*PN	Pn	22 09 52.9	+2.6
LAST	**Lasithi**	**2.48**	**219**	*e*Pn	Pn	22 09 52.9	+2.6
KARN	**Karanos**	**3.28**	**240**	*e*PN	Pn	22 10 03.7	+2.5
KARN	**Karanos**	**3.28**	**240**	*e*Pn	Pn	22 10 03.7	+2.5

IDC ***05*** *22:12:51.6±0.5, 19°.84N×121°.38E, h0km, mb4.2/27, mb1 4.3/28, mb1mx4.3/33, mbtmp4.2/28, ML4.0/1, MS4.0/16, Ms1 4.1/16, ms1mx3.8/33, Error ellipse: s-maj=18.0km s-min=12.1km az=80.0*
MOS ***05*** *22:12:54.6±1.0, 19°.84N×121°.49E, h33km, mb4.7/24, MS4.2/10, Error ellipse: s-maj=11.2km s-min=5.9km az=117.8*
MAN ***05*** *22:12:55, 20°.06N×121°.27E, h33km, mb5.0, ML3.9, MS4.0*
NEIC ***05*** *22:12:55.1±1.7, 19°.87N×121°.52E, h24km±12km, mb4.5/31, Error ellipse: s-maj=7.1km s-min=4.8km az=87.0*
ISCJB ***05*** *22:12:56.8±0.4, 19°.94N±0°.02×121°.45E±0°.05, h48km±3km, mb4.3/69, MS4.1/29, Error ellipse: s-maj=7.2km s-min=3.0km az=177.3*
BJI ***05*** *22:12:56.5, 20°.24N×121°.03E, h12km, mB4.5/20, mb4.3/24, ML3.7/1, Ms4.3/21, Ms7 4.3/20*
GCMT ***05*** *22:12:58.3±0.3, 20°.04N×121°.13E, h31km±1km, MW4.9, Moment Tensor Solution. s24,c30; s61,c95; Moment tensor: Scale 10^16^Nm; Mrr2.24±.17; Mθθ0.37±.10; Mφφ-2.61±.12; Mrθ-0.89±.13; Mrφ-1.02±.06; Mθφ-1.08±.14; Best double couple: Mo3.00000×10^16^ NP1:φs1.00000°, δ34.00000°, λ65.00000°. NP2:φs210.00000°, δ60.00000°, λ106.00000°. Principal axes: T 2.6800, Plg71.0000°, Azm156.0000°; N 0.5600, Plg14.0000°, Azm22.0000°; P -3.2400, Plg13.0000°, Azm289.0000°; Data Used: IU II G IC CN.*
ISC 05 22:12:58.2±0.3, 19°.94N±0°.02×121°.45E±0°.04, h45km±3km, h33km±6.3km: pP-P, n193, σ1♀03/196, **mb4.3**/69, **MS4.1**/29, **9C-6D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBP	**Basco**	**0.69**	**44**	*e*P	**Pn**	**22 13 11.4**	**-0.2**
BBP				*e*S	**Sn**	**22 13 21.0**	**-0.3**
SGCP	**Mt. Cagua**	**1.78**	**162**	*e*P	**Pn**	**22 13 27.5**	**+1.0**
APYP	**Conner**	**2.08**	**186**	*e*P	**Pn**	**22 13 30.0**	**-0.6**
APYP				*e*S	**Sn**	**22 13 56.9**	**+1.7**
CVP	**Callao Caves**	**2.25**	**171**	*e*P	**Pn**	**22 13 32.7**	**-0.3**
CVP				*e*S	**Sn**	**22 14 03.3**	**+3.7**
ABRA	**Dolores**	**2.38**	**197**	*e*P	**Pn**	**22 13 34.8**	**0.0**

comp=Z,470nm,20.0s,MS3.9
CHTO Chiang Mai 21.27 271 *e*P **P 22 17 40.1 -0.8**
CHTO pmax pmax
comp=Z,33nm,1.6s,mb4.4
CHTO Chiang Mai 21.27 271 *e*P **P 22 17 40.1 -0.7**
comp=Z,33nm,1.6s,mb4.4
CM31 Chiang Mai Arr 21.31 270 *e*P **P 22 17 43.3 +1.9**
CMAR Chiang Mai Arr 21.31 270 P **P 22 17 40.2 -1.1**
comp=Z,1.9nm,0.8s,mb3.5,baz=73,slow=9.4,SNR=17
CMAR PcP PcP 22 21 45.2 +0.5
comp=Z,0.8nm,0.7s,baz=34,slow=0.3,SNR=5.6
CMAR LR LR 22 26 07.6
comp=Z,268nm,18.4s,MS3.7,baz=172,slow=38
CMAR Chiang Mai Arr 21.31 270 P **P 22 17 40.2 -1.1**
CMAR 22 21 45.2
KSM Kuching 21.35 212 *e*P **P 22 17 40.9 -0.9**
comp=Z,30nm,1.1s,mb4.5
MAJO Matsushiro 22.11 38 P **P 22 17 48.2 -1.6**
MJAR Matsushiro Arr 22.11 38 P **P 22 17 51.0 +1.3**
comp=Z,3.5nm,0.8s,mb3.8,baz=222,slow=7.1,SNR=12
LZH Lanzhou 22.31 320 *e*P **P 22 17 51.7 -0.2**
LZH pP 22 17 58.8
LZH sP sP 22 18 02.3 -6.1
LZH PP 22 18 19.5
LZH *e*S **S 22 21 53.0 -1.9**
LZH pmax pmax
comp=Z,21nm,1.0s,mb4.5
LZH pmax pmax
comp=Z,160nm,4.7s
LZH LR LR
comp=N,680nm,13.5s
LZH LR LR
comp=Z,930nm,16.0s,MS4.3
HHC Hu-ho-hao-te 22.49 340 *e*P **P 22 17 54.6 +0.9**
HHC pP 22 18 00.1
HHC sP sP 22 18 03.4 -6.8
HHC PP 22 18 22.8
HHC PcP PcP 22 21 48.9 +2.3
HHC sS sS 22 22 05.6 -10
HHC ScP ScP 22 25 23.6 +2.9
HHC PcS PcS 22 25 26.9 +1.6
HHC pmax pmax
comp=Z,9.0nm,0.9s,mb4.2
HHC pmax pmax
comp=Z,120nm,6.6s
HHC LR LR
comp=N,870nm,14.0s,MS4.3
HHC LR LR
comp=E,360nm,16.0s,MS4.3
HHC LR LR
comp=Z,830nm,14.3s,MS4.3
KAPI Kappang 24.85 184 P **P 22 18 15.3 -1.3**
comp=Z,9.2nm,0.7s,mb4.5,baz=8.2,slow=9.8,SNR=6.1
KAPI LR LR 22 28 01.1
comp=Z,423nm,20.5s,MS3.9,baz=4.7,slow=37
KULM Kulim 24.93 237 *e*P **P 22 18 17.3 -0.2**
comp=Z,4.5nm,0.7s,mb4.1
MDJ Mudanjiang 25.52 14 P **P 22 18 22.4 -0.1**
MDJ pP pP 22 18 28.4 -5.9
MDJ sP sP 22 18 31.0 -8.7
MDJ S **S 22 22 50.0 +3.2**
MDJ sS sS 22 23 00.5 -6.2
MDJ pmax pmax
comp=Z,4.0nm,0.8s,mb4.0
MDJ pmax pmax
comp=Z,13nm,3.8s
MDJ LR LR
comp=N,140nm,23.9s,MS4.0
MDJ LR LR
comp=E,440nm,21.2s,MS4.0
MDJ LR LR
comp=Z,230nm,19.2s,MS3.7
GTA Gaotai 26.90 321 *e*P **P 22 18 40.3 +5.3**
GTA pP pP 22 18 44.9 -1.9
GTA sP sP 22 18 47.9 -4.3
GTA pmax pmax
comp=Z,3.0nm,1.1s,mb3.7
PSI Prapat 27.82 235 P **P 22 18 42.9 -0.6**
comp=Z,2.3nm,0.4s,mb4.1,baz=323,slow=22,SNR=7.0
PSI LR LR 22 29 27.2
comp=Z,216nm,18.5s,MS3.8,baz=227,slow=36
LSA Lhasa 29.10 295 *e*P **P 22 18 50.0 -4.7**
LSA Lhasa 29.10 295 *e*P **P 22 18 55.4 +0.7**
LSA pmax pmax
comp=Z,3.0nm,0.9s,mb4.0
LSA Lhasa 29.10 295 *e*P **P 22 18 55.4 +0.7**
comp=Z,3.2nm,0.9s,mb4.0
ASAJ Asahikawa 29.87 31 P **P 22 19 02.2 +0.8**
comp=Z,3.4nm,0.5s,mb4.4,baz=134,slow=17,SNR=5.1
ULN Ulaanbaatar 30.21 341 P **P 22 19 04.3 0.0**
SONM Songino Array 30.39 340 P **P 22 19 06.5 +0.5**
comp=Z,0.7nm,0.5s,mb3.7,baz=159,slow=10.0,SNR=6.3
SONM LR LR 22 33 21.0
comp=Z,476nm,18.2s,MS4.2,baz=251,slow=40
SONM Songino Array 30.39 340 P **P 22 19 06.5 +0.5**
SONM LR LR 22 33 21.0
HABR Khabarovsk 30.51 18 *e*P **P 22 19 06.1 -0.9**
HABR *e* 22 29 39.9
HABR MLR MLR
comp=Z,136nm,17.0s,MS3.7
ZAK Zakamensk 33.62 339 *e*P **P 22 19 34.7 +0.4**
ZAK pmax pmax
comp=Z,2.0nm,1.6s,mb3.8
TLY Talaya 34.62 340 *e*P **P 22 19 44.2 +1.3**
TLY *e*S **S 22 25 06.0 -3.1**
TLY pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
TLY MLR MLR
comp=Z,225nm,15.0s,MS4.0
TLY Talaya 34.62 340 *e*P **P 22 19 41.8 -1.0**
comp=Z,1.7nm,0.6s,mb4.2
WMQ Urumqi 36.86 318 *e*P **P 22 20 04.0 +1.7**
FITZ Fitzroy Crossi 38.03 174 *e*P **P 22 20 11.3 -1.0**
comp=Z,6.2nm,0.8s,mb4.4
MBWA Marble Bar 40.88 182 *e*P **P 22 20 34.3 -1.7**
MBWA Marble Bar 40.88 182 *e*P **P 22 20 34.5 -1.6**
comp=Z,8.3nm,0.6s,mb4.5
PALK Pallekele 41.44 258 LR LR 22 37 60.0
comp=Z,149nm,18.3s,MS3.9,baz=66,slow=36
WRAB Tennant Creek 41.59 162 *e*P **P 22 20 40.4 -1.5**
WRAB pmax pmax
comp=Z,24nm,1.2s,mb4.7
WRAB Tennant Creek 41.59 162 *e*P **P 22 20 40.4 -1.5**
comp=Z,24nm,1.2s,mb4.7
WRA Warramunga Arr 41.60 162 P **P 22 20 40.2 -1.7**
comp=Z,11nm,0.5s,mb4.7,baz=343,slow=9.1,SNR=61
MK31 Makanchi Array 41.63 319 *e*P **P 22 20 42.7 +0.8**
MKAR Makanchi Array 41.63 319 P **P 22 20 42.7 +0.7**
comp=Z,1.6nm,0.7s,mb3.7,baz=97,slow=9.9,SNR=11
MKAR LR LR 22 41 10.9
comp=Z,198nm,18.3s,MS4.0,baz=34,slow=41
MKAR Makanchi Array 41.63 319 P **P 22 20 42.7 +0.7**
MKAR LR LR 22 41 10.9
PETK Petropavlovsk- 43.29 31 P **P 22 20 55.7 +0.3**
comp=Z,4.7nm,0.7s,mb4.3,baz=211,slow=2.6,SNR=6.3
PETK LR LR 22 39 30.1
comp=Z,87nm,19.5s,MS3.7,baz=121,slow=37
PETK Petropavlovsk- 43.29 31 P **P 22 20 55.7 +0.3**
PETK LR LR 22 39 30.1
ZAA0 Zalesovo Array 43.97 329 *e*P **P 22 21 00.7 -0.2**
ZALV Zalesovo Beam 43.97 329 P **P 22 21 01.0 +0.2**
comp=Z,2.0nm,0.6s,mb4.0,baz=110,slow=8.3,SNR=11
ZALV LR LR 22 40 41.7
comp=Z,186nm,18.4s,MS4.0,baz=78,slow=38
TKM2 Tokmak 2 44.66 311 P **P 22 21 06.3 -0.2**
ASAR Alice Springs 45.01 164 P **P 22 21 08.6 -0.9**
comp=Z,6.5nm,0.5s,mb4.7,baz=344,slow=6.8,SNR=100
NVS Novosibirsk 45.24 330 *e*P **P 22 21 09.0 -2.0**
NVS *e*S **S 22 27 46.0 -1.8**
NVS pmax pmax
comp=Z,19nm,1.7s,mb4.7
NVS pmax pmax
comp=N,14nm,1.8s
NVS pmax pmax
comp=E,17nm,1.8s
NVS smax
comp=N,8.0nm,2.0s
NVS smax
comp=E,18nm,2.3s
UCH Uchtor 45.24 310 *e*P **P 22 21 10.8 -0.4**
UCH pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
UCH Uchtor 45.24 310 *e*P **P 22 21 10.8 -0.4**
comp=Z,10nm,1.4s,mb4.5
AAK Ala-Archa 45.36 311 LR LR 22 42 49.1
comp=Z,584nm,18.9s,MS4.5,baz=35,slow=40
AAK Ala-Archa 45.36 311 *e*P **P 22 21 12.9 +0.8**
KURK Kurchatov 45.55 323 P **P 22 21 13.9 +0.4**
comp=Z,2.0nm,0.7s,mb4.1,baz=122,slow=7.4,SNR=19
KURK LR LR 22 43 21.6
comp=Z,91nm,20.2s,MS3.7,baz=100,slow=40
KURK Kurchatov 45.55 323 *e*P **P 22 21 14.3 +0.8**
KURK pmax pmax
comp=Z,26nm,1.8s,mb4.9
KURK Kurchatov 45.55 323 *e*P **P 22 21 14.3 +0.8**
comp=Z,26nm,1.8s,mb4.9
AML Almayashu 45.81 310 *e*P **P 22 21 18.1 +2.4**
AML pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
AML Almayashu 45.81 310 *e*P **P 22 21 18.1 +2.5**
comp=Z,3.7nm,1.0s,mb4.3
EKS2 Erkin-Say 45.88 311 *e*P **P 22 21 16.4 +0.2**
EKS2 pmax pmax
comp=Z,4.0nm,1.3s,mb4.2
EKS2 Erkin-Say 45.88 311 *e*P **P 22 21 16.4 +0.2**
comp=Z,4.3nm,1.3s,mb4.2
MEEK Moeskatharra 46.38 184 *e*P **P 22 21 18.7 -1.5**
CTAO Charters Tower 46.61 147 P **P 22 21 20.5 -1.6**
KBL Kabul 48.31 299 *e*P **P 22 21 37.4 +2.1**
KBL pmax pmax
comp=Z,21nm,1.8s,mb4.9
KBL Kabul 48.31 299 *e*P **P 22 21 37.4 +2.1**
comp=Z,21nm,1.8s,mb4.9
FORT Forrest 50.83 173 *e*P **P 22 21 53.9 -0.4**
comp=Z,34nm,0.7s,mb5.4
FORT Forrest 50.83 173 *e*P **P 22 21 54.0 -0.3**
comp=Z,37nm,0.7s,mb5.4
BVAR Borovoye Array 51.15 323 P **P 22 21 57.5 +0.9**
comp=Z,0.9nm,0.7s,mb3.8,baz=99,slow=9.6,SNR=6.5
BVAR PcP PcP 22 23 11.1 -0.5
comp=Z,1.2nm,0.7s,baz=132,slow=4.3,SNR=4.0
BRVK Borovoye 51.22 323 *ce*P **P 22 21 57.5 +0.4**
BRVK pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
BRVK Borovoye 51.22 323 *e*P **P 22 21 58.3 +1.2**
comp=Z,3.3nm,0.8s,mb4.3
TIXI Tiksi 51.90 3 *e*P **P 22 22 01.7 -0.2**
TIXI pmax pmax
comp=Z,49nm,2.4s,mb5.0
TIXI Tiksi 51.90 3 *e*P **P 22 22 01.7 -0.1**
comp=Z,49nm,2.4s,mb5.0
NWAO Narrogin (SRO) 52.72 184 *e*P **P 22 22 08.0 -0.4**
comp=Z,70nm,0.8s
NWAO Narrogin (SRO) 52.72 184 *e*P **P 22 22 07.2 -1.2**
NWAO pmax pmax
comp=Z,30nm,1.2s
NWAO Narrogin (SRO) 52.72 184 *e*P **P 22 22 07.2 -1.3**
comp=Z,30nm,1.2s,mb5.1
BBOO Buckleboo 54.28 165 *e*P **P 22 22 19.4 -0.5**
comp=Z,8.3nm,0.5s,mb4.9
STKA Stephens Creek 55.02 159 *e*P **P 22 22 24.9 -0.3**
comp=Z,4.8nm,0.8s,mb4.6
STKA Stephens Creek 55.02 159 P **P 22 22 25.1 -0.2**
comp=Z,5.0nm,0.7s,mb4.7,baz=272,slow=1.2,SNR=10
STKA Stephens Creek 55.02 159 *e*P **P 22 22 23.8 -1.4**
comp=Z,0.9nm,0.6s,mb4.0
BILL Bilibino 55.59 19⇑ *e*P **P 22 22 29.5 +0.6**
BILL *e* 22 24 31.6
BILL *e*S **S 22 30 11.9 +0.7**
BILL pmax pmax
comp=Z,10.0nm,2.5s,mb4.4
BILL MLR MLR
comp=Z,100nm,17.0s,MS4.0
BILL Bilibino 55.59 19 *e*P **P 22 22 28.5 -0.4**
comp=Z,3.0nm,0.6s,mb4.5
CMSA Cobar Meteorol 56.22 155 *e*P **P 22 22 34.1 +0.2**
ABKAR Akbulak array 56.62 316 *e*P **P 22 22 36.8 +0.2**
comp=Z,1.9nm,0.8s,mb4.2
ABKAR PcP PcP 22 23 31.3 -1.2
SVE Sverdlovsk 57.63 325 *e*P **P 22 22 52.2 +8.6**
SVE *e* 22 24 49.5
SVE pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
SVE MLR MLR
comp=Z,223nm,18.0s,MS4.3
ARU Arti 58.66 325 *d i*P pP 22 23 01.1 -2.5
ARU S sS 22 31 14.2 +1.0
ARU pmax pmax
comp=Z,20nm,2.5s,mb4.7
ARU MLR MLR
comp=Z,309nm,17.0s,MS4.5
ARU Arti 58.66 325 *e*P **P 22 22 50.9 +0.1**
comp=Z,2.5nm,0.6s,mb4.4
TOO Toolangi 61.52 158 *e*P **P 22 23 11.8 +1.3**
GNI Garni 67.45 306 P **P 22 23 51.1 +1.6**
comp=Z,0.7nm,0.3s,mb4.1,baz=140,slow=13,SNR=4.3
GNI Garni 67.45 306 *ce*P **P 22 23 49.3 -0.2**
GNI pmax pmax
comp=Z,9.0nm,1.2s
ZEI Tsey 67.75 309 *e*P **P 22 23 50.6 -0.7**
ZEI *e* pP 22 24 01.5 -2.7
ZEI pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
KIV Kislovodsk 68.48 310 *e*P **P 22 23 56.4 +0.6**
KIV *e*S S 22 32 58.3 +3.7
KIV pmax pmax
comp=Z,14nm,1.1s,mb4.9
KIV MLR MLR
comp=Z,124nm,19.0s,MS4.2
KIV Kislovodsk 68.48 310 *e*P **P 22 23 56.7 +0.9**
comp=Z,13nm,0.9s,mb5.0
VSR Storozhevoye 69.94 318 *e*P **P 22 24 04.1 -0.7**
VSR pmax pmax
comp=N,3.0nm,0.4s
VSR pmax pmax
comp=E,6.0nm,0.4s
VSR pmax pmax
comp=Z,3.0nm,0.4s,mb4.6
OBN Obninsk 70.99 323⇓ *e*P **P 22 24 10.3 -0.8**
OBN *e*S S 22 33 23.1 -0.6
OBN pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
OBN MLR MLR
comp=Z,100nm,16.0s,MS4.2
BPAW Bear Paw Mtn. 71.21 28 *e*P **P 22 24 12.6 +0.4**
comp=Z,10.0nm,1.4s,mb4.5
JOF Joensuu 72.52 331 *e*P **P 22 24 22.9 +2.8**
JOF *e*P 22 24 23.8
JOF Joensuu 72.52 331 *e*p **P 22 24 23.8 +3.7**
JOF Joensuu 72.52 331 *e*p **P 22 24 22.9 +2.8**
JOF Joensuu 72.52 331 *e*p **P 22 24 23.8 +3.7**
JOF Joensuu 72.52 331 *e*p **P 22 24 23.8 +3.7**
JOF Joensuu 72.52 331 *e*p **P 22 24 22.9 +2.8**
JOF Joensuu 72.52 331 *e*p **P 22 24 23.8 +3.7**
ARCES ARCESS Array B 73.56 339 P **P 22 24 26.6 +0.5**
comp=Z,3.7nm,1.0s,mb4.3,baz=99,slow=4.7,SNR=3.8
SPITS Spitsbergen Ar 73.67 348 P **P 22 24 27.4 +0.8**
comp=Z,3.8nm,0.6s,mb4.5,baz=83,slow=7.1,SNR=11
FINES FINESS Array B 75.23 330 P **P 22 24 36.0 +0.1**
comp=Z,2.4nm,0.8s,mb4.2,baz=118,slow=11,SNR=4.9
FINES LR LR 23 00 55.5
comp=Z,185nm,18.3s,MS4.4,baz=190,slow=38
BRTR Keskin Array B 75.91 307 P **P 22 24 39.8 -0.6**
comp=Z,0.5nm,0.8s,mb3.5,baz=145,slow=4.5,SNR=3.7
BRTR Keskin Array B 75.91 307 *ce*P **P 22 24 40.7 +0.4**
DAWY Dawson 76.19 27 *e*P **P 22 24 42.1 +0.7**
AKASG Malin Array Be 76.21 319 P **P 22 24 40.3 -1.5**
comp=Z,0.6nm,0.5s,mb3.8,baz=64,slow=6.1,SNR=6.5
AKASG Malin Array Be 76.21 319 *ce*P **P 22 24 41.9 +0.1**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
IDID Didziasalis 76.47 324 *e*P **P 22 24 43.3 +0.2**
IDID AMB AMB 22 24 45.0
comp=Z,3.9nm,1.0s,mb4.3
IZAR Zarasai 76.62 325 *e*P **P 22 24 44.3 +0.2**
IZAR AMB AMB 22 24 45.9
comp=Z,2.9nm,0.7s,mb4.3
ISAL Salakas 76.74 324 *e*P **P 22 24 44.8 +0.1**
IIGN Ignalina 76.75 324 *e*P **P 22 24 44.9 +0.1**
IIGN AMB AMB 22 24 45.4
comp=Z,3.5nm,1.9s,mb4.0
INK Inuvik 77.05 22 *e*P **P 22 24 45.4 -0.8**
SUW Suwalki 78.83 323 *e*P **P 22 24 55.8 -0.5**
SUW Suwalki 78.83 323 *e*P **P 22 24 56.4 +0.1**
VRI Vrincioaia 79.14 315‖ *i*P **P 22 24 59.0 +0.7**
BURAR Bucovina Array 79.60 317‖ *i*P **P 22 25 00.5 -0.2**
MLR Muntele Rosu 79.78 315 P **P 22 25 01.7 0.0**
comp=Z,1.9nm,0.8s,mb4.1,baz=199,slow=3.7,SNR=5.9
MLR Muntele Rosu 79.78 315‖ *i*P **P 22 25 01.9 +0.2**
KWP Kalwaria Pacla 80.53 319 *e*P **P 22 25 06.4 +0.8**
KWP Kalwaria Pacla 80.53 319 *e*P **P 22 25 06.1 +0.5**
comp=Z,36nm,1.7s,mb5.0
KWP Kalwaria Pacla 80.53 319⇑ *i*P **P 22 25 06.7 +1.0**
DAG Danmarks Havn 80.58 351⇑ *i*P **P 22 25 05.3 -0.2**
DAG pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
DAG Danmarks Havn 80.58 351⇑ *i*P **P 22 25 05.3 -0.2**
comp=Z,4.1nm,0.7s,mb4.5
KOLS Kolonicke sedl 81.03 319 *e*P **P 22 25 09.1 +0.7**
KOLS pmax pmax
comp=Z,9.0nm,1.8s,mb4.4
KOLS Kolonicke sedl 81.03 319 *e*P **P 22 25 09.1 +0.7**
comp=Z,9.0nm,1.8s,mb4.4
KOLS Kolonicke sedl 81.03 319 *e*P **P 22 25 09.0 +0.6**
HFS Hagfors 81.38 331 P **P 22 25 09.0 -1.0**
comp=Z,2.2nm,0.7s,mb4.2,baz=90,slow=5.9,SNR=7.3
CRVS Cervenica-Dubn 81.55 319 *e*P **P 22 25 12.6 +1.5**
CRVS *e* pP 22 25 23.1 -1.3
CRVS pmax pmax
comp=Z,7.0nm,1.5s,mb4.4
CRVS Cervenica-Dubn 81.55 319 *e*P **P 22 25 12.6 +1.5**
comp=Z,6.7nm,1.5s,mb4.3
CRVS *e* pP 22 25 23.1 -1.3
CRVS Cervenica-Dubn 81.55 319 *e*P **P 22 25 12.6 +1.5**
CRVS *e*sP sP 22 25 23.1 -6.3
NB2 NORSAR Subarra 82.08 333 P **P 22 25 12.9 -0.8**
comp=Z,0.1nm,0.6s,baz=68,slow=6.2
NOA NORSAR Array B 82.08 333 P **P 22 25 12.7 -1.0**
comp=Z,1.1nm,0.7s,mb3.9,baz=62,slow=5.1,SNR=5.4
NOA LR LR 23 05 29.5
comp=Z,271nm,18.3s,MS4.7,baz=60,slow=38
OJC Ojcow 82.08 321 *e*P **P 22 25 13.5 -0.4**
KECS Kecovo 82.30 319 *e*P **P 22 25 16.8 +1.7**
KECS pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
KECS Kecovo 82.30 319 *e*P **P 22 25 16.8 +1.7**
comp=Z,2.1nm,1.1s,mb4.0
KECS Kecovo 82.30 319 *e*P **P 22 25 16.8 +1.7**
RES Resolute Bay 82.79 9 *e*P **P 22 25 16.7 -0.5**
OKC Ostrava-Krasne 83.22 321 AMS AMS 23 05 40.0
comp=Z,100nm,7.5s
VYHS Vyhne 83.31 319 *e*P **P 22 25 21.4 +1.1**
VYHS *e* pP 22 25 32.2 -1.4
VYHS pmax pmax
comp=Z,4.0nm,1.5s,mb4.2
VYHS Vyhne 83.31 319 *e*P **P 22 25 21.4 +1.1**
comp=Z,4.3nm,1.5s,mb4.3
VYHS *e* pP 22 25 32.2 -1.4
VYHS Vyhne 83.31 319 *e*P **P 22 25 21.4 +1.1**
VYHS *e*sP sP 22 25 32.2 -6.5
MORC Moravsky Berou 83.60 321 *e*P **P 22 25 21.8 0.0**
DPC Dobruska-Polom 84.09 322 *e*P **P 22 25 24.8 +0.5**
DPC MLR MLR
comp=Z,100nm,15.8s,MS4.3
DPC Dobruska-Polom 84.09 322 *e*P **P 22 25 24.8 +0.5**
DPC AMS AMS 23 06 10.0
comp=Z,100nm,15.8s
VRAC Vranov 84.35 321 P **P 22 25 26.3 +0.6**
comp=Z,3.2nm,0.8s,mb4.5,baz=75,slow=15,SNR=8.3
KMBO Kilima Mbogo 84.93 267 P **P 22 25 28.6 -0.6**
comp=Z,3.9nm,1.1s,mb4.4,baz=63,slow=9.5,SNR=5.4
TREC Trest 85.02 321 AMS AMS 23 09 30.0
comp=Z,200nm,5.7s
PVCC Panska Ves 85.03 322 *e*P **P 22 25 29.6 +0.6**
PVCC MLR MLR
comp=Z,100nm,20.4s,MS4.2
PVCC Panska Ves 85.03 322 *e*P **P 22 25 29.6 +0.6**
PVCC AMS AMS 23 07 00.0
comp=Z,100nm,20.4s
PRU Pruhonice 85.28 322 *e*P **P 22 25 31.3 +1.0**
PRU MLR MLR
comp=Z,100nm,16.0s,MS4.3
PRU Pruhonice 85.28 322 *e*P **P 22 25 31.3 +1.0**
PRU AMS AMS 23 07 10.0
comp=Z,100nm,16.0s
CLL Collm 85.58 323 *e*P **P 22 25 29.0 -2.8**
CLL *e* pP 22 25 45.0 -0.1
CLL pmax pmax
comp=Z,7.0nm,1.3s,mb4.7
CLL MLR MLR
comp=Z,200nm,17.1s,MS4.6
CLL Collm 85.58 323 *e*P **P 22 25 29.0 -2.8**
comp=Z,7.0nm,1.3s,mb4.7
CLL *e* pP 22 25 45.0 -0.1
CLL *e* 22 25 58.0
CLL LR LR
comp=Z,200nm,17.1s,MS4.6
CLL Collm 85.58 323 *e*P **P 22 25 31.0 -0.8**
comp=Z,7.0nm,1.3s,mb4.7
CLL *e*(sP) sP 22 25 45.0 -5.1
KHC Kasperske Hory 86.22 321 AMS AMS 23 07 30.0
comp=Z,100nm,18.5s
GERES GERESS Array B 86.27 321 P **P 22 25 34.8 -0.4**
comp=Z,0.3nm,0.5s,mb3.8,baz=90,slow=2.7,SNR=4.0
NKC Novy Kostel 86.38 323 AMS AMS 23 08 00.0
comp=Z,100nm,17.3s
SUMG Summit 86.73 354 *e*P **P 22 25 37.1 +0.1**
YKA Yellowknife Ar 86.77 23 P **P 22 25 37.3 0.0**
comp=Z,2.6nm,0.6s,mb4.7,baz=309,slow=4.6,SNR=17
PPT Papeete 94.91 107 LR LR 23 06 21.2
comp=Z,117nm,18.1s,MS4.4,baz=277,slow=34
M13A Montello 100.18 39 *e*Pdif Pdif 22 26 37.2 -2.2
N13A Wendover, West 100.47 40 *e*Pdif Pdif 22 26 37.1 -3.5
LPAZ La Paz 170.19 70 PKP PKPdf 22 33 03.1 +1.1
comp=Z,4.7nm,1.3s,baz=46,slow=2.0,SNR=6.5
LPAZ La Paz 170.19 70 *e*PKPdf PKPdf 22 33 02.1 +0.1

KRSC 05 22:13:11.6±1.1, 53°.91N×163°.74E, h41km±40km, ML3.8,
Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**1.35**	**300**	*e*P	Pn	22 13 35.6	+1.8
MKZ				*e*S	Sn	22 13 52.8	+2.3
BKI	**Bering**	**1.84**	**44**	*e*S	Sn	22 13 59.5	-3.0
KBTR	**Krutoberegovo**	**2.36**	**347**	*e*P	Pn	22 13 47.9	+0.1
KBTR				*e*S	Sn	22 14 14.2	-1.3
SPN	**Mys Shipunski**	**2.36**	**251**	*e*P	Pn	22 13 48.3	+0.5
SPN				*e*S	Sn	22 14 15.3	-0.3
KII	**Karymskiy**	**2.54**	**275**	P	Pn	22 13 52.5	+2.3
KII				*e*S	Sn	22 14 21.9	+2.1
BZGR	**Bezymyannyi-Gr**	**2.69**	**320**	P	Pn	22 13 54.5	+2.2
BZGR				*e*S	Sn	22 14 26.2	+2.7
ZLN	**Zelenaya**	**2.71**	**322**	*e*P	Pn	22 13 54.8	+2.3
ZLN				*e*S	Sn	22 14 26.2	+2.2
NLC	**Nalytchevo**	**2.73**	**256**	*e*P	Pn	22 13 53.9	+1.1
NLC				*e*S	Sn	22 14 25.0	+0.6
KMNR	**Kamenistaya**	**2.74**	**314**	*e*P	Pn	22 13 55.7	+2.7
KMNR				*e*S	Sn	22 14 28.4	+3.5
KPT	**Kopyto**	**2.89**	**317**	P	Pn	22 13 57.4	+2.3
KPT				S	Sn	22 14 30.8	+2.3
KRSR	**Krestovskiy**	**2.95**	**323**	S	Sn	22 14 33.5	+3.6
KLY	**Klyuchi**	**2.99**	**325**	S	Sn	22 14 33.2	+2.2
AVH	**Avacha**	**3.05**	**260**	*e*P	Pn	22 13 59.4	+2.2
AVH				*e*S	Sn	22 14 34.6	+2.1
SRKR	**Sorokina**	**3.12**	**333**	P	Pn	22 14 00.8	+2.6
SRKR				*e*S	Sn	22 14 36.8	+2.7
PET	**Petropavlovsk**	**3.17**	**256**	S	Sn	22 14 37.4	+2.1
SRDR	**Sredinnyy**	**3.34**	**318**	P	Pn	22 14 04.5	+3.3
SRDR				S	Sn	22 14 43.4	+3.8
GNL	**Ganaly**	**3.44**	**269**	*e*P	Pn	22 14 06.0	+3.3
GNL				*e*S	Sn	22 14 45.7	+3.5

IDC ***05*** *22:28:04.4±1.2, 16°.76N×120°.16E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/23, mbtmp3.6/5, Error ellipse: s-maj=58.6km s-min=19.0km az=62.0*
MAN ***05*** *22:28:10, 16°.91N×119°.89E, h22km, mb4.3, ML3.2, MS3.0*
ISCJB ***05*** *22:28:10.7±1.0, 16°.93N±0°.05×119°.85E±0°.09, h41km±16km, mb3.8/5, Error ellipse: s-maj=14.8km s-min=7.4km az=21.7*
ISC 05 22:28:10.8±1.1, 16°.94N±0°.04×119°.90E±0°.06, h24km±9km, n14, σ1°.05/18, mb3.8/5, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.56**	**179**	*e*P	**Pb**	**22 28 21.8**	**-0.2**
BOLP				*e*S	**Sb**	**22 28 29.1**	**-0.5**
BCPH	**Baguio City Da**	**0.86**	**131**	*i* S	**Sb**	**22 28 36.1**	**-2.0**
ABRA	**Dolores**	**1.04**	**48**	*e*P	**Pn**	**22 28 30.1**	**+0.1**
ABRA				*e*S	**Sb**	**22 28 45.0**	**+1.5**
APYP	**Conner**	**1.57**	**54**	*e*P	**Pn**	**22 28 38.0**	**+0.7**
APYP				*e*S	**Sn**	**22 28 54.8**	**-2.1**
PCPH	**Palayan**	**1.79**	**140**⇑	*e*P	**Pn**	**22 28 39.6**	**-0.6**

PCPH *i* S **Sn** **22 29 02.8 +0.6**
BALP Baler 2.00 126 *e*P **Pn** **22 28 44.6 +1.4**
TGY Tagaytay City 2.99 160 Pg **Pn** **22 28 58.4 +1.5**
60nm,0.3s,baz=300,slow=21,SNR=7.2
TGY Lg 22 29 37.6
52nm,0.3s,baz=342,slow=20,SNR=4.1
LUBP Lubang 3.21 174 *e*P **Pn** **22 29 00.7 +0.9**
CMAR Chiang Mai Arr 20.03 277 P **P** **22 32 42.1 -0.1**
0.7nm,0.3s,baz=90,slow=6.3,SNR=4.9
SONM Songino Array 32.75 343 P **P** **22 34 41.1 -0.6**
0.6nm,0.6s,mb3.7,baz=160,slow=9.9,SNR=5.1
WRA Warramunga Arr 39.30 158 P **P** **22 35 33.0 -5.1**
0.4nm,0.4s,mb3.5,baz=338,slow=9.2,SNR=4.6
ASAR Alice Springs 42.61 161 P **P** **22 36 00.6 -4.8**
0.6nm,0.6s,mb3.5,baz=342,slow=6.9,SNR=7.4
MKAR Makanchi Array 43.00 322 P **P** **22 36 07.4 -0.9**
0.3nm,0.2s,mb3.6,baz=114,slow=7.0,SNR=2.9
KURK Kurchatov 47.09 325 P **P** **22 36 40.6 -0.1**
3.8nm,0.2s,mb4.9,baz=123,slow=8.4,SNR=3.9

NEIC 05 22:31:16.6,38°.00S×176°.27E,h149km,MG3.8(WEL),
After WEL.,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.71**	**112**	P	Pn	22 31 39.0	0.0
MWZ	**Matawai**	**1.05**	**109**	P	Pn	22 31 42.0	+0.4
MWZ				S	Sn	22 32 00.6	-0.1
BKZ	**Black Stump Fm**	**1.18**	**172**	P	Pn	22 31 42.6	-0.2
TWVZ	**Taurewa**	**1.25**	**211**	P	Pn	22 31 43.8	+0.3
TUVZ	**Tukino**	**1.36**	**201**	P	Pn	22 31 44.8	+0.3
FWVZ	**Far West T-bar**	**1.38**	**204**	P	Pn	22 31 45.0	+0.3
WNVZ	**Wahianoa**	**1.43**	**201**	P	Pn	22 31 45.3	0.0
MOVZ	**Moawhango**	**1.46**	**196**	P	Pn	22 31 45.1	-0.5
KNZ	**Kokohu**	**1.50**	**133**	P	Pn	22 31 46.1	+0.1
TSZ	**Takapari Road**	**2.07**	**187**	P	Pn	22 31 51.2	-1.2
DVHZ	**Dannevirke**	**2.30**	**182**	P	Pn	22 31 53.5	-1.6
BFZ	**Birch Farm**	**2.68**	**180**	P	Pn	22 31 57.8	-2.0
MRZ	**Mangatainoka R**	**2.71**	**191**	P	Pn	22 31 57.9	-2.3
KIW	**Kapiti Island**	**3.05**	**200**	P	Pn	22 32 01.7	-2.7
MTW	**Mount Morrison**	**3.21**	**190**	P	Pn	22 32 03.3	-3.2
CAW	**Cannon Point**	**3.24**	**196**	P	Pn	22 32 03.9	-3.0
MRW	**Makara Radio**	**3.45**	**200**	P	Pn	22 32 06.5	-3.0
MSWZ	**Moikau Station**	**3.50**	**193**	P	Pn	22 32 06.7	-3.5
TCW	**Tory Channel**	**3.56**	**205**	P	Pn	22 32 07.7	-3.3
NNZ	**Nelson**	**3.91**	**214**	P	Pn	22 32 12.2	-3.4
QRZ	**Quartz Range**	**4.04**	**225**	P	Pn	22 32 13.7	-3.6
THZ	**Tophouse**	**4.56**	**214**	P	Pn	22 32 20.9	-3.2
KHZ	**Kahutara**	**4.88**	**204**	P	Pn	22 32 24.1	-4.2

*IDC **05** 22:46:12.6±1.0,0°.75S×134°.44E,h0km,mb4.0/7,*
mb1 4.2/9,mb1mx4.0/20,mbtmp4.0/9,ML3.8/2,MS3.3/4,
Ms1 3.3/4,ms1mx2.9/27,Error ellipse: s-maj=46.1km
s-min=15.9km az=69.0
*BJI **05** 22:46:13.8, 1°.54S×134°.57E,h58km,mB4.9/1,mb4.2/2,*
Ms4.2/1,Ms7 3.9/1
*ISCJB **05** 22:46:15.9±0.7,0°.83S±0°.06×134°.2E±0°.1,h33km,*
mb4.1/12,MS3.5/2,Error ellipse: s-maj=21.0km
s-min=7.2km az=163.3
*NEIC **05** 22:46:18.6±1.9,0°.85S×134°.15E,h38km±17km,mb4.1/8,*
Error ellipse: s-maj=19.0km s-min=7.1km az=63.0
ISC 05 22:46:17.3±4.4,0°.90S±0°.06×134°.2E±0°.2,h29km±31km,
n32,σ0°81/30,mb4.1/12,MS3.5/2,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**11.70**	**313**	Pn	**Pn**	**22 49 02.2**	**-0.2**
GUMO	**Guam**	**17.85**	**36**	LR	LR	22 56 09.4
	comp=Z,35nm,20.3s,baz=69,slow=34					
WRAB	**Tennant Creek**	**18.92**	**180**	*e*P	**Pn**	**22 50 36.0**	**-0.6**
	6.2nm,0.6s					
WRAB				*e*S	**Sn**	**22 54 07.3**	**-0.4**
WRA	**Warramunga Arr**	**18.93**	**180**	P	**Pn**	**22 50 35.9**	**-0.9**
	0.3nm,0.3s,baz=360,slow=12,SNR=15					
FITZ	**Fitzroy Crossi**	**19.06**	**206**	P	**Pn**	**22 50 39.6**	**+1.3**
	0.2nm,0.3s,baz=45,slow=14,SNR=4.9					
FITZ				LR	LR	22 59 38.9
	comp=Z,124nm,18.0s,baz=244,slow=42					
FITZ	**Fitzroy Crossi**	**19.06**	**206**	*e*P	**Pn**	**22 50 39.5**	**+1.1**
	3.4nm,0.6s					
FITZ				LR	LR	22 59 38.9
CTA	**Charters Tower**	**22.42**	**149**	P	**P**	**22 51 13.5**	**-0.2**
	1.7nm,0.3s,mb4.0,baz=275,slow=20,SNR=3.7					
CTA	**Charters Tower**	**22.42**	**149**	P	**P**	**22 51 13.5**	**-0.2**
CTAO	**Charters Tower**	**22.42**	**149**	*e*P	**P**	**22 51 17.4**	**+3.7**
	12nm,0.7s,mb4.4					
ASAR	**Alice Springs**	**22.64**	**181**	P	**P**	**22 51 16.9**	**+0.8**
	4.6nm,0.6s,mb4.1,baz=7.6,slow=11,SNR=18					
KSM	**Kuching**	**24.02**	**276**	P	**P**	**22 51 29.6**	**-0.3**
MBWA	**Marble Bar**	**24.60**	**214**	*e*P	**P**	**22 51 36.0**	**+0.8**
	33nm,1.2s,mb4.7					
QIZ	**Qiongzhong**	**31.06**	**311**	*e*P	**P**	**22 52 31.6**	**-1.5**
STKA	**Stephens Creek**	**31.59**	**168**	P	**P**	**22 52 37.6**	**+0.1**
	4.1nm,0.7s,mb4.4,baz=329,slow=10,SNR=11					
STKA	**Stephens Creek**	**31.59**	**168**	*e*P	**P**	**22 52 37.5**	**0.0**
	0.9nm,0.6s,mb3.8					
KULM	**Kulim**	**34.08**	**281**	*e*P	**P**	**22 52 58.6**	**-0.9**
NWAO	**Narrogin (SRO)**	**35.64**	**205**	*e*P	**P**	**22 53 12.8**	**+0.1**
CMAR	**Chiang Mai Arr**	**39.65**	**301**	P	**P**	**22 53 48.2**	**+1.3**
	0.6nm,0.3s,mb3.8,baz=127,slow=8.5,SNR=8.1					
CHTO	**Chiang Mai**	**39.80**	**301**	*e*P	**P**	**22 53 47.4**	**-0.8**
	1.4nm,0.6s,mb3.9					
LZH	**Lanzhou**	**46.40**	**326**	*e*P	**P**	**22 54 42.5**	**+1.2**
LZH				pmax	pmax	
	comp=Z,86nm,4.9s					
GTA	**Gaotai**	**51.00**	**326**	*e*P	**P**	**22 55 17.6**	**+1.0**
GTA				pmax	pmax	
	comp=Z,3.0nm,1.0s,mb4.2					
PALK	**Pallekele**	**53.99**	**280**	P	**P**	**22 55 39.2**	**-0.1**
SONM	**Songino Array**	**54.24**	**337**	LR	LR	23 16 56.7
	comp=Z,43nm,19.6s,MS3.5,baz=339,slow=34					
MK31	**Makanchi Array**	**65.64**	**324**	*e*P	**P**	**22 56 59.1**	**+0.3**
MKAR	**Makanchi Array**	**65.64**	**324**	P	**P**	**22 56 59.9**	**+1.1**
	comp=Z,1.3nm,0.8s,mb4.0,baz=101,slow=12,SNR=8.1					
MKAR				LR	LR	23 25 19.8
	comp=Z,31nm,19.6s,MS3.5,baz=177,slow=36					
ZALV	**Zalesovo Beam**	**68.15**	**331**	P	**P**	**22 57 13.7**	**-0.9**
	comp=Z,0.6nm,0.5s,mb3.9,baz=105,slow=12,SNR=4.1					
UCH	**Uchtor**	**68.64**	**316**	*e*P	**P**	**22 57 17.9**	**0.0**
EKS2	**Erkin-Say**	**69.30**	**317**	*e*P	**P**	**22 57 22.2**	**+0.2**
	comp=Z,1.5nm,0.7s,mb4.0					
KURK	**Kurchatov**	**69.69**	**326**	*e*P	**P**	**22 57 24.5**	**+0.3**
	comp=Z,3.0nm,0.9s,mb4.2					
BVAR	**Borovoye Array**	**75.28**	**326**	P	**P**	**22 57 56.0**	**-1.5**
	comp=Z,0.6nm,0.8s,mb3.6,baz=163,slow=5.3,SNR=3.3					
ARU	**Arti**	**82.83**	**327**	P	**P**	**22 58 38.4**	**-0.3**
LPAZ	**La Paz**	**152.11**	**129**	PKPbc	PKPbc	23 06 12.5	+1.5
	comp=Z,2.6nm,0.8s,baz=178,slow=0.4,SNR=11					

*WAR **05** 23:39:32.9,50°.20N×19°.11E*
*ISCJB **05** 23:39:36.5±0.2,49°.93N±0°.02×18°.46E±0°.02,h0km,Error*
ellipse: s-maj=3.1km s-min=1.6km az=12.5
*CSEM **05** 23:39:37.9±0.1,49°.91N×18°.48E,h2km,ML3.3/10,Error*
ellipse: s-maj=3.3km s-min=1.9km az=11.0
*IPEC **05** 23:39:38.0±0.1,49°.89N×18°.53E,h3km±1km,ML2.5/4,*
Error ellipse: s-maj=1.0km s-min=0.7km az=176.0
*NEIC **05** 23:39:38.8±0.3,49°.94N×18°.51E,h10km,ML3.5(SZGRF),*
ML2.8(PRU),Error ellipse: s-maj=5.8km s-min=4.0km
az=188.0
*IDC **05** 23:39:38.7±1.5,49°.66N×18°.55E,h0km,mb3.1/1,*
mb1 3.2/5,mb1mx3.1/24,mbtmp3.2/5,ML2.6/4,Error
ellipse: s-maj=22.8km s-min=9.1km az=135.0
*PRU **05** 23:39:39.6,49°.85N×18°.50E,h0km*
*BGR **05** 23:39:40.1±0.8,49°.76N×18°.36E,h1km,ML3.5,Error*
ellipse: s-maj=12.2km s-min=8.9km az=2.0
ISC 05 23:39:37.8±0.2,49°.91N±0°.02×18°.48E±0°.02,h0km,n142,
σ1°12/231,22C-13D,Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.23**	**253**	P	**Pg**	**23 39 43.4**	**+1.2**
OKC	**Ostrava-Krasne**	**0.23**	**253**	*e*PG	**Pg**	**23 39 43.8**	**+1.6**
OKC				*e*SG	**Sg**	**23 39 47.2**	**+2.1**
	comp=Z,3μm,1.5s					
OKC	**Ostrava-Krasne**	**0.23**	**253**	*e*Pg	**Pg**	**23 39 43.4**	**+1.2**
	baz=79					
OKC				*e*Sg	**Sg**	**23 39 46.2**	**+1.1**
	baz=79					
RAC	**Raciborz**	**0.26**	**314**	*e*Pg	**Pg**	**23 39 45.6**	**+2.8**
RAC				*e*Sg	**Sg**	**23 39 50.7**	**+4.6**
MORC	**Moravsky Berou**	**0.62**	**258**	*e*P	**Pg**	**23 39 50.4**	**+0.6**
MORC				*e*S	**Sg**	**23 39 59.4**	**+1.5**
MORC	**Moravsky Berou**	**0.62**	**258**	⇓*i*P	**Pg**	**23 39 50.4**	**+0.6**
MORC	**Moravsky Berou**	**0.62**	**258**	*e*P	**Pg**	**23 39 50.4**	**+0.6**
MORC				*e*Sg	**Sg**	**23 39 58.8**	**+1.0**
	comp=Z,119nm,0.4s,baz=80					
MORC				*e*S	**Sg**	**23 39 59.4**	**+1.6**
OJC	**Ojcow**	**0.90**	**69**	*e*Pg	**Pg**	**23 39 54.7**	**-0.4**
OJC				*e*Sg	**Sg**	**23 40 08.3**	**+1.5**
OJC	**Ojcow**	**0.90**	**69**	*e*Pg	**Pg**	**23 39 54.7**	**-0.4**
OJC				*e*Sg	**Sg**	**23 40 06.2**	**-0.6**
	baz=248					
LIKS	**Likavka**	**0.95**	**154**	*e*Pg	**Pg**	**23 39 58.3**	**+2.3**
LIKS				*e*Sg	**Sg**	**23 40 13.7**	**+5.5**
LIKS	**Likavka**	**0.95**	**154**	*e*PG	**Pg**	**23 39 58.3**	**+2.3**
LIKS				*e*SG	**Sg**	**23 40 13.7**	**+5.5**
LIKS	**Likavka**	**0.95**	**154**	*e*Pg	**Pg**	**23 39 58.3**	**+2.3**
JAVC	**Velka Javorina**	**1.18**	**207**	*e*Pg	**Pg**	**23 40 01.0**	**+0.7**
JAVC				*e*Sg	**Sg**	**23 40 16.7**	**+1.2**
	comp=Z,48nm,0.5s					
NIE	**Niedzica**	**1.28**	**112**	*e*Pg	**Pg**	**23 40 02.1**	**-0.3**
NIE				*e*Sg	**Sg**	**23 40 20.7**	**+1.6**
NIE	**Niedzica**	**1.28**	**112**	*e*Pg	**Pg**	**23 40 02.1**	**-0.3**
NIE				*e*Sg	**Sg**	**23 40 20.7**	**+1.6**
VRAC	**Vranov**	**1.37**	**245**	Pg	**Pg**	**23 40 03.6**	**-0.4**
	comp=Z,37nm,0.3s,baz=70,slow=15,SNR=343					
VRAC				Lg		23 40 22.8
	comp=Z,27nm,0.3s,baz=323,slow=14,SNR=15					
VRAC	**Vranov**	**1.37**	**245**	⇑P	**Pg**	**23 40 03.6**	**-0.4**
VRAC	**Vranov**	**1.37**	**245**	⇑*i*P	**Pg**	**23 40 03.6**	**-0.4**
VRAC	**Vranov**	**1.37**	**245**	⇑P	**Pg**	**23 40 03.6**	**-0.4**
VRAC				*e*Sg	**Sg**	**23 40 21.3**	**-0.4**
	comp=Z,78nm,0.4s,baz=65					
VYHS	**Vyhne**	**1.43**	**171**	*e*PN	**Pn**	**23 40 04.0**	**-1.0**
VYHS				*e*SN	**Sn**	**23 40 23.5**	**-1.0**
VYHS	**Vyhne**	**1.43**	**171**	*e*Pg	**Pn**	**23 40 04.0**	**-1.0**
	baz=352					
VYHS				*e*Sg	**Sg**	**23 40 22.2**	**-1.6**
	baz=352					
VYHS				*e*Sn	**Sn**	**23 40 23.5**	**-1.0**
DPC	**Dobruska-Polom**	**1.46**	**289**	*e*PG	**Pg**	**23 40 05.7**	**-0.1**
DPC				*e*SG	**Sg**	**23 40 27.0**	**+2.2**
	comp=Z,118nm,0.9s					
DPC	**Dobruska-Polom**	**1.46**	**289**	*e*Pn	**Pn**	**23 40 05.6**	**+0.2**
	baz=107					
DPC				*e*Sg	**Sg**	**23 40 25.0**	**+0.2**
	baz=107					
SMOL	**Smolenice**	**1.56**	**207**	*e*Pn	**Pn**	**23 40 06.2**	**-0.5**
SMOL				*e*Sn	**Sn**	**23 40 27.8**	**+0.2**
SMOL	**Smolenice**	**1.56**	**207**	*e*PN	**Pn**	**23 40 06.2**	**-0.5**
SMOL				*e*SN	**Sn**	**23 40 27.8**	**+0.2**
SMOL	**Smolenice**	**1.56**	**207**	*e*Pn	**Pn**	**23 40 06.2**	**-0.5**
SMOL				*e*Sn	**Sn**	**23 40 27.8**	**+0.2**
KRUC	**Moravsky**	**1.60**	**239**	*e*Pn	**Pn**	**23 40 07.3**	**-0.1**
	baz=59					
KRUC				*e*Sg	**Sg**	**23 40 28.8**	**-0.5**
	comp=Z,24nm,0.2s,baz=59					
KSP	**Ksiaz**	**1.69**	**305**	*e*Pn	**Pn**	**23 40 09.6**	**+1.1**
KSP				*e*Pg	**Pg**	**23 40 12.2**	**+2.1**
KSP				*e*Sg	**Sg**	**23 40 35.2**	**+3.2**
KSP	**Ksiaz**	**1.69**	**305**	*e*Pn	**Pn**	**23 40 08.7**	**+0.2**
KSP				*e*Pg	**Pg**	**23 40 11.6**	**+1.4**
KSP				*e*Sg	**Sg**	**23 40 34.3**	**+2.3**
KSP	**Ksiaz**	**1.69**	**305**	*e*Pn	**Pn**	**23 40 08.7**	**+0.2**
KSP	**Ksiaz**	**1.69**	**305**	*e*Pg	**Pg**	**23 40 11.6**	**+1.4**
KSP				*e*Sg	**Sg**	**23 40 31.9**	**-0.1**
	baz=123					
UPC	**Upice**	**1.70**	**292**	*e*PN	**Pn**	**23 40 08.8**	**+0.1**
UPC				*e*PG	**Pg**	**23 40 10.4**	**0.0**
UPC				*e*SG	**Sg**	**23 40 34.4**	**+2.0**
UPC	**Upice**	**1.70**	**292**	Pn	**Pn**	**23 40 08.8**	**+0.1**
UPC	**Upice**	**1.70**	**292**	Pg	**Pg**	**23 40 10.4**	**0.0**
UPC				Sg	**Sg**	**23 40 34.4**	**+2.0**
STHS	**Stebnicka Huta**	**1.86**	**104**	*e*Pn	**Pn**	**23 40 12.4**	**+1.5**
STHS				*e*		23 40 15.4
STHS				*e*Sn	**Sn**	**23 40 36.0**	**+1.0**
STHS				*e*		23 40 40.9
STHS	**Stebnicka Huta**	**1.86**	**104**	*e*PN	**Pn**	**23 40 12.3**	**+1.4**
STHS				*e*		23 40 15.4
STHS	**Stebnicka Huta**	**1.86**	**104**	*e*SN	**Sn**	**23 40 36.0**	**+1.0**
STHS				*e*	**Sg**	**23 40 40.9**	**+3.4**
STHS	**Stebnicka Huta**	**1.86**	**104**	*e*Pn	**Pn**	**23 40 12.4**	**+1.5**
STHS				*e*Sn	**Sn**	**23 40 36.0**	**+1.0**
KECS	**Kecovo**	**1.94**	**137**	*e*Pn	**Pn**	**23 40 11.3**	**-0.7**
KECS				*e*		23 40 13.9
KECS				*e*Sn	**Sn**	**23 40 37.5**	**+0.5**
KECS	**Kecovo**	**1.94**	**137**	*e*PN	**Pn**	**23 40 11.3**	**-0.7**
KECS				*e*		23 40 13.9
KECS	**Kecovo**	**1.94**	**137**	*e*SN	**Sn**	**23 40 37.5**	**+0.5**
TREC	**Trest**	**2.04**	**254**	*e*PN	**Pn**	**23 40 13.8**	**+0.4**
TREC				*e*PG	**Pg**	**23 40 16.3**	**-0.7**
TREC				*e*SG	**Sg**	**23 40 43.3**	**-0.1**
	comp=Z,159nm,1.4s					
TREC	**Trest**	**2.04**	**254**	Pn	**Pn**	**23 40 13.8**	**+0.4**
TREC	**Trest**	**2.04**	**254**	Pg	**Pg**	**23 40 16.3**	**-0.7**
TREC				Sg	**Sg**	**23 40 43.3**	**-0.1**
	comp=Z,159nm,1.4s					
CRVS	**Cervenica-Dubn**	**2.19**	**116**	*e*PN	**Pn**	**23 40 16.9**	**+1.5**
CRVS				*e*		23 40 20.0
CRVS	**Cervenica-Dubn**	**2.19**	**116**	*e*SN	**Sn**	**23 40 42.8**	**-0.4**
CRVS				*e*		23 40 51.1
CRVS	**Cervenica-Dubn**	**2.19**	**116**	*e*Pn	**Pn**	**23 40 16.9**	**+1.5**
CRVS				*e*Sn	**Sn**	**23 40 42.8**	**-0.4**
PSZ	**Piszkesteto**	**2.19**	**154**	*e*Pn	**Pn**	**23 40 14.8**	**-0.7**
PSZ	**Piszkesteto**	**2.19**	**154**	⇓*e*Pn	**Pn**	**23 40 15.2**	**-0.3**
PSZ	**Piszkesteto**	**2.19**	**154**	⇓*i*P	**Pn**	**23 40 15.0**	**-0.5**
PSZ	**Piszkesteto**	**2.19**	**154**	*e*Pn	**Pn**	**23 40 14.8**	**-0.7**
PSZ	**Piszkesteto**	**2.19**	**154**	⇓*e*P	**Pn**	**23 40 15.2**	**-0.3**
PRU	**Pruhonice**	**2.55**	**273**	*e*Pn	**Pn**	**23 40 20.1**	**-0.3**
PRU				*e*Pg	**Pg**	**23 40 25.3**	**-1.3**
PRU				*e*Sg	**Sg**	**23 40 57.8**	**-1.8**
PRU	**Pruhonice**	**2.55**	**273**	*e*PN	**Pn**	**23 40 20.6**	**+0.2**
PRU				*e*PG	**Pg**	**23 40 25.4**	**-1.2**
PRU				*e*SG	**Sg**	**23 41 00.8**	**+1.1**
	comp=Z,29nm,0.6s					
PRU	**Pruhonice**	**2.55**	**273**	Pn	**Pn**	**23 40 20.6**	**+0.2**
PRU	**Pruhonice**	**2.55**	**273**	Pg	**Pg**	**23 40 25.4**	**-1.2**
PRU				Sg	**Sg**	**23 41 00.8**	**+1.1**
	comp=Z,29nm,0.6s					
SOP	**Sopron**	**2.56**	**211**	⇑*e*Pn	**Pn**	**23 40 20.6**	**0.0**
SOP	**Sopron**	**2.56**	**211**	⇑*e*P	**Pn**	**23 40 20.6**	**0.0**
PVCC	**Panska Ves**	**2.59**	**285**	*e*PN	**Pn**	**23 40 20.3**	**-0.7**
PVCC				*e*PG	**Pg**	**23 40 26.8**	**-0.7**
PVCC				*e*SG	**Sg**	**23 41 02.2**	**+1.2**
	comp=Z,151nm,1.1s					
PVCC	**Panska Ves**	**2.59**	**285**	Pn	**Pn**	**23 40 20.3**	**-0.7**
CONA	**Conrad Observa**	**2.63**	**222**	⇓*i*Pn	**Pn**	**23 40 20.6**	**-0.8**
	comp=Z,4.1nm,0.4s					
CONA				⇑*i*Sg	**Sg**	**23 40 57.5**	**-4.7**
	comp=Z,8.4nm,0.4s					
CONA	**Conrad Observa**	**2.63**	**222**	Pn	**Pn**	**23 40 20.6**	**-0.9**
	comp=Z,4.1nm,0.4s					
CSNA	**Conrad Observa**	**2.63**	**222**	⇓*i*Pn	**Pn**	**23 40 20.6**	**-0.9**
	comp=Z,5.2nm,0.4s					
CSNA	**Conrad Observa**	**2.63**	**222**	Pn	**Pn**	**23 40 20.6**	**-0.9**
	comp=Z,5.2nm,0.4s					
KOLS	**Kolonicke sedl**	**2.66**	**110**	*e*PN	**Pn**	**23 40 24.0**	**+2.1**
KOLS				*e*		23 40 30.0
KOLS	**Kolonicke sedl**	**2.66**	**110**	*e*SG	**Sg**	**23 41 02.8**	**-0.4**
KOLS	**Kolonicke sedl**	**2.66**	**110**	*e*Pn	**Pn**	**23 40 24.0**	**+2.1**
KOLS				*e*Sg	**Sg**	**23 41 02.8**	**-0.4**
KWP	**Kalwaria Pacla**	**2.75**	**94**	*e*Pn	**Pn**	**23 40 22.8**	**-0.3**
KWP				*e*Pg	**Pg**	**23 40 29.1**	**-1.4**
KWP	**Kalwaria Pacla**	**2.75**	**94**	*e*Pn	**Pn**	**23 40 22.5**	**-0.6**
KWP				*e*Sg	**Sg**	**23 41 07.2**	**+1.0**
KWP	**Kalwaria Pacla**	**2.75**	**94**	⇑*i*P	**Pn**	**23 40 22.8**	**-0.4**
KWP	**Kalwaria Pacla**	**2.75**	**94**	*e*Pn	**Pn**	**23 40 22.5**	**-0.7**
KWP	**Kalwaria Pacla**	**2.75**	**94**	⇑*i*P	**Pn**	**23 40 22.8**	**-0.4**
KWP	**Kalwaria Pacla**	**2.75**	**94**	*e*Pg	**Pg**	**23 40 29.1**	**-1.4**
KWP				*e*Sg	**Sg**	**23 41 07.2**	**+1.0**
UZH	**Uzhgorod**	**2.80**	**116**	⇓*i*P	**Pn**	**23 40 31.0**	**+7.2**
BRG	**Berggiesshubel**	**3.06**	**290**	PG	**Pg**	**23 40 34.8**	**-1.7**
BRG				SG	**Sg**	**23 41 16.5**	**+0.3**
	comp=Z,20nm,0.6s					
KHC	**Kasperske Hory**	**3.29**	**258**	*e*Pn	**Pn**	**23 40 30.9**	**+0.3**
KHC				*e*Pg	**Pg**	**23 40 39.5**	**-1.3**
KHC				*e*Sn	**Sn**	**23 41 10.2**	**-0.1**
KHC	**Kasperske Hory**	**3.29**	**258**	*e*PN	**Pn**	**23 40 30.9**	**+0.3**
KHC				*e*PG	**Pg**	**23 40 38.1**	**-2.7**
KHC				*e*SN	**Sn**	**23 41 15.0**	**+4.7**
KHC				*e*SG	**Sg**	**23 41 24.3**	**+0.8**
	comp=Z,29nm,0.8s					
KHC	**Kasperske Hory**	**3.29**	**258**	Pn	**Pn**	**23 40 30.9**	**+0.3**
KHC	**Kasperske Hory**	**3.29**	**258**	*e*Pg	**Pg**	**23 40 39.5**	**-1.3**
KHC				Sg	**Sg**	**23 41 24.3**	**+0.8**
	comp=Z,29nm,0.8s					
GEC2	**GERESS Array S**	**3.30**	**253**	*e*Pn	**Pn**	**23 40 31.3**	**+0.6**
GEC2				*e*Pg	**Pg**	**23 40 38.8**	**-2.3**
GEC2				*e*Sg	**Sg**	**23 41 21.3**	**-2.5**
GEC2	**GERESS Array S**	**3.30**	**253**	*e*Pn	**Pn**	**23 40 31.1**	**+0.4**
GEC2				*e*Pg	**Pg**	**23 40 39.6**	**-1.4**
GEC2				*e*Sg	**Sg**	**23 41 22.8**	**-1.1**
GEC2	**GERESS Array S**	**3.30**	**253**	*e*Pn	**Pn**	**23 40 31.1**	**+0.4**
GEC2	**GERESS Array S**	**3.30**	**253**	*e*Pg	**Pg**	**23 40 39.6**	**-1.5**
GEC2				Sg	**Sg**	**23 41 21.3**	**-2.5**
GERES	**GERESS Array B**	**3.30**	**253**	Pn	**Pn**	**23 40 31.1**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=69,slow=14,SNR=13					
GERES				Pg	**Pg**	**23 40 38.0**	**-3.0**
	comp=Z,4.5nm,0.3s,baz=74,slow=15,SNR=52					
GERES				Lg		23 41 21.9
	comp=Z,2.8nm,0.3s,baz=76,slow=28,SNR=5.6					
GERES	**GERESS Array B**	**3.30**	**253**	Pn	**Pn**	**23 40 31.1**	**+0.4**
GERES	**GERESS Array B**	**3.30**	**253**	Pg	**Pg**	**23 40 38.0**	**-3.1**
ARSA	**Arzberg**	**3.31**	**218**	⇑*i*Pn	**Pn**	**23 40 31.1**	**+0.3**
	comp=Z,2.8nm,0.5s					
ARSA				⇑*i*Sg	**Sg**	**23 41 21.0**	**-2.9**
	comp=Z,6.6nm,0.5s					
ARSA	**Arzberg**	**3.31**	**218**	Pn	**Pn**	**23 40 31.1**	**+0.3**
	comp=Z,2.8nm,0.5s					
ARSA				Sg	**Sg**	**23 41 21.0**	**-3.0**
	comp=Z,6.6nm,0.5s					
MOA	**Molln**	**3.46**	**235**	⇑*i*Pn	**Pn**	**23 40 32.3**	**-0.7**
	comp=Z,0.6nm,0.1s					
MOA				⇓*i*Sg	**Sg**	**23 41 27.1**	**-1.9**
	comp=Z,9.4nm,0.5s					
MOA	**Molln**	**3.46**	**235**	Pn	**Pn**	**23 40 32.3**	**-0.6**
	comp=Z,0.6nm,0.1s					
MOA				Sg	**Sg**	**23 41 27.1**	**-1.9**
	comp=Z,9.4nm,0.5s					
PKSM	**Moragy**	**3.70**	**178**	⇓*e*P	**Pn**	**23 40 35.9**	**-0.3**
WET	**Wettzell**	**3.73**	**260**	*e*Pn	**Pn**	**23 40 36.3**	**-0.3**
WET				*e*Sg	**Sg**	**23 41 36.3**	**-1.4**
WET	**Wettzell**	**3.73**	**260**	Pn	**Pn**	**23 40 36.3**	**-0.3**
WET				Sg	**Sg**	**23 41 36.3**	**-1.3**
CLL	**Collm**	**3.76**	**294**	*e*Pn	**Pn**	**23 40 37.0**	**-0.4**
CLL				*e*Pg	**Pg**	**23 40 49.5**	**-0.4**
CLL				*e*Sg	**Sg**	**23 41 40.1**	**+1.4**
CLL	**Collm**	**3.76**	**294**	*e*Pn	**Pn**	**23 40 37.0**	**-0.1**
CLL				*e*Pg	**Pg**	**23 40 49.0**	**-0.9**
CLL				*i* Sg	**Sg**	**23 41 40.1**	**+1.4**
CLL	**Collm**	**3.76**	**294**	*e*Pn	**Pn**	**23 40 37.0**	**-0.1**
CLL				*e*Pg	**Pg**	**23 40 49.0**	**-0.9**
CLL				*e*Sn	**Sn**	**23 41 22.0**	**0.0**
CLL				*i* Sg	**Sg**	**23 41 40.1**	**+1.4**
	comp=Z,34nm,1.2s					
CLL	**Collm**	**3.76**	**294**	*e*Pn	**Pn**	**23 40 37.0**	**-0.1**
NKC	**Novy Kostel**	**3.90**	**277**	*e*PG	**Pg**	**23 40 50.4**	**-2.2**
NKC				*e*SG	**Sg**	**23 41 43.9**	**+0.8**
	comp=Z,30nm,1.0s					
TANN	**Tannenbergstha**	**3.91**	**280**	*e*Pg	**Pg**	**23 40 50.9**	**-1.8**
TANN				*e*Sg	**Sg**	**23 41 44.

12nm,0.9s
BPAW Bear Paw Mtn. 19.75 39 *e*P **Pn 23 48 27.7 -0.4**
17nm,1.6s
CRAG Craig 27.73 63 P **P 23 49 45.6 +1.3**
MDJ Mudanjiang 33.89 279 P **P 23 50 38.9 +0.2**
MDJ pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
MDJ pmax pmax
comp=Z,23nm,3.3s
YKA Yellowknife Ar 35.70 46 P **P 23 50 53.5 -0.5**
comp=Z,0.9nm,0.4s,mb4.1,baz=283,slow=7.2,SNR=8.7
YKA Yellowknife Ar 35.70 46 P **P 23 50 53.5 -0.5**
RES Resolute Bay 39.99 24 P **P 23 51 30.4 +0.4**
comp=Z,0.6nm,0.5s,mb3.5,baz=339,slow=4.7,SNR=5.1
BOZ Bozeman (W) 44.08 69 *e*P **P 23 52 03.8 +0.1**
comp=Z,2.0nm,0.6s,mb4.0
ULN Ulaanbaatar 45.63 296 *e*P **P 23 52 16.5 +0.5**
SONM Songino Array 46.02 296 P **P 23 52 19.2 +0.1**
comp=Z,0.7nm,0.6s,mb3.8,baz=65,slow=9.0,SNR=6.9
SONM PcP PcP 23 53 54.0 -0.7
comp=Z,0.3nm,0.6s,baz=90,slow=2.8,SNR=3.5
SONM Songino Array 46.02 296 P **P 23 52 19.2 +0.1**
SONM PcP PcP 23 53 54.0 -0.7
PDAR Pinedale Array 46.95 72 P **P 23 52 26.4 0.0**
comp=Z,1.1nm,0.5s,mb4.0,baz=322,slow=3.3,SNR=9.4
HHC Hu-ho-hao-te 47.02 285 *e*P **P 23 52 27.1 +0.1**
HHC pP pP 23 52 37.0 -4.0
HHC sP sP 23 52 40.9 -6.2
HHC PcP PcP 23 53 59.1 +0.7
HHC PP PP 23 54 17.0 -0.8
HHC ScP ScP 23 57 49.2 +1.7
HHC PcS PcS 23 57 53.7 +0.3
HHC S **S 23 59 15.9 +1.2**
HHC sS sS 23 59 32.4 -5.8
HHC pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
HHC pmax pmax
comp=Z,49nm,4.6s
HHC LR LR
comp=N,62nm,16.6s,MS3.8
HHC LR LR
comp=E,71nm,16.7s,MS3.8
HHC LR LR
comp=Z,54nm,17.8s,MS3.6
SPITS Spitsbergen Ar 50.29 356 P **P 23 52 51.9 +0.3**
comp=Z,1.5nm,0.4s,mb4.4,baz=34,slow=6.4,SNR=22
ZALV Zalesovo Beam 53.51 313 P **P 23 53 15.0 -0.9**
comp=Z,0.5nm,0.5s,mb3.7,baz=76,slow=6.1,SNR=3.4
ARCES ARCESS Array B 57.94 350 P **P 23 53 47.0 -0.4**
comp=Z,2.1nm,0.7s,mb4.3,baz=30,slow=8.4,SNR=6.1
KURK Kurchatov 58.50 313 *e*P **P 23 53 51.6 +0.1**
comp=Z,2.4nm,0.8s,mb4.3
TXAR Lajitas Array 59.32 80 P **P 23 53 56.7 -0.8**
comp=Z,0.1nm,0.5s,mb3.1,baz=283,slow=4.5,SNR=2.9
TXAR LR LR 00 14 51.7
comp=Z,36nm,21.9s,MS3.5,baz=40,slow=31
TXAR Lajitas Array 59.32 80 P **P 23 53 56.7 -0.8**
TXAR LR LR 00 14 51.7
MK31 Makanchi Array 59.48 308 *e*P **P 23 53 57.5 -0.9**
MKAR Makanchi Array 59.48 308 P **P 23 53 57.9 -0.4**
comp=Z,1.7nm,0.6s,mb4.3,baz=43,slow=8.2,SNR=17
MKAR Makanchi Array 59.48 308 P **P 23 53 57.9 -0.4**
SCHQ Schefferville 60.40 38 P **P 23 54 04.6 +0.1**
comp=Z,1.8nm,1.0s,mb4.1,baz=315,slow=7.1,SNR=2.5
SCHQ Schefferville 60.40 38 P **P 23 54 04.6 +0.1**
BVAR Borovoye Array 60.42 319 P **P 23 54 05.1 +0.4**
comp=Z,1.6nm,0.4s,mb4.4,baz=54,slow=7.2,SNR=10
JOF Joensuu 63.38 345 *e*p **P 23 54 23.8 -0.6**
comp=Z,2.4nm,0.5s,mb4.6
JOF Joensuu 63.38 345 *e*p **P 23 54 23.8 -0.6**
comp=Z,2.4nm,0.5s,mb4.6
TKM2 Tokmak 2 65.56 309 *e*P **P 23 54 39.5 +0.5**
comp=Z,1.0nm,0.6s,mb4.4
FINES FINESS Array B 65.59 347 P **P 23 54 37.9 -1.0**
comp=Z,1.3nm,0.6s,mb4.2,baz=26,slow=9.3,SNR=9.4
AAK Ala-Archa 66.32 309 P **P 23 54 44.2 +0.3**
EKS2 Erkin-Say 66.64 310 *e*P **P 23 54 46.5 +0.6**
comp=Z,1.6nm,0.7s,mb4.2
AML Almayashu 67.08 309 *e*P **P 23 54 50.0 +1.2**
comp=Z,4.7nm,1.1s,mb4.4
AKTK Aktyubinsk 67.26 324 P **P 23 54 49.3 -0.4**
AKTO Aktyubinsk 67.26 324 P **P 23 54 49.3 -0.4**
comp=Z,0.7nm,0.4s,mb4.1,baz=111,slow=8.6,SNR=3.8
ABKAR Akbulak array 67.50 322 *e*P **P 23 54 50.1 -1.1**
comp=Z,0.4nm,0.3s,mb3.9
NB2 NORSAR Subarra 67.54 354 P **P 23 54 51.0 -0.3**
comp=Z,0.3nm,0.4s,mb3.7,baz=338,slow=6.5
NOA NORSAR Array B 67.54 354 P **P 23 54 51.4 +0.1**
comp=Z,0.5nm,0.4s,mb3.9,baz=8.3,slow=6.4,SNR=4.4
EKA Eskdalemuir Ar 73.59 2 P **P 23 55 28.6 +0.4**
comp=Z,1.3nm,0.6s,mb4.0,baz=353,slow=4.5,SNR=12
KBL Kabul 75.28 307 *e*P **P 23 55 37.8 -0.6**
comp=Z,3.7nm,0.7s,mb4.4
AKASG Malin Array Be 75.30 341 P **P 23 55 37.9 -0.3**
comp=Z,0.3nm,0.3s,mb3.7,baz=19,slow=5.9,SNR=3.1
KWP Kalwaria Pacla 77.50 345 *e*P **P 23 55 51.0 +0.3**
comp=Z,4.1nm,0.6s,mb4.5
BUR08 Bucovina Ar. S 79.00 343 *e*P **P 23 55 59.4 +0.4**
GERES GERESS Array B 79.44 351 P **P 23 56 01.2 -0.2**
comp=Z,0.4nm,0.5s,mb3.6,baz=38,slow=6.8,SNR=4.3
BOSA Boshof 150.44 311 PKPbc PKPbc 00 03 45.9 -0.6
comp=Z,2.3nm,1.0s,baz=266,slow=22,SNR=5.3

CSEM ***05*** *23:47:49.1,36°.38N×21°.87E,h6km,MD3.5,After ATH*
NEIC ***05*** *23:47:49.1,36°.38N×21°.87E,h6km,MD3.5(ATH),After ATH.*

ATH 05 23:47:49.1,36°.38N×21°.87E,h6km±2km,MD3.5/14,
Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.53**	**349**	*e*PG	Pg	23 47 59.1	-0.1
PYL				*e*SB	Sg	23 48 06.2	+0.1
PYL	**PYLOS**	**0.53**	**349**	*e*Pg	Pg	23 47 59.1	-0.1
PYL				*e*Sb	Sg	23 48 06.2	+0.1
ITM	**Ithomi**	**0.80**	**3**	*e*Pb	Pb	23 48 04.8	-0.6
ITM				*e*Sb	Sb	23 48 15.1	-1.4
ITM	**Ithomi**	**0.80**	**3**	*e*PB	Pb	23 48 04.8	-0.6
ITM				*e*SB	Sb	23 48 15.1	-1.4
ITM	**Ithomi**	**0.80**	**3**	*e*Pb	Pb	23 48 04.8	-0.6
ITM				*e*Sb	Sb	23 48 15.1	-1.4
VLI	**Veliai**	**0.92**	**68**	*e*Pg	Pg	23 48 06.6	-0.2
VLI	**Veliai**	**0.92**	**68**	*e*PG	Pg	23 48 06.6	-0.2
VLI	**Veliai**	**0.92**	**68**	*e*Pg	Pg	23 48 06.6	-0.2
KYTH	**Kithira**	**0.95**	**96**	*e*Pb	Pb	23 48 07.3	-0.6
KYTH	**Kithira**	**0.95**	**96**	*e*PB	Pb	23 48 07.3	-0.6
KYTH	**Kithira**	**0.95**	**96**	*e*Pb	Pb	23 48 07.3	-0.6
VLX	**Vlachokerasia**	**1.07**	**22**	*e*PN	Pn	23 48 09.6	-1.0
VLX				*e*SB	Sb	23 48 23.9	-0.3
VLX	**Vlachokerasia**	**1.07**	**22**	*e*Pn	Pn	23 48 09.6	-1.0
VLX				*e*Sb	Sb	23 48 23.9	-0.3
GUR	**Goura**	**1.60**	**14**	*e*PG	Pg	23 48 18.8	-1.0
GUR	**Goura**	**1.60**	**14**	*e*Pg	Pg	23 48 18.8	-1.0
RLS	**Riolos of Patr**	**1.71**	**349**	*e*Pg	Pg	23 48 20.6	-1.2
RLS	**Riolos of Patr**	**1.71**	**349**	*e*PG	Pg	23 48 20.6	-1.2
RLS	**Riolos of Patr**	**1.71**	**349**	*e*Pg	Pg	23 48 20.6	-1.2
LTK	**Loutraki**	**1.86**	**28**	*e*PG	Pg	23 48 24.5	-0.2
LTK	**Loutraki**	**1.86**	**28**	*e*Pg	Pg	23 48 24.5	-0.2
EFP	**Efpalio**	**2.04**	**1**	*e*PG	Pg	23 48 26.8	-1.5
EFP	**Efpalio**	**2.04**	**1**	*e*Pg	Pg	23 48 26.8	-1.5
VAM	**Vamos**	**2.13**	**116**	*e*Pb	Pb	23 48 26.3	-1.7
VAM	**Vamos**	**2.13**	**116**	*e*PB	Pb	23 48 26.3	-1.7
VAM	**Vamos**	**2.13**	**116**	*e*Pb	Pb	23 48 26.3	-1.7
VLY	**Voula,Athens**	**2.13**	**46**	*e*Pn	Pn	23 48 27.2	+2.0
VLY	**Voula,Athens**	**2.13**	**46**	*e*PN	Pn	23 48 27.2	+2.0
VLY	**Voula,Athens**	**2.13**	**46**	*e*Pn	Pn	23 48 27.2	+2.0
PTL	**Penteli**	**2.30**	**43**	*e*Pb	Pb	23 48 28.2	-2.9
PTL	**Penteli**	**2.30**	**43**	*e*PB	Pb	23 48 28.2	-2.9
PTL	**Penteli**	**2.30**	**43**	*e*Pb	Pb	23 48 28.2	-2.9
LKR	**Lokris**	**2.44**	**21**	*e*Pn	Pn	23 48 32.3	+2.9
LKR	**Lokris**	**2.44**	**21**	*e*PN	Pn	23 48 32.3	+2.9
LKR	**Lokris**	**2.44**	**21**	*e*Pn	Pn	23 48 32.3	+2.9
AGG	**Agios Georgios**	**2.66**	**8**	*e*Pn	Pn	23 48 35.2	+2.7
AGG	**Agios Georgios**	**2.66**	**8**	*e*PN	Pn	23 48 35.2	+2.7
AGG	**Agios Georgios**	**2.66**	**8**	*e*Pn	Pn	23 48 35.2	+2.7
IDI	**Anoyia**	**2.69**	**113**	*e*Pn	Pn	23 48 35.5	+2.7
IDI	**Anoyia**	**2.69**	**113**	*e*PN	Pn	23 48 35.5	+2.7
IDI	**Anoyia**	**2.69**	**113**	*e*Pn	Pn	23 48 35.5	+2.7
THL	**Klokotos Trika**	**3.18**	**2**	*e*PN	Pn	23 48 41.9	+2.3
THL	**Klokotos Trika**	**3.18**	**2**	*e*Pn	Pn	23 48 41.9	+2.3
KEK	**Kerkira**	**3.71**	**334**	*e*Pn	Pn	23 48 50.0	+3.1
KEK	**Kerkira**	**3.71**	**334**	*e*PN	Pn	23 48 50.0	+3.1
KEK	**Kerkira**	**3.71**	**334**	*e*Pn	Pn	23 48 50.0	+3.1

IDC ***05*** *23:58:26.4±0.8,31°.57N×104°.07E,h0km,mb4.0/14,*
mb1 4.0/16,mb1mx3.9/30,mbtmp3.9/16,ML3.1/1,MS3.2/4,
Ms1 3.2/4,ms1mx2.7/31,Error ellipse: s-maj=31.0km
s-min=15.4km az=53.0
NEIC ***05*** *23:58:28.2±0.3,31°.60N×104°.03E,h10km,mb4.3/15,Error*
ellipse: s-maj=7.8km s-min=5.9km az=81.0
BJI ***05*** *23:58:29.5,31°.57N×104°.20E,h17km,mB4.6/3,mb4.5/4,*
ML3.8/16,Ms3.7/5,Ms7 3.4/5

ISC 05 23:58:28.2±0.7,31°.63N±0°.02×104°.17E±0°.04,h11km±4km,
n66,σ0°92/75,mb4.1/24,MS3.2/3,1D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.80**	**206**	*i*Pg	**Pg**	**23 58 43.3**	**-0.3**
CD2				Sg	**Sg**	**23 58 54.3**	**+0.3**
CD2				smax			
comp=N,7μm,0.8s							
CD2				smax			
comp=E,9μm,0.8s							
LZH	**Lanzhou**	**4.46**	**357**	Pg	**Pg**	**23 59 54.1**	**+0.6**
LZH				Sg	**Sg**	**00 00 50.0**	**-1.3**
LZH				smax			
comp=N,120nm,1.1s							
LZH				smax			
comp=E,110nm,1.0s							
LZH				LR	LR		
comp=E,450nm,6.4s							
LZH				LR	LR		
comp=Z,500nm,8.8s							
LZH	**Lanzhou**	**4.46**	**357**	Pg	**Pg**	**23 59 54.1**	**+0.6**
XAN	**Xi'an**	**4.67**	**58**	Pn	**Pn**	**23 59 39.7**	**+1.1**
XAN				Pg	**Pg**	**23 59 54.9**	**-2.7**
XAN				Sn	**Sn**	**00 00 39.0**	**+6.3**
XAN				Sg	**Sg**	**00 00 57.5**	**-0.6**
XAN				smax			
comp=N,93nm,1.0s							
XAN				smax			
comp=E,79nm,0.8s							
ENH	**Enshi**	**4.77**	**105**	*e*Pn	**Pn**	**23 59 42.1**	**+2.2**
ENH				Sn	**Sn**	**00 00 35.1**	**0.0**
GYA	**Guiyang**	**5.59**	**156**	Pn	**Pb**	**00 00 03.2**	**-2.6**
GYA				Pg	**Pg**	**00 00 17.0**	**+1.7**
GYA				Sn	**Sn**	**00 00 54.8**	**-0.8**
GYA				Sg	**Sb**	**00 01 12.9**	**0.0**
GYA				smax			
comp=N,260nm,0.8s							
GYA				smax			
comp=E,180nm,0.7s							
GYA	**Guiyang**	**5.59**	**156**	Pg	**Pb**	**00 00 03.2**	**-2.6**
GYA				Sn	**Sn**	**00 00 54.8**	**-0.8**
GYA				smax			
comp=N,260nm,0.8s							
GYA				smax			
comp=E,180nm,0.7s							
WHN	**Wuhan**	**8.80**	**94**	P	**Pn**	**00 00 39.8**	**+4.5**
WHN				S	**Sn**	**00 02 11.9**	**-2.6**
WHN				LR	LR		
comp=N,140nm,1.6s							
WHN				LR	LR		
comp=E,100nm,1.3s							
WHN				LR	LR		
comp=Z,98nm,1.3s							
CHTO	**Chiang Mai**	**13.60**	**202**	*e*P	**Pn**	**00 01 41.3**	**+0.2**
comp=Z,4.1nm,0.8s							
CMAR	**Chiang Mai Arr**	**13.94**	**201**	Pn	**Pn**	**00 01 46.0**	**-0.8**
baz=13,slow=12,SNR=9.1							
JIRN	**Jiri**	**16.12**	**260**	*e*P	**Pn**	**00 02 13.0**	**-1.7**
SONM	**Songino Array**	**16.28**	**5**	Pn	**Pn**	**00 02 18.5**	**+1.9**
comp=Z,0.1nm,0.3s,baz=186,slow=13,SNR=2.6							
SONM				LR	LR	00 09 12.1	
comp=Z,81nm,19.5s,baz=77,slow=40							
GUN	**Gumba**	**16.30**	**262**	*e*P	**Pn**	**00 02 13.4**	**-3.7**
comp=Z,44nm,0.9s							
ULN	**Ulaanbaatar**	**16.37**	**7**	*e*Pn	**Pn**	**00 02 17.6**	**-0.1**
comp=Z,1.6nm,0.7s							
PKI	**Pulchoki**	**16.80**	**261**	*e*P	**Pn**	**00 02 16.9**	**-6.6**
KKN	**Kakani**	**16.85**	**262**	*e*P	**Pn**	**00 02 15.5**	**-8.5**
comp=Z,15nm,0.4s							
DMN	**Daman**	**17.05**	**261**	*e*P	**Pn**	**00 02 18.9**	**-7.6**
comp=Z,32nm,0.9s							
KSRS	**Korea Array**	**20.39**	**67**	P	**P**	**00 03 06.3**	**+1.4**
comp=Z,4.0nm,0.7s,baz=256,slow=9.9,SNR=16							
KSRS				LR	LR	00 12 19.9	
comp=Z,16nm,20.1s,MS2.4,baz=260,slow=41							
CN2	**Changchun**	**20.70**	**48**	*e*P	**P**	**00 03 10.4**	**+2.2**
CN2				pmax	pmax		
comp=Z,30nm,0.7s							
CN2				pmax	pmax		
comp=Z,200nm,4.0s							
MK31	**Makanchi Array**	**22.62**	**318**	*e*P	**P**	**00 03 29.9**	**+1.1**
MKAR	**Makanchi Array**	**22.62**	**318**	P	**P**	**00 03 29.1**	**+0.3**
comp=Z,5.3nm,0.8s,mb4.0,baz=105,slow=13,SNR=32							
TKM2	**Tokmak 2**	**25.26**	**305**	*e*P	**P**	**00 03 54.9**	**+0.7**
comp=Z,2.7nm,0.8s,mb3.8							
UCH	**Uchtor**	**25.84**	**303**	*e*P	**P**	**00 04 00.5**	**+1.0**
comp=Z,6.7nm,0.9s,mb4.2							
AAK	**Ala-Archa**	**25.96**	**303**	*e*P	**P**	**00 04 01.0**	**+0.5**
comp=Z,3.1nm,0.8s,mb3.9							
ZAA0	**Zalesovo Array**	**26.28**	**334**	*e*P	**P**	**00 04 02.8**	**-0.5**
ZALV	**Zalesovo Beam**	**26.28**	**334**	P	**P**	**00 04 03.8**	**+0.5**
comp=Z,6.5nm,0.7s,mb4.2,baz=134,slow=9.5,SNR=34							
AML	**Almayashu**	**26.41**	**302**	*e*P	**P**	**00 04 06.3**	**+1.7**
comp=Z,2.2nm,0.8s,mb3.7							
EKS2	**Erkin-Say**	**26.48**	**303**	*e*P	**P**	**00 04 04.3**	**-1.0**
comp=Z,1.3nm,0.4s,mb3.8							
KURK	**Kurchatov**	**26.86**	**323**	P	**P**	**00 04 08.7**	**+0.1**
comp=Z,4.7nm,0.8s,mb4.0,baz=131,slow=8.6,SNR=32							
KURK	**Kurchatov**	**26.86**	**323**	*e*P	**P**	**00 04 07.8**	**-0.8**
comp=Z,6.5nm,1.1s,mb4.1							
KBL	**Kabul**	**29.48**	**285**	*e*P	**P**	**00 04 31.6**	**-0.6**
BVAR	**Borovoye Array**	**32.42**	**321**	P	**P**	**00 04 58.3**	**+0.5**
comp=Z,1.7nm,0.7s,mb4.0,baz=123,slow=11,SNR=7.8							
BRVK	**Borovoye**	**32.49**	**321**	*e*P	**P**	**00 04 58.7**	**+0.2**
comp=Z,2.3nm,0.6s,mb4.2							
PALK	**Pallekele**	**32.66**	**227**	*e*P	**P**	**00 05 00.1**	**-0.2**
AKTK	**Aktyubinsk**	**38.82**	**313**	P	**P**	**00 05 52.6**	**-0.3**
AKTO	**Aktyubinsk**	**38.82**	**313**	P	**P**	**00 05 52.6**	**-0.3**
comp=Z,1.3nm,0.8s,mb3.7,baz=95,slow=8.8,SNR=5.2							
ARU	**Arti**	**40.05**	**322**	*e*P	**P**	**00 06 03.1**	**0.0**
comp=Z,9.7nm,0.9s,mb4.5							
PETK	**Petropavlovsk-**	**43.78**	**44**	LR	LR	00 27 13.7	
comp=Z,39nm,19.8s,MS3.3,baz=92,slow=39							
KIV	**Kislovodsk**	**49.07**	**303**	*e*P	**P**	**00 07 15.6**	**+0.3**
KEV	**Kevo**	**56.28**	**336**	*e*P	**P**	**00 08 07.5**	**-0.7**
BR131	**Keskin Array S**	**56.53**	**299**	P	**P**	**00 08 11.0**	**+0.5**
BRTR	**Keskin Array B**	**56.53**	**299**	P	**P**	**00 08 11.1**	**+0.6**
comp=Z,0.4nm,0.7s,mb3.5,baz=79,slow=7.5,SNR=3.2							
ARCES	**ARCESS Array B**	**56.81**	**336**	P	**P**	**00 08 11.8**	**-0.2**
comp=Z,2.2nm,0.8s,mb4.2,baz=96,slow=8.3,SNR=3.4							
AKASG	**Malin Array Be**	**57.07**	**313**	P	**P**	**00 08 13.4**	**-0.7**
comp=Z,0.5nm,0.4s,mb3.9,baz=69,slow=6.9,SNR=5.4							
FINES	**FINESS Array B**	**57.16**	**326**	P	**P**	**00 08 14.2**	**-0.4**
comp=Z,1.6nm,0.6s,mb4.2,baz=81,slow=12,SNR=8.8							
FINES	**FINESS Array B**	**57.16**	**326**	P	**P**	**00 08 14.2**	**-0.4**
IDID	**Didziasalis**	**57.70**	**319**	*e*P	**P**	**00 08 18.6**	**+0.1**
IZAR	**Zarasai**	**57.90**	**319**	*e*P	**P**	**00 08 19.8**	**-0.1**
IIGN	**Ignalina**	**57.99**	**319**	*e*P	**P**	**00 08 20.4**	**-0.1**
ISAL	**Salakas**	**58.00**	**319**	*e*P	**P**	**00 08 20.7**	**0.0**
WRA	**Warramunga Arr**	**58.88**	**146**	P	**P**	**00 08 26.8**	**-0.3**
comp=Z,0.5nm,0.5s,mb3.8,baz=340,slow=7.8,SNR=3.1							
KWP	**Kalwaria Pacla**	**61.39**	**313**	*e*P	**P**	**00 08 44.2**	**+0.1**
comp=Z,9.1nm,1.0s,mb4.9							
ASAR	**Alice Springs**	**61.91**	**149**	P	**P**	**00 08 47.8**	**0.0**
comp=Z,0.5nm,0.8s,mb3.7,baz=334,slow=6.4,SNR=6.0							
NB2	**NORSAR Subarra**	**64.25**	**327**	P	**P**	**00 09 02.0**	**-0.9**
comp=Z,0.7nm,0.8s,mb3.7,baz=70,slow=6.9							
NOA	**NORSAR Array B**	**64.25**	**327**	P	**P**	**00 09 02.0**	**-0.9**
comp=Z,1.9nm,0.9s,mb4.1,baz=72,slow=6.4,SNR=4.5							
MORC	**Moravsky Berou**	**64.54**	**314**	*e*P	**P**	**00 09 04.5**	**-0.5**
comp=Z,1.8nm,0.9s,mb4.1							
GERES	**GERESS Array B**	**67.22**	**314**	P	**P**	**00 09 22.4**	**+0.1**
comp=Z,0.9nm,0.7s,mb3.9,baz=72,slow=4.3,SNR=5.9							
KMBO	**Kilima Mbogo**	**71.08**	**256**	P	**P**	**00 09 46.4**	**-0.4**
CDF	**Champ du Feu**	**71.28**	**316**	*e*P	**P**	**00 09 47.1**	**-0.4**
WLF	**Walferdange**	**71.38**	**317**	P	**P**	**00 09 47.5**	**-0.5**
LPG	**La Plagne**	**72.93**	**313**	*e*P	**P**	**00 09 57.7**	**+0.3**
comp=Z,12nm,1.0s,mb4.5							
LPG	**La Plagne**	**72.93**	**313**	*e*P	**P**	**00 09 57.7**	**+0.3**
comp=Z,5.8nm,1.0s,mb4.5							
LPL	**La Plagne**	**72.94**	**313**	*e*P	**P**	**00 09 57.6**	**+0.2**
comp=Z,11nm,0.9s,mb4.5							
LPL	**La Plagne**	**72.94**	**313**	*e*P	**P**	**00 09 57.6**	**+0.2**
comp=Z,5.7nm,0.9s,mb4.5							
SMF	**Signal de Mont**	**74.17**	**315**	*e*P	**P**	**00 10 03.9**	**-0.7**
BOSA	**Boshof**	**95.99**	**240**	LR	LR	00 49 54.7	
comp=Z,45nm,21.7s,MS3.9,baz=76,slow=32							

ISK ***06*** *00:12:45.1,34°.17N×32°.84E,h6km,ML4.3*
DDA ***06*** *00:12:46.6,34°.39N×32°.82E,h5km±4km,Ml4.4*
BJI ***06*** *00:12:47.7,34°.40N×32°.80E,h10km,mB4.7/2,mb4.6/3*
NEIC ***06*** *00:12:49.7±0.3,34°.38N×32°.82E,h10km,mb4.3/51,*
ML4.3(ISK),Error ellipse: s-maj=5.7km s-min=3.4km
az=195.0
GII ***06*** *00:12:50.6±0.0,34°.42N×32°.99E,h1km,Mb4.1/4,Md3.8/7,*
Mm3.2/6
SGS ***06*** *00:12:50.9,34°.74N×33°.23E,h29km*
CSEM ***06*** *00:12:50.2±0.1,34°.45N×32°.81E,h10km,mb4.3/47,Ms2.9,*
Error ellipse: s-maj=3.4km s-min=2.3km az=57.0
MOS ***06*** *00:12:51.7±1.4,34°.49N×32°.82E,h33km,mb4.4/36,Error*
ellipse: s-maj=6.1km s-min=3.1km az=113.9
ISCJB ***06*** *00:12:51.1±0.5,34°.42N±0°.01×32°.78E±0°.02,h32km±4km,*
mb4.2/76,MS3.1/5,Error ellipse: s-maj=2.7km
s-min=1.8km az=146.1
HLW ***06*** *00:12:52.4,34°.59N×32°.82E,h32km±28km,Md4.2,Ml3.9*
IDC ***06*** *00:12:53.7±1.8,34°.49N×32°.82E,h37km±17km,mb3.9/21,*
mb1 4.0/30,mb1mx3.9/36,mbtmp3.9/30,ML3.8/7,MS3.1/4,
Ms1 3.1/4,ms1mx2.6/33,Error ellipse: s-maj=15.4km
s-min=10.4km az=23.0
SZGRF ***06*** *00:12:58.3,34°.82N×32°.42E,h33km,mb4.3,Cyprus*
region

ISC 06 00:12:52.9±0.6,34°.44N±0°.01×32°.81E±0°.02,h31km±5km,
n602,σ1°13/642,mb4.2/76,MS3.1/5,19C-17D,Cyprus
region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEF	**Lefka**	**0.69**	**5**	PG	**Pb**	**00 13 03.7**	**-2.7**
LEF				SG	**Sb**	**00 13 16.3**	**+0.7**
LEF	**Lefka**	**0.69**	**5**	Pg	**Pb**	**00 13 03.7**	**-2.7**
LEF				Sg	**Sb**	**00 13 16.7**	**+1.1**
LEF	**Lefka**	**0.69**	**5**	*i* Pg	**Pb**	**00 13 03.7**	**-2.7**
LEF				Sg	**Sb**	**00 13 16.7**	**+1.1**
LFK	**Lefkose**	**1.03**	**35**	*e*PN	**Pn**	**00 13 09.6**	**-1.6**
LFK				*e*SN	**Sn**	**00 13 27.4**	**+2.9**
LFK	**Lefkose**	**1.03**	**35**	Pn	**Pn**	**00 13 09.6**	**-1.6**
LFK				Sg	**Sn**	**00 13 27.6**	**+3.0**
LFK	**Lefkose**	**1.03**	**35**	*e*Pn	**Pn**	**00 13 09.6**	**-1.6**
LFK				Sg	**Sn**	**00 13 27.6**	**+3.0**
EREN	**Erenkoy**	**1.56**	**45**	*e*PN	**Pn**	**00 13 17.5**	**-1.0**
EREN	**Erenkoy**	**1.56**	**45**	*e*Pn	**Pn**	**00 13 17.5**	**-1.0**
GAZI	**Gazipasa**	**1.84**	**347**	*i* P	**Pn**	**00 13 21.6**	**-0.8**
GAZI				*i* S	**Sn**	**00 13 45.4**	**+0.8**
GAZI	**Gazipasa**	**1.84**	**347**	*i* P	**Pn**	**00 13 21.6**	**-0.8**
GAZI				*i* S	**Sn**	**00 13 45.4**	**+0.8**
IKL	**Isikli**	**1.94**	**21**	*e*PN	**Pn**	**00 13 23.0**	**-0.7**
IKL	**Isikli**	**1.94**	**21**	*e*Pn	**Pn**	**00 13 23.0**	**-0.7**
ERMK	**Ermenek**	**2.20**	**2**	*i* P	**Pn**	**00 13 28.2**	**+0.8**
ERMK				*i* S	**Sn**	**00 13 59.9**	**+6.3**
ERMK	**Ermenek**	**2.20**	**2**	*i* P	**Pn**	**00 13 28.2**	**+0.8**
MATL	**Matarih**	**2.29**	**114**	*e*P	**Pn**	**00 13 27.8**	**-0.8**
MATL	**Matarih**	**2.29**	**114**	*e*P	**Pn**	**00 13 27.8**	**-0.8**
HNTI	**Hanita**	**2.38**	**124**	Pn	**Pn**	**00 13 29.5**	**-0.3**
HNTI				Sn	**Sn**	**00 13 58.1**	**+0.1**
BHL	**Bhannes**	**2.41**	**102**	*e*Pn	**Pn**	**00 13 30.1**	**-0.2**
BHL	**Bhannes**	**2.41**	**102**	*e*P	**Pn**	**00 13 30.1**	**-0.2**
BHL	**Bhannes**	**2.41**	**102**	*e*P	**Pn**	**00 13 30.1**	**-0.1**
HDMB	**Hadim**	**2.54**	**354**	*e*PN	**Pn**	**00 13 31.8**	**-0.1**
HDMB	**Hadim**	**2.54**	**354**	*e*Pn	**Pn**	**00 13 31.8**	**-0.1**
OFRI	**'Ofer**	**2.56**	**134**	Pn	**Pn**	**00 13 31.4**	**-0.9**
MMAI	**Mount Meron Ar**	**2.58**	**123**	Pn	**Pn**	**00 13 31.8**	**-0.7**
66nm,0.3s,baz=311,slow=13,SNR=211							
MMAI				Sn	**Sn**	**00 14 03.0**	**+0.1**
182nm,0.3s,baz=301,slow=26,SNR=15							
HWQ	**Hawqa**	**2.60**	**93**	*e*Pn	**Pn**	**00 13 31.1**	**-1.7**
HWQ	**Hawqa**	**2.60**	**93**	*e*P	**Pn**	**00 13 31.0**	**-1.8**
HWQ	**Hawqa**	**2.60**	**93**	*e*Pn	**Pn**	**00 13 31.1**	**-1.7**
BLGI	**Bet Lehem HaGe**	**2.61**	**130**	Pn	**Pn**	**00 13 32.0**	**-1.0**
RCY	**Rachaya**	**2.67**	**110**	*e*Pn	**Pn**	**00 13 32.5**	**-1.3**
RCY	**Rachaya**	**2.67**	**110**	*e*Pn	**Pn**	**00 13 32.5**	**-1.3**
KSDI	**Kefar Szold**	**2.67**	**117**	Pn	**Pn**	**00 13 32.5**	**-1.3**
KSDI				Sn	**Sn**	**

KUZU **Kuzuini** 4.18 55 *i* P Pn 00 13 53.1 -1.5
KUZU *i* S Sn 00 14 45.7 +3.3
TURN **Turunc** 4.20 307 *i* P Pn 00 13 56.9 +2.1
TURN **Turunc** 4.20 307 *i* P Pn 00 13 56.9 +2.1
ARG **Arkhangelos** 4.22 296 *e*P Pn 00 13 54.5 -0.6
AANS 4.30 197 P Pn 00 13 56.5 +0.3
baz=197
ZFRI **Zfri** 4.36 152 Pn Pn 00 13 56.7 -0.2
DNZL **Cakiroluk** 4.46 318 *i* P Pn 00 13 58.9 +0.6
DNZL **Cakiroluk** 4.46 318 *i* P Pn 00 13 58.9 +0.6
PRNI **Paran** 4.47 155 Pn Pn 00 13 58.6 0.0
SHUT **Suhut-Afyon** 4.50 337 *e*PN Pn 00 14 00.1 +1.2
SHUT **Suhut-Afyon** 4.50 337 *e*Pn Pn 00 14 00.1 +1.3
GAZ **Gaziantep** 4.50 51 *e*PN Pn 00 13 58.1 -0.8
GAZ **Gaziantep** 4.50 51 *e*Pn Pn 00 13 58.1 -0.8
KIZT **Kizilcal** 4.50 351 *e*PN Pn 00 13 59.6 +0.7
KIZT **Kizilcal** 4.50 351 *e*Pn Pn 00 13 59.6 +0.7
DENT **Denizli** 4.51 318 *e*PN Pn 00 13 59.4 +0.3
DENT **Denizli** 4.51 318 *e*Pn Pn 00 13 59.4 +0.4
HHAG **Hagoal** 4.51 188 P Pn 00 13 59.4 +0.3
baz=188
HHAG S Sn 00 14 49.9 -0.5
baz=188
HHAG **Hagoal** 4.51 188 P Pn 00 13 59.3 +0.2
HHAG S Sn 00 14 49.9 -0.6
KMRS **Kahramanmaras** 4.51 46 *e*PN Pn 00 13 58.1 -1.0
KMRS **Kahramanmaras** 4.51 46 *e*Pn Pn 00 13 58.1 -1.0
BOLV **Bolvadin** 4.53 341 *i* P Pn 00 14 00.9 +1.6
BOLV **Bolvadin** 4.53 341 *i* P Pn 00 14 00.9 +1.6
YER **Yerkesik** 4.56 307 *e*PN Pn 00 13 59.6 -0.2
YER **Yerkesik** 4.56 307 *e*Pn Pn 00 13 59.6 -0.2
KOT **Kottamia** 4.57 191 P Pn 00 14 00.1 +0.2
baz=191
KOT **Kottamia** 4.57 191 P Pn 00 14 00.2 +0.3
SUZ 4.58 180 P Pn 00 14 00.1 0.0
baz=179
SUZ 4.58 180 P Pn 00 14 00.1 0.0
KRMI **Paran Flat** 4.60 159 Pn Pn 00 14 00.0 -0.3
KRMI Sn Sn 00 14 54.6 +1.9
HNKL **Nakhl** 4.60 167 P Pn 00 14 00.5 +0.2
baz=167
HNKL AMP 00 15 00.0
comp=E,220µm,0.6s,logA/T=5.6,baz=167
HNKL **Nakhl** 4.60 167 P Pn 00 14 00.5 +0.2
KARP **Karpathos** 4.77 285 *e*P Pn 00 14 03.0 +0.4
GZT **Gaziantep** 4.83 52 *i* P Pn 00 14 02.4 -1.1
DAT **Datca** 4.84 300 *e*PN Pn 00 14 02.6 -1.0
DAT **Datca** 4.84 300 *e*Pn Pn 00 14 02.6 -1.0
HSAF **As Saff** 4.92 193 P Pn 00 14 04.4 -0.3
baz=193
HSAF **As Saff** 4.92 193 P Pn 00 14 04.4 -0.3
AYT **Al 'Ayyat** 4.92 197 P Pn 00 14 04.9 +0.2
baz=197
AYT **Al 'Ayyat** 4.92 197 P Pn 00 14 04.9 +0.2
GLL **Jalalah** 4.93 191 P Pn 00 14 05.0 +0.1
baz=192
GLL **Jalalah** 4.93 191 P Pn 00 14 05.0 +0.1
MBRI **Mt Berech** 4.96 158 Pn Pn 00 14 05.3 +0.1
MBRI Sn Sn 00 15 04.1 +2.6
MLSB **Milas** 4.99 306 *e*PN Pn 00 14 05.5 -0.1
MLSB **Milas** 4.99 306 *e*Pn Pn 00 14 05.5 -0.1
ZNM 5.04 179 P Pn 00 14 07.4 +1.0
baz=179
ZNM 5.04 179 P Pn 00 14 07.4 +1.0
AQBJ **Aqaba** 5.06 157 Pn Pn 00 14 07.0 +0.3
EIL **Elat** 5.09 159 Pn Pn 00 14 07.2 +0.2
comp=E,29nm,0.3s,baz=342,slow=8.6,SNR=297
EIL Sn Sn 00 15 06.3 +1.6
comp=E,39nm,0.3s,baz=81,slow=22,SNR=13
EIL LR LR 00 16 47.9
comp=E,143nm,18.9s,baz=30,slow=46
EIL **Elat** 5.09 159 Pn Pn 00 14 07.2 +0.2
EIL Sn Sn 00 15 06.3 +1.6
EIL LR LR 00 16 47.9
EIL **Elat** 5.09 159 Pn Pn 00 14 07.2 +0.2
EIL Sn Sn 00 15 06.3 +1.6
EIL **Elat** 5.09 159 Pn Pn 00 14 06.5 -0.5
EIL Sn Sn 00 15 06.3 +1.6
ALT **Altintas** 5.10 336 *e*PN Pn 00 14 08.0 +0.9
ALT **Altintas** 5.10 336 *e*Pn Pn 00 14 08.0 +0.9
SVRH **Sivrihisar-ESK** 5.11 349 *e*PN Pn 00 14 09.0 +1.7
SVRH **Sivrihisar-ESK** 5.11 349 *e*Pn Pn 00 14 09.0 +1.7
SARI **SarD1z-Kayseri** 5.26 35 *e*PN Pn 00 14 05.0 -4.4
KULA **Kula-Manisa** 5.27 322 *e*PN Pn 00 14 10.0 +0.5
KULA **Kula-Manisa** 5.27 322 *e*Pn Pn 00 14 10.0 +0.5
ESKT **Eskisehir** 5.31 343 *e*PN Pn 00 14 11.0 +0.9
ESKT **Eskisehir** 5.31 343 *e*Pn Pn 00 14 11.0 +0.9
BRTR **Keskin Array B** 5.32 7 Pn Pn 00 14 11.8 +1.6
comp=E,3.8nm,0.3s,baz=176,slow=16,SNR=142
BRTR Sn Sn 00 15 04.5 -5.9
comp=E,0.8nm,0.3s,baz=188,slow=26,SNR=5.5
BRTR **Keskin Array B** 5.32 7 P Pn 00 14 11.8 +1.6
BR131 **Keskin Array S** 5.32 7 *e*Pn Pn 00 14 11.9 +1.7
BR131 *e*Sn Sn 00 15 18.9 +8.5
BR131 **Keskin Array S** 5.32 7 *e*Pn Pn 00 14 11.9 +1.7
BR131 *e*Sn Sn 00 15 18.9 +8.5
LOD **Lodumlu** 5.44 360 *e*PN Pn 00 14 13.9 +2.1
LOD **Lodumlu** 5.44 360 *e*Pn Pn 00 14 13.9 +2.0
HBST **Basata** 5.45 162 P Pn 00 14 12.1 +0.1
baz=162
HBST **Basata** 5.45 162 P Pn 00 14 12.1 +0.1
ZKR **Zakros** 5.47 279 *e*P Pn 00 14 11.5 -0.8
YOZ **Yozgat** 5.57 20 *e*PN Pn 00 14 14.4 +0.9
YOZ **Yozgat** 5.57 20 *e*Pn Pn 00 14 14.4 +0.8
URFA **Urfa** 5.72 57 *e*PN Pn 00 14 14.4 -1.3
URFA **Urfa** 5.72 57 *e*Pn Pn 00 14 14.4 -1.3
SMG **Samos** 5.84 306 *e*P Pn 00 14 16.0 -1.3
HMAT **Matruh** 5.86 237 AMP 00 15 00.0
comp=N,80µm,0.7s,logA/T=5.1,baz=236
HDHB **Dhahab** 5.90 164 P Pn 00 14 18.1 0.0
baz=164
HDHB **Dhahab** 5.90 164 P Pn 00 14 18.1 -0.1
CORM **Corum** 5.91 14 *e*PN Pn 00 14 19.4 +1.1
CORM **Corum** 5.91 14 *e*Pn Pn 00 14 19.4 +1.1
MYA **Malataya** 5.96 48 *e*PN Pn 00 14 19.4 +0.4
MYA **Malataya** 5.96 48 *e*Pn Pn 00 14 19.4 +0.4
IZM **Izmir** 5.97 313 *e*PN Pn 00 14 19.9 +0.8
NPS **Neapolis** 5.98 280 *e*P Pn 00 14 19.0 -0.2
HKAT **Jabal Katrina** 5.98 170 P Pn 00 14 19.0 -0.3
baz=170
HKAT **Jabal Katrina** 5.98 170 P Pn 00 14 19.0 -0.3
AKS **Akhisar** 5.98 319 *e*PN Pn 00 14 19.9 +0.6
AKS **Akhisar** 5.98 319 *e*Pn Pn 00 14 19.9 +0.6
DARE **Darende-Malaty** 6.03 40 *e*PN Pn 00 14 13.9 -6.0
LAST **Lasithi** 6.08 279 *e*P Pn 00 14 20.0 -0.6
TR2 6.08 172 P Pn 00 14 20.6 -0.1
baz=172
TR2 6.08 172 P Pn 00 14 20.6 -0.1
BLCB **Balcova** 6.10 312 *e*PN Pn 00 14 21.4 +0.5
BLCB **Balcova** 6.10 312 *e*Pn Pn 00 14 21.4 +0.5
DST **Dursunbey** 6.15 328 *e*PN Pn 00 14 22.9 +1.3
DST **Dursunbey** 6.15 328 *e*Pn Pn 00 14 22.9 +1.3
BDAS **Al Bad'** 6.30 161 P Pn 00 14 22.2 -1.4
BDAS **Al Bad'** 6.30 161 P Pn 00 14 22.2 -1.4
BDAS S Sn 00 15 32.9 -1.6
SVSK **Karacayir** 6.41 30 *e*PN Pn 00 14 25.8 +0.7
SVSK **Karacayir** 6.41 30 *e*Pn Pn 00 14 25.8 +0.7
APE **Apeiranthos** 6.48 296⇑ *i*P Pn 00 14 24.8 -1.3
APE **Apeiranthos** 6.48 296 *e*P Pn 00 14 26.0 -0.1
APE **Apeiranthos** 6.48 296⇑ *i*P Pn 00 14 24.8 -1.3
TR1 6.48 171 P Pn 00 14 25.6 -0.6
baz=171
TR1 6.48 171 P Pn 00 14 25.6 -0.6
SVRC **Sivrice-ELAZID** 6.55 51 *e*PN Pn 00 14 27.3 +0.2
SVRC **Sivrice-ELAZID** 6.55 51 *e*Pn Pn 00 14 27.3 +0.2
IDI **Anoyia** 6.57 280 Pn Pn 00 14 27.5 +0.1
comp=N,2.7nm,0.3s,baz=60,slow=22,SNR=20
IDI Sn Sn 00 15 38.8 -2.4
comp=N,2.5nm,0.3s,baz=117,slow=18,SNR=4.4
IDI **Anoyia** 6.57 280 Pn Pn 00 14 27.5 +0.2
SIVA **Sivas** 6.62 277 *e*P Pn 00 14 29.0 +1.0
SHRM 6.62 170 P Pn 00 14 28.2 +0.1
baz=170
SHRM 6.62 170 P Pn 00 14 28.2 +0.1
PTK **Pertek** 6.91 48 *e*PN Pn 00 14 32.2 +0.3
PTK **Pertek** 6.91 48 *e*Pn Pn 00 14 32.3 +0.3
DIY **Diyarbakir** 6.92 58 *e*PN Pn 00 14 31.3 -0.9
DIY **Diyarbakir** 6.92 58 *e*Pn Pn 00 14 31.3 -0.8
SLUM 7.03 247 P Pn 00 14 33.0 -0.7
baz=247
SLUM 7.03 247 P Pn 00 14 33.0 -0.7
KARN **Karanos** 7.37 280 *e*P Pn 00 14 38.5 +0.1

EZC **Erzincan** 7.45 43 *e*PN Pn 00 14 40.2 +0.8
DBAS **Duba** 7.70 159 P Pn 00 14 42.7 -0.1
DBAS **Duba** 7.70 159 P Pn 00 14 42.7 -0.1
BTMT **Batman** 7.94 59 *e*PN Pn 00 14 42.6 -3.5
SWA2 8.12 232 P Pn 00 14 47.9 -0.7
baz=232
SWA2 AMP 00 16 00.0
comp=N,50µm,0.3s,logA/T=5.2,baz=232
SWA2 8.12 232 P Pn 00 14 47.9 -0.8
WJHS 8.27 157 P Pn 00 14 50.1 -0.7
WJHS 8.27 157 P Pn 00 14 50.1 -0.7
EZM **Erzurum** 8.74 49 Pn Pn 00 14 48.1 -9.0
TIRR **Tirgusor** 10.57 343 *e*Pn Pn 00 15 22.3 +0.1
TIRR *e*Sn Sn 00 17 23.5 +4.1
TIRR **Tirgusor** 10.57 343 *e*P Pn 00 15 22.3 +0.2
HARR **Harsova** 10.91 341 ⇑P Pn 00 15 26.1 -0.7
HARR **Harsova** 10.91 341 ⇑P Pn 00 15 26.1 -0.7
ANN **Anapa** 10.95 18 *e*P Pn 00 15 29.5 +2.2
ANN pmax pmax
comp=Z,21nm,0.9s
ANN **Anapa** 10.95 18 *e*P Pn 00 15 29.5 +2.2
comp=Z,21nm,0.9s
GNI **Garni** 11.08 56 Pn Pn 00 15 32.5 +3.3
comp=Z,0.2nm,0.3s,baz=165,slow=16,SNR=2.5
GNI LR LR 00 20 25.5
comp=Z,67nm,19.3s,baz=264,slow=41
GNI **Garni** 11.08 56*c*e*P Pn 00 15 33.6 +4.5
GNI pmax pmax
comp=Z,16nm,1.7s
GNI **Garni** 11.08 56 *e*Pn Pn 00 15 32.6 +3.4
GNI Sn Sn 00 17 43.1 +11
GNI **Garni** 11.08 56 Sn Sn 00 17 43.1 +11
ZEI **Tsey** 12.01 43 *e*P Pn 00 15 46.5 +4.6
ZEI pmax pmax
comp=Z,8.0nm,1.1s
KIV **Kislovodsk** 12.20 36 *e*P Pn 00 15 47.5 +3.1
KIV *e*S Sn 00 18 04.4 +5.1
KIV pmax pmax
comp=Z,12nm,1.2s
KIV MLR MLR
comp=Z,11nm,11.0s
KIV **Kislovodsk** 12.20 36 *e*Pn Pn 00 15 47.9 +3.5
MLR **Muntele Rosu** 12.23 337 Pn Pn 00 15 46.2 +1.4
comp=Z,0.1nm,0.3s,baz=308,slow=17,SNR=2.6
MLR **Muntele Rosu** 12.23 337 Pn Pn 00 15 46.2 +1.4
MLR ⇑P 00 15 51.9
MLR **Muntele Rosu** 12.23 337 P Pn 00 15 46.2 +1.4
VRI **Vrincioaia** 12.32 340 ⇑P Pn 00 15 47.4 +1.3
VRI **Vrincioaia** 12.32 340 ⇑P Pn 00 15 47.3 +1.2
LEOM **Leova** 12.51 345 ⇓P Pn 00 15 50.3 +1.6
LEOM **Leova** 12.51 345 P Pn 00 15 50.3 +1.6
GOF **Gofitskoye** 13.19 33 *e*P Px 00 16 09.7
GOF **Gofitskoye** 13.19 33 *e*P Px 00 16 09.7
TIP **Timpagrande** 13.70 295 *e*Pn Pn 00 16 00.5 -4.5
TIP *e*Sn Sn 00 18 24.8 -11
BZS **Buzias** 14.06 326 ⇑P Pn 00 16 15.8 +5.9
BZS **Buzias** 14.06 326 ⇑P Pn 00 16 15.8 +5.9
BURAR **Bucovina Array** 14.35 339 ⇓P Pn 00 16 21.6 +7.8
BURAR **Bucovina Array** 14.35 339 ⇓P Pn 00 16 21.6 +7.8
BUR08 **Bucovina Ar. S** 14.38 339 *e*Pn Pn 00 16 14.5 +0.3
BUR08 **Bucovina Ar. S** 14.38 339 *e*Pn Pn 00 16 14.5 +0.3
PKSM **Moragy** 15.94 322 ⇑P Pn 00 16 36.7 +1.8
PKSM **Moragy** 15.94 322 ⇑P Pn 00 16 36.7 +1.8
UZH **Uzhgorod** 16.20 334 ⇓ *i*P Pn 00 16 41.0 +2.9
UZH *e* 00 19 43.0
UZH **Uzhgorod** 16.20 334 *i* P Pn 00 16 41.0 +2.9
KIEV **Kiev** 16.46 352 *e*P Pn 00 16 41.5 +0.1
KIEV pmax pmax
comp=Z,8.0nm,0.6s
KIEV **Kiev** 16.46 352 *e*Pn Pn 00 16 41.5 +0.1
comp=Z,8.3nm,0.6s
KIEV **Kiev** 16.46 352 *e*P Pn 00 16 41.5 +0.1
comp=Z,8.0nm,0.6s
KOLS **Kolonicke sedl** 16.46 335 *e*P Pn 00 16 45.0 +3.6
KOLS pmax pmax
comp=Z,11nm,1.0s
KOLS **Kolonicke sedl** 16.46 335 *e*P Pn 00 16 45.0 +3.6
comp=Z,11nm,1.0s
KOLS *e*PP 00 16 48.0
KOLS **Kolonicke sedl** 16.46 335 *e*P Pn 00 16 45.0 +3.6
comp=Z,11nm,1.0s
AKASG **Malin Array Be** 16.47 352 Pn Pn 00 16 41.3 -0.2
comp=Z,3.0nm,0.3s,baz=168,slow=9.5,SNR=30
AKASG **Malin Array Be** 16.47 352*c*e*P Pn 00 16 42.9 +1.4
AKASG pmax pmax
comp=Z,11nm,0.7s
AKASG **Malin Array Be** 16.47 352 Pn Pn 00 16 41.3 -0.2
AKASG **Malin Array Be** 16.47 352 *e*P Pn 00 16 42.9 +1.4
comp=Z,11nm,0.7s
AKBB **Malin Array Si** 16.47 352 *e*P Pn 00 16 42.2 +0.7
AKBB **Malin Array Si** 16.47 352 *e*P Pn 00 16 42.2 +0.7
PSZ **Piszkesteto** 16.58 328⇓ *e*P Pn 00 16 43.8 +0.8
CRVS **Cervenica-Dubn** 16.73 333 *e*P Pn 00 16 45.3 +0.5
CRVS pmax pmax
comp=Z,6.0nm,1.1s
CRVS **Cervenica-Dubn** 16.73 333 *e*P Pn 00 16 45.3 +0.5
comp=Z,6.3nm,1.1s
CRVS *e*PP 00 16 50.2
CRVS **Cervenica-Dubn** 16.73 333 *e*P Pn 00 16 45.3 +0.5
comp=Z,6.0nm,1.1s
KECS **Kecovo** 16.77 331 *e*P Pn 00 16 47.3 +2.0
KECS pmax pmax
comp=Z,11nm,1.0s
KECS **Kecovo** 16.77 331 *e*P Pn 00 16 47.3 +2.0
comp=Z,11nm,1.0s
KECS *e* 00 16 56.1
KWP **Kalwaria Pacla** 16.91 337 *e*P Pn 00 16 47.8 +0.7
KWP pmax pmax
comp=Z,11nm,0.6s
KWP **Kalwaria Pacla** 16.91 337 *e*Pn Pn 00 16 47.8 +0.7
comp=Z,11nm,0.6s
KWP **Kalwaria Pacla** 16.91 337 *e*P Pn 00 16 47.8 +0.7
comp=Z,11nm,0.6s
STHS **Stebnicka Huta** 17.24 334 *e*P Pn 00 16 51.8 +0.7
STHS pmax pmax
comp=Z,4.0nm,1.4s
STHS **Stebnicka Huta** 17.24 334 *e*P Pn 00 16 51.8 +0.7
comp=Z,4.3nm,1.4s
STHS *e*PP 00 16 57.7
STHS **Stebnicka Huta** 17.24 334 *e*P Pn 00 16 51.8 +0.7
comp=Z,4.0nm,1.4s
VSR **Storozhevoye** 17.39 13 *e*P Pn 00 16 50.3 -2.8
VSR pmax pmax
comp=Z,3.0nm,0.5s
VSR pmax pmax
comp=N,3.0nm,0.6s
VSR pmax pmax
comp=E,3.0nm,0.6s
VSR **Storozhevoye** 17.39 13 *e*P Pn 00 16 50.3 -2.8
comp=E,3.0nm,0.5s
VYHS **Vyhne** 17.48 328 *e*P Pn 00 16 55.2 +1.0
VYHS pmax pmax
comp=Z,8.0nm,1.4s
VYHS **Vyhne** 17.48 328 *e*P Pn 00 16 55.2 +1.0
comp=Z,8.2nm,1.4s
VYHS **Vyhne** 17.48 328 *e*P Pn 00 16 55.2 +1.0
comp=Z,8.0nm,1.4s
VRHR **Novokhopersk** 17.84 18 *e*P Pn 00 17 00.3 +1.7
VRHR pmax pmax
comp=Z,50nm,0.6s
VRHR pmax pmax
comp=N,30nm,1.5s
VRHR pmax pmax
comp=E,9.0nm,0.5s
VRHR **Novokhopersk** 17.84 18 *e*P Pn 00 17 00.3 +1.7
comp=E,30nm,1.5s
SOP **Sopron** 17.99 322⇓ *e*P Pn 00 17 00.9 +0.4
SOKA **Soboth** 18.17 318⇑ *i*Pn Pn 00 17 03.0 +0.2
comp=E,10nm,1.1s
SOKA **Soboth** 18.17 318 Pn Pn 00 17 03.0 +0.3
comp=E,10nm,1.1s
ARSA **Arzberg** 18.25 320⇓ *i*Pn Pn 00 17 04.3 +0.6
comp=E,7.9nm,0.8s
ARSA **Arzberg** 18.25 320 Pn Pn 00 17 04.3 +0.6
comp=E,7.9nm,0.8s
OBKA **Obir** 18.35 317⇓ *i*P Pn 00 17 06.7 +1.9
comp=E,14nm,0.8s
OBKA **Obir** 18.35 317 P Pn 00 17 06.7 +1.8
comp=E,14nm,0.8s
CONA **Conrad Observa** 18.50 322⇓ *e*P Pn 00 17 06.7 -0.1
comp=E,4.7nm,1.1s
CONA **Conrad Observa** 18.50 322 P Pn 00 17 06.7 -0.1
comp=E,4.7nm,1.1s
OKC **Ostrava-Krasne** 18.79 329 *e*P Pn 00 17 08.6 -1.6
OKC **Ostrava-Krasne** 18.79 329 *e*P Pn 00 17 08.6 -1.6

OKC *e*pP pP 00 17 12.7 -5.0
OKC **Ostrava-Krasne** 18.79 329 *e*P Pn 00 17 08.6 -1.6
MYKA **Terra Mystica** 18.93 316⇑ *i*P Pn 00 17 12.3 +0.3
comp=E,12nm,0.6s
MYKA **Terra Mystica** 18.93 316 P Pn 00 17 12.3 +0.3
comp=E,12nm,0.6s
MORC **Moravsky Berou** 19.00 328 *e*P Pn 00 17 10.3 -2.5
MORC pmax pmax
comp=Z,1.0nm,0.5s
MORC **Moravsky Berou** 19.00 328 *e*P Pn 00 17 10.3 -2.5
comp=Z,1.1nm,0.5s
MORC **Moravsky Berou** 19.00 328 *e*P Pn 00 17 10.3 -2.5
comp=Z,1.0nm,0.5s
VRAC **Vranov** 19.09 326 P Pn 00 17 11.8 -2.0
comp=Z,0.1nm,0.3s,baz=113,slow=12,SNR=6.6
VRAC LR LR 00 25 22.7
comp=Z,19nm,21.1s,baz=326,slow=39
VRAC **Vranov** 19.09 326 P Pn 00 17 11.8 -2.0
KEST **Kesra** 19.24 281 P Pn 00 17 16.8 +1.0
comp=Z,0.1nm,0.3s,baz=83,slow=0.8,SNR=6.3
MOA **Molln** 19.29 320⇓ *i*P Pn 00 17 15.1 -1.2
comp=Z,4.1nm,0.8s
MOA **Molln** 19.29 320 P Pn 00 17 15.1 -1.1
comp=Z,4.1nm,0.8s
KBA **Koelnbreinsper** 19.35 317⇓ *i*P Pn 00 17 18.6 +1.7
comp=Z,8.6nm,0.8s
KBA **Koelnbreinsper** 19.35 317 Pn Pn 00 17 18.6 +1.6
comp=Z,8.6nm,0.8s
VSL **Villasalto** 19.38 292 *e*P Pn 00 17 09.4 -7.9
ABTA **Abfaltersbach** 19.65 315⇑ *i*P Pn 00 17 20.7 +0.2
comp=Z,4.1nm,0.6s
ABTA **Abfaltersbach** 19.65 315 P Pn 00 17 20.7 +0.1
comp=Z,4.1nm,0.6s
DPC **Dobruska-Polom** 19.96 328 *e*P Pn 00 17 22.4 -1.8
DPC **Dobruska-Polom** 19.96 328 *e*P Pn 00 17 22.4 -1.8
DPC *e*pP pP 00 17 25.5 -5.0
DPC **Dobruska-Polom** 19.96 328 *e*P Pn 00 17 22.4 -1.8
RJOB **Jochberg** 20.03 318 *e*P P 00 17 25.0 +1.9
comp=Z,5.0nm,0.7s
GEC2 **GERESS Array S** 20.20 321 *e*P P 00 17 25.0 0.0
comp=Z,20nm,1.1s
GEC2 **GERESS Array S** 20.20 321 *e*P P 00 17 22.6 -2.3
comp=Z,3µm,1.0s
GEC2 *e*S S 00 21 11.6 +1.7
GEC2 **GERESS Array S** 20.20 321 *e*P P 00 17 22.7 -2.3
GEC2 *e*S S 00 21 11.6 +1.7
GERES **GERESS Array B** 20.20 321 P P 00 17 24.5 -0.5
comp=Z,3.6nm,0.6s,baz=126,slow=8.7,SNR=21
GERES **GERESS Array B** 20.20 321 P P 00 17 24.5 -0.5
UPC **Upice** 20.21 328 *e*P P 00 17 25.3 +0.2
UPC **Upice** 20.21 328 *e*P P 00 17 25.3 +0.2
UPC *e*pP 00 17 28.3
UPC **Upice** 20.21 328 *e*P P 00 17 25.3 +0.2
KSP **Ksiaz** 20.33 329 *e*P P 00 17 25.3 -1.1
KSP **Ksiaz** 20.33 329 *e*P P 00 17 25.3 -1.1
MNK **Minsk** 20.36 352 *e*P P 00 17 23.0 -3.7
WTTA **Wattenberg** 20.43 315⇓ *i*P P 00 17 27.4 -0.2
comp=Z,12nm,0.6s
WTTA **Wattenberg** 20.43 315 P P 00 17 27.4 -0.1
comp=Z,12nm,0.6s
KHC **Kasperske Hory** 20.44 322 *e*P P 00 17 26.7 -0.9
KHC smax
comp=N,1.0nm,0.4s
KHC **Kasperske Hory** 20.44 322 *e*P P 00 17 25.9 -1.7
comp=N,9.4nm,0.6s
KHC **Kasperske Hory** 20.44 322 *e*P P 00 17 26.7 -0.9
KHC *e*pP 00 17 31.0
KHC **Kasperske Hory** 20.44 322 *e*P P 00 17 26.7 -0.9
PRU **Pruhonice** 20.52 325 *e*P P 00 17 27.8 -0.7
PRU **Pruhonice** 20.52 325 *e*P P 00 17 27.8 -0.7
PRU **Pruhonice** 20.52 325 *e*P P 00 17 27.8 -0.7
SUW **Suwalki** 20.72 344 *e*P P 00 17 29.2 -1.3
SUW pmax pmax
comp=Z,27nm,0.9s
SUW **Suwalki** 20.72 344 *e*P P 00 17 29.2 -1.3
comp=Z,27nm,0.9s
SUW **Suwalki** 20.72 344 *e*P P 00 17 29.2 -1.3
comp=Z,27nm,0.9s
MOTA **Moosalm** 20.79 315⇓ *e*P P 00 17 30.8 -0.5
comp=Z,2.4nm,1.0s,SNR=13
MOTA **Moosalm** 20.79 315 P P 00 17 30.8 -0.5
comp=Z,2.4nm,1.0s,SNR=13
WET **Wettzell** 20.81 321 *e*P P 00 17 30.5 -1.1
comp=Z,16nm,1.1s
OBN **Obninsk** 20.84 6 *e*P P 00 17 32.9 +1.1
OBN *e* 00 17 53.0
OBN pmax pmax
comp=Z,39nm,0.8s
OBN **Obninsk** 20.84 6 *e*P P 00 17 33.5 +1.7
comp=Z,33nm,0.7s
OBN **Obninsk** 20.84 6 *e*P P 00 17 32.9 +1.1
comp=Z,39nm,0.8s
FETA **Feichten** 20.85 314⇓ *i*P P 00 17 32.2 +0.2
comp=Z,14nm,1.0s
FETA **Feichten** 20.85 314 P P 00 17 32.2 +0.2
comp=Z,14nm,1.0s
PVCC **Panska Ves** 20.88 326 *e*P P 00 17 32.8 +0.5
PVCC **Panska Ves** 20.88 326 *e*P P 00 17 32.8 +0.5
PVCC **Panska Ves** 20.88 326 *e*P P 00 17 32.8 +0.5
RETA **Reutte** 21.06 315⇓ *i*P P 00 17 33.3 -0.9
comp=Z,2.0nm,0.5s,mb3.7
RETA **Reutte** 21.06 315 P P 00 17 33.3 -1.0
comp=Z,2.0nm,0.5s,mb3.7
FUR **Furstenfeldbru** 21.12 317 *e*P P 00 17 32.8 -2.1
comp=Z,22nm,0.9s,mb4.5
DAVOX **Davos/Dischmat** 21.25 312 P P 00 17 36.4 +0.1
comp=Z,10.0nm,0.8s,mb4.2,baz=156,slow=13,SNR=8.0
DAVOX **Davos/Dischmat** 21.25 312 P P 00 17 36.4 +0.1
IDID **Didziasalis** 21.30 350 *e*P P 00 17 35.5 -1.3
IDID **Didziasalis** 21.30 350 *e*P P 00 17 35.5 -1.3
SNR=40
BRG **Berggiesshubel** 21.41 326 *e*P P 00 17 36.2 -1.7
comp=Z,5.3nm,1.4s,mb3.7
BRG *e* 00 17 40.3
comp=Z,16nm,1.4s
BRG **Berggiesshubel** 21.41 326 *e*P P 00 17 36.2 -1.8
comp=Z,9.0nm,1.4s,mb3.9
IIGN **Ignalina** 21.41 350 *e*P P 00 17 37.1 -0.9
IIGN **Ignalina** 21.41 350 *e*P P 00 17 37.1 -0.9
SNR=40
DAVA **Damuels** 21.48 314⇓ *i*P P 00 17 37.7 -1.1
comp=Z,8.2nm,0.5s,mb4.3,SNR=9.6
DAVA **Damuels** 21.48 314 P P 00 17 37.7 -1.1
comp=Z,8.2nm,0.5s,mb4.3,SNR=9.6
ROTZ **Rotzenmuhle** 21.54 322 *e*P P 00 17 37.4 -2.0
comp=Z,8.0nm,1.2s,mb4.0
MOS **Moscow** 21.56 7 *e*P P 00 17 40.6 +1.0
MOS *e* 00 18 00.4
MOS **Moscow** 21.56 7 *e*P P 00 17 40.6 +1.0
ISAL **Salakas** 21.64 350 *e*P P 00 17 39.2 -1.2
ISAL **Salakas** 21.64 350 *e*P P 00 17 39.2 -1.2
SNR=35
NKC **Novy Kostel** 21.71 323 *e*P P 00 17 43.9 +2.7
NKC **Novy Kostel** 21.71 323 *e*P P 00 17 43.9 +2.7
SBF **Sospel** 21.75 303 *e*P P 00 17 41.2 -0.5
SBF **Sospel** 21.75 303 *e*P P 00 17 41.2 -0.5
IZAR **Zarasai** 21.79 350 *e*P P 00 17 41.4 -0.7
IZAR **Zarasai** 21.79 350 *e*P P 00 17 41.4 -0.7
SNR=35
TANN **Tannenbergstha** 21.81 323 *e*P P 00 17 40.9 -1.4
comp=Z,10.0nm,1.1s,mb4.2
GRF **Grafenberg Arr** 22.01 320 *e*P P 00 17 43.2 -1.2
comp=Z,8.0nm,0.8s,mb4.2
GRF **Grafenberg Arr** 22.01 320 *e*P P 00 17 43.2 -1.2
GRF pmax pmax
comp=Z,8.0nm,0.8s,mb4.2
GRF **Grafenberg Arr** 22.01 320 *e*P P 00 17 43.2 -1.2
comp=Z,8.0nm,0.8s,mb4.2
CLL **Collm** 22.14 326 *e*P P 00 17 44.6 -1.2
comp=Z,7.0nm,0.7s,mb4.2
CLL **Collm** 22.14 326 *e*P P 00 17 46.0 +0.2
CLL *e* 00 17 50.0
CLL pmax pmax
comp=Z,12nm,1.3s,mb4.2
CLL **Collm** 22.14 326 *e*P P 00 17 46.0 +0.2
comp=Z,12nm,1.3s,mb4.2
CLL *e* 00 17 50.0
CLL **Collm** 22.14 326 *e*P P 00 17 46.0 +0.2
comp=Z,12nm,1.3s,mb4.2
CLL *e*sP sP 00 17 50.0 -7.9
CLL **Collm** 22.14 326 *e*P P 00 17 46.0 +0.2
comp=Z,12nm,1.3s,mb4.2
FRF **La Foret Royal** 22.21 302 *e*P P 00 17 47.4 +0.8
comp=Z,14nm,0.8s,mb4.2
FRF **La Foret Royal** 22.21 302 *e*P P 00 17 47.4 +0.8

FRF pmax pmax
comp=Z,7.0nm,0.8s,mb4.1
FRF La Forel Royal 22.21 302 *e*P **P 00 17 47.4 +0.8**
comp=Z,7.1nm,0.8s,mb4.2
FRF La Forel Royal 22.21 302 *e*P **P 00 17 47.4 +0.8**
comp=Z,7.1nm,0.8s,mb4.2
LMR La Mourre 22.25 301 *e*P **P 00 17 48.8 +1.7**
comp=Z,8.7nm,0.6s,mb4.1
LMR La Mourre 22.25 301 *e*P **P 00 17 48.8 +1.7**
LMR pmax pmax
comp=Z,4.0nm,0.6s,mb4.0
LMR La Mourre 22.25 301 *e*P **P 00 17 48.8 +1.7**
comp=Z,4.3nm,0.6s,mb4.1
LMR La Mourre 22.25 301 *e*P **P 00 17 48.8 +1.7**
comp=Z,4.3nm,0.6s,mb4.1
MOX Moxa 22.38 323 *e*P **P 00 17 48.4 0.0**
comp=Z,52nm,1.4s,mb4.8
MOX Moxa 22.38 323 *e*P **P 00 17 48.2 -0.2**
comp=Z,37nm,1.1s,mb4.7
MOX Moxa 22.38 323 *e*P **P 00 17 48.4 0.0**
MOX pmax pmax
comp=Z,52nm,1.4s,mb4.8
MOX Moxa 22.38 323 *e*P **P 00 17 48.4 0.0**
comp=Z,52nm,1.4s,mb4.8
MBDF Montbardon 22.46 305 *e*P **P 00 17 51.6 +2.3**
comp=Z,19nm,0.7s,mb4.4
MBDF Montbardon 22.46 305 *e*P **P 00 17 51.6 +2.3**
MBDF pmax pmax
comp=Z,10.0nm,0.7s,mb4.3
MBDF Montbardon 22.46 305 *e*P **P 00 17 51.6 +2.3**
comp=Z,9.6nm,0.7s,mb4.3
MBDF Montbardon 22.46 305 *e*P **P 00 17 51.6 +2.3**
comp=Z,9.6nm,0.7s,mb4.4
STU Stuttgart 22.62 316 *e*P **P 00 17 49.2 -1.7**
STU Stuttgart 22.62 316 *e*P **P 00 17 49.2 -1.7**
BNI Bardonecchia 22.63 306 *e*P **P 00 17 49.3 -1.8**
BNI pmax pmax
comp=Z,4.0nm,0.6s,mb4.0
BNI Bardonecchia 22.63 306 *e*P **P 00 17 49.3 -1.8**
comp=Z,4.4nm,0.6s,mb4.1
BNI Bardonecchia 22.63 306 *e*P **P 00 17 49.3 -1.8**
comp=Z,4.0nm,0.6s,mb4.0
LPG La Plagne 22.73 307 *e*P **P 00 17 54.3 +2.2**
comp=Z,23nm,0.7s,mb4.4
LPG La Plagne 22.73 307 *e*P **P 00 17 54.3 +2.2**
LPG pmax pmax
comp=Z,12nm,0.7s,mb4.4
LPG La Plagne 22.73 307 *e*P **P 00 17 54.3 +2.2**
comp=Z,12nm,0.7s,mb4.4
LPG La Plagne 22.73 307 *e*P **P 00 17 54.3 +2.2**
comp=Z,12nm,0.7s,mb4.4
LPL La Plagne 22.75 307 *e*P **P 00 17 54.1 +1.8**
comp=Z,17nm,0.6s,mb4.3
LPL La Plagne 22.75 307 *e*P **P 00 17 54.1 +1.8**
LPL pmax pmax
comp=Z,9.0nm,0.6s,mb4.4
LPL La Plagne 22.75 307 *e*P **P 00 17 54.1 +1.8**
comp=Z,8.6nm,0.6s,mb4.4
LPL La Plagne 22.75 307 *e*P **P 00 17 54.1 +1.8**
comp=Z,8.6nm,0.6s,mb4.3
BFO Black Forest 22.90 315 *e*P **P 00 17 52.4 -1.5**
comp=Z,25nm,1.0s,mb4.6
BFO Black Forest 22.90 315 *ce*P **P 00 17 53.1 -0.8**
BFO Black Forest 22.90 315 *e*P **P 00 17 50.2 -3.7**
comp=Z,21nm,0.9s,mb4.6
BFO Black Forest 22.90 315 *e*P **P 00 17 53.1 -0.8**
ORIF Oris-en-Rattie 23.12 305 *e*P **P 00 17 57.4 +1.1**
comp=Z,9.4nm,0.6s,mb4.1
ORIF *e*MLR MLR
comp=Z,47nm,19.2s,MS2.6
ORIF Oris-en-Rattie 23.12 305 *e*P **P 00 17 57.4 +1.1**
ORIF pmax pmax
comp=Z,5.0nm,0.6s,mb4.1
ORIF Oris-en-Rattie 23.12 305 *e*P **P 00 17 57.4 +1.1**
comp=Z,4.7nm,0.6s,mb4.1
ORIF Oris-en-Rattie 23.12 305 *e*P **P 00 17 57.4 +1.1**
comp=Z,4.7nm,0.6s,mb4.1
UBBA Unterbreizbach 23.30 322 *e*P **P 00 17 57.1 -1.0**
comp=Z,20nm,1.5s,mb4.3
ECH Echery 23.54 314 P **P 00 17 57.2 -3.3**
ECH pmax pmax
comp=Z,13nm,1.3s,mb4.2
ECH Echery 23.54 314 P **P 00 17 57.2 -3.3**
comp=Z,12nm,1.3s,mb4.2
ECH Echery 23.54 314 P **P 00 17 57.2 -3.3**
comp=Z,13nm,1.3s,mb4.2
HINF Hinteralfeld 23.55 312 *e*P **P 00 17 58.4 -2.2**
comp=Z,5.7nm,0.6s,mb3.9
HINF Hinteralfeld 23.55 312 *e*P **P 00 17 58.4 -2.2**
HINF pmax pmax
comp=Z,3.0nm,0.6s,mb3.9
HINF Hinteralfeld 23.55 312 *e*P **P 00 17 58.4 -2.2**
comp=Z,2.8nm,0.6s,mb3.9
HINF Hinteralfeld 23.55 312 *e*P **P 00 17 58.4 -2.2**
comp=Z,2.8nm,0.6s,mb3.9
CABF La Chapelle 23.55 309 *e*P **P 00 18 00.1 -0.5**
comp=Z,21nm,0.9s,mb4.3
CABF La Chapelle 23.55 309 *e*P **P 00 18 00.1 -0.5**
CABF pmax pmax
comp=Z,11nm,0.9s,mb4.3
CABF La Chapelle 23.55 309 *e*P **P 00 18 00.1 -0.5**
comp=Z,11nm,0.9s,mb4.3
CABF La Chapelle 23.55 309 *e*P **P 00 18 00.1 -0.5**
comp=Z,11nm,0.9s,mb4.3
CDF Champ du Feu 23.56 314 *e*P **P 00 18 00.3 -0.4**
comp=Z,20nm,1.2s,mb4.1
CDF Champ du Feu 23.56 314 *e*P **P 00 18 00.3 -0.4**
CDF pmax pmax
comp=Z,10.0nm,1.2s,mb4.1
CDF Champ du Feu 23.56 314 *e*P **P 00 18 00.3 -0.4**
comp=Z,10nm,1.2s,mb4.1
CDF Champ du Feu 23.56 314 *e*P **P 00 18 00.3 -0.4**
comp=Z,10nm,1.2s,mb4.1
CLZ Clausthal 23.73 324 *e*P **P 00 18 00.7 -1.5**
comp=Z,15nm,1.5s,mb4.2
VIVF Saint-Julien-l 23.93 304 *e*P **P 00 18 03.6 -0.5**
VIVF Saint-Julien-l 23.93 304 *e*P **P 00 18 03.6 -0.5**
HAU Haudompre 23.94 312 *e*P **P 00 18 02.1 -2.0**
comp=Z,16nm,0.9s,mb4.2
HAU *e*MLR MLR
comp=Z,60nm,17.8s,MS2.8
HAU Haudompre 23.94 312 *e*P **P 00 18 02.1 -2.0**
HAU pmax pmax
comp=Z,8.0nm,0.9s,mb4.2
HAU MLR MLR
comp=Z,60nm,17.8s,MS3.1
HAU Haudompre 23.94 312 *e*P **P 00 18 02.1 -2.0**
comp=Z,8.0nm,0.9s,mb4.2
HAU LR LR
comp=Z,60nm,17.8s,MS3.1
HAU Haudompre 23.94 312 *e*P **P 00 18 02.1 -2.0**
comp=Z,8.0nm,0.9s,mb4.2
NRDL Niedersach Rie 24.27 325 *e*P **P 00 18 06.7 -0.4**
comp=Z,8.0nm,1.0s,mb4.1
LASF Ste Croix 24.29 302 *e*P **P 00 18 07.4 0.0**
LASF Ste Croix 24.29 302 *e*P **P 00 18 07.4 0.0**
AKTK Aktyubinsk 24.36 41 P **P 00 18 07.8 -0.1**
AKTK Aktyubinsk 24.36 41 P **P 00 18 07.8 -0.1**
AKTO Aktyubinsk 24.36 41 P **P 00 18 07.8 -0.1**
comp=Z,12nm,0.7s,mb4.5,baz=235,slow=8.2,SNR=61
WLF Walferdange 24.79 316 *e*P **P 00 18 09.4 -2.5**
WLF pmax pmax
comp=Z,8.0nm,0.9s,mb4.2
WLF Walferdange 24.79 316 *e*P **P 00 18 09.4 -2.5**
comp=Z,8.2nm,0.9s,mb4.3
WLF Walferdange 24.79 316 *e*P **P 00 18 09.4 -2.5**
comp=Z,8.1nm,0.9s,mb4.2
ABKAR Akbulak array 24.88 45 *e*P **P 00 18 12.1 -0.6**
comp=Z,3.4nm,0.6s,mb4.0
ABKAR Akbulak array 24.88 45 *e*P **P 00 18 12.1 -0.6**
comp=Z,3.4nm,0.6s,mb4.0
MEZF Maizieres J'vi 24.93 313 *e*P **P 00 18 12.1 -1.1**
comp=Z,19nm,0.8s,mb4.4
MEZF Maizieres J'vi 24.93 313 *e*P **P 00 18 12.1 -1.1**
comp=Z,19nm,0.8s,mb4.7
MEZF Maizieres J'vi 24.93 313 *e*P **P 00 18 12.1 -1.1**
comp=Z,9.4nm,0.8s,mb4.4
SMF Signal de Mont 25.02 308 *e*P **P 00 18 13.4 -0.6**
comp=Z,12nm,0.8s,mb4.2
SMF Signal de Mont 25.02 308 *e*P **P 00 18 13.4 -0.6**
SMF pmax pmax
comp=Z,6.0nm,0.8s,mb4.2
SMF Signal de Mont 25.02 308 *e*P **P 00 18 13.4 -0.6**
comp=Z,6.0nm,0.8s,mb4.2
SMF Signal de Mont 25.02 308 *e*P **P 00 18 13.4 -0.6**
comp=Z,6.0nm,0.8s,mb4.2
BSEG Bad Segeberg 25.11 328 *e*P **P 00 18 15.2 +0.5**
comp=Z,24nm,1.6s,mb4.5
LOR Lormes 25.22 309 *e*P **P 00 18 15.6 -0.2**
LOR *e*MLR MLR
comp=Z,45nm,17.5s,MS2.7
LOR Lormes 25.22 309 *e*P **P 00 18 15.6 -0.2**
LOR LR LR
comp=Z,50nm,17.5s,MS3.1
LOR Lormes 25.22 309 *e*P **P 00 18 15.6 -0.2**
MTLF Montolieu 25.31 300 *e*P **P 00 18 17.3 +0.7**
MTLF Montolieu 25.31 300 *e*P **P 00 18 17.3 +0.7**
SSF Saint Saulge 25.37 309 *e*P **P 00 18 15.9 -1.3**
comp=Z,8.5nm,0.8s,mb4.0
SSF Saint Saulge 25.37 309 *e*P **P 00 18 15.9 -1.3**
SSF pmax pmax
comp=Z,4.0nm,0.8s,mb4.0
SSF Saint Saulge 25.37 309 *e*P **P 00 18 15.9 -1.3**
comp=Z,4.3nm,0.8s,mb4.0
SSF Saint Saulge 25.37 309 *e*P **P 00 18 15.9 -1.3**
comp=Z,4.2nm,0.8s,mb4.0
AVF Avril sur Loir 25.39 308 *e*P **P 00 18 17.2 -0.1**
comp=Z,5.2nm,0.8s,mb3.8
AVF Avril sur Loir 25.39 308 *e*P **P 00 18 17.2 -0.1**
AVF pmax pmax
comp=Z,3.0nm,0.8s,mb3.9
AVF Avril sur Loir 25.39 308 *e*P **P 00 18 17.2 -0.1**
comp=Z,2.6nm,0.8s,mb3.8
AVF Avril sur Loir 25.39 308 *e*P **P 00 18 17.2 -0.1**
comp=Z,2.6nm,0.8s,mb3.8
BGF Bois d'Agland 25.64 307 *e*P **P 00 18 19.5 -0.2**
BGF Bois d'Agland 25.64 307 *e*P **P 00 18 19.5 -0.2**
CAF Calviac 25.74 303 *e*P **P 00 18 21.3 +0.8**
CAF Calviac 25.74 303 *e*P **P 00 18 21.3 +0.8**
GIVF Givet 25.76 316 *e*P **P 00 18 20.0 -0.6**
GIVF Givet 25.76 316 *e*P **P 00 18 20.0 -0.6**
TCF Toulx Ste Croi 25.99 306 *e*P **P 00 18 22.9 +0.1**
comp=Z,8.2nm,0.9s,mb4.0
TCF Toulx Ste Croi 25.99 306 *e*P **P 00 18 22.9 +0.1**
TCF pmax pmax
comp=Z,4.0nm,0.9s,mb4.0
TCF Toulx Ste Croi 25.99 306 *e*P **P 00 18 22.9 +0.1**
comp=Z,4.1nm,0.9s,mb4.0
TCF Toulx Ste Croi 25.99 306 *e*P **P 00 18 22.9 +0.1**
comp=Z,4.1nm,0.9s,mb4.0
BAIF Baives 26.09 315 *e*P **P 00 18 22.3 -1.4**
comp=Z,24nm,0.8s,mb4.5
BAIF Baives 26.09 315 *e*P **P 00 18 22.3 -1.4**
BAIF pmax pmax
comp=Z,12nm,0.8s,mb4.5
BAIF Baives 26.09 315 *e*P **P 00 18 22.3 -1.4**
comp=Z,12nm,0.8s,mb4.5
BAIF Baives 26.09 315 *e*P **P 00 18 22.3 -1.4**
comp=Z,12nm,0.8s,mb4.5
RJF Les Rejaudoux 26.20 304 *e*P **P 00 18 25.0 +0.3**
comp=Z,20nm,0.6s,mb4.5
RJF *e*MLR MLR
comp=Z,56nm,19.2s,MS2.8
RJF Les Rejaudoux 26.20 304 *e*P **P 00 18 25.0 +0.3**
RJF pmax pmax
comp=Z,10.0nm,0.6s,mb4.5
RJF MLR MLR
comp=Z,60nm,19.3s,MS3.1
RJF Les Rejaudoux 26.20 304 *e*P **P 00 18 25.0 +0.3**
comp=Z,10nm,0.6s,mb4.5
RJF LR LR
comp=Z,60nm,19.3s,MS3.1
RJF Les Rejaudoux 26.20 304 *e*P **P 00 18 25.0 +0.3**
comp=Z,10nm,0.6s,mb4.5
TAM Tamanrasset 26.53 251 *e*P **P 00 18 29.0 +1.0**
comp=Z,1.5nm,1.0s,mb3.5
TAM Tamanrasset 26.53 251 *e*P **P 00 18 29.0 +1.1**
comp=Z,1.5nm,1.0s,mb3.5
EPF Esarros 26.61 299 *e*P **P 00 18 29.4 +0.9**
EPF Esparros 26.61 299 *e*P **P 00 18 29.4 +0.9**
LFF La Frestale 26.66 303 *e*P **P 00 18 29.3 +0.4**
comp=Z,11nm,0.6s,mb4.2
LFF La Frestale 26.66 303 *e*P **P 00 18 29.3 +0.4**
LFF pmax pmax
comp=Z,5.0nm,0.6s,mb4.2
LFF La Frestale 26.66 303 *e*P **P 00 18 29.3 +0.4**
comp=Z,5.4nm,0.6s,mb4.2
LFF La Frestale 26.66 303 *e*P **P 00 18 29.3 +0.4**
comp=Z,5.4nm,0.6s,mb4.2
ETSF Etsaut 27.25 298 *e*P **P 00 18 35.8 +1.6**
ETSF Etsaut 27.25 298 *e*P **P 00 18 35.8 +1.6**
FINES FINESS Array B 27.37 353 P **P 00 18 33.5 -1.6**
comp=Z,4.3nm,0.5s,mb4.2,baz=156,slow=11,SNR=48
FINES FINESS Array B 27.37 353 P **P 00 18 33.5 -1.5**
KAF Kangasniemi 28.00 353 *e*P **P 00 18 38.1 -2.6**
KAF pmax pmax
comp=Z,3.0nm,0.7s,mb4.0
KAF Kangasniemi 28.00 353 *e*p **P 00 18 38.1 -2.6**
comp=Z,2.5nm,0.7s,mb4.0
ARU Arti 28.16 31 *d*iP **P 00 18 46.1 +3.9**
ARU *e* 00 19 30.5
ARU SS 00 24 50.1
ARU pmax pmax
comp=Z,4.0nm,0.7s,mb4.2
ARU Arti 28.16 31 *e*P **P 00 18 43.5 +1.3**
comp=Z,4.7nm,0.8s,mb4.2
ARU Arti 28.16 31 *e*P **P 00 18 43.5 +1.3**
comp=Z,4.7nm,0.8s,mb4.2
JOF Joensuu 28.52 359 *e*P **P 00 18 43.5 -1.8**
JOF pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
JOF Joensuu 28.52 359 *e*p **P 00 18 43.5 -1.8**
comp=Z,3.5nm,0.7s,mb4.2
JOF Joensuu 28.52 359 *e*P **P 00 18 43.5 -1.8**
HFS Hagfors 28.58 340 P **P 00 18 44.7 -1.1**
comp=Z,1.4nm,0.6s,mb3.8,baz=145,slow=9.0,SNR=4.8
HFS Hagfors 28.58 340 P **P 00 18 44.7 -1.1**
KONO Kongsberg 29.46 336 *e*P **P 00 18 51.5 -2.2**
KONO Kongsberg 29.46 336 *e*P **P 00 18 51.5 -2.2**
ESDC Sonseca Array 29.67 291 P **P 00 18 56.8 +1.0**
comp=Z,2.0nm,0.7s,mb3.9,baz=69,slow=10.0,SNR=6.1
ESDC Sonseca Array 29.67 291 P **P 00 18 56.8 +1.0**
NAO01 NORSAR Array S 29.98 339 *e*P **P 00 18 56.6 -1.6**
comp=Z,1.3nm,0.6s,mb3.8
NAO01 NORSAR Array S 29.98 339 *e*P **P 00 18 56.6 -1.6**
comp=Z,1.3nm,0.6s,mb3.8
NB2 NORSAR Subarra 30.03 339 P **P 00 18 57.6 -1.1**
comp=Z,0.9nm,0.6s,mb3.7,baz=142,slow=9.3
NB2 NORSAR Subarra 30.03 339 P **P 00 18 57.6 -1.1**
comp=Z,0.9nm,0.6s,mb3.7,baz=142,slow=9.2,SNR=6.6
NOA NORSAR Array B 30.03 339 P **P 00 18 56.8 -1.9**
comp=Z,0.8nm,0.6s,mb3.6,baz=145,slow=8.5,SNR=6.9
NOA NORSAR Array B 30.03 339 P **P 00 18 56.8 -1.9**
BRVK Borovoye 32.36 43 *ce*P **P 00 19 19.6 +0.3**
BRVK pmax pmax
comp=Z,5.0nm,1.2s,mb4.2
BRVK Borovoye 32.36 43 P **P 00 19 18.8 -0.5**
BRVK Borovoye 32.36 43 *e*P **P 00 19 19.6 +0.3**
comp=Z,5.0nm,1.2s,mb4.2
BVAR Borovoye Array 32.41 43 P **P 00 19 19.9 +0.2**
comp=Z,2.2nm,0.6s,mb4.2,baz=240,slow=7.0,SNR=15
BVAR Borovoye Array 32.41 43 P **P 00 19 19.9 +0.2**
AML Almayashu 32.75 64 *e*P **P 00 19 23.0 +0.2**
comp=Z,2.8nm,0.8s,mb4.2
AML Almayashu 32.75 64 *e*P **P 00 19 23.0 +0.1**
comp=Z,2.8nm,0.8s,mb4.2
AAK Ala-Archa 33.34 63 P **P 00 19 28.1 +0.1**
comp=Z,2.8nm,0.6s,mb4.4,baz=233,slow=7.2,SNR=6.2
AAK Ala-Archa 33.34 63 *ce*P **P 00 19 29.9 +1.9**
AAK pmax pmax
comp=Z,5.0nm,1.7s,mb4.2
AAK Ala-Archa 33.34 63 *e*P **P 00 19 28.1 0.0**
comp=Z,4.0nm,0.7s,mb4.5
AAK Ala-Archa 33.34 63 *e*P **P 00 19 28.1 +0.1**
comp=Z,4.0nm,0.7s,mb4.5
UCH Uchtor 33.36 64 *e*P **P 00 19 28.7 +0.5**
comp=Z,2.5nm,0.7s,mb4.2
UCH Uchtor 33.36 64 *e*P **P 00 19 28.7 +0.5**
comp=Z,2.5nm,0.7s,mb4.2
TKM2 Tokmak 2 34.15 63 *e*P **P 00 19 35.6 +0.5**
TKM2 pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
TKM2 Tokmak 2 34.15 63 *e*P **P 00 19 35.6 +0.5**
comp=Z,3.5nm,0.6s,mb4.5
TKM2 Tokmak 2 34.15 63 *e*P **P 00 19 35.6 +0.5**
comp=Z,3.5nm,0.6s,mb4.5
TORD Torodi Ar. Bea 35.26 241 P **P 00 19 45.9 +1.0**
comp=Z,0.6nm,0.7s,mb3.7,baz=58,slow=5.9,SNR=4.9
ARCES ARCESS Array B 35.39 356 P **P 00 19 43.3 -2.1**
comp=Z,2.6nm,0.6s,mb4.3,baz=169,slow=7.1,SNR=17
ARCES ARCESS Array B 35.39 356 P **P 00 19 43.3 -2.1**
KURK Kurchatov 36.80 50 P **P 00 19 57.9 +0.2**
comp=Z,3.1nm,0.7s,mb4.2,baz=264,slow=8.6,SNR=19
KURK PcP PcP 00 22 19.4 +0.1
comp=Z,0.8nm,0.7s,baz=261,slow=3.7,SNR=5.1
KURK Kurchatov 36.80 50 P **P 00 19 57.9 +0.2**
KURK 00 22 19.4
KURK pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
KURK Kurchatov 36.80 50 *e*P **P 00 19 58.4 +0.7**
comp=Z,4.3nm,0.8s,mb4.3
KURK Kurchatov 36.80 50 *e*P **P 00 19 58.4 +0.7**
comp=Z,4.3nm,0.8s,mb4.3
KURK Kurchatov 36.80 50 PcP PcP 00 22 19.4 +0.1
MK31 Makanchi Array 38.92 56 *e*P **P 00 20 16.8 +1.1**
MK31 Makanchi Array 38.92 56 *e*P **P 00 20 16.8 +1.1**
MKAR Makanchi Array 38.92 56 P **P 00 20 16.4 +0.7**
comp=Z,1.4nm,0.6s,mb3.9,baz=266,slow=7.0,SNR=9.6
MKAR Makanchi Array 38.92 56 P **P 00 20 16.5 +0.8**
NVS Novosibirsk 40.20 44 *e*P **P 00 20 26.3 +0.1**
NVS pmax pmax
comp=N,3.0nm,1.0s
NVS pmax pmax
comp=Z,8.0nm,1.0s,mb4.4
NVS pmax pmax
comp=E,7.0nm,1.2s
NVS Novosibirsk 40.20 44 *e*P **P 00 20 26.3 +0.1**
ZAA0 Zalesovo Array 40.99 45 *e*P **P 00 20 31.8 -1.0**
ZAA0 Zalesovo Array 40.99 45 *e*P **P 00 20 31.8 -1.0**
ZALV Zalesovo Beam 40.99 45 P **P 00 20 32.1 -0.6**
comp=E,2.8nm,0.5s,mb4.2,baz=264,slow=9.4,SNR=17
DMN Daman 44.92 84 *e*P **P 00 21 06.2 +1.3**
comp=E,14nm,0.6s,mb5.0
DMN Daman 44.92 84 *e*P **P 00 21 06.2 +1.3**
comp=E,14nm,0.6s,mb5.0
KKN Kakani 44.99 84 *e*P **P 00 21 06.6 +1.1**
comp=E,22nm,0.6s,mb5.2
KKN Kakani 44.99 84 *e*P **P 00 21 06.6 +1.1**
comp=E,22nm,0.6s,mb5.2
PKI Pulchoki 45.18 84 *e*P **P 00 21 08.0 +1.0**
PKI Pulchoki 45.18 84 *e*P **P 00 21 08.0 +1.0**
GUN Gumba 45.44 83 *e*P **P 00 21 10.4 +1.3**
GUN Gumba 45.44 83 *e*P **P 00 21 10.4 +1.3**
JIRN Jiri 45.79 83 *e*P **P 00 21 13.2 +1.4**
comp=E,36nm,0.6s,mb5.5
JIRN Jiri 45.79 83 *e*P **P 00 21 13.2 +1.4**
comp=E,36nm,0.6s,mb5.5
RAMN Ramite 46.40 84 *e*P **P 00 21 17.0 +0.3**
comp=E,8.8nm,0.7s,mb4.8
RAMN Ramite 46.40 84 *e*P **P 00 21 17.0 +0.3**
comp=E,8.8nm,0.7s,mb4.8
TAPN Taplejung 47.16 83 *e*P **P 00 21 23.3 +0.7**
comp=E,24nm,1.0s,mb5.1
TAPN Taplejung 47.16 83 *e*P **P 00 21 23.3 +0.7**
comp=E,24nm,1.0s,mb5.1
ZAK Zakamensk 52.46 50 *e*P **P 00 22 03.5 +0.9**
ZAK pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
ZAK Zakamensk 52.46 50 *e*P **P 00 22 03.5 +0.9**
comp=Z,2.0nm,1.0s,mb4.0
SONM Songino Array 55.02 52 P **P 00 22 21.2 -0.1**
comp=Z,1.8nm,0.6s,mb4.3,baz=288,slow=8.3,SNR=19
SONM Songino Array 55.02 52 P **P 00 22 21.2 -0.1**
ULN Ulaanbaatar 55.44 52 *e*P **P 00 22 24.8 +0.5**
ULN pmax pmax
comp=Z,5.0nm,1.3s,mb4.4
ULN Ulaanbaatar 55.44 52 *e*P **P 00 22 24.8 +0.5**
comp=Z,5.2nm,1.3s,mb4.4
ULN Ulaanbaatar 55.44 52 *e*P **P 00 22 24.8 +0.5**
comp=Z,5.0nm,1.3s,mb4.4
DGAR Diego Garcia 56.01 130 P **P 00 22 23.1 -5.7**
CMAR Chiang Mai Arr 60.36 87 P **P 00 22 59.4 +0.1**
comp=Z,2.8nm,0.8s,mb4.3,baz=294,slow=8.6,SNR=11
CMAR Chiang Mai Arr 60.36 87 P **P 00 22 59.3 0.0**
SCHQ Schefferville 67.73 322 P **P 00 23 46.8 -0.3**
comp=Z,1.3nm,0.7s,mb4.0,baz=31,slow=5.9,SNR=3.7
SCHQ Schefferville 67.73 322 P **P 00 23 46.8 -0.3**
NJ2 Nanjing 69.77 65 *e*P **P 00 24 02.4 +2.1**
NJ2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
BILL Bilibino 72.08 17 P **P 00 24 14.2 +0.6**
BILL pmax pmax
comp=Z,2.0nm,1.2s,mb3.9
BILL Bilibino 72.08 17 P **P 00 24 12.6 -1.0**
BILL Bilibino 72.08 17 P **P 00 24 14.2 +0.6**
comp=Z,2.0nm,1.2s,mb3.9
KSRS Korea Array 73.61 56 P **P 00 24 22.4 -0.8**
comp=Z,0.5nm,0.4s,mb3.8,baz=273,slow=13,SNR=2.7
KSRS Korea Array 73.61 56 P **P 00 24 22.4 -0.9**
KSRS pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
KSRS Korea Array 73.61 56 P **P 00 24 22.4 -0.9**
comp=Z,1.0nm,0.4s,mb4.1
INK Inuvik 77.06 355 P **P 00 24 41.6 -0.9**
comp=Z,1.4nm,0.6s,mb4.0,baz=350,slow=9.1,SNR=6.0
INK Inuvik 77.06 355 P **P 00 24 41.6 -0.9**
YKA Yellowknife Ar 79.91 345 P **P 00 24 58.9 +0.6**
comp=Z,0.8nm,0.6s,mb3.8,baz=33,slow=5.6,SNR=5.0
YKA Yellowknife Ar 79.91 345 P **P 00 24 58.9 +0.6**
YKA Yellowknife Ar 79.91 345 P **P 00 24 58.9 +0.5**
PETK Petropavlovsk- 80.56 30 P **P 00 25 00.2 -1.8**
comp=Z,1.0nm,0.7s,mb3.8,baz=278,slow=10.0,SNR=3.1
EGAK Eagle 81.00 357 *e*P **P 00 25 04.5 +0.4**
comp=Z,6.0nm,0.8s,mb4.6
EGAK Eagle 81.00 357 *e*P **P 00 25 04.5 +0.3**
comp=Z,6.0nm,0.8s,mb4.6
CBIJ Chichi jima 89.39 57 LR LR 01 12 20.4
comp=Z,45nm,18.6s,MS3.9,baz=104,slow=40

CSEM ***06*** *00:19:31.9±0.2, 49°.86N×18°.53E, h2km, ML2.1/8*
ISCJB ***06*** *00:19:31.1±0.6, 49°.85N±0°.04×18°.52E±0°.04, h0km, Error ellipse: s-maj=5.2km s-min=3.8km az=179.9*
IPEC ***06*** *00:19:32.2±0.1, 49°.84N×18°.53E, h3km±1km, ML1.2/4, Error ellipse: s-maj=1.2km s-min=0.7km az=170.0*
PRU ***06*** *00:19:34.7, 49°.86N×18°.36E, h0km*
ISC 06 00:19:32.0±0.6, 49°.84N±0°.04×18°.51E±0°.04, h0km, n18, σ0=94/29, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.23**	**270**	*e*PG	**Pg**	**00 19 37.7**	**+1.3**
OKC				*e*SG	**Sg**	**00 19 40.8**	**+1.3**
comp=Z,16nm,0.3s							
OKC	**Ostrava-Krasne**	**0.23**	**270**	*e*Pg	**Pg**	**00 19 37.1**	**+0.7**
baz=88							
OKC				Sg	**Sg**	**00 19 40.8**	**+1.3**
comp=Z,16nm,0.3s							
MORC	**Moravsky Berou**	**0.63**	**265**	*e*Pg	**Pg**	**00 19 45.0**	**+1.0**
baz=84							
MORC				*e*Sg	**Sg**	**00 19 52.5**	**+0.4**
comp=Z,8.0nm,0.3s,baz=84							
OJC	**Ojcow**	**0.92**	**65**	*e*Pg	**Pg**	**00 19 49.0**	**-0.5**
OJC				*e*Sg	**Sg**	**00 20 01.9**	**+0.6**
OJC	**Ojcow**	**0.92**	**65**	*e*Pg	**Pg**	**00 19 49.1**	**-0.4**
baz=246							
OJC				*e*Sg	**Sg**	**00 20 00.6**	**-0.7**
baz=246							
JAVC	**Velka Javorina**	**1.12**	**209**	*e*Pg	**Pg**	**00 19 55.0**	**+1.5**
JAVC				*e*Sg	**Sg**	**00 20 11.4**	**+3.4**
comp=Z,1.5nm,0.2s							
VRAC	**Vranov**	**1.36**	**248**	*e*Pn	**Pn**	**00 19 57.6**	**-0.5**
VRAC				*e*Sg	**Sg**	**00 20 15.2**	**-0.3**
comp=Z,4.4nm,0.4s,baz=66							
VYHS	**Vyhne**	**1.36**	**171**	*e*Pg	**Pg**	**00 19 57.6**	**-0.5**
baz=352							
VYHS				*e*Sg	**Sg**	**00 20 15.2**	**-0.5**
baz=352							
DPC	**Dobruska-Polom**	**1.50**	**291**	*e*PG	**Pg**	**00 20 00.7**	**+0.1**
DPC				*e*SG	**Sg**	**00 20 20.1**	**0.0**
comp=Z,5.5nm,0.6s							
DPC	**Dobruska-Polom**	**1.50**	**291**	*e*Pn	**Pn**	**00 20 00.3**	**+0.2**
baz=109							
DPC	**Dobruska-Polom**	**1.50**	**291**	Pg	**Pg**	**00 20 00.7**	**+0.1**
DPC				Sg	**Sg**	**00 20 20.1**	**0.0**
comp=Z,5.5nm,0.6s							
KRUC	**Moravsky**	**1.58**	**241**	*e*Pn	**Pn**	**00 20 01.2**	**0.0**
baz=60							
KRUC				*e*Sg	**Sg**	**00 20 22.0**	**-0.8**
comp=Z,2.2nm,0.2s,baz=60							
UPC	**Upice**	**1.74**	**294**	*e*SG	**Sg**	**00 20 27.8**	**0.0**
comp=Z,1.6nm,0.3s							
UPC	**Upice**	**1.74**	**294**	Sg	**Sg**	**00 20 27.8**	**0.0**
comp=Z,1.6nm,0.3s							
PRU	**Pruhonice**	**2.57**	**275**	*e*SG	**Sg**	**00 20 53.0**	**-1.4**
comp=Z,1.3nm,0.4s							
PRU	**Pruhonice**	**2.57**	**275**	Sg	**Sg**	**00 20 53.0**	**-1.4**
comp=Z,1.3nm,0.4s							
KHC	**Kasperske Hory**	**3.29**	**259**	*e*SG	**Sg**	**00 21 15.3**	**-2.4**

comp=Z,1.2nm,0.4s

KHC	Kasperske Hory	3.29	259	e	Sg	00 21 15.3 -2.4

MAN 06 00:20:29,15°.33N×122°.33E,h1km,mb4.4,ML3.3,MS3.2, 1C-2D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	Polilio Island	0.71	212	eP	Pg	00 20 41.9	-0.7
BALP	Baler	0.83	299	eP	Pg	00 20 45.5	+0.5
BALP				eS	Sg	00 20 55.9	+0.1
PCPH	Palayan	1.21	281	⇑iP	Pg	00 20 51.0	-1.3
GQP	Guinayangan	1.42	175	⇓iP	Pn	00 20 54.0	-1.9
PALP	Palanan	1.73	3	⇓iP	Sn	00 21 21.9	-0.9
BOAC	Boac	1.92	194	eP	Pn	00 21 04.0	+1.1
BOAC				eS	Sn	00 21 28.2	+0.6
PVCP	Virac	2.47	134	eP	Pn	00 21 11.5	+1.1
PVCP				eS	Sn	00 21 39.9	-1.4
LUBP	Lubang	2.57	232	eP	Pn	00 21 12.9	+1.2
APYP	Conner	2.72	338	eP	Pn	00 21 14.2	+0.3
SJMP	San Jose	3.08	203	eP	Pn	00 21 20.7	+1.8

*IDC **06** 00:30:40.2±1.1,37°.27N×103°.43E,h0km,mb3.5/4, mb1 3.8/7,mb1mx3.5/28,mbtmp3.7/7,ML3.7/3,MS2.7/1, Ms1 2.7/1,ms1mx1.9/24,Error ellipse: s-maj=34.7km s-min=18.6km az=59.0*
*NEIC **06** 00:30:41.5±0.6,37°.17N×103°.28E,h10km,mb3.6/2,Error ellipse: s-maj=11.1km s-min=8.8km az=186.0*
*BJI **06** 00:30:43.4,37°.26N×103°.08E,h17km,ML3.5/9,Ms3.4/2, Ms7 3.1/1*

ISC 06 00:30:42.6±1.2,37°.21N±0°.05×103°.37E±0°.08,h17km±11km, n22,σ0°95/26,mb3.5/5,Gansu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	Lanzhou	1.18	161	Pg	Pg	00 31 05.4	+0.1
LZH				Sg	Sg	00 31 21.1	+0.3
LZH				smax			
	comp=N,6μm,0.6s						
LZH				smax			
	comp=E,4μm,0.6s						
GTA	Gaotai	3.56	309	Pn	Pn	00 31 38.1	+1.1
GTA				Pg	Pg	00 31 43.4	-7.3
GTA				Sg	Sg	00 32 26.2	-11
GTA				LR	LR		
	comp=N,500nm,7.5s						
GTA				LR	LR		
	comp=E,260nm,8.3s						
GTA				LR	LR		
	comp=Z,250nm,9.0s						
XAN	Xi'an	5.52	123	Pg	Pg	00 32 23.4	-4.8
XAN				Sg	Sg	00 33 35.5	-4.1
XAN				smax			
	comp=N,39nm,0.7s						
XAN				smax			
	comp=E,12nm,0.7s						
BTO	Baotou	6.20	55	ePg	Pg	00 32 40.4	-0.8
BTO				smax			
	comp=N,10.0nm,1.0s						
BTO				smax			
	comp=E,8.0nm,0.6s						
BJT	Baijiatuau	10.40	70	ePn	Pn	00 33 10.7	-0.3
SONM	Songino Array	10.85	11	Pn	Pn	00 33 17.1	0.0
	comp=E,1.3nm,0.3s,baz=192,slow=14,SNR=40						
SONM				Lg		00 36 24.0	
	comp=E,0.6nm,0.3s,baz=199,slow=26,SNR=7.2						
ULN	Ulaanbaatar	10.99	13	ePn	Pn	00 33 20.8	+1.8
	comp=E,2.3nm,0.5s						
ULN				eSn	Sn	00 35 14.3	-7.2
TLY	Talaya	14.47	1	ePn	Pn	00 34 07.7	+1.2
MK31	Makanchi Array	18.31	308	Pn	Pn	00 34 55.6	-0.1
MKAR	Makanchi Array	18.31	308	P	Pn	00 34 56.8	+1.1
	comp=E,0.1nm,0.3s,baz=94,slow=13,SNR=4.9						
KSRS	Korea Array	19.52	82	P	Pn	00 35 07.2	-3.1
	comp=E,0.1nm,0.3s,baz=227,slow=29,SNR=4.5						
ZALV	Zalesovo Beam	21.08	328	P	P	00 35 24.6	-1.3
	comp=E,0.6nm,0.6s,mb3.1,baz=143,slow=12,SNR=3.9						
TKM2	Tokmak 2	21.95	294	eP	P	00 35 35.5	+0.2
	comp=E,1.4nm,0.6s,mb3.6						
KURK	Kurchatov	22.22	315	P	P	00 35 37.8	-0.3
	comp=E,1.6nm,0.6s,mb3.6,baz=118,slow=12,SNR=12						
KURK	Kurchatov	22.22	315	eP	P	00 35 37.8	-0.3
	comp=E,1.8nm,0.6s,mb3.7						
UCH	Uchtor	22.70	292	eP	P	00 35 42.7	-0.6
AAK	Ala-Archa	22.74	293	LR	LR	00 44 43.6	
	comp=E,19nm,21.6s,baz=6.3,slow=37						
AAK	Ala-Archa	22.74	293	eP	P	00 35 43.0	-0.6
EKS2	Erkin-Say	23.27	293	P	P	00 35 48.4	-0.9
AML	Almayashu	23.30	291	P	P	00 35 48.7	-0.9
WRA	Warramunga Arr	63.90	147	P	P	00 41 15.7	+1.2
	comp=E,0.8nm,0.6s,mb3.9,baz=344,slow=7.1,SNR=4.3						
ASAR	Alice Springs	67.03	150	P	P	00 41 35.0	+0.3
	comp=E,0.2nm,0.4s,mb3.5,baz=346,slow=6.7,SNR=5.3						

*ISK **06** 00:38:14.2,38°.56N×31°.27E,h5km,MD3.6*
*CSEM **06** 00:38:15.8±0.1,38°.56N×31°.28E,h2km,MD3.3,Error ellipse: s-maj=2.8km s-min=2.6km az=5.0*
*DDA **06** 00:38:15.1,38°.55N×31°.29E,h7km±3km,Md3.3*
*ISCJB **06** 00:38:16.0±0.3,38°.56N±0°.02×31°.30E±0°.03,h10km,Error ellipse: s-maj=2.9km s-min=2.8km az=142.6*

ISC 06 00:38:16.0±0.5,38°.55N±0°.02×31°.28E±0°.03,h1km±4km, n70,σ0°84/97,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLV	Bolvadin	0.31	304	iP	Pg	00 38 21.9	-0.1
BOLV				iS	Sg	00 38 26.7	+0.8
BOLV	Bolvadin	0.31	304	iP	Pg	00 38 21.9	0.0
BOLV				iS	Sg	00 38 26.7	+0.7
SHUT	Suhut-Afyon	0.57	271	ePG	Pg	00 38 26.3	-0.7
SHUT	Suhut-Afyon	0.57	271	ePg	Pg	00 38 26.3	-0.7
KIZT	Kizilcal	0.58	55	ePG	Pg	00 38 26.9	-0.2
KIZT	Kizilcal	0.58	55	ePg	Pg	00 38 26.9	-0.2
KDHN	Kadinhani	0.66	92	iP	Pg	00 38 28.1	-0.6
KDHN				iS	Sg	00 38 36.8	-0.4
KDHN	Kadinhani	0.66	92	iP	Pg	00 38 28.1	-0.6
KDHN				iS	Sg	00 38 36.8	-0.4
SVRH	Sivrihisar-ESK	0.92	12	ePG	Pg	00 38 33.0	-0.7
SVRH				eSG	Sg	00 38 46.8	+1.2
SVRH	Sivrihisar-ESK	0.92	12	ePg	Pg	00 38 33.0	-0.7
SVRH				eSg	Sg	00 38 46.8	+1.2
LADK	Ladik-KONYA	0.92	112	ePG	Pg	00 38 33.2	-0.5
LADK				eSG	Sg	00 38 46.8	+1.2
LADK	Ladik-KONYA	0.92	112	ePg	Pg	00 38 33.2	-0.5
LADK				eSg	Sg	00 38 46.8	+1.1
ISP	Isparta	0.93	221	ePG	Pg	00 38 32.7	-1.1
ISP				eSG	Sg	00 38 47.5	+1.7
ESKT	Eskisehir	1.03	341	ePG	Pg	00 38 35.4	-0.3
ESKT				eSG	Sg	00 38 49.6	+0.6
ESKT	Eskisehir	1.03	341	iP	Pg	00 38 34.7	-1.1
ESKT				iS	Sg	00 38 49.8	+0.7
ESKT	Eskisehir	1.03	341	ePg	Pg	00 38 35.4	-0.3
ESKT				eSg	Sg	00 38 49.6	+0.5
SEYT	Eskypehyr	1.03	341	iP	Pg	00 38 34.7	-1.0
SEYT				iS	Sg	00 38 49.8	+0.7
ALT	Altintas	1.04	299	ePG	Pg	00 38 35.3	-0.8
ALT	Altintas	1.04	299	ePg	Pg	00 38 35.3	-0.7
KONT	Konya--Tatoy	1.04	125	ePG	Pg	00 38 35.5	-0.5
KONT	Konya--Tatoy	1.04	125	ePg	Pg	00 38 35.5	-0.5
SUTC	Sutluce-Ispart	1.09	192	ePN	Pn	00 38 35.6	-2.8
SUTC	Sutluce-Ispart	1.09	192	ePn	Pn	00 38 35.6	-2.8
BCK	Bucak	1.21	207	ePN	Pn	00 38 38.6	-1.5
BCK				eSN	Sn	00 38 56.9	-0.2
BCK	Bucak	1.21	207	ePn	Pn	00 38 38.6	-1.5
BCK				eSn	Sn	00 38 56.9	-0.2
KHAL	Karahalli	1.41	263	iP	Pn	00 38 41.9	-1.0
KHAL				iS	Sg	00 39 02.3	+0.9
KHAL	Karahalli	1.41	263	iP	Pn	00 38 41.9	-0.9
KHAL				iS	Sg	00 39 02.3	+0.9
BORA	Eskisehir	1.48	335	iP	Pn	00 38 43.0	-0.7
BORA				iS	Sb	00 39 04.2	+0.7
BORA	Eskisehir	1.48	335	iP	Pn	00 38 43.0	-0.7
BORA				iS	Sb	00 39 04.2	+0.7
GDZ	Gediz	1.50	292	iP	Pn	00 38 43.2	-0.9
GDZ				iS	Sb	00 39 04.8	+0.5
GDZ	Gediz	1.50	292	iP	Pn	00 38 43.2	-0.9
GDZ				iS	Sb	00 39 04.8	+0.5
KORT	Korkueli	1.71	206	iP	Pn	00 38 48.1	+1.2
KORT	Korkueli	1.71	206	iP	Pn	00 38 48.1	+1.2
ANTB	Antalya	1.72	197	ePN	Pn	00 38 46.7	-0.4
ANTB	Antalya	1.72	197	ePn	Pn	00 38 46.7	-0.3
BBAL	Bala	1.75	55	iP	Pn	00 38 48.7	+1.3
BBAL				iS	Sn	00 39 15.6	+5.3
BBAL	Bala	1.75	55	iP	Pn	00 38 48.7	+1.2
LOD	Lodumlu	1.77	40	ePN	Pn	00 38 47.1	-0.6
LOD	Lodumlu	1.77	40	ePn	Pn	00 38 47.1	-0.7
SULT	Sultanhani-AKS	1.79	100	ePN	Pn	00 38 48.0	0.0
SULT	Sultanhani-AKS	1.79	100	ePn	Pn	00 38 48.0	-0.1
HDMB	Hadim	1.85	148	ePN	Pn	00 38 49.0	+0.1
HDMB	Hadim	1.85	148	ePn	Pn	00 38 49.0	+0.2
GOLH	Golhisar	1.89	227	iP	Pn	00 38 50.3	+0.9
GOLH				iS	Sn	00 39 12.3	-1.4
GOLH	Golhisar	1.89	227	iP	Pn	00 38 50.3	+1.0
GOLH				iS	Sn	00 39 12.4	-1.3
DNZL	Cakiroluk	1.96	245	iP	Pn	00 38 58.4	+8.0
DNZL				iS	Sn	00 39 02.4	-13
GLHS	Glhisar (BURDU	1.98	226	ePN	Pn	00 38 50.8	+0.2
GLHS	Glhisar (BURDU	1.98	226	ePn	Pn	00 38 50.8	+0.2
KULA	Kula-Manisa	2.05	270	ePN	Pn	00 38 52.2	+0.5
KULA	Kula-Manisa	2.05	270	ePn	Pn	00 38 52.2	+0.6
DEMI	Demirci	2.06	285	iP	Pn	00 38 51.0	-0.8
DEMI	Demirci	2.06	285	iP	Pn	00 38 51.0	-0.8
ELL	Elmali	2.10	212	ePN	Pn	00 38 52.8	+0.6
ELL	Elmali	2.10	212	ePn	Pn	00 38 52.8	+0.5
DST	Dursunbey	2.32	298	ePN	Pn	00 38 55.1	-0.2
DST	Dursunbey	2.32	298	ePn	Pn	00 38 55.1	-0.2
GAZI	Gazipasa	2.45	160	iP	Pn	00 38 58.2	+1.1
GAZI				iS	Sn	00 39 29.5	+1.8
GAZI	Gazipasa	2.45	160	iP	Pn	00 38 58.2	+1.1
GAZI				iS	Sn	00 39 29.5	+1.8
FETY	Fethiye	2.58	223	ePN	Pn	00 38 59.1	+0.1
FETY	Fethiye	2.58	223	ePn	Pn	00 38 59.1	+0.1
YER	Yerkesik	2.76	240	ePN	Pn	00 39 01.1	-0.3
YER	Yerkesik	2.76	240	ePn	Pn	00 39 01.1	-0.2
MLSB	Milas	3.04	247	ePN	Pn	00 39 05.2	0.0
MLSB	Milas	3.04	247	ePn	Pn	00 39 05.2	0.0
IZM	Izmir	3.15	269	ePN	Pn	00 39 07.3	+0.5
DAT	Datca	3.45	239	ePN	Pn	00 39 10.7	-0.2
DAT	Datca	3.45	239	ePn	Pn	00 39 10.7	-0.2
BODT	Bodrum	3.47	246	ePN	Pn	00 39 11.6	+0.4
BODT	Bodrum	3.47	246	ePn	Pn	00 39 11.6	+0.4
EZN	Ezine	4.05	290	ePN	Pn	00 39 18.9	-0.3

CASC 06 00:46:21.6±1.4,12°.90N×88°.61W,h49km±16km,MD3.6, ML3.3,1C-3D,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSM	San Miguel	0.62	32	iP	Pn	00 46 34.9	+0.6
VSM				eS	Sn	00 46 45.4	+1.9
BLLM	Bellamira	0.65	34	⇓iP	Pn	00 46 35.0	+0.3
BLLM				eS	Sn	00 46 44.9	+0.7
SNVI	San Vicente	0.74	343	eP	Pn	00 46 36.1	+0.3
SNVI				eS	Sn	00 46 47.1	+0.9
LFRS	El Faro	0.84	329	⇓iP	Pn	00 46 37.5	+0.3
LFRS				eS	Sn	00 46 49.0	+0.4
CNCH	Conchagua	0.85	64	⇑eP	Pn	00 46 37.1	-0.1
CNCH				eS	Sn	00 46 49.5	+0.8
LBRS	Las Brisas	0.93	333	eP	Pn	00 46 38.9	+0.5
LBRS				eS	Sn	00 46 51.0	+0.2
CAHU	Cacacuatique	0.95	24	⇓iP	Pn	00 46 39.0	+0.3
CAHU				eS	Sn	00 46 53.1	+1.9
LFU	La Fuente	0.98	330	eP	Pn	00 46 39.4	+0.4
LFU				eS	Sn	00 46 53.1	+1.3
SNET	Serv Nac Est T	0.99	322	eP	Pn	00 46 38.7	-0.5
SNET				eS	Sn	00 46 52.6	+0.5
BOQS	Boqueron	1.05	322	eP	Pn	00 46 40.6	+0.5
BOQS				eS	Sn	00 46 54.7	+1.0
SBLS	San Blas	1.36	314	eP	Pn	00 46 45.1	+0.9
SBLS				eS	Sn	00 47 03.4	+2.4
SNJE	San Jose	1.36	315	eP	Pn	00 46 44.9	+0.6
SNJE				eS	Sn	00 47 03.5	+2.3
RTR	El Retiro	1.41	315	eP	Pn	00 46 44.6	-0.3
RTR				eS	Sn	00 47 03.2	+0.8
RBDL	Robledal	1.60	319	eP	Pn	00 46 47.6	+0.2
TGUH	Tegucigalpa,Un	1.74	48	eP	Pn	00 46 49.6	+0.2
TGUH				eS	Sn	00 47 10.9	+0.5
TGUH				AML	AML	00 47 16.3	
	comp=N,831nm,0.4s						
CNGN	Cerro Negro	1.91	102	eP	Pn	00 46 51.7	0.0
CNGN				eS	Sn	00 47 15.6	+1.0
CSAN		2.25	108	eP	Pn	00 46 56.8	+0.4
MGAN	Managua	2.43	108	AML	AML	00 47 28.0	
	comp=E,111nm,0.5s						
SSN	San Juan del S	3.13	120	eP	Pn	00 47 08.7	+0.2
SSN				eS	Sn	00 47 44.6	0.0
JTS	JuntasAbangare	4.42	125	eP	Pn	00 47 28.8	+2.6

GUC 06 00:55:50.1±0.5,42°.08S×72°.50W,h4km±4km,ML3.8,1C, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOCH	HornopirØn	0.18	21	eP	Pg	00 55 52.4	-1.2
HOCH				eS	Sg	00 55 54.5	-1.5
HOCH				AML	AML	00 55 57.8	
	comp=N,45μm,0.3s						
PMCH	Puerto Montt	0.66	333	⇑iP	Pg	00 56 02.6	-0.1
PMCH				eS	Sg	00 56 12.4	+1.1

*NEIC **06** 01:01:40.8±1.5,27°.98N×140°.41E,h415km±21km,mb3.6/3, Error ellipse: s-maj=57.0km s-min=10.4km az=78.0*
*ISCJB **06** 01:01:47.7±0.5,27°.84N±0°.07×140°.1E±0°.4,h512km±14km, mb3.6/9,Error ellipse: s-maj=51.4km s-min=8.0km az=170.8*
*JMA **06** 01:01:48.5±0.1,28°.00N×140°.57E,h518km,M3.7*
*IDC **06** 01:01:48.4±0.7,27°.88N×140°.10E,h500km±19km,mb3.3/7, mb1 3.4/8,mb1mx3.0/25,mbtmp3.3/8,Error ellipse: s-maj=61.2km s-min=14.6km az=77.0*

ISC 06 01:01:48.8±0.5,27°.90N±0°.07×140°.4E±0°.4,h512km±13km, n24,σ0°77/30,mb3.6/9,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.80	116	P	P	01 02 54.0	-0.1
CBIJ				eS	S	01 03 46.2	-0.9
CBIJ	Chichi jima	1.80	116	P	P	01 02 54.2	+0.1
	47nm,0.3s,baz=257,slow=23,SNR=18						
CBIJ				S	S	01 03 46.5	-0.6
	38nm,0.3s,baz=309,slow=22,SNR=8.1						
JHHJ	Haha-jima-NKT	2.04	128	P	P	01 02 55.9	+0.6
JHHJ				eS	S	01 03 48.8	-0.4
BSO1	Boso 1	6.76	4	P	P	01 03 33.6	+0.8
BSO1				eS	S	01 04 58.5	+0.4
BSO3	Boso 3	6.88	1	P	P	01 03 34.6	+0.5
BSO3				eS	S	01 04 59.0	-1.4
BSO4	Boso 4	7.07	360	P	P	01 03 38.3	+2.3
BSO4				eS	S	01 05 03.1	-0.7
JIE	Ise	7.20	335	P	P	01 03 38.3	+1.1
JHU	Hanno	7.99	354	P	P	01 03 44.9	-0.3
JRY	Ryogami san	8.19	352	P	P	01 03 48.2	+0.9
JAG	Ashikaga	8.54	355	P	P	01 03 50.2	-0.7
MAJO	Matsushiro	8.81	349	ePn	P	01 03 43.9	-10
MAT	Matsushiro	8.81	349	P	P	01 03 43.6	-10
ZALV	Zalesovo Beam	47.83	319	P	P	01 09 38.0	-1.2
	0.5nm,0.4s,mb3.4,baz=116,slow=3.4,SNR=2.9						
WRAB	Tennant Creek	47.90	188	eP	P	01 09 40.2	0.0
	1.1nm,0.4s,mb3.7						
WRA	Warramunga Arr	47.91	188	P	P	01 09 40.5	+0.2
	1.3nm,0.3s,mb3.9,baz=3.8,slow=7.6,SNR=10						
WRA	Warramunga Arr	47.91	188	P	P	01 09 40.5	+0.2
KURK	Kurchatov	51.27	314	P	P	01 10 04.3	-0.4
	2.1nm,0.6s,mb3.7,baz=92,slow=8.3,SNR=13						
KURK	Kurchatov	51.27	314	eP	P	01 10 04.0	-0.8
	1.6nm,0.6s,mb3.5						
ASAR	Alice Springs	51.64	188	P	P	01 10 07.7	0.0
	0.2nm,0.3s,mb2.9,baz=4.7,slow=5.1,SNR=6.1						
BVAR	Borovoye Array	56.36	317	P	P	01 10 40.4	-0.3
	1.9nm,0.4s,mb3.7,baz=92,slow=7.0,SNR=17						
BRVK	Borovoye	56.43	317	eP	P	01 10 40.8	-0.3
	1.8nm,0.7s,mb3.4						
ARCES	ARCESS Array B	72.25	340	P	P	01 12 21.7	+0.4
	2.3nm,0.8s,mb3.6,baz=69,slow=10,SNR=4.2						
FINES	FINESS Array B	76.52	333	P	P	01 12 45.7	+0.2
	1.7nm,0.4s,mb3.9,baz=70,slow=5.3,SNR=25						
FINES	FINESS Array B	76.52	333	P	P	01 12 45.7	+0.2

*DDA **06** 01:02:33.0,36°.88N×26°.46E,h2km±2km,Md3.0*
*THE **06** 01:02:33.6,36°.89N×26°.40E,h10km±1km,ML2.9/2,Error ellipse: s-maj=1.8km s-min=0.7km az=188.0*
*CSEM **06** 01:02:33.6±0.2,36°.89N×26°.38E,h15km,ML2.9/2,Error ellipse: s-maj=8.5km s-min=4.2km az=134.0*
*ISCJB **06** 01:02:34.1±0.4,36°.88N±0°.03×26°.43E±0°.03,h25km±6km, Error ellipse: s-maj=5.8km s-min=3.8km az=151.0*

ISC 06 01:02:33.6±0.6,36°.89N±0°.03×26°.42E±0°.03,h15km±5km, n29,σ0°95/49,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIS1	Nisyros Isl.	0.68	114	P	Pg	01 02 46.5	-0.2
NIS1				S	Sg	01 02 57.4	+1.7
APE	Apeiranthos	0.73	285	P	Pg	01 02 47.1	-0.7
APE				S	Sg	01 02 58.1	+0.6
APE	Apeiranthos	0.73	285	P	Pg	01 02 47.1	-0.7
APE				S	Sg	01 02 58.1	+0.6
BDRM	Kayabasi	0.84	77	iP	Pg	01 02 49.1	-0.9
BDRM				iS	Sg	01 03 00.4	-0.6
THR2	Thira island,	0.90	241	P	Pb	01 02 50.4	-0.5
THR2				S	Sg	01 03 03.9	+1.1
THR2	Thira island,	0.90	241	P	Pb	01 02 50.4	-0.5
THR2				S	Sg	01 03 03.9	+1.1
THR1	Thera Island	0.93	237	P	Pb	01 02 50.4	-0.9
THR1				S	Sb	01 03 03.8	+0.4
THR1	Thera Island	0.93	237	P	Pb	01 02 50.4	-0.9
THR1				S	Sb	01 03 03.8	+0.4
THR3	Thira Island,	0.94	240	P	Pb	01 02 51.0	-0.6
THR3				S	Sb	01 03 05.0	+1.0
THR3	Thira Island,	0.94	240	P	Pb	01 02 51.0	-0.6
THR3				S	Sb	01 03 05.0	+1.0
GCAM	G?zelcaml?	1.04	38	iP	Pb	01 02 53.1	-0.2
GCAM				iS	Sb	01 03 06.8	0.0
GCAM	G?zelcaml?	1.04	38	iP	Pb	01 02 53.1	-0.3
AYDN	Tasoluk	1.40	56	iP	Pn	01 02 58.9	+0.3
AYDN				iS	Sn	01 03 19.7	+2.8
AYDN	Tasoluk	1.40	56	iP	Pn	01 02 58.9	+0.3
AYDN				iS	Sn	01 03 19.7	+2.8
URLA	Izmir	1.48	5	iP	Pn	01 03 00.8	+1.2
URLA				iS	Sn	01 03 22.8	+4.0
URLA	Izmir	1.48	5	iP	Pn	01 03 00.9	+1.2
CHOS	Chios island	1.53	349	P	Pn	01 02 59.0	-1.3
CHOS				S	Sn	01 03 20.4	+0.5
CHOS	Chios island	1.53	349	P	Pn	01 02 59.0	-1.3
ARG	Arkhangelos	1.53	115	P	Pn	01 02 59.4	-1.0
BLCB	Balcova	1.58	18	P	Pn	01 03 00.5	-0.6
BLCB				S	Sn	01 03 20.6	-0.6
BLCB	Balcova	1.58	18	P	Pn	01 03 00.5	-0.6
BLCB	Balcova	1.58	18	S	Sn	01 03 20.6	-0.6
TURN	Turunc	1.75	90	eP	Pn	01 02 59.6	-3.9
TURN				iS	Sn	01 03 21.1	-4.5
ZKR	Zakros	1.77	185	P	Pn	01 03 03.8	+0.1
ZKR	Zakros	1.77	185	P	Pn	01 03 03.8	+0.1
LAST	Lasithi	1.88	204	P	Pn	01 03 04.5	-0.7
LAST				S	Sn	01 03 28.2	-0.5
LAST	Lasithi	1.88	204	P	Pn	01 03 04.5	-0.7
LAST				S	Sn	01 03 28.2	-0.5
DNZL	Cakiroluk	2.25	68	iP	Pn	01 03 12.0	+1.8
DNZL				iS	Sn	01 03 21.6	-16
DNZL	Cakiroluk	2.25	68	iP	Pn	01 03 12.0	+1.8

*ISCJB **06** 01:07:33.4±0.5,13°.41N±0°.05×91°.55W±0°.03,h33km, mb4.1/19,MS3.4/4,Error ellipse: s-maj=7.8km s-min=3.0km az=23.0*
*MEX **06** 01:07:34.8±0.4,13°.28N×91°.85W,h72km±24km,MD4.4*
*CASC **06** 01:07:38.4±2.2,13°.61N×91°.18W,h16km±11km,MD4.1, ML3.4,mb4.1(NEIC)*
*IDC **06** 01:07:40.0±2.8,13°.64N×91°.19W,h79km±22km,mb3.8/8, mb1 3.9/10,mb1mx3.7/25,mbtmp3.7/10,MS3.4/5, Ms1 3.4/5,ms1mx3.0/29,Error ellipse: s-maj=37.6km s-min=14.4km az=51.0*
*NEIC **06** 01:07:40.1±1.3,13°.58N×91°.17W,h81km±12km,mb4.1/13, Error ellipse: s-maj=16.3km s-min=8.7km az=50.0*

ISC 06 01:07:35.8±0.5,13°.51N±0°.05×91°.48W±0°.03,h35km,n67, σ1°17/81,mb4.1/19,MS3.4/4,3C-1D,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	Jato	0.82	349	⇓eP	Pn	01 07 51.6	+0.7
FUG	Fuego 3	1.12	33	eP	Pn	01 07 55.6	+0.5
FG6		1.20	29	eP	Pn	01 07 56.5	+0.3
PCG	Pacaya	1.22	44	eP	Pn	01 07 57.3	+0.8
TP2	Tecpan 2	1.35	19	eP	Pn	01 07 59.2	+1.1
NBG	Las Nubes	1.54	46	eP	Pn	01 08 02.4	+1.6
THIG		1.59	331	iP	Pn	01 08 00.7	-0.8
THIG				iS	Sn	01 08 20.8	+0.1
APG	El Apazote	1.79	33	P	Pn	01 08 06.2	+2.1
	81nm,0.3s,baz=200,slow=11,SNR=319						
APG				S	Sn	01 08 31.9	+6.2
	43nm,0.3s,baz=62,slow=21,SNR=6.2						
RTR	El Retiro	1.83	78	eP	Pn	01 08 04.9	+0.1
SBLS	San Blas	1.84	79	eP	Pn	01 08 04.9	0.0
SBLS				⇑eS	Sn	01 08 25.8	-1.1
SBLS				AML	AML	01 08 32.6	
	comp=Z,489nm,0.4s						
RBDL	Robledal	1.84	71	⇑eP	Pn	01 08 05.2	+0.2
RBDL				eS	Sn	01 08 25.6	-1.6
SNJE	San Jose	1.86	79	eP	Pn	01 08 05.0	-0.2
BOQS	Boqueron	2.15	84	eP	Pn	01 08 09.5	+0.3
BOQS				eS	Sn	01 08 33.8	-0.9
SNET	Serv Nac Est T	2.19	85	eP	Pn	01 08 09.4	-0.4
SNET				eS	Sn	01 08 40.9	+5.1
MTO2	Montecristo 2	2.24	66	eP	Pn	01 08 10.8	+0.3
MRL	Marmol	2.33	48	⇑eP	Pn	01 08

TKL LR LR 01 22 16.1
comp=Z,145nm,21.2s,MS3.4,baz=259,slow=38
WCI Wyandotte Cave 25.05 10 *eP* **P 01 12 54.8 -2.0**
comp=Z,9.2nm,0.9s,mb4.3
ANMO Albuquerque 25.28 330 P **P 01 12 59.0 +0.1**
comp=Z,1.3nm,0.8s,mb3.5,baz=158,slow=13,SNR=4.7
ANMO Albuquerque 25.28 330 *eP* **P 01 12 59.6 +0.6**
comp=Z,0.4nm,0.8s,mb3.0
TUC Tucson 25.73 320 *eP* **P 01 13 04.9 +1.8**
comp=Z,1.8nm,0.8s,mb3.6
PV04 Paradox Valley 29.21 331 *eP* **P 01 13 36.0 +1.8**
DUG Dugway 32.52 329 *eP* **P 01 14 04.9 +1.5**
comp=Z,1.3nm,0.7s,mb4.0
HWUT Hardware Ranch 33.01 332 *eP* **P 01 14 08.6 +1.0**
comp=Z,3.7nm,0.9s,mb4.3
M13A Montello 34.07 329 *eP* **P 01 14 18.7 +1.8**
comp=Z,3.3nm,0.8s,mb4.3
REDW Red Top Meadow 34.10 334 *eP* **P 01 14 17.5 +0.4**
comp=Z,3.9nm,0.7s,mb4.5
TPAW Teton Pass 34.25 334 *eP* **P 01 14 19.2 +0.9**
comp=Z,2.7nm,0.7s,mb4.3
NVAR Mina Array Bea 34.37 321 P **P 01 14 19.7 +0.2**
comp=Z,2.9nm,0.8s,mb4.3,baz=133,slow=8.7,SNR=13
NVAR Mina Array Bea 34.37 321 P **P 01 14 19.7 +0.2**
HLID Hailey 35.85 331 *eP* **P 01 14 32.6 +0.4**
comp=Z,1.6nm,0.8s,mb4.0
ULM Lac du Bonnet 36.82 355 LR LR 01 34 18.7
comp=Z,61nm,18.2s,MS3.4,baz=148,slow=44
WVOR Wild Horse Val 37.18 326 *eP* **P 01 14 45.2 +1.7**
comp=Z,1.9nm,0.7s,mb4.0
YBH Yreka Blue Hor 39.06 322 LR LR 01 33 08.5
comp=Z,48nm,19.1s,MS3.3,baz=335,slow=39
SIV San Ignacio 41.99 133 P **P 01 15 22.0 -1.8**
comp=Z,0.9nm,0.7s,mb3.5,baz=292,slow=9.8,SNR=7.0
SCHQ Schefferville 45.51 20 P **P 01 15 49.0 -2.7**
comp=Z,2.9nm,0.7s,mb4.3,baz=225,slow=13,SNR=5.7
YKA Yellowknife Ar 51.62 347 P **P 01 16 37.0 -1.6**
comp=Z,1.8nm,0.7s,mb4.1,baz=148,slow=7.7,SNR=12
YKA PcP PcP 01 17 51.8 -0.2
comp=Z,0.8nm,0.7s,baz=153,slow=3.5,SNR=7.7
YKA Yellowknife Ar 51.62 347 P **P 01 16 37.0 -1.6**
YKA PcP PcP 01 17 51.8 -0.2
DLBC Dease Lake 53.31 336 *eP* **P 01 16 52.6 +1.5**
INK Inuvik 61.05 343 P **P 01 17 44.0 -1.7**
comp=Z,2.0nm,0.7s,mb4.3,baz=123,slow=11,SNR=4.3
NOA NORSAR Array B 84.34 28 LR LR 01 57 37.3
comp=Z,14nm,18.4s,MS3.4,baz=270,slow=36
HFS Hagfors 85.79 29 P **P 01 20 08.9 -2.4**
comp=Z,1.0nm,0.7s,mb4.1,baz=269,slow=7.4,SNR=3.3
CMAR Chiang Mai Arr 146.62 342 PKPbc PKPbc 01 27 14.7 +0.1
comp=Z,2.7nm,0.8s,baz=339,slow=4.8,SNR=13

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*IDC **06** 01:16:10.8±1.4, 34°.54N×32°.98E, h0km, mb3.4/2, mb1 3.7/6, mb1mx3.4/25, mbtmp3.6/6, ML3.5/4, Error ellipse: s-maj=40.5km s-min=17.1km az=50.0*
*DDA **06** 01:16:11.0, 34°.48N×32°.88E, h15km±5km, Md3.5*
*HLW **06** 01:16:12.0, 34°.60N×32°.75E, h27km±12km, Md3.2, Ml3.3*
*NEIC **06** 01:16:12.1±0.8, 34°.49N×32°.94E, h10km, ML3.3(CSEM), Error ellipse: s-maj=10.5km s-min=9.3km az=199.0*
*ISCJB **06** 01:16:12.8±0.9, 34°.43N±0°.02×32°.81E±0°.03, h33km±9km, Error ellipse: s-maj=4.8km s-min=3.4km az=176.4*
*CSEM **06** 01:16:13.4±0.1, 34°.47N×32°.85E, h20km, ML3.3, Error ellipse: s-maj=4.2km s-min=2.9km az=82.0*
ISC 06 01:16:13.4±0.8, 34°.46N±0°.02×32°.86E±0°.03, h20km±6km, n82, σ1°01/111, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEF	**Lefka**	**0.66**	**2**	Pg	**Pg**	**01 16 25.9**	**-0.6**
LEF				Sg	**Sg**	**01 16 36.9**	**+1.6**
LEF	**Lefka**	**0.66**	**2**	Pg	**Pg**	**01 16 25.9**	**-0.6**
LFK	**Lefkose**	**0.99**	**34**	Pg	**Pg**	**01 16 29.1**	**-3.5**
MAGT	**Magosa**	**1.05**	**52**	Pg	**Pg**	**01 16 29.1**	**-4.7**
EREN	**Erenkoy**	**1.52**	**45**	Pn	**Pn**	**01 16 37.2**	**-2.2**
EREN	**Erenkoy**	**1.52**	**45**	Pn	**Pn**	**01 16 37.2**	**-2.2**
GAZI	**Gazipasa**	**1.83**	**346**	P	**Pn**	**01 16 43.5**	**-0.2**
GAZI				S	**Sn**	**01 17 05.9**	**-0.4**
GAZI	**Gazipasa**	**1.83**	**346**	*i* P	**Pn**	**01 16 43.5**	**-0.1**
GAZI				*i* S	**Sn**	**01 17 05.9**	**-0.3**
GAZI	**Gazipasa**	**1.83**	**346**	*i* P	**Pn**	**01 16 43.5**	**-0.2**
GAZI				*i* S	**Sn**	**01 17 05.9**	**-0.4**
ERMK	**Ermenek**	**2.18**	**1**	*i* P	**Pn**	**01 16 50.2**	**+1.6**
ERMK				*i* S	**Sn**	**01 17 21.8**	**+6.9**
ERMK	**Ermenek**	**2.18**	**1**	*i* P	**Pn**	**01 16 50.2**	**+1.7**
HWQ	**Hawqa**	**2.56**	**93**	*e*Pn	**Pn**	**01 16 53.4**	**-0.3**
HWQ	**Hawqa**	**2.56**	**93**	*e*Pn	**Pn**	**01 16 53.4**	**-0.3**
MMAI	**Mount Meron Ar**	**2.56**	**124**	Pn	**Pn**	**01 16 53.4**	**-0.3**
	10nm,0.3s,baz=312,slow=12,SNR=49						
MMAI				Sn	**Sn**	**01 17 25.1**	**+0.8**
	44nm,0.3s,baz=299,slow=29,SNR=18						
RCY	**Rachaya**	**2.64**	**111**	*e*Pn	**Pn**	**01 16 54.4**	**-0.5**
RCY	**Rachaya**	**2.64**	**111**	*e*Pn	**Pn**	**01 16 54.4**	**-0.5**
YAYL	**Yayladag**	**3.09**	**58**	*i* P	**Pn**	**01 17 00.8**	**-0.2**
YAYL				*i* S	**Sn**	**01 17 35.9**	**-1.4**
YAYL	**Yayladag**	**3.09**	**58**	*i* P	**Pn**	**01 17 00.8**	**-0.2**
YAYL				*i* S	**Sn**	**01 17 35.9**	**-1.4**
GULE	**Gulek**	**3.22**	**28**	*i* P	**Pn**	**01 17 05.6**	**+2.7**
GULE				*i* S	**Sn**	**01 17 46.7**	**+6.1**
GULE	**Gulek**	**3.22**	**28**	*i* P	**Pn**	**01 17 05.6**	**+2.8**
YURE	**YUREGIR**	**3.27**	**43**	*i* P	**Pn**	**01 17 04.6**	**+1.2**
YURE				*i* S	**Sn**	**01 17 43.4**	**+1.7**
YURE	**YUREGIR**	**3.27**	**43**	*i* P	**Pn**	**01 17 04.6**	**+1.1**
YURE				*i* S	**Sn**	**01 17 43.4**	**+1.6**
COBT	**Iskenderun**	**3.45**	**52**	P	**Pn**	**01 17 06.6**	**+0.6**
COBT				S	**Sn**	**01 17 44.9**	**-1.4**
COBT	**Iskenderun**	**3.45**	**52**	*i* P	**Pn**	**01 17 06.7**	**+0.7**
COBT				*i* S	**Sn**	**01 17 45.0**	**-1.3**
COBT	**Iskenderun**	**3.45**	**52**	P	**Pn**	**01 17 06.6**	**+0.6**
COBT				S	**Sn**	**01 17 44.9**	**-1.4**
MANS	**Anshas**	**3.67**	**198**	P	**Pn**	**01 17 17.5**	**+8.4**
AMAG	**Maghara**	**3.81**	**176**	P	**Pn**	**01 17 10.4**	**-0.6**
	baz=174						
AMAG				S	**Sn**	**01 17 55.9**	**+0.6**
	baz=174						
AMAG	**Maghara**	**3.81**	**176**	P	**Pn**	**01 17 10.4**	**-0.6**
AMAG				S	**Sn**	**01 17 55.9**	**+0.6**
ASF	**Jabal al Asfar**	**4.08**	**123**	Pn	**Pn**	**01 17 14.7**	**+0.1**
	1.8nm,0.3s,baz=297,slow=6.8,SNR=16						
ASF				Sn	**Sn**	**01 18 06.5**	**+4.8**
	3.3nm,0.3s,baz=343,slow=15,SNR=6.0						
KDHN	**Kadinhani**	**4.10**	**352**	P	**Pn**	**01 17 16.8**	**+1.9**
KDHN	**Kadinhani**	**4.10**	**352**	*i* P	**Pn**	**01 17 16.9**	**+2.0**
KDHN	**Kadinhani**	**4.10**	**352**	P	**Pn**	**01 17 16.8**	**+1.9**
KUZU	**Kuzuini**	**4.14**	**55**	*i* P	**Pn**	**01 17 15.0**	**-0.5**
KUZU				*e*S	**Sn**	**01 18 01.2**	**-2.0**
KUZU	**Kuzuini**	**4.14**	**55**	*i* P	**Pn**	**01 17 15.0**	**-0.4**
KUZU				*e*S	**Sn**	**01 18 01.2**	**-2.0**
AANS		**4.33**	**197**	P	**Pn**	**01 17 17.5**	**-0.7**
	baz=196						
HHAG	**Hagoal**	**4.54**	**188**	P	**Pn**	**01 17 21.1**	**+0.2**
	baz=187						
HHAG	**Hagoal**	**4.54**	**188**	P	**Pn**	**01 17 21.2**	**+0.2**
SUZ		**4.60**	**180**	P	**Pn**	**01 17 21.8**	**-0.1**
	baz=179						
SUZ		**4.60**	**180**	P	**Pn**	**01 17 21.8**	**-0.1**
HNKL	**Nakhl**	**4.61**	**168**	P	**Pn**	**01 17 22.5**	**+0.5**
	baz=167						
HNKL				S	**Sn**	**01 18 15.3**	**+0.3**
	baz=167						
HNKL	**Nakhl**	**4.61**	**168**	P	**Pn**	**01 17 22.5**	**+0.5**
HNKL				S	**Sn**	**01 18 15.3**	**+0.3**
KHAL	**Karahalli**	**4.76**	**326**	*e*P	**Pn**	**01 17 24.5**	**+0.5**
KHAL				*i* S	**Sn**	**01 18 18.2**	**-0.3**
KHAL	**Karahalli**	**4.76**	**326**	*e*P	**Pn**	**01 17 24.5**	**+0.5**
KHAL				*i* S	**Sn**	**01 18 18.2**	**-0.3**
HSAF	**As Saff**	**4.95**	**193**	P	**Pn**	**01 17 26.6**	**-0.1**
	baz=192						
HSAF	**As Saff**	**4.95**	**193**	P	**Pn**	**01 17 26.6**	**-0.1**
GLL	**Jalalah**	**4.96**	**192**	P	**Pn**	**01 17 26.3**	**-0.5**
	baz=191						
GLL	**Jalalah**	**4.96**	**192**	P	**Pn**	**01 17 26.3**	**-0.5**
ZNM		**5.07**	**180**	P	**Pn**	**01 17 28.9**	**+0.7**
	baz=178						
ZNM		**5.07**	**180**	P	**Pn**	**01 17 28.9**	**+0.7**
EIL	**Elat**	**5.09**	**159**	Pn	**Pn**	**01 17 29.0**	**+0.4**
	4.7nm,0.3s,baz=339,slow=9.1,SNR=82						
EIL				Sn	**Sn**	**01 18 27.9**	**+1.1**
	6.2nm,0.3s,baz=73,slow=10,SNR=8.2						
EIL	**Elat**	**5.09**	**159**	Pn	**Pn**	**01 17 29.0**	**+0.4**
EIL				Sn	**Sn**	**01 18 27.9**	**+1.1**
EIL	**Elat**	**5.09**	**159**	Pn	**Pn**	**01 17 29.0**	**+0.4**
BDRM	**Kayabasi**	**5.12**	**302**	P	**Pn**	**01 17 27.9**	**-1.0**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**5.12**	**302**	*i* P	**Pn**	**01 17 27.9**	**-1.0**
BDRM				*i* S	**Sn**	**01 18 21.0**	**-6.3**
BDRM	**Kayabasi**	**5.12**	**302**	*i* P	**Pn**	**01 17 27.9**	**-1.0**
AYDN	**Tasoluk**	**5.15**	**310**	P	**Pn**	**01 17 29.0**	**-0.3**
AYDN	**Tasoluk**	**5.15**	**310**	*i* P	**Pn**	**01 17 29.0**	**-0.3**
AYDN				*i* S	**Sn**	**01 18 20.9**	**-7.3**
AYDN	**Tasoluk**	**5.15**	**310**	*i* P	**Pn**	**01 17 29.0**	**-0.3**
BR131	**Keskin Array S**	**5.29**	**7**	*e*Pn	**Pn**	**01 17 34.9**	**+3.6**
BRTR	**Keskin Array B**	**5.29**	**7**	Pn	**Pn**	**01 17 34.8**	**+3.5**
	0.4nm,0.3s,baz=178,slow=15,SNR=17						
HBST	**Basata**	**5.46**	**163**	P	**Pn**	**01 17 34.1**	**+0.4**
	baz=162						
HBST	**Basata**	**5.46**	**163**	P	**Pn**	**01 17 34.1**	**+0.4**
HMAT	**Matruh**	**5.90**	**237**	P	**Pn**	**01 17 38.5**	**-1.2**
	baz=236						
HMAT	**Matruh**	**5.90**	**237**	P	**Pn**	**01 17 38.5**	**-1.2**
HDHB	**Dhahab**	**5.91**	**165**	P	**Pn**	**01 17 40.3**	**+0.5**
	baz=164						
HDHB	**Dhahab**	**5.91**	**165**	P	**Pn**	**01 17 40.3**	**+0.5**
HKAT	**Jabal Katrina**	**6.00**	**170**	P	**Pn**	**01 17 41.4**	**+0.4**
	baz=169						
HKAT	**Jabal Katrina**	**6.00**	**170**	P	**Pn**	**01 17 41.4**	**+0.4**
TR2		**6.10**	**173**	P	**Pn**	**01 17 42.2**	**-0.2**
	baz=172						
TR2		**6.10**	**173**	P	**Pn**	**01 17 42.2**	**-0.2**
TR1		**6.50**	**171**	P	**Pn**	**01 17 48.1**	**+0.2**
	baz=170						
TR1		**6.50**	**171**	P	**Pn**	**01 17 48.1**	**+0.2**
IDI	**Anoyia**	**6.61**	**279**	Pn	**Pn**	**01 17 49.1**	**-0.2**
	0.5nm,0.3s,baz=131,slow=11,SNR=5.7						
IDI				Sn	**Sn**	**01 19 04.4**	**+0.3**
	1.4nm,0.3s,baz=17,slow=13,SNR=6.5						
IDI	**Anoyia**	**6.61**	**279**	Pn	**Pn**	**01 17 49.1**	**-0.3**
IDI				Sn	**Sn**	**01 19 04.3**	**+0.2**
AWBH		**6.99**	**210**	P	**Pn**	**01 17 53.7**	**-1.0**
	baz=209						
AWBH		**6.99**	**210**	P	**Pn**	**01 17 53.7**	**-1.0**
SWA2		**8.17**	**232**	P	**Pn**	**01 18 09.2**	**-1.6**
	baz=232						
SWA2				AMP		01 20 00.0	
	comp=N,10μm,0.4s,logA/T=4.4,baz=232						
SWA2		**8.17**	**232**	P	**Pn**	**01 18 09.2**	**-1.6**
GERES	**GERESS Array B**	**20.21**	**321**	P	**P**	**01 20 48.9**	**+2.1**
	comp=N,0.3nm,0.4s,baz=146,slow=9.1,SNR=6.4						
GERES	**GERESS Array B**	**20.21**	**321**	P	**P**	**01 20 48.9**	**+2.1**
FINES	**FINESS Array B**	**27.35**	**353**	P	**P**	**01 21 55.8**	**-1.0**
	comp=N,1.1nm,0.8s,baz=163,slow=9.3,SNR=6.0						
FINES	**FINESS Array B**	**27.35**	**353**	P	**P**	**01 21 55.8**	**-1.0**

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*ISCJB **06** 01:23:39.8±0.5, 13°.30N±0°.05×91°.57W±0°.03, h33km, mb3.9/15, MS3.6/2, Error ellipse: s-maj=7.5km s-min=3.2km az=16.2*
*CASC **06** 01:23:43.1±2.4, 13°.50N×91°.39W, h30km±28km, MD4.0, ML3.6, mb4.1(NEIC)*
*MEX **06** 01:23:47.8±0.5, 13°.68N×91°.89W, h20km±76km, MD4.3*
*NEIC **06** 01:23:47.4±1.3, 13°.63N×91°.14W, h82km±12km, mb4.1/6, Error ellipse: s-maj=17.3km s-min=7.1km az=49.0*
*IDC **06** 01:23:47.3±2.7, 13°.68N×91°.04W, h77km±21km, mb3.6/9, mb1 3.8/11, mb1mx3.6/24, mbtmp3.6/11, MS3.5/3, Ms1 3.5/3, ms1mx2.8/27, Error ellipse: s-maj=37.5km s-min=12.8km az=48.0*
ISC 06 01:23:42.0±0.5, 13°.39N±0°.06×91°.51W±0°.03, h35km, n56, σ1°01/75, mb3.9/14, MS3.6/2, 2C-1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.93**	**353**	*i* P	**Pn**	**01 23 58.5**	**-0.1**
FUG	**Fuego 3**	**1.23**	**32**	*e*P	**Pn**	**01 24 02.4**	**-0.4**
FG6		**1.31**	**28**	*e*P	**Pn**	**01 24 03.7**	**-0.2**
PCG	**Pacaya**	**1.33**	**41**	*e*P	**Pn**	**01 24 04.1**	**0.0**
TP2	**Tecpan 2**	**1.46**	**19**	*e*P	**Pn**	**01 24 06.1**	**+0.2**
TP2				*e*S	**Sn**	**01 24 25.9**	**+2.0**
NBG	**Las Nubes**	**1.64**	**43**	*e*P	**Pn**	**01 24 09.7**	**+1.3**
THIG		**1.67**	**334**	*e*P	**Pn**	**01 24 07.2**	**-1.7**
THIG				*i* S	**Sn**	**01 24 22.5**	**-6.6**
RTR	**El Retiro**	**1.88**	**74**	*e*P	**Pn**	**01 24 11.6**	**-0.1**
RTR				*e*S	**Sn**	**01 24 33.5**	**-0.8**
SBLS	**San Blas**	**1.89**	**76**	*e*P	**Pn**	**01 24 11.3**	**-0.5**
SBLS				*e*S	**Sn**	**01 24 36.2**	**+1.7**
SBLS				AML	AML	01 24 52.6	
	comp=Z,613nm,0.3s						
APG	**El Apazote**	**1.90**	**32**	P	**Pn**	**01 24 12.2**	**+0.3**
	comp=Z,105nm,0.3s,baz=196,slow=8.3,SNR=477						
APG				S	**Sn**	**01 24 39.5**	**+4.9**
	comp=Z,58nm,0.3s,baz=116,slow=22,SNR=6.5						
RBDL	**Robledal**	**1.91**	**68**	*e*P	**Pn**	**01 24 12.1**	**-0.1**
SNJE	**San Jose**	**1.91**	**75**	*e*P	**Pn**	**01 24 11.6**	**-0.6**
SNJE				*e*S	**Sn**	**01 24 34.5**	**-0.5**
BOQS	**Boqueron**	**2.20**	**81**	*e*P	**Pn**	**01 24 15.5**	**-0.5**
BOQS				*e*S	**Sn**	**01 24 41.2**	**-0.9**
BOQS				AML	AML	01 24 52.6	
	comp=Z,660nm,0.5s						
SNET	**Serv Nac Est T**	**2.24**	**82**	*e*P	**Pn**	**01 24 16.3**	**-0.3**
SNET				*e*S	**Sn**	**01 24 43.2**	**+0.2**
MTO2	**Montecristo 2**	**2.32**	**64**	*e*P	**Pn**	**01 24 17.2**	**-0.5**
MTO2				*e*S	**Sn**	**01 24 42.4**	**-2.6**
LFRS	**El Faro**	**2.40**	**84**	*e*P	**Pn**	**01 24 19.3**	**+0.5**
LFRS				*e*S	**Sn**	**01 24 46.7**	**-0.2**
LBRS	**Las Brisas**	**2.43**	**82**	*e*P	**Pn**	**01 24 18.9**	**-0.3**
MRL	**Marmol**	**2.43**	**47**	*e*P	**Pn**	**01 24 21.0**	**+1.8**
SNVI	**San Vicente**	**2.61**	**85**	*e*P	**Pn**	**01 24 22.3**	**+0.6**
PCIG		**2.83**	**325**	*e*P	**Pn**	**01 24 22.8**	**-2.0**
PCIG				*i* S	**Sn**	**01 24 51.3**	**-6.4**
BLLM	**Bellamira**	**3.19**	**89**	*e*P	**Pn**	**01 24 30.6**	**+1.0**
BLLM				*e*S	**Sn**	**01 25 07.0**	**+0.5**
CAHU	**Cacacuatique**	**3.23**	**83**	*e*P	**Pn**	**01 24 30.5**	**+0.2**
SCX	**San Cristobal**	**3.50**	**342**	*e*P	**Pn**	**01 24 34.7**	**+0.8**
SCX				*i* S	**Sn**	**01 25 08.9**	**-5.1**
CNCH	**Conchagua**	**3.58**	**91**	*e*P	**Pn**	**01 24 35.6**	**+0.5**
TGIG		**3.71**	**335**	*e*P	**Pn**	**01 24 37.0**	**+0.2**
TGIG				*i* S	**Sn**	**01 25 12.7**	**-6.6**
TGUH	**Tegucigalpa,Un**	**4.17**	**80**	*e*Pn	**Pn**	**01 24 43.2**	**0.0**
TGUH	**Tegucigalpa,Un**	**4.17**	**80**	*e*P	**Pn**	**01 24 43.3**	**+0.1**
CMIG	**Matias Romero**	**4.91**	**319**	P	**Pn**	**01 24 52.5**	**-0.8**
	comp=Z,2.0nm,0.3s,baz=130,slow=11,SNR=15						
CMIG				S	**Sn**	**01 25 52.6**	**+3.7**
	comp=Z,7.0nm,0.3s,baz=88,slow=14,SNR=6.0						
VHO	**Vista Hermosa**	**6.23**	**307**	*e*P	**Pn**	**01 25 11.6**	**+0.1**
VHO				*i* S	**Sn**	**01 26 16.2**	**-5.3**
PNIG	**Pinotepa**	**7.05**	**296**	*i* P	**Pn**	**01 25 22.2**	**-0.7**
PNIG				*i* S	**Sn**	**01 26 36.0**	**-5.8**
JTS	**JuntasAbangare**	**7.12**	**115**	P	**Pn**	**01 25 26.1**	**+2.3**
	comp=Z,1.3nm,0.3s,baz=322,slow=20,SNR=7.5						
JTS				S	**Sn**	**01 26 39.0**	**-4.5**
	comp=Z,0.6nm,0.3s,baz=201,slow=18,SNR=2.0						
JTS				LR	LR	01 28 20.0	
	comp=Z,182nm,21.1s,baz=287,slow=40						
JTS	**JuntasAbangare**	**7.12**	**115**	*e*Pn	**Pn**	**01 25 26.0**	**+2.2**
	comp=Z,14nm,0.8s						
JTS				S	**Sn**	**01 26 39.0**	**-4.5**
JTS				LR	LR	01 28 20.0	
TEIG	**Tepich**	**7.47**	**24**	*e*Pn	**Pn**	**01 25 28.7**	**+0.2**
	comp=Z,170nm,0.5s						
UTMO	**Huajuapan**	**7.50**	**307**	*e*P	**Pn**	**01 25 28.4**	**-0.5**
UTMO				*i* S	**Sn**	**01 26 47.0**	**-5.8**
TXAR	**Lajitas Array**	**19.46**	**327**	P	**Pn**	**01 28 07.8**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=156,slow=13,SNR=32						
SDV	**Santo Domingo**	**20.96**	**100**	P	**P**	**01 28 21.1**	**-1.2**
	comp=Z,1.8nm,0.4s,baz=282,slow=17,SNR=3.8						
SDV	**Santo Domingo**	**20.96**	**100**	P	**P**	**01 28 21.1**	**-1.2**
UALR	**University of**	**21.30**	**358**	*e*P	**P**	**01 28 26.1**	**+0.4**
	comp=Z,9.3nm,0.7s,mb4.2						
MNTX	**Cornudas Mount**	**22.23**	**327**	*e*P	**P**	**01 28 35.9**	**+0.3**
	comp=Z,5.0nm,0.7s,mb4.0						
SWET	**Sewanee**	**22.31**	**12**	*e*P	**P**	**01 28 35.2**	**-1.2**
TKL	**Tuckaleechee C**	**23.24**	**16**	P	**P**	**01 28 45.1**	**-1.2**
	comp=Z,6.3nm,0.6s,mb4.2,baz=181,slow=12,SNR=17						
TKL				LR	LR	01 38 44.1	
	comp=Z,132nm,19.2s,MS3.4,baz=249,slow=39						
ANMO	**Albuquerque**	**25.36**	**330**	P	**P**	**01 29 06.7**	**+0.8**
	comp=Z,0.5nm,0.3s,mb3.5,baz=165,slow=9.2,SNR=5.5						
ANMO	**Albuquerque**	**25.36**	**330**	*e*P	**P**	**01 29 07.4**	**+1.5**
	comp=Z,0.3nm,0.8s,mb2.9						
PDAR	**Pinedale Array**	**33.17**	**335**	P	**P**	**01 30 15.1**	**0.0**
	comp=Z,0.3nm,0.6s,mb3.4,baz=134,slow=12,SNR=3.1						
LOHW	**Long Hollow**	**34.29**	**335**	*e*P	**P**	**01 30 25.4**	**+0.4**
	comp=Z,1.6nm,0.6s,mb4.1						
TPAW	**Teton Pass**	**34.34**	**335**	*e*P	**P**	**01 30 26.2**	**+0.9**
	comp=Z,1.8nm,0.6s,mb4.2						
NVAR	**Mina Array Bea**	**34.44**	**321**	P	**P**	**01 30 28.9**	**+2.6**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	comp=Z,2.5nm,0.8s,mb4.2,baz=130,slow=8.2,SNR=9.2						
NVAR	**Mina Array Bea**	**34.44**	**321**	P	**P**	**01 30 28.9**	**+2.6**
HLID	**Hailey**	**35.93**	**331**	*e*P	**P**	**01 30 39.3**	**+0.2**
	comp=Z,1.5nm,0.8s,mb4.0						
WVOR	**Wild Horse Val**	**37.26**	**326**	*e*P	**P**	**01 30 52.4**	**+2.0**
	comp=Z,2.9nm,0.9s,mb4.1						
SIV	**San Ignacio**	**41.93**	**133**	P	**P**	**01 31 29.8**	**+0.2**
	comp=Z,0.4nm,0.5s,mb3.3,baz=323,slow=10,SNR=5.1						
SCHQ	**Schefferville**	**45.63**	**20**	P	**P**	**01 31 55.5**	**-3.3**
	comp=Z,3.5nm,0.8s,mb4.3,baz=215,slow=1.5,SNR=6.6						
SCHQ				LR	LR	01 51 04.7	
	comp=Z,96nm,21.5s,MS3.7,baz=54,slow=36						
YKA	**Yellowknife Ar**	**51.72**	**347**	P	**P**	**01 32 44.1**	**-1.4**
	comp=Z,1.6nm,0.7s,mb4.1,baz=149,slow=7.5,SNR=11						
YKA				PcP	PcP	01 33 58.7	+0.1
	comp=Z,0.6nm,0.6s,baz=148,slow=3.8,SNR=5.4						
YKA	**Yellowknife Ar**	**51.72**	**347**	P	**P**	**01 32 44.1**	**-1.4**
YKA				PcP	PcP	01 33 58.7	+0.1
TORD	**Torodi Ar. Bea**	**90.06**	**77**	P	**P**	**01 36 37.2**	**-1.8**
	comp=Z,0.2nm,0.8s,mb3.5,baz=271,slow=5.4,SNR=3.2						
CMAR	**Chiang Mai Arr**	**146.72**	**342**	PKPbc	PKPbc	01 43 20.8	-0.3
	comp=Z,1.1nm,0.3s,baz=343,slow=4.4,SNR=11						

CASC 06 01:45:28.6±1.8, 12°.05N×87°.44W, h50km±37km, MD3.8, ML3.2, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.84**	**81**	*e*P	Pn	01 45 44.1	-0.1
COPN				*e*S	Sn	01 45 56.5	+0.9
CNGN	**Cerro Negro**	**0.85**	**58**	*e*P	Pn	01 45 45.0	+0.7
CNGN				*e*S	Sn	01 45 56.2	+0.3
CNGN				AML	AML	01 46 04.7	
	comp=N,699nm,0.2s						
MOMN	**Momotombo**	**0.95**	**68**	*e*P	Pn	01 45 46.7	+1.1
CSAN		**1.00**	**82**	*e*P	Pn	01 45 47.2	+0.8
MGAN	**Managua**	**1.17**	**85**	*e*P	Pn	01 45 48.2	-0.4
MGAN				*e*S	Sn	01 46 08.4	+4.9
WILN	**Americas 2**	**1.23**	**85**	AML	AML	01 46 12.2	
	comp=N,356nm,0.7s						
HUEN		**1.27**	**77**	*e*P	Pn	01 45 49.6	-0.4
CNCH	**Conchagua**	**1.28**	**343**	*e*P	Pn	01 45 50.6	+0.5
CNCH				*e*S	Sn	01 46 06.8	+0.5
APON	**Apoyo**	**1.35**	**95**	*e*P	Pn	01 45 50.5	-0.6
BLLM	**Bellamira**	**1.59**	**331**	*e*P	Pn	01 45 54.8	+0.4
SSN	**San Juan del S**	**1.72**	**115**	*e*P	Pn	01 45 52.5	-3.7
CONN	**Concepcion**	**1.84**	**105**	*e*P	Pn	01 45 57.4	-0.4
CAHU	**Cacacuatique**	**1.87**	**336**	*e*P	Pn	01 45 59.8	+1.6
TGUH	**Tegucigalpa,Un**	**2.00**	**5**	*e*P	Pn	01 46 00.1	0.0
TGUH				*e*S	Sn	01 46 24.2	+0.2
LFRS	**El Faro**	**2.23**	**315**	*e*P	Pn	01 46 03.0	-0.1
LFRS				*e*S	Sn	01 46 30.4	+1.1
LBRS	**Las Brisas**	**2.30**	**317**	*e*P	Pn	01 46 04.5	+0.5
LBRS				*e*S	Sn	01 46 32.3	+1.2
RBDL	**Robledal**	**3.00**	**313**	*e*P	Pn	01 46 14.4	+0.8

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*IDC **06** 01:49:52.8±4.5, 4°.30S×101°.83E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.6/22, mbtmp3.8/5, Error ellipse: s-maj=194.0km s-min=22.6km az=54.0*
*ISCJB **06** 01:49:57.3±2.2, 4°.3S±0°.1×101°.9E±0°.1, h50km±17km, mb3.9/5, Error ellipse: s-maj=27.9km s-min=12.4km az=142.2*
*DJA **06** 01:49:58, 4°.42S×101°.98E, h19km, MLv3.8/4*
**ISC 06

KRUS	**Krusevo**	**1.08**	**354**	*e*Pg	**Pg**	**02 02 59.0**	**-1.3**
KRUS				*e*Sg	**Sg**	**02 03 14.4**	**+0.1**
KRUS				*e*Lg		02 03 15.5	
	comp=E,2.1nm,0.2s						
KRUS				*e*Lg		02 03 15.7	
	comp=N,5.6nm,0.4s						

IDC ***06*** *02:02:40.8±1.0,51°.13N×179°.27W,h0km,mb4.0/19, mb1 4.2/19,mb1mx4.0/33,mbtmp4.0/19,MS3.7/1, Ms1 3.7/1,ms1mx2.5/42,Error ellipse: s-maj=29.7km s-min=17.4km az=9.0*
NEIC ***06*** *02:02:46.4±1.0,51°.14N×179°.23W,h37km±7km,mb4.1/9, ML3.6(AEIC),Error ellipse: s-maj=13.9km s-min=5.4km az=179.0*
ISCJB ***06*** *02:02:46.7±1.1,51°.2N±0°.1×179°.24W±0°.07,h53km±7km, mb4.1/27,Error ellipse: s-maj=24.5km s-min=6.9km az=176.0*
ISC 06 02:02:47.5±1.2,51°.2N±0°.1×179°.22W±0°.07,h45km±8km, n42,σ0°.76/42,mb4.1/27,2C,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.95**	**283**	P	**Pn**	**02 03 02.7**	**-1.7**
AMKA				S	**Sn**	**02 03 17.2**	**+0.4**
ADK	**Adak**	**1.74**	**65**	P	**Pn**	**02 03 14.7**	**-0.5**
ADK				S	**Sn**	**02 03 37.4**	**+1.3**
FX1	**Attu Island--F**	**5.00**	**293**	Pn	**Pn**	**02 04 00.8**	**+0.8**
	4.2nm,0.3s,baz=275,slow=23,SNR=18						
FX1				Sn	**Sn**	**02 05 07.9**	**+11**
	5.5nm,0.3s,baz=327,slow=23,SNR=6.6						
FX1	**Attu Island--F**	**5.00**	**293**	P	**Pn**	**02 04 01.2**	**+1.2**
KTH	**Kantishna Hill**	**19.45**	**40**	*e*P	**Pn**	**02 07 10.8**	**-0.6**
	11nm,0.8s						
EGAK	**Eagle**	**23.88**	**41**	*e*P	**P**	**02 07 55.8**	**-0.6**
	7.7nm,1.1s,mb4.0						
DAWY	**Dawson**	**24.44**	**43**	*e*P	**P**	**02 08 00.7**	**-0.8**
YKA	**Yellowknife Ar**	**35.57**	**46**	P	**P**	**02 09 39.7**	**-0.3**
	1.0nm,0.6s,mb3.9,baz=283,slow=8.5,SNR=6.6						
YKA	**Yellowknife Ar**	**35.57**	**46**	P	**P**	**02 09 39.7**	**-0.3**
NEW	**Newport**	**39.20**	**69**	*e*P	**P**	**02 10 10.4**	**-0.5**
	3.2nm,0.8s,mb4.1						
NVAR	**Mina Array Bea**	**43.84**	**82**	P	**P**	**02 10 50.3**	**+1.3**
	0.3nm,0.4s,mb3.4,baz=302,slow=7.0,SNR=3.5						
FFC	**Flin Flon**	**44.48**	**54**	*e*P	**P**	**02 10 53.3**	**-0.6**
	3.3nm,1.0s,mb4.0						
ULN	**Ulaanbaatar**	**46.11**	**296**	*e*P	**P**	**02 11 07.3**	**+0.4**
	1.6nm,0.8s,mb4.0						
DUG	**Dugway**	**46.17**	**77**	*e*P	**P**	**02 11 08.4**	**+0.9**
	2.1nm,0.8s,mb4.1						
SONM	**Songino Array**	**46.50**	**297**	P	**P**	**02 11 10.4**	**+0.5**
	0.4nm,0.5s,mb3.6,baz=89,slow=8.0,SNR=7.5						
BW06	**Boulder Array**	**46.63**	**72**	*e*P	**P**	**02 11 11.1**	**+0.1**
	1.8nm,0.6s,mb4.2						
PDAR	**Pinedale Array**	**46.63**	**72**	P	**P**	**02 11 11.3**	**+0.3**
	1.1nm,0.5s,mb4.1,baz=317,slow=6.1,SNR=11						
SPITS	**Spitsbergen Ar**	**50.56**	**356**	P	**P**	**02 11 40.8**	**0.0**
	1.6nm,0.4s,mb4.3,baz=44,slow=6.1,SNR=21						
ARCES	**ARCESS Array B**	**58.25**	**350**	P	**P**	**02 12 36.9**	**+0.2**
	5.7nm,1.2s,mb4.5,baz=27,slow=8.2,SNR=5.3						
TXAR	**Lajitas Array**	**58.95**	**81**	P	**P**	**02 12 40.7**	**-1.4**
	0.4nm,0.7s,mb3.6,baz=311,slow=5.8,SNR=5.0						
TXAR				LR	LR	02 34 56.5	
	comp=Z,60nm,19.6s,baz=5.0,slow=33						
KURK	**Kurchatov**	**58.97**	**314**	P	**P**	**02 12 42.2**	**+0.2**
	2.4nm,0.5s,mb4.5,baz=42,slow=6.8,SNR=3.5						
KURK	**Kurchatov**	**58.97**	**314**	*e*P	**P**	**02 12 42.3**	**+0.4**
	2.5nm,0.7s,mb4.3						
MKAR	**Makanchi Array**	**59.95**	**308**	P	**P**	**02 12 48.5**	**-0.3**
	0.8nm,0.4s,mb4.1,baz=52,slow=9.0,SNR=4.7						
BVAR	**Borovoye Array**	**60.88**	**320**	P	**P**	**02 12 54.7**	**-0.2**
	0.4nm,0.3s,mb4.0,baz=66,slow=8.1,SNR=3.5						
JOF	**Joensuu**	**63.73**	**345**	*e*p	**P**	**02 13 11.8**	**-2.1**
	1.5nm,0.4s,mb4.4						
JOF	**Joensuu**	**63.73**	**345**	*e*p	**P**	**02 13 11.8**	**-2.1**
	1.5nm,0.4s,mb4.4						
FINES	**FINESS Array B**	**65.93**	**347**	P	**P**	**02 13 27.6**	**-0.6**
	1.5nm,0.7s,mb4.1,baz=15,slow=7.9,SNR=7.2						
EKS2	**Erkin-Say**	**67.12**	**310**	*e*P	**P**	**02 13 37.0**	**+0.9**
	2.5nm,0.7s,mb4.3						
AKTK	**Aktyubinsk**	**67.70**	**324**	P	**P**	**02 13 39.7**	**0.0**
AKTO	**Aktyubinsk**	**67.70**	**324**	P	**P**	**02 13 39.7**	**0.0**
	0.8nm,0.5s,mb4.0,baz=8.0,slow=0.6,SNR=4.7						
NOA	**NORSAR Array B**	**67.83**	**355**	P	**P**	**02 13 40.5**	**+0.3**
	0.5nm,0.7s,mb3.6,baz=20,slow=14,SNR=4.7						
HFS	**Hagfors**	**68.56**	**353**	P	**P**	**02 13 44.2**	**-0.7**
	0.7nm,0.4s,mb3.9,baz=8.5,slow=3.0,SNR=8.5						
AKASG	**Malin Array Be**	**75.66**	**342**	P	**P**	**02 14 27.3**	**-0.2**
	4.4nm,0.3s,mb4.8,baz=20,slow=6.5,SNR=16						
KWP	**Kalwaria Pacla**	**77.84**	**346**	⇑*i*P	**P**	**02 14 40.4**	**+0.6**
BURAR	**Bucovina Array**	**79.38**	**343**	⇑*i*P	**P**	**02 14 48.9**	**+0.6**
GERES	**GERESS Array B**	**79.75**	**351**	P	**P**	**02 14 50.4**	**+0.1**
	0.4nm,0.6s,mb3.5,baz=43,slow=6.2,SNR=3.6						
MLR	**Muntele Rosu**	**81.29**	**342**	P	**P**	**02 14 59.7**	**+1.1**
	2.5nm,0.6s,mb4.3,baz=323,slow=5.1						
FITZ	**Fitzroy Crossi**	**84.13**	**232**	P	**P**	**02 15 13.1**	**-0.4**
	3.2nm,0.9s,mb4.5,baz=90,slow=6.1,SNR=3.6						
BRTR	**Keskin Array B**	**85.02**	**335**	P	**P**	**02 15 18.8**	**+0.8**
	0.8nm,0.7s,mb4.0,baz=40,slow=2.6,SNR=5.6						
TORD	**Torodi Ar. Bea**	**115.95**	**359**	PKP	PKPdf	02 21 25.0	-0.4
	0.1nm,0.8s,baz=208,slow=2.8,SNR=2.9						
TSUM	**Tsumeb**	**145.44**	**331**	PKPbc	PKPbc	02 22 19.7	-0.8
	1.7nm,0.6s,baz=260,slow=4.9,SNR=5.6						
TSUM	**Tsumeb**	**145.44**	**331**	*e*PKPbc	PKPbc	02 22 20.6	+0.2

ISK ***06*** *02:11:04.6,34°.14N×32°.62E,h13km,MD3.4*
CSEM ***06*** *02:11:05.5±0.5,34°.16N×32°.58E,h8km,MD3.4,Error ellipse: s-maj=8.5km s-min=7.7km az=37.0*
DDA ***06*** *02:11:08.6,34°.15N×32°.80E,h20km±1km,Md3.3*
ISCJB ***06*** *02:11:09.5±1.0,34°.43N±0°.03×32°.83E±0°.08,h1km±7km, Error ellipse: s-maj=10.9km s-min=3.8km az=163.4*
GII ***06*** *02:11:12.7±1.7,34°.65N×32°.69E,h31km±3km,Md2.0/2*
ISC 06 02:11:10.7±1.1,34°.46N±0°.03×32°.85E±0°.08,h1km±8km, n36,σ0°.78/55,Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEF	**Lefka**	**0.66**	**3**	*e*PG	**Pg**	**02 11 24.1**	**+0.8**
LEF				*e*SG	**Sg**	**02 11 38.3**	**+6.4**
LEF	**Lefka**	**0.66**	**3**	*e*Pg	**Pg**	**02 11 24.1**	**+0.8**
LEF				*e*Sg	**Sg**	**02 11 38.3**	**+6.4**
LFK	**Lefkose**	**0.99**	**34**	*e*PN	**Pg**	**02 11 30.0**	**+0.3**
LFK				*e*SN	**Sg**	**02 11 48.5**	**+5.8**
LFK	**Lefkose**	**0.99**	**34**	*e*Pn	**Pg**	**02 11 30.0**	**+0.2**
LFK				*e*Sn	**Sg**	**02 11 48.5**	**+5.8**
GAZI	**Gazipasa**	**1.82**	**346**	*i* P	**Pn**	**02 11 42.8**	**-0.3**
GAZI				*i* S	**Sn**	**02 12 06.8**	**0.0**
GAZI	**Gazipasa**	**1.82**	**346**	*i* P	**Pn**	**02 11 42.8**	**-0.3**
GAZI				*i* S	**Sn**	**02 12 06.8**	**0.0**
ERMK	**Ermenek**	**2.18**	**1**	*i* P	**Pn**	**02 11 48.7**	**+0.7**
ERMK				*i* S	**Sn**	**02 12 22.4**	**+6.8**
ERMK	**Ermenek**	**2.18**	**1**	*i* P	**Pn**	**02 11 48.7**	**+0.7**
HNTI	**Hanita**	**2.38**	**125**	Sn	**Sn**	**02 12 20.1**	**-0.3**
HDMB	**Hadim**	**2.52**	**353**	*e*PN	**Pn**	**02 11 50.9**	**-1.8**
HDMB				*e*SN	**Sn**	**02 12 24.6**	**+0.7**
HDMB	**Hadim**	**2.52**	**353**	*e*Pn	**Pn**	**02 11 50.9**	**-1.7**
HDMB				*e*Sn	**Sn**	**02 12 24.6**	**+0.7**
MMA0B	**Mount Meron ar**	**2.57**	**123**	Pn	**Pn**	**02 11 53.2**	**-0.2**
MMA0B				Sn	**Sn**	**02 12 24.7**	**-0.6**
KSDI	**Kefar Szold**	**2.66**	**118**	Pn	**Pn**	**02 11 54.4**	**-0.2**
HRI	**Mount Hermon**	**2.68**	**116**	Sn	**Sn**	**02 12 27.4**	**-0.6**
MERS	**Mersin**	**2.77**	**29**	*e*PN	**Pn**	**02 11 55.6**	**-0.4**
MERS				*e*SN	**Sn**	**02 12 32.3**	**+2.3**
MERS	**Mersin**	**2.77**	**29**	*e*Pn	**Pn**	**02 11 55.6**	**-0.4**
MERS				*e*Sn	**Sn**	**02 12 32.3**	**+2.3**
SLTI	**Sal'it**	**2.88**	**140**	Sn	**Sn**	**02 12 32.2**	**-0.6**
MMLI	**Mount Malkishu**	**2.95**	**132**	Pn	**Pn**	**02 11 58.5**	**-0.1**
MMLI				Sn	**Sn**	**02 12 34.0**	**-0.6**
YAYL	**Yayladag**	**3.10**	**59**	*i* P	**Pn**	**02 11 59.1**	**-1.5**
YAYL				*i* S	**Sn**	**02 12 33.4**	**-4.9**
YAYL	**Yayladag**	**3.10**	**59**	*i* P	**Pn**	**02 11 59.2**	**-1.4**
HMDT	**Nahal Hemdat**	**3.14**	**134**	Pn	**Pn**	**02 12 01.4**	**+0.2**
HMDT				Sn	**Sn**	**02 12 39.8**	**+0.4**
GULE	**Gulek**	**3.23**	**29**	*i* P	**Pn**	**02 12 02.4**	**0.0**
GULE				*i* S	**Sn**	**02 12 45.7**	**+4.3**
GULE	**Gulek**	**3.23**	**29**	*i* P	**Pn**	**02 12 02.4**	**0.0**
GULE				*i* S	**Sn**	**02 12 45.7**	**+4.3**
KARA	**Karaisali**	**3.32**	**32**	*e*PN	**Pn**	**02 12 03.1**	**-0.7**
KARA	**Karaisali**	**3.32**	**32**	*e*Pn	**Pn**	**02 12 03.1**	**-0.6**
SUTC	**Sutluce-Ispart**	**3.36**	**334**	*e*PN	**Pn**	**02 12 01.1**	**-3.1**
SUTC	**Sutluce-Ispart**	**3.36**	**334**	*e*Pn	**Pn**	**02 12 01.2**	**-3.1**
DSI	**Dead Sea**	**3.58**	**143**	Pn	**Pn**	**02 12 07.3**	**0.0**
DSI				Sn	**Sn**	**02 12 51.1**	**+0.9**
RTMI	**Retamim**	**3.73**	**155**	Pn	**Pn**	**02 12 09.8**	**+0.4**
KZIT	**Kziot**	**3.78**	**159**	Pn	**Pn**	**02 12 10.0**	**0.0**
MZDA	**Masada**	**3.79**	**145**	Pn	**Pn**	**02 12 11.1**	**+1.0**
MZDA				Sn	**Sn**	**02 12 56.1**	**+0.8**
KOZT	**Kozan**	**3.87**	**38**	*e*PN	**Pn**	**02 12 11.2**	**0.0**
PRNI	**Paran**	**4.48**	**155**	Pn	**Pn**	**02 12 19.8**	**+0.1**
KRMI	**Paran Flat**	**4.61**	**159**	Pn	**Pn**	**02 12 21.1**	**-0.4**
MBRI	**Mt Berech**	**4.97**	**159**	Pn	**Pn**	**02 12 27.0**	**+0.6**
EIL	**Elat**	**5.10**	**159**	Pn	**Pn**	**02 12 28.4**	**+0.3**

NIED ***06*** *02:22:00,45°.00N×150°.10E,h165km,Mw4.6 Best double couple: M0 9.22000×10^15 NP1:φ=265.00000°, δ86.00000°,λ-82.00000°. NP2:φ=26.00000°,δ9.00000°, λ-149.00000°.*
MOS ***06*** *02:22:11.3±1.2,45°.83N×149°.85E,h93km,mb4.3/30,Error ellipse: s-maj=10.3km s-min=6.3km az=95.1*
ISCJB ***06*** *02:22:12.0±0.5,45°.33N±0°.05×150°.12E±0°.05, h124km±4km,mb4.4/66,Error ellipse: s-maj=9.0km s-min=5.0km az=150.5*
BJI ***06*** *02:22:12.3,45°.63N×150°.13E,h116km,mB4.4/13, mb4.7/22*
SKHL ***06*** *02:22:12.9±0.3,45°.63N×150°.37E,h79km±19km,mb5.5/4*
NEIC ***06*** *02:22:12.9±0.8,45°.67N×149°.97E,h104km±7km,mb4.4/33, Error ellipse: s-maj=10.5km s-min=5.5km az=153.0*
JMA ***06*** *02:22:15.4±0.6,44°.95N×150°.11E,h112km,M4.4*
IDC ***06*** *02:22:15.4±2.5,45°.74N×149°.97E,h128km±21km, mb3.9/20,mb1 4.0/23,mb1mx3.9/32,mbtmp3.9/23,Error ellipse: s-maj=34.5km s-min=11.9km az=172.0*
ISC 06 02:22:12.7±0.5,45°.44N±0°.05×150°.10E±0°.06,h112km±4km, h123km±2.8km;pP-P,n186,σ1°.26/216,mb4.4/66,4C-4D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.59**	**263**	*e*PN	**Pn**	**02 22 42.2**	**+1.5**
KUR				pmax	pmax		
	comp=N,2μm,0.3s						
KUR				pmax	pmax		
	comp=E,710nm,0.3s						
KUR				pmax	pmax		
	comp=Z,4μm,0.3s						
KUR	**Kuril'sk**	**1.59**	**263**	*e*P	**Pn**	**02 22 42.2**	**+1.5**
KUR				AMB	AMB	02 22 43.0	
	comp=Z,4μm,1.0s						
KUR				AMB	AMB	02 22 43.1	
	comp=Z,2μm,0.3s						
KUR				AMB	AMB	02 22 43.1	
	comp=Z,2μm,0.3s						
KUR				AMB	AMB	02 22 43.1	
	comp=Z,4μm,0.3s						
KUR				*e*S	**Sn**	**02 23 04.0**	**+2.0**
KUR				A		02 23 07.0	
	comp=Z,10μm,1.4s						
KUR				A		02 23 07.0	
	comp=Z,5μm,1.4s						
KUR				A		02 23 07.0	
	comp=Z,3μm,0.7s						
KUR				A		02 23 07.0	
	comp=Z,2μm,0.7s						
YUK	**Yuzh-Kuril'sk**	**3.33**	**247**	⇑*i*PN	**Pn**	**02 23 05.0**	**+1.9**
YUK				*i* S	**Sn**	**02 23 44.3**	**+2.2**
YUK				pmax	pmax		
	comp=N,2μm,0.2s						
YUK				pmax	pmax		
	comp=Z,3μm,0.2s						
YUK				pmax	pmax		
	comp=E,220nm,0.3s						
YUK				pmax	pmax		
	comp=Z,2μm,1.1s						
YUK				pmax	pmax		
	comp=N,2μm,0.6s						
YUK				pmax	pmax		
	comp=E,4μm,0.4s						
YUK				smax			
	comp=N,2μm,0.7s						
YUK				smax			
	comp=E,3μm,0.5s						
YUK				smax			
	comp=N,880nm,0.4s						
YUK				smax			
	comp=E,1μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**3.33**	**247**	⇑*i*P	**Pn**	**02 23 05.0**	**+1.9**
YUK				AMB	AMB	02 23 06.7	
	comp=E,550nm,0.2s						
YUK				AMB	AMB	02 23 06.7	
	comp=E,440nm,0.2s						
YUK				AMB	AMB	02 23 06.7	
	comp=E,2μm,0.2s						
YUK				AMB	AMB	02 23 08.9	
	comp=E,2μm,1.1s						
YUK				*i* S	**Sn**	**02 23 44.3**	**+2.2**
YUK				A		02 23 49.2	
	comp=E,2μm,0.6s						
YUK				A		02 23 49.2	
	comp=E,3μm,0.6s						
YUK				A		02 23 50.0	
	comp=E,720nm,0.5s						
YUK				A		02 23 50.0	
	comp=E,1μm,0.5s						
NEM2	**Nemuro 2**	**3.75**	**238**	P	**Pn**	**02 23 08.9**	**+0.2**
NEM2				*e*S	**Sn**	**02 23 50.8**	**-1.2**
JRA	**Rausu**	**3.86**	**249**	P	**Pn**	**02 23 12.3**	**+2.2**
JNK	**Nakash**	**4.27**	**246**	P	**Pn**	**02 23 17.6**	**+1.9**
JAK	**Akkeshi**	**4.59**	**240**	P	**Pn**	**02 23 20.1**	**+0.1**
JAK				*e*S	**Sn**	**02 24 10.4**	**-1.8**
JTKR	**Abashiri--Toko**	**4.65**	**254**	P	**Pn**	**02 23 23.1**	**+2.3**
JAR	**Ashorobuto**	**5.02**	**247**	P	**Pn**	**02 23 27.7**	**+1.9**
JOB	**Onbets**	**5.17**	**243**	P	**Pn**	**02 23 28.9**	**+1.1**
JOB				*e*S	**Sn**	**02 24 25.6**	**-0.7**
YSS	**Yuzh-Sakhalins**	**5.32**	**289**	⇓*e*PN	**Pn**	**02 23 32.4**	**+2.6**
YSS				pmax	pmax		
	comp=Z,30nm,0.7s						
YSS	**Yuzh-Sakhalins**	**5.32**	**289**	*e*Pn	**Pn**	**02 23 32.6**	**+2.8**
	comp=Z,18nm,0.4s						
YSS	**Yuzh-Sakhalins**	**5.32**	**289**	⇓*e*P	**Pn**	**02 23 32.4**	**+2.6**
YSS				AMB	AMB	02 23 33.2	
	comp=Z,30nm,0.7s						
YSS				*e*S	**Sn**	**02 24 32.0**	**+2.2**
YSS				A		02 24 36.5	
	comp=Z,110nm,1.0s						
JSE	**Soyaes**	**5.33**	**267**	P	**Pn**	**02 23 33.2**	**+3.2**
JKK2	**Kamakawa 2**	**5.47**	**256**	P	**Pn**	**02 23 34.7**	**+2.8**
ASAJ	**Asahikawa**	**5.50**	**259**	P	**Pn**	**02 23 35.4**	**+3.1**
ASAJ	**Asahikawa**	**5.50**	**259**	P	**Pn**	**02 23 35.3**	**+3.0**
	comp=Z,9.5nm,0.3s,baz=81,slow=17,SNR=37						
ASAJ	**Asahikawa**	**5.50**	**259**	PN	**Pn**	**02 23 35.3**	**+3.0**
ASAJ				pmax	pmax		
	comp=Z,10.0nm,0.3s						
JCH	**Churui**	**5.62**	**242**	P	**Pn**	**02 23 34.2**	**+0.3**
JCH				*e*S	**Sn**	**02 24 35.5**	**-1.6**
JFR	**Furan**	**5.85**	**250**	P	**Pn**	**02 23 39.5**	**+2.5**
JEM	**Erimo**	**6.08**	**238**	P	**Pn**	**02 23 41.5**	**+1.3**
JEM				*e*S	**Sn**	**02 24 47.9**	**-0.5**
ERM	**Erimo**	**6.08**	**238**	*e*Pn	**Pn**	**02 23 41.7**	**+1.5**
ERM				*e*Sn	**Sn**	**02 24 46.8**	**-1.6**
JBT2	**Biratori 2**	**6.17**	**247**	P	**Pn**	**02 23 42.2**	**+0.8**
JNBK	**Urakawa-nobuka**	**6.18**	**242**	P	**Pn**	**02 23 41.6**	**+0.1**
JNBK				*e*S	**Sn**	**02 24 48.0**	**-2.7**
SKR	**Severo-Kuril's**	**6.61**	**35**	*e*PN	**Pn**	**02 23 43.5**	**-3.8**
SKR				*e*S	**Sn**	**02 24 54.0**	**-7.1**
SKR				pmax	pmax		
	comp=N,80nm,0.5s						
SKR				pmax	pmax		
	comp=E,80nm,0.5s						
SKR				pmax	pmax		
	comp=Z,150nm,0.5s						
SKR				smax			
	comp=N,50nm,0.4s						
SKR				smax			
	comp=E,80nm,0.4s						
SKR				smax			
	comp=Z,20nm,0.4s						
SKR	**Severo-Kuril's**	**6.61**	**35**	*e*P	**Pn**	**02 23 43.5**	**-3.8**
SKR				AMB	AMB	02 23 45.5	
	comp=Z,80nm,0.5s						
SKR				AMB	AMB	02 23 45.5	
	comp=Z,150nm,0.5s						
SKR				*e*S	**Sn**	**02 24 54.0**	**-7.1**
SKR				A		02 24 58.5	
	comp=Z,50nm,0.4s						
SKR				A		02 24 58.5	
	comp=Z,80nm,0.4s						
SKR				A		02 24 58.5	
	comp=Z,20nm,0.4s						
JNB	**Noboribetsu**	**7.18**	**249**	P	**Pn**	**02 23 55.4**	**+0.3**
JNB				*e*S	**Sn**	**02 25 13.8**	**-1.2**
JKB	**Kayabe**	**7.47**	**245**	P	**Pn**	**02 23 58.6**	**-0.4**
JKB				*e*S	**Sn**	**02 25 17.5**	**-4.6**
JSH	**Shimam**	**7.77**	**252**	P	**Pn**	**02 24 04.5**	**+1.5**
JYM2	**Yakumo 2**	**7.79**	**248**	P	**Pn**	**02 24 03.6**	**+0.4**
JYM2				*e*S	**Sn**	**02 25 27.0**	**-2.7**
JSR	**Shiriuchi**	**8.05**	**244**	P	**Pn**	**02 24 06.5**	**-0.4**
JSR				*e*S	**Sn**	**02 25 32.1**	**-4.1**
JTM	**Tenmabayashi**	**8.08**	**238**	P	**Pn**	**02 24 06.1**	**-1.1**
JTM				*e*S	**Sn**	**02 25 30.7**	**-6.1**
JANG	**Nango**	**8.08**	**234**	P	**Pn**	**02 24 05.4**	**-1.9**
JANG				*e*S	**Sn**	**02 25 29.9**	**-7.0**
JTH	**Tanohata**	**8.19**	**231**	P	**Pn**	**02 24 06.2**	**-2.5**
JOSM	**Okushiri--Mats**	**8.39**	**250**	P	**Pn**	**02 24 11.5**	**+0.1**
OFUJ	**Ofunato**	**8.91**	**227**	P	**Pn**	**02 24 17.1**	**-1.4**
OFUJ				*e*S	**Sn**	**02 25 51.6**	**-5.5**
PEA0B	**Petropavlovsk-**	**9.14**	**30**	*e*Pn	**Pn**	**02 24 19.7**	**-1.8**
PETK	**Petropavlovsk-**	**9.14**	**30**	P	**Pn**	**02 24 20.0**	**-1.5**
	comp=Z,3.3nm,0.3s,baz=215,slow=14,SNR=42						
PETK	**Petropavlovsk-**	**9.14**	**30**	*e*PN	**Pn**	**02 24 19.9**	**-1.6**
PETK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
JRG	**Rokugo**	**9.24**	**233**	P	**Pn**	**02 24 21.7**	**-1.3**
JRG				*e*S	**Sn**	**02 25 59.6**	**-5.5**
JIO	**Ouri**	**9.55**	**226**	P	**Pn**	**02 24 25.1**	**-2.1**
JIO				*e*S	**Sn**	**02 26 05.6**	**-6.9**
JYA	**Atsumi**	**10.32**	**232**	P	**Pn**	**02 24 36.6**	**-1.0**
JYA				*e*S	**Sn**	**02 26 27.5**	**-3.6**
MJAR	**Matsushiro Arr**	**12.63**	**229**	P	**Pn**	**02 25 08.4**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=31,slow=14,SNR=9.4						
MAJO	**Matsushiro**	**12.63**	**229**	*e*PN	**Pn**	**02 25 08.0**	**-0.2**
KLR	**Kul'dur**	**13.01**	**294**	*e*PN	**Pn**	**02 25 11.1**	**-2.0**
MDJ	**Mudanjiang**	**14.53**	**274**	P	**Pn**	**02 25 33.2**	**+0.4**
MDJ				pmax	pmax		
	comp=Z,54nm,6.3s						
FX1	**Attu Island--F**	**16.77**	**55**	P	**Pn**	**02 26 02.1**	**+1.5**
	comp=Z,8.4nm,0.3s,baz=305,slow=2.1,SNR=34						
CN2	**Changchun**	**17.61**	**273**	*e*P	**Pn**	**02 26 11.5**	**+0.6**
CN2				*e*sP	sP	02 26 43.9	-0.9
CN2				*e*S	**S**	**02 29 21.3**	**-5.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
YAK	**Yakutsk**	**20.39**	**332**	*e*P	**P**	**02 26 39.1**	**-1.2**
YAK				pmax	pmax		
	comp=Z,18nm,0.8s						
TIXI	**Tiksi**	**28.18**	**346**	*e*P	**P**	**02 27 51.0**	**-3.1**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.3						
TIXI	**Tiksi**	**28.18**	**346**	*e*P	**P**	**02 27 51.0**	**-3.2**
	comp=Z,4.2nm,0.4s,mb4.3						
HHC	**Hu-ho-hao-te**	**28.30**	**275**	*e*P	**P**	**02 27 57.4**	**+1.9**
HHC				pP	pP	02 28 24.1	+4.1
HHC				sP	sP	02 28 39.2	+6.2
HHC				PP	PP	02 28 53.3	-8.0
HHC				PcP	PcP	02 31 08.7	+3.0
HHC				S	**S**	**02 32 33.6**	**+0.1**
HHC				sS	sS	02 33 18.5	+2.2
HHC				SS	SS	02 34 03.5	-34
HHC				ScP	ScP	02 34 37.2	+0.9
HHC				PcS	PcS	02 34 50.6	+2.6
HHC				ScS	ScS	02 38 28.4	-0.8
HHC				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.4						
HHC				pmax	pmax		
	comp=Z,51nm,6.2s						
HHC				LR	LR		
	comp=N,59nm,16.8s						
HHC				LR	LR		
	comp=E,83nm,16.8s						
HHC				LR	LR		
	comp=Z,72nm,16.8s						
SONM	**Songino Array**	**29.81**	**291**	P	**P**	**02 28 09.1**	**+0.3**
	comp=Z,0.7nm,0.4s,mb3.6,baz=85,slow=9.0,SNR=5.3						
GTA	**Gaotai**	**37.10**	**279**	⇑P	**P**	**02 29 14.3**	**+2.2**
GTA				pP	pP	02 29 39.7	+2.5
GTA				sP	sP	02 29 52.8	+2.8
GTA				PP	PP	02 30 43.5	+4.8
GTA				S	**S**	**02 34 51.2**	**+1.3**
GTA				sS	sS	02 35 35.2	+1.7
GTA				SS	SS	02 37 27.1	-10
GTA				pmax	pmax		
	comp=Z,18nm,0.7s,mb5.1						
GTA				pmax	pmax		
	comp=Z,58nm,5.3s						
GTA				LR	LR		
	comp=N,71nm,7.7s						
GTA				LR	LR		
	comp=E,160nm,8.6s						
GTA				LR	LR		
	comp=Z,170nm,12.2s						
COLA	**College**	**38.46**	**37**	*e*P	**P**	**02 29 23.5**	**+0.3**
COLA				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
COLA	**College**	**38.46**	**37**	*e*P	**P**	**02 29 23.5**	**+0.3**
	comp=Z,2.2nm,0.6s,mb4.2						
CD2	**Chengdu**

comp=Z,3.0nm,0.6s,mb4.5
AAK Ala-Archa 52.53 296 *e*P **P 02 31 15.0 +0.8**
comp=Z,2.7nm,0.6s,mb4.5
RES Resolute Bay 52.73 18 P **P 02 31 15.4 +0.1**
comp=Z,4.6nm,0.8s,mb4.6,baz=328,slow=7.8,SNR=26
JIRN Jiri 52.95 273 *e*P **P 02 31 19.2 +1.7**
comp=Z,12nm,0.4s,mb5.3
GUN Gumba 53.01 274 *e*P **P 02 31 19.9 +1.9**
comp=Z,12nm,0.5s,mb5.2
RAMN Ramite 53.09 272 *e*P **P 02 31 19.5 +0.9**
comp=Z,7.6nm,0.3s,mb5.2
KSH Kashi 53.20 292 *e*P **P 02 31 24.4 +5.2**
KSH pP pP 02 31 53.8 +8.0
KSH sP sP 02 32 08.3 +10
KSH PcP PcP 02 32 29.2 +3.5
KSH PP PP 02 33 28.3 +8.2
KSH ScP ScP 02 36 13.8 +1.0
KSH PcS PcS 02 36 26.9 +2.2
KSH S **S 02 38 45.5 +4.1**
KSH sS sS 02 39 37.9 +11
KSH ScS ScS 02 40 57.6 +0.1
KSH SS SS 02 42 28.0 +6.0
KSH pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
KSH pmax pmax
comp=Z,57nm,5.6s
KSH LR LR
comp=N,67nm,4.6s
KSH LR LR
comp=E,57nm,4.6s
KSH LR LR
comp=Z,65nm,4.6s
YKA Yellowknife Ar 53.22 35 P **P 02 31 19.3 +0.3**
comp=Z,1.3nm,0.7s,mb4.1,baz=296,slow=7.0,SNR=5.9
SVE Sverdlovsk 53.36 317 *e*P **P 02 31 17.0 -3.1**
SVE pmax pmax
comp=Z,13nm,0.7s,mb5.1
PKI Pulchoki 53.55 274 *e*P **P 02 31 19.6 -2.3**
PKIN Phulchoki 53.55 274 *e*P **P 02 31 19.6 -2.4**
ARU Arti 54.55 317*c i*P **P 02 31 27.5 -1.3**
ARU *e* 02 33 27.4
ARU S **S 02 38 59.7 +0.6**
ARU pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
ARU Arti 54.55 317 *e*P **P 02 31 27.0 -1.7**
comp=Z,9.9nm,0.7s,mb5.0
AKTK Aktyubinsk 58.02 311 P **P 02 31 52.5 -1.0**
AKTO Aktyubinsk 58.02 311 P **P 02 31 52.5 -1.0**
comp=Z,3.2nm,0.6s,mb4.5,baz=56,slow=7.2,SNR=15
ARCES ARCESS Array B 58.39 340 P **P 02 31 54.5 -1.3**
comp=Z,3.7nm,0.9s,mb4.4,baz=24,slow=9.3,SNR=6.7
ARCES ARCESS Array B 58.39 340 P **P 02 31 54.5 -1.3**
COEN Coen 59.45 188 *e*P **P 02 32 06.5 +2.8**
comp=Z,67nm,1.0s,mb5.6
NEW Newport 59.63 51 *e*P **P 02 32 04.3 -0.4**
NEW pmax pmax
comp=Z,2.0nm,0.7s
NEW Newport 59.63 51 *e*P **P 02 32 04.2 -0.4**
comp=Z,2.1nm,0.7s,mb4.3
KBL Kabul 60.58 291 *e*P **P 02 32 11.9 +0.5**
KBL pmax pmax
comp=Z,13nm,1.1s,mb4.9
KBL Kabul 60.58 291 *e*P **P 02 32 11.9 +0.5**
comp=Z,13nm,1.1s,mb4.9
JOF Joensuu 61.56 333 *e*P **P 02 32 15.7 -1.8**
JOF pmax pmax
comp=Z,3.0nm,0.3s,mb4.8
JOF Joensuu 61.56 333 *e*p **P 02 32 15.7 -1.8**
comp=Z,2.5nm,0.3s,mb4.7
SUMG Summit 62.13 3 *e*P **P 02 32 21.8 +0.6**
comp=Z,5.5nm,0.9s,mb4.6
WVOR Wild Horse Val 62.23 57 *e*P **P 02 32 22.9 +0.6**
WVOR pmax pmax
comp=Z,1.0nm,0.7s,mb4.0
WVOR Wild Horse Val 62.23 57 *e*P **P 02 32 22.9 +0.5**
comp=Z,1.4nm,0.7s,mb4.1
KAF Kangasniemi 63.73 334 *e*P **P 02 32 29.2 -2.7**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb4.0
KAF Kangasniemi 63.73 334 *e*p **P 02 32 29.2 -2.7**
comp=Z,1.1nm,0.4s,mb4.0
BOZ Bozeman (W) 64.21 50 *e*P **P 02 32 36.2 +0.9**
BOZ pmax pmax
comp=Z,1.0nm,0.4s,mb4.0
BOZ Bozeman (W) 64.21 50 *e*P **P 02 32 36.2 +0.8**
comp=Z,0.9nm,0.4s,mb4.0
FINES FINESS Array B 64.31 334 P **P 02 32 34.1 -1.6**
comp=Z,2.7nm,0.5s,mb4.3,baz=26,slow=8.3,SNR=29
NVAR Mina Array Bea 64.90 60 P **P 02 32 40.1 +0.2**
comp=Z,1.1nm,0.6s,mb3.9,baz=290,slow=7.2,SNR=7.5
BW06 Boulder Array 67.21 52 *e*P **P 02 32 54.2 -0.5**
comp=Z,1.6nm,0.9s,mb3.9
PDAR Pinedale Array 67.21 52 P **P 02 32 54.4 -0.3**
comp=Z,0.6nm,0.6s,mb3.6,baz=336,slow=3.3,SNR=5.5
NB2 NORSAR Subarra 68.77 340 P **P 02 33 02.7 -1.4**
comp=Z,2.7nm,0.6s,mb4.2,baz=28,slow=6.5
NOA NORSAR Array B 68.77 340 P **P 02 33 02.9 -1.1**
comp=Z,3.2nm,0.6s,mb4.3,baz=29,slow=6.5,SNR=20
NOA NORSAR Array B 68.77 340 P **P 02 33 02.9 -1.1**
HFS Hagfors 68.92 338 P **P 02 33 03.7 -1.4**
comp=Z,4.2nm,0.6s,mb4.5,baz=46,slow=6.4,SNR=24
NAO01 NORSAR Array S 69.01 340 *e*P **P 02 33 03.9 -1.8**
comp=Z,4.3nm,0.8s,mb4.3
KIV Kislovodsk 70.18 313 *e*P **P 02 33 14.2 +1.1**
KIV pmax pmax
comp=Z,7.0nm,0.6s,mb4.7
KIV Kislovodsk 70.18 313 *e*P **P 02 33 14.2 +1.1**
comp=Z,7.4nm,0.6s,mb4.7
ZEI Tsey 70.38 311 *e*P **P 02 33 13.6 -0.7**
ZEI pmax pmax
comp=Z,15nm,1.6s,mb4.6
AKASG Malin Array Be 71.44 325 P **P 02 33 19.6 -1.0**
comp=Z,4.4nm,0.4s,mb4.7,baz=36,slow=6.3,SNR=24
AKASG Malin Array Be 71.44 325 *e*P **P 02 33 19.5 -1.1**
AKASG pmax pmax
comp=Z,4.0nm,0.4s
AKBB Malin Array Si 71.44 325 *e*P **P 02 33 19.1 -1.5**
KIEV Kiev 71.45 325 *e*P **P 02 33 19.2 -1.4**
KIEV pmax pmax
comp=Z,5.0nm,0.6s,mb4.5
KIEV Kiev 71.45 325 *e*P **P 02 33 19.2 -1.4**
comp=Z,4.9nm,0.6s,mb4.5
GNI Garni 71.75 309 *e*P **P 02 33 22.0 -0.6**
KWP Kalwaria Pacla 74.84 328 *e*P **P 02 33 40.6 0.0**
KWP pmax pmax
comp=Z,11nm,1.1s,mb4.5
KWP Kalwaria Pacla 74.84 328 *e*P **P 02 33 40.6 +0.1**
comp=Z,11nm,1.1s,mb4.5
BUR08 Bucovina Ar. S 75.48 325 *e*P **P 02 33 44.0 -0.3**
STHS Stebnicka Huta 75.56 328 *e*P **P 02 33 46.5 +1.8**
STHS pmax pmax
comp=Z,2.0nm,0.7s,mb4.0
STHS Stebnicka Huta 75.56 328 *e*P **P 02 33 46.5 +1.8**
comp=Z,2.3nm,0.7s,mb4.0
KOLS Kolonicke sedl 75.58 327 *e*P **P 02 33 45.1 +0.3**
KOLS pmax pmax
comp=Z,3.0nm,1.0s,mb4.0
KOLS Kolonicke sedl 75.58 327 *e*P **P 02 33 45.1 +0.3**
comp=Z,2.6nm,1.0s,mb3.9
CRVS Cervenica-Dubn 75.91 328 *e*P **P 02 33 47.3 +0.6**
CRVS pmax pmax
comp=Z,15nm,2.5s,mb4.3
CRVS Cervenica-Dubn 75.91 328 *e*P **P 02 33 47.3 +0.6**
comp=Z,15nm,2.5s,mb4.3
DPC Dobruska-Polom 76.51 332 *e*P **P 02 33 50.3 +0.2**
DPC Dobruska-Polom 76.51 332 *e*P **P 02 33 50.3 +0.2**
MORC Moravsky Berou 76.59 331 *e*P **P 02 33 51.2 +0.7**
KECS Kecovo 76.62 328 *e*P **P 02 33 50.9 +0.2**
KECS pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
KECS Kecovo 76.62 328 *e*P **P 02 33 50.9 +0.2**
comp=Z,1.7nm,0.8s,mb3.8
CLL Collm 76.76 334⇓*i*P **P 02 33 50.7 -0.7**
CLL pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
CLL Collm 76.76 334⇓*i*P **P 02 33 50.7 -0.7**
comp=Z,5.0nm,0.6s,mb4.4
BRG Berggiesshubel 76.84 333 *e*P **P 02 33 51.4 -0.5**
comp=Z,3.2nm,0.8s,mb4.1
BRG Berggiesshubel 76.84 333 *e*P **P 02 33 51.4 -0.5**
BRG pmax pmax
comp=Z,2.0nm,0.9s,mb3.9
VYHS Vyhne 77.21 329 *e*P **P 02 33 54.6 +0.6**
VYHS pmax pmax
comp=Z,4.0nm,1.5s,mb3.9
VYHS Vyhne 77.21 329 *e*P **P 02 33 54.6 +0.6**
comp=Z,3.8nm,1.5s,mb3.9
PRU Pruhonice 77.41 332 *e*P **P 02 33 55.8 +0.7**
PRU Pruhonice 77.41 332 *e*P **P 02 33 55.8 +0.7**
BRTR Keskin Array B 77.87 315 P **P 02 33 57.4 -0.5**
comp=Z,0.7nm,0.6s,mb3.6,baz=81,slow=3.3,SNR=5.0
BRTR Keskin Array B 77.87 315 *e*P **P 02 33 58.8 +0.9**
KHC Kasperske Hory 78.47 333 *e*P **P 02 34 00.7 -0.3**
KHC Kasperske Hory 78.47 333 *e*P **P 02 34 00.7 -0.3**
GERES GERESS Array B 78.68 332 P **P 02 34 02.2 0.0**
comp=Z,1.6nm,0.6s,mb4.0,baz=37,slow=5.2,SNR=14
TXAR Lajitas Array 79.96 58 P **P 02 34 10.1 +0.6**
comp=Z,0.9nm,0.6s,mb3.8,baz=298,slow=4.5,SNR=17
TXAR Lajitas Array 79.96 58 P **P 02 34 10.1 +0.6**
CDF Champ du Feu 81.04 336 *e*P **P 02 34 15.9 +1.0**
comp=Z,2.3nm,0.5s,mb4.0
CDF Champ du Feu 81.04 336 *e*P **P 02 34 15.9 +1.0**
CDF pmax pmax
comp=Z,1.0nm,0.5s,mb3.9
CDF Champ du Feu 81.04 336 *e*P **P 02 34 15.9 +1.0**
comp=Z,1.1nm,0.5s,mb3.9
MEZF Maizieres J'vi 81.58 337 *e*P **P 02 34 19.3 +1.6**
comp=Z,7.7nm,0.6s,mb4.4
MEZF Maizieres J'vi 81.58 337 *e*P **P 02 34 19.3 +1.6**
comp=Z,7.7nm,0.6s,mb4.7
HINF Hinteralfeld 81.70 336 *e*P **P 02 34 18.7 +0.3**
MMAI Mount Meron Ar 82.07 310 P **P 02 34 21.2 +0.6**
comp=Z,2.4nm,0.5s,mb4.3,baz=46,slow=7.1,SNR=5.8
FLN La Foliniere 82.72 341 *e*P **P 02 34 23.2 -0.5**
CABF La Chapelle 83.01 336 *e*P **P 02 34 26.2 +1.0**
LOR Lormes 83.03 338 *e*P **P 02 34 25.7 +0.4**
GRR Gorron 83.16 341 *e*P **P 02 34 26.2 +0.2**
SSF Saint Saulge 83.31 338 *e*P **P 02 34 26.8 0.0**
AVF Avril sur Loir 83.60 338 *e*P **P 02 34 28.6 +0.3**
comp=Z,4.5nm,0.6s,mb4.2
AVF Avril sur Loir 83.60 338 *e*P **P 02 34 28.6 +0.3**
AVF pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
AVF Avril sur Loir 83.60 338 *e*P **P 02 34 28.6 +0.3**
comp=Z,2.3nm,0.6s,mb4.2
SMF Signal de Mont 83.61 337 *e*P **P 02 34 28.8 +0.5**
comp=Z,15nm,1.0s,mb4.5
SMF Signal de Mont 83.61 337 *e*P **P 02 34 28.8 +0.5**
SMF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
SMF Signal de Mont 83.61 337 *e*P **P 02 34 28.8 +0.5**
comp=Z,7.3nm,1.0s,mb4.5
SGMF Saint Gilles 83.67 342 *e*P **P 02 34 28.3 -0.3**
LPG La Plagne 83.83 335 *e*P **P 02 34 29.8 +0.4**
BGF Bois d'Agland 83.95 338 *e*P **P 02 34 30.7 +0.7**
comp=Z,5.1nm,0.6s,mb4.2
BGF Bois d'Agland 83.95 338 *e*P **P 02 34 30.7 +0.7**
BGF pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
BGF Bois d'Agland 83.95 338 *e*P **P 02 34 30.7 +0.7**
comp=Z,2.5nm,0.6s,mb4.2
BNI Bardonecchia 84.25 335 *e*P **P 02 34 32.3 +0.7**
BNI pmax pmax
comp=Z,20nm,1.6s,mb4.7
BNI Bardonecchia 84.25 335 *e*P **P 02 34 32.3 +0.7**
comp=Z,20nm,1.6s,mb4.7
TCF Toulx Ste Croi 84.37 338 *e*P **P 02 34 33.4 +1.2**
comp=Z,5.4nm,0.7s,mb4.2
TCF Toulx Ste Croi 84.37 338 *e*P **P 02 34 33.4 +1.2**
TCF pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
TCF Toulx Ste Croi 84.37 338 *e*P **P 02 34 33.4 +1.2**
comp=Z,2.7nm,0.7s,mb4.2
MFF Saint Martin d 84.67 340 *e*P **P 02 34 33.7 0.0**
comp=Z,8.2nm,0.7s,mb4.5
MFF Saint Martin d 84.67 340 *e*P **P 02 34 33.7 0.0**
MFF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
MFF Saint Martin d 84.67 340 *e*P **P 02 34 33.7 0.0**
comp=Z,4.1nm,0.7s,mb4.5
CAF Calviac 85.67 338 *e*P **P 02 34 39.3 +0.6**

NIED ***06*** *02:38:00,31.°20N×141.°90E,h5km,Mw5.1 Best double couple: M₀5.25000×10¹⁶ NP1:φ=348.00000°,δ77.00000°, λ81.00000°. NP2:φ=203.00000°,δ16.00000°,λ124.00000°.*
JMA ***06*** *02:38:53.3±0.2,31.°15N×141.°86E,h0km,M4.6*
IDC ***06*** *02:38:54.0±0.5,31.°04N×141.°67E,h0km,mb4.5/20, mb1 4.7/22,mb1mx4.7/26,mbtmp4.5/22,ML4.1/3,MS4.5/19, Ms1 4.5/19,ms1mx4.4/31,Error ellipse: s-maj=17.6km s-min=13.5km az=67.0*
ISCJB ***06*** *02:38:56.3±1.0,31.°05N±0.°02×141.°53E±0.°02,h22km±6km, mb4.8/132,MS4.7/51,Error ellipse: s-maj=4.4km s-min=3.2km az=30.7*
MOS ***06*** *02:38:57.9±1.0,31.°05N×141.°51E,h33km,mb5.1/59, MS4.8/23,Error ellipse: s-maj=10.0km s-min=5.0km az=112.9*
BJI ***06*** *02:38:59.5,31.°16N×141.°51E,h49km,mB4.8/36,mb4.7/40, Ms4.8/45,Ms7 4.6/43*
GCMT ***06*** *02:39:00.4±0.3,30.°96N×141.°93E,h20km,MW5.0, Moment Tensor Solution. s23,c32; s76,c116; Moment tensor: Scale 10¹⁶Nm; Mrr3.94±.24; Mθθ0.00±.13; Mφφ-3.94±.15; Mrθ0.87±.28; Mrφ0.50±.08; Mθφ2.15±.25; Best double couple: M₀4.60000×10¹⁶ NP1:φ=160.00000°, δ33.00000°,λ67.00000°. NP2:φ=7.00000°,δ60.00000°, λ104.00000°. Principal axes: T 4.6900, Plg71.0000°, Azm309.0000°; N -0.1800, Plg12.0000°, Azm179.0000°; P -4.5100, Plg14.0000°, Azm86.0000°; Data Used: II IU IC CN G.*
NEIC ***06*** *02:39:01.8±1.3,31.°07N×141.°49E,h52km±10km,mb4.9/81, MW5.1(NIED) Error ellipse: s-maj=6.9km s-min=5.6km az=166.0*
ISC 06 02:38:59.6±0.6,31.°03N±0.°03×141.°56E±0.°03,h35km±4km, h42km±2.9km:pP-P,n527,σ0=83/541,mb4.8/132,MS4.7/51, 109C-119D,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.54**	**325**	P		**Pn**	**02 39 36.3**	**-2.1**
JHJ	**Hachijo jima 2**	**2.57**	**325**	Pn		**Pn**	**02 39 37.9**	**-0.9**
	18nm,0.3s,baz=72,slow=24,SNR=5.3							
JHJ				Sn		**Sn**	**02 40 08.2**	**-0.6**
	102nm,0.3s,baz=70,slow=19,SNR=6.9							
BSO1	**Boso 1**	**3.64**	**352**	P		**Pn**	**02 39 50.5**	**-3.0**
BSO1				S		**Sn**	**02 40 33.3**	**-2.0**
BSO3	**Boso 3**	**3.86**	**347**	P		**Pn**	**02 39 55.5**	**-1.0**
BSO3				S		**Sn**	**02 40 39.7**	**-0.9**
CBIJ	**Chichi jima**	**3.96**	**172**	P		**Pn**	**02 39 58.7**	**+0.8**
CBIJ	**Chichi jima**	**3.96**	**172**	Pn		**Pn**	**02 39 56.5**	**-1.4**
	46nm,0.3s,baz=283,slow=22,SNR=27							
CBIJ				Sn		**Sn**	**02 40 40.0**	**-3.2**
	37nm,0.3s,baz=295,slow=18,SNR=4.0							
CBIJ				LR		LR	02 41 17.4	
	comp=Z,3μm,19.1s,baz=351,slow=36							
BSO4	**Boso 4**	**4.08**	**346**	S		**Sn**	**02 40 46.0**	**0.0**
JOD2	**Odawara 2**	**4.70**	**335**	P		**Pn**	**02 40 09.6**	**+1.6**
JOD2				S		**Sn**	**02 41 03.5**	**+2.2**
JHU	**Hanno**	**5.17**	**339**	P		**Pn**	**02 40 14.7**	**+0.2**
JHU				S		**Sn**	**02 41 13.9**	**+1.0**
JYT	**Yasato**	**5.30**	**348**	S		**Sn**	**02 41 15.3**	**-0.9**
JNY	**Yasuok**	**5.31**	**325**	P		**Pn**	**02 40 19.6**	**+3.2**
JRY	**Ryogami san**	**5.44**	**337**	P		**Pn**	**02 40 19.0**	**+0.8**
JRY				S		**Sn**	**02 41 21.8**	**+2.2**
JAO	**Obara**	**5.55**	**321**	P		**Pn**	**02 40 24.2**	**+4.5**
JHO	**Hitachi**	**5.62**	**352**	P		**Pn**	**02 40 18.0**	**-2.7**
MJAR	**Matsushiro Arr**	**6.16**	**334**	Pn		**Pn**	**02 40 28.0**	**-0.1**
	6.2nm,0.3s,baz=152,slow=11,SNR=75							
MAJO	**Matsushiro**	**6.16**	**334**	*e*P		**Pn**	**02 40 28.9**	**+0.8**
MAT	**Matsushiro**	**6.16**	**334**	P		**Pn**	**02 40 28.0**	**-0.1**
MAT				S		**Sn**	**02 41 37.3**	**0.0**
MAT	**Matsushiro**	**6.16**	**334**	P		**Pn**	**02 40 29.1**	**+1.0**
MAT				S		**Sn**	**02 41 38.0**	**+0.7**
KSRS	**Korea Array**	**12.96**	**303**	Pn		**Pn**	**02 42 06.2**	**+4.9**
	0.4nm,0.3s,baz=116,slow=13,SNR=21							
KSRS				LR		LR	02 47 00.8	
	comp=Z,1μm,18.6s,baz=116,slow=37							
ASAJ	**Asahikawa**	**13.09**	**3**	Pn		**Pn**	**02 42 03.9**	**+0.9**
	1.5nm,0.3s,baz=143,slow=33,SNR=4.7							
ASAJ				LR		LR	02 47 54.3	
	comp=Z,2μm,19.5s,baz=191,slow=41							
ASAJ	**Asahikawa**	**13.09**	**3**	P		**Pn**	**02 42 03.9**	**+1.0**
ASAJ				pmax		pmax		
	comp=Z,2.0nm,0.3s							
ASAJ				MLR		MLR		
	comp=Z,2μm,19.5s							
YSS	**Yuzh-Sakhalins**	**15.93**	**3**	*e*P		**Pn**	**02 42 36.5**	**-4.4**
YSS				*e*S		**S**	**02 45 33.0**	**-16**
YSS				pmax		pmax		
	comp=N,30nm,1.0s							
YSS				pmax		pmax		
	comp=Z,40nm,1.0s							
YSS				MLR		MLR		
	comp=N,3μm,14.0s							
YSS				MLR		MLR		
	comp=Z,2μm,14.0s							
YSS				MLR		MLR		
	comp=E,1μm,16.0s							
YSS	**Yuzh-Sakhalins**	**15.93**	**3**	*e*Pn		**Pn**	**02 42 36.7**	**-4.2**
MDJ	**Mudanjiang**	**16.50**	**329**	P		**Pn**	**02 42 49.7**	**+1.4**
MDJ				pP		pP	02 43 01.9	+2.1
MDJ				sP		sP	02 43 07.2	+2.9
MDJ				S		**S**	**02 45 49.7**	**-12**
MDJ				PcP		PcP	02 47 39.1	+0.8
MDJ				pmax		pmax		
	comp=Z,9.0nm,1.0s							
MDJ				pmax		pmax		
	comp=Z,200nm,10.8s							
MDJ				LR		LR		
	comp=N,2μm,20.6s							
MDJ				LR		LR		
	comp=E,2μm,19.3s							
MDJ				LR		LR		
	comp=Z,1μm,17.1s							
MDJ	**Mudanjiang**	**16.50**	**329**	*e*Pn		**Pn**	**02 42 50.0**	**+1.8**
	comp=Z,19nm,0.9s							
SSE	**Sheshan**	**17.45**	**275**	P		**Pn**	**02 43 00.0**	**-0.3**
SSE				pP		pP	02 43 08.5	-1.9
SSE				sP		sP	02 43 12.6	-2.3
SSE				S		**S**	**02 46 16.0**	**-4.9**
SSE				pmax		pmax		
	comp=Z,24nm,0.7s							
SSE				pmax		pmax		
	comp=Z,520nm,12.0s							
SSE				LR		LR		
	comp=N,1μm,16.5s							
SSE				LR		LR		
	comp=E,2μm,16.5s							
SSE				LR		LR		
	comp=Z,3μm,16.8s							
CN2	**Changchun**	**18.02**	**320**	*e*P		**Pn**	**02 43 05.2**	**-2.0**
CN2				*e*pP		pP	02 43 14.6	-2.0
CN2				*e*S		**S**	**02 46 21.6**	**-11**
CN2				*e*SS			02 46 45.5	
CN2				pmax		pmax		
	comp=Z,10.0nm,0.9s							
CN2				pmax		pmax		
	comp=Z,300nm,8.0s							
CN2				LR		LR		
	comp=N,3μm,14.0s							
CN2				LR		LR		
	comp=E,2μm,14.0s							
CN2				LR		LR		
	comp=Z,2μm,15.0s							
DL2	**Dalian**	**18.10**	**301**⇑*i*P			**Pn**	**02 43 07.0**	**-1.2**
DL2				*e*S		**S**	**02 46 24.5**	**-9.4**
DL2				SS			02 46 50.0	
DL2				pmax		pmax		
	comp=Z,10.0nm,0.7s							
DL2				pmax		pmax		
	comp=Z,200nm,9.1s							
DL2				LR		LR		
	comp=N,1μm,14.1s							
DL2				LR		LR		
	comp=E,1μm,16.3s							
DL2				LR		LR		
	comp=Z,2μm,16.7s							
HABR	**Khabarovsk**	**18.11**	**346**	*e*P		**Pn**	**02 43 06.2**	**-2.0**
HABR				*e*			02 46 27.6	
HABR				pmax		pmax		
	comp=E,21nm,0.7s							
HABR				pmax		pmax		
	comp=Z,78nm,1.5s							
HABR				pmax		pmax		
	comp=N,31nm,0.7s							
HABR				MLR		MLR		
	comp=Z,686nm,14.0s							
NJ2	**Nanjing**	**19.38**	**279**	*e*P		**Pn**	**02 43 27.0**	**+3.3**
NJ2				pP		pP	02 43 36.9	+5.3
NJ2				sP		sP	02 43 43.1	+7.0
NJ2				PP			02 43 45.4	
NJ2				S		**S**	**02 46 59.0**	**-0.7**
NJ2				pmax		pmax		
	comp=Z,20nm,0.6s							
NJ2				pmax		pmax		
	comp=Z,350nm,7.4s							
NJ2				LR		LR		
	comp=N,1μm,15.6s							
NJ2				LR		LR		
	comp=E,2μm,18.9s							
NJ2				LR		LR		
	comp=Z,2μm,16.7s							
KLR	**Kul'dur**	**19.63**	**341**	*e*P		**Pn**	**02 43 19.0**	**-7.5**
KLR				*e*S		**S**	**02 47 09.5**	**+5.0**
KLR				MLR		MLR		
	comp=E,1μm,13.0s							
KLR				MLR		MLR		
	comp=Z,2μm,13.0s							
QZH	**Quanzhou**	**21.15**	**259**⇑*i*P			**P**	**02 43 42.0**	**+0.3**
QZH				LR		LR		
	comp=N,3μm,22.0s,MS4.8							
QZH				LR		LR		
	comp=E,4μm,18.2s,MS4.8							
QZH				LR		LR		
	comp=Z,3μm,16.9s,MS4.8							
BJT	**Baijiatuau**	**22.46**	**300**	*e*P		**P**	**02 43 54.9**	**-0.7**
BJT				pmax		pmax		
	comp=Z,24nm,0.6s							
BJT	**Baijiatuau**	**22.46**	**300**	*e*P		**P**	**02 43 54.9**	**-0.7**
	comp=Z,24nm,0.6s,mb4.8							
BJI	**Beijing**	**22.47**	**301**	P		**P**	**02 43 55.1**	**-0.5**
BJI				S		**S**	**02 47 56.7**	**-3.8**
BJI				pmax		pmax		
	comp=Z,210nm,7.1s							
BJI				LR		LR		
	comp=N,1μm,14.3s,MS4.8							
BJI				LR		LR		
	comp=E,2μm,16.2s,MS4.8							
BJI				LR		LR		
	comp=Z,2μm,17.2s,MS4.5							
WHN	**Wuhan**	**23.36**	**276**	⇑P		**P**	**02 44 02.1**	**-3.1**
WHN				LR		LR		
	comp=N,2μm,14.6s,MS5.0							
WHN				LR		LR		
	comp=E,4μm,16.0s,MS5.0							
WHN				LR		LR		
	comp=Z,5μm,17.0s,MS5.1							
HIA	**Hailar**	**24.55**	**324**	*e*P		**P**	**02 44 15.0**	**-0.8**
HIA				pmax		pmax		
	comp=Z,16nm,0.4s							
HIA	**Hailar**	**24.55**	**324**	*e*P		**P**	**02 44 15.0**	**-0.8**
	comp=Z,16nm,0.4s,mb4.9							
PETK	**Petropavlovsk-**	**24.99**	**23**	P		**P**	**02 44 22.8**	**+3.0**
	comp=Z,0.5nm,0.4s,baz=43,slow=53,SNR=2.9							
PETK	**Petropavlovsk-**	**24.99**	**23**	P		**P**	**02 44 22.8**	**+3.0**
PET	**Petropavlovsk**	**25.25**	**25**	*e*P		**P**	**02 44 26.0**	**+3.8**
PET				*e*S		**S**	**02 48 45.7**	**+0.3**
PET				pmax		pmax		
	comp=Z,100nm,9.1s							
PET				MLR		MLR		
	comp=Z,900nm,16.0s,MS4.4							
PET				MLR		MLR		
	comp=Z,800nm,15.0s							
TGY	**Tagaytay City**	**25.35**	**233**	LR		LR	02 53 54.0	
	comp=Z,6.6nm,19.2s,slow=35							
HHC	**Hu-ho-hao-te**	**26.07**	**300**	*e*P		**P**	**02 44 27.3**	**-2.5**
HHC				pP		pP	02 44 38.9	-0.9
HHC				sP		sP	02 44 44.5	+0.3
HHC				PP			02 45 09.4	
HHC				PcP		PcP	02 47 55.3	-1.6
HHC				S		**S**	**02 48 53.9**	**-4.7**
HHC				sS		sS	02 49 12.3	-3.0
HHC				SS			02 50 01.5	
HHC				ScP		ScP	02 51 29.7	-4.1
HHC				PcS		PcS	02 51 34.7	-3.0
HHC				ScS		ScS	02 55 18.7	-4.8
HHC				pmax		pmax		
	comp=Z,9.0nm,0.9s,mb4.3							
HHC				pmax		pmax		
	comp=Z,230nm,7.1s							
HHC				LR		LR		
	comp=N,1μm,14.1s,MS4.9							
HHC				LR		LR		
	comp=E,2μm,17.2s,MS4.9							

HHC LR LR
comp=Z,3μm,17.1s,MS4.9
GZH Guangzhou 26.29 259 P **P** **02 44 29.9 -2.0**
GZH S **S** **02 49 01.4 -0.9**
GZH LR LR
comp=N,1μm,18.6s,MS4.6
GZH LR LR
comp=E,880nm,19.2s,MS4.6
GZH LR LR
comp=Z,2μm,16.7s,MS4.7
XAN Xi'an 27.61 285 P **P** **02 44 42.9 -0.8**
XAN pP pP 02 44 54.8 +1.0
XAN sP sP 02 45 00.3 +2.2
XAN PP 02 45 29.7
XAN S **S** **02 49 15.3 -7.8**
XAN SS 02 50 37.1
XAN pmax pmax
comp=Z,3.0nm,1.1s,mb3.8
XAN pmax pmax
comp=Z,35nm,11.3s
XAN LR LR
comp=N,800nm,17.3s
XAN LR LR
comp=Z,380nm,15.1s,MS4.1
CLNS Chul'man 28.30 341 *e*P **P** **02 44 56.0 +6.5**
CLNS pmax pmax
comp=Z,13nm,1.2s,mb4.4
CLNS pmax pmax
comp=N,9.0nm,0.7s
CLNS pmax pmax
comp=E,6.0nm,0.8s
GYA Guiyang 30.85 270 *e*P **P** **02 45 27.8 +15**
GYA sP sP 02 45 33.9 +7.0
GYA pP pP 02 45 37.6 +15
GYA PP PP 02 46 17.2 -5.3
GYA PcP PcP 02 48 11.3 +2.3
GYA S **S** **02 50 13.5 -0.6**
GYA sS sS 02 50 36.4 +5.6
GYA ScP ScP 02 51 48.0 -1.0
GYA PcS PcS 02 51 55.1 +2.0
GYA ScS ScS 02 55 43.7 -2.2
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
GYA pmax pmax
comp=Z,90nm,4.8s
QIZ Qiongzhong 31.01 255 P **P** **02 45 15.7 +1.7**
QIZ pP pP 02 45 26.3 +2.2
QIZ sS sS 02 50 32.9 -0.5
QIZ pmax pmax
comp=Z,90nm,2.8s,mb5.1
QIZ LR LR
comp=N,510nm,15.9s
QIZ LR LR
comp=Z,830nm,19.7s,MS4.4
ULN Ulaanbaatar 31.18 313 *e*P **P** **02 45 16.6 +1.4**
ULN pmax pmax
comp=Z,20nm,1.0s,mb4.9
ULN Ulaanbaatar 31.18 313 *e*P **P** **02 45 16.6 +1.4**
comp=Z,20nm,1.0s,mb4.9
SONM Songino Array 31.58 312 P **P** **02 45 19.8 +1.1**
comp=Z,11nm,0.9s,mb4.7,baz=118,slow=7.9,SNR=60
SONM LR LR 02 58 38.7
comp=Z,816nm,18.2s,MS4.4,baz=84,slow=37
LZH Lanzhou 31.69 289 *e*P **P** **02 45 19.4 -0.5**
LZH pP pP 02 45 30.9 +0.9
LZH sP sP 02 45 36.0 +1.7
LZH PP PP 02 46 24.4 -7.3
LZH PcP PcP 02 48 12.1 +1.0
LZH *e*S **S** **02 50 25.1 -2.0**
LZH sS sS 02 50 46.1 +2.3
LZH SS SS 02 52 16.4 -27
LZH pmax pmax
comp=Z,17nm,1.3s,mb4.7
LZH pmax pmax
comp=Z,84nm,4.0s
LZH LR LR
comp=E,1μm,14.1s
LZH LR LR
comp=Z,1μm,16.9s,MS4.7
CD2 Chengdu 32.31 280 *e*P **P** **02 45 26.4 +1.1**
CD2 pP pP 02 45 38.3 +2.8
CD2 sP sP 02 45 43.7 +4.0
CD2 PP PP 02 46 35.2 -3.4
CD2 S **S** **02 50 35.1 -1.6**
CD2 sS sS 02 50 55.3 +1.8
CD2 SS SS 02 52 30.9 -25
CD2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
CD2 pmax pmax
comp=Z,60nm,5.8s
CD2 LR LR
comp=N,2μm,15.5s,MS5.1
CD2 LR LR
comp=E,2μm,14.2s,MS5.1
CD2 LR LR
comp=Z,2μm,15.4s,MS4.9
ZAK Zakamensk 34.36 315⇑ *i*P **P** **02 45 43.8 +0.8**
ZAK pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
TLY Talaya 34.61 318 *e*P **P** **02 45 46.1 +1.0**
TLY *e* 02 47 07.2
TLY *e*S **S** **02 51 20.4 +8.5**
TLY pmax pmax
comp=Z,15nm,1.1s,mb4.8
TLY MLR MLR
comp=Z,2μm,16.0s,MS4.9
TLY Talaya 34.61 318 *e*P **P** **02 45 46.8 +1.7**
comp=Z,13nm,1.0s,mb4.8
KMI Kunming 34.63 270 P **P** **02 45 46.5 +0.9**
KMI pP pP 02 46 01.0 +5.2
KMI sP sP 02 46 06.6 +6.6
KMI PP PP 02 47 05.3 +0.9
KMI S **S** **02 51 09.9 -2.9**
KMI sS sS 02 51 34.9 +5.3
KMI SS SS 02 53 24.7 -19
KMI pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
KMI pmax pmax
comp=Z,96nm,3.7s
KMI LR LR
comp=N,610nm,14.5s,MS4.7
KMI LR LR
comp=E,720nm,12.0s,MS4.7
KMI LR LR
comp=Z,1μm,12.8s,MS4.8
GTA Gaotai 34.86 296 *e*P **P** **02 45 47.0 -0.4**
GTA pP pP 02 45 56.2 -1.4
GTA PP PP 02 47 04.9 -1.8
GTA S **S** **02 51 13.3 -2.8**
GTA SS SS 02 53 26.1 -22
GTA pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
GTA pmax pmax
comp=Z,180nm,5.6s
GTA LR LR
comp=N,1μm,15.8s,MS4.9
GTA LR LR
comp=E,2μm,17.5s,MS4.9
GTA LR LR
comp=Z,2μm,17.0s,MS4.9
MOY Mondy 36.15 317 *e*P **P** **02 45 59.9 +1.6**
BILL Bilibino 39.77 14 *e*P **P** **02 46 29.2 +0.6**
BILL *i* SS SS 02 55 25.6 -0.8
BILL pmax pmax
comp=Z,21nm,2.5s,mb4.4
BILL MLR MLR
comp=Z,700nm,15.0s,MS4.6
BILL Bilibino 39.77 14 *e*P **P** **02 46 30.0 +1.4**
comp=Z,4.3nm,0.8s,mb4.2
CHTO Chiang Mai 40.28 263 *e*P **P** **02 46 34.0 +0.5**
CHTO pmax pmax
comp=Z,8.0nm,1.1s,mb4.4
CHTO Chiang Mai 40.28 263 *e*P **P** **02 46 34.0 +0.5**
comp=Z,8.4nm,1.1s,mb4.4
CMAR Chiang Mai Arr 40.44 262 P **P** **02 46 33.3 -1.5**
comp=Z,1.4nm,0.3s,mb4.1,baz=48,slow=6.3,SNR=7.1
CMAR LR LR 03 04 35.4
comp=Z,940nm,19.1s,MS4.7,baz=72,slow=38
KAPI Kappang 41.46 214 *e*P **P** **02 46 41.9 -1.3**
comp=Z,21nm,1.0s,mb4.7
WMQ Urumqi 43.91 303 P **P** **02 47 04.0 +1.1**
WMQ pP pP 02 47 16.0 +2.8
WMQ sP sP 02 47 22.0 +4.5
WMQ PP PP 02 48 49.0 +3.6
WMQ S **S** **02 53 32.0 +0.1**
WMQ SS SS 02 56 41.0 -7.9
WMQ pmax pmax
comp=Z,21nm,1.0s,mb4.8
WMQ pmax pmax
comp=Z,98nm,4.0s
WMQ LR LR
comp=N,880nm,15.0s,MS4.9
WMQ LR LR
comp=E,530nm,15.0s,MS4.9
WMQ LR LR
comp=Z,420nm,15.0s,MS4.5
COEN Coen 44.76 178 *e*P **P** **02 47 12.8 +3.0**
comp=Z,135nm,0.9s,mb5.8
ZAA0 Zalesovo Array 46.21 317 *e*P **P** **02 47 20.7 -0.2**
ZAA0 *e*PcP PcP 02 48 56.2 +0.1
ZALV Zalesovo Beam 46.21 317 P **P** **02 47 21.3 +0.4**
comp=Z,12nm,1.0s,mb4.8,baz=99,slow=6.6,SNR=32
ZALV PcP PcP 02 48 56.0 -0.1
comp=Z,6.7nm,0.8s,baz=105,slow=3.0,SNR=7.1
ZALV LR LR 03 07 18.7
comp=Z,335nm,19.0s,MS4.3,baz=101,slow=37
ZALV Zalesovo Beam 46.21 317 P **P** **02 47 21.3 +0.4**
ZALV 02 48 56.0
ZALV Zalesovo Beam 46.21 317 P **P** **02 47 21.3 +0.4**
ZALV PcP PcP 02 48 56.0 -0.1
ZALV LR LR 03 07 18.7
NVS Novosibirsk 47.22 318 *i*P **P** **02 47 29.0 +0.2**
NVS *e* 02 47 47.8
NVS *e*S **S** **02 54 20.7 +1.5**
NVS pmax pmax
comp=Z,36nm,1.2s,mb5.2
NVS pmax pmax
comp=N,7.0nm,1.1s
NVS pmax pmax
comp=E,43nm,1.1s
NVS smax
comp=N,19nm,1.6s
NVS smax
comp=E,28nm,1.4s
MKAR Makanchi Array 47.61 307 P **P** **02 47 32.7 +0.7**
comp=E,8.8nm,0.9s,mb4.8,baz=81,slow=10,SNR=24
RAMN Ramite 47.84 280 *e*P **P** **02 47 33.6 -0.4**
comp=E,37nm,1.0s,mb5.4
JIRN Jiri 47.96 281 *e*P **P** **02 47 35.1 +0.1**
comp=E,17nm,0.5s,mb5.3
GUN Gumba 48.15 281 *e*P **P** **02 47 36.3 -0.1**
comp=E,48nm,0.9s,mb5.5
KKN Kakani 48.69 281 *e*P **P** **02 47 39.9 -0.7**
comp=E,39nm,0.9s,mb5.4
KKN Kakani 48.69 281 *e*P **P** **02 47 39.9 -0.7**
KKN pmax pmax
comp=Z,39nm,0.9s,mb5.4
DMN Daman 48.89 281 *e*P **P** **02 47 42.1 -0.1**
KURK Kurchatov 49.89 312 LR LR 03 09 28.9
comp=Z,356nm,21.9s,MS4.3,baz=90,slow=37
KURK Kurchatov 49.89 312 *e*P **P** **02 47 49.4 0.0**
KURK pmax pmax
comp=Z,19nm,0.8s,mb5.2
KURK Kurchatov 49.89 312 *e*P **P** **02 47 49.4 0.0**
comp=Z,19nm,0.8s,mb5.2
TTA Tatalina 50.37 32 *e*P **P** **02 47 54.6 +1.8**
TTA pmax pmax
comp=Z,42nm,2.0s,mb5.1
TTA Tatalina 50.37 32 *e*P **P** **02 47 54.6 +1.7**
comp=Z,42nm,2.0s,mb5.1
CTAO Charters Tower 51.03 174 *e*P **P** **02 48 00.6 +2.4**
CTAO pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
CTAO Charters Tower 51.03 174 *e*P **P** **02 48 00.6 +2.4**
comp=Z,5.1nm,0.6s,mb4.6
WRAB Tennant Creek 51.14 189 *e*P **P** **02 47 59.2 +0.1**
WRAB pmax pmax
comp=Z,20nm,1.1s,mb5.0
WRAB Tennant Creek 51.14 189 *e*P **P** **02 47 59.2 +0.1**
comp=Z,20nm,1.1s,mb5.0
WRA Warramunga Arr 51.15 189 P **P** **02 47 59.3 +0.1**
comp=Z,3.7nm,0.3s,mb4.8,baz=7.0,slow=7.8,SNR=30
WRA LR LR 03 10 15.6
comp=Z,412nm,19.4s,MS4.5,baz=15,slow=37
TKM2 Tokmak 2 52.77 303 *e*P **P** **02 48 12.6 +1.4**
TKM2 pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
TKM2 Tokmak 2 52.77 303 *e*P **P** **02 48 12.6 +1.4**
comp=Z,8.0nm,0.9s,mb4.7
KSH Kashi 53.16 298 *e*P **P** **02 48 19.1 +5.0**
KSH pP pP 02 48 31.6 +6.9
KSH sP sP 02 48 36.9 +8.1
KSH PcP PcP 02 49 25.8 +3.9
KSH PP PP 02 50 21.3 +7.2
KSH ScP ScP 02 53 18.3 +1.5
KSH PcS PcS 02 53 23.4 +2.7
KSH S **S** **02 55 45.6 +3.3**
KSH sS sS 02 56 07.6 +7.8
KSH ScS ScS 02 58 01.3 +0.4
KSH SS SS 02 59 25.9 +4.1
KSH pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
KSH pmax pmax
comp=Z,130nm,8.0s
KSH LR LR
comp=N,310nm,12.2s,MS4.7
KSH LR LR
comp=E,280nm,11.9s,MS4.7
KSH LR LR
comp=Z,360nm,14.4s,MS4.6
PMR Palmer 53.45 34 *e*P **P** **02 48 16.0 +0.2**
PMR pmax pmax
comp=Z,33nm,1.4s,mb5.1
PMR Palmer 53.45 34 *e*P **P** **02 48 16.0 +0.2**
comp=Z,33nm,1.4s,mb5.1
AAK Ala-Archa 53.63 302 *ce*P **P** **02 48 19.1 +1.7**
AAK pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
AAK Ala-Archa 53.63 302 *e*P **P** **02 48 18.9 +1.4**
UCH Uchtor 53.69 302 *e*P **P** **02 48 19.1 +1.2**
comp=Z,22nm,1.5s,mb4.9
EKS2 Erkin-Say 54.14 303 *e*P **P** **02 48 22.1 +0.9**
comp=Z,18nm,1.6s,mb4.8
COLA College 54.15 30 *e*P **P** **02 48 21.6 +0.7**
COLA pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
COLA College 54.15 30 *e*P **P** **02 48 21.6 +0.7**
comp=Z,3.2nm,0.5s,mb4.5
BVAR Borovoye Array 54.82 316 P **P** **02 48 26.2 +0.3**
comp=Z,11nm,0.9s,mb4.9,baz=98,slow=9.1,SNR=14
BVAR PcP PcP 02 49 29.1 +1.1
comp=Z,2.6nm,0.6s,baz=31,slow=3.4,SNR=3.6
BRVK Borovoye 54.88 316 *ce*P **P** **02 48 26.6 +0.2**
BRVK pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
BRVK Borovoye 54.88 316 *e*P **P** **02 48 27.2 +0.9**
comp=Z,9.0nm,0.8s,mb4.8
ASAR Alice Springs 54.88 189 P **P** **02 48 26.8 +0.1**
comp=Z,4.7nm,0.7s,mb4.6,baz=5.8,slow=4.8,SNR=24
BMRM Bremner River 55.64 35 *e*P **P** **02 48 31.4 -0.4**
comp=Z,45nm,1.4s,mb5.3
EIDS Eidsvold 56.82 170 *e*P **P** **02 48 41.9 +1.4**
comp=Z,193nm,2.8s,mb5.6
EGAK Eagle 57.01 30 *e*P **P** **02 48 40.6 -0.9**
comp=Z,5.3nm,0.8s,mb4.6
DZM Mont Dzumac 57.95 153 *e*LR LR 03 05 47.5
comp=Z,340nm,24.6s
INK Inuvik 59.71 25 P **P** **02 48 59.2 -1.0**
comp=Z,4.4nm,0.6s,mb4.7,baz=337,slow=2.6,SNR=8.1
SVE Sverdlovsk 59.80 321⇑ *e*P **P** **02 49 02.0 +1.0**
SVE *e* 02 49 45.8
SVE *e*S **S** **02 57 14.7 +5.0**
SVE pmax pmax
comp=Z,39nm,1.0s,mb5.4
SVE MLR MLR
comp=Z,660nm,19.0s,MS4.8
KBL Kabul 59.84 294 *e*P **P** **02 49 02.2 +0.5**
KBL pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
KBL Kabul 59.84 294 *e*P **P** **02 49 02.2 +0.6**
comp=Z,4.0nm,0.6s,mb4.6
ARU Arti 61.01 321 *c i*P **P** **02 49 09.5 +0.2**
ARU 02 49 51.7
ARU S **S** **02 57 28.5 +3.3**
ARU SS SS 03 01 21.3 -3.2
ARU pmax pmax
comp=Z,34nm,1.2s,mb5.3
ARU MLR MLR
comp=Z,475nm,19.0s,MS4.7
ARU Arti 61.01 321 *e*P **P** **02 49 08.9 -0.4**
comp=Z,22nm,0.8s,mb5.3
ABKAR Akbulak array 61.99 313 *e*P **P** **02 49 16.2 +0.1**
comp=Z,12nm,0.8s,mb5.1
STKA Stephens Creek 62.57 180 P **P** **02 49 19.1 -0.8**
comp=Z,3.2nm,0.7s,mb4.6,baz=21,slow=6.5,SNR=4.1
STKA LR LR 03 16 08.9
comp=Z,431nm,20.1s,MS4.6,baz=22,slow=36
FORT Forrest 62.79 193 *e*P **P** **02 49 22.2 +0.7**
comp=Z,39nm,0.9s,mb5.5
KBS Kingsbay 66.58 351 *ce*P **P** **02 49 46.6 +1.0**
KBS pmax pmax
comp=Z,6.0nm,1.2s,mb4.5
RES Resolute Bay 68.38 14 *e*P **P** **02 49 56.3 -0.8**
RES pmax pmax
comp=Z,41nm,1.9s,mb5.1
RES Resolute Bay 68.38 14 *e*P **P** **02 49 56.3 -0.8**
comp=Z,41nm,1.9s,mb5.1
YKA Yellowknife Ar 68.96 29 P **P** **02 49 59.6 -1.3**
comp=Z,2.0nm,0.6s,mb4.3,baz=295,slow=6.0,SNR=6.6
YKA LR LR 03 22 36.7
comp=Z,12nm,19.4s,baz=125,slow=38
ARCES ARCESS Array B 69.66 340 P **P** **02 50 03.9 -1.1**
comp=Z,6.5nm,0.8s,mb4.6,baz=57,slow=9.1,SNR=9.2
ARCES ARCESS Array B 69.66 340 P **P** **02 50 03.9 -1.1**
JOF Joensuu 71.33 333 *e*P **P** **02 50 14.7 -0.6**
JOF pmax pmax
comp=Z,12nm,0.9s,mb4.8
JOF Joensuu 71.33 333 *e*p **P** **02 50 14.7 -0.6**
comp=Z,12nm,0.9s,mb4.8
JOF Joensuu 71.33 333 *e*p **P** **02 50 14.7 -0.6**
comp=Z,12nm,0.9s,mb4.8
DAG Danmarks Havn 71.75 355⇓ *e*P **P** **02 50 17.0 -0.7**
DAG pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
DAG Danmarks Havn 71.75 355⇓ *i*P **P** **02 50 17.0 -0.7**
comp=Z,2.2nm,0.8s,mb4.1
F04A Amboy 72.27 47⇑P **P** **02 50 20.4 -0.9**
baz=72
MAK Makhachkala 72.31 310 *e*P **P** **02 50 19.3 -2.3**
MAK *e*PPP 02 54 48.8
MAK *e*S S 02 59 41.4 -1.0
MAK *e* 03 00 24.5
MAK pmax pmax
comp=Z,77nm,1.3s,mb5.5
MAK MLR MLR
comp=Z,2μm,17.0s,MS5.4
OBN Obninsk 73.00 325 *e*P **P** **02 50 25.2 -0.3**
OBN *e* 02 50 39.6
OBN *i* S S 02 59 52.7 +2.9
OBN *e*SS SS 03 04 39.0 +9.0
OBN pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
OBN MLR MLR
comp=Z,800nm,15.0s,MS5.1
VSR Storozhevoye 73.56 320 *e*P **P** **02 50 29.3 +0.4**
VSR pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
VSR pmax pmax
comp=N,1.0nm,0.3s
VSR pmax pmax
comp=E,2.0nm,0.7s
VSR MLR MLR
comp=E,240nm,15.0s,MS4.8
VSR MLR MLR
comp=Z,580nm,15.0s,MS5.0
VSR MLR MLR
comp=N,220nm,13.0s,MS4.8
KAF Kangasniemi 73.71 334 *e*P **P** **02 50 26.1 -3.4**
KAF pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
KAF Kangasniemi 73.71 334 *e*p **P** **02 50 26.1 -3.4**
comp=Z,7.2nm,0.9s,mb4.6
KAF Kangasniemi 73.71 334 *e*p **P** **02 50 26.1 -3.4**
comp=Z,7.2nm,0.9s,mb4.6
YBH Yreka Blue Hor 73.98 51 *e*P **P** **02 50 34.0 +2.5**
EDM Edmonton 74.01 37 *e*P **P** **02 50 31.2 -0.3**
FINES FINESS Array B 74.19 333 P **P** **02 50 32.5 +0.1**
comp=Z,3.5nm,0.7s,mb4.4,baz=57,slow=7.0,SNR=19
FINES LR LR 03 25 47.3
comp=Z,273nm,18.1s,MS4.6,baz=233,slow=38
GOF Gofitskoye 74.23 313 *e*P **P** **02 50 40.9 +8.0**
NEW Newport 74.39 43 *e*P **P** **02 50 36.9 +3.1**
K05A Summer Lake 74.71 49⇑P **P** **02 50 35.6 -0.2**
baz=74
ZEI Tsey 74.76 311 *e*P **P** **02 50 35.2 -0.8**
ZEI pmax pmax
comp=Z,16nm,1.5s,mb4.7
KIV Kislovodsk 74.98 312 *e*P **P** **02 50 38.4 +1.1**
KIV *e*S S 03 00 14.0 +1.6
KIV pmax pmax
comp=Z,18nm,1.1s,mb4.9
KIV MLR MLR
comp=Z,461nm,19.0s,MS4.8
KIV Kislovodsk 74.98 312 *e*P **P** **02 50 38.3 +1.0**
comp=Z,39nm,1.4s,mb5.2
GNI Garni 75.44 308 *ce*P **P** **02 50 39.3 -0.7**
GNI pmax pmax
comp=Z,24nm,1.2s
GNI Garni 75.44 308 *e*P **P** **02 50 41.7 +1.7**
comp=Z,50nm,1.4s,mb5.3
D11A Klaveano Farm, 75.45 44⇓P **P** **02 50 39.1 -0.8**
baz=75
WALA Waterton Lakes 75.84 41 *e*P **P** **02 50 42.5 +0.4**
comp=Z,0.2nm,0.7s
G10A Bishop Farm, J 75.86 46⇑P **P** **02 50 41.2 -1.1**
baz=76
B13A Whitefish 75.87 42⇓P **P** **02 50 41.2 -1.1**
baz=76
E11A Bogner Ranch, 75.88 44⇑P **P** **02 50 41.9 -0.5**
baz=76
BSMT Bassoo Peak 75.96 42 *e*P **P** **02 50 46.8 +4.0**
BMO Blue Mountains 75.96 46 *e*P **P** **02 50 42.2 -0.7**
comp=Z,21nm,1.7s,mb4.8
J08A Circle Bar Ran 75.96 48⇑P **P** **02 50 42.6 -0.3**
baz=76
D12A Red Ives Fores 76.03 43⇓P **P** **02 50 42.5 -0.7**
baz=76
I09A Lost Marbles R 76.12 47⇓P **P** **02 50 43.4 -0.5**
baz=76
F11A Grangeville 76.14 45⇑P **P** **02 50 43.6 -0.3**
baz=76
A14A Double T Ranch 76.16 41⇓P **P** **02 50 43.4 -0.5**
baz=76
C13A Hot Springs 76.17 43⇓P **P** **02 50 43.8 -0.2**
baz=76,SNR=6.5
E12A Beaver Dam Sad 76.23 44⇑P **P** **02 50 44.1 -0.2**
baz=76
JTMT Jette 76.30 42 *e*P **P** **02 50 44.7 -0.1**
WVOR Wild Horse Val 76.31 49 *e*P **P** **02 50 46.1 +1.2**
WVOR pmax pmax
comp=Z,51nm,2.0s,mb5.1
WVOR Wild Horse Val 76.31 49 *e*P **P** **02 50 46.0 +1.1**
comp=Z,51nm,2.0s,mb5.1
G11A Walters Elk Ra 76.32 45⇓P **P** **02 50 44.7 -0.2**
baz=76
YBMT Yellow Bay 76.40 42 *e*P **P** **02 50 47.8 +2.5**
J09A Fry Pan Ranch, 76.43 48⇑P **P** **02 50 45.0 -0.6**
baz=76
BEKR Beckworth 76.43 52⇓P **P** **02 50 44.7 -0.9**
baz=76
H10A Noah's Angus R 76.44 46⇑P **P** **02 50 44.9 -0.7**
baz=76
D13A Huson 76.54 43⇑P **P** **02 50 45.4 -0.7**
baz=76
A15A Johnson Ranch, 76.54 41⇓P **P** **02 50 45.5 -0.6**
baz=76
B14A Marquette Ranc 76.56 41⇓P **P** **02 50 45.6 -0.6**
baz=76
SWMT Swartz Lake 76.59 42 *e*P **P** **02 50 46.5 +0.1**
C14A Swan Lake 76.60 42⇓P **P** **02 50 46.3 -0.1**
baz=76,SNR=5.4
SUMG Summit 76.67 0 *i*P **P** **02 50 47.4 +1.0**
comp=Z,4.2nm,0.9s,mb4.4
F12A Elk City 76.75 44⇓P **P** **02 50 47.0 -0.3**
baz=76
H11A Donnelly 76.83 46⇓P **P** **02 50 47.2 -0.6**
baz=77
MSO Missoula 76.98 43 *e*P **P** **02 50 49.3 +0.7**
B15A Bradely Ranch, 76.99 41⇑P **P** **02 50 48.3 -0.4**
baz=77,SNR=16
SLMT Seeley Lake 77.02 42 *e*P **P** **02 50 48.5 -0.3**
G12A Big Creek, Yel 77.03 45⇓P **P** **02 50 48.6 -0.3**
baz=77
D14A Greenough 77.10 43⇓P **P** **02 50 49.2 -0.1**
baz=77
C15A Salmond Ranch, 77.25 42⇓P **P** **02 50 50.1 0.0**
baz=77,SNR=15
K10A MacKenzie Ranc 77.27 48⇑P **P** **02 50 50.2 -0.1**

baz=77
F13A **Darby** 77.29 44 ⇓P P 02 50 49.8 -0.6
baz=77
CMB **Columbia Colle** 77.31 53 eP P 02 50 50.1 -0.5
CMB pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
CMB **Columbia Colle** 77.31 53 eP P 02 50 50.1 -0.5
comp=Z,5.5nm,0.8s,mb4.5
CHMT **Chamberlain Mo** 77.33 43 eP P 02 50 50.8 +0.2
B16A **M & M Farms, S** 77.42 41 ⇓P P 02 50 50.7 -0.4
baz=77
IZAR **Zarasai** 77.55 328 eP P 02 50 52.6 +1.0
IZAR AMB AMB 02 50 58.5
comp=Z,3.4nm,1.7s,mb4.0
MNK **Minsk** 77.57 327 eP P 02 50 52.0 +0.2
IDID **Didziasalis** 77.59 328 eP P 02 50 53.5 +1.7
IDID AMB AMB 02 50 58.4
comp=Z,4.0nm,1.0s,mb4.3
MFID **Camas Ranch** 77.60 47 ⇓P P 02 50 51.9 -0.2
baz=77
H12A **Diamond D Ranc** 77.62 45 ⇑P P 02 50 51.8 -0.5
baz=77
A17A **Triple J Farms** 77.69 40 ⇓P P 02 50 52.4 -0.1
baz=77
D15A **Lincoln** 77.69 42 ⇑P P 02 50 52.3 -0.2
baz=77
G13A **Cobalt** 77.71 45 ⇓P P 02 50 52.3 -0.5
baz=78,SNR=5.1
ISAL **Salakas** 77.71 328 eP P 02 50 53.1 +0.6
ISAL AMB AMB 02 50 59.3
comp=Z,4.5nm,1.2s,mb4.3
IIGN **Ignalina** 77.80 328 eP P 02 50 54.2 +1.2
IIGN AMB AMB 02 50 59.9
comp=Z,4.6nm,1.6s,mb4.2
K11A **Parker Ranch,** 77.81 47 ⇓P P 02 50 53.1 -0.2
baz=78
ANN **Anapa** 77.81 315 eP P 02 50 50.9 -2.4
ANN eS S 03 00 43.8 +0.3
ANN pmax pmax
comp=Z,19nm,1.0s,mb5.0
I12A **Atlanta** 77.84 46 ⇑P P 02 50 53.0 -0.5
baz=78
L10A **Juniper Basin** 77.88 48 ⇓P P 02 50 53.4 -0.3
baz=78
E15A **Deer Lodge** 77.95 43 ⇑P P 02 50 53.8 -0.2
baz=78,SNR=7.2
H13A **Challis** 77.98 45 ⇓P P 02 50 54.2 0.0
baz=78,SNR=14
B17A **L&G Farms, Che** 77.99 41 ⇑P P 02 50 53.7 -0.5
baz=78
M10A **I.L. Ranch, Tu** 78.12 49 ⇑P P 02 50 55.1 0.0
baz=78
J12A **Stokes Ranch,** 78.14 47 ⇑P P 02 50 55.0 -0.2
baz=78
A18A **Metzger Ranch,** 78.17 40 ⇑P P 02 50 54.8 -0.4
baz=78
D16A **Dana Ranch, Ca** 78.26 42 ⇓P P 02 50 55.8 +0.1
baz=78
L11A **Cat Creek Ranc** 78.29 48 ⇑P P 02 50 55.6 -0.5
baz=78
F15A **Butte** 78.35 43 ⇑P P 02 50 56.3 0.0
baz=78,SNR=29
LRM **Limekiln Ridge** 78.39 43 eP P 02 50 56.9 +0.4
I13A **Wildhorse Cree** 78.40 46 ⇑P P 02 50 56.6 0.0
baz=78,SNR=5.1
HLID **Hailey** 78.41 46 ⇑P P 02 50 56.5 -0.1
baz=78
HLID **Hailey** 78.41 46 eP P 02 50 56.6 0.0
comp=Z,3.6nm,0.9s,mb4.3
E16A **East Helena** 78.45 42 ⇓P P 02 50 56.7 -0.1
baz=78
H14A **Leadore** 78.49 45 ⇓P P 02 50 56.9 -0.1
baz=78
B18A **Beardsley Farm** 78.50 40 ⇓P P 02 50 56.7 -0.4
baz=78
NVAR **Mina Array Bea** 78.53 52 P P 02 50 57.6 +0.2
comp=Z,3.8nm,0.7s,mb4.5,baz=288,slow=5.9,SNR=19
DLMT **Dillon** 78.55 44 eP P 02 50 57.2 -0.2
K12A **Draper Farm, C** 78.59 47 ⇓P P 02 50 57.8 +0.1
baz=78
J13A **Cove Ranch, Pi** 78.64 46 ⇑P P 02 50 57.9 0.0
baz=78
M11A **Holland Ranch,** 78.65 48 ⇓P P 02 50 58.3 +0.3
baz=78
D17A **Six Diamond Ra** 78.68 42 ⇓P P 02 50 57.8 -0.3
baz=78,SNR=5.2
FFC **Flin Flon** 78.70 32 iP P 02 50 58.2 +0.2
FFC **Flin Flon** 78.70 32 eP P 02 50 57.1 -0.9
comp=Z,5.9nm,0.8s,mb4.6
G15A **Dillon** 78.72 44 ⇑P P 02 50 58.1 -0.3
baz=78
EGMT **Eagleton** 78.72 40 ⇓P P 02 50 58.3 0.0
baz=78
EGMT **Eagleton** 78.72 40 eP P 02 51 00.6 +2.4
L12A **House Creek Ra** 78.77 48 ⇑P P 02 50 59.1 +0.4
baz=78
I14A **Mackay** 78.80 45 ⇓P P 02 50 59.2 +0.4
baz=78,SNR=19
F16A **Kennard Place,** 78.89 43 ⇓P P 02 50 59.0 -0.3
baz=79,SNR=5.5
BOZ **Bozeman (W)** 78.97 43 ⇓P P 02 50 59.5 -0.1
baz=79
BOZ **Bozeman (W)** 78.97 43 eP P 02 50 59.8 +0.1
BOZ pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
BOZ **Bozeman (W)** 78.97 43 eP P 02 50 59.8 +0.2
comp=Z,3.3nm,0.8s,mb4.3
E17A **Martinsdale** 78.97 42 ⇓P P 02 50 59.6 0.0
baz=79
G16A **Moss Hill, Enn** 79.09 44 ⇓P P 02 51 00.2 -0.1
baz=79
K13A **Stover Farm, H** 79.09 47 ⇓P P 02 51 00.6 +0.1
baz=79
AKASG **Malin Array Be** 79.14 323 P P 02 51 00.4 -0.1
comp=Z,5.0nm,0.8s,mb4.5,baz=47,slow=5.6,SNR=19
AKASG LR LR 03 28 34.4
comp=Z,881nm,18.0s,MS5.1,baz=60,slow=38
AKASG **Malin Array Be** 79.14 323 P P 02 51 00.4 -0.1
AKASG LR LR 03 28 34.4
AKBB **Malin Array Si** 79.14 323 eP P 02 51 00.1 -0.4
KIEV **Kiev** 79.15 323 eP P 02 51 00.2 -0.4
KIEV pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
KIEV **Kiev** 79.15 323 eP P 02 51 00.2 -0.4
comp=Z,6.5nm,0.8s,mb4.6
D18A **Linhart Farms,** 79.16 41 ⇑P P 02 51 00.4 -0.3
baz=79
M12A **Wells** 79.22 48 ⇓P P 02 51 01.2 0.0
baz=79
ELK **Elko** 79.37 49 LR LR 03 23 07.9
comp=Z,407nm,18.9s,MS4.8,baz=270,slow=34
F17A **Fitzpatrick Pl** 79.39 43 ⇓P P 02 51 01.7 -0.3
baz=79,SNR=5.6
E18A **Harlowton** 79.45 42 ⇓P P 02 51 02.1 -0.1
baz=79,SNR=6.4
L13A **Double Diamond** 79.48 47 ⇓P P 02 51 02.8 +0.2
baz=79
Q10A **Clear Creek Ra** 79.61 51 ⇓P P 02 51 03.7 +0.4
baz=79
H16A **Russell Place,** 79.71 44 ⇓P P 02 51 03.7 0.0
baz=79
J15A **Blackfoot** 79.71 45 ⇓P P 02 51 03.6 -0.1
baz=80
K14A **Jones Ranch, D** 79.72 46 ⇑P P 02 51 03.9 +0.1
baz=80,SNR=7.2
NB2 **NORSAR Subarra** 79.77 338 P P 02 51 03.1 -0.6
comp=Z,2.6nm,0.6s,mb4.3,baz=41,slow=5.3
NOA **NORSAR Array B** 79.77 338 P P 02 51 03.1 -0.6
comp=Z,3.0nm,0.7s,mb4.3,baz=41,slow=5.4,SNR=18
NOA LR LR 03 29 37.2
comp=Z,411nm,19.9s,MS4.8,baz=35,slow=38
F18A **Big Timber** 79.94 42 ⇓P P 02 51 04.9 0.0
baz=80
O12A **Currie** 79.94 49 ⇑P P 02 51 05.2 +0.1
baz=80,SNR=8.2
S10A **Tonopah Range,** 79.95 52 ⇑P P 02 51 05.3 +0.2
baz=80
L14A **Malta** 79.95 47 ⇑P P 02 51 05.3 +0.2
baz=80
NAO01 **NORSAR Array S** 80.02 338 eP P 02 51 04.7 -0.4
comp=Z,1.8nm,0.7s,mb4.1
I16A **Newdale** 80.02 45 ⇓P P 02 51 05.7 +0.2
baz=80
K15A **Arbon** 80.04 46 ⇓P P 02 51 05.9 +0.4
baz=80
KEMA **Kemaliye** 80.05 310 iP P 02 51 07.3 +1.6
Q11A **Duckwater** 80.09 51 ⇑P P 02 51 05.6 -0.4
baz=80
M14A **Sheep Mountain** 80.17 47 ⇓P P 02 51 06.0 -0.3
baz=80,SNR=5.8
P12A **McGill** 80.25 50 ⇑P P 02 51 06.5 -0.2
baz=80
H17A **Grant Village** 80.28 44 ⇑P P 02 51 06.8 0.0
baz=80
MPMC **Manual Prospec** 80.30 54 ⇑P P 02 51 07.3 +0.2
baz=80
IMW **Indian Meadow** 80.34 44 eP P 02 51 08.4 +1.2
HVU **Hansel Valley** 80.38 47 eP P 02 51 07.9 +0.5
HVU pmax pmax
comp=Z,31nm,1.4s,mb5.0
HVU **Hansel Valley** 80.38 47 eP P 02 51 07.9 +0.5
comp=Z,31nm,1.4s,mb5.0
R11A **Troy Canyon, C** 80.40 51 ⇓P P 02 51 07.6 0.0
baz=80,SNR=6.2
RRI2 **Red Ridge** 80.42 45 eP P 02 51 08.0 +0.4
comp=Z,8.5nm,0.7s,mb4.8
L15A **Malad City** 80.50 47 ⇓P P 02 51 08.1 0.0
baz=80
FURC **Furnace Creek,** 80.52 53 ⇑P P 02 51 08.8 +0.5
baz=80
K16A **Soda Springs** 80.54 46 ⇓P P 02 51 08.4 +0.1
baz=80,SNR=5.2
TPAW **Teton Pass** 80.56 45 eP P 02 51 09.3 +0.9
comp=Z,5.3nm,0.8s,mb4.5
EDW2 **Edwards Air Fo** 80.56 55 ⇓P P 02 51 08.4 -0.1
baz=80
N14A **Grayback Hills** 80.63 48 ⇓P P 02 51 08.4 -0.4
baz=80,SNR=5.3
RLMT **Red Lodge** 80.64 43 ⇑P P 02 51 09.0 +0.2
baz=80
RLMT **Red Lodge** 80.64 43 eP P 02 51 09.9 +1.2
BGU **Big Grassy Mou** 80.69 48 eP P 02 51 08.7 -0.4
comp=Z,6.8nm,1.2s,mb4.5
REDW **Red Top Meadow** 80.69 45 eP P 02 51 11.0 +2.0
LOHW **Long Hollow** 80.70 44 eP P 02 51 09.9 +0.8
comp=Z,9.4nm,1.3s,mb4.6
U10A **Ash Meadows, A** 80.91 53 ⇓P P 02 51 10.8 +0.4
baz=81
R12A **Pony Springs,** 81.06 51 ⇓P P 02 51 11.4 +0.3
baz=81
L16A **Fish Haven** 81.09 46 ⇑P P 02 51 11.2 0.0
baz=81
Q13A **Wheeler Ranch,** 81.11 50 ⇑P P 02 51 11.8 +0.4
baz=81
DUG **Dugway** 81.22 48 ⇓P P 02 51 11.8 -0.1
baz=81,SNR=7.4
DUG **Dugway** 81.22 48 eP P 02 51 12.0 0.0
DUG pmax pmax
comp=Z,27nm,1.4s,mb5.0
DUG **Dugway** 81.22 48 eP P 02 51 12.0 0.0
comp=Z,27nm,1.4s,mb5.0
HWUT **Hardware Ranch** 81.23 47 eP P 02 51 12.2 +0.3
comp=Z,41nm,1.6s,mb5.1
T11A **Corn Creek, Al** 81.23 52 ⇑P P 02 51 12.0 -0.1
baz=81
J18A **Kendall Valley** 81.28 45 ⇓P P 02 51 12.2 0.0
baz=81
P14A **Drum Mountains** 81.39 49 ⇑P P 02 51 12.7 -0.1
baz=81,SNR=12
R13A **O'Grain Ranch,** 81.57 50 ⇓P P 02 51 13.9 +0.1
baz=81
Q14A **Sevier Lake (B** 81.58 49 ⇑P P 02 51 13.6 -0.3
baz=81,SNR=16
TUQ **Turquoise Moun** 81.71 54 ⇑P P 02 51 14.9 +0.3
baz=82
BW06 **Boulder Array** 81.81 45 ⇑P P 02 51 14.7 -0.3
baz=82
BW06 **Boulder Array** 81.81 45 eP P 02 51 13.8 -1.2
comp=Z,4.6nm,0.9s,mb4.4
PDAR **Pinedale Array** 81.81 45 P P 02 51 14.8 -0.3
comp=Z,3.2nm,0.8s,mb4.3,baz=290,slow=2.1,SNR=15
PDAR LR LR 03 24 29.8
comp=Z,155nm,18.6s,MS4.4,baz=70,slow=34
NLU **North Lily Min** 81.83 48 eP P 02 51 18.7 +3.5
JLU **Jordanelle** 81.86 47 eP P 02 51 15.6 +0.2
comp=Z,22nm,1.2s,mb5.0
M17A **Scullys Gap (B** 81.87 46 ⇓P P 02 51 15.0 -0.3
baz=82
PPT **Papeete** 81.88 116 eS S 03 01 29.1 +2.2
PPT eLR LR 03 16 21.9
comp=Z,289nm,24.2s
comp=Z,259nm,21.5s
PPT **Papeete** 81.88 116 LR LR 03 21 11.6
comp=Z,258nm,18.7s,MS4.6,baz=190,slow=31
S13A **Holt Ranch, En** 81.96 51 ⇑P P 02 51 15.5 -0.4
baz=82,SNR=5.8
L18A **Fontenelle, Gr** 82.00 46 ⇓P P 02 51 15.9 -0.2
baz=82
DAU **Daniels Canyon** 82.09 47 eP P 02 51 17.3 +0.8
ARUT **Antelope Range** 82.13 51 eP P 02 51 17.7 +0.9
ARUT pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
ARUT **Antelope Range** 82.13 51 eP P 02 51 17.7 +0.9
comp=Z,10nm,1.2s,mb4.6
Q15A **Fillmore** 82.16 49 ⇓P P 02 51 16.8 -0.1
baz=82
K19A **Absolon Red Bu** 82.21 44 ⇑P P 02 51 16.8 -0.3
baz=82
GMRC **Granite Mounta** 82.25 54 ⇓P P 02 51 17.6 +0.1
baz=82
M18A **Lyman** 82.26 46 ⇓P P 02 51 17.5 +0.1
baz=82
V12A **Nelson** 82.30 53 ⇓P P 02 51 17.5 -0.2
baz=82
LVV **L'vov** 82.31 325 eP P 02 51 22.3 +4.8
LVV MLR MLR
comp=N,500nm,16.0s,MS5.2
LVV MLR MLR
comp=Z,800nm,16.0s,MS5.2
LVV MLR MLR
comp=E,600nm,17.0s,MS5.2
PFO **Pinyon Flat Ob** 82.31 55 ⇑P P 02 51 17.5 -0.4
baz=82
CCUT **Cedar City** 82.31 51 eP P 02 51 17.8 +0.1
comp=E,8.3nm,1.3s,mb4.5
L19A **Farson** 82.31 45 ⇑P P 02 51 17.7 +0.1
baz=82
BELC **Belle Mtn. Jos** 82.42 55 ⇑P P 02 51 17.9 -0.5
baz=82
U13A **Pakoon Wash** 82.53 52 ⇓P P 02 51 19.0 +0.1
baz=82
O17A **Robinson Place** 82.54 47 ⇑P P 02 51 18.9 0.0
baz=82,SNR=15
MSU **Marysvale** 82.56 49 eP P 02 51 19.5 +0.5
MONP **Monument Peak** 82.72 56 ⇑P P 02 51 19.8 -0.1
baz=82
N18A **Larsen Ranch,** 82.77 46 ⇓P P 02 51 20.0 -0.1
baz=82
V13A **Grand Canyon W** 82.82 52 ⇓P P 02 51 20.4 0.0
baz=83
IRM **Iron Mountain** 82.93 54 ⇑P P 02 51 21.2 +0.2
baz=83
BR131 **Keskin Array S** 82.94 312 eP P 02 51 22.2 +1.3
comp=E,12nm,1.0s,mb4.9
BRTR **Keskin Array B** 82.94 312 P P 02 51 21.9 +1.0
comp=E,8.6nm,0.9s,mb4.8,baz=104,slow=4.0,SNR=36
BRTR LR LR 03 34 00.8
comp=E,122nm,18.5s,MS4.3,baz=221,slow=40
BRTR **Keskin Array B** 82.94 312 P P 02 51 21.9 +1.0
BRTR LR LR 03 34 00.8
P17A **Butcher Ranch,** 82.95 48 ⇑P P 02 51 20.7 -0.3
baz=83
O18A **Roosevelt** 82.96 47 ⇑P P 02 51 21.3 +0.2
baz=83
L20A **Wamsutter** 82.99 45 ⇓P P 02 51 21.2 +0.1
baz=83
Q16A **Castle Valley** 82.99 49 ⇓P P 02 51 21.2 0.0
baz=83
BC3 **Big Chuckawall** 82.99 55 ⇓P P 02 51 20.9 -0.5
baz=83
U14A **Mt Trumbull** 83.05 52 ⇑P P 02 51 21.4 -0.3
baz=83
KWP **Kalwaria Pacla** 83.08 325 eP P 02 51 21.9 +0.4
KWP pmax pmax
comp=Z,27nm,1.0s,mb5.2
KWP **Kalwaria Pacla** 83.08 325 eP P 02 51 21.9 +0.3
comp=Z,27nm,1.0s,mb5.2
KWP **Kalwaria Pacla** 83.08 325 ⇓iP P 02 51 21.9 +0.4
BUR08 **Bucovina Ar. S** 83.10 322 eP P 02 51 22.1 +0.5
BURAR **Bucovina Array** 83.11 322 ⇓P P 02 51 21.8 +0.1
BURAR **Bucovina Array** 83.11 322 ⇓iP P 02 51 21.8 +0.1
N19A **John Jarvie Ra** 83.12 46 ⇓P P 02 51 21.8 -0.1
baz=83
R16A **Teasdale** 83.14 49 ⇑P P 02 51 22.1 +0.1
baz=83
P18A **Preston Nutter** 83.18 48 ⇓P P 02 51 22.3 +0.1
baz=83
T15A **Red Dirt Ranch** 83.26 51 ⇓P P 02 51 22.6 0.0
baz=83
SRU **San Rafael** 83.29 48 ⇑P P 02 51 22.8 0.0
baz=83
SRU **San Rafael** 83.29 48 eP P 02 51 22.9 +0.1
SRU pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
SRU **San Rafael** 83.29 48 eP P 02 51 22.9 +0.1
comp=Z,8.2nm,0.9s,mb4.8
VRI **Vrincioaia** 83.39 320 ⇓P P 02 51 24.6 +1.4
VRI **Vrincioaia** 83.39 320 ⇓iP P 02 51 24.6 +1.4
HARR **Harsova** 83.45 319 ⇓P P 02 51 24.4 +0.9
HARR **Harsova** 83.45 319 ⇓iP P 02 51 24.4 +0.9
SGKT **Sivrigoynuk** 83.45 314 iP P 02 51 22.6 -1.0
O19A **Miners Draw (B** 83.50 47 ⇑P P 02 51 23.7 -0.2
baz=83
V14A **Boquillas Ranc** 83.54 52 ⇑P P 02 51 23.9 -0.3
baz=83,SNR=6.0
Q18A **Rafter H Ranch** 83.55 48 ⇓P P 02 51 23.7 -0.4
baz=83
R17A **Hanksville Air** 83.57 49 ⇓P P 02 51 23.9 -0.3
baz=83
L21A **Rawlins** 83.60 44 ⇑P P 02 51 24.4 0.0
baz=83
X13A **Yucca** 83.61 53 ⇑P P 02 51 24.4 -0.1
baz=83,SNR=5.6
U15A **North Rim** 83.64 51 ⇑P P 02 51 24.3 -0.4
baz=83
N20A **Spence Gulch,** 83.72 46 ⇑P P 02 51 25.0 +0.1
baz=84
KOLS **Kolonicke sedl** 83.76 325 eP P 02 51 25.1 +0.1
KOLS pmax pmax
comp=Z,10.0nm,1.5s,mb4.7
KOLS **Kolonicke sedl** 83.76 325 eP P 02 51 25.1 +0.1
comp=Z,10nm,1.5s,mb4.7
KOLS **Kolonicke sedl** 83.76 325 eP P 02 51 25.1 +0.1
GLA **Glamis** 83.76 55 ⇑P P 02 51 25.5 +0.1
baz=84
W14A **Seligman** 83.78 53 ⇓P P 02 51 25.2 -0.3
baz=84
M21A **Separation Pea** 83.81 45 ⇓P P 02 51 25.3 -0.1
baz=84
RWWY **Rawlins** 83.86 45 eP P 02 51 27.8 +2.1
comp=Z,46nm,1.7s,mb5.3
STHS **Stebnicka Huta** 83.94 325 eP P 02 51 27.5 +1.6
STHS pmax pmax
comp=Z,7.0nm,1.1s,mb4.7
STHS **Stebnicka Huta** 83.94 325 eP P 02 51 27.5 +1.6
comp=Z,6.8nm,1.1s,mb4.7
STHS **Stebnicka Huta** 83.94 325 eP P 02 51 27.5 +1.6
UZH **Uzhgorod** 83.95 324 ⇑iP P 02 51 26.8 +0.8
UZH e pP 02 51 37.4 +0.3
UZH eS S 03 01 45.8 -1.4
UZH MLR MLR
comp=N,200nm,15.0s,MS5.0
UZH MLR MLR
comp=E,500nm,15.0s,MS5.0
UZH MLR MLR
comp=Z,400nm,15.0s,MS4.9
S17A **Black Ridge (B** 83.95 50 ⇑P P 02 51 26.0 -0.2
baz=84
V15A **Kaibab Nationa** 84.06 52 ⇓P P 02 51 26.8 0.0
baz=84
OJC **Ojcow** 84.09 327 eP P 02 51 26.1 -0.6
OJC eS S 03 01 45.3 -3.4
OJC L 03 32 17.7
comp=Z,0.4nm,17.7s
R18A **Canyonlands Na** 84.11 49 ⇓P P 02 51 27.1 +0.1
baz=84
L22A **Ellis Ranch, M** 84.12 44 ⇓P P 02 51 27.1 +0.2
baz=84
O20A **White River Ci** 84.14 46 ⇓P P 02 51 27.2 +0.1
baz=84
TRPA **Tarpa** 84.15 324 ⇓iP P 02 51 27.7 +0.7
CRVS **Cervenica-Dubn** 84.18 325 eP P 02 51 27.7 +0.6
CRVS pmax pmax
comp=Z,30nm,2.3s,mb5.0
CRVS **Cervenica-Dubn** 84.18 325 eP P 02 51 27.7 +0.6
comp=Z,30nm,2.3s,mb5.0
CRVS **Cervenica-Dubn** 84.18 325 eP P 02 51 27.7 +0.6
Q19A **Hogan Spring (** 84.19 48 ⇓P P 02 51 27.3 -0.1
baz=84
N21A **Black Mountain** 84.22 45 ⇓P P 02 51 27.6 0.0
baz=84
RSSD **Black Hills** 84.24 41 eP P 02 51 29.2 +1.7
RSSD pmax pmax
comp=Z,11nm,1.5s,mb4.8
RSSD **Black Hills** 84.24 41 eP P 02 51 29.2 +1.7
comp=Z,12nm,1.5s,mb4.8
X14A **Yava** 84.33 53 ⇑P P 02 51 27.9 -0.3
baz=84
W15A **Williams** 84.36 52 ⇑P P 02 51 28.3 0.0
baz=84
NIE **Niedzica** 84.39 326 eP P 02 51 29.1 +0.9
P20A **De Beque** 84.42 47 ⇓P P 02 51 28.4 -0.2
baz=84
S18A **Hurst Farm, Bl** 84.44 49 ⇓P P 02 51 28.1 -0.7
baz=84,SNR=6.4
ULM **Lac du Bonnet** 84.45 33 eP P 02 51 29.1 +0.6
comp=Z,2.4nm,0.8s,mb4.4
Z13A **Yuma Proving G** 84.50 55 ⇓P P 02 51 28.7 -0.4
baz=84
Y14A **Wickenburg** 84.54 54 ⇓P P 02 51 28.3 -1.0
baz=84
O21A **Pagoda** 84.57 46 ⇑P P 02 51 29.0 -0.3
baz=84
R19A **Curley Farm, L** 84.57 48 ⇓P P 02 51 29.3 -0.1
baz=84
TAOE **Nuku Hiva Isla** 84.63 104 eLR LR 03 18 06.2
comp=Z,298nm,24.3s
PV04 **Paradox Valley** 84.74 48 eP P 02 51 30.5 +0.3
X15A **Humboldt** 84.77 53 ⇑P P 02 51 29.8 -0.6
baz=84,SNR=6.6
WUAZ **Wupatki** 84.77 52 ⇑P P 02 51 30.1 -0.3
baz=84
WUAZ **Wupatki** 84.77 52 eP P 02 51 30.4 0.0
comp=Z,15nm,1.2s,mb5.0
Q20A **Ridgley Place,** 84.80 47 ⇑P P 02 51 30.3 -0.2
baz=84
N22A **Wattenberg Ran** 84.84 45 ⇑P P 02 51 30.9 +0.3
baz=85
T18A **Mexican Hat** 84.84 50 ⇑P P 02 51 30.2 -0.6
baz=85
W16A **Flagstaff** 84.90 52 ⇓P P 02 51 30.7 -0.4
baz=85
KECS **Kecovo** 84.94 325 eP P 02 51 32.0 +1.0
KECS pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
KECS **Kecovo** 84.94 325 eP P 02 51 32.0 +1.0
comp=Z,2.1nm,0.9s,mb4.3
KECS **Kecovo** 84.94 325 eP P 02 51 32.0 +1.0
S19A **Harvey Farm, M** 84.97 49 ⇑P P 02 51 30.8 -0.6
baz=85
Y15A **Casa Rosa Ranc** 85.00 53 ⇓P P 02 51 31.4 -0.1
baz=85,SNR=5.0
V17A **Tonalea, Kykot** 85.10 51 ⇓P P 02 51 31.8 -0.3
baz=85
PV01 **Paradox Valley** 85.11 48 eP P 02 51 31.9 -0.2
OKC **Ostrava-Krasne** 85.13 327 eP P 02 51 31.9 0.0
OKC e 03 02 03.3
OKC MLR MLR
comp=Z,400nm,15.4s,MS4.9
OKC **Ostrava-Krasne** 85.13 327 eP P 02 51 31.9 0.0
OKC eS S 03 02 03.3 +4.3
OKC AMS AMS 03 38 50.0
comp=Z,400nm,15.4s
R20A **Redvale** 85.19 48 ⇓P P 02 51 32.3 -0.2
baz=85
U18A **Rough Rock, Ch** 85.26 50 ⇓P P 02 51 32.3 -0.6
baz=85,SNR=5.9
114A **Black Gap (USA** 85.29 55 ⇑P P 02 51 32.9 -0.1
baz=85
MORC **Moravsky Berou** 85.45 327 ⇑P P 02 51 33.6 +0.1
MORC **Moravsky Berou** 85.45 327 eP P 02 51 33.5 0.0
comp=Z,5.2nm,1.1s,mb4.6
MORC **Moravsky Berou** 85.45 327 ⇑iP P 02 51 33.6 +0.1
MMAI **Mount Meron Ar** 85.55 306 P P 02 51 35.5 +1.1
comp=Z,0.4nm,0.2s,mb4.2,baz=37,slow=13,SNR=3.6
MMAI LR LR 03 36 52.4
comp=Z,183nm,18.4s,MS4.5,baz=15,slow=41
T19A **Beclabito** 85.57 49 ⇓P P 02 51 34.6 +0.2
baz=85
DPC **Dobruska-Polom** 85.61 328 eP P 02 51 34.5 +0.2
DPC MLR MLR
comp=Z,500nm,14.6s,MS5.0

DPC	**Dobruska-Polom**	**85.61**	**328**	*e*P	**P**	**02 51 34.5**	**+0.2**
DPC				*e*PCP	PcP	02 51 38.8	+1.6
DPC				AMS	AMS	03 33 30.0	
	comp=Z,500nm,14.6s						
PSZ	**Piszkesteto**	**85.61**	**325**	*e*P	**P**	**02 51 34.5**	**+0.1**
PSZ				pmax	pmax		
	comp=Z,13nm,1.3s,mb5.0						
PSZ	**Piszkesteto**	**85.61**	**325**	*e*P	**P**	**02 51 34.5**	**+0.2**
	comp=Z,13nm,1.3s,mb5.0						
V18A	**Ganado**	**85.62**	**51**	⇓P	**P**	**02 51 34.5**	**-0.2**
	baz=85						
Y16A	**Circle Bar Ran**	**85.63**	**53**	⇓P	**P**	**02 51 34.1**	**-0.7**
	baz=85						
UPC	**Upice**	**85.63**	**329**	*e*P	**P**	**02 51 33.2**	**-1.2**
UPC				*e*		02 51 38.6	
UPC	**Upice**	**85.63**	**329**	*e*P	**P**	**02 51 33.2**	**-1.2**
UPC				*e*PCP	PcP	02 51 38.6	+1.3
MVCO	**Mesa Verde**	**85.69**	**49**	⇑P	**P**	**02 51 34.7**	**-0.3**
	baz=85						
MVCO	**Mesa Verde**	**85.69**	**49**	*e*P	**P**	**02 51 37.2**	**+2.3**
Q22A	**Crested Butte,**	**85.72**	**47**	⇑P	**P**	**02 51 35.1**	**0.0**
	baz=86						
VYHS	**Vyhne**	**85.74**	**326**	*e*P	**P**	**02 51 35.8**	**+0.8**
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.7						
VYHS	**Vyhne**	**85.74**	**326**	*e*P	**P**	**02 51 35.8**	**+0.8**
	comp=Z,4.7nm,1.1s,mb4.6						
VYHS	**Vyhne**	**85.74**	**326**	*e*P	**P**	**02 51 35.8**	**+0.8**
U19A	**Dine' College,**	**85.77**	**50**	⇑P	**P**	**02 51 35.4**	**+0.1**
	baz=86						
214A	**Organ Pipe Nat**	**85.78**	**55**	⇓P	**P**	**02 51 35.6**	**+0.1**
	baz=86						
S21A	**Coal Bank Pass**	**85.88**	**48**	⇓P	**P**	**02 51 36.1**	**+0.2**
	baz=86						
Y17A	**Roosevelt**	**86.17**	**53**	⇓P	**P**	**02 51 37.0**	**-0.4**
	baz=86						
U20A	**Newcomb**	**86.17**	**50**	⇑P	**P**	**02 51 37.3**	**-0.1**
	baz=86						
VRAC	**Vranov**	**86.22**	**327**	⇑P	**P**	**02 51 37.5**	**+0.1**
VRAC	**Vranov**	**86.22**	**327**	⇑*i*P	**P**	**02 51 37.5**	**+0.1**
PVCC	**Panska Ves**	**86.26**	**329**	*e*S	S	03 02 12.5	+2.5
PVCC				AMS	AMS	03 34 40.0	
	comp=Z,500nm,13.1s						
BRG	**Berggiesshubel**	**86.28**	**330**	*e*P	**P**	**02 51 43.3**	**+5.7**
	comp=Z,15nm,1.8s,mb4.9						
BRG				PP	PP	02 55 00.0	+2.0
BRG				S	S	03 02 12.0	+1.8
BRG				SS	SS	03 07 51.0	+2.4
BRG							
	comp=N,297nm,15.7s						
BRG							
	comp=E,204nm,17.1s						
BRG							
	comp=Z,357nm,14.4s						
BRG	**Berggiesshubel**	**86.28**	**330**	*e*P	**P**	**02 51 43.3**	**+5.7**
BRG						02 55 00.0	
BRG				S	S	03 02 12.0	+1.8
BRG				SS	SS	03 07 51.0	+2.4
BRG				pmax	pmax		
	comp=Z,9.0nm,1.8s,mb4.7						
BRG				MLR	MLR		
	comp=N,178nm,15.7s,MS4.6						
BRG				MLR	MLR		
	comp=E,122nm,17.1s,MS4.6						
BRG				MLR	MLR		
	comp=Z,214nm,14.4s,MS4.7						
W19A	**Sanders**	**86.33**	**51**	⇓P	**P**	**02 51 38.9**	**+0.7**
	baz=86						
CLL	**Collm**	**86.36**	**331**	⇑*i*P	**P**	**02 51 37.6**	**-0.4**
CLL				*e**PP	pP	02 51 44.0	-5.1
CLL				*e*S	S	03 02 04.0	-7.0
CLL				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.7						
CLL				MLR	MLR		
	comp=Z,300nm,17.7s,MS4.7						
CLL	**Collm**	**86.36**	**331**	⇑*i*P	**P**	**02 51 37.6**	**-0.4**
	comp=Z,5.0nm,0.9s,mb4.7						
CLL				*e*pP	pP	02 51 44.0	-5.1
CLL				*e*S	S	03 02 04.0	-7.0
CLL				LR	LR		
	comp=Z,300nm,17.7s,MS4.7						
CLL	**Collm**	**86.36**	**331**	⇑*i*P	**P**	**02 51 37.6**	**-0.4**
	comp=Z,5.0nm,0.9s,mb4.7						
CLL				*e*pP	pP	02 51 44.0	-5.1
	comp=Z,18nm,1.5s						
CLL				*e*(PP)		02 54 59.0	
CLL				*e*S	S	03 02 04.0	-7.0
CLL				*e*pPS		03 03 25.0	
CLL				*e*SS	SS	03 08 00.0	+10
CLL				*e*		03 12 24.0	
CLL				*e*		03 13 24.0	
V20A	**Brimhall**	**86.54**	**50**	⇓P	**P**	**02 51 39.8**	**+0.5**
	baz=86						
PRU	**Pruhonice**	**86.66**	**329**	*e*P	**P**	**02 51 39.7**	**+0.2**
PRU				*e*		02 51 44.8	
PRU				*e*		03 02 15.1	
PRU				MLR	MLR		
	comp=Z,500nm,16.2s,MS5.0						
PRU	**Pruhonice**	**86.66**	**329**	*e*P	**P**	**02 51 39.7**	**+0.2**
PRU				*e*x	x	02 51 44.8	
PRU				*e*S	S	03 02 15.1	+1.1
PRU				AMS	AMS	03 35 10.0	
	comp=Z,500nm,16.2s						
Y18A	**Canyon Day Jun**	**86.67**	**52**	⇓P	**P**	**02 51 40.8**	**+0.9**
	baz=86						
TREC	**Trest**	**86.74**	**328**	*e*P	**P**	**02 51 39.5**	**-0.4**
TREC				*e*		03 02 15.7	
TREC				MLR	MLR		
	comp=Z,500nm,16.8s,MS5.0						
TREC	**Trest**	**86.74**	**328**	*e*P	**P**	**02 51 39.5**	**-0.4**
TREC				*e*S	S	03 02 15.7	+0.9
TREC				AMS	AMS	03 33 20.0	
	comp=Z,500nm,16.8s						
X19A	**St. Johns**	**86.80**	**51**	⇑P	**P**	**02 51 40.9**	**+0.4**
	baz=87						
T22A	**Edith**	**86.83**	**48**	⇓P	**P**	**02 51 41.1**	**+0.5**
	baz=87						
SDCO	**Great Sand Dun**	**87.28**	**47**	*e*P	**P**	**02 51 42.7**	**-0.1**
	comp=Z,9.9nm,1.5s,mb4.8						
217A	**Green Valley**	**87.28**	**54**	⇓P	**P**	**02 51 43.6**	**+0.7**
	baz=87						
CONA	**Conrad Observa**	**87.55**	**327**	⇓*i*P	**P**	**02 51 44.5**	**+0.7**
	comp=Z,5.4nm,1.1s,mb4.7						
Y20A	**Horse Springs,**	**87.71**	**51**	⇑P	**P**	**02 51 45.4**	**+0.4**
	baz=88						
KHC	**Kasperske Hory**	**87.72**	**329**	*e*P	**P**	**02 51 44.3**	**-0.3**
KHC				*e*		03 02 26.1	
KHC				MLR	MLR		
	comp=Z,500nm,15.4s,MS5.0						
KHC	**Kasperske Hory**	**87.72**	**329**	*e*P	**P**	**02 51 44.3**	**-0.3**
KHC				*e*PCP	PcP	02 51 48.3	+1.8
KHC				*e*S	S	03 02 26.1	+1.9
KHC				AMS	AMS	03 35 00.0	
	comp=Z,500nm,15.4s						
GERES	**GERESS Array B**	**87.87**	**329**	P	**P**	**02 51 45.6**	**+0.3**
	comp=Z,0.9nm,0.9s,mb4.0,baz=73,slow=8.4,SNR=3.6						
GERES				LR	LR	03 34 43.6	
	comp=Z,226nm,18.8s,MS4.6,baz=271,slow=38						
Z20A	**Nine Sixteen R**	**88.04**	**52**	⇑P	**P**	**02 51 47.2**	**+0.7**
	baz=88						
318A	**Bisbee**	**88.05**	**54**	⇑P	**P**	**02 51 46.8**	**+0.2**
	baz=88						
GRF	**Grafenberg Arr**	**88.32**	**330**	*e*P	**P**	**02 51 53.7**	**+6.2**
	comp=Z,13nm,1.8s,mb4.9						
GRF				*e*L		03 34 10.3	
	comp=Z,217nm,18.4s						
GRF	**Grafenberg Arr**	**88.32**	**330**	*e*P	**P**	**02 51 53.7**	**+6.2**
GRF				pmax	pmax		
	comp=Z,13nm,1.8s,mb4.9						
GRF				MLR	MLR		
	comp=Z,200nm,18.4s,MS4.6						
ANMO	**Albuquerque**	**88.36**	**50**	LR	LR	03 30 22.7	
	comp=Z,668nm,18.7s,MS5.1,baz=123,slow=35						
ANMO	**Albuquerque**	**88.36**	**50**	*e*P	**P**	**02 51 48.0**	**0.0**
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.4s						
ANMO	**Albuquerque**	**88.36**	**50**	*e*P	**P**	**02 51 48.0**	**0.0**
	comp=Z,1.1nm,1.4s,mb3.9						
ECSD	**EROS Data Cent**	**88.56**	**38**	*e*P	**P**	**02 51 47.9**	**-0.8**
	comp=Z,8.6nm,1.1s,mb5.0						
SOKA	**Soboth**	**88.84**	**326**	⇓*i*P	**P**	**02 51 50.3**	**+0.3**
	comp=Z,6.0nm,0.9s,mb4.9						
OBKA	**Obir**	**89.19**	**327**	⇓*e*P	**P**	**02 51 52.4**	**+0.8**
	comp=Z,6.5nm,1.0s,mb4.9						
FETA	**Feichten**	**90.56**	**329**	⇑*i*P	**P**	**02 51 58.6**	**+0.5**
	comp=Z,6.1nm,0.9s,mb4.9						
BFO	**Black Forest**	**90.59**	**331**	*i*P	**P**	**02 51 58.6**	**+0.5**
CDF	**Champ du Feu**	**90.96**	**332**	*e*P	**P**	**02 51 58.9**	**-1.0**
Z27A	**Tatum**	**91.49**	**49**	⇑P	**P**	**02 52 03.6**	**+1.0**
	baz=91						
HINF	**Hinteralfeld**	**91.61**	**331**	*e*P	**P**	**02 52 00.8**	**-2.1**
HAU	**Haudompre**	**91.66**	**332**	*e*P	**P**	**02 52 01.1**	**-2.0**
HAU				*e*MLR	MLR		
	comp=Z,225nm,17.0s,MS4.4						
HAU	**Haudompre**	**91.66**	**332**	*e*P	**P**	**02 52 01.1**	**-2.0**
HAU				LR	LR		
	comp=Z,220nm,17.0s,MS4.7						
425A	**Indio Mountain**	**91.88**	**52**	⇓P	**P**	**02 52 04.6**	**+0.1**
	baz=92						
CABF	**La Chapelle**	**92.88**	**331**	*e*P	**P**	**02 52 07.7**	**-1.1**
526A	**Mary Lane Ranc**	**92.94**	**52**	⇑P	**P**	**02 52 09.5**	**+0.1**
	baz=93						
527A	**Woodward Ranch**	**93.21**	**52**	⇑P	**P**	**02 52 10.7**	**+0.1**
	baz=93						
LOR	**Lormes**	**93.25**	**333**	*e*P	**P**	**02 52 08.4**	**-2.1**
	comp=Z,14nm,1.2s,mb5.0						
LOR				*e*MLR	MLR		
	comp=Z,288nm,17.0s,MS4.5						
LOR	**Lormes**	**93.25**	**333**	*e*P	**P**	**02 52 08.4**	**-2.1**
LOR				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb5.0						
LOR				MLR	MLR		
	comp=Z,290nm,17.0s,MS4.8						
LOR	**Lormes**	**93.25**	**333**	*e*P	**P**	**02 52 08.4**	**-2.1**
	comp=Z,6.8nm,1.2s,mb5.0						
LOR				LR	LR		
	comp=Z,290nm,17.0s,MS4.8						
428A	**Kincaid Ranch,**	**93.47**	**51**	⇑P	**P**	**02 52 12.4**	**+0.6**
	baz=93						
LPL	**La Plagne**	**93.48**	**330**	*e*P	**P**	**02 52 11.9**	**+0.3**
	comp=Z,17nm,1.0s,mb5.1						
LPL	**La Plagne**	**93.48**	**330**	*e*P	**P**	**02 52 11.9**	**+0.3**
LPL				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb5.1						
LPL	**La Plagne**	**93.48**	**330**	*e*P	**P**	**02 52 11.9**	**+0.3**
	comp=Z,8.4nm,1.0s,mb5.1						
LPG	**La Plagne**	**93.49**	**330**	*e*P	**P**	**02 52 11.3**	**-0.3**
	comp=Z,11nm,0.9s,mb5.0						
LPG	**La Plagne**	**93.49**	**330**	*e*P	**P**	**02 52 11.3**	**-0.3**
LPG				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.9						
LPG	**La Plagne**	**93.49**	**330**	*e*P	**P**	**02 52 11.3**	**-0.3**
	comp=Z,5.4nm,0.9s,mb5.0						
SSF	**Saint Saulge**	**93.56**	**333**	*e*P	**P**	**02 52 09.9**	**-2.0**
	comp=Z,12nm,1.1s,mb5.0						
SSF	**Saint Saulge**	**93.56**	**333**	*e*P	**P**	**02 52 09.9**	**-2.0**
SSF				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.9						
SSF	**Saint Saulge**	**93.56**	**333**	*e*P	**P**	**02 52 09.9**	**-2.0**
	comp=Z,6.1nm,1.1s,mb4.9						
TXAR	**Lajitas Array**	**93.68**	**53**	P	**P**	**02 52 13.1**	**+0.3**
	comp=Z,4.0nm,0.8s,mb4.9,baz=299,slow=3.1,SNR=37						
SMF	**Signal de Mont**	**93.77**	**332**	*e*P	**P**	**02 52 11.7**	**-1.2**
	comp=Z,15nm,1.1s,mb5.0						
SMF	**Signal de Mont**	**93.77**	**332**	*e*P	**P**	**02 52 11.7**	**-1.2**
SMF				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb5.0						
SMF	**Signal de Mont**	**93.77**	**332**	*e*P	**P**	**02 52 11.7**	**-1.2**
	comp=Z,7.4nm,1.1s,mb5.0						
627A	**Terlingua Ranc**	**93.79**	**52**	⇑P	**P**	**02 52 13.5**	**+0.2**
	baz=94						
AVF	**Avril sur Loir**	**93.84**	**333**	*e*P	**P**	**02 52 11.4**	**-1.8**
	comp=Z,11nm,0.9s,mb5.0						
AVF	**Avril sur Loir**	**93.84**	**333**	*e*P	**P**	**02 52 11.4**	**-1.8**
AVF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb5.0						
AVF	**Avril sur Loir**	**93.84**	**333**	*e*P	**P**	**02 52 11.4**	**-1.8**
	comp=Z,5.7nm,0.9s,mb5.0						
BNI	**Bardonecchia**	**93.87**	**330**	*e*P	**P**	**02 52 14.3**	**+0.9**
BNI				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb5.0						
BNI	**Bardonecchia**	**93.87**	**330**	*e*P	**P**	**02 52 14.3**	**+0.9**
	comp=Z,5.7nm,1.0s,mb5.0						
ORIF	**Oris-en-Rattie**	**94.32**	**330**	*e*P	**P**	**02 52 14.7**	**-0.7**
ORIF				*e*MLR	MLR		
	comp=Z,454nm,18.0s,MS4.7						
TCF	**Toulx Ste Croi**	**94.70**	**333**	*e*P	**P**	**02 52 15.0**	**-2.2**
	comp=Z,28nm,1.5s,mb5.2						
TCF	**Toulx Ste Croi**	**94.70**	**333**	*e*P	**P**	**02 52 15.0**	**-2.2**
TCF				pmax	pmax		
	comp=Z,14nm,1.5s,mb5.2						
TCF	**Toulx Ste Croi**	**94.70**	**333**	*e*P	**P**	**02 52 15.0**	**-2.2**
	comp=Z,14nm,1.5s,mb5.2						
VIVF	**Saint-Julien-l**	**94.88**	**331**	*e*P	**P**	**02 52 16.3**	**-1.7**
	comp=Z,16nm,1.1s,mb5.0						
VIVF	**Saint-Julien-l**	**94.88**	**331**	*e*P	**P**	**02 52 16.3**	**-1.7**
VIVF				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb5.1						
VIVF	**Saint-Julien-l**	**94.88**	**331**	*e*P	**P**	**02 52 16.3**	**-1.7**
	comp=Z,7.9nm,1.1s,mb5.1						
RKT	**Rikitea**	**96.34**	**113**	*e*LR	LR	03 23 36.9	
	comp=Z,337nm,36.2s						
TORD	**Torodi Ar. Bea**	**121.56**	**313**	PKP	PKPdf	02 57 49.1	-1.0
	comp=Z,0.4nm,0.7s,baz=43,slow=1.2,SNR=8.8						
SDV	**Santo Domingo**	**129.73**	**43**	PKP	PKPdf	02 58 05.7	-0.1
	comp=Z,1.2nm,0.3s,baz=18,slow=5.8,SNR=3.7						
LPAZ	**La Paz**	**149.22**	**68**	PKPbc	PKPbc	02 58 46.0	+1.0
	comp=Z,4.3nm,0.8s,baz=341,slow=4.6,SNR=5.8						
LPAZ	**La Paz**	**149.22**	**68**	*e*PKPbc	PKPbc	02 58 46.0	+0.9
PLCA	**Paso Flores**	**152.37**	**119**	PKPbc	PKPbc	02 58 51.7	0.0
	comp=Z,2.9nm,0.9s,baz=269,slow=6.5,SNR=4.3						
PLCA	**Paso Flores**	**152.37**	**119**	PKIKP	PKPbc	02 58 51.7	-0.1
PLCA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PLCA	**Paso Flores**	**152.37**	**119**	*e*PKPbc	PKPbc	02 58 53.0	+1.2
SIV	**San Ignacio**	**154.49**	**59**	PKP	PKPdf	02 58 49.4	+0.8
	comp=Z,0.9nm,0.9s,baz=128,slow=2.1,SNR=4.1						
SIV				PKPab	PKPab	02 59 10.2	-1.3
	comp=Z,1.6nm,0.8s,baz=310,slow=8.8,SNR=4.6						

*JMA **06** 02:49:06.6±0.2,36°.20N×142°.42E,h91km,M3.0*
*ISCJB **06** 02:49:08.7±1.0,36°.20N±0°.05×142°.35E±0°.08,h57km, mb3.7/5,Error ellipse: s-maj=9.6km s-min=6.4km az=10.1*
*NEIC **06** 02:49:15.6±2.3,36°.41N×141°.69E,mb4.1/1,Error ellipse: s-maj=50.4km s-min=14.2km az=153.0*
*IDC **06** 02:49:16.1±5.4,36°.35N×141°.61E,h54km±10km,mb3.5/4, mb1 3.6/5,mb1mx3.3/27,mbtmp3.5/5,MS3.8/1,Ms1 3.8/1, ms1mx3.1/30,Error ellipse: s-maj=93.0km s-min=47.3km az=116.0*

ISC 06 02:49:10.3±1.0,36°.19N±0°.05×142°.29E±0°.09,h59km, h59km±3.6km:pP-P,n21,σ1§46/26,mb3.7/5,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.26**	**248**	P	**Pn**	**02 49 31.1**	**-0.6**
CHOJ				S	**Sn**	**02 49 49.7**	**+2.0**
JHO	**Hitachi**	**1.45**	**287**	P	**Pn**	**02 49 33.0**	**-1.3**
JHO				S	**Sn**	**02 49 53.7**	**+1.3**
JFK	**Kawauchi**	**1.64**	**316**	S	**Sn**	**02 49 57.3**	**+0.5**
BSO1	**Boso 1**	**1.87**	**215**	P	**Pn**	**02 49 38.4**	**-1.5**
BSO3	**Boso 3**	**2.00**	**227**	P	**Pn**	**02 49 40.7**	**-1.1**
JMM	**Marumori**	**2.06**	**325**	P	**Pn**	**02 49 40.7**	**-1.8**
JMM				S	**Sn**	**02 50 07.0**	**-0.1**
JAG	**Ashikaga**	**2.31**	**277**	P	**Pn**	**02 49 45.5**	**-0.4**
JAG				S	**Sn**	**02 50 12.0**	**-1.1**
JRY	**Ryogami san**	**2.75**	**267**	P	**Pn**	**02 49 51.8**	**-0.1**
JOD2	**Odawara 2**	**2.77**	**251**	P	**Pn**	**02 49 52.1**	**0.0**
JOD2				S	**Sn**	**02 50 26.7**	**+2.4**
JMK	**Ichinoseki**	**2.89**	**343**	S	**Sn**	**02 50 26.8**	**-0.6**
MJAR	**Matsushiro Arr**	**3.31**	**277**	P	**Pn**	**02 49 57.2**	**-2.4**
	2.3nm,0.3s,baz=112,slow=7.8,SNR=9.1						
MAJO	**Matsushiro**	**3.32**	**277**	*e*Pn	**Pn**	**02 49 57.7**	**-1.9**
MAT	**Matsushiro**	**3.32**	**277**	P	**Pn**	**02 49 57.6**	**-2.1**
MAT				*e*S	**Sn**	**02 50 38.2**	**+0.4**
PET	**Petropavlovsk**	**20.39**	**29**	*e*P	**P**	**02 53 47.2**	**+5.2**
	29nm,0.9s						
FX1	**Attu Island--F**	**27.33**	**43**	LR	LR	03 05 09.1	
	comp=Z,172nm,18.4s,baz=228,slow=34						
SONM	**Songino Array**	**28.85**	**305**	P	**P**	**02 55 04.4**	**+1.4**
	0.6nm,0.5s,mb3.5,baz=106,slow=8.5,SNR=4.7						
SONM				pP	pP	02 55 17.9	+0.3
	1.3nm,0.7s,baz=109,slow=9.2,SNR=6.1						
CMAR	**Chiang Mai Arr**	**41.98**	**257**	P	**P**	**02 56 58.1**	**+2.4**
	0.8nm,0.4s,mb3.8,baz=62,slow=6.0,SNR=2.3						
MKAR	**Makanchi Array**	**45.17**	**303**	P	**P**	**02 57 23.6**	**+2.6**
	0.8nm,0.7s,mb3.7,baz=76,slow=8.2,SNR=4.0						
MKAR				pP	pP	02 57 37.2	+0.9
	1.4nm,0.6s,baz=81,slow=12,SNR=5.2						
MKAR	**Makanchi Array**	**45.17**	**303**	P	**P**	**02 57 23.6**	**+2.6**
MKAR				pP	pP	02 57 37.2	+0.9
KURK	**Kurchatov**	**47.01**	**309**	P	**P**	**02 57 37.4**	**+2.0**
	0.6nm,0.6s,mb3.7,baz=83,slow=8.4,SNR=3.0						
KURK				pP	pP	02 57 52.3	+1.6
	1.1nm,0.7s,baz=84,slow=8.2,SNR=5.9						
TKM2	**Tokmak 2**	**50.66**	**299**	*e*P	**P**	**02 58 04.8**	**+1.3**
	1.2nm,0.6s,mb4.0						
TKM2				*e*pP	pP	02 58 21.9	+2.9

*ISCJB **06** 02:49:29.2±0.7,13°.80N±0°.07×92°.14W±0°.04,h74km±18km, Error ellipse: s-maj=12.5km s-min=3.9km az=27.4*
*MEX **06** 02:49:32.3±0.6,13°.80N×92°.21W,h20km±32km,MD4.3*
*CASC **06** 02:49:32.5±2.7,13°.66N×91°.81W,h12km±999km,MD4.1*

ISC 06 02:49:30.8±0.7,13°.81N±0°.07×92°.12W±0°.04,h48km±38km, n20,σ1§07/35,1D,Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.69**	**43**	*i*P	**Pn**	**02 49 45.5**	**+1.2**
THIG		**1.10**	**352**	*i*P	**Pn**	**02 49 48.8**	**-1.0**
THIG				*i*S	**Sn**	**02 50 03.1**	**-0.9**
FUG	**Fuego 3**	**1.39**	**63**	⇓*e*P	**Pn**	**02 49 54.2**	**+0.4**
PCG	**Pacaya**	**1.57**	**68**	*e*P	**Pn**	**02 49 57.3**	**+1.0**
NBG	**Las Nubes**	**1.88**	**66**	*e*P	**Pn**	**02 50 02.8**	**+2.3**
NBG				*e*S	**Sn**	**02 50 27.7**	**+4.6**
PCIG		**2.17**	**331**	*e*P	**Pn**	**02 50 03.8**	**-0.6**
PCIG				*i*S	**Sn**	**02 50 28.8**	**-1.3**
RBDL	**Robledal**	**2.38**	**82**	*e*P	**Pn**	**02 50 07.4**	**+0.1**
RBDL				*e*S	**Sn**	**02 50 34.2**	**-1.1**
RTR	**El Retiro**	**2.40**	**88**	*e*P	**Pn**	**02 50 08.2**	**+0.6**
RTR				*e*S	**Sn**	**02 50 34.2**	**-1.7**
SBLS	**San Blas**	**2.42**	**89**	*e*P	**Pn**	**02 50 08.2**	**+0.3**
SNJE	**San Jose**	**2.44**	**88**	*e*P	**Pn**	**02 50 08.5**	**+0.3**
SNJE				*e*S	**Sn**	**02 50 35.2**	**-1.6**
CCIG	**Comitan**	**2.46**	**360**	*i*P	**Pn**	**02 50 10.0**	**+1.5**
CCIG				*i*S	**Sn**	**02 50 37.6**	**+0.4**
MRL	**Marmol**	**2.66**	**62**	*e*P	**Pn**	**02 50 13.6**	**+2.4**
BOQS	**Boqueron**	**2.76**	**91**	*e*P	**Pn**	**02 50 12.6**	**0.0**
BOQS				*e*S	**Sn**	**02 50 43.6**	**-1.0**
SCX	**San Cristobal**	**2.95**	**350**	*i*P	**Pn**	**02 50 16.5**	**+1.3**
SCX				*i*S	**Sn**	**02 50 50.0**	**+0.6**
LFRS	**El Faro**	**2.97**	**93**	*e*P	**Pn**	**02 50 15.9**	**+0.4**
LFRS				*e*S	**Sn**	**02 50 48.1**	**-1.8**
TGIG		**3.11**	**342**	*e*P	**Pn**	**02 50 17.8**	**+0.4**
TGIG				*i*S	**Sn**	**02 50 52.8**	**-0.4**
HUIG	**Huatulco**	**4.32**	**297**	*i*P	**Pn**	**02 50 34.7**	**+0.7**
HUIG				*i*S	**Sn**	**02 51 21.6**	**-1.6**
VHO	**Vista Hermosa**	**5.51**	**307**	*i*P	**Pn**	**02 50 50.4**	**+0.1**
VHO				*i*S	**Sn**	**02 51 51.9**	**-0.5**
PNIG	**Pinotepa**	**6.35**	**295**	*e*P	**Pn**	**02 51 02.8**	**+0.9**
PNIG				*i*S	**Sn**	**02 52 11.4**	**-1.6**
UTMO	**Huajuapan**	**6.78**	**307**	*i*P	**Pn**	**02 51 08.8**	**+1.1**
UTMO				*i*S	**Sn**	**02 52 23.2**	**-0.4**

*ISCJB **06** 02:50:08.8±0.4,39°.09N±0°.02×24°.27E±0°.02,h6km±3km, Error ellipse: s-maj=2.8km s-min=2.4km az=138.8*
*THE **06** 02:50:09.8,39°.11N×24°.23E,h4km±1km,ML3.8/21,Error ellipse: s-maj=1.2km s-min=0.6km az=306.0*
*CSEM **06** 02:50:09.6±0.1,39°.10N×24°.26E,h10km,ML3.8/21,Error ellipse: s-maj=2.3km s-min=2.1km az=129.0*
*NEIC **06** 02:50:10.0,39°.10N×24°.26E,h34km,ML3.5(ATH),After ATH.*
*ATH **06** 02:50:10.0,39°.10N×24°.26E,h34km±1km,MD3.7/31, ML3.5*
*SKO **06** 02:50:15.7,39°.42N×23°.83E,h28km*

ISC 06 02:50:09.7±0.4,39°.10N±0°.02×24°.26E±0°.02,h8km±3km, n173,σ0§89/235,2D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOS	**Alonnisos**	**0.30**	**283**	P	**Pg**	**02 50 15.8**	**+0.1**
AOS				S	**Sg**	**02 50 20.4**	**+0.7**
AOS	**Alonnisos**	**0.30**	**283**	P	**Pg**	**02 50 15.8**	**+0.1**
AOS				S	**Sg**	**02 50 20.4**	**+0.7**
NEO	**Neokhori**	**0.83**	**285**	*e*Pn	**Pg**	**02 50 26.4**	**+0.7**
NEO				*e*Sn	**Sg**	**02 50 38.1**	**+1.6**
NEO	**Neokhori**	**0.83**	**285**	*e*PN	**Pg**	**02 50 26.4**	**+0.7**
NEO				*e*SN	**Sg**	**02 50 38.1**	**+1.6**
NEO	**Neokhori**	**0.83**	**285**	*e*Pn	**Pg**	**02 50 26.4**	**+0.7**
NEO				*e*Sn	**Sg**	**02 50 38.1**	**+1.6**
XOR	**Xorichti**	**0.87**	**288**	P	**Pg**	**02 50 26.5**	**+0.1**
XOR				S	**Sg**	**02 50 38.0**	**+0.3**
XOR	**Xorichti**	**0.87**	**288**	P	**Pg**	**02 50 26.5**	**+0.1**
XOR				S	**Sg**	**02 50 38.0**	**+0.3**
PAIG	**Paliouri**	**0.94**	**332**	P	**Pg**	**02 50 27.8**	**+0.1**
PAIG				S	**Sg**	**02 50 40.6**	**+0.7**
PAIG	**Paliouri**	**0.94**	**332**	P	**Pg**	**02 50 27.8**	**+0.1**
PAIG				S	**Sg**	**02 50 40.6**	**+0.7

DSF				S	Sn	02 50 57.3	+0.3
PRK	Paraskevi	1.57	84	ePb	Pb	02 50 37.3	-1.7
PRK	Paraskevi	1.57	84	P	Pn	02 50 37.6	-0.2
PRK				S	Sn	02 51 00.0	+1.7
PRK	Paraskevi	1.57	84	ePB	Pb	02 50 37.3	-1.7
PRK	Paraskevi	1.57	84	ePb	Pb	02 50 37.3	-1.7
PRK	Paraskevi	1.57	84	P	Pn	02 50 37.6	-0.2
PRK				S	Sn	02 51 00.0	+1.7
BOZC	Bozcaada	1.57	61	iP	Pn	02 50 37.1	-0.7
CHOS	Chios island	1.58	116	P	Pn	02 50 38.0	+0.1
CHOS				S	Sn	02 51 00.8	+2.4
CHOS	Chios island	1.58	116	ePN	Pn	02 50 38.0	+0.1
CHOS	Chios island	1.58	116	P	Pn	02 50 38.0	+0.1
LIT	Litokhoron	1.69	307	ePn	Pn	02 50 38.9	-0.6
LIT	Litokhoron	1.69	307	P	Pn	02 50 38.9	-0.6
LIT	Litokhoron	1.69	307	ePN	Pn	02 50 38.9	-0.6
LIT	Litokhoron	1.69	307	P	Pn	02 50 38.9	-0.6
HORT	Hortiatis	1.74	330	P	Pn	02 50 40.0	-0.2
HORT				S	Sn	02 51 02.4	-0.1
HORT	Hortiatis	1.74	330	P	Pn	02 50 40.0	-0.2
HORT				S	Sn	02 51 02.4	-0.1
THL	Klokotos Trika	1.80	286	P	Pn	02 50 40.6	-0.4
THL				S	Sn	02 51 05.0	+1.0
THL	Klokotos Trika	1.80	286	ePN	Pn	02 50 40.2	-0.8
THL	Klokotos Trika	1.80	286	ePn	Pn	02 50 40.2	-0.8
THL	Klokotos Trika	1.80	286	P	Pn	02 50 40.6	-0.4
THL				S	Sn	02 51 05.0	+1.0
KALE	Kalithea	1.80	247	P	Pn	02 50 40.5	-0.5
KALE				S	Sn	02 51 03.9	-0.1
KALE	Kalithea	1.80	247	P	Pn	02 50 40.5	-0.5
KALE				S	Sn	02 51 03.9	-0.1
THE	Thessaloniki	1.82	327	P	Pn	02 50 41.5	+0.2
THE	Thessaloniki	1.82	327	P	Pn	02 50 41.5	+0.2
SOH	Sokhos	1.85	338	ePn	Pn	02 50 41.6	-0.1
SOH	Sokhos	1.85	338	P	Pn	02 50 41.7	0.0
SOH	Sokhos	1.85	338	ePN	Pn	02 50 41.6	-0.1
SOH	Sokhos	1.85	338	ePn	Pn	02 50 41.6	-0.1
AYVA	Ayvalik	1.90	83	iP	Pn	02 50 42.2	-0.1
AYVA	Ayvalik	1.90	83	iP	Pn	02 50 42.2	-0.2
GUR	Goura	1.90	233	P	Pn	02 50 42.0	-0.3
GUR				S	Sn	02 51 06.9	+0.5
GUR	Goura	1.90	233	ePN	Pn	02 50 41.8	-0.5
GUR				eSN	Sn	02 51 06.1	-0.3
GUR	Goura	1.90	233	P	Pn	02 50 42.0	-0.3
GUR				eSn	Sn	02 51 06.1	-0.3
GUR				S	Sn	02 51 06.9	+0.5
KAVA	Kavala	1.90	6	P	Pn	02 50 41.4	-1.0
KAVA	Kavala	1.90	6	P	Pn	02 50 41.4	-1.0
EVR	Evrytania	1.92	265	ePb	Pb	02 50 42.8	-2.1
EVR	Evrytania	1.92	265	ePB	Pb	02 50 42.8	-2.1
EVR	Evrytania	1.92	265	ePb	Pb	02 50 42.8	-2.1
EFP	Efpalio	1.96	251	P	Pn	02 50 43.3	+0.2
EFP				S	Sn	02 51 08.9	+1.0
EFP	Efpalio	1.96	251	ePN	Pn	02 50 42.8	-0.3
EFP	Efpalio	1.96	251	ePn	Pn	02 50 42.8	-0.3
EFP	Efpalio	1.96	251	P	Pn	02 50 43.3	+0.2
EFP				S	Sn	02 51 08.9	+1.0
LAKA	Lakka	1.98	245	P	Pn	02 50 43.6	+0.1
LAKA	Lakka	1.98	245	P	Pn	02 50 43.6	+0.1
SRS	Serrai	2.08	346	P	Pn	02 50 44.3	-0.5
SRS				S	Sn	02 51 10.7	-0.1
SRS	Serrai	2.08	346	P	Pn	02 50 44.3	-0.5
SRS				S	Sn	02 51 10.7	-0.1
ALN	Alexandroupoli	2.26	37	ePn	Pn	02 50 46.9	-0.4
ALN	Alexandroupoli	2.26	37	P	Pn	02 50 46.8	-0.5
ALN				S	Sn	02 51 15.8	+0.5
ALN	Alexandroupoli	2.26	37	ePN	Pn	02 50 46.9	-0.4
ALN	Alexandroupoli	2.26	37	ePn	Pn	02 50 46.9	-0.4
ALN				S	Sn	02 51 15.8	+0.5
APE	Apeiranthos	2.26	153	ePn	Pn	02 50 47.0	-0.3
APE	Apeiranthos	2.26	153	P	Pn	02 50 47.0	-0.3
APE	Apeiranthos	2.26	153	⇓iP	Pn	02 50 47.2	-0.1
APE	Apeiranthos	2.26	153	ePN	Pn	02 50 47.0	-0.3
APE	Apeiranthos	2.26	153	P	Pn	02 50 47.0	-0.3
KZN	Kozani	2.27	303	ePn	Pn	02 50 46.6	-0.8
KZN	Kozani	2.27	303	ePN	Pn	02 50 46.6	-0.8
KZN	Kozani	2.27	303	ePn	Pn	02 50 46.6	-0.8
NVR	Nevrokopi	2.27	352	ePn	Pn	02 50 47.1	-0.3
NVR	Nevrokopi	2.27	352	ePN	Pn	02 50 47.1	-0.3
NVR	Nevrokopi	2.27	352	ePn	Pn	02 50 47.1	-0.3
RDO	Rodhopi	2.27	25	ePn	Pn	02 50 46.7	-0.7
RDO	Rodhopi	2.27	25	ePN	Pn	02 50 46.7	-0.7
RDO	Rodhopi	2.27	25	ePn	Pn	02 50 46.7	-0.7
VLX	Vlachokerasia	2.27	221	P	Pn	02 50 47.2	-0.3
VLX				S	Sn	02 51 16.0	+0.3
VLX	Vlachokerasia	2.27	221	ePN	Pn	02 50 47.3	-0.2
VLX	Vlachokerasia	2.27	221	P	Pn	02 50 47.2	-0.3
VLX				S	Sn	02 51 16.0	+0.3
RLS	Riolos of Patr	2.42	245	ePn	Pn	02 50 50.0	+0.5
RLS	Riolos of Patr	2.42	245	ePN	Pn	02 50 50.0	+0.5
RLS	Riolos of Patr	2.42	245	ePn	Pn	02 50 50.0	+0.5
SMG	Samos	2.46	124	ePn	Pn	02 50 49.3	-0.7
SMG	Samos	2.46	124	ePN	Pn	02 50 49.3	-0.7
SMG	Samos	2.46	124	ePn	Pn	02 50 49.3	-0.7
VAY	Valandovo	2.57	330	ePn	Pn	02 50 49.3	-2.2
VLI	Veliai	2.60	204	ePn	Pn	02 50 51.2	-0.8
VLI	Veliai	2.60	204	ePN	Pn	02 50 51.2	-0.8
VLI	Veliai	2.60	204	ePn	Pn	02 50 51.2	-0.8
ITM	Ithomi	2.66	224	ePn	Pn	02 50 53.5	+0.7
ITM	Ithomi	2.66	224	P	Pn	02 50 53.7	+0.9
ITM	Ithomi	2.66	224	ePN	Pn	02 50 53.5	+0.7
ITM	Ithomi	2.66	224	P	Pn	02 50 53.7	+0.9
BALY	Balya	2.68	75	iP	Pn	02 50 53.5	+0.4
BALY	Balya	2.68	75	iP	Pn	02 50 53.8	+0.4
JAN	Janina	2.70	283	ePn	Pn	02 50 53.3	0.0
JAN	Janina	2.70	283	ePN	Pn	02 50 53.3	0.0
JAN	Janina	2.70	283	ePn	Pn	02 50 53.3	0.0
AKHS	Akhisar	2.78	93	iP	Pn	02 51 01.8	+7.3
PYL	PYLOS	2.97	223	P	Pn	02 50 58.3	+1.3
PYL	PYLOS	2.97	223	ePN	Pn	02 50 58.0	+1.0
PYL	PYLOS	2.97	223	ePn	Pn	02 50 58.0	+1.0
PYL	PYLOS	2.97	223	P	Pn	02 50 58.3	+1.3
KYTH	Kithira	2.98	199	ePn	Pn	02 50 56.9	-0.3
KYTH	Kithira	2.98	199	ePN	Pn	02 50 56.9	-0.3
KYTH	Kithira	2.98	199	ePn	Pn	02 50 56.9	-0.3
VLS	Valsamata	3.02	253	ePn	Pn	02 50 58.9	+1.2
VLS	Valsamata	3.02	253	ePN	Pn	02 50 58.9	+1.2
VLS	Valsamata	3.02	253	ePn	Pn	02 50 58.9	+1.2
IGT	Igoumenitsa	3.08	279	P	Pn	02 51 00.7	+2.2
KRUS	Krusevo	3.23	315	ePn	Pn	02 50 58.1	-2.5
DURS	Dursunbey	3.31	85	iP	Pn	02 51 01.8	+0.1
KEK	Kerkira	3.51	281	ePn	Pn	02 51 05.7	+1.2
KEK	Kerkira	3.51	281	ePN	Pn	02 51 05.7	+1.2
KEK	Kerkira	3.51	281	ePn	Pn	02 51 05.7	+1.2
VAM	Vamos	3.69	181	ePn	Pn	02 51 06.6	-0.3
VAM	Vamos	3.69	181	ePN	Pn	02 51 06.6	-0.3
VAM	Vamos	3.69	181	ePn	Pn	02 51 06.6	-0.3
KARN	Karanos	3.70	184	ePN	Pn	02 51 07.2	+0.1
KARN	Karanos	3.70	184	ePn	Pn	02 51 07.3	+0.2
IDI	Anoyia	3.84	172	ePn	Pn	02 51 09.6	+0.6
IDI	Anoyia	3.84	172	ePN	Pn	02 51 09.6	+0.6
IDI	Anoyia	3.84	172	ePn	Pn	02 51 09.6	+0.6
NPS	Neapolis	3.98	164	ePn	Pn	02 51 10.2	-0.8
NPS	Neapolis	3.98	164	ePN	Pn	02 51 10.2	-0.8
NPS	Neapolis	3.98	164	ePn	Pn	02 51 10.2	-0.8
LAST	Lasithi	4.05	166	ePn	Pn	02 51 12.8	+0.9
LAST	Lasithi	4.05	166	ePN	Pn	02 51 12.8	+0.9
LAST	Lasithi	4.05	166	ePn	Pn	02 51 12.8	+0.9
SIVA	Sivas	4.10	174	ePn	Pn	02 51 13.3	+0.7
SIVA	Sivas	4.10	174	ePN	Pn	02 51 13.3	+0.7
SIVA	Sivas	4.10	174	ePn	Pn	02 51 13.3	+0.7
BARS	Barje	4.15	334	⇓iP	Pn	02 51 13.6	+0.4
SCTE	Santa Cesarea	4.58	284	ePN	Pn	02 51 20.2	+1.1
SCTE	Santa Cesarea	4.58	284	ePn	Pn	02 51 20.3	+1.1
ESKT	Eskisehir	5.13	83	iP	Pn	02 51 28.2	+1.5
SEYT	Eskypehyr	5.13	83	iP	Pn	02 51 28.2	+1.5
TIP	Timpagrande	5.83	273	P	Pn	02 51 38.6	+2.2
TIP	Timpagrande	5.83	273	P	Pn	02 51 38.6	+2.2

*NEIC **06** 03:00:28.0, 40°.69S×73°.08W, h56km, MD3.9(GUC), After GUC.*

GUC 06 03:00:28.0±0.5, 40°.69S×73°.08W, h56km±3km, MD3.9, ML4.0, 1C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OSCH	Osorno	0.12	342	⇓iP	Pn	03 00 36.4	-0.2
OSCH				iS	Sn	03 00 43.2	+0.6
VLCH	Valdivia	0.89	352	⇓iP	Pn	03 00 44.8	+0.4
VLCH				iS	Sn	03 00 57.1	+0.6
VLCH	Valdivia	0.89	352	⇓iP	Pn	03 00 44.8	+0.4
VLCH				iS	Sn	03 00 57.1	+0.6
VLCH				AML	AML	03 00 58.7	
	comp=N,9μm,0.4s						
HOCH	HornopirØn	1.32	158	⇑iP	Pn	03 00 51.0	+0.9
HOCH				iS	Sn	03 01 08.3	+1.7
HOCH				AML	AML	03 01 10.1	
	comp=N,4μm,0.3s						
PLCA	Paso Flores	1.92	92	ePn	Pn	03 00 59.6	+1.3
PLCA				eSn	Sn	03 01 16.0	-5.3
TMU	Temuco	1.99	11	⇓iP	Pn	03 00 59.7	+0.5
TMU				iS	Sn	03 01 23.6	+0.7

*IDC **06** 03:19:07.1±1.3, 56°.30N×153°.70W, h0km, mb3.9/10, mb1 4.1/10, mb1mx3.8/27, mbtmp3.9/10, Error ellipse: s-maj=43.3km s-min=19.9km az=11.0*
*ISCJB **06** 03:19:08.2±0.8, 55°.96N±0°.07×153°.4W±0°.2, h33km, mb4.0/9, Error ellipse: s-maj=15.3km s-min=8.9km az=25.1*
*NEIC **06** 03:19:09.3, 55°.93N×153°.25W, h27km, ML3.4(AEIC), After AEIC.*

ISC 06 03:19:10.0±3.1, 56°.06N±0°.08×153°.6W±0°.2, h24km±22km, n20, σ0s.99/22, mb4.0/9, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	Old Harbor	1.18	7	P	Pn	03 19 30.3	-0.6
OHAK				S	Sn	03 19 46.5	+0.4
KDAK	Kodiak Island	1.81	17	P	Pn	03 19 39.1	-0.5
KDAK				S	Sn	03 20 01.9	+0.2
RSO	Redoubt South	4.44	5	ePn	Pn	03 20 16.9	+1.3
SEW	Seward	4.60	27	P	Pn	03 20 16.4	-1.6
SLKM	Skilak Lake	4.79	20	P	Pn	03 20 19.7	-0.9
SVW2	Sparrevohn	5.16	349	ePn	Pn	03 20 27.3	+1.7
RC01	Rabbit Creek A	5.42	20	ePn	Pn	03 20 28.8	-0.4
BMRM	Bremner River	6.79	40	ePn	Pn	03 20 47.0	-1.0
BPAW	Bear Paw Mtn.	8.17	8	ePn	Pn	03 21 08.6	+1.8
	4.6nm,0.8s						
YKA	Yellowknife Ar	20.65	56	P	P	03 23 48.1	+0.7
	1.3nm,0.7s,baz=268,slow=9.8,SNR=9.1						
TXAR	Lajitas Array	44.02	106	P	P	03 27 17.7	+2.3
	0.9nm,0.8s,mb3.6,baz=307,slow=7.2,SNR=11						
SADO	Sadowa	46.50	71	P	P	03 27 34.7	-0.2
	1.5nm,0.4s,mb4.3,baz=29,slow=5.2,SNR=3.8						
SADO	Sadowa	46.50	71	P	P	03 27 34.7	-0.2
MJAR	Matsushiro Arr	48.83	277	P	P	03 27 52.7	-0.3
	0.6nm,0.5s,mb3.9,baz=32,slow=7.2,SNR=3.6						
SONM	Songino Array	56.92	308	P	P	03 28 51.9	-0.7
	1.2nm,0.9s,mb3.9,baz=33,slow=6.8,SNR=5.5						
ZALV	Zalesovo Beam	60.40	325	P	P	03 29 16.6	-0.1
	0.9nm,0.4s,mb4.2,baz=65,slow=8.4,SNR=3.7						
NOA	NORSAR Array B	62.63	8	P	P	03 29 30.4	-1.2
	0.8nm,0.7s,mb3.9,baz=352,slow=6.8,SNR=4.7						
BVAR	Borovoye Array	65.43	333	P	P	03 29 49.2	-0.9
	0.9nm,0.6s,mb4.0,baz=15,slow=6.0,SNR=3.7						
MKAR	Makanchi Array	67.35	322	P	P	03 30 03.1	+0.6
	0.3nm,0.4s,mb3.7,baz=200,slow=42,SNR=3.5						
CMAR	Chiang Mai Arr	84.24	295	P	P	03 31 39.6	+0.2
	1.1nm,0.6s,mb4.2,baz=8.9,slow=5.2,SNR=4.7						

MEX 06 03:22:11.2±0.6, 15°.20N×94°.36W, h16km±7km, MD4.0, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCIG		1.21	65	eP	Pn	03 22 29.5	-3.9
PCIG				iS	Sb	03 22 43.3	-5.7
HUIG	Huatulco	1.78	289	eP	Pn	03 22 38.0	-3.3
HUIG				iS	Sn	03 22 58.1	-5.5
TGIG		1.97	37	iP	Pn	03 22 41.0	-2.9
TGIG				iS	Sn	03 23 03.5	-4.7
THIG		2.04	98	iP	Pn	03 22 41.7	-3.2
THIG				iS	Sn	03 23 05.3	-4.8
CCIG	Comitan	2.39	63	eP	Pn	03 22 47.2	-2.5
CCIG				iS	Sn	03 23 15.2	-3.6
VHO	Vista Hermosa	2.95	309	iP	Pn	03 22 55.9	-1.5
VHO				iS	Sn	03 23 29.5	-2.9
PNIG	Pinotepa	3.82	289	iP	Pn	03 23 07.3	-2.1
PNIG				iS	Sn	03 23 50.0	-4.0
UTMO	Huajuapan	4.22	309	iP	Pn	03 23 12.7	-2.1
UTMO				iS	Sn	03 24 00.2	-3.5
TPIG	Tehuac#an	4.30	318	eP	Pn	03 23 19.2	+3.1
TPIG				iS	Sn	03 24 02.5	-3.5
SCIG	Sabancuy	4.82	39	eP	Pn	03 23 20.5	-2.6
SCIG				iS	Sn	03 24 16.0	-2.7

*SKO **06** 03:27:28.0, 39°.92N×19°.95E, h0km, M2.0, ML2.4*
*ATH **06** 03:27:30.2, 40°.31N×19°.84E, h10km±1km, MD3.6/12*
*THE **06** 03:27:30.2, 40°.34N×19°.82E, h0km±3km, ML3.2/4, Error ellipse: s-maj=5.3km s-min=1.1km az=297.0*
*NEIC **06** 03:27:30.2, 40°.31N×19°.84E, h10km, MD3.6(ATH), After ATH.*
*TIR **06** 03:27:31.5±3.4, 40°.22N×19°.96E, h5km±46km*
*ISCJB **06** 03:27:32.0±0.6, 40°.22N±0°.02×19°.93E±0°.05, h12km±4km, Error ellipse: s-maj=6.4km s-min=3.3km az=9.8*
*CSEM **06** 03:27:32.9±0.3, 40°.18N×19°.97E, h2km, ML3.2/4, Error ellipse: s-maj=7.3km s-min=4.1km az=94.0*

ISC 06 03:27:32.5±0.6, 40°.21N±0°.02×19°.91E±0°.05, h17km±4km, n60, σ1s.31/77, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SRN	Sarande	0.34	168	iPG	Pg	03 27 38.1	-1.5
SRN				iSG	Sg	03 27 44.6	+0.1
SRN	Sarande	0.34	168	iPg	Pg	03 27 38.1	-1.5
	SNR=91						
KEK	Kerkira	0.51	190	ePb	Pg	03 27 41.8	-0.8
KEK	Kerkira	0.51	190	P	Pg	03 27 41.7	-0.9
KEK				S	Sg	03 27 51.6	+2.2
KEK	Kerkira	0.51	190	ePB	Pg	03 27 41.8	-0.8
KEK	Kerkira	0.51	190	P	Pg	03 27 41.7	-0.9
IGT	Igoumenitsa	0.76	154	P	Pg	03 27 46.0	-1.2
IGT				S	Sg	03 28 00.0	+2.8
IGT	Igoumenitsa	0.76	154	P	Pg	03 27 46.0	-1.2
KBN	Korca	0.79	58	iPG	Pg	03 27 44.0	-3.8
KBN				iSG	Sg	03 27 58.2	0.0
JAN	Janina	0.91	127	ePg	Pg	03 27 49.1	-1.1
JAN				eSb	Sg	03 28 03.1	+0.9
JAN	Janina	0.91	127	ePG	Pg	03 27 49.1	-1.1
JAN				eSB	Sg	03 28 03.1	+0.9
JAN	Janina	0.91	127	ePg	Pg	03 27 49.1	-1.1
JAN				eSb	Sg	03 28 03.1	+0.9
OHR	Ohrid	1.12	37	ePg	Pg	03 27 53.2	-1.0
OHR				eSg	Sg	03 28 12.1	+3.1
OHR				eLg		03 28 12.7	
	comp=E,76nm,0.9s						
OHR				eLg		03 28 14.8	
	comp=N,35nm,0.4s						
OHR	Ohrid	1.12	37	P	Pn	03 27 50.5	-2.9
OHR	Ohrid	1.12	37	P	Pn	03 27 50.5	-2.9
FNA	Florina	1.26	63	P	Pn	03 27 53.5	-1.7
FNA				S	Sb	03 28 12.6	+1.1
FNA	Florina	1.26	63	P	Pn	03 27 53.5	-1.7
BIA	Bitola	1.34	53	ePg	Pn	03 27 54.9	-1.5
BIA				eSg	Sg	03 28 16.5	+0.6
BIA				eLg		03 28 18.3	
	comp=E,24nm,0.3s						
BIA				eLg		03 28 20.1	
	comp=N,14nm,0.3s						
BIA	Bitola	1.34	53	P	Pn	03 27 54.9	-1.5
BIA	Bitola	1.34	53	P	Pn	03 27 54.9	-1.5
KZN	Kozani	1.43	86	ePb	Pb	03 27 58.0	-0.6
KZN	Kozani	1.43	86	P	Pg	03 27 58.6	-1.4
KZN				S	Sg	03 28 18.9	+0.3
KZN	Kozani	1.43	86	ePB	Pb	03 27 58.0	-0.6
KZN	Kozani	1.43	86	ePb	Pb	03 27 58.0	-0.6
KZN	Kozani	1.43	86	P	Pg	03 27 58.6	-1.4
PHP	Peshkopia	1.52	15	iPN	Pg	03 28 01.8	0.0
PHP				iSN	Sg	03 28 24.3	+2.6
PHP	Peshkopia	1.52	15	iPn	Pg	03 28 01.8	0.0
	SNR=57						
PHP				iSn	Sg	03 28 24.3	+2.6
	SNR=57						
LKD2	Lefkada island	1.54	158	P	Pn	03 28 01.0	+2.0
LKD2				S	Sg	03 28 23.7	+1.7
LKD2	Lefkada island	1.54	158	P	Pn	03 28 01.0	+2.0
LKD2				S	Sg	03 28 23.7	+1.7
KRUS	Krusevo	1.54	41	ePn	Pn	03 27 59.1	0.0
THL	Klokotos Trika	1.75	111	ePN	Pb	03 28 03.8	-0.2
THL	Klokotos Trika	1.75	111	ePn	Pb	03 28 03.8	-0.2
PUK	Puka	1.83	360	iPN	Pb	03 28 05.5	+0.1
PUK				iSN	Sb	03 28 29.6	+1.6
PUK	Puka	1.83	360	iPn	Pb	03 28 05.5	+0.1
	SNR=57						
PUK				iSn	Sb	03 28 29.6	+1.6
	SNR=57						
EVR	Evrytania	1.96	131	ePn	Pb	03 28 07.2	-0.4
EVR	Evrytania	1.96	131	ePN	Pb	03 28 07.2	-0.4
EVR	Evrytania	1.96	131	ePn	Pb	03 28 07.2	-0.4
LIT	Litokhoron	1.98	92	ePn	Pb	03 28 07.1	-0.9
LIT	Litokhoron	1.98	92	ePN	Pb	03 28 07.1	-0.9
LIT	Litokhoron	1.98	92	ePn	Pb	03 28 07.1	-0.9
VLS	Valsamata	2.10	165	ePn	Pb	03 28 08.9	-1.2
VLS	Valsamata	2.10	165	P	Pn	03 28 07.4	+0.6
VLS	Valsamata	2.10	165	ePN	Pb	03 28 08.9	-1.2
VLS	Valsamata	2.10	165	P	Pn	03 28 07.4	+0.6
VLS	Valsamata	2.10	165	ePn	Pb	03 28 08.9	-1.2
BCI	Bajram Curri	2.15	3	iPN	Pb	03 28 10.5	-0.5
BCI	Bajram Curri	2.15	3	iPn	Pb	03 28 10.5	-0.5
	SNR=57						
AGG	Agios Georgios	2.22	122	ePn	Pb	03 28 11.0	-1.0
AGG	Agios Georgios	2.22	122	ePN	Pb	03 28 11.0	-1.0
AGG	Agios Georgios	2.22	122	ePn	Pb	03 28 11.0	-1.0
EFP	Efpalio	2.36	138	ePN	Pb	03 28 13.0	-1.5
EFP	Efpalio	2.36	138	ePn	Pb	03 28 13.0	-1.5
SOH	Sokhos	2.70	76	ePn	Pn	03 28 16.3	+1.3
SOH	Sokhos	2.70	76	ePN	Pn	03 28 16.3	+1.3
SOH	Sokhos	2.70	76	ePn	Pn	03 28 16.3	+1.3
PLG	Polygyros	2.71	85	ePn	Pn	03 28 16.2	+1.0
PLG	Polygyros	2.71	85	ePN	Pn	03 28 16.2	+1.0
PLG	Polygyros	2.71	85	ePn	Pn	03 28 16.2	+1.0
GUR	Goura	2.96	139	ePN	Pn	03 28 20.8	+2.2
GUR	Goura	2.96	139	ePn	Pn	03 28 20.8	+2.2

*MEX **06** 03:29:40.4±0.3, 12°.95N×91°.78W, h17km±8km, MD4.4*
*ISCJB **06** 03:29:47.7±0.8, 13°.66N±0°.05×91°.23W±0°.04, h56km±6km, mb4.4/68, MS4.0/3, Error ellipse: s-maj=10.5km s-min=4.6km az=34.2*
*NEIC **06** 03:29:52.3±0.9, 13°.67N×91°.11W, h89km±8km, mb4.3/58, Error ellipse: s-maj=9.8km s-min=4.9km az=225.0*
*IDC **06** 03:29:52.3±1.9, 13°.73N×91°.00W, h85km±16km, mb4.0/19, mb1 4.2/22, mb1mx4.1/30, mbtmp4.0/22, MS3.8/3, Ms1 3.8/3, ms1mx3.2/27, Error ellipse: s-maj=25.4km s-min=10.1km az=53.0*

ISC 06 03:29:48.7±0.8, 13°.69N±0°.05×91°.18W±0°.04, h45km±6km, n363, σ0s.84/372, mb4.4/68, MS4.0/3, 103C-130D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APG	El Apazote	1.48	28	P	Pn	03 30 16.6	+3.7
	195nm,0.3s,baz=192,slow=9.9,SNR=58						
APG				S	Sn	03 30 46.1	+15
	127nm,0.3s,baz=142,slow=18,SNR=5.1						
THIG		1.60	319	eP	Pn	03 30 10.2	-4.3
THIG				iS	Sn	03 30 33.8	-0.3
CCIG	Comitan	2.73	340	iP	Pn	03 30 29.6	-0.5
CCIG				iS	Sn	03 31 07.6	+5.6
PCIG		2.81	316	eP	Pn	03 30 25.9	-5.2
PCIG				iS	Sn	03 31 00.6	-3.1
SCX	San Cristobal	3.34	335	eP	Pn	03 30 36.3	-2.0
SCX				iS	Sn	03 31 20.7	+3.9
TGIG		3.59	329	eP	Pn	03 30 38.7	-3.2
TGIG				iS	Sn	03 31 24.7	+1.6
TGUH	Tegucigalpa,Un	3.81	84	ePn	Pn	03 30 47.2	+2.4
CMIG	Matias Romero	4.92	314	P	Pn	03 30 58.2	-1.9
	4.2nm,0.3s,baz=316,slow=18,SNR=4.1						
CMIG				S	Sn	03 31 57.9	+2.2
	10nm,0.3s,baz=83,slow=17,SNR=7.1						
CMIG	Matias Romero	4.92	314	P	Pn	03 30 58.2	-1.9
CMIG				S	Sn	03 31 57.9	+2.2
HUIG	Huatulco	5.20	294	iP	Pn	03 30 53.2	-11
HUIG				iS	Sn	03 31 49.8	-13
SCIG	Sabancuy	5.24	360	iP	Pn	03 31 05.4	+0.9
OXX	Oaxaca	6.32	303	eP	Pn	03 31 10.9	-8.4
OXX				iS	Sn	03 32 21.2	-9.0
VHO	Vista Hermosa	6.32	303	iP	Pn	03 31 10.9	-8.4
VHO				iS	Sn	03 32 21.4	-8.9
JTS	JuntasAbangare	6.97	118	P	Pn	03 31 30.5	+2.2
	4.4nm,0.3s,baz=318,slow=16,SNR=24						
JTS				S	Sn	03 32 42.6	-3.6
	4.2nm,0.3s,baz=316,slow=

225A Deer Hill, Car 22.18 328 ⇓P P 03 34 40.1 -0.9
baz=22,SNR=24
126A Clayton Basin, 22.22 330 ⇓P P 03 34 39.7 -1.7
baz=22,SNR=9.1
Z27A Tatum 22.40 333 ⇓P P 03 34 41.2 -2.0
baz=22,SNR=20
CPRX Cap Rock 22.46 331 eP P 03 34 42.7 -1.2
12nm,0.9s,mb4.3
CPCT Cooper Cave 22.48 14 eP P 03 34 44.8 +0.7
224A Cornudas Mount 22.52 327 ⇑P P 03 34 43.5 -1.1
baz=23,SNR=35
125A Gardner Draw, 22.54 329 ⇑P P 03 34 43.1 -1.7
baz=23,SNR=20
WVT Waverly 22.54 7 eP P 03 34 44.4 -0.4
21nm,1.5s,mb4.3
Z26A Caprock 22.71 331 ⇓P P 03 34 44.6 -2.0
baz=23,SNR=22
MSTX Muleshoe 22.77 334 ⇑P P 03 34 45.4 -1.8
baz=23,SNR=9.5
Y27A Causey 22.86 334 ⇓P P 03 34 45.7 -2.4
baz=23,SNR=12
TKL Tuckaleechee C 22.86 16 P P 03 34 48.9 +0.8
20nm,0.6s,mb4.7,baz=181,slow=11,SNR=46
TKL LR LR 03 44 49.0
comp=Z,383nm,20.4s,MS3.8,baz=237,slow=39
TKL Tuckaleechee C 22.86 16 eP P 03 34 48.5 +0.4
124A Stringfield Ra 22.98 328 ⇑P P 03 34 48.5 -0.8
baz=23,SNR=63
Z25A Roswell 23.07 330 ⇓P P 03 34 49.0 -1.4
baz=23
AMTX Amarillo 23.14 338 eP P 03 34 49.5 -1.5
33nm,0.9s,mb4.8
222A Williams Famil 23.42 324 ⇑P P 03 34 52.9 -1.0
baz=24
Z24A Sheppen Canyo 23.43 329 ⇓P P 03 34 53.2 -0.8
baz=24,SNR=23
X27A F and S Farms, 23.48 335 ⇑P P 03 34 52.4 -2.1
baz=24,SNR=6.6
Y25A Mesa, Roswell 23.58 331 ⇑P P 03 34 54.5 -0.8
baz=24,SNR=16
X26A CR and CF Fran 23.71 333 ⇓P P 03 34 55.6 -0.8
baz=24
320A Kipp Ranch, An 23.71 321 ⇑P P 03 34 56.5 -0.1
baz=24,SNR=5.5
TZTN Tazewell 23.76 15 eP P 03 34 56.5 -0.4
13nm,0.8s,mb4.4
Z23A Rita Site, Whi 23.82 327 ⇓P P 03 34 57.3 -0.2
baz=24,SNR=7.0
W27A Bowe Ranch, En 23.83 335 ⇓P P 03 34 56.0 -1.6
baz=24,SNR=13
Y24A Capitan 23.94 330 ⇓P P 03 34 58.3 -0.4
baz=24,SNR=14
SIUC Southern Illin 23.99 4 eP P 03 34 58.9 0.0
28nm,0.7s,mb4.8
220A Playas Peak, P 24.11 322 ⇑P P 03 35 00.4 +0.2
baz=24,SNR=10
121A Cookes Peak, D 24.12 324 ⇓P P 03 35 00.8 +0.5
baz=24,SNR=10
Z22A Elephant Butte 24.21 326 ⇑P P 03 35 01.0 -0.1
baz=24,SNR=20
319A Douglas 24.21 320 ⇓P P 03 35 01.3 +0.2
baz=24
Y23A Lovelace Mesa, 24.26 329 ⇓P P 03 35 01.6 +0.1
baz=24,SNR=29
CCM Cathedral Cave 24.26 360 eP P 03 34 59.7 -1.8
28nm,0.8s,mb4.7
ATAH Atahualpa 24.27 148 P P 03 35 01.2 -0.6
5.2nm,0.8s,mb4.0,baz=336,slow=9.6,SNR=4.0
X24A Lazy VL Ranch, 24.46 331 ⇑P P 03 35 02.8 -0.5
baz=25
W25A X Bar L Ranch, 24.55 333 ⇑P P 03 35 03.8 -0.4
baz=25,SNR=7.7
219A White Tail Can 24.62 321 ⇓P P 03 35 05.1 +0.3
baz=25,SNR=21
120A U Bar Ranch, L 24.63 323 ⇓P P 03 35 05.4 +0.5
baz=25,SNR=7.2
Z21A St. Cloud Mine 24.63 325 ⇓P P 03 35 05.7 +0.8
baz=25,SNR=7.4
318A Bisbee 24.70 319 ⇑P P 03 35 05.8 +0.2
baz=25,SNR=10
BNM Barren Site 24.72 328 eP P 03 35 06.3 +0.6
7.5nm,0.8s,mb4.3
Y22A Socorro 24.73 327 ⇑P P 03 35 06.4 +0.6
baz=25,SNR=13
V26A Tequesquite Ra 24.76 335 ⇑P P 03 35 05.6 -0.4
baz=25
WCI Wyandotte Cave 24.82 9 eP P 03 35 05.8 -0.8
12nm,0.8s,mb4.5
LPM Los Pinos Moun 24.85 328 eP P 03 35 07.8 +0.9
LENM Lemitar 24.91 328 eP P 03 35 07.8 +0.4
W24A Lazy 6 Ranch, 24.98 332 ⇑P P 03 35 08.1 0.0
baz=25,SNR=8.0
Z20A Nine Sixteen R 25.01 324 ⇑P P 03 35 08.4 0.0
baz=25
OLIL Olney 25.09 6 eP P 03 35 09.4 +0.4
10nm,0.8s,mb4.4
218A Dragoon 25.09 320 ⇓P P 03 35 09.4 +0.2
baz=25,SNR=6.7
V25A Rancho No Teng 25.15 334 ⇑P P 03 35 09.6 0.0
baz=25
Y21A Point of Rocks 25.16 326 ⇑P P 03 35 10.6 +0.8
baz=25,SNR=6.8
119A Ashpeak Ranch, 25.18 322 ⇓P P 03 35 10.0 +0.1
baz=25
LAZ Ladron 25.18 328 eP P 03 35 10.8 +0.9
2.2nm,0.7s,mb3.8
ELN Prospectdale 25.22 20 eP P 03 35 10.4 +0.2
U26A Atchley Ranch, 25.26 336 ⇑P P 03 35 10.3 -0.3
baz=25,SNR=11
ANMO Albuquerque 25.27 330 P P 03 35 10.8 +0.2
2.9nm,0.7s,mb3.9,baz=153,slow=12,SNR=14
ANMO Albuquerque 25.27 330 eP P 03 35 10.6 -0.1
0.9nm,0.8s,mb3.4
W23A Werner Place, 25.29 330 ⇓P P 03 35 10.8 0.0
baz=25
217A Green Valley 25.45 318 ⇑P P 03 35 11.8 -0.6
baz=26
Y20A Horse Springs, 25.47 325 ⇓P P 03 35 13.3 +0.8
baz=26,SNR=12
118A Homack Ranch, 25.50 321 ⇓P P 03 35 13.0 +0.2
baz=26,SNR=6.3
U25A Circle Dot Ran 25.54 335 ⇑P P 03 35 13.7 +0.6
baz=26
X21A Alamocita Cree 25.55 327 ⇑P P 03 35 14.0 +0.7
baz=26,SNR=18
W22A Albuquerque 25.57 329 ⇑P P 03 35 14.0 +0.6
baz=26
V23A Ortiz Mt. (NFS 25.78 331 ⇓P P 03 35 16.1 +0.9
baz=26
TUC Tucson 25.79 319 eP P 03 35 16.4 +0.9
5.5nm,0.9s,mb4.1
117A Oracle 25.93 320 ⇓P P 03 35 16.7 0.0
baz=26
Y19A Nutrioso 26.00 324 ⇑P P 03 35 17.1 -0.3
baz=26
X20A Quemado 26.01 326 ⇓P P 03 35 18.0 +0.6
baz=26,SNR=5.2
Z17A San Carlos Hig 26.25 321 ⇑P P 03 35 19.7 0.0
baz=26
V22A San Miguel Ran 26.26 330 ⇓P P 03 35 20.1 +0.5
baz=26
Y18A Canyon Day Jun 26.33 323 ⇑P P 03 35 20.7 +0.4
baz=26
X19A St. Johns 26.36 325 ⇑P P 03 35 21.2 +0.6
baz=26
V21A Milan 26.53 329 ⇑P P 03 35 22.4 +0.3
baz=27
116A Eloy 26.54 318 ⇓P P 03 35 22.0 -0.2
baz=27
X18A Snowflake 26.81 324 ⇓P P 03 35 24.9 +0.2
baz=27
Z16A Peralta Trail, 26.87 320 ⇓P P 03 35 24.6 -0.6
baz=27
214A Organ Pipe Nat 26.89 316 ⇓P P 03 35 24.7 -0.7
baz=27
SDCO Great Sand Dun 27.14 335 eP P 03 35 27.8 +0.3
1.8nm,0.9s,mb3.6
T22A Edith 27.14 332 ⇑P P 03 35 28.3 +0.7
baz=27
Y16A Circle Bar Ran 27.27 321 ⇓P P 03 35 29.0 +0.3
baz=27
U20A Newcomb 27.42 329 ⇓P P 03 35 30.4 +0.3
baz=28
114A Black Gap (USA 27.43 317 ⇑P P 03 35 29.8 -0.4
baz=28
X16A Lo Mia Camp, P 27.61 322 ⇑P P 03 35 31.7 -0.1
baz=28,SNR=9.5
U19A Dine' College, 27.71 327 ⇑P P 03 35 33.1 +0.4
baz=28
Y15A Casa Rosa Ranc 27.84 320 ⇓P P 03 35 33.7 -0.3
baz=28
T19A Beclabito 28.03 328 ⇓P P 03 35 35.2 -0.3
baz=28
MVCO Mesa Verde 28.06 330 ⇑P P 03 35 36.0 +0.2
baz=28,SNR=7.3
MVCO Mesa Verde 28.06 330 eP P 03 35 36.1 +0.3
6.6nm,0.7s,mb4.4
V17A Tonalea, Kykot 28.08 324 ⇓P P 03 35 36.1 +0.1
baz=28
W16A Flagstaff 28.13 323 ⇓P P 03 35 36.5 0.0
baz=28
X15A Humboldt 28.14 321 ⇓P P 03 35 36.0 -0.5
baz=28
Z13A Yuma Proving G 28.21 317 ⇓P P 03 35 37.0 -0.2
baz=28
Y14A Wickenburg 28.26 319 ⇑P P 03 35 37.4 -0.2
baz=28
WUAZ Wupatki 28.33 324 ⇓P P 03 35 38.2 -0.1
baz=28
WUAZ Wupatki 28.33 324 eP P 03 35 38.9 +0.6
5.8nm,0.9s,mb4.2
X14A Yava 28.53 320 ⇓P P 03 35 39.6 -0.4
baz=29
T18A Mexican Hat 28.70 328 ⇑P P 03 35 41.5 0.0
baz=29
R20A Redvale 28.78 331 ⇓P P 03 35 42.5 +0.3
baz=29
S19A Harvey Farm, M 28.80 330 ⇑P P 03 35 42.6 +0.2
baz=29,SNR=6.3
ISCO Idaho Springs 28.94 337 eP P 03 35 43.9 +0.3
V15A Kaibab Nationa 29.01 323 ⇓P P 03 35 44.7 +0.4
baz=29
T17A Navajo Res., N 29.09 326 ⇑P P 03 35 45.4 +0.5
baz=29
W14A Seligman 29.14 321 ⇑P P 03 35 45.4 0.0
baz=29
S18A Hurst Farm, Bl 29.18 328 ⇑P P 03 35 46.0 +0.2
baz=29,SNR=8.1
PV04 Paradox Valley 29.20 331 eP P 03 35 46.7 +0.8
X13A Yucca 29.20 319 ⇑P P 03 35 45.4 -0.5
baz=29
R19A Curley Farm, L 29.29 330 ⇑P P 03 35 46.5 -0.2
baz=29
V14A Bouillas Ranc 29.43 322 ⇑P P 03 35 48.2 +0.1
baz=30,SNR=5.3
U15A North Rim 29.50 324 ⇓P P 03 35 48.3 -0.3
baz=30
W13A Hualapai Mount 29.56 320 ⇓P P 03 35 49.3 +0.2
baz=30
S17A Black Ridge (B 29.56 327 ⇓P P 03 35 49.6 +0.4
baz=30
R18A Canyonlands Na 29.67 329 ⇓P P 03 35 50.0 -0.1
baz=30
BC3 Big Chuckawall 29.68 316 ⇓P P 03 35 50.0 -0.2
baz=30
Q19A Hogan Spring (29.81 331 ⇓P P 03 35 51.1 -0.2
baz=30
T15A Red Dirt Ranch 29.97 325 ⇑P P 03 35 53.0 +0.2
baz=30
U14A Mt Trumbull 30.01 323 ⇓P P 03 35 53.3 +0.1
baz=30
R17A Hanksville Air 30.11 328 ⇓P P 03 35 54.4 +0.5
baz=30
V13A Grand Canyon W 30.11 321 ⇑P P 03 35 54.3 +0.2
baz=30,SNR=5.0
N22A Wattenberg Ran 30.13 337 ⇓P P 03 35 54.9 +0.8
baz=30
LDFC Landfair 30.32 319 eP P 03 35 57.1 +1.2
12nm,0.7s,mb4.7
T14A Hurricane 30.40 324 ⇓P P 03 35 57.2 +0.6
baz=30,SNR=5.6
R16A Teasdale 30.40 327 ⇓P P 03 35 57.2 +0.7
baz=30,SNR=6.3
S15A Panguitch 30.43 326 ⇑P P 03 35 57.8 +0.9
baz=30
U13A Pakoon Wash 30.48 322 ⇓P P 03 35 58.0 +0.7
baz=31
GMRC Granite Mounta 30.49 318 ⇓P P 03 35 57.6 +0.2
baz=31
N21A Black Mountain 30.52 335 ⇑P P 03 35 58.3 +0.8
baz=31
SRU San Rafael 30.54 330 ⇑P P 03 35 58.1 +0.3
baz=31
SRU San Rafael 30.54 330 eP P 03 35 59.0 +1.2
V12A Nelson 30.57 320 ⇑P P 03 35 58.5 +0.4
baz=31,SNR=11
Q16A Castle Valley 30.72 329 ⇑P P 03 35 59.7 +0.4
baz=31
R15A Junction 30.77 326 ⇑P P 03 36 00.7 +0.8
baz=31
P18A Preston Nutter 30.81 330 ⇓P P 03 36 00.3 +0.2
baz=31
U12A Valley of Fire 30.83 321 ⇑P P 03 36 00.4 0.0
baz=31
T13A Saint George 30.85 323 ⇑P P 03 36 01.3 +0.8
baz=31,SNR=6.8
N20A Spence Gulch, 30.89 334 ⇑P P 03 36 01.2 +0.3
baz=31,SNR=6.3
CCUT Cedar City 30.90 324 eP P 03 36 02.6 +1.6
P17A Butcher Ranch, 30.93 330 ⇓P P 03 36 01.1 -0.1
baz=31
MSU Marysvale 30.94 327 eP P 03 36 02.7 +1.4
3.0nm,0.8s,mb4.2
S14A Cedar City 30.94 325 ⇓P P 03 36 02.2 +0.9
baz=31
ARUT Antelope Range 31.11 324 eP P 03 36 04.2 +1.3
10nm,0.8s,mb4.7
M21A Separation Pea 31.17 336 ⇑P P 03 36 04.0 +0.6
baz=31
RWWY Rawlins 31.18 336 eP P 03 36 04.4 +1.0
O18A Roosevelt 31.20 332 ⇑P P 03 36 03.9 +0.3
baz=31
S13A Holt Ranch, En 31.21 324 ⇓P P 03 36 04.4 +0.7
baz=31,SNR=16
Q15A Fillmore 31.40 327 ⇓P P 03 36 06.2 +0.8
baz=32
M20A Sweetwater, Wa 31.41 335 ⇓P P 03 36 05.6 +0.2
baz=32
L21A Rawlins 31.48 337 ⇓P P 03 36 05.9 -0.1
baz=32
O17A Robinson Place 31.49 331 ⇑P P 03 36 06.3 +0.2
baz=32,SNR=6.8
N18A Larsen Ranch, 31.62 333 ⇓P P 03 36 07.3 +0.1
baz=32
P15A Leamington 31.77 328 ⇓P P 03 36 08.8 +0.1
baz=32
MPU Maple Canyon 31.79 329 eP P 03 36 08.9 +0.2
3.6nm,0.7s,mb4.3
O16A Springville 31.87 330 ⇓P P 03 36 09.6 +0.2
baz=32,SNR=6.9
Q14A Sevier Lake (B 31.87 326 ⇓P P 03 36 10.2 +0.7
baz=32,SNR=8.5
DAU Daniels Canyon 31.91 330 eP P 03 36 10.9 +1.1
R12A Pony Springs, 32.15 324 ⇑P P 03 36 13.1 +1.2
baz=32,SNR=9.6
P14A Drum Mountains 32.20 327 ⇓P P 03 36 13.2 +0.8
baz=32,SNR=6.0
Q13A Wheeler Ranch, 32.26 325 ⇓P P 03 36 13.7 +0.8
baz=32,SNR=11
RSSD Black Hills 32.26 343 eP P 03 36 12.0 -0.9
1.7nm,0.6s,mb4.0
DUG Dugway 32.51 328 eP P 03 36 15.8 +0.7
2.4nm,0.8s,mb4.2
P13A Bates Ranch, G 32.61 326 ⇓P P 03 36 18.1 +2.1
baz=33,SNR=16
SADO Sadowa 32.63 16 P P 03 36 14.6 -1.4
10.0nm,0.8s,mb4.8,baz=218,slow=9.6,SNR=12
R11A Troy Canyon, C 32.73 323 ⇓P P 03 36 17.7 +0.7
baz=33
Q12A Willow Creek R 32.77 325 ⇑P P 03 36 18.9 +1.6
baz=33
M16A Huntsville 32.78 331 ⇑P P 03 36 18.0 +0.5
baz=33
N15A Stansbury Isla 32.89 329 ⇑P P 03 36 19.1 +0.7
baz=33
HWUT Hardware Ranch 32.98 331 eP P 03 36 19.7 +0.5
4.6nm,0.8s,mb4.5
BW06 Boulder Array 33.03 335 eP P 03 36 20.2 +0.6
1.0nm,0.6s,mb3.9
PDAR Pinedale Array 33.03 335 P P 03 36 19.0 -0.6
1.3nm,0.7s,mb4.0,baz=125,slow=7.4,SNR=9.6
PDAR PcP PcP 03 39 02.2 -0.3
0.7nm,0.8s,baz=177,slow=2.7,SNR=4.2
S10A Tonopah Range, 33.05 322 ⇓P P 03 36 19.1 -0.7
baz=33
L17A Cokeville 33.06 333 ⇓P P 03 36 19.8 -0.1
baz=33,SNR=9.2
Q11A Duckwater 33.10 324 ⇓P P 03 36 21.5 +1.2
baz=33,SNR=12
P12A McGill 33.11 325 ⇓P P 03 36 21.7 +1.4
baz=33,SNR=7.9
K18A Toltan Ranch, 33.13 334 ⇓P P 03 36 20.9 +0.4
baz=33
BGU Big Grassy Mou 33.17 329 eP P 03 36 21.0 +0.2
3.2nm,0.7s,mb4.4
N14A Grayback Hills 33.19 329 ⇑P P 03 36 21.7 +0.7
baz=33,SNR=7.8
L16A Fish Haven 33.24 332 ⇑P P 03 36 21.5 0.0
baz=33,SNR=8.7
O12A Currie 33.58 326 ⇓P P 03 36 25.8 +1.4
baz=34,SNR=12
J18A Kendall Valley 33.59 335 ⇑P P 03 36 24.0 -0.5
baz=34
L15A Malad City 33.68 331 ⇓P P 03 36 25.4 +0.1
baz=34,SNR=11
N13A Wendover, West 33.72 328 ⇓P P 03 36 26.6 +1.0
baz=34
M14A Sheep Mountain 33.76 329 ⇑P P 03 36 26.4 +0.4
baz=34,SNR=16
K16A Soda Springs 33.96 333 ⇓P P 03 36 27.5 -0.1
baz=34
O11A Cowboy Ranch, 33.98 325 ⇓P P 03 36 28.6 +0.7
baz=34,SNR=6.3
J17A Brown Place, J 34.00 334 ⇓P P 03 36 28.5 +0.4
baz=34,SNR=7.1
REDW Red Top Meadow 34.06 334 eP P 03 36 28.5 -0.1
11nm,0.8s,mb4.8
M13A Montello 34.07 328 ⇑P P 03 36 29.4 +0.8
baz=34
M13A Montello 34.07 328 eP P 03 36 29.8 +1.1
8.6nm,0.7s,mb4.8
SNOW Snow King Moun 34.10 334 eP P 03 36 29.0 +0.1
16nm,0.8s,mb5.0
L14A Malta 34.11 330 ⇓P P 03 36 29.2 +0.2
baz=34,SNR=14
LOHW Long Hollow 34.16 335 eP P 03 36 29.5 +0.1
3.5nm,0.8s,mb4.3
ELK Elko 34.18 327 P P 03 36 31.2 +1.6
3.9nm,0.7s,mb4.4,baz=135,slow=8.3,SNR=16
TPAW Teton Pass 34.21 334 eP P 03 36 29.7 -0.2
2.7nm,0.6s,mb4.3
K15A Arbon 34.27 332 ⇓P P 03 36 30.4 0.0
baz=34,SNR=6.7
NVAR Mina Array Bea 34.41 321 P P 03 36 32.7 +1.0
6.2nm,0.7s,mb4.6,baz=131,slow=8.0,SNR=26
NVAR PcP PcP 03 39 05.8 -0.7
1.2nm,0.5s,baz=124,slow=4.5,SNR=7.5
NVAR Mina Array Bea 34.41 321 P P 03 36 32.7 +1.0
NVAR PcP PcP 03 39 05.8 -0.7
K14A Jones Ranch, D 34.47 331 ⇓P P 03 36 32.2 +0.1
baz=35,SNR=13
M12A Wells 34.49 328 ⇓P P 03 36 33.2 +0.9
baz=35,SNR=11
N11A Elko Archery C 34.50 326 ⇑P P 03 36 33.4 +0.9
baz=35
IMW Indian Meadow 34.53 334 eP P 03 36 32.6 0.0
2.8nm,0.6s,mb4.4
J15A Blackfoot 34.79 332 ⇓P P 03 36 35.0 +0.1
baz=35,SNR=5.4
M11A Holland Ranch, 34.96 327 ⇓P P 03 36 37.6 +1.2
baz=35,SNR=8.1
G18A Lazy EL Ranch, 35.17 337 ⇑P P 03 36 37.2 -0.9
baz=35,SNR=5.7
J14A Carey 35.23 331 ⇓P P 03 36 38.9 +0.2
baz=35,SNR=8.4
K12A Draper Farm, C 35.38 329 ⇑P P 03 36 40.0 0.0
baz=36,SNR=5.3
M10A I.L. Ranch, Tu 35.43 326 ⇓P P 03 36 42.0 +1.6
baz=36,SNR=10
L11A Cat Creek Ranc 35.47 328 ⇑P P 03 36 41.7 +1.0
baz=36,SNR=10
J13A Cove Ranch, Pi 35.59 331 ⇓P P 03 36 41.7 -0.1
baz=36,SNR=6.4
I14A Mackay 35.66 332 ⇑P P 03 36 43.2 +0.8
baz=36,SNR=8.6
F18A Big Timber 35.72 338 ⇓P P 03 36 42.2 -0.7
baz=36,SNR=5.9
L10A Juniper Basin 35.78 327 ⇑P P 03 36 43.8 +0.4
baz=36,SNR=8.9
HLID Hailey 35.83 331 ⇓P P 03 36 44.3 +0.5
baz=36,SNR=7.2
HLID Hailey 35.83 331 eP P 03 36 44.0 +0.2
3.9nm,0.8s,mb4.4
J12A Stokes Ranch, 35.93 330 ⇓P P 03 36 44.4 -0.3
baz=36
I13A Wildhorse Cree 35.96 331 ⇑P P 03 36 45.4 +0.5
baz=36,SNR=8.9
K11A Parker Ranch, 36.05 328 ⇑P P 03 36 45.9 +0.2
baz=36,SNR=6.8
F17A Fitzpatrick Pl 36.08 337 ⇑P P 03 36 45.7 -0.2
baz=36,SNR=6.0
H14A Leadore 36.16 333 ⇓P P 03 36 47.2 +0.6
baz=36,SNR=5.4
G15A Dillon 36.21 334 ⇑P P 03 36 47.5 +0.4
baz=36,SNR=7.6
BOZ Bozeman (W) 36.25 336 eP P 03 36 46.8 -0.5
1.9nm,0.9s,mb4.0
I12A Atlanta 36.35 330 ⇓P P 03 36 48.5 +0.2
baz=36,SNR=15
E18A Harlowton 36.36 338 ⇑P P 03 36 47.8 -0.5
baz=36
MFID Camas Ranch 36.41 329 ⇓P P 03 36 49.1 +0.3
baz=36
H13A Challis 36.52 332 ⇑P P 03 36 50.0 +0.3
baz=37,SNR=14
ULM Lac du Bonnet 36.66 355 P P 03 36 47.2 -3.6
4.6nm,0.7s,mb4.4,baz=172,slow=8.1,SNR=6.1
ULM Lac du Bonnet 36.66 355 P P 03 36 47.2 -3.6
F15A Butte 36.76 335 ⇓P P 03 36 51.9 +0.2
baz=37
H12A Diamond D Ranc 36.78 331 ⇓P P 03 36 52.2 +0.2
baz=37,SNR=12
I11A Placerville 36.84 330 ⇓P P 03 36 52.6 +0.2
baz=37,SNR=23
D17A Six Diamond Ra 37.14 338 ⇑P P 03 36 54.5 -0.4
baz=37
WVOR Wild Horse Val 37.19 326 eP P 03 36 56.4 +1.0
4.8nm,0.7s,mb4.4
J09A Fry Pan Ranch, 37.34 327 ⇑P P 03 36 57.6 +0.9
baz=37,SNR=12
I10A Payette 37.38 329 ⇓P P 03 36 57.7 +0.7
baz=38
G12A Big Creek, Yel 37.44 332 ⇑P P 03 36 57.3 -0.3
baz=38,SNR=5.3
H11A Donnelly 37.45 330 ⇑P P 03 36 57.3 -0.3
baz=38,SNR=6.8
F13A Darby 37.50 333 ⇓P P 03 36 57.8 -0.2
baz=38,SNR=5.5
LPAZ La Paz 37.50 142 P P 03 36 57.7 -0.6
1.0nm,0.8s,mb3.7,baz=311,slow=8.7,SNR=5.6
LPAZ La Paz 37.50 142 eP P 03 36 57.9 -0.5
1.6nm,0.8s,mb3.9
C17A Wharram Farm, 37.57 338 ⇑P P 03 36 57.8 -0.8
baz=38
H10A Noah's Angus R 37.72 330 ⇑P P 03 36 59.3 -0.6
baz=38,SNR=6.6
J08A Circle Bar Ran 37.73 327 ⇓P P 03 37 00.4 +0.4
baz=38,SNR=27
D15A Lincoln 37.74 336 ⇑P P 03 36 60.0 -0.1
baz=38
I09A Lost Marbles R 37.77 328 ⇑P P 03 37 00.6 +0.3
baz=38,SNR=21
F12A Elk City 37.89 332 ⇓P P 03 37 00.9 -0.4
baz=38,SNR=17
E13A Victor 37.95 334 ⇓P P 03 37 01.5 -0.3
baz=38,SNR=7.3
G11A Walters Elk Ra 38.09 331 ⇓P P 03 37 02.3 -0.6
baz=38,SNR=8.3
MSO Missoula 38.15 335 eP P 03 37 02.5 -1.0
5.8nm,1.2s,mb4.2
D14A Greenough 38.17 335 ⇓P P 03 37 03.0 -0.6
baz=38
BMO Blue Mountains 38.18 330 eP P 03 37 02.7 -1.1
3.9nm,1.0s,mb4.1
A18A Metzger Ranch, 38.35 340 ⇓P P 03 37 04.8 -0.4
baz=38
C15A Salmond Ranch, 38.38 337 ⇑P P 03 37 05.4 0.0
baz=38
G10A Bishop Farm, J 38.41 330 ⇓P P 03 37 05.1 -0.6
baz=38
E12A Beaver Dam Sad 38.53 333 ⇓P P 03 37 06.0 -0.7
baz=39,SNR=7.7
D13A Huson 38.58 334 ⇓P P 03 37 06.5 -0.6
baz=39,SNR=7.4

H08A	Prairie City	38.63	328	⇓P		P	03 37 07.6 0.0
	baz=39						
A17A	Triple J Farms	38.66	339	⇓P		P	03 37 06.7 -1.1
	baz=39						
I07A	Izee	38.77	327	⇑P		P	03 37 08.8 +0.1
	baz=39						
E11A	Bogner Ranch,	38.77	332	⇑P		P	03 37 08.1 -0.6
	baz=39,SNR=9.0						
D12A	Red Ives Fores	38.93	334	⇑P		P	03 37 09.7 -0.3
	baz=39						
F10A	Beach Ranch, E	38.96	331	⇓P		P	03 37 09.8 -0.5
	baz=39,SNR=9.8						
C13A	Hot Springs	39.09	335	⇑P		P	03 37 11.0 -0.3
	baz=39						
G08A	Pilot Rock	39.32	329	⇑P		P	03 37 13.5 +0.2
	baz=39						
D11A	Klaveano Farm,	39.35	333	⇓P		P	03 37 12.9 -0.7
	baz=39						
A15A	Johnson Ranch,	39.42	338	⇓P		P	03 37 13.7 -0.4
	baz=40						
B13A	Whitefish	39.60	336	⇓P		P	03 37 14.8 -0.8
	baz=40						
A14A	Double T Ranch	39.67	337	⇓P		P	03 37 15.9 -0.3
	baz=40,SNR=8.3						
H04A	Detroit Lake	40.61	326	⇓P		P	03 37 23.8 -0.3
	baz=41						
NEW	Newport	40.62	333	*e*P		P	03 37 23.2 -0.8
	2.4nm,0.6s,mb4.0						
C09A	Chrisman Ranch	40.79	332	⇓P		P	03 37 25.0 -0.5
	baz=41						
A11A	Hall Mountain,	40.83	335	⇓P		P	03 37 25.6 -0.2
	baz=41						
B09A	Rice	41.20	333	⇑P		P	03 37 28.4 -0.4
	baz=41						
FFC	Flin Flon	41.80	351	*e*P		P	03 37 33.1 -0.6
	1.9nm,0.6s,mb3.9						
SIV	San Ignacio	41.90	134	P		P	03 37 32.6 -2.3
	3.0nm,0.7s,mb4.0,baz=309,slow=8.6,SNR=20						
D05A	Enumclaw	42.15	329	⇑P		P	03 37 36.9 +0.2
	baz=42						
A07A	Ashnola River,	42.66	332	⇓P		P	03 37 40.7 -0.1
	baz=43,SNR=5.2						
B06A	Marblemount	42.81	330	⇑P		P	03 37 41.3 -0.6
	baz=43						
SCHQ	Schefferville	45.24	20	P		P	03 37 59.8 -1.5
	10.0nm,0.9s,mb4.7,baz=207,slow=6.4,SNR=12						
SCHQ	Schefferville	45.24	20	*e*P		P	03 37 59.6 -1.7
	12nm,1.0s,mb4.7						
YKA	Yellowknife Ar	51.51	346	P		P	03 38 48.0 -1.4
	4.0nm,0.7s,mb4.5,baz=150,slow=7.5,SNR=22						
YKA				PcP		PcP	03 40 02.3 -0.8
	2.1nm,0.7s,baz=144,slow=3.7,SNR=13						
YKA	Yellowknife Ar	51.51	346	P		P	03 38 48.0 -1.4
YKA				PcP		PcP	03 40 02.3 -0.8
DLBC	Dease Lake	53.26	336	P		P	03 39 03.5 +1.0
	12nm,0.7s,mb4.9,baz=141,slow=6.2,SNR=36						
DLBC				LR		LR	04 02 21.3
	comp=Z,68nm,21.5s,MS3.7,baz=0.1,slow=37						
DLBC	Dease Lake	53.26	336	*e*P		P	03 39 03.3 +0.8
INK	Inuvik	60.96	343	P		P	03 39 56.0 -0.8
	5.3nm,0.7s,mb4.8,baz=122,slow=7.0,SNR=12						
INK	Inuvik	60.96	343	*e*P		P	03 39 55.3 -1.5
	4.9nm,0.7s,mb4.8						
RES	Resolute Bay	61.02	359	P		P	03 39 55.1 -2.0
	3.0nm,0.7s,mb4.5,baz=181,slow=8.2,SNR=17						
RES	Resolute Bay	61.02	359	*e*P		P	03 39 54.7 -2.4
	3.1nm,0.7s,mb4.5						
COLA	College	63.85	337	*e*P		P	03 40 15.1 -1.1
	5.3nm,0.8s,mb4.6						
RSO	Redoubt South	64.31	331	*e*P		P	03 40 18.9 -0.3
KTH	Kantishna Hill	64.56	335	*e*P		P	03 40 19.6 -1.2
	12nm,0.9s,mb4.9						
BPAW	Bear Paw Mtn.	64.79	335	*e*P		P	03 40 21.0 -1.3
	9.6nm,0.8s,mb4.9						
COLD	Coldfoot	65.71	339	*e*P		P	03 40 28.2 0.0
	4.6nm,1.2s,mb4.4						
TTA	Tatalina	66.53	333	*e*P		P	03 40 31.1 -2.4
	13nm,1.2s,mb4.8						
BILL	Bilibino	82.04	338	*e*P		P	03 42 02.6 -1.1
	3.4nm,0.8s,mb4.3						
NOA	NORSAR Array B	84.03	29	P		P	03 42 13.6 -0.6
	0.8nm,0.7s,mb4.0,baz=290,slow=5.2,SNR=5.1						
TIC	Toumodi	84.74	84	*e*P		P	03 42 18.9 +0.2
	40nm,1.2s,mb5.4						
LIC	Lamto	84.83	85	*e*P		P	03 42 19.2 +0.1
	42nm,1.4s,mb5.4						
DBIC	Dimbokro	84.89	84	P		P	03 42 19.5 +0.1
	5.0nm,0.8s,mb4.7,baz=229,slow=4.9,SNR=5.0						
DBIC	Dimbokro	84.89	84	*e*P		P	03 42 19.4 0.0
	6.0nm,0.8s,mb4.8						
KIC	Kosan Boka	85.07	85	*e*P		P	03 42 20.4 0.0
	20nm,0.9s,mb5.3						
ARCES	ARCESS Array B	86.18	18	P		P	03 42 22.5 -2.2
	2.7nm,0.9s,mb4.5,baz=306,slow=4.1,SNR=4.7						
ARCES	ARCESS Array B	86.18	18	P		P	03 42 22.5 -2.2
TORD	Torodi Ar. Bea	89.67	77	P		P	03 42 39.4 -3.2
	0.2nm,0.6s,mb3.6,baz=298,slow=31,SNR=6.0						
ABKAR	Akbulak array	112.33	20	*e*PKP		PKiKP	03 48 17.1 -2.5
KURK	Kurchatov	115.25	7	PKP		PKPdf	03 48 24.1 -1.1
	0.6nm,0.7s,baz=342,slow=2.3,SNR=3.4						
HHC	Hu-ho-hao-te	121.79	340	*e*PKP		PKPdf	03 48 35.0 -3.1
HHC				sPKP			03 49 12.4
HHC				PP		PP	03 50 14.9 +4.6
HHC				PKS			03 52 10.1
HHC				SKS		SKSdf	03 55 35.9 -11
HHC				SKKS		SKKSac	03 56 52.7 -14
HHC				AMB		AMB	
	comp=Z,38nm,7.0s						
HHC				LR		LR	
	comp=N,89nm,24.0s,MS4.5						
HHC				LR		LR	
	comp=E,110nm,27.6s,MS4.5						
HHC				LR		LR	
	comp=Z,140nm,26.4s,MS4.5						
WMQ	Urumqi	122.76	1	*e*PKP		PKPdf	03 48 36.0 -3.8
CD2	Chengdu	133.39	342	*e*PKP		PKPdf	03 48 58.5 -2.0
CHTO	Chiang Mai	146.19	343	*e*PKPbc		PKPbc	03 49 24.0 -0.9
CMAR	Chiang Mai Arr	146.53	342	PKPbc		PKPbc	03 49 25.9 -0.1
	comp=Z,7.7nm,0.8s,baz=344,slow=4.5,SNR=37						

*IPEC **06** 03:33:27.9±0.1,50°.25N×18°.91E,h3km±1km,ML1.8/3,*
Error ellipse: s-maj=1.5km s-min=0.8km az=171.0
*CSEM **06** 03:33:27.8±0.3,50°.32N×18°.83E,h2km,ML2.6/6,Error*
ellipse: s-maj=8.2km s-min=3.5km az=178.0
*PRU **06** 03:33:28.3,50°.23N×18°.80E,h0km*

WAR 06 03:33:27.3,50°.23N×18°.91E,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	Ojcow	0.57	91	*e*Pg	Pg	03 33 38.8	+0.6
OJC				*e*Sg	Sg	03 33 46.6	+1.0
OJC	Ojcow	0.57	91	*e*Pg	Pg	03 33 38.7	+0.5
	baz=273						
OJC				*e*Sg	Sg	03 33 46.3	+0.7
	baz=273						
OKC	Ostrava-Krasne	0.63	232	*e*PG	Pg	03 33 40.1	+0.8
OKC				*e*SG	Sg	03 33 48.6	+1.1
	comp=Z,8.8nm,0.3s						
OKC	Ostrava-Krasne	0.63	232	*e*Pg	Pg	03 33 40.3	+1.0
	baz=50						
OKC				Sg	Sg	03 33 48.6	+1.1
	comp=Z,8.8nm,0.3s						
MORC	Moravsky Berou	0.99	243	*e*Pg	Pg	03 33 46.9	+0.6
	baz=61						
MORC				*e*Sg	Sg	03 33 59.1	0.0
	comp=Z,15nm,0.2s,baz=61						
NIE	Niedzica	1.22	131	*e*Pg	Pg	03 33 52.3	+1.7
NIE				*e*Sg	Sg	03 34 09.6	+3.2
JAVC	Velka Javorina	1.59	211	*e*Pn	Pn	03 33 58.8	+2.1
DPC	Dobruska-Polom	1.66	275	*e*PG	Pg	03 33 57.8	-1.4
DPC				*e*SG	Sg	03 34 19.4	-1.3
	comp=Z,5.0nm,0.3s						
DPC	Dobruska-Polom	1.66	275	*e*Pn	Pn	03 33 57.7	0.0
	baz=92						
DPC				Sg	Sg	03 34 19.4	-1.3
	comp=Z,5.0nm,0.3s						
STHS	Stebnicka Huta	1.72	117	*e*PN	Pg	03 34 01.4	+1.2
STHS				*e*SN	Sg	03 34 25.4	+3.0
STHS	Stebnicka Huta	1.72	117	*e*Pn	Pg	03 34 01.4	+1.2
STHS				*e*Sn	Sg	03 34 25.4	+3.0
VYHS	Vyhne	1.74	182	*e*PN	Pn	03 33 59.8	+1.1
VYHS				*e*SN	Sn	03 34 23.1	+1.6
VYHS	Vyhne	1.74	182	*e*Pn	Pn	03 33 59.2	+0.5
	baz=1.5						
VYHS				*e*Sn	Sn	03 34 23.1	+1.6
VRAC	Vranov	1.76	239	*e*Sg	Sg	03 34 23.5	-0.4
	comp=Z,9.8nm,0.3s,baz=57						
KSP	Ksiaz	1.78	291	*e*Pg	Pg	03 34 01.3	-0.1
KSP				*e*Sg	Sg	03 34 25.0	+0.6
UPC	Upice	1.88	280	*e*SG	Sg	03 34 26.3	-1.2
UPC	Upice	1.88	280	Sg	Sg	03 34 26.3	-1.2
KRUC	Moravsky	2.01	235	*e*Pn	Pn	03 34 03.2	+0.8
	baz=53						
KRUC				*e*Sn	Sn	03 34 29.5	+1.3
	comp=Z,3.9nm,0.3s,baz=53						
KECS	Kecovo	2.03	149	*e*SN	Sn	03 34 30.9	+2.2
PRU	Pruhonice	2.82	267	*e*SG	Sg	03 34 54.6	-3.3
	comp=Z,2.5nm,0.3s						
PRU	Pruhonice	2.82	267	Sg	Sg	03 34 54.6	-3.3
	comp=Z,2.5nm,0.3s						
KHC	Kasperske Hory	3.63	254	*e*SG	Sg	03 35 20.8	-3.1
	comp=Z,3.5nm,0.6s						
KHC	Kasperske Hory	3.63	254	Sg	Sg	03 35 20.8	-3.1
	comp=Z,3.5nm,0.6s						

*NIED **06** 03:38:00,31°.00N×141°.50E,h38km,Mw3.9 Best double*
couple: M0=9.06000×10^14 NP1:φ=51.00000°,δ=76.00000°,
λ=153.00000°. NP2:φ=148.00000°,δ=64.00000°,λ=15.00000°.
*JMA **06** 03:38:02.2±0.2,31°.05N×141°.46E,h53km,M4.4*
*ISCJB **06** 03:38:08.0±1.4,31°.36N±0°.07×141°.2E±0°.1,h80km±11km,*
mb3.9/17,Error ellipse: s-maj=15.9km s-min=12.2km
az=9.3
*IDC **06** 03:38:11.2±2.6,31°.44N×140°.99E,h94km±20km,mb3.7/10,*
mb1 3.9/11,mb1mx3.7/25,mbtmp3.6/11,MS4.1/1,
Ms1 4.1/1,ms1mx2.6/31,Error ellipse: s-maj=26.9km
s-min=22.7km az=89.0
*NEIC **06** 03:38:12.5±2.0,31°.42N×141°.05E,h106km±14km,mb4.1/8,*
Error ellipse: s-maj=19.0km s-min=14.8km az=168.0

ISC 06 03:38:05.9±1.2,31°.16N±0°.07×141°.2E±0°.1,h55km±9km,
n43,σ1§20/50,mb4.0/17,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	2.27	329	P	Pn	03 38 41.2	+0.2
JHJ	Hachijo jima 2	2.29	329	P	Pn	03 38 41.5	+0.2
	17nm,0.3s,baz=221,slow=20,SNR=13						
JHJ				S	Sn	03 39 07.3	-1.0
	88nm,0.3s,baz=240,slow=22,SNR=11						
JHJ				LR	LR	03 39 13.7	
	comp=Z,1μm,21.5s,baz=69,slow=32						
BSO1	Boso 1	3.49	357	P	Pn	03 38 57.9	+0.2
BSO1				*e*S	Sn	03 39 37.9	+0.2
BSO2	Boso 2	3.60	354	*e*S	Sn	03 39 40.8	+0.3
BSO3	Boso 3	3.68	351	P	Pn	03 39 00.3	0.0
BSO3				*e*S	Sn	03 39 41.2	-1.2
CBIJ	Chichi jima	4.14	168	P	Pn	03 39 02.3	-4.3
CBIJ				*e*S	Sn	03 39 42.9	-11
CBIJ	Chichi jima	4.14	168	P	Pn	03 39 03.2	-3.4
	9.9nm,0.3s,baz=283,slow=21,SNR=9.5						
CBIJ				S	Sn	03 39 46.1	-7.6
	9.8nm,0.3s,baz=269,slow=22,SNR=7.1						
JHU	Hanno	4.95	342	P	Pn	03 39 19.8	+2.2
JHU				*e*S	Sn	03 40 11.9	-1.6
JNY	Yasuok	5.03	327	P	Pn	03 39 23.1	+4.3
JRY	Ryogami san	5.21	339	P	Pn	03 39 23.3	+2.1
JRY				*e*S	Sn	03 40 21.5	+1.5
JHO	Hitachi	5.46	355	P	Pn	03 39 24.1	-0.6
JHO				*e*S	Sn	03 40 24.9	-1.3
MJAR	Matsushiro Arr	5.92	336	P	Pn	03 39 33.2	+2.3
	1.7nm,0.3s,baz=149,slow=10.0,SNR=15						
MAJO	Matsushiro	5.92	336	*e*Pn	Pn	03 39 34.1	+3.2
	14nm,0.6s						
MAT	Matsushiro	5.92	336	P	Pn	03 39 33.9	+3.0
MAT	Matsushiro	5.92	336	P	Pn	03 39 34.3	+3.4
JFK	Kawauchi	6.20	358	P	Pn	03 39 33.4	-1.4
JFK				*e*S	Sn	03 40 39.8	-4.5
JMK	Ichinoseki	7.78	0	P	Pn	03 39 55.4	-1.0
JMK				*e*S	Sn	03 41 18.2	-4.8
KSRS	Korea Array	12.63	303	P	Pn	03 41 09.4	+6.6
	baz=121,slow=12,SNR=5.6						
BILL	Bilibino	39.73	14	*e*P	P	03 45 32.5	-0.1
	2.6nm,0.9s,mb4.0						
MKAR	Makanchi Array	47.29	307	P	P	03 46 35.5	+1.8
	0.3nm,0.3s,mb3.6,baz=69,slow=10,SNR=3.6						
KURK	Kurchatov	49.58	312	*e*P	P	03 46 49.9	-1.3
	1.3nm,0.3s,mb4.4						
EKS2	Erkin-Say	53.81	302	*e*P	P	03 47 21.9	-1.0
	3.5nm,1.1s,mb4.2						
ASAR	Alice Springs	54.96	188	P	P	03 47 34.9	+3.5
	0.3nm,0.5s,mb3.6,baz=357,slow=5.4,SNR=5.9						
DLBC	Dease Lake	63.42	36	P	P	03 48 30.2	+0.7
	3.1nm,1.0s,mb4.4,baz=332,slow=1.5,SNR=3.8						
DLBC	Dease Lake	63.42	36	P	P	03 48 30.2	+0.7
RES	Resolute Bay	68.33	14	P	P	03 49 00.7	-0.2
	baz=320,slow=7.2						
RES	Resolute Bay	68.33	14	*e*P	P	03 49 00.7	-0.2
	1.2nm,0.6s,mb4.1						
YKA	Yellowknife Ar	69.00	29	P	P	03 49 04.9	-0.2
	1.6nm,0.8s,mb4.0,baz=294,slow=6.4,SNR=6.3						
FINES	FINESS Array B	73.94	333	P	P	03 49 34.2	-0.7
	1.3nm,0.4s,mb4.2,baz=67,slow=5.5,SNR=13						
FINES				LR	LR	04 21 56.5	
	comp=Z,118nm,19.4s,baz=145,slow=36						
NVAR	Mina Array Bea	78.70	52	P	P	03 50 03.3	+0.9
	1.6nm,0.8s,mb4.0,baz=285,slow=5.5,SNR=9.1						
FFC	Flin Flon	78.76	32	*e*P	P	03 50 02.1	-0.2
	2.4nm,0.6s,mb4.3						
AKASG	Malin Array Be	78.85	323	P	P	03 50 01.6	-1.3
	0.5nm,0.4s,mb3.8,baz=47,slow=6.6,SNR=4.0						
BOZ	Bozeman (W)	79.09	43	*e*P	P	03 50 05.6	+1.3
	2.6nm,1.0s,mb4.1						
NB2	NORSAR Subarra	79.53	338	P	P	03 50 05.1	-1.4
	comp=Z,0.9nm,0.6s,mb3.9,baz=41,slow=5.3						
NOA	NORSAR Array B	79.53	338	P	P	03 50 05.5	-1.0
	comp=Z,0.7nm,0.6s,mb3.7,baz=41,slow=5.4,SNR=5.1						
PDAR	Pinedale Array	81.94	45	P	P	03 50 19.8	+0.1
	comp=Z,0.3nm,0.6s,mb3.4,baz=272,slow=2.3,SNR=2.9						
BR131	Keskin Array S	82.63	312	*e*P	P	03 50 23.7	+0.4
	comp=Z,0.7nm,0.7s,mb3.8						
BRTR	Keskin Array B	82.63	312	P	P	03 50 23.5	+0.2
	comp=Z,1.0nm,0.8s,mb3.9,baz=104,slow=2.8,SNR=4.2						
TXAR	Lajitas Array	93.85	52	P	P	03 51 18.5	+1.0
	comp=Z,1.1nm,0.6s,mb4.4,baz=301,slow=3.2,SNR=13						
TXAR	Lajitas Array	93.85	52	P	P	03 51 18.5	+1.0
TORD	Torodi Ar. Bea	121.24	312	PKP	PKPdf	03 56 51.1	-2.2
	comp=Z,0.2nm,1.0s,baz=44,slow=1.3,SNR=3.4						
LPAZ	La Paz	149.47	68	PKPbc	PKPbc	03 57 50.1	+0.6
	comp=Z,1.7nm,0.9s,baz=345,slow=2.1,SNR=6.2						
LPAZ	La Paz	149.47	68	*e*PKPbc	PKPbc	03 57 50.0	+0.6

*CSEM **06** 03:41:53.2±0.3,35°.65N×4°.70E,h2km,ML4.2,Error*
ellipse: s-maj=9.5km s-min=3.9km az=169.0
*CRAAG **06** 03:41:54.2,35°.76N×4°.45E,Ml4.2*
*MDD **06** 03:41:54.5±0.7,35°.71N×4°.70E,h0km,mb4.1/23,Error*
ellipse: s-maj=11.8km s-min=3.9km az=178.0,PRIMO
*NEIC **06** 03:41:55.8,35°.71N×4°.57E,h0km,MG4.1(MDD),After*
MDD.

ISC 06 03:41:58.9±0.8,35°.88N±0°.04×4°.39E±0°.05,h16km±5km,
n202,σ0§88/273,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKET	Djebel Ketaf	0.45	292	P	Pg	03 42 07.1	-0.8
AKET	Djebel Ketaf	0.45	292	P	Pg	03 42 07.1	-0.8
AKET	Djebel Ketaf	0.45	292	P	Pg	03 42 07.1	-0.8
AKET	Djebel Ketaf	0.45	292	P	Pg	03 42 07.1	-0.8
AKF	Akfadou	0.76	11	P	Pg	03 42 14.2	+0.4
AKF	Akfadou	0.76	11	P	Pg	03 42 14.2	+0.4
AKF	Akfadou	0.76	11	P	Pg	03 42 14.2	+0.4
AKF	Akfadou	0.76	11	P	Pg	03 42 14.2	+0.4
ADJB	Djebel Djouab	0.82	290	P	Pg	03 42 13.8	-1.1
ADJB	Djebel Djouab	0.82	290	P	Pg	03 42 13.8	-1.1
ADJB	Djebel Djouab	0.82	290	P	Pg	03 42 13.8	-1.1
ADJB	Djebel Djouab	0.82	290	P	Pg	03 42 13.8	-1.1
SET	Setif	0.88	68	P	Pg	03 42 07.0	-8.9
SET	Setif	0.88	68	P	Pg	03 42 07.0	-8.9
SET	Setif	0.88	68	P	Pg	03 42 07.0	-8.9
SET	Setif	0.88	68	P	Pg	03 42 07.0	-8.9
CKHR	Kef el Ahmar	0.92	81	P	Pg	03 42 06.9	-10
CKHR	Kef el Ahmar	0.92	81	P	Pg	03 42 06.9	-10
CKHR	Kef el Ahmar	0.92	81	P	Pg	03 42 06.9	-10
CKHR	Kef el Ahmar	0.92	81	P	Pg	03 42 06.9	-10
EMHD	Djebel Mahouad	1.21	286	P	Pn	03 42 21.2	0.0
EMHD	Djebel Mahouad	1.21	286	P	Pn	03 42 21.2	0.0
EMHD	Djebel Mahouad	1.21	286	P	Pn	03 42 21.2	0.0
EMHD	Djebel Mahouad	1.21	286	P	Pn	03 42 21.2	0.0
DFRA	Djebel Bou Aff	1.37	61	P	Pn	03 42 16.1	-7.3
DFRA	Djebel Bou Aff	1.37	61	P	Pn	03 42 16.1	-7.3
DFRA	Djebel Bou Aff	1.37	61	P	Pn	03 42 16.1	-7.3
DFRA	Djebel Bou Aff	1.37	61	P	Pn	03 42 16.1	-7.3
ABA	Alger-Bouzarea	1.43	310	P	Pg	03 42 25.4	-1.0
ABA	Alger-Bouzarea	1.43	310	P	Pg	03 42 25.4	-1.0
ABA	Alger-Bouzarea	1.43	310	P	Pg	03 42 25.4	-1.0
ABA	Alger-Bouzarea	1.43	310	P	Pg	03 42 25.4	-1.0
CTEI	Djebel Teioual	1.64	83	P	Pn	03 42 20.9	-6.3
CTEI	Djebel Teioual	1.64	83	P	Pn	03 42 20.9	-6.3
CTEI	Djebel Teioual	1.64	83	P	Pn	03 42 20.9	-6.3
CTEI	Djebel Teioual	1.64	83	P	Pn	03 42 20.9	-6.3
CASM	Ain Smara	1.74	77	P	Pn	03 42 21.3	-7.2
CASM	Ain Smara	1.74	77	P	Pn	03 42 21.3	-7.2
CASM	Ain Smara	1.74	77	P	Pn	03 42 21.3	-7.2
CASM	Ain Smara	1.74	77	P	Pn	03 42 21.3	-7.2
CKFL	Kef-Lekhel	1.95	74	P	Pn	03 42 26.9	-4.5
CKFL	Kef-Lekhel	1.95	74	P	Pn	03 42 26.9	-4.5
CKFL	Kef-Lekhel	1.95	74	P	Pn	03 42 26.9	-4.5
CKFL	Kef-Lekhel	1.95	74	P	Pn	03 42 26.9	-4.5
EBNR	Beni Rached	2.35	281	P	Pn	03 42 36.5	-0.4
EBNR	Beni Rached	2.35	281	P	Pn	03 42 36.5	-0.4
ECHA	Ech Chlef	2.47	277	P	Pn	03 42 37.7	-0.8
ECHA	Ech Chlef	2.47	277	P	Pn	03 42 37.7	-0.8
ECHF	Ech Chlef	2.49	277	P	Pn	03 42 37.7	-1.1
ECHF	Ech Chlef	2.49	277	P	Pn	03 42 37.7	-1.1
CMAH	Djebel Manchou	2.56	72	P	Pn	03 42 35.0	-4.7
CMAH	Djebel Manchou	2.56	72	P	Pn	03 42 35.0	-4.7
CMAH	Djebel Manchou	2.56	72	P	Pn	03 42 35.0	-4.7
CMAH	Djebel Manchou	2.56	72	P	Pn	03 42 35.0	-4.7
ETRT	Tiaret	2.57	260	P	Pn	03 42 42.3	+2.5
ETRT	Tiaret	2.57	260	P	Pn	03 42 42.3	+2.5
ETRT	Tiaret	2.57	260	P	Pn	03 42 42.3	+2.5
ETRT	Tiaret	2.57	260	P	Pn	03 42 42.3	+2.5
EANR	'Ain N'Sour	2.67	272	P	Pn	03 42 41.0	-0.3
EANR	'Ain N'Sour	2.67	272	P	Pn	03 42 41.0	-0.3
EANR	'Ain N'Sour	2.67	272	P	Pn	03 42 41.0	-0.3
EANR	'Ain N'Sour	2.67	272	P	Pn	03 42 41.0	-0.3
OJGS	Djebel Guires	2.99	264	P	Pn	03 42 42.0	-3.7
OJGS	Djebel Guires	2.99	264	P	Pn	03 42 42.0	-3.7
OJGS	Djebel Guires	2.99	264	P	Pn	03 42 42.0	-3.7
OJGS	Djebel Guires	2.99	264	P	Pn	03 42 42.0	-3.7
OKGL	Djebel Kef Gue	3.05	274	P	Pn	03 42 47.0	+0.6
OKGL	Djebel Kef Gue	3.05	274	P	Pn	03 42 47.0	+0.6
OKGL	Djebel Kef Gue	3.05	274	P	Pn	03 42 47.0	+0.6
OKGL	Djebel Kef Gue	3.05	274	P	Pn	03 42 47.0	+0.6
OJBR	Djebel Berber	3.31	266	P	Pn	03 42 45.0	-5.0
OJBR	Djebel Berber	3.31	266	P	Pn	03 42 45.0	-5.0
ODJA	Bouhanifia	3.74	263	P	Pb	03 43 05.0	+0.4
EIBI	Ibiza	3.97	323	P	Pn	03 42 59.8	+0.7
EIBI				S	Sn	03 43 45.8	+0.5
EIBI	Ibiza	3.97	323	P	Pn	03 42 59.8	+0.7
	6.7nm,0.2s,SNR=16						
EIBI				S	Sn	03 43 45.8	+0.5
	7.2nm,0.4s,SNR=7.9					

ERTA	**Horta de San J**	**5.99 329**	P	**Pn**	**03 43 26.3**	**-0.5**
ERTA			S	**Sn**	**03 44 34.0**	**-1.0**
ERTA	**Horta de San J**	**5.99 329**	P	**Pn**	**03 43 26.3**	**-0.5**
	1.1nm,0.3s,SNR=7.9					
ERTA			S	**Sn**	**03 44 34.0**	**-1.0**
	9.6nm,1.0s,SNR=7.9				

GYA pmax pmax
comp=Z,120nm,5.2s
GYA LR LR
comp=N,530nm,18.0s
GYA LR LR
comp=E,680nm,19.2s
GYA LR LR
comp=Z,760nm,18.5s
BJI Beijing 59.97 325 P P 03 52 48.3 -0.9
BJI sP sP 03 53 17.0 -3.1
BJI PP PP 03 55 03.8 +1.2
BJI S **S 04 00 49.9 -5.2**
BJI sS sS 04 01 30.2 -1.6
BJI pmax pmax
comp=Z,15nm,0.7s,mb5.1
BJI pmax pmax
comp=Z,230nm,8.4s
BJI LR LR
comp=N,230nm,20.4s
BJI LR LR
comp=E,140nm,18.6s
BJI LR LR
comp=Z,170nm,21.5s
PET Petropavlovsk 60.30 2 eP P 03 52 56.4 +5.2
PET *e*S **S 04 01 08.2 +9.3**
PET pmax pmax
comp=Z,300nm,10.2s
PET MLR MLR
comp=Z,300nm,17.0s
PET MLR MLR
comp=Z,300nm,11.0s
PETK Petropavlovsk- 60.36 1 P P 03 52 51.6 0.0
comp=Z,5.3nm,0.8s,mb4.6,baz=154,slow=8.1,SNR=6.7
PETK LR LR 04 15 14.0
comp=Z,386nm,20.6s,baz=178,slow=32
KLR Kul'dur 60.37 342 eP P 03 52 47.2 -4.6
KMI Kunming 61.24 304 P P 03 52 58.7 +0.5
KMI pP pP 03 53 19.2 -0.5
KMI sP sP 03 53 29.4 +0.2
KMI PP PP 03 55 16.3 +2.2
KMI S **S 04 01 11.0 -1.0**
KMI sS sS 04 01 46.9 -1.8
KMI SS SS 04 05 15.7 +1.9
KMI pmax pmax
comp=Z,18nm,1.1s,mb5.0
KMI pmax pmax
comp=Z,110nm,3.8s
KMI LR LR
comp=N,160nm,17.2s
KMI LR LR
comp=E,190nm,19.4s
KMI LR LR
comp=Z,280nm,23.7s
FX1 Attu Island--F 61.84 12 P P 03 53 03.7 +2.1
comp=Z,5.8nm,0.6s,mb4.8,baz=174,slow=22,SNR=4.2
FX1 Attu Island--F 61.84 12 P P 03 53 03.7 +2.1
CM31 Chiang Mai Arr 62.04 295 eP P 03 53 04.2 +0.6
comp=Z,32nm,0.9s,mb5.4
CM31 *e*pP pP 03 53 12.8 -12
CMAR Chiang Mai Arr 62.04 295 P P 03 53 04.2 +0.5
comp=Z,10.0nm,0.8s,mb4.9,baz=106,slow=5.1,SNR=33
CMAR LR LR 04 18 34.7
comp=Z,124nm,19.8s,baz=297,slow=35
CHTO Chiang Mai 62.15 296 eP P 03 53 04.3 -0.1
CHTO pmax pmax
comp=Z,60nm,1.3s,mb5.5
CHTO Chiang Mai 62.15 296 eP P 03 53 04.3 -0.1
comp=Z,60nm,1.3s,mb5.5
CHTO Chiang Mai 62.15 296 P P 03 53 04.7 +0.2
SNR=20
CHTO P 03 53 04.7
SNR=20
TAOE Nuku Hiva Isla 62.99 96 *e*LR LR 04 12 24.3
comp=Z,439nm,23.7s
CD2 Chengdu 63.01 310⇑ *i*P **P 03 53 10.9 +1.0**
CD2 pP pP 03 53 35.2 +3.7
CD2 PP PP 03 55 32.0 +2.4
CD2 PcS PcS 03 57 49.7 -1.1
CD2 S **S 04 01 31.8 -2.2**
CD2 ScS ScS 04 02 50.2 -5.0
CD2 SS SS 04 05 41.0 -0.2
CD2 pmax pmax
comp=Z,30nm,0.8s,mb5.3
CD2 pmax pmax
comp=Z,120nm,5.2s
CD2 LR LR
comp=N,330nm,25.0s
CD2 LR LR
comp=E,420nm,23.8s
CD2 LR LR
comp=Z,270nm,20.2s
HHC Hu-ho-hao-te 63.16 323 eP P 03 53 11.0 +0.3
HHC pP pP 03 53 30.5 -1.9
HHC sP sP 03 53 39.2 -2.6
HHC PcP PcP 03 53 47.5 0.0
HHC PP PP 03 55 31.8 +1.0
HHC ScP ScP 03 57 41.5 -0.8
HHC PcS PcS 03 57 49.8 -1.3
HHC S **S 04 01 34.7 -0.9**
HHC sS sS 04 02 09.1 -3.4
HHC ScS ScS 04 02 53.2 -2.8
HHC SS SS 04 05 44.2 +0.9
HHC pmax pmax
comp=Z,17nm,0.9s,mb5.0
HHC pmax pmax
comp=Z,88nm,6.0s
HHC LR LR
comp=N,140nm,18.0s
HHC LR LR
comp=E,170nm,19.2s
HHC LR LR
comp=Z,220nm,20.7s
LZH Lanzhou 65.47 315 eP P 03 53 28.4 +2.5
LZH pP pP 03 53 48.6 +0.9
LZH sP sP 03 53 56.7 -0.3
LZH PcP PcP 03 54 00.2 +3.1
LZH PP PP 03 55 54.5 +3.4
LZH *e*S S 04 02 06.3 +2.1
LZH sS sS 04 02 39.1 -2.2
LZH pmax pmax
comp=Z,20nm,1.2s,mb4.8
LZH pmax pmax
comp=Z,69nm,4.8s
LZH LR LR
comp=E,240nm,16.4s
LZH LR LR
comp=Z,420nm,17.3s
CASY Casey 66.50 198 eP P 03 53 32.3 +0.3
comp=Z,20nm,1.0s,mb4.9
RKT Rikitea 67.69 112 *e*LR LR 04 14 31.2
comp=Z,736nm,28.2s
GTA Gaotai 69.88 317 eP P 03 53 54.1 +0.5
GTA pP pP 03 54 13.8 -1.8
GTA sP sP 03 54 22.5 -2.4
GTA PP PP 03 56 32.2 +2.9
GTA S S 04 02 56.2 -0.6
GTA sS sS 04 03 30.4 -3.9
GTA SS SS 04 07 28.6 +1.0
GTA pmax pmax
comp=Z,13nm,1.2s,mb4.6
GTA pmax pmax
comp=Z,93nm,4.5s
GTA LR LR
comp=N,120nm,16.2s
GTA LR LR
comp=E,160nm,22.5s
GTA LR LR
comp=Z,160nm,21.0s
ULN Ulaanbaatar 70.03 327 eP P 03 53 55.0 +0.7
ULN pmax pmax
comp=Z,44nm,1.2s,mb5.2
ULN Ulaanbaatar 70.03 327 eP P 03 53 55.0 +0.7
comp=Z,44nm,1.2s,mb5.2
ULN Ulaanbaatar 70.03 327 P P 03 53 55.4 +1.1
SNR=30
ULN P 03 53 55.4
SNR=30
SEY Seymchan 70.26 358 *ce*P **P 03 53 55.3 -0.1**
SONM Songino Array 70.36 327 P P 03 53 57.0 +0.7
comp=Z,20nm,0.8s,mb5.0,baz=133,slow=6.0,SNR=71
SONM LR LR 04 24 48.1
comp=Z,247nm,21.2s,baz=13,slow=36
SHL Shillong 70.54 300⇑ *i*P **P 03 53 58.0 +0.1**
SHL *ex* x 04 04 20.0
YAK Yakutsk 72.27 347 *e*P **P 03 54 06.5 -1.0**
YAK pmax pmax
comp=Z,27nm,1.1s,mb5.0
YAK pmax pmax
comp=E,5.0nm,1.0s
YAK pmax pmax
comp=N,10.0nm,1.3s
YAK MLR MLR
comp=Z,215nm,21.0s
YAK MLR MLR
comp=N,145nm,21.0s
YAK MLR MLR
comp=E,84nm,17.0s
LSA Lhasa 72.50 304 *e*P **P 03 54 10.5 +0.9**
LSA pmax pmax
comp=Z,7.0nm,0.6s,mb4.7
LSA Lhasa 72.50 304 *e*P **P 03 54 10.5 +0.9**
comp=Z,6.5nm,0.6s,mb4.6
MIR Mirnyy 72.68 202⇑ *i*P **P 03 54 11.6 +1.6**
MIR pmax pmax
comp=Z,58nm,1.4s,mb5.2
ZAK Zakamensk 73.51 328⇓ *i*P **P 03 54 14.9 -0.2**
ZAK pmax pmax
comp=Z,14nm,1.1s,mb4.6
TLY Talaya 74.06 329 *e*P **P 03 54 18.5 +0.2**
TLY *e* 03 54 30.2
TLY *e*S ScS 04 04 21.1 +0.2
TLY pmax pmax
comp=Z,14nm,1.3s,mb4.5
TLY MLR MLR
comp=Z,116nm,20.0s
TLY Talaya 74.06 329 *e*P **P 03 54 18.5 +0.2**
TLY Talaya 74.06 329 P **P 03 54 18.8 +0.5**
SNR=13
TLY P 03 54 18.8
SNR=13
MOY Mondy 75.43 328 *e*P **P 03 54 26.3 +0.1**
MOY pmax pmax
comp=Z,30nm,2.7s,mb4.5
RAMN Ramite 75.47 300 *e*P **P 03 54 26.5 -0.5**
comp=Z,56nm,1.0s,mb5.2
BILL Bilibino 75.67 4 *e*P **P 03 54 27.5 +0.3**
BILL *e* 03 54 36.9
BILL *i* pP 03 54 47.3 -2.2
BILL pmax pmax
comp=Z,26nm,1.2s,mb4.8
BILL MLR MLR
comp=Z,100nm,19.0s
BILL Bilibino 75.67 4 *e*P **P 03 54 26.9 -0.4**
comp=Z,20nm,1.0s,mb4.8
JIRN Jiri 76.02 301 *e*P **P 03 54 29.9 -0.2**
comp=Z,37nm,0.8s,mb5.2
GUN Gumba 76.36 301 *e*P **P 03 54 32.0 0.0**
comp=Z,102nm,0.9s,mb5.6
PKI Pulchoki 76.67 301 *e*P **P 03 54 33.3 -0.5**
comp=Z,150nm,1.3s,mb5.6
PKIN Phulchoki 76.68 301 *e*P **P 03 54 32.8 -1.0**
comp=Z,28nm,0.8s,mb5.0
PKIN Phulchoki 76.68 301 *e*P **P 03 54 33.8 0.0**
KKN Kakani 76.83 301 *e*P **P 03 54 34.5 -0.2**
DMN Daman 76.93 300 *e*P **P 03 54 35.1 -0.2**
comp=Z,124nm,1.0s,mb5.6
SVW2 Sparrevohn 78.00 22 *e*P **P 03 54 41.4 +0.9**
TTA Tatalina 79.06 20 *e*P **P 03 54 46.2 -0.1**
TTA pmax pmax
comp=Z,11nm,1.0s,mb4.6
TTA Tatalina 79.06 20 *e*P **P 03 54 46.2 -0.1**
comp=Z,11nm,1.0s,mb4.6
WMQ Urumqi 79.96 317 *e*P **P 03 54 52.2 +0.6**
WMQ pP pP 03 55 12.2 -1.9
WMQ sP sP 03 55 21.2 -2.1
WMQ PP PP 03 57 56.2 +1.6
WMQ S S 04 04 48.2 -0.5
WMQ ScS ScS 04 05 07.2 -1.8
WMQ SS SS 04 10 02.2 +1.7
WMQ pmax pmax
comp=Z,38nm,1.2s,mb5.1
WMQ pmax pmax
comp=Z,160nm,7.0s
WMQ LR LR
comp=N,160nm,18.0s
WMQ LR LR
comp=E,260nm,18.0s
WMQ LR LR
comp=Z,200nm,18.0s
NGP Nagpur 80.79 293 *ex* **P 03 54 51.4 -5.2**
TIXI Tiksi 80.99 352 *e*P **P 03 54 55.9 -0.6**
JOSI Joshimath 82.37 302 *e*PKP **P 03 55 03.4 -1.3**
JOSI AML AML 03 55 07.3
comp=Z,275nm,0.7s
QSPA South Pole Qui 82.50 180 *e*P **P 03 55 06.2 +1.8**
comp=Z,50nm,1.0s,mb5.3
AGRA Agra 83.03 299 *e*PKP **P 03 55 07.3 -0.8**
AGRA AMb AMB 03 55 10.1
comp=Z,49nm,0.2s,mb6.0
COLA College 83.11 21 *e*P **P 03 55 06.5 -1.2**
COLA pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
COLA College 83.11 21 *e*P **P 03 55 06.5 -1.2**
comp=Z,6.7nm,0.8s,mb4.5
COLA *e*pP pP 03 55 18.9 -11
DDI Dehra Dun 83.58 302 *ex* **P 03 55 10.0 -1.0**
KLP Kalpa 83.68 303 *e*PKP **P 03 55 10.7 -0.7**
KLP AML AML 03 55 14.3
comp=Z,49nm,1.5s
BISR Bishrakh 83.74 300 *ex* x 03 55 19.0
BISR AMb AMB 03 55 19.9
comp=Z,189nm,0.4s
SONA Sohna 83.98 299 *e*PKP **P 03 55 12.3 -0.7**
SONA AMb AMB 03 55 14.5
comp=Z,25nm,1.4s,mb4.9
AYAN Aya Nagar 83.99 300 AMb AMB 03 55 12.0
comp=Z,12nm,0.4s,mb5.1
AYAN *e*PKP 03 55 13.2
MAW Mawson 84.40 203⇑ *i*P **P 03 55 15.8 +1.4**
comp=Z,20nm,1.0s,mb4.9
MAW Mawson 84.40 203 P **P 03 55 16.0 +1.6**
comp=Z,21nm,0.9s,mb5.0,baz=91,slow=6.9,SNR=29
MAW LR LR 04 30 50.2
comp=Z,147nm,20.0s,baz=334,slow=34
MAW Mawson 84.40 203 *e*P **P 03 55 15.6 +1.2**
MAW pmax pmax
comp=Z,7.0nm,1.0s
MAW Mawson 84.40 203 *e*P **P 03 55 15.6 +1.2**
comp=Z,7.3nm,1.0s,mb4.5
MKAR Makanchi Array 84.53 318 P **P 03 55 15.6 +0.2**
comp=Z,82nm,0.8s,mb5.7,baz=88,slow=7.2,SNR=368
MKAR Makanchi Array 84.53 318 P **P 03 55 15.6 +0.2**
KKR Kurukshetra 84.55 301 *ex* x 03 55 24.0
RTK Rohtak 84.71 300 *e*PKP **P 03 55 15.6 -1.1**
KHET Khetri 85.05 299 *e*PKP **P 03 55 17.5 -1.0**
KHET AMb AMB 03 55 19.5
comp=Z,25nm,1.0s,mb5.1
ZAA0 Zalesovo Array 85.22 326 *e*P **P 03 55 17.5 -1.1**
ZALV Zalesovo Beam 85.22 326 P **P 03 55 17.8 -0.9**
comp=Z,24nm,0.5s,mb5.4,baz=112,slow=5.5,SNR=123
EGAK Eagle 85.51 22 *e*P **P 03 55 19.9 0.0**
comp=Z,3.5nm,1.0s,mb4.2
DAWY Dawson 85.87 23 *e*P **P 03 55 21.9 +0.2**
DAWY *ep*P pP 03 55 36.5 -7.9
NVS Novosibirsk 86.39 326 *i*P **P 03 55 23.2 -1.2**
NVS pmax pmax
comp=N,17nm,1.6s
NVS pmax pmax
comp=Z,57nm,1.6s,mb5.2
NVS pmax pmax
comp=E,34nm,1.4s
KSH Kashi 87.20 310 *e*P **P 03 55 30.5 +1.7**
KSH pP pP 03 55 55.7 +4.2
KSH PP PP 03 58 57.9 +4.1
KSH SKS 04 05 46.3
KSH S S 04 05 59.3 -2.5
KSH SS SS 04 11 50.5 +2.8
KSH pmax pmax
comp=Z,25nm,1.1s,mb5.1
KSH pmax pmax
comp=Z,230nm,3.1s
KSH LR LR
comp=N,75nm,4.2s
KSH LR LR
comp=E,67nm,4.3s
KSH LR LR
comp=Z,78nm,4.3s
KURK Kurchatov 87.92 322 P **P 03 55 31.1 -0.8**
comp=Z,132nm,0.6s,mb6.1,SNR=12
KURK Kurchatov 87.92 322 P **P 03 55 30.7 -1.2**
comp=Z,12nm,0.6s,mb5.1,baz=98,slow=5.3,SNR=48
KURK Kurchatov 87.92 322 *e*P **P 03 55 31.1 -0.8**
KURK pmax pmax
comp=Z,12nm,0.5s,mb5.2
KURK Kurchatov 87.92 322 *e*P **P 03 55 31.1 -0.8**
comp=Z,12nm,0.5s,mb5.2
KURK Kurchatov 87.92 322 P **P 03 55 31.5 -0.4**
SNR=10
KURK P 03 55 31.5
SNR=10
DLBC Dease Lake 87.96 30 P **P 03 55 31.9 0.0**
comp=Z,3.9nm,1.1s,mb4.4,baz=303,slow=4.0,SNR=4.6
DLBC Dease Lake 87.96 30 *e*P **P 03 55 32.4 +0.4**
DLBC *ep*P pP 03 55 44.4 -10
TKM2 Tokmak 2 88.18 314 P **P 03 55 33.9 +0.5**
SNR=6.2
TKM2 Tokmak 2 88.18 314 *e*P **P 03 55 33.4 +0.1**
TKM2 pmax pmax
comp=Z,22nm,0.9s,mb5.2
TKM2 Tokmak 2 88.18 314 *e*P **P 03 55 33.4 0.0**
comp=Z,22nm,0.9s,mb5.2
KZA Kyzart 88.26 313 P **P 03 55 35.6 +1.9**
SNR=9.1
KBK Karagaybulak 88.60 313 P **P 03 55 36.0 +0.7**
SNR=11
CHMS Chumysh 88.81 313 P **P 03 55 36.8 +0.5**
SNR=6.8
UCH Uchtor 88.83 313 P **P 03 55 38.0 +1.6**
SNR=11
UCH Uchtor 88.83 313 *e*P **P 03 55 37.4 +1.0**
comp=Z,33nm,1.5s,mb5.1
AAK Ala-Archa 88.92 313 P **P 03 55 37.7 +0.9**
SNR=6.8
AAK Ala-Archa 88.92 313 P **P 03 55 37.6 +0.8**
comp=Z,12nm,0.8s,mb5.0,baz=108,slow=5.2,SNR=17
AAK Ala-Archa 88.92 313 *ce*P **P 03 55 37.0 +0.2**
AAK pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
AAK Ala-Archa 88.92 313 *e*P **P 03 55 37.4 +0.5**
comp=Z,14nm,0.8s,mb5.0
USP Ospenovka 89.04 314 P **P 03 55 37.9 +0.5**
SNR=13
JASL Jaisalmer 89.14 297 *e*PKP **P 03 55 35.1 -3.1**
AML Almayashu 89.41 312 P **P 03 55 40.6 +1.5**
SNR=12
EKS2 Erkin-Say 89.45 313 P **P 03 55 39.9 +0.6**
SNR=5.0
EKS2 Erkin-Say 89.45 313 *e*P **P 03 55 39.7 +0.4**
comp=Z,10.0nm,0.9s,mb4.8
INK Inuvik 89.76 20 P **P 03 55 39.5 -0.7**
comp=Z,1.1nm,0.6s,mb4.2,baz=231,slow=8.9,SNR=5.1
INK Inuvik 89.76 20 *e*P **P 03 55 39.9 -0.3**
INK pmax pmax
comp=Z,6.0nm,1.1s
INK Inuvik 89.76 20 *e*P **P 03 55 39.9 -0.3**
comp=Z,5.9nm,1.1s,mb4.6
NVAR Mina Array Bea 91.11 52 P **P 03 55 48.2 +1.0**
comp=Z,1.5nm,0.9s,mb4.1,baz=250,slow=5.3,SNR=6.8
NVAR Mina Array Bea 91.11 52 P **P 03 55 48.2 +1.0**
WVOR Wild Horse Val 91.46 48 *e*P **P 03 55 49.9 +1.2**
WVOR pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
WVOR Wild Horse Val 91.46 48 *e*P **P 03 55 49.9 +1.3**
comp=Z,6.3nm,1.0s,mb4.7
KBL Kabul 91.82 304 *e*P **P 03 55 50.0 -0.6**
KBL pmax pmax
comp=Z,11nm,1.0s,mb5.0
KBL Kabul 91.82 304 *e*P **P 03 55 50.0 -0.6**
comp=Z,11nm,1.0s,mb5.0
SYO Syowa Base 92.25 199⇑ *i*P **P 03 55 51.4 -0.4**
BVAR Borovoye Array 93.37 323 P **P 03 55 56.2 -1.1**
comp=Z,17nm,0.8s,mb5.4,baz=104,slow=6.3,SNR=55
BRVK Borovoye 93.44 323 *ce*P **P 03 55 56.7 -0.9**
BRVK pmax pmax
comp=Z,20nm,0.8s,mb5.5
BRVK Borovoye 93.44 323 *e*P **P 03 55 56.4 -1.2**
comp=Z,20nm,1.0s,mb5.4
BRVK *ep*P pP 03 56 07.5 -13
BRVK Borovoye 93.44 323 P **P 03 55 56.8 -0.8**
SNR=8.3
BRVK P 03 55 56.8
SNR=8.3
HLID Hailey 94.67 47 *e*P **P 03 56 04.7 +1.3**
comp=Z,2.1nm,1.1s,mb4.5
YKA Yellowknife Ar 96.21 28 P **P 03 56 10.1 +0.1**
comp=Z,1.7nm,0.8s,mb4.5,baz=265,slow=4.3,SNR=9.8
YKA PKKPbc PKKPbc 04 12 55.9 -3.1
comp=Z,0.9nm,0.8s,baz=58,slow=3.1,SNR=4.2
YKA LR LR 04 35 30.4
comp=Z,16nm,21.0s,baz=170,slow=33
PDAR Pinedale Array 98.16 48 P **P 03 56 20.4 +1.2**
comp=Z,0.8nm,0.7s,mb4.3,baz=288,slow=2.4,SNR=7.5
PDAR PKKPbc PKKPbc 04 12 32.5 -20
comp=Z,0.5nm,0.7s,baz=72,slow=9.5,SNR=4.6
PDAR LR LR 04 36 41.4
comp=Z,205nm,18.9s,baz=342,slow=33
FINES FINESS Array B 114.84 336 PKP PKiKP 04 01 21.6 -0.6
comp=Z,1.3nm,0.7s,baz=122,slow=1.8,SNR=4.6
KMBO Kilima Mbogo 118.48 265 *e*PKIKP PKPdf 04 01 30.2 -0.4
AKASG Malin Array Be 118.60 325 PKP PKPdf 04 01 29.4 -0.3
comp=Z,1.6nm,0.4s,baz=49,slow=2.9,SNR=11
AKASG Malin Array Be 118.60 325 PKP PKPdf 04 01 29.4 -0.3
AKBB Malin Array Si 118.60 325 *e*PKIKP PKPdf 04 01 29.2 -0.5
BR131 Keskin Array S 119.57 312 *e*PKPdf PKPdf 04 01 31.9 0.0
BRTR Keskin Array B 119.57 312 PKP PKPdf 04 01 31.9 -0.1
comp=Z,1.9nm,0.8s,baz=141,slow=2.5,SNR=11
BRTR PKKP PKKPbc 04 12 25.9 +42
comp=Z,0.6nm,0.8s,baz=297,slow=4.0,SNR=3.9
BRTR Keskin Array B 119.57 312 *c i*PKIKP PKPdf 04 01 31.8 -0.2
BRTR pmax pmax
comp=Z,2.0nm,0.9s
NOA NORSAR Array B 120.53 341 PKP PKPdf 04 01 31.8 -1.4
comp=Z,1.0nm,0.7s,baz=43,slow=1.9,SNR=6.2
NOA NORSAR Array B 120.53 341 PKP PKPdf 04 01 31.8 -1.4
BOSA Boshof 120.62 231 PKP PKPdf 04 01 34.7 +0.3
comp=Z,2.4nm,0.8s,baz=189,slow=1.0,SNR=5.7
BOSA Boshof 120.62 231 *e*PKPdf PKPdf 04 01 35.1 +0.7
LBTB Lobatse 122.06 234 *e*PKIKP PKPdf 04 01 37.5 +0.3
LCO Las Campanas 122.11 131 *e*PKPdf PKPdf 04 01 38.4 +1.2
TRQA Tornquist 122.43 145 *e*PKPdf PKPdf 04 01 37.9 +0.4
KWP Kalwaria Pacla 122.80 326 *e*PKIKP PKPdf 04 01 38.2 +0.4
KOLS Kolonicke sedl 123.40 325 *e*PKP PKPdf 04 01 40.1 +1.1
KOLS *e* 04 01 51.2
KOLS Kolonicke sedl 123.40 325 *e*PKP PKPdf 04 01 40.1 +1.1
KOLS *e* 04 01 51.1
STHS Stebnicka Huta 123.72 326 *e*PKIKP PKPdf 04 01 41.1 +1.5
STHS Stebnicka Huta 123.72 326 *e*PKP PKPdf 04 01 41.1 +1.5
CRVS Cervenica-Dubn 123.87 326 *e*PKP PKPdf 04 01 41.5 +1.6
CRVS *e* 04 01 51.4
CRVS Cervenica-Dubn 123.87 326 *e*PKP PKPdf 04 01 41.5 +1.6
CRVS *e* 04 01 51.4
PSZ Piszkesteto 125.28 325 *e*PKIKP PKPdf 04 01 42.7 0.0
PSZ Piszkesteto 125.28 325⇓ *e*PKP PKPdf 04 01 43.5 +0.8
MORC Moravsky Berou 125.50 328 *e*PKIKP PKPdf 04 01 43.6 +0.6
VYHS Vyhne 125.55 326 *e*PKP PKPdf 04 01 43.6 +0.4
VYHS *e* 04 01 53.1
VYHS Vyhne 125.55 326 *e*PKP PKPdf 04 01 43.6 +0.4
VYHS *e* 04 01 53.1
DPC Dobruska-Polom 125.78 329 *e*PKIKP PKPdf 04 01 44.7 +1.2
DPC Dobruska-Polom 125.78 329 *e*PKPdf PKPdf 04 01 44.7 +1.2
UPC Upice 125.84 330 *e*PKIKP PKPdf 04 01 44.4 +0.7
UPC Upice 125.84 330 *e*PKPdf PKPdf 04 01 44.4 +0.7
UPC *ex* x 04 01 54.8
BSEG Bad Segeberg 126.12 336 *e*PKPdf PKPdf 04 01 44.9 +0.8
PVCC Panska Ves 126.54 330 *e*PKIKP PKPdf 04 01 46.1 +1.1
PVCC Panska Ves 126.54 330 *e*PKPdf PKPdf 04 01 46.1 +1.1
PVCC *ex* x 04 01 57.0
BRG Berggiesshubel 126.62 331 *e*PKP PKPdf 04 01 45.8 +0.6
comp=Z,17nm,1.4s
BRG Berggiesshubel 126.62 331 *e*PKIKP PKPdf 04 01 45.8 +0.7
BRG pmax pmax
comp=Z,10.0nm,1.4s
CLL Collm 126.78 332 *e*PKPdf PKPdf 04 01 45.7 +0.3
CLL Collm 126.78 332⇑ *i*PKIKP PKPdf 04 01 45.8 +0.4
CLL pmax pmax
comp=Z,9.0nm,1.0s
CLL MLR MLR
comp=Z,100nm,20.3s
CLL Collm 126.78 332⇑ *i*PKP PKPdf 04 01 45.8 +0.4
CLL *i* 04 01 56.3
CLL LR LR
comp=Z,100nm,20.3s
CLL Collm 126.78 332⇑ *i*PKPdf PKPdf 04 01 45.8 +0.4
comp=Z,9.0nm,1.0s
CLL *i* 04 01 56.3
CLL LmV 05 01 00.0

comp=Z,100nm,20.3s
TREC Trest 126.86 329 *e*PKIKP PKPdf 04 01 46.5 +0.9
TREC MLR MLR
comp=Z,200nm,17.1s
TREC Trest 126.86 329 *e*PKPdf PKPdf 04 01 46.5 +0.9
TREC *ex* x 04 01 56.9
TREC AMS AMS 05 01 20.0
comp=Z,200nm,17.1s
PRU Pruhonice 126.90 330 *e*PKIKP PKPdf 04 01 46.9 +1.2
PRU MLR MLR
comp=Z,200nm,20.2s
PRU Pruhonice 126.90 330 *e*PKPdf PKPdf 04 01 46.9 +1.2
PRU *ex* x 04 01 57.9
PRU AMS AMS 05 00 00.0
comp=Z,200nm,20.2s
NRDL Niedersach Rie 127.25 335 *e*PKPdf PKPdf 04 01 46.8 +0.5
SOP Sopron 127.27 327⇓*e*PKP PKPdf 04 01 47.4 +0.9
CLZ Clausthal 127.60 334 *e*PKPdf PKPdf 04 01 48.3 +1.3
TANN Tannenbergstha 127.63 331 *e*PKPdf PKPdf 04 01 47.7 +0.6
NKC Novy Kostel 127.76 331 *e*PKIKP PKPdf 04 01 47.7 +0.4
NKC Novy Kostel 127.76 331 *e*PKPdf PKPdf 04 01 47.7 +0.4
NKC *ex* x 04 01 58.6
MOX Moxa 127.88 332 *e*PKP PKPdf 04 01 47.8 +0.3
MOX Moxa 127.88 332 *e*PKPdf PKPdf 04 01 48.0 +0.5
KHC Kasperske Hory 127.94 330 *e*PKPdf PKPdf 04 01 48.5 +0.8
KHC Kasperske Hory 127.94 330 *e*PKPdf PKPdf 04 01 48.7 +1.0
KHC *ex* x 04 01 59.0
KHC AMS AMS 05 00 30.0
comp=Z,200nm,22.6s
GEC2 GERESS Array S 128.06 329 *e*PKPdf PKPdf 04 01 48.4 +0.5
GEC2 GERESS Array S 128.06 329 *e*PKPdf PKPdf 04 01 48.6 +0.6
GEC2 *ep*PKPdf pPKPdf 04 01 59.1 -13
GERES GERESS Array B 128.06 329 PKP PKPdf 04 01 48.8 +0.9
comp=Z,2.7nm,0.8s,baz=51,slow=0.9,SNR=16
ROTZ Rotzenmuhle 128.19 331 *e*PKPdf PKPdf 04 01 48.8 +0.6
WET Wettzell 128.28 330 *e*PKPdf PKPdf 04 01 49.2 +0.9
UBBA Unterbreizbach 128.49 333 *e*PKPdf PKPdf 04 01 49.6 +0.9
GRF Grafenberg Arr 128.71 331 *e*PKPdf PKPdf 04 01 49.7 +0.5
RJOB Jochberg 129.23 329 *e*PKPdf PKPdf 04 01 50.7 +0.5
BOJS Bojanci 129.28 325 *i* PKPdf PKPdf 04 01 52.3 +1.9
BOJS *i* 04 02 01.9
VISS Visnje 129.34 326 *i* PKPdf PKPdf 04 01 51.1 +0.6
VISS *i* 04 02 11.1
ROSC El Rosal 129.75 90 PKP PKPdf 04 01 52.7 +0.5
comp=Z,5.4nm,0.6s,baz=80,slow=21,SNR=5.0
ROSC El Rosal 129.75 90 *e*PKPdf PKPdf 04 01 53.1 +0.9
LPAZ La Paz 130.21 119 PKP PKPdf 04 01 55.0 +2.1
comp=Z,7.0nm,0.7s,baz=357,slow=1.6,SNR=29
LPAZ La Paz 130.21 119 *e*PKPdf PKPdf 04 01 54.9 +2.0
STU Stuttgart 130.31 332 *e*PKPdf PKPdf 04 01 52.8 +0.6
MEM Membach 130.36 335 PKP PKPdf 04 01 53.4 +1.1
BCLA Clavier 130.80 336 PKP PKPdf 04 01 53.7 +0.6
WLF Walferdange 131.02 335 PKP PKPdf 04 01 56.0 +2.4
BFO Black Forest 131.03 332 *e*PKPdf PKPdf 04 01 54.3 +0.7
SNF Seneffe 131.14 336 PKP PKPdf 04 01 55.9 +2.1
DOU Dourbes 131.34 336 PKP PKPdf 04 01 56.0 +1.9
TSUM Tsumeb 131.34 236 *e*PKPdf PKPdf 04 01 56.4 +1.4
CDF Champ du Feu 131.45 333 *e*PKIKP PKPdf 04 01 54.7 +0.3
HINF Hinteralfeld 132.08 332 *e*PKIKP PKPdf 04 01 56.2 +0.6
comp=Z,15nm,1.0s
HAU Haudompre 132.17 333 *e*PKIKP PKPdf 04 01 56.4 +0.6
comp=Z,8.9nm,0.8s
AQU L'Aquila 132.22 323 *e*PKIKP PKPdf 04 01 55.7 -0.3
SDV Santo Domingo 133.68 85 PKP PKPdf 04 02 00.6 +1.0
comp=Z,9.2nm,0.8s,baz=270,slow=4.4,SNR=12
SDV Santo Domingo 133.68 85 *e*PKPdf PKPdf 04 01 59.3 -0.3
LPL La Plagne 133.80 330 *e*PKIKP PKPdf 04 02 00.4 +1.5
LPG La Plagne 133.81 330 *e*PKIKP PKPdf 04 02 00.4 +1.5
LOR Lormes 133.83 334 *e*PKIKP PKPdf 04 01 59.3 +0.4
SSF Saint Saulge 134.15 334 *e*PKIKP PKPdf 04 02 00.0 +0.5
BNI Bardonecchia 134.16 330 *e*PKIKP PKPdf 04 01 59.7 +0.1
SMF Signal de Mont 134.32 333 *e*PKIKP PKPdf 04 02 00.3 +0.4
MBDF Montbardon 134.35 330 *e*PKIKP PKPdf 04 01 59.9 -0.1
AVF Avril sur Loir 134.42 334 *e*PKIKP PKPdf 04 02 00.9 +0.8
comp=Z,14nm,1.2s
ORIF Oris-en-Rattie 134.65 330 *e*PKIKP PKPdf 04 02 00.6 +0.1
BGF Bois d'Agland 134.82 334 *e*PKIKP PKPdf 04 02 01.3 +0.5
VIVF Saint-Julien-l 135.28 331 *e*PKIKP PKPdf 04 02 02.1 +0.4
TCF Toulx Ste Croi 135.31 334 *e*PKIKP PKPdf 04 02 03.1 +1.4
comp=Z,30nm,1.3s
SIV San Ignacio 136.38 122 PKP PKPdf 04 02 05.5 +0.9
comp=Z,5.8nm,0.8s,baz=252,slow=4.9,SNR=8.4
KEST Kesra 138.62 318 PKP PKiKP 04 02 11.6 +1.3
comp=Z,2.1nm,1.0s,baz=219,slow=1.6,SNR=5.4
MVO Moncorvo 143.27 339 *e*PKP PKPdf 04 02 14.3 -2.1
ESDC Sonseca Array 143.31 334 PKP PKPdf 04 02 14.1 -2.4
comp=Z,3.6nm,0.8s,baz=39,slow=2.0,SNR=14
ESDC Sonseca Array 143.31 334 PKP PKPdf 04 02 14.1 -2.5
PVRL Vila Real 143.41 339 *e*PKP PKPdf 04 02 14.9 -1.7
PVIS Viseu 143.97 339 *e*PKP PKPdf 04 02 16.6 -1.0
MTE Manteigas 144.12 339 *e*PKPdf PKiKP 04 02 22.3 +0.8
MTE Manteigas 144.12 339 *e*PKP PKiKP 04 02 22.7 +1.2
PCBR Castelo Branco 144.59 338 *e*PKP PKPdf 04 02 18.3 -0.5
PMRV Marv??o 144.92 338 *e*PKP PKPdf 04 02 19.7 +0.4
PTOM Tomar 145.13 339 *e*PKP PKPdf 04 02 20.5 +0.8
CAM4 Nova Friburgo 145.13 149⇑*i*P PKPbc 04 02 21.2 +1.3
CAM4 *i* 04 02 25.1
CAM4 *i* 04 02 30.7
CAM4 *i* 04 02 35.7
CAM4 *i* 04 02 54.2
PESTR Estremoz 145.48 337 *e*PKP PKPdf 04 02 20.9 +0.6
PBAR Barrancos 145.87 336 *e*PKP PKPdf 04 02 22.4 +1.4
EVO Evora 145.94 338⇑*i*PKIKP PKPdf 04 02 22.7 +1.6
comp=Z,79nm,1.1s
EVO Evora 145.94 338 *e*PKP PKPdf 04 02 22.7 +1.6
PMAFR Mafra 146.02 339 *e*PKP PKPab 04 02 23.0 +0.2
PBEJ Beja 146.32 337 *e*PKP PKPab 04 02 23.8 -0.1
PCVE Castro Verde 146.73 337 *e*PKP PKPab 04 02 26.4 +0.9
PVAQ Vaqueiros 146.80 336 *e*PKP PKPab 04 02 25.6 -0.2
PBDV Barranco-do-Ve 147.03 336 *e*PKP PKPab 04 02 26.4 -0.3
MORF Marmelete 147.25 337 *e*PKP PKPab 04 02 27.0 -0.6
TAM Tamanrasset 147.92 302 *e*PKIKP PKPdf 04 02 26.0 +1.1
TAM *e* 04 02 29.1
TOA0 Torodi Ar. Sit 154.27 285 *e*PKPdf PKPdf 04 02 34.1 -0.7
TOA0 *e*PKPbc PKPbc 04 02 42.7 -0.4
TORD Torodi Ar. Bea 154.27 285 PKP PKPdf 04 02 33.0 -1.7
comp=Z,1.9nm,0.9s,baz=78,slow=0.5,SNR=13
TORD PKPbc PKPbc 04 02 42.9 -0.2
comp=Z,6.8nm,0.8s,baz=86,slow=2.1,SNR=28
KIC Kosan Boka 161.01 268 *e*P PKPab 04 03 25.2 -1.3
comp=Z,46nm,1.0s
DBIC Dimbokro 161.15 269 PKPab PKPab 04 03 27.4 +0.2
comp=Z,3.6nm,0.5s,baz=88,slow=6.5,SNR=9.2
LIC Lamto 161.28 267 *e*PKP2 PKPab 04 03 27.9 +0.2
comp=Z,34nm,1.0s
LIC Lamto 161.28 267 *e*P PKPab 04 03 27.1 -0.6
comp=Z,45nm,1.0s
TIC Toumodi 161.31 269 *e*P PKPab 04 03 27.7 -0.1
comp=Z,25nm,0.9s

*NEIC **06** 03:47:35.7, 34°.86S×72°.55W, h27km, ML3.5(GUC), After GUC.*
GUC 06 03:47:35.7±0.9, 34°.86S×72°.55W, h27km±8km, MD3.8, ML3.5, 2C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCO	**Chanco**	**0.87**	**179**	⇓*i*P	Pb	03 47 51.9	-0.2
CNCO				*i* S	Sb	03 48 03.3	-0.1
TALC	**Talca**	**0.92**	**126**	⇓*i*P	Pn	03 47 52.0	-0.9
TALC				*i* S	Sb	03 48 04.4	-0.5
TALC	**Talca**	**0.92**	**126**	⇓*i*P	Pn	03 47 52.0	-0.9
TALC				*i* S	Sb	03 48 04.4	-0.5
TALC				AML	AML	03 48 05.5	
comp=N,3μm,0.1s							
NICH	**Los Niches**	**1.09**	**98**	*e*P	Pn	03 47 54.7	-0.5
NICH				*e*S	Sn	03 48 10.2	+0.7
LNV	**Longovilo**	**1.31**	**46**	*e*P	Pn	03 47 57.9	-0.3
LNV				*i* S	Sn	03 48 15.9	+1.2
CACH	**El Canelo**	**1.77**	**66**	⇓*i*P	Pn	03 48 05.8	+1.3
CACH				*i* S	Sn	03 48 29.9	+3.7
CCHI	**Chillan**	**1.78**	**168**	*e*P	Pn	03 48 06.0	+1.4
CCHI				S	Sn	03 48 29.4	+3.1
CCHI	**Chillan**	**1.78**	**168**	*e*P	Pn	03 48 06.0	+1.4
CCHI				*i* S	Sn	03 48 29.4	+3.1
CCHI				AML	AML	03 48 36.3	
comp=E,484nm,0.5s							
CHCH	**Chadas Angostu**	**1.82**	**60**	⇑*i*P	Pn	03 48 06.5	+1.3
CHCH				*i* S	Sn	03 48 30.9	+3.4
ANTU	**Antumapu**	**2.05**	**51**	AML	AML	03 48 46.1	
comp=N,441nm,0.4s							
CLCH	**Cerro Calan**	**2.22**	**49**	AML	AML	03 48 53.5	
comp=N,538nm,0.5s							
PEL	**Peldehue**	**2.31**	**43**	⇑*i*P	Pn	03 48 13.2	+1.2
PEL				*e*S	Sn	03 48 42.1	+2.6
PEL				AML	AML	03 48 48.2	
comp=N,741nm,0.5s							
FCH	**Farellones**	**2.42**	**51**	*e*P	Pn	03 48 15.9	+2.4
FCH				AML	AML	03 48 51.2	
comp=N,259nm,0.3s							

*TRN **06** 03:49:23.4, 9°.94N×58°.92W, h89km, MD4.2*
*IDC **06** 03:49:28.8±1.1, 10°.89N×59°.73W, h0km, mb3.7/5, mb1 4.0/6, mb1mx3.6/25, mbtmp3.8/6, ML3.9/1, Error ellipse: s-maj=27.8km s-min=25.3km az=17.0*
*ISCJB **06** 03:49:35.1±1.4, 10°.68N±0°.06×59°.6W±0°.1, h67km±9km, mb3.9/11, Error ellipse: s-maj=19.5km s-min=9.0km az=15.5*
*NEIC **06** 03:49:37.2±1.3, 10°.67N×59°.69W, h66km±9km, mb4.1/6, MD4.2(TRN), Error ellipse: s-maj=17.2km s-min=8.9km az=108.0*
ISC 06 03:49:33.7±1.7, 10°.51N±0°.07×59°.4W±0°.1, h49km±11km, n54, σ1°13/65, mb3.9/11, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOSP	**Speyside**	**1.34**	**306**	*e*P	**Pn**	**03 49 55.5**	**-0.5**
TOSP				*e*S	**Sn**	**03 50 18.3**	**+5.5**
BOT	**Bacolet**	**1.43**	**297**	*e*P	**Pn**	**03 49 57.8**	**+0.5**
BOT	**Bacolet**	**1.43**	**297**	*e*P	**Pn**	**03 49 57.8**	**+0.5**
TPR	**Prospect**	**1.49**	**297**	*e*P	**Pn**	**03 49 58.8**	**+0.7**
TPR	**Prospect**	**1.49**	**297**	*e*P	**Pn**	**03 49 58.8**	**+0.7**
TBH	**Brigand Hill**	**1.62**	**269**	*e*P	**Pn**	**03 49 59.7**	**-0.2**
TBH				*e*S	Sx	03 50 22.5	
TBH	**Brigand Hill**	**1.62**	**269**	*e*P	**Pn**	**03 49 59.7**	**-0.2**
TBH				*e*S	Sx	03 50 22.5	
TRN	**Trinidad (W)**	**1.95**	**274**	*e*P	**Pn**	**03 50 03.3**	**-1.1**
TRN				*e*S	Sx	03 50 31.5	
TRN	**Trinidad (W)**	**1.95**	**274**	*e*P	**Pn**	**03 50 03.3**	**-1.1**
TRN				*e*S	Sx	03 50 31.5	
TPP	**Pointe-a-Pierr**	**2.00**	**265**	*e*P	**Pn**	**03 50 04.7**	**-0.5**
TPP				*e*S	Sx	03 50 32.6	
TPP	**Pointe-a-Pierr**	**2.00**	**265**	*e*P	**Pn**	**03 50 04.7**	**-0.5**
TPP				*e*S	Sx	03 50 32.6	
TCE	**Chacachacare**	**2.30**	**275**	*e*P	**Pn**	**03 50 08.0**	**-1.1**
TCE				*e*S	Sx	03 50 39.6	
TCE	**Chacachacare**	**2.30**	**275**	*e*P	**Pn**	**03 50 08.0**	**-1.1**
TCE				*e*S	Sx	03 50 39.6	
GRGR	**Grenville**	**2.72**	**307**	*e*Pn	**Pn**	**03 50 14.5**	**-0.4**
GRW	**Mount Saint Ca**	**2.74**	**307**	*e*P	**Pn**	**03 50 15.8**	**+0.6**
GRW				*e*S	Sx	03 50 53.8	
GRW	**Mount Saint Ca**	**2.74**	**307**	*e*P	**Pn**	**03 50 15.8**	**+0.6**
GRW				*e*S	Sx	03 50 53.8	
GRIC	**Isle de Caille**	**2.76**	**310**	*e*P	**Pn**	**03 50 16.8**	**+1.3**
GRIC				*e*S	Sx	03 50 53.1	
GRHS	**Sauteurs**	**2.76**	**308**	*e*P	**Pn**	**03 50 15.4**	**-0.1**
GRHS				*e*S	Sx	03 50 54.1	
GRHS	**Sauteurs**	**2.76**	**308**	*e*P	**Pn**	**03 50 15.4**	**-0.1**
GRHS				*e*S	Sx	03 50 54.1	
GRSS	**Sisters**	**2.79**	**310**	*e*P	**Pn**	**03 50 17.0**	**+1.2**
GRSS				*e*S	Sx	03 50 54.5	
GRSS	**Sisters**	**2.79**	**310**	*e*P	**Pn**	**03 50 17.0**	**+1.2**
GRSS				*e*S	Sx	03 50 54.5	
FCV	**Fort Charlotte**	**3.17**	**326**	*e*P	**Pn**	**03 50 21.9**	**+0.6**
FCV				*e*S	Sx	03 51 05.2	
FCV	**Fort Charlotte**	**3.17**	**326**	*e*P	**Pn**	**03 50 21.9**	**+0.6**
FCV				*e*S	Sx	03 51 05.2	
BHS	**Barnard House**	**3.23**	**329**	*e*S	**Sn**	**03 51 06.3**	**+7.1**
SVB	**Belmont**	**3.27**	**327**	*e*P	**Pn**	**03 50 21.4**	**-1.2**
SVB				*e*S	**Sn**	**03 51 04.9**	**+4.6**
SVB	**Belmont**	**3.27**	**327**	*e*P	**Pn**	**03 50 21.4**	**-1.2**
SVB				*e*S	**Sn**	**03 51 04.9**	**+4.6**
SSV	**Crater Summit**	**3.29**	**328**	*e*P	**Pn**	**03 50 24.4**	**+1.6**
SSV				*e*S	Sx	03 51 08.4	
SSV	**Crater Summit**	**3.29**	**328**	*e*P	**Pn**	**03 50 24.4**	**+1.6**
SSV				*e*S	Sx	03 51 08.4	
SVV	**Soufriere Volc**	**3.29**	**328**	*e*P	**Pn**	**03 50 23.1**	**+0.3**
SVV				*e*S	Sx	03 51 07.9	
SVV	**Soufriere Volc**	**3.29**	**328**	*e*P	**Pn**	**03 50 23.1**	**+0.3**
SVV				*e*S	Sx	03 51 07.9	
MCLT	**Moule a Chique**	**3.51**	**335**	*e*P	**Pn**	**03 50 24.5**	**-1.2**
MCLT				*e*S	**Sn**	**03 51 08.2**	**+2.2**
MCLT	**Moule a Chique**	**3.51**	**335**	*e*P	**Pn**	**03 50 24.5**	**-1.2**
MCLT				*e*S	**Sn**	**03 51 08.2**	**+2.2**
SLB	**Belfond**	**3.65**	**334**	*e*P	**Pn**	**03 50 28.2**	**+0.5**
SLB				*e*S	**Sn**	**03 51 16.3**	**+6.7**
SLB	**Belfond**	**3.65**	**334**	*e*P	**Pn**	**03 50 28.2**	**+0.5**
SLB				*e*S	**Sn**	**03 51 16.3**	**+6.7**
MVM	**Montagne Vaucl**	**4.27**	**340**	*e*P	**Pn**	**03 50 34.9**	**-1.3**
BIM	**Bigot**	**4.29**	**338**	*e*P	**Pn**	**03 50 35.4**	**-1.1**
FDF	**Fort de France**	**4.52**	**338**	*e*Pn	**Pn**	**03 50 38.4**	**-1.3**
FDF	**Fort de France**	**4.52**	**338**	*e*P	**Pn**	**03 50 39.0**	**-0.7**
FDF				*e*S	**Sn**	**03 51 32.0**	**+1.0**
PCRV	**Puerto La Cruz**	**5.14**	**267**	Pn	**Pn**	**03 50 41.4**	**-6.8**
5.0nm,0.3s,baz=60,slow=4.9,SNR=33							
PCRV				Sn	**Sn**	**03 51 35.8**	**-10**
2.9nm,0.3s,baz=180,slow=15,SNR=3.6							
DEG	**La Desirade**	**5.98**	**345**	*e*P	**Pn**	**03 50 58.1**	**-1.6**
MTP	**Monte Pirata**	**9.60**	**322**	*e*Pn	**Pn**	**03 51 49.7**	**+0.4**
SDV	**Santo Domingo**	**11.17**	**263**	Pn	**Pn**	**03 52 03.7**	**-7.1**
2.2nm,0.3s,baz=69,slow=7.7,SNR=14							
SDV				Sn	**Sn**	**03 54 06.4**	**-8.0**
3.2nm,0.3s,baz=60,slow=13,SNR=10							
SDV	**Santo Domingo**	**11.17**	**263**	Pn	**Pn**	**03 52 03.7**	**-7.1**
SDV				Sn	**Sn**	**03 54 06.4**	**-8.0**
OTAV	**Otavalo**	**21.50**	**243**	*e*P	**P**	**03 54 21.2**	**+2.6**
3.4nm,0.9s,mb3.7							
ATAH	**Atahualpa**	**25.77**	**228**	P	**P**	**03 55 03.0**	**+2.8**
2.6nm,0.5s,mb4.0,baz=102,slow=9.3,SNR=2.4							
SIV	**San Ignacio**	**26.39**	**184**	P	**P**	**03 55 10.0**	**+4.3**
0.8nm,0.7s,mb3.4,baz=6.9,slow=14							
PLAL	**Pickwick Lake**	**35.70**	**318**	*e*P	**P**	**03 56 27.9**	**+0.4**
5.2nm,0.7s,mb4.6							
WVT	**Waverly**	**36.22**	**319**	*e*P	**P**	**03 56 31.6**	**-0.5**
2.0nm,0.8s,mb4.1							
TXAR	**Lajitas Array**	**45.29**	**301**	P	**P**	**03 57 45.0**	**-1.9**
0.2nm,0.4s,mb3.3,baz=116,slow=8.3,SNR=7.2							
PDAR	**Pinedale Array**	**54.07**	**316**	P	**P**	**03 58 52.1**	**-1.4**
0.9nm,0.8s,mb3.8,baz=115,slow=8.6,SNR=6.3							
DUG	**Dugway**	**55.54**	**312**	*e*P	**P**	**03 59 03.6**	**-0.6**
1.4nm,0.8s,mb4.0							
HLID	**Hailey**	**57.68**	**315**	*e*P	**P**	**03 59 19.4**	**0.0**
1.2nm,0.6s,mb4.1							
TORD	**Torodi Ar. Bea**	**59.76**	**81**	P	**P**	**03 59 37.6**	**+3.4**
0.4nm,0.7s,mb3.6,baz=288,slow=5.8,SNR=6.3							
NEW	**Newport**	**60.92**	**320**	*e*P	**P**	**03 59 41.2**	**-0.4**
2.0nm,0.7s,mb4.4							

*DDA **06** 04:27:45.4, 37°.29N×36°.88E, h7km±6km, Md2.5*
*ISK **06** 04:27:45.7, 37°.32N×36°.88E, h5km, MD2.7*
*ISCJB **06** 04:27:45.4±0.8, 37°.30N±0°.04×36°.83E±0°.05, h9km±6km, Error ellipse: s-maj=7.6km s-min=5.9km az=156.5*
*CSEM **06** 04:27:46.3±0.2, 37°.32N×36°.87E, h10km, MD2.7, Error ellipse: s-maj=4.6km s-min=3.7km az=43.0*
ISC 06 04:27:45.6±0.8, 37°.32N±0°.04×36°.83E±0°.05, h14km±5km, n17, σ1°14/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMRS	**Kahramanmaras**	**0.19**	**17**	*e*PG	**Pg**	**04 27 50.1**	**+0.1**
KMRS				*e*SG	**Sg**	**04 27 53.1**	**0.0**
KMRS	**Kahramanmaras**	**0.19**	**17**	*e*Pg	**Pg**	**04 27 50.1**	**+0.1**
KMRS				*e*Sg	**Sg**	**04 27 53.1**	**+0.1**
GAZ	**Gaziantep**	**0.34**	**116**	*e*PG	**Pg**	**04 27 52.2**	**-0.3**
GAZ				*e*SG	**Sg**	**04 27 57.0**	**-0.1**
GAZ	**Gaziantep**	**0.34**	**116**	*e*Pg	**Pg**	**04 27 52.2**	**-0.3**
GAZ				*e*Sg	**Sg**	**04 27 57.0**	**-0.1**
KUZU	**Kuzuini**	**0.58**	**160**	*i* P	**Pg**	**04 27 54.5**	**-2.4**
KUZU				*i* S	**Sg**	**04 28 05.4**	**+0.8**
KUZU	**Kuzuini**	**0.58**	**160**	*i* P	**Pg**	**04 27 54.5**	**-2.4**
KUZU				*i* S	**Sg**	**04 28 05.4**	**+0.8**
GZT	**Gaziantep**	**0.59**	**86**	*i* P	**Pg**	**04 27 52.8**	**-4.3**
GZT				*i* S	**Sg**	**04 28 04.5**	**-0.4**
KOZT	**Kozan**	**0.81**	**282**	*e*PG	**Pg**	**04 28 02.4**	**+1.1**
KOZT	**Kozan**	**0.81**	**282**	*e*Pg	**Pg**	**04 28 02.4**	**+1.1**
ATAB	**Bozova**	**1.18**	**82**	*i* P	**Pn**	**04 28 07.5**	**-0.1**
ATAB				*i* S	**Sb**	**04 28 22.5**	**-0.3**
ATAB	**Bozova**	**1.18**	**82**	*i* P	**Pn**	**04 28 07.5**	**-0.1**
ATAB				*i* S	**Sb**	**04 28 22.5**	**-0.3**
AKCD	**Akcadag**	**1.30**	**41**	*i* P	**Pn**	**04 28 11.2**	**+1.9**
AKCD				*i* S	**Sb**	**04 28 27.3**	**+0.9**
AKCD	**Akcadag**	**1.30**	**41**	*i* P	**Pn**	**04 28 11.2**	**+1.8**
AKCD				*i* S	**Sb**	**04 28 27.3**	**+0.8**
SARI	**SarD1z-Kayseri**	**1.36**	**356**	*e*PN	**Pn**	**04 28 08.3**	**-1.8**
SARI				*e*SN	**Sn**	**04 28 24.6**	**-3.4**
URFA	**Urfa**	**1.59**	**85**	*e*PN	**Pn**	**04 28 14.6**	**+1.3**
URFA	**Urfa**	**1.59**	**85**	*e*Pn	**Pn**	**04 28 14.6**	**+1.3**
DARE	**Darende-Malaty**	**1.80**	**25**	*e*PN	**Pn**	**04 28 11.8**	**-4.4**

*ISCJB **06** 04:56:06.9±1.0, 33°.02S±0°.07×66°.3W±0°.1, h43km±11km, mb4.0/12, Error ellipse: s-maj=19.3km s-min=8.5km az=148.9*
*NEIC **06** 04:56:08.8±0.8, 33°.00S×66°.30W, h45km±7km, mb4.1/8, MD4.1(SJA), Error ellipse: s-maj=13.3km s-min=7.7km az=66.0*
NEIC Felt [III] in the San Luis area.
*IDC **06** 04:56:08.1±3.8, 32°.93S×66°.45W, h35km±29km, mb3.5/4, mb1 3.9/8, mb1mx3.7/17, mbtmp3.6/8, ML4.0/3, MS2.9/1, Ms1 3.1/1, ms1mx2.3/17, Error ellipse: s-maj=33.8km s-min=20.4km az=73.0*
ISC 06 04:56:09.0±0.9, 32°.97S±0°.08×66°.3W±0°.1, h44km±10km, n24, σ0°75/22, mb4.0/12, San Luis Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**2.13**	**309**	Pn	**Pn**	**04 56 41.3**	**-0.8**
3.4nm,0.3s,baz=133,slow=12,SNR=100							
CFAA				Lg		04 57 11.5	
74nm,0.3s,baz=21,slow=17,SNR=36							
LCO	**Las Campanas**	**5.46**	**315**	*e*Pn	**Pn**	**04 57 28.8**	**+0.9**
42nm,0.4s							
LCO				*e*Lg		04 58 52.0	
TRQA	**Tornquist**	**6.18**	**146**	*e*Pn	**Pn**	**04 57 36.1**	**-1.5**
16nm,0.5s							
TRQA				*e*Sn	**Sn**	**04 58 47.5**	**+0.5**
PLCA	**Paso Flores**	**8.46**	**203**	Pn	**Pn**	**04 58 09.7**	**+0.7**
0.2nm,0.3s,baz=20,slow=11,SNR=9.1							
PLCA				Pg	Pn	04 58 42.1	+33
0.7nm,0.3s,baz=28,slow=15,SNR=7.8							
PLCA				Lg		05 00 23.2	
0.9nm,0.3s,baz=359,slow=16,SNR=3.4							
PLCA	**Paso Flores**	**8.46**	**203**	*e*Pn	**Pn**	**04 58 09.7**	**+0.7**
PLCA				Pg	Pn	04 58 42.1	+33
PLCA				Lg		05 00 23.2	
LPAZ	**La Paz**	**16.69**	**354**	Pn	**Pn**	**04 59 59.5**	**-0.3**
0.7nm,0.3s,baz=150,slow=6.2,SNR=31							
LPAZ				LR	LR	05 06 12.3	
comp=Z,49nm,21.8s,baz=356,slow=36							
LPAZ	**La Paz**	**16.69**	**354**	*e*Pn	**Pn**	**05 00 01.0**	**+1.2**
LPAZ				LR	LR	05 06 12.3	
SIV	**San Ignacio**	**17.55**	**17**	P	**Pn**	**05 00 10.5**	**0.0**
0.3nm,0.3s,baz=205,slow=11,SNR=18							
JCT	**Junction City**	**70.62**	**330**	*e*P	**P**	**05 07 19.4**	**-0.5**
1.8nm,0.6s,mb4.2							
TXAR	**Lajitas Array**	**71.37**	**326**	P	**P**	**05 07 24.5**	**+0.1**
0.4nm,0.7s,mb3.5,baz=148,slow=10,SNR=2.5							
WVT	**Waverly**	**71.63**	**342**	*e*P	**P**	**05 07 25.1**	**-0.7**
2.2nm,0.7s,mb4.2							
MNTX	**Cornudas Mount**	**74.16**	**326**	*e*P	**P**	**05 07 40.1**	**-0.8**
0.9nm,0.9s,mb3.7							
AMTX	**Amarillo**	**75.22**	**331**	*e*P	**P**	**05 07 47.4**	**+0.5**
3.4nm,0.6s,mb4.5							
SDCO	**Great Sand Dun**	**79.27**	**329**	*e*P	**P**	**05 08 09.7**	**+0.1**
0.8nm,0.8s,mb3.7							
TOA0	**Torodi Ar. Sit**	**79.37**	**67**	*e*P	**P**	**05 08 11.4**	**+0.7**
TORD	**Torodi Ar. Bea**	**79.37**	**67**	P	**P**	**05 08 11.0**	**+0.4**
0.5nm,0.7s,mb3.6,baz=280,slow=6.0,SNR=5.6							
ISCO	**Idaho Springs**	**81.04**	**330**	*e*P	**P**	**05 08 19.3**	**+0.2**
0.8nm,0.4s,mb4.0							
RSSD	**Black Hills**	**84.08**	**334**	*e*P	**P**	**05 08 35.0**	**+0.2**
2.2nm,0.9s,mb4.3							
BW06	**Boulder Array**	**85.16**	**330**	*e*P	**P**	**05 08 39.7**	**-0.5**
0.7nm,0.7s,mb3.9							
PDAR	**Pinedale Array**	**85.16**	**330**	P	**P**	**05 08 38.9**	**-1.4**
0.6nm,0.6s,mb3.9,baz=135,slow=14,SNR=6.1							
NVAR	**Mina Array Bea**	**85.92**	**322**	P	**P**	**05 08 45.4**	**+1.2**
0.7nm,0.8s,mb4.0,baz=159,slow=6.4,SNR=3.9							
WRA	**Warramunga Arr**	**123.81**	**204**	PKP	PKPdf	05 15 01.3	-1.4
0.3nm,0.4s,baz=170,slow=1.6,SNR=4.2							
ZALV	**Zalesovo Beam**	**150.69**	**36**	PKPbc	PKPbc	05 15 56.6	+0.9
1.6nm,0.4s,baz=316,slow=2.8,SNR=10							
MKAR	**Makanchi Array**	**152.43**	**51**	PKPbc	PKPbc	05 16 00.4	+0.5
0.7nm,0.6s,baz=313,slow=2.7,SNR=6.8							

*ISCJB **06** 05:09:21.5±0.6, 21°.06S±0°.04×68°.79W±0°.08, h112km±4km, mb4.3/30, Error ellipse: s-maj=12.7km s-min=6.9km az=177.1*
*GUC **06** 05:09:22.9±0.8, 21°.09S×69°.06W, h116km±9km, ML4.6*
*IDC **06** 05:09:24.5±1.2, 20°.99S×68°.69

comp=N,0.3nm,0.7s,mb3.2
JFWS Jewell Farm 66.67 343 *e*P P 05 20 00.8 -1.3
comp=N,3.7nm,0.7s,mb4.3
SDCO Great Sand Dun 67.95 329 *e*P P 05 20 10.5 +0.2
comp=N,1.6nm,0.6s,mb4.0
DBIC Dimbokro 68.46 74 P P 05 20 13.7 -0.4
comp=N,3.9nm,0.9s,mb4.3,baz=234,slow=7.7,SNR=3.2
MVCO Mesa Verde 69.01 327 *e*P P 05 20 17.3 +0.4
comp=N,4.1nm,0.7s,mb4.4
QSPA South Pole Qui 69.13 180 *e*P P 05 20 18.5 +1.4
comp=N,1.9nm,0.6s,mb4.1
WUAZ Wupatki 69.27 324 *e*P P 05 20 19.4 +0.9
comp=N,3.0nm,0.8s,mb4.2
PV01 Paradox Valley 69.76 327 *e*P P 05 20 22.2 +0.7
SRU San Rafael 71.49 327 *e*P P 05 20 32.4 +0.4
comp=N,6.3nm,0.8s,mb4.5
CCUT Cedar City 71.84 324 *e*P P 05 20 35.7 +1.5
comp=N,5.0nm,0.8s,mb4.4
MSU Marysvale 71.91 325 *e*P P 05 20 35.6 +1.1
ISA Isabella 73.48 320 *e*P P 05 20 44.7 +0.8
comp=N,2.8nm,0.7s,mb4.2
PDAR Pinedale Array 73.81 330 P P 05 20 45.9 +0.3
comp=N,0.6nm,0.7s,mb3.5,baz=135,slow=6.5,SNR=5.8
HWUT Hardware Ranch 73.89 328 *e*P P 05 20 46.3 +0.1
comp=N,3.8nm,0.7s,mb4.2
ULM Lac du Bonnet 74.95 342 P P 05 20 51.0 -1.1
comp=N,4.4nm,0.5s,mb4.5,baz=145,slow=4.4,SNR=7.2
NVAR Mina Array Bea 75.24 322 P P 05 20 54.5 +0.5
comp=N,1.4nm,0.9s,mb3.7,baz=157,slow=6.4,SNR=5.6
RLMT Red Lodge 75.50 332 *e*P P 05 20 55.8 +0.4
comp=N,18nm,1.7s,mb4.5
SCHQ Schefferville 75.60 1 P P 05 20 55.0 -0.7
comp=N,1.9nm,0.7s,mb4.0,baz=182,slow=13,SNR=3.2
HLID Hailey 76.75 328 *e*P P 05 21 03.7 +1.2
comp=N,2.5nm,0.8s,mb4.0
TORD Torodi Ar. Bea 77.06 70 P P 05 21 04.5 -0.4
comp=N,2.4nm,0.5s,mb4.2,baz=252,slow=5.3,SNR=21
TORD pP pP 05 21 34.2 +3.1
comp=N,1.1nm,0.4s,baz=254,slow=5.5,SNR=2.1
TORD sP sP 05 21 46.9 +4.7
comp=N,3.1nm,0.9s,baz=256,slow=4.5,SNR=3.5
BMO Blue Mountains 79.13 327 *e*P P 05 21 16.2 +0.5
comp=N,1.4nm,0.8s,mb3.8
YKA Yellowknife Ar 90.83 341 P P 05 22 13.3 -0.4
comp=N,1.1nm,0.6s,mb4.2,baz=132,slow=4.8,SNR=11
YKA pP pP 05 22 44.1 +3.4
comp=N,1.2nm,0.8s,baz=131,slow=4.7,SNR=4.7
WRA Warramunga Arr 133.41 211 PKP PKPdf 05 28 27.0 -0.4
comp=N,0.5nm,0.8s,baz=168,slow=2.4,SNR=3.4
ZALV Zalesovo Beam 141.49 25 PKP PKPdf 05 28 41.5 +0.3
comp=N,1.2nm,0.6s,baz=343,slow=2.0,SNR=4.6
MKAR Makanchi Array 145.19 36 PKPbc PKPbc 05 28 48.2 +0.5
comp=N,3.4nm,0.7s,baz=356,slow=4.9,SNR=19
MKAR pPKPbc 05 29 19.7
comp=N,1.3nm,0.6s,baz=344,slow=4.0,SNR=6.0
HHC Hu-ho-hao-te 160.27 359 *e*PKP PKPdf 05 29 10.2 +0.2
HHC pPKP pPKPdf 05 29 52.8 +15
HHC sPKP 05 30 09.5
HHC PKS 05 32 42.3
HHC PP PP 05 33 38.5 +6.3
HHC SKS SKSdf 05 35 58.3 -7.7
HHC SKKS SKKSac 05 40 07.0 -5.1
HHC SS SS 05 53 32.9 -0.7
HHC LR LR
comp=N,78nm,25.0s
HHC LR LR
comp=E,140nm,26.2s
HHC LR LR
comp=Z,58nm,26.2s

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*ISCJB **06** 05:10:57.1±1.8, 30°.09S×0°.04×72°.16W×0°.09, h18km±12km, mb4.2/4, Error ellipse: s-maj=13.6km s-min=6.7km az=6.2*
*NEIC **06** 05:10:58.1, 30°.05S×72°.08W, h29km, ML4.3(GUC), After GUC.*
*GUC **06** 05:10:58.1±0.8, 30°.05S×72°.08W, h29km±8km, ML4.3*
*IDC **06** 05:11:04.0±4.0, 30°.02S×71°.92W, h52km±33km, mb4.0/4, mb1 4.1/6, mb1mx3.8/16, mbtmp4.0/6, ML3.8/2, Error ellipse: s-maj=37.7km s-min=25.7km az=87.0*
ISC 06 05:10:58.1±1.7, 30°.07S±0°.04×72°.06W±0°.08, h9km±9km, n26, σ0=84/30, mb4.2/4, 2C-4D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OVCH	**Ovalle**	**0.91**	**126**	⇓*i*P	**Pg**	**05 11 14.9**	**-0.7**
OVCH				*e*S	**Sg**	**05 11 27.4**	**-0.1**
OVCH	**Ovalle**	**0.91**	**126**	⇓*i*P	**Pg**	**05 11 14.9**	**-0.7**
OVCH				*e*S	**Sg**	**05 11 27.4**	**-0.1**
OVCH				AML	AML	05 11 31.6	
	comp=N,12μm,0.5s						
TLL	**Tololo Astrono**	**1.09**	**95**	⇓*i*P	**Pg**	**05 11 18.2**	**-0.7**
TLL				*i* S	**Sg**	**05 11 33.6**	**+0.5**
TLL	**Tololo Astrono**	**1.09**	**95**	⇓*i*P	**Pg**	**05 11 18.2**	**-0.7**
TLL				*i* S	**Sg**	**05 11 33.6**	**+0.5**
TLL				AML	AML	05 11 43.3	
	comp=N,7μm,0.6s						
LCO	**Las Campanas**	**1.58**	**48**	*e*Pn	**Pn**	**05 11 25.3**	**-0.9**
LCO	**Las Campanas**	**1.58**	**48**	⇑*i*P	**Pn**	**05 11 25.3**	**-0.9**
LCO				*i* S	**Sn**	**05 11 46.8**	**0.0**
LCO				AML	AML	05 11 53.2	
	comp=N,4μm,0.7s						
PEL	**Peldehue**	**3.28**	**159**	⇑*i*P	**Pn**	**05 11 49.8**	**+0.3**
PEL				*i* S	**Sn**	**05 12 28.4**	**-0.2**
PEL				AML	AML	05 12 47.6	
	comp=E,3μm,0.6s						
FCH	**Farellones**	**3.58**	**156**	AML	AML	05 13 05.3	
	comp=E,584nm,0.6s						
CFAA	**Coronel Fontan**	**3.62**	**116**	P	**Pn**	**05 11 56.8**	**+2.6**
	comp=E,1.9nm,0.3s,baz=305,slow=12,SNR=123						
CFAA				S	**Sn**	**05 12 45.5**	**+8.4**
	comp=E,2.8nm,0.3s,baz=114,slow=8.0,SNR=4.9						
CFAA	**Coronel Fontan**	**3.62**	**116**	P	**Pn**	**05 11 56.8**	**+2.6**
CFAA				S	**Sn**	**05 12 45.5**	**+8.4**
ANTU	**Antumapu**	**3.69**	**161**	*i* S	**Sn**	**05 12 37.8**	**-1.0**
CHCH	**Chadas Angostu**	**4.03**	**163**	*e*P	**Pn**	**05 11 60.0**	**+0.1**
CACH	**El Canelo**	**4.22**	**163**	*e*P	**Pn**	**05 12 02.7**	**+0.3**
PLCA	**Paso Flores**	**10.71**	**174**	P	**Pn**	**05 13 31.1**	**-0.3**
	comp=E,0.5nm,0.3s,baz=332,slow=11,SNR=12						
PLCA	**Paso Flores**	**10.71**	**174**	*e*Pn	**Pn**	**05 13 30.8**	**-0.7**
TRQA	**Tornquist**	**11.53**	**136**	*e*Pn	**Pn**	**05 13 44.0**	**+1.1**
LPAZ	**La Paz**	**14.19**	**16**	P	**Pn**	**05 14 20.9**	**+1.8**
	comp=E,0.5nm,0.3s,baz=207,slow=7.7,SNR=5.5						
LPAZ	**La Paz**	**14.19**	**16**	*e*Pn	**Pn**	**05 14 19.1**	**-0.1**
USHA	**Ushuaia**	**24.88**	**175**	P	**P**	**05 16 21.9**	**+1.1**
	comp=E,6.1nm,1.0s,mb4.1,baz=355,slow=9.8,SNR=4.6						
SWET	**Sewanee**	**66.24**	**348**	*e*P	**P**	**05 21 45.6**	**-0.7**
TXAR	**Lajitas Array**	**66.32**	**330**	P	**P**	**05 21 47.4**	**+0.5**
	comp=E,0.7nm,0.8s,mb3.7,baz=142,slow=6.3,SNR=3.7						
DBIC	**Dimbokro**	**73.97**	**72**	P	**P**	**05 22 33.5**	**-0.6**
	comp=E,5.8nm,0.8s,mb4.6,baz=214,slow=6.3,SNR=6.7						
TORD	**Torodi Ar. Bea**	**82.90**	**70**	P	**P**	**05 23 22.4**	**-1.0**
	comp=E,5.4nm,0.9s,mb4.6,baz=258,slow=5.0,SNR=13						
WRA	**Warramunga Arr**	**124.16**	**210**	PKP	PKPdf	05 29 56.8	-0.8
	comp=E,0.2nm,0.4s,baz=151,slow=1.5,SNR=2.9						
BVAR	**Borovoye Array**	**144.34**	**39**	PKP	PKPdf	05 30 33.3	-0.7
	comp=E,0.4nm,0.3s,baz=0.0,slow=4.7,SNR=3.6						
ZALV	**Zalesovo Beam**	**150.85**	**28**	PKPbc	PKPbc	05 30 50.4	0.0
	comp=E,7.5nm,0.5s,baz=298,slow=3.1,SNR=28						

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*IDC **06** 05:43:01.5±2.5, 47°.06N×153°.57E, h0km, mb3.8/5, mb1 4.0/7, mb1mx3.6/28, mbtmp3.8/7, ML3.8/2, Error ellipse: s-maj=54.9km s-min=28.3km az=173.0*
*MOS **06** 05:43:05.8±1.8, 47°.19N×153°.69E, h50km, mb4.3/1, Error ellipse: s-maj=41.9km s-min=14.5km az=65.3*
*ISCJB **06** 05:43:05.2±1.1, 47°.2N±0°.2×153°.7E±0°.2, h33km, mb3.9/6, Error ellipse: s-maj=32.2km s-min=11.7km az=144.5*
*NEIC **06** 05:43:07.3±1.9, 47°.16N×153°.76E, h35km, mb4.5/1, Error ellipse: s-maj=42.6km s-min=20.4km az=169.0*
ISC 06 05:43:07.4±1.2, 47°.2N±0°.2×153°.7E±0°.2, h35km, n12, σ1=06/15, mb3.9/6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.83**	**24**	*e*PN	**Pn**	**05 44 02.0**	**-1.7**
SKR				pmax	pmax		
	comp=N,50nm,0.4s						
SKR				pmax	pmax		
	comp=Z,50nm,0.4s						
KUR	**Kuril'sk**	**4.48**	**246**	PN	**Pn**	**05 44 12.0**	**-0.7**
KUR				*e*S	**Sn**	**05 45 11.0**	**+7.4**
KUR				smax			
	comp=N,170nm,0.7s						
KUR				smax			
	comp=E,20nm,0.7s						
PETK	**Petropavlovsk-**	**6.44**	**22**	Pn	**Pn**	**05 44 40.4**	**+0.8**
	comp=E,1.3nm,0.3s,baz=177,slow=12,SNR=7.4						
PETK				Sn	**Sn**	**05 45 58.3**	**+6.6**
	baz=114,slow=36,SNR=2.3						
FX1	**Attu Island--F**	**13.74**	**58**	Pn	**Pn**	**05 46 16.9**	**-2.4**
	comp=E,1.8nm,0.3s,baz=55,slow=15,SNR=8.1						
FX1				Sn	**Sn**	**05 48 36.9**	**-14**
	comp=E,0.7nm,0.3s,baz=142,slow=21,SNR=4.7						
COLA	**College**	**35.54**	**39**	*e*P	**P**	**05 50 01.1**	**+0.6**
COLA				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.6						
COLA	**College**	**35.54**	**39**	*e*P	**P**	**05 50 01.1**	**+0.6**
	comp=Z,2.5nm,0.4s,mb4.5						
INK	**Inuvik**	**41.05**	**33**	P	**P**	**05 50 47.5**	**+0.7**
	comp=Z,0.6nm,0.6s,mb3.4,baz=253,slow=8.9,SNR=3.5						
YKA	**Yellowknife Ar**	**50.32**	**37**	P	**P**	**05 52 00.7**	**+0.7**
	comp=Z,0.2nm,0.5s,mb3.4,baz=297,slow=6.9,SNR=3.5						
FINES	**FINESS Array B**	**63.77**	**335**	P	**P**	**05 53 35.1**	**-0.1**
	comp=Z,1.7nm,0.4s,mb4.4,baz=29,slow=8.1,SNR=14						
PDAR	**Pinedale Array**	**64.17**	**54**	P	**P**	**05 53 39.6**	**+1.5**
	comp=Z,0.3nm,0.7s,mb3.4,baz=350,slow=4.8,SNR=3.2						
NOA	**NORSAR Array B**	**67.90**	**341**	P	**P**	**05 54 02.3**	**+0.5**
	comp=Z,0.8nm,0.5s,mb4.0,baz=26,slow=6.3,SNR=3.5						
BUR08	**Bucovina Ar. S**	**75.38**	**327**	*e*P	**P**	**05 54 46.5**	**-0.5**

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*SKO **06** 05:47:42.8, 41°.31N×21°.06E, h20km, M1.8, ML2.1*
*THE **06** 05:47:43.3, 41°.34N×21°.05E, h11km±4km, ML3.0/1, Error ellipse: s-maj=5.0km s-min=0.6km az=199.0*
*CSEM **06** 05:47:43.3±0.2, 41°.32N×21°.06E, h10km, ML3.0/1, Error ellipse: s-maj=5.1km s-min=3.6km az=58.0*
*ISCJB **06** 05:47:43.6±0.4, 41°.33N±0°.03×21°.07E±0°.03, h8km±5km, Error ellipse: s-maj=4.3km s-min=4.1km az=9.0*
*TIR **06** 05:47:47.0±3.3, 41°.26N×20°.58E, h6km, ML3.4*
ISC 06 05:47:44.0±0.4, 41°.33N±0°.03×21°.08E±0°.03, h11km±4km, n23, σ0=83/46, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRUS	**Krusevo**	**0.14**	**72**	*i* Pg	**Pg**	**05 47 47.4**	**+0.2**
KRUS				*i* Sg	**Sg**	**05 47 50.0**	**+0.5**
KRUS				*e*Lg		05 47 50.1	
	comp=N,214nm,0.1s						
KRUS				*e*Lg		05 47 50.1	
	comp=E,118nm,0.2s						
OHR	**Ohrid**	**0.30**	**224**	*i* Pg	**Pg**	**05 47 49.1**	**-0.9**
OHR				*i* Sg	**Sg**	**05 47 54.3**	**+0.2**
OHR				*e*Lg		05 47 54.4	
	comp=E,162nm,0.3s						
OHR				*e*Lg		05 47 54.6	
	comp=N,238nm,0.3s						
OHR	**Ohrid**	**0.30**	**224**	P	**Pg**	**05 47 49.0**	**-1.0**
OHR				S	**Sg**	**05 47 53.9**	**-0.2**
OHR	**Ohrid**	**0.30**	**224**	P	**Pg**	**05 47 49.0**	**-1.0**
OHR				S	**Sg**	**05 47 53.9**	**-0.2**
BIA	**Bitola**	**0.36**	**149**	*i* Pg	**Pg**	**05 47 50.6**	**-0.5**
BIA				*i* Sg	**Sg**	**05 47 56.7**	**+0.8**
BIA				*e*Lg		05 47 57.2	
	comp=E,86nm,0.2s						
BIA				*e*Lg		05 47 58.0	
	comp=N,47nm,0.2s						
BIA	**Bitola**	**0.36**	**149**	P	**Pg**	**05 47 50.3**	**-0.8**
BIA				S	**Sg**	**05 47 56.6**	**+0.7**
BIA	**Bitola**	**0.36**	**149**	P	**Pg**	**05 47 50.3**	**-0.8**
BIA				S	**Sg**	**05 47 56.6**	**+0.7**
FNA	**Florina**	**0.59**	**157**	P	**Pg**	**05 47 54.9**	**-0.5**
FNA				S	**Sg**	**05 48 03.7**	**+0.6**
FNA	**Florina**	**0.59**	**157**	P	**Pg**	**05 47 54.9**	**-0.5**
FNA				S	**Sg**	**05 48 03.7**	**+0.6**
PHP	**Peshkopia**	**0.60**	**307**	*i* PG	**Pg**	**05 47 54.7**	**-0.9**
PHP				*i* SG	**Sg**	**05 48 03.3**	**-0.1**
PHP	**Peshkopia**	**0.60**	**307**	*i* Pg	**Pg**	**05 47 54.7**	**-0.9**
	SNR=92						
PHP				*i* Sg	**Sg**	**05 48 03.3**	**-0.1**
	SNR=92						
SKO	**Skopje**	**0.70**	**23**	*e*Pg	**Pg**	**05 47 57.6**	**+0.1**
SKO				*i* Sg	**Sg**	**05 48 07.6**	**+0.9**
SKO				*e*Lg		05 48 07.8	
	comp=N,96nm,0.3s						
SKO				*e*Lg		05 48 07.9	
	comp=E,53nm,0.3s						
SKO	**Skopje**	**0.70**	**23**	P	**Pg**	**05 47 57.6**	**+0.1**
SKO				S	**Sg**	**05 48 07.5**	**+0.8**
SKO	**Skopje**	**0.70**	**23**	P	**Pg**	**05 47 57.6**	**+0.1**
SKO				S	**Sg**	**05 48 07.5**	**+0.8**
KBN	**Korca**	**0.74**	**197**	*i* PG	**Pg**	**05 48 01.7**	**+3.5**
KBN				*i* SG	**Sg**	**05 48 08.7**	**+0.9**
KBN	**Korca**	**0.74**	**197**	*i* Pg	**Pg**	**05 48 01.7**	**+3.5**
	SNR=91						
KBN				*i* Sg	**Sg**	**05 48 08.7**	**+0.9**
	SNR=91						
VAY	**Valandovo**	**1.12**	**90**	*i* Pg	**Pg**	**05 48 04.8**	**-0.8**
VAY				*i* Sg	**Sg**	**05 48 20.4**	**+0.1**
VAY				*e*Lg		05 48 20.5	
	comp=N,39nm,0.6s						
VAY				*e*Lg		05 48 20.7	
	comp=E,30nm,0.3s						
VAY	**Valandovo**	**1.12**	**90**	P	**Pb**	**05 48 04.5**	**-0.9**
VAY				S	**Sb**	**05 48 20.0**	**-0.1**
VAY	**Valandovo**	**1.12**	**90**	P	**Pb**	**05 48 04.5**	**-0.9**
VAY				S	**Sb**	**05 48 20.0**	**-0.1**
PUK	**Puka**	**1.14**	**309**	*i* PN	**Pn**	**05 48 04.3**	**-1.5**
PUK				*i* SN	**Sn**	**05 48 23.3**	**+1.9**
PUK	**Puka**	**1.14**	**309**	*i* Pn	**Pn**	**05 48 04.3**	**-1.5**
PUK				*i* Sn	**Sn**	**05 48 23.3**	**+1.9**
BCI	**Bajram Curri**	**1.28**	**324**	*i* PN	**Pn**	**05 48 07.5**	**-0.3**
BCI				*i* SN	**Sn**	**05 48 25.6**	**+0.6**
BCI	**Bajram Curri**	**1.28**	**324**	*i* Pn	**Pn**	**05 48 07.5**	**-0.3**
BCI				*i* Sn	**Sn**	**05 48 25.6**	**+0.6**

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*TIR **06** 05:49:52.7±0.7, 41°.38N×21°.19E, h6km±999km, ML2.7*
*THE **06** 05:49:54.8, 41°.35N×21°.07E, h2km±17km, ML2.8/1, Error ellipse: s-maj=17.9km s-min=0.4km az=0.0*
*SKO **06** 05:49:54.8, 41°.31N×21°.06E, h15km, M1.6, ML1.9*
*CSEM **06** 05:49:54.6±0.2, 41°.33N×21°.06E, h10km, ML2.8/1, Error ellipse: s-maj=6.4km s-min=3.9km az=72.0*
*ISCJB **06** 05:49:54.9±0.5, 41°.32N±0°.02×21°.07E±0°.04, h12km±5km, Error ellipse: s-maj=4.8km s-min=4.1km az=21.2*
ISC 06 05:49:55.3±0.5, 41°.33N±0°.03×21°.06E±0°.04, h12km±6km, n19, σ0=82/38, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRUS	**Krusevo**	**0.14**	**75**	*e*Pg	**Pg**	**05 49 59.0**	**+0.2**
KRUS				*e*Sg	**Sg**	**05 50 01.6**	**+0.3**
KRUS				*e*Lg		05 50 01.6	
	comp=N,94nm,0.1s						
KRUS				*e*Lg		05 50 01.7	
	comp=E,53nm,0.2s						
OHR	**Ohrid**	**0.30**	**222**	*e*Pg	**Pg**	**05 50 00.8**	**-0.6**
OHR				*e*Sg	**Sg**	**05 50 05.8**	**+0.4**
OHR				*e*Lg		05 50 05.9	
	comp=E,111nm,0.3s						
OHR				*e*Lg		05 50 06.1	
	comp=N,148nm,0.3s						
OHR	**Ohrid**	**0.30**	**222**	P	**Pg**	**05 50 00.7**	**-0.7**
OHR				S	**Sg**	**05 50 05.5**	**+0.1**
OHR	**Ohrid**	**0.30**	**222**	P	**Pg**	**05 50 00.7**	**-0.7**
OHR				S	**Sg**	**05 50 05.5**	**+0.1**
BIA	**Bitola**	**0.37**	**148**	*e*Pg	**Pg**	**05 50 02.1**	**-0.6**
BIA				*e*Sg	**Sg**	**05 50 08.4**	**+0.8**
BIA				*e*Lg		05 50 08.9	
	comp=E,52nm,0.2s						
BIA				*e*Lg		05 50 09.0	
	comp=N,83nm,0.3s						
BIA	**Bitola**	**0.37**	**148**	P	**Pg**	**05 50 01.6**	**-1.1**
BIA				S	**Sg**	**05 50 07.7**	**+0.1**
BIA	**Bitola**	**0.37**	**148**	P	**Pg**	**05 50 01.6**	**-1.1**
BIA				S	**Sg**	**05 50 07.7**	**+0.1**
PHP	**Peshkopia**	**0.59**	**307**	*i* PG	**Pg**	**05 50 05.9**	**-0.9**
PHP				*i* SG	**Sg**	**05 50 14.9**	**+0.4**
PHP	**Peshkopia**	**0.59**	**307**	*i* Pg	**Pg**	**05 50 05.9**	**-0.9**
	SNR=90						
PHP				*i* Sg	**Sg**	**05 50 14.9**	**+0.4**
	SNR=90						
FNA	**Florina**	**0.60**	**157**	P	**Pg**	**05 50 06.5**	**-0.4**
FNA				S	**Sg**	**05 50 15.4**	**+0.6**
FNA	**Florina**	**0.60**	**157**	P	**Pg**	**05 50 06.5**	**-0.4**
FNA				S	**Sg**	**05 50 15.4**	**+0.6**
SKO	**Skopje**	**0.70**	**24**	*e*Pg	**Pg**	**05 50 09.6**	**+0.7**
SKO				*e*Sg	**Sg**	**05 50 19.2**	**+1.1**
SKO				*e*Lg		05 50 19.6	
	comp=E,33nm,0.3s						
SKO				*e*Lg		05 50 20.1	
	comp=N,54nm,0.3s						
SKO	**Skopje**	**0.70**	**24**	P	**Pg**	**05 50 08.2**	**-0.7**
SKO				S	**Sg**	**05 50 18.6**	**+0.5**
SKO	**Skopje**	**0.70**	**24**	P	**Pg**	**05 50 08.2**	**-0.7**
SKO				S	**Sg**	**05 50 18.6**	**+0.5**
KBN	**Korca**	**0.74**	**197**	*i* PG	**Pg**	**05 50 08.6**	**-1.0**
KBN				*i* SG	**Sg**	**05 50 20.8**	**+1.6**
KBN	**Korca**	**0.74**	**197**	*i* Pg	**Pg**	**05 50 08.6**	**-1.0**
	SNR=90						
KBN				*i* Sg	**Sg**	**05 50 20.8**	**+1.6**
	SNR=90						
PUK	**Puka**	**1.13**	**309**	*i* PN	**Pn**	**05 50 15.7**	**-1.2**
PUK				*i* SN	**Sn**	**05 50 33.9**	**+1.5**
PUK	**Puka**	**1.13**	**309**	*i* Pn	**Pn**	**05 50 15.7**	**-1.2**
PUK				*i* Sn	**Sn**	**05 50 33.9**	**+1.5**
VAY	**Valandovo**	**1.14**	**90**	*e*Pg	**Pg**	**05 50 16.3**	**-0.8**
VAY				*e*Lg		05 50 32.2	
	comp=N,18nm,0.5s						
VAY				*e*Sg	**Sg**	**05 50 32.3**	**+0.4**
VAY				*e*Lg		05 50 32.5	
	comp=E,19nm,0.3s						

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*NEIC **06** 05:54:23.3±0.8, 7°.85S×120°.48E, h10km, mb3.7/3, Error ellipse: s-maj=48.8km s-min=10.0km az=59.0*
*IDC **06** 05:54:26.9±4.6, 7°.81S×120°.70E, h35km±37km, mb3.8/5, mb1 4.0/8, mb1mx3.7/22, mbtmp3.8/8, ML3.7/3, MS3.3/4, Ms1 3.3/4, ms1mx2.9/22, Error ellipse: s-maj=59.8km s-min=11.2km az=56.0*
ISC 06 05:54:27.3±0.7, 7.7S±0°.1×120°.8E±0°.2, h35km, n20, σ0=96/20, mb4.2/6, MS3.4/2, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**2.86**	**338**	Pn	**Pn**	**05 55 10.5**	**+0.1**
	23nm,0.3s,baz=160,slow=5.4,SNR=61						
KAPI				Sn	**Sn**	**05 55 43.8**	**+0.1**
	22nm,0.3s,baz=170,slow=9.0,SNR=8.0						
KAPI				LR	LR	05 56 44.1	
	comp=Z,420nm,18.7s,baz=144,slow=47						
KAPI	**Kappang**	**2.86**	**338**	*e*Pn	**Pn**	**05 55 10.1**	**-0.4**
KAPI				Sn	**Sn**	**05 55 43.8**	**+0.1**
KAPI				LR	LR	05 56 44.1	
FITZ	**Fitzroy Crossi**	**11.37**	**156**	Pn	**Pn**	**05 57 05.9**	**-1.4**
	0.2nm,0.3s,baz=358,slow=12,SNR=5.0						
FITZ				Sn	**Sn**	**05 59 09.2**	**-3.9**
	0.2nm,0.3s,baz=273,slow=5.0,SNR=3.0						
FITZ				LR	LR	06 01 42.3	
	comp=Z,88nm,19.0s,baz=355,slow=38						
FITZ	**Fitzroy Crossi**	**11.37**	**156**	*e*Pn	**Pn**	**05 57 06.6**	**-0.6**
FITZ				*e*Sn	**Sn**	**05 59 13.3**	**+0.2**
FITZ				LR	LR	06 01 42.3	
WRA	**Warramunga Arr**	**17.89**	**134**	P	**Pn**	**05 58 33.8**	**+0.2**
	0.2nm,0.3s,baz=307,slow=13,SNR=7.8						
WRA				S	**Sn**	**06 01 51.5**	**-0.5**
	0.1nm,0.3s,baz=304,slow=24,SNR=3.8						
WRAB	**Tennant Creek**	**17.89**	**134**	*e*P	**Pn**	**05 58 35.1**	**+1.6**
	3.0nm,0.7s						
ASAR	**Alice Springs**	**20.25**	**143**	P	**P**	**05 59 00.6**	**+0.9**
	4.1nm,0.8s,baz=321,slow=11,SNR=20						
STKA	**Stephens Creek**	**30.88**	**144**	P	**P**	**06 00 40.9**	**+0.3**
	3.0nm,0.7s,mb4.2,baz=319,slow=5.0,SNR=5.7						
STKA	**Stephens Creek**	**30.88**	**144**	*e*P	**P**	**06 00 41.4**	**+0.8**
	0.6nm,0.8s,mb3.5						
CMAR	**Chiang Mai Arr**	**33.78**	**320**	LR	LR	06 16 20.1	
	comp=Z,21nm,19.3s,MS2.9,baz=135,slow=39						
EIDS	**Eidsvold**	**33.79**	**125**	*e*P	**P**	**06 01 04.5**	**-1.6**
	46nm,0.3s						
LZH	**Lanzhou**	**46.38**	**341**	*e*P	**P**	**06 02 48.2**	**-2.1**
LZH				pP	pP	06 02 52.0	-8.6
LZH				sP	sP	06 02 54.0	-11
LZH				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
SONM	**Songino Array**	**56.73**	**348**	P	**P**	**06 04 08.6**	**+1.1**
	comp=Z,1.1nm,0.7s,mb4.0,baz=181,slow=5.8,SNR=3.3						
MKAR	**Makanchi Array**	**64.14**	**332**	P	**P**	**06 04 58.5**	**+0.4**
	comp=Z,0.9nm,0.7s,mb3.9,baz=96,slow=8.7,SNR=6.1						
ZALV	**Zalesovo Beam**	**68.48**	**338**	P	**P**	**06 05 25.6**	**-0.2**
	comp=Z,1.0nm,0.4s,mb4.2,baz=158,slow=6.4,SNR=3.7						
KURK	**Kurchatov**	**68.64**	**333**	*e*P	**P**	**06 05 27.2**	**+0.3**
	comp=Z,2.6nm,0.8s,mb4.2						
MAW	**Mawson**	**71.08**	**200**	LR	LR	06 36 02.3	
	comp=Z,62nm,18.1s,MS3.9,baz=200,slow=35						
TORD	**Torodi Ar. Bea**	**120.00**	**281**	PKP	PKPdf	06 13 12.2	-3.1
	comp=Z,0.3nm,0.7s,baz=58,slow=1.8,SNR=2.9						
LPAZ	**La Paz**	**154.59**	**160**	PKPab	PKPab	06 14 40.7	+0.8
	comp=Z,1.5nm,0.6s,baz=217,slow=7.3,SNR=7.6						
LPAZ	**La Paz**	**154.59**	**160**	PKPab	PKPab	06 14 40.7	+0.8

CASC 06 06:34:22.0±2.5, 14°.77N×90°.97W, h235km±19km, MD4.0, 1C-2D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.34**	**159**	*e*P	Pn	06 34 53.4	+0.7
NBG	**Las Nubes**	**0.63**	**106**	⇓*e*P	Pn	06 34 55.1	+1.5
NBG				*e*S	S	06 35 20.1	+1.9
JAT	**Jato**	**0.78**	**236**	⇑*e*P	Pn	06 34 54.4	+0.1
MRL	**Marmol**	**1.27**	**76**	⇓*i*P	Pn	06 34 58.9	+1.8
MRL				*e*S	S	06 35 24.8	+0.2
RTR	**El Retiro**	**1.55**	**124**	*e*P	Pn	06 34 59.7	+0.5
RTR				*e*S	S	06 35 31.8	+3.4
SNJE	**San Jose**	**1.59**	**124**	*e*P	Pn	06 35 00.2

ELDTW	**Lidau**	0.69 233	*e*P		**Pb**	06 57 05.8 -1.2
	baz=230					
SMLT	**Sun Moon Lake**	0.70 293	⇑*i*P		**Pb**	06 57 06.8 -0.5
	baz=295					
SMLT			*e*S		**Sb**	06 57 16.6 -0.1
	baz=295					
ALS	**Alishan**	0.74 263	⇑*i*P		**Pb**	06 57 07.9 -0.1
	baz=269					
ALS			*e*S		**Sb**	06 57 17.6 -0.3
	baz=269					
TYC	**Yuchr**	0.75 293	⇑*i*P		**Pb**	06 57 07.5 -0.6
	baz=295					
TYC			S		**Sb**	06 57 17.6 -0.3
	baz=295					
TWT	**Tachien**	0.75 328	⇑*i*P		**Pb**	06 57 07.9 -0.3
	baz=324					
TWT			*e*S		**Sb**	06 57 17.6 -0.5
	baz=324					
ENA	**Nanau**	0.82 8	*e*P		**Pn**	06 57 08.2 -1.2
	baz=359					
CHN5	**Tsauling**	0.85 269	⇑*i*P		**Pn**	06 57 09.6 -0.1
	baz=271					
CHN5			S		**Sb**	06 57 21.1 +0.2
	baz=271					
NNS	**Nan Shan**	0.85 345	*e*P		**Pn**	06 57 08.9 -0.8
	baz=348					
WNT	**Mingjian**	0.89 288	*e*P		**Pn**	06 57 10.2 0.0
	baz=290					
WNT			*e*S		**Sb**	06 57 21.7 -0.2
	baz=290					
TWG	**Pinlang**	0.93 212	*e*Pg		**Pn**	06 57 09.1 -1.6
TWG	**Pinlang**	0.93 212	*e*P		**Pn**	06 57 08.5 -2.2
	baz=208					
TWG			*e*S		**Sb**	06 57 22.9 -0.2
	baz=208					
TPUB	**Ta-pu**	0.95 251	*e*Pn		**Pn**	06 57 10.5 -0.5
TPUB			*e*Sn		**Sn**	06 57 24.2 +0.6
TTN	**Taitung**	0.95 207	*e*P		**Pn**	06 57 12.8 +1.8
	baz=202					
WGK	**Gukeng**	0.96 275	*e*P		**Pn**	06 57 11.1 -0.1
	baz=277					
WGK			*e*S		**Sn**	06 57 23.8 -0.1
	baz=277					
WTP	**Ta-pu**	0.98 249	⇑P		**Pn**	06 57 11.4 0.0
	baz=249					
WTP			*e*S		**Sn**	06 57 24.3 -0.1
	baz=249					
TCU	**Taichung**	1.01 302	⇑P		**Pn**	06 57 12.4 +0.6
	baz=303					
TWC	**Suao**	1.02 12	*e*P		**Pn**	06 57 11.9 -0.1
	baz=25					
TWC			*e*S		**Sn**	06 57 26.3 +0.9
	baz=25					
ENTT	**Nioudou**	1.03 358	*e*P		**Pn**	06 57 11.2 -0.9
ENTT			*e*S		**Sn**	06 57 25.4 -0.2
TWQ1	**Liyutan**	1.06 314	P		**Pn**	06 57 13.2 +0.7
	baz=316					
TWQ1			*e*S		**Sn**	06 57 27.0 +0.6
	baz=316					
YHNB	**Yeheng**	1.08 349	*e*Pn		**Pn**	06 57 12.1 -0.7
YHNB			*e*Sn		**Sn**	06 57 26.0 -0.8
CHN1	**Nanshi**	1.08 247	P		**Pn**	06 57 13.0 +0.2
	baz=248					
CHN1			*e*S		**Sn**	06 57 27.1 +0.3
	baz=248					
SGST	**Jiashian**	1.08 241	*e*P		**Pn**	06 57 13.1 +0.3
	baz=241					
SGST			*e*S		**Sn**	06 57 27.2 +0.3
	baz=241					
TWK	**Hsinying**	1.08 252	*e*P		**Pn**	06 57 12.7 -0.1
	baz=253					
TWK			*e*S		**Sn**	06 57 27.2 +0.2
	baz=253					
NSK	**Sanguang**	1.09 348	⇑P		**Pn**	06 57 12.5 -0.4
	baz=350					
NSK			*e*S		**Sn**	06 57 25.9 -1.1
	baz=350					
CHY	**Chiayi**	1.09 264	*e*P		**Pn**	06 57 12.8 -0.2
	baz=266					
CHY			*e*S		**Sn**	06 57 27.1 0.0
	baz=266					
TWE	**Neicheng**	1.11 3	*e*P		**Pn**	06 57 12.6 -0.7
	baz=357					
TWE			*e*S		**Sn**	06 57 28.0 +0.5
	baz=357					
NSY	**Sanyi**	1.12 316	*e*P		**Pn**	06 57 13.9 +0.6
	baz=317					
NSTT	**Nanjuang**	1.16 332	P		**Pn**	06 57 14.3 +0.4
	baz=333					
NSTT			*e*S		**Sn**	06 57 28.5 -0.3
	baz=333					
WTCT	**Ta-ch'eng**	1.24 282	*e*P		**Pn**	06 57 15.4 +0.4
	baz=274					
WTCT			*e*S		**Sn**	06 57 30.8 -0.1
	baz=274					
SSD	**Sandimen**	1.24 226	*e*P		**Pn**	06 57 15.7 +0.6
	baz=226					
SSD			*e*S		**Sn**	06 57 31.6 +0.8
	baz=226					
CHN3	**Shinhua**	1.26 245	*e*P		**Pn**	06 57 16.6 +1.3
	baz=258					
CHN3			*e*S		**Sn**	06 57 33.9 +2.6
	baz=258					
CHN8	**Yiju**	1.31 259	*e*P		**Pn**	06 57 15.5 -0.5
	baz=261					
CHN8			*e*S		**Sn**	06 57 32.7 +0.2
	baz=261					
TWM1	**Shoushan**	1.34 235	*e*P		**Pn**	06 57 17.1 +0.7
	baz=235					
TWA	**Mucha**	1.36 359	*e*P		**Pn**	06 57 17.3 +0.5
	baz=360					
EAST	**Anshuo**	1.41 210	*e*P		**Pn**	06 57 17.8 +0.5
	baz=197					
TAW	**Tawu**	1.41 208	*e*P		**Pn**	06 57 18.2 +0.9
	baz=194					
TWB1	**Santiao Chiao**	1.44 14	*e*P		**Pn**	06 57 18.4 +0.6
	baz=24					
TWB1			*e*S		**Sn**	06 57 36.6 +1.0
	baz=24					
NWF	**Wu-fen Shan**	1.46 6	*e*P		**Pn**	06 57 18.3 +0.1
	baz=8.0					
NWF			*e*S		**Sn**	06 57 37.5 +1.1
	baz=8.0					
TWS1	**Kuangyinshan**	1.50 353	*e*P		**Pn**	06 57 18.9 +0.3
	baz=7.0					
TWS1			*e*S		**Sn**	06 57 38.5 +1.3
	baz=7.0					
SCZT	**Fangliau**	1.53 217	*e*P		**Pn**	06 57 19.4 +0.4
	baz=197					
SCZT			*e*S		**Sn**	06 57 38.6 +0.6
	baz=197					
YOJ	**Yonaguni jima**	1.54 56	P		**Pn**	06 57 19.1 0.0
YOJ			*e*S		**Sn**	06 57 38.0 -0.2
TWK1	**Hengchun**	1.82 204	*e*P		**Pn**	06 57 23.2 +0.2
	baz=198					
TWK1			*e*S		**Sn**	06 57 45.4 +0.4
	baz=198					
TSEB	**Hengchuen, Pin**	1.82 201	*e*P		**Pn**	06 57 24.0 +1.0
	baz=197					
PNG	**Penghu**	1.88 269	⇑P		**Pn**	06 57 23.4 -0.5
	baz=272					
PNG			*e*S		**Sn**	06 57 45.9 -0.9
	baz=272					
PCYT	**Pengchaiyu**	2.06 12	*e*P		**Pn**	06 57 26.7 +0.4
	baz=357					
HATJ	**Hateruma jima**	2.06 77	P		**Pn**	06 57 25.9 -0.4
HATJ			*e*S		**Sn**	06 57 49.7 -1.4
IRIF	**Iriomote-Funau**	2.07 69	P		**Pn**	06 57 26.6 +0.1
IRIF			*e*S		**Sn**	06 57 51.2 -0.1
JKRS	**Kuro-shima**	2.29 74	P		**Pn**	06 57 29.7 +0.3
JKRS			*e*S		**Sn**	06 57 56.7 +0.1
JIJ	**Ishigaki jima**	2.44 72	P		**Pn**	06 57 31.4 -0.1
JIJ			*e*S		**Sn**	06 57 58.8 -1.6
JTJ	**Tarama**	3.01 69	P		**Pn**	06 57 39.4 +0.1
JTJ			*e*S		**Sn**	06 58 13.4 -1.1
QZH	**Quanzhou**	3.06 296	Pn		**Pn**	06 57 39.4 -0.6
QZH			Sn		**Sn**	06 58 13.2 -2.4
QZH			smax			
	comp=N,80nm,0.5s					
QZH			smax			
	comp=E,50nm,0.6s					

*IDC **06** 07:29:12.3±3.6, 34°.08N×107°.20E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/26, mbtmp3.6/4, MS2.5/2, Ms1 2.5/2, ms1mx2.1/22, Error ellipse: s-maj=410.9km s-min=22.0km az=51.0*

*ISCJB **06** 07:29:13.1±0.5, 32°.96N±0°.04×105°.61E±0°.05, h10km, mb3.6/4, Error ellipse: s-maj=5.7km s-min=5.0km az=163.5*

*BJI **06** 07:29:14.6, 32°.89N×105°.67E, h17km, mb3.9/1, ML3.7/10, Ms3.5/4, Ms7 3.1/4*

*NEIC **06** 07:29:16.0±0.8, 32°.75N×105°.19E, h10km, mb3.8/1, Error ellipse: s-maj=64.8km s-min=11.6km az=224.0*

ISC 06 07:29:14.6±0.5, 32°.87N±0°.04×105°.62E±0°.05, h10km, n13, σ1§22/22, mb3.6/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	2.51	220	Pn	**Pn**	07 29 54.7	-0.7
CD2				Pg	**Pb**	07 29 58.3	-1.4
CD2				Sg	**Sb**	07 30 30.1	-0.6
CD2				smax			
	comp=N,980nm,0.8s						
XAN	**Xi'an**	3.00	66	Pn	**Pn**	07 30 02.8	+0.6
XAN				Pg	**Pg**	07 30 11.7	-0.4
XAN				Sn	**Sn**	07 30 35.5	-2.7
XAN				Sg	**Sg**	07 30 46.1	-4.9
XAN				smax			
	comp=N,190nm,0.6s						
XAN				smax			
	comp=E,99nm,0.6s						
LZH	**Lanzhou**	3.53	336	*e*Pn	**Pn**	07 30 12.4	+2.9
LZH				Pg	**Pg**	07 30 21.8	-0.5
LZH				Sn	**Sn**	07 30 55.8	+4.5
LZH				Sg	**Sg**	07 31 07.4	-0.6
LZH				smax			
	comp=N,370nm,0.8s						
LZH				smax			
	comp=E,470nm,0.7s						
LZH				LR	LR		
	comp=E,760nm,5.7s						
LZH				LR	LR		
	comp=Z,1μm,7.8s						
ENH	**Enshi**	4.19	127	*e*Pn	**Pn**	07 30 23.3	+4.7
ENH				*e*S	**Sb**	07 31 19.2	0.0
GYA	**Guiyang**	6.45	172	Pg	**Pn**	07 30 54.2	+4.6
GYA				Sg	**Sn**	07 31 58.8	-4.5
GYA				smax			
	comp=N,50nm,0.7s						
GYA				smax			
	comp=E,80nm,0.8s						
GTA	**Gaotai**	8.04	326	*e*P	**Pn**	07 31 12.2	+0.8
GTA				pP		07 31 16.7	
GTA				sP		07 31 20.0	
GTA				S	**Sn**	07 32 50.8	+8.4
GTA				sS		07 32 55.1	
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GTA				LR	LR		
	comp=N,160nm,7.5s						
GTA				LR	LR		
	comp=E,120nm,9.3s						
GTA				LR	LR		
	comp=Z,130nm,7.5s						
SONM	**Songino Array**	14.96	2	LR	LR	07 38 42.1	
	comp=Z,32nm,21.6s,baz=83,slow=41						
KSRS	**Korea Array**	18.79	70	LR	LR	07 40 08.1	
	comp=Z,10nm,20.7s,baz=160,slow=38						
MKAR	**Makanchi Array**	22.57	315	P	**P**	07 34 14.6	-0.3
	comp=Z,0.9nm,0.6s,mb3.4,baz=107,slow=12,SNR=7.6						
KURK	**Kurchatov**	26.67	320	P	**P**	07 34 53.5	+0.1
	comp=Z,0.3nm,0.2s,mb3.4,baz=120,slow=10,SNR=3.9						
KURK	**Kurchatov**	26.67	320	*e*P	**P**	07 34 53.6	+0.1
	comp=Z,1.6nm,0.8s,mb3.6						
WRA	**Warramunga Arr**	59.25	148	P	**P**	07 39 18.0	+1.7
	comp=Z,0.8nm,0.7s,mb3.9,baz=346,slow=7.6,SNR=3.8						
ASAR	**Alice Springs**	62.36	151	P	**P**	07 39 39.9	+2.5
	comp=Z,0.4nm,0.5s,mb3.9,baz=334,slow=6.4,SNR=8.5						

*NEIC **06** 07:41:29.6±1.1, 14°.43N×90°.15W, h244km±11km, mb4.0/7, Error ellipse: s-maj=21.2km s-min=10.9km az=51.0*

*IDC **06** 07:41:29.5±0.9, 14°.44N×89°.92W, h238km±5km, mb3.4/4, mb1 3.6/8, mb1mx3.3/24, mbtmp3.5/8, Error ellipse: s-maj=30.7km s-min=12.3km az=47.0*

*ISCJB **06** 07:41:29.5±0.4, 14°.49N±0°.08×90°.00W±0°.09, h247km±4km, mb3.8/7, Error ellipse: s-maj=17.4km s-min=5.9km az=137.4*

*CASC **06** 07:41:35.2±4.5, 12°.72N×90°.64W, h18km±51km, MD4.1, ML3.0, mb4.3(NEIC)*

ISC 06 07:41:30.2±0.4, 14°.50N±0°.08×89°.99W±0°.09, h243km±4km, n49, σ0§93/57, mb3.8/7, 3C-3D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NBG	**Las Nubes**	0.35	284	⇑*e*P	**Pn**	07 42 02.9	+1.0
NBG				*e*S	**S**	07 42 30.7	+4.1
RBDL	**Robledal**	0.49	143	*e*P	**Pn**	07 42 01.8	-0.5
PCG	**Pacaya**	0.61	260	‖*e*P	**Pn**	07 42 03.1	+0.5
MTO2	**Montecristo 2**	0.62	99	*e*P	**Pn**	07 42 02.4	-0.3
APG	**El Apazote**	0.68	318	P	**Pn**	07 42 03.2	+0.3
	52nm,0.3s,baz=152,slow=3.9,SNR=698						
APG				S	**S**	07 42 28.7	+0.2
	7.7nm,0.3s,baz=304,slow=22,SNR=44						
RTR	**El Retiro**	0.69	151	*e*P	**Pn**	07 42 02.4	-0.6
SNJE	**San Jose**	0.73	149	*e*P	**Pn**	07 42 02.6	-0.5
SBLS	**San Blas**	0.75	151	*e*P	**Pn**	07 42 02.5	-0.8
SBLS				AML	AML	07 42 37.8	
	comp=Z,214nm,0.2s						
FUG	**Fuego 3**	0.82	266	⇑*e*P	**Pn**	07 42 03.7	+0.1
BOQS	**Boqueron**	1.03	138	*e*P	**Pn**	07 42 04.4	-0.3
TP2	**Tecpan 2**	1.03	286	‖*i*P	**Pn**	07 42 06.0	+1.4
SNET	**Serv Nac Est T**	1.10	138	*e*P	**Pn**	07 42 04.8	-0.3
LBRS	**Las Brisas**	1.19	129	*e*P	**Pn**	07 42 05.1	-0.6
LFRS	**El Faro**	1.26	134	*e*P	**Pn**	07 42 05.3	-0.8
SNVI	**San Vicente**	1.43	128	*e*P	**Pn**	07 42 06.6	-0.7
JAT	**Jato**	1.60	264	‖*i*P	**Pn**	07 42 08.3	-0.3
TGUH	**Tegucigalpa,Un**	2.67	99	*e*Pn	**Pn**	07 42 18.8	+0.1
TGUH	**Tegucigalpa,Un**	2.67	99	*e*P	**Pn**	07 42 19.0	+0.3
COPN	**Copaltepe**	4.04	124	*e*P	**Pn**	07 42 34.5	+0.3
COPN				*e*S	**S**	07 43 19.8	-5.1
CMIG	**Matias Romero**	5.37	299	P	**Pn**	07 42 49.0	-1.3
	comp=Z,11nm,0.3s,baz=117,slow=7.6,SNR=240						
CMIG				S	**S**	07 43 46.9	-7.2
	comp=Z,14nm,0.3s,baz=354,slow=22,SNR=12						
CMIG	**Matias Romero**	5.37	299	P	**Pn**	07 42 49.0	-1.3
CMIG				S	**S**	07 43 46.9	-7.2
GBS3	**Finca Las Im¨¡**	5.77	129	*i* P	**Pn**	07 42 56.2	+0.8
LAPC	**Finca la Perla**	5.79	129	*i* P	**Pn**	07 42 56.0	+0.2
NY14	**Universidad de**	5.80	131	*i* P	**Pn**	07 42 56.5	+0.8
NY14				*i* S	**S**	07 43 59.5	-4.5
TEIG	**Tepich**	5.92	16	*e*Pn	**Pn**	07 42 57.4	+0.1
	comp=Z,42nm,0.6s						
LIM1	**Limonal**	5.97	129	*i* P	**Pn**	07 42 57.7	-0.2
VCR	**Vista de Mar**	6.09	135	*e*P	**Pn**	07 43 00.9	+1.5
VCR				*e*S	**S**	07 44 05.0	-5.6
JTS	**JuntasAbangare**	6.46	130	P	**Pn**	07 43 03.8	-0.3
	comp=Z,14nm,0.3s,baz=332,slow=14,SNR=65						
JTS				S	**S**	07 44 12.5	-6.7
	comp=Z,9.7nm,0.3s,baz=298,slow=22,SNR=8.8						
JCR	**Jicaral**	6.64	134	*e*P	**Pn**	07 43 06.5	+0.1
CGA2	**Cerro Gallo 2**	7.00	129	⇑*e*P	**Pn**	07 43 12.7	+1.7
LAJ	**Bijagual**	7.36	128	*e*P	**Pn**	07 43 13.3	-2.2
QCR	**Quepos**	7.61	131	*e*P	**Pn**	07 43 18.0	-0.7
BUS	**Buena Vista**	7.83	128	*e*P	**Pn**	07 43 23.0	+1.5
BAR1		8.37	128	*e*P	**Pn**	07 43 28.4	+0.1
MTDJ	**Mount Denham**	12.52	71	*e*Pn	**Pn**	07 44 24.7	+4.3
OTAV	**Otavalo**	18.20	140	*e*P	**P**	07 45 28.4	+2.7
	comp=Z,1.7nm,0.7s						
TXAR	**Lajitas Array**	19.43	322	P	**P**	07 45 41.3	+2.6
	comp=Z,0.1nm,0.3s,baz=147,slow=11,SNR=5.7						
SDV	**Santo Domingo**	19.75	104	P	**P**	07 45 41.0	-1.3
	comp=Z,1.5nm,0.3s,baz=342,slow=4.3,SNR=9.7						
SDV	**Santo Domingo**	19.75	104	*e*P	**P**	07 45 41.2	-1.1
	comp=Z,6.3nm,0.5s						
SWET	**Sewanee**	20.95	9	*e*P	**P**	07 45 54.7	0.0
WVT	**Waverly**	21.62	5	*e*P	**P**	07 46 02.1	+0.8
	comp=Z,1.7nm,0.3s,mb4.0						
WMOK	**Wichita Mounta**	21.65	340	*e*P	**P**	07 46 00.8	-0.8
	comp=Z,0.6nm,0.3s,mb3.6						
TKL	**Tuckaleechee C**	21.79	14	P	**P**	07 46 03.5	+0.6
	comp=Z,1.8nm,0.4s,mb4.0,baz=179,slow=12,SNR=8.1						
SIV	**San Ignacio**	41.65	136	P	**P**	07 48 53.7	-1.5
	comp=Z,1.9nm,0.6s,mb3.7,baz=324,slow=9.1,SNR=5.5						
SCHQ	**Schefferville**	44.09	19	P	**P**	07 49 13.8	-0.6
	comp=Z,3.0nm,0.4s,mb4.0,baz=207,slow=6.6,SNR=18						
SCHQ	**Schefferville**	44.09	19	*e*P	**P**	07 49 13.5	-0.9
	comp=Z,2.7nm,0.3s,mb4.0						
YKA	**Yellowknife Ar**	51.01	346	P	**P**	07 50 06.6	-0.6
	comp=Z,0.3nm,0.4s,mb3.1,baz=151,slow=7.3,SNR=7.0						
YKA	**Yellowknife Ar**	51.01	346	P	**P**	07 50 06.6	-0.6
RES	**Resolute Bay**	60.24	358	*e*P	**P**	07 51 12.4	-0.2
	comp=Z,4.5nm,1.2s,mb4.0						

*ISCJB **06** 08:29:52.4±1.0, 59°.28N±0°.03×27°.6E±0°.1, h0km, Error ellipse: s-maj=10.7km s-min=4.3km az=23.4*

*CSEM **06** 08:29:57.7±0.8, 59°.34N×27°.21E, h2km, ML2.5, Error ellipse: s-maj=28.8km s-min=12.2km az=92.0, Mining explosion.*

*BER **06** 08:29:59.8±3.1, 59°.33N×26°.92E, h2km±16km, ML2.5(NAO)*

*NAO **06** 08:29:59.2±0.9, 59°.29N×26°.64E, ML2.5*

*IDC **06** 08:30:00.2±2.1, 59°.40N×27°.32E, h0km, mb1 3.1/4, mb1mx3.0/27, mbtmp3.1/4, ML2.9/3, Error ellipse: s-maj=20.5km s-min=10.9km az=117.0*

ISC 06 08:29:56.6±0.8, 59°.28N±0°.03×27°.2E±0°.1, h0km, n28, σ1§47/34, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSU	**Vasula**	0.86	198	Pg	**Pg**	08 30 15.1	+2.0
VSU				Lg		08 30 26.8	
VSU	**Vasula**	0.86	198	Pg	**Pg**	08 30 15.1	+2.0
	SNR=90						
VSU				*e*S	**Sg**	08 30 24.4	+0.1
	102nm,0.6s,SNR=90						
VSU				Lg		08 30 26.8	
	SNR=109						
MEF	**Metsahovi**	1.72	304	*e*P	**Pn**	08 30 29.2	+1.6
	SNR=50						
MEF				*e*S	**Sn**	08 30 49.7	-0.5
	37nm,0.7s,SNR=50						
FIA0	**FINESS Array S**	2.24	346	Pn	**Pn**	08 30 36.9	+2.0
	baz=161,slow=18						
FIA0				Pg	**Pg**	08 30 38.3	-1.2
	baz=158,slow=16						
FIA0				Lg		08 31 08.0	
	baz=168,slow=37						
FIA0				Rg		08 31 18.4	
	baz=178,slow=37						
FIA0	**FINESS Array S**	2.24	346	Pn	**Pn**	08 30 36.9	+2.0
	SNR=50						
FIA0	**FINESS Array S**	2.24	346	Pg	**Pg**	08 30 38.3	-1.2
	SNR=90						
FIA0				Lg		08 31 08.0	
	SNR=50						
FINES	**FINESS Array B**	2.24	346	Pn	**Pn**	08 30 37.0	+2.1
	2.3nm,0.3s,baz=164,slow=15,SNR=47						
FINES				Pg	**Pg**	08 30 38.3	-1.2
	2.3nm,0.3s,baz=164,slow=16,SNR=48						
FINES				Lg		08 31 07.7	
	2.2nm,0.3s,baz=164,slow=25,SNR=11						
SLIT	**Slitere, Latvi**	3.08	240	*e*P	**Pb**	08 30 52.8	+0.6
	SNR=50						
SLIT				*e*S	**Sb**	08 31 31.8	+1.5
	233nm,0.5s,SNR=50						
RAF	**Rauma**	3.25	305	*e*P	**Pb**	08 30 52.1	-2.9
	SNR=50						
RAF				*e*S	**Sb**	08 31 30.4	-4.5
	9.7nm,0.3s,SNR=50						
IZAR	**Zarasai**	3.58	189	*e*S	**Sg**	08 31 50.0	-1.6
IZAR	**Zarasai**	3.58	189	*e*S	**Sg**	08 31 50.0	-1.6
ISAL	**Salakas**	3.77	190	*e*S	**Sg**	08 31 54.6	-3.0
ISAL	**Salakas**	3.77	190	*e*S	**Sg**	08 31 54.6	-3.0
IIGN	**Ignalina**	3.98	188	*e*S	**Sg**	08 32 02.6	-1.8
IIGN	**Ignalina**	3.98	188	*e*S	**Sg**	08 32 02.6	-1.8
IDID	**Didziasalis**	3.99	184	*e*S	**Sg**	08 32 06.4	+1.8
IDID	**Didziasalis**	3.99	184	*e*S	**Sg**	08 32 06.4	+1.8
NACGM	**Naroch**	4.40	183	*e*	**Sg**	08 32 13.0	-4.9
HFS	**Hagfors**	6.91	283	Lg		08 33 27.4	
	baz=93,slow=37						
HFS	**Hagfors**	6.91	283	Lg		08 33 27.4	
	baz=93,slow=37						
HFS	**Hagfors**	6.91	283	Pn	**Pn**	08 31 40.5	+1.6
	0.1nm,0.3s,baz=103,slow=12,SNR=3.3						
HFS				Sn	**Sn**	08 32 56.4	-1.6
	0.3nm,0.3s,baz=114,slow=30,SNR=5.1						
HFS				Lg		08 33 30.1	
	1.4nm,0.3s,baz=95,slow=30,SNR=9.9						
HFS	**Hagfors**	6.91	283	Lg		08 33 27.4	
	SNR=50						
NB2	**NORSAR Subarra**	8.18	289	Pn	**Pn**	08 31 56.3	-0.1
NB2	**NORSAR Subarra**	8.18	289	Pn	**Pn**	08 31 56.3	-0.1
	SNR=50						
NOA	**NORSAR Array B**	8.18	289	Pn	**Pn**	08 31 56.4	+0.1
	0.2nm,0.3s,baz=64,slow=12,SNR=3.0						
NOA				Lg		08 34 10.2	
	0.7nm,0.3s,baz=92,slow=12,SNR=5.2						
ARA0	**ARCESS Array S**	10.32	357	Pn	**Pn**	08 32 25.4	-0.2
	baz=173,slow=14						
ARA0				Sn	**Sn**	08 34 14.8	-7.1
	baz=170,slow=18						
ARA0	**ARCESS Array S**	10.32	357	Pn	**Pn**	08 32 25.4	-0.2
	SNR=50						
ARCES	**ARCESS Array B**	10.32	357	Pn	**Pn**	08 32 25.2	-0.4
	0.1nm,0.3s,baz=172,slow=14,SNR=5.0						
ARCES				Sn	**Sn**	08 34 14.3	-7.5
	0.2nm,0.3s,baz=169,slow=16,SNR=3.8						

*IDC **06** 08:32:37.4±0.7, 59°.28S×25°.71W, h0km, mb4.2/9, mb1 4.3/9, mb1mx4.2/16, mbtmp4.2/9, MS3.5/2, Ms1 3.4/2, ms1mx3.1/12, Error ellipse: s-maj=27.6km s-min=18.1km az=41.0*

*ISCJB **06** 08:32:37.4±0.8, 59°.3S±0°.2×25°.6W±0°.3, h10km, mb4.2/10, MS3.5/2, Error ellipse: s-maj=27.1km s-min=14.2km az=41.6*

*NEIC **06** 08:32:42.5±0.4, 59°.28S×25°.67W, h35km, mb4.3/3, Error ellipse: s-maj=17.2km s-min=10.7km az=215.0*

ISC 06 08:32:39.2±0.8, 59°.3S±0°.2×25°.7W±0°.3, h10km, n19, σ0§87/13, mb4.2/10, MS3.5/2, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USHA	**Ushuaia**	23.37	262	P	**P**	08 37 48.5	+0.8
	8.1nm,1.0s,mb4.1,baz=101,slow=12,SNR=5.7						
QSPA	**South Pole Qui**	30.94	180	P	**P**	08 38 56.9	+1.3
	3.1nm,0.5s,mb4.4,baz=204,slow=1.0,SNR=65						
QSPA	**South Pole Qui**	30.94	180	*e*P	**P**	08 38 56.7	+1.1
	3.9nm,0.6s,mb4.4						
TRQA	**Tornquist**	31.44	296	*e*P	**P**	08 39 01.0	+0.6
	3.5nm,0.7s,mb4.3						
PLCA	**Paso Flores**	33.48	283	P	**P**	08 39 17.8	-0.4
	1.2nm,0.6s,mb4.0,

*IDC **06** 08:41:17.7±2.3, 37.°52N×22.°31E, h49km±30km, mb3.6/7, mb1 3.8/11, mb1mx3.5/29, mbtmp3.7/11, ML4.2/4, Error ellipse: s-maj=25.8km s-min=20.8km az=69.0*
*PDG **06** 08:41:18.8±0.6, 37.°49N×22.°10E, h79km±3km, ML4.1/10, Error ellipse: s-maj=1.0km s-min=1.5km az=0.0*
*CSEM **06** 08:41:18.9±0.1, 37.°46N×22.°07E, h75km±2km, ML4.4/14, Error ellipse: s-maj=3.5km s-min=2.5km az=45.0*
*ATH **06** 08:41:18.4, 37.°45N×22.°15E, h71km±2km, ML3.8*
*NEIC **06** 08:41:18.4, 37.°45N×22.°15E, h71km, MG3.8(ATH), After ATH.*
*THE **06** 08:41:18.9, 37.°43N×22.°21E, h72km±1km, ML4.4/14, Error ellipse: s-maj=1.9km s-min=1.0km az=211.0*
*SGS **06** 08:41:21.4, 37.°55N×22.°23E, h72km*
*SKO **06** 08:41:30.8, 38.°56N×21.°96E, h0km*
ISC 06 08:41:18.7±0.2, 37.°44N±0.°02×22.°08E±0.°02, h77km±3km, n274, σ1°15/358, mb3.5/8, 13C-10D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLX	**Vlachokerasia**	**0.25**	**106**	P	**Pn**	**08 41 30.2**	**-0.1**
VLX				S	**Sn**	**08 41 37.8**	**-1.1**
VLX	**Vlachokerasia**	**0.25**	**106**	*eP*	**Pn**	**08 41 30.1**	**-0.2**
VLX				*eS*	**Sn**	**08 41 37.7**	**-1.2**
VLX	**Vlachokerasia**	**0.25**	**106**	*eP*	**Pn**	**08 41 30.1**	**-0.2**
VLX				S	**Sn**	**08 41 37.8**	**-1.1**
ITM	**Ithomi**	**0.28**	**205**	*eP*	**Pn**	**08 41 30.4**	**-0.1**
ITM				*eS*	**Sn**	**08 41 38.6**	**-0.6**
ITM	**Ithomi**	**0.28**	**205**	P	**Pn**	**08 41 30.4**	**-0.1**
ITM				S	**Sn**	**08 41 38.7**	**-0.5**
ITM	**Ithomi**	**0.28**	**205**	*eP*	**Pn**	**08 41 30.4**	**-0.1**
ITM				*eS*	**Sn**	**08 41 38.6**	**-0.6**
ITM	**Ithomi**	**0.28**	**205**	P	**Pn**	**08 41 30.4**	**-0.1**
ITM				S	**Sn**	**08 41 38.7**	**-0.5**
GUR	**Goura**	**0.54**	**23**	P	**Pn**	**08 41 32.5**	**0.0**
GUR				S	**Sn**	**08 41 42.0**	**-0.7**
GUR	**Goura**	**0.54**	**23**	*eP*	**Pn**	**08 41 32.5**	**0.0**
GUR				*eS*	**Sn**	**08 41 41.3**	**-1.4**
GUR	**Goura**	**0.54**	**23**	P	**Pn**	**08 41 32.5**	**0.0**
GUR				*eS*	**Sn**	**08 41 41.3**	**-1.4**
PYL	**PYLOS**	**0.60**	**207**	P	**Pn**	**08 41 33.4**	**+0.3**
PYL				S	**Sn**	**08 41 43.8**	**+0.1**
PYL	**PYLOS**	**0.60**	**207**	*eP*	**Pn**	**08 41 33.4**	**+0.3**
PYL				*eS*	**Sn**	**08 41 44.1**	**+0.4**
PYL	**PYLOS**	**0.60**	**207**	P	**Pn**	**08 41 33.4**	**+0.3**
PYL				*eS*	**Sn**	**08 41 44.1**	**+0.4**
RLS	**Riolos of Patr**	**0.79**	**322**	*eP*	**Pn**	**08 41 35.7**	**+0.7**
RLS	**Riolos of Patr**	**0.79**	**322**	*eP*	**Pn**	**08 41 35.7**	**+0.7**
RLS	**Riolos of Patr**	**0.79**	**322**	*eP*	**Pn**	**08 41 35.7**	**+0.7**
LAKA	**Lakka**	**0.81**	**354**	P	**Pn**	**08 41 36.1**	**+0.8**
LAKA				S	**Sn**	**08 41 48.0**	**+0.4**
LAKA	**Lakka**	**0.81**	**354**	P	**Pn**	**08 41 36.1**	**+0.8**
LAKA				S	**Sn**	**08 41 48.0**	**+0.4**
UPR	**University Cam**	**0.88**	**345**	P	**Pn**	**08 41 37.5**	**+1.4**
UPR				S	**Sn**	**08 41 51.2**	**+2.2**
UPR	**University Cam**	**0.88**	**345**	*eP*	**Pn**	**08 41 37.8**	**+1.7**
UPR				*eS*	**Sn**	**08 41 49.4**	**+0.4**
UPR	**University Cam**	**0.88**	**345**	P	**Pn**	**08 41 37.5**	**+1.4**
UPR				*eS*	**Sn**	**08 41 49.4**	**+0.4**
LTK	**Loutraki**	**0.92**	**50**	P	**Pn**	**08 41 36.0**	**-0.5**
LTK				S	**Sn**	**08 41 47.9**	**-1.9**
LTK	**Loutraki**	**0.92**	**50**	*eP*	**Pn**	**08 41 35.8**	**-0.7**
LTK				*eS*	**Sn**	**08 41 48.0**	**-1.8**
LTK	**Loutraki**	**0.92**	**50**	P	**Pn**	**08 41 36.0**	**-0.5**
LTK				*eS*	**Sn**	**08 41 48.0**	**-1.8**
KALE	**Kalithea**	**0.95**	**3**	P	**Pn**	**08 41 37.5**	**+0.5**
KALE				S	**Sn**	**08 41 50.8**	**+0.2**
KALE	**Kalithea**	**0.95**	**3**	P	**Pn**	**08 41 37.5**	**+0.5**
KALE				S	**Sn**	**08 41 50.8**	**+0.2**
VLI	**Veliai**	**0.99**	**136**	*eP*	**Pn**	**08 41 38.4**	**+1.0**
VLI	**Veliai**	**0.99**	**136**	*eP*	**Pn**	**08 41 38.4**	**+1.0**
VLI	**Veliai**	**0.99**	**136**	*eP*	**Pn**	**08 41 38.4**	**+1.0**
EFP	**Efpalio**	**1.00**	**352**	P	**Pn**	**08 41 38.4**	**+0.9**
EFP				S	**Sn**	**08 41 53.0**	**+1.5**
EFP	**Efpalio**	**1.00**	**352**	*eP*	**Pn**	**08 41 38.4**	**+0.9**
EFP	**Efpalio**	**1.00**	**352**	P	**Pn**	**08 41 38.4**	**+0.9**
EFP				S	**Sn**	**08 41 53.0**	**+1.5**
DSF	**Desfina**	**1.03**	**20**	P	**Pn**	**08 41 37.5**	**-0.5**
DSF				S	**Sn**	**08 41 51.6**	**-0.7**
DSF	**Desfina**	**1.03**	**20**	P	**Pn**	**08 41 37.5**	**-0.5**
DSF				S	**Sn**	**08 41 51.6**	**-0.7**
NAIG	**Nisos Aigina**	**1.17**	**74**	*eP*	**Pn**	**08 41 38.9**	**-0.5**
NAIG	**Nisos Aigina**	**1.17**	**74**	*eP*	**Pn**	**08 41 39.0**	**-0.5**
NAIG	**Nisos Aigina**	**1.17**	**74**	*eP*	**Pn**	**08 41 39.0**	**-0.5**
KFL	**Anninata**	**1.22**	**304**	P	**Pn**	**08 41 41.4**	**+1.1**
KFL				S	**Sn**	**08 41 59.9**	**+3.4**
KYTH	**Kithira**	**1.39**	**146**	*eP*	**Pn**	**08 41 44.0**	**+1.6**
KYTH	**Kithira**	**1.39**	**146**	*eP*	**Pn**	**08 41 44.0**	**+1.6**
KYTH	**Kithira**	**1.39**	**146**	*eP*	**Pn**	**08 41 44.0**	**+1.6**
VLS	**Valsamata**	**1.39**	**303**	*eP*	**Pn**	**08 41 42.9**	**+0.5**
VLS	**Valsamata**	**1.39**	**303**	P	**Pn**	**08 41 42.8**	**+0.4**
VLS				S	**Sn**	**08 42 02.1**	**+1.8**
VLS	**Valsamata**	**1.39**	**303**	*eP*	**Pn**	**08 41 42.9**	**+0.5**
VLS	**Valsamata**	**1.39**	**303**	P	**Pn**	**08 41 42.8**	**+0.4**
VLS				S	**Sn**	**08 42 02.1**	**+1.8**
ATH	**Athens Observa**	**1.40**	**67**	*eP*	**Pn**	**08 41 41.9**	**-0.7**
ATH	**Athens Observa**	**1.40**	**67**	*eP*	**Pn**	**08 41 41.9**	**-0.7**
ATH	**Athens Observa**	**1.40**	**67**	*eP*	**Pn**	**08 41 41.9**	**-0.7**
LKR	**Lokris**	**1.41**	**31**	*eP*	**Pn**	**08 41 42.2**	**-0.5**
LKR	**Lokris**	**1.41**	**31**	P	**Pn**	**08 41 42.2**	**-0.5**
LKR				S	**Sn**	**08 41 59.8**	**-1.0**
LKR	**Lokris**	**1.41**	**31**	*eP*	**Pn**	**08 41 42.2**	**-0.5**
LKR	**Lokris**	**1.41**	**31**	P	**Pn**	**08 41 42.2**	**-0.5**
LKR				S	**Sn**	**08 41 59.8**	**-1.0**
VLY	**Voula,Athens**	**1.42**	**73**	*eP*	**Pn**	**08 41 42.4**	**-0.4**
VLY	**Voula,Athens**	**1.42**	**73**	*eP*	**Pn**	**08 41 42.4**	**-0.4**
VLY	**Voula,Athens**	**1.42**	**73**	*eP*	**Pn**	**08 41 42.4**	**-0.4**
ATHU	**Athens Univers**	**1.45**	**68**	P	**Pn**	**08 41 42.8**	**-0.4**
ATHU				S	**Sn**	**08 41 59.9**	**-1.8**
ATHU	**Athens Univers**	**1.45**	**68**	P	**Pn**	**08 41 42.8**	**-0.4**
ATHU				S	**Sn**	**08 41 59.9**	**-1.8**
ATAL	**Atalanti**	**1.46**	**30**	P	**Pn**	**08 41 43.0**	**-0.3**
ATAL				S	**Sn**	**08 42 00.7**	**-1.2**
ATAL	**Atalanti**	**1.46**	**30**	P	**Pn**	**08 41 43.0**	**-0.3**
ATAL				S	**Sn**	**08 42 00.7**	**-1.2**
EVR	**Evrytania**	**1.49**	**352**	*eP*	**Pn**	**08 41 45.4**	**+1.6**
EVR	**Evrytania**	**1.49**	**352**	*eP*	**Pn**	**08 41 45.4**	**+1.6**
EVR	**Evrytania**	**1.49**	**352**	*eP*	**Pn**	**08 41 45.4**	**+1.6**
PTL	**Penteli**	**1.54**	**66**	*eP*	**Pn**	**08 41 44.1**	**-0.3**
PTL	**Penteli**	**1.54**	**66**	*eP*	**Pn**	**08 41 44.1**	**-0.3**
PTL	**Penteli**	**1.54**	**66**	*eP*	**Pn**	**08 41 44.1**	**-0.3**
AGG	**Agios Georgios**	**1.59**	**7**	*eP*	**Pn**	**08 41 45.5**	**+0.4**
AGG	**Agios Georgios**	**1.59**	**7**	P	**Pn**	**08 41 45.6**	**+0.5**
AGG				S	**Sn**	**08 42 05.8**	**+0.7**
AGG	**Agios Georgios**	**1.59**	**7**	*eP*	**Pn**	**08 41 45.5**	**+0.4**
AGG	**Agios Georgios**	**1.59**	**7**	*eP*	**Pn**	**08 41 45.5**	**+0.4**
AGG				S	**Sn**	**08 42 05.8**	**+0.7**
LKD2	**Lefkada island**	**1.75**	**321**	P	**Pn**	**08 41 49.0**	**+1.8**
LKD2	**Lefkada island**	**1.75**	**321**	P	**Pn**	**08 41 49.0**	**+1.8**
NEO	**Neokhori**	**2.07**	**25**	*eP*	**Pn**	**08 41 51.5**	**+0.1**
NEO	**Neokhori**	**2.07**	**25**	*eP*	**Pn**	**08 41 51.5**	**+0.1**
NEO	**Neokhori**	**2.07**	**25**	*eP*	**Pn**	**08 41 51.5**	**+0.1**
XOR	**Xorichti**	**2.12**	**24**	P	**Pn**	**08 41 51.9**	**-0.1**
XOR				S	**Sn**	**08 42 18.2**	**+0.8**
XOR	**Xorichti**	**2.12**	**24**	P	**Pn**	**08 41 51.9**	**-0.1**
XOR				S	**Sn**	**08 42 18.2**	**+0.8**
THL	**Klokotos Trika**	**2.12**	**359**	P	**Pn**	**08 41 53.2**	**+1.1**
THL				S	**Sn**	**08 42 19.1**	**+1.5**
THL	**Klokotos Trika**	**2.12**	**359**	*eP*	**Pn**	**08 41 52.7**	**+0.6**
THL	**Klokotos Trika**	**2.12**	**359**	*eP*	**Pn**	**08 41 52.7**	**+0.6**
THL				S	**Sn**	**08 42 19.1**	**+1.5**
AOS	**Alonnisos**	**2.24**	**39**	P	**Pn**	**08 41 53.2**	**-0.4**
AOS	**Alonnisos**	**2.24**	**39**	P	**Pn**	**08 41 53.2**	**-0.4**
JAN	**Janina**	**2.42**	**337**	*eP*	**Pn**	**08 41 57.8**	**+1.8**
JAN	**Janina**	**2.42**	**337**	*eP*	**Pn**	**08 41 57.8**	**+1.8**
JAN	**Janina**	**2.42**	**337**	*eP*	**Pn**	**08 41 57.8**	**+1.8**
MEV	**Metsovon**	**2.44**	**344**	P	**Pn**	**08 41 58.1**	**+1.8**
MEV	**Metsovon**	**2.44**	**344**	P	**Pn**	**08 41 58.1**	**+1.8**
IGT	**Igoumenitsa**	**2.50**	**327**	P	**Pn**	**08 41 57.4**	**+0.2**
IGT	**Igoumenitsa**	**2.50**	**327**	P	**Pn**	**08 41 57.4**	**+0.2**
KARN	**Karanos**	**2.52**	**143**	*eP*	**Pn**	**08 41 58.9**	**+1.5**
KARN	**Karanos**	**2.52**	**143**	*eP*	**Pn**	**08 41 58.9**	**+1.5**
VAM	**Vamos**	**2.65**	**139**	*eP*	**Pn**	**08 42 00.0**	**+0.8**
VAM	**Vamos**	**2.65**	**139**	*eP*	**Pn**	**08 42 00.0**	**+0.8**
VAM	**Vamos**	**2.65**	**139**	*eP*	**Pn**	**08 42 00.0**	**+0.8**
LIT	**Litokhoron**	**2.68**	**7**	*eP*	**Pn**	**08 41 59.9**	**+0.3**
LIT	**Litokhoron**	**2.68**	**7**	P	**Pn**	**08 41 59.8**	**+0.2**
LIT				S	**Sn**	**08 42 32.6**	**+1.6**
LIT	**Litokhoron**	**2.68**	**7**	*eP*	**Pn**	**08 41 59.9**	**+0.3**
LIT	**Litokhoron**	**2.68**	**7**	P	**Pn**	**08 41 59.8**	**+0.2**
LIT				S	**Sn**	**08 42 32.6**	**+1.6**
APE	**Apeiranthos**	**2.78**	**97**	*eP*	**Pn**	**08 41 59.5**	**-1.4**
APE	**Apeiranthos**	**2.78**	**97**	P	**Pn**	**08 41 59.5**	**-1.4**
APE	**Apeiranthos**	**2.78**	**97**	*eP*	**Pn**	**08 42 00.9**	**0.0**
APE	**Apeiranthos**	**2.78**	**97**	*eP*	**Pn**	**08 42 00.9**	**0.0**
PAIG	**Paliouri**	**2.78**	**26**	P	**Pn**	**08 42 00.7**	**-0.3**
PAIG	**Paliouri**	**2.78**	**26**	P	**Pn**	**08 42 00.7**	**-0.3**
KZN	**Kozani**	**2.88**	**355**	*eP*	**Pn**	**08 42 03.8**	**+1.6**
KZN	**Kozani**	**2.88**	**355**	P	**Pn**	**08 42 04.1**	**+1.9**
KZN	**Kozani**	**2.88**	**355**	*eP*	**Pn**	**08 42 03.8**	**+1.6**
KZN	**Kozani**	**2.88**	**355**	*eP*	**Pn**	**08 42 03.8**	**+1.6**
KEK	**Kerkira**	**2.89**	**323**	*eP*	**Pn**	**08 42 02.9**	**+0.5**
KEK	**Kerkira**	**2.89**	**323**	P	**Pn**	**08 42 02.8**	**+0.4**
KEK	**Kerkira**	**2.89**	**323**	*eP*	**Pn**	**08 42 02.9**	**+0.5**
KEK	**Kerkira**	**2.89**	**323**	P	**Pn**	**08 42 02.8**	**+0.4**
SRN	**Sarande**	**2.93**	**327**	*i* PN	**Pn**	**08 42 03.7**	**+0.7**
SRN				*i* SN	**Sn**	**08 42 31.6**	**-5.5**
SRN	**Sarande**	**2.93**	**327**	*i* Pn	**Pn**	**08 42 03.7**	**+0.7**
GVD	**Gavdhos**	**3.06**	**147**	*eP*	**Pn**	**08 42 05.3**	**+0.5**
GVD	**Gavdhos**	**3.06**	**147**	P	**Pn**	**08 42 05.5**	**+0.7**
GVD	**Gavdhos**	**3.06**	**147**	*eP*	**Pn**	**08 42 05.3**	**+0.5**
GVD	**Gavdhos**	**3.06**	**147**	*eP*	**Pn**	**08 42 05.3**	**+0.5**
PLG	**Polygyros**	**3.12**	**20**	*eP*	**Pn**	**08 42 05.4**	**-0.2**
PLG	**Polygyros**	**3.12**	**20**	P	**Pn**	**08 42 05.6**	**0.0**
PLG	**Polygyros**	**3.12**	**20**	*eP*	**Pn**	**08 42 05.4**	**-0.2**
PLG	**Polygyros**	**3.12**	**20**	*eP*	**Pn**	**08 42 05.4**	**-0.2**
IDI	**Anoyia**	**3.12**	**133**	P	**Pn**	**08 42 05.4**	**-0.2**
IDI	24nm,0.3s,baz=318,slow=16,SNR=76			S	**Sn**	**08 42 38.9**	**-2.9**
	6.7nm,0.3s,baz=307,slow=19,SNR=2.9						
IDI	**Anoyia**	**3.12**	**133**	*eP*	**Pn**	**08 42 05.3**	**-0.3**
IDI	**Anoyia**	**3.12**	**133**	*eP*	**Pn**	**08 42 05.3**	**-0.3**
OUR	**Ouranopolis**	**3.25**	**27**	P	**Pn**	**08 42 06.9**	**-0.4**
OUR	**Ouranopolis**	**3.25**	**27**	P	**Pn**	**08 42 06.9**	**-0.4**
THE	**Thessaloniki**	**3.26**	**12**	P	**Pn**	**08 42 07.4**	**-0.1**
THE				S	**Sn**	**08 42 46.9**	**+1.7**
THE	**Thessaloniki**	**3.26**	**12**	P	**Pn**	**08 42 07.4**	**-0.1**
THE				S	**Sn**	**08 42 46.9**	**+1.7**
CHOS	**Chios island**	**3.28**	**72**	P	**Pn**	**08 42 08.2**	**+0.4**
CHOS	**Chios island**	**3.28**	**72**	*eP*	**Pn**	**08 42 08.3**	**+0.5**
CHOS	**Chios island**	**3.28**	**72**	P	**Pn**	**08 42 08.2**	**+0.4**
KBN	**Korca**	**3.34**	**343**	*i* PN	Px	08 42 19.5	
KBN				*i* SN	**Sn**	**08 42 56.2**	**+9.2**
FNA	**Florina**	**3.39**	**351**	P	**Pn**	**08 42 10.1**	**+0.9**
FNA				S	**Sn**	**08 42 49.8**	**+1.6**
FNA	**Florina**	**3.39**	**351**	P	**Pn**	**08 42 10.1**	**+0.9**
FNA				S	**Sn**	**08 42 49.8**	**+1.6**
LIA	**Limnos Island**	**3.46**	**44**	*eP*	**Pn**	**08 42 09.7**	**-0.4**
LIA	**Limnos Island**	**3.46**	**44**	P	**Pn**	**08 42 09.8**	**-0.3**
LIA	**Limnos Island**	**3.46**	**44**	*eP*	**Pn**	**08 42 09.7**	**-0.4**
LIA	**Limnos Island**	**3.46**	**44**	P	**Pn**	**08 42 09.8**	**-0.3**
SOH	**Sokhos**	**3.52**	**16**	P	**Pn**	**08 42 12.0**	**+1.0**
SOH				S	**Sn**	**08 42 52.6**	**+1.1**
SOH	**Sokhos**	**3.52**	**16**	P	**Pn**	**08 42 12.0**	**+1.0**
SOH				S	**Sn**	**08 42 52.6**	**+1.1**
LAST	**Lasithi**	**3.56**	**129**	*eP*	**Pn**	**08 42 12.4**	**+0.8**
LAST	**Lasithi**	**3.56**	**129**	*eP*	**Pn**	**08 42 12.4**	**+0.8**
LAST	**Lasithi**	**3.56**	**129**	*eP*	**Pn**	**08 42 12.4**	**+0.8**
NPS	**Neapolis**	**3.58**	**126**	P	**Pn**	**08 42 13.0**	**+1.1**
NPS	**Neapolis**	**3.58**	**126**	P	**Pn**	**08 42 13.0**	**+1.1**
BIA	**Bitola**	**3.62**	**351**	*ePn*	**Pn**	**08 42 13.0**	**+0.6**
SMG	**Samos**	**3.79**	**84**	P	**Pn**	**08 42 15.8**	**+1.1**
SMG	**Samos**	**3.79**	**84**	P	**Pn**	**08 42 15.8**	**+1.1**
OHR	**Ohrid**	**3.80**	**345**	*ePn*	**Pn**	**08 42 15.0**	**+0.2**
SRS	**Serrai**	**3.86**	**17**	P	**Pn**	**08 42 16.3**	**+0.7**
SRS	**Serrai**	**3.86**	**17**	P	**Pn**	**08 42 16.3**	**+0.7**
XRY	**Khrisi**	**3.88**	**130**	*eP*	**Pn**	**08 42 17.4**	**+1.4**
XRY	**Khrisi**	**3.88**	**130**	*eP*	**Pn**	**08 42 17.4**	**+1.4**
XRY	**Khrisi**	**3.88**	**130**	*eP*	**Pn**	**08 42 17.4**	**+1.4**
VAY	**Valandovo**	**3.90**	**5**	*ePn*	**Pn**	**08 42 16.8**	**+0.7**
KRUS	**Krusevo**	**3.98**	**351**	*ePn*	**Pn**	**08 42 17.3**	**+0.1**
KRUS				*eSg*	**Sn**	**08 43 01.4**	**-1.2**
KAVA	**Kavala**	**4.03**	**27**	P	**Pn**	**08 42 17.6**	**-0.3**
KAVA	**Kavala**	**4.03**	**27**	P	**Pn**	**08 42 17.6**	**-0.3**
ZKR	**Zakros**	**4.07**	**123**	*eP*	**Pn**	**08 42 19.5**	**+1.0**
ZKR	**Zakros**	**4.07**	**123**	*eP*	**Pn**	**08 42 19.5**	**+1.0**
ZKR	**Zakros**	**4.07**	**123**	*eP*	**Pn**	**08 42 19.5**	**+1.0**
NVR	**Nevrokopi**	**4.14**	**19**	P	**Pn**	**08 42 24.8**	**+5.3**
STIP	**Stip**	**4.25**	**1**	*ePn*	**Pn**	**08 42 23.2**	**+2.2**
TIR	**Tirane**	**4.26**	**337**	*ePn*	**Pn**	**08 42 21.2**	**+0.1**
TIR	**Tirane**	**4.26**	**337**	*ePn*	**Pn**	**08 42 21.2**	**+0.1**
KARP	**Karpathos**	**4.51**	**113**	*eP*	**Pn**	**08 42 25.4**	**+0.9**
KARP	**Karpathos**	**4.51**	**113**	*eP*	**Pn**	**08 42 25.4**	**+0.9**
KARP	**Karpathos**	**4.51**	**113**	*eP*	**Pn**	**08 42 25.4**	**+0.9**
TIP	**Timpagrande**	**4.53**	**294**	*ePn*	**Pn**	**08 42 25.7**	**+0.9**
TIP				*eSn*	**Sn**	**08 43 13.1**	**-3.1**
TIP	**Timpagrande**	**4.53**	**294**	*ePn*	**Pn**	**08 42 25.7**	**+0.9**
TIP				*eSn*	**Sn**	**08 43 13.1**	**-3.0**
ALN	**Alexandroupoli**	**4.63**	**41**	*eP*	**Pn**	**08 42 25.6**	**-0.5**
ALN	**Alexandroupoli**	**4.63**	**41**	P	**Pn**	**08 42 25.6**	**-0.5**
ALN	**Alexandroupoli**	**4.63**	**41**	P	**Pn**	**08 42 25.6**	**-0.5**
PUK	**Puka**	**4.90**	**341**	*i* PN	**Pn**	**08 42 30.1**	**+0.4**
PUK				*i* SN	**Sn**	**08 43 18.4**	**-6.7**
PUK	**Puka**	**4.90**	**341**	*i* Pn	**Pn**	**08 42 30.1**	**+0.4**
CEL	**Celeste**	**4.96**	**281**	*ePn*	**Pn**	**08 42 31.2**	**+0.6**
CEL	**Celeste**	**4.96**	**281**	*ePn*	**Pn**	**08 42 31.2**	**+0.5**
ULC	**Ulcinj**	**5.02**	**335**	⇑*iPn*	**Pn**	**08 42 31.2**	**-0.2**
ULC				*eSn*	**Sn**	**08 43 26.6**	**-1.4**
ULC	**Ulcinj**	**5.02**	**335**	⇑*iPn*	**Pn**	**08 42 31.2**	**-0.2**
ULC				*eSn*	**Sn**	**08 43 26.6**	**-1.4**
ORI	**Oriolo Calabro**	**5.12**	**303**	Pn	**Pn**	**08 42 33.5**	**+0.7**
	279nm,0.3s						
ORI	**Oriolo Calabro**	**5.12**	**303**	Pn	**Pn**	**08 42 33.5**	**+0.7**
	279nm,0.3s						
BCI	**Bajram Curri**	**5.16**	**343**	*ePN*	**Pn**	**08 42 34.5**	**+1.2**
BCI	**Bajram Curri**	**5.16**	**343**	*ePn*	**Pn**	**08 42 34.5**	**+1.2**
LTRZ	**Laterza**	**5.17**	**309**	Pn	**Pn**	**08 42 33.3**	**-0.2**
	109nm,0.3s						
LTRZ	**Laterza**	**5.17**	**309**	Pn	**Pn**	**08 42 33.3**	**-0.2**
	109nm,0.3s						
BARS	**Barje**	**5.38**	**358**	⇑*iPn*	**Pn**	**08 42 36.8**	**+0.5**
PVY	**Plav**	**5.40**	**343**	*ePn*	**Pn**	**08 42 37.9**	**+1.3**
PVY				*eSn*	**Sn**	**08 43 36.4**	**-0.9**
PVY	**Plav**	**5.40**	**343**	*ePn*	**Pn**	**08 42 37.9**	**+1.3**
PVY				*eSn*	**Sn**	**08 43 36.4**	**-0.9**
SG1	**Sgolgore (BA)**	**5.40**	**311**	*i* Pn	**Pn**	**08 42 36.5**	**-0.1**
PDG	**Podgorica**	**5.44**	**337**	⇓*iPn*	**Pn**	**08 42 37.6**	**+0.5**
PDG				*eSn*	**Sn**	**08 43 36.7**	**-1.5**
TTG	**Podgorica**	**5.44**	**337**	⇓*iPn*	**Pn**	**08 42 37.6**	**+0.5**
TTG				*eSn*	**Sn**	**08 43 36.7**	**-1.5**
TTG	**Podgorica**	**5.44**	**337**	⇓*iPn*	**Pn**	**08 42 37.6**	**+0.5**
TTG				*eSn*	**Sn**	**08 43 36.7**	**-1.5**
BUM	**Brajici-Budva**	**5.44**	**334**	⇑*iPn*	**Pn**	**08 42 36.0**	**-1.1**
BUM				*eSn*	**Sn**	**08 43 36.4**	**-1.9**
BUM	**Brajici-Budva**	**5.44**	**334**	⇑*iPn*	**Pn**	**08 42 36.0**	**-1.1**
BUM				*eSn*	**Sn**	**08 43 36.4**	**-1.9**
BAI	**Bari**	**5.45**	**314**	*ePn*	**Pn**	**08 42 37.0**	**-0.3**
HAVL	**Avola**	**5.57**	**267**	Pn	**Pn**	**08 42 38.2**	**-0.8**
	274nm,0.2s						
HAVL	**Avola**	**5.57**	**267**	Pn	**Pn**	**08 42 38.2**	**-0.8**
	274nm,0.2s						
BEY	**Berane**	**5.68**	**344**	⇓*iPn*	**Pn**	**08 42 40.9**	**+0.5**
BEY				*eSn*	**Sn**	**08 43 43.6**	**-0.6**
IVA	**Berane**	**5.68**	**344**	⇓*iPn*	**Pn**	**08 42 40.9**	**+0.5**
IVA				*eSn*	**Sn**	**08 43 43.6**	**-0.6**
IVA	**Berane**	**5.68**	**344**	⇓*iPn*	**Pn**	**08 42 40.9**	**+0.5**
IVA				*eSn*	**Sn**	**08 43 43.6**	**-0.6**
HCY	**Herceg Novi**	**5.71**	**332**	⇓*iPn*	**Pn**	**08 42 40.5**	**-0.3**
HCY				*eSn*	**Sn**	**08 43 43.2**	**-1.7**
HCY	**Herceg Novi**	**5.71**	**332**	⇓*iPn*	**Pn**	**08 42 40.5**	**-0.3**
HCY				*eSn*	**Sn**	**08 43 43.2**	**-1.7**
NKY	**Niksic**	**5.87**	**337**	⇑*iPn*	**Pn**	**08 42 42.9**	**0.0**
NKY				*eSn*	**Sn**	**08 43 47.5**	**-1.2**
NKY	**Niksic**	**5.87**	**337**	⇑*iPn*	**Pn**	**08 42 42.9**	**0.0**
NKY				*eSn*	**Sn**	**08 43 47.5**	**-1.2**
HVZN	**Vizzini**	**5.88**	**270**	Pn	**Pn**	**08 42 42.4**	**-0.7**
	68nm,0.4s						
HVZN	**Vizzini**	**5.88**	**270**	Pn	**Pn**	**08 42 42.4**	**-0.7**
	68nm,0.4s						
BRY	**Bratogost**	**6.09**	**335**	⇑*iPn*	**Pn**	**08 42 44.9**	**-1.1**
BRY				*eSn*	**Sn**	**08 43 51.9**	**-2.3**
BRY	**Bratogost**	**6.09**	**335**	⇑*iPn*	**Pn**	**08 42 44.9**	**-1.1**
VAE	**Valguarnera**	**6.10**	**273**	S	**Sn**	**08 43 53.6**	**-0.9**
	baz=81,slow=14,SNR=3.8						
RAFF	**Raffo Rosso**	**6.15**	**270**	Pn	**Pn**	**08 42 46.4**	**-0.5**
RAFF	**Raffo Rosso**	**6.15**	**270**	Pn	**Pn**	**08 42 46.4**	**-0.5**
PLE	**Pljevlja**	**6.23**	**342**	⇑*iPn*	**Pn**	**08 42 48.1**	**+0.2**
PLE				*eSn*	**Sn**	**08 43 54.8**	**-2.9**
PLE	**Pljevlja**	**6.23**	**342**	⇑*iPn*	**Pn**	**08 42 48.1**	**+0.2**
UPM	**Unac-Piva**	**6.25**	**338**	⇓*iPn*	**Pn**	**08 42 48.6**	**+0.5**
UPM				*eSn*	**Sn**	**08 43 56.1**	**-1.9**
UPM	**Unac-Piva**	**6.25**	**338**	⇓*iPn*	**Pn**	**08 42 48.6**	**+0.5**
UPM				*eSn*	**Sn**	**08 43 56.1**	**-1.9**
MS1	**Monte Sant'Ang**	**6.37**	**314**	*ePn*	**Pn**	**08 42 49.4**	**-0.5**
SLUM		**6.47**	**156**	P	**Pn**	**08 42 50.7**	**-0.5**
	baz=157						
SLUM				AMP		08 43 00.0	
	comp=E,340μm,0.3s,logA/T=6.0,baz=157						
SLUM		**6.47**	**156**	P	**Pn**	**08 42 50.7**	**-0.6**
RGNG	**Rignano Grg**	**6.56**	**312**	Pn	**Pn**	**08 42 52.0**	**-0.4**
RGNG	**Rignano Grg**	**6.56**	**312**	Pn	**Pn**	**08 42 52.0**	**-0.4**
BBLS	**Lazići**	**6.74**	**343**	⇑*iPn*	**Pn**	**08 42 54.1**	**-0.7**
DIVS	**Divibare**	**6.84**	**347**	⇑*iPn*	**Pn**	**08 42 55.2**	**-1.0**
CIGN	**Sant'Elia a Pi**	**6.96**	**309**	Pn	**Pn**	**08 42 58.5**	**+0.6**
	comp=E,51nm,0.8s						
CIGN	**Sant'Elia a Pi**	**6.96**	**309**	Pn	**Pn**	**08 42 58.5**	**+0.6**
	comp=E,51nm,0.8s						
SGG	**Gregorio Mates**	**7.15**	**306**	Pn	**Pn**	**08 43 01.8**	**+1.4**
	comp=E,24nm,0.4s						
SGG	**Gregorio

MJAR Matsushiro Arr 14.51 342 P **Pn** **08 52 29.0 +1.9**
0.6nm,0.3s,baz=160,slow=12,SNR=4.7
KSRS Korea Array 19.93 321 P **Pn** **08 53 35.0 +0.6**
1.5nm,0.7s,baz=163,slow=13,SNR=4.4
KSRS LR LR 09 00 38.0
comp=Z,21nm,18.5s,baz=145,slow=35
CMAR Chiang Mai Arr 41.92 273 LR LR 09 16 47.0
comp=Z,12nm,18.3s,baz=90,slow=40
WRAB Tennant Creek 43.38 193 *e*P **P** **08 57 03.2 +0.6**
7.5nm,1.3s,mb4.3
WRA Warramunga Arr 43.39 193 P **P** **08 57 02.0 -0.7**
0.3nm,0.4s,mb3.4,baz=8.0,slow=8.7,SNR=5.9
ASAR Alice Springs 47.10 192 P **P** **08 57 31.2 -0.8**
0.3nm,0.6s,mb3.4,baz=16,slow=9.4,SNR=5.7
MKAR Makanchi Array 54.28 312 P **P** **08 58 27.0 +1.0**
0.3nm,0.6s,mb3.4,baz=91,slow=10.0,SNR=2.9
MKAR Makanchi Array 54.28 312 P **P** **08 58 27.0 +1.0**
KURK Kurchatov 56.98 317 P **P** **08 58 44.4 -0.9**
0.4nm,0.4s,mb3.8,baz=91,slow=7.8,SNR=3.0
BVAR Borovoye Array 62.13 319 P **P** **08 59 20.6 -0.1**
0.6nm,0.5s,mb4.0,baz=64,slow=6.6,SNR=2.9
NVAR Mina Array Bea 82.17 52 P **P** **09 01 21.0 +0.3**
1.2nm,0.6s,mb4.0,baz=278,slow=5.1,SNR=11
NVAR Mina Array Bea 82.17 52 P **P** **09 01 21.0 +0.2**
PDAR Pinedale Array 86.36 45 P **P** **09 01 41.7 -0.2**
0.2nm,0.5s,mb3.6,baz=246,slow=4.4,SNR=3.4
PLCA Paso Flores 146.14 130 PKPbc PKPbc 09 08 38.4 -1.4
1.0nm,0.6s,baz=220,slow=11,SNR=5.3
LPAZ La Paz 149.44 84 PKPbc PKPbc 09 08 49.9 +0.6
1.4nm,0.5s,baz=11,slow=2.3,SNR=12
LPAZ La Paz 149.44 84 PKPbc PKPbc 09 08 49.9 +0.6

NEIC 06 08:56:11.6, 36.10S×179.93E, h33km, ML4.0(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.96**	**221**	P	Pn	08 56 42.2	-0.3
MXZ				S	Sn	08 57 03.7	-2.2
PUZ	**Puketiti**	**2.38**	**214**	P	Pn	08 56 48.3	0.0
PUZ				S	Sn	08 57 16.3	0.0
MWZ	**Matawai**	**2.94**	**220**	P	Pn	08 56 55.6	-0.4
MWZ				S	Sn	08 57 28.3	-1.9
URZ	**Urewera**	**3.12**	**225**	P	Pn	08 56 57.6	-0.8
KNZ	**Kokohu**	**3.42**	**211**	P	Pn	08 57 01.5	-1.1
KUZ	**Kuaotunu**	**3.46**	**258**	P	Pn	08 57 02.6	-0.5
MKAZ	**Moumakai**	**3.96**	**254**	P	Pn	08 57 09.8	-0.2
TSZ	**Takapari Road**	**5.04**	**217**	P	Pn	08 57 21.7	-3.2

NEIC 06 09:02:53.9, 37.82N×122.08W, h8km, MW3.5(BRK), After NCEDC., Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCCM	**Marconi Confer**	**0.72**	**298**	*e*Pg	Pg	09 03 07.7	0.0
MCCM				*e*Sg	Sg	09 03 20.2	+3.2
CMB	**Columbia Colle**	**1.35**	**80**	*e*Pn	Pn	09 03 18.0	-1.0
CMB				*e*Sn	Sn	09 03 36.0	-1.2
HOPS	**Hopland**	**1.41**	**327**	*e*Pn	Pn	09 03 18.4	-1.4
WDC	**Whiskeytown Da**	**2.78**	**353**	*e*Pn	Pn	09 03 37.2	-1.5
ISA	**Isabella**	**3.60**	**126**	*e*Pn	Pn	09 03 51.3	+1.3
ISA				*e*Sn	Sn	09 04 33.3	+0.6
MOD	**Modoc**	**4.30**	**18**	*e*Pn	Pn	09 04 02.6	+3.0
MWC	**Mount Wilson**	**4.84**	**137**	*e*Pn	Pn	09 04 10.5	+3.4

*IDC **06** 09:18:17.2±3.8, 11.18N×86.34W, h0km, mb3.8/2, mb1 4.0/2, mb1mx3.5/19, mbtmp3.8/2, Error ellipse: s-maj=78.2km s-min=62.5km az=170.0*
*ISCJB **06** 09:18:46.9±0.6, 12.34N±0.07×86.98W±0.07, h150km±7km, mb3.6/2, Error ellipse: s-maj=16.2km s-min=3.4km az=43.0*
*CASC **06** 09:18:47.4±2.4, 12.30N×87.03W, h139km±11km, MD3.9, ML2.6*

ISC 06 09:18:47.5±0.6, 12.36N±0.07×86.97W±0.07, h150km±6km, n37, σ0.91/49, mb3.6/2, 1C-1D, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNGN	**Cerro Negro**	**0.30**	**62**	*e*P	**Pn**	**09 19 07.9**	**-0.2**
COPN	**Copaltepe**	**0.41**	**115**	*e*P	**Pn**	**09 19 08.3**	**-0.2**
COPN				*e*S	**Sn**	**09 19 21.5**	**-2.9**
MOMN	**Momotombo**	**0.43**	**83**	*e*P	**Pn**	**09 19 08.7**	**+0.2**
XAVN	**Gruta Xavier**	**0.67**	**108**	*e*P	**Pn**	**09 19 09.7**	**-0.1**
MGAN	**Managua**	**0.74**	**106**	*e*P	**Pn**	**09 19 10.0**	**-0.2**
MGAN				*e*S	**Sn**	**09 19 28.8**	**+1.3**
CRUN	**El Crucero**	**0.76**	**119**	*e*P	**Pn**	**09 19 11.1**	**+0.7**
WILN	**Americas 2**	**0.79**	**104**	*e*P	**Pn**	**09 19 10.3**	**-0.3**
WILN				*e*S	**Sn**	**09 19 29.1**	**+0.9**
APON	**Apoyo**	**0.99**	**116**	*e*P	**Pn**	**09 19 12.2**	**0.0**
CNCH	**Conchagua**	**1.24**	**318**	*e*P	**Pn**	**09 19 14.0**	**-0.5**
CONN	**Concepcion**	**1.54**	**121**	*e*P	**Pn**	**09 19 17.2**	**-0.3**
VSM	**San Miguel**	**1.66**	**310**	*e*P	**Pn**	**09 19 19.1**	**+0.4**
TGUH	**Tegucigalpa,Un**	**1.72**	**350**	*e*P	**Pn**	**09 19 18.8**	**-0.6**
TGUH				*e*S	**Sn**	**09 19 43.6**	**-0.3**
BUEV	**Buena Vista**	**2.18**	**135**	*i* P	**Pn**	**09 19 25.0**	**+0.2**
LAPC	**Finca la Perla**	**2.18**	**136**	*i* P	**Pn**	**09 19 24.5**	**-0.3**
LAPC				*i* S	**Sn**	**09 19 52.2**	**-1.3**
SNVI	**San Vicente**	**2.21**	**305**	*e*P	**Pn**	**09 19 24.9**	**-0.1**
SNVI				*e*S	**Sn**	**09 19 53.1**	**-0.9**
NY14	**Universidad de**	**2.21**	**140**	*i* P	**Pn**	**09 19 26.5**	**+1.5**
NY14				*i* S	**Sn**	**09 19 54.2**	**+0.2**
GPS1	**Guardaparques**	**2.24**	**134**	*i* S	**Sn**	**09 19 54.5**	**-0.1**
GPS3	**Bodega del ICE**	**2.24**	**135**	*i* S	**Sn**	**09 19 54.6**	**-0.1**
LIM1	**Limonal**	**2.36**	**134**	*i* P	**Pn**	**09 19 26.1**	**-0.8**
LFRS	**El Faro**	**2.39**	**302⇑**	*e*P	**Pn**	**09 19 27.6**	**+0.3**
LFRS				*e*S	**Sn**	**09 19 56.8**	**-1.2**
LBRS	**Las Brisas**	**2.44**	**304**	*e*P	**Pn**	**09 19 28.3**	**+0.4**
SNET	**Serv Nac Est T**	**2.57**	**301**	*e*P	**Pn**	**09 19 29.9**	**+0.5**
VCR	**Vista de Mar**	**2.58**	**149**	*e*P	**Pn**	**09 19 30.1**	**+0.5**
VCR				*e*S	**Sn**	**09 19 59.8**	**-2.2**
JTS	**JuntasAbangare**	**2.85**	**136**	*e*P	**Pn**	**09 19 32.5**	**-0.5**
SBLS	**San Blas**	**2.97**	**300**	*e*P	**Pn**	**09 19 35.4**	**+0.9**
RTR	**El Retiro**	**3.02**	**301**	*e*P	**Pn**	**09 19 36.1**	**+1.0**
RTR				*e*S	**Sn**	**09 20 12.2**	**+0.2**
JCR	**Jicaral**	**3.09**	**144**	*e*P	**Pn**	**09 19 36.6**	**+0.6**
JCR				*e*S	**Sn**	**09 20 14.1**	**+0.5**
RBDL	**Robledal**	**3.17**	**304**	*e*P	**Pn**	**09 19 37.6**	**+0.6**
CGA2	**Cerro Gallo 2**	**3.38**	**133**	*e*P	**Pn**	**09 19 40.4**	**+0.6**
CGA2				*e*S	**Sn**	**09 20 19.7**	**-0.6**
LAJ	**Bijagual**	**3.74**	**131**	*e*P	**Pn**	**09 19 39.0**	**-5.3**
URSC	**Urasca**	**4.01**	**128**	*e*P	**Pn**	**09 19 50.2**	**+2.2**
BUS	**Buena Vista**	**4.21**	**131⇓**	*e*P	**Pn**	**09 19 51.8**	**+1.3**
BUS				*e*S	**Sn**	**09 20 39.6**	**+0.1**
BAR1		**4.75**	**130**	*e*P	**Pn**	**09 19 58.2**	**+0.6**
BAR1				*e*S	**Sn**	**09 20 49.7**	**-2.5**
TXAR	**Lajitas Array**	**22.94**	**320**	P	**P**	**09 23 36.2**	**-2.5**
1.0nm,0.7s,mb3.4,baz=138,slow=10,SNR=8.5							
SCHQ	**Schefferville**	**45.24**	**16**	P	**P**	**09 26 43.5**	**-6.0**
1.6nm,0.6s,mb3.8,baz=246,slow=10.0,SNR=4.0							
ASAR	**Alice Springs**	**139.67**	**248**	PKP	PKPdf	09 37 47.5	-11
0.2nm,0.6s,baz=120,slow=3.0,SNR=3.8							
WRA	**Warramunga Arr**	**139.69**	**254**	PKP	PKPdf	09 37 48.0	-10
0.2nm,0.6s,baz=91,slow=3.2,SNR=2.6							

*DDA **06** 09:47:14.6, 40.41N×34.43E, h7km±1km, Md2.9*
*ISK **06** 09:47:14.3, 40.46N×34.47E, h5km, MD2.7*
*CSEM **06** 09:47:14.8±0.2, 40.43N×34.44E, h10km, MD2.7, Error ellipse: s-maj=4.0km s-min=3.6km az=56.0*
*ISCJB **06** 09:47:14.8±0.6, 40.44N±0.03×34.44E±0.04, h10km±6km, Error ellipse: s-maj=6.1km s-min=5.2km az=41.4*

ISC 06 09:47:15.2±0.5, 40.43N±0.03×34.44E±0.04, h11km±7km, n19, σ0.57/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CORM	**Corum**	**0.29**	**150**	*e*Pg	**Pg**	**09 47 20.7**	**-0.3**
CORM				*e*SG	**Sg**	**09 47 25.8**	**+0.8**
CORM	**Corum**	**0.29**	**150**	*e*Pg	**Pg**	**09 47 20.7**	**-0.4**
CORM				*e*Sg	**Sg**	**09 47 25.8**	**+0.8**
CTKT	**Corum**	**0.33**	**54**	*i* P	**Pg**	**09 47 21.8**	**+0.1**
CTKT				*i* S	**Sg**	**09 47 26.8**	**+0.7**
CTKT	**Corum**	**0.33**	**54**	*i* P	**Pg**	**09 47 21.8**	**+0.1**
CTKT				*i* S	**Sg**	**09 47 26.8**	**+0.6**
CANT	**Cankiri**	**0.65**	**286**	*e*PG	**Pg**	**09 47 27.9**	**+0.1**
CANT				*e*SG	**Sg**	**09 47 36.8**	**+0.6**
TOS	**Tosya**	**0.68**	**332**	*e*PG	**Pg**	**09 47 28.1**	**-0.2**
TOS	**Tosya**	**0.68**	**332**	*e*Pg	**Pg**	**09 47 28.2**	**-0.2**
ELDT	**Eldivan**	**0.77**	**275**	*i* P	**Pg**	**09 47 29.9**	**-0.3**
ELDT				*i* S	**Sg**	**09 47 40.6**	**+0.3**
ELDT	**Eldivan**	**0.77**	**275**	*i* P	**Pg**	**09 47 29.9**	**-0.2**
ELDT				*i* S	**Sg**	**09 47 40.6**	**+0.4**
CDAG	**Cicekdag**	**0.81**	**184**	*i* P	**Pg**	**09 47 29.9**	**-0.9**
CDAG				*i* S	**Sg**	**09 47 41.2**	**-0.1**
CDAG	**Cicekdag**	**0.81**	**184**	*i* P	**Pg**	**09 47 29.9**	**-0.9**
CDAG				*i* S	**Sg**	**09 47 41.2**	**-0.2**
BYBT	**Boyabat**	**1.06**	**13**	*e*PG	**Pg**	**09 47 34.1**	**-1.5**
BYBT	**Boyabat**	**1.06**	**13**	*e*Pg	**Pg**	**09 47 34.1**	**-1.5**
DIKM	**Dikmen**	**1.36**	**27**	*e*PN	**Pn**	**09 47 40.4**	**+0.2**
DIKM	**Dikmen**	**1.36**	**27**	*e*Pn	**Pn**	**09 47 40.4**	**+0.2**
BZK	**Bozkurt**	**1.56**	**348**	*e*PN	**Pn**	**09 47 43.0**	**+0.1**
BZK	**Bozkurt**	**1.56**	**348**	*e*Pn	**Pn**	**09 47 43.0**	**+0.1**
SVSK	**Karacayir**	**2.03**	**104**	*e*PN	**Pn**	**09 47 49.5**	**+0.3**
SVSK	**Karacayir**	**2.03**	**104**	*e*Pn	**Pn**	**09 47 49.6**	**+0.3**

DDA 06 09:48:56.7, 37.07N×28.29E, h7km±2km, Ml3.1, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TURN	**Turunc**	**0.32**	**128**	*i* P	Pg	09 49 01.7	-1.2
TURN				*i* S	Sg	09 49 07.8	+0.5
AYDN	**Tasoluk**	**0.67**	**331**	*i* P	Pg	09 49 09.4	-0.1
AYDN				*i* S	Sg	09 49 19.9	+1.5
DNZL	**Cakiroluk**	**0.86**	**44**	*i* P	Pg	09 49 13.1	-0.1
DNZL				*i* S	Sg	09 49 26.2	+1.8
DNZL	**Cakiroluk**	**0.86**	**44**	*i* S	Sg	09 49 26.2	+1.7

NNC 06 09:50:18.4±2.3, 51.61N×75.61E, h0km, mb2.7, mpv2.3, 12C-8D, Error ellipse: s-maj=111.1km s-min=16.5km az=24.0, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.09**	**117**	⇑Pn	Pn	09 50 54.6	0.0
0.4nm,0.3s,baz=297,slow=17							
KURBB				⇑Lg		09 51 24.4	
3.1nm,0.7s							
KURBB	**Kurchatov Arra**	**2.09**	**117**	⇑Pn	Pn	09 50 54.6	0.0
0.4nm,0.3s,baz=297,slow=17							
KURBB				⇑Lg		09 51 24.4	
3.1nm,0.7s							
KURK	**Kurchatov**	**2.10**	**114**	⇑Pn	Pn	09 50 55.8	+1.1
2.1nm,0.4s							
KURK				⇑Lg		09 51 24.2	
20nm,1.0s							
KURK	**Kurchatov**	**2.10**	**114**	⇑Pn	Pn	09 50 55.8	+1.1
2.1nm,0.4s							
KURK				⇑Lg		09 51 24.2	
20nm,1.0s							
VOSK	**Vostochnaya**	**3.06**	**293**	⇑Pn	Pn	09 51 10.1	+2.1
1.4nm,0.5s							
VOSK				⇓Sn	Sn	09 51 44.1	-1.2
16nm,1.0s							
VOSK	**Vostochnaya**	**3.06**	**293**	⇑Pn	Pn	09 51 10.1	+2.1
1.4nm,0.5s							
VOSK				⇓Sn	Sn	09 51 44.1	-1.2
16nm,1.0s							
BVA0	**Borovoye Array**	**3.50**	**296**	⇑Pn	Pn	09 51 09.6	-4.5
0.2nm,0.6s,baz=104,slow=22,SNR=4.9							
BVA0				⇓Sn	Sn	09 51 58.1	+2.0
0.7nm,0.5s,baz=115,slow=28,SNR=7.5							
BVA0	**Borovoye Array**	**3.50**	**296**	⇑Pn	Pn	09 51 09.6	-4.5
0.2nm,0.6s,baz=104,slow=22,SNR=4.9							
BVA0				⇓Sn	Sn	09 51 58.1	+2.0
0.7nm,0.5s,baz=115,slow=28,SNR=7.5							
ZRNK	**Zerenda**	**4.27**	**291**	⇓Pn	Pn	09 51 21.6	-3.0
0.5nm,0.6s							
ZRNK				⇓Sn	Sn	09 52 22.6	+7.5
8.4nm,0.9s							
ZRNK	**Zerenda**	**4.27**	**291**	⇓Pn	Pn	09 51 21.6	-3.0
0.5nm,0.6s							
ZRNK				⇓Sn	Sn	09 52 22.6	+7.5
8.4nm,0.9s							

DJA 06 09:51:38, 1.27N×98.99E, h23km, MLv3.7/3, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**0.76**	**129**	P	Pb	09 51 47.8	-4.7
GSI	**Gunungsitoli**	**1.42**	**271**	P	Pn	09 51 57.6	-4.7
GSI				S	Sn	09 52 20.9	+0.6
PPI	**Padang Panjang**	**2.22**	**141**	P	Pn	09 52 15.2	+1.8
BKNI	**Bangkinang**	**2.25**	**115**	P	Pn	09 52 12.3	-1.6
BKNI				S	Sn	09 52 42.6	+1.6
PDSI	**Padang**	**2.62**	**146**	P	Pn	09 52 21.5	+2.6
SDSI	**Sungai Dareh**	**3.28**	**132**	P	Pn	09 52 29.3	+1.3
IPM	**Ipoh**	**3.78**	**32**	P	Pn	09 52 36.8	+1.9

*TIR **06** 10:00:53.4±5.1, 37.67N×20.05E, h0km±999km*
*NEIC **06** 10:01:00.0, 38.34N×21.86E, h13km, ML3.4(ATH), After ATH.*
*THE **06** 10:01:00.6, 38.35N×21.83E, h0km±1km, ML4.1/16, Error ellipse: s-maj=1.6km s-min=0.6km az=223.0*
*CSEM **06** 10:01:00.3±0.1, 38.32N×21.85E, h7km, ML4.1/16, Error ellipse: s-maj=3.7km s-min=3.1km az=55.0*
*ATH **06** 10:01:00.0, 38.34N×21.86E, h13km±1km, MD3.6/9, ML3.4*
*ISCJB **06** 10:01:00.3±0.3, 38.34N±0.02×21.82E±0.02, h7km±2km, mb3.6/8, Error ellipse: s-maj=2.6km s-min=2.4km az=19.4*
*SKO **06** 10:01:02.3, 38.39N×22.17E, h0km*
*IDC **06** 10:01:03.9±7.0, 38.43N×21.70E, h33km±62km, mb3.5/8, mb1 3.6/10, mb1mx3.5/28, mbtmp3.6/10, ML3.3/2, Error ellipse: s-maj=24.3km s-min=19.6km az=84.0*

ISC 06 10:01:00.9±0.3, 38.35N±0.01×21.83E±0.02, h6km±2km, n146, σ1.22/193, mb3.6/8, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.07**	**207**	P	**Pg**	**10 01 02.4**	**-0.1**
UPR				S	**Sg**	**10 01 04.2**	**+0.6**
UPR	**University Cam**	**0.07**	**207**	*e*PG	**Pg**	**10 01 02.4**	**-0.1**
UPR				*e*SG	**Sg**	**10 01 04.4**	**+0.8**
UPR	**University Cam**	**0.07**	**207**	P	**Pg**	**10 01 02.4**	**-0.1**
UPR				S	**Sg**	**10 01 04.2**	**+0.6**
EFP	**Efpalio**	**0.10**	**38**	P	**Pg**	**10 01 02.4**	**-0.7**
EFP				S	**Sg**	**10 01 05.2**	**+0.6**
EFP	**Efpalio**	**0.10**	**38**	*e*PG	**Pg**	**10 01 03.0**	**-0.1**
EFP				*e*SG	**Sg**	**10 01 05.2**	**+0.6**
EFP	**Efpalio**	**0.10**	**38**	P	**Pg**	**10 01 02.4**	**-0.7**
EFP	**Efpalio**	**0.10**	**38**	*e*Pg	**Pg**	**10 01 03.0**	**-0.1**
EFP				*e*Sg	**Sg**	**10 01 05.2**	**+0.6**
LAKA	**Lakka**	**0.16**	**131**	P	**Pg**	**10 01 04.1**	**0.0**
LAKA				S	**Sg**	**10 01 07.1**	**+0.9**
LAKA	**Lakka**	**0.16**	**131**	P	**Pg**	**10 01 04.1**	**0.0**
KALE	**Kalithea**	**0.25**	**79**	P	**Pg**	**10 01 05.1**	**-0.7**
KALE				S	**Sg**	**10 01 10.2**	**+1.1**
KALE	**Kalithea**	**0.25**	**79**	P	**Pg**	**10 01 05.1**	**-0.7**
RLS	**Riolos of Patr**	**0.40**	**225**	*e*Pb	**Pg**	**10 01 08.4**	**-0.3**
RLS				*e*Sb	**Sg**	**10 01 14.9**	**+1.0**
RLS	**Riolos of Patr**	**0.40**	**225**	*e*PB	**Pg**	**10 01 08.4**	**-0.3**
RLS				*e*SB	**Sg**	**10 01 14.9**	**+1.0**
RLS	**Riolos of Patr**	**0.40**	**225**	*e*Pb	**Pg**	**10 01 08.4**	**-0.3**
RLS				*e*Sb	**Sg**	**10 01 14.9**	**+1.0**
DSF	**Desfina**	**0.56**	**83**	P	**Pg**	**10 01 11.0**	**-0.6**
DSF				S	**Sg**	**10 01 19.2**	**+0.4**
DSF	**Desfina**	**0.56**	**83**	P	**Pg**	**10 01 11.0**	**-0.6**
EVR	**Evrytania**	**0.57**	**359**	*e*Pb	**Pg**	**10 01 11.2**	**-0.7**
EVR				*e*Sb	**Sg**	**10 01 20.2**	**+0.9**
EVR	**Evrytania**	**0.57**	**359**	*e*PB	**Pg**	**10 01 11.2**	**-0.7**
EVR				*e*SB	**Sg**	**10 01 20.2**	**+0.9**
EVR	**Evrytania**	**0.57**	**359**	*e*Pb	**Pg**	**10 01 11.2**	**-0.7**
EVR				*e*Sb	**Sg**	**10 01 20.2**	**+0.9**
GUR	**Goura**	**0.58**	**135**	P	**Pg**	**10 01 11.2**	**-0.8**
GUR				S	**Sg**	**10 01 20.1**	**+0.6**
GUR	**Goura**	**0.58**	**135**	*e*PB	**Pg**	**10 01 11.2**	**-0.8**
GUR	**Goura**	**0.58**	**135**	P	**Pg**	**10 01 11.2**	**-0.8**
AGG	**Agios Georgios**	**0.78**	**30**	*e*Pg	**Pg**	**10 01 14.5**	**-1.4**
AGG	**Agios Georgios**	**0.78**	**30**	P	**Pg**	**10 01 14.6**	**-1.3**
AGG				S	**Sg**	**10 01 26.8**	**+0.7**
AGG	**Agios Georgios**	**0.78**	**30**	*e*PG	**Pg**	**10 01 14.5**	**-1.4**
AGG	**Agios Georgios**	**0.78**	**30**	P	**Pg**	**10 01 14.6**	**-1.3**
AGG				S	**Sg**	**10 01 26.8**	**+0.7**
KFL	**Anninata**	**0.85**	**254**	P	**Pg**	**10 01 16.4**	**-0.8**
KFL				S	**Sg**	**10 01 29.3**	**+1.1**
LTK	**Loutraki**	**0.95**	**109**	P	**Pg**	**10 01 18.6**	**-0.6**
LTK				S	**Sg**	**10 01 33.0**	**+1.4**
LTK	**Loutraki**	**0.95**	**109**	*e*PN	**Pn**	**10 01 18.7**	**-2.2**
LTK	**Loutraki**	**0.95**	**109**	*e*Pn	**Pn**	**10 01 18.7**	**-2.2**
LKR	**Lokris**	**0.97**	**71**	*e*Pg	**Pg**	**10 01 17.8**	**-1.7**
LKR	**Lokris**	**0.97**	**71**	P	**Pg**	**10 01 17.9**	**-1.6**
LKR				S	**Sg**	**10 01 33.6**	**+1.5**
LKR	**Lokris**	**0.97**	**71**	*e*PG	**Pg**	**10 01 17.8**	**-1.7**
LKR	**Lokris**	**0.97**	**71**	*e*Pg	**Pg**	**10 01 17.8**	**-1.7**
VLS	**Valsamata**	**0.99**	**261**	*e*Pb	**Pg**	**10 01 18.3**	**-1.5**
VLS				*e*Sn	**Sg**	**10 01 34.3**	**+1.7**
VLS	**Valsamata**	**0.99**	**261**	P	**Pg**	**10 01 18.1**	**-1.7**
VLS				S	**Sg**	**10 01 34.3**	**+1.7**
VLS	**Valsamata**	**0.99**	**261**	*e*PB	**Pg**	**10 01 18.3**	**-1.5**
VLS				*e*SN	**Sg**	**10 01 34.3**	**+1.7**
VLS	**Valsamata**	**0.99**	**261**	*e*Pb	**Pg**	**10 01 18.3**	**-1.5**
VLS				*e*Sn	**Sg**	**10 01 34.3**	**+1.7**
ATAL	**Atalanti**	**1.00**	**69**	P	**Pg**	**10 01 18.4**	**-1.7**
ATAL				S	**Sg**	**10 01 34.3**	**+1.2**
ATAL	**Atalanti**	**1.00**	**69**	P	**Pg**	**10 01 18.4**	**-1.7**
LKD2	**Lefkada island**	**1.02**	**296**	P	**Pg**	**10 01 18.9**	**-1.5**
LKD2				S	**Sg**	**10 01 34.9**	**+1.3**
LKD2	**Lefkada island**	**1.02**	**296**	P	**Pg**	**10 01 18.9**	**-1.5**
LKD2				S	**Sg**	**10 01 34.9**	**+1.3**
VLX	**Vlachokerasia**	**1.07**	**156**	P	**Pg**	**10 01 20.3**	**-1.1**
VLX				S	**Sg**	**10 01 36.7**	**+1.5**
VLX	**Vlachokerasia**	**1.07**	**156**	*e*PG	**Pg**	**10 01 19.7**	**-1.7**
VLX	**Vlachokerasia**	**1.07**	**156**	P	**Pg**	**10 01 20.3**	**-1.1**
ITM	**Ithomi**	**1.17**	**176**	*e*Pb	**Pg**	**10 01 22.1**	**-1.1**
ITM	**Ithomi**	**1.17**	**176**	P	**Pg**	**10 01 22.1**	**-1.1**
ITM				S	**Sg**	**10 01 39.6**	**+1.2**
ITM	**Ithomi**	**1.17**	**176**	*e*PB	**Pg**	**10 01 22.1**	**-1.1**
ITM	**Ithomi**	**1.17**	**176**	P	**Pg**	**10 01 22.1**	**-1.1**
ITM				S	**Sg**	**10 01 39.6**	**+1.2**
THL	**Klokotos Trika**	**1.23**	**7**	P	**Pg**	**10 01 23.2**	**-1.2**
THL				S	**Sg**	**10 01 41.8**	**+1.4**
THL	**Klokotos Trika**	**1.23**	**7**	*e*PB	**Pg**	**10 01 23.2**	**-1.2**
THL	**Klokotos Trika**	**1.23**	**7**	P	**Pg**	**10 01 23.2**	**-1.2**
NAIG	**Nisos Aigina**	**1.44**	**114**	*e*Pb	**Pb**	**10 01 26.9**	**-1.2**
NAIG	**Nisos Aigina**	**1.44**	**114**	*e*PB	**Pb**	**10 01 26.9**	**-1.2**
NAIG	**Nisos Aigina**	**1.44**	**114**	*e*Pb	**Pb**	**10 01 26.9**	**-1.2**
PYL	**PYLOS**	**1.45**	**183**	P	**Pn**	**10 01 27.1**	**-0.5**
PYL				S	**Sb**	**10 01 48.8**	**+1.8**
PYL	**PYLOS**	**1.45**	**183**	*e*PG	**Pg**	**10 01 26.8**	**-1.9**
PYL	**PYLOS**	**1.45**	**183**	*e*Pg	**Pg**	**10 01 26.8**	**-1.9**
PYL	**PYLOS**	**1.45**	**183**	P	**Pn**	**10 01 27.1**	**-0.5**
NEO	**Neokhori**	**1.45**	**48**	*e*Pg	**Pg**	**10 01 27.0**	**-1.8**
NEO	**Neokhori**	**1.45**	**48**	*e*PG	**Pg**	**10 01 27.0**	**-1.8**
NEO	**Neokhori**	**1.45**	**48**	*e*Pg	**Pg**	**10 01 27.0**	**-1.8**
XOR	**Xorichti**	**1.48**	**46**	P	**Pn**	**10 01 26.9**	**-1.1**
XOR				S	**Sn**	**10 01 49.0**	**+1.3**
XOR	**Xorichti**	**1.48**	**46**	P	**Pn**	**10 01 26.9**	**-1.1**
MEV	**Metsovon**	**1.51**	**342**	P	**Pn**	**10 01 29.6**	**+1.1**
MEV	**Metsovon**	**1.51**	**342**	P	**Pn**	**10 01 29.6**	**+1.1**
JAN	**Janina**	**1.51**	**330**	*e*Pb	**Pb**	**10 01 29.1**	**-0.3**
JAN	**Janina**	**1.51**	**330**	*e*PB	**Pb**	**10 01 29.1**	**-0.3**
JAN	**Janina**	**1.51**	**330**	*e*Pb	**Pb**	**10 01 29.1**	**-0.3**
ATH	**Athens Observa**	**1.54**	**103**	*e*Pb	**Pb**	**10 01 28.2**	**-1.6**
ATH	**Athens Observa**	**1.54**	**103**	*e*PB	**Pb**	**10 01 28.2**	**-1.6**
ATH	**Athens Observa**	**1.54**	**103**	*e*Pb	**Pb**	**10 01 28.2**	**-1.6**
ATHU	**Athens Univers**	**1.59**	**103**	S	**Sn**	**10 01 50.9**	**+0.4**
ATHU	**Athens Univers**	**1.59**	**103**	S	**Sn**	**10 01 50.9**	**+0.4**
VLY	**Voula,Athens**	**1.63**	**107**	*e*Pb	**Pb**	**10 01 30.1**	**-1.3**
VLY	**Voula,Athens**	**1.63**	**107**	*e*PB	**Pb**	**10 01 30.1**	**-1.3**
VLY	**Voula,Athens**	**1.63**	**107**	*e*Pb	**Pb**	**10 01 30.1**	**-1.3**
PTL	**Penteli**	**1.63**	**100**	*e*Pg	**Pg**	**10 01 30.3**	**-1.9**
PTL	**Penteli**	**1.63**	**100**	*e*PG	**Pg**	**10 01 30.3**	**-1.9**
PTL	**Penteli**	**1.63**	**100**	*e*Pg	**Pg**	**10 01 30.3**	**-1.9**
AOS	**Alonnisos**	**1.81**	**62**	P	**Pn**	**10 01 31.4**	**-1.2**
AOS				S	**

*ISK **06** 10:11:47.4, 40.′14N×26.′93E, h7km, MD2.5*
*CSEM **06** 10:11:47.4, 40.′14N×26.′93E, h7km, MD2.5, After ISK*
*ISCJB **06** 10:11:48.8±0.7, 40.′17N±0.′04×26.′87E±0.′06, h18km±16km, Error ellipse: s-maj=8.3km s-min=6.4km az=38.7*
*DDA **06** 10:11:51.6, 40.′33N×27.′58E, h7km±1km, Md2.8*
ISC 06 10:11:48.6±0.8, 40.′16N±0.′04×26.′88E±0.′05, h16km±10km, n13, σ0°70/19, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPK	**Lapseki**	**0.23**	**336**	*e*PG	**Pg**	**10 11 54.0**	**+0.1**
LPK				*e*SG	**Sg**	**10 11 57.5**	**+0.1**
LPK	**Lapseki**	**0.23**	**336**	*e*Pg	**Pg**	**10 11 54.0**	**+0.1**
LPK				*e*Sg	**Sg**	**10 11 57.6**	**+0.1**
EZN	**Ezine**	**0.54**	**232**	*e*PG	**Pg**	**10 11 58.8**	**-0.5**
EZN				*e*SG	**Sg**	**10 12 07.0**	**+0.4**
EZN	**Ezine**	**0.54**	**232**	*e*Pg	**Pg**	**10 11 58.8**	**-0.5**
EZN				*e*Sg	**Sg**	**10 12 07.0**	**+0.4**
RKY	**Sarkoy-Tekirda**	**0.57**	**23**	*e*PG	**Pg**	**10 11 59.2**	**-0.8**
RKY	**Sarkoy-Tekirda**	**0.57**	**23**	*e*Pg	**Pg**	**10 11 59.2**	**-0.8**
SART	**Tekirdag**	**0.58**	**23**	*i* P	**Pg**	**10 12 00.8**	**+0.8**
SART				*i* S	**Sg**	**10 12 08.3**	**+0.6**
BALY	**Balya**	**0.70**	**126**	*i* P	**Pg**	**10 12 03.2**	**+0.8**
BALY				*i* S	**Sg**	**10 12 11.8**	**+0.2**
GADA	**Gvkgeada**	**0.76**	**273**	*e*PG	**Pg**	**10 12 03.0**	**-0.3**
GADA	**Gvkgeada**	**0.76**	**273**	*e*Pg	**Pg**	**10 12 03.0**	**-0.3**
BNT	**Bandirma**	**0.82**	**76**	*e*PG	**Pg**	**10 12 02.8**	**-1.8**
ARMT	**Armutlu**	**1.57**	**74**	*e*PN	**Pn**	**10 12 16.1**	**+0.3**
ARMT	**Armutlu**	**1.57**	**74**	*e*Pn	**Pn**	**10 12 16.1**	**+0.3**

*CSEM **06** 10:13:20.9, 34.′66N×23.′65E, h5km, MD3.6, After ATH*
*NEIC **06** 10:13:20.9, 34.′66N×23.′65E, h5km, MD3.6(ATH), After ATH.*
ATH 06 10:13:20.9, 34.′66N×23.′65E, h5km, MD3.6/4, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.40**	**63**	*e*Pb	Pg	10 13 29.7	+1.0
GVD				*e*Sb	Sg	10 13 35.4	+1.5
GVD	**Gavdhos**	**0.40**	**63**	*e*PB	Pg	10 13 29.7	+1.0
GVD				*e*SB	Sg	10 13 35.4	+1.5
GVD	**Gavdhos**	**0.40**	**63**	*e*Pb	Pg	10 13 29.7	+1.0
GVD				*e*Sb	Sg	10 13 35.4	+1.5
KARN	**Karanos**	**0.77**	**16**	*e*PG	Pg	10 13 35.6	-0.1
KARN				*e*SB	Sg	10 13 47.4	+1.6
KARN	**Karanos**	**0.77**	**16**	*e*Pg	Pg	10 13 35.6	-0.1
KARN				*e*Sb	Sg	10 13 47.4	+1.6
VAM	**Vamos**	**0.87**	**31**	*e*Pg	Pg	10 13 37.5	-0.1
VAM				*e*Sb	Sg	10 13 50.3	+1.4
VAM	**Vamos**	**0.87**	**31**	*e*PG	Pg	10 13 37.5	-0.1
VAM				*e*SB	Sg	10 13 50.3	+1.4
VAM	**Vamos**	**0.87**	**31**	*e*Pg	Pg	10 13 37.5	-0.1
VAM				*e*Sb	Sg	10 13 50.3	+1.4
SIVA	**Sivas**	**1.02**	**69**	*e*Pb	Pg	10 13 40.5	+0.1
SIVA	**Sivas**	**1.02**	**69**	*e*PB	Pg	10 13 40.5	+0.1
SIVA	**Sivas**	**1.02**	**69**	*e*Pb	Pg	10 13 40.5	+0.1
IDI	**Anoyia**	**1.20**	**58**	*e*Pn	Pg	10 13 42.8	-1.0
IDI	**Anoyia**	**1.20**	**58**	*e*PN	Pg	10 13 42.8	-1.0
IDI	**Anoyia**	**1.20**	**58**	*e*Pn	Pg	10 13 42.8	-1.0
LAST	**Lasithi**	**1.58**	**71**	*e*Pg	Pn	10 13 50.0	+0.4
LAST	**Lasithi**	**1.58**	**71**	*e*PG	Pn	10 13 50.0	+0.4
LAST	**Lasithi**	**1.58**	**71**	*e*Pg	Pn	10 13 50.0	+0.4
KYTH	**Kithira**	**1.69**	**343**	*e*Pn	Pb	10 13 52.9	+0.4
KYTH	**Kithira**	**1.69**	**343**	*e*PN	Pb	10 13 52.9	+0.4
KYTH	**Kithira**	**1.69**	**343**	*e*Pn	Pb	10 13 52.9	+0.4
XRY	**Khrisi**	**1.70**	**82**	*e*Pn	Pb	10 13 53.4	+0.8
XRY	**Khrisi**	**1.70**	**82**	*e*PN	Pb	10 13 53.4	+0.8
XRY	**Khrisi**	**1.70**	**82**	*e*Pn	Pb	10 13 53.4	+0.8
VLI	**Veliai**	**2.13**	**344**	*e*Pg	Pg	10 14 00.8	-1.0
VLI	**Veliai**	**2.13**	**344**	*e*PG	Pg	10 14 00.8	-1.0
VLI	**Veliai**	**2.13**	**344**	*e*Pg	Pg	10 14 00.8	-1.0
KARP	**Karpathos**	**3.01**	**72**	*e*Pn	Pb	10 14 12.9	-2.1
KARP	**Karpathos**	**3.01**	**72**	*e*PN	Pb	10 14 12.9	-2.1
KARP	**Karpathos**	**3.01**	**72**	*e*Pn	Pb	10 14 12.9	-2.1

*IDC **06** 10:51:11.2±4.5, 4.′72S×130.′38E, h17km±27km, mb3.9/7, mb1 4.0/10, mb1mx3.8/18, mbtmp3.9/10, ML3.7/3, Error ellipse: s-maj=54.7km s-min=16.5km az=80.0*
*NEIC **06** 10:51:11.6±0.6, 4.′77S×130.′37E, h20km, Error ellipse: s-maj=31.4km s-min=9.4km az=82.0*
*ISCJB **06** 10:51:11.5±0.7, 4.′89S±0.′06×130.′21E±0.′09, h33km, mb3.9/7, Error ellipse: s-maj=14.0km s-min=6.2km az=152.7*
*DJA **06** 10:51:19, 4.′82S×129.′75E, h27km, MLv3.7/4*
ISC 06 10:51:13.8±0.7, 4.′88S±0.′05×130.′16E±0.′09, h35km, n13, σ1°13/17, mb3.9/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.96**	**321**	P	**Pn**	**10 51 49.5**	**+5.0**
MSAI				S	**Sn**	**10 52 07.3**	**-0.5**
AAI	**Ambon**	**2.29**	**301**	P	**Pn**	**10 51 48.7**	**-0.4**
AAI				S	**Sn**	**10 52 15.6**	**-0.5**
NLAI	**Namlea**	**3.46**	**298**	P	**Pn**	**10 52 07.7**	**+2.5**
FITZ	**Fitzroy Crossi**	**13.87**	**198**	Pn	**Pn**	**10 54 28.8**	**+0.9**
	0.2nm,0.3s,baz=71,slow=18,SNR=10.0						
FITZ				Sn	**Sn**	**10 56 59.4**	**-1.4**
	0.1nm,0.3s,baz=72,slow=20,SNR=2.1						
WRA	**Warramunga Arr**	**15.52**	**165**	Pn	**Pn**	**10 54 48.6**	**-1.5**
	0.2nm,0.3s,baz=343,slow=13,SNR=8.3						
WRA				Sn	**Sn**	**10 57 36.1**	**-4.9**
	0.3nm,0.3s,baz=333,slow=23,SNR=4.4						
ASAR	**Alice Springs**	**19.03**	**169**	P	**Pn**	**10 55 33.7**	**-0.1**
	0.8nm,0.3s,baz=352,slow=8.9,SNR=69						
ASAR				ScP	ScP	11 03 32.4	+1.8
	0.0nm,0.3s,baz=2.5,slow=1.6,SNR=5.1						
STKA	**Stephens Creek**	**28.92**	**160**	P	**P**	**10 57 11.0**	**+1.4**
	1.3nm,0.4s,mb4.0,baz=355,slow=8.4,SNR=5.7						
MJAR	**Matsushiro Arr**	**41.88**	**10**	P	**P**	**10 58 58.8**	**-2.0**
	0.9nm,0.7s,mb3.5,baz=181,slow=9.0,SNR=3.1						
SONM	**Songino Array**	**56.49**	**341**	P	**P**	**11 00 52.4**	**+0.1**
	1.5nm,1.0s,mb4.0,baz=151,slow=6.4,SNR=3.7						
MKAR	**Makanchi Array**	**66.55**	**326**	P	**P**	**11 02 00.5**	**+0.3**
	1.9nm,0.6s,mb4.3,baz=106,slow=8.8,SNR=18						
ZALV	**Zalesovo Beam**	**69.76**	**333**	P	**P**	**11 02 19.8**	**-0.5**
	0.8nm,0.4s,mb4.0,baz=101,slow=3.0,SNR=3.8						
BVAR	**Borovoye Array**	**76.36**	**328**	P	**P**	**11 02 59.6**	**+0.3**
	0.8nm,0.6s,mb3.9,baz=87,slow=7.4,SNR=3.6						
MAW	**Mawson**	**76.97**	**201**	P	**P**	**11 03 04.4**	**+1.9**
	0.5nm,0.4s,mb3.8,baz=80,slow=11,SNR=5.3						

MAN 06 10:54:51, 17.′52N×122.′45E, h9km, mb4.2, ML3.0, MS2.8, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.46**	**183**	*e*P	Pg	10 55 01.5	+1.6
PALP				*e*S	Sg	10 55 11.8	+5.8
APYP	**Conner**	**1.20**	**287**	*e*P	Pb	10 55 13.6	-0.3
BALP	**Baler**	**1.96**	**205**	*e*P	Pn	10 55 25.7	+1.3

*ISK **06** 10:56:24.6, 38.′06N×37.′78E, h9km, MD2.7*
*DDA **06** 10:56:25.6, 38.′01N×37.′83E, h7km±3km, Md2.8*
*CSEM **06** 10:56:25.3±0.2, 38.′05N×37.′78E, h12km, MD2.7, Error ellipse: s-maj=6.4km s-min=3.4km az=139.0*
*ISCJB **06** 10:56:25.4±0.6, 38.′02N±0.′04×37.′79E±0.′05, h8km±7km, Error ellipse: s-maj=7.6km s-min=5.0km az=43.9*
ISC 06 10:56:25.9±0.6, 38.′04N±0.′04×37.′78E±0.′05, h13km±6km, n16, σ0°61/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKCD	**Akcadag**	**0.28**	**23**	*i* P	**Pg**	**10 56 31.6**	**-0.2**
AKCD				*i* S	**Sg**	**10 56 36.6**	**+0.9**
AKCD	**Akcadag**	**0.28**	**23**	*i* P	**Pg**	**10 56 31.6**	**-0.1**
AKCD				*i* S	**Sg**	**10 56 36.6**	**+0.9**
MYA	**Malataya**	**0.58**	**60**	*e*PG	**Pg**	**10 56 36.2**	**-1.1**
MYA				*e*SG	**Sg**	**10 56 44.8**	**-0.2**
MYA	**Malataya**	**0.58**	**60**	*e*Pg	**Pg**	**10 56 36.2**	**-1.1**
MYA				*e*Sg	**Sg**	**10 56 44.8**	**-0.2**
GZT	**Gaziantep**	**0.70**	**194**	*i* P	**Pg**	**10 56 39.7**	**+0.2**
KMRS	**Kahramanmaras**	**0.88**	**233**	*e*PG	**Pg**	**10 56 41.8**	**-1.1**
KMRS				*e*SG	**Sg**	**10 56 54.6**	**+0.3**
KMRS	**Kahramanmaras**	**0.88**	**233**	*e*Pg	**Pg**	**10 56 41.8**	**-1.0**
KMRS				*e*Sg	**Sg**	**10 56 54.6**	**+0.3**
URFA	**Urfa**	**1.02**	**126**	*e*PG	**Pg**	**10 56 44.8**	**-0.6**
URFA				*e*SG	**Sg**	**10 56 59.7**	**+1.0**
URFA	**Urfa**	**1.02**	**126**	*e*Pg	**Pg**	**10 56 44.8**	**-0.7**
URFA				*e*Sg	**Sg**	**10 56 59.7**	**+1.0**
SARI	**SarD1z-Kayseri**	**1.07**	**307**	*e*PN	**Pn**	**10 56 46.9**	**+0.4**
SVRC	**Sivrice-ELAZID**	**1.25**	**74**	*e*PN	**Pn**	**10 56 48.7**	**-0.3**
SVRC	**Sivrice-ELAZID**	**1.25**	**74**	*e*Pn	**Pn**	**10 56 48.7**	**-0.3**
KUZU	**Kuzuini**	**1.38**	**204**	*i* P	**Pn**	**10 56 51.3**	**+0.5**
KUZU				*i* S	**Sn**	**10 57 08.8**	**0.0**
KUZU	**Kuzuini**	**1.38**	**204**	*i* P	**Pn**	**10 56 51.3**	**+0.5**
KUZU				*i* S	**Sn**	**10 57 08.8**	**-0.1**
PTK	**Pertek**	**1.52**	**55**	*e*PN	**Pn**	**10 56 52.9**	**+0.1**
PTK	**Pertek**	**1.52**	**55**	*e*Pn	**Pn**	**10 56 52.9**	**+0.1**

*IDC **06** 11:03:49.0±0.7, 31.′20N×103.′86E, h0km, mb4.1/13, mb1 4.2/15, mb1mx4.0/30, mbtmp4.1/15, ML4.0/2, MS3.4/13, Ms1 3.4/13, ms1mx3.2/31, Error ellipse: s-maj=30.8km s-min=13.9km az=63.0*
*BJI **06** 11:03:50.8, 31.′18N×103.′96E, h19km, mB4.6/8, mb4.4/12, ML4.2/16, Ms4.4/13, Ms7 4.0/11*
*NEIC **06** 11:03:50.5±0.3, 31.′15N×103.′70E, h10km, mb4.6/5, Error ellipse: s-maj=6.7km s-min=6.2km az=160.0*
*ISCJB **06** 11:03:50.8±0.6, 31.′11N±0.′04×103.′79E±0.′04, h29km±4km, mb4.2/15, MS3.4/12, Error ellipse: s-maj=6.9km s-min=5.1km az=148.7*
*MOS **06** 11:03:51.5±1.1, 31.′11N×103.′80E, h33km, mb4.7/3, Error ellipse: s-maj=13.7km s-min=9.3km az=101.9*
ISC 06 11:03:51.2±0.7, 31.′16N±0.′03×103.′75E±0.′04, h15km±4km, n69, σ1°08/72, mb4.2/15, MS3.4/12, 1C-4D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.25**	**179**	*i* Pg	**Pg**	**11 03 55.6**	**-1.0**
CD2				Sg	**Sg**	**11 04 01.6**	**+1.4**
CD2				smax			
	comp=N,47μm,0.7s						
CD2				smax			
	comp=E,105μm,0.8s						
LZH	**Lanzhou**	**4.92**	**1**	*e*Pg	**Pb**	**11 05 19.7**	**+2.7**
LZH				Sn	**Sn**	**11 06 07.5**	**+6.3**
LZH				Sg	**Sg**	**11 06 28.6**	**-0.5**
LZH				smax			
	comp=N,270nm,1.1s						
LZH				smax			
	comp=E,290nm,0.9s						
LZH				LR	LR		
	comp=E,3μm,6.2s						
LZH				LR	LR		
	comp=Z,4μm,8.6s						
ENH	**Enshi**	**5.02**	**99**	*e*Pn	**Pn**	**11 05 06.4**	**+0.5**
	comp=Z,244nm,0.8s						
ENH				*e*Sn	**Sn**	**11 06 00.8**	**-2.9**
XAN	**Xi'an**	**5.22**	**55**	Pn	**Pn**	**11 05 06.8**	**-2.0**
XAN				Pg	**Pg**	**11 05 25.3**	**-6.0**
XAN				Sn	**Sn**	**11 05 59.3**	**-9.4**
XAN				Sg	**Sb**	**11 06 25.4**	**+0.6**
XAN				smax			
	comp=N,530nm,0.9s						
XAN				smax			
	comp=E,220nm,1.0s						
KMI	**Kunming**	**6.08**	**189**	Pn	**Pn**	**11 05 22.7**	**+2.2**
KMI				Sn	**Sn**	**11 06 30.9**	**+1.1**
KMI				Sg	**Sg**	**11 07 05.4**	**-0.9**
KMI				smax			
	comp=N,120nm,1.5s						
KMI				smax			
	comp=E,120nm,1.4s						
KMI				LR	LR		
	comp=N,1μm,7.2s						
KMI				LR	LR		
	comp=E,3μm,9.9s						
GTA	**Gaotai**	**8.84**	**340**	*e*P	**Pn**	**11 05 49.4**	**-9.0**
GTA				pP		11 05 53.8	
GTA				sP		11 05 56.9	
GTA				S	**Sn**	**11 07 26.9**	**-11**
GTA				sS		11 07 33.1	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,41nm,6.0s						
GTA				LR	LR		
	comp=N,430nm,13.5s						
GTA				LR	LR		
	comp=E,690nm,12.0s						
GTA				LR	LR		
	comp=Z,550nm,9.6s						
WHN	**Wuhan**	**9.13**	**91**	P	**Pn**	**11 06 03.0**	**+0.6**
WHN				S	**Sn**	**11 07 40.4**	**-4.6**
WHN				LR	LR		
	comp=N,3μm,5.6s						
WHN				LR	LR		
	comp=E,2μm,4.6s						
WHN				LR	LR		
	comp=Z,2μm,6.2s						
TIA	**Tai'an**	**12.22**	**62**	*e*P	**Pn**	**11 06 45.0**	**+0.3**
CHTO	**Chiang Mai**	**13.04**	**201**	*e*P	**Pn**	**11 06 54.6**	**-1.3**
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CHTO	**Chiang Mai**	**13.04**	**201**	*e*Pn	**Pn**	**11 06 54.6**	**-1.4**
	comp=Z,0.4nm,0.6s						
CMAR	**Chiang Mai Arr**	**13.37**	**200**	Pn	**Pn**	**11 07 02.6**	**+2.1**
	comp=Z,0.4nm,0.3s,baz=6.8,slow=9.6,SNR=6.3						
TAPN	**Taplejung**	**14.51**	**259**	*e*P	**Pn**	**11 07 14.0**	**-2.0**
	comp=Z,14nm,0.6s						
TAPN	**Taplejung**	**14.51**	**259**	*e*P	**Pn**	**11 07 14.0**	**-2.0**
	comp=Z,14nm,0.6s						
ODAN	**Odare**	**14.94**	**257**	*e*P	**Pn**	**11 07 21.5**	**-0.4**
ODAN	**Odare**	**14.94**	**257**	*e*P	**Pn**	**11 07 21.5**	**-0.4**
RAMN	**Ramite**	**15.57**	**259**	*e*P	**Pn**	**11 07 30.0**	**-0.2**
RAMN	**Ramite**	**15.57**	**259**	*e*P	**Pn**	**11 07 30.0**	**-0.2**
JIRN	**Jiri**	**15.70**	**262**	*e*P	**Pn**	**11 07 30.6**	**-1.2**
JIRN	**Jiri**	**15.70**	**262**	*e*P	**Pn**	**11 07 30.6**	**-1.2**
GUN	**Gumba**	**15.89**	**263**	*e*P	**Pn**	**11 07 33.9**	**-0.4**
	comp=Z,17nm,0.4s						
GUN	**Gumba**	**15.89**	**263**	*e*P	**Pn**	**11 07 33.9**	**-0.4**
	comp=Z,17nm,0.4s						
PKI	**Pulchoki**	**16.39**	**262**	*e*P	**Pn**	**11 07 39.6**	**-1.1**
	comp=Z,38nm,0.9s						
PKI	**Pulchoki**	**16.39**	**262**	*e*P	**Pn**	**11 07 40.2**	**-0.5**
PKI				pmax	pmax		
	comp=Z,22nm,0.6s						
PKI	**Pulchoki**	**16.39**	**262**	*e*P	**Pn**	**11 07 40.2**	**-0.5**
	comp=Z,22nm,0.6s						
PKIN	**Phulchoki**	**16.39**	**262**	*e*P	**Pn**	**11 07 39.9**	**-0.9**
	comp=Z,28nm,0.7s						
PKIN	**Phulchoki**	**16.39**	**262**	*e*P	**Pn**	**11 07 40.2**	**-0.6**
	comp=Z,22nm,0.6s						
KKN	**Kakani**	**16.43**	**263**	*e*P	**Pn**	**11 07 40.7**	**-0.6**
KKN	**Kakani**	**16.43**	**263**	*e*P	**Pn**	**11 07 40.7**	**-0.6**
KKN	**Kakani**	**16.43**	**263**	*e*P	**Pn**	**11 07 40.7**	**-0.6**
DMN	**Daman**	**16.63**	**262**	*e*P	**Pn**	**11 07 44.0**	**+0.2**
	comp=Z,41nm,0.8s						
DMN	**Daman**	**16.63**	**262**	*e*P	**Pn**	**11 07 44.0**	**+0.2**
	comp=Z,41nm,0.8s						
SONM	**Songino Array**	**16.78**	**6**	Pn	**Pn**	**11 07 45.6**	**0.0**
	comp=Z,0.2nm,0.3s,baz=188,slow=9.7,SNR=6.4						
SONM				LR	LR	11 14 45.6	
	comp=Z,198nm,19.3s,baz=20,slow=39						
ZAK	**Zakamensk**	**19.21**	**359**	*e*P	**Pn**	**11 08 19.1**	**+3.7**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.5s						
KSRS	**Korea Array**	**20.90**	**66**	P	**P**	**11 08 32.2**	**-0.8**
	comp=Z,4.4nm,0.6s,baz=264,slow=11,SNR=28						
KSRS				LR	LR	11 16 19.1	
	comp=Z,43nm,18.6s,MS2.9,baz=173,slow=36						
KSRS	**Korea Array**	**20.90**	**66**	P	**P**	**11 08 32.3**	**-0.7**
KSRS				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KSRS				MLR	MLR		
	comp=Z,43nm,18.6s,MS2.9						
CN2	**Changchun**	**21.27**	**48**	*e*P	**P**	**11 08 36.8**	**-0.2**
CN2				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.5						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
MKAR	**Makanchi Array**	**22.74**	**319**	P	**P**	**11 08 53.5**	**+0.9**
	comp=Z,1.8nm,0.8s,mb3.6,baz=108,slow=12,SNR=13						
MKAR	**Makanchi Array**	**22.74**	**319**	*c*eP	**P**	**11 08 53.9**	**+1.3**
AAK	**Ala-Archa**	**25.92**	**304**	LR	LR	11 21 10.6	
	comp=Z,138nm,20.3s,MS3.5,baz=193,slow=40						
AAK	**Ala-Archa**	**25.92**	**304**	*de*P	**P**	**11 09 25.6**	**+2.9**
ZALV	**Zalesovo Beam**	**26.54**	**335**	P	**P**	**11 09 28.2**	**+0.1**
	comp=Z,2.2nm,0.6s,mb3.9,baz=133,slow=10,SNR=7.7						
ZALV				LR	LR	11 20 36.8	
	comp=Z,60nm,20.0s,MS3.1,baz=72,slow=38						
KURK	**Kurchatov**	**27.02**	**324**	P	**P**	**11 09 33.3**	**+0.7**
	comp=Z,2.4nm,0.8s,mb3.8,baz=128,slow=9.6,SNR=8.0						
KURK				LR	LR	11 21 27.0	
	comp=Z,105nm,18.9s,MS3.4,baz=120,slow=39						
MJAR	**Matsushiro Arr**	**29.02**	**70**	LR	LR	11 22 29.7	
	comp=Z,92nm,18.1s,MS3.4,baz=180,slow=39						
DAV	**Davao City (W)**	**31.48**	**135**	LR	LR	11 22 43.1	
	comp=Z,76nm,21.6s,MS3.3,baz=73,slow=36						
BRVK	**Borovoye**	**32.63**	**322**	*e*P	**P**	**11 10 24.2**	**+1.9**
ASAJ	**Asahikawa**	**33.06**	**56**	LR	LR	11 23 36.5	
	comp=Z,50nm,18.5s,MS3.2,baz=352,slow=36						
AKTO	**Aktyubinsk**	**38.88**	**313**	LR	LR	11 27 46.5	
	comp=Z,48nm,18.2s,MS3.4,baz=93,slow=37						
SEY	**Seymchan**	**44.19**	**30**	*e*P	**P**	**11 11 58.1**	**-1.1**
PETK	**Petropavlovsk-**	**44.36**	**44**	LR	LR	11 32 00.0	
	comp=Z,43nm,20.4s,MS3.4,baz=199,slow=38						
ARCES	**ARCESS Array B**	**57.09**	**336**	P	**P**	**11 13 36.0**	**-0.5**
	comp=Z,2.8nm,0.8s,mb4.4,baz=77,slow=5.2,SNR=5.2						
ARCES	**ARCESS Array B**	**57.09**	**336**	P	**P**	**11 13 36.0**	**-0.5**
FINES	**FINESS Array B**	**57.35**	**326**	P	**P**	**11 13 40.1**	**+1.7**
	comp=Z,0.9nm,0.7s,mb3.9,baz=100,slow=7.9,SNR=3.9						
WRAB	**Tennant Creek**	**58.68**	**146**	*e*P	**P**	**11 13 48.3**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb5.0						
WRAB	**Tennant Creek**	**58.68**	**146**	*e*P	**P**	**11 13 48.3**	**+0.1**
	comp=Z,7.9nm,0.5s,mb5.0						
WRA	**Warramunga Arr**	**58.69**	**146**	P	**P**	**11 13 48.1**	**-0.1**
	comp=Z,6.3nm,0.5s,mb4.9,baz=339,slow=8.0,SNR=9.3						
SPITS	**Spitsbergen Ar**	**59.21**	**346**	P	**P**	**11 13 51.3**	**+0.1**
	comp=Z,1.5nm,0.7s,mb4.2,baz=131,slow=5.7,SNR=5.4						
ASAR	**Alice Springs**	**61.69**	**148**	P	**P**	**11 14 08.9**	**+0.1**
	comp=Z,1.1nm,0.8s,mb4.0,baz=334,slow=6.7,SNR=13						
HFS	**Hagfors**	**63.56**	**326**	P	**P**	**11 14 20.2**	**-0.6**
	comp=Z,1.6nm,0.8s,mb4.1,baz=110,slow=8.5,SNR=4.1						
NB2	**NORSAR Subarra**	**64.45**	**327**	P	**P**	**11 14 25.7**	**-1.0**
	comp=Z,0.5nm,0.5s,mb3.8,baz=73,slow=6.9						
NOA	**NORSAR Array B**	**64.45**	**327**	P	**P**	**11 14 26.1**	**-0.5**
	comp=Z,0.9nm,0.8s,mb3.9,baz=72,slow=6.7,SNR=4.1						
NOA				LR	LR	11 45 03.3	
	comp=Z,25nm,18.9s,MS3.4,baz=225,slow=38						
NWAO	**Narrogin (SRO)**	**65.00**	**168**	P	**P**	**11 14 30.9**	**+0.4**
	comp=Z,3.4nm,0.6s,mb4.5,baz=342,slow=9.6,SNR=2.9						
GERES	**GERESS Array B**	**67.29**	**314**	LR	LR	11 47 25.6	
	comp=Z,23nm,18.6s,MS3.4,baz=150,slow=39						
LPG	**La Plagne**	**72.99**	**313**	*e*P	**P**	**11 15 20.4**	**+0.2**
	comp=Z,9.8nm,0.9s,mb4.4						
LPG	**La Plagne**	**72.99**	**313**	*e*P	**P**	**11 15 20.4**	**+0.2**
LPG				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
LPG	**La Plagne**	**72.99**	**313**	*e*P	**P**	**11 15 20.4**	**+0.2**
	comp=Z,4.9nm,0.9s,mb4.4						
LPL	**La Plagne**	**73.00**	**313**	*e*P	**P**	**11 15 20.3**	**+0.1**
YKA	**Yellowknife Ar**	**81.73**	**17**	P	**P**	**11 16 08.4**	**-0.4**
	comp=Z,0.7nm,0.7s,mb3.7,baz=330,slow=5.5,SNR=5.3						
YKA	**Yellowknife Ar**	**81.73**	**17**	P	**P**	**11 16 08.4**	**-0.4**
ULM	**Lac du Bonnet**	**97.10**	**13**	LR	LR	12 06 20.1	
	comp=Z,43nm,19.2s,MS4.0,baz=34,slow=39						

*JMA **06** 11:19:37.7±0.2, 30.′65N×141.′80E, h37km, M3.7*
*ISCJB **06** 11:19:38.1±0.8, 30.′74N±0.′06×142.′0E±0.′2, h33km, mb3.6/2, Error ellipse: s-maj=25.3km s-min=6.0km az=165.6*
*IDC **06** 11:19:39.6±4.4, 30.′37N×140.′75E, h0km, mb3.4/2, mb1 3.6/3, mb1mx3.3/25, mbtmp3.4/3, ML3.2/1, MS3.1/1, Ms1 3.1/1, ms1mx2.3/18, Error ellipse: s-maj=269.0km s-min=33.7km az=81.0*
ISC 06 11:19:40.7±0.9, 30.′77N±0.′06×142.′0E±0.′2, h35km, n14, σ1°28/20, mb3.6/2, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.99**	**322**	*e*S	**Sn**	**11 20 58.6**	**-1.5**
JHJ	**Hachijo jima 2**	**3.01**	**322**	LR	LR	11 21 01.3	
	comp=Z,339nm,18.7s,baz=39,slow=29						
CBIJ	**Chichi jima**	**3.66**	**177**	*e*S	**Sn**	**11 21 13.9**	**-2.8**
BSO3	**Boso 3**	**4.21**	**343**	P	**Pn**	**11 20 42.9**	**+0.5**
BSO3				*e*S	**Sn**	**11 21 30.9**	**+0.5**
JHU	**Hanno**	**5.56**	**337**	P	**Pn**	**11 21 02.0**	**+1.1**
JHU				*e*S	**Sn**	**11 22 03.5**	**0.0**
JRY	**Ryogami san**	**5.84**	**335**	P	**Pn**	**11 21 06.8**	**+2.1**
JRY				*e*S	**Sn**	**11 22 11.7**	**+1.2**
JHO	**Hitachi**	**5.95**	**349**	P	**Pn**	**11 21 06.3**	**+0.1**
JHO				*e*S	**Sn**	**11 22 10.9**	**-2.2**
JAG	**Ashika

h146km±11km, Error ellipse: s-maj=11.2km s-min=8.3km az=174.7
*NEIC **06** 11:36:36.8±1.0, 36°.11N×69°.59E, h159km±42km, mb3.7/1, Error ellipse: s-maj=42.7km s-min=21.6km az=179.0*
*NNC **06** 11:36:38.4±3.4, 36°.98N×69°.57E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=28.9km s-min=26.0km az=100.0*
*IDC **06** 11:36:50.3±24.0, 36°.93N×69.72E, h238km±135km, mb1 3.0/5, mb1mx2.8/29, mbtmp3.0/5, Error ellipse: s-maj=302.6km s-min=50.6km az=3.0*

ISC 06 11:36:35.9±0.6, 36°.19N±0°.05×69°.94E±0°.08, h142km±10km, n24, σ1§13/30, 2C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**1.80**	**204**	*e*Pn	**Pn**	**11 37 08.5**	**+0.3**
KBL				*e*Sn	**Sn**	**11 37 33.4**	**+0.4**
KSH	**Kashi**	**5.82**	**53**	Pn	**Pn**	**11 37 57.2**	**-2.8**
KSH				Sn	**Sn**	**11 38 55.3**	**-10**
KSH	comp=N,46nm,0.4s			smax			
KSH	comp=E,38nm,0.3s			smax			
AML	**Almayashu** SNR=18	**6.61**	**25**	P	**Pn**	**11 38 11.2**	**+0.5**
KK31	**Karatay Array** comp=E,2.0nm,0.4s,baz=185,slow=13,SNR=34	**6.92**	**3**	⇓Pn	**Pn**	**11 38 13.3**	**-1.4**
KK31	comp=E,8.3nm,0.6s,baz=184,slow=23,SNR=6.2			⇑Sn	**Sn**	**11 39 28.1**	**-4.0**
UCH	**Uchtor** SNR=17	**7.00**	**29**	P	**Pn**	**11 38 16.7**	**+0.9**
EKS2	**Erkin-Say** SNR=5.6	**7.11**	**24**	P	**Pn**	**11 38 19.9**	**+2.5**
KZA	**Kyzart** SNR=6.0	**7.18**	**33**	P	**Pn**	**11 38 19.5**	**+1.2**
ULHL	**Ulahol** SNR=11	**7.78**	**37**	P	**Pn**	**11 38 33.6**	**+7.4**
TKM2	**Tokmak 2** comp=E,4.2nm,0.6s	**8.02**	**31**	⇑Pn	**Pn**	**11 38 29.2**	**-0.3**
TKM2	comp=E,3.0nm,0.8s			⇓Sn	**Sn**	**11 39 58.0**	**-0.6**
TKM2	**Tokmak 2** SNR=8.3	**8.02**	**31**	P	**Pn**	**11 38 29.0**	**-0.5**
MKAR	**Makanchi Array** comp=E,0.2nm,0.3s,baz=238,slow=14,SNR=8.8	**14.05**	**37**	P	**Pn**	**11 39 53.2**	**+4.6**
AB31	**Akbulak array** comp=E,0.5nm,0.3s,baz=157,slow=12,SNR=28	**14.96**	**334**	Pn	**Pn**	**11 39 59.2**	**-0.9**
AB31	comp=E,0.5nm,0.5s,baz=160,slow=23,SNR=2.5			⇓Sn	**Sn**	**11 42 36.1**	**-10**
ABKAR	**Akbulak array** comp=E,1.1nm,0.3s	**14.96**	**334**	*e*Pn	**Pn**	**11 39 59.2**	**-0.9**
ABKAR				*e*Sn	**Sn**	**11 42 37.8**	**-8.1**
DMN	**Daman** comp=E,5.8nm,0.5s	**15.45**	**119**	*e*P	**Pn**	**11 40 04.7**	**-1.6**
KURK	**Kurchatov** comp=E,0.2nm,0.3s,baz=210,slow=11,SNR=6.5	**15.81**	**21**	P	**Pn**	**11 40 11.5**	**+1.0**
JIRN	**Jiri** comp=E,10nm,0.4s	**16.19**	**117**	*e*P	**Pn**	**11 40 15.6**	**+0.2**
AKTK	**Aktyubinsk**	**16.64**	**333**	P	**Pn**	**11 40 20.5**	**-0.2**
AKTO	**Aktyubinsk** comp=E,0.3nm,0.3s,baz=148,slow=13,SNR=6.2	**16.64**	**333**	P	**Pn**	**11 40 20.5**	**-0.2**
BVAR	**Borovoye Array** comp=E,0.2nm,0.3s,baz=158,slow=12,SNR=4.6	**16.84**	**1**	P	**Pn**	**11 40 22.9**	**-0.1**
TAPN	**Taplejung** comp=E,6.0nm,0.4s	**17.47**	**115**	*e*P	**Pn**	**11 40 31.2**	**+0.3**
ODAN	**Odare** comp=E,4.9nm,0.3s	**17.52**	**117**	*e*P	**Pn**	**11 40 28.5**	**-3.0**
ZAA0	**Zalesovo Array**	**20.56**	**26**	*e*P	**P**	**11 41 04.5**	**+1.3**
ZALV	**Zalesovo Beam** comp=E,0.7nm,0.3s,baz=219,slow=11,SNR=11	**20.56**	**26**	P	**P**	**11 41 04.5**	**+1.3**
ZALV	**Zalesovo Beam**	**20.56**	**26**	P	**P**	**11 41 04.5**	**+1.3**

MEX 06 11:43:58.7±0.9, 14°.99N×93°.20W, h60km±13km, MD3.7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.71**	**358**	*e*P	Pn	11 44 11.3	-1.8
PCIG				*i* S	Sn	11 44 22.3	-1.3
THIG		**0.91**	**95**	*e*P	Pn	11 44 14.0	-1.6
THIG				*i* S	Sn	11 44 26.1	-1.9
CCIG	**Comitan**	**1.64**	**38**	*e*P	Pn	11 44 24.8	-0.5
CCIG				*i* S	Sn	11 44 43.3	-2.1
TGIG		**1.78**	**2**	*e*P	Pn	11 44 25.8	-1.3
TGIG				*i* S	Sn	11 44 46.6	-2.2
HUIG	**Huatulco**	**2.91**	**286**	*i* P	Pn	11 44 41.1	-1.5
HUIG				*i* S	Sn	11 45 14.9	-1.5

*ISCJB **06** 11:51:07.7±0.4, 50°.11N±0°.03×18°.38E±0°.03, h0km, Error ellipse: s-maj=3.9km s-min=2.3km az=18.9*
*IPEC **06** 11:51:08.5±0.2, 50°.07N×18°.47E, h6km±2km, ML2.3/4, Error ellipse: s-maj=1.4km s-min=1.0km az=2.0*
*CSEM **06** 11:51:08.9±0.2, 50°.09N×18°.38E, h1km, ML3.2/9, Error ellipse: s-maj=5.5km s-min=3.1km az=14.0*
*WAR **06** 11:51:09.2, 50°.06N×18°.43E*
*PRU **06** 11:51:10.4, 50°.09N×18°.34E, h0km*

ISC 06 11:51:09.1±0.4, 50°.09N±0°.03×18°.37E±0°.03, h0km, n40, σ1§18/66, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.11**	**268**	*e*Pg	**Pg**	**11 51 13.0**	**+1.8**
OKC	**Ostrava-Krasne**	**0.29**	**210**	*e*PG	**Pg**	**11 51 15.2**	**+0.6**
OKC	comp=Z,336nm,0.7s			*e*SG	**Sg**	**11 51 19.6**	**+1.3**
OKC	**Ostrava-Krasne** baz=41	**0.29**	**210**	*e*Pg	**Pg**	**11 51 14.9**	**+0.3**
OKC	comp=Z,336nm,0.7s			Sg	**Sg**	**11 51 19.6**	**+1.3**
MORC	**Moravsky Berou** baz=64	**0.62**	**240**	*e*Pg	**Pg**	**11 51 21.2**	**+0.3**
MORC	comp=Z,36nm,0.2s,baz=64			*e*Sg	**Sg**	**11 51 29.3**	**+0.4**
OJC	**Ojcow**	**0.93**	**81**	*e*Pg	**Pg**	**11 51 25.2**	**-1.7**
OJC				*e*Sg	**Sg**	**11 51 37.8**	**-1.1**
OJC	**Ojcow** baz=261	**0.93**	**81**	*e*Pg	**Pg**	**11 51 25.0**	**-1.9**
LIKS	**Likavka**	**1.14**	**155**	*e*SG	**Sg**	**11 51 48.5**	**+2.7**
LIKS	**Likavka**	**1.14**	**155**	*e*Sg	**Sg**	**11 51 48.5**	**+2.7**
JAVC	**Velka Javorina**	**1.31**	**201**	*e*Pg	**Pg**	**11 51 34.3**	**+0.1**
JAVC	comp=Z,31nm,0.3s			*e*Sg	**Sg**	**11 51 52.0**	**+0.8**
DPC	**Dobruska-Polom**	**1.34**	**282**	*e*PG	**Pg**	**11 51 34.8**	**0.0**
DPC	comp=Z,120nm,0.5s			*e*SG	**Sg**	**11 51 53.3**	**+1.2**
DPC	**Dobruska-Polom**	**1.34**	**282**	Pg	**Pg**	**11 51 34.8**	**0.0**
DPC	baz=101			*e*Sg	**Sg**	**11 51 52.6**	**+0.5**
VRAC	**Vranov** baz=57	**1.39**	**237**	*e*Pg	**Pg**	**11 51 35.1**	**-0.7**
VRAC	comp=Z,52nm,0.3s,baz=57			*e*Sg	**Sg**	**11 51 53.3**	**-0.5**
NIE	**Niedzica**	**1.43**	**117**	*e*Pg	**Pg**	**11 51 35.9**	**-0.5**
NIE				*e*Sg	**Sg**	**11 51 55.2**	**+0.3**
NIE	**Niedzica**	**1.43**	**117**	*e*Pg	**Pg**	**11 51 35.9**	**-0.5**
NIE				*e*Sg	**Sg**	**11 51 55.2**	**+0.3**
KSP	**Ksiaz**	**1.53**	**300**	*e*Pn	**Pn**	**11 51 37.4**	**-0.2**
KSP				*e*Sn	**Sn**	**11 51 58.5**	**+0.3**
KSP				*e*Sg	**Sg**	**11 52 00.3**	**+2.2**
KSP	**Ksiaz**	**1.53**	**300**	*e*Pn	**Pn**	**11 51 37.4**	**-0.2**
KSP				*e*Pg	**Pg**	**11 51 39.7**	**+1.4**
KSP				*e*Sg	**Sg**	**11 51 59.5**	**+1.4**
KSP	**Ksiaz**	**1.53**	**300**	*e*Pn	**Pn**	**11 51 37.4**	**-0.2**
UPC	**Upice**	**1.57**	**286**	*e*SG	**Sg**	**11 52 00.7**	**+1.2**
UPC	**Upice**	**1.57**	**286**	Sg	**Sg**	**11 52 00.7**	**+1.2**
VYHS	**Vyhne**	**1.62**	**169**	*e*PN	**Pn**	**11 51 38.5**	**-0.4**
VYHS				*e*SN	**Sn**	**11 51 59.9**	**-0.6**
VYHS	**Vyhne** baz=351	**1.62**	**169**	*e*Pg	**Pg**	**11 51 37.6**	**-2.6**
VYHS	**Vyhne**	**1.62**	**169**	*e*Pn	**Pn**	**11 51 38.5**	**-0.4**
VYHS	baz=351			*e*Sg	**Sg**	**11 51 58.6**	**-2.6**
VYHS				*e*Sn	**Sn**	**11 51 59.9**	**-0.6**
KRUC	**Moravsky** baz=52	**1.65**	**232**	*e*Pn	**Pn**	**11 51 38.2**	**-1.0**
KRUC	comp=Z,40nm,0.3s,baz=52			*e*Sg	**Sg**	**11 52 01.0**	**-0.9**
SMOL	**Smolenice**	**1.69**	**202**	*e*SN	**Sn**	**11 52 03.1**	**+0.9**
SMOL	**Smolenice**	**1.69**	**202**	*e*Sn	**Sn**	**11 52 03.1**	**+0.9**
STHS	**Stebnicka Huta**	**1.98**	**109**	*e*PN	**Pn**	**11 51 46.7**	**+2.9**
STHS				*e*SN	**Sn**	**11 52 14.0**	**+4.7**
STHS	**Stebnicka Huta**	**1.98**	**109**	*e*Pn	**Pn**	**11 51 46.7**	**+2.9**
KECS	**Kecovo**	**2.12**	**138**	*e*PG	**Pg**	**11 51 50.9**	**+1.2**
KECS				*e*SN	**Sn**	**11 52 13.6**	**+0.8**
PSZ	**Piszkesteto**	**2.39**	**155**	*e*Sn	**Sn**	**11 52 19.4**	**-0.1**
PRU	**Pruhonice**	**2.47**	**269**	*e*PG	**Pg**	**11 51 53.8**	**-2.6**
PRU				*e*SG	**Sg**	**11 52 27.4**	**-1.0**
PRU	**Pruhonice** comp=Z,18nm,0.7s	**2.47**	**269**	Sg	**Sg**	**11 52 27.4**	**-1.0**
PVCC	**Panska Ves** comp=Z,35nm,0.5s	**2.48**	**282**	*e*SG	**Sg**	**11 52 29.6**	**+1.0**
PVCC	**Panska Ves** comp=Z,35nm,0.5s	**2.48**	**282**	Sg	**Sg**	**11 52 29.6**	**+1.0**
KOLS	**Kolonicke sedl**	**2.79**	**113**	*e*PG	**Pg**	**11 52 02.1**	**-0.5**
KOLS				*e*SG	**Sg**	**11 52 40.1**	**+1.3**
KOLS	**Kolonicke sedl**	**2.79**	**113**	*e*Pg	**Pg**	**11 52 02.1**	**-0.5**
KOLS				*e*Sg	**Sg**	**11 52 40.1**	**+1.3**
BRG	**Berggiesshubel**	**2.94**	**287**	PG	**Pg**	**11 52 04.4**	**-0.9**
BRG				SG	**Sg**	**11 52 42.3**	**-1.0**
KHC	**Kasperske Hory** comp=Z,16nm,0.8s	**3.26**	**255**	*e*PG	**Pg**	**11 52 09.2**	**-2.3**
KHC				*e*SG	**Sg**	**11 52 52.9**	**-0.9**
KHC	**Kasperske Hory** comp=Z,22nm,0.4s	**3.26**	**255**	Pg	**Pg**	**11 52 09.2**	**-2.3**
KHC				Sg	**Sg**	**11 52 52.9**	**-0.9**
NKC	**Novy Kostel** comp=Z,18nm,0.8s	**3.81**	**274**	*e*SG	**Sg**	**11 53 11.1**	**-0.3**
NKC	**Novy Kostel** comp=Z,18nm,0.8s	**3.81**	**274**	Sg	**Sg**	**11 53 11.1**	**-0.3**

*DDA **06** 11:54:32.7, 39°.43N×33°.10E, h9km±1km, Md3.0*
*ISK **06** 11:54:32.7, 39°.44N×33°.02E, h7km, MD3.3*
*CSEM **06** 11:54:33.0±0.1, 39°.43N×33°.00E, h0km±1km, MD3.0, Error ellipse: s-maj=2.0km s-min=1.5km az=126.0*
*ISCJB **06** 11:54:33.7±0.3, 39°.43N±0°.02×33°.03E±0°.03, h10km, Error ellipse: s-maj=3.3km s-min=2.7km az=42.3*

ISC 06 11:54:33.3±0.5, 39°.42N±0°.02×33°.04E±0°.03, h2km±4km, n50, σ0§92/77, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBAL	**Bala**	**0.14**	**29**	*i* P	**Pg**	**11 54 35.8**	**-0.2**
BBAL				*i* S	**Sg**	**11 54 37.9**	**+0.1**
BBAL	**Bala**	**0.14**	**29**	*i* P	**Pg**	**11 54 35.8**	**-0.2**
BBAL				*i* S	**Sg**	**11 54 37.9**	**+0.1**
LOD	**Lodumlu**	**0.51**	**336**	PG	**Pg**	**11 54 42.6**	**-0.5**
LOD				SG	**Sg**	**11 54 50.0**	**+0.2**
LOD	**Lodumlu**	**0.51**	**336**	*i* Pg	**Pg**	**11 54 42.6**	**-0.5**
LOD				*i* Sg	**Sg**	**11 54 50.0**	**+0.2**
KIZT	**Kizilcal**	**1.05**	**239**	*e*PG	**Pg**	**11 54 53.1**	**-0.2**
KIZT				*e*SG	**Sg**	**11 55 08.2**	**+1.2**
KIZT	**Kizilcal**	**1.05**	**239**	*e*Pg	**Pg**	**11 54 53.1**	**-0.3**
KIZT				*e*Sg	**Sg**	**11 55 08.2**	**+1.3**
CDAG	**Cicekdag**	**1.05**	**78**	*i* P	**Pg**	**11 54 52.1**	**-1.3**
CDAG				*i* S	**Sg**	**11 55 06.8**	**-0.3**
CDAG	**Cicekdag**	**1.05**	**78**	*i* P	**Pg**	**11 54 52.1**	**-1.3**
CDAG				*i* S	**Sg**	**11 55 06.8**	**-0.3**
ELDT	**Eldivan**	**1.11**	**16**	*i* P	**Pg**	**11 54 53.7**	**-0.9**
ELDT				*i* S	**Sg**	**11 55 09.3**	**+0.4**
ELDT	**Eldivan**	**1.11**	**16**	*i* P	**Pg**	**11 54 53.7**	**-0.9**
ELDT				*i* S	**Sg**	**11 55 09.4**	**+0.4**
KDHN	**Kadinhani**	**1.15**	**219**	*i* P	**Pg**	**11 54 55.2**	**-0.1**
KDHN				*i* S	**Sg**	**11 55 11.5**	**+1.3**
KDHN	**Kadinhani**	**1.15**	**219**	*i* P	**Pg**	**11 54 55.2**	**-0.1**
KDHN				*i* S	**Sg**	**11 55 11.5**	**+1.3**
SVRH	**Sivrihisar-ESK**	**1.17**	**272**	*e*PN	**Pn**	**11 54 54.9**	**-1.8**
SVRH				*e*SN	**Sn**	**11 55 11.6**	**-1.6**
SVRH	**Sivrihisar-ESK**	**1.17**	**272**	*e*Pn	**Pn**	**11 54 54.9**	**-1.8**
SVRH				*e*Sn	**Sn**	**11 55 11.6**	**-1.6**
CANT	**Cankiri**	**1.27**	**21**	*e*PN	**Pn**	**11 54 57.0**	**-1.0**
SULT	**Sultanhani-AKS**	**1.27**	**163**	*e*PN	**Pn**	**11 54 57.9**	**-0.2**
SULT				*e*SN	**Sn**	**11 55 16.2**	**+0.5**
LADK	**Ladik-KONYA**	**1.33**	**204**	*e*PN	**Pn**	**11 54 58.5**	**-0.3**
LADK				*e*SN	**Sn**	**11 55 17.2**	**+0.1**
LADK	**Ladik-KONYA**	**1.33**	**204**	*e*Pn	**Pn**	**11 54 58.5**	**-0.3**
LADK				*e*Sn	**Sn**	**11 55 17.2**	**+0.2**
SGKT	**Sivrigoynuk**	**1.38**	**327**	*i* P	**Pn**	**11 54 58.9**	**-0.6**
SGKT				*i* S	**Sg**	**11 55 18.4**	**+0.9**
SGKT	**Sivrigoynuk**	**1.38**	**327**	*i* P	**Pn**	**11 54 58.8**	**-0.7**
SGKT				*i* S	**Sg**	**11 55 18.4**	**+0.9**
CORM	**Corum**	**1.44**	**58**	*e*PN	**Pn**	**11 54 59.5**	**-0.9**
CORM	**Corum**	**1.44**	**58**	*e*Pn	**Pn**	**11 54 59.5**	**-0.9**
AVNT	**Avonos**	**1.55**	**114**	*i* P	**Pn**	**11 55 00.7**	**-1.2**
AVNT				*i* S	**Sn**	**11 55 22.8**	**+0.1**
AVNT	**Avonos**	**1.55**	**114**	*i* P	**Pn**	**11 55 00.7**	**-1.2**
AVNT				*i* S	**Sn**	**11 55 22.8**	**+0.2**
KONT	**Konya--Tatoy**	**1.56**	**200**	*e*PN	**Pn**	**11 55 02.5**	**+0.5**
KONT	**Konya--Tatoy**	**1.56**	**200**	*e*Pn	**Pn**	**11 55 02.5**	**+0.4**
ESKT	**Eskisehir**	**1.69**	**274**	*i* P	**Pn**	**11 55 06.5**	**+2.6**
ESKT				*i* S	**Sn**	**11 55 25.2**	**-0.9**
SEYT	**Eskypehyr**	**1.69**	**274**	*i* S	**Sn**	**11 55 25.2**	**-0.9**
ILGA	**Ilgaz**	**1.71**	**17**	*i* P	**Pn**	**11 55 04.8**	**+0.7**
ILGA				*i* S	**Sn**	**11 55 27.6**	**+1.0**
ILGA	**Ilgaz**	**1.71**	**17**	*i* P	**Pn**	**11 55 04.8**	**+0.7**
ILGA				*i* S	**Sn**	**11 55 27.6**	**+1.0**
MDU	**Mudurnu**	**1.75**	**307**	*e*PN	**Pn**	**11 55 03.7**	**-0.9**
MDU	**Mudurnu**	**1.75**	**307**	*e*Pn	**Pn**	**11 55 03.7**	**-0.9**
YOZ	**Yozgat**	**1.78**	**82**	*e*PN	**Pn**	**11 55 05.2**	**+0.2**
YOZ	**Yozgat**	**1.78**	**82**	*e*Pn	**Pn**	**11 55 05.2**	**+0.2**
CTKT	**Corum**	**1.81**	**48**	*i* P	**Pn**	**11 55 06.2**	**+0.8**
CTKT				*i* S	**Sn**	**11 55 30.3**	**+1.4**
CTKT	**Corum**	**1.81**	**48**	*i* P	**Pn**	**11 55 06.2**	**+0.8**
CTKT				*i* S	**Sn**	**11 55 30.3**	**+1.4**
BALT	**Daday**	**2.13**	**7**	*i* P	**Pn**	**11 55 11.7**	**+1.9**
BALT				*i* S	**Sn**	**11 55 40.6**	**+3.7**
BALT	**Daday**	**2.13**	**7**	*i* P	**Pn**	**11 55 11.7**	**+1.9**
GULT	**Gulveren**	**2.19**	**298**	*e*PN	**Pn**	**11 55 10.1**	**-0.5**
GULT	**Gulveren**	**2.19**	**298**	*e*Pn	**Pn**	**11 55 10.1**	**-0.5**
ALT	**Altintas**	**2.30**	**262**	*e*PN	**Pn**	**11 55 11.9**	**-0.3**
ALT	**Altintas**	**2.30**	**262**	*e*Pn	**Pn**	**11 55 12.0**	**-0.2**
HDMB	**Hadim**	**2.49**	**190**	*e*PN	**Pn**	**11 55 15.3**	**+0.5**
HDMB	**Hadim**	**2.49**	**190**	*e*Pn	**Pn**	**11 55 15.3**	**+0.5**
SUTC	**Sutluce-Ispart**	**2.51**	**220**	*e*PN	**Pn**	**11 55 15.2**	**0.0**
SUTC	**Sutluce-Ispart**	**2.51**	**220**	*e*Pn	**Pn**	**11 55 15.2**	**+0.1**
KOZT	**Kozan**	**2.92**	**131**	*e*PN	**Pn**	**11 55 21.5**	**+0.7**
SARI	**SarD1z-Kayseri**	**2.94**	**103**	*e*PN	**Pn**	**11 55 19.8**	**-1.3**
SVSK	**Karacayir**	**3.10**	**80**	*e*PN	**Pn**	**11 55 23.6**	**+0.4**
SVSK	**Karacayir**	**3.10**	**80**	*e*Pn	**Pn**	**11 55 23.6**	**+0.4**

IDC 06 12:04:56.5±4.1, 3°.60S×100°.50E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.5/23, mbtmp3.6/5, Error ellipse: s-maj=176.7km s-min=21.5km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.2nm,0.4s,baz=304,slow=8.8,SNR=3.5	**36.77**	**119**	P	P	12 12 05.9	-0.3
ASAR	**Alice Springs** 0.3nm,0.4s,baz=302,slow=8.1,SNR=8.6	**37.92**	**125**	P	P	12 12 16.1	+0.2
SONM	**Songino Array** 1.0nm,0.6s,baz=182,slow=9.2,SNR=6.6	**51.48**	**5**	P	P	12 14 03.9	+0.2
MKAR	**Makanchi Array** 0.3nm,0.4s,baz=135,slow=9.3,SNR=3.4	**52.70**	**344**	P	P	12 14 12.8	0.0
ZALV	**Zalesovo Beam** 0.6nm,0.3s,baz=165,slow=2.9,SNR=5.2	**58.83**	**349**	P	P	12 14 56.4	-0.3
TXAR	**Lajitas Array** 0.2nm,0.5s,baz=224,slow=2.5,SNR=4.6	**145.64**	**39**	PKPbc	PKPbc	12 24 37.4	-0.5

IDC 06 12:06:18.3±16.0, 23°.06S×179°.39E, h258km±155km, mb3.1/3, mb1 3.3/4, mb1mx3.2/16, mbtmp3.2/4, Error ellipse: s-maj=86.6km s-min=47.4km az=20.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera** 1.0nm,0.3s,baz=20,slow=4.3,SNR=5.1	**15.28**	**187**	P	Pn	12 09 40.4	-0.9
ASAR	**Alice Springs** 0.2nm,0.4s,baz=93,slow=8.0,SNR=6.7	**41.62**	**260**	P	P	12 13 41.6	-0.1
WRA	**Warramunga Arr** 0.7nm,0.4s,baz=93,slow=8.4,SNR=8.4	**41.91**	**265**	P	P	12 13 43.9	-0.1
KSRS	**Korea Array** 0.8nm,0.6s,baz=129,slow=4.4,SNR=4.4	**77.24**	**320**	P	P	12 17 45.0	+1.0
BRTR	**Keskin Array B** 0.7nm,0.6s,baz=87,slow=4.9,SNR=5.6	**146.62**	**308**	PKPbc	PKPbc	12 25 28.4	-1.2

IDC 06 12:24:04.6±1.2, 31°.99N×104°.76E, h0km, mb3.4/4, mb1 3.7/5, mb1mx3.4/26, mbtmp3.4/5, ML3.5/1, Error ellipse: s-maj=72.8km s-min=21.9km az=60.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr** 0.1nm,0.3s,baz=12,slow=9.1,SNR=5.5	**14.46**	**203**	Pn	Pn	12 27 29.9	-0.8
MKAR	**Makanchi Array** 0.2nm,0.4s,baz=113,slow=10.0,SNR=3.8	**22.69**	**317**	P	P	12 29 07.9	+0.3
ZALV	**Zalesovo Beam** 0.4nm,0.4s,baz=120,slow=8.5,SNR=2.2	**26.18**	**333**	P	P	12 29 40.5	-0.1
WRA	**Warramunga Arr** 1.0nm,0.7s,baz=339,slow=7.6,SNR=5.3	**58.91**	**147**	P	P	12 34 05.7	+0.1
ASAR	**Alice Springs** 0.2nm,0.7s,baz=335,slow=6.4,SNR=5.4	**61.97**	**150**	P	P	12 34 26.6	+0.1

*CSEM **06** 12:28:05.7, 37°.45N×34°.87E, h5km, ML2.6, After ISK*

ISK 06 12:28:05.7, 37°.45N×34°.87E, h5km, ML2.6, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MERS	**Mersin**	**0.64**	**205**	*e*PG	Pg	12 28 19.3	+1.3
MERS				*e*SG	Sg	12 28 29.2	+2.9
MERS	**Mersin**	**0.64**	**205**	*e*Pg	Pg	12 28 19.3	+1.3
MERS				*e*Sg	Sg	12 28 29.2	+2.9
KOZT	**Kozan**	**0.77**	**87**	*e*PG	Pg	12 28 21.1	+0.7
KOZT				*e*SG	Sg	12 28 33.3	+3.0
KOZT	**Kozan**	**0.77**	**87**	*e*Pg	Pg	12 28 21.1	+0.7
KOZT				*e*Sg	Sg	12 28 33.3	+3.0
KRTS	**Karatas**	**0.96**	**155**	*e*PG	Pg	12 28 25.8	+1.6
KRTS	**Karatas**	**0.96**	**155**	*e*Pg	Pg	12 28 25.8	+1.6
IKL	**Isikli**	**1.54**	**218**	*e*PN	Pn	12 28 35.0	+1.3
IKL	**Isikli**	**1.54**	**218**	*e*Pn	Pn	12 28 35.0	+1.3
SARI	**SarD1z-Kayseri**	**1.90**	**49**	*e*PN	Pn	12 28 35.8	-2.9
HDMB	**Hadim**	**1.96**	**256**	*e*PN	Pn	12 28 41.8	+2.2
HDMB	**Hadim**	**1.96**	**256**	*e*Pn	Pn	12 28 41.8	+2.2

*IDC **06** 13:06:34.5±1.0, 32°.02N×104°.79E, h0km, mb3.6/5, mb1 3.7/7, mb1mx3.5/28, mbtmp3.6/7, ML3.6/1, MS2.9/1, Ms1 2.9/1, ms1mx2.2/30, Error ellipse: s-maj=42.8km s-min=18.3km az=55.0*
*ISCJB **06** 13:06:35.6±0.6, 32°.30N±0°.04×104°.91E±0°.06, h10km, mb3.5/5, Error ellipse: s-maj=7.7km s-min=6.0km az=0.2*
*BJI **06** 13:06:37.0, 32°.20N×105°.09E, h3km, mb3.7/2, ML3.5/11, Ms3.6/3, Ms7 3.2/3*
*NEIC **06** 13:06:39.5±0.8, 32°.34N×104°.56E, h10km, Error ellipse: s-maj=15.8km s-min=10.9km az=75.0*

ISC 06 13:06:37.3±0.6, 32°.35N±0°.04×104°.93E±0°.07, h10km, n18, σ1§49/26, mb3.5/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.75**	**62**	Pn	**Pn**	**13 07 36.2**	**+1.1**
XAN				Pg	**Pb**	**13 07 40.2**	**-3.3**
XAN				Sn	**Sn**	**13 08 24.7**	**+5.4**
XAN				Sg	**Sb**	**13 08 29.5**	**+0.5**
XAN	comp=N,160nm,0.7s			smax			
XAN	comp=E,86nm,0.8s			smax			
LZH	**Lanzhou**	**3.83**	**347**	*e*Pn	**Pn**	**13 07 40.5**	**+4.1**
LZH				Pg	**Pg**	**13 07 48.7**	**-2.1**
LZH				Sn	**Sn**	**13 08 21.1**	**-0.4**
LZH				Sg	**Sg**	**13 08 35.6**	**-4.9**
LZH	comp=N,210nm,0.7s			smax			
LZH	comp=E,400nm,0.7s			smax			
LZH	comp=E,650nm,4.4s			LR	LR		
LZH	comp=Z,760nm,5.2s			LR	LR		
ENH	**Enshi**	**4.42**	**117**	*e*Pn	**Pb**	**13 07 52.0**	**-2.9**
ENH				*e*Sn	**Sn**	**13 08 28.1**	**-7.7**
GYA	**Guiyang**	**6.06**	**165**	Pn	**Pn**	**13 08 08.6**	**+1.6**
GYA				Sn	**Sn**	**13 09 14.8**	**-1.7**
GYA	comp=N,70nm,0.8s			smax			
GYA	comp=E,50nm,0.9s			smax			
GTA	**Gaotai**	**8.18**	**331**	*e*P	**Pn**	**13 08 43.1**	**+7.1**
GTA				pP		13 08 47.3	
GTA				sP		13 08 51.1	
GTA	comp=Z,1.0nm,0.7s			pmax	pmax		
WHN	**Wuhan**	**8.25**	**100**	P	**Pb**	**13 09 09.8**	**+10**
BJT	**Baijiatuan** comp=Z,15nm,0.3s	**11.87**	**47**	P	**Pn**	**13 09 30.3**	**+3.8**
QIZ	**Qiongzhong** comp=Z,292nm,2.0s	**13.98**	**160**	*e*P	**Pn**	**13 09 58.5**	**+3.0**
CHTO	**Chiang Mai** comp=Z,1.1nm,0.3s	**14.52**	**203**	P	**Pn**	**13 10 03.1**	**+0.3**
SONM	**Songino Array** comp=Z,0.2nm,0.3s,baz=188,slow=9.5,SNR=3.5	**15.51**	**4**	Pn	**Pn**	**13 10 20.0**	**+4.1**
SONM	comp=Z,45nm,18.6s,baz=212,slow=38			LR	LR	13 16 45.0	
KSRS	**Korea Array** baz=254,slow=10,SNR=4.0	**12.53**	**69**	P	**Pn**	**13 11 05.8**	**-0.2**
MKAR	**Makanchi Array** comp=Z,1.2nm,0.8s,mb3.4,baz=96,slow=9.9,SNR=11	**22.53**	**316**	P	**P**	**13 11 38.2**	**+1.0**
MKAR	**Makanchi Array** comp=Z,0.4nm,0.3s,mb3.4,baz=134,slow=8.4,SNR=2.9	**22.53**	**316**	P	**P**	**13 11 38.2**	**+1.0**

YOZ	**Yozgat**	**1.74**	**82**	*e*Pn	**Pn**	**13 10 32.5**	**-0.4**
MDU	**Mudurnu**	**1.79**	**307**	*e*PN	**Pb**	**13 10 35.2**	**+0.1**
MDU	**Mudurnu**	**1.79**	**307**	*e*PN	**Pb**	**13 10 35.2**	**+0.2**
BALT	**Daday**	**2.14**	**6**	*i* P	**Pb**	**13 10 40.1**	**-1.0**
BALT				*i* S	**Sb**	**13 11 07.6**	**-0.4**
BALT	**Daday**	**2.14**	**6**	*i* P	**Pb**	**13 10 40.1**	**-0.9**
BALT				*i* S	**Sb**	**13 11 07.6**	**-0.4**
GULT	**Gulveren**	**2.23**	**298**	*e*PN	**Pn**	**13 10 41.5**	**+2.0**
GULT	**Gulveren**	**2.23**	**298**	*e*Pn	**Pn**	**13 10 41.5**	**+2.0**
ALT	**Altintas**	**2.34**	**262**	*e*PN	**Pn**	**13 10 41.7**	**+0.7**
ALT	**Altintas**	**2.34**	**262**	*e*Pn	**Pn**	**13 10 41.7**	**+0.6**
HDMB	**Hadim**	**2.48**	**191**	*e*PN	**Pn**	**13 10 41.6**	**-1.4**
HDMB	**Hadim**	**2.48**	**191**	*e*Pn	**Pn**	**13 10 41.7**	**-1.4**
SVSK	**Karacayir**	**3.06**	**79**	*e*PN	**Pn**	**13 10 52.2**	**+1.2**
SVSK	**Karacayir**	**3.06**	**79**	*e*Pn	**Pn**	**13 10 52.2**	**+1.2**

*IDC **06** 13:15:49.4±0.8, 31°.38N×103°.61E, h0km, mb4.0/11, mb1 4.1/13, mb1mx4.0/27, mbtmp4.0/13, ML3.7/2, MS3.5/8, Ms1 3.5/8, ms1mx3.1/43, Error ellipse: s-maj=30.7km s-min=15.7km az=58.0*

*BJI **06** 13:15:50.1, 31°.37N×103°.70E, h11km, mB4.3/5, mb4.1/7, ML4.2/17, Ms4.3/11, Ms7 3.9/8*

*ISCJB **06** 13:15:50.1±0.8, 31°.38N±0°.03×103°.49E±0°.04, h21km±7km, mb4.0/13, MS3.4/7, Error ellipse: s-maj=5.7km s-min=4.8km az=162.0*

*NEIC **06** 13:15:51.5±0.6, 31°.44N×103°.56E, h10km, mb3.8/2, Error ellipse: s-maj=12.1km s-min=9.0km az=78.0*

ISC 06 13:15:50.3±0.8, 31°.37N±0°.02×103°.48E±0°.04, h7km±6km, n36, σ0°.96/43, mb4.0/13, MS3.4/7, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.52**	**152**	⇑*i*Pg	**Pg**	**13 16 00.8**	**+0.5**
CD2				Sg	**Sg**	**13 16 08.2**	**+1.2**
CD2				smax			
	comp=N,10μm,0.8s						
CD2				smax			
	comp=E,15μm,0.7s						
LZH	**Lanzhou**	**4.71**	**4**	*e*Pn	**Pn**	**13 17 05.5**	**+3.7**
LZH				Sn	**Sb**	**13 18 06.1**	**-4.1**
LZH				Sg	**Sg**	**13 18 20.5**	**-1.2**
LZH				smax			
	comp=N,420nm,1.2s						
LZH				smax			
	comp=E,530nm,1.3s						
LZH				LR	LR		
	comp=N,2μm,5.7s						
LZH				LR	LR		
	comp=Z,2μm,7.0s						
ENH	**Enshi**	**5.28**	**100**	*e*Pn	**Pn**	**13 17 10.2**	**+0.5**
	comp=Z,90nm,0.7s						
ENH				*e*Sn	**Sn**	**13 18 09.9**	**-0.9**
XAN	**Xi'an**	**5.30**	**58**	Pn	**Pn**	**13 17 08.8**	**-1.1**
XAN				Pg	**Pb**	**13 17 22.9**	**-0.4**
XAN				Sn	**Sn**	**13 18 11.1**	**-0.2**
XAN				Sg	**Sg**	**13 18 33.7**	**-6.9**
XAN				smax			
	comp=N,370nm,1.0s						
XAN				smax			
	comp=E,170nm,1.1s						
GYA	**Guiyang**	**5.63**	**150**	Pn	**Pn**	**13 17 14.8**	**+0.3**
GYA				Sn	**Sn**	**13 18 18.2**	**-1.2**
GYA				smax			
	comp=N,260nm,1.0s						
GYA				smax			
	comp=E,460nm,1.1s						
KMI	**Kunming**	**6.26**	**186**	Pn	**Pn**	**13 17 24.4**	**+1.3**
KMI				Sn	**Sn**	**13 18 34.8**	**0.0**
KMI				Sg	**Sg**	**13 19 09.5**	**-1.8**
KMI				smax			
	comp=N,68nm,1.7s						
KMI				smax			
	comp=E,72nm,1.9s						
KMI				LR	LR		
	comp=N,990nm,6.4s						
KMI				LR	LR		
	comp=E,4μm,9.1s						
GTA	**Gaotai**	**8.56**	**341**	*e*P	**Pn**	**13 17 56.0**	**+1.4**
GTA				pP		13 18 00.4	
GTA				sP		13 18 03.3	
GTA				S	**Sn**	**13 19 31.7**	**+0.2**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,61nm,4.8s						
GTA				LR	LR		
	comp=N,600nm,11.7s						
GTA				LR	LR		
	comp=E,890nm,12.6s						
GTA				LR	LR		
	comp=Z,280nm,9.6s						
WHN	**Wuhan**	**9.37**	**92**	P	**Pn**	**13 18 07.2**	**+1.4**
WHN				LR	LR		
	comp=N,3μm,7.4s						
WHN				LR	LR		
	comp=E,930nm,9.6s						
WHN				LR	LR		
	comp=Z,1μm,7.6s						
CMAR	**Chiang Mai Arr**	**13.50**	**199**	Pn	**Pn**	**13 19 04.3**	**+2.0**
	comp=Z,0.2nm,0.3s,baz=14,slow=12,SNR=6.2						
CMAR				LR	LR	13 24 35.3	
	comp=Z,172nm,18.7s,baz=0.0,slow=39						
TAPN	**Taplejung**	**14.32**	**258**	*e*P	**Pn**	**13 19 14.1**	**+0.6**
	comp=Z,11nm,0.7s						
ODAN	**Odare**	**14.76**	**256**	*e*P	**Pn**	**13 19 19.6**	**+0.1**
JIRN	**Jiri**	**15.50**	**261**	*e*P	**Pn**	**13 19 28.3**	**-1.1**
GUN	**Gumba**	**15.69**	**262**	*e*P	**Pn**	**13 19 31.2**	**-0.6**
	comp=Z,56nm,0.9s						
PKI	**Pulchoki**	**16.19**	**261**	*e*P	**Pn**	**13 19 37.6**	**-0.7**
	comp=Z,37nm,0.6s						
KKN	**Kakani**	**16.23**	**262**	*e*P	**Pn**	**13 19 37.6**	**-1.2**
	comp=Z,63nm,0.8s						
DMN	**Daman**	**16.43**	**261**	*e*P	**Pn**	**13 19 39.2**	**-2.2**
	comp=Z,46nm,0.7s						
SONM	**Songino Array**	**16.59**	**7**	Pn	**Pn**	**13 19 43.6**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=190,slow=14,SNR=11						
ULN	**Ulaanbaatar**	**16.70**	**8**	*e*Pn	**Pn**	**13 19 44.5**	**-0.1**
	comp=Z,4.7nm,0.8s						
KSRS	**Korea Array**	**21.03**	**67**	P	**P**	**13 20 34.1**	**-0.5**
	comp=Z,9.4nm,0.8s,mb4.2,baz=260,slow=10,SNR=44						
KSRS				LR	LR	13 29 04.9	
	comp=Z,90nm,19.7s,MS3.2,baz=304,slow=38						
CN2	**Changchun**	**21.30**	**48**	*e*P	**P**	**13 20 37.3**	**-0.2**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.5						
MKAR	**Makanchi Array**	**22.43**	**319**	P	**P**	**13 20 50.3**	**+0.8**
	comp=Z,3.8nm,0.9s,mb3.8,baz=117,slow=13,SNR=27						
AAK	**Ala-Archa**	**25.61**	**304**	LR	LR	13 32 17.3	
	comp=Z,254nm,19.0s,MS3.8,baz=253,slow=38						
ZAA0	**Zalesovo Array**	**26.25**	**335**	*e*P	**P**	**13 21 26.4**	**+0.5**
ZALV	**Zalesovo Beam**	**26.25**	**335**	P	**P**	**13 21 26.6**	**+0.8**
	comp=Z,4.9nm,0.9s,mb4.0,baz=134,slow=8.5,SNR=14						
ZALV				LR	LR	13 31 55.4	
	comp=Z,68nm,18.9s,MS3.2,baz=134,slow=37						
KURK	**Kurchatov**	**26.71**	**324**	P	**P**	**13 21 31.0**	**+0.9**
	comp=Z,4.8nm,1.0s,mb4.0,baz=130,slow=9.1,SNR=35						
KURK				LR	LR	13 33 10.1	
	comp=Z,144nm,19.5s,MS3.5,baz=110,slow=39						
PSI	**Prapat**	**28.74**	**189**	LR	LR	13 33 26.2	
	comp=Z,96nm,18.8s,MS3.4,baz=21,slow=37						
MJAR	**Matsushiro Arr**	**29.16**	**70**	LR	LR	13 35 10.5	
	comp=Z,54nm,18.4s,MS3.2,baz=195,slow=40						
PALK	**Pallekele**	**32.05**	**226**	LR	LR	13 36 32.0	
	comp=Z,46nm,20.3s,MS3.2,baz=285,slow=39						
TIXI	**Tiksi**	**42.60**	**12**	*e*P	**P**	**13 23 45.7**	**-0.9**
	comp=Z,2.1nm,0.6s,mb4.0						
ARCES	**ARCESS Array B**	**56.80**	**336**	P	**P**	**13 25 34.8**	**0.0**
	comp=Z,2.0nm,0.8s,mb4.2,baz=96,slow=9.9,SNR=5.1						
FINES	**FINESS Array B**	**57.05**	**326**	P	**P**	**13 25 37.0**	**+0.4**
	comp=Z,1.1nm,0.5s,mb4.1,baz=50,slow=10,SNR=5.3						
WRA	**Warramunga Arr**	**58.99**	**146**	P	**P**	**13 25 50.2**	**-0.5**
	comp=Z,2.8nm,0.7s,mb4.4,baz=338,slow=7.5,SNR=8.2						
ASAR	**Alice Springs**	**62.00**	**148**	P	**P**	**13 26 10.7**	**-0.5**
	comp=Z,0.9nm,0.7s,mb4.0,baz=339,slow=6.8,SNR=12						
NOA	**NORSAR Array B**	**64.15**	**327**	P	**P**	**13 26 24.6**	**-0.5**
	comp=Z,0.6nm,0.6s,mb3.8,baz=72,slow=6.7,SNR=3.1						
YKA	**Yellowknife Ar**	**81.59**	**17**	P	**P**	**13 28 08.9**	**+0.4**
	comp=Z,0.7nm,0.7s,mb3.7,baz=325,slow=5.9,SNR=3.9						
TORD	**Torodi Ar. Bea**	**93.05**	**287**	P	**P**	**13 29 07.3**	**+2.1**
	comp=Z,0.5nm,1.1s,mb3.9,baz=28,slow=3.7,SNR=2.3						

DJA 06 13:16:17, 1°.56N×120°.24E, h68km, MLv4.0/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPSI	**Mapaga**	**1.26**	**196**	P	Pn	13 16 39.2	+0.4
MRSI	**Marisa**	**2.01**	**122**	P	Pn	13 16 44.1	-4.7
APSI	**Ampana**	**2.83**	**150**	P	Pn	13 17 02.7	+2.8
APSI				S	Sn	13 17 34.0	+1.1
LUWI	**Luwuk**	**3.62**	**136**	P	Pn	13 17 09.8	-0.8
LUWI				S	Sn	13 17 52.9	+0.7
MYLDM	**Lahad Datu**	**3.99**	**334**	P	Pn	13 17 15.7	-0.1

*BJI **06** 13:42:39.5, 8°.40S×128°.53E, h122km, mB6.0/52, mb5.9/66*

*ISCJB **06** 13:42:47.2±0.1, 7°.51S±0°.02×127°.92E±0°.02, h120km, mb5.8/155, Error ellipse: s-maj=3.4km s-min=2.9km az=149.5*

*NEIC **06** 13:42:49.0±0.1, 7°.50S×127°.89E, h122km, mb5.7/59, ME5.3, MW6.0, MW5.9, Error ellipse: s-maj=5.3km s-min=3.7km az=54.0 Broadband fault plane solution: P waves. NP1:ϕ_s105.00000°, δ45.00000°, λ80.00000°. NP2:ϕ_s299.00000°, δ46.00000°, λ100.00000°. Principal axes: T Plg83.0000°, Azm289.0000°; N Plg0.0000°, Azm0.0000°; P Plg0.0000°, Azm22.0000°; Moment Tensor Solution. s52 Moment tensor: Scale 10^{18} Nm; M_{rr}1.02; $M_{\theta\theta}$-0.63; $M_{\phi\phi}$-0.39; $M_{r\theta}$0.11; $M_{\theta\phi}$0.45; $M_{\phi r}$0.18; Best double couple: $M_0$1.00000×10^{18} NP1:ϕ_s318.00000°, δ47.00000°, λ105.00000°. NP2:ϕ_s117.00000°, δ45.00000°, λ75.00000°. Principal axes: T 1.0600, Plg79.0000°, Azm303.0000°; N -0.0900, Plg10.0000°, Azm127.0000°; P -0.9700, Plg0.0000°, Azm37.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [III] at Darwin, Australia.

*TEH **06** 13:42:49.0, 7°.44S×127°.94E, h122km*

*BGS **06** 13:42:49.2±1.6, 7°.50S×127°.89E, h122km, mb5.7(NEIC)*

*IDC **06** 13:42:49.4±0.8, 7°.45S×127°.76E, h120km±6km, mb5.4/25, mb1 5.3/25, mb1mx5.3/26, mbtmp5.4/25, MS5.2/10, Ms1 5.2/10, ms1mx4.7/26, Error ellipse: s-maj=12.7km s-min=9.1km az=85.0*

*MOS **06** 13:42:50.0±1.0, 7°.26S×127°.76E, h132km, mb5.8/47, MS5.0/17, Error ellipse: s-maj=9.9km s-min=5.5km az=111.7*

*GCMT **06** 13:42:52.6±0.1, 7°.63S×127°.87E, h138km, MW6.0, Moment Tensor Solution. s114,c240; s57,c74; Moment tensor: Scale 10^{18}Nm; M_{rr}1.07±.01; $M_{\theta\theta}$-1.06±.01; $M_{\phi\phi}$-0.02±.01; $M_{r\theta}$-0.05±.01; $M_{\theta\phi}$0.08±.01; $M_{\phi r}$0.30±.01; Best double couple: $M_0$1.10000×10^{18} NP1:ϕ_s81.00000°, δ45.00000°, λ70.00000°. NP2:ϕ_s288.00000°, δ49.00000°, λ109.00000°. Principal axes: T 1.1500, Plg76.0000°, Azm267.0000°; N -0.0800, Plg14.0000°, Azm95.0000°; P -1.0700, Plg2.0000°, Azm5.0000°; Data Used: II IU CN IC G. Surface waves: sta=118, comp=273, per= 50.*

*DJA **06** 13:42:52.3±0.2, 8°.S±2°.×12°.8E±°, h150km±3km, mB6.3/66, mb5.7/70, MLv6.4/11, Mw(mB)6.0/66*

*SZGRF **06** 13:43:14.6, 5°.50S×124°.50E, h139km, Banda Sea*

ISC 06 13:42:49.1±0.1, 7°.56S±0°.02×127°.90E±0°.02, h122km, h122km±1.3km: pP-P, n1208, σ1°.24/476, mb5.8/154, 263C-223D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**3.86**	**4**	P	**Pn**	**13 43 50.8**	**+4.0**
MSAI	**Masohi**	**4.31**	**14**	P	**Pn**	**13 43 57.4**	**+4.6**
NLAI	**Namlea**	**4.36**	**349**	P	**Pn**	**13 43 58.7**	**+5.1**
TLE	**Tual**	**5.17**	**69**	P	**Pn**	**13 44 07.1**	**+2.7**
	42nm7μm,1.0s						
MMRI	**Maumere**	**5.70**	**259**	P	**Pn**	**13 44 14.7**	**+3.1**
	23nm4μm,1.4s						
KDI	**Kendari**	**6.35**	**304**	P	**Pn**	**13 44 23.7**	**+3.3**
	3.3nm706nm,2.0s						
KAKA	**Kakadu**	**6.80**	**139**	⇓*i*P	**Pn**	**13 44 27.0**	**+0.7**
	570nm,0.2s						
KAKA	**Kakadu**	**6.80**	**139**	*e*Pn	**Pn**	**13 44 26.8**	**+0.4**
	298nm,0.8s						
KAKA	**Kakadu**	**6.80**	**139**	P	**Pn**	**13 44 26.6**	**+0.3**
	18nm5μm,0.6s						
LBMI	**Labuha**	**6.89**	**357**	P	**Pn**	**13 44 32.9**	**+5.3**
	19nm4μm,1.2s						
WSI	**Waingapu**	**7.80**	**254**	P	**Pn**	**13 44 40.7**	**+0.8**
	161nm4μm,0.7s						
BKSI	**Bulukumba**	**8.04**	**286**	P	**Pn**	**13 44 46.5**	**+3.3**
	9μm868nm,1.0s						
KNA	**Kununurra**	**8.19**	**174**	P	**Pn**	**13 44 44.8**	**-0.3**
LUWI	**Luwuk**	**8.25**	**321**	P	**Pn**	**13 44 51.6**	**+5.6**
	1μm,1.0s						
TNTI	**Ternate**	**8.29**	**356**	P	**Pn**	**13 44 51.3**	**+4.7**
	2μm,1.3s						
BNSI	**Bone**	**8.36**	**292**	P	**Pn**	**13 44 51.6**	**+4.1**
	811nm,0.9s						
KAPI	**Kappang**	**8.48**	**287**	P	**Pn**	**13 44 51.2**	**+2.0**
	7.4nm,0.3s,baz=131,slow=7.6,SNR=31						
KAPI				S	**Sn**	**13 46 24.4**	**+1.2**
	baz=123,slow=17,SNR=1.5						
KAPI	**Kappang**	**8.48**	**287**	P	**Pn**	**13 44 51.0**	**+1.8**
	3μm155nm,0.9s						
APSI	**Ampana**	**9.08**	**316**	P	**Pn**	**13 45 02.2**	**+5.0**
	1μm,1.7s						
TTSI	**Tana Toraja**	**9.21**	**299**	P	**Pn**	**13 45 03.9**	**+4.9**
	6μm336nm,1.1s						
MNI	**Manado**	**9.45**	**341**	P	**Pn**	**13 45 07.3**	**+5.1**
MRSI	**Marisa**	**9.95**	**323**	P	**Pn**	**13 45 14.2**	**+5.2**
	8μm385nm,1.2s						
FITZ	**Fitzroy Crossi**	**10.71**	**192**	*e*P	**Pn**	**13 45 16.2**	**-2.8**
	1μm,0.5s						
FITZ				*e*S	**Sn**	**13 47 06.4**	**-11**
FITZ	**Fitzroy Crossi**	**10.71**	**192**	P	**Pn**	**13 45 16.3**	**-2.7**
	94nm,0.3s,baz=29,slow=10.0,SNR=731						
FITZ				S	**Sn**	**13 47 08.1**	**-9.0**
	121nm,0.3s,baz=295,slow=23,SNR=10						
FITZ				LR	LR	13 50 07.1	
	comp=Z,15μm,19.0s,baz=7.9,slow=41						
FITZ	**Fitzroy Crossi**	**10.71**	**192**	⇓*i*Pn	**Pn**	**13 45 16.4**	**-2.6**
	16nm,0.8s						
FITZ				*e*S	**Sn**	**13 47 08.7**	**-8.4**
FITZ	**Fitzroy Crossi**	**10.71**	**192**	P	**Pn**	**13 45 16.5**	**-2.5**
	2μm,0.7s						
SGSI	**Sangihe**	**11.42**	**348**	P	**Pn**	**13 45 32.2**	**+3.7**
SMPI	**Sarmi**	**12.11**	**63**	P	**Pn**	**13 45 38.9**	**+1.2**
	6μm363nm,1.2s						
KHKI	**Kahang-Kahang**	**12.20**	**265**	P	**Pn**	**13 45 36.8**	**-2.0**
	4μm152nm,0.7s						
MMPI	**Merauke**	**12.40**	**95**	P	**Pn**	**13 45 42.4**	**+0.9**
	1μm,0.7s						
KBKI	**Kotabaru**	**12.42**	**289**	P	**Pn**	**13 45 45.7**	**+4.0**
	4μm362nm,0.9s						
SRBI	**Singaraja**	**12.58**	**267**	P	**Pn**	**13 45 44.9**	**+1.1**
	9μm198nm,0.9s						
DNP	**Denpasar**	**12.61**	**264**	P	**Pn**	**13 45 48.9**	**+4.7**
	503nm,0.5s						
IGBI	**Denpasar**	**12.68**	**263**	P	**Pn**	**13 45 44.7**	**-0.5**
	690nm,0.4s						
ABJI	**Asem Bagus**	**13.54**	**268**	P	**Pn**	**13 45 58.0**	**+1.6**
	268nm,1.0s						
JAY	**Jayapura**	**13.70**	**69**	P	**Pn**	**13 46 02.6**	**+4.2**
	4μm200nm,0.7s						
WRAB	**Tennant Creek**	**13.80**	**154**	*e*P	**Pn**	**13 45 53.9**	**-5.7**
WRAB				pmax	pmax		
	comp=Z,2μm,1.0s						
WRAB	**Tennant Creek**	**13.80**	**154**	*e*Pn	**Pn**	**13 45 53.9**	**-5.7**
	comp=Z,2μm,1.0s						
WRAB				*e*Sn	**Sn**	**13 48 16.4**	**-16**
WRAB	**Tennant Creek**	**13.80**	**154**	P	**Pn**	**13 45 56.7**	**-2.9**
	comp=Z,2μm,1.6s						
WRA	**Warramunga Arr**	**13.80**	**154**	P	**Pn**	**13 45 56.0**	**-3.7**
	comp=Z,42nm,0.3s,baz=323,slow=13,SNR=527						
WRA				S	**Sn**	**13 48 21.6**	**-10**
	comp=Z,267nm,0.3s,baz=324,slow=25,SNR=14						
KMMI	**Kalianget**	**13.83**	**271**	P	**Pn**	**13 46 02.4**	**+2.4**
	comp=Z,244nm,1.1s						
GSPH	**General Santos**	**13.87**	**348**	*e*P	**Pn**	**13 46 03.5**	**+2.9**
GMJI	**Gumukmas**	**14.33**	**266**	P	**Pn**	**13 46 05.5**	**-1.0**
	comp=Z,4μcomp=Z,164nm,0.6s						
MATI	**Mati**	**14.50**	**353**	*e*P	**Pn**	**13 46 12.3**	**+3.7**
DAV	**Davao City (W)**	**14.71**	**351**	P	**Pn**	**13 46 12.2**	**+0.9**
	comp=Z,41nm,0.3s,baz=35,slow=22,SNR=7.3						
DAV	**Davao City (W)**	**14.71**	**351**	*e*Pn	**Pn**	**13 46 18.4**	**+7.1**
DAV	**Davao City (W)**	**14.71**	**351**	Pn	**Pn**	**13 46 15.0**	**+3.7**
	SNR=38						
DAV				Pn	**Pn**	**13 46 15.0**	**+3.7**
	SNR=38						
DAV	**Davao City (W)**	**14.71**	**351**	⇓*e*P	**Pn**	**13 46 10.1**	**-1.2**
DAV	**Davao City (W)**	**14.71**	**351**	P	**Pn**	**13 46 18.3**	**+7.0**
	comp=Z,1μm,1.0s						
DMPH	**Davao City--Mi**	**14.74**	**351**	*e*P	**Pn**	**13 46 05.0**	**-6.6**
KCP	**Kidapawan**	**14.74**	**349**	⇓*e*P	**Pn**	**13 46 18.3**	**+6.7**
GRJI	**Gresik**	**15.31**	**271**	P	**Pn**	**13 46 20.1**	**+1.3**
	comp=Z,686nm,0.6s						
TSM	**Tawau**	**15.45**	**319**	P	**Pn**	**13 46 25.4**	**+4.9**
BUKP	**Musuan**	**15.59**	**349**	*e*P	**Pn**	**13 46 29.3**	**+7.0**
MBWA	**Marble Bar**	**15.65**	**209**	⇓*i*P	**Pn**	**13 46 21.4**	**-1.6**
	comp=Z,18nm,0.4s						
MBWA				*e*S	S	13 49 01.4	-22
MBWA	**Marble Bar**	**15.65**	**209**	Pn	**Pn**	**13 46 23.0**	**0.0**
	SNR=21						
MBWA				Pn	**Pn**	**13 46 23.0**	**0.0**
	SNR=21						
MBWA	**Marble Bar**	**15.65**	**209**	P	**Pn**	**13 46 22.3**	**-0.7**
	comp=Z,615nm,1.2s						
BIPH	**Bislig**	**15.71**	**354**	⇓*e*P	**Pn**	**13 46 25.4**	**+1.7**
MYLDM	**Lahad Datu**	**15.75**	**323**	P	**Pn**	**13 46 32.0**	**+7.7**
MYLDM	**Lahad Datu**	**15.75**	**323**	P	**Pn**	**13 46 30.1**	**+5.9**
	comp=Z,823nm,1.1s						
PWJI	**Pagerwojo**	**15.95**	**267**	P	**Pn**	**13 46 25.9**	**-0.9**
	comp=Z,5μmcomp=Z,329nm,0.6s						
PAGZ	**Pagadian**	**15.95**	**344**	*e*P	**Pn**	**13 46 31.3**	**+4.6**
SJI	**Sawahan**	**15.99**	**268**	P	**Pn**	**13 46 27.6**	**+0.4**
	comp=Z,8μmcomp=Z,411nm,0.6s						
IPIL	**Ipil**	**16.14**	**341**	*e*P	**Pn**	**13 46 34.2**	**+5.1**
COEN	**Coen**	**16.30**	**114**	*e*P	**Pn**	**13 46 29.9**	**-1.1**
	comp=Z,298nm,0.8s						
COEN				*e*S	**S**	**13 49 19.5**	**-13**
COEN	**Coen**	**16.30**	**114**	P	**Pn**	**13 46 30.6**	**-0.4**
	comp=Z,1μm,0.8s						
NGJI	**Ngawi**	**16.30**	**270**	P	**Pn**	**13 46 33.1**	**+2.1**
	comp=Z,10μmcomp=Z,312nm,0.9s						
BUTP	**Butuan**	**16.57**	**352**	*e*P	**Pn**	**13 46 42.1**	**+7.8**
PCJI	**Pacitan**	**16.57**	**267**	P	**Pn**	**13 46 32.7**	**-1.7**
SDKM	**Sandakan**	**16.91**	**321**	P	**Pn**	**13 46 44.1**	**+5.6**
ASAR	**Alice Springs**	**17.02**	**161**	P	**Pn**	**13 46 37.8**	**-2.0**
	comp=Z,23nm,0.3s,baz=327,slow=9.3,SNR=769						
ASAR				S	**S**	**13 49 43.8**	**-5.8**
	comp=Z,78nm,0.3s,baz=346,slow=24,SNR=6.4						
ASAR				P3KPbc		14 21 38.5	
	comp=Z,0.0nm,0.3s,baz=152,slow=3.6,SNR=9.3						
ASAR	**Alice Springs**	**17.02**	**161**	P	**Pn**	**13 46 37.8**	**-2.0**
ASAR				S	**S**	**13 49 43.8**	**-5.8**
UGM	**Wanagama**	**17.22**	**268**	P	**Pn**	**13 46 42.5**	**+0.2**
	comp=Z,8μmcomp=Z,304nm,0.9s						
SMRI	**Semarang**	**17.32**	**271**	P	**Pn**	**13 46 43.7**	**+0.2**
	comp=Z,8μmcomp=Z,219nm,1.0s						
MSLP	**Maasin**	**17.84**	**350**	*e*P	**Pn**	**13 46 54.5**	**+4.9**
KKM	**Kota Kinabalu**	**17.84**	**319**	P	**Pn**	**13 46 53.4**	**+3.7**
KKM	**Kota Kinabalu**	**17.84**	**319**	*e*P	**Pn**	**13 46 52.8**	**+3.0**
	comp=Z,3μm,2.2s						
KKM	**Kota Kinabalu**	**17.84**	**319**	P	**Pn**	**13 46 53.0**	**+3.2**
	comp=Z,526nm,1.6s						
STKI	**Sintang**	**18.04**	**294**	P	**P**	**13 46 54.1**	**+3.2**
	comp=Z,740nm,2.1s						
KDM	**Kudat**	**18.12**	**322**	P	**P**	**13 46 56.6**	**+4.7**
BTM	**Bintulu**	**18.24**	**305**	P	**P**	**13 46 57.1**	**+4.0**
SBUM	**Sibu**	**18.53**	**302**	P	**P**	**13 46 59.9**	**+3.6**
SBUM	**Sibu**	**18.53**	**302**	P	**P**	**13 47 00.0**	**+3.6**
	comp=Z,582nm,2.1s						
OCLP	**Ormoc**	**18.77**	**350**	*e*P	**P**	**13 47 03.2**	**+4.3**
GUIM	**Jordan**	**18.82**	**344**	*e*P	**P**	**13 47 02.0**	**+2.5**
BATP	**Bataraza**	**19.11**	**328**	*e*P	**P**	**13 47 07.6**	**+5.0**
CUYO	**Cuyo Island**	**19.53**	**339**	*e*P	**P**	**13 47 11.0**	**+3.8**
KSM	**Kuching**	**19.71**	**296**	P	**P**	**13 47 10.8**	**+1.7**
KSM	**Kuching**	**19.71**	**296**	*e*P	**P**	**13 47 10.8**	**+1.6**
	comp=Z,620nm,0.8s						
KSM	**Kuching**	**19.71**	**296**	P	**P**	**13 47 11.3**	**+2.2**
	comp=Z,905nm,0.9s						
LEM	**Lembang**	**20.13**	**271**	P	**P**	**13 47 13.7**	**0.0**
	comp=Z,10μmcomp=Z,374nm,1.0s						
CNP	**Catarman**	**20.20**	**351**	*e*P	**P**	**13 47 18.9**	**+4.6**
ENPP	**El Nido**	**20.46**	**336**	*e*P	**P**	**13 47 20.6**	**+3.4**
OTRP	**Odiongan**	**20.63**	**344**	*e*P	**P**	**13 47 23.7**	**+4.7**
TPI	**Tanjungpandan**	**20.71**	**282**	P	**P**	**13 47 21.6**	**+1.6**
	comp=Z,332nm,2.4s						
BUSP	**Coron**	**20.89**	**338**	*e*P	**P**	**13 47 25.1**	**+3.3**
CBJI	**Citeko**	**20.92**	**272**	P	**P**	**13 47 19.2**	**-3.0**
	comp=Z,1μm,0.6s						
SJMP	**San Jose**	**21.00**	**341**	*e*P	**P**	**13 47 27.3**	**+4.3**
PVCP	**Virac**	**21.34**	**350**	*e*P	**P**	**13 47 29.5**	**+2.9**
AUQP	**San Andres**	**21.38**	**346**	*e*P	**P**	**13 47 32.7**	**+5.6**
CTA	**Charters Tower**	**21.71**	**127**	*e*P	**P**	**13 47 32.3**	**+1.8**
	comp=Z,124nm,1.0s,mb5.2						
CTA				*e*S	**S**	**13 51 25.2**	**+1.4**
CTA	**Charters Tower**	**21.71**	**127**	P	**P**	**13 47 32.5**	**+2.0**
	comp=Z,83nm,0.7s,mb5.2,baz=295,slow=10.0,SNR=67						
CTA				S	**S**	**13 51 24.0**	**+0.2**
	comp=Z,34nm,0.7s,baz=135,slow=4.

STKA LR LR 14 00 40.5
comp=Z,7μm,18.8s,baz=337,slow=39
STKA Stephens Creek 27.36 154 *e*P **P 13 48 24.1 +1.3**
comp=Z,400nm,1.9s,mb5.6
KTGM Kuala Trenggan 27.83 297 P **P 13 48 28.2 +1.0**
BKNI Bangkinang 27.90 285 P **P 13 48 29.2 +1.3**
comp=Z,5μmcomp=Z,335nm,0.9s,mb5.8
PDSI Padang 28.13 282 P **P 13 48 30.2 +0.3**
comp=Z,3μmcomp=Z,158nm,0.7s,mb5.6
PPSI Pulau Pagai 28.17 278 P **P 13 48 28.3 -2.0**
PPI Padang Panjang 28.31 283 P **P 13 48 30.9 -0.6**
comp=Z,3μmcomp=Z,176nm,0.8s,mb5.6
FRIM Kepong 28.32 291 P **P 13 48 32.0 +0.4**
EIDS Eidsvold 28.34 131 *e*P **P 13 48 32.3 +0.7**
comp=Z,441nm,2.0s,mb5.6
BBP Basco 28.43 348 *e*P **P 13 48 30.8 -1.6**
IPM Ipoh 29.36 293 P **P 13 48 41.1 +0.3**
IPM Ipoh 29.36 293 P **P 13 48 41.2 +0.4**
comp=Z,4μmcomp=Z,251nm,1.2s,mb5.7
SISI Saibi 29.37 281 P **P 13 48 39.3 -1.6**
comp=Z,65nm,0.9s,mb5.3
MNSI Mandailing Nat 29.44 285 P **P 13 48 40.2 -1.3**
comp=Z,4μmcomp=Z,215nm,0.8s,mb5.8
KULM Kulim 30.03 294 P **P 13 48 46.8 +0.1**
KULM Kulim 30.03 294 *e*P **P 13 48 46.2 -0.5**
comp=Z,159nm,0.9s,mb5.7
KULM Kulim 30.03 294 P **P 13 48 46.7 -0.1**
comp=Z,5μmcomp=Z,270nm,1.2s,mb5.8
PSI Prapat 30.68 289 LR LR 14 00 21.7
comp=Z,4μm,21.0s,baz=110,slow=34
COCO West Island 30.93 259 *e*P **P 13 48 53.3 -1.4**
COCO pmax pmax
comp=Z,52nm,0.7s,mb5.4
COCO West Island 30.93 259 *e*P **P 13 48 53.3 -1.4**
comp=Z,52nm,0.7s,mb5.4
GSI Gunungsitoli 31.50 285 P **P 13 48 58.3 -1.4**
comp=Z,5μmcomp=Z,227nm,0.8s,mb6.0
HNR Honiara 31.75 96 P **P 13 48 59.7 -2.2**
comp=Z,86nm,0.8s,mb5.5,baz=109,slow=3.6,SNR=2.7
HNR LR LR 14 01 56.6
comp=Z,2μm,20.1s,baz=287,slow=36
HNR Honiara 31.75 96 P **P 13 48 59.7 -2.2**
HNR pmax pmax
comp=Z,87nm,0.8s,mb5.5
HNR MLR MLR
comp=Z,2μm,20.2s
HNR Honiara 31.75 96 *e*P **P 13 48 59.4 -2.5**
comp=Z,1μm,1.6s,mb6.3
ARMA Armidale 31.81 139 *e*P **P 13 49 03.9 +1.7**
ARMA Armidale 31.81 139 *e*P **P 13 49 04.0 +1.8**
comp=Z,95nm,1.0s,mb5.5
QIZ Qiongzhong 31.86 326 P **P 13 49 03.0 +0.3**
QIZ pP pP 13 49 29.1 -0.2
QIZ sP sP 13 49 42.6 -0.8
QIZ pmax pmax
comp=Z,210nm,0.8s,mb5.9
QIZ pmax pmax
comp=Z,1μm,7.4s
QIZ LR LR
comp=N,2μm,13.1s
QIZ LR LR
comp=Z,5μm,20.1s
QIZ Qiongzhong 31.86 326 *e*P **P 13 49 03.3 +0.6**
comp=Z,182nm,0.8s,mb5.9
UBT Ubonrachathani 32.05 315 P **P 13 49 05.5 +1.0**
NACB Ninganchiao 32.13 349 *e*P **P 13 49 02.8 -2.3**
comp=Z,98nm,0.9s,mb5.5
HKC Hong Kong Obse 32.58 336⇑*i*P **P 13 49 08.0 -1.0**
HKC *i*S **S 13 54 14.0 -1.8**
TATO Taipei 32.93 349 *e*P **P 13 49 10.3 -1.8**
comp=Z,57nm,0.8s,mb5.5
QZH Quanzhou 33.55 345⇑*i*P **P 13 49 17.9 +0.5**
QZH pmax pmax
comp=Z,390nm,1.0s,mb6.2
QZH pmax pmax
comp=Z,3μm,3.3s
QZH LR LR
comp=N,2μm,13.3s
QZH LR LR
comp=E,3μm,12.2s
QZH LR LR
comp=Z,11μm,30.4s
GZH Guangzhou 33.62 335 P **P 13 49 21.9 +3.9**
GZH S **S 13 54 34.4 +2.5**
GZH LR LR
comp=N,4μm,20.2s
GZH LR LR
comp=E,7μm,18.9s
GZH LR LR
comp=Z,7μm,19.1s
TOO Toolangi 33.88 154 *e*P **P 13 49 23.1 +3.0**
TOO *e*S **S 13 54 35.9 +0.4**
CNB Canberra Magne 33.92 148 *e*P **P 13 49 23.4 +2.8**
CNB *e*S **S 13 54 39.4 +3.0**
KKTK Khon Kaen 34.34 314 P **P 13 49 25.3 +0.9**
comp=Z,2μm,0.6s,mb7.0
NNT Nongplab 34.41 305 P **P 13 49 26.5 +1.5**
BSI Banda Aceh 35.02 291 P **P 13 49 29.0 -1.3**
comp=Z,3μmcomp=Z,249nm,0.8s,mb6.1
NST Nakhon Sawan 35.90 310 P **P 13 49 38.0 +0.2**
comp=Z,83nm,0.6s,mb5.8
CBIJ Chichi jima 37.13 21 P **P 13 49 48.3 +0.3**
comp=Z,60nm,0.3s,mb6.0,baz=269,slow=23,SNR=9.7
CM31 Chiang Mai Arr 38.53 312 *e*P **P 13 50 00.2 +0.3**
CMAR Chiang Mai Arr 38.53 312 P **P 13 50 00.6 +0.6**
comp=Z,110nm,0.8s,mb5.8,baz=142,slow=7.0,SNR=157
CMAR PcP PcP 13 52 11.6 +1.2
comp=Z,50nm,0.8s,baz=174,slow=2.5,SNR=15
CMAR ScP ScP 13 55 45.4 -2.0
comp=Z,13nm,0.9s,baz=160,slow=3.4,SNR=7.9
CMAR PKiKP PKiKP 13 59 24.3 -0.3
comp=Z,1.8nm,0.9s,baz=265,slow=1.9,SNR=4.2
CMAR PKPPKP 14 22 29.4
comp=Z,0.4nm,0.4s,baz=301,slow=2.6,SNR=4.3
CMAR Chiang Mai Arr 38.53 312 P **P 13 50 00.6 +0.6**
CMAR PcP PcP 13 52 11.6 +1.2
CMAR ScP ScP 13 55 45.4 -2.0
CHTO Chiang Mai 38.75 313 *e*P **P 13 50 02.2 +0.4**
CHTO pmax pmax
comp=Z,104nm,0.6s,mb5.8
CHTO Chiang Mai 38.75 313 *e*P **P 13 50 02.2 +0.4**
comp=Z,104nm,0.6s,mb5.8
CHTO Chiang Mai 38.75 313 P **P 13 50 02.7 +0.9**
SNR=38
CHTO P 13 50 02.7
SNR=38
CHTO Chiang Mai 38.75 313 P **P 13 50 02.5 +0.7**
comp=Z,3μmcomp=Z,212nm,0.8s,mb6.0
SSE Sheshan 38.97 351 P **P 13 50 03.9 +0.5**
SSE pP pP 13 50 30.9 +0.2
SSE sP sP 13 50 44.8 +0.2
SSE PcP PcP 13 52 11.9 +0.4
SSE S **S 13 55 54.1 +1.0**
SSE SS SS 13 58 51.2 +1.0
SSE pmax pmax
comp=Z,220nm,1.0s,mb5.9
SSE pmax pmax
comp=Z,950nm,6.5s
SSE LR LR
comp=N,660nm,13.1s
SSE LR LR
comp=E,1μm,13.1s
SSE LR LR
comp=Z,1μm,18.1s
GYA Guiyang 39.60 329⇑*i*P **P 13 50 08.9 +0.2**
GYA pP pP 13 50 37.0 +0.9
GYA sP sP 13 50 51.8 +1.9
GYA PP PP 13 51 45.2 +3.0
GYA pmax pmax
comp=Z,150nm,0.8s,mb5.9
GYA pmax pmax
comp=Z,2μm,6.1s
GYA LR LR
comp=N,3μm,17.5s
GYA LR LR
comp=E,2μm,15.7s
GYA LR LR
comp=Z,3μm,19.4s
NOUC Port Laguerre 39.70 116 *e*P **P 13 50 10.8 +1.1**
DZM Mont Dzumac 39.82 115 *e*P **P 13 50 12.1 +1.4**
comp=Z,226nm,1.5s,mb5.8
DZM *e*S **S 13 56 07.4 +1.1**
comp=Z,4μm,25.0s
DZM *e*LQ 13 59 28.5
comp=Z,11μm,28.6s
DZM *e*LR LR 14 01 17.4
comp=Z,7μm,27.9s
DZM Mont Dzumac 39.82 115 *e*P **P 13 50 11.5 +0.8**
WHN Wuhan 40.05 342⇑*i*P **P 13 50 12.6 +0.2**
WHN pP pP 13 50 40.6 +0.8
WHN S **S 13 56 06.4 -3.0**
WHN pmax pmax
comp=Z,960nm,1.0s,mb6.6
WHN pmax pmax
comp=Z,4μm,7.4s
NJ2 Nanjing 40.32 348 *e*P **P 13 50 15.0 +0.4**
NJ2 pP pP 13 50 43.3 +1.2
NJ2 sP sP 13 50 58.0 +2.1
NJ2 PP PP 13 51 53.3 +3.3
NJ2 S **S 13 56 11.0 -2.4**
NJ2 pmax pmax
comp=Z,410nm,0.9s,mb6.3
NJ2 LR LR
comp=N,940nm,23.9s
NJ2 LR LR
comp=E,1μm,26.5s
NJ2 LR LR
comp=Z,2μm,24.4s
KMI Kunming 40.69 324⇑P **P 13 50 20.0 +2.3**
KMI pP pP 13 50 47.2 +2.0
KMI sP sP 13 50 59.9 +0.9
KMI PP PP 13 51 59.0 +5.0
KMI PcP PcP 13 52 18.1 +0.9
KMI ScP ScP 13 55 53.9 -1.7
KMI S **S 13 56 20.4 +1.4**
KMI ScS ScS 14 00 09.5 -1.2
KMI pmax pmax
comp=Z,430nm,1.1s,mb6.2
KMI pmax pmax
comp=Z,2μm,5.2s
KMI LR LR
comp=N,3μm,14.8s
KMI LR LR
comp=E,2μm,15.8s
KMI LR LR
comp=Z,3μm,20.4s
ENH Enshi 41.56 336 *e*P **P 13 50 24.8 0.0**
comp=Z,168nm,0.7s,mb5.9
CD2 Chengdu 44.70 330⇑*i*P **P 13 50 50.6 +0.6**
CD2 pP pP 13 51 19.2 +1.3
CD2 sP sP 13 51 33.8 +2.2
CD2 PP PP 13 52 38.0 +1.1
CD2 PcS PcS 13 56 23.3 -0.9
CD2 S **S 13 57 18.6 +1.0**
CD2 pmax pmax
comp=Z,460nm,0.8s,mb6.3
CD2 pmax pmax
comp=Z,2μm,8.4s
CD2 LR LR
comp=N,2μm,15.6s
CD2 LR LR
comp=E,3μm,19.2s
CD2 LR LR
comp=Z,4μm,19.2s
TIA Tai'an 44.70 348 P **P 13 50 49.3 -0.7**
TIA S **S 13 57 14.0 -3.4**
TIA pmax pmax
comp=Z,130nm,0.7s,mb5.8
TIA pmax pmax
comp=Z,710nm,6.0s
TIA LR LR
comp=N,720nm,11.0s
TIA LR LR
comp=E,2μm,22.6s
KSRS Korea Array 44.78 0 P **P 13 50 51.2 +0.7**
comp=E,115nm,0.9s,mb5.6,baz=177,slow=10,SNR=266
KSRS PcP PcP 13 52 31.5 +0.9
comp=E,19nm,0.8s,baz=186,slow=3.7,SNR=8.6
KSRS ScP ScP 13 56 09.6 -2.3
comp=E,3.7nm,0.8s,baz=179,slow=5.4,SNR=4.7
INCN Inchon 44.82 359 *e*P **P 13 50 51.7 +0.8**
comp=E,243nm,1.1s,mb5.8
INCN Inchon 44.82 359 P **P 13 50 52.1 +1.2**
SNR=22
INCN P 13 50 52.1
SNR=22
MJAR Matsushiro Arr 44.92 12 P **P 13 50 50.3 -1.4**
comp=E,95nm,0.9s,mb5.5,baz=189,slow=9.4,SNR=133
MJAR pP pP 13 51 18.6 -1.0
comp=E,37nm,1.1s,baz=186,slow=8.6,SNR=2.4
MJAR PcP PcP 13 52 30.8 -0.4
comp=E,9.2nm,0.7s,baz=184,slow=3.6,SNR=4.7
MAJO Matsushiro 44.92 12 *e*P **P 13 50 50.1 -1.6**
MAJO pmax pmax
comp=Z,157nm,1.0s,mb5.7
MAJO Matsushiro 44.92 12 *e*P **P 13 50 50.1 -1.6**
comp=Z,157nm,1.0s,mb5.7
MAT Matsushiro 44.92 12 P **P 13 50 50.1 -1.6**
MAT S **S 13 57 15.0 -5.6**
XAN Xi'an 45.11 338 P **P 13 50 52.8 -0.5**
XAN SS SS 14 00 48.1 -0.4
XAN pmax pmax
comp=Z,120nm,0.9s,mb5.6
XAN pmax pmax
comp=Z,330nm,9.7s
XAN LR LR
comp=N,2μm,24.4s
XAN LR LR
comp=E,450nm,17.4s
XAN LR LR
comp=Z,1μm,17.4s
WAKE Wake Island 46.58 55 *e*P **P 13 51 05.7 +0.6**
comp=Z,478nm,1.7s,mb6.0
DL2 Dalian 46.59 353⇑*i*P **P 13 51 04.6 -0.2**
DL2 pP pP 13 51 33.3 +0.4
DL2 PcP PcP 13 52 37.9 +1.0
DL2 PP PP 13 52 55.2 -0.9
DL2 S **S 13 57 41.2 -3.3**
DL2 SS SS 14 01 17.2 +4.8
DL2 pmax pmax
comp=Z,110nm,1.0s,mb5.5
DL2 pmax pmax
comp=Z,550nm,6.0s
TIY Taiyuan 47.30 343⇑*i*P **P 13 51 10.2 -0.1**
TIY pP pP 13 51 41.4 +2.9
TIY PP PP 13 53 06.9 +4.3
TIY S **S 13 57 50.2 -4.4**
TIY pmax pmax
comp=Z,1μm,5.1s
TIY LR LR
comp=N,1μm,13.2s
TIY LR LR
comp=E,1μm,13.7s
AGT Agartala 47.51 312 *i*x x 13 51 06.0
SHL Shillong 48.07 314⇑*i*P **P 13 51 15.0 -1.5**
SHL *ex* x 13 52 44.0
BJT Baijiatuau 48.56 348 *e*P **P 13 51 19.7 -0.3**
BJT pmax pmax
comp=Z,273nm,1.0s
BJT Baijiatuau 48.56 348 *e*P **P 13 51 19.7 -0.3**
comp=Z,273nm,1.0s,mb6.1
BJI Beijing 48.58 348 P **P 13 51 20.2 0.0**
BJI pP pP 13 51 48.9 +0.4
BJI sP sP 13 52 02.6 +0.5
BJI PP PP 13 53 15.2 +0.9
BJI sS sS 13 59 03.3 +1.8
BJI SS SS 14 01 49.1 +4.5
BJI pmax pmax
comp=Z,250nm,1.2s,mb6.0
BJI pmax pmax
comp=Z,2μm,6.8s
BJI LR LR
comp=N,450nm,18.7s
BJI LR LR
comp=E,1μm,17.1s
BJI LR LR
comp=Z,2μm,22.2s
LZH Lanzhou 48.95 334 *e*P **P 13 51 24.2 +1.1**
LZH pP pP 13 51 53.3 +1.9
LZH sP sP 13 52 06.3 +1.3
LZH PP PP 13 53 19.0 +1.3
LZH *e*S **S 13 58 15.5 -2.5**
LZH pmax pmax
comp=Z,57nm,1.0s,mb5.5
LZH pmax pmax
comp=Z,200nm,5.5s
LZH LR LR
comp=N,5μm,17.6s
LZH LR LR
comp=Z,5μm,18.0s
SNY Shenyang 49.30 356⇑P **P 13 51 25.5 -0.1**
SNY PP PP 13 53 21.8 +1.0
SNY S **S 13 58 18.8 -3.9**
SNY sS sS 13 59 11.9 +0.3
SNY pmax pmax
comp=Z,200nm,1.0s,mb6.0
SNY pmax pmax
comp=Z,1μm,5.3s
SNY LR LR
comp=N,5μm,17.4s
SNY LR LR
comp=E,840nm,9.0s
SNY LR LR
comp=Z,2μm,24.0s
PALK Pallekele 49.31 286 P **P 13 51 25.5 -0.7**
comp=Z,408nm,0.9s,mb6.4,SNR=5.4
PALK Pallekele 49.31 286 LR LR 14 13 24.1
comp=Z,1μm,21.4s,baz=103,slow=37
PALK Pallekele 49.31 286 *e*P **P 13 51 25.0 -1.2**
PALK pmax pmax
comp=Z,313nm,1.6s,mb6.0
PALK Pallekele 49.31 286 *e*P **P 13 51 25.0 -1.3**
comp=Z,313nm,1.6s,mb6.0
MSVF Nonsavu 49.84 107 *e*P **P 13 51 32.2 +2.1**
comp=Z,124nm,1.5s,mb5.6
OUZ Omahuta 50.06 130 *e*P **P 13 51 33.9 +2.3**
comp=Z,174nm,1.5s,mb5.8
HHC Hu-ho-hao-te 50.46 344 *e*P **P 13 51 34.4 0.0**
HHC pP pP 13 52 03.6 +0.7
HHC sP sP 13 52 18.0 +1.6
HHC PcP PcP 13 52 50.4 -0.5
HHC PP PP 13 53 33.1 +1.7
HHC ScP ScP 13 56 33.6 -2.1
HHC PcS PcS 13 56 46.7 -1.5
HHC S **S 13 58 37.4 -1.4**
HHC sS sS 13 59 29.9 +2.0
HHC ScS ScS 14 01 09.6 -3.6
HHC pmax pmax
comp=Z,51nm,1.1s,mb5.4
HHC pmax pmax
comp=Z,2μm,5.9s
HHC LR LR
comp=N,630nm,13.7s
HHC LR LR
comp=E,720nm,15.6s
HHC LR LR
comp=Z,670nm,15.0s
VLA Vladivostok 50.57 4*d i*P **P 13 51 35.2 +0.1**
VLA *e**PP pP 13 52 02.7 -0.9
VLA *e**SP sP 13 52 17.4 +0.2
VLA *e*S **S 13 58 33.6 -6.6**
VLA pmax pmax
comp=Z,317nm,1.2s,mb6.2
VLA Vladivostok 50.57 4 *i*P **P 13 51 34.7 -0.4**
BTO Baotou 50.68 342 *e*P **P 13 51 34.7 -1.3**
VIS Vishakhapatnam 50.68 300 *i*P **P 13 51 34.7 -1.7**
VIS *ex* x 13 51 42.3
comp=Z,257nm,1.7s
VIS *i*x x 13 58 36.7
CN2 Changchun 51.17 358 *e*P **P 13 51 39.2 -0.4**
CN2 *e*pP pP 13 52 08.3 +0.1
CN2 *e*sP sP 13 52 22.6 +0.9
CN2 PcP PcP 13 52 52.4 -1.0
CN2 *e*S **S 13 58 46.5 -1.9**
CN2 *e*SS SS 14 02 22.2 -3.4
CN2 pmax pmax
comp=Z,50nm,1.0s,mb5.5
CN2 pmax pmax
comp=Z,300nm,6.0s
CN2 LR LR
comp=N,1μm,16.0s
CN2 LR LR
comp=E,1μm,16.0s
CN2 LR LR
comp=Z,2μm,18.0s
LSA Lhasa 51.19 318 P **P 13 51 40.4 +0.3**
LSA LR LR
comp=N,3μm,7.6s
LSA LR LR
comp=E,3μm,7.0s
LSA LR LR
comp=Z,2μm,8.3s
LSA Lhasa 51.19 318 *e*P **P 13 51 41.3 +1.2**
LSA pmax pmax
comp=Z,146nm,0.7s,mb6.1
LSA Lhasa 51.19 318 *e*P **P 13 51 41.3 +1.3**
comp=Z,146nm,0.7s,mb6.1
MDJ Mudanjiang 51.95 2 P **P 13 51 45.7 +0.2**
MDJ pP pP 13 52 13.4 -0.7
MDJ sP sP 13 52 27.5 -0.1
MDJ PcP PcP 13 52 56.5 +0.2
MDJ PP PP 13 53 44.7 -0.1
MDJ S **S 13 58 55.8 -3.4**
MDJ sS sS 13 59 50.0 +1.4
MDJ ScS ScS 14 01 20.4 -2.9
MDJ SS SS 14 02 36.8 -1.2
MDJ pmax pmax
comp=Z,170nm,1.6s,mb5.8
MDJ pmax pmax
comp=Z,1μm,9.6s
MDJ LR LR
comp=N,2μm,39.0s
MDJ LR LR
comp=E,710nm,17.1s
MDJ LR LR
comp=Z,2μm,28.1s
MDJ Mudanjiang 51.95 2 *e*P **P 13 51 45.4 0.0**
comp=Z,409nm,1.5s,mb6.2
MDJ *e*pP pP 13 52 14.1 0.0
ODAN Odare 52.07 313 *e*P **P 13 51 46.0 -0.7**
comp=Z,279nm,0.5s,mb6.5
RPZ Rata Peaks 52.09 141 *e*P **P 13 51 47.5 +0.9**
comp=Z,449nm,1.1s,mb6.4
TAPN Taplejung 52.12 313 *e*P **P 13 51 46.2 -0.9**
comp=Z,247nm,0.8s,mb6.3
RAMN Ramite 52.70 312 *e*P **P 13 51 51.4 +0.1**
comp=Z,659nm,0.6s,mb6.9
KHZ Kahutara 53.05 139 *e*P **P 13 51 54.8 +1.1**
comp=Z,153nm,0.9s,mb6.0
ASAJ Asahikawa 53.12 13 P **P 13 51 53.8 -0.4**
comp=Z,37nm,0.7s,mb5.5,baz=227,slow=12,SNR=28
ASAJ pP pP 13 52 22.8 0.0
comp=Z,22nm,0.8s,baz=258,slow=25,SNR=3.2
ASAJ LR LR 14 15 02.5
comp=Z,1μm,19.2s,baz=122,slow=36
ASAJ Asahikawa 53.12 13 P **P 13 51 53.8 -0.3**
ASAJ *PP pP 13 52 22.8 0.0
ASAJ pmax pmax
comp=Z,37nm,0.7s
ASAJ MLR MLR
comp=Z,1μm,19.3s
JIRN Jiri 53.40 313 *e*P **P 13 51 56.4 -0.1**
comp=Z,274nm,0.7s,mb6.4
GTA Gaotai 53.49 333⇑P **P 13 51 57.5 +0.6**
GTA pP pP 13 52 26.7 +1.1
GTA sP sP 13 52 39.9 +0.8
GTA PP PP 13 53 58.3 -0.5
GTA S **S 13 59 16.2 -4.0**
GTA ScS ScS 14 01 29.8 -4.5
GTA pmax pmax
comp=Z,49nm,0.8s,mb5.6
GTA pmax pmax
comp=Z,2μm,9.0s
GTA LR LR
comp=N,2μm,18.6s
GTA LR LR
comp=E,2μm,16.8s
GTA LR LR
comp=Z,3μm,17.7s
GUN Gumba 53.77 313 *e*P **P 13 51 59.0 -0.2**
comp=Z,445nm,0.7s,mb6.6
URZ Urewera 53.81 132 *e*P **P 13 51 59.0 -0.3**
comp=Z,24nm,0.4s,mb5.6
YUK Yuzh-Kuril'sk 53.87 16⇑*i*P **P 13 51 59.3 -0.2**
YUK *i* 13 53 11.6
YUK *i* 13 53 57.0
YUK *i*S **S 13 59 19.5 -5.7**
YUK *i*SS SS 14 02 58.3 -10
YUK pmax pmax
comp=Z,750nm,1.4s,mb6.5
YUK pmax pmax
comp=N,390nm,1.4s
YUK pmax pmax
comp=E,490nm,1.4s
YUK pmax pmax
comp=Z,670nm,1.4s,mb6.5

PKI	**Pulchoki**	**53.92**	**312**	*e*P	**P**	**13 51 59.8**	**-0.5**
	comp=Z,331nm,0.6s,mb6.6						
PKI	**Pulchoki**	**53.92**	**312**	*e*P	**P**	**13 52 00.7**	**+0.4**
PKIN	**Phulchoki**	**53.94**	**312**	*e*P	**P**	**13 52 00.7**	**+0.3**
	comp=Z,235nm,0.7s,mb6.3						
KKN	**Kakani**	**54.14**	**312**	*e*P	**P**	**13 52 01.3**	**-0.6**
	comp=Z,372nm,0.7s,mb6.5						
DMN	**Daman**	**54.17**	**312**	*e*P	**P**	**13 52 02.0**	**-0.1**
	comp=Z,381nm,0.8s,mb6.5						
HYB	**Hyderabad**	**54.70**	**297**	*e*P	**P**	**13 52 05.5**	**-0.6**
HYB				*e*S	**S**	**13 59 36.0**	**-1.3**
HYB	**Hyderabad**	**54.70**	**297**	*i* P	**P**	**13 52 04.0**	**-2.1**
HYB				*e*pP	pP	13 52 32.5	-2.5
HYB				*e*S	**S**	**13 59 35.0**	**-2.3**
DGAR	**Diego Garcia**	**54.94**	**266**	*e*P	**P**	**13 52 04.2**	**-3.7**
DGAR				pmax	pmax		
	comp=Z,144nm,0.7s,mb6.1						
DGAR	**Diego Garcia**	**54.94**	**266**	*e*P	**P**	**13 52 04.2**	**-3.7**
	comp=Z,144nm,0.7s,mb6.1						
NGP	**Nagpur**	**55.80**	**302**	*e*PKP	**P**	**13 52 09.1**	**-4.8**
NGP			⇓*ex*		x	13 59 43.4	
YSS	**Yuzh-Sakhalins**	**55.86**	**12***c*	*i*P	**P**	**13 52 13.6**	**-0.2**
YSS				*i* *PP	pP	13 52 42.4	-0.4
YSS				*e*PPP		13 55 32.0	
YSS				*e*S	**S**	**13 59 49.0**	**-2.7**
YSS				pmax	pmax		
	comp=N,30nm,0.7s						
YSS				pmax	pmax		
	comp=Z,50nm,0.7s,mb5.7						
YSS				pmax	pmax		
	comp=Z,800nm,9.0s						
YSS				smax			
	comp=N,1μm,16.0s						
YSS				MLR	MLR		
	comp=E,500nm,15.0s						
YSS				MLR	MLR		
	comp=Z,600nm,15.0s						
YSS				MLR	MLR		
	comp=N,500nm,16.0s						
YSS	**Yuzh-Sakhalins**	**55.86**	**12**	*e*P	**P**	**13 52 13.1**	**-0.7**
	comp=N,42nm,0.7s,mb5.6						
HABR	**Khabarovsk**	**56.15**	**6***c*	*i*P	**P**	**13 52 14.2**	**-1.6**
HABR				*e**PP	pP	13 52 41.9	-2.9
HABR				*e**SP	sP	13 52 55.8	-2.5
HABR				*e*		13 53 08.8	
HABR				*e*		13 54 19.6	
HABR				PPP		13 55 36.7	
HABR				*e*S	**S**	**13 59 54.3**	**-1.2**
HABR				*e*		14 01 49.8	
HABR				*e*SS	SS	14 03 42.7	-1.3
HABR				pmax	pmax		
	comp=N,94nm,1.9s						
HABR				pmax	pmax		
	comp=Z,254nm,1.6s,mb6.0						
HABR				pmax	pmax		
	comp=E,96nm,1.8s						
HABR				MLR	MLR		
	comp=Z,653nm,15.0s						
KLR	**Kul'dur**	**56.65**	**3**κ	*i*P	**P**	**13 52 15.0**	**-4.4**
KLR				*e*S	**S**	**13 59 53.5**	**-8.6**
KLR				pmax	pmax		
	comp=Z,280nm,1.8s,mb6.0						
KLR				pmax	pmax		
	comp=Z,2μm,8.5s						
KLR				MLR	MLR		
	comp=N,700nm,15.0s						
KLR				MLR	MLR		
	comp=Z,1μm,15.0s						
HIA	**Hailar**	**57.03**	**354**	*e*P	**P**	**13 52 23.7**	**+1.6**
HIA				pmax	pmax		
	comp=Z,360nm,1.9s						
HIA	**Hailar**	**57.03**	**354**	*e*P	**P**	**13 52 23.7**	**+1.6**
	comp=Z,360nm,1.9s,mb6.1						
AKL	**Akola**	**57.34**	**300**	*e*PKP	**P**	**13 52 23.4**	**-1.4**
AKL				*ex*	x	13 52 27.7	
	comp=Z,322nm,1.6s						
AKL			*i* x		x	13 53 03.2	
BHPL	**Bhopal**	**58.05**	**303**	*e*PKP	**P**	**13 52 28.7**	**-1.1**
BHPL				AMb	AMB	13 52 33.1	
	comp=Z,305nm,1.3s,mb6.2						
ULN	**Ulaanbaatar**	**58.18**	**344**⇑	*i*P	**P**	**13 52 30.8**	**+0.7**
ULN				pmax	pmax		
	comp=Z,108nm,1.0s,mb5.8						
ULN	**Ulaanbaatar**	**58.18**	**344**⇑	*i*P	**P**	**13 52 30.8**	**+0.7**
	comp=Z,108nm,1.0s,mb5.8						
ULN	**Ulaanbaatar**	**58.18**	**344**	P	**P**	**13 52 31.2**	**+1.1**
	SNR=94						
ULN				P		13 52 31.2	
	SNR=94						
ULN	**Ulaanbaatar**	**58.18**	**344**	P	**P**	**13 52 31.2**	**+1.1**
	comp=Z,3μmcomp=Z,144nm,1.3s,mb5.8						
SONM	**Songino Array**	**58.34**	**343**	P	**P**	**13 52 32.0**	**+0.7**
	comp=Z,47nm,0.8s,mb5.6,baz=160,slow=6.7,SNR=168						
SONM				pP	pP	13 52 59.0	-1.5
	comp=Z,11nm,0.8s,baz=163,slow=13,SNR=2.8						
SONM				PcP	PcP	13 53 21.7	+0.8
	comp=Z,30nm,0.9s,baz=151,slow=3.4,SNR=4.2						
SONM				PKP2bc		14 22 16.4	
	comp=Z,2.8nm,0.9s,baz=289,slow=1.5,SNR=6.3						
SONM	**Songino Array**	**58.34**	**343**	P	**P**	**13 52 32.0**	**+0.8**
SONM				*PP	pP	13 52 59.0	-1.5
SONM						13 53 21.7	
SONM	**Songino Array**	**58.34**	**343**	P	**P**	**13 52 32.0**	**+0.7**
SONM				pP	pP	13 52 59.0	-1.5
SONM				PcP	PcP	13 53 21.7	+0.8
SONM			⇑*e*			14 22 16.4	
KAD	**Karad**	**58.54**	**295**	*e*PKP	**P**	**13 52 32.2**	**-1.1**
PTH	**Pithoragarh**	**58.84**	**311**	*e*PKP	**P**	**13 52 34.8**	**-0.3**
PTH				*ex*	x	13 55 19.0	
POO	**Poona**	**59.27**	**297**	*e*PKP	**P**	**13 52 37.5**	**-0.8**
DRV	**Dumont d'Urvil**	**59.60**	**174**	P	**P**	**13 52 38.0**	**-1.7**
DRV				S	**S**	**14 00 46.0**	**+5.9**
DRV				SS	SS	14 04 42.0	+4.5
DRV				R		14 11 00.0	
CASY	**Casey**	**59.85**	**188**	*e*P	**P**	**13 52 42.6**	**+1.2**
CASY	**Casey**	**59.85**	**188**	*e*P	**P**	**13 52 42.3**	**+0.9**
	comp=Z,48nm,0.8s,mb5.6						
CIT	**Chita**	**60.61**	**350**	*e*P	**P**	**13 52 48.8**	**+2.1**
CIT				*e*	pP	13 53 17.4	+1.2
CIT				pmax	pmax		
	comp=Z,321nm,2.4s,mb5.9						
NDI	**New Delhi**	**60.69**	**309**	*e*PKP	**P**	**13 52 45.0**	**-2.8**
NDI				*ex*	x	14 00 50.0	
DDI	**Dehra Dun**	**60.84**	**311**	*e*PKP	**P**	**13 52 46.0**	**-2.8**
DDI				*ex*	x	13 54 53.0	
ZAK	**Zakamensk**	**61.53**	**342**	*e*P	**P**	**13 52 53.2**	**+0.2**
ZAK				*e*	pP	13 53 21.7	-0.8
ZAK				pmax	pmax		
	comp=Z,58nm,1.8s,mb5.3						
AJM	**Ajmer**	**61.73**	**305**	*e*PKP	**P**	**13 52 53.9**	**-1.0**
SDNR	**Sundarnagar**	**62.23**	**311**	*e*PKP	**P**	**13 52 58.1**	**0.0**
TLY	**Talaya**	**62.58**	**343**	P	**P**	**13 53 00.7**	**+0.7**
	comp=Z,261nm,0.8s,mb6.2,SNR=25						
TLY	**Talaya**	**62.58**	**343***c*	*i*P	**P**	**13 53 00.6**	**+0.6**
TLY				*e*	pP	13 53 29.4	-0.2
TLY				*e*S	**S**	**14 01 16.4**	**-1.7**
TLY				*e*PS		14 01 25.9	
TLY				pmax	pmax		
	comp=Z,166nm,2.8s,mb5.5						
TLY	**Talaya**	**62.58**	**343**	*e*P	**P**	**13 53 00.2**	**+0.2**
	comp=Z,48nm,0.9s,mb5.4						
TLY	**Talaya**	**62.58**	**343**	P	**P**	**13 53 01.1**	**+1.1**
	SNR=46						
TLY				P		13 53 01.1	
	SNR=46						
BHK	**Bhakra**	**62.61**	**311**	*e*PKP	**P**	**13 52 58.0**	**-2.6**
BHK				*ex*	x	13 53 34.8	
WMQ	**Urumqi**	**62.75**	**328**	P	**P**	**13 53 02.0**	**+0.7**
WMQ				pP	pP	13 53 32.0	+1.1
WMQ				sP	sP	13 53 47.0	+2.8
WMQ				PP	PP	13 55 23.0	+2.1
WMQ				S	**S**	**14 01 19.0**	**-1.6**
WMQ				ScS	ScS	14 02 38.0	-4.2
WMQ				LR	LR		
	comp=N,2μm,18.0s						
WMQ				LR	LR		
	comp=E,2μm,18.0s						
WMQ				LR	LR		
	comp=Z,2μm,18.0s						
IRK	**Irkutsk**	**62.91**	**344**	*e*P	**P**	**13 53 02.3**	**+0.2**
IRK				*e*	pP	13 53 31.6	-0.1
IRK				pmax	pmax		
	comp=Z,248nm,2.5s,mb5.7						
SKR	**Severo-Kuril's**	**62.94**	**20**	*e*P	**P**	**13 53 00.0**	**-2.4**
SKR				*e*	pP	13 53 29.0	-3.0
SKR				*e*S	**S**	**14 01 15.0**	**-7.7**
SKR				*e*PS		14 01 39.0	
SKR				*e*SS	SS	14 05 28.0	-2.5
SKR				pmax	pmax		
	comp=N,700nm,5.0s						
SKR				pmax	pmax		
	comp=E,900nm,5.0s						
SKR				pmax	pmax		
	comp=Z,1μm,5.0s						
SKR				smax			
	comp=N,2μm,12.0s						
SKR				smax			
	comp=E,1μm,12.0s						
SKR				MLR	MLR		
	comp=Z,1μm,14.0s						
MOY	**Mondy**	**63.36**	**342**	*e*P	**P**	**13 53 05.7**	**+0.5**
MOY				pmax	pmax		
	comp=Z,417nm,3.6s						
MIR	**Mirnyy**	**63.56**	**195**⇑	*i*P	**P**	**13 53 07.8**	**+1.5**
MIR				*i* *SP	sP	13 53 39.0	-10
MIR				*e*SP		14 02 06.0	
MIR				pmax	pmax		
	comp=N,588nm,10.0s						
MIR				pmax	pmax		
	comp=E,693nm,8.0s						
MIR				pmax	pmax		
	comp=Z,392nm,1.8s,mb5.9						
MIR				pmax	pmax		
	comp=Z,2μm,8.0s						
CLNS	**Chul'man**	**64.22**	**358***c*	*i*P	**P**	**13 53 12.2**	**+1.5**
CLNS				*e*		13 53 52.3	
CLNS				*e*S	**S**	**14 01 35.3**	**-3.0**
CLNS				*e**SS	sS	14 01 58.4	-31
CLNS				*e*		14 02 21.1	
CLNS				pmax	pmax		
	comp=Z,80nm,1.4s,mb5.4						
CLNS				pmax	pmax		
	comp=N,79nm,1.7s						
CLNS				pmax	pmax		
	comp=E,9.0nm,0.9s						
CLNS				smax			
	comp=N,419nm,11.8s						
CLNS				smax			
	comp=E,290nm,11.7s						
PEA0B	**Petropavlovsk-**	**65.52**	**19**	*e*P	**P**	**13 53 18.6**	**-0.6**
PETK	**Petropavlovsk-**	**65.52**	**19**	P	**P**	**13 53 18.9**	**-0.3**
	comp=E,32nm,0.8s,mb5.2,baz=194,slow=4.9,SNR=45						
PETK				pP	pP	13 53 45.6	-3.4
	comp=E,25nm,0.8s,baz=191,slow=4.4,SNR=4.4						
PETK				PKP2bc		14 22 03.8	
	comp=E,4.9nm,0.8s,baz=68,slow=8.2,SNR=5.9						
PETK	**Petropavlovsk-**	**65.52**	**19**	P	**P**	**13 53 18.9**	**-0.3**
PETK				*PP	pP	13 53 45.6	-3.4
PETK	**Petropavlovsk-**	**65.52**	**19**	P	**P**	**13 53 18.9**	**-0.3**
PETK				pP	pP	13 53 45.6	-3.4
PETK			⇑*e*			14 22 03.8	
PET	**Petropavlovsk**	**65.76**	**20***c*	*i*P	**P**	**13 53 20.5**	**-0.3**
PET				*e**PP	pP	13 53 52.7	+2.1
PET				*i* S	S	14 01 56.3	-1.1
PET				pmax	pmax		
	comp=Z,900nm,6.7s						
PET				pmax	pmax		
	comp=Z,49nm,1.3s,mb5.2						
PET				pmax	pmax		
	comp=Z,700nm,15.9s						
PET	**Petropavlovsk**	**65.76**	**20**	*e*P	**P**	**13 53 19.9**	**-0.8**
	comp=Z,223nm,1.5s,mb5.8						
PET				*e*	pP	13 53 47.0	-3.6
BOD	**Bodaibo**	**66.13**	**352**	*e*P	**P**	**13 53 24.0**	**+1.0**
BOD				pmax	pmax		
	comp=Z,97nm,1.5s,mb5.4						
KSH	**Kashi**	**67.04**	**319**⇑	*i*P	**P**	**13 53 29.6**	**+0.4**
KSH				PcP	PcP	13 53 57.3	+0.7
KSH				pP	pP	13 54 00.2	+1.1
KSH				sP	sP	13 54 14.3	+2.0
KSH				PP	PP	13 56 00.0	+1.4
KSH				ScP		13 57 47.4	
KSH				PcS		13 58 00.5	
KSH				S	S	14 02 07.9	-5.4
KSH				pmax	pmax		
	comp=Z,100nm,0.7s,mb5.8						
KSH				pmax	pmax		
	comp=Z,1μm,4.3s						
KSH				LR	LR		
	comp=N,1μm,13.4s						
KSH				LR	LR		
	comp=E,590nm,12.7s						
KSH				LR	LR		
	comp=Z,310nm,7.1s						
MKAR	**Makanchi Array**	**67.57**	**328**	P	**P**	**13 53 32.4**	**0.0**
	comp=Z,42nm,0.5s,mb5.6,baz=109,slow=8.5,SNR=264						
MKAR				pP	pP	13 53 58.7	-3.7
	comp=Z,41nm,0.8s,baz=104,slow=6.0,SNR=1.9						
MKAR				S	S	14 02 17.8	-1.6
	comp=Z,2.9nm,1.1s,baz=138,slow=14,SNR=5.6						
MKAR				PKPPKP		14 21 50.5	
	comp=Z,2.4nm,0.9s,baz=336,slow=2.7,SNR=7.6						
MKAR	**Makanchi Array**	**67.57**	**328**	P	**P**	**13 53 32.4**	**0.0**
MKAR				*PP	pP	13 53 58.7	-3.6
MKAR				S	S	14 02 17.8	-1.6
MKAR	**Makanchi Array**	**67.57**	**328**	P	**P**	**13 53 32.4**	**0.0**
MKAR				pP	pP	13 53 58.7	-3.7
MKAR				S	S	14 02 17.8	-1.6
MKAR				P'P'		14 21 50.5	
ULHL	**Ulahol**	**68.33**	**321**	P	**P**	**13 53 40.0**	**+2.7**
	SNR=8.5						
AAA	**Alma-Ata**	**68.47**	**322**	*e*P	**P**	**13 53 39.0**	**+0.9**
AAA				*e*S	S	14 02 28.8	-1.5
AAA				pmax	pmax		
	comp=Z,2μm,5.8s						
AAA				smax			
	comp=E,2μm,20.1s						
AAA				MLR	MLR		
	comp=Z,1μm,26.0s						
KZA	**Kyzart**	**68.86**	**321**	P	**P**	**13 53 41.7**	**+1.1**
	SNR=73						
TKM2	**Tokmak 2**	**69.10**	**322**	P	**P**	**13 53 42.4**	**+0.4**
	SNR=101						
KBK	**Karagaybulak**	**69.36**	**321**	P	**P**	**13 53 46.6**	**+2.9**
	SNR=31						
YAK	**Yakutsk**	**69.39**	**1***c*	*i*P	**P**	**13 53 42.8**	**-0.6**
YAK				*e**PP	pP	13 54 07.4	-6.1
YAK				*e*		13 56 13.7	
YAK				*e*S	S	14 02 37.2	-3.2
YAK				*e**SS	sS	14 03 17.6	-15
YAK				*e*		14 03 26.3	
YAK				pmax	pmax		
	comp=Z,244nm,1.0s,mb6.0						
YAK				pmax	pmax		
	comp=N,119nm,1.3s						
YAK				pmax	pmax		
	comp=E,35nm,1.3s						
YAK				pmax	pmax		
	comp=Z,57nm,1.4s,mb5.2						
YAK				pmax	pmax		
	comp=E,39nm,1.5s						
YAK				pmax	pmax		
	comp=N,22nm,1.3s						
YAK				smax			
	comp=E,468nm,2.3s						
YAK				smax			
	comp=N,400nm,2.3s						
YAK	**Yakutsk**	**69.39**	**1**	*e*P	**P**	**13 53 42.7**	**-0.7**
	comp=N,257nm,0.9s,mb6.1						
UCH	**Uchtor**	**69.41**	**320**	P	**P**	**13 53 45.0**	**+1.1**
	SNR=74						
QUE	**Quetta**	**69.42**	**306**	*e*P	**P**	**13 53 35.0**	**-9.3**
QUE				*e*S	S	14 02 27.0	-15
KBL	**Kabul**	**69.54**	**311**	*e*P	**P**	**13 53 43.4**	**-1.5**
KBL				pmax	pmax		
	comp=Z,117nm,0.7s,mb5.8						
KBL	**Kabul**	**69.54**	**311**	*e*P	**P**	**13 53 43.4**	**-1.5**
	comp=Z,117nm,0.7s,mb5.8						
AAK	**Ala-Archa**	**69.63**	**321**	P	**P**	**13 53 46.1**	**+0.8**
	SNR=48						
AAK	**Ala-Archa**	**69.63**	**321**	P	**P**	**13 53 45.6**	**+0.3**
	comp=Z,54nm,0.7s,mb5.5,baz=132,slow=6.2,SNR=76						
AAK				PKPPKP		14 21 53.1	
	comp=Z,1.2nm,0.2s,baz=218,slow=3.7,SNR=25						
AAK	**Ala-Archa**	**69.63**	**321**	P	**P**	**13 53 45.6**	**+0.3**
AAK				P'P'		14 21 53.1	
AAK	**Ala-Archa**	**69.63**	**321**	P	**P**	**13 53 46.4**	**+1.1**
	SNR=60						
AAK				P		13 53 46.4	
	SNR=60						
AAK	**Ala-Archa**	**69.63**	**321**	P	**P**	**13 53 45.9**	**+0.6**
FRU	**Bishkek**	**69.66**	**321**⇑	*e*P	**P**	**13 53 45.0**	**-0.5**
FRU				pmax	pmax		
	comp=Z,670nm,2.6s,mb6.0						
CHMS	**Chumysh**	**69.67**	**321**	P	**P**	**13 53 45.6**	**+0.1**
	SNR=12						
AML	**Almayashu**	**69.88**	**320**	P	**P**	**13 53 47.7**	**+0.9**
	SNR=115						
USP	**Ospenovka**	**69.97**	**321**	P	**P**	**13 53 47.7**	**+0.3**
	SNR=69						
EKS2	**Erkin-Say**	**70.10**	**321**	P	**P**	**13 53 49.1**	**+0.9**
	SNR=23						
ZAA0	**Zalesovo Array**	**71.18**	**335**⇑	*i*P	**P**	**13 53 53.6**	**-0.8**
ZALV	**Zalesovo Beam**	**71.18**	**335**	P	**P**	**13 53 53.5**	**-0.9**
	comp=Z,107nm,0.6s,mb5.8,baz=122,slow=4.6,SNR=230						
ZALV				S	S	14 02 55.3	-6.2
	comp=Z,1.4nm,0.7s,baz=122,slow=11,SNR=4.1						
ZALV				PKPPKP		14 21 44.5	
	comp=Z,5.6nm,1.0s,baz=0.0,slow=1.5,SNR=10.0						
ZALV	**Zalesovo Beam**	**71.18**	**335**	P	**P**	**13 53 53.5**	**-0.9**
ZALV				S	S	14 02 55.3	-6.2
ZALV	**Zalesovo Beam**	**71.18**	**335**	P	**P**	**13 53 53.5**	**-0.9**
ZALV				S	S	14 02 55.3	-6.2
ZALV				P'P'		14 21 44.5	
FX1	**Attu Island--F**	**71.40**	**27**	P	**P**	**13 53 55.4**	**-0.4**
	comp=Z,84nm,1.0s,mb5.5,baz=78,slow=1.4,SNR=17						
FX1	**Attu Island--F**	**71.40**	**27**	P	**P**	**13 53 55.4**	**-0.4**
SMY	**Shemya**	**71.72**	**28**	*e*P	**P**	**13 53 58.3**	**+0.6**
SMY				pmax	pmax		
	comp=Z,199nm,1.2s,mb5.8						
SMY	**Shemya**	**71.72**	**28**	*e*P	**P**	**13 53 58.3**	**+0.6**
	comp=Z,199nm,1.2s,mb5.8						
KURK	**Kurchatov**	**71.92**	**330**	P	**P**	**13 53 58.4**	**-0.6**
	comp=Z,73nm,0.8s,mb5.5,baz=129,slow=5.6,SNR=158						
KURK				PKPPKP		14 21 43.2	
	comp=Z,1.2nm,0.8s,baz=296,slow=2.9,SNR=7.6						
KURK	**Kurchatov**	**71.92**	**330**	P	**P**	**13 53 58.4**	**-0.6**
KURK				P'P'		14 21 43.2	
KURK	**Kurchatov**	**71.92**	**330**	P	**P**	**13 53 59.1**	**+0.1**
	SNR=129						
KURK				P		13 53 59.1	
	SNR=129						
NVS	**Novosibirsk**	**72.46**	**335**⇑	*i*P	**P**	**13 54 01.2**	**-0.9**
NVS				*i*		13 54 25.7	
NVS				*i* *PP	pP	13 54 38.5	+6.1
NVS				*e*S	S	14 03 07.2	-9.0
NVS				*i* *SS	sS	14 04 04.2	-4.2
NVS				pmax	pmax		
	comp=Z,680nm,2.4s,mb6.0						
NVS				pmax	pmax		
	comp=N,280nm,2.0s						
NVS				pmax	pmax		
	comp=E,284nm,2.0s						
NVS				smax			
	comp=N,150nm,2.4s						
NVS				smax			
	comp=E,155nm,2.4s						
SEY	**Seymchan**	**72.75**	**11**⇑	*i*P	**P**	**13 54 03.4**	**-0.2**
SBA	**Scott Base**	**73.07**	**172**	*e*P	**P**	**13 54 06.7**	**+1.3**
SBA				pmax	pmax		
	comp=Z,146nm,1.5s,mb5.6						
SBA	**Scott Base**	**73.07**	**172**	*e*P	**P**	**13 54 06.7**	**+1.3**
	comp=Z,146nm,1.5s,mb5.6						
MAW	**Mawson**	**73.67**	**201**⇑	*i*P	**P**	**13 54 10.5**	**+1.4**
	comp=Z,66nm,0.9s,mb5.4						
MAW				*e*S	S	14 03 24.0	-5.6
MAW	**Mawson**	**73.67**	**201**	P	**P**	**13 54 09.9**	**+0.8**
	comp=Z,85nm,0.9s,mb5.5,baz=70,slow=8.3,SNR=64						
MAW				LR	LR	14 23 58.1	
	comp=Z,2μm,20.3s,baz=65,slow=34						
ADK	**Adak**	**75.75**	**32**	*e*P	**P**	**13 54 20.8**	**-0.4**
ADK				pmax	pmax		
	comp=Z,139nm,1.4s,mb5.5						
ADK	**Adak**	**75.75**	**32**	*e*P	**P**	**13 54 20.8**	**-0.4**
	comp=Z,139nm,1.4s,mb5.5						
IDAH	**Dahanechah**	**75.98**	**306**	*e*P	**P**	**13 54 24.1**	**+1.1**
HATD	**Hatta, Dubai**	**76.86**	**298**	P	**P**	**13 54 28.2**	**0.0**
	SNR=19						
IBND	**Bandar-abas**	**77.19**	**300**	*e*P	**P**	**13 54 30.8**	**+0.9**
IBND				*e*P		13 54 31.0	
FAQ	**Al Faqa, Dubai**	**77.31**	**297**	P	**P**	**13 54 30.5**	**-0.2**
	SNR=16						
NAZ	**Nazwa, Dubai**	**77.31**	**298**	P	**P**	**13 54 30.4**	**-0.3**
	SNR=12						
BVAR	**Borovoye Array**	**77.43**	**329**	P	**P**	**13 54 30.4**	**-0.3**
	comp=Z,57nm,0.9s,mb5.3,baz=132,slow=6.6,SNR=98						
BVAR				pP	pP	13 54 59.3	-2.1
	comp=Z,5.2nm,0.4s,baz=128,slow=8.6,SNR=3.3						
BVAR				PKKPbc	PKKPbc	14 13 35.5	-2.0
	comp=Z,0.9nm,0.8s,baz=224,slow=4.1,SNR=4.3						
BVAR				PKPPKP		14 21 41.3	
	comp=Z,1.3nm,1.0s,baz=17,slow=1.5,SNR=5.0						
BVAR	**Borovoye Array**	**77.43**	**329**	P	**P**	**13 54 30.4**	**-0.3**
BVAR				*PP	pP	13 54 59.3	-2.1
BRVK	**Borovoye**	**77.51**	**329***c*	*i*P	**P**	**13 54 30.5**	**-0.6**
BRVK				*i* *PP	pP	13 55 01.4	-0.4
BRVK				pmax	pmax		
	comp=Z,283nm,2.0s,mb5.7						
BRVK	**Borovoye**	**77.51**	**329**⇑	*i*P	**P**	**13 54 30.7**	**-0.4**
	comp=Z,351nm,1.5s,mb5.9						
BRVK				*e*pP	pP	13 55 01.1	-0.7
BRVK	**Borovoye**	**77.51**	**329**	P	**P**	**13 54 31.2**	**+0.1**
	SNR=79						
BRVK				P		13 54 31.2	
	SNR=79						
ASUD	**Al Ashush, Dub**	**77.52**	**297**	P	**P**	**13 54 32.5**	**+0.7**
	SNR=9.7						
OPO	**Ambohidratompo**	**78.86**	**253**	P	**P**	**13 54 39.5**	**+0.1**
	comp=Z,20nm,0.8s,mb5.0,baz=104,slow=3.5,SNR=21						
TIXI	**Tiksi**	**79.05**	**0**⇑	*i*P	**P**	**13 54 37.7**	**-1.5**
TIXI				*e* *PP	pP	13 55 08.1	-1.9
TIXI				pmax	pmax		
	comp=Z,55nm,0.7s,mb5.5						
TIXI	**Tiksi**	**79.05**	**0**⇑	*i*P	**P**	**13 54 37.7**	**-1.5**
	comp=Z,55nm,0.7s,mb5.5						
TIXI				*e*pP	pP	13 55 08.1	-1.9
IBAF	**Bafgh**	**79.12**	**304**	*e*P	**P**	**13 54 40.4**	**-0.1**
BILL	**Bilibino**	**80.14**	**14***c*	*i*P	**P**	**13 54 44.3**	**-0.9**
BILL				*i*		13 54 50.7	
BILL				*e*		13 57 48.2	
BILL				*i* S	S	14 04 36.6	-3.0
BILL				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BILL				MLR	MLR		
	comp=Z,400nm,19.0s						
BILL	**Bilibino**	**80.14**	**14**	*e*P	**P**	**13 54 43.6**	**-1.6**
	comp=Z,13nm,1.0s,mb4.7						
ICHK	**Chekchek**	**80.25**	**304**	*e*P	**P**	**13 54 46.1**	**-0.5**
PPT	**Papeete**	**80.67**	**107**	*e*S	S	14 04 43.7	-3.4
	comp=Z,2μm,26.0s						
PPT				*e*LQ		14 16 42.3	
	comp=Z,2μm,25.8s						
PPT				*e*LR	LR	14 20 12.5	
	comp=Z,3μm,32.5s						
IANJ	**Anjilo**	**81.50**	**308**	*e*P	**P**	**13 54 52.9**	**-0.3**
SYO	**Syowa Base**	**82.39**	**201**⇓	*i*P	**P**	**13 54 56.7**	**-0.5**
QSPA	**South Pole Qui**	**82.42**	**180**	LR	LR	14 31 17.9	
	comp=Z,3μm,19.1s,baz=167,slow=35						
IDMV	**Damavand**	**83.01**	**307**	*e*P	**P**	**13 55 00.8**	**-0.2**
SVE	**Sverdlovsk**	**84.17**	**329**⇓	*e*P	**P**	**13 55 05.9**	**-0.6**
SVE				*e*		13 58 25.8	
SVE				*e*PPP		14 00 21.1	
SVE				*e*S	S	14 05 08.

comp=Z,206nm,1.4s,mb5.9
RDF Al-Radifah 85.25 300 *e*P **P 13 55 12.0 -0.5**
RDF AMb AMB 13 55 15.1
comp=Z,263nm,1.0s,mb6.1
NAY Al-Naaiem 85.57 300 *e*P **P 13 55 12.8 -1.3**
NAY AMb AMB 13 55 15.1
comp=Z,202nm,0.9s,mb6.0
SDPT Sand Point 85.92 33 *e*P **P 13 55 14.2 -0.9**
comp=Z,72nm,0.7s,mb5.7
SOKR Solikamsk 87.08 331*c i*P **P 13 55 19.2 -1.6**
SOKR S SKSac 14 05 28.4 -8.1
SOKR pmax pmax
comp=Z,90nm,1.2s,mb5.6
MAK Makhachkala 88.12 314*c i*P **P 13 55 26.0 -0.2**
MAK *e**PP pP 13 55 56.6 -1.0
MAK *e* 13 58 52.7
MAK *e*S SKSac 14 05 44.3 +0.7
MAK *e* 14 06 02.3
MAK pmax pmax
comp=Z,161nm,0.8s,mb6.1
IAZR Azarshahr 88.22 308 *e*P **P 13 55 26.7 0.0**
BHD Baghdad 88.71 304 *e*P **P 13 55 24.0 -5.2**
BHD *e*PP PP 13 58 59.0 -0.8
BHD *e*SKS 14 05 45.0
BHD *e*S S 14 06 02.0 -4.2
DGRG David-gareji 89.38 312 P **P 13 55 33.1 +0.9**
GNI Garni 89.62 310*c i*P **P 13 55 33.4 +0.1**
GNI pmax pmax
comp=Z,106nm,2.9s
GNI Garni 89.62 310 *e*P **P 13 55 32.9 -0.3**
comp=Z,42nm,0.9s,mb5.6
GNI Garni 89.62 310 P **P 13 55 33.7 +0.5**
SNR=8.6
GNI P 13 55 33.7
SNR=8.6
MTA Mtatsminda 89.85 312 P **P 13 55 34.7 +0.3**
TBLG Delisi 89.90 312 P **P 13 55 34.6 0.0**
SVW2 Sparrevohn 90.11 28 *e*P **P 13 55 34.0 -1.0**
MSL Mosul 90.26 307 *e*P **P 13 55 37.0 +0.7**
OHAK Old Harbor 90.29 32 *e*P **P 13 55 33.3 -2.6**
comp=Z,35nm,0.8s,mb5.5
GOR Gori 90.41 312 P **P 13 55 37.8 +0.9**
TTA Tatalina 90.41 26 *e*P **P 13 55 36.1 -0.3**
KMBO Kilima Mbogo 90.49 269 P **P 13 55 37.5 -0.5**
comp=Z,123nm,0.5s,mb6.3,baz=90,slow=15,SNR=8.3
KMBO Kilima Mbogo 90.49 269 P **P 13 55 37.5 -0.5**
KMBO Kilima Mbogo 90.49 269 P **P 13 55 39.3 +1.4**
SNR=13
KMBO P 13 55 39.3
SNR=13
KEH Kehvi 90.59 312 P **P 13 55 36.1 -1.6**
TAOE Nuku Hiva Isla 90.77 99 *e*S S 14 06 25.4 -0.6
comp=Z,545nm,25.8s
TAOE *e*LR LR 14 24 56.0
comp=Z,1μm,28.6s
ONI Oni 90.99 313 P **P 13 55 39.6 +0.1**
NVL N'lazarevskaya 91.21 197⇓*i*P **P 13 55 41.4 +1.3**
NVL *e**PP pP 13 56 27.7 +16
NVL *e*S SKSac 14 05 57.4 -3.3
NVL *e* 14 06 29.0
NVL pmax pmax
comp=Z,112nm,1.1s,mb5.9
MAIT Maitri 91.23 197 *e*P **P 13 55 41.8 +1.6**
MAIT *e*E 13 56 05.1
MAIT *e*E 13 56 33.7
KIV Kislovodsk 91.75 314 *e*P **P 13 55 41.9 -1.2**
KIV *e**PP pP 13 56 13.6 -1.0
KIV *e* 13 59 22.0
KIV *e* 14 06 02.4
KIV pmax pmax
comp=Z,250nm,5.3s
KIV pmax pmax
comp=Z,29nm,1.1s,mb5.4
KIV MLR MLR
comp=Z,409nm,20.0s
KIV Kislovodsk 91.75 314 *e*P **P 13 55 43.4 +0.4**
comp=Z,29nm,1.0s,mb5.5
KIV Kislovodsk 91.75 314 P **P 13 55 43.8 +0.7**
SNR=6.6
KIV P 13 55 43.8
SNR=6.6
POGA Pongola 92.11 242⇑*i*P **P 13 55 45.0 -0.1**
POGA AMb AMB 13 55 47.4
comp=Z,81nm,1.2s,mb5.8
MOPA Mopani 92.93 246⇑*i*P **P 13 55 48.2 -0.8**
MOPA AMb AMB 13 55 51.8
comp=Z,84nm,1.6s,mb5.8
PMR Palmer 93.25 28 *e*P **P 13 55 47.8 -1.8**
PMR pmax pmax
comp=Z,34nm,0.9s,mb5.7
PMR Palmer 93.25 28 *e*P **P 13 55 47.8 -1.8**
comp=Z,34nm,0.9s,mb5.7
VRHR Novokhopersk 93.48 321 *e*P **P 13 55 49.5 -1.4**
VRHR *e* 13 59 33.0
VRHR pmax pmax
comp=Z,90nm,0.8s,mb6.2
VRHR pmax pmax
comp=N,10.0nm,0.4s
VRHR pmax pmax
comp=E,30nm,1.0s
VRHR pmax pmax
comp=Z,190nm,7.5s
VRHR pmax pmax
comp=N,110nm,9.4s
VRHR pmax pmax
comp=E,210nm,11.7s
RKT Rikitea 93.57 114 *e*SKSac SKSac 14 06 14.5 -1.2
comp=E,689nm,25.8s
RKT *e*SP SP 14 07 55.7 -8.9
comp=E,652nm,26.2s
RKT *e*LQ 14 21 41.6
comp=E,903nm,28.0s
RKT *e*LR LR 14 26 13.0
comp=E,986nm,32.2s
SOC Sochi 93.83 313*c i*P **P 13 55 50.4 -2.3**
SOC *e* 13 59 34.2
SOC *e*S SKSac 14 06 12.8 -3.4
SOC *e* 14 06 50.3
SOC *e*SSS 14 16 56.7
SOC pmax pmax
comp=Z,22nm,0.8s,mb5.5
COLA College 94.35 25 *e*P **P 13 55 53.1 -1.4**
COLA pmax pmax
comp=Z,10.0nm,0.8s,mb5.2
COLA College 94.35 25 *e*P **P 13 55 53.1 -1.4**
comp=Z,10nm,0.8s,mb5.2
VSR Storozhevoye 95.04 321 *e*P **P 13 55 56.4 -1.6**
VSR *e* 13 59 46.0
VSR *e* 14 06 13.4
VSR pmax pmax
comp=Z,50nm,0.7s,mb6.0
VSR pmax pmax
comp=N,3.0nm,0.8s
VSR pmax pmax
comp=E,30nm,0.9s
VSR pmax pmax
comp=Z,150nm,2.5s,mb6.0
VSR pmax pmax
comp=N,80nm,2.9s
VSR pmax pmax
comp=E,70nm,1.3s
GRM Grahamstown 95.31 236 *e*P **P 13 56 00.4 +0.7**
GRM AMb AMB 13 56 04.5
comp=Z,105nm,1.7s,mb6.0
SEK Senekal 95.40 241 *e*P **P 13 56 00.4 +0.1**
SEK AMb AMB 13 56 03.0
comp=Z,48nm,1.6s,mb5.7
ANN Anapa 95.59 314 *e*P **P 13 55 58.6 -2.1**
ANN *e**PP pP 13 56 29.0 -3.2
ANN *e* 13 59 54.5
ANN *e* 14 06 23.1
ANN pmax pmax
comp=Z,107nm,0.9s,mb6.3
ANN MLR MLR
comp=N,318nm,22.0s
ANN MLR MLR
comp=E,849nm,22.0s
ANN MLR MLR
comp=Z,675nm,22.0s
ANN Anapa 95.59 314 *i* P **P 13 55 59.4 -1.3**
PRYS Parys 95.91 242⇑*i*P **P 13 56 02.1 -0.5**
PRYS AMb AMB 13 56 05.0
comp=Z,61nm,2.3s,mb5.6
MENT Mentasta 95.94 27 *e*P **P 13 56 00.9 -0.9**
MMAI Mount Meron Ar 96.15 302 P **P 13 56 02.8 -0.8**
comp=Z,13nm,0.9s,mb5.4,baz=98,slow=6.1,SNR=10
SOE Somerset East 96.22 236 *e*P **P 13 56 05.0 +1.1**
SOE AMb AMB 13 56 07.6
comp=Z,70nm,1.8s,mb5.8
MOS Moscow 96.34 325 *e*P **P 13 55 57.3 -6.5**
MOS *e*PPP 14 01 58.5
MOS pmax pmax
comp=Z,61nm,0.6s,mb6.2
MOS pmax pmax
comp=Z,300nm,2.2s,mb6.3
MOS Moscow 96.34 325 *e*P **P 13 56 01.9 -1.9**
HVD Gariep Dam 96.74 238 *e*P **P 13 56 06.9 +0.6**
HVD AMb AMB 13 56 08.9
comp=Z,32nm,1.5s,mb5.5
OBN Obninsk 96.90 325 *e*P **P 13 56 04.5 -1.9**
OBN *i* pP 13 56 37.7 -0.2
OBN *i* 14 00 03.6
OBN *e*PS SP 14 08 37.7 -1.9
OBN *e*SS SS 14 13 55.2 -1.6
OBN pmax pmax
comp=Z,86nm,1.4s,mb6.0
EGAK Eagle 97.19 26 *e*P **P 13 56 06.1 -1.3**
comp=Z,15nm,1.1s,mb5.3
LSZ Lusaka 97.30 254 P **P 13 56 08.5 -0.6**
comp=Z,7.7nm,0.7s,mb5.2,baz=86,slow=2.6,SNR=9.6
LSZ Lusaka 97.30 254 P **P 13 56 08.5 -0.6**
LSZ pmax pmax
comp=Z,8.0nm,0.7s,mb5.3
BOSA Boshof 97.38 240 P **P 13 56 09.3 0.0**
comp=Z,12nm,0.8s,mb5.4,baz=111,slow=5.2,SNR=9.2
BOSA PKKPbc PKKPbc 14 12 46.9 -0.4
comp=Z,3.2nm,0.9s,baz=193,slow=7.7,SNR=4.1
BOSA LR LR 14 36 14.1
comp=Z,763nm,20.3s,baz=99,slow=33
SWZ Schweizer 97.63 241⇑*i*P **P 13 56 10.0 -0.4**
SWZ AMb AMB 13 56 12.6
comp=Z,36nm,1.4s,mb5.7
LBTB Lobatse 97.86 243 P **P 13 56 11.3 -0.1**
comp=Z,22nm,1.1s,mb5.6,baz=130,slow=4.0,SNR=11
DAWY Dawson 97.93 26 *e*P **P 13 56 09.6 -1.2**
BR131 Keskin Array S 98.05 309 *e*P **P 13 56 10.2 -1.7**
comp=Z,11nm,0.8s,mb5.4
BRTR Keskin Array B 98.05 309 P **P 13 56 10.0 -1.9**
comp=Z,12nm,0.8s,mb5.4,baz=116,slow=5.6,SNR=28
BRTR PP PP 14 00 14.4 +1.9
comp=Z,3.1nm,0.8s,baz=116,slow=6.0,SNR=5.5
BRTR PKKPbc PKKPbc 14 12 46.4 +0.3
comp=Z,1.5nm,0.8s,baz=203,slow=3.3,SNR=6.0
BRTR Keskin Array B 98.05 309 P **P 13 56 10.0 -1.9**
BRTR 14 00 14.4
APA Apatity 98.65 337⇓*i*P **P 13 56 15.0 +1.0**
APA *PP PP 14 00 18.0 +1.7
APA *e*S S 14 07 26.0 -6.5
APA pmax pmax
comp=Z,168nm,1.8s,mb6.3
JOF Joensuu 99.68 333 *e*P Pdif 13 56 15.6 -3.3
JOF pmax pmax
comp=Z,21nm,0.8s,mb5.8
JOF Joensuu 99.68 333 *e*p Pdif 13 56 15.6 -3.3
comp=Z,20nm,0.8s
JOF Joensuu 99.68 333 *e*p Pdif 13 56 15.6 -3.3
comp=Z,20nm,0.8s
SKAG Skagway 99.91 31 *e*P Pdif 13 56 19.3 -0.6
comp=Z,18nm,1.0s
INK Inuvik 100.16 22 *e*P Pdif 13 56 19.3 -1.7
INK pmax pmax
comp=Z,11nm,1.0s
INK Inuvik 100.16 22 *e*P Pdif 13 56 19.3 -1.7
comp=Z,11nm,1.0s
SUR Sutherland 100.18 235 P Pdif 13 56 22.7 +1.5
comp=Z,15nm,0.8s,baz=84,slow=5.8,SNR=7.1
SUR PP PP 14 00 29.7 +0.9
comp=Z,8.6nm,0.9s,baz=84,slow=11,SNR=3.1
SUR PKKPbc PKKPbc 14 12 39.9 +0.3
comp=Z,12nm,0.9s,baz=296,slow=5.0,SNR=5.9
CVNA Calvinia 101.29 236 *e*P Pdif 13 56 26.0 -0.1
CVNA AMb AMB 13 56 29.8
comp=Z,31nm,1.4s
AKASG Malin Array Be 101.30 320 P Pdif 13 56 24.2 -1.9
comp=Z,11nm,0.9s,baz=76,slow=4.5,SNR=21
AKASG PP PP 14 00 39.2 +2.4
comp=Z,8.3nm,0.8s,baz=81,slow=6.8,SNR=6.4
AKBB Malin Array Si 101.30 320 *e*P Pdif 13 56 24.3 -1.8
KIEV Kiev 101.31 320 *e*P Pdif 13 56 24.4 -1.7
KIEV pmax pmax
comp=Z,8.0nm,0.8s
KIEV Kiev 101.31 320 *e*P Pdif 13 56 24.4 -1.7
comp=Z,8.5nm,0.8s
ARCES ARCESS Array B 101.37 339 P Pdif 13 56 24.2 -2.2
comp=Z,26nm,0.8s,baz=74,slow=5.6,SNR=38
ARCES PKKPbc PKKPbc 14 12 32.9 -4.8
comp=Z,3.9nm,0.8s,baz=48,slow=1.8,SNR=8.1
KIS Kishinev 101.67 316 *e*P Pdif 13 56 24.0 -3.8
KIS Kishinev 101.67 316 *e*P Pdif 13 56 24.0 -3.8
KIS *e* 14 00 38.0
KIS MLR MLR
comp=Z,500nm,17.0s
TLCR 101.72 315⇓P Pdif 13 56 27.6 -0.4
TLCR 101.72 315⇓*i*P Pdif 13 56 27.6 -0.4
MICGM Minsk 101.93 324 *e* Pdif 13 56 26.0 -2.9
MNK Minsk 101.96 324 *e*P Pdif 13 56 26.0 -3.0
TIRR Tirgusor 102.02 314⇑P Pdif 13 56 28.7 -0.6
TIRR Tirgusor 102.02 314⇑*i*P Pdif 13 56 28.7 -0.6
KAF Kangasniemi 102.06 332 *e*P Pdif 13 56 26.4 -3.1
KAF pmax pmax
comp=Z,10.0nm,0.9s
KAF Kangasniemi 102.06 332 *e*p Pdif 13 56 26.4 -3.1
comp=Z,10nm,0.9s
KAF Kangasniemi 102.06 332 *e*p Pdif 13 56 26.4 -3.1
comp=Z,10nm,0.9s
CFR Carcaliu 102.20 315⇓P Pdif 13 56 30.1 0.0
CFR Carcaliu 102.20 315⇓*i*P Pdif 13 56 30.1 0.0
PSN Preselentsi 102.20 313 *e*P PP 14 00 33.0 -11
VSU Vasula 102.24 328⇑*e*P Pdif 13 56 29.0 -1.3
KBS Kingsbay 102.25 350 *e*PP PP 14 00 45.8 +2.6
KBS *e*SS SS 14 15 11.7 +1.5
KBS AMS AMS 14 43 11.5
comp=Z,626nm,20.0s
KBS Kingsbay 102.25 350⇑*i*P Pdif 13 56 29.1 -1.2
KBS *e* 13 56 33.3
FINES FINESS Array B 102.25 331 P Pdif 13 56 27.7 -2.6
comp=Z,6.0nm,0.8s,baz=90,slow=5.7,SNR=16
FINES PKiKP PKiKP 14 00 51.6 +0.1
comp=Z,1.8nm,0.4s,baz=115,slow=2.9,SNR=8.1
CVD Cernavoda 102.29 314⇑P Pdif 13 56 28.6 -1.9
CVD Cernavoda 102.29 314⇑*i*P Pdif 13 56 28.6 -1.9
HARR Harsova 102.36 314⇓P Pdif 13 56 29.2 -1.6
HARR Harsova 102.36 314⇓*i*P Pdif 13 56 29.2 -1.6
IDID Didziasalis 102.53 325 *e*P Pdif 13 56 30.8 -0.8
IDID AMB AMB 13 56 33.1
comp=Z,18nm,0.8s
NACGM Naroch 102.54 325 *e* PP 14 00 35.0 -11
IZAR Zarasai 102.77 325 *e*P Pdif 13 56 31.9 -0.7
IZAR AMB AMB 13 56 33.6
comp=Z,16nm,0.9s
PRD Provadia 102.78 312 *e*P PP 14 00 40.7 -7.5
IIGN Ignalina 102.82 325 *e*P Pdif 13 56 31.8 -1.0
IIGN AMB AMB 13 56 33.5
comp=Z,14nm,1.0s
ISAL Salakas 102.85 325 *e*P Pdif 13 56 31.9 -1.1
ISAL AMB AMB 13 56 34.0
comp=Z,9.6nm,0.9s
VRI Vrincioaia 103.16 315⇑P Pdif 13 56 34.9 +0.5
VRI Vrincioaia 103.16 315⇑*i*P Pdif 13 56 34.9 +0.5
PLOR Plostina 103.22 315⇑P Pdif 13 56 35.3 +0.7
PLOR Plostina 103.22 315⇑*i*P Pdif 13 56 35.3 +0.7
JMB Yambol 103.40 312 *e*P PKiKP 14 00 48.7 -5.4
TRO Tromso 103.61 340 *e*PP PP 14 00 51.9 -1.6
TRO AMS AMS 14 44 45.0
comp=Z,665nm,17.5s
TRO Tromso 103.61 340 *e*P Pdif 13 56 36.2 -0.2
MLR Muntele Rosu 103.73 315 PKiKP PKiKP 14 00 54.9 +0.3
comp=Z,7.1nm,0.7s,baz=102,slow=4.1,SNR=5.8
MLR Muntele Rosu 103.73 315⇑P Pdif 13 56 36.6 -0.3
MLR Muntele Rosu 103.73 315⇑*i*P Pdif 13 56 36.6 -0.3
SZH Strazhica 103.85 313 *e*P PP 14 00 45.5 -11
BURAR Bucovina Array 104.09 317⇓P Pdif 13 56 38.9 +0.4
BURAR Bucovina Array 104.09 317⇓*i*P Pdif 13 56 38.8 +0.3
BUR08 Bucovina Ar. S 104.10 317 *e*P Pdif 13 56 38.5 0.0
KDZ Kurdzhali 104.31 311 *i* P PKiKP 14 00 50.8 -5.0
PGB Panagyurishte 105.19 312 P PKiKP 14 00 59.3 +1.9
MMB Musomiste 105.57 311 *e*P PKiKP 14 00 55.9 -2.3
TRPA Tarpa 105.84 318⇑*i*P Pdif 13 56 46.9 +0.6
DRGR 105.87 316⇓*i*P Pdif 13 56 46.1 -0.3
DRGR 105.87 316⇓*i*P Pdif 13 56 46.1 -0.3
VTS Vitosha 105.89 312 *i* P PKiKP 14 01 03.8 +5.1
KOLS Kolonicke sedl 105.92 319 *e*Pdif Pdif 13 56 49.1 +2.4
KOLS *e* 13 57 28.4
KOLS *e*PP PP 14 00 59.7 -12
KOLS Kolonicke sedl 105.92 319 PDIF Pdif 13 56 49.1 +2.4
KOLS *e* 13 57 28.4
KOLS Kolonicke sedl 105.92 319 *e*PKP PKiKP 14 00 59.7 +1.1
UZH Uzhgorod 105.94 318 *e*P Pdif 13 56 46.6 -0.2
UZH *i* 14 01 09.0
UZH *e* 14 10 08.0
UZH *e*PS PS 14 10 33.0 +1.7
KKB Krupnik 106.03 311 *e*P PKiKP 14 01 03.1 +4.1
TSUM Tsumeb 106.41 248 PKiKP PKiKP 14 01 00.1 -0.3
comp=Z,1.9nm,0.8s,baz=309,slow=4.0,SNR=3.6
STHS Stebnicka Huta 106.53 319 *e*Pdif Pdif 13 56 50.8 +1.4
STHS *e* 13 57 45.4
STHS *e*PP PP 14 01 05.4 -10
STHS Stebnicka Huta 106.53 319 PDIF Pdif 13 56 50.8 +1.4
STHS *e* 13 57 45.4
STHS Stebnicka Huta 106.53 319 *e*PKP PKiKP 14 01 05.4 +5.7
BZS Buzias 106.75 315⇑P Pdif 13 56 49.4 -0.9
BZS Buzias 106.75 315⇑*i*P Pdif 13 56 49.4 -0.9
KECS Kecovo 107.15 318 *e*P Pdif 13 56 53.9 +1.8
KECS Kecovo 107.15 318 PDIF Pdif 13 56 53.9 +1.8
OJC Ojcow 107.34 320 *e*Pdif Pdif 13 56 52.7 -0.2
OJC *e*PP PP 14 01 23.5 +1.9
PSZ Piszkesteto 107.63 318⇑*e*PP PP 14 01 28.4 +4.6
VYHS Vyhne 108.24 319 *e*Pdif Pdif 13 56 56.6 -0.3
VYHS *e*PP PP 14 01 21.5 -6.7
VYHS Vyhne 108.24 319 PDIF Pdif 13 56 56.6 -0.3
VYHS *e*PP PP 14 01 21.5 -6.7
BUD Budapest 108.27 317⇑*e*PP PP 14 01 30.4 +1.9
OKC Ostrava-Krasne 108.45 320 *e*PKP PKiKP 14 01 04.1 +0.8
OKC *e*SP SP 14 10 44.5 +3.1
HFS Hagfors 108.45 331 Pdiff Pdif 13 56 55.4 -2.5
comp=Z,4.8nm,0.8s,baz=77,slow=6.2,SNR=7.0
HFS PKiKP PKiKP 14 01 02.4 -0.6
comp=Z,3.8nm,0.9s,baz=99,slow=9.2,SNR=4.9
HFS PP PP 14 01 25.2 -4.2
comp=Z,4.5nm,0.9s,baz=64,slow=3.4,SNR=3.6
HFS PKKPbc PKKPbc 14 12 13.3 -2.5
comp=Z,0.9nm,0.5s,baz=228,slow=1.8,SNR=5.5
RES Resolute Bay 108.62 11 *e*P Pdif 13 56 57.7 -1.0
RES pmax pmax
comp=Z,6.0nm,0.9s
RES Resolute Bay 108.62 11 *e*P Pdif 13 56 57.7 -0.9
comp=Z,6.4nm,0.9s
RES *e*PKPdf PKiKP 14 01 03.0 +0.1
MORC Moravsky Berou 108.85 320 *e*PKPdf PKiKP 14 01 03.9 -0.1
MORC *e*PP PP 14 01 36.2 +3.6
YKA Yellowknife Ar 109.17 26 Pdiff Pdif 13 57 00.1 -0.9
comp=Z,1.5nm,0.8s,baz=295,slow=5.0,SNR=5.8
YKA PKiKP PKiKP 14 01 03.6 -0.6
comp=Z,10nm,0.8s,baz=295,slow=2.0,SNR=29
YKA PKKPbc PKKPbc 14 12 10.9 -2.8
comp=Z,4.7nm,0.6s,baz=107,slow=3.1,SNR=24
YKA PKKPab PKKPab 14 12 23.2 -0.5
comp=Z,4.1nm,0.9s,baz=107,slow=5.0,SNR=8.2
YKA Yellowknife Ar 109.17 26 Pdif Pdif 13 57 00.1 -0.9
YKA PKPdf PKiKP 14 01 03.6 -0.6
YKA PKKPbc PKKPbc 14 12 10.9 -2.8
YKA PKKPab PKKPab 14 12 23.2 -0.5
BSD Bornholm Skovb 109.23 326 *i* P PP 14 01 36.5 +1.3
BSD
comp=Z,740nm,19.0s
NB2 NORSAR Subarra109.32 333 P Pdif 13 56 59.5 -2.3
comp=Z,4.3nm,1.0s,baz=72,slow=4.4
NB2 NORSAR Subarra109.32 333 P Pdif 13 56 59.5 -2.3
baz=72,slow=4.4
NB2 NORSAR Subarra109.32 333 P Pdif 13 56 59.5 -2.3
NB2 NORSAR Subarra109.32 333 P Pdif 13 56 59.5 -2.3
NOA NORSAR Array B109.32 333 Pdiff Pdif 13 56 59.6 -2.2
comp=Z,3.2nm,0.8s,baz=69,slow=4.5,SNR=15
NOA PKiKP PKiKP 14 01 04.7 +0.2
comp=Z,1.5nm,1.0s,baz=267,slow=3.9,SNR=7.3
NOA PP PP 14 01 34.3 -1.3
comp=Z,3.4nm,1.0s,baz=65,slow=6.5,SNR=4.5
NOA PKKPbc PKKPbc 14 12 11.1 -2.1
comp=Z,1.4nm,0.8s,baz=274,slow=4.9,SNR=6.7
NOA PKKPab PKKPab 14 12 23.7 +0.7
comp=Z,2.3nm,1.0s,baz=250,slow=4.2,SNR=4.4
NOA NORSAR Array B109.32 333 Pdif Pdif 13 56 59.6 -2.2
NOA PKPdf PKiKP 14 01 04.7 +0.2
NOA PP PP 14 01 34.3 -1.3
NOA PKKPbc PKKPbc 14 12 11.1 -2.1
NOA PKKPab PKKPab 14 12 23.7 +0.7
KSP Ksiaz 109.42 321 *e*P Pdif 13 57 02.9 +0.7
DPC Dobruska-Polom 109.50 321 *e*PKP PKiKP 14 01 06.0 +0.8
DPC *e*PP PP 14 01 39.2 +1.9
DPC *e*x x 14 02 14.3
DPC AMS AMS 14 52 00.0
comp=Z,500nm,21.6s
UPC Upice 109.67 321 *e*PKP PKiKP 14 01 05.0 -0.5
UPC *e*PP PP 14 01 39.6 +1.1
A07A Ashnola River, 109.86 41⇑P PKiKP 14 01 06.4 +0.5
baz=110
SOP Sopron 109.88 318⇓*e*PP PP 14 01 42.2 +2.0
TREC Trest 110.26 320 *e*PKP PKiKP 14 01 07.4 +0.7
TREC *e*PP PP 14 01 46.5 +3.7
TREC *e*SP SP 14 10 56.7 -2.5
CONA Conrad Observa 110.30 318⇑*i*PKiKP PKiKP 14 01 07.7 +0.9
comp=Z,4.0nm,0.9s
CSNA Conrad Observa 110.30 318⇑*e*PKiKP PKiKP 14 01 07.6 +0.8
comp=Z,3.8nm,0.9s
COP Copenhagen 110.43 327 *i* P PP 14 01 37.5 -6.3
COP
comp=Z,280nm,18.0s
RUE Ruedersdorf 110.56 323 *e*P Pdif 13 57 06.2 -1.1
PVCC Panska Ves 110.56 321 *e*PKIKP PKiKP 14 01 07.9 +0.7
PVCC Panska Ves 110.56 321 *e*PKP PKiKP 14 01 07.9 +0.7
KONO Kongsberg 110.56 331 *e*PP PP 14 01 42.6 -1.9
LBCM Butte Creek Ri 110.59 49 P PKiKP 14 01 08.2 +0.7
K05A Summer Lake 110.65 47⇓P PKiKP 14 01 08.4 +0.7
baz=111
B08A Colville Reser 110.69 41⇑P PKiKP 14 01 08.1 +0.6
baz=111
PRU Pruhonice 110.70 321 *e*PKIKP PKiKP 14 01 08.4 +0.9
PRU *e* 14 01 47.8
PRU *e* 14 11 01.1
PRU MLR MLR
comp=Z,400nm,19.0s
PRU Pruhonice 110.70 321 *e*PKP PKiKP 14 01 08.4 +0.9
PRU *e*PP PP 14 01 47.8 +1.8
PRU *e*SP SP 14 11 01.1 -2.1
PRU AMS AMS 14 47 10.0
comp=Z,400nm,19.0s
BRG Berggiesshubel 110.86 322 *e*PKP PKiKP 14 01 07.0 -0.8
comp=Z,12nm,1.0s
BRG PP PP 14 01 51.0 +3.9
BRG SDIF Sdif 14 09 22.0 +6.9
BRG
comp=N,376nm,15.6s
BRG
comp=E,578nm,21.1s
BRG
comp=Z,578nm,19.5s
BRG Berggiesshubel 110.86 322 *e*PKIKP PKiKP 14 01 07.0 -0.8
BRG 14 01 51.0
BRG pmax pmax
comp=Z,7.0nm,1.0s
BRG MLR MLR
comp=N,225nm,15.6s
BRG MLR MLR
comp=E,346nm,21.1s
BRG MLR MLR
comp=Z,346nm,19.5s
JMIC Jan Mayen 111.03 346 *e*PP PP 14 01 46.8 -0.7
PERS Pernice 111.05 317 *e*PP PP 14 01 51.2 +2.6
SOKA Soboth 111.10 317⇑*i*PKiKP PKiKP 14 01 08.5 +0.2
comp=Z,18nm,1.5s
BOJS Bojanci 111.18 316 *e*PP PP 14 01 51.6 +2.0
D08A Wollman Farm, 111.24 42⇑P PKiKP 14 01 09.8 +1.2
baz=111
CLL Collm 111.33 322 *e*PKiKP PKiKP 14 01 07.6 -1.0
CLL *e*PP PP 14 01 53.4 +3.0
CLL *e*PKKPab PKKPab 14 12 16.9 +2.6
CLL Collm 111.33 322 *e*PKIKP PKiKP 14 01 07.0 -1.6
CLL *e* 14 01 54.0
CLL *i* 14 12 17.1
CLL pmax pmax
comp=Z,11nm,0.9s
CLL pmax pmax
comp=Z,94nm,2.2s

CLL Collm 111.33 322 *e*PKP PKiKP 14 01 07.0 -1.6
CLL *e*PP PP 14 01 54.0 +3.6
CLL *e*PKKP PKKPbc 14 12 07.0 +0.7
CLL *i* PKKP PKKPbc 14 12 17.1 +11
CLL Collm 111.33 322 *e*PKiKP PKiKP 14 01 07.0 -1.6
comp=Z,11nm,0.9s
CLL *e*PP PP 14 01 54.0 +3.6
comp=Z,94nm,2.2s
CLL *es*PP 14 02 29.0
CLL *es*PPP 14 04 54.0
CLL *e*SP SP 14 11 08.0 -0.9
CLL *es*SP 14 11 58.0
CLL *e*(PKKPbc) 14 12 07.0
CLL *i* (PKKPab) 14 12 17.1
CLL *e* 14 13 12.0
CLL *es*PKKSbc 14 16 38.0
CLL *e*SS SS 14 17 18.0 +3.7
CLL *e*PSS 14 17 28.0
CLL *e*SKKSacre 14 19 12.0
CLL *e*SSS 14 21 18.0
VISS Visnje 111.41 316 *e*PP PP 14 01 53.6 +2.4
I07A Izee 111.42 46 ⇓P PKiKP 14 01 10.2 +1.1
baz=112
B09A Rice 111.44 41 ⇓P PKiKP 14 01 10.1 +1.2
baz=112
BEKR Beckworth 111.48 50 ⇓P PKiKP 14 01 10.0 +0.7
baz=112
GEC2 GERESS Array S 111.50 320 *e*PKiKP PKiKP 14 01 08.4 -0.6
GEC2 *e*PP PP 14 01 54.8 +3.1
GEC2 *e*PKKPab PKKPab 14 12 15.6 +2.0
GEC2 GERESS Array S 111.50 320 *e*PKIKP PKiKP 14 01 08.3 -0.7
GEC2 *e* 14 01 53.9
GEC2 GERESS Array S 111.50 320 *e*P PKiKP 14 01 08.3 -0.7
GEC2 *e*PP PP 14 01 53.9 +2.1
GERES GERESS Array B 111.50 320 PKiKP PKiKP 14 01 08.7 -0.3
comp=Z,5.8nm,0.8s,baz=75,slow=1.5,SNR=26
GERES PP PP 14 01 52.6 +0.9
comp=Z,3.8nm,0.8s,baz=76,slow=5.6,SNR=6.3
GERES PKKPbc PKKPbc 14 12 03.6 -2.1
comp=Z,2.2nm,0.8s,baz=276,slow=3.8,SNR=9.3
GERES GERESS Array B 111.50 320 PKIKP PKiKP 14 01 08.7 -0.3
GERES 14 01 52.6
KHC Kasperske Hory 111.51 320 *e*PKIKP PKiKP 14 01 08.2 -0.8
KHC *e* 14 01 54.4
KHC *e* 14 11 09.4
KHC MLR MLR
comp=Z,600nm,25.4s
KHC Kasperske Hory 111.51 320 *e*P PKiKP 14 01 08.0 -1.1
KHC Kasperske Hory 111.51 320 *e*PKP PKiKP 14 01 08.2 -0.8
KHC *e*PP PP 14 01 54.4 +2.6
KHC *e*SP SP 14 11 09.4 -1.3
KHC AMS AMS 14 43 20.0
comp=Z,600nm,25.4s
G08A Pilot Rock 111.57 44 ⇑P PKiKP 14 01 10.0 +0.7
baz=112
LJU Ljubljana 111.57 317 *i* PP PP 14 01 55.2 +2.9
D09A Jones Farm, Ri 111.64 42 ⇓P PKiKP 14 01 09.9 +0.5
baz=112
FOO Floro 111.83 334 *e*PP PP 14 01 55.9 +2.3
FOO AMS AMS 14 50 44.9
comp=Z,713nm,26.3s
TANN Tannenbergstha 111.89 321 *e*PKiKP PKiKP 14 01 09.9 +0.2
TANN *e*PP PP 14 01 59.0 +4.6
TANN *e*PKKPab PKKPab 14 12 14.8 +3.0
MUD Monsted U'grnd 111.91 328 *i* P PP 14 01 57.8 +3.4
MUD
comp=Z,470nm,20.0s
JAVS Javornik 111.92 316 *e*PP PP 14 01 56.9 +2.1
H08A Prairie City 111.92 45 ⇓P PKiKP 14 01 10.3 +0.3
baz=112
NKC Novy Kostel 111.95 321 *e*PKIKP PKiKP 14 01 09.5 -0.3
NKC Novy Kostel 111.95 321 *e*PKP PKiKP 14 01 09.5 -0.3
WET Wettzell 111.96 320 *e*PKiKP PKiKP 14 01 09.9 0.0
WET *e*PP PP 14 01 57.8 +2.8
WET *e*PKKPab PKKPab 14 12 13.8 +2.3
WCN Washoe City 112.02 51 ⇓P PKiKP 14 01 11.4 +1.1
baz=112
BSEG Bad Segeberg 112.14 326 *e*PKiKP PKiKP 14 01 11.4 +1.3
BSEG *e*PKKPab PKKPab 14 12 12.7 +2.0
KBA Koelnbreinsper 112.14 318 ⇑*i*PKiKP PKiKP 14 01 09.8 -0.5
comp=Z,8.9nm,1.5s
BER Bergen 112.24 333 *e*PP PP 14 01 57.0 +0.5
BER AMS AMS 14 49 39.4
comp=Z,904nm,16.0s
BER Bergen 112.24 333 *e*P Pdif 13 57 20.3 +5.6
J08A Circle Bar Ran 112.29 46 ⇑P PKiKP 14 01 11.6 +0.9
baz=112
D10A Wagner Farm, O 112.33 42 ⇓P PKiKP 14 01 11.2 +0.5
baz=112
WVOR Wild Horse Val 112.34 47 *e*PKIKP PKiKP 14 01 11.1 +0.3
MOX Moxa 112.35 322 *e*PKP PKiKP 14 01 11.2 +0.6
MOX *e*PP PP 14 02 05.0 +7.3
MOX
comp=Z,400nm,23.0s
MOX Moxa 112.35 322 *e*PKiKP PKiKP 14 01 10.7 +0.1
MOX *e*PP PP 14 01 59.3 +1.6
MOX Moxa 112.35 322 *e*PKIKP PKiKP 14 01 11.2 +0.6
MOX *e* 14 02 05.0
MOX Moxa 112.35 322 *e*PKP PKiKP 14 01 11.2 +0.6
MOX *e*PP PP 14 02 05.0 +7.3
RJOB Jochberg 112.35 319 *e*PKiKP PKiKP 14 01 10.0 -0.7
RJOB *e*PP PP 14 02 01.1 +3.3
RJOB *e*PKKPab PKKPab 14 12 11.4 +1.6
A11A Hall Mountain, 112.46 40 ⇓P PKiKP 14 01 11.7 +0.8
baz=113
E10A Myers Farm, Un 112.58 43 ⇑P PKiKP 14 01 11.8 +0.6
baz=113
B11A Sandpoint 112.59 41 ⇓P PKiKP 14 01 11.6 +0.5
baz=113
H09A Durkee 112.60 45 ⇓P PKiKP 14 01 12.2 +0.9
baz=113
F10A Beach Ranch, E 112.61 43 ⇑P PKiKP 14 01 11.6 +0.4
baz=113,SNR=8.8
NRDL Niedersach Rie 112.71 324 *e*PKiKP PKiKP 14 01 11.6 +0.4
NRDL *e*PKKPab PKKPab 14 12 10.8 +2.7
ABTA Abfaltersbach 112.78 318 ⇑*i*PKiKP PKiKP 14 01 11.2 -0.3
comp=Z,7.8nm,0.7s
J09A Fry Pan Ranch, 112.80 46 ⇓P PKiKP 14 01 12.4 +0.7
baz=113
G10A Bishop Farm, J 112.84 44 ⇑P PKiKP 14 01 12.4 +0.7
baz=113
GRF Grafenberg Arr 112.86 321 *e*PKiKP PKiKP 14 01 11.1 -0.5
GRF *e*PP PP 14 02 06.2 +4.9
GRF *e*pPP 14 02 31.6
GRF *e*PKKPab PKKPab 14 12 09.5 +2.0
GRF Grafenberg Arr 112.86 321 PKIKP PKiKP 14 01 11.1 -0.5
GRF *e* 14 02 06.2
GRF Grafenberg Arr 112.86 321 PKPdf PKiKP 14 01 11.1 -0.5
GRF *e*PP PP 14 02 06.2 +4.9
GRF *e*pPP 14 02 31.6
GRF PKKPab PKKPab 14 12 09.5 +2.0
VES Vestal, Richgr 113.03 54 ⇑P PKiKP 14 01 12.3 -0.1
baz=113
EDM Edmonton 113.03 35 *e*PKIKP PKiKP 14 01 11.4 -0.4
E11A Bogner Ranch, 113.21 43 ⇑P PKiKP 14 01 12.8 +0.4
baz=113
WTTA Wattenberg 113.23 318 ⇑*i*PKiKP PKiKP 14 01 12.1 -0.3
comp=Z,30nm,0.7s
FUR Furstenfeldbru 113.23 319 *e*PKiKP PKiKP 14 01 12.6 +0.2
H10A Noah's Angus R 113.25 45 ⇓P PKiKP 14 01 12.6 +0.1
baz=113,SNR=7.8
NVAR Mina Array Bea 113.27 51 PKiKP PKiKP 14 01 13.6 +0.9
comp=Z,11nm,0.9s,baz=255,slow=2.1,SNR=9.8
NVAR PP PP 14 02 04.6 -0.2
comp=Z,1.8nm,0.7s,baz=245,slow=3.9,SNR=3.5
NVAR PKKPbc PKKPbc 14 11 59.1 -0.2
comp=Z,2.0nm,0.8s,baz=144,slow=3.2,SNR=7.2
UBBA Unterbreizbach 113.28 322 *e*PKiKP PKiKP 14 01 12.9 +0.5
UBBA *e*PP PP 14 02 07.4 +3.1
UBBA *e*PKKPab PKKPab 14 12 08.5 +2.9
I10A Payette 113.32 45 ⇑P PKiKP 14 01 13.6 +0.9
baz=114
F11A Grangeville 113.36 43 ⇓P PKiKP 14 01 12.7 0.0
baz=114,SNR=5.2
G11A Walters Elk Ra 113.40 44 ⇓P PKiKP 14 01 12.6 -0.1
baz=114,SNR=7.5
J10A Berg Farm, Mel 113.49 46 ⇑P PKiKP 14 01 14.0 +1.0
baz=114
ISA Isabella 113.54 54 ⇓P PKiKP 14 01 14.1 +0.7
baz=114
ISA Isabella 113.54 54 *e*PKPdf PKiKP 14 01 14.2 +0.8
TIN Tinemaha 113.54 53 ⇓P PKiKP 14 01 14.5 +1.2
baz=114
K10A MacKenzie Ranc 113.55 47 ⇓P PKiKP 14 01 13.6 +0.5
baz=114
MOTA Moosalm 113.56 319 ⇑*i*PKiKP PKiKP 14 01 12.9 -0.1
comp=Z,20nm,1.0s
A13A Flathead Natio 113.71 40 ⇑P PKiKP 14 01 13.2 0.0
baz=114
H11A Donnelly 113.74 44 ⇓P PKiKP 14 01 13.6 +0.2
baz=114,SNR=23
CWC Cottonwood Cre 113.75 54 ⇑P PKiKP 14 01 14.1 +0.4
baz=114
BSMT Bassoo Peak 113.77 41 P PKiKP 14 01 13.6 +0.2
B13A Whitefish 113.83 40 ⇓P PKiKP 14 01 13.5 0.0
baz=114
CIS Catalina Islan 113.89 57 ⇓P PKiKP 14 01 14.1 0.0
baz=114
FETA Feichten 113.89 318 ⇑*i*PKPdf PKiKP 14 01 13.1 -0.6
comp=Z,18nm,1.5s
C13A Hot Springs 113.95 41 ⇑P PKiKP 14 01 13.7 0.0
baz=114,SNR=5.7
PASC Pasadena Art C 113.97 56 *e*PKPdf PKiKP 14 01 15.1 +0.8
L10A Juniper Basin 113.99 47 ⇓P PKiKP 14 01 14.9 +0.9
baz=114
F12A Elk City 114.00 43 ⇓P PKiKP 14 01 14.5 +0.6
baz=114,SNR=5.5
EDW2 Edwards Air Fo 114.04 55 ⇓P PKiKP 14 01 15.0 +0.7
baz=114
MWC Mount Wilson 114.07 56 *e*PKIKP PKiKP 14 01 14.5 +0.1
K11A Parker Ranch, 114.16 46 ⇓P PKiKP 14 01 15.0 +0.7
baz=114,SNR=6.2
MFID Camas Ranch 114.16 46 ⇓P PKiKP 14 01 14.7 +0.4
baz=114,SNR=14
D13A Huson 114.19 42 ⇑P PKiKP 14 01 14.5 +0.3
baz=114,SNR=7.2
LRMC Laurel Mountai 114.20 55 ⇓P PKiKP 14 01 15.4 +0.8
baz=114
GRAC Grapevine Rang 114.23 53 ⇓P PKiKP 14 01 15.0 +0.4
baz=114
MPMC Manual Prospec 114.28 54 ⇑P PKiKP 14 01 15.4 +0.6
baz=114
SCO Scoresbysund 114.28 349 *i* P PP 14 02 07.1 -3.5
SCO
comp=Z,310nm,20.0s
O10A Cortez Mining, 114.32 49 ⇑P PKiKP 14 01 15.2 +0.5
baz=114
SWMT Swartz Lake 114.37 41 *e*PKPdf PKiKP 14 01 14.5 -0.1
DAVA Damuels 114.38 319 ⇑*i*PKPdf PKiKP 14 01 14.1 -0.5
comp=Z,33nm,1.1s
TOD Tromm 114.39 321 *e*PKIKP PKiKP 14 01 14.6 +0.1
STU Stuttgart 114.39 320 *e*PKiKP PKiKP 14 01 14.5 -0.1
STU *e*PP PP 14 02 15.7 +3.5
STU Stuttgart 114.39 320 *e*PKIKP PKiKP 14 01 14.6 0.0
STU Stuttgart 114.39 320 *e*PKPdf PKiKP 14 01 14.6 +0.1
BFSC Mount Baldy Ra 114.40 56 ⇑P PKiKP 14 01 15.7 +0.7
baz=114
TNS Taunus Mts 114.41 322 *e*PKiKP PKiKP 14 01 14.8 +0.3
TNS *e*PP PP 14 02 17.1 +4.8
TNS *e*PKKPab PKKPab 14 12 03.4 +2.8
C14A Swan Lake 114.46 41 ⇑P PKiKP 14 01 15.5 +0.8
baz=115
P10A Eureka 114.48 50 ⇑P PKiKP 14 01 15.6 +0.6
baz=115
L11A Cat Creek Ranc 114.49 47 ⇓P PKiKP 14 01 15.9 +0.9
baz=115,SNR=19
SUMG Summit 114.51 356 *i* P PP 14 02 12.4 +0.2
SUMG *i* S PS 14 11 54.5 +2.3
DAVOX Davos/Dischmat 114.52 318 PKP PKiKP 14 01 14.7 -0.1
comp=Z,4.6nm,0.3s,baz=360,slow=4.1,SNR=6.8
DAVOX PKKPbc PKKPbc 14 11 54.9 -0.6
comp=Z,6.7nm,0.8s,baz=310,slow=4.5,SNR=5.8
E13A Victor 114.54 42 ⇓P PKiKP 14 01 15.9 +1.0
baz=115,SNR=6.6
I12A Atlanta 114.57 45 ⇓P PKiKP 14 01 15.9 +0.9
baz=115,SNR=27
H12A Diamond D Ranc 114.58 44 ⇓P PKiKP 14 01 16.4 +1.4
baz=115,SNR=14
B14A Marquette Ranc 114.60 40 ⇓P PKiKP 14 01 15.6 +0.7
baz=115
F13A Darby 114.62 43 ⇑P PKiKP 14 01 15.9 +0.8
baz=115
M11A Holland Ranch, 114.62 48 ⇑P PKiKP 14 01 16.3 +1.0
baz=115
Q10A Clear Creek Ra 114.67 51 ⇑P PKiKP 14 01 16.4 +0.9
baz=115
S10A Tonopah Range, 114.69 52 ⇑P PKiKP 14 01 16.4 +0.9
baz=115
BUG Bochum--Univer 114.71 324 *e*PKKPab PKKPab 14 12 01.7 +2.4
FURC Furnace Creek, 114.72 53 ⇑P PKiKP 14 01 16.3 +0.7
baz=115
J12A Stokes Ranch, 114.72 46 ⇑P PKiKP 14 01 16.8 +1.4
baz=115,SNR=25
A15A Johnson Ranch, 114.75 39 ⇓P PKiKP 14 01 14.9 -0.4
baz=115
SLMT Seeley Lake 114.78 41 *e*PKPdf PKiKP 14 01 15.1 -0.2
D14A Greenough 114.82 41 ⇑P PKiKP 14 01 14.9 -0.5
baz=115,SNR=13
R10A Warm Springs 114.85 51 ⇓P PKiKP 14 01 15.7 0.0
baz=115
SPAK Spaichingen-Ko 114.85 320 *e*P PKiKP 14 01 15.5 0.0
MURC Murrieta 114.86 57 ⇑P PKiKP 14 01 15.9 -0.1
baz=115
G13A Cobalt 114.87 44 ⇑P PKiKP 14 01 15.7 +0.1
baz=115
GSC Goldstone 114.94 55 *e*PKIKP PKiKP 14 01 17.0 +1.0
O11A Cowboy Ranch, 114.99 49 ⇓P PKiKP 14 01 16.3 +0.3
baz=115
H13A Challis 114.99 44 ⇓P PKiKP 14 01 16.1 +0.3
baz=115,SNR=43
K12A Draper Farm, C 115.00 46 ⇓P PKiKP 14 01 15.9 0.0
baz=115,SNR=9.7
E14A Clinton 115.01 42 ⇓P PKiKP 14 01 16.3 +0.5
baz=115,SNR=6.5
L12A House Creek Ra 115.03 47 ⇑P PKiKP 14 01 17.0 +1.0
baz=115,SNR=15
P11A Circle Ranch, 115.03 50 ⇓P PKiKP 14 01 16.6 +0.5
baz=115
CHMT Chamberlain Mo 115.03 42 *e*PKPdf PKiKP 14 01 15.6 -0.2
B15A Bradely Ranch, 115.06 40 ⇑P PKiKP 14 01 15.9 +0.1
baz=115,SNR=10
BFO Black Forest 115.07 320 *e*PP PP 14 02 18.5 +1.5
BFO Black Forest 115.07 320 *i* PKIKP PKiKP 14 01 16.7 +0.8
BFO Black Forest 115.07 320 *e*PKPdf PKiKP 14 01 14.9 -1.0
HLID Hailey 115.13 45 ⇓P PKiKP 14 01 17.0 +0.9
baz=115,SNR=57
HLID Hailey 115.13 45 P PKiKP 14 01 17.3 +1.1
U10A Ash Meadows, A 115.15 53 ⇓P PKiKP 14 01 17.4 +1.0
baz=115
C15A Salmond Ranch, 115.20 40 ⇓P PKiKP 14 01 17.5 +1.3
baz=115,SNR=9.1
LANF Langenberg 115.20 321 *e*P PKiKP 14 01 16.4 +0.3
LRW Lerwick 115.21 335 *e*P PKiKP 14 01 15.9 +0.1
Q11A Duckwater 115.24 51 ⇑P PKiKP 14 01 17.6 +1.0
baz=115
I13A Wildhorse Cree 115.25 45 ⇑P PKiKP 14 01 17.1 +0.7
baz=115,SNR=45
F14A Wisdom 115.26 43 ⇓P PKiKP 14 01 16.8 +0.5
baz=115
M12A Wells 115.27 48 ⇓P PKiKP 14 01 17.5 +1.0
baz=115,SNR=12
SHOC Shoshone 115.27 54 ⇓P PKiKP 14 01 17.4 +0.7
baz=115
N12A Clover Valley, 115.30 48 ⇓P PKiKP 14 01 17.4 +0.9
baz=115,SNR=9.8
N12A Clover Valley, 115.30 48 *e*PKPdf PKPdf 14 01 17.6 +1.1
WAL1 Walls 115.33 335 *e*P PKiKP 14 01 16.2 +0.2
J13A Cove Ranch, Pi 115.34 45 ⇓P PKiKP 14 01 17.4 +0.8
baz=116,SNR=25
R11A Troy Canyon, C 115.39 51 ⇓P PKiKP 14 01 17.4 +0.6
baz=116
S11A Rachel 115.39 52 ⇓P PKiKP 14 01 17.5 +0.6
baz=116
HEC Hector,Ludlow 115.40 55 ⇓P PKPdf 14 01 17.2 +0.3
baz=116
FELD Feldberg im Sc 115.42 320 *e*P PKiKP 14 01 15.6 -1.0
RUP Ruppelstein 115.43 322 *e*PKIKP PKPdf 14 01 17.2 +0.7
D15A Lincoln 115.47 41 ⇑P PKiKP 14 01 17.3 +0.6
baz=116,SNR=7.0
PFO Pinyon Flat Ob 115.48 56 ⇑P PKPdf 14 01 17.6 +0.5
baz=116
PFO Pinyon Flat Ob 115.48 56 *e*PKPdf PKPdf 14 01 17.8 +0.7
B16A M & M Farms, S 115.57 40 ⇓P PKiKP 14 01 17.4 +0.5
baz=116
E15A Deer Lodge 115.58 42 ⇑P PKiKP 14 01 17.2 +0.2
baz=116,SNR=5.3
K13A Stover Farm, H 115.58 46 ⇓P PKiKP 14 01 17.6 +0.6
baz=116,SNR=9.7
H14A Leadore 115.59 44 ⇑P PKiKP 14 01 17.2 +0.2
baz=116
MONP Monument Peak 115.60 57 ⇓P PKPdf 14 01 18.0 +0.6
baz=116
TUQ Turquoise Moun 115.63 54 ⇑P PKPdf 14 01 18.3 +0.9
baz=116
O12A Currie 115.64 49 ⇓P PKPdf 14 01 16.7 -0.6
baz=116,SNR=15
P12A McGill 115.69 50 ⇑P PKPdf 14 01 18.1 +0.7
baz=116,SNR=7.5
I14A Mackay 115.71 45 ⇑P PKPdf 14 01 17.6 +0.4
baz=116,SNR=20
CDF Champ du Feu 115.72 320 ⇑*i*PKIKP PKPdf 14 01 15.9 -1.2
comp=Z,20nm,1.1s
BELC Belle Mtn. Jos 115.80 56 ⇓P PKPdf 14 01 18.6 +0.9
baz=116
J14A Carey 115.82 45 ⇑P PKPdf 14 01 18.8 +1.3
baz=116,SNR=7.3
L13A Double Diamond 115.82 47 ⇑P PKPdf 14 01 18.8 +1.3
baz=116,SNR=18
M13A Montello 115.83 48 ⇓P PKPdf 14 01 18.1 +0.5
baz=116,SNR=9.6
M13A Montello 115.83 48 *e*PKPdf PKPdf 14 01 18.2 +0.6
Q12A Willow Creek R 115.83 50 ⇓P PKPdf 14 01 18.2 +0.6
baz=116,SNR=8.5
F15A Butte 115.84 42 ⇓P PKPdf 14 01 18.0 +0.6
baz=116,SNR=11
ECH Echery 115.85 320 *e*P PKPdf 14 01 17.2 -0.2
BBS Basel-Blauen 115.87 319 *e*PKIKP PKPdf 14 01 17.1 -0.3
LRM Limekiln Ridge 115.88 42 *e*PKPdf PKPdf 14 01 18.0 +0.5
MCMT McKenzie Canyo 115.89 44 *e*PKPdf PKPdf 14 01 18.0 +0.4
DVTC Desert V Tower 115.90 57 ⇓P PKPdf 14 01 18.6 +0.6
baz=116
DLMT Dillon 115.91 43 *e*PKPdf PKPdf 14 01 18.1 +0.6
N13A Wendover, West 115.92 48 ⇓P PKPdf 14 01 18.3 +0.5
baz=116
N13A Wendover, West 115.92 48 *e*PKPdf PKPdf 14 01 18.0 +0.2
GMRC Granite Mounta 115.95 55 ⇓P PKPdf 14 01 19.0 +1.0
baz=116
MOF Molkenrain 115.99 320 *e*P PKPdf 14 01 17.2 -0.5
WLF Walferdange 115.99 322 *e*PP PP 14 02 28.5 +5.1
A17A Triple J Farms 116.03 39 ⇓P PKPdf 14 01 18.5 +0.8
baz=116
G15A Dillon 116.04 43 ⇑P PKPdf 14 01 18.7 +0.9
baz=116,SNR=8.0
S12A Delamar Landin 116.10 52 ⇓P PKPdf 14 01 19.4 +1.2
baz=116
SWSC Sam W. Stewart 116.12 57 ⇑P PKPdf 14 01 18.7 +0.4
baz=116
R12A Pony Springs, 116.15 51 ⇑P PKPdf 14 01 18.9 +0.7
baz=116
HINF Hinteralfeld 116.18 320 *e*PKIKP PKPdf 14 01 16.9 -1.1
comp=Z,39nm,0.9s
B17A L&G Farms, Che 116.19 39 ⇓P PKPdf 14 01 18.1 +0.1
baz=116
BCLA Clavier 116.24 323 PKP PKPdf 14 01 19.2 +1.2
PGF Pioggiola 116.24 314 ⇑*i*PKIKP PKPdf 14 01 17.6 -0.7
comp=Z,120nm,1.3s
O13A Hicks Ranch, I 116.24 49 ⇑P PKPdf 14 01 19.2 +0.8
baz=116
K14A Jones Ranch, D 116.26 46 ⇓P PKPdf 14 01 18.7 +0.3
baz=116,SNR=13
BC3 Big Chuckawall 116.30 56 ⇓P PKPdf 14 01 19.3 +0.6
baz=116
L14A Malta 116.34 47 ⇓P PKPdf 14 01 19.1 +0.5
baz=116,SNR=13
LOMF Lomont 116.34 319 *e*P PKPdf 14 01 18.2 -0.2
LDFC Landfair 116.35 55 *e*PKPdf PKPdf 14 01 20.0 +1.3
USHA Ushuaia 116.35 170 PKP PKPdf 14 01 18.5 +0.3
comp=Z,3.6nm,0.6s,baz=0.0,slow=13,SNR=4.7
I15A Monteview 116.36 44 ⇓P PKPdf 14 01 19.2 +0.7
baz=116
P13A Bates Ranch, G 116.37 50 ⇑P PKPdf 14 01 18.6 0.0
baz=116,SNR=21
T12A Moapa 116.38 53 ⇓P PKPdf 14 01 19.5 +0.7
baz=116
M14A Sheep Mountain 116.39 47 ⇓P PKPdf 14 01 18.9 +0.3
baz=116,SNR=26
C17A Wharram Farm, 116.42 40 ⇑P PKPdf 14 01 18.5 0.0
baz=117,SNR=5.9
HAU Haudompre 116.44 320 *e*PKIKP PKPdf 14 01 17.7 -0.8
comp=Z,69nm,1.0s
HAU *e*MLR MLR
comp=Z,694nm,21.5s
HAU Haudompre 116.44 320 *e*PKPdf PKPdf 14 01 17.7 -0.8
HAU LR LR
comp=Z,690nm,21.5s
F16A Kennard Place, 116.44 42 ⇑P PKPdf 14 01 19.0 +0.4
baz=117,SNR=7.9
V12A Nelson 116.45 54 ⇓P PKPdf 14 01 19.8 +0.9
baz=117
IRM Iron Mountain 116.47 56 ⇓P PKPdf 14 01 20.2 +1.2
baz=117
Q13A Wheeler Ranch, 116.47 50 ⇓P PKPdf 14 01 19.4 +0.6
baz=117,SNR=13
BOZ Bozeman (W) 116.48 42 ⇓P PKPdf 14 01 19.1 +0.4
baz=117,SNR=11
G16A Moss Hill, Enn 116.48 43 ⇓P PKPdf 14 01 19.6 +0.9
baz=117,SNR=12
J15A Blackfoot 116.56 45 ⇓P PKPdf 14 01 19.5 +0.6
baz=117
A18A Metzger Ranch, 116.57 39 ⇓P PKPdf 14 01 18.4 -0.4
baz=117
U12A Valley of Fire 116.57 53 ⇑P PKPdf 14 01 20.0 +0.8
baz=117,SNR=7.9
THEF They Montfort 116.59 321 *e*P PKPdf 14 01 18.8 0.0
D17A Six Diamond Ra 116.63 41 ⇑P PKPdf 14 01 19.1 +0.1
baz=117,SNR=11
GIVF Givet 116.64 323 *e*PKIKP PKPdf 14 01 18.4 -0.4
comp=Z,55nm,1.2s
N14A Grayback Hills 116.67 48 ⇓P PKPdf 14 01 19.2 0.0
baz=117
R13A O'Grain Ranch, 116.67 51 ⇓P PKPdf 14 01 20.2 +0.9
baz=117,SNR=10
K15A Arbon 116.68 46 ⇓P PKPdf 14 01 20.0 +0.8
baz=117,SNR=28
E17A Martinsdale 116.74 41 ⇓P PKPdf 14 01 19.6 +0.5
baz=117,SNR=8.3
HVU Hansel Valley 116.74 47 *e*PKIKP PKPdf 14 01 19.7 +0.4
HVU *e* 14 02 25.4
BGU Big Grassy Mou 116.77 48 *e*PKPdf PKPdf 14 01 19.7 +0.3
DOU Dourbes 116.78 323 PKP PKPdf 14 01 19.1 0.0
B18A Beardsley Farm 116.79 39 ⇑P PKPdf 14 01 19.5 +0.3
baz=117
NEE2 Needles Airpor 116.80 55 ⇑P PKPdf 14 01 19.7 +0.1
baz=117
SNF Seneffe 116.81 323 PKP PKPdf 14 01 19.7 +0.5
QLMT Earthquake Lak 116.85 43 *e*PKPdf PKPdf 14 01 20.3 +0.9
SAOF Saorge 116.87 316 *e*P PKPdf 14 01 19.5 0.0
S13A Holt Ranch, En 116.88 52 ⇓P PKPdf 14 01 20.2 +0.5
baz=117,SNR=19
GLA Glamis 116.91 57 ⇑P PKPdf 14 01 20.0 +0.1
baz=117
EGMT Eagleton 116.94 40 ⇓P PKPdf 14 01 20.1 +0.6
baz=117
T13A Saint George 116.95 52 ⇑P PKPdf 14 01 20.1 +0.2
baz=117,SNR=13
AUTN L'Aution 116.95 316 *e*P PKPdf 14 01 20.2 +0.6
AUTN L'Aution 116.95 316 *e*P PKPdf 14 01 21.6 +2.0
L15A Malad City 116.96 47 ⇑P PKPdf 14 01 20.4 +0.7
baz=117,SNR=10
LPG La Plagne 116.97 318 ⇑*i*PKIKP PKPdf 14 01 19.4 -0.2
comp=Z,32nm,0.9s
LPL La Plagne 116.98 318 ⇑*i*PKIKP PKPdf 14 01 19.3 -0.3
SBF Sospel 116.99 316 ⇑*i*PKIKP PKPdf 14 01 18.9 -0.8
comp=Z,45nm,0.9s
H16A Russell Place, 117.02 43 ⇓P PKPdf 14 01 20.2 +0.5
baz=117,SNR=6.8
BAIF Baives 117.02 323 *e*PKIKP PKPdf 14 01 19.3 -0.3
comp=Z,35nm,0.9s
U13A Pakoon Wash 117.03 53 ⇓P PKPdf 14 01 20.5 +0.5
baz=117,SNR=8.7
Q14A Sevier Lake (B 117.03 50 ⇑P PKPdf 14 01 20.5 +0.5
baz=117,SNR=11
LUCF Luceram 117.04 316 *e*P PKPdf 14 01 20.2 +0.4
F17A Fitzpatrick Pl 117.05 42 ⇓P PKPdf 14 01 20.4 +0.7
baz=117,SNR=30
Y12C Blythe 117.05 56 ⇑P PKPdf 14 01 20.4 +0.3
baz=117,SNR=5.4
P14A Drum Mountains 117.05 49 ⇓P PKPdf 14 01 20.7 +0.7
baz=117,SNR=29
M15A Larsen Ranch, 117.06 47 ⇑P PKPdf 14 01 20.7 +0.7
baz=117
CABF La Chapelle 117.06 319 *e*PKIKP PKPdf 14 01 19.4 -0.4
comp=Z,70nm,0.9s
REVF Revere 117.07 315 *e*P PKPdf 14 01 20.0 +0.1
TOUF Mont Tournerai 117.07 316 *e*P PKPdf 14 01 20.5 +0.6
MEZF Maizieres J'vi 117.08 321 ⇑*i*PKIKP PKPdf 14 01 19.2 -0.5
I16A Newdale 117.09 44 ⇓P PKPdf 14 01 20.4 +0.5
baz=117

DUG Dugway 117.10 49 ⇑P PKPdf 14 01 20.4 +0.4
baz=117,SNR=22
DUG Dugway 117.10 49 ePKPdf PKPdf 14 01 20.6 +0.5
V13A Grand Canyon W 117.12 54 ⇑P PKPdf 14 01 21.1 +0.9
baz=117
N15A Stansbury Isla 117.15 48 ⇓P PKPdf 14 01 20.4 +0.3
baz=117
BNI Bardonecchia 117.16 317 ePKIKP PKPdf 14 01 19.5 -0.5
BNI e 14 02 34.2
ARUT Antelope Range 117.16 51 ePKIKP PKPdf 14 01 20.9 +0.7
G17A Pierce Place, 117.17 43 ⇓P PKPdf 14 01 20.9 +0.9
baz=117,SNR=7.0
ORE Reay 117.18 334 eP PKPdf 14 01 19.9 +0.3
D18A Linhart Farms, 117.19 40 ⇑P PKPdf 14 01 20.3 +0.4
baz=117
MBDF Montbardon 117.19 317 ⇑iPKIKP PKPdf 14 01 19.1 -1.0
comp=Z,13nm,0.6s
CCUT Cedar City 117.27 52 ePKPdf PKPdf 14 01 21.6 +1.2
K16A Soda Springs 117.31 46 ⇑P PKPdf 14 01 20.3 0.0
baz=118,SNR=18
E18A Harlowton 117.32 41 ⇓P PKPdf 14 01 20.5 +0.2
baz=118,SNR=8.3
O15A The Old Anders 117.33 48 ⇓P PKPdf 14 01 21.3 +0.8
baz=118
W13A Hualapai Mount 117.33 54 ⇓P PKPdf 14 01 20.6 -0.1
baz=118,SNR=16
S14A Cedar City 117.38 51 ⇑P PKPdf 14 01 21.6 +1.0
baz=118,SNR=8.4
CALN Calern 117.40 316 eP PKPdf 14 01 21.0 +0.5
X13A Yucca 117.47 55 ⇓P PKPdf 14 01 21.2 +0.3
baz=118,SNR=29
KEST Kesra 117.48 306 PKP PKPdf 14 01 21.1 +0.2
comp=Z,8.2nm,0.9s,baz=274,slow=2.8,SNR=22
KEST PKKPbc PKKPbc 14 11 46.8 +2.1
comp=Z,3.1nm,1.0s,baz=189,slow=0.7,SNR=4.9
NOQ North Oquirrh 117.50 48 ePKPdf PKPdf 14 01 21.7 +0.9
H17A Grant Village 117.56 44 ⇓P PKPdf 14 01 21.8 +1.0
baz=118,SNR=5.7
T14A Hurricane 117.59 52 ⇑P PKPdf 14 01 21.9 +0.8
baz=118,SNR=10.0
Y13A Salome 117.61 56 ⇓P PKPdf 14 01 21.6 +0.4
baz=118,SNR=7.8
FRF La Foret Royal 117.62 315 ⇑iPKIKP PKPdf 14 01 20.2 -0.7
comp=Z,72nm,1.1s
U14A Mt Trumbull 117.65 53 ⇓P PKPdf 14 01 22.4 +1.1
baz=118,SNR=25
L16A Fish Haven 117.65 46 ⇑P PKPdf 14 01 21.8 +0.8
baz=118,SNR=15
P15A Leamington 117.65 49 ⇓P PKPdf 14 01 21.8 +0.7
baz=118,SNR=10
F18A Big Timber 117.67 42 ⇓P PKPdf 14 01 21.4 +0.4
baz=118,SNR=27
M16A Huntsville 117.69 47 ⇓P PKPdf 14 01 21.8 +0.6
baz=118,SNR=8.2
Q15A Fillmore 117.71 50 ⇓P PKPdf 14 01 21.8 +0.5
baz=118,SNR=15
I17A Pilgrim Ck. 117.71 44 ⇓P PKPdf 14 01 21.7 +0.6
baz=118
NLU North Lily Min 117.71 49 eP PKPdf 14 01 21.5 +0.3
ORIF Oris-en-Rattie 117.74 317 ⇑iPKIKP PKPdf 14 01 20.5 -0.6
ORIF eMLR MLR
comp=Z,930nm,22.0s
J17A Brown Place, J 117.78 45 ⇓P PKPdf 14 01 21.9 +0.7
baz=118,SNR=15
LOHW Long Hollow 117.78 44 ePKPdf PKPdf 14 01 22.0 +0.8
LMR La Mourre 117.78 315 ⇑iPKIKP PKPdf 14 01 20.5 -0.8
comp=Z,55nm,1.2s
K17A Gardner Place, 117.81 45 ⇑P PKPdf 14 01 22.2 +0.9
baz=118
113A Mohawk Valley, 117.83 57 ⇑P PKPdf 14 01 21.9 +0.2
baz=118
Z13A Yuma Proving G 117.85 56 ⇓P PKPdf 14 01 22.3 +0.6
baz=118,SNR=43
V14A Boquillas Ranc 117.86 54 ⇓P PKPdf 14 01 22.4 +0.8
baz=118,SNR=56
RSC Scourie 117.91 334 eP PKPdf 14 01 21.4 +0.4
N16A Rees Ranch, Co 117.94 48 ⇓P PKPdf 14 01 22.4 +0.7
baz=118
W14A Seligman 117.96 54 ⇑P PKPdf 14 01 23.4 +1.6
baz=118,SNR=38
G18A Lazy EL Ranch, 117.96 42 ⇓P PKPdf 14 01 22.6 +1.1
baz=118
R15A Junction 117.97 51 ⇑P PKPdf 14 01 22.5 +0.7
baz=118
MSU Marysvale 117.97 50 ePKIKP PKPdf 14 01 23.3 +1.5
JLU Jordanelle 118.01 48 ePKPdf PKPdf 14 01 22.1 +0.3
S15A Panguitch 118.02 51 ⇑P PKPdf 14 01 22.9 +1.0
baz=118,SNR=10
MPU Maple Canyon 118.02 49 ePKPdf PKPdf 14 01 22.7 +0.9
L17A Cokeville 118.02 46 ⇓P PKPdf 14 01 21.9 +0.2
baz=118,SNR=18
MENF Mencas 118.04 324 eP PKPdf 14 01 22.6 +1.1
O16A Springville 118.07 48 ⇑P PKPdf 14 01 22.5 +0.6
baz=118
P16A Fountain Green 118.10 49 ⇓P PKPdf 14 01 22.8 +0.8
baz=118
T15A Red Dirt Ranch 118.15 52 ⇑P PKPdf 14 01 22.9 +0.7
baz=118,SNR=18
RLMT Red Lodge 118.22 42 ⇑P PKPdf 14 01 23.4 +1.3
baz=118,SNR=6.1
SMRF Simiane la Rot 118.24 316 ⇑iPKIKP PKPdf 14 01 21.9 -0.2
comp=Z,61nm,1.0s
X14A Yava 118.25 55 ⇓P PKPdf 14 01 22.8 +0.4
baz=118,SNR=16
Y14A Wickenburg 118.26 56 ⇑P PKPdf 14 01 22.7 +0.2
baz=118,SNR=12
LOR Lormes 118.27 320 ePKIKP PKPdf 14 01 21.4 -0.7
LOR eMLR MLR
comp=Z,40nm,1.1s
LOR Lormes 118.27 320 ePKPdf PKPdf 14 01 21.4 -0.7
LOR LR LR
comp=Z,685nm,21.0s
I18A Diamond G Ranc 118.30 44 ⇑P PKPdf 14 01 23.2 +0.9
comp=Z,690nm,21.0s
J18A Kendall Valley 118.31 45 ⇑P PKPdf 14 01 23.2 +0.9
baz=118,SNR=10
EBH Black Hill 118.32 332 eP PKPdf 14 01 22.0 +0.1
U15A North Rim 118.34 53 ⇓P PKPdf 14 01 23.5 +0.9
baz=118,SNR=14
M17A Scullys Gap (B 118.35 47 ⇓P PKPdf 14 01 23.0 +0.6
baz=118,SNR=58
EBL Broad Law 118.35 331 eP PKPdf 14 01 22.1 +0.1
N17A Moffit Pass 118.37 47 ⇑P PKPdf 14 01 23.1 +0.6
baz=118,SNR=20
Z14A Wintersburg 118.41 56 ⇑P PKPdf 14 01 23.4 +0.6
baz=118,SNR=9.9
XAL Allendale 118.42 330 eP PKPdf 14 01 21.9 -0.2
KAC Achnashellach 118.45 333 eP PKPdf 14 01 21.8 -0.3
K18A Toltan Ranch, 118.46 45 ⇑P PKPdf 14 01 23.2 +0.6
baz=119,SNR=35
RRR Rubha Reidh 118.47 334 eP PKPdf 14 01 21.5 -0.6
FFC Flin Flon 118.50 30 i PKIKP PKPdf 14 01 22.4 +0.1
FFC Flin Flon 118.50 30 ePKPdf PKPdf 14 01 21.6 -0.7
SMF Signal de Mont 118.50 319 ePKIKP PKPdf 14 01 21.7 -0.8
comp=Z,69nm,1.3s
EAU Auchinoon 118.51 331 eP PKPdf 14 01 22.4 +0.2
TMUT Trail Mountain 118.52 49 ePKPdf PKPdf 14 01 23.8 +1.0
R16A Teasdale 118.56 50 ⇑P PKPdf 14 01 23.8 +0.8
baz=119,SNR=15
V15A Kaibab Nationa 118.57 53 ⇑P PKPdf 14 01 23.9 +0.9
baz=119,SNR=40
114A Black Gap (USA 118.57 57 ⇑P PKPdf 14 01 23.8 +0.7
baz=119,SNR=34
SSF Saint Saulge 118.57 320 ePKIKP PKPdf 14 01 22.1 -0.6
comp=Z,87nm,1.0s
VIVF Saint-Julien-l 118.57 317 ⇑iPKIKP PKPdf 14 01 22.1 -0.6
comp=Z,54nm,1.1s
W15A Williams 118.62 54 ⇓P PKPdf 14 01 24.7 +1.6
baz=119,SNR=7.0
O17A Robinson Place 118.64 48 ⇓P PKPdf 14 01 23.9 +0.9
baz=119,SNR=22
EKA Eskdalemuir Ar 118.64 331 PKP PKPdf 14 01 22.4 -0.2
comp=Z,3.5nm,0.6s,baz=31,slow=3.9,SNR=24
EKA PKKPbc PKKPbc 14 11 39.7 -1.5
comp=Z,1.9nm,0.8s,baz=265,slow=3.5,SNR=8.3
Q16A Castle Valley 118.64 50 ⇑P PKPdf 14 01 24.0 +1.0
baz=119
ESK Eskdalemuir 118.67 331 eP PKPdf 14 01 22.1 -0.5
L18A Fontenelle, Gr 118.67 46 ⇑P PKPdf 14 01 23.6 +0.6
baz=119,SNR=33
KPL Plockton 118.70 333 eP PKPdf 14 01 22.0 -0.6
ECK Cauldkaine Hil 118.70 330 eP PKPdf 14 01 22.9 +0.3
EAB Aberfoyle 118.75 332 eP PKPdf 14 01 22.7 0.0
214A Organ Pipe Nat 118.76 58 ⇑P PKPdf 14 01 23.7 +0.2
baz=119,SNR=16
BW06 Boulder Array 118.76 45 ⇑P PKPdf 14 01 23.6 +0.4
baz=119,SNR=29
PDAR Pinedale Array 118.76 45 PKP PKPdf 14 01 23.2 +0.1
comp=Z,14nm,0.8s,baz=227,slow=1.0,SNR=75
PDAR PKKPbc PKKPbc 14 11 39.6 -0.8
comp=Z,7.0nm,0.8s,baz=103,slow=4.3,SNR=17
AVF Avril sur Loir 118.77 320 ePKIKP PKPdf 14 01 22.1 -0.9
comp=Z,22nm,0.6s
X15A Humboldt 118.78 55 ⇓P PKPdf 14 01 24.2 +0.7
baz=119,SNR=19
M18A Lyman 118.79 47 ⇑P PKPdf 14 01 23.2 -0.1
baz=119
Y15A Casa Rosa Ranc 118.81 55 ⇓P PKPdf 14 01 24.1 +0.6
baz=119,SNR=30
P17A Butcher Ranch, 118.83 49 ⇑P PKPdf 14 01 23.3 0.0
baz=119,SNR=14
T16A Glen Canyon Da 118.84 52 ⇑P PKPdf 14 01 23.6 +0.1
baz=119,SNR=11
PLDF La Plantade 118.89 319 eP PKPdf 14 01 23.9 +0.6
LHO Holmfirth 118.89 328 eP PKPdf 14 01 23.0 -0.1
KAR1 Arisaig 119.02 333 eP PKPdf 14 01 23.2 0.0
SRU San Rafael 119.08 49 ⇑P PKPdf 14 01 24.2 +0.3
baz=119,SNR=40
SRU San Rafael 119.08 49 ePKPdf PKPdf 14 01 24.2 +0.3
L19A Farson 119.10 46 ⇓P PKPdf 14 01 24.0 +0.2
baz=119,SNR=22
R17A Hanksville Air 119.11 50 ⇑P PKPdf 14 01 24.1 +0.1
baz=119,SNR=50
115A Sonoran Desert 119.12 57 ⇓P PKPdf 14 01 24.5 +0.3
baz=119,SNR=26
P18A Preston Nutter 119.15 49 ⇓P PKPdf 14 01 24.4 +0.4
baz=119,SNR=14
O18A Roosevelt 119.16 48 ⇑P PKPdf 14 01 24.9 +0.9
baz=119,SNR=14
BGF Bois d'Agland 119.17 320 ⇑iPKIKP PKPdf 14 01 23.5 -0.3
comp=Z,123nm,0.8s
AGO Saint Agoulin 119.18 319 eP PKPdf 14 01 24.3 +0.4
N18A Larsen Ranch, 119.20 47 ⇓P PKPdf 14 01 24.0 -0.1
baz=119,SNR=10
W16A Flagstaff 119.23 54 ⇓P PKPdf 14 01 24.7 +0.4
baz=119
S17A Black Ridge (B 119.23 51 ⇓P PKPdf 14 01 24.5 +0.2
baz=119,SNR=29
K19A Absolon Red Bu 119.24 45 ⇓P PKPdf 14 01 24.3 +0.2
baz=119,SNR=34
WUAZ Wupatki 119.27 53 ⇓P PKPdf 14 01 25.0 +0.6
baz=119,SNR=35
WUAZ Wupatki 119.27 53 ePKPdf PKPdf 14 01 24.8 +0.5
PYM Petit Puy Mans 119.36 319 eP PKPdf 14 01 24.7 +0.5
Q18A Rafter H Ranch 119.38 49 ⇑P PKPdf 14 01 24.4 -0.1
baz=120,SNR=22
LASF Ste Croix 119.38 317 ⇑iPKIKP PKPdf 14 01 23.8 -0.5
comp=Z,85nm,1.1s
T17A Navajo Res., N 119.38 52 ⇓P PKPdf 14 01 25.5 +0.9
baz=120,SNR=103
LBL Lubilhac 119.39 318 eP PKPdf 14 01 24.3 0.0
M19A Rock Springs 119.42 46 ⇑P PKPdf 14 01 24.7 +0.2
baz=120,SNR=7.4
X16A Lo Mia Camp, P 119.44 55 ⇑P PKPdf 14 01 25.0 +0.2
baz=120,SNR=27
Y16A Circle Bar Ran 119.52 55 ⇑P PKPdf 14 01 25.6 +0.7
baz=120
116A Eloy 119.58 57 ⇑P PKPdf 14 01 25.4 +0.3
baz=120,SNR=29
N19A John Jarvie Ra 119.59 47 ⇓P PKPdf 14 01 24.8 0.0
baz=120
GAL1 Galloway 119.64 331 eP PKPdf 14 01 24.0 -0.4
K20A Yellowstone Ra 119.65 45 ⇑P PKPdf 14 01 24.5 -0.4
baz=120,SNR=13
Z16A Peralta Trail, 119.66 56 ⇓P PKPdf 14 01 25.7 +0.5
baz=120
TCF Toulx Ste Croi 119.68 320 ePKIKP PKPdf 14 01 24.3 -0.5
comp=Z,72nm,1.0s
V17A Tonalea, Kykot 119.70 53 ⇓P PKPdf 14 01 25.8 +0.6
baz=120,SNR=24
R18A Canyonlands Na 119.74 50 ⇑P PKPdf 14 01 25.4 +0.3
baz=120,SNR=48
O19A Miers Draw (B 119.80 48 ⇑P PKPdf 14 01 25.4 +0.2
baz=120,SNR=16
S18A Hurst Farm, Bl 119.84 51 ⇓P PKPdf 14 01 26.0 +0.6
baz=120,SNR=39
L20A Wamsutter 119.85 46 ⇓P PKPdf 14 01 25.7 +0.4
baz=120,SNR=23
216A Three Points, 119.89 57 ⇓P PKPdf 14 01 26.2 +0.5
baz=120
W17A Winslow 119.89 54 ⇓P PKPdf 14 01 26.1 +0.5
baz=120,SNR=5.2
X17A Forest Lakes 119.97 55 ⇓P PKPdf 14 01 26.3 +0.6
baz=120
Q19A Hogan Spring (120.07 49 ⇓P PKPdf 14 01 26.5 +0.7
baz=120,SNR=31
Y17A Roosevelt 120.07 55 ⇑P PKPdf 14 01 26.4 +0.4
baz=120,SNR=20
T18A Mexican Hat 120.07 51 ⇑P PKPdf 14 01 25.5 -0.4
baz=120,SNR=59
P19A Cripple Cowboy 120.09 48 ⇑P PKPdf 14 01 26.3 +0.5
baz=120,SNR=15
DGMT Dagmar 120.19 37 ⇑P PKPdf 14 01 26.2 +0.5
baz=120
DGMT Dagmar 120.19 37 ePKPdf PKPdf 14 01 26.7 +1.0
LDF La Druitiere 120.21 323 ⇑iPKIKP PKPdf 14 01 25.0 -0.8
comp=Z,54nm,1.1s
R19A Curley Farm, L 120.25 50 ⇓P PKPdf 14 01 26.5 +0.4
baz=120
U18A Rough Rock, Ch 120.25 52 ⇓P PKPdf 14 01 26.5 +0.3
baz=120,SNR=50
N20A Spence Gulch, 120.27 47 ⇓P PKPdf 14 01 26.7 +0.6
baz=120,SNR=53
CAF Calviac 120.28 318 ⇑iPKIKP PKPdf 14 01 25.9 -0.1
comp=Z,95nm,1.1s
WLF1 Llynfaes 120.33 329 eP PKPdf 14 01 26.0 +0.2
HGH Gray Hill 120.34 327 eP PKPdf 14 01 25.3 -0.6
FLN La Foliniere 120.35 323 ⇑iPKIKP PKPdf 14 01 25.3 -0.7
comp=Z,70nm,1.1s
FLN eMLR MLR
comp=Z,803nm,21.0s
FLN La Foliniere 120.35 323 ⇑iPKPdf PKPdf 14 01 25.3 -0.7
FLN LR LR
comp=Z,800nm,21.0s
V18A Ganado 120.37 53 ⇑P PKPdf 14 01 27.4 +1.0
baz=120,SNR=24
HTR Trewern Hill 120.37 327 eP PKPdf 14 01 25.9 -0.1
117A Oracle 120.38 57 ⇑P PKPdf 14 01 26.9 +0.3
baz=120,SNR=28
TUC Tucson 120.39 57 ePKIKP PKPdf 14 01 26.7 +0.1
Z17A San Carlos Hig 120.46 56 ⇑P PKPdf 14 01 27.3 +0.5
baz=121
217A Green Valley 120.46 58 ⇓P PKPdf 14 01 27.2 +0.4
baz=121,SNR=35
S19A Harvey Farm, M 120.49 51 ⇓P PKPdf 14 01 27.1 +0.5
baz=121,SNR=15
PV04 Paradox Valley 120.49 50 ePKPdf PKPdf 14 01 27.5 +0.8
O20A White River Ci 120.49 48 ⇓P PKPdf 14 01 27.5 +0.9
baz=121,SNR=35
RJF Les Rejaudoux 120.50 319 ⇑iPKIKP PKPdf 14 01 26.2 -0.2
comp=Z,63nm,1.3s
RJF eMLR MLR
comp=Z,306nm,21.0s
RJF Les Rejaudoux 120.50 319 ⇑iPKPdf PKPdf 14 01 26.2 -0.2
RJF LR LR
comp=Z,310nm,21.0s
L21A Rawlins 120.55 45 ⇓P PKPdf 14 01 26.8 +0.1
baz=121,SNR=28
P20A De Beque 120.57 48 ⇓P PKPdf 14 01 27.5 +0.7
baz=121,SNR=16
X18A Snowflake 120.62 54 ⇓P PKPdf 14 01 27.5 +0.5
baz=121,SNR=6.6
SFJD Kangerlussuaq 120.64 359 PKP PKPdf 14 01 25.9 -0.1
comp=Z,12nm,0.5s,baz=110,slow=0.8,SNR=7.0
W18A Petrified Fore 120.66 54 ⇓P PKPdf 14 01 27.3 +0.2
baz=121,SNR=22
M21A Separation Pea 120.67 46 ⇑P PKPdf 14 01 27.2 +0.3
baz=121,SNR=28
Y18A Canyon Day Jun 120.72 55 ⇓P PKPdf 14 01 27.6 +0.4
baz=121
GRR Gorron 120.74 323 ⇑iPKIKP PKPdf 14 01 26.3 -0.5
comp=Z,47nm,1.0s
MTLF Montolieu 120.75 316 ⇑iPKIKP PKPdf 14 01 26.3 -0.7
comp=Z,63nm,1.1s
RWWY Rawlins 120.75 46 ePKPdf PKPdf 14 01 27.0 -0.1
Q20A Ridgley Place, 120.79 49 ⇓P PKPdf 14 01 28.0 +0.8
baz=121,SNR=30
U19A Dine' College, 120.80 52 ⇓P PKPdf 14 01 27.9 +0.6
baz=121,SNR=12
T19A Beclabito 120.81 52 ⇑P PKPdf 14 01 27.9 +0.6
baz=121,SNR=11
PV01 Paradox Valley 120.81 50 ePKPdf PKPdf 14 01 28.1 +0.8
N21A Black Mountain 120.83 47 ⇓P PKPdf 14 01 27.6 +0.4
baz=121,SNR=46
Z18A Geronimo 120.86 56 ⇑P PKPdf 14 01 28.1 +0.6
baz=121
W19A Sanders 120.94 54 ⇓P PKPdf 14 01 27.7 +0.1
baz=121
R20A Redvale 120.94 50 ⇑P PKPdf 14 01 28.0 +0.5
baz=121,SNR=21
118A Homack Ranch, 121.00 56 ⇓P PKPdf 14 01 28.2 +0.4
baz=121
O21A Pagoda 121.03 47 ⇑P PKPdf 14 01 27.9 +0.3
baz=121,SNR=16
MFF Saint Martin d 121.06 321 ⇑iPKIKP PKPdf 14 01 26.8 -0.7
comp=Z,71nm,1.0s
V19A Window Rock 121.07 53 ⇓P PKPdf 14 01 28.7 +0.8
baz=121,SNR=8.4
218A Dragoon 121.07 57 ⇑P PKPdf 14 01 28.2 +0.2
baz=121,SNR=29
MVCO Mesa Verde 121.12 51 ⇓P PKPdf 14 01 28.5 +0.7
baz=121,SNR=35
MVCO Mesa Verde 121.12 51 ePKPdf PKPdf 14 01 28.8 +0.9
LFF La Frestale 121.15 319 ⇑iPKIKP PKPdf 14 01 27.5 -0.2
comp=Z,81nm,0.9s
X19A St. Johns 121.17 54 ⇑P PKPdf 14 01 28.9 +0.8
baz=121,SNR=15
L22A Ellis Ranch, M 121.19 45 ⇓P PKPdf 14 01 28.2 +0.3
baz=121
VALF Valcebollere 121.21 315 eP PKPdf 14 01 28.8 +0.9
Y19A Nutrioso 121.31 55 ⇑P PKPdf 14 01 29.0 +0.7
baz=121,SNR=9.7
U20A Newcomb 121.32 52 ⇓P PKPdf 14 01 28.9 +0.6
baz=121,SNR=12
Q21A Lamborn Mesa, 121.37 49 ⇓P PKPdf 14 01 29.6 +1.3
baz=122,SNR=28
Z19A T-Link Ranch, 121.44 56 ⇑P PKPdf 14 01 29.1 +0.5
baz=122,SNR=7.4
V20A Brimhall 121.50 53 ⇓P PKPdf 14 01 29.0 +0.4
baz=122,SNR=11
R21A Cimarron 121.52 49 ⇑P PKPdf 14 01 29.5 +0.9
baz=122,SNR=5.2
119A Ashpeak Ranch, 121.53 56 ⇑P PKPdf 14 01 29.1 +0.3
baz=122,SNR=20
S21A Coal Bank Pass 121.54 50 ⇓P PKPdf 14 01 29.4 +0.8
baz=122,SNR=74
HTL Hartland 121.57 327 eP PKPdf 14 01 28.0 -0.3
N22A Wattenberg Ran 121.58 46 ⇑P PKPdf 14 01 29.3 +0.7
baz=122,SNR=12
219A White Tail Can 121.72 57 ⇓P PKPdf 14 01 29.3 +0.1
baz=122,SNR=50
X20A Quemado 121.78 54 ⇑P PKPdf 14 01 30.3 +1.0
baz=122,SNR=16
SGMF Saint Gilles 121.81 323 ⇑iPKIKP PKPdf 14 01 28.0 -0.9
comp=Z,53nm,1.0s
319A Douglas 121.83 58 ⇑P PKPdf 14 01 30.2 +0.8
baz=122,SNR=51
Q22A Crested Butte, 121.85 49 ⇑P PKPdf 14 01 30.3 +1.0
baz=122,SNR=44
Y20A Horse Springs, 122.03 55 ⇓P PKPdf 14 01 30.7 +1.0
baz=122,SNR=14
Z20A Nine Sixteen R 122.03 56 ⇓P PKPdf 14 01 30.7 +1.0
baz=122,SNR=31
RSSD Black Hills 122.07 42 ePKIKP PKPdf 14 01 28.5 -1.0
120A U Bar Ranch, L 122.12 56 ⇓P PKPdf 14 01 31.0 +1.1
baz=122,SNR=36
EPF Esparros 122.14 317 ⇑iPKIKP PKPdf 14 01 29.1 -0.6
comp=Z,44nm,1.1s
V21A Milan 122.15 52 ⇓P PKPdf 14 01 30.6 +0.7
baz=122,SNR=17
RESF Ens 122.22 316 eP PKPdf 14 01 31.1 +1.3
W21A San Fidel 122.32 53 ⇑P PKPdf 14 01 31.1 +0.8
baz=122,SNR=8.8
QUIF Quistinic 122.33 323 ⇑iPKIKP PKPdf 14 01 29.0 -0.9
comp=Z,42nm,1.0s
220A Playas Peak, P 122.35 57 ⇓P PKPdf 14 01 31.1 +0.7
baz=122,SNR=39
X21A Alamocita Cree 122.38 54 ⇓P PKPdf 14 01 31.0 +0.7
baz=122,SNR=48
T22A Edith 122.40 51 ⇑P PKPdf 14 01 31.7 +1.3
baz=122
VIEF Viey 122.41 317 eP PKPdf 14 01 30.5 +0.3
320A Kipp Ranch, An 122.47 58 ⇑P PKPdf 14 01 31.5 +0.9
baz=123,SNR=45
ISCO Idaho Springs 122.52 47 ePKIKP PKPdf 14 01 31.0 +0.5
Y21A Point of Rocks 122.57 54 ⇑P PKPdf 14 01 31.9 +1.1
baz=123,SNR=13
V22A San Miguel Ran 122.69 52 ⇑P PKPdf 14 01 31.9 +0.9
baz=123
Z21A St. Cloud Mine 122.74 55 ⇑P PKPdf 14 01 32.0 +0.8
baz=123
ETSF Etsaut 122.80 317 ⇑iPKIKP PKPdf 14 01 31.3 +0.4
comp=Z,79nm,1.1s
121A Cookes Peak, D 122.83 56 ⇓P PKPdf 14 01 32.0 +0.7
baz=123
LAZ Ladron 122.91 54 ePKPdf PKPdf 14 01 31.8 +0.4
221A Mesquite Ranch 122.95 57 ⇓P PKPdf 14 01 32.4 +0.8
baz=123
W22A Albuquerque 122.95 53 ⇓P PKPdf 14 01 33.2 +1.7
baz=123
X22A Bernardo 122.98 54 ⇓P PKPdf 14 01 32.7 +1.1
baz=123
LENM Lemitar 123.10 54 ePKPdf PKPdf 14 01 32.5 +0.8
Y22A Socorro 123.16 54 ⇓P PKPdf 14 01 32.7 +0.7
baz=123
Y22D IRIS PASSCAL I 123.16 54 ⇓P PKPdf 14 01 33.0 +1.1
baz=123
SJPF Ste Jean 123.17 317 ⇑iPKIKP PKPdf 14 01 31.6 0.0
comp=Z,84nm,1.2s
ANMO Albuquerque 123.31 53 ePKIKP PKPdf 14 01 32.8 +0.7
ANMO e 14 02 05.3
V23A Ortiz Mt. (NFS 123.31 52 ⇓P PKPdf 14 01 33.5 +1.4
baz=123
Z22A Elephant Butte 123.33 55 ⇑P PKPdf 14 01 33.0 +0.7
baz=124
BNM Barren Site 123.38 54 ePKPdf PKPdf 14 01 32.7 +0.4
122A Conniff Cattle 123.43 56 ⇑P PKPdf 14 01 33.3 +0.8
baz=124
222A Williams Famil 123.49 56 ⇓P PKPdf 14 01 33.3 +0.7
baz=124
W23A Werner Place, 123.50 53 ⇓P PKPdf 14 01 33.1 +0.5
baz=124
X23A Hourglass Bar 123.62 53 ⇑P PKPdf 14 01 33.4 +0.6
baz=124
U24A Moreno Valley 123.82 51 ⇑P PKPdf 14 01 34.6 +1.5
baz=124
Y23A Lovelace Mesa, 123.90 54 ⇑P PKPdf 14 01 34.0 +0.7
baz=124
Z23A Rita Site, Whi 123.92 55 ⇑P PKPdf 14 01 34.1 +0.7
baz=124
ULM Lac du Bonnet 124.04 32 PKP PKPdf 14 01 32.4 -0.7
comp=Z,30nm,0.8s,baz=317,slow=3.3,SNR=19
123A Bell Site, Whi 124.05 56 ⇑P PKPdf 14 01 34.1 +0.5
baz=124
W24A Lazy 6 Ranch, 124.06 52 ⇓P PKPdf 14 01 34.5 +0.9
baz=124,SNR=48
223A Chaparral, Ant 124.07 56 ⇑P PKPdf 14 01 34.1 +0.4
baz=124
X24A Lazy VL Ranch, 124.22 53 ⇓P PKPdf 14 01 34.4 +0.5
baz=124
Y24A Capitan 124.39 54 ⇓P PKPdf 14 01 35.1 +0.8
baz=124,SNR=98
U25A Circle Dot Ran 124.49 51 ⇓P PKPdf 14 01 35.2 +0.8
baz=125
V25A Rancho No Teng 124.50 51 ⇑P PKPdf 14 01 34.9 +0.4
baz=125
Z24A Sheeppen Canyo 124.61 55 ⇑P PKPdf 14 01 35.2 +0.5
baz=125
OGNE Ogallala 124.66 45 ePKPdf PKPdf 14 01 33.9 -0.7
124A Stringfield Ra 124.70 55 ⇑P PKPdf 14 01 35.6 +0.7
baz=125
224A Cornudas Mount 124.80 56 ⇓P PKPdf 14 01 35.4 +0.3
baz=125
W25A X Bar L Ranch, 124.81 52 ⇓P PKPdf 14 01 35.5 +0.5
baz=125,SNR=23
X25A Clemmons Ranch 124.85 53 ⇑P PKPdf 14 01 35.3 +0.2
baz=125,SNR=8.2
324A Moseley Ranch, 124.98 57 ⇓P PKPdf 14 01 35.3 -0.2
baz=125
Y25A Mesa, Roswell 124.99 54 ⇓P PKPdf 14 01 35.8 +0.4
baz=125,SNR=43
U26A Atchley Ranch, 125.00 51 ⇑P PKPdf 14 01 35.7 +0.3
baz=125,SNR=18
AGMN Agassiz Nation 125.13 34 ePKPdf PKPdf 14 01 33.5 -1.7
Z25A Roswell 125.14 54 ⇓P PKPdf 14 01 36.2 +0.5
baz=125,SNR=28
V26A Tequesquite Ra 125.16 51 ⇑P PKPdf 14 01 35.5 -0.2
baz=125,SNR=7.6
125A Gardner Draw, 125.36 55 ⇑P PKPdf 14 01 36.5 +0.3
baz=126,SNR=18
225A Deer Hill, Car 125.36 56 ⇓P PKPdf 14 01 36.8 +0.7

baz=126,SNR=20
W26A Owens Ranch, T 125.39 52 ⇑P PKPdf 14 01 35.7 -0.4
baz=126
325A Bean Ranch, Si 125.42 57 ⇓P PKPdf 14 01 36.4 0.0
baz=126,SNR=23
X26A CR and CF Fran 125.51 53 ⇑P PKPdf 14 01 36.5 +0.1
baz=126,SNR=18
425A Indio Mountain 125.55 58 ⇓P PKPdf 14 01 36.9 +0.4
baz=126,SNR=33
Y26A Elida 125.68 53 ⇑P PKPdf 14 01 36.6 -0.1
baz=126,SNR=6.5
GDL2 Guadalupe Moun 125.72 56 *e*PKPdf PKPdf 14 01 37.5 +0.6
Z26A Caprock 125.74 54 ⇓P PKPdf 14 01 36.6 -0.3
baz=126,SNR=8.7
126A Clayton Basin, 125.88 55 ⇓P PKPdf 14 01 37.0 -0.2
baz=126,SNR=12
CPRX Cap Rock 125.90 55 *e*PKPdf PKPdf 14 01 37.8 +0.7
W27A Bowe Ranch, En 125.94 52 ⇓P PKPdf 14 01 37.2 0.0
baz=126,SNR=23
226A Malaga, Loving 125.97 56 ⇑P PKPdf 14 01 37.4 +0.1
baz=126,SNR=27
X27A F and S Farms, 126.05 52 ⇑P PKPdf 14 01 37.4 0.0
baz=126,SNR=5.3
CLNB Carlsbad 126.10 55 *e*PKPdf PKPdf 14 01 38.1 +0.5
Y27A Causey 126.22 53 ⇑P PKPdf 14 01 38.0 +0.2
baz=126,SNR=8.4
326A Caldwell Ranch 126.26 57 ⇑P PKPdf 14 01 37.7 -0.2
baz=126,SNR=9.5
Z27A Tatum 126.34 54 ⇓P PKPdf 14 01 38.1 +0.1
baz=126,SNR=14
426A McDonald Obser 126.38 57 ⇑P PKPdf 14 01 38.4 +0.2
baz=126,SNR=10
127A Arkansas Junct 126.41 55 ⇓P PKPdf 14 01 38.3 +0.2
baz=126,SNR=5.1
ESDC Sonseca Array 126.42 314 PKP PKPdf 14 01 37.9 -0.1
comp=Z,9.7nm,0.9s,baz=8.7,slow=3.6,SNR=26
ESLA Sonseca Array 126.42 314 *e*PKPdf PKPdf 14 01 37.4 -0.5
526A Mary Lane Ranc 126.47 58 ⇑P PKPdf 14 01 39.0 +0.7
baz=127,SNR=39
MSTX Muleshoe 126.50 53 ⇑P PKPdf 14 01 38.8 +0.5
baz=127,SNR=6.4
626A Big Bend Ranch 126.56 59 ⇓P PKPdf 14 01 38.5 0.0
baz=127,SNR=13
227A Bennet, Jal 126.64 56 ⇓P PKPdf 14 01 38.8 +0.2
baz=127
327A Balmorhea Ranc 126.65 56 ⇑P PKPdf 14 01 38.4 -0.2
baz=127
PAB San Pablo 126.75 314 *e*PKIKP PKPdf 14 01 37.8 -0.8
527A Woodward Ranch 126.86 58 ⇓P PKPdf 14 01 39.3 +0.2
baz=127,SNR=33
427A Hayter Ranch, 126.86 57 ⇑P PKPdf 14 01 39.1 0.0
baz=127,SNR=30
TOA0 Torodi Ar. Sit 126.87 281 *e*PKPdf PKPdf 14 01 38.5 -1.0
TORD Torodi Ar. Bea 126.87 281 PKP PKPdf 14 01 39.3 -0.2
comp=Z,41nm,0.8s,baz=59,slow=1.9,SNR=110
TORD PKKPbc 14 11 10.4
comp=Z,1.2nm,0.8s,baz=289,slow=2.1,SNR=4.2
TXAR Lajitas Array 127.00 59 PKP PKPdf 14 01 39.8 +0.4
comp=Z,14nm,0.9s,baz=270,slow=1.3,SNR=51
TXAR PKKPbc 14 11 11.4
comp=Z,1.6nm,0.9s,baz=103,slow=5.5,SNR=7.5
TXAR SKKPbc 14 14 51.2
comp=Z,0.7nm,0.9s,baz=97,slow=2.9,SNR=3.8
ECSD EROS Data Cent 127.05 40 *e*PKPdf PKPdf 14 01 37.7 -1.4
328A Wristen Ranch, 127.21 56 ⇓P PKPdf 14 01 40.1 +0.4
baz=127,SNR=25
627A Terlingua Ranc 127.21 59 ⇓P PKPdf 14 01 39.6 -0.2
baz=127,SNR=32
428A Kincaid Ranch, 127.48 57 ⇑P PKPdf 14 01 41.0 +0.7
baz=128,SNR=14
528A Cox Ranch, San 127.54 58 ⇓P PKPdf 14 01 40.8 +0.4
baz=128,SNR=18
628A Black Gap, Mar 127.63 59 ⇑P PKPdf 14 01 40.9 +0.3
baz=128,SNR=16
MVO Moncorvo 127.90 317 *e*PKPdf PKPdf 14 01 42.3 +1.6
MTE Manteigas 128.60 317 *e*PKPdf PKPdf 14 01 49.9 +7.8
PVIS Viseu 128.69 317 *e*PKPdf PKPdf 14 01 43.7 +1.4
PCBR Castelo Branco 128.81 316 *e*PKPdf PKPdf 14 01 44.3 +1.8
PMRV Marv??o 128.93 316 *e*PKPdf PKPdf 14 01 43.0 +0.2
PLCA Paso Flores 129.03 162 PKP PKPdf 14 01 43.8 +0.8
comp=Z,34nm,1.1s,baz=178,slow=3.8,SNR=2.9
PLCA SKPbc 14 04 50.7
comp=Z,7.6nm,0.8s,baz=209,slow=4.0,SNR=6.1
PLCA Paso Flores 129.03 162 PKP PKPdf 14 01 43.8 +0.8
PLCA SKPbc 14 04 50.7
KSU1 Kansas State U 129.22 45 *e*PKPdf PKPdf 14 01 43.9 +0.5
PBAR Barrancos 129.22 314 *e*PKPdf PKPdf 14 01 45.2 +1.8
PESTR Estremoz 129.31 315 *e*PKPdf PKPdf 14 01 45.0 +1.5
WMOK Wichita Mounta 129.37 51 *e*PKIKP PKPdf 14 01 44.8 +1.0
EVO Evora 129.76 315 *e*PKIKP PKPdf 14 01 45.5 +1.1
comp=Z,100nm,1.3s
EVO *e*MLR MLR
comp=Z,645nm,20.2s
EVO Evora 129.76 315 *e*PKPdf PKPdf 14 01 46.3 +1.9
EVOP Sao Brissos 129.84 315 *e*P PKPdf 14 01 44.3 -0.2
EVOP AMS AMS 15 03 52.5
comp=Z,415nm,21.1s
PBEJ Beja 129.88 314 *e*PKPdf PKPdf 14 01 47.0 +2.4
JCT Junction City 129.94 56 *e*PKIKP PKPdf 14 01 43.3 -1.7
PVAQ Vaqueiros 130.04 313 *e*PKPdf PKPdf 14 01 47.0 +2.1
PCVE Castro Verde 130.17 314 *e*PKPdf PKPdf 14 01 48.4 +3.2
PBDV Barranco-do-Ve 130.26 313 *e*PKPdf PKPdf 14 01 47.7 +2.3
LIS Lisbon 130.47 316 *e*P PKPdf 14 01 44.9 -0.8
LIS AMS AMS 15 19 56.9
comp=E,707nm,23.1s
MORF Marmelete 130.75 314 *e*PKIKP PKPdf 14 01 46.1 -0.2
MORF Marmelete 130.75 314 *e*PKPdf PKPdf 14 01 47.8 +1.5
PFVI Vila Bisbo 130.95 313 *e*PKPdf PKPdf 14 01 47.3 +0.6
SCHQ Schefferville 131.40 11 PKhKP 14 01 41.5
comp=E,14nm,0.6s,baz=12,slow=5.9,SNR=5.1
SCHQ PKP PKPdf 14 01 48.4 +1.4
comp=E,8.5nm,0.4s,baz=333,slow=1.6,SNR=45
SCHQ SKPbc SKPbc 14 04 59.1 -2.0
comp=E,22nm,0.8s,baz=346,slow=3.7,SNR=13
JFWS Jewell Farm 131.41 37 *e*PKIKP PKPdf 14 01 47.1 -0.3
KIC Kosan Boka 132.99 272 *e*PKIKP PKPdf 14 01 51.3 +0.1
comp=E,368nm,1.8s
DBIC Dimbokro 133.13 272 PKhKP 14 01 45.3
comp=E,6.0nm,0.9s,baz=306,slow=4.6,SNR=6.1
DBIC PKP PKPdf 14 01 51.8 +0.4
comp=E,29nm,0.8s,baz=78,slow=2.6,SNR=20
DBIC SKPbc SKPbc 14 05 06.4 -2.1
comp=E,42nm,1.0s,baz=81,slow=6.0,SNR=12
LIC Lamto 133.26 271 *e*PKIKP PKPdf 14 01 51.1 -0.6
comp=E,149nm,1.1s
LIC *e*MLR MLR
comp=Z,433nm,21.2s
LIC Lamto 133.26 271 *e*PKIKP PKPdf 14 01 51.7 0.0
comp=Z,182nm,1.1s
LIC Lamto 133.26 271 *e*PKPdf PKPdf 14 01 51.1 -0.6
LIC LR LR
comp=Z,220nm,21.3s
TIC Toumodi 133.29 272 *e*PKIKP PKPdf 14 01 52.0 +0.3
comp=Z,62nm,0.7s
HKT Hockley 133.37 56 *e*PKIKP PKPdf 14 01 51.9 +0.4
MIAR Mount Ida 133.39 49 *e*PKIKP PKPdf 14 01 51.0 -0.4
CCM Cathedral Cave 133.41 43 *e*PKIKP PKPdf 14 01 50.8 -0.5
TRQA Tornquist 133.70 169 *e*PKPdf PKPdf 14 01 51.6 -0.3
FVM French Village 134.00 43 *e*PKIKP PKPdf 14 01 50.1 -2.3
UALR University of 134.20 48 *e*PKPdf PKPdf 14 01 52.6 -0.2
SIUC Southern Illin 134.96 43 *e*PKPdf PKPdf 14 01 54.6 +0.4
HBAR Harrisburg 135.06 46 *e*PKPdf PKPdf 14 01 55.3 +0.9
OLIL Olney 135.14 41 *e*PKPdf PKPdf 14 01 53.1 -1.4
USIN University of 135.85 41 *e*PKIKP PKPdf 14 01 57.1 +1.3
WCI Wyandotte Cave 136.59 40 *e*PKIKP PKPdf 14 01 57.6 +0.4
WVT Waverly 136.74 44 *e*PKIKP PKPdf 14 01 57.2 -0.4
PLAL Pickwick Lake 137.18 45 *e*PKPdf PKPdf 14 01 57.0 -1.4
CMIG Matias Romero 137.23 73 SKPbc SKPbc 14 05 20.8 -0.4
comp=Z,12nm,1.0s,baz=200,slow=3.8,SNR=3.7
ACSO Alum Creek Sta 137.35 35 *e*PKPpre 14 01 50.2
ACSO *e*PKPdf PKPdf 14 01 58.2 -0.4
CFAA Coronel Fontan 138.11 159 PKhKP 14 01 49.9
comp=Z,0.9nm,0.4s,baz=218,slow=2.6,SNR=17
CFAA PKP PKPdf 14 02 00.9 +0.6
comp=Z,2.9nm,0.6s,baz=240,slow=3.1,SNR=12
CFAA Coronel Fontan 138.11 159 PKP 14 01 49.9
CFAA PKP PKPdf 14 02 00.9 +0.6
LONY Lake Ozonia 138.22 24 *e*PKPdf PKPdf 14 01 59.3 -0.7
SWET Sewanee 138.54 44 *e*PKPdf PKPdf 14 02 00.8 -0.2
TZTN Tazewell 139.34 40 *e*PKPdf 14 01 49.1
CPCT Cooper Cave 139.36 42 *e*PKPdf 14 01 53.9
LCO Las Campanas 139.46 155 *e*PKPpre 14 01 55.6
PKME Peaks-Kenny Pk 139.59 19 *e*PKPdf PKPdf 14 01 58.2 -4.3
TKL Tuckaleechee C 139.73 41 *e*PKHKP 14 01 54.7
TKL *e* 14 02 03.2
SSPA Standing Stone 139.83 31 *e*PKPpre 14 01 54.9
SSPA *e*PKPdf PKPdf 14 02 03.5 +0.4
BRAL Brewton 139.88 50 *e*PKPdf PKPdf 14 02 03.0 -0.5
ELN Prospectdale 140.64 37 *e*PKPdf PKPdf 14 01 57.3 -7.4
BLA Blacksburg 140.85 37 *e*PKHKP PKPdf 14 01 58.5 -6.6
GOGA Godfrey 141.24 44 *e*PKHKP PKPdf 14 02 00.3 -5.6
APG El Apazote 141.71 75 SKPbc SKPbc 14 05 33.8 +0.3
comp=Z,19nm,1.0s,baz=277,slow=3.5,SNR=5.5
JSC Jenkinsville 142.20 41 *e*PKHKP PKPdf 14 02 03.2 -4.4
TEIG Tepich 142.79 66 *e*PKPdf PKPdf 14 02 06.0 -3.0
COW Cow Castle Cre 143.12 42 *e*PKPdf PKPdf 14 02 06.6 -2.6
BBTS Babate 144.43 285 PKP PKPdf 14 02 12.1 +0.1
baz=255,slow=2.2
TGUH Tegucigalpa,Un 144.89 76 *e*PKPdf PKPdf 14 02 12.8 0.0
DWPF Disney 145.56 50 *e*PKPdf PKPdf 14 02 13.8 +0.2
JTS JuntasAbangare 147.44 83 *e*PKIKP PKPdf 14 02 17.6 +0.4
NNA Nana 148.66 128 PKP PKPdf 14 02 20.2 +1.1
comp=Z,161nm,0.9s,baz=266,slow=5.5,SNR=6.3
NNA PKPbc PKPbc 14 02 24.4 +1.4
comp=Z,55nm,0.8s,baz=269,slow=5.6,SNR=8.0
CAM4 Nova Friburgo 148.84 197 ⇑P PKPdf 14 02 20.0 +0.7
CAM4 *i* 14 02 24.2
CAM4 *i* 14 02 25.7
CAM4 *i* 14 02 32.4
CAM4 *i* 14 02 43.1
ARE Arequipa 149.38 141 *e*PKHKP PKPbc 14 02 22.0 -2.7
ATAH Atahualpa 149.99 118 PKP PKPbc 14 02 22.8 -3.5
comp=Z,135nm,0.9s,baz=216,slow=1.5,SNR=18
ATAH PKPbc PKPab 14 02 29.0 -3.4
comp=Z,130nm,0.9s,baz=198,slow=2.4,SNR=49
LPAZ La Paz 151.49 146 PKP PKPbc 14 02 25.3 -4.5
comp=Z,31nm,1.2s,baz=37,slow=0.3,SNR=51
LPAZ PKPbc PKPab 14 02 32.0 -6.4
comp=Z,76nm,0.7s,baz=42,slow=4.3,SNR=114
LPAZ La Paz 151.49 146 PKP PKPbc 14 02 25.3 -4.5
LPAZ PKPbc PKPab 14 02 32.0 -6.4
BCIP Isla Barro Col 152.52 85 *e*PKPdf PKPdf 14 02 24.9 -0.3
BCIP *e*PKPbc PKPbc 14 02 31.6 -0.6
OTAV Otavalo 152.74 104 *e*PKPdf PKPdf 14 02 26.1 +0.5
MTDJ Mount Denham 153.08 64 *e*PKPdf PKPdf 14 02 25.6 -0.2
MTDJ *e*PKPbc PKPbc 14 02 33.2 -0.1
MTDJ *e*PKPab PKPab 14 02 45.1 0.0
SIV San Ignacio 154.97 159 PKP PKPdf 14 02 28.9 +0.4
comp=Z,20nm,1.0s,baz=221,slow=2.1,SNR=50
SIV PKPbc PKPbc 14 02 38.9 +1.5
comp=Z,15nm,1.0s,baz=228,slow=3.7,SNR=12
SIV PKPab PKPab 14 02 54.1 +1.1
comp=Z,29nm,0.8s,baz=214,slow=5.1,SNR=19
ROSC El Rosal 157.74 96 PKP PKPdf 14 02 32.8 +0.5
comp=Z,24nm,0.7s,baz=95,slow=11,SNR=15
ROSC PKPab PKPab 14 03 07.7 +2.3
comp=Z,27nm,0.8s,baz=123,slow=7.0,SNR=9.8
SDDR Presa de Saban 158.18 57 *e*PKPdf PKPdf 14 02 31.8 -0.9
RCBR Riachuelo 159.07 231 *e*PKPab PKPab 14 03 12.1 +1.1
SDV Santo Domingo 161.61 85 PKP PKPdf 14 02 36.5 -0.1
comp=Z,57nm,0.8s,baz=7.2,slow=0.2,SNR=62
SDV PKPab PKPab 14 03 23.9 +1.7
comp=Z,15nm,0.8s,baz=236,slow=3.7,SNR=3.8
CRPR Cabo Rojo, PR 162.07 53 *e*PKPdf PKPdf 14 02 36.9 -0.1
ICM Isla Caja Muer 162.60 52 *e*PKPdf PKPdf 14 02 36.6 -0.9
SJG San Juan 162.76 51 PKP PKPdf 14 02 37.2 -0.5
comp=Z,433nm,0.9s
CBYP Canovanas 162.90 50 *e*PKPdf PKPdf 14 02 37.0 -0.8
MTP Monte Pirata 163.23 50 *e*PKPdf PKPdf 14 02 36.6 -1.5
PCRV Puerto La Cruz 167.35 77 PKP PKPdf 14 02 41.2 -0.5
comp=Z,7.3nm,0.7s,baz=47,slow=3.1,SNR=3.6
FDF Fort de France 168.62 50 *e*P PKPdf 14 02 43.0 +0.5
BIM Bigot 168.81 51 *e*P PKPdf 14 02 42.7 0.0
MVM Montagne Vaucl 168.92 50 *e*P PKPdf 14 02 42.8 +0.1

IDC 06 13:54:20.0±3.3,31°.13N×103°.37E,h0km,mb3.8/3,
mb1 4.1/4,mb1mx3.6/25,mbtmp3.9/4,ML3.4/1,MS4.4/3,
Ms1 4.5/3,ms1mx3.7/34,Error ellipse: s-maj=85.1km
s-min=33.8km az=101.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.24**	**199**	LR	LR	14 03 21.0	
	comp=Z,5μm,21.9s,baz=126,slow=41						
SONM	**Songino Array**	**16.84**	**7**	Pn	Pn	13 58 16.3	-0.8
	0.1nm,0.3s,baz=190,slow=7.2,SNR=2.3						
KSRS	**Korea Array**	**21.22**	**66**	P	P	13 59 08.1	+0.7
	1.5nm,0.7s,baz=261,slow=10,SNR=8.3						
KSRS				LR	LR	14 08 12.8	
	comp=Z,2μm,20.3s,baz=166,slow=39						
WRA	**Warramunga Arr**	**58.85**	**146**	P	P	14 04 20.4	-0.2
	2.6nm,0.5s,baz=338,slow=8.0,SNR=8.2						
ASAR	**Alice Springs**	**61.84**	**148**	P	P	14 04 41.0	0.0
	0.8nm,0.8s,baz=330,slow=6.4,SNR=4.7						
YKA	**Yellowknife Ar**	**81.85**	**17**	LR	LR	14 42 10.5	
	comp=Z,65nm,21.9s,baz=25,slow=35						

*IDC **06** 14:23:15.0±1.7,23°.74S×179°.90E,h509km±17km,mb3.5/9,*
mb1 3.8/10,mb1mx3.6/16,mbtmp3.5/10,Error ellipse:
s-maj=17.8km s-min=14.2km az=158.0
*NEIC **06** 14:23:15.6±2.3,23°.79S×179°.94E,h523km±25km,mb4.2/7,*
Error ellipse: s-maj=21.6km s-min=13.4km az=192.0
*ISCJB **06** 14:23:15.7±2.4,23°.75±0°.1×179°.8E±0°.1,h525km±28km,*
mb4.0/15,Error ellipse: s-maj=16.4km s-min=15.1km
az=173.8

ISC 06 14:23:16.0±2.2,23°.8S±0°.1×179°.9E±0°.1,h517km±26km,
n26,σ0°.65/20,mb4.0/15,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.58**	**189**	P	**P**	**14 26 20.1**	**-1.2**
	1.6nm,0.3s,baz=194,slow=16,SNR=14						
URZ				S	**S**	**14 28 54.2**	**+0.1**
	0.7nm,0.3s,baz=189,slow=19,SNR=12						
CTAO	**Charters Tower**	**31.33**	**270**	*e*P	**P**	**14 28 54.7**	**+0.8**
	15nm,0.5s,mb4.8						
STKA	**Stephens Creek**	**34.62**	**248**	P	**P**	**14 29 21.9**	**+0.2**
	1.3nm,0.4s,mb3.8,baz=96,slow=14,SNR=5.4						
STKA	**Stephens Creek**	**34.62**	**248**	*e*P	**P**	**14 29 22.4**	**+0.8**
	0.3nm,0.4s,mb3.2						
ASAR	**Alice Springs**	**41.91**	**261**	P	**P**	**14 30 21.8**	**+0.7**
	7.7nm,0.8s,mb4.3,baz=96,slow=7.5,SNR=189						
ASAR				ScP	ScP	14 35 07.8	+2.0
	3.3nm,0.7s,baz=108,slow=4.4,SNR=26						
ASAR				S	**S**	**14 36 01.5**	**-0.3**
	0.7nm,0.9s,baz=96,slow=12,SNR=4.7						
WRAB	**Tennant Creek**	**42.26**	**266**	*e*P	**P**	**14 30 23.8**	**-0.1**
	8.6nm,0.8s,mb4.3						
WRA	**Warramunga Arr**	**42.27**	**266**	P	**P**	**14 30 23.9**	**0.0**
	11nm,0.6s,mb4.6,baz=102,slow=8.0,SNR=76						
WRA				ScP	ScP	14 35 09.9	+2.7
	2.1nm,0.9s,baz=94,slow=3.8,SNR=8.4						
WRA				S	**S**	**14 36 04.7**	**-2.4**
	0.6nm,0.7s,baz=102,slow=14,SNR=2.9						
KAKA	**Kakadu**	**46.16**	**275**	*e*P	**P**	**14 30 54.0**	**-0.1**
	19nm,0.4s,mb5.0						
FITZ	**Fitzroy Crossi**	**50.69**	**266**	*e*P	**P**	**14 31 27.8**	**0.0**
	3.6nm,0.6s,mb3.9						
MBWA	**Marble Bar**	**55.25**	**260**	*e*P	**P**	**14 31 59.6**	**-0.7**
	4.7nm,0.7s,mb3.8						
QSPA	**South Pole Qui**	**66.26**	**180**	P	**P**	**14 33 12.9**	**+0.9**
	6.4nm,0.6s,mb4.3,baz=15,slow=1.3,SNR=62						
KSM	**Kuching**	**71.95**	**280**	*e*P	**P**	**14 33 47.2**	**-0.1**
	4.7nm,0.8s,mb4.0						
MAW	**Mawson**	**77.78**	**200**	P	**P**	**14 34 19.6**	**+0.6**
	2.7nm,0.6s,mb3.8,baz=118,slow=7.2,SNR=11						
KSRS	**Korea Array**	**78.09**	**320**	P	**P**	**14 34 21.7**	**+0.5**
	0.5nm,0.8s,mb2.9,baz=107,slow=28,SNR=3.3						
NVAR	**Mina Array Bea**	**84.79**	**44**	P	**P**	**14 34 55.0**	**-0.5**
	1.3nm,0.9s,mb3.5,baz=226,slow=7.8,SNR=8.1						
TXAR	**Lajitas Array**	**90.51**	**58**	P	**P**	**14 35 22.5**	**-0.1**
	1.5nm,0.7s,mb4.0,baz=219,slow=5.8,SNR=18						
PDAR	**Pinedale Array**	**92.73**	**44**	P	**P**	**14 35 32.2**	**-0.3**
	0.8nm,0.7s,mb3.9,baz=207,slow=1.7,SNR=5.6						
KURK	**Kurchatov**	**115.05**	**317**	PKP	PKPdf	14 40 56.0	-1.7
	0.6nm,0.6s,baz=68,slow=2.3,SNR=3.4						
BVAR	**Borovoye Array**	**120.29**	**319**	PKP	PKPdf	14 41 06.2	-1.5
	0.4nm,0.4s,baz=42,slow=4.6,SNR=3.7						
ARCES	**ARCESS Array B**	**131.78**	**348**	PKP	PKPdf	14 41 27.9	-1.4
	1.6nm,0.9s,baz=36,slow=4.9,SNR=4.0						
FINES	**FINESS Array B**	**138.32**	**341**	SKPbc	SKPbc	14 44 26.1	-1.1
	1.9nm,0.8s,baz=71,slow=8.3,SNR=5.0						
NOA	**NORSAR Array B**	**141.98**	**351**	PKhKP		14 41 43.1	
	0.5nm,0.7s,baz=16,slow=4.5,SNR=2.6						
AKASG	**Malin Array Be**	**144.83**	**327**	PKP	PKPdf	14 41 52.6	-0.9
	1.1nm,0.5s,baz=52,slow=4.3,SNR=3.4						
AKASG				SKPbc	SKPbc	14 44 43.6	-0.3
	0.3nm,0.3s,baz=54,slow=1.4,SNR=4.6						
BRTR	**Keskin Array B**	**147.42**	**307**	PKPbc	PKPbc	14 42 00.4	-1.2
	0.3nm,0.6s,baz=146,slow=2.8,SNR=3.1						
MMAI	**Mount Meron Ar**	**147.54**	**294**	PKPbc	PKPbc	14 42 02.8	+0.6
	1.8nm,0.5s,baz=83,slow=8.5,SNR=5.1						
TORD	**Torodi Ar. Bea**	**169.24**	**190**	PKP	PKPdf	14 42 22.4	-2.0
	0.9nm,0.9s,baz=242,slow=3.1,SNR=3.0						
TORD				PKPab	PKPab	14 43 39.8	-0.2
	1.1nm,0.8s,baz=204,slow=3.2,SNR=5.3						

*ISCJB **06** 14:38:43.4±1.4,31°.05N±0°.03×103°.39E±0°.04,h3km±9km,*
mb4.1/21,Error ellipse: s-maj=6.3km s-min=5.2km
az=164.4
*IDC **06** 14:38:44.6±0.6,31°.07N×103°.48E,h0km,mb4.0/18,*
mb1 4.1/20,mb1mx4.0/29,mbtmp4.0/20,ML3.5/2,Error
ellipse: s-maj=26.0km s-min=11.9km az=56.0
*BJI **06** 14:38:46.9,31°.10N×103°.53E,h15km,mB4.6/8,mb4.2/13,*
ML4.2/16,Ms3.8/11,Ms7 3.5/8
*NEIC **06** 14:38:46.4±0.4,31°.09N×103°.50E,h10km,mb4.5/3,Error*
ellipse: s-maj=10.7km s-min=7.9km az=75.0

ISC 06 14:38:47.6±0.8,31°.11N±0°.03×103°.34E±0°.04,h17km±5km,
n48,σ1°.06/60,mb4.1/21,1D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.41**	**119**	⇓*i*Pg	**Pg**	**14 38 56.1**	**+0.1**
CD2				Sg	**Sg**	**14 39 03.2**	**+1.6**
CD2				smax			
	comp=N,24μm,0.7s						
CD2				smax			
	comp=E,28μm,1.0s						
LZH	**Lanzhou**	**4.98**	**5**	*e*Pn	**Pn**	**14 40 07.6**	**+6.1**
LZH				Pg	**Pg**	**14 40 22.5**	**-0.5**
LZH				Sn	**Sn**	**14 41 04.6**	**+5.9**
LZH				Sg	**Sg**	**14 41 25.9**	**-1.6**
LZH				smax			
	comp=N,65nm,0.7s						
LZH				smax			
	comp=E,140nm,0.9s						
LZH				LR	LR		
	comp=N,710nm,6.0s						
LZH				LR	LR		
	comp=Z,1μm,8.9s						
ENH	**Enshi**	**5.36**	**97**	*e*Pn	**Pn**	**14 40 06.9**	**+0.2**
	comp=Z,141nm,0.6s						
ENH				*e*Sn	**Sn**	**14 41 07.4**	**-0.6**
GYA	**Guiyang**	**5.47**	**147**	Pn	**Pn**	**14 40 08.4**	**+0.1**
GYA				Sn	**Sn**	**14 41 12.4**	**+1.5**
GYA				Sg	**Sg**	**14 41 34.9**	**-8.4**
GYA				smax			
	comp=N,490nm,0.8s						
GYA				smax			
	comp=E,670nm,0.9s						
GYA				LR	LR		
	comp=N,800nm,2.0s						
GYA				LR	LR		
	comp=E,910nm,2.1s						
GYA				LR	LR		
	comp=Z,810nm,2.0s						
XAN	**Xi'an**	**5.54**	**57**	Pn	**Pn**	**14 40 08.5**	**-0.7**
XAN				Sn	**Sn**	**14 41 21.4**	**+8.9**
XAN				Sg	**Sg**	**14 41 39.3**	**-6.2**
XAN				smax			
	comp=N,390nm,0.7s						
XAN				smax			
	comp=E,260nm,0.7s						
XAN				LR	LR		
	comp=N,340nm,6.5s						
XAN				LR	LR		
	comp=E,120nm,7.2s						
XAN				LR	LR		
	comp=Z,59nm,5.0s						
KMI	**Kunming**	**5.99**	**185**	Pn	**Pn**	**14 40 16.0**	**+0.7**
KMI				Sn	**Sn**	**14 41 22.4**	**-1.1**
KMI				Sg	**Sg**	**14 41 52.9**	**-6.8**
KMI				smax			
	comp=N,59nm,2.0s						
KMI				smax			
	comp=E,61nm,1.4s						
KMI				LR	LR		
	comp=N,470nm,8.2s						
KMI				LR	LR		
	comp=E,860nm,4.2s						
GTA	**Gaotai**	**8.77**	**342**	*e*P	**Pn**	**14 40 59.3**	**+5.8**
GTA				pP		14 41 03.6	
GTA				sP		14 41 06.9	
GTA				S	**Sn**	**14 42 36.7**	**+4.8**
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,100nm,4.5s						
GTA				LR	LR		
	comp=N,280nm,14.1s						
GTA				LR	LR		
	comp=E,310nm,14.1s						
GTA				LR	LR		
	comp=Z,350nm,15.0s						
LSA	**Lhasa**	**10.62**	**266**	*e*Pn	**Pn**	**14 41 23.2**	**+4.3**
	comp=Z,5.6nm,0.6s						
CHTO	**Chiang Mai**	**12.87**	**199**	*e*Pn	**Pn**	**14 41 48.7**	**-1.1**
	comp=Z,5.3nm,0.8s						
CM31	**Chiang Mai Arr**	**13.21**	**199**	*e*Pn	**Pn**	**14 41 59.5**	**+5.1**
	comp=Z,2.1nm,0.4s						
CMAR	**Chiang Mai Arr**	**13.21**	**199**	Pn	**Pn**	**14 41 55.5**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=10,slow=11,SNR=9.5						
TAPN	**Taplejung**	**14.15**	**259**	*e*P	**Pn**	**14 42 04.8**	**-2.4**
ODAN	**Odare**	**14.59**	**257**	*e*P	**Pn**	**14 42 12.2**	**-0.9**
	comp=Z,33nm,1.0s						
GUN	**Gumba**	**15.53**	**263**	*e*P	**Pn**	**14 42 25.3**	**-0.4**
	comp=Z,9.8nm,0.4s						
PKI	**Pulchoki**	**16.03**	**262**	*e*P	**Pn**	**14 42 31.3**	**-0.9**
	comp=Z,33nm,0.7s						
PKIN	**Phulchoki**	**16.04**	**262**	*e*P	**Pn**	**14 42 32.2**	**-0.1**
	comp=Z,31nm,0.6s						
KKN	**Kakani**	**16.08**	**263**	*e*P	**Pn**	**14 42 33.2**	**+0.4**
	comp=Z,31nm,0.7s						
SONM	**Songino Array**	**16.87**	**7**	Pn	**Pn**	**14 42 43.4**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=198,slow=9.1,SNR=3.1						
ULN	**Ulaanbaatar**	**16.98**	**9**	*e*Pn	**Pn**	**14 42 46.0**	**+1.9**
	comp=Z,2.2nm,0.8s						
KSRS	**Korea Array**	**21.25**	**66**	P	**P**	**14 43 31.7**	**-1.0**
	comp=Z,5.4nm,0.6s,mb4.0,baz=242,slow=9.2,SNR=30						
CN2	**Changchun**	**21.57**	**48**	*e*P	**P**	**14 43 36.4**	**+0.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.3						
MKAR	**Makanchi Array**	**22.55**	**320**	P	**P**	**14 43 48.2**	**+1.6**
	comp=Z,4.5nm,1.0s,mb3.9,baz=114,slow=12,SNR=15						
MKAR	**Makanchi Array**	**22.55**	**320**	P	**P**	**14 43 48.2**	**+1.6**
AAK	**Ala-Archa**	**25.66**	**305**	P	**P**	**14 44 19.1**	**+2.8**
	comp=Z,2.5nm,0.5s,mb4.0,baz=132,slow=5.2,SNR=11						
ZAA0	**Zalesovo Array**	**26.44**	**335**	*e*P	**P**	**14 44 23.6**	**+0.4**
ZALV	**Zalesovo Beam**	**26.44**	**335**	P	**P**	**14 44 24.3**	**+1.1**
	comp=Z,4.4nm,0.8s,mb4.

comp=Z,2.5nm,0.5s,mb4.4,baz=330,slow=3.8,SNR=10
STKA Stephens Creek 72.37 146 *eP* **P 14 50 10.9 -1.6**
comp=Z,0.4nm,0.5s,mb3.6
LPG La Plagne 72.77 313 *eP* **P 14 50 14.6 -0.2**
comp=Z,8.7nm,0.7s,mb4.5
LPG La Plagne 72.77 313 *eP* **P 14 50 14.6 -0.2**
comp=Z,4.3nm,0.7s,mb4.5
LPL La Plagne 72.77 313 *eP* **P 14 50 15.3 +0.4**
YKA Yellowknife Ar 81.88 17 P **P 14 51 05.0 -0.5**
comp=Z,0.5nm,0.5s,mb3.7,baz=326,slow=4.7,SNR=4.1
TORD Torodi Ar. Bea 93.01 287 P **P 14 52 00.6 +0.1**
comp=Z,0.2nm,0.5s,mb3.8,baz=67,slow=3.7,SNR=2.5

JMA 06 14:39:52.0±0.8, 31°.75N×142°.84E, h0km, M3.8, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOD2	**Odawara 2**	**4.70**	**319**	P	Pn	14 41 05.5	+1.3
JHU	**Hanno**	**5.05**	**325**	P	Pn	14 41 10.6	+1.6
JHU				*e*S	Sn	14 42 08.8	+0.8
JHO	**Hitachi**	**5.20**	**339**	P	Pn	14 41 13.7	+2.7
JHO				*e*S	Sn	14 42 14.7	+3.0
JRY	**Ryogami san**	**5.37**	**323**	P	Pn	14 41 15.2	+1.8
JAG	**Ashikaga**	**5.44**	**330**	P	Pn	14 41 16.9	+2.5
MAT	**Matsushiro**	**6.13**	**322**	P	Pn	14 41 24.8	+1.0
MAT	**Matsushiro**	**6.13**	**322**	P	Pn	14 41 25.5	+1.7

*ISCJB **06** 14:45:50.0±1.2, 12°.3S±0°.2×78°.6E±0°.2, h10km, mb4.0/10, Error ellipse: s-maj=29.3km s-min=14.0km az=38.8*
*IDC **06** 14:45:51.6±2.1, 12°.21S×78°.75E, h0km, mb4.0/8, mb1 4.1/9, mb1mx3.8/27, mbtmp4.0/9, ML4.0/1, Error ellipse: s-maj=63.2km s-min=23.3km az=58.0*
*NEIC **06** 14:45:52.5±0.8, 12°.27S×78°.67E, h10km, mb4.3/3, Error ellipse: s-maj=20.1km s-min=10.1km az=219.0*
ISC 06 14:45:52.5±1.2, 12°.2S±0°.2×78°.7E±0°.2, h10km, n15, σ0§66/14, mb4.0/10, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGAR	**Diego Garcia**	**7.79**	**307**	*e*Pn	**Pn**	**14 47 45.9**	**-0.2**
91nm,0.3s							
PALK	**Pallekele**	**19.48**	**6**	P	**Pn**	**14 50 20.2**	**-0.8**
0.4nm,0.3s,baz=170,slow=11,SNR=3.2							
PALK				S	**Sn**	**14 53 42.8**	**-17**
2.0nm,0.3s,baz=34,slow=3.2,SNR=7.5							
PALK	**Pallekele**	**19.48**	**6**	*e*P	**Pn**	**14 50 19.8**	**-1.2**
29nm,1.3s							
KULM	**Kulim**	**27.93**	**53**	*e*P	**P**	**14 51 43.1**	**-0.1**
5.7nm,1.1s,mb4.1							
CMAR	**Chiang Mai Arr**	**36.46**	**34**	P	**P**	**14 52 58.5**	**+0.7**
0.8nm,0.5s,mb3.9,baz=237,slow=9.4,SNR=6.0							
ASAR	**Alice Springs**	**53.46**	**110**	P	**P**	**14 55 13.4**	**+0.2**
0.8nm,0.8s,mb3.7,baz=282,slow=7.2,SNR=9.0							
WRA	**Warramunga Arr**	**53.82**	**106**	P	**P**	**14 55 16.5**	**+0.5**
1.4nm,0.7s,mb4.0,baz=269,slow=7.8,SNR=15							
WRAB	**Tennant Creek**	**53.83**	**106**	*e*P	**P**	**14 55 14.9**	**-1.2**
1.2nm,0.4s,mb4.2							
MKAR	**Makanchi Array**	**58.84**	**3**	P	**P**	**14 55 52.0**	**+0.8**
1.5nm,0.6s,mb4.2,baz=189,slow=6.7,SNR=13							
KURK	**Kurchatov**	**62.68**	**360**	P	**P**	**14 56 16.8**	**-0.5**
0.6nm,0.5s,mb4.0,baz=185,slow=6.1,SNR=4.7							
SONM	**Songino Array**	**64.69**	**20**	P	**P**	**14 56 31.5**	**+0.9**
0.6nm,0.5s,mb3.9,baz=191,slow=7.3,SNR=5.4							
ZALV	**Zalesovo Beam**	**66.12**	**4**	P	**P**	**14 56 40.1**	**+0.4**
1.8nm,0.6s,mb4.3,baz=205,slow=5.1,SNR=8.4							
KSRS	**Korea Array**	**67.63**	**41**	P	**P**	**14 56 49.2**	**-0.5**
1.5nm,0.7s,mb4.1,baz=242,slow=7.7,SNR=7.9							
PDAR	**Pinedale Array**	**148.75**	**12**	PKPbc	PKPbc	15 05 40.9	+0.5
0.8nm,0.7s,baz=98,slow=2.5,SNR=6.1							
NVAR	**Mina Array Bea**	**149.84**	**27**	PKPbc	PKPbc	15 05 44.3	+1.0
0.7nm,0.7s,baz=339,slow=1.6,SNR=5.2							

*IDC **06** 14:55:22.2±2.0, 5°.35N×126°.58E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/22, mbtmp3.7/4, MS3.4/1, Ms1 3.4/1, ms1mx2.6/28, Error ellipse: s-maj=117.8km s-min=19.7km az=66.0*
*NEIC **06** 14:55:26.7±0.7, 5°.37N×126°.63E, h35km, mb3.8/3, Error ellipse: s-maj=39.8km s-min=10.2km az=72.0*
*ISCJB **06** 14:55:27.8±1.6, 5°.3N±0°.1×126°.4E±0°.2, h66km±23km, mb3.5/6, Error ellipse: s-maj=35.1km s-min=17.6km az=159.8*
ISC 06 14:55:28.5±1.7, 5°.3N±0°.1×126°.3E±0°.2, h54km±25km, n12, σ0§61/15, mb3.6/6, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.62**	**358**	*e*P	**Pn**	**14 55 54.7**	**0.0**
MATI				*e*S	**Sn**	**14 56 06.5**	**-8.0**
DAV	**Davao City (W)**	**1.89**	**337**	Pn	**Pn**	**14 55 57.6**	**-0.8**
28nm,0.3s,baz=34,slow=18,SNR=3.9							
DAV				Sn	**Sn**	**14 56 21.8**	**+0.7**
40nm,0.3s,baz=263,slow=17,SNR=3.8							
KCP	**Kidapawan**	**2.08**	**324⇓**	*e*P	**Pn**	**14 56 01.2**	**+0.3**
KCP				*i*S	**Sn**	**14 56 24.9**	**-0.8**
BUKP	**Musuan**	**2.83**	**334**	*e*P	**Pn**	**14 56 12.0**	**+0.7**
BUKP				*e*S	**Sn**	**14 56 31.7**	**-13**
FITZ	**Fitzroy Crossi**	**23.28**	**182**	P	**P**	**15 00 32.7**	**+1.0**
1.9nm,1.0s,mb3.5,baz=343,slow=11,SNR=5.0							
WRAB	**Tennant Creek**	**26.31**	**163**	*e*P	**P**	**15 00 59.0**	**-0.3**
3.0nm,0.9s,mb3.8							
WRA	**Warramunga Arr**	**26.31**	**163**	P	**P**	**15 00 58.7**	**-0.6**
0.4nm,0.5s,mb3.2,baz=340,slow=11,SNR=5.1							
ASAR	**Alice Springs**	**29.74**	**166**	P	**P**	**15 01 30.1**	**+0.2**
0.7nm,0.6s,mb3.6,baz=345,slow=7.2,SNR=20							
MJAR	**Matsushiro Arr**	**32.93**	**18**	LR	LR	15 13 31.4	
comp=Z,62nm,19.0s,baz=295,slow=33							
STKA	**Stephens Creek**	**39.75**	**159**	P	**P**	**15 02 56.5**	**+0.5**
1.1nm,0.5s,mb3.9,baz=343,slow=11,SNR=2.8							
STKA	**Stephens Creek**	**39.75**	**159**	*e*P	**P**	**15 02 54.9**	**-1.1**
0.6nm,0.9s,mb3.3							
BILL	**Bilibino**	**68.13**	**15**	*e*P	**P**	**15 06 22.5**	**0.0**
0.6nm,0.4s,mb4.0							

*ISK **06** 15:04:05.4, 37°.26N×28°.18E, h5km, MD2.7*
*DDA **06** 15:04:06.1, 37°.24N×28°.21E, h7km±1km, Md2.9*
*CSEM **06** 15:04:06.5±0.2, 37°.25N×28°.22E, h5km, MD2.7, Error ellipse: s-maj=4.2km s-min=3.4km az=20.0*
*ISCJB **06** 15:04:06.5±0.5, 37°.25N±0°.03×28°.22E±0°.03, h4km±15km, Error ellipse: s-maj=5.6km s-min=4.2km az=17.0*
ISC 06 15:04:07.0±0.5, 37°.25N±0°.03×28°.21E±0°.03, h6km±13km, n18, σ0§82/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.13**	**154**	*e*PG	**Pg**	**15 04 08.9**	**-0.7**
YER	**Yerkesik**	**0.13**	**154**	*e*Pg	**Pg**	**15 04 08.9**	**-0.8**
MLSB	**Milas**	**0.35**	**277**	*e*PG	**Pg**	**15 04 13.4**	**-0.4**
MLSB				*e*SG	**Sg**	**15 04 18.6**	**+0.2**
MLSB	**Milas**	**0.35**	**277**	*e*Pg	**Pg**	**15 04 13.4**	**-0.4**
MLSB				*e*Sg	**Sg**	**15 04 18.6**	**+0.3**
AYDN	**Tasoluk**	**0.49**	**327**	*i*P	**Pg**	**15 04 16.1**	**-0.2**
AYDN				*i*S	**Sg**	**15 04 23.3**	**+0.6**
AYDN	**Tasoluk**	**0.49**	**327**	*i*P	**Pg**	**15 04 16.1**	**-0.3**
AYDN				*i*S	**Sg**	**15 04 23.3**	**+0.6**
TURN	**Turunc**	**0.49**	**140**	*i*P	**Pg**	**15 04 15.0**	**-1.4**
TURN				*i*S	**Sg**	**15 04 22.4**	**-0.4**
TURN	**Turunc**	**0.49**	**140**	*i*P	**Pg**	**15 04 15.0**	**-1.4**
TURN				*i*S	**Sg**	**15 04 22.4**	**-0.4**
BDRM	**Kayabasi**	**0.64**	**253**	*i*P	**Pg**	**15 04 18.5**	**-0.8**
BDRM				*i*S	**Sg**	**15 04 27.9**	**+0.3**
BDRM	**Kayabasi**	**0.64**	**253**	*i*P	**Pg**	**15 04 18.5**	**-0.8**
BDRM				*i*S	**Sg**	**15 04 27.9**	**+0.3**
DAT	**Datca**	**0.73**	**224**	*e*PG	**Pg**	**15 04 20.6**	**-0.4**
DAT				*e*SG	**Sg**	**15 04 31.6**	**+1.2**
DAT	**Datca**	**0.73**	**224**	*e*Pg	**Pg**	**15 04 20.6**	**-0.4**
DAT				*e*Sg	**Sg**	**15 04 31.7**	**+1.3**
DNZL	**Cakiroluk**	**0.80**	**56**	*e*P	**Pg**	**15 04 21.6**	**-0.6**
DNZL				*i*S	**Sg**	**15 04 33.4**	**+0.8**
DNZL	**Cakiroluk**	**0.80**	**56**	*e*P	**Pg**	**15 04 21.6**	**-0.6**
DNZL				*i*S	**Sg**	**15 04 33.4**	**+0.8**
FETY	**Fethiye**	**0.93**	**131**	*e*PG	**Pg**	**15 04 25.0**	**+0.2**
FETY				*e*SG	**Sg**	**15 04 39.1**	**+2.2**
FETY	**Fethiye**	**0.93**	**131**	*e*Pg	**Pg**	**15 04 25.0**	**+0.2**
FETY				*e*Sg	**Sg**	**15 04 39.1**	**+2.2**
KULA	**Kula-Manisa**	**1.31**	**16**	*e*PN	**Pn**	**15 04 31.6**	**-0.2**
KULA	**Kula-Manisa**	**1.31**	**16**	*e*Pn	**Pn**	**15 04 31.6**	**-0.2**

*DJA **06** 15:16:04, 4°.65S×101°.46E, h18km, MLv4.4/11*
*NEIC **06** 15:16:05.6±0.7, 4°.38S×101°.61E, h35km, mb4.1/5, Error ellipse: s-maj=30.0km s-min=7.1km az=53.0*
*ISCJB **06** 15:16:05.6±1.0, 4°.53S±0°.08×101°.52E±0°.07, h59km±8km, mb4.1/15, MS3.6/2, Error ellipse: s-maj=17.2km s-min=6.2km az=38.9*
*IDC **06** 15:16:06.3±1.2, 4°.42S×101°.55E, h39km±6km, mb3.9/12, mb1 4.0/12, mb1mx3.8/23, mbtmp3.9/12, MS3.5/3, Ms1 3.6/3, ms1mx3.0/36, Error ellipse: s-maj=39.8km s-min=13.1km az=54.0*
ISC 06 15:16:06.7±0.9, 4°.57S±0°.08×101°.50E±0°.07, h52km±8km, n36, σ1§05/35, mb4.1/15, MS3.6/2, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.42**	**50**	P	**Pn**	**15 16 27.3**	**-2.9**
KSI				S	**Sn**	**15 16 50.3**	**+2.5**
MNAI	**Manna**	**1.47**	**82**	P	**Pn**	**15 16 30.0**	**-0.8**
PPSI	**Pulau Pagai**	**2.33**	**320**	P	**Pn**	**15 16 42.5**	**-0.1**
LWLI	**Liwa**	**2.59**	**100**	P	**Pn**	**15 16 45.6**	**-0.5**
MDSI	**Maura Dua**	**2.67**	**88**	P	**Pn**	**15 16 45.9**	**-1.4**
MDSI				S	**Sn**	**15 17 18.0**	**-0.5**
KASI	**Kota Agung**	**3.13**	**108**	P	**Pn**	**15 16 52.1**	**-1.5**
KLI	**Kotabumi**	**3.36**	**95**	P	**Pn**	**15 16 58.4**	**+1.7**
SDSI	**Sungai Dareh**	**3.62**	**359**	P	**Pn**	**15 17 01.2**	**+0.9**
PDSI	**Padang**	**3.78**	**344**	P	**Pn**	**15 17 03.1**	**+0.6**
SISI	**Saibi**	**4.02**	**323**	P	**Pn**	**15 17 05.6**	**-0.2**
PPI	**Padang Panjang**	**4.23**	**345**	P	**Pn**	**15 17 09.2**	**+0.5**
RGRI	**Rengat**	**4.28**	**11**	P	**Pn**	**15 17 11.2**	**+1.9**
CGJI	**Cibinong**	**4.64**	**116**	P	**Pn**	**15 17 14.9**	**+0.6**
MYKOM	**Kota Tinggi**	**6.74**	**20**	P	**Pn**	**15 17 43.1**	**0.0**
0.1nm29nm,0.8s							
GSI	**Gunungsitoli**	**7.03**	**326**	P	**Pn**	**15 17 47.1**	**0.0**
PSI	**Prapat**	**7.76**	**341**	LR	LR	15 21 30.1	
comp=Z,255nm,19.0s,baz=188,slow=43							
CM31	**Chiang Mai Arr**	**23.02**	**354**	*e*P	**P**	**15 21 05.7**	**-1.8**
1.3nm,0.5s,mb3.6							
CMAR	**Chiang Mai Arr**	**23.02**	**354**	P	**P**	**15 21 05.2**	**-2.2**
1.0nm,0.6s,mb3.4,baz=184,slow=9.0,SNR=9.5							
CMAR				pP		15 21 16.9	
1.6nm,0.6s,baz=184,slow=8.1,SNR=8.8							
CMAR				PcP	PcP	15 24 58.0	+2.3
0.5nm,0.5s,baz=212,slow=3.7,SNR=4.9							
CMAR				LR	LR	15 30 24.5	
comp=Z,76nm,21.8s,MS3.1,baz=325,slow=38							
NWAO	**Narrogin (SRO)**	**31.81**	**154**	*e*P	**P**	**15 22 22.7**	**-3.8**
8.1nm,0.9s,mb4.5							
WRA	**Warramunga Arr**	**35.43**	**118**	P	**P**	**15 22 58.4**	**+0.2**
0.8nm,0.4s,mb4.0,baz=306,slow=8.8,SNR=18							
WRA				PcP	PcP	15 25 28.4	+1.2
0.7nm,0.7s,baz=307,slow=2.3,SNR=6.0							
WRAB	**Tennant Creek**	**35.44**	**118**	*e*P	**P**	**15 22 59.2**	**+1.0**
1.2nm,0.5s,mb4.1							
ASAR	**Alice Springs**	**36.55**	**124**	P	**P**	**15 23 08.7**	**+0.9**
2.1nm,0.7s,mb4.1,baz=294,slow=7.4,SNR=48							
CTA	**Charters Tower**	**46.18**	**113**	P	**P**	**15 24 27.9**	**+1.2**
2.6nm,0.6s,mb4.4,baz=348,slow=3.5,SNR=3.7							
CTAO	**Charters Tower**	**46.18**	**113**	*e*P	**P**	**15 24 26.3**	**-0.5**
3.2nm,0.7s,mb4.4							
STKA	**Stephens Creek**	**46.34**	**131**	P	**P**	**15 24 28.9**	**+1.1**
2.2nm,0.6s,mb4.3,baz=297,slow=13,SNR=8.2							
STKA	**Stephens Creek**	**46.34**	**131**	*e*P	**P**	**15 24 28.5**	**+0.7**
0.5nm,0.6s,mb3.6							
KSRS	**Korea Array**	**48.51**	**28**	P	**P**	**15 24 44.0**	**-0.5**
2.1nm,0.8s,mb4.2,baz=215,slow=7.6,SNR=9.9							
KSRS				pP	pP	15 24 55.7	-2.7
1.2nm,0.7s,baz=214,slow=7.1,SNR=4.5							
SONM	**Songino Array**	**52.36**	**4**	P	**P**	**15 25 13.4**	**0.0**
2.6nm,0.5s,mb4.4,baz=187,slow=10,SNR=20							
MKAR	**Makanchi Array**	**53.90**	**344**	P	**P**	**15 25 25.1**	**+0.3**
2.3nm,0.7s,mb4.2,baz=132,slow=7.9,SNR=19							
MKAR				pP	pP	15 25 35.9	-3.0
2.0nm,0.7s,baz=126,slow=8.2,SNR=4.3							
ZAA0	**Zalesovo Array**	**59.96**	**349**	*e*P	**P**	**15 26 06.9**	**-0.6**
ZALV	**Zalesovo Beam**	**59.96**	**349**	P	**P**	**15 26 07.2**	**-0.3**
3.4nm,0.4s,mb4.7,baz=174,slow=4.5,SNR=16							
BVAR	**Borovoye Array**	**63.10**	**340**	P	**P**	**15 26 28.3**	**-0.4**
0.8nm,0.5s,mb4.2,baz=142,slow=8.2,SNR=7.1							
BRTR	**Keskin Array B**	**76.15**	**313**	P	**P**	**15 27 49.8**	**+0.4**
0.5nm,0.5s,mb3.7,baz=130,slow=5.7,SNR=4.3							
QSPA	**South Pole Qui**	**85.41**	**180**	LR	LR	15 59 37.5	
comp=Z,73nm,19.5s,MS4.1,slow=30							
FINES	**FINESS Array B**	**87.07**	**332**	P	**P**	**15 28 47.1**	**+0.6**
0.7nm,0.4s,mb4.2,baz=98,slow=3.9,SNR=7.5							
TXAR	**Lajitas Array**	**145.73**	**41**	PKPbc	PKPbc	15 35 42.1	+1.5
2.4nm,0.6s,baz=290,slow=1.3,SNR=21							
TXAR				pPKPbc	pPKPbc	15 35 53.2	-2.9
1.7nm,0.7s,baz=288,slow=0.4,SNR=7.0							

*ISCJB **06** 15:34:54.1±1.2, 6°.4S±0°.1×128°.8E±0°.2, h300km, Error ellipse: s-maj=34.4km s-min=8.0km az=151.9*
*IDC **06** 15:35:02.6±5.5, 6°.87S×129°.02E, h325km±76km, mb3.2/1, mb1 3.3/4, mb1mx2.9/18, mbtmp3.1/4, Error ellipse: s-maj=73.8km s-min=48.6km az=90.0*
ISC 06 15:34:55.3±1.2, 6°.3S±0°.1×128°.8E±0°.2, h300km, n6, σ0§43/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**3.49**	**332**	P	**S**	**15 36 44.8**	**+0.1**
KDI	**Kendari**	**6.55**	**291**	P	**Pn**	**15 36 30.9**	**-0.4**
FITZ	**Fitzroy Crossi**	**12.09**	**194**	P	**Pn**	**15 37 39.3**	**+0.4**
0.1nm,0.3s,baz=40,slow=7.9,SNR=5.1							
WRA	**Warramunga Arr**	**14.57**	**159**	P	**P**	**15 38 07.7**	**+0.1**
0.8nm,0.3s,baz=340,slow=11,SNR=10							
WRA				S	**S**	**15 40 43.3**	**-4.0**
0.1nm,0.3s,baz=333,slow=21,SNR=5.6							
ASAR	**Alice Springs**	**17.93**	**165**	P	**P**	**15 38 44.5**	**+0.3**
0.6nm,0.3s,baz=346,slow=12,SNR=48							
ASAR				S	**S**	**15 41 47.6**	**-6.6**
0.1nm,0.3s,baz=346,slow=21,SNR=5.6							
STKA	**Stephens Creek**	**28.10**	**156**	P	**P**	**15 40 20.0**	**0.0**
1.7nm,1.0s,baz=355,slow=11,SNR=2.1							

*BJI **06** 15:56:56.7, 67°.90N×129°.60E, h10km, mB4.5/5, mb4.3/6*
*MOS **06** 15:56:56.4±1.5, 67°.93N×129°.45E, h14km, mb4.3/7, Error ellipse: s-maj=28.6km s-min=11.9km az=85.3*
*IDC **06** 15:56:57.1±1.2, 68°.12N×129°.17E, h0km, mb3.7/8, mb1 3.8/8, mb1mx3.6/29, mbtmp3.7/8, MS2.9/1, Ms1 3.0/1, ms1mx2.4/28, Error ellipse: s-maj=31.6km s-min=21.3km az=155.0*
*NEIC **06** 15:56:57.8±0.5, 67°.91N×129°.57E, h10km, mb4.2/3, Error ellipse: s-maj=10.7km s-min=9.6km az=147.0*
ISC 06 15:56:59.7±3.3, 68°.02N±0°.06×129°.6E±0°.2, h21km±26km, n31, σ1§15/33, mb3.9/13, MS3.1/2, 2C, Northern and central Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIXI	**Tiksi**	**3.65**	**356**	*e*Pn	**Pn**	**15 57 55.0**	**+0.2**
TIXI				*e*Sn	**Sn**	**15 58 36.5**	**-0.6**
YAK	**Yakutsk**	**6.02**	**180**	*e*P	**Pn**	**15 58 23.7**	**-3.6**
YAK				*e*		15 59 32.7	
YAK				pmax	pmax		
comp=Z,11nm,0.5s							
YAK				smax			
comp=E,29nm,0.6s							
YAK				smax			
comp=N,33nm,0.6s							
YAK				smax			
comp=Z,77nm,9.4s							
YAK	**Yakutsk**	**6.02**	**180**	*e*Pn	**Pn**	**15 58 23.5**	**-3.8**
comp=Z,86nm,0.7s							
BILL	**Bilibino**	**13.60**	**73**	*e*P	**Pn**	**16 00 11.8**	**+0.8**
BILL				pmax	pmax		
comp=Z,3.0nm,0.8s							
BILL	**Bilibino**	**13.60**	**73**	*e*Pn	**Pn**	**16 00 11.8**	**+0.8**
comp=Z,2.8nm,0.8s							
BILL				*e*Sn	**Sn**	**16 02 32.3**	**-8.8**
PETK	**Petropavlovsk-**	**20.07**	**124**	P	**P**	**16 01 34.7**	**+3.5**
comp=Z,2.3nm,0.7s,baz=311,slow=9.4,SNR=3.7							
PETK	**Petropavlovsk-**	**20.07**	**124**	P	**P**	**16 01 34.7**	**+3.5**
PET	**Petropavlovsk**	**20.44**	**123**	P	**P**	**16 01 35.0**	**-0.2**
PET				pmax	pmax		
comp=Z,3.0nm,0.5s							
PET	**Petropavlovsk**	**20.44**	**123**	P	**P**	**16 01 35.0**	**-0.2**
comp=Z,2.6nm,0.5s							
MOY	**Mondy**	**21.46**	**235**	*e*P	**P**	**16 01 47.3**	**+1.1**
MOY				*e*		16 05 37.9	
ZAK	**Zakamensk**	**21.92**	**229**	*e*P	**P**	**16 01 47.6**	**-3.5**
ZAK				*e*		16 05 49.7	
ZAK				pmax	pmax		
comp=Z,5.0nm,1.1s,mb3.9							
ULN	**Ulaanbaatar**	**23.21**	**221**	*e*P	**P**	**16 02 07.6**	**+2.8**
SONM	**Songino Array**	**23.40**	**222**	P	**P**	**16 02 07.1**	**+0.3**
comp=Z,0.7nm,0.7s,mb3.2,baz=5.0,slow=11,SNR=3.1							
NVS	**Novosibirsk**	**25.04**	**261**	*e*P	**P**	**16 02 20.2**	**-1.6**
NVS				*e*S	**S**	**16 06 45.5**	**+1.1**
NVS				pmax	pmax		
comp=Z,25nm,2.2s,mb4.4							
NVS				pmax	pmax		
comp=N,9.0nm,1.7s							
NVS				smax			
comp=N,8.0nm,1.8s							
NVS				smax			
comp=E,16nm,2.3s							
ZAA0	**Zalesovo Array**	**25.14**	**258**	*e*P	**P**	**16 02 24.4**	**+1.7**
ZALV	**Zalesovo Beam**	**25.14**	**258**	P	**P**	**16 02 22.6**	**-0.1**
comp=E,3.0nm,0.8s,mb3.9,baz=48,slow=8.9,SNR=9.8							
KURK	**Kurchatov**	**30.02**	**261**	P	**P**	**16 03 06.1**	**-0.3**
comp=E,1.8nm,0.7s,mb3.9,baz=43,slow=8.8,SNR=7.8							
KURK	**Kurchatov**	**30.02**	**261**	P	**P**	**16 03 06.1**	**-0.3**
KURK				pmax	pmax		
comp=Z,2.0nm,0.7s,mb4.0							
KURK	**Kurchatov**	**30.02**	**261**	*e*P	**P**	**16 03 05.6**	**-0.8**
comp=Z,4.7nm,1.0s,mb4.2							
BRVK	**Borovoye**	**31.28**	**272⇑**	*e*P	**P**	**16 03 26.2**	**+8.7**
BRVK				pmax	pmax		
comp=Z,3.0nm,1.8s,mb3.8							
MAJO	**Matsushiro**	**31.91**	**167**	*e*P	**P**	**16 03 21.7**	**-1.5**
MAJO				pmax	pmax		
comp=Z,3.0nm,0.8s,mb4.2							
MAJO	**Matsushiro**	**31.91**	**167**	*e*P	**P**	**16 03 21.7**	**-1.5**
comp=Z,3.1nm,0.8s,mb4.2							
MK31	**Makanchi Array**	**31.94**	**253**	*e*P	**P**	**16 03 22.3**	**-1.1**
MKAR	**Makanchi Array**	**31.94**	**253**	P	**P**	**16 03 22.3**	**-1.1**
comp=Z,2.9nm,0.6s,mb4.3,baz=50,slow=9.7,SNR=28							
AAK	**Ala-Archa**	**38.35**	**257⇑**	*e*P	**P**	**16 04 24.3**	**+5.7**
AAK				pmax	pmax		
comp=Z,3.0nm,1.7s,mb3.8							
YKA	**Yellowknife Ar**	**41.89**	**39**	P	**P**	**16 04 47.7**	**0.0**
comp=Z,0.4nm,0.6s,mb3.2,baz=334,slow=8.4,SNR=3.2							
NOA	**NORSAR Array B**	**43.76**	**322**	LR	LR	16 26 28.8	
comp=Z,15nm,21.1s,MS2.9,baz=50,slow=41							
KIV	**Kislovodsk**	**49.04**	**287**	*e*P	**P**	**16 05 50.8**	**+6.3**
KIV				pmax	pmax		
comp=Z,6.0nm,1.0s,mb4.6							
KIV				MLR	MLR		
comp=Z,27nm,16.0s,MS3.3							
GERES	**GERESS Array B**	**54.06**	**313**	P	**P**	**16 06 22.1**	**+0.2**
comp=Z,0.7nm,0.8s,mb3.6,baz=46,slow=9.5,SNR=3.9							
BRTR	**Keskin Array B**	**55.97**	**292**	P	**P**	**16 06 36.5**	**+0.7**
comp=Z,0.3nm,0.4s,mb3.6,baz=45,slow=8.0,SNR=3.0							
HKT	**Hockley**	**76.65**	**39**	*e*P	**P**	**16 08 39.5**	**-8.9**

*IDC **06** 15:58:14.7±2.7, 28°.77N×142°.90E, h0km, mb3.9/7, mb1 3.9/9, mb1mx3.7/27, mbtmp3.8/9, ML3.6/2, Error ellipse: s-maj=94.0km s-min=17.4km az=78.0*
*ISCJB **06** 15:58:17.5±0.8, 28°.80N±0°.03×142°.7E±0°.2, h33km, mb3.9/8, Error ellipse: s-maj=20.0km s-min=3.6km az=175.3*
*JMA **06** 15:58:18.6±0.1, 28°.75N×142°.49E, h39km, M4.1*
*NEIC **06** 15:58:19.2±1.4, 28°.84N×142°.89E, h35km, mb4.3/2, Error ellipse: s-maj=41.4km s-min=12.7km az=77.0*
ISC 06 15:58:19.4±1.9, 28°.74N±0°.03×142°.7E±0°.2, h30km±16km, n30, σ1§12/43, mb3.9/8, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.70**	**196**	P	**Pn**	**15 59 46.4**	**-0.5**
CBIJ				S	**Sn**	**15 59 06.7**	**-0.9**
CBIJ	**Chichi jima**	**1.70**	**196**	Pn	**Pn**	**15 58 46.5**	**-0.3**
JHHJ	**Haha-jima-NKT**	**2.15**	**192**	*e*S	**Sn**	**15 59 18.3**	**-0.5**
JHJ2	**Mitsune**	**5.01**	**331**	P	**Pn**	**15 59 34.4**	**+2.0**
JHJ2				*e*S	**Sn**	**16 00 27.9**	**-1.4**
BSO1	**Boso 1**	**6.08**	**347**	P	**Pn**	**15 59 46.1**	**-1.0**
BSO1				*e*S	**Sn**	**16 00 50.9**	**-4.6**
BSO3	**Boso 3**	**6.32**	**343**	P	**Pn**	**15 59 51.6**	**+1.1**
BSO3				*e*S	**Sn**	**16 01 01.2**	**-0.5**
JIM2	**Oshima 3**	**6.58**	**336**	P	**Pn**	**15 59 54.4**	**+0.5**
JIM2				*e*S	**Sn**	**16 01 07.7**	**-0.2**
JYO	**Yokosk**	**6.96**	**339**	P	**Pn**	**16 00 00.4**	**+1.2**
JYO				*e*S	**Sn**	**16 01 16.4**	**-0.9**
JOD2	**Odawara 2**	**7.19**	**336**

LZH				smax			
	comp=N,220nm,0.8s						
LZH				smax			
	comp=E,360nm,0.6s						
LZH				LR	LR		
	comp=E,550nm,6.2s						
LZH				LR	LR		
	comp=Z,770nm,6.9s						
GYA	**Guiyang**	**6.21**	**168**	Pn	**Pn**	**16 24 17.2**	**+0.7**
GYA				smax			
	comp=N,70nm,0.6s						
GYA				smax			
	comp=E,60nm,0.7s						
GTA	**Gaotai**	**8.13**	**329**	*e*P	**Pn**	**16 24 43.9**	**+1.0**
GTA				pP		16 24 47.9	
GTA				sP		16 24 51.3	
GTA				S	**Sn**	**16 26 15.1**	**+0.1**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,75nm,5.4s						
GTA				LR	LR		
	comp=N,120nm,10.8s						
GTA				LR	LR		
	comp=E,170nm,10.2s						
GTA				LR	LR		
	comp=Z,190nm,10.2s						
CMAR	**Chiang Mai Arr**	**15.16**	**204**	Pn	**Pn**	**16 26 16.2**	**-2.9**
	comp=Z,0.2nm,0.3s,baz=13,slow=12,SNR=4.9						
SONM	**Songino Array**	**15.27**	**3**	Pn	**Pn**	**16 26 22.0**	**+1.7**
	baz=184,slow=12,SNR=2.5						
KSRS	**Korea Array**	**19.17**	**69**	P	**Pn**	**16 27 11.8**	**+2.4**
	comp=Z,0.2nm,0.3s,baz=251,slow=10,SNR=4.9						
KSRS				LR	LR	16 34 41.0	
	comp=Z,22nm,20.3s,baz=15,slow=37						
MK31	**Makanchi Array**	**22.57**	**316**	*e*P	**P**	**16 27 46.3**	**+1.1**
MKAR	**Makanchi Array**	**22.57**	**316**	P	**P**	**16 27 45.7**	**+0.5**
	comp=Z,1.0nm,0.5s,mb3.5,baz=106,slow=13,SNR=15						
MKAR	**Makanchi Array**	**22.57**	**316**	P	**P**	**16 27 45.7**	**+0.5**
ZALV	**Zalesovo Beam**	**25.87**	**332**	P	**P**	**16 28 17.2**	**+0.7**
	comp=Z,0.6nm,0.3s,mb3.6,baz=146,slow=8.4,SNR=4.7						
KURK	**Kurchatov**	**26.71**	**321**	P	**P**	**16 28 24.5**	**+0.3**
	comp=Z,0.3nm,0.3s,mb3.3,baz=49,slow=11,SNR=6.6						
KURK	**Kurchatov**	**26.71**	**321**	*e*P	**P**	**16 28 23.4**	**-0.8**
	comp=Z,1.9nm,0.8s,mb3.7						
BVAR	**Borovoye Array**	**32.29**	**320**	P	**P**	**16 29 13.3**	**-0.4**
	comp=Z,0.5nm,0.7s,mb3.5,baz=139,slow=12,SNR=3.6						
ARCES	**ARCESS Array B**	**56.34**	**335**	P	**P**	**16 32 26.0**	**+0.4**
	comp=Z,5.9nm,1.1s,mb4.5,baz=67,slow=9.3,SNR=3.8						
FINES	**FINESS Array B**	**56.91**	**326**	P	**P**	**16 32 29.9**	**+0.1**
	comp=Z,1.0nm,0.7s,mb3.9,baz=79,slow=7.2,SNR=4.6						
AKASG	**Malin Array Be**	**57.12**	**313**	P	**P**	**16 32 30.5**	**-0.9**
	comp=Z,0.5nm,0.4s,mb3.9,baz=71,slow=6.4,SNR=4.5						
WRA	**Warramunga Arr**	**59.16**	**148**	P	**P**	**16 32 45.2**	**-0.8**
	comp=Z,1.3nm,0.8s,mb4.0,baz=340,slow=7.6,SNR=6.2						
ASAR	**Alice Springs**	**62.25**	**150**	P	**P**	**16 33 06.3**	**-0.7**
	comp=Z,0.6nm,0.8s,mb3.8,baz=331,slow=6.5,SNR=6.8						
NOA	**NORSAR Array B**	**63.96**	**327**	P	**P**	**16 33 17.0**	**-1.0**
	comp=Z,0.6nm,0.8s,mb3.7,baz=68,slow=6.4,SNR=3.5						
JMIC	**Jan Mayen**	**66.76**	**341**	LR	LR	17 03 57.9	
	comp=Z,23nm,19.9s,baz=78,slow=37						
GERES	**GERESS Array B**	**67.24**	**314**	P	**P**	**16 33 38.3**	**-1.1**
	comp=Z,0.4nm,0.5s,mb3.8,baz=67,slow=3.5,SNR=5.8						
LPG	**La Plagne**	**72.97**	**313**	*e*P	**P**	**16 34 14.8**	**+0.2**
	comp=Z,10nm,0.9s,mb4.5						
LPL	**La Plagne**	**72.97**	**313**	*e*P	**P**	**16 34 14.7**	**+0.1**
	comp=Z,6.5nm,0.7s,mb4.3						
SMF	**Signal de Mont**	**74.16**	**315**	*e*P	**P**	**16 34 21.0**	**-0.6**
AVF	**Avril sur Loir**	**74.37**	**316**	*e*P	**P**	**16 34 22.3**	**-0.5**
TCF	**Toulx Ste Croi**	**75.30**	**316**	*e*P	**P**	**16 34 27.9**	**-0.3**
YKA	**Yellowknife Ar**	**80.00**	**18**	P	**P**	**16 34 53.1**	**-1.0**
	comp=Z,0.3nm,0.5s,mb3.5,baz=323,slow=4.9,SNR=2.7						

IDC 06 16:22:49.8±3.9, 30°.55S×69°.34W, h115km±30km, mb3.3/1, mb1 3.2/2, mb1mx3.1/15, mbtmp3.2/2, Error ellipse: s-maj=56.7km s-min=32.9km az=111.0, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**1.42**	**139**	P	Pn	16 23 16.2	+0.3
	7.1nm,0.3s,baz=339,slow=5.9,SNR=857						
CFAA				S	Sn	16 23 35.8	0.0
	21nm,0.3s,baz=72,slow=21,SNR=135						
CPUP	**Villa Florida**	**11.37**	**71**	P	Pn	16 25 23.9	-4.8
	1.4nm,0.3s,baz=237,slow=11,SNR=7.2						
SIV	**San Ignacio**	**16.34**	**29**	P	Pn	16 26 32.0	-0.6
	0.1nm,0.3s,baz=230,slow=12,SNR=6.5						
TORD	**Torodi Ar. Bea**	**80.86**	**69**	P	P	16 34 51.5	+0.2
	0.4nm,0.4s,baz=236,slow=4.7,SNR=8.3						
ASAR	**Alice Springs**	**121.67**	**205**	PKP	PKPdf	16 41 30.0	-0.6
	0.3nm,0.8s,baz=130,slow=1.9,SNR=3.7						
WRA	**Warramunga Arr**	**124.88**	**207**	PKP	PKPdf	16 41 36.6	-0.3
	0.3nm,0.4s,baz=161,slow=1.6,SNR=11						
ZALV	**Zalesovo Beam**	**150.09**	**31**	PKPbc	PKPbc	16 42 25.8	-0.7
	1.5nm,0.3s,baz=319,slow=3.9,SNR=7.0						
MKAR	**Makanchi Array**	**152.74**	**45**	PKPbc	PKPbc	16 42 33.2	+0.4
	0.2nm,0.3s,baz=312,slow=3.3,SNR=4.3						
MKAR				PKPab	PKPab	16 42 44.5	+0.4
	0.4nm,0.4s,baz=316,slow=5.9,SNR=3.7						

*BJI **06** 16:59:52.2, 35°.28N×81°.61E, h6km, ML3.7/5*
*IDC **06** 16:59:54.8±2.3, 35°.39N×80°.88E, h0km, mb3.4/2, mb1 3.3/5, mb1mx3.2/27, mbtmp3.3/5, ML3.2/3, MS3.0/4, Ms1 3.0/4, ms1mx2.5/26, Error ellipse: s-maj=50.3km s-min=28.0km az=131.0*
*ISCJB **06** 16:59:55.7±2.3, 35°.7N±0°.1×80°.6E±0°.1, h6km±14km, mb3.3/2, MS3.1/3, Error ellipse: s-maj=20.1km s-min=14.3km az=37.5*
ISC 06 16:59:55.9±3.2, 35°.5N±0°.1×80°.8E±0°.2, h1km±19km, n10, σ0°.98/8, mb3.4/2, MS3.1/3, Kashmir-Xizang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**5.52**	**318**	Pg	**Pg**	**17 01 41.3**	**-0.3**
KSH				Sn	**Sb**	**17 02 32.8**	**-6.9**
KSH				smax			
	comp=N,33nm,0.6s						
KSH				smax			
	comp=E,42nm,0.6s						
AAK	**Ala-Archa**	**8.61**	**327**	Pg	Px	17 02 37.7	
	comp=E,0.0nm,0.3s,baz=176,slow=17,SNR=3.1						
AAK				Lg		17 04 34.8	
	comp=E,0.0nm,0.3s,baz=234,slow=19,SNR=2.4						
AAK				LR	LR	17 05 58.9	
	comp=E,31nm,20.8s,baz=27,slow=42						
MKAR	**Makanchi Array**	**11.31**	**5**	Pn	**Pn**	**17 02 38.0**	**-0.6**
	comp=E,0.1nm,0.3s,baz=181,slow=11,SNR=6.0						
MKAR				Sn	**Sn**	**17 04 45.2**	**-0.4**
	comp=E,0.2nm,0.3s,baz=182,slow=22,SNR=3.8						
ZALV	**Zalesovo Beam**	**18.63**	**7**	P	**Pn**	**17 04 15.7**	**+0.8**
	comp=E,0.1nm,0.3s,baz=191,slow=7.0,SNR=3.1						
BVAR	**Borovoye Array**	**18.97**	**340**	P	**Pn**	**17 04 20.5**	**+1.4**
	comp=E,0.1nm,0.3s,baz=156,slow=11,SNR=3.1						
SONM	**Songino Array**	**22.62**	**49**	P	**P**	**17 04 57.9**	**-0.2**
	comp=E,0.8nm,1.0s,mb3.2,baz=234,slow=9.0,SNR=5.4						
KSRS	**Korea Array**	**37.64**	**73**	LR	LR	17 24 51.8	
	comp=E,27nm,18.6s,MS3.1,baz=340,slow=40						
NOA	**NORSAR Array B**	**49.91**	**323**	LR	LR	17 29 29.7	
	comp=E,13nm,21.5s,MS2.9,baz=140,slow=35						
ESDC	**Sonseca Array**	**64.81**	**302**	LR	LR	17 44 33.9	
	comp=E,27nm,19.6s,MS3.4,baz=170,slow=41						
TORD	**Torodi Ar. Bea**	**73.67**	**275**	P	**P**	**17 11 31.0**	**-0.6**
	comp=E,0.7nm,1.1s,mb3.6,baz=54,slow=4.2,SNR=2.4						

*IDC **06** 17:01:51.1±1.2, 31°.54N×104°.08E, h0km, mb3.7/7, mb1 3.9/8, mb1mx3.6/29, mbtmp3.7/8, Error ellipse: s-maj=43.5km s-min=22.0km az=64.0*
ISC 06 17:01:51.4±3.7, 31°.6N±0°.1×104°.1E±0°.2, h1km±21km, n9, σ0°.79/10, mb3.8/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.53**	**357**	*e*Pg	**Pg**	**17 03 18.2**	**0.0**
LZH				Sg	**Sg**	**17 04 16.9**	**0.0**
LZH				smax			
	comp=N,56nm,1.0s						
LZH				smax			
	comp=E,87nm,1.1s						
SONM	**Songino Array**	**16.35**	**5**	Pn	**Pn**	**17 05 42.0**	**-0.1**
	baz=195,slow=10,SNR=3.6						
KSRS	**Korea Array**	**20.45**	**67**	P	**P**	**17 06 30.3**	**0.0**
	comp=E,0.9nm,0.8s,baz=255,slow=9.5,SNR=3.9						
ZALV	**Zalesovo Beam**	**26.33**	**334**	P	**P**	**17 07 26.5**	**-2.0**
	comp=E,0.4nm,0.3s,mb3.5,baz=116,slow=9.8,SNR=5.1						
KURK	**Kurchatov**	**26.90**	**323**	P	**P**	**17 07 35.2**	**+1.5**
	comp=E,1.9nm,0.3s,mb4.4,baz=130,slow=8.6,SNR=1.6						
WRA	**Warramunga Arr**	**58.84**	**146**	P	**P**	**17 11 51.9**	**+0.3**
	comp=E,0.6nm,0.8s,mb3.7,baz=337,slow=7.7,SNR=3.4						
ASAR	**Alice Springs**	**61.86**	**149**	P	**P**	**17 12 11.9**	**-0.4**
	comp=E,0.3nm,0.8s,mb3.6,baz=328,slow=6.1,SNR=4.7						
INK	**Inuvik**	**71.73**	**19**	P	**P**	**17 13 15.2**	**+0.5**
	comp=E,1.2nm,0.7s,mb4.1,baz=323,slow=6.6,SNR=4.2						
YKA	**Yellowknife Ar**	**81.26**	**17**	P	**P**	**17 14 08.8**	**0.0**
	comp=E,0.3nm,0.5s,mb3.6,baz=330,slow=5.4,SNR=3.5						

GUC 06 17:05:45.2±0.4, 21°.70S×68°.56W, h104km±11km, ML3.7, 2C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**1.03**	**237**	⇑*i*P	Pn	17 06 13.5	+7.3
PB04				*i* S	Sn	17 06 35.1	+13
PB04				AML	AML	17 06 37.3	
	comp=E,633nm,0.1s						
MACH	**Maria Elena**	**1.22**	**246**	*e*P	Pn	17 06 09.3	+1.0
MACH				*i* S	Sn	17 06 27.8	+2.0
PECH	**Pedro de Valdi**	**1.36**	**229**	*e*P	Pn	17 06 10.7	+0.7
PECH				*i* S	Sn	17 06 30.3	+1.5
PECH				AML	AML	17 06 31.1	
	comp=E,2μm,0.3s						
TOCH	**Tocopilla**	**1.57**	**255**	*e*P	Pn	17 06 13.2	+0.6
TOCH				*i* S	Sn	17 06 34.2	+0.8
TOCH				AML	AML	17 06 41.6	
	comp=N,936nm,0.2s						
HMBC	**Humberston**	**1.89**	**319**	⇓*i*P	Pn	17 06 17.6	+1.1
HMBC				*i* S	Sn	17 06 41.7	+1.4
HMBC				AML	AML	17 06 43.4	
	comp=N,1μm,0.2s						
PSGC	**Pisagua**	**2.56**	**325**	*e*P	Pn	17 06 24.9	-0.3
PSGC				*i* S	Sn	17 06 55.9	-0.1
PSGC				AML	AML	17 07 01.7	
	comp=E,241nm,0.4s						
MNMC	**Miæe Miæ**	**2.74**	**339**	⇑*i*P	Pn	17 06 29.1	+1.4
MNMC				*i* S	Sn	17 07 02.6	+2.4
MNMC				AML	AML	17 07 05.5	
	comp=N,452nm,0.2s						

*IDC **06** 17:12:33.8±0.9, 32°.27N×105°.11E, h0km, mb3.5/6, mb1 3.6/9, mb1mx3.5/29, mbtmp3.5/9, ML3.4/3, Error ellipse: s-maj=36.0km s-min=16.8km az=54.0*
*BJI **06** 17:12:34.7, 32°.48N×105°.25E, h9km, mB4.0/1, mb3.8/2, ML3.7/11, Ms3.7/5, Ms7 3.4/5*
*NEIC **06** 17:12:35.0±0.5, 32°.31N×105°.19E, h10km, mb3.7/1, Error ellipse: s-maj=13.1km s-min=7.2km az=60.0*
ISC 06 17:12:34.5±1.1, 32°.39N±0°.03×105°.31E±0°.04, h1km±8km, n19, σ1°.07/30, mb3.6/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.98**	**222**	Pn	**Pn**	**17 13 10.1**	**+1.0**
CD2				Pg	**Pg**	**17 13 12.7**	**+0.3**
CD2				Sg	**Sg**	**17 13 39.5**	**+1.4**
CD2				smax			
	comp=N,5μm,0.8s						
CD2				smax			
	comp=E,6μm,0.7s						
XAN	**Xi'an**	**3.45**	**60**	Pn	**Pn**	**17 13 29.4**	**+0.1**
XAN				Pg	**Pb**	**17 13 35.7**	**-0.6**
XAN				Sn	**Sn**	**17 14 10.9**	**+0.1**
XAN				Sg	**Sb**	**17 14 18.8**	**+0.1**
XAN				smax			
	comp=N,360nm,0.7s						
XAN				smax			
	comp=E,140nm,0.9s						
XAN				LR	LR		
	comp=N,160nm,4.2s						
XAN				LR	LR		
	comp=E,55nm,3.8s						
XAN				LR	LR		
	comp=Z,96nm,7.5s						
LZH	**Lanzhou**	**3.88**	**342**	*e*Pn	**Pn**	**17 13 36.2**	**+0.9**
LZH				Pg	**Pb**	**17 13 44.6**	**+0.8**
LZH				Sn	**Sn**	**17 14 22.8**	**+1.2**
LZH				Sg	**Sb**	**17 14 32.5**	**+1.2**
LZH				smax			
	comp=N,470nm,0.6s						
LZH				smax			
	comp=E,1μm,0.6s						
LZH				LR	LR		
	comp=E,830nm,4.9s						
LZH				LR	LR		
	comp=Z,960nm,6.4s						
ENH	**Enshi**	**4.15**	**119**	*e*Pn	**Pn**	**17 13 39.0**	**+0.1**
ENH				*e*Pg	**Pg**	**17 13 51.8**	**-2.2**
ENH				*e*Sn	**Sn**	**17 14 30.8**	**+2.7**
GYA	**Guiyang**	**6.02**	**168**	Pg	**Pn**	**17 14 06.5**	**+1.8**
GYA				Sg	**Sn**	**17 15 14.3**	**-0.1**
GYA				smax			
	comp=N,70nm,0.6s						
GYA				smax			
	comp=E,60nm,0.7s						
GTA	**Gaotai**	**8.30**	**329**	*e*P	**Pn**	**17 14 34.7**	**-1.3**
GTA				pP		17 14 38.8	
GTA				sP		17 14 42.0	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**15.01**	**204**	Pn	**Pn**	**17 16 05.3**	**-2.5**
	comp=Z,0.2nm,0.3s,baz=16,slow=14,SNR=4.5						
SONM	**Songino Array**	**15.45**	**3**	Pn	**Pn**	**17 16 13.6**	**+0.1**
	comp=Z,0.0nm,0.3s,baz=182,slow=12,SNR=2.0						
SONM				Lg		17 20 44.8	
	comp=Z,0.1nm,0.3s,baz=177,slow=28,SNR=2.9						
KSRS	**Korea Array**	**19.20**	**68**	P	**Pn**	**17 17 01.7**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=254,slow=11,SNR=7.2						
MK31	**Makanchi Array**	**22.73**	**316**	*e*P	**P**	**17 17 36.7**	**-1.1**
MKAR	**Makanchi Array**	**22.73**	**316**	P	**P**	**17 17 36.6**	**-1.1**
	comp=Z,0.4nm,0.3s,mb3.4,baz=108,slow=12,SNR=9.6						
ZALV	**Zalesovo Beam**	**26.05**	**332**	P	**P**	**17 18 09.3**	**+0.3**
	comp=Z,0.7nm,0.5s,mb3.5,baz=142,slow=7.5,SNR=3.8						
KURK	**Kurchatov**	**26.87**	**321**	P	**P**	**17 18 15.7**	**-0.8**
	comp=Z,1.0nm,0.6s,mb3.7						
BVAR	**Borovoye Array**	**32.45**	**320**	P	**P**	**17 19 04.8**	**-1.2**
	comp=Z,0.2nm,0.4s,mb3.4,baz=73,slow=9.7,SNR=2.6						
AKTK	**Aktyubinsk**	**39.03**	**312**	P	**P**	**17 20 02.2**	**-0.4**
AKTO	**Aktyubinsk**	**39.03**	**312**	P	**P**	**17 20 02.2**	**-0.4**
	comp=Z,0.6nm,0.6s,mb3.4,baz=69,slow=8.6,SNR=2.9						
WRA	**Warramunga Arr**	**58.99**	**148**	P	**P**	**17 22 34.8**	**-1.0**
	comp=Z,0.8nm,0.7s,mb3.9,baz=327,slow=9.2,SNR=10.0						
WRA	**Warramunga Arr**	**58.99**	**148**	P	**P**	**17 22 34.8**	**-1.0**
ASAR	**Alice Springs**	**62.07**	**150**	P	**P**	**17 22 56.4**	**-0.4**
	comp=Z,0.5nm,0.7s,mb3.9,baz=333,slow=6.5,SNR=11						

*DDA **06** 18:38:58.1, 40°.16N×26°.91E, h7km±3km, Md3.0*
*CSEM **06** 18:38:58.9±0.3, 40°.17N×26°.88E, h2km, MD2.6, Error ellipse: s-maj=6.3km s-min=4.2km az=83.0*
*ISCJB **06** 18:38:58.2±0.5, 40°.17N±0°.03×26°.90E±0°.04, h3km±9km, Error ellipse: s-maj=5.5km s-min=4.1km az=20.2*
*ISK **06** 18:39:01.2, 40°.41N×26°.84E, h5km, MD2.6*
ISC 06 18:38:58.9±0.5, 40°.18N±0°.03×26°.89E±0°.04, h4km±9km, n22, σ0°.53/37, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPK	**Lapseki**	**0.22**	**333**	*e*PG	**Pg**	**18 39 02.4**	**-0.8**
LPK	**Lapseki**	**0.22**	**333**	*e*Pg	**Pg**	**18 39 02.4**	**-0.8**
EZN	**Ezine**	**0.56**	**231**	*e*PG	**Pg**	**18 39 16.3**	**+6.8**
EZN	**Ezine**	**0.56**	**231**	*e*Pg	**Pg**	**18 39 16.3**	**+6.7**
RKY	**Sarkoy-Tekirda**	**0.56**	**23**	*e*PG	**Pg**	**18 39 09.6**	**0.0**
RKY				*e*SG	**Sg**	**18 39 16.2**	**-0.6**
RKY	**Sarkoy-Tekirda**	**0.56**	**23**	*e*Pg	**Pg**	**18 39 09.6**	**0.0**
RKY				*e*Sg	**Sg**	**18 39 16.3**	**-0.5**
SART	**Tekirdag**	**0.56**	**23**	*i* P	**Pg**	**18 39 09.4**	**-0.2**
SART				*i* S	**Sg**	**18 39 17.2**	**+0.3**
SART	**Tekirdag**	**0.56**	**23**	*i* P	**Pg**	**18 39 09.4**	**-0.2**
SART				*i* S	**Sg**	**18 39 17.2**	**+0.3**
BALY	**Balya**	**0.71**	**128**	*i* P	**Pg**	**18 39 12.0**	**-0.5**
BALY				*i* S	**Sg**	**18 39 21.4**	**-0.3**
BALY	**Balya**	**0.71**	**128**	*i* P	**Pg**	**18 39 12.0**	**-0.5**
BALY				*i* S	**Sg**	**18 39 21.5**	**-0.2**
BOZC	**Bozcaada**	**0.72**	**243**	*i* P	**Pg**	**18 39 12.5**	**-0.3**
BOZC				*i* S	**Sg**	**18 39 22.6**	**+0.5**
ENEZ	**Enez**	**0.79**	**315**	*e*PG	**Pg**	**18 39 14.8**	**+0.7**
ENEZ				*e*SG	**Sg**	**18 39 24.1**	**-0.3**
ENEZ	**Enez**	**0.79**	**315**	*e*Pg	**Pg**	**18 39 14.8**	**+0.7**
ENEZ				*e*Sg	**Sg**	**18 39 24.1**	**-0.3**
BNT	**Bandirma**	**0.81**	**77**	*e*PG	**Pg**	**18 39 18.1**	**+3.7**
AYVA	**Ayvalik**	**0.88**	**190**	*i* P	**Pg**	**18 39 15.5**	**-0.3**
AYVA				*i* S	**Sg**	**18 39 27.2**	**+0.1**
AYVA	**Ayvalik**	**0.88**	**190**	*i* P	**Pg**	**18 39 15.5**	**-0.3**
AYVA				*i* S	**Sg**	**18 39 27.2**	**+0.1**
CRLT	**Corlu**	**1.15**	**34**	*e*PG	**Pg**	**18 39 21.4**	**+0.5**
CRLT				*e*SG	**Sg**	**18 39 36.0**	**+0.2**
CRLT	**Corlu**	**1.15**	**34**	*e*Pg	**Pg**	**18 39 21.4**	**+0.4**
CRLT				*e*Sg	**Sg**	**18 39 36.0**	**+0.1**
CTKS	**Kestanelik-??a**	**1.62**	**49**	*e*PN	**Pg**	**18 39 30.6**	**+0.6**
CTKS	**Kestanelik-??a**	**1.62**	**49**	*e*Pn	**Pg**	**18 39 30.6**	**+0.6**
EDRB	**Edirne**	**1.67**	**356**	*e*PN	**Pn**	**18 39 29.7**	**+0.7**
EDRB				*e*SN	**Sn**	**18 39 50.3**	**-0.6**
EDRB	**Edirne**	**1.67**	**356**	*e*Pn	**Pn**	**18 39 29.7**	**+0.7**
EDRB				*e*Sn	**Sn**	**18 39 50.3**	**-0.6**

*IDC **06** 18:42:01.0±1.2, 0°.62S×122°.35E, h0km, mb3.2/4, mb1 3.5/5, mb1mx3.3/21, mbtmp3.4/5, ML4.2/1, Error ellipse: s-maj=43.2km s-min=20.0km az=76.0*
*ISCJB **06** 18:42:04.5±0.7, 0°.65S±0°.05×122°.41E±0°.04, h40km±11km, mb3.2/4, Error ellipse: s-maj=8.7km s-min=6.9km az=148.9*
*DJA **06** 18:42:05, 0°.69S×122°.37E, h24km, MLv3.8/11*
ISC 06 18:42:04.7±1.1, 0°.64S±0°.05×122°.40E±0°.04, h21km±9km, n17, σ0°.80/22, mb3.2/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.54**	**137**	P	**Pb**	**18 42 15.9**	**+0.3**
APSI	**Ampana**	**0.80**	**250**	P	**Pb**	**18 42 18.2**	**-1.7**
APSI				S	**Sb**	**18 42 30.9**	**+0.5**
PCI	**Palu**	**2.58**	**264**	P	**Pn**	**18 42 47.0**	**+1.8**
PCI				S	**Sn**	**18 43 15.9**	**-0.1**
MNI	**Manado**	**3.20**	**50**	P	**Pn**	**18 42 53.4**	**-0.3**
KDI	**Kendari**	**3.30**	**176**	P	**Pn**	**18 42 55.3**	**+0.1**
TTSI	**Tana Toraja**	**3.52**	**227**	P	**Pn**	**18 42 58.5**	**+0.3**
TTSI				S	**Sn**	**18 43 39.7**	**+0.5**
SPSI	**Sidrap Palu**	**4.22**	**219**	S	**Sn**	**18 43 57.2**	**+0.6**
BNSI	**Bone**	**4.38**	**212**	P	**Pn**	**18 43 10.2**	**+0.1**
KAPI	**Kappang**	**5.09**	**211**	Pn	**Pn**	**18 43 18.7**	**-1.0**
	8.3nm,0.3s,baz=32,slow=7.7,SNR=49						
KAPI				Sn	**Sn**	**18 44 16.2**	**-1.8**
	1.2nm,0.3s,baz=48,slow=22,SNR=6.1						
KAPI	**Kappang**	**5.09**	**211**	P	**Pn**	**18 43 18.9**	**-0.9**
	0.1nm21nm,0.6s						
BKSI	**Bulukumba**	**5.18**	**206**	P	**Pn**	**18 43 21.1**	**+0.1**
	0.1nm18nm,0.8s						
BKSI				S	**Sn**	**18 44 20.3**	**+0.2**
	0.1nm18nm,0.8s						
NLAI	**Namlea**	**5.36**	**119**	P	**Pn**	**18 43 24.3**	**+0.8**
	0.1nm15nm,0.7s						
MYLDM	**Lahad Datu**	**6.97**	**326**	P	**Pn**	**18 43 46.1**	**+0.4**
WRA	**Warramunga Arr**	**22.46**	**149**	P	**P**	**18 47 02.5**	**-0.1**
	0.7nm,0.8s,mb3.2,baz=327,slow=11,SNR=5.6						
ASAR	**Alice Springs**	**25.46**	**155**	P	**P**	**18 47 31.3**	**-0.1**
	0.4nm,0.8s,mb3.0,baz=333,slow=9.5,SNR=5.1						
SONM	**Songino Array**	**50.25**	**346**	P	**P**	**18 50 58.0**	**-1.3**
	0.1nm,0.3s,mb3.3,baz=150,slow=6.1,SNR=2.3						
MKAR	**Makanchi Array**	**58.84**	**329**	P	**P**	**18 52 01.9**	**+0.2**
	0.2nm,0.7s,mb3.3,baz=126,slow=3.9,SNR=2.9						

IDC 06 18:51:31.7±9.1, 10°.39S×164°.16E, h75km±57km, mb3.9/4, mb1 4.0/6, mb1mx3.6/19, mbtmp4.0/6, ML4.4/1, MS3.1/1, Ms1 3.1/1, ms1mx2.3/19, Error ellipse: s-maj=100.4km s-min=51.6km az=37.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.26**	**282**	P	Pn	18 52 34.0	-0.1
	20nm,0.3s,baz=149,slow=5.9,SNR=9.4						
HNR				S	Sn	18 53 23.2	+0.6
	18nm,0.3s,baz=202,slow=19,SNR=3.2						
HNR				LR	LR	18 54 08.3	
	comp=Z,281nm,21.7s,baz=286,slow=37						
CTA	**Charters Tower**	**19.77**	**239**	P	Pn	18 55 56.4	-1.6
	0.3nm,0.3s,baz=67,slow=15,SNR=6.4						
STKA	**Stephens Creek**	**29.88**	**221**	P	P	18 57 32.6	+0.3
	2.1nm,0.8s,baz=45,slow=7.1,SNR=4.2						
WRA	**Warramunga Arr**	**30.27**	**248**	P	P	18 57 35.9	+0.1
	2.2nm,0.6s,baz=80,slow=9.1,SNR=24						
ASAR	**Alice Springs**	**31.72**	**242**	P	P	18 57 48.1	-0.4
	1.6nm,0.7s,baz=67,slow=9.5,SNR=22						
FITZ	**Fitzroy Crossi**	**38.06**	**254**	P	P	18 58 43.2	-0.1
	2.5nm,0.6s,baz=80,slow=11,SNR=10						

*NEIC **06** 18:57:21.1±1.3, 9°.53S×115°.92E, h46km±14km, mb4.7/9, Error ellipse: s-maj=15.8km s-min=8.1km az=65.0*
*DJA **06** 18:57:25, 9°.59S×116°.07E, h54km, MLv4.3/15*
*ISCJB **06** 18:57:25.3±0.6, 9°.35S±0°.06×116°.17E±0°.03, h98km±4km, mb4.2/16, Error ellipse: s-maj=9.4km s-min=5.4km az=2.4*
*IDC **06** 18:

30nm,2.2s
PMBI Palembang 12.99 299 P Pn 19 00 33.6 +5.9
WRA Warramunga Arr 20.48 123 P P 19 01 56.6 -0.7
3.6nm,0.7s,baz=300,slow=12,SNR=25
WRA S **S 19 05 33.4 -8.4**
0.3nm,0.5s,baz=306,slow=18,SNR=11
WRAB Tennant Creek 20.48 123 *eP* **P 19 01 56.7 -0.6**
4.6nm,0.8s
ASAR Alice Springs 22.14 132 P P 19 02 14.9 -0.1
1.5nm,0.6s,mb3.5,baz=310,slow=9.2,SNR=20
ASAR S **S 19 06 15.0 +1.4**
0.8nm,0.8s,baz=304,slow=22,SNR=3.1
NWAO Narrogin (SRO) 23.48 178 P P 19 02 28.3 +0.1
5.4nm,0.7s,mb4.0,baz=353,slow=12,SNR=4.7
NWAO S **S 19 06 38.5 +3.4**
5.5nm,0.7s,baz=299,slow=19,SNR=2.7
NWAO Narrogin (SRO) 23.48 178 P P 19 02 28.3 +0.1
NWAO S **S 19 06 38.5 +3.4**
CMAR Chiang Mai Arr 32.44 328 P P 19 03 50.0 +1.7
0.8nm,0.6s,mb3.6,baz=165,slow=6.4,SNR=7.7
ENH Enshi 39.92 351 P P 19 04 52.0 +0.1
ODAN Odare 45.55 323 *eP* **P 19 05 37.6 0.0**
TAPN Taplejung 45.73 324 *eP* **P 19 05 39.6 +0.6**
24nm,1.2s,mb4.8
JIRN Jiri 46.86 323 *eP* **P 19 05 47.9 +0.1**
15nm,0.4s,mb5.0
GUN Gumba 47.23 323 *eP* **P 19 05 50.2 -0.5**
17nm,0.6s,mb4.9
PKI Pulchoki 47.27 322 *eP* **P 19 05 50.7 -0.3**
PKI Pulchoki 47.27 322 *eP* **P 19 05 51.5 +0.5**
6.0nm,0.6s,mb4.5
PKIN Phulchoki 47.28 322 *eP* **P 19 05 51.5 +0.4**
6.0nm,0.6s,mb4.5
DMN Daman 47.48 322 *eP* **P 19 05 51.8 -0.8**
13nm,0.6s,mb4.8
KKN Kakani 47.50 322 *eP* **P 19 05 52.6 -0.2**
ULN Ulaanbaatar 57.54 353 P P 19 07 06.2 -0.3
1.4nm,0.9s,mb4.0
SONM Songino Array 57.59 352 P P 19 07 06.8 -0.2
1.1nm,0.8s,mb4.0,baz=164,slow=8.8,SNR=8.6
KBL Kabul 62.40 317 *eP* **P 19 07 39.8 -0.3**
2.6nm,0.7s,mb4.4
MKAR Makanchi Array 63.53 335 P P 19 07 47.0 -0.3
0.3nm,0.2s,mb3.7,baz=125,slow=7.2,SNR=4.5
ZAA0 Zalesovo Array 68.41 341 *eP* **P 19 08 17.0 -1.4**
ZALV Zalesovo Beam 68.41 341 P P 19 08 17.3 -1.2
1.2nm,0.5s,mb4.0,baz=151,slow=4.1,SNR=8.0
ZALV Zalesovo Beam 68.41 341 P P 19 08 17.3 -1.2
BVAR Borovoye Array 73.31 333 P P 19 08 47.9 -0.3
1.2nm,0.8s,mb3.8,baz=174,slow=6.0,SNR=5.9
BRVK Borovoye 73.38 333 P P 19 08 48.5 -0.1
2.3nm,0.6s,mb4.2

DJA 06 19:26:19, 1°.91N×98°.99E, h10km, MLv3.7/7, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**1.25**	**152**	P	Pn	19 26 36.3	-6.3
GSI	**Gunungsitoli**	**1.54**	**247**	P	Pn	19 26 44.9	-1.6
GSI				S	Sn	19 27 06.9	+0.4
BKNI	**Bangkinang**	**2.58**	**127**	P	Pn	19 27 00.9	0.0
BKNI				S	Sn	19 27 32.1	-0.3
PPI	**Padang Panjang**	**2.74**	**149**	P	Pn	19 27 03.4	+0.3
PPI				S	Sn	19 27 38.7	+2.4
PDSI	**Padang**	**3.17**	**152**	P	Pn	19 27 10.1	+1.2
SISI	**Saibi**	**3.22**	**178**	P	Pn	19 27 08.8	-0.8
IPM	**Ipoh**	**3.26**	**38**	P	Pn	19 27 10.9	+0.6
SDSI	**Sungai Dareh**	**3.73**	**139**	P	Pn	19 27 22.0	+5.3
KULM	**Kulim**	**3.74**	**26**	P	Pn	19 27 16.9	0.0
MYKOM	**Kota Tinggi**	**4.86**	**91**	P	Pb	19 27 44.2	-0.1

SFS ***06*** *20:02:54.0, 35°.68N×0°.53W, h0km*
MOS ***06*** *20:02:55.7±1.1, 35°.93N×0°.66W, h10km, mb5.6/75, MS5.0/64, Error ellipse: s-maj=4.2km s-min=2.0km az=65.9*
NEIC ***06*** *20:02:56.9±0.1, 35°.88N×0°.66W, h4km, mb5.5/169, MS5.3/106, MW5.5, MW5.5, ML5.5(ALG), Error ellipse: s-maj=2.6km s-min=1.6km az=167.0, Moment Tensor Solution. s73 Moment tensor: Scale 10¹⁷Nm; Mrr0.22; Mθθ0.00; Mφφ-0.22; Mrθ-1.61; Mθφ-0.94; Mφr-1.13; Best double couple: M0=2.20000×10¹⁷ NP1:φs=355.00000°, δ17.00000°, λ25.00000°. NP2:φs=241.00000°, δ83.00000°, λ105.00000°. Principal axes: T 1.7500, Plg49.0000°, Azm167.0000°; N 0.7100, Plg15.0000°, Azm58.0000°; P -2.4600, Plg36.0000°, Azm317.0000°;*
NEIC One person killed by a rockfall and more than 30 people injured in the Oran area. Several homes were destroyed at Gambetta. Felt [VI] at Mostaganem and Oran. Felt at Hassi Mameche and Sidi Bel Abbes. Also felt at Huercal-Overa, Lumbreras, Mazarron and Torrevieja, Spain.
IDC ***06*** *20:02:56.3±0.4, 35°.98N×0°.62W, h0km, mb4.9/32, mb1 5.0/38, mb1mx5.0/40, mbtmp4.9/38, ML5.1/5, MS4.9/29, Ms1 4.9/29, ms1mx4.8/35 Error ellipse: s-maj=11.5km s-min=9.8km az=136.0*
ISCJB ***06*** *20:02:56.9±0.1, 35°.98N±0°.01×0°.569W±0°.009, h10km, mb5.3/242, MS5.1/178, Error ellipse: s-maj=1.6km s-min=1.0km az=168.8*
PDA ***06*** *20:02:57.8, 35°.90N×0°.59W, h4km*
CSEM ***06*** *20:02:57.6±0.1, 35°.90N×0°.64W, h10km, mb5.0/14, ML5.3/5, Mw5.5*
INMG ***06*** *20:02:57.4±2.1, 35°.73N×0°.51W, h31km, Mb5.5, ML4.5, Error ellipse: s-maj=6.2km s-min=3.4km az=145.0*
BJI ***06*** *20:02:57.0, 36°.56N×0°.69W, h8km, mB5.9/42, mb5.2/52, Ms5.4/49, Ms7 5.1/46*
LDG ***06*** *20:02:57.0±0.2, 35°.77N×0°.70W, h20km, Ml5.3/42, ms4.8/9, Error ellipse: s-maj=4.7km s-min=3.6km az=159.0*
MDD ***06*** *20:02:58.8±0.4, 35°.83N×0°.56W, h19km±5km, mb5.5/39, Error ellipse: s-maj=5.8km s-min=3.1km az=172.0, PRIMO*
MDD EMS: III-IV MURCIA CAPITAL, CARTAGENA, MAZARR.
IGIL ***06*** *20:02:58.6, 35°.88N×0°.68W, h2km, ML4.2*
CRAAG ***06*** *20:02:58.6, 35°.81N×0°.52W, Ml5.5*
SZGRF ***06*** *20:02:59.1, 35°.53N×0°.23E, h10km, mb5.2, MS4.8, Northern Algeria*
BGS ***06*** *20:03:01.6±1.5, 36°.16N×0°.71W, h10km, mb5.4, MS5.5*
GCMT ***06*** *20:03:01.0±0.1, 35°.93N×0°.48W, h12km, MW5.5, Moment Tensor Solution. s77,c121; s99,c230; Moment tensor: Scale 10¹⁷Nm; Mrr2.06±.02; Mθθ-1.18±.02; Mφφ-0.88±.03; Mrθ-0.66±.07; Mθφ-1.04±.02; Mφr-0.29±.08; Best double couple: M0=2.20000×10¹⁷ NP1:φs=44.00000°, δ36.00000°, λ81.00000°. NP2:φs=235.00000°, δ54.00000°, λ96.00000°. Principal axes: T 2.1900, Plg79.0000°, Azm170.0000°; N 0.0000, Plg5.0000°, Azm51.0000°; P -2.1900, Plg9.0000°, Azm320.0000°; Data Used: II IU IC G CN. Surface waves from 108 sta.*
CNRM ***06*** *20:03:02.6, 35°.90N×0°.78W, h30km*
DJA ***06*** *20:03:28, 35°.93N×0°.12E, h250km, Mw5.6/7*
ISC 06 20:02:58.3±0.1, 35°.92N±0°.01×0°.606W±0°.009, h10km, (h12km±1.6km: pP-P), n2313, σ1°.08/2668, mb5.3/241, MS5.1/178, 493C-290D, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USTO	**Oran**	**0.20**	**167**	P	**Pg**	**20 03 02.0**	**-0.4**
USTO	**Oran**	**0.20**	**167**	P	**Pg**	**20 03 02.0**	**-0.4**
USTO	**Oran**	**0.20**	**167**	P	**Pg**	**20 03 02.0**	**-0.4**
OTSS	**Djebel Tessala**	**0.66**	**194**	P	**Pg**	**20 03 11.0**	**0.0**
OTSS	**Djebel Tessala**	**0.66**	**194**	P	**Pg**	**20 03 11.0**	**0.0**
OTSS	**Djebel Tessala**	**0.66**	**194**	P	**Pg**	**20 03 11.0**	**0.0**
OTSS	**Djebel Tessala**	**0.66**	**194**	P	**Pg**	**20 03 11.0**	**0.0**
OTSS	**Djebel Tessala**	**0.66**	**194**	P	**Pg**	**20 03 11.0**	**0.0**
ODZI	**Dzioua**	**0.81**	**219**	P	**Pg**	**20 03 14.0**	**+0.1**
ODZI	**Dzioua**	**0.81**	**219**	P	**Pg**	**20 03 14.0**	**+0.1**
ODZI	**Dzioua**	**0.81**	**219**	P	**Pg**	**20 03 14.0**	**+0.1**
OJBR	**Djebel Berber**	**0.84**	**113**	P	**Pg**	**20 03 13.5**	**-1.1**
OJBR	**Djebel Berber**	**0.84**	**113**	P	**Pg**	**20 03 13.8**	**-0.8**
OJBR	**Djebel Berber**	**0.84**	**113**	P	**Pg**	**20 03 13.5**	**-1.1**
OJBR	**Djebel Berber**	**0.84**	**113**	P	**Pg**	**20 03 13.5**	**-1.1**
OJBR	**Djebel Berber**	**0.84**	**113**	P	**Pg**	**20 03 13.8**	**-0.8**
OKGL	**Djebel Kef Gue**	**1.02**	**83**	P	**Pg**	**20 03 16.4**	**-1.5**
OKGL	**Djebel Kef Gue**	**1.02**	**83**	P	**Pg**	**20 03 16.4**	**-1.5**
EANR	**'Ain N'Sour**	**1.38**	**88**	P	**Pn**	**20 03 21.0**	**-2.6**
EANR	**'Ain N'Sour**	**1.38**	**88**	P	**Pn**	**20 03 21.0**	**-2.6**
EANR	**'Ain N'Sour**	**1.38**	**88**	P	**Pn**	**20 03 21.0**	**-2.6**
ECHF	**Ech Chlef**	**1.59**	**81**	P	**Pn**	**20 03 23.0**	**-3.5**
ECHF	**Ech Chlef**	**1.59**	**81**	P	**Pn**	**20 03 23.0**	**-3.5**
ECHA	**Ech Chlef**	**1.61**	**81**	P	**Pn**	**20 03 23.0**	**-3.8**
ETRT	**Tiaret**	**1.64**	**108**	P	**Pn**	**20 03 24.0**	**-3.2**
ETRT	**Tiaret**	**1.64**	**108**	P	**Pn**	**20 03 24.0**	**-3.2**
ETRT	**Tiaret**	**1.64**	**108**	P	**Pn**	**20 03 24.0**	**-3.2**
ENIJ	**Nijar**	**1.66**	**309**	⇓P	**Pn**	**20 03 25.4**	**-2.1**
ENIJ	**Nijar**	**1.66**	**309**	⇓P	**Pn**	**20 03 25.4**	**-2.1**
575nm,0.4s,SNR=18
ENIJ Nijar 1.66 309 ⇓P **Pn 20 03 25.4 -2.1**
575nm,0.4s,SNR=18
ENIJ Nijar 1.66 309 P Pn 20 03 25.4 -2.1
575nm,0.4s,SNR=18
CART Cartagena 1.69 349 ⇓*i*Pn **Pn 20 03 25.1 -2.7**
CART Cartagena 1.69 349 ⇓P **Pn 20 03 25.1 -2.8**
CART S **Sn 20 03 43.9 -5.6**
CART Cartagena 1.69 349 ⇓P **Pn 20 03 25.1 -2.8**
CART S **Sn 20 03 43.9 -5.6**
CART Cartagena 1.69 349 P Pn 20 03 25.1 -2.8
SNR=1.0
CART *e*S **Sn 20 03 43.9 -5.7**
EBNR Beni Rached 1.77 77 P Pn 20 03 26.0 -2.9
EALB Alboran 1.97 271 P Pn 20 03 29.3 -2.4
EALB S **Sn 20 03 54.5 -1.9**
EALB Alboran 1.97 271 P Pn 20 03 29.3 -2.4
592nm,0.4s,SNR=158
EALB S **Sn 20 03 54.5 -2.0**
10μm,0.5s,SNR=8.2
EALB Alboran 1.97 271 P Pn 20 03 29.3 -2.4
592nm,0.4s,SNR=158
EALB S **Sn 20 03 54.5 -2.0**
10μm,0.5s,SNR=8.2
EALB Alboran 1.97 271 P Pn 20 03 29.3 -2.4
592nm,0.4s,SNR=158
EALB S **Sn 20 03 54.5 -2.0**
10μm,0.5s,SNR=8.2
EMUR La Murta 1.98 345 ⇓P **Pn 20 03 29.6 -2.3**
EMUR S **Sn 20 03 53.6 -3.2**
EMUR La Murta 1.98 345 ⇓P **Pn 20 03 29.6 -2.3**
631nm,0.5s,SNR=18
EMUR S **Sn 20 03 53.6 -3.2**
6μm,0.4s,SNR=19
EMUR La Murta 1.98 345 ⇓P **Pn 20 03 29.6 -2.3**
631nm,0.5s,SNR=18
EMUR S **Sn 20 03 53.6 -3.2**
6μm,0.4s,SNR=19
EMUR La Murta 1.98 345 P Pn 20 03 29.6 -2.3
631nm,0.5s,SNR=18
EMUR S **Sn 20 03 53.6 -3.1**
6μm,0.4s,SNR=19
ZAI Zaio 1.99 242 *i*P **Pn 20 03 30.0 -2.0**
ZAI *i*S **Sn 20 03 52.0 -4.9**
MELI Melilla 2.00 252 ⇓P **Pn 20 03 29.3 -2.8**
MELI S **Sn 20 03 50.3 -6.9**
MELI Melilla 2.00 252 ⇓P **Pn 20 03 29.3 -2.8**
MELI S **Sn 20 03 50.3 -6.9**
MELI Melilla 2.00 252 *i*P **Pn 20 03 29.3 -2.8**
EBER Berja 2.08 298 ⇓P **Pn 20 03 31.4 -1.9**
EBER S **Sn 20 03 59.4 +0.1**
EBER Berja 2.08 298 ⇓P **Pn 20 03 31.3 -1.9**
781nm,0.7s,SNR=18
EBER S **Sn 20 03 59.3 +0.1**
2μm,0.2s,SNR=8.8
EBER Berja 2.08 298 ⇓P **Pn 20 03 31.3 -1.9**
781nm,0.7s,SNR=18
EBER S **Sn 20 03 59.3 +0.1**
2μm,0.2s,SNR=8.8
EBER Berja 2.08 298 ⇓P **Pn 20 03 31.4 -1.9**
EBER S **Sn 20 03 59.3 +0.1**
2μm,0.2s,SNR=8.8
EHUE Huescar 2.47 320 ⇓P **Pn 20 03 37.8 -0.8**
EHUE Huescar 2.47 320 ⇓P **Pn 20 03 37.8 -0.8**
166nm,0.9s,SNR=18
EHUE Huescar 2.47 320 ⇓P **Pn 20 03 37.8 -0.8**
166nm,0.9s,SNR=18
EHUE Huescar 2.47 320 P Pn 20 03 37.8 -0.8
166nm,0.9s,SNR=18
EGUA Guajares 2.56 292 ⇓P **Pn 20 03 37.2 -2.6**
EGUA Guajares 2.56 292 ⇓P **Pn 20 03 37.2 -2.6**
168nm,0.6s,SNR=18
EGUA Guajares 2.56 292 ⇓P **Pn 20 03 37.2 -2.6**
168nm,0.6s,SNR=18
EGUA Guajares 2.56 292 P Pn 20 03 37.2 -2.6
168nm,0.6s,SNR=18
EQUE Quentar 2.62 300 ⇓P **Pn 20 03 40.4 -0.2**
EQUE S **Sn 20 04 09.6 -2.8**
1μm,0.7s,SNR=18
EQUE S **Sn 20 04 09.6 -2.8**
16μm,1.5s,SNR=7.9
EQUE Quentar 2.62 300 ⇓P **Pn 20 03 40.4 -0.2**
1μm,0.7s,SNR=18
EQUE S **Sn 20 04 09.6 -2.8**
16μm,1.5s,SNR=7.9
EQUE Quentar 2.62 300 P Pn 20 03 40.4 -0.2
1μm,0.7s,SNR=18
EQUE S **Sn 20 04 09.6 -2.8**
16μm,1.5s,SNR=7.9
EQES Quesada 2.73 314 ⇓P **Pn 20 03 42.3 +0.2**
EQES S **Sn 20 04 15.6 +0.5**
EQES Quesada 2.73 314 ⇓P **Pn 20 03 42.3 +0.2**
1μm,0.5s,SNR=18
EQES S **Sn 20 04 15.6 +0.5**
6μm,0.8s,SNR=13
EQES Quesada 2.73 314 ⇓P **Pn 20 03 42.3 +0.2**
1μm,0.5s,SNR=18
EQES S **Sn 20 04 15.6 +0.5**
6μm,0.8s,SNR=13
EQES Quesada 2.73 314 P Pn 20 03 42.3 +0.2
1μm,0.5s,SNR=18
EQES S **Sn 20 04 15.6 +0.5**
6μm,0.8s,SNR=13
ECOG Cogollos-Vega 2.74 300 P Pn 20 03 42.0 -0.3
ECOG S **Sn 20 04 08.8 -6.6**
ECOG Cogollos-Vega 2.74 300 P Pn 20 03 42.0 -0.3
543nm,0.7s,SNR=145
ECOG S **Sn 20 04 08.8 -6.6**
SNR=7.9
ECOG Cogollos-Vega 2.74 300 P Pn 20 03 42.0 -0.3
543nm,0.7s,SNR=145
ECOG S **Sn 20 04 08.8 -6.6**
SNR=7.9
ECOG Cogollos-Vega 2.74 300 P Pn 20 03 42.0 -0.3
543nm,0.7s,SNR=145
TOU Touzarine 2.74 250 P Pn 20 03 42.0 -0.3
SNR=1.0
TOU *i*S **Sn 20 04 11.0 -4.5**
EBEN Beniarda 2.79 6 ⇓P **Pn 20 03 41.5 -1.5**
EBEN S **Sn 20 04 14.7 -2.0**
EBEN Beniarda 2.79 6 ⇓P **Pn 20 03 41.5 -1.5**
98nm,0.3s,SNR=18
EBEN S **Sn 20 04 14.7 -2.0**
1μm,0.3s,SNR=5.7
EBEN Beniarda 2.79 6 ⇓P **Pn 20 03 41.5 -1.5**
98nm,0.3s,SNR=18
EBEN S **Sn 20 04 14.7 -2.0**
1μm,0.3s,SNR=5.7
EBEN Beniarda 2.79 6 P Pn 20 03 41.5 -1.5
98nm,0.3s,SNR=18
EBEN S **Sn 20 04 14.7 -2.0**
1μm,0.3s,SNR=5.7
ERON Agron 2.80 294 P Pn 20 03 42.1 -1.1
ERON Agron 2.80 294 P Pn 20 03 42.1 -1.1
124nm,0.5s,SNR=7.9
ERON Agron 2.80 294 P Pn 20 03 42.1 -1.1
124nm,0.5s,SNR=7.9
ERON Agron 2.80 294 P Pn 20 03 42.1 -1.0
124nm,0.5s,SNR=7.9
MPAL Palemas 2.81 257 *i*P **Pn 20 03 42.5 -0.7**
MPAL *i*S **Sn 20 04 12.0 -5.1**
ETOB Tobarra 2.82 345 ⇓P **Pn 20 03 42.9 -0.5**
ETOB S **Sn 20 04 15.5 -1.9**
ETOB Tobarra 2.82 345 ⇓P **Pn 20 03 42.8 -0.5**
217nm,0.2s,SNR=18
ETOB S **Sn 20 04 15.5 -1.9**
15μm,0.6s,SNR=7.0
ETOB Tobarra 2.82 345 ⇓P **Pn 20 03 42.8 -0.5**
217nm,0.2s,SNR=18
ETOB S **Sn 20 04 15.5 -1.9**
15μm,0.6s,SNR=7.0
ETOB Tobarra 2.82 345 P Pn 20 03 42.8 -0.6
217nm,0.2s,SNR=18
ETOB S **Sn 20 04 15.5 -1.9**
15μm,0.6s,SNR=7.0
EMHD Djebel Mahouad 2.90 83 P Pn 20 03 42.0 -2.4
EMHD Djebel Mahouad 2.90 83 P Pn 20 03 42.0 -2.4
EMHD Djebel Mahouad 2.90 83 P Pn 20 03 42.0 -2.4
ABA Alger-Bouzarea 3.07 72 P Pn 20 03 44.1 -2.7
ABA Alger-Bouzarea 3.07 72 P Pn 20 03 44.1 -2.7
ABA Alger-Bouzarea 3.07 72 P Pn 20 03 44.1 -2.7
EVIA Vianos 3.10 331 ⇓P **Pn 20 03 46.8 -0.5**
EVIA Vianos 3.10 331 ⇓P **Pn 20 03 46.8 -0.5**
25nm,0.2s,SNR=18
EVIA Vianos 3.10 331 ⇓P **Pn 20 03 46.8 -0.5**
25nm,0.2s,SNR=18
EVIA Vianos 3.10 331 P Pn 20 03 46.8 -0.5
25nm,0.2s,SNR=18
ELOJ Sierra Loja 3.11 294 ⇓P **Pn 20 03 47.4 +0.1**
ELOJ Sierra Loja 3.11 294 ⇓P **Pn 20 03 47.4 +0.1**
89nm,0.7s,SNR=18
ELOJ Sierra Loja 3.11 294 ⇓P **Pn 20 03 47.4 +0.1**
89nm,0.7s,SNR=18
ELOJ Sierra Loja 3.11 294 P Pn 20 03 47.4 +0.1
89nm,0.7s,SNR=18
EMAL Malaga-Limoner 3.20 286 P Pn 20 03 46.0 -2.6
EMAL Malaga-Limoner 3.20 286 ⇓P **Pn 20 03 49.3 +0.7**
EMAL S **Sn 20 04 19.1 -7.6**
EMAL Malaga-Limoner 3.20 286 ⇓P **Pn 20 03 49.3 +0.7**
EMAL S **Sn 20 04 19.1 -7.6**
EMAL Malaga-Limoner 3.20 286 *i*P **Pn 20 03 49.3 +0.7**
ADJB Djebel Djouab 3.29 85 P Pn 20 03 48.2 -1.6
ADJB Djebel Djouab 3.29 85 P Pn 20 03 48.2 -1.6
ADJB Djebel Djouab 3.29 85 P Pn 20 03 48.2 -1.6
ADJB Djebel Djouab 3.29 85 P Pn 20 03 48.2 -1.6
ELUQ Luque 3.36 300 ⇓P **Pn 20 03 51.0 +0.1**
ELUQ Luque 3.36 300 ⇓P **Pn 20 03 51.0 +0.1**
124nm,0.6s,SNR=18
ELUQ Luque 3.36 300 ⇓P **Pn 20 03 51.0 +0.1**
124nm,0.6s,SNR=18
ELUQ Luque 3.36 300 P Pn 20 03 51.0 +0.1
124nm,0.6s,SNR=18
EBAN Banos Encina 3.39 312 ⇓P **Pn 20 03 50.7 -0.5**
EBAN S **Sn 20 04 30.0 -1.4**
EBAN Banos Encina 3.39 312 ⇓P **Pn 20 03 50.7 -0.5**
168nm,0.4s,SNR=18
EBAN S **Sn 20 04 30.0 -1.5**
365nm,0.3s,SNR=7.9
EBAN Banos Encina 3.39 312 ⇓P **Pn 20 03 50.7 -0.5**
168nm,0.4s,SNR=18
EBAN S **Sn 20 04 30.0 -1.5**
365nm,0.3s,SNR=7.9
EBAN Banos Encina 3.39 312 P Pn 20 03 50.7 -0.5
168nm,0.4s,SNR=18
EBAN S **Sn 20 04 30.0 -1.4**
365nm,0.3s,SNR=7.9
EMIJ Mijas 3.43 282 ⇓P **Pn 20 03 48.3 -3.5**
EMIJ S **Sn 20 04 28.7 -3.7**
EMIJ Mijas 3.43 282 ⇓P **Pn 20 03 48.3 -3.5**
68nm,0.3s,SNR=18
EMIJ S **Sn 20 04 28.7 -3.7**
710nm,0.2s,SNR=6.8
EMIJ Mijas 3.43 282 ⇓P **Pn 20 03 48.3 -3.5**
68nm,0.3s,SNR=18
EMIJ S **Sn 20 04 28.7 -3.7**
710nm,0.2s,SNR=6.8
EMIJ Mijas 3.43 282 P Pn 20 03 48.3 -3.5
68nm,0.3s,SNR=18
EMIJ S **Sn 20 04 28.7 -3.7**
710nm,0.2s,SNR=6.8
TZK Tazeka 3.46 239 P Pn 20 03 52.0 -0.2
SNR=1.0
EIBI Ibiza 3.46 26 ⇑P **Pn 20 03 50.9 -1.3**
EIBI S **Sn 20 04 29.4 -3.9**
EIBI Ibiza 3.46 26 ⇑P **Pn 20 03 50.9 -1.3**
389nm,0.2s,SNR=18
EIBI S **Sn 20 04 29.4 -3.9**
6μm,0.6s,SNR=1413
EIBI Ibiza 3.46 26 ⇑P **Pn 20 03 50.9 -1.3**
389nm,0.2s,SNR=18
EIBI S **Sn 20 04 29.4 -3.9**
6μm,0.6s,SNR=1413
EIBI Ibiza 3.46 26 P Pn 20 03 50.9 -1.3
389nm,0.2s,SNR=18
EIBI S **Sn 20 04 29.4 -3.9**
6μm,0.6s,SNR=1000
AKET Djebel Ketaf 3.64 87 P Pn 20 03 53.7 -1.0
AKET Djebel Ketaf 3.64 87 P Pn 20 03 53.7 -1.0
AKET Djebel Ketaf 3.64 87 P Pn 20 03 53.7 -1.0
AKET Djebel Ketaf 3.64 87 P Pn 20 03 53.7 -1.0
EADA Adamuz 3.89 306 P Pn 20 03 57.0 -1.0
EADA S **Sn 20 04 43.0 -0.8**
EADA Adamuz 3.89 306 P Pn 20 03 57.0 -1.0
926nm,1.5s,SNR=99
EADA S **Sn 20 04 43.0 -0.8**
2μm,0.8s,SNR=4.7
EADA Adamuz 3.89 306 P Pn 20 03 57.0 -1.0
926nm,1.5s,SNR=99
EADA S **Sn 20 04 43.0 -0.8**
2μm,0.8s,SNR=4.7
EADA Adamuz 3.89 306 P Pn 20 03 57.0 -1.1
926nm,1.5s,SNR=99
EADA S **Sn 20 04 43.0 -0.7**
2μm,0.8s,SNR=4.7
DKH Dar Kharkhour 3.89 265 *i*P **Pn 20 03 56.0 -2.2**
EJIF Jimena Fronter 3.97 279 P Pn 20 03 59.0 -0.2
EJIF S **Sn 20 04 45.4 -0.4**
EJIF Jimena Fronter 3.97 279 P Pn 20 03 59.0 -0.2
12nm,0.2s,SNR=7.9
EJIF S **Sn 20 04 45.4 -0.4**
1μm,0.8s,SNR=7.9
EJIF Jimena Fronter 3.97 279 P Pn 20 03 59.0 -0.2
12nm,0.2s,SNR=7.9
EJIF S **Sn 20 04 45.4 -0.4**
1μm,0.8s,SNR=7.9
EJIF Jimena Fronter 3.97 279 P Pn 20 03 59.0 -0.2
12nm,0.2s,SNR=7.9
EJIF S **Sn 20 04 45.4 -0.4**
1μm,0.8s,SNR=7.9
LIJA Lijar 3.99 286 P Pn 20 04 00.1 +0.6
LIJA S **Sn 20 04 48.3 +2.0**
LIJA Lijar 3.99 286 P Pn 20 04 00.1 +0.6
LIJA S **Sn 20 04 48.3 +2.0**
LIJA Lijar 3.99 286 P Pn 20 04 00.1 +0.6
SNR=1.0
LIJA *e*S **Sn 20 04 48.3 +2.0**
MOMI Momias 4.16 277 P Pn 20 04 03.5 +1.6
MOMI S **Sn 20 04 55.6 +5.1**
MOMI Momias 4.16 277 P Pn 20 04 03.5 +1.6
MOMI S **Sn 20 04 55.6 +5.1**
MOMI Momias 4.16 277 *e*P **Pn 20 04 03.5 +1.7**
AKF Akfadou 4.24 79 P Pn 20 04 01.7 -1.2
AKF Akfadou 4.24 79 P Pn 20 04 01.7 -1.2
AKF Akfadou 4.24 79 P Pn 20 04 01.7 -1.2
AKF Akfadou 4.24 79 P Pn 20 04 01.7 -1.2
ESPR Espera 4.34 284 P Pn 20 04 03.6 -0.6
ESPR S **Sn 20 04 52.9 -2.1**
ESPR Espera 4.34 284 P Pn 20 04 03.7 -0.6
331nm,0.9s,SNR=54
ESPR S **Sn 20 04 52.9 -2.0**
296nm,0.4s,SNR=4.1
ESPR Espera 4.34 284 P Pn 20 04 03.7 -0.6
331nm,0.9s,SNR=54
ESPR S **Sn 20 04 52.9 -2.0**
296nm,0.4s,SNR=4.1
ESPR Espera 4.34 284 P Pn 20 04 03.7 -0.6
331nm,0.9s,SNR=54
ESPR S **Sn 20 04 52.9 -2.0**
296nm,0.4s,SNR=4.1
RSA Sarsar 4.39 258 P Pn 20 04 05.0 0.0
SNR=1.0
ECAB El Cabril 4.41 301 P Pn 20 04 03.9 -1.4
ECAB S **Sn 20 04 54.8 -1.9**
ECAB El Cabril 4.41 301 P Pn 20 04 03.9 -1.4
168nm,0.6s,SNR=7.9
ECAB S **Sn 20 04 54.8 -1.9**
235nm,0.3s,SNR=7.9
ECAB El Cabril 4.41 301 P Pn 20 04 03.9 -1.4
168nm,0.6s,SNR=7.9
ECAB S **Sn 20 04 54.8 -1.9**
235nm,0.3s,SNR=7.9
ECAB El Cabril 4.41 301 P Pn 20 04 03.9 -1.4
168nm,0.6s,SNR=7.9
ECAB S **Sn 20 04 54.8 -1.9**
235nm,0.3s,SNR=7.9
GIBL Gibalbin 4.42 283 P Pn 20 04 06.8 +1.5
GIBL S **Sn 20 05 05.2 +8.3**
GIBL Gibalbin 4.42 283 P Pn 20 04 06.8 +1.5
GIBL S **Sn 20 05 05.2 +8.3**
GIBL Gibalbin 4.42 283 *e*P **Pn 20 04 06.8 +1.4**
IFR Ifrane 4.43 238 P Pn 20 04 04.8 -0.7
IFR Ifrane 4.43 238 P Pn 20 04 04.8 -0.7
CNIL Conil 4.43 277 P Pn 20 04 06.5 +0.9

CNIL S Sn 20 04 55.6 -1.6
CNIL Conil 4.43 277 P Pn 20 04 06.5 +0.9
CNIL S Sn 20 04 55.6 -1.6
CNIL Conil 4.43 277 eP Pn 20 04 06.5 +0.9
CNIL S Sn 20 04 55.6 -1.6
SNR=1.0
EMOS Mosqueruela 4.43 1 P Pn 20 04 06.0 +0.4
EMOS S Sn 20 04 55.7 -1.5
EMOS Mosqueruela 4.43 1 P Pn 20 04 06.0 +0.4
566nm,0.4s,SNR=529
EMOS S Sn 20 04 55.7 -1.5
6µm,0.9s,SNR=14
EMOS Mosqueruela 4.43 1 P Pn 20 04 06.0 +0.4
566nm,0.4s,SNR=529
EMOS S Sn 20 04 55.7 -1.5
6µm,0.9s,SNR=14
EMOS Mosqueruela 4.43 1 P Pn 20 04 06.0 +0.4
566nm,0.4s,SNR=529
EMOS S Sn 20 04 55.7 -1.5
6µm,0.9s,SNR=14
MDT Midelt 4.54 228 Pn Pn 20 04 06.2 -0.8
56nm,0.3s,baz=58,slow=14,SNR=769
MDT Sn Sn 20 04 56.0 -3.9
47nm,0.3s,baz=55,slow=13,SNR=4.6
MDT LR LR 20 05 24.3
comp=Z,2µm,21.9s,baz=62,slow=32
MDT Midelt 4.54 228 Pn Pn 20 04 06.2 -0.8
MDT Sn Sn 20 04 56.0 -3.8
SFS San Fernando 4.56 278 eP Pn 20 04 07.0 -0.3
SFS San Fernando 4.56 278 P Pn 20 04 06.5 -0.8
SFS S Sn 20 04 50.0 -10
SFS San Fernando 4.56 278 P Pn 20 04 06.5 -0.8
SFS S Sn 20 04 50.0 -10
SFS San Fernando 4.56 278 eP Pn 20 04 07.0 -0.3
MIF Mishlifen 4.56 238 i P Pn 20 04 06.0 -1.3
ESDC Sonseca Array 4.59 326 Pn Pn 20 04 06.6 -1.2
140nm,0.3s,baz=141,slow=13,SNR=627
ESDC Sn Sn 20 04 58.1 -3.0
291nm,0.3s,baz=146,slow=23,SNR=9.6
ESDC Sonseca Array 4.59 326 Pn Pn 20 04 06.6 -1.2
ESDC Sn Sn 20 04 58.1 -3.0
ESDC Sonseca Array 4.59 326 Pn Pn 20 04 06.6 -1.1
ESDC Sn Sn 20 04 58.1 -3.0
ESLA Sonseca Array 4.59 326 ePn Pn 20 04 06.9 -0.8
ESLA Sonseca Array 4.59 326 ePn Pn 20 04 06.9 -0.8
CZD Col de Zad 4.66 233 P Pn 20 04 10.0 +1.3
SNR=1.0
PAB San Pablo 4.68 322|| eP Pn 20 04 07.7 -1.2
PAB San Pablo 4.68 322 eP Pn 20 04 07.7 -1.2
ETOS Mallorca 4.70 34 P Pn 20 04 07.4 -1.7
ETOS S Sn 20 04 59.8 -3.8
ETOS Mallorca 4.70 34 P Pn 20 04 07.4 -1.7
89nm,0.3s,SNR=97
ETOS S Sn 20 04 59.8 -3.8
2µm,0.5s,SNR=12
ETOS Mallorca 4.70 34 P Pn 20 04 07.4 -1.7
89nm,0.3s,SNR=97
ETOS S Sn 20 04 59.8 -3.8
2µm,0.5s,SNR=12
ETOS Mallorca 4.70 34 P Pn 20 04 07.4 -1.8
89nm,0.3s,SNR=97
ETOS S Sn 20 04 59.8 -3.9
2µm,0.5s,SNR=12
CKHR Kef el Ahmar 4.96 87 P Pn 20 04 12.3 -0.6
CKHR Kef el Ahmar 4.96 87 P Pn 20 04 12.3 -0.6
CKHR Kef el Ahmar 4.96 87 P Pn 20 04 12.3 -0.6
CKHR Kef el Ahmar 4.96 87 P Pn 20 04 12.3 -0.6
ZFT Errachidia 4.97 220 i P Pn 20 04 12.0 -1.0
ETOR Torete 5.02 347 P Pn 20 04 14.6 +1.0
ETOR S Sn 20 05 08.7 -2.9
ETOR Torete 5.02 347 P Pn 20 04 14.6 +1.0
142nm,0.3s,SNR=7.9
ETOR S Sn 20 05 08.7 -3.0
250nm,0.2s,SNR=7.9
ETOR Torete 5.02 347 P Pn 20 04 14.6 +1.0
142nm,0.3s,SNR=7.9
ETOR S Sn 20 05 08.7 -3.0
250nm,0.2s,SNR=7.9
ETOR Torete 5.02 347 P Pn 20 04 14.6 +1.0
142nm,0.3s,SNR=7.9
ETOR S Sn 20 05 08.7 -2.9
250nm,0.2s,SNR=7.9
ERTA Horta de San J 5.08 8 ⇑P Pn 20 04 14.2 -0.2
ERTA S Sn 20 05 11.2 -1.9
ERTA Horta de San J 5.08 8 ⇑P Pn 20 04 14.2 -0.2
249nm,0.5s,SNR=18
ERTA S Sn 20 05 11.3 -1.9
4µm,0.9s,SNR=23
ERTA Horta de San J 5.08 8 ⇑P Pn 20 04 14.2 -0.2
249nm,0.5s,SNR=18
ERTA S Sn 20 05 11.3 -1.9
4µm,0.9s,SNR=23
ERTA Horta de San J 5.08 8 P Pn 20 04 14.2 -0.2
249nm,0.5s,SNR=18
ERTA S Sn 20 05 11.3 -1.8
4µm,0.9s,SNR=23
EMIN Mina Concepcio 5.20 293 P Pn 20 04 14.2 -1.9
EMIN S Sn 20 05 13.9 -2.3
EMIN Mina Concepcio 5.20 293 P Pn 20 04 14.2 -1.9
42nm,0.3s,SNR=125
EMIN S Sn 20 05 13.9 -2.3
95nm,0.3s,SNR=7.9
EMIN Mina Concepcio 5.20 293 P Pn 20 04 14.2 -1.9
42nm,0.3s,SNR=125
EMIN S Sn 20 05 13.9 -2.3
95nm,0.3s,SNR=7.9
EMIN Mina Concepcio 5.20 293 P Pn 20 04 14.2 -1.9
42nm,0.3s,SNR=125
EMIN S Sn 20 05 13.9 -2.3
95nm,0.3s,SNR=7.9
DFRA Djebel Bou Aff 5.28 81 P Pn 20 04 16.5 -0.7
DFRA Djebel Bou Aff 5.28 81 P Pn 20 04 16.5 -0.7
DFRA Djebel Bou Aff 5.28 81 P Pn 20 04 16.5 -0.7
DFRA Djebel Bou Aff 5.28 81 P Pn 20 04 16.5 -0.7
GUD Guadarrama 5.48 330 P Pn 20 04 20.1 +0.2
GUD S Sn 20 05 22.1 -0.8
GUD Guadarrama 5.48 330 P Pn 20 04 20.0 +0.2
193nm,0.5s,SNR=7.9
GUD S Sn 20 05 22.1 -0.8
SNR=7.9
GUD Guadarrama 5.48 330 P Pn 20 04 20.0 +0.2
193nm,0.5s,SNR=7.9
GUD S Sn 20 05 22.1 -0.8
SNR=7.9
GUD Guadarrama 5.48 330 P Pn 20 04 20.0 +0.1
193nm,0.5s,SNR=7.9
GUD S Sn 20 05 22.1 -0.8
SNR=1.0
RTC Rabat Centre 5.49 251 P Pn 20 04 21.0 +1.0
SNR=1.0
MAHO Mahon 5.53 43 P Pn 20 04 17.1 -3.5
MAHO S Sn 20 05 18.5 -5.7
MAHO Mahon 5.53 43 P Pn 20 04 17.1 -3.5
MAHO S Sn 20 05 18.5 -5.7
EPOB Poblet 5.58 13 ⇑P Pn 20 04 20.7 -0.6
EPOB S Sn 20 05 20.2 -5.3
EPOB Poblet 5.58 13 ⇑P Pn 20 04 20.7 -0.6
103nm,0.5s,SNR=18
EPOB S Sn 20 05 20.2 -5.3
662nm,0.7s,SNR=7.0
EPOB Poblet 5.58 13 ⇑P Pn 20 04 20.7 -0.6
103nm,0.5s,SNR=18
EPOB S Sn 20 05 20.2 -5.3
662nm,0.7s,SNR=7.0
EPOB Poblet 5.58 13 P Pn 20 04 20.7 -0.6
103nm,0.5s,SNR=18
KIB El Ksiba 5.60 235 P Pn 20 04 22.0 +0.3
SNR=1.0
PBAR Barrancos 5.62 295 ePn Pn 20 04 20.4 -1.4
PBAR eSn Sn 20 05 23.7 -2.6
PBAR A 20 05 32.1
590nm,0.9s
PBAR A 20 06 52.2
27µm,17.7s
PBAR Barrancos 5.62 295 ePn Pn 20 04 20.4 -1.4
PBAR eSn Sn 20 05 23.7 -2.6
590nm,0.9s
CTEI Djebel Teioual 5.69 87 P Pn 20 04 21.7 -1.1
CTEI Djebel Teioual 5.69 87 P Pn 20 04 21.7 -1.1
CTEI Djebel Teioual 5.69 87 P Pn 20 04 21.7 -1.1
CTEI Djebel Teioual 5.69 87 P Pn 20 04 21.7 -1.1
EGRO El Granado 5.75 288 P Pn 20 04 21.9 -1.8
EGRO S Sn 20 05 26.2 -3.5
EGRO El Granado 5.75 288 P Pn 20 04 21.9 -1.8
177nm,0.7s,SNR=136
EGRO S Sn 20 05 26.2 -3.5
117nm,0.4s,SNR=7.7
EGRO El Granado 5.75 288 P Pn 20 04 21.9 -1.8
177nm,0.7s,SNR=136
EGRO S Sn 20 05 26.2 -3.5
117nm,0.4s,SNR=7.7
EGRO El Granado 5.75 288 P Pn 20 04 21.9 -1.8
177nm,0.7s,SNR=136
EGRO S Sn 20 05 26.2 -3.5
117nm,0.4s,SNR=7.7
CASM Ain Smara 5.76 85 P Pn 20 04 21.9 -1.8
CASM Ain Smara 5.76 85 P Pn 20 04 21.9 -1.8
CASM Ain Smara 5.76 85 P Pn 20 04 21.9 -1.8
CASM Ain Smara 5.76 85 P Pn 20 04 21.9 -1.8
ESAC San Caprasio 5.79 1 P Pn 20 04 26.1 +1.8
ESAC S Sn 20 05 29.8 -0.8
ESAC San Caprasio 5.79 1 P Pn 20 04 26.0 +1.8
256nm,0.3s,SNR=19
ESAC S Sn 20 05 27.7 -3.0
1µm,0.3s,SNR=8.5
ESAC San Caprasio 5.79 1 P Pn 20 04 26.0 +1.8
256nm,0.3s,SNR=19
ESAC S Sn 20 05 27.7 -3.0
1µm,0.3s,SNR=8.5
ESAC San Caprasio 5.79 1 P Pn 20 04 26.0 +1.8
256nm,0.3s,SNR=19
ESAC S Sn 20 05 29.8 -0.9
1µm,0.3s,SNR=8.5
EBAD Badajoz 5.83 301 P Pn 20 04 23.5 -1.3
EBAD S Sn 20 05 28.1 -3.6
EBAD Badajoz 5.83 301 P Pn 20 04 23.5 -1.4
112nm,0.4s,SNR=156
EBAD S Sn 20 05 28.1 -3.6
393nm,0.3s,SNR=6.8
EBAD Badajoz 5.83 301 P Pn 20 04 23.5 -1.4
112nm,0.4s,SNR=156
EBAD S Sn 20 05 28.1 -3.6
393nm,0.3s,SNR=6.8
EBAD Badajoz 5.83 301 P Pn 20 04 23.5 -1.3
112nm,0.4s,SNR=156
EBAD S Sn 20 05 28.1 -3.7
393nm,0.3s,SNR=6.8
PVAQ Vaqueiros 5.90 287 ePn Pn 20 04 23.7 -2.1
PVAQ A 20 04 44.7
414nm,1.3s
PVAQ eSn Sn 20 05 29.1 -4.4
PVAQ A 20 05 44.7
285nm,0.5s
PVAQ A 20 07 11.1
23µm,17.5s
PVAQ Vaqueiros 5.90 287 ePn Pn 20 04 23.7 -2.1
414nm,1.3s
CKFL Kef-Lekhel 5.95 83 P Pn 20 04 25.0 -1.4
CKFL Kef-Lekhel 5.95 83 P Pn 20 04 25.0 -1.4
CKFL Kef-Lekhel 5.95 83 P Pn 20 04 25.0 -1.4
CKFL Kef-Lekhel 5.95 83 P Pn 20 04 25.0 -1.4
PBDV Barranco-do-Ve 6.04 285 ePn Pn 20 04 25.6 -2.0
PBDV A 20 04 51.4
617nm,1.4s
PBDV eSn Sn 20 05 32.9 -3.9
PBDV A 20 05 42.6
283nm,0.5s
PBDV A 20 07 16.6
19µm,17.4s
PBDV Barranco-do-Ve 6.04 285 ePn Pn 20 04 25.6 -2.0
617nm,1.4s
TZC Tazercounte 6.17 234 P Pn 20 04 29.0 -0.4
SNR=1.0
PBEJ Beja 6.18 292 ePn Pn 20 04 29.0 -0.6
PBEJ A 20 04 32.6
315nm,1.1s
PBEJ eSn Sn 20 05 36.7 -3.6
PBEJ Beja 6.18 292 ePn Pn 20 04 29.0 -0.6
315nm,1.1s
PBEJ eSn Sn 20 05 36.7 -3.6
AVE Averroes 6.19 247 P Pn 20 04 31.0 +1.2
AVE Averroes 6.19 247 P Pn 20 04 31.0 +1.2
PCVE Castro Verde 6.21 288 ePn Pn 20 04 29.3 -0.6
PCVE A 20 04 58.8
307nm,1.5s
PCVE eSn Sn 20 05 38.5 -2.4
PCVE A 20 05 49.3
170nm,0.5s
PCVE A 20 07 21.0
22µm,17.6s
PCVE Castro Verde 6.21 288 ePn Pn 20 04 29.3 -0.6
307nm,1.5s
PCVE eSn Sn 20 05 38.5 -2.4
170nm,0.5s
PESTR Estremoz 6.29 300 ePn Pn 20 04 29.9 -1.2
PESTR A 20 05 23.9
385nm,2.1s
PESTR eSn Sn 20 05 40.1 -2.8
PESTR A 20 06 06.1
210nm,0.6s
PESTR A 20 07 22.7
35µm,16.9s
PESTR Estremoz 6.29 300 ePn Pn 20 04 29.9 -1.2
385nm,2.1s
PESTR eSn Sn 20 05 40.1 -2.8
210nm,0.6s
CFON Fontmartina 6.29 21 ⇑P Pn 20 04 30.3 -0.8
CFON S Sn 20 05 38.6 -4.4
CFON Fontmartina 6.29 21 ⇑P Pn 20 04 30.3 -0.8
170nm,0.4s,SNR=18
CFON S Sn 20 05 38.6 -4.4
365nm,0.3s,SNR=5.9
CFON Fontmartina 6.29 21 ⇑P Pn 20 04 30.3 -0.8
170nm,0.4s,SNR=18
CFON S Sn 20 05 38.6 -4.4
365nm,0.3s,SNR=5.9
CFON Fontmartina 6.29 21 P Pn 20 04 30.3 -0.8
170nm,0.4s,SNR=18
PMRV Marv??o 6.42 305 ePn Pn 20 04 32.0 -0.8
PMRV A 20 05 27.2
399nm,1.8s
PMRV eSn Sn 20 05 41.2 -4.9
PMRV A 20 05 45.5
172nm,0.4s
PMRV A 20 07 26.6
42µm,16.3s
PMRV Marv??o 6.42 305 ePn Pn 20 04 32.0 -0.8
399nm,1.8s
EVO Evora 6.46 296 ePn Pn 20 04 32.9 -0.5
baz=109
EVO eSn Sn 20 05 39.2 -7.9
855nm,0.8s
EVO eMLR MLR
comp=Z,42µm,21.2s
EVO Evora 6.46 296 eP Pn 20 04 32.1 -1.3
EVO Evora 6.46 296 ePn Pn 20 04 31.9 -1.5
EVO A 20 05 28.5
comp=Z,354nm,1.8s
EVO eSn Sn 20 05 43.4 -3.7
EVO A 20 06 04.7
comp=Z,172nm,0.5s
EVO A 20 07 27.6
comp=Z,25µm,18.2s
EVO Evora 6.46 296 eP Pn 20 04 32.1 -1.3
CMAH Djebel Manchou 6.52 81 P Pn 20 04 32.3 -2.0
CMAH Djebel Manchou 6.52 81 P Pn 20 04 32.3 -2.0
CMAH Djebel Manchou 6.52 81 P Pn 20 04 32.3 -2.0
CMAH Djebel Manchou 6.52 81 P Pn 20 04 32.3 -2.0
EVOP Sao Brissos 6.54 296 eP Pn 20 04 32.8 -1.6
EVOP eS Sn 20 05 40.5 -8.5
EVOP eS Sn 20 05 40.5 -8.5
EVOP AML AML 20 05 48.5
comp=N,110nm,0.4s
EVOP Sao Brissos 6.54 296 eP Pn 20 04 32.8 -1.7
EVOP eS Sn 20 05 40.5 -8.6
EVOP Sao Brissos 6.54 296 ePn Pn 20 04 32.9 -1.6
baz=109
ABSA Djebel Ababsia 6.55 85 P Pn 20 04 32.9 -1.8
ABSA Djebel Ababsia 6.55 85 P Pn 20 04 32.9 -1.8
CABS Djebel Ababsia 6.55 85 P Pn 20 04 32.9 -1.8
CABS Djebel Ababsia 6.55 85 P Pn 20 04 32.9 -1.8
CSOR Sort 6.58 11 ⇑P Pn 20 04 35.1 +0.1
CSOR S Sn 20 05 48.8 -1.4
CSOR Sort 6.58 11 ⇑P Pn 20 04 35.1 +0.1
comp=N,90nm,0.4s,SNR=18
CSOR S Sn 20 05 46.9 -3.2
comp=N,292nm,0.4s,SNR=5.3
CSOR Sort 6.58 11 ⇑P Pn 20 04 35.1 +0.1
comp=N,90nm,0.4s,SNR=18
CSOR S Sn 20 05 46.9 -3.2
comp=N,292nm,0.4s,SNR=5.3
CSOR Sort 6.58 11 P Pn 20 04 35.1 0.0
comp=N,90nm,0.4s,SNR=18
CSOR S Sn 20 05 48.8 -1.4
comp=N,292nm,0.4s,SNR=5.3
MORF Marmelete 6.62 284 eP Pn 20 04 33.8 -1.8
MORF eS Sn 20 05 43.1 -7.9
MORF Marmelete 6.62 284 eP Pn 20 04 34.5 -1.1
MORF Marmelete 6.62 284 eP Pn 20 04 34.5 -1.1
MORF Marmelete 6.62 284 P Pn 20 04 33.8 -1.7
MORF S Sn 20 05 43.0 -8.0
MORF Marmelete 6.62 284 P Pn 20 04 33.8 -1.7
MORF S Sn 20 05 43.0 -8.0
MORF Marmelete 6.62 284 ePn Pn 20 04 34.0 -1.6
MORF A 20 05 12.3
comp=N,495nm,1.7s
MORF eSn Sn 20 05 46.5 -4.5
MORF A 20 05 55.1
comp=N,138nm,0.4s
MORF A 20 07 43.4
comp=N,17µm,17.6s
MORF Marmelete 6.62 284 ePn Pn 20 04 34.0 -1.6
comp=N,495nm,1.7s
MORF Marmelete 6.62 284 eP Pn 20 04 34.5 -1.1
PCBR Castelo Branco 6.69 308 ePn Pn 20 04 36.1 -0.5
PCBR A 20 04 44.8
comp=N,475nm,1.1s
PCBR eSn Sn 20 05 48.1 -4.8
PCBR A 20 05 52.2
comp=N,294nm,0.5s
PCBR A 20 07 41.3
comp=N,27µm,15.8s
PCBR Castelo Branco 6.69 308 ePn Pn 20 04 36.1 -0.5
comp=N,475nm,1.1s
MOE Montemor 6.70 295 eP Pn 20 04 36.4 -0.3
MOE Montemor 6.70 295 ePn Pn 20 04 36.5 -0.2
MOE eSn Sn 20 05 49.4 -3.7
MOE Montemor 6.70 295 eP Pn 20 04 36.4 -0.3
PTEO Sao Teotonio 6.72 286 ePn Pn 20 04 35.8 -1.1
PTEO A 20 05 02.4
comp=N,830nm,1.1s
PTEO eSn Sn 20 05 49.2 -4.3
PTEO A 20 05 59.9
comp=N,325nm,0.6s
PTEO A 20 07 42.9
comp=N,11µm,17.2s
PTEO Sao Teotonio 6.72 286 ePn Pn 20 04 35.8 -1.1
comp=N,830nm,1.1s
EBIE Bielsa 6.78 5 P Pn 20 04 38.8 +1.1
EBIE S Sn 20 05 53.7 -1.3
EBIE Bielsa 6.78 5 P Pn 20 04 38.8 +1.1
comp=N,9.0nm,0.4s,SNR=44
EBIE S Sn 20 05 53.7 -1.3
comp=N,50nm,0.3s,SNR=5.0
EBIE Bielsa 6.78 5 P Pn 20 04 38.8 +1.1
comp=N,9.0nm,0.4s,SNR=44
EBIE S Sn 20 05 53.7 -1.3
comp=N,50nm,0.3s,SNR=5.0
EBIE Bielsa 6.78 5 P Pn 20 04 38.8 +1.0
comp=N,9.0nm,0.4s,SNR=44
EBIE S Sn 20 05 53.7 -1.3
comp=N,50nm,0.3s,SNR=5.0
VALF Valcebollere 6.78 17 eP Pn 20 04 38.1 +0.3
VALF Valcebollere 6.78 17 eP Pn 20 04 38.1 +0.3
ECRI Cripan 6.84 348 P Pn 20 04 39.2 +0.6
ECRI S Sn 20 05 54.8 -1.6
ECRI Cripan 6.84 348 P Pn 20 04 39.2 +0.7
comp=N,108nm,0.4s,SNR=18
ECRI S Sn 20 05 53.2 -3.2
comp=N,94nm,0.4s,SNR=7.9
ECRI Cripan 6.84 348 P Pn 20 04 39.2 +0.7
comp=N,108nm,0.4s,SNR=18
ECRI S Sn 20 05 53.2 -3.2
comp=N,94nm,0.4s,SNR=7.9
ECRI Cripan 6.84 348 P Pn 20 04 39.2 +0.6
comp=N,108nm,0.4s,SNR=18
ECRI S Sn 20 05 54.8 -1.6
comp=N,94nm,0.4s,SNR=7.9
CLLI Llivia 6.84 16 P Pn 20 04 39.1 +0.4
CLLI S Sn 20 05 52.5 -4.1
CLLI Llivia 6.84 16 P Pn 20 04 39.1 +0.4
comp=N,49nm,0.3s,SNR=110
CLLI S Sn 20 05 52.5 -4.1
comp=N,577nm,0.7s,SNR=5.5
CLLI Llivia 6.84 16 P Pn 20 04 39.1 +0.4
comp=N,49nm,0.3s,SNR=110
CLLI S Sn 20 05 52.5 -4.1
comp=N,577nm,0.7s,SNR=5.5
CLLI Llivia 6.84 16 P Pn 20 04 39.1 +0.4
comp=N,49nm,0.3s,SNR=110
IUNC Unciti 6.86 354 P Pn 20 04 40.1 +1.3
comp=N,85nm,0.3s,SNR=60
IUNC S Sn 20 05 55.8 -1.1
comp=N,50nm,0.5s,SNR=7.9
IUNC Unciti 6.86 354 P Pn 20 04 40.1 +1.3
comp=N,85nm,0.3s,SNR=60
IUNC S Sn 20 05 55.8 -1.1
comp=N,50nm,0.5s,SNR=7.9
IUNC Unciti 6.86 354 P Pn 20 04 40.1 +1.2
comp=N,85nm,0.3s,SNR=60
IUNC S Sn 20 05 55.8 -1.1
comp=N,50nm,0.5s,SNR=7.9
IPRE Itoiz 6.90 355 P Pn 20 04 40.9 +1.5
comp=N,28nm,0.3s,SNR=14
IPRE S Sn 20 05 52.1 -5.8
comp=N,30nm,0.4s,SNR=7.9
IPRE Itoiz 6.90 355 P Pn 20 04 40.9 +1.5
comp=N,28nm,0.3s,SNR=14
IPRE S Sn 20 05 52.1 -5.8
comp=N,30nm,0.4s,SNR=7.9
IPRE Itoiz 6.90 355 P Pn 20 04 40.9 +1.5
comp=N,28nm,0.3s,SNR=14
IPRE S Sn 20 05 56.4 -1.5
comp=N,30nm,0.4s,SNR=7.9
RESF Ens 6.91 6 eP Pn 20 04 40.3 +0.7
RESF Ens 6.91 6 eP Pn 20 04 40.3 +0.7
IZUN Zunzarren 6.96 355 P Pn 20 04 41.5 +1.2
comp=N,25nm,0.3s,SNR=7.9
IZUN S Sn 20 05 54.3 -5.1
comp=N,65nm,0.3s,SNR=7.9
IZUN Zunzarren 6.96 355 P Pn 20 04 41.5 +1.2
comp=N,25nm,0.3s,SNR=7.9
IZUN S Sn 20 05 54.3 -5.1
comp=N,65nm,0.3s,SNR=7.9
IZUN Zunzarren 6.96 355 P Pn 20 04 41.5 +1.3
comp=N,25nm,0.3s,SNR=7.9
IZUN S Sn 20 05 56.9 -2.5
comp=N,65nm,0.3s,SNR=7.9
ETSF Etsaut 6.97 0 ePn Pn 20 04 41.1 +0.8
ETSF eSn Sn 20 05 53.9 -5.7
comp=N,2µm,1.4s
ETSF Etsaut 6.97 0 P Pn 20 04 41.1 +0.8
ETSF S Sn 20 05 53.9 -5.7
comp=N,1µm,1.4s
ETSF Etsaut 6.97 0 P Pn 20 04 41.1 +0.8
ETSF S Sn 20 05 53.9 -5.7
comp=N,1µm,1.4s
ETSF Etsaut 6.97 0 ePn Pn 20 04 41.1 +0.8
EORO Oroz-Betelu 6.98 356 P Pn 20 04 41.9 +1.4
comp=N,51nm,0.2s,SNR=7.9
EORO S Sn 20 05 58.3 -1.7
comp=N,114nm,0.4s,SNR=7.9
EORO Oroz-Betelu 6.98 356 P Pn 20 04 41.9 +1.4
comp=N,51nm,0.2s,SNR=7.9
EORO S Sn 20 05 58.3 -1.7
comp=N,114nm,0.4s,SNR=7.9
EORO Oroz-Betelu 6.98 356 P Pn 20 04 41.9 +1.4
comp=N,51nm,0.2s,SNR=7.9
EORO S Sn 20 05 58.3 -1.7
comp=N,114nm,0.4s,SNR=7.9
MELF Melles 7.02 8 eP Pn 20 04 42.3 +1.2
MELF Melles 7.02 8 eP Pn 20 04 42.3 +1.2
IUSE Utxeti 7.05 354 P Pn 20 04 42.8 +1.3
comp=N,6.9nm,0.2s,SNR=25
IUSE S Sn 20 05 59.8 -1.9
comp=N,19nm,0.3s,SNR=7.9
IUSE Utxeti 7.05 354 P Pn 20 04 42.8 +1.3
comp=N,6.9nm,0.2s,SNR=25
IUSE S Sn 20 05 59.8 -1.9
comp=N,19nm,0.3s,SNR=7.9
IUSE Utxeti 7.05 354 P Pn 20 04 42.8 +1.3
comp=N,6.9nm,0.2s,SNR=25
IUSE S Sn 20 06 02.1 +0.4
comp=N,19nm,0.3s,SNR=7.9
EJON La Jonquera 7.06 22 P Pn 20 04 41.2 -0.4
EJON S Sn 20 05 57.1 -4.7
EJON La Jonquera 7.06 22 P Pn 20 04 41.2 -0.4

comp=N,36nm,0.3s,SNR=46
EJON S Sn 20 05 57.1 -4.7
comp=N,103nm,0.4s,SNR=8.8
EJON La Jonquera 7.06 22 P Pn 20 04 41.2 -0.4
comp=N,36nm,0.3s,SNR=46
EJON S Sn 20 05 57.1 -4.7
comp=N,103nm,0.4s,SNR=8.8
EJON La Jonquera 7.06 22 P Pn 20 04 41.2 -0.4
comp=N,36nm,0.3s,SNR=46
MTE Manteigas 7.06 311 ePn Pn 20 04 46.8 +5.2
MTE eSn Sn 20 06 04.4 +2.5
MTE Manteigas 7.06 311 ePn Pn 20 04 47.5 +5.9
MTE A 20 05 30.2
comp=N,442nm,1.4s
MTE eSn Sn 20 05 59.5 -2.4
MTE A 20 08 01.8
comp=N,38µm,17.2s
FILF Fillols 7.07 19 eP Pn 20 04 40.9 -0.8
FILF Fillols 7.07 19 eP Pn 20 04 40.9 -0.8
SJAF Saint Jean de 7.09 21 eP Pn 20 04 40.9 -1.1
SJAF Saint Jean de 7.09 21 eP Pn 20 04 40.9 -1.1
CARF Carcanieres 7.10 16 eP Pn 20 04 42.6 +0.4
CARF Carcanieres 7.10 16 eP Pn 20 04 42.6 +0.4
ALMR Almeirim 7.11 299 eP Pn 20 04 40.5 -1.8
ALMR eS Sn 20 05 55.0 -8.1
ALMR eS Sn 20 05 55.0 -8.1
ALMR AML AML 20 05 56.6
comp=N,280nm,0.9s
ALMR Almeirim 7.11 299 eP Pn 20 04 40.5 -1.8
ALMR eS Sn 20 05 55.0 -8.1
ALMR Almeirim 7.11 299 P Pn 20 04 40.5 -1.8
ALMR S Sn 20 05 55.0 -8.1
ALMR Almeirim 7.11 299 P Pn 20 04 40.5 -1.8
ALMR S Sn 20 05 55.0 -8.1
ALMR Almeirim 7.11 299 eP Pn 20 04 40.5 -1.8
PLML Palmela 7.12 294 ePn Pn 20 04 42.4 -0.1
PLML eSn Sn 20 06 01.8 -1.6
PLML Palmela 7.12 294 ePn Pn 20 04 42.4 -0.1
PLML eSn Sn 20 06 01.8 -1.6
EPF Esparros 7.13 6 ePn Pn 20 04 42.8 +0.1
EPF eSn Sn 20 05 57.6 -6.2
comp=N,987nm,0.8s
EPF Esparros 7.13 6 P Pn 20 04 42.8 +0.1
EPF S Sn 20 05 57.6 -6.2
comp=N,494nm,0.8s
EPF Esparros 7.13 6 P Pn 20 04 42.8 +0.1
EPF S Sn 20 05 57.6 -6.2
comp=N,494nm,0.8s
EPF Esparros 7.13 6 ePn Pn 20 04 42.8 +0.1
REYF Montagne du Re 7.14 1 eP Pn 20 04 44.2 +1.5
REYF Montagne du Re 7.14 1 eP Pn 20 04 44.2 +1.5
MLS Moulis 7.15 10 eP Pn 20 04 40.0 -2.8
MLS Moulis 7.15 10 P Pn 20 04 40.0 -2.8
SNR=1.0
ATE Arette 7.15 359 eP Pn 20 04 43.1 +0.2
ATE Arette 7.15 359 eP Pn 20 04 43.1 +0.2
SJPF Ste Jean 7.20 356 ePn Pn 20 04 44.6 +1.1
SJPF eSn Sn 20 05 59.6 -5.7
comp=N,600nm,0.8s
SJPF Ste Jean 7.20 356 P Pn 20 04 44.6 +1.1
SJPF S Sn 20 05 59.6 -5.7
comp=N,300nm,0.8s
SJPF Ste Jean 7.20 356 P Pn 20 04 44.6 +1.1
SJPF S Sn 20 05 59.6 -5.7
comp=N,300nm,0.8s
SJPF Ste Jean 7.20 356 ePn Pn 20 04 44.6 +1.1
PTOM Tomar 7.20 303 ePn Pn 20 04 42.6 -0.9
PTOM A 20 04 51.0
comp=N,621nm,1.4s
PTOM eSn Sn 20 05 59.0 -6.3
PTOM Tomar 7.20 303 ePn Pn 20 04 42.6 -0.9
comp=N,621nm,1.4s
MVO Moncorvo 7.26 318 ⇓P Pn 20 04 44.2 -0.2
MVO S Sn 20 06 04.6 -2.2
MVO Moncorvo 7.26 318 ⇓P Pn 20 04 44.2 -0.2
comp=N,187nm,1.1s,SNR=18
MVO S Sn 20 06 04.6 -2.2
comp=N,86nm,0.4s,SNR=7.9
MVO Moncorvo 7.26 318 ⇓P Pn 20 04 44.2 -0.2
comp=N,187nm,1.1s,SNR=18
MVO S Sn 20 06 04.6 -2.2
comp=N,86nm,0.4s,SNR=7.9
MVO Moncorvo 7.26 318 ePn Pn 20 04 44.1 -0.3
MVO A 20 04 49.1
comp=N,382nm,1.2s
MVO eSn Sn 20 06 04.2 -2.6
MVO A 20 06 56.4
comp=N,289nm,0.6s
MVO A 20 08 00.9
comp=N,33µm,16.7s
MVO Moncorvo 7.26 318 ePn Pn 20 04 44.1 -0.3
comp=N,382nm,1.2s
MVO eSn Sn 20 06 04.2 -2.6
comp=N,289nm,0.6s
MVO S Sn 20 06 04.6 -2.2
comp=N,86nm,0.4s,SNR=7.9
ELIZ Elizondo 7.27 355 ⇓P Pn 20 04 45.5 +1.0
ELIZ S Sn 20 06 03.3 -3.7
ELIZ Elizondo 7.27 355 ⇓P Pn 20 04 45.5 +1.1
comp=N,34nm,0.3s,SNR=18
ELIZ S Sn 20 06 03.3 -3.7
comp=N,94nm,0.4s,SNR=7.9
ELIZ Elizondo 7.27 355 ⇓P Pn 20 04 45.5 +1.1
comp=N,34nm,0.3s,SNR=18
ELIZ S Sn 20 06 03.3 -3.7
comp=N,94nm,0.4s,SNR=7.9
ELIZ Elizondo 7.27 355 P Pn 20 04 45.5 +1.0
comp=N,34nm,0.3s,SNR=18
ELIZ S Sn 20 06 03.3 -3.7
comp=N,94nm,0.4s,SNR=7.9
ORDF Ordiarp 7.29 358 eP Pn 20 04 45.5 +0.8
ORDF Ordiarp 7.29 358 eP Pn 20 04 45.5 +0.8
EALK Alkurruntz 7.32 355 P Pn 20 04 46.5 +1.3
EALK S Sn 20 06 06.0 -2.3
EALK Alkurruntz 7.32 355 P Pn 20 04 46.5 +1.3
comp=N,80nm,0.3s,SNR=72
EALK S Sn 20 06 06.0 -2.3
comp=N,133nm,0.3s,SNR=7.9
EALK Alkurruntz 7.32 355 P Pn 20 04 46.5 +1.3
comp=N,80nm,0.3s,SNR=72
EALK S Sn 20 06 06.0 -2.3
comp=N,133nm,0.3s,SNR=7.9
EALK Alkurruntz 7.32 355 P Pn 20 04 46.5 +1.3
comp=N,80nm,0.3s,SNR=72
EALK S Sn 20 06 06.0 -2.3
comp=N,133nm,0.3s,SNR=7.9
OSSF Osses 7.34 356 eP Pn 20 04 46.1 +0.6
OSSF Osses 7.34 356 eP Pn 20 04 46.1 +0.6
LIS Lisbon 7.36 295 eP Pn 20 04 43.3 -2.4
LIS eS Sn 20 05 59.6 -10
LIS AML AML 20 06 05.5
comp=E,360nm,0.4s
LIS Lisbon 7.36 295 eP Pn 20 04 43.3 -2.4
LIS eS Sn 20 05 59.6 -10
LIS Lisbon 7.36 295 P Pn 20 04 43.3 -2.4
LIS S Sn 20 05 59.6 -10
LIS Lisbon 7.36 295 P Pn 20 04 43.3 -2.4
LIS S Sn 20 05 59.6 -10
LRDF Laroque-de-Fa 7.41 18 eP Pn 20 04 46.1 -0.4
LRDF Laroque-de-Fa 7.41 18 eP Pn 20 04 46.1 -0.4
PVIS Viseu 7.46 312 ePn Pn 20 04 46.6 -0.6
PVIS A 20 04 51.4
comp=E,421nm,1.3s
PVIS eSn Sn 20 06 05.9 -5.9
PVIS A 20 08 05.7
comp=E,21µm,16.7s
PVIS Viseu 7.46 312 ePn Pn 20 04 46.6 -0.6
comp=E,421nm,1.3s
PMAFR Mafra 7.54 296 P Pn 20 04 47.6 -0.6
comp=E,161nm,0.6s,SNR=20
PMAFR S Sn 20 06 09.4 -4.3
comp=E,114nm,0.2s,SNR=7.9
PMAFR Mafra 7.54 296 P Pn 20 04 47.6 -0.6
comp=E,161nm,0.6s,SNR=20
PMAFR S Sn 20 06 09.4 -4.3
comp=E,114nm,0.2s,SNR=7.9
PMAFR Mafra 7.54 296 ePn Pn 20 04 47.4 -0.8
PMAFR A 20 04 52.6
comp=E,420nm,1.9s
PMAFR eSn Sn 20 06 09.0 -4.7
PMAFR A 20 08 10.7
comp=E,26µm,18.0s
PMAFR Mafra 7.54 296 P Pn 20 04 47.6 -0.6
comp=E,161nm,0.6s,SNR=20
PBRG Braganca 7.57 323 ePn Pn 20 04 48.5 -0.2
PBRG A 20 04 53.3
comp=E,272nm,1.3s
PBRG eSn Sn 20 06 08.5 -6.1
PBRG A 20 08 09.4
comp=E,21µm,16.1s
PBRG Braganca 7.57 323 ePn Pn 20 04 48.5 -0.2
comp=E,272nm,1.3s
ELAN Lanestosa 7.62 344 P Pn 20 04 50.1 +0.8
ELAN S Sn 20 06 13.7 -1.9
ELAN Lanestosa 7.62 344 P Pn 20 04 50.1 +0.8
comp=E,29nm,0.2s,SNR=41
ELAN S Sn 20 06 11.0 -4.6
comp=E,46nm,0.4s,SNR=7.9
ELAN Lanestosa 7.62 344 P Pn 20 04 50.1 +0.8
comp=E,29nm,0.2s,SNR=41
ELAN S Sn 20 06 11.0 -4.6
comp=E,46nm,0.4s,SNR=7.9
ELAN Lanestosa 7.62 344 P Pn 20 04 50.1 +0.8
comp=E,29nm,0.2s,SNR=41
ELAN S Sn 20 06 13.7 -1.9
comp=E,46nm,0.4s,SNR=7.9
OUK Oukaimeden 7.67 234 P Pn 20 04 50.0 0.0
SNR=1.0
ECAL Calabor 7.67 323 P Pn 20 04 49.7 -0.4
ECAL S Sn 20 06 14.1 -2.9
ECAL Calabor 7.67 323 P Pn 20 04 49.7 -0.4
comp=E,90nm,0.4s,SNR=137
ECAL S Sn 20 06 14.1 -2.9
comp=E,46nm,0.2s,SNR=7.9
ECAL Calabor 7.67 323 P Pn 20 04 49.7 -0.4
comp=E,90nm,0.4s,SNR=137
ECAL S Sn 20 06 14.1 -2.9
comp=E,46nm,0.2s,SNR=7.9
ECAL Calabor 7.67 323 P Pn 20 04 49.7 -0.4
comp=E,90nm,0.4s,SNR=137
ECAL S Sn 20 06 14.1 -2.9
comp=E,46nm,0.2s,SNR=7.9
PVRL Vila Real 7.71 316 ePn Pn 20 04 50.2 -0.4
PVRL A 20 04 55.6
comp=E,334nm,1.5s
PVRL eSn Sn 20 06 12.6 -5.4
PVRL A 20 08 13.0
comp=E,20µm,16.8s
PVRL Vila Real 7.71 316 ePn Pn 20 04 50.2 -0.4
comp=E,334nm,1.5s
MTLF Montolieu 7.72 16 ePn Pn 20 04 51.9 +1.2
MTLF eSn Sn 20 06 12.1 -6.1
comp=E,846nm,0.8s
MTLF Montolieu 7.72 16 P Pn 20 04 51.9 +1.2
MTLF S Sn 20 06 12.1 -6.1
comp=E,423nm,0.8s
MTLF Montolieu 7.72 16 P Pn 20 04 51.9 +1.2
MTLF S Sn 20 06 12.1 -6.1
comp=E,423nm,0.8s
MTLF Montolieu 7.72 16 ePn Pn 20 04 51.9 +1.2
CIA Chichaoua 8.06 240 P Pn 20 04 56.0 +0.6
SNR=1.0
KEST Kesra 8.09 88 Pn Pn 20 04 54.6 -1.2
comp=E,5.2nm,0.3s,baz=257,slow=2.6,SNR=138
KEST Sn Sn 20 06 22.4 -4.8
comp=E,3.3nm,0.3s,baz=260,slow=6.1,SNR=2.8
PTO Porto 8.14 312 ePn Pn 20 04 56.2 -0.3
PTO eSn Sn 20 06 22.2 -6.4
PTO A 20 08 33.8
comp=E,27µm,18.0s
PTO Porto 8.14 312 ePn Pn 20 04 56.2 -0.3
EARI Arriondas 8.18 336 P Pn 20 04 57.0 0.0
EARI S Sn 20 06 24.9 -4.5
EARI Arriondas 8.18 336 P Pn 20 04 57.0 0.0
comp=E,38nm,0.4s,SNR=124
EARI S Sn 20 06 24.9 -4.5
comp=E,30nm,0.4s,SNR=7.9
EARI Arriondas 8.18 336 P Pn 20 04 57.0 0.0
comp=E,38nm,0.4s,SNR=124
EARI S Sn 20 06 24.9 -4.5
comp=E,30nm,0.4s,SNR=7.9
EARI Arriondas 8.18 336 P Pn 20 04 57.0 0.0
comp=E,38nm,0.4s,SNR=124
PCAB Cabril 8.18 317 ePn Pn 20 04 57.0 0.0
PCAB A 20 05 01.9
comp=E,275nm,1.6s
PCAB eSn Sn 20 06 24.0 -5.4
PCAB A 20 08 27.6
comp=E,20µm,16.6s
PCAB Cabril 8.18 317 ePn Pn 20 04 57.0 0.0
comp=E,275nm,1.6s
ELOB Lobios 8.30 318 P Pn 20 04 58.5 -0.3
ELOB S Sn 20 06 26.6 -5.9
ELOB Lobios 8.30 318 P Pn 20 04 58.5 -0.3
comp=E,17nm,0.4s,SNR=21
ELOB S Sn 20 06 26.6 -5.9
comp=E,5.9nm,0.6s,SNR=7.9
ELOB Lobios 8.30 318 P Pn 20 04 58.5 -0.3
comp=E,17nm,0.4s,SNR=21
ELOB S Sn 20 06 26.6 -5.9
comp=E,5.9nm,0.6s,SNR=7.9
ELOB Lobios 8.30 318 P Pn 20 04 58.5 -0.2
comp=E,17nm,0.4s,SNR=21
JHA Jbel Lahdid 8.46 243 P Pn 20 05 01.0 +0.1
SNR=1.0
VSL Villasalto 8.68 63 ePn Pn 20 05 00.6 -3.3
comp=E,69nm,0.5s
LASF Ste Croix 8.83 21 ePn Pn 20 05 05.0 -0.9
LASF eSn Sn 20 06 38.2 -7.3
comp=E,338nm,0.9s
LASF Ste Croix 8.83 21 P Pn 20 05 05.0 -0.9
LASF S Sn 20 06 38.2 -7.3
comp=E,169nm,0.9s
LASF Ste Croix 8.83 21 P Pn 20 05 05.0 -0.9
LASF S Sn 20 06 38.2 -7.3
comp=E,169nm,0.9s
LASF Ste Croix 8.83 21 ePn Pn 20 05 05.0 -0.9
EZAM Zamans 8.84 317 P Pn 20 05 05.7 -0.4
EZAM S Sn 20 06 41.4 -4.4
EZAM Zamans 8.84 317 P Pn 20 05 05.7 -0.4
comp=E,49nm,0.6s,SNR=7.9
EZAM S Sn 20 06 38.0 -7.8
comp=E,47nm,0.4s,SNR=7.9
EZAM Zamans 8.84 317 P Pn 20 05 05.7 -0.4
comp=E,49nm,0.6s,SNR=7.9
EZAM S Sn 20 06 38.0 -7.8
comp=E,47nm,0.4s,SNR=7.9
EZAM Zamans 8.84 317 P Pn 20 05 05.7 -0.4
comp=E,49nm,0.6s,SNR=7.9
EPON Pontenova 8.95 328 P Pn 20 05 07.3 -0.2
EPON S Sn 20 06 41.9 -6.5
EPON Pontenova 8.95 328 P Pn 20 05 07.3 -0.2
comp=E,51nm,0.4s,SNR=7.9
EPON S Sn 20 06 41.9 -6.5
comp=E,8.5nm,0.2s,SNR=7.9
EPON Pontenova 8.95 328 P Pn 20 05 07.3 -0.2
comp=E,51nm,0.4s,SNR=7.9
EPON S Sn 20 06 41.9 -6.5
comp=E,8.5nm,0.2s,SNR=7.9
EPON Pontenova 8.95 328 P Pn 20 05 07.3 -0.2
comp=E,51nm,0.4s,SNR=7.9
LFF La Frestale 9.06 6 ePn Pn 20 05 08.7 -0.4
LFF eSn Sn 20 06 44.0 -7.2
comp=E,997nm,1.0s
LFF La Frestale 9.06 6 P Pn 20 05 08.7 -0.4
LFF S Sn 20 06 44.0 -7.2
comp=E,499nm,1.0s
LFF La Frestale 9.06 6 P Pn 20 05 08.7 -0.4
LFF S Sn 20 06 44.0 -7.2
comp=E,499nm,1.0s
LFF La Frestale 9.06 6 ePn Pn 20 05 08.7 -0.4
LMR La Mourre 9.21 34 ePn Pn 20 05 11.2 +0.1
LMR eSn Sn 20 06 47.0 -7.8
comp=E,476nm,1.0s
LMR La Mourre 9.21 34 P Pn 20 05 11.2 +0.1
LMR S Sn 20 06 47.0 -7.8
comp=E,238nm,1.0s
LMR La Mourre 9.21 34 P Pn 20 05 11.2 +0.1
LMR S Sn 20 06 47.0 -7.8
comp=E,238nm,1.0s
LMR La Mourre 9.21 34 ePn Pn 20 05 11.2 +0.1
CAF Calviac 9.22 12 ePn Pn 20 05 11.5 +0.3
CAF eSn Sn 20 06 47.8 -7.2
comp=E,285nm,0.8s
CAF Calviac 9.22 12 P Pn 20 05 11.5 +0.3
CAF S Sn 20 06 47.8 -7.2
comp=E,142nm,0.8s
CAF Calviac 9.22 12 P Pn 20 05 11.5 +0.3
CAF S Sn 20 06 47.8 -7.2
comp=E,142nm,0.8s
CAF Calviac 9.22 12 ePn Pn 20 05 11.5 +0.3
AFS Agadir Fac de 9.26 236 P Pn 20 05 12.0 +0.2
SNR=1.0
STS Santiago 9.28 321 P Pn 20 05 12.8 +0.8
STS Santiago 9.28 321 P Pn 20 05 12.8 +0.7
comp=E,29nm,0.4s,SNR=6.6
STS Santiago 9.28 321 P Pn 20 05 12.8 +0.7
comp=E,29nm,0.4s,SNR=6.6
STS Santiago 9.28 321 P Pn 20 05 12.8 +0.8
comp=E,29nm,0.4s,SNR=6.6
SMRF Simiane la Rot 9.34 29 ePn Pn 20 05 13.2 +0.4
SMRF eSn Sn 20 06 51.0 -6.8
comp=E,102nm,0.6s
SMRF Simiane la Rot 9.34 29 P Pn 20 05 13.2 +0.4
SMRF S Sn 20 06 51.0 -6.8
comp=E,102nm,0.6s
SMRF Simiane la Rot 9.34 29 P Pn 20 05 13.2 +0.4
SMRF S Sn 20 06 51.0 -6.8
comp=E,102nm,0.6s
SMRF Simiane la Rot 9.34 29 ePn Pn 20 05 13.2 +0.4
FRF La Foret Royal 9.45 34 ePn Pn 20 05 14.7 +0.3
FRF eSn Sn 20 06 53.2 -7.4
comp=E,194nm,0.6s
FRF La Foret Royal 9.45 34 P Pn 20 05 14.7 +0.3
FRF S Sn 20 06 53.2 -7.4
comp=E,97nm,0.6s
FRF La Foret Royal 9.45 34 P Pn 20 05 14.7 +0.3
FRF S Sn 20 06 53.2 -7.4
comp=E,97nm,0.6s
FRF La Foret Royal 9.45 34 ePn Pn 20 05 14.7 +0.3
RJF Les Rejaudoux 9.51 9 ePn Pn 20 05 14.5 -0.7
RJF eSn Sn 20 06 54.8 -7.3
comp=E,261nm,0.8s
RJF eMLR MLR
comp=Z,9µm,20.8s
RJF Les Rejaudoux 9.51 9 P Pn 20 05 14.5 -0.7
RJF S Sn 20 06 54.8 -7.3
comp=Z,130nm,0.8s
RJF Les Rejaudoux 9.51 9 P Pn 20 05 14.5 -0.7
RJF S Sn 20 06 54.8 -7.3
comp=Z,130nm,0.8s
RJF Les Rejaudoux 9.51 9 ePn Pn 20 05 14.5 -0.7
EMAZ Mazaricos 9.54 320 P Pn 20 05 17.3 +1.6
EMAZ S Sn 20 06 58.0 -5.0
EMAZ Mazaricos 9.54 320 P Pn 20 05 17.3 +1.6
comp=Z,47nm,0.6s,SNR=21
EMAZ S Sn 20 06 55.7 -7.2
comp=Z,5.3nm,0.3s,SNR=7.9
EMAZ Mazaricos 9.54 320 P Pn 20 05 17.3 +1.6
comp=Z,47nm,0.6s,SNR=21
EMAZ S Sn 20 06 55.7 -7.2
comp=Z,5.3nm,0.3s,SNR=7.9
EMAZ Mazaricos 9.54 320 P Pn 20 05 17.3 +1.6
comp=Z,47nm,0.6s,SNR=21
CALN Calern 9.71 34 eP Pn 20 05 19.9 +1.9
CALN Calern 9.71 34 eP Pn 20 05 19.9 +1.9
LBL Lubilhac 9.75 16 eP Pn 20 05 18.9 +0.4
LBL Lubilhac 9.75 16 eP Pn 20 05 18.9 +0.4
OCF Saint Nazaire 9.75 26 eP Pn 20 05 19.2 +0.7
OCF Saint Nazaire 9.75 26 eP Pn 20 05 19.2 +0.7
OG26 St.-Nazaire-De 9.75 26 eP Pn 20 05 19.2 +0.7
OG26 St.-Nazaire-De 9.75 26 eP Pn 20 05 19.2 +0.7
FRNF Fournols 9.75 13 eP Pn 20 05 18.4 -0.2
FRNF Fournols 9.75 13 eP Pn 20 05 18.4 -0.2
VIVF Saint-Julien-l 9.79 23 ePn Pn 20 05 18.6 -0.4
VIVF eSn Sn 20 07 01.1 -7.8
comp=Z,201nm,1.0s
VIVF Saint-Julien-l 9.79 23 P Pn 20 05 18.6 -0.4
VIVF S Sn 20 07 01.1 -7.8
comp=Z,101nm,1.0s
VIVF Saint-Julien-l 9.79 23 P Pn 20 05 18.6 -0.4
VIVF S Sn 20 07 01.1 -7.8
comp=Z,101nm,1.0s
VIVF Saint-Julien-l 9.79 23 ePn Pn 20 05 18.6 -0.4
MVIF Mont Vial 9.94 34 eP Pn 20 05 24.1 +3.0
PGF Pioggiola 9.96 45 ePn Pn 20 05 20.6 -0.8
PGF eSn Sn 20 07 05.8 -7.3
comp=Z,391nm,0.9s
PGF Pioggiola 9.96 45 P Pn 20 05 20.6 -0.8
PGF S Sn 20 07 05.8 -7.3
comp=Z,196nm,0.9s
PGF Pioggiola 9.96 45 P Pn 20 05 20.6 -0.8
PGF S Sn 20 07 05.8 -7.3
comp=Z,196nm,0.9s
PGF Pioggiola 9.96 45 ePn Pn 20 05 20.6 -0.8
LUCF Luceram 10.03 35 eP Pn 20 05 23.1 +0.8
LUCF Luceram 10.03 35 eP Pn 20 05 23.1 +0.8
SBF Sospel 10.05 35 ePn Pn 20 05 22.8 +0.2
SBF eSn Sn 20 07 07.7 -7.6
comp=Z,267nm,0.9s
SBF Sospel 10.05 35 P Pn 20 05 22.8 +0.2
SBF S Sn 20 07 07.7 -7.6
comp=Z,133nm,0.9s
SBF Sospel 10.05 35 P Pn 20 05 22.8 +0.2
SBF S Sn 20 07 07.7 -7.6
comp=Z,133nm,0.9s
SBF Sospel 10.05 35 ePn Pn 20 05 22.8 +0.2
TOUF Mont Tournerai 10.07 34 eP Pn 20 05 24.3 +1.3
TOUF Mont Tournerai 10.07 34 eP Pn 20 05 24.3 +1.3
SSB Saint Sauveur 10.13 21 eP Pn 20 05 24.2 +0.5
SSB Saint Sauveur 10.13 21 ePn Pn 20 05 23.8 +0.1
SSB Saint Sauveur 10.13 21 eP Pn 20 05 23.8 +0.1
AUTN L'Aution 10.14 35 eP Pn 20 05 24.8 +0.9
AUTN L'Aution 10.14 35 eP Pn 20 05 24.8 +0.9
PYM Petit Puy Mans 10.19 14 eP Pn 20 05 25.4 +0.9
PYM Petit Puy Mans 10.19 14 eP Pn 20 05 25.4 +0.9
SAOF Saorge 10.20 35 eP Pn 20 05 20.8 -3.8
ORIF Oris-en-Rattie 10.25 27 ePn Pn 20 05 26.6 +1.2
ORIF eSn Sn 20 07 13.0 -7.3
comp=Z,484nm,0.9s
ORIF eMLR MLR
comp=Z,11µm,15.0s
ORIF Oris-en-Rattie 10.25 27 P Pn 20 05 26.6 +1.2
ORIF S Sn 20 07 13.0 -7.3
comp=Z,242nm,0.9s
ORIF Oris-en-Rattie 10.25 27 P Pn 20 05 26.6 +1.2
ORIF S Sn 20 07 13.0 -7.3
comp=Z,242nm,0.9s
ORIF Oris-en-Rattie 10.25 27 ePn Pn 20 05 26.6 +1.2
SURF Saint Ours 10.25 31 eP Pn 20 05 28.4 +3.0
STV Sant Anna di V 10.29 34 P Pn 20 05 28.1 +2.2
STV Sant Anna di V 10.29 34 P Pn 20 05 28.1 +2.2
MBDF Montbardon 10.44 30 ePn Pn 20 05 28.9 +1.0
MBDF eSn Sn 20 07 16.8 -8.0
comp=Z,177nm,1.0s
MBDF Montbardon 10.44 30 P Pn 20 05 28.9 +1.0
MBDF S Sn 20 07 16.8 -8.0
comp=Z,88nm,1.0s
MBDF Montbardon 10.44 30 P Pn 20 05 28.9 +1.0
MBDF S Sn 20 07 16.8 -8.0
comp=Z,88nm,1.0s
MBDF Montbardon 10.44 30 ePn Pn 20 05 28.9 +1.0
DOI San Damiano 10.46 33 P Pn 20 05 30.5 +2.3
AGO Saint Agoulin 10.50 14 eP Pn 20 05 28.7 -0.1
AGO Saint Agoulin 10.50 14 eP Pn 20 05 28.7 -0.1
PLDF La Plantade 10.53 16 eP Pn 20 05 29.8 +0.6
PLDF La Plantade 10.53 16 eP Pn 20 05 29.8 +0.6
TCF Toulx Ste Croi 10.57 11 ePn Pn 20 05 28.2 -1.5
TCF eSn Sn 20 07 19.7 -8.4
comp=Z,223nm,0.7s
TCF Toulx Ste Croi 10.57 11 P Pn 20 05 28.2 -1.5
TCF S Sn 20 07 19.7 -8.4
comp=Z,112nm,0.7s
TCF Toulx Ste Croi 10.57 11 P Pn 20 05 28.2 -1.5
TCF S Sn 20 07 19.7 -8.4
comp=Z,112nm,0.7s
TCF Toulx Ste Croi 10.57 11 Pn Pn 20 05 28.2 -1.5
SNR=1.0
BNI Bardonecchia 10.67 29 eP Pn 20 05 31.8 +0.7
BNI pmax pmax
comp=Z,67nm,1.1s
BNI Bardonecchia 10.67 29 ePn Pn 20 05 31.8 +0.7
comp=Z,67nm,1.1s
BNI Bardonecchia 10.67 29 eP Pn 20 05 31.8 +0.7
comp=Z,67nm,1.1s
MFF Saint Martin d 10.67 2 ePn Pn 20 05 30.9 -0.3
MFF eSn Sn 20 07 22.6 -8.1
comp=Z,203nm,0.8s
MFF Saint Martin d 10.67 2 P Pn 20 05 30.9 -0.3
MFF S Sn 20 07 22.6 -8.1
comp=Z,102nm,0.8s
MFF Saint Martin d 10.67 2 P Pn 20 05 30.9 -0.3
MFF S Sn 20 07 22.6 -8.1
comp=Z,102nm,0.8s
MFF Saint Martin d 10.67 2 ePn Pn 20 05 30.9 -0.3

ERC	**Erice**	**10.76**	**75**	P	**Pn**	**20 05 33.3 +0.9**
ERC	**Erice**	**10.76**	**75**	P	**Pn**	**20 05 33.3 +0.9**
QLNO	**Quiliano**	**10.83**	**36**	P	**Pn**	**20 05 34.4 +1.1**
QLNO	**Quiliano**	**10.83**	**36**	P	**Pn**	**20 05 34.4 +1.1**
BGF	**Bois d'Agland**	**10.94**	**13**	*e*Pn	**Pn**	**20 05 33.6 -1.1**
BGF				*e*Sn	**Sn**	**20 07 28.7 -8.4**
	comp=Z,302nm,0.6s					
BGF	**Bois d'Agland**	**10.94**	**13**	P	**Pn**	**20 05 33.6 -1.1**
BGF				S	**Sn**	**20 07 28.7 -8.4**
	comp=Z,151nm,0.6s					
BGF	**Bois d'Agland**	**10.94**	**13**	P	**Pn**	**20 05 33.6 -1.1**
BGF				S	**Sn**	**20 07 28.7 -8.4**
	comp=Z,151nm,0.6s					
BGF	**Bois d'Agland**	**10.94**	**13**	*e*Pn	**Pn**	**20 05 33.6 -1.1**
RSP	**Reno Superiore**	**10.98**	**31**	P	**Pn**	**20 05 37.9 +2.5**
LPG	**La Plagne**	**11.07**	**28**	*e*Pn	**Pn**	**20 05 38.0 +1.4**
LPG				*e*Sn	**Sn**	**20 07 32.7 -7.6**
	comp=Z,70nm,0.5s					
LPG	**La Plagne**	**11.07**	**28**	P	**Pn**	**20 05 38.0 +1.4**
LPG				S	**Sn**	**20 07 32.7 -7.6**
	comp=Z,35nm,0.5s					
LPG	**La Plagne**	**11.07**	**28**	P	**Pn**	**20 05 38.0 +1.4**
LPG				S	**Sn**	**20 07 32.7 -7.6**
	comp=Z,35nm,0.5s					
LPG	**La Plagne**	**11.07**	**28**	*e*Pn	**Pn**	**20 05 38.0 +1.4**
LPL	**La Plagne**	**11.08**	**28**	*e*Pn	**Pn**	**20 05 38.5 +1.8**
LPL				*e*Sn	**Sn**	**20 07 33.0 -7.5**
	comp=Z,202nm,0.9s					
LPL	**La Plagne**	**11.08**	**28**	P	**Pn**	**20 05 38.5 +1.8**
LPL				S	**Sn**	**20 07 33.0 -7.5**
	comp=Z,101nm,0.9s					
LPL	**La Plagne**	**11.08**	**28**	P	**Pn**	**20 05 38.5 +1.8**
LPL				S	**Sn**	**20 07 33.0 -7.5**
	comp=Z,101nm,0.9s					
LPL	**La Plagne**	**11.08**	**28**	*e*Pn	**Pn**	**20 05 38.5 +1.8**
MAON	**Monte Argentar**	**11.18**	**51**	P	**Pn**	**20 05 40.2 +2.1**
MAON	**Monte Argentar**	**11.18**	**51**	P	**Pn**	**20 05 40.2 +2.1**
SMF	**Signal de Mont**	**11.22**	**16**	*e*Pn	**Pn**	**20 05 39.0 +0.4**
SMF				*e*Sn	**Sn**	**20 07 35.8 -8.2**
	comp=Z,172nm,0.9s					
SMF	**Signal de Mont**	**11.22**	**16**	P	**Pn**	**20 05 39.0 +0.4**
SMF				S	**Sn**	**20 07 35.8 -8.2**
	comp=Z,86nm,0.9s					
SMF	**Signal de Mont**	**11.22**	**16**	P	**Pn**	**20 05 39.0 +0.4**
SMF				S	**Sn**	**20 07 35.8 -8.2**
	comp=Z,86nm,0.9s					
SMF	**Signal de Mont**	**11.22**	**16**	*e*Pn	**Pn**	**20 05 39.0 +0.4**
AVF	**Avril sur Loir**	**11.26**	**14**	*e*Pn	**Pn**	**20 05 37.8 -1.3**
AVF				*e*Sn	**Sn**	**20 07 36.9 -8.0**
	comp=Z,129nm,0.9s					
AVF	**Avril sur Loir**	**11.26**	**14**	P	**Pn**	**20 05 37.8 -1.3**
AVF				S	**Sn**	**20 07 36.9 -8.0**
	comp=Z,64nm,0.9s					
AVF	**Avril sur Loir**	**11.26**	**14**	P	**Pn**	**20 05 37.8 -1.3**
AVF				S	**Sn**	**20 07 36.9 -8.0**
	comp=Z,64nm,0.9s					
AVF	**Avril sur Loir**	**11.26**	**14**	*e*Pn	**Pn**	**20 05 37.8 -1.3**
SSF	**Saint Saulge**	**11.54**	**14**	*e*Pn	**Pn**	**20 05 42.4 -0.7**
SSF				*e*Sn	**Sn**	**20 07 44.0 -8.0**
	comp=Z,148nm,1.0s					
SSF	**Saint Saulge**	**11.54**	**14**	P	**Pn**	**20 05 42.4 -0.7**
SSF				S	**Sn**	**20 07 44.0 -8.0**
	comp=Z,74nm,1.0s					
SSF	**Saint Saulge**	**11.54**	**14**	P	**Pn**	**20 05 42.4 -0.7**
SSF				S	**Sn**	**20 07 44.0 -8.0**
	comp=Z,74nm,1.0s					
SSF	**Saint Saulge**	**11.54**	**14**	*e*Pn	**Pn**	**20 05 42.4 -0.7**
FAVR	**Favara**	**11.55**	**79**	P	**Pn**	**20 05 46.2 +3.0**
TOLF	**Tolfa**	**11.56**	**54**	P	**Pn**	**20 05 45.2 +1.9**
TOLF	**Tolfa**	**11.56**	**54**	P	**Pn**	**20 05 45.2 +1.9**
PII	**Pisa**	**11.56**	**44**	P	**Pn**	**20 05 45.0 +1.7**
PII	**Pisa**	**11.56**	**44**	P	**Pn**	**20 05 45.0 +1.7**
HYF	**Humbligny**	**11.59**	**11**	*e*Pn	**Pn**	**20 05 42.9 -0.8**
HYF				*e*Sn	**Sn**	**20 07 44.3 -8.8**
HYF	**Humbligny**	**11.59**	**11**	P	**Pn**	**20 05 42.9 -0.8**
HYF				S	**Sn**	**20 07 44.3 -8.8**
HYF	**Humbligny**	**11.59**	**11**	P	**Pn**	**20 05 42.9 -0.8**
HYF				S	**Sn**	**20 07 44.3 -8.8**
HYF	**Humbligny**	**11.59**	**11**	*e*Pn	**Pn**	**20 05 42.9 -0.8**
ORO	**Oropa**	**11.67**	**31**	P	**Pn**	**20 05 46.9 +2.1**
ORO	**Oropa**	**11.67**	**31**	P	**Pn**	**20 05 46.9 +2.1**
BOB	**Bobbio (Coli)**	**11.69**	**38**	P	**Pn**	**20 05 47.9 +2.8**
LATE	**Laterza**	**11.70**	**51**	P	**Pn**	**20 05 46.7 +1.4**
LATE	**Laterza**	**11.70**	**51**	P	**Pn**	**20 05 46.7 +1.4**
VLC	**Villacollemand**	**11.77**	**42**	*e*Pn	**Pn**	**20 05 46.6 +0.5**
VLC	**Villacollemand**	**11.77**	**42**	*e*Pn	**Pn**	**20 05 46.6 +0.5**
CABF	**La Chapelle**	**11.80**	**23**	*e*Pn	**Pn**	**20 05 46.3 -0.2**
CABF				*e*Sn	**Sn**	**20 07 48.4 -10**
	comp=Z,187nm,1.0s					
CABF	**La Chapelle**	**11.80**	**23**	P	**Pn**	**20 05 46.3 -0.2**
CABF				S	**Sn**	**20 07 48.4 -10**
	comp=Z,94nm,1.0s					
CABF	**La Chapelle**	**11.80**	**23**	P	**Pn**	**20 05 46.3 -0.2**
CABF				S	**Sn**	**20 07 48.4 -10**
	comp=Z,94nm,1.0s					
CABF	**La Chapelle**	**11.80**	**23**	*e*Pn	**Pn**	**20 05 46.3 -0.2**
LOR	**Lormes**	**11.81**	**15**	*e*Pn	**Pn**	**20 05 46.0 -0.7**
	baz=200					
LOR				*e*Sn	**Sn**	**20 07 50.3 -8.3**
	comp=Z,178nm,1.2s					
LOR				*e*MLR	MLR	
	comp=Z,8µm,14.2s					
LOR	**Lormes**	**11.81**	**15**	P	**Pn**	**20 05 46.0 -0.7**
LOR				S	**Sn**	**20 07 50.3 -8.3**
	comp=Z,89nm,1.2s					
LOR	**Lormes**	**11.81**	**15**	P	**Pn**	**20 05 46.0 -0.7**
LOR				S	**Sn**	**20 07 50.3 -8.3**
	comp=Z,89nm,1.2s					
LOR	**Lormes**	**11.81**	**15**	*e*Pn	**Pn**	**20 05 46.0 -0.7**
	baz=200					
BDI	**Bagni Di Lucca**	**11.82**	**43**	P	**Pn**	**20 05 48.8 +2.0**
BDI	**Bagni Di Lucca**	**11.82**	**43**	P	**Pn**	**20 05 48.8 +2.0**
CSNT	**Castellina Chi**	**11.86**	**47**	P	**Pn**	**20 05 49.9 +2.5**
GIB	**Gibilmanna**	**11.89**	**76**	P	**Pn**	**20 05 49.0 +1.2**
GIB	**Gibilmanna**	**11.89**	**76**	P	**Pn**	**20 05 49.0 +1.2**
RDP	**Rocca di Papa**	**11.90**	**57**	P	**Pn**	**20 05 50.3 +2.3**
RDP	**Rocca di Papa**	**11.90**	**57**	P	**Pn**	**20 05 50.3 +2.3**
GSCL	**Gusciola**	**12.00**	**42**	P	**Pn**	**20 05 51.7 +2.4**
MTCE	**Montecelio**	**12.04**	**56**	P	**Pn**	**20 05 50.8 +1.0**
MTCE	**Montecelio**	**12.04**	**56**	P	**Pn**	**20 05 50.8 +1.0**
MGAB	**Montegabbione**	**12.05**	**51**	P	**Pn**	**20 05 51.7 +1.7**
MGAB	**Montegabbione**	**12.05**	**51**	P	**Pn**	**20 05 51.7 +1.7**
RAFF	**Raffo Rosso**	**12.11**	**79**	P	**Pn**	**20 05 52.0 +1.2**
RAFF	**Raffo Rosso**	**12.11**	**79**	P	**Pn**	**20 05 52.0 +1.2**
QUIF	**Quistinic**	**12.13**	**352**	*e*Pn	**Pn**	**20 05 50.9 -0.2**
QUIF				*e*Sn	**Sn**	**20 07 57.2 -9.2**
	comp=Z,63nm,0.5s					
QUIF	**Quistinic**	**12.13**	**352**	P	**Pn**	**20 05 50.9 -0.2**
QUIF				S	**Sn**	**20 07 57.2 -9.2**
	comp=Z,31nm,0.5s					
QUIF	**Quistinic**	**12.13**	**352**	P	**Pn**	**20 05 50.9 -0.2**
QUIF				S	**Sn**	**20 07 57.2 -9.2**
	comp=Z,31nm,0.5s					
QUIF	**Quistinic**	**12.13**	**352**	*e*Pn	**Pn**	**20 05 50.9 -0.2**
VAE	**Valguarnera**	**12.16**	**78**	Pn	**Pn**	**20 05 52.6 +1.2**
	comp=Z,0.7nm,0.3s,baz=267,slow=5.7,SNR=5.1					
VAE				LR	LR	20 11 02.4
	comp=Z,4µm,19.0s,baz=146,slow=40					
VAE	**Valguarnera**	**12.16**	**78**	Pn	**Pn**	**20 05 52.6 +1.2**
VAE				LR	LR	20 11 02.4
VAE	**Valguarnera**	**12.16**	**78**	Pn	**Pn**	**20 05 52.6 +1.1**
FNVD	**Fontana Vidola**	**12.18**	**44**	P	**Pn**	**20 05 54.6 +2.9**
ZCCA	**Zocca**	**12.21**	**43**	P	**Pn**	**20 05 57.0 +4.8**
WDD	**Wield Dalam**	**12.27**	**86**	P	**Pn**	**20 05 49.8 -3.3**
VMG	**Vicchio**	**12.29**	**46**	P	**Pn**	**20 05 56.3 +3.0**
GUAR	**Guarcino**	**12.32**	**57**	P	**Pn**	**20 05 54.7 +0.9**
GUAR	**Guarcino**	**12.32**	**57**	P	**Pn**	**20 05 54.7 +0.9**
CRE	**Caprese Michel**	**12.34**	**48**	P	**Pn**	**20 05 56.9 +3.0**
HVZN	**Vizzini**	**12.39**	**80**	P	**Pn**	**20 05 55.8 +1.2**
HVZN	**Vizzini**	**12.39**	**80**	P	**Pn**	**20 05 55.8 +1.2**
FIAM	**Fiamignano**	**12.39**	**55**	P	**Pn**	**20 05 55.9 +1.2**
FIAM	**Fiamignano**	**12.39**	**55**	P	**Pn**	**20 05 55.9 +1.2**
SGMF	**Saint Gilles**	**12.41**	**354**	*e*Pn	**Pn**	**20 05 54.2 -0.6**
SGMF				*e*Sn	**Sn**	**20 08 03.7 -9.3**
	comp=Z,93nm,0.8s					
SGMF	**Saint Gilles**	**12.41**	**354**	P	**Pn**	**20 05 54.2 -0.6**
SGMF				S	**Sn**	**20 08 03.7 -9.3**
	comp=Z,47nm,0.8s					
SGMF	**Saint Gilles**	**12.41**	**354**	P	**Pn**	**20 05 54.2 -0.6**
SGMF				S	**Sn**	**20 08 03.7 -9.3**
	comp=Z,47nm,0.8s					
SGMF	**Saint Gilles**	**12.41**	**354**	*e*Pn	**Pn**	**20 05 54.2 -0.6**
CDCA	**Citt' di Caste**	**12.42**	**49**	P	**Pn**	**20 05 58.2 +3.2**
SFI	**Santa Sofia**	**12.44**	**46**	P	**Pn**	**20 05 57.5 +2.2**
HMDC	**Modica**	**12.44**	**81**	P	**Pn**	**20 05 55.9 +0.6**
HMDC	**Modica**	**12.44**	**81**	P	**Pn**	**20 05 55.9 +0.6**
BADI	**Badiali**	**12.45**	**49**	P	**Pn**	**20 05 57.7 +2.2**
BADI	**Badiali**	**12.45**	**49**	P	**Pn**	**20 05 57.7 +2.2**
GRR	**Gorron**	**12.46**	**359**	*e*Pn	**Pn**	**20 05 54.5 -1.0**
GRR				*e*Sn	**Sn**	**20 08 04.7 -10**
	comp=Z,515nm,1.5s					
GRR	**Gorron**	**12.46**	**359**	P	**Pn**	**20 05 54.5 -1.0**
GRR				S	**Sn**	**20 08 04.7 -10**
	comp=Z,257nm,1.5s					
GRR	**Gorron**	**12.46**	**359**	P	**Pn**	**20 05 54.5 -1.0**
GRR				S	**Sn**	**20 08 04.7 -10**
	comp=Z,257nm,1.5s					
GRR	**Gorron**	**12.46**	**359**	*e*Pn	**Pn**	**20 05 54.5 -1.0**
ASS	**Assisi**	**12.47**	**51**	P	**Pn**	**20 05 57.6 +1.9**
ASS	**Assisi**	**12.47**	**51**	P	**Pn**	**20 05 57.6 +1.9**
PTQR	**Pietraquaria**	**12.48**	**57**	P	**Pn**	**20 05 57.2 +1.3**
PTQR	**Pietraquaria**	**12.48**	**57**	P	**Pn**	**20 05 57.2 +1.3**
MURB	**Monte Urbino**	**12.49**	**50**	P	**Pn**	**20 05 58.4 +2.4**
MURB	**Monte Urbino**	**12.49**	**50**	P	**Pn**	**20 05 58.4 +2.4**
ROSF	**Rostrenen**	**12.56**	**352**	*e*Pn	**Pn**	**20 05 56.7 -0.2**
ROSF				*e*Sn	**Sn**	**20 08 07.3 -10**
	comp=Z,87nm,0.7s					
ROSF	**Rostrenen**	**12.56**	**352**	P	**Pn**	**20 05 56.7 -0.2**
ROSF				S	**Sn**	**20 08 07.3 -10**
	comp=Z,43nm,0.7s					
ROSF	**Rostrenen**	**12.56**	**352**	P	**Pn**	**20 05 56.7 -0.2**
ROSF				S	**Sn**	**20 08 07.3 -10**
	comp=Z,43nm,0.7s					
ROSF	**Rostrenen**	**12.56**	**352**	*e*Pn	**Pn**	**20 05 56.7 -0.2**
VVLD	**Villa Vallelon**	**12.57**	**58**	P	**Pn**	**20 05 58.0 +0.9**
VVLD	**Villa Vallelon**	**12.57**	**58**	P	**Pn**	**20 05 58.0 +0.9**
AQU	**L'Aquila**	**12.62**	**55**	*e*P	**Pn**	**20 05 58.4 +0.6**
AQU	**L'Aquila**	**12.62**	**55**	*e*P	**Pn**	**20 05 58.4 +0.6**
BST	**Brest**	**12.63**	**349**	*e*P	**Pn**	**20 05 59.2 +1.3**
BST	**Brest**	**12.63**	**349**	*e*P	**Pn**	**20 05 59.2 +1.3**
SDI	**San Donato**	**12.63**	**58**	P	**Pn**	**20 05 57.2 -0.8**
SDI	**San Donato**	**12.63**	**58**	P	**Pn**	**20 05 57.2 -0.8**
PIEI	**Pieia**	**12.64**	**49**	P	**Pn**	**20 06 00.5 +2.4**
NRCA	**Norcia**	**12.65**	**53**	P	**Pn**	**20 05 59.4 +1.2**
NRCA	**Norcia**	**12.65**	**53**	P	**Pn**	**20 05 59.4 +1.2**
LDF	**La Druitiere**	**12.67**	**1**	*e*Pn	**Pn**	**20 05 57.3 -1.1**
LDF				*e*Sn	**Sn**	**20 08 09.6 -10**
	comp=Z,95nm,0.7s					
LDF	**La Druitiere**	**12.67**	**1**	*e*Pn	**Pn**	**20 05 57.3 -1.1**
SSY	**Sortino**	**12.67**	**80**	P	**Pn**	**20 06 00.0 +1.5**
SSY	**Sortino**	**12.67**	**80**	P	**Pn**	**20 06 00.0 +1.5**
LOMF	**Lomont**	**12.69**	**24**	*e*P	**Pn**	**20 06 02.2 +3.5**
HAVL	**Avola**	**12.71**	**81**	P	**Pn**	**20 06 00.2 +1.1**
HAVL	**Avola**	**12.71**	**81**	P	**Pn**	**20 06 00.2 +1.1**
SNTG	**Esanatoglia**	**12.75**	**51**	P	**Pn**	**20 06 01.2 +1.7**
SNTG	**Esanatoglia**	**12.75**	**51**	P	**Pn**	**20 06 01.2 +1.7**
AGST	**Augusta-Monte**	**12.80**	**79**	P	**Pn**	**20 06 01.4 +1.2**
AGST	**Augusta-Monte**	**12.80**	**79**	P	**Pn**	**20 06 01.4 +1.2**
INTR	**Introdacqua**	**12.82**	**57**	P	**Pn**	**20 06 01.3 +0.8**
INTR	**Introdacqua**	**12.82**	**57**	P	**Pn**	**20 06 01.3 +0.8**
FLN	**La Foliniere**	**12.83**	**0**	*e*Pn	**Pn**	**20 06 00.2 -0.4**
	baz=175					
FLN				*e*Sn	**Sn**	**20 08 13.8 -10**
	comp=Z,200nm,1.2s					
FLN				*e*MLR	MLR	
	comp=Z,11µm,19.5s					
FLN	**La Foliniere**	**12.83**	**0**	P	**Pn**	**20 06 00.2 -0.4**
FLN				S	**Sn**	**20 08 13.8 -10**
	comp=Z,100nm,1.2s					
FLN	**La Foliniere**	**12.83**	**0**	P	**Pn**	**20 06 00.2 -0.4**
FLN				S	**Sn**	**20 08 13.8 -10**
	comp=Z,100nm,1.2s					
FLN	**La Foliniere**	**12.83**	**0**	*e*Pn	**Pn**	**20 06 00.2 -0.4**
	baz=175					
EFAM	**Famara**	**12.83**	**242**	P	**Pn**	**20 05 57.5 -3.2**
	comp=Z,9.7nm,0.4s					
EFAM				S	**Sn**	**20 08 10.8 -13**
EFAM	**Famara**	**12.83**	**242**	P	**Pn**	**20 05 57.5 -3.2**
	comp=Z,9.7nm,0.4s,SNR=7.9					
EFAM				S	**Sn**	**20 08 10.7 -13**
	comp=Z,12nm,0.4s,SNR=7.9					
EFAM	**Famara**	**12.83**	**242**	P	**Pn**	**20 05 57.5 -3.2**
	comp=Z,9.7nm,0.4s,SNR=7.9					
EFAM				S	**Sn**	**20 08 10.7 -13**
	comp=Z,12nm,0.4s,SNR=7.9					
RNI2	**Rionero Sannit**	**12.87**	**59**	P	**Pn**	**20 06 03.0 +1.8**
RNI2	**Rionero Sannit**	**12.87**	**59**	P	**Pn**	**20 06 03.0 +1.8**
TERO	**Teramo**	**12.87**	**54**	P	**Pn**	**20 06 02.0 +0.7**
TERO	**Teramo**	**12.87**	**54**	P	**Pn**	**20 06 02.0 +0.7**
FSSB	**Fossombrone**	**12.88**	**49**	P	**Pn**	**20 06 03.8 +2.5**
SGG	**Gregorio Mates**	**12.91**	**61**	P	**Pn**	**20 06 03.6 +1.8**
SGG	**Gregorio Mates**	**12.91**	**61**	P	**Pn**	**20 06 03.6 +1.8**
MIDA	**Miranda**	**12.92**	**59**	P	**Pn**	**20 06 03.2 +1.3**
MIDA	**Miranda**	**12.92**	**59**	P	**Pn**	**20 06 03.2 +1.3**
SFTF	**Sexfontaines**	**12.96**	**17**	*e*Pn	**Pn**	**20 06 02.3 -0.1**
	baz=183					
SFTF				*e*Sn	**Sn**	**20 08 16.3 -10**
	comp=Z,327nm,1.3s					
SFTF	**Sexfontaines**	**12.96**	**17**	*e*Pn	**Pn**	**20 06 02.3 -0.1**
	baz=183					
CING	**Cingoli**	**12.97**	**51**	P	**Pn**	**20 06 04.9 +2.3**
CING	**Cingoli**	**12.97**	**51**	P	**Pn**	**20 06 04.9 +2.3**
MAGA	**Magasa**	**12.99**	**37**	P	**Pn**	**20 06 04.1 +1.2**
MAGA	**Magasa**	**12.99**	**37**	P	**Pn**	**20 06 04.1 +1.2**
PESA	**Pesaro**	**13.05**	**48**	P	**Pn**	**20 06 06.2 +2.6**
OFFI	**Offida**	**13.07**	**53**	P	**Pn**	**20 06 06.1 +2.2**
OFFI	**Offida**	**13.07**	**53**	P	**Pn**	**20 06 06.1 +2.2**
HINF	**Hinteralfeld**	**13.11**	**23**	*e*Pn	**Pn**	**20 06 02.9 -1.5**
HINF				*e*Sn	**Sn**	**20 08 20.3 -10**
	comp=Z,728nm,2.5s					
HINF	**Hinteralfeld**	**13.11**	**23**	Pn	**Pn**	**20 06 02.9 -1.5**
	SNR=1.0					
HAU	**Haudompre**	**13.13**	**21**	*e*Pn	**Pn**	**20 06 03.5 -1.2**
HAU				*e*Sn	**Sn**	**20 08 21.0 -10**
	comp=Z,638nm,2.3s					
HAU				*e*MLR	MLR	
	comp=Z,4µm,12.5s					
HAU	**Haudompre**	**13.13**	**21**	*e*Pn	**Pn**	**20 06 03.5 -1.2**
MABI	**Malga Bissina**	**13.14**	**36**	P	**Pn**	**20 06 06.4 +1.6**
MABI	**Malga Bissina**	**13.14**	**36**	P	**Pn**	**20 06 06.4 +1.6**
PSB1	**Pescosannita**	**13.17**	**62**	P	**Pn**	**20 06 07.1 +1.8**
PSB1	**Pescosannita**	**13.17**	**62**	P	**Pn**	**20 06 07.1 +1.8**
MTTG	**Motta San Giov**	**13.20**	**76**	P	**Pn**	**20 06 07.3 +1.5**
MTTG	**Motta San Giov**	**13.20**	**76**	P	**Pn**	**20 06 07.3 +1.5**
THEF	**They Montfort**	**13.22**	**20**	*e*P	**Pn**	**20 06 08.6 +2.6**
MOF	**Molkenrain**	**13.23**	**23**	*e*P	**Pn**	**20 06 08.6 +2.5**
MEZF	**Maizieres J'vi**	**13.24**	**17**	*e*Pn	**Pn**	**20 06 04.3 -2.0**
	baz=192					
MEZF				*e*Sn	**Sn**	**20 08 25.1 -8.4**
	comp=Z,182nm,1.1s					
MEZF	**Maizieres J'vi**	**13.24**	**17**	Pn	**Pn**	**20 06 04.3 -2.0**
	SNR=1.0					
MRB1	**Monte Rocchett**	**13.25**	**62**	P	**Pn**	**20 06 08.3 +1.9**
MRB1	**Monte Rocchett**	**13.25**	**62**	P	**Pn**	**20 06 08.3 +1.9**
JSA	**Saint Aubin**	**13.31**	**356**	*e*P	**Pn**	**20 06 07.7 +0.5**
JSA				AMb	AMB	20 06 20.8
	comp=Z,94nm,1.0s					
JSA				AMS	AMS	20 11 48.0
	comp=Z,21µm,14.0s					
JSA	**Saint Aubin**	**13.31**	**356**	P	**Pn**	**20 06 07.7 +0.5**
JSA				AMb	AMB	20 06 20.8
	comp=Z,94nm,1.0s					
JSA				AMS	AMS	20 11 48.0
	comp=Z,21µm,14.0s					
JSA	**Saint Aubin**	**13.31**	**356**	*e*P	**Pn**	**20 06 07.7 +0.6**
AOI	**Ancona**	**13.31**	**51**	P	**Pn**	**20 06 08.3 +1.1**
AOI	**Ancona**	**13.31**	**51**	P	**Pn**	**20 06 08.3 +1.1**
CIGN	**Sant'Elia a Pi**	**13.38**	**60**	P	**Pn**	**20 06 10.3 +2.2**
CIGN	**Sant'Elia a Pi**	**13.38**	**60**	P	**Pn**	**20 06 10.3 +2.2**
CEL	**Celeste**	**13.38**	**75⇑**	*e*Pn	**Pn**	**20 06 06.8 -1.3**
CEL	**Celeste**	**13.38**	**75⇑**	*e*Pn	**Pn**	**20 06 06.8 -1.4**
BRMO	**Bormio**	**13.38**	**35**	P	**Pn**	**20 06 11.0 +2.8**
DAVOX	**Davos/Dischmat**	**13.39**	**33**	Pn	**Pn**	**20 06 09.9 +1.6**
	comp=Z,1.9nm,0.3s,baz=217,slow=11,SNR=35					
DAVOX	**Davos/Dischmat**	**13.39**	**33**	P	**Pn**	**20 06 09.9 +1.6**
RFYF	**Reffroy**	**13.46**	**18**	*e*P	**Pn**	**20 06 11.3 +2.0**
	baz=201					
RFYF				*e*Sn	**Sn**	**20 08 29.9 -9.0**
	comp=Z,151nm,1.0s					
SOI	**Samo**	**13.49**	**76**	P	**Pn**	**20 06 10.8 +1.1**
SOI	**Samo**	**13.49**	**76**	P	**Pn**	**20 06 10.8 +1.1**
FG5	**Orsara di Pugl**	**13.51**	**62**	P	**Pn**	**20 06 12.1 +2.1**
FG5	**Orsara di Pugl**	**13.51**	**62**	P	**Pn**	**20 06 12.1 +2.1**
FELD	**Feldberg im Sc**	**13.54**	**25**	*e*P	**Pn**	**20 06 11.9 +1.5**
ECH	**Echery**	**13.56**	**23**	*e*P	**Pn**	**20 06 12.3 +1.7**
ECH	**Echery**	**13.56**	**23**	*e*Pn	**Pn**	**20 06 06.2 -4.4**
ECH	**Echery**	**13.56**	**23**	*e*P	**Pn**	**20 06 12.3 +1.7**
CDF	**Champ du Feu**	**13.77**	**23**	*e*Pn	**Pn**	**20 06 12.5 -0.9**
CDF				*e*Sn	**Sn**	**20 08 37.2 -9.1**
	comp=Z,564nm,2.4s					
CDF	**Champ du Feu**	**13.77**	**23**	*e*Pn	**Pn**	**20 06 12.5 -0.9**
DAVA	**Damuels**	**13.78**	**31⇑**	*i*Pn	**Pn**	**20 06 15.6 +2.0**
	comp=Z,121nm,1.0s,SNR=23					
DAVA	**Damuels**	**13.78**	**31**	P	**Pn**	**20 06 15.6 +2.0**
	comp=Z,121nm,1.0s,SNR=23					
APPI	**Appiano**	**13.79**	**36**	P	**Pn**	**20 06 15.3 +1.6**
APPI	**Appiano**	**13.79**	**36**	P	**Pn**	**20 06 15.3 +1.6**
PTRP	**Pietrapertosa**	**13.88**	**66**	P	**Pn**	**20 06 17.2 +2.2**
PTRP	**Pietrapertosa**	**13.88**	**66**	P	**Pn**	**20 06 17.2 +2.2**
FETA	**Feichten**	**13.95**	**34⇑**	*i*Pn	**Pn**	**20 06 18.8 +2.9**
	comp=Z,72nm,0.8s,SNR=20					
SGRT	**San Giovanni R**	**14.00**	**61**	P	**Pn**	**20 06 16.8 +0.1**
SGRT	**San Giovanni R**	**14.00**	**61**	P	**Pn**	**20 06 16.8 +0.1**
SPAK	**Spaichingen-Ko**	**14.01**	**27**	*e*P	**Pn**	**20 06 18.1 +1.3**
BFO	**Black Forest**	**14.04**	**25**	Pn	**Pn**	**20 06 17.7 +0.5**
	comp=Z,344nm,1.0s,SNR=22					
BFO	**Black Forest**	**14.04**	**25**	*e*P	**Pn**	**20 06 18.3 +1.1**
BFO	**Black Forest**	**14.04**	**25**	*i*P	**Pn**	**20 06 18.9 +1.7**
BFO	**Black Forest**	**14.04**	**25**	*e*Pn	**Pn**	**20 06 16.5 -0.7**
BFO	**Black Forest**	**14.04**	**25**	*e*Pn	**Pn**	**20 06 16.5 -0.7**
BFO	**Black Forest**	**14.04**	**25**	*i*P	**Pn**	**20 06 18.9 +1.7**
ORI	**Oriolo Calabro**	**14.07**	**68**	P	**Pn**	**20 06 19.1 +1.5**
ORI	**Oriolo Calabro**	**14.07**	**68**	P	**Pn**	**20 06 19.1 +1.5**
MSAG	**Monte S. Angel**	**14.11**	**61**	P	**Pn**	**20 06 18.3 +0.2**
MSAG	**Monte S. Angel**	**14.11**	**61**	P	**Pn**	**20 06 18.3 +0.2**
TAM	**Tamanrasset**	**14.13**	**156⇓**	*i*Pn	**Pn**	**20 06 14.3 -4.2**
TAM				pmax	pmax	
	comp=Z,60nm,0.9s					
TAM	**Tamanrasset**	**14.13**	**156⇓**	*i*Pn	**Pn**	**20 06 14.3 -4.2**
	comp=Z,60nm,0.9s					
TIP	**Timpagrande**	**14.15**	**72**	*e*Pn	**Pn**	**20 06 17.9 -0.9**
	comp=Z,220nm,1.6s					
TIP	**Timpagrande**	**14.15**	**72**	*e*Pn	**Pn**	**20 06 17.9 -0.8**
	comp=Z,220nm,1.6s					
MLNI	**Malnisio**	**14.26**	**40⇑**	*e*P	**Pn**	**20 06 23.0 +2.9**
MLNI	**Malnisio**	**14.26**	**40⇑**	*e*P	**Pn**	**20 06 23.0 +2.9**
RETA	**Reutte**	**14.32**	**33⇑**	*i*Pn	**Pn**	**20 06 22.1 +1.2**
	comp=Z,58nm,0.9s,SNR=25					
RETA	**Reutte**	**14.32**	**33**	Pn	**Pn**	**20 06 22.1 +1.2**
	comp=Z,58nm,0.9s,SNR=25					
MOTA	**Moosalm**	**14.36**	**34⇑**	*i*Pn	**Pn**	**20 06 23.0 +1.5**
	comp=Z,46nm,0.8s,SNR=25					
MOTA	**Moosalm**	**14.36**	**34**	Pn	**Pn**	**20 06 23.0 +1.5**
	comp=Z,46nm,0.8s,SNR=25					
LANF	**Langenberg**	**14.44**	**23**	*e*P	**Pn**	**20 06 24.2 +1.7**
LTRZ	**Laterza**	**14.46**	**66**	P	**Pn**	**20 06 22.6

comp=Z,24µm,14.8s
HTL Hartland 15.32 351 P Pn 20 06 34.2 -0.3
HTL AMb AMB 20 06 38.3
comp=Z,107nm,1.4s
HTL AMS AMS 20 13 14.8
comp=Z,24µm,14.8s
MOZS Mozjanca 15.34 43 eP Pn 20 06 34.5 -0.2
BOJS Bojanci 15.34 47 i P Pn 20 06 34.1 -0.7
BOJS eS Sx 20 10 33.3
VNDS Vrh nad Dolski 15.37 44 eP Pn 20 06 34.7 -0.3
WOL Wolverton 15.39 359 eP Pn 20 06 36.0 +0.6
WOL AMb AMB 20 06 44.8
comp=Z,282nm,2.4s
WOL AMS AMS 20 13 14.3
comp=Z,16µm,14.1s
WOL Wolverton 15.39 359 P Pn 20 06 36.0 +0.6
WOL AMb AMB 20 06 44.8
comp=Z,282nm,2.4s
WOL AMS AMS 20 13 14.3
comp=Z,16µm,14.1s
RJOB Jochberg 15.44 36 eP Pn 20 06 32.9 -3.1
comp=Z,112nm,1.2s
MEM Membach 15.44 16 P Pn 20 06 36.8 +0.9
PDKS Podkum 15.51 44 eP Pn 20 06 36.0 -0.9
OBKA Obir 15.52 42⇑ iPn Pn 20 06 37.2 +0.1
comp=Z,139nm,1.4s,SNR=11
OBKA Obir 15.52 42 Pn Pn 20 06 37.2 +0.1
comp=Z,139nm,1.4s,SNR=11
BEBN Eben Emael 15.54 15 P Pn 20 06 37.1 -0.2
HGN Heimansgroeve 15.57 16 eP Pn 20 06 38.2 +0.5
comp=Z,376nm,2.8s
HGN Heimansgroeve 15.57 16 eS Sn 20 09 33.1 +3.0
SWN1 Swindon 15.61 357 eP Pn 20 06 38.6 +0.5
SWN1 AMb AMB 20 06 42.5
comp=Z,206nm,1.4s
SWN1 AMS AMS 20 13 28.7
comp=Z,16µm,10.8s
SWN1 Swindon 15.61 357 P Pn 20 06 38.6 +0.5
SWN1 AMb AMB 20 06 42.5
comp=Z,206nm,1.4s
SWN1 AMS AMS 20 13 28.7
comp=Z,16µm,10.8s
LEGS Legarje 15.63 45 eP Pn 20 06 37.8 -0.7
TNS Taunus Mts 15.73 22 eP Pn 20 06 41.2 +1.4
comp=Z,343nm,1.4s
ZAVS Zavodnje 15.74 43 eP Pn 20 06 39.2 -0.7
HGH Gray Hill 15.79 355 eP Pn 20 06 41.4 +0.8
HGH Gray Hill 15.79 355 P Pn 20 06 41.4 +0.8
HGH Gray Hill 15.79 355 eP Pn 20 06 41.4 +0.9
SOKA Soboth 15.89 43⇑ iPn Pn 20 06 41.9 0.0
comp=Z,136nm,2.0s
SOKA Soboth 15.89 43 Pn Pn 20 06 41.9 0.0
comp=Z,136nm,2.0s
PERS Pernice 15.91 43 eP Pn 20 06 42.0 -0.2
SISC Sisak 15.99 48 P Pn 20 06 42.6 -0.7
SISC Sisak 15.99 48 i P Pn 20 06 42.6 -0.7
HCY Herceg Novi 16.17 60⇓ iP Pn 20 06 44.3 -1.2
HCY Herceg Novi 16.17 60⇓ iP Pn 20 06 44.4 -1.1
HCY P 20 06 48.0
HCY Herceg Novi 16.17 60 P Pn 20 06 48.0 +2.5
MOA Molln 16.23 38⇑ iPn Pn 20 06 46.1 -0.2
comp=Z,148nm,1.4s,SNR=34
MOA Molln 16.23 38 Pn Pn 20 06 46.1 -0.2
comp=Z,148nm,1.4s,SNR=34
GRF Grafenberg Arr 16.24 28 eP Pn 20 06 46.4 0.0
comp=Z,563nm,1.2s
GRF eS Sn 20 09 50.3 +3.9
GRF eL 20 12 36.7
comp=Z,5µm,18.4s
GRF Grafenberg Arr 16.24 28 eP Pn 20 06 46.4 0.0
comp=Z,563nm,1.2s
GRF eS Sn 20 09 50.3 +3.9
HTR Trewern Hill 16.26 354 eP Pn 20 06 47.6 +1.0
HTR Trewern Hill 16.26 354 P Pn 20 06 47.6 +1.0
HTR Trewern Hill 16.26 354 eP Pn 20 06 47.6 +1.0
BRY Bratogost 16.34 59 eP Pn 20 06 45.3 -2.4
BRY Bratogost 16.34 59 eP Pn 20 06 45.4 -2.3
BUM Brajici-Budva 16.41 61⇓ iP Pn 20 06 48.9 +0.3
BUM Brajici-Budva 16.41 61 P Pn 20 06 51.0 +2.4
BUM Brajici-Budva 16.41 61 P Pn 20 06 51.0 +2.4
KOGS Kog 16.44 45 P Pn 20 06 52.0 +3.0
KOGS Kog 16.44 45 P Pn 20 06 52.0 +3.0
WET Wettzell 16.50 33 eP Pn 20 06 47.6 -2.1
comp=Z,201nm,1.3s
WET eS Sn 20 09 52.9 +0.2
ARSA Arzberg 16.51 42⇑ iPn Pn 20 06 49.8 0.0
comp=Z,175nm,1.6s,SNR=22
ARSA Arzberg 16.51 42 P Pn 20 06 49.8 0.0
comp=Z,175nm,1.6s,SNR=1.0
BUG Bochum--Univer 16.51 18 eP Pn 20 06 52.0 +2.2
comp=Z,401nm,2.0s
BUG eS Sn 20 09 54.4 +1.5
KEK Kerkira 16.56 71 P Pn 20 06 47.6 -2.9
KEK Kerkira 16.56 71 eP Pn 20 06 48.1 -2.4
ULC Ulcinj 16.57 63⇓ iP Pn 20 06 51.2 +0.6
ULC Ulcinj 16.57 63⇓ iP Pn 20 06 51.2 +0.6
NKY Niksic 16.63 60⇓ iP Pn 20 06 51.5 +0.1
NKY Niksic 16.63 60⇓ iP Pn 20 06 51.5 +0.1
NKY Niksic 16.63 60⇓ iP Pn 20 06 51.5 +0.1
GEC2 GERESS Array S 16.65 35 eP Pn 20 06 49.7 -1.9
comp=Z,224nm,1.3s
GEC2 eS Sn 20 09 54.2 -2.2
GEC2 GERESS Array S 16.65 35⇑ ePn Pn 20 06 50.0 -1.6
comp=Z,83µm,1.6s
GEC2 GERESS Array S 16.65 35⇑ ePn Pn 20 06 50.0 -1.6
comp=Z,10µm,1.6s
GERES GERESS Array B 16.65 35 Pn Pn 20 06 49.6 -2.0
comp=Z,3.2nm,0.3s,baz=216,slow=8.9,SNR=110
GERES LR LR 20 13 18.0
comp=Z,2µm,18.9s,baz=231,slow=37
GERES GERESS Array B 16.65 35 Pn Pn 20 06 49.6 -2.0
HLM1 Long Mynd 16.67 355 eP Pn 20 06 52.2 +0.4
HLM1 Long Mynd 16.67 355 P Pn 20 06 52.2 +0.4
HLM1 Long Mynd 16.67 355 eP Pn 20 06 52.2 +0.4
ROTZ Rotzenmuhle 16.69 30 eP Pn 20 06 50.6 -1.5
comp=Z,102nm,1.1s
ROTZ eS Sn 20 09 59.3 +2.0
UPM Unac-Piva 16.69 58⇓ iP Pn 20 06 50.9 -1.3
UPM Unac-Piva 16.69 58⇓ iP Pn 20 06 50.9 -1.3
UPM P 20 06 55.0
UPM Unac-Piva 16.69 58 P Pn 20 06 55.0 +2.8
PDG Podgorica 16.70 61⇓ iP Pn 20 06 52.9 +0.6
TTG Podgorica 16.70 61⇓ iP Pn 20 06 52.8 +0.5
TTG Podgorica 16.70 61 P Pn 20 06 54.0 +1.7
TTG Podgorica 16.70 61 P Pn 20 06 54.0 +1.7
SRN Sarande 16.73 70 i PN Pn 20 06 50.3 -2.4
SRN Sarande 16.73 70 i Pn Pn 20 06 50.3 -2.4
UBBA Unterbreizbach 16.74 24 eP Pn 20 06 53.0 +0.3
UBBA eS Sn 20 10 02.2 +3.7
AEU East Anglia Un 16.74 4 eP Pn 20 06 52.8 +0.1
AEU East Anglia Un 16.74 4 P Pn 20 06 52.8 +0.1
AEU East Anglia Un 16.74 4 P Pn 20 06 52.8 0.0
SNR=1.0
KHC Kasperske Hory 16.80 34⇑ eP Pn 20 06 51.7 -1.8
KHC eS Sn 20 10 05.8 +5.8
KHC MLR MLR
comp=Z,9µm,12.6s
KHC Kasperske Hory 16.80 34⇑ ePn Pn 20 06 51.6 -1.9
comp=Z,347nm,1.7s
KHC Kasperske Hory 16.80 34⇑ eP Pn 20 06 51.7 -1.8
KHC epP pP 20 06 55.7 -2.8
KHC ex x 20 07 02.0
KHC ex x 20 07 16.0
KHC eS Sn 20 10 05.8 +5.8
KHC AMS AMS 20 14 10.0
comp=Z,9µm,12.6s
KHC Kasperske Hory 16.80 34 Pn Pn 20 06 51.6 -1.9
comp=Z,347nm,1.7s,SNR=1.0
CWF Charnwood Fore 16.82 359 eP Pn 20 06 53.8 +0.1
CWF AMb AMB 20 07 01.6
comp=Z,265nm,2.1s
CWF AMS AMS 20 14 08.8
comp=Z,13µm,13.8s
CWF Charnwood Fore 16.82 359 P Pn 20 06 53.8 +0.1
CWF AMb AMB 20 07 01.6
comp=Z,265nm,2.1s
CWF AMS AMS 20 14 08.8
comp=Z,13µm,13.8s
CWF Charnwood Fore 16.82 359 eP Pn 20 06 53.8 +0.1
TIR Tirane 16.87 65 eP Pn 20 06 53.0 -1.5
TIR pmax pmax
comp=Z,78nm,0.9s
TIR Tirane 16.87 65 ePn Pn 20 06 53.0 -1.5
comp=Z,78nm,0.9s
TIR Tirane 16.87 65 ePn Pn 20 06 53.0 -1.5
comp=Z,78nm,0.9s
WTSB Winterswijk 16.89 16 eP Pn 20 06 53.8 -0.7
comp=Z,291nm,1.1s
WTSB Winterswijk 16.89 16 P Pn 20 06 53.8 -0.7
comp=Z,291nm,1.1s,SNR=1.0
PUK Puka 17.05 63 i PN Pn 20 06 54.8 -1.9
PUK Puka 17.05 63 i Pn Pn 20 06 54.8 -1.9
PLE Pljevlja 17.07 58⇓ iP Pn 20 06 57.1 +0.2
PLE Pljevlja 17.07 58 P Pn 20 06 59.0 +2.1
PLE Pljevlja 17.07 58 P Pn 20 06 59.0 +2.1
CSNA Conrad Observa 17.10 40⇑ iPn Pn 20 06 56.6 -0.7
comp=Z,122nm,1.6s
CSNA Conrad Observa 17.10 40 P Pn 20 06 56.6 -0.7
comp=Z,122nm,1.6s,SNR=1.0
CONA Conrad Observa 17.10 40⇑ iPn Pn 20 06 56.7 -0.6
comp=Z,130nm,1.5s,SNR=14
CONA Conrad Observa 17.10 40 P Pn 20 06 56.7 -0.6
comp=Z,130nm,1.5s,SNR=1.0
NKC Novy Kostel 17.15 29 eP Pn 20 06 58.0 +0.1
NKC eS Sn 20 10 13.7 +5.2
NKC MLR MLR
comp=Z,5µm,10.7s
NKC Novy Kostel 17.15 29⇑ eP Pn 20 06 58.0 +0.1
NKC eS Sn 20 10 13.7 +5.2
NKC AMS AMS 20 14 40.0
comp=Z,5µm,10.7s
NKC Novy Kostel 17.15 29 eP Pn 20 06 58.0 +0.1
comp=Z,5µm,10.7s
MOX Moxa 17.16 27 eP Pn 20 06 58.8 +0.8
comp=Z,268nm,1.6s
MOX eS Sn 20 10 15.0 +6.3
MOX
comp=Z,5µm,16.0s
MOX Moxa 17.16 27 eP Pn 20 06 57.9 -0.1
comp=Z,261nm,1.5s
MOX eS Sn 20 10 12.8 +4.1
MOX Moxa 17.16 27 eP Pn 20 06 58.8 +0.8
MOX eS Sn 20 10 15.0 +6.3
MOX pmax pmax
comp=Z,268nm,1.6s
MOX Moxa 17.16 27 eP Pn 20 06 58.8 +0.8
comp=Z,268nm,1.6s
MOX eS Sn 20 10 15.0 +6.3
MOX Moxa 17.16 27 eP Pn 20 06 58.8 +0.8
comp=Z,268nm,1.6s
STNC Stoke 17.20 357 eP Pn 20 06 59.1 +0.6
STNC AMb AMB 20 07 06.6
comp=Z,476nm,1.7s
STNC Stoke 17.20 357 P Pn 20 06 59.1 +0.6
STNC AMb AMB 20 07 06.6
comp=Z,476nm,1.7s
STNC Stoke 17.20 357 eP Pn 20 06 59.1 +0.6
PVY Plav 17.25 61⇓ iP Pn 20 06 58.4 -0.8
PVY Plav 17.25 61⇓ iP Pn 20 06 58.5 -0.8
PVY Plav 17.25 61⇓ iP Pn 20 06 58.5 -0.7
BCI Bajram Curri 17.26 62 i PN Pn 20 07 01.2 +1.9
BCI Bajram Curri 17.26 62 i Pn Pn 20 07 01.2 +1.9
BEY Berane 17.28 60⇓ iP Pn 20 06 59.8 +0.3
IVA Berane 17.28 60⇓ iP Pn 20 06 59.8 +0.3
IVA Berane 17.28 60⇓ iP Pn 20 06 59.8 +0.3
TANN Tannenbergstha 17.30 29 eP Pn 20 06 58.5 -1.2
comp=Z,71nm,1.4s
TANN eS Sn 20 10 14.7 +2.6
SOP Sopron 17.33 42⇓ eP Pn 20 06 59.8 -0.3
SOP Sopron 17.33 42⇓ eP Pn 20 06 59.8 -0.3
KBI1 Birley Grange 17.34 358 eP Pn 20 07 00.5 +0.3
KBI1 Birley Grange 17.34 358 P Pn 20 07 00.5 +0.3
KBI1 Birley Grange 17.34 358 eP Pn 20 07 00.5 +0.3
RHK3 Tenkes 17.35 49 eP Pn 20 06 59.1 -1.3
JAN Janina 17.36 71 eP Pn 20 06 59.0 -1.6
IBBN Ibbenburen 17.42 17 eP Pn 20 07 03.5 +2.2
comp=Z,111nm,1.2s
IBBN eS Sn 20 10 16.9 +1.8
VAL Valentia 17.42 340⇓ iS Sn 20 10 31.4 +16
KBN Korca 17.43 68 i PN Pn 20 06 59.8 -1.7
KBN Korca 17.43 68 i Pn Pn 20 06 59.8 -1.7
OHR Ohrid 17.52 66 P Pn 20 07 02.0 -0.6
OHR Ohrid 17.52 66 eP Pn 20 07 00.9 -1.6
OHR Ohrid 17.52 66 P Pn 20 07 02.0 -0.6
WLF1 Llynfaes 17.57 352 eP Pn 20 07 03.1 0.0
WLF1 AMb AMB 20 07 10.1
comp=Z,498nm,1.8s
WLF1 AMS AMS 20 14 44.3
comp=Z,63µm,13.5s
WLF1 Llynfaes 17.57 352 P Pn 20 07 03.1 0.0
WLF1 AMb AMB 20 07 10.1
comp=Z,498nm,1.8s
WLF1 AMS AMS 20 14 44.3
comp=Z,63µm,13.5s
WLF1 Llynfaes 17.57 352 eP Pn 20 07 03.1 0.0
LHO Holmfirth 17.64 358 eP Pn 20 07 05.0 +1.0
LHO Holmfirth 17.64 358 P Pn 20 07 05.0 +1.0
LHO Holmfirth 17.64 358 eP Pn 20 07 05.0 +1.0
WIT Witteveen 17.65 15 eP Pn 20 07 09.8 +5.7
comp=Z,821nm,3.0s
PKS9 Tamasi 17.71 47⇓ eP Pn 20 07 05.1 +0.3
DIVS Divibare 17.73 56 P Pn 20 07 03.5 -1.7
DIVS Divibare 17.73 56 P Pn 20 07 03.5 -1.7
CLZ Clausthal 17.74 23 eP Pn 20 07 05.1 -0.1
comp=Z,51nm,1.1s
CLZ eS Sn 20 10 28.1 +5.4
PKSM Moragy 17.74 49 ⇑P Pn 20 07 05.0 -0.3
PKSM Moragy 17.74 49⇑ iP Pn 20 07 05.0 -0.3
PKSM Moragy 17.74 49 P Pn 20 07 05.0 -0.3
RLS Riolos of Patr 17.76 77 eP Pn 20 07 03.0 -2.6
DSB Dublin 17.79 349 eP Pn 20 07 07.2 +1.4
comp=Z,419nm,2.0s
DSB Dublin 17.79 349 eP Pn 20 07 07.2 +1.4
comp=Z,419nm,2.0s
TREC Trest 17.80 36⇑ eP Pn 20 07 04.5 -1.5
TREC MLR MLR
comp=Z,7µm,11.6s
TREC Trest 17.80 36⇑ eP Pn 20 07 04.5 -1.5
TREC AMS AMS 20 15 00.0
comp=Z,7µm,11.6s
TREC Trest 17.80 36 P Pn 20 07 04.5 -1.5
comp=Z,7µm,11.6s,SNR=1.0
PRU Pruhonice 17.85 33⇑ eP Pn 20 07 05.9 -0.7
PRU MLR MLR
comp=Z,5µm,10.5s
PRU Pruhonice 17.85 33⇑ eP Pn 20 07 05.9 -0.7
PRU AMS AMS 20 14 50.0
comp=Z,5µm,10.5s
PRU Pruhonice 17.85 33 eP Pn 20 07 05.9 -0.7
comp=Z,5µm,10.5s
FNA Florina 17.90 68 P Pn 20 07 05.4 -1.8
FNA Florina 17.90 68 P Pn 20 07 05.4 -1.8
KRUS Krusevo 17.90 66 eP Pn 20 07 04.5 -2.7
FRGS Fruska Gora 18.01 53⇑ iP Pn 20 07 07.3 -1.3
PYL PYLOS 18.01 80 eP Pn 20 07 06.7 -2.0
HPK Haverah Park 18.05 358 eP Pn 20 07 09.6 +0.6
HPK AMb AMB 20 07 13.8
comp=Z,151nm,2.3s
HPK Haverah Park 18.05 358 P Pn 20 07 09.6 +0.6
HPK AMb AMB 20 07 13.8
comp=Z,151nm,2.3s
HPK Haverah Park 18.05 358 eP Pn 20 07 09.6 +0.6
LJBD Adjabya 18.06 100 i P Pn 20 07 10.0 +0.6
comp=Z,778nm,1.6s,SNR=39
EFP Efpalio 18.11 75 eP Pn 20 07 07.9 -2.0
KZN Kozani 18.13 69 P Pn 20 07 08.7 -1.4
KZN Kozani 18.13 69 eP Pn 20 07 08.3 -1.8
KZN Kozani 18.13 69 P Pn 20 07 08.7 -1.4
ITM Ithomi 18.14 79 P Pn 20 07 08.4 -1.9
ITM Ithomi 18.14 79 eP Pn 20 07 08.3 -2.0
ITM Ithomi 18.14 79 P Pn 20 07 08.4 -1.9
GRUS Gruza 18.16 58⇑ iP Pn 20 07 08.4 -2.0
SKO Skopje 18.16 64 eP Pn 20 07 10.7 +0.2
LAKA Lakka 18.16 76 P Pn 20 07 11.7 +1.2
LAKA Lakka 18.16 76 P Pn 20 07 11.7 +1.2
PKSG 18.19 45⇓ eP Pn 20 07 12.5 +1.7
CLL Collm 18.21 28 eP Pn 20 07 10.8 -0.3
comp=Z,3µm,3.9s
CLL eS Sn 20 10 37.3 +3.0
CLL Collm 18.21 28 eP Pn 20 07 11.0 -0.1
CLL eS Sn 20 10 37.0 +2.7
CLL pmax pmax
comp=Z,3µm,4.0s
CLL Collm 18.21 28 eP Pn 20 07 11.0 -0.1
comp=Z,3µm,4.0s
CLL e 20 07 21.0
CLL eS Sn 20 10 37.0 +2.7
CLL i SS 20 10 56.7
CLL Lmax 20 16 00.0
CLL Collm 18.21 28 eP Pn 20 07 11.0 -0.1
comp=Z,3µm,4.0s
CLL ePP 20 07 21.0
CLL ePPP 20 07 30.0
CLL eS Sn 20 10 37.0 +2.7
CLL i SS 20 10 56.7
CLL Lmax 20 16 00.0
CLL Collm 18.21 28 eP Pn 20 07 11.0 -0.1
comp=Z,3µm,4.0s
PKS2 Kecel 18.22 49⇑ eP Pn 20 07 13.1 +1.9
NRDL Niedersach Rie 18.23 21 eP Pn 20 07 12.1 +0.9
comp=Z,577nm,2.3s
NRDL eS Sn 20 10 40.6 +6.1
THL Klokotos Trika 18.25 72 P Pn 20 07 10.1 -1.4
THL Klokotos Trika 18.25 72 eP Pn 20 07 09.9 -1.6
THL Klokotos Trika 18.25 72 P Pn 20 07 10.1 -1.4
PVCC Panska Ves 18.26 32⇑ eP Pn 20 07 10.9 -0.7
PVCC eS Sn 20 10 40.1 +4.8
PVCC MLR MLR
comp=Z,5µm,10.8s
PVCC Panska Ves 18.26 32 P Pn 20 07 11.4 -0.2
PVCC Panska Ves 18.26 32 P Pn 20 07 11.4 -0.2
PVCC Panska Ves 18.26 32⇑ eP Pn 20 07 10.9 -0.7
PVCC ex x 20 07 17.8
PVCC eS Sn 20 10 40.1 +4.8
PVCC AMS AMS 20 15 40.0
comp=Z,5µm,10.8s
PVCC Panska Ves 18.26 32 P Pn 20 07 11.4 -0.2
PVCC S Sn 20 10 40.1 +4.8
KALE Kalithea 18.29 75 P Pn 20 07 12.9 +0.8
KALE Kalithea 18.29 75 P Pn 20 07 12.9 +0.8
SMOL Smolenice 18.29 41 eP Pn 20 07 13.9 +1.9
SMOL Smolenice 18.29 41 eP Pn 20 07 13.9 +1.9
SMOL Smolenice 18.29 41 eP Pn 20 07 13.9 +1.9
VRAC Vranov 18.36 38 P Pn 20 07 11.0 -1.8
baz=230,slow=10,SNR=33
VRAC LR LR 20 14 26.2
comp=Z,3µm,20.4s,baz=237,slow=38
VRAC Vranov 18.36 38 P Pn 20 07 11.8 -1.0
VRAC ⇓P 20 07 12.3
VRAC Vranov 18.36 38⇓ iP Pn 20 07 12.3 -0.5
VRAC Vranov 18.36 38 ⇓P Pn 20 07 12.3 -0.5
GUR Goura 18.45 77 P Pn 20 07 16.4 +2.3
GUR Goura 18.45 77 eP Pn 20 07 14.0 -0.1
GUR Goura 18.45 77 P Pn 20 07 16.4 +2.3
AGG Agios Georgios 18.46 73 P Pn 20 07 12.6 -1.5
AGG Agios Georgios 18.46 73 eP Pn 20 07 11.9 -2.2
AGG Agios Georgios 18.46 73 P Pn 20 07 12.6 -1.5
PKS7 Kunszentmiklos 18.46 47⇓ eP Pn 20 07 15.2 +1.1
PKS6 Bocsa 18.49 49⇓ eP Pn 20 07 15.3 +0.9
VLX Vlachokerasia 18.50 79 P Pn 20 07 19.6 +5.0
VLX Vlachokerasia 18.50 79 eP Pn 20 07 14.8 +0.2
BUD Budapest 18.60 46⇑ eP Pn 20 07 16.5 +0.7
BUD Budapest 18.60 46⇑ eP Pn 20 07 16.5 +0.7
STIP Stip 18.65 65 eP Pn 20 07 15.4 -1.1
LIT Litokhoron 18.66 70 P Pn 20 07 13.7 -2.8
LIT Litokhoron 18.66 70 eP Pn 20 07 13.6 -2.9
LIT Litokhoron 18.66 70 P Pn 20 07 13.7 -2.8
GMM Mts of Mourne 18.69 350 eP Pn 20 07 17.6 +0.8
GMM Mts of Mourne 18.69 350 P Pn 20 07 17.6 +0.8
GMM Mts of Mourne 18.69 350 eP Pn 20 07 17.6 +0.8
XDE Dent Fell 18.69 355 eP Pn 20 07 17.5 +0.7
XDE Dent Fell 18.69 355 P Pn 20 07 17.5 +0.7
XDE Dent Fell 18.69 355 eP Pn 20 07 17.5 +0.7
PKSN Nyarlorinc 18.81 48⇓ eP Pn 20 07 19.1 +0.7
NISS 18.87 60⇑ iP Pn 20 07 18.9 -0.2
VAY Valandovo 18.87 66 P Pn 20 07 18.0 -1.2
VAY Valandovo 18.87 66 eP Pn 20 07 16.6 -2.5
VAY Valandovo 18.87 66 P Pn 20 07 19.4 +0.2
VAY Valandovo 18.87 66 P Pn 20 07 18.0 -1.2
UPC Upice 18.89 34⇑ eP Pn 20 07 18.3 -0.9
UPC Upice 18.89 34⇑ eP Pn 20 07 18.3 -0.9
UPC epP pP 20 07 26.4 +4.9
UPC Upice 18.89 34 eP Pn 20 07 18.3 -0.9
DPC Dobruska-Polom 18.92 35⇑ eP Pn 20 07 18.6 -1.1
DPC MLR MLR
comp=Z,5µm,12.1s
DPC Dobruska-Polom 18.92 35⇑ eP Pn 20 07 18.6 -1.1
DPC epP pP 20 07 25.8 +3.9
DPC AMS AMS 20 15 30.0
comp=Z,5µm,12.1s
DPC Dobruska-Polom 18.92 35 eP Pn 20 07 18.6 -1.1
comp=Z,5µm,12.1s
LTK Loutraki 18.94 77 eP Pn 20 07 18.1 -1.9
LKR Lokris 18.97 75 eP Pn 20 07 18.6 -1.8
XAL Allendale 18.97 357 eP Pn 20 07 20.3 +0.1
XAL Allendale 18.97 357 P Pn 20 07 20.3 +0.1
XAL Allendale 18.97 357 eP Pn 20 07 20.3 +0.1
VLI Veliai 18.98 81 eP Pn 20 07 19.5 -1.0
VYHS Vyhne 19.04 43 eP Pn 20 07 20.4 -0.7
VYHS pmax pmax
comp=Z,1µm,4.0s
VYHS Vyhne 19.04 43 eP Pn 20 07 20.4 -0.7
comp=Z,1µm,4.0s
VYHS eS Sn 20 10 55.8 +1.5
VYHS Vyhne 19.04 43 eP Pn 20 07 20.4 -0.7
VYHS eS Sn 20 10 55.8 +1.5
VYHS Vyhne 19.04 43 eP Pn 20 07 20.4 -0.7
comp=Z,1µm,4.0s
VYHS eS Sn 20 10 55.8 +1.5
GCD Castle Douglas 19.08 354 eP Pn 20 07 21.5 -0.1
GCD Castle Douglas 19.08 354 P Pn 20 07 21.5 -0.1
GCD Castle Douglas 19.08 354 eP Pn 20 07 21.5 -0.1
MORC Moravsky Berou 19.13 38⇑ eP Pn 20 07 21.3 -0.9
MORC pmax pmax
comp=Z,88nm,1.1s
MORC Moravsky Berou 19.13 38⇑ eP Pn 20 07 21.3 -0.9
comp=Z,88nm,1.1s
MORC Moravsky Berou 19.13 38⇓ iP Pn 20 07 21.8 -0.4
MORC Moravsky Berou 19.13 38⇑ eP Pn 20 07 21.3 -0.9
comp=Z,88nm,1.1s
XOR Xorichti 19.14 73 P Pn 20 07 23.8 +1.4
XOR Xorichti 19.14 73 P Pn 20 07 23.8 +1.4
TIM Timisoara 19.15 53 P Pn 20 07 23.2 +0.7
TIM Timisoara 19.15 53 P Pn 20 07 23.2 +0.7
GAL1 Galloway 19.16 353 eP Pn 20 07 22.7 +0.3
GAL1 AMb AMB 20 07 30.7
comp=Z,116nm,1.5s
GAL1 AMS AMS 20 15 42.9
comp=Z,16µm,13.9s
GAL1 Galloway 19.16 353 P Pn 20 07 22.7 +0.3
GAL1 AMb AMB 20 07 30.7
comp=Z,116nm,1.5s
GAL1 AMS AMS 20 15 42.9
comp=Z,16µm,13.9s
GAL1 Galloway 19.16 353 eP Pn 20 07 22.7 +0.3
NEO Neokhori 19.16 73 eP Pn 20 07 20.4 -2.3
KSP Ksiaz 19.25 34 eP Pn 20 07 23.1 -0.5
KSP eS Sn 20 11 05.3 +6.0
KSP LMZ 20 15 35.7
comp=Z,8µm,14.6s
KSP Ksiaz 19.25 34⇑ eP Pn 20 07 22.9 -0.7
KSP eS Sn 20 10 56.7 -2.6
KSP MLR MLR
comp=Z,9µm,14.9s
KSP Ksiaz 19.25 34 P Pn 20 07 25.9 +2.3
KSP Ksiaz 19.25 34 eP Pn 20 07 22.9 -0.7
comp=Z,9µm,14.9s
PSZ Piszkesteto 19.33 45 P Pn 20 07 23.8 -0.8
PSZ Piszkesteto 19.33 45⇑ iP Pn 20 07 24.1 -0.5
comp=Z,130nm,1.1s
PSZ Piszkesteto 19.33 45⇑ eP Pn 20 07 24.2 -0.4
PSZ Piszkesteto 19.33 45⇑ iP Pn 20 07 24.2 -0.4
PSZ Piszkesteto 19.33 45 P Pn 20 07 23.8 -0.8
ECK Cauldkaine Hil 19.34 356 eP Pn 20 07 24.2 -0.4
ECK Cauldkaine Hil 19.34 356 P Pn 20 07 24.2 -0.4
ECK Cauldkaine Hil 19.34 356 eP Pn 20 07 24.2 -0.4
KKB Krupnik 19.34 65 i P Pn 20 07 23.7 -1.1
KKB Krupnik 19.34 65 i P Pn 20 07 23.7 -1.1
BZS Buzias 19.36 53 ⇑P Pn 20 07 24.0 -1.0
BZS P 20 07 24.2
BZS Buzias 19.36 53⇑ iP Pn 20 07 24.0 -1.0
BZS Buzias 19.36 53 P Pn 20 07 24.0 -1.0
SOH Sokhos 19.39 68 P Pn 20 07 22.4 -3.0
SOH Sokhos 19.39 68 eP Pn 20 07 22.1 -3.3
SOH Sokhos 19.39 68 P Pn 20 07 22.4 -3.0
PLG Polygyros 19.41 70 P Pn 20 07 22.2 -3.5
PLG Polygyros 19.41 70 eP Pn 20 07 22.6 -3.1
PLG Polygyros 19.41 70 P Pn 20 07 22.2 -3.5
RUE Ruedersdorf 19.44 27 eP Pn 20 07 25.7 -0.2
comp=Z,726nm,1.8s
RUE Ruedersdorf 19.44 27 eP Pn 20 07 25.7 -0.2
comp=Z,726nm,1.8s

OKC Ostrava-Krasne 19.48 39⇑ eP Pn 20 07 25.5 -0.8
OKC MLR MLR
comp=Z,6μm,12.1s
OKC Ostrava-Krasne 19.48 39⇑ eP Pn 20 07 25.5 -0.8
OKC AMS AMS 20 16 10.0
comp=Z,6μm,12.1s
OKC Ostrava-Krasne 19.48 39 eP Pn 20 07 25.5 -0.8
comp=Z,6μm,12.1s
ESK Eskdalemuir 19.48 356 Pn Pn 20 07 26.5 +0.2
comp=Z,401nm,1.5s,SNR=11
ESK Eskdalemuir 19.48 356 eP Pn 20 07 26.0 -0.3
ESK AMb AMB 20 07 33.1
comp=Z,135nm,1.4s
ESK AMS AMS 20 16 03.2
comp=Z,23μm,12.6s
ESK Eskdalemuir 19.48 356 P Pn 20 07 26.0 -0.3
ESK AMb AMB 20 07 33.1
comp=Z,135nm,1.4s
ESK AMS AMS 20 16 03.2
comp=Z,23μm,12.6s
ESK Eskdalemuir 19.48 356 i P Pn 20 07 27.3 +1.0
ESK Eskdalemuir 19.48 356 eP Pn 20 07 26.1 -0.2
comp=Z,180nm,1.5s
ESK Eskdalemuir 19.48 356 eP Pn 20 07 26.0 -0.3
EKA Eskdalemuir Ar 19.49 356 P Pn 20 07 26.1 -0.4
baz=176,slow=11,SNR=56
EKA Eskdalemuir Ar 19.49 356 P Pn 20 07 26.0 -0.5
LIKS Likavka 19.50 42 eP Pn 20 07 28.6 +1.9
LIKS pmax pmax
comp=Z,66nm,1.1s
LIKS Likavka 19.50 42 eP Pn 20 07 28.6 +1.9
comp=Z,66nm,1.1s
LIKS Likavka 19.50 42 eP Pn 20 07 28.6 +1.9
ATH Athens Observa 19.54 77 eP Pn 20 07 25.0 -2.2
PAIG Paliouri 19.55 71 P Pn 20 07 23.0 -4.3
BSEG Bad Segeberg 19.56 20 eP Pn 20 07 27.0 -0.3
comp=Z,227nm,1.5s
BSEG eS Sn 20 11 08.1 +1.4
VTS Vitosha 19.57 63 i P Pn 20 07 26.2 -1.4
VTS Vitosha 19.57 63 i P Pn 20 07 26.2 -1.4
SRS Serrai 19.61 67 P Pn 20 07 24.5 -3.5
SRS Serrai 19.61 67 P Pn 20 07 24.5 -3.5
DJES Djerdap 19.63 57⇑ iP Pn 20 07 25.5 -2.8
PTL Penteli 19.65 77 eP Pn 20 07 25.4 -3.1
RAC Raciborz 19.65 38 eP Pn 20 07 28.3 -0.1
RAC MLR MLR
comp=N,5μm,13.0s
RAC MLR MLR
comp=Z,3μm,14.0s
RAC MLR MLR
comp=E,3μm,11.0s
RAC Raciborz 19.65 38 eP Pn 20 07 28.3 -0.1
comp=E,3μm,14.0s
LUJL Ujela 19.66 104 eP Pn 20 07 26.6 -2.1
comp=E,633nm,1.8s,SNR=38
PSMN Pico do Norte, 19.69 280 eP Pn 20 07 25.4 -3.7
PSMN Pico do Norte, 19.69 280 eP Pn 20 07 25.4 -3.7
MMB Musomiste 19.77 66 i P Pn 20 07 27.9 -2.1
MMB Musomiste 19.77 66 i P Pn 20 07 27.9 -2.1
OUR Ouranopolis 19.82 70 P Pn 20 07 26.8 -3.7
OUR Ouranopolis 19.82 70 P Pn 20 07 26.8 -3.7
EBL Broad Law 19.92 356 eP Pn 20 07 30.9 -0.7
EBL Broad Law 19.92 356 P Pn 20 07 30.9 -0.7
EBL Broad Law 19.92 356 eP Pn 20 07 30.9 -0.7
KECS Kecovo 19.96 45 eP Pn 20 07 31.3 -0.8
KECS pmax pmax
comp=Z,28nm,1.1s
KECS Kecovo 19.96 45 eP Pn 20 07 31.3 -0.8
comp=Z,28nm,1.1s
KECS Kecovo 19.96 45 eP Pn 20 07 31.3 -0.8
CMLA Cha da Macela 20.02 283 eP P 20 07 30.8 -0.3
comp=Z,65nm,0.9s
CMLA eLR LR 20 12 35.7
CMLA Cha da Macela 20.02 283 P P 20 07 31.2 +0.1
CMLA Cha da Macela 20.02 283 eP P 20 07 30.8 -0.3
comp=Z,65nm,0.9s
EAU Auchinoon 20.02 355 eP P 20 07 31.7 +0.7
EAU Auchinoon 20.02 355 P P 20 07 31.7 +0.7
EAU Auchinoon 20.02 355 eP P 20 07 31.7 +0.7
ESY Stoneypath 20.05 357 eP P 20 07 32.2 +1.0
ESY Stoneypath 20.05 357 P P 20 07 32.2 +1.0
ESY Stoneypath 20.05 357 eP P 20 07 32.2 +0.9
PGBU Glenifferbraes 20.07 354 AMb AMB 20 07 37.1
comp=Z,146nm,1.7s
EDI Edinburgh 20.08 356 eP P 20 07 32.6 +0.9
EDI AMb AMB 20 07 40.4
comp=Z,183nm,1.6s
EDI AMS AMS 20 16 23.3
comp=Z,24μm,12.4s,MS5.8
EDI Edinburgh 20.08 356 P P 20 07 32.6 +0.9
EDI AMb AMB 20 07 40.4
comp=Z,183nm,1.6s
EDI AMS AMS 20 16 23.3
comp=Z,24μm,12.4s
EDI Edinburgh 20.08 356 eP P 20 07 32.6 +0.9
PDA Ponta Delgada 20.13 283 eP P 20 07 31.5 -0.8
PDA eLQ 20 11 22.0
PDA eLR LR 20 12 32.0
PDA Ponta Delgada 20.13 283 eP P 20 07 31.5 -0.8
VAM Vamos 20.15 84 eP P 20 07 31.6 -1.0
GVD Gavdhos 20.15 86 P P 20 07 30.6 -2.0
comp=Z,175nm,0.7s
GVD Gavdhos 20.15 86 P P 20 07 30.6 -2.1
comp=Z,175nm,0.7s
PSET Sete Cidades 20.17 283 eP P 20 07 31.3 -1.5
comp=Z,28nm,0.7s
PSET Sete Cidades 20.17 283 eP P 20 07 31.3 -1.5
comp=Z,28nm,0.7s
PGB Panagyurishte 20.26 63 i P P 20 07 33.3 -0.4
PGB Panagyurishte 20.26 63 i P P 20 07 33.3 -0.4
NIE Niedzica 20.37 42 eP P 20 07 36.1 +1.3
NIE Niedzica 20.37 42 eP P 20 07 36.1 +1.3
EBH Black Hill 20.43 355 eP P 20 07 36.6 +1.2
EBH Black Hill 20.43 355 P P 20 07 36.6 +1.2
EBH Black Hill 20.43 355 eP P 20 07 36.6 +1.2
EAB Aberfoyle 20.43 354 eP P 20 07 35.4 -0.1
EAB Aberfoyle 20.43 354 P P 20 07 35.4 -0.1
EAB Aberfoyle 20.43 354 eP P 20 07 35.4 0.0
DRGR 20.52 51 P P 20 07 36.9 +0.4
DRGR 20 07 37.5
DRGR 20.52 51 ⇑P P 20 07 37.5 +1.0
DRGR 20.52 51 ⇑iP P 20 07 37.5 +1.0
DRGR 20.52 51 P P 20 07 36.9 +0.4
RZN Rozhen 20.52 66 i P P 20 07 35.8 -0.8
RZN Rozhen 20.52 66 i P P 20 07 35.8 -0.8
OJC Ojcow 20.55 40 i P P 20 07 36.4 -0.5
OJC eS S 20 11 28.0 +1.4
OJC L 20 14 41.5
comp=Z,2.1nm,20.2s
OJC Ojcow 20.55 40 i P P 20 07 36.4 -0.5
comp=Z,2μm,20.2s
OJC eS S 20 11 28.0 +1.4
PLD Plovdiv 20.57 65 P P 20 07 35.8 -1.3
PLD Plovdiv 20.57 65 i P P 20 07 36.7 -0.4
PLD Plovdiv 20.57 65 P P 20 07 36.7 -0.4
SNR=1.0
LTBQ Tobrug 20.68 94 eP P 20 07 39.1 +0.7
comp=Z,278nm,1.7s,SNR=34
IDI Anoyia 20.73 84 P P 20 07 38.6 -0.3
comp=Z,114nm,0.6s,baz=273,slow=11,SNR=45
CRVS Cervenica-Dubn 20.73 44 eP P 20 07 39.8 +1.0
comp=Z,356nm,2.1s
CRVS eS S 20 11 36.9 +6.8
CRVS LR LR
comp=Z,2μm,14.5s,MS4.5
CRVS Cervenica-Dubn 20.73 44 eP P 20 07 39.8 +1.0
CRVS eS S 20 11 36.9 +6.8
CRVS Cervenica-Dubn 20.73 44 eP P 20 07 39.8 +1.0
comp=Z,356nm,2.1s
STHS Stebnicka Huta 20.88 43 eP P 20 07 42.5 +2.1
STHS pmax pmax
comp=Z,128nm,2.3s
STHS Stebnicka Huta 20.88 43 eP P 20 07 42.5 +2.1
comp=Z,128nm,2.3s
STHS Stebnicka Huta 20.88 43 eP P 20 07 42.5 +2.1
STHS Stebnicka Huta 20.88 43 eP P 20 07 42.5 +2.1
comp=Z,128nm,2.3s
TRPA Tarpa 20.99 47⇑ iP P 20 07 41.3 -0.3
TRPA Tarpa 20.99 47⇑ iP P 20 07 41.3 -0.3
APE Apeiranthos 21.03 79 P P 20 07 42.2 +0.1
APE 20 07 42.9
APE Apeiranthos 21.03 79 ⇑P P 20 07 42.9 +0.8
APE Apeiranthos 21.03 79 P P 20 07 40.5 -1.6
APE Apeiranthos 21.03 79⇑ iP P 20 07 42.9 +0.8
APE Apeiranthos 21.03 79 eP P 20 07 40.6 -1.5
APE Apeiranthos 21.03 79 P P 20 07 40.5 -1.6
KDZ Kurdzhali 21.04 66 i P P 20 07 40.5 -1.7
KDZ Kurdzhali 21.04 66 i P P 20 07 40.5 -1.7
RDO Rodhopi 21.07 68 P P 20 07 41.3 -1.2
RDO Rodhopi 21.07 68 eP P 20 07 41.0 -1.5
RDO Rodhopi 21.07 68 P P 20 07 41.3 -1.2
UZH Uzhgorod 21.08 46⇓ iP P 20 07 42.4 -0.1
UZH e 20 08 17.4
UZH eS S 20 11 33.4 -3.6
UZH MLR MLR
comp=N,2μm,12.0s,MS5.0
UZH MLR MLR
comp=E,3μm,12.0s,MS5.0
UZH MLR MLR
comp=Z,2μm,12.0s,MS4.6
UZH Uzhgorod 21.08 46 eP P 20 07 42.0 -0.5
DIM Dimitrovgrad 21.18 65 i P P 20 07 43.2 -0.5
DIM Dimitrovgrad 21.18 65 i P P 20 07 43.2 -0.5
KOLS Kolonicke sedl 21.21 45 eP P 20 07 44.6 +0.6
comp=Z,133nm,1.8s,mb5.0
KOLS eS S 20 11 43.8 +4.2
KOLS LR LR
comp=Z,2μm,14.7s,MS4.5
KOLS Kolonicke sedl 21.21 45 eP P 20 07 44.6 +0.6
KOLS eS S 20 11 43.8 +4.2
KOLS Kolonicke sedl 21.21 45 eP P 20 07 44.6 +0.6
comp=Z,133nm,1.8s,mb5.0
LAST Lasithi 21.22 84 P P 20 07 43.9 -0.3
LAST Lasithi 21.22 84 P P 20 07 43.9 -0.3
PVL Pavlikeni 21.23 62 i P P 20 07 42.2 -2.0
PVL Pavlikeni 21.23 62 i P P 20 07 42.2 -2.0
KAR1 Arisaig 21.30 352 eP P 20 07 45.6 +0.8
KAR1 Arisaig 21.30 352 P P 20 07 45.6 +0.8
NPS Neapolis 21.32 84 eP P 20 07 42.9 -2.3
ADH Angra Heroismo 21.34 285 eP P 20 07 43.4 -2.0
comp=Z,133nm,0.9s,mb5.3
MDB Medias 21.35 54 P P 20 07 46.6 +1.1
BMR Baia Mare 21.37 49 P P 20 07 46.0 +0.3
BMR Baia Mare 21.37 49⇑ iP P 20 07 49.3 +3.6
CHOS Chios island 21.37 75 P P 20 07 45.0 -0.8
CHOS Chios island 21.37 75 eP P 20 07 43.7 -2.1
CHOS Chios island 21.37 75 P P 20 07 45.0 -0.8
GKP Gorka Klasztor 21.40 30 eP P 20 07 46.5 +0.5
GKP eS S 20 11 50.6 +7.4
GKP LMZ 20 17 01.9
comp=Z,4μm,13.9s
GKP Gorka Klasztor 21.40 30 P P 20 07 47.4 +1.5
ALN Alexandroupoli 21.43 69 P P 20 07 44.6 -1.8
ALN Alexandroupoli 21.43 69 eP P 20 07 44.1 -2.3
ALN Alexandroupoli 21.43 69 P P 20 07 44.6 -1.8
PRK Paraskevi 21.53 73 eP P 20 07 45.8 -1.7
KSB Sheil Bridge 21.54 353 eP P 20 07 47.4 0.0
KSB Sheil Bridge 21.54 353 P P 20 07 47.4 0.0
MUD Monsted U'grnd 21.58 15⇑ iP P 20 07 48.0 +0.1
MUD pmax pmax
comp=Z,53nm,1.1s,mb4.9
MUD Monsted U'grnd 21.58 15⇑ iP P 20 07 48.0 +0.1
comp=Z,53nm,1.1s,mb4.9
MUD Monsted U'grnd 21.58 15⇑ iP P 20 07 48.0 +0.1
comp=Z,53nm,1.1s,mb4.9
SZH Strazhica 21.67 62 i P P 20 07 48.2 -0.7
SZH Strazhica 21.67 62 i P P 20 07 48.2 -0.7
COP Copenhagen 21.68 20⇑ iP P 20 07 49.1 +0.1
COP i 20 08 15.5
COP pmax pmax
comp=Z,18nm,1.0s,mb4.5
COP MLR MLR
comp=Z,610nm,17.0s
COP Copenhagen 21.68 20⇑ iP P 20 07 49.1 +0.1
comp=Z,18nm,1.0s,mb4.5
COP i 20 08 15.5
COP
comp=Z,600nm,17.0s
COP Copenhagen 21.68 20⇑ iP P 20 07 49.1 +0.1
comp=Z,18nm,1.0s,mb4.5
KPL Plockton 21.69 353 eP P 20 07 49.0 0.0
KPL AMb AMB 20 07 56.2
comp=Z,112nm,1.8s,mb5.0
KPL AMS AMS 20 17 19.1
comp=Z,15μm,14.3s,MS5.5
KPL Plockton 21.69 353 P P 20 07 49.0 0.0
KPL AMb AMB 20 07 56.2
comp=Z,112nm,1.8s,mb5.0
KPL AMS AMS 20 17 19.1
comp=Z,15μm,14.3s
URLA Izmir 21.79 75⇑ iP P 20 07 49.5 -0.8
URLA Izmir 21.79 75 i P P 20 07 49.5 -0.8
KWP Kalwaria Pacla 21.80 44 eP P 20 07 51.1 +0.8
KWP eS S 20 11 58.5 +7.2
KWP LMN 20 16 07.5
comp=Z,5μm,18.1s
KWP Kalwaria Pacla 21.80 44⇑ eP P 20 07 51.0 +0.7
KWP pmax pmax
comp=Z,71nm,0.8s,mb5.2
KWP MLR MLR
comp=Z,2μm,20.0s,MS4.6
KWP Kalwaria Pacla 21.80 44⇑ eP P 20 07 51.0 +0.6
comp=Z,71nm,0.8s,mb5.2
KWP LR LR
comp=Z,2μm,20.0s,MS4.6
KWP Kalwaria Pacla 21.80 44⇓ iP P 20 07 51.0 +0.7
KWP Kalwaria Pacla 21.80 44⇓ iP P 20 07 51.0 +0.7
KAC Achnashellach 21.81 353 eP P 20 07 51.1 +0.8
KAC Achnashellach 21.81 353 P P 20 07 51.1 +0.8
ZKR Zakros 21.83 84 P P 20 07 52.8 +2.1
ZKR Zakros 21.83 84 P P 20 07 52.8 +2.1
AYVA Ayvalik 21.85 73 eP P 20 07 50.2 -0.7
AYVA Ayvalik 21.85 73 eP P 20 07 50.2 -0.8
BSD Bornholm Skovb 21.96 24⇑ iP P 20 07 51.3 -0.7
BSD pmax pmax
comp=Z,32nm,0.8s,mb4.8
BSD MLR MLR
comp=Z,1μm,15.0s,MS4.5
BSD Bornholm Skovb 21.96 24⇑ iP P 20 07 51.3 -0.7
comp=Z,32nm,0.8s,mb4.8
BSD
comp=Z,1μm,15.0s
BSD Bornholm Skovb 21.96 24⇑ iP P 20 07 51.3 -0.7
comp=Z,32nm,0.8s,mb4.8
JMB Yambol 22.01 64 P P 20 07 51.2 -1.4
JMB Yambol 22.01 64 i P P 20 07 51.5 -1.1
JMB Yambol 22.01 64 P P 20 07 51.2 -1.4
PMAN Manadas 22.01 285 eP P 20 07 51.9 -0.7
comp=Z,56nm,0.9s,mb5.0
SMG Samos 22.02 77 eP P 20 07 51.4 -1.3
PID Ribeirinha 22.04 285 eP P 20 07 49.9 -3.0
ROSA Rosais 22.12 286 eP P 20 07 53.2 -0.7
MLR Muntele Rosu 22.19 56 P P 20 07 54.2 -0.4
comp=Z,134nm,1.0s,mb5.3,baz=285,slow=4.3,SNR=56
MLR LR LR 20 16 29.7
comp=Z,3μm,20.3s,MS4.7,baz=256,slow=37
MLR Muntele Rosu 22.19 56 P P 20 07 54.2 -0.4
MLR pmax pmax
comp=Z,134nm,1.0s
MLR MLR MLR
comp=Z,3μm,20.3s
MLR Muntele Rosu 22.19 56 P P 20 07 54.4 -0.2
MLR ⇓P 20 07 54.6
MLR Muntele Rosu 22.19 56⇓ iP P 20 07 54.6 0.0
MLR Muntele Rosu 22.19 56⇓ iP P 20 07 54.6 0.0
SART Tekirdag 22.27 69⇑ iP P 20 07 54.1 -1.4
SART Tekirdag 22.27 69 i P P 20 07 54.1 -1.4
PICO Pico 22.27 285 eP P 20 07 55.9 +0.4
KDAG Bornova 22.32 75 i P P 20 07 55.3 -0.7
KDAG Bornova 22.32 75 i P P 20 07 55.3 -0.7
PCAN Candelaria 22.32 285 eP P 20 07 56.8 +0.8
comp=Z,354nm,1.4s,mb5.6
GCAM G?zelcaml? 22.33 77⇑ iP P 20 07 55.5 -0.6
GCAM G?zelcaml? 22.33 77 i P P 20 07 55.5 -0.6
WAR Warsaw 22.39 37 eP P 20 07 56.8 +0.2
WAR eS S 20 12 06.7 +4.1
WAR LMN 20 16 22.2
comp=Z,8μm,14.4s
WAR Warsaw 22.39 37⇑ eP P 20 07 56.8 +0.2
BUR01 Bucovina Ar. S 22.41 51 P P 20 07 57.7 +0.8
BURAR Bucovina Array 22.41 51 ⇑P P 20 07 57.3 +0.4
BURAR 20 07 57.7
BURAR Bucovina Array 22.41 51⇑ iP P 20 07 57.3 +0.4
BURAR Bucovina Array 22.41 51⇑ iP P 20 07 57.3 +0.4
BUR08 Bucovina Ar. S 22.41 51⇑ eP P 20 07 56.8 -0.1
HOR Horta 22.43 285 eP P 20 07 56.5 -0.7
PCED Cedros 22.49 285 eP P 20 07 57.4 -0.3
comp=Z,34nm,0.6s,mb5.0
CALA Caldeira 22.49 285 eP P 20 07 57.0 -0.8
BDRM Kayabasi 22.55 79 i P P 20 07 56.4 -2.0
BDRM Kayabasi 22.55 79 i P P 20 07 56.4 -2.0
BALY Balya 22.58 72⇑ iP P 20 07 57.4 -1.2
BALY Balya 22.58 72 i P P 20 07 57.4 -1.3
LVV L'vov 22.64 45⇑ iP P 20 07 59.3 0.0
LVV e 20 08 33.5
LVV i S S 20 12 10.3 +2.7
LVV MLR MLR
comp=Z,1μm,15.0s,MS4.5
LVV MLR MLR
comp=N,2μm,14.0s,MS4.8
LVV MLR MLR
comp=E,1μm,14.0s,MS4.8
LVV L'vov 22.64 45 i P P 20 07 59.4 +0.1
PRD Provadia 22.71 63 i P P 20 07 58.9 -1.2
PRD Provadia 22.71 63 i P P 20 07 58.9 -1.2
AKHS Akhisar 22.73 74⇑ iP P 20 07 59.6 -0.8
AKHS Akhisar 22.73 74 i P P 20 07 59.6 -0.7
PLOR Plostina 22.77 56 P P 20 07 59.6 -1.1
PLOR Plostina 22.77 56⇑ iP P 20 08 00.7 0.0
PLOR Plostina 22.77 56⇑ iP P 20 08 00.7 0.0
TOA0 Torodi Ar. Sit 22.77 174 eP P 20 07 59.4 -1.5
TOA0 eS S 20 12 07.7 -2.5
TORD Torodi Ar. Bea 22.77 174 P P 20 07 59.8 -1.1
comp=E,52nm,0.8s,mb5.0,baz=357,slow=9.5,SNR=124
TORD LR LR 20 17 32.2
comp=E,11μm,18.4s,MS5.3,baz=355,slow=38
VRI Vrincioaia 22.83 56 P P 20 08 00.4 -0.9
VRI 20 08 00.9
VRI Vrincioaia 22.83 56⇓ iP P 20 08 00.9 -0.4
VRI Vrincioaia 22.83 56⇓ iP P 20 08 00.9 -0.4
AYDN Tasoluk 22.84 77⇑ iP P 20 08 00.6 -1.0
AYDN Tasoluk 22.84 77 i P P 20 08 00.6 -0.9
ELBA Catalca 23.25 68⇑ iP P 20 08 04.0 -1.8
ELBA Catalca 23.25 68 i P P 20 08 04.0 -1.8
PSN Preselentsi 23.35 62 i P P 20 08 04.7 -2.1
PSN Preselentsi 23.35 62 i P P 20 08 04.7 -2.1
HARR Harsova 23.36 59 ⇑P P 20 08 05.4 -1.6
HARR Harsova 23.36 59⇑ iP P 20 08 05.4 -1.6
HARR Harsova 23.36 59⇑ iP P 20 08 05.4 -1.6
DEMI Demirci 23.43 74⇑ iP P 20 08 06.3 -1.4
DEMI Demirci 23.43 74 i P P 20 08 06.3 -1.4
KMPD K-Podol'skiy 23.55 49 P P 20 08 07.0 -1.8
CFR Carcaliu 23.61 58 ⇑P P 20 08 07.6 -1.9
CFR 20 08 07.8
CFR Carcaliu 23.61 58⇑ iP P 20 08 07.6 -1.9
CFR Carcaliu 23.61 58⇑ iP P 20 08 07.6 -1.9
LKFR Kufra 23.65 113 eP P 20 08 09.8 -0.2
comp=E,574nm,1.7s,mb5.7,SNR=152
LKFR eS S 20 12 25.3 +0.8
SNR=35
TIRR Tirgusor 23.65 60 eP P 20 08 07.5 -2.4
TIRR pmax pmax
comp=Z,317nm,1.9s,mb5.4
TIRR Tirgusor 23.65 60 eP P 20 08 07.5 -2.4
comp=Z,317nm,1.9s,mb5.4
TIRR Tirgusor 23.65 60⇓ iP P 20 08 08.1 -1.8
TIRR Tirgusor 23.65 60⇓ iP P 20 08 08.1 -1.8
DNZL Cakiroluk 23.77 77⇑ iP P 20 08 10.6 -0.3
DNZL Cakiroluk 23.77 77 i P P 20 08 10.6 -0.3
IAS Iasi 23.77 53 P P 20 08 09.9 -1.0
LEOM Leova 24.01 55 ⇑P P 20 08 12.0 -1.1
LEOM Leova 24.01 55⇑ iP P 20 08 12.0 -1.1
LEOM Leova 24.01 55⇑ iP P 20 08 12.0 -1.1
GDZ Gediz 24.02 73⇑ iP P 20 08 11.3 -2.0
GDZ Gediz 24.02 73 i P P 20 08 11.3 -2.0
KHAL Karahalli 24.07 75⇑ iP P 20 08 13.2 -0.4
KHAL Karahalli 24.07 75 i P P 20 08 13.2 -0.5
TLCR 24.08 58 ⇑P P 20 08 12.3 -1.5
TLCR 24.08 58⇑ iP P 20 08 12.3 -1.5
TLCR 24.08 58⇑ iP P 20 08 12.3 -1.5
GOLH Golhisar 24.22 78⇑ iP P 20 08 14.3 -0.7
GOLH Golhisar 24.22 78 i P P 20 08 14.3 -0.8
AKAS Kas 24.38 80⇑ iP P 20 08 15.2 -1.3
AKAS Kas 24.38 80 i P P 20 08 15.2 -1.3
SUW Suwalki 24.51 35 eP P 20 08 16.8 -0.8
SUW eS S 20 12 37.0 -0.9
SUW LMZ 20 17 50.8
comp=Z,2μm,19.0s
SUW Suwalki 24.51 35⇑ iP P 20 08 16.7 -0.9
SUW pmax pmax
comp=Z,916nm,1.0s,mb6.3
SUW Suwalki 24.51 35⇑ iP P 20 08 16.6 -0.9
comp=Z,916nm,1.0s,mb6.3
SUW Suwalki 24.51 35⇑ eP P 20 08 16.8 -0.8
SUW eS S 20 12 37.0 -0.8
KIS Kishinev 24.53 54⇑ iP P 20 08 12.0 -5.8
comp=Z,3μm,3.0s
KIS Kishinev 24.53 54 ePP 20 08 58.0
KIS eS S 20 12 38.0 -0.3
KIS eSS 20 13 28.0
KIS eLQ 20 16 00.0
KIS LRM 20 18 38.0
comp=Z,2μm,16.0s
KIS Kishinev 24.53 54α iP P 20 08 12.0 -5.8
KIS e 20 08 58.0
KIS eS S 20 12 38.0 -0.3
KIS eSS 20 13 28.0
KIS pmax pmax
comp=N,600nm,2.0s
KIS pmax pmax
comp=E,3μm,3.0s
KIS pmax pmax
comp=N,1μm,2.0s
KIS pmax pmax
comp=E,3μm,2.0s
KIS pmax pmax
comp=Z,3μm,2.0s
KIS MLR MLR
comp=Z,2μm,17.0s,MS4.6
KIS MLR MLR
comp=E,2μm,16.0s
KIS MLR MLR
comp=Z,2μm,16.0s
KIS Kishinev 24.53 54 P P 20 08 16.3 -1.5
KONO Kongsberg 24.65 12⇑ iP P 20 08 17.5 -1.3
KONO eS S 20 12 42.9 +2.9
KONO AMS AMS 20 20 08.1
comp=Z,3μm,11.8s,MS5.0
KONO Kongsberg 24.65 12⇑ iP P 20 08 17.5 -1.3
KONO eP 20 08 17.6
KONO LR LR
comp=Z,3μm,11.8s,MS5.0
KONO Kongsberg 24.65 12⇑ iP P 20 08 17.5 -1.3
SNR=28
BER Bergen 24.77 7 eP P 20 08 18.7 -1.2
BER AMb AMB 20 08 21.9
comp=Z,245nm,5.2s
BER eS S 20 12 44.3 +2.3
BER AMS AMS 20 19 51.3
comp=Z,5μm,16.3s,MS5.1
BER Bergen 24.77 7 eP P 20 08 18.7 -1.2
BER pmax pmax
comp=Z,245nm,5.2s
BER MLR MLR
comp=Z,5μm,16.3s,MS5.1
BER Bergen 24.77 7 eP P 20 08 18.7 -1.2
comp=Z,245nm,5.2s
BER LR LR
comp=Z,5μm,16.3s,MS5.1
BER Bergen 24.77 7 eP P 20 08 18.7 -1.2
SNR=28
KORT Korkueli 24.87 78⇑ iP P 20 08 22.0 +1.0
KORT Korkueli 24.87 78 i P P 20 08 22.0 +1.0
ESKT Eskisehir 25.07 72 eP P 20 08 21.8 -1.1
SEYT Eskypehyr 25.07 72 eP P 20 08 21.8 -1.0
BOLV Bolvadin 25.19 74⇑ iP P 20 08 23.9 0.0
BOLV Bolvadin 25.19 74 i P P 20 08 23.9 0.0
BBTS Babate 25.53 218 P P 20 08 27.6 +0.4
comp=Z,67nm,0.8s,mb5.2,baz=206,slow=1.0,SNR=8.6
BBTS LR LR 20 18 48.6
comp=Z,3μm,18.1s,MS4.9,baz=22,slow=37
HFS Hagfors 25.93 16 P P 20 08 28.7 -1.7
comp=Z,4.6nm,0.5s,mb4.3,baz=189,slow=8.7,SNR=34
HFS LR LR 20 19 42.6
comp=Z,2μm,18.0s,MS4.7,baz=215,slow=39
FOO Floro 25.94 6 eP P 20 08 28.6 -1.9
FOO eS S 20 13 02.8 +2.3
FOO eScP ScP 20 15 37.8 -0.5
FOO AMS AMS 20 20 57.5
comp=Z,3μm,11.7s,MS5.0

FOO Floro 25.94 6 *e*P **P 20 08 28.6 -1.9**
SNR=28
SGKT Sivrigoynuk 25.98 70 *e*P **P 20 08 30.8 -0.3**
SGKT Sivrigoynuk 25.98 70 *e*P **P 20 08 30.8 -0.3**
NAO01 NORSAR Array S 26.00 13 *e*P **P 20 08 29.6 -1.5**
KIEV Kiev 26.02 46⇑ *e*P **P 20 08 28.3 -3.0**
KIEV pmax pmax
comp=Z,61nm,0.8s,mb5.2
KIEV MLR MLR
comp=Z,744nm,22.0s,MS4.2
KIEV Kiev 26.02 46⇑ *e*P **P 20 08 28.3 -3.0**
comp=Z,61nm,0.8s,mb5.2
KIEV LR LR
comp=Z,744nm,22.0s,MS4.2
AKASG Malin Array Be 26.03 46 P **P 20 08 28.7 -2.7**
comp=Z,29nm,0.5s,mb5.1,baz=244,slow=10,SNR=36
AKBB Malin Array Si 26.03 46⇑ *e*P **P 20 08 28.4 -3.0**
KDHN Kadinhani 26.11 74⇑ *i*P **P 20 08 32.4 +0.1**
KDHN Kadinhani 26.11 74 *i*P **P 20 08 32.4 +0.1**
NB2 NORSAR Subarra 26.24 13 P **P 20 08 31.9 -1.3**
comp=Z,35nm,1.4s,mb4.7,baz=204,slow=9.3
NB2 NORSAR Subarra 26.24 13 P **P 20 08 31.9 -1.3**
baz=204,slow=8.7,SNR=28
NOA NORSAR Array B 26.24 13 P **P 20 08 31.2 -2.0**
comp=Z,5.5nm,1.0s,baz=205,slow=8.4,SNR=6.3
NOA LR LR 20 18 57.5
comp=Z,1μm,19.9s,baz=205,slow=37
NOA NORSAR Array B 26.24 13 P **P 20 08 31.2 -2.0**
NOA LR LR 20 18 57.5
IIGN Ignalina 26.73 35 *e*P **P 20 08 37.0 -0.7**
IIGN AMB AMB 20 08 41.1
comp=Z,122nm,1.1s,mb5.3
IIGN Ignalina 26.73 35 *e*P **P 20 08 37.0 -0.6**
comp=Z,122nm,1.1s,mb5.3,SNR=28
NACGM Naroch 26.73 36 *e*P **P 20 08 34.0 -3.7**
ISAL Salakas 26.81 34 *e*P **P 20 08 37.6 -0.8**
ISAL AMB AMB 20 08 41.8
comp=Z,84nm,1.1s,mb5.2
ISAL Salakas 26.81 34 *e*P **P 20 08 37.6 -0.8**
comp=Z,84nm,1.1s,mb5.2,SNR=28
BBAL Bala 26.83 72⇑ *i*P **P 20 08 38.6 -0.1**
BBAL Bala 26.83 72 *i*P **P 20 08 38.6 -0.1**
IDID Didziasalis 26.95 35 *e*P **P 20 08 38.8 -0.8**
IDID AMB AMB 20 08 42.9
comp=Z,48nm,1.0s,mb5.0
IDID Didziasalis 26.95 35 *e*P **P 20 08 38.8 -0.8**
comp=Z,48nm,1.0s,mb5.0,SNR=28
IZAR Zarasai 26.97 34 *e*P **P 20 08 39.2 -0.7**
IZAR AMB AMB 20 08 43.3
comp=Z,72nm,1.0s,mb5.2
BALT Daday 26.99 68⇑ *i*P **P 20 08 40.0 -0.1**
BALT Daday 26.99 68 *i*P **P 20 08 40.0 -0.2**
ELDT Eldivan 27.02 70⇑ *i*P **P 20 08 40.1 -0.4**
ELDT Eldivan 27.02 70 *i*P **P 20 08 40.1 -0.4**
MNK Minsk 27.03 38⇑ *e*P **P 20 08 36.0 -4.4**
MNK *e*S **S 20 13 10.0 -7.8**
MNK pmax pmax
comp=Z,280nm,1.8s,mb5.5
MNK pmax pmax
comp=N,220nm,1.8s
MNK pmax pmax
comp=E,360nm,1.8s
MNK MLR MLR
comp=E,6μm,12.0s
MNK MLR MLR
comp=Z,8μm,10.0s,MS5.5
MICGM Minsk 27.05 38⇑ *e*P **P 20 08 36.0 -4.6**
MOL Molde 27.15 8 *e*S **S 20 13 24.1 +4.5**
BR131 Keskin Array S 27.22 72⇑ *e*P **P 20 08 41.6 -0.6**
comp=Z,4.8nm,0.7s
BR131 LR LR
comp=Z,478nm,19.0s
BRTR Keskin Array B 27.22 72 P **P 20 08 41.8 -0.5**
comp=Z,3.6nm,0.8s,baz=271,slow=7.3,SNR=25
ILGA Ilgaz 27.24 69⇑ *i*P **P 20 08 41.9 -0.6**
ILGA Ilgaz 27.24 69 *i*P **P 20 08 41.8 -0.6**
SIM Simferopol' 27.75 60*c* *i*P **P 20 08 47.4 +0.5**
SIM *e*S **S 20 13 30.0 +0.7**
SIM pmax pmax
comp=Z,97nm,2.4s,mb5.0
CDAG Cicekdag 27.79 72⇑ *i*P **P 20 08 47.2 -0.1**
CDAG Cicekdag 27.79 72 *i*P **P 20 08 47.2 -0.1**
CTKT Corum 28.06 70⇑ *i*P **P 20 08 50.1 +0.4**
CTKT Corum 28.06 70 *i*P **P 20 08 50.2 +0.4**
AVNT Avonos 28.23 73⇑ *i*P **P 20 08 51.3 0.0**
AVNT Avonos 28.23 73 *i*P **P 20 08 51.3 0.0**
GULE Gulek 28.34 77⇑ *i*P **P 20 08 52.3 0.0**
GULE Gulek 28.34 77 *i*P **P 20 08 52.3 0.0**
VSU Vasula 28.85 30*c* *i*P **P 20 08 55.2 -1.4**
VSU Vasula 28.85 30⇑ *i*P **P 20 08 55.3 -1.3**
TOKA Tokat 29.36 70⇑ *i*P **P 20 09 01.3 0.0**
TOKA Tokat 29.36 70 *i*P **P 20 09 01.3 0.0**
DBIC Dimbokro 29.38 189 P **P 20 09 00.8 -0.8**
comp=Z,50nm,0.9s,mb5.2,baz=355,slow=8.8,SNR=21
DBIC LR LR 20 21 15.8
comp=Z,4μm,20.6s,MS5.0,baz=356,slow=37
DBIC Dimbokro 29.38 189 *e*P **P 20 09 00.6 -1.0**
DBIC pmax pmax
comp=Z,188nm,1.2s
DBIC MLR MLR
comp=Z,5μm,21.0s
DBIC Dimbokro 29.38 189 *e*P **P 20 09 00.6 -1.0**
comp=Z,188nm,1.2s,mb5.7
DBIC *e* 20 09 23.2
DBIC LR LR
comp=Z,5μm,21.0s,MS5.1
TIC Toumodi 29.42 189 *e*P **P 20 09 00.9 -1.1**
comp=Z,703nm,1.4s,mb6.2
PINB Pinarbasi 29.44 73⇑ *i*P **P 20 09 02.0 -0.1**
PINB Pinarbasi 29.44 73 *i*P **P 20 09 02.0 -0.1**
ERBA Erbaa 29.55 69⇑ *i*P **P 20 09 01.3 -1.8**
ERBA Erbaa 29.55 69 *i*P **P 20 09 01.3 -1.7**
NSS Namsos 29.63 11 *e*P **P 20 09 02.5 -1.0**
NSS *e*S **S 20 14 01.7 +3.2**
NSS AMS AMS 20 23 04.0
comp=Z,4μm,13.7s,MS5.2
NSS Namsos 29.63 11 *e*P **P 20 09 02.5 -0.9**
SNR=27
KIC Kosan Boka 29.67 188 *e*P **P 20 09 03.2 -1.0**
comp=Z,488nm,1.5s,mb6.0
BHL Bhannes 29.70 83 *e*P **P 20 09 03.6 -0.8**
BHL Bhannes 29.70 83 *e*P **P 20 09 03.6 -0.8**
MMAI Mount Meron Ar 29.73 85 P **P 20 09 05.5 +0.9**
comp=Z,7.8nm,0.6s,mb4.6,baz=285,slow=11,SNR=16
LIC Lamto 29.84 189 *e*P **P 20 09 04.4 -1.3**
comp=Z,219nm,1.0s,mb5.5,baz=9.7
LIC *e*MLR MLR
comp=Z,6μm,19.5s,MS4.9
LIC Lamto 29.84 189 *e*P **P 20 09 04.3 -1.4**
comp=Z,424nm,1.4s,mb6.0
LIC Lamto 29.84 189 *e*P **P 20 09 04.4 -1.3**
comp=Z,109nm,1.0s,mb5.5
LIC LR LR
comp=Z,3μm,19.5s,MS4.9
HWQ Hawqa 29.84 82 *e*P **P 20 09 06.5 +0.8**
HWQ Hawqa 29.84 82 *e*P **P 20 09 06.5 +0.8**
ANN Anapa 30.08 61 *e*P **P 20 09 05.4 -2.3**
ANN *e**PP pP 20 09 08.6 -2.1
ANN *e* 20 12 08.3
ANN *e*S **S 20 14 03.4 -2.7**
ANN *e* 20 19 45.4
ANN pmax pmax
comp=Z,111nm,1.5s,mb5.4
ANN MLR MLR
comp=N,1μm,14.0s,MS4.8
ANN MLR MLR
comp=E,452nm,14.0s,MS4.8
ANN MLR MLR
comp=Z,1μm,14.0s,MS4.7
ANN Anapa 30.08 61 *i*P **P 20 09 05.7 -2.0**
FINES FINESS Array B 30.60 25 P **P 20 09 11.1 -1.0**
comp=Z,22nm,0.9s,mb5.0,baz=224,slow=6.5,SNR=77
FINES LR LR 20 22 41.8
comp=Z,790nm,18.4s,MS4.4,baz=234,slow=39
FINES FINESS Array B 30.60 25 P **P 20 09 11.1 -1.0**
FINES LR LR 20 22 41.8
AKCD Akcadag 30.67 74⇑ *i*P **P 20 09 13.1 +0.1**
AKCD Akcadag 30.67 74 *i*P **P 20 09 13.1 +0.1**
GRSN GIRESUNGRSN 30.68 69⇑ *i*P **P 20 09 13.3 +0.2**
GRSN GIRESUNGRSN 30.68 69 *i*P **P 20 09 13.3 +0.2**
UMAU Umeaa 30.85 18 P **P 20 09 14.1 -0.1**
KEMA Kemaliye 31.00 72⇑ *i*P **P 20 09 15.2 -0.6**
KEMA Kemaliye 31.00 72 *i*P **P 20 09 15.2 -0.6**
ATAB Bozova 31.08 75⇑ *i*P **P 20 09 16.9 +0.3**
ATAB Bozova 31.08 75 *i*P **P 20 09 16.9 +0.3**
KAF Kangasniemi 31.15 24 *e*P **P 20 09 14.8 -2.1**
KAF pmax pmax
comp=Z,41nm,1.1s,mb5.2
KAF Kangasniemi 31.15 24 *e*p **P 20 09 14.8 -2.1**
comp=Z,41nm,1.1s,mb5.2
KAF Kangasniemi 31.15 24 *e*p **P 20 09 14.8 -2.1**
comp=Z,41nm,1.1s,mb5.2
KAF Kangasniemi 31.15 24 *e*P **P 20 09 14.8 -2.1**
comp=Z,41nm,1.1s,mb5.2
BORG Borgarnes 31.43 343 PFAKE 20 09 30.0 +11
BORG LR LR
comp=Z,3μm,21.0s,MS4.9
ELZG Elazig 31.47 73⇑ *i*P **P 20 09 20.3 +0.3**
ELZG Elazig 31.47 73 *i*P **P 20 09 20.3 +0.3**
SOC Sochi 31.68 64*c* *i*P **P 20 09 21.0 -0.8**
SOC *e**PP pP 20 09 23.5 -1.4
SOC *e* 20 10 22.8
SOC *e*S **S 20 14 30.3 -0.9**
SOC *e*SS SS 20 16 14.5 -32
SOC pmax pmax
comp=Z,38nm,0.8s,mb5.3
SOC MLR MLR
comp=Z,590nm,18.0s,MS4.3
SOC Sochi 31.68 64 *i*P **P 20 09 20.9 -0.9**
OBN Obninsk 31.82 41*c* *i*P **P 20 09 21.5 -1.4**
OBN *i*S **S 20 14 30.6 -2.5**
OBN *i*SS SS 20 16 19.9 -29
OBN pmax pmax
comp=Z,104nm,1.5s,mb5.4
OBN MLR MLR
comp=Z,2μm,15.0s,MS4.9
OBN Obninsk 31.82 41⇑ *i*P **P 20 09 21.6 -1.3**
OBN LR LR
comp=Z,906nm,21.0s,MS4.4
VSR Storozhevoye 32.17 49 *e*P **P 20 09 24.5 -1.5**
VSR *e**PP pP 20 09 27.6 -1.5
VSR *e*S **S 20 14 35.2 -3.3**
VSR 20 19 55.8
VSR pmax pmax
comp=Z,40nm,1.3s,mb5.1
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,30nm,0.8s
VSR smax
comp=N,110nm,5.9s
VSR smax
comp=Z,10.0nm,4.1s
VSR smax
comp=E,100nm,6.8s
VSR MLR MLR
comp=N,580nm,10.0s,MS4.6
VSR MLR MLR
comp=Z,660nm,10.0s,MS4.6
VSR MLR MLR
comp=E,430nm,11.0s,MS4.6
VOR Voronezh 32.31 48 *e*P **P 20 09 26.0 -1.2**
VOR pmax pmax
comp=Z,200nm,2.0s,mb5.6
DIYA Diyarbakir 32.44 74⇑ *i*P **P 20 09 28.8 +0.2**
DIYA Diyarbakir 32.44 74 *i*P **P 20 09 28.8 +0.3**
KOPT Kop Dagi 32.45 70⇑ *i*P **P 20 09 29.2 +0.6**
KOPT Kop Dagi 32.45 70 *i*P **P 20 09 29.2 +0.6**
MOS Moscow 32.61 40 *e*P **P 20 09 26.4 -3.4**
MOS *e* 20 10 37.9
MOS *e* 20 12 11.8
MOS *e*S **S 20 14 43.0 -2.4**
MOS pmax pmax
comp=Z,256nm,1.9s,mb5.8
MOS pmax pmax
comp=Z,1μm,3.6s
MOS MLR MLR
comp=Z,3μm,14.0s,MS5.2
DBAD Bademkaya 33.27 68⇑ *i*P **P 20 09 35.3 -0.4**
DBAD Bademkaya 33.27 68 *i*P **P 20 09 35.3 -0.4**
DDEM Demirkent 33.32 68⇑ *i*P **P 20 09 36.0 -0.2**
DDEM Demirkent 33.32 68 *i*P **P 20 09 36.0 -0.2**
JOF Joensuu 33.42 26 *e*p **P 20 09 31.6 -5.2**
JOF Joensuu 33.42 26 *e*p **P 20 09 31.6 -5.2**
DAGI Agillar 33.42 68⇑ *i*P **P 20 09 36.9 -0.2**
ARTV Artvin 33.43 68⇑ *i*P **P 20 09 36.6 -0.5**
ARTV Artvin 33.43 68 *i*P **P 20 09 36.7 -0.4**
VRHR Novokhopersk 33.66 50 *e*P **P 20 09 38.0 -1.0**
VRHR *e**PP pP 20 09 40.8 -1.3
VRHR *e*S **S 20 15 00.0 -1.8**
VRHR pmax pmax
comp=Z,80nm,1.4s,mb5.5
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,80nm,1.2s
VRHR smax
comp=N,110nm,6.8s
VRHR smax
comp=Z,50nm,6.3s
VRHR smax
comp=E,70nm,5.4s
VRHR MLR MLR
comp=E,620nm,12.0s,MS4.7
VRHR MLR MLR
comp=Z,520nm,12.0s,MS4.5
VRHR MLR MLR
comp=N,630nm,15.0s,MS4.7
KIV Kislovodsk 33.83 63 P **P 20 09 40.1 -0.5**
comp=N,145nm,0.9s,mb5.9,SNR=12
KIV Kislovodsk 33.83 63 *e*P **P 20 09 39.8 -0.8**
KIV *e* 20 12 19.7
KIV *e*S **S 20 15 03.6 -0.9**
KIV *e*SS SS 20 17 08.5 -22
KIV pmax pmax
comp=Z,16nm,1.1s,mb4.9
KIV MLR MLR
comp=Z,285nm,15.0s,MS4.1
KIV Kislovodsk 33.83 63 *e*P **P 20 09 39.6 -1.0**
comp=Z,23nm,0.9s,mb5.1
KIV LR LR
comp=Z,541nm,20.0s,MS4.3
KIV Kislovodsk 33.83 63 ⇓P **P 20 09 39.3 -1.3**
SNR=7.1
KIV ⇓P 20 09 39.3
SNR=7.1
KIV Kislovodsk 33.83 63 P **P 20 09 39.3 -1.3**
SNR=7.1
ONI Oni 34.45 65 P **P 20 09 45.6 -0.4**
DIGO Kars 34.60 69⇑ *i*P **P 20 09 47.4 +0.1**
DIGO Kars 34.60 69 *i*P **P 20 09 47.4 +0.1**
KEH Kehvi 34.83 66 P **P 20 09 46.9 -2.4**
DYDN Diyadin 34.95 70⇑ *i*P **P 20 09 50.4 0.0**
DYDN Diyadin 34.95 70 *i*P **P 20 09 50.4 0.0**
GOR Gori 34.98 66 P **P 20 09 51.1 +0.5**
MSL Mosul 35.07 76 *e*P **P 20 09 54.0 +2.5**
MSL *e*S **S 20 15 30.0 +6.1**
HAKT HAKKARI 35.30 74⇑ *i*P **P 20 09 53.6 +0.1**
HAKT HAKKARI 35.30 74 *i*P **P 20 09 53.6 +0.2**
JMIC Jan Mayen 35.38 356 *e*P **P 20 09 54.7 +1.0**
JMIC *e*S **S 20 15 30.4 +2.5**
JMIC Jan Mayen 35.38 356 *e*P **P 20 09 54.7 +1.0**
SNR=27
TRO Tromso 35.42 12 *e*P **P 20 09 54.9 +0.9**
TRO *e*PP PP 20 11 09.6 -4.7
TRO *e*S **S 20 15 30.1 +1.6**
TRO *e*SS SS 20 18 02.0 -0.2
TRO AMS AMS 20 25 03.6
comp=Z,3μm,16.6s,MS5.1
TRO Tromso 35.42 12 *e*P **P 20 09 54.9 +0.9**
SNR=27
TRO *e*S **S 20 15 30.1 +1.7**
SNR=28
TRO *e*SS SS 20 18 02.0 -0.2
SNR=47
TBLG Delisi 35.48 67 P **P 20 09 54.5 -0.4**
MTA Mtatsminda 35.52 67 P **P 20 09 54.8 -0.4**
GNI Garni 35.67 69*c* *i*P **P 20 09 56.5 -0.1**
GNI pmax pmax
comp=Z,106nm,1.2s
GNI Garni 35.67 69 *e*P **P 20 09 56.3 -0.3**
comp=Z,168nm,1.5s,mb5.8
GNI LR LR
comp=Z,390nm,21.0s,MS4.2
GNI Garni 35.67 69 ⇑P **P 20 09 55.1 -1.4**
SNR=18
GNI ⇑P 20 09 55.1
SNR=18
GNI Garni 35.67 69 P **P 20 09 55.1 -1.5**
SNR=18
KTK1 Kautokeino 35.67 14 *e*P **P 20 09 55.6 -0.6**
KTK1 Kautokeino 35.67 14 *e*P **P 20 09 55.6 -0.6**
SNR=26
DGRG David-gareji 35.98 67 P **P 20 09 59.5 +0.3**
SCO Scoresbysund 36.47 348⇑ *i*P **P 20 10 04.1 +1.1**
SCO *i* 20 11 30.6
SCO pmax pmax
comp=Z,14nm,1.2s,mb4.8
SCO MLR MLR
comp=Z,2μm,16.0s,MS5.0
SCO Scoresbysund 36.47 348⇑ *i*P **P 20 10 04.1 +1.1**
comp=Z,14nm,1.2s,mb4.8
SCO *i* 20 11 30.6
SCO
comp=Z,2μm,16.0s
SCO Scoresbysund 36.47 348⇑ *i*P **P 20 10 04.1 +1.1**
comp=Z,14nm,1.2s,mb4.8,SNR=26
ARCES ARCESS Array B 36.57 15 P **P 20 10 02.6 -1.2**
comp=Z,13nm,0.7s,mb4.9,baz=210,slow=7.1,SNR=30
KEV Kevo 37.07 16 *e*P **P 20 10 05.7 -2.4**
comp=Z,22nm,0.7s,mb5.1
KEV LR LR
comp=Z,2μm,20.0s,MS4.9
KEV Kevo 37.07 16 *e*p **P 20 10 05.7 -2.4**
comp=Z,22nm,0.7s,mb5.1
KEV Kevo 37.07 16 *e*p **P 20 10 05.7 -2.4**
comp=Z,22nm,0.7s,mb5.1
KEV Kevo 37.07 16 *e*P **P 20 10 05.7 -2.4**
comp=Z,22nm,0.7s,mb5.1
APA Apatity 37.10 21⇓ *i*P **P 20 10 07.8 -0.6**
APA *i* 20 11 30.0
APA *i*S **S 20 15 54.0 -0.2**
APA pmax pmax
comp=Z,9.0nm,1.2s,mb4.5
APA MLR MLR
comp=Z,1μm,13.0s,MS4.9
MAK Makhachkala 37.39 64*c* *i*P **P 20 10 10.2 -1.0**
MAK *e* 20 11 36.2
MAK *e*PPP 20 11 52.8
MAK *e* 20 12 27.4
MAK *e*S **S 20 15 50.3 -8.9**
MAK *e* 20 20 24.7
MAK pmax pmax
comp=E,151nm,1.5s
MAK pmax pmax
comp=Z,197nm,1.7s,mb5.7
MAK pmax pmax
comp=N,113nm,1.3s
LVZ Lovozero 37.67 21⇑ *e*P **P 20 10 12.7 -0.6**
LVZ MLR MLR
comp=Z,2μm,19.0s,MS4.9
MIB Mutribah 40.41 85 *e*P **P 20 10 35.4 -1.3**
MIB AMb AMB 20 10 44.7
comp=Z,88nm,1.3s,mb5.3
NAY Al-Naaiem 40.54 85 *e*P **P 20 10 35.8 -1.9**
NAY AMb AMB 20 10 52.2
comp=Z,28nm,1.6s,mb4.6
UMR Umm Al-Rimmam 40.81 85 *e*P **P 20 10 38.5 -1.5**
UMR AMb AMB 20 10 48.1
comp=Z,116nm,1.4s,mb5.3
SUMG Summit 41.40 344 *e*P **P 20 10 45.5 +1.2**
comp=Z,614nm,2.3s,mb5.8
SUMG Summit 41.40 344⇑ *i*P **P 20 10 45.8 +1.5**
comp=Z,19nm,1.0s,mb4.7
SUMG Summit 41.40 344⇑ *i*P **P 20 10 45.8 +1.5**
comp=Z,19nm,1.0s,mb4.7,SNR=25
DAG Danmarks Havn 41.74 354⇓ *i*P **P 20 10 47.9 +0.9**
DAG pmax pmax
comp=Z,25nm,1.3s,mb4.7
DAG MLR MLR
comp=N,4μm,17.0s
DAG MLR MLR
comp=Z,6μm,17.0s,MS5.6
DAG Danmarks Havn 41.74 354⇓ *i*P **P 20 10 47.9 +0.9**
comp=Z,25nm,1.3s,mb4.7
DAG
comp=Z,6μm,17.0s
SFJD Kangerlussuaq 42.09 333⇑ *i*P **P 20 10 49.1 -0.9**
SFJD *i* 20 12 29.1
SFJD pmax pmax
comp=Z,12nm,0.8s,mb4.6
SFJD MLR MLR
comp=Z,2μm,17.0s,MS5.0
SFJD Kangerlussuaq 42.09 333 *e*P **P 20 10 49.7 -0.3**
comp=Z,171nm,1.7s,mb5.4
SFJD Kangerlussuaq 42.09 333⇑ *i*P **P 20 10 49.1 -0.9**
comp=Z,12nm,0.8s,mb4.6
SFJD *i* 20 12 29.1
SFJD
comp=Z,2μm,17.0s
SFJD Kangerlussuaq 42.09 333⇑ *i*P **P 20 10 49.1 -0.9**
comp=Z,12nm,0.8s,mb4.6,SNR=25
IVRN Varamin 42.21 75 *e*P **P 20 10 50.5 -0.9**
IVRN Varamin 42.21 75 *e*P **P 20 10 50.5 -0.9**
KBS Kingsbay 43.43 4 *e*P **P 20 11 02.0 +1.3**
KBS AMb AMB 20 11 07.5
comp=Z,74nm,2.9s,mb4.9
KBS *e*SS SS 20 20 45.2 +3.1
KBS AMS AMS 20 29 50.2
comp=Z,2μm,15.5s,MS5.2
KBS Kingsbay 43.43 4 *e*P **P 20 11 01.2 +0.5**
KBS *e* 20 11 02.0
KBS pmax pmax
comp=Z,23nm,1.0s,mb4.9
KBS MLR MLR
comp=Z,2μm,15.5s,MS5.2
KBS Kingsbay 43.43 4 *e*P **P 20 11 01.2 +0.5**
comp=Z,23nm,1.0s,mb4.8
KBS *e*P pP 20 11 02.0 -1.8
KBS LR LR
comp=Z,2μm,15.5s,MS5.2
KBS Kingsbay 43.43 4⇑ *i*P **P 20 11 02.0 +1.3**
SNR=25
SOKR Solikamsk 43.50 39*c* *i*P **P 20 11 01.1 -0.4**
SOKR S **S 20 17 28.4 -1.5**
SOKR SS SS 20 20 41.7 -2.3
SOKR pmax pmax
comp=Z,150nm,0.9s,mb5.7
SOKR MLR MLR
comp=Z,1μm,17.0s,MS5.0
DESE Dese 43.95 114 *e*P **P 20 11 07.5 +1.9**
ARU Arti 44.21 43 P **P 20 11 06.4 -0.9**
comp=Z,980nm,0.8s,mb6.6,SNR=48
ARU Arti 44.21 43*c* *i*P **P 20 11 06.8 -0.5**
ARU *e* 20 12 47.0
ARU *e*PPP 20 13 29.2
ARU S **S 20 17 40.0 -0.4**
ARU SS SS 20 20 58.8 +0.9
ARU pmax pmax
comp=Z,430nm,1.7s,mb5.9
ARU MLR MLR
comp=Z,1μm,14.0s,MS4.9
ARU Arti 44.21 43⇑ *i*P **P 20 11 06.8 -0.5**
comp=Z,748nm,1.6s,mb6.2
ARU LR LR
comp=Z,837nm,19.0s,MS4.7
FURI Furi 44.72 117 *e*P **P 20 11 14.2 +2.3**
FURI S tx 20 26 36.7
SVE Sverdlovsk 45.36 43⇓ *e*P **P 20 11 16.6 +0.1**
SVE *e*S **S 20 17 57.9 +0.8**
SVE pmax pmax
comp=Z,305nm,1.7s,mb5.8
SVE MLR MLR
comp=Z,1μm,12.0s,MS5.1
ASCN Ascension 45.50 199 PFAKE 20 11 30.0 +12
ASCN LR LR
comp=Z,898nm,22.0s,MS4.7
ABKT Ailbek 46.31 69 P **P 20 11 23.7 -0.5**
comp=Z,119nm,1.5s,mb5.6,SNR=18
MBAR Mbarara 46.60 134 P **P 20 11 26.4 -0.3**
comp=Z,79nm,1.1s,mb5.6,SNR=14
SCHQ Schefferville 48.26 315 P **P 20 11 38.9 -0.3**
comp=Z,19nm,0.7s,mb5.2,baz=88,slow=7.8,SNR=23
SCHQ LR LR 20 29 26.8
comp=Z,2μm,19.1s,MS5.2,baz=84,slow=33
SCHQ Schefferville 48.26 315 *e*P **P 20 11 38.8 -0.4**
comp=Z,97nm,1.4s,mb5.6
KMBO Kilima Mbogo 51.00 128 P **P 20 12 02.2 +1.7**
comp=Z,15nm,0.9s,mb4.9,baz=320,slow=8.4,SNR=33
KMBO LR LR 20 35 29.9
comp=Z,5μm,18.0s,MS5.5,baz=281,slow=38
KMBO Kilima Mbogo 51.00 128⇑ *i*P **P 20 12 02.0 +1.5**
KMBO *e* 20 13 56.9
KMBO pmax pmax
comp=Z,72nm,1.3s

KMBO MLR MLR
comp=Z,5μm,21.0s
KMBO Kilima Mbogo 51.00 128⇑*i*P P 20 12 02.0 +1.4
comp=Z,72nm,1.3s,mb5.4
KMBO *e*PP PP 20 13 56.9 -0.3
KMBO LR LR
comp=Z,5μm,21.0s,MS5.5
KMBO Kilima Mbogo 51.00 128 ⇓P P 20 12 01.2 +0.7
SNR=21
KMBO ⇓P 20 12 01.2
SNR=21
KMBO Kilima Mbogo 51.00 128 P P 20 12 01.2 +0.7
SNR=21
BRVK Borovoye 51.24 47 P P 20 12 02.7 +0.9
comp=Z,352nm,1.4s,mb6.1,SNR=30
BRVK Borovoye 51.24 47*c i*P P 20 12 02.0 +0.2
BRVK pmax pmax
comp=Z,184nm,1.7s,mb5.7
BRVK Borovoye 51.24 47⇑*i*P P 20 12 02.1 +0.2
comp=Z,326nm,1.8s,mb6.0
BRVK LR LR
comp=Z,876nm,19.0s,MS4.8
BRVK Borovoye 51.24 47 ⇑P P 20 12 01.0 -0.8
SNR=28
BRVK ⇑P 20 12 01.0
SNR=28
BRVK Borovoye 51.24 47 P P 20 12 01.0 -0.8
SNR=28
BVAR Borovoye Array 51.30 47 P P 20 12 02.5 +0.2
comp=Z,6.3nm,0.5s,mb4.8,baz=264,slow=6.0,SNR=46
BVAR PP PP 20 13 59.0 0.0
comp=Z,2.5nm,0.7s,baz=264,slow=13,SNR=3.8
BBSR BB Station 52.31 286 PFAKE 20 12 20.0 +10
BBSR LR LR
comp=Z,1μm,20.0s,MS4.9
LBNH Lisbon 53.63 302 *e*P **P 20 12 20.3 +0.5**
LBNH pmax pmax
comp=Z,19nm,0.8s,mb5.1
LBNH MLR MLR
comp=Z,6μm,20.0s,MS5.7
LBNH Lisbon 53.63 302 *e*P **P 20 12 20.3 +0.6**
comp=Z,20nm,0.8s,mb5.1
LBNH LR LR
comp=Z,6μm,20.0s,MS5.7
MDV Middlebury 54.57 302 *e*P **P 20 12 27.0 +0.4**
FRNY Flat Rock 54.59 303 *e*P **P 20 12 26.6 -0.1**
comp=Z,69nm,1.5s,mb5.5
NCB Newcomb 55.29 303 *e*P **P 20 12 32.0 +0.2**
comp=Z,128nm,2.0s,mb5.6
NCB LR LR
comp=Z,6μm,20.0s,MS5.7
LONY Lake Ozonia 55.33 303 *e*P **P 20 12 31.8 -0.3**
comp=Z,30nm,1.1s,mb5.2
LONY LR LR
comp=Z,4μm,20.0s,MS5.5
KBL Kabul 55.76 69⇑*i*P P 20 12 34.5 -0.8
KBL pmax pmax
comp=Z,18nm,1.1s,mb5.0
KBL Kabul 55.76 69⇑*i*P P 20 12 34.5 -0.8
comp=Z,18nm,1.1s,mb5.0
EKS2 Erkin-Say 56.25 59 P P 20 12 39.1 +0.3
SNR=33
EKS2 Erkin-Say 56.25 59⇑*i*P P 20 12 38.9 +0.2
comp=Z,64nm,1.3s,mb5.5
EKS2 LR LR
comp=Z,785nm,19.0s,MS4.8
AML Almayashu 56.37 59 P P 20 12 40.4 +0.8
SNR=8.9
AML Almayashu 56.37 59⇑*e*P P 20 12 39.5 -0.2
comp=Z,39nm,1.6s,mb5.2
AML LR LR
comp=Z,586nm,19.0s,MS4.7
ANWB Willy Bob 56.69 268 PFAKE 20 12 50.0 +7.9
ANWB LR LR
comp=Z,966nm,20.0s,MS4.9
AAK Ala-Archa 56.76 59 P P 20 12 42.9 +0.6
comp=Z,86nm,1.0s,mb5.7,SNR=14
AAK Ala-Archa 56.76 59 P P 20 12 42.7 +0.3
SNR=7.5
AAK Ala-Archa 56.76 59⇑*i*P P 20 12 42.2 -0.1
AAK pmax pmax
comp=Z,68nm,1.6s,mb5.4
AAK MLR MLR
comp=Z,702nm,20.0s,MS4.8
AAK Ala-Archa 56.76 59⇑*i*P P 20 12 42.2 -0.1
comp=Z,68nm,1.6s,mb5.4
AAK LR LR
comp=Z,702nm,20.0s,MS4.8
AAK Ala-Archa 56.76 59 ⇑P P 20 12 40.6 -1.7
SNR=22
AAK ⇑P 20 12 40.6
SNR=22
AAK Ala-Archa 56.76 59 P P 20 12 40.6 -1.7
SNR=22
FRU Bishkek 56.77 58⇑*i*P P 20 12 42.0 -0.4
FRU pmax pmax
comp=Z,350nm,2.3s,mb6.0
CHMS Chumysh 56.81 58 P P 20 12 42.4 -0.2
SNR=18
KURK Kurchatov 56.81 48⇑*i*P P 20 12 42.1 -0.5
KURK pmax pmax
comp=Z,115nm,1.0s,mb5.9
KURK MLR MLR
comp=Z,808nm,21.0s,MS4.8
KURK Kurchatov 56.81 48⇑*i*P P 20 12 42.1 -0.5
comp=Z,115nm,1.0s,mb5.9
KURK LR LR
comp=Z,808nm,21.0s,MS4.8
KURK Kurchatov 56.81 48 ⇑P P 20 12 42.1 -0.5
SNR=64
KURK ⇑P 20 12 42.1
SNR=64
KURK Kurchatov 56.81 48 P P 20 12 42.1 -0.5
SNR=64
UCH Uchtor 56.91 59 P P 20 12 44.1 +0.7
SNR=16
UCH Uchtor 56.91 59⇑*e*P P 20 12 43.9 +0.4
comp=Z,10nm,0.8s,mb4.9
KBK Karagaybulak 57.06 58 P P 20 12 44.8 +0.3
SNR=11
BINY Binghamton 57.10 301 *e*P **P 20 12 45.4 +0.6**
comp=Z,92nm,1.6s,mb5.6
BINY LR LR
comp=Z,2μm,20.0s,MS5.2
TKM2 Tokmak 2 57.42 58 P P 20 12 46.9 -0.1
SNR=9.7
TKM2 Tokmak 2 57.42 58⇑*i*P P 20 12 46.8 -0.2
TKM2 pmax pmax
comp=Z,118nm,2.3s,mb5.5
TKM2 Tokmak 2 57.42 58⇑*i*P P 20 12 46.8 -0.2
comp=Z,118nm,2.3s,mb5.5
TSUM Tsumeb 57.47 160⇑*e*P P 20 12 47.8 +0.3
comp=Z,113nm,1.5s,mb5.7
KZA Kyzart 57.48 59 P P 20 12 48.6 +1.2
SNR=17
FDF Fort de France 57.74 265 *e*P **P 20 12 50.1 +0.5**
FDF pmax pmax
comp=Z,79nm,1.3s,mb5.6
FDF MLR MLR
comp=Z,572nm,19.0s,MS4.7
FDF Fort de France 57.74 265 *e*P **P 20 12 50.1 +0.5**
comp=Z,79nm,1.3s,mb5.6
FDF LR LR
comp=Z,572nm,19.0s,MS4.7
LSZ Lusaka 57.75 147 *e*P **P 20 12 50.1 +0.6**
LSZ pmax pmax
comp=Z,124nm,1.4s,mb5.8
LSZ Lusaka 57.75 147 *e*P **P 20 12 50.1 +0.6**
comp=Z,124nm,1.4s,mb5.8
ULHL Ulahol 58.10 58 P P 20 12 52.2 +0.3
SNR=11
MVL Millersville 58.16 299 *e*P **P 20 12 53.4 +1.1**
comp=Z,221nm,2.1s,mb5.8
NVS Novosibirsk 58.21 43 *i*P **P 20 12 52.7 +0.4**
NVS *i* 20 14 58.4
NVS *e*S **S 20 20 52.7 -1.1**
NVS pmax pmax
comp=Z,579nm,2.3s,mb6.2
NVS pmax pmax
comp=N,12nm,1.0s
NVS pmax pmax
comp=E,84nm,1.5s
NVS pmax pmax
comp=N,61nm,2.6s
NVS pmax pmax
comp=Z,220nm,2.6s,mb5.7
NVS pmax pmax
comp=E,126nm,3.6s
NVS smax
comp=N,42nm,2.5s
NVS smax
comp=E,34nm,2.8s
AAA Alma-Ata 58.21 57 *i*P **P 20 12 53.2 +0.6**
AAA *e*S **S 20 20 53.5 -0.8**
AAA pmax pmax
comp=Z,1μm,4.8s
AAA smax
comp=N,500nm,7.1s
AAA MLR MLR
comp=Z,1μm,16.0s,MS5.1
SADO Sadowa 58.34 305 P **P 20 12 53.2 -0.2**
comp=Z,8.4nm,0.7s,mb4.9,baz=81,slow=5.0,SNR=8.2
KSH Kashi 58.94 61⇑*i*P P 20 12 57.2 -0.5
KSH pP pP 20 13 01.8 +0.9
KSH sP sP 20 13 04.2 +2.0
KSH PcP PcP 20 13 46.5 -0.4
KSH PP PP 20 15 09.2 +1.4
KSH ScP ScP 20 17 45.0 -2.5
KSH PcS PcS 20 17 46.7 -1.9
KSH S **S 20 21 00.3 -3.6**
KSH sS sS 20 21 07.9 -1.2
KSH ScS ScS 20 22 42.9 -4.9
KSH SS SS 20 24 55.3 -1.8
KSH pmax pmax
comp=Z,71nm,1.3s,mb5.5
KSH pmax pmax
comp=Z,760nm,3.3s
KSH LR LR
comp=N,360nm,11.9s,MS5.0
KSH LR LR
comp=E,490nm,10.9s,MS5.0
KSH LR LR
comp=Z,570nm,14.1s,MS4.8
SSPA Standing Stone 59.01 300 *e*P **P 20 12 57.5 -0.7**
comp=Z,49nm,1.4s,mb5.3
NIL Nilore 59.31 69 PFAKE 20 13 10.0 +10
NIL LR LR
comp=Z,186nm,22.0s,MS4.2
ZAA0 Zalesovo Array 59.38 43⇑*i*P P 20 13 00.1 -0.4
ZALV Zalesovo Beam 59.38 43 P **P 20 13 00.2 -0.3**
comp=Z,28nm,0.6s,mb5.5,baz=289,slow=7.3,SNR=116
ZALV PP PP 20 15 07.9 -3.3
comp=Z,3.1nm,0.8s,baz=302,slow=8.3,SNR=3.4
ZALV Zalesovo Beam 59.38 43 P **P 20 13 00.2 -0.3**
ZALV PP PP 20 15 07.9 -3.3
GRGR Grenville 59.59 263 PFAKE 20 13 10.0 +7.5
GRGR LR LR
comp=Z,304nm,20.0s,MS4.4
CBN Corbin 59.59 297 PFAKE 20 13 10.0 +7.7
CBN LR LR
comp=Z,2μm,22.0s,MS5.2
CBYP Canovanas 59.67 271 *e*P **P 20 13 03.7 +0.7**
comp=Z,28nm,1.0s,mb5.2
HUMP Col San Antoni 59.74 271 *e*P **P 20 13 05.1 +1.6**
comp=Z,205nm,1.6s,mb5.9
ERPA Erie 59.90 302 *e*P **P 20 13 03.7 -0.6**
comp=Z,116nm,1.4s,mb5.7
ERPA LR LR
comp=Z,2μm,20.0s,MS5.3
JSRW J. Sargeant Re 60.17 297 *e*P **P 20 13 06.6 +0.4**
CELP Cerrillos 60.36 272 *e*P **P 20 13 09.1 +1.3**
AOPR Arecibo Observ 60.36 272 *e*P **P 20 13 09.3 +1.5**
comp=Z,32nm,0.8s,mb5.4
OBIP Obispado Ponce 60.40 272 *e*P **P 20 13 09.1 +1.1**
comp=Z,72nm,1.0s,mb5.7
MK31 Makanchi Array 60.44 52⇑*i*P P 20 13 07.4 -0.5
MK31 *e* 20 15 17.3
MKAR Makanchi Array 60.44 52 P **P 20 13 07.4 -0.5**
comp=Z,20nm,0.6s,mb5.3,baz=313,slow=4.4,SNR=172
MKAR LR LR 20 40 37.1
comp=Z,677nm,19.1s,MS4.8,baz=294,slow=37
MCWV Mont Chateau 60.77 300 *e*P **P 20 13 09.7 -0.6**
comp=Z,228nm,2.2s,mb5.9
MCWV LR LR
comp=Z,3μm,20.0s,MS5.4
CRPR Cabo Rojo, PR 60.83 272 *e*P **P 20 13 11.6 +0.6**
comp=Z,43nm,1.1s,mb5.5
CNNC Cliffs of the 61.20 294 PFAKE 20 13 20.0 +6.7
CNNC LR LR
comp=Z,2μm,20.0s,MS5.3
BHJ Bhuj 61.22 81 *e*PKP **P 20 13 12.5 -1.1**
GLMI Grayling 61.92 307 PFAKE 20 13 30.0 +12
GLMI LR LR
comp=Z,2μm,20.0s,MS5.3
BLA Blacksburg 62.20 297 PFAKE 20 13 30.0 +10
BLA LR LR
comp=Z,1μm,19.0s,MS5.2
GRTK Grand Turk 62.30 277 PFAKE 20 13 30.0 +9.1
GRTK LR LR
comp=Z,726nm,22.0s,MS4.8
AAM Ann Arbor 62.32 304 PFAKE 20 13 30.0 +9.3
AAM LR LR
comp=Z,4μm,22.0s,MS5.5
ACSO Alum Creek Sta 62.73 301 P **P 20 13 23.0 -0.5**
comp=Z,47nm,0.8s,mb5.7
ACSO LR LR
comp=Z,3μm,20.0s,MS5.5
AJM Ajmer 63.62 75 *e*PKP **P 20 13 28.0 -1.6**
AJM AMb AMB 20 13 30.6
comp=Z,68nm,1.3s,mb5.5
SDDR Presa de Saban 63.71 275 *e*P **P 20 13 31.4 +1.1**
comp=Z,121nm,1.1s,mb5.8
NHSC New Hope 63.84 293 PFAKE 20 13 40.0 +9.0
NHSC LR LR
comp=Z,2μm,20.0s,MS5.3
COWI Conover 64.28 309 PFAKE 20 13 50.0 +16
COWI LR LR
comp=Z,3μm,19.0s,MS5.5
DDI Dehra Dun 64.44 70 *ex* x 20 13 33.0
TZTN Tazewell 64.75 298 *e*P **P 20 13 36.6 -0.2**
comp=Z,59nm,1.4s,mb5.4
EYMN Ely 64.92 312 *e*P **P 20 13 36.8 -0.9**
comp=Z,62nm,1.4s,mb5.4
EYMN LR LR
comp=Z,2μm,20.0s,MS5.3
WMQ Urumqi 65.14 53 P **P 20 13 40.0 +0.7**
WMQ sP sP 20 13 47.0 +3.3
WMQ PP PP 20 16 05.0 +2.8
WMQ ScP 20 18 14.0
WMQ S S 20 22 21.0 -1.0
WMQ ScS ScS 20 23 31.0 -3.4
WMQ SS SS 20 26 34.0 +0.2
WMQ pmax pmax
comp=Z,45nm,1.0s,mb5.5
WMQ pmax pmax
comp=Z,190nm,6.0s
WMQ LR LR
comp=N,1μm,18.0s,MS5.3
WMQ LR LR
comp=E,960nm,18.0s,MS5.3
WMQ LR LR
comp=Z,620nm,18.0s,MS4.8
TKL Tuckaleechee C 65.32 297 *e*P **P 20 13 40.3 -0.3**
LBTB Lobatse 65.47 154 *e*P **P 20 13 41.3 -0.2**
LBTB pmax pmax
comp=Z,194nm,1.8s,mb5.8
LBTB MLR MLR
comp=Z,5μm,21.0s,MS5.7
LBTB Lobatse 65.47 154 *e*P **P 20 13 41.3 -0.2**
comp=Z,194nm,1.8s,mb5.8
LBTB LR LR
comp=Z,5μm,21.0s,MS5.7
WCI Wyandotte Cave 65.92 301 *e*P **P 20 13 43.6 -0.8**
WCI pmax pmax
comp=Z,129nm,1.9s,mb5.6
WCI Wyandotte Cave 65.92 301 *e*P **P 20 13 43.6 -0.8**
comp=Z,129nm,1.9s,mb5.6
CPCT Cooper Cave 65.95 297 *e*P **P 20 13 44.6 -0.1**
GOGA Godfrey 66.14 295 *e*P **P 20 13 45.9 0.0**
GOGA pmax pmax
comp=Z,56nm,1.5s,mb5.4
GOGA MLR MLR
comp=Z,2μm,20.0s,MS5.3
GOGA Godfrey 66.14 295 *e*P **P 20 13 45.9 0.0**
comp=Z,56nm,1.5s,mb5.4
GOGA LR LR
comp=Z,2μm,20.0s,MS5.3
MSEY Mahe Island 66.16 115 PFAKE 20 14 00.0 +14
MSEY LR LR
comp=Z,2μm,21.0s,MS5.4
GTBY Guantanamo Bay 66.30 278 PFAKE 20 14 00.0 +13
GTBY LR LR
comp=Z,870nm,22.0s,MS4.9
JFWS Jewell Farm 66.42 307 PFAKE 20 14 00.0 +12
JFWS LR LR
comp=Z,2μm,22.0s,MS5.2
ULM Lac du Bonnet 66.42 316 P **P 20 13 46.3 -1.1**
comp=Z,17nm,0.9s,mb5.1,baz=69,slow=6.1,SNR=10
ULM LR LR 20 39 05.1
comp=Z,2μm,20.0s,MS5.3,baz=53,slow=33
ULM Lac du Bonnet 66.42 316 *e*P **P 20 13 46.1 -1.3**
comp=Z,26nm,1.0s,mb5.2
HDIL Hopedale 66.89 304 PFAKE 20 14 00.0 +9.4
HDIL LR LR
comp=Z,3μm,19.0s,MS5.5
OLIL Olney 66.94 302 *e*P **P 20 13 49.3 -1.6**
comp=Z,61nm,1.0s,mb5.6
TIXI Tiksi 67.01 15⇑*i*P P 20 13 51.1 +0.3
TIXI pmax pmax
comp=Z,136nm,1.7s,mb5.7
TIXI Tiksi 67.01 15⇑*i*P P 20 13 51.1 +0.3
comp=Z,136nm,1.7s,mb5.7
DWPF Disney 67.17 289 PFAKE 20 14 00.0 +7.4
DWPF LR LR
comp=Z,946nm,19.0s,MS5.0
AGMN Agassiz Nation 67.35 314 *e*P **P 20 13 52.4 -1.0**
comp=Z,57nm,1.6s,mb5.3
AGMN LR LR
comp=Z,2μm,19.0s,MS5.4
BHPL Bhopal 67.42 77 *e*PKP **P 20 13 52.9 -1.3**
BHPL AMb AMB 20 13 55.3
comp=Z,91nm,1.6s,mb5.5
FFC Flin Flon 67.48 322 P **P 20 13 53.3 -0.8**
comp=Z,107nm,1.4s,mb5.7,SNR=7.3
FFC Flin Flon 67.48 322 *i*P **P 20 13 54.0 -0.1**
FFC Flin Flon 67.48 322 *e*P **P 20 13 53.5 -0.6**
comp=Z,42nm,1.4s,mb5.3
FFC LR LR
comp=Z,3μm,21.0s,MS5.4
KAD Karad 67.91 84 *e*PKP **P 20 13 56.8 -0.6**
SIUC Southern Illin 68.20 301 *e*P **P 20 13 57.6 -1.4**
comp=Z,26nm,1.0s,mb5.2
AKL Akola 68.40 80 *e*PKP **P 20 13 59.8 -0.6**
YKA Yellowknife Ar 68.65 333 P **P 20 14 00.9 -0.4**
comp=Z,17nm,0.9s,mb5.0,baz=55,slow=6.3,SNR=64
YKA LR LR 20 42 25.1
comp=Z,287nm,18.2s,MS4.5,baz=50,slow=34
YKA Yellowknife Ar 68.65 333 P **P 20 14 00.9 -0.4**
YKA LR LR 20 42 25.1
BOSA Boshof 68.66 156 P **P 20 14 01.2 -0.5**
comp=Z,27nm,1.1s,mb5.1,baz=343,slow=6.4,SNR=20
BOSA LR LR 20 45 22.1
comp=Z,5μm,18.5s,MS5.8,baz=343,slow=37
BOSA Boshof 68.66 156⇓*e*P P 20 14 00.3 -1.4
BOSA pmax pmax
comp=Z,107nm,1.4s,mb5.6
BOSA MLR MLR
comp=Z,5μm,22.0s,MS5.7
BOSA Boshof 68.66 156⇓*e*P P 20 14 00.3 -1.4
comp=Z,107nm,1.4s,mb5.6
BOSA LR LR
comp=Z,5μm,22.0s,MS5.7
SDV Santo Domingo 68.68 266⇑*e*P P 20 14 02.8 +0.5
comp=Z,74nm,1.2s,mb5.5
PLAL Pickwick Lake 68.73 298 *e*P **P 20 14 00.6 -1.7**
comp=Z,48nm,0.9s,mb5.4
FVM French Village 68.90 302 *e*P **P 20 14 01.8 -1.5**
FVM pmax pmax
comp=Z,122nm,1.4s,mb5.6
FVM French Village 68.90 302 *e*P **P 20 14 01.8 -1.5**
comp=Z,122nm,1.4s,mb5.6
LRAL Lakeview Retre 68.91 296 P **P 20 14 03.0 -0.5**
comp=Z,16nm,0.8s,mb5.0
LRAL LR LR
comp=Z,2μm,21.0s,MS5.3
MTDJ Mount Denham 69.14 278 *e*P **P 20 14 04.8 -0.3**
comp=Z,318nm,1.4s,mb6.1
MOY Mondy 69.19 41 *e*P **P 20 14 06.0 +1.2**
MOY pmax pmax
comp=Z,234nm,3.6s
CCM Cathedral Cave 69.43 303⇑*e*P P 20 14 05.0 -1.6
CCM pmax pmax
comp=Z,26nm,0.8s,mb5.2
CCM MLR MLR
comp=Z,2μm,20.0s,MS5.4
CCM Cathedral Cave 69.43 303⇑*e*P P 20 14 05.0 -1.6
comp=Z,26nm,0.8s,mb5.2
CCM LR LR
comp=Z,2μm,20.0s,MS5.4
NGP Nagpur 69.78 78 *ex* **P 20 14 04.4 -4.6**
BRAL Brewton 69.97 294 PFAKE 20 14 20.0 +10
BRAL LR LR
comp=Z,1μm,20.0s,MS5.2
ECSD EROS Data Cent 70.08 310 *e*P **P 20 14 09.4 -1.0**
comp=Z,16nm,0.9s,mb5.0
ECSD LR LR
comp=Z,4μm,19.0s,MS5.7
CAM4 Nova Friburgo 70.25 221⇑*i*P P 20 14 12.2 +0.5
CAM4 *i* pP 20 14 15.5 +0.5
CAM4 *i* 20 14 17.7
CAM4 *i* 20 14 27.5
CAM4 *i* 20 14 56.4
CAM4 *i* 20 15 04.1
CAM4 *i* 20 15 17.3
INK Inuvik 70.32 343⇑*e*P P 20 14 11.2 -0.3
INK pmax pmax
comp=Z,45nm,1.3s
INK Inuvik 70.32 343⇑*e*P P 20 14 11.2 -0.4
comp=Z,45nm,1.3s,mb5.2
TLY Talaya 70.57 40 P **P 20 14 14.2 +0.9**
comp=Z,315nm,1.4s,mb6.0,SNR=29
TLY Talaya 70.57 40 *e*P **P 20 14 14.0 +0.7**
TLY *e* 20 14 34.7
TLY *e*S S 20 23 28.9 +2.2
TLY pmax pmax
comp=Z,138nm,1.5s,mb5.7
TLY MLR MLR
comp=Z,1μm,15.0s,MS5.2
TLY Talaya 70.57 40 *e*P **P 20 14 13.6 +0.3**
comp=Z,154nm,1.5s,mb5.7
TLY Talaya 70.57 40 ⇓P P 20 14 14.1 +0.8
SNR=48
TLY ⇓P 20 14 14.1
SNR=48
TLY Talaya 70.57 40 P **P 20 14 14.1 +0.8**
SNR=48
TLY *e*S S 20 23 28.9 +2.2
IRK Irkutsk 70.58 39 *e*P **P 20 14 12.8 -0.6**
IRK pmax pmax
comp=Z,228nm,1.7s,mb5.8
ZAK Zakamensk 71.09 41⇓*i*P P 20 14 17.0 +0.4
ZAK pmax pmax
comp=Z,57nm,1.5s,mb5.3
HYB Hyderabad 71.37 82 *e*P **P 20 14 18.0 -0.7**
HYB Hyderabad 71.37 82 *i*P **P 20 14 17.0 -1.7**
BOD Bodaibo 71.79 31 *e*P **P 20 14 18.9 -1.7**
BOD pmax pmax
comp=Z,69nm,1.5s,mb5.4
DGMT Dagmar 72.00 317 ⇑P P 20 14 22.1 +0.1
baz=72
DGMT Dagmar 72.00 317 *e*P **P 20 14 20.1 -2.0**
comp=Z,74nm,1.3s,mb5.5
DGMT LR LR
comp=Z,2μm,19.0s,MS5.3
KSU1 Kansas State U 72.49 306 *e*P **P 20 14 23.9 -1.3**
comp=Z,81nm,1.3s,mb5.5
KSU1 LR LR
comp=Z,4μm,21.0s,MS5.7
MIAR Mount Ida 72.84 300⇑*e*P P 20 14 26.4 -0.9
MIAR pmax pmax
comp=Z,49nm,1.2s,mb5.3
MIAR Mount Ida 72.84 300⇑*e*P P 20 14 26.4 -1.0
comp=Z,49nm,1.2s,mb5.3
EDM Edmonton 73.86 325⇑*e*P P 20 14 32.3 -0.7
ROSC El Rosal 73.99 264 P **P 20 14 34.4 0.0**
comp=Z,4.7nm,0.5s,mb4.7,baz=281,slow=23,SNR=11
ROSC LR LR 20 45 11.0
comp=Z,467nm,18.9s,MS4.8,baz=202,slow=34
ROSC El Rosal 73.99 264⇑*e*P P 20 14 34.5 +0.2
LAO LASA Array 74.14 316 PFAKE 20 14 50.0 +15
LAO LR LR
comp=Z,2μm,21.0s,MS5.4
SONM Songino Array 74.23 42 P **P 20 14 35.6 +0.3**
comp=Z,38nm,1.3s,mb5.2,baz=296,slow=3.5,SNR=93
SONM LR LR 20 48 51.7
comp=Z,843nm,20.5s,MS5.0,baz=318,slow=37
YAK Yakutsk 74.47 22*c i*P P 20 14 36.5 +0.1
YAK *e* 20 14 50.1
YAK *e*PPP 20 19 04.9
YAK *e*S S 20 24 11.2 +0.2

YAK e 20 24 46.1
YAK pmax pmax
comp=Z,96nm,1.4s,mb5.5
YAK pmax pmax
comp=N,62nm,1.5s
YAK pmax pmax
comp=E,65nm,1.5s
YAK smax
comp=N,459nm,4.0s
YAK smax
comp=E,218nm,4.2s
YAK MLR MLR
comp=Z,961nm,20.0s,MS5.1
YAK MLR MLR
comp=E,875nm,20.0s,MS5.2
YAK MLR MLR
comp=N,692nm,18.0s,MS5.2
YAK Yakutsk 74.47 22⇑ iP P 20 14 36.5 +0.1
comp=N,93nm,0.8s,mb5.8
LSA Lhasa 74.56 64⇑ iP P 20 14 37.6 +0.1
LSA pmax pmax
comp=Z,70nm,1.5s,mb5.4
LSA Lhasa 74.56 64⇑ iP P 20 14 37.6 +0.1
comp=Z,70nm,1.5s,mb5.4
ULN Ulaanbaatar 74.57 42⇑ iP P 20 14 37.6 +0.4
ULN pmax pmax
comp=Z,101nm,1.6s,mb5.5
ULN Ulaanbaatar 74.57 42⇑ iP P 20 14 37.6 +0.3
comp=Z,101nm,1.6s,mb5.5
ULN Ulaanbaatar 74.57 42 ⇑P P 20 14 37.6 +0.3
SNR=40
ULN ⇑P 20 14 37.6
SNR=40
ULN Ulaanbaatar 74.57 42 P P 20 14 37.6 +0.4
SNR=40
COLD Coldfoot 74.60 348 eP P 20 14 37.4 +0.3
comp=Z,36nm,1.3s,mb5.1
CBKS Cedar Bluff 74.69 307 eP P 20 14 37.2 -0.9
CBKS pmax pmax
comp=Z,335nm,1.6s,mb6.0
CBKS MLR MLR
comp=Z,2μm,21.0s,MS5.5
CBKS Cedar Bluff 74.69 307 eP P 20 14 37.2 -1.0
comp=Z,334nm,1.6s,mb6.0
CBKS LR LR
comp=Z,2μm,21.0s,MS5.5
A18A Metzger Ranch, 74.78 320 ⇑P P 20 14 38.4 0.0
baz=74,SNR=23
EGAK Eagle 74.98 344 eP P 20 14 39.8 +0.5
comp=Z,87nm,1.4s,mb5.5
EGAK LR LR
comp=Z,1μm,19.0s,MS5.2
B18A Beardsley Farm 75.06 319 ⇓P P 20 14 39.9 -0.2
baz=75,SNR=17
NATX Nacogdoches 75.11 298 P P 20 14 38.3 -2.4
NATX LR LR
comp=Z,2μm,20.0s,MS5.5
DAWY Dawson 75.16 343 eP P 20 14 41.1 +0.8
GTA Gaotai 75.19 52 P P 20 14 41.2 +0.2
GTA pP pP 20 14 45.9 +1.6
GTA sP sP 20 14 48.9 +3.4
GTA PP PP 20 17 32.6 +3.7
GTA S S 20 24 22.2 +2.4
GTA sS sS 20 24 29.0 +3.8
GTA pmax pmax
comp=Z,32nm,1.8s,mb5.0
GTA pmax pmax
comp=Z,680nm,5.1s
GTA LR LR
comp=N,550nm,14.1s,MS5.2
GTA LR LR
comp=E,610nm,14.4s,MS5.2
GTA LR LR
comp=Z,310nm,12.9s,MS4.8
A17A Triple J Farms 75.21 320 ⇓P P 20 14 40.8 -0.1
baz=75,SNR=29
EGMT Eagleton 75.27 319 ⇓P P 20 14 41.5 +0.1
baz=75,SNR=18
EGMT Eagleton 75.27 319 eP P 20 14 41.3 0.0
comp=Z,104nm,1.3s,mb5.6
EGMT LR LR
comp=Z,3μm,20.0s,MS5.6
CIT Chita 75.29 36 eP P 20 14 41.4 +0.1
CIT e 20 15 01.8
CIT pmax pmax
comp=Z,164nm,2.9s,mb5.5
B17A L&G Farms, Che 75.66 320 ⇓P P 20 14 43.4 -0.1
baz=75,SNR=17
D18A Linhart Farms, 75.81 318 ⇓P P 20 14 44.5 +0.1
baz=76,SNR=15
BILL Bilibino 75.89 5c iP P 20 14 44.6 +0.2
BILL i 20 14 52.9
BILL i S S 20 24 20.5 -6.0
BILL i SS SS 20 29 25.8 +8.4
BILL pmax pmax
comp=Z,101nm,1.6s,mb5.5
BILL MLR MLR
comp=Z,400nm,18.0s,MS4.8
BILL Bilibino 75.89 5⇑ iP P 20 14 44.5 0.0
comp=Z,126nm,1.5s,mb5.6
BILL LR LR
comp=Z,929nm,20.0s,MS5.1
BCIP Isla Barro Col 75.98 271 PFAKE 20 15 00.0 +14
BCIP LR LR
comp=Z,310nm,20.0s,MS4.6
C17A Wharram Farm, 76.05 319 ⇓P P 20 14 45.8 0.0
baz=76,SNR=17
B16A M & M Farms, S 76.06 320 ⇓P P 20 14 45.4 -0.4
baz=76
A15A Johnson Ranch, 76.23 321 ⇑P P 20 14 46.0 -0.7
baz=76,SNR=9.0
E18A Harlowton 76.25 318 ⇑P P 20 14 47.1 +0.1
baz=76,SNR=19
COLA College 76.31 346⇑ eP P 20 14 46.3 -0.6
COLA pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
COLA MLR MLR
comp=Z,945nm,21.0s,MS5.1
COLA College 76.31 346⇑ eP P 20 14 46.3 -0.6
comp=Z,9.4nm,0.9s,mb4.7
COLA LR LR
comp=Z,945nm,21.0s,MS5.1
D17A Six Diamond Ra 76.31 319 ⇓P P 20 14 47.3 0.0
baz=76,SNR=6.2
WMOK Wichita Mounta 76.33 303 eP P 20 14 46.9 -0.7
WMOK pmax pmax
comp=Z,24nm,0.9s,mb5.1
WMOK Wichita Mounta 76.33 303 eP P 20 14 46.9 -0.7
comp=Z,24nm,0.9s,mb5.1
C16A Fuhringer Ranc 76.47 320 ⇓P P 20 14 47.7 -0.4
baz=76,SNR=6.1
F18A Big Timber 76.55 317 ⇑P P 20 14 48.8 +0.1
baz=76,SNR=5.8
B15A Bradely Ranch, 76.57 320 ⇓P P 20 14 47.7 -1.0
baz=76,SNR=12
A14A Double T Ranch 76.59 321 ⇑P P 20 14 48.5 -0.3
baz=76,SNR=16
CLNS Chul'man 76.77 27c iP P 20 14 49.3 -0.3
CLNS e*PP pP 20 14 57.0 +4.1
CLNS ePPP 20 19 26.7
CLNS eS S 20 24 37.6 +1.1
CLNS e 20 25 06.9
CLNS pmax pmax
comp=Z,33nm,1.6s,mb5.0
CLNS pmax pmax
comp=E,5.0nm,0.9s
CLNS pmax pmax
comp=N,15nm,1.1s
CLNS smax
comp=N,115nm,13.8s
CLNS smax
comp=E,79nm,13.8s
WALA Waterton Lakes 76.78 322 eP P 20 14 49.2 -0.6
comp=E,2.3nm,1.3s
RLMT Red Lodge 76.78 316 ⇑P P 20 14 50.2 +0.2
baz=77
RLMT Red Lodge 76.78 316⇑ eP P 20 14 50.0 0.0
comp=E,108nm,2.0s,mb5.4
G18A Lazy EL Ranch, 76.83 317 ⇓P P 20 14 49.8 -0.4
baz=77
E17A Martinsdale 76.83 318 ⇑P P 20 14 50.3 +0.1
baz=77,SNR=12
D16A Dana Ranch, Ca 76.84 319 ⇓P P 20 14 50.4 +0.1
baz=77,SNR=8.4
PHWY Pilot Hill 76.86 312⇑ eP P 20 14 50.8 +0.3
comp=E,88nm,1.2s,mb5.6
B14A Marquette Ranc 76.90 321 ⇓P P 20 14 49.5 -1.0
baz=77
C15A Salmond Ranch, 76.93 320 ⇓P P 20 14 49.9 -0.9
baz=77
HKT Hockley 76.94 297⇑ iP P 20 14 51.0 -0.1
HKT pmax pmax
comp=Z,35nm,1.1s,mb5.2
HKT MLR MLR
comp=Z,2μm,21.0s,MS5.4
HKT Hockley 76.94 297⇑ iP P 20 14 51.0 -0.2
comp=Z,35nm,1.1s,mb5.2
HKT LR LR
comp=Z,2μm,21.0s,MS5.4
DLBC Dease Lake 76.96 335 eP P 20 14 52.0 +1.3
F17A Fitzpatrick Pl 77.07 318 ⇓P P 20 14 51.9 +0.3
baz=77,SNR=10
MENT Mentasta 77.14 344 eP P 20 14 52.1 +0.5
E16A East Helena 77.22 319 ⇓P P 20 14 52.7 +0.3
baz=77,SNR=5.5
D15A Lincoln 77.35 319 ⇑P P 20 14 53.1 -0.1
baz=77,SNR=6.0
SHL Shillong 77.36 68 ePKP P 20 14 53.0 -0.5
G17A Pierce Place, 77.48 317 ⇑P P 20 14 54.5 +0.6
baz=77
B13A Whitefish 77.50 321 ⇓P P 20 14 53.8 -0.2
baz=77,SNR=14
PAX Paxson 77.51 344 eP P 20 14 54.1 +0.4
PAX pmax pmax
comp=Z,48nm,1.6s,mb5.2
PAX Paxson 77.51 344 eP P 20 14 54.1 +0.4
comp=Z,48nm,1.6s,mb5.2
BPAW Bear Paw Mtn. 77.59 347 eP P 20 14 52.8 -1.4
comp=Z,11nm,1.0s,mb4.8
L21A Rawlins 77.61 313 ⇑P P 20 14 54.4 -0.2
baz=77
F16A Kennard Place, 77.67 318 ⇓P P 20 14 55.4 +0.5
baz=77,SNR=13
RWWY Rawlins 77.69 313⇑ eP P 20 14 55.3 +0.2
comp=Z,127nm,1.3s,mb5.7
A12A Yaak River Ran 77.73 322 ⇓P P 20 14 54.9 -0.3
baz=78
SLMT Seeley Lake 77.73 320 eP P 20 14 54.6 -0.7
comp=Z,23nm,1.3s,mb5.0
BOZ Bozeman (W) 77.76 318 ⇓P P 20 14 55.9 +0.5
baz=78,SNR=24
BOZ Bozeman (W) 77.76 318⇑ eP P 20 14 56.0 +0.6
BOZ pmax pmax
comp=Z,36nm,1.1s,mb5.2
BOZ MLR MLR
comp=Z,2μm,20.0s,MS5.4
BOZ Bozeman (W) 77.76 318⇑ eP P 20 14 56.0 +0.6
comp=Z,36nm,1.1s,mb5.2
BOZ LR LR
comp=Z,2μm,20.0s,MS5.4
K20A Yellowstone Ra 77.76 314 ⇓P P 20 14 54.9 -0.6
baz=78
N22A Wattenberg Ran 77.76 312 ⇑P P 20 14 56.1 +0.5
baz=78
E15A Deer Lodge 77.81 319 ⇑P P 20 14 56.2 +0.5
baz=78,SNR=21
JTMT Jette 77.82 321 eP P 20 14 55.3 -0.4
comp=Z,20nm,1.4s,mb4.8
CHMT Chamberlain Mo 77.82 320 eP P 20 14 55.4 -0.4
comp=Z,34nm,1.4s,mb5.1
SWMT Swartz Lake 77.82 320 eP P 20 14 54.8 -1.0
comp=Z,26nm,1.3s,mb5.0
M21A Separation Pea 77.83 313 ⇑P P 20 14 55.9 0.0
baz=78,SNR=7.8
D14A Greenough 77.84 320 ⇓P P 20 14 55.1 -0.7
baz=78,SNR=8.2
ISCO Idaho Springs 77.85 310⇑ eP P 20 14 56.1 0.0
ISCO pmax pmax
comp=Z,44nm,1.3s,mb5.2
ISCO MLR MLR
comp=Z,2μm,19.0s,MS5.6
ISCO Idaho Springs 77.85 310⇑ eP P 20 14 56.1 0.0
comp=Z,44nm,1.3s,mb5.2
ISCO LR LR
comp=Z,2μm,19.0s,MS5.6
K19A Absolon Red Bu 77.95 314 ⇓P P 20 14 55.4 -1.2
baz=78
I18A Diamond G Ranc 77.97 316 ⇑P P 20 14 56.9 +0.3
baz=78,SNR=5.2
B12A Libby 78.01 322 ⇓P P 20 14 56.7 -0.1
baz=78
BSMT Bassoo Peak 78.01 321 eP P 20 14 56.6 -0.2
comp=Z,73nm,1.5s,mb5.4
C13A Hot Springs 78.01 321 ⇓P P 20 14 56.9 +0.1
baz=78
CHUM Lake Minchumin 78.03 348 eP P 20 14 56.3 -0.3
comp=Z,59nm,1.3s,mb5.4
A11A Hall Mountain, 78.07 323 ⇓P P 20 14 57.0 -0.1
baz=78,SNR=12
YFT Old Faithful 78.08 317 eP P 20 14 59.0 +1.8
comp=Z,54nm,1.3s,mb5.3
KTH Kantishna Hill 78.08 347 eP P 20 14 56.7 -0.2
comp=Z,91nm,1.3s,mb5.5
LRM Limekiln Ridge 78.09 318 eP P 20 14 57.5 +0.2
comp=Z,325nm,1.6s,mb6.0
F15A Butte 78.10 318 ⇓P P 20 14 57.9 +0.5
baz=78,SNR=16
G16A Moss Hill, Enn 78.12 318 ⇑P P 20 14 57.9 +0.5
baz=78,SNR=9.6
H16A Russell Place, 78.14 317 ⇓P P 20 14 58.5 +0.9
baz=78,SNR=7.4
L20A Wamsutter 78.16 314 ⇑P P 20 14 57.7 -0.1
baz=78
AMTX Amarillo 78.21 304 PFAKE 20 15 10.0 +12
AMTX LR LR
comp=Z,2μm,22.0s,MS5.5
MSO Missoula 78.23 320 eP P 20 14 57.5 -0.6
comp=Z,27nm,1.4s,mb5.0
MSO LR LR
comp=Z,2μm,20.0s,MS5.5
I17A Pilgrim Ck. 78.26 316 ⇓P P 20 14 59.0 +0.8
baz=78
E14A Clinton 78.27 319 ⇓P P 20 14 58.1 -0.1
baz=78
D13A Huson 78.33 320 ⇑P P 20 14 58.3 -0.2
baz=78,SNR=18
TNA Tin City 78.36 355⇑ eP P 20 14 58.5 +0.1
comp=Z,71nm,1.4s,mb5.4
J18A Kendall Valley 78.39 315 ⇓P P 20 14 59.1 +0.1
baz=78,SNR=16
BW06 Boulder Array 78.40 315 ⇑P P 20 14 58.4 -0.7
baz=78,SNR=7.5
BW06 Boulder Array 78.40 315 PFAKE 20 15 10.0 +11
BW06 LR LR
comp=Z,1μm,20.0s,MS5.3
PDAR Pinedale Array 78.40 315 P P 20 14 58.5 -0.6
comp=Z,12nm,0.8s,mb4.8,baz=64,slow=6.8,SNR=20
PDAR LR LR 20 46 20.1
comp=Z,1μm,21.0s,MS5.2,baz=50,slow=33
B11A Sandpoint 78.42 322 ⇑P P 20 14 58.6 -0.4
baz=78
N21A Black Mountain 78.43 312 ⇑P P 20 14 59.8 +0.6
baz=78,SNR=5.8
C12B Naegeli Ranch, 78.45 321 ⇑P P 20 14 59.4 +0.2
baz=78
DLMT Dillon 78.47 318⇑ iP P 20 15 00.2 +0.9
comp=Z,119nm,1.4s,mb5.6
IMW Indian Meadow 78.48 316 eP P 20 15 00.1 +0.6
comp=Z,23nm,1.2s,mb5.0
G15A Dillon 78.53 318 ⇓P P 20 15 00.6 +0.9
baz=78,SNR=24
F14A Wisdom 78.59 319 ⇓P P 20 15 00.3 +0.3
baz=78
E13A Victor 78.62 320 ⇓P P 20 14 59.9 -0.3
baz=78,SNR=28
A10A Northport 78.64 323 ⇓P P 20 14 59.6 -0.6
baz=78
U26A Atchley Ranch, 78.69 307 ⇑P P 20 15 00.6 -0.2
baz=78,SNR=11
J17A Brown Place, J 78.69 316 ⇓P P 20 15 00.9 +0.3
baz=78,SNR=6.4
L19A Farson 78.70 314 ⇓P P 20 15 00.5 -0.2
baz=78,SNR=7.1
O21A Pagoda 78.74 312 ⇑P P 20 15 01.2 +0.3
baz=78
TPAW Teton Pass 78.74 316 P P 20 15 01.6 +0.7
comp=Z,19nm,1.0s,mb5.0
K18A Toltan Ranch, 78.76 315 ⇑P P 20 15 01.1 +0.1
baz=78
REDW Red Top Meadow 78.77 316 eP P 20 15 01.3 +0.3
comp=Z,55nm,1.5s,mb5.3
I16A Newdale 78.80 316 ⇓P P 20 15 02.5 +1.3
baz=79
D12A Red Ives Fores 78.82 321 ⇑P P 20 15 00.9 -0.4
baz=79
N20A Spence Gulch, 78.83 313 ⇑P P 20 15 01.7 +0.3
baz=79,SNR=10.0
PNL Peninsula 78.85 340 eP P 20 15 01.9 +0.7
comp=Z,104nm,1.3s,mb5.6
PPLA Purkeypile 78.92 347⇑ iP P 20 15 01.1 -0.4
comp=Z,63nm,1.4s,mb5.4
B10A Chitwood Farm, 78.93 323 ⇑P P 20 15 01.4 -0.5
baz=79
MCMT McKenzie Canyo 78.94 318 eP P 20 15 02.7 +0.7
comp=Z,14nm,1.1s,mb4.8
M19A Rock Springs 78.95 313 ⇑P P 20 15 02.2 +0.1
baz=79,SNR=6.4
G14A Jackson 79.01 318 ⇓P P 20 15 02.7 +0.4
baz=79
SDCO Great Sand Dun 79.01 309⇑ iP P 20 15 02.5 0.0
comp=Z,24nm,1.1s,mb5.0
W27A Bowe Ranch, En 79.02 305 ⇑P P 20 15 02.4 -0.2
baz=79
RRI2 Red Ridge 79.04 316 eP P 20 15 02.8 +0.2
comp=Z,73nm,1.5s,mb5.4
SMCO Snowmass 79.06 311⇑ eP P 20 15 02.9 +0.2
comp=Z,56nm,1.4s,mb5.3
V26A Tequesquite Ra 79.07 306 ⇓P P 20 15 02.2 -0.6
baz=79,SNR=10.0
BMRM Bremner River 79.07 343 eP P 20 15 03.3 +0.9
comp=Z,187nm,1.3s,mb5.9
U25A Circle Dot Ran 79.11 307 ⇑P P 20 15 03.6 +0.5
baz=79
F13A Darby 79.12 319 ⇓P P 20 15 02.9 0.0
baz=79,SNR=6.9
SEY Seymchan 79.13 12c iP P 20 15 03.0 +0.3
SEY Seymchan 79.13 12⇑ iP P 20 15 03.1 +0.4
K17A Gardner Place, 79.19 315 ⇑P P 20 15 03.5 +0.1
baz=79,SNR=8.5
DIV Divide 79.20 344 eP P 20 15 03.6 +0.6
comp=Z,61nm,1.4s,mb5.3
L18A Fontenelle, Gr 79.20 314 ⇓P P 20 15 03.5 0.0
baz=79
Q22A Crested Butte, 79.22 310 ⇑P P 20 15 04.0 +0.4
baz=79,SNR=7.9
TGUH Tegucigalpa,Un 79.24 280⇑ eP P 20 15 04.7 +0.6
comp=Z,234nm,1.5s,mb5.9
O20A White River Ci 79.25 312 ⇑P P 20 15 03.4 -0.4
baz=79
I15A Monteview 79.28 317 ⇑P P 20 15 05.5 +1.6
baz=79,SNR=9.2
AHID Auburn Hatcher 79.29 315 PFAKE 20 15 20.0 +16
AHID LR LR
comp=Z,2μm,20.0s,MS5.5
X27A F and S Farms, 79.29 305 ⇑P P 20 15 04.0 -0.1
baz=79
C10A Spilker Farm, 79.30 322 ⇓P P 20 15 03.1 -0.8
baz=79
B09A Rice 79.30 323 ⇑P P 20 15 03.8 -0.1
baz=79,SNR=11
D11A Klaveano Farm, 79.33 321 ⇓P P 20 15 02.9 -1.1
baz=79
N19A John Jarvie Ra 79.34 313 ⇓P P 20 15 04.1 -0.2
baz=79
H14A Leadore 79.36 318 ⇓P P 20 15 05.3 +1.0
baz=79,SNR=17
JCT Junction City 79.47 300 eP P 20 15 04.7 -0.4
JCT pmax pmax
comp=Z,43nm,0.9s,mb5.4
JCT MLR MLR
comp=Z,4μm,21.0s,MS5.7
JCT Junction City 79.47 300 eP P 20 15 04.7 -0.4
comp=Z,43nm,0.9s,mb5.4
JCT LR LR
comp=Z,4μm,21.0s,MS5.7
W26A Owens Ranch, T 79.47 306 ⇑P P 20 15 05.2 +0.2
baz=79,SNR=8.1
MSTX Muleshoe 79.47 304 ⇑P P 20 15 04.9 -0.2
baz=79
JTS JuntasAbangare 79.49 275 PFAKE 20 15 20.0 +15
JTS LR LR
comp=Z,736nm,22.0s,MS5.0
PMR Palmer 79.52 345 eP P 20 15 04.7 -0.1
PMR pmax pmax
comp=Z,54nm,1.6s,mb5.2
PMR Palmer 79.52 345 eP P 20 15 04.7 -0.1
comp=Z,54nm,1.6s,mb5.2
G13A Cobalt 79.52 319 ⇓P P 20 15 05.4 +0.2
baz=79,SNR=8.2
K16A Soda Springs 79.52 316 ⇑P P 20 15 05.5 +0.3
baz=79,SNR=7.1
TTA Tatalina 79.53 349 eP P 20 15 04.3 -0.6
M18A Lyman 79.53 314 ⇓P P 20 15 05.3 0.0
baz=79
L17A Cokeville 79.58 315 ⇓P P 20 15 05.2 -0.4
baz=79,SNR=5.2
V25A Rancho No Teng 79.58 307 ⇑P P 20 15 05.4 -0.3
baz=79
N18A Larsen Ranch, 79.58 313 ⇑P P 20 15 05.6 0.0
baz=79,SNR=7.0
F12A Elk City 79.63 320 ⇑P P 20 15 05.6 -0.1
baz=79,SNR=11
J15A Blackfoot 79.63 317 ⇓P P 20 15 06.8 +1.0
baz=79,SNR=7.0
Q21A Lamborn Mesa, 79.64 311 ⇓P P 20 15 06.5 +0.6
baz=79,SNR=6.8
U24A Moreno Valley 79.67 308 ⇓P P 20 15 07.0 +0.9
baz=80
O19A Miners Draw (B 79.68 313 ⇓P P 20 15 06.2 +0.1
baz=80,SNR=22
LZH Lanzhou 79.72 53 eP P 20 15 07.4 +1.0
LZH pP pP 20 15 09.7 0.0
LZH sP sP 20 15 11.1 +0.2
LZH PP PP 20 18 03.0 -3.9
LZH eS S 20 25 07.2 -1.8
LZH sS sS 20 25 14.4 -0.1
LZH SKS 20 25 18.3
LZH ScS ScS 20 25 26.3 -4.4
LZH SS SS 20 30 17.1 +0.3
LZH pmax pmax
comp=Z,120nm,1.4s,mb5.6
LZH pmax pmax
comp=Z,500nm,4.1s
LZH LR LR
comp=N,650nm,15.2s
LZH LR LR
comp=Z,980nm,17.5s,MS5.2
P20A De Beque 79.73 312 ⇑P P 20 15 06.2 -0.2
baz=80
Y27A Causey 79.79 304 ⇑P P 20 15 06.6 -0.3
baz=80
C09A Chrisman Ranch 79.79 323 ⇑P P 20 15 05.8 -0.7
baz=80
KVTX Kingsville 79.79 297 PFAKE 20 15 20.0 +13
KVTX LR LR
comp=Z,1μm,20.0s,MS5.3
D10A Wagner Farm, O 79.80 322 ⇓P P 20 15 05.5 -1.2
baz=80
X26A CR and CF Fran 79.82 305 ⇑P P 20 15 07.0 0.0
baz=80,SNR=7.3
W25A X Bar L Ranch, 79.85 306 ⇑P P 20 15 07.5 +0.3
baz=80,SNR=11
M17A Scullys Gap (B 79.86 314 ⇑P P 20 15 06.8 -0.2
baz=80,SNR=5.5
I14A Mackay 79.86 317 ⇑P P 20 15 08.4 +1.4
baz=80,SNR=14
H13A Challis 79.88 318 ⇑P P 20 15 08.1 +1.0
baz=80,SNR=41
R21A Cimarron 79.92 310 ⇑P P 20 15 07.7 +0.3
baz=80,SNR=12
B08A Colville Reser 79.92 324 ⇓P P 20 15 07.0 -0.3
baz=80,SNR=11
A07A Ashnola River, 79.94 325 ⇑P P 20 15 07.6 +0.2
baz=80,SNR=13
L16A Fish Haven 79.95 315 ⇑P P 20 15 07.5 0.0
baz=80,SNR=8.7
F11A Grangeville 80.01 320 ⇓P P 20 15 07.2 -0.6
baz=80,SNR=25
P19A Cripple Cowboy 80.01 312 ⇑P P 20 15 07.9 -0.1
baz=80
Q20A Ridgley Place, 80.01 311 ⇓P P 20 15 07.8 -0.1
baz=80
OTAV Otavalo 80.02 263⇑ eP P 20 15 09.1 +0.8
comp=Z,78nm,1.5s,mb5.4
HIA Hailar 80.06 35 eP P 20 15 08.1 +0.1
HIA pmax pmax
comp=Z,99nm,1.5s
HIA MLR MLR
comp=Z,1μm,19.0s
HIA Hailar 80.06 35 eP P 20 15 08.1 +0.1
comp=Z,99nm,1.5s,mb5.5
HIA LR LR

comp=Z,1µm,19.0s,MS5.2
G12A **Big Creek, Yel** 80.08 319 ⇑P P 20 15 08.2 0.0
baz=80
E10A **Myers Farm, Un** 80.10 321 ⇑P P 20 15 07.9 -0.4
baz=80
RC01 **Rabbit Creek A** 80.10 345 P P 20 15 07.0 -1.0
comp=Z,16nm,0.8s,mb5.0
K15A **Arbon** 80.15 316 ⇑P P 20 15 09.0 +0.4
baz=80
Z27A **Tatum** 80.16 304 ⇑P P 20 15 08.8 0.0
baz=80,SNR=24
Y26A **Elida** 80.20 305 ⇓P P 20 15 09.5 +0.4
baz=80
H12A **Diamond D Ranc** 80.21 319 ⇑P P 20 15 09.5 +0.6
baz=80,SNR=31
O18A **Roosevelt** 80.23 313 ⇓P P 20 15 09.0 -0.1
baz=80
I13A **Wildhorse Cree** 80.23 318 ⇓P P 20 15 10.1 +1.1
baz=80,SNR=6.3
J14A **Carey** 80.29 317 ⇑P P 20 15 10.7 +1.3
baz=80
N17A **Moffit Pass** 80.29 314 ⇑P P 20 15 09.2 -0.2
baz=80
HWUT **Hardware Ranch** 80.29 315 eP P 20 15 08.8 -0.6
comp=Z,73nm,1.3s,mb5.5
HWUT LR LR
comp=Z,1µm,20.0s,MS5.3
D09A **Jones Farm, Ri** 80.31 322 ⇑P P 20 15 08.8 -0.6
baz=80
T22A **Edith** 80.34 309 ⇓P P 20 15 10.6 +0.8
baz=80,SNR=16
GAMB **Gambell** 80.38 356⇑iP P 20 15 09.5 +0.1
comp=Z,118nm,1.6s,mb5.6
G11A **Walters Elk Ra** 80.39 320 ⇑P P 20 15 09.9 0.0
baz=80
X25A **Clemmons Ranch** 80.40 306 ⇓P P 20 15 10.3 +0.2
baz=80,SNR=11
W24A **Lazy 6 Ranch,** 80.48 307 ⇑P P 20 15 11.2 +0.7
baz=80,SNR=11
S21A **Coal Bank Pass** 80.50 310 ⇑P P 20 15 11.4 +0.8
baz=80,SNR=21
F10A **Beach Ranch, E** 80.50 321 ⇓P P 20 15 10.0 -0.4
baz=80,SNR=10
L15A **Malad City** 80.51 315 ⇓P P 20 15 10.5 0.0
baz=80,SNR=11
M16A **Huntsville** 80.51 315 ⇑P P 20 15 10.4 -0.2
baz=80
R20A **Redvale** 80.54 310 ⇓P P 20 15 10.8 0.0
baz=80
NLW **Nelson Butte** 80.60 324 P P 20 15 11.5 +0.6
J13A **Cove Ranch, Pi** 80.60 317 ⇓P P 20 15 12.1 +1.1
baz=80,SNR=11
K14A **Jones Ranch, D** 80.60 316 ⇓P P 20 15 11.5 +0.5
baz=80,SNR=6.4
Q19A **Hogan Spring (** 80.60 312 ⇓P P 20 15 10.8 -0.4
baz=80
E09A **Wood Farm, Sta** 80.60 322 ⇑P P 20 15 10.5 -0.5
baz=80
D08A **Wollman Farm,** 80.62 322 ⇑P P 20 15 10.4 -0.6
baz=80
HLID **Hailey** 80.62 318 ⇓P P 20 15 12.0 +0.9
baz=80,SNR=21
HLID **Hailey** 80.62 318⇑eP P 20 15 12.1 +1.0
comp=Z,42nm,1.4s,mb5.2
HLID LR LR
comp=Z,2µm,19.0s,MS5.6
127A **Arkansas Junct** 80.63 304 ⇑P P 20 15 11.3 -0.1
baz=80,SNR=6.4
V23A **Ortiz Mt. (NFS** 80.65 307 ⇑P P 20 15 12.4 +0.9
baz=80
N16A **Rees Ranch, Co** 80.68 314 ⇓P P 20 15 11.6 +0.1
baz=80
Z26A **Caprock** 80.70 304 ⇑P P 20 15 11.9 +0.2
baz=80,SNR=20
O17A **Robinson Place** 80.71 313 ⇑P P 20 15 11.7 0.0
baz=80,SNR=13
PV04 **Paradox Valley** 80.73 311 eP P 20 15 11.7 -0.1
BTO **Baotou** 80.74 46 eP P 20 15 11.2 -0.6
CPRX **Cap Rock** 80.77 304 eP P 20 15 13.1 +1.0
comp=Z,78nm,1.3s,mb5.5
Y25A **Mesa, Roswell** 80.78 305 ⇓P P 20 15 12.2 +0.1
baz=81
DGAR **Diego Garcia** 80.81 106 PFAKE 20 15 20.0 +7.5
DGAR LR LR
comp=Z,1µm,19.0s,MS5.3
I12A **Atlanta** 80.86 318 ⇑P P 20 15 13.0 +0.6
baz=81,SNR=10
JLU **Jordanelle** 80.87 314 eP P 20 15 12.3 -0.2
comp=Z,65nm,1.5s,mb5.3
HVU **Hansel Valley** 80.87 315 eP P 20 15 12.0 -0.5
HVU pmax pmax
comp=Z,45nm,1.3s,mb5.2
HVU **Hansel Valley** 80.87 315 eP P 20 15 12.0 -0.5
comp=Z,45nm,1.3s,mb5.2
X24A **Lazy VL Ranch,** 80.88 306 ⇑P P 20 15 13.2 +0.5
baz=81
M15A **Larsen Ranch,** 80.89 315 ⇑P P 20 15 12.5 -0.1
baz=81
G10A **Bishop Farm, J** 80.91 320 ⇓P P 20 15 11.9 -0.7
baz=81,SNR=15
ETW **Entiat** 80.93 323 eP P 20 15 12.5 -0.2
comp=Z,126nm,1.4s,mb5.7
L14A **Malta** 80.97 316 ⇓P P 20 15 13.2 +0.2
baz=81,SNR=7.5
227A **Bennet, Jal** 80.98 303 ⇑P P 20 15 13.8 +0.5
baz=81
W23A **Werner Place,** 80.99 307 ⇑P P 20 15 13.6 +0.4
baz=81,SNR=6.7
R19A **Curley Farm, L** 81.02 311 ⇓P P 20 15 13.5 +0.2
baz=81,SNR=6.2
V22A **San Miguel Ran** 81.02 308 ⇑P P 20 15 14.3 +0.9
baz=81,SNR=11
328A **Wristen Ranch,** 81.03 302 ⇓P P 20 15 13.4 -0.2
baz=81,SNR=5.6
F09A **S2 Ranch, Elgi** 81.03 321 ⇑P P 20 15 13.3 0.0
baz=81
Q18A **Rafter H Ranch** 81.04 312 ⇓P P 20 15 13.3 -0.1
baz=81,SNR=21
K13A **Stover Farm, H** 81.04 317 ⇑P P 20 15 14.6 +1.2
baz=81,SNR=6.0
126A **Clayton Basin,** 81.10 304 ⇓P P 20 15 14.2 +0.3
baz=81
LNOR **Lincton Mounta** 81.11 321 eP P 20 15 13.3 -0.4
LNOR pmax pmax
comp=Z,52nm,1.7s,mb5.2
LNOR **Lincton Mounta** 81.11 321 eP P 20 15 13.3 -0.4
comp=Z,52nm,1.7s,mb5.2
O16A **Springville** 81.15 314 ⇑P P 20 15 14.1 +0.1
baz=81
P17A **Butcher Ranch,** 81.17 313 ⇑P P 20 15 13.8 -0.3
baz=81,SNR=9.5
SVW2 **Sparrevohn** 81.19 348 eP P 20 15 14.2 +0.4
Z25A **Roswell** 81.19 305 ⇑P P 20 15 14.9 +0.5
baz=81,SNR=8.7
H10A **Noah's Angus R** 81.19 320 ⇑P P 20 15 13.1 -1.1
baz=81,SNR=6.1
J12A **Stokes Ranch,** 81.20 318 ⇑P P 20 15 14.8 +0.5
baz=81
MVCO **Mesa Verde** 81.22 310 ⇑P P 20 15 14.9 +0.4
baz=81,SNR=11
MVCO **Mesa Verde** 81.22 310 eP P 20 15 14.9 +0.4
comp=Z,132nm,1.6s,mb5.6
I11A **Placerville** 81.23 319 ⇑P P 20 15 14.4 0.0
baz=81,SNR=6.7
SRU **San Rafael** 81.27 312 ⇓P P 20 15 14.3 -0.3
baz=81,SNR=11
SRU **San Rafael** 81.27 312 eP P 20 15 13.9 -0.8
SRU pmax pmax
comp=Z,51nm,1.2s,mb5.3
SRU **San Rafael** 81.27 312 eP P 20 15 13.9 -0.8
comp=Z,51nm,1.2s,mb5.3
RSO **Redoubt South** 81.27 346 eP P 20 15 13.8 -0.5
Y24A **Capitan** 81.27 306 ⇓P P 20 15 15.2 +0.4
baz=81,SNR=12
S19A **Harvey Farm, M** 81.28 310 ⇑P P 20 15 14.9 +0.2
baz=81,SNR=8.3
N15A **Stansbury Isla** 81.30 315 ⇓P P 20 15 14.5 -0.3
baz=81
BMO **Blue Mountains** 81.31 320 eP P 20 15 14.3 -0.5
comp=Z,109nm,1.9s,mb5.5
BMO LR LR
comp=Z,2µm,20.0s,MS5.5
ANMO **Albuquerque** 81.32 307⇑eP P 20 15 15.5 +0.5
ANMO pmax pmax
comp=Z,7.0nm,1.3s
ANMO MLR MLR
comp=Z,2µm,20.0s
ANMO **Albuquerque** 81.32 307⇑eP P 20 15 15.5 +0.5
comp=Z,7.4nm,1.3s,mb4.5
ANMO LR LR
comp=Z,2µm,20.0s,MS5.5
L13A **Double Diamond** 81.33 316 ⇓P P 20 15 15.9 +1.0
baz=81,SNR=6.3
428A **Kincaid Ranch,** 81.33 302 ⇑P P 20 15 15.4 +0.2
baz=81
R18A **Canyonlands Na** 81.34 311 ⇓P P 20 15 15.0 -0.1
baz=81,SNR=7.8
MPU **Maple Canyon** 81.35 314 eP P 20 15 14.5 -0.6
comp=Z,37nm,1.3s,mb5.2
X23A **Hourglass Bar** 81.37 306 ⇓P P 20 15 16.1 +0.8
baz=81,SNR=9.2
M14A **Sheep Mountain** 81.38 316 ⇑P P 20 15 15.5 +0.3
baz=81,SNR=17
HAWA **Hanford** 81.38 322 PFAKE 20 15 30.0 +15
HAWA LR LR
comp=Z,2µm,19.0s,MS5.5
HHC **Hu-ho-hao-te** 81.48 45 eP P 20 15 15.6 -0.1
HHC pP pP 20 15 20.4 +1.4
HHC sP sP 20 15 22.6 +2.4
HHC PP PP 20 18 22.9 +1.6
HHC S S 20 25 26.7 -0.6
HHC SKS 20 25 30.3
HHC sS sS 20 25 31.7 -1.0
HHC SS SS 20 30 42.7 0.0
HHC pmax pmax
comp=Z,17nm,1.0s,mb4.9
HHC LR LR
comp=N,590nm,15.5s,MS5.1
HHC LR LR
comp=E,440nm,17.4s,MS5.1
HHC LR LR
comp=Z,540nm,25.4s
MFID **Camas Ranch** 81.49 318 ⇓P P 20 15 16.6 +0.9
baz=81,SNR=10.0
K12A **Draper Farm, C** 81.50 317 ⇓P P 20 15 16.5 +0.7
baz=81,SNR=6.9
226A **Malaga, Loving** 81.50 303 ⇑P P 20 15 16.7 +0.6
baz=81,SNR=28
327A **Balmorhea Ranc** 81.50 303 ⇓P P 20 15 16.2 +0.1
baz=81
W22A **Albuquerque** 81.51 307 ⇑P P 20 15 17.0 +1.0
baz=81
125A **Gardner Draw,** 81.52 304 ⇑P P 20 15 16.2 +0.1
baz=81,SNR=18
V21A **Milan** 81.55 308 ⇑P P 20 15 17.0 +0.8
baz=81
TMUT **Trail Mountain** 81.56 313⇑eP P 20 15 16.2 0.0
comp=Z,34nm,1.1s,mb5.2
I10A **Payette** 81.56 319 ⇓P P 20 15 16.8 +0.7
baz=81
BGU **Big Grassy Mou** 81.57 315 eP P 20 15 16.1 -0.2
comp=Z,73nm,1.4s,mb5.4
Z24A **Sheeppen Canyo** 81.59 305 ⇑P P 20 15 16.9 +0.5
baz=81,SNR=11
GDL2 **Guadalupe Moun** 81.60 304 eP P 20 15 16.5 -0.1
comp=Z,31nm,0.7s,mb5.3
H09A **Durkee** 81.62 320 ⇑P P 20 15 16.4 -0.1
baz=81,SNR=13
P16A **Fountain Green** 81.62 313 ⇑P P 20 15 16.7 +0.2
baz=81
NLU **North Lily Min** 81.65 314 eP P 20 15 16.1 -0.5
comp=Z,43nm,1.4s,mb5.2
O15A **The Old Anders** 81.67 314 ⇓P P 20 15 16.8 +0.1
baz=81
Y23A **Lovelace Mesa,** 81.68 306 ⇓P P 20 15 17.4 +0.5
baz=82,SNR=8.9
N14A **Grayback Hills** 81.71 315 ⇑P P 20 15 16.9 -0.1
baz=82,SNR=7.6
528A **Cox Ranch, San** 81.74 301 ⇑P P 20 15 17.4 +0.1
baz=82,SNR=6.0
427A **Hayter Ranch,** 81.75 302 ⇑P P 20 15 17.4 +0.1
baz=82
U20A **Newcomb** 81.75 309 ⇑P P 20 15 18.0 +0.7
baz=82,SNR=9.1
Q16A **Castle Valley** 81.78 312 ⇑P P 20 15 17.2 -0.2
baz=82,SNR=9.8
T19A **Beclabito** 81.79 310 ⇓P P 20 15 17.4 -0.1
baz=82,SNR=11
R17A **Hanksville Air** 81.82 312 ⇓P P 20 15 17.3 -0.3
baz=82,SNR=13
CPUP **Villa Florida** 81.84 229 P P 20 15 17.6 -0.1
comp=Z,9.8nm,0.7s,mb4.8,baz=42,slow=5.9,SNR=21
CPUP LR LR 20 52 42.0
comp=Z,393nm,18.6s,MS4.8,baz=294,slow=36
S18A **Hurst Farm, Bl** 81.84 311 ⇓P P 20 15 17.8 +0.1
baz=82
G08A **Pilot Rock** 81.86 321 ⇑P P 20 15 16.6 -1.1
baz=82
326A **Caldwell Ranch** 81.87 303 ⇑P P 20 15 18.8 +0.9
baz=82,SNR=25
L12A **House Creek Ra** 81.89 317 ⇑P P 20 15 18.6 +0.7
baz=82,SNR=7.2
BNM **Barren Site** 81.92 306 eP P 20 15 18.7 +0.5
comp=Z,38nm,1.2s,mb5.2
DUG **Dugway** 81.92 314 ⇑P P 20 15 18.0 -0.1
baz=82,SNR=7.7
DUG **Dugway** 81.92 314⇑eP P 20 15 18.0 -0.1
DUG pmax pmax
comp=Z,42nm,1.4s,mb5.2
DUG MLR MLR
comp=Z,1µm,20.0s,MS5.3
DUG **Dugway** 81.92 314⇑eP P 20 15 18.0 -0.1
comp=Z,42nm,1.4s,mb5.2
DUG LR LR
comp=Z,1µm,20.0s,MS5.3
F07A **Phinny Hill Vi** 81.93 322 ⇑P P 20 15 18.5 +0.5
baz=82
M13A **Montello** 81.94 316 ⇑P P 20 15 18.8 +0.7
baz=82
M13A **Montello** 81.94 316⇑eP P 20 15 18.5 +0.4
comp=Z,73nm,1.4s,mb5.4
X22A **Bernardo** 81.95 307 ⇑P P 20 15 19.6 +1.2
baz=82
225A **Deer Hill, Car** 81.96 304 ⇑P P 20 15 18.3 -0.2
baz=82,SNR=6.7
W21A **San Fidel** 81.98 308 ⇓P P 20 15 19.2 +0.6
baz=82,SNR=13
J10A **Berg Farm, Mel** 81.99 319 ⇓P P 20 15 18.9 +0.5
baz=82
P15A **Leamington** 82.02 314 ⇓P P 20 15 18.3 -0.3
baz=82,SNR=10
124A **Stringfield Ra** 82.03 305 ⇓P P 20 15 19.2 +0.4
baz=82,SNR=13
K11A **Parker Ranch,** 82.03 318 ⇑P P 20 15 19.6 +1.0
baz=82
V20A **Brimhall** 82.08 309 ⇓P P 20 15 19.5 +0.5
baz=82,SNR=5.9
LAZ **Ladron** 82.10 307 eP P 20 15 19.6 +0.5
comp=Z,25nm,1.4s,mb4.9
T18A **Mexican Hat** 82.12 310 ⇑P P 20 15 19.3 +0.1
baz=82,SNR=12
I09A **Lost Marbles R** 82.13 320 ⇑P P 20 15 19.1 -0.1
baz=82,SNR=16
LENM **Lemitar** 82.13 307 eP P 20 15 19.6 +0.3
comp=Z,30nm,1.1s,mb5.1
WPW **White Pass** 82.16 323 P P 20 15 19.9 +0.7
Z23A **Rita Site, Whi** 82.20 305 ⇑P P 20 15 20.5 +0.7
baz=82,SNR=8.7
628A **Black Gap, Mar** 82.21 301 ⇓P P 20 15 20.2 +0.4
baz=82,SNR=25
LPAZ **La Paz** 82.23 244 P P 20 15 20.1 +0.2
comp=Z,16nm,1.2s,mb4.8,baz=42,slow=6.0,SNR=29
LPAZ LR LR 20 49 24.7
comp=Z,352nm,21.2s,MS4.7,baz=51,slow=34
LPAZ **La Paz** 82.23 244⇑eP P 20 15 19.9 0.0
LPAZ pmax pmax
comp=Z,71nm,1.5s
LPAZ MLR MLR
comp=Z,586nm,20.0s
LPAZ **La Paz** 82.23 244⇑eP P 20 15 19.9 -0.1
comp=Z,71nm,1.5s,mb5.4
LPAZ LR LR
comp=Z,586nm,20.0s,MS5.0
U19A **Dine' College,** 82.24 309 ⇓P P 20 15 19.9 0.0
baz=82,SNR=10
LON **Longmire** 82.25 324 eP P 20 15 19.1 -0.6
LON pmax pmax
comp=Z,24nm,0.9s,mb5.1
LON **Longmire** 82.25 324 eP P 20 15 19.1 -0.6
comp=Z,24nm,0.9s,mb5.1
Y22A **Socorro** 82.27 306 ⇑P P 20 15 20.7 +0.6
baz=82,SNR=15
L11A **Cat Creek Ranc** 82.29 317 ⇑P P 20 15 21.0 +1.0
baz=82,SNR=7.0
N13A **Wendover, West** 82.29 315 ⇓P P 20 15 20.7 +0.7
baz=82
N13A **Wendover, West** 82.29 315⇑eP P 20 15 20.5 +0.5
comp=Z,88nm,1.4s,mb5.5
426A **McDonald Obser** 82.29 302 ⇑P P 20 15 21.0 +0.8
baz=82,SNR=34
527A **Woodward Ranch** 82.32 302 ⇓P P 20 15 20.9 +0.5
baz=82,SNR=7.9
M12A **Wells** 82.32 316 ⇑P P 20 15 21.2 +1.0
baz=82,SNR=6.0
R16A **Teasdale** 82.37 312 ⇓P P 20 15 20.6 +0.1
baz=82,SNR=8.9
S17A **Black Ridge (B** 82.37 311 ⇑P P 20 15 20.5 0.0
baz=82
Q15A **Fillmore** 82.44 313 ⇓P P 20 15 20.9 0.0
baz=82
224A **Cornudas Mount** 82.45 304 ⇓P P 20 15 20.6 -0.5
baz=82
P14A **Drum Mountains** 82.47 314 ⇑P P 20 15 21.1 +0.2
baz=82
K10A **MacKenzie Ranc** 82.48 318 ⇓P P 20 15 21.8 +0.8
baz=82
X21A **Alamocita Cree** 82.49 307 ⇓P P 20 15 22.5 +1.3
baz=82,SNR=30
V19A **Window Rock** 82.50 309 ⇑P P 20 15 21.5 +0.2
baz=82
325A **Bean Ranch, Si** 82.51 303 ⇓P P 20 15 21.0 -0.4
baz=82,SNR=6.7
J09A **Fry Pan Ranch,** 82.57 319 ⇓P P 20 15 22.3 +0.9
baz=82,SNR=13
U18A **Rough Rock, Ch** 82.57 310 ⇑P P 20 15 21.7 +0.1
baz=82,SNR=14
627A **Terlingua Ranc** 82.58 301 ⇑P P 20 15 22.2 +0.4
baz=82
MNTX **Cornudas Mount** 82.59 304 eP P 20 15 21.0 -0.7
MNTX LR LR
comp=Z,4µm,19.0s,MS5.8
123A **Bell Site, Whi** 82.61 305 ⇓P P 20 15 22.4 +0.6
baz=82
MSU **Marysvale** 82.64 313 eP P 20 15 21.3 -0.6
MSU pmax pmax
comp=Z,24nm,1.1s,mb5.1
MSU **Marysvale** 82.64 313 eP P 20 15 21.3 -0.6
comp=Z,24nm,1.1s,mb5.1
O13A **Hicks Ranch, I** 82.64 315 ⇓P P 20 15 22.4 +0.5
baz=82
MVU **Marysvale** 82.67 313 PFAKE 20 15 30.0 +8.0
MVU LR LR
comp=Z,2µm,19.0s,MS5.5
Y21A **Point of Rocks** 82.69 307 ⇑P P 20 15 23.6 +1.4
baz=82,SNR=18
Z22A **Elephant Butte** 82.69 306 ⇑P P 20 15 23.2 +0.9
baz=82,SNR=22
526A **Mary Lane Ranc** 82.70 302 ⇓P P 20 15 23.3 +0.9
baz=82,SNR=43
L10A **Juniper Basin** 82.74 318 ⇓P P 20 15 23.5 +1.2
baz=82,SNR=7.5
G06A **Carlson Farm,** 82.74 322 ⇑P P 20 15 22.8 +0.5
baz=82
NLWA **Neilton Lookou** 82.76 325 ⇑P P 20 15 23.4 +1.1
baz=82
N12A **Clover Valley,** 82.77 316 ⇑P P 20 15 23.6 +1.1
baz=82,SNR=16
N12A **Clover Valley,** 82.77 316 eP P 20 15 23.1 +0.6
comp=Z,39nm,1.1s,mb5.3
T17A **Navajo Res., N** 82.78 311 ⇓P P 20 15 23.0 +0.3
baz=83,SNR=7.5
CD2 **Chengdu** 82.79 57⇑iP P 20 15 22.4 -0.4
CD2 sP sP 20 15 30.0 +2.7
CD2 PP PP 20 18 34.5 +2.0
CD2 S S 20 25 38.8 -2.3
CD2 sS sS 20 25 46.7 +0.1
CD2 SS SS 20 31 04.8 +1.9
CD2 pmax pmax
comp=Z,80nm,1.6s,mb5.5
CD2 pmax pmax
comp=Z,210nm,5.2s
CD2 LR LR
comp=N,660nm,14.4s,MS5.2
CD2 LR LR
comp=E,620nm,16.8s,MS5.2
CD2 LR LR
comp=Z,770nm,15.6s,MS5.2
M11A **Holland Ranch,** 82.80 317 ⇓P P 20 15 24.2 +1.5
baz=83,SNR=8.7
324A **Moseley Ranch,** 82.81 304 ⇓P P 20 15 22.5 -0.4
baz=83,SNR=18
TXAR **Lajitas Array** 82.85 301 P P 20 15 23.5 +0.3
comp=Z,7.8nm,0.8s,mb4.8,baz=64,slow=5.5,SNR=26
TXAR LR LR 20 50 25.3
comp=Z,3µm,21.2s,MS5.7,baz=0.0,slow=34
425A **Indio Mountain** 82.88 303 ⇓P P 20 15 23.3 0.0
baz=83,SNR=11
X20A **Quemado** 82.89 308 ⇑P P 20 15 24.5 +1.2
baz=83,SNR=14
R15A **Junction** 82.89 312 ⇓P P 20 15 24.0 +0.8
baz=83,SNR=6.2
J08A **Circle Bar Ran** 82.94 319 ⇓P P 20 15 23.9 +0.5
baz=83,SNR=10
U17A **Shonto** 82.95 310 ⇑P P 20 15 24.2 +0.6
baz=83
ELK **Elko** 82.95 316 eP P 20 15 24.2 +0.7
ELK pmax pmax
comp=Z,60nm,1.6s
ELK MLR MLR
comp=Z,2µm,19.0s
ELK **Elko** 82.95 316 eP P 20 15 24.2 +0.7
comp=Z,60nm,1.6s,mb5.4
ELK LR LR
comp=Z,2µm,19.0s,MS5.4
I07A **Izee** 82.98 321 ⇓P P 20 15 23.6 +0.1
baz=83
Q14A **Sevier Lake (B** 82.98 314 ⇑P P 20 15 24.1 +0.5
baz=83,SNR=14
O12A **Currie** 82.99 315 ⇑P P 20 15 24.4 +0.7
baz=83,SNR=9.0
626A **Big Bend Ranch** 83.04 301 ⇑P P 20 15 24.9 +0.8
baz=83,SNR=23
122A **Conniff Cattle** 83.06 305 ⇑P P 20 15 25.8 +1.7
baz=83
V18A **Ganado** 83.06 309 ⇑P P 20 15 24.6 +0.5
baz=83
W19A **Sanders** 83.10 309 ⇑P P 20 15 24.7 +0.4
baz=83
223A **Chaparral, Ant** 83.10 305 ⇑P P 20 15 25.7 +1.3
baz=83
P13A **Bates Ranch, G** 83.11 314 ⇑P P 20 15 24.9 +0.6
baz=83,SNR=11
Z21A **St. Cloud Mine** 83.12 306 ⇓P P 20 15 25.6 +1.1
baz=83
F04A **Amboy** 83.12 323 ⇓P P 20 15 24.2 -0.1
baz=83
M10A **I.L. Ranch, Tu** 83.16 317 ⇑P P 20 15 25.8 +1.3
baz=83,SNR=5.7
N11A **Elko Archery C** 83.18 316 ⇑P P 20 15 25.7 +1.0
baz=83
HOOD **Mount Hood Mea** 83.19 323 eP P 20 15 24.2 -0.4
comp=Z,284nm,1.4s,mb6.1
Y20A **Horse Springs,** 83.21 307 ⇓P P 20 15 26.1 +1.2
baz=83,SNR=11
T16A **Glen Canyon Da** 83.22 311 ⇑P P 20 15 24.7 -0.2
baz=83
VIPM **Ingram Point** 83.25 321 P P 20 15 26.4 +1.5
R14A **James Farms, M** 83.28 313 ⇑P P 20 15 26.2 +1.0
baz=83
S15A **Panguitch** 83.29 312 ⇓P P 20 15 26.0 +0.7
baz=83
W18A **Petrified Fore** 83.31 309 ⇑P P 20 15 25.8 +0.4
baz=83
Q13A **Wheeler Ranch,** 83.44 314 ⇑P P 20 15 26.6 +0.6
baz=83,SNR=6.8
X19A **St. Johns** 83.47 308 ⇑P P 20 15 27.3 +1.0
baz=83,SNR=7.3
222A **Williams Famil** 83.49 305 ⇓P P 20 15 27.7 +1.2
baz=83
O11A **Cowboy Ranch,** 83.60 316 ⇓P P 20 15 27.9 +1.1
baz=83
P12A **McGill** 83.61 315 ⇓P P 20 15 27.9 +1.0
baz=83,SNR=11
V17A **Tonalea, Kykot** 83.66 310 ⇑P P 20 15 28.2 +1.0
baz=83,SNR=37
WVOR **Wild Horse Val** 83.67 319 eP P 20 15 27.4 +0.3
WVOR pmax pmax
comp=Z,91nm,1.6s,mb5.7
WVOR **Wild Horse Val** 83.67 319 eP P 20 15 27.4 +0.2
comp=Z,92nm,1.6s,mb5.7
F03A **Seaside** 83.68 324 ⇓P P 20 15 28.3 +1.2
baz=83
G04A **Mulino** 83.68 323 ⇓P P 20 15 27.6 +0.4
baz=83

121A Cookes Peak, D 83.68 306 ⇑P P 20 15 28.7 +1.3
baz=84,SNR=12
N10A Dunphy 83.68 317 ⇓P P 20 15 28.4 +1.2
baz=83
KDAK Kodiak Island 83.72 345 P P 20 15 28.0 +0.9
comp=Z,695nm,1.1s,mb6.7,SNR=5.5
KDAK Kodiak Island 83.72 345 P P 20 15 26.5 -0.6
KDAK pmax pmax
comp=Z,267nm,1.4s,mb6.2
KDAK MLR MLR
comp=Z,1μm,19.0s,MS5.3
KDAK Kodiak Island 83.72 345 P P 20 15 26.5 -0.6
comp=Z,267nm,1.4s,mb6.2
KDAK LR LR
comp=Z,1μm,19.0s,MS5.3
S14A Cedar City 83.72 313 ⇑P P 20 15 28.3 +0.8
baz=84
T15A Red Dirt Ranch 83.73 312 ⇑P P 20 15 27.0 -0.6
baz=84,SNR=8.6
Y19A Nutrioso 83.74 308 ⇑P P 20 15 29.4 +1.8
baz=84,SNR=20
X18A Snowflake 83.82 308 ⇑P P 20 15 28.4 +0.3
baz=84
Z20A Nine Sixteen R 83.84 307 ⇑P P 20 15 29.6 +1.4
baz=84,SNR=13
Q12A Willow Creek R 83.86 314 ⇓P P 20 15 29.0 +0.8
baz=84,SNR=9.3
H04A Detroit Lake 83.91 322 ⇑P P 20 15 28.3 0.0
baz=84,SNR=5.5
R13A O'Grain Ranch, 83.92 313 ⇑P P 20 15 29.3 +0.8
baz=84,SNR=7.9
W17A Winslow 83.95 309 ⇑P P 20 15 29.8 +1.1
baz=84,SNR=8.3
O10A Cortez Mining, 83.97 316 ⇓P P 20 15 29.9 +1.2
baz=84
CCUT Cedar City 83.98 313 eP P 20 15 29.0 +0.2
comp=Z,21nm,1.2s,mb5.1
221A Mesquite Ranch 84.00 305 ⇓P P 20 15 30.8 +1.8
baz=84,SNR=6.8
P11A Circle Ranch, 84.04 315 ⇓P P 20 15 30.2 +1.1
baz=84
U15A North Rim 84.06 311 ⇑P P 20 15 29.7 +0.5
baz=84,SNR=7.8
WUAZ Wupatki 84.09 310 ⇑P P 20 15 30.4 +1.0
baz=84,SNR=11
WUAZ Wupatki 84.09 310⇑eP P 20 15 30.1 +0.7
comp=Z,86nm,1.4s,mb5.7
T14A Hurricane 84.13 312 ⇑P P 20 15 29.6 0.0
baz=84
Z19A T-Link Ranch, 84.17 307 ⇑P P 20 15 31.3 +1.5
baz=84,SNR=7.9
R12A Pony Springs, 84.20 314 ⇑P P 20 15 30.8 +0.8
baz=84,SNR=6.3
120A U Bar Ranch, L 84.23 306 ⇑P P 20 15 31.7 +1.5
baz=84,SNR=25
XAN Xi'an 84.25 52 P P 20 15 29.7 -0.6
XAN PP PP 20 18 44.3 0.0
XAN SKS 20 25 50.3
XAN pmax pmax
comp=Z,15nm,1.5s,mb4.9
XAN pmax pmax
comp=Z,98nm,5.3s
XAN LR LR
comp=N,440nm,16.8s,MS5.0
XAN LR LR
comp=E,110nm,14.4s,MS5.0
XAN LR LR
comp=Z,160nm,17.6s,MS4.5
S13A Holt Ranch, En 84.25 313 ⇓P P 20 15 31.0 +0.8
baz=84,SNR=10
BMN Battle Mountai 84.28 317 eP P 20 15 30.3 0.0
BMN pmax pmax
comp=Z,61nm,1.4s,mb5.5
BMN MLR MLR
comp=Z,2μm,20.0s,MS5.5
BMN Battle Mountai 84.28 317 eP P 20 15 30.3 0.0
comp=Z,60nm,1.4s,mb5.5
BMN LR LR
comp=Z,2μm,20.0s,MS5.5
Y18A Canyon Day Jun 84.36 308 ⇑P P 20 15 32.3 +1.5
baz=84,SNR=9.4
V15A Kaibab Nationa 84.39 311 ⇓P P 20 15 31.9 +1.0
baz=84,SNR=7.8
P10A Eureka 84.40 316 ⇓P P 20 15 32.3 +1.3
baz=84,SNR=6.9
W16A Flagstaff 84.46 310 ⇓P P 20 15 32.5 +1.2
baz=84,SNR=6.1
Q11A Duckwater 84.46 315 ⇑P P 20 15 32.1 +0.9
baz=84,SNR=18
119A Ashpeak Ranch, 84.53 307 ⇓P P 20 15 33.1 +1.4
baz=84,SNR=26
COR Corvallis 84.53 323 PFAKE 20 15 40.0 +8.5
COR LR LR
comp=Z,3μm,20.0s,MS5.6
220A Playas Peak, P 84.56 306 ⇓P P 20 15 33.1 +1.2
baz=84,SNR=33
U14A Mt Trumbull 84.61 312 ⇓P P 20 15 32.7 +0.6
baz=84,SNR=14
BJI Beijing 84.63 44 P P 20 15 32.0 -0.1
BJI PP PP 20 18 45.5 -1.7
BJI S S 20 25 58.8 -0.6
BJI pmax pmax
comp=Z,44nm,2.0s,mb5.2
BJI pmax pmax
comp=Z,690nm,4.2s
BJI LR LR
comp=N,880nm,12.6s
BJI LR LR
comp=E,680nm,20.5s
BJI LR LR
comp=Z,730nm,18.4s
BJT Baijiatuau 84.64 44 PFAKE 20 15 40.0 +7.8
BJT LR LR
comp=Z,743nm,19.0s,MS5.1
K05A Summer Lake 84.65 320 ⇓P P 20 15 33.5 +1.3
baz=84,SNR=15
T13A Saint George 84.65 312 ⇑P P 20 15 33.3 +1.0
baz=84,SNR=18
R11A Troy Canyon, C 84.76 314 ⇑P P 20 15 33.6 +0.8
baz=84,SNR=18
Z18A Geronimo 84.80 307 ⇓P P 20 15 34.4 +1.3
baz=85
S12A Delamar Landin 84.82 313 ⇑P P 20 15 34.5 +1.4
baz=85,SNR=9.3
X16A Lo Mia Camp, P 84.84 309 ⇓P P 20 15 34.6 +1.4
baz=85,SNR=21
W15A Williams 84.86 310 ⇓P P 20 15 34.6 +1.3
baz=85,SNR=6.0
Q10A Clear Creek Ra 84.91 315 ⇓P P 20 15 34.8 +1.3
baz=85,SNR=18
320A Kipp Ranch, An 84.92 305 ⇑P P 20 15 35.4 +1.7
baz=85,SNR=29
MOD Modoc 84.92 319⇓eP P 20 15 34.2 +0.7
comp=Z,100nm,1.5s,mb5.7
MOD LR LR
comp=Z,2μm,21.0s,MS5.4
Y17A Roosevelt 84.93 308 ⇑P P 20 15 35.2 +1.5
baz=85,SNR=28
Z17A San Carlos Hig 84.94 308 ⇑P P 20 15 35.3 +1.5
baz=85,SNR=9.6
219A White Tail Can 84.98 306 ⇑P P 20 15 35.4 +1.3
baz=85,SNR=55
118A Homack Ranch, 85.04 307 ⇑P P 20 15 35.4 +1.1
baz=85,SNR=27
V14A Boquillas Ranc 85.08 311 ⇓P P 20 15 35.6 +1.2
baz=85,SNR=16
U13A Pakoon Wash 85.09 312 ⇑P P 20 15 35.4 +1.0
baz=85,SNR=9.3
Y16A Circle Bar Ran 85.21 309 ⇑P P 20 15 36.6 +1.4
baz=85,SNR=18
R10A Warm Springs 85.21 315 ⇑P P 20 15 36.4 +1.4
baz=85,SNR=12
KLR Kul'dur 85.26 29 eP P 20 15 30.0 -5.1
KLR eS S 20 25 54.5 -11
KLR pmax pmax
comp=E,45nm,2.0s
KLR pmax pmax
comp=Z,120nm,2.0s,mb5.7
KLR pmax pmax
comp=Z,900nm,4.0s
T11A Corn Creek, Al 85.29 313 ⇑P P 20 15 36.6 +1.2
baz=85,SNR=23
X15A Humboldt 85.29 310 ⇑P P 20 15 36.7 +1.1
baz=85,SNR=22
S11A Rachel 85.33 314 ⇑P P 20 15 36.6 +1.0
baz=85,SNR=5.9
T12A Moapa 85.33 313 ⇓P P 20 15 36.7 +1.0
baz=85

W14A Seligman 85.34 311 ⇓P P 20 15 37.3 +1.5
baz=85,SNR=23
319A Douglas 85.39 306 ⇑P P 20 15 37.6 +1.5
baz=85,SNR=30
U12A Valley of Fire 85.42 312 ⇓P P 20 15 36.9 +0.7
baz=85
V13A Grand Canyon W 85.47 312 ⇑P P 20 15 37.1 +0.7
baz=85,SNR=18
218A Dragoon 85.52 306 ⇑P P 20 15 37.7 +1.0
baz=85,SNR=39
Z16A Peralta Trail, 85.53 308 ⇑P P 20 15 37.7 +1.0
baz=85,SNR=6.0
117A Oracle 85.58 307 ⇑P P 20 15 38.1 +1.1
baz=85,SNR=30
KMI Kunming 85.60 62 P P 20 15 36.9 -0.3
KMI pP pP 20 15 38.3 -2.2
KMI PP PP 20 18 56.6 +1.1
KMI SKS 20 25 59.3
KMI S S 20 26 07.5 -1.9
KMI SS SS 20 31 43.4 -1.2
KMI pmax pmax
comp=Z,21nm,1.8s,mb5.1
KMI pmax pmax
comp=Z,530nm,3.4s
KMI LR LR
comp=N,300nm,19.7s,MS4.9
KMI LR LR
comp=E,280nm,16.9s,MS4.9
KMI LR LR
comp=Z,280nm,18.8s,MS4.7
S10A Tonopah Range, 85.63 315 ⇑P P 20 15 38.1 +0.9
baz=85,SNR=33
Y15A Casa Rosa Ranc 85.70 309 ⇓P P 20 15 38.7 +1.1
baz=86,SNR=20
X14A Yava 85.71 310 ⇑P P 20 15 38.6 +1.0
baz=86,SNR=12
TUC Tucson 85.78 307 eP P 20 15 37.5 -0.5
HUMO Hull Mountain 85.80 321 PFAKE 20 15 50.0 +12
HUMO LR LR
comp=Z,2μm,20.0s,MS5.4
318A Bisbee 85.82 306 ⇑P P 20 15 39.2 +1.0
baz=86,SNR=11
W13A Hualapai Mount 85.91 311 ⇓P P 20 15 39.6 +1.0
baz=86,SNR=13
U11A Corn Creek 85.93 313 ⇑P P 20 15 39.9 +1.2
baz=86
V12A Nelson 86.08 312 ⇓P P 20 15 40.3 +0.9
baz=86,SNR=6.5
Y14A Wickenburg 86.13 310 ⇓P P 20 15 40.4 +0.7
baz=86,SNR=11
217A Green Valley 86.14 307 ⇑P P 20 15 40.8 +1.0
baz=86,SNR=9.0
116A Eloy 86.21 308 ⇑P P 20 15 41.0 +0.9
baz=86
X13A Yucca 86.21 311 ⇑P P 20 15 41.1 +1.0
baz=86,SNR=16
LBCM Butte Creek Ri 86.24 319 P P 20 15 41.1 +1.1
NVAR Mina Array Bea 86.26 316 P P 20 15 40.2 0.0
comp=Z,2.2nm,0.8s,mb4.4,baz=77,slow=3.9,SNR=4.8
NVAR Mina Array Bea 86.26 316 P P 20 15 40.2 0.0
YBH Yreka Blue Hor 86.30 321 P P 20 15 39.4 -1.0
comp=Z,12nm,1.3s,mb5.0,baz=61,slow=4.1,SNR=3.6
V11A Goodsprings 86.35 312 ⇓P P 20 15 41.8 +1.1
baz=86,SNR=9.9
W12A Cal Nev Ari 86.38 312 ⇓P P 20 15 41.6 +0.8
baz=86
BEKR Beckworth 86.39 318 ⇓P P 20 15 41.5 +0.6
baz=86,SNR=7.9
216A Three Points, 86.41 307 ⇓P P 20 15 42.1 +1.0
baz=86
115A Sonoran Desert 86.45 308 ⇑P P 20 15 42.5 +1.2
baz=86,SNR=7.3
WCN Washoe City 86.46 317 ⇓P P 20 15 42.2 +0.9
baz=86
Z14A Wintersburg 86.47 309 ⇓P P 20 15 42.2 +0.8
baz=86
U10A Ash Meadows, A 86.50 313 ⇑P P 20 15 43.1 +1.6
baz=86,SNR=11
CHTO Chiang Mai 86.58 69 eP P 20 15 40.9 -1.2
CHTO pmax pmax
comp=Z,55nm,2.0s,mb5.4
CHTO MLR MLR
comp=Z,259nm,20.0s,MS4.6
CHTO Chiang Mai 86.58 69 eP P 20 15 40.9 -1.2
comp=Z,55nm,2.0s,mb5.4
CHTO LR LR
comp=Z,259nm,20.0s,MS4.6
CHTO Chiang Mai 86.58 69 ⇓P P 20 15 41.5 -0.7
SNR=5.5
CHTO ⇓P 20 15 41.5
SNR=5.5
CHTO Chiang Mai 86.58 69 P P 20 15 41.5 -0.6
SNR=5.5
NEE2 Needles Airpor 86.58 311 ⇑P P 20 15 42.7 +0.8
baz=86
PDMCI Parker Dam,Lak 86.60 311 ⇓P P 20 15 42.8 +0.8
baz=86
GRAC Grapevine Rang 86.71 314 ⇓P P 20 15 44.0 +1.5
baz=86
Y13A Salome 86.73 310 ⇑P P 20 15 43.4 +0.7
baz=86
CN2 Changchun 86.73 36 eP P 20 15 41.3 -1.2
CN2 esP sP 20 15 47.9 +0.9
CN2 ePP PP 20 19 04.6 +0.6
CN2 eS S 20 26 15.1 -4.8
CN2 eSS SS 20 31 58.3 -1.7
CN2 pmax pmax
comp=Z,20nm,1.9s,mb5.0
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,800nm,17.0s,MS5.3
CN2 LR LR
comp=E,800nm,17.0s,MS5.3
CN2 LR LR
comp=Z,600nm,17.0s,MS5.1
FURC Furnace Creek, 86.78 314 ⇑P P 20 15 44.4 +1.6
baz=86
CMAR Chiang Mai Arr 86.79 70 P P 20 15 42.0 -1.1
comp=Z,1.0nm,0.6s,mb4.2,baz=296,slow=4.8,SNR=9.2
CMAR LR LR 21 01 29.3
comp=Z,170nm,19.0s,MS4.5,baz=184,slow=40
SHOC Shoshone 86.82 313 ⇓P P 20 15 44.1 +1.1
baz=87
114A Black Gap (USA 86.84 309 ⇓P P 20 15 43.7 +0.5
baz=87
TUQ Turquoise Moun 86.92 312 ⇑P P 20 15 44.4 +0.9
baz=87
Z13A Yuma Proving G 87.03 309 ⇑P P 20 15 44.7 +0.6
baz=87,SNR=8.2
ENH Enshi 87.03 54 eP P 20 15 43.1 -1.1
comp=Z,30nm,1.0s,mb5.5
ENH LR LR
comp=Z,507nm,19.0s,MS5.0
MLAC Mammoth Lakes 87.12 316 ⇓P P 20 15 46.5 +2.0
baz=87
HABR Khabarovsk 87.15 28ceP P 20 15 42.7 -1.7
HABR e*PP pP 20 15 45.9 -1.8
HABR e*SP sP 20 15 47.4 -1.5
HABR e 20 19 05.7
HABR PPP 20 20 59.9
HABR eS S 20 26 09.1 -15
HABR e*SS sS 20 26 15.4 -14
HABR eSS SS 20 32 06.0 +0.2
HABR pmax pmax
comp=N,4.0nm,0.5s
HABR pmax pmax
comp=E,4.0nm,0.3s
HABR pmax pmax
comp=Z,4.0nm,0.5s,mb4.9
HABR MLR MLR
comp=Z,517nm,22.0s,MS4.9
TIN Tinemaha 87.17 315 ⇓P P 20 15 46.3 +1.6
baz=87
Y12C Blythe 87.20 310 ⇓P P 20 15 45.7 +0.8
baz=87
GMRC Granite Mounta 87.21 312 ⇑P P 20 15 45.7 +0.8
baz=87,SNR=6.7
SNY Shenyang 87.29 38 ⇑P P 20 15 43.8 -1.4
SNY S S 20 26 24.8 -0.6
SNY pmax pmax
comp=Z,16nm,2.3s,mb4.8
SNY pmax pmax
comp=Z,370nm,4.7s
SNY LR LR
comp=N,730nm,12.0s,MS5.4
SNY LR LR

comp=E,560nm,13.8s,MS5.4
SNY LR LR
comp=Z,1μm,13.3s,MS5.4
214A Organ Pipe Nat 87.31 308 ⇑P P 20 15 45.8 +0.3
baz=87,SNR=8.1
IRM Iron Mountain 87.31 311 ⇓P P 20 15 46.2 +0.8
baz=87,SNR=8.5
DAC Darwin (Calif) 87.34 314 PFAKE 20 16 00.0 +14
DAC LR LR
comp=Z,2μm,19.0s,MS5.5
113A Mohawk Valley, 87.38 309 ⇑P P 20 15 46.1 +0.2
baz=87,SNR=5.5
MPMC Manual Prospec 87.43 314 ⇑P P 20 15 47.3 +1.3
baz=87,SNR=8.6
GSC Goldstone 87.54 313 ⇓P P 20 15 47.3 +0.7
baz=87
GYA Guiyang 87.55 59⇑iP P 20 15 46.3 -0.4
GYA PP PP 20 19 12.5 +1.3
GYA SKS 20 26 11.0
GYA S S 20 26 25.4 -2.9
GYA SS SS 20 32 13.2 +0.2
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.3
GYA pmax pmax
comp=Z,270nm,3.7s
GYA LR LR
comp=N,1μm,14.3s,MS5.6
GYA LR LR
comp=E,1μm,15.5s,MS5.6
GYA LR LR
comp=Z,1μm,12.4s,MS5.5
HEC Hector,Ludlow 87.58 312 ⇑P P 20 15 47.7 +0.9
baz=87
CMB Columbia Colle 87.70 317⇑eP P 20 15 47.4 +0.1
CMB pmax pmax
comp=Z,110nm,2.3s,mb5.7
CMB MLR MLR
comp=Z,2μm,20.0s,MS5.5
CMB Columbia Colle 87.70 317⇑eP P 20 15 47.4 +0.1
comp=Z,110nm,2.3s,mb5.7
CMB LR LR
comp=Z,2μm,20.0s,MS5.5
BC3 Big Chuckawall 87.84 311 ⇑P P 20 15 47.9 -0.1
baz=88
GLA Glamis 87.86 310 ⇑P P 20 15 48.5 +0.4
baz=88
BELC Belle Mtn. Jos 87.94 311 ⇑P P 20 15 49.4 +0.9
baz=88
LRMC Laurel Mountai 87.94 313 ⇑P P 20 15 49.5 +1.0
baz=88
RRX Edison Barstow 87.94 313 ⇑P P 20 15 49.8 +1.3
baz=88
MDJ Mudanjiang 88.01 33 P P 20 15 47.3 -1.3
MDJ PP PP 20 19 11.7 -2.5
MDJ S S 20 26 30.1 -2.1
MDJ SS SS 20 32 16.9 -1.7
MDJ pmax pmax
comp=Z,7.0nm,2.1s,mb4.5
MDJ pmax pmax
comp=Z,200nm,4.8s
MDJ LR LR
comp=N,610nm,17.3s,MS5.2
MDJ LR LR
comp=E,570nm,18.2s,MS5.2
MDJ LR LR
comp=Z,770nm,11.5s
112A Yuma 88.05 309 ⇑P P 20 15 48.9 -0.1
baz=88
ISA Isabella 88.28 314 ⇓P P 20 15 51.0 +0.9
baz=88,SNR=6.9
ISA Isabella 88.28 314⇑eP P 20 15 50.7 +0.6
ISA pmax pmax
comp=Z,28nm,1.1s,mb5.4
ISA Isabella 88.28 314⇑eP P 20 15 50.7 +0.6
comp=Z,28nm,1.1s,mb5.4
DL2 Dalian 88.42 41⇑iP P 20 15 50.5 -0.2
DL2 PP PP 20 19 17.9 +0.2
DL2 S S 20 26 36.8 +0.5
DL2 pmax pmax
comp=Z,10.0nm,1.1s,mb5.0
DL2 pmax pmax
comp=Z,240nm,3.7s
DL2 LR LR
comp=N,450nm,17.9s,MS5.1
DL2 LR LR
comp=E,450nm,17.3s,MS5.1
DL2 LR LR
comp=Z,590nm,14.1s,MS5.2
HOPS Hopland 88.48 319 PFAKE 20 16 00.0 +9.0
HOPS LR LR
comp=Z,2μm,20.0s,MS5.5
PFO Pinyon Flat Ob 88.48 311 ⇓P P 20 15 51.7 +0.6
baz=88
PFO Pinyon Flat Ob 88.48 311 iP P 20 15 52.9 +1.8
VES Vestal, Richgr 88.51 314 ⇓P P 20 15 50.7 -0.5
baz=88
SWSC Sam W. Stewart 88.53 310 ⇓P P 20 15 51.5 +0.2
baz=88
EDW2 Edwards Air Fo 88.53 313 ⇑P P 20 15 51.7 +0.4
baz=88
BFSC Mount Baldy Ra 88.78 312 ⇓P P 20 15 52.4 0.0
baz=89
MURC Murrieta 88.94 312 ⇓P P 20 15 52.9 -0.3
baz=89
MCCM Marconi Confer 89.00 318 PFAKE 20 16 00.0 +6.6
MCCM LR LR
comp=Z,2μm,20.0s,MS5.5
PETK Petropavlovsk- 89.35 13 LR LR 20 57 59.8
comp=Z,280nm,20.6s,MS4.7,baz=190,slow=37
PET Petropavlovsk 89.60 12 eP P 20 15 54.8 -1.1
PET eS S 20 26 40.7 -6.1
PET eSS SS 20 32 37.0 -4.0
PET pmax pmax
comp=Z,100nm,13.8s
PET MLR MLR
comp=Z,400nm,20.0s,MS4.8
PET MLR MLR
comp=Z,400nm,20.0s
VLA Vladivostok 90.21 33 eP P 20 15 57.0 -2.0
VLA MLR MLR
comp=Z,500nm,13.0s,MS5.1
YSS Yuzh-Sakhalins 91.18 24ceP P 20 16 03.0 -0.4
YSS e 20 19 39.0
YSS eS S 20 27 02.0 +0.4
YSS e 20 28 06.0
YSS pmax pmax
comp=Z,50nm,1.4s,mb5.7
YSS pmax pmax
comp=Z,500nm,5.0s
YSS smax
comp=N,500nm,14.0s
YSS MLR MLR
comp=Z,500nm,19.0s,MS5.0
YSS MLR MLR
comp=N,500nm,20.0s,MS5.1
YSS MLR MLR
comp=E,500nm,18.0s,MS5.1
YSS Yuzh-Sakhalins 91.18 24⇓eP P 20 16 03.1 -0.3
NJ2 Nanjing 91.75 48 eP P 20 16 00.7 -5.6
NJ2 pP pP 20 16 10.5 +0.8
NJ2 sP sP 20 16 12.8 +1.9
NJ2 SKS 20 26 37.0
NJ2 S S 20 27 03.0 -4.3
NJ2 sS sS 20 27 11.0 -1.8
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.3
NJ2 pmax pmax
comp=Z,320nm,4.4s
NJ2 LR LR
comp=N,460nm,28.1s,MS5.0
NJ2 LR LR
comp=E,560nm,23.3s,MS5.0
NJ2 LR LR
comp=Z,530nm,29.8s
INCN Inchon 92.11 39 PFAKE 20 16 20.0 +12
INCN LR LR
comp=Z,687nm,19.0s,MS5.1
KSRS Korea Array 92.79 39 P P 20 16 09.2 -1.8
comp=Z,1.1nm,0.8s,mb4.4,baz=335,slow=5.5,SNR=5.9
KSRS LR LR 21 01 52.5
comp=Z,554nm,20.2s,MS5.0,baz=334,slow=38
KSRS Korea Array 92.79 39 P P 20 16 09.3 -1.7
KSRS pmax pmax
comp=Z,1.0nm,0.8s,mb4.3
KSRS MLR MLR
comp=Z,554nm,20.2s,MS5.0

TRQA	**Tornquist**	92.96	224	*e*P		**P**		20 16 12.0	+0.5
	comp=Z,31nm,1.6s,mb5.5								
SSE	**Sheshan**	93.82	47	P		**P**		20 16 14.1	-1.8
SSE				PP		PP		20 19 58.2	-2.5
SSE				S		S		20 27 22.7	-3.1
SSE				sS		sS		20 27 28.4	-2.9
SSE				pmax		pmax			
	comp=Z,31nm,0.7s,mb5.8								
SSE				pmax		pmax			
	comp=Z,78nm,5.5s								
SSE				LR		LR			
	comp=N,310nm,14.1s,MS5.2								
SSE				LR		LR			
	comp=E,480nm,14.1s,MS5.2								
SSE				LR		LR			
	comp=Z,550nm,13.7s,MS5.2								
QIZ	**Qiongzhong**	94.53	63	P		**P**		20 16 19.1	-0.3
QIZ				S		S		20 27 30.3	-2.0
QIZ				LR		LR			
	comp=N,370nm,14.0s								
QIZ				LR		LR			
	comp=Z,440nm,17.5s,MS5.0								
ERM	**Erimo**	95.64	26	PFAKE				20 16 40.0	+16
ERM				LR		LR			
	comp=Z,297nm,22.0s,MS4.7								
KULM	**Kulim**	95.98	79	PFAKE				20 16 40.0	+14
KULM				LR		LR			
	comp=Z,423nm,19.0s,MS4.9								
PSI	**Prapat**	96.08	82	LR		LR		21 05 12.0	
	comp=Z,387nm,18.1s,MS4.9,baz=265,slow=39								
MJAR	**Matsushiro Arr**	98.38	32	LR		LR		21 07 03.3	
	comp=Z,512nm,18.1s,MS5.1,baz=340,slow=39								
PLCA	**Paso Flores**	99.68	226	P		Pdif		20 16 43.6	+1.4
	comp=Z,1.6nm,0.6s,baz=78,slow=3.9,SNR=5.0								
PLCA				LR		LR		21 04 23.7	
	comp=Z,484nm,18.3s,MS5.0,baz=292,slow=37								
PAF	**Port-aux-Franc**	105.52	140	PFAKE				20 21 30.0	+9.0
PAF				LR		LR			
	comp=Z,3µm,19.0s,MS5.8								
KSM	**Kuching**	105.95	76	PFAKE				20 21 30.0	+7.0
KSM				LR		LR			
	comp=Z,308nm,21.0s,MS4.8								
KKM	**Kota Kinabalu**	107.64	69	PFAKE				20 21 40.0	+14
KKM				LR		LR			
	comp=Z,303nm,19.0s,MS4.9								
DAV	**Davao City (W)**	113.84	61	PFAKE				20 21 50.0	+12
DAV				LR		LR			
	comp=Z,412nm,20.0s,MS5.0								
KAPI	**Kappang**	117.35	75	PFAKE				20 22 00.0	+15
KAPI				LR		LR			
	comp=Z,342nm,21.0s,MS5.0								
GUMO	**Guam**	120.92	40	PFAKE				20 22 00.0	+8.5
GUMO				LR		LR			
	comp=Z,315nm,20.0s,MS5.0								
CASY	**Casey**	130.74	150	PFAKE				20 22 20.0	+11
CASY				LR		LR			
	comp=Z,1µm,20.0s,MS5.6								
TAOE	**Nuku Hiva Isla**	134.40	296	*e*LR		LR		21 05 16.0	
	comp=Z,922nm,25.3s								
WRA	**Warramunga Arr**	137.52	80	PKhKP		PKPpre		20 22 11.3	
	comp=Z,0.4nm,0.6s,baz=318,slow=2.1,SNR=5.1								
WRA				PKP		PKPdf		20 22 21.8	-1.0
	comp=Z,1.5nm,0.9s,baz=324,slow=1.9,SNR=8.6								
WRA				PP		PP		20 25 06.2	-2.6
	comp=Z,0.9nm,0.9s,baz=312,slow=5.7,SNR=6.2								
WRA	**Warramunga Arr**	137.52	80	PKP		PKPpre		20 22 11.3	
WRA				PKP		PKPdf		20 22 21.8	-1.0
WRA				PP		PP		20 25 06.2	-2.6
ASAR	**Alice Springs**	139.01	85	PKhKP		PKPpre		20 22 15.7	
	comp=Z,0.6nm,0.5s,baz=287,slow=1.8,SNR=12								
ASAR				PKP		PKPdf		20 22 24.8	-0.6
	comp=Z,3.2nm,1.0s,baz=300,slow=1.5,SNR=11								
ASAR				PP		PP		20 25 16.2	-1.9
	comp=Z,2.8nm,1.1s,baz=310,slow=7.0,SNR=8.4								
BBOO	**Buckleboo**	144.31	98	*e*P		PKPdf		20 22 32.0	-2.6
	comp=Z,38nm,0.8s								
CTA	**Charters Tower**	146.95	70	*e*P		PKPdf		20 22 40.8	+1.3
	comp=Z,11nm,0.8s								
CTAO	**Charters Tower**	146.95	70	PKPdf		PKPdf		20 22 38.8	-0.7
CTAO				*e*PKPbc		PKPbc		20 22 41.0	-0.5
CTAO				LR		LR			
	comp=Z,755nm,20.0s,MS5.5								
PPT	**Papeete**	147.00	295	*e*LR		LR		21 11 10.2	
	comp=Z,997nm,23.0s								
HNR	**Honiara**	148.24	39	PFAKE				20 22 50.0	+8.2
HNR				LR		LR			
	comp=Z,487nm,20.0s,MS5.3								
STKA	**Stephens Creek**	148.50	94	*e*P		PKPdf		20 22 44.5	+2.8
	comp=Z,26nm,0.8s								
STKA	**Stephens Creek**	148.50	94	PKPbc		PKPbc		20 22 44.7	-0.6
	comp=Z,28nm,0.7s,baz=311,slow=3.0,SNR=35								
STKA	**Stephens Creek**	148.50	94	*e*PKPdf		PKPdf		20 22 40.3	-1.5
STKA				*e*PKPbc		PKPbc		20 22 44.5	-0.8
STKA				PKPbc		PKPbc		20 22 44.7	-0.6
QLP	**Quilpie**	148.67	83	*e*P		PKPdf		20 22 45.6	+3.4
ARPS	**Mount Arapiles**	149.86	103	*e*P		PKPdf		20 22 48.0	+4.3
	comp=Z,228nm,1.6s								
CMSA	**Cobar Meteorol**	151.72	91	*e*P		PKPdf		20 22 52.5	+5.7
RMQ	**Roma**	152.25	79	*e*P		PKPdf		20 22 54.8	+7.1
	comp=Z,51nm,1.3s								
TOO	**Toolangi**	152.87	104	*e*P		PKPdf		20 22 55.4	+7.1
MSVF	**Nonsavu**	161.84	4	PFAKE				20 23 10.0	+10
MSVF				LR		LR			
	comp=Z,874nm,19.0s								
DZM	**Mont Dzumac**	162.17	43	*e*LR		LR		21 18 07.1	
	comp=Z,1000nm,25.6s								

*NEIC **06** 20:09:59.0, 37°.36N×109°.47W, h10km, ML3.7(SLC), After SLC.*
NEIC Felt [III] at Blanding.
*ISCJB **06** 20:09:59.2±0.2, 37°.358N±0°.009×109°.45W±0°.01, h10km, Error ellipse: s-maj=1.5km s-min=1.3km az=2.4*
ISC 06 20:09:59.1±0.2, 37°.359N±0°.009×109°.45W±0°.01, h10km, n97, σ1°03/158, 48C-54D, Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T18A	**Mexican Hat**	0.41	237	⇓P		**Pg**	20 10 06.6 -0.4
	baz=0.4						
T18A				⇓S		**Sg**	20 10 12.1 -0.3
	baz=0.4						
S19A	**Harvey Farm, M**	0.46	33	⇓P		**Pg**	20 10 08.1 +0.1
	baz=0.5,SNR=1000						
S19A				⇑S		**Sg**	20 10 14.5 +0.4
	baz=0.5						
S18A	**Hurst Farm, Bl**	0.55	307	⇑P		**Pg**	20 10 09.3 -0.4
	baz=0.5,SNR=381						
S18A				⇓S		**Sg**	20 10 16.6 -0.2
	baz=0.5						
T19A	**Beclabito**	0.63	147	⇓P		**Pg**	20 10 11.0 -0.2
	baz=0.6						
T19A				⇑S		**Sg**	20 10 19.3 -0.1
	baz=0.6						
MVCO	**Mesa Verde**	0.77	101	⇓P		**Pg**	20 10 13.9 0.0
	baz=0.8,SNR=153						
MVCO				⇓S		**Sg**	20 10 24.2 +0.1
	baz=0.8						
MVCO	**Mesa Verde**	0.77	101	*e*Pg		**Pg**	20 10 13.9 -0.1
MVCO				*e*Sg		**Sg**	20 10 25.1 +1.1
R19A	**Curley Farm, L**	0.94	9	⇑P		**Pg**	20 10 16.5 -0.7
	baz=0.9,SNR=98						
R19A				⇑S		**Sg**	20 10 28.6 -0.9
	baz=0.9						
U18A	**Rough Rock, Ch**	1.00	200	⇓P		**Pg**	20 10 17.4 -0.9
	baz=1.0						
U18A				⇑S		**Sg**	20 10 29.8 -1.3
	baz=1.0						
PV01	**Paradox Valley**	1.04	42	*e*Pg		**Pg**	20 10 18.4 -0.8
U19A	**Dine' College,**	1.08	170	⇑P		**Pg**	20 10 18.9 -1.0
	baz=1.1						
U19A				⇓S		**Sg**	20 10 32.5 -1.4
	baz=1.1						
R18A	**Canyonlands Na**	1.08	341	⇓P		**Pg**	20 10 19.0 -0.9
	baz=1.1,SNR=136						
R18A				⇑S		**Sg**	20 10 32.8 -1.2
	baz=1.1						
S17A	**Black Ridge (B**	1.11	285	P		**Pb**	20 10 19.9 -0.5
	baz=1.1,SNR=365						
S17A				⇑S		**Sg**	20 10 33.8 -1.0
	baz=1.1						
PV04	**Paradox Valley**	1.12	22	*e*Pg		**Pg**	20 10 20.2 -0.4
PV04				*e*Sg		**Sg**	20 10 34.5 -0.7
T17A	**Navajo Res., N**	1.14	252	⇓P		**Pb**	20 10 20.1 -0.8
	baz=1.1,SNR=114						
T17A				⇓S		**Sb**	20 10 35.0 -0.8
	baz=1.1						
R20A	**Redvale**	1.19	45	P		**Pb**	20 10 21.0 -0.7
	baz=1.2,SNR=102						
R20A				⇑S		**Sb**	20 10 36.2 -0.8
	baz=1.2						
U20A	**Newcomb**	1.23	143	⇓Pb		**Pb**	20 10 22.2 -0.3
	baz=1.2						
U20A				⇓Sb		**Sb**	20 10 38.0 -0.4
	baz=1.2						
S21A	**Coal Bank Pass**	1.35	77	⇓Pb		**Pb**	20 10 23.8 -0.7
	baz=1.4						
S21A				⇓Sb		**Sb**	20 10 41.2 -0.7
	baz=1.4						
R17A	**Hanksville Air**	1.46	317	Pb		**Pb**	20 10 25.5 -0.8
	baz=1.4,SNR=263						
R17A				⇓Sb		**Sb**	20 10 43.9 -1.0
	baz=1.4						
Q19A	**Hogan Spring (**	1.60	5	⇑Pb		**Pb**	20 10 27.9 -0.8
	baz=1.6,SNR=97						
Q19A				⇑Sb		**Sb**	20 10 48.7 -0.3
	baz=1.6						
V19A	**Window Rock**	1.67	169	⇑Pb		**Pb**	20 10 29.6 -0.4
	baz=1.7						
V19A				⇓Sb		**Sb**	20 10 50.7 -0.4
	baz=1.7						
T16A	**Glen Canyon Da**	1.69	258	⇑Pb		**Pb**	20 10 29.5 -0.7
	baz=1.7,SNR=74						
T16A				⇓Sb		**Sb**	20 10 50.6 -0.9
	baz=1.7						
V18A	**Ganado**	1.69	193	⇑Pb		**Pb**	20 10 29.6 -0.6
	baz=1.7						
V18A				⇓Sb		**Sb**	20 10 51.5 0.0
	baz=1.7						
V20A	**Brimhall**	1.75	153	⇓Pb		**Pb**	20 10 31.5 +0.3
	baz=1.8,SNR=87						
V20A				⇑Sb		**Sb**	20 10 54.1 +0.9
	baz=1.8						
R21A	**Cimarron**	1.81	56	⇑Pb		**Pb**	20 10 31.9 -0.4
	baz=1.8,SNR=62						
R21A				⇑Sb		**Sb**	20 10 55.0 -0.1
	baz=1.8						
Q18A	**Rafter H Ranch**	1.82	343	⇑P		**Pn**	20 10 31.3 +0.8
	baz=1.8,SNR=111						
Q18A				⇓Sb		**Sb**	20 10 55.3 -0.2
	baz=1.8						
Q20A	**Ridgley Place,**	1.83	29	⇓P		**Pn**	20 10 31.4 +0.7
	baz=1.8,SNR=58						
Q20A				⇓Sb		**Sb**	20 10 55.6 -0.2
	baz=1.8						
R16A	**Teasdale**	1.86	300	⇓P		**Pn**	20 10 31.9 +0.9
	baz=1.8,SNR=52						
R16A				⇓Sb		**Sb**	20 10 55.9 -0.5
	baz=1.8						
SRU	**San Rafael**	1.94	334	P		**Pn**	20 10 33.2 +1.1
	baz=1.9,SNR=243						
SRU				⇓Sb		**Sb**	20 10 58.7 -0.2
	baz=1.9						
SRU	**San Rafael**	1.94	334	*e*Pn		**Pn**	20 10 33.0 +0.8
SRU				*e*S		**Sn**	20 10 58.9 +2.2
V17A	**Tonalea, Kykot**	2.04	212	P		**Pn**	20 10 34.9 +1.3
	baz=2.0,SNR=637						
V17A				⇓Sb		**Sb**	20 11 01.4 -0.4
	baz=2.0						
T22A	**Edith**	2.06	99	⇑P		**Pn**	20 10 35.4 +1.6
	baz=2.1,SNR=39						
T22A				⇑Sb		**Sb**	20 11 02.6 +0.3
	baz=2.1						
Q16A	**Castle Valley**	2.07	319	⇓P		**Pn**	20 10 34.9 +1.1
	baz=2.1,SNR=182						
Q16A				⇓Sb		**Sb**	20 11 02.2 -0.3
	baz=2.1						
Q21A	**Lamborn Mesa,**	2.09	45	⇓P		**Pn**	20 10 35.3 +1.2
	baz=2.1,SNR=31						
Q21A				⇓Sb		**Sb**	20 11 03.3 +0.2
	baz=2.1						
V21A	**Milan**	2.13	136	⇑P		**Pn**	20 10 36.4 +1.7
	baz=2.1,SNR=35						
V21A				⇓Sb		**Sb**	20 11 04.7 +0.5
	baz=2.1						
W19A	**Sanders**	2.24	179	⇑P		**Pn**	20 10 37.7 +1.4
	baz=2.2,SNR=69						
W19A				⇓Sb		**Sb**	20 11 07.5 0.0
	baz=2.2						
W18A	**Petrified Fore**	2.25	186	⇓P		**Pn**	20 10 37.6 +1.3
	baz=2.3						
W18A				⇓Sb		**Sb**	20 11 07.5 -0.1
	baz=2.3						
P20A	**De Beque**	2.29	21	⇑Sb		**Sb**	20 11 09.1 +0.1
	baz=2.3						
P19A	**Cripple Cowboy**	2.30	9	⇓Sb		**Sb**	20 11 09.4 +0.2
	baz=2.3						
S15A	**Panguitch**	2.34	279	⇓Sb		**Sb**	20 11 10.2 -0.1
	baz=2.3						
P17A	**Butcher Ranch,**	2.34	335	⇑Sb		**Sb**	20 11 10.1 -0.3
	baz=2.3						
T15A	**Red Dirt Ranch**	2.37	263	⇑P		**Pn**	20 10 38.8 +0.8
	baz=2.4,SNR=59						
T15A				⇓Sb		**Sb**	20 11 10.7 -0.4
	baz=2.4						
TMUT	**Trail Mountain**	2.38	325	*e*Pn		**Pn**	20 10 39.8 +1.6
R15A	**Junction**	2.40	292	⇑Sb		**Sb**	20 11 11.9 0.0
	baz=2.4						
WUAZ	**Wupatki**	2.41	221	⇑P		**Pn**	20 10 39.6 +1.0
	baz=2.4,SNR=104						
WUAZ				⇑Sb		**Sb**	20 11 12.4 +0.2
	baz=2.4						
WUAZ	**Wupatki**	2.41	221	*e*Pn		**Pn**	20 10 39.4 +0.9
WUAZ				*e*Sn		**Sn**	20 11 07.0 -1.0
MSU	**Marysvale**	2.45	299	*e*P		**Pn**	20 10 41.7 +2.6
MSU				*e*Sg		**Sg**	20 11 12.9 -4.7
U15A	**North Rim**	2.46	249	⇑P		**Pn**	20 10 41.7 +2.4
	baz=2.5,SNR=41						
U15A				⇓Sb		**Sb**	20 11 13.3 -0.5
	baz=2.5						
W17A	**Winslow**	2.49	205	⇑P		**Pn**	20 10 40.7 +0.9
	baz=2.5,SNR=27						
W17A				⇑Sb		**Sb**	20 11 14.5 -0.2
	baz=2.5						
V22A	**San Miguel Ran**	2.50	124	⇑Sb		**Sb**	20 11 15.2 +0.3
	baz=2.5						
Q22A	**Crested Butte,**	2.50	52	⇓Sb		**Sb**	20 11 16.0 +1.0
	baz=2.5						
SMCO	**Snowmass**	2.66	46	*e*Pg		**Pg**	20 10 47.5 -2.6
W21A	**San Fidel**	2.67	146	⇑Sb		**Sb**	20 11 20.6 +0.8
	baz=2.7						
V15A	**Kaibab Nationa**	2.68	236	⇑P		**Pn**	20 10 44.4 +2.1
	baz=2.7,SNR=235						
V15A				⇑Sb		**Sb**	20 11 19.3 -0.7
	baz=2.7						
W16A	**Flagstaff**	2.82	217	⇑P		**Pn**	20 10 45.9 +1.7
	baz=2.8,SNR=16						
W16A				⇓Sb		**Sb**	20 11 23.8 -0.3
	baz=2.8						
Q15A	**Fillmore**	2.83	306	⇓Sb		**Sb**	20 11 25.0 +0.5
	baz=2.8						
P16A	**Fountain Green**	2.84	323	⇑Sb		**Sb**	20 11 25.5 +0.8
	baz=2.8						
X18A	**Snowflake**	2.85	188	⇑P		**Pn**	20 10 45.8 +1.1
	baz=2.9						
X18A				⇑Sb		**Sb**	20 11 25.0 0.0
	baz=2.9						
X20A	**Quemado**	2.91	164	⇑Sb		**Sb**	20 11 27.8 +1.0
	baz=2.9						
T14A	**Hurricane**	2.92	265	⇓Sb		**Sb**	20 11 26.9 0.0
	baz=2.9						
O20A	**White River Ci**	2.93	18	⇑Sb		**Sb**	20 11 27.9 +0.7
	baz=2.9						
X19A	**St. Johns**	2.93	177	⇑Sb		**Sb**	20 11 27.9 +0.7
	baz=2.9						
O18A	**Roosevelt**	2.94	352	⇓Sb		**Sb**	20 11 28.4 +0.9
	baz=2.9						
O19A	**Miners Draw (B**	2.95	5	⇓Sb		**Sb**	20 11 28.7 +1.0
	baz=3.0						
S14A	**Cedar City**	2.98	279	⇑Sb		**Sb**	20 11 29.5 +0.7
	baz=3.0						
O17A	**Robinson Place**	3.01	341	⇑Sb		**Sb**	20 11 30.9 +1.4
	baz=3.0						
CCUT	**Cedar City**	3.12	275	*e*Pn		**Pn**	20 10 49.3 +0.9
CCUT				*e*Pg		**Pg**	20 10 56.6 -2.3
CCUT				*e*Sg		**Sg**	20 11 35.2 -4.1
P15A	**Leamington**	3.13	316	⇑Sb		**Sb**	20 11 33.8 +0.7
	baz=3.1						
U14A	**Mt Trumbull**	3.14	254	⇓Sb		**Sb**	20 11 33.8 +0.6
	baz=3.1						
W15A	**Williams**	3.15	227	⇓Sb		**Sb**	20 11 34.6 +1.0
	baz=3.1						
MPU	**Maple Canyon**	3.16	328	*e*Pn		**Pn**	20 10 49.4 +0.6
MPU				*e*Sg		**Sg**	20 11 35.9 -4.6
SDCO	**Great Sand Dun**	3.16	82	*e*Pg		**Pg**	20 10 57.3 -2.4
ARUT	**Antelope Range**	3.20	279	Pn		**Pn**	20 10 50.3 +0.8
ARUT				*e*Pg		**Pg**	20 10 58.4 -2.0
ARUT				*e*Sg		**Sg**	20 11 38.1 -3.8
X21A	**Alamocita Cree**	3.21	155	⇑P		**Pn**	20 10 51.1 +1.6
	baz=3.2,SNR=8.6						
X21A				⇓Sb		**Sb**	20 11 37.0 +1.8
	baz=3.2						
O21A	**Pagoda**	3.24	28	⇓Sb		**Sb**	20 11 37.3 +1.0
	baz=3.2						
NLU	**North Lily Min**	3.31	322	*e*Pg		**Pg**	20 11 00.5 -2.0
X16A	**Lo Mia Camp, P**	3.35	209	⇓Sb		**Sb**	20 11 39.9 +0.5
	baz=3.4						
Y19A	**Nutrioso**	3.40	177	⇓Sb		**Sb**	20 11 42.3 +1.6
	baz=3.4						
ANMO	**Albuquerque**	3.41	134	*e*Pn		**Pn**	20 10 52.0 -0.4
V14A	**Boquillas Ranc**	3.41	241	⇑Sb		**Sb**	20 11 41.8 +0.6
	baz=3.4						
LAZ	**Ladron**	3.50	147	*e*Pn		**Pn**	20 10 54.0 +0.5
LAZ				*e*Pg		**Pg**	20 11 04.1 -1.9
LAZ				*e*Sg		**Sg**	20 11 47.1 -4.3
N19A	**John Jarvie Ra**	3.54	3	⇓Sb		**Sb**	20 11 45.7 +0.9
	baz=3.5						
T13A	**Saint George**	3.58	266	⇓Sb		**Sb**	20 11 46.9 +1.0
	baz=3.6						
JLU	**Jordanelle**	3.59	335	*e*Pb		**Pb**	20 10 58.5 -4.3
LENM	**Lemitar**	3.77	147	*e*Pb		**Pb**	20 11 02.8 -2.9
LENM				*e*Sg		**Sg**	20 11 55.3 -4.8
DUG	**Dugway**	3.86	318	*e*Pg		**Pg**	20 11 08.1 -5.0
ISCO	**Idaho Springs**	3.87	50	*e*Pn		**Pn**	20 10 57.5 -1.1
ISCO				*e*Pg		**Pg**	20 11 11.1 -2.1
BNM	**Barren Site**	3.94	144	*e*Pn		**Pn**	20 10 57.9 -1.7
BNM				*e*Pg		**Pg**	20 11 12.6 -1.9
HWUT	**Hardware Ranch**	4.55	340	*e*Pn		**Pn**	20 11 09.6 +1.6
SHPR	**Sheep Range**	4.66	261	*e*Pg		**Pg**	20 11 22.9 -5.3
RWWY	**Rawlins**	4.66	21	*e*Sg		**Sg**	20 12 22.1 -6.5
TUC	**Tucson**	5.16	193	*e*Pn		**Pn**	20 11 16.2 -0.1
TUC				*e*Pg		**Pg**	20 11 34.1 -3.7
TUC				*e*Sg		**Sg**	20 12 40.6 -4.0
N12A	**Clover Valley,**	5.57	310	*e*Pg		**Pg**	20 11 45.9 +0.1
GLA	**Glamis**	6.15	227	*e*Pn		**Pn**	20 11 28.5 -1.5
GLA				*e*Sg		**Sg**	20 13 12.4 -4.2
GSC	**Goldstone**	6.28	253	*e*Pg		**Pg**	20 11 56.0 -3.4
LOHW	**Long Hollow**	6.31	352	*e*Pg		**Pg**	20 11 56.4 -3.4
MNTX	**Cornudas Mount**	6.57	148	Pn		**Pn**	20 11 35.1 -0.7
MNTX				*e*Pg		**Pg**	20 12 00.3 -4.5
MNTX				*e*Sg		**Sg**	20 13 23.7 -6.2
GDL2	**Guadalupe Moun**	6.63	139	*e*Pg		**Pg**	20 12 05.6 -0.5
GDL2				*e*Sg		**Sg**	20 13 26.9 -5.0

*ISCJB **06** 20:22:35.6±1.3, 43°.87N±0°.07×73°.99E±0°.07, h2km±9km, Error ellipse: s-maj=13.1km s-min=7.4km az=26.5*
*NNC **06** 20:22:36.5±8.6, 42°.30N×73°.85E, h0km, mb2.7, mpv2.4, Error ellipse: s-maj=170.8km s-min=23.2km az=170.0*
*KNET **06** 20:22:38.4±0.5, 43°.74N×74°.06E, h29km±4km, ml2.1, Error ellipse: s-maj=3.7km s-min=2.6km az=159.0*
ISC 06 20:22:36.2±1.4, 43°.87N±0°.07×74°.02E±0°.07, h2km±6km, n12, σ0°61/21, 9C-12D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USP	**Ospenovka**	0.69	150	P		**Pg**	20 22 50.2 +0.7
	62nm,0.2s,SNR=38						
USP				⇓S		**Sg**	20 22 59.3 +0.8
	178nm,0.2s						
CHMS	**Chumysh**	1.02	148	⇓P		**Pg**	20 22 55.6 -0.1
	13nm,0.1s,SNR=34						
CHMS				⇓S		**Sg**	20 23 09.0 +0.1
	58nm,0.2s						
EKS2	**Erkin-Say**	1.22	189	⇓P		**Pg**	20 22 58.9 -0.7
	3.4nm,0.1s,SNR=26						
EKS2				⇓S		**Sg**	20 23 15.2 -0.2
	29nm,0.2s						
AAK	**Ala-Archa**	1.28	164	P		**Pg**	20 23 00.1 -0.6
	14nm,0.2s,SNR=8.6						
AAK				⇓S		**Sg**	20 23 16.9 -0.4
	18nm,0.2s						
KBK	**Karagaybulak**	1.39	150	⇓P		**Pn**	20 23 02.0 -0.5
	10nm,0.1s,SNR=10						
TKM2	**Tokmak 2**	1.49	129	⇓P		**Pn**	20 23 03.4 -0.6
	0.6nm,0.2s						
TKM2				⇑S		**Sb**	20 23 22.9 -1.0
	9.0nm,0.2s						
TKM2	**Tokmak 2**	1.49	129	⇑P		**Pn**	20 23 03.6 -0.4
	7.9nm,0.2s,SNR=9.4						
TKM2				⇑S		**Sb**	20 23 23.3 -0.6
	36nm,0.1s						
UCH	**Uchtor**	1.68	167	⇓P		**Pn**	20 23 06.9 +0.3
	9.3nm,0.2s,SNR=15						
UCH				⇑S		**Sn**	20 23 28.7 +0.1
	21nm,0.3s						
AML	**Almayashu**	1.75	188	⇑P		**Pn**	20 23 08.3 +0.7
	8.7nm,0.5s,SNR=8.5						
AML				⇓S		**Sn**	20 23 30.5 +0.1
	18nm,0.3s						
KZA	**Kyzart**	2.00	153	⇑P		**Pn**	20 23 12.5 +1.5
	2.7nm,0.1s,SNR=11						
KNDC	**Almaty**	2.24	106	⇓Pn		**Pn**	20 23 19.5 +5.2
	5.4nm,0.4s						
KNDC				⇓Lg			20 23 48.2
	15nm,0.5s						
KK31	**Karatay Array**	2.67	255	⇑Pn		**Pn**	20 23 19.5 -0.7
	0.1nm,0.3s						
KK31		

EMUR			T			20 27 34.2	
	SNR=5.5						
EMUR	**La Murta**	**2.35 344**	P	Pn		20 25 57.9	-2.0
	1.7nm,0.1s,SNR=6.1						
EMUR			S	Sn		20 26 18.8	-8.9
	8.2nm,0.4s,SNR=8.3						
EMUR			T			20 27 34.2	
	SNR=5.5						
EMUR	**La Murta**	**2.35 344**	P	Pn		20 25 58.0	-1.9
EMUR			S	Sn		20 26 18.9	-8.8
EBER	**Berja**	**2.39 304**	P	Pn		20 25 59.3	-1.2
EBER			S	Sn		20 26 25.2	-3.6
EBER	**Berja**	**2.39 304**	P	Pn		20 25 59.3	-1.2
	1.4nm,0.1s,SNR=9.7						
EBER			S	Sn		20 26 25.2	-3.6
	4.9nm,0.3s,SNR=7.0						
EBER			T			20 27 28.7	
	SNR=6.4						
EBER	**Berja**	**2.39 304**	P	Pn		20 25 59.3	-1.2
	1.4nm,0.1s,SNR=9.7						
EBER			S	Sn		20 26 25.2	-3.6
	4.9nm,0.3s,SNR=7.0						
EBER			T			20 27 28.7	
	SNR=6.4						
EBER	**Berja**	**2.39 304**	P	Pn		20 25 59.3	-1.2
	1.4nm,0.1s,SNR=9.7						
EBER			S	Sn		20 26 25.2	-3.5
	4.9nm,0.3s,SNR=7.0						
EHUE	**Huescar**	**2.83 323**	P	Pn		20 26 06.1	-0.4
EHUE	**Huescar**	**2.83 323**	P	Pn		20 26 06.1	-0.4
	0.9nm,0.1s,SNR=7.9						
EHUE	**Huescar**	**2.83 323**	P	Pn		20 26 06.1	-0.4
	0.9nm,0.1s,SNR=7.9						
EHUE	**Huescar**	**2.83 323**	P	Pn		20 26 06.1	-0.5
	0.9nm,0.1s,SNR=7.9						
EGUA	**Guajares**	**2.83 297**	P	Pn		20 26 06.8	+0.1
EGUA			S	Sn		20 26 34.6	-5.1
EGUA	**Guajares**	**2.83 297**	P	Pn		20 26 06.8	+0.1
	5.2nm,0.2s,SNR=7.9						
EGUA			S	Sn		20 26 34.6	-5.1
	12nm,0.3s,SNR=7.9						
EGUA	**Guajares**	**2.83 297**	P	Pn		20 26 06.8	+0.1
	5.2nm,0.2s,SNR=7.9						
EGUA			S	Sn		20 26 34.6	-5.1
	12nm,0.3s,SNR=7.9						
EGUA	**Guajares**	**2.83 297**	P	Pn		20 26 06.8	+0.2
	5.2nm,0.2s,SNR=7.9						
EGUA			S	Sn		20 26 34.6	-5.1
	12nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**2.93 304**	P	Pn		20 26 08.1	+0.2
	1.3nm,0.1s,SNR=8.6						
EQUE			S	Sn		20 26 38.4	-3.6
	1.6

ENTT					*e*S		**Sn**	**20 54 47.7 +2.5**
	baz=13							
TWE	**Neicheng**	**1.89**	**35**		*e*P		**Pn**	**20 54 24.1 -0.5**
	baz=34							
TWE					*e*S		**Sn**	**20 54 50.7 +2.6**
	baz=34							
TWC	**Suao**	**1.91**	**41**		*e*P		**Pn**	**20 54 26.7 +1.9**
	baz=55							
TWC					*i* S		**Sn**	**20 54 51.7 +3.2**
	baz=55							
ILA	**Ilan**	**1.97**	**36**		*e*P		**Pn**	**20 54 28.4 +2.7**
	baz=19							
TATO	**Taipei**	**2.02**	**27**		*e*Pn		**Pn**	**20 54 24.1 -2.4**
TATO					*e*Sg		**Sg**	**20 54 57.9 -0.2**
TWA	**Mucha**	**2.07**	**29**		*e*P		**Pn**	**20 54 26.7 -0.3**
	baz=14							
TWS1	**Kuangyinshan**	**2.11**	**24**		*e*P		**Pn**	**20 54 28.6 +1.1**
	baz=10.0							
NWF	**Wu-fen Shan**	**2.24**	**32**		*e*P		**Pn**	**20 54 31.0 +1.6**
	baz=31							
KNM	**Kinmen**	**2.25**	**304**		*e*P		**Pn**	**20 54 27.7 -1.8**
	baz=303							
TWB1	**Santiao Chiao**	**2.29**	**37**		*e*P		**Pn**	**20 54 30.7 +0.6**
	baz=20							
QZH	**Quanzhou**	**2.47**	**316**		Pn		**Pn**	**20 54 31.4 -1.2**
QZH					Sn		**Sn**	**20 54 59.4 -3.1**
QZH					smax			
	comp=N,140nm,0.4s							
QZH					smax			
	comp=E,150nm,0.5s							

TAP 06 20:55:24.1, 23°.22N×121°.83E, h19km, ML3.7, 5C, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWF1	**Yuli**	**0.51**	**285**	⇑*i*P	Pg	20 55 33.9	-0.5
	baz=285						
EHY	**Hungye**	**0.55**	**302**	⇑*i*P	Pg	20 55 34.5	-0.7
	baz=300						
EHY				*e*S	Sg	20 55 42.7	+0.1
	baz=300						
ESL	**Shilin**	**0.70**	**328**	P	Pb	20 55 36.7	-1.1
	baz=328						
ESL				S	Sb	20 55 46.6	-0.4
	baz=328						
ELDTW	**Lidau**	**0.75**	**268**	⇑*i*P	Pb	20 55 37.5	-1.1
	baz=267						
ELDTW				*e*S	Sb	20 55 47.0	-1.5
	baz=267						
TTN	**Taitung**	**0.78**	**234**	*e*P	Pb	20 55 37.5	-1.6
	baz=224						
TTN				*e*S	Sb	20 55 47.6	-1.8
	baz=224						
HWA	**Hwalien**	**0.78**	**345**	*e*P	Pb	20 55 38.4	-0.8
	baz=344						
TWG	**Pinlang**	**0.80**	**241**	*i* P	Pb	20 55 38.5	-1.0
	baz=231						
TWG				*e*S	Sb	20 55 49.1	-0.9
	baz=231						
YUS	**Yu-Shan**	**0.85**	**289**	*i* P	Pb	20 55 40.1	-0.3
	baz=288						
TWD	**Chiawan**	**0.89**	**346**	*i* P	Pb	20 55 39.9	-1.0
	baz=345						
TWD				S	Sb	20 55 51.4	-1.0
	baz=345						
ALS	**Alishan**	**0.99**	**287**	*e*P	Pb	20 55 42.4	-0.3
	baz=278						
ECL	**Taimali**	**1.02**	**233**	P	Pb	20 55 41.2	-1.9
	baz=233						
WHF	**Hehuan Shan**	**1.06**	**331**	*e*P	Pb	20 55 42.8	-1.1
	baz=330						
SMLT	**Sun Moon Lake**	**1.08**	**308**	*e*P	Pb	20 55 43.6	-0.7
	baz=308						
WTP	**Ta-pu**	**1.12**	**272**	⇑*i*P	Pn	20 55 44.8	-0.1
	baz=271						
WTP				*e*S	Sb	20 55 58.5	-0.6
	baz=271						
CHN5	**Tsauling**	**1.12**	**290**	⇑*i*P	Pn	20 55 45.2	+0.3
	baz=289						
CHN5				S	Sb	20 56 00.3	+1.0
	baz=289						
TYC	**Yuchr**	**1.12**	**308**	*e*P	Pn	20 55 44.0	-0.9
	baz=306						
TYC				*e*S	Sb	20 55 59.9	+0.6
	baz=306						
SGST	**Jiashian**	**1.16**	**264**	*e*P	Pn	20 55 44.6	-0.8
	baz=263						
TWT	**Tachien**	**1.19**	**330**	*e*P	Pn	20 55 45.3	-0.6
	baz=339						
CHN1	**Nanshi**	**1.20**	**269**	P	Pn	20 55 45.6	-0.3
	baz=268						
CHN1				*e*S	Sb	20 56 02.5	+1.1
	baz=268						
SSD	**Sandimen**	**1.20**	**247**	*e*P	Pn	20 55 44.7	-1.3
	baz=247						
LAY	**Lan-yu**	**1.20**	**192**	*e*P	Pn	20 55 43.2	-2.8
	baz=193						
LAY				*e*S	Sb	20 55 58.1	-3.4
	baz=193						
ENA	**Nanau**	**1.21**	**356**	P	Pn	20 55 44.6	-1.5
	baz=8.0						
ENA				*e*S	Sb	20 56 00.3	-1.4
	baz=8.0						
TAW	**Tawu**	**1.22**	**225**	*e*P	Pn	20 55 43.8	-2.4
	baz=238						
EAST	**Anshuo**	**1.23**	**228**	*e*P	Pn	20 55 44.5	-1.9
	baz=228						
TWK	**Hsinying**	**1.24**	**273**	P	Pn	20 55 46.7	+0.3
	baz=271						
TWK				*e*S	Sb	20 56 02.6	+0.2
	baz=271						
WNT	**Mingjian**	**1.24**	**302**	P	Pn	20 55 47.0	+0.5
	baz=301						
WNT				S	Sb	20 56 04.0	+1.4
	baz=301						
WGK	**Gukeng**	**1.25**	**292**	*e*P	Pn	20 55 47.4	+0.6
	baz=292						
NNS	**Nan Shan**	**1.29**	**341**	P	Pn	20 55 46.6	-0.6
	baz=339						
NNS				*e*S	Sn	20 56 02.4	-1.5
	baz=339						
CHY	**Chiayi**	**1.32**	**282**	*e*P	Pn	20 55 48.4	+0.8
	baz=282						
SGLT	**Jiouru**	**1.33**	**249**	*e*P	Pn	20 55 46.4	-1.4
	baz=244						
TWM1	**Shoushan**	**1.36**	**253**	*e*P	Pn	20 55 49.2	+1.2
	baz=253						
CHN3	**Shinhua**	**1.36**	**264**	P	Pn	20 55 49.9	+1.8
	baz=263						
CHN3				*e*S	Sn	20 56 09.8	+4.1
	baz=263						
TWC	**Suao**	**1.39**	**1**	P	Pn	20 55 47.9	-0.6
	baz=359						
TWC				S	Sn	20 56 05.4	-0.9
	baz=359						
SCZT	**Fangliau**	**1.40**	**233**	*e*P	Pn	20 55 47.9	-0.8
	baz=225						
TCU	**Taichung**	**1.41**	**311**	*e*P	Pn	20 55 49.9	+1.1
	baz=309						
TCU				*e*S	Sn	20 56 08.0	+1.1
	baz=309						
ENTT	**Nioudou**	**1.44**	**350**	P	Pn	20 55 48.7	-0.6
	baz=349						
ENTT				*e*S	Sn	20 56 06.5	-1.1
	baz=349						
TWQ1	**Liyutan**	**1.48**	**319**	*e*P	Pn	20 55 50.9	+1.0
	baz=318						
TWQ1				*e*S	Sn	20 56 10.8	+2.0
	baz=318						
CHN8	**Yiju**	**1.50**	**275**	*e*P	Pn	20 55 50.6	+0.6
	baz=274						
CHN8				*e*S	Sn	20 56 11.3	+2.3
	baz=274						
TWE	**Neicheng**	**1.50**	**354**	P	Pn	20 55 49.7	-0.5
	baz=352						
TWE				*e*S	Sn	20 56 07.1	-2.1
	baz=352						
NSK	**Sanguang**	**1.52**	**343**	P	Pn	20 55 49.7	-0.6
	baz=342						
NSK				S	Sn	20 56 08.1	-1.4
	baz=342						
NSY	**Sanyi**	**1.54**	**321**	*e*P	Pn	20 55 51.8	+1.1
	baz=319						
NSY				*e*S	Sn	20 56 12.5	+2.3
	baz=319						
WTCT	**Ta-ch'eng**	**1.56**	**295**	*e*P	Pn	20 55 51.4	+0.4
	baz=294						
TSEB	**Hengchuen, Pin**	**1.57**	**213**	*e*P	Pn	20 55 51.2	+0.2
	baz=215						
TSEB				*e*S	Sn	20 56 11.0	+0.2
	baz=215						
HEN	**Hengchun**	**1.57**	**220**	*e*P	Pn	20 55 51.1	0.0
	baz=220						
HEN				*e*S	Sn	20 56 10.3	-0.6
	baz=220						
TWK1	**Hengchun**	**1.58**	**217**	*e*P	Pn	20 55 50.0	-1.2
	baz=217						
TWK1				*e*S	Sn	20 56 10.9	-0.3
	baz=217						
NSTT	**Nanjuang**	**1.60**	**332**	*e*P	Pn	20 55 52.0	+0.6
	baz=330						
TWP	**Hsiaoliuchiu**	**1.61**	**238**	*e*P	Pn	20 55 54.4	+2.8
	baz=238						
TWA	**Mucha**	**1.77**	**353**	*e*P	Pn	20 55 54.4	+0.6
	baz=351						
TWB1	**Santiao Chiao**	**1.79**	**5**	*e*P	Pn	20 55 54.3	+0.3
	baz=16						
NWF	**Wu-fen Shan**	**1.84**	**359**	*e*P	Pn	20 55 55.9	+1.1
	baz=357						
NWF				*e*S	Sn	20 56 18.7	+1.0
	baz=357						
PNG	**Penghu**	**2.12**	**280**	*e*P	Pn	20 55 58.6	0.0
	baz=279						

*BUC **06** 21:05:29.4±0.9, 45°.42N×21°.26E, h11km±7km, MD2.5/2, Error ellipse: s-maj=7.9km s-min=4.2km az=19.0*
*ISCJB **06** 21:05:29.4±0.5, 45°.42N±0°.03×21°.23E±0°.05, h13km±5km, Error ellipse: s-maj=6.4km s-min=3.9km az=38.3*
*CSEM **06** 21:05:30.3, 45°.69N×21°.14E, h0km, ML2.1, After BEO*
*BEO **06** 21:05:30.3±0.7, 45°.69N×21°.14E, h0km, ML2.1/6*
ISC 06 21:05:30.0±0.5, 45°.44N±0°.03×21°.25E±0°.05, h16km±5km, n26, σ0°.99/44, 8C-4D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIM	**Timisoara**	**0.29**	**356**	⇑*i*P	**Pg**	**21 05 36.1**	**-0.2**
TIM				*i* S	**Sg**	**21 05 41.1**	**+0.5**
TIM	**Timisoara**	**0.29**	**356**	⇑*i*P	**Pg**	**21 05 36.1**	**-0.2**
TIM	**Timisoara**	**0.29**	**356**	S	**Sg**	**21 05 41.1**	**+0.5**
BZS	**Buzias**	**0.31**	**56**	⇓*i*Pg	**Pg**	**21 05 36.2**	**-0.4**
BZS				*e*Sg	**Sg**	**21 05 41.0**	**-0.1**
BZS	**Buzias**	**0.31**	**56**	⇓*i*P	**Pg**	**21 05 36.2**	**-0.4**
BZS				*i* S	**Sg**	**21 05 41.1**	**0.0**
BZS	**Buzias**	**0.31**	**56**	⇓*i*P	**Pg**	**21 05 36.2**	**-0.4**
BZS				S	**Sg**	**21 05 41.1**	**0.0**
BZS	**Buzias**	**0.31**	**56**	⇓*i*Pg	**Pg**	**21 05 36.2**	**-0.4**
BZS				*e*Sg	**Sg**	**21 05 41.0**	**-0.1**
FRGS	**Fruska Gora**	**1.05**	**255**	*e*Pg	**Pg**	**21 05 50.2**	**-0.2**
FRGS				*e*Sg	**Sg**	**21 06 04.3**	**+0.1**
GZR	**Gura Zlata**	**1.08**	**92**	⇑*i*P	**Pb**	**21 05 50.2**	**-0.1**
GZR				*i* S	**Sb**	**21 06 05.2**	**+1.1**
GZR	**Gura Zlata**	**1.08**	**92**	⇑*i*P	**Pb**	**21 05 50.2**	**-0.1**
GZR	**Gura Zlata**	**1.08**	**92**	S	**Sb**	**21 06 05.2**	**+1.1**
DEV	**Deva**	**1.24**	**69**	⇑*i*P	**Pn**	**21 05 52.4**	**-0.3**
DEV				*i* S	**Sb**	**21 06 09.6**	**+0.8**
DEV	**Deva**	**1.24**	**69**	⇑*i*P	**Pn**	**21 05 52.4**	**-0.3**
DEV	**Deva**	**1.24**	**69**	S	**Sb**	**21 06 09.6**	**+0.8**
GRUS	**Gruza**	**1.60**	**194**	*e*Pn	**Pg**	**21 06 02.8**	**+2.0**
GRUS				*e*Sn	**Sg**	**21 06 26.3**	**+4.8**
GRUS	**Gruza**	**1.60**	**194**	*e*Pn	**Pg**	**21 06 02.8**	**+2.0**
GRUS				*e*Sn	**Sg**	**21 06 26.3**	**+4.8**
DIVS	**Divibare**	**1.61**	**214**	*e*Pn	**Pg**	**21 06 02.0**	**+0.9**
DIVS				*e*Sn	**Sg**	**21 06 25.2**	**+3.2**
DIVS	**Divibare**	**1.61**	**214**	*e*Pn	**Pg**	**21 06 02.0**	**+0.9**
DIVS				*e*Sn	**Sg**	**21 06 25.2**	**+3.2**
DRGR		**1.69**	**37**	⇑*i*P	**Pn**	**21 05 58.4**	**-0.5**
DRGR				*i* S	**Sn**	**21 06 19.8**	**-0.4**
DRGR		**1.69**	**37**	⇑*i*P	**Pn**	**21 05 58.4**	**-0.5**
DRGR		**1.69**	**37**	S	**Sn**	**21 06 19.8**	**-0.4**
BBLS	**Lazići**	**2.05**	**220**	*e*Pn	**Pg**	**21 06 08.5**	**-0.9**
BBLS				*e*Sn	**Sg**	**21 06 35.7**	**-0.3**
BBLS	**Lazići**	**2.05**	**220**	*e*Pn	**Pg**	**21 06 08.5**	**-0.9**
BBLS				*e*Sn	**Sg**	**21 06 35.7**	**-0.3**
ZAPS	**Zavoj**	**2.38**	**155**	*e*Pn	**Pg**	**21 06 14.4**	**-1.4**
ZAPS				*e*Sn	**Sg**	**21 06 47.6**	**+0.9**
BARS	**Barje**	**2.66**	**171**	*e*Pn	**Pg**	**21 06 18.0**	**-3.0**
BARS				*e*Sn	**Sg**	**21 06 54.2**	**-1.2**
BARS	**Barje**	**2.66**	**171**	*e*Pn	**Pg**	**21 06 18.0**	**-3.0**
BARS				*e*Sn	**Sg**	**21 06 54.2**	**-1.2**

*NEIC **06** 21:10:39.0, 35°.78N×0°.59W, h0km, MG4.2(MDD), After MDD.*
*INMG **06** 21:10:39.2±1.6, 35°.70N×0°.40W, h42km±12km, ML2.4, Error ellipse: s-maj=9.1km s-min=4.9km az=135.0*
*ISCJB **06** 21:10:39.4±0.3, 36°.00N±0°.02×0°.61W±0°.02, h10km, Error ellipse: s-maj=3.3km s-min=2.6km az=162.9*
*CRAAG **06** 21:10:40.2, 35°.80N×0°.56W, Ml4.5*
*CSEM **06** 21:10:40.5±0.2, 35°.80N×0°.62W, h20km, ML4.5, Error ellipse: s-maj=5.4km s-min=3.2km az=179.0*
*MDD **06** 21:10:40.3±0.7, 35°.81N×0°.62W, h6km±9km, mb4.2/26, Error ellipse: s-maj=9.0km s-min=5.1km az=174.0, PRIMO*
*LDG **06** 21:10:41.6±0.4, 35°.96N×0°.62W, h30km, Ml3.3/10, Error ellipse: s-maj=8.8km s-min=3.8km az=152.0*
*CNRM **06** 21:10:54.9, 35°.77N×0°.44W, h30km, MD4.0*
ISC 06 21:10:40.5±0.3, 35°.96N±0°.02×0°.64W±0°.02, h10km, n250, σ1°.33/390, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USTO	**Oran**	**0.23**	**162**	P	**Pg**	**21 10 43.0**	**-2.3**
USTO	**Oran**	**0.23**	**162**	P	**Pg**	**21 10 43.0**	**-2.3**
USTO	**Oran**	**0.23**	**162**	P	**Pg**	**21 10 43.0**	**-2.3**
ODJA	**Bouhanifia**	**0.74**	**147**	P	**Pg**	**21 10 45.0**	**-10**
ODJA	**Bouhanifia**	**0.74**	**147**	P	**Pg**	**21 10 45.0**	**-10**
ODJA	**Bouhanifia**	**0.74**	**147**	P	**Pg**	**21 10 45.0**	**-10**
ODZI	**Dziouia**	**0.82**	**216**	P	**Pg**	**21 10 56.5**	**+0.1**
ODZI	**Dziouia**	**0.82**	**216**	P	**Pg**	**21 10 56.5**	**+0.1**
ODZI	**Dziouia**	**0.82**	**216**	P	**Pg**	**21 10 56.5**	**+0.1**
OJBR	**Djebel Berber**	**0.88**	**115**	P	**Pg**	**21 10 57.0**	**-0.5**
OJBR	**Djebel Berber**	**0.88**	**115**	P	**Pg**	**21 10 57.0**	**-0.5**
OJBR	**Djebel Berber**	**0.88**	**115**	P	**Pg**	**21 10 57.0**	**-0.5**
OJBR	**Djebel Berber**	**0.88**	**115**	P	**Pg**	**21 10 57.0**	**-0.5**
EANR	**'Ain N'Sour**	**1.41**	**90**	P	**Pn**	**21 11 04.4**	**-1.8**
EANR	**'Ain N'Sour**	**1.41**	**90**	P	**Pn**	**21 11 04.4**	**-1.8**
EANR	**'Ain N'Sour**	**1.41**	**90**	P	**Pn**	**21 11 04.4**	**-1.8**
EANR	**'Ain N'Sour**	**1.41**	**90**	P	**Pn**	**21 11 04.4**	**-1.8**
ECHF	**Ech Chlef**	**1.61**	**82**	P	**Pg**	**21 11 12.9**	**+1.4**
ECHF	**Ech Chlef**	**1.61**	**82**	P	**Pg**	**21 11 12.9**	**+1.4**
ENIJ	**Nijar**	**1.62**	**309**	P	**Pn**	**21 11 08.4**	**-0.7**
ENIJ				S	**Sn**	**21 11 29.7**	**-0.4**
ENIJ	**Nijar**			P	**Pn**	**21 11 08.4**	**-0.7**
	38nm,0.3s,SNR=16	**1.62**	**309**				
ENIJ				S	**Sn**	**21 11 29.7**	**-0.4**
	53nm,0.3s,SNR=6.0						
ENIJ	**Nijar**			P	**Pn**	**21 11 08.4**	**-0.7**
	38nm,0.3s,SNR=16	**1.62**	**309**				
ENIJ				S	**Sn**	**21 11 29.7**	**-0.4**
	53nm,0.3s,SNR=6.0						
ENIJ	**Nijar**			P	**Pn**	**21 11 08.4**	**-0.8**
	38nm,0.3s,SNR=16	**1.62**	**309**				
ENIJ				S	**Sn**	**21 11 29.7**	**-0.4**
	53nm,0.3s,SNR=6.0						
ECHA	**Ech Chlef**	**1.64**	**83**	P	**Pg**	**21 11 12.9**	**+1.0**
ECHA	**Ech Chlef**	**1.64**	**83**	P	**Pg**	**21 11 12.9**	**+1.0**
ETRT	**Tiaret**	**1.68**	**109**	P	**Pn**	**21 11 08.3**	**-1.6**
ETRT	**Tiaret**	**1.68**	**109**	P	**Pn**	**21 11 08.3**	**-1.6**
ETRT	**Tiaret**	**1.68**	**109**	P	**Pn**	**21 11 08.3**	**-1.6**
ETRT	**Tiaret**	**1.68**	**109**	P	**Pn**	**21 11 08.3**	**-1.6**
EBNR	**Beni Rached**	**1.79**	**79**	P	**Pg**	**21 11 18.9**	**+4.1**
EBNR	**Beni Rached**	**1.79**	**79**	P	**Pg**	**21 11 18.9**	**+4.1**
EMUR	**La Murta**	**1.94**	**346**	P	**Pn**	**21 11 13.0**	**-0.7**
EMUR				S	**Sn**	**21 11 35.9**	**-2.2**
EMUR	**La Murta**	**1.94**	**346**	P	**Pn**	**21 11 13.0**	**-0.7**
	13nm,0.2s,SNR=30						
EMUR				S	**Sn**	**21 11 35.9**	**-2.2**
	40nm,0.3s,SNR=4.6						
EMUR				T		21 12 49.2	
	SNR=6.9						
EMUR	**La Murta**	**1.94**	**346**	P	**Pn**	**21 11 13.0**	**-0.7**
	13nm,0.2s,SNR=30						
EMUR				S	**Sn**	**21 11 35.9**	**-2.2**
	40nm,0.3s,SNR=4.6						
EMUR				T		21 12 49.2	
	SNR=6.9						
EMUR	**La Murta**	**1.94**	**346**	P	**Pn**	**21 11 13.0**	**-0.6**
	13nm,0.2s,SNR=30						
EMUR				S	**Sn**	**21 11 35.9**	**-2.2**
	40nm,0.3s,SNR=4.6						
EALB	**Alboran**	**1.95**	**270**	P	**Pn**	**21 11 12.1**	**-1.6**
EALB				S	**Sn**	**21 11 36.3**	**-1.8**
EALB	**Alboran**	**1.95**	**270**	P	**Pn**	**21 11 12.1**	**-1.6**
	5.9nm,0.2s,SNR=9.2						
EALB				S	**Sn**	**21 11 36.3**	**-1.8**
	38nm,0.3s,SNR=5.8						
EALB	**Alboran**	**1.95**	**270**	P	**Pn**	**21 11 12.1**	**-1.6**
	5.9nm,0.2s,SNR=9.2						
EALB				S	**Sn**	**21 11 36.3**	**-1.8**
	38nm,0.3s,SNR=5.8						
EALB	**Alboran**	**1.95**	**270**	P	**Pn**	**21 11 12.1**	**-1.5**
	5.9nm,0.2s,SNR=9.2						
EALB				S	**Sn**	**21 11 36.3**	**-1.8**
	38nm,0.3s,SNR=5.8						
ZAI	**Zaio**	**1.98**	**241**	*i* P	**Pg**	**21 11 26.0**	**+7.4**
ZAI				*i* S	**Sg**	**21 11 51.0**	**+6.7**
EBER	**Berja**	**2.05**	**298**	P	**Pn**	**21 11 14.6**	**-0.5**
EBER				S	**Sn**	**21 11 41.9**	**+1.3**
EBER	**Berja**	**2.05**	**298**	P	**Pn**	**21 11 14.5**	**-0.5**
	7.4nm,0.2s,SNR=22						
EBER				S	**Sn**	**21 11 41.9**	**+1.3**
	22nm,0.3s,SNR=4.5						
EBER	**Berja**	**2.05**	**298**	P	**Pn**	**21 11 14.5**	**-0.5**
	7.4nm,0.2s,SNR=22						
EBER				S	**Sn**	**21 11 41.9**	**+1.3**
	22nm,0.3s,SNR=4.5						
EBER	**Berja**	**2.05**	**298**	P	**Pn**	**21 11 14.6**	**-0.4**
EBER				S	**Sn**	**21 11 41.9**	**+1.3**
	22nm,0.3s,SNR=4.5						
EHUE	**Huescar**	**2.43**	**320**	P	**Pn**	**21 11 21.2**	**+0.9**
EHUE	**Huescar**	**2.43**	**320**	P	**Pn**	**21 11 21.2**	**+0.9**
	6.1nm,0.1s,SNR=7.9						
EHUE	**Huescar**	**2.43**	**320**	P	**Pn**	**21 11 21.2**	**+0.9**
	6.1nm,0.1s,SNR=7.9						
EHUE	**Huescar**	**2.43**	**320**	P	**Pn**	**21 11 21.2**	**+0.9**
	6.1nm,0.1s,SNR=7.9						
EGUA	**Guajares**	**2.52**	**291**	P	**Pn**	**21 11 20.7**	**-0.9**
EGUA				S	**Sn**	**21 11 51.1**	**-1.2**
EGUA	**Guajares**	**2.52**	**291**	P	**Pn**	**21 11 20.7**	**-0.9**
	12nm,0.2s,SNR=7.9						
EGUA				S	**Sn**	**21 11 51.1**	**-1.2**
	29nm,0.3s,SNR=7.9						
EGUA	**Guajares**	**2.52**	**291**	P	**Pn**	**21 11 20.7**	**-0.9**
	12nm,0.2s,SNR=7.9						
EGUA				S	**Sn**	**21 11 51.1**	**-1.2**
	29nm,0.3s,SNR=7.9						
EGUA	**Guajares**	**2.52**	**291**	P	**Pn**	**21 11 20.7**	**-0.8**
	12nm,0.2s,SNR=7.9						
EGUA				S	**Sn**	**21 11 51.1**	**-1.2**
	29nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**2.58**	**300**	P	**Pn**	**21 11 23.2**	**+0.9**
	8.5nm,0.3s,SNR=23						
EQUE	**Quentar**	**2.58**	**300**	P	**Pn**	**21 11 23.2**	**+0.9**
	8.5nm,0.3s,SNR=23						
EQUE	**Quentar**	**2.58**	**300**	P	**Pn**	**21 11 23.2**	**+0.9**
	8.5nm,0.3s,SNR=23						
EQES	**Quesada**	**2.69**	**314**	P	**Pn**	**21 11 25.7**	**+1.9**
EQES				S	**Sn**	**21 11 58.5**	**+2.2**
EQES	**Quesada**	**2.69**	**314**	P	**Pn**	**21 11 25.7**	**+1.9**
	15nm,0.2s,SNR=32						
EQES				S	**Sn**	**21 11 58.5**	**+2.2**
	16nm,0.3s,SNR=7.9						
EQES	**Quesada**	**2.69**	**314**	P	**Pn**	**21 11 25.7**	**+1.9**
	15nm,0.2s,SNR=32						
EQES				S	**Sn**	**21 11 58.5**	**+2.2**
	16nm,0.3s,SNR=7.9						
EQES	**Quesada**	**2.69**	**314**	P	**Pn**	**21 11 25.7**	**+1.9**
	15nm,0.2s,SNR=32						
EQES				S	**Sn**	**21 11 58.5**	**+2.1**
	16nm,0.3s,SNR=7.9						
ECOG	**Cogollos-Vega**	**2.70**	**300**	P	**Pn**	**21 11 25.0**	**+1.0**
ECOG	**Cogollos-Vega**	**2.70**	**300**	P	**Pn**	**21 11 25.0**	**+1.0**
	3.3nm,0.1s,SNR=7.9						
ECOG	**Cogollos-Vega**	**2.70**	**300**	P	**Pn**	**21 11 25.0**	**+1.0**
	3.3nm,0.1s,SNR=7.9						
ECOG	**Cogollos-Vega**	**2.70**	**300**	P	**Pn**	**21 11 25.0**	**+1.0**
	3.3nm,0.1s,SNR=7.9						
EBEN	**Beniarda**	**2.76**	**7**	P	**Pn**	**21 11 24.8**	**-0.1**
EBEN				S	**Sn**	**21 11 56.0**	**-2.3**
EBEN	**Beniarda**	**2.76**	**7**	P	**Pn**	**21 11 24.8**	**-0.1**
	8.2nm,0.2s,SNR=29						
EBEN				S	**Sn**	**21 11 56.0**	**-2.3**
	13nm,0.3s,SNR=5.6					

	5.9nm,0.5s,SNR=7.9						
EBAN	**Banos Encina**	**3.35**	**312**	P	**Pn**	**21 11 33.6**	**+0.7**
EBAN				S	**Sn**	**21 12 13.4**	**+0.7**
EBAN	**Banos Encina**	**3.35**	**312**	P	**Pn**	**21 11 33.6**	**+0.7**
	5.6nm,0.2s,SNR=9.6						
EBAN				S	**Sn**	**21 12 13.4**	**+0.7**
	6.7nm,0.4s					

az=140.5
*NDI **06** 21:16:33.7±3.0, 24.70N×84.99E, h11km±13km, ML4.1, mb3.8(NEIC)*
*NEIC **06** 21:16:33.9±2.7, 24.70N×84.96E, h11km±18km, mb3.8/6, Error ellipse: s-maj=7.8km s-min=5.8km az=87.0*
NEIC At least 2 people injured, minor damage and power outages occurred in the Manpur area. Felt at Atri, Gaya, Gararu, Paraiya and Tankuppa.
*DMN **06** 21:16:40.4±14.0, 29.92N×87.00E, h10km, Ml4.7/2, Error ellipse: s-maj=348.1km s-min=152.9km az=180.0*

ISC 06 21:16:34.3±1.5, 24.67N±0.03×84.88E±0.03, h18km±11km, n64, σ1°12/82, mb3.8/12, Northern India

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOK	**Bokaro**	**1.27**	**133**	*e*PKP	**Pn**	**21 16 57.5**	**+0.3**
BOK				*e*S	**Sb**	**21 17 14.0**	**+0.3**
RAMN	**Ramite**	**2.75**	**34**	*e*Pn	**Pn**	**21 17 17.0**	**-0.6**
RAMN	**Ramite**	**2.75**	**34**	*e*Pn	**Pn**	**21 17 17.0**	**-0.6**
PKI	**Pulchoki**	**2.93**	**9**	*e*Pn	**Pn**	**21 17 19.8**	**-0.2**
PKI				*e*Sn	**Sn**	**21 17 56.7**	**+2.0**
	1μm,0.6s						
PKI	**Pulchoki**	**2.93**	**9**	*e*Pn	**Pn**	**21 17 20.5**	**+0.5**
PKI				*e*Sn	**Sn**	**21 17 56.7**	**+2.0**
PKIN	**Phulchoki**	**2.93**	**9**	*e*Pn	**Pn**	**21 17 20.5**	**+0.5**
DMN	**Daman**	**2.93**	**4**	*e*Pn	**Pn**	**21 17 19.8**	**-0.3**
DMN				*e*Sn	**Sn**	**21 17 54.7**	**-0.1**
	1μm,0.6s						
DMN	**Daman**	**2.93**	**4**	*e*Pn	**Pn**	**21 17 19.8**	**-0.3**
DMN				*e*Sn	**Sn**	**21 17 54.7**	**-0.1**
KKN	**Kakani**	**3.13**	**7**	*e*Pn	**Pn**	**21 17 23.1**	**+0.4**
KKN	**Kakani**	**3.13**	**7**	*e*Pn	**Pn**	**21 17 23.1**	**+0.4**
ODAN	**Odare**	**3.14**	**46**	*e*Pn	**Pn**	**21 17 20.9**	**-2.1**
ODAN	**Odare**	**3.14**	**46**	*e*Pn	**Pn**	**21 17 20.9**	**-2.1**
JIRN	**Jiri**	**3.20**	**21**	*e*Pn	**Pn**	**21 17 23.7**	**-0.1**
JIRN	**Jiri**	**3.20**	**21**	*e*Pn	**Pn**	**21 17 23.7**	**-0.1**
GUN	**Gumba**	**3.35**	**15**	*e*Pn	**Pn**	**21 17 26.0**	**+0.2**
GUN	**Gumba**	**3.35**	**15**	*e*Pn	**Pn**	**21 17 26.0**	**+0.2**
TAPN	**Taplejung**	**3.69**	**43**	*e*Pn	**Pn**	**21 17 28.9**	**-1.6**
TAPN	**Taplejung**	**3.69**	**43**	*e*Pn	**Pn**	**21 17 28.9**	**-1.6**
SLGI	**Shiliguri**	**3.78**	**57**	*ex*	**Pb**	**21 17 40.0**	**-0.5**
CAL	**Calcutta**	**3.81**	**123**	*e*S	**Sn**	**21 18 12.7**	**-4.0**
GTK	**Gangtok**	**4.28**	**51**	*e*PKP	**Pb**	**21 17 50.0**	**+0.9**
GTK				*e*S	**Sb**	**21 18 36.0**	**-4.5**
PTH	**Pithoragarh**	**6.39**	**321**	*e*PKP	**Pn**	**21 18 09.0**	**+1.4**
PTH				*ex*	x	21 21 39.0	
NGP	**Nagpur**	**6.41**	**238**	*ex*	**Pn**	**21 18 07.5**	**-0.4**
NGP				*e*S	**Sn**	**21 19 19.9**	**-0.8**
NGP				AML	AML	21 20 03.6	
	comp=E,141nm,0.6s						
NGP				AML	AML	21 20 04.0	
	comp=N,229nm,0.4s						
SHL	**Shillong**	**6.41**	**81**	*e*PKP	**Pn**	**21 18 07.0**	**-0.9**
SHL				*ex*	x	21 19 47.0	
BHPL	**Bhopal**	**6.96**	**260**	*e*PKP	**Pn**	**21 18 16.1**	**+0.6**
BHPL				*e*S	**Sn**	**21 19 32.2**	**-2.1**
BHPL				AML	AML	21 20 20.5	
	comp=N,298nm,0.8s						
BHPL				AML	AML	21 20 20.7	
	comp=E,130nm,0.4s						
VIS	**Vishakhapatnam**	**7.07**	**192**	*e*S	**Sn**	**21 19 33.4**	**-3.4**
LSA	**Lhasa**	**7.50**	**47**	P	**Pn**	**21 18 23.8**	**+0.9**
LSA				S	**Sn**	**21 19 47.2**	**-0.3**
LSA				LR	LR		
	comp=N,140nm,16.0s						
LSA				LR	LR		
	comp=E,180nm,13.0s						
LSA				LR	LR		
	comp=Z,300nm,17.0s						
LSA	**Lhasa**	**7.50**	**47**	*e*Pn	**Pn**	**21 18 24.3**	**+1.4**
	comp=Z,11nm,0.4s						
LSA				*e*Sn	**Sn**	**21 19 33.8**	**-14**
SONA	**Sohna**	**7.84**	**299**	*e*PKP	**Pn**	**21 18 27.8**	**+0.3**
SONA				*e*S	**Sn**	**21 19 52.5**	**-3.3**
SONA				AML	AML	21 20 44.5	
	comp=E,132nm,0.5s						
SONA				AML	AML	21 20 44.8	
	comp=N,196nm,0.7s						
NDI	**New Delhi**	**7.93**	**302**	*e*PKP	**Pn**	**21 18 28.0**	**-0.7**
NDI				*ex*	x	21 20 55.0	
BHGR	**Bahadurgarh**	**8.15**	**301**	*ex*	**Sn**	**21 19 57.1**	**-6.2**
KHET	**Khetri**	**8.81**	**295**	*e*PKP	**Pn**	**21 18 42.0**	**+1.2**
KHET				*ex*	x	21 20 12.5	
KHET				AML	AML	21 20 19.6	
	comp=N,53nm,0.2s						
KHET				AML	AML	21 20 21.9	
	comp=E,64nm,0.2s						
KLP	**Kalpa**	**8.99**	**321**	*e*PKP	**Pn**	**21 18 43.5**	**+0.1**
KLP				*ex*	x	21 21 07.2	
HYB	**Hyderabad**	**9.32**	**220**	*e*P	**Pn**	**21 18 49.0**	**+1.1**
HYB				*e*S	**Sn**	**21 20 35.0**	**+2.6**
HYB	**Hyderabad**	**9.32**	**220**	*i* P	**Pn**	**21 18 48.0**	**+0.1**
HYB				*e*S	**Sn**	**21 20 35.0**	**+2.6**
AJM	**Ajmer**	**9.41**	**283**	*e*PKP	**Pn**	**21 18 49.3**	**+0.2**
AJM				*e*S	**Sn**	**21 20 30.0**	**-4.5**
AJM				AML	AML	21 21 31.4	
	comp=E,101nm,0.6s						
AJM				AML	AML	21 21 34.4	
	comp=N,74nm,0.4s						
SDNR	**Sundarnagar**	**9.74**	**316**	*e*PKP	**Pn**	**21 18 55.1**	**+1.5**
LATR	**Latur**	**9.93**	**233**	*e*PKP	**Pn**	**21 18 57.0**	**+0.8**
POO	**Poona**	**11.94**	**241**	*e*PKP	**Pn**	**21 19 22.5**	**-1.2**
POO				*ex*	x	21 22 48.2	
KAD	**Karad**	**12.38**	**236**	*e*PKP	**Pn**	**21 19 30.4**	**+0.6**
CHCP	**Chirah Chowk**	**13.52**	**314**	P	**Pn**	**21 19 42.2**	**-3.1**
CHTO	**Chiang Mai**	**14.31**	**111**	*e*Pn	**Pn**	**21 19 55.0**	**-1.2**
CMAR	**Chiang Mai Arr**	**14.47**	**113**	Pn	**Pn**	**21 19 57.9**	**-0.4**
	comp=N,0.1nm,0.3s,baz=294,slow=14,SNR=4.5						
CEP	**Cherat**	**14.52**	**312**	P	**Pn**	**21 19 55.6**	**-3.4**
CEP				S	**Sn**	**21 22 33.0**	**-6.5**
KSH	**Kashi**	**16.60**	**335**	P	**Pn**	**21 20 23.2**	**-2.9**
KSH				pP	pP	21 20 27.7	-5.7
KSH				sP	sP	21 20 31.7	-4.0
KSH				PP		21 20 35.6	
KSH				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,71nm,4.3s						
KSH				LR	LR		
	comp=N,120nm,5.0s						
KSH				LR	LR		
	comp=E,80nm,5.4s						
KSH				LR	LR		
	comp=Z,91nm,4.5s						
KBL	**Kabul**	**16.90**	**309**	*e*Pn	**Pn**	**21 20 26.3**	**-3.6**
	comp=Z,6.7nm,0.6s						
KBL				*e*Sn	**Sn**	**21 23 25.0**	**-12**
PALK	**Pallekele**	**17.76**	**194**	P	**Pn**	**21 20 42.5**	**+1.7**
	comp=Z,1.2nm,0.3s,baz=8.2,slow=11,SNR=8.3						
PALK				S	**Sn**	**21 23 49.4**	**-9.0**
	comp=Z,0.3nm,0.3s,baz=106,slow=15,SNR=1.9						
PALK	**Pallekele**	**17.76**	**194**	*e*P	**Pn**	**21 20 43.0**	**+2.2**
PALK				S	**Sn**	**21 23 49.4**	**-9.0**
UCH	**Uchtor**	**19.50**	**336**	*e*P	**Pn**	**21 21 00.8**	**-0.9**
	comp=Z,4.0nm,0.7s						
AML	**Almayashu**	**19.72**	**335**	*e*P	**Pn**	**21 21 04.8**	**+0.4**
	comp=Z,3.1nm,0.6s						
MKAR	**Makanchi Array**	**22.17**	**355**	P	**P**	**21 21 29.4**	**+0.1**
	comp=Z,1.0nm,0.4s,mb3.6,baz=150,slow=9.8,SNR=8.6						
ENH	**Enshi**	**22.52**	**70**	*e*P	**P**	**21 21 33.7**	**+0.6**
	comp=Z,21nm,1.2s,mb4.5						
XAN	**Xi'an**	**22.90**	**60**	P	**P**	**21 21 36.0**	**-1.2**
KURK	**Kurchatov**	**26.45**	**351**	P	**P**	**21 22 08.1**	**-2.0**
	comp=Z,0.6nm,0.5s,mb3.4,baz=175,slow=8.8,SNR=2.9						
KURK	**Kurchatov**	**26.45**	**351**	*e*P	**P**	**21 22 10.2**	**+0.2**
	comp=Z,1.10nm,0.6s,mb3.5						
SONM	**Songino Array**	**28.72**	**31**	P	**P**	**21 22 31.8**	**+1.4**
	comp=Z,0.2nm,0.4s,mb3.2,baz=235,slow=5.1,SNR=4.0						
ULN	**Ulaanbaatar**	**29.05**	**32**	*e*P	**P**	**21 22 33.3**	**-0.1**
	comp=Z,0.7nm,0.4s,mb3.7						
ZALV	**Zalesovo Beam**	**29.24**	**360**	P	**P**	**21 22 35.4**	**+0.4**
	comp=Z,0.5nm,0.3s,mb3.7,baz=185,slow=11,SNR=4.1						
FINES	**FINESS Array B**	**53.81**	**329**	P	**P**	**21 25 56.5**	**+0.9**
	comp=Z,0.7nm,0.5s,mb3.9,baz=112,slow=8.5,SNR=7.7						
ARCES	**ARCESS Array B**	**56.52**	**339**	P	**P**	**21 26 16.5**	**+1.3**
	comp=Z,1.9nm,0.7s,mb4.2,baz=96,slow=7.4,SNR=3.7						
GERES	**GERESS Array B**	**59.63**	**314**	P	**P**	**21 26 38.0**	**+0.8**
	comp=Z,0.3nm,0.4s,mb3.7,baz=84,slow=7.1,SNR=5.9						
WRA	**Warramunga Arr**	**65.45**	**128**	P	**P**	**21 27 16.0**	**-0.5**
	comp=Z,0.4nm,0.4s,mb3.8,baz=323,slow=6.6,SNR=2.9						
ASAR	**Alice Springs**	**67.59**	**132**	P	**P**	**21 27 30.9**	**+0.7**
	comp=Z,0.5nm,0.3s,mb4.0,baz=314,slow=6.2,SNR=24						
TORD	**Torodi Ar. Bea**	**78.52**	**279**	P	**P**	**21 28 35.1**	**0.0**
	comp=Z,0.9nm,0.8s,mb3.8,baz=52,slow=4.5,SNR=6.1						

*ISCJB **06** 21:24:60.0±1.3, 31.14N±0.08×142.0E±0.4, h33km, mb3.6/5, Error ellipse: s-maj=47.2km s-min=6.2km az=168.5*
*IDC **06** 21:25:00.4±3.4, 30.84N×141.10E, h0km, mb3.5/5, mb1 3.5/7, mb1mx3.4/27, mbtmp3.5/7, ML3.3/2, Error ellipse: s-maj=144.5km s-min=18.7km az=69.0*
*JMA **06** 21:25:05.5±0.4, 31.71N×142.52E, h55km, M3.3*

ISC 06 21:25:02.1±1.3, 31.16N±0.08×142.1E±0.4, h35km, n12, σ1°01/15, mb3.6/5, Southern of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**3.60**	**345**	P	**Pn**	**21 25 54.8**	**-0.6**
CBIJ	**Chichi jima**	**4.05**	**179**	Pn	**Pn**	**21 26 01.9**	**+0.4**
	3.7nm,0.3s,baz=297,slow=20,SNR=7.8						
CBIJ				Sn	**Sn**	**21 26 46.4**	**-1.5**
	5.6nm,0.3s,baz=287,slow=20,SNR=4.5						
JHU	**Hanno**	**5.23**	**334**	P	**Pn**	**21 26 19.1**	**+1.4**
JHU				*e*S	**Sn**	**21 27 15.2**	**-1.6**
JRY	**Ryogami san**	**5.52**	**332**	P	**Pn**	**21 26 23.0**	**+1.3**
JHO	**Hitachi**	**5.58**	**347**	P	**Pn**	**21 26 21.6**	**-0.9**
JAG	**Ashikaga**	**5.69**	**338**	P	**Pn**	**21 26 24.4**	**+0.4**
JAG				*e*S	**Sn**	**21 27 25.0**	**-3.0**
MJAR	**Matsushiro Arr**	**6.26**	**330**	Pn	**Pn**	**21 26 32.4**	**+0.6**
	0.5nm,0.3s,baz=154,slow=11,SNR=8.1						
SONM	**Songino Array**	**31.83**	**312**	P	**P**	**21 31 24.2**	**+0.8**
	0.2nm,0.4s,mb3.3,baz=109,slow=7.8,SNR=3.6						
ZALV	**Zalesovo Beam**	**46.42**	**317**	P	**P**	**21 33 25.9**	**+0.8**
	0.5nm,0.5s,mb3.7,baz=117,slow=12,SNR=2.9						
MKAR	**Makanchi Array**	**47.90**	**307**	P	**P**	**21 33 36.5**	**-0.2**
	0.8nm,0.9s,mb3.7,baz=75,slow=11,SNR=3.7						
KURK	**Kurchatov**	**50.14**	**312**	P	**P**	**21 33 53.6**	**-0.1**
	0.7nm,0.6s,mb3.8,baz=86,slow=7.6,SNR=6.1						
ASAR	**Alice Springs**	**55.08**	**189**	P	**P**	**21 34 30.7**	**+0.2**
	0.2nm,0.4s,mb3.5,baz=2.9,slow=4.7,SNR=8.5						

*ATH **06** 21:28:46.8, 36.97N×26.58E, h90km±9km*
*DDA **06** 21:28:48.4, 36.84N×26.63E, h7km±3km, Md3.0*
*CSEM **06** 21:28:48.7±0.4, 36.83N×26.60E, h2km, MD2.9, Error ellipse: s-maj=7.4km s-min=6.1km az=3.0*
*ISCJB **06** 21:28:49.1±1.1, 36.83N±0.05×26.63E±0.05, h9km±10km, Error ellipse: s-maj=9.1km s-min=6.2km az=152.3*
*ISK **06** 21:28:50.8, 36.71N×26.74E, h26km, MD2.9*

ISC 06 21:28:49.3±0.8, 36.84N±0.04×26.62E±0.04, h8km±6km, n25, σ1°07/40, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.70**	**71**	*i* P	**Pg**	**21 29 02.6**	**-0.2**
BDRM				*i* S	**Sg**	**21 29 11.7**	**-0.2**
BDRM	**Kayabasi**	**0.70**	**71**	*i* P	**Pg**	**21 29 02.6**	**-0.2**
BDRM				*i* S	**Sg**	**21 29 11.7**	**-0.2**
DAT	**Datca**	**0.78**	**98**	*e*PG	**Pg**	**21 29 04.9**	**+0.5**
DAT				*e*SG	**Sg**	**21 29 15.1**	**+0.6**
DAT	**Datca**	**0.78**	**98**	*e*Pg	**Pg**	**21 29 04.9**	**+0.6**
DAT				*e*Sg	**Sg**	**21 29 15.1**	**+0.6**
SMG	**Samos**	**0.88**	**12**	*e*P	**Pg**	**21 29 04.8**	**-1.5**
SMG				*e*S	**Sg**	**21 29 17.4**	**-0.3**
SMG	**Samos**	**0.88**	**12**	*e*P	**Pg**	**21 29 04.8**	**-1.5**
SMG				*e*S	**Sg**	**21 29 17.4**	**-0.3**
APE	**Apeiranthos**	**0.90**	**285**	*e*P	**Pg**	**21 29 05.4**	**-1.2**
APE				*e*S	**Sg**	**21 29 19.4**	**+1.2**
APE	**Apeiranthos**	**0.90**	**285**	*e*P	**Pg**	**21 29 05.4**	**-1.2**
APE				*e*S	**Sg**	**21 29 19.4**	**+1.2**
GCAM	**G?zelcaml?**	**0.99**	**30**	*i* P	**Pg**	**21 29 07.0**	**-1.3**
GCAM				*i* S	**Sg**	**21 29 21.4**	**+0.3**
GCAM	**G?zelcaml?**	**0.99**	**30**	*i* P	**Pg**	**21 29 07.0**	**-1.3**
GCAM				*i* S	**Sg**	**21 29 21.4**	**+0.3**
MLSB	**Milas**	**1.03**	**64**	*e*PG	**Pg**	**21 29 09.9**	**+0.8**
MLSB				*e*SG	**Sg**	**21 29 23.6**	**+1.0**
MLSB	**Milas**	**1.03**	**64**	*e*Pg	**Pg**	**21 29 09.9**	**+0.8**
MLSB				*e*Sg	**Sg**	**21 29 23.6**	**+1.0**
AYDN	**Tasoluk**	**1.30**	**51**	*i* P	**Pn**	**21 29 12.7**	**-1.0**
AYDN				*i* S	**Sb**	**21 29 29.2**	**-1.5**
AYDN	**Tasoluk**	**1.30**	**51**	*i* P	**Pn**	**21 29 12.7**	**-1.0**
AYDN				*i* S	**Sb**	**21 29 29.2**	**-1.5**
KARP	**Karpathos**	**1.37**	**161**	*e*P	**Pn**	**21 29 13.4**	**-1.2**
KARP	**Karpathos**	**1.37**	**161**	*e*P	**Pn**	**21 29 13.4**	**-1.2**
YER	**Yerkesik**	**1.37**	**77**	*e*PN	**Pn**	**21 29 14.2**	**-0.5**
YER	**Yerkesik**	**1.37**	**77**	*e*Pn	**Pn**	**21 29 14.2**	**-0.4**
BLCB	**Balcova**	**1.58**	**12**	*e*PN	**Pn**	**21 29 19.0**	**+1.5**
BLCB	**Balcova**	**1.58**	**12**	*e*Pn	**Pn**	**21 29 19.0**	**+1.5**
TURN	**Turunc**	**1.59**	**88**	*i* P	**Pn**	**21 29 12.4**	**-5.3**
TURN				*e*S	**Sn**	**21 29 33.5**	**-5.1**
IZM	**Izmir**	**1.64**	**18**	*e*PN	**Pn**	**21 29 20.4**	**+2.1**
IZM	**Izmir**	**1.64**	**18**	*e*Pn	**Pn**	**21 29 20.4**	**+2.1**
KULA	**Kula-Manisa**	**2.33**	**44**	*e*PN	**Pn**	**21 29 29.2**	**+1.3**
KULA	**Kula-Manisa**	**2.33**	**44**	*e*Pn	**Pn**	**21 29 29.2**	**+1.3**

*ATH **06** 21:52:31.4, 33.96N×25.01E, h10km±3km, MD3.6/3*
*NEIC **06** 21:52:31.4, 33.96N×25.01E, h10km, MD3.6(ATH), After ATH.*
*IDC **06** 21:52:31.7±1.2, 34.13N×25.10E, h0km, mb3.7/4, mb1 3.6/8, mb1mx3.5/27, mbtmp3.6/8, ML3.9/4, Error ellipse: s-maj=23.2km s-min=18.7km az=78.0*
*CSEM **06** 21:52:32.7±0.4, 34.06N×25.14E, h2km, MD3.6, Error ellipse: s-maj=13.3km s-min=6.8km az=69.0*
*ISCJB **06** 21:52:32.7±1.2, 34.09N±0.04×25.33E±0.06, h15km±8km, mb3.5/4, Error ellipse: s-maj=9.3km s-min=4.8km az=149.4*
*HLW **06** 21:52:33.7, 34.34N×25.28E, h32km±29km, Md2.8, Ml3.0*

ISC 06 21:52:35.8±0.9, 34.10N±0.04×25.17E±0.05, h32km±8km, n46, σ1°04/58, mb3.5/4, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.96**	**342**	*e*Pn	**Pn**	**21 52 51.8**	**-1.3**
SIVA				*e*Sb	**Sb**	**21 53 06.7**	**+0.3**
SIVA	**Sivas**	**0.96**	**342**	*e*PN	**Pn**	**21 52 51.8**	**-1.3**
SIVA				*e*SB	**Sb**	**21 53 06.7**	**+0.3**
SIVA	**Sivas**	**0.96**	**342**	*e*Pn	**Pn**	**21 52 51.8**	**-1.3**
SIVA				*e*Sb	**Sb**	**21 53 06.7**	**+0.3**
LAST	**Lasithi**	**1.09**	**13**	*e*Pg	**Pn**	**21 52 54.7**	**-0.1**
LAST				*e*Sb	**Sb**	**21 53 12.1**	**+2.1**
LAST	**Lasithi**	**1.09**	**13**	*e*PG	**Pn**	**21 52 54.7**	**-0.1**
LAST				*e*SB	**Sb**	**21 53 12.1**	**+2.1**
LAST	**Lasithi**	**1.09**	**13**	*e*Pg	**Pn**	**21 52 54.7**	**-0.1**
LAST				*e*Sb	**Sb**	**21 53 12.1**	**+2.1**
GVD	**Gavdhos**	**1.16**	**310**	*e*Pn	**Pn**	**21 52 55.1**	**-0.7**
IDI	**Anoyia**	**1.21**	**349**	Pn	**Pn**	**21 52 56.1**	**-0.4**
	23nm,0.3s,baz=160,slow=17,SNR=87						
IDI				Sn	**Sn**	**21 53 11.9**	**+0.1**
	42nm,0.3s,baz=297,slow=16,SNR=11						
IDI	**Anoyia**	**1.21**	**349**	*e*PG	**Pn**	**21 52 55.9**	**-0.6**
IDI	**Anoyia**	**1.21**	**349**	*e*Pg	**Pn**	**21 52 55.9**	**-0.6**
NPS	**Neapolis**	**1.22**	**17**	*e*Pb	**Pb**	**21 52 57.1**	**-1.1**
NPS	**Neapolis**	**1.22**	**17**	*e*PB	**Pb**	**21 52 57.1**	**-1.1**
NPS	**Neapolis**	**1.22**	**17**	*e*Pb	**Pb**	**21 52 57.1**	**-1.1**
ZKR	**Zakros**	**1.33**	**40**	*e*Pb	**Pb**	**21 53 00.6**	**+0.5**
ZKR	**Zakros**	**1.33**	**40**	*e*PB	**Pb**	**21 53 00.6**	**+0.5**
ZKR	**Zakros**	**1.33**	**40**	*e*Pb	**Pb**	**21 53 00.6**	**+0.5**
VAM	**Vamos**	**1.53**	**329**	*e*Pb	**Pb**	**21 53 01.3**	**-2.3**
VAM	**Vamos**	**1.53**	**329**	*e*PB	**Pb**	**21 53 01.3**	**-2.3**
VAM	**Vamos**	**1.53**	**329**	*e*Pb	**Pb**	**21 53 01.3**	**-2.3**
KARP	**Karpathos**	**2.18**	**48**	*e*Pn	**Pn**	**21 53 12.6**	**+2.8**
KARP	**Karpathos**	**2.18**	**48**	*e*PN	**Pn**	**21 53 12.6**	**+2.8**
KARP	**Karpathos**	**2.18**	**48**	*e*Pn	**Pn**	**21 53 12.6**	**+2.8**
SLUM		**2.60**	**179**	P	**Pn**	**21 53 17.0**	**+1.4**
	baz=182						
SLUM				AMP		21 53 00.0	
	comp=N,30μm,0.1s,logA/T=5.3,baz=182						
SLUM				S	**Sn**	**21 53 46.9**	**+0.8**
	baz=182						
SLUM		**2.60**	**179**	P	**Pn**	**21 53 17.0**	**+1.4**
SLUM				S	**Sn**	**21 53 46.8**	**+0.8**
KYTH	**Kithira**	**2.79**	**322**	*e*Pn	**Pn**	**21 53 18.7**	**+0.5**
KYTH	**Kithira**	**2.79**	**322**	*e*PN	**Pn**	**21 53 18.7**	**+0.5**
KYTH	**Kithira**	**2.79**	**322**	*e*Pn	**Pn**	**21 53 18.7**	**+0.5**
VLI	**Veliai**	**3.19**	**326**	*e*Pn	**Pn**	**21 53 24.9**	**+1.2**
VLI	**Veliai**	**3.19**	**326**	*e*PN	**Pn**	**21 53 24.9**	**+1.2**
VLI	**Veliai**	**3.19**	**326**	*e*Pn	**Pn**	**21 53 24.9**	**+1.2**
HMAT	**Matruh**	**3.41**	**151**	P	**Pn**	**21 53 27.5**	**+0.8**
	baz=154						
HMAT				AMP		21 54 00.0	
	comp=E,40μm,0.3s,logA/T=5.2,baz=154						
HMAT				S	**Sn**	**21 54 05.2**	**-0.8**
	baz=154						
HMAT	**Matruh**	**3.41**	**151**	P	**Pn**	**21 53 27.5**	**+0.8**
HMAT				S	**Sn**	**21 54 05.2**	**-0.8**
AMAG	**Maghara**	**7.62**	**115**	P	**Pn**	**21 54 23.9**	**-0.6**
	baz=116						
AMAG	**Maghara**	**7.62**	**115**	P	**Pn**	**21 54 23.9**	**-0.7**
RSH		**7.87**	**111**	P	**Pn**	**21 54 26.9**	**-1.1**
TIP	**Timpagrande**	**8.45**	**309**	*e*Pn	**Pn**	**21 54 34.5**	**-1.4**
HNKL	**Nakhl**	**8.55**	**117**	P	**Pn**	**21 54 36.6**	**-0.7**
	baz=118						
HNKL	**Nakhl**	**8.55**	**117**	P	**Pn**	**21 54 36.6**	**-0.8**
MMAI	**Mount Meron Ar**	**8.61**	**94**	Pn	**Pn**	**21 54 39.0**	**+1.0**
	comp=E,1.1nm,0.3s,baz=275,slow=12,SNR=6.3						
MMAI				Sn	**Sn**	**21 56 12.7**	**-1.3**
	comp=E,0.9nm,0.3s,baz=266,slow=21,SNR=4.1						
EIL	**Elat**	**9.41**	**115**	Pn	**Pn**	**21 54 49.1**	**0.0**
	comp=E,0.8nm,0.3s,baz=238,slow=5.7,SNR=8.8						
AKASG	**Malin Array Be**	**16.86**	**9**	Pn	**Pn**	**21 56 28.9**	**-0.2**
	comp=E,0.7nm,0.3s,baz=199,slow=10,SNR=4.1						
GERES	**GERESS Array B**	**17.03**	**333**	Pn	**Pn**	**21 56 32.3**	**+1.0**
	comp=E,0.2nm,0.3s,baz=143,slow=12,SNR=8.2						
HFS	**Hagfors**	**27.11**	**347**	P	**P**	**21 58 14.8**	**-0.6**
	comp=E,0.3nm,0.4s,mb3.1,baz=144,slow=5.4,SNR=4.7						
TORD	**Torodi Ar. Bea**	**29.82**	**231**	P	**P**	**21 58 40.5**	**+0.4**
	comp=E,0.5nm,0.6s,mb3.4,baz=32,slow=8.3,SNR=18						
MKAR	**Makanchi Array**	**44.36**	**56**	P	**P**	**22 00 44.2**	**+1.3**
	comp=E,0.3nm,0.2s,mb3.6,baz=276,slow=7.1,SNR=3.7						
ZALV	**Zalesovo Beam**	**45.73**	**45**	P	**P**	**22 00 53.5**	**-0.2**
	comp=E,0.6nm,0.4s,mb3.9,baz=280,slow=9.9,SNR=3.7						

DJA 06 21:56:39, 1.85N×99.01E, h10km, MLv3.8/7, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**1.19**	**151**	P	Pb	21 56 56.1	-5.6
GSI	**Gunungsitoli**	**1.53**	**249**	P	Pn	21 57 04.8	-1.6
GSI				S	Sn	21 57 27.1	+0.7
BKNI	**Bangkinang**	**2.53**	**127**	P	Pn	21 57 21.3	+1.1
BKNI				S	Sn	21 57 52.5	+1.4
PPI	**Padang Panjang**	**2.68**	**149**	P	Pn	21 57 23.3	+1.1
PDSI	**Padang**	**3.10**	**152**	P	Pn	21 57 29.7	+1.6
SISI	**Saibi**	**3.16**	**179**	P	Pn	21 57 32.9	+4.1
IPM	**Ipoh**	**3.30**	**38**	P	Pn	21 57 32.4	+1.7
SDSI	**Sungai Dareh**	**3.67**	**139**	P	Pn	21 57 42.7	+6.8
KULM	**Kulim**	**3.79**	**26**	P	Pn	21 57 37.4	-0.1
MYKOM	**Kota Tinggi**	**4.84**	**91**	P	Pn	21 58 01.5	+10

*CSEM **06** 22:11:54.4±0.5, 35.77N×0.67W, h10km, mb3.2/4, Error ellipse: s-maj=14.1km s-min=8.8km az=23.0*
*ISCJB **06** 22:11:56.4±0.8, 36.01N±0.04×0.77W±0.05, h10km, Error ellipse: s-maj=6.1km s-min=5.4km az=165.4*
*MDD **06** 22:11:57.5±0.6, 35.78N×0.60W, h33km±10km, mb3.7/5, Error ellipse: s-maj=9.6km s-min=7.3km az=48.0, PRIMO*
*NEIC **06** 22:11:57.2, 35.94N×0.79W, h0km, MG3.2(MDD), After MDD.*

ISC 06 22:11:56.3±0.6, 35.96N±0.04×0.75W±0.05, h10km, n59, σ1°42/105, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USTO	**Oran**	**0.28**	**145**	P	**Pg**	**22 12 03.0**	**+1.1**
USTO	**Oran**	**0.28**	**145**	P	**Pg**	**22 12 03.0**	**+1.1**
USTO	**Oran**	**0.28**	**145**	P	**Pg**	**22 12 03.0**	**+1.1**
USTO	**Oran**	**0.28**	**145**	P	**Pg**	**22 12 03.0**	**+1.1**
ODJA	**Bouhanifia**	**0.80**	**142**	P	**Pg**	**22 12 09.0**	**-2.7**
ODJA	**Bouhanifia**	**0.80**	**142**	P	**Pg**	**22 12 09.0**	**-2.7**
ODJA	**Bouhanifia**	**0.80**	**142**	P	**Pg

EQES			T			22 14 22.2
	SNR=7.9					
EQES	**Quesada**	**2.62 315**	P	**Pn**	**22 12 40.9**	**+2.2**
	0.8nm,0.1s,SNR=7.9					
EQES			S	**Sn**	**22 13 12.1**	**+1.7**
	8.1nm,0.3s,SNR=7.9					
EQES			T			22 14 22.2
	SNR=7.9					
EQES	**Quesada**	**2.62 315**	P	**Pn**	**22 12 40.9**	**+2.3**
	0.8nm,0.1s,SNR=7.9					
EQES			S	**Sn**	**22 13 12.1**	**+1.7**
	8.1nm,0.3s,SNR=7.9					
ETOB	**Tobarra**	**2.75 347**	P	**Pn**	**22 12 41.5**	**+1.0**
ETOB			S	**Sn**	**22 13 12.8**	**-1.1**
ETOB	**Tobarra**	**2.75 347**	P	**Pn**	**22 12 41.6**	**+1.0**
	1.6nm,0.2s,SNR=7.9					
ETOB			S	**Sn**	**22 13 12.8**	**-1.1**
	4.8nm,0.2s,SNR=7.9					
ETOB			T			22 14 24.2
	SNR=7.9					
ETOB	**Tobarra**	**2.75 347**	P	**Pn**	**22 12 41.6**	**+1.0**
	1.6nm,0.2s,SNR=7.9					
ETOB			S	**Sn**	**22 13 12.8**	**-1.1**
	4.8nm,0.2s,SNR=7.9					
ETOB			T			22 14 24.2
	SNR=7.9					
ETOB	**Tobarra**	**2.75 347**	P	**Pn**	**22 12 41.6**	**+1.0**
	1.6nm,0.2s,SNR=7.9					
ETOB			S	**Sn**	**22 13 12.8**	**-1.0**
	4.8nm,0.2s,SNR=7.9					
EBEN	**Beniarda**	**2.77 8**	P	**Pn**	**22 12 42.1**	**+1.4**
EBEN			S	**Sn**	**22 13 13.5**	**-0.7**
EBEN	**Beniarda**	**2.77 8**	P	**Pn**	**22 12 42.1**	**+1.4**
	0.3nm,0.1s,SNR=7.7					
EBEN			S	**Sn**	**22 13 13.5**	**-0.7**
	1.4nm,0.2s,SNR=7.9				

SNR=7.9
EGUA S Sn 22 49 34.1 -0.6
447nm,0.4s,SNR=7.9
EGUA Guajares 2.46 291 P Pn 22 49 04.3 -0.3
SNR=7.9
EGUA S Sn 22 49 34.1 -0.6
447nm,0.4s,SNR=7.9
EQUE Quentar 2.51 300 ⇓P Pn 22 49 06.9 +1.4
69nm,0.3s,SNR=18
EQUE S Sn 22 49 38.6 +2.5
140nm,0.4s,SNR=4.3
EQUE Quentar 2.51 300 ⇓P Pn 22 49 06.9 +1.4
69nm,0.3s,SNR=18
EQUE S Sn 22 49 38.6 +2.5
140nm,0.4s,SNR=4.3
EQUE Quentar 2.51 300 P Pn 22 49 06.9 +1.5
69nm,0.3s,SNR=18
EQUE S Sn 22 49 38.6 +2.5
140nm,0.4s,SNR=4.3
EQES Quesada 2.62 314 ⇓P Pn 22 49 09.2 +2.3
EQES S Sn 22 49 42.3 +3.5
EQES Quesada 2.62 314 ⇓P Pn 22 49 09.2 +2.3
40nm,0.3s,SNR=18
EQES S Sn 22 49 42.3 +3.5
332nm,0.3s,SNR=9.3
EQES Quesada 2.62 314 ⇓P Pn 22 49 09.2 +2.3
40nm,0.3s,SNR=18
EQES S Sn 22 49 42.3 +3.5
332nm,0.3s,SNR=9.3
EQES Quesada 2.62 314 P Pn 22 49 09.2 +2.3
40nm,0.3s,SNR=18
EQES S Sn 22 49 42.3 +3.6
332nm,0.3s,SNR=9.3
ECOG Cogollos-Vega 2.64 300 ⇑P Pn 22 49 08.4 +1.3
ECOG S Sn 22 49 42.5 +3.4
ECOG Cogollos-Vega 2.64 300 ⇑P Pn 22 49 08.4 +1.3
70nm,0.4s,SNR=18
ECOG S Sn 22 49 42.5 +3.4
76nm,0.2s,SNR=4.6
ECOG Cogollos-Vega 2.64 300 ⇑P Pn 22 49 08.4 +1.3
70nm,0.4s,SNR=18
ECOG S Sn 22 49 42.5 +3.4
76nm,0.2s,SNR=4.6
ECOG Cogollos-Vega 2.64 300 P Pn 22 49 08.4 +1.3
70nm,0.4s,SNR=18
ECOG S Sn 22 49 42.5 +3.4
76nm,0.2s,SNR=4.6
TOU Touzarine 2.69 248 *i* P Pn 22 49 07.0 -0.9
TOU *i* S Sn 22 49 41.0 +0.4
ERON Agron 2.70 293 P Pn 22 49 08.8 +0.8
ERON Agron 2.70 293 P Pn 22 49 08.8 +0.8
106nm,0.4s,SNR=7.9
ERON Agron 2.70 293 P Pn 22 49 08.8 +0.8
106nm,0.4s,SNR=7.9
ERON Agron 2.70 293 P Pn 22 49 08.8 +0.8
106nm,0.4s,SNR=7.9
ETOB Tobarra 2.73 346 ⇓P Pn 22 49 09.5 +1.1
ETOB S Sn 22 49 41.4 -0.1
ETOB Tobarra 2.73 346 ⇓P Pn 22 49 09.5 +1.1
24nm,0.1s,SNR=18
ETOB S Sn 22 49 41.4 -0.1
299nm,0.4s,SNR=8.5
ETOB T 22 50 49.3
SNR=4.0
ETOB Tobarra 2.73 346 ⇓P Pn 22 49 09.5 +1.1
24nm,0.1s,SNR=18
ETOB S Sn 22 49 41.4 -0.1
299nm,0.4s,SNR=8.5
ETOB T 22 50 49.3
SNR=4.0
ETOB Tobarra 2.73 346 P Pn 22 49 09.5 +1.1
24nm,0.1s,SNR=18
ETOB S Sn 22 49 41.4 -0.1
299nm,0.4s,SNR=8.5
ETOB T 22 50 49.3
SNR=4.0
EBEN Beniarda 2.73 8 P Pn 22 49 08.2 -0.2
EBEN S Sn 22 49 39.2 -2.4
EBEN Beniarda 2.73 8 P Pn 22 49 08.2 -0.2
15nm,0.3s,SNR=37
EBEN S Sn 22 49 39.2 -2.4
53nm,0.5s,SNR=5.0
EBEN T 22 50 49.5
SNR=11
EBEN Beniarda 2.73 8 P Pn 22 49 08.2 -0.2
15nm,0.3s,SNR=37
EBEN S Sn 22 49 39.2 -2.4
53nm,0.5s,SNR=5.0
EBEN T 22 50 49.5
SNR=11
EBEN Beniarda 2.73 8 P Pn 22 49 08.2 -0.2
15nm,0.3s,SNR=37
EBEN S Sn 22 49 39.2 -2.3
53nm,0.5s,SNR=5.0
MPAL Palemas 2.75 255 *i* P Pn 22 49 07.0 -1.6
MPAL *i* S Sn 22 49 42.0 +0.1
EMHD Djebel Mahouad 2.97 85 P Pn 22 49 09.4 -2.3
EMHD Djebel Mahouad 2.97 85 P Pn 22 49 09.4 -2.3
EMHD Djebel Mahouad 2.97 85 P Pn 22 49 09.4 -2.3
EMHD Djebel Mahouad 2.97 85 P Pn 22 49 09.4 -2.3
EVIA Vianos 3.01 332 ⇓P Pn 22 49 13.3 +1.1
EVIA S Sn 22 49 50.0 +1.7
EVIA Vianos 3.01 332 ⇓P Pn 22 49 13.3 +1.1
121nm,0.4s,SNR=18
EVIA S Sn 22 49 50.0 +1.7
194nm,0.2s
EVIA T 22 50 56.8
EVIA Vianos 3.01 332 ⇓P Pn 22 49 13.3 +1.1
121nm,0.4s,SNR=18
EVIA S Sn 22 49 50.0 +1.7
194nm,0.2s
EVIA T 22 50 56.8
EVIA Vianos 3.01 332 P Pn 22 49 13.3 +1.1
121nm,0.4s,SNR=18
EVIA S Sn 22 49 50.0 +1.8
194nm,0.2s
ELOJ Sierra Loja 3.01 294 ⇑P Pn 22 49 14.2 +2.0
ELOJ S Sn 22 49 50.1 +1.8
ELOJ Sierra Loja 3.01 294 ⇑P Pn 22 49 14.2 +2.0
31nm,0.5s,SNR=18
ELOJ S Sn 22 49 50.1 +1.8
56nm,0.5s,SNR=7.4
ELOJ Sierra Loja 3.01 294 ⇑P Pn 22 49 14.2 +2.0
31nm,0.5s,SNR=18
ELOJ S Sn 22 49 50.1 +1.8
56nm,0.5s,SNR=7.4
ELOJ Sierra Loja 3.01 294 P Pn 22 49 14.2 +2.0
31nm,0.5s,SNR=18
ELOJ S Sn 22 49 50.1 +1.8
56nm,0.5s,SNR=7.4
ELUQ Luque 3.26 300 ⇓P Pn 22 49 17.6 +1.9
ELUQ S Sn 22 49 57.0 +2.5
ELUQ Luque 3.26 300 ⇓P Pn 22 49 17.6 +1.9
21nm,0.3s,SNR=18
ELUQ S Sn 22 49 57.0 +2.5
54nm,0.3s,SNR=7.9
ELUQ Luque 3.26 300 ⇓P Pn 22 49 17.6 +1.9
21nm,0.3s,SNR=18
ELUQ S Sn 22 49 57.0 +2.5
54nm,0.3s,SNR=7.9
ELUQ Luque 3.26 300 P Pn 22 49 17.6 +1.9
21nm,0.3s,SNR=18
ELUQ S Sn 22 49 57.0 +2.5
54nm,0.3s,SNR=7.9
EBAN Banos Encina 3.28 312 ⇓P Pn 22 49 17.2 +1.3
EBAN S Sn 22 49 56.7 +1.6
EBAN Banos Encina 3.28 312 ⇓P Pn 22 49 17.2 +1.3
35nm,0.4s,SNR=18
EBAN S Sn 22 49 56.7 +1.6
45nm,0.2s
EBAN Banos Encina 3.28 312 ⇓P Pn 22 49 17.2 +1.3
35nm,0.4s,SNR=18
EBAN S Sn 22 49 56.7 +1.6
45nm,0.2s
EBAN Banos Encina 3.28 312 P Pn 22 49 17.2 +1.2
35nm,0.4s,SNR=18
EBAN S Sn 22 49 56.7 +1.6
45nm,0.2s
EMIJ Mijas 3.34 281 P Pn 22 49 15.4 -1.3
EMIJ S Sn 22 49 54.5 -2.0
EMIJ Mijas 3.34 281 P Pn 22 49 15.4 -1.3
11nm,0.3s,SNR=20
EMIJ S Sn 22 49 54.5 -2.0
58nm,0.4s,SNR=8.8
EMIJ Mijas 3.34 281 P Pn 22 49 15.4 -1.3
11nm,0.3s,SNR=20
EMIJ S Sn 22 49 54.5 -2.0
58nm,0.4s,SNR=8.8
EMIJ Mijas 3.34 281 P Pn 22 49 15.4 -1.3
11nm,0.3s,SNR=20
EMIJ S Sn 22 49 54.5 -1.9
58nm,0.4s,SNR=8.8
TZK Tazeka 3.43 237 *i* P Pn 22 49 18.0 0.0
TZK *i* S Sn 22 49 59.0 +0.3
EIBI Ibiza 3.44 28 ⇓P Pn 22 49 17.6 -0.6
EIBI S Sn 22 49 55.5 -3.4
EIBI Ibiza 3.44 28 ⇓P Pn 22 49 17.5 -0.6
20nm,0.2s,SNR=18
EIBI S Sn 22 49 55.5 -3.4
90nm,0.5s,SNR=4.6
EIBI Ibiza 3.44 28 ⇓P Pn 22 49 17.5 -0.6
20nm,0.2s,SNR=18
EIBI S Sn 22 49 55.5 -3.4
90nm,0.5s,SNR=4.6
EIBI Ibiza 3.44 28 P Pn 22 49 17.5 -0.6
20nm,0.2s,SNR=18
EIBI S Sn 22 49 55.5 -3.4
90nm,0.5s,SNR=4.6
EADA Adamuz 3.78 306 P Pn 22 49 23.9 +1.1
EADA S Sn 22 50 07.6 +0.2
EADA Adamuz 3.78 306 P Pn 22 49 23.9 +1.1
14nm,0.4s,SNR=14
EADA S Sn 22 50 07.6 +0.2
28nm,0.3s,SNR=5.4
EADA Adamuz 3.78 306 P Pn 22 49 23.9 +1.1
14nm,0.4s,SNR=14
EADA S Sn 22 50 07.6 +0.2
28nm,0.3s,SNR=5.4
EADA Adamuz 3.78 306 P Pn 22 49 23.9 +1.0
14nm,0.4s,SNR=14
EADA S Sn 22 50 07.6 +0.2
28nm,0.3s,SNR=5.4
DKH Dar Kharkhour 3.82 264 *i* P Pn 22 49 24.0 +0.6
DKH *i* S Sn 22 50 08.0 -0.4
LIJA Lijar 3.90 285 P Pn 22 49 27.5 +3.0
LIJA S Sn 22 50 10.0 -0.3
LIJA Lijar 3.90 285 P Pn 22 49 27.5 +3.0
LIJA S Sn 22 50 10.0 -0.3
LIJA Lijar 3.90 285 *e*P Pn 22 49 27.5 +3.0
LIJA *e*S Sn 22 50 10.0 -0.3
ESPR Espera 4.25 283 P Pn 22 49 30.8 +1.5
ESPR S Sn 22 50 19.7 +0.9
ESPR Espera 4.25 283 P Pn 22 49 30.8 +1.5
4.5nm,0.3s,SNR=7.4
ESPR S Sn 22 50 19.7 +0.9
30nm,0.4s,SNR=4.6
ESPR Espera 4.25 283 P Pn 22 49 30.8 +1.5
4.5nm,0.3s,SNR=7.4
ESPR S Sn 22 50 19.7 +0.9
30nm,0.4s,SNR=4.6
ESPR Espera 4.25 283 P Pn 22 49 30.8 +1.6
4.5nm,0.3s,SNR=7.4
ESPR S Sn 22 50 19.7 +0.8
30nm,0.4s,SNR=4.6
ECAB El Cabril 4.31 300 P Pn 22 49 30.5 +0.4
ECAB S Sn 22 50 19.4 -1.0
ECAB El Cabril 4.31 300 P Pn 22 49 30.5 +0.4
7.3nm,0.2s,SNR=7.9
ECAB S Sn 22 50 19.4 -1.0
22nm,0.4s,SNR=7.9
ECAB El Cabril 4.31 300 P Pn 22 49 30.5 +0.4
7.3nm,0.2s,SNR=7.9
ECAB S Sn 22 50 19.4 -1.0
22nm,0.4s,SNR=7.9
ECAB El Cabril 4.31 300 P Pn 22 49 30.5 +0.4
7.3nm,0.2s,SNR=7.9
ECAB S Sn 22 50 19.4 -1.0
22nm,0.4s,SNR=7.9
RSA Sarsar 4.33 257 *i* P Pn 22 49 30.0 -0.4
RSA *i* S Sn 22 50 21.0 +0.1
EMOS Mosqueruela 4.37 2 P Pn 22 49 32.5 +1.6
EMOS S Sn 22 50 20.9 -0.9
EMOS Mosqueruela 4.37 2 P Pn 22 49 32.5 +1.6
8.2nm,0.2s,SNR=68
EMOS S Sn 22 50 20.9 -0.9
53nm,0.5s,SNR=12
EMOS Mosqueruela 4.37 2 P Pn 22 49 32.5 +1.6
8.2nm,0.2s,SNR=68
EMOS S Sn 22 50 20.9 -0.9
53nm,0.5s,SNR=12
EMOS Mosqueruela 4.37 2 P Pn 22 49 32.5 +1.6
8.2nm,0.2s,SNR=68
EMOS S Sn 22 50 20.9 -0.9
53nm,0.5s,SNR=12
ESDC Sonseca Array 4.49 326 Pn Pn 22 49 33.5 +1.0
21nm,0.3s,baz=139,slow=14,SNR=215
ESDC Sn Sn 22 50 24.9 +0.1
24nm,0.3s,baz=131,slow=18,SNR=9.4
ESDC Lg 22 50 37.8
21nm,0.3s,baz=144,slow=29,SNR=7.0
ESDC LR LR 22 51 21.4
comp=Z,157nm,21.6s,baz=130,slow=39
ESDC Sonseca Array 4.49 326 Pn Pn 22 49 33.5 +0.9
ESDC Sn Sn 22 50 25.0 +0.1
ESLA Sonseca Array 4.49 326 *e*Pn Pn 22 49 33.2 +0.6
ESLA *e*Sn Sn 22 50 23.6 -1.3
ESLA Sonseca Array 4.49 326 *e*Pn Pn 22 49 33.2 +0.6
ESLA *e*Sn Sn 22 50 23.6 -1.3
MDT Midelt 4.53 227 Pn Pn 22 49 33.1 0.0
3.2nm,0.3s,baz=57,slow=14,SNR=76
MDT Sn Sn 22 50 25.4 -0.4
3.7nm,0.3s,baz=306,slow=19,SNR=3.3
MDT Midelt 4.53 227 Pn Pn 22 49 33.1 0.0
MDT Sn Sn 22 50 25.4 -0.4
MIF Mishlifen 4.53 237 *i* P Pn 22 49 34.0 +0.8
MIF *i* S Sn 22 50 26.0 +0.1
PAB San Pablo 4.57 322 *e*Pn Pn 22 49 34.7 +0.9
PAB *e*Sn Sn 22 50 23.3 -3.6
PAB San Pablo 4.57 322 *e*Pn Pn 22 49 34.7 +1.0
PAB *e*Sn Sn 22 50 23.3 -3.6
CZD Col de Zad 4.64 232 *i* P Pn 22 49 36.0 +1.3
CZD *i* S Sn 22 50 28.0 -0.6
ETOS Mallorca 4.68 35 P Pn 22 49 35.1 -0.2
ETOS S Sn 22 50 27.1 -2.5
ETOS Mallorca 4.68 35 P Pn 22 49 35.1 -0.2
4.3nm,0.2s,SNR=12
ETOS S Sn 22 50 27.1 -2.5
46nm,0.6s,SNR=6.1
ETOS Mallorca 4.68 35 P Pn 22 49 35.1 -0.2
4.3nm,0.2s,SNR=12
ETOS S Sn 22 50 27.1 -2.5
46nm,0.6s,SNR=6.1
ETOS Mallorca 4.68 35 P Pn 22 49 35.1 -0.1
4.3nm,0.2s,SNR=12
ETOS S Sn 22 50 27.1 -2.5
46nm,0.6s,SNR=6.1
ETOR Torete 4.94 348 P Pn 22 49 40.5 +1.8
ETOR S Sn 22 50 33.5 -2.3
ETOR Torete 4.94 348 P Pn 22 49 40.5 +1.8
16nm,0.4s,SNR=7.9
ETOR S Sn 22 50 33.5 -2.3
31nm,0.3s,SNR=7.9
ETOR T 22 51 35.9
SNR=7.9
ETOR Torete 4.94 348 P Pn 22 49 40.5 +1.8
16nm,0.4s,SNR=7.9
ETOR S Sn 22 50 33.5 -2.3
31nm,0.3s,SNR=7.9
ETOR T 22 51 35.9
SNR=7.9
ETOR Torete 4.94 348 P Pn 22 49 40.5 +1.8
16nm,0.4s,SNR=7.9
ETOR S Sn 22 50 33.5 -2.3
31nm,0.3s,SNR=7.9
ZFT Errachidia 4.98 219 *i* P Pn 22 49 39.0 -0.3
ZFT *i* S Sn 22 50 35.0 -1.9
ERTA Horta de San J 5.02 9 ⇑P Pn 22 49 40.8 +0.9
ERTA S Sn 22 50 36.2 -1.7
ERTA Horta de San J 5.02 9 ⇑P Pn 22 49 40.8 +0.9
4.0nm,0.3s,SNR=18
ERTA S Sn 22 50 36.2 -1.7
45nm,0.5s,SNR=6.5
ERTA Horta de San J 5.02 9 ⇑P Pn 22 49 40.8 +0.9
4.0nm,0.3s,SNR=18
ERTA S Sn 22 50 36.2 -1.7
45nm,0.5s,SNR=6.5
ERTA Horta de San J 5.02 9 P Pn 22 49 40.8 +0.9
4.0nm,0.3s,SNR=18
ERTA S Sn 22 50 36.2 -1.8
45nm,0.5s,SNR=6.5
EMIN Mina Concepcio 5.10 292 P Pn 22 49 40.7 -0.3
EMIN S Sn 22 50 39.5 -0.4
EMIN Mina Concepcio 5.10 292 P Pn 22 49 40.7 -0.3
5.3nm,0.3s,SNR=27
EMIN S Sn 22 50 39.5 -0.4
4.7nm,0.3s,SNR=11
EMIN Mina Concepcio 5.10 292 P Pn 22 49 40.7 -0.3
5.3nm,0.3s,SNR=27
EMIN S Sn 22 50 39.5 -0.5
4.7nm,0.3s,SNR=11
GUD Guadarrama 5.38 331 P Pn 22 49 46.6 +1.8
GUD S Sn 22 50 45.3 -1.4
GUD Guadarrama 5.38 331 P Pn 22 49 46.6 +1.8
15nm,0.3s,SNR=7.9
GUD S Sn 22 50 45.3 -1.4
17nm,0.4s,SNR=7.9
GUD Guadarrama 5.38 331 P Pn 22 49 46.6 +1.8
15nm,0.3s,SNR=7.9
GUD S Sn 22 50 45.3 -1.4
17nm,0.4s,SNR=7.9
GUD Guadarrama 5.38 331 P Pn 22 49 46.6 +1.8
15nm,0.3s,SNR=7.9
GUD S Sn 22 50 45.3 -1.4
17nm,0.4s,SNR=7.9
PBAR Barrancos 5.51 295 *e*Pn Pn 22 49 47.2 +0.5
PBAR *e*Sn Sn 22 50 49.4 -0.7
PBAR Barrancos 5.51 295 *e*Pn Pn 22 49 47.2 +0.5
PBAR *e*Sn Sn 22 50 49.4 -0.7
EPOB Poblet 5.53 14 P Pn 22 49 47.2 +0.4
EPOB S Sn 22 50 45.7 -4.8
EPOB Poblet 5.53 14 P Pn 22 49 47.2 +0.4
4.7nm,0.3s,SNR=12
EPOB S Sn 22 50 45.7 -4.8
11nm,0.4s,SNR=6.8
EPOB Poblet 5.53 14 P Pn 22 49 47.2 +0.4
4.7nm,0.3s,SNR=12
EPOB S Sn 22 50 45.7 -4.8
11nm,0.4s,SNR=6.8
EPOB Poblet 5.53 14 P Pn 22 49 47.2 +0.3
4.7nm,0.3s,SNR=12
KIB El Ksiba 5.58 234 *i* P Pn 22 49 48.0 +0.4
KIB *i* S Sn 22 50 52.0 +0.3
EGRO El Granado 5.66 288 P Pn 22 49 48.1 -0.5
EGRO S Sn 22 50 51.5 -2.1
EGRO El Granado 5.66 288 P Pn 22 49 48.1 -0.5
9.0nm,0.4s,SNR=12
EGRO S Sn 22 50 51.5 -2.1
7.7nm,0.3s,SNR=6.9
EGRO El Granado 5.66 288 P Pn 22 49 48.1 -0.5
9.0nm,0.4s,SNR=12
EGRO S Sn 22 50 51.5 -2.1
7.7nm,0.3s,SNR=6.9
EGRO El Granado 5.66 288 P Pn 22 49 48.1 -0.5
9.0nm,0.4s,SNR=12
EGRO S Sn 22 50 51.5 -2.1
7.7nm,0.3s,SNR=6.9
ESAC San Caprasio 5.72 2 P Pn 22 49 52.0 +2.4
ESAC S Sn 22 50 54.3 -1.0
ESAC San Caprasio 5.72 2 P Pn 22 49 51.9 +2.4
19nm,0.2s,SNR=4.0
ESAC S Sn 22 50 54.3 -1.0
35nm,0.3s,SNR=7.9
ESAC San Caprasio 5.72 2 P Pn 22 49 51.9 +2.4
19nm,0.2s,SNR=4.0
ESAC S Sn 22 50 54.3 -1.0
35nm,0.3s,SNR=7.9
ESAC San Caprasio 5.72 2 P Pn 22 49 52.0 +2.5
ESAC S Sn 22 50 54.3 -0.9
35nm,0.3s,SNR=7.9
EBAD Badajoz 5.73 301 P Pn 22 49 49.6 0.0
EBAD S Sn 22 50 52.7 -2.7
EBAD Badajoz 5.73 301 P Pn 22 49 49.6 0.0
5.7nm,0.3s,SNR=43
EBAD S Sn 22 50 52.7 -2.7
20nm,0.2s,SNR=7.9
EBAD Badajoz 5.73 301 P Pn 22 49 49.6 0.0
5.7nm,0.3s,SNR=43
EBAD S Sn 22 50 52.7 -2.7
20nm,0.2s,SNR=7.9
EBAD Badajoz 5.73 301 P Pn 22 49 49.7 0.0
5.7nm,0.3s,SNR=43
EBAD S Sn 22 50 52.7 -2.8
20nm,0.2s,SNR=7.9
PVAQ Vaqueiros 5.81 286 *e*Pn Pn 22 49 50.4 -0.3
PVAQ *e*Sn Sn 22 50 54.9 -2.5
PVAQ A 22 51 01.9
11nm,0.5s
PVAQ Vaqueiros 5.81 286 *e*Pn Pn 22 49 50.4 -0.3
PVAQ *e*Sn Sn 22 50 54.9 -2.5
11nm,0.5s
PBDV Barranco-do-Ve 5.95 284 *e*Pn Pn 22 49 53.2 +0.6
PBDV *e*Sn Sn 22 51 00.1 -0.7
PBDV A 22 51 06.3
11nm,0.5s
PBDV Barranco-do-Ve 5.95 284 *e*Pn Pn 22 49 53.2 +0.6
PBDV *e*Sn Sn 22 51 00.1 -0.7
11nm,0.5s
PBEJ Beja 6.08 292 *e*Pn Pn 22 49 54.7 +0.3
PBEJ *e*Sn Sn 22 51 03.1 -1.0
PBEJ A 22 51 09.8
6.5nm,0.4s
PBEJ Beja 6.08 292 *e*Pn Pn 22 49 54.7 +0.3
PBEJ *e*Sn Sn 22 51 03.1 -1.0
6.5nm,0.4s
PCVE Castro Verde 6.11 288 *e*Pn Pn 22 49 55.4 +0.6
PCVE *e*Sn Sn 22 51 04.3 -0.5
PCVE A 22 51 16.8
7.8nm,0.4s
PCVE Castro Verde 6.11 288 *e*Pn Pn 22 49 55.4 +0.6
PCVE *e*Sn Sn 22 51 04.3 -0.5
7.8nm,0.4s
TZC Tazercounte 6.14 233 *i* P Pn 22 49 55.0 -0.3
TZC *i* S Sn 22 51 05.0 -0.7
PESTR Estremoz 6.19 300 *e*Pn Pn 22 49 56.5 +0.6
PESTR *e*Sn Sn 22 51 05.8 -0.8
PESTR A 22 51 51.6
9.0nm,0.7s
PESTR Estremoz 6.19 300 *e*Pn Pn 22 49 56.5 +0.6
PESTR *e*Sn Sn 22 51 05.8 -0.8
9.0nm,0.7s
CFON Fontmartina 6.26 22 P Pn 22 49 56.8 -0.1
CFON S Sn 22 51 03.5 -5.0
CFON Fontmartina 6.26 22 P Pn 22 49 56.7 -0.1
12nm,0.2s,SNR=22
CFON S Sn 22 51 03.5 -5.0
3.6nm,0.2s,SNR=7.9
CFON Fontmartina 6.26 22 P Pn 22 49 56.7 -0.1
12nm,0.2s,SNR=22
CFON S Sn 22 51 03.5 -5.0
3.6nm,0.2s,SNR=7.9
CFON Fontmartina 6.26 22 P Pn 22 49 56.8 -0.1
PMRV Marv??o 6.31 305 *e*Pn Pn 22 49 58.8 +1.2
PMRV *e*Sn Sn 22 51 08.0 -1.8
PMRV A 22 51 43.1
12nm,0.5s
PMRV Marv??o 6.31 305 *e*Pn Pn 22 49 58.8 +1.2
PMRV *e*Sn Sn 22 51 08.0 -1.8
12nm,0.5s
EVO Evora 6.36 296 *e*Pn Pn 22 49 59.4 +1.2
EVO *e*Sn Sn 22 51 08.0 -2.9
14nm,0.3s
EVO Evora 6.36 296 *e*Pn Pn 22 49 58.6 +0.4
EVO *e*Sn Sn 22 51 08.3 -2.6
EVO A 22 51 11.9
11nm,0.5s
EVO Evora 6.36 296 *e*Pn Pn 22 49 58.6 +0.4
EVO *e*Sn Sn 22 51 08.3 -2.6
11nm,0.5s
EVOP Sao Brissos 6.44 295 *e*Pn Pn 22 49 59.4 +0.1
MORF Marmelete 6.52 284 *e*Pn Pn 22 50 00.8 +0.3
MORF *e*Sn Sn 22 51 14.8 -0.2
MORF A 22 51 18.5
12nm,0.3s
MORF Marmelete 6.52 284 *e*Pn Pn 22 50 00.8 +0.3
MORF *e*Sn Sn 22 51 14.8 -0.2
12nm,0.3s
CSOR Sort 6.53 12 P Pn 22 50 01.8 +1.2
CSOR S Sn 22 51 14.4 -0.7
CSOR Sort 6.53 12 P Pn 22 50 01.8 +1.2
1.8nm,0.2s,SNR=8.5
CSOR S Sn 22 51 14.4 -0.7
4.5nm,0.3s,SNR=6.4
CSOR Sort 6.53 12 P Pn 22 50 01.8 +1.2
1.8nm,0.2s,SNR=8.5
CSOR S Sn 22 51 14.4 -0.7
4.5nm,0.3s,SNR=6.4
CSOR Sort 6.53 12 P Pn 22 50 01.8 +1.2

1.8nm,0.2s,SNR=8.5
CSOR S Sn 22 51 14.4 -0.7
4.5nm,0.3s,SNR=6.4
PCBR Castelo Branco 6.59 308 *e*Pn Pn 22 50 02.6 +1.2
PCBR *e*Sn Sn 22 51 13.9 -2.7
PCBR A 22 51 17.7
19nm,0.5s
PCBR Castelo Branco 6.59 308 *e*Pn Pn 22 50 02.6 +1.2
PCBR *e*Sn Sn 22 51 13.9 -2.7
19nm,0.5s
MOE Montemor 6.60 295 *e*Pn Pn 22 50 02.5 +0.9
MOE *e*Sn Sn 22 51 13.3 -3.6
MOE Montemor 6.60 295 *e*Pn Pn 22 50 02.5 +0.9
PTEO Sao Teotonio 6.62 286 *e*Pn Pn 22 50 01.8 -0.1
PTEO *e*Sn Sn 22 51 16.0 -1.4
PTEO A 22 51 28.6
15nm,0.6s
PTEO Sao Teotonio 6.62 286 *e*Pn Pn 22 50 01.8 -0.1
PTEO *e*Sn Sn 22 51 16.0 -1.4
15nm,0.6s
EBIE Bielsa 6.72 5 P Pn 22 50 04.8 +1.6
EBIE Bielsa 6.72 5 P Pn 22 50 04.7 +1.6
1.1nm,0.2s,SNR=5.8
EBIE Bielsa 6.72 5 P Pn 22 50 04.7 +1.6
1.1nm,0.2s,SNR=5.8
EBIE Bielsa 6.72 5 P Pn 22 50 04.7 +1.5
1.1nm,0.2s,SNR=5.8
ECRI Cripan 6.75 349 P Pn 22 50 06.4 +2.8
ECRI S Sn 22 51 19.2 -1.4
ECRI Cripan 6.75 349 P Pn 22 50 06.4 +2.8
6.2nm,0.2s,SNR=7.9
ECRI S Sn 22 51 19.2 -1.4
3.5nm,0.3s,SNR=4.0
ECRI Cripan 6.75 349 P Pn 22 50 06.4 +2.8
6.2nm,0.2s,SNR=7.9
ECRI S Sn 22 51 19.2 -1.4
3.5nm,0.3s,SNR=4.0
ECRI Cripan 6.75 349 P Pn 22 50 06.4 +2.7
6.2nm,0.2s,SNR=7.9
ECRI S Sn 22 51 19.2 -1.4
3.5nm,0.3s,SNR=4.0
IUNC Unciti 6.78 355 ⇑P Pn 22 50 06.7 +2.6
12nm,0.4s,SNR=18
IUNC Unciti 6.78 355 ⇑P Pn 22 50 06.7 +2.6
12nm,0.4s,SNR=18
IUNC Unciti 6.78 355 P Pn 22 50 06.7 +2.6
12nm,0.4s,SNR=18
CLLI Llivia 6.80 17 P Pn 22 50 05.6 +1.3
CLLI S Sn 22 51 18.5 -3.3
CLLI Llivia 6.80 17 P Pn 22 50 05.6 +1.3
1.0nm,0.2s,SNR=7.3
CLLI S Sn 22 51 18.5 -3.3
11nm,0.5s,SNR=7.9
CLLI Llivia 6.80 17 P Pn 22 50 05.6 +1.3
1.0nm,0.2s,SNR=7.3
CLLI S Sn 22 51 18.5 -3.3
11nm,0.5s,SNR=7.9
CLLI Llivia 6.80 17 P Pn 22 50 05.6 +1.3
1.0nm,0.2s,SNR=7.3
IZUN Zunzarren 6.88 355 ⇓P Pn 22 50 08.2 +2.7
4.3nm,0.4s,SNR=18
IZUN Zunzarren 6.88 355 ⇓P Pn 22 50 08.2 +2.7
4.3nm,0.4s,SNR=18
IZUN Zunzarren 6.88 355 P Pn 22 50 08.2 +2.7
4.3nm,0.4s,SNR=18
ETSF Etsaut 6.90 1 *e*Pn Pn 22 50 07.8 +2.2
ETSF *e*Sn Sn 22 51 20.8 -3.3
14nm,0.5s
ETSF Etsaut 6.90 1 P Pn 22 50 07.8 +2.2
ETSF S Sn 22 51 20.8 -3.3
6.8nm,0.5s
ETSF Etsaut 6.90 1 P Pn 22 50 07.8 +2.2
ETSF S Sn 22 51 20.8 -3.3
6.8nm,0.5s
ETSF Etsaut 6.90 1 *e*Pn Pn 22 50 07.8 +2.2
EORO Oroz-Betelu 6.91 356 ⇓P Pn 22 50 08.2 +2.4
9.0nm,0.4s,SNR=18
EORO S Sn 22 51 24.0 -0.4
13nm,0.4s,SNR=7.9
EORO Oroz-Betelu 6.91 356 ⇓P Pn 22 50 08.2 +2.4
9.0nm,0.4s,SNR=18
EORO S Sn 22 51 24.0 -0.4
13nm,0.4s,SNR=7.9
EORO Oroz-Betelu 6.91 356 P Pn 22 50 08.2 +2.4
9.0nm,0.4s,SNR=18
EORO S Sn 22 51 24.0 -0.4
13nm,0.4s,SNR=7.9
MTE Manteigas 6.95 311 *e*Pn Pn 22 50 14.5 +8.1
MTE *e*Sn Sn 22 51 29.1 +3.5
MTE A 22 52 17.4
19nm,0.6s
IUSE Utxeti 6.98 355 P Pn 22 50 09.0 +2.3
3.7nm,0.4s,SNR=6.2
IUSE Utxeti 6.98 355 P Pn 22 50 09.0 +2.3
3.7nm,0.4s,SNR=6.2
IUSE Utxeti 6.98 355 P Pn 22 50 09.0 +2.3
3.7nm,0.4s,SNR=6.2
EJON La Jonquera 7.02 22 P Pn 22 50 08.3 +1.0
EJON La Jonquera 7.02 22 P Pn 22 50 08.3 +1.0
0.5nm,0.2s,SNR=7.9
EJON La Jonquera 7.02 22 P Pn 22 50 08.3 +1.0
0.5nm,0.2s,SNR=7.9
EJON La Jonquera 7.02 22 P Pn 22 50 08.3 +0.9
0.5nm,0.2s,SNR=7.9
EPF Esparros 7.08 6 *e*Pn Pn 22 50 09.3 +1.2
EPF *e*Sn Sn 22 51 24.6 -3.9
16nm,0.6s
EPF Esparros 7.08 6 P Pn 22 50 09.3 +1.2
EPF S Sn 22 51 24.6 -3.9
7.9nm,0.6s
EPF Esparros 7.08 6 P Pn 22 50 09.3 +1.2
EPF S Sn 22 51 24.6 -3.9
7.9nm,0.6s
EPF Esparros 7.08 6 *e*Pn Pn 22 50 09.3 +1.2
PTOM Tomar 7.09 303 *e*Pn Pn 22 50 09.3 +1.0
PTOM *e*Sn Sn 22 51 28.1 -0.9
PTOM A 22 52 12.8
14nm,0.6s
PTOM Tomar 7.09 303 *e*Pn Pn 22 50 09.3 +1.0
PTOM *e*Sn Sn 22 51 28.1 -0.9
14nm,0.6s
SJPF Ste Jean 7.12 357 *e*Pn Pn 22 50 11.1 +2.4
SJPF *e*Sn Sn 22 51 26.5 -3.2
8.6nm,0.4s
SJPF Ste Jean 7.12 357 P Pn 22 50 11.1 +2.4
SJPF S Sn 22 51 26.5 -3.2
4.3nm,0.4s
SJPF Ste Jean 7.12 357 P Pn 22 50 11.1 +2.4
SJPF S Sn 22 51 26.5 -3.2
4.3nm,0.4s
SJPF Ste Jean 7.12 357 *e*Pn Pn 22 50 11.1 +2.4
MVO Moncorvo 7.16 318 ⇑P Pn 22 50 11.0 +1.8
MVO S Sn 22 51 27.7 -2.8
MVO Moncorvo 7.16 318 ⇑P Pn 22 50 11.0 +1.8
5.1nm,0.4s,SNR=18
MVO S Sn 22 51 27.7 -2.8
16nm,0.5s,SNR=7.5
MVO Moncorvo 7.16 318 ⇑P Pn 22 50 11.0 +1.8
5.1nm,0.4s,SNR=18
MVO S Sn 22 51 27.7 -2.8
16nm,0.5s,SNR=7.5
MVO Moncorvo 7.16 318 *e*Pn Pn 22 50 11.1 +1.9
MVO *e*Sn Sn 22 51 29.3 -1.2
MVO A 22 52 11.3
13nm,0.7s
MVO Moncorvo 7.16 318 P Pn 22 50 11.0 +1.8
5.1nm,0.4s,SNR=18
MVO S Sn 22 51 27.7 -2.8
16nm,0.5s,SNR=7.5
MVO *e*Sn Sn 22 51 29.3 -1.2
13nm,0.7s
ELIZ Elizondo 7.19 355 ⇓P Pn 22 50 11.9 +2.2
ELIZ S Sn 22 51 30.4 -1.0
ELIZ Elizondo 7.19 355 ⇓P Pn 22 50 11.9 +2.2
13nm,0.3s,SNR=18
ELIZ S Sn 22 51 30.4 -1.0
8.5nm,0.4s,SNR=7.9
ELIZ Elizondo 7.19 355 ⇓P Pn 22 50 11.9 +2.2
13nm,0.3s,SNR=18
ELIZ S Sn 22 51 30.4 -1.0
8.5nm,0.4s,SNR=7.9
ELIZ Elizondo 7.19 355 P Pn 22 50 11.9 +2.2
13nm,0.3s,SNR=18
ELIZ S Sn 22 51 30.4 -0.9
8.5nm,0.4s,SNR=7.9
EALK Alkurruntz 7.24 355 P Pn 22 50 12.5 +2.1
EALK S Sn 22 51 31.8 -0.9
EALK Alkurruntz 7.24 355 P Pn 22 50 12.5 +2.1
10nm,0.4s,SNR=11
EALK S Sn 22 51 31.8 -0.9
26nm,0.6s,SNR=9.7
EALK Alkurruntz 7.24 355 P Pn 22 50 12.5 +2.1
10nm,0.4s,SNR=11
EALK S Sn 22 51 31.8 -0.9
26nm,0.6s,SNR=9.7
EALK Alkurruntz 7.24 355 P Pn 22 50 12.5 +2.1
10nm,0.4s,SNR=11
EALK S Sn 22 51 31.8 -0.9
26nm,0.6s,SNR=9.7
PVIS Viseu 7.36 312 *e*Pn Pn 22 50 13.1 +1.1
PVIS *e*Sn Sn 22 51 34.0 -1.5
PVIS Viseu 7.36 312 *e*Pn Pn 22 50 13.1 +1.1
PVIS *e*Sn Sn 22 51 34.0 -1.5
PMAFR Mafra 7.43 296 P Pn 22 50 13.2 +0.2
5.0nm,0.2s,SNR=7.9
PMAFR S Sn 22 51 34.5 -2.9
35nm,0.5s,SNR=7.9
PMAFR Mafra 7.43 296 P Pn 22 50 13.2 +0.2
5.0nm,0.2s,SNR=7.9
PMAFR S Sn 22 51 34.5 -2.9
35nm,0.5s,SNR=7.9
PMAFR Mafra 7.43 296 P Pn 22 50 13.2 +0.2
5.0nm,0.2s,SNR=7.9
PMAFR S Sn 22 51 34.5 -2.9
35nm,0.5s,SNR=7.9
PBRG Braganca 7.47 323 *e*Pn Pn 22 50 14.9 +1.4
PBRG *e*Sn Sn 22 51 35.0 -3.3
PBRG A 22 52 22.5
7.1nm,0.5s
PBRG Braganca 7.47 323 *e*Pn Pn 22 50 14.9 +1.4
ELAN Lanestosa 7.53 345 P Pn 22 50 16.4 +2.1
ELAN S Sn 22 51 38.2 -1.5
ELAN Lanestosa 7.53 345 P Pn 22 50 16.4 +2.1
4.0nm,0.3s,SNR=9.3
ELAN S Sn 22 51 38.2 -1.5
2.2nm,0.2s,SNR=5.4
ELAN Lanestosa 7.53 345 P Pn 22 50 16.4 +2.1
4.0nm,0.3s,SNR=9.3
ELAN S Sn 22 51 38.2 -1.5
2.2nm,0.2s,SNR=5.4
ELAN Lanestosa 7.53 345 P Pn 22 50 16.4 +2.1
4.0nm,0.3s,SNR=9.3
ELAN S Sn 22 51 38.2 -1.5
2.2nm,0.2s,SNR=5.4
ECAL Calabor 7.57 323 P Pn 22 50 15.7 +0.7
ECAL S Sn 22 51 38.5 -2.3
ECAL Calabor 7.57 323 P Pn 22 50 15.6 +0.7
18nm,0.4s,SNR=27
ECAL S Sn 22 51 38.5 -2.3
6.2nm,0.3s,SNR=7.9
ECAL Calabor 7.57 323 P Pn 22 50 15.6 +0.7
18nm,0.4s,SNR=27
ECAL S Sn 22 51 38.5 -2.3
6.2nm,0.3s,SNR=7.9
ECAL Calabor 7.57 323 P Pn 22 50 15.6 +0.7
18nm,0.4s,SNR=27
ECAL S Sn 22 51 38.5 -2.3
6.2nm,0.3s,SNR=7.9
PVRL Vila Real 7.61 316 *e*Pn Pn 22 50 16.0 +0.6
PVRL *e*Sn Sn 22 51 40.3 -1.4
PVRL A 22 52 23.5
8.5nm,0.6s
PVRL Vila Real 7.61 316 *e*Pn Pn 22 50 16.0 +0.6
PVRL *e*Sn Sn 22 51 40.3 -1.4
8.5nm,0.6s
MTLF Montolieu 7.68 16 *e*Pn Pn 22 50 17.5 +1.2
MTLF *e*Sn Sn 22 51 39.8 -3.5
21nm,1.0s
MTLF Montolieu 7.68 16 P Pn 22 50 17.5 +1.2
MTLF S Sn 22 51 39.8 -3.5
10nm,1.0s
MTLF Montolieu 7.68 16 P Pn 22 50 17.5 +1.2
MTLF S Sn 22 51 39.8 -3.5
10nm,1.0s
MTLF Montolieu 7.68 16 *e*Pn Pn 22 50 17.5 +1.2
PCAB Cabril 8.07 317 *e*Pn Pn 22 50 23.0 +1.2
PCAB Cabril 8.07 317 *e*Pn Pn 22 50 23.0 +1.2
EARI Arriondas 8.08 336 P Pn 22 50 23.4 +1.5
EARI S Sn 22 51 47.8 -5.5
EARI Arriondas 8.08 336 P Pn 22 50 23.4 +1.5
2.8nm,0.3s,SNR=22
EARI S Sn 22 51 47.8 -5.5
1.6nm,0.3s,SNR=12
EARI Arriondas 8.08 336 P Pn 22 50 23.4 +1.5
2.8nm,0.3s,SNR=22
EARI S Sn 22 51 47.8 -5.5
1.6nm,0.3s,SNR=12
EARI Arriondas 8.08 336 P Pn 22 50 23.4 +1.5
2.8nm,0.3s,SNR=22
KEST Kesra 8.16 89 Pn Pn 22 50 22.6 -0.4
0.2nm,0.3s,baz=234,slow=3.3,SNR=13
KEST Sn Sn 22 51 52.9 -2.4
0.1nm,0.3s,baz=172,slow=1.7,SNR=3.0
ELOB Lobios 8.20 318 P Pn 22 50 25.2 +1.6
ELOB S Sn 22 51 53.4 -2.8
ELOB Lobios 8.20 318 P Pn 22 50 25.2 +1.6
2.3nm,0.3s,SNR=6.0
ELOB S Sn 22 51 53.4 -2.8
9.4nm,0.5s,SNR=7.9
ELOB Lobios 8.20 318 P Pn 22 50 25.2 +1.6
2.3nm,0.3s,SNR=6.0
ELOB S Sn 22 51 53.4 -2.8
9.4nm,0.5s,SNR=7.9
ELOB Lobios 8.20 318 P Pn 22 50 25.2 +1.7
2.3nm,0.3s,SNR=6.0
ELOB S Sn 22 51 53.4 -2.8
9.4nm,0.5s,SNR=7.9
LASF Ste Croix 8.80 22 *e*Pn Pn 22 50 31.1 -0.6
LASF *e*Sn Sn 22 52 04.7 -6.1
2.6nm,0.5s
LASF Ste Croix 8.80 22 P Pn 22 50 31.1 -0.6
LASF S Sn 22 52 04.7 -6.1
1.3nm,0.5s
LASF Ste Croix 8.80 22 P Pn 22 50 31.1 -0.6
LASF S Sn 22 52 04.7 -6.1
1.3nm,0.5s
LASF Ste Croix 8.80 22 *e*Pn Pn 22 50 31.1 -0.6
EPON Pontenova 8.85 328 P Pn 22 50 33.6 +1.2
EPON S Sn 22 52 07.8 -4.4
EPON Pontenova 8.85 328 P Pn 22 50 33.6 +1.2
10nm,0.4s,SNR=7.9
EPON S Sn 22 52 07.7 -4.4
3.0nm,0.3s,SNR=7.9
EPON Pontenova 8.85 328 P Pn 22 50 33.6 +1.2
10nm,0.4s,SNR=7.9
EPON S Sn 22 52 07.7 -4.4
3.0nm,0.3s,SNR=7.9
EPON Pontenova 8.85 328 P Pn 22 50 33.6 +1.2
10nm,0.4s,SNR=7.9
EPON S Sn 22 52 07.8 -4.3
LFF La Frestale 9.00 7 *e*Pn Pn 22 50 33.5 -1.0
LFF *e*Sn Sn 22 52 11.0 -4.9
11nm,0.6s
LFF La Frestale 9.00 7 P Pn 22 50 33.5 -1.0
LFF S Sn 22 52 11.0 -4.9
5.7nm,0.6s
LFF La Frestale 9.00 7 P Pn 22 50 33.5 -1.0
LFF S Sn 22 52 11.0 -4.9
5.7nm,0.6s
LFF La Frestale 9.00 7 *e*Pn Pn 22 50 33.5 -1.0
CAF Calviac 9.17 12 *e*Pn Pn 22 50 37.9 +1.1
CAF *e*Sn Sn 22 52 14.6 -5.4
8.7nm,0.8s
CAF Calviac 9.17 12 P Pn 22 50 37.9 +1.1
CAF S Sn 22 52 14.6 -5.4
4.3nm,0.8s
CAF Calviac 9.17 12 P Pn 22 50 37.9 +1.1
CAF S Sn 22 52 14.6 -5.4
4.3nm,0.8s
CAF Calviac 9.17 12 *e*Pn Pn 22 50 37.9 +1.1
LMR La Mourre 9.20 35 *e*Pn Pn 22 50 39.0 +1.8
LMR *e*Sn Sn 22 52 14.1 -6.6
1.5nm,0.3s
LMR La Mourre 9.20 35 P Pn 22 50 39.0 +1.8
LMR S Sn 22 52 14.1 -6.6
0.8nm,0.3s
LMR La Mourre 9.20 35 P Pn 22 50 39.0 +1.8
LMR S Sn 22 52 14.1 -6.6
0.8nm,0.3s
LMR La Mourre 9.20 35 *e*Pn Pn 22 50 39.0 +1.8
SMRF Simiane la Rot 9.31 29 *e*Pn Pn 22 50 41.7 +2.9
SMRF *e*Sn Sn 22 52 17.7 -5.8
2.0nm,0.4s
SMRF Simiane la Rot 9.31 29 P Pn 22 50 41.7 +2.9
SMRF S Sn 22 52 17.7 -5.8
2.0nm,0.4s
SMRF Simiane la Rot 9.31 29 P Pn 22 50 41.7 +2.9
SMRF S Sn 22 52 17.7 -5.8
2.0nm,0.4s
SMRF Simiane la Rot 9.31 29 *e*Pn Pn 22 50 41.7 +2.9
FRF La Foret Royal 9.44 35 *e*Pn Pn 22 50 42.1 +1.6
FRF *e*Sn Sn 22 52 20.0 -6.6
1.1nm,0.4s
FRF La Foret Royal 9.44 35 P Pn 22 50 42.1 +1.6
FRF S Sn 22 52 20.0 -6.6
0.6nm,0.4s
FRF La Foret Royal 9.44 35 P Pn 22 50 42.1 +1.6
FRF S Sn 22 52 20.0 -6.6
0.6nm,0.4s
FRF La Foret Royal 9.44 35 *e*Pn Pn 22 50 42.1 +1.6
RJF Les Rejaudoux 9.45 10 *e*Pn Pn 22 50 39.2 -1.5
RJF *e*Sn Sn 22 52 21.7 -5.3
1.6nm,0.4s
RJF Les Rejaudoux 9.45 10 *e*Pn Pn 22 50 39.2 -1.5
PGF Pioggiola 9.97 46 *e*Pn Pn 22 50 46.6 -1.1
PGF *e*Sn Sn 22 52 32.7 -6.9
6.7nm,0.5s
PGF Pioggiola 9.97 46 *e*Pn Pn 22 50 46.6 -1.1
SBF Sospel 10.04 36 *e*Pn Pn 22 50 48.7 0.0
SBF *e*Sn Sn 22 52 34.7 -6.6
2.3nm,0.3s
SBF Sospel 10.04 36 *e*Pn Pn 22 50 48.7 0.0
ORIF Oris-en-Rattie 10.22 27 *e*Pn Pn 22 50 52.4 +1.1
ORIF *e*Sn Sn 22 52 39.9 -6.0
8.8nm,0.8s
ORIF Oris-en-Rattie 10.22 27 *e*Pn Pn 22 50 52.4 +1.1
TCF Toulx Ste Croi 10.52 11 *e*Pn Pn 22 50 54.2 -1.0
TCF *e*Sn Sn 22 52 47.5 -5.5
1.3nm,0.4s
TCF Toulx Ste Croi 10.52 11 *e*Pn Pn 22 50 54.2 -1.0
MFF Saint Martin d 10.61 2 *e*Pn Pn 22 50 57.5 +1.0
MFF *e*Sn Sn 22 52 49.7 -5.6
1.4nm,0.4s
MFF Saint Martin d 10.61 2 *e*Pn Pn 22 50 57.5 +1.0
AVF Avril sur Loir 11.21 14 *e*Pn Pn 22 51 03.7 -1.0
AVF *e*Sn Sn 22 53 03.8 -6.2
0.9nm,0.4s
AVF Avril sur Loir 11.21 14 *e*Pn Pn 22 51 03.7 -1.0
SSF Saint Saulge 11.50 15 *e*Pn Pn 22 51 08.8 +0.1
SSF *e*Sn Sn 22 53 11.0 -6.1
2.5nm,0.6s
SSF Saint Saulge 11.50 15 *e*Pn Pn 22 51 08.8 +0.1
LOR Lormes 11.77 15 *e*Pn Pn 22 51 12.2 -0.2
LOR *e*Sn Sn 22 53 16.7 -7.0
0.7nm,0.3s
LOR Lormes 11.77 15 *e*Pn Pn 22 51 12.2 -0.2
QUIF Quistinic 12.05 352 *e*Pn Pn 22 51 16.7 +0.4
QUIF *e*Sn Sn 22 53 24.3 -6.4
2.2nm,0.4s
QUIF Quistinic 12.05 352 *e*Pn Pn 22 51 16.7 +0.4
SGMF Saint Gilles 12.33 354 *e*Pn Pn 22 51 20.1 +0.1
SGMF *e*Sn Sn 22 53 31.2 -6.2
1.6nm,0.5s
SGMF Saint Gilles 12.33 354 *e*Pn Pn 22 51 20.1 +0.1
ROSF Rostrenen 12.48 352 *e*Pn Pn 22 51 22.5 +0.4
ROSF *e*Sn Sn 22 53 34.1 -7.0
6.6nm,0.6s
ROSF Rostrenen 12.48 352 *e*Pn Pn 22 51 22.5 +0.4
TAM Tamanrasset 14.22 156 *e*Pn Pn 22 51 41.0 -5.0
2.7nm,0.9s
TAM Tamanrasset 14.22 156 *e*Pn Pn 22 51 41.0 -5.0
2.7nm,0.9s
GERES GERESS Array B 16.64 35 Pn Pn 22 52 18.2 +0.5
0.1nm,0.3s,baz=224,slow=2.7,SNR=3.9
GERES GERESS Array B 16.64 35 Pn Pn 22 52 18.2 +0.5
TOA0 Torodi Ar. Sit 22.85 174 *e*P P 22 53 26.8 -1.2
TOA0 Torodi Ar. Sit 22.85 174 *e*P P 22 53 26.8 -1.1
TORD Torodi Ar. Bea 22.85 174 P P 22 53 26.9 -1.1
1.8nm,0.5s,mb3.7,baz=352,slow=11,SNR=30
AKASG Malin Array Be 26.04 46 P P 22 53 54.9 -2.8
0.8nm,0.5s,mb3.5,baz=242,slow=11,SNR=2.8
NOA NORSAR Array B 26.19 13 LR LR 23 05 57.2
comp=Z,5.0nm,18.4s,baz=290,slow=40
IIGN Ignalina 26.72 35 *e*P P 22 54 05.3 +1.5
IIGN Ignalina 26.72 35 *e*P P 22 54 05.3 +1.5
SNR=29
ISAL Salakas 26.80 35 *e*P P 22 54 05.9 +1.4
ISAL Salakas 26.80 35 *e*P P 22 54 05.9 +1.4
SNR=29
IDID Didziasalis 26.94 36 *e*P P 22 54 07.2 +1.5
IDID Didziasalis 26.94 36 *e*P P 22 54 07.2 +1.4
SNR=28
IZAR Zarasai 26.96 34 *e*P P 22 54 07.5 +1.6
IZAR Zarasai 26.96 34 *e*P P 22 54 07.5 +1.5
SNR=28
ZALV Zalesovo Beam 59.38 43 P P 22 58 27.4 +0.7
1.7nm,0.8s,mb4.1,baz=293,slow=8.0,SNR=5.2
ZALV Zalesovo Beam 59.38 43 P P 22 58 27.4 +0.7
ZALV Zalesovo Beam 59.38 43 P P 22 58 27.4 +0.7
MKAR Makanchi Array 60.46 52 P P 22 58 34.3 +0.1
0.8nm,0.6s,mb3.9,baz=304,slow=5.7,SNR=9.1
PDAR Pinedale Array 78.30 315 P P 23 00 25.3 +0.6
0.3nm,0.6s,mb3.4,baz=7.0,slow=8.2,SNR=2.8
PDAR Pinedale Array 78.30 315 P P 23 00 25.3 +0.6
TXAR Lajitas Array 82.74 301 P P 23 00 50.6 +1.7
0.2nm,0.6s,mb3.3,baz=68,slow=8.1,SNR=2.7
TXAR Lajitas Array 82.74 301 P P 23 00 50.6 +1.8

*ISK **06** 22:57:18.9, 41°.11N±28°.84E, h6km, MD3.2*
*SOF **06** 22:57:19.0, 41°.18N±28°.69E, h14km, MD2.9*
*DDA **06** 22:57:19.0, 41°.10N±28°.83E, h15km±1km, Md3.5*
*CSEM **06** 22:57:19.4±0.1, 41°.13N±28°.81E, h8km, MD3.2, Error ellipse: s-maj=3.0km s-min=2.2km az=23.0*
*THE **06** 22:57:19.9, 41°.04N±28°.72E, h0km±1km, ML3.7/3, Error ellipse: s-maj=3.3km s-min=0.7km az=91.0*
*ISCJB **06** 22:57:19.0±0.3, 41°.13N±0°.02×28°.81E±0°.02, h10km±2km, Error ellipse: s-maj=3.7km s-min=2.6km az=17.2*

ISC 06 22:57:19.5±0.3, 41°.12N±0°.02×28°.82E±0°.02, h8km±2km, n121, σ0°80/150, 4C-4D, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
BGKT	**Bogazkoy**	**0.07**	**333**	PG		**Pg**	**22 57 21.7**	**+0.2**
BGKT	**Bogazkoy**	**0.07**	**333**	*i* Pg		**Pg**	**22 57 21.7**	**+0.2**
ISK	**Istanbul-Kandi**	**0.19**	**105**	*e*PG		**Pg**	**22 57 23.0**	**-0.4**
ISK	**Istanbul-Kandi**	**0.19**	**105**	*e*Pg		**Pg**	**22 57 23.0**	**-0.4**
KLYT	**Kilyos**	**0.22**	**51**	*e*PG		**Pg**	**22 57 23.9**	**-0.1**
KLYT				*e*SG		**Sg**	**22 57 26.7**	**-0.2**
KLYT	**Kilyos**	**0.22**	**51**	*e*Pg		**Pg**	**22 57 23.9**	**0.0**
KLYT				*e*Sg		**Sg**	**22 57 26.7**	**-0.2**
CTKS	**Kestanelik-??a**	**0.26**	**297**	*e*PG		**Pg**	**22 57 25.2**	**+0.4**
CTKS				*e*SG		**Sg**	**22 57 29.4**	**+1.0**
CTKS	**Kestanelik-??a**	**0.26**	**297**	*e*Pg		**Pg**	**22 57 25.2**	**+0.4**
CTKS				*e*Sg		**Sg**	**22 57 29.4**	**+1.1**
ELBA	**Catalca**	**0.29**	**276**	*i* P		**Pg**	**22 57 25.7**	**+0.4**
ELBA				*i* S		**Sg**	**22 57 30.1**	**+0.8**
ELBA	**Catalca**	**0.29**	**276**	*i* P		**Pg**	**22 57 25.7**	**+0.4**
ELBA				*i* S		**Sg**	**22 57 30.1**	**+0.8**
SLVT	**Silivri**	**0.47**	**284**	*e*PG		**Pg**	**22 57 29.1**	**+0.4**
SLVT	**Silivri**	**0.47**	**284**	*e*Pg		**Pg**	**22 57 29.1**	**+0.4**
CTYL	**Yal??k??y-??at**	**0.54**	**312**	*e*PG		**Pg**	**22 57 29.9**	**0.0**
CTYL	**Yal??k??y-??at**	**0.54**	**312**	*e*Pg		**Pg**	**22 57 29.9**	**0.0**
ARMT	**Armutlu**	**0.55**	**177**	*e*PG		**Pg**	**22 57 29.8**	**-0.3**
ARMT				*e*SG		**Sg**	**22 57 37.7**	**+0.3**
ARMT	**Armutlu**	**0.55**	**177**	*e*Pg		**Pg**	**22 57 29.8**	**-0.4**
ARMT				*e*Sg		**Sg**	**22 57 37.7**	**+0.4**
SILT	**Sile**	**0.62**	**86**	*e*PG		**Pg**	**22 57 31.0**	**-0.6**
SILT	**Sile**	**0.62**	**86**	*e*Pg		**Pg**	**22 57 31.0**	**-0.6**
YLV	**Yalova**	**0.69**	**142**	*e*PG		**Pg**	**22 57 32.6**	**-0.2**
YLV	**Yalova**	**0.69**	**142**	*e*Pg		**Pg**	**22 57 32.6**	**-0.2**
GEMT	**Gemlik**	**0.74**	**157**	*e*PG		**Pg**	**22 57 33.3**	**-0.4**
GEMT	**Gemlik**	**0.74**	**157**	*e*Pg		**Pg**	**22 57 33.3**	**-0.4**
CRLT	**Corlu**	**0.82**	**271**	*e*PG		**Pg**	**22 57 35.5**	**+0.3**
CRLT				*e*SG		**Sg**	**22 57 47.3**	**+1.5**
CRLT	**Corlu**	**0.82**	**271**	*e*Pg		**Pg**	**22 57 35.5**	**+0.3**
CRLT				*e*Sg		**Sg**	**22 57 47.3**	**+1.4**
KCT	**Karacabey**	**0.92**	**203**	*e*PG		**Pg**	**22 57 36.9**	**-0.3**
KCT	**Karacabey**	**0.92**	**203**	*e*Pg		**Pg**	**22 57 36.9**	**-0.3**
ADVT	**Abdulvahap**	**0.98**	**134**	*e*PG		**Pg**	**22 57 37.7**	**-0.6**
ADVT	**Abdulvahap**	**0.98**	**134**	*e*Pg		**Pg**	**22 57 37.7**	**-0.6**
TKR	**Tekirdag**	**0.98**	**263**	*e*PG		**Pg**	**22 57 38.4**	**+0.1**
TKR	**Tekirdag**	**0.98**	**263**	*e*Pg		**Pg**	**22 57 38.4**	**+0.1**
ULDT	**Uludag**	**1.00**	**166**	*i* P		**Pg**	**22 57 38.3**	**-0.5**

ULDT			*i* S	Sg	22 57 51.0	-0.8
ULDT	**Uludag**	**1.00 166**	*i* S	Sg	22 57 51.0	-0.8
ULDT	**Uludag**	**1.00 166**	*i* P	Pg	22 57 38.3	-0.5
BNT	**Bandirma**	**1.02 222**	*e*PG	Pg	22 57 39.3	+0.2
EDC	**Edincik**	**1.06 224**	*e*PG	Pg	22 57 39.4	-0.4
EDC	**Edincik**	**1.06 224**	*e*Pg	Pg	22 57 39.4	-0.4
SART	**Tekirdag**	**1.31 252**	*i* P	Pn	22 57 42.7	-1.5
SART			*i* S	Sb	22 58 00.8	-0.5
SART	**Tekirdag**	**1.31 252**	*i* P	Pn	22 57 42.7	-1.4
SART			*i* S	Sb	22 58 00.9	-0.5
GPA	**Golpazari**	**1.40 126**	*e*PN	Pn	22 57 45.5	+0.1
GPA	**Golpazari**	**1.40 126**	*e*Pn	Pn	22 57 45.5	+0.1
GULT	**Gulveren**	**1.46 117**	*e*PN	Pn	22 57 46.1	0.0
GULT			*e*SN	Sn	22 58 05.7	+0.3
GULT	**Gulveren**	**1.46 117**	*e*Pn	Pn	22 57 46.1	-0.1
GULT			*e*Sn	Sn	22 58 05.7	+0.3
DST	**Dursunbey**	**1.52 186**	*e*PN	Pn	22 57 47.3	+0.3
DST	**Dursunbey**	**1.52 186**	*e*Pn	Pn	22 57 47.3	+0.3
HENT	**Hendek**	**1.60 100**	*i* P	Pn	22 57 47.9	-0.2
HENT			*i* S	Sn	22 58 09.0	0.0
HENT	**Hendek**	**1.60 100**	*i* P	Pn	22 57 47.9	-0.2
HENT			*i* S	Sn	22 58 09.0	0.0
BALB	**Balikesir**	**1.64 206**	*e*PN	Pn	22 57 49.1	+0.5
BALB	**Balikesir**	**1.64 206**	*e*Pn	Pn	22 57 49.2	+0.6
BALY	**Balya**	**1.65 214**	*i* P	Pn	22 57 47.6	-1.2
BALY			*i* S	Sn	22 58 09.4	-0.8
BALY	**Balya**	**1.65 214**	*i* P	Pn	22 57 47.6	-1.2
BALY			*i* S	Sn	22 58 09.4	-0.8
EDRB	**Edirne**	**1.72 296**	*e*PN	Pn	22 57 50.3	+0.6
EDRB	**Edirne**	**1.72 296**	*e*Pn	Pn	22 57 50.3	+0.5
LPK	**Lapseki**	**1.73 245**	*e*PN	Pn	22 57 50.5	+0.6
LPK	**Lapseki**	**1.73 245**	*e*Pn	Pn	22 57 50.5	+0.6
MDU	**Mudurnu**	**1.93 109**	*e*PN	Pn	22 57 52.9	+0.2
MDU	**Mudurnu**	**1.93 109**	*e*Pn	Pn	22 57 52.9	+0.2
KDZE	**Karadeniz Ereo**	**1.99 83**	*e*PN	Pn	22 57 53.8	+0.3
KDZE	**Karadeniz Ereo**	**1.99 83**	*e*Pn	Pn	22 57 53.8	+0.3
ENEZ	**Enez**	**2.05 260**	*e*PN	Pn	22 57 55.4	+1.0
ENEZ	**Enez**	**2.05 260**	*e*Pn	Pn	22 57 55.4	+1.1
ALN	**Alexandroupoli**	**2.11 265**	P	Pn	22 57 54.0	-1.1
ALN			S	Sn	22 58 21.3	-0.2
ALN	**Alexandroupoli**	**2.11 265**	P	Pn	22 57 54.0	-1.1
ALN			S	Sn	22 58 21.3	-0.2
JMB	**Yambol**	**2.15 310**	P	Pn	22 57 56.2	+0.6
JMB			S	Sn	22 58 24.1	+1.6
JMB	**Yambol**	**2.15 310**	Pg	Pg	22 58 00.6	-0.1
JMB			P		22 57 55.8	
JMB	**Yambol**	**2.15 310**	Pg	Pg	22 58 00.6	-0.1
JMB			S	Sn	22 58 24.1	+1.6
ESKT	**Eskisehir**	**2.23 135**	*e*PN	Pn	22 57 56.8	+0.1
ESKT	**Eskisehir**	**2.23 135**	*e*Pn	Pn	22 57 56.8	+0.1
ALT	**Altintas**	**2.29 154**	*e*PN	Pn	22 57 57.9	+0.4
ALT	**Altintas**	**2.29 154**	*e*Pn	Pn	22 57 57.9	+0.4
EZN	**Ezine**	**2.30 237**	*e*PN	Pn	22 57 58.6	+1.0
EZN	**Ezine**	**2.30 237**	*e*Pn	Pn	22 57 58.6	+0.9
AKS	**Akhisar**	**2.36 199**	*e*PN	Pn	22 57 59.4	+0.8
AKS	**Akhisar**	**2.36 199**	*e*Pn	Pn	22 57 59.4	+0.8
GADA	**Gvkgeada**	**2.41 248**	*e*PN	Pn	22 58 00.1	+0.9
GADA	**Gvkgeada**	**2.41 248**	*e*Pn	Pn	22 58 00.1	+0.9
RDO	**Rodhopi**	**2.48 272**	P	Pn	22 57 59.5	-0.7
RDO			S	Sn	22 58 30.5	-0.1
RDO	**Rodhopi**	**2.48 272**	P	Pn	22 57 59.5	-0.7
RDO			S	Sn	22 58 30.5	-0.1
SGKT	**Sivrigoynuk**	**2.52 101**	*i* P	Pn	22 58 01.4	+0.8
SGKT			*e*S	Sn	22 58 38.1	+6.6
SGKT	**Sivrigoynuk**	**2.52 101**	*i* P	Pn	22 58 01.4	+0.7
KULA	**Kula-Manisa**	**2.60 183**	*e*PN	Pn	22 58 02.8	+0.9
KULA	**Kula-Manisa**	**2.60 183**	*e*Pn	Pn	22 58 02.8	+0.9
PSN	**Preselentsi**	**2.61 350**	*i* P	Pn	22 58 00.7	-1.3
PSN	**Preselentsi**	**2.61 350**	*i* P	Pn	22 58 00.7	-1.3
KDZ	**Kurdzhali**	**2.61 283**	P	Pn	22 58 01.6	-0.4
KDZ			Pg	Pg	22 58 07.6	-2.0
KDZ	**Kurdzhali**	**2.61 283**	P	Pn	22 58 01.6	-0.4
SVRH	**Sivrihisar-ESK**	**2.66 128**	*e*PN	Pn	22 58 03.3	+0.6
SVRH	**Sivrihisar-ESK**	**2.66 128**	*e*Pn	Pn	22 58 03.3	+0.7
PRK	**Paraskevi**	**2.70 227**	P	Pn	22 58 02.3	-0.9
PRK			S	Sn	22 58 35.4	-0.7
PRK	**Paraskevi**	**2.70 227**	P	Pn	22 58 02.3	-0.9
PRK			S	Sn	22 58 35.4	-0.7
SHUT	**Suhut-Afyon**	**2.89 152**	*e*PN	Pn	22 58 06.7	+1.0
SHUT	**Suhut-Afyon**	**2.89 152**	*e*Pn	Pn	22 58 06.7	+0.9
SAFT	**Safranbolu**	**2.92 86**	*e*PN	Pn	22 58 06.4	+0.1
SAFT	**Safranbolu**	**2.92 86**	*e*Pn	Pn	22 58 06.4	+0.1
IZM	**Izmir**	**2.97 204**	*e*PN	Pn	22 58 08.0	+1.1
IZM	**Izmir**	**2.97 204**	*e*Pn	Pn	22 58 08.0	+1.1
SZH	**Strazhica**	**3.04 316**	P	Pn	22 58 07.1	-0.7
SZH	**Strazhica**	**3.04 316**	P	Pn	22 58 07.1	-0.7
BLCB	**Balcova**	**3.05 207**	*e*PN	Pn	22 58 09.2	+1.2
BLCB	**Balcova**	**3.05 207**	*e*Pn	Pn	22 58 09.2	+1.1
RZN	**Rozhen**	**3.14 282**	P	Pn	22 58 07.8	-1.4
RZN	**Rozhen**	**3.14 282**	P	Pn	22 58 07.8	-1.4
KIZT	**Kizilcal**	**3.24 133**	*e*PN	Pn	22 58 11.7	+1.0
KIZT	**Kizilcal**	**3.24 133**	*e*Pn	Pn	22 58 11.7	+1.0
LOD	**Lodumlu**	**3.25 111**	*e*PN	Pn	22 58 11.5	+0.7
LOD	**Lodumlu**	**3.25 111**	*e*Pn	Pn	22 58 11.5	+0.7
KAVA	**Kavala**	**3.26 269**	P	Pn	22 58 10.3	-0.6
KAVA	**Kavala**	**3.26 269**	P	Pn	22 58 10.3	-0.6
TIRR	**Tirgusor**	**3.35 355** ⇑	*i*P	Pn	22 58 11.7	-0.5
TIRR	**Tirgusor**	**3.35 355** ⇑	*i*P	Pn	22 58 11.7	-0.5
HARR	**Harsova**	**3.63 350** ⇓	*i*P	Pn	22 58 13.7	-2.3
HARR	**Harsova**	**3.63 350** ⇓	*i*P	Pn	22 58 13.7	-2.3
SRS	**Serrai**	**3.95 272**	P	Pn	22 58 20.1	-0.3
SRS	**Serrai**	**3.95 272**	P	Pn	22 58 20.1	-0.3
KKB	**Krupnik**	**4.37 282**	P	Pn	22 58 24.5	-1.7
KKB	**Krupnik**	**4.37 282**	P	Pn	22 58 24.5	-1.7
VTS	**Vitosha**	**4.44 291**	P	Pn	22 58 25.7	-1.5
VTS	**Vitosha**	**4.44 291**	P	Pn	22 58 25.7	-1.5
MLR	**Muntele Rosu**	**4.85 335** ⇓	*i*P	Pn	22 58 33.8	+1.0
MLR	**Muntele Rosu**	**4.85 335** ⇓	*i*P	Pn	22 58 33.8	+1.0
PLOR	**Plostina**	**4.99 342** ⇑	*i*P	Pn	22 58 35.8	+1.1
PLOR	**Plostina**	**4.99 342** ⇑	*i*P	Pn	22 58 35.8	+1.1

*ATH **06** 23:01:39.2, 38.°10N×23.°62E, h24km, MD3.5/11, ML4.0*
*NEIC **06** 23:01:39.2, 38.°10N×23.°62E, h24km, ML4.0(ATH), After ATH.*
NEIC Felt at Athens.
*ISCJB **06** 23:01:39.8±0.3, 38.°13N±0.°02×23.°63E±0.°03, h11km±3km, Error ellipse: s-maj=4.0km s-min=3.2km az=137.3*
*CSEM **06** 23:01:40.7±0.1, 38.°11N×23.°63E, h19km, ML4.0, Error ellipse: s-maj=3.8km s-min=3.5km az=70.0*
*THE **06** 23:01:40.3, 38.°12N×23.°60E, h9km±1km, ML3.7/6, Error ellipse: s-maj=1.4km s-min=0.6km az=10.0*

ISC 06 23:01:40.3±0.3,**38.°13N**±0.°02×**23.°62E**±0.°03,**h12**km±3km, **n123**, σ0**°75**/152, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATH	**Athens Observa**	**0.17**	**153**	*e*Pb	**Pg**	**23 01 44.4**	**+0.2**
ATH				*e*Sb	**Sg**	23 01 46.9	0.0
ATH	**Athens Observa**	**0.17**	**153**	*e*PB	**Pg**	**23 01 44.4**	**+0.2**
ATH				*e*SB	**Sg**	23 01 46.9	0.0
ATH	**Athens Observa**	**0.17**	**153**	*e*Pb	**Pg**	**23 01 44.4**	**+0.2**
ATH				*e*Sb	**Sg**	23 01 46.9	0.0
PTL	**Penteli**	**0.21**	**112**	*e*Pb	**Pg**	**23 01 45.4**	**+0.6**
PTL				*e*Sb	**Sg**	**23 01 48.6**	**+0.7**
PTL	**Penteli**	**0.21**	**112**	*e*PB	**Pg**	**23 01 45.4**	**+0.6**
PTL				*e*SB	**Sg**	**23 01 48.6**	**+0.7**
PTL	**Penteli**	**0.21**	**112**	*e*Pb	**Pg**	**23 01 45.4**	**+0.6**
PTL				*e*Sb	**Sg**	**23 01 48.6**	**+0.7**
VLY	**Voula,Athens**	**0.31**	**153**	*e*Pb	**Pg**	**23 01 46.3**	**-0.2**
VLY				*e*Sb	**Sg**	**23 01 50.2**	**-0.5**
VLY	**Voula,Athens**	**0.31**	**153**	*e*PB	**Pg**	**23 01 46.3**	**-0.2**
VLY				*e*SB	**Sg**	**23 01 50.2**	**-0.5**
VLY	**Voula,Athens**	**0.31**	**153**	*e*Pb	**Pg**	**23 01 46.3**	**-0.2**
VLY				*e*Sb	**Sg**	**23 01 50.2**	**-0.5**
NAIG	**Nisos Aigina**	**0.38**	**195**	*e*Pb	**Pg**	**23 01 47.1**	**-0.8**
NAIG	**Nisos Aigina**	**0.38**	**195**	*e*PB	**Pg**	**23 01 47.1**	**-0.8**
NAIG	**Nisos Aigina**	**0.38**	**195**	*e*Pb	**Pg**	**23 01 47.1**	**-0.8**
LTK	**Loutraki**	**0.52**	**259**	*e*Pn	**Pg**	**23 01 50.0**	**-0.5**
LTK				*e*SN	**Sg**	**23 01 57.5**	**+0.1**
LTK	**Loutraki**	**0.52**	**259**	*e*Pn	**Pg**	**23 01 50.0**	**-0.5**
LKR	**Lokris**	**0.71**	**317**	*e*Pn	**Pg**	**23 01 53.5**	**-0.6**
LKR				*e*Sn	**Sg**	**23 02 04.5**	**+1.0**
LKR	**Lokris**	**0.71**	**317**	P	**Pg**	**23 01 53.5**	**-0.6**
LKR				S	**Sg**	**23 02 04.1**	**+0.6**
LKR	**Lokris**	**0.71**	**317**	*e*PN	**Pg**	**23 01 53.5**	**-0.6**
LKR				*e*SN	**Sg**	**23 02 04.5**	**+1.0**
LKR	**Lokris**	**0.71**	**317**	P	**Pg**	**23 01 53.5**	**-0.6**
LKR				S	**Sg**	**23 02 04.1**	**+0.6**

ATAL	**Atalanti**	**0.73**	**321**	P	**Pg**	**23 01 53.9**	**-0.6**
ATAL				S	**Sg**	**23 02 04.9**	**+0.8**
ATAL	**Atalanti**	**0.73**	**321**	P	**Pg**	**23 01 53.9**	**-0.6**
ATAL				S	**Sg**	**23 02 04.9**	**+0.8**
GUR	**Goura**	**1.02**	**260**	*e*PN	**Pg**	**23 01 59.1**	**-0.9**
GUR	**Goura**	**1.02**	**260**	*e*Pn	**Pg**	**23 01 59.1**	**-0.9**
AOS	**Alonnisos**	**1.06**	**11**	P	**Pg**	**23 02 00.4**	**-0.3**
AOS	**Alonnisos**	**1.06**	**11**	P	**Pg**	**23 02 00.4**	**-0.3**
KALE	**Kalithea**	**1.19**	**283**	P	**Pn**	**23 02 01.9**	**-0.8**
KALE				S	**Sb**	**23 02 18.8**	**+0.7**
KALE	**Kalithea**	**1.19**	**283**	P	**Pn**	**23 02 01.9**	**-0.8**
KALE				S	**Sb**	**23 02 18.8**	**+0.7**
NEO	**Neokhori**	**1.22**	**346**	*e*Pn	**Pn**	**23 02 02.8**	**-0.3**
NEO	**Neokhori**	**1.22**	**346**	*e*PN	**Pn**	**23 02 02.8**	**-0.3**
NEO	**Neokhori**	**1.22**	**346**	*e*Pn	**Pn**	**23 02 02.8**	**-0.3**
VLX	**Vlachokerasia**	**1.24**	**233**	*e*PN	**Pn**	**23 02 02.6**	**-0.7**
VLX	**Vlachokerasia**	**1.24**	**233**	*e*Pn	**Pn**	**23 02 02.6**	**-0.7**
XOR	**Xorichti**	**1.28**	**345**	P	**Pn**	**23 02 03.8**	**-0.1**
XOR				S	**Sb**	**23 02 20.0**	**-0.7**
XOR	**Xorichti**	**1.28**	**345**	P	**Pn**	**23 02 03.8**	**-0.1**
XOR				S	**Sb**	**23 02 20.0**	**-0.7**
LAKA	**Lakka**	**1.30**	**276**	P	**Pn**	**23 02 03.3**	**-0.8**
LAKA				S	**Sb**	**23 02 21.5**	**+0.4**
LAKA	**Lakka**	**1.30**	**276**	P	**Pn**	**23 02 03.3**	**-0.8**
LAKA				S	**Sb**	**23 02 21.5**	**+0.4**
AGG	**Agios Georgios**	**1.35**	**312**	*e*Pn	**Pn**	**23 02 05.1**	**+0.3**
AGG	**Agios Georgios**	**1.35**	**312**	P	**Pn**	**23 02 04.5**	**-0.3**
AGG				S	**Sb**	**23 02 23.0**	**+0.4**
AGG	**Agios Georgios**	**1.35**	**312**	*e*PN	**Pn**	**23 02 05.1**	**+0.3**
AGG	**Agios Georgios**	**1.35**	**312**	P	**Pn**	**23 02 04.5**	**-0.3**
AGG	**Agios Georgios**	**1.35**	**312**	*e*Pn	**Pn**	**23 02 05.1**	**+0.3**
AGG				S	**Sb**	**23 02 23.0**	**+0.4**
EFP	**Efpalio**	**1.38**	**283**	*e*PN	**Pn**	**23 02 04.9**	**-0.4**
EFP	**Efpalio**	**1.38**	**283**	*e*Pn	**Pn**	**23 02 04.9**	**-0.4**
UPR	**University Cam**	**1.45**	**277**	*e*PN	**Pn**	**23 02 06.5**	**+0.2**
UPR	**University Cam**	**1.45**	**277**	*e*Pn	**Pn**	**23 02 06.5**	**+0.2**
VLI	**Veliai**	**1.51**	**201**	*e*Pn	**Pn**	**23 02 05.9**	**-1.1**
VLI	**Veliai**	**1.51**	**201**	*e*PN	**Pn**	**23 02 05.9**	**-1.1**
VLI	**Veliai**	**1.51**	**201**	*e*Pn	**Pn**	**23 02 05.9**	**-1.1**
EVR	**Evrytania**	**1.62**	**300**	*e*Pn	**Pn**	**23 02 09.0**	**+0.4**
EVR	**Evrytania**	**1.62**	**300**	*e*PN	**Pn**	**23 02 09.0**	**+0.4**
EVR	**Evrytania**	**1.62**	**300**	*e*Pn	**Pn**	**23 02 09.0**	**+0.4**
ITM	**Ithomi**	**1.64**	**235**	*e*Pn	**Pn**	**23 02 08.6**	**-0.3**
ITM	**Ithomi**	**1.64**	**235**	P	**Pn**	**23 02 08.6**	**-0.3**
ITM				S	**Sn**	**23 02 30.1**	**+0.2**
ITM	**Ithomi**	**1.64**	**235**	*e*PN	**Pn**	**23 02 08.6**	**-0.3**
ITM	**Ithomi**	**1.64**	**235**	P	**Pn**	**23 02 08.6**	**-0.3**
ITM				S	**Sn**	**23 02 30.1**	**+0.2**
RLS	**Riolos of Patr**	**1.70**	**268**	*e*Pn	**Pn**	**23 02 10.1**	**+0.4**
RLS	**Riolos of Patr**	**1.70**	**268**	*e*PN	**Pn**	**23 02 10.1**	**+0.4**
RLS	**Riolos of Patr**	**1.70**	**268**	*e*Pn	**Pn**	**23 02 10.1**	**+0.4**
PAIG	**Paliouri**	**1.80**	**2**	P	**Pn**	**23 02 10.7**	**-0.4**
PAIG	**Paliouri**	**1.80**	**2**	P	**Pn**	**23 02 10.7**	**-0.4**
APE	**Apeiranthos**	**1.85**	**124**	*e*Pn	**Pn**	**23 02 11.2**	**-0.6**
APE	**Apeiranthos**	**1.85**	**124**	P	**Pn**	**23 02 11.4**	**-0.4**
APE	**Apeiranthos**	**1.85**	**124**	*e*PN	**Pn**	**23 02 11.2**	**-0.6**
APE	**Apeiranthos**	**1.85**	**124**	P	**Pn**	**23 02 11.4**	**-0.4**
KYTH	**Kithira**	**1.90**	**194**	*e*Pb	**Pn**	**23 02 11.4**	**-1.0**
KYTH	**Kithira**	**1.90**	**194**	*e*PB	**Pn**	**23 02 11.4**	**-1.0**
THL	**Klokotos Trika**	**1.90**	**319**	P	**Pn**	**23 02 12.6**	**+0.1**
THL	**Klokotos Trika**	**1.90**	**319**	*e*PN	**Pn**	**23 02 12.8**	**+0.3**
THL	**Klokotos Trika**	**1.90**	**319**	P	**Pn**	**23 02 12.6**	**+0.1**
PYL	**PYLOS**	**1.93**	**231**	P	**Pn**	**23 02 14.0**	**+1.1**
PYL	**PYLOS**	**1.93**	**231**	*e*PN	**Pn**	**23 02 13.1**	**+0.2**
PYL	**PYLOS**	**1.93**	**231**	*e*Pn	**Pn**	**23 02 13.1**	**+0.2**
PYL	**PYLOS**	**1.93**	**231**	P	**Pn**	**23 02 14.0**	**+1.1**
CHOS	**Chios island**	**1.94**	**82**	P	**Pn**	**23 02 13.2**	**+0.3**
CHOS	**Chios island**	**1.94**	**82**	*e*PN	**Pn**	**23 02 13.1**	**+0.2**
CHOS	**Chios island**	**1.94**	**82**	*e*Pn	**Pn**	**23 02 13.1**	**+0.2**
LIA	**Limnos Island**	**2.15**	**34**	*e*Pn	**Pn**	**23 02 15.3**	**-0.6**
LIA	**Limnos Island**	**2.15**	**34**	P	**Pn**	**23 02 15.3**	**-0.6**
LIA	**Limnos Island**	**2.15**	**34**	*e*PN	**Pn**	**23 02 15.3**	**-0.6**
LIA	**Limnos Island**	**2.15**	**34**	P	**Pn**	**23 02 15.3**	**-0.6**
LIT	**Litokhoron**	**2.16**	**336**	*e*Pn	**Pn**	**23 02 15.7**	**-0.3**
LIT	**Litokhoron**	**2.16**	**336**	P	**Pn**	**23 02 15.9**	**-0.1**
LIT	**Litokhoron**	**2.16**	**336**	*e*PN	**Pn**	**23 02 15.7**	**-0.3**
LIT	**Litokhoron**	**2.16**	**336**	P	**Pn**	**23 02 15.9**	**-0.1**
PLG	**Polygyros**	**2.25**	**357**	*e*Pn	**Pn**	**23 02 16.9**	**-0.3**
PLG	**Polygyros**	**2.25**	**357**	P	**Pn**	**23 02 17.0**	**-0.2**
PLG	**Polygyros**	**2.25**	**357**	*e*PN	**Pn**	**23 02 16.9**	**-0.3**
PLG	**Polygyros**	**2.25**	**357**	P	**Pn**	**23 02 17.0**	**-0.2**
PRK	**Paraskevi**	**2.36**	**61**	*e*Pb	**Pn**	**23 02 19.3**	**+0.5**
PRK	**Paraskevi**	**2.36**	**61**	*e*PB	**Pn**	**23 02 19.3**	**+0.5**
VLS	**Valsamata**	**2.39**	**272**	*e*Pb	**Pn**	**23 02 20.1**	**+1.0**
VLS	**Valsamata**	**2.39**	**272**	P	**Pn**	**23 02 20.3**	**+1.2**
VLS	**Valsamata**	**2.39**	**272**	*e*PB	**Pn**	**23 02 20.1**	**+1.0**
VLS	**Valsamata**	**2.39**	**272**	P	**Pn**	**23 02 20.3**	**+1.2**
LKD2	**Lefkada island**	**2.42**	**287**	P	**Pn**	**23 02 21.5**	**+2.0**
LKD2	**Lefkada island**	**2.42**	**287**	P	**Pn**	**23 02 21.5**	**+2.0**
SMG	**Samos**	**2.58**	**98**	*e*Pn	**Pn**	**23 02 21.9**	**+0.1**
SMG	**Samos**	**2.58**	**98**	*e*PN	**Pn**	**23 02 21.9**	**+0.1**
SMG	**Samos**	**2.58**	**98**	*e*Pn	**Pn**	**23 02 21.9**	**+0.1**
SOH	**Sokhos**	**2.70**	**356**	*e*Pn	**Pn**	**23 02 23.6**	**+0.2**
SOH	**Sokhos**	**2.70**	**356**	P	**Pn**	**23 02 23.4**	**0.0**
SOH	**Sokhos**	**2.70**	**356**	*e*PN	**Pn**	**23 02 23.6**	**+0.2**
SOH	**Sokhos**	**2.70**	**356**	P	**Pn**	**23 02 23.4**	**0.0**
KARN	**Karanos**	**2.73**	**175**	P	**Pn**	**23 02 24.5**	**+0.6**
KARN	**Karanos**	**2.73**	**175**	P	**Pn**	**23 02 24.5**	**+0.6**
VAM	**Vamos**	**2.75**	**170**	P	**Pn**	**23 02 26.7**	**+2.5**
VAM	**Vamos**	**2.75**	**170**	P	**Pn**	**23 02 26.7**	**+2.5**
KAVA	**Kavala**	**2.95**	**13**	P	**Pn**	**23 02 26.4**	**-0.5**
KAVA	**Kavala**	**2.95**	**13**	P	**Pn**	**23 02 26.4**	**-0.5**
SRS	**Serrai**	**2.99**	**360**	P	**Pn**	**23 02 27.2**	**-0.2**
SRS	**Serrai**	**2.99**	**360**	P	**Pn**	**23 02 27.2**	**-0.2**
FNA	**Florina**	**3.17**	**328**	P	**Pn**	**23 02 31.4**	**+1.5**
FNA	**Florina**	**3.17**	**328**	P	**Pn**	**23 02 31.4**	**+1.5**
NVR	**Nevrokopi**	**3.23**	**3**	P	**Pn**	**23 02 31.3**	**+0.6**
NVR	**Nevrokopi**	**3.23**	**3**	P	**Pn**	**23 02 31.3**	**+0.6**
KEK	**Kerkira**	**3.37**	**299**	P	**Pn**	**23 02 33.2**	**+0.5**
KEK	**Kerkira**	**3.37**	**299**	P	**Pn**	**23 02 33.2**	**+0.5**
KRUS	**Krusevo**	**3.72**	**331**	*e*Pn	**Pn**	**23 02 38.4**	**+0.9**
TIP	**Timpagrande** 14nm,0.9s	**5.47**	**283**	*e*Pn	**Pn**	**23 03 01.9**	**+0.4**
TIP	**Timpagrande** 14nm,0.9s	**5.47**	**283**	*e*Pn	**Pn**	**23 03 01.9**	**+0.4**
STON	**Ston**	**6.54**	**318**	*e*Pn	**Pn**	**23 03 15.7**	**-0.5**
STON				Sn	**Sn**	**23 04 28.4**	**-2.2**
STON	**Ston**	**6.54**	**318**	*e*Pn	**Pn**	**23 03 15.7**	**-0.5**
STON				Sn	**Sn**	**23 04 28.4**	**-2.3**
NVLJ	**Novalja**	**9.19**	**317**	*e*Pn	**Pn**	**23 03 51.3**	**-1.3**
NVLJ				Sn	**Sn**	**23 05 30.7**	**-5.2**
NVLJ	**Novalja**	**9.19**	**317**	*e*Pn	**Pn**	**23 03 51.3**	**-1.3**

*BJI **06** 23:11:48.9, 3.°35S×100.°27E, h32km, mB5.1/2, mb4.8/6*
*IDC **06** 23:11:51.4±1.0, 2.°65S×100.°02E, h0km, mb4.2/12, mb1 4.3/14, mb1mx4.1/25, mbtmp4.2/14, ML3.6/2, MS3.4/3, Ms1 3.5/3, ms1mx2.9/25, Error ellipse: s-maj=35.1km s-min=14.4km az=53.0*
*ISCJB **06** 23:11:53.0±1.0, 2.°74S±0.°05×99.°91E±0.°06, h26km±6km, mb4.4/23, MS3.5/2, Error ellipse: s-maj=12.4km s-min=6.0km az=141.1*
*DJA **06** 23:11:54, 2.°69S×99.°99E, h10km, MLv4.5/11*
*NEIC **06** 23:11:55.7±3.4, 2.°65S×100.°07E, h29km±22km, mb4.6/11, Error ellipse: s-maj=19.9km s-min=5.5km az=49.0*

ISC 06 23:11:53.9±1.0,**2.°73S**±0.°05×**99.°92E**±0.°06,**h16**km±6km, **n51**, σ1**°07**/48, **mb4.4**/23, **MS3.5**/2, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.10**	**113**	P	**Pg**	**23 11 56.7**	**-0.5**
SISI	**Saibi**	**1.62**	**329**	P	**Pn**	**23 12 21.6**	**-0.1**
PDSI	**Padang**	**1.88**	**17**	P	**Pn**	**23 12 24.6**	**-0.7**
PDSI				S	**Sn**	**23 12 50.2**	**+1.5**
PPI	**Padang Panjang**	**2.30**	**12**	P	**Pn**	**23 12 31.2**	**+0.1**
SDSI	**Sungai Dareh**	**2.33**	**40**	P	**Pn**	**23 12 31.9**	**+0.3**
KSI	**Kapahiang**	**2.82**	**109**	P	**Pn**	**23 12 40.0**	**+1.7**
BKNI	**Bangkinang**	**3.23**	**20**	P	**Pn**	**23 12 51.1**	**+7.2**
MNAI	**Manna**	**3.44**	**118**	P	**Pn**	**23 12 49.1**	**+2.3**
MNSI	**Mandailing Nat**	**3.51**	**354**	P	**Pn**	**23 12 48.4**	**+0.6**
MDSI	**Maura Dua**	**4.60**	**112**	P	**Pn**	**23 13 04.2**	**+1.5**
MDSI				S	**Sn**	**23 13 55.3**	**-0.5**
GSI	**Gunungsitoli**	**4.64**	**330**	P	**Pn**	**23 13 04.6**	**+1.3**
LWLI	**Liwa**	**4.72**	**119**	P	**Pn**	**23 13 06.2**	**+1.9**
PSI	**Prapat** 0.4nm,0.3s,baz=286,slow=7.4,SNR=3.1	**5.58**	**350**	Pn	**Pn**	**23 13 15.0**	**-1.2**
PSI				LR	LR	23 15 40.7	
	comp=Z,255nm,20.4s,baz=81,slow=42						
MYKOM	**Kota Tinggi**	**5.96**	**41**	P	**Pn**	**23 13 22.0**	**+0.5**
	0.2nm30nm,0.6s						
IPM	**Ipoh**	**7.24**	**9**	P	**Pn**	**23 13 39.2**	**+0.1**
KULM	**Kulim** 7.6nm,0.7s	**8.00**	**5**	*e*Pn	**Pn**	**23 13 48.8**	**-0.6**
KAPI	**Kappang** 0.6nm,0.3s,baz=294,slow=7.9,SNR=4.8	**19.91**	**97**	P	**Pn**	**23 16 24.2**	**-2.5**
CMAR	**Chiang Mai Arr** 3.3nm,0.6s,mb3.9,baz=184,slow=10,SNR=17	**21.07**	**357**	P	**P**	**23 16 35.8**	**-1.7**
CMAR				LR	LR	23 24 55.3	
	comp=Z,78nm,19.1s,MS3.1,baz=180,slow=37						
LSA	**Lhasa** 2.2nm,0.4s,mb4.4	**33.32**	**346**	*e*P	**P**	**23 18 32.3**	**+1.3**
XAN	**Xi'an**	**37.54**	**12**	P	**P**	**23 19 03.9**	**-3.4**
WRA	**Warramunga Arr** 2.1nm,0.4s,mb4.2,baz=304,slow=9.1,SNR=11	**37.70**	**120**	P	**P**	**23 19 07.7**	**-1.2**
WRAB	**Tennant Creek** 2.6nm,0.6s,mb4.1	**37.71**	**120**	*e*P	**P**	**23 19 08.1**	**-0.9**
LZH	**Lanzhou**	**38.78**	**5**	*e*P	**P**	**23 19 21.6**	**+3.9**
ASAR	**Alice Springs** 1.2nm,0.4s,mb4.0,baz=302,slow=7.7,SNR=20	**38.90**	**125**	P	**P**	**23 19 18.6**	**-0.3**
ASAR				PcP	PcP	23 21 29.9	+0.2
	0.5nm,0.8s,baz=318,slow=2.5,SNR=4.7						
KSRS	**Korea Array** 2.0nm,0.7s,mb4.3,baz=220,slow=8.4,SNR=9.0	**47.68**	**30**	P	**P**	**23 20 28.6**	**-1.1**
CTAO	**Charters Tower** 6.3nm,0.8s,mb4.7	**48.37**	**115**	*e*P	**P**	**23 20 34.2**	**-1.1**
STKA	**Stephens

LZH				LR	LR		
	comp=Z,940nm,8.3s						
ENH	**Enshi**	**4.47**	**112**	*e*Pn	**Pn**	**23 55 58.9**	**+3.3**
ENH				*e*Pg	**Pg**	**23 56 11.9**	**-0.5**
ENH				*e*Sg	**Sg**	**23 57 10.1**	**-0.2**
GYA	**Guiyang**	**5.82**	**162**	Pg	**Pn**	**23 56 20.7**	**+6.6**
GYA				Sg	**Sn**	**23 57 21.3**	**-0.2**
GYA				smax			
	comp=N,120nm,0.8s						
GYA				smax			
	comp=E,140nm,0.8s						
KMI	**Kunming**	**7.10**	**194**	P	**Sg**	**23 58 42.4**	**+7.8**
KMI				pmax	pmax		
	comp=Z,13nm,1.7s						
GTA	**Gaotai**	**8.36**	**333**	*e*P	**Pn**	**23 56 55.0**	**+6.1**
GTA				pP		23 56 59.1	
GTA				sP		23 57 02.1	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
WHN	**Wuhan**	**8.40**	**98**	P	**Pn**	**23 56 49.9**	**+0.4**
WHN				S	**Sn**	**23 58 24.5**	**-0.5**
WHN				LR	LR		
	comp=N,730nm,5.5s						
WHN				LR	LR		
	comp=E,800nm,3.1s						
WHN				LR	LR		
	comp=Z,340nm,12.4s						
CMAR	**Chiang Mai Arr**	**14.48**	**202**	Pn	**Pn**	**23 58 12.3**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=9.2,slow=12,SNR=2.9						
SONM	**Songino Array**	**15.83**	**4**	Pn	**Pn**	**23 58 30.8**	**+0.1**
	baz=186,slow=12,SNR=5.8						
ULN	**Ulaanbaatar**	**15.91**	**6**	*e*P	**Pn**	**23 58 33.5**	**+1.8**
	comp=Z,8.2nm,1.4s						
KSRS	**Korea Array**	**19.82**	**68**	P	**Pn**	**23 59 22.1**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=254,slow=9.9,SNR=7.0						
MKAR	**Makanchi Array**	**22.62**	**317**	P	**P**	**23 59 49.0**	**+0.2**
	comp=Z,1.4nm,0.6s,mb3.7,baz=95,slow=14,SNR=17						
MKAR	**Makanchi Array**	**22.62**	**317**	P	**P**	**23 59 49.0**	**+0.2**
UCH	**Uchtor**	**26.00**	**302**	*e*P	**P**	**00 00 21.0**	**0.0**
	comp=Z,2.6nm,1.0s,mb3.8						
ZALV	**Zalesovo Beam**	**26.11**	**333**	P	**P**	**00 00 22.1**	**+0.2**
	comp=Z,4.5nm,0.6s,mb4.3,baz=130,slow=10.0,SNR=25						
AML	**Almayashu**	**26.57**	**301**	*e*P	**P**	**00 00 27.4**	**+1.2**
	comp=Z,1.0nm,0.6s,mb3.7						
KURK	**Kurchatov**	**26.81**	**322**	P	**P**	**00 00 28.5**	**+0.3**
	comp=Z,1.4nm,0.7s,mb3.8,baz=130,slow=8.7,SNR=14						
KURK	**Kurchatov**	**26.81**	**322**	P	**P**	**00 00 28.5**	**+0.3**
BRVK	**Borovoye**	**32.45**	**321**	*e*P	**P**	**00 01 16.6**	**-1.6**
	comp=Z,1.8nm,0.7s,mb4.1						
AKTK	**Aktyubinsk**	**38.88**	**312**	P	**P**	**00 02 13.7**	**+0.2**
AKTO	**Aktyubinsk**	**38.88**	**312**	P	**P**	**00 02 13.7**	**+0.2**
	comp=Z,0.7nm,0.5s,mb3.6,baz=107,slow=14,SNR=2.9						
ARU	**Arti**	**40.01**	**321**	*e*P	**P**	**00 02 22.6**	**-0.2**
	comp=Z,1.8nm,0.4s,mb4.0						
JOF	**Joensuu**	**54.51**	**327**	*e*p	**P**	**00 04 14.3**	**-1.4**
	comp=Z,0.4nm,0.3s,mb3.9						
JOF	**Joensuu**	**54.51**	**327**	*e*p	**P**	**00 04 14.3**	**-1.4**
	comp=Z,0.4nm,0.3s,mb3.9						
KEV	**Kevo**	**56.09**	**336**	*e*p	**P**	**00 04 25.9**	**-1.1**
	comp=Z,0.8nm,0.3s,mb4.2						
KEV	**Kevo**	**56.09**	**336**	*e*p	**P**	**00 04 25.9**	**-1.1**
	comp=Z,0.8nm,0.3s,mb4.2						
ARCES	**ARCESS Array B**	**56.62**	**336**	P	**P**	**00 04 30.3**	**-0.5**
	comp=Z,6.4nm,1.1s,mb4.6,baz=80,slow=7.8,SNR=11						
ARCES	**ARCESS Array B**	**56.62**	**336**	P	**P**	**00 04 30.3**	**-0.5**
BRTR	**Keskin Array B**	**56.72**	**299**	P	**P**	**00 04 31.5**	**-0.5**
	comp=Z,0.4nm,0.6s,mb3.6,baz=112,slow=9.4,SNR=4.0						
FINES	**FINESS Array B**	**57.08**	**326**	P	**P**	**00 04 33.4**	**-0.8**
	comp=Z,2.8nm,0.9s,mb4.3,baz=111,slow=10,SNR=6.2						
AKASG	**Malin Array Be**	**57.12**	**313**	P	**P**	**00 04 33.6**	**-1.0**
	comp=Z,1.2nm,0.3s,mb4.3,baz=68,slow=7.3,SNR=4.3						
WRA	**Warramunga Arr**	**58.98**	**147**	P	**P**	**00 04 48.7**	**+0.8**
	comp=Z,2.4nm,0.7s,mb4.4,baz=340,slow=7.4,SNR=6.4						
WRA	**Warramunga Arr**	**58.98**	**147**	P	**P**	**00 04 48.7**	**+0.8**
ASAR	**Alice Springs**	**62.03**	**150**	P	**P**	**00 05 09.7**	**+0.9**
	comp=Z,1.3nm,0.8s,mb4.2,baz=338,slow=6.9,SNR=8.3						
NOA	**NORSAR Array B**	**64.14**	**327**	P	**P**	**00 05 21.5**	**-0.9**
	comp=Z,1.3nm,0.9s,mb4.2,baz=70,slow=6.5,SNR=3.7						
GERES	**GERESS Array B**	**67.25**	**314**	P	**P**	**00 05 42.4**	**-0.3**
	comp=Z,0.6nm,0.6s,mb4.0,baz=71,slow=4.8,SNR=7.1						
CDF	**Champ du Feu**	**71.30**	**316**	*e*P	**P**	**00 06 07.2**	**-0.6**
LPG	**La Plagne**	**72.98**	**313** ⇑	*i*P	**P**	**00 06 18.3**	**+0.4**
	comp=Z,9.5nm,0.5s,mb4.9						
LPG	**La Plagne**	**72.98**	**313** ⇑	*i*P	**P**	**00 06 18.3**	**+0.4**
	comp=Z,4.8nm,0.5s,mb4.9						
LPL	**La Plagne**	**72.98**	**313** ⇑	*i*P	**P**	**00 06 18.2**	**+0.3**
	comp=Z,9.6nm,0.4s,mb4.9						
LPL	**La Plagne**	**72.98**	**313** ⇑	*i*P	**P**	**00 06 18.2**	**+0.3**
	comp=Z,4.8nm,0.4s,mb5.0						
YKA	**Yellowknife Ar**	**80.66**	**17**	P	**P**	**00 07 01.2**	**+0.3**
	comp=Z,0.7nm,0.7s,mb3.8,baz=328,slow=5.4,SNR=4.1						

*IDC **06** 23:59:59.1±0.7,31°.23N×103°.71E,h0km,mb4.2/13, mb1 4.3/15,mb1mx4.0/28,mbtmp4.2/15,ML4.0/2,MS3.4/4, Ms1 3.4/4,ms1mx2.8/31,Error ellipse: s-maj=23.5km s-min=14.4km az=48.0*

*NEIC **07** 00:00:00.5±0.4,31°.23N×103°.70E,h10km,mb4.5/26,Error ellipse: s-maj=8.5km s-min=6.3km az=155.0*

*BJI **07** 00:00:00.4,31°.33N×103°.75E,h15km,mB4.5/14,mb4.5/26, ML4.1/12,Ms4.1/25,Ms7 3.8/24*

*MOS **07** 00:00:01.9±1.0,31°.18N×103°.70E,h33km,mb4.5/12,Error ellipse: s-maj=11.2km s-min=7.5km az=98.4*

*ISCJB **07** 00:00:01.3±0.7,31°.18N±0°.04×103°.71E±0°.04,h30km±6km, mb4.3/34,MS3.5/7,Error ellipse: s-maj=6.6km s-min=5.4km az=8.1*

ISC 07 00:00:02.0±0.6,31°.21N±0°.03×103°.76E±0°.03,h20km±4km, n96,σ1°.28/116,mb4.3/34,MS3.5/7,3C-1D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.30**	**181** ⇑	*i*Pg	**Pg**	**00 00 07.7**	**-1.0**
CD2				Sg	**Sg**	**00 00 14.8**	**+1.6**
CD2				smax			
	comp=N,18μm,0.8s						
CD2				smax			
	comp=E,25μm,0.7s						
LZH	**Lanzhou**	**4.86**	**1**	*e*Pn	**Pn**	**00 01 19.5**	**+5.5**
LZH				Pg	**Pg**	**00 01 33.9**	**-1.2**
LZH				Sn	**Sn**	**00 02 19.0**	**+9.3**
LZH				Sg	**Sg**	**00 02 37.1**	**-1.0**
LZH				smax			
	comp=N,240nm,0.9s						
LZH				smax			
	comp=E,460nm,1.0s						
LZH				LR	LR		
	comp=N,3μm,5.7s						
LZH				LR	LR		
	comp=Z,4μm,5.9s						
XAN	**Xi'an**	**5.19**	**56**	Pn	**Pn**	**00 01 19.8**	**+1.4**
XAN				Pg		00 01 33.9	
XAN				Sn	**Sn**	**00 02 19.8**	**+2.1**
XAN				Sg		00 02 42.9	
XAN				smax			
	comp=N,460nm,0.9s						
XAN				smax			
	comp=E,260nm,1.0s						
GYA	**Guiyang**	**5.38**	**151**	Pg	**Pn**	**00 01 25.9**	**+4.8**
GYA				Sg	**Sb**	**00 02 38.3**	**-1.0**
GYA				smax			
	comp=N,240nm,0.9s						
GYA				smax			
	comp=E,250nm,1.0s						
GYA				LR	LR		
	comp=N,780nm,2.8s						
GYA				LR	LR		
	comp=E,990nm,2.9s						
GYA				LR	LR		
	comp=Z,490nm,1.9s						
KMI	**Kunming**	**6.13**	**189**	Pn	**Pn**	**00 01 31.6**	**+0.1**
KMI				P*	**Pb**	**00 01 45.3**	**-2.8**
GTA	**Gaotai**	**8.79**	**340**	*e*P	**Pn**	**00 02 09.3**	**+1.4**
GTA				pP		00 02 13.5	
GTA				sP		00 02 16.4	
GTA				S	**Sn**	**00 03 48.3**	**+1.9**
GTA				sS		00 03 56.1	
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,87nm,6.0s						
GTA				LR	LR		
	comp=N,220nm,14.1s						
GTA				LR	LR		
	comp=E,380nm,14.4s						
GTA				LR	LR		
	comp=Z,240nm,8.1s						
WHN	**Wuhan**	**9.12**	**91**	P	**Pn**	**00 02 22.2**	**+10**
WHN				S	**Sn**	**00 03 52.4**	**-2.2**
WHN				LR	LR		
	comp=N,1μm,7.0s						
WHN				LR	LR		
	comp=E,1μm,9.4s						
WHN				LR	LR		
	comp=Z,1μm,11.7s						
WHN	**Wuhan**	**9.12**	**91**	P	**Pn**	**00 02 22.2**	**+10**
WHN				S	**Sn**	**00 03 52.4**	**-2.2**
WHN				LR	LR		
	comp=N,1μm,7.0s						
WHN				LR	LR		
	comp=E,1μm,9.4s						
WHN				LR	LR		
	comp=Z,1μm,11.7s						
HHC	**Hu-ho-hao-te**	**11.50**	**31**	*e*P	**Pn**	**00 02 44.1**	**-0.9**
HHC				pP		00 02 47.3	
HHC				sP		00 02 50.4	
HHC				PP		00 02 52.6	
HHC				S	**Sn**	**00 04 50.7**	**-2.1**
HHC				sS		00 04 53.1	
HHC				SS		00 05 02.5	
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,67nm,4.8s						
HHC				LR	LR		
	comp=N,680nm,9.2s						
HHC				LR	LR		
	comp=E,450nm,8.7s						
HHC				LR	LR		
	comp=Z,410nm,12.9s						
HHC	**Hu-ho-hao-te**	**11.50**	**31**	*e*P	**Pn**	**00 02 44.1**	**-0.9**
HHC				pP		00 02 47.3	
HHC				sP		00 02 50.4	
HHC				PP		00 02 52.6	
HHC				S	**Sn**	**00 04 50.7**	**-2.1**
HHC				SS		00 05 02.5	
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,67nm,4.8s						
HHC				LR	LR		
	comp=N,680nm,9.2s						
HHC				LR	LR		
	comp=E,450nm,8.7s						
HHC				LR	LR		
	comp=Z,410nm,12.9s						
NJ2	**Nanjing**	**12.89**	**82**	*e*P	**Pn**	**00 03 06.1**	**+2.0**
NJ2				pP		00 03 09.1	
NJ2				sP		00 03 12.7	
NJ2				PP		00 03 16.5	
NJ2				S	**Sn**	**00 05 25.0**	**-1.9**
NJ2				sS		00 05 31.0	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,110nm,5.0s						
NJ2				LR	LR		
	comp=N,310nm,8.5s						
NJ2				LR	LR		
	comp=E,630nm,14.8s						
NJ2				LR	LR		
	comp=Z,690nm,13.3s						
NJ2	**Nanjing**	**12.89**	**82**	*e*P	**Pn**	**00 03 06.1**	**+2.0**
NJ2				pP		00 03 09.1	
NJ2				sP		00 03 12.7	
NJ2				PP		00 03 16.5	
NJ2				S	**Sn**	**00 05 25.0**	**-1.9**
NJ2				sS		00 05 31.0	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,110nm,5.0s						
NJ2				LR	LR		
	comp=N,310nm,8.5s						
NJ2				LR	LR		
	comp=E,630nm,14.8s						
NJ2				LR	LR		
	comp=Z,690nm,13.3s						
CHTO	**Chiang Mai**	**13.09**	**201**	*e*P	**Pn**	**00 03 15.1**	**+8.2**
QIZ	**Qiongzhong**	**13.32**	**154**	P	**Pn**	**00 03 16.1**	**+6.2**
QIZ				S	**Sn**	**00 05 50.5**	**+13**
QIZ				pmax	pmax		
	comp=Z,20nm,1.5s						
QIZ				LR	LR		
	comp=Z,290nm,9.3s						
BJI	**Beijing**	**13.39**	**45**	P	**Pn**	**00 03 07.8**	**-3.0**
BJI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BJI				LR	LR		
	comp=N,190nm,9.2s						
BJI				LR	LR		
	comp=E,150nm,9.4s						
BJI				LR	LR		
	comp=Z,130nm,17.4s						
CMAR	**Chiang Mai Arr**	**13.43**	**200**	Pn	**Pn**	**00 03 12.8**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=14,slow=12,SNR=5.8						
TAPN	**Taplejung**	**14.53**	**259**	*e*P	**Pn**	**00 03 25.8**	**-0.6**
	comp=Z,7.9nm,0.7s						
ODAN	**Odare**	**14.96**	**257**	*e*P	**Pn**	**00 03 29.6**	**-2.8**
GUN	**Gumba**	**15.90**	**263**	*e*P	**Pn**	**00 03 45.6**	**+0.9**
	comp=Z,32nm,0.8s						
PKI	**Pulchoki**	**16.40**	**262**	*e*P	**Pn**	**00 03 48.8**	**-2.3**
KKN	**Kakani**	**16.45**	**263**	*e*P	**Pn**	**00 03 50.7**	**-1.0**
	comp=Z,31nm,0.7s						
KKN	**Kakani**	**16.45**	**263**	*e*P	**Pn**	**00 03 50.7**	**-1.0**
KKN				pmax	pmax		
	comp=Z,31nm,0.7s						
DMN	**Daman**	**16.65**	**262**	*e*P	**Pn**	**00 03 52.0**	**-2.2**
	comp=Z,36nm,0.9s						
SONM	**Songino Array**	**16.72**	**6**	Pn	**Pn**	**00 03 55.8**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=191,slow=13,SNR=6.1						
SONM				LR	LR	00 11 10.8	
	comp=Z,183nm,21.6s,baz=345,slow=40						
ULN	**Ulaanbaatar**	**16.82**	**8**	*e*P	**Pn**	**00 03 59.8**	**+3.6**
ULN				pmax	pmax		
	comp=Z,22nm,1.4s						
ULN	**Ulaanbaatar**	**16.82**	**8**	*e*Pn	**Pn**	**00 03 59.8**	**+3.6**
	comp=Z,22nm,1.4s						
WMQ	**Urumqi**	**17.87**	**319**	P	**Pn**	**00 04 09.0**	**-0.3**
WMQ				sP	sP	00 04 16.0	-2.1
WMQ				PP		00 04 23.0	
WMQ				S	**Sn**	**00 07 25.0**	**-3.0**
WMQ				SS		00 07 51.0	
WMQ				pmax	pmax		
	comp=Z,18nm,0.8s						
WMQ				LR	LR		
	comp=N,84nm,6.0s						
WMQ				LR	LR		
	comp=E,55nm,6.0s						
WMQ				LR	LR		
	comp=Z,70nm,6.0s						
TLY	**Talaya**	**20.45**	**360**	*e*P	**P**	**00 04 40.2**	**+2.1**
TLY				pmax	pmax		
	comp=Z,8.0nm,1.2s						
TLY				MLR	MLR		
	comp=Z,101nm,12.0s,MS3.4						
TLY	**Talaya**	**20.45**	**360**	*e*P	**P**	**00 04 36.1**	**-1.9**
	comp=Z,4.3nm,0.8s						
MOY	**Mondy**	**20.54**	**355**	*e*P	**P**	**00 04 40.9**	**+1.9**
KSRS	**Korea Array**	**20.87**	**66**	P	**P**	**00 04 43.9**	**+1.1**
	comp=Z,11nm,0.7s,baz=260,slow=10,SNR=54						
KSRS				LR	LR	00 13 17.4	
	comp=Z,75nm,20.5s,MS3.0,baz=250,slow=38						
KSRS	**Korea Array**	**20.87**	**66**	P	**P**	**00 04 43.9**	**+1.1**
KSRS				pmax	pmax		
	comp=Z,11nm,0.7s						
KSRS				MLR	MLR		
	comp=Z,75nm,20.5s,MS3.0						
CN2	**Changchun**	**21.23**	**48**	*e*P	**P**	**00 04 48.4**	**+1.8**
CN2				*e*pP		00 04 52.3	
CN2				*e*S	**S**	**00 08 36.0**	**-5.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2						
CN2				pmax	pmax		
	comp=Z,40nm,0.8s,mb4.8						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,12.0s,MS3.9						
CN2				LR	LR		
	comp=E,200nm,12.0s,MS3.9						
CN2				LR	LR		
	comp=Z,200nm,14.0s,MS3.7						
CN2	**Changchun**	**21.23**	**48**	*e*P	**P**	**00 04 48.4**	**+1.8**
CN2				*e*pP		00 04 52.3	
CN2				*e*S	**S**	**00 08 36.0**	**-5.6**
CN2				pmax	pmax		
	comp=Z,40nm,0.8s,mb4.8						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,12.0s,MS3.9						
CN2				LR	LR		
	comp=E,200nm,12.0s,MS3.9						
CN2				LR	LR		
	comp=Z,200nm,14.0s,MS3.7						
MK31	**Makanchi Array**	**22.71**	**319**	*e*P	**P**	**00 05 02.6**	**+0.3**
MKAR	**Makanchi Array**	**22.71**	**319**	P	**P**	**00 05 02.2**	**-0.1**
	comp=Z,12nm,0.9s,mb4.3,baz=113,slow=12,SNR=71						
MDJ	**Mudanjiang**	**24.26**	**49**	P	**P**	**00 05 20.0**	**+2.4**
MDJ				pP		00 05 22.7	
MDJ				sP	sP	00 05 24.2	-1.9
MDJ				S	**S**	**00 09 33.4**	**-1.9**
MDJ				sS	sS	00 09 43.8	-1.4
MDJ				ScP	ScP	00 12 38.5	+3.6
MDJ				PcS	PcS	00 12 39.6	+2.5
MDJ				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.3						
MDJ				pmax	pmax		
	comp=Z,52nm,4.9s						
MDJ				LR	LR		
	comp=N,48nm,10.5s,MS3.6						
MDJ				LR	LR		
	comp=E,96nm,12.6s,MS3.6						
MDJ				LR	LR		
	comp=Z,110nm,12.6s,MS3.5						
MDJ	**Mudanjiang**	**24.26**	**49**	*e*P	**P**	**00 05 20.1**	**+2.5**
	comp=Z,45nm,1.6s,mb4.7						
TKM2	**Tokmak 2**	**25.21**	**306**	*e*P	**P**	**00 05 27.6**	**+1.3**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.9						
TKM2	**Tokmak 2**	**25.21**	**306**	*e*P	**P**	**00 05 27.6**	**+1.3**
	comp=Z,2.7nm,0.7s,mb3.9						
UCH	**Uchtor**	**25.77**	**303**	*e*P	**P**	**00 05 32.9**	**+1.5**
	comp=Z,16nm,1.2s,mb4.4						
AAK	**Ala-Archa**	**25.90**	**304**	P	**P**	**00 05 33.9**	**+1.3**
	comp=Z,1.9nm,0.4s,mb4.0,baz=198,slow=6.1,SNR=6.7						
AAK	**Ala-Archa**	**25.90**	**304**	*e*P	**P**	**00 05 34.1**	**+1.5**
AAK				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.3						
AAK	**Ala-Archa**	**25.90**	**304**	*e*P	**P**	**00 05 34.0**	**+1.5**
	comp=Z,10nm,1.0s,mb4.3						
AML	**Almayashu**	**26.34**	**303**	*e*P	**P**	**00 05 38.1**	**+1.5**
	comp=Z,11nm,1.4s,mb4.2						
EKS2	**Erkin-Say**	**26.42**	**304**	*e*P	**P**	**00 05 37.4**	**+0.2**
	comp=Z,4.2nm,0.9s,mb4.0						
ZAA0	**Zalesovo Array**	**26.50**	**335**	*e*P	**P**	**00 05 36.4**	**-1.5**
ZALV	**Zalesovo Beam**	**26.50**	**335**	P	**P**	**00 05 36.7**	**-1.1**
	comp=Z,2.1nm,0.6s,mb3.8,baz=139,slow=9.3,SNR=12						
ZALV	**Zalesovo Beam**	**26.50**	**335**	P	**P**	**00 05 36.7**	**-1.2**
KURK	**Kurchatov**	**26.99**	**323**	P	**P**	**00 05 41.8**	**-0.5**
	comp=Z,5.1nm,0.8s,mb4.1,baz=127,slow=9.7,SNR=27						
KURK				LR	LR	00 17 31.3	
	comp=Z,46nm,20.1s,MS3.0,baz=95,slow=39						
KURK	**Kurchatov**	**26.99**	**323**	*e*P	**P**	**00 05 42.1**	**-0.2**
KURK				pmax	pmax		
	comp=Z,25nm,1.6s,mb4.5						
KURK	**Kurchatov**	**26.99**	**323**	*e*P	**P**	**00 05 42.1**	**-0.2**
	comp=Z,25nm,1.6s,mb4.5						
KLR	**Kul'dur**	**27.70**	**41**	*e*P	**P**	**00 05 47.8**	**-0.9**
MJAR	**Matsushiro Arr**	**28.99**	**70**	P	**P**	**00 06 01.4**	**+1.0**
	comp=Z,1.4nm,0.5s,mb3.9,baz=276,slow=8.1,SNR=4.2						
BVAR	**Borovoye Array**	**32.53**	**322**	P	**P**	**00 06 32.5**	**+1.2**
	comp=Z,0.9nm,0.6s,mb3.9,baz=118,slow=8.2,SNR=4.1						
BVAR				PcP	PcP	00 09 17.2	-0.5
	comp=Z,0.5nm,0.6s,baz=90,slow=2.9,SNR=3.6						
BRVK	**Borovoye**	**32.60**	**322**	*e*P	**P**	**00 06 33.2**	**+1.2**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
BRVK	**Borovoye**	**32.60**	**322**	*e*P	**P**	**00 06 33.2**	**+1.2**
	comp=Z,2.1nm,0.7s,mb4.2						
CBIJ	**Chichi jima**	**33.69**	**87**	LR	LR	00 21 13.4	
	comp=Z,161nm,18.4s,MS3.8,baz=297,slow=38						
ARU	**Arti**	**40.17**	**322**	*d*P	**P**	**00 07 36.3**	**-0.2**
ARU				*e*		00 09 07.8	
ARU				S	**S**	**00 13 43.3**	**+1.3**
ARU				pmax	pmax		
	comp=Z,15nm,2.5s,mb4.3						
ARU	**Arti**	**40.17**	**322**	*e*P	**P**	**00 07 35.9**	**-0.6**
	comp=Z,6.9nm,1.0s,mb4.3						
TIXI	**Tiksi**	**42.70**	**11**	*e*P	**P**	**00 07 55.8**	**-1.3**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
TIXI	**Tiksi**	**42.70**	**11**	*e*P	**P**	**00 07 55.8**	**-1.3**
	comp=Z,3.6nm,0.8s,mb4.2						
SEY	**Seymchan**	**44.14**	**30**	*ce*P	**P**	**00 08 11.6**	**+2.8**
PETK	**Petropavlovsk-**	**44.32**	**44**	P	**P**	**00 08 11.3**	**+0.9**
	comp=Z,1.5nm,0.6s,mb3.9,baz=241,slow=5.9,SNR=3.6						
PETK	**Petropavlovsk-**	**44.32**	**44**	P	**P**	**00 08 11.3**	**+0.9**
BILL	**Bilibino**	**51.20**	**25** ⇑	*e*P	**P**	**00 09 03.6**	**0.0**
BILL				*e*		00 09 11.6	
BILL				*e*S	**S**	**00 16 33.6**	**+13**
BILL				SSS		00 21 36.0	
BILL				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
BILL				MLR	MLR		
	comp=Z,100nm,16.0s,MS3.9						
BILL	**Bilibino**	**51.20**	**25**	*e*P	**P**	**00 09 03.3**	**-0.3**
	comp=Z,13nm,1.3s,mb4.7						
JOF	**Joensuu**	**54.78**	**328**	*e*p	**P**	**00 09 26.0**	**-4.0**
	comp=Z,0.3nm,0.3s,mb3.8						
JOF	**Joensuu**	**54.78**	**328**	*e*p	**P**	**00 09 26.0**	**-4.0**
	comp=Z,0.3nm,0.3s,mb3.8						
KEV	**Kevo**	**56.52**	**336**	*e*p	**P**	**00 09 41.6**	**-0.8**
	comp=Z,0.4nm,0.3s,mb3.9						
KEV	**Kevo**	**56.52**	**336**	*e*p	**P**	**00 09 41.6**	**-0.8**
	comp=Z,0.4nm,0.3s,mb3.9						
ARCES	**ARCESS Array B**	**57.04**	**336**	P	**P**	**00 09 45.5**	**-0.6**
	comp=Z,4.5nm,0.9s,mb4.5,baz=61,slow=8.5,SNR=3.6						
FINES	**FINESS Array B**	**57.31**	**326**	P	**P**	**00 09 47.3**	**-0.8**
	comp=Z,2.4nm,0.9s,mb4.2,baz=127,slow=11,SNR=4.8						
WRAB	**Tennant Creek**	**58.72**	**146**	*e*P	**P**	**00 09 58.9**	**+0.4**
WRAB				pmax	pmax		
	comp=Z,22nm,1.3s,mb5.0						
WRAB	**Tennant Creek**	**58.72**	**146**	*e*P	**P**	**00 09 58.9**	**+0.4**
	comp=Z,22nm,1.3s,mb5.0						
WRA	**Warramunga Arr**	**58.73**	**146**	P	**P**	**00 09 59.0**	**+0.5**
	comp=Z,3.5nm,0.4s,mb4.7,baz=337,slow=7.8,SNR=17						
ASAR	**Alice Springs**	**61.73**	**148**	P	**P**	**00 10 19.6**	**+0.5**
	comp=Z,1.6nm,0.7s,mb4.2,baz=338,slow=6.6,SNR=14						
COLD	**Coldfoot**	**67.49**	**24**	*e*P	**P**	**00 10 55.3**	**-0.8**
	comp=Z,3.6nm,0.7s,mb4.5						
BPAW	**Bear Paw Mtn.**	**68.64**	**27**	*e*P	**P**	**00 11 02.5**	**-0.8**
	comp=Z,4.4nm,0.8s,mb4.4						
PPLA	**Purkeypile**	**68.71**	**28**	*e*P	**P**	**00 11 04.1**	**+0.3**
	comp=Z,5.9nm,0.5s,mb4.8						
COLA

*IDC **07** 00:07:24.1±1.0, 1°.65N×99°.02E, h0km, mb4.0/9, mb1 4.1/9, mb1mx3.8/25, mbtmp4.0/9, MS3.7/2, Ms1 3.7/2, ms1mx2.9/21, Error ellipse: s-maj=32.9km s-min=12.4km az=74.0*
*ISCJB **07** 00:07:27.0±1.4, 1°.88N±0°.04×98°.93E±0°.06, h14km±9km, mb4.1/13, Error ellipse: s-maj=11.6km s-min=5.7km az=153.3*
*NEIC **07** 00:07:29.9±0.7, 1°.74N×99°.15E, h35km, mb4.2/6, Error ellipse: s-maj=19.9km s-min=11.1km az=52.0*
*DJA **07** 00:07:29, 1°.84N×99°.05E, h10km, MLv4.5/7*

ISC 07 00:07:27.0±1.3, 1°.86N±0°.04×98°.96E±0°.06, h2km±9km, n40, σ1°20/41, mb4.1/13, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**0.94**	**358**	Pg	**Pg**	**00 07 44.9**	**0.0**
	47nm,0.3s,baz=143,slow=14,SNR=95						
PSI				Lg		00 07 57.7	
	65nm,0.3s,baz=233,slow=20,SNR=46						
PSI	**Prapat**	**0.94**	**358**	Pg	**Pg**	**00 07 44.9**	**0.0**
PSI				Lg		00 07 57.7	
MNSI	**Mandailing Nat**	**1.23**	**150**	P	**Pg**	**00 07 46.4**	**-4.1**
MNSI				S	**Sg**	**00 08 05.8**	**-0.6**
GSI	**Gunungsitoli**	**1.49**	**248**	P	**Pn**	**00 07 55.5**	**+0.8**
GSI				S	**Sn**	**00 08 18.5**	**+3.8**
BKNI	**Bangkinang**	**2.58**	**126**	P	**Pn**	**00 08 11.0**	**+1.3**
BKNI				S	**Sn**	**00 08 42.9**	**+1.3**
PPI	**Padang Panjang**	**2.71**	**148**	P	**Pn**	**00 08 13.0**	**+1.4**
FRIM	**Kepong**	**2.99**	**63**	P	**Pn**	**00 08 19.0**	**+3.6**
PDSI	**Padang**	**3.14**	**151**	P	**Pn**	**00 08 16.0**	**-1.4**
SISI	**Saibi**	**3.17**	**178**	P	**Pn**	**00 08 17.2**	**-0.6**
IPM	**Ipoh**	**3.32**	**38**	P	**Pn**	**00 08 21.2**	**+1.3**
IPM	**Ipoh**	**3.32**	**38**	P	**Pn**	**00 08 21.0**	**+1.1**
SDSI	**Sungai Dareh**	**3.71**	**138**	P	**Pn**	**00 08 28.8**	**+3.5**
KULM	**Kulim**	**3.80**	**26**	P	**Pn**	**00 08 27.3**	**+0.7**
KULM	**Kulim**	**3.80**	**26**	ePn	**Pn**	**00 08 26.4**	**-0.1**
KULM	**Kulim**	**3.80**	**26**	P	**Pn**	**00 08 27.4**	**+0.9**
RGRI	**Rengat**	**4.03**	**123**	P	**Pn**	**00 08 38.2**	**+8.6**
KGM	**Kluang**	**4.36**	**88**	P	**Pn**	**00 08 29.2**	**-5.0**
MYKOM	**Kota Tinggi**	**4.89**	**91**	P	**Pn**	**00 08 37.2**	**-4.3**
MYKOM	**Kota Tinggi**	**4.89**	**91**	P	**Pn**	**00 08 39.1**	**-2.4**
KTGM	**Kuala Trenggan**	**5.41**	**50**	P	**Pn**	**00 08 48.5**	**-0.1**
MDSI	**Maura Dua**	**8.18**	**140**	P	**Pn**	**00 09 27.0**	**+0.2**
CMAR	**Chiang Mai Arr**	**16.49**	**360**	Pn	**Pn**	**00 11 23.4**	**+3.8**
	baz=200,slow=12,SNR=8.5						
CHTO	**Chiang Mai**	**16.85**	**360**	ePn	**Pn**	**00 11 25.6**	**+1.5**
	3.4nm,0.9s						
PALK	**Pallekele**	**18.97**	**287**	LR	LR	00 18 19.1	
	comp=Z,169nm,20.2s,baz=95,slow=34						
KAPI	**Kappang**	**21.86**	**108**	P	**P**	**00 12 18.0**	**-3.2**
	43nm,1.0s,mb4.8,baz=180,slow=11,SNR=9.6						
WRA	**Warramunga Arr**	**40.91**	**124**	P	**P**	**00 15 06.4**	**-4.6**
	2.9nm,0.7s,mb4.0,baz=303,slow=9.1,SNR=4.8						
UCH	**Uchtor**	**45.78**	**335**	eP	**P**	**00 15 50.6**	**+0.6**
	5.7nm,1.3s,mb4.3						
TKM2	**Tokmak 2**	**45.90**	**336**	eP	**P**	**00 15 52.0**	**+1.0**
	4.0nm,1.0s,mb4.3						
AML	**Almayashu**	**46.06**	**334**	eP	**P**	**00 15 53.2**	**+1.0**
	5.7nm,1.2s,mb4.4						
MK31	**Makanchi Array**	**47.06**	**344**	eP	**P**	**00 15 59.5**	**-0.4**
MKAR	**Makanchi Array**	**47.06**	**344**	P	**P**	**00 15 60.0**	**0.0**
	1.0nm,0.7s,mb3.9,baz=120,slow=7.2,SNR=8.4						
KURK	**Kurchatov**	**51.63**	**344**	P	**P**	**00 16 34.0**	**-0.9**
	1.3nm,0.7s,mb4.0,baz=162,slow=7.2,SNR=6.1						
KURK	**Kurchatov**	**51.63**	**344**	eP	**P**	**00 16 34.7**	**-0.2**
	3.8nm,1.2s,mb4.2						
STKA	**Stephens Creek**	**52.51**	**133**	LR	LR	00 41 14.0	
	comp=Z,99nm,18.0s,baz=25,slow=39						
ZALV	**Zalesovo Beam**	**53.21**	**350**	P	**P**	**00 16 44.8**	**-1.8**
	0.9nm,0.4s,mb4.1,baz=170,slow=7.6,SNR=7.0						
BVAR	**Borovoye Array**	**56.23**	**340**	P	**P**	**00 17 07.3**	**-1.2**
	0.6nm,0.5s,mb3.9,baz=140,slow=9.7,SNR=5.6						
ABKAR	**Akbulak array**	**57.78**	**331**	eP	**P**	**00 17 19.5**	**0.0**
	0.8nm,0.5s,mb4.0						
BRTR	**Keskin Array B**	**69.98**	**312**	P	**P**	**00 18 38.7**	**-1.4**
	0.7nm,0.6s,mb3.8,baz=133,slow=6.9,SNR=4.8						
FINES	**FINESS Array B**	**80.23**	**332**	P	**P**	**00 19 37.2**	**-1.7**
	0.8nm,0.6s,mb3.8,baz=98,slow=9.8,SNR=5.2						
ARCES	**ARCESS Array B**	**82.51**	**340**	P	**P**	**00 19 50.0**	**-0.8**
	1.8nm,0.9s,mb4.1,baz=98,slow=6.5,SNR=4.6						

*BJI **07** 00:07:52.3, 12°.49N×125°.68E, h52km, mB4.6/2, mb4.6/3, Ms3.9/3, Ms7 3.8/3*
*MOS **07** 00:07:54.9±0.8, 13°.30N×125°.72E, h33km, mb4.8/15, Error ellipse: s-maj=18.2km s-min=8.4km az=116.6*
*ISCJB **07** 00:07:55.4±0.9, 13°.37N±0°.04×125°.77E±0°.06, h36km±8km, mb4.5/50, MS3.7/9, Error ellipse: s-maj=9.6km s-min=5.5km az=163.7*
*MAN **07** 00:07:56, 13°.42N×125°.62E, h61km, mb5.0, ML3.9, MS4.0*
*IDC **07** 00:07:58.9±0.8, 13°.34N×125°.71E, h53km±7km, mb4.1/20, mb1 4.1/20, mb1mx4.0/26, mbtmp4.1/20, MS3.8/8, Ms1 3.8/8, ms1mx3.4/22, Error ellipse: s-maj=20.9km s-min=10.8km az=78.0*
*NEIC **07** 00:07:58.7±0.4, 13°.35N×125°.89E, mb4.6/15, Error ellipse: s-maj=13.4km s-min=7.9km az=64.0*

ISC 07 00:07:57.2±0.9, 13°.38N±0°.04×125°.73E±0°.06, h35km±7km, h54km±1.3km: pP-P, n107, σ1°00/109, mb4.5/50, MS3.7/9, 7C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVCP	**Virac**	**1.55**	**278**	eP	**Pn**	**00 08 21.1**	**-1.3**
PVCP				eS	**Sn**	**00 08 30.9**	**-10**
MMPH	**Masbate**	**2.29**	**244⇑**	eP	**Pn**	**00 08 32.5**	**-0.1**
MMPH				i S	**Sn**	**00 09 00.5**	**+0.9**
OCLP	**Ormoc**	**2.56**	**206**	eP	**Pn**	**00 08 37.5**	**+1.3**
AUQP	**San Andres**	**2.98**	**269**	eP	**Pn**	**00 08 43.2**	**+1.2**
AUQP				eS	**Sn**	**00 08 58.5**	**-18**
GQP	**Guinayangan**	**3.24**	**280⇓**	eP	**Pn**	**00 08 44.5**	**-1.1**
GQP				eS	**Sn**	**00 09 21.1**	**-1.9**
MSLP	**Maasin**	**3.33**	**195**	eP	**Pn**	**00 08 48.2**	**+1.3**
OTRP	**Odiongan**	**3.76**	**255**	eP	**Pn**	**00 08 53.5**	**+0.7**
POLP	**Polilio Island**	**3.92**	**291**	eP	**Pn**	**00 08 54.9**	**-0.1**
TBP	**Tagbilaran**	**4.09**	**207**	eP	**Pn**	**00 08 57.3**	**-0.1**
TBP				eS	**Sn**	**00 09 43.2**	**-0.9**
GUIM	**Jordan**	**4.11**	**229**	eP	**Pn**	**00 08 58.0**	**+0.4**
SJMP	**San Jose**	**4.59**	**259**	eP	**Pn**	**00 09 05.5**	**+1.3**
BALP	**Baler**	**4.66**	**301**	eP	**Pn**	**00 09 02.9**	**-2.3**
TGY	**Tagaytay City**	**4.72**	**279**	P	**Pn**	**00 09 13.1**	**+7.2**
	46nm,0.3s,baz=169,slow=5.2,SNR=2.6						
PALP	**Palanan**	**4.86**	**319**	eP	**Pn**	**00 09 07.8**	**-0.2**
PCPH	**Palayan**	**4.99**	**296⇑**	eP	**Pn**	**00 09 06.9**	**-2.8**
PAGZ	**Pagadian**	**5.96**	**203**	eP	**Pn**	**00 09 24.4**	**+1.4**
APYP	**Conner**	**6.21**	**316**	eP	**Pn**	**00 09 26.3**	**-0.2**
QIZ	**Qiongzhong**	**16.26**	**292**	P	**Pn**	**00 11 42.6**	**-0.4**
QIZ				S	**S**	**00 14 45.7**	**-8.6**
QIZ				pmax	pmax		
	comp=Z,68nm,3.7s						
QIZ				LR	LR		
	comp=N,170nm,17.8s						
QIZ				LR	LR		
	comp=E,210nm,14.5s						
QIZ				LR	LR		
	comp=Z,270nm,18.6s						
WHN	**Wuhan**	**20.06**	**330**	P	**P**	**00 12 33.8**	**+6.3**
CBIJ	**Chichi jima**	**20.57**	**46**	P	**P**	**00 12 33.0**	**-0.2**
	comp=Z,32nm,0.7s,baz=286,slow=20,SNR=3.5						
JHJ	**Hachijo jima 2**	**23.46**	**31**	LR	LR	00 20 53.1	
	comp=Z,382nm,18.0s,MS3.9,baz=62,slow=33						
KSRS	**Korea Array**	**24.06**	**4**	P	**P**	**00 13 09.4**	**+0.3**
	comp=Z,14nm,1.0s,mb4.4,baz=186,slow=11,SNR=20						
KSRS				LR	LR	00 22 18.5	
	comp=Z,228nm,18.0s,MS3.7,baz=33,slow=36						
MJAR	**Matsushiro Arr**	**25.64**	**24**	P	**P**	**00 13 24.0**	**+0.4**
	comp=Z,1.8nm,0.9s,mb3.6,baz=186,slow=9.8,SNR=3.4						
MJAR				LR	LR	00 22 32.7	
	comp=Z,246nm,18.2s,MS3.8,baz=210,slow=34						
CMAR	**Chiang Mai Arr**	**26.24**	**285**	P	**P**	**00 13 28.4**	**-0.8**
	comp=Z,1.4nm,0.3s,mb3.9,baz=91,slow=8.0,SNR=7.6						
CMAR				pP	pP	00 13 42.1	+2.9
	comp=Z,2.5nm,0.4s,baz=98,slow=6.9,SNR=4.1						
CMAR				LR	LR	00 23 59.0	
	comp=Z,150nm,20.0s,MS3.5,baz=95,slow=37						
CMAR	**Chiang Mai Arr**	**26.24**	**285**	P	**P**	**00 13 28.4**	**-0.8**
CMAR				*PP	pP	00 13 42.2	+3.0
KAKA	**Kakadu**	**26.76**	**165**	eP	**P**	**00 13 32.8**	**-1.0**
	comp=Z,28nm,0.5s,mb5.0						
PSI	**Prapat**	**28.51**	**251**	LR	LR	00 25 10.0	
	comp=Z,197nm,18.9s,MS3.7,baz=24,slow=36						
FITZ	**Fitzroy Crossi**	**31.28**	**180**	P	**P**	**00 14 13.7**	**-0.2**
	comp=Z,1.9nm,0.4s,mb4.3,baz=4.6,slow=9.8,SNR=7.2						
WRAB	**Tennant Creek**	**34.17**	**165**	eP	**P**	**00 14 37.2**	**-2.1**
WRAB				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
WRAB	**Tennant Creek**	**34.17**	**165**	eP	**P**	**00 14 37.2**	**-2.0**
	comp=Z,7.6nm,1.0s,mb4.6						
WRA	**Warramunga Arr**	**34.17**	**165**	P	**P**	**00 14 37.7**	**-1.6**
	comp=Z,4.2nm,1.0s,mb4.3,baz=343,slow=9.9,SNR=7.2						
WRA	**Warramunga Arr**	**34.17**	**165**	P	**P**	**00 14 37.7**	**-1.6**
LSA	**Lhasa**	**35.86**	**303**	P	**P**	**00 14 55.7**	**+1.8**
KLR	**Kul'dur**	**36.09**	**7**	eP	**P**	**00 14 52.0**	**-3.6**
ASAR	**Alice Springs**	**37.67**	**168**	P	**P**	**00 15 09.5**	**+0.3**
	comp=Z,3.2nm,0.7s,mb4.2,baz=350,slow=7.9,SNR=24						
ULN	**Ulaanbaatar**	**37.74**	**339**	eP	**P**	**00 15 10.7**	**+1.1**
ULN				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.6						
ULN	**Ulaanbaatar**	**37.74**	**339**	eP	**P**	**00 15 10.7**	**+1.0**
	comp=Z,16nm,1.2s,mb4.6						
SONM	**Songino Array**	**37.95**	**339**	P	**P**	**00 15 12.4**	**+1.1**
	comp=Z,4.5nm,0.9s,mb4.2,baz=151,slow=6.3,SNR=12						
SONM				pP	pP	00 15 26.2	+4.6
	comp=Z,2.8nm,0.8s,baz=154,slow=7.9,SNR=4.0						
SONM				LR	LR	00 29 34.7	
	comp=Z,104nm,21.2s,MS3.6,baz=106,slow=34						
SONM	**Songino Array**	**37.95**	**339**	P	**P**	**00 15 12.4**	**+1.0**
SONM				*PP	pP	00 15 26.2	+4.6
TAPN	**Taplejung**	**38.10**	**297**	eP	**P**	**00 15 16.0**	**+3.1**
	comp=Z,38nm,1.1s,mb5.0						
ODAN	**Odare**	**38.26**	**296**	eP	**P**	**00 15 17.8**	**+3.5**
	comp=Z,14nm,0.7s,mb4.8						
RAMN	**Ramite**	**38.97**	**296**	eP	**P**	**00 15 22.2**	**+1.9**
	comp=Z,18nm,0.7s,mb4.9						
GUN	**Gumba**	**39.81**	**298**	eP	**P**	**00 15 27.3**	**+0.1**
	comp=Z,49nm,1.0s,mb5.2						
KKN	**Kakani**	**40.30**	**297**	eP	**P**	**00 15 30.8**	**-0.5**
DMN	**Daman**	**40.41**	**297**	eP	**P**	**00 15 32.3**	**0.0**
MORW	**Morawa**	**43.22**	**192**	eP	**P**	**00 15 54.9**	**-0.2**
FORT	**Forrest**	**43.95**	**177**	eP	**P**	**00 16 00.6**	**-0.3**
	comp=Z,10.0nm,0.5s,mb4.8						
KMBL	**Kambalda**	**44.64**	**185**	eP	**P**	**00 16 05.8**	**-0.6**
	comp=Z,44nm,0.5s,mb5.5						
KLBR	**Kellerberrin**	**45.36**	**190**	eP	**P**	**00 16 11.8**	**-0.4**
	comp=Z,4.2nm,0.4s,mb4.6						
NWAO	**Narrogin (SRO)**	**46.75**	**190**	eP	**P**	**00 16 23.1**	**0.0**
	comp=Z,32nm,0.4s,mb5.6						
NWAO	**Narrogin (SRO)**	**46.75**	**190**	P	**P**	**00 16 23.4**	**+0.3**
	comp=Z,4.5nm,0.4s,mb4.8,baz=20,slow=12,SNR=12						
BBOO	**Buckleboo**	**46.97**	**168**	eP	**P**	**00 16 24.6**	**-0.2**
	comp=Z,18nm,0.5s,mb5.3						
PETK	**Petropavlovsk-**	**47.07**	**26**	P	**P**	**00 16 26.2**	**+0.8**
	comp=Z,1.8nm,0.7s,mb4.1,baz=170,slow=8.8,SNR=2.6						
PETK				LR	LR	00 36 39.4	
	comp=Z,76nm,18.6s,MS3.7,baz=21,slow=36						
PETK	**Petropavlovsk-**	**47.07**	**26**	P	**P**	**00 16 26.2**	**+0.8**
PETK				LR	LR	00 36 39.4	
STKA	**Stephens Creek**	**47.49**	**162**	eP	**P**	**00 16 28.9**	**0.0**
	comp=Z,17nm,1.0s,mb4.9						
STKA	**Stephens Creek**	**47.49**	**162**	P	**P**	**00 16 29.0**	**+0.1**
	comp=Z,19nm,0.8s,mb5.1,baz=336,slow=8.4,SNR=19						
CMSA	**Cobar Meteorol**	**48.59**	**157**	eP	**P**	**00 16 37.9**	**+0.5**
MK31	**Makanchi Array**	**49.27**	**321**	eP	**P**	**00 16 43.2**	**+0.7**
MKAR	**Makanchi Array**	**49.27**	**321**	P	**P**	**00 16 43.3**	**+0.8**
	comp=Z,4.3nm,0.8s,mb4.5,baz=99,slow=10,SNR=14						
MKAR	**Makanchi Array**	**49.27**	**321**	c i P	**P**	**00 16 43.2**	**+0.7**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ZALV	**Zalesovo Beam**	**51.67**	**330**	P	**P**	**00 17 00.4**	**-0.1**
	comp=Z,1.9nm,0.5s,mb4.2,baz=133,slow=6.3,SNR=4.6						
ZALV				LR	LR	00 39 20.1	
	comp=Z,37nm,20.7s,MS3.4,baz=88,slow=36						
UCH	**Uchtor**	**52.65**	**313**	eP	**P**	**00 17 09.9**	**+1.9**
UCH				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.7						
UCH	**Uchtor**	**52.65**	**313**	eP	**P**	**00 17 09.9**	**+1.9**
	comp=Z,14nm,1.3s,mb4.7						
NVS	**Novosibirsk**	**52.95**	**331**	eP	**P**	**00 17 01.0**	**-9.0**
NVS				pmax	pmax		
	comp=Z,15nm,1.6s,mb4.7						
NVS				pmax	pmax		
	comp=N,17nm,1.9s						
NVS				pmax	pmax		
	comp=E,12nm,1.4s						
AML	**Almayashu**	**53.21**	**313**	eP	**P**	**00 17 13.7**	**+1.6**
AML				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
AML	**Almayashu**	**53.21**	**313**	eP	**P**	**00 17 13.7**	**+1.5**
	comp=Z,9.0nm,1.2s,mb4.6						
KURK	**Kurchatov**	**53.24**	**324**	P	**P**	**00 17 12.6**	**+0.4**
	comp=Z,5.6nm,0.5s,mb4.8,baz=121,slow=8.0,SNR=42						
KURK				pP	pP	00 17 26.5	+3.8
	comp=Z,5.7nm,0.7s,baz=121,slow=7.4,SNR=5.9						
EKS2	**Erkin-Say**	**53.30**	**314**	eP	**P**	**00 17 13.7**	**+0.9**
EKS2				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.5						
EKS2	**Erkin-Say**	**53.30**	**314**	eP	**P**	**00 17 13.7**	**+0.9**
	comp=Z,7.7nm,1.2s,mb4.5						
KBL	**Kabul**	**55.19**	**303**	eP	**P**	**00 17 26.6**	**-0.1**
KBL				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
KBL	**Kabul**	**55.19**	**303**	eP	**P**	**00 17 26.6**	**-0.1**
	comp=Z,3.0nm,0.5s,mb4.6						
BVAR	**Borovoye Array**	**58.84**	**325**	P	**P**	**00 17 52.3**	**+0.1**
	comp=Z,2.7nm,0.8s,mb4.4,baz=115,slow=6.7,SNR=10						
BRVK	**Borovoye**	**58.91**	**325**	c e P	**P**	**00 17 53.0**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
BRVK	**Borovoye**	**58.91**	**325**	eP	**P**	**00 17 52.9**	**+0.2**
	comp=Z,14nm,1.1s,mb4.9						
BILL	**Bilibino**	**60.58**	**16⇑**	eP	**P**	**00 18 04.3**	**+0.4**
BILL				e		00 18 09.4	
BILL				e		00 18 19.8	
BILL				eSS	SS	00 30 15.4	-0.3
BILL				pmax	pmax		
	comp=Z,14nm,2.5s,mb4.7						
BILL				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.0						
ABKAR	**Akbulak array**	**64.21**	**318**	eP	**P**	**00 18 27.8**	**-0.7**
	comp=Z,2.6nm,0.8s,mb4.3						
ARU	**Arti**	**66.37**	**326**	P	**P**	**00 18 47.2**	**+4.8**
GNI	**Garni**	**74.67**	**308⇑**	eP	**P**	**00 19 35.1**	**+1.7**
GNI				pmax	pmax		
	comp=Z,18nm,2.5s						
COLD	**Coldfoot**	**75.47**	**24**	eP	**P**	**00 19 38.5**	**+1.1**
	comp=Z,10nm,1.1s,mb4.7						
KIV	**Kislovodsk**	**75.87**	**312**	eP	**P**	**00 19 40.0**	**-0.2**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
KIV	**Kislovodsk**	**75.87**	**312**	eP	**P**	**00 19 40.0**	**-0.2**
	comp=Z,6.0nm,1.0s,mb4.5						
VSR	**Storozhevoye**	**77.56**	**320**	eP	**P**	**00 19 49.5**	**-0.1**
VSR				pmax	pmax		
	comp=N,3.0nm,0.5s						
VSR				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.6						
VSR				pmax	pmax		
	comp=E,4.0nm,0.9s						
OBN	**Obninsk**	**78.68**	**324⇓**	eP	**P**	**00 19 55.5**	**-0.2**
OBN				e		00 20 00.7	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.8						
JOF	**Joensuu**	**80.21**	**332**	ep	**P**	**00 19 59.3**	**-4.6**
	comp=Z,0.5nm,0.3s,mb3.9						
JOF	**Joensuu**	**80.21**	**332**	ep	**P**	**00 19 59.3**	**-4.6**
	comp=Z,0.5nm,0.3s,mb3.9						
KEV	**Kevo**	**80.56**	**340**	ep	**P**	**00 19 57.8**	**-7.8**
	comp=Z,0.3nm,0.4s,mb3.6						
KEV	**Kevo**	**80.56**	**340**	ep	**P**	**00 19 57.8**	**-7.8**
	comp=Z,0.3nm,0.4s,mb3.6						
ARCES	**ARCESS Array B**	**81.12**	**339**	P	**P**	**00 20 07.3**	**-1.3**
	comp=Z,1.5nm,0.6s,mb4.1,baz=81,slow=7.5,SNR=7.9						
INK	**Inuvik**	**81.61**	**22**	eP	**P**	**00 20 11.0**	**-0.2**
INK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
INK	**Inuvik**	**81.61**	**22**	eP	**P**	**00 20 11.0**	**-0.2**
	comp=Z,7.6nm,1.3s,mb4.5						
KAF	**Kangasniemi**	**82.65**	**332**	ep	**P**	**00 20 13.8**	**-3.0**
	comp=Z,0.4nm,0.5s,mb3.7						
KAF	**Kangasniemi**	**82.65**	**332**	ep	**P**	**00 20 13.8**	**-3.0**
	comp=Z,0.4nm,0.5s,mb3.7						
FINES	**FINESS Array B**	**82.93**	**331**	P	**P**	**00 20 17.6**	**-0.7**
	comp=Z,1.6nm,0.5s,mb4.3,baz=54,slow=5.3,SNR=12						
FINES				pP	pP	00 20 32.4	+3.0
	comp=Z,0.6nm,0.5s,baz=46,slow=5.5,SNR=1.2						
MMAI	**Mount Meron Ar**	**83.11**	**302**	P	**P**	**00 20 20.0**	**+0.2**
	comp=Z,1.4nm,0.6s,mb4.2,baz=98,slow=5.0,SNR=2.9						
BR131	**Keskin Array S**	**83.17**	**309**	eP	**P**	**00 20 20.0**	**0.0**
AKASG	**Malin Array Be**	**83.84**	**321**	P	**P**	**00 20 21.6**	**-1.7**
	comp=Z,1.3nm,0.5s,mb4.3,baz=66,slow=4.6,SNR=9.0						
AKASG	**Malin Array Be**	**83.84**	**321**	c e P	**P**	**00 20 23.1**	**-0.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
IDID	**Didziasalis**	**84.17**	**325**	eP	**P**	**00 20 23.8**	**-0.9**
IDID				AMB	AMB	00 20 25.7	
	comp=Z,3.7nm,1.5s,mb4.3						
IZAR	**Zarasai**	**84.33**	**326**	eP	**P**	**00 20 24.6**	**-0.9**
IZAR				AMB	AMB	00 20 30.7	
	comp=Z,3.5nm,1.3s,mb4.3						
ISAL	**Salakas**	**84.44**	**326**	eP	**P**	**00 20 25.2**	**-0.9**
ISAL				AMB	AMB	00 20 31.4	
	comp=Z,4.1nm,4.1s						
IIGN	**Ignalina**	**84.44**	**326**	eP	**P**	**00 20 25.2**	**-1.0**
IIGN				AMB	AMB	00 20 27.2	
	comp=Z,2.5nm,1.6s,mb4.1						
BUR08	**Bucovina Ar. S**	**87.19**	**318**	eP	**P**	**00 20 40.5**	**+0.5**
RES	**Resolute Bay**	**88.55**	**10**	eP	**P**	**00 20 45.5**	**-0.4**
RES				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.6						
RES	**Resolute Bay**	**88.55**	**10**	eP	**P**	**00 20 45.5**	**-0.4**
	comp=Z,3.0nm,0.9s,mb4.6						
NOA	**NORSAR Array B**	**89.76**	**334**	P	**P**	**00 20 51.2**	**-0.6**
	comp=Z,0.2nm,0.5s,mb3.7,baz=66,slow=4.4,SNR=3.5						
TXAR	**Lajitas Array**	**116.17**	**48**	PKP	PKPdf	00 26 37.1	-0.4
	comp=Z,0.2nm,0.6s,baz=338,slow=2.1,SNR=3.2						
TORD	**Torodi Ar. Bea**	**118.60**	**293**	PKP	PKPdf	00 26 41.4	-1.0
	comp=Z,0.8nm,1.2s,baz=53,slow=3.2,SNR=5.2						

*FUNV **07** 00:09:05.9, 6°.70N×73°.13W, h168km, MW3.5*
*IDC **07** 00:09:06.3±1.3, 6°.74N×72°.89W, h167km±11km, mb3.0/1, mb1 3.2/3, mb1mx3.0/22, mbtmp3.3/3, Error ellipse: s-maj=80.1km s-min=13.9km az=136.0*
*ISCJB **07** 00:09:06.0±0.9, 6°.91N±0°.07×72°.95W±0°.08, h180km±8km, Error ellipse: s-maj=14.6km s-min=9.8km az=36.2*

ISC 07 00:09:06.8±0.9, 6°.90N±0°.07×72°.95W±0°.08, h174km±8km, n16, σ1°00/25, 1C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.15**	**33⇑**	i P	**Pn**	**00 09 35.4**	**+0.2**
CAPV				eS	**Sn**	**00 09 57.5**	**+0.4**
ROSC	**El Rosal**	**2.45**	**214**	P	**Pn**	**00 09 46.9**	**-1.7**
	26nm,0.3s,baz=283,slow=12,SNR=47						
ROSC				S	**Sn**	**00 10 13.8**	**-7.2**
	19nm,0.3s,baz=83,slow=16,SNR=7.5						
VIGV	**El Vigia**	**2.49**	**39**	eP	**Pn**	**00 09 49.8**	**+0.7**
VIGV				eS	**Sn**	**00 10 22.1**	**+0.2**
SOCV	**Socops**	**2.50**	**56**	eP	**Pn**	**00 09 50.1**	**+0.9**
SOCV				eS	**Sn**	**00 10 22.1**	**+0.1**
SDV	**Santo Domingo**	**3.03**	**49**	P	**Pn**	**00 09 56.9**	**+1.3**
	6.2nm,0.3s,baz=249,slow=4.9,SNR=31						
SDV				S	**Sn**	**00 10 34.1**	**+0.5**
	18nm,0.3s,baz=63,slow=23,SNR=30						
VIRV	**Villa del Rosa**	**3.62**	**9**	eP	**Pn**	**00 10 02.4**	**-0.7**
VIRV				eS	**Sn**	**00 10 45.9**	**-1.0**
SANV	**Sanarito**	**4.26**	**52**	eP	**Pn**	**00 10 12.5**	**+1.3**
CURV	**Curarigua**	**4.28**	**44**	eP	**Pn**	**00 10 12.2**	**+0.8**
CURV				eS	**Sn**	**00 11 01.6**	**-0.3**
DABV	**Dabajuro**	**4.61**	**30**	eP	**Pn**	**00 10 16.6**	**+1.0**
DABV				eS	**Sn**	**00 11 08.3**	**-1.2**
SIQV	**Siquisique**	**4.85**	**40**	eP	**Pn**	**00 10 19.3**	**+0.5**
BAUV	**El Baul**	**5.27**	**67**	eP	**Pn**	**00 10 24.0**	**-0.3**
BAUV				eS	**Sn**	**00 11 22.6**	**-2.4**
MONV	**Montecano**	**5.82**	**30**	eP	**Pn**	**00 10 32.4**	**+0.9**
MONV				eS	**Sn**	**00 11 35.0**	**-3.0**

HDMB	Hadim	2.64	89	*e*Pn	Pn	00 17 37.3	+0.8
DST	Dursunbey	2.67	351	*e*PN	Pn	00 17 37.4	+0.5
DST	Dursunbey	2.67	351	*e*Pn	Pn	00 17 37.4	+0.5
KONT	Konya--Tatoy	2.70	68	*e*PN	Pn	00 17 38.2	+0.9
KONT	Konya--Tatoy	2.70	68	*e*Pn	Pn	00 17 38.2	+0.9

NEIC ***07*** *00:18:46.4, 36.°18N×12.°72E, h10km, ML3.4(ROM), After ROM.*
ROM ***07*** *00:18:46.4±0.6, 36.°18N×12.°72E, h10km, Ml3.4/20, Error ellipse: s-maj=10.2km s-min=3.0km az=32.0*
ISCJB ***07*** *00:18:46.0±1.4, 36.°23N±0.°05×12.°73E±0.°05, h3km±11km, mb3.4/4, Error ellipse: s-maj=8.6km s-min=5.8km az=154.4*
CSEM ***07*** *00:18:47.0±0.2, 36.°25N×12.°77E, h2km, ML3.4, Error ellipse: s-maj=7.6km s-min=4.5km az=109.0*
IDC ***07*** *00:18:49.7±1.4, 35.°99N×12.°52E, h0km, mb3.4/4, mb1 3.5/6, mb1mx3.4/26, mbtmp3.4/6, ML3.0/2, Error ellipse: s-maj=35.3km s-min=20.7km az=143.0*

ISC 07 00:18:46.8±1.5, 36.°23N±0.°05×12.°74E±0.°05, h2km±11km, n67, σ0°79/72, mb3.4/4, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTS	**Pantelleria** 427nm,0.3s	**0.83**	**314**	Pn	**Pg**	**00 19 03.1**	**+0.3**
FAVR	**Favara** 542nm,0.8s	**1.27**	**35**	Pn	**Pn**	**00 19 12.1**	**+0.6**
FAVR	**Favara** 542nm,0.8s	**1.27**	**35**	Pn	**Pn**	**00 19 12.1**	**+0.6**
WDD	**Wield Dalam**	**1.49**	**104**	Pn	**Pn**	**00 19 14.4**	**-0.1**
WDD				Sn	**Sn**	**00 19 33.5**	**-1.0**
WDD	**Wield Dalam** 903nm,0.6s	**1.49**	**104**	*e*Pn	**Pn**	**00 19 13.8**	**-0.8**
WDD				*e*Sn	**Sn**	**00 19 33.2**	**-1.3**
WDD	**Wield Dalam**	**1.49**	**104**	Pn	**Pn**	**00 19 14.4**	**-0.1**
WDD				*e*Sn	**Sn**	**00 19 33.2**	**-1.3**
RAFF	**Raffo Rosso** 488nm,0.6s	**1.63**	**52**	Pn	**Pn**	**00 19 16.0**	**-0.5**
RAFF	**Raffo Rosso** 488nm,0.6s	**1.63**	**52**	Pn	**Pn**	**00 19 16.0**	**-0.5**
CORL	**Corleone** 439nm,0.8s	**1.72**	**15**	Pn	**Pn**	**00 19 17.0**	**-0.7**
CORL	**Corleone** 439nm,0.8s	**1.72**	**15**	Pn	**Pn**	**00 19 17.0**	**-0.7**
RESU	**Resuttano** 261nm,0.8s	**1.76**	**36**	Pg	**Pn**	**00 19 19.8**	**+1.5**
RESU	**Resuttano** 261nm,0.8s	**1.76**	**36**	Pg	**Pn**	**00 19 19.8**	**+1.5**
HMDC	**Modica** 290nm,0.6s	**1.79**	**66**	Pn	**Pn**	**00 19 17.6**	**-1.1**
HMDC	**Modica** 290nm,0.6s	**1.79**	**66**	Pn	**Pn**	**00 19 17.6**	**-1.1**
ERC	**Erice** 619nm,0.7s	**1.80**	**356**	Pn	**Pn**	**00 19 18.2**	**-0.7**
ERC	**Erice** 619nm,0.7s	**1.80**	**356**	Pn	**Pn**	**00 19 18.2**	**-0.7**
HVZN	**Vizzini** 1μm,0.9s	**1.84**	**59**	Pn	**Pn**	**00 19 18.8**	**-0.6**
HVZN	**Vizzini** 1μm,0.9s	**1.84**	**59**	Pn	**Pn**	**00 19 18.8**	**-0.6**
GIB	**Gibilmanna** 593nm,0.6s	**2.03**	**30**	Pn	**Pn**	**00 19 22.5**	**+0.5**
GIB	**Gibilmanna** 593nm,0.6s	**2.03**	**30**	Pn	**Pn**	**00 19 22.5**	**+0.5**
HAVL	**Avola** 235nm,0.5s	**2.05**	**69**	Pn	**Pn**	**00 19 21.6**	**-0.6**
HAVL	**Avola** 235nm,0.5s	**2.05**	**69**	Pn	**Pn**	**00 19 21.6**	**-0.6**
ECNV	**Catenanuova**	**2.08**	**49**	Pn	**Pg**	**00 19 25.2**	**-1.6**
SSY	**Sortino** 660nm,0.8s	**2.08**	**63**	Pn	**Pn**	**00 19 22.2**	**-0.5**
SSY	**Sortino** 660nm,0.8s	**2.08**	**63**	Pn	**Pn**	**00 19 22.2**	**-0.5**
USI	**Ustica** 52nm,0.3s	**2.49**	**8**	Pn	**Pn**	**00 19 27.9**	**-0.5**
USI	**Ustica** 52nm,0.3s	**2.49**	**8**	Pn	**Pn**	**00 19 27.9**	**-0.5**
ACL	**Alicudi** 164nm,0.4s	**2.63**	**29**	Pn	**Pn**	**00 19 29.8**	**-0.4**
MMME	**Mongiuffi-Meli** 126nm,0.7s	**2.63**	**49**	Pn	**Pn**	**00 19 30.5**	**+0.3**
MMME	**Mongiuffi-Meli** 126nm,0.7s	**2.63**	**49**	Pn	**Pn**	**00 19 30.5**	**+0.3**
IACL	**Alicudi** 164nm,0.4s	**2.63**	**29**	Pn	**Pn**	**00 19 29.8**	**-0.4**
IFIL	**Filicudi I Eol** 183nm,0.6s	**2.74**	**31**	Pn	**Pn**	**00 19 31.2**	**-0.6**
IFIL	**Filicudi I Eol** 183nm,0.6s	**2.74**	**31**	Pn	**Pn**	**00 19 31.2**	**-0.6**
VPL	**Vulcano Piano** 177nm,0.5s	**2.79**	**39**	Pn	**Pn**	**00 19 32.3**	**-0.1**
VPL	**Vulcano Piano** 177nm,0.5s	**2.79**	**39**	Pn	**Pn**	**00 19 32.3**	**-0.1**
KEST	**Kesra** 3.8nm,0.3s,baz=42,slow=4.3,SNR=227	**2.80**	**261**	Pn	**Pn**	**00 19 32.6**	**+0.1**
KEST	4.6nm,0.3s,baz=64,slow=20,SNR=10			Sn	**Sn**	**00 20 05.2**	**-1.6**
LLI	**Lipari** 660nm,0.8s	**2.82**	**38**	Pn	**Pn**	**00 19 32.7**	**-0.2**
LLI	**Lipari** 660nm,0.8s	**2.82**	**38**	Pn	**Pn**	**00 19 32.7**	**-0.2**
SLNA	**Salina** 100nm,0.4s	**2.86**	**35**	Pn	**Pn**	**00 19 33.6**	**+0.2**
SLNA	**Salina** 100nm,0.4s	**2.86**	**35**	Pn	**Pn**	**00 19 33.6**	**+0.2**
MTTG	**Motta San Giov** 126nm,0.9s	**2.95**	**52**	Pn	**Pn**	**00 19 35.1**	**+0.5**
MTTG	**Motta San Giov** 126nm,0.9s	**2.95**	**52**	Pn	**Pn**	**00 19 35.1**	**+0.5**
MSRU	**Castanea** 126nm,0.9s	**3.00**	**47**	Pn	**Pn**	**00 19 35.9**	**+0.6**
MSRU	**Castanea** 126nm,0.9s	**3.00**	**47**	Pn	**Pn**	**00 19 35.9**	**+0.6**
MPAZ	**Palizzi** 40nm,0.7s	**3.12**	**56**	Pn	**Pn**	**00 19 37.3**	**+0.3**
MPAZ	**Palizzi** 40nm,0.7s	**3.12**	**56**	Pn	**Pn**	**00 19 37.3**	**+0.3**
SOI	**Samo** 23nm,0.6s	**3.22**	**54**	Pn	**Pn**	**00 19 38.5**	**+0.2**
SOI	**Samo** 23nm,0.6s	**3.22**	**54**	Pn	**Pn**	**00 19 38.5**	**+0.2**
CEL	**Celeste**	**3.23**	**50**	*e*Pn	**Pn**	**00 19 38.6**	**+0.2**
CEL	**Celeste**	**3.23**	**50**	*e*Pn	**Pn**	**00 19 38.6**	**+0.2**
ALAS	**Alassa** SNR=154	**3.51**	**196**	*e*P	**Pn**	**00 19 42.2**	**-0.1**
PLAC	**Placanica** 11nm,0.6s	**3.68**	**52**	Pn	**Pn**	**00 19 45.3**	**+0.6**
PLAC	**Placanica** 11nm,0.6s	**3.68**	**52**	Pn	**Pn**	**00 19 45.3**	**+0.6**
GHAR	**Gharyan** SNR=135	**4.11**	**176**	*e*P	**Pn**	**00 19 51.8**	**+1.2**
GHAR	SNR=135			*e*S	**Sn**	**00 20 34.0**	**-5.2**
SERS	**Sersale** 14nm,0.6s	**4.20**	**47**	Pn	**Pn**	**00 19 53.2**	**+1.4**
SERS	**Sersale** 14nm,0.6s	**4.20**	**47**	Pn	**Pn**	**00 19 53.2**	**+1.4**
TIP	**Timpagrande**	**4.33**	**46**	*e*Pn	**Pn**	**00 19 54.3**	**+0.7**
TIP	**Timpagrande**	**4.33**	**46**	*e*Pn	**Pn**	**00 19 54.3**	**+0.7**
SIRI	**Monte Sirino -** 25nm,0.5s	**4.65**	**31**	Pn	**Pn**	**00 19 59.3**	**+1.4**
SIRI	**Monte Sirino -** 25nm,0.5s	**4.65**	**31**	Pn	**Pn**	**00 19 59.3**	**+1.4**
LSHF	**Shwairf** SNR=119	**6.36**	**168**	*e*P	**Pn**	**00 20 16.1**	**-5.4**
BRTR	**Keskin Array B** 0.0nm,0.3s,baz=264,slow=8.5,SNR=6.6	**16.84**	**72**	P	**Pn**	**00 22 50.8**	**+7.3**
NOA	**NORSAR Array B** 0.4nm,0.7s,mb3.1,baz=189,slow=6.7,SNR=2.5	**24.84**	**358**	P	**P**	**00 24 16.2**	**+6.0**
TORD	**Torodi Ar. Bea** 0.7nm,1.1s,mb3.1,baz=21,slow=8.9,SNR=6.5	**25.04**	**206**	P	**P**	**00 24 13.5**	**+1.1**
TORD	**Torodi Ar. Bea**	**25.04**	**206**	P	**P**	**00 24 13.5**	**+1.1**
FINES	**FINESS Array B** 2.4nm,0.9s,mb3.7,baz=181,slow=12,SNR=3.5	**26.60**	**14**	P	**P**	**00 24 32.6**	**+6.5**
MKAR	**Makanchi Array** 0.2nm,0.3s,mb3.5,baz=297,slow=5.5,SNR=2.7	**51.56**	**55**	P	**P**	**00 27 58.1**	**+4.0**

ISCJB ***07*** *00:28:24.9±0.5, 22.°65S±0.°05×68.°48W±0.°07, h112km±7km, mb4.2/9, Error ellipse: s-maj=11.1km s-min=7.7km az=2.4*
NEIC ***07*** *00:28:25.0±1.0, 22.°67S×68.°52W, h99km±9km, mb4.1/5, Error ellipse: s-maj=15.2km s-min=9.3km az=100.0*
IDC ***07*** *00:28:25.6±2.1, 22.°68S×68.°43W, h103km±18km, mb4.3/6, mb1 4.1/10, mb1mx3.9/18, mbtmp4.0/10, Error ellipse: s-maj=24.2km s-min=15.3km az=91.0*
GUC ***07*** *00:28:27.0±0.6, 22.°58S×68.°69W, h117km±7km, ML4.5*

ISC 07 00:28:25.7±0.5, 22.°68S±0.°04×68.°47W±0.°06, h103km±6km, n35, σ1°14/36, mb4.2/9, 5C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**1.03**	**293**	⇑*i*P	**Pn**	**00 28 53.6**	**+7.0**
PB04				*i* S	**Sn**	**00 29 13.8**	**+11**
PB04	6nm,0.6s			AML	AML	00 29 16.2	
PECH	**Pedro de Valdi**	**1.12**	**274**	⇑*i*P	**Pn**	**00 28 48.5**	**+1.0**
PECH				*i* S	**Sn**	**00 29 05.2**	**+1.1**
PECH	6nm,0.4s			AML	AML	00 29 06.7	
MACH	**Maria Elena**	**1.29**	**292**	⇑*i*P	**Pn**	**00 28 50.2**	**+0.7**
MACH				*i* S	**Sn**	**00 29 07.7**	**+0.2**
MECH	**Mejillones**	**1.87**	**257**	*i* P	**Pn**	**00 28 57.2**	**+0.5**
MECH				*i* S	**Sn**	**00 29 20.4**	**0.0**
MECH	5nm,0.3s			AML	AML	00 29 28.8	
PB01	**Plate Boundary**	**1.88**	**330**	⇓*i*P	**Pn**	**00 28 57.2**	**+0.3**
PB01				*i* S	**Sn**	**00 29 20.6**	**-0.1**
PB01	4μm,0.2s			AML	AML	00 29 22.6	
HMBC	**Humberston**	**2.73**	**331**	⇑*i*P	**Pn**	**00 29 06.9**	**-1.0**
HMBC				*i* S	**Sn**	**00 29 38.6**	**-1.8**
HMBC	2μm,0.3s			AML	AML	00 29 40.2	
PSGC	**Pisagua** 820nm,0.4s	**3.43**	**333**	AML	AML	00 30 15.8	
LPAZ	**La Paz** 1.3nm,0.3s,baz=187,slow=9.3,SNR=27	**6.37**	**3**	P	**Pn**	**00 29 59.4**	**+2.4**
LCO	**Las Campanas** 63nm,0.9s	**6.62**	**197**	*e*Pn	**Pn**	**00 29 57.9**	**-2.5**
LCO				*e*Sn	**Sn**	**00 31 11.5**	**-2.7**
CFAA	**Coronel Fontan** 0.2nm,0.3s,baz=353,slow=12,SNR=22	**8.89**	**179**	P	**Pn**	**00 30 29.9**	**-1.4**
CFAA	0.2nm,0.3s,baz=153,slow=6.8,SNR=3.1			S	**Sn**	**00 32 02.3**	**-7.3**
SIV	**San Ignacio** 4.5nm,0.3s,baz=242,slow=12,SNR=153	**9.64**	**48**	P	**Pn**	**00 30 39.2**	**-2.3**
SIV	2.0nm,0.3s,baz=322,slow=23,SNR=4.2			S	**Sn**	**00 32 19.5**	**-8.5**
CPUP	**Villa Florida** 0.6nm,0.3s,baz=286,slow=11,SNR=4.9	**10.77**	**112**	P	**Pn**	**00 30 58.0**	**+1.1**
TRQA	**Tornquist** 7.0nm,0.6s	**16.31**	**161**	*e*P	**Pn**	**00 32 10.6**	**+2.1**
PLCA	**Paso Flores** 0.2nm,0.3s,baz=14,slow=12,SNR=5.9	**18.09**	**185**	P	**P**	**00 32 30.1**	**+1.0**
PLCA	**Paso Flores** 4.5nm,0.8s	**18.09**	**185**	*e*P	**P**	**00 32 30.5**	**+1.4**
SPB	**Sao Paulo** 18nm,0.6s	**19.37**	**97**	*e*P	**P**	**00 32 43.1**	**-0.3**
CAM4	**Nova Friburgo**	**23.92**	**94**	⇓*i*P	**P**	**00 33 30.2**	**0.0**
CAM4				*i*		00 33 34.0	
CAM4				*i*		00 33 44.4	
CAM4				*i*		00 33 51.5	
CAM4				*i*		00 34 02.8	
CAM4				*i*		00 34 20.0	
PMSA	**Palmer Station** 20nm,0.5s,mb5.1,baz=6.5,slow=18,SNR=28	**42.18**	**177**	P	**P**	**00 36 07.2**	**-0.6**
TXAR	**Lajitas Array** 0.2nm,0.6s,mb3.3,baz=110,slow=7.8,SNR=2.9	**61.83**	**325**	P	**P**	**00 38 33.6**	**-0.3**
QSPA	**South Pole Qui** 5.5nm,0.5s,mb4.6	**67.52**	**180**	*e*P	**P**	**00 39 11.7**	**+1.5**
ANMO	**Albuquerque** 0.2nm,0.7s,mb3.1	**67.71**	**327**	*e*P	**P**	**00 39 11.5**	**-0.4**
DBIC	**Dimbokro** 6.6nm,0.9s,mb4.5,baz=181,slow=10,SNR=5.6	**68.68**	**73**	P	**P**	**00 39 18.4**	**-0.2**
SYO	**Syowa Base**	**75.26**	**159**	⇑*e*P	**P**	**00 39 56.4**	**-0.5**
TOA0	**Torodi Ar. Sit**	**77.37**	**70**	*e*P	**P**	**00 40 11.4**	**+1.7**
TORD	**Torodi Ar. Bea** 3.7nm,0.3s,mb4.5,baz=258,slow=5.3,SNR=70	**77.37**	**70**	P	**P**	**00 40 09.1**	**-0.6**
BOSA	**Boshof** 2.2nm,0.8s,mb4.0,baz=150,slow=3.6,SNR=4.1	**82.54**	**118**	P	**P**	**00 40 37.6**	**+0.1**
MAW	**Mawson** 1.8nm,0.3s,mb4.3,baz=78,slow=3.8,SNR=16	**83.09**	**163**	P	**P**	**00 40 39.6**	**0.0**
YKA	**Yellowknife Ar** 0.7nm,0.5s,mb4.2,baz=141,slow=4.5,SNR=4.8	**92.43**	**340**	P	**P**	**00 41 23.9**	**-0.4**
ASAR	**Alice Springs** 1.3nm,0.8s,baz=127,slow=1.9,SNR=11	**129.06**	**207**	PKP	PKPdf	00 47 22.3	+0.1
WRA	**Warramunga Arr** 0.9nm,0.6s,baz=159,slow=1.7,SNR=4.8	**132.14**	**209**	PKP	PKPdf	00 47 28.3	+0.1
WRA	**Warramunga Arr**	**132.14**	**209**	PKP	PKPdf	00 47 28.3	+0.1
ZALV	**Zalesovo Beam** 0.4nm,0.3s,baz=338,slow=3.1,SNR=2.6	**142.84**	**26**	PKhKP		00 47 43.6	
ZALV	0.6nm,0.3s,baz=305,slow=5.2,SNR=4.4			PKP	PKPdf	00 47 47.2	+0.5
MK31	**Makanchi Array** 1.3nm,0.6s,baz=358,slow=3.6,SNR=11	**146.33**	**37**	*e*PKPbc	PKPbc	00 47 53.6	-0.8
MKAR	**Makanchi Array**	**146.33**	**37**	PKPbc	PKPbc	00 47 53.7	-0.7
MKAR	**Makanchi Array**	**146.33**	**37**	PKPbc	PKPbc	00 47 53.7	-0.7

ISC 07 00:28:35.6±0.9, 41.°47N±0.°05×75.°9E±0.°1, h10km, n12, σ1°24/15, 4C, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZA	**Kyzart** SNR=66	**0.77**	**323**	P	**Pg**	**00 28 49.1**	**-1.3**
UCH	**Uchtor** SNR=69	**1.27**	**307**	P	**Pn**	**00 28 58.4**	**-0.9**
KBK	**Karagaybulak** SNR=124	**1.37**	**330**	P	**Pn**	**00 29 00.1**	**-0.7**
TKM2	**Tokmak 2** 12nm,0.2s	**1.47**	**352**	⇑P	**Pn**	**00 29 00.4**	**-1.7**
TKM2	18nm,0.4s			⇑S	**Sg**	**00 29 24.2**	**+1.4**
TKM2	**Tokmak 2** SNR=39	**1.47**	**352**	P	**Pn**	**00 29 00.3**	**-1.7**
AAK	**Ala-Archa** SNR=57	**1.55**	**319**	P	**Pn**	**00 29 03.6**	**+0.3**
CHMS	**Chumysh** SNR=11	**1.74**	**332**	P	**Pn**	**00 29 06.0**	**+0.2**
AML	**Almayashu** SNR=45	**1.76**	**293**	P	**Pn**	**00 29 06.3**	**+0.2**
KSH	**Kashi**	**1.95**	**178**	Pn	**Pn**	**00 29 06.2**	**-2.5**
KSH				Sn	**Sn**	**00 29 35.1**	**+1.9**
KSH	49nm,0.6s			smax			
KSH	63nm,0.6s			smax			
EKS2	**Erkin-Say** SNR=15	**1.96**	**308**	P	**Pn**	**00 29 10.1**	**+1.2**
USP	**Ospenovka** SNR=82	**2.07**	**331**	P	**Pn**	**00 29 11.7**	**+1.4**
KK31	**Karatay Array** 2.1nm,0.7s,baz=107,slow=15,SNR=17	**4.30**	**294**	⇑P	**Pg**	**00 29 53.8**	**-4.1**
KK31	5.4nm,0.7s,baz=109,slow=27			⇑S	**Sg**	**00 30 53.7**	**0.0**

IDC ***07*** *00:48:09.5±0.5, 31.°10N×103.°47E, h0km, mb4.2/21, mb1 4.3/23, mb1mx4.3/29, mbtmp4.2/23, ML3.9/2, MS3.7/17, Ms1 3.7/17, ms1mx3.5/40, Error ellipse: s-maj=20.7km s-min=11.8km az=50.0*
BJI ***07*** *00:48:10.9, 31.°12N×103.°66E, h14km, mB4.6/19, mb4.6/30, ML4.6/24, Ms4.5/47, Ms7 4.4/38*
NEIC ***07*** *00:48:11.4±0.2, 31.°14N×103.°46E, h10km, mb4.7/52, MS4.3/1, Error ellipse: s-maj=5.6km s-min=5.0km az=192.0*
ISCJB ***07*** *00:48:11.7±0.7, 31.°09N±0.°03×103.°49E±0.°03, h26km±5km, mb4.5/77, MS3.9/23, Error ellipse: s-maj=4.4km s-min=4.1km az=2.7*
MOS ***07*** *00:48:12.6±0.8, 31.°08N×103.°53E, h33km, mb4.7/38, MS4.0/6, Error ellipse: s-maj=8.5km s-min=5.6km az=109.9*
SZGRF ***07*** *00:49:07.4, 37.°51N×97.°43E, h33km, mb4.7, Qinghai, China*

ISC 07 00:48:12.3±0.7, 31.°18N±0.°02×103.°55E±0.°03, h14km±4km, h16km±1.9km: pP-P, n228, σ1°13/237, mb4.5/77, MS3.9/23, 8C-7D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.33**	**146**	⇑*i*Pg	**Pg**	**00 48 18.7**	**-0.3**
CD2				Sg	**Sg**	**00 48 25.0**	**+1.5**
CD2	137μm,0.7s			smax			
CD2	84μm,0.7s			smax			
LZH	**Lanzhou**	**4.90**	**3**	*e*Pn	**Pn**	**00 49 28.8**	**+3.3**
LZH				Sn	**Sn**	**00 50 29.7**	**+7.7**
LZH				Sg	**Sg**	**00 50 48.4**	**-1.1**
LZH	950nm,1.1s			smax			
LZH	1μm,1.3s			smax			
LZH	5μm,6.1s			LR	LR		
LZH	6μm,6.7s			LR	LR		
ENH	**Enshi** 286nm,0.5s	**5.20**	**99**	*e*Pn	**Pn**	**00 49 29.6**	**0.0**
ENH				*e*Sg	**Sg**	**00 50 56.9**	**-2.2**
XAN	**Xi'an**	**5.36**	**56**	Pn	**Pn**	**00 49 31.2**	**-0.6**
XAN				Sn	**Sn**	**00 50 28.8**	**-4.5**
XAN				Sg	**Sg**	**00 50 55.1**	**-9.2**
XAN	2μm,1.0s			smax			
XAN	1μm,0.9s			smax			
XAN	2μm,8.6s			LR	LR		
XAN	1μm,9.0s			LR	LR		
XAN	2μm,9.7s			LR	LR		
GYA	**Guiyang**	**5.44**	**149**	Pg	**Pn**	**00 49 35.7**	**+2.6**
GYA				Sg	**Sn**	**00 50 34.9**	**-0.6**
GYA	1μm,0.8s			smax			
GYA	980nm,0.9s			smax			
GYA	2μm,6.0s			LR	LR		
GYA	3μm,6.2s			LR	LR		
GYA	2μm,7.6s			LR	LR		
KMI	**Kunming**	**6.08**	**187**	⇓Pn	**Pn**	**00 49 42.2**	**+0.4**
KMI				Sn	**Sn**	**00 50 51.9**	**+0.7**
KMI				Sg	**Sg**	**00 51 24.4**	**-3.1**
KMI	130nm,1.7s			smax			
KMI	140nm,1.1s			smax			
KMI	3μm,9.1s			LR	LR		
KMI	4μm,7.5s			LR	LR		
GTA	**Gaotai**	**8.76**	**341**	⇑P	**Pn**	**00 50 21.6**	**+3.1**
GTA				pP		00 50 25.9	
GTA				sP		00 50 28.7	
GTA				S	**Sn**	**00 52 02.8**	**+5.8**
GTA				sS		00 52 07.8	
GTA	83nm,5.4s			pmax	pmax		
GTA	1μm,11.1s			LR	LR		
GTA	1μm,8.1s			LR	LR		
GTA	970nm,11.4s			LR	LR		
WHN	**Wuhan**	**9.31**	**91**	P	**Pn**	**00 50 24.9**	**-1.2**
WHN				S	**Sn**	**00 52 03.4**	**-7.3**
WHN	5μm,7.4s			LR	LR		
WHN	12μm,6.6s			LR	LR		
WHN	12μm,7.0s			LR	LR		
BTO	**Baotou**	**10.77**	**27**	*e*P	**Pn**	**00 50 51.1**	**+5.1**
LSA	**Lhasa**	**10.80**	**265**	P	**Pn**	**00 50 47.2**	**+0.6**
LSA	3μm,11.3s			LR	LR		
LSA	4μm,10.8s			LR	LR		
LSA	**Lhasa** 14nm,0.6s	**10.80**	**265**	*e*P	**Pn**	**00 50 48.0**	**+1.4**
LSA	14nm,0.6s			pmax	pmax		
LSA	**Lhasa** 14nm,0.6s	**10.80**	**265**	*e*Pn	**Pn**	**00 50 48.0**	**+1.4**
HHC	**Hu-ho-hao-te**	**11.62**	**32**	*e*P	**Pn**	**00 51 00.6**	**+2.9**
HHC				pP		00 51 03.9	
HHC				sP		00 51 07.0	
HHC				PP		00 51 10.1	
HHC				S	**Sn**	**00 53 12.7**	**+5.5**
HHC				SS		00 53 22.9	
HHC	9.0nm,0.9s			pmax	pmax		
HHC	120nm,4.5s			pmax	pmax		
HHC	2μm,7.8s			LR	LR		
HHC	1μm,6.8s			LR	LR		
HHC	2μm,12.0s			LR	LR		
TIA	**Tai'an** 550nm,9.0s	**12.37**	**62**	*e*P	**Pn**	**00 51 09.4**	**+1.4**
TIA				LR	LR		
CHG	**Chiang Mai** 18nm,0.9s	**13.00**	**200**	⇑P	**Pn**	**00 51 27.3**	**+11**
CHTO	**Chiang Mai** 13nm,0.6s	**13.00**	**200**	*e*P	**Pn**	**00 51 17.5**	**+0.8**
CHTO	13nm,0.6s			pmax	pmax		
CHTO	**Chiang Mai** 13nm,0.6s	**13.00**	**200**	*e*Pn	**Pn**	**00 51 17.5**	**+0.8**
NJ2	**Nanjing**	**13.08**	**82**	*e*P	**Pn**	**00 51 17.7**	**0.0**
NJ2				pP		00 51 21.0	
NJ2				sP		00 51 24.3	
NJ2				PP		00 51 28.1	
NJ2				S	**Sn**	**00 53 41.2**	**-1.8**
NJ2	40nm,0.8s			pmax	pmax		
NJ2	90nm,5.2s			pmax	pmax		
NJ2	2μm,14.4s			LR	LR		
NJ2	4μm,12.5s			LR	LR		
NJ2	5μm,12.2s			LR	LR		
CM31	**Chiang Mai Arr**	**13.34**	**199**	*e*Pn	**Pn**	**00 51 23.0**	**+1.7**
CMAR	**Chiang Mai Arr** 0.3nm,0.3s,baz=9.9,slow=12,SNR=11	**13.34**	**199**	Pn	**Pn**	**00 51 19.4**	**-1.9**
CMAR	548nm,18.1s,baz=15,slow=39			LR	LR	00 56 45.5	
QIZ	**Qiongzhong**	**13.37**	**153**	P	**Pn**	**00 51 22.5**	**+0.7**
QIZ				pP		00 51 25.3	
QIZ				S	**Sn**	**00 53 53.6**	**+3.3**
QIZ	22nm,1.7s			pmax	pmax		
QIZ	1μm,7.4s			LR	LR		
QIZ	820nm,8.4s			LR	LR		
BJI	**Beijing**	**13.54**	**46**	P	**Pn**	**00 51 23.7**	**-0.3**
BJI	31nm,1.3s			pmax	pmax		
BJI	1μm,9.4s			LR	LR		
BJI	580nm,7.2s			LR	LR		
BJI	330nm,21.7s			LR	LR		
TAPN	**Taplejung**	**14.34**	**259**	*e*P	**Pn**	**00 51 33.7**	**-1.2**
BDT	**Bhumibol Dam** 36nm,0.9s	**14.48**	**198**	P	**Pn**	**00 51 44.0**	**+7.1**
ODAN	**Odare** 39nm,0.6s	**14.77**	**257**	*e*P	**Pn**	**00 51 39.0**	**-1.9**
KKTK	**Khon Kaen**	**14.79**	**183**	P	**Pn**	**00 51 44.0**	**+2.8**
RAMN	**Ramite**	**15.40**	**258**	*e*P	**Pn**	**00 51 46.6**	**-2.7**
GUN	**Gumba** 113nm,0.9s	**15.72**	**262**	*e*P	**Pn**	**00 51 50.1**	**-3.2**
NST	**Nakhon Sawan** 50nm,1.0s	**15.75**	**192**	P	**Pn**	**00 51 57.0**	**+3.2**
PKI	**Pulchoki** 74nm,1.0s	**16.21**	**262**	*e*P	**Pn**	**00 51 56.1**	**-3.7**
PKI	**Pulchoki** 74nm,1.0s	**16.21**	**262**	*e*P	**Pn**	**00 51 57.1**	**-2.7**
PKI	48nm,0.8s			pmax	pmax		
PKI	**Pulchoki** 48nm,0.8s	**16.21**	**262**	*e*P	**Pn**	**00 51 57.1**	**-2.7**
PKIN	**Phulchoki** 48nm,0.8s	**16.22**	**262**	*e*P	**Pn**	**00 51 57.1**	**-2.8**

KKN Kakani 16.26 263 *e*P **Pn 00 51 56.9 -3.5**
comp=Z,92nm,0.8s
KKN Kakani 16.26 263 *e*P **Pn 00 51 56.9 -3.5**
KKN pmax pmax
comp=Z,92nm,0.8s
DMN Daman 16.46 262 *e*P **Pn 00 51 59.4 -3.5**
comp=Z,122nm,1.1s
DL2 Dalian 16.68 58 P **Pn 00 52 08.3 +2.7**
DL2 S **Sn 00 55 17.9 +7.4**
DL2 pmax pmax
comp=Z,30nm,1.2s
DL2 pmax pmax
comp=Z,140nm,6.5s
DL2 LR LR
comp=N,290nm,17.1s
DL2 LR LR
comp=E,410nm,16.6s
DL2 LR LR
comp=Z,590nm,13.8s
SONM Songino Array 16.77 7 Pn **Pn 00 52 07.6 +0.9**
comp=Z,0.2nm,0.3s,baz=188,slow=14,SNR=20
SONM LR LR 00 59 20.8
comp=Z,736nm,18.4s,baz=187,slow=40
ULN Ulaanbaatar 16.88 8 *e*P **Pn 00 52 08.5 +0.5**
ULN pmax pmax
comp=Z,15nm,1.1s
ULN Ulaanbaatar 16.88 8 *e*Pn **Pn 00 52 08.5 +0.5**
comp=Z,15nm,1.1s
TPUB Ta-pu 17.09 113 *e*Pn **Pn 00 52 10.5 -0.3**
comp=Z,46nm,1.4s
SSLB Suanglung 17.10 111 *e*Pn **Pn 00 52 12.0 +1.0**
comp=Z,47nm,1.0s
WMQ Urumqi 17.77 320 P **Pn 00 52 20.0 +0.8**
WMQ sP sP 00 52 27.0 +1.3
WMQ PP 00 52 34.0
WMQ S **Sn 00 55 36.0 -1.1**
WMQ SS 00 56 02.0
WMQ pmax pmax
comp=Z,18nm,0.8s
WMQ LR LR
comp=N,420nm,6.0s
WMQ LR LR
comp=E,240nm,6.0s
WMQ LR LR
comp=Z,270nm,6.0s
SNY Shenyang 19.25 51 ⇓P **Pn 00 52 38.1 +0.9**
SNY S **Sn 00 56 10.8 -1.9**
SNY pmax pmax
comp=Z,24nm,1.8s
SNY pmax pmax
comp=Z,280nm,3.5s
SNY LR LR
comp=N,370nm,20.5s
SNY LR LR
comp=E,230nm,21.7s
TLY Talaya 20.48 0 *e*P pP 00 53 01.3 +7.8
TLY *e*S **S 00 56 41.8 +3.5**
TLY pmax pmax
comp=Z,12nm,1.1s
TLY MLR MLR
comp=Z,586nm,16.0s,MS4.0
MOY Mondy 20.55 355 *e*P **P 00 52 54.2 +3.9**
MOY pmax pmax
comp=Z,44nm,2.5s
KSRS Korea Array 21.05 66 P **P 00 52 56.0 +0.1**
comp=Z,16nm,0.8s,mb4.4,baz=261,slow=9.8,SNR=56
KSRS LR LR 01 01 48.0
comp=Z,235nm,21.7s,MS3.5,baz=69,slow=39
KSRS Korea Array 21.05 66 P **P 00 52 56.1 +0.2**
KSRS pmax pmax
comp=Z,16nm,0.8s,mb4.4
KSRS MLR MLR
comp=Z,235nm,21.7s,MS3.5
CN2 Changchun 21.39 48 ⇑P **P 00 53 00.4 +1.0**
CN2 *es*P sP 00 53 07.5 +2.3
CN2 *e*PP 00 53 23.5
CN2 *e*S **S 00 56 52.0 -4.4**
CN2 pmax pmax
comp=Z,70nm,0.9s,mb5.0
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,500nm,10.0s,MS4.3
CN2 LR LR
comp=E,400nm,10.0s,MS4.3
CN2 LR LR
comp=Z,500nm,14.0s,MS4.1
HIA Hailar 21.81 29 *e*P **P 00 53 04.3 +0.4**
HIA pmax pmax
comp=Z,21nm,0.8s
HIA Hailar 21.81 29 *e*P **P 00 53 04.3 +0.4**
comp=Z,21nm,0.8s,mb4.6
CIT Chita 22.08 17 *e*P **P 00 53 06.4 -0.4**
MK31 Makanchi Array 22.61 320 *e*P **P 00 53 13.0 +0.5**
MKAR Makanchi Array 22.61 320 P **P 00 53 12.7 +0.2**
comp=Z,7.2nm,1.0s,mb4.1,baz=110,slow=10,SNR=21
KSH Kashi 23.91 298 P **P 00 53 29.0 +3.3**
KSH pP 00 53 33.2
KSH sP sP 00 53 36.0 +4.4
KSH PP 00 54 03.8
KSH PcP PcP 00 57 10.9 +2.8
KSH S **S 00 57 43.9 +2.3**
KSH sS sS 00 57 50.8 +2.3
KSH SS 00 58 36.2
KSH ScP ScP 01 00 47.5 +1.3
KSH PcS PcS 01 00 49.3 +1.6
KSH ScS ScS 01 04 33.6 +0.6
KSH pmax pmax
comp=Z,12nm,1.2s,mb4.2
KSH pmax pmax
comp=Z,120nm,3.5s
KSH LR LR
comp=N,160nm,7.2s
KSH LR LR
comp=E,360nm,7.6s
KSH LR LR
comp=Z,340nm,8.7s
MDJ Mudanjiang 24.42 49 P **P 00 53 31.2 +0.9**
MDJ pP 00 53 34.1
MDJ sP sP 00 53 35.4 -0.8
MDJ PcP PcP 00 57 09.4 +0.3
MDJ S **S 00 57 50.4 +0.7**
MDJ sS sS 00 57 57.6 +1.0
MDJ ScP ScP 01 00 47.5 +0.1
MDJ PcS PcS 01 00 49.0 +0.1
MDJ pmax pmax
comp=Z,35nm,1.6s,mb4.5
MDJ pmax pmax
comp=Z,86nm,3.3s
MDJ LR LR
comp=N,120nm,8.6s
MDJ LR LR
comp=E,360nm,9.9s
MDJ LR LR
comp=Z,370nm,12.5s,MS4.1
MDJ Mudanjiang 24.42 49 *e*P **P 00 53 30.3 0.0**
comp=Z,88nm,1.5s,mb5.0
KZA Kyzart 25.07 304 P **P 00 53 38.5 +2.3**
SNR=21
TKM2 Tokmak 2 25.08 306 *e*P **P 00 53 37.5 +1.2**
TKM2 pmax pmax
comp=Z,14nm,1.2s,mb4.4
TKM2 Tokmak 2 25.08 306 *e*P **P 00 53 37.5 +1.2**
comp=Z,14nm,1.2s,mb4.4
KBK Karagaybulak 25.45 305 P **P 00 53 41.5 +1.8**
SNR=8.8
UCH Uchtor 25.64 304 P **P 00 53 43.9 +2.5**
SNR=13
UCH Uchtor 25.64 304 *e*P **P 00 53 43.4 +1.9**
comp=Z,31nm,1.2s,mb4.7
FRU Bishkek 25.74 305 *e*P **P 00 53 47.0 +4.7**
FRU pmax pmax
comp=Z,100nm,1.9s,mb5.0
AAK Ala-Archa 25.76 304 P **P 00 53 49.6 +7.1**
SNR=6.7
AAK Ala-Archa 25.76 304 P **P 00 53 42.4 -0.1**
comp=Z,5.3nm,0.8s,mb4.1,baz=104,slow=8.7,SNR=7.1
AAK LR LR 01 05 23.3
comp=Z,410nm,20.2s,MS4.0,baz=87,slow=40
AAK Ala-Archa 25.76 304 P **P 00 53 42.4 -0.2**
AAK pmax pmax
comp=Z,5.0nm,0.8s,mb4.1
AAK MLR MLR
comp=Z,410nm,20.2s,MS4.0
AAK Ala-Archa 25.76 304 *e*P **P 00 53 44.3 +1.7**
comp=Z,30nm,1.1s,mb4.7

USP Ospenovka 25.95 306 P **P 00 53 50.9 +6.6**
SNR=9.9
AML Almayashu 26.20 303 P **P 00 53 45.6 -0.9**
SNR=7.2
AML Almayashu 26.20 303 *e*P **P 00 53 45.4 -1.1**
comp=Z,18nm,1.1s,mb4.5
EKS2 Erkin-Say 26.28 304 P **P 00 53 56.4 +9.1**
SNR=5.6
EKS2 Erkin-Say 26.28 304 *e*P **P 00 53 48.4 +1.2**
comp=Z,53nm,1.5s,mb4.8
ZAA0 Zalesovo Array 26.44 335 *e*P **P 00 53 48.9 +0.3**
ZALV Zalesovo Beam 26.44 335 P **P 00 53 49.1 +0.5**
comp=Z,6.0nm,0.9s,mb4.1,baz=138,slow=9.1,SNR=11
ZALV LR LR 01 06 10.0
comp=Z,24nm,21.7s,baz=240,slow=41
KURK Kurchatov 26.90 324 P **P 00 53 53.0 +0.3**
comp=Z,9.4nm,0.9s,mb4.3,baz=130,slow=9.2,SNR=44
KURK LR LR 01 05 39.6
comp=Z,217nm,18.4s,MS3.8,baz=120,slow=39
KURK Kurchatov 26.90 324 P **P 00 53 53.0 +0.3**
KURK pmax pmax
comp=Z,9.0nm,0.9s,mb4.3
KURK MLR MLR
comp=Z,217nm,18.4s,MS3.7
KURK Kurchatov 26.90 324 *e*P **P 00 53 53.1 +0.4**
comp=Z,19nm,1.1s,mb4.5
NVS Novosibirsk 27.72 334 *e*P **P 00 53 52.7 -7.4**
KLR Kul'dur 27.85 42 *e*P **P 00 54 00.0 -1.2**
KLR MLR MLR
comp=E,800nm,11.0s
KLR MLR MLR
comp=Z,2μm,11.0s,MS4.9
PSI Prapat 28.57 190 LR LR 01 06 07.2
comp=Z,133nm,19.8s,MS3.5,baz=20,slow=38
MJAR Matsushiro Arr 29.17 70 P **P 00 54 13.9 +0.6**
comp=Z,0.9nm,0.3s,mb3.9,baz=279,slow=8.4,SNR=5.9
MJAR LR LR 01 06 31.3
comp=Z,139nm,19.4s,MS3.6,baz=265,slow=38
HABR Khabarovsk 29.44 45 P **P 00 54 14.5 -1.0**
HABR *e**SP sP 00 54 27.7 +6.3
HABR 00 55 09.3
HABR *e*S **S 00 59 07.3 -1.8**
HABR *e**SS sS 00 59 23.7 +7.7
HABR SS SS 01 00 37.7 -36
HABR *e* 01 04 53.2
HABR MLR MLR
comp=Z,425nm,10.0s,MS4.4
PALK Pallekele 31.97 227 LR LR 01 08 10.5
comp=Z,147nm,21.8s,MS3.6,baz=46,slow=38
BVAR Borovoye Array 32.43 322 P **P 00 54 42.0 +0.3**
comp=Z,2.0nm,0.8s,mb4.0,baz=112,slow=10,SNR=6.8
BVAR PcP PcP 00 57 28.0 -0.8
comp=Z,2.3nm,0.7s,baz=149,slow=2.2,SNR=8.1
BRVK Borovoye 32.51 322 *e*P **P 00 54 42.7 +0.3**
BRVK pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
BRVK Borovoye 32.51 322 *e*P **P 00 54 42.7 +0.3**
comp=Z,6.8nm,1.1s,mb4.5
ABKAR Akbulak array 37.26 312 *e*P **P 00 55 23.7 +0.2**
comp=Z,1.0nm,0.6s,mb3.8
SVE Sverdlovsk 39.15 324 *e*P **P 00 55 40.1 +0.8**
SVE pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
ARU Arti 40.08 322 *d i*P **P 00 55 47.1 +0.1**
ARU S **S 01 01 52.3 -0.2**
ARU SS SS 01 04 47.0 -2.7
ARU pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
ARU Arti 40.08 322 *e*P **P 00 55 47.2 +0.2**
comp=Z,11nm,1.0s,mb4.5
TIXI Tiksi 42.77 12 *e*P **P 00 56 10.4 +1.5**
TIXI pmax pmax
comp=Z,23nm,1.7s,mb4.6
TIXI Tiksi 42.77 12 *e*P **P 00 56 10.4 +1.5**
comp=Z,23nm,1.7s,mb4.6
SEY Seymchan 44.26 30 ⇑*e*P **P 00 56 22.9 +1.9**
PETK Petropavlovsk- 44.47 44 P **P 00 56 22.6 -0.3**
comp=Z,3.9nm,0.8s,mb4.2,baz=297,slow=16,SNR=3.6
PETK LR LR 01 16 56.5
comp=Z,171nm,18.2s,MS4.0,baz=133,slow=39
GNI Garni 47.84 298 *e*P **P 00 56 50.5 +0.9**
GNI pmax pmax
comp=Z,8.0nm,1.2s
GNI Garni 47.84 298 *e*P **P 00 56 50.5 +0.8**
comp=Z,7.9nm,1.2s,mb4.6
ZEI Tsey 48.12 301 *e*P **P 00 56 51.8 0.0**
ZEI pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
KIV Kislovodsk 48.87 303 ⇑*e*P **P 00 56 58.1 +0.6**
KIV *e* 00 57 07.5
KIV *e* 00 57 12.9
KIV 00 58 25.0
KIV pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
KIV MLR MLR
comp=Z,100nm,16.0s,MS3.9
KIV Kislovodsk 48.87 303 *e*P **P 00 56 57.4 -0.1**
comp=Z,13nm,1.0s,mb4.9
VSR Storozhevoye 50.68 313 *e*P **P 00 57 10.0 -1.2**
VSR pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
VSR pmax pmax
comp=N,2.0nm,0.4s
VSR pmax pmax
comp=E,4.0nm,0.6s
BILL Bilibino 51.31 25 ⇑*e*P **P 00 57 15.3 -0.3**
BILL *e* pP 00 57 20.3 +0.3
BILL pmax pmax
comp=Z,10.0nm,1.5s,mb4.5
BILL MLR MLR
comp=Z,200nm,17.0s,MS4.2
BILL Bilibino 51.31 25 *e*P **P 00 57 14.9 -0.7**
comp=Z,12nm,1.2s,mb4.7
KAKA Kakadu 51.72 143 *e*P **P 00 57 19.8 +0.5**
OBN Obninsk 52.10 318 ⇓*e*P **P 00 57 21.6 -0.1**
OBN pmax pmax
comp=Z,6.0nm,0.4s,mb4.9
OBN MLR MLR
comp=Z,200nm,17.0s,MS4.2
FITZ Fitzroy Crossi 53.40 154 P **P 00 57 30.6 -1.1**
comp=Z,2.8nm,0.8s,mb4.2,baz=346,slow=8.3,SNR=2.7
MBWA Marble Bar 54.31 161 *e*P **P 00 57 38.6 +0.3**
comp=Z,26nm,1.1s,mb5.1
JOF Joensuu 54.70 328 *e*P **P 00 57 38.0 -2.7**
JOF pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
JOF Joensuu 54.70 328 *ep* **P 00 57 38.0 -2.7**
comp=Z,0.5nm,0.3s,mb4.0
JOF Joensuu 54.70 328 *ep* **P 00 57 38.0 -2.7**
comp=Z,0.5nm,0.3s,mb4.0
BR131 Keskin Array S 56.29 299 *e*P **P 00 57 50.5 -2.0**
BRTR Keskin Array B 56.29 299 P **P 00 57 52.1 -0.4**
comp=Z,0.6nm,0.6s,mb3.8,baz=111,slow=7.0,SNR=5.9
BRTR LR LR 01 26 45.0
comp=Z,36nm,19.1s,MS3.5,baz=221,slow=41
KEV Kevo 56.47 336 *e*P **P 00 57 51.2 -2.1**
KEV pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
KEV Kevo 56.47 336 *ep* **P 00 57 51.2 -2.1**
comp=Z,0.5nm,0.3s,mb4.0
KEV Kevo 56.47 336 *ep* **P 00 57 51.2 -2.1**
comp=Z,0.5nm,0.3s,mb4.0
MMAI Mount Meron Ar 56.80 291 LR LR 01 28 32.1
comp=Z,74nm,18.7s,MS3.8,baz=235,slow=43
AKASG Malin Array Be 56.98 313 P **P 00 57 56.3 -1.0**
comp=Z,1.8nm,0.4s,mb4.4,baz=73,slow=6.3,SNR=10
AKASG Malin Array Be 56.98 313 *ce*P **P 00 57 56.2 -1.1**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
ARCES ARCESS Array B 56.99 336 P **P 00 57 56.6 -0.4**
comp=Z,3.4nm,0.9s,mb4.4,baz=92,slow=7.7,SNR=6.3
ARCES PcP PcP 00 58 50.9 -1.2
comp=Z,0.8nm,0.4s,baz=92,slow=3.9,SNR=6.0
KAF Kangasniemi 57.06 327 *ep* **P 00 57 54.0 -3.6**
comp=Z,0.4nm,0.4s,mb3.8
KAF Kangasniemi 57.06 327 *ep* **P 00 57 54.0 -3.6**
comp=Z,0.4nm,0.4s,mb3.8
FINES FINESS Array B 57.23 326 P **P 00 57 58.3 -0.5**
comp=Z,1.6nm,0.5s,mb4.3,baz=91,slow=6.0,SNR=9.8
WRAB Tennant Creek 58.80 146 *e*P **P 00 58 09.8 -0.5**
WRAB pmax pmax
comp=Z,23nm,1.2s,mb5.1
WRAB Tennant Creek 58.80 146 *e*P **P 00 58 09.8 -0.6**
comp=Z,23nm,1.2s,mb5.1
WRA Warramunga Arr 58.81 146 P **P 00 58 09.9 -0.4**
comp=Z,5.5nm,0.6s,mb4.8,baz=338,slow=7.8,SNR=56

SUW Suwalki 59.96 318 *e*P **P 00 58 18.1 +0.2**
SUW Suwalki 59.96 318 *e*P **P 00 58 18.1 +0.1**
comp=Z,9.0nm,0.6s,mb5.0
BUR08 Bucovina Ar. S 60.22 310 *e*P **P 00 58 19.2 -0.7**
KWP Kalwaria Pacla 61.30 313 *e*P **P 00 58 27.3 +0.1**
KWP Kalwaria Pacla 61.30 313 *e*P **P 00 58 26.9 -0.3**
KWP pmax pmax
comp=Z,21nm,1.1s,mb5.2
KWP Kalwaria Pacla 61.30 313 *e*P **P 00 58 26.9 -0.3**
comp=Z,21nm,1.1s,mb5.2
KOLS Kolonicke sedl 61.77 312 *e*P **P 00 58 30.3 -0.1**
KOLS pmax pmax
comp=Z,5.0nm,1.5s,mb4.4
KOLS Kolonicke sedl 61.77 312 *e*P **P 00 58 30.3 -0.1**
comp=Z,5.4nm,1.5s,mb4.5
KOLS Kolonicke sedl 61.77 312 *e*P **P 00 58 30.3 -0.1**
ASAR Alice Springs 61.81 148 P **P 00 58 30.6 -0.2**
comp=Z,1.7nm,0.7s,mb4.3,baz=329,slow=6.9,SNR=16
STHS Stebnicka Huta 62.28 313 *e*P **P 00 58 34.5 +0.7**
STHS *e* 00 58 44.6
STHS pmax pmax
comp=Z,3.0nm,1.1s,mb4.3
STHS Stebnicka Huta 62.28 313 *e*P **P 00 58 34.5 +0.7**
comp=Z,2.7nm,1.1s,mb4.3
STHS *e* 00 58 44.6
STHS Stebnicka Huta 62.28 313 *e*P **P 00 58 34.5 +0.7**
STHS *e* 00 58 44.6
CRVS Cervenica-Dubn 62.29 312 *e*P **P 00 58 34.2 +0.3**
CRVS *e* 00 58 50.1
CRVS pmax pmax
comp=Z,5.0nm,1.7s,mb4.4
CRVS Cervenica-Dubn 62.29 312 *e*P **P 00 58 34.2 +0.3**
comp=Z,5.3nm,1.7s,mb4.4
CRVS *e* 00 58 50.1
CRVS Cervenica-Dubn 62.29 312 *e*P **P 00 58 34.2 +0.3**
CRVS *e* 00 58 50.1
NIE Niedzica 62.86 313 *e*P **P 00 58 38.4 +0.7**
KECS Kecovo 63.03 312 *e*P **P 00 58 38.9 +0.1**
KECS pmax pmax
comp=Z,2.0nm,1.0s,mb4.2
KECS Kecovo 63.03 312 *e*P **P 00 58 38.9 +0.1**
comp=Z,2.2nm,1.0s,mb4.2
KECS *e*PP pP 00 58 42.8 -0.5
KECS Kecovo 63.03 312 *e*P **P 00 58 38.9 +0.1**
KECS *e*pP pP 00 58 42.8 -0.5
VYHS Vyhne 64.07 313 *e*P **P 00 58 45.6 -0.1**
VYHS pmax pmax
comp=Z,5.0nm,1.6s,mb4.3
VYHS Vyhne 64.07 313 *e*P **P 00 58 45.6 -0.1**
comp=Z,5.3nm,1.6s,mb4.3
VYHS *e*PP pP 00 59 01.8 +12
VYHS Vyhne 64.07 313 *e*P **P 00 58 45.6 -0.1**
VYHS *e* pP 00 59 01.8 +12
NB2 NORSAR Subarra 64.33 327 P **P 00 58 46.1 -1.1**
comp=Z,0.7nm,0.7s,mb3.8,baz=74,slow=6.9
NOA NORSAR Array B 64.33 327 P **P 00 58 45.5 -1.7**
comp=Z,0.5nm,0.6s,mb3.7,baz=77,slow=5.4,SNR=4.0
MORC Moravsky Berou 64.47 314 *e*P **P 00 58 48.2 -0.1**
MORC pmax pmax
comp=Z,1.0nm,0.6s,mb4.0
MORC Moravsky Berou 64.47 314 *e*P **P 00 58 48.2 -0.1**
comp=Z,1.0nm,0.6s,mb4.0
DPC Dobruska-Polom 65.03 315 *e*P **P 00 58 52.2 +0.3**
DPC Dobruska-Polom 65.03 315 *e*P **P 00 58 52.2 +0.3**
UPC Upice 65.16 315 *e*P **P 00 58 52.9 +0.1**
UPC Upice 65.16 315 *e*P **P 00 58 52.9 +0.1**
PRU Pruhonice 66.23 315 *e*P **P 00 59 00.1 +0.4**
PRU Pruhonice 66.23 315 *e*P **P 00 59 00.1 +0.4**
BRG Berggiesshubel 66.27 316 *e*P **P 00 58 59.6 -0.3**
comp=Z,5.0nm,1.3s,mb4.4
BRG Berggiesshubel 66.27 316 *e*P **P 00 58 59.6 -0.4**
BRG pmax pmax
comp=Z,3.0nm,1.3s,mb4.2
CLL Collm 66.67 317 *e*P **P 00 59 01.7 -0.8**
comp=Z,10.0nm,1.7s,mb4.6
CLL Collm 66.67 317 ⇓*i*P **P 00 59 01.7 -0.8**
CLL *e* pP 00 59 07.0 0.0
CLL pmax pmax
comp=Z,10.0nm,1.6s,mb4.6
CLL MLR MLR
comp=Z,200nm,19.7s,MS4.3
CLL Collm 66.67 317 ⇓*i*P **P 00 59 01.7 -0.8**
comp=Z,10.0nm,1.6s,mb4.6
CLL *e* pP 00 59 07.0 0.0
CLL LR LR
comp=Z,200nm,19.7s,MS4.3
CLL Collm 66.67 317 ⇓*i*P **P 00 59 01.7 -0.8**
comp=Z,10.0nm,1.6s,mb4.6
CLL Lm 00 29 00.0
comp=N,100nm,19.2s
CLL Lm 00 29 00.0
comp=E,100nm,20.6s
CLL Lm 00 29 00.0
comp=Z,200nm,19.7s
CLL *e*(pP) pP 00 59 07.0 0.0
KHC Kasperske Hory 67.12 315 *e*P **P 00 59 00.4 -5.0**
KHC Kasperske Hory 67.12 315 *e*P **P 00 59 00.4 -5.0**
GEC2 GERESS Array S 67.15 314 *e*P **P 00 59 05.4 -0.2**
comp=Z,6.0nm,1.3s,mb4.5
GERES GERESS Array B 67.15 314 P **P 00 59 05.3 -0.3**
comp=Z,0.8nm,0.6s,mb3.9,baz=74,slow=4.7,SNR=12
TTA Tatalina 67.23 29 *e*P **P 00 59 03.3 -2.5**
TTA pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
TTA Tatalina 67.23 29 *e*P **P 00 59 03.3 -2.6**
comp=Z,6.0nm,1.1s,mb4.5
COLD Coldfoot 67.59 24 *e*P **P 00 59 08.6 +0.5**
comp=Z,9.8nm,1.0s,mb4.8
ROTZ Rotzenmuhle 67.71 316 *e*P **P 00 59 09.3 +0.2**
comp=Z,11nm,1.5s,mb4.7
CLZ Clausthal 68.00 318 *e*P **P 00 59 11.0 +0.1**
comp=Z,9.0nm,1.2s,mb4.7
RJOB Jochberg 68.13 313 *e*P **P 00 59 12.5 +0.7**
comp=Z,7.0nm,1.4s,mb4.5
GRF Grafenberg Arr 68.33 316 *e*P **P 00 59 13.0 0.0**
comp=Z,10.0nm,1.2s,mb4.7
GRF Grafenberg Arr 68.33 316 *e*P **P 00 59 13.0 0.0**
GRF pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
GRF Grafenberg Arr 68.33 316 *e*P **P 00 59 13.0 0.0**
comp=Z,10.0nm,1.2s,mb4.7
BPAW Bear Paw Mtn. 68.75 27 *e*P **P 00 59 15.3 -0.1**
comp=Z,12nm,1.0s,mb4.8
PPLA Purkeypile 68.82 28 *e*P **P 00 59 16.1 +0.2**
comp=Z,17nm,1.1s,mb4.9
FUR Furstenfeldbru 68.90 314 *e*P **P 00 59 17.3 +0.7**
comp=Z,40nm,1.6s,mb5.1
COLA College 69.56 26 *e*P **P 00 59 20.2 -0.2**
COLA pmax pmax
comp=Z,13nm,0.9s,mb4.9
COLA College 69.56 26 *e*P **P 00 59 20.2 -0.3**
comp=Z,13nm,0.9s,mb4.9
BFO Black Forest 70.63 315 *i*P **P 00 59 27.5 +0.3**
PMR Palmer 70.70 29 *e*P **P 00 59 29.4 +1.9**
PMR pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
PMR Palmer 70.70 29 *e*P **P 00 59 29.4 +1.9**
comp=Z,10nm,1.0s,mb4.7
KDAK Kodiak Island 71.04 33 *i*P **P 00 59 29.7 +0.2**
CDF Champ du Feu 71.22 316 *e*P **P 00 59 30.0 -0.9**
comp=Z,6.8nm,0.8s,mb4.3
CDF Champ du Feu 71.22 316 *e*P **P 00 59 30.0 -0.9**
CDF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
CDF Champ du Feu 71.22 316 *e*P **P 00 59 30.0 -0.9**
comp=Z,3.4nm,0.8s,mb4.3
WLF Walferdange 71.34 317 P **P 00 59 31.7 +0.1**
comp=Z,8.6nm,1.4s,mb4.5
WLF Walferdange 71.34 317 *e*P **P 00 59 31.3 -0.2**
WLF pmax pmax
comp=Z,11nm,1.0s,mb4.7
WLF Walferdange 71.34 317 *e*P **P 00 59 31.3 -0.2**
comp=Z,11nm,1.0s,mb4.7
INK Inuvik 72.24 19 LR LR 01 34 15.6
comp=Z,65nm,19.1s,MS3.9,baz=249,slow=38
INK Inuvik 72.24 19 *e*P **P 00 59 36.5 -0.1**
INK pmax pmax
comp=Z,11nm,1.1s
INK Inuvik 72.24 19 *e*P **P 00 59 36.5 -0.2**
comp=Z,11nm,1.1s,mb4.7
EIDS Eidsvold 72.31 136 *e*P **P 00 59 37.7 +0.2**
comp=Z,5.2nm,0.9s,mb4.5
STKA Stephens Creek 72.34 147 P **P 00 59 37.0 -0.6**
comp=Z,1.6nm,0.5s,mb4.2,baz=7.9,slow=5.6,SNR=5.7
STKA Stephens Creek 72.34 147 P **P 00 59 37.0 -0.6**
LPG La Plagne 72.85 313 *e*P **P 00 59 40.8 +0.2**

comp=Z,11nm,0.8s,mb4.6
LPG La Plagne 72.85 313 *e*P **P 00 59 40.8 +0.2**
LPG pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
LPG La Plagne 72.85 313 *e*P **P 00 59 40.8 +0.2**
comp=Z,5.5nm,0.8s,mb4.5
LPL La Plagne 72.85 313 *e*P **P 00 59 40.7 0.0**
comp=Z,8.1nm,0.5s,mb4.6
LPL La Plagne 72.85 313 *e*P **P 00 59 40.7 0.0**
LPL pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
LPL La Plagne 72.85 313 *e*P **P 00 59 40.7 0.0**
comp=Z,4.1nm,0.5s,mb4.6
DAWY Dawson 73.07 24 *e*P **P 00 59 42.1 +0.5**
BNI Bardonecchia 73.09 313 *e*P **P 00 59 42.0 -0.1**
BNI pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
BNI Bardonecchia 73.09 313 *e*P **P 00 59 42.0 -0.1**
comp=Z,6.5nm,1.1s,mb4.5
RES Resolute Bay 73.70 5 *e*P **P 00 59 45.0 -0.2**
RES pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
RES Resolute Bay 73.70 5 *e*P **P 00 59 45.0 -0.2**
comp=Z,3.7nm,1.1s,mb4.2
SMF Signal de Mont 74.10 315 *e*P **P 00 59 47.1 -0.9**
comp=Z,3.9nm,0.5s,mb4.3
SMF Signal de Mont 74.10 315 *e*P **P 00 59 47.1 -0.9**
SMF pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
SMF Signal de Mont 74.10 315 *e*P **P 00 59 47.1 -0.9**
comp=Z,2.0nm,0.5s,mb4.3
AVF Avril sur Loir 74.33 315 *e*P **P 00 59 49.2 -0.1**
comp=Z,9.9nm,1.0s,mb4.4
AVF Avril sur Loir 74.33 315 *e*P **P 00 59 49.2 -0.1**
AVF pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
AVF Avril sur Loir 74.33 315 *e*P **P 00 59 49.2 -0.1**
comp=Z,4.9nm,1.0s,mb4.4
YKA Yellowknife Ar 81.76 17 P **P 01 00 28.6 -1.7**
comp=Z,0.4nm,0.5s,mb3.6,baz=323,slow=5.3,SNR=3.0
YKA LR LR 01 41 14.2
comp=Z,7.4nm,18.9s,MS3.1,baz=60,slow=39
YKA Yellowknife Ar 81.76 17 P **P 01 00 28.6 -1.7**
YKA LR LR 01 41 14.2
ESDC Sonseca Array 82.61 312 P **P 01 00 34.9 -0.3**
comp=Z,0.7nm,0.7s,mb3.8,baz=42,slow=5.8,SNR=3.6
LSZ Lusaka 85.75 249 LR LR 01 35 27.9
comp=Z,31nm,21.5s,MS3.7,baz=328,slow=33
TORD Torodi Ar. Bea 93.15 287 P **P 01 01 25.5 -1.1**
comp=Z,1.3nm,1.0s,mb4.3,baz=68,slow=3.0,SNR=6.3
TSUM Tsumeb 96.40 252 LR LR 01 46 58.6
comp=Z,73nm,18.6s,MS4.2,baz=343,slow=37
ULM Lac du Bonnet 97.12 12 LR LR 01 46 19.8
comp=Z,68nm,18.0s,MS4.2,baz=29,slow=36
TXAR Lajitas Array 114.48 26 PKP PKiKP 01 06 53.9 +1.6
comp=Z,0.3nm,0.7s,baz=151,slow=2.9,SNR=3.7
OTAV Otavalo 148.69 4 *e*PKPbc PKPbc 01 07 59.5 -0.4
LPAZ La Paz 163.34 331 PKP PKPdf 01 08 14.0 -1.1
comp=Z,0.8nm,0.7s,baz=324,slow=2.3,SNR=3.9
LPAZ La Paz 163.34 331 PKP PKPdf 01 08 14.0 -1.1
PLCA Paso Flores 169.34 205 PKPab PKPab 01 09 28.4 -3.2
comp=Z,2.6nm,1.0s,baz=174,slow=10,SNR=3.2
PLCA Paso Flores 169.34 205 PKP2 PKPab 01 09 28.4 -3.2
PLCA pmax pmax
comp=Z,3.0nm,1.0s

*ISCJB **07** 01:09:28.3±0.8, 36.°04N±0.°05×0.°62W±0.°04, h10km, Error ellipse: s-maj=7.1km s-min=4.3km az=152.8*
*NEIC **07** 01:09:29.0, 35.°80N×0.°50W, h21km, MG3.9(MDD), After MDD.*
*MDD **07** 01:09:29.2±1.5, 35.°80N×0.°50W, h23km±22km, mb3.9/14, Error ellipse: s-maj=24.1km s-min=6.9km az=153.0, PRIMO*
*CSEM **07** 01:09:30.4±0.5, 35.°87N×0.°55W, h40km, mb3.9/14, Error ellipse: s-maj=11.7km s-min=5.5km az=156.0*

ISC 07 01:09:29.8±0.8, 36.°05N±0.°05×0.°67W±0.°04, h10km, n105, σ1§45/210, Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENIJ	**Nijar**	**1.55**	**307**	P	**Pn**	**01 09 56.8**	**-0.6**
ENIJ				S	**Sn**	**01 10 15.1**	**-2.4**
ENIJ	**Nijar**	**1.55**	**307**	P	**Pn**	**01 09 56.8**	**-0.6**
	4.9nm,0.1s,SNR=7.3						
ENIJ				S	**Sn**	**01 10 15.1**	**-2.4**
	6.0nm,0.1s,SNR=6.8						
ENIJ				T		01 11 12.4	
	SNR=7.9						
ENIJ	**Nijar**	**1.55**	**307**	P	**Pn**	**01 09 56.8**	**-0.6**
	4.9nm,0.1s,SNR=7.3						
ENIJ				S	**Sn**	**01 10 15.1**	**-2.4**
	6.0nm,0.1s,SNR=6.8						
ENIJ				T		01 11 12.4	
	SNR=7.9						
ENIJ	**Nijar**	**1.55**	**307**	P	**Pn**	**01 09 56.8**	**-0.6**
	4.9nm,0.1s,SNR=7.3						
ENIJ				S	**Sn**	**01 10 15.1**	**-2.4**
	6.0nm,0.1s,SNR=6.8						
EMUR	**La Murta**	**1.85**	**346**	P	**Pn**	**01 10 01.1**	**-0.5**
EMUR				S	**Sn**	**01 10 22.4**	**-2.7**
EMUR	**La Murta**	**1.85**	**346**	P	**Pn**	**01 10 01.1**	**-0.5**
	2.2nm,0.1s,SNR=18						
EMUR				S	**Sn**	**01 10 22.4**	**-2.7**
	4.6nm,0.1s,SNR=7.9						
EMUR				T		01 11 36.8	
	SNR=7.9						
EMUR	**La Murta**	**1.85**	**346**	P	**Pn**	**01 10 01.1**	**-0.5**
	2.2nm,0.1s,SNR=18						
EMUR				S	**Sn**	**01 10 22.4**	**-2.7**
	4.6nm,0.1s,SNR=7.9						
EMUR				T		01 11 36.8	
	SNR=7.9						
EMUR	**La Murta**	**1.85**	**346**	P	**Pn**	**01 10 01.1**	**-0.5**
	2.2nm,0.1s,SNR=18						
EMUR				S	**Sn**	**01 10 22.4**	**-2.6**
	4.6nm,0.1s,SNR=7.9						
EALB	**Alboran**	**1.92**	**268**	P	**Pn**	**01 10 01.8**	**-0.7**
EALB				S	**Sn**	**01 10 24.9**	**-1.9**
EALB	**Alboran**	**1.92**	**268**	P	**Pn**	**01 10 01.8**	**-0.7**
	7.5nm,0.3s,SNR=7.9						
EALB				S	**Sn**	**01 10 24.9**	**-1.9**
	13nm,0.2s,SNR=7.9					

NVAR Mina Array Bea 92.31 52 pP pP 01 29 02.0 +1.4
0.2nm,0.2s,baz=224,slow=5.0,SNR=3.5
TORD Torodi Ar. Bea 152.24 285 PKPbc PKPbc 01 35 31.9 0.0
0.5nm,0.6s,baz=59,slow=2.3,SNR=8.2
TORD pPKPbc pPKPbc 01 35 46.6 -0.6
0.5nm,0.7s,baz=79,slow=1.8,SNR=3.1

JMA 07 01:17:13.5±0.1, 27°.30N×141°.07E, h465km, M3.7, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.01**	**101**	P	P	01 18 11.6	+0.3
CBIJ				*e*S	S	01 18 58.1	0.0
JHHJ	**Haha-jima-NKT**	**1.19**	**124**	P	P	01 18 12.5	+0.6
JHHJ				S	S	01 19 58.1	-1.0
BSO1	**Boso 1**	**7.33**	**359**	P	P	01 19 04.4	+2.5
BSO3	**Boso 3**	**7.49**	**356**	S	S	01 20 35.5	+1.5
BSO4	**Boso 4**	**7.69**	**356**	*e*S	S	01 20 39.5	+1.7
JIE	**Ise**	**8.00**	**333**	P	P	01 19 10.3	+1.3
JWM	**Minabe**	**8.18**	**324**	P	P	01 19 12.9	+2.0
JKU	**Kubokawa**	**9.15**	**313**	P	P	01 19 22.8	+1.4
JAG	**Ashikaga**	**9.20**	**352**	P	P	01 19 22.5	+0.7
JHO	**Hitachi**	**9.29**	**358**	P	P	01 19 24.5	+1.7
JWT	**Wachi**	**9.32**	**330**	P	P	01 19 24.3	+1.2
JAD	**Aida**	**9.64**	**324**	P	P	01 19 27.8	+1.2
JHK	**Hiroka**	**10.07**	**351**	P	P	01 19 32.9	+1.7

*ISK **07** 01:19:26.8, 36°.97N×29°.21E, h5km, MD3.1*
*DDA **07** 01:19:28.3, 37°.01N×29°.19E, h24km±2km, Md3.3*
*CSEM **07** 01:19:28.0±0.1, 36°.95N×29°.23E, h2km, MD3.1, Error ellipse: s-maj=1.9km s-min=1.4km az=162.0*
*ISCJB **07** 01:19:28.2±0.5, 36°.97N±0°.02×29°.20E±0°.03, h3km±5km, Error ellipse: s-maj=4.3km s-min=4.0km az=36.4*
ISC 07 01:19:28.6±0.5, 36°.96N±0°.02×29°.21E±0°.03, h7km±4km, n47, σ0s72/67, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**50**	PG	**Pg**	**01 19 33.7**	**-0.9**
GLHS				*e*SG	**Sg**	**01 19 38.7**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.30**	**50**	*i* Pg	**Pg**	**01 19 33.7**	**-0.8**
GLHS				*e*Sg	**Sg**	**01 19 38.7**	**+0.1**
FETY	**Fethiye**	**0.34**	**197**	PG	**Pg**	**01 19 34.6**	**-0.6**
FETY				*e*SG	**Sg**	**01 19 40.7**	**+1.0**
FETY	**Fethiye**	**0.34**	**197**	*i* Pg	**Pg**	**01 19 34.6**	**-0.6**
FETY				*e*Sg	**Sg**	**01 19 40.7**	**+1.1**
GOLH	**Golhisar**	**0.40**	**45**	*i* P	**Pg**	**01 19 35.6**	**-0.7**
GOLH				*i* S	**Sg**	**01 19 42.3**	**+0.9**
GOLH	**Golhisar**	**0.40**	**45**	*i* P	**Pg**	**01 19 35.6**	**-0.7**
GOLH				*i* S	**Sg**	**01 19 42.3**	**+0.8**
TURN	**Turunc**	**0.49**	**260**	*i* P	**Pg**	**01 19 43.2**	**+5.0**
TURN				*i* S	**Sg**	**01 19 53.7**	**+9.1**
ELL	**Elmali**	**0.60**	**110**	*e*PG	**Pg**	**01 19 40.2**	**+0.1**
ELL	**Elmali**	**0.60**	**110**	*e*Pg	**Pg**	**01 19 40.2**	**+0.1**
DNZL	**Cakiroluk**	**0.74**	**350**	*i* P	**Pg**	**01 19 41.5**	**-1.4**
DNZL				*i* S	**Sg**	**01 19 52.8**	**+0.3**
YER	**Yerkesik**	**0.76**	**284**	*e*PG	**Pg**	**01 19 42.7**	**-0.6**
YER	**Yerkesik**	**0.76**	**284**	*e*Pg	**Pg**	**01 19 42.7**	**-0.5**
AKAS	**Kas**	**0.79**	**156**	*i* P	**Pg**	**01 19 44.2**	**+0.4**
AKAS				*i* S	**Sg**	**01 19 58.2**	**+4.2**
DENT	**Denizli**	**0.81**	**350**	*e*PG	**Pg**	**01 19 42.9**	**-1.2**
DENT				*e*SG	**Sg**	**01 19 56.1**	**+1.5**
DENT	**Denizli**	**0.81**	**350**	*e*Pg	**Pg**	**01 19 42.9**	**-1.2**
DENT				*e*Sg	**Sg**	**01 19 56.1**	**+1.5**
KORT	**Korkueli**	**0.92**	**87**	*i* P	**Pg**	**01 19 45.4**	**-0.8**
KORT				*i* S	**Sg**	**01 20 01.4**	**+3.4**
KORT	**Korkueli**	**0.92**	**87**	*i* P	**Pg**	**01 19 45.4**	**-0.8**
ANTB	**Antalya**	**1.16**	**93**	*e*PN	**Pn**	**01 19 50.3**	**-1.0**
ANTB	**Antalya**	**1.16**	**93**	*e*Pn	**Pn**	**01 19 50.3**	**-1.0**
MLSB	**Milas**	**1.19**	**287**	*e*PN	**Pn**	**01 19 50.9**	**-0.9**
MLSB	**Milas**	**1.19**	**287**	*e*Pn	**Pn**	**01 19 50.9**	**-0.8**
BCK	**Bucak**	**1.21**	**65**	*e*PN	**Pn**	**01 19 51.4**	**-0.6**
BCK	**Bucak**	**1.21**	**65**	*e*Pn	**Pn**	**01 19 51.4**	**-0.6**
AYDN	**Tasoluk**	**1.27**	**304**	*i* P	**Pn**	**01 19 52.3**	**-0.5**
AYDN				*i* S	**Sg**	**01 20 10.0**	**+0.5**
AYDN	**Tasoluk**	**1.27**	**304**	*i* P	**Pn**	**01 19 52.3**	**-0.5**
AYDN				*i* S	**Sg**	**01 20 10.0**	**+0.5**
DAT	**Datca**	**1.33**	**261**	*e*PN	**Pn**	**01 19 53.6**	**0.0**
DAT	**Datca**	**1.33**	**261**	*e*Pn	**Pn**	**01 19 53.6**	**0.0**
BDRM	**Kayabasi**	**1.42**	**275**	*i* P	**Pn**	**01 19 55.4**	**+0.6**
BDRM				*i* S	**Sb**	**01 20 13.7**	**0.0**
BDRM	**Kayabasi**	**1.42**	**275**	*i* P	**Pn**	**01 19 55.4**	**+0.6**
BDRM				*i* S	**Sb**	**01 20 13.7**	**0.0**
KHAL	**Karahalli**	**1.43**	**9**	*i* P	**Pn**	**01 19 54.6**	**-0.3**
KHAL				*i* S	**Sb**	**01 20 14.1**	**+0.1**
KHAL	**Karahalli**	**1.43**	**9**	*i* P	**Pn**	**01 19 54.7**	**-0.3**
KHAL				*i* S	**Sb**	**01 20 14.1**	**+0.2**
SUTC	**Sutluce-Ispart**	**1.52**	**70**	*e*PN	**Pn**	**01 19 56.4**	**+0.2**
SUTC	**Sutluce-Ispart**	**1.52**	**70**	*e*Pn	**Pn**	**01 19 56.4**	**+0.2**
KULA	**Kula-Manisa**	**1.61**	**345**	*e*PN	**Pn**	**01 19 57.8**	**+0.3**
KULA	**Kula-Manisa**	**1.61**	**345**	*e*Pn	**Pn**	**01 19 57.8**	**+0.3**
SHUT	**Suhut-Afyon**	**1.91**	**33**	*e*PN	**Pn**	**01 20 01.9**	**+0.3**
SHUT	**Suhut-Afyon**	**1.91**	**33**	*e*Pn	**Pn**	**01 20 01.9**	**+0.2**
IZM	**Izmir**	**2.11**	**313**	*e*PN	**Pn**	**01 20 04.9**	**+0.6**
IZM	**Izmir**	**2.11**	**313**	*e*Pn	**Pn**	**01 20 04.9**	**+0.6**
DEMI	**Demirci**	**2.12**	**350**	*i* P	**Pn**	**01 20 04.3**	**-0.1**
DEMI				*i* S	**Sn**	**01 20 31.3**	**+0.3**
DEMI	**Demirci**	**2.12**	**350**	*i* P	**Pn**	**01 20 04.3**	**-0.1**
DEMI				*i* S	**Sn**	**01 20 31.3**	**+0.3**
ALT	**Altintas**	**2.21**	**19**	*e*PN	**Pn**	**01 20 06.0**	**+0.2**
ALT	**Altintas**	**2.21**	**19**	*e*Pn	**Pn**	**01 20 06.0**	**+0.3**
BLCB	**Balcova**	**2.23**	**310**	*e*PN	**Pn**	**01 20 06.2**	**+0.2**
BLCB	**Balcova**	**2.23**	**310**	*e*Pn	**Pn**	**01 20 06.2**	**+0.2**
HDMB	**Hadim**	**2.62**	**89**	*e*PN	**Pn**	**01 20 12.3**	**+0.8**
HDMB	**Hadim**	**2.62**	**89**	*e*Pn	**Pn**	**01 20 12.3**	**+0.9**

SKHL 07 01:33:26.1±0.5, 51°.96N×142°.74E, h10km, mb4.2/5, Ms3.6/1, 1C, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TYV	**Tymovskoe**	**1.10**	**183**	⇑*i*Pg	Pg	01 33 48.4	+1.2
TYV				*e*Sg	Sg	01 34 03.8	+2.3
OKH	**Okha**	**1.60**	**4**	*e*Pg	Pg	01 33 59.4	+2.7
OKH				*i* Sg	Sg	01 34 22.5	+5.1
OKH				A		01 34 23.2	
	2μm,0.9s						
NKL	**Nikolayevsk**	**1.73**	**314**	*i* Pg	Pg	01 34 00.8	+1.5
NKL				AMB	AMB	01 34 03.0	
	90nm,0.3s						
NKL				AMB	AMB	01 34 03.0	
	100nm,0.3s						
NKL				*i* Sg	Sg	01 34 25.5	+3.7
NKL				A		01 34 26.5	
	195nm,0.4s						
NKL				A		01 34 26.5	
	240nm,0.4s						
NKL				A		01 34 28.0	
	1μm,4.0s						
UGL	**Uglegorsk**	**2.92**	**189**	*e*Pg	Pg	01 34 25.0	+3.0
UGL				AMB	AMB	01 34 30.0	
	77nm,0.5s						
UGL				*e*Sg	Sg	01 35 05.0	+5.3
UGL				A		01 35 07.5	
	112nm,0.7s						
UGL				A		01 35 07.5	
	195nm,0.7s						
GRNR	**Gornyy**	**4.13**	**256**	*e*P	Pn	01 34 31.0	+1.8
GRNR				AMB	AMB	01 34 36.8	
	28nm,0.8s						
GRNR				*e*Pg	Pg	01 34 48.0	+2.7
GRNR				AMB	AMB	01 34 55.0	
	24nm,0.9s						
GRNR				*e*S	Sn	01 35 18.0	+0.4
GRNR				*e*Sg	Sg	01 35 44.7	+5.9
GRNR				A		01 35 51.0	
	98nm,0.6s						
YSS	**Yuzh-Sakhalins**	**5.01**	**180**	*e*P	Pn	01 34 43.8	+2.5
YSS				*e*Pg	Pg	01 35 07.5	+5.5
YSS				AMB	AMB	01 35 09.0	
	25nm,0.8s						
YSS				*e*S	Sn	01 35 39.9	+0.7
YSS				*e*Sg	Sg	01 36 15.0	+8.1
YSS				A		01 36 16.0	
	25nm,0.7s						
YSS				A		01 36 16.0	
	27nm,0.7s						
YSS				AMS	AMS	01 37 04.0	
	300nm,11.0s						
YSS				AMS	AMS	01 37 04.0	
	400nm,11.0s						
TEY	**Ternei**	**8.04**	**213**	*e*Sg	Sn	01 37 56.5	+63
TEY				A		01 37 57.0	
	43nm,1.0s						
BMKR	**Bomnak**	**8.76**	**294**	*e*P	Pn	01 35 36.0	+3.3
BMKR				*e*Pg	Pn	01 35 56.3	+24
BMKR				AMB	AMB	01 35 57.5	
	5.0nm,0.8s						
BMKR				*e*S	Sn	01 37 17.5	+6.1
BMKR				A		01 37 18.0	
	2.0nm,0.7s						
BMKR				*e*Sg	Sn	01 38 19.0	+68
BMKR				A		01 38 20.0	
	41nm,1.0s						
BMKR				A		01 38 20.0	
	45nm,1.0s						
ZEA	**Zeya**	**9.54**	**287**	*e*S	Sn	01 37 37.4	+6.9
ZEA				*e*Sg	Sn	01 38 36.4	+66
ZEA				A		01 38 38.7	
	58nm,1.2s						
KROS	**Kirovskiy**	**9.78**	**291**	*e*S	Sn	01 37 44.0	+7.6
KROS				*e*Sg	Sn	01 38 31.5	+55
KROS				A		01 38 32.5	
	23nm,1.0s						
KROS				A		01 38 32.5	
	17nm,1.0s						

*IDC **07** 01:35:46.1±5.0, 36°.24N×70°.85E, h152km±46km, mb3.5/8, mb1 3.6/13, mb1mx3.4/30, mbtmp3.5/13, Error ellipse: s-maj=34.2km s-min=16.0km az=28.0*
*ISCJB **07** 01:35:49.2±0.4, 36°.48N±0°.03×70°.98E±0°.05, h195km±6km, mb3.7/9, Error ellipse: s-maj=6.0km s-min=4.9km az=179.6*
*NEIC **07** 01:35:50.3±0.7, 36°.45N×70°.95E, h189km±7km, mb4.0/4, Error ellipse: s-maj=11.5km s-min=8.0km az=120.0*
*NNC **07** 01:35:53.1±6.5, 37°.07N×69°.59E, h0km, mpv4.1, Error ellipse: s-maj=65.7km s-min=42.5km az=122.0*
ISC 07 01:35:50.0±0.4, 36°.46N±0°.03×71°.04E±0°.05, h186km±6km, n50, σ1s29/62, mb3.8/9, 5C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.52**	**221**	*e*Pn	**Pn**	**01 36 34.2**	**+1.0**
KBL				*e*Sn	**Sn**	**01 37 06.3**	**-0.5**
CEP	**Cherat**	**2.73**	**165**	⇑P	**Pn**	**01 36 38.7**	**+3.0**
CEP				S	**Sn**	**01 37 14.0**	**+2.8**
CHCP	**Chirah Chowk**	**3.34**	**146**	⇑P	**Pn**	**01 36 46.5**	**+3.5**
KSH	**Kashi**	**4.94**	**50**	Pn	**Pn**	**01 37 01.2**	**-2.0**
KSH				Sn	**Sn**	**01 37 53.2**	**-7.7**
KSH				smax			
	comp=N,97nm,0.4s						
KSH				smax			
	comp=E,53nm,0.3s						
AML	**Almayashu**	**6.02**	**19**	P	**Pn**	**01 37 18.2**	**+1.0**
	SNR=64						
AML	**Almayashu**	**6.02**	**19**	*e*Pn	**Pn**	**01 37 18.1**	**+0.9**
	comp=E,42nm,0.4s						
AML				*e*Sn	**Sn**	**01 38 24.0**	**-2.0**
UCH	**Uchtor**	**6.35**	**24**	P	**Pn**	**01 37 22.7**	**+1.2**
	SNR=22						
UCH	**Uchtor**	**6.35**	**24**	*e*Pn	**Pn**	**01 37 22.2**	**+0.8**
	comp=E,6.5nm,0.5s						
UCH				*e*Sn	**Sn**	**01 38 31.8**	**-2.1**
KZA	**Kyzart**	**6.49**	**29**	P	**Pn**	**01 37 25.7**	**+2.5**
	SNR=7.5						
EKS2	**Erkin-Say**	**6.54**	**18**	P	**Pn**	**01 37 25.5**	**+1.5**
	SNR=9.7						
EKS2	**Erkin-Say**	**6.54**	**18**	*e*Pn	**Pn**	**01 37 24.4**	**+0.5**
	comp=E,8.7nm,0.4s						
EKS2				*e*Sn	**Sn**	**01 38 29.5**	**-8.7**
KK31	**Karatay Array**	**6.64**	**357**	P	**Pn**	**01 37 25.1**	**-0.1**
	comp=E,8.1nm,0.5s,baz=180,slow=12,SNR=198						
KK31				⇓S	**Sn**	**01 38 35.1**	**-5.6**
	comp=E,64nm,0.5s						
AAK	**Ala-Archa**	**6.71**	**22**	P	**Pn**	**01 37 27.7**	**+1.5**
	SNR=7.8						
AAK	**Ala-Archa**	**6.71**	**22**	P	**Pn**	**01 37 27.6**	**+1.4**
	comp=E,0.1nm,0.3s,baz=165,slow=5.1,SNR=15						
AAK				S	**Sn**	**01 38 41.5**	**-0.8**
	comp=E,0.0nm,0.3s,baz=145,slow=22,SNR=11						
SDNR	**Sundarnagar**	**6.98**	**133**	*e*PKP	**Pn**	**01 37 31.5**	**+1.6**
SDNR				*e*S	**Sn**	**01 38 47.5**	**-1.3**
USP	**Ospenovka**	**7.29**	**20**	P	**Pn**	**01 37 34.8**	**+1.0**
	SNR=7.3						
TKM2	**Tokmak 2**	**7.34**	**27**	P	**Pn**	**01 37 35.8**	**+1.3**
	SNR=11						
TKM2	**Tokmak 2**	**7.34**	**27**	*e*Pn	**Pn**	**01 37 35.6**	**+1.2**
	comp=E,9.4nm,0.6s						
KLP	**Kalpa**	**7.74**	**127**	*e*S	**Sn**	**01 39 05.5**	**-1.4**
KLP				AML	AML	01 39 08.0	
	comp=E,279nm,0.4s						
KLP				AML	AML	01 39 08.5	
	comp=N,148nm,0.4s						
DDI	**Dehra Dun**	**8.48**	**134**	*ex*	x	01 39 04.5	
IMYA	**Miami**	**8.82**	**272**	*e*Pn	**Pn**	**01 37 50.8**	**-3.1**
IMYA				*e*		01 38 05.0	
	comp=Z,118nm,0.1s						
JOSI	**Joshimath**	**9.23**	**127**	*e*S	**Sn**	**01 39 39.4**	**-3.0**
JOSI				AML	AML	01 39 42.7	
	comp=E,104nm,0.5s						
JOSI				AML	AML	01 39 43.6	
	comp=N,74nm,0.4s						
KHET	**Khetri**	**9.29**	**153**	*e*S	**Sn**	**01 39 37.6**	**-6.2**
KHET				AML	AML	01 39 41.1	
	comp=N,43nm,0.5s						
KHET				AML	AML	01 39 42.6	
	comp=E,48nm,0.4s						
SONA	**Sohna**	**9.65**	**146**	*e*S	**Sn**	**01 39 46.6**	**-5.9**
SONA				AML	AML	01 39 52.4	
	comp=E,40nm,0.4s						
SONA				AML	AML	01 39 55.1	
	comp=N,24nm,0.5s						
IAKL	**Akhelmad**	**9.89**	**274**	*e*Pn	**Pn**	**01 38 07.2**	**-0.7**
IAKL				*e*Sg	**Sn**	**01 39 52.6**	**-5.5**
IAKL				*e*		01 40 02.9	
	comp=N,111nm,0.2s						
ISFR	**Sfrayin**	**10.48**	**277**	*e*Pn	**Pn**	**01 38 15.9**	**+0.3**
ISFR				*e*Pn	**Pn**	**01 38 16.3**	**+0.7**
ISFR				*e*		01 40 18.1	
	comp=E,223nm,0.2s						
ISFR				*e*		01 40 28.6	
	comp=Z,64nm,0.2s						
MKAR	**Makanchi Array**	**13.30**	**36**	P	**Pn**	**01 38 53.5**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=223,slow=14,SNR=3.4						
AB31	**Akbulak array**	**15.13**	**331**	P	**Pn**	**01 39 12.3**	**-1.8**
	comp=Z,2.6nm,0.5s,baz=144,slow=12,SNR=58						
AB31				⇑S	**S**	**01 41 52.5**	**-10**
	comp=Z,1.3nm,0.5s						
ABKAR	**Akbulak array**	**15.13**	**331**	*e*P	**Pn**	**01 39 12.3**	**-1.8**
	comp=Z,4.2nm,0.6s						
ABKAR				*e*S	**S**	**01 41 51.8**	**-10**
KURK	**Kurchatov**	**15.25**	**19**	P	**Pn**	**01 39 16.0**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=211,slow=10.0,SNR=4.9						
BVA0	**Borovoye Array**	**16.57**	**359**	⇑P	**Pn**	**01 39 31.2**	**-0.3**
	comp=Z,0.3nm,0.8s,baz=164,slow=11,SNR=12						
BVAR	**Borovoye Array**	**16.57**	**359**	P	**Pn**	**01 39 32.0**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=161,slow=10,SNR=12						
BRVK	**Borovoye**	**16.60**	**358**	⇓P	**Pn**	**01 39 32.1**	**+0.2**
	comp=Z,4.3nm,0.7s						
BRVK	**Borovoye**	**16.60**	**358**	*e*P	**Pn**	**01 39 32.3**	**+0.4**
	comp=Z,2.7nm,0.6s						
AKTK	**Aktyubinsk**	**16.83**	**330**	P	**Pn**	**01 39 34.4**	**-0.3**
AKTO	**Aktyubinsk**	**16.83**	**330**	⇑P	**Pn**	**01 39 34.3**	**-0.3**
	comp=Z,2.9nm,1.1s						
AKTO	**Aktyubinsk**	**16.83**	**330**	P	**Pn**	**01 39 34.4**	**-0.3**
	comp=Z,1.9nm,0.3s,baz=138,slow=11,SNR=42						
ZALV	**Zalesovo Beam**	**19.93**	**24**	P	**P**	**01 40 08.3**	**+1.0**
	comp=Z,1.6nm,0.5s,baz=215,slow=13,SNR=8.3						
ARU	**Arti**	**21.68**	**341**	*e*P	**P**	**01 40 26.0**	**+0.3**
	comp=Z,3.0nm,0.7s,mb3.8						
AKASG	**Malin Array Be**	**32.99**	**309**	P	**P**	**01 42 06.8**	**-0.3**
	comp=Z,0.5nm,0.4s,mb3.6,baz=81,slow=7.4,SNR=4.7						
JOF	**Joensuu**	**35.92**	**330**	*ep*	**P**	**01 42 32.2**	**+0.2**
	comp=Z,1.6nm,0.3s,mb4.1						
FINES	**FINESS Array B**	**37.53**	**326**	P	**P**	**01 42 46.2**	**+0.6**
	comp=Z,3.6nm,0.9s,mb4.0,baz=130,slow=9.1,SNR=11						
FINES	**FINESS Array B**	**37.53**	**326**	P	**P**	**01 42 46.2**	**+0.6**
ARCES	**ARCESS Array B**	**41.19**	**338**	P	**P**	**01 43 16.1**	**+0.4**
	comp=Z,4.0nm,0.9s,mb4.1,baz=98,slow=8.7,SNR=8.6						
NB2	**NORSAR Subarra**	**44.43**	**323**	P	**P**	**01 43 41.6**	**-0.3**
	comp=Z,1.6nm,0.6s,mb3.8,baz=96,slow=7.9						
NOA	**NORSAR Array B**	**44.43**	**323**	P	**P**	**01 43 42.0**	**+0.2**
	comp=Z,1.5nm,0.6s,mb3.8,baz=97,slow=7.8,SNR=10						
TORD	**Torodi Ar. Bea**	**65.75**	**269**	P	**P**	**01 46 13.1**	**-2.0**
	comp=Z,0.4nm,0.5s,mb3.5,baz=51,slow=5.8,SNR=17						
WRA	**Warramunga Arr**	**81.94**	**122**	P	**P**	**01 47 49.0**	**+0.1**
	comp=Z,0.9nm,0.5s,mb3.6,baz=325,slow=5.0,SNR=18						
WRA	**Warramunga Arr**	**81.94**	**122**	P	**P**	**01 47 49.0**	**+0.1**
ASAR	**Alice Springs**	**84.20**	**125**	P	**P**	**01 48 00.8**	**+0.3**
	comp=Z,0.8nm,0.6s,mb3.6,baz=309,slow=5.2,SNR=15						

*CRAAG **07** 01:39:14.2, 35°.58N×0°.32W, Ml4.2*
*ISCJB **07** 01:39:16.5±0.5, 35°.94N±0°.03×0°.57W±0°.03, h10km, Error ellipse: s-maj=4.4km s-min=3.4km az=157.8*
*MDD **07** 01:39:17.4±0.5, 35°.68N×0°.49W, h22km±4km, mb4.1/16, Error ellipse: s-maj=7.3km s-min=5.8km az=1.0, PRIMO*
*NEIC **07** 01:39:17.0, 35°.82N×0°.57W, h0km, ML3.2(ALG), After MDD.*
*INMG **07** 01:39:19.3±1.4, 35°.83N×0°.78W, h0km, ML2.3, Error ellipse: s-maj=10.4km s-min=8.1km az=110.0*
*CSEM **07** 01:39:19.2±0.4, 36°.02N×0°.73W, h5km, ML3.2, Error ellipse: s-maj=8.3km s-min=5.6km az=146.0*
ISC 07 01:39:18.2±0.5, 35°.94N±0°.03×0°.62W±0°.03, h10km, n151, σ1s44/266, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USTO	**Oran**	**0.21**	**164**	P	**Pg**	**01 39 21.0**	**-1.5**
USTO	**Oran**	**0.21**	**164**	P	**Pg**	**01 39 21.0**	**-1.5**
USTO	**Oran**	**0.21**	**164**	P	**Pg**	**01 39 21.0**	**-1.5**
ODJA	**Bouhanifia**	**0.72**	**147**	P	**Pg**	**01 39 26.0**	**-6.0**
ODJA	**Bouhanifia**	**0.72**	**147**	P	**Pg**	**01 39 26.0**	**-6.0**
ODJA	**Bouhanifia**	**0.72**	**147**	P	**Pg**	**01 39 26.0**	**-6.0**
ODZI	**Dzioua**	**0.81**	**218**	P	**Pg**	**01 39 34.0**	**+0.2**
ODZI	**Dzioua**	**0.81**	**218**	P	**Pg**	**01 39 34.0**	**+0.2**
ODZI	**Dzioua**	**0.81**	**218**	P	**Pg**	**01 39 34.0**	**+0.2**
EANR	**'Ain N'Sour**	**1.40**	**89**	P	**Pn**	**01 39 39.6**	**-4.1**
EANR	**'Ain N'Sour**	**1.40**	**89**	P	**Pn**	**01 39 39.6**	**-4.1**
EANR	**'Ain N'Sour**	**1.40**	**89**	P	**Pn**	**01 39 39.6**	**-4.1**
EANR	**'Ain N'Sour**	**1.40**	**89**	P	**Pn**	**01 39 39.6**	**-4.1**
ENIJ	**Nijar**	**1.64**	**309**	P	**Pn**	**01 39 46.1**	**-1.0**
ENIJ				S	**Sn**	**01 40 05.8**	**-2.4**
ENIJ	**Nijar**	**1.64**	**309**	P	**Pn**	**01 39 46.1**	**-1.0**
	15nm,0.2s,SNR=17						
ENIJ				S	**Sn**	**01 40 05.8**	**-2.4**
	46nm,0.2s,SNR=13						
ENIJ	**Nijar**	**1.64**	**309**	P	**Pn**	**01 39 46.1**	**-1.0**
	15nm,0.2s,SNR=17						
ENIJ				S	**Sn**	**01 40 05.8**	**-2.4**
	46nm,0.2s,SNR=13						
ENIJ	**Nijar**	**1.64**	**309**	P	**Pn**	**01 39 46.1**	**-1.0**
ENIJ				S	**Sn**	**01 40 05.8**	**-2.5**
EBNR	**Beni Rached**	**1.78**	**78**	P	**Pn**	**01 39 46.0**	**-2.9**
EBNR	**Beni Rached**	**1.78**	**78**	P	**Pn**	**01 39 46.0**	**-2.9**
EALB	**Alboran**	**1.96**	**271**	P	**Pn**	**01 39 50.3**	**-1.1**
EALB				S	**Sn**	**01 40 14.3**	**-1.7**
EALB	**Alboran**	**1.96**	**271**	P	**Pn**	**01 39 50.3**	**-1.1**
	5.0nm,0.2s,SNR=7.9						
EALB				S	**Sn**	**01 40 14.3**	**-1.7**
	10nm,0.2s,SNR=7.9						
EALB	**Alboran**	**1.96**	**271**	P	**Pn**	**01 39 50.3**	**-1.1**
	5.0nm,0.2s,SNR=7.9						
EALB				S	**Sn**	**01 40 14.3**	**-1.7**
	10nm,0.2s,SNR=7.9						
EALB	**Alboran**	**1.96**	**271**	P	**Pn**	**01 39 50.3**	**-1.1**
EALB				S	**Sn**	**01 40 14.3**	**-1.7**
EMUR	**La Murta**	**1.97**	**346**	P	**Pn**	**01 39 50.7**	**-0.9**
EMUR				S	**Sn**	**01 40 14.4**	**-1.9**
EMUR	**La Murta**	**1.97**	**346**	P	**Pn**	**01 39 50.7**	**-0.9**
	8.5nm,0.1s,SNR=34						
EMUR				S	**Sn**	**01 40 12.4**	**-3.9**
	10nm,0.1s,SNR=7.9						
EMUR				T		01 41 28.8	
	SNR=7.9						
EMUR	**La Murta**	**1.97**	**346**	P	**Pn**	**01 39 50.7**	**-0.9**
	8.5nm,0.1s,SNR=34						
EMUR				S	**Sn**	**01 40 12.4**	**-3.9**
	10nm,0.1s,SNR=7.9						
EMUR				T		01 41 28.8	
	SNR=7.9						
EMUR	**La Murta**	**1.97**	**346**	P	**Pn**	**01 39 50.7**	**-0.8**
EMUR				S	**Sn**	**01 40 14.4**	**-1.8**
EBER	**Berja**	**2.07**	**298**	P	**Pn**	**01 39 52.4**	**-0.5**
EBER				S	**Sn**	**01 40 18.3**	**-0.4**
EBER	**Berja**	**2.07**	**298**	P	**Pn**	**01 39 52.4**	**-0.5**
	3.8nm,0.2s,SNR=33						
EBER				S	**Sn**	**01 40 18.3**	**-0.4**
	14nm,0.2s,SNR=9.3						
EBER	**Berja**	**2.07**	**298**	P	**Pn**	**01 39 52.4**	**-0.5**
	3.8nm,0.2s,SNR=33						
EBER				S	**Sn**	**01 40 18.3**	**-0.4**
	14nm,0.2s,SNR=9.3						
EBER	**Berja**	**2.07**	**298**	P	**Pn**	**01 39 52.4**	**-0.5**
EBER				S	**Sn**	**01 40 18.3**	**-0.4**
EHUE	**Huescar**	**2.45**	**320**	P	**Pn**	**01 39 59.3**	**+1.1**

4.9nm,0.2s,SNR=7.9
ERON S Sn 01 40 36.9 +0.5
5.8nm,0.2s,SNR=7.9
ETOB Tobarra 2.80 345 P Pn 01 40 03.9 +0.8
ETOB S Sn 01 40 36.7 -0.2
ETOB Tobarra 2.80 345 P Pn 01 40 03.9 +0.8
16nm,0.3s,SNR=83
ETOB S Sn 01 40 36.2 -0.7
20nm,0.1s,SNR=13
ETOB Tobarra 2.80 345 P Pn 01 40 03.9 +0.8
16nm,0.3s,SNR=83
ETOB S Sn 01 40 36.2 -0.7
20nm,0.1s,SNR=13
ETOB Tobarra 2.80 345 P Pn 01 40 03.9 +0.9
ETOB S Sn 01 40 36.7 -0.2
EVIA Vianos 3.09 332 P Pn 01 40 07.5 +0.5
EVIA Vianos 3.09 332 P Pn 01 40 07.5 +0.5
11nm,0.2s,SNR=16
EVIA S Sn 01 40 44.3 +0.4
28nm,0.3s,SNR=7.9
EVIA Vianos 3.09 332 P Pn 01 40 07.5 +0.5
11nm,0.2s,SNR=16
EVIA S Sn 01 40 44.3 +0.4
28nm,0.3s,SNR=7.9
EVIA Vianos 3.09 332 P Pn 01 40 07.5 +0.6
ELUQ Luque 3.35 300 P Pn 01 40 12.8 +2.3
ELUQ S Sn 01 40 53.3 +3.0
ELUQ Luque 3.35 300 P Pn 01 40 12.8 +2.3
2.1nm,0.2s,SNR=7.9
ELUQ S Sn 01 40 53.3 +3.0
2.2nm,0.2s,SNR=7.9
ELUQ Luque 3.35 300 P Pn 01 40 12.8 +2.3
2.1nm,0.2s,SNR=7.9
ELUQ S Sn 01 40 53.3 +3.0
2.2nm,0.2s,SNR=7.9
ELUQ Luque 3.35 300 P Pn 01 40 12.8 +2.3
EBAN Banos Encina 3.37 312 P Pn 01 40 11.4 +0.6
EBAN S Sn 01 40 53.2 +2.4
EBAN Banos Encina 3.37 312 P Pn 01 40 11.4 +0.6
5.0nm,0.2s,SNR=8.7
EBAN S Sn 01 40 53.2 +2.4
4.3nm,0.2s,SNR=7.9
EBAN Banos Encina 3.37 312 P Pn 01 40 11.4 +0.6
5.0nm,0.2s,SNR=8.7
EBAN S Sn 01 40 53.2 +2.4
4.3nm,0.2s,SNR=7.9
EBAN Banos Encina 3.37 312 P Pn 01 40 11.4 +0.6
EMIJ Mijas 3.41 282 P Pn 01 40 09.8 -1.6
EMIJ S Sn 01 40 51.2 -0.7
EMIJ Mijas 3.41 282 P Pn 01 40 09.8 -1.6
1.0nm,0.1s,SNR=6.3
EMIJ S Sn 01 40 48.1 -3.8
3.2nm,0.2s,SNR=7.9
EMIJ Mijas 3.41 282 P Pn 01 40 09.8 -1.6
1.0nm,0.1s,SNR=6.3
EMIJ S Sn 01 40 48.1 -3.8
3.2nm,0.2s,SNR=7.9
EMIJ Mijas 3.41 282 P Pn 01 40 09.8 -1.6
EMIJ S Sn 01 40 51.2 -0.7
EIBI Ibiza 3.46 26 P Pn 01 40 11.6 -0.5
EIBI S Sn 01 40 50.6 -2.4
EIBI Ibiza 3.46 26 P Pn 01 40 11.5 -0.5
7.3nm,0.1s,SNR=42
EIBI S Sn 01 40 49.3 -3.8
10.0nm,0.1s,SNR=7.9
EIBI Ibiza 3.46 26 P Pn 01 40 11.5 -0.5
7.3nm,0.1s,SNR=42
EIBI S Sn 01 40 49.3 -3.8
10.0nm,0.1s,SNR=7.9
EIBI Ibiza 3.46 26 P Pn 01 40 11.6 -0.4
EIBI S Sn 01 40 50.6 -2.5
EADA Adamuz 3.87 306 P Pn 01 40 18.7 +1.0
EADA S Sn 01 40 03.4 +0.2
EADA Adamuz 3.87 306 P Pn 01 40 18.7 +1.0
0.5nm,0.2s,SNR=7.9
EADA S Sn 01 41 03.4 +0.2
1.6nm,0.2s,SNR=7.9
EADA Adamuz 3.87 306 P Pn 01 40 18.7 +1.0
0.5nm,0.2s,SNR=7.9
EADA S Sn 01 41 03.4 +0.2
1.6nm,0.2s,SNR=7.9
EADA Adamuz 3.87 306 P Pn 01 40 18.7 +1.0
EADA S Sn 01 41 03.4 +0.2
EMOS Mosqueruela 4.42 1 P Pn 01 40 26.6 +1.4
EMOS S Sn 01 41 17.9 +1.1
EMOS Mosqueruela 4.42 1 P Pn 01 40 26.6 +1.4
2.6nm,0.1s,SNR=34
EMOS S Sn 01 41 15.5 -1.3
10nm,0.2s,SNR=7.2
EMOS Mosqueruela 4.42 1 P Pn 01 40 26.6 +1.4
2.6nm,0.1s,SNR=34
EMOS S Sn 01 41 15.5 -1.3
10nm,0.2s,SNR=7.2
EMOS Mosqueruela 4.42 1 P Pn 01 40 26.6 +1.3
EMOS S Sn 01 41 18.0 +1.2
ETOS Mallorca 4.69 34 P Pn 01 40 29.9 +0.9
ETOS S Sn 01 41 21.6 -1.9
ETOS Mallorca 4.69 34 P Pn 01 40 29.9 +0.9
1.3nm,0.2s,SNR=6.2
ETOS S Sn 01 41 20.5 -3.0
2.5nm,0.2s,SNR=4.6
ETOS Mallorca 4.69 34 P Pn 01 40 29.9 +0.9
1.3nm,0.2s,SNR=6.2
ETOS S Sn 01 41 20.5 -3.0
2.5nm,0.2s,SNR=4.6
ETOS Mallorca 4.69 34 P Pn 01 40 29.9 +0.9
ETOS S Sn 01 41 21.6 -1.9
ETOR Torete 5.00 347 P Pn 01 40 35.6 +2.4
ETOR S Sn 01 41 29.6 -1.6
ETOR Torete 5.00 347 P Pn 01 40 35.7 +2.4
2.4nm,0.1s,SNR=7.9
ETOR S Sn 01 41 29.6 -1.6
3.2nm,0.1s,SNR=7.9
ETOR Torete 5.00 347 P Pn 01 40 35.7 +2.4
2.4nm,0.1s,SNR=7.9
ETOR S Sn 01 41 29.6 -1.6
3.2nm,0.1s,SNR=7.9
ETOR Torete 5.00 347 P Pn 01 40 35.7 +2.4
ETOR S Sn 01 41 29.6 -1.6
ERTA Horta de San J 5.07 8 P Pn 01 40 35.2 +1.0
ERTA S Sn 01 41 33.4 +0.7
ERTA Horta de San J 5.07 8 P Pn 01 40 35.2 +1.0
1.9nm,0.1s,SNR=12
ERTA S Sn 01 41 31.1 -1.6
2.2nm,0.1s,SNR=7.9
ERTA Horta de San J 5.07 8 P Pn 01 40 35.2 +1.0
1.9nm,0.1s,SNR=12
ERTA S Sn 01 41 31.1 -1.6
2.2nm,0.1s,SNR=7.9
ERTA Horta de San J 5.07 8 P Pn 01 40 35.2 +1.0
ERTA S Sn 01 41 33.4 +0.7
EMIN Mina Concepcio 5.18 292 P Pn 01 40 36.0 +0.3
EMIN S Sn 01 41 35.0 -0.6
EMIN Mina Concepcio 5.18 292 P Pn 01 40 36.0 +0.3
0.2nm,0.1s,SNR=7.9
EMIN S Sn 01 41 32.8 -2.8
0.2nm,0.1s,SNR=7.9
EMIN Mina Concepcio 5.18 292 P Pn 01 40 36.0 +0.3
0.2nm,0.1s,SNR=7.9
EMIN S Sn 01 41 32.8 -2.8
0.2nm,0.1s,SNR=7.9
EMIN Mina Concepcio 5.18 292 P Pn 01 40 36.0 +0.2
EMIN S Sn 01 41 35.0 -0.6
GUD Guadarrama 5.46 330 P Pn 01 40 41.2 +1.7
GUD S Sn 01 41 40.2 -2.2
GUD Guadarrama 5.46 330 P Pn 01 40 41.2 +1.6
1.4nm,0.2s,SNR=7.9
GUD S Sn 01 41 40.2 -2.2
0.7nm,0.2s,SNR=7.9
GUD Guadarrama 5.46 330 P Pn 01 40 41.2 +1.6
1.4nm,0.2s,SNR=7.9
GUD S Sn 01 41 40.2 -2.2
0.7nm,0.2s,SNR=7.9
GUD Guadarrama 5.46 330 P Pn 01 40 41.2 +1.7
GUD S Sn 01 41 40.2 -2.2
EPOB Poblet 5.57 13 P Pn 01 40 41.7 +0.7
EPOB Poblet 5.57 13 P Pn 01 40 41.7 +0.7
1.5nm,0.1s,SNR=9.9
EPOB S Sn 01 41 40.8 -4.3
5.3nm,0.3s,SNR=7.9
EPOB Poblet 5.57 13 P Pn 01 40 41.7 +0.7
1.5nm,0.1s,SNR=9.9
EPOB S Sn 01 41 40.8 -4.3
5.3nm,0.3s,SNR=7.9
EPOB Poblet 5.57 13 P Pn 01 40 41.7 +0.7
PBAR Barrancos 5.60 295 *e*Pn Pn 01 40 41.9 +0.5
PBAR *e*Sn Sn 01 41 42.8 -3.0
PBAR A 01 41 47.1
1.4nm,0.8s
PBAR Barrancos 5.60 295 *e*Pn Pn 01 40 41.9 +0.5
PBAR *e*Sn Sn 01 41 42.8 -3.0
1.4nm,0.8s
EGRO El Granado 5.74 288 P Pn 01 40 42.2 -1.2
EGRO S Sn 01 41 46.8 -2.4
EGRO El Granado 5.74 288 P Pn 01 40 42.2 -1.2
1.0nm,0.3s,SNR=7.9
EGRO S Sn 01 41 45.8 -3.4
0.5nm,0.2s,SNR=7.9
EGRO El Granado 5.74 288 P Pn 01 40 42.2 -1.2
1.0nm,0.3s,SNR=7.9
EGRO S Sn 01 41 45.8 -3.4
0.5nm,0.2s,SNR=7.9
EGRO El Granado 5.74 288 P Pn 01 40 42.2 -1.1
EGRO S Sn 01 41 46.8 -2.4
EBAD Badajoz 5.82 301 P Pn 01 40 44.2 -0.2
EBAD S Sn 01 41 48.6 -2.6
EBAD Badajoz 5.82 301 P Pn 01 40 44.2 -0.2
0.3nm,0.1s,SNR=7.9
EBAD S Sn 01 41 47.6 -3.6
1.1nm,0.2s,SNR=7.9
EBAD Badajoz 5.82 301 P Pn 01 40 44.2 -0.2
0.3nm,0.1s,SNR=7.9
EBAD S Sn 01 41 47.6 -3.6
1.1nm,0.2s,SNR=7.9
EBAD Badajoz 5.82 301 P Pn 01 40 44.2 -0.2
EBAD S Sn 01 41 48.6 -2.6
PVAQ Vaqueiros 5.89 287 *e*Pn Pn 01 40 44.9 -0.5
PVAQ *e*Sn Sn 01 41 48.6 -4.3
PVAQ A 01 41 53.7
2.1nm,0.9s
PVAQ Vaqueiros 5.89 287 *e*Pn Pn 01 40 44.9 -0.5
PVAQ *e*Sn Sn 01 41 48.6 -4.3
2.1nm,0.9s
PCVE Castro Verde 6.19 288 *e*Pn Pn 01 40 50.0 +0.5
PCVE Castro Verde 6.19 288 *e*Pn Pn 01 40 50.0 +0.5
PESTR Estremoz 6.27 300 *e*Pn Pn 01 40 51.0 +0.3
PESTR *e*Sn Sn 01 41 58.4 -4.0
PESTR Estremoz 6.27 300 *e*Pn Pn 01 40 51.0 +0.3
PESTR *e*Sn Sn 01 41 58.4 -4.0
CFON Fontmartina 6.29 21 P Pn 01 40 51.2 +0.3
CFON S Sn 01 41 58.5 -4.3
CFON Fontmartina 6.29 21 P Pn 01 40 51.2 +0.3
3.1nm,0.2s,SNR=8.7
CFON S Sn 01 41 58.5 -4.3
1.3nm,0.2s,SNR=7.9
CFON Fontmartina 6.29 21 P Pn 01 40 51.2 +0.3
3.1nm,0.2s,SNR=8.7
CFON S Sn 01 41 58.5 -4.3
1.3nm,0.2s,SNR=7.9
CFON Fontmartina 6.29 21 P Pn 01 40 51.2 +0.3
PMRV Marv??o 6.40 305 *e*Pn Pn 01 40 53.9 +1.4
PMRV *e*Sn Sn 01 42 03.1 -2.5
PMRV Marv??o 6.40 305 *e*Pn Pn 01 40 53.9 +1.4
PMRV *e*Sn Sn 01 42 03.1 -2.5
EVO Evora 6.44 296 *e*Pn Pn 01 40 53.1 +0.1
EVO *e*Sn Sn 01 42 03.6 -2.9
EVO Evora 6.44 296 *e*Pn Pn 01 40 53.1 +0.1
EVO *e*Sn Sn 01 42 03.6 -2.9
CSOR Sort 6.57 11 P Pn 01 40 55.7 +0.9
CSOR S Sn 01 42 10.8 +0.9
CSOR Sort 6.57 11 P Pn 01 40 55.7 +0.9
0.4nm,0.2s,SNR=7.9
CSOR S Sn 01 42 10.8 +0.9
0.8nm,0.3s,SNR=7.9
CSOR Sort 6.57 11 P Pn 01 40 55.7 +0.9
0.4nm,0.2s,SNR=7.9
CSOR S Sn 01 42 10.8 +0.9
0.8nm,0.3s,SNR=7.9
CSOR Sort 6.57 11 P Pn 01 40 55.7 +0.9
CSOR S Sn 01 42 10.8 +1.0
CLLI Llivia 6.84 16 P Pn 01 40 59.7 +1.3
CLLI S Sn 01 42 13.6 -2.7
CLLI Llivia 6.84 16 P Pn 01 40 59.7 +1.3
0.2nm,0.1s,SNR=7.9
CLLI S Sn 01 42 13.6 -2.7
0.2nm,0.1s,SNR=7.9
CLLI Llivia 6.84 16 P Pn 01 40 59.7 +1.3
0.2nm,0.1s,SNR=7.9
CLLI S Sn 01 42 13.6 -2.7
0.2nm,0.1s,SNR=7.9
CLLI Llivia 6.84 16 P Pn 01 40 59.7 +1.3
ELAN Lanestosa 7.60 344 P Pn 01 41 11.8 +2.8
ELAN Lanestosa 7.60 344 P Pn 01 41 11.8 +2.8
SNR=7.9
ELAN Lanestosa 7.60 344 P Pn 01 41 11.8 +2.8
SNR=7.9
ELAN Lanestosa 7.60 344 P Pn 01 41 11.8 +2.9
EARI Arriondas 8.16 336 P Pn 01 41 18.5 +1.9
EARI Arriondas 8.16 336 P Pn 01 41 18.5 +1.9
SNR=7.9
EARI Arriondas 8.16 336 P Pn 01 41 18.5 +1.9
SNR=7.9
EARI Arriondas 8.16 336 P Pn 01 41 18.5 +1.9

*ISCJB **07** 01:53:51.7±0.2, 45°.06N±0°.01×6°.47E±0°.02, h15km±3km, Error ellipse: s-maj=2.5km s-min=2.3km az=143.3*
*CSEM **07** 01:53:52.1±0.1, 45°.08N×6°.49E, h20km, ML2.5/25, Error ellipse: s-maj=2.1km s-min=1.6km az=45.0*
*STR **07** 01:53:52.4±0.8, 45°.16N×6°.59E, h5km, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*GEN **07** 01:53:53.0, 45°.13N×6°.51E, h36km, ML1.8*
*NEIC **07** 01:53:53.4, 45°.06N×6°.48E, h2km, MD2.4(ROM), ML2.5(STR), ML2.5(LDG), After LDG.*
*ROM **07** 01:53:53.3±0.4, 45°.07N×6°.55E, h9km±1km, Md2.4/6, Ml1.6/7, Error ellipse: s-maj=4.5km s-min=1.8km az=98.0*
*LDG **07** 01:53:53.4±0.1, 45°.06N×6°.48E, h2km, Ml2.5/18, Error ellipse: s-maj=1.1km s-min=0.7km az=68.0*
ISC 07 01:53:52.4±0.2, 45°.07N±0°.01×6.48E±0°.02, h16km±3km, n89, σ0.95/157, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNI	**Bardonecchia**	**0.14**	**99**	Pg	**Pg**	**01 53 55.9**	**-0.5**
BNI				Sg	**Sg**	**01 53 58.0**	**-1.0**
50nm,0.3s							
BNI	**Bardonecchia**	**0.14**	**99**	Pg	**Pg**	**01 53 55.9**	**-0.5**
BNI				Sg	**Sg**	**01 53 58.0**	**-1.0**
50nm,0.3s							
GDM	**Grand'Maison**	**0.29**	**297**	Pg	**Pg**	**01 53 58.9**	**+0.3**
GDM				Sg	**Sg**	**01 54 03.0**	**+0.3**
GDM	**Grand'Maison**	**0.29**	**297**	Pg	**Pg**	**01 53 58.9**	**+0.3**
GDM				Sg	**Sg**	**01 54 03.0**	**+0.3**
MBDF	**Montbardon**	**0.41**	**149**	*e*Pg	**Pg**	**01 54 00.6**	**-0.1**
MBDF				*e*Sg	**Sg**	**01 54 06.3**	**+0.1**
55nm,0.4s							
MBDF	**Montbardon**	**0.41**	**149**	*e*Pg	**Pg**	**01 54 00.6**	**-0.1**
MBDF				*e*Sg	**Sg**	**01 54 06.3**	**+0.1**
28nm,0.4s							
ORIF	**Oris-en-Rattie**	**0.45**	**250**	*e*Pg	**Pg**	**01 54 01.8**	**+0.3**
ORIF				*e*Sg	**Sg**	**01 54 07.8**	**+0.2**
95nm,0.2s							
ORIF	**Oris-en-Rattie**	**0.45**	**250**	*e*Pg	**Pg**	**01 54 01.8**	**+0.3**
ORIF				*e*Sg	**Sg**	**01 54 07.8**	**+0.2**
48nm,0.2s							
LPG	**La Plagne**	**0.47**	**24**	*e*Pg	**Pg**	**01 54 02.2**	**+0.4**
LPG				*e*Sg	**Sg**	**01 54 09.2**	**+1.1**
38nm,0.4s							
LPG	**La Plagne**	**0.47**	**24**	*e*Pg	**Pg**	**01 54 02.2**	**+0.4**
LPG				*e*Sg	**Sg**	**01 54 09.2**	**+1.1**
19nm,0.4s							
LPL	**La Plagne**	**0.48**	**22**	*e*Pg	**Pg**	**01 54 02.3**	**+0.3**
LPL				*e*Sg	**Sg**	**01 54 09.6**	**+1.2**
LPL	**La Plagne**	**0.48**	**22**	*e*Pg	**Pg**	**01 54 02.3**	**+0.3**
LPL				*e*Sg	**Sg**	**01 54 09.6**	**+1.2**
GRN	**Grenoble**	**0.54**	**288**	Pg	**Pg**	**01 54 04.3**	**+1.1**
GRN				Sg	**Sg**	**01 54 12.1**	**+1.6**
GRN	**Grenoble**	**0.54**	**288**	Pg	**Pg**	**01 54 04.3**	**+1.1**
GRN				Sg	**Sg**	**01 54 12.1**	**+1.6**
RSP	**Reno Superiore**	**0.56**	**82**	Pg	**Pg**	**01 54 03.8**	**+0.3**
RSP				Sg	**Sg**	**01 54 11.3**	**+0.2**
36nm,0.3s							
RSP	**Reno Superiore**	**0.56**	**82**	Pg	**Pg**	**01 54 03.8**	**+0.3**
RSP				S	**Sg**	**01 54 10.8**	**-0.3**
RSP				Sg	**Sg**	**01 54 11.3**	**+0.2**
36nm,0.3s							
LSD	**Lago del Serru**	**0.60**	**50**	Pg	**Pg**	**01 54 05.0**	**+0.7**
LSD				Sg	**Sg**	**01 54 12.4**	**0.0**
52nm,0.7s							
LSD	**Lago del Serru**	**0.60**	**50**	Pg	**Pg**	**01 54 05.0**	**+0.7**
LSD				Sg	**Sg**	**01 54 12.4**	**0.0**
52nm,0.7s							
LSD				S	**Sg**	**01 54 12.7**	**+0.3**
SURF	**Saint Ours**	**0.64**	**158**	Pg	**Pg**	**01 54 05.8**	**+0.8**
SURF				Sg	**Sg**	**01 54 14.4**	**+0.9**
SURF	**Saint Ours**	**0.64**	**158**	Pg	**Pg**	**01 54 05.8**	**+0.8**
SURF				Sg	**Sg**	**01 54 14.4**	**+0.9**
PZZ	**Stroppo**	**0.73**	**141**	Pg	**Pg**	**01 54 06.4**	**-0.2**
PZZ				Sg	**Sg**	**01 54 16.8**	**+0.6**
51nm,0.2s							
PZZ	**Stroppo**	**0.73**	**141**	Pg	**Pg**	**01 54 06.4**	**-0.2**
PZZ				S	**Sg**	**01 54 15.9**	**-0.3**
PZZ				Sg	**Sg**	**01 54 16.8**	**+0.6**
51nm,0.2s							
DOI	**San Damiano**	**0.79**	**136**	Pg	**Pg**	**01 54 07.5**	**-0.3**
DOI				Sg	**Sg**	**01 54 18.3**	**+0.1**
31nm,0.3s							
DOI	**San Damiano**	**0.79**	**136**	Pg	**Pg**	**01 54 07.5**	**-0.3**
DOI				Sg	**Sg**	**01 54 18.3**	**+0.1**
31nm,0.3s							
OCF	**Saint Nazaire**	**0.97**	**240**	Pg	**Pg**	**01 54 13.2**	**+2.0**
OCF	**Saint Nazaire**	**0.97**	**240**	Pg	**Pg**	**01 54 13.2**	**+2.0**
OG26	**St.-Nazaire-De**	**0.97**	**240**	Pg	**Pg**	**01 54 13.2**	**+2.0**
OG26	**St.-Nazaire-De**	**0.97**	**240**	Pg	**Pg**	**01 54 13.2**	**+2.0**
TRAV	**Traversella**	**1.00**	**63**	Pg	**Pg**	**01 54 12.1**	**+0.4**
TRAV				Sg	**Sg**	**01 54 24.7**	**-0.1**
26nm,0.3s							
TRAV	**Traversella**	**1.00**	**63**	P	**Pb**	**01 54 09.5**	**-1.8**
TRAV	**Traversella**	**1.00**	**63**	Pg	**Pg**	**01 54 12.1**	**+0.4**
TRAV				Sg	**Sg**	**01 54 24.7**	**-0.1**
26nm,0.3s							
TOUF	**Mont Tournerai**	**1.20**	**152**	Pg	**Pg**	**01 54 15.4**	**-0.1**
TOUF	**Mont Tournerai**	**1.20**	**152**	Pg	**Pg**	**01 54 15.4**	**-0.1**
MVIF	**Mont Vial**	**1.27**	**157**	Pg	**Pg**	**01 54 18.4**	**+1.5**
MVIF	**Mont Vial**	**1.27**	**157**	Pg	**Pg**	**01 54 18.4**	**+1.5**
SMRF	**Simiane la Rot**	**1.27**	**211**	*e*P	**Pn**	**01 54 18.1**	**+2.6**
SMRF				*e*Sg	**Sg**	**01 54 33.4**	**-0.1**
10nm,0.3s							
SMRF	**Simiane la Rot**	**1.27**	**211**	*e*Pg	**Pg**	**01 54 17.0**	**0.0**
SMRF				*e*P		01 54 18.1	
SMRF				*e*Sg	**Sg**	**01 54 33.4**	**-0.1**
SMRF	**Simiane la Rot**	**1.27**	**211**	*e*Pg	**Pg**	**01 54 17.0**	**0.0**
SMRF				*e*Sg	**Sg**	**01 54 33.4**	**-0.1**
5.1nm,0.3s							
AUTN	**L'Aution**	**1.27**	**147**	Pg	**Pg**	**01 54 17.4**	**+0.4**
AUTN				Sg	**Sg**	**01 54 32.9**	**-0.7**
AUTN	**L'Aution**	**1.27**	**147**	Pg	**Pg**	**01 54 17.4**	**+0.4**
AUTN				Sg	**Sg**	**01 54 32.9**	**-0.7**
VIVF	**Saint-Julien-l**	**1.30**	**261**	*e*Pg	**Pg**	**01 54 17.9**	**+0.5**
VIVF				*e*Sg	**Sg**	**01 54 34.4**	**0.0**
15nm,0.2s							
VIVF	**Saint-Julien-l**	**1.30**	**261**	*e*Pg	**Pg**	**01 54 17.9**	**+0.5**
VIVF				*e*Sg	**Sg**	**01 54 34.4**	**0.0**
7.5nm,0.2s							
SAOF	**Saorge**	**1.33**	**144**	Pg	**Pg**	**01 54 18.0**	**-0.1**
SAOF	**Saorge**	**1.33**	**144**	Pg	**Pg**	**01 54 18.0**	**-0.1**
LUCF	**Luceram**	**1.33**	**152**	Pg	**Pg**	**01 54 18.5**	**+0.4**
LUCF	**Luceram**	**1.33**	**152**	Pg	**Pg**	**01 54 18.5**	**+0.4**
MONE	**Monesi**	**1.35**	**137**	P	**Pn**	**01 54 15.8**	**-0.7**
MONE				S	**Sn**	**01 54 30.9**	**-3.2**
CALN	**Calern**	**1.35**	**167**	Sg	**Sg**	**01 54 40.9**	**+4.8**
SSB	**Saint Sauveur**	**1.38**	**279**	Pg	**Pg**	**01 54 20.3**	**+1.2**
SSB	**Saint Sauveur**	**1.38**	**279**	Pg	**Pg**	**01 54 20.3**	**+1.2**
SBF	**Sospel**	**1.39**	**150**	*e*Pg	**Pg**	**01 54 19.2**	**0.0**
SBF				*e*Sg	**Sg**	**01 54 36.9**	**-0.4**
48nm,0.6s							
SBF	**Sospel**	**1.39**	**150**	*e*Pg	**Pg**	**01 54 19.2**	**0.0**
SBF				*e*Sg	**Sg**	**01 54 36.9**	**-0.4**
24nm,0.6s							
RONM	**Roccetta Nervi**	**1.44**	**146**	P	**Pn**	**01 54 16.3**	**-1.5**
RORO	**Rocca Rossa**	**1.49**	**130**	P	**Pn**	**01 54 16.3**	**-2.1**
NEGI	**Seborga**	**1.51**	**144**	P	**Pn**	**01 54 18.0**	**-0.7**
FRF	**La Foret Royal**	**1.52**	**175**	*e*Pg	**Pg**	**01 54 21.5**	**-0.1**
FRF				*e*Sg	**Sg**	**01 54 40.8**	**-0.5**
22nm,0.3s							
FRF	**La Foret Royal**	**1.52**	**175**	*e*Pg	**Pg**	**01 54 21.5**	**-0.1**
FRF				*e*Sg	**Sg**	**01 54 40.8**	**-0.5**
11nm,0.3s							
IMI	**Imperia**	**1.54**	**138**	P	**Pn**	**01 54 17.8**	**-1.4**
CABF	**La Chapelle**	**1.56**	**350**	*e*Pg	**Pg**	**01 54 22.9**	**+0.5**
CABF				*e*Sg	**Sg**	**01 54 43.0**	**+0.2**
11nm,0.5s							
CABF	**La Chapelle**	**1.56**	**350**	*e*Pn	**Pn**	**01 54 20.8**	**+1.4**
CABF				*e*Pg	**Pg**	**01 54 22.9**	**+0.5**
CABF				*e*Sg	**Sg**	**01 54 43.0**	**+0.2**
CABF	**La Chapelle**	**1.56**	**350**	*e*Pn	**Pn**	**01 54 20.8**	**+1.4**
CABF	**La Chapelle**	**1.56**	**350**	*e*Pg	**Pg**	**01 54 22.9**	**+0.5**
CABF				*e*Sg	**Sg**	**01 54 43.0**	**+0.2**
5.5nm,0.5s							
PCP	**Piancastagn**	**1.57**	**109**	P	**Pn**	**01 54 18.7**	**-0.8**
LMR	**La Mourre**	**1.74**	**179**	*e*Pg	**Pg**	**01 54 25.4**	**-0.4**
LMR				*e*Sg	**Sg**	**01 54 47.7**	**-0.7**
11nm,0.3s							
LMR	**La Mourre**	**1.74**	**179**	*e*Pg	**Pg**	**01 54 25.4**	**-0.4**
LMR				*e*Sg	**Sg**	**01 54 47.7**	**-0.7**
5.4nm,0.3s							
LASF	**Ste Croix**	**2.12**	**243**	*e*Pg	**Pg**	**01 54 32.7**	**-0.4**
LASF				*e*Sg	**Sg**	**01 55 00.2**	**-0.4**
5.3nm,0.4s							
LASF	**Ste Croix**	**2.12**	**243**	*e*P	**Pn**	**01 54 29.6**	**+2.5**
LASF				*e*Pg	**Pg**	**01 54 32.7**	**-0.4**
LASF				*e*Sg	**Sg**	**01 55 00.2**	**-0.4**
LASF	**Ste Croix**	**2.12**	**243**	*e*Pg	**Pg**	**01 54 32.7**	**-0.4**
LASF				*e*Sg	**Sg**	**01 55 00.2**	**-0.4**
2.7nm,0.4s							
SMF	**Signal de Mont**	**2.42**	**311**	*e*Pg	**Pg**	**01 54 37.0**	**-1.8**
SMF				*e*Sg	**Sg**	**01 55 10.0**	**-0.2**
4.8nm,0.3s							
SMF	**Signal de Mont**	**2.42**	**311**	*e*Pg	**Pg**	**01 54 37.0**	**-1.8**
SMF				*e*Sg	**Sg**	**01 55 10.0**	**-0.2**
2.4nm,0.3s							
HINF	**Hinteralfeld**	**2.76**	**5**	*e*Sg	**Sg**	**01 55 20.7**	**-0.2**
1.8nm,0.3s							
HINF	**Hinteralfeld**	**2.76**	**5**	*e*Sg	**Sg**	**01 55 20.7**	**-0.2**
0.9nm,0.3s							
AVF	**Avril sur Loir**	**2.77**	**309**	*e*Pg	**Pg**	**01 54 45.3**	**-0.3**
AVF				*e*Sg	**Sg**	**01 55 19.6**	**-1.9**
3.2nm,0.4s							
AVF	**Avril sur Loir**	**2.77**	**309**	*e*P	**Pn**	**01 54 39.6**	**+3.5**
AVF				*e*Pg	**Pg**	**01 54 45.3**	**-0.3**
AVF				*e*Sg	**Sg**	**01 55 19.6**	**-1.9**
AVF	**Avril sur Loir**	**2.77**	**309**	*e*Pg	**Pg**	**01 54 45.3**	**-0.3**
AVF				*e*Sg	**Sg**	**01 55 19.6**	**-1.9**
1.6nm,0.4s							
LOR	**Lormes**	**2.85**	**321**	*e*Pg	**Pg**	**01 54 46.5**	**-0.5**
LOR				*e*Sg	**Sg**	**01 55 23.0**	**-1.0**
2.5nm,0.3s							
LOR	**Lormes**	**2.85**	**321**	*e*Pg	**Pg**	**01 54 46.5**	**-0.5**
LOR				*e*Sg	**Sg**	**01 55 23.0**	**-1.0**
1.2nm,0.3s							
SSF	**Saint Saulge**	**2.87**	**315**	*e*Pg	**Pg**	**01 54 46.8**	**-0.6**
SSF				*e*Sg	**Sg**	**01 55 23.6**	**-0.9**
3.4nm,0.4s							
SSF	**Saint Saulge**	**2.87**	**315**	*e*Pg	**Pg**	**01 54 46.8**	**-0.6**
SSF				*e*Sg	**Sg**	**01 55 23.6**	**-0.9**
1.7nm,0.4s							
HAU	**Haudompre**	**2.93**	**358**	*e*Pg	**Pg**	**01 54 48.6**	**0.0**
HAU				*e*Sg	**Sg**	**01 55 26.1**	**-0.5**
3.9nm,0.3s							
HAU	**Haudompre**	**2.93**	**358**	*e*Pg	**Pg**	**01 54 48.6**	**0.0**
HAU				*e*Sg	**Sg**	**01 55 26.1**	**-0.5**
2.0nm,0.3s							
BGF	**Bois d'Agland**	**2.94**	**302**	*e*Pg	**Pg**	**01 54 48.1**	**-0.7**
BGF				*e*Sg	**Sg**	**01 55 26.1**	**-0.8**
17nm,0.5s							
BGF	**Bois d'Agland**	**2.94**	**302**	*e*P	**Pn**	**01 54 41.8**	**+3.4**
BGF				*e*Pg	**Pg**	**01 54 48.1**	**-0.7**
BGF				*e*Sg	**Sg**	**01 55 26.1**	**-0.8**
BGF	**Bois d'Agland**	**2.94**	**302**	*e*Pg	**Pg**	**01 54 48.1**	**-0.7**
BGF				*e*Sg	**Sg**	**01 55 26.1**	**-0.8**
8.3nm,0.5s							
CAF	**Calviac**	**3.13**	**269**	*e*P	**Pn**	**01 54 44.8**	**+3.8**
CAF				*e*Sg	**Sg**	**01 55 31.7**	**-1.3**
3.3nm,0.4s							
TCF	**Toulx Ste Croi**	**3.23**	**294**	*e*Sg	**Sg**	**01 55 35.0**	**-1.1**
3.4nm,0.5s							
TCF	**Toulx Ste Croi**	**3.23**	**294**	*e*Sg	**Sg**	**01 55 35.0**	**-1.1**
1.7nm,0.5s							
RJF	**Les Rejaudoux**	**3.52**	**276**	*e*Sg	**Sg**	**01 55 44.2**	**-1.0**
4.9nm,0.5s							
RJF	**Les Rejaudoux**	**3.52**	**276**	*e*Sg	**Sg**	**01 55 44.2**	**-

*CSEM **07** 02:04:10.7, 37.37N×20.62E, h5km, MD3.5, After ATH*
*NEIC **07** 02:04:10.7, 37.37N×20.62E, h5km, MD3.5(ATH), After ATH.*

ATH 07 02:04:11.3, 37.37N×20.63E, h4km±4km, MD3.5/3, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.95**	**44**	*e*Pb	Pg	02 04 29.3	-0.3
RLS				*e*Sb	Sg	02 04 42.8	+0.8
RLS	**Riolos of Patr**	**0.95**	**44**	*e*PG	Pg	02 04 29.3	-0.3
RLS				*e*SG	Sg	02 04 42.8	+0.8
RLS	**Riolos of Patr**	**0.95**	**44**	*e*Pb	Pg	02 04 29.3	-0.3
RLS				*e*Sb	Sg	02 04 42.8	+0.8
PYL	**PYLOS**	**1.01**	**118**	*e*PG	Pg	02 04 30.2	-0.4
PYL	**PYLOS**	**1.01**	**118**	*e*Pb	Pg	02 04 30.2	-0.4
ITM	**Ithomi**	**1.05**	**100**	*e*Pn	Pg	02 04 30.9	-0.6
ITM	**Ithomi**	**1.05**	**100**	*e*PG	Pg	02 04 30.9	-0.6
ITM	**Ithomi**	**1.05**	**100**	*e*Pn	Pg	02 04 30.9	-0.6
VLX	**Vlachokerasia**	**1.39**	**89**	*e*PN	Pn	02 04 37.9	+0.4
VLX	**Vlachokerasia**	**1.39**	**89**	*e*Pb	Pb	02 04 37.9	0.0
EFP	**Efpalio**	**1.46**	**43**	*e*PG	Pg	02 04 38.0	-1.3
EFP	**Efpalio**	**1.46**	**43**	*e*Pg	Pg	02 04 38.0	-1.3
GUR	**Goura**	**1.47**	**67**	*e*PB	Pb	02 04 37.7	-1.5
GUR	**Goura**	**1.47**	**67**	*e*Pg	Pg	02 04 37.7	-1.8
EVR	**Evrytania**	**1.80**	**31**	*e*Pn	Pn	02 04 45.7	+2.6
EVR	**Evrytania**	**1.80**	**31**	*e*PB	Pb	02 04 45.7	+0.8
EVR	**Evrytania**	**1.80**	**31**	*e*Pn	Pn	02 04 45.7	+2.6
VLI	**Veliai**	**1.96**	**109**	*e*Pg	Pg	02 04 47.2	-1.6
VLI	**Veliai**	**1.96**	**109**	*e*PN	Pn	02 04 47.2	+2.0
VLI	**Veliai**	**1.96**	**109**	*e*Pg	Pg	02 04 47.2	-1.6
AGG	**Agios Georgios**	**2.12**	**39**	*e*Pg	Pg	02 04 50.5	-1.5
AGG	**Agios Georgios**	**2.12**	**39**	*e*PG	Pg	02 04 50.5	-1.5
AGG	**Agios Georgios**	**2.12**	**39**	*e*Pg	Pg	02 04 50.5	-1.5
KYTH	**Kithira**	**2.22**	**119**	*e*Pn	Pn	02 04 51.2	+2.4
KYTH	**Kithira**	**2.22**	**119**	*e*PN	Pn	02 04 51.2	+2.4
KYTH	**Kithira**	**2.22**	**119**	*e*Pn	Pn	02 04 51.2	+2.4
LKR	**Lokris**	**2.27**	**55**	*e*Pn	Pn	02 04 51.0	+1.5
LKR	**Lokris**	**2.27**	**55**	*e*PB	Pb	02 04 51.0	-1.8
LKR	**Lokris**	**2.27**	**55**	*e*Pn	Pn	02 04 51.0	+1.5
THL	**Klokotos Trika**	**2.45**	**26**	*e*PN	Pn	02 04 54.0	+2.0
THL	**Klokotos Trika**	**2.45**	**26**	*e*Pn	Pn	02 04 54.0	+2.0
VLY	**Voula,Athens**	**2.56**	**78**	*e*Pg	Pg	02 04 57.9	-2.4
VLY	**Voula,Athens**	**2.56**	**78**	*e*Pg	Pg	02 04 57.9	-2.4
NEO	**Neokhori**	**2.81**	**46**	*e*Pb	Pb	02 04 58.1	-3.9
NEO	**Neokhori**	**2.81**	**46**	*e*Pb	Pb	02 04 58.1	-3.9
STON	**Ston**	**5.94**	**339**	Sn	Sn	02 06 46.7	-1.7
NVLJ	**Novalja**	**8.40**	**331**	Sn	Sn	02 07 46.7	-2.3

*IDC **07** 02:15:22.5±1.7, 24.30S×66.78W, h154km±19km, mb3.7/3, mb1 3.7/5, mb1mx3.5/17, mbtmp3.6/5, Error ellipse: s-maj=42.4km s-min=13.7km az=97.0*
*ISCJB **07** 02:15:22.7±0.9, 24.28S±0.05×67.0W±0.1, h176km±15km, mb3.7/4, Error ellipse: s-maj=19.3km s-min=7.9km az=1.0*
*NEIC **07** 02:15:23.3±0.8, 24.29S×66.82W, h165km±11km, mb3.8/2, Error ellipse: s-maj=25.5km s-min=9.1km az=108.0*
*GUC **07** 02:15:27.2±0.5, 23.85S×67.50W, h233km±15km, ML4.6*

ISC 07 02:15:23.4±0.9, 24.27S±0.05×66.9W±0.1, h168km±14km, n17, σ1§17/22, mb3.7/4, 3C-1D, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PECH	**Pedro de Valdi**	**3.02**	**303**	⇑*i*P	Pn	02 16 13.8	+2.0
PECH				*i* S	Sn	02 16 48.9	-0.3
PECH				AML	AML	02 16 50.2	
	comp=E,2μm,0.3s						
PB04	**Plate Boundary**	**3.08**	**310**	⇓*i*P	Pn	02 16 19.5	+6.9
PB04				*i* S	Sn	02 16 59.6	+8.9
PB04				AML	AML	02 17 08.5	
	comp=N,993nm,0.4s						
MACH	**Maria Elena**	**3.32**	**308**	⇑*i*P	Pn	02 16 17.1	+1.5
MACH				*i* S	Sn	02 16 55.4	-0.6
MECH	**Mejillones**	**3.42**	**289**	⇑*i*P	Pn	02 16 18.4	+1.5
MECH				*i* S	Sn	02 16 57.1	-1.3
MECH				AML	AML	02 17 02.4	
	comp=E,853nm,0.4s						
PB01	**Plate Boundary**	**3.98**	**323**	*e*P	Pn	02 16 24.8	+0.8
PB01				*i* S	Sn	02 17 08.6	-2.6
LCO	**Las Campanas**	**5.80**	**215**	*e*Pn	Pn	02 16 47.5	-0.2
CFAA	**Coronel Fontan**	**7.40**	**189**	P	Pn	02 17 09.2	+0.5
	comp=E,0.3nm,0.3s,baz=7.3,slow=13,SNR=38						
CFAA				S	Sn	02 18 28.9	-2.9
	comp=E,0.5nm,0.3s,baz=269,slow=19,SNR=12						
LPAZ	**La Paz**	**8.02**	**352**	P	Pn	02 17 18.5	+1.4
	comp=E,2.7nm,0.3s,baz=167,slow=7.7,SNR=88						
LPAZ				S	Sn	02 18 46.3	-0.6
	comp=E,0.2nm,0.3s,baz=49,slow=19,SNR=2.7						
SIV	**San Ignacio**	**9.91**	**35**	P	Pn	02 17 41.2	-0.7
	comp=E,0.3nm,0.3s,baz=227,slow=13,SNR=17						
TOA0	**Torodi Ar. Sit**	**76.61**	**69**	*e*P	P	02 26 54.8	-1.1
TORD	**Torodi Ar. Bea**	**76.61**	**69**	P	P	02 26 55.4	-0.5
	comp=E,0.8nm,0.5s,mb3.6,baz=257,slow=5.4,SNR=29						
MAW	**Mawson**	**81.16**	**163**	P	P	02 27 20.6	+0.8
	comp=E,1.1nm,0.6s,mb3.7,baz=225,slow=5.7,SNR=6.0						
LBTB	**Lobatse**	**82.22**	**114**	P	P	02 27 26.2	0.0
	comp=E,1.5nm,0.6s,mb3.8,baz=254,slow=5.3,SNR=3.0						
LBTB	**Lobatse**	**82.22**	**114**	*e*P	P	02 27 26.9	+0.6
	comp=E,1.3nm,0.5s,mb3.8						
TAM	**Tamanrasset**	**84.47**	**62**	*e*P	P	02 27 37.3	-0.3
	comp=E,0.9nm,0.8s,mb3.5						
WRA	**Warramunga Arr**	**131.41**	**207**	PKP	PKPdf	02 34 16.7	+0.2
	comp=E,0.3nm,0.6s,baz=147,slow=1.8,SNR=5.3						
MKAR	**Makanchi Array**	**146.69**	**40**	PKPbc	PKPbc	02 34 45.8	+0.5
	comp=E,1.3nm,0.6s,baz=326,slow=4.2,SNR=8.4						

*NEIC **07** 02:18:12.6, 35.79N×0.54W, h0km, ML3.2(ALG), After MDD.*
*ISCJB **07** 02:18:13.0±0.5, 35.99N±0.03×0.60W±0.03, h10km, Error ellipse: s-maj=4.2km s-min=3.7km az=161.0*
*CRAAG **07** 02:18:14.7, 35.56N×0.51W, Ml3.5*
*CSEM **07** 02:18:14.8±0.3, 35.82N×0.57W, h30km, ML3.5*
*MDD **07** 02:18:15.1±0.5, 35.80N×0.53W, h23km±7km, mb3.8/11, Error ellipse: s-maj=11.2km s-min=6.1km az=155.0, PRIMO*
*INMG **07** 02:18:15.3±1.1, 35.79N×0.55W, h31km, ML2.2, Error ellipse: s-maj=5.3km s-min=3.1km az=147.0*

ISC 07 02:18:14.1±0.5, 35.96N±0.03×0.61W±0.03, h10km, n117, σ1§42/201, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USTO	**Oran**	**0.23**	**167**	P	Pg	02 18 19.0	+0.2
USTO	**Oran**	**0.23**	**167**	P	Pg	02 18 19.0	+0.2
USTO	**Oran**	**0.23**	**167**	P	Pg	02 18 19.0	+0.2
ODJA	**Bouhanifia**	**0.73**	**149**	P	Pg	02 18 21.0	-7.2
ODJA	**Bouhanifia**	**0.73**	**149**	P	Pg	02 18 21.0	-7.2
ODJA	**Bouhanifia**	**0.73**	**149**	P	Pg	02 18 21.0	-7.2
ODZI	**Dzioua**	**0.84**	**217**	P	Pg	02 18 30.0	-0.2
ODZI	**Dzioua**	**0.84**	**217**	P	Pg	02 18 30.0	-0.2
ODZI	**Dzioua**	**0.84**	**217**	P	Pg	02 18 30.0	-0.2
OJBR	**Djebel Berber**	**0.87**	**115**	P	Pg	02 18 31.0	+0.3
OJBR	**Djebel Berber**	**0.87**	**115**	P	Pg	02 18 31.0	+0.3
OJBR	**Djebel Berber**	**0.87**	**115**	P	Pg	02 18 31.0	+0.3
OJBR	**Djebel Berber**	**0.87**	**115**	P	Pg	02 18 31.0	+0.3
EANR	**'Ain N'Sour**	**1.39**	**90**	P	Pn	02 18 37.0	-2.5
EANR	**'Ain N'Sour**	**1.39**	**90**	P	Pn	02 18 37.0	-2.5
EANR	**'Ain N'Sour**	**1.39**	**90**	P	Pn	02 18 37.0	-2.5
EANR	**'Ain N'Sour**	**1.39**	**90**	P	Pn	02 18 37.0	-2.5
ENIJ	**Nijar**	**1.63**	**309**	P	Pn	02 18 42.5	-0.3
ENIJ				S	Sn	02 19 01.0	-2.9
ENIJ	**Nijar**	**1.63**	**309**	P	Pn	02 18 42.5	-0.3
	11nm,0.2s,SNR=11						
ENIJ				S	Sn	02 19 01.0	-2.9
	39nm,0.3s,SNR=15						
ENIJ				T		02 20 01.7	
	SNR=7.9						
ENIJ	**Nijar**	**1.63**	**309**	P	Pn	02 18 42.5	-0.3
	11nm,0.2s,SNR=11						
ENIJ				S	Sn	02 19 01.0	-2.9
	39nm,0.3s,SNR=15						
ENIJ				T		02 20 01.7	
	SNR=7.9						
ENIJ	**Nijar**	**1.63**	**309**	P	Pn	02 18 42.5	-0.3
	1.3nm,0.1s,SNR=11						
EBNR	**Beni Rached**	**1.77**	**79**	P	Pn	02 18 43.0	-1.7
EBNR	**Beni Rached**	**1.77**	**79**	P	Pn	02 18 43.0	-1.7
EMUR	**La Murta**	**1.94**	**345**	P	Pn	02 18 47.1	-0.1
EMUR				S	Sn	02 19 10.7	-0.9
EMUR	**La Murta**	**1.94**	**345**	P	Pn	02 18 47.1	-0.1
	1.1nm,0.1s,SNR=12						
EMUR				S	Sn	02 19 08.2	-3.4
	14nm,0.2s,SNR=7.9						
EMUR				T		02 20 25.0	
	SNR=7.9						
EMUR	**La Murta**	**1.94**	**345**	P	Pn	02 18 47.1	-0.1
	1.1nm,0.1s,SNR=12						
EMUR				S	Sn	02 19 08.2	-3.4
	14nm,0.2s,SNR=7.9						
EMUR				T		02 20 25.0	
	SNR=7.9						
EMUR	**La Murta**	**1.94**	**345**	P	Pn	02 18 47.1	0.0
	0.4nm,0.1s,SNR=12						
EMUR				S	Sn	02 19 10.7	-0.9
	4.5nm,0.2s,SNR=7.9						
EALB	**Alboran**	**1.96**	**270**	P	Pn	02 18 46.2	-1.2
EALB				S	Sn	02 19 11.2	-0.9
EALB	**Alboran**	**1.96**	**270**	P	Pn	02 18 46.2	-1.2
	8.0nm,0.1s,SNR=7.2						
EALB				S	Sn	02 19 09.6	-2.5
	25nm,0.3s,SNR=7.9						
EALB	**Alboran**	**1.96**	**270**	P	Pn	02 18 46.2	-1.2
	8.0nm,0.1s,SNR=7.2						
EALB				S	Sn	02 19 09.6	-2.5
	25nm,0.3s,SNR=7.9						
EALB	**Alboran**	**1.96**	**270**	P	Pn	02 18 46.2	-1.2
	2.4nm,0.1s,SNR=7.2						
EALB				S	Sn	02 19 11.2	-0.9
	9.1nm,0.2s,SNR=7.9						
EBER	**Berja**	**2.06**	**298**	P	Pn	02 18 48.3	-0.4
EBER				S	Sn	02 19 15.6	+1.1
EBER	**Berja**	**2.06**	**298**	P	Pn	02 18 48.3	-0.4
	2.6nm,0.1s,SNR=20						
EBER				S	Sn	02 19 14.4	0.0
	28nm,0.3s,SNR=8.1						
EBER	**Berja**	**2.06**	**298**	P	Pn	02 18 48.3	-0.4
	2.6nm,0.1s,SNR=20						
EBER				S	Sn	02 19 14.4	0.0
	28nm,0.3s,SNR=8.1						
EBER	**Berja**	**2.06**	**298**	P	Pn	02 18 48.3	-0.4
	0.6nm,0.1s,SNR=20						
EBER				S	Sn	02 19 15.6	+1.2
	5.0nm,0.2s,SNR=8.1						
EHUE	**Huescar**	**2.44**	**320**	P	Pn	02 18 56.2	+2.3
EHUE				S	Sn	02 19 28.5	+4.8
EHUE	**Huescar**	**2.44**	**320**	P	Pn	02 18 56.0	+2.1
	1.6nm,0.1s,SNR=7.9						
EHUE				S	Sn	02 19 27.2	+3.4
	5.0nm,0.2s,SNR=7.9						
EHUE	**Huescar**	**2.44**	**320**	P	Pn	02 18 56.0	+2.1
	1.6nm,0.1s,SNR=7.9						
EHUE				S	Sn	02 19 27.2	+3.4
	5.0nm,0.2s,SNR=7.9						
EHUE	**Huescar**	**2.44**	**320**	P	Pn	02 18 56.2	+2.3
	0.6nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**2.59**	**299**	P	Pn	02 18 57.3	+1.3
	3.0nm,0.3s,SNR=14						
EQUE				S	Sn	02 19 30.7	+3.1
	6.2nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**2.59**	**299**	P	Pn	02 18 57.3	+1.3
	3.0nm,0.3s,SNR=14						
EQUE				S	Sn	02 19 30.7	+3.1
	6.2nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**2.59**	**299**	P	Pn	02 18 57.3	+1.3
	0.3nm,0.1s,SNR=14						
EQES	**Quesada**	**2.69**	**314**	P	Pn	02 18 59.5	+2.1
EQES				S	Sn	02 19 32.4	+2.3
EQES	**Quesada**	**2.69**	**314**	P	Pn	02 18 59.5	+2.1
	4.5nm,0.1s,SNR=30						
EQES				S	Sn	02 19 32.4	+2.3
	21nm,0.3s,SNR=7.9						
EQES	**Quesada**	**2.69**	**314**	P	Pn	02 18 59.5	+2.1
	4.5nm,0.1s,SNR=30						
EQES				S	Sn	02 19 32.4	+2.3
	21nm,0.3s,SNR=7.9						
EQES	**Quesada**	**2.69**	**314**	P	Pn	02 18 59.5	+2.1
	0.4nm,0.1s,SNR=30						
EQES				S	Sn	02 19 32.4	+2.3
	7.4nm,0.2s,SNR=7.9						
ECOG	**Cogollos-Vega**	**2.71**	**300**	P	Pn	02 19 00.3	+2.6
	3.2nm,0.2s,SNR=7.9						
ECOG	**Cogollos-Vega**	**2.71**	**300**	P	Pn	02 19 00.3	+2.6
	3.2nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**2.76**	**6**	P	Pn	02 18 58.4	+0.1
EBEN				S	Sn	02 19 30.2	-1.4
EBEN	**Beniarda**	**2.76**	**6**	P	Pn	02 18 58.4	+0.1
	0.2nm,0.1s,SNR=11						
EBEN				S	Sn	02 19 30.2	-1.4
	4.4nm,0.3s,SNR=7.9						
EBEN	**Beniarda**	**2.76**	**6**	P	Pn	02 18 58.4	+0.1
	0.2nm,0.1s,SNR=11						
EBEN				S	Sn	02 19 30.2	-1.4
	4.4nm,0.3s,SNR=7.9						
EBEN	**Beniarda**	**2.76**	**6**	P	Pn	02 18 58.4	+0.1
	0.2nm,0.1s,SNR=11						
EBEN				S	Sn	02 19 30.2	-1.4
	0.3nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	**2.78**	**345**	P	Pn	02 18 59.7	+1.1
ETOB				S	Sn	02 19 32.5	+0.3
ETOB	**Tobarra**	**2.78**	**345**	P	Pn	02 19 00.2	+1.6
	3.7nm,0.2s,SNR=20						
ETOB				S	Sn	02 19 32.1	-0.1
	11nm,0.2s,SNR=10						
ETOB	**Tobarra**	**2.78**	**345**	P	Pn	02 19 00.2	+1.6
	3.7nm,0.2s,SNR=20						
ETOB				S	Sn	02 19 32.1	-0.1
	11nm,0.2s,SNR=10						
ETOB	**Tobarra**	**2.78**	**345**	P	Pn	02 18 59.7	+1.1
	0.6nm,0.2s,SNR=20						
ETOB				S	Sn	02 19 32.5	+0.3
	3.4nm,0.2s,SNR=10						
EMHD	**Djebel Mahouad**	**2.90**	**84**	P	Pn	02 18 52.0	-8.3
EVIA	**Vianos**	**3.07**	**331**	P	Pn	02 19 03.7	+1.1
EVIA				S	Sn	02 19 41.4	+2.0
EVIA	**Vianos**	**3.07**	**331**	P	Pn	02 19 04.9	+2.4
	3.7nm,0.2s,SNR=7.9						
EVIA				S	Sn	02 19 39.2	-0.1
	12nm,0.2s,SNR=8.8						
EVIA	**Vianos**	**3.07**	**331**	P	Pn	02 19 04.9	+2.4
	3.7nm,0.2s,SNR=7.9						
EVIA				S	Sn	02 19 39.2	-0.1
	12nm,0.2s,SNR=8.8						
EVIA	**Vianos**	**3.07**	**331**	P	Pn	02 19 03.7	+1.1
	0.7nm,0.1s,SNR=7.9						
EVIA				S	Sn	02 19 41.4	+2.1
	4.0nm,0.2s,SNR=8.8						
EBAN	**Banos Encina**	**3.36**	**312**	P	Pn	02 19 09.1	+2.5
EBAN				S	Sn	02 19 46.2	-0.3
EBAN	**Banos Encina**	**3.36**	**312**	P	Pn	02 19 07.2	+0.6
	2.4nm,0.2s,SNR=7.9						
EBAN				S	Sn	02 19 46.2	-0.3
	5.0nm,0.3s,SNR=7.9						
EBAN	**Banos Encina**	**3.36**	**312**	P	Pn	02 19 07.2	+0.6
	2.4nm,0.2s,SNR=7.9						
EBAN				S	Sn	02 19 46.2	-0.3
	5.0nm,0.3s,SNR=7.9						
EBAN	**Banos Encina**	**3.36**	**312**	P	Pn	02 19 09.1	+2.5
	0.7nm,0.1s,SNR=7.9						
EBAN				S	Sn	02 19 46.2	-0.3
	0.9nm,0.1s,SNR=7.9						
EMIJ	**Mijas**	**3.41**	**281**	P	Pn	02 19 05.9	-1.4
EMIJ				S	Sn	02 19 45.0	-2.8
EMIJ	**Mijas**	**3.41**	**281**	P	Pn	02 19 05.9	-1.4
	1.1nm,0.1s,SNR=6.8						
EMIJ				S	Sn	02 19 44.3	-3.5
	6.8nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	**3.41**	**281**	P	Pn	02 19 05.9	-1.4
	1.1nm,0.1s,SNR=6.8						
EMIJ				S	Sn	02 19 44.3	-3.5
	6.8nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	**3.41**	**281**	P	Pn	02 19 05.9	-1.4
	0.4nm,0.1s,SNR=6.8						
EMIJ				S	Sn	02 19 45.0	-2.9
	1.2nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**3.44**	**26**	P	Pn	02 19 07.4	-0.2
EIBI				S	Sn	02 19 47.0	-1.4
EIBI	**Ibiza**	**3.44**	**26**	P	Pn	02 19 07.4	-0.2
	4.3nm,0.2s,SNR=9.2						
EIBI				S	Sn	02 19 47.0	-1.4
	4.3nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**3.44**	**26**	P	Pn	02 19 07.4	-0.2
	4.3nm,0.2s,SNR=9.2						
EIBI				S	Sn	02 19 47.0	-1.4
	4.3nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**3.44**	**26**	P	Pn	02 19 07.4	-0.2
	0.6nm,0.1s,SNR=9.2						
EIBI				S	Sn	02 19 47.0	-1.4
	3.0nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**3.86**	**306**	P	Pn	02 19 16.9	+3.4
EADA				S	Sn	02 19 59.9	+1.0
EADA	**Adamuz**	**3.86**	**306**	P	Pn	02 19 16.9	+3.4
	0.7nm,0.2s,SNR=7.9						
EADA				S	Sn	02 19 57.6	-1.3
	0.9nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**3.86**	**306**	P	Pn	02 19 16.9	+3.4
	0.7nm,0.2s,SNR=7.9						
EADA				S	Sn	02 19 57.6	-1.3
	0.9nm,0.1s,SNR=7.9						
EMOS	**Mosqueruela**	**4.40**	**1**	P	Pn	02 19 22.6	+1.8
EMOS				S	Sn	02 20 12.1	0.0
EMOS	**Mosqueruela**	**4.40**	**1**	P	Pn	02 19 22.6	+1.8
	1.4nm,0.1s,SNR=11						
EMOS				S	Sn	02 20 11.8	-0.3
	6.1nm,0.4s,SNR=7.9						
EMOS	**Mosqueruela**	**4.40**	**1**	P	Pn	02 19 22.6	+1.8
	1.4nm,0.1s,SNR=11						
EMOS				S	Sn	02 20 11.8	-0.3
	6.1nm,0.4s,SNR=7.9						
EMOS	**Mosqueruela**	**4.40**	**1**	P	Pn	02 19 22.6	+1.8
	0.5nm,0.2s,SNR=11						
EMOS				S	Sn	02 20 12.1	0.0
	0.3nm,0.1s,SNR=7.9						
ETOS	**Mallorca**	**4.67**	**34**	P	Pn	02 19 25.0	+0.4
ETOS				S	Sn	02 20 18.1	-0.8
ETOS	**Mallorca**	**4.67**	**34**	P	Pn	02 19 25.0	+0.4
	0.8nm,0.2s,SNR=7.9						
ETOS				S	Sn	02 20 17.0	-1.8
	4.1nm,0.5s,SNR=7.9						
ETOS	**Mallorca**	**4.67**	**34**	P	Pn	02 19 25.0	+0.4
	0.8nm,0.2s,SNR=7.9						
ETOS				S	Sn	02 20 17.0	-1.8
	4.1nm,0.5s,SNR=7.9						
ETOS	**Mallorca**	**4.67**	**34**	P	Pn	02 19 25.0	+0.4
	0.3nm,0.2s,SNR=7.9						
ETOS				S	Sn	02 20 18.0	-0.8
	0.4nm,0.2s,SNR=7.9						
ETOR	**Torete**	**4.98**	**347**	P	Pn	02 19 32.5	+3.6
ETOR				S	Sn	02 20 26.1	-0.4
ETOR	**Torete**	**4.98**	**347**	P	Pn	02 19 32.5	+3.6
	0.7nm,0.1s,SNR=7.9						
ETOR				S	Sn	02 20 26.1	-0.4
	0.9nm,0.1s,SNR=7.9						
ETOR	**Torete**	**4.98**	**347**	P	Pn	02 19 32.5	+3.6
	0.7nm,0.1s,SNR=7.9						
ETOR				S	Sn	02 20 26.1	-0.4
	0.9nm,0.1s,SNR=7.9						
ERTA	**Horta de San J**	**5.04**	**8**	P	Pn	02 19 30.9	+1.2
ERTA				S	Sn	02 20 28.2	+0.2
ERTA	**Horta de San J**	**5.04**	**8**	P	Pn	02 19 30.9	+1.2
	2.7nm,0.4s,SNR=7.9						
ERTA				S	Sn	02 20 28.2	+0.2
	2.1nm,0.3s,SNR=7.9						
ERTA	**Horta de San J**	**5.04**	**8**	P	Pn	02 19 30.9	+1.2
	2.7nm,0.4s,SNR=7.9						
ERTA				S	Sn	02 20 28.2	+0.2
	2.1nm,0.3s,SNR=7.9						
ERTA	**Horta de San J**	**5.04**	**8**	P	Pn	02 19 30.9	+1.2
	0.3nm,0.1s,SNR=7.9						
ERTA				S	Sn	02 20 28.2	+0.2
	1.0nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.18**	**292**	P	Pn	02 19 31.5	-0.1
EMIN				S	Sn	02 20 29.9	-1.5
EMIN	**Mina Concepcio**	**5.18**	**292**	P	Pn	02 19 31.5	-0.1
	0.2nm,0.2s,SNR=7.9						
EMIN				S	Sn	02 20 29.9	-1.5
	0.4nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.18**	**292**	P	Pn	02 19 31.5	-0.1
	0.2nm,0.2s,SNR=7.9						
EMIN				S	Sn	02 20 29.9	-1.5
	0.4nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.18**	**292**	P	Pn	02 19 31.5	-0.1
	0.1nm,0.1s,SNR=7.9						
EMIN				S	Sn	02 20 29.9	-1.5
	0.1nm,0.1s,SNR=7.9						
GUD	**Guadarrama**	**5.44**	**330**	P	Pn	02 19 36.8	+1.7
GUD	**Guadarrama**	**5.44**	**330**	P	Pn	02 19 36.8	+1.7
	1.1nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	**5.44**	**330**	P	Pn	02 19 36.8	+1.7
	1.1nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	**5.44**	**330**	P	Pn	02 19 36.8	+1.6
	0.1nm,0.1s,SNR=7.9						
EPOB	**Poblet**	**5.54**	**13**	P	Pn	02 19 37.5	+0.9
EPOB				S	Sn	02 20 38.5	-1.9
EPOB	**Poblet**	**5.54**	**13**	P	Pn	02 19 37.5	+0.9
	1.1nm,0.3s,SNR=7.9						
EPOB				S	Sn	02 20 38.5	-1.9
	3.1nm,0.4s,SNR=7.9						
EPOB	**Poblet**	**5.54**	**13**	P	Pn	02 19 37.5	+0.9
	1.1nm,0.3s,SNR=7.9						
EPOB				S	Sn	02 20 38.5	-1.9
	3.1nm,0.4s,SNR=7.9						
EPOB	**Poblet**	**5.54**	**13**	P	Pn	02 19 37

HWA				eS	Sn	02 22 05.0	-0.8
	baz=260						
TWC	**Suao**	**0.98 310**	*i* P		Pn	02 21 52.1	-1.0
	baz=310						
TWC				S	Sn	02 22 05.0	-0.8
	baz=310						
TWD	**Chiawan**	**1.00 276**	P		Pn	02 21 51.8	-1.5
	baz=276						
TWD				eS	Sn	02 22 04.3	-1.9
	baz=276						
NACB	**Ninganchiao**	**1.01 281**	ePn		Pn	02 21 51.7	-1.8
NACB				eSn	Sn	02 22 03.5	-3.0
IRIF	**Iriomote-Funau**	**1.02 70**	P		Pn	02 21 53.1	-0.5
IRIF				eS	Sn	02 22 06.3	-0.5
HATJ	**Hateruma jima**	**1.03 85**	P		Pn	02 21 53.5	-0.2
HATJ				S	Sn	02 22 07.6	+0.6
ESL	**Shilin**	**1.15 262**	eP		Pn	02 21 53.5	-1.9
	baz=255						
ESL				eS	Sn	02 22 07.8	-2.2
	baz=255						
ILA	**Ilan**	**1.16 313**	P		Pn	02 21 56.0	+0.5
	baz=314						
ILA				eS	Sn	02 22 11.4	+1.3
	baz=314						
TWE	**Neicheng**	**1.18 309**	P		Pn	02 21 55.5	-0.3
	baz=310						
TWE				eS	Sn	02 22 11.5	+0.8
	baz=310						
TWB1	**Santiao Chiao**	**1.20 329**	⇑P		Pn	02 21 55.2	-0.9
	baz=330						
TWB1				S	Sn	02 22 11.0	-0.2
	baz=330						
ENTT	**Nioudou**	**1.21 303**	P		Pn	02 21 55.9	-0.2
	baz=292						
ENTT				eS	Sn	02 22 12.5	+1.1
	baz=292						
JKRS	**Kuro-shima**	**1.24 78**	P		Pn	02 21 56.6	0.0
JKRS				S	Sn	02 22 13.6	+1.4
NNS	**Nan Shan**	**1.28 291**	P		Pn	02 21 56.6	-0.5
	baz=291						
NNS				eS	Sn	02 22 12.4	-0.7
	baz=291						
WHF	**Hehuan Shan**	**1.30 278**	⇓*i*P		Pn	02 21 56.8	-0.6
	baz=277						
WHF				eS	Sn	02 22 12.6	-1.1
	baz=277						
EHY	**Hungye**	**1.33 250**	P		Pn	02 21 56.7	-1.1
	baz=249						
EHY				S	Sn	02 22 13.1	-1.2
	baz=249						
NWF	**Wu-fen Shan**	**1.36 323**	*i* P		Pn	02 21 57.9	-0.4
	baz=324						
NWF				eS	Sn	02 22 16.0	+0.9
	baz=324						
YHNB	**Yeheng**	**1.37 300**	ePn		Pn	02 21 57.8	-0.7
JIJ	**Ishigaki jima**	**1.39 74**	P		Pn	02 21 58.2	-0.4
JIJ				S	Sn	02 22 15.3	-0.5
NSK	**Sanguang**	**1.39 300**	⇓P		Pn	02 21 58.5	-0.2
	baz=289						
YULB	**Yu-li**	**1.40 246**	ePn		Pn	02 21 57.2	-1.5
YULB				eSn	Sn	02 22 14.4	-1.5
TWT	**Tachien**	**1.40 282**	eP		Pn	02 21 58.8	+0.1
	baz=281						
TWA	**Mucha**	**1.41 315**	eP		Pn	02 21 58.9	0.0
	baz=316						
TWA				eS	Sn	02 22 17.4	+1.0
	baz=316						
TWF1	**Yuli**	**1.41 244**	P		Pn	02 21 57.9	-1.0
	baz=235						
TWF1				eS	Sn	02 22 15.4	-0.9
	baz=235						
TATO	**Taipei**	**1.47 313**	ePn		Pn	02 21 60.0	+0.2
TATO				eSn	Sn	02 22 18.1	+0.3
TAP1	**Taipei**	**1.49 315**	eP		Pn	02 21 60.0	0.0
	baz=315						
SSLB	**Suanglung**	**1.59 263**	ePn		Pn	02 22 00.3	-1.1
SSLB				eSn	Sn	02 22 19.9	-0.8
TWS1	**Kuangyinshan**	**1.60 314**	eP		Pn	02 22 01.8	+0.3
	baz=328						
TWY	**Chenhua**	**1.62 323**	eP		Pn	02 22 01.4	-0.4
	baz=323						
SMLT	**Sun Moon Lake**	**1.63 267**	P		Pn	02 22 01.8	-0.1
	baz=267						
SMLT				eS	Sn	02 22 21.0	-0.7
	baz=267						
YUS	**Yu-Shan**	**1.66 253**	eP		Pn	02 22 02.4	+0.1
	baz=253						
YUS				eS	Sn	02 22 21.2	-1.2
	baz=253						
NSTT	**Nanjuang**	**1.66 293**	*i* P		Pn	02 22 03.1	+0.7
	baz=293						
TYC	**Yuchr**	**1.67 268**	⇓P		Pn	02 22 02.3	-0.1
	baz=267						
NCU	**National Centr**	**1.68 306**	eP		Pn	02 22 04.8	+2.2
	baz=307						
ELDTW	**Lidau**	**1.72 243**	eP		Pn	02 22 01.9	-1.2
	baz=242						
PCYT	**Pengchaiyu**	**1.73 342**	⇑*i*P		Pn	02 22 02.7	-0.6
	baz=342						
HSN	**Hsinchu**	**1.76 298**	eP		Pn	02 22 04.6	+0.9
	baz=300						
ALS	**Alishan**	**1.78 255**	⇓*i*P		Pn	02 22 04.4	+0.5
	baz=255						
ALS				eS	Sn	02 22 25.1	-0.3
	baz=255						
TWQ1	**Liyutan**	**1.78 282**	eP		Pn	02 22 04.9	+1.0
	baz=283						
TWQ1				eS	Sn	02 22 26.4	+1.0
	baz=283						
NSY	**Sanyi**	**1.81 284**	eP		Pn	02 22 05.1	+0.8
	baz=285						
NSY				eS	Sn	02 22 26.9	+0.9
	baz=285						
WNT	**Mingjian**	**1.83 267**	eP		Pn	02 22 05.1	+0.4
	baz=267						
WNT				eS	Sn	02 22 28.4	+1.8
	baz=267						
TCU	**Taichung**	**1.84 276**	eP		Pn	02 22 05.6	+0.8
	baz=276						
TCU				eS	Sn	02 22 28.7	+1.9
	baz=276						
TTN	**Taitung**	**1.86 229**	eP		Pn	02 22 04.5	-0.6
	baz=220						
CHN5	**Tsauling**	**1.87 259**	eP		Pn	02 22 06.0	+0.8
	baz=250						
TWG	**Pinlang**	**1.87 232**	ePn		Pn	02 22 03.7	-1.5
TWG				eSn	Sn	02 22 25.6	-2.1
TWG	**Pinlang**	**1.87 232**	eP		Pn	02 22 03.9	-1.3
	baz=225						
JTJ	**Tarama**	**1.96 70**	P		Pn	02 22 06.3	-0.1
JTJ				eS	Sn	02 22 30.9	+1.1
WGK	**Gukeng**	**1.96 262**	eP		Pn	02 22 07.6	+1.1
	baz=261						
TPUB	**Ta-pu**	**2.00 251**	ePn		Pn	02 22 07.5	+0.5
TPUB				eSn	Sn	02 22 31.8	+1.0
WTP	**Ta-pu**	**2.03 249**	eP		Pn	02 22 08.1	+0.7
	baz=240						
WTP				eS	Sn	02 22 33.6	+2.0
	baz=240						
ECL	**Taimali**	**2.10 229**	eP		Pn	02 22 06.5	-1.8
	baz=238						
CHY	**Chiayi**	**2.12 257**	eP		Pn	02 22 10.1	+1.4
	baz=257						
SGST	**Jiashian**	**2.12 246**	eP		Pn	02 22 09.7	+1.0
	baz=237						
SGST				eS	Sn	02 22 35.7	+1.9
	baz=237						
CHN1	**Nanshi**	**2.13 249**	eP		Pn	02 22 09.9	+1.1
	baz=248						
CHN1				eS	Sn	02 22 36.2	+2.2
	baz=248						
TWK	**Hsinying**	**2.13 251**	eP		Pn	02 22 10.1	+1.3
	baz=250						
TWK				eS	Sn	02 22 36.0	+2.0
	baz=250						
LAY	**Lan-yu**	**2.19 209**	eP		Pn	02 22 07.3	-2.4
	baz=207						
WTCT	**Ta-ch'eng**	**2.20 268**	eP		Pn	02 22 10.5	+0.8
	baz=280						
WTCT				eS	Sn	02 22 37.4	+1.7
	baz=280						
SSD	**Sandimen**	**2.25 237**	eP		Pn	02 22 10.3	-0.1
	baz=231						
WSF	**Szhu**	**2.28 262**	eP		Pn	02 22 11.1	+0.3
	baz=262						
WSF				eS	Sn	02 22 39.8	+2.2
	baz=262						
TAW	**Tawu**	**2.30 226**	eP		Pn	02 22 10.9	-0.2
	baz=233						
EAST	**Anshuo**	**2.32 227**	*i* P		Pn	02 22 10.2	-1.2
	baz=234						
CHN8	**Yiju**	**2.35 255**	eP		Pn	02 22 12.2	+0.4
	baz=254						
CHN8				eS	Sn	02 22 41.0	+1.5
	baz=254						
SGLT	**Jiouru**	**2.37 239**	eP		Pn	02 22 12.4	+0.3
	baz=235						
TWM1	**Shoushan**	**2.37 241**	eP		Pn	02 22 13.6	+1.5
	baz=241						
SCLT	**Jiali**	**2.42 251**	eP		Pn	02 22 13.5	+0.8
	baz=250						
SCLT				eS	Sn	02 22 43.4	+2.3
	baz=250						
SCZT	**Fangliau**	**2.48 230**	eP		Pn	02 22 13.3	-0.3
	baz=224						
JMJ	**Miyako jima 2**	**2.52 70**	P		Pn	02 22 15.5	+1.3
JMJ				eS	Sn	02 22 44.5	+0.8
JOGS	**Gusukube**	**2.60 72**	P		Pn	02 22 16.1	+0.8
JOGS				eS	Sn	02 22 48.0	+2.3
TSEB	**Hengchuen, Pin**	**2.64 219**	eP		Pn	02 22 15.8	0.0
	baz=225						
TSEB				eS	Sn	02 22 47.3	+0.7
	baz=225						
HEN	**Hengchun**	**2.66 223**	eP		Pn	02 22 15.8	-0.2
	baz=221						
HEN				eS	Sn	02 22 46.0	-1.0
	baz=221						
TWK1	**Hengchun**	**2.66 221**	eP		Pn	02 22 15.5	-0.6
	baz=226						
TWK1				eS	Sn	02 22 47.3	+0.2
	baz=226						
TWP	**Hsiaoliuchiu**	**2.68 233**	eP		Pn	02 22 19.1	+2.7
	baz=245						
PNG	**Penghu**	**2.89 262**	eP		Pn	02 22 19.1	-0.1
	baz=277						
PNG				eS	Sn	02 22 52.8	0.0
	baz=277						
QZH	**Quanzhou**	**3.85 285**	*i* P		Pn	02 22 31.7	-0.7
QZH			S		Sn	02 23 11.9	-4.4
QZH			smax				
	comp=N,250nm,0.8s						
QZH			smax				
	comp=E,240nm,1.1s						
KNM	**Kinmen**	**3.90 277**	eP		Pn	02 22 33.1	0.0
	baz=277						
JKE	**Kume jima 2**	**4.39 57**	P		Pn	02 22 39.5	-0.4
KSRS	**Korea Array**	**14.16 17**	P		Pn	02 24 54.3	+0.7
	comp=E,0.4nm,0.3s,baz=206,slow=13,SNR=13						
KSRS			LR		LR	02 30 51.2	
	comp=E,83nm,19.0s,baz=200,slow=40						
CBIJ	**Chichi jima**	**17.87 76**	LR		LR	02 31 33.7	
	comp=E,55nm,21.5s,baz=190,slow=34						
MJAR	**Matsushiro Arr**	**18.32 43**	P		Pn	02 25 47.3	+1.0
	comp=E,0.3nm,0.3s,baz=311,slow=9.0,SNR=4.4						
MJAR			LR		LR	02 33 20.7	
	comp=E,26nm,20.0s,baz=190,slow=39						
CMAR	**Chiang Mai Arr**	**22.79 261**	LR		LR	02 37 22.7	
	comp=E,28nm,18.2s,MS2.8,baz=70,slow=42						
SONM	**Songino Array**	**27.10 336**	P		P	02 27 13.1	-1.0
	comp=E,1.8nm,0.6s,mb3.8,baz=147,slow=8.7,SNR=7.5						
SONM			pP		pP	02 27 28.0	+1.9
	comp=E,1.9nm,1.0s,baz=152,slow=7.9,SNR=3.0						
SONM			LR		LR	02 39 07.9	
	comp=E,85nm,20.9s,MS3.3,baz=111,slow=39						
MK31	**Makanchi Array**	**39.44 316**	eP		P	02 29 01.0	-0.2
MKAR	**Makanchi Array**	**39.44 316**	P		P	02 29 01.1	-0.2
	comp=E,1.2nm,0.6s,mb3.8,baz=92,slow=12,SNR=8.5						
MKAR			LR		LR	02 46 38.6	
	comp=E,32nm,20.2s,MS3.1,baz=357,slow=38						
ZALV	**Zalesovo Beam**	**41.16 327**	LR		LR	02 47 37.4	
	comp=E,44nm,18.7s,MS3.4,baz=228,slow=38						
TKM2	**Tokmak 2**	**42.97 308**	eP		P	02 29 30.8	+0.5
	comp=E,1.8nm,0.6s,mb4.0						
KURK	**Kurchatov**	**43.13 320**	P		P	02 29 30.6	-0.8
	comp=E,0.6nm,0.3s,mb3.8,baz=110,slow=8.5,SNR=4.2						
KURK			PcP		PcP	02 31 20.3	-0.3
	comp=E,0.8nm,0.6s,baz=123,slow=3.4,SNR=2.8						
KURK	**Kurchatov**	**43.13 320**	eP		P	02 29 30.6	-0.9
	comp=E,1.1nm,0.4s,mb3.9						
KURK			PcP		PcP	02 31 20.3	-0.3
AAK	**Ala-Archa**	**43.72 307**	eP		P	02 29 34.2	-2.1
	comp=E,1.2nm,0.6s,mb3.8						
WRA	**Warramunga Arr**	**45.11 164**	P		P	02 29 48.4	+0.8
	comp=E,1.9nm,0.8s,mb4.0,baz=346,slow=8.7,SNR=9.2						
WRA			pP		pP	02 30 01.0	+0.8
	comp=E,2.2nm,0.9s,baz=347,slow=8.7,SNR=5.7						
ASAR	**Alice Springs**	**48.60 166**	P		P	02 30 16.1	+1.3
	comp=E,0.6nm,0.5s,mb3.9,baz=354,slow=15,SNR=11						
ASAR			pP		pP	02 30 29.6	+2.2
	comp=E,1.0nm,0.7s,baz=354,slow=7.5,SNR=5.6						
BVAR	**Borovoye Array**	**48.70 320**	P		P	02 30 14.7	-0.6
	comp=E,0.8nm,0.5s,mb4.0,baz=111,slow=7.7,SNR=5.8						
BVAR			PcP		PcP	02 31 39.9	-0.1
	comp=E,1.6nm,0.6s,baz=117,slow=5.4,SNR=7.2						
ABKAR	**Akbulak array**	**54.56 314**	eP		P	02 30 58.7	-0.5
	comp=E,0.9nm,0.6s,mb4.0						
ARCES	**ARCESS Array B**	**70.24 338**	P		P	02 32 44.1	+0.6
	comp=E,2.8nm,0.9s,mb4.2,baz=60,slow=5.8,SNR=3.9						
FINES	**FINESS Array B**	**72.31 330**	P		P	02 32 55.2	-1.0
	comp=E,1.0nm,0.5s,mb4.0,baz=54,slow=5.1,SNR=13						
BRTR	**Keskin Array B**	**74.39 307**	P		P	02 33 09.5	+0.6
	comp=E,1.0nm,0.7s,mb3.9,baz=96,slow=5.3,SNR=8.4						
HFS	**Hagfors**	**78.41 331**	LR		LR	03 11 47.3	
	comp=E,82nm,18.5s,MS4.1,baz=241,slow=38						
NB2	**NORSAR Subarra**	**79.04 333**	P		P	02 33 33.5	-1.2
	comp=Z,0.7nm,0.5s,mb3.9,baz=53,slow=5.6						
NOA	**NORSAR Array B**	**79.04 333**	P		P	02 33 33.5	-1.2
	comp=Z,0.9nm,0.6s,mb3.9,baz=56,slow=5.5,SNR=7.6						
NOA			LR		LR	03 12 21.6	
	comp=Z,30nm,18.2s,MS3.7,baz=65,slow=39						
NOA	**NORSAR Array B**	**79.04 333**	P		P	02 33 33.5	-1.2
NOA			LR		LR	03 12 21.6	
YKA	**Yellowknife Ar**	**82.62 23**	P		P	02 33 52.6	-1.2
	comp=Z,0.7nm,0.8s,mb3.8,baz=318,slow=5.0,SNR=4.2						
GERES	**GERESS Array B**	**83.86 321**	P		P	02 34 00.4	-0.1
	comp=Z,0.4nm,0.6s,mb3.7,baz=33,slow=3.2,SNR=3.5						
KMBO	**Kilima Mbogo**	**86.27 267**	P		P	02 34 14.9	+1.7
	comp=Z,1.7nm,0.8s,mb4.3,baz=58,slow=15,SNR=4.0						
EKA	**Eskdalemuir Ar**	**88.53 332**	P		P	02 34 21.6	-1.7
	comp=Z,0.6nm,0.8s,mb4.0,baz=19,slow=4.5,SNR=3.4						

NEIC 07 02:36:21.7, 39.°58S×174.°21E, h213km, MG3.9(WEL), **After WEL., North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRZ	**Vera Road**	**0.62**	**43**	P	Pn	02 36 50.4	-0.4
WAZ	**Wanganui**	**0.62**	**107**	P	Pn	02 36 51.6	+0.9
FWVZ	**Far West T-bar**	**1.09**	**73**	P	Pn	02 36 53.5	+0.1
WPVZ	**Whakapapa**	**1.10**	**71**	P	Pn	02 36 52.9	-0.5
WTVZ	**West Tongariro**	**1.17**	**67**	P	Pn	02 36 54.1	+0.2
HIZ	**Hauiti**	**1.18**	**25**	P	Pn	02 36 53.5	-0.5
HIZ				S	S	02 37 17.9	-1.2
MOVZ	**Moawhango**	**1.21**	**82**	P	Pn	02 36 53.9	-0.3
KIW	**Kapiti Island**	**1.39**	**158**	P	Pn	02 36 55.6	+0.1
KIW				S	S	02 37 19.8	-2.3
TSZ	**Takapari Road**	**1.43**	**110**	P	Pn	02 36 56.1	+0.2
MRZ	**Mangatainoka R**	**1.51**	**136**	P	Pn	02 36 56.4	-0.1
TCW	**Tory Channel**	**1.63**	**178**	P	Pn	02 36 57.7	+0.1
CAW	**Cannon Point**	**1.66**	**157**	P	Pn	02 36 57.8	-0.1
DVHZ	**Dannevirke**	**1.67**	**116**	P	Pn	02 36 58.0	+0.1
MRW	**Makara Radio**	**1.69**	**167**	P	Pn	02 36 58.0	-0.1
TIWZ	**Tintock**	**1.75**	**134**	P	Pn	02 36 58.7	0.0
NNZ	**Nelson**	**1.76**	**201**	P	Pn	02 36 58.8	+0.1
SNZO	**South Karori**	**1.77**	**168**	P	Pn	02 36 58.6	-0.3
QRZ	**Quartz Range**	**1.79**	**225**	P	Pn	02 36 58.6	-0.5
BKZ	**Black Stump Fm**	**1.82**	**78**	P	Pn	02 36 59.0	-0.4
MTW	**Mount Morrison**	**1.86**	**148**	P	Pn	02 36 59.3	-0.4
BHW	**Baring Head**	**1.90**	**165**	P	Pn	02 36 59.7	-0.4
BFZ	**Birch Farm**	**1.91**	**126**	P	Pn	02 37 00.1	-0.1
PRHZ	**Porangahau**	**1.99**	**111**	P	Pn	02 37 01.2	+0.2
MSWZ	**Moikau Station**	**2.00**	**157**	P	Pn	02 37 00.6	-0.5
PAWZ	**Paruwai Farm**	**2.02**	**153**	P	Pn	02 37 00.9	-0.4
BSWZ	**Blackbirch Sta**	**2.15**	**187**	P	Pn	02 37 02.6	0.0
THZ	**Tophouse**	**2.40**	**204**	P	Pn	02 37 05.0	-0.2
URZ	**Urewera**	**2.62**	**61**	P	Pn	02 37 06.1	-1.6
KNZ	**Kokohu**	**2.75**	**79**	P	Pn	02 37 08.6	-0.5
DSZ	**Denniston Nort**	**2.83**	**219**	P	Pn	02 37 09.6	-0.4
MWZ	**Matawai**	**2.87**	**65**	P	Pn	02 37 09.3	-1.2
KHZ	**Kahutara**	**2.88**	**190**	P	Pn	02 37 10.1	-0.4
LTZ	**Lake Taylor**	**3.52**	**204**	P	Pn	02 37 17.2	-0.8
MXZ	**Matakaoa Point**	**3.79**	**59**	P	Pn	02 37 20.0	-1.4
CRLZ	**Canterbury Las**	**4.17**	**196**	P	Pn	02 37 24.6	-1.3
MQZ	**McQueen's Vall**	**4.29**	**195**	P	Pn	02 37 25.3	-2.1
WVZ	**Waitaha Valley**	**4.36**	**216**	P	Pn	02 37 27.1	-1.2
RPZ	**Rata Peaks**	**4.76**	**209**	P	Pn	02 37 32.0	-1.3
LBZ	**Lake Benmore**	**5.66**	**211**	P	Pn	02 37 42.8	-1.9
ODZ	**Otahua Downs**	**6.07**	**205**	P	Pn	02 37 48.8	-1.1
EAZ	**Earnscleugh**	**6.71**	**211**	P	Pn	02 37 56.1	-2.0

NEIC 07 02:45:08.2, 37.°92S×175.°70E, h258km, MG4.2(WEL), **After WEL., North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**1.16**	**107**	P	Pn	02 45 44.6	-0.3
WPVZ	**Whakapapa**	**1.29**	**185**	P	Pn	02 45 45.9	+0.2
FWVZ	**Far West T-bar**	**1.34**	**185**	P	Pn	02 45 46.3	+0.3
BKZ	**Black Stump Fm**	**1.39**	**154**	P	Pn	02 45 46.2	-0.2
BKZ				S	S	02 46 16.1	-0.5
VRZ	**Vera Road**	**1.41**	**211**	P	Pn	02 45 47.0	+0.5
MOVZ	**Moawhango**	**1.49**	**178**	P	Pn	02 45 46.8	-0.3
MWZ	**Matawai**	**1.50**	**107**	P	Pn	02 45 47.6	+0.4
KNZ	**Kokohu**	**1.90**	**126**	P	Pn	02 45 50.3	-0.1
KNZ				S	S	02 46 22.8	-0.9
WAZ	**Wanganui**	**1.92**	**197**	P	Pn	02 45 50.2	-0.3
TSZ	**Takapari Road**	**2.15**	**175**	P	Pn	02 45 51.6	-0.9
DVHZ	**Dannevirke**	**2.41**	**171**	P	Pn	02 45 53.6	-1.4
PRHZ	**Porangahau**	**2.46**	**163**	P	Pn	02 45 54.5	-1.0
MRZ	**Mangatainoka R**	**2.74**	**182**	P	Pn	02 45 56.3	-2.0
BFZ	**Birch Farm**	**2.79**	**171**	P	Pn	02 45 57.1	-1.7
KIW	**Kapiti Island**	**3.00**	**192**	P	Pn	02 45 58.8	-2.3
CAW	**Cannon Point**	**3.22**	**189**	P	Pn	02 46 00.9	-2.5
MTW	**Mount Morrison**	**3.24**	**183**	P	Pn	02 46 00.8	-2.8
MRW	**Makara Radio**	**3.40**	**193**	P	Pn	02 46 02.5	-2.8
TCW	**Tory Channel**	**3.47**	**198**	P	Pn	02 46 03.5	-2.7
SNZO	**South Karori**	**3.47**	**192**	P	Pn	02 46 03.5	-2.7
MSWZ	**Moikau Station**	**3.51**	**186**	P	Pn	02 46 03.6	-3.0
NNZ	**Nelson**	**3.75**	**208**	P	Pn	02 46 06.1	-3.3
QRZ	**Quartz Range**	**3.80**	**219**	P	Pn	02 46 06.6	-3.4
BSWZ	**Blackbirch Sta**	**4.04**	**200**	P	Pn	02 46 09.9	-2.8
THZ	**Tophouse**	**4.40**	**208**	P	Pn	02 46 13.2	-3.7
KHZ	**Kahutara**	**4.79**	**200**	P	Pn	02 46 17.9	-3.6
LTZ	**Lake Taylor**	**5.52**	**207**	P	Pn	02 46 26.1	-4.3
MQZ	**McQueen's Vall**	**6.23**	**201**	P	Pn	02 46 33.7	-5.4
ODZ	**Otahua Downs**	**8.06**	**206**	P	Pn	02 46 57.8	-4.4

*ISCJB **07** 02:55:40.3±0.4, 35.°98N±0.°03×0.°66W±0.°03, h10km, Error ellipse: s-maj=4.2km s-min=3.5km az=1.7*
*NEIC **07** 02:55:41.0, 35.°88N×0.°65W, h0km, ML3.0(ALG), After MDD.*
*MDD **07** 02:55:41.3±1.1, 35.°73N×0.°54W, h22km±10km, mb3.8/11, Error ellipse: s-maj=21.8km s-min=7.1km az=153.0, PRIMO*
*CSEM **07** 02:55:41.4±0.2, 35.°87N×0.°65W, h15km, mb3.6/21, Error ellipse: s-maj=5.0km s-min=3.8km az=4.0*
*INMG **07** 02:55:42.3±1.0, 35.°77N×0.°56W, h31km, ML2.0, Error ellipse: s-maj=5.1km s-min=2.8km az=152.0*
*CRAAG **07** 02:55:43.0, 35.°77N×0.°65W, Ml3.6*

ISC 07 02:55:41.3±0.4, 35.°96N±0.°03×0.°66W±0.°03, h10km, n149, σ1§24/240, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USTO	**Oran**	**0.24**	**159**	P	**Pg**	**02 55 45.0**	**-1.3**
USTO	**Oran**	**0.24**	**159**	P	**Pg**	**02 55 45.0**	**-1.3**
USTO	**Oran**	**0.24**	**159**	P	**Pg**	**02 55 45.0**	**-1.3**
OTSS	**Djebel Tessala**	**0.69**	**189**	P	**Pg**	**02 55 54.0**	**-0.6**
OTSS	**Djebel Tessala**	**0.69**	**189**	P	**Pg**	**02 55 54.0**	**-0.6**
ODJA	**Bouhanifia**	**0.75**	**147**	P	**Pg**	**02 55 47.0**	**-8.9**
ODJA	**Bouhanifia**	**0.75**	**147**	P	**Pg**	**02 55 47.0**	**-8.9**
ODJA	**Bouhanifia**	**0.75**	**147**	P	**Pg**	**02 55 47.0**	**-8.9**
ODZI	**Dzioua**	**0.82**	**215**	P	**Pg**	**02 56 03.0**	**+5.9**
ODZI	**Dzioua**	**0.82**	**215**	P	**Pg**	**02 56 03.0**	**+5.9**
ODZI	**Dzioua**	**0.82**	**215**	P	**Pg**	**02 56 03.0**	**+5.9**
OJBR	**Djebel Berber**	**0.90**	**115**	P	**Pg**	**02 56 05.0**	**+6.4**
OJBR	**Djebel Berber**	**0.90**	**115**	P	**Pg**	**02 56 05.0**	**+6.4**
OJBR	**Djebel Berber**	**0.90**	**115**	P	**Pg**	**02 56 05.0**	**+6.4**
OKGL	**Djebel Kef Gue**	**1.06**	**86**	P	**Pg**	**02 56 00.4**	**-1.2**
OKGL	**Djebel Kef Gue**	**1.06**	**86**	P	**Pg**	**02 56 00.4**	**-1.2**
OJGS	**Djebel Guires**	**1.23**	**111**	P	**Pn**	**02 56 04.6**	**0.0**
OJGS	**Djebel Guires**	**1.23**	**111**	P	**Pn**	**02 56 04.6**	**0.0**
ENIJ	**Nijar**	**1.60**	**309**	P	**Pn**	**02 56 09.9**	**+0.2**
ENIJ				S	**Sn**	**02 56 29.5**	**-1.0**
ENIJ	**Nijar**	**1.60**	**309**	P	**Pn**	**02 56 09.9**	**+0.2**
	4.1nm,0.1s,SNR=6.9						
ENIJ				S	**Sn**	**02 56 29.5**	**-1.0**
	8.4nm,0.3s,SNR=6.1						
ENIJ				T		02 57 29.0	
	SNR=7.9					

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Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USTO	Oran	0.30	184	P	Pg	03 02 43.0	+2.4
USTO	Oran	0.30	184	P	Pg	03 02 43.0	+2.4
USTO	Oran	0.30	184	P	Pg	03 02 43.0	+2.4
ODJA	Bouhanifia	0.77	157	P	Pg	03 02 48.0	-1.3
ODJA	Bouhanifia	0.77	157	P	Pg	03 02 48.0	-1.3
ODJA	Bouhanifia	0.77	157	P	Pg	03 02 48.0	-1.3
ENIJ	Nijar	1.65	305	P	Pn	03 03 02.8	-0.7
ENIJ				S	Sn	03 03 21.0	-3.8
ENIJ	Nijar	1.65	305	P	Pn	03 03 02.8	-0.7
	1.2nm,0.1s,SNR=7.9						
ENIJ				S	Sn	03 03 21.0	-3.8
	8.9nm,0.2s,SNR=13						
ENIJ	Nijar	1.65	305	P	Pn	03 03 02.8	-0.7
	1.2nm,0.1s,SNR=7.9						
ENIJ				S	Sn	03 03 21.0	-3.8
	8.9nm,0.2s,SNR=13						
ENIJ	Nijar	1.65	305	P	Pn	03 03 02.8	-0.7
	1.3nm,0.2s,SNR=7.9						
EMUR	La Murta	1.89	343	P	Pn	03 03 07.0	+0.1
EMUR				S	Sn	03 03 28.9	-1.9
EMUR	La Murta	1.89	343	P	Pn	03 03 07.0	+0.1
	1.4nm,0.2s,SNR=6.5						
EMUR				S	Sn	03 03 28.9	-1.9
	7.4nm,0.3s,SNR=4.6						
EMUR				T		03 04 42.7	
	SNR=7.9						
EMUR	La Murta	1.89	343	P	Pn	03 03 07.0	+0.1
	1.4nm,0.2s,SNR=6.5						
EMUR				S	Sn	03 03 28.9	-1.9
	7.4nm,0.3s,SNR=4.6						
EMUR				T		03 04 42.7	
	SNR=7.9						
EMUR	La Murta	1.89	343	P	Pn	03 03 07.0	+0.1
	0.3nm,0.1s,SNR=6.5						
EMUR				S	Sn	03 03 28.9	-1.9
	0.8nm,0.1s,SNR=4.6						
EALB	Alboran	2.04	268	S	Sn	03 03 29.2	-5.2
	9.5nm,0.3s,SNR=7.9						
EALB	Alboran	2.04	268	S	Sn	03 03 29.2	-5.2
	9.5nm,0.3s,SNR=7.9						
EBER	Berja	2.09	295	P	Pn	03 03 08.8	-0.8
EBER				S	Sn	03 03 33.9	-1.9
EBER	Berja	2.09	295	P	Pn	03 03 08.8	-0.8
	1.2nm,0.2s,SNR=8.3						
EBER				S	Sn	03 03 33.3	-2.4
	12nm,0.3s,SNR=7.9						
EBER	Berja	2.09	295	P	Pn	03 03 08.8	-0.8
	1.2nm,0.2s,SNR=8.3						
EBER				S	Sn	03 03 33.3	-2.4
	12nm,0.3s,SNR=7.9						
EBER	Berja	2.09	295	P	Pn	03 03 08.8	-0.9
	0.3nm,0.1s,SNR=8.3						
EBER				S	Sn	03 03 33.8	-1.9
	3.2nm,0.2s,SNR=7.9						
EHUE	Huescar	2.43	318	P	Pn	03 03 15.7	+1.4
EHUE				S	Sn	03 03 45.6	+1.5
EHUE	Huescar	2.43	318	P	Pn	03 03 15.6	+1.4
	0.4nm,0.1s,SNR=7.9						
EHUE				S	Sn	03 03 44.9	+0.8
	1.5nm,0.2s,SNR=7.9						
EHUE	Huescar	2.43	318	P	Pn	03 03 15.6	+1.4
	0.4nm,0.1s,SNR=7.9						
EHUE				S	Sn	03 03 44.9	+0.8
	1.5nm,0.2s,SNR=7.9						
EHUE	Huescar	2.43	318	P	Pn	03 03 15.6	+1.3
	0.2nm,0.1s,SNR=7.9						
EHUE				S	Sn	03 03 45.6	+1.5
	0.9nm,0.2s,SNR=7.9						
EQUE	Quentar	2.62	297	P	Pn	03 03 17.7	+0.8
	0.8nm,0.2s,SNR=4.7						
EQUE				S	Sn	03 03 47.3	-1.5
	2.5nm,0.5s,SNR=7.9						
EQUE	Quentar	2.62	297	P	Pn	03 03 17.7	+0.8
	0.8nm,0.2s,SNR=4.7						
EQUE				S	Sn	03 03 47.3	-1.5
	2.5nm,0.5s,SNR=7.9						
EQUE	Quentar	2.62	297	P	Pn	03 03 17.7	+0.8
	0.4nm,0.1s,SNR=4.7						
EQUE				S	Sn	03 03 47.3	-1.5
	0.1nm,0.1s,SNR=7.9						
EBEN	Beniarda	2.67	5	P	Pn	03 03 18.4	+0.8
EBEN				S	Sn	03 03 49.4	-0.8
EBEN	Beniarda	2.67	5	P	Pn	03 03 18.4	+0.8
	0.2nm,0.1s,SNR=4.0						
EBEN				S	Sn	03 03 49.3	-0.8
	0.2nm,0.1s,SNR=7.9						
EBEN	Beniarda	2.67	5	P	Pn	03 03 18.4	+0.8
	0.2nm,0.1s,SNR=4.0						
EBEN				S	Sn	03 03 49.3	-0.8
	0.2nm,0.1s,SNR=7.9						
EBEN	Beniarda	2.67	5	P	Pn	03 03 18.4	+0.7
	0.1nm,0.1s,SNR=7.9						
EBEN				S	Sn	03 03 49.3	-0.8
	0.2nm,0.1s,SNR=7.9						
EQES	Quesada	2.70	312	P	Pn	03 03 19.6	+1.6
EQES				S	Sn	03 03 51.4	+0.7
EQES	Quesada	2.70	312	P	Pn	03 03 19.6	+1.6
	1.1nm,0.1s,SNR=13						
EQES				S	Sn	03 03 51.4	+0.7
	5.6nm,0.2s,SNR=10						
EQES	Quesada	2.70	312	P	Pn	03 03 19.6	+1.6
	1.1nm,0.1s,SNR=13						
EQES				S	Sn	03 03 51.4	+0.7
	5.6nm,0.2s,SNR=10						
EQES	Quesada	2.70	312	P	Pn	03 03 19.6	+1.6
	0.2nm,0.1s,SNR=13						
EQES				S	Sn	03 03 51.4	+0.7
	1.2nm,0.1s,SNR=10						
ETOB	Tobarra	2.73	343	P	Pn	03 03 19.4	+1.0
ETOB				S	Sn	03 03 52.3	+0.9
ETOB	Tobarra	2.73	343	P	Pn	03 03 19.4	+1.0
	1.2nm,0.2s,SNR=8.3						
ETOB				S	Sn	03 03 50.9	-0.6
	2.8nm,0.1s,SNR=6.9						
ETOB				T		03 05 01.4	
	SNR=7.9						
ETOB	Tobarra	2.73	343	P	Pn	03 03 19.4	+1.0
	1.2nm,0.2s,SNR=8.3						
ETOB				S	Sn	03 03 50.9	-0.6
	2.8nm,0.1s,SNR=6.9						
ETOB				T		03 05 01.4	
	SNR=7.9						
ETOB	Tobarra	2.73	343	P	Pn	03 03 19.4	+1.0
	0.2nm,0.1s,SNR=8.3						
ETOB				S	Sn	03 03 52.3	+0.8
	1.5nm,0.1s,SNR=6.9						
ECOG	Cogollos-Vega	2.74	298	P	Pn	03 03 21.3	+2.7
ECOG	Cogollos-Vega	2.74	298	P	Pn	03 03 21.3	+2.7
	0.6nm,0.1s,SNR=7.9						
ECOG				S	Sn	03 03 53.8	+2.0
	2.1nm,0.3s,SNR=7.9						
ECOG	Cogollos-Vega	2.74	298	P	Pn	03 03 21.3	+2.7
	0.6nm,0.1s,SNR=7.9						
ECOG				S	Sn	03 03 53.8	+2.0
	2.1nm,0.3s,SNR=7.9						
EVIA	Vianos	3.04	329	P	Pn	03 03 23.2	+0.5
EVIA				S	Sn	03 04 00.7	+1.6
EVIA	Vianos	3.04	329	P	Pn	03 03 23.2	+0.5
	0.8nm,0.1s,SNR=4.0						
EVIA				S	Sn	03 04 00.1	+1.0
	3.4nm,0.2s,SNR=7.5						
EVIA	Vianos	3.04	329	P	Pn	03 03 23.2	+0.5
	0.8nm,0.1s,SNR=4.0						
EVIA				S	Sn	03 04 00.1	+1.0
	3.4nm,0.2s,SNR=7.5						
EVIA	Vianos	3.04	329	P	Pn	03 03 23.2	+0.5
	0.2nm,0.1s,SNR=7.9						
EVIA				S	Sn	03 04 00.7	+1.6
	1.7nm,0.2s,SNR=7.5						
EIBI	Ibiza	3.33	26	P	Pn	03 03 27.1	+0.4
EIBI				S	Sn	03 04 04.5	-1.9
EIBI	Ibiza	3.33	26	P	Pn	03 03 27.1	+0.4
	0.9nm,0.1s,SNR=7.9						
EIBI				S	Sn	03 04 04.5	-1.9
	2.6nm,0.3s,SNR=7.9						
EIBI	Ibiza	3.33	26	P	Pn	03 03 27.1	+0.4
	0.9nm,0.1s,SNR=7.9						
EIBI				S	Sn	03 04 04.5	-1.9
	2.6nm,0.3s,SNR=7.9						
EIBI	Ibiza	3.33	26	P	Pn	03 03 27.1	+0.4
	0.3nm,0.1s,SNR=7.9						
EIBI				S	Sn	03 04 04.5	-1.9
	0.3nm,0.1s,SNR=7.9						
EMIJ	Mijas	3.47	280	P	Pn	03 03 26.3	-2.3

EHUE 1.1nm,0.1s,SNR=7.9 S Sn 02 56 53.2 +2.8
EGUA 1.2nm,0.3s,SNR=7.9 **Guajares** 2.50 291 P Pn 02 56 22.3 +0.3
EGUA S Sn 02 56 51.3 -1.3
EGUA 3.6nm,0.2s,SNR=7.9 **Guajares** 2.50 291 P Pn 02 56 22.3 +0.3
EGUA S Sn 02 56 51.3 -1.3
EGUA 6.4nm,0.3s,SNR=7.9 **Guajares** 2.50 291 P Pn 02 56 22.3 +0.3
EGUA 3.6nm,0.2s,SNR=7.9 S Sn 02 56 51.3 -1.3
EGUA 6.4nm,0.3s,SNR=7.9 **Guajares** 2.50 291 P Pn 02 56 22.3 +0.2
EGUA 3.6nm,0.2s,SNR=7.9 S Sn 02 56 51.3 -1.3
EQUE 6.4nm,0.3s,SNR=7.9 **Quentar** 2.56 300 P Pn 02 56 24.1 +1.2
EQUE 2.0nm,0.2s,SNR=14 **Quentar** 2.56 300 P Pn 02 56 24.1 +1.2
EQUE 2.0nm,0.2s,SNR=14 **Quentar** 2.56 300 P Pn 02 56 24.1 +1.2
EQES 2.0nm,0.2s,SNR=14 **Quesada** 2.67 314 P Pn 02 56 26.7 +2.4
EQES S Sn 02 56 57.6 +0.8
EQES 3.5nm,0.1s,SNR=57 **Quesada** 2.67 314 P Pn 02 56 26.7 +2.4
EQES 3.8nm,0.3s,SNR=11 S Sn 02 56 57.6 +0.8
EQES T 02 58 13.9
SNR=7.9
EQES 3.5nm,0.1s,SNR=57 **Quesada** 2.67 314 P Pn 02 56 26.7 +2.4
EQES 3.8nm,0.3s,SNR=11 S Sn 02 56 57.6 +0.8
EQES T 02 58 13.9
SNR=7.9
EQES 3.5nm,0.1s,SNR=57 **Quesada** 2.67 314 P Pn 02 56 26.7 +2.4
EQES 3.8nm,0.3s,SNR=11 S Sn 02 56 57.6 +0.9
ECOG 1.8nm,0.3s,SNR=7.9 **Cogollos-Vega** 2.68 300 P Pn 02 56 26.5 +2.0
ECOG S Sn 02 56 57.2 +0.1
ECOG 1.7nm,0.2s,SNR=7.9 **Cogollos-Vega** 2.68 300 P Pn 02 56 26.5 +2.0
ECOG 1.8nm,0.3s,SNR=7.9 S Sn 02 56 57.2 +0.1
ECOG 1.7nm,0.2s,SNR=7.9 **Cogollos-Vega** 2.68 300 P Pn 02 56 26.5 +2.0
ECOG 1.8nm,0.3s,SNR=7.9 S Sn 02 56 57.2 +0.1
ECOG 1.7nm,0.2s,SNR=7.9 **Cogollos-Vega** 2.68 300 P Pn 02 56 26.5 +2.0
ECOG 1.8nm,0.3s,SNR=7.9 S Sn 02 56 57.2 +0.1
ERON 3.9nm,0.2s,SNR=7.9 **Agron** 2.75 293 P Pn 02 56 25.8 +0.4
ERON S Sn 02 56 59.5 +0.8
ERON 1.8nm,0.3s,SNR=7.9 **Agron** 2.75 293 P Pn 02 56 25.8 +0.4
ERON 3.9nm,0.2s,SNR=7.9 S Sn 02 56 59.5 +0.8
ERON 1.8nm,0.3s,SNR=7.9 **Agron** 2.75 293 P Pn 02 56 25.8 +0.4
ERON 3.9nm,0.2s,SNR=7.9 S Sn 02 56 59.5 +0.8
ERON 1.8nm,0.3s,SNR=7.9 **Agron** 2.75 293 P Pn 02 56 25.8 +0.4
ERON 3.9nm,0.2s,SNR=7.9 S Sn 02 56 59.5 +0.8
EBEN 1.8nm,0.3s,SNR=7.9 **Beniarda** 2.76 7 P Pn 02 56 25.9 +0.3
EBEN S Sn 02 56 56.9 -2.1
EBEN 1.9nm,0.1s,SNR=19 **Beniarda** 2.76 7 P Pn 02 56 25.9 +0.3
EBEN 2.3nm,0.3s,SNR=7.9 S Sn 02 56 56.9 -2.1
EBEN 1.9nm,0.1s,SNR=19 **Beniarda** 2.76 7 P Pn 02 56 25.9 +0.3
EBEN 2.3nm,0.3s,SNR=7.9 S Sn 02 56 56.9 -2.1
EBEN 1.9nm,0.1s,SNR=19 **Beniarda** 2.76 7 P Pn 02 56 25.9 +0.3
ETOB 3.2nm,0.1s,SNR=44 **Tobarra** 2.77 345 P Pn 02 56 27.1 +1.4
ETOB S Sn 02 56 59.5 +0.3
ETOB 3.1nm,0.3s,SNR=6.5 **Tobarra** 2.77 345 P Pn 02 56 27.1 +1.4
ETOB T 02 58 09.6
SNR=4.6
ETOB 3.2nm,0.1s,SNR=44 **Tobarra** 2.77 345 P Pn 02 56 27.1 +1.4
ETOB 3.1nm,0.3s,SNR=6.5 S Sn 02 56 59.5 +0.3
ETOB T 02 58 09.6
SNR=4.6
ETOB 3.2nm,0.1s,SNR=44 **Tobarra** 2.77 345 P Pn 02 56 27.1 +1.4
ETOB 3.1nm,0.3s,SNR=6.5 S Sn 02 56 59.5 +0.3
EVIA 2.8nm,0.1s,SNR=7.3 **Vianos** 3.05 332 P Pn 02 56 30.6 +1.1
EVIA S Sn 02 57 07.7 +1.6
EVIA 2.2nm,0.2s **Vianos** 3.05 332 P Pn 02 56 30.6 +1.1
EVIA S Sn 02 57 07.7 +1.6
EVIA T 02 58 15.0
EVIA 2.8nm,0.1s,SNR=7.3 **Vianos** 3.05 332 P Pn 02 56 30.6 +1.1
EVIA 2.2nm,0.2s S Sn 02 57 07.7 +1.6
EVIA T 02 58 15.0
EVIA 2.8nm,0.1s,SNR=7.3 **Vianos** 3.05 332 P Pn 02 56 30.6 +1.0
EVIA 2.2nm,0.2s S Sn 02 57 07.7 +1.6
ELOJ 0.5nm,0.2s,SNR=7.9 **Sierra Loja** 3.05 294 P Pn 02 56 29.6 -0.1
ELOJ 0.5nm,0.2s,SNR=7.9 **Sierra Loja** 3.05 294 P Pn 02 56 29.6 -0.1
ELOJ 0.5nm,0.2s,SNR=7.9 **Sierra Loja** 3.05 294 P Pn 02 56 29.6 -0.1
ELOJ 0.5nm,0.2s,SNR=7.9 **Sierra Loja** 3.05 294 P Pn 02 56 29.6 0.0
ELUQ 1.3nm,0.2s,SNR=7.9 **Luque** 3.31 300 P Pn 02 56 33.4 +0.3
ELUQ S Sn 02 57 12.4 -0.1
ELUQ 0.9nm,0.2s,SNR=7.9 **Luque** 3.31 300 P Pn 02 56 33.4 +0.3
ELUQ S Sn 02 57 12.4 -0.1
ELUQ 1.3nm,0.2s,SNR=7.9 **Luque** 3.31 300 P Pn 02 56 33.4 +0.3
ELUQ 0.9nm,0.2s,SNR=7.9 S Sn 02 57 12.4 -0.1
ELUQ 1.3nm,0.2s,SNR=7.9 **Luque** 3.31 300 P Pn 02 56 33.4 +0.3
ELUQ 0.9nm,0.2s,SNR=7.9 S Sn 02 57 12.4 -0.1
EMIJ 0.5nm,0.1s,SNR=7.9 **Mijas** 3.38 281 P Pn 02 56 33.0 -1.1
EMIJ S Sn 02 57 10.9 -3.4
EMIJ 0.5nm,0.1s,SNR=7.9 **Mijas** 3.38 281 P Pn 02 56 33.0 -1.1
EMIJ S Sn 02 57 10.9 -3.4
EMIJ 1.8nm,0.3s,SNR=7.9 **Mijas** 3.38 281 P Pn 02 56 33.0 -1.1
EMIJ 0.5nm,0.1s,SNR=7.9 S Sn 02 57 10.9 -3.4
EMIJ 1.8nm,0.3s,SNR=7.9 **Mijas** 3.38 281 P Pn 02 56 33.0 -1.1
EMIJ 0.5nm,0.1s,SNR=7.9 S Sn 02 57 10.9 -3.4
EIBI 1.8nm,0.3s,SNR=7.9 **Mijas** 3.38 281 P Pn 02 56 33.0 -1.1
EIBI 2.5nm,0.1s,SNR=16 **Ibiza** 3.45 27 P Pn 02 56 34.9 -0.2
EIBI S Sn 02 57 12.7 -3.3
EIBI 3.0nm,0.3s,SNR=6.7 **Ibiza** 3.45 27 P Pn 02 56 34.9 -0.2
EIBI 2.5nm,0.1s,SNR=16 S Sn 02 57 12.7 -3.3
EIBI 3.0nm,0.3s,SNR=6.7 **Ibiza** 3.45 27 P Pn 02 56 34.9 -0.2
EIBI 2.5nm,0.1s,SNR=16 S Sn 02 57 12.7 -3.3
EIBI 3.0nm,0.3s,SNR=6.7 **Ibiza** 3.45 27 P Pn 02 56 34.9 -0.2
EADA 2.5nm,0.1s,SNR=16 **Adamuz** 3.83 306 P Pn 02 56 43.1 +2.8
EADA S Sn 02 57 24.5 -0.9
EADA 0.1nm,0.1s,SNR=7.9 **Adamuz** 3.83 306 P Pn 02 56 43.1 +2.8
EADA 0.3nm,0.3s,SNR=7.9 S Sn 02 57 24.5 -0.9
EADA 0.3nm,0.3s,SNR=7.9 **Adamuz** 3.83 306 P Pn 02 56 43.1 +2.8
EADA 0.1nm,0.1s,SNR=7.9 S Sn 02 57 24.5 -0.9
EADA 0.3nm,0.3s,SNR=7.9 **Adamuz** 3.83 306 P Pn 02 56 43.1 +2.8
EADA 0.1nm,0.1s,SNR=7.9 S Sn 02 57 24.5 -0.9
ECAB 0.3nm,0.3s,SNR=7.9 **El Cabril** 4.36 300 P Pn 02 56 47.7 +0.2
ECAB S Sn 02 57 37.2 -1.1
ECAB 0.5nm,0.1s,SNR=7.9 **El Cabril** 4.36 300 P Pn 02 56 47.7 +0.2
ECAB S Sn 02 57 37.2 -1.1
ECAB 0.5nm,0.3s,SNR=7.9 **El Cabril** 4.36 300 P Pn 02 56 47.7 +0.2
ECAB 0.5nm,0.1s,SNR=7.9 S Sn 02 57 37.2 -1.1
ECAB 0.5nm,0.3s,SNR=7.9 **El Cabril** 4.36 300 P Pn 02 56 47.7 +0.2
ECAB 0.5nm,0.1s,SNR=7.9 S Sn 02 57 37.2 -1.1
ECAB 0.5nm,0.3s,SNR=7.9 **El Cabril** 4.36 300 P Pn 02 56 47.7 +0.2
EMOS 0.7nm,0.1s,SNR=12 **Mosqueruela** 4.40 2 P Pn 02 56 50.0 +1.9
EMOS S Sn 02 57 38.9 -0.4
EMOS 2.0nm,0.4s,SNR=7.9 **Mosqueruela** 4.40 2 P Pn 02 56 50.0 +1.9
EMOS 0.7nm,0.1s,SNR=12 S Sn 02 57 38.9 -0.4
EMOS 2.0nm,0.4s,SNR=7.9 **Mosqueruela** 4.40 2 P Pn 02 56 50.0 +1.9
EMOS 0.7nm,0.1s,SNR=12 S Sn 02 57 38.9 -0.4
EMOS 2.0nm,0.4s,SNR=7.9 **Mosqueruela** 4.40 2 P Pn 02 56 50.0 +1.9
EMOS 0.7nm,0.1s,SNR=12 S Sn 02 57 38.9 -0.4
ETOS 2.0nm,0.4s,SNR=7.9 **Mallorca** 4.69 35 P Pn 02 56 52.6 +0.5
ETOS S Sn 02 57 44.2 -2.3
ETOS 0.4nm,0.1s,SNR=7.9 **Mallorca** 4.69 35 P Pn 02 56 52.6 +0.5
ETOS 0.7nm,0.4s,SNR=7.9 S Sn 02 57 44.2 -2.3
ETOS 0.4nm,0.1s,SNR=7.9 **Mallorca** 4.69 35 P Pn 02 56 52.6 +0.5
ETOS 0.7nm,0.4s,SNR=7.9 S Sn 02 57 44.2 -2.3
ETOS 0.4nm,0.1s,SNR=7.9 **Mallorca** 4.69 35 P Pn 02 56 52.6 +0.5
ETOR 1.4nm,0.2s,SNR=7.9 **Torete** 4.97 348 P Pn 02 56 58.0 +2.0
ETOR S Sn 02 57 52.0 -1.5
ETOR 1.3nm,0.3s,SNR=7.9 **Torete** 4.97 348 P Pn 02 56 58.0 +2.0
ETOR 1.4nm,0.2s,SNR=7.9 S Sn 02 57 52.0 -1.5
ETOR 1.3nm,0.3s,SNR=7.9 **Torete** 4.97 348 P Pn 02 56 58.0 +2.0
ETOR 1.4nm,0.2s,SNR=7.9 S Sn 02 57 52.0 -1.5
ETOR 1.3nm,0.3s,SNR=7.9 **Torete** 4.97 348 P Pn 02 56 58.0 +2.0
ETOR 1.4nm,0.2s,SNR=7.9 S Sn 02 57 52.0 -1.5
ERTA 0.4nm,0.1s,SNR=7.9 **Horta de San J** 5.05 9 P Pn 02 56 58.5 +1.5
ERTA S Sn 02 57 53.8 -1.6
ERTA 1.0nm,0.3s,SNR=7.9 **Horta de San J** 5.05 9 P Pn 02 56 58.5 +1.5
ERTA 0.4nm,0.1s,SNR=7.9 S Sn 02 57 53.8 -1.6
ERTA 1.0nm,0.3s,SNR=7.9 **Horta de San J** 5.05 9 P Pn 02 56 58.5 +1.5
ERTA 0.4nm,0.1s,SNR=7.9 S Sn 02 57 53.8 -1.6
ERTA 1.0nm,0.3s,SNR=7.9 **Horta de San J** 5.05 9 P Pn 02 56 58.5 +1.5
ERTA 0.4nm,0.1s,SNR=7.9 S Sn 02 57 53.8 -1.6
EMIN 0.2nm,0.1s,SNR=7.9 **Mina Concepcio** 5.15 292 P Pn 02 56 59.1 +0.7
EMIN S Sn 02 57 55.9 -2.0
EMIN 0.2nm,0.1s,SNR=7.9 **Mina Concepcio** 5.15 292 P Pn 02 56 59.1 +0.7
EMIN 0.3nm,0.4s,SNR=7.9 S Sn 02 57 55.9 -2.0
EMIN 0.2nm,0.1s,SNR=7.9 **Mina Concepcio** 5.15 292 P Pn 02 56 59.1 +0.7
EMIN 0.3nm,0.4s,SNR=7.9 S Sn 02 57 55.9 -2.0
EMIN 0.2nm,0.1s,SNR=7.9 **Mina Concepcio** 5.15 292 P Pn 02 56 59.1 +0.7
EMIN 0.3nm,0.4s,SNR=7.9 S Sn 02 57 55.9 -2.0
GUD 0.8nm,0.2s,SNR=7.9 **Guadarrama** 5.42 331 P Pn 02 57 04.0 +1.9
GUD 0.8nm,0.2s,SNR=7.9 **Guadarrama** 5.42 331 P Pn 02 57 04.0 +1.9
GUD 0.8nm,0.2s,SNR=7.9 **Guadarrama** 5.42 331 P Pn 02 57 04.0 +1.9
GUD 0.8nm,0.2s,SNR=7.9 **Guadarrama** 5.42 331 P Pn 02 57 04.0 +1.8
EPOB 0.3nm,0.1s,SNR=7.9 **Poblet** 5.55 14 P Pn 02 57 04.8 +0.9
EPOB S Sn 02 58 04.9 -2.9
EPOB 0.3nm,0.1s,SNR=7.9 **Poblet** 5.55 14 P Pn 02 57 04.8 +0.9
EPOB S Sn 02 58 04.9 -2.9
EPOB 1.0nm,0.3s,SNR=7.9 **Poblet** 5.55 14 P Pn 02 57 04.8 +0.9
EPOB 0.3nm,0.1s,SNR=7.9 S Sn 02 58 04.9 -2.9
EPOB 1.0nm,0.3s,SNR=7.9 **Poblet** 5.55 14 P Pn 02 57 04.8 +0.9
EPOB 0.3nm,0.1s,SNR=7.9 S Sn 02 58 04.9 -2.9
PBAR 0.3nm,0.1s,SNR=7.9 **Barrancos** 5.56 295 *e*Pn Pn 02 57 04.7 +0.6
PBAR *e*Sn Sn 02 58 04.7 -3.3
PBAR 0.5nm,0.1s,SNR=7.9 **Barrancos** 5.56 295 *e*Pn Pn 02 57 04.7 +0.6
EGRO 0.2nm,0.1s,SNR=7.9 **El Granado** 5.70 288 P Pn 02 57 05.2 -0.8
EGRO 0.2nm,0.1s,SNR=7.9 **El Granado** 5.70 288 P Pn 02 57 05.2 -0.8
EGRO 0.2nm,0.1s,SNR=7.9 **El Granado** 5.70 288 P Pn 02 57 05.2 -0.8
EGRO 0.2nm,0.1s,SNR=7.9 **El Granado** 5.70 288 P Pn 02 57 05.2 -0.8
EBAD 0.3nm,0.1s,SNR=7.9 **Badajoz** 5.78 301 P Pn 02 57 07.2 +0.1
EBAD S Sn 02 58 11.4 -2.0
EBAD 0.3nm,0.1s,SNR=7.9 **Badajoz** 5.78 301 P Pn 02 57 07.2 +0.1
EBAD S Sn 02 58 11.4 -2.0
EBAD 0.5nm,0.3s,SNR=7.9 **Badajoz** 5.78 301 P Pn 02 57 07.2 +0.1
EBAD 0.3nm,0.1s,SNR=7.9 S Sn 02 58 11.4 -2.0
EBAD 0.5nm,0.3s,SNR=7.9 **Badajoz** 5.78 301 P Pn 02 57 07.2 +0.1
EBAD 0.3nm,0.1s,SNR=7.9 S Sn 02 58 11.4 -2.0
PVAQ 0.2nm,0.1s,SNR=7.9 **Vaqueiros** 5.85 286 *e*Pn Pn 02 57 08.1 0.0
PVAQ *e*Sn Sn 02 58 13.6 -1.7
PVAQ 0.2nm,0.1s,SNR=7.9 **Vaqueiros** 5.85 286 *e*Pn Pn 02 57 08.1 0.0
PVAQ *e*Sn Sn 02 58 13.6 -1.7
PBEJ 0.2nm,0.1s,SNR=7.9 **Beja** 6.13 292 *e*Pn Pn 02 57 12.0 +0.1
PBEJ 0.2nm,0.1s,SNR=7.9 **Beja** 6.13 292 *e*Pn Pn 02 57 12.0 +0.1
PESTR 0.2nm,0.1s,SNR=7.9 **Estremoz** 6.23 300 *e*Pn Pn 02 57 14.1 +0.8
PESTR 0.2nm,0.1s,SNR=7.9 **Estremoz** 6.23 300 *e*Pn Pn 02 57 14.1 +0.8
CFON 0.9nm,0.2s,SNR=7.9 **Fontmartina** 6.27 22 P Pn 02 57 14.0 +0.2
CFON 0.9nm,0.2s,SNR=7.9 **Fontmartina** 6.27 22 P Pn 02 57 14.0 +0.1
CFON 0.9nm,0.2s,SNR=7.9 **Fontmartina** 6.27 22 P Pn 02 57 14.0 +0.1
CFON 0.9nm,0.2s,SNR=7.9 **Fontmartina** 6.27 22 P Pn 02 57 14.0 +0.1
EVO 0.2nm,0.1s,SNR=7.9 **Evora** 6.40 296 *e*Pn Pn 02 57 16.1 +0.4
EVO 0.2nm,0.1s,SNR=7.9 **Evora** 6.40 296 *e*Pn Pn 02 57 16.1 +0.4
PCBR 0.2nm,0.1s,SNR=7.9 **Castelo Branco** 6.64 308 *e*Pn Pn 02 57 20.1 +1.2
PCBR 0.2nm,0.1s,SNR=7.9 **Castelo Branco** 6.64 308 *e*Pn Pn 02 57 20.1 +1.2
EARI 0.1nm,0.1s,SNR=7.9 **Arriondas** 8.13 336 P Pn 02 57 40.1 +0.8
EARI 0.1nm,0.1s,SNR=7.9 **Arriondas** 8.13 336 P Pn 02 57 40.1 +0.8
EARI 0.1nm,0.1s,SNR=7.9 **Arriondas** 8.13 336 P Pn 02 57 40.1 +0.8
EARI 0.1nm,0.1s,SNR=7.9 **Arriondas** 8.13 336 P Pn 02 57 40.1 +0.8

ISCJB ***07*** *03:02:33.8±0.8, 36°.04N±0°.04×0°.53W±0°.06, h10km, Error ellipse: s-maj=6.9km s-min=6.0km az=139.3*
NEIC ***07*** *03:02:34.9, 36°.01N×0°.56W, h0km, MG2.9(MDD), After MDD.*
MDD ***07*** *03:02:35.8±0.9, 35°.83N×0°.49W, h48km±13km, mb3.5/4, Error ellipse: s-maj=10.5km s-min=8.5km az=42.0, PRIMO*
CSEM ***07*** *03:02:35.3±0.5, 36°.04N×0°.63W, h10km, mb2.9/1, Error ellipse: s-maj=10.7km s-min=9.1km az=77.0*
ISC 07 03:02:34.6±0.7,**36°.04N**±0°.04×**0°.52W**±0°.05,**h10**km,**n54,**

EMIJ				S	Sn	03 04 06.1	-3.7
EMIJ	**Mijas**	**3.47 280**		S	**Sn**	**03 04 05.4**	**-4.4**
	1.3nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**3.47 280**		S	**Sn**	**03 04 05.4**	**-4.4**
	1.3nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**3.47 280**		P	**Pn**	**03 03 26.3**	**-2.3**
	0.2nm,0.1s,SNR=7.9						
EMIJ				S	**Sn**	**03 04 06.1**	**-3.7**
	0.7nm,0.2s,SNR=7.9						

IDC 07 03:10:42.9±20.0, 9°.10S×157°.31E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.7/17, mbtmp3.8/4, Error ellipse: s-maj=344.9km s-min=77.5km az=52.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.68 242**		P	P	03 16 05.5	-0.2
	0.6nm,0.8s,baz=69,slow=9.3,SNR=5.9						
ASAR	**Alice Springs**	**26.66 234**		P	P	03 16 23.5	-0.1
	0.5nm,1.0s,baz=71,slow=9.0,SNR=3.1						
STKA	**Stephens Creek**	**26.96 211**		P	P	03 16 26.7	+0.4
	1.0nm,0.4s,baz=56,slow=12,SNR=4.4						
FITZ	**Fitzroy Crossi**	**32.01 250**		P	P	03 17 11.3	0.0
	4.9nm,1.1s,baz=77,slow=19,SNR=2.4						

*NEIC **07** 03:18:00.6±5.0, 4°.00S×141°.30E, h117km±42km, mb4.3/5, Error ellipse: s-maj=36.4km s-min=14.3km az=68.0*
*IDC **07** 03:18:04.6±4.8, 4°.10S×141°.25E, h152km±47km, mb3.7/6, mb1 3.8/7, mb1mx3.6/14, mbtmp3.7/7, Error ellipse: s-maj=41.7km s-min=14.5km az=112.0*
ISC 07 03:18:03.2±2.8, 4°.09S±0°.09×141°.1E±0°.1, h134km±25km, n20, σ0°97/23, mb4.0/9, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**12.12 224**		*e*P	**Pn**	**03 20 51.1**	**-0.4**
	28nm,0.5s						
KAKA				*e*S	**Sn**	**03 23 00.6**	**-4.6**
KAKA	**Kakadu**	**12.12 224**		*e*Pn	**Pn**	**03 20 51.4**	**-0.1**
	79nm,0.5s						
KAKA				*e*Sn	**Sn**	**03 23 00.2**	**-5.0**
WRAB	**Tennant Creek**	**17.07 202**		*e*P	**Pn**	**03 21 55.2**	**+1.4**
	13nm,0.6s						
WRA	**Warramunga Arr**	**17.09 202**		P	**Pn**	**03 21 53.8**	**-0.1**
	2.2nm,0.3s,baz=22,slow=12,SNR=52						
WRA				S	**S**	**03 25 01.6**	**-2.6**
	0.2nm,0.3s,baz=14,slow=22,SNR=5.0						
FITZ	**Fitzroy Crossi**	**20.57 226**		*e*P	**P**	**03 22 35.5**	**+4.0**
	5.9nm,0.8s						
FITZ	**Fitzroy Crossi**	**20.57 226**		P	**P**	**03 22 33.4**	**+1.9**
	3.4nm,0.6s,baz=61,slow=16,SNR=8.3						
FITZ				S	**S**	**03 26 16.2**	**+2.0**
	9.3nm,0.8s,baz=140,slow=14,SNR=5.5						
ASAR	**Alice Springs**	**20.67 199**		P	**P**	**03 22 33.0**	**+0.5**
	4.1nm,0.7s,baz=31,slow=11,SNR=54						
EIDS	**Eidsvold**	**23.23 157**		*e*P	**P**	**03 22 58.3**	**-0.2**
EIDS	**Eidsvold**	**23.23 157**		*e*P	**P**	**03 22 58.3**	**-0.2**
	14nm,0.9s,mb4.4						
RMQ	**Roma**	**23.45 163**		*e*P	**P**	**03 23 00.2**	**-0.2**
	11nm,0.7s,mb4.4						
CMSA	**Cobar Meteorol**	**27.64 172**		*e*P	**P**	**03 23 39.4**	**+1.1**
FORT	**Forrest**	**29.26 203**		*e*P	**P**	**03 23 51.4**	**-1.3**
	20nm,0.8s,mb4.9						
MK31	**Makanchi Array**	**72.33 322**		*e*P	**P**	**03 29 14.4**	**+0.2**
MKAR	**Makanchi Array**	**72.33 322**		P	**P**	**03 29 14.7**	**+0.4**
	0.8nm,0.5s,mb3.7,baz=82,slow=13,SNR=8.7						
ZALV	**Zalesovo Beam**	**74.33 329**		P	**P**	**03 29 24.8**	**-0.9**
	0.5nm,0.4s,mb3.6,baz=97,slow=6.1,SNR=3.8						
KURK	**Kurchatov**	**76.21 325**		*e*P	**P**	**03 29 35.8**	**-0.8**
	2.3nm,1.0s,mb3.8						
MAW	**Mawson**	**81.76 202**		P	**P**	**03 30 07.1**	**+0.6**
	2.0nm,0.8s,mb3.8,baz=73,slow=9.8,SNR=4.4						
BVAR	**Borovoye Array**	**81.80 325**		P	**P**	**03 30 06.8**	**-0.2**
	1.9nm,0.5s,mb4.0,baz=104,slow=6.3,SNR=12						
BRVK	**Borovoye**	**81.87 325**		*e*P	**P**	**03 30 07.4**	**0.0**
	2.0nm,0.6s,mb3.9						
LPAZ	**La Paz**	**144.71 126**		PKP	PKPdf	03 37 24.1	-0.9
	0.7nm,0.6s,baz=147,slow=5.7,SNR=3.7						

*IDC **07** 03:50:08.8±3.0, 4°.34N×73°.88W, h20km±19km, mb3.5/6, mb1 3.9/8, mb1mx3.7/22, mbtmp3.7/8, ML4.4/2, MS3.2/5, Ms1 3.2/5, ms1mx3.0/19, Error ellipse: s-maj=19.6km s-min=17.9km az=76.0*
*NEIC **07** 03:50:09.8±1.7, 4°.36N×73°.94W, h27km±12km, mb4.0/2, Error ellipse: s-maj=13.5km s-min=12.3km az=57.0*
*ISCJB **07** 03:50:10.4±1.1, 4°.45N±0°.07×73°.83W±0°.08, h42km±12km, mb3.7/7, MS3.3/2, Error ellipse: s-maj=15.4km s-min=10.1km az=38.7*
ISC 07 03:50:09.9±1.9, 4°.38N±0°.08×73°.91W±0°.09, h24km±14km, n21, σ0°66/17, mb3.7/7, MS3.3/2, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**0.64 319**		Pg	**Pb**	**03 50 22.1**	**-0.3**
	174nm,0.3s,baz=114,slow=9.6,SNR=273						
SDV	**Santo Domingo**	**5.54 36**		Pn	**Pn**	**03 51 31.6**	**+0.7**
	18nm,0.3s,baz=216,slow=5.1,SNR=75						
SDV				Sn	**Sn**	**03 52 33.8**	**-0.1**
	7.7nm,0.3s,baz=300,slow=20,SNR=3.9						
SDV				Lg		03 53 03.9	
	15nm,0.3s,baz=303,slow=18,SNR=5.8						
SDV				LR	LR	03 53 54.3	
	comp=Z,190nm,20.2s,baz=303,slow=41						
SDV	**Santo Domingo**	**5.54 36**		Pn	**Pn**	**03 51 31.6**	**+0.7**
SDV				Sn	**Sn**	**03 52 33.8**	**-0.1**
SDV				Lg		03 53 03.9	
SDV				LR	LR	03 53 54.3	
OTAV	**Otavalo**	**6.12 228**		*e*Pn	**Pn**	**03 51 43.5**	**+4.5**
	56nm,1.2s						
PCRV	**Puerto La Cruz**	**10.85 57**		Pn	**Pn**	**03 52 43.8**	**-0.1**
	1.6nm,0.3s,baz=233,slow=5.1,SNR=5.0						
ATAH	**Atahualpa**	**12.28 201**		LR	LR	03 58 18.6	
	comp=Z,71nm,20.6s,baz=255,slow=40						
SJG	**San Juan**	**15.62 28**		LR	LR	04 00 12.5	
	comp=Z,48nm,19.2s,baz=282,slow=39						
LPAZ	**La Paz**	**21.31 165**		P	**P**	**03 54 55.5**	**+0.3**
	3.5nm,1.0s,mb3.7,baz=342,slow=16,SNR=10						
LPAZ				LR	LR	04 03 14.2	
	comp=Z,72nm,20.6s,MS3.0,baz=117,slow=37						
LPAZ	**La Paz**	**21.31 165**		*e*P	**P**	**03 54 56.9**	**+1.8**
	6.5nm,1.2s,mb3.8						
LPAZ				LR	LR	04 03 14.2	
SIV	**San Ignacio**	**23.89 148**		P	**P**	**03 55 21.0**	**-0.9**
	1.4nm,0.7s,mb3.5,baz=317,slow=8.9,SNR=8.9						
WMOK	**Wichita Mounta**	**38.00 326**		*e*P	**P**	**03 57 25.8**	**-0.4**
	2.6nm,0.9s,mb4.0						
ULM	**Lac du Bonnet**	**49.33 342**		LR	LR	04 21 03.1	
	comp=Z,48nm,18.1s,MS3.5,baz=30,slow=38						
PDAR	**Pinedale Array**	**49.61 326**		P	**P**	**03 59 00.3**	**+0.9**
	0.2nm,0.5s,mb3.4,baz=118,slow=9.4,SNR=2.4						
SCHQ	**Schefferville**	**50.63 5**		P	**P**	**03 59 07.0**	**+0.1**
	1.8nm,0.7s,mb4.1,baz=180,slow=8.1,SNR=4.1						
YKA	**Yellowknife Ar**	**65.28 341**		P	**P**	**04 00 49.2**	**-0.3**
	0.3nm,0.4s,mb3.6,baz=132,slow=6.4,SNR=3.8						
YKA	**Yellowknife Ar**	**65.28 341**		P	**P**	**04 00 49.2**	**-0.4**
TORD	**Torodi Ar. Bea**	**75.01 78**		P	**P**	**04 01 49.4**	**-0.7**
	0.4nm,0.8s,mb3.4,baz=282,slow=6.8,SNR=4.3						
TORD	**Torodi Ar. Bea**	**75.01 78**		P	**P**	**04 01 49.4**	**-0.7**
ASAR	**Alice Springs**	**147.02 232**		PKPbc	PKPbc	04 09 49.0	-2.5
	0.2nm,0.5s,baz=120,slow=3.5,SNR=5.8						
WRAB	**Tennant Creek**	**148.43 238**		*e*PKPbc	PKPbc	04 09 55.6	+0.1
WRA	**Warramunga Arr**	**148.43 238**		PKPbc	PKPbc	04 09 54.6	-0.9
	1.4nm,0.6s,baz=110,slow=2.9,SNR=25						

MEX 07 04:01:22.1±0.9, 15°.09N×94°.14W, h20km±67km, MD3.9, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.08 55**		*i* P	Pn	04 01 38.8	-3.3
PCIG				*i* S	Sb	04 01 50.7	-5.0
THIG		**1.82 95**		*e*P	Pn	04 01 49.9	-2.4
THIG				*i* S	Sn	04 02 10.6	-4.2
TGIG		**1.94 30**		*i* P	Pn	04 01 52.2	-1.8
TGIG				*i* S	Sn	04 02 15.1	-2.8
HUIG	**Huatulco**	**2.02 290**		*i* P	Pn	04 01 52.1	-2.9
HUIG				*i* S	Sn	04 02 15.0	-4.7
SCX	**San Cristobal**	**2.19 41**		*i* P	Pn	04 01 54.9	-2.5
SCX				*i* S	Sn	04 02 20.3	-3.6
CCIG	**Comitan**	**2.27 58**		*i* P	Pn	04 01 56.3	-2.1
CCIG				*i* S	Sn	04 02 23.4	-2.4
VHO	**Vista Hermosa**	**3.18 309**		*e*P	Pn	04 02 08.7	-2.4
VHO				*i* S	Sn	04 02 44.6	-3.8
PNIG	**Pinotepa**	**4.05 289**		*e*P	Pn	04 02 20.3	-2.7
PNIG				*i* S	Sn	04 03 05.8	-4.2

IDC 07 04:10:26.1±2.5, 55°.52N×86°.05E, h0km, mb1 3.1/3, mb1mx3.0/29, mbtmp3.1/3, ML3.0/3, Error ellipse: s-maj=21.4km s-min=7.4km az=28.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.72 205**		Pn	Pn	04 10 55.2	-2.1
	6.9nm,0.3s,baz=28,slow=20,SNR=36						
ZALV				Pg	Pg	04 10 58.0	-1.1
	6.9nm,0.3s,baz=27,slow=17,SNR=52						
ZALV				Lg		04 11 22.6	
	4.5nm,0.3s,baz=21,slow=34,SNR=11						
KURK	**Kurchatov**	**6.56 226**		Pn	Pn	04 12 03.5	-0.2
	0.1nm,0.3s,baz=43,slow=14,SNR=4.9						
KURK				Sn	Sn	04 13 19.7	+0.6
	0.0nm,0.3s,baz=36,slow=16,SNR=3.1						
KURK				Lg		04 14 01.3	
	0.1nm,0.3s,baz=47,slow=29,SNR=8.2						
MKAR	**Makanchi Array**	**9.04 197**		Pn	Pn	04 12 38.4	+0.6
	0.2nm,0.3s,baz=13,slow=9.8,SNR=4.8						
MKAR				Lg		04 15 11.6	
	0.2nm,0.3s,baz=17,slow=36,SNR=3.6						
BVAR	**Borovoye Array**	**9.49 261**		Pn	Pn	04 12 44.4	+0.5
	0.2nm,0.3s,baz=67,slow=11,SNR=4.6						
BVAR				Sn	Sn	04 14 27.5	-3.6
	0.1nm,0.3s,baz=58,slow=27,SNR=2.5						

*CSEM **07** 04:24:39.9±0.3, 35°.96N×0°.63W, h10km, mb3.0/13, Error ellipse: s-maj=7.2km s-min=4.2km az=15.0*
*ISCJB **07** 04:24:39.2±0.6, 35°.99N±0°.04×0°.66W±0°.04, h10km, Error ellipse: s-maj=5.4km s-min=4.4km az=12.0*
*NEIC **07** 04:24:41.8, 35°.91N×0°.61W, h19km, MG3.0(MDD), After MDD.*
*MDD **07** 04:24:42.3±2.1, 35°.88N×0°.57W, h30km±33km, mb3.6/6, Error ellipse: s-maj=29.1km s-min=9.7km az=154.0, PRIMO*
ISC 07 04:24:39.8±0.6, 35°.97N±0°.04×0°.65W±0°.04, h10km, n57, σ1°11/104, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTSS	**Djebel Tessala**	**0.70 190**		P	**Pg**	**04 24 52.7**	**-0.5**
OKGL	**Djebel Kef Gue**	**1.05 86**		P	**Pg**	**04 24 58.4**	**-1.5**
OKGL	**Djebel Kef Gue**	**1.05 86**		P	**Pg**	**04 24 58.4**	**-1.5**
OJGS	**Djebel Guires**	**1.23 112**		P	**Pn**	**04 25 02.6**	**-0.3**
OJGS	**Djebel Guires**	**1.23 112**		P	**Pn**	**04 25 02.6**	**-0.4**
ENIJ	**Nijar**	**1.61 309**		P	**Pn**	**04 25 08.9**	**+0.7**
ENIJ				S	**Sn**	**04 25 29.9**	**+0.8**
ENIJ	**Nijar**	**1.61 309**		P	**Pn**	**04 25 09.9**	**+1.6**
	1.7nm,0.3s,SNR=7.9						
ENIJ				S	**Sn**	**04 25 27.6**	**-1.4**
	2.4nm,1.2s,SNR=7.9						
ENIJ	**Nijar**	**1.61 309**		P	**Pn**	**04 25 09.9**	**+1.6**
	1.7nm,0.3s,SNR=7.9						
ENIJ				S	**Sn**	**04 25 27.6**	**-1.4**
	2.4nm,1.2s,SNR=7.9						
ENIJ	**Nijar**	**1.61 309**		P	**Pn**	**04 25 08.9**	**+0.7**
	1.7nm,0.3s,SNR=7.9						
ENIJ				S	**Sn**	**04 25 29.9**	**+0.9**
	2.4nm,1.2s,SNR=7.9						
EMUR	**La Murta**	**1.93 346**		P	**Pn**	**04 25 12.8**	**+0.1**
EMUR				S	**Sn**	**04 25 36.5**	**-0.5**
EMUR	**La Murta**	**1.93 346**		P	**Pn**	**04 25 12.2**	**-0.4**
	1.1nm,0.1s,SNR=4.6						
EMUR				S	**Sn**	**04 25 33.2**	**-3.8**
	5.2nm,0.3s,SNR=7.8						
EMUR	**La Murta**	**1.93 346**		P	**Pn**	**04 25 12.2**	**-0.4**
	1.1nm,0.1s,SNR=4.6						
EMUR				S	**Sn**	**04 25 33.2**	**-3.8**
	5.2nm,0.3s,SNR=7.8						
EMUR	**La Murta**	**1.93 346**		P	**Pn**	**04 25 12.8**	**+0.2**
	3.4nm,0.4s,SNR=4.6						
EMUR				S	**Sn**	**04 25 36.5**	**-0.4**
	3.8nm,0.5s,SNR=7.8						
EALB	**Alboran**	**1.94 270**		S	**Sn**	**04 25 35.2**	**-2.0**
	8.6nm,0.4s,SNR=7.9						
EALB	**Alboran**	**1.94 270**		S	**Sn**	**04 25 35.2**	**-2.0**
	8.6nm,0.4s,SNR=7.9						
EBER	**Berja**	**2.03 298**		P	**Pn**	**04 25 14.8**	**+0.8**
EBER				S	**Sn**	**04 25 39.0**	**-0.5**
EBER	**Berja**	**2.03 298**		P	**Pn**	**04 25 14.1**	**0.0**
	0.7nm,0.1s,SNR=7.3						
EBER				S	**Sn**	**04 25 39.0**	**-0.5**
	2.5nm,0.3s,SNR=6.7						
EBER	**Berja**	**2.03 298**		P	**Pn**	**04 25 14.1**	**0.0**
	0.7nm,0.1s,SNR=7.3						
EBER				S	**Sn**	**04 25 39.0**	**-0.5**
	2.5nm,0.3s,SNR=6.7						
EBER	**Berja**	**2.03 298**		P	**Pn**	**04 25 14.8**	**+0.7**
	2.5nm,0.6s,SNR=7.3						
EBER				S	**Sn**	**04 25 39.0**	**-0.5**
	1.8nm,0.3s,SNR=6.7						
EHUE	**Huescar**	**2.41 320**		P	**Pn**	**04 25 20.1**	**+0.8**
EHUE				S	**Sn**	**04 25 47.8**	**-1.1**
EHUE	**Huescar**	**2.41 320**		P	**Pn**	**04 25 20.6**	**+1.3**
	0.6nm,0.1s,SNR=7.9						
EHUE				S	**Sn**	**04 25 47.8**	**-1.1**
	0.4nm,0.1s,SNR=7.9						
EHUE	**Huescar**	**2.41 320**		P	**Pn**	**04 25 20.6**	**+1.3**
	0.6nm,0.1s,SNR=7.9						
EHUE				S	**Sn**	**04 25 47.8**	**-1.1**
	0.4nm,0.1s,SNR=7.9						
EHUE	**Huescar**	**2.41 320**		P	**Pn**	**04 25 20.1**	**+0.8**
	0.8nm,0.7s,SNR=7.9						
EHUE				S	**Sn**	**04 25 47.8**	**-1.1**
	15nm,2.2s,SNR=7.9						
EGUA	**Guajares**	**2.51 291**		P	**Pn**	**04 25 21.4**	**+0.8**
EGUA				S	**Sn**	**04 25 50.4**	**-0.9**
EGUA	**Guajares**	**2.51 291**		P	**Pn**	**04 25 21.4**	**+0.8**
	1.1nm,0.3s,SNR=7.9						
EGUA				S	**Sn**	**04 25 50.4**	**-0.8**
	48nm,1.2s,SNR=7.9						
EQUE	**Quentar**	**2.56 300**		P	**Pn**	**04 25 23.1**	**+1.7**
	1.1nm,0.3s,SNR=5.7						
EQUE				S	**Sn**	**04 25 53.0**	**+0.4**
	1.0nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**2.56 300**		P	**Pn**	**04 25 23.1**	**+1.7**
	1.1nm,0.3s,SNR=5.7						
EQUE				S	**Sn**	**04 25 53.0**	**+0.4**
	1.0nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**2.56 300**		P	**Pn**	**04 25 22.1**	**+0.7**
	2.2nm,0.8s,SNR=5.7						
EQUE				S	**Sn**	**04 25 53.0**	**+0.4**
	10.0nm,1.7s,SNR=7.9						
EQES	**Quesada**	**2.67 314**		P	**Pn**	**04 25 24.3**	**+1.5**
EQES				S	**Sn**	**04 25 55.3**	**+0.1**
EQES	**Quesada**	**2.67 314**		P	**Pn**	**04 25 24.8**	**+2.0**
	1.5nm,0.2s,SNR=19						
EQES				S	**Sn**	**04 25 55.3**	**+0.1**
	1.7nm,0.2s,SNR=9.2						
EQES	**Quesada**	**2.67 314**		P	**Pn**	**04 25 24.8**	**+2.0**
	1.5nm,0.2s,SNR=19						
EQES				S	**Sn**	**04 25 55.3**	**+0.1**
	1.7nm,0.2s,SNR=9.2						
EQES	**Quesada**	**2.67 314**		P	**Pn**	**04 25 24.3**	**+1.5**
	1.0nm,0.3s,SNR=19						
EQES				S	**Sn**	**04 25 55.3**	**+0.1**
	1.2nm,0.3s,SNR=9.2						
EBEN	**Beniarda**	**2.75 7**		P	**Pn**	**04 25 25.4**	**+1.4**
EBEN				S	**Sn**	**04 25 56.5**	**-0.7**
EBEN	**Beniarda**	**2.75 7**		P	**Pn**	**04 25 25.3**	**+1.4**
	0.4nm,0.2s,SNR=5.9						
EBEN				S	**Sn**	**04 25 54.9**	**-2.3**
	1.5nm,0.3s,SNR=7.9						
EBEN	**Beniarda**	**2.75 7**		P	**Pn**	**04 25 25.3**	**+1.4**
	0.4nm,0.2s,SNR=5.9						
EBEN				S	**Sn**	**04 25 54.9**	**-2.3**
	1.5nm,0.3s,SNR=7.9						
EBEN	**Beniarda**	**2.75 7**		P	**Pn**	**04 25 25.3**	**+1.4**
	1.1nm,0.3s,SNR=5.9						
EBEN				S	**Sn**	**04 25 56.5**	**-0.7**
	7.0nm,1.3s,SNR=7.9						
ETOB	**Tobarra**	**2.77 345**		P	**Pn**	**04 25 25.2**	**+1.1**
ETOB				S	**Sn**	**04 25 57.7**	**+0.1**
ETOB	**Tobarra**	**2.77 345**		P	**Pn**	**04 25 25.2**	**+1.1**
	1.3nm,0.1s,SNR=13						
ETOB				S	**Sn**	**04 25 57.7**	**+0.1**
	3.0nm,0.1s,SNR=4.8					

MAGA Magasa 0.97 335 Pg Pg 04 25 29.5 0.0
MAGA Sg Sg 04 25 44.8 +2.7
8µm,0.4s
MAGA Magasa 0.97 335 Pg Pg 04 25 29.5 0.0
MAGA Sg Sg 04 25 44.8 +2.7
8µm,0.4s
CODM Codolo 1.09 243 P Pb 04 25 32.0 +0.2
CODM S Sg 04 25 44.6 -1.4
SFI Santa Sofia 1.09 155 Pg Pg 04 25 30.9 -1.0
SFI Sg Sg 04 25 46.7 +0.6
313nm,0.6s
MAIM Mastiano 1.11 208 Pg Pg 04 25 31.6 -0.5
MAIM Sg Sg 04 25 49.4 +2.9
MAIM Mastiano 1.11 208 P Pb 04 25 30.5 -1.6
MAIM Mastiano 1.11 208 Pg Pg 04 25 31.6 -0.5
MTLO Montello 1.11 34⇑ ePg Pg 04 25 32.2 -0.1
MTLO eSg Sg 04 25 48.2 +1.5
MTLO Montello 1.11 34 ePg Pg 04 25 32.2 0.0
MTLO eSg Sg 04 25 48.2 +1.5
CRMI Carmignano 1.12 189 Pg Pg 04 25 31.9 -0.4
CRMI Sg Sg 04 25 48.6 +1.7
110nm,0.5s
CRMI Carmignano 1.12 189 Pg Pg 04 25 31.9 -0.4
IESO Jesolo 1.14 56⇑ ePg Pg 04 25 33.0 +0.3
IESO Jesolo 1.14 56 ePg Pg 04 25 33.0 +0.3
ASQU Asqua 1.18 159 Pg Pg 04 25 32.8 -0.7
ASQU Sg Sg 04 25 49.7 +1.0
ASQU Asqua 1.18 159 Pg Pg 04 25 32.8 -0.7
ASQU Sg Sg 04 25 49.7 +1.0
BOB Bobbio (Coli) 1.25 265 Pg Pg 04 25 35.8 +0.8
BOB Bobbio (Coli) 1.25 265 Pg Pg 04 25 35.8 +0.8
MABI Malga Bissina 1.25 338 Pg Pg 04 25 34.6 -0.4
MABI Sg Sg 04 25 52.5 +1.2
MABI Malga Bissina 1.25 338 Pg Pg 04 25 34.6 -0.4
MABI Sg Sg 04 25 52.5 +1.2
VARN Col Varnada, M 1.27 30⇑ iPg Pn 04 25 33.9 -0.7
VARN i Sg Sg 04 25 52.4 +0.8
VARN Col Varnada, M 1.27 30 i Pg Pn 04 25 33.9 -0.7
VARN i Sg Sg 04 25 52.4 +0.8
PII Pisa 1.27 203 Pg Pn 04 25 34.2 -0.4
81nm,0.2s
PII Pisa 1.27 203 Pg Pn 04 25 34.2 -0.4
81nm,0.2s
SC2M Scurtabo 1.29 248 Pg Pg 04 25 35.9 +0.3
SC2M Scurtabo 1.29 248 P Pn 04 25 35.3 +0.4
SC2M Scurtabo 1.29 248 Pg Pg 04 25 35.9 +0.3
SC2M S Sn 04 25 50.0 -2.2
RSM Repubblica di 1.32 137 Pg Pg 04 25 36.0 -0.1
43nm,0.9s
RSM Repubblica di 1.32 137 Pg Pg 04 25 36.0 -0.1
43nm,0.9s
MDI Monti di Nese 1.37 310 Pg Pg 04 25 36.7 -0.5
MDI Monti di Nese 1.37 310 Pg Pg 04 25 36.7 -0.5
CRE Caprese Michel 1.39 157 Pg Pn 04 25 36.2 0.0
236nm,1.4s
CRE Caprese Michel 1.39 157 Pg Pn 04 25 36.2 0.0
236nm,1.4s
CAE Caneva 1.41 38⇑ iPg Pn 04 25 35.8 -0.7
CAE i Sg Sg 04 25 56.6 +0.4
CAE Caneva 1.41 38 i Pg Pn 04 25 35.8 -0.8
CAE i Sg Sg 04 25 56.6 +0.4
CSNT Castellina Chi 1.43 177 Pg Pn 04 25 36.3 -0.5
60nm,0.4s
CSNT Castellina Chi 1.43 177 Pg Pn 04 25 36.3 -0.5
60nm,0.4s
FAU Forcella Aurin 1.44 22⇑ iPg Pn 04 25 37.7 +0.7
FAU Forcella Aurin 1.44 22 i Pg Pn 04 25 37.7 +0.7
PARC Parchiule 1.45 149 Pg Pn 04 25 37.4 +0.3
109nm,0.6s
PARC Parchiule 1.45 149 Pg Pn 04 25 37.4 +0.3
109nm,0.6s
APPI Appiano 1.58 1 Pg Pn 04 25 39.6 +0.7
APPI Sg Sg 04 26 02.8 +1.1
650nm,0.3s
APPI Appiano 1.58 1 Pg Pn 04 25 39.6 +0.7
APPI Sg Sg 04 26 02.8 +1.1
650nm,0.3s
CSO Casso 1.59 29⇑ iPg Pn 04 25 38.3 -0.7
CSO i Sg Sg 04 26 02.4 +0.5
FSSB Fossombrone 1.65 136 Pg Pn 04 25 40.8 +0.9
31nm,0.2s
FSSB Fossombrone 1.65 136 Pg Pn 04 25 40.8 +0.9
31nm,0.2s
CIMO Cimolais 1.66 31⇓ iPg Pn 04 25 39.3 -0.7
CIMO i Sg Sn 04 26 01.8 +0.5
PIEI Pieia 1.66 144 Pg Pn 04 25 40.5 +0.5
73nm,0.5s
PIEI Pieia 1.66 144 Pg Pn 04 25 40.5 +0.5
73nm,0.5s
GENL Genova Univers 1.67 254 P Pn 04 25 39.6 -0.5
BRMO Bormio 1.68 340 Pg Pn 04 25 41.6 +1.3
358nm,0.7s
BRMO Bormio 1.68 340 Pg Pn 04 25 41.6 +1.3
358nm,0.7s
TLI Talmassons 1.69 52 ePg Pn 04 25 39.7 -0.6
GROG Isola di Gorgo 1.75 213 Pg Pn 04 25 41.4 +0.2
GROG Isola di Gorgo 1.75 213 Pg Pn 04 25 41.4 +0.2
AFL Alpe Faloria 1.77 22 ePg Pg 04 25 44.8 0.0
AFL eSg Sg 04 26 10.4 +2.6
AFL Alpe Faloria 1.77 22 ePg Pg 04 25 44.8 0.0
AFL eSg Sg 04 26 10.4 +2.6
MPRI Monte Prat 1.84 42⇓ iPg Pn 04 25 42.0 -0.5
CSMI Casera Mimoias 1.91 32 ePg Pn 04 25 43.8 +0.3
PCP Piancastagn 1.93 260 P Pn 04 25 44.6 +0.9
BAD Bernadia 1.96 46⇑ iPg Pn 04 25 43.3 -0.9
COLI Coloredo 1.97 50⇑ ePg Pn 04 25 43.5 -0.7
TRI Trieste 1.98 65 ePn Pn 04 25 43.1 -1.3
TRI eSn Sn 04 26 07.0 -2.3
TRI Trieste 1.98 65 ePn Pn 04 25 43.1 -1.3
TRI eSn Sn 04 26 07.0 -2.3
VINO Villanova 2.00 46⇑ iPg Pn 04 25 43.7 -0.9
SABO M.te Sabotino 2.00 56⇑ iPg Pn 04 25 44.3 -0.5
SABO i Sg Sn 04 26 09.8 0.0
ROTM Rocchetta Tana 2.03 270 P Pn 04 25 46.3 +1.3
ABTA Abfaltersbach 2.06 26⇓ iPn Pn 04 25 46.2 +0.6
0.7nm,0.1s
ABTA ⇑ iSg Sg 04 26 18.2 +1.0
39nm,0.3s
ABTA Abfaltersbach 2.06 26 Pn Pn 04 25 46.2 +0.6
0.7nm,0.1s
ABTA Sg Sg 04 26 18.2 +1.0
39nm,0.3s
DRE Drenchia 2.14 52⇑ ePg Pn 04 25 45.8 -0.8
FETA Feichten 2.15 351⇓ iPn Pn 04 25 49.3 +2.5
4.5nm,0.2s
FETA ⇓ iSn Sg 04 26 19.1 -0.8
32nm,0.3s
FETA Feichten 2.15 351 Pn Pn 04 25 49.3 +2.6
4.5nm,0.2s
VOJS Vojsko 2.20 58 i Pn Pn 04 25 46.5 -1.0
VOJS i Sn Sn 04 26 14.1 -0.6
VOJS
comp=Z,11nm,0.1s
VOJS Vojsko 2.20 58 i Pn Pn 04 25 46.5 -1.0
VOJS i Sn Sn 04 26 14.1 -0.6
VOJS Vojsko 2.20 58 i Pn Pn 04 25 46.5 -0.9
VOJS i Sn Sn 04 26 14.1 -0.6
JAVS Javornik 2.25 63 i Pn Pn 04 25 47.1 -1.0
JAVS i Sn Sn 04 26 15.0 -0.9
JAVS
comp=Z,24nm,0.2s
JAVS Javornik 2.25 63 i Pn Pn 04 25 47.1 -1.0
JAVS i Sn Sn 04 26 15.0 -0.9
JAVS Javornik 2.25 63 i Pn Pn 04 25 47.1 -1.0
JAVS i Sn Sn 04 26 15.0 -0.9
ACOM Acomizza, Ital 2.31 44 ePg Pn 04 25 49.0 0.0
RORO Rocca Rossa 2.38 252 P Pn 04 25 48.9 -1.0
WTTA Wattenberg 2.39 7 ePn Pn 04 25 51.8 +1.8
WTTA eSg Sg 04 26 27.0 -0.5
WTTA Wattenberg 2.39 7⇓ iPn Pn 04 25 51.7 +1.7
comp=Z,6.4nm,0.2s
WTTA ⇓ iSn Sg 04 26 25.2 -2.3
comp=Z,137nm,0.3s
WTTA Wattenberg 2.39 7 Pn Pn 04 25 51.7 +1.7
comp=Z,6.4nm,0.2s
CEY Cerknica 2.42 69 i Pn Pn 04 25 49.6 -0.9
CEY i Sn Sn 04 26 20.0 -0.2
CEY
comp=Z,3.0nm,0.1s
CEY Cerknica 2.42 69 i Pn Pn 04 25 49.6 -0.9
CEY i Sn Sn 04 26 20.0 -0.2
CEY Cerknica 2.42 69 i Pn Pn 04 25 49.7 -0.8
CEY i Sn Sn 04 26 20.0 -0.2

MYKA Terra Mystica 2.43 44⇓ iPn Pn 04 25 50.8 +0.2
comp=Z,1.1nm,0.1s
MYKA ⇓ iSg Sg 04 26 30.2 +1.2
comp=Z,27nm,0.3s
MYKA Terra Mystica 2.43 44 Pn Pn 04 25 50.8 +0.2
comp=Z,1.1nm,0.1s
MYKA Sg Sg 04 26 30.2 +1.2
comp=Z,27nm,0.3s
MOTA Moosalm 2.45 358⇑ iPn Pn 04 25 53.2 +2.3
comp=Z,8.9nm,0.2s
MOTA ⇑ iSn Sg 04 26 27.6 -1.9
comp=Z,81nm,0.3s
MOTA Moosalm 2.45 358 Pn Pn 04 25 53.2 +2.4
comp=Z,8.9nm,0.2s
WATA Walderalm 2.45 6⇑ iPn Pn 04 25 52.8 +1.9
comp=Z,11nm,0.2s
WATA ⇑ iSn Sg 04 26 26.3 -3.3
comp=Z,54nm,0.3s
WATA Walderalm 2.45 6 Pn Pn 04 25 52.8 +1.9
comp=Z,11nm,0.2s
TRAV Traversella 2.52 285 P Pn 04 25 53.9 +2.1
DAVA Damuels 2.56 339 ePn Pn 04 25 54.7 +2.3
DAVA Damuels 2.56 339⇑ iPn Pn 04 25 54.9 +2.6
comp=Z,4.6nm,0.2s
DAVA ⇓ iSn Sn 04 26 28.1 +4.5
comp=Z,49nm,0.4s
DAVA Damuels 2.56 339 Pn Pn 04 25 54.9 +2.5
comp=Z,4.6nm,0.2s
IMI Imperia 2.57 249 P Pn 04 25 52.1 -0.4
MONE Monesi 2.60 253 P Pn 04 25 52.8 -0.1
LJU Ljubljana 2.60 63 i Pn Pn 04 25 52.9 -0.1
LJU i Sn Sn 04 26 25.1 +0.4
LJU
comp=Z,11nm,0.1s
LJU Ljubljana 2.60 63 i Pn Pn 04 25 52.9 -0.1
LJU i Sn Sn 04 26 25.1 +0.4
LJU Ljubljana 2.60 63 i Pn Pn 04 25 52.9 -0.1
LJU i Sn Sn 04 26 25.1 +0.4
RETA Reutte 2.61 353⇑ iPn Pn 04 25 55.2 +2.2
comp=Z,8.7nm,0.3s
RETA ⇓ iSn Sn 04 26 29.5 +4.7
comp=Z,43nm,0.6s
RETA Reutte 2.61 353 Pn Pn 04 25 55.2 +2.2
comp=Z,8.7nm,0.3s
NVLJ Novalja 2.64 96 ePn Pn 04 25 52.5 -0.9
NVLJ Sn Sn 04 26 22.4 -3.0
NVLJ Novalja 2.64 96 ePn Pn 04 25 52.5 -0.9
NVLJ Sn Sn 04 26 22.5 -2.9
KBA Koelnbreinsper 2.64 34 ePn Pn 04 25 56.6 +3.1
KBA eSg Sg 04 26 37.8 +2.0
KBA Koelnbreinsper 2.64 34⇓ iPg Pg 04 26 00.3 -1.2
comp=Z,22nm,0.3s
KBA ⇑ iSg Sg 04 26 36.4 +0.6
comp=Z,32nm,0.3s
KBA Koelnbreinsper 2.64 34 Pg Pg 04 26 00.3 -1.2
comp=Z,22nm,0.3s
KBA Sg Sg 04 26 36.4 +0.6
comp=Z,32nm,0.3s
NEGI Seborga 2.72 249 P Pn 04 25 54.5 -0.1
SAOF Saorge 2.77 252 P Pn 04 25 56.4 +1.2
SAOF Saorge 2.77 252 P Pn 04 25 56.4 +1.2
RONM Roccetta Nervi 2.78 250 P Pn 04 25 55.0 -0.4
PGF Pioggiola 2.84 215 ePn Pn 04 25 55.9 -0.3
PGF eSn Sn 04 26 28.0 -2.4
comp=Z,44nm,0.5s
PGF Pioggiola 2.84 215 ePn Pn 04 25 55.9 -0.3
PGF eSn Sn 04 26 28.0 -2.4
comp=Z,22nm,0.5s
OBKA Obir 2.85 54 ePn Pn 04 25 56.3 0.0
OBKA eSg Sg 04 26 41.8 -0.4
OBKA Obir 2.85 54⇓ iPn Pn 04 25 56.1 -0.2
comp=Z,1.5nm,0.1s
OBKA ⇑ iSg Sg 04 26 41.8 -0.4
comp=Z,54nm,0.5s
OBKA Obir 2.85 54 Pn Pn 04 25 56.1 -0.2
comp=Z,1.5nm,0.1s
OBKA Sg Sg 04 26 41.8 -0.4
comp=Z,54nm,0.5s
AUTN L'Aution 2.85 253 P Pn 04 25 56.6 +0.3
AUTN S Sn 04 26 34.8 +4.1
AUTN L'Aution 2.85 253 P Pn 04 25 56.6 +0.3
SBF Sospel 2.89 250 ePn Pn 04 25 57.5 +0.6
SBF eSn Sn 04 26 30.0 -1.7
comp=Z,105nm,0.5s
SBF Sospel 2.89 250 ePn Pn 04 25 57.5 +0.6
SBF eSn Sn 04 26 30.0 -1.7
comp=Z,52nm,0.5s
BOJS Bojanci 2.93 77 i Pn Pn 04 25 57.2 -0.2
BOJS i Sn Sn 04 26 32.0 -0.5
BOJS Bojanci 2.93 77 i Pn Pn 04 25 57.2 -0.2
BOJS i Sn Sn 04 26 32.0 -0.6
LUCF Luceram 2.94 251 P Pn 04 25 58.5 +0.9
LUCF S Sn 04 26 37.0 +4.1
LUCF Luceram 2.94 251 P Pn 04 25 58.5 +0.9
TOUF Mont Tournerai 2.97 254 P Pn 04 25 58.7 +0.8
TOUF Mont Tournerai 2.97 254 P Pn 04 25 58.7 +0.8
RJOB Jochberg 3.05 21 ePn Pn 04 26 00.0 +0.9
RJOB eSg Sg 04 26 50.2 +1.5
MBDF Montbardon 3.16 268 ePn Pn 04 26 01.4 +0.8
MBDF eSn Sn 04 26 38.5 +0.2
comp=Z,20nm,0.5s
MBDF Montbardon 3.16 268 ePn Pn 04 26 01.4 +0.8
MBDF eSn Sn 04 26 38.5 +0.2
comp=Z,10nm,0.5s
LPG La Plagne 3.20 282 ePn Pn 04 26 01.9 +0.7
LPG eSn Sn 04 26 40.0 +0.6
LPG eSg Sg 04 26 57.5 +3.8
comp=Z,13nm,0.4s
LPG La Plagne 3.20 282 ePn Pn 04 26 01.9 +0.7
LPG eSn Sn 04 26 40.0 +0.6
SOKA Soboth 3.22 55⇓ iPn Pn 04 26 01.5 +0.1
comp=Z,5.2nm,0.5s
SOKA ⇓ iSn Sn 04 26 39.1 -0.7
comp=Z,6.6nm,0.3s
SOKA ⇑ iSg Sg 04 26 53.4 -0.8
comp=Z,11nm,0.3s
SOKA Soboth 3.22 55 Pn Pn 04 26 01.5 +0.1
comp=Z,5.2nm,0.5s
SOKA Sn Sn 04 26 39.1 -0.7
comp=Z,6.6nm,0.3s
SOKA Sg Sg 04 26 53.4 -0.8
comp=Z,11nm,0.3s
LPL La Plagne 3.22 283 ePn Pn 04 26 02.4 +1.0
LPL eSn Sn 04 26 40.9 +1.1
comp=Z,13nm,0.3s
LPL La Plagne 3.22 283 ePn Pn 04 26 02.4 +1.0
LPL eSn Sn 04 26 40.9 +1.1
comp=Z,6.3nm,0.3s
PERS Pernice 3.25 56 i Pn Pn 04 26 01.7 -0.1
PERS i Sn Sn 04 26 40.6 +0.2
PERS Pernice 3.25 56 i Pn Pn 04 26 01.7 -0.1
PERS i Sn Sn 04 26 40.7 +0.3
FUR Furstenfeldbru 3.27 1 eSg Sg 04 26 55.1 -0.7
FRF La Foret Royal 3.54 249 ePn Pn 04 26 05.8 0.0
FRF eSn Sn 04 26 47.0 -0.6
comp=Z,22nm,0.4s
FRF La Foret Royal 3.54 249 ePn Pn 04 26 05.8 0.0
FRF eSn Sn 04 26 47.0 -0.6
comp=Z,11nm,0.4s
MOA Molln 3.64 35 ePn Pn 04 26 08.2 +1.1
MOA ePn Pn 04 26 08.5 +1.4
MOA eSn Sn 04 26 54.3 +4.2
MOA Molln 3.64 35⇓ iPn Pn 04 26 08.0 +0.9
comp=Z,6.0nm,0.2s
MOA ⇑ iSn Sn 04 26 52.3 +2.3
comp=Z,1.8nm,0.1s
MOA Molln 3.64 35 Pn Pn 04 26 08.0 +0.9
comp=Z,6.0nm,0.2s
MOA Sn Sn 04 26 52.3 +2.2
comp=Z,1.8nm,0.1s
FELD Feldberg im Sc 3.71 325 P Pn 04 26 08.8 +0.6
FELD Feldberg im Sc 3.71 325 P Pn 04 26 08.8 +0.6
LMR La Mourre 3.72 247 ePn Pn 04 26 07.9 -0.5
LMR eSn Sn 04 26 49.6 -2.6
comp=Z,18nm,0.3s
LMR La Mourre 3.72 247 ePn Pn 04 26 07.9 -0.5
LMR eSn Sn 04 26 49.6 -2.6
comp=Z,9.1nm,0.3s
ORIF Oris-en-Rattie 3.78 272 ePn Pn 04 26 09.5 +0.3
ORIF eSn Sn 04 26 53.6 -0.1
comp=Z,13nm,0.4s
ORIF Oris-en-Rattie 3.78 272 ePn Pn 04 26 09.5 +0.3
ORIF eSn Sn 04 26 53.6 -0.1
comp=Z,6.6nm,0.4s
ARSA Arzberg 3.82 50⇓ iPn Pn 04 26 09.2 -0.5

comp=Z,2.0nm,0.2s
ARSA ⇓ iSn Sn 04 26 54.5 -0.1
comp=Z,4.4nm,0.4s
ARSA Arzberg 3.82 50 Pn Pn 04 26 09.2 -0.5
comp=Z,2.0nm,0.2s
ARSA Sn Sn 04 26 54.5 -0.1
comp=Z,4.4nm,0.4s
BFO Black Forest 3.96 331 ePn Pn 04 26 12.3 +0.6
BFO eSn Sn 04 26 58.7 +0.6
BFO Black Forest 3.96 331 ePn Pn 04 26 12.1 +0.4
BFO ePg Pg 04 26 27.9 +1.1
BFO eSg Sg 04 27 18.4 +0.3
BFO Black Forest 3.96 331 ePn Pn 04 26 12.1 +0.4
BFO Black Forest 3.96 331 ePg Pg 04 26 27.9 +1.1
CABF La Chapelle 3.97 297 ePn Pn 04 26 12.5 +0.8
CABF eSn Sn 04 26 58.1 -0.2
comp=Z,9.4nm,0.5s
CABF La Chapelle 3.97 297 ePn Pn 04 26 12.5 +0.8
CABF eSn Sn 04 26 58.1 -0.2
comp=Z,4.7nm,0.5s
MOF Molkenrain 4.08 318 P Pn 04 26 13.5 +0.2
MOF Molkenrain 4.08 318 P Pn 04 26 13.5 +0.2
SMRF Simiane la Rot 4.13 259 ePn Pn 04 26 14.7 +0.7
SMRF eSn Sn 04 27 02.0 -0.4
comp=Z,10nm,0.5s
SMRF Simiane la Rot 4.13 259 ePn Pn 04 26 14.7 +0.7
SMRF eSn Sn 04 27 02.0 -0.4
comp=Z,5.2nm,0.5s
HINF Hinteralfeld 4.20 316 ePn Pn 04 26 14.4 -0.4
HINF eSn Sn 04 27 02.8 -1.0
comp=Z,14nm,0.5s
HINF Hinteralfeld 4.20 316 ePn Pn 04 26 14.4 -0.4
HINF eSn Sn 04 27 02.8 -1.0
comp=Z,6.8nm,0.5s
GEC2 GERESS Array S 4.30 23 ePn Pn 04 26 16.0 -0.3
GEC2 GERESS Array S 4.30 23 ePn Pn 04 26 16.7 +0.4
GEC2 ePg Pg 04 26 30.1 -3.1
GEC2 eSn Sn 04 27 05.9 -0.6
GEC2 GERESS Array S 4.30 23 ePn Pn 04 26 16.7 +0.4
ECH Echery 4.34 321 P Pn 04 26 17.2 +0.4
ECH Echery 4.34 321 P Pn 04 26 17.2 +0.4
WET Wettzell 4.40 14 ePn Pn 04 26 17.7 +0.1
WET eSn Sn 04 27 08.3 -0.6
CSNA Conrad Observa 4.42 45⇑ iPn Pn 04 26 18.1 +0.1
comp=Z,0.7nm,0.1s
CSNA ⇑ iSn Sn 04 27 08.9 -0.6
comp=Z,3.0nm,0.3s
CSNA Conrad Observa 4.42 45 Pn Pn 04 26 18.1 +0.1
comp=Z,0.7nm,0.1s
CSNA Sn Sn 04 27 08.9 -0.6
comp=Z,3.0nm,0.3s
CONA Conrad Observa 4.42 45⇑ iPn Pn 04 26 18.0 0.0
comp=Z,2.8nm,0.4s
CONA ⇑ iSn Sn 04 27 09.9 +0.4
comp=Z,3.2nm,0.3s
CONA Conrad Observa 4.42 45 Pn Pn 04 26 18.0 0.0
comp=Z,2.8nm,0.4s
CONA Sn Sn 04 27 09.9 +0.4
comp=Z,3.2nm,0.3s
CDF Champ du Feu 4.43 324 ePn Pn 04 26 18.5 +0.4
CDF eSn Sn 04 27 08.1 -1.7
CDF eSg Sg 04 27 33.6 +0.4
comp=Z,15nm,0.5s
CDF Champ du Feu 4.43 324 ePn Pn 04 26 18.5 +0.4
CDF eSn Sn 04 27 08.1 -1.7
CDF eSg Sg 04 27 33.6 +0.4
comp=Z,7.6nm,0.5s
KHC Kasperske Hory 4.54 20 ePn Pn 04 26 18.8 -0.7
KHC ePg Pg 04 26 36.7 -1.0
KHC eSg Sg 04 27 34.3 -2.2
KHC Kasperske Hory 4.54 20 ePN Pn 04 26 19.4 -0.1
KHC ePG Pg 04 26 35.5 -2.2
KHC eSN Sn 04 27 10.0 -2.3
KHC eSG Sg 04 27 33.7 -2.7
comp=Z,22nm,0.8s
KHC Kasperske Hory 4.54 20 Pn Pn 04 26 19.4 -0.1
KHC Kasperske Hory 4.54 20 ePg Pg 04 26 36.7 -1.0
HAU Haudompre 4.57 315 ePn Pn 04 26 20.0 0.0
HAU eSn Sn 04 27 11.3 -1.9
comp=Z,12nm,0.3s
HAU Haudompre 4.57 315 ePn Pn 04 26 20.0 0.0
HAU eSn Sn 04 27 11.3 -1.9
comp=Z,6.2nm,0.3s
VIVF Saint-Julien-I 4.64 272 ePn Pn 04 26 20.6 -0.4
VIVF eSn Sn 04 27 13.6 -1.3
comp=Z,3.1nm,0.2s
VIVF Saint-Julien-I 4.64 272 ePn Pn 04 26 20.6 -0.4
VIVF eSn Sn 04 27 13.6 -1.3
comp=Z,1.5nm,0.2s
GRF Grafenberg Arr 4.80 0 eSg Sg 04 27 45.2 +0.4
THEF They Montfort 4.90 315 P Pn 04 26 25.1 +0.6
THEF They Montfort 4.90 315 P Pn 04 26 25.1 +0.6
STON Ston 5.11 111 ePn Pn 04 26 27.6 +0.1
STON Sn Sn 04 27 22.3 -4.2
STON Ston 5.11 111 ePn Pn 04 26 27.5 0.0
LASF Ste Croix 5.32 264 ePn Pn 04 26 30.2 -0.1
LASF eSn Sn 04 27 30.7 -0.9
comp=Z,4.3nm,0.5s
LASF Ste Croix 5.32 264 ePn Pn 04 26 30.2 -0.1
LASF eSn Sn 04 27 30.7 -0.9
comp=Z,2.2nm,0.5s
SFTF Sexfontaines 5.39 310 ePn Pn 04 26 31.1 -0.1
baz=126
SFTF Sexfontaines 5.39 310 ePn Pn 04 26 31.1 -0.1
baz=126
NKC Novy Kostel 5.41 9 eSG Sg 04 28 03.1 -1.2
comp=Z,9.7nm,0.5s
NKC Novy Kostel 5.41 9 Sg Sg 04 28 03.1 -1.2
comp=Z,9.7nm,0.5s
SMF Signal de Mont 5.44 291 ePn Pn 04 26 31.7 -0.2
SMF eSn Sn 04 27 33.1 -1.4
comp=Z,5.2nm,0.3s
SMF Signal de Mont 5.44 291 ePn Pn 04 26 31.7 -0.2
SMF eSn Sn 04 27 33.1 -1.4
comp=Z,2.6nm,0.3s
PRU Pruhonice 5.57 23 eSG Sg 04 28 06.4 -3.3
comp=Z,6.5nm,0.4s
LOR Lormes 5.63 298 ePn Pn 04 26 34.5 -0.1
baz=122
LOR eSn Sn 04 27 36.6 -2.7
comp=Z,9.6nm,0.4s
LOR Lormes 5.63 298 ePn Pn 04 26 34.5 -0.1
baz=122
TNS Taunus Mts 5.64 342 eSn Sn 04 27 39.6 0.0
MOX Moxa 5.76 3 ePN Pn 04 26 36.9 +0.6
MOX eSN Sn 04 27 40.0 -2.3
MOX eSG Sg 04 28 15.0 -0.6
MOX Moxa 5.76 3 ePn Pn 04 26 36.9 +0.6
MOX eSn Sn 04 27 40.0 -2.3
MOX eSg Sg 04 28 15.0 -0.6
MOX Moxa 5.76 3 ePn Pn 04 26 36.9 +0.6
SSF Saint Saulge 5.78 295 ePn Pn 04 26 36.5 -0.2
SSF eSn Sn 04 27 41.1 -1.9
comp=Z,3.7nm,0.5s
SSF Saint Saulge 5.78 295 ePn Pn 04 26 36.5 -0.2
SSF eSn Sn 04 27 41.1 -1.9
comp=Z,1.9nm,0.5s
AVF Avril sur Loir 5.80 292 ePn Pn 04 26 36.6 -0.3
AVF eSn Sn 04 27 41.7 -1.7
comp=Z,2.3nm,0.4s
AVF Avril sur Loir 5.80 292 ePn Pn 04 26 36.6 -0.3
AVF eSn Sn 04 27 41.7 -1.7
comp=Z,1.1nm,0.4s
BGF Bois d'Agland 6.08 289 ePn Pn 04 26 41.2 +0.5
BGF Bois d'Agland 6.08 289 ePn Pn 04 26 41.2 +0.5
BRG Berggiesshubel 6.26 16 ePN Pg 04 27 07.6 -3.0
BRG SG Sb 04 28 20.6 +6.0
comp=Z,4.5nm,0.6s
TCF Toulx Ste Croi 6.46 286 ePn Pn 04 26 46.2 +0.2
TCF eSn Sn 04 27 57.2 -2.5
comp=Z,2.8nm,0.3s
TCF Toulx Ste Croi 6.46 286 ePn Pn 04 26 46.2 +0.2
CAF Calviac 6.49 273 ePn Pn 04 26 46.4 0.0
CAF Calviac 6.49 273 ePn Pn 04 26 46.4 0.0
CLL Collm 6.53 10 i Pn Pn 04 26 47.4 +0.6
CLL eSg Sg 04 28 39.0 -1.2
CLL Collm 6.53 10 i Pn Pn 04 26 47.4 +0.6
CLL e 04 28 09.0
CLL eSg Sg 04 28 39.0 -1.2
comp=Z,17nm,1.2s
CLL Collm 6.53 10 i Pn Pn 04 26 47.4 +0.6
CLL eSg Sg 04 28 39.0 -1.2

MEX 07 04:57:39.7±0.7, 16°.74N×95°.13W, h124km±15km, MD3.7, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.35**	**225**	*i* P	Pn	04 58 04.0	-1.7
HUIG				*i* S	Sn	04 58 23.9	-1.4
OXX	**Oaxaca**	**1.57**	**283**	*i* P	Pn	04 58 07.1	-1.0
OXX				*i* S	Sn	04 58 27.9	-1.9
VHO	**Vista Hermosa**	**1.57**	**283**	*i* P	Pn	04 58 07.8	-0.4
VHO				*i* S	Sn	04 58 27.8	-2.2
TGIG		**1.92**	**88**	*i* P	Pn	04 58 11.5	-0.9
TGIG				*i* S	Sn	04 58 34.9	-2.4
PCIG		**2.10**	**119**	*e*P	Pn	04 58 13.3	-1.3
PCIG				*i* S	Sn	04 58 39.9	-1.4
PNIG	**Pinotepa**	**2.90**	**264**	*i* P	Pn	04 58 22.6	-2.2
PNIG				*i* S	Sn	04 58 56.9	-2.6
CCIG	**Comitan**	**2.90**	**99**	*i* P	Pn	04 58 24.1	-0.8
CCIG				*i* S	Sn	04 58 57.8	-1.9
THIG		**3.30**	**123**	*e*P	Pn	04 58 28.6	-1.5
CAIG	**El Cayaco**	**4.93**	**274**	*e*P	Pn	04 58 50.5	-1.3
CAIG				*i* S	Sn	04 59 46.5	-1.4

*IDC **07** 05:05:40.6±1.3, 28°.12N×103°.87E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.5/24, mbtmp3.6/6, ML3.6/1, MS2.5/1, Ms1 2.5/1, ms1mx2.0/24, Error ellipse: s-maj=42.0km s-min=21.3km az=65.0*
*NEIC **07** 05:05:42.6±0.8, 28°.12N×103°.81E, h10km, Error ellipse: s-maj=20.5km s-min=12.9km az=57.0*
*BJI **07** 05:05:42.5, 28°.07N×103°.89E, h10km, ML3.3/12, Ms3.5/2, Ms7 3.4/1*

ISC 07 05:05:42.0±1.3, 28°.09N±0°.03×103°.83E±0°.07, h4km±9km, n14, σ1°10/22, mb3.6/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.81**	**359**	Pg	**Pb**	**05 06 33.4**	**+0.7**
CD2				Sg	**Sb**	**05 07 08.3**	**+0.8**
CD2				smax			
	comp=N,450nm,0.6s						
CD2	**Chengdu**	**2.81**	**359**	*e*Pn	**Pn**	**05 06 26.6**	**-1.1**
CD2				Pg	**Pg**	**05 06 35.9**	**0.0**
CD2				Sn	**Sn**	**05 07 04.1**	**+2.1**
CD2				Sg	**Sb**	**05 07 08.2**	**+0.7**
CD2				smax			
	comp=N,410nm,0.7s						
CD2				smax			
	comp=E,450nm,0.8s						
GYA	**Guiyang**	**3.00**	**122**	Pg	**Pn**	**05 06 31.6**	**+1.4**
GYA				Sg	**Sn**	**05 07 07.6**	**+1.0**
GYA				smax			
	comp=N,190nm,0.7s						
GYA				smax			
	comp=E,170nm,0.7s						
KMI	**Kunming**	**3.11**	**199**	Pg	**Pg**	**05 06 41.3**	**-0.3**
KMI				Sg	**Sb**	**05 07 16.3**	**+0.1**
KMI				smax			
	comp=N,31nm,1.0s						
KMI				smax			
	comp=E,36nm,1.1s						
KMI				LR	LR		
	comp=N,260nm,4.6s						
KMI				LR	LR		
	comp=E,310nm,4.6s						
ENH	**Enshi**	**5.40**	**65**	*e*Pn	**Pn**	**05 07 03.9**	**+0.7**
	comp=E,32nm,0.6s						
ENH				*e*Sn	**Sn**	**05 08 04.2**	**-1.7**
XAN	**Xi'an**	**7.36**	**35**	Pg	**Pn**	**05 07 30.7**	**+0.5**
XAN				Sg	**Sn**	**05 08 46.3**	**-7.9**
XAN				smax			
	comp=N,18nm,1.0s						
XAN				smax			
	comp=E,11nm,0.8s						
SONM	**Songino Array**	**19.81**	**5**	P	**Pn**	**05 10 12.3**	**-2.6**
	comp=E,0.2nm,0.3s,baz=186,slow=12,SNR=3.5						
KSRS	**Korea Array**	**22.25**	**59**	P	**P**	**05 10 38.5**	**-1.3**
	comp=E,1.8nm,0.6s,mb3.7,baz=251,slow=9.8,SNR=8.3						
KSRS				LR	LR	05 18 53.7	
	comp=E,13nm,19.0s,baz=235,slow=36						
MK31	**Makanchi Array**	**25.18**	**324**	*e*P	**P**	**05 11 09.0**	**+0.7**
MKAR	**Makanchi Array**	**25.18**	**324**	P	**P**	**05 11 08.1**	**-0.2**
	comp=E,0.2nm,0.3s,mb3.2,baz=131,slow=13,SNR=3.6						
ZALV	**Zalesovo Beam**	**29.36**	**337**	P	**P**	**05 11 44.5**	**-1.3**
	comp=E,0.7nm,0.6s,mb3.5,baz=152,slow=6.5,SNR=3.3						
WRAB	**Tennant Creek**	**56.13**	**145**	*e*P	**P**	**05 15 23.7**	**+1.0**
WRA	**Warramunga Arr**	**56.13**	**145**	P	**P**	**05 15 21.3**	**-1.4**
	comp=E,0.6nm,0.5s,mb3.9,baz=334,slow=8.6,SNR=7.7						
ASAR	**Alice Springs**	**59.06**	**148**	P	**P**	**05 15 43.5**	**+0.2**
	comp=E,0.3nm,0.5s,mb3.6,baz=330,slow=6.7,SNR=6.5						

*NEIC **07** 05:53:51.0, 38°.38N×22°.34E, h25km, ML3.5(ATH), After ATH.*
*CSEM **07** 05:53:51.3±0.2, 38°.42N×22°.30E, h20km, ML3.8/3, Error ellipse: s-maj=5.5km s-min=4.5km az=25.0*
*ATH **07** 05:53:51.0, 38°.38N×22°.34E, h25km±1km, MD3.5/5, ML3.5*
*ISCJB **07** 05:53:51.4±0.3, 38°.37N±0°.02×22°.36E±0°.03, h12km±3km, Error ellipse: s-maj=4.1km s-min=3.5km az=170.9*
*THE **07** 05:53:52.3, 38°.35N×22°.34E, h6km±1km, ML3.8/3, Error ellipse: s-maj=1.4km s-min=0.4km az=1.0*

ISC 07 05:53:51.8±0.3, 38°.37N±0°.03×22°.36E±0°.03, h13km±3km, n64, σ0°59/87, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSF	**Desfina**	**0.14**	**74**	P	**Pg**	**05 53 55.6**	**+0.3**
DSF				S	**Sg**	**05 53 58.1**	**+0.3**
DSF	**Desfina**	**0.14**	**74**	P	**Pg**	**05 53 55.6**	**+0.3**
KALE	**Kalithea**	**0.17**	**276**	P	**Pg**	**05 53 55.7**	**0.0**
KALE				S	**Sg**	**05 53 58.1**	**-0.4**
KALE	**Kalithea**	**0.17**	**276**	P	**Pg**	**05 53 55.7**	**0.0**
KALE				S	**Sg**	**05 53 58.1**	**-0.4**
LAKA	**Lakka**	**0.33**	**246**	P	**Pg**	**05 53 58.3**	**-0.1**
LAKA				S	**Sg**	**05 54 03.0**	**+0.2**
LAKA	**Lakka**	**0.33**	**246**	P	**Pg**	**05 53 58.3**	**-0.1**
LAKA				S	**Sg**	**05 54 03.0**	**+0.2**
EFP	**Efpalio**	**0.36**	**279**	P	**Pg**	**05 53 58.6**	**-0.4**
EFP	**Efpalio**	**0.36**	**279**	*e*PB	**Pg**	**05 53 58.6**	**-0.4**
EFP				*e*SB	**Sg**	**05 54 04.1**	**+0.3**
EFP	**Efpalio**	**0.36**	**279**	P	**Pg**	**05 53 58.6**	**-0.4**
EFP				*e*Sb	**Sg**	**05 54 04.1**	**+0.3**
GUR	**Goura**	**0.43**	**181**	P	**Pg**	**05 54 00.3**	**-0.1**
GUR	**Goura**	**0.43**	**181**	*e*PB	**Pg**	**05 54 00.2**	**-0.2**
GUR				*e*SB	**Sg**	**05 54 06.9**	**+0.7**
GUR	**Goura**	**0.43**	**181**	P	**Pg**	**05 54 00.3**	**-0.1**
GUR				*e*Sb	**Sg**	**05 54 06.9**	**+0.7**
UPR	**University Cam**	**0.46**	**259**	*e*PB	**Pg**	**05 54 00.8**	**0.0**
UPR				*e*SB	**Sg**	**05 54 08.1**	**+1.2**
UPR	**University Cam**	**0.46**	**259**	*e*Pb	**Pg**	**05 54 00.8**	**0.0**
UPR				*e*Sb	**Sg**	**05 54 08.1**	**+1.2**
LKR	**Lokris**	**0.58**	**61**	*e*Pn	**Pg**	**05 54 02.4**	**-0.6**
LKR				*e*Sn	**Sg**	**05 54 11.3**	**+0.6**
LKR	**Lokris**	**0.58**	**61**	*e*PN	**Pg**	**05 54 02.4**	**-0.6**
LKR				*e*SN	**Sg**	**05 54 11.2**	**+0.5**
LTK	**Loutraki**	**0.59**	**126**	P	**Pg**	**05 54 03.6**	**+0.2**
LTK	**Loutraki**	**0.59**	**126**	*e*PN	**Pg**	**05 54 03.5**	**+0.1**
LTK	**Loutraki**	**0.59**	**126**	P	**Pg**	**05 54 03.6**	**+0.2**
AGG	**Agios Georgios**	**0.65**	**358**	*e*Pn	**Pg**	**05 54 03.7**	**-0.7**
AGG				*e*Sn	**Sg**	**05 54 13.0**	**0.0**
AGG	**Agios Georgios**	**0.65**	**358**	*e*PN	**Pg**	**05 54 03.7**	**-0.7**
AGG				*e*SN	**Sg**	**05 54 13.0**	**0.0**
AGG	**Agios Georgios**	**0.65**	**358**	*e*Pn	**Pg**	**05 54 03.7**	**-0.7**
EVR	**Evrytania**	**0.69**	**322**	*e*Pn	**Pg**	**05 54 04.9**	**-0.3**
EVR				*e*Sn	**Sg**	**05 54 14.6**	**+0.2**
EVR	**Evrytania**	**0.69**	**322**	*e*PN	**Pg**	**05 54 04.9**	**-0.3**
EVR				*e*SN	**Sg**	**05 54 14.6**	**+0.2**
EVR	**Evrytania**	**0.69**	**322**	*e*Pn	**Pg**	**05 54 04.9**	**-0.3**
RLS	**Riolos of Patr**	**0.77**	**246**	*e*Pn	**Pg**	**05 54 05.8**	**-0.8**
RLS	**Riolos of Patr**	**0.77**	**246**	*e*PN	**Pg**	**05 54 05.8**	**-0.8**
RLS	**Riolos of Patr**	**0.77**	**246**	*e*Pn	**Pg**	**05 54 05.8**	**-0.8**
VLX	**Vlachokerasia**	**1.00**	**179**	P	**Pg**	**05 54 10.4**	**-0.7**
VLX	**Vlachokerasia**	**1.00**	**179**	*e*PN	**Pg**	**05 54 10.7**	**-0.4**
VLX	**Vlachokerasia**	**1.00**	**179**	P	**Pg**	**05 54 10.4**	**-0.7**
VLX	**Vlachokerasia**	**1.00**	**179**	*e*Pn	**Pg**	**05 54 10.7**	**-0.4**
NAIG	**Nisos Aigina**	**1.08**	**124**	*e*Pn	**Pg**	**05 54 12.5**	**-0.1**
NAIG	**Nisos Aigina**	**1.08**	**124**	*e*PN	**Pg**	**05 54 12.5**	**-0.1**
NAIG	**Nisos Aigina**	**1.08**	**124**	*e*Pn	**Pg**	**05 54 12.5**	**-0.1**
ATH	**Athens Observa**	**1.14**	**110**	*e*Pn	**Pn**	**05 54 13.3**	**-0.1**
ATH				*e*Sn	**Sn**	**05 54 29.4**	**+0.4**
ATH	**Athens Observa**	**1.14**	**110**	*e*PN	**Pn**	**05 54 13.3**	**-0.1**
ATH				*e*SN	**Sn**	**05 54 29.4**	**+0.4**
ATH	**Athens Observa**	**1.14**	**110**	*e*Pn	**Pn**	**05 54 13.3**	**-0.1**
ATH				*e*Sn	**Sn**	**05 54 29.4**	**+0.4**
THL	**Klokotos Trika**	**1.22**	**347**	*e*PN	**Pn**	**05 54 14.1**	**-0.4**
THL	**Klokotos Trika**	**1.22**	**347**	*e*Pn	**Pn**	**05 54 14.1**	**-0.4**
PTL	**Penteli**	**1.23**	**105**	*e*Pn	**Pn**	**05 54 14.4**	**-0.2**
PTL	**Penteli**	**1.23**	**105**	*e*PN	**Pn**	**05 54 14.4**	**-0.2**
PTL	**Penteli**	**1.23**	**105**	*e*Pn	**Pn**	**05 54 14.4**	**-0.2**
ITM	**Ithomi**	**1.24**	**196**	*e*Pb	**Pb**	**05 54 13.4**	**-1.6**
ITM	**Ithomi**	**1.24**	**196**	P	**Pn**	**05 54 14.7**	**0.0**
ITM	**Ithomi**	**1.24**	**196**	*e*PB	**Pb**	**05 54 13.4**	**-1.6**
ITM	**Ithomi**	**1.24**	**196**	*e*Pb	**Pb**	**05 54 13.4**	**-1.6**
ITM	**Ithomi**	**1.24**	**196**	P	**Pn**	**05 54 14.7**	**0.0**
VLY	**Voula,Athens**	**1.25**	**114**	*e*Pn	**Pn**	**05 54 14.3**	**-0.6**
VLY	**Voula,Athens**	**1.25**	**114**	*e*PN	**Pn**	**05 54 14.2**	**-0.7**
VLY	**Voula,Athens**	**1.25**	**114**	*e*Pn	**Pn**	**05 54 14.3**	**-0.6**
KFL	**Anninata**	**1.26**	**258**	P	**Pn**	**05 54 15.5**	**+0.4**
PYL	**PYLOS**	**1.55**	**198**	*e*PN	**Pn**	**05 54 19.8**	**+0.7**
PYL	**PYLOS**	**1.55**	**198**	*e*Pn	**Pn**	**05 54 19.8**	**+0.7**
VLI	**Veliai**	**1.71**	**164**	*e*Pn	**Pn**	**05 54 21.2**	**-0.1**
VLI				*e*Sn	**Sn**	**05 54 42.9**	**-0.1**
VLI	**Veliai**	**1.71**	**164**	*e*PN	**Pn**	**05 54 21.2**	**-0.1**
VLI				*e*SN	**Sn**	**05 54 42.9**	**-0.1**
VLI	**Veliai**	**1.71**	**164**	*e*Pn	**Pn**	**05 54 21.2**	**-0.1**
VLI				*e*Sn	**Sn**	**05 54 42.9**	**-0.1**
KYTH	**Kithira**	**2.16**	**165**	*e*Pn	**Pn**	**05 54 27.8**	**+0.4**
KYTH	**Kithira**	**2.16**	**165**	*e*PN	**Pn**	**05 54 27.8**	**+0.4**
KYTH	**Kithira**	**2.16**	**165**	*e*Pn	**Pn**	**05 54 27.8**	**+0.4**
APE	**Apeiranthos**	**2.83**	**116**	*e*Pn	**Pn**	**05 54 36.9**	**+0.2**
APE	**Apeiranthos**	**2.83**	**116**	*e*PN	**Pn**	**05 54 36.9**	**+0.2**
APE	**Apeiranthos**	**2.83**	**116**	*e*Pn	**Pn**	**05 54 36.9**	**+0.2**
KRUS	**Krusevo**	**3.11**	**344**	*e*Pn	**Pn**	**05 54 43.6**	**+3.2**

*IDC **07** 05:56:44.5±1.8, 20°.95S×67°.54W, h182km±15km, mb3.3/3, mb1 3.7/6, mb1mx3.4/18, mbtmp3.4/6, Error ellipse: s-maj=28.1km s-min=15.6km az=67.0*
*ISCJB **07** 05:56:44.0±0.6, 20°.94S±0°.05×67°.65W±0°.09, h192km±9km, mb3.3/3, Error ellipse: s-maj=13.7km s-min=8.7km az=176.7*
*GUC **07** 05:56:46.4±0.7, 20°.86S×67°.99W, h199km±12km, MD3.6, ML3.9*

ISC 07 05:56:44.9±0.6, 20°.93S±0°.05×67°.62W±0°.09, h185km±9km, n14, σ1°20/22, mb3.4/3, 2C, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**1.75**	**266**	*e*P	**Pn**	**05 57 20.2**	**+0.6**
PB01				*i* S	**Sn**	**05 57 45.9**	**-0.6**
PB01				AML	AML	05 57 49.1	
	comp=N,432nm,0.4s						
PB04	**Plate Boundary**	**2.19**	**232**	*e*P	**Pn**	**05 57 31.7**	**+7.4**
PB04				*i* S	**Sn**	**05 58 05.6**	**+11**
PB04				AML	AML	05 58 09.6	
	comp=N,157nm,0.1s						
HMBC	**Humberston**	**2.22**	**287⇑**	*i*P	**Pn**	**05 57 24.7**	**0.0**
HMBC				*i* S	**Sn**	**05 57 54.1**	**-1.5**
HMBC				AML	AML	05 57 57.2	
	comp=N,1μm,0.6s						
PECH	**Pedro de Valdi**	**2.53**	**229**	*i* P	**Pn**	**05 57 30.1**	**+1.9**
PECH				*i* S	**Sn**	**05 58 03.0**	**+1.1**
PECH				AML	AML	05 58 03.5	
	comp=E,260nm,0.1s						
MNMC	**Miæe Miæ**	**2.58**	**314⇑**	*i*P	**Pn**	**05 57 29.7**	**+0.9**
MNMC				*i* S	**Sn**	**05 58 02.7**	**-0.2**
MNMC				AML	AML	05 58 08.9	
	comp=N,587nm,0.7s						
PSGC	**Pisagua**	**2.70**	**299**	*e*P	**Pn**	**05 57 29.8**	**-0.4**
PSGC				*i* S	**Sn**	**05 58 02.9**	**-2.4**
PSGC				AML	AML	05 58 05.2	
	comp=E,479nm,0.6s						
LPAZ	**La Paz**	**4.65**	**354**	P	**Pn**	**05 57 55.9**	**+1.4**
	comp=E,6.1nm,0.3s,baz=159,slow=7.4,SNR=228						
LPAZ				S	**Sn**	**05 58 50.8**	**+1.8**
	baz=308,slow=19,SNR=1.3						
SIV	**San Ignacio**	**7.92**	**53**	P	**Pn**	**05 58 34.4**	**-2.7**
	comp=E,3.1nm,0.3s,baz=231,slow=14,SNR=177						
SIV				S	**Sn**	**05 59 54.9**	**-11**
	comp=E,0.1nm,0.3s,baz=264,slow=15,SNR=3.1						
CFAA	**Coronel Fontan**	**10.64**	**183**	P	**Pn**	**05 59 11.4**	**-1.2**
	comp=E,0.1nm,0.3s,baz=6.6,slow=12,SNR=23						
CFAA				S	**Sn**	**06 01 03.1**	**-7.9**
	comp=E,0.0nm,0.3s,baz=4.5,slow=12,SNR=4.2						
CPUP	**Villa Florida**	**10.85**	**122**	P	**Pn**	**05 59 15.6**	**+0.2**
	comp=E,1.0nm,0.3s,baz=294,slow=11,SNR=13						
TXAR	**Lajitas Array**	**60.87**	**324**	P	**P**	**06 06 37.5**	**-0.5**
	comp=E,0.2nm,0.7s,mb3.1,baz=161,slow=8.4,SNR=3.5						
TORD	**Torodi Ar. Bea**	**76.03**	**70**	P	**P**	**06 08 11.9**	**-0.4**
	comp=E,0.8nm,0.6s,mb3.5,baz=252,slow=5.6,SNR=9.9						
YKA	**Yellowknife Ar**	**91.06**	**340**	P	**P**	**06 09 28.6**	**+0.9**
	comp=E,0.3nm,0.6s,mb3.5,baz=126,slow=4.2,SNR=4.2						
MKAR	**Makanchi Array**	**144.47**	**36**	PKP	PKPdf	06 15 59.3	+0.2
	comp=E,1.2nm,0.9s,baz=327,slow=4.0,SNR=5.1						

*ISCJB **07** 06:08:16.3±0.8, 2°.35N±0°.05×126°.80E±0°.06, h80km±9km, mb4.1/14, Error ellipse: s-maj=10.9km s-min=8.2km az=153.2*
*DJA **07** 06:08:17, 2°.58N×126°.94E, h50km, MLv4.4/5*
*IDC **07** 06:08:17.2±3.5, 2°.26N×126°.82E, h73km±32km, mb3.8/11, mb1 3.9/11, mb1mx3.8/20, mbtmp3.8/11, MS3.2/2, Ms1 3.2/2, ms1mx2.6/26, Error ellipse: s-maj=44.8km s-min=11.0km az=71.0*
*NEIC **07** 06:08:19.6±2.8, 2°.24N×126°.65E, h94km±26km, mb4.3/7, Error ellipse: s-maj=29.3km s-min=8.9km az=62.0*

ISC 07 06:08:17.5±0.8, 2°.34N±0°.05×126°.84E±0°.07, h74km±8km, n34, σ1°10/34, mb4.1/14, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.65**	**161**	P	**Pn**	**06 08 42.1**	**-2.5**
SGSI	**Sangihe**	**1.87**	**316**	P	**Pn**	**06 08 45.4**	**-2.1**
MNI	**Manado**	**2.19**	**246**	P	**Pn**	**06 08 51.8**	**0.0**
LBMI	**Labuha**	**3.03**	**167**	P	**Pn**	**06 09 04.3**	**+1.0**
MRSI	**Marisa**	**5.24**	**249**	P	**Pn**	**06 09 34.8**	**+1.5**
	0.4nm1μm91nm,0.8s						
LUWI	**Luwuk**	**5.28**	**230**	P	**Pn**	**06 09 36.5**	**+2.6**
	0.5nm1μm86nm,0.7s						
SWI	**Sorong**	**5.45**	**126**	P	**Pn**	**06 09 36.9**	**+0.7**
	0.1nm32nm,0.8s						
APSI	**Ampana**	**6.11**	**238**	P	**Pn**	**06 09 48.8**	**+3.5**
TTSI	**Tana Toraja**	**8.82**	**233**	P	**Pn**	**06 10 21.7**	**-0.7**
KAPI	**Kappang**	**10.18**	**224**	*e*Pn	**Pn**	**06 10 39.3**	**-1.5**
KAPI				*e*Sn	**Sn**	**06 12 33.3**	**0.0**
KAKA	**Kakadu**	**15.96**	**160**	*e*P	**Pn**	**06 12 00.2**	**+2.6**
	14nm,0.6s						
KAKA	**Kakadu**	**15.96**	**160**	*e*P	**Pn**	**06 11 59.9**	**+2.3**
	42nm,0.6s						
FITZ	**Fitzroy Crossi**	**20.35**	**183**	*e*P	**P**	**06 12 47.6**	**-0.4**
	7.0nm,0.6s						
FITZ	**Fitzroy Crossi**	**20.35**	**183**	P	**P**	**06 12 47.1**	**-0.9**
	2.3nm,0.4s,baz=14,slow=8.5,SNR=12						
FITZ	**Fitzroy Crossi**	**20.35**	**183**	*e*P	**P**	**06 12 47.5**	**-0.5**
	6.3nm,0.8s						
WRAB	**Tennant Creek**	**23.33**	**162**	*e*P	**P**	**06 13 18.7**	**-0.6**
	11nm,0.8s,mb4.2						
WRA	**Warramunga Arr**	**23.34**	**162**	P	**P**	**06 13 17.7**	**-1.7**
	2.0nm,0.4s,mb3.8,baz=341,slow=10,SNR=63						
WRA				S	**S**	**06 17 26.1**	**-0.4**
	1.0nm,0.9s,baz=338,slow=18,SNR=4.4						
ASAR	**Alice Springs**	**26.75**	**165**	P	**P**	**06 13 49.5**	**-0.9**
	0.7nm,0.3s,mb3.6,baz=344,slow=6.6,SNR=17						
CMAR	**Chiang Mai Arr**	**31.68**	**302**	P	**P**	**06 14 34.0**	**-0.2**
	1.0nm,0.4s,mb3.9,baz=112,slow=7.3,SNR=5.7						
KSRS	**Korea Array**	**34.95**	**2**	P	**P**	**06 15 03.2**	**+0.8**
	1.0nm,0.5s,mb3.9,baz=188,slow=11,SNR=6.3						
MJAR	**Matsushiro Arr**	**35.62**	**16**	LR	LR	06 29 15.3	
	comp=Z,30nm,20.7s,baz=65,slow=35						
STKA	**Stephens Creek**	**36.80**	**159**	*e*P	**P**	**06 15 18.0**	**-0.3**
	9.4nm,0.6s,mb4.9						
STKA	**Stephens Creek**	**36.80**	**159**	P	**P**	**06 15 18.1**	**-0.2**
	11nm,0.7s,mb4.9,baz=340,slow=8.4,SNR=32						
STKA	**Stephens Creek**	**36.80**	**159**	*e*P	**P**	**06 15 17.9**	**-0.4**
	2.3nm,0.7s,mb4.2						
ARMA	**Armidale**	**40.26**	**146**	*e*P	**P**	**06 15 48.3**	**+1.0**
ASAJ	**Asahikawa**	**43.88**	**16**	LR	LR	06 31 02.8	
	comp=Z,33nm,22.0s,baz=170,slow=31						
ULN	**Ulaanbaatar**	**48.46**	**342**	*e*P	**P**	**06 16 52.5**	**0.0**
	1.2nm,0.4s,mb4.1						
SONM	**Songino Array**	**48.64**	**342**	P	**P**	**06 16 54.0**	**+0.2**
	1.0nm,0.6s,mb3.9,baz=161,slow=9.0,SNR=4.4						
TLY	**Talaya**	**52.87**	**342**	*e*P	**P**	**06 17 26.3**	**+0.6**
	2.1nm,0.6s,mb4.3						
MKAR	**Makanchi Array**	**58.75**	**326**	P	**P**	**06 18 07.7**	**-0.1**
	1.3nm,0.5s,mb4.3,baz=104,slow=9.9,SNR=12						
ZALV	**Zalesovo Beam**	**61.87**	**333**	P	**P**	**06 18 28.6**	**-0.3**
	0.6nm,0.4s,mb4.0,baz=132,slow=7.4,SNR=2.6						
KURK	**Kurchatov**	**62.96**	**328**	*e*P	**P**	**06 18 35.8**	**-0.5**
	4.9nm,0.6s,mb4.6						
BVAR	**Borovoye Array**	**68.54**	**327**	P	**P**	**06 19 12.7**	**+0.6**
	1.0nm,0.6s,mb3.9,baz=126,slow=9.8,SNR=6.3						
MAW	**Mawson**	**82.50**	**200**	P	**P**	**06 20 31.9**	**+0.3**
	2.2nm,0.9s,mb4.0,baz=74,slow=9.0,SNR=3.1						

*IDC **07** 06:28:30.3±0.5, 32°.47N×105°.42E, h0km, mb4.3/17, mb1 4.4/20, mb1mx4.3/31, mbtmp4.3/20, ML4.3/3, MS3.2/4, Ms1 3.2/4, ms1mx2.7/28, Error ellipse: s-maj=28.6km s-min=11.1km az=57.0*
*BJI **07** 06:28:31.7, 32°.49N×105°.51E, h15km, mB4.4/10, mb4.3/13, ML4.2/19, Ms4.2/18, Ms7 4.0/16*
*NEIC **07** 06:28:32.2±0.2, 32°.50N×105°.38E, h10km, mb4.4/18, Error ellipse: s-maj=6.2km s-min=4.9km az=50.0*
*ISCJB **07** 06:28:32.1±1.5, 32°.49N±0°.03×105°.44E±0°.04, h25km±11km, mb4.4/36, MS3.3/4, Error ellipse: s-maj=5.2km s-min=4.5km az=172.0*
*MOS **07** 06:28:33.2±1.0, 32°.53N×105°.44E, h33km, mb4.6/10, Error ellipse: s-maj=13.3km s-min=7.7km az=106.0*

ISC 07 06:28:34.4±1.5, 32°.50N±0°.03×105°.42E±0°.04, h26km±11km, n98, σ1°03/113, mb4.4/36, MS3.3/4, 3C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.12**	**222⇑**	*i*Pn	**Pn**	**06 29 09.0**	**+0.8**
CD2				Pg	**Pn**	**06 29 12.4**	**+4.2**
CD2				Sg	**Sn**	**06 29 41.0**	**+7.2**
CD2				smax			
	comp=N,18μm,0.7s						
CD2				smax			
	comp=E,7μm,0.5s						
XAN	**Xi'an**	**3.31**	**61**	Pn	**Pn**	**06 29 24.6**	**+0.1**
XAN				Sn	**Sn**	**06 30 01.6**	**-1.4**
XAN				Sg	**Sn**	**06 30 13.8**	**+11**
XAN				smax			
	comp=N,890nm,0.9s						
XAN				smax			
	comp=E,640nm,0.8s						
XAN				LR	LR		
	comp=N,630nm,5.6s						
XAN				LR	LR		
	comp=E,300nm,9.0s						
XAN				LR	LR		
	comp=Z,350nm,7.5s						
LZH	**Lanzhou**	**3.81**	**340**	*e*Pn	**Pn**	**06 29 33.3**	**+1.9**
LZH				Pg	**Pn**	**06 29 43.2**	**+12**
LZH				Sn	**Sn**	**06 30 19.5**	**+4.1**
LZH				Sg	**Sn**	**06 30 30.5**	**+15**
LZH				smax			
	comp=N,2μm,0.8s						
LZH				smax			
	comp=E,2μm,0.6s						
LZH				LR	LR		
	comp=N,3μm,5.8s						
LZH				LR	LR		
	comp=Z,3μm,8.5s						
ENH	**Enshi**	**4.12**	**121**	*e*Pn	**Pn**	**06 29 37.1**	**+1.4**
ENH				*e*Pg	**Pn**	**06 29 47.3**	**+12**
ENH				*e*Sg	**Sn**	**06 30 40.5**	**+17**
GYA	**Guiyang**	**6.11**	**169**	Pn	**Pn**	**06 30 03.9**	**+0.8**
GYA				Sn	**Sn**	**06 31 12.0**	**-0.2**
GYA				smax			
	comp=N,450nm,0.7s						
GYA				smax			
	comp=E,510nm,0.8s						
KMI	**Kunming**	**7.71**	**198**	Pn	**Pn**	**06 30 25.2**	**+0.1**
KMI				Sn	**Sn**	**06 31 52.1**	**+0.5**
KMI				Sg	Sn	06 32 36.3	+45
KMI				smax			
	comp=N,48nm,1.5s						
KMI				smax			
	comp=E,53nm,1.5s						
KMI				LR	LR		
	comp=N,320nm,8.4s						
KMI				LR	LR		
	comp=E,520nm,5.9s						
WHN	**Wuhan**	**7.87**	**102**	Pn	**Pn**	**06 30 26.8**	**-0.3**
WHN				Sn	**Sn**	**06 31 53.0**	**-2.3**
WHN				LR	LR		
	comp=N,1μm,2.4s						
WHN				LR	LR		
	comp=E,1μm,4.3s						
WHN				LR	LR		
	comp=Z,1μm,3.4s						
GTA	**Gaotai**	**8.26**	**328**	*e*P	**Pn**	**06 30 32.3**	**-0.2**
GTA				pP		06 30 36.8	
GTA				sP		06 30 40.1	
GTA				pmax	pmax		
	comp=Z,18nm,0.8s						
GTA				pmax	pmax		
	comp=Z,43nm,4.8s					

KSRS pmax pmax
comp=Z,1.0nm,0.3s
TLY Talaya 19.21 357 *e*P **Pn 06 32 56.3 -1.0**
TLY pmax pmax
comp=Z,3.0nm,0.8s
TLY Talaya 19.21 357 *e*P **Pn 06 32 56.3 -1.0**
comp=Z,3.2nm,0.8s
MOY Mondy 19.43 352 *e*P **Pn 06 33 03.7 +3.8**
MK31 Makanchi Array 22.72 316 *e*P **P 06 33 34.3 +0.2**
MKAR Makanchi Array 22.72 316 P **P 06 33 34.6 +0.5**
comp=Z,4.9nm,0.7s,mb4.1,baz=106,slow=13,SNR=19
TKM2 Tokmak 2 25.67 302 *e*P **P 06 34 03.5 +1.4**
TKM2 pmax pmax
comp=Z,4.0nm,0.8s,mb4.0
TKM2 Tokmak 2 25.67 302 *e*P **P 06 34 03.5 +1.4**
comp=Z,3.8nm,0.8s,mb4.0
KLR Kul'dur 25.81 42 *e*P **P 06 34 03.2 0.0**
ZAA0 Zalesovo Array 26.00 332 *e*P **P 06 34 05.5 +0.6**
ZALV Zalesovo Beam 26.00 332 P **P 06 34 05.0 +0.1**
comp=Z,2.7nm,0.5s,mb4.0,baz=134,slow=10,SNR=13
ZALV LR LR 06 44 40.9
comp=Z,60nm,18.3s,MS3.2,baz=40,slow=37
UCH Uchtor 26.30 301 *e*P **P 06 34 09.6 +1.8**
comp=Z,7.3nm,1.1s,mb4.1
AAK Ala-Archa 26.39 301 *e*P **P 06 34 12.9 +4.3**
AAK pmax pmax
comp=Z,2.0nm,1.4s,mb3.5
KURK Kurchatov 26.84 321 P **P 06 34 13.6 +0.9**
comp=Z,2.4nm,0.5s,mb4.0,baz=126,slow=9.4,SNR=21
KURK Kurchatov 26.84 321 *e*P **P 06 34 13.0 +0.4**
KURK pmax pmax
comp=Z,6.0nm,0.8s,mb4.2
KURK Kurchatov 26.84 321 *e*P **P 06 34 13.0 +0.4**
comp=Z,6.3nm,0.8s,mb4.2
AML Almayashu 26.87 300 *e*P **P 06 34 14.7 +1.7**
comp=Z,5.3nm,0.6s,mb4.2
BVAR Borovoye Array 32.43 320 P **P 06 35 02.0 -0.1**
comp=Z,0.7nm,0.5s,mb3.7,baz=108,slow=9.3,SNR=3.1
BVAR PcP PcP 06 37 48.4 -0.4
comp=Z,1.6nm,0.8s,baz=116,slow=3.4,SNR=3.8
ABKAR Akbulak array 37.61 310 *e*P **P 06 35 47.6 +0.8**
comp=Z,2.2nm,0.4s,mb4.2
KAPI Kappang 39.71 157 P **P 06 36 03.6 -1.1**
comp=Z,18nm,0.6s,mb5.0,baz=324,slow=8.1,SNR=10.0
ARU Arti 40.04 321 *e i*P **P 06 36 09.8 +2.7**
ARU *e* 06 37 38.8
ARU S **S 06 42 16.6 +5.5**
ARU pmax pmax
comp=Z,13nm,1.2s,mb4.5
ARU Arti 40.04 321 *e*P **P 06 36 06.8 -0.2**
comp=Z,10nm,1.2s,mb4.4
TIXI Tiksi 41.17 11 *e*P **P 06 36 16.8 +0.6**
TIXI pmax pmax
comp=Z,5.0nm,0.6s,mb4.3
TIXI Tiksi 41.17 11 *e*P **P 06 36 16.8 +0.6**
comp=Z,5.3nm,0.6s,mb4.3
PETK Petropavlovsk- 42.41 45 LR LR 06 53 56.0
comp=Z,17nm,18.8s,MS3.0,baz=108,slow=36
GNI Garni 48.66 297⇑ *e*P **P 06 37 21.0 +4.8**
GNI pmax pmax
comp=Z,4.0nm,0.5s
BILL Bilibino 49.44 26 P **P 06 37 20.0 -1.8**
BILL *e* pP 06 37 26.4 -3.3
BILL pmax pmax
comp=Z,4.0nm,1.6s,mb4.2
BILL MLR MLR
comp=Z,100nm,15.0s,MS3.9
KNA Kununurra 52.92 151 *e*P **P 06 37 48.7 +0.2**
comp=Z,15nm,0.5s,mb5.2
FITZ Fitzroy Crossi 53.91 156 *e*P **P 06 37 55.6 -0.1**
comp=Z,5.6nm,0.3s,mb5.0
FITZ Fitzroy Crossi 53.91 156 P **P 06 37 55.7 0.0**
comp=Z,3.3nm,0.4s,mb4.6,baz=342,slow=8.4,SNR=24
JOF Joensuu 54.46 327 *e*P **P 06 37 58.4 -0.8**
JOF pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
JOF Joensuu 54.46 327 *ep* **P 06 37 58.4 -0.8**
comp=Z,1.2nm,0.3s,mb4.3
JOF Joensuu 54.46 327 *ep* **P 06 37 58.4 -0.8**
comp=Z,1.2nm,0.3s,mb4.3
KEV Kevo 55.92 336 *e*P **P 06 38 02.9 -6.8**
KEV pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
KEV Kevo 55.92 336 *ep* **P 06 38 02.9 -6.8**
comp=Z,0.5nm,0.4s,mb3.9
KEV Kevo 55.92 336 *ep* **P 06 38 02.9 -6.8**
comp=Z,0.5nm,0.4s,mb3.9
ARCES ARCESS Array B 56.46 335 P **P 06 38 13.8 +0.2**
comp=Z,1.3nm,0.5s,mb4.2,baz=80,slow=8.7,SNR=11
KAF Kangasniemi 56.84 327 *e*P **P 06 38 13.9 -2.5**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
KAF Kangasniemi 56.84 327 *ep* **P 06 38 13.9 -2.5**
comp=Z,0.8nm,0.4s,mb4.1
KAF Kangasniemi 56.84 327 *ep* **P 06 38 13.9 -2.5**
comp=Z,0.8nm,0.4s,mb4.1
BRTR Keskin Array B 57.04 299 P **P 06 38 18.2 +0.1**
comp=Z,1.2nm,0.7s,mb4.0,baz=96,slow=8.1,SNR=7.4
FINES FINESS Array B 57.05 326 P **P 06 38 18.5 +0.7**
comp=Z,4.4nm,0.8s,mb4.5,baz=84,slow=7.1,SNR=26
FINES FINESS Array B 57.05 326 P **P 06 38 18.5 +0.7**
AKASG Malin Array Be 57.26 313 P **P 06 38 19.1 -0.4**
comp=Z,3.9nm,0.4s,mb4.8,baz=68,slow=7.5,SNR=14
AKBB Malin Array Si 57.26 313 *e*P **P 06 38 18.8 -0.7**
KIEV Kiev 57.27 313 *e*P **P 06 38 18.9 -0.7**
KIEV pmax pmax
comp=Z,5.0nm,0.4s,mb4.9
KIEV Kiev 57.27 313 *e*P **P 06 38 18.9 -0.7**
comp=Z,4.8nm,0.4s,mb4.9
COEN Coen 58.63 136 *e*P **P 06 38 29.8 +0.3**
COEN Coen 58.63 136 *e*P **P 06 38 29.3 -0.1**
comp=Z,77nm,0.6s
WRAB Tennant Creek 59.03 148 *e*P **P 06 38 33.2 +1.1**
WRAB pmax pmax
comp=Z,16nm,0.6s,mb5.2
WRAB Tennant Creek 59.03 148 *e*P **P 06 38 33.2 +1.1**
comp=Z,16nm,0.6s,mb5.2
WRA Warramunga Arr 59.03 148 P **P 06 38 32.3 +0.2**
comp=Z,13nm,0.5s,mb5.2,baz=341,slow=7.9,SNR=192
KWP Kalwaria Pacla 61.58 313 *e*P **P 06 38 49.0 -0.4**
KWP pmax pmax
comp=Z,13nm,0.8s,mb5.1
KWP Kalwaria Pacla 61.58 313 *e*P **P 06 38 49.0 -0.4**
comp=Z,13nm,0.8s,mb5.1
ASAR Alice Springs 62.12 150 P **P 06 38 53.6 +0.4**
comp=Z,8.3nm,0.7s,mb5.0,baz=332,slow=6.6,SNR=111
NB2 NORSAR Subarra 64.09 327 P **P 06 39 05.0 -0.9**
comp=Z,2.3nm,0.6s,mb4.4,baz=72,slow=6.9
NOA NORSAR Array B 64.09 327 P **P 06 39 05.1 -0.8**
comp=Z,3.0nm,0.9s,mb4.3,baz=70,slow=6.6,SNR=7.5
NOA LR LR 07 06 13.9
comp=Z,9.5nm,20.1s,MS3.0,baz=135,slow=35
CLL Collm 66.81 317 *e*P **P 06 39 25.0 +1.4**
CLL Collm 66.81 317 *e*P **P 06 39 25.0 +1.4**
PPLA Purkeypile 66.91 29 *e*P **P 06 39 23.9 -0.1**
comp=Z,4.0nm,0.8s,mb4.5
GERES GERESS Array B 67.38 314 P **P 06 39 26.7 -0.6**
comp=Z,1.0nm,0.7s,mb3.9,baz=56,slow=3.9,SNR=2.9
INK Inuvik 70.47 20 *e*P **P 06 39 45.5 -0.7**
INK pmax pmax
comp=Z,3.0nm,1.0s
INK Inuvik 70.47 20 *e*P **P 06 39 45.5 -0.7**
comp=Z,3.3nm,1.0s,mb4.2
STKA Stephens Creek 72.58 148 *e*P **P 06 39 59.1 -0.2**
comp=Z,1.9nm,0.4s,mb4.4
STKA Stephens Creek 72.58 148 P **P 06 39 57.9 -1.4**
comp=Z,2.0nm,0.5s,mb4.3,baz=344,slow=7.5,SNR=6.4
STKA Stephens Creek 72.58 148 *e*P **P 06 39 58.5 -0.7**
comp=Z,0.5nm,0.5s,mb3.7
LPG La Plagne 73.11 313 *e*P **P 06 40 02.6 +0.2**
comp=Z,11nm,0.7s,mb4.6
LPL La Plagne 73.12 313 *e*P **P 06 40 02.5 0.0**
comp=Z,8.9nm,0.6s,mb4.5
CMSA Cobar Meteorol 74.20 145 *e*P **P 06 40 09.5 +0.7**
SMF Signal de Mont 74.30 315 *e*P **P 06 40 08.4 -1.0**
YKA Yellowknife Ar 80.03 18 P **P 06 40 41.1 -0.1**
comp=Z,0.4nm,0.4s,mb3.7,baz=324,slow=4.9,SNR=6.7
TORD Torodi Ar. Bea 94.27 288 P **P 06 41 52.0 +0.1**
comp=Z,0.3nm,0.5s,mb4.0,baz=62,slow=3.5,SNR=3.9
OTAV Otavalo 147.24 7 *e*PKPdf PKPdf 06 48 14.0 +0.2
OTAV *e*PKPbc PKPbc 06 48 17.2 +1.1

NEIC ***07*** *06:32:16.1±0.6,5.°36N×94.°41E,h35km,mb4.6/1,Error ellipse: s-maj=16.3km s-min=7.5km az=47.0*
IDC ***07*** *06:32:18.2±1.2,5.°42N×94.°60E,h53km±7km,mb3.8/10,*
mb1 3.9/12,mb1mx3.6/27,mbtmp3.8/12,Error ellipse: s-maj=42.6km s-min=12.5km az=46.0
ISCJB ***07*** *06:32:19.0±2.7,5.°5N±0.°1×94.°7E±0.°1,h74km±24km, mb3.9/10,Error ellipse: s-maj=27.0km s-min=12.9km az=148.3*
ISC 07 06:32:20.1±2.5,**5.°5N**±0.°1×**94.°7E**±0.°2,**h68**km±22km, **h56**km±.8km**:pP-P,n19,**σ0$37/20,**mb3.9**/10,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**5.01**	**122**	P	**Pn**	**06 33 33.1**	**+0.2**
	2.2nm,0.3s,baz=309,slow=13,SNR=4.9						
PSI				S	**Sn**	**06 34 29.9**	**+0.4**
	1.7nm,0.3s,baz=313,slow=19,SNR=2.3						
KULM	**Kulim**	**5.95**	**92**	*e*Pn	**Pn**	**06 33 45.0**	**-0.7**
KULM				*e*Sn	**Sn**	**06 34 52.6**	**0.0**
CMAR	**Chiang Mai Arr**	**13.54**	**18**	P	**Pn**	**06 35 29.1**	**-0.1**
	baz=211,slow=13,SNR=3.6						
MKAR	**Makanchi Array**	**42.50**	**347**	P	**P**	**06 40 09.0**	**+0.3**
	2.6nm,0.6s,mb4.1,baz=155,slow=8.6,SNR=23						
SONM	**Songino Array**	**43.36**	**11**	P	**P**	**06 40 15.9**	**+0.2**
	0.5nm,0.5s,mb3.5,baz=192,slow=6.8,SNR=3.8						
WRA	**Warramunga Arr**	**46.48**	**124**	P	**P**	**06 40 40.9**	**+0.1**
	1.4nm,0.6s,mb3.9,baz=303,slow=9.3,SNR=4.8						
KURK	**Kurchatov**	**47.03**	**346**	P	**P**	**06 40 44.5**	**-0.1**
	4.5nm,0.7s,mb4.3,baz=169,slow=7.0,SNR=7.8						
KURK	**Kurchatov**	**47.03**	**346**	*e*P	**P**	**06 40 44.8**	**+0.2**
	4.3nm,0.7s,mb4.3						
ASAR	**Alice Springs**	**48.01**	**129**	P	**P**	**06 40 52.2**	**-0.5**
	0.6nm,0.6s,mb3.6,baz=301,slow=7.3,SNR=3.3						
ZAA0	**Zalesovo Array**	**48.96**	**352**	*e*P	**P**	**06 40 59.9**	**+0.3**
ZALV	**Zalesovo Beam**	**48.96**	**352**	P	**P**	**06 40 59.9**	**+0.4**
	1.1nm,0.2s,mb4.3,baz=168,slow=7.6,SNR=8.6						
ZALV	**Zalesovo Beam**	**48.96**	**352**	P	**P**	**06 40 59.9**	**+0.4**
BVAR	**Borovoye Array**	**51.39**	**341**	P	**P**	**06 41 17.7**	**-0.2**
	1.2nm,0.6s,mb4.1,baz=150,slow=12,SNR=5.3						
BVAR				pP	pP	06 41 32.3	-3.0
	0.7nm,0.5s,baz=148,slow=8.7,SNR=3.2						
BVAR	**Borovoye Array**	**51.39**	**341**	P	**P**	**06 41 17.7**	**-0.2**
BVAR				pP	pP	06 41 32.3	-3.0
FINES	**FINESS Array B**	**75.05**	**332**	P	**P**	**06 43 53.5**	**-0.8**
	2.5nm,0.9s,mb3.9,baz=116,slow=6.6,SNR=3.8						
FINES				pP	pP	06 44 08.4	-4.2
	2.1nm,1.0s,baz=130,slow=6.0,SNR=1.1						
FINES	**FINESS Array B**	**75.05**	**332**	P	**P**	**06 43 53.5**	**-0.8**
FINES				pP	pP	06 44 08.4	-4.2
ARCES	**ARCESS Array B**	**77.66**	**340**	P	**P**	**06 44 09.0**	**0.0**
	3.2nm,1.0s,mb4.0,baz=87,slow=7.4,SNR=4.8						
GERES	**GERESS Array B**	**79.94**	**318**	P	**P**	**06 44 22.2**	**+0.3**
	0.5nm,0.5s,mb3.6,baz=94,slow=5.4,SNR=6.0						
GERES				pP	pP	06 44 37.8	-2.6
	0.4nm,0.5s,baz=72,slow=8.6,SNR=3.1						
TXAR	**Lajitas Array**	**141.14**	**26**	PKP	PKPdf	06 51 44.5	+0.9
	0.2nm,0.5s,baz=300,slow=2.0,SNR=3.9						

BEO ***07*** *06:50:26.7±1.0,41.°80N×20.°51E,h0km,ML2.5/5*
CSEM ***07*** *06:50:30.1±0.2,42.°01N×20.°73E,h2km,ML3.4/1,Error ellipse: s-maj=5.0km s-min=3.1km az=36.0*
ISCJB ***07*** *06:50:30.2±0.3,42.°01N±0.°02×20.°72E±0.°02,h10km,Error ellipse: s-maj=3.2km s-min=2.0km az=41.3*
SKO ***07*** *06:50:31.3,41.°89N×20.°80E,h18km,M2.2,ML2.5*
PDG ***07*** *06:50:31.6±0.2,42.°11N×20.°73E,h11km,ML2.6/10,Error ellipse: s-maj=0.7km s-min=1.3km az=0.0*
NEIC ***07*** *06:50:31.6,42.°11N×20.°73E,h11km,ML2.6(PDG),After PDG.*
THE ***07*** *06:50:31.0,41.°96N×20.°82E,h2km±18km,ML3.4/1,Error ellipse: s-maj=18.1km s-min=0.6km az=0.0*
SOF ***07*** *06:50:34.9,41.°89N×21.°08E,h15km,MD2.5*
ISC 07 06:50:30.5±0.3,**41.°99N**±0.°02×**20.°72E**±0.°03,**h1**km±4km, **n60,**σ1$02/98,**6C-17D,Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKO	**Skopje**	**0.54**	**92**	*e*Pg	**Pg**	**06 50 41.1**	**+0.4**
SKO				*e*Sg	**Sg**	**06 50 49.3**	**+1.6**
SKO				*e*Lg		06 50 49.4	
	comp=E,242nm,0.4s						
SKO				*e*Lg		06 50 50.0	
	comp=N,360nm,0.3s						
SKO	**Skopje**	**0.54**	**92**	P	**Pg**	**06 50 41.0**	**+0.2**
SKO				S	**Sg**	**06 50 49.1**	**+1.4**
SKO	**Skopje**	**0.54**	**92**	P	**Pg**	**06 50 41.0**	**+0.2**
SKO				S	**Sg**	**06 50 49.1**	**+1.4**
BCI	**Bajram Curri**	**0.61**	**308**	*i* PN	**Pg**	**06 50 41.2**	**-1.1**
BCI				*i* SN	**Sg**	**06 50 46.0**	**-4.3**
BCI	**Bajram Curri**	**0.61**	**308**	*i* Pn	**Pg**	**06 50 41.2**	**-1.1**
PUK	**Puka**	**0.62**	**275**	*i* PN	**Pg**	**06 50 42.1**	**-0.3**
PUK				*i* SN	**Sg**	**06 50 50.2**	**-0.2**
PUK	**Puka**	**0.62**	**275**	*i* Pn	**Pg**	**06 50 42.1**	**-0.3**
KRUS	**Krusevo**	**0.73**	**147**	⇓*i*Pg	**Pg**	**06 50 43.9**	**-0.7**
KRUS				*e*Sg	**Sg**	**06 50 54.4**	**+0.4**
KRUS				*e*Lg		06 50 54.5	
	comp=E,34nm,0.2s						
KRUS				*e*Lg		06 50 55.8	
	comp=N,90nm,0.4s						
PVY	**Plav**	**0.82**	**318**	⇓*i*Pg	**Pg**	**06 50 45.4**	**-0.8**
PVY				*e*Sg	**Sg**	**06 50 57.0**	**+0.1**
PVY	**Plav**	**0.82**	**318**	⇓*i*Pg	**Pg**	**06 50 45.4**	**-0.8**
PVY				*e*Sg	**Sg**	**06 50 57.0**	**+0.1**
OHR	**Ohrid**	**0.88**	**176**	*e*Pg	**Pg**	**06 50 46.9**	**-0.4**
OHR				*e*Sg	**Sg**	**06 50 59.7**	**+1.0**
OHR				*e*Lg		06 50 60.0	
	comp=E,194nm,0.7s						
OHR				*e*Lg		06 51 01.1	
	comp=N,132nm,0.7s						
OHR	**Ohrid**	**0.88**	**176**	P	**Pg**	**06 50 46.8**	**-0.5**
OHR				S	**Sg**	**06 50 59.1**	**+0.4**
OHR	**Ohrid**	**0.88**	**176**	P	**Pg**	**06 50 46.8**	**-0.5**
OHR				S	**Sg**	**06 50 59.1**	**+0.4**
BIA	**Bitola**	**1.07**	**155**	*e*Pn	**Pg**	**06 50 50.0**	**-0.9**
BIA				*e*Sn	**Sg**	**06 51 06.9**	**+2.1**
BIA				*e*Lg		06 51 07.1	
	comp=E,67nm,0.2s						
BIA				*e*Lg		06 51 07.7	
	comp=N,38nm,0.2s						
BIA	**Bitola**	**1.07**	**155**	P	**Pg**	**06 50 49.9**	**-1.1**
BIA	**Bitola**	**1.07**	**155**	P	**Pg**	**06 50 49.9**	**-1.1**
BEY	**Berane**	**1.07**	**326**	⇓*i*Pg	**Pg**	**06 50 49.9**	**-1.1**
BEY				*e*Sg	**Sg**	**06 51 05.1**	**+0.1**
IVA	**Berane**	**1.07**	**326**	⇓*i*Pg	**Pg**	**06 50 49.9**	**-1.1**
IVA				*e*Sg	**Sg**	**06 51 05.1**	**+0.1**
IVA	**Berane**	**1.07**	**326**	⇓*i*Pg	**Pg**	**06 50 49.9**	**-1.1**
IVA				*e*Sg	**Sg**	**06 51 05.1**	**+0.1**
ULC	**Ulcinj**	**1.10**	**269**	⇑*i*Pg	**Pg**	**06 50 52.4**	**+0.9**
ULC				*e*Sg	**Sg**	**06 51 09.8**	**+4.1**
ULC	**Ulcinj**	**1.10**	**269**	⇑*i*Pg	**Pg**	**06 50 52.4**	**+0.9**
STIP	**Stip**	**1.13**	**105**	P	**Pg**	**06 50 50.7**	**-1.5**
STIP	**Stip**	**1.13**	**105**	P	**Pg**	**06 50 50.7**	**-1.5**
BARS	**Barje**	**1.16**	**44**	*e*Pg	**Pg**	**06 50 52.3**	**-0.4**
BARS				*e*Sg	**Sg**	**06 51 11.1**	**+3.4**
PDG	**Podgorica**	**1.17**	**293**	⇓*i*Pg	**Pn**	**06 50 52.3**	**-1.7**
PDG				*e*Sg	**Sg**	**06 51 10.2**	**+2.1**
TTG	**Podgorica**	**1.17**	**293**	⇓*i*Pg	**Pn**	**06 50 52.3**	**-1.7**
TTG				*e*Sg	**Sg**	**06 51 10.2**	**+2.1**
TTG	**Podgorica**	**1.17**	**293**	⇓*i*Pg	**Pn**	**06 50 52.3**	**-1.7**
TTG				*e*Sg	**Sg**	**06 51 10.2**	**+2.1**
FNA	**Florina**	**1.30**	**157**	P	**Pg**	**06 50 54.7**	**-0.7**
FNA				S	**Sg**	**06 51 12.4**	**+0.1**
FNA	**Florina**	**1.30**	**157**	P	**Pg**	**06 50 54.7**	**-0.7**
FNA				S	**Sg**	**06 51 12.4**	**+0.1**
SJES	**Sjenica**	**1.39**	**337**	*e*Pg	**Pn**	**06 50 54.2**	**-2.7**
SJES				*i* Sg	**Sg**	**06 51 15.1**	**+0.1**
BUM	**Brajici-Budva**	**1.39**	**284**	⇓*i*Pg	**Pg**	**06 50 56.9**	**-0.2**
BUM				*e*Sg	**Sg**	**06 51 19.1**	**+3.9**
BUM	**Brajici-Budva**	**1.39**	**284**	⇓*i*Pg	**Pg**	**06 50 56.9**	**-0.2**
NKY	**Niksic**	**1.52**	**303**	⇓*i*Pg	**Pn**	**06 50 58.4**	**-0.3**
NKY				*e*Sg	**Sg**	**06 51 20.8**	**+1.5**
NKY	**Niksic**	**1.52**	**303**	⇓*i*Pg	**Pn**	**06 50 58.4**	**-0.3**
NKY				*e*Sg	**Sg**	**06 51 20.8**	**+1.5**
VAY	**Valandovo**	**1.54**	**115**	*e*Pn	**Pn**	**06 50 58.4**	**-0.7**
VAY				*e*Sn	**Sn**	**06 51 19.5**	**-0.1**
VAY				*e*Lg		06 51 19.8	
	comp=E,37nm,0.5s						
VAY				*e*Lg		06 51 20.1	
	comp=N,27nm,0.5s						
VAY	**Valandovo**	**1.54**	**115**	P	**Pn**	**06 50 58.5**	**-0.5**
VAY	**Valandovo**	**1.54**	**115**	P	**Pn**	**06 50 58.5**	**-0.5**
PLE	**Pljevlja**	**1.66**	**324**	⇓*i*Pg	**Pn**	**06 51 00.0**	**-0.7**
PLE				*e*Sg	**Sg**	**06 51 23.1**	**-0.7**
PLE	**Pljevlja**	**1.66**	**324**	⇓*i*Pg	**Pn**	**06 51 00.0**	**-0.7**
PLE				*e*Sg	**Sg**	**06 51 23.1**	**-0.7**
NISS		**1.68**	**32**	*e*Pg	**Pn**	**06 51 01.6**	**+0.6**
NISS		**1.68**	**32**	*e*Pg	**Pn**	**06 51 01.6**	**+0.6**
HCY	**Herceg Novi**	**1.71**	**286**	⇑*i*Pn	**Pb**	**06 51 02.0**	**-0.7**
HCY				*e*Sn	**Sg**	**06 51 26.1**	**+0.6**
HCY	**Herceg Novi**	**1.71**	**286**	⇑*i*Pn	**Pb**	**06 51 02.0**	**-0.7**
KKB	**Krupnik**	**1.77**	**93**	P	**Pg**	**06 51 05.4**	**+1.0**
UPM	**Unac-Piva**	**1.81**	**313**	⇑*i*Pn	**Pn**	**06 51 03.0**	**+0.3**
UPM				*e*Sn	**Sn**	**06 51 27.4**	**+1.2**
UPM	**Unac-Piva**	**1.81**	**313**	⇑*i*Pn	**Pn**	**06 51 03.0**	**+0.3**
UPM				*e*Sn	**Sn**	**06 51 27.4**	**+1.2**
BRY	**Bratogost**	**1.85**	**300**	⇓*i*Pn	**Pn**	**06 51 03.3**	**0.0**
BRY				*e*Sn	**Sn**	**06 51 29.3**	**+2.0**
BRY	**Bratogost**	**1.85**	**300**	⇓*i*Pn	**Pn**	**06 51 03.3**	**0.0**
BRY				*e*Sn	**Sn**	**06 51 29.3**	**+2.0**
GRUS	**Gruza**	**1.90**	**360**	*e*Pg	**Pn**	**06 51 04.1**	**+0.1**
GRUS				*i* Sg	**Sg**	**06 51 33.8**	**+2.3**
GRUS	**Gruza**	**1.90**	**360**	*e*Pg	**Pn**	**06 51 04.1**	**+0.1**
ZAPS	**Zavoj**	**1.91**	**47**	*e*Pg	**Pg**	**06 51 05.5**	**-1.6**
VTS	**Vitosha**	**1.94**	**71**	P	**Pb**	**06 51 06.3**	**-0.3**
VTS	**Vitosha**	**1.94**	**71**	P	**Pb**	**06 51 06.3**	**-0.3**
BBLS	**Lazići**	**2.11**	**333**	*e*Pg	**Pn**	**06 51 06.4**	**-0.5**
BBLS				*i* Sg	**Sg**	**06 51 37.8**	**-0.5**
DIVS	**Divibare**	**2.17**	**346**	*e*Pg	**Pn**	**06 51 08.2**	**+0.4**
DIVS				*e*Sg	**Sg**	**06 51 40.5**	**+0.1**
STON	**Ston**	**2.40**	**293**	*e*Pn	**Pn**	**06 51 10.4**	**-0.5**
STON				Sn	**Sb**	**06 51 43.8**	**-0.8**
STON	**Ston**	**2.40**	**293**	*e*Pn	**Pn**	**06 51 10.4**	**-0.5**
MPEP	**Malo Peshtene**	**2.61**	**57**	P	**Pg**	**06 51 20.0**	**-0.6**
RZN	**Rozhen**	**3.00**	**94**	P	**Pn**	**06 51 20.8**	**+1.7**
RZN	**Rozhen**	**3.00**	**94**	P	**Pn**	**06 51 20.8**	**+1.7**

NEIC ***07*** *07:24:33.3±0.5,35.°87N×0.°49W,h10km,ML3.5(ALG), Error ellipse: s-maj=6.1km s-min=5.7km az=219.0*
ISCJB ***07*** *07:24:33.3±0.4,36.°03N±0.°03×0.°55W±0.°03,h10km,Error ellipse: s-maj=4.0km s-min=3.1km az=15.2*
CRAAG ***07*** *07:24:34.9,35.°76N×0.°37W,Ml3.9*
MDD ***07*** *07:24:35.5±0.4,35.°84N×0.°48W,h25km±5km,mb3.9/16, Error ellipse: s-maj=7.4km s-min=4.5km az=8.0,PRIMO*
CSEM ***07*** *07:24:35.3±0.2,35.°86N×0.°53W,h30km,ML3.9,Error ellipse: s-maj=7.1km s-min=4.2km az=12.0*
ISC 07 07:24:33.9±0.4,**35.°99N**±0.°03×**0.°54W**±0.°03,**h10**km,**n138,** σ1$31/211,**Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USTO	**Oran**	**0.26**	**182**	P	**Pg**	**07 24 40.0**	**+0.8**
USTO	**Oran**	**0.26**	**182**	P	**Pg**	**07 24 40.0**	**+0.8**
USTO	**Oran**	**0.26**	**182**	P	**Pg**	**07 24 40.0**	**+0.8**
ODJA	**Bouhanifia**	**0.73**	**154**	P	**Pg**	**07 24 43.0**	**-5.1**
ODJA	**Bouhanifia**	**0.73**	**154**	P	**Pg**	**07 24 43.0**	**-5.1**
ODJA	**Bouhanifia**	**0.73**	**154**	P	**Pg**	**07 24 43.0**	**-5.1**
OJBR	**Djebel Berber**	**0.83**	**119**	P	**Pg**	**07 24 52.0**	**+2.1**
OJBR	**Djebel Berber**	**0.83**	**119**	P	**Pg**	**07 24 47.0**	**-2.9**
OJBR	**Djebel Berber**	**0.83**	**119**	P	**Pg**	**07 24 52.0**	**+2.1**
OJBR	**Djebel Berber**	**0.83**	**119**	P	**Pg**	**07 24 52.0**	**+2.1**
OJBR	**Djebel Berber**	**0.83**	**119**	P	**Pg**	**07 24 52.0**	**+2.1**
ODZI	**Dzioua**	**0.90**	**219**	P	**Pg**	**07 24 51.0**	**-0.2**
ODZI	**Dzioua**	**0.90**	**219**	P	**Pg**	**07 24 51.0**	**-0.2**
ODZI	**Dzioua**	**0.90**	**219**	P	**Pg**	**07 24 51.0**	**-0.2**
OKGL	**Djebel Kef Gue**	**0.96**	**87**	P	**Pg**	**07 24 51.0**	**-1.4**
OKGL	**Djebel Kef Gue**	**0.96**	**87**	P	**Pg**	**07 24 51.0**	**-1.4**
OKGL	**Djebel Kef Gue**	**0.96**	**87**	P	**Pg**	**07 24 51.0**	**-1.4**
OKGL	**Djebel Kef Gue**	**0.96**	**87**	P	**Pg**	**07 24 51.0**	**-1.4**
OJGS	**Djebel Guires**	**1.16**	**114**	P	**Pg**	**07 24 52.0**	**-4.1**
OJGS	**Djebel Guires**	**1.16**	**114**	P	**Pg**	**07 24 52.0**	**-4.1**
OJGS	**Djebel Guires**	**1.16**	**114**	P	**Pg**	**07 24 52.0**	**-4.1**
EANR	**'Ain N'Sour**	**1.33**	**91**	P	**Pn**	**07 24 57.7**	**-0.9**
EANR	**'Ain N'Sour**	**1.33**	**91**	P	**Pn**	**07 24 57.7**	**-0.9**
EANR	**'Ain N'Sour**	**1.33**	**91**	P	**Pn**	**07 24 57.7**	**-0.9**
EANR	**'Ain N'Sour**	**1.33**	**91**	P	**Pn**	**07 24 57.7**	**-0.9**
ECHF	**Ech Chlef**	**1.53**	**83**	P	**Pn**	**07 25 00.0**	**-1.3**
ECHF	**Ech Chlef**	**1.53**	**83**	P	**Pn**	**07 25 00.0**	**-1.3**
ECHA	**Ech Chlef**	**1.55**	**84**	P	**Pn**	**07 25 00.0**	**-1.6**
ECHA	**Ech Chlef**	**1.55**	**84**	P	**Pn**	**07 25 00.0**	**-1.6**
ETRT	**Tiaret**	**1.61**	**111**	P	**Pn**	**07 25 01.7**	**-0.7**
ETRT	**Tiaret**	**1.61**	**111**	P	**Pn**	**07 25 01.7**	**-0.7**
ETRT	**Tiaret**	**1.61**	**111**	P	**Pn**	**07 25 01.7**	**-0.7**
ETRT	**Tiaret**	**1.61**	**111**	P	**Pn**	**07 25 01.7**	**-0.7**
ENIJ	**Nijar**	**1.66**	**307**	P	**Pn**	**07 25 02.7**	**-0.4**
ENIJ				S	**Sn**	**07 25 21.8**	**-2.7**
ENIJ	**Nijar**	**1.66**	**307**	P	**Pn**	**07 25 02.7**	**-0.4**
	13nm,0.2s,SNR=8.8						
ENIJ				S	**Sn**	**07 25 21.8**	**-2.7**
	35nm,0.3s,SNR=5.6						
ENIJ	**Nijar**	**1.66**	**307**	P	**Pn**	**07 25 02.7**	**-0.4**
	13nm,0.2s,SNR=8.8						
ENIJ				S	**Sn**	**07 25 21.8**	**-2.7**
	35nm,0.3s,SNR=5.6						
EBNR	**Beni Rached**	**1.70**	**79**	P	**Pn**	**07 25 03.8

3.8nm,0.3s,SNR=8.0
EQUE Quentar 2.63 298 P Pn 07 25 17.2 +0.8
3.0nm,0.3s,SNR=8.0
EQES Quesada 2.72 312 P Pn 07 25 19.9 +2.3
EQES S Sn 07 25 52.0 +1.4
EQES Quesada 2.72 312 P Pn 07 25 20.2 +2.6
17nm,0.3s,SNR=18
EQES S Sn 07 25 52.5 +1.9
15nm,0.2s,SNR=5.0
EQES Quesada 2.72 312 P Pn 07 25 20.2 +2.6
17nm,0.3s,SNR=18
EQES S Sn 07 25 52.5 +1.9
15nm,0.2s,SNR=5.0
EQES Quesada 2.72 312 P Pn 07 25 19.9 +2.3
2.4nm,0.1s,SNR=18
EQES S Sn 07 25 52.0 +1.4
11nm,0.3s,SNR=5.0
EBEN Beniarda 2.72 5 P Pn 07 25 18.6 +0.9
EBEN S Sn 07 25 48.7 -1.9
EBEN Beniarda 2.72 5 P Pn 07 25 18.6 +0.9
3.2nm,0.2s,SNR=16
EBEN S Sn 07 25 49.9 -0.7
11nm,0.3s,SNR=5.7
EBEN Beniarda 2.72 5 P Pn 07 25 18.6 +0.9
3.2nm,0.2s,SNR=16
EBEN S Sn 07 25 49.9 -0.7
11nm,0.3s,SNR=5.7
EBEN Beniarda 2.72 5 P Pn 07 25 18.6 +0.9
1.7nm,0.2s,SNR=16
ECOG Cogollos-Vega 2.75 299 P Pn 07 25 19.0 +0.9
ECOG Cogollos-Vega 2.75 299 P Pn 07 25 19.0 +0.9
6.0nm,0.3s,SNR=7.9
ECOG Cogollos-Vega 2.75 299 P Pn 07 25 19.0 +0.9
6.0nm,0.3s,SNR=7.9
ECOG Cogollos-Vega 2.75 299 P Pn 07 25 19.0 +0.9
2.3nm,0.2s,SNR=7.9
ETOB Tobarra 2.77 343 P Pn 07 25 19.8 +1.4
ETOB S Sn 07 25 51.9 0.0
ETOB Tobarra 2.77 343 P Pn 07 25 19.8 +1.4
5.3nm,0.2s,SNR=16
ETOB S Sn 07 25 51.3 -0.5
21nm,0.2s,SNR=7.5
ETOB Tobarra 2.77 343 P Pn 07 25 19.8 +1.4
5.3nm,0.2s,SNR=16
ETOB S Sn 07 25 51.3 -0.5
21nm,0.2s,SNR=7.5
ETOB Tobarra 2.77 343 P Pn 07 25 19.8 +1.5
3.3nm,0.2s,SNR=16
ETOB S Sn 07 25 51.8 0.0
13nm,0.3s,SNR=7.5
ERON Agron 2.82 292 P Pn 07 25 20.0 +0.9
17nm,0.4s,SNR=7.9
ERON Agron 2.82 292 P Pn 07 25 20.0 +0.9
17nm,0.4s,SNR=7.9
EMHD Djebel Mahouad 2.84 85 P Pb 07 25 31.4 +6.7
EVIA Vianos 3.07 330 P Pn 07 25 23.5 +1.0
EVIA S Sn 07 25 59.9 +0.6
EVIA Vianos 3.07 330 P Pn 07 25 23.5 +1.0
11nm,0.2s,SNR=16
EVIA S Sn 07 25 59.9 +0.6
24nm,0.3s
EVIA Vianos 3.07 330 P Pn 07 25 23.5 +1.0
11nm,0.2s,SNR=16
EVIA S Sn 07 25 59.9 +0.6
24nm,0.3s
EVIA Vianos 3.07 330 P Pn 07 25 23.5 +1.0
6.9nm,0.2s,SNR=16
EVIA S Sn 07 25 59.9 +0.6
25nm,0.4s
ELUQ Luque 3.38 299 S Sn 07 26 07.0 +0.1
5.1nm,0.2s,SNR=7.9
ELUQ Luque 3.38 299 S Sn 07 26 07.0 +0.1
5.1nm,0.2s,SNR=7.9
EIBI Ibiza 3.38 26 P Pn 07 25 27.7 +0.9
EIBI S Sn 07 26 05.7 -1.2
EIBI Ibiza 3.38 26 P Pn 07 25 27.4 +0.7
3.9nm,0.1s,SNR=18
EIBI S Sn 07 26 05.7 -1.2
14nm,0.2s,SNR=6.9
EIBI Ibiza 3.38 26 P Pn 07 25 27.4 +0.7
3.9nm,0.1s,SNR=18
EIBI S Sn 07 26 05.7 -1.2
14nm,0.2s,SNR=6.9
EIBI Ibiza 3.38 26 P Pn 07 25 27.7 +1.0
3.2nm,0.1s,SNR=18
EIBI S Sn 07 26 05.7 -1.2
11nm,0.2s,SNR=6.9
EBAN Banos Encina 3.38 311 P Pn 07 25 27.7 +0.9
EBAN S Sn 07 26 06.7 -0.2
EBAN Banos Encina 3.38 311 P Pn 07 25 27.1 +0.4
3.8nm,0.2s,SNR=7.9
EBAN S Sn 07 26 06.7 -0.2
2.5nm,0.3s,SNR=7.9
EBAN Banos Encina 3.38 311 P Pn 07 25 27.1 +0.4
3.8nm,0.2s,SNR=7.9
EBAN S Sn 07 26 06.7 -0.2
2.5nm,0.3s,SNR=7.9
EBAN Banos Encina 3.38 311 P Pn 07 25 27.7 +0.9
3.0nm,0.2s,SNR=7.9
EBAN S Sn 07 26 06.7 -0.3
2.5nm,0.3s,SNR=7.9
EMIJ Mijas 3.47 281 P Pn 07 25 27.2 -0.8
EMIJ S Sn 07 26 06.0 -3.1
EMIJ Mijas 3.47 281 P Pn 07 25 27.2 -0.8
1.5nm,0.3s,SNR=7.9
EMIJ S Sn 07 26 06.5 -2.6
4.7nm,0.3s,SNR=7.9
EMIJ Mijas 3.47 281 P Pn 07 25 27.2 -0.8
1.5nm,0.3s,SNR=7.9
EMIJ S Sn 07 26 06.5 -2.6
4.7nm,0.3s,SNR=7.9
EMIJ Mijas 3.47 281 P Pn 07 25 27.2 -0.8
1.4nm,0.1s,SNR=7.9
EMIJ S Sn 07 26 06.0 -3.1
3.1nm,0.3s,SNR=7.9
EADA Adamuz 3.89 305 P Pn 07 25 35.9 +2.1
EADA S Sn 07 26 18.1 -1.4
EADA Adamuz 3.89 305 P Pn 07 25 35.8 +2.1
1.3nm,0.3s,SNR=7.9
EADA S Sn 07 26 18.7 -0.8
2.5nm,0.2s,SNR=7.9
EADA Adamuz 3.89 305 P Pn 07 25 35.8 +2.1
1.3nm,0.3s,SNR=7.9
EADA S Sn 07 26 18.7 -0.8
2.5nm,0.2s,SNR=7.9
EADA Adamuz 3.89 305 P Pn 07 25 35.8 +2.0
0.4nm,0.3s,SNR=7.9
EADA S Sn 07 26 18.1 -1.4
1.3nm,0.3s,SNR=7.9
EMOS Mosqueruela 4.37 1 P Pn 07 25 43.1 +2.8
EMOS S Sn 07 26 30.4 -0.8
EMOS Mosqueruela 4.37 1 P Pn 07 25 42.7 +2.5
4.7nm,0.4s,SNR=14
EMOS S Sn 07 26 30.4 -0.8
7.4nm,0.2s,SNR=7.9
EMOS Mosqueruela 4.37 1 P Pn 07 25 42.7 +2.5
4.7nm,0.4s,SNR=14
EMOS S Sn 07 26 30.4 -0.8
7.4nm,0.2s,SNR=7.9
EMOS Mosqueruela 4.37 1 P Pn 07 25 43.1 +2.8
3.4nm,0.3s,SNR=14
EMOS S Sn 07 26 30.4 -0.8
2.8nm,0.2s,SNR=7.9
ETOR Torete 4.97 347 P Pn 07 25 50.7 +2.1
ETOR S Sn 07 26 44.5 -1.5
ETOR Torete 4.97 347 P Pn 07 25 51.3 +2.7
2.4nm,0.2s,SNR=7.9
ETOR S Sn 07 26 45.2 -0.8
3.2nm,0.3s,SNR=7.9
ETOR Torete 4.97 347 P Pn 07 25 51.3 +2.7
2.4nm,0.2s,SNR=7.9
ETOR S Sn 07 26 45.2 -0.8
3.2nm,0.3s,SNR=7.9
ETOR Torete 4.97 347 P Pn 07 25 50.7 +2.2
2.4nm,0.2s,SNR=7.9
ERTA Horta de San J 5.00 8 P Pn 07 25 51.2 +2.2
ERTA S Sn 07 26 46.6 -0.4
ERTA Horta de San J 5.00 8 P Pn 07 25 52.0 +3.0
0.8nm,0.1s,SNR=7.9
ERTA S Sn 07 26 46.6 -0.4
6.5nm,0.3s,SNR=7.9
ERTA Horta de San J 5.00 8 P Pn 07 25 52.0 +3.0
0.8nm,0.1s,SNR=7.9
ERTA S Sn 07 26 46.6 -0.4
6.5nm,0.3s,SNR=7.9
ERTA Horta de San J 5.00 8 P Pn 07 25 51.2 +2.1
0.8nm,0.2s,SNR=7.9
ERTA S Sn 07 26 46.6 -0.4
0.2nm,0.1s,SNR=7.9
EMIN Mina Concepcio 5.23 292 P Pn 07 25 50.4 -1.7
EMIN Mina Concepcio 5.23 292 P Pn 07 25 51.2 -1.0
1.0nm,0.4s,SNR=7.9
EMIN Mina Concepcio 5.23 292 P Pn 07 25 51.2 -1.0
1.0nm,0.4s,SNR=7.9
EMIN Mina Concepcio 5.23 292 P Pn 07 25 50.4 -1.7
0.5nm,0.3s,SNR=7.9
GUD Guadarrama 5.44 330 P Pn 07 25 56.3 +1.2
GUD S Sn 07 26 55.4 -2.3
GUD Guadarrama 5.44 330 P Pn 07 25 56.8 +1.7
1.7nm,0.2s,SNR=7.9
GUD S Sn 07 26 55.4 -2.3
2.6nm,0.2s,SNR=7.9
GUD Guadarrama 5.44 330 P Pn 07 25 56.8 +1.7
1.7nm,0.2s,SNR=7.9
GUD S Sn 07 26 55.4 -2.3
2.6nm,0.2s,SNR=7.9
GUD Guadarrama 5.44 330 P Pn 07 25 56.3 +1.2
1.7nm,0.2s,SNR=7.9
EPOB Poblet 5.50 13 P Pn 07 25 56.7 +0.9
EPOB S Sn 07 26 56.3 -2.9
EPOB Poblet 5.50 13 P Pn 07 25 57.6 +1.7
1.3nm,0.3s,SNR=7.9
EPOB S Sn 07 26 56.3 -2.9
3.9nm,0.3s,SNR=7.9
EPOB Poblet 5.50 13 P Pn 07 25 57.6 +1.7
1.3nm,0.3s,SNR=7.9
EPOB S Sn 07 26 56.3 -2.9
3.9nm,0.3s,SNR=7.9
EPOB Poblet 5.50 13 P Pn 07 25 56.7 +0.8
0.3nm,0.2s,SNR=7.9
PBAR Barrancos 5.63 295 *e*Pn **Pn 07 25 57.9 +0.2**
PBAR *e*Sn **Sn 07 27 01.2 -1.3**
PBAR A 07 27 07.1
1.7nm,0.9s
PBAR Barrancos 5.63 295 *e*Pn **Pn 07 25 57.9 +0.2**
PBAR *e*Sn **Sn 07 27 01.2 -1.3**
1.7nm,0.9s
EBAD Badajoz 5.85 300 P Pn 07 26 01.3 +0.7
EBAD Badajoz 5.85 300 P Pn 07 26 01.3 +0.7
2.0nm,0.3s,SNR=5.5
EBAD S Sn 07 27 04.5 -3.2
1.4nm,0.2s,SNR=7.9
EBAD Badajoz 5.85 300 P Pn 07 26 01.3 +0.7
2.0nm,0.3s,SNR=5.5
EBAD S Sn 07 27 04.5 -3.2
1.4nm,0.2s,SNR=7.9
EBAD Badajoz 5.85 300 P Pn 07 26 01.3 +0.7
2.2nm,0.3s,SNR=5.5
PVAQ Vaqueiros 5.94 286 *e*Pn **Pn 07 26 01.3 -0.6**
PVAQ Vaqueiros 5.94 286 *e*Pn **Pn 07 26 01.3 -0.6**
CFON Fontmartina 6.21 21 P Pn 07 26 06.5 +0.9
CFON Fontmartina 6.21 21 P Pn 07 26 06.5 +0.9
2.9nm,0.3s,SNR=7.9
CFON Fontmartina 6.21 21 P Pn 07 26 06.5 +0.9
2.9nm,0.3s,SNR=7.9
CFON Fontmartina 6.21 21 P Pn 07 26 06.5 +0.9
4.8nm,0.5s,SNR=7.9
GTA S Sn 07 26 46.6 -0.4
GTA LR LR
comp=E,410nm,8.1s
GTA LR LR
comp=Z,630nm,9.9s
WHN Wuhan 8.12 102 P Pn 07 34 44.7 +0.1
WHN S Sn 07 36 10.0 -7.1
WHN LR LR
comp=N,830nm,6.7s
WHN LR LR
comp=E,1μm,6.8s
WHN LR LR
comp=Z,680nm,9.1s
HHC Hu-ho-hao-te 9.79 30 *e*P **Pn 07 35 09.4 +1.9**
HHC pP 07 35 16.5
HHC sP 07 35 21.3
HHC S **Sn 07 36 59.5 +1.4**
HHC sS 07 37 09.6
HHC pmax pmax
comp=Z,14nm,0.7s
HHC pmax pmax
comp=Z,42nm,5.6s
HHC LR LR
comp=N,330nm,6.8s
HHC LR LR
comp=E,460nm,7.5s
HHC LR LR
comp=Z,290nm,6.5s
CMAR Chiang Mai Arr 15.07 203 Pn **Pn 07 36 19.0 -0.8**
comp=Z,0.5nm,0.3s,baz=15,slow=12,SNR=4.6
SONM Songino Array 15.33 3 Pn **Pn 07 36 22.6 -0.5**
comp=Z,0.4nm,0.3s,baz=183,slow=14,SNR=9.1
SONM Lg 07 40 52.5
comp=Z,0.4nm,0.3s,baz=180,slow=30,SNR=3.6
SONM LR LR 07 43 12.4
comp=Z,33nm,18.4s,baz=257,slow=41
ULN Ulaanbaatar 15.40 5 *e*P **Pn 07 36 23.5 -0.5**
ULN pmax pmax
comp=Z,7.0nm,0.9s
ULN Ulaanbaatar 15.40 5 *e*P **Pn 07 36 23.5 -0.6**
comp=Z,6.7nm,0.9s
TAPN Taplejung 15.95 256 *e*P **Pn 07 36 33.5 +2.2**
comp=Z,20nm,0.8s
RAMN Ramite 17.01 256 *e*P **Pn 07 36 44.0 -0.9**
comp=Z,21nm,0.9s
JIRN Jiri 17.08 258 *e*P **Pn 07 36 45.3 -0.5**
comp=Z,6.7nm,0.5s
GUN Gumba 17.25 260 *e*P **Pn 07 36 47.7 -0.2**
comp=Z,16nm,0.7s
PKI Pulchoki 17.76 259 *e*P **Pn 07 36 53.3 -1.0**
PKI pmax pmax
comp=Z,5.0nm,0.5s
PKI Pulchoki 17.76 259 *e*P **Pn 07 36 53.3 -1.0**
comp=Z,4.7nm,0.5s
PKIN Phulchoki 17.77 259 *e*P **Pn 07 36 53.3 -1.1**
comp=Z,4.7nm,0.5s
KSRS Korea Array 19.30 69 P **Pn 07 37 13.5 +0.5**
comp=Z,0.4nm,0.3s,baz=250,slow=10,SNR=15
CN2 Changchun 19.50 49 *e*P **Pn 07 37 17.0 +1.7**
CN2 *e*S **Sn 07 40 50.2 -4.3**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,10.0s
CN2 LR LR
comp=E,200nm,10.0s
CN2 LR LR
comp=Z,200nm,11.0s
MK31 Makanchi Array 22.53 316 *e*P **P 07 37 46.6 -0.2**
MKAR Makanchi Array 22.53 316 P **P 07 37 47.0 +0.2**
comp=Z,5.1nm,0.7s,mb4.2,baz=105,slow=14,SNR=19
TKM2 Tokmak 2 25.44 303 *e*P **P 07 38 16.3 +1.3**
TKM2 pmax pmax
comp=Z,3.0nm,0.5s,mb4.3
TKM2 Tokmak 2 25.44 303 *e*P **P 07 38 16.3 +1.3**
comp=Z,2.9nm,0.5s,mb4.3
ZAA0 Zalesovo Array 25.86 332 *e*P **P 07 38 18.1 -0.5**
ZALV Zalesovo Beam 25.86 332 P **P 07 38 18.3 -0.3**
comp=Z,3.0nm,0.6s,mb4.1,baz=135,slow=9.6,SNR=8.0
UCH Uchtor 26.07 301 *e*P **P 07 38 21.7 +1.0**
comp=Z,11nm,1.1s,mb4.4
AAK Ala-Archa 26.17 301 LR LR 07 49 32.8
comp=Z,52nm,19.4s,MS3.1,baz=317,slow=38
AAK Ala-Archa 26.17 301 *e*P **P 07 38 22.7 +1.2**
AAK pmax pmax
comp=Z,1.0nm,0.9s,mb3.5
AML Almayashu 26.65 300 *e*P **P 07 38 26.9 +1.0**
comp=Z,5.6nm,0.6s,mb4.5
KURK Kurchatov 26.67 321 P **P 07 38 25.6 -0.3**
comp=Z,3.0nm,0.8s,mb4.1,baz=135,slow=8.7,SNR=12
KURK Kurchatov 26.67 321 P **P 07 38 25.7 -0.3**
KURK pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
KURK Kurchatov 26.67 321 *e*P **P 07 38 25.3 -0.7**
comp=Z,5.9nm,0.8s,mb4.4
BVAR Borovoye Array 32.25 320 P **P 07 39 15.4 -0.1**
comp=Z,1.3nm,0.6s,mb4.1,baz=113,slow=11,SNR=7.9
BVAR PcP PcP 07 42 02.6 -1.3
comp=Z,0.3nm,0.4s,baz=90,slow=2.9,SNR=2.7
ABKAR Akbulak array 37.41 310 *e*P **P 07 40 00.5 +0.4**
comp=Z,2.2nm,0.7s,mb4.0
ARU Arti 39.87 321*c i*P **P 07 40 19.5 -1.1**
ARU S **S 07 46 20.4 -5.6**
ARU pmax pmax
comp=Z,8.0nm,1.0s,mb4.3
PETK Petropavlovsk- 42.58 45 LR LR 07 59 29.0
comp=Z,32nm,20.4s,MS3.2,baz=138,slow=38
GNI Garni 48.42 297‖ *e*P **P 07 41 31.1 +1.6**
GNI pmax pmax
comp=Z,11nm,1.2s
BILL Bilibino 49.53 26 P **P 07 41 43.0 +5.5**
BILL *e* 07 42 00.8
BILL pmax pmax
comp=Z,12nm,2.5s,mb4.4
ARCES ARCESS Array B 56.33 335 P **P 07 42 27.2 -0.6**
comp=Z,4.7nm,0.7s,mb4.6,baz=87,slow=8.6,SNR=10
BRTR Keskin Array B 56.81 299 P **P 07 42 31.2 -0.5**
comp=Z,1.3nm,0.7s,mb4.1,baz=94,slow=8.2,SNR=8.3
FINES FINESS Array B 56.89 326 P **P 07 42 31.2 -0.6**
comp=Z,3.2nm,0.8s,mb4.4,baz=91,slow=7.3,SNR=5.6
FINES FINESS Array B 56.89 326 P **P 07 42 31.2 -0.6**
AKASG Malin Array Be 57.06 313 P **P 07 42 32.2 -1.0**
comp=Z,1.7nm,0.5s,mb4.3,baz=67,slow=7.0,SNR=6.8
AKASG Malin Array Be 57.06 313 P **P 07 42 32.2 -1.0**
WRAB Tennant Creek 59.18 148 *e*P **P 07 42 46.7 -1.6**
WRAB pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
WRAB Tennant Creek 59.18 148 *e*P **P 07 42 46.7 -1.6**
comp=Z,3.3nm,0.6s,mb4.5
WRA Warramunga Arr 59.18 148 P **P 07 42 46.9 -1.5**
comp=Z,2.2nm,0.7s,mb4.3,baz=340,slow=7.7,SNR=21
ASAR Alice Springs 62.26 150 P **P 07 43 07.7 -1.6**
comp=Z,0.8nm,0.6s,mb4.1,baz=336,slow=6.6,SNR=14
NB2 NORSAR Subarra 63.94 327 P **P 07 43 18.1 -1.9**
comp=Z,1.7nm,0.5s,mb4.5,baz=71,slow=6.9
NOA NORSAR Array B 63.94 327 P **P 07 43 18.4 -1.6**
comp=Z,1.9nm,0.7s,mb4.5,baz=71,slow=6.8,SNR=10
CTA Charters Tower 65.45 137 LR LR 08 14 41.6
comp=Z,93nm,19.2s,MS4.0,baz=237,slow=38
CLL Collm 66.62 317 *e*P **P 07 43 37.0 -0.6**
CLL Collm 66.62 317 *e*P **P 07 43 37.0 -0.6**
CLL *ep*P 07 43 40.0
GERES GERESS Array B 67.18 314 P **P 07 43 40.5 -0.8**
comp=Z,0.3nm,0.3s,mb4.0,baz=70,slow=5.6,SNR=3.9
YKA Yellowknife Ar 80.09 18 P **P 07 44 55.9 -0.9**
comp=Z,0.9nm,0.7s,mb3.8,baz=323,slow=4.1,SNR=3.8

ISCJB ***07*** *07:26:11.6±0.8, 76°.88N±0°.06×19°.1E±0°.2, h10km, Error ellipse: s-maj=8.5km s-min=5.5km az=27.1*
BER ***07*** *07:26:15.8±2.6, 76°.98N×19°.18E, h23km±19km, MD2.3, ML2.8*
ISC 07 07:26:12.1±0.9,**76°.96N**±0°.05×**19°.0E**±0°.2,**h11**km±11km,**n4,** σ0s**61/9,Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSP	**Hornsund**	**0.79**	**275**	*e*P	**Pg**	**07 26 28.2**	**+0.9**
HSP				*e*S	**Sg**	**07 26 38.1**	**+0.6**
HOPEN	**Hopen**	**1.45**	**105**	*e*P	**Pn**	**07 26 38.6**	**+0.5**
HOPEN				*e*Sg	**Sg**	**07 26 59.1**	**+0.4**
HOPEN				AML	AML	07 27 00.2	
	comp=Z,264nm,0.2s						
BJO	**Bjornoya**	**2.47**	**179**	*e*P	**Pn**	**07 26 51.9**	**-0.2**
BJO				*e*Pg	**Pg**	**07 26 58.5**	**-0.8**
BJO				*e*Sg	**Sg**	**07 27 30.8**	**-0.4**
BJO				AML	AML	07 27 41.9	
	comp=Z,45nm,0.7s						
KBS	**Kingsbay**	**2.48**	**326**	*e*P	**Pn**	**07 26 52.2**	**0.0**
KBS				*e*Sg	**Sg**	**07 27 30.4**	**-1.1**
KBS				AML	AML	07 27 36.2	
	comp=Z,138nm,0.5s						

ISCJB ***07*** *07:32:43.5±0.8, 32°.49N±0°.03×105°.21E±0°.04, h2km±5km, mb4.2/21, MS3.4/3, Error ellipse: s-maj=5.4km s-min=4.7km az=42.0*
IDC ***07*** *07:32:44.5±0.7, 32°.43N×105°.07E, h0km, mb4.1/13, mb1 4.2/16, mb1mx4.1/29, mbtmp4.1/16, ML4.1/3, MS3.3/4, Ms1 3.3/4, ms1mx2.7/30, Error ellipse: s-maj=28.6km s-min=14.3km az=56.0*
BJI ***07*** *07:32:45.9, 32°.47N×105°.14E, h15km, mB4.4/10, mb4.3/13, ML4.2/13, Ms4.1/14, Ms7 3.8/13*
NEIC ***07*** *07:32:46.4±0.4, 32°.50N×105°.15E, h10km, mb4.2/12, Error ellipse: s-maj=7.5km s-min=6.7km az=70.0*
MOS ***07*** *07:32:47.4±1.1, 32°.46N×105°.17E, h33km, mb4.6/6, Error ellipse: s-maj=14.8km s-min=8.6km az=115.0*
ISC 07 07:32:45.6±0.8,**32°.52N**±0°.03×**105°.13E**±0°.04,**h1**km±5km, **n58,**σ1s**17/73,mb4.2/21,MS3.4/3,2C,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.98**	**216**	Pn	**Pn**	**07 33 20.8**	**+0.5**
CD2				Pg	**Pg**	**07 33 22.9**	**-0.7**
CD2				Sn	**Sn**	**07 33 48.1**	**+2.3**
CD2				Sg	**Sg**	**07 33 50.8**	**+1.5**
CD2				smax			
	comp=N,5μm,0.7s						
CD2				smax			
	comp=E,3μm,0.7s						
XAN	**Xi'an**	**3.52**	**63**	Pn	**Pn**	**07 33 43.5**	**+2.0**
XAN				Pg	**Pg**	**07 33 53.3**	**+0.2**
XAN				Sn	**Sn**	**07 34 18.4**	**-5.4**
XAN				Sg	**Sg**	**07 34 31.2**	**-7.6**
XAN				smax			
	comp=N,780nm,0.9s						
XAN				smax			
	comp=E,470nm,0.9s						
LZH	**Lanzhou**	**3.71**	**344**	*e*Pn	**Pn**	**07 33 46.4**	**+2.3**
LZH				Pg	**Pg**	**07 33 56.4**	**-0.4**
LZH				Sn	**Sn**	**07 34 34.8**	**+6.2**
LZH				Sg	**Sg**	**07 34 43.1**	**-1.9**
LZH				smax			
	comp=N,1μm,1.0s						
LZH				smax			
	comp=E,2μm,0.9s						
LZH				LR	LR		
	comp=N,2μm,5.4s						
LZH				LR	LR		
	comp=Z,3μm,6.3s						
ENH	**Enshi**	**4.35**	**120**	*e*Pn	**Pn**	**07 33 54.3**	**+1.4**
ENH				*e*Pg	**Pg**	**07 34 03.0**	**-6.0**
ENH				*e*Sn	**Sn**	**07 34 48.4**	**+4.1**
ENH				*e*Sg	**Sg**	**07 35 04.3**	**-1.1**
GYA	**Guiyang**	**6.19**	**167**	Pn	**Pn**	**07 34 19.2**	**+1.1**
GYA				Sn	**Sn**	**07 35 27.1**	**-2.5**
GYA				smax			
	comp=N,140nm,0.8s						
GYA				smax			
	comp=E,170nm,0.8s						
KMI	**Kunming**	**7.66**	**196**	Pn	**Pn**	**07 34 40.4**	**+2.0**
KMI				Sn	**Sn**	**07 36 01.0**	**-4.9**
KMI				smax			
	comp=N,29nm,2.0s						
KMI				smax			
	comp=E,38nm,1.2s						
KMI				LR	LR		
	comp=N,490nm,7.1s						
KMI				LR	LR		
	comp=E,500nm,8.9s						
GTA	**Gaotai**	**8.11**	**329**	*e*P	**Pn**	**07 34 44.6**	**+0.1**
GTA				pP		07 34 48.8	
GTA				sP		07 34 52.0	
GTA				pmax	pmax		
	comp=Z,14nm,0.7s						
GTA				pmax	pmax		
	comp=Z,83nm,5.1s						
GTA				LR	LR		
	comp=N,580nm,9.9s						

NEIC ***07*** *07:33:54.2, 44°.12N×7°.86E, h3km, ML2.8(LDG), ML2.3(STR), ML1.8(ROM), After ROM.*
ROM ***07*** *07:33:54.2±0.2, 44°.12N×7°.86E, h3km±3km, Md2.2/7, Ml1.8/6, Error ellipse: s-maj=2.1km s-min=2.1km az=133.0*
LDG ***07*** *07:33:54.8±0.1, 44°.13N×7°.89E, h10km, Md2.6/2, Ml2.8/11, Error ellipse: s-maj=1.7km s-min=1.2km az=86.0*
CSEM ***07*** *07:33:54.8±0.1, 44°.11N×7°.86E, h12km, ML2.7/13, Error ellipse: s-maj=2.4km s-min=1.9km az=120.0*
ISCJB ***07*** *07:33:54.7±0.3, 44°.12N±0°.02×7°.83E±0°.03, h12km±3km, Error ellipse: s-maj=3.2km s-min=2.9km az=43.9*
STR ***07*** *07:33:55.9±0.4, 44°.13N×7°.81E, h5km, Ml2.3, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
GEN ***07*** *07:33:55.3, 44°.10N×7°.87E, h7km, ML2.0*
ISC 07 07:33:54.9±0.3,**44°.11N**±0°.02×**7°.85E**±0°.03,**h15**km±3km, **n63,**σ0s**82/125,Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MONE	**Monesi**	**0.08**	**244**	**P**	**Pg**	**07 33 57.5**	**-0.5**
MONE				S	Sg	07 33 59.0	-0.9
RORO	**Rocca Rossa**	**0.15**	**91**	**P**	**Pg**	**07 33 58.4**	**-0.5**
IMI	**Imperia**	**0.20**	**172**	Pg	**Pg**	**07 33 59.4**	**-0.2**
IMI				Sg	**Sg**	**07 34 01.9**	**-0.9**
	408nm,3.8s						
IMI	**Imperia**	**0.20**	**172**	Pg	**Pg**	**07 33 59.4**	**-0.2**
IMI				Sg	**Sg**	**07 34 01.9**	**-0.9**
	408nm,3.8s						
SAOF	**Saorge**	**0.25**	**239**	Pg	**Pg**	**07 34 00.3**	**0.0**
SAOF				Sg	**Sg**	**07 34 03.7**	**-0.3**
SAOF	**Saorge**	**0.25**	**239**	Pg	**Pg**	**07 34 00.3**	**0.0**
SAOF				Sg	**Sg**	**07 34 03.7**	**-0.3**
NEGI	**Seborga**	**0.29**	**202**	P	**Pg**	**07 34 01.0**	**0.0**
NEGI				S	**Sg**	**07 34 04.9**	**-0.2**
RONM	**Roccetta Nervi**	**0.30**	**218**	P	**Pg**	**07 34 01.1**	**-0.1**
RONM				S	**Sg**	**07 34 05.2**	**-0.3**
AUTN	**L'Aution**	**0.33**	**249**	Pg	**Pg**	**07 34 02.1**	**+0.4**
AUTN				Sg	**Sg**	**07 34 06.6**	**+0.3**
AUTN	**L'Aution**	**0.33**	**249**	Pg	**Pg**	**07 34 02.1**	**+0.4**
AUTN				Sg	**Sg**	**07 34 06.6**	**+0.3**
ENR	**Entracque**	**0.33**	**290**	P	**Pg**	**07 34 02.0**	**+0.2**
ENR				S	**Sg**	**07 34 06.8**	**+0.4**
SBF	**Sospel**	**0.39**	**230**	*e*Pg	**Pg**	**07 34 03.2**	**+0.4**
SBF				*e*Sg	**Sg**	**07 34 08.5**	**+0.3**
	209nm,0.3s						
SBF	**Sospel**	**0.39**	**230**	*e*Pg	**Pg**	**07 34 03.2**	**+0.4**
SBF				*e*Sg	**Sg**	**07 34 08.5**	**+0.3**
	104nm,0.3s						
STV	**Sant Anna di V**	**0.40**	**289**	Pg	**Pg**	**07 34 03.3**	**+0.3**
STV				Sg	**Sg**	**07 34 09.4**	**+0.9**
	157nm,0.1s						
STV	**Sant Anna di V**	**0.40**	**289**	P	**Pg**	**07 34 03.3**	**+0.3**
STV				S	**Sg**	**07 34 08.8**	**+0.3**
STV				Sg	**Sg**	**07 34 09.4**	**+0.9**
	157nm,0.1s						
QLNO	**Quiliano**	**0.41**	**59**	Pg	**Pg**	**07 34 03.7**	**+0.5**
QLNO				Sg	**Sg**	**07 34 09.2**	**+0.4**
	112nm,0.2s						
QLNO	**Quiliano**	**0.41**	**59**	Pg	**Pg**	**07 34 03.7**	**+0.5**
QLNO				Sg	**Sg**	**07 34 09.2**	**+0.4**
	112nm,0.2s						
LUCF	**Luceram**	**0.43**	**239**	Pg	**Pg**	**07 34 03.8**	**+0.3**
LUCF				Sg	**Sg**	**07 34 09.9**	**+0.6**
LUCF	**Luceram**	**0.43**	**239**	Pg	**Pg**	**07 34 03.8**	**+0.3**
LUCF				Sg	**Sg**	**07 34 09.9**	**+0.6**
TOUF	**Mont Tournerai**	**0.45**	**257**	Pg	**Pg**	**07 34 04.4**	**+0.6**
TOUF	**Mont Tournerai**	**0.45**	**257**	Pg	**Pg**	**07 34 04.4**	**+0.6**
REVF	**Revere**	**0.51**	**223**	Pg	**Pg**	**07 34 05.7**	**+0.7**
REVF				Sg	**Sg**	**07 34 13.1**	**+1.2**
REVF	**Revere**	**0.51**	**223**	Pg	**Pg**	**07 34 05.7**	**+0.7**
REVF				Sg	**Sg**	**07 34 13.1**	**+1.2**
MVIF	**Mont Vial**	**0.55**	**247**	Pg	**Pg**	**07 34 06.2**	**+0.5**
MVIF				Sg	**Sg**	**07 34 13.6**	**+0.5**
MVIF	**Mont Vial**	**0.55**	**247**	Pg	**Pg**	**07 34 06.2**	**+0.5**
MVIF				Sg	**Sg**	**07 34 13.6**	**+0.5**
DOI	**San Damiano**	**0.58**	**312**	Pg	**Pg**	**07 34 07.1**	**+0.7**
DOI				Sg	**Sg**	**07 34 15.6**	**+1.4**
	81nm,0.3s						
DOI	**San Damiano**	**0.58**	**312**	Pg	**Pg**	**07 34 07.1**	**+0.7**
DOI				Sg	**Sg**	**07 34 15.6**	**+1.4**
	81nm,0.3s						
PCP	**Piancastagn**	**0.66**	**49**	Pg	**Pg**	**07 34 08.3**	**+0.6**
	49nm,0.2s						
PCP	**Piancastagn**	**0.66**	**49**	P	**Pg**	**07 34 07.9**	**+0.2**
PCP	**Piancastagn**	**0.66**	**49**	Pg	**Pg**	**07 34 08.3**	**+0.6**
	49nm,0.2s						
PCP				S	**Sg**	**07 34 16.2**	**-0.2**
PZZ	**Stroppo**	**0.66**	**307**	Pg	**Pg**	**07 34 08.3**	**+0.5**
PZZ				Sg	**Sg**	**07 34 17.7**	**+1.2**
	56nm,0.4s						
PZZ	**Stroppo**	**0.66**	**307**	Pg	**Pg**	**07 34 08.3**	**+0.5**
PZZ				S	**Sg**	**07 34 16.9**	**+0.4**
PZZ				Sg	**Sg**	**07 34 17.7**	**+1.2**
	56nm,0.4s						
CALN	**Calern**	**0.78**	**243**	Pg	**Pg**	**07 34 10.6**	**+0.5**
CALN	**Calern**	**0.78**	**243**	Pg	**Pg**	**07 34 10.6**	**+0.5**
ROTM	**Rocchetta Tana**	**0.82**	**26**	P	**Pb**	**07 34 11.8**	**+1.0**
ROTM				S	**Sg**	**07 34 23.1**	**+1.5**
MBDF	**Montbardon**	**0.99**	**309**	*e*Pg	**Pg**	**07 34 13.7**	**-0.3**
MBDF				*e*Sg	**Sg**	**07 34 26.4**	**-0.6**
	23nm,0.3s						
MBDF	**Montbardon**	**0.99**	**309**	*e*Pg	**Pg**	**07 34 13.7**	**-0.3**
MBDF				*e*Sg	**Sg**	**07 34 26.4**	**-0.6**
	12nm,0.3s						
FRF	**La Foret Royal**	**1.03**	**238**	*e*Pg	**Pg**	**07 34 14.8**	**-0.1**
FRF				*e*Sg	**Sg**	**07 34 28.2**	**-0.2**
	52nm,0.2s						
FRF	**La Foret Royal**	**1.03**	**238**	*e*Pg	**Pg**	**07 34 14.8**	**-0.1**
FRF				*e*Sg	**Sg**	**07 34 28.2**	**-0.2**
	26nm,0.2s						
RSP	**Reno Superiore**	**1.12**	**338**	P	**Pb**	**07 34 15.4**	**-0.5**
RSP				S	**Sb**	**07 34 30.0**	**-0.2**
LMR	**La Mourre**	**1.25**	**232**	*e*Pg	**Pg**	**07 34 18.7**	**-0.2**
LMR				*e*Sg	**Sg**	**07 34 35.1**	**-0.1**
	30nm,0.2s						
LMR	**La Mourre**	**1.25**	**232**	*e*Pn	**Pn**	**07 34 17.8**	**+0.1**
LMR				*e*Pg	**Pg**	**07 34 18.7**	**-0.2**
LMR				*e*Sg	**Sg**	**07 34 35.1**	**-0.1**
LMR	**La Mourre**	**1.25**	**232**	*e*Pn	**Pn**	**07 34 17.8**	**+0.1**
LMR	**La Mourre**	**1.25**	**232**	*e*Pg	**Pg**	**07 34 18.7**	**-0.2**
LMR				*e*Sg	**Sg**	**07 34 35.1**	**-0.1**
	15nm,0.2s						
TRAV	**Traversella**	**1.40**	**357**	P	**Pn**	**07 34 19.7**	**-0.2**
TRAV				S	**Sn**	**07 34 36.4**	**-1.6**
LPG	**La Plagne**	**1.59**	**331**	*e*Pg	**Pg**	**07 34 24.9**	**-0.6**
LPG				*e*Sg	**Sg**	**07 34 45.0**	**-1.1**
	9.0nm,0.4s						
LPG	**La Plagne**	**1.59**	**331**	*e*P	**Pn**	**07 34 23.9**	**+1.4**
LPG				*e*Pg	**Pg**	**07 34 24.9**	**-0.6**
LPG				*e*Sg	**Sg**	**07 34 45.0**	**-1.1**
LPG	**La Plagne**	**1.59**	**331**	*e*P	**Pn**	**07 34 23.9**	**+1.4**
LPG	**La Plagne**	**1.59**	**331**	*e*Pg	**Pg**	**07 34 24.9**	**-0.6**
LPG				*e*Sg	**Sg**	**07 34 45.0**	**-1.1**
	4.5nm,0.4s						
LPL	**La Plagne**	**1.61**	**331**	*e*Pg	**Pg**	**07 34 25.4**	**-0.5**
LPL				*e*Sg	**Sg**	**07 34 45.7**	**-1.2**
	5.3nm,0.3s						
LPL	**La Plagne**	**1.61**	**331**	*e*P	**Pn**	**07 34 24.0**	**+1.2**
LPL				*e*Pg	**Pg**	**07 34 25.4**	**-0.5**
LPL				*e*Sg	**Sg**	**07 34 45.7**	**-1.2**
LPL	**La Plagne**	**1.61**	**331**	*e*P	**Pn**	**07 34 24.0**	**+1.2**
LPL	**La Plagne**	**1.61**	**331**	*e*Pg	**Pg**	**07 34 25.4**	**-0.5**
LPL				*e*Sg	**Sg**	**07 34 45.7**	**-1.2**
	2.7nm,0.3s						
ORIF	**Oris-en-Rattie**	**1.62**	**300**	*e*Pg	**Pg**	**07 34 25.4**	**-0.7**
ORIF				*e*Sg	**Sg**	**07 34 46.1**	**-1.1**
	11nm,0.3s						
ORIF	**Oris-en-Rattie**	**1.62**	**300**	*e*Pg	**Pg**	**07 34 25.4**	**-0.7**
ORIF				*e*Sg	**Sg**	**07 34 46.1**	**-1.1**
	5.3nm,0.3s						
SMRF	**Simiane la Rot**	**1.65**	**266**	*e*Pg	**Pg**	**07 34 25.6**	**-1.0**
SMRF				*e*Sg	**Sg**	**07 34 47.2**	**-0.8**
	14nm,0.3s						
SMRF	**Simiane la Rot**	**1.65**	**266**	*e*Pg	**Pg**	**07 34 25.6**	**-1.0**
SMRF				*e*Sg	**Sg**	**07 34 47.2**	**-0.8**
	6.8nm,0.3s						
PGF	**Pioggiola**	**1.77**	**151**	*e*Pn	**Pn**	**07 34 23.7**	**-1.3**
PGF				*e*Sn	**Sn**	**07 34 43.9**	**-3.3**
	14nm,0.2s						
PGF	**Pioggiola**	**1.77**	**151**	*e*Pn	**Pn**	**07 34 23.7**	**-1.3**
VIVF	**Saint-Julien-l**	**2.39**	**289**	*e*Pg	**Pg**	**07 34 39.4**	**-1.4**
VIVF				*e*Sn	**Sn**	**07 35 00.0**	**-2.5**
VIVF				*e*S	**Sn**	**07 35 04.8**	**+2.3**
VIVF				*e*Sg	**Sg**	**07 35 10.4**	**-1.4**
	5.8nm,0.4s						
VIVF	**Saint-Julien-l**	**2.39**	**289**	*e*P	**Pn**	**07 34 35.1**	**+1.6**
VIVF				*e*Pg	**Pg**	**07 34 39.4**	**-1.4**
VIVF				*e*Sn	**Sn**	**07 35 00.0**	**-2.5**
VIVF				*e*S	**Sn**	**07 35 04.8**	**+2.3**
VIVF				*e*Sg	**Sg**	**07 35 10.4**	**-1.4**
VIVF	**Saint-Julien-l**	**2.39**	**289**	*e*P	**Pn**	**07 34 35.1**	**+1.6**
VIVF	**Saint-Julien-l**	**2.39**	**289**	*e*Pg	**Pg**	**07 34 39.4**	**-1.4**
VIVF				*e*S	**Sn**	**07 35 04.8**	**+2.3**
VIVF				*e*Sg	**Sg**	**07 35 10.4**	**-1.4**
	2.9nm,0.4s						

PRU 07 07:43:05.4, 49°.90N×18°.49E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.23**	**254**	*e*P	Pg	07 43 10.2	+0.4
OKC	**Ostrava-Krasne**	**0.23**	**254**	*e*PG	Pg	07 43 10.2	+0.4
OKC				*e*SG	Sg	07 43 13.2	+0.4
	comp=Z,12nm,0.4s						
DPC	**Dobruska-Polom**	**1.47**	**289**	*e*P	Pn	07 43 32.6	-0.5
DPC				*e*		07 43 52.0	
DPC	**Dobruska-Polom**	**1.47**	**289**	*e*PG	Pg	07 43 32.6	-0.9
DPC				*e*SG	Sg	07 43 52.0	-0.5

DJA 07 07:45:59, 8°.78S×121°.20E, h15km, MLv3.7/4, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**1.04**	**82**	P	Pb	07 46 16.1	-2.5
MMRI				S	Sb	07 46 33.1	+1.0
WSI	**Waingapu**	**1.25**	**225**	P	Pn	07 46 21.2	-0.8
BKSI	**Bulukumba**	**3.60**	**343**	P	Pn	07 46 52.0	-2.3
BNSI	**Bone**	**4.48**	**346**	P	Pn	07 47 09.5	+3.0

ISC 07 07:58:10.9±0.8, 40°.05N±0°.06×75°.9E±0°.4, h10km, n9, σ1°.46/10, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.54**	**177**	Pg	**Pg**	**07 58 18.9**	**-2.4**
KSH				Sg	**Sg**	**07 58 29.6**	**+1.2**
KSH				smax			
	comp=N,120nm,0.4s						
KSH				smax			
	comp=E,62nm,0.4s						
KZA	**Kyzart**	**2.09**	**346**	P	**Pn**	**07 58 43.5**	**-2.5**
	SNR=36						
ULHL	**Ulahol**	**2.20**	**6**	P	**Pn**	**07 58 47.2**	**-0.3**
	SNR=14						
UCH	**Uchtor**	**2.42**	**334**	P	**Pn**	**07 58 46.7**	**-3.9**
	SNR=30						
KBK	**Karagaybulak**	**2.71**	**344**	P	**Pn**	**07 58 54.7**	**+0.3**
	SNR=18						
AAK	**Ala-Archa**	**2.80**	**338**	P	**Pn**	**07 58 55.5**	**-0.2**
	SNR=8.3						
TKM2	**Tokmak 2**	**2.88**	**355**	P	**Pn**	**07 58 58.1**	**+1.4**
	SNR=13						
EKS2	**Erkin-Say**	**3.07**	**329**	P	**Pn**	**07 58 59.5**	**+0.1**
	SNR=5.3						
USP	**Ospenovka**	**3.39**	**342**	P	**Pn**	**07 59 06.3**	**+2.5**
	SNR=11						

*IDC **07** 08:39:08.6±0.7, 52°.63N×168°.05W, h0km, mb4.0/27, mb1 4.2/28, mb1mx4.2/35, mbtmp4.0/28, ML3.6/1, MS3.2/3, Ms1 3.2/3, ms1mx2.6/39, Error ellipse: s-maj=21.3km s-min=11.2km az=176.0*

*NEIC **07** 08:39:12.5, 52°.44N×167°.99W, h11km, mb4.0/3, ML3.7(AEIC), ML3.7(PMR), After AEIC.*

*ISCJB **07** 08:39:12.6±1.1, 52°.48N±0°.09×168°.08W±0°.07, h44km±8km, mb4.0/26, Error ellipse: s-maj=15.1km s-min=6.4km az=167.9*

ISC 07 08:39:14.7±1.0, 52°.54N±0°.09×168°.09W±0°.07, h44km±7km, n46, σ1°.07/48, mb4.0/26, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**0.64**	**314**	P	**Pn**	**08 39 25.6**	**-1.8**
NIKO				S	**Sn**	**08 39 36.6**	**+0.1**
UNV	**Unalaska Valle**	**1.62**	**35**	P	**Pn**	**08 39 39.1**	**-1.6**
UNV				S	**Sn**	**08 40 01.4**	**+1.0**
AKUT	**Akutan**	**2.12**	**40**	*e*P	**Pn**	**08 39 46.7**	**-0.9**
SDPT	**Sand Point**	**5.30**	**55**	*e*P	**Pn**	**08 40 32.6**	**+1.4**
CHGN	**Chignik**	**6.79**	**52**	*e*P	**Pn**	**08 40 53.0**	**+1.4**
AMKA	**Amchitka**	**7.88**	**267**	*e*P	**Pn**	**08 41 06.5**	**0.0**
OHAK	**Old Harbor**	**9.73**	**55**	*e*P	**Pn**	**08 41 30.5**	**-1.3**
	4.5nm,0.3s						
KDAK	**Kodiak Island**	**10.30**	**53**	Pn	**Pn**	**08 41 38.0**	**-1.7**
	2.0nm,0.3s,baz=221,slow=4.0,SNR=13						
FX1	**Attu Island--F**	**11.38**	**279**	Pn	**Pn**	**08 41 55.2**	**+0.8**
	1.3nm,0.3s,baz=190,slow=6.9,SNR=7.9						
FX1				LR	LR	08 45 43.0	
	comp=Z,75nm,20.6s,baz=115,slow=35						
FX1	**Attu Island--F**	**11.38**	**279**	Pn	**Pn**	**08 41 55.2**	**+0.8**
FX1				LR	LR	08 45 43.0	
PPLA	**Purkeypile**	**13.37**	**33**	*e*Pn	**Pn**	**08 42 24.1**	**+2.7**
	16nm,0.8s						
CHUM	**Lake Minchumin**	**14.03**	**30**	*e*Pn	**Pn**	**08 42 32.3**	**+1.8**
	8.4nm,0.5s						
CHUM				*e*P		08 42 37.7	
KTH	**Kantishna Hill**	**14.24**	**33**	*e*Pn	**Pn**	**08 42 33.9**	**+0.6**
	13nm,1.0s						
BPAW	**Bear Paw Mtn.**	**14.60**	**31**	*e*Pn	**Pn**	**08 42 39.0**	**+0.8**
	12nm,0.8s						
BMRM	**Bremner River**	**15.32**	**47**	*e*Pn	**Pn**	**08 42 45.8**	**-1.8**
	6.9nm,0.5s						
COLA	**College**	**16.12**	**32**	*e*Pn	**Pn**	**08 42 55.2**	**-2.6**
	8.6nm,0.7s						
MENT	**Mentasta**	**16.55**	**41**	*e*P	**Pn**	**08 43 04.5**	**+1.3**
COLD	**Coldfoot**	**17.14**	**24**	*e*Pn	**Pn**	**08 43 11.7**	**+1.1**
	5.2nm,0.6s						
PETK	**Petropavlovsk-**	**20.57**	**285**	P	**P**	**08 43 49.6**	**+0.1**
	6.1nm,0.5s,baz=86,slow=12,SNR=19						
DLBC	**Dease Lake**	**22.13**	**59**	P	**P**	**08 44 05.0**	**-1.0**
	1.2nm,0.8s,mb3.4,baz=278,slow=14,SNR=1.9						
DLBC				LR	LR	08 52 50.0	
	comp=Z,56nm,19.1s,baz=202,slow=37						
INK	**Inuvik**	**22.78**	**33**	P	**P**	**08 44 10.2**	**-2.7**
	4.6nm,0.5s,mb4.2,baz=244,slow=10,SNR=34						
INK				LR	LR	08 55 02.3	
	comp=Z,80nm,18.3s,baz=287,slow=42						
YKA	**Yellowknife Ar**	**29.54**	**49**	P	**P**	**08 45 14.1**	**-0.5**
	0.5nm,0.6s,mb3.4,baz=279,slow=8.1,SNR=3.9						
YBH	**Yreka Blue Hor**	**32.20**	**91**	P	**P**	**08 45 39.7**	**+1.5**
	1.7nm,0.8s,mb3.9,baz=290,slow=4.6,SNR=3.0						
NVAR	**Mina Array Bea**	**36.88**	**92**	P	**P**	**08 46 18.6**	**-0.1**
	0.6nm,0.6s,mb3.6,baz=289,slow=8.5,SNR=3.9						
PDAR	**Pinedale Array**	**39.60**	**80**	P	**P**	**08 46 41.9**	**+0.4**
	1.2nm,0.7s,mb3.7,baz=310,slow=4.8,SNR=9.4						
MJAR	**Matsushiro Arr**	**40.49**	**269**	P	**P**	**08 46 49.2**	**+0.3**
	0.5nm,0.3s,mb3.7,baz=55,slow=4.9,SNR=4.6						
KSRS	**Korea Array**	**46.16**	**277**	P	**P**	**08 47 34.8**	**+0.1**
	2.3nm,0.7s,mb4.2,baz=56,slow=7.7,SNR=12						
SONM	**Songino Array**	**51.89**	**301**	P	**P**	**08 48 18.7**	**+0.4**
	0.6nm,0.6s,mb3.7,baz=65,slow=7.0,SNR=3.8						
TXAR	**Lajitas Array**	**51.96**	**90**	P	**P**	**08 48 19.4**	**+0.2**
	1.5nm,0.5s,mb4.2,baz=303,slow=5.5,SNR=32						
ZALV	**Zalesovo Beam**	**57.83**	**318**	P	**P**	**08 49 01.1**	**-0.1**
	0.8nm,0.6s,mb3.9,baz=28,slow=6.8,SNR=2.9						
ARCES	**ARCESS Array B**	**57.84**	**354**	P	**P**	**08 49 00.2**	**-0.8**
	3.4nm,0.5s,mb4.4,baz=14,slow=6.4,SNR=5.2						
BVAR	**Borovoye Array**	**64.02**	**325**	P	**P**	**08 49 43.0**	**-0.2**
	2.3nm,0.5s,mb4.5,baz=50,slow=6.4,SNR=10						
MKAR	**Makanchi Array**	**64.26**	**314**	P	**P**	**08 49 46.0**	**+1.2**
	0.3nm,0.3s,mb3.9,baz=129,slow=50,SNR=2.4						
FINES	**FINESS Array B**	**65.81**	**353**	P	**P**	**08 49 53.9**	**-0.8**
	2.6nm,0.6s,mb4.4,baz=22,slow=8.5,SNR=22						
NB2	**NORSAR Subarra**	**66.77**	**0**	P	**P**	**08 50 00.3**	**-0.6**
	comp=Z,0.7nm,0.6s,mb3.9,baz=360,slow=6.2						
NOA	**NORSAR Array B**	**66.77**	**0**	P	**P**	**08 50 00.5**	**-0.4**
	comp=Z,0.8nm,0.6s,mb4.0,baz=360,slow=6.3,SNR=4.9						
HFS	**Hagfors**	**67.67**	**359**	P	**P**	**08 50 05.8**	**-0.8**
	comp=Z,3.4nm,0.4s,mb4.8,baz=31,slow=3.5,SNR=42						
AKTO	**Aktyubinsk**	**70.25**	**331**	P	**P**	**08 50 22.8**	**+0.1**
	comp=Z,1.8nm,0.8s,mb4.1,baz=2.9,slow=2.8,SNR=6.4						
EKA	**Eskdalemuir Ar**	**71.78**	**9**	P	**P**	**08 50 31.9**	**+0.1**
	comp=Z,0.9nm,0.6s,mb3.9,baz=342,slow=4.5,SNR=5.5						
AKASG	**Malin Array Be**	**76.10**	**349**	P	**P**	**08 50 56.2**	**-1.0**
	comp=Z,1.3nm,0.5s,mb4.1,baz=9.6,slow=5.4,SNR=5.4						
CMAR	**Chiang Mai Arr**	**77.34**	**284**	P	**P**	**08 51 05.8**	**+1.1**
	comp=Z,1.6nm,0.7s,mb4.1,baz=25,slow=6.6,SNR=6.6						
GERES	**GERESS Array B**	**78.98**	**359**	P	**P**	**08 51 13.9**	**+0.5**
	comp=Z,0.2nm,0.4s,mb3.4,baz=357,slow=2.7,SNR=3.4						
BRTR	**Keskin Array B**	**86.19**	**343**	P	**P**	**08 51 52.1**	**+1.1**
	comp=Z,1.2nm,0.9s,mb4.1,baz=58,slow=3.1,SNR=6.0						
ESDC	**Sonseca Array**	**87.13**	**12**	P	**P**	**08 51 55.5**	**-0.2**
	comp=Z,0.3nm,0.3s,mb4.0,baz=351,slow=4.9,SNR=3.3						
WRA	**Warramunga Arr**	**87.72**	**232**	P	**P**	**08 51 57.5**	**-1.0**
	comp=Z,0.6nm,0.6s,mb4.0,baz=31,slow=5.8,SNR=6.3						
ASAR	**Alice Springs**	**91.11**	**231**	P	**P**	**08 52 14.4**	**+0.1**
	comp=Z,0.8nm,0.7s,mb4.1,baz=28,slow=5.4,SNR=9.5						

IDC 07 08:56:36.4±2.1, 54°.25N×86°.07E, h0km, mb1 3.5/3, mb1mx3.2/29, mbtmp3.5/3, ML3.4/3, Error ellipse:

s-maj=16.2km s-min=6.3km az=66.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**0.80**	**248**	Pg	Pg	08 56 49.8	-1.9
	2.3nm,0.3s,baz=68,slow=17,SNR=8.2						
ZALV				Lg		08 57 03.5	
	14nm,0.3s,baz=69,slow=32,SNR=26						
ZALV				Rg		08 57 08.5	
	11nm,0.3s,baz=75,slow=33,SNR=12						
KURK	**Kurchatov**	**5.77**	**235**	Pn	Pn	08 58 05.2	+2.0
	0.3nm,0.3s,baz=51,slow=13,SNR=7.9						
KURK				Sn	Sn	08 59 12.0	+2.1
	0.1nm,0.3s,baz=262,slow=27,SNR=2.8						
KURK				Lg		08 59 43.4	
	0.1nm,0.3s,baz=49,slow=32,SNR=3.6						
MKAR	**Makanchi Array**	**7.84**	**199**	Pn	Pn	08 58 32.1	+0.5
	0.6nm,0.3s,baz=23,slow=11,SNR=9.9						
MKAR				Sn	Sn	09 00 01.0	-0.1
	0.2nm,0.3s,baz=21,slow=25,SNR=2.9						
MKAR				Lg		09 00 44.3	
	0.1nm,0.3s,baz=19,slow=32,SNR=4.7						
BVAR	**Borovoye Array**	**9.40**	**269**	Pn	Pn	08 58 53.9	+0.9
	0.3nm,0.3s,baz=70,slow=19,SNR=5.9						
BVAR				Sn	Sn	09 00 34.9	-4.3
	0.3nm,0.3s,baz=73,slow=26,SNR=3.5						

*ISK **07** 08:58:44.8, 37°.25N×28°.22E, h6km, MD2.6*

*DDA **07** 08:58:45.1, 37°.22N×28°.21E, h8km±3km, Md3.1*

*CSEM **07** 08:58:45.4±0.1, 37°.22N×28°.21E, h8km, MD2.6, Error ellipse: s-maj=3.3km s-min=2.6km az=42.0*

*ISCJB **07** 08:58:45.5±0.5, 37°.21N±0°.04×28°.20E±0°.04, h8km±7km, Error ellipse: s-maj=8.1km s-min=4.6km az=32.1*

ISC 07 08:58:45.8±0.5, 37°.22N±0°.04×28°.21E±0°.04, h9km±7km, n18, σ0°.59/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.10**	**146**	*e*PG	**Pg**	**08 58 47.8**	**-0.4**
YER				*e*SG	**Sg**	**08 58 50.3**	**+0.3**
YER	**Yerkesik**	**0.10**	**146**	*e*Pg	**Pg**	**08 58 47.8**	**-0.4**
YER				*e*Sg	**Sg**	**08 58 50.3**	**+0.3**
MLSB	**Milas**	**0.36**	**283**	*e*PG	**Pg**	**08 58 52.3**	**-0.5**
MLSB				*e*SG	**Sg**	**08 58 57.8**	**+0.2**
MLSB	**Milas**	**0.36**	**283**	*e*Pg	**Pg**	**08 58 52.3**	**-0.5**
MLSB				*e*Sg	**Sg**	**08 58 57.8**	**+0.3**
TURN	**Turunc**	**0.47**	**138**	*i* P	**Pg**	**08 58 54.1**	**-0.7**
TURN				*i* S	**Sg**	**08 59 01.8**	**+0.8**
TURN	**Turunc**	**0.47**	**138**	*i* P	**Pg**	**08 58 54.1**	**-0.7**
TURN				*i* S	**Sg**	**08 59 01.8**	**+0.9**
AYDN	**Tasoluk**	**0.52**	**329**	*i* P	**Pg**	**08 58 55.0**	**-0.7**
AYDN				*i* S	**Sg**	**08 59 03.0**	**+0.4**
AYDN	**Tasoluk**	**0.52**	**329**	*i* P	**Pg**	**08 58 55.0**	**-0.8**
AYDN				*i* S	**Sg**	**08 59 03.0**	**+0.4**
BDRM	**Kayabasi**	**0.63**	**256**	*i* P	**Pg**	**08 58 57.2**	**-0.8**
BDRM				*i* S	**Sg**	**08 59 07.3**	**+1.1**
BDRM	**Kayabasi**	**0.63**	**256**	*i* P	**Pg**	**08 58 57.2**	**-0.8**
BDRM				*i* S	**Sg**	**08 59 07.3**	**+1.0**
DAT	**Datca**	**0.70**	**226**	*e*PG	**Pg**	**08 58 59.2**	**-0.1**
DAT	**Datca**	**0.70**	**226**	*e*Pg	**Pg**	**08 58 59.2**	**-0.2**
MANT	**Manisa**	**1.30**	**12**	*i* P	**Pn**	**08 59 09.8**	**-0.4**
MANT				*i* S	**Sb**	**08 59 28.0**	**+0.8**
MANT	**Manisa**	**1.30**	**12**	*i* P	**Pn**	**08 59 09.8**	**-0.3**
MANT				*i* S	**Sb**	**08 59 28.0**	**+0.8**
KULA	**Kula-Manisa**	**1.34**	**15**	*e*PN	**Pn**	**08 59 10.4**	**-0.3**
KULA	**Kula-Manisa**	**1.34**	**15**	*e*Pn	**Pn**	**08 59 10.4**	**-0.3**
ELL	**Elmali**	**1.44**	**109**	*e*PN	**Pn**	**08 59 12.2**	**+0.2**
ELL	**Elmali**	**1.44**	**109**	*e*Pn	**Pn**	**08 59 12.2**	**+0.2**

*IDC **07** 09:07:23.8±1.1, 61°.47S×155°.46E, h0km, mb4.4/8, mb1 4.5/8, mb1mx4.4/13, mbtmp4.4/8, MS4.0/3, Ms1 4.0/3, ms1mx3.3/23, Error ellipse: s-maj=51.1km s-min=18.0km az=79.0*

*ISCJB **07** 09:07:24.5±1.0, 61°.5S±0°.1×155°.0E±

MKAR Sn **Sn** **09 12 53.5 -7.3**
0.1nm,0.3s,baz=319,slow=22,SNR=5.8
MKAR Lg 09 13 24.8
0.4nm,0.3s,baz=324,slow=31,SNR=7.2
AAK Ala-Archa 10.30 189 Lg 09 14 43.8
0.0nm,0.3s,baz=18,slow=20,SNR=4.0

CASC 07 09:10:51.3±1.5, 11°.63N×87°.09W, h41km±79km, MD3.6, ML3.2, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.74**	**42**	*e*P	Pn	09 11 05.3	0.0
COPN				*e*S	Sn	09 11 15.9	+0.5
COPN				AML	AML	09 11 17.6	
	comp=Z,806nm,0.5s						
CRUN	**El Crucero**	**0.85**	**65**	*e*P	Pn	09 11 07.9	+1.0
CSAN		**0.86**	**50**	*e*P	Pn	09 11 06.9	-0.1
XAVN	**Gruta Xavier**	**0.91**	**55**	*e*P	Pn	09 11 07.8	+0.1
MOMN	**Momotombo**	**0.95**	**35**	*e*P	Pn	09 11 08.5	+0.3
CNGN	**Cerro Negro**	**0.95**	**24**	*e*P	Pn	09 11 07.8	-0.4
CNGN				*e*S	Sn	09 11 20.3	-0.4
CNGN				AML	AML	09 11 22.0	
	comp=E,621nm,0.4s						
CNGN				*e*S	Sn	09 11 22.1	+1.4
MGAN	**Managua**	**0.98**	**58**	*e*P	Pn	09 11 08.4	-0.2
MGAN				*e*S	Sn	09 11 21.6	+0.3
APON	**Apoyo**	**1.05**	**74**	*e*P	Pn	09 11 10.1	+0.5
HUEN		**1.15**	**52**	*e*P	Pn	09 11 10.8	-0.1
SSN	**San Juan del S**	**1.26**	**105**	*e*P	Pn	09 11 12.8	+0.4
CNCH	**Conchagua**	**1.79**	**336**	*e*P	Pn	09 11 20.1	+0.3
TGUH	**Tegucigalpa,Un**	**2.42**	**356**	*e*P	Pn	09 11 29.2	+0.7
JTS	**JuntasAbangare**	**2.49**	**122**	*e*P	Pn	09 11 28.2	-1.0
LFRS	**El Faro**	**2.76**	**316**	*e*P	Pn	09 11 33.6	+0.5
LFRS				*e*S	Sn	09 12 06.2	+0.9
LBRS	**Las Brisas**	**2.83**	**318**	*e*P	Pn	09 11 35.0	+0.9
LBRS				*e*S	Sn	09 12 07.5	+0.5

IDC ***07*** *09:14:17.4±0.8, 22°.43S×170°.75E, h0km, mb4.3/13, mb1 4.4/14, mb1mx4.4/18, mbtmp4.3/14, ML3.8/1, MS4.0/10, Ms1 4.0/10, ms1mx3.6/28, Error ellipse: s-maj=23.2km s-min=18.9km az=119.0*
NOU ***07*** *09:14:21.1±1.3, 21°.89S×170°.79E, h10km, MD3.3, ML4.2*
LDG ***07*** *09:14:21.5±0.2, 21°.35S×170°.61E, h10km, Mb4.6/1, Ms4.2/8, Error ellipse: s-maj=21.3km s-min=3.6km az=159.0*
ISCJB ***07*** *09:14:22.9±1.2, 22°.34S±0°.09×170°.51E±0°.06, h35km±9km, mb4.5/25, MS4.2/14, Error ellipse: s-maj=14.7km s-min=8.2km az=163.9*
SZGRF ***07*** *09:14:22.3, 22°.27S×171°.54E, h33km, Southeast of Loyalty Islands*
BGS ***07*** *09:14:23.7±3.5, 22°.53S×170°.63E, h33km, mb4.6(NEIC)*
BJI ***07*** *09:14:23.2, 22°.49S×170°.90E, h43km, mB4.8/9, mb4.8/14, Ms5.1/5, Ms7 4.5/6*
NEIC ***07*** *09:14:23.3±0.4, 22°.53S×170°.63E, h35km, mb4.6/9, Error ellipse: s-maj=12.7km s-min=9.8km az=165.0*
ISC 07 09:14:24.9±1.1, 22°.38S±0°.08×170°.50E±0°.06, h37km±9km, h35km±4.5km; pP-P, n159, σ1°.08/64, mb4.5/25, MS4.2/14, 7C, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.36**	**273**	*e*P	**Pn**	**09 15 14.4**	**-0.5**
BAYA				*e*S	**Sn**	**09 15 53.5**	**0.0**
NORM	**Noumea**	**3.73**	**271**	*e*P	**Pn**	**09 15 19.4**	**-0.5**
NORM				*e*S	**Sn**	**09 16 01.6**	**-1.0**
MVNO	**Noumea**	**3.76**	**271**	*e*P	**Pn**	**09 15 20.0**	**-0.3**
MVNO				*e*S	**Sn**	**09 16 03.3**	**-0.1**
DZM	**Mont Dzumac**	**3.77**	**274**	*e*Pn	**Pn**	**09 15 20.4**	**-0.1**
	254nm,0.3s						
DZM				*e*Sn	**Sn**	**09 16 01.3**	**-2.4**
	685nm,0.3s						
DZM	**Mont Dzumac**	**3.77**	**274**	*e*P	**Pn**	**09 15 20.2**	**-0.4**
DZM				*e*S	**Sn**	**09 16 04.2**	**+0.4**
DZM				AMP		09 16 06.2	
	comp=Z,6μm,1.0s						
DZM	**Mont Dzumac**	**3.77**	**274**	*e*Pn	**Pn**	**09 15 20.1**	**-0.5**
DZM				*e*Sn	**Sn**	**09 16 04.7**	**+0.9**
NOUC	**Port Laguerre**	**3.90**	**273**	*e*P	**Pn**	**09 15 22.0**	**-0.3**
NOUC				*e*S	**Sn**	**09 16 08.4**	**+1.5**
NOUC				AMP		09 16 11.8	
	comp=Z,209nm,2.3s						
MSVF	**Nonsavu**	**8.46**	**58**	Pn	**Pn**	**09 16 26.4**	**+1.4**
	comp=Z,76nm,0.9s						
HNR	**Honiara**	**16.38**	**320**	LR	LR	09 23 38.6	
	comp=Z,264nm,21.6s,baz=151,slow=34						
URZ	**Urewera**	**16.82**	**162**	Pn	**Pn**	**09 18 12.7**	**-4.8**
	comp=Z,0.3nm,0.3s,baz=297,slow=9.0,SNR=3.3						
URZ				LR	LR	09 23 45.2	
	comp=Z,837nm,18.9s,baz=119,slow=34						
EIDS	**Eidsvold**	**18.01**	**257**	*e*Pn	**Pn**	**09 18 32.5**	**+0.1**
	comp=Z,7.7nm,0.8s						
ARMA	**Armidale**	**18.69**	**241**	*e*P	**Pn**	**09 18 46.0**	**+5.4**
ARMA	**Armidale**	**18.69**	**241**	P	**Pn**	**09 18 42.3**	**+1.7**
	comp=Z,36nm,1.4s						
RMQ	**Roma**	**20.21**	**254**	*e*P	**P**	**09 19 02.3**	**+5.6**
	comp=Z,66nm,1.1s						
RPZ	**Rata Peaks**	**21.29**	**179**	P	**P**	**09 19 04.1**	**-4.1**
	comp=Z,9.2nm,0.8s,mb4.2,baz=319,slow=3.5,SNR=1.9						
RPZ				LR	LR	09 25 56.7	
	comp=Z,512nm,19.8s,MS3.9,baz=220,slow=33						
CNB	**Canberra Magne**	**22.50**	**230**	*e*P	**P**	**09 19 22.2**	**+1.0**
CTA	**Charters Tower**	**22.71**	**271**	*e*P	**P**	**09 19 24.7**	**+1.1**
	comp=Z,5.8nm,0.7s,mb4.1						
CTA	**Charters Tower**	**22.71**	**271**	P	**P**	**09 19 23.9**	**+0.4**
	comp=Z,4.1nm,0.5s,mb4.1,baz=90,slow=11,SNR=9.4						
CTA	**Charters Tower**	**22.71**	**271**	P	**P**	**09 19 23.9**	**+0.4**
CTAO	**Charters Tower**	**22.71**	**271**	*e*P	**P**	**09 19 23.9**	**+0.4**
	comp=Z,7.9nm,0.9s,mb4.1						
CMSA	**Cobar Meteorol**	**23.88**	**242**	*e*P	**P**	**09 19 35.4**	**+0.3**
TOO	**Toolangi**	**26.32**	**229**	*e*P	**P**	**09 19 59.5**	**+2.3**
COEN	**Coen**	**27.25**	**283**	*e*P	**P**	**09 20 06.6**	**+0.9**
STKA	**Stephens Creek**	**27.34**	**244**	*e*P	**P**	**09 20 07.1**	**+0.6**
	comp=Z,4.9nm,0.8s,mb4.1						
STKA	**Stephens Creek**	**27.34**	**244**	P	**P**	**09 20 06.9**	**+0.4**
	comp=Z,4.4nm,0.9s,mb4.0,baz=25,slow=22,SNR=4.1						
STKA				LR	LR	09 30 20.7	
	comp=Z,325nm,18.0s,MS3.9,baz=223,slow=35						
STKA	**Stephens Creek**	**27.34**	**244**	*e*P	**P**	**09 20 07.1**	**+0.6**
	comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**33.65**	**261**	P	**P**	**09 21 01.6**	**-0.7**
	comp=Z,3.9nm,0.6s,mb4.5,baz=72,slow=9.0,SNR=72						
WRAB	**Tennant Creek**	**33.76**	**267**	*e*P	**P**	**09 21 02.2**	**-1.0**
	comp=Z,14nm,1.4s,mb4.7						
WRA	**Warramunga Arr**	**33.76**	**267**	P	**P**	**09 21 01.8**	**-1.4**
	comp=Z,1.4nm,0.8s,mb3.9,baz=97,slow=8.4,SNR=28						
KAKA	**Kakadu**	**37.45**	**278**	*e*P	**P**	**09 21 35.1**	**+0.2**
PPT	**Papeete**	**37.75**	**90**	LR	LR	09 33 45.8	
	comp=Z,155nm,18.5s,MS3.8,baz=137,slow=31						
PPT	**Papeete**	**37.75**	**90**	*e*P	**P**	**09 21 43.6**	**+6.2**
WAKE	**Wake Island**	**41.57**	**355**	*e*P	**P**	**09 22 07.8**	**-1.3**
	comp=Z,843nm,2.7s						
FITZ	**Fitzroy Crossi**	**42.20**	**267**	*e*P	**P**	**09 22 14.6**	**+0.2**
	comp=Z,18nm,0.7s,mb4.8						
FITZ	**Fitzroy Crossi**	**42.20**	**267**	*e*P	**P**	**09 22 15.2**	**+0.8**
	comp=Z,9.4nm,0.8s,mb4.5						
MBWA	**Marble Bar**	**46.98**	**261**	*e*P	**P**	**09 22 52.4**	**-0.2**
MBWA	**Marble Bar**	**46.98**	**261**	*e*P	**P**	**09 22 52.5**	**-0.1**
	comp=Z,57nm,1.6s,mb5.2						
MEEK	**Meekatharra**	**47.15**	**254**	*e*P	**P**	**09 22 52.9**	**-0.9**
NWAO	**Narrogin (SRO)**	**47.91**	**245**	P	**P**	**09 22 58.9**	**-0.7**
	comp=Z,5.9nm,0.7s,mb4.8,baz=61,slow=10,SNR=4.6						
KSM	**Kuching**	**63.24**	**284**	*e*P	**P**	**09 24 50.0**	**-0.1**
	comp=Z,15nm,0.9s,mb5.1						
MJAR	**Matsushiro Arr**	**66.06**	**332**	P	**P**	**09 25 06.5**	**-1.4**
	comp=Z,0.9nm,0.5s,mb4.0,baz=164,slow=7.2,SNR=5.5						
MAT	**Matsushiro**	**66.06**	**332**	P	**P**	**09 25 06.3**	**-1.6**
QSPA	**South Pole Qui**	**67.69**	**180**	*e*P	**P**	**09 25 16.2**	**-1.6**
	comp=Z,9.1nm,1.0s,mb4.8						
KSRS	**Korea Array**	**71.75**	**325**	P	**P**	**09 25 42.5**	**-0.7**
	comp=Z,1.0nm,0.7s,mb3.8,baz=144,slow=6.1,SNR=5.5						
NJ2	**Nanjing**	**73.27**	**316**	*e*P	**P**	**09 25 54.4**	**+1.9**
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s,mb5.3						
PETK	**Petropavlovsk-**	**75.98**	**352**	P	**P**	**09 26 06.8**	**-0.9**
	comp=Z,1.9nm,0.6s,mb4.2,baz=138,slow=7.1,SNR=3.5						
PETK	**Petropavlovsk-**	**75.98**	**352**	P	**P**	**09 26 06.8**	**-0.9**
MAW	**Mawson**	**75.99**	**202**	P	**P**	**09 26 07.0**	**-0.7**
	comp=Z,1.0nm,0.3s,mb4.2,baz=118,slow=9.9,SNR=4.5						
CN2	**Changchun**	**77.74**	**328**	*e*P	**P**	**09 26 20.2**	**+2.4**
CN2				*e*S	S	09 36 08.0	+0.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
GYA	**Guiyang**	**78.57**	**305**	P	**P**	**09 26 23.4**	**+0.5**
GYA				pP	pP	09 26 35.7	+1.4
GYA				sP	sP	09 26 40.2	+1.6
GYA				PP	PP	09 29 23.5	+2.3
GYA				S	S	09 36 15.0	-2.1
GYA				SKS		09 36 31.1	
GYA				SS	SS	09 41 21.8	0.0
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
GYA				pmax	pmax		
	comp=Z,80nm,5.8s						
GYA				LR	LR		
	comp=N,420nm,18.9s,MS4.9						
GYA				LR	LR		
	comp=E,390nm,19.2s,MS4.9						
GYA				LR	LR		
	comp=Z,410nm,19.0s,MS4.8						
BJI	**Beijing**	**80.10**	**321**	P	**P**	**09 26 31.7**	**+0.8**
BJI				LR	LR		
	comp=Z,40nm,20.6s,MS3.8						
CMAR	**Chiang Mai Arr**	**80.86**	**294**	P	**P**	**09 26 36.2**	**+0.7**
	comp=Z,4.3nm,0.6s,mb4.5,baz=138,slow=3.9,SNR=14						
KMI	**Kunming**	**80.92**	**302**	P	**P**	**09 26 36.9**	**+1.2**
KMI				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.5						
CD2	**Chengdu**	**83.07**	**307**	*e*P	**P**	**09 26 50.1**	**+3.3**
CD2				pP	pP	09 26 58.2	-0.1
CD2				sP	sP	09 27 02.1	-0.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.1						
CD2				pmax	pmax		
	comp=Z,30nm,5.6s						
HHC	**Hu-ho-hao-te**	**83.36**	**319**	*e*P	**P**	**09 26 50.0**	**+2.0**
HHC				pP	pP	09 27 00.5	+0.9
HHC				sP	sP	09 27 04.5	+0.7
HHC				PP	PP	09 30 03.3	+2.8
HHC				S	S	09 37 05.3	-1.0
HHC				SS	SS	09 42 33.1	+0.4
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
HHC				pmax	pmax		
	comp=Z,65nm,6.6s						
HHC				LR	LR		
	comp=N,120nm,20.2s,MS4.7						
HHC				LR	LR		
	comp=E,300nm,19.7s,MS4.7						
HHC				LR	LR		
	comp=Z,87nm,17.8s,MS4.2						
PMSA	**Palmer Station**	**83.57**	**159**	P	**P**	**09 26 57.5**	**+8.6**
KDAK	**Kodiak Island**	**85.59**	**19**	LR	LR	09 59 49.3	
	comp=Z,84nm,18.3s,MS4.2,baz=277,slow=32						
USHA	**Ushuaia**	**88.14**	**150**	LR	LR	09 59 58.7	
	comp=Z,100nm,18.2s,MS4.3,baz=20,slow=31						
YBH	**Yreka Blue Hor**	**88.73**	**43**	LR	LR	10 02 43.8	
	comp=Z,78nm,18.8s,MS4.2,baz=223,slow=33						
NVAR	**Mina Array Bea**	**90.00**	**48**	P	**P**	**09 27 19.1**	**-1.4**
	comp=Z,0.9nm,0.6s,mb4.3,baz=227,slow=8.0,SNR=5.7						
ULN	**Ulaanbaatar**	**90.07**	**323**	*e*P	**P**	**09 27 20.3**	**-0.4**
	comp=Z,2.6nm,1.1s,mb4.5						
SONM	**Songino Array**	**90.42**	**323**	P	**P**	**09 27 21.6**	**-0.6**
	comp=Z,2.7nm,0.8s,mb4.7,baz=145,slow=5.4,SNR=9.2						
TXAR	**Lajitas Array**	**97.22**	**61**	LR	LR	10 04 06.7	
	comp=Z,71nm,18.6s,MS4.2,baz=50,slow=31						
PDAR	**Pinedale Array**	**97.87**	**47**	LR	LR	10 09 54.5	
	comp=Z,77nm,18.1s,MS4.2,baz=258,slow=34						
WMQ	**Urumqi**	**100.21**	**313**	*e*P	Pdif	09 28 09.0	+2.0
WMQ				pmax	pmax		
	comp=Z,16nm,1.0s						
RES	**Resolute Bay**	**112.62**	**17**	PKiKP	PKiKP	09 32 53.6	-2.8
	comp=Z,0.9nm,0.8s,baz=252,slow=3.2,SNR=4.2						
SCHQ	**Schefferville**	**126.71**	**37**	PKP	PKPdf	09 33 21.8	-2.2
	comp=Z,1.1nm,0.7s,baz=234,slow=2.2,SNR=4.8						
ARCES	**ARCESS Array B**	**128.39**	**345**	PKP	PKPdf	09 33 24.8	-1.9
	comp=Z,1.3nm,0.5s,baz=62,slow=2.9,SNR=9.4						
KOLS	**Kolonicke sedl**	**143.46**	**324**	*e*PKP	PKPdf	09 33 52.0	-3.3
KOLS	**Kolonicke sedl**	**143.46**	**324**	*e*PKP	PKPdf	09 33 52.0	-3.3
CRVS	**Cervenica-Dubn**	**143.92**	**325**	*e*PKP	PKPdf	09 33 51.8	-4.3
CRVS	**Cervenica-Dubn**	**143.92**	**325**	*e*PKP	PKPdf	09 33 51.8	-4.3
RRR	**Rubha Reidh**	**144.46**	**357**	*e*P	PKPdf	09 33 52.8	-3.9
KECS	**Kecovo**	**144.69**	**325**	*e*PKP	PKPdf	09 33 55.4	-2.0
KECS	**Kecovo**	**144.69**	**325**	*e*PKP	PKPdf	09 33 55.4	-2.0
KAC	**Achnashellach**	**144.78**	**356**	*e*P	PKPdf	09 33 54.2	-3.1
KSK	**Scoval**	**144.89**	**357**	*e*P	PKPdf	09 33 54.7	-2.8
KPL	**Plockton**	**144.96**	**356**	*e*P	PKPdf	09 33 54.4	-3.2
OKC	**Ostrava-Krasne**	**145.02**	**328**	*e*PKP	PKPdf	09 33 56.2	-1.8
BSEG	**Bad Segeberg**	**145.10**	**339**	*e*PKPbc	PKPbc	09 33 56.1	-1.4
KSP	**Ksiaz**	**145.19**	**331**	*e*P	PKPbc	09 33 57.0	-0.9
PSZ	**Piszkesteto**	**145.34**	**325**	*e*PKPdf	PKPdf	09 33 57.8	-0.8
MORC	**Moravsky Berou**	**145.35**	**329**	*e*PKPdf	PKPdf	09 33 57.8	-0.8
KAR1	**Arisaig**	**145.39**	**356**	*e*P	PKPbc	09 33 56.5	-1.9
DPC	**Dobruska-Polom**	**145.53**	**330**	*e*PKP	PKPdf	09 33 58.4	-0.4
VYHS	**Vyhne**	**145.54**	**326**	*e*PKP	PKPdf	09 33 58.7	-0.2
VYHS				*e*		09 34 09.1	
VYHS	**Vyhne**	**145.54**	**326**	*e*PKP	PKPdf	09 33 58.7	-0.2
VYHS				*e*		09 34 09.1	
UPC	**Upice**	**145.56**	**331**	*e*PKP	PKPdf	09 33 58.2	-0.7
EBH	**Black Hill**	**145.88**	**354**	*e*P	PKPdf	09 33 57.3	-1.9
EAB	**Aberfoyle**	**146.01**	**355**	*e*P	PKPdf	09 33 58.2	-1.2
ESY	**Stoneypath**	**146.11**	**353**	*e*P	PKPdf	09 33 58.5	-1.2
PVCC	**Panska Ves**	**146.18**	**332**	*e*PKP	PKPdf	09 34 00.1	+0.2
BRG	**Berggiesshubel**	**146.19**	**333**	*i* PKP	PKPdf	09 33 59.9	0.0
	comp=Z,9.7nm,0.9s						
CLL	**Collm**	**146.24**	**334**	*e*PKPbc	PKPbc	09 33 59.9	-1.2
EAU	**Auchinoon**	**146.27**	**354**	*e*P	PKPdf	09 33 58.9	-1.0
EBL	**Broad Law**	**146.30**	**353**	*e*P	PKPdf	09 33 59.1	-0.9
NRDL	**Niedersach Rie**	**146.37**	**338**	*e*PKPbc	PKPbc	09 34 00.0	-1.5
PRU	**Pruhonice**	**146.59**	**331**	*e*PKP	PKPdf	09 34 01.8	+1.2
TREC	**Trest**	**146.66**	**330**	*e*PKP	PKPdf	09 34 01.2	+0.4
ESK	**Eskdalemuir**	**146.77**	**353**	*e*P	PKPdf	09 34 00.4	-0.4
ESK	**Eskdalemuir**	**146.77**	**353**	*e*PKPbc	PKPdf	09 34 00.6	-0.2
CLZ	**Clausthal**	**146.81**	**337**	*e*PKPbc	PKPbc	09 34 01.7	-1.1
ECK	**Cauldkaine Hil**	**146.90**	**353**	*e*P	PKPdf	09 34 00.8	-0.2
XAL	**Allendale**	**147.10**	**352**	*e*P	PKPdf	09 34 01.1	-0.2
TANN	**Tannenbergstha**	**147.15**	**334**	*e*PKPbc	PKPbc	09 34 02.5	-1.3
IBBN	**Ibbenburen**	**147.30**	**340**	*e*PKPbc	PKPbc	09 34 02.6	-1.5
MOX	**Moxa**	**147.31**	**335**	*e*PKP	PKPdf	09 34 02.8	+1.0
	comp=Z,10.0nm,1.3s						
MOX	**Moxa**	**147.31**	**335**	*e*PKPbc	PKPbc	09 34 02.8	-1.4
MOX				*e*PKPab	PKPab	09 34 04.6	-1.5
GAL1	**Galloway**	**147.36**	**355**	*e*P	PKPdf	09 34 01.8	0.0
CONA	**Conrad Observa**	**147.42**	**328** ⇑	*i*PKPbc	PKPbc	09 34 03.9	-0.8
	comp=Z,5.2nm,0.7s						
CSNA	**Conrad Observa**	**147.42**	**328** ⇑	*i*PKPbc	PKPbc	09 34 03.9	-0.7
	comp=Z,4.9nm,0.7s						
XDE	**Dent Fell**	**147.60**	**353**	*e*P	PKPdf	09 34 03.4	+1.2
KHC	**Kasperske Hory**	**147.64**	**331**	*e*PKPdf	PKPdf	09 34 04.4	+1.9
KHC				*e*PKPbc	PKPbc	09 34 06.7	+1.5
KHC				*e*PKPab	PKPab	09 34 08.4	+1.0
KHC	**Kasperske Hory**	**147.64**	**331**	*e*PKP	PKPdf	09 34 04.0	+1.6
KHC				*ex*	x	09 34 06.5	
ROTZ	**Rotzenmuhle**	**147.75**	**333**	*e*PKPab	PKPab	09 34 07.6	-0.3
UBBA	**Unterbreizbach**	**147.79**	**337**	*e*PKPbc	PKPbc	09 34 04.0	-1.5
GEC2	**GERESS Array S**	**147.80**	**331**	*e*PKPbc	PKPbc	09 34 04.5	-1.1
GEC2	**GERESS Array S**	**147.80**	**331**	*e*PKPdf	PKPdf	09 34 04.6	+1.9
GERES	**GERESS Array B**	**147.80**	**331**	PKPbc	PKPdf	09 34 03.9	+1.2
	comp=Z,2.8nm,0.6s,baz=58,slow=3.5,SNR=12						
WET	**Wettzell**	**147.94**	**332**	*e*PKPbc	PKPbc	09 34 04.8	-1.2
BUG	**Bochum--Univer**	**148.20**	**340**	*e*PKPbc	PKPbc	09 34 05.0	-1.6
GRF	**Grafenberg Arr**	**148.22**	**334**	*e*PKPbc	PKPbc	09 34 05.4	-1.3
GRF				*e*PKPab	PKPab	09 34 09.5	-0.2
LHO	**Holmfirth**	**148.34**	**351**	*e*P	PKPdf	09 34 04.8	+1.4
TNS	**Taunus Mts**	**148.84**	**338**	*e*PKPbc	PKPbc	09 34 06.9	-1.4
WLF1	**Livnfaes**	**148.89**	**354**	*e*P	PKPdf	09 34 06.2	+1.9
RJOB	**Jochberg**	**149.02**	**330**	*e*PKPab	PKPab	09 34 11.8	-1.2
CWF	**Charnwood Fore**	**149.04**	**350**	*e*P	PKPdf	09 34 06.4	+1.8
KBA	**Koelnbreinsper**	**149.24**	**329** ⇑	*i*PKPbc	PKPbc	09 34 08.3	-1.1
	comp=Z,5.9nm,0.6s						
MEM	**Membach**	**149.32**	**341**	PKP	PKPbc	09 34 08.1	-1.4
FUR	**Furstenfeldbru**	**149.38**	**332**	*e*PKPab	PKPab	09 34 14.1	-0.4
CRNS	**Crni Vrh**	**149.48**	**326**	*e*PKPbc	PKPbc	09 34 08.5	-1.6
CRNS				*e*		09 34 12.5	
CEY	**Cerknica**	**149.62**	**326**	*i* PKPbc	PKPbc	09 34 09.0	-1.4
UCC	**Uccle**	**149.63**	**343**	PKP	PKPbc	09 34 08.8	-1.5
ABTA	**Abfaltersbach**	**149.87**	**329** ⇑	*i*PKPbc	PKPbc	09 34 08.9	-2.1
	comp=Z,6.1nm,0.6s						
WTTA	**Wattenberg**	**149.90**	**331** ⇑	*i*PKPbc	PKPbc	09 34 09.7	-1.3
	comp=Z,6.9nm,0.7s						
MOTA	**Moosalm**	**150.08**	**331** ⇑	*i*PKPbc	PKPbc	09 34 09.8	-1.7
	comp=Z,4.2nm,0.6s						
WLF	**Walferdange**	**150.09**	**339**	PKP	PKPbc	09 34 10.7	-0.7
WLF	**Walferdange**	**150.09**	**339**	*e*PKPbc	PKPbc	09 34 10.4	-1.0
GIVF	**Givet**	**150.12**	**341**	*e*PKP1	PKPbc	09 34 10.3	-1.2
	comp=Z,22nm,0.6s						
DOU	**Dourbes**	**150.20**	**342**	PKP	PKPbc	09 34 10.6	-1.0
BAIF	**Baives**	**150.34**	**342**	*e*PKP1	PKPbc	09 34 10.9	-1.1
BFO	**Black Forest**	**150.45**	**336**	*e*PKPbc	PKPbc	09 34 10.8	-1.5
FETA	**Feichten**	**150.49**	**331** ⇑	*i*PKPbc	PKPbc	09 34 11.3	-1.1
	comp=Z,6.0nm,0.8s						
CDF	**Champ du Feu**	**150.78**	**337**	*e*PKP1	PKPbc	09 34 11.8	-1.3
	comp=Z,7.4nm,0.7s						
HINF	**Hinteralfeld**	**151.43**	**337**	*e*PKP1	PKPbc	09 34 13.1	-1.5
HAU	**Haudompre**	**151.45**	**337**	*e*PKP1	PKPbc	09 34 13.2	-1.5
	comp=Z,12nm,0.8s						
HAU				*e*MLR	MLR		
	comp=Z,90nm,21.2s,MS4.2						
HAU	**Haudompre**	**151.45**	**337**	*e*PKP	PKPbc	09 34 13.2	-1.5
HAU				LR	LR		
	comp=Z,90nm,21.3s,MS4.5						
MEZF	**Maizieres J'vi**	**151.46**	**340**	*e*PKP1	PKPbc	09 34 13.7	-1.0
	comp=Z,21nm,0.9s						
FLN	**La Foliniere**	**152.71**	**347**	*e*PKP1	PKPbc	09 34 16.4	-1.1
	comp=Z,14nm,0.6s						
FLN				*e*MLR	MLR		
	comp=Z,84nm,20.2s,MS4.2						
FLN	**La Foliniere**	**152.71**	**347**	*e*PKP	PKPbc	09 34 16.4	-1.1
FLN				LR	LR		
	comp=Z,80nm,20.3s,MS4.5						
CABF	**La Chapelle**	**152.72**	**336**	*e*PKP1	PKPbc	09 34 16.6	-1.0
LDF	**La Druitiere**	**152.79**	**346**	*e*PKP1	PKPbc	09 34 16.4	-1.3
LOR	**Lormes**	**152.93**	**340**	*e*PKP1	PKPbc	09 34 16.5	-1.5
LOR				*e*MLR	MLR		
	comp=Z,82nm,21.0s,MS4.2						
LOR	**Lormes**	**152.93**	**340**	*e*PKP	PKPbc	09 34 16.5	-1.5
LOR				LR	LR		
	comp=Z,80nm,21.0s,MS4.5						
SSF	**Saint Saulge**	**153.23**	**340**	*e*PKP1	PKPbc	09 34 17.3	-1.4
LPL	**La Plagne**	**153.38**	**334**	*e*PKP1	PKPbc	09 34 18.2	-0.9
LPG	**La Plagne**	**153.39**	**334**	*e*PKP1	PKPbc	09 34 18.3	-0.8
AVF	**Avril sur Loir**	**153.52**	**340**	*e*PKP1	PKPbc	09 34 17.4	-1.9
TORD	**Torodi Ar. Bea**	**165.94**	**231**	PKP	PKPdf	09 34 25.0	-1.6
	comp=Z,1.2nm,1.0s,baz=74,slow=0.2,SNR=3.8						
TORD				PKPab	PKPab	09 35 24.8	-1.8
	comp=Z,0.9nm,1.1s,baz=116,slow=3.4,SNR=2.9						

IDC 07 09:36:31.2±3.5, 5°.31S×146°.81E, h0km, mb3.8/3, mb1 3.9/5, mb1mx3.6/17, mbtmp3.8/5, ML3.6/2, Error ellipse: s-maj=62.6km s-min=50.8km az=88.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**14.70**	**182**	Pn	Pn	09 40 00.9	+0.4
	0.2nm,0.3s,baz=0,slow=10,SNR=2.5						
WRA	**Warramunga Arr**	**18.94**	**219**	P	Pn	09 40 53.7	-0.7
	0.2nm,0.3s,baz=44,slow=12,SNR=16					

comp=N,110nm,0.4s
SKR pmax pmax
comp=E,80nm,0.4s
SKR pmax pmax
comp=Z,130nm,0.4s
SKR smax
comp=N,1μm,0.4s
SKR smax
comp=E,990nm,0.4s
SKR smax
comp=N,2μm,3.5s
SKR smax
comp=E,2μm,3.5s
PEA0B Petropavlovsk- 5.37 20 *e*Pn **Pn 09 59 33.7 +0.8**
PETK Petropavlovsk- 5.37 20 P **Pn 09 59 33.7 +0.8**
comp=E,4.1nm,0.3s,baz=191,slow=11,SNR=67
PETK S **Sn 10 00 44.0 +11**
comp=E,0.7nm,0.3s,baz=185,slow=18,SNR=2.3
PETK Petropavlovsk- 5.37 20 P **Pn 09 59 33.7 +0.8**
PETK S **Sn 10 00 44.0 +11**
PET Petropavlovsk 5.54 26 *e*PN **Pn 09 59 35.0 -0.4**
PET Petropavlovsk 5.54 26 *e*Pn **Pn 09 59 34.5 -0.9**
PET *e*Sn **Sn 10 00 37.2 -0.5**
YUK Yuzh-Kuril'sk 7.32 239⇓*i*PN **Pn 10 00 00.2 +0.4**
YUK *i* S **Sn 10 01 25.2 +3.7**
YUK pmax pmax
comp=Z,190nm,0.5s
YUK smax
comp=E,150nm,0.5s
YUK smax
comp=N,120nm,0.4s
YUK MLR MLR
comp=E,700nm,16.9s
YUK MLR MLR
comp=Z,540nm,16.9s
YUK MLR MLR
comp=N,120nm,3.4s
YSS Yuzh-Sakhalins 8.11 266⇑*e*PN **Pn 10 00 12.0 +1.5**
YSS *e* 10 01 42.0
YSS pmax pmax
comp=E,60nm,1.0s
YSS pmax pmax
comp=Z,60nm,1.0s
YSS MLR MLR
comp=E,200nm,14.0s
YSS MLR MLR
comp=Z,200nm,14.0s
YSS Yuzh-Sakhalins 8.11 266 *e*Pn **Pn 10 00 12.2 +1.8**
comp=Z,61nm,0.8s
YSS *e*Sn **Sn 10 01 43.2 +2.7**
ASAJ Asahikawa 9.25 249 P **Pn 10 00 28.2 +2.1**
comp=Z,2.1nm,0.3s,baz=78,slow=17,SNR=19
ASAJ LR LR 10 03 38.7
comp=Z,306nm,19.6s,baz=155,slow=36
ASAJ Asahikawa 9.25 249 PN **Pn 10 00 28.3 +2.2**
ASAJ pmax pmax
comp=Z,2.0nm,0.3s
ASAJ MLR MLR
comp=Z,306nm,19.6s
ERM Erimo 10.14 237 *e*Pn **Pn 10 00 35.7 -2.5**
ERM *e*Sn **Sn 10 02 30.6 +0.3**
FX1 Attu Island--F 12.73 61 P **Pn 10 01 12.0 -1.6**
comp=Z,5.4nm,0.3s,baz=273,slow=5.4,SNR=53
FX1 S **Sn 10 03 22.9 -11**
comp=Z,4.7nm,0.3s,baz=168,slow=23,SNR=9.6
FX1 LR LR 10 05 44.0
comp=Z,82nm,20.1s,baz=255,slow=35
KLR Kul'dur 15.13 283 *e*P **Pn 10 01 45.2 -0.4**
KLR MLR MLR
comp=Z,500nm,14.0s
MJAR Matsushiro Arr 16.72 232 P **Pn 10 02 03.2 -2.6**
comp=Z,0.5nm,0.3s,baz=28,slow=12,SNR=13
MAJO Matsushiro 16.72 232 *e*P **Pn 10 02 02.5 -3.3**
MAJO pmax pmax
comp=Z,8.0nm,0.6s
MAJO Matsushiro 16.72 232 *e*Pn **Pn 10 02 02.5 -3.3**
comp=Z,7.9nm,0.6s
MAT Matsushiro 16.72 232 P **Pn 10 02 03.0 -2.8**
MDJ Mudanjiang 17.59 268 *e*Pn **Pn 10 02 16.1 -0.5**
comp=Z,3.2nm,0.5s
CLNS Chul'man 19.95 307 *e*P pP 10 02 56.0 +1.0
CLNS pmax pmax
comp=E,28nm,1.1s
CLNS pmax pmax
comp=Z,38nm,1.1s
CLNS pmax pmax
comp=N,33nm,1.2s
BILL Bilibino 20.83 12 P pP 10 03 08.0 +3.5
BILL *e* 10 03 17.7
BILL pmax pmax
comp=Z,3.0nm,0.9s
BILL MLR MLR
comp=Z,100nm,14.0s,MS3.3
KSRS Korea Array 22.19 251 P **P 10 03 06.4 -0.5**
comp=Z,12nm,0.9s,mb4.3,baz=51,slow=9.8,SNR=35
KSRS LR LR 10 11 20.3
comp=Z,136nm,18.1s,MS3.4,baz=256,slow=36
KSRS Korea Array 22.19 251 P **P 10 03 06.4 -0.4**
KSRS pmax pmax
comp=Z,12nm,0.9s,mb4.3
KSRS MLR MLR
comp=Z,137nm,18.1s,MS3.4
SONM Songino Array 31.86 288 LR LR 10 18 25.0
comp=Z,124nm,19.1s,MS3.6,baz=112,slow=38
EGAK Eagle 37.30 40 *e*P **P 10 05 21.9 +0.2**
comp=Z,23nm,1.8s,mb4.7
INK Inuvik 39.95 33 P **P 10 05 44.9 +1.1**
comp=Z,0.7nm,0.6s,mb3.6,baz=285,slow=4.4,SNR=4.0
ZALV Zalesovo Beam 42.64 305 PcP PcP 10 07 57.3 +0.2
comp=Z,0.5nm,0.3s,baz=72,slow=4.7,SNR=2.7
ZALV LR LR 10 23 36.9
comp=Z,45nm,21.5s,MS3.3,baz=74,slow=36
MKAR Makanchi Array 47.22 297 P **P 10 06 42.0 -0.6**
comp=Z,0.3nm,0.3s,mb3.7,baz=58,slow=9.1,SNR=5.0
MKAR pP pP 10 06 54.2 -2.9
comp=Z,0.5nm,0.7s,baz=64,slow=11,SNR=1.6
MKAR LR LR 10 28 17.0
comp=Z,65nm,18.1s,MS3.6,baz=352,slow=38
MKAR Makanchi Array 47.22 297 P **P 10 06 42.0 -0.5**
MKAR *PP pP 10 06 54.3 -2.9
KURK Kurchatov 47.46 303 P **P 10 06 43.2 -1.1**
comp=Z,1.7nm,0.6s,mb4.2,baz=70,slow=8.5,SNR=13
RES Resolute Bay 49.21 19 P **P 10 06 57.9 +0.4**
comp=Z,1.1nm,0.5s,mb4.1,baz=315,slow=2.9,SNR=11
YKA Yellowknife Ar 49.22 38 P **P 10 06 58.8 +1.2**
comp=Z,1.8nm,0.8s,mb4.1,baz=302,slow=8.0,SNR=4.8
BVAR Borovoye Array 50.78 309 P **P 10 07 07.9 -1.7**
comp=Z,1.6nm,0.4s,mb4.3,baz=59,slow=7.4,SNR=9.8
BVAR PcP PcP 10 08 25.8 0.0
comp=Z,0.6nm,0.5s,baz=354,slow=3.0,SNR=3.7
CMAR Chiang Mai Arr 53.68 257 P **P 10 07 31.3 -0.3**
comp=Z,1.6nm,0.5s,mb4.2,baz=30,slow=8.0,SNR=8.0
CMAR LR LR 10 32 07.1
comp=Z,53nm,18.5s,MS3.6,baz=0.0,slow=38
AAK Ala-Archa 54.14 296 LR LR 10 30 56.6
comp=Z,64nm,21.1s,MS3.7,baz=10,slow=36
AKTO Aktyubinsk 58.57 312 LR LR 10 32 49.4
comp=Z,34nm,21.1s,MS3.4,baz=229,slow=36
NVAR Mina Array Bea 60.91 64 P **P 10 08 23.0 +0.7**
comp=Z,1.3nm,0.7s,mb4.2,baz=292,slow=7.6,SNR=8.6
NVAR pP pP 10 08 36.5 -1.0
comp=Z,0.8nm,0.8s,baz=277,slow=8.8,SNR=3.4
PDAR Pinedale Array 63.13 55 P **P 10 08 38.7 +1.6**
comp=Z,1.2nm,0.9s,mb4.0,baz=310,slow=3.3,SNR=8.0
FINES FINESS Array B 63.23 335 P **P 10 08 35.9 -1.6**
comp=Z,4.0nm,1.1s,mb4.5,baz=39,slow=9.1,SNR=5.9
FINES FINESS Array B 63.23 335 P **P 10 08 35.9 -1.6**
FINES pmax pmax
comp=Z,4.0nm,1.1s
FINES FINESS Array B 63.23 335 P **P 10 08 35.9 -1.6**
WRA Warramunga Arr 70.14 200 P **P 10 09 22.0 +0.1**
comp=Z,0.7nm,0.7s,mb3.7,baz=16,slow=6.1,SNR=7.9
WRA pP pP 10 09 34.5 -2.9
comp=Z,0.9nm,0.7s,baz=16,slow=6.2,SNR=4.6
SCHQ Schefferville 71.65 24 pP pP 10 09 43.0 -3.3
comp=Z,1.8nm,0.7s,baz=0.0,slow=9.1,SNR=2.6
ASAR Alice Springs 73.83 200 P **P 10 09 45.1 +1.2**
comp=Z,0.4nm,0.6s,mb3.5,baz=13,slow=5.6,SNR=8.1
TXAR Lajitas Array 75.94 62 P **P 10 09 57.5 +1.2**
comp=Z,1.0nm,0.8s,mb3.8,baz=303,slow=4.0,SNR=11
TXAR Lajitas Array 75.94 62 P **P 10 09 57.6 +1.3**
TXAR pmax pmax
comp=Z,1.0nm,0.8s
GERES GERESS Array B 77.66 335 P **P 10 10 05.4 -0.2**
comp=Z,0.5nm,0.5s,mb3.7,baz=59,slow=5.1,SNR=3.9
BRTR Keskin Array B 78.08 317 P **P 10 10 08.0 -0.1**
comp=Z,0.9nm,0.6s,mb3.9,baz=72,slow=4.0,SNR=5.9

TAP ***07*** *10:22:26.8,23°.88N×121°.85E,h39km±1km,ML3.2,D*
ISCJB ***07*** *10:22:27.2±0.3,23°.87N±0°.02×121°.87E±0°.02,h40km±7km, Error ellipse: s-maj=3.6km s-min=2.4km az=138.6*
JMA ***07*** *10:22:28.7±0.2,24°.14N×121°.93E,h75km,M2.5*
ISC 07 10:22:27.8±0.3,23°.88N±0°.02×121°.86E±0°.02,h37km±7km**, n48,**σ0**78**/88,7C-1D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.25**	**293**	*e*P	**Pn**	**10 22 35.3**	**0.0**
HWA	baz=293			*e*S	**Sn**	**10 22 41.8**	**+1.3**
TWD	**Chiawan**	**0.31**	**310**	*i* P	**Pn**	**10 22 35.5**	**-0.5**
TWD	baz=311			S	**Sn**	**10 22 41.8**	**+0.1**
ESF	**Shoufeng Towns**	**0.32**	**269**	*e*P	**Pn**	**10 22 36.0**	**-0.1**
ESF	baz=267			*e*S	**Sn**	**10 22 42.0**	**+0.3**
ESL	**Shilin**	**0.39**	**261**	*i* P	**Pn**	**10 22 36.1**	**-0.8**
ESL	baz=259			S	**Sn**	**10 22 43.1**	**-0.3**
ENA	**Nanau**	**0.56**	**349**	*i* P	**Pn**	**10 22 38.5**	**-0.7**
ENA	baz=350			*e*S	**Sn**	**10 22 47.2**	**-0.1**
WHF	**Hehuan Shan**	**0.60**	**296**⇑	*i*P	**Pn**	**10 22 39.0**	**-0.8**
WHF	baz=296			S	**Sn**	**10 22 47.8**	**-0.6**
EHY	**Hungye**	**0.61**	**233**	*i* P	**Pn**	**10 22 38.5**	**-1.4**
EHY	baz=231			*e*S	**Sn**	**10 22 47.3**	**-1.4**
NNS	**Nan Shan**	**0.71**	**322**⇑	*i*P	**Pn**	**10 22 40.7**	**-0.7**
NNS	baz=322			S	**Sn**	**10 22 50.4**	**-0.7**
TWT	**Tachien**	**0.73**	**301**⇑	*i*P	**Pn**	**10 22 41.1**	**-0.4**
TWT	baz=300			S	**Sn**	**10 22 50.5**	**-0.9**
TWC	**Suao**	**0.73**	**359**⇓	*i*P	**Pn**	**10 22 41.4**	**-0.2**
TWC	baz=1.0			S	**Sn**	**10 22 51.6**	**+0.1**
TWF1	**Yuli**	**0.73**	**225**⇑	*i*P	**Pn**	**10 22 40.3**	**-1.3**
TWF1	baz=223			*e*S	**Sn**	**10 22 50.1**	**-1.4**
ENTT	**Nioudou**	**0.81**	**341**	*i* P	**Pn**	**10 22 42.0**	**-0.7**
ENTT	baz=341			*e*S	**Sn**	**10 22 52.9**	**-0.5**
TWE	**Neicheng**	**0.86**	**348**	P	**Pn**	**10 22 43.1**	**-0.3**
TWE	baz=349			*e*S	**Sn**	**10 22 54.6**	**-0.1**
SMLT	**Sun Moon Lake**	**0.88**	**271**⇑	*i*P	**Pn**	**10 22 42.9**	**-0.7**
YUS	**Yu-Shan**	**0.92**	**245**⇑	*i*P	**Pn**	**10 22 44.0**	**-0.1**
YUS	baz=244			S	**Sn**	**10 22 55.4**	**-0.7**
TYC	**Yuchr**	**0.92**	**272**	*i* P	**Pn**	**10 22 43.5**	**-0.6**
TYC	baz=271			*e*S	**Sn**	**10 22 56.5**	**+0.4**
NSK	**Sanguang**	**0.92**	**330**	*i* P	**Pn**	**10 22 43.7**	**-0.4**
NSK	baz=330			S	**Sn**	**10 22 54.7**	**-1.4**
ALS	**Alishan**	**1.03**	**250**⇑	*i*P	**Pn**	**10 22 45.6**	**-0.1**
ALS	baz=248			*e*S	**Sn**	**10 22 58.7**	**-0.2**
ELDTW	**Lidau**	**1.03**	**229**	*i* P	**Pn**	**10 22 44.5**	**-1.3**
ELDTW	baz=227			*e*S	**Sn**	**10 22 56.7**	**-2.2**
WNT	**Mingjian**	**1.07**	**270**	P	**Pn**	**10 22 46.4**	**+0.1**
NSTT	baz=269			*e*S	**Sn**	**10 23 00.4**	**+0.2**
NSTT	**Nanjuang**	**1.08**	**314**	P	**Pn**	**10 22 46.7**	**+0.2**
NSTT	baz=314			*e*S	**Sn**	**10 23 00.4**	**+0.2**
TWQ1	**Liyutan**	**1.10**	**296**	P	**Pn**	**10 22 46.6**	**0.0**
TWQ1	baz=295			S	**Sn**	**10 23 00.9**	**+0.4**
TCU	**Taichung**	**1.11**	**284**	P	**Pn**	**10 22 47.3**	**+0.5**
TCU	baz=283			*e*S	**Sn**	**10 23 02.1**	**+1.2**
CHN5	**Tsauling**	**1.12**	**256**	P	**Pn**	**10 22 46.6**	**-0.2**
CHN5	baz=255			S	**Sn**	**10 23 01.9**	**+0.8**
TWA	**Mucha**	**1.13**	**347**	*e*S	**Sn**	**10 23 01.2**	**-0.1**
TWB1	**Santiao Chiao**	**1.13**	**6**	*e*S	**Sn**	**10 23 01.8**	**+0.3**
NSY	baz=7.0						
NSY	**Sanyi**	**1.14**	**298**	P	**Pn**	**10 22 47.4**	**+0.2**
NSY	baz=298			*e*S	**Sn**	**10 23 01.9**	**+0.3**
NWF	**Wu-fen Shan**	**1.19**	**357**	P	**Pn**	**10 22 48.7**	**+0.7**
NWF	baz=357			*e*S	**Sn**	**10 23 04.2**	**+1.3**
WGK	**Gukeng**	**1.20**	**261**	*e*P	**Pn**	**10 22 48.6**	**+0.6**
WGK	baz=260			*e*S	**Sn**	**10 23 04.5**	**+1.3**
YOJ	**Yonaguni jima**	**1.20**	**61**	P	**Pn**	**10 22 48.1**	**0.0**
YOJ				*e*S	**Sn**	**10 23 02.3**	**-0.9**
TWS1	**Kuangyinshan**	**1.28**	**342**	*e*P	**Pn**	**10 22 49.5**	**+0.3**
TWS1	baz=342			*e*S	**Sn**	**10 23 05.7**	**+0.5**
WTP	**Ta-pu**	**1.30**	**241**	*e*P	**Pn**	**10 22 49.2**	**-0.3**
WTP	baz=240			*e*S	**Sn**	**10 23 06.5**	**+0.9**
CHY	**Chiayi**	**1.37**	**254**	*e*S	**Sn**	**10 23 08.6**	**+1.4**
TWK	baz=253						
TWK	**Hsinying**	**1.40**	**244**	*e*P	**Pn**	**10 22 51.4**	**+0.7**
TWK	baz=243			*e*S	**Sn**	**10 23 08.1**	**+0.2**
CHN1	**Nanshi**	**1.40**	**241**	*e*P	**Pn**	**10 22 51.0**	**+0.3**
CHN1	baz=240			*e*S	**Sn**	**10 23 08.9**	**+0.8**
SGST	**Jiashian**	**1.41**	**236**	*i* P	**Pn**	**10 22 51.6**	**+0.6**
SGST	baz=235			*i* S	**Sn**	**10 23 09.7**	**+1.3**
WTCT	**Ta-ch'eng**	**1.44**	**270**	P	**Pn**	**10 22 51.5**	**+0.1**
WTCT	baz=269			*e*S	**Sn**	**10 23 10.5**	**+1.4**
SSD	**Sandimen**	**1.59**	**225**	*e*P	**Pn**	**10 22 54.7**	**+1.2**
EAST	**Anshuo**	**1.75**	**212**	*e*P	**Pn**	**10 22 57.5**	**+1.8**
IRIF	**Iriomote-Funau**	**1.77**	**75**	P	**Pn**	**10 22 56.3**	**+0.4**
IRIF				*e*S	**Sn**	**10 23 17.6**	**+0.4**
HATJ	**Hateruma jima**	**1.79**	**84**	P	**Pn**	**10 22 57.0**	**+0.8**
HATJ				*e*S	**Sn**	**10 23 18.1**	**+0.4**
LAY	**Lan-yu**	**1.85**	**189**	*e*P	**Pn**	**10 22 57.2**	**+0.2**
LAY	baz=188			*e*S	**Sn**	**10 23 17.9**	**-1.3**
SCZT	**Fangliau**	**1.88**	**218**	*e*P	**Pn**	**10 22 58.6**	**+1.2**
SCZT	baz=216			*e*S	**Sn**	**10 23 20.1**	**+0.2**
JKRS	**Kuro-shima**	**2.00**	**79**	P	**Pn**	**10 22 59.8**	**+0.8**
JKRS				*e*S	**Sn**	**10 23 23.3**	**+0.5**
PNG	**Penghu**	**2.13**	**262**	*e*P	**Pn**	**10 22 59.8**	**-1.1**
PNG	baz=261			*e*S	**Sn**	**10 23 24.6**	**-1.5**
JIJ	**Ishigaki jima**	**2.14**	**76**	P	**Pn**	**10 23 01.0**	**0.0**
JIJ				*e*S	**Sn**	**10 23 25.4**	**-1.0**
TWK1	**Hengchun**	**2.15**	**207**	*e*S	**Sn**	**10 23 26.9**	**+0.2**
JTJ	**Tarama**	**2.71**	**73**	P	**Pn**	**10 23 09.0**	**+0.3**
JTJ				*e*S	**Sn**	**10 23 40.2**	**-0.1**

IDC ***07*** *10:34:13.9±1.2,44°.12N×135°.01E,h342km±17km, mb3.2/16,mb1 3.4/20,mb1mx3.3/32,mbtmp3.3/20,Error ellipse: s-maj=20.6km s-min=12.2km az=178.0*
ISCJB ***07*** *10:34:13.1±0.3,43°.58N±0°.05×135°.24E±0°.05, h380km±4km,mb3.5/21,Error ellipse: s-maj=8.6km s-min=5.4km az=8.9*
NEIC ***07*** *10:34:14.6±0.9,44°.00N×135°.02E,h355km±14km,mb3.8/6, Error ellipse: s-maj=19.3km s-min=11.2km az=172.0*
JMA ***07*** *10:34:14.8±0.4,43°.49N×135°.47E,h391km,M3.4*
MOS ***07*** *10:34:14.1±0.9,44°.05N×134°.97E,h364km,mb4.0/7,Error ellipse: s-maj=16.0km s-min=12.2km az=113.8*
SKHL ***07*** *10:34:14.2±0.4,43°.94N×135°.01E,h357km±6km,mb4.0/2*
BJI ***07*** *10:34:16.3,43°.83N×134°.91E,h379km,mB4.4/5,mb4.4/7*
ISC 07 10:34:14.0±0.3,43°.59N±0°.05×135°.26E±0°.05,h373km±4km**, n70,**σ1**06**/85,mb3.5**/21,1C-2D,Primorye**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEY	**Ternei**	**1.73**	**33**⇓	*e*P	**Pn**	**10 35 06.3**	**+0.8**
TEY				*i* S	**S**	**10 35 46.6**	**-0.6**
TEY	80nm,0.9s			A		10 35 47.1	
TEY	70nm,0.9s			A		10 35 47.1	
GRTR	**Gornotajezhnoj**	**2.26**	**274**⇑	*i*P	**Pn**	**10 35 09.8**	**+0.7**
GRTR				*i* S	**S**	**10 35 53.4**	**-0.1**
VLA	**Vladivostok**	**2.50**	**260**	*e*P	**Pn**	**10 35 11.0**	**+0.1**
VLA	comp=Z,61nm,0.7s			pmax	pmax		
VLA	**Vladivostok**	**2.50**	**260**	*e*P	**Pn**	**10 35 11.0**	**+0.1**
VLA	comp=Z,61nm,0.7s			AMB	AMB	10 35 12.5	
JOSM	**Okushiri--Mats**	**3.45**	**115**	P	**Pn**	**10 35 19.4**	**+0.4**
JSH	**Shimam**	**3.63**	**104**	P	**Pn**	**10 35 21.3**	**+0.6**
JYM2	**Yakumo 2**	**4.03**	**110**	P	**Pn**	**10 35 25.3**	**+0.7**
JKB	**Kayabe**	**4.58**	**110**	P	**Pn**	**10 35 31.1**	**+1.0**
JHR	**Hokuryu**	**4.69**	**86**	P	**Pn**	**10 35 32.3**	**+1.0**
JOT	**Ohata**	**4.81**	**115**	P	**Pn**	**10 35 33.0**	**+0.4**
JOT				*e*S	**S**	**10 36 35.1**	**-1.3**
JWK2	**Keihoku**	**5.05**	**68**	P	**Pn**	**10 35 36.8**	**+1.7**
JBT2	**Biratori 2**	**5.25**	**96**	P	**Pn**	**10 35 37.7**	**+0.4**
JBT2				*e*S	**S**	**10 36 43.7**	**-1.2**
JAH	**Hinai**	**5.26**	**128**	P	**Pn**	**10 35 37.9**	**+0.5**
ASAJ	**Asahikawa**	**5.33**	**82**	P	**Pn**	**10 35 38.8**	**+0.7**
ASAJ				*e*S	**S**	**10 36 46.7**	**+0.4**
ASAJ	**Asahikawa**	**5.33**	**82**	P	**Pn**	**10 35 38.9**	**+0.8**
ASAJ	comp=Z,7.8nm,0.3s,baz=240,slow=8.2,SNR=60 baz=139,slow=19,SNR=3.9			S	**S**	**10 36 45.9**	**-0.5**
ASAJ	**Asahikawa**	**5.33**	**82**	P	**Pn**	**10 35 38.9**	**+0.8**
ASAJ				S	**S**	**10 36 45.9**	**-0.4**
ASAJ	comp=Z,8.0nm,0.3s			pmax	pmax		
JFR	**Furan**	**5.36**	**92**	P	**Pn**	**10 35 38.8**	**+0.4**
JFR				*e*S	**S**	**10 36 44.7**	**-2.3**
JSE	**Soyaes**	**5.43**	**73**	P	**Pn**	**10 35 40.4**	**+1.2**
JSE				*e*S	**S**	**10 36 48.2**	**-0.1**
JSD	**Sado**	**6.00**	**157**	P	**Pn**	**10 35 46.6**	**+1.0**
JCH	**Churui**	**6.01**	**97**	P	**Pn**	**10 35 44.6**	**-1.0**
JCH				*e*S	**S**	**10 36 54.1**	**-6.0**
ERM	**Erimo**	**6.02**	**102**	*e*P	**Pn**	**10 35 45.9**	**+0.2**
ERM	comp=Z,49nm,0.5s			pmax	pmax		
ERM	**Erimo**	**6.02**	**102**	*e*Pn	**Pn**	**10 35 45.9**	**+0.2**
ERM	comp=Z,48nm,0.5s			*e*Sn	**S**	**10 36 52.5**	**-7.8**
JEM	**Erimo**	**6.02**	**102**	P	**Pn**	**10 35 45.7**	**0.0**
JEM				*e*S	**S**	**10 36 56.4**	**-3.9**
JYA	**Atsumi**	**6.02**	**145**	P	**Pn**	**10 35 46.1**	**+0.3**
YSS	**Yuzh-Sakhalins**	**6.26**	**55**	*e*P	**Pn**	**10 35 48.9**	**+0.6**
YSS	**Yuzh-Sakhalins**	**6.26**	**55**	*e*Pn	**Pn**	**10 35 48.8**	**+0.5**
YSS	comp=Z,14nm,0.8s						
YSS	**Yuzh-Sakhalins**	**6.26**	**55**	*e*P	**Pn**	**10 35 48.8**	**+0.5**
JTKR	**Abashiri--Toko**	**6.27**	**84**	P	**Pn**	**10 35 48.8**	**+0.3**
JTKR				*e*S	**S**	**10 37 03.6**	**-1.8**
JMK	**Ichinoseki**	**6.45**	**134**	P	**Pn**	**10 35 49.9**	**-0.7**
JMK				*e*S	**S**	**10 37 06.6**	**-2.7**
GRNR	**Gornyy**	**7.22**	**6**	*e*P	**Pn**	**10 35 56.3**	**-2.9**
GRNR				AMB	AMB	10 35 56.8	
MJAR	**Matsushiro Arr**	**7.39**	**161**	P	**Pn**	**10 36 08.8**	**+7.3**
	comp=Z,1.2nm,0.3s,baz=352,slow=10,SNR=4.3						
JFK	**Kawauchi**	**7.54**	**144**	P	**Pn**	**10 36 01.8**	**-1.4**
NEM2	**Nemuro 2**	**7.63**	**88**	P	**Pn**	**10 36 03.7**	**-0.3**
NEM2				*e*S	**S**	**10 37 26.2**	**-7.7**
KSRS	**Korea Array**	**8.29**	**225**	P	**Pn**	**10 36 14.2**	**+2.3**
	comp=Z,0.7nm,0.3s,baz=46,slow=10,SNR=26						
KSRS	**Korea Array**	**8.29**	**225**	P	**Pn**	**10 36 14.2**	**+2.3**
KSRS	comp=Z,1.0nm,0.3s			pmax	pmax		
TYV	**Tymovskoe**	**8.84**	**32**⇓	*i*P	**Pn**	**10 36 19.6**	**+1.6**
BMKR	**Bomnak**	**11.89**	**342**	*e*P	**Pn**	**10 36 48.5**	**-5.3**
BMKR				AMB	AMB	10 36 49.8	
KROS	**Kirovskiy**	**12.13**	**336**	*e*P	**P**	**10 36 51.1**	**-4.7**
KROS				AMB	AMB	10 36 52.0	
CBIJ	**Chichi jima**	**17.39**	**159**	P	**P**	**10 38 01.4**	**+8.1**
	comp=Z,2.5nm,0.3s,baz=267,slow=19,SNR=5.7						
SONM	**Songino Array**	**20.54**	**292**	P	**P**	**10 38 23.6**	**-1.4**
	comp=Z,2.1nm,0.9s,baz=98,slow=9.1,SNR=8.7						
ZALV	**Zalesovo Beam**	**34.14**	**306**	P	**P**	**10 40 23.1**	**-1.9**
	comp=Z,1.4nm,0.5s,mb3.4,baz=94,slow=8.8,SNR=6.6						
MKAR	**Makanchi Array**	**36.88**	**294**	P	**P**	**10 40 47.0**	**-1.2**
	comp=Z,1.8nm,0.6s,mb3.5,baz=77,slow=13,SNR=7.1						
KURK	**Kurchatov**	**38.34**	**301**	P	**P**	**10 40 59.3**	**-0.9**
	comp=Z,1.9nm,0.6s,mb3.5,baz=79,slow=8.8,SNR=6.5						
TKM2	**Tokmak 2**	**42.63**	**291**	*e*P	**P**	**10 41 35.8**	**+0.8**
TKM2	comp=Z,4.0nm,0.5s,mb3.8			pmax	pmax		
TKM2	**Tokmak 2**	**42.63**	**291**	*e*P	**P**	**10 41 35.8**	**+0.7**
	comp=Z,3.9nm,0.5s,mb3.8						
BVAR	**Borovoye Array**	**42.78**	**306**	P	**P**	**10 41 35.3**	**-0.8**
	comp=Z,1.4nm,0.5s,mb3.4,baz=69,slow=7.7,SNR=6.5						
COLA	**College**	**46.24**	**35**	*e*P	**P**	**10 42 04.4**	**+1.5**
COLA	comp=Z,4.0nm,0.8s,mb3.6			pmax	pmax		
COLA	**College**	**46.24**	**35**	*e*P	**P**	**10 42 04.4**	**+1.5**
	comp=Z,4.2nm,0.8s,mb3.6						
EGAK	**Eagle**	**49.03**	**34**	*e*P	**P**	**10 42 24.9**	**+0.8**
	comp=Z,0.9nm,0.4s,mb3.4						
ABKAR	**Akbulak array**	**50.23**	**304**	*e*P	**P**	**10 42 33.1**	**-0.2**
	comp=Z,1.8nm,0.6s,mb3.5						
INK	**Inuvik**	**50.80**	**29**	P	**P**	**10 42 37.4**	**+0.3**
	comp=Z,0.4nm,0.5s,mb3.0,baz=315,slow=7.1,SNR=3.6						
AKTK	**Aktyubinsk**	**50.89**	**307**	P	**P**	**10 42 37.9**	**-0.2**
AKTO	**Aktyubinsk**	**50.89**	**307**	P	**P**	**10 42 37.9**	**-0.2**
	comp=Z,1.4nm,0.5s,mb3.5,baz=68,slow=11,SNR=5.3						
ARCES	**ARCESS Array B**	**56.17**	**337**	P	**P**	**10 43 15.2**	**-0.5**
	comp=Z,2.3nm,0.9s,mb3.5,baz=54,slow=8.2,SNR=6.2						
JOF	**Joensuu**	**57.95**	**328**	*e*P	**P**	**10 43 26.5**	**-1.6**
JOF	comp=Z,1.0nm,0.3s,mb3.6			pmax	pmax		
JOF	**Joensuu**	**57.95**	**328**	*e*p	**P**	**10 43 26.5**	**-1.6**
	comp=Z,0.9nm,0.3s,mb3.6						
KAF	**Kangasniemi**	**60.30**	**329**	*e*P	**P**	**10 43 36.4**	**-7.7**
KAF	comp=Z,1.0nm,0.4s,mb3.6			pmax	pmax		
KAF	**Kangasniemi**	**60.30**	**329**	*e*p	**P**	**10 43 36.4**	**-7.7**
	comp=Z,1.2nm,0.4s,mb3.7						
FINES	**FINESS Array B**	**60.80**	**329**	P	**P**	**10 43 47.0**	**-0.4**
	comp=Z,3.8nm,0.6s,mb4.0,baz=48,slow=8.5,SNR=23						
FINES	**FINESS Array B**	**60.80**	**329**	P	**P**	**10 43 47.0**	**-0.4**
FINES	comp=Z,4.0nm,0.6s			pmax	pmax		
AKASG	**Malin Array Be**	**66.26**	**318**	P	**P**	**10 44 22.4**	**-0.5**
	comp=Z,0.7nm,0.4s,mb3.7,baz=48,slow=6.0,SNR=5.2						
AKASG	**Malin Array Be**	**66.26**	**318**	P	**P**	**10 44 22.4**	**-0.5**
AKASG	comp=Z,1.0nm,0.4s			pmax	pmax		
NB2	**NORSAR Subarra**	**66.28**	**334**	P	**P**	**10 44 22.5**	**-0.4**
	comp=Z,1.2nm,0.6s,mb3.8,baz=39,slow=6.5						
NOA	**NORSAR Array B**	**66.28**	**334**	P	**P**	**10 44 22.6**	**-0.3**
	comp=Z,1.4nm,0.6s,mb3.9,baz=39,slow=6.3,SNR=8.2						
BRTR	**Keskin Array B**	**71.07**	**307**	P	**P**	**10 44 52.0**	**-0.5**

comp=Z,0.8nm,0.7s,mb3.5,baz=61,slow=6.8,SNR=4.5
GERES GERESS Array B 74.66 324 P **P** **10 45 13.2 0.0**
comp=Z,0.9nm,0.6s,mb3.7,baz=63,slow=6.7,SNR=4.5
GERES GERESS Array B 74.66 324 P **P** **10 45 13.2 0.0**
GERES pmax pmax
comp=Z,1.0nm,0.6s
NVAR Mina Array Bea 74.70 51 P **P** **10 45 15.9 +2.2**
comp=Z,0.5nm,0.7s,mb3.4,baz=297,slow=8.9,SNR=3.3
PDAR Pinedale Array 76.28 43 P **P** **10 45 23.4 +1.0**
comp=Z,0.5nm,0.7s,mb3.4,baz=5.7,slow=1.5,SNR=4.6
TXAR Lajitas Array 89.57 48 P **P** **10 46 31.8 +1.7**
comp=Z,0.1nm,0.5s,mb3.0,baz=2.9,slow=1.8,SNR=2.6

*NEIC **07** 10:34:12.7±0.6,24°.49N×95°.56E,h10km,mb4.2/3,Error ellipse: s-maj=21.6km s-min=9.7km az=56.0*
*ISCJB **07** 10:34:15.7±2.6,24°.4N±0°.1×95°.5E±0°.2,h54km±28km, mb4.0/12,MS3.5/3,Error ellipse: s-maj=28.4km s-min=14.0km az=143.5*
*IDC **07** 10:34:17.6±4.1,24°.42N×95°.59E,h50km±40km,mb3.7/9, mb1 3.8/10,mb1mx3.5/30,mbtmp3.7/10,ML2.9/1,MS3.6/3, Ms1 3.6/3,ms1mx2.9/29,Error ellipse: s-maj=50.7km s-min=14.3km az=56.0*
*BJI **07** 10:34:22.3,25°.36N×95°.30E,h24km,mb4.3/3*
ISC 07 10:34:17.0±2.2,24°.5N±0°.1×95.6E±0°.2,h46km±25km,n20, σ0§81/17,mb4.0/12,MS3.5/3,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**6.74**	**152**	P	**Pn**	**10 35 53.6**	**+0.2**
	0.1nm,0.3s,baz=322,slow=17,SNR=3.1						
PSI	**Prapat**	**21.77**	**171**	LR	LR	10 47 35.2	
	comp=Z,60nm,19.2s,MS3.0,baz=56,slow=36						
BJT	**Baijiatuau**	**23.23**	**43**	*e*P	**P**	**10 39 20.1**	**-0.2**
	105nm,0.4s						
MKAR	**Makanchi Array**	**24.70**	**338**	P	**P**	**10 39 34.9**	**+1.2**
	2.3nm,0.6s,mb3.9,baz=144,slow=10,SNR=10						
MKAR	**Makanchi Array**	**24.70**	**338**	P	**P**	**10 39 34.9**	**+1.2**
MK31	**Makanchi Array**	**24.70**	**338**	*e*P	**P**	**10 39 33.3**	**-0.4**
TKM2	**Tokmak 2**	**24.70**	**323**	*e*P	**P**	**10 39 32.0**	**-1.8**
	11nm,1.2s,mb4.3						
SONM	**Songino Array**	**24.86**	**17**	P	**P**	**10 39 34.7**	**-0.4**
	0.7nm,0.8s,mb3.3,baz=202,slow=9.0,SNR=3.6						
AAK	**Ala-Archa**	**25.13**	**321**	P	**P**	**10 39 38.0**	**+0.3**
	1.6nm,0.5s,mb3.8,baz=159,slow=8.6,SNR=4.2						
EKS2	**Erkin-Say**	**25.56**	**321**	*e*P	**P**	**10 39 42.2**	**+0.6**
	5.0nm,0.8s,mb4.1						
KURK	**Kurchatov**	**29.31**	**338**	P	**P**	**10 40 16.3**	**+1.2**
	1.5nm,0.8s,mb3.8,baz=150,slow=8.8,SNR=4.8						
ABKAR	**Akbulak array**	**37.22**	**321**	*e*P	**P**	**10 41 23.6**	**-0.3**
	1.9nm,0.8s,mb4.0						
AKTK	**Aktyubinsk**	**38.88**	**322**	P	**P**	**10 41 37.0**	**-0.8**
AKTO	**Aktyubinsk**	**38.88**	**322**	P	**P**	**10 41 37.0**	**-0.8**
	1.1nm,0.6s,mb3.8,baz=121,slow=10,SNR=5.2						
JHJ	**Hachijo jima 2**	**39.45**	**67**	LR	LR	10 59 50.4	
	comp=Z,137nm,19.5s,MS3.8,baz=17,slow=39						
ASAJ	**Asahikawa**	**42.84**	**51**	LR	LR	11 00 42.6	
	comp=Z,99nm,19.6s,MS3.7,baz=12,slow=37						
WRA	**Warramunga Arr**	**58.06**	**136**	P	**P**	**10 44 05.8**	**0.0**
	5.1nm,0.6s,mb4.7,baz=323,slow=7.3,SNR=40						
ASAR	**Alice Springs**	**60.58**	**139**	P	**P**	**10 44 22.9**	**-0.3**
	1.9nm,0.7s,mb4.3,baz=320,slow=6.9,SNR=17						
NOA	**NORSAR Array B**	**66.22**	**328**	P	**P**	**10 45 01.4**	**+1.5**
	0.5nm,0.9s,mb3.5,baz=79,slow=6.8,SNR=2.3						
GERES	**GERESS Array B**	**66.79**	**315**	P	**P**	**10 45 03.7**	**-0.1**
	1.0nm,0.7s,mb4.0,baz=80,slow=7.2,SNR=6.8						

*ISCJB **07** 10:34:50.0±0.5,34°.10N±0°.06×136°.28E±0°.07, h395km±3km,mb3.7/7,Error ellipse: s-maj=11.0km s-min=7.7km az=144.9*
*IDC **07** 10:34:50.5±0.8,34°.05N×136°.28E,h382km±8km,mb3.4/7, mb1 3.4/11,mb1mx3.1/33,mbtmp3.4/11,Error ellipse: s-maj=16.8km s-min=11.0km az=91.0*
*NEIC **07** 10:34:51.1,34°.18N×136°.21E,h391km,MG3.4(JMA), After JMA.*
*JMA **07** 10:34:51.0±0.1,34°.18N×136°.20E,h391km±1km,M3.4*
ISC 07 10:34:51.2±0.5,34°.11N±0°.06×136°.29E±0°.07,h387km±3km, n33,σ0§61/48,mb3.7/7,Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKN2	**Miekihoku**	**0.13**	**354**	P	**Pn**	**10 35 39.6**	**+0.7**
JKN2				S	**S**	**10 36 17.4**	**-0.2**
JIE	**Ise**	**0.45**	**50**	P	**Pn**	**10 35 40.2**	**+0.9**
JIE				S	**S**	**10 36 18.7**	**+0.6**
JWY	**Kouya**	**0.59**	**281**	P	**Pn**	**10 35 40.4**	**+0.8**
JWY				S	**S**	**10 36 18.3**	**-0.3**
JWZ	**Kozaga**	**0.75**	**220**	P	**Pn**	**10 35 40.3**	**+0.2**
JWZ				S	**S**	**10 36 19.2**	**-0.2**
JWT	**Wachi**	**1.38**	**328**	P	**Pn**	**10 35 42.4**	**+0.1**
JWT				S	**S**	**10 36 22.5**	**-1.1**
JAI	**Aioi**	**1.56**	**259**	P	**Pn**	**10 35 43.5**	**+0.2**
JAI				S	**S**	**10 36 24.9**	**-0.4**
JGM	**Miyama**	**1.63**	**12**	P	**Pn**	**10 35 44.1**	**+0.6**
JGM				S	**S**	**10 36 26.2**	**+0.3**
JMN	**Monobe**	**2.04**	**260**	P	**Pn**	**10 35 46.4**	**+0.3**
JKG	**Kaga**	**2.17**	**1**	P	**Pn**	**10 35 46.8**	**0.0**
JKG				S	**S**	**10 36 31.0**	**-0.8**
JYN	**Shimob**	**2.32**	**53**	P	**Pn**	**10 35 48.3**	**+0.4**
JOD2	**Odawara 2**	**2.58**	**63**	P	**Pn**	**10 35 50.3**	**+0.5**
JHS	**Saijyo**	**2.77**	**290**	P	**Pn**	**10 35 51.3**	**0.0**
JRY	**Ryogami san**	**2.87**	**48**	P	**Pn**	**10 35 52.6**	**+0.5**
JRY				S	**S**	**10 36 42.0**	**+0.6**
MAJO	**Matsushiro**	**2.89**	**32**	*e*P	**Pn**	**10 35 52.4**	**+0.1**
MAJO	**Matsushiro**	**2.89**	**32**	*e*Pn	**Pn**	**10 35 52.4**	**+0.1**
MAT	**Matsushiro**	**2.89**	**32**	P	**Pn**	**10 35 52.3**	**0.0**
MAT				S	**S**	**10 36 41.1**	**-0.7**
MAT	**Matsushiro**	**2.89**	**32**	P	**Pn**	**10 35 52.4**	**+0.1**
MAT				S	**S**	**10 36 41.2**	**-0.6**
MJAR	**Matsushiro Arr**	**2.89**	**32**	P	**Pn**	**10 35 52.0**	**-0.3**
	11nm,0.3s,baz=211,slow=8.8,SNR=147						
MJAR				S	**S**	**10 36 41.6**	**-0.1**
	0.6nm,0.3s,baz=221,slow=9.4,SNR=4.3						
JHJ	**Hachijo jima 2**	**3.08**	**108**	P	**Pn**	**10 35 53.4**	**-0.6**
	6.7nm,0.3s,baz=180,slow=20,SNR=4.5						
JHJ				S	**S**	**10 36 44.2**	**-0.5**
	7.5nm,0.3s,baz=90,slow=20,SNR=4.2						
JTO	**Tosashimizu**	**3.17**	**248**	P	**Pn**	**10 35 54.8**	**0.0**
JNA	**Nagahama**	**3.22**	**261**	P	**Pn**	**10 35 55.4**	**+0.2**
KSRS	**Korea Array**	**7.58**	**299**	P	**Pn**	**10 36 40.5**	**-0.4**
	0.7nm,0.3s,baz=116,slow=11,SNR=14						
CBIJ	**Chichi jima**	**8.63**	**142**	P	**Pn**	**10 36 49.5**	**-3.8**
	5.2nm,0.3s,baz=260,slow=14,SNR=4.9						
CBIJ				S	**S**	**10 38 18.8**	**-15**
	3.4nm,0.3s,baz=253,slow=19,SNR=5.7						
ASAJ	**Asahikawa**	**11.13**	**24**	P	**Pn**	**10 37 19.9**	**-2.1**
	1.0nm,0.3s,baz=210,slow=8.9,SNR=3.8						
ASAJ				S	**S**	**10 39 19.0**	**-6.6**
	0.4nm,0.3s,baz=162,slow=19,SNR=4.1						
PETK	**Petropavlovsk-**	**24.35**	**32**	P	**P**	**10 39 35.6**	**-0.1**
	2.0nm,0.7s,mb3.7,baz=231,slow=8.5,SNR=3.6						
SONM	**Songino Array**	**26.22**	**311**	P	**P**	**10 39 53.0**	**+0.7**
	2.4nm,0.8s,mb3.7,baz=117,slow=10,SNR=7.5						
FX1	**Attu Island--F**	**32.20**	**43**	P	**P**	**10 40 45.7**	**+1.2**
	5.2nm,0.8s,mb3.9,baz=233,slow=8.9,SNR=5.2						
FX1	**Attu Island--F**	**32.20**	**43**	P	**P**	**10 40 45.7**	**+1.1**
KDAK	**Kodiak Island**	**52.04**	**40**	P	**P**	**10 43 22.5**	**+0.1**
	7.2nm,1.0s,mb3.9,baz=207,slow=6.8,SNR=3.6						
KDAK	**Kodiak Island**	**52.04**	**40**	P	**P**	**10 43 22.5**	**+0.1**
WRA	**Warramunga Arr**	**53.78**	**182**	P	**P**	**10 43 34.5**	**-0.9**
	2.9nm,0.3s,mb4.0,baz=358,slow=7.6,SNR=80						
ASAR	**Alice Springs**	**57.50**	**183**	P	**P**	**10 44 01.1**	**-0.4**
	1.7nm,0.7s,mb3.5,baz=355,slow=5.0,SNR=49						
INK	**Inuvik**	**58.86**	**26**	P	**P**	**10 44 10.2**	**0.0**
	0.6nm,0.4s,mb3.2,baz=305,slow=5.1,SNR=5.3						

*ISCJB **07** 10:42:02.9±0.8,32°.33N±0°.02×105°.62E±0°.03,h9km±5km, mb4.3/43,MS3.9/12,Error ellipse: s-maj=3.7km s-min=3.5km az=147.0*
*IDC **07** 10:42:03.0±0.5,32°.37N×105°.70E,h0km,mb4.1/21, mb1 4.3/24,mb1mx4.2/34,mbtmp4.2/24,ML4.0/3,MS3.7/9, Ms1 3.8/9,ms1mx3.4/31,Error ellipse: s-maj=17.7km s-min=11.8km az=50.0*
*BJI **07** 10:42:04.1,32°.35N×105°.67E,h14km,mB4.5/17,mb4.4/27, ML4.5/18,Ms4.5/39,Ms7 4.1/32*
*NEIC **07** 10:42:05.0±0.3,32°.31N×105°.50E,h10km,mb4.6/26,Error ellipse: s-maj=6.0km s-min=6.0km az=127.0*
*MOS **07** 10:42:06.0±1.5,32°.29N×105°.66E,h33km,mb4.6/15,Error ellipse: s-maj=10.3km s-min=7.0km az=101.7*
ISC 07 10:42:03.8±0.7,32°.39N±0°.02×105°.61E±0°.02,h1km±4km, n119,σ1§26/142,mb4.3/43,MS3.9/12,3C-2D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.16**	**227**	⇑*i*Pn	**Pn**	**10 42 41.9**	**+1.0**
CD2				Pg	**Pg**	**10 42 47.2**	**+2.0**
CD2				Sn	**Sn**	**10 43 11.7**	**+3.4**
CD2				Sg	**Sg**	**10 43 14.8**	**+1.6**
CD2				smax			
	comp=N,11μm,0.5s						
CD2				smax			
	comp=E,16μm,0.6s						
XAN	**Xi'an**	**3.23**	**58**	Pn	**Pn**	**10 42 55.4**	**-0.1**
XAN				Pg	**Pg**	**10 43 05.3**	**-0.3**
XAN				Sn	**Sn**	**10 43 34.4**	**-0.2**
XAN				Sg	**Sg**	**10 43 44.6**	**-2.9**
XAN				smax			
	comp=N,2μm,0.8s						
XAN				smax			
	comp=E,1μm,1.0s						
XAN				LR	LR		
	comp=N,6μm,8.1s						
XAN				LR	LR		
	comp=E,2μm,10.1s						
XAN				LR	LR		
	comp=Z,2μm,7.5s						
ENH	**Enshi**	**3.93**	**121**	*e*Pn	**Pn**	**10 43 05.8**	**+0.6**
ENH				*e*Sg	**Sg**	**10 44 10.9**	**+0.7**
LZH	**Lanzhou**	**3.97**	**339**	*e*Pn	**Pn**	**10 43 08.1**	**+2.4**
LZH				Pg	**Pg**	**10 43 18.0**	**-1.8**
LZH				Sn	**Sn**	**10 43 57.4**	**+4.6**
LZH				Sg	**Sg**	**10 44 08.4**	**-2.8**
LZH				smax			
	comp=N,3μm,0.8s						
LZH				smax			
	comp=E,4μm,0.8s						
LZH				LR	LR		
	comp=N,5μm,4.5s						
LZH				LR	LR		
	comp=Z,6μm,5.4s						
GYA	**Guiyang**	**5.98**	**171**	Pg	**Pn**	**10 43 34.1**	**+0.7**
GYA				Sg	**Sn**	**10 44 40.5**	**-2.1**
GYA				smax			
	comp=N,900nm,1.2s						
GYA				smax			
	comp=E,1μm,1.3s						
GYA				LR	LR		
	comp=N,1μm,5.6s						
GYA				LR	LR		
	comp=E,6μm,6.8s						
GYA				LR	LR		
	comp=Z,2μm,4.8s						
KMI	**Kunming**	**7.67**	**200**	Pn	**Pn**	**10 43 57.1**	**+0.6**
KMI				Sn	**Sn**	**10 45 22.9**	**-1.1**
KMI				Sg	**Sg**	**10 46 06.8**	**-3.2**
KMI				smax			
	comp=N,120nm,2.2s						
KMI				smax			
	comp=E,110nm,2.4s						
KMI				LR	LR		
	comp=N,2μm,7.3s						
KMI				LR	LR		
	comp=E,4μm,8.9s						
WHN	**Wuhan**	**7.69**	**102**	Pn	**Pn**	**10 43 55.9**	**-1.0**
WHN				Sn	**Sn**	**10 45 19.0**	**-5.6**
WHN				LR	LR		
	comp=N,9μm,6.0s						
WHN				LR	LR		
	comp=E,8μm,7.8s						
WHN				LR	LR		
	comp=Z,4μm,12.6s						
GTA	**Gaotai**	**8.43**	**328**	P	**Pn**	**10 44 07.5**	**+0.5**
GTA				pP		10 44 12.3	
GTA				sP		10 44 15.2	
GTA				S	**Sn**	**10 45 37.4**	**-5.4**
GTA				pmax	pmax		
	comp=Z,18nm,0.8s						
GTA				pmax	pmax		
	comp=Z,52nm,5.1s						
GTA				LR	LR		
	comp=N,2μm,11.1s						
GTA				LR	LR		
	comp=E,3μm,12.3s						
GTA				LR	LR		
	comp=Z,1μm,8.4s						
BTO	**Baotou**	**8.93**	**22**	*e*P	**Pn**	**10 44 12.8**	**-1.1**
BTO				S	**Sn**	**10 46 01.3**	**+6.2**
BTO				LR	LR		
	comp=N,880nm,10.2s						
BTO				LR	LR		
	comp=E,810nm,4.9s						
HHC	**Hu-ho-hao-te**	**9.70**	**28**	*e*P	**Pn**	**10 44 29.7**	**+5.3**
HHC				pP		10 44 32.9	
HHC				sP		10 44 35.7	
HHC				S	**Sn**	**10 46 21.3**	**+7.3**
HHC				sS		10 46 25.9	
HHC				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC				LR	LR		
	comp=N,2μm,8.6s						
HHC				LR	LR		
	comp=E,1μm,7.8s						
HHC				LR	LR		
	comp=Z,880nm,7.7s						
NJ2	**Nanjing**	**11.22**	**88**	*e*P	**Pn**	**10 44 49.5**	**+4.2**
NJ2				pP		10 44 52.8	
NJ2				sP		10 44 56.1	
NJ2				PP		10 44 59.9	
NJ2				S	**Sn**	**10 46 51.4**	**0.0**
NJ2				sS		10 46 56.0	
NJ2				pmax	pmax		
	comp=Z,20nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,110nm,3.5s						
NJ2				LR	LR		
	comp=N,3μm,12.6s						
NJ2				LR	LR		
	comp=E,1μm,8.0s						
NJ2				LR	LR		
	comp=Z,1μm,8.2s						
BJI	**Beijing**	**11.44**	**45**	P	**Pn**	**10 44 48.7**	**+0.4**
BJI				pmax	pmax		
	comp=Z,14nm,0.6s						
BJI				LR	LR		
	comp=N,910nm,10.4s						
BJI				LR	LR		
	comp=E,1μm,10.4s						
BJI				LR	LR		
	comp=Z,290nm,20.2s						
GZH	**Guangzhou**	**11.52**	**142**	P	**Pn**	**10 44 43.7**	**-5.7**
GZH				S	**Sn**	**10 46 50.2**	**-8.5**
GZH				LR	LR		
	comp=N,1μm,6.3s						
GZH				LR	LR		
	comp=E,2μm,6.8s						
LSA	**Lhasa**	**12.69**	**262**	*e*P	**Pn**	**10 45 06.7**	**+1.4**
QZH	**Quanzhou**	**13.59**	**120**	*e*P	**Pn**	**10 45 17.6**	**-0.1**
QZH				S	**Sn**	**10 47 51.4**	**+2.0**
QZH				LR	LR		
	comp=N,5μm,10.0s						
QZH				LR	LR		
	comp=E,3μm,9.0s						
QZH				LR	LR		
	comp=Z,2μm,13.0s						
SHL	**Shillong**	**13.80**	**244**	*e*PKP	**Pn**	**10 45 18.7**	**-1.8**
SHL				*e*S	**Sn**	**10 47 53.5**	**-0.9**
QIZ	**Qiongzhong**	**13.84**	**163**	P	**Pn**	**10 45 21.7**	**+0.6**
QIZ				S	**Sn**	**10 47 56.2**	**+0.7**
QIZ				LR	LR		
	comp=N,1μm,8.2s						
QIZ				LR	LR		
	comp=Z,690nm,9.1s						
CHG	**Chiang Mai**	**14.79**	**206**	⇑P	**Pn**	**10 45 34.9**	**+0.8**
	comp=Z,11nm,1.2s						
CM31	**Chiang Mai Arr**	**15.12**	**205**	*e*Pn	**Pn**	**10 45 38.9**	**+0.4**
	comp=Z,4.6nm,0.5s						
CMAR	**Chiang Mai Arr**	**15.12**	**205**	Pn	**Pn**	**10 45 38.7**	**+0.2**
	comp=Z,0.9nm,0.3s,baz=14,slow=11,SNR=44						
CMAR				LR	LR	10 51 59.5	
	comp=Z,330nm,18.4s,baz=191,slow=39						
SONM	**Songino Array**	**15.44**	**2**	Pn	**Pn**	**10 45 42.8**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=187,slow=14,SNR=7.2						
SONM				Lg		10 50 09.4	
	comp=Z,0.1nm,0.3s,baz=190,slow=23,SNR=2.8						
ULN	**Ulaanbaatar**	**15.50**	**4**	*e*P	**Pn**	**10 45 46.3**	**+3.0**
ULN				*e*		10 48 40.1	
ULN				pmax	pmax		
	comp=Z,11nm,1.1s						
ULN	**Ulaanbaatar**	**15.50**	**4**	*e*Pn	**Pn**	**10 45 46.3**	**+3.0**
	comp=Z,11nm,1.1s						
ULN				*e*Sn	**Sn**	**10 48 40.1**	**+4.5**
YHNB	**Yeheng**	**15.84**	**115**	*e*P	**Pn**	**10 45 53.0**	**+5.1**
	comp=Z,30nm,1.0s						
SSLB	**Suanglung**	**16.01**	**118**	*e*Pn	**Pn**	**10 45 51.8**	**+1.5**
	comp=Z,17nm,0.9s						
KKTK	**Khon Kaen**	**16.18**	**190**	P	**Pn**	**10 45 52.0**	**-0.4**
TAPN	**Taplejung**	**16.31**	**257**	*e*P	**Pn**	**10 45 53.2**	**-0.9**
	comp=Z,58nm,1.0s						
ODAN	**Odare**	**16.77**	**256**	*e*P	**Pn**	**10 45 58.6**	**-1.3**
	comp=Z,26nm,0.5s						
SNY	**Shenyang**	**17.12**	**52**	⇓P	**Pn**	**10 46 10.3**	**+6.0**
SNY				S	**Sn**	**10 49 26.0**	**+11**
SNY				pmax	pmax		
	comp=Z,12nm,0.5s						
SNY				pmax	pmax		
	comp=Z,100nm,4.5s						
SNY				LR	LR		
	comp=E,440nm,19.3s						
SNY				LR	LR		
	comp=Z,440nm,16.2s						
RAMN	**Ramite**	**17.38**	**257**	*e*P	**Pn**	**10 46 04.9**	**-2.7**
	comp=Z,43nm,0.7s						
JIRN	**Jiri**	**17.46**	**259**	*e*P	**Pn**	**10 46 06.8**	**-1.8**
	comp=Z,13nm,0.4s						
GUN	**Gumba**	**17.63**	**260**	*e*P	**Pn**	**10 46 08.8**	**-1.9**
	comp=Z,100nm,0.9s						
WMQ	**Urumqi**	**18.09**	**314**	*e*P	**Pn**	**10 46 19.5**	**+3.2**
WMQ				pmax	pmax		
	comp=Z,16nm,1.0s						
WMQ	**Urumqi**	**18.09**	**314**	SP		10 46 17.0	
WMQ				sP	sP	10 46 24.0	+6.7
WMQ				PP		10 46 31.0	
WMQ				S	**Sn**	**10 49 35.0**	**-3.7**
WMQ				SS		10 49 59.0	
WMQ				pmax	pmax		
	comp=Z,16nm,0.8s						
WMQ				LR	LR		
	comp=N,650nm,6.0s						
WMQ				LR	LR		
	comp=E,350nm,6.0s						
WMQ				LR	LR		
	comp=Z,310nm,6.0s						
PKI	**Pulchoki**	**18.14**	**260**	*e*P	**Pn**	**10 46 14.7**	**-2.3**
	comp=Z,121nm,0.9s						
PKI	**Pulchoki**	**18.14**	**260**	*e*P	**Pn**	**10 46 14.7**	**-2.3**
PKI				pmax	pmax		
	comp=Z,121nm,0.9s						
PKIN	**Phulchoki**	**18.15**	**260**	*e*P	**Pn**	**10 46 14.6**	**-2.5**
	comp=Z,69nm,0.7s						
PKIN	**Phulchoki**	**18.15**	**260**	*e*P	**Pn**	**10 46 15.3**	**-1.8**
	comp=Z,90nm,1.1s						
DMN	**Daman**	**18.38**	**260**	*e*P	**Pn**	**10 46 17.2**	**-2.7**
	comp=Z,72nm,0.9s						
KSRS	**Korea Array**	**18.97**	**68**	P	**Pn**	**10 46 26.4**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=254,slow=10,SNR=23						
CN2	**Changchun**	**19.28**	**48**	*e*P	**Pn**	**10 46 31.2**	**+0.5**
CN2				*e*pP	pP	10 46 35.0	+4.9
CN2				*e*S	**Sn**	**10 50 05.1**	**-2.1**
CN2				pmax	pmax		
	comp=Z,30nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,400nm,11.0s						
CN2				LR	LR		
	comp=E,500nm,11.0s						
CN2				LR	LR		
	comp=Z,300nm,10.0s						
TLY	**Talaya**	**19.33**	**356**	*e*P	**Pn**	**10 46 40.8**	**+10**
TLY				*e*S	**Sn**	**10 50 02.9**	**-5.5**
TLY				pmax	pmax		
	comp=Z,6.0nm,1.4s						
TLY				MLR	MLR		
	comp=Z,90nm,11.0s						
TLY	**Talaya**	**19.33**	**356**	P	**Pn**	**10 46 32.9**	**+1.6**
MOY	**Mondy**	**19.56**	**351**	*e*P	**Pn**	**10 46 41.4**	**+7.4**
IRK	**Irkutsk**	**19.86**	**358**	*e*P	**Pn**	**10 46 41.1**	**+3.5**
IRK				pmax	pmax		
	comp=Z,35nm,1.7s						
MKAR	**Makanchi Array**	**22.90**	**316**	P	**P**	**10 47 08.8**	**0.0**
	comp=Z,9.3nm,1.1s,mb4.1,baz=100,slow=14,SNR=23						
KSH	**Kashi**	**24.95**	**295**	*e*P	**P**	**10 47 32.1**	**+3.6**
KSH				pP		10 47 36.2	
KSH				sP	sP	10 47 39.0	+10
KSH				PP		10 48 10.2	
KSH				PcP	PcP	10 51 06.5	+2.5
KSH				S	**S**	**10 51 53.6**	**+0.7**
KSH				sS	sS	10 52 01.2	+7.7
KSH				SS		10 52 54.6	
KSH				ScP	ScP	10 54 43.6	-0.4
KSH				PcS	PcS	10 54 45.5	+1.4
KSH				ScS	ScS	10 58 31.0	-1.2
KSH				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.3						
KSH				pmax	pmax		
	comp=Z,47nm,3.5s						
KSH				LR	LR		
	comp=N,270nm,10.6s						
KSH				LR	LR		
	comp=E,220nm,6.7s						
KSH				LR	LR		
	comp=Z,160nm,8.7s						
KLR	**Kul'dur**	**25.78**	**42**	*e*P	**P**	**10 47 32.8**	**-3.2**
KLR				MLR	MLR		
	comp=E,500nm,10.0s						
KLR				MLR	MLR		
	comp=Z,700nm,10.0s,MS4.5						
TKM2	**Tokmak 2**	**25.86**	**303**	*e*P	**P**	**10 47 38.4**	**+1.6**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.0						
TKM2	**Tokmak 2**	**25.86**	**303**	*e*P	**P**	**10 47 38.4**	**+1.6**
	comp=Z,3.9nm,0.8s,mb4.0						
ZALV	**Zalesovo Beam**	**26.16**	**332**	P	**P**	**10 47 39.6**	**+0.2**
	comp=Z,2.3nm,0.9s,mb3.7,baz=133,slow=10.0,SNR=2.6						
ZALV				LR	LR	10 57 31.5	
	comp=Z,88nm,18.8s,MS3.3,baz=92,slow=35						
UCH	**Uchtor**	**26.48**	**301**	P	**P**	**10 47 42.0**	**-0.4**
	comp=Z,9.7nm,1.2s,mb4.2						
AAK	**Ala-Archa**	**26.58**	**302**	P	**P**	**10 47 44.9**	**+1.6**
	comp=Z,1.3nm,0.2s,mb4.0,baz=143,slow=10,SNR=2.4						
AAK				LR	LR	11 00 16.0	
	comp=Z,383nm,18.7s,MS4.0,baz=33,slow=41						
AAK	**Ala-Archa**	**26.58**	**302**	*e*P	**P**	**10 47 48.8**	**+5.5**
AAK				pmax	pmax		
	comp=Z,1.0nm,1.4s,mb3.1						
KURK	**Kurchatov**	**27.03**	**321**	P	**P**	**10 47 47.4**	**+0.2**
	comp=Z,5.2nm,0.9s,mb4.0,baz=128,slow=10.0,SNR=12						
KURK	**Kurchatov**	**27.03**	**321**	*e*P	**P**	**10 47 47.5**	**+0.3**
KURK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.2						
KURK	**Kurchatov**	**27.03**	**321**	*e*P	**P**	**10 47 47.5**	**+0.3**
	comp=Z,6.7nm,0.9s,mb4.2						
AML	**Almayashu**	**27.06**	**300**	P	**P**	**10 47 49.5**	**+1.8**
	comp=Z,5.4nm,0.8s,mb4.1						
EKS2	**Erkin-Say**	**27.11**	**301**	P	**P**	**10 47 53.6**	**+5.5**
MJAR	**Matsushiro Arr**	**27.12**	**72**	P	**P**	**10 47 45.9**	**-2.4**
	comp=Z,0.5nm,0.6s,mb3.3,baz=280,slow=9.8,SNR=3.3						
NVS	**Novosibirsk**	**27.45**	**331**	*e*P	**P**	**10 47 54.4**	**+3.4**
PSI	**Prapat**	**30.10**	**193**

comp=Z,3.0nm,0.8s,mb4.0
TIXI Tiksi 41.25 11 *e*P **P 10 49 51.9 +2.0**
comp=Z,3.1nm,0.8s,mb4.0
PETK Petropavlovsk- 42.38 45 P **P 10 49 59.2 -0.2**
comp=Z,2.1nm,0.7s,mb3.9,baz=250,slow=4.3,SNR=2.5
ZEI Tsey 49.01 301 *e*P **P 10 50 54.9 +2.9**
ZEI pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
BILL Bilibino 49.47 26↓ *e*P **P 10 50 54.9 -0.2**
BILL *e* 10 51 00.0
BILL S **S 10 57 52.0 -11**
BILL pmax pmax
comp=Z,6.0nm,1.7s,mb4.3
BILL MLR MLR
comp=Z,200nm,16.0s,MS4.2
KIV Kislovodsk 49.69 303 P **P 10 51 02.0 +4.8**
KIV *e* 10 51 18.0
KIV pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
KIV MLR MLR
comp=Z,100nm,17.0s,MS3.9
OBN Obninsk 52.39 317 P **P 10 51 22.0 +4.7**
OBN *e* 10 51 32.8
OBN pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
OBN MLR MLR
comp=Z,100nm,15.0s,MS4.0
JOF Joensuu 54.63 327 *e*P **P 10 51 32.3 -1.4**
JOF pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
JOF Joensuu 54.63 327 *e*p **P 10 51 32.3 -1.4**
comp=Z,3.3nm,0.8s,mb4.4
JOF Joensuu 54.63 327 *e*p **P 10 51 32.3 -1.4**
comp=Z,3.3nm,0.8s,mb4.4
MBWA Marble Bar 54.93 164 *e*P **P 10 51 36.3 0.0**
comp=Z,44nm,1.5s,mb5.3
KEV Kevo 56.08 336 *e*P **P 10 51 44.6 +0.6**
KEV pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
KEV Kevo 56.08 336 *e*p **P 10 51 44.6 +0.6**
comp=Z,0.6nm,0.4s,mb4.0
KEV Kevo 56.08 336 *e*p **P 10 51 44.6 +0.6**
comp=Z,0.6nm,0.4s,mb4.0
ARCES ARCESS Array B 56.62 335 P **P 10 51 47.6 -0.3**
comp=Z,1.6nm,0.7s,mb4.2,baz=96,slow=8.4,SNR=4.9
FINES FINESS Array B 57.22 326 P **P 10 51 51.6 -0.6**
comp=Z,2.0nm,0.8s,mb4.2,baz=99,slow=8.3,SNR=7.0
BRTR Keskin Array B 57.23 299 P **P 10 51 52.6 0.0**
comp=Z,1.4nm,0.9s,mb4.0,baz=126,slow=6.3,SNR=6.3
AKASG Malin Array Be 57.45 313 P **P 10 51 53.3 -0.7**
comp=Z,2.6nm,0.5s,mb4.5,baz=68,slow=7.6,SNR=4.3
MMAI Mount Meron Ar 58.01 291 LR LR 11 23 49.6
comp=Z,46nm,19.9s,MS3.6,baz=100,slow=43
WRAB Tennant Creek 58.85 148 *e*P **P 10 52 03.5 -0.6**
WRAB pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
WRAB Tennant Creek 58.85 148 *e*P **P 10 52 03.5 -0.6**
comp=Z,9.6nm,0.6s,mb5.0
WRA Warramunga Arr 58.86 148 P **P 10 52 03.2 -1.0**
comp=Z,8.1nm,0.6s,mb4.9,baz=341,slow=7.9,SNR=93
WRA Warramunga Arr 58.86 148 P **P 10 52 03.1 -1.0**
BUR08 Bucovina Ar. S 60.79 310 P **P 10 52 17.0 -0.2**
KWP Kalwaria Pacla 61.77 313 *e*P **P 10 52 24.6 +0.8**
KWP pmax pmax
comp=Z,7.0nm,0.5s,mb5.0
KWP Kalwaria Pacla 61.77 313 *e*P **P 10 52 24.6 +0.8**
comp=Z,7.3nm,0.5s,mb5.1
ASAR Alice Springs 61.95 150 P **P 10 52 24.8 -0.5**
comp=Z,4.4nm,0.6s,mb4.7,baz=332,slow=6.4,SNR=82
NB2 NORSAR Subarra 64.27 327 P **P 10 52 38.9 -1.3**
comp=Z,1.5nm,0.6s,mb4.2,baz=72,slow=6.9
NOA NORSAR Array B 64.27 327 P **P 10 52 39.0 -1.2**
comp=Z,1.3nm,0.7s,mb4.1,baz=71,slow=6.7,SNR=5.5
NOA LR LR 11 21 07.5
comp=Z,38nm,19.6s,MS3.6,baz=125,slow=36
BPAW Bear Paw Mtn. 66.87 28 *e*P **P 10 52 57.3 +0.3**
comp=Z,12nm,1.5s,mb4.7
GERES GERESS Array B 67.56 314 P **P 10 53 01.8 +0.1**
comp=Z,0.8nm,0.6s,mb4.0,baz=42,slow=4.2,SNR=8.7
COLA College 67.71 26 *e*P **P 10 53 02.6 +0.3**
COLA pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
COLA College 67.71 26 *e*P **P 10 53 02.6 +0.3**
comp=Z,4.3nm,0.8s,mb4.5
KDAK Kodiak Island 69.06 34 P **P 10 53 10.1 -0.8**
comp=Z,5.5nm,0.9s,mb4.5,baz=308,slow=12,SNR=2.7
INK Inuvik 70.52 20 P **P 10 53 19.8 0.0**
comp=Z,1.3nm,0.7s,mb4.0,baz=322,slow=7.9,SNR=4.6
INK Inuvik 70.52 20 *e*P **P 10 53 20.0 +0.3**
INK pmax pmax
comp=Z,1.0nm,0.5s
INK Inuvik 70.52 20 *e*P **P 10 53 20.0 +0.3**
comp=Z,1.2nm,0.5s,mb4.1
BMRM Bremner River 70.99 29 *e*P **P 10 53 25.0 +2.3**
comp=Z,7.4nm,0.7s,mb4.7
STKA Stephens Creek 72.41 148 P **P 10 53 30.5 -1.0**
comp=Z,1.7nm,0.5s,mb4.2,baz=319,slow=8.2,SNR=7.4
LPG La Plagne 73.30 313 *e*P **P 10 53 37.0 +0.2**
comp=Z,1.1nm,0.5s,mb4.7
LPG La Plagne 73.30 313 *e*P **P 10 53 37.0 +0.2**
LPG pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
LPG La Plagne 73.30 313 *e*P **P 10 53 37.0 +0.2**
comp=Z,5.3nm,0.5s,mb4.7
LPL La Plagne 73.30 314 *e*P **P 10 53 36.8 0.0**
comp=Z,8.5nm,0.6s,mb4.6
LPL La Plagne 73.30 314 *e*P **P 10 53 36.8 0.0**
LPL pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
LPL La Plagne 73.30 314 *e*P **P 10 53 36.8 0.0**
comp=Z,4.3nm,0.6s,mb4.6
YKA Yellowknife Ar 80.08 18 P **P 10 54 14.5 -0.4**
comp=Z,0.8nm,0.6s,mb3.8,baz=328,slow=5.6,SNR=3.8
TORD Torodi Ar. Bea 94.46 288 LR LR 11 45 41.4
comp=Z,49nm,18.2s,MS4.0,baz=160,slow=40
PDAR Pinedale Array 98.55 25 LR LR 11 46 25.3
comp=Z,42nm,18.8s,MS4.0,baz=132,slow=39
LPAZ La Paz 162.99 339 PKP PKPdf 11 02 08.0 -0.4
comp=Z,1.2nm,1.0s,baz=22,slow=5.4,SNR=3.2

*ISCJB **07** 10:52:55.1±1.7,31°.41N±0°.07×142°.8E±0°.3,h60km±15km, mb3.6/5,Error ellipse: s-maj=42.1km s-min=9.9km az=169.8*
*IDC **07** 10:52:56.1±3.0,30°.79N×140°.92E,h0km,mb3.6/5, mb1 3.6/7,mb1mx3.4/27,mbtmp3.5/7,ML3.3/2,Error ellipse: s-maj=121.6km s-min=19.1km az=69.0*
*JMA **07** 10:52:58.9±0.4,31°.49N×142°.44E,h10km,M2.9*
ISC 07 10:52:56.7±1.4,31°.34N±0°.07×142°.7E±0°.3,h50km±13km, n14,σ1°.9±14°.18,mb3.6/5,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**3.60**	**337**	P		**Pn**	**10 53 50.6**	**+0.7**
BSO1				*e*S		**Sn**	**10 54 32.4**	**+1.3**
CBIJ	**Chichi jima**	**4.25**	**186**	Pn		**Pn**	**10 53 56.3**	**-2.7**
	4.4nm,0.3s,baz=325,slow=18,SNR=5.2							
CBIJ				Sn		**Sn**	**10 54 39.8**	**-7.6**
	3.9nm,0.3s,baz=294,slow=20,SNR=3.9							
JHU	**Hanno**	**5.32**	**329**	P		**Pn**	**10 54 14.4**	**+0.9**
JHO	**Hitachi**	**5.54**	**342**	P		**Pn**	**10 54 17.6**	**+1.1**
JHO				S		**Sn**	**10 55 17.4**	**-1.5**
JRY	**Ryogami san**	**5.62**	**327**	P		**Pn**	**10 54 18.8**	**+1.1**
JAG	**Ashikaga**	**5.73**	**333**	*e*S		**Sn**	**10 55 22.2**	**-1.5**
JFK	**Kawauchi**	**6.19**	**347**	P		**Pn**	**10 54 26.9**	**+1.4**
JFK				*e*S		**Sn**	**10 55 33.2**	**-1.7**
MJAR	**Matsushiro Arr**	**6.38**	**326**	Pn		**Pn**	**10 54 28.3**	**+0.3**
	0.4nm,0.3s,baz=162,slow=12,SNR=5.3							
JMK	**Ichinoseki**	**7.69**	**351**	*e*S		**Sn**	**10 56 10.9**	**-0.7**
SONM	**Songino Array**	**32.09**	**311**	P		**P**	**10 59 19.9**	**+1.0**
	0.4nm,0.3s,mb3.7,baz=106,slow=9.4,SNR=4.3							
MKAR	**Makanchi Array**	**48.20**	**307**	P		**P**	**11 01 31.2**	**-0.9**
	0.1nm,0.3s,mb3.3,baz=74,slow=5.2,SNR=4.2							
KURK	**Kurchatov**	**50.39**	**312**	P		**P**	**11 01 48.2**	**-0.6**
	0.6nm,0.5s,mb3.9,baz=88,slow=7.9,SNR=3.2							
WRA	**Warramunga Arr**	**51.62**	**190**	P		**P**	**11 01 58.4**	**+0.2**
	0.2nm,0.2s,mb3.6,baz=6.4,slow=7.7,SNR=15							
ASAR	**Alice Springs**	**55.34**	**190**	P		**P**	**11 02 26.1**	**+0.7**
	0.2nm,0.3s,mb3.6,baz=4.5,slow=5.2,SNR=8.0							

*IDC **07** 11:06:37.0±0.9,35°.01N×81°.28E,h0km,mb3.6/8, mb1 3.7/12,mb1mx3.6/29,mbtmp3.6/12,ML3.7/3,MS3.1/7, Ms1 3.1/7,ms1mx2.7/34,Error ellipse: s-maj=27.4km s-min=14.6km az=53.0*

*ISCJB **07** 11:06:37.9±0.4,35°.15N±0°.05×81°.5E±0°.1,h10km, mb3.5/10,MS3.1/4,Error ellipse: s-maj=13.3km s-min=5.0km az=152.1*
*NEIC **07** 11:06:39.8±0.5,35°.07N×81°.36E,h10km,mb3.7/3,Error ellipse: s-maj=14.6km s-min=7.0km az=57.0*
*BJI **07** 11:06:43.4,35°.47N×81°.66E,h16km,mb4.1/2,ML4.0/4, Ms3.8/2,Ms7 3.5/1*
ISC 07 11:06:40.1±0.4,35°.16N±0°.05×81°.49E±0°.10,h10km,n39, σ1°.22/37,mb3.5/10,MS3.1/4,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**6.19**	**316**	*e*Pn		**Pn**	**11 08 14.0**	**+2.5**
KSH				*e*Sn		**Sn**	**11 09 28.7**	**+6.4**
KSH				LR		LR		
	comp=N,500nm,4.8s							
KSH				LR		LR		
	comp=E,470nm,4.1s							
KSH				LR		LR		
	comp=Z,240nm,2.8s							
DMN	**Daman**	**8.13**	**157**	*e*P		**Pn**	**11 08 41.7**	**+3.4**
	comp=Z,12nm,0.5s							
DMN	**Daman**	**8.13**	**157**	*e*P		**Pn**	**11 08 41.7**	**+3.4**
	comp=Z,12nm,0.5s							
GUN	**Gumba**	**8.13**	**151**	*e*P		**Pn**	**11 08 38.9**	**+0.6**
	comp=Z,9.1nm,0.3s							
GUN	**Gumba**	**8.13**	**151**	*e*P		**Pn**	**11 08 38.9**	**+0.6**
	comp=Z,9.1nm,0.3s							
PKIN	**Phulchoki**	**8.26**	**155**	*e*P		**Pn**	**11 08 40.3**	**+0.3**
	comp=Z,17nm,0.5s							
PKIN	**Phulchoki**	**8.26**	**155**	*e*P		**Pn**	**11 08 40.5**	**+0.5**
	comp=Z,16nm,0.5s							
PKI	**Pulchoki**	**8.27**	**155**	*e*P		**Pn**	**11 08 40.3**	**+0.2**
	comp=Z,15nm,0.5s							
JIRN	**Jiri**	**8.48**	**151**	*e*P		**Pn**	**11 08 43.3**	**+0.3**
	comp=Z,14nm,0.3s							
JIRN	**Jiri**	**8.48**	**151**	*e*P		**Pn**	**11 08 43.3**	**+0.3**
	comp=Z,14nm,0.3s							
UCH	**Uchtor**	**8.92**	**324**	*e*Pn		**Pn**	**11 08 50.2**	**+1.2**
	comp=Z,11nm,0.8s							
UCH				*e*Sg		Sn	11 11 21.0	+52
TKM2	**Tokmak 2**	**9.01**	**331**	*e*Pn		**Pn**	**11 08 50.6**	**+0.5**
	comp=Z,5.2nm,0.7s							
AAK	**Ala-Archa**	**9.24**	**326**	Pg		Px	11 09 25.1	
	comp=Z,0.0nm,0.3s,baz=159,slow=11,SNR=4.8							
AAK				Lg			11 11 31.2	
	comp=Z,0.0nm,0.3s,baz=45,slow=20,SNR=3.2							
AAK				LR		LR	11 13 01.1	
	comp=Z,78nm,21.1s,baz=185,slow=41							
AML	**Almayashu**	**9.25**	**321**	Pn		**Pn**	**11 08 56.5**	**+2.9**
RAMN	**Ramite**	**9.28**	**150**	*e*P		**Pn**	**11 08 52.7**	**-1.3**
	comp=Z,22nm,0.5s							
RAMN	**Ramite**	**9.28**	**150**	*e*P		**Pn**	**11 08 52.7**	**-1.3**
	comp=Z,22nm,0.5s							
ODAN	**Odare**	**9.69**	**147**	*e*P		**Pn**	**11 09 00.8**	**+1.2**
	comp=Z,21nm,0.8s							
ODAN	**Odare**	**9.69**	**147**	*e*P		**Pn**	**11 09 00.8**	**+1.2**
	comp=Z,21nm,0.8s							
WMQ	**Urumqi**	**9.89**	**27**	P		**Pn**	**11 09 02.5**	**+0.3**
KBL	**Kabul**	**10.25**	**270**	*e*Pn		**Pn**	**11 09 03.2**	**-4.1**
	comp=Z,5.3nm,0.5s							
MKAR	**Makanchi Array**	**11.64**	**3**	Pn		**Pn**	**11 09 25.7**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=169,slow=11,SNR=34							
KURK	**Kurchatov**	**15.69**	**353**	Pn		**Pn**	**11 10 16.7**	**-4.4**
	comp=Z,0.1nm,0.3s,baz=175,slow=12,SNR=7.8							
KURK				LR		LR	11 17 18.0	
	comp=Z,58nm,19.8s,baz=185,slow=41							
KURK	**Kurchatov**	**15.69**	**353**	*e*Pn		**Pn**	**11 10 18.2**	**-2.9**
KURK				LR		LR	11 17 18.0	
ZALV	**Zalesovo Beam**	**18.93**	**6**	P		**Pn**	**11 11 00.9**	**-0.7**
	baz=196,slow=10,SNR=4.7							
ZALV				LR		LR	11 19 03.1	
	comp=Z,26nm,19.0s,baz=182,slow=39							
BVAR	**Borovoye Array**	**19.52**	**340**	P		**Pn**	**11 11 07.3**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=146,slow=13,SNR=3.3							
BRVK	**Borovoye**	**19.58**	**340**	*e*P		**Pn**	**11 11 09.1**	**-0.4**
	comp=Z,3.0nm,0.7s							
ABKAR	**Akbulak array**	**21.19**	**318**	*e*P		**P**	**11 11 27.1**	**+1.5**
	comp=Z,1.4nm,0.6s,mb3.5							
SONM	**Songino Array**	**22.43**	**48**	P		**P**	**11 11 39.4**	**+0.5**
	comp=Z,0.6nm,0.8s,mb3.1,baz=241,slow=4.8,SNR=2.5							
SONM				LR		LR	11 20 56.9	
	comp=Z,42nm,20.2s,MS2.9,baz=89,slow=38							
CMAR	**Chiang Mai Arr**	**22.73**	**133**	P		**P**	**11 11 42.2**	**-0.1**
	comp=Z,1.4nm,0.4s,mb3.8,baz=306,slow=11,SNR=6.0							
ULN	**Ulaanbaatar**	**22.85**	**48**	*e*P		**P**	**11 11 44.7**	**+1.3**
	comp=Z,0.8nm,0.4s,mb3.5							
AKTK	**Aktyubinsk**	**22.88**	**319**	P		**P**	**11 11 43.1**	**-0.5**
AKTK				LR		LR	11 21 27.4	
AKTO	**Aktyubinsk**	**22.88**	**319**	P		**P**	**11 11 43.1**	**-0.5**
	comp=Z,0.7nm,0.5s,mb3.4,baz=124,slow=15,SNR=2.7							
AKTO				LR		LR	11 21 27.4	
	comp=Z,52nm,20.2s,MS3.0,baz=303,slow=39							
KSRS	**Korea Array**	**37.20**	**73**	LR		LR	11 29 14.6	
	comp=Z,23nm,18.7s,MS3.0,baz=245,slow=36							
AKASG	**Malin Array Be**	**40.42**	**309**	P		**P**	**11 14 16.1**	**-2.2**
	comp=Z,0.9nm,0.5s,mb3.8,baz=81,slow=7.2,SNR=4.5							
MLR	**Muntele Rosu**	**42.82**	**301**	LR		LR	11 35 36.5	
	comp=Z,51nm,19.7s,MS3.4,baz=328,slow=41							
FINES	**FINESS Array B**	**43.43**	**325**	P		**P**	**11 14 42.3**	**-0.5**
	comp=Z,0.9nm,0.6s,mb3.6,baz=130,slow=11,SNR=4.0							
WRA	**Warramunga Arr**	**74.26**	**129**	P		**P**	**11 18 16.0**	**-1.6**
	comp=Z,0.4nm,0.8s,mb3.4,baz=332,slow=5.7,SNR=4.0							
TORD	**Torodi Ar. Bea**	**74.28**	**275**	P		**P**	**11 18 14.6**	**-3.3**
	comp=Z,0.7nm,0.5s,mb3.8,baz=43,slow=5.1,SNR=9.1							
ASAR	**Alice Springs**	**76.73**	**132**	P		**P**	**11 18 30.7**	**-1.0**
	comp=Z,0.3nm,0.7s,mb3.3,baz=318,slow=6.7,SNR=3.1							

*TAP **07** 11:13:09.1,24°.92N×122°.20E,h131km,ML3.6,C*
*ISCJB **07** 11:13:09.8±0.6,24°.85N±0°.04×122°.22E±0°.02, h126km±4km,Error ellipse: s-maj=6.0km s-min=3.3km az=164.1*
*JMA **07** 11:13:10.4±0.2,24°.95N×122°.24E,h118km±3km,M2.4*
ISC 07 11:13:10.1±0.6,24°.87N±0°.04×122°.21E±0°.02,h126km±5km, n46,σ0°.70/81,2C-3D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.24**	**305**	P		**Pn**	**11 13 27.4**	**-0.2**
	baz=296							
TWC	**Suao**	**0.42**	**232**	*i* P		**Pn**	**11 13 28.1**	**-0.3**
	baz=229							
TWC				*e*S		**Sn**	**11 13 41.9**	**-0.2**
	baz=229							
ILA	**Ilan**	**0.43**	**256**	*e*S		**Sn**	**11 13 43.0**	**+0.9**
	baz=258							
NWF	**Wu-fen Shan**	**0.44**	**297**	*i* P		**Pn**	**11 13 28.2**	**-0.2**
	baz=285							
NWF				*e*S		**Sn**	**11 13 41.4**	**-0.9**
	baz=285							
TWE	**Neicheng**	**0.51**	**253**	P		**Pn**	**11 13 28.5**	**-0.3**
	baz=251							
TWE				*e*S		**Sn**	**11 13 44.1**	**+1.2**
	baz=251							
TWA	**Mucha**	**0.58**	**281**	*i* P		**Pn**	**11 13 28.7**	**-0.5**
	baz=273							
TWA				S		**Sn**	**11 13 44.8**	**+1.1**
	baz=273							
ENA	**Nanau**	**0.61**	**224**	*i* P		**Pn**	**11 13 29.7**	**+0.2**
	baz=216							
ENA				S		**Sn**	**11 13 44.7**	**+0.6**
	baz=216							
ENTT	**Nioudou**	**0.63**	**249**	*i* P		**Pn**	**11 13 29.7**	**+0.1**
	baz=245							
ENTT				S		**Sn**	**11 13 45.1**	**+0.8**
	baz=245							
TAP1	**Taipei**	**0.64**	**285**	*e*P		**Pn**	**11 13 29.6**	**-0.1**
	baz=277							
TWY	**Chenhua**	**0.68**	**306**	P		**Pn**	**11 13 29.5**	**-0.5**
	baz=301							
TWY				*e*S		**Sn**	**11 13 44.3**	**-0.7**
	baz=301							
TWS1	**Kuangyinshan**	**0.75**	**288**	P		**Pn**	**11 13 30.1**	**-0.4**
	baz=288							
TWS1				*e*S		**Sn**	**11 13 46.7**	**+0.7**
	baz=288							
PCYT	**Pengchaiyu**	**0.77**	**351**	*e*P		**Pn**	**11 13 30.3**	**-0.3**
	baz=349							
NSK	**Sanguang**	**0.80**	**256**	↓*i* P		**Pn**	**11 13 30.7**	**-0.2**
	baz=246							
NSK				S		**Sn**	**11 13 46.0**	**-0.6**
	baz=246							
YOJ	**Yonaguni jima**	**0.84**	**119**	P		**Pn**	**11 13 31.0**	**-0.2**
YOJ				*e*S		**Sn**	**11 13 46.3**	**-0.9**
NNS	**Nan Shan**	**0.87**	**241**	↓*i* P		**Pn**	**11 13 31.8**	**+0.3**
	baz=238							
NNS				S		**Sn**	**11 13 48.3**	**+0.6**
	baz=238							
NCU	**National Centr**	**0.93**	**276**	P		**Pn**	**11 13 31.9**	**-0.1**
	baz=266							
NCU				*e*S		**Sn**	**11 13 48.9**	**+0.2**
	baz=266							
TWD	**Chiawan**	**0.96**	**215**	P		**Pn**	**11 13 32.1**	**-0.3**
	baz=211							
TWD				S		**Sn**	**11 13 48.7**	**-0.6**
	baz=211							
HWA	**Hwalien**	**1.04**	**212**	*e*P		**Pn**	**11 13 33.4**	**+0.3**
	baz=218							
WHF	**Hehuan Shan**	**1.12**	**230**	↓*i* P		**Pn**	**11 13 34.6**	**+0.7**
	baz=228							
WHF				S		**Sn**	**11 13 52.7**	**+0.7**
	baz=228							
NSTT	**Nanjuang**	**1.12**	**258**	*i* P		**Pn**	**11 13 33.6**	**-0.3**
	baz=250							
NSTT				S		**Sn**	**11 13 51.1**	**-0.9**
	baz=250							
TWT	**Tachien**	**1.12**	**237**	*i* P		**Pn**	**11 13 34.9**	**+0.9**
	baz=240							
TWT				S		**Sn**	**11 13 53.1**	**+1.1**
	baz=240							
HSN	**Hsinchu**	**1.13**	**267**	*e*P		**Pn**	**11 13 33.4**	**-0.5**
	baz=259							
HSN				*e*S		**Sn**	**11 13 51.1**	**-0.9**
	baz=259							
ESL	**Shilin**	**1.27**	**214**	P		**Pn**	**11 13 34.6**	**-0.8**
	baz=217							
ESL				*e*S		**Sn**	**11 13 54.0**	**-0.6**
	baz=217							
NSY	**Sanyi**	**1.39**	**251**	*e*P		**Pn**	**11 13 36.9**	**+0.1**
	baz=250							
NSY				*e*S		**Sn**	**11 13 56.8**	**-0.2**
	baz=250							
TWQ1	**Liyutan**	**1.41**	**249**	↑*i* P		**Pn**	**11 13 36.8**	**-0.1**
	baz=247							
TWQ1				S		**Sn**	**11 13 56.8**	**-0.5**
	baz=247							
IRIF	**Iriomote-Funau**	**1.48**	**111**	P		**Pn**	**11 13 37.5**	**-0.3**
IRIF				*e*S		**Sn**	**11 13 58.8**	**-0.1**
SMLT	**Sun Moon Lake**	**1.55**	**231**	↑*i* P		**Pn**	**11 13 39.1**	**+0.6**
	baz=229							
SMLT				S		**Sn**	**11 14 00.9**	**+0.8**
	baz=229							
TYC	**Yuchr**	**1.56**	**232**	P		**Pn**	**11 13 39.0**	**+0.3**
	baz=239							
TYC				S		**Sn**	**11 14 00.7**	**+0.3**
	baz=239							
EHY	**Hungye**	**1.58**	**211**	*e*P		**Pn**	**11 13 39.2**	**+0.3**
	baz=209							
EHY				*e*S		**Sn**	**11 13 59.4**	**-1.4**
	baz=209							
HATJ	**Hateruma jima**	**1.67**	**119**	P		**Pn**	**11 13 40.1**	**+0.2**
HATJ				*e*S		**Sn**	**11 14 03.0**	**+0.4**
TWF1	**Yuli**	**1.73**	**209**	*e*P		**Pn**	**11 13 39.8**	**-0.9**
	baz=214							
TWF1				*e*S		**Sn**	**11 14 02.9**	**-0.9**
	baz=214							
JKRS	**Kuro-shima**	**1.76**	**111**	P		**Pn**	**11 13 41.1**	**+0.1**
JKRS				*e*S		**Sn**	**11 14 04.5**	**0.0**
YUS	**Yu-Shan**	**1.79**	**220**	*e*P		**Pn**	**11 13 42.4**	**+1.1**
	baz=211							
YUS				S		**Sn**	**11 14 07.1**	**+1.9**
	baz=211							
JIJ	**Ishigaki jima**	**1.83**	**106**	P		**Pn**	**11 13 41.6**	**-0.3**
JIJ				*e*S		**Sn**	**11 14 05.6**	**-0.5**
ALS	**Alishan**	**1.86**	**224**	*e*P		**Pn**	**11 13 43.6**	**+1.3**
	baz=231							
ALS				*e*S		**Sn**	**11 14 07.0**	**+0.2**
	baz=231							
CHN5	**Tsauling**	**1.89**	**228**	*i* P		**Pn**	**11 13 43.3**	**+0.8**
	baz=234							
CHN5				S		**Sn**	**11 14 07.8**	**+0.5**
	baz=234							
ELDTW	**Lidau**	**2.00**	**213**	*e*P		**Pn**	**11 13 43.7**	**-0.2**
	baz=205							
ELDTW				*e*S		**Sn**	**11 14 09.2**	**-0.5**
	baz=205							
WSF	**Szhu**	**2.19**	**236**	*e*S		**Sn**	**11 14 13.6**	**-0.3**
	baz=241							
TWK	**Hsinying**	**2.24**	**225**	*e*S		**Sn**	**11 14 15.0**	**-0.1**
	baz=224							
CHN1	**Nanshi**	**2.27**	**223**	*e*P		**Pn**	**11 13 49.4**	**+2.0**
	baz=221							
CHN1				*e*S		**Sn**	**11 14 15.9**	**0.0**
	baz=221							
JTJ	**Tarama**	**2.28**	**95**	P		**Pn**	**11 13 47.8**	**+0.4**
JTJ				*e*S		**Sn**	**11 14 16.1**	**+0.2**
TWG	**Pinlang**	**2.29**	**207**	*e*S		**Sn**	**11 14 15.0**	**-1.2**
	baz=199							
SGST	**Jiashian**	**2.32**	**220**	*e*S		**Sn**	**11 14 16.1**	**-0.8**
	baz=227							
PNG	**Penghu**	**2.75**	**242**	*e*S		**Sn**	**11 14 23.9**	**-2.7**
	baz=236							
JOGS	**Gusukube**	**2.91**	**91**	P		**Pn**	**11 13 56.0**	**+0.6**
JOGS				*e*S		**Sn**	**11 14 30.5**	**+0.2**
JKE	**Kume jima 2**	**4.38**	**70**	P		**Pn**	**11 14 14.5**	**-0.4**

*ISCJB **07** 11:13:29.1±0.7,13°.18N±0°.10×92°.7E±0°.1,h33km,mb3.8/9, Error ellipse: s-maj=19.7km s-min=7.8km az=139.8*
*NEIC **07** 11:13:31.3±0.7,13°.18N×92°.65E,h35km,mb4.4/7,Error ellipse: s-maj=18.9km s-min=6.5km az=53.0*
*IDC **07** 11:13:32.6±1.1,13°.17N×92°.87E,h39km±6km,mb3.5/7, mb1 3.6/8,mb1mx3.4/24,mbtmp3.4/8,Error ellipse: s-maj=48.6km s-min=12.8km az=62.0*
ISC 07 11:13:31.2±0.7,13°.17N±0°.10×92°.6E±0°.1,h35km, (h42km±6km:pP-P),n34,σ0°.74/33,mb3.8/10,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**1.50**	**176**	*e*PKP		x	11 14 02.0	
CMAR	**Chiang Mai Arr**	**8.04**	**48**	Pn		**Pn**	**11 15 24.8**	**-0.7**
	baz=237,slow=13,SNR=2.9							
CMAR				Sn		**Sn**	**11 17 08.8**	**+14**
	0.4nm,0.3s,baz=235,slow=27,SNR=5.1							
CMAR	**Chiang Mai Arr**	**8.04**	**48**	Pn		**Pn**	**11 15 24.8**	**-0.7**
CMAR				Sn		**Sn**	**11 17 08.8**	**+14**
BOK	**Bokaro**	**12.35**	**330**	*e*PKP		**Pn**	**11 16 23.1**	**-1.5**
BOK				*e*S		**Sn**	**11 18 24.8**	**-16**
HYB	**Hyderabad**	**14.22**	**289**	*i* P		**Pn**	**11 16 57.5**	**+7.3**
ODAN	**Odare**	**14.48**	**341**	*e*P		**Pn**	**11 16 53.8**	**+0.1**
RAMN	**Ramite**	**14.83**	**339**	*e*P		**Pn**	**11 16 58.0**	**-0.4**
	22nm,0.4s							
TAPN	**Taplejung**	**14.84**	**343**	*e*P		**Pn**	**11 16 58.1**

KURK pP pP 11 21 07.2 +1.6
comp=Z,3.4nm,0.8s,baz=160,slow=7.8,SNR=11
KSRS Korea Array 39.67 46 pP pP 11 21 11.2 +1.0
comp=Z,1.4nm,0.8s,baz=238,slow=9.2,SNR=4.8
ZAA0 Zalesovo Array 41.15 353 P **P 11 21 12.9 +1.0**
ZALV Zalesovo Beam 41.15 353 P **P 11 21 12.6 +0.7**
comp=Z,0.4nm,0.3s,mb3.5,baz=187,slow=5.7,SNR=3.2
ZALV pP pP 11 21 24.3 +2.1
comp=Z,2.6nm,0.7s,baz=176,slow=8.8,SNR=7.6
BVAR Borovoye Array 43.53 341 P **P 11 21 32.7 +1.4**
comp=Z,0.3nm,0.4s,mb3.3,baz=160,slow=4.6,SNR=2.7
BVAR pP pP 11 21 44.2 +2.5
comp=Z,0.8nm,0.7s,baz=144,slow=10,SNR=3.1
ABKAR Akbulak array 44.92 330 *e*P **P 11 21 42.0 -0.5**
comp=Z,0.6nm,0.4s,mb3.8
WRA Warramunga Arr 52.60 128 P **P 11 22 41.3 -0.6**
comp=Z,0.9nm,0.5s,mb3.9,baz=309,slow=8.0,SNR=17
WRA pP pP 11 22 52.6 +0.1
comp=Z,1.2nm,0.7s,baz=305,slow=8.3,SNR=5.4
WRA PcP PcP 11 23 52.1 +0.3
comp=Z,0.5nm,0.5s,baz=319,slow=3.1,SNR=12
WRAB Tennant Creek 52.61 128 *e*P **P 11 22 42.0 0.0**
comp=Z,8.4nm,1.3s,mb4.5
ASAR Alice Springs 54.49 132 P **P 11 22 55.6 -0.1**
comp=Z,0.7nm,0.5s,mb3.8,baz=308,slow=6.7,SNR=18
ASAR pP pP 11 23 06.7 +0.4
comp=Z,0.8nm,0.7s,baz=309,slow=6.8,SNR=4.4
BRTR Keskin Array B 57.92 309 pP pP 11 23 30.2 -0.5
comp=Z,1.1nm,0.8s,baz=114,slow=6.0,SNR=5.0

IDC 07 11:24:12.3±14.0, 24°.07S×69°.29E, h0km, mb4.0/6, mb1 4.0/6, mb1mx3.7/26, mbtmp4.0/6, Error ellipse: s-maj=497.6km s-min=27.1km az=51.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NWAO	**Narrogin (SRO)**	**42.74**	**113**	P	P	11 32 11.7	+0.2
	15nm,1.2s,baz=258,slow=7.8,SNR=4.1						
ASAR	**Alice Springs**	**58.59**	**104**	P	P	11 34 11.2	0.0
	0.4nm,0.7s,baz=245,slow=6.4,SNR=7.2						
WRA	**Warramunga Arr**	**59.98**	**100**	P	P	11 34 20.9	0.0
	0.3nm,0.7s,baz=252,slow=10,SNR=3.0						
MKAR	**Makanchi Array**	**71.50**	**9**	P	P	11 35 33.5	-1.1
	0.2nm,0.3s,baz=181,slow=2.8,SNR=4.3						
KURK	**Kurchatov**	**74.91**	**6**	P	P	11 35 55.6	+1.0
	0.6nm,0.2s,baz=207,slow=8.1,SNR=3.0						
ZALV	**Zalesovo Beam**	**78.84**	**9**	P	P	11 36 16.1	-0.7
	0.6nm,0.5s,baz=177,slow=2.8,SNR=3.6						

IGQ 07 11:28:41.3, 2°.65S×78°.31W, h109km±4km, Mb4.0, Ms3.8, 12C-2D, Error ellipse: s-maj=9.8km s-min=4.7km az=172.3, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACE	**Macas**	**0.41**	**16**	⇑S	Sn	11 29 09.8	+0.2
MACE	**Macas**	**0.41**	**16**	⇑P	Pn	11 28 58.3	+0.9
RIOE	**Riobamba**	**0.95**	**340**	P	Pn	11 29 02.7	+0.8
ARRY	**Arrayan**	**1.15**	**353**	⇑P	Pn	11 29 04.3	+0.3
PATA	**Patacocha**	**1.15**	**354**	⇑P	Pn	11 29 04.8	+0.9
PATA	**Patacocha**	**1.15**	**354**	⇑S	Sn	11 29 21.6	+0.5
ULBA	**Ulba**	**1.20**	**355**	⇑S	Sn	11 29 21.6	-0.6
ULBA	**Ulba**	**1.20**	**355**	⇑P	Pn	11 29 05.3	+0.8
IGUA	**Igualata**	**1.20**	**344**	P	Pn	11 29 05.5	+0.9
JUI6	**Juive**	**1.23**	**353**	⇑S	Sn	11 29 22.9	+0.2
JUI6	**Juive**	**1.23**	**353**	⇑P	Pn	11 29 05.6	+0.7
RUN5	**Runtun**	**1.23**	**355**	P	Pn	11 29 05.3	+0.4
RUN5	**Runtun**	**1.23**	**355**	S	Sn	11 29 22.2	-0.7
PISA	**Pisayambo**	**1.58**	**357**	⇑P	Pn	11 29 10.4	+1.3
PISA	**Pisayambo**	**1.58**	**357**	⇑S	Sn	11 29 29.9	-0.3
MOV1	**Cotopaxi Vol s**	**1.93**	**356**	P	Pn	11 29 15.7	+2.3
TAMB	**Tambo**	**1.95**	**358**	⇓S	Sn	11 29 42.4	+4.2
TAMB	**Tambo**	**1.95**	**358**	⇓P	Pn	11 29 15.3	+1.7
COV1	**Cotopaxi Volc**	**1.98**	**359**	P	Pn	11 29 16.3	+2.3
VC1	**Cotopaxi 1**	**2.00**	**357**	P	Pn	11 29 16.0	+1.7
PITA	**Cotopaxi Volc**	**2.08**	**357**	P	Pn	11 29 17.1	+1.8
ANTI	**Antisana**	**2.19**	**4**	P	Pn	11 29 17.7	+1.0
CHAR	**Charly**	**2.63**	**14**	P	Pn	11 29 22.8	+0.4
LAV3	**Lava3-Reventad**	**2.63**	**15**	⇑P	Pn	11 29 22.6	+0.2
CONE	**Cono NE Rev Vo**	**2.65**	**15**	P	Pn	11 29 22.6	-0.1
CAYR	**Refugio Cayamb**	**2.67**	**7**	P	Pn	11 29 25.6	+2.7
CAYA	**Cayambe**	**2.72**	**7**	P	Pn	11 29 25.6	+2.0
JAMA	**Jama**	**3.04**	**321**	P	Pn	11 29 26.6	-1.2

DJA 07 11:34:12, 3°.31S×139°.62E, h51km, mb4.7/4, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**1.34**	**54**	P	Pn	11 34 35.0	+0.6
JAY				S	Sn	11 34 51.6	+0.5
SMPI	**Sarmi**	**1.59**	**325**	P	Pn	11 34 38.2	+0.4
SMPI				S	Sn	11 34 58.8	+1.5
MMPI	**Merauke**	**5.18**	**172**	P	Pn	11 35 29.5	+2.5
	396nm,0.8s						
MMPI				S	Sn	11 36 29.0	+3.5
	396nm,0.8s						
TLE	**Tual**	**7.24**	**251**	P	Pn	11 35 55.6	+0.3
	0.4nm50nm,2.9s						
COEN	**Coen**	**11.15**	**162**	P	Pn	11 36 48.7	-0.1
	51nm,2.2s						
KAKA	**Kakadu**	**11.73**	**217**	P	Pn	11 36 55.0	-1.8

*DDA **07** 11:47:13.8, 39°.12N×37°.84E, h8km±5km, Md3.1*
*ISK **07** 11:47:13.2, 39°.12N×37°.86E, h2km, MD3.0*
*CSEM **07** 11:47:14.3±0.1, 39°.10N×37°.87E, h2km, MD3.0, Error ellipse: s-maj=1.4km s-min=1.0km az=42.0*
*ISCJB **07** 11:47:14.4±0.7, 39°.14N±0°.03×37°.88E±0°.04, h2km±6km, Error ellipse: s-maj=6.2km s-min=3.9km az=39.9*
ISC 07 11:47:15.2±0.7, 39°.17N±0°.03×37°.93E±0°.04, h3km±6km, n35, σ1°15/51, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DARE	**Darende-Malaty**	**0.23**	**204**	*e*PG	**Pg**	**11 47 26.3**	**+6.6**
DARE				*e*SG	**Sg**	**11 47 35.5**	**+13**
KEMA	**Kemaliye**	**0.45**	**77**	*i* P	**Pg**	**11 47 24.4**	**+0.5**
KEMA				*i* S	**Sg**	**11 47 32.2**	**+2.4**
KEMA	**Kemaliye**	**0.45**	**77**	*i* P	**Pg**	**11 47 24.4**	**+0.5**
KEMA				*i* S	**Sg**	**11 47 32.2**	**+2.5**
AKCD	**Akcadag**	**0.87**	**180**	*i* P	**Pg**	**11 47 29.9**	**-1.9**
AKCD				*i* S	**Sg**	**11 47 44.0**	**+0.9**
AKCD	**Akcadag**	**0.87**	**180**	*i* P	**Pg**	**11 47 29.9**	**-1.9**
SVSK	**Karacayir**	**1.04**	**317**	*e*PG	**Pg**	**11 47 34.0**	**-1.1**
SVSK				*e*SG	**Sg**	**11 47 49.4**	**+0.8**
SVSK	**Karacayir**	**1.04**	**317**	*e*Pg	**Pg**	**11 47 34.0**	**-1.1**
SVSK				*e*Sg	**Sg**	**11 47 49.4**	**+0.8**
ELZG	**Elazig**	**1.06**	**129**	*i* P	**Pg**	**11 47 34.8**	**-0.8**
ELZG				*i* S	**Sg**	**11 47 50.3**	**+1.0**
ELZG	**Elazig**	**1.06**	**129**	*i* P	**Pg**	**11 47 34.8**	**-0.7**
ELZG				*i* S	**Sg**	**11 47 50.3**	**+1.0**
SARI	**SarD1z-Kayseri**	**1.08**	**243**	*e*PN	**Pn**	**11 47 39.7**	**+2.6**
PTK	**Pertek**	**1.17**	**103**	*e*PN	**Pn**	**11 47 37.1**	**-1.3**
PTK				*e*SN	**Sn**	**11 47 55.0**	**+0.1**
PTK	**Pertek**	**1.17**	**103**	*e*Pn	**Pn**	**11 47 37.1**	**-1.3**
PTK				*e*Sn	**Sn**	**11 47 55.0**	**+0.1**
PINB	**Pinarbasi**	**1.28**	**248**	*i* P	**Pg**	**11 47 36.3**	**-3.5**
PINB	**Pinarbasi**	**1.28**	**248**	*i* P	**Pg**	**11 47 36.3**	**-3.5**
SVRC	**Sivrice-ELAZID**	**1.33**	**126**	*e*PN	**Pn**	**11 47 40.0**	**-0.6**
SVRC	**Sivrice-ELAZID**	**1.33**	**126**	*e*Pn	**Pn**	**11 47 40.0**	**-0.6**
TOKT	**Tokat**	**1.57**	**318**	*e*PN	**Pn**	**11 47 43.4**	**-0.5**
TOKT				*e*SN	**Sn**	**11 48 04.7**	**+0.1**
TOKT	**Tokat**	**1.57**	**318**	*e*Pn	**Pn**	**11 47 43.4**	**-0.5**
TOKT				*e*Sn	**Sn**	**11 48 04.7**	**0.0**
TOKA	**Tokat**	**1.61**	**316**	*i* P	**Pn**	**11 47 43.5**	**-0.9**
TOKA				*i* S	**Sn**	**11 48 06.7**	**+1.1**
TOKA	**Tokat**	**1.61**	**316**	*i* P	**Pn**	**11 47 43.5**	**-0.9**
TOKA				*i* S	**Sn**	**11 48 06.7**	**+1.1**
GRSN	**GIRESUNGRSN**	**1.78**	**8**	*i* P	**Pn**	**11 47 45.5**	**-1.2**
GRSN	**GIRESUNGRSN**	**1.78**	**8**	*i* P	**Pn**	**11 47 45.5**	**-1.2**
GZT	**Gaziantep**	**1.83**	**189**	*i* P	**Pn**	**11 47 48.4**	**+0.9**
GZT				*i* S	**Sn**	**11 48 15.5**	**+4.4**
ESPY	**Espiye-Giresun**	**1.85**	**19**	*e*PN	**Pn**	**11 47 48.0**	**+0.3**
ESPY	**Espiye-Giresun**	**1.85**	**19**	*e*Pn	**Pn**	**11 47 48.1**	**+0.3**
URFA	**Urfa**	**1.86**	**157**	*e*PN	**Pn**	**11 47 46.9**	**-0.9**
URFA	**Urfa**	**1.86**	**157**	*e*Pn	**Pn**	**11 47 46.9**	**-1.0**
YOZ	**Yozgat**	**2.07**	**284**	*e*PN	**Pn**	**11 47 49.9**	**-0.9**
YOZ	**Yozgat**	**2.07**	**284**	*e*Pn	**Pn**	**11 47 49.9**	**-0.9**
CORM	**Corum**	**2.74**	**293**	*e*PN	**Pn**	**11 47 59.4**	**-0.5**
CORM	**Corum**	**2.74**	**293**	*e*Pn	**Pn**	**11 47 59.4**	**-0.5**
CDAG	**Cicekdag**	**2.79**	**281**	*i* P	**Pn**	**11 48 00.5**	**-0.2**
CDAG				*i* S	**Sn**	**11 48 39.9**	**+5.0**
CDAG	**Cicekdag**	**2.79**	**281**	*i* P	**Pn**	**11 48 00.5**	**-0.2**
CTKT	**Corum**	**2.82**	**302**	*e*P	**Pn**	**11 48 03.0**	**+2.0**
CTKT	**Corum**	**2.82**	**302**	*e*P	**Pn**	**11 48 03.0**	**+2.0**

*ISCJB **07** 11:54:02.9±0.7, 32°.21N±0°.05×104°.97E±0°.05, h10km, mb3.3/6, Error ellipse: s-maj=7.8km s-min=5.7km az=41.0*
*IDC **07** 11:54:04.6±1.4, 32°.30N×104°.93E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.4/26, mbtmp3.5/5, Error ellipse: s-maj=190.1km s-min=24.9km az=55.0*
*NEIC **07** 11:54:05.9±0.8, 32°.38N×105°.13E, h10km, mb3.3/1, Error ellipse: s-maj=19.7km s-min=8.9km az=216.0*
*BJI **07** 11:54:07.4, 32°.43N×104°.48E, h15km, ML3.2/5*
ISC 07 11:54:05.5±0.7, 32°.19N±0°.04×104°.83E±0°.05, h10km, n12, σ1°32/18, mb3.3/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.90**	**61**	Pn	**Pn**	**11 55 08.9**	**+3.4**
XAN				Pg	**Pg**	**11 55 22.6**	**+2.4**
XAN				Sn	**Sn**	**11 55 52.6**	**+1.3**
XAN				Sg	**Sg**	**11 56 09.9**	**-0.8**
XAN				smax			
	comp=N,110nm,0.8s						
XAN				smax			
	comp=E,46nm,0.8s						
LZH	**Lanzhou**	**3.97**	**348**	*e*Pg	**Pg**	**11 55 21.9**	**+0.3**
LZH				Sg	**Sg**	**11 56 11.8**	**-1.3**
LZH				smax			
	comp=N,88nm,0.7s						
LZH				smax			
	comp=E,81nm,0.6s						
ENH	**Enshi**	**4.42**	**114**	*e*Pg	**Pg**	**11 55 27.5**	**-2.8**
ENH				*e*Sg	**Sg**	**11 56 26.9**	**-0.7**
GYA	**Guiyang**	**5.93**	**164**	Pg	**Pb**	**11 55 41.3**	**-7.7**
GYA				Sg	**Sn**	**11 56 41.6**	**+0.1**
GYA				smax			
	comp=N,30nm,0.6s						
GYA				smax			
	comp=E,20nm,0.7s						
BJT	**Baijiatuan**	**12.04**	**46**	Pn	**Pn**	**11 56 53.4**	**-3.8**
MKAR	**Makanchi Array**	**22.59**	**317**	P	**P**	**11 59 06.5**	**+0.5**
	comp=E,0.2nm,0.4s,mb2.9,baz=132,slow=8.3,SNR=3.6						
MKAR	**Makanchi Array**	**22.59**	**317**	P	**P**	**11 59 06.5**	**+0.5**
ZALV	**Zalesovo Beam**	**26.03**	**333**	P	**P**	**11 59 39.3**	**+0.7**
	comp=E,0.5nm,0.5s,mb3.3,baz=128,slow=9.6,SNR=3.8						
KURK	**Kurchatov**	**26.77**	**321**	P	**P**	**11 59 45.6**	**+0.3**
	comp=E,0.1nm,0.3s,mb2.9,baz=121,slow=14,SNR=2.9						
ABKAR	**Akbulak array**	**37.43**	**310**	*e*P	**P**	**12 01 15.8**	**-2.9**
	comp=E,0.2nm,0.3s,mb3.4						
FINES	**FINESS Array B**	**57.02**	**326**	P	**P**	**12 03 50.9**	**-0.2**
	comp=E,1.8nm,0.9s,mb4.1,baz=63,slow=6.4,SNR=2.5						
WRA	**Warramunga Arr**	**59.04**	**147**	P	**P**	**12 04 06.9**	**+1.2**
	comp=E,0.3nm,0.7s,mb3.4,baz=340,slow=7.9,SNR=4.7						

*NEIC **07** 11:59:50.9±3.5, 23°.80N×121°.88E, h10km, Error ellipse: s-maj=37.0km s-min=9.1km az=99.0*
*TAP **07** 11:59:52.0, 23°.87N×121°.87E, h40km±1km, ML3.4, D*
*ISCJB **07** 11:59:52.7±0.3, 23°.86N±0°.02×121°.87E±0°.02, h37km±8km, Error ellipse: s-maj=3.3km s-min=2.3km az=138.3*
*JMA **07** 11:59:53.2±0.3, 23°.98N×121°.89E, h70km, M2.6*
ISC 07 11:59:53.0±0.3, 23°.87N±0°.02×121°.86E±0°.02, h34km±2km, n58, σ0°84/105, 12C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.26**	**295**	*e*P	**Pb**	**12 00 00.6**	**+0.3**
	baz=293						
HWA				*e*S	**Sb**	**12 00 06.9**	**+1.7**
	baz=293						
TWD	**Chiawan**	**0.32**	**311**	⇑*i*P	**Pb**	**12 00 01.0**	**-0.1**
	baz=310						
TWD				*i* S	**Sb**	**12 00 07.3**	**+0.8**
	baz=310						
ESF	**Shoufeng Towns**	**0.32**	**270**	*e*P	**Pb**	**12 00 01.1**	**0.0**
	baz=269						
NACB	**Ninganchiao**	**0.39**	**322**	*e*Pg	**Pb**	**12 00 01.2**	**-0.8**
NACB				*e*Sg	**Sb**	**12 00 08.4**	**+0.3**
ESL	**Shilin**	**0.39**	**262**	⇑*i*P	**Pb**	**12 00 01.6**	**-0.4**
	baz=261						
ESL				*e*S	**Sb**	**12 00 08.4**	**+0.1**
	baz=261						
ENA	**Nanau**	**0.57**	**349**	P	**Pb**	**12 00 04.0**	**-0.7**
	baz=348						
ENA				*e*S	**Sb**	**12 00 12.6**	**-0.2**
	baz=348						
WHF	**Hehuan Shan**	**0.61**	**297**	⇑*i*P	**Pn**	**12 00 04.5**	**-0.8**
	baz=296						
WHF				*e*S	**Sb**	**12 00 13.2**	**-0.7**
	baz=296						
EHY	**Hungye**	**0.61**	**234**	P	**Pn**	**12 00 04.2**	**-1.1**
	baz=233						
EHY				*e*S	**Sb**	**12 00 12.7**	**-1.1**
	baz=233						
YULB	**Yu-li**	**0.70**	**227**	*e*Pg	**Pn**	**12 00 05.0**	**-1.6**
YULB				*e*Sg	**Sn**	**12 00 14.0**	**-2.2**
NNS	**Nan Shan**	**0.72**	**322**	⇑*i*P	**Pn**	**12 00 06.2**	**-0.7**
	baz=321						
NNS				S	**Sn**	**12 00 15.7**	**-1.0**
	baz=321						
TWF1	**Yuli**	**0.73**	**225**	⇑*i*P	**Pn**	**12 00 05.8**	**-1.2**
	baz=224						
TWT	**Tachien**	**0.73**	**302**	⇑*i*P	**Pn**	**12 00 06.5**	**-0.5**
	baz=300						
TWT				*e*S	**Sn**	**12 00 16.2**	**-0.8**
	baz=300						
TWC	**Suao**	**0.74**	**359**	P	**Pn**	**12 00 06.7**	**-0.3**
	baz=359						
TWC				S	**Sn**	**12 00 17.1**	**0.0**
	baz=359						
ENTT	**Nioudou**	**0.81**	**341**	*i* P	**Pn**	**12 00 07.5**	**-0.6**
	baz=340						
ENTT				*e*S	**Sn**	**12 00 18.3**	**-0.7**
	baz=340						
SSLB	**Suanglung**	**0.83**	**265**	*e*Pg	**Pn**	**12 00 06.8**	**-1.6**
SSLB				*e*Sg	**Sn**	**12 00 17.0**	**-2.5**
TWE	**Neicheng**	**0.87**	**348**	P	**Pn**	**12 00 08.5**	**-0.3**
	baz=348						
TWE				*e*S	**Sn**	**12 00 19.7**	**-0.6**
	baz=348						
SMLT	**Sun Moon Lake**	**0.88**	**271**	⇑*i*P	**Pn**	**12 00 08.3**	**-0.7**
	baz=270						
SMLT				*e*S	**Sn**	**12 00 20.6**	**0.0**
	baz=270						
ILA	**Ilan**	**0.90**	**354**	*e*P	**Pn**	**12 00 11.0**	**+1.7**
	baz=353						
ILA				*e*S	**Sn**	**12 00 21.9**	**+0.8**
	baz=353						
YHNB	**Yeheng**	**0.91**	**331**	*e*Pg	**Pn**	**12 00 08.7**	**-0.7**
YHNB				*e*Sg	**Sn**	**12 00 20.3**	**-1.1**
YUS	**Yu-Shan**	**0.91**	**246**	⇑*i*P	**Pn**	**12 00 09.5**	**0.0**
	baz=245						
YUS				*e*S	**Sn**	**12 00 20.6**	**-0.8**
	baz=245						
TYC	**Yuchr**	**0.92**	**272**	P	**Pn**	**12 00 09.0**	**-0.5**
	baz=272						
TYC				*e*S	**Sn**	**12 00 21.8**	**+0.2**
	baz=272						
NSK	**Sanguang**	**0.92**	**331**	⇑*i*P	**Pn**	**12 00 09.1**	**-0.5**
	baz=330						
NSK				S	**Sn**	**12 00 20.2**	**-1.5**
	baz=330						
ELDTW	**Lidau**	**1.03**	**229**	*i* P	**Pn**	**12 00 09.8**	**-1.2**
	baz=228						
ELDTW				*e*S	**Sn**	**12 00 23.0**	**-1.3**
	baz=228						
ALS	**Alishan**	**1.03**	**250**	⇑*i*P	**Pn**	**12 00 11.1**	**0.0**
	baz=249						
ALS				S	**Sn**	**12 00 24.0**	**-0.3**
	baz=249						
WNT	**Mingjian**	**1.07**	**271**	P	**Pn**	**12 00 11.9**	**+0.2**
	baz=270						
WNT				*e*S	**Sn**	**12 00 25.9**	**+0.5**
	baz=270						
NSTT	**Nanjuang**	**1.09**	**314**	⇑*i*P	**Pn**	**12 00 12.1**	**+0.2**
	baz=313						
NSTT				S	**Sn**	**12 00 25.9**	**+0.1**
	baz=313						
TWQ1	**Liyutan**	**1.10**	**296**	⇑*i*P	**Pn**	**12 00 12.1**	**0.0**
	baz=295						
TWQ1				S	**Sn**	**12 00 26.4**	**+0.3**
	baz=295						
CHN5	**Tsauling**	**1.11**	**256**	P	**Pn**	**12 00 12.2**	**0.0**
	baz=255						
CHN5				S	**Sn**	**12 00 26.9**	**+0.5**
	baz=255						
TCU	**Taichung**	**1.12**	**285**	*e*P	**Pn**	**12 00 12.6**	**+0.4**
	baz=284						
TCU				*e*S	**Sn**	**12 00 27.2**	**+0.7**
	baz=284						
TWA	**Mucha**	**1.14**	**347**	*e*P	**Pn**	**12 00 12.9**	**+0.4**
	baz=347						
TWA				*e*S	**Sn**	**12 00 26.9**	**0.0**
	baz=347						
NSY	**Sanyi**	**1.14**	**299**	P	**Pn**	**12 00 12.8**	**+0.2**
	baz=298						
NSY				*e*S	**Sn**	**12 00 28.1**	**+1.0**
	baz=298						
TWB1	**Santiao Chiao**	**1.14**	**6**	*e*S	**Sn**	**12 00 27.2**	**+0.1**
	baz=5.0						
NWF	**Wu-fen Shan**	**1.20**	**357**	*e*P	**Pn**	**12 00 13.7**	**+0.3**
	baz=356						
NWF				*e*S	**Sn**	**12 00 29.2**	**+0.6**
	baz=356						
WGK	**Gukeng**	**1.20**	**262**	*e*P	**Pn**	**12 00 13.9**	**+0.4**
	baz=261						
WGK				*e*S	**Sn**	**12 00 30.0**	**+1.4**
	baz=261						
YOJ	**Yonaguni jima**	**1.21**	**60**	P	**Pn**	**12 00 13.7**	**+0.2**
YOJ				*e*S	**Sn**	**12 00 28.8**	**+0.1**
NCU	**National Centr**	**1.26**	**331**	*e*P	**Pn**	**12 00 15.8**	**+1.6**
	baz=330						
NCU				*e*S	**Sn**	**12 00 30.3**	**+0.4**
	baz=330						
TPUB	**Ta-pu**	**1.26**	**244**	*e*Pg	**Pn**	**12 00 14.7**	**+0.5**
TPUB				*e*Sg	**Sn**	**12 00 30.7**	**+0.6**
TWG	**Pinlang**	**1.27**	**215**	*e*Pg	**Pn**	**12 00 14.0**	**-0.4**
TWG				*e*Sg	**Sn**	**12 00 29.8**	**-0.5**
TWG	**Pinlang**	**1.27**	**215**	*e*P	**Pn**	**12 00 12.8**	**-1.5**
	baz=214						
TWG				*e*S	**Sn**	**12 00 27.9**	**-2.3**
	baz=214						
TWS1	**Kuangyinshan**	**1.29**	**342**	*e*P	**Pn**	**12 00 14.3**	**-0.3**
	baz=341						
TWS1				*e*S	**Sn**	**12 00 30.6**	**-0.2**
	baz=341						
WTP	**Ta-pu**	**1.30**	**242**	P	**Pn**	**12 00 15.2**	**+0.4**
	baz=241						
WTP				*e*S	**Sn**	**12 00 31.9**	**+0.9**
	baz=241						
CHY	**Chiayi**	**1.37**	**255**	*e*P	**Pn**	**12 00 16.1**	**+0.4**
	baz=254						
CHY				*e*S	**Sn**	**12 00 33.8**	**+1.1**
	baz=254						
TWK	**Hsinying**	**1.39**	**245**	*e*P	**Pn**	**12 00 16.6**	**+0.5**
	baz=244						
TWK				*e*S	**Sn**	**12 00 34.3**	**+1.0**
	baz=244						
CHN1	**Nanshi**	**1.40**	**241**	*e*P	**Pn**	**12 00 16.6**	**+0.5**
	baz=240						
CHN1				*e*S	**Sn**	**12 00 34.6**	**+1.2**
	baz=240						
SGST	**Jiashian**	**1.41**	**236**	P	**Pn**	**12 00 17.2**	**+0.9**
	baz=236						
SGST				S	**Sn**	**12 00 35.1**	**+1.4**
	baz=236						
WTCT	**Ta-ch'eng**	**1.44**	**270**	*e*S	**Sn**	**12 00 36.0**	**+1.4**
	baz=269						
WSF	**Szhu**	**1.52**	**262**	*e*S	**Sn**	**12 00 37.7**	**+1.4**
	baz=261						
SSD	**Sandimen**	**1.59**	**225**	*e*P	**Pn**	**12 00 19.6**	**+0.9**
	baz=225						
CHN8	**Yiju**	**1.60**	**251**	*e*S	**Sn**	**12 00 39.2**	**+0.8**
	baz=250						
EAST	**Anshuo**	**1.75**	**212**	*e*P	**Pn**	**12 00 20.9**	**0.0**
	baz=212						
IRIF	**Iriomote-Funau**	**1.77**	**74**	P	**Pn**	**12 00 21.5**	**+0.2**
IRIF				*e*S	**Sn**	**12 00 43.1**	**+0.4**
HATJ	**Hateruma jima**	**1.79**	**84**	P	**Pn**	**12 00 21.9**	**+0.3**
HATJ				*e*S	**Sn**	**12 00 43.5**	**+0.4**
LAY	**Lan-yu**	**1.84**	**189**	*e*P	**Pn**	**12 00 21.4**	**-0.9**
	baz=188						
SCZT	**Fangliau**	**1.88**	**218**	*e*P	**Pn**	**12 00 24.2**	**+1.5**
	baz=217						
JKRS	**Kuro-shima**	**2.00**	**79**	P	**Pn**	**12 00 25.5**	**+1.1**
JKRS				*e*S	**Sn**	**12 00 49.4**	**+1.1**
PNG	**Penghu**	**2.13**	**262**	*e*S	**Sn**	**12 00 50.1**	**-1.5**
	baz=261						
JIJ	**Ishigaki jima**	**2.15**	**76**	P	**Pn**	**12 00 26.3**	**-0.1**
JIJ				*e*S	**Sn**	**12 00 51.0**	**-0.9**
JTJ	**Tarama**	**2.71**	**73**	P	**Pn**	**12 00 34.2**	**0.0**
JTJ				*e*S	**Sn**	**12 01 05.6**	**-0.2**

DJA 07 12:05:14, 1°.73N×99°.14E, h10km, MLv3.5/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**1.03**	**155**	P	Pg	12 05 32.3	-1.5
GSI	**Gunungsitoli**	**1.62**	**255**	P	Pn	12 05 42.2	-0.4
GSI				S	Sn	12 06 03.8	+0.2
BKNI	**Bangkinang**	**2.36**	**126**	P	Pn	12 05 56.4	+3.6
PPI	**Padang Panjang**	**2.51**	**150**	P	Pn	12 05 55.4	+0.5
IPM	**Ipoh**	**3.32**	**35**	P	Pn	12 06 06.6	+0.6
KULM	**Kulim**	**3.84**	**23**	P	Pn	12 06 12.9	-0.4

*IDC **07** 12:24:19.7±1.2, 30°.61N×84°.00E, h0km, mb3.5/6, mb1 3.7/8, mb1mx3.5/29, mbtmp3.5/8, ML3.7/2, MS3.1/6, Ms1 3.1/6, ms1mx2.7/34, Error ellipse: s-maj=41.8km s-min=19.3km az=64.0*
*ISCJB **07** 12:24:19.4±0.4, 30°.64N±0°.05×83°.65E±0°.04, h10km, mb3.4/6, MS3.0/5, Error ellipse: s-maj=7.2km s-min=4.9km az=27.5*
*NEIC **07** 12:24:21.4±0.6, 30°.65N×83°.75E, h10km, mb3.6/1, Error ellipse: s-maj=16.9km s-min=6.3km az=69.0*
*NDI **07** 12:24:30.8±3.4, 30°.80N

GTA pmax pmax
comp=Z,5.0nm,1.2s
MKAR Makanchi Array 16.19 357 Pn **Pn 12 28 08.9 +0.7**
comp=Z,0.1nm,0.3s,baz=151,slow=9.6,SNR=3.2
LZH Lanzhou 17.76 67 *eP* **Pn 12 28 27.0 -1.0**
LZH pP pP 12 28 35.2 +3.6
LZH sP sP 12 28 40.2 +7.3
LZH pmax pmax
comp=Z,14nm,1.1s
CMAR Chiang Mai Arr 18.44 127 P **Pn 12 28 34.6 -1.8**
comp=Z,0.2nm,0.3s,baz=307,slow=11,SNR=10
KURK Kurchatov 20.43 351 P **P 12 28 57.1 -0.8**
comp=Z,2.6nm,0.7s,baz=172,slow=11,SNR=11
KURK LR LR 12 38 09.3
comp=Z,60nm,18.5s,MS3.0,baz=185,slow=41
ZALV Zalesovo Beam 23.34 2 P **P 12 29 27.6 -1.5**
comp=Z,0.8nm,0.8s,mb3.2,baz=181,slow=7.2,SNR=3.2
ZALV LR LR 12 39 33.8
comp=Z,21nm,18.0s,MS2.6,baz=284,slow=39
SONM Songino Array 24.50 39 P **P 12 29 40.5 +0.5**
comp=Z,1.2nm,0.8s,mb3.5,baz=228,slow=9.2,SNR=6.5
SONM LR LR 12 40 08.2
comp=Z,38nm,21.7s,MS2.9,baz=253,slow=39
ULN Ulaanbaatar 24.88 40 *eP* **P 12 29 42.6 -0.8**
comp=Z,0.8nm,0.5s,mb3.5
AKTO Aktyubinsk 27.53 323 LR LR 12 42 25.4
comp=Z,82nm,18.1s,MS3.4,baz=149,slow=39
ERM Erimo 48.43 59 *eP* **P 12 33 04.0 +0.9**
comp=Z,84nm,0.6s
NOA NORSAR Array B 55.29 326 P **P 12 33 56.2 +2.2**
comp=Z,0.3nm,0.6s,mb3.5,baz=108,slow=5.9,SNR=2.6
NOA LR LR 13 00 03.3
comp=Z,13nm,18.3s,MS3.0,baz=90,slow=39
WRA Warramunga Arr 70.02 129 P **P 12 35 31.6 -1.3**
comp=Z,0.6nm,0.8s,mb3.5,baz=325,slow=6.3,SNR=8.1
ASAR Alice Springs 72.37 132 P **P 12 35 45.4 -1.6**
comp=Z,0.4nm,0.8s,mb3.4,baz=324,slow=6.6,SNR=4.3
CPUP Villa Florida 145.52 267 PKPbc PKPbc 12 44 01.9 +2.3
comp=Z,0.2nm,0.3s,baz=18,slow=6.4,SNR=3.0

*IDC **07** 12:31:29.7±0.6, 8°.05S×120°.32E, h0km, mb4.1/13, mb1 4.2/16, mb1mx4.2/25, mbtmp4.1/16, ML4.2/3, MS3.5/7, Ms1 3.5/7, ms1mx3.2/36, Error ellipse: s-maj=31.7km s-min=12.3km az=71.0*
*NEIC **07** 12:31:31.6±3.6, 8°.07S×120°.35E, h14km±23km, mb4.2/3, Error ellipse: s-maj=15.0km s-min=6.5km az=70.0*
*ISCJB **07** 12:31:34.6±0.5, 8°.11S±0°.03×120°.44E±0°.04, h52km±6km, mb4.2/20, MS3.4/4, Error ellipse: s-maj=6.9km s-min=5.1km az=146.2*
*DJA **07** 12:31:36, 8°.04S×120°.44E, h46km, MLv4.8/13*
ISC 07 12:31:36.4±0.5, 8°.13S±0°.03×120°.42E±0°.04, h50km±6km, n59, σ1s04/68, mb4.2/20, MS3.4/4, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.54 184**		P	**Pn**	**12 32 01.2**	**-0.4**
WSI				S	**Sn**	**12 32 24.2**	**+3.9**
MMRI	**Maumere**	**1.87 106**		P	**Pn**	**12 32 05.4**	**-0.7**
MMRI				S	**Sn**	**12 32 30.6**	**+2.0**
BKSI	**Bulukumba**	**2.80 354**		P	**Pn**	**12 32 15.9**	**-2.9**
BKSI				S	**Sn**	**12 32 52.3**	**+0.9**
KAPI	**Kappang**	**3.16 348**		Pn	**Pn**	**12 32 19.9**	**-3.9**
KAPI	22nm,0.3s,baz=140,slow=13,SNR=63			LR	LR	12 33 54.7	
	comp=Z,2μm,18.2s,baz=107,slow=47						
KAPI	**Kappang**	**3.16 348**		P	**Pn**	**12 32 20.6**	**-3.1**
KDI	**Kendari**	**4.69 28**		P	**Pn**	**12 32 44.1**	**-0.6**
KHKI	**Kahang-Kahang**	**4.76 267**		P	**Pn**	**12 32 45.6**	**-0.1**
TTSI	**Tana Toraja**	**5.08 353**		P	**Pn**	**12 32 51.2**	**+1.1**
	0.3nm76nm,0.8s						
SRBI	**Singaraja**	**5.15 270**		P	**Pn**	**12 32 51.7**	**+0.6**
	0.8nm134nm,1.0s						
DNP	**Denpasar**	**5.18 264**		P	**Pn**	**12 32 52.3**	**+0.9**
	4.2nm416nm,0.6s						
IGBI	**Denpasar**	**5.26 262**		P	**Pn**	**12 32 54.0**	**+1.5**
	4.1nm721nm,0.7s						
ABJI	**Asem Bagus**	**6.13 273**		P	**Pn**	**12 33 08.0**	**+3.5**
KMMI	**Kalianget**	**6.48 279**		P	**Pn**	**12 33 07.9**	**-1.4**
	99nm,0.8s						
GMJI	**Gumukmas**	**6.90 268**		P	**Pn**	**12 33 15.7**	**+0.6**
	0.5nm65nm,0.7s						
APSI	**Ampana**	**7.27 10**		P	**Pn**	**12 33 19.9**	**-0.3**
	0.2nm20nm,0.8s						
LUWI	**Luwuk**	**7.42 19**		P	**Pn**	**12 33 22.3**	**+0.1**
	0.2nm69nm,0.9s						
PWJI	**Pagerwojo**	**8.53 270**		P	Px	12 33 49.3	
KNA	**Kununurra**	**11.14 134**		*eP*	**Pn**	**12 34 12.2**	**-0.9**
	226nm,2.0s						
KNA				*eS*	**Sn**	**12 36 11.7**	**-4.6**
KNA	**Kununurra**	**11.14 134**		P	**Pn**	**12 34 12.8**	**-0.3**
	1μm109nm,0.8s						
FITZ	**Fitzroy Crossi**	**11.14 153**		*eP*	**Pn**	**12 34 13.1**	**-0.1**
	24nm,0.8s						
FITZ				*eS*	**Sn**	**12 36 12.2**	**-4.2**
FITZ	**Fitzroy Crossi**	**11.14 153**		Pn	**Pn**	**12 34 12.1**	**-1.1**
	0.8nm,0.3s,baz=338,slow=8.4,SNR=18						
FITZ				Sn	**Sn**	**12 36 11.7**	**-4.6**
	1.1nm,0.3s,baz=85,slow=11,SNR=3.0						
FITZ				LR	LR	12 38 55.8	
	comp=Z,169nm,19.6s,baz=340,slow=40						
FITZ	**Fitzroy Crossi**	**11.14 153**		P	**Pn**	**12 34 14.2**	**+1.0**
	44nm,1.5s						
KAKA	**Kakadu**	**12.67 112**		*eP*	**Pn**	**12 34 33.5**	**-0.6**
	19nm,0.6s						
KAKA	**Kakadu**	**12.67 112**		*e*Pn	**Pn**	**12 34 32.3**	**-1.8**
	60nm,0.6s						
KAKA				Sn	**Sn**	**12 36 55.3**	**+1.5**
KAKA	**Kakadu**	**12.67 112**		P	**Pn**	**12 34 33.8**	**-0.3**
MBWA	**Marble Bar**	**12.97 183**		*eP*	**Pn**	**12 34 35.6**	**-2.6**
MBWA				*eS*	**Sn**	**12 36 51.8**	**-9.3**
MBWA	**Marble Bar**	**12.97 183**		*e*Pn	**Pn**	**12 34 35.7**	**-2.5**
MBWA				*e*Sn	**Sn**	**12 36 50.1**	**-11**
WRA	**Warramunga Arr**	**17.88 133**		P	**Pn**	**12 35 40.6**	**-1.1**
	1.2nm,0.3s,baz=309,slow=12,SNR=50						
WRA				S	**S**	**12 38 52.5**	**-12**
	0.1nm,0.3s,baz=303,slow=22,SNR=5.7						
WRA				LR	LR	12 44 07.5	
	comp=Z,264nm,18.2s,baz=110,slow=42						
WRA	**Warramunga Arr**	**17.88 133**		P	**Pn**	**12 35 40.6**	**-1.1**
WRA				S	**S**	**12 38 52.5**	**-12**
WRA				LR	LR	12 44 07.5	
WRAB	**Tennant Creek**	**17.89 132**		*e*Pn	**Pn**	**12 35 41.0**	**-0.7**
	8.5nm,0.6s						
MEEK	**Meekatharra**	**18.49 185**		*eP*	**Pn**	**12 35 49.2**	**+0.2**
MEEK				*eS*	**S**	**12 39 00.5**	**-16**
ASAR	**Alice Springs**	**20.15 142**		P	**P**	**12 36 07.0**	**+0.4**
	5.6nm,0.4s,baz=315,slow=10,SNR=135						
ASAR				S	**S**	**12 39 43.2**	**-7.0**
	0.6nm,0.7s,baz=309,slow=16,SNR=2.9						
KLBR	**Kellerberrin**	**23.48 186**		*eP*	**P**	**12 36 40.7**	**-1.1**
	8.4nm,0.4s,mb4.5						
KLBR				*eS*	**S**	**12 40 58.0**	**+6.3**
FORT	**Forrest**	**23.64 163**		*eP*	**P**	**12 36 42.8**	**-0.5**
	22nm,0.6s,mb4.8						
FORT	**Forrest**	**23.64 163**		*eP*	**P**	**12 36 42.9**	**-0.3**
	24nm,0.6s,mb4.8						
NWAO	**Narrogin (SRO)**	**24.86 186**		P	**P**	**12 36 54.7**	**+0.4**
	13nm,0.7s,mb4.6,baz=3.8,slow=9.6,SNR=12						
MTSU	**Mount Surprise**	**25.28 116**		*eP*	**P**	**12 36 59.2**	**+0.8**
	32nm,0.6s,mb5.0						
BBOO	**Buckleboo**	**28.52 152**		*eP*	**P**	**12 37 27.2**	**-0.1**
	5.6nm,0.4s,mb4.7						
STKA	**Stephens Creek**	**30.77 143**		P	**P**	**12 37 48.0**	**+0.8**
	3.8nm,0.5s,mb4.5,baz=309,slow=8.7,SNR=8.9						
STKA				LR	LR	12 51 28.3	
	comp=Z,111nm,18.7s,MS3.5,baz=218,slow=39						
CMSA	**Cobar Meteorol**	**33.12 138**		*eP*	**P**	**12 38 09.0**	**+1.1**
CMAR	**Chiang Mai Arr**	**33.86 321**		P	**P**	**12 38 15.0**	**+0.5**
	0.5nm,0.4s,mb3.8,baz=138,slow=8.2,SNR=3.8						
CMAR				LR	LR	12 54 26.8	
	comp=Z,61nm,18.6s,MS3.4,baz=138,slow=41						
YNG	**Young**	**36.62 139**		*eP*	**P**	**12 38 39.7**	**+1.7**
	9.0nm,0.4s,mb5.0						
XAN	**Xi'an**	**43.33 346**		P	**P**	**12 39 41.7**	**+8.1**
XAN				pP	pP	12 39 54.5	+7.5
XAN				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.9						
KSRS	**Korea Array**	**45.88 8**		P	**P**	**12 39 53.8**	**-0.1**
	comp=Z,0.4nm,0.8s,mb3.4,baz=172,slow=9.8,SNR=2.6						
KSRS				LR	LR	13 01 33.5	
	comp=Z,25nm,19.4s,MS3.2,baz=12,slow=39						
MJAR	**Matsushiro Arr**	**47.47 20**		P	**P**	**12 40 06.2**	**-0.2**
	comp=Z,0.7nm,0.9s,mb3.6,baz=139,slow=21,SNR=3.0						
GTA	**Gaotai**	**51.01 339**		*eP*	**P**	**12 40 36.8**	**+3.4**
GTA				pP	pP	12 40 41.3	-5.7
GTA				sP	sP	12 40 44.7	-8.1
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.0						
TARA	**Tarawa**	**53.19 82**		*eP*	**P**	**12 40 43.4**	**-6.7**
	comp=Z,1.0nm,0.6s,mb3.9						
SONM	**Songino Array**	**57.08 349**		P	**P**	**12 41 17.6**	**+0.1**
	comp=Z,1.5nm,1.0s,mb4.0,baz=165,slow=6.2,SNR=7.7						
SONM				LR	LR	13 09 51.6	
	comp=Z,26nm,18.3s,MS3.4,baz=88,slow=40						
MKAR	**Makanchi Array**	**64.33 332**		P	**P**	**12 42 06.2**	**-0.7**
	comp=Z,0.8nm,0.6s,mb4.0,baz=119,slow=7.8,SNR=11						
AAK	**Ala-Archa**	**65.57 324**		P	**P**	**12 42 15.0**	**0.0**
	comp=Z,1.2nm,0.3s,mb4.4,baz=90,slow=1.0,SNR=2.4						
ZAA0	**Zalesovo Array**	**68.74 338**		*eP*	**P**	**12 42 34.4**	**-0.4**
ZALV	**Zalesovo Beam**	**68.74 338**		P	**P**	**12 42 33.6**	**-1.2**
	comp=Z,2.1nm,0.6s,mb4.2,baz=140,slow=4.3,SNR=9.9						
KURK	**Kurchatov**	**68.85 333**		P	**P**	**12 42 34.4**	**-1.2**
	comp=Z,1.5nm,0.9s,mb3.9,baz=136,slow=5.4,SNR=4.9						
MAW	**Mawson**	**70.53 200**		P	**P**	**12 42 46.7**	**+1.0**
	comp=Z,2.0nm,0.6s,mb4.2,baz=82,slow=11,SNR=4.9						
BVAR	**Borovoye Array**	**74.20 331**		P	**P**	**12 43 07.5**	**-0.2**
	comp=Z,0.6nm,0.4s,mb3.9,baz=134,slow=4.2,SNR=3.3						
TORD	**Torodi Ar. Bea**	**119.68 280**		PKP	PKPdf	12 50 20.1	-1.8
	comp=Z,0.3nm,0.6s,baz=134,slow=1.4,SNR=2.6						
CPUP	**Villa Florida**	**145.68 184**		PKPbc	PKPbc	12 51 10.8	+0.3
	comp=Z,0.4nm,0.4s,baz=180,slow=5.1,SNR=4.8						
CPUP	**Villa Florida**	**145.68 184**		PKPbc	PKPbc	12 51 10.8	+0.3
LPAZ	**La Paz**	**154.31 161**		PKPab	PKPab	12 51 48.8	+2.7
	comp=Z,1.8nm,0.6s,baz=234,slow=0.9,SNR=7.0						

*IDC **07** 12:39:50.1±0.7, 12°.95N×125°.61E, h0km, mb3.9/12, mb1 4.1/13, mb1mx3.9/25, mbtmp4.0/13, ML4.5/1, MS3.2/2, Ms1 3.2/2, ms1mx2.6/36, Error ellipse: s-maj=30.4km s-min=13.4km az=71.0*
*MAN **07** 12:39:55, 12°.84N×124°.89E, h11km, mb5.4, ML4.4, MS4.6*
*NEIC **07** 12:39:55.7±0.6, 12°.89N×125°.42E, h35km, mb4.2/1, Error ellipse: s-maj=26.2km s-min=9.8km az=61.0*
*ISCJB **07** 12:39:55.2±1.0, 12°.80N±0°.05×125°.04E±0°.08, h45km±9km, mb3.9/13, MS3.3/2, Error ellipse: s-maj=14.9km s-min=6.3km az=153.5*
ISC 07 12:39:55.1±1.5, 12°.82N±0°.05×125°.08E±0°.06, h28km±10km, n38, σ1s30/40, mb3.9/13, MS3.3/2, 1C-1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.51 233**		*eP*	**Pb**	**12 40 04.1**	**-1.5**
CNP				*eS*	**Sb**	**12 40 12.4**	**-0.3**
PVCP	**Virac**	**1.19 311**		*eP*	**Pn**	**12 40 13.0**	**-2.8**
PVCP				*eS*	**Sn**	**12 40 30.2**	**-0.9**
BESP	**Borongan**	**1.26 164**		*eP*	**Pn**	**12 40 19.2**	**+2.4**
MMPH	**Masbate**	**1.50 252**		*eP*	**Pn**	**12 40 18.4**	**-1.7**
MMPH				*i* S	**Sn**	**12 40 37.1**	**-1.6**
OCLP	**Ormoc**	**1.82 195**		*eP*	**Pn**	**12 40 26.6**	**+2.1**
AUQP	**San Andres**	**2.40 282**		*eP*	**Pn**	**12 40 34.6**	**+2.1**
MSLP	**Maasin**	**2.68 185**		*eP*	**Pn**	**12 40 40.5**	**+4.1**
GQP	**Guinayangan**	**2.78 293**		*eP*	**Pn**	**12 40 37.1**	**-0.7**
GQP				*e*S	**Sn**	**12 41 11.5**	**+1.0**
OTRP	**Odiongan**	**3.02 262**		*eP*	**Pn**	**12 40 41.1**	**0.0**
BOAC	**Boac**	**3.22 282**		*eP*	**Pn**	**12 40 44.5**	**+0.7**
GUIM	**Jordan**	**3.27 228**		*eP*	**Pn**	**12 40 44.9**	**+0.4**
TBP	**Tagbilaran**	**3.33 201**		*eP*	**Pn**	**12 40 45.4**	**0.0**
POLP	**Polillo Island**	**3.59 302**		*eP*	**Pn**	**12 40 50.6**	**+1.7**
SJMP	**San Jose**	**3.88 265**		*eP*	**Pn**	**12 40 53.8**	**+0.9**
TGY	**Tagaytay City**	**4.23 288**		Pn	**Pn**	**12 41 01.0**	**+3.2**
	23nm,0.3s,baz=42,slow=6.3,SNR=5.0						
CUYO	**Cuyo Island**	**4.43 244**		*eP*	**Pn**	**12 41 00.4**	**-0.1**
BALP	**Baler**	**4.47 311**		*eP*	**Pn**	**12 40 59.6**	**-1.4**
LUBP	**Lubang**	**4.79 281**		*eP*	**Pn**	**12 41 06.5**	**+1.0**
BUKP	**Musuan**	**4.91 180**		*eP*	**Pn**	**12 41 11.0**	**+3.9**
APYP	**Conner**	**6.23 324**		*eP*	**Pn**	**12 41 28.0**	**+2.8**
KSRS	**Korea Array**	**24.66 5**		P	**P**	**12 45 10.2**	**-3.3**
	1.8nm,0.7s,mb3.7,baz=183,slow=9.8,SNR=4.1						
CMAR	**Chiang Mai Arr**	**25.77 286**		P	**P**	**12 45 28.4**	**+4.6**
	0.6nm,0.6s,mb3.3,baz=96,slow=8.2,SNR=4.5						
KAKA	**Kakadu**	**26.39 164**		*eP*	**P**	**12 45 30.2**	**+0.8**
FITZ	**Fitzroy Crossi**	**30.73 179**		P	**P**	**12 46 07.7**	**-0.3**
	1.9nm,0.7s,mb4.1,baz=21,slow=9.0,SNR=6.1						
WRA	**Warramunga Arr**	**33.81 164**		P	**P**	**12 46 34.0**	**-0.9**
	0.5nm,0.3s,mb3.9,baz=341,slow=8.2,SNR=18						
WRA				PcP	PcP	12 49 12.8	-1.1
	0.3nm,0.4s,baz=341,slow=2.8,SNR=5.4						
ASAJ	**Asahikawa**	**34.62 22**		P	**P**	**12 46 38.4**	**-3.4**
	1.8nm,0.6s,mb4.2,baz=181,slow=32,SNR=5.1						
ASAR	**Alice Springs**	**37.27 167**		P	**P**	**12 47 03.0**	**-1.7**
	1.4nm,0.4s,mb4.2,baz=344,slow=7.3,SNR=32						
SONM	**Songino Array**	**38.24 340**		P	**P**	**12 47 13.9**	**+1.3**
	0.6nm,0.6s,mb3.5,baz=159,slow=9.1,SNR=3.8						
STKA	**Stephens Creek**	**47.18 161**		P	**P**	**12 48 24.5**	**-0.8**
	2.9nm,0.8s,mb4.3,baz=317,slow=12,SNR=4.3						
MKAR	**Makanchi Array**	**49.31 322**		P	**P**	**12 48 41.9**	**+0.2**
	0.5nm,0.6s,mb3.7,baz=107,slow=9.4,SNR=7.6						
ZAA0	**Zalesovo Array**	**51.84 331**		*eP*	**P**	**12 49 01.9**	**+1.2**
ZALV	**Zalesovo Beam**	**51.84 331**		P	**P**	**12 49 00.2**	**-0.4**
	2.3nm,0.7s,mb4.2,baz=114,slow=8.2,SNR=6.6						
ZALV				LR	LR	13 15 20.7	
	comp=Z,15nm,18.1s,MS3.0,baz=58,slow=41						
BVAR	**Borovoye Array**	**58.92 325**		P	**P**	**12 49 52.2**	**+0.5**
	1.3nm,0.7s,mb4.1,baz=67,slow=11,SNR=4.5						
ABKAR	**Akbulak array**	**64.20 319**		P	**P**	**12 50 26.6**	**-0.8**
	2.0nm,0.9s,mb4.2						
ASF	**Jabal al Asfar**	**81.78 301**		LR	LR	13 32 01.0	
	comp=Z,21nm,19.3s,MS3.5,baz=20,slow=38						
FINES	**FINESS Array B**	**83.11 331**		P	**P**	**12 52 17.5**	**-0.6**
	1.3nm,0.9s,mb4.0,baz=58,slow=5.9,SNR=4.6						
BUR08	**Bucovina Ar. S**	**87.18 318**		*eP*	**P**	**12 52 38.7**	**-0.1**
PLCA	**Paso Flores**	**149.00 157**		PKPbc	PKPbc	12 59 41.6	+0.8
	0.8nm,0.4s,baz=261,slow=11,SNR=5.5						

*IDC **07** 12:54:53.1±0.7, 6°.24S×131°.45E, h0km, mb4.5/13, mb1 4.5/15, mb1mx4.4/21, mbtmp4.4/15, ML5.3/3, MS3.1/3, Ms1 3.1/3, ms1mx2.6/26, Error ellipse: s-maj=27.5km s-min=13.8km az=76.0*
*BJI **07** 12:54:56.3, 6°.66S×131°.85E, h65km, mB4.9/1, mb4.8/5*
*NEIC **07** 12:54:58.5±0.4, 6°.33S×131°.29E, h35km, mb4.8/16, Error ellipse: s-maj=13.3km s-min=6.0km az=67.0*
*ISCJB **07** 12:54:59.1±0.8, 6°.42S±0°.04×131°.45E±0°.05, h66km±8km, mb4.7/33, Error ellipse: s-maj=9.4km s-min=5.5km az=144.0*
*DJA **07** 12:55:02, 6°.41S×131°.51E, h85km, Mw5.5/9*
ISC 07 12:55:01.1±0.6, 6°.43S±0°.04×131°.43E±0°.05, h67km±7km, n79, σ1s21/87, mb4.7/33, 1D, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**1.52 59**		P	**Pn**	**12 55 31.2**	**+4.9**
AAI	**Ambon**	**4.21 310**		P	**Pn**	**12 56 02.2**	**-0.7**
NLAI	**Namlea**	**5.35 306**		P	**Pn**	**12 56 19.0**	**+0.6**
	1.3nm5μm390nm,0.8s						
KAKA	**Kakadu**	**6.33 171**		*i P*	**Pn**	**12 56 34.4**	**+2.6**
	399nm,0.8s						
KAKA				*e*S	**Sn**	**12 57 41.9**	**-0.8**
KAKA	**Kakadu**	**6.33 171**		*e*Pn	**Pn**	**12 56 34.4**	**+2.6**
	651nm,0.5s						
KAKA				*e*Sn	**Sn**	**12 57 42.1**	**-0.6**
KAKA	**Kakadu**	**6.33 171**		P	**Pn**	**12 56 34.2**	**+2.4**
	6.5nm464nm,0.5s						
LBMI	**Labuha**	**6.96 326**		P	**Pn**	**12 56 40.6**	**+0.1**
	0.8nm3μm155nm,0.9s						
LBMI				S	**Sn**	**12 57 50.6**	**-7.6**
	0.8nm3μm155nm,0.9s						
KDI	**Kendari**	**9.11 285**		P	**Pn**	**12 57 11.8**	**+1.9**
	759nm65nm,0.9s						
MMPI	**Merauke**	**9.11 103**		S	**Sn**	**12 58 51.2**	**+0.2**
KNA	**Kununurra**	**9.63 195**		P	**Pn**	**12 57 17.8**	**+0.8**
	2μm,0.6s						
APSI	**Ampana**	**11.19 299**		P	**Pn**	**12 57 39.8**	**+1.5**
	69nm,1.0s						
MRSI	**Marisa**	**11.69 306**		P	**Pn**	**12 57 44.5**	**-0.7**
	739nm92nm,0.7s						
KAPI	**Kappang**	**11.70 276**		LR	LR	13 02 19.4	
	comp=Z,87nm,21.5s,baz=128,slow=38						
FITZ	**Fitzroy Crossi**	**12.90 205**		*eP*	**Pn**	**12 57 57.9**	**-3.8**
	178nm,0.3s						
FITZ				*e*S	**Sn**	**13 00 11.0**	**-13**
FITZ	**Fitzroy Crossi**	**12.90 205**		Pn	**Pn**	**12 57 58.5**	**-3.3**
	34nm,0.3s,baz=36,slow=11,SNR=317						
FITZ				Sn	**Sn**	**13 00 11.1**	**-13**
	11nm,0.3s,baz=339,slow=18,SNR=5.9						
FITZ				LR	LR	13 03 25.7	
	comp=Z,81nm,21.2s,baz=20,slow=39						
FITZ	**Fitzroy Crossi**	**12.90 205**		P	**Pn**	**12 57 59.7**	**-2.0**
	4μm233nm,0.6s						
WRAB	**Tennant Creek**	**13.72 168**		*e*Pn	**Pn**	**12 58 10.4**	**-2.3**
	54nm,0.6s						
WRAB				*e*Sn	**Sn**	**13 00 36.2**	**-7.3**
WRAB	**Tennant Creek**	**13.72 168**		P	**Pn**	**12 58 11.3**	**-1.4**
	83nm,0.7s						
WRA	**Warramunga Arr**	**13.73 168**		Pn	**Pn**	**12 58 10.3**	**-2.4**
	8.6nm,0.3s,baz=350,slow=13,SNR=151						
WRA				Sn	**Sn**	**13 00 35.1**	**-8.6**
	18nm,0.3s,baz=344,slow=23,SNR=11						
COEN	**Coen**	**13.77 124**		*e*Pn	**Pn**	**12 58 14.5**	**+1.2**
	123nm,0.5s						
COEN				*e*Sn	**Sn**	**13 00 38.8**	**-5.9**
KBKI	**Kotabaru**	**15.52 281**		P	**Pn**	**12 58 37.3**	**+1.2**
	61nm,1.0s						
MYLDM	**Lahad Datu**	**17.30 311**		P	**Pn**	**12 58 59.0**	**+0.6**
	32nm,1.0s						
ASAR	**Alice Springs**	**17.31 172**		P	**Pn**	**12 58 58.3**	**-0.1**
	5.9nm,0.3s,baz=357,slow=14,SNR=130						
ASAR				S	**S**	**13 02 01.6**	**-14**
	3.0nm,0.3s,baz=354,slow=27,SNR=7.2						
MBWA	**Marble Bar**	**18.51 217**		*eP*	**Pn**	**12 59 11.3**	**-1.8**
MBWA				*eS*	**S**	**13 02 24.5**	**-16**
MBWA	**Marble Bar**	**18.51 217**		*eP*	**Pn**	**12 59 11.3**	**-1.7**
	18nm,0.6s						
SJI	**Sawahan**	**19.55 265**		P	**Pn**	**12 59 28.5**	**+3.0**
CTA	**Charters Tower**	**19.79 135**		*eP*	**Pn**	**12 59 31.9**	**+3.6**
	8.0nm,0.6s						
CTA				*eS*	**S**	**13 03 24.7**	**+19**
CTA	**Charters Tower**	**19.79 135**		P	**Pn**	**12 59 26.8**	**-1.5**
	0.1nm,0.3s,baz=312,slow=14,SNR=2.3						
STKI	**Sintang**	**20.93 287**		P	**P**	**12 59 28.9**	**-10**
SBUM	**Sibu**	**21.10 294**		P	**P**	**12 59 39.4**	**-1.0**
	30nm,0.9s,mb4.6						
KSM	**Kuching**	**22.49 290**		*eP*	**P**	**12 59 53.2**	**-2.1**
	14nm,0.8s,mb4.3						
KSM	**Kuching**	**22.49 290**		P	**P**	**12 59 53.5**	**-1.8**
	19nm,0.9s,mb4.4						
LEM	**Lembang**	**23.65 268**		P	**P**	**13 00 07.2**	**+0.5**
	1μm70nm,0.8s,mb5.0						
CBJI	**Citeko**	**24.42 269**		P	**P**	**13 00 12.7**	**-1.0**
	305nm,0.8s,mb5.7						
FORT	**Forrest**	**24.43 187**		*eP*	**P**	**13 00 15.9**	**+2.3**
	61nm,0.7s,mb5.0						
FORT				*eS*	**S**	**13 04 46.0**	**+17**
FORT	**Forrest**	**24.43 187**		*eP*	**P**	**13 00 15.9**	**+2.3**
	67nm,0.7s,mb5.1						
CGJI	**Cibinong**	**25.57 268**		P	**P**	**13 00 23.3**	**-0.8**
	93nm,0.8s,mb5.3						
STKA	**Stephens Creek**	**27.05 161**		*eP*	**P**	**13 00 40.5**	**+3.2**
	1.8nm,0.3s,mb4.1						
STKA				*eS*	Sx	13 05 49.3	
STKA	**Stephens Creek**	**27.05 161**		P	**P**	**13 00 39.9**	**+2.6**
	2.9nm,0.3s,mb4.2,baz=344,slow=8.8,SNR=21						
STKA	**Stephens Creek**	**27.05 161**		P	**P**	**13 00 39.9**	**+2.6**
STKA				*eS*	Sx	13 05 36.7	
KLBR	**Kellerberrin**	**28.11 205**		*eP*	**P**	**13 00 48.1**	**+1.3**
	11nm,1.0s,mb4.3						
HNR	**Honiara**	**28.40 98**		LR	LR	13 12 03.3	
	comp=Z,55nm,18.5s,baz=148,slow=36						
NWAO	**Narrogin (SRO)**	**29.49 205**		P	**P**	**13 01 01.1**	**+2.1**
	6.2nm,0.7s,mb4.4,baz=44,slow=9.1,SNR=4.1						
PSI	**Prapat**	**33.72 285**		P	**P**	**13 01 36.5**	**0.0**
	21nm,0.8s,mb5.0,baz=107,slow=2.9,SNR=13						
CM31	**Chiang Mai Arr**	**40.47 308**		*eP*	**P**	**13 02 33.3**	**-0.2**
	3.2nm,0.5s,mb4.4						
CMAR	**Chiang Mai Arr**	**40.47 308**		P	**P**	**13 02 33.2**	**-0.4**
	4.7nm,0.5s,mb4.6,baz=137,slow=7.1,SNR=39						
CHTO	**Chiang Mai**	**40.67 309**		*eP*	**P**	**13 02 34.6**	**-0.6**
	18nm,1.1s,mb4.8						
CHTO	**Chiang Mai**	**40.67 309**		P	**P**	**13 02 34.9**	**-0.3**
ENH	**Enshi**	**42.12 331**		*eP*	**P**	**13 02 46.1**	**-0.8**
	10nm,0.6s,mb4.7						
MAJO	**Matsushiro**	**43.21 8**		*eP*	**P**	**13 02 55.2**	**-0.4**
	10.0

KBTR *i* S **Sn** **13 02 48.4 +0.2**
MKZ **Mys Kozlova** **1.18 161** *i* P **Pn** **13 02 29.1 -0.2**
MKZ *i* S **Sn** **13 02 49.1 0.0**
KII **Karymskiy** **1.88 210** *eP* **Pn** **13 02 37.2 +0.4**
KII *eS* **Sn** **13 03 03.5 +1.1**
SPN **Mys Shipunski** **2.65 194** *i P* **Pn** **13 02 44.4 -1.6**
SPN *i* S **Sn** **13 03 15.9 -3.0**
GNL **Ganaly** **2.68 224** *eP* **Pn** **13 02 46.8 +0.4**
GNL *eS* **Sn** **13 03 20.0 +0.4**
NLC **Nalytchevo** **2.70 202** *eP* **Pn** **13 02 46.0 -0.6**
NLC *i* S **Sn** **13 03 18.8 -1.2**
AVH **Avacha** **2.77 210** *eP* **Pn** **13 02 48.2 +0.8**
AVH *eS* **Sn** **13 03 22.3 +0.8**
BKI **Bering** **2.84 97** *i P* **Pn** **13 02 48.9 +0.6**
BKI *i* S **Sn** **13 03 22.9 -0.2**
PET **Petropavlovsk** **3.00 209** *e*PN **Pn** **13 02 50.4 0.0**
PET *eS* **Sn** **13 03 27.2 +0.3**
PET pmax pmax
comp=Z,26nm,0.6s
PET smax
comp=E,91nm,0.5s
PET smax
comp=N,150nm,0.8s
PET **Petropavlovsk** **3.00 209** *eP* **Pn** **13 02 50.5 +0.1**
PET *i* S **Sn** **13 03 26.0 -0.9**
PETK **Petropavlovsk-** **3.23 219** P **Pn** **13 02 52.9 -0.4**
comp=N,0.6nm,0.3s,baz=58,slow=15,SNR=15
PETK S **Sn** **13 03 39.2 +7.1**
comp=N,1.2nm,0.3s,baz=82,slow=21,SNR=4.2
PETK **Petropavlovsk-** **3.23 219** P **Pn** **13 02 52.9 -0.5**
PETK S **Sn** **13 03 39.2 +7.1**
MIPR **Malaya Ipel'ka** **4.24 219** *eP* **Pn** **13 03 06.8 +0.3**
FX1 **Attu Island--F** **7.62 106** P **Pn** **13 03 51.9 +0.5**
comp=N,3.0nm,0.3s,baz=334,slow=9.2,SNR=21
FX1 S **Sn** **13 05 14.7 -1.6**
comp=N,12nm,0.3s,baz=127,slow=21,SNR=18
BILL **Bilibino** **12.65 9**⇑*e*PN **Pn** **13 05 05.3 +7.7**
BILL pmax pmax
comp=Z,7.0nm,1.2s
ASAJ **Asahikawa** **16.53 233** P **Pn** **13 05 47.5 +1.2**
comp=Z,1.5nm,0.3s,baz=46,slow=7.5,SNR=16
ASAJ **Asahikawa** **16.53 233** P **Pn** **13 05 47.5 +1.2**
ASAJ pmax pmax
comp=Z,2.0nm,0.3s
TIXI **Tiksi** **21.02 332** *eP* **P** **13 06 33.9 -0.9**
TIXI pmax pmax
comp=Z,6.0nm,0.9s,mb3.9
TIXI **Tiksi** **21.02 332** *eP* **P** **13 06 33.9 -0.8**
comp=Z,5.5nm,0.9s,mb3.9
INK **Inuvik** **31.51 40** P **P** **13 08 11.4 +0.7**
comp=Z,0.5nm,0.4s,mb3.6,baz=290,slow=9.2,SNR=5.1
YKA **Yellowknife Ar** **40.91 45** P **P** **13 09 30.8 +0.4**
comp=Z,0.9nm,0.6s,mb3.6,baz=300,slow=7.9,SNR=4.8
YKA **Yellowknife Ar** **40.91 45** P **P** **13 09 30.8 +0.4**
SPITS **Spitsbergen Ar** **44.69 350** P **P** **13 09 59.9 -0.8**
comp=Z,2.0nm,0.5s,mb4.0,baz=64,slow=9.4,SNR=7.3
NVAR **Mina Array Bea** **54.38 72** P **P** **13 11 17.7 +3.1**
comp=Z,0.3nm,0.5s,mb3.3,baz=291,slow=7.6,SNR=3.4
FINES **FINESS Array B** **57.98 336** P **P** **13 11 37.9 -1.9**
comp=Z,0.9nm,0.6s,mb3.8,baz=23,slow=9.2,SNR=6.1
FINES **FINESS Array B** **57.98 336** P **P** **13 11 37.9 -1.8**
FINES pmax pmax
comp=Z,1.0nm,0.6s
TXAR **Lajitas Array** **69.14 69** P **P** **13 12 55.1 +1.7**
comp=Z,0.6nm,0.5s,mb3.6,baz=298,slow=5.5,SNR=8.4
TXAR **Lajitas Array** **69.14 69** P **P** **13 12 55.1 +1.7**
TXAR pmax pmax
comp=Z,1.0nm,0.5s

*NEIC **07** 13:04:52.0, 35°.98S×72°.62W, h14km, mb4.5/2, ML4.0(GUC), After GUC.*
NEIC Felt [III] at Cauquenes and [II] at Chanco, Parral and Retiro.

GUC 07 13:04:52.8±0.5, 35°.98S×72°.62W, h14km±3km, MD4.0, ML4.0, 6C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
COCH	**Cobquecura**	**0.20**	**222**	⇑*i* P		Pg	13 04 58.0	+0.5
COCH				*i* S		Sg	13 05 01.2	+0.6
COCH				AML		AML	13 05 01.3	
	comp=N,37μm,0.1s							
CNCO	**Chanco**	**0.25**	**16**	⇑*i* P		Pg	13 04 59.5	+1.2
CNCO				*i* S		Sg	13 05 03.9	+2.0
CCHI	**Chillan**	**0.76**	**145**	⇑*i* P		Pg	13 05 07.0	-0.6
CCHI				*i* S		Sg	13 05 17.2	-0.4
TALC	**Talca**	**0.99**	**54**	⇓*i* P		Pb	13 05 10.4	-1.3
TALC				*i* S		Sb	13 05 23.8	-0.8
TALC	**Talca**	**0.99**	**54**	⇓*i* P		Pb	13 05 10.4	-1.3
TALC				*i* S		Sb	13 05 23.8	-0.8
TALC				AML		AML	13 05 24.6	
	comp=N,9μm,0.1s							
NICH	**Los Niches**	**1.50**	**50**	⇑*i* P		Pn	13 05 18.5	-0.7
NICH				*i* S		Sn	13 05 37.8	-0.6
LNV	**Longovilo**	**2.25**	**26**	⇑*i* P		Pn	13 05 30.4	+0.9
LNV				*i* S		Sn	13 05 59.0	+1.9
CACH	**El Canelo**	**2.49**	**42**	⇑*i* P		Pn	13 05 34.1	+1.2
CACH				*i* S		Sn	13 06 05.8	+2.8
ANTU	**Antumapu**	**2.91**	**35**	AML		AML	13 06 25.0	
	comp=N,461nm,0.6s							
PEL	**Peldehue**	**3.25**	**30**	AML		AML	13 06 40.3	
	comp=N,458nm,0.6s							
FCH	**Farellones**	**3.27**	**37**	AML		AML	13 06 31.4	
	comp=E,203nm,0.5s							
LCO	**Las Campanas**	**7.13**	**14**	*e*Pn		Pn	13 06 34.5	-2.3
	comp=E,23nm,1.2s							
LCO				*e*Sn		Sn	13 07 55.0	-2.6
TRQA	**Tornquist**	**8.76**	**107**	*eP*		Pn	13 06 58.2	-0.7
	comp=E,4.6nm,1.0s							
TRQA				Sn		Sn	13 08 32.8	-4.7
CPUP	**Villa Florida**	**16.22**	**58**	*e*Pn		Pn	13 08 39.0	-1.4
	comp=E,4.0nm,0.5s							
RCBR	**Riachuelo**	**45.10**	**57**	*eP*		P	13 13 01.4	-7.3
	comp=E,33nm,1.1s							

*IDC **07** 13:06:08.1±3.9, 36°.38N×71°.01E, h168km±34km, mb3.6/9, mb1 3.6/14, mb1mx3.4/31, mbtmp3.5/14, MS3.0/1, Ms1 3.0/1, ms1mx2.3/28, Error ellipse: s-maj=26.7km s-min=16.7km az=24.0*
*BJI **07** 13:06:12.8, 36°.80N×71°.10E, h210km, mb4.4/2*
*ISCJB **07** 13:06:12.7±0.5, 36°.67N±0°.04×71°.00E±0°.08, h218km±6km, mb3.7/9, Error ellipse: s-maj=10.8km s-min=5.4km az=167.7*
*NEIC **07** 13:06:14.9±2.0, 36°.82N×71°.07E, h211km±23km, mb4.5/5, Error ellipse: s-maj=21.5km s-min=8.4km az=54.0*

ISC 07 13:06:13.6±0.5, 36°.66N±0°.04×71°.05E±0°.10, h212km±6km, n48, σ1°.02/53, mb3.7/9, 1C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.91**	**166**	⇓P		Pn	13 07 03.5	+0.6
CEP				S		S	13 07 41.0	-0.6
CHCP	**Chirah Chowk**	**3.50**	**148**	P		Pn	13 07 10.4	+0.6
KSH	**Kashi**	**4.82**	**52**	*i* P		Pn	13 07 21.4	-4.6
KSH				S		S	13 08 10.3	-13
KSH				smax				
	comp=N,150nm,0.8s							
KSH				smax				
	comp=E,170nm,0.6s							
SARP	**Sargodha**	**4.91**	**164**	P		Pn	13 07 26.8	-0.4
AML	**Almayashu**	**5.84**	**20**	P		Pn	13 07 39.3	+0.4
	SNR=182							
UCH	**Uchtor**	**6.18**	**25**	P		Pn	13 07 43.8	+0.6
	SNR=30							
KZA	**Kyzart**	**6.32**	**30**	P		Pn	13 07 44.8	-0.3
	SNR=20							
EKS2	**Erkin-Say**	**6.36**	**19**	P		Pn	13 07 46.0	+0.5
	SNR=6.8							
KK05	**Karatay Array**	**6.47**	**357**	⇑P		Pn	13 07 46.6	-0.3
	comp=E,3.1nm,0.4s,baz=177,slow=13							
KK05				⇓S		S	13 08 53.4	-7.8
	comp=E,26nm,0.5s,baz=184,slow=22							
AAK	**Ala-Archa**	**6.54**	**23**	P		Pn	13 07 48.4	+0.6
	SNR=32							
AAK	**Ala-Archa**	**6.54**	**23**	P		Pn	13 07 47.5	-0.3
	comp=E,0.2nm,0.3s,baz=175,slow=5.4,SNR=42							
AAK				S		S	13 09 00.2	-2.6
	comp=E,0.0nm,0.3s,baz=122,slow=23,SNR=7.5							
KBK	**Karagaybulak**	**6.71**	**25**	P		Pn	13 07 50.7	+0.7
	SNR=13							
ULHL	**Ulahol**	**6.88**	**34**	P		Pn	13 07 52.6	+0.4
	SNR=11							
CHMS	**Chumysh**	**6.95**	**23**	P		Pn	13 07 53.1	0.0
	SNR=11							
SDNR	**Sundarnagar**	**7.11**	**135**	*e*PKP		Pn	13 07 54.5	-0.9
SDNR				*eS*		S	13 09 10.1	-6.3
TKM2	**Tokmak 2**	**7.17**	**28**	⇓P		Pn	13 07 56.2	+0.3
	comp=E,89nm,0.8s							
TKM2	**Tokmak 2**	**7.17**	**28**	P		Pn	13 07 56.4	+0.4
	SNR=8.2							
KLP	**Kalpa**	**7.86**	**128**	*eS*		S	13 09 27.6	-6.5
KLP				AML		AML	13 09 30.9	
	comp=E,204nm,0.5s							
KLP				AML		AML	13 09 31.0	
	comp=N,202nm,0.7s							
DDI	**Dehra Dun**	**8.61**	**135**	*ex*		x	13 09 26.5	
JOSI	**Joshimath**	**9.35**	**128**	*eS*		S	13 09 59.2	-10
JOSI				AML		AML	13 10 05.1	
	comp=N,61nm,0.3s							
JOSI				AML		AML	13 10 05.4	
	comp=E,80nm,0.3s							
KHET	**Khetri**	**9.45**	**153**	*eS*		S	13 10 02.4	-9.4
KHET				AML		AML	13 10 37.3	
	comp=E,14nm,0.4s							
KHET				AML		AML	13 10 37.8	
	comp=N,12nm,0.2s							
MKAR	**Makanchi Array**	**13.14**	**36**	P		Pn	13 09 11.2	-1.1
	comp=N,0.3nm,0.3s,baz=213,slow=6.5,SNR=11							
DMN	**Daman**	**14.93**	**123**	*eP*		Pn	13 09 36.6	+2.2
	comp=N,9.3nm,0.5s							
ABKAR	**Akbulak array**	**14.97**	**331**	*e*Pn		Pn	13 09 34.3	-0.4
	comp=N,0.9nm,0.3s							
ABKAR				*eS*		S	13 12 15.7	-4.8
KURK	**Kurchatov**	**15.07**	**19**	P		Pn	13 09 33.6	-2.3
	comp=N,0.2nm,0.3s,baz=207,slow=11,SNR=8.1							
PKIN	**Phulchoki**	**15.14**	**123**	*eP*		Pn	13 09 41.7	+4.6
	comp=N,9.6nm,0.5s							
PKI	**Pulchoki**	**15.16**	**123**	*eP*		Pn	13 09 39.3	+2.1
PKI	**Pulchoki**	**15.16**	**123**	*eP*		Pn	13 09 41.7	+4.5
	comp=N,9.6nm,0.5s							
GUN	**Gumba**	**15.26**	**121**	*eP*		Pn	13 09 40.4	+1.9
	comp=N,9.4nm,0.4s							
BVAR	**Borovoye Array**	**16.38**	**359**	P		P	13 09 51.5	+0.9
	comp=N,0.2nm,0.3s,baz=147,slow=14,SNR=5.7							
BVAR				LR		LR	13 17 25.3	
	comp=N,56nm,20.8s,baz=234,slow=41							
AKTK	**Aktyubinsk**	**16.66**	**330**	P		P	13 09 54.3	+0.5
AKTO	**Aktyubinsk**	**16.66**	**330**	P		P	13 09 54.3	+0.5
	comp=N,0.8nm,0.3s,baz=141,slow=9.6,SNR=11							
TAPN	**Taplejung**	**16.89**	**119**	*eP*		P	13 09 58.9	+2.4
	comp=N,18nm,0.8s							
ODAN	**Odare**	**16.97**	**121**	*eP*		P	13 09 58.4	+1.0
	comp=N,9.5nm,0.6s							
ZAA0	**Zalesovo Array**	**19.76**	**25**	*eP*		P	13 10 26.9	-0.3
ZALV	**Zalesovo Beam**	**19.76**	**25**	P		P	13 10 27.7	+0.5
	comp=N,2.1nm,0.5s,baz=219,slow=12,SNR=10							
AKASG	**Malin Array Be**	**32.88**	**309**	P		P	13 12 26.3	-1.0
	comp=N,0.3nm,0.3s,mb3.4,baz=76,slow=7.2,SNR=8.6							
JOF	**Joensuu**	**35.75**	**330**	*ep*		P	13 12 51.9	+0.1
	comp=N,1.5nm,0.3s,mb4.0							
FINES	**FINESS Array B**	**37.38**	**326**	P		P	13 13 06.6	+1.0
	comp=N,1.6nm,0.4s,mb3.9,baz=116,slow=8.5,SNR=11							
FINES	**FINESS Array B**	**37.38**	**326**	P		P	13 13 06.6	+1.0
ARCES	**ARCESS Array B**	**41.02**	**338**	P		P	13 13 36.3	+0.8
	comp=N,1.4nm,0.5s,mb3.7,baz=115,slow=8.2,SNR=11							
NB2	**NORSAR Subarra**	**44.28**	**323**	P		P	13 14 02.1	+0.3
	comp=Z,1.7nm,0.5s,mb3.6,baz=96,slow=7.9							
NOA	**NORSAR Array B**	**44.28**	**323**	P		P	13 14 02.4	+0.6
	comp=Z,3.3nm,0.7s,mb3.8,baz=96,slow=7.8,SNR=14							
NOA	**NORSAR Array B**	**44.28**	**323**	P		P	13 14 02.4	+0.6
TORD	**Torodi Ar. Bea**	**65.76**	**269**	P		P	13 16 34.4	-1.7
	comp=Z,1.1nm,0.6s,mb3.6,baz=50,slow=5.4,SNR=13							
INK	**Inuvik**	**73.75**	**9**	P		P	13 17 24.4	+0.5
	comp=Z,1.6nm,0.6s,mb3.9,baz=8.5,slow=8.9,SNR=13							
WRA	**Warramunga Arr**	**82.04**	**122**	P		P	13 18 08.9	-1.3
	comp=Z,1.1nm,0.8s,mb3.5,baz=330,slow=4.9,SNR=3.6							
ASAR	**Alice Springs**	**84.31**	**125**	P		P	13 18 20.9	-0.8
	comp=Z,1.4nm,0.8s,mb3.7,baz=317,slow=6.0,SNR=5.9							

*BJI **07** 13:06:27.5, 12°.44S×78°.00W, h37km, mB5.0/12, Ms5.3/8, Ms7 4.7/12*
*NEIC **07** 13:06:28.8±0.2, 12°.39S×77°.59W, h35km, mb5.0/74, ML5.0(LIM), Error ellipse: s-maj=7.3km s-min=4.6km az=54.0*
NEIC Felt [IV] at Lima.
*ISCJB **07** 13:06:29.9±0.9, 12°.36S±0°.05×77°.58W±0°.04, h58km±6km, mb4.9/110, MS4.2/19, Error ellipse: s-maj=9.2km s-min=4.8km az=38.2*
*IDC **07** 13:06:30.8±0.5, 12°.33S×77°.53W, h49km±4km, mb4.4/21, mb1 4.5/24, mb1mx4.5/27, mbtmp4.4/24, MS4.1/18, Ms1 4.0/18, ms1mx3.9/25, Error ellipse: s-maj=10.2km s-min=7.1km az=162.0*

ISC 07 13:06:32.4±0.8, 12°.35S±0°.05×77°.46W±0°.04, h63km±6km, h50km±2.2km: pP-P, n456, σ0°.67/411, mb4.9/109, 118C-122D, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**0.70**	**59**	Pn		Pn	13 06 46.4	-0.4
	758μm,0.4s							
NNA	**Nana**	**0.70**	**59**	P		Pn	13 06 45.8	-1.1
	20μm,0.3s,baz=252,slow=11							
NNA				S		Sn	13 06 57.1	-0.3
	22μm,0.3s,baz=271,slow=17,SNR=45							
NNA	**Nana**	**0.70**	**59**	*e*Pn		Pn	13 06 45.8	-1.0
NNA				*e*Sn		Sn	13 06 57.1	-0.3
ATAH	**Atahualpa**	**5.26**	**350**	P		Pn	13 07 49.7	+1.2
	51nm,0.3s,baz=173,slow=6.8,SNR=237							
ATAH				S		Sn	13 08 47.9	+0.1
	43nm,0.3s,baz=54,slow=22,SNR=7.3							
ATAH				LR		LR	13 10 04.5	
	comp=Z,2μm,20.2s,baz=171,slow=41							
LPAZ	**La Paz**	**9.85**	**115**	P		Pn	13 08 52.1	+0.7
	0.9nm,0.3s,baz=311,slow=12,SNR=16							
LPAZ				LR		LR	13 12 37.6	
	comp=Z,338nm,19.9s,baz=300,slow=37							
LPAZ	**La Paz**	**9.85**	**115**	*e*Pn		Pn	13 08 51.1	-0.3
OTAV	**Otavalo**	**12.54**	**355**	*e*Pn		Pn	13 09 28.3	+0.2
SIV	**San Ignacio**	**16.30**	**105**	P		Pn	13 10 18.1	+0.7
	0.9nm,0.3s,baz=292,slow=14,SNR=18							
PAYG	**Puerto Ayora**	**17.21**	**311**	Pn		Pn	13 10 24.7	-4.2
	33nm,1.0s							
ROSC	**El Rosal**	**17.37**	**10**	P		Pn	13 10 30.9	+0.2
	1.8nm,0.3s,baz=86,slow=19,SNR=2.4							
ROSC	**El Rosal**	**17.37**	**10**	*eP*		Pn	13 10 34.0	+3.3
CFAA	**Coronel Fontan**	**20.97**	**158**	P		P	13 11 10.9	+0.5
	2.6nm,1.0s,baz=336,slow=9.9,SNR=19							
CFAA				LR		LR	13 18 30.2	
	comp=Z,38nm,19.5s,baz=9.9,slow=34							
FCH	**Farellones**	**21.89**	**164**	*eP*		P	13 11 26.3	+6.1
SDV	**Santo Domingo**	**22.16**	**18**	P		P	13 11 24.1	+0.9
	48nm,0.8s,mb5.0,baz=217,slow=13,SNR=36							
SDV				LR		LR	13 21 11.9	
	comp=Z,831nm,20.3s,baz=351,slow=40							
SDV	**Santo Domingo**	**22.16**	**18**	*eP*		P	13 11 23.8	+0.5
	172nm,1.5s,mb5.3							
CPUP	**Villa Florida**	**23.50**	**129**	P		P	13 11 36.6	-0.2
	4.9nm,0.6s,mb4.2,baz=291,slow=10,SNR=23							
CPUP				LR		LR	13 21 20.9	
	comp=Z,216nm,19.5s,baz=301,slow=38							
CPUP	**Villa Florida**	**23.50**	**129**	*eP*		P	13 11 36.1	-0.6
	36nm,0.7s,mb4.9							
JTS	**JuntasAbangare**	**23.69**	**341**	P		P	13 11 39.1	+0.5
	7.7nm,1.1s,mb4.0,baz=169,slow=23,SNR=6.2							
JTS				LR		LR	13 20 04.4	
	comp=Z,231nm,18.6s,baz=168,slow=34							
JTS	**JuntasAbangare**	**23.69**	**341**	*eP*		P	13 11 39.9	+1.3
	91nm,1.7s,mb4.9							
PCRV	**Puerto La Cruz**	**25.75**	**30**	P		P	13 11 58.9	+1.6
	22nm,0.8s,mb4.7,baz=202,slow=3.4,SNR=8.8							
PCRV				LR		LR	13 23 15.4	
	comp=Z,1μm,18.9s,baz=206,slow=39							
PLCA	**Paso Flores**	**28.92**	**169**	P		P	13 12 25.5	0.0
	16nm,0.8s,mb4.8,baz=339,slow=11,SNR=21							
PLCA				LR		LR	13 21 30.4	
	comp=Z,285nm,19.4s,baz=36,slow=31							
PLCA	**Paso Flores**	**28.92**	**169**	*eP*		P	13 12 25.5	0.0
	25nm,0.9s,mb4.9							
TRQA	**Tornquist**	**29.09**	**154**	*eP*		P	13 12 25.4	-1.8
CRPR	**Cabo Rojo, PR**	**31.84**	**19**	*eP*		P	13 12 51.6	+0.1
	16nm,0.9s,mb4.8							
MPR	**Mayaguez**	**32.02**	**19**	*eP*		P	13 12 53.8	+0.7
OBIP	**Obispado Ponce**	**32.04**	**20**	*eP*		P	13 12 53.6	+0.3
	102nm,1.5s,mb5.4							
CELP	**Cerrillos**	**32.08**	**20**	*eP*		P	13 12 54.2	+0.6
LRS	**Lares**	**32.19**	**19**	*eP*		P	13 12 55.1	+0.5
SJG	**San Juan**	**32.26**	**20**	*eP*		P	13 12 54.6	-0.5
	34nm,0.5s,mb5.4							
AOPR	**Arecibo Observ**	**32.27**	**19**	*eP*		P	13 12 55.6	+0.3
	34nm,0.8s,mb5.2							
CBYP	**Canovanas**	**32.51**	**21**	*eP*		P	13 12 48.6	-8.8
	22nm,0.6s,mb5.3							
ANWB	**Willy Bob**	**33.60**	**28**	*eP*		P	13 13 04.4	-2.5
	184nm,0.8s,mb6.1							
TEIG	**Tepich**	**34.07**	**342**	*eP*		P	13 13 11.1	+0.1
	35nm,1.0s,mb5.2							
CAM4	**Nova Friburgo**	**34.68**	**111**	⇓*i* P		P	13 13 15.7	-0.6
CAM4				*i*			13 13 19.3	
CAM4				*i*		pP	13 13 30.5	-1.3
CAM4				*i*		pP	13 13 34.4	+2.6
CAM4				*i*			13 13 49.5	
CAM4				*i*			13 14 05.4	
USHA	**Ushuaia**	**42.98**	**172**	P		P	13 14 25.3	+0.1
	7.2nm,0.8s,mb4.5,baz=298,slow=5.1,SNR=6.3							
GOGA	**Godfrey**	**45.86**	**353**	*eP*		P	13 14 47.8	-0.7
	54nm,1.6s,mb5.2							
LRAL	**Lakeview Retre**	**46.03**	**349**	*eP*		P	13 14 49.1	-0.8
	45nm,0.9s,mb5.4							
JCT	**Junction City**	**47.70**	**334**	*eP*		P	13 15 02.2	-0.7
	2.6nm,0.4s,mb4.6							
SWET	**Sewanee**	**47.98**	**351**	*eP*		P	13 15 03.2	-1.8
CPCT	**Cooper Cave**	**48.00**	**352**	*eP*		P	13 15 03.9	-1.3
TKL	**Tuckaleechee C**	**48.11**	**353**	*eP*		P	13 15 04.6	-1.4
TKL				*e*		pP	13 15 17.3	-4.8
628A	**Black Gap, Mar**	**48.29**	**330**	⇑P		P	13 15 07.8	+0.3
	baz=48,SNR=14							
627A	**Terlingua Ranc**	**48.51**	**329**	⇑P		P	13 15 09.2	0.0
	baz=49,SNR=7.9							
TXAR	**Lajitas Array**	**48.55**	**329**	P		P	13 15 09.2	-0.3
	2.7nm,1.0s,mb4.2,baz=46,slow=7.2,SNR=3.7							
TXAR				pP		pP	13 15 22.2	-3.4
	3.1nm,0.7s,baz=119,slow=10,SNR=7.3							
TXAR				LR		LR	13 34 34.8	
	comp=Z,117nm,18.8s,baz=355,slow=35							
528A	**Cox Ranch, San**	**48.80**	**330**	⇓P		P	13 15 11.8	+0.4
	baz=49							
UALR	**University of**	**48.94**	**344**	*eP*		P	13 15 12.2	-0.2
	36nm,1.1s,mb5.3							
626A	**Big Bend Ranch**	**48.96**	**329**	⇑P		P	13 15 13.3	+0.6
	baz=49,SNR=20							
TZTN	**Tazewell**	**48.96**	**353**	*eP*		P	13 15 11.5	-1.0
	56nm,1.7s,mb5.3							
MIAR	**Mount Ida**	**49.08**	**342**	*eP*		P	13 15 13.2	-0.2
	14nm,0.6s,mb5.2							
527A	**Woodward Ranch**	**49.18**	**330**	⇑P		P	13 15 14.6	+0.3
	baz=49,SNR=7.1							
WVT	**Waverly**	**49.20**	**349**	*eP*		P	13 15 12.2	-2.1
	12nm,0.8s,mb5.0							
428A	**Kincaid Ranch,**	**49.22**	**331**	⇓P		P	13 15 15.0	+0.4
	baz=49							
526A	**Mary Lane Ranc**	**49.35**	**329**	⇓P		P	13 15 15.7	+0.1
	baz=50,SNR=12							
ELN	**Prospectdale**	**49.41**	**357**	*eP*		P	13 15 15.7	-0.2
427A	**Hayter Ranch,**	**49.66**	**330**	⇑P		P	13 15 17.3	-0.7
	baz=50							
426A	**McDonald Obser**	**49.82**	**330**	⇓P		P	13 15 18.8	-0.4
	baz=50,SNR=9.6							
328A	**Wristen Ranch,**	**49.82**	**331**	⇑P		P	13 15 19.2	0.0
	baz=50,SNR=13							
326A	**Caldwell Ranch**	**50.32**	**330**	P		P	13 15 23.4	+0.4
	baz=50,SNR=10							
425A	**Indio Mountain**	**50.39**	**329**	P		P	13 15 23.9	+0.4
	baz=51,SNR=12							
325A	**Bean Ranch, Si**	**50.86**	**329**	⇑P		P	13 15 27.2	+0.1
	baz=51,SNR=18							
WCI	**Wyandotte Cave**	**50.98**	**351**	*eP*		P	13 15 26.6	-1.2
	29nm,0.9s,mb5.2							
226A	**Malaga, Loving**	**51.00**	**331**	⇑P		P	13 15 27.6	-0.5
	baz=51,SNR=16							
SIUC	**Southern Illin**	**51.00**	**348**	*eP*		P	13 15 26.6	-1.4
	58nm,1.0s,mb5.5							
WMOK	**Wichita Mounta**	**51.01**	**337**	*eP*		P	13 15 27.3	-0.8
	22nm,1.5s,mb4.9							
127A	**Arkansas Junct**	**51.16**	**332**	⇓P		P	13 15 29.9	+0.7
	baz=51							
324A	**Moseley Ranch,**	**51.17**	**329**	⇑P		P	13 15 29.1	-0.3
	baz=51,SNR=7.4							
GDL2	**Guadalupe Moun**	**51.23**	**331**	*eP*		P	13 15 30.2	+0.4
	3.8nm,0.8s,mb4.4							
MNTX	**Cornudas Mount**	**51.33**	**329**	*eP*		P	13 15 29.3	-1.2
	15nm,1.4s,mb4.7							
225A	**Deer Hill, Car**	**51.38**	**330**	⇓P		P	13 15 31.6	+0.6
	baz=52,SNR=9.2							
126A	**Clayton Basin,**	**51.44**	**331**	⇑P		P	13 15 31.8	+0.4
	baz=52							
Z27A	**Tatum**	**51.62**	**332**	⇑P		P	13 15 33.0	+0.3
	baz=52,SNR=12							
CPRX	**Cap Rock**	**51.69**	**332**	*eP*		P	13 15 33.2	+0.1
	13nm,1.1s,mb4.8							
224A	**Cornudas Mount**	**51.70**	**329**	⇑P		P	13 15 32.9	-0.4
	baz=52,SNR=10							
125A	**Gardner Draw,**	**51.75**	**331**	⇓P		P	13 15 33.4	-0.3
	baz=52							
OLIL	**Olney**	**51.78**	**349**	*eP*		P	13 15 32.5	-1.3
	31nm,0.8s,mb5.3							
Z26A	**Caprock**	**51.94**	**332**	⇑P		P	13 15 34.9	-0.1
	baz=52							
MSTX	**Muleshoe**	**51.98**	**333**	⇑P

U26A	Atchley Ranch,	54.45	334	⇑P	P	13 15 53.0 -0.4
	baz=55					
118A	Homack Ranch,	54.46	326	⇓P	P	13 15 52.9 -0.7
	baz=55					
ANMO	Albuquerque	54.48	331	eP	P	13 15 54.0 +0.2
	2.3nm,1.1s,mb4.0					
Y20A	Horse Springs,	54.60	328	⇓P	P	13 15 55.0 +0.4
	baz=55					
TUC	Tucson	54.66	325	eP	P	13 15 55.2 +0.2
	2.1nm,0.8s,mb4.2					
X21A	Alamocita Cree	54.73	329	⇓P	P	13 15 56.2 +0.7
	baz=55,SNR=11					
U25A	Circle Dot Ran	54.74	333	⇓P	P	13 15 55.3 -0.3
	baz=55					
216A	Three Points,	54.81	324	⇑P	P	13 15 56.2 +0.1
	baz=55					
117A	Oracle	54.83	325	⇓P	P	13 15 56.6 +0.3
	baz=55,SNR=13					
V23A	Ortiz Mt. (NFS	55.00	331	⇓P	P	13 15 57.6 +0.2
	baz=55					
U24A	Moreno Valley	55.13	333	⇑P	P	13 15 58.6 +0.1
	baz=55					
X20A	Quemado	55.16	329	⇑P	P	13 15 58.9 +0.2
	baz=55					
Z17A	San Carlos Hig	55.24	326	⇓P	P	13 15 58.8 -0.4
	baz=55					
T25A	Trinidad	55.36	334	⇑P	P	13 16 00.3 +0.3
	baz=56					
116A	Eloy	55.37	325	⇓P	P	13 15 59.6 -0.6
	baz=56					
X19A	St. Johns	55.48	328	⇓P	P	13 16 01.2 +0.3
	baz=56					
V22A	San Miguel Ran	55.48	331	⇓P	P	13 16 01.6 +0.7
	baz=56,SNR=7.7					
U23A	El Rito	55.48	332	⇓P	P	13 16 01.2 +0.3
	baz=56					
RKT	Rikitea	55.52	250	eLR	LR	13 32 09.2
	755nm,33.5s					
214A	Organ Pipe Nat	55.56	323	⇓P	P	13 16 01.1 -0.5
	baz=56					
W20A	Ramah	55.62	329	⇓P	P	13 16 01.4 -0.6
	baz=56					
Y17A	Roosevelt	55.74	326	⇑P	P	13 16 02.2 -0.6
	baz=56					
U22A	Llaves	55.83	331	⇓P	P	13 16 02.7 -0.7
	baz=56					
X18A	Snowflake	55.90	328	⇓P	P	13 16 03.4 -0.6
	baz=56					
W19A	Sanders	56.06	328	⇓P	P	13 16 05.1 0.0
	baz=56					
114A	Black Gap (USA	56.18	324	⇓P	P	13 16 05.0 -1.0
	baz=56					
JFWS	Jewell Farm	56.22	349	eP	P	13 16 04.1 -2.0
	6.6nm,0.5s,mb4.9					
Y16A	Circle Bar Ran	56.22	326	⇓P	P	13 16 06.3 0.0
	baz=56					
U21A	Nageezi	56.25	331	⇑P	P	13 16 06.2 -0.2
	baz=56					
SDCO	Great Sand Dun	56.34	333	eP	P	13 16 05.5 -1.6
	11nm,1.1s,mb4.8					
T22A	Edith	56.37	332	⇓P	P	13 16 07.4 +0.1
	baz=57					
LBNH	Lisbon	56.54	5	eP	P	13 16 07.9 -0.4
	35nm,1.4s,mb5.2					
X16A	Lo Mia Camp, P	56.61	326	⇑P	P	13 16 09.0 0.0
	baz=57,SNR=6.5					
U20A	Newcomb	56.63	330	⇑P	P	13 16 09.2 +0.1
	baz=57					
Y15A	Casa Rosa Ranc	56.75	325	⇑P	P	13 16 10.4 +0.4
	baz=57					
Z13A	Yuma Proving G	56.95	324	⇓P	P	13 16 11.4 0.0
	baz=57					
X15A	Humboldt	57.09	326	⇑P	P	13 16 12.5 +0.1
	baz=57					
V17A	Tonalea, Kykot	57.18	328	⇑P	P	13 16 13.7 +0.7
	baz=57,SNR=8.0					
T19A	Beclabito	57.23	330	⇓P	P	13 16 14.1 +0.7
	baz=57					
MVCO	Mesa Verde	57.28	331	⇑P	P	13 16 14.3 +0.6
	baz=58					
R22A	Saguache, Gunn	57.30	333	⇑P	P	13 16 13.7 -0.2
	baz=58					
S21A	Coal Bank Pass	57.31	332	⇓P	P	13 16 14.3 +0.4
	baz=58					
R21A	Cimarron	57.77	332	⇑P	P	13 16 17.7 +0.5
	baz=58					
U17A	Shonto	57.87	329	⇑P	P	13 16 17.9 0.0
	baz=58					
Q22A	Crested Butte,	57.89	333	⇑P	P	13 16 18.3 +0.3
	baz=58					
T18A	Mexican Hat	57.89	330	⇑P	P	13 16 18.2 +0.2
	baz=58,SNR=9.5					
R20A	Redvale	58.01	331	⇑P	P	13 16 19.6 +0.8
	baz=58,SNR=9.9					
S19A	Harvey Farm, M	58.01	331	⇓P	P	13 16 19.1 +0.3
	baz=58,SNR=9.2					
PV01	Paradox Valley	58.05	331	eP	P	13 16 19.6 +0.5
	2µm,1.3s					
V15A	Kaibab Nationa	58.06	327	⇑P	P	13 16 19.9 +0.7
	baz=58					
X13A	Yucca	58.06	325	⇑P	P	13 16 19.4 +0.2
	baz=58					
W14A	Seligman	58.10	326	⇓P	P	13 16 20.0 +0.5
	baz=58					
ISCO	Idaho Springs	58.11	335	eP	P	13 16 18.6 -0.8
	3.0nm,0.7s,mb4.4					
T17A	Navajo Res., N	58.25	329	⇓P	P	13 16 21.3 +0.8
	baz=58					
S18A	Hurst Farm, Bl	58.38	330	⇓P	P	13 16 21.7 +0.3
	baz=59,SNR=7.9					
V14A	Boquillas Ranc	58.42	326	⇓P	P	13 16 22.9 +1.1
	baz=59,SNR=8.8					
W13A	Hualapai Mount	58.46	325	⇓P	P	13 16 22.4 +0.4
	baz=59					
ECSD	EROS Data Cent	58.48	344	eP	P	13 16 20.4 -1.5
	14nm,0.9s,mb5.0					
IRM	Iron Mountain	58.50	324	⇓P	P	13 16 22.4 +0.1
	baz=59,SNR=6.8					
U15A	North Rim	58.58	327	⇓P	P	13 16 23.7 +0.8
	baz=59					
BELC	Belle Mtn. Jos	58.89	323	⇑P	P	13 16 25.4 +0.4
	baz=59					
Q19A	Hogan Spring (	59.04	331	⇓P	P	13 16 25.8 -0.2
	baz=59					
U14A	Mt Trumbull	59.05	327	⇓P	P	13 16 26.1 0.0
	baz=59,SNR=7.2					
V13A	Grand Canyon W	59.06	326	⇓P	P	13 16 26.3 +0.1
	baz=59,SNR=6.3					
P20A	De Beque	59.07	332	⇑P	P	13 16 26.6 +0.4
	baz=59					
GMRC	Granite Mounta	59.24	324	⇓P	P	13 16 27.4 0.0
	baz=59					
N22A	Wattenberg Ran	59.30	335	⇓P	P	13 16 27.9 +0.1
	baz=60					
R17A	Hanksville Air	59.31	330	⇓P	P	13 16 28.2 +0.4
	baz=60,SNR=6.7					
T14A	Hurricane	59.48	327	⇑P	P	13 16 30.2 +1.2
	baz=60					
O20A	White River Ci	59.52	333	⇑P	P	13 16 29.6 +0.4
	baz=60					
Q18A	Rafter H Ranch	59.56	331	⇑P	P	13 16 29.5 0.0
	baz=60					
N21A	Black Mountain	59.72	334	⇓P	P	13 16 30.9 +0.4
	baz=60					
SCI	San Clemente I	59.74	320	⇓P	P	13 16 30.8 -0.1
	baz=60					
SRU	San Rafael	59.76	331	⇑P	P	13 16 30.9 0.0
	baz=60					
Q16A	Castle Valley	59.92	330	⇑P	P	13 16 32.0 0.0
	baz=60					
P18A	Preston Nutter	60.03	331	⇓P	P	13 16 33.2 +0.4
	baz=60					
O19A	Miners Draw (B	60.05	332	P	P	13 16 33.1 +0.3
	baz=60,SNR=5.7					
N20A	Spence Gulch,	60.10	333	⇓P	P	13 16 33.4 +0.2
	baz=60,SNR=5.8					
P17A	Butcher Ranch,	60.15	331	⇑P	P	13 16 33.7 +0.1
	baz=60					
L22A	Ellis Ranch, M	60.32	335	⇑P	P	13 16 35.5 +0.9
	baz=60					
M21A	Separation Pea	60.35	335	⇑P	P	13 16 35.3 +0.4
	baz=61,SNR=5.8					
RWWY	Rawlins	60.35	335	eP	P	13 16 35.3 +0.4
	9.5nm,1.0s,mb4.8					
N19A	John Jarvie Ra	60.55	333	⇑P	P	13 16 36.3 0.0
	baz=61,SNR=6.1					
Q15A	Fillmore	60.58	329	⇑P	P	13 16 36.7 +0.1
	baz=61					
M20A	Sweetwater, Wa	60.60	334	⇓P	P	13 16 36.8 +0.2
	baz=61					
L21A	Rawlins	60.65	335	⇑P	P	13 16 36.9 0.0
	baz=61,SNR=6.5					
O17A	Robinson Place	60.71	331	⇑P	P	13 16 37.9 +0.5
	baz=61,SNR=7.8					
T11A	Corn Creek, Al	60.76	326	⇓P	P	13 16 38.8 +1.0
	baz=61,SNR=5.5					
S12A	Delamar Landin	60.82	326	⇑P	P	13 16 38.7 +0.5
	baz=61					
N18A	Larsen Ranch,	60.84	332	⇓P	P	13 16 38.7 +0.4
	baz=61,SNR=6.4					
Q14A	Sevier Lake (B	61.03	329	⇓P	P	13 16 40.2 +0.6
	baz=61,SNR=6.9					
O16A	Springville	61.08	331	⇓P	P	13 16 40.2 +0.3
	baz=61					
L20A	Wamsutter	61.09	334	⇑P	P	13 16 40.7 +0.8
	baz=61					
DAU	Daniels Canyon	61.13	331	eP	P	13 16 38.5 -1.7
	4.2nm,0.7s,mb4.7					
RSSD	Black Hills	61.18	338	eP	P	13 16 40.1 -0.4
	3.5nm,0.6s,mb4.7					
MPMC	Manual Prospec	61.20	324	⇑P	P	13 16 41.2 +0.4
	baz=61					
R12A	Pony Springs,	61.22	327	⇓P	P	13 16 41.2 +0.3
	baz=61,SNR=5.8					
S11A	Rachel	61.34	326	⇓P	P	13 16 41.6 -0.1
	baz=62					
N17A	Moffit Pass	61.35	332	⇓P	P	13 16 42.4 +0.7
	baz=62					
JLU	Jordanelle	61.37	331	eP	P	13 16 42.4 +0.5
	30nm,1.6s,mb5.2					
P14A	Drum Mountains	61.38	329	⇑P	P	13 16 41.9 -0.1
	baz=62					
M18A	Lyman	61.38	333	⇓P	P	13 16 42.0 0.0
	baz=62					
Q13A	Wheeler Ranch,	61.38	328	⇓P	P	13 16 41.5 -0.5
	baz=62,SNR=7.2					
L19A	Farson	61.61	333	⇓P	P	13 16 43.0 -0.4
	baz=62,SNR=7.1					
K20A	Yellowstone Ra	61.63	335	⇑P	P	13 16 43.1 -0.5
	baz=62,SNR=7.2					
M17A	Scullys Gap (B	61.69	332	⇑P	P	13 16 43.7 -0.3
	baz=62					
DUG	Dugway	61.71	330	⇓P	P	13 16 45.0 +0.8
	baz=62,SNR=11					
DUG	Dugway	61.71	330	eP	P	13 16 44.6 +0.4
	6.3nm,0.7s,mb4.8					
DUG			e			13 16 53.6
P13A	Bates Ranch, G	61.75	328	⇓P	P	13 16 44.6 +0.2
	baz=62					
R11A	Troy Canyon, C	61.76	327	⇓P	P	13 16 44.6 0.0
	baz=62,SNR=5.2					
L18A	Fontenelle, Gr	61.77	333	⇑P	P	13 16 45.2 +0.7
	baz=62					
CWC	Cottonwood Cre	61.80	323	⇑P	P	13 16 45.4 +0.5
	baz=62					
Q12A	Willow Creek R	61.87	328	⇑P	P	13 16 45.1 -0.1
	baz=62					
K19A	Absolon Red Bu	61.98	334	⇓P	P	13 16 45.4 -0.5
	baz=62,SNR=5.6					
S10A	Tonopah Range,	62.01	326	⇑P	P	13 16 45.9 -0.3
	baz=62,SNR=6.4					
Q11A	Duckwater	62.16	327	⇑P	P	13 16 47.4 +0.2
	baz=62,SNR=7.4					
HWUT	Hardware Ranch	62.21	332	eP	P	13 16 47.1 -0.3
	9.7nm,0.8s,mb5.0					
P12A	McGill	62.23	328	⇓P	P	13 16 47.9 +0.3
	baz=62,SNR=8.3					
BW06	Boulder Array	62.23	334	⇓P	P	13 16 46.6 -1.0
	baz=62,SNR=7.9					
PDAR	Pinedale Array	62.23	334	P	P	13 16 46.7 -0.9
	3.4nm,0.9s,mb4.5,baz=140,slow=7.2,SNR=18					
K18A	Toltan Ranch,	62.34	333	⇓P	P	13 16 48.8 +0.5
	baz=62,SNR=9.5					
N14A	Grayback Hills	62.40	330	⇑P	P	13 16 48.9 +0.1
	baz=63					
AGMN	Agassiz Nation	62.55	346	eP	P	13 16 49.0 -0.6
	14nm,0.6s,mb5.2					
O12A	Currie	62.73	329	⇓P	P	13 16 51.4 +0.4
	baz=63,SNR=6.5					
J18A	Kendall Valley	62.79	334	⇑P	P	13 16 50.9 -0.5
	baz=63,SNR=8.4					
L15A	Malad City	62.90	331	⇑P	P	13 16 51.5 -0.6
	baz=63,SNR=5.2					
HVU	Hansel Valley	62.91	331	eP	P	13 16 51.6 -0.5
	3.9nm,0.7s,mb4.7					
M14A	Sheep Mountain	62.97	330	⇓P	P	13 16 52.1 -0.5
	baz=63,SNR=7.4					
I18A	Diamond G Ranc	63.10	334	⇑P	P	13 16 53.9 +0.5
	baz=63					
K16A	Soda Springs	63.18	332	⇓P	P	13 16 54.6 +0.7
	baz=63					
J17A	Brown Place, J	63.22	333	⇑P	P	13 16 54.5 +0.4
	baz=63					
NVAR	Mina Array Bea	63.31	325	P	P	13 16 55.6 +0.7
	3.3nm,0.8s,mb4.5,baz=140,slow=7.7,SNR=18					
L14A	Malta	63.33	331	P	P	13 16 55.2 +0.3
	baz=64,SNR=5.9					
LOHW	Long Hollow	63.37	334	eP	P	13 16 54.5 -0.6
	3.5nm,0.7s,mb4.6					
RRI2	Red Ridge	63.47	333	eP	P	13 16 56.3 +0.4
	11nm,0.7s,mb5.1					
K15A	Arbon	63.50	332	⇓P	P	13 16 56.3 +0.3
	baz=64					
I17A	Pilgrim Ck.	63.60	334	⇓P	P	13 16 57.3 +0.7
	baz=64					
O10A	Cortez Mining,	63.66	327	⇓P	P	13 16 57.3 +0.2
	baz=64					
M12A	Weis	63.68	329	⇑P	P	13 16 57.0 -0.3
	baz=64					
K14A	Jones Ranch, D	63.69	331	P	P	13 16 57.4 0.0
	baz=64,SNR=5.4					
L13A	Double Diamond	63.71	330	⇑P	P	13 16 57.4 0.0
	baz=64					
IMW	Indian Meadow	63.74	334	eP	P	13 16 56.9 -0.7
	12nm,1.2s,mb4.8					
I16A	Newdale	63.96	333	⇓P	P	13 16 59.2 +0.1
	baz=64					
J15A	Blackfoot	64.01	332	⇑P	P	13 16 59.9 +0.5
	baz=64					
RLMT	Red Lodge	64.03	335	⇑P	P	13 16 59.4 -0.1
	baz=64,SNR=7.8					
RLMT	Red Lodge	64.03	335	eP	P	13 16 59.1 -0.4
	12nm,1.2s,mb4.8					
M11A	Holland Ranch,	64.13	329	⇑P	P	13 16 59.8 -0.4
	baz=64					
L12A	House Creek Ra	64.27	330	⇓P	P	13 17 00.9 -0.2
	baz=64					
G18A	Lazy EL Ranch,	64.31	335	P	P	13 17 01.5 +0.2
	baz=64,SNR=18					
ULM	Lac du Bonnet	64.39	347	P	P	13 17 00.9 -0.8
	21nm,0.8s,mb5.2,baz=160,slow=6.0,SNR=16					
J14A	Carey	64.45	332	⇓P	P	13 17 02.8 +0.5
	baz=65,SNR=8.3					
I15A	Monteview	64.50	333	⇓P	P	13 17 02.2 -0.4
	baz=65					
H16A	Russell Place,	64.52	334	⇓P	P	13 17 03.3 +0.6
	baz=65,SNR=9.5					
K12A	Draper Farm, C	64.59	330	⇓P	P	13 17 03.2 +0.1
	baz=65,SNR=11					
L11A	Cat Creek Ranc	64.65	329	⇑P	P	13 17 03.7 +0.1
	baz=65,SNR=5.9					
J13A	Cove Ranch, Pi	64.82	331	⇑P	P	13 17 04.5 -0.1
	baz=65,SNR=6.0					
F18A	Big Timber	64.85	336	P	P	13 17 05.1 +0.3
	baz=65,SNR=20					
I14A	Mackay	64.89	332	⇑P	P	13 17 04.9 -0.2
	baz=65,SNR=9.4					
L10A	Juniper Basin	64.95	329	⇓P	P	13 17 05.5 0.0
	baz=65,SNR=8.2					
DGMT	Dagmar	65.03	341	⇓P	P	13 17 06.7 +0.9
	baz=65					
DGMT	Dagmar	65.03	341	eP	P	13 17 05.8 -0.1
	20nm,1.1s,mb5.1					
HLID	Hailey	65.05	331	⇑P	P	13 17 06.8 +0.6
	baz=65,SNR=6.3					
HLID	Hailey	65.05	331	eP	P	13 17 06.3 +0.1
	3.5nm,0.7s,mb4.5					
H15A	Lima	65.06	333	⇓P	P	13 17 06.8 +0.6
	baz=65					
J12A	Stokes Ranch,	65.14	331	⇓P	P	13 17 06.9 +0.1
	baz=65					
G16A	Moss Hill, Enn	65.18	334	⇓P	P	13 17 07.5 +0.6
	baz=65,SNR=7.2					
I13A	Wildhorse Cree	65.18	332	⇓P	P	13 17 07.8 +0.8
	baz=65,SNR=9.3					
F17A	Fitzpatrick Pl	65.24	335	⇓P	P	13 17 07.7 +0.4
	baz=65,SNR=6.0					
K11A	Parker Ranch,	65.24	330	⇓P	P	13 17 07.7 +0.3
	baz=65					
MCMT	McKenzie Canyo	65.31	333	eP	P	13 17 08.5 +0.7
	2.4nm,0.7s,mb4.3					
H14A	Leadore	65.38	333	⇑P	P	13 17 09.1 +0.8
	baz=66					
G15A	Dillon	65.42	333	⇑P	P	13 17 08.3 -0.2
	baz=66					
BOZ	Bozeman (W)	65.43	334	⇓P	P	13 17 08.6 0.0
	baz=66,SNR=8.3					
BOZ	Bozeman (W)	65.43	334	eP	P	13 17 08.3 -0.2
	3.6nm,0.8s,mb4.5					
BEKR	Beckworth	65.46	325	⇓P	P	13 17 09.1 +0.2
	baz=66					
E18A	Harlowton	65.47	336	⇑P	P	13 17 09.0 +0.2
	baz=66,SNR=8.4					
I12A	Atlanta	65.57	331	⇑P	P	13 17 09.2 -0.3
	baz=66					
MFID	Camas Ranch	65.62	330	⇑P	P	13 17 10.1 +0.2
	baz=66,SNR=11					
DLMT	Dillon	65.62	334	eP	P	13 17 10.0 +0.2
	14nm,1.4s,mb4.8					
K10A	MacKenzie Ranc	65.66	329	⇓P	P	13 17 10.0 -0.1
	baz=66,SNR=6.3					
H13A	Challis	65.75	332	⇓P	P	13 17 10.7 0.0
	baz=66,SNR=5.8					
E17A	Martinsdale	65.77	335	⇑P	P	13 17 10.7 0.0
	baz=66,SNR=9.6					
F15A	Butte	65.96	334	⇓P	P	13 17 12.2 +0.3
	baz=66					
H12A	Diamond D Ranc	66.01	332	⇑P	P	13 17 12.1 -0.2
	baz=66,SNR=5.0					
I11A	Placerville	66.05	331	⇑P	P	13 17 12.8 +0.1
	baz=66,SNR=7.0					
J10A	Berg Farm, Mel	66.09	330	⇓P	P	13 17 12.8 -0.1
	baz=66					
G13A	Cobalt	66.14	332	⇓P	P	13 17 13.4 +0.2
	baz=66					
E16A	East Helena	66.16	335	⇑P	P	13 17 13.2 -0.1
	baz=66					
D17A	Six Diamond Ra	66.26	336	⇓P	P	13 17 13.8 -0.1
	baz=66					
E15A	Deer Lodge	66.48	334	⇑P	P	13 17 15.4 +0.1
	baz=67,SNR=5.2					
J09A	Fry Pan Ranch,	66.52	329	⇑P	P	13 17 15.6 0.0
	baz=67					
EGMT	Eagleton	66.61	337	⇑P	P	13 17 16.2 +0.2
	baz=67					
G12A	Big Creek, Yel	66.67	332	⇓P	P	13 17 16.3 -0.2
	baz=67					
H11A	Donnelly	66.67	331	⇓P	P	13 17 16.1 -0.4
	baz=67					
C17A	Wharram Farm,	66.68	336	⇑P	P	13 17 15.7 -0.8
	baz=67					
F13A	Darby	66.72	333	⇑P	P	13 17 16.3 -0.5
	baz=67					
MOD	Modoc	66.83	326	eP	P	13 17 17.7 +0.1
	6.1nm,0.6s,mb4.8					
E14A	Clinton	66.84	334	⇑P	P	13 17 17.8 +0.2
	baz=67,SNR=6.1					
J08A	Circle Bar Ran	66.89	329	⇓P	P	13 17 18.3 +0.3
	baz=67					
D15A	Lincoln	66.92	335	⇓P	P	13 17 17.3 -0.8
	baz=67					
F12A	Elk City	67.11	332	⇓P	P	13 17 19.0 -0.3
	baz=67					
E13A	Victor	67.16	333	⇑P	P	13 17 19.7 +0.1
	baz=67,SNR=7.0					
C16A	Fuhringer Ranc	67.21	336	⇓P	P	13 17 19.9 0.0
	baz=67					
G11A	Walters Elk Ra	67.31	331	⇑P	P	13 17 19.8 -0.8
	baz=68					
MSO	Missoula	67.35	334	eP	P	13 17 20.7 -0.2
	9.9nm,1.1s,mb4.8					
D14A	Greenough	67.36	334	⇑P	P	13 17 20.5 -0.4
	baz=68,SNR=5.7					
A18A	Metzger Ranch,	67.38	337	⇑P	P	13 17 20.2 -0.7
	baz=68					
SLMT	Seeley Lake	67.48	334	eP	P	13 17 21.2 -0.5
	17nm,1.7s,mb4.8					
SLMT			e			13 17 31.9
SCHQ	Schefferville	67.52	7	P	P	13 17 21.3 -0.4
	9.0nm,0.8s,mb4.9,baz=190,slow=3.6,SNR=15					
SCHQ				pP	pP	13 17 35.0 -3.7
	7.6nm,0.8s,baz=220,slow=5.8,SNR=6.0					
SCHQ				LR	LR	13 47 18.4
	comp=Z,191nm,20.5s,baz=92,slow=36					
C15A	Salmond Ranch,	67.53	335	⇓P	P	13 17 22.4 +0.4
	baz=68,SNR=5.7					
F11A	Grangeville	67.62	332	⇑P	P	13 17 22.1 -0.4
	baz=68,SNR=5.5					
G10A	Bishop Farm, J	67.63	331	⇓P	P	13 17 22.5 -0.1
	baz=68,SNR=5.4					
A17A	Triple J Farms	67.72	337	⇓P	P	13 17 21.8 -1.3
	baz=68,SNR=7.1					
D13A	Huson	67.78	334	⇑P	P	13 17 23.7 +0.1
	baz=68					
H08A	Prairie City	67.83	329	⇑P	P	13 17 22.4 -1.5
	baz=68,SNR=7.1					
I07A	Izee	67.93	329	⇓P	P	13 17 24.6 +0.1
	baz=68					
G09A	Cove	67.94	330	⇑P	P	13 17 24.2 -0.4
	baz=68					
B15A	Bradely Ranch,	67.94	336	⇓P	P	13 17 24.7 +0.2
	baz=68,SNR=6.7					
C14A	Swan Lake	68.00	334	⇑P	P	13 17 24.7 -0.2
	baz=68					
YBH	Yreka Blue Hor	68.03	325	P	P	13 17 24.4 -0.8
	2.1nm,0.8s,mb4.2,baz=52,slow=6.5,SNR=5.2					
D12A	Red Ives Fores	68.14	333	⇑P	P	13 17 25.2 -0.6
	baz=68					
F10A	Beach Ranch, E	68.19	331	⇑P	P	13 17 25.6 -0.6
	baz=68,SNR=7.1					
C13A	Hot Springs	68.29	334	⇓P	P	13 17 26.3 -0.4
	baz=68					
BSMT	Bassoo Peak	68.51	334	eP	P	13 17 28.4 +0.4
	3.5nm,0.9s,mb4.3					
BSMT			e		pP	13 17 43.8 -1.3
A15A	Johnson Ranch,	68.54	336	⇑P	P	13 17 27.6 -0.7
	baz=69					
D11A	Klaveano Farm,	68.58	333	⇓P	P	13 17 28.9 +0.4
	baz=69					
PPT	Papeete	69.51	256	eLR	LR	13 38 48.3
	360nm,28.5s					
PPT	Papeete	69.51	256	LR	LR	13 39 50.9
	comp=Z,45nm,18.5s,baz=115,slow=29					
B11A	Sandpoint	69.64	334	⇓P	P	13 17 35.5 +0.4
	baz=70					
NEW	Newport	69.84	333	eP	P	13 17 35.2 -1.2
	7.2nm,1.2s,mb4.5					
OD2	Odessa Site #2	69.92	332	eP	P	13 17 37.0 +0.2
	15nm,1.0s,mb4.9					
A11A	Hall Mountain,	70.03	334	⇑P	P	13 17 37.7 +0.2
	baz=70					
A07A	Ashnola River,	71.89	332	⇑P	P	13 17 48.2 -0.6
	baz=72					
EDM	Edmonton	72.17	338	eP	P	13 17 49.0 -1.3
EDM			e		pP	13 18 02.4 -5.0
LIC	Lamto	74.31	80	eP	P	13 18 03.9 +0.1
	88nm,1.4s,mb5.5					
TIC	Toumodi	74.43	79	eP	P	13 18 03.5 -1.0
	6.1nm,0.2s,mb5.2					
DBIC	Dimbokro	74.59	79	P	P	13 18 05.8 +0.4
	6.9nm,0.7s,mb4.7,baz=233,slow=7.7,SNR=12					
DBIC				LR	LR	13 49 14.0
	comp=Z,253nm,20.3s,baz=203,slow=34					
DBIC	Dimbokro	74.59	79	P	P	13 18 05.8 +0.4
DBIC				LR	LR	13 49 14.0
KIC	Kosan Boka	74.62	80	eP	P	13 18 05.9 +0.3
	24nm,0.7s,mb5.2					
QSPA	South Pole Qui	77.79	180	P	P	13 18 23.6 +1.2
	10nm,1.0s,mb4.7,baz=153,slow=3.5,SNR=

PCVE	Castro Verde	81.75	49	eP	P	13 18 47.8	+3.3
	79nm,1.9s,mb5.3						
PCVE	Castro Verde	81.75	49	eLR	LR	13 47 08.8	
	122nm,20.0s						
PVAQ	Vaqueiros	81.90	49	eP	P	13 18 47.4	+2.1
	32nm,1.9s,mb4.9						
PVAQ	Vaqueiros	81.90	49	eLR	LR	13 47 09.4	
	106nm,22.0s						
PBEJ	Beja	82.02	48	eP	P	13 18 46.1	+0.1
	30nm,1.5s,mb5.0						
EVO	Evora	82.11	48	⇑iP	P	13 18 47.5	+1.1
	69nm,1.0s,mb5.2						
EVO	Evora	82.11	48	eP	P	13 18 47.7	+1.3
	37nm,1.8s,mb5.0						
DLBC	Dease Lake	82.43	335	eP	P	13 18 47.4	-0.2
TORD	Torodi Ar. Bea	82.47	75	P	P	13 18 49.4	+0.6
	26nm,1.1s,mb5.1,baz=254,slow=5.2,SNR=60						
TORD				pP	pP	13 19 04.1	-2.0
	8.9nm,0.9s,baz=287,slow=7.6,SNR=6.8						
TORD				LR	LR	13 53 46.0	
	comp=Z,269nm,19.5s,baz=225,slow=34						
PESTR	Estremoz	82.54	48	eP	P	13 18 50.0	+1.3
	38nm,1.9s,mb5.1						
PESTR	Estremoz	82.54	48	eLR	LR	13 47 15.7	
	130nm,22.0s						
PBAR	Barrancos	82.69	48	eP	P	13 18 51.2	+1.8
	29nm,1.7s,mb5.0						
PBAR	Barrancos	82.69	48	eLR	LR	13 47 57.3	
	120nm,20.0s						
PMRV	Marv??o	82.90	47	eP	P	13 18 51.2	+0.7
	25nm,1.8s,mb4.9						
PMRV	Marv??o	82.90	47	eLR	LR	13 48 32.7	
	96nm,22.0s						
PCBR	Castelo Branco	82.99	47	eP	P	13 18 52.1	+1.1
	28nm,1.6s,mb5.0						
PVIS	Viseu	83.03	46	eP	P	13 18 52.3	+1.1
	39nm,1.7s,mb5.2						
MTE	Manteigas	83.16	46	eP	P	13 18 59.6	+7.8
	34nm,1.3s,mb5.2						
MTE	Manteigas	83.16	46	eSS	SS	13 34 48.6	+16
MTE	Manteigas	83.16	46	eLR	LR	13 47 54.7	
	125nm,22.0s						
PVRL	Vila Real	83.37	45	eP	P	13 18 54.3	+1.4
	22nm,2.0s,mb4.8						
MVO	Moncorvo	83.81	46	eP	P	13 18 56.3	+1.2
	35nm,1.7s,mb5.2						
ESDC	Sonseca Array	85.46	48	P	P	13 19 03.7	+0.2
	4.7nm,0.8s,mb4.7,baz=257,slow=5.2,SNR=11						
ESDC				LR	LR	13 52 50.0	
	comp=Z,99nm,19.8s,baz=245,slow=32						
ESDC	Sonseca Array	85.46	48	P	P	13 19 03.7	+0.2
ESDC				LR	LR	13 52 50.0	
RES	Resolute Bay	87.54	355	P	P	13 19 12.8	-0.1
	4.2nm,1.0s,mb4.6,baz=193,slow=5.6,SNR=6.7						
SYO	Syowa Base	87.82	161	⇓eP	P	13 19 12.8	-1.7
TAM	Tamanrasset	88.38	66	eP	P	13 19 19.6	+1.6
	14nm,1.1s,mb5.1						
SUMG	Summit	88.50	11	eP	P	13 19 17.7	+0.2
	38nm,1.1s,mb5.5						
SUMG	Summit	88.50	11	iP	P	13 19 18.5	+1.0
	22nm,1.0s,mb5.3						
SJPF	Ste Jean	88.53	45	eP	P	13 19 18.4	+0.1
	54nm,1.4s,mb5.4						
SJPF	Ste Jean	88.53	45	eP	P	13 19 18.4	+0.1
	27nm,1.4s,mb5.4						
ROSF	Rostrenen	88.89	40	eP	P	13 19 18.4	-1.4
	18nm,1.0s,mb5.1						
ROSF	Rostrenen	88.89	40	eP	P	13 19 18.4	-1.4
	9.3nm,1.0s,mb5.1						
ETSF	Etsaut	88.93	46	eP	P	13 19 20.2	0.0
SGMF	Saint Gilles	89.31	40	eP	P	13 19 21.3	-0.5
	36nm,1.2s,mb5.3						
SGMF	Saint Gilles	89.31	40	eP	P	13 19 21.3	-0.5
	18nm,1.2s,mb5.3						
DAWY	Dawson	89.35	337	eP	P	13 19 20.8	-0.9
EPF	Esparros	89.60	46	eP	P	13 19 23.6	+0.3
	54nm,1.5s,mb5.3						
EPF	Esparros	89.60	46	eP	P	13 19 23.6	+0.3
	27nm,1.5s,mb5.4						
INK	Inuvik	89.68	342	P	P	13 19 22.8	-0.3
	8.8nm,1.1s,mb5.0,baz=122,slow=3.0						
MFF	Saint Martin d	90.34	42	eP	P	13 19 26.0	-0.7
	7.5nm,0.7s,mb4.8						
MFF	Saint Martin d	90.34	42	eP	P	13 19 26.0	-0.7
	3.8nm,0.7s,mb4.8						
LFF	La Frestale	90.44	44	eP	P	13 19 26.5	-0.7
SCO	Scoresbysund	90.81	16	iP	P	13 19 28.2	-0.1
	4.4nm,0.9s,mb4.8						
LDF	La Druitiere	90.95	40	eP	P	13 19 28.7	-0.8
	13nm,0.9s,mb5.0						
LDF	La Druitiere	90.95	40	eP	P	13 19 28.7	-0.8
	6.7nm,0.9s,mb5.0						
MTLF	Montolieu	91.00	46	eP	P	13 19 29.0	-0.9
	53nm,1.6s,mb5.3						
MTLF	Montolieu	91.00	46	eP	P	13 19 29.0	-0.9
	26nm,1.6s,mb5.3						
AFI	Afiamalu	91.19	256	LR	LR	13 53 06.3	
	comp=Z,79nm,18.2s,baz=89,slow=31						
CAF	Calviac	91.33	44	eP	P	13 19 30.7	-0.6
TCF	Toulx Ste Croi	91.81	43	eP	P	13 19 32.7	-0.8
	14nm,1.1s,mb4.9						
TCF	Toulx Ste Croi	91.81	43	eP	P	13 19 32.7	-0.8
	6.8nm,1.1s,mb4.9						
AVF	Avril sur Loir	92.70	43	eP	P	13 19 36.5	-1.1
SMF	Signal de Mont	92.99	43	⇑iP	P	13 19 38.6	-0.4
	42nm,1.5s,mb5.3						
SMF	Signal de Mont	92.99	43	⇑iP	P	13 19 38.6	-0.4
	21nm,1.5s,mb5.3						
ORIF	Oris-en-Rattie	93.95	45	eP	P	13 19 44.3	+0.9
	44nm,1.4s,mb5.4						
ORIF	Oris-en-Rattie	93.95	45	eP	P	13 19 44.3	+0.9
	22nm,1.4s,mb5.4						
CABF	La Chapelle	94.48	43	eP	P	13 19 44.4	-1.4
	15nm,1.0s,mb5.1						
CABF	La Chapelle	94.48	43	eP	P	13 19 44.4	-1.4
	7.4nm,1.0s,mb5.1						
KEST	Kesra	94.54	55	LR	LR	14 02 14.2	
	comp=Z,37nm,20.3s,baz=210,slow=35						
BCLA	Clavier	94.85	40	P	P	13 19 48.1	+0.7
HAU	Haudompre	94.97	42	eP	P	13 19 46.2	-1.8
BOSA	Boshof	95.04	121	LR	LR	13 57 35.3	
	comp=Z,82nm,19.2s,baz=325,slow=32						
WLF	Walferdange	95.21	40	P	P	13 19 50.1	+1.0
	comp=Z,9.0nm,1.4s,mb5.0						
MAW	Mawson	95.28	166	P	P	13 19 48.2	-1.0
	comp=Z,2.6nm,0.9s,mb4.7,baz=79,slow=6.2,SNR=4.2						
MAW				LR	LR	13 59 46.8	
	comp=Z,78nm,21.9s,baz=239,slow=34						
MEM	Membach	95.33	39	P	P	13 19 50.2	+0.6
CDF	Champ du Feu	95.66	42	eP	P	13 19 50.5	-0.7
	comp=Z,10nm,1.1s,mb4.9						
CDF	Champ du Feu	95.66	42	eP	P	13 19 50.5	-0.7
	comp=Z,5.3nm,1.1s,mb4.9						
RPZ	Rata Peaks	96.50	223	LR	LR	13 52 04.0	
	comp=Z,88nm,21.4s,baz=86,slow=28						
GERES	GERESS Array B	99.94	42	P	Pdif	13 20 10.2	-0.1
	comp=Z,0.1nm,0.3s,baz=261,slow=8.0,SNR=4.5						
BRTR	Keskin Array B	113.99	52	PKP	PKiKP	13 25 04.0	-0.6
	comp=Z,1.1nm,1.0s,baz=198,slow=3.6,SNR=4.6						
STKA	Stephens Creek	122.27	219	PKP	PKPdf	13 25 19.2	-1.7
	comp=Z,1.8nm,1.0s,baz=9.5,slow=13,SNR=2.8						
STKA	Stephens Creek	122.27	219	PKP	PKPdf	13 25 19.2	-1.7
YAK	Yakutsk	126.68	344	eP	Pdif	13 22 06.7	-2.5
AKTK	Aktyubinsk	127.51	34	PKP	PKPdf	13 25 30.6	+0.3
AKTO	Aktyubinsk	127.51	34	PKP	PKPdf	13 25 30.6	+0.3
	comp=Z,2.1nm,0.8s,baz=320,slow=2.6,SNR=7.4						
ABKAR	Abkulak array	129.18	35	ePKPdf	PKPdf	13 25 33.9	+0.4
ABKAR				e		13 25 45.9	
BVAR	Borovoye Array	131.99	26	PKP	PKPdf	13 25 39.3	+0.6
	comp=Z,2.7nm,0.9s,baz=263,slow=2.5,SNR=12						
ASAR	Alice Springs	132.86	221	PKP	PKPdf	13 25 40.5	-0.8
	comp=Z,1.5nm,0.5s,baz=120,slow=2.2,SNR=27						
ASAR				pPKP	pPKPdf	13 25 55.0	-4.5
	comp=Z,1.7nm,0.6s,baz=145,slow=3.0,SNR=7.2						
WRA	Warramunga Arr	135.18	225	PKP	PKPdf	13 25 45.0	-0.8
	comp=Z,2.5nm,0.6s,baz=127,slow=2.0,SNR=8.4						
WRA				pPKP	pPKPdf	13 26 00.6	-3.4
	comp=Z,3.8nm,0.7s,baz=128,slow=1.9,SNR=10.0						
WRA	Warramunga Arr	135.18	225	PKP	PKPdf	13 25 45.0	-0.8
WRA				pPKP	pPKPdf	13 26 00.6	-3.4
ZALV	Zalesovo Beam	136.18	15	PKP	PKPdf	13 25 46.2	-0.4
	comp=Z,12nm,1.0s,baz=304,slow=2.7,SNR=19						
ZALV				pPKP	pPKPdf	13 26 01.7	-3.1
	comp=Z,5.1nm,0.9s,baz=318,slow=2.0,SNR=3.8						
KURK	Kurchatov	137.04	22	eP	PKPdf	13 25 48.1	-0.1
KURK				e		13 25 56.4	
KURK	Kurchatov	137.04	22	ePKPdf	PKPdf	13 25 48.1	-0.1
	0.9nm,0.3s,baz=307,slow=13,SNR=38						
WRA				S	Sn	13 16 12.0	-7.4
	baz=302,slow=21,SNR=5.5						
WRAB	Tennant Creek	17.89	133	ePn	Pn	13 13 00.4	-0.3
	4.4nm,0.6s						
MEEK	Meekatharra	18.59	185	eP	Pn	13 13 09.5	+0.3
MEEK				eS	Sn	13 16 19.7	-17
ASAR	Alice Springs	20.17	142	P	P	13 13 26.4	+0.3
	3.7nm,0.4s,baz=313,slow=9.9,SNR=61						
ASAR				S	S	13 17 11.3	-0.1
	2.6nm,1.1s,baz=318,slow=20,SNR=4.7						
MORW	Morawa	21.34	191	eP	P	13 13 36.0	-2.8
MORW				eS	S	13 17 24.2	-10
COEN	Coen	23.01	107	eP	P	13 13 56.4	-0.4
KLBR	Kellerberrin	23.58	186	eP	P	13 14 00.4	-2.0
	4.5nm,0.4s,mb4.2						
PSI	Prapat	24.06	296	P	P	13 14 08.0	+1.0
	3.5nm,0.5s,mb4.0,baz=154,slow=20,SNR=3.5						
NWAO	Narrogin (SRO)	24.96	187	P	P	13 14 17.4	+2.5
	18nm,1.0s,mb4.5,baz=357,slow=7.2,SNR=5.8						
BBOO	Buckleboo	28.57	152	eP	P	13 14 46.9	-0.5
	14nm,1.8s,mb4.4						
STKA	Stephens Creek	30.79	143	eP	P	13 15 07.3	+0.1
	1.7nm,0.6s,mb4.0						
STKA	Stephens Creek	30.79	143	P	P	13 15 07.1	-0.1
	1.3nm,0.3s,mb4.2,baz=329,slow=8.4,SNR=10						
STKA				LR	LR	13 27 09.8	
	comp=Z,139nm,21.6s,MS3.6,baz=327,slow=36						
CMSA	Cobar Meteorol	33.13	138	eP	P	13 15 28.4	+0.6
CMAR	Chiang Mai Arr	33.84	321	P	P	13 15 34.8	+0.7
	0.3nm,0.4s,mb3.6,baz=134,slow=7.6,SNR=5.1						
CMAR				LR	LR	13 30 31.8	
	comp=Z,85nm,18.2s,MS3.5,baz=155,slow=38						
YNG	Young	36.63	140	eP	P	13 15 59.2	+1.2
	5.4nm,0.4s,mb4.7						
MAT	Matsushiro	47.35	19	ePKP	PKiKP	13 25 44.3	-4.7
GTA	Gaotai	50.95	339	eP	P	13 17 54.5	+1.6
GTA				pP	pP	13 17 58.6	-2.2
GTA				sP	sP	13 18 01.8	-2.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.1						
GTA				smax			
	comp=N,14nm,0.6s						
GTA				smax			
	comp=E,9.0nm,0.5s						
SONM	Songino Array	57.01	349	P	P	13 18 37.5	+0.5
	comp=E,1.8nm,1.0s,mb4.1,baz=168,slow=7.1,SNR=7.1						
MKAR	Makanchi Array	64.29	332	P	P	13 19 26.9	+0.2
	comp=E,1.0nm,0.6s,mb4.1,baz=125,slow=7.6,SNR=8.0						
AAK	Ala-Archa	65.55	324	P	P	13 19 36.4	+1.5
	comp=E,0.6nm,0.3s,mb4.1,baz=197,slow=20,SNR=2.6						
ZAA0	Zalesovo Array	68.68	338	eP	P	13 19 53.6	-1.0
ZALV	Zalesovo Beam	68.68	338	P	P	13 19 53.9	-0.7
	comp=E,2.8nm,0.8s,mb4.3,baz=132,slow=2.2,SNR=11						
KURK	Kurchatov	68.80	333	P	P	13 19 54.9	-0.5
	comp=E,1.6nm,0.6s,mb4.1,baz=147,slow=5.5,SNR=5.5						
MAW	Mawson	70.65	200	P	P	13 20 06.7	+0.1
	comp=E,2.3nm,0.9s,mb4.1,baz=67,slow=15,SNR=3.5						
BVAR	Borovoye Array	74.16	331	P	P	13 20 26.2	-1.5
	comp=E,0.2nm,0.4s,mb3.4,baz=82,slow=3.1,SNR=2.6						
AKASG	Malin Array Be	96.96	320	LR	LR	14 09 25.3	
	comp=E,59nm,20.6s,MS4.1,baz=265,slow=38						
TORD	Torodi Ar. Bea	119.75	281	PKP	PKPdf	13 27 40.0	-2.4
	comp=E,0.2nm,0.6s,baz=105,slow=2.6,SNR=2.7						
CPUP	Villa Florida	145.78	183	PKPbc	PKPbc	13 28 30.2	-0.9
	comp=E,0.4nm,0.4s,baz=116,slow=6.3,SNR=3.7						
LPAZ	La Paz	154.37	161	PKPab	PKPab	13 29 08.2	+1.6
	comp=E,0.8nm,0.5s,baz=176,slow=0.9,SNR=4.1						

*ISCJB **07** 13:14:50.0±0.3, 36°.02N±0°.02×0°.61W±0°.03, h10km, Error ellipse: s-maj=3.6km s-min=3.0km az=25.0*
*NEIC **07** 13:14:51.4, 35°.95N×0°.67W, h0km, ML3.2(ALG), After MDD.*
*CRAAG **07** 13:14:51.7, 35°.59N×0°.45W, Ml3.5*
*CSEM **07** 13:14:51.0±0.2, 35°.94N×0°.65W, h10km, ML3.5, Error ellipse: s-maj=6.6km s-min=4.5km az=14.0*
*MDD **07** 13:14:52.1±0.4, 35°.82N×0°.54W, h22km±6km, mb3.9/14, Error ellipse: s-maj=7.2km s-min=4.4km az=5.0, PRIMO*
*INMG **07** 13:14:52.6±1.1, 35°.82N×0°.57W, h31km, ML2.3, Error ellipse: s-maj=5.4km s-min=3.2km az=143.0*

ISC 07 13:14:51.1±0.4, 35°.99N±0°.02×0°.65W±0°.03, h10km, n166, σ1°45/270, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USTO	Oran	0.27	163	P	Pg	13 14 56.0	-0.5
USTO	Oran	0.27	163	P	Pg	13 14 56.0	-0.5
USTO	Oran	0.27	163	P	Pg	13 14 56.0	-0.5
OTSS	Djebel Tessala	0.72	190	P	Pg	13 15 05.0	+0.1
ODJA	Bouhanifia	0.77	148	P	Pg	13 15 02.0	-4.0
ODJA	Bouhanifia	0.77	148	P	Pg	13 15 02.0	-4.0
ODJA	Bouhanifia	0.77	148	P	Pg	13 15 02.0	-4.0
ODZI	Dzioua	0.84	214	P	Pg	13 15 08.0	+0.7
ODZI	Dzioua	0.84	214	P	Pg	13 15 08.0	+0.7
ODZI	Dzioua	0.84	214	P	Pg	13 15 08.0	+0.7
OJBR	Djebel Berber	0.90	116	P	Pg	13 15 07.0	-1.4
OJBR	Djebel Berber	0.90	116	P	Pg	13 15 07.0	-1.4
OJBR	Djebel Berber	0.90	116	P	Pg	13 15 07.0	-1.4
OJBR	Djebel Berber	0.90	116	P	Pg	13 15 07.0	-1.4
OKGL	Djebel Kef Gue	1.05	87	P	Pg	13 15 08.0	-3.2
OKGL	Djebel Kef Gue	1.05	87	P	Pg	13 15 09.9	-1.3
OKGL	Djebel Kef Gue	1.05	87	P	Pg	13 15 08.0	-3.2
OKGL	Djebel Kef Gue	1.05	87	P	Pg	13 15 08.0	-3.2
OKGL	Djebel Kef Gue	1.05	87	P	Pg	13 15 08.0	-3.2
OJGS	Djebel Guires	1.23	113	P	Pn	13 15 18.0	+3.6
OJGS	Djebel Guires	1.23	113	P	Pn	13 15 14.4	+0.1
OJGS	Djebel Guires	1.23	113	P	Pn	13 15 18.0	+3.6
OJGS	Djebel Guires	1.23	113	P	Pn	13 15 18.0	+3.6
OJGS	Djebel Guires	1.23	113	P	Pn	13 15 18.0	+3.6
EANR	'Ain N'Sour	1.42	91	P	Pn	13 15 14.0	-2.9
EANR	'Ain N'Sour	1.42	91	P	Pn	13 15 14.0	-2.9
EANR	'Ain N'Sour	1.42	91	P	Pn	13 15 14.0	-2.9
EANR	'Ain N'Sour	1.42	91	P	Pn	13 15 14.0	-2.9
ENIJ	Nijar	1.59	308	P	Pn	13 15 19.3	-0.1
ENIJ				S	Sn	13 15 37.9	-2.1
ENIJ	Nijar	1.59	308	P	Pn	13 15 19.3	-0.1
	6.9nm,0.1s,SNR=6.6						
ENIJ				S	Sn	13 15 37.9	-2.1
	60nm,0.2s,SNR=22						
ENIJ	Nijar	1.59	308	P	Pn	13 15 19.3	-0.1
	6.9nm,0.1s,SNR=6.6						
ENIJ				S	Sn	13 15 37.9	-2.1
	60nm,0.2s,SNR=22						
ENIJ	Nijar	1.59	308	P	Pn	13 15 19.3	0.0
	6.7nm,0.2s,SNR=6.6						
ENIJ				S	Sn	13 15 37.9	-2.1
	65nm,0.3s,SNR=22						
ECHF	Ech Chlef	1.62	84	P	Pn	13 15 18.0	-1.6
ECHF	Ech Chlef	1.62	84	P	Pn	13 15 18.0	-1.6
CART	Cartagena	1.62	350	ePn	Pn	13 15 18.8	-0.9
CART				eSn	Sn	13 15 37.4	-3.2
CART	Cartagena	1.62	350	ePn	Pn	13 15 18.8	-0.9
ECHA	Ech Chlef	1.64	84	P	Pn	13 15 18.0	-1.9
ECHA	Ech Chlef	1.64	84	P	Pn	13 15 18.0	-1.9
ETRT	Tiaret	1.69	110	P	Pn	13 15 19.0	-1.7
ETRT	Tiaret	1.69	110	P	Pn	13 15 19.0	-1.7
ETRT	Tiaret	1.69	110	P	Pn	13 15 19.0	-1.7
ETRT	Tiaret	1.69	110	P	Pn	13 15 19.0	-1.7
EBNR	Beni Rached	1.79	80	P	Pn	13 15 25.0	+3.0
EBNR	Beni Rached	1.79	80	P	Pn	13 15 25.0	+3.0
EMUR	La Murta	1.91	346	P	Pn	13 15 23.7	+0.1
EMUR				S	Sn	13 15 45.5	-2.2
EMUR	La Murta	1.91	346	P	Pn	13 15 23.7	+0.1
	6.4nm,0.2s,SNR=10						
EMUR				S	Sn	13 15 45.5	-2.2
	22nm,0.3s,SNR=14						
EMUR	La Murta	1.91	346	P	Pn	13 15 23.7	+0.1
	6.4nm,0.2s,SNR=10						
EMUR				S	Sn	13 15 45.5	-2.2
	22nm,0.3s,SNR=14						
EMUR	La Murta	1.91	346	P	Pn	13 15 23.7	0.0
	2.2nm,0.2s,SNR=10						
EMUR				S	Sn	13 15 45.5	-2.2
	18nm,0.3s,SNR=14						
EALB	Alboran	1.94	269	P	Pn	13 15 23.4	-0.7
EALB				S	Sn	13 15 46.8	-1.7
EALB	Alboran	1.94	269	P	Pn	13 15 23.4	-0.7
	3.8nm,0.1s,SNR=7.9						
EALB				S	Sn	13 15 46.8	-1.7
	37nm,0.3s,SNR=7.9						
EALB	Alboran	1.94	269	P	Pn	13 15 23.4	-0.7
	3.8nm,0.1s,SNR=7.9						

MEX 07 13:07:27.6±0.6, 16°.05N×97°.61W, h15km, MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.60	305	iP	Pg	13 07 37.4	-2.1
PNIG				iS	Sg	13 07 45.9	-1.6
VHO	Vista Hermosa	1.32	39	iP	Pn	13 07 47.9	-3.7
VHO				iS	Sb	13 08 04.2	-4.7
HUIG	Huatulco	1.47	101	eP	Pn	13 07 50.5	-3.1
HUIG				iS	Sn	13 08 07.4	-5.2
ACX	Acapulco	2.36	291	eP	Pn	13 08 00.5	-5.3
CAIG	El Cayaco	2.74	292	eP	Pn	13 08 06.4	-4.6

*IDC **07** 13:08:49.6±0.7, 7°.91S×120°.65E, h0km, mb4.1/12, mb1 4.2/15, mb1mx4.1/26, mbtmp4.1/15, ML4.1/3, MS3.7/5, Ms1 3.7/5, ms1mx3.1/34, Error ellipse: s-maj=37.9km s-min=12.6km az=65.0*
*NEIC **07** 13:08:51.3±0.4, 7°.88S×120°.69E, h10km, mb3.8/1, Error ellipse: s-maj=19.9km s-min=6.1km az=59.0*
*DJA **07** 13:08:52, 7°.93S×120°.47E, h9km, MLv4.6/7*
*ISCJB **07** 13:08:52.8±0.7, 8°.07S±0°.04×120°.49E±0°.06, h37km±8km, mb4.1/15, MS3.7/3, Error ellipse: s-maj=9.7km s-min=5.3km az=157.5*

ISC 07 13:08:53.5±1.8, 8°.03S±0°.04×120°.50E±0°.05, h26km±14km, n42, σ1°18/50, mb4.1/15, MS3.7/3, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	Waingapu	1.64	187	P	Pn	13 09 21.3	+0.6
WSI				S	Sn	13 09 44.3	+3.3
MMRI	Maumere	1.82	109	P	Pn	13 09 24.6	+1.4
MMRI				S	Sn	13 09 51.8	+6.3
BKSI	Bulukumba	2.72	352	P	Pn	13 09 34.7	-0.9
BKSI				S	Sn	13 10 08.0	+0.4
KAPI	Kappang	3.09	346	Pn	Pn	13 09 39.2	-1.5
	33nm,0.3s,baz=165,slow=7.3,SNR=71						
KAPI				Sn	Sn	13 10 13.9	-2.9
	28nm,0.3s,baz=43,slow=19,SNR=5.7						
KAPI				LR	LR	13 11 14.4	
	comp=Z,3μm,18.8s,baz=162,slow=48						
KAPI	Kappang	3.09	346	Pn	Pn	13 09 39.1	-1.5
KAPI				Sn	Sn	13 10 13.9	-2.9
KAPI				LR	LR	13 11 14.4	
KAPI	Kappang	3.09	346	P	Pn	13 09 39.8	-0.9
KDI	Kendari	4.56	28	P	Pn	13 10 01.1	+0.1
KHKI	Kahang-Kahang	4.85	266	P	Pn	13 10 05.2	+0.2
KHKI				S	Sn	13 11 06.5	+6.1
TTSI	Tana Toraja	5.00	352	P	Pn	13 10 09.8	+2.8
IGBI	Denpasar	5.36	261	P	Pn	13 10 13.3	+1.4
IGBI				S	Sn	13 11 06.0	-6.7
KMMI	Kalianget	6.55	278	P	Pn	13 10 27.3	-1.0
FITZ	Fitzroy Crossi	11.19	154	Pn	Pn	13 11 32.3	+0.4
	0.6nm,0.3s,baz=159,slow=11,SNR=13						
FITZ				Sn	Sn	13 13 35.8	-0.4
	0.7nm,0.3s,baz=241,slow=19,SNR=3.2						
FITZ				LR	LR	13 16 04.5	
	comp=Z,178nm,19.0s,baz=333,slow=39						
MBWA	Marble Bar	13.07	183	eP	Pn	13 11 55.1	-2.6
MBWA				eS	Sn	13 14 12.0	-10
WRA	Warramunga Arr	17.88	133	P	Pn	13 12 59.6	-1.0

EALB			S	Sn	13 15 46.8	-1.7
	37nm,0.3s,SNR=7.9					
EALB	**Alboran**	**1.94 269**	P	Pn	13 15 23.4	-0.6
	2.6nm,0.1s,SNR=7.9					
EALB			S	Sn	13 15 46.8	-1.6
	34nm,0.3s,SNR=7.9					
EBER	**Berja**	**2.02 297**	P	Pn	13 15 24.9	-0.4
EBER			S	Sn	13 15 50.5	-0.1
EBER	**Berja**	**2.02 297**	P	Pn	13 15 24.9	-0.4
	5.4nm,0.2s,SNR=14					
EBER			S	Sn	13 15 50.5	-0.1
	64nm,0.4s,SNR=7.9					
EBER	**Berja**	**2.02 297**	P	Pn	13 15 24.9	-0.4
	5.4nm,0.2s,SNR=14					
EBER			S	Sn	13 15 50.5	-0.1
	64nm,0.4s,SNR=7.9					
EBER	**Berja**	**2.02 297**	P	Pn	13 15 24.9	-0.3
	1.6nm,0.2s,SNR=14					
EBER			S	Sn	13 15 50.5	-0.1
	60nm,0.4s,SNR=7.9					
EHUE	**Huescar**	**2.40 320**	P	Pn	13 15 32.2	+1.8
EHUE			S	Sn	13 16 00.7	+0.9
EHUE	**Huescar**	**2.40 320**	P	Pn	13 15 32.2	+1.8
	2.1nm,0.1s,SNR=7.9					
EHUE			S	Sn	13 16 00.7	+0.9
	6.5nm,0.2s,SNR=7.9					
EHUE	**Huescar**	**2.40 320**	P	Pn	13 15 32.2	+1.8
	2.1nm,0.1s,SNR=7.9					
EHUE			S	Sn	13 16 00.7	+0.9
	6.5nm,0.2s,SNR=7.9					
EHUE	**Huescar**	**2.40 320**	P	Pn	13 15 32.2	+1.8
	1.7nm,0.1s,SNR=7.9					
EHUE			S	Sn	13 16 00.7	+0.9
	4.5nm,0.2s,SNR=7.9					
EGUA	**Guajares**	**2.50 291**	P	Pn	13 15 32.1	+0.4
EGUA			S	Sn	13 16 01.1	-1.2
EGUA	**Guajares**	**2.50 291**	P	Pn	13 15 33.4	+1.6
	16nm,0.3s,SNR=7.9					
EGUA			S	Sn	13 16 01.1	-1.2
	18nm,0.2s,SNR=7.9					
EGUA	**Guajares**	**2.50 291**	P	Pn	13 15 33.4	+1.6
	16nm,0.3s,SNR=7.9					
EGUA			S	Sn	13 16 01.1	-1.2
	18nm,0.2s,SNR=7.9					
EGUA	**Guajares**	**2.50 291**	P	Pn	13 15 32.1	+0.3
	14nm,0.3s,SNR=7.9					
EGUA			S	Sn	13 16 01.1	-1.2
	35nm,0.4s,SNR=7.9					
EQUE	**Quentar**	**2.56 299**	P	Pn	13 15 33.8	+1.2
	1.8nm,0.1s,SNR=12					
EQUE			S	Sn	13 16 03.3	-0.4
	13nm,0.4s,SNR=7.9					
EQUE	**Quentar**	**2.56 299**	P	Pn	13 15 33.8	+1.2
	1.8nm,0.1s,SNR=12					
EQUE			S	Sn	13 16 03.3	-0.4
	13nm,0.4s,SNR=7.9					
EQUE	**Quentar**	**2.56 299**	P	Pn	13 15 33.8	+1.3
	4.9nm,0.3s,SNR=12					
EQUE			S	Sn	13 16 03.3	-0.4
	8.8nm,0.4s,SNR=7.9					
EQES	**Quesada**	**2.66 314**	P	Pn	13 15 35.9	+2.0
EQES			S	Sn	13 16 07.7	+1.5
EQES	**Quesada**	**2.66 314**	P	Pn	13 15 35.9	+2.0
	7.1nm,0.1s,SNR=27					
EQES			S	Sn	13 16 07.7	+1.5
	16nm,0.2s,SNR=7.9					
EQES	**Quesada**	**2.66 314**	P	Pn	13 15 35.9	+2.0
	7.1nm,0.1s,SNR=27					
EQES			S	Sn	13 16 07.7	+1.5
	16nm,0.2s,SNR=7.9					
EQES	**Quesada**	**2.66 314**	P	Pn	13 15 35.9	+2.0
	8.3nm,0.2s,SNR=27					
EQES			S	Sn	13 16 07.7	+1.5
	16nm,0.2s,SNR=7.9					
ECOG	**Cogollos-Vega**	**2.68 300**	P	Pn	13 15 34.4	+0.2
ECOG			S	Sn	13 16 09.9	+3.2
ECOG	**Cogollos-Vega**	**2.68 300**	P	Pn	13 15 36.2	+2.0
	3.4nm,0.2s,SNR=7.9					
ECOG			S	Sn	13 16 09.9	+3.2
	8.4nm,0.2s,SNR=7.9					
ECOG	**Cogollos-Vega**	**2.68 300**	P	Pn	13 15 36.2	+2.0
	3.4nm,0.2s,SNR=7.9					
ECOG			S	Sn	13 16 09.9	+3.2
	8.4nm,0.2s,SNR=7.9					
ECOG	**Cogollos-Vega**	**2.68 300**	P	Pn	13 15 34.4	+0.2
	1.9nm,0.2s,SNR=7.9					
EBEN	**Beniarda**	**2.73 7**	P	Pn	13 15 36.6	+1.7
EBEN			S	Sn	13 16 07.7	-0.3
EBEN	**Beniarda**	**2.73 7**	P	Pn	13 15 36.9	+2.0
	1.4nm,0.1s,SNR=19					
EBEN			S	Sn	13 16 07.6	-0.3
	4.8nm,0.3s,SNR=7.9					
EBEN	**Beniarda**	**2.73 7**	P	Pn	13 15 36.9	+2.0
	1.4nm,0.1s,SNR=19					
EBEN			S	Sn	13 16 07.6	-0.3
	4.8nm,0.3s,SNR=7.9					
EBEN	**Beniarda**	**2.73 7**	P	Pn	13 15 36.6	+1.7
	2.4nm,0.4s,SNR=19					
EBEN			S	Sn	13 16 07.7	-0.3
ETOB	**Tobarra**	**2.75 345**	P	Pn	13 15 36.3	+1.2
ETOB			S	Sn	13 16 08.7	+0.3
ETOB	**Tobarra**	**2.75 345**	P	Pn	13 15 36.3	+1.2
	4.4nm,0.2s,SNR=19					
ETOB			S	Sn	13 16 08.7	+0.3
	17nm,0.1s,SNR=7.9					
ETOB	**Tobarra**	**2.75 345**	P	Pn	13 15 36.3	+1.2
	4.4nm,0.2s,SNR=19					
ETOB			S	Sn	13 16 08.7	+0.3
	17nm,0.1s,SNR=7.9					
ETOB	**Tobarra**	**2.75 345**	P	Pn	13 15 36.3	+1.2
	2.6nm,0.2s,SNR=19					
ETOB			S	Sn	13 16 08.7	+0.3
	17nm,0.1s,SNR=7.9					
EMHD	**Djebel Mahouad**	**2.92 85**	P	Px	13 15 55.0	
EMHD	**Djebel Mahouad**	**2.92 85**	P	Px	13 15 55.0	
EVIA	**Vianos**	**3.03 331**	P	Pn	13 15 40.2	+1.1
EVIA			S	Sn	13 16 16.0	+0.6
EVIA	**Vianos**	**3.03 331**	P	Pn	13 15 40.2	+1.1
	5.3nm,0.2s,SNR=9.9					
EVIA			S	Sn	13 16 16.0	+0.6
	19nm,0.2s					
EVIA	**Vianos**	**3.03 331**	P	Pn	13 15 40.2	+1.1
	5.3nm,0.2s,SNR=9.9					
EVIA			S	Sn	13 16 16.0	+0.6
	19nm,0.2s					
EVIA	**Vianos**	**3.03 331**	P	Pn	13 15 40.2	+1.1
	3.1nm,0.1s,SNR=9.9					
EVIA			S	Sn	13 16 16.0	+0.6
	23nm,0.3s					
ELOJ	**Sierra Loja**	**3.05 293**	P	Pn	13 15 39.9	+0.5
ELOJ			S	Sn	13 16 16.1	+0.3
ELOJ	**Sierra Loja**	**3.05 293**	P	Pn	13 15 39.9	+0.5
	1.3nm,0.2s,SNR=7.9					
ELOJ			S	Sn	13 16 15.6	-0.3
	6.9nm,0.4s,SNR=7.9					
ELOJ	**Sierra Loja**	**3.05 293**	P	Pn	13 15 39.9	+0.5
	1.3nm,0.2s,SNR=7.9					
ELOJ			S	Sn	13 16 15.6	-0.3
	6.9nm,0.4s,SNR=7.9					
ELOJ	**Sierra Loja**	**3.05 293**	P	Pn	13 15 39.9	+0.6
	0.7nm,0.3s,SNR=7.9					
ELOJ			S	Sn	13 16 16.1	+0.2
	1.6nm,0.2s,SNR=7.9					
ELUQ	**Luque**	**3.30 299**	P	Pn	13 15 45.7	+2.9
ELUQ			S	Sn	13 16 21.0	-1.1
ELUQ	**Luque**	**3.30 299**	P	Pn	13 15 45.7	+2.9
	2.2nm,0.2s,SNR=7.9					
ELUQ			S	Sn	13 16 21.0	-1.1
	5.4nm,0.2s,SNR=7.9					
ELUQ	**Luque**	**3.30 299**	P	Pn	13 15 45.7	+2.9
	2.2nm,0.2s,SNR=7.9					
ELUQ			S	Sn	13 16 21.0	-1.1
	5.4nm,0.2s,SNR=7.9					
ELUQ	**Luque**	**3.30 299**	P	Pn	13 15 45.7	+2.9
	1.1nm,0.2s,SNR=7.9					
ELUQ			S	Sn	13 16 21.0	-1.1
	4.4nm,0.2s,SNR=7.9					
EBAN	**Banos Encina**	**3.32 312**	P	Pn	13 15 42.8	-0.2
EBAN			S	Sn	13 16 22.7	+0.2
EBAN	**Banos Encina**	**3.32 312**	P	Pn	13 15 45.8	+2.8
	2.4nm,0.1s,SNR=7.9					
EBAN			S	Sn	13 16 22.7	+0.2
	4.9nm,0.2s,SNR=7.9					
EBAN	**Banos Encina**	**3.32 312**	P	Pn	13 15 45.8	+2.8
	2.4nm,0.1s,SNR=7.9					
EBAN			S	Sn	13 16 22.7	+0.2
	4.9nm,0.2s,SNR=7.9					
EBAN	**Banos Encina**	**3.32 312**	P	Pn	13 15 42.8	-0.2
	1.6nm,0.1s,SNR=7.9					
EBAN			S	Sn	13 16 22.7	+0.2
	4.9nm,0.2s,SNR=7.9					
EMIJ	**Mijas**	**3.38 281**	P	Pn	13 15 43.5	-0.4
EMIJ			S	Sn	13 16 21.9	-2.2
EMIJ	**Mijas**	**3.38 281**	P	Pn	13 15 43.5	-0.4
	1.0nm,0.1s,SNR=6.5					
EMIJ			S	Sn	13 16 21.9	-2.2
	8.0nm,0.3s,SNR=7.9					
EMIJ	**Mijas**	**3.38 281**	P	Pn	13 15 43.5	-0.4
	1.0nm,0.1s,SNR=6.5					
EMIJ			S	Sn	13 16 21.9	-2.2
	8.0nm,0.3s,SNR=7.9					
EMIJ	**Mijas**	**3.38 281**	P	Pn	13 15 43.5	-0.4
	2.1nm,0.3s,SNR=6.5					
EMIJ			S	Sn	13 16 21.9	-2.2
	3.8nm,0.2s,SNR=7.9					
EIBI	**Ibiza**	**3.42 27**	P	Pn	13 15 44.3	-0.1
EIBI			S	Sn	13 16 23.1	-1.9
EIBI	**Ibiza**	**3.42 27**	P	Pn	13 15 44.3	-0.1
	3.0nm,0.1s,SNR=8.2					
EIBI			S	Sn	13 16 23.1	-1.9
	6.4nm,0.2s,SNR=7.9					
EIBI	**Ibiza**	**3.42 27**	P	Pn	13 15 44.3	-0.1
	3.0nm,0.1s,SNR=8.2					
EIBI			S	Sn	13 16 23.1	-1.9
	6.4nm,0.2s,SNR=7.9					
EIBI	**Ibiza**	**3.42 27**	P	Pn	13 15 44.3	-0.1
	2.2nm,0.2s,SNR=8.2					
EADA	**Adamuz**	**3.82 306**	P	Pn	13 15 51.2	+1.3
EADA			S	Sn	13 16 33.5	-1.5
EADA	**Adamuz**	**3.82 306**	P	Pn	13 15 51.2	+1.3
	0.3nm,0.1s,SNR=7.9					
EADA			S	Sn	13 16 33.5	-1.5
	2.1nm,0.1s,SNR=7.9					
EADA	**Adamuz**	**3.82 306**	P	Pn	13 15 51.2	+1.3
	0.3nm,0.1s,SNR=7.9					
EADA			S	Sn	13 16 33.5	-1.5
	2.1nm,0.1s,SNR=7.9					
EADA	**Adamuz**	**3.82 306**	P	Pn	13 15 51.2	+1.3
	0.3nm,0.1s,SNR=7.9					
EADA			S	Sn	13 16 33.5	-1.4
	1.3nm,0.2s,SNR=7.9					
EMOS	**Mosqueruela**	**4.37 2**	P	Pn	13 15 59.2	+1.7
EMOS			S	Sn	13 16 46.8	-1.6
EMOS	**Mosqueruela**	**4.37 2**	P	Pn	13 15 59.2	+1.7
	2.3nm,0.2s,SNR=7.9					
EMOS			S	Sn	13 16 48.5	+0.1
	8.4nm,0.4s,SNR=7.9					
EMOS	**Mosqueruela**	**4.37 2**	P	Pn	13 15 59.2	+1.7
	2.3nm,0.2s,SNR=7.9					
EMOS			S	Sn	13 16 48.5	+0.1
	8.4nm,0.4s,SNR=7.9					
EMOS	**Mosqueruela**	**4.37 2**	P	Pn	13 15 59.2	+1.7
	2.9nm,0.2s,SNR=7.9					
EMOS			S	Sn	13 16 46.8	-1.6
	2.7nm,0.2s,SNR=7.9					
ESLA	**Sonseca Array**	**4.52 325**	*e*Pn	Pn	13 16 00.8	+1.3
ESLA			*e*Sn	Sn	13 16 51.2	-0.9
ESLA	**Sonseca Array**	**4.52 325**	*e*Pn	Pn	13 16 00.8	+1.3
ESLA			*e*Sn	Sn	13 16 51.2	-0.9
PAB	**San Pablo**	**4.61 322**	*e*Pn	Pn	13 16 02.2	+1.5
PAB			*e*Sn	Sn	13 16 50.9	-3.3
PAB	**San Pablo**	**4.61 322**	*e*Pn	Pn	13 16 02.2	+1.5
ETOR	**Torete**	**4.95 347**	P	Pn	13 16 07.2	+1.8
ETOR			S	Sn	13 17 01.6	-1.1
ETOR	**Torete**	**4.95 347**	P	Pn	13 16 07.2	+1.8
	2.0nm,0.3s,SNR=7.9					
ETOR			S	Sn	13 17 01.6	-1.1
	4.7nm,0.2s,SNR=7.9					
ETOR	**Torete**	**4.95 347**	P	Pn	13 16 07.2	+1.8
	2.0nm,0.3s,SNR=7.9					
ETOR			S	Sn	13 17 01.6	-1.1
	4.7nm,0.2s,SNR=7.9					
ETOR	**Torete**	**4.95 347**	P	Pn	13 16 07.2	+1.8
	1.8nm,0.2s,SNR=7.9					
ETOR			S	Sn	13 17 01.6	-1.1
	4.3nm,0.2s,SNR=7.9					
ERTA	**Horta de San J**	**5.02 9**	P	Pn	13 16 07.7	+1.3
ERTA			S	Sn	13 17 03.4	-1.0
ERTA	**Horta de San J**	**5.02 9**	P	Pn	13 16 07.7	+1.3
	0.9nm,0.2s,SNR=7.9					
ERTA			S	Sn	13 17 03.3	-1.1
	5.0nm,0.4s,SNR=7.9					
ERTA	**Horta de San J**	**5.02 9**	P	Pn	13 16 07.7	+1.3
	0.9nm,0.2s,SNR=7.9					
ERTA			S	Sn	13 17 03.3	-1.1
	5.0nm,0.4s,SNR=7.9					
ERTA	**Horta de San J**	**5.02 9**	P	Pn	13 16 07.7	+1.3
	0.6nm,0.1s,SNR=7.9					
ERTA			S	Sn	13 17 03.3	-1.1
	2.2nm,0.3s,SNR=7.9					
EMIN	**Mina Concepcio**	**5.15 292**	P	Pn	13 16 08.6	+0.5
EMIN			S	Sn	13 17 05.6	-2.0
EMIN	**Mina Concepcio**	**5.15 292**	P	Pn	13 16 08.6	+0.5
	0.2nm,0.1s,SNR=7.9					
EMIN			S	Sn	13 17 04.7	-2.9
	0.9nm,0.3s,SNR=7.9					
EMIN	**Mina Concepcio**	**5.15 292**	P	Pn	13 16 08.6	+0.5
	0.2nm,0.1s,SNR=7.9					
EMIN			S	Sn	13 17 04.7	-2.9
	0.9nm,0.3s,SNR=7.9					
EMIN	**Mina Concepcio**	**5.15 292**	P	Pn	13 16 08.6	+0.5
	0.7nm,0.3s,SNR=7.9					
EMIN			S	Sn	13 17 05.6	-2.0
	0.9nm,0.3s,SNR=7.9					
GUD	**Guadarrama**	**5.40 330**	P	Pn	13 16 13.4	+1.7
GUD			S	Sn	13 17 11.5	-2.4
GUD	**Guadarrama**	**5.40 330**	P	Pn	13 16 13.4	+1.7
	1.2nm,0.3s,SNR=7.9					
GUD			S	Sn	13 17 11.5	-2.4
	1.4nm,0.3s,SNR=7.9				

KLR **Kul'dur** 15.04 282 *e*P Pn 13 20 58.2 +0.3
KLR MLR MLR
comp=Z,500nm,14.0s
JSD **Sado** 15.71 235 P Pn 13 21 03.0 -3.6
VLA **Vladivostok** 16.64 260 *e*P Pn 13 21 18.9 +0.5
VLA pmax pmax
comp=Z,14nm,1.1s
MAJO **Matsushiro** 16.84 231 *e*P Pn 13 21 19.5 -1.5
MAJO pmax pmax
comp=Z,9.0nm,0.6s
MAJO **Matsushiro** 16.84 231 *e*Pn Pn 13 21 19.5 -1.5
comp=Z,9.4nm,0.6s
MAT **Matsushiro** 16.84 231 P Pn 13 21 19.7 -1.3
MAT S S 13 24 18.0 -18
MAT **Matsushiro** 16.84 231 P Pn 13 21 20.0 -1.0
MJAR **Matsushiro Arr** 16.84 231 P Pn 13 21 19.9 -1.1
comp=Z,0.8nm,0.3s,baz=29,slow=14,SNR=33
JRY **Ryogami san** 16.89 229 P Pn 13 21 20.9 -0.7
MDJ **Mudanjiang** 17.56 267 P Pn 13 21 31.6 +1.7
MDJ pmax pmax
comp=Z,14nm,0.8s
MDJ pmax pmax
comp=Z,31nm,4.2s
MDJ **Mudanjiang** 17.56 267 *e*Pn Pn 13 21 31.1 +1.3
comp=Z,10nm,0.7s
JWT **Wachi** 19.29 234 P Pn 13 21 50.2 -0.6
YAK **Yakutsk** 19.53 324 *e*P Pn 13 21 50.8 -2.8
YAK *e*S S 13 25 30.2 +0.2
YAK pmax pmax
comp=Z,5.0nm,0.8s
YAK pmax pmax
comp=Z,25nm,0.7s
YAK pmax pmax
comp=N,7.0nm,0.6s
YAK pmax pmax
comp=E,14nm,1.1s
YAK smax
comp=N,3.0nm,0.9s
YAK **Yakutsk** 19.53 324 *e*P Pn 13 21 53.0 -0.5
comp=N,19nm,0.6s
BILL **Bilibino** 20.59 13⇓ *e*P P 13 22 00.8 -2.7
BILL *e* 13 22 15.9
BILL *e* 13 22 21.8
BILL *e* 13 26 12.4
BILL SS 13 26 36.0
BILL pmax pmax
comp=Z,6.0nm,1.0s
BILL MLR MLR
comp=Z,100nm,16.0s,MS3.3
BILL **Bilibino** 20.59 13 *e*P P 13 22 01.0 -2.4
comp=Z,5.8nm,0.5s
CN2 **Changchun** 20.63 268 *e*P P 13 22 03.0 -1.1
CN2 *e*pP 13 22 12.0
CN2 *e*S S 13 25 46.1 -6.0
CN2 pmax pmax
comp=Z,10.0nm,0.9s
CN2 pmax pmax
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,200nm,13.0s,MS3.8
CN2 LR LR
comp=E,200nm,13.0s,MS3.8
CN2 LR LR
comp=Z,200nm,15.0s,MS3.6
JHS **Saijyo** 20.76 238 P P 13 22 06.9 +1.4
KSRS **Korea Array** 22.23 250 P P 13 22 21.5 +0.2
comp=Z,12nm,0.9s,mb4.3,baz=48,slow=9.9,SNR=54
KSRS **Korea Array** 22.23 250 P P 13 22 21.5 +0.2
KSRS pmax pmax
comp=Z,12nm,0.9s,mb4.3
KS15 **Wonju Array Si** 22.26 251 *e*P P 13 22 22.4 +0.7
TIXI **Tiksi** 26.20 342 *e*P pP 13 23 11.7 +1.6
TTA **Tatalina** 30.57 43 *e*P P 13 23 38.0 +0.4
HHC **Hu-ho-hao-te** 31.17 272 *e*P P 13 23 45.2 +2.0
HHC pP pP 13 23 54.7 0.0
HHC sP sP 13 23 58.7 -1.1
HHC PP PP 13 24 47.3 -6.6
HHC PcP PcP 13 26 41.2 +4.0
HHC S S 13 28 47.2 +1.1
HHC sS sS 13 29 02.4 -2.9
HHC PcS PcS 13 30 24.4 +3.1
HHC ScS ScS 13 34 16.1 +2.4
HHC pmax pmax
comp=Z,22nm,0.8s,mb5.0
HHC pmax pmax
comp=Z,40nm,4.4s
HHC LR LR
comp=N,95nm,16.7s,MS3.7
HHC LR LR
comp=E,93nm,16.7s,MS3.7
HHC LR LR
comp=Z,120nm,17.8s,MS3.6
NJ2 **Nanjing** 31.41 252 *e*P P 13 23 48.1 +2.7
NJ2 pmax pmax
comp=Z,20nm,0.5s,mb5.2
SONM **Songino Array** 31.74 287 P P 13 23 47.8 -0.3
comp=Z,1.2nm,0.7s,mb3.8,baz=70,slow=10,SNR=6.3
SONM LR LR 13 37 39.0
comp=Z,178nm,20.0s,MS3.7,baz=78,slow=38
TLY **Talaya** 32.33 295 *e*P P 13 23 53.1 -0.1
TLY pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
TLY MLR MLR
comp=Z,141nm,19.0s,MS3.7
COLD **Coldfoot** 33.45 35 *e*P P 13 24 02.5 -0.3
comp=Z,2.6nm,0.7s,mb4.3
WHN **Wuhan** 35.29 255 ⇓P P 13 24 19.5 +0.3
TPUB **Ta-pu** 36.69 239 *e*P P 13 24 31.3 +0.1
comp=Z,8.0nm,0.6s,mb4.7
TWG **Pinlang** 36.82 238 *e*P P 13 24 32.3 +0.1
comp=Z,9.6nm,0.6s,mb4.8
EGAK **Eagle** 37.13 40 *e*P P 13 24 33.8 -0.7
comp=Z,6.1nm,0.8s,mb4.5
DAWY **Dawson** 37.97 41 *e*P P 13 24 41.0 -0.6
ENH **Enshi** 38.62 259 *e*P P 13 24 46.9 -0.6
comp=Z,3.5nm,0.6s,mb4.3
HYT **Haines Junctio** 39.44 46 *e*P P 13 24 59.0 +5.1
GTA **Gaotai** 39.69 278 *e*P P 13 24 57.1 +0.8
GTA pP pP 13 25 06.2 -1.8
GTA sP sP 13 25 10.5 -2.6
GTA PP PP 13 26 31.0 +3.2
GTA S S 13 30 57.3 +0.6
GTA pmax pmax
comp=Z,4.0nm,1.3s,mb4.0
GTA pmax pmax
comp=Z,39nm,5.4s
GTA LR LR
comp=N,130nm,15.6s,MS4.0
GTA LR LR
comp=E,120nm,14.7s,MS4.0
GTA LR LR
comp=Z,110nm,16.5s,MS3.8
GTA **Gaotai** 39.69 278 sPKP PP 13 26 30.7 +2.9
INK **Inuvik** 39.76 34 P P 13 24 57.0 +0.4
comp=Z,1.5nm,0.5s,mb4.0,baz=304,slow=6.3,SNR=18
INK pP pP 13 25 08.1 -0.2
comp=Z,3.1nm,0.5s,baz=281,slow=7.9,SNR=5.5
INK **Inuvik** 39.76 34 *e*P P 13 24 57.0 +0.5
INK pmax pmax
comp=Z,4.0nm,0.8s
INK **Inuvik** 39.76 34 *e*P P 13 24 57.0 +0.4
comp=Z,4.3nm,0.8s,mb4.2
CD2 **Chengdu** 41.99 264 *e*P P 13 25 15.2 -0.1
CD2 pP pP 13 25 25.3 -1.8
CD2 sP sP 13 25 28.8 -3.4
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.6
CD2 pmax pmax
comp=Z,40nm,5.2s
ZALV **Zalesovo Beam** 42.47 305 P P 13 25 19.2 +0.3
comp=Z,0.8nm,0.4s,mb3.7,baz=86,slow=8.6,SNR=4.8
ZALV PcP PcP 13 27 11.2 +0.1
comp=Z,4.3nm,0.7s,baz=66,slow=3.6,SNR=7.5
ZALV LR LR 13 43 34.1
comp=Z,53nm,21.1s,MS3.4,baz=70,slow=37
ZALV **Zalesovo Beam** 42.47 305 P P 13 25 19.3 +0.4
ZALV 13 27 11.2
GYA **Guiyang** 43.02 257 P P 13 25 25.0 +1.3
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
DLBC **Dease Lake** 43.77 47 *e*P P 13 25 29.5 +0.1
QIZ **Qiongzhong** 46.38 247 *e*P P 13 25 49.5 -1.0
comp=Z,57nm,1.5s,mb5.3
KMI **Kunming** 46.50 259 P P 13 25 54.8 +3.4
KMI pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
MKAR **Makanchi Array** 47.07 297 P P 13 25 54.8 -0.8
comp=Z,4.8nm,0.8s,mb4.5,baz=61,slow=10,SNR=28
MKAR PcP PcP 13 27 26.4 -0.6
comp=Z,1.8nm,0.9s,baz=108,slow=3.0,SNR=2.7
RES **Resolute Bay** 48.99 19 P P 13 26 09.8 -0.3
comp=Z,3.4nm,0.6s,mb4.5,baz=291,slow=8.7,SNR=9.4
RES **Resolute Bay** 48.99 19 P P 13 26 09.8 -0.3
YKA **Yellowknife Ar** 49.05 38 P P 13 26 10.7 +0.1
comp=Z,3.5nm,0.7s,mb4.5,baz=296,slow=7.7,SNR=6.8
YKA **Yellowknife Ar** 49.05 38 P P 13 26 10.7 +0.1
BVAR **Borovoye Array** 50.59 309 P P 13 26 21.5 -1.0
comp=Z,2.2nm,0.5s,mb4.3,baz=58,slow=7.1,SNR=12
BVAR PcP PcP 13 27 39.5 -0.1
comp=Z,3.9nm,0.6s,baz=67,slow=3.2,SNR=9.6
KBS **Kingsbay** 51.04 351⇑ *e*P P 13 26 26.2 +0.6
KBS pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
KBS **Kingsbay** 51.04 351 *e*P P 13 26 25.2 -0.4
comp=Z,20nm,1.7s,mb4.8
A07A **Ashnola River,** 53.21 55 ⇓P P 13 26 41.9 -0.2
baz=53
D05A **Enumclaw** 53.36 58 ⇑P P 13 26 43.3 +0.1
baz=53
CHTO **Chiang Mai** 53.44 257 *e*P P 13 26 44.3 +0.2
CHTO **Chiang Mai** 53.44 257 *e*PKPdf P 13 26 44.3 +0.1
CM31 **Chiang Mai Arr** 53.70 256 *e*P P 13 26 47.3 +1.3
comp=Z,5.2nm,0.6s,mb4.6
CMAR **Chiang Mai Arr** 53.70 256 P P 13 26 47.0 +0.9
comp=Z,9.4nm,0.7s,mb4.8,baz=34,slow=7.3,SNR=62
AAK **Ala-Archa** 53.99 296 P P 13 26 47.6 -0.3
comp=Z,2.0nm,0.4s,mb4.4,baz=203,slow=4.0,SNR=4.9
AAK **Ala-Archa** 53.99 296 *c i*P P 13 26 47.4 -0.5
AAK pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
EKS2 **Erkin-Say** 54.40 296 *e*P P 13 26 50.1 -0.8
comp=Z,3.4nm,0.9s,mb4.3
EDM **Edmonton** 54.50 48 *e*P P 13 26 51.6 +0.2
A10A **Northport** 54.78 54 ⇓P P 13 26 53.9 +0.4
baz=55
JIRN **Jiri** 55.79 274 *e*P P 13 27 00.7 -0.4
GUN **Gumba** 55.83 275 *e*P P 13 26 57.1 -4.3
comp=Z,75nm,1.1s,mb5.6
RAMN **Ramite** 55.98 274 *e*P P 13 27 01.0 -1.5
KKN **Kakani** 56.30 275 *e*P P 13 26 55.1 -10
PKI **Pulchoki** 56.36 275 *e*P P 13 26 56.1 -9.1
comp=Z,43nm,0.9s,mb5.5
PKIN **Phulchoki** 56.37 275 *e*P P 13 26 56.3 -9.0
comp=Z,24nm,0.8s,mb5.3
PKIN **Phulchoki** 56.37 275 *e*P P 13 26 56.7 -8.6
comp=Z,34nm,0.9s,mb5.4
B13A **Whitefish** 56.79 53 ⇓P P 13 27 07.4 -0.6
baz=57
G10A **Bishop Farm, J** 57.21 57 ⇓P P 13 27 10.6 -0.4
baz=57
BMO **Blue Mountains** 57.37 58 *e*P P 13 27 12.2 +0.1
E12A **Beaver Dam Sad** 57.38 55 ⇑P P 13 27 11.9 -0.2
baz=57
I09A **Lost Marbles R** 57.67 59 ⇓P P 13 27 13.4 -0.9
baz=57
F12A **Elk City** 57.96 56 ⇑P P 13 27 16.7 +0.4
baz=58
SLMT **Seeley Lake** 58.00 53 *e*P P 13 27 16.6 +0.1
MSO **Missoula** 58.01 54 *e*P P 13 27 17.1 +0.5
J09A **Fry Pan Ranch,** 58.05 59 ⇑P P 13 27 17.3 +0.4
baz=58
D14A **Greenough** 58.09 54 ⇓P P 13 27 17.2 0.0
baz=58,SNR=7.1
ABKAR **Akbulak array** 58.13 310 *e*P P 13 27 15.4 -1.9
comp=Z,1.2nm,0.5s,mb4.2
C15A **Salmond Ranch,** 58.14 52 ⇓P P 13 27 17.9 +0.4
baz=58,SNR=5.5
H11A **Donnelly** 58.19 57 ⇓P P 13 27 18.2 +0.3
baz=58,SNR=9.6
G12A **Big Creek, Yel** 58.31 56 ⇑P P 13 27 18.0 -0.7
baz=58
AKTO **Aktyubinsk** 58.37 312 LR LR 13 51 57.3
comp=Z,52nm,20.9s,MS3.6,baz=343,slow=36
E14A **Clinton** 58.51 54 ⇑P P 13 27 19.2 -0.9
baz=58
C16A **Fuhringer Ranc** 58.58 52 ⇓P P 13 27 20.4 -0.1
baz=58
FFC **Flin Flon** 58.88 41 *i* P P 13 27 24.2 +1.7
K10A **MacKenzie Ranc** 58.91 59 ⇑P P 13 27 22.4 -0.5
baz=59
G13A **Cobalt** 58.94 56 ⇑P P 13 27 23.3 +0.2
baz=59,SNR=6.1
B18A **Beardsley Farm** 59.23 51 ⇑P P 13 27 24.9 -0.1
baz=59
I12A **Atlanta** 59.25 57 ⇓P P 13 27 25.5 +0.2
baz=59
H13A **Challis** 59.26 56 ⇑P P 13 27 25.3 0.0
baz=59
K11A **Parker Ranch,** 59.39 59 ⇑P P 13 27 26.3 +0.1
baz=59
F15A **Butte** 59.41 54 ⇓P P 13 27 26.6 +0.2
baz=59
J12A **Stokes Ranch,** 59.62 58 ⇓P P 13 27 28.1 +0.3
baz=59,SNR=6.1
DLMT **Dillon** 59.66 55 *e*P P 13 27 28.5 +0.5
comp=Z,1.4nm,0.7s,mb4.1
I13A **Wildhorse Cree** 59.75 57 ⇑P P 13 27 28.7 0.0
baz=60,SNR=6.4
HLID **Hailey** 59.80 57 ⇑P P 13 27 29.4 +0.4
baz=60
HLID **Hailey** 59.80 57 *e*P P 13 27 28.6 -0.4
comp=Z,2.1nm,0.8s,mb4.2
MCMT **McKenzie Canyo** 59.87 55 *e*P P 13 27 28.9 -0.5
comp=Z,0.5nm,0.7s,mb3.6
M10A **I.L. Ranch, Tu** 59.89 60 ⇓P P 13 27 30.0 +0.3
baz=60
E17A **Martinsdale** 59.90 53 ⇑P P 13 27 30.1 +0.4
baz=60,SNR=8.6
F16A **Kennard Place,** 59.92 54 ⇑P P 13 27 30.3 +0.5
baz=60
L11A **Cat Creek Ranc** 59.93 59 ⇑P P 13 27 30.2 +0.3
baz=60
BOZ **Bozeman (W)** 60.01 54 ⇓P P 13 27 30.6 +0.2
baz=60,SNR=5.9
BOZ **Bozeman (W)** 60.01 54 *e*P P 13 27 31.4 +1.0
BOZ *e* pP 13 27 43.4 +0.7
BOZ pmax pmax
comp=Z,11nm,1.5s,mb4.7
BOZ **Bozeman (W)** 60.01 54 *e*P P 13 27 31.4 +1.0
comp=Z,11nm,1.5s,mb4.7
BOZ *e* pP 13 27 43.4 +0.7
J13A **Cove Ranch, Pi** 60.04 57 ⇓P P 13 27 31.2 +0.5
baz=60
I14A **Mackay** 60.11 56 ⇑P P 13 27 31.7 +0.6
baz=60,SNR=6.3
G16A **Moss Hill, Enn** 60.18 54 ⇑P P 13 27 31.6 0.0
baz=60,SNR=6.6
JOF **Joensuu** 60.31 334 *e*P pP 13 27 42.9 -1.6
JOF pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
JOF **Joensuu** 60.31 334 *e*p pP 13 27 42.9 -1.6
comp=Z,0.6nm,0.4s
JOF **Joensuu** 60.31 334 *e*p pP 13 27 42.9 -1.6
comp=Z,0.6nm,0.4s
F17A **Fitzpatrick Pl** 60.36 53 ⇓P P 13 27 33.4 +0.6
baz=60
L12A **House Creek Ra** 60.37 59 ⇓P P 13 27 32.9 -0.1
baz=60
M11A **Holland Ranch,** 60.38 60 ⇑P P 13 27 33.6 +0.6
baz=60
J14A **Carey** 60.46 57 ⇑P P 13 27 34.2 +0.6
baz=60,SNR=5.3
G17A **Pierce Place,** 60.69 54 ⇑P P 13 27 35.6 +0.5
baz=60
H16A **Russell Place,** 60.82 55 ⇑P P 13 27 36.3 +0.3
baz=61
NVAR **Mina Array Bea** 60.84 64 P P 13 27 37.0 +0.8
comp=Z,1.3nm,0.6s,mb4.2,baz=298,slow=6.6,SNR=8.5
NVAR pP pP 13 27 48.9 +0.4
comp=Z,1.1nm,0.8s,baz=292,slow=8.3,SNR=5.0
F18A **Big Timber** 60.86 53 ⇑P P 13 27 36.7 +0.4
baz=61,SNR=6.0
J15A **Blackfoot** 61.01 56 ⇓P P 13 27 38.8 +1.5
baz=61
G18A **Lazy EL Ranch,** 61.33 53 ⇑P P 13 27 39.0 -0.4
baz=61
L14A **Malta** 61.45 58 ⇓P P 13 27 40.9 +0.6
baz=61
RLMT **Red Lodge** 61.61 53 ⇓P P 13 27 41.4 +0.1
baz=61
RLMT **Red Lodge** 61.61 53 *e*P P 13 27 42.4 +1.0
comp=Z,3.6nm,1.0s,mb4.5
RLMT *e* pP 13 27 54.7 +1.1
O12A **Currie** 61.74 60 ⇑P P 13 27 42.8 +0.5
baz=62,SNR=5.3
R11A **Troy Canyon, C** 62.51 62 ⇑P P 13 27 47.9 +0.5
baz=62
L17A **Cokeville** 62.73 57 ⇓P P 13 27 49.5 +0.6
baz=62
S11A **Rachel** 62.87 63 ⇓P P 13 27 49.4 -0.5
baz=63
DUG **Dugway** 62.90 59 ⇑P P 13 27 48.6 -1.5
baz=63
DUG **Dugway** 62.90 59 *e*P P 13 27 49.8 -0.2
DUG *e* pP 13 28 02.7 +0.3
DUG pmax pmax
comp=Z,14nm,1.9s,mb4.8
DUG **Dugway** 62.90 59 *e*P P 13 27 49.8 -0.2
comp=Z,14nm,1.9s,mb4.8
DUG *e* pP 13 28 02.7 +0.3
FINES **FINESS Array B** 62.98 335 P P 13 27 48.6 -1.6
comp=Z,1.7nm,0.7s,mb4.3,baz=25,slow=8.3,SNR=6.7
BW06 **Boulder Array** 63.02 55 ⇑P P 13 27 51.4 +0.6
baz=63,SNR=6.2
PDAR **Pinedale Array** 63.02 55 P P 13 27 51.5 +0.7
comp=Z,2.4nm,0.8s,mb4.4,baz=328,slow=3.2,SNR=18
PDAR pP pP 13 28 03.9 +0.8
comp=Z,2.8nm,0.8s,baz=331,slow=2.8,SNR=11
Q13A **Wheeler Ranch,** 63.02 61 ⇑P P 13 27 51.6 +0.7
baz=63
Q14A **Sevier Lake (B** 63.43 61 ⇓P P 13 27 54.1 +0.5
baz=63
O16A **Springville** 63.64 59 ⇑P P 13 27 54.4 -0.6
baz=63
T13A **Saint George** 64.38 63 ⇓P P 13 27 59.4 -0.4
baz=64
ULM **Lac du Bonnet** 64.66 42 P P 13 28 00.1 -1.3
comp=Z,4.4nm,0.7s,mb4.6,baz=324,slow=4.9,SNR=3.5
U13A **Pakoon Wash** 64.75 63 ⇑P P 13 28 02.7 +0.4
baz=64
O19A **Miners Draw (B** 64.92 57 ⇓P P 13 28 03.2 -0.1
baz=65
SRU **San Rafael** 64.94 59 ⇓P P 13 28 03.2 -0.2
baz=65
SRU **San Rafael** 64.94 59 *e*P P 13 28 03.7 +0.3
SRU *e* pP 13 28 13.4 -2.4
SRU pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
SRU **San Rafael** 64.94 59 *e*P P 13 28 03.7 +0.3
comp=Z,5.6nm,0.7s,mb4.7
SRU *e* pP 13 28 13.4 -2.5
R16A **Teasdale** 64.95 60 ⇑P P 13 28 03.9 +0.4
baz=65
LDFC **Landfair** 64.97 65 *e*P P 13 28 03.8 0.0
comp=Z,13nm,1.3s,mb4.8
LDFC *e* pP 13 28 15.9 -0.2
N20A **Spence Gulch,** 65.03 56 ⇑P P 13 28 04.4 +0.3
baz=65
RSSD **Black Hills** 65.04 51 *e*P P 13 28 03.7 -0.3
RSSD pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
RSSD **Black Hills** 65.04 51 *e*P P 13 28 03.7 -0.4
comp=Z,1.8nm,0.6s,mb4.3
V13A **Grand Canyon W** 65.12 64 ⇓P P 13 28 03.9 -0.8
baz=65
PSI **Prapat** 65.66 245 P P 13 28 08.6 +0.2
comp=Z,9.7nm,0.8s,mb4.9,baz=19,slow=2.8,SNR=6.9
PSI **Prapat** 65.66 245 P P 13 28 08.6 +0.2
Q19A **Hogan Spring (** 65.76 58 ⇑P P 13 28 07.9 -0.9
baz=66
R18A **Canyonlands Na** 65.79 59 ⇓P P 13 28 08.7 -0.3
baz=66
T18A **Mexican Hat** 66.66 60 ⇑P P 13 28 14.0 -0.6
baz=66
S19A **Harvey Farm, M** 66.66 59 ⇑P P 13 28 13.9 -0.7
baz=66
NOA **NORSAR Array B** 67.00 342 P P 13 28 15.6 -0.8
comp=Z,2.2nm,0.9s,mb4.2,baz=27,slow=6.4,SNR=4.6
NOA LR LR 14 01 25.5
comp=Z,40nm,19.5s,MS3.6,baz=285,slow=39
Y14A **Wickenburg** 67.02 64 ⇑P P 13 28 16.5 -0.4
baz=67
X15A **Humboldt** 67.10 64 ⇑P P 13 28 17.9 +0.5
baz=67
Z13A **Yuma Proving G** 67.13 65 ⇑P P 13 28 17.3 -0.3
baz=67
Q22A **Crested Butte,** 67.15 57 ⇑P P 13 28 17.3 -0.4
baz=67
V17A **Tonalea, Kykot** 67.17 62 ⇓P P 13 28 17.9 +0.1
baz=67
ISCO **Idaho Springs** 67.21 55 *e*P P 13 28 17.8 -0.2
ISCO *e* pP 13 28 31.3 +0.8
ISCO pmax pmax
comp=Z,1.0nm,0.7s,mb4.0
ISCO **Idaho Springs** 67.21 55 *e*P P 13 28 17.8 -0.3
comp=Z,1.0nm,0.7s,mb4.0
ISCO *e* pP 13 28 31.3 +0.8
MVCO **Mesa Verde** 67.40 59 ⇓P P 13 28 18.9 -0.3
baz=67
V18A **Ganado** 67.61 61 ⇑P P 13 28 20.7 +0.1
baz=67
U19A **Dine' College,** 67.63 60 ⇓P P 13 28 21.3 +0.6
baz=67
HYB **Hyderabad** 67.93 272 *e*P P 13 28 23.0 +0.2
HYB **Hyderabad** 67.93 272 *i* P P 13 28 22.0 -0.8
Y17A **Roosevelt** 68.48 63 ⇑P P 13 28 26.9 +0.8
baz=68
CTA **Charters Tower** 68.55 188 P P 13 28 26.1 -0.4
comp=Z,3.1nm,0.6s,mb4.5,baz=360,slow=10,SNR=7.6
CTAO **Charters Tower** 68.55 188 *e*P P 13 28 25.7 -0.8
CTAO pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
CTAO **Charters Tower** 68.55 188 *e*P P 13 28 25.7 -0.8
comp=Z,3.2nm,0.6s,mb4.4
W20A **Ramah** 68.86 61 ⇓P P 13 28 28.1 -0.3
baz=69
X19A **St. Johns** 68.89 62 ⇓P P 13 28 28.1 -0.5
baz=69
X20A **Quemado** 69.27 61 ⇓P P 13 28 31.6 +0.6
baz=69
118A **Homack Ranch,** 69.74 64 ⇑P P 13 28 34.1 +0.2
baz=70
ANMO **Albuquerque** 70.16 60 *e*P P 13 28 37.0 +0.5
ANMO pmax pmax
comp=Z,1.0nm,0.9s
ANMO **Albuquerque** 70.16 60 *e*P P 13 28 37.0 +0.5
comp=Z,0.6nm,0.9s,mb3.5
218A **Dragoon** 70.17 64 ⇑P P 13 28 36.2 -0.4
baz=70
U25A **Circle Dot Ran** 70.29 57 ⇓P P 13 28 36.9 -0.4
baz=70
WRA **Warramunga Arr** 70.37 200 P P 13 28 37.8 +0.1
comp=Z,8.9nm,0.8s,mb4.8,baz=17,slow=6.5,SNR=40
318A **Bisbee** 70.58 64 ⇑P P 13 28 38.5 -0.6
baz=70
120A **U Bar Ranch, L** 70.60 63 ⇓P P 13 28 38.7 -0.5
baz=70
Z21A **St. Cloud Mine** 70.63 62 ⇓P P 13 28 39.3 0.0
baz=70
AKASG **Malin Array Be** 70.73 327 P P 13 28 38.6 -1.0
comp=Z,1.0nm,0.5s,mb4.0,baz=36,slow=6.3,SNR=4.0
AKASG **Malin Array Be** 70.73 327 *ce*P P 13 28 41.5 +1.8
AKASG pmax pmax
comp=Z,1.0nm,0.4s
319A **Douglas** 71.05 64 ⇓P P 13 28 42.1 +0.2
baz=71
Z22A **Elephant Butte** 71.08 61 ⇑P P 13 28 42.2 +0.1
baz=71
220A **Playas Peak, P** 71.12 63 ⇑P P 13 28 43.0 +0.6
baz=71
SCHQ **Schefferville** 71.44 24 P P 13 28 42.8 -1.1
comp=Z,3.4nm,0.5s,mb4.5,baz=317,slow=7.1,SNR=6.6
Y25A **Mesa, Roswell** 71.91 59 ⇓P P 13 28 47.2 0.0
baz=72
125A **Gardner Draw,** 72.85 60 ⇓P P 13 28 52.8 +0.1
baz=73
Z27A **Tatum** 73.20 59 ⇓P P 13 28 55.0 +0.2
baz=73
ASAR **Alice Springs** 74.06 200 P P 13 29 00.6 +0.9
comp=Z,3.0nm,0.7s,mb4.3,baz=13,slow=5.6,SNR=42
STHS **Stebnicka Huta** 74.59 330 *e*P P 13 29 06.6 +4.0
STHS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
STHS **Stebnicka Huta** 74.59 330 *e*P P 13 29 06.6 +4.0
comp=Z,3.3nm,0.9s,mb4.3
STHS **Stebnicka Huta** 74.59 330 *e*P P 13 29 06.6 +4.0
KOLS **Kolonicke sedl** 74.67 330 *e*P P 13 29 04.4 +1.3
KOLS **Kolonicke sedl** 74.67 330 *e*P P 13 29 04.4 +1.3
BUR08 **Bucovina Ar. S** 74.74 327 *e*P P 13 29 02.8 -0.7

328A	**Wristen Ranch,**	74.85	60	⇓P	P	13 29 03.7	-0.7
	baz=75						
CRVS	**Cervenica-Dubn**	74.96	330	*e*P	P	13 29 04.6	-0.2
CRVS	**Cervenica-Dubn**	74.96	330	*e*P	P	13 29 04.6	-0.2
UPC	**Upice**	75.26	334	*e*P	P	13 29 06.8	+0.4
UPC	**Upice**	75.26	334	*e*P	P	13 29 06.8	+0.4
DPC	**Dobruska-Polom**	75.31	334	*e*P	P	13 29 07.1	+0.4
DPC	**Dobruska-Polom**	75.31	334	*e*P	P	13 29 07.1	+0.4
DPC				*ex*	x	13 29 11.1	
CLL	**Collm**	75.38	336	⇓*i*P	P	13 29 06.8	-0.3
CLL				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
CLL	**Collm**	75.38	336	⇓*i*P	P	13 29 06.8	-0.3
	comp=Z,5.0nm,0.8s,mb4.5						
CLL				LmV		14 03 00.0	
	comp=Z,100nm,19.4s						
428A	**Kincaid Ranch,**	75.41	60	⇓P	P	13 29 07.9	+0.3
	baz=75						
626A	**Big Bend Ranch**	75.42	62	⇓P	P	13 29 07.1	-0.7
	baz=75						
KECS	**Kecovo**	75.65	330	*e*P	P	13 29 12.7	+4.0
KECS				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
KECS	**Kecovo**	75.65	330	*e*P	P	13 29 12.7	+4.0
	comp=Z,1.8nm,0.8s,mb4.0						
KECS	**Kecovo**	75.65	330	*e*P	P	13 29 12.7	+4.0
TXAR	**Lajitas Array**	75.86	62	P	P	13 29 10.5	+0.2
	comp=Z,1.6nm,0.8s,mb4.0,baz=292,slow=3.9,SNR=15						
TXAR				pP	pP	13 29 23.6	+0.7
	comp=Z,2.2nm,0.6s,baz=297,slow=4.0,SNR=15						
VYHS	**Vyhne**	76.17	331	*e*P	P	13 29 11.2	-0.5
VYHS				pmax	pmax		
	comp=Z,8.0nm,2.1s,mb4.3						
VYHS	**Vyhne**	76.17	331	*e*P	P	13 29 11.2	-0.5
	comp=Z,7.8nm,2.1s,mb4.3						
VYHS	**Vyhne**	76.17	331	*e*P	P	13 29 11.2	-0.5
KHC	**Kasperske Hory**	77.19	335	*e*P	P	13 29 17.9	+0.4
KHC	**Kasperske Hory**	77.19	335	*e*P	P	13 29 17.9	+0.4
KHC				*ex*	x	13 29 21.3	
GERES	**GERESS Array B**	77.41	335	P	P	13 29 18.5	-0.2
	comp=Z,0.2nm,0.3s,mb3.6,baz=17,slow=6.0,SNR=5.3						
GERES				LR	LR	14 06 07.7	
	comp=Z,110nm,19.4s,MS4.2,baz=300,slow=38						
BRTR	**Keskin Array B**	77.86	317	P	P	13 29 21.9	+0.6
	comp=Z,1.7nm,1.0s,mb3.9,baz=67,slow=4.2,SNR=6.5						
BAIF	**Baives**	78.68	341	*e*P	P	13 29 24.3	-1.4
CDF	**Champ du Feu**	79.51	339	*e*P	P	13 29 29.9	-0.4
	comp=Z,9.8nm,1.0s,mb4.4						
CDF	**Champ du Feu**	79.51	339	*e*P	P	13 29 29.9	-0.4
CDF				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
CDF	**Champ du Feu**	79.51	339	*e*P	P	13 29 29.9	-0.4
	comp=Z,4.9nm,1.0s,mb4.4						
MEZF	**Maizieres J'vi**	79.95	340	*e*P	P	13 29 32.5	-0.2
HAU	**Haudompre**	80.12	339	*e*P	P	13 29 33.1	-0.5
HINF	**Hinteralfeld**	80.17	339	*e*P	P	13 29 33.0	-0.9
STKA	**Stephens Creek**	80.72	191	P	P	13 29 37.8	+1.1
	comp=Z,1.2nm,0.5s,mb4.1,baz=348,slow=7.9,SNR=3.8						
STKA	**Stephens Creek**	80.72	191	P	P	13 29 35.5	-1.3
	comp=Z,0.4nm,0.8s,mb3.4						
FLN	**La Foliniere**	80.86	344	*e*P	P	13 29 36.9	-0.7
	comp=Z,52nm,1.3s,mb5.0						
FLN	**La Foliniere**	80.86	344	*e*P	P	13 29 36.9	-0.7
FLN				pmax	pmax		
	comp=Z,26nm,1.3s,mb5.0						
FLN	**La Foliniere**	80.86	344	*e*P	P	13 29 36.9	-0.7
	comp=Z,26nm,1.3s,mb5.0						
LDF	**La Druitiere**	80.96	343	*e*P	P	13 29 37.2	-0.9
	comp=Z,26nm,1.2s,mb4.7						
LDF	**La Druitiere**	80.96	343	*e*P	P	13 29 37.2	-0.9
LDF				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7						
LDF	**La Druitiere**	80.96	343	*e*P	P	13 29 37.2	-0.9
	comp=Z,13nm,1.2s,mb4.7						
GRR	**Gorron**	81.29	344	*e*P	P	13 29 39.4	-0.4
	comp=Z,53nm,1.4s,mb5.0						
GRR	**Gorron**	81.29	344	*e*P	P	13 29 39.4	-0.4
GRR				pmax	pmax		
	comp=Z,27nm,1.4s,mb5.0						
GRR	**Gorron**	81.29	344	*e*P	P	13 29 39.4	-0.4
	comp=Z,26nm,1.4s,mb5.0						
LOR	**Lormes**	81.39	340	*e*P	P	13 29 39.8	-0.6
	comp=Z,15nm,0.9s,mb4.6						
LOR	**Lormes**	81.39	340	*e*P	P	13 29 39.8	-0.6
LOR				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
LOR	**Lormes**	81.39	340	*e*P	P	13 29 39.8	-0.6
	comp=Z,7.7nm,0.9s,mb4.6						
SSF	**Saint Saulge**	81.66	340	*e*P	P	13 29 41.4	-0.4
	comp=Z,11nm,0.9s,mb4.5						
SSF	**Saint Saulge**	81.66	340	*e*P	P	13 29 41.4	-0.4
SSF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
SSF	**Saint Saulge**	81.66	340	*e*P	P	13 29 41.4	-0.4
	comp=Z,5.4nm,0.9s,mb4.5						
ROSF	**Rostrenen**	81.77	345	*e*P	P	13 29 42.1	-0.3
	comp=Z,62nm,1.3s,mb5.1						
ROSF	**Rostrenen**	81.77	345	*e*P	P	13 29 42.1	-0.3
ROSF				pmax	pmax		
	comp=Z,31nm,1.3s,mb5.1						
ROSF	**Rostrenen**	81.77	345	*e*P	P	13 29 42.1	-0.3
	comp=Z,31nm,1.3s,mb5.1						
AVF	**Avril sur Loir**	81.95	340	*e*P	P	13 29 43.0	-0.4
	comp=Z,14nm,0.9s,mb4.6						
AVF	**Avril sur Loir**	81.95	340	*e*P	P	13 29 43.0	-0.4
AVF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
AVF	**Avril sur Loir**	81.95	340	*e*P	P	13 29 43.0	-0.4
	comp=Z,6.8nm,0.9s,mb4.6						
SMF	**Signal de Mont**	81.98	340	*e*P	P	13 29 43.1	-0.4
	comp=Z,14nm,0.9s,mb4.6						
SMF	**Signal de Mont**	81.98	340	*e*P	P	13 29 43.1	-0.4
SMF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
SMF	**Signal de Mont**	81.98	340	*e*P	P	13 29 43.1	-0.4
	comp=Z,7.1nm,0.9s,mb4.6						
PPT	**Papeete**	82.34	127	LR	LR	14 03 16.9	
	comp=Z,95nm,18.7s,MS4.2,baz=351,slow=33						
LPL	**La Plagne**	82.35	338	*e*P	P	13 29 46.0	+0.5
	comp=Z,13nm,0.9s,mb4.6						
LPL	**La Plagne**	82.35	338	*e*P	P	13 29 46.0	+0.5
LPL				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
LPL	**La Plagne**	82.35	338	*e*P	P	13 29 46.0	+0.5
	comp=Z,6.3nm,0.9s,mb4.5						
LPG	**La Plagne**	82.36	338	*e*P	P	13 29 46.2	+0.7
	comp=Z,15nm,0.9s,mb4.6						
LPG	**La Plagne**	82.36	338	*e*P	P	13 29 46.2	+0.7
LPG				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
LPG	**La Plagne**	82.36	338	*e*P	P	13 29 46.2	+0.7
	comp=Z,7.3nm,0.9s,mb4.6						
MMAI	**Mount Meron Ar**	82.45	312	P	P	13 29 46.8	+0.6
	comp=Z,5.4nm,0.6s,mb4.7,baz=37,slow=7.3,SNR=6.2						
TCF	**Toulx Ste Croi**	82.68	341	*e*P	P	13 29 47.0	-0.2
	comp=Z,17nm,1.0s,mb4.7						
TCF	**Toulx Ste Croi**	82.68	341	*e*P	P	13 29 47.0	-0.2
TCF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
TCF	**Toulx Ste Croi**	82.68	341	*e*P	P	13 29 47.0	-0.2
	comp=Z,8.4nm,1.0s,mb4.7						
MFF	**Saint Martin d**	82.87	343	*e*P	P	13 29 47.9	-0.2
	comp=Z,16nm,0.8s,mb4.8						
MFF	**Saint Martin d**	82.87	343	*e*P	P	13 29 47.9	-0.2
MFF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
MFF	**Saint Martin d**	82.87	343	*e*P	P	13 29 47.9	-0.2
	comp=Z,7.8nm,0.8s,mb4.8						
MBDF	**Montbardon**	83.08	337	*e*P	P	13 29 51.4	+2.2
ORIF	**Oris-en-Rattie**	83.12	338	*e*P	P	13 29 50.1	+0.6
	comp=Z,12nm,0.8s,mb4.7						
ORIF	**Oris-en-Rattie**	83.12	338	*e*P	P	13 29 50.1	+0.6
ORIF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
ORIF	**Oris-en-Rattie**	83.12	338	*e*P	P	13 29 50.1	+0.6
	comp=Z,6.0nm,0.8s,mb4.7						
VIVF	**Saint-Julien-l**	83.47	339	*e*P	P	13 29 51.5	+0.2
	comp=Z,20nm,1.1s,mb4.8						
VIVF	**Saint-Julien-l**	83.47	339	*e*P	P	13 29 51.5	+0.2
VIVF				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
VIVF	**Saint-Julien-l**	83.47	339	*e*P	P	13 29 51.5	+0.2
	comp=Z,10nm,1.1s,mb4.8						
RJF	**Les Rejaudoux**	83.77	341	*e*P	P	13 29 52.6	-0.2
CAF	**Calviac**	84.01	341	*e*P	P	13 29 54.2	+0.2
LFF	**La Frestale**	84.28	342	*e*P	P	13 29 55.3	-0.1
LASF	**Ste Croix**	84.40	339	*e*P	P	13 29 56.4	+0.3
	comp=Z,53nm,1.4s,mb5.2						
EIL	**Elat**	85.39	311	P	P	13 30 01.3	+0.1
	comp=Z,4.3nm,0.9s,mb4.6,baz=34,slow=7.2,SNR=4.0						
EIL				LR	LR	14 16 25.6	
	comp=Z,143nm,18.9s,MS4.4,baz=100,slow=42						
NWAO	**Narrogin (SRO)**	87.54	211	P	P	13 30 12.2	+0.8
	comp=Z,10nm,0.8s,mb5.1,baz=11,slow=5.7,SNR=3.9						
NWAO	**Narrogin (SRO)**	87.54	211	P	P	13 30 12.2	+0.8
NWAO				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NWAO	**Narrogin (SRO)**	87.54	211	*e*P	P	13 30 10.5	-0.9
	comp=Z,10nm,0.8s,mb5.1						
ESDC	**Sonseca Array**	90.28	344	P	P	13 30 23.6	-0.9
	comp=Z,1.7nm,1.0s,mb4.3,baz=54,slow=2.6,SNR=4.7						
CPUP	**Villa Florida**	146.82	60	PKPbc	PKPbc	13 37 04.5	-1.3
	comp=Z,0.8nm,0.6s,baz=334,slow=2.9,SNR=3.6						
PLCA	**Paso Flores**	147.36	94	PKPbc	PKPbc	13 37 06.2	-0.6
	comp=Z,3.1nm,0.7s,baz=174,slow=5.7,SNR=8.8						

MEX 07 13:19:44.5±0.6, 16.06N×97.57W, h17km±27km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	0.62	302	*i* P	Pg	13 19 54.4	-2.4
PNIG				*i* S	Sg	13 20 02.8	-2.5
VHO	**Vista Hermosa**	1.29	39	*i* P	Pn	13 20 04.6	-3.1
VHO				*i* S	Sb	13 20 19.6	-4.9
OXX	**Oaxaca**	1.30	39	*i* P	Pn	13 20 04.8	-3.1
OXX				*i* S	Sn	13 20 19.1	-5.7
HUIG	**Huatulco**	1.44	102	*i* P	Pn	13 20 06.6	-3.1
HUIG				*i* S	Sn	13 20 22.0	-6.2
ACX	**Acapulco**	2.33	290	*i* P	Pn	13 20 20.7	-1.4
ACX				*i* S	Sn	13 20 47.8	-2.6
TPIG	**Tehuac#an**	2.35	5	*e*P	Pn	13 20 19.6	-2.7
TPIG				*i* S	Sn	13 20 46.8	-4.0
CAIG	**El Cayaco**	2.76	291	*e*P	Pn	13 20 23.5	-4.5
CAIG				*i* S	Sn	13 20 58.7	-2.2
PLIG	**Platanillo**	2.96	322	*e*P	Pn	13 20 27.8	-2.9
PLIG				*i* S	Sn	13 21 01.5	-4.4
MZM		3.49	333	*e*P	Pn	13 20 35.6	-2.3
MZVM				*i* S	Sn	13 21 15.1	-3.7
IIO	**Organos**	3.68	343	*e*P	Pn	13 20 39.3	-1.2
IIO				*i* S	Sn	13 21 20.9	-2.6
PTVM	**Pico Tres Padr**	3.81	338	*e*P	Pn	13 20 40.3	-2.0
PTVM				*i* S	Sn	13 21 23.5	-3.2
TGIG		4.33	80	*e*P	Pn	13 20 48.8	-0.7
TGIG				*i* S	Sn	13 21 36.6	-3.0
CCIG	**Comitan**	5.23	87	*e*P	Pn	13 21 02.2	+0.3
CCIG				*i* S	Sn	13 22 01.1	-0.7

KRSC 07 13:28:04.8±0.1, 53.91N×161.36E, h20km±19km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	0.68	18	*e*P	Pb	13 28 16.7	-1.3
MKZ				*i* S	Sb	13 28 25.0	-2.0
KII	**Karymskiy**	1.14	277	*e*P	Pn	13 28 25.9	+0.4
KII				*i* S	Sb	13 28 40.1	+0.1
SPN	**Mys Shipunski**	1.14	225	*e*P	Pn	13 28 24.5	-1.1
SPN				*i* S	Sb	13 28 38.9	-1.2
NLC	**Nalytchevo**	1.41	239	*e*P	Pn	13 28 29.1	-0.2
NLC				*i* S	Sn	13 28 47.5	+0.2
AVH	**Avacha**	1.69	249	*e*P	Pn	13 28 34.2	+1.1
AVH				*i* S	Sn	13 28 56.1	+1.9
PET	**Petropavlovsk**	1.85	242	*e*P	Pn	13 28 35.2	-0.1
KMNR	**Kamenistaya**	1.96	341	*e*P	Pn	13 28 38.6	+1.8
KMNR				*i* S	Sn	13 29 04.2	+3.4
GNL	**Ganaly**	2.04	265	*e*P	Pn	13 28 39.8	+1.9
GNL				*i* S	Sn	13 29 05.8	+3.1
BZGR	**Bezymyannyi-Gr**	2.07	350	*e*P	Pn	13 28 39.9	+1.5
BZGR				*i* S	Sn	13 29 05.8	+2.3
ZLN	**Zelenaya**	2.14	352	*e*P	Pn	13 28 40.8	+1.5
ZLN				*i* S	Sn	13 29 07.3	+2.2
KPT	**Kopyto**	2.16	343	*e*P	Pn	13 28 42.2	+2.6
KPT				*i* S	Sn	13 29 09.2	+3.4
KRSR	**Krestovskiy**	2.36	349	P	Pn	13 28 42.8	+0.5
KRSR				*i* S	Sn	13 29 11.3	+0.7
KLY	**Klyuchi**	2.44	351	P	Pn	13 28 44.2	+0.7
KLY				*i* S	Sn	13 29 13.8	+1.1
KBTR	**Krutoberegovo**	2.45	19	*e*P	Pn	13 28 43.2	-0.4
KBTR				*i* S	Sn	13 29 11.8	-1.1
SRDR	**Sredinnyy**	2.59	339	P	Pn	13 28 46.7	+1.2
SRDR				*i* S	Sn	13 29 18.2	+1.9
SRKR	**Sorokina**	2.75	358	P	Pn	13 28 50.3	+2.6
SRKR				*i* S	Sn	13 29 23.3	+3.0

KRSC 07 13:30:18.2±0.7, 55.59N×165.97E, h31km±30km, ML3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	0.39	180	*i* P	Pb	13 30 27.1	+0.2
BKI				*i* S	Sb	13 30 33.2	+0.3
KBTR	**Krutoberegovo**	1.88	291	*e*P	Pn	13 30 48.4	+0.3
KBTR				*e*S	Sn	13 31 10.7	0.0
MKZ	**Mys Kozlova**	2.65	249	*e*P	Pn	13 31 00.8	+2.1
MKZ				*e*S	Sn	13 31 32.1	+2.4
SRKR	**Sorokina**	2.89	294	*e*P	Pn	13 31 04.4	+2.4
SRKR				S	Sn	13 31 38.4	+2.7
ZLN	**Zelenaya**	2.95	280	*e*P	Pn	13 31 05.5	+2.7
ZLN				*e*S	Sn	13 31 40.4	+3.3
BZGR	**Bezymyannyi-Gr**	3.00	279	P	Pn	13 31 05.4	+1.9
BZGR				S	Sn	13 31 40.0	+1.6
KLY	**Klyuchi**	3.08	286	P	Pn	13 31 05.2	+0.6
KLY				S	Sn	13 31 39.8	-0.5
KRSR	**Krestovskiy**	3.11	284	P	Pn	13 31 07.2	+2.2
KRSR				S	Sn	13 31 43.3	+2.3
KMNR	**Kamenistaya**	3.25	275	P	Pn	13 31 09.9	+2.9
KMNR				*e*S	Sn	13 31 46.9	+2.4
KPT	**Kopyto**	3.27	279	S	Sn	13 31 49.9	+4.9
SRDR	**Sredinnyy**	3.59	284	P	Pn	13 31 14.6	+3.0
SRDR				S	Sn	13 31 55.5	+2.6
SPN	**Mys Shipunski**	4.28	237	*e*S	Sn	13 32 09.9	-0.1
NLC	**Nalytchevo**	4.57	241	P	Pn	13 31 28.3	+3.2
NLC				*e*S	Sn	13 32 19.5	+2.5
AVH	**Avacha**	4.82	244	*e*P	Pn	13 31 32.2	+3.7
AVH				*e*S	Sn	13 32 27.4	+4.1
PET	**Petropavlovsk**	5.00	242	P	Pn	13 31 34.6	+3.7
PET				S	Sn	13 32 29.3	+1.7
GNL	**Ganaly**	5.03	251	P	Pn	13 31 35.2	+3.7
MIPR	**Malaya Ipel'ka**	6.37	242	P	Pn	13 31 53.1	+3.3

*IDC **07** 13:30:42.2±0.9, 34.41N×82.73E, h0km, mb3.7/9, mb1 3.8/12, mb1mx3.6/29, mbtmp3.7/12, ML3.4/2, MS3.4/1, Ms1 3.4/1, ms1mx2.3/32, Error ellipse: s-maj=30.9km s-min=17.4km az=58.0*

*ISCJB **07** 13:30:42.1±0.7, 34.49N±0.10×82.9E±0.2, h10km, mb3.7/9, Error ellipse: s-maj=20.7km s-min=11.1km az=149.2*

*NEIC **07** 13:30:44.3±0.9, 34.43N×82.80E, h10km, mb3.6/1, Error ellipse: s-maj=24.6km s-min=13.3km az=52.0*

ISC 07 13:30:44.0±0.7, 34.43N±0.10×82.8E±0.2, h10km, n18, σ0.99/17, mb3.7/9, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UCH	**Uchtor**	10.16	322	*e*Pn	Pn	13 33 11.8	+2.0
	3.4nm,1.0s						
AML	**Almayashu**	10.52	320	*e*P	Pn	13 33 16.8	+2.1
	3.2nm,0.8s						
MKAR	**Makanchi Array**	12.36	358	Pn	Pn	13 33 39.6	-0.2
	0.1nm,0.3s,baz=165,slow=9.3,SNR=11						
KURK	**Kurchatov**	16.56	351	Pn	Pn	13 34 31.6	-4.6
	baz=172,slow=12,SNR=4.8						
ZALV	**Zalesovo Beam**	19.57	4	P	Pn	13 35 12.7	-0.3
	0.2nm,0.3s,baz=187,slow=12,SNR=11						
BVAR	**Borovoye Array**	20.59	338	P	P	13 35 23.1	+0.1
	1.8nm,0.9s,baz=148,slow=12,SNR=6.5						
CMAR	**Chiang Mai Arr**	21.43	134	P	P	13 35 33.6	+1.4
	0.9nm,0.7s,mb3.2,baz=317,slow=10,SNR=5.1						
ABKAR	**Akbulak array**	22.46	318	*e*P	P	13 35 43.2	+0.1
	1.8nm,0.8s,mb3.5						
AKTK	**Aktyubinsk**	24.15	319	P	P	13 35 59.0	-1.0
AKTO	**Aktyubinsk**	24.15	319	P	P	13 35 59.0	-1.0
	0.7nm,0.6s,mb3.3,baz=127,slow=10,SNR=3.8						
KSRS	**Korea Array**	36.37	72	LR	LR	13 54 17.0	
	comp=Z,51nm,18.4s,baz=232,slow=39						
BRTR	**Keskin Array B**	39.21	293	P	P	13 38 12.6	+0.3
	0.4nm,0.4s,mb3.5,baz=76,slow=6.1,SNR=3.4						
FINES	**FINESS Array B**	44.66	325	P	P	13 38 56.3	-0.2
	2.3nm,0.9s,mb4.0,baz=157,slow=18,SNR=3.1						
NB2	**NORSAR Subarra**	51.79	324	P	P	13 39 50.6	-1.0
	comp=Z,0.8nm,0.6s,mb3.8,baz=86,slow=7.4						
NOA	**NORSAR Array B**	51.79	324	P	P	13 39 50.1	-1.4
	comp=Z,0.8nm,0.7s,mb3.8,baz=86,slow=7.4,SNR=3.9						
WRA	**Warramunga Arr**	72.95	130	P	P	13 42 13.4	-0.3
	comp=Z,0.4nm,0.8s,mb4.3,baz=327,slow=6.0,SNR=2.8						
TORD	**Torodi Ar. Bea**	75.45	276	P	P	13 42 27.4	-1.1
	comp=Z,0.7nm,0.6s,mb3.8,baz=51,slow=5.5,SNR=7.8						
BOSA	**Boshof**	83.02	228	P	P	13 43 09.6	+0.1
	comp=Z,4.2nm,1.0s,mb4.4,baz=0.7,slow=4.2,SNR=3.7						

*IDC **07** 13:34:10.9±1.1, 4.19N×73.77W, h0km, mb3.6/3, mb1 4.0/4, mb1mx3.6/22, mbtmp3.8/4, ML4.4/1, MS3.1/2, Ms1 3.1/2, ms1mx2.8/20, Error ellipse: s-maj=22.7km s-min=10.4km az=56.0*

*ISCJB **07** 13:34:11.6±0.9, 4.28N±0.07×73.80W±0.10, h10km, mb3.6/3, Error ellipse: s-maj=14.1km s-min=10.3km az=9.4*

*NEIC **07** 13:34:13.1, 4.37N×73.82W, h0km, ML3.6(RSNC), After RSNC.*

ISC 07 13:34:13.2±0.9, 4.27N±0.07×73.86W±0.10, h10km, n9, σ0.67/8, mb3.6/3, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	0.75	321	Pg	Pg	13 34 27.2	-0.5
	112nm,0.3s,baz=113,slow=12,SNR=156						
ROSC				Lg		13 34 40.1	
	170nm,0.3s,baz=103,slow=19,SNR=18						
SDV	**Santo Domingo**	5.59	35	Pn	Pn	13 35 36.4	-0.1
	11nm,0.3s,baz=242,slow=6.1,SNR=43						
SDV				Sn	Sn	13 36 40.8	0.0
	21nm,0.3s,baz=84,slow=20,SNR=9.1						
SDV				Lg		13 37 08.3	
	9.5nm,0.3s,baz=270,slow=20,SNR=6.1						
SDV				LR	LR	13 37 59.5	
	comp=Z,166nm,20.3s,baz=2.2,slow=41						
SDV	**Santo Domingo**	5.59	35	Pn	Pn	13 35 36.4	-0.1
SDV				Sn	Sn	13 36 40.8	0.0
SDV				Lg		13 37 08.3	
SDV				LR	LR	13 37 59.5	
JTS	**JuntasAbangare**	12.52	299	LR	LR	13 41 48.3	
	comp=Z,124nm,21.0s,baz=238,slow=36						
LPAZ	**La Paz**	21.20	165	P	P	13 38 59.8	+0.6
	1.7nm,0.8s,mb3.4,baz=343,slow=17,SNR=5.1						
SIV	**San Ignacio**	23.78	148	P	P	13 39 25.1	-1.1
	1.3nm,0.7s,mb3.5,baz=331,slow=9.5,SNR=5.1						
YKA	**Yellowknife Ar**	65.40	341	P	P	13 44 56.6	+0.9
	0.9nm,0.7s,mb3.9,baz=141,slow=6.2,SNR=3.9						
ASAR	**Alice Springs**	147.00	232	PKPbc	PKPbc	13 53 54.4	-2.6
	0.7nm,1.0s,baz=111,slow=4.3,SNR=5.1						
WRA	**Warramunga Arr**	148.43	238	PKPbc	PKPbc	13 53 58.8	-2.3
	1.3nm,0.9s,baz=109,slow=2.4,SNR=9.2						

*IDC **07** 13:37:30.8±2.7, 25.85N×127.92E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.5/24, mbtmp3.5/4, Error ellipse: s-maj=167.1km s-min=24.2km az=66.0*

*JMA **07** 13:37:35.0±0.3, 25.55N×127.70E, h42km±4km, M3.1*

*ISCJB **07** 13:37:35.5±1.1, 25.58N±0.08×127.73E±0.06, h43km±12km, mb3.5/4, Error ellipse: s-maj=13.1km s-min=9.5km az=12.5*

ISC 07 13:37:36.1±1.2, 25.59N±0.06×127.70E±0.07, h32km±6km, n14, σ0.80/21, mb3.5/4, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT2	**Tamagusuku 2**	0.54	5	P	Pb	13 37 46.9	-0.4
JJT2				*e*S	Sb	13 37 56.1	+1.2
NAH1	**Naha**	0.61	359	P	Pb	13 37 47.7	-0.6
NAH1				S	Sb	13 37 56.3	-0.3
JAGN	**Aguni-jima**	1.07	338	P	Pn	13 37 54.8	-0.1
JAGN				S	Sn	13 38 08.5	-0.2
JKE	**Kume jima 2**	1.10	312	P	Pn	13 37 54.7	-0.5
JKE				*e*S	Sn	13 38 09.5	+0.2
JOW	**Kunigami**	1.34	23	P	Pn	13 37 58.4	-0.1
JIH	**Iheya**	1.46	10	P	Pn	13 38 00.3	+0.1
JIH				*e*S	Sn	13 38 18.3	+0.2
JTK	**Tokunoshima**	2.45	27	P	Pn	13 38 14.6	+0.7
JTK				*e*S	Sn	13 38 43.0	+0.2
JMZ	**Minamidaito 2**	3.19	85	P	Pn	13 38 22.1	-1.9
JMZ				S	Sn	13 38 57.0	-3.9
JAM	**Amami Oshima**	3.28	31	P	Pn	13 38 25.7	+0.4
JZK	**Kikaishima**	3.39	36	P	Pn

comp=Z,2.0nm,0.7s
MKAR **Makanchi Array 16.11 356** Pn **Pn 13 58 41.3 -0.1**
comp=Z,0.0nm,0.3s,baz=161,slow=12,SNR=4.2
MKAR LR LR 14 06 01.5
comp=Z,83nm,18.0s,baz=254,slow=41
CHTO **Chiang Mai 18.02 128** *e*P **Pn 13 59 04.7 -0.8**
comp=Z,8.1nm,1.3s
CMAR **Chiang Mai Arr 18.27 128** P **Pn 13 59 04.1 -4.5**
comp=Z,0.3nm,0.3s,baz=306,slow=12,SNR=4.3
CMAR LR LR 14 06 59.4
comp=Z,72nm,19.6s,baz=310,slow=40
KURK **Kurchatov 20.38 350** P **P 13 59 30.5 -1.1**
comp=Z,6.2nm,0.9s,baz=171,slow=10,SNR=33
KURK LR LR 14 08 34.9
comp=Z,116nm,19.9s,MS3.2,baz=165,slow=40
ZAA0 **Zalesovo Array 23.23 1** *e*P **P 14 00 02.6 +0.6**
ZALV **Zalesovo Beam 23.23 1** P **P 14 00 02.7 +0.6**
comp=Z,1.3nm,0.6s,mb3.6,baz=186,slow=12,SNR=5.6
ZALV LR LR 14 10 24.8
comp=Z,35nm,18.2s,MS2.9,baz=263,slow=40
SONM **Songino Array 24.24 39** P **P 14 00 12.8 +1.0**
comp=Z,1.3nm,0.7s,mb3.5,baz=229,slow=11,SNR=7.4
BVAR **Borovoye Array 24.39 340** P **P 14 00 13.4 +0.2**
comp=Z,1.2nm,0.9s,mb3.3,baz=172,slow=12,SNR=5.8
ABKAR **Akbulak array 25.92 322** *e*P **P 14 00 27.2 +0.1**
comp=Z,1.4nm,0.6s,mb3.7
PSI **Prapat 31.16 150** LR LR 14 15 25.9
comp=Z,12nm,18.4s,MS2.6,baz=12,slow=40
KSRS **Korea Array 36.78 67** P **P 14 02 00.5 -2.2**
comp=Z,0.3nm,0.5s,mb3.3,baz=267,slow=9.0,SNR=4.4
KSRS LR LR 14 18 37.6
comp=Z,55nm,19.6s,MS3.3,baz=80,slow=39
ASF **Jabal al Asfar 39.92 285** LR LR 14 21 45.5
comp=Z,50nm,18.1s,MS3.4,baz=10.0,slow=40
BRTR **Keskin Array B 41.61 297** P **P 14 02 43.1 0.0**
comp=Z,0.5nm,0.8s,mb3.2,baz=144,slow=9.1,SNR=4.5
JOF **Joensuu 46.29 330** *e*p **P 14 03 21.6 +1.3**
comp=Z,0.4nm,0.4s,mb3.7
JOF **Joensuu 46.29 330** *e*p **P 14 03 21.6 +1.3**
comp=Z,0.4nm,0.4s,mb3.7
FINES **FINESS Array B 48.26 327** P **P 14 03 35.2 -0.5**
comp=Z,1.1nm,0.6s,mb4.1,baz=104,slow=14,SNR=5.4
FINES LR LR 14 26 48.2
comp=Z,40nm,19.6s,MS3.4,baz=275,slow=40
FINES **FINESS Array B 48.26 327** P **P 14 03 35.2 -0.5**
FINES LR LR 14 26 48.2
ARCES **ARCESS Array B 50.64 337** P **P 14 03 54.3 +0.6**
comp=Z,2.0nm,0.8s,mb4.1,baz=106,slow=9.5,SNR=3.5
NOA **NORSAR Array B 55.37 326** P **P 14 04 27.8 -1.0**
comp=Z,0.7nm,0.7s,mb3.8,baz=77,slow=8.2,SNR=3.0
WRA **Warramunga Arr 69.86 129** P **P 14 06 04.0 -2.1**
comp=Z,0.8nm,0.7s,mb3.8,baz=326,slow=6.2,SNR=9.2
ASAR **Alice Springs 72.23 133** P **P 14 06 19.7 -0.6**
comp=Z,0.3nm,0.8s,mb3.3,baz=316,slow=5.9,SNR=6.2
TORD **Torodi Ar. Bea 76.83 278** P **P 14 06 46.2 -1.2**
comp=Z,1.3nm,0.9s,mb3.8,baz=40,slow=4.6,SNR=4.3
BOSA **Boshof 81.29 229** LR LR 14 39 22.5

*ISCJB **07** 13:57:13.8±0.4, 38°.41N±0°.02×21°.82E±0°.03, h7km±4km, Error ellipse: s-maj=5.0km s-min=3.6km az=37.7*
*ATH **07** 13:57:14.0, 38°.40N×21°.85E, h12km±1km, MD3.3/15*
*THE **07** 13:57:14.2, 38°.45N×21°.77E, h2km±2km, ML3.5/2, Error ellipse: s-maj=2.9km s-min=0.6km az=194.0*
*NEIC **07** 13:57:14.0, 38°.40N×21°.85E, h12km, MD3.3(ATH), ML3.5(THE), After ATH.*
*CSEM **07** 13:57:14.0±0.2, 38°.41N×21°.80E, h15km, MD3.3, Error ellipse: s-maj=6.7km s-min=5.1km az=101.0*

ISC 07 13:57:14.4±0.4, 38°.40N±0°.03×21°.84E±0°.03, h8km±4km, n65, σ0.9±94/81, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EFP	**Efpalio**	**0.06**	**66**	P	**Pg**	**13 57 16.5**	**+0.4**
EFP	**Efpalio**	**0.06**	**66**	*e*PG	**Pg**	**13 57 16.5**	**+0.4**
EFP				*e*SG	**Sg**	**13 57 17.5**	**+0.1**
EFP	**Efpalio**	**0.06**	**66**	P	**Pg**	**13 57 16.5**	**+0.4**
EFP				*e*Sg	**Sg**	**13 57 17.5**	**+0.1**
UPR	**University Cam**	**0.13**	**199**	P	**Pg**	**13 57 17.5**	**+0.4**
UPR	**University Cam**	**0.13**	**199**	*e*PG	**Pg**	**13 57 17.2**	**+0.1**
UPR				*e*SG	**Sg**	**13 57 19.3**	**+0.3**
UPR	**University Cam**	**0.13**	**199**	*e*Pg	**Pg**	**13 57 17.2**	**+0.1**
UPR	**University Cam**	**0.13**	**199**	P	**Pg**	**13 57 17.5**	**+0.4**
UPR				*e*Sg	**Sg**	**13 57 19.3**	**+0.3**
KALE	**Kalithea**	**0.24**	**93**	P	**Pg**	**13 57 19.9**	**+0.8**
KALE	**Kalithea**	**0.24**	**93**	P	**Pg**	**13 57 19.9**	**+0.8**
RLS	**Riolos of Patr**	**0.45**	**220**	*e*Pb	**Pg**	**13 57 23.0**	**-0.1**
RLS				*e*Sb	**Sg**	**13 57 30.0**	**+0.9**
RLS	**Riolos of Patr**	**0.45**	**220**	*e*PB	**Pg**	**13 57 23.0**	**-0.1**
RLS				*e*SB	**Sg**	**13 57 30.0**	**+0.9**
RLS	**Riolos of Patr**	**0.45**	**220**	*e*Pb	**Pg**	**13 57 23.0**	**-0.1**
RLS				*e*Sb	**Sg**	**13 57 30.0**	**+0.9**
EVR	**Evrytania**	**0.51**	**357**	*e*Pb	**Pg**	**13 57 24.2**	**-0.1**
EVR				*e*Sb	**Sg**	**13 57 31.7**	**+0.7**
EVR	**Evrytania**	**0.51**	**357**	*e*PB	**Pg**	**13 57 24.2**	**-0.1**
EVR				*e*SB	**Sg**	**13 57 31.7**	**+0.7**
EVR	**Evrytania**	**0.51**	**357**	*e*Pb	**Pg**	**13 57 24.2**	**-0.1**
EVR				*e*Sb	**Sg**	**13 57 31.7**	**+0.7**
DSF	**Desfina**	**0.54**	**89**	P	**Pg**	**13 57 25.6**	**+0.8**
DSF	**Desfina**	**0.54**	**89**	P	**Pg**	**13 57 25.6**	**+0.8**
AGG	**Agios Georgios**	**0.73**	**32**	*e*Pg	**Pg**	**13 57 27.6**	**-0.8**
AGG	**Agios Georgios**	**0.73**	**32**	P	**Pg**	**13 57 27.5**	**-0.9**
AGG				S	**Sg**	**13 57 38.3**	**+0.4**
AGG	**Agios Georgios**	**0.73**	**32**	*e*PG	**Pg**	**13 57 27.6**	**-0.8**
AGG	**Agios Georgios**	**0.73**	**32**	*e*Pg	**Pg**	**13 57 27.6**	**-0.8**
AGG				S	**Sg**	**13 57 38.3**	**+0.4**
LKR	**Lokris**	**0.94**	**74**	*e*Pn	**Pg**	**13 57 32.3**	**-0.2**
LKR	**Lokris**	**0.94**	**74**	P	**Pg**	**13 57 32.3**	**-0.2**
LKR				S	**Sg**	**13 57 46.5**	**+1.8**
LKR	**Lokris**	**0.94**	**74**	*e*PN	**Pg**	**13 57 32.3**	**-0.2**
LKR	**Lokris**	**0.94**	**74**	P	**Pg**	**13 57 32.3**	**-0.2**
LKR				S	**Sg**	**13 57 46.5**	**+1.8**
LTK	**Loutraki**	**0.97**	**113**	*e*PN	**Pg**	**13 57 33.0**	**+0.1**
LTK	**Loutraki**	**0.97**	**113**	*e*Pn	**Pg**	**13 57 33.0**	**+0.1**
VLS	**Valsamata**	**1.01**	**257**	*e*Pb	**Pg**	**13 57 32.2**	**-1.5**
VLS				*e*Sb	**Sg**	**13 57 48.1**	**+1.3**
VLS	**Valsamata**	**1.01**	**257**	P	**Pg**	**13 57 32.1**	**-1.6**
VLS	**Valsamata**	**1.01**	**257**	*e*PB	**Pg**	**13 57 32.2**	**-1.5**
VLS				*e*SB	**Sg**	**13 57 48.1**	**+1.3**
VLS	**Valsamata**	**1.01**	**257**	*e*Pb	**Pg**	**13 57 32.2**	**-1.5**
VLX	**Vlachokerasia**	**1.12**	**157**	*e*PB	**Pg**	**13 57 34.8**	**-1.0**
VLX	**Vlachokerasia**	**1.12**	**157**	*e*Pb	**Pg**	**13 57 34.8**	**-1.0**
THL	**Klokotos Trika**	**1.17**	**7**	P	**Pb**	**13 57 35.5**	**-1.3**
THL	**Klokotos Trika**	**1.17**	**7**	*e*PB	**Pb**	**13 57 36.3**	**-0.5**
THL	**Klokotos Trika**	**1.17**	**7**	P	**Pb**	**13 57 35.5**	**-1.3**
THL	**Klokotos Trika**	**1.17**	**7**	*e*Pb	**Pb**	**13 57 36.3**	**-0.5**
ITM	**Ithomi**	**1.22**	**177**	*e*Pg	**Pg**	**13 57 36.8**	**-1.0**
ITM	**Ithomi**	**1.22**	**177**	P	**Pg**	**13 57 37.0**	**-0.7**
ITM	**Ithomi**	**1.22**	**177**	*e*PG	**Pg**	**13 57 36.8**	**-1.0**
ITM	**Ithomi**	**1.22**	**177**	P	**Pg**	**13 57 37.0**	**-0.7**
NEO	**Neokhori**	**1.41**	**50**	*e*Pb	**Pb**	**13 57 40.3**	**-0.6**
NEO	**Neokhori**	**1.41**	**50**	*e*PB	**Pb**	**13 57 40.3**	**-0.6**
NEO	**Neokhori**	**1.41**	**50**	*e*Pb	**Pb**	**13 57 40.3**	**-0.6**
XOR	**Xorichti**	**1.43**	**47**	P	**Pn**	**13 57 40.6**	**+0.1**
XOR	**Xorichti**	**1.43**	**47**	P	**Pn**	**13 57 40.6**	**+0.1**
JAN	**Janina**	**1.47**	**329**	*e*Pg	**Pg**	**13 57 41.4**	**-1.1**
JAN	**Janina**	**1.47**	**329**	*e*PG	**Pg**	**13 57 41.4**	**-1.1**
JAN	**Janina**	**1.47**	**329**	*e*Pg	**Pg**	**13 57 41.4**	**-1.1**
PTL	**Penteli**	**1.63**	**102**	*e*Pg	**Pg**	**13 57 44.2**	**-1.5**
PTL	**Penteli**	**1.63**	**102**	*e*PG	**Pg**	**13 57 44.2**	**-1.5**
PTL	**Penteli**	**1.63**	**102**	*e*Pg	**Pg**	**13 57 44.2**	**-1.5**
VLY	**Voula,Athens**	**1.64**	**109**	*e*Pg	**Pg**	**13 57 43.8**	**-1.9**
VLY	**Voula,Athens**	**1.64**	**109**	*e*PG	**Pg**	**13 57 43.8**	**-1.9**
AOS	**Alonnisos**	**1.77**	**64**	P	**Pn**	**13 57 45.3**	**+0.1**
AOS	**Alonnisos**	**1.77**	**64**	P	**Pn**	**13 57 45.3**	**+0.1**
VLI	**Veliai**	**1.90**	**152**	*e*Pn	**Pn**	**13 57 47.9**	**+0.9**
VLI	**Veliai**	**1.90**	**152**	*e*PN	**Pn**	**13 57 47.9**	**+0.9**
VLI	**Veliai**	**1.90**	**152**	*e*Pn	**Pn**	**13 57 47.9**	**+0.9**
KZN	**Kozani**	**1.90**	**358**	*e*Pn	**Pn**	**13 57 47.8**	**+0.7**
KZN	**Kozani**	**1.90**	**358**	*e*PN	**Pn**	**13 57 47.8**	**+0.7**
KZN	**Kozani**	**1.90**	**358**	*e*Pn	**Pn**	**13 57 47.8**	**+0.7**
KYTH	**Kithira**	**2.32**	**155**	*e*Pn	**Pn**	**13 57 54.9**	**+2.0**
KYTH	**Kithira**	**2.32**	**155**	*e*PN	**Pn**	**13 57 54.9**	**+2.0**
KYTH	**Kithira**	**2.32**	**155**	*e*Pn	**Pn**	**13 57 54.9**	**+2.0**

*IDC **07** 14:04:13.9±1.2, 36°.46N×69°.77E, h0km, mb3.6/7, mb1 3.7/12, mb1mx3.6/30, mbtmp3.6/12, ML3.4/5, MS3.1/2, Ms1 3.1/2, ms1mx2.5/28, Error ellipse: s-maj=21.1km s-min=19.2km az=87.0*

*NEIC **07** 14:04:21.2±0.9, 36°.83N×69°.48E, h35km, mb3.3/1, Error ellipse: s-maj=15.3km s-min=11.2km az=132.0*
*ISCJB **07** 14:04:21.0±0.7, 36°.81N±0°.04×69°.64E±0°.08, h68km±9km, mb3.5/6, Error ellipse: s-maj=11.5km s-min=5.3km az=19.1*

ISC 07 14:04:22.5±0.6, 36°.78N±0°.04×69°.57E±0°.09, h70km±9km, n39, σ1.9±29/48, mb3.5/6, 1C, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.28**	**191**	*e*Pn	**Pn**	**14 04 56.3**	**-1.5**
KBL				*e*Sn	**Sn**	**14 05 25.6**	**+0.7**
CEP	**Cherat**	**3.52**	**146**	⇑P	**Pn**	**14 05 14.4**	**-0.3**
CEP				S	**Sn**	**14 05 58.0**	**+3.0**
CHCP	**Chirah Chowk**	**4.34**	**135**	P	**Pn**	**14 05 25.6**	**-0.3**
KSH	**Kashi**	**5.74**	**60**	Pn	**Pn**	**14 05 40.6**	**-4.3**
KSH				Sn	**Sn**	**14 06 41.9**	**-7.4**
KSH				smax			
	comp=N,61nm,0.5s						
KSH				smax			
	comp=E,41nm,0.4s						
AML	**Almayashu**	**6.22**	**30**	P	**Pn**	**14 05 52.5**	**+0.9**
	SNR=15						
AML	**Almayashu**	**6.22**	**30**	*e*Pn	**Pn**	**14 05 52.2**	**+0.7**
	comp=E,24nm,0.6s						
AML				*e*Sn	**Sn**	**14 07 01.8**	**+0.5**
UCH	**Uchtor**	**6.64**	**34**	P	**Pn**	**14 05 58.8**	**+1.5**
	SNR=8.8						
UCH	**Uchtor**	**6.64**	**34**	*e*Pn	**Pn**	**14 05 58.0**	**+0.6**
	comp=E,11nm,0.7s						
EKS2	**Erkin-Say**	**6.71**	**28**	*e*Pn	**Pn**	**14 05 58.2**	**0.0**
	comp=E,6.0nm,0.6s						
EKS2				*e*Sn	**Sn**	**14 07 15.3**	**+2.2**
KZA	**Kyzart**	**6.88**	**38**	P	**Pn**	**14 06 02.1**	**+1.6**
	SNR=6.2						
AAK	**Ala-Archa**	**6.97**	**31**	Pn	**Pn**	**14 06 01.5**	**-0.3**
	comp=E,0.0nm,0.3s,baz=195,slow=11,SNR=11						
AAK				Sn	**Sn**	**14 07 20.1**	**+0.6**
	comp=E,0.0nm,0.3s,baz=85,slow=20,SNR=4.3						
AAK				Lg		14 07 59.1	
	comp=E,0.0nm,0.3s,baz=180,slow=12,SNR=3.0						
AAK	**Ala-Archa**	**6.97**	**31**	Pn	**Pn**	**14 06 01.5**	**-0.3**
AAK				Sn	**Sn**	**14 07 20.1**	**+0.6**
AAK				Lg		14 07 59.1	
CHMS	**Chumysh**	**7.37**	**31**	P	**Pn**	**14 06 08.1**	**+0.8**
	SNR=5.2						
USP	**Ospenovka**	**7.50**	**29**	P	**Pn**	**14 06 09.3**	**+0.3**
	SNR=6.2						
TKM2	**Tokmak 2**	**7.68**	**35**	*e*Pn	**Pn**	**14 06 11.5**	**-0.1**
	comp=E,5.5nm,0.5s						
TKM2				*e*Sn	**Sn**	**14 07 35.3**	**-1.7**
MK31	**Makanchi Array**	**13.77**	**39**	*e*Pn	**Pn**	**14 07 34.6**	**+0.3**
MK31				Sn	**Sn**	**14 10 03.8**	**-1.6**
MKAR	**Makanchi Array**	**13.77**	**39**	Pn	**Pn**	**14 07 32.5**	**-1.7**
	comp=E,0.1nm,0.3s,baz=231,slow=15,SNR=2.8						
ABKAR	**Akbulak array**	**14.30**	**334**	*e*Pn	**Pn**	**14 07 38.3**	**-2.9**
	comp=E,4.5nm,0.6s						
ABKAR				*e*Sn	**Sn**	**14 10 13.2**	**-5.1**
KURK	**Kurchatov**	**15.37**	**22**	Pn	**Pn**	**14 07 52.2**	**-2.8**
	comp=E,0.0nm,0.3s,baz=211,slow=11,SNR=2.3						
KURK	**Kurchatov**	**15.37**	**22**	Pn	**Pn**	**14 07 52.4**	**-2.6**
	comp=E,1.7nm,0.8s						
AKTK	**Aktyubinsk**	**15.98**	**332**	Pn	**Pn**	**14 08 01.9**	**-0.8**
AKTO	**Aktyubinsk**	**15.98**	**332**	Pn	**Pn**	**14 08 01.9**	**-0.8**
	comp=E,0.4nm,0.3s,baz=131,slow=11,SNR=4.2						
DMN	**Daman**	**16.00**	**120**	*e*P	**Pn**	**14 07 57.1**	**-6.1**
	comp=E,17nm,0.8s						
KKN	**Kakani**	**16.01**	**120**	*e*P	**Pn**	**14 07 56.5**	**-6.8**
	comp=E,13nm,0.6s						
PKIN	**Phulchoki**	**16.22**	**120**	*e*P	**Pn**	**14 08 00.1**	**-5.8**
	comp=E,7.8nm,0.5s						
PKI	**Pulchoki**	**16.23**	**120**	*e*P	**Pn**	**14 08 00.1**	**-6.0**
	comp=E,9.6nm,0.6s						
BVAR	**Borovoye Array**	**16.25**	**2**	Pn	**Pn**	**14 08 05.0**	**-1.2**
	comp=E,0.4nm,0.3s,baz=165,slow=12,SNR=9.0						
GUN	**Gumba**	**16.36**	**118**	*e*P	**Pn**	**14 08 01.5**	**-6.1**
	comp=E,9.2nm,0.4s						
JIRN	**Jiri**	**16.73**	**118**	*e*P	**Pn**	**14 08 05.8**	**-6.5**
	comp=E,12nm,0.4s						
ZAA0	**Zalesovo Array**	**20.16**	**27**	*e*Pn	**P**	**14 08 50.6**	**-0.2**
ZALV	**Zalesovo Beam**	**20.16**	**27**	P	**P**	**14 08 50.8**	**-0.1**
	comp=E,1.0nm,0.4s,baz=223,slow=9.4,SNR=4.5						
SONM	**Songino Array**	**29.12**	**56**	P	**P**	**14 10 18.6**	**+2.1**
	comp=E,0.3nm,0.4s,mb3.3,baz=264,slow=8.5,SNR=2.5						
SONM	**Songino Array**	**29.12**	**56**	P	**P**	**14 10 18.6**	**+2.1**
AKASG	**Malin Array Be**	**31.88**	**309**	P	**P**	**14 10 44.3**	**+3.5**
	comp=E,1.3nm,0.6s,mb3.8,baz=81,slow=7.6,SNR=4.8						
FINES	**FINESS Array B**	**36.61**	**326**	P	**P**	**14 11 23.6**	**+2.0**
	comp=E,2.4nm,0.8s,mb4.2,baz=94,slow=12,SNR=4.3						
GERES	**GERESS Array B**	**41.83**	**305**	LR	LR	14 32 53.6	
	comp=E,28nm,20.0s,baz=72,slow=41						
NOA	**NORSAR Array B**	**43.47**	**323**	P	**P**	**14 12 20.4**	**+2.1**
	comp=E,0.8nm,0.8s,mb3.5,baz=292,slow=15,SNR=2.7						
NOA				LR	LR	14 33 39.3	
	comp=E,20nm,20.8s,baz=270,slow=40						
WRA	**Warramunga Arr**	**83.11**	**121**	P	**P**	**14 16 39.7**	**-1.0**
	comp=E,0.8nm,1.1s,mb3.5,baz=322,slow=5.0,SNR=6.4						
ASAR	**Alice Springs**	**85.36**	**124**	P	**P**	**14 16 51.6**	**-0.5**
	comp=E,0.1nm,0.5s,mb3.0,baz=310,slow=4.8,SNR=6.1						

MEX 07 14:32:57.6±0.8, 15°.34N×94°.73W, h19km±73km, MD3.9, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**1.40**	**288**	*i*P	Pn	14 33 19.1	-3.0
HUIG				*i*S	Sn	14 33 35.1	-4.9
PCIG		**1.50**	**76**	*i*P	Pn	14 33 20.8	-2.7
PCIG				*i*S	Sn	14 33 37.4	-5.1
TGIG		**2.10**	**47**	*i*P	Pn	14 33 28.7	-3.1
TGIG				*i*S	Sn	14 33 53.7	-3.7
SCX	**San Cristobal**	**2.44**	**55**	*i*P	Pn	14 33 33.4	-3.1
SCX				*i*S	Sn	14 34 02.2	-3.6
VHO	**Vista Hermosa**	**2.58**	**312**	*e*P	Pn	14 33 36.2	-2.2
VHO				*i*S	Sn	14 34 06.8	-2.5
CCIG	**Comitan**	**2.66**	**69**	*e*P	Pn	14 33 38.6	-0.9
CCIG				*i*S	Sn	14 34 09.3	-1.9
PNIG	**Pinotepa**	**3.43**	**288**	*i*P	Pn	14 33 47.6	-2.5
PNIG				*i*S	Sn	14 34 26.8	-3.5

CASC 07 14:45:42.8±1.6, 13°.13N×90°.00W, h25km±8km, MD3.6, ML3.4, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SBLS	**San Blas**	**0.79**	**27**	*e*P	Pb	14 45 57.8	-0.1
SBLS				*e*S	Sb	14 46 09.4	+1.1
SNJE	**San Jose**	**0.83**	**27**	*e*P	Pb	14 45 58.1	-0.5
RTR	**El Retiro**	**0.83**	**24**	*e*P	Pb	14 45 58.5	-0.2
BOQS	**Boqueron**	**0.92**	**49**	*e*P	Pb	14 45 60.0	-0.1
RBDL	**Robledal**	**1.02**	**17**	*e*P	Pn	14 46 01.5	-0.1
LFRS	**El Faro**	**1.03**	**62**	*e*P	Pn	14 46 01.2	-0.5
LFRS				*e*S	Sb	14 46 16.1	+0.9
LBRS	**Las Brisas**	**1.11**	**57**	*e*P	Pn	14 46 02.6	-0.1
SNVI	**San Vicente**	**1.22**	**67**	*e*P	Pn	14 46 04.1	-0.2
FUG	**Fuego 3**	**1.55**	**328**	*e*P	Pn	14 46 08.7	0.0
FG6		**1.66**	**329**	*e*P	Pn	14 46 10.4	+0.1
FG6				*e*S	Sn	14 46 31.1	+0.2
BLLM	**Bellamira**	**1.74**	**80**	*e*P	Pn	14 46 11.4	0.0
CAHU	**Cacacuatique**	**1.85**	**70**	*e*P	Pn	14 46 13.1	+0.2
TP2	**Tecpan 2**	**1.92**	**329**	*e*P	Pn	14 46 15.9	+2.0
MRL	**Marmol**	**1.95**	**9**	*e*P	Pn	14 46 16.4	+2.2
CNCH	**Conchagua**	**2.11**	**86**	*e*P	Pn	14 46 16.4	-0.1
CRIN	**San Cristobal**	**2.90**	**98**	*e*P	Pn	14 46 27.8	+0.4
CRIN				*e*S	Sn	14 47 02.3	+0.8
CRIN				AML	AML	14 47 14.7	
	comp=E,202nm,0.4s						
COPN	**Copaltepe**	**3.45**	**105**	*e*P	Pn	14 46 34.1	-0.9

IDC 07 14:49:31.1±2.3, 14°.50N×54°.64E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.5/27, mbtmp3.7/7, Error ellipse: s-maj=76.3km s-min=28.6km az=69.0, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKTO	**Aktyubinsk**	**35.94**	**4**	P	P	14 56 32.2	-0.9
	0.3nm,0.3s,baz=186,slow=14,SNR=2.0						
MKAR	**Makanchi Array**	**39.62**	**30**	P	P	14 57 04.6	+0.2
	0.3nm,0.2s,baz=211,slow=7.0,SNR=3.6						
BVAR	**Borovoye Array**	**40.41**	**15**	P	P	14 57 11.4	+0.5
	0.6nm,0.4s,baz=162,slow=40,SNR=3.3						
ZALV	**Zalesovo Beam**	**45.92**	**24**	P	P	14 57 55.2	-0.2
	0.7nm,0.5s,baz=240,slow=5.1,SNR=4.2						
FINES	**FINESS Array B**	**51.17**	**343**	P	P	14 58 35.9	+0.1
	1.2nm,0.6s,baz=151,slow=8.7,SNR=6.2						
WRA	**Warramunga Arr**	**85.49**	**112**	P	P	15 02 11.1	-0.4
	0.3nm,0.9s,baz=306,slow=4.1,SNR=3.2						
ASAR	**Alice Springs**	**86.21**	**115**	P	P	15 02 15.4	+0.5
	0.4nm,0.7s,baz=298,slow=5.3,SNR=5.2						

*ISK **07** 14:58:47.5, 39°.22N×35°.23E, h9km, MD2.9*
*CSEM **07** 14:58:48.9±0.3, 39°.27N×35°.25E, h8km, MD3.0, Error ellipse: s-maj=7.4km s-min=5.2km az=108.0*
*ISCJB **07** 14:58:48.3±1.1, 39°.24N±0°.05×35°.27E±0°.07, h7km±10km, Error ellipse: s-maj=8.9km s-min=8.1km az=137.8*
*DDA **07** 14:58:52.6, 39°.13N×34°.65E, h3km, Md3.0*

ISC 07 14:58:49.0±0.9, 39°.25N±0°.04×35°.29E±0°.07, h11km±9km, n17, σ0.9±97/26, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOZ	**Yozgat**	**0.39**	**4**	*e*PG	**Pg**	**14 58 56.2**	**-0.4**
YOZ				*e*SG	**Sg**	**14 59 02.5**	**+0.7**
YOZ	**Yozgat**	**0.39**	**4**	*e*Pg	**Pg**	**14 58 56.2**	**-0.4**
YOZ				*e*Sg	**Sg**	**14 59 02.5**	**+0.7**
AVNT	**Avonos**	**0.58**	**215**	*i*P	**Pg**	**14 59 00.1**	**-0.1**
AVNT				*i*S	**Sg**	**14 59 09.5**	**+1.6**
AVNT	**Avonos**	**0.58**	**215**	*i*P	**Pg**	**14 59 00.1**	**-0.1**
AVNT				*i*S	**Sg**	**14 59 09.5**	**+1.7**
CDAG	**Cicekdag**	**0.80**	**298**	*i*P	**Pg**	**14 59 03.0**	**-1.4**
CDAG				*i*S	**Sg**	**14 59 14.3**	**-0.5**
CDAG	**Cicekdag**	**0.80**	**298**	*i*P	**Pg**	**14 59 03.0**	**-1.4**
CDAG				*i*S	**Sg**	**14 59 14.3**	**-0.5**
CORM	**Corum**	**1.05**	**332**	*e*PG	**Pg**	**14 59 08.3**	**-0.9**
CORM				*e*SG	**Sg**	**14 59 23.6**	**+0.6**
CORM	**Corum**	**1.05**	**332**	*e*Pg	**Pg**	**14 59 08.3**	**-0.9**
CORM				*e*Sg	**Sg**	**14 59 23.6**	**+0.7**
SARI	**SarD1z-Kayseri**	**1.24**	**117**	*e*PN	**Pn**	**14 59 11.5**	**-0.8**
SVSK	**Karacayir**	**1.48**	**63**	*e*PN	**Pn**	**14 59 15.9**	**+0.3**
SVSK	**Karacayir**	**1.48**	**63**	*e*Pn	**Pn**	**14 59 15.9**	**+0.3**
SULT	**Sultanhani-AKS**	**1.74**	**233**	*e*PN	**Pn**	**14 59 17.8**	**-1.4**
SULT	**Sultanhani-AKS**	**1.74**	**233**	*e*Pn	**Pn**	**14 59 17.8**	**-1.3**
ELDT	**Eldivan**	**1.89**	**311**	*i*P	**Pn**	**14 59 23.0**	**+1.8**
ELDT				*i*S	**Sn**	**14 59 50.0**	**+5.0**
ELDT	**Eldivan**	**1.89**	**311**	*i*P	**Pn**	**14 59 23.0**	**+1.8**
DIKM	**Dikmen**	**2.39**	**360**	*e*PN	**Pn**	**14 59 28.6**	**+0.4**
DIKM	**Dikmen**	**2.39**	**360**	*e*Pn	**Pn**	**14 59 28.6**	**+0.5**

*NEIC **07** 15:50:38.2, 19°.14N×67°.66W, h5km, MD3.4(RSPR), After RSPR.*

RSPR 07 15:50:38.2, 19°.14N×67°.66W, h5km±3km, MD3.4/14, MD3.4/14, 12C-3D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.85**	**142**	⇓*e*P	Pg	15 50 52.2	-2.3
AGPR				*e*S	Sg	15 51 03.8	-1.7
AGP	**Aguadilla**	**0.88**	**146**	*e*Pb	Pb	15 50 50.3	-5.6
AGP				*e*Sb	Sb	15 51 02.9	-5.1
PCDR	**Punta Cana, DR**	**0.92**	**228**	⇑*e*P	Pg	15 50 51.7	-4.2
PCDR	**Punta Cana, DR**	**0.92**	**228**	*e*S	Sg	15 51 02.5	-5.3
MPR	**Mayaguez**	**1.05**	**152**	*e*Pb	Pb	15 50 54.8	-4.0
MPR				*e*Sb	Sb	15 51 08.1	-4.7
IMO	**Isla Mona**	**1.05**	**193**	⇓*e*P	Pg	15 50 53.7	-4.6
LSP	**Las Mesas**	**1.10**	**150**	*e*Pb	Pb	15 50 56.0	-3.7
LSP				*e*Sn	Sn	15 51 10.6	-5.3
LRS	**Lares**	**1.15**	**137**	⇓*i*P	Pg	15 50 57.2	-3.0
LRS				*e*S	Sg	15 51 12.7	-2.4
AOPR	**Arecibo Observ**	**1.

BBAL			*i* S	Sg	16 24 46.2	+1.5
CDAG	**Cicekdag**	**1.44 130**	*i* P	Pn	16 24 37.1	+0.1
CDAG			*i* S	Sn	16 24 55.2	-0.3
CDAG	**Cicekdag**	**1.44 130**	*i* P	Pn	16 24 37.1	+0.2
CDAG			*i* S	Sn	16 24 55.2	-0.3

NEIC ***07*** *16:25:25.0, 36°.96N×29°.21E, h5km, MD3.7(ISK), After ISK.*
ISK ***07*** *16:25:25.8, 36°.96N×29°.21E, h5km, ML3.6*
IDC ***07*** *16:25:26.6±1.0, 36°.95N×29°.17E, h0km, mb3.8/6, mb1 3.9/12, mb1mx3.7/31, mbtmp3.8/12, ML3.7/5, MS2.8/8, Ms1 2.8/8, ms1mx2.6/41, Error ellipse: s-maj=19.0km s-min=16.0km az=147.0*
DDA ***07*** *16:25:26.6, 37°.01N×29°.23E, h26km±1km, Md3.6*
ISCJB ***07*** *16:25:27.1±0.4, 36°.97N±0°.02×29°.22E±0°.02, h6km±3km, mb3.7/6, MS2.9/4, Error ellipse: s-maj=3.0km s-min=2.6km az=148.0*
CSEM ***07*** *16:25:27.5±0.1, 36°.97N×29°.21E, h2km, ML3.6, Error ellipse: s-maj=2.7km s-min=2.4km az=162.0*
THE ***07*** *16:25:28.2, 36°.88N×29°.28E, h2km±4km, ML4.1/1, Error ellipse: s-maj=5.5km s-min=2.0km az=108.0*
HLW ***07*** *16:25:29.9, 36°.93N×29°.19E, h27km±24km, Md3.7, Ml3.9*
ISC 07 16:25:27.5±0.4, 36°.98N±0°.02×29°.21E±0°.02, h1km±3km, n154, σ0s95/184, mb3.8/6, MS2.9/4, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.29**	**53**	*e*PG	**Pg**	**16 25 32.2**	**-0.9**
GLHS				*e*SG	**Sg**	**16 25 38.3**	**+1.4**
GLHS	**Glhisar (BURDU**	**0.29**	**53**	*e*Pg	**Pg**	**16 25 32.3**	**-0.8**
GLHS				*e*Sg	**Sg**	**16 25 38.3**	**+1.3**
FETY	**Fethiye**	**0.36**	**196**	*e*PG	**Pg**	**16 25 33.4**	**-0.9**
FETY				*e*SG	**Sg**	**16 25 39.4**	**+0.5**
FETY	**Fethiye**	**0.36**	**196**	*e*Pg	**Pg**	**16 25 33.4**	**-0.9**
FETY				*e*Sg	**Sg**	**16 25 39.4**	**+0.5**
GOLH	**Golhisar**	**0.38**	**48**	*i* P	**Pg**	**16 25 34.2**	**-0.7**
GOLH				*i* S	**Sg**	**16 25 41.3**	**+1.4**
GOLH	**Golhisar**	**0.38**	**48**	*i* P	**Pg**	**16 25 34.2**	**-0.7**
GOLH				*i* S	**Sg**	**16 25 41.3**	**+1.4**
ELL	**Elmali**	**0.61**	**112**	*e*PG	**Pg**	**16 25 38.0**	**-1.2**
ELL	**Elmali**	**0.61**	**112**	*e*Pg	**Pg**	**16 25 38.0**	**-1.2**
DNZL	**Cakiroluk**	**0.72**	**350**	*i* P	**Pg**	**16 25 39.9**	**-1.5**
DNZL				*i* S	**Sg**	**16 25 51.6**	**+0.9**
DNZL	**Cakiroluk**	**0.72**	**350**	*i* P	**Pg**	**16 25 39.9**	**-1.4**
DNZL				*i* S	**Sg**	**16 25 51.6**	**+0.9**
YER	**Yerkesik**	**0.75**	**282**	*e*PG	**Pg**	**16 25 41.9**	**-0.1**
YER				*e*SG	**Sg**	**16 25 53.0**	**+1.2**
YER	**Yerkesik**	**0.75**	**282**	*e*Pg	**Pg**	**16 25 41.9**	**-0.1**
YER				*e*Sg	**Sg**	**16 25 53.0**	**+1.3**
DENT	**Denizli**	**0.79**	**350**	*e*PG	**Pg**	**16 25 41.8**	**-0.8**
DENT	**Denizli**	**0.79**	**350**	*e*Pg	**Pg**	**16 25 41.8**	**-0.8**
AKAS	**Kas**	**0.81**	**156**	*i* P	**Pg**	**16 25 42.8**	**-0.2**
AKAS				*i* S	**Sg**	**16 25 55.0**	**+1.5**
AKAS	**Kas**	**0.81**	**156**	*i* P	**Pg**	**16 25 42.8**	**-0.2**
AKAS				*i* S	**Sg**	**16 25 55.0**	**+1.5**
KSL	**Kastellorizon**	**0.88**	**160**	*e*P	**Pg**	**16 25 44.5**	**+0.1**
ARG	**Arkhangelos**	**1.15**	**229**	P	**Pg**	**16 25 48.3**	**-1.3**
ARG				S	**Sg**	**16 26 05.4**	**+0.8**
ARG	**Arkhangelos**	**1.15**	**229**	*e*P	**Pg**	**16 25 47.7**	**-1.9**
ARG	**Arkhangelos**	**1.15**	**229**	P	**Pg**	**16 25 48.3**	**-1.3**
ARG				S	**Sg**	**16 26 05.4**	**+0.8**
ANTB	**Antalya**	**1.16**	**93**	*e*PN	**Pn**	**16 25 49.3**	**-1.6**
ANTB	**Antalya**	**1.16**	**93**	*e*Pn	**Pn**	**16 25 49.3**	**-1.6**
MLSB	**Milas**	**1.19**	**286**	*e*PN	**Pn**	**16 25 49.7**	**-1.5**
MLSB	**Milas**	**1.19**	**286**	*e*Pn	**Pn**	**16 25 49.7**	**-1.5**
BCK	**Bucak**	**1.21**	**66**	*e*PN	**Pn**	**16 25 50.3**	**-1.2**
BCK	**Bucak**	**1.21**	**66**	*e*Pn	**Pn**	**16 25 50.3**	**-1.2**
AYDN	**Tasoluk**	**1.26**	**303**	*i* P	**Pg**	**16 25 50.8**	**-0.8**
AYDN				*i* S	**Sg**	**16 26 07.8**	**-0.1**
AYDN	**Tasoluk**	**1.26**	**303**	*i* P	**Pg**	**16 25 50.8**	**-0.8**
AYDN				*i* S	**Sg**	**16 26 07.8**	**-0.1**
DAT	**Datca**	**1.33**	**260**	*e*PN	**Pn**	**16 25 52.3**	**-0.9**
DAT	**Datca**	**1.33**	**260**	*e*Pn	**Pn**	**16 25 52.3**	**-0.9**
ISP	**Isparta**	**1.35**	**51**	*e*PN	**Pn**	**16 25 53.2**	**-0.2**
ISP	**Isparta**	**1.35**	**51**	*e*Pn	**Pn**	**16 25 52.2**	**-1.2**
ISP	**Isparta**	**1.35**	**51**	P	**Pg**	**16 25 52.7**	**-0.6**
ISP	**Isparta**	**1.35**	**51**	P	**Pg**	**16 25 52.7**	**-0.6**
ISP	**Isparta**	**1.35**	**51**	*e*Pn	**Pn**	**16 25 53.2**	**-0.2**
BDRM	**Kayabasi**	**1.41**	**274**	*i* P	**Pn**	**16 25 53.4**	**-0.9**
BDRM				*i* S	**Sg**	**16 26 12.4**	**-0.5**
BDRM	**Kayabasi**	**1.41**	**274**	*i* P	**Pn**	**16 25 53.4**	**-1.0**
BDRM				*i* S	**Sg**	**16 26 12.4**	**-0.5**
SUTC	**Sutluce-Ispart**	**1.52**	**70**	*e*PN	**Pn**	**16 25 56.2**	**+0.4**
SUTC	**Sutluce-Ispart**	**1.52**	**70**	*e*Pn	**Pn**	**16 25 56.2**	**+0.4**
KULA	**Kula-Manisa**	**1.59**	**344**	*e*PN	**Pn**	**16 25 56.1**	**-0.7**
KULA	**Kula-Manisa**	**1.59**	**344**	*e*Pn	**Pn**	**16 25 56.1**	**-0.8**
NIS1	**Nisyros Isl.**	**1.67**	**258**	P	**Pn**	**16 25 58.6**	**+0.7**
NIS1				S	**Sn**	**16 26 20.3**	**+0.3**
NIS1	**Nisyros Isl.**	**1.67**	**258**	P	**Pn**	**16 25 58.6**	**+0.7**
NIS1				S	**Sn**	**16 26 20.3**	**+0.3**
GCAM	**G?zelcaml?**	**1.73**	**295**	*i* P	**Pn**	**16 25 58.2**	**-0.5**
GCAM				*i* S	**Sn**	**16 26 20.0**	**-1.4**
GCAM	**G?zelcaml?**	**1.73**	**295**	*i* P	**Pn**	**16 25 58.2**	**-0.5**
GCAM				*i* S	**Sn**	**16 26 20.0**	**-1.4**
SHUT	**Suhut-Afyon**	**1.90**	**34**	*e*PN	**Pn**	**16 26 00.8**	**-0.3**
SHUT	**Suhut-Afyon**	**1.90**	**34**	*e*Pn	**Pn**	**16 26 00.8**	**-0.3**
SMG	**Samos**	**2.02**	**292**	*e*P	**Pn**	**16 26 02.0**	**-0.8**
IZM	**Izmir**	**2.09**	**313**	*e*PN	**Pn**	**16 26 03.6**	**-0.1**
DEMI	**Demirci**	**2.10**	**350**	*i* P	**Pn**	**16 26 02.7**	**-1.1**
DEMI				*i* S	**Sn**	**16 26 29.1**	**-1.4**
DEMI	**Demirci**	**2.10**	**350**	*i* P	**Pn**	**16 26 02.7**	**-1.1**
DEMI				*i* S	**Sn**	**16 26 29.1**	**-1.4**
KARP	**Karpathos**	**2.18**	**230**	*e*P	**Pn**	**16 26 05.3**	**+0.3**
AKHS	**Akhisar**	**2.19**	**330**	*i* P	**Pn**	**16 26 04.1**	**-1.0**
AKHS				*i* S	**Sn**	**16 26 31.8**	**-1.1**
AKHS	**Akhisar**	**2.19**	**330**	*i* P	**Pn**	**16 26 04.1**	**-1.0**
AKHS				*i* S	**Sn**	**16 26 31.8**	**-1.1**
ALT	**Altintas**	**2.19**	**19**	*e*PN	**Pn**	**16 26 05.0**	**-0.1**
ALT	**Altintas**	**2.19**	**19**	*e*Pn	**Pn**	**16 26 05.1**	**0.0**
BLCB	**Balcova**	**2.22**	**310**	*e*PN	**Pn**	**16 26 05.3**	**-0.1**
BLCB	**Balcova**	**2.22**	**310**	P	**Pn**	**16 26 05.0**	**-0.4**
BLCB	**Balcova**	**2.22**	**310**	P	**Pn**	**16 26 05.0**	**-0.4**
BLCB	**Balcova**	**2.22**	**310**	*e*Pn	**Pn**	**16 26 05.3**	**-0.1**
HDMB	**Hadim**	**2.63**	**89**	*e*PN	**Pn**	**16 26 11.2**	**+0.1**
HDMB	**Hadim**	**2.63**	**89**	*e*Pn	**Pn**	**16 26 11.2**	**+0.1**
DST	**Dursunbey**	**2.66**	**350**	*e*PN	**Pn**	**16 26 11.8**	**+0.2**
DST	**Dursunbey**	**2.66**	**350**	*e*Pn	**Pn**	**16 26 11.8**	**+0.3**
KONT	**Konya--Tatoy**	**2.69**	**68**	*e*PN	**Pn**	**16 26 12.0**	**+0.1**
KONT	**Konya--Tatoy**	**2.69**	**68**	*e*Pn	**Pn**	**16 26 12.0**	**+0.1**
LADK	**Ladik-KONYA**	**2.79**	**63**	*e*PN	**Pn**	**16 26 13.5**	**+0.2**
LADK	**Ladik-KONYA**	**2.79**	**63**	*e*Pn	**Pn**	**16 26 13.5**	**+0.2**
KIZT	**Kizilcal**	**2.84**	**47**	*e*PN	**Pn**	**16 26 14.5**	**+0.5**
KIZT	**Kizilcal**	**2.84**	**47**	*e*Pn	**Pn**	**16 26 14.5**	**+0.5**
ESKT	**Eskisehir**	**2.85**	**27**	*e*PN	**Pn**	**16 26 14.6**	**+0.5**
ESKT	**Eskisehir**	**2.85**	**27**	*e*Pn	**Pn**	**16 26 14.6**	**+0.5**
BALB	**Balikesir**	**2.85**	**339**	*e*PN	**Pn**	**16 26 14.6**	**+0.4**
BALB	**Balikesir**	**2.85**	**339**	*e*Pn	**Pn**	**16 26 14.6**	**+0.4**
CHOS	**Chios island**	**2.87**	**300**	P	**Pn**	**16 26 14.8**	**+0.4**
CHOS				S	**Sn**	**16 26 50.7**	**+1.2**
CHOS	**Chios island**	**2.87**	**300**	*e*P	**Pn**	**16 26 14.4**	**0.0**
CHOS	**Chios island**	**2.87**	**300**	P	**Pn**	**16 26 14.8**	**+0.4**
CHOS				S	**Sn**	**16 26 50.7**	**+1.2**
APE	**Apeiranthos**	**2.94**	**273**	P	**Pn**	**16 26 15.3**	**-0.1**
APE	**Apeiranthos**	**2.94**	**273**	P	**Pn**	**16 26 15.3**	**-0.1**
BALY	**Balya**	**3.03**	**336**	*i* P	**Pn**	**16 26 15.7**	**-0.8**
BALY				*i* S	**Sn**	**16 26 49.7**	**-3.7**
BALY	**Balya**	**3.03**	**336**	*i* P	**Pn**	**16 26 15.7**	**-0.9**
ZKR	**Zakros**	**3.05**	**233**	P	**Pn**	**16 26 17.9**	**+1.0**
ZKR	**Zakros**	**3.05**	**233**	*e*P	**Pn**	**16 26 18.3**	**+1.4**
ZKR	**Zakros**	**3.05**	**233**	P	**Pn**	**16 26 17.9**	**+1.0**
SVRH	**Sivrihisar-ESK**	**3.07**	**36**	*e*PN	**Pn**	**16 26 17.5**	**+0.4**
SVRH	**Sivrihisar-ESK**	**3.07**	**36**	*e*Pn	**Pn**	**16 26 17.5**	**+0.4**
THR1	**Thera Island**	**3.07**	**260**	P	**Pn**	**16 26 16.8**	**-0.4**
THR1	**Thera Island**	**3.07**	**260**	P	**Pn**	**16 26 16.8**	**-0.4**
GEMT	**Gemlik**	**3.45**	**360**	*e*PN	**Pn**	**16 26 23.2**	**+0.8**
GEMT	**Gemlik**	**3.45**	**360**	*e*Pn	**Pn**	**16 26 23.2**	**+0.8**
ADVT	**Abdulvahap**	**3.48**	**7**	*e*PN	**Pn**	**16 26 23.7**	**+1.0**
ADVT	**Abdulvahap**	**3.48**	**7**	*e*Pn	**Pn**	**16 26 23.7**	**+1.0**
LEF	**Lefka**	**3.52**	**121**	*e*PN	**Pn**	**16 26 23.3**	**0.0**
LEF	**Lefka**	**3.52**	**121**	*e*Pn	**Pn**	**16 26 23.3**	**0.0**
BNT	**Bandirma**	**3.52**	**344**	*e*PN	**Pn**	**16 26 24.0**	**+0.6**
BNT	**Bandirma**	**3.52**	**344**	*e*Pn	**Pn**	**16 26 24.0**	**+0.7**
LAST	**Lasithi**	**3.52**	**240**	P	**Pn**	**16 26 24.1**	**+0.7**
LAST	**Lasithi**	**3.52**	**240**	*e*P	**Pn**	**16 26 23.8**	**+0.4**
LAST	**Lasithi**	**3.52**	**240**	P	**Pn**	**16 26 24.1**	**+0.7**
XRY	**Khrisi**	**3.54**	**235**	*e*P	**Pn**	**16 26 24.0**	**+0.4**
YLV	**Yalova**	**3.59**	**2**	*e*PN	**Pn**	**16 26 25.3**	**+1.1**
YLV	**Yalova**	**3.59**	**2**	*e*Pn	**Pn**	**16 26 25.3**	**+1.1**
ARMT	**Armutlu**	**3.59**	**356**	*e*PN	**Pn**	**16 26 25.2**	**+0.9**
ARMT	**Armutlu**	**3.59**	**356**	*e*Pn	**Pn**	**16 26 25.2**	**+0.9**
GULT	**Gulveren**	**3.60**	**16**	*e*PN	**Pn**	**16 26 25.4**	**+1.0**
GULT	**Gulveren**	**3.60**	**16**	*e*Pn	**Pn**	**16 26 25.4**	**+1.0**
SULT	**Sultanhani-AKS**	**3.63**	**69**	*e*PN	**Pn**	**16 26 25.6**	**+0.6**
SULT	**Sultanhani-AKS**	**3.63**	**69**	*e*Pn	**Pn**	**16 26 25.6**	**+0.7**
IKL	**Isikli**	**3.68**	**100**	*e*PN	**Pn**	**16 26 26.2**	**+0.7**
IKL	**Isikli**	**3.68**	**100**	*e*Pn	**Pn**	**16 26 26.2**	**+0.7**
MDU	**Mudurnu**	**3.82**	**24**	*e*PN	**Pn**	**16 26 28.4**	**+1.0**
MDU	**Mudurnu**	**3.82**	**24**	*e*Pn	**Pn**	**16 26 28.4**	**+0.9**
IDI	**Anoyia**	**3.88**	**246**	Pn	**Pn**	**16 26 28.8**	**+0.5**
	4.0nm,0.3s,baz=60,slow=15,SNR=28						
IDI				Sn	**Sn**	**16 27 15.6**	**+1.1**
	7.0nm,0.3s,baz=60,slow=1.4,SNR=12						
IDI				LR	LR	16 28 14.2	
	comp=Z,186nm,18.8s,baz=61,slow=44						
IDI	**Anoyia**	**3.88**	**246**	Pn	**Pn**	**16 26 28.8**	**+0.5**
IDI				Sn	**Sn**	**16 27 15.6**	**+1.1**
LPK	**Lapseki**	**3.89**	**331**	*e*PN	**Pn**	**16 26 29.4**	**+1.0**
LPK	**Lapseki**	**3.89**	**331**	*e*Pn	**Pn**	**16 26 29.4**	**+0.9**
RKY	**Sarkoy-Tekirda**	**4.03**	**337**	*e*PN	**Pn**	**16 26 31.3**	**+1.0**
RKY	**Sarkoy-Tekirda**	**4.03**	**337**	*e*Pn	**Pn**	**16 26 31.3**	**+1.0**
MFT	**Murefte**	**4.09**	**339**	*e*PN	**Pn**	**16 26 32.2**	**+1.1**
MFT	**Murefte**	**4.09**	**339**	*e*Pn	**Pn**	**16 26 32.2**	**+1.0**
MERS	**Mersin**	**4.26**	**90**	*e*PN	**Pn**	**16 26 34.5**	**+0.9**
MERS	**Mersin**	**4.26**	**90**	*e*Pn	**Pn**	**16 26 34.5**	**+1.0**
LIA	**Limnos Island**	**4.30**	**314**	*e*P	**Pn**	**16 26 32.7**	**-1.3**
BR131	**Keskin Array S**	**4.43**	**50**	*e*PN	**Pn**	**16 26 35.9**	**0.0**
BR131	**Keskin Array S**	**4.43**	**50**	*e*Pn	**Pn**	**16 26 35.9**	**0.0**
BRTR	**Keskin Array B**	**4.43**	**50**	Pn	**Pn**	**16 26 36.4**	**+0.4**
	1.0nm,0.3s,baz=232,slow=14,SNR=26						
BRTR				Sn	**Sn**	**16 27 30.9**	**+2.7**
	0.6nm,0.3s,baz=224,slow=25,SNR=6.0						
BRTR	**Keskin Array B**	**4.43**	**50**	Pn	**Pn**	**16 26 36.3**	**+0.4**
KARN	**Karanos**	**4.56**	**251**	P	**Pn**	**16 26 39.3**	**+1.7**
KARN	**Karanos**	**4.56**	**251**	P	**Pn**	**16 26 39.3**	**+1.7**
KYTH	**Kithira**	**5.01**	**264**	*e*P	**Pn**	**16 26 45.9**	**+2.1**
VLI	**Veliai**	**5.03**	**269**	*e*P	**Pn**	**16 26 46.0**	**+1.8**
PYL	**PYLOS**	**5.98**	**271**	*e*P	**Pn**	**16 27 05.2**	**+8.1**
MMAI	**Mount Meron Ar**	**6.44**	**126**	Pn	**Pn**	**16 27 02.7**	**-0.8**
	4.6nm,0.3s,baz=312,slow=12,SNR=19						
AMAG	**Maghara**	**7.14**	**151**	P	**Pn**	**16 27 12.1**	**-1.0**
	baz=150						
AMAG	**Maghara**	**7.14**	**151**	P	**Pn**	**16 27 12.1**	**-1.0**
SUZ		**7.74**	**156**	P	**Pn**	**16 27 21.3**	**0.0**
	baz=155						
SUZ		**7.74**	**156**	P	**Pn**	**16 27 21.3**	**0.0**
SWA2		**8.33**	**203**	P	**Pn**	**16 27 28.9**	**-0.5**
	baz=204						
SWA2				S	**Sn**	**16 28 53.4**	**-11**
	baz=204						
SWA2				AMP		16 29 00.0	
	comp=E,40μm,0.4s,logA/T=5.0,baz=204						
SWA2		**8.33**	**203**	P	**Pn**	**16 27 28.9**	**-0.5**
EIL	**Elat**	**8.73**	**145**	Pn	**Pn**	**16 27 33.6**	**-1.3**
	comp=E,1.3nm,0.3s,baz=360,slow=9.6,SNR=12						
EIL				LR	LR	16 31 52.6	
	comp=E,32nm,18.6s,baz=268,slow=44						
EIL	**Elat**	**8.73**	**145**	Pn	**Pn**	**16 27 33.6**	**-1.3**
MLR	**Muntele Rosu**	**8.85**	**345**	Pn	**Pn**	**16 27 37.6**	**+1.1**
	comp=E,0.3nm,0.3s,baz=195,slow=5.7,SNR=13						
VRAC	**Vranov**	**15.35**	**327**	LR	LR	16 34 40.7	
	comp=E,23nm,18.4s,baz=148,slow=36						
GERES	**GERESS Array B**	**16.38**	**321**	Pn	**Pn**	**16 29 19.7**	**+1.1**
	baz=136,slow=17,SNR=2.3						
GERES				LR	LR	16 35 12.2	
	comp=E,14nm,21.4s,baz=116,slow=36						
FINES	**FINESS Array B**	**24.57**	**356**	P	**P**	**16 30 47.7**	**-1.0**
	comp=E,1.4nm,0.8s,mb3.7,baz=155,slow=7.6,SNR=3.4						
AKTK	**Aktyubinsk**	**24.61**	**48**	P	**P**	**16 30 47.8**	**-1.3**
AKTK				LR	LR	16 43 28.1	
AKTO	**Aktyubinsk**	**24.61**	**48**	P	**P**	**16 30 47.8**	**-1.3**
	comp=E,1.8nm,0.9s,mb3.8,baz=246,slow=9.0,SNR=5.9						
AKTO				LR	LR	16 43 28.1	
	comp=E,25nm,20.3s,MS2.7,baz=275,slow=44						
HFS	**Hagfors**	**25.21**	**342**	P	**P**	**16 30 53.5**	**-1.1**
	comp=E,1.2nm,0.7s,mb3.7,baz=217,slow=7.2,SNR=4.3						
HFS				LR	LR	16 42 10.1	
	comp=E,37nm,19.3s,MS2.9,baz=137,slow=40						
NOA	**NORSAR Array B**	**26.63**	**340**	LR	LR	16 43 12.2	
	comp=E,18nm,21.1s,MS2.6,baz=330,slow=40						
TORD	**Torodi Ar. Bea**	**34.18**	**233**	P	**P**	**16 32 12.8**	**-1.7**
	comp=E,2.0nm,0.5s,mb4.3,baz=33,slow=8.6,SNR=24						
KURK	**Kurchatov**	**37.48**	**53**	P	**P**	**16 32 42.0**	**-0.5**
	comp=E,0.3nm,0.3s,mb3.6,baz=275,slow=8.3,SNR=4.3						
MKAR	**Makanchi Array**	**40.04**	**59**	P	**P**	**16 33 04.2**	**+0.2**
	comp=E,0.4nm,0.2s,mb3.6,baz=336,slow=2.7,SNR=6.4						
MKAR	**Makanchi Array**	**40.04**	**59**	P	**P**	**16 33 04.2**	**+0.2**
KSRS	**Korea Array**	**74.57**	**55**	LR	LR	17 15 01.5	
	comp=E,14nm,19.2s,MS3.3,baz=78,slow=40						

PRE 07 16:30:39.6±0.8, 26°.84S×26°.81E, h2km, ML2.1, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOAB	**Moab Khotsong**	**0.15**	**184**	*e*P	Pg	16 30 42.8	+0.4
MOAB				*e*S	Sg	16 30 44.0	-0.4
MOAB				AML	AML	16 30 44.1	
	comp=Z,622nm,0.2s						
TAUL	**Tau Lekoa**	**0.24**	**229**	*e*P	Pg	16 30 44.2	0.0
TAUL				*e*S	Sg	16 30 47.8	+0.5
TAUL				AML	AML	16 30 48.7	
	comp=Z,319nm,0.1s						
PRYS	**Parys**	**0.50**	**100**	*e*P	Pg	16 30 49.3	+0.1
PRYS				*e*S	Sg	16 30 56.3	+0.6
PRYS				AML	AML	16 31 00.9	
	comp=Z,68nm,0.5s						
KSR	**Koster**	**0.99**	**5**	*e*P	Pg	16 30 58.3	-0.2
KSR				*e*S	Sg	16 31 12.3	+1.0
KSR				AML	AML	16 31 18.8	
	comp=Z,80nm,0.1s						
SWZ	**Schweizer**	**1.36**	**255**	*e*P	Pn	16 31 05.9	+0.3
SWZ				*e*S	Sg	16 31 24.4	+1.0
SWZ				AML	AML	16 31 26.3	
	comp=Z,39nm,0.2s						
SEK	**Senekal**	**1.65**	**154**	*e*P	Pn	16 31 07.9	-1.7
SEK				*e*S	Sn	16 31 29.8	-1.5
SEK				AML	AML	16 31 31.4	
	comp=Z,17nm,0.5s						
SLR	**Silverton**	**1.72**	**51**	*e*P	Pn	16 31 10.2	-0.3
SLR				*e*S	Sn	16 31 34.4	+1.3
SLR				AML	AML	16 31 37.1	
	comp=Z,46nm,0.4s						
POGA	**Pongola**	**4.31**	**98**	*e*P	Pn	16 31 46.9	+0.7
POGA				*e*S	Sn	16 32 38.1	+1.0
POGA				AML	AML	16 32 57.5	
	comp=Z,3.4nm,0.7s						
PKA	**Prieska**	**4.55**	**231**	*e*P	Pn	16 31 46.3	-3.2
PKA				*e*S	Sn	16 32 36.6	-6.4
PKA				AML	AML	16 33 02.2	
	comp=Z,3.9nm,0.8s						
MOPA	**Mopani**	**5.31**	**52**	*e*P	Pn	16 31 59.5	-0.5
MOPA				*e*S	Sn	16 32 59.6	-2.1
MOPA				AML	AML	16 33 01.3	
	comp=Z,9.4nm,0.3s						

ISCJB ***07*** *16:37:21.7±0.4, 23°.97N±0°.02×121°.79E±0°.03, h22km±4km, Error ellipse: s-maj=4.7km s-min=2.5km az=37.4*
TAP ***07*** *16:37:22.2, 24°.01N×121°.71E, h25km, ML2.8, C*
JMA ***07*** *16:37:22.2±0.4, 23°.88N×121°.84E, h27km, M2.3*
ISC 07 16:37:21.9±0.4, 23°.98N±0°.02×121°.77E±0°.03, h21km±4km, n35, σ0s63/64, 4C-1D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.15**	**271**	⇑*i*P	**Pb**	**16 37 27.1**	**+0.6**
	baz=245						
HWA				*e*S	**Sb**	**16 37 30.5**	**+0.8**
	baz=245						
TWD	**Chiawan**	**0.19**	**303**	⇑*i*P	**Pb**	**16 37 27.1**	**+0.1**
	baz=309						
TWD				*i* S	**Sb**	**16 37 30.6**	**+0.1**
	baz=309						
ESL	**Shilin**	**0.35**	**243**	⇑*i*P	**Pb**	**16 37 29.4**	**-0.1**
	baz=239						
ESL				*e*S	**Sb**	**16 37 34.8**	**+0.2**
	baz=239						
ENA	**Nanau**	**0.45**	**356**	⇓*i*P	**Pb**	**16 37 31.1**	**-0.1**
	baz=7.0						
ENA				*e*S	**Sb**	**16 37 37.8**	**+0.3**
	baz=7.0						
WHF	**Hehuan Shan**	**0.49**	**290**	⇑*i*P	**Pb**	**16 37 31.6**	**-0.3**
	baz=282						
WHF				S	**Sb**	**16 37 38.5**	**-0.3**
	baz=282						
NNS	**Nan Shan**	**0.59**	**322**	*i* P	**Pb**	**16 37 33.3**	**-0.2**
	baz=326						
NNS				S	**Sb**	**16 37 41.5**	**0.0**
	baz=326						
TWT	**Tachien**	**0.61**	**297**	*e*P	**Pb**	**16 37 34.0**	**0.0**
	baz=295						
TWT				*e*S	**Sb**	**16 37 41.9**	**-0.2**
	baz=295						
EHY	**Hungye**	**0.62**	**222**	*e*P	**Pb**	**16 37 33.6**	**-0.5**
	baz=213						
EHY				*e*S	**Sb**	**16 37 42.1**	**-0.3**
	baz=213						
TWC	**Suao**	**0.63**	**6**	*i* P	**Pb**	**16 37 34.3**	**0.0**
	baz=10.0						
TWC				S	**Sb**	**16 37 43.6**	**+0.8**
	baz=10.0						
ENTT	**Nioudou**	**0.69**	**344**	P	**Pb**	**16 37 34.9**	**-0.3**
	baz=343						
ENTT				*e*S	**Sb**	**16 37 44.5**	**+0.2**
	baz=343						
TWE	**Neicheng**	**0.75**	**353**	*e*P	**Pb**	**16 37 36.0**	**-0.2**
	baz=4.0						
TWE				*e*S	**Sb**	**16 37 46.4**	**+0.4**
	baz=4.0						
TWF1	**Yuli**	**0.76**	**215**	*e*P	**Pb**	**16 37 35.3**	**-1.1**
	baz=219						
TWF1				*e*S	**Sb**	**16 37 47.1**	**+0.8**
	baz=219						
NSK	**Sanguang**	**0.79**	**332**	P	**Pb**	**16 37 36.5**	**-0.6**
	baz=324						
NSK				*e*S	**Sb**	**16 37 46.7**	**-0.6**
	baz=324						
SMLT	**Sun Moon Lake**	**0.81**	**264**	P	**Pb**	**16 37 36.8**	**-0.4**
	baz=259						
SMLT				S	**Sb**	**16 37 47.0**	**-0.7**
	baz=259						
TYC	**Yuchr**	**0.84**	**265**	P	**Pb**	**16 37 36.9**	**-0.9**
	baz=261						
TYC				S	**Sb**	**16 37 47.9**	**-0.8**
	baz=261						
YUS	**Yu-Shan**	**0.90**	**237**	*e*P	**Pb**	**16 37 38.7**	**0.0**
	baz=231						
YUS				*e*S	**Sb**	**16 37 50.5**	**+0.3**
	baz=231						
NSTT	**Nanjuang**	**0.96**	**313**	*e*P	**Pb**	**16 37 39.4**	**-0.4**
	baz=315						
NSTT				S	**Sb**	**16 37 51.9**	**-0.2**
	baz=315						
TWQ1	**Liyutan**	**0.99**	**292**	*e*P	**Pb**	**16 37 40.3**	**0.0**
	baz=291						
TWQ1				*e*S	**Sb**	**16 37 52.8**	**0.0**
	baz=291						
ALS	**Alishan**	**1.00**	**243**	*i* P	**Pb**	**16 37 40.8**	**+0.2**
	baz=236						
ALS				*e*S	**Sb**	**16 37 53.6**	**+0.3**
	baz=236						
TWA	**Mucha**	**1.01**	**350**	*e*P	**Pb**	**

NEIC ***07*** *16:48:52.0, 36°.96N×29°.19E, h5km, MD3.6(ISK), After ISK.*
ISK ***07*** *16:48:52.8, 36°.96N×29°.19E, h5km, ML3.6*
IDC ***07*** *16:48:54.1±0.9, 36°.90N×29°.15E, h0km, mb3.8/5, mb1 3.9/13, mb1mx3.7/31, mbtmp3.7/13, ML3.7/8, MS2.7/4, Ms1 2.8/4, ms1mx2.4/34, Error ellipse: s-maj=16.8km s-min=15.6km az=157.0*
CSEM ***07*** *16:48:54.7±0.1, 36°.96N×29°.21E, h2km, ML3.6, Error ellipse: s-maj=3.3km s-min=2.6km az=169.0*
ISCJB ***07*** *16:48:54.1±0.4, 36°.96N±0°.02×29°.20E±0°.02, h3km±3km, mb3.6/5, MS2.7/3, Error ellipse: s-maj=3.5km s-min=2.6km az=153.4*
THE ***07*** *16:48:54.9, 36°.89N×29°.26E, h0km±1km, ML4.2/1, Error ellipse: s-maj=2.2km s-min=1.0km az=86.0*
DDA ***07*** *16:48:54.0, 36°.96N×29°.22E, h22km±1km, Md3.5*

ISC 07 16:48:54.8±0.4, 36°.97N±0°.02×29°.21E±0°.02, h0km±3km, n162, σ0°97/188, mb3.7/5, MS2.7/3, 6D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**51**	PG	**Pg**	**16 48 59.9**	**-0.6**
GLHS	**Glhisar (BURDU**	**0.30**	**51**	*i* Pg	**Pg**	**16 48 59.9**	**-0.7**
FETY	**Fethiye**	**0.34**	**196**	*e*PG	**Pg**	**16 49 00.4**	**-1.0**
FETY				*e*SG	**Sg**	**16 49 06.5**	**+0.7**
FETY	**Fethiye**	**0.34**	**196**	*e*Pg	**Pg**	**16 49 00.4**	**-1.0**
FETY				*e*Sg	**Sg**	**16 49 06.5**	**+0.7**
GOLH	**Golhisar**	**0.39**	**47**	*i* P	**Pg**	**16 49 01.9**	**-0.4**
GOLH				*i* S	**Sg**	**16 49 08.5**	**+1.1**
GOLH	**Golhisar**	**0.39**	**47**	*i* P	**Pg**	**16 49 01.9**	**-0.4**
GOLH				*i* S	**Sg**	**16 49 08.5**	**+1.1**
TURN	**Turunc**	**0.49**	**259**	*i* P	**Pg**	**16 49 09.3**	**+5.1**
TURN				*i* S	**Sg**	**16 49 20.7**	**+10**
ELL	**Elmali**	**0.60**	**111**	*e*PG	**Pg**	**16 49 05.8**	**-0.6**
ELL	**Elmali**	**0.60**	**111**	*e*Pg	**Pg**	**16 49 05.8**	**-0.6**
DNZL	**Cakiroluk**	**0.73**	**350**	*i* P	**Pg**	**16 49 07.9**	**-1.0**
DNZL				*i* S	**Sg**	**16 49 19.4**	**+1.1**
DNZL	**Cakiroluk**	**0.73**	**350**	*i* P	**Pg**	**16 49 07.9**	**-0.9**
YER	**Yerkesik**	**0.76**	**283**	*e*PG	**Pg**	**16 49 08.8**	**-0.5**
YER	**Yerkesik**	**0.76**	**283**	*e*Pg	**Pg**	**16 49 08.8**	**-0.5**
DENT	**Denizli**	**0.80**	**350**	*e*PG	**Pg**	**16 49 08.8**	**-1.3**
AKAS	**Kas**	**0.80**	**156**	*i* P	**Pg**	**16 49 10.1**	**0.0**
AKAS				*i* S	**Sg**	**16 49 24.7**	**+4.2**
AKAS	**Kas**	**0.80**	**156**	*i* P	**Pg**	**16 49 10.1**	**0.0**
KSL	**Kastellorizon**	**0.87**	**159**	*e*P	**Pg**	**16 49 12.5**	**+1.0**
KORT	**Korkueli**	**0.92**	**88**	*i* P	**Pg**	**16 49 11.1**	**-1.3**
KORT				*i* S	**Sg**	**16 49 26.9**	**+2.6**
KORT	**Korkueli**	**0.92**	**88**	*i* P	**Pg**	**16 49 11.1**	**-1.3**
KORT				*i* S	**Sg**	**16 49 26.9**	**+2.6**
ARG	**Arkhangelos**	**1.15**	**230**	P	**Pg**	**16 49 15.8**	**-1.0**
ARG				S	**Sg**	**16 49 33.6**	**+2.0**
ARG	**Arkhangelos**	**1.15**	**230**	*e*P	**Pg**	**16 49 15.6**	**-1.2**
ARG	**Arkhangelos**	**1.15**	**230**	P	**Pg**	**16 49 15.8**	**-1.0**
ANTB	**Antalya**	**1.16**	**93**	*e*PN	**Pn**	**16 49 16.6**	**-1.7**
ANTB	**Antalya**	**1.16**	**93**	*e*Pn	**Pn**	**16 49 16.6**	**-1.7**
MLSB	**Milas**	**1.19**	**286**	*e*PN	**Pn**	**16 49 16.2**	**-2.4**
MLSB	**Milas**	**1.19**	**286**	*e*Pn	**Pn**	**16 49 16.2**	**-2.4**
BCK	**Bucak**	**1.21**	**66**	*e*PN	**Pn**	**16 49 17.2**	**-1.8**
BCK	**Bucak**	**1.21**	**66**	*e*Pn	**Pn**	**16 49 17.2**	**-1.7**
AYDN	**Tasoluk**	**1.26**	**304**	*i* P	**Pg**	**16 49 18.6**	**-0.4**
AYDN				*i* S	**Sg**	**16 49 36.5**	**+1.1**
AYDN	**Tasoluk**	**1.26**	**304**	*i* P	**Pg**	**16 49 18.6**	**-0.4**
AYDN				*i* S	**Sg**	**16 49 36.5**	**+1.1**
DAT	**Datca**	**1.33**	**260**	*e*PN	**Pn**	**16 49 18.8**	**-1.7**
DAT	**Datca**	**1.33**	**260**	*e*Pn	**Pn**	**16 49 18.8**	**-1.7**
ISP	**Isparta**	**1.35**	**50**	*e*PN	**Pn**	**16 49 20.0**	**-0.9**
ISP	**Isparta**	**1.35**	**50**	*e*Pn	**Pn**	**16 49 19.7**	**-1.2**
ISP	**Isparta**	**1.35**	**50**	P	**Pg**	**16 49 19.9**	**-0.8**
ISP	**Isparta**	**1.35**	**50**	P	**Pg**	**16 49 19.9**	**-0.8**
BDRM	**Kayabasi**	**1.41**	**275**	*i* P	**Pn**	**16 49 21.2**	**-0.5**
BDRM				*i* S	**Sg**	**16 49 40.5**	**+0.3**
BDRM	**Kayabasi**	**1.41**	**275**	*i* P	**Pn**	**16 49 21.2**	**-0.5**
BDRM				*i* S	**Sg**	**16 49 40.5**	**+0.3**
KHAL	**Karahalli**	**1.42**	**9**	*i* P	**Pn**	**16 49 20.7**	**-1.1**
KHAL				*i* S	**Sg**	**16 49 40.6**	**+0.2**
KHAL	**Karahalli**	**1.42**	**9**	*i* P	**Pn**	**16 49 20.7**	**-1.1**
KHAL				*i* S	**Sg**	**16 49 40.6**	**+0.2**
SUTC	**Sutluce-Ispart**	**1.52**	**70**	*e*PN	**Pn**	**16 49 22.7**	**-0.5**
SUTC	**Sutluce-Ispart**	**1.52**	**70**	*e*Pn	**Pn**	**16 49 22.7**	**-0.5**
KULA	**Kula-Manisa**	**1.60**	**345**	*e*PN	**Pn**	**16 49 23.6**	**-0.7**
KULA	**Kula-Manisa**	**1.60**	**345**	*e*Pn	**Pn**	**16 49 23.6**	**-0.8**
NIS1	**Nisyros Isl.**	**1.67**	**258**	P	**Pn**	**16 49 26.2**	**+1.0**
NIS1	**Nisyros Isl.**	**1.67**	**258**	P	**Pn**	**16 49 26.2**	**+1.0**
SHUT	**Suhut-Afyon**	**1.91**	**34**	*e*PN	**Pn**	**16 49 27.3**	**-1.2**
SHUT	**Suhut-Afyon**	**1.91**	**34**	*e*Pn	**Pn**	**16 49 27.3**	**-1.3**
SMG	**Samos**	**2.03**	**292**	*e*P	**Pn**	**16 49 29.8**	**-0.4**
IZM	**Izmir**	**2.10**	**313**	*e*PN	**Pn**	**16 49 30.6**	**-0.6**
IZM	**Izmir**	**2.10**	**313**	*e*Pn	**Pn**	**16 49 30.6**	**-0.6**
KDAG	**Bornova**	**2.10**	**314**	*i* P	**Pn**	**16 49 31.0**	**-0.2**
KDAG				*i* S	**Sn**	**16 49 55.5**	**-2.6**
KDAG	**Bornova**	**2.10**	**314**	*i* P	**Pn**	**16 49 31.0**	**-0.2**
DEMI	**Demirci**	**2.11**	**350**	*i* P	**Pn**	**16 49 30.5**	**-0.7**
DEMI	**Demirci**	**2.11**	**350**	*i* P	**Pn**	**16 49 30.5**	**-0.8**
KARP	**Karpathos**	**2.18**	**230**	*e*P	**Pn**	**16 49 32.6**	**+0.4**
AKHS	**Akhisar**	**2.20**	**330**	*i* P	**Pn**	**16 49 31.8**	**-0.8**
AKHS				*i* S	**Sn**	**16 50 00.1**	**-0.4**
AKHS	**Akhisar**	**2.20**	**330**	*i* P	**Pn**	**16 49 31.8**	**-0.8**
AKHS				*i* S	**Sn**	**16 50 00.1**	**-0.4**
ALT	**Altintas**	**2.20**	**19**	*e*PN	**Pn**	**16 49 32.0**	**-0.6**
ALT	**Altintas**	**2.20**	**19**	*e*Pn	**Pn**	**16 49 32.0**	**-0.6**
BLCB	**Balcova**	**2.22**	**310**	*e*PN	**Pn**	**16 49 31.5**	**-1.4**
BLCB	**Balcova**	**2.22**	**310**	P	**Pn**	**16 49 32.3**	**-0.6**
BLCB	**Balcova**	**2.22**	**310**	*e*Pn	**Pn**	**16 49 31.5**	**-1.4**
BLCB	**Balcova**	**2.22**	**310**	P	**Pn**	**16 49 32.3**	**-0.6**
BOLV	**Bolvadin**	**2.23**	**38**	*i* P	**Pn**	**16 49 33.1**	**+0.2**
BOLV				*i* S	**Sn**	**16 50 03.0**	**+1.9**
BOLV	**Bolvadin**	**2.23**	**38**	*i* P	**Pn**	**16 49 33.1**	**+0.2**
BOLV				*i* S	**Sn**	**16 50 03.0**	**+1.8**
HDMB	**Hadim**	**2.63**	**89**	*e*PN	**Pn**	**16 49 38.2**	**-0.2**
HDMB	**Hadim**	**2.63**	**89**	*e*Pn	**Pn**	**16 49 38.2**	**-0.2**
DST	**Dursunbey**	**2.67**	**350**	*e*PN	**Pn**	**16 49 39.4**	**+0.4**
DST	**Dursunbey**	**2.67**	**350**	*e*Pn	**Pn**	**16 49 39.4**	**+0.3**
DURS	**Dursunbey**	**2.69**	**348**	*i* P	**Pn**	**16 49 38.8**	**-0.5**
DURS	**Dursunbey**	**2.69**	**348**	*i* P	**Pn**	**16 49 38.8**	**-0.5**
KONT	**Konya--Tatoy**	**2.69**	**68**	*e*PN	**Pn**	**16 49 39.3**	**0.0**
KONT	**Konya--Tatoy**	**2.69**	**68**	*e*Pn	**Pn**	**16 49 39.3**	**0.0**
KDHN	**Kadinhani**	**2.78**	**55**	*i* P	**Pn**	**16 49 40.8**	**+0.2**
KDHN	**Kadinhani**	**2.78**	**55**	*i* P	**Pn**	**16 49 40.8**	**+0.3**
LADK	**Ladik-KONYA**	**2.80**	**63**	*e*PN	**Pn**	**16 49 40.9**	**+0.1**
LADK	**Ladik-KONYA**	**2.80**	**63**	*e*Pn	**Pn**	**16 49 40.9**	**+0.2**
KIZT	**Kizilcal**	**2.85**	**47**	*e*PN	**Pn**	**16 49 41.8**	**+0.3**
KIZT	**Kizilcal**	**2.85**	**47**	*e*Pn	**Pn**	**16 49 41.8**	**+0.3**
ESKT	**Eskisehir**	**2.86**	**26**	*e*PN	**Pn**	**16 49 41.9**	**+0.2**
ESKT	**Eskisehir**	**2.86**	**26**	*e*Pn	**Pn**	**16 49 41.9**	**+0.3**
BALB	**Balikesir**	**2.87**	**339**	*e*PN	**Pn**	**16 49 42.0**	**+0.3**
BALB	**Balikesir**	**2.87**	**339**	*e*Pn	**Pn**	**16 49 42.0**	**+0.3**
CHOS	**Chios island**	**2.87**	**301**	P	**Pn**	**16 49 41.7**	**-0.1**
CHOS				S	**Sn**	**16 50 18.3**	**+1.2**
CHOS	**Chios island**	**2.87**	**301**	*e*P	**Pn**	**16 49 40.9**	**-0.9**
CHOS	**Chios island**	**2.87**	**301**	P	**Pn**	**16 49 41.7**	**-0.1**
CHOS				S	**Sn**	**16 50 18.3**	**+1.2**
APE	**Apeiranthos**	**2.94**	**273**	P	**Pn**	**16 49 42.8**	**0.0**
APE				S	**Sn**	**16 50 19.0**	**+0.2**
APE	**Apeiranthos**	**2.94**	**273**	P	**Pn**	**16 49 42.8**	**0.0**
APE				S	**Sn**	**16 50 19.0**	**+0.2**
BALY	**Balya**	**3.04**	**336**	*i* P	**Pn**	**16 49 43.3**	**-0.7**
BALY	**Balya**	**3.04**	**336**	*i* P	**Pn**	**16 49 43.3**	**-0.7**
ZKR	**Zakros**	**3.05**	**234**	P	**Pn**	**16 49 45.6**	**+1.4**
ZKR	**Zakros**	**3.05**	**234**	P	**Pn**	**16 49 45.6**	**+1.4**
SVRH	**Sivrihisar-ESK**	**3.08**	**36**	*e*PN	**Pn**	**16 49 45.1**	**+0.5**
SVRH	**Sivrihisar-ESK**	**3.08**	**36**	*e*Pn	**Pn**	**16 49 45.1**	**+0.5**
PRK	**Paraskevi**	**3.25**	**315**	*e*P	**Pn**	**16 49 46.3**	**-0.6**
GPA	**Golpazari**	**3.43**	**14**	*e*PN	**Pn**	**16 49 50.1**	**+0.7**
GPA	**Golpazari**	**3.43**	**14**	*e*Pn	**Pn**	**16 49 50.2**	**+0.8**
GEMT	**Gemlik**	**3.46**	**360**	*e*PN	**Pn**	**16 49 50.7**	**+0.8**
GEMT	**Gemlik**	**3.46**	**360**	*e*Pn	**Pn**	**16 49 50.7**	**+0.8**
ADVT	**Abdulvahap**	**3.49**	**7**	*e*PN	**Pn**	**16 49 51.0**	**+0.8**
ADVT	**Abdulvahap**	**3.49**	**7**	*e*Pn	**Pn**	**16 49 51.0**	**+0.8**
LAST	**Lasithi**	**3.52**	**240**	P	**Pn**	**16 49 51.7**	**+1.1**
LAST	**Lasithi**	**3.52**	**240**	P	**Pn**	**16 49 51.7**	**+1.1**
BNT	**Bandirma**	**3.53**	**344**	*e*PN	**Pn**	**16 49 51.4**	**+0.5**
BNT	**Bandirma**	**3.53**	**344**	*e*Pn	**Pn**	**16 49 51.4**	**+0.6**
YLV	**Yalova**	**3.60**	**2**	*e*PN	**Pn**	**16 49 52.0**	**+0.2**
YLV	**Yalova**	**3.60**	**2**	*e*Pn	**Pn**	**16 49 52.0**	**+0.3**
ARMT	**Armutlu**	**3.60**	**356**	*e*PN	**Pn**	**16 49 52.5**	**+0.7**
ARMT	**Armutlu**	**3.60**	**356**	*e*Pn	**Pn**	**16 49 52.5**	**+0.7**
GULT	**Gulveren**	**3.61**	**16**	*e*PN	**Pn**	**16 49 52.8**	**+0.8**
GULT	**Gulveren**	**3.61**	**16**	*e*Pn	**Pn**	**16 49 52.8**	**+0.9**
SULT	**Sultanhani-AKS**	**3.64**	**69**	*e*PN	**Pn**	**16 49 52.8**	**+0.5**
SULT	**Sultanhani-AKS**	**3.64**	**69**	*e*Pn	**Pn**	**16 49 52.8**	**+0.5**
EZN	**Ezine**	**3.64**	**322**	*e*PN	**Pn**	**16 49 51.6**	**-0.7**
EZN	**Ezine**	**3.64**	**322**	*e*Pn	**Pn**	**16 49 51.6**	**-0.8**
IKL	**Isikli**	**3.68**	**100**	*e*PN	**Pn**	**16 49 52.9**	**+0.1**
IKL	**Isikli**	**3.68**	**100**	*e*Pn	**Pn**	**16 49 52.9**	**0.0**
MDU	**Mudurnu**	**3.83**	**24**	*e*PN	**Pn**	**16 49 56.0**	**+1.0**
MDU	**Mudurnu**	**3.83**	**24**	*e*Pn	**Pn**	**16 49 56.0**	**+1.0**
IDI	**Anoyia**	**3.87**	**246**	Pn	**Pn**	**16 49 54.9**	**-0.7**
IDI	4.9nm,0.3s,baz=53,slow=15,SNR=25			Sn	**Sn**	**16 50 42.6**	**+0.9**
IDI	**Anoyia**	**3.87**	**246**	Pn	**Pn**	**16 49 54.8**	**-0.8**
IDI	7.9nm,0.3s,baz=169,slow=12,SNR=14			Sn	**Sn**	**16 50 42.6**	**+0.8**
LPK	**Lapseki**	**3.90**	**331**	*e*PN	**Pn**	**16 49 55.9**	**-0.1**
LPK	**Lapseki**	**3.90**	**331**	*e*Pn	**Pn**	**16 49 55.9**	**0.0**
RKY	**Sarkoy-Tekirda**	**4.04**	**338**	*e*PN	**Pn**	**16 49 58.2**	**+0.3**
RKY	**Sarkoy-Tekirda**	**4.04**	**338**	*e*Pn	**Pn**	**16 49 58.2**	**+0.4**
ISK	**Istanbul-Kandi**	**4.09**	**358**	*e*PN	**Pn**	**16 49 59.6**	**+1.0**
ISK	**Istanbul-Kandi**	**4.09**	**358**	*e*Pn	**Pn**	**16 49 59.6**	**+1.0**
MERS	**Mersin**	**4.26**	**90**	*e*PN	**Pn**	**16 50 01.5**	**+0.6**
MERS	**Mersin**	**4.26**	**90**	*e*Pn	**Pn**	**16 50 01.5**	**+0.6**
LIA	**Limnos Island**	**4.30**	**314**	*e*P	**Pn**	**16 50 01.7**	**+0.2**
BR131	**Keskin Array S**	**4.44**	**50**	*e*Pn	**Pn**	**16 50 03.5**	**+0.1**
BR131	**Keskin Array S**	**4.44**	**50**	*e*Pn	**Pn**	**16 50 03.5**	**+0.1**
BRTR	**Keskin Array B**	**4.44**	**50**	Pn	**Pn**	**16 50 03.7**	**+0.3**
BRTR	1.4nm,0.3s,baz=230,slow=14,SNR=45			Sn	**Sn**	**16 50 59.0**	**+3.2**
BRTR	**Keskin Array B**	**4.44**	**50**	Pn	**Pn**	**16 50 03.7**	**+0.3**
KARN	**Karanos**	**4.55**	**252**	P	**Pn**	**16 50 06.0**	**+1.1**
KARN	**Karanos**	**4.55**	**252**	P	**Pn**	**16 50 06.0**	**+1.1**
VLI	**Veliai**	**5.03**	**269**	*e*P	**Pn**	**16 50 13.4**	**+1.9**
MMAI	**Mount Meron Ar**	**6.43**	**126**	Pn	**Pn**	**16 50 30.9**	**+0.1**
MLR	5.3nm,0.3s,baz=318,slow=12,SNR=24			LR	LR	16 54 42.6	
TIRR	**Tirgusor**	**7.51**	**356**	⇓*i*P	**Pn**	**16 50 45.4**	**0.0**
TIRR	**Tirgusor**	**7.51**	**356**	⇓*i*P	**Pn**	**16 50 45.4**	**0.0**
ASF	**Jabal al Asfar**	**7.94**	**125**	Pn	**Pn**	**16 50 51.8**	**+0.3**
EIL	**Elat**	**8.72**	**145**	Pn	**Pn**	**16 51 00.4**	**-1.7**
MLR	**Muntele Rosu**	**8.86**	**345**	Pn	**Pn**	**16 51 06.1**	**+2.1**
MLR	**Muntele Rosu**	**8.86**	**345**	⇓*i*P	**Pn**	**16 51 06.1**	**+2.1**
MLR	**Muntele Rosu**	**8.86**	**345**	⇓*i*P	**Pn**	**16 51 06.1**	**+2.1**
VRI	**Vrincioaia**	**9.08**	**349**	⇓P	**Pn**	**16 51 11.7**	**+4.7**
VRI	**Vrincioaia**	**9.08**	**349**	⇓*i*P	**Pn**	**16 51 11.7**	**+4.6**
AKASG	**Malin Array Be**	**13.73**	**0**	Pn	**Pn**	**16 52 11.2**	**+0.6**
AKASG	**Malin Array Be**	**13.73**	**0**	Pn	**Pn**	**16 52 11.2**	**+0.6**
GERES	**GERESS Array B**	**16.39**	**321**	Pn	**Pn**	**16 52 48.6**	**+2.5**
AKTK	**Aktyubinsk**	**24.62**	**48**	P	**P**	**16 54 16.7**	**+0.1**
AKTK	**Aktyubinsk**	**24.62**	**48**	P	**P**	**16 54 16.7**	**+0.1**
AKTO	**Aktyubinsk**	**24.62**	**48**	P	**P**	**16 54 16.7**	**+0.1**
HFS	**Hagfors**	**25.23**	**342**	LR	LR	17 05 03.3	
ESDC	**Sonseca Array**	**26.08**	**286**	P	**P**	**16 54 28.5**	**-1.5**
NOA	**NORSAR Array B**	**26.64**	**340**	P	**P**	**16 54 34.0**	**-0.8**
NOA	0.5nm,0.8s,mb3.3,baz=129,slow=10.0,SNR=3.1			LR	LR	17 06 09.5	
TORD	**Torodi Ar. Bea**	**34.18**	**233**	P	**P**	**16 55 40.5**	**-1.4**
MKAR	**Makanchi Array**	**40.04**	**59**	P	**P**	**16 56 31.2**	**-0.2**
MKAR	**Makanchi Array**	**40.04**	**59**	P	**P**	**16 56 31.2**	**-0.2**
ZALV	**Zalesovo Beam**	**41.38**	**48**	LR	LR	17 16 39.0	

SZGRF ***07*** *16:56:02.5, 17°.98N×65°.34W, h33km, mb4.9, MS4.3, Puerto Rico region*
ISCJB ***07*** *16:56:07.5±1.1, 19°.56N±0°.02×64°.39W±0°.02, h5km±7km, mb4.7/98, MS4.1/27, Error ellipse: s-maj=4.0km s-min=3.3km az=168.9*
LDG ***07*** *16:56:07.4±0.5, 19°.32N×64°.50W, h10km, Mb4.9/12, Ms3.9/8, Error ellipse: s-maj=24.9km s-min=9.8km az=82.0*
IDC ***07*** *16:56:07.8±0.4, 19°.47N×64°.38W, h0km, mb4.5/30, mb1 4.6/34, mb1mx4.6/39, mbtmp4.5/34, ML4.1/3, MS4.1/20, Ms1 4.1/20, ms1mx4.0/26, Error ellipse: s-maj=11.6km s-min=10.1km az=141.0*
RSPR ***07*** *16:56:08.8, 19°.76N×64°.21W, h30km±20km, MD4.9/18, MD4.9/18*
NEIC ***07*** *16:56:08.8, 19°.76N×64°.21W, h30km, mb4.9/71, MD4.9(RSPR), After RSPR.*
NEIC Felt on Saint Thomas.
BJI ***07*** *16:56:10.7, 19°.80N×64°.20W, h29km, mB5.3/4, Ms5.0/4, Ms7 4.5/5*
GCMT ***07*** *16:56:12.9±0.3, 19°.52N×64°.35W, h18km±1km, MW4.9, Moment Tensor Solution. s28,c32; s68,c102; Moment tensor: Scale 10^{16}Nm; M_{rr}2.48±.19; $M_{\theta\theta}$-1.44±.12; $M_{\phi\phi}$-1.04±.14; $M_{r\theta}$-0.22±.33; $M_{\theta\phi}$1.89±.10; $M_{\phi r}$0.52±.33; Best double couple: $M_0$2.90000×10^{16} NP1:ϕ_s125.00000°, δ40.00000°, λ79.00000°. NP2:ϕ_s319.00000°, δ51.00000°, λ99.00000°. Principal axes: T 2.5600, Plg81.0000°, Azm277.0000°; N 0.6300, Plg7.0000°, Azm133.0000°; P -3.1900, Plg5.0000°, Azm42.0000°; Data Used: II IU G IC CN.*

ISC 07 16:56:08.6±0.9, 19°.52N±0°.03×64°.42W±0°.02, h1km±6km, n464, σ0°82/457, mb4.8/98, MS4.1/27, 152C-118D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.79**	**174**	⇑*i*P	**Pg**	**16 56 25.3**	**+1.6**
ABV	**Anegada**	**0.79**	**174**	⇑*i*P	**Pg**	**16 56 25.3**	**+1.6**
TBVI	**Tortola**	**1.11**	**190**	⇓*i*P	**Pg**	**16 56 30.3**	**+0.4**
TBVI	**Tortola**	**1.11**	**190**	⇓*i*P	**Pg**	**16 56 30.3**	**+0.4**
STVI	**Saint Thomas**	**1.27**	**204**	⇓*e*P	**Pg**	**16 56 32.5**	**-0.3**
STVI				*e*S	**Sg**	**16 56 50.4**	**+1.1**
STVI	**Saint Thomas**	**1.27**	**204**	⇓*e*P	**Pg**	**16 56 32.5**	**-0.3**
STVI				*e*S	**Sg**	**16 56 50.4**	**+1.1**
MTP	**Monte Pirata**	**1.77**	**217**	⇓*e*P	**Pn**	**16 56 40.6**	**+0.2**
MTP	**Monte Pirata**	**1.77**	**217**	⇓*e*P	**Pn**	**16 56 40.6**	**+0.2**
CDVI	**St. Croix**	**1.79**	**191**	⇓*e*P	**Pn**	**16 56 41.6**	**+1.0**
CDVI	**St. Croix**	**1.79**	**191**	⇓*e*P	**Pn**	**16 56 41.6**	**+1.0**
CBYP	**Canovanas**	**1.84**	**228**	⇓*e*P	**Pn**	**16 56 41.3**	**0.0**
CBYP	**Canovanas**	**1.84**	**228**	⇓*e*P	**Pn**	**16 56 41.3**	**0.0**
HUMP	**Col San Antoni**	**1.93**	**225**	⇓*e*P	**Pn**	**16 56 42.3**	**-0.2**
HUMP	**Col San Antoni**	**1.93**	**225**	⇓*e*P	**Pn**	**16 56 42.3**	**-0.2**
CPD	**Cerro la Pandu**	**2.04**	**224**	⇓*e*P	**Pn**	**16 56 44.1**	**0.0**
CPD	**Cerro la Pandu**	**2.04**	**224**	⇓*e*P	**Pn**	**16 56 44.1**	**0.0**
SJG	**San Juan**	**2.15**	**230**	⇓*e*P	**Pn**	**16 56 45.4**	**-0.3**
SJG	**San Juan**	**2.15**	**230**	⇓*e*P	**Pn**	**16 56 45.4**	**-0.3**
SJG	**San Juan**	**2.15**	**230**	Pn	**Pn**	**16 56 45.4**	**-0.3**
SJG	48nm,0.3s,baz=63,slow=9.3,SNR=43			Sn	**Sn**	**16 57 13.7**	**+0.7**
SJG	**San Juan**	**2.15**	**230**	⇓*e*P	**Pn**	**16 56 45.4**	**-0.3**
SJG	**San Juan**	**2.15**	**230**	⇓*e*P	**Pn**	**16 56 45.3**	**-0.3**
SJG	**San Juan**	**2.15**	**230**	⇓*e*P	**Pn**	**16 56 45.4**	**-0.3**
AOPR	**Arecibo Observ**	**2.50**	**243**	⇓*e*P	**Pn**	**16 56 50.0**	**-0.4**
AOPR	**Arecibo Observ**	**2.50**	**243**	⇓*e*P	**Pn**	**16 56 50.1**	**-0.3**
CELP	**Cerrillos**	**2.50**	**235**	⇓*e*P	**Pn**	**16 56 50.4**	**0.0**
CELP	**Cerrillos**	**2.50**	**235**	⇓*e*P	**Pn**	**16 56 50.4**	**0.0**
OBIP	**Obispado Ponce**	**2.54**	**235**	⇓*e*P	**Pn**	**16 56 50.9**	**0.0**
OBIP	**Obispado Ponce**	**2.54**	**235**	⇓*e*P	**Pn**	**16 56 50.9**	**0.0**
ICM	**Isla Caja Muer**	**2.56**	**231**	⇑*e*P	**Pn**	**16 56 51.9**	**+0.6**
ICM				*e*S	**Sn**	**16 57 24.5**	**+1.4**
ICM	**Isla Caja Muer**	**2.56**	**231**	⇑*e*P	**Pn**	**16 56 51.9**	**+0.6**
ICM				*e*S	**Sn**	**16 57 24.5**	**+1.4**
LRS	**Lares**	**2.60**	**242**	⇑*e*P	**Pn**	**16 56 51.2**	**-0.6**
LRS	**Lares**	**2.60**	**242**	⇑*e*P	**Pn**	**16 56 51.2**	**-0.6**
SKI	**Saint Kitts**	**2.69**	**143**	*e*P	**Pn**	**16 56 54.2**	**+1.1**
SKI	**Saint Kitts**	**2.69**	**143**	*e*P	**Pn**	**16 56 54.2**	**+1.1**
SKI	**Saint Kitts**	**2.69**	**143**	*e*	**Sg**	**16 57 34.0**	**-1.2**
AGPR	**Aguadilla, PR**	**2.75**	**248**	⇑*e*P	**Pn**	**16 56 53.2**	**-0.7**
AGPR				*e*S	**Sn**	**16 57 28.2**	**+0.4**
AGPR	**Aguadilla, PR**	**2.75**	**248**	⇑*e*P	**Pn**	**16 56 53.2**	**-0.7**
AGPR				*e*S	**Sn**	**16 57 28.2**	**+0.4**
GBPR	**Guanica, Bosqu**	**2.79**	**237**	⇑*e*P	**Pn**	**16 56 55.1**	**+0.7**
GBPR	**Guanica, Bosqu**	**2.79**	**237**	⇑*e*P	**Pn**	**16 56 55.7**	**+1.3**
AGP	**Aguadilla**	**2.80**	**247**	*e*Pn	**Pn**	**16 56 53.6**	**-1.0**
LSP	**Las Mesas**	**2.85**	**243**	⇑*e*P	**Pn**	**16 56 55.3**	**0.0**
LSP	**Las Mesas**	**2.85**	**243**	⇑*e*P	**Pn**	**16 56 55.3**	**0.0**
MPR	**Mayaguez**	**2.88**	**244**	*e*Pn	**Pn**	**16 56 54.9**	**-0.8**
NVBH	**Bath Hotel, Ne**	**2.94**	**144**	*e*P	**Pn**	**16 56 58.2**	**+1.7**
CRPR	**Cabo Rojo, PR**	**2.96**	**240**	⇑*e*P	**Pn**	**16 56 57.1**	**+0.4**
CRPR				*e*S	**Sn**	**16 57 34.1**	**+1.2**
CRPR	**Cabo Rojo, PR**	**2.96**	**240**	⇑*e*P	**Pn**	**16 56 57.1**	**+0.4**
CRPR				*e*S	**Sn**	**16 57 34.1**	**+1.2**
ANWB	**Willy Bob**	**3.10**	**126**	*e*Pn	**Pn**	**16 56 56.6**	**-2.1**
BPA	**Boggy Peak**	**3.46**	**135**	*e*P	**Pn**	**16 57 03.1**	**-0.5**
BPA	**Boggy Peak**	**3.46**	**135**	*e*P	**Pn**	**16 57 03.1**	**-0.5**
BPA	**Boggy Peak**	**3.46**	**135**	*e*	**Sg**	**16 57 56.8**	**-3.0**
IMO	**Isla Mona**	**3.59**	**248**	⇑*e*P	**Pn**	**16 57 06.5**	**+1.1**
IMO	**Isla Mona**	**3.59**	**248**	⇑*e*P	**Pn**	**16 57 06.5**	**+1.1**
PCDR	**Punta Cana, DR**	**3.88**	**256**	⇑*e*P	**Pn**	**16 57 09.3**	**0.0**
PCDR	**Punta Cana, DR**	**3.88**	**256**	⇑*e*P	**Pn**	**16 57 09.3**	**0.0**
LZG	**Guadaloupe-1**	**4.20**	**143**	*e*P	**Pn**	**16 57 13.3**	**-0.5**
SCG	**Saint Claude**	**4.34**	**143**	*e*P	**Pn**	**16 57 15.7**	**0.0**
HMG	**Houelmont**	**4.37**	**143**	*e*P	**Pn**	**16 57 16.1**	**0.0**
PHG	**Guadaloupe-2**	**4.37**	**142**	*e*P	**Pn**	**16 57 15.5**	**-0.7**
TBG	**Guadaloupe-3**	**4.50**	**144**	*e*P	**Pn**	**16 57 18.1**	**+0.2**
SMN1	**Samana, DR**	**4.59**	**267**	⇑*e*P	**Pn**	**16 57 18.4**	**-0.8**
MGG	**Marie-Galante**	**4.64**	**140**	⇑*i*P	**Pn**	**16 57 19.4**	**-0.5**
**

baz=38,SNR=11
125A Gardner Draw, 38.21 298 ⇓P P 17 03 29.3 -0.8
baz=38
225A Deer Hill, Car 38.26 297 ⇑P P 17 03 30.2 -0.3
baz=38
325A Bean Ranch, Si 38.27 296 ⇑P P 17 03 30.9 +0.2
baz=38,SNR=25
U26A Atchley Ranch, 38.29 304 ⇑P P 17 03 30.8 +0.1
baz=38
AGMN Agassiz Nation 38.32 326 eP P 17 03 30.6 -0.2
35nm,1.2s,mb5.0
Z25A Roswell 38.37 299 ⇑P P 17 03 31.8 +0.3
baz=38
Y25A Mesa, Roswell 38.47 300 ⇓P P 17 03 33.2 +0.9
baz=38
W25A X Bar L Ranch, 38.56 302 ⇓P P 17 03 33.7 +0.7
baz=39,SNR=6.5
MNTX Cornudas Mount 38.67 297 eP P 17 03 33.5 -0.4
8.5nm,1.1s,mb4.3
324A Moseley Ranch, 38.72 296 ⇑P P 17 03 33.0 -1.4
baz=39
U25A Circle Dot Ran 38.80 304 ⇑P P 17 03 34.1 -1.0
baz=39
V25A Rancho No Teng 38.83 303 ⇑P P 17 03 34.9 -0.3
baz=39
224A Cornudas Mount 38.84 297 ⇓P P 17 03 33.4 -2.0
baz=39,SNR=7.1
124A Stringfield Ra 38.88 298 ⇓P P 17 03 35.5 -0.3
baz=39,SNR=7.0
Z24A Sheeppen Canyo 38.91 299 ⇓P P 17 03 35.4 -0.6
baz=39
T25A Trinidad 39.00 305 ⇓P P 17 03 36.1 -0.6
baz=39
Y24A Capitan 39.08 300 ⇑P P 17 03 37.9 +0.5
baz=39,SNR=10
W24A Lazy 6 Ranch, 39.32 302 ⇓P P 17 03 39.5 +0.1
baz=39,SNR=9.7
ULM Lac du Bonnet 39.54 328 P P 17 03 40.3 -0.7
12nm,0.7s,mb4.7,baz=120,slow=7.5,SNR=8.9
ULM LR LR 17 18 26.2
comp=Z,310nm,19.0s,MS4.2,baz=165,slow=34
Y23A Lovelace Mesa, 39.59 300 ⇓P P 17 03 41.4 -0.2
baz=40,SNR=5.6
Z23A Rita Site, Whi 39.62 299 ⇑P P 17 03 42.3 +0.4
baz=40
X23A Hourglass Bar 39.82 301 ⇑P P 17 03 44.5 +0.9
baz=40
W23A Werner Place, 39.90 302 ⇓P P 17 03 45.2 +0.9
baz=40,SNR=7.5
SDCO Great Sand Dun 40.00 306 eP P 17 03 45.3 +0.3
6.9nm,0.7s,mb4.4
BNM Barren Site 40.09 300 eP P 17 03 46.7 +0.9
17nm,0.9s,mb4.7
ANMO Albuquerque 40.11 301 P P 17 03 46.7 +0.7
10nm,0.9s,mb4.5,baz=117,slow=8.5,SNR=23
ANMO Albuquerque 40.11 301 P P 17 03 46.7 +0.7
122A Conniff Cattle 40.17 298 ⇓P P 17 03 45.8 -0.7
baz=40
LAZ Ladron 40.55 300 eP P 17 03 50.9 +1.2
4.1nm,0.9s,mb4.2
V22A San Miguel Ran 40.66 303 ⇓P P 17 03 51.4 +0.8
baz=41,SNR=8.9
ISCO Idaho Springs 40.66 309 eP P 17 03 51.2 +0.7
3.6nm,0.9s,mb4.1
121A Cookes Peak, D 40.80 297 ⇑P P 17 03 51.2 -0.5
baz=41
Z21A St. Cloud Mine 40.81 299 ⇑P P 17 03 52.3 +0.5
baz=41,SNR=6.4
T22A Edith 40.90 304 ⇑P P 17 03 53.0 +0.6
baz=41,SNR=5.3
Y21A Point of Rocks 40.92 300 ⇓P P 17 03 53.4 +0.6
baz=41,SNR=28
X21A Alamocita Cree 41.09 300 ⇓P P 17 03 54.8 +0.7
baz=41,SNR=12
220A Playas Peak, P 41.35 296 ⇓P P 17 03 55.9 -0.3
baz=41
Q22A Crested Butte, 41.36 307 ⇑P P 17 03 56.6 +0.3
baz=41
U21A Nageezi 41.36 303 ⇑P P 17 03 55.2 -1.1
baz=41
Y20A Horse Springs, 41.49 299 ⇓P P 17 03 57.7 +0.3
baz=42
120A U Bar Ranch, L 41.51 297 ⇓P P 17 03 58.1 +0.5
baz=42,SNR=7.2
Z20A Nine Sixteen R 41.55 298 ⇑P P 17 03 58.0 +0.1
baz=42,SNR=6.2
X20A Quemado 41.69 300 ⇓P P 17 03 59.8 +0.8
baz=42
W20A Ramah 41.78 301 ⇑P P 17 04 00.7 +0.9
baz=42
Q21A Lamborn Mesa, 41.86 307 ⇓P P 17 04 00.9 +0.6
baz=42
219A White Tail Can 41.98 296 ⇑P P 17 04 01.6 +0.2
baz=42,SNR=9.9
Y19A Nutrioso 42.22 299 ⇓P P 17 04 03.2 -0.1
baz=42,SNR=6.7
R20A Redvale 42.31 306 ⇑P P 17 04 04.3 +0.2
baz=42
X19A St. Johns 42.31 300 ⇑P P 17 04 04.3 +0.1
baz=42
N21A Black Mountain 42.34 310 ⇓P P 17 04 04.6 +0.4
baz=42
Q20A Ridgley Place, 42.43 307 ⇓P P 17 04 05.3 +0.3
baz=42,SNR=7.2
M21A Separation Pea 42.48 311 ⇑P P 17 04 04.6 -0.8
baz=42
T19A Beclabito 42.52 304 ⇓P P 17 04 05.9 +0.1
baz=42,SNR=7.8
U19A Dine' College, 42.56 303 ⇑P P 17 04 04.4 -1.7
baz=43
L21A Rawlins 42.60 311 ⇓P P 17 04 05.5 -0.8
baz=43,SNR=5.7
118A Homack Ranch, 42.64 297 ⇑P P 17 04 05.9 -0.9
baz=43
W18A Petrified Fore 42.78 301 ⇓P P 17 04 06.6 -1.3
baz=43
S19A Harvey Farm, M 42.80 305 ⇑P P 17 04 08.4 +0.4
baz=43,SNR=6.7
Y18A Canyon Day Jun 42.83 299 ⇑P P 17 04 09.2 +0.8
baz=43,SNR=9.8
R19A Curley Farm, L 43.01 306 ⇓P P 17 04 09.9 +0.2
baz=43
P19A Cripple Cowboy 43.12 308 ⇑P P 17 04 10.4 -0.2
baz=43
Z17A San Carlos Hig 43.14 298 ⇓P P 17 04 11.2 +0.4
baz=43,SNR=5.2
T18A Mexican Hat 43.25 304 ⇑P P 17 04 11.3 -0.3
baz=43,SNR=8.9
217A Green Valley 43.27 296 ⇑P P 17 04 12.5 +0.5
baz=43,SNR=7.3
117A Oracle 43.28 297 ⇓P P 17 04 12.7 +0.7
baz=43,SNR=18
TUC Tucson 43.30 297 eP P 17 04 12.3 +0.2
5.3nm,0.8s,mb4.3
TUC e 17 04 21.9
L20A Wamsutter 43.30 311 ⇑P P 17 04 12.5 +0.5
baz=43
O19A Miners Draw (B 43.39 308 ⇓P P 17 04 12.4 -0.4
baz=43
S18A Hurst Farm, Bl 43.45 305 ⇓P P 17 04 13.1 -0.2
baz=43,SNR=6.3
Y17A Roosevelt 43.49 299 ⇑P P 17 04 14.0 +0.3
baz=44
K20A Yellowstone Ra 43.50 312 ⇓P P 17 04 13.4 -0.2
baz=44
R18A Canyonlands Na 43.52 306 ⇓P P 17 04 13.9 +0.1
baz=44
V17A Tonalea, Kykot 43.72 301 ⇓P P 17 04 15.9 +0.5
baz=44,SNR=12
K19A Absolon Red Bu 43.90 312 ⇓P P 17 04 15.6 -1.3
baz=44,SNR=6.7
Z16A Peralta Trail, 43.94 298 ⇓P P 17 04 17.5 +0.2
baz=44,SNR=8.5
Y16A Circle Bar Ran 44.04 299 ⇓P P 17 04 18.7 +0.6
baz=44,SNR=7.1
P18A Preston Nutter 44.06 307 ⇑P P 17 04 16.2 -2.0
baz=44,SNR=5.6
X16A Lo Mia Camp, P 44.07 300 ⇑P P 17 04 19.4 +1.0
baz=44
116A Eloy 44.09 297 ⇓P P 17 04 18.4 -0.2
baz=44
R17A Hanksville Air 44.15 305 ⇑P P 17 04 19.3 +0.4
baz=44
WUAZ Wupatki 44.17 301 ⇓P P 17 04 19.3 +0.2
baz=44,SNR=6.3
W16A Flagstaff 44.24 301 ⇓P P 17 04 20.9 +1.2
baz=44,SNR=5.5
BW06 Boulder Array 44.38 312 ⇑P P 17 04 19.8 -1.0
baz=44,SNR=11
PDAR Pinedale Array 44.38 312 P P 17 04 21.4 +0.6
7.6nm,1.0s,mb4.4,baz=105,slow=9.3,SNR=24
PDAR LR LR 17 22 28.6
comp=Z,225nm,18.3s,MS4.1,baz=304,slow=36
P17A Butcher Ranch, 44.40 307 ⇓P P 17 04 19.5 -1.4
baz=44
L18A Fontenelle, Gr 44.49 310 ⇑P P 17 04 20.0 -1.6
baz=44
O17A Robinson Place 44.56 308 ⇑P P 17 04 22.0 -0.2
baz=44,SNR=6.6
K18A Toltan Ranch, 44.69 311 ⇑P P 17 04 23.5 +0.4
baz=45,SNR=7.4
X15A Humboldt 44.73 300 ⇓P P 17 04 23.8 +0.1
baz=45,SNR=5.3
Y15A Casa Rosa Ranc 44.75 299 ⇓P P 17 04 24.6 +0.8
baz=45,SNR=6.6
M17A Scullys Gap (B 44.82 310 ⇓P P 17 04 22.7 -1.5
baz=45,SNR=6.8
J18A Kendall Valley 44.84 312 ⇑P P 17 04 24.1 -0.3
baz=45,SNR=12
I18A Diamond G Ranc 44.85 313 ⇓P P 17 04 24.1 -0.3
baz=45
RLMT Red Lodge 44.93 315 ⇓P P 17 04 23.8 -1.2
baz=45,SNR=6.8
RLMT Red Lodge 44.93 315 eP P 17 04 25.2 +0.2
14nm,1.1s,mb4.8
114A Black Gap (USA 45.10 297 ⇑P P 17 04 27.0 +0.4
baz=45,SNR=6.3
L17A Cokeville 45.13 310 ⇑P P 17 04 26.1 -0.6
baz=45
FFC Flin Flon 45.23 330 eP P 17 04 24.6 -2.6
6.3nm,1.0s,mb4.5
FFC e 17 04 35.5
X14A Yava 45.27 299 ⇓P P 17 04 28.4 +0.5
baz=45,SNR=6.6
S15A Panguitch 45.29 304 ⇑P P 17 04 27.9 -0.2
baz=45
Y14A Wickenburg 45.31 299 ⇑P P 17 04 29.0 +0.8
baz=45,SNR=6.3
K17A Gardner Place, 45.34 311 ⇓P P 17 04 27.9 -0.5
baz=45
LOHW Long Hollow 45.36 313 eP P 17 04 28.9 +0.4
17nm,1.4s,mb4.8
J17A Brown Place, J 45.37 312 ⇓P P 17 04 29.4 +0.8
baz=45
REDW Red Top Meadow 45.47 312 eP P 17 04 29.7 +0.4
19nm,1.2s,mb4.9
M16A Huntsville 45.48 309 ⇓P P 17 04 28.3 -1.2
baz=46,SNR=5.9
F18A Big Timber 45.49 316 ⇑P P 17 04 29.8 +0.3
baz=45,SNR=11
W14A Seligman 45.51 300 ⇓P P 17 04 29.8 -0.1
baz=46,SNR=5.6
L16A Fish Haven 45.51 310 ⇓P P 17 04 29.6 -0.2
baz=46
TPAW Teton Pass 45.57 312 eP P 17 04 30.6 +0.5
5.6nm,0.8s,mb4.7
IMW Indian Meadow 45.68 313 eP P 17 04 30.9 -0.1
3.3nm,0.8s,mb4.4
U14A Mt Trumbull 45.75 302 ⇓P P 17 04 31.0 -0.7
baz=46
K16A Soda Springs 45.84 311 ⇑P P 17 04 33.0 +0.7
baz=46
113A Mohawk Valley, 45.84 297 ⇓P P 17 04 32.1 -0.4
baz=46
E18A Harlowton 45.85 317 ⇓P P 17 04 32.5 +0.2
baz=46,SNR=6.9
D18A Linhart Farms, 46.00 318 ⇓P P 17 04 33.9 +0.5
baz=46,SNR=5.5
CPUP Villa Florida 46.09 171 P P 17 04 31.8 -2.6
4.1nm,0.6s,mb4.6,baz=339,slow=7.1,SNR=18
CPUP LR LR 17 26 10.2
comp=Z,154nm,18.8s,MS4.0,baz=166,slow=39
F17A Fitzpatrick Pl 46.11 316 ⇑P P 17 04 35.3 +0.9
baz=46,SNR=10.0
DUG Dugway 46.11 307 ⇓P P 17 04 34.4 -0.1
baz=46
DUG Dugway 46.11 307 eP P 17 04 34.8 +0.3
13nm,1.3s,mb4.8
H16A Russell Place, 46.13 314 ⇑P P 17 04 35.8 +1.2
baz=46
W13A Hualapai Mount 46.15 300 ⇓P P 17 04 35.4 +0.5
baz=46
P14A Drum Mountains 46.19 306 ⇓P P 17 04 35.2 +0.1
baz=46,SNR=5.8
L15A Malad City 46.20 310 ⇑P P 17 04 35.1 -0.1
baz=46,SNR=15
Q14A Sevier Lake (B 46.23 306 ⇑P P 17 04 36.5 +1.0
baz=46,SNR=7.2
EGMT Eagleton 46.27 319 ⇑P P 17 04 36.7 +1.1
baz=46
QLMT Earthquake Lak 46.29 314 eP P 17 04 37.3 +1.5
16nm,1.0s,mb5.0
V13A Grand Canyon W 46.32 301 ⇓P P 17 04 36.8 +0.6
baz=46,SNR=8.7
U13A Pakoon Wash 46.37 302 ⇑P P 17 04 37.4 +0.7
baz=46,SNR=8.9
B18A Beardsley Farm 46.42 319 ⇑P P 17 04 37.2 +0.4
baz=46
E17A Martinsdale 46.42 316 ⇓P P 17 04 37.5 +0.6
baz=46,SNR=5.5
BGU Big Grassy Mou 46.43 308 eP P 17 04 37.4 +0.4
6.3nm,0.9s,mb4.7
S13A Holt Ranch, En 46.45 304 ⇓P P 17 04 38.0 +0.8
baz=46
K15A Arbon 46.47 311 ⇓P P 17 04 36.8 -0.5
baz=46
N14A Grayback Hills 46.53 308 ⇓P P 17 04 37.9 +0.2
baz=46,SNR=10
D17A Six Diamond Ra 46.55 317 ⇓P P 17 04 37.8 0.0
baz=46,SNR=8.4
J15A Blackfoot 46.59 312 ⇑P P 17 04 38.3 +0.1
baz=46,SNR=8.1
R13A O'Grain Ranch, 46.63 304 ⇑P P 17 04 38.3 -0.3
baz=47
G16A Moss Hill, Enn 46.66 314 ⇓P P 17 04 39.7 +1.0
baz=47,SNR=5.3
A18A Metzger Ranch, 46.66 320 ⇑P P 17 04 39.0 +0.3
baz=47,SNR=10
BOZ Bozeman (W) 46.67 315 ⇓P P 17 04 38.0 -0.8
baz=47,SNR=8.6
BOZ Bozeman (W) 46.67 315 eP P 17 04 38.9 +0.1
8.7nm,1.3s,mb4.7
F16A Kennard Place, 46.71 315 ⇓P P 17 04 39.8 +0.7
baz=47,SNR=5.9
I15A Monteview 46.78 313 ⇑P P 17 04 40.6 +0.9
baz=47,SNR=8.0
M14A Sheep Mountain 46.79 309 ⇓P P 17 04 37.8 -1.9
baz=47,SNR=12
L14A Malta 46.83 310 ⇓P P 17 04 40.5 +0.5
baz=47,SNR=5.3
P13A Bates Ranch, G 46.88 306 ⇑P P 17 04 41.0 +0.4
baz=47
K14A Jones Ranch, D 46.90 310 ⇓P P 17 04 41.1 +0.5
baz=47,SNR=6.1
V12A Nelson 47.00 301 ⇑P P 17 04 42.0 +0.5
baz=47,SNR=7.7
B17A L&G Farms, Che 47.02 319 ⇑P P 17 04 42.5 +1.0
baz=47
H15A Lima 47.06 313 ⇓P P 17 04 42.3 +0.5
baz=47,SNR=8.2
D16A Dana Ranch, Ca 47.06 317 ⇓P P 17 04 42.7 +0.8
baz=47
IRM Iron Mountain 47.10 299 ⇓P P 17 04 41.8 -0.6
baz=47,SNR=8.4
G15A Dillon 47.11 314 ⇓P P 17 04 42.5 +0.3
baz=47
LDFC Landfair 47.15 300 eP P 17 04 44.3 +1.6
32nm,1.1s,mb5.4
R12A Pony Springs, 47.15 305 ⇑P P 17 04 42.3 -0.3
baz=47
A17A Triple J Farms 47.20 319 ⇑P P 17 04 43.3 +0.5
baz=47,SNR=8.0
DLMT Dillon 47.24 314 eP P 17 04 43.5 +0.2
21nm,1.2s,mb5.1
MCMT McKenzie Canyo 47.26 314 eP P 17 04 44.1 +0.7
2.6nm,0.9s,mb4.4
LRM Limekiln Ridge 47.27 315 eP P 17 04 44.4 +0.9
53nm,1.3s,mb5.5
F15A Butte 47.31 315 ⇓P P 17 04 44.4 +0.6
baz=47,SNR=6.6
BC3 Big Chuckawall 47.32 298 ⇑P P 17 04 44.6 +0.6
baz=47
J14A Carey 47.33 311 ⇓P P 17 04 44.8 +0.8
baz=47,SNR=23
L13A Double Diamond 47.35 310 ⇑P P 17 04 44.8 +0.7
baz=47
M13A Montello 47.36 309 ⇑P P 17 04 45.0 +0.7
baz=47
M13A Montello 47.36 309 eP P 17 04 44.9 +0.7
8.8nm,1.0s,mb4.8
I14A Mackay 47.44 312 ⇑P P 17 04 45.6 +0.8
baz=47,SNR=12
C16A Fuhringer Ranc 47.44 318 ⇑P P 17 04 45.2 +0.4
baz=47,SNR=5.9
V11A Goodsprings 47.48 301 ⇓P P 17 04 45.5 +0.2
baz=48
H14A Leadore 47.56 313 ⇓P P 17 04 46.4 +0.7
baz=48,SNR=9.3
P12A McGill 47.56 306 ⇓P P 17 04 45.4 -0.5
baz=48
GMRC Granite Mounta 47.57 300 ⇑P P 17 04 46.1 +0.1
baz=48
K13A Stover Farm, H 47.58 310 ⇑P P 17 04 46.3 +0.3
baz=48,SNR=5.8
O12A Currie 47.58 307 ⇑P P 17 04 46.4 +0.4
baz=48
E15A Deer Lodge 47.58 316 ⇑P P 17 04 46.1 +0.2
baz=48
B16A M & M Farms, S 47.63 318 ⇑P P 17 04 45.8 -0.5
baz=48
D15A Lincoln 47.69 317 ⇑P P 17 04 47.0 +0.2
baz=48,SNR=7.3
J13A Cove Ranch, Pi 47.81 311 ⇓P P 17 04 48.6 +0.8
baz=48,SNR=6.7
TUQ Turquoise Moun 47.84 300 ⇑P P 17 04 48.6 +0.4
baz=48,SNR=9.8
F14A Wisdom 47.89 315 ⇑P P 17 04 49.0 +0.7
baz=48
I13A Wildhorse Cree 47.90 312 ⇑P P 17 04 49.0 +0.6
baz=48,SNR=17
N12A Clover Valley, 47.90 308 ⇑P P 17 04 49.1 +0.6
baz=48,SNR=10.0
N12A Clover Valley, 47.90 308 eP P 17 04 48.5 0.0
10nm,0.8s,mb5.0
R11A Troy Canyon, C 47.91 304 ⇓P P 17 04 48.4 -0.2
baz=48
M12A Wells 47.92 309 ⇓P P 17 04 48.9 +0.3
baz=48,SNR=11
C15A Salmond Ranch, 47.98 317 ⇓P P 17 04 49.4 +0.4
baz=48
HLID Hailey 48.02 311 ⇑P P 17 04 49.7 +0.4
baz=48,SNR=7.3
HLID Hailey 48.02 311 eP P 17 04 49.7 +0.3
9.4nm,1.3s,mb4.8
ELK Elko 48.03 308 P P 17 04 49.4 -0.1
2.6nm,0.7s,mb4.5,baz=101,slow=5.6,SNR=11
Q11A Duckwater 48.04 305 ⇑P P 17 04 49.8 +0.2
baz=48,SNR=5.8
B15A Bradely Ranch, 48.13 318 ⇑P P 17 04 49.5 -0.6
baz=48,SNR=8.2
CHMT Chamberlain Mo 48.13 316 eP P 17 04 49.4 -0.7
6.8nm,1.2s,mb4.7
H13A Challis 48.15 313 ⇓P P 17 04 50.5 +0.1
baz=48,SNR=11
K12A Draper Farm, C 48.16 310 ⇓P P 17 04 50.3 -0.1
baz=48
O11A Cowboy Ranch, 48.24 307 ⇓P P 17 04 51.4 +0.3
baz=48,SNR=19
U10A Ash Meadows, A 48.27 302 ⇑P P 17 04 50.6 -0.8
baz=48
SLMT Seeley Lake 48.39 316 eP P 17 04 52.7 +0.5
17nm,1.3s,mb5.0
J12A Stokes Ranch, 48.44 311 ⇑P P 17 04 52.7 +0.1
baz=48,SNR=7.3
A15A Johnson Ranch, 48.46 319 ⇑P P 17 04 52.2 -0.5
baz=48,SNR=11
R10A Warm Springs 48.46 304 ⇑P P 17 04 52.7 -0.1
baz=48
F13A Darby 48.53 314 ⇑P P 17 04 53.8 +0.6
baz=48
H12A Diamond D Ranc 48.57 313 ⇓P P 17 04 52.1 -1.4
baz=48
M11A Holland Ranch, 48.57 308 ⇑P P 17 04 53.9 +0.2
baz=48,SNR=8.1
I12A Atlanta 48.58 312 ⇑P P 17 04 53.9 +0.2
baz=48,SNR=7.5
B14A Marquette Ranc 48.59 318 ⇑P P 17 04 54.0 +0.3
baz=48
E13A Victor 48.61 315 ⇓P P 17 04 53.8 -0.1
baz=48,SNR=11
Q10A Clear Creek Ra 48.61 305 ⇓P P 17 04 54.0 0.0
baz=49
S10A Tonopah Range, 48.65 304 ⇓P P 17 04 54.6 +0.3
baz=49,SNR=13
L11A Cat Creek Ranc 48.68 309 ⇓P P 17 04 54.0 -0.5
baz=49
C14A Swan Lake 48.71 317 ⇑P P 17 04 54.6 0.0
baz=49
SWMT Swartz Lake 48.80 317 eP P 17 04 55.5 +0.3
6.4nm,0.9s,mb4.7
A14A Double T Ranch 48.89 319 ⇓P P 17 04 55.2 -0.7
baz=49,SNR=8.1
D13A Huson 48.97 316 ⇓P P 17 04 56.5 -0.1
baz=49,SNR=5.5
MFID Camas Ranch 48.99 311 ⇑P P 17 04 55.1 -1.7
baz=49,SNR=7.6
K11A Parker Ranch, 49.00 310 ⇑P P 17 04 56.2 -0.7
baz=49
G12A Big Creek, Yel 49.03 313 ⇑P P 17 04 57.0 -0.2
baz=49
F12A Elk City 49.14 314 P P 17 04 58.4 +0.5
baz=49,SNR=5.3
BFSC Mount Baldy Ra 49.18 299 ⇑P P 17 04 57.8 -0.7
baz=49
L10A Juniper Basin 49.19 309 ⇓P P 17 04 58.5 +0.1
baz=49,SNR=8.0
I11A Placerville 49.19 312 ⇑P P 17 04 58.5 +0.1
baz=49,SNR=5.4
C13A Hot Springs 49.22 317 ⇓P P 17 04 58.1 -0.4
baz=49
BSMT Bassoo Peak 49.41 317 eP P 17 04 59.7 -0.2
11nm,1.2s,mb4.8
H11A Donnelly 49.41 313 ⇓P P 17 04 58.7 -1.3
baz=49
E12A Beaver Dam Sad 49.52 315 ⇑P P 17 05 01.0 +0.1
baz=50
D12A Red Ives Fores 49.55 316 ⇓P P 17 05 00.6 -0.4
baz=50
K10A MacKenzie Ranc 49.61 310 ⇑P P 17 05 01.5 -0.1
baz=50,SNR=6.7
G11A Walters Elk Ra 49.74 313 ⇑P P 17 05 01.5 -1.1
baz=50
F11A Grangeville 49.78 314 ⇑P P 17 05 01.9 -0.9
baz=50,SNR=8.6
H10A Noah's Angus R 49.89 312 ⇑P P 17 05 02.9 -0.8
baz=50
NVAR Mina Array Bea 50.04 304 P P 17 05 06.1 +1.1
10nm,1.1s,mb4.7,baz=102,slow=6.3,SNR=19
NVAR Mina Array Bea 50.04 304 P P 17 05 06.1 +1.1
D11A Klaveano Farm, 50.20 316 ⇑P P 17 05 05.9 -0.1
baz=50,SNR=5.5
EDM Edmonton 50.36 324 eP P 17 05 06.4 -0.7
H09A Durkee 50.55 312 ⇓P P 17 05 08.3 -0.4
baz=50
B11A Sandpoint 50.59 317 ⇑P P 17 05 08.6 -0.3
baz=50
G09A Cove 50.76 313 ⇑P P 17 05 09.5 -0.8
baz=51
J08A Circle Bar Ran 50.87 310 ⇑P P 17 05 10.1 -1.0
baz=51,SNR=7.9
NEW Newport 51.02 317 eP P 17 05 11.8 -0.4
13nm,0.8s,mb4.9
H08A Prairie City 51.22 312 ⇓P P 17 05 13.7 -0.1
baz=51,SNR=9.9
G08A Pilot Rock 51.57 313 ⇑P P 17 05 15.9 -0.5
baz=52
B09A Rice 51.73 317 ⇑P P 17 05 15.6 -1.9
baz=52
I07A Izee 51.73 311 ⇓P P 17 05 16.1 -1.5
baz=52,SNR=5.7
OD2 Odessa Site #2 51.85 315 eP P 17 05 18.2 -0.2
25nm,1.1s,mb5.0
A07A Ashnola River, 53.31 317 ⇓P P 17 05 27.9 -1.3
baz=53
YBH Yreka Blue Hor 53.75 308 P P 17 05 31.5 -1.0
4.1nm,0.7s,mb4.5,baz=110,slow=6.2,SNR=10
MDT Midelt 54.65 63 P P 17 05 39.4 +0.1
5.8nm,1.0s,mb4.5,baz=275,slow=5.2,SNR=5.6
YKA Yellowknife Ar 54.93 334 P P 17 05 39.7 -1.1
8.3nm,0.8s,mb4.8,baz=109,slow=7.3,SNR=24
YKA Yellowknife Ar 54.93 334 P P 17 05 39.7 -1.1
SUMG Summit 55.10 9 eP P 17 05 42.9 +1.0
48nm,1.1s,mb5.4
ESDC Sonseca Array 55.24 55 P P 17 05 44.4 +0.9

4.6nm,1.0s,mb4.5,baz=274,slow=6.7,SNR=8.9
ESDC LR LR 17 23 57.7
comp=Z,117nm,19.2s,MS4.0,baz=200,slow=30
SJPF Ste Jean 57.48 51 *eP* **P 17 06 00.2 +0.8**
39nm,1.3s,mb5.0
SJPF Ste Jean 57.48 51 *eP* **P 17 06 00.2 +0.8**
19nm,1.3s,mb5.0
EKA Eskdalemuir Ar 57.88 36 P **P 17 06 02.1 +0.1**
6.6nm,1.1s,mb4.6,baz=264,slow=4.7,SNR=7.2
GRR Gorron 58.16 45 *eP* **P 17 06 05.5 +1.4**
FLN La Foliniere 58.45 44 *eP* **P 17 06 06.5 +0.4**
FLN *e*MLR MLR
comp=Z,187nm,17.2s,MS4.0
FLN La Foliniere 58.45 44 *eP* **P 17 06 06.5 +0.4**
FLN LR LR
comp=Z,190nm,17.3s,MS4.3
MFF Saint Martin d 58.48 47 *eP* **P 17 06 06.9 +0.6**
comp=Z,52nm,1.4s,mb5.1
MFF Saint Martin d 58.48 47 *eP* **P 17 06 06.9 +0.6**
comp=Z,26nm,1.4s,mb5.1
EPF Esparros 58.62 51 *eP* **P 17 06 08.1 +0.7**
comp=Z,16nm,0.8s,mb4.8
EPF Esparros 58.62 51 *eP* **P 17 06 08.1 +0.7**
comp=Z,7.8nm,0.8s,mb4.8
LDF La Druitiere 58.67 44 *eP* **P 17 06 09.2 +1.6**
comp=Z,44nm,1.3s,mb5.0
LDF La Druitiere 58.67 44 *eP* **P 17 06 09.2 +1.6**
comp=Z,22nm,1.3s,mb5.0
LFF La Frestale 58.99 49 *eP* **P 17 06 10.2 +0.3**
LIC Lamto 59.12 94 *eP* **P 17 06 08.7 -2.6**
comp=Z,38nm,1.2s,mb5.0
LIC *e*MLR MLR
comp=Z,261nm,20.2s,MS4.0
LIC Lamto 59.12 94 *eP* **P 17 06 08.7 -2.6**
comp=Z,19nm,1.2s,mb5.0
LIC LR LR
comp=Z,130nm,20.3s,MS4.0
DBIC Dimbokro 59.14 94 P **P 17 06 11.2 -0.3**
comp=Z,12nm,1.0s,mb4.9,baz=275,slow=7.9,SNR=5.9
DBIC LR LR 17 26 46.2
comp=Z,204nm,20.1s,MS4.2,baz=268,slow=31
TCF Toulx Ste Croi 60.08 47 *eP* **P 17 06 17.5 +0.1**
PLCA Paso Flores 60.21 185 P **P 17 06 16.9 -1.2**
comp=Z,2.2nm,0.8s,mb4.3,baz=52,slow=6.1,SNR=5.5
PLCA LR LR 17 32 14.3
comp=Z,193nm,20.2s,MS4.2,baz=40,slow=36
BGF Bois d'Agland 60.53 47 *eP* **P 17 06 21.9 +1.4**
DLBC Dease Lake 60.83 327 *eP* **P 17 06 22.9 +0.6**
DLBC *e* 17 06 34.0
AVF Avril sur Loir 60.89 47 *eP* **P 17 06 25.1 +2.1**
comp=Z,24nm,1.1s,mb4.9
AVF Avril sur Loir 60.89 47 *eP* **P 17 06 25.1 +2.1**
comp=Z,12nm,1.1s,mb4.9
SSF Saint Saulge 61.01 46 *eP* **P 17 06 24.7 +1.0**
comp=Z,28nm,1.3s,mb4.9
SSF Saint Saulge 61.01 46 *eP* **P 17 06 24.7 +1.0**
comp=Z,14nm,1.3s,mb4.9
SMF Signal de Mont 61.22 47 *eP* **P 17 06 27.5 +2.3**
comp=Z,27nm,1.3s,mb4.9
SMF Signal de Mont 61.22 47 *eP* **P 17 06 27.5 +2.3**
comp=Z,14nm,1.3s,mb4.9
LOR Lormes 61.26 46 *eP* **P 17 06 26.1 +0.7**
LOR *e*MLR MLR
comp=Z,149nm,17.2s,MS3.9
LOR Lormes 61.26 46 *eP* **P 17 06 26.1 +0.7**
LOR LR LR
comp=Z,150nm,17.3s,MS4.2
GIVF Givet 62.01 43 *eP* **P 17 06 32.6 +2.2**
MEZF Maizieres J'vi 62.10 45 *eP* **P 17 06 31.2 +0.1**
comp=Z,26nm,0.8s,mb5.2
MEZF Maizieres J'vi 62.10 45 *eP* **P 17 06 31.2 +0.1**
comp=Z,26nm,0.8s,mb5.5
CABF La Chapelle 62.77 47 *eP* **P 17 06 37.1 +1.5**
HAU Haudompre 62.95 45 *eP* **P 17 06 38.9 +2.1**
HAU *e*MLR MLR
comp=Z,150nm,17.5s,MS3.9
HAU Haudompre 62.95 45 *eP* **P 17 06 38.9 +2.1**
HAU LR LR
comp=Z,150nm,17.5s,MS4.2
HINF Hinteralfeld 63.29 46 *eP* **P 17 06 40.8 +1.7**
TORD Torodi Ar. Bea 63.44 85 P **P 17 06 39.9 -0.7**
comp=Z,14nm,1.1s,mb5.0,baz=291,slow=6.1,SNR=21
TORD LR LR 17 33 03.0
comp=Z,211nm,18.3s,MS4.3,baz=275,slow=35
CDF Champ du Feu 63.58 45 *eP* **P 17 06 40.6 -0.3**
INK Inuvik 64.32 337 *eP* **P 17 06 43.8 -1.6**
comp=Z,13nm,1.0s,mb5.1
KEST Kesra 65.94 59 LR LR 17 32 11.3
comp=Z,56nm,18.4s,MS3.8,baz=87,slow=33
DAWY Dawson 66.06 332 *eP* **P 17 06 56.5 -0.3**
GRF Grafenberg Arr 66.14 43 *eP* **P 17 06 57.3 -0.3**
comp=Z,13nm,1.5s,mb4.9
GRF *e*L 17 34 15.6
comp=Z,182nm,18.1s
NB2 NORSAR Subarra 66.17 31 P **P 17 06 57.9 +0.3**
comp=Z,9.3nm,1.2s,mb4.9,baz=270,slow=6.5
NOA NORSAR Array B 66.17 31 P **P 17 06 59.1 +1.5**
comp=Z,4.2nm,1.0s,mb4.6,baz=268,slow=6.5,SNR=3.6
NOA LR LR 17 34 53.2
comp=Z,250nm,18.2s,MS4.5,baz=270,slow=35
EGAK Eagle 66.87 333 *eP* **P 17 07 01.6 -0.4**
comp=Z,6.4nm,0.7s,mb5.0
KHC Kasperske Hory 67.71 44 *ep*P pP 17 07 09.4 +1.5
KHC AMS AMS 17 35 20.0
comp=Z,200nm,15.2s
GERES GERESS Array B 67.82 44 P **P 17 07 06.6 -1.7**
comp=Z,1.1nm,0.8s,mb4.2,baz=268,slow=7.5,SNR=8.9
GERES LR LR 17 35 21.8
comp=Z,96nm,18.2s,MS4.1,baz=265,slow=35
MENT Mentasta 67.95 331 *eP* **P 17 07 09.3 +0.4**
PVCC Panska Ves 68.25 42 AMS AMS 17 36 50.0
comp=Z,300nm,16.5s
PRU Pruhonice 68.27 43 *ep*P pP 17 07 11.4 0.0
PRU AMS AMS 17 39 10.0
comp=Z,200nm,16.6s
KBS Kingsbay 68.36 12 *eP* **P 17 07 11.7 +0.5**
comp=Z,13nm,1.1s,mb5.1
PAX Paxson 68.75 331 *eP* **P 17 07 13.8 -0.1**
comp=Z,13nm,1.3s,mb5.0
TREC Trest 68.95 44 *ep*P pP 17 07 15.2 -0.5
TREC AMS AMS 17 36 30.0
comp=Z,200nm,18.0s
UPC Upice 69.16 42 *ep*P pP 17 07 16.0 -1.0
DPC Dobruska-Polom 69.38 42 *ep*P pP 17 07 17.8 -0.5
DPC AMS AMS 17 37 40.0
comp=Z,300nm,14.6s
VRAC Vranov 69.67 44 P **P 17 07 19.8 0.0**
comp=Z,1.3nm,0.6s,mb4.3,baz=280,slow=8.1,SNR=3.5
COLA College 69.73 333 *eP* **P 17 07 18.7 -1.2**
comp=Z,14nm,0.8s,mb5.1
COLD Coldfoot 70.56 336 *eP* **P 17 07 24.1 -0.9**
comp=Z,3.9nm,0.9s,mb4.5
OKC Ostrava-Krasne 70.61 43 AMS AMS 17 38 20.0
comp=Z,300nm,20.1s
BPAW Bear Paw Mtn. 71.14 332 *eP* **P 17 07 27.3 -1.3**
comp=Z,15nm,0.9s,mb5.1
KTH Kantishna Hill 71.17 332 *eP* **P 17 07 27.9 -0.9**
comp=Z,7μm,1.3s
CHUM Lake Minchumin 71.75 332 *eP* **P 17 07 30.8 -1.5**
comp=Z,22nm,1.1s,mb5.2
PPLA Purkeypile 71.82 331 *eP* **P 17 07 30.7 -2.0**
comp=Z,46nm,1.8s,mb5.3
ARCES ARCESS Array B 71.86 22 P **P 17 07 32.4 -0.4**
comp=Z,8.4nm,1.0s,mb4.8,baz=290,slow=7.6,SNR=7.4
RSO Redoubt South 72.42 329 *eP* **P 17 07 35.2 -1.1**
FINES FINESS Array B 73.30 30 P **P 17 07 39.8 -1.7**
comp=Z,5.8nm,1.1s,mb4.6,baz=245,slow=4.0,SNR=7.3
FINES LR LR 17 38 40.7
comp=Z,149nm,18.7s,MS4.3,baz=309,slow=35
SVW2 Sparrevohn 73.68 330 *eP* **P 17 07 42.7 -1.1**
BUR08 Bucovina Ar. S 75.59 44 *eP* **P 17 07 56.0 +0.9**
AKASG Malin Array Be 77.40 41 P **P 17 08 03.3 -2.1**
comp=Z,0.2nm,0.2s,mb3.8,baz=275,slow=4.3,SNR=7.2
AKASG LR LR 17 42 19.8
comp=Z,210nm,18.2s,MS4.5,baz=265,slow=36
BRTR Keskin Array B 83.72 50 P **P 17 08 39.2 -0.3**
comp=Z,3.6nm,1.0s,mb4.6,baz=289,slow=3.8,SNR=13
BRTR LR LR 17 41 20.5
comp=Z,46nm,20.5s,MS3.8,baz=120,slow=32
BILL Bilibino 85.24 343 *eP* **P 17 08 46.1 -0.5**
comp=Z,10nm,1.1s,mb5.0
MMAI Mount Meron Ar 87.43 56 P **P 17 08 58.4 +0.3**
comp=Z,10.0nm,1.0s,mb5.0,baz=305,slow=40,SNR=2.9
MMAI LR LR 17 45 40.3
comp=Z,26nm,18.3s,MS3.7,baz=215,slow=34
TIXI Tiksi 88.61 356 *eP* **P 17 09 02.1 -0.9**
comp=Z,14nm,1.3s,mb5.0

PETK Petropavlovsk- 99.03 336 LR LR 17 56 36.1
comp=Z,83nm,20.8s,MS4.2,baz=222,slow=37
CN2 Changchun 116.35 352 *e*PKP PKPdf 17 14 54.4 +0.2
CN2 AMB AMB
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,200nm,16.0s,MS5.0
CN2 LR LR
comp=E,200nm,16.0s,MS5.0
CN2 LR LR
comp=Z,200nm,19.0s,MS4.8
HHC Hu-ho-hao-te 119.83 4 *e*PKP PKPdf 17 15 00.1 -0.9
HHC PP PP 17 16 27.1 +4.2
HHC PKS 17 18 35.3
HHC SKS SKSdf 17 22 07.2 -7.2
HHC SKKS SKKSac 17 23 16.5 -9.2
HHC AMB AMB
comp=Z,67nm,3.6s
HHC LR LR
comp=N,92nm,19.2s,MS4.6
HHC LR LR
comp=E,100nm,19.2s,MS4.6
HHC LR LR
comp=Z,34nm,21.6s,MS4.0
BJI Beijing 120.75 359 PKP PKPdf 17 15 02.2 -0.6
BJI LR LR
comp=Z,38nm,37.7s,MS3.8
MAW Mawson 121.72 159 PKP PKPdf 17 15 02.9 -0.8
comp=Z,0.6nm,0.3s,baz=310,slow=5.0,SNR=4.7
CD2 Chengdu 128.59 13 *e*PKP PKPdf 17 15 16.2 -1.9
CD2 sPKP 17 15 30.0
CD2 PP PP 17 17 26.2 +4.3
CD2 PKS 17 18 51.4
CD2 SKS SKSdf 17 22 22.7 -8.6
CD2 SKKS SKKSac 17 24 12.5 -10
CD2 SS SS 17 34 35.8 -3.1
CD2 AMB AMB
comp=Z,100nm,10.2s
CD2 LR LR
comp=N,160nm,16.2s
CD2 LR LR
comp=Z,150nm,18.2s,MS4.7
NJ2 Nanjing 128.63 356 *e*PKP PKPdf 17 15 12.6 -5.5
CMAR Chiang Mai Arr 138.88 24 PKP PKPdf 17 15 36.5 -1.2
comp=Z,1.0nm,0.9s,baz=308,slow=2.6,SNR=6.5
WRA Warramunga Arr 162.33 265 PKP PKPdf 17 16 11.3 -1.6
comp=Z,2.7nm,0.9s,baz=44,slow=0.4,SNR=13
WRA PKPab PKPab 17 16 58.2 -2.0
comp=Z,3.2nm,0.7s,baz=84,slow=4.1,SNR=19
WRA Warramunga Arr 162.33 265 PKP PKPdf 17 16 11.3 -1.6
WRA PKPab PKPab 17 16 58.2 -2.0
ASAR Alice Springs 162.47 253 PKP PKPdf 17 16 11.6 -1.3
comp=Z,1.9nm,1.0s,baz=165,slow=1.8,SNR=12
ASAR PKPab PKPab 17 16 59.8 -1.0
comp=Z,3.2nm,0.8s,baz=105,slow=4.6,SNR=17

TRN ***07*** *17:07:13.7, 19.°47N×64.°38W, h19km*
NEIC ***07*** *17:07:15.5, 19.°66N×64.°31W, h38km, MD3.5(RSPR), After RSPR.*
RSPR 07 17:07:15.5, 19.°66N×64.°31W, h37km±16km, MD3.5/6, MD3.5/6, 14C-2D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.92**	**181⇑**	*eP*	Pn	17 07 30.4	-1.5
ABV				*eS*	Sn	17 07 42.7	-1.3
ABV	**Anegada**	**0.92**	**181⇑**	*eP*	Pn	17 07 30.4	-1.5
ABV				*eS*	Sn	17 07 42.7	-1.3
TBVI	**Tortola**	**1.27**	**193⇑**	*eP*	Pn	17 07 35.3	-1.4
TBVI				*eS*	Sn	17 07 51.2	-1.4
TBVI	**Tortola**	**1.27**	**193⇑**	*eP*	Pn	17 07 35.3	-1.4
TBVI				*eS*	Sn	17 07 51.2	-1.4
STVI	**Saint Thomas**	**1.43**	**205⇑**	*eP*	Pn	17 07 38.4	-0.6
STVI				*eS*	Sn	17 07 55.3	-1.4
STVI	**Saint Thomas**	**1.43**	**205⇑**	*eP*	Pn	17 07 38.4	-0.6
STVI				*eS*	Sn	17 07 55.3	-1.4
MTP	**Monte Pirata**	**1.95**	**217⇑**	*eP*	Pn	17 07 45.5	-0.6
MTP				*eS*	Sn	17 08 08.6	-0.7
MTP	**Monte Pirata**	**1.95**	**217⇑**	*eP*	Pn	17 07 45.5	-0.6
MTP				*eS*	Sn	17 08 08.6	-0.7
CBYP	**Canovanas**	**2.01**	**227⇓**	*eP*	Pn	17 07 46.1	-0.9
CBYP				*eS*	Sn	17 08 09.7	-1.2
CBYP	**Canovanas**	**2.01**	**227⇓**	*eP*	Pn	17 07 46.1	-0.9
CBYP				*eS*	Sn	17 08 09.7	-1.2
HUMP	**Col San Antoni**	**2.10**	**224⇑**	*eP*	Pn	17 07 47.5	-0.6
HUMP				*eS*	Sn	17 08 11.8	-1.3
HUMP	**Col San Antoni**	**2.10**	**224⇑**	*eP*	Pn	17 07 47.5	-0.6
HUMP				*eS*	Sn	17 08 11.8	-1.3
SJG	**San Juan**	**2.32**	**229⇑**	*eP*	Pn	17 07 50.3	-1.0
SJG	**San Juan**	**2.32**	**229⇑**	*eP*	Pn	17 07 50.3	-1.0
CELP	**Cerrillos**	**2.67**	**234⇑**	*eP*	Pn	17 07 54.9	-1.1
CELP	**Cerrillos**	**2.67**	**234⇑**	*eP*	Pn	17 07 54.9	-1.1

IDC ***07*** *17:20:21.1±0.9, 7.°98S×120.°60E, h0km, mb3.9/7, mb1 4.0/10, mb1mx3.8/24, mbtmp3.9/10, ML3.7/3, MS2.8/1, Ms1 2.8/1, ms1mx2.0/25, Error ellipse: s-maj=46.3km s-min=15.0km az=61.0*
NEIC ***07*** *17:20:22.6±0.5, 8.°05S×120.°50E, h10km, mb3.6/3, Error ellipse: s-maj=20.3km s-min=7.2km az=63.0*
DJA ***07*** *17:20:24, 7.°96S×120.°42E, h7km, MLv4.2/6*
ISCJB ***07*** *17:20:25.1±0.7, 8.°08S±0.°05×120.°49E±0.°07, h47km±9km, mb3.9/7, Error ellipse: s-maj=11.6km s-min=6.8km az=156.7*
ISC 07 17:20:26.5±0.6, 8.°07S±0.°05×120.°51E±0.°07, h38km±9km, n25, σ1§04/27, mb3.9/7, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.60**	**188**	P	**Pn**	**17 20 52.6**	**+0.3**
MMRI	**Maumere**	**1.80**	**108**	P	**Pn**	**17 20 56.9**	**+1.9**
MMRI				S	**Sn**	**17 21 23.9**	**+7.2**
BKSI	**Bulukumba**	**2.76**	**352**	P	**Pn**	**17 21 07.2**	**-1.1**
BKSI				S	**Sn**	**17 21 40.8**	**+0.4**
KAPI	**Kappang**	**3.13**	**346**	Pn	**Pn**	**17 21 11.3**	**-2.1**
	12nm,0.3s,baz=148,slow=9.3,SNR=32						
KAPI				Sn	Sx	17 21 46.6	
	3.4nm,0.3s,baz=190,slow=18,SNR=4.2						
KAPI				LR	LR	17 22 36.5	
	comp=Z,187nm,22.0s,baz=89,slow=44						
KAPI	**Kappang**	**3.13**	**346**	P	**Pn**	**17 21 11.8**	**-1.6**
KHKI	**Kahang-Kahang**	**4.86**	**266**	P	**Pn**	**17 21 37.8**	**+0.6**
TTSI	**Tana Toraja**	**5.04**	**352**	P	**Pn**	**17 21 40.7**	**+1.0**
IGBI	**Denpasar**	**5.36**	**262**	P	**Pn**	**17 21 45.7**	**+1.7**
	0.8nm3μm181nm,0.5s						
KMMI	**Kalianget**	**6.57**	**278**	P	**Pn**	**17 21 59.5**	**-1.1**
FITZ	**Fitzroy Crossi**	**11.15**	**154**	Pn	**Pn**	**17 23 03.5**	**0.0**
	0.3nm,0.3s,baz=159,slow=4.3,SNR=11						
FITZ				Sn	Sx	17 25 04.6	
	0.2nm,0.3s,baz=156,slow=19,SNR=2.4						
MBWA	**Marble Bar**	**13.03**	**183**	*e*Pn	**Pn**	**17 23 27.1**	**-2.2**
MBWA				*e*Sn	Sx	17 25 42.8	
WRA	**Warramunga Arr**	**17.85**	**133**	P	**Pn**	**17 24 31.4**	**-0.6**
	0.3nm,0.3s,baz=304,slow=14,SNR=21						
WRA	**Warramunga Arr**	**17.85**	**133**	P	**Pn**	**17 24 31.4**	**-0.6**
WRAB	**Tennant Creek**	**17.85**	**133**	*e*Pn	**Pn**	**17 24 32.0**	**0.0**
	4.3nm,0.9s						
ASAR	**Alice Springs**	**20.13**	**142**	P	**P**	**17 24 58.7**	**+1.3**
	2.1nm,0.4s,baz=315,slow=10,SNR=118						
NWAO	**Narrogin (SRO)**	**24.92**	**187**	P	**P**	**17 25 46.0**	**-0.1**
	9.2nm,1.0s,mb4.3,baz=350,slow=16,SNR=2.9						
NWAO	**Narrogin (SRO)**	**24.92**	**187**	P	**P**	**17 25 46.0**	**-0.1**
CTA	**Charters Tower**	**27.63**	**118**	P	**P**	**17 26 08.8**	**-2.0**
	1.0nm,0.3s,mb3.9,baz=260,slow=15,SNR=2.7						
STKA	**Stephens Creek**	**30.75**	**143**	P	**P**	**17 26 39.0**	**+0.7**
	1.0nm,0.3s,mb4.1,baz=323,slow=16,SNR=7.7						
STKA	**Stephens Creek**	**30.75**	**143**	*e*Pn	**P**	**17 26 38.6**	**+0.3**
	0.3nm,0.3s,mb3.6						
CM31	**Chiang Mai Arr**	**33.88**	**321**	P	**P**	**17 27 06.5**	**+0.6**
	1.0nm,0.6s,mb3.9						
MK31	**Makanchi Array**	**64.33**	**332**	*e*P	**P**	**17 30 58.3**	**0.0**
MKAR	**Makanchi Array**	**64.33**	**332**	P	**P**	**17 30 58.6**	**+0.4**
	0.5nm,0.6s,mb3.8,baz=97,slow=9.9,SNR=7.2						
ZALV	**Zalesovo Beam**	**68.72**	**338**	P	**P**	**17 31 25.7**	**-0.5**
	0.8nm,0.5s,mb3.9,baz=122,slow=5.9,SNR=4.2						
BVAR	**Borovoye Array**	**74.20**	**331**	P	**P**	**17 31 59.6**	**+0.4**
	0.3nm,0.6s,mb3.4,baz=116,slow=9.8,SNR=3.9						

IDC ***07*** *17:24:36.3±1.3, 6.°12N×124.°49E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.3/22, mbtmp3.5/4, Error ellipse: s-maj=27.2km s-min=14.6km az=122.0*
ISCJB ***07*** *17:24:38.9±1.4, 7.°29N±0.°08×127.°0E±0.°1, h64km±16km, mb3.4/4, Error ellipse: s-maj=19.0km s-min=13.4km az=16.0*
ISC 07 17:24:39.9±1.6, 7.°28N±0.°08×127.°0E±0.°1, h52km±19km, n11, σ0§75/16, mb3.4/4, 3C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.82**	**246**	*eP*	**Pn**	**17 24 53.4**	**-1.9**
MATI				*eS*	**Sn**	**17 24 59.1**	**-7.5**
BIPH	**Bislig**	**1.11**	**324⇑**	*eP*	**Pn**	**17 24 60.0**	**+0.9**
BIPH				*eS*	**Sn**	**17 25 12.6**	**-0.8**
DAV	**Davao City (W)**	**1.44**	**262**	Pg	**Pn**	**17 25 04.1**	**+0.5**
	58nm,0.3s,baz=275,slow=11,SNR=7.1						
DAV				Lg		17 25 21.4	
	126nm,0.3s,baz=169,slow=21,SNR=22						
DMPH	**Davao City--Mi**	**1.51**	**263⇑**	*i*P	**Pn**	**17 25 04.7**	**+0.2**
DMPH				*i* S	**Sn**	**17 25 22.9**	**-0.2**
KCP	**Kidapawan**	**1.93**	**262⇑**	*i*P	**Pn**	**17 25 11.4**	**+1.1**
KCP				*i* S	**Sn**	**17 25 33.4**	**0.0**
BUKP	**Musuan**	**2.03**	**287**	*eP*	**Pn**	**17 25 12.0**	**+0.4**
BUKP				*e*S	**Sn**	**17 25 28.8**	**-7.0**
BUTP	**Butuan**	**2.17**	**321**	*eP*	**Pn**	**17 25 17.7**	**+4.1**
WRA	**Warramunga Arr**	**27.99**	**165**	P	**P**	**17 30 25.9**	**0.0**
	0.2nm,0.4s,mb3.1,baz=341,slow=11,SNR=4.8						
ASAR	**Alice Springs**	**31.48**	**168**	P	**P**	**17 30 57.0**	**+0.3**
	0.3nm,0.4s,mb3.5,baz=336,slow=7.4,SNR=12						
STKA	**Stephens Creek**	**41.35**	**161**	P	**P**	**17 32 20.4**	**-0.3**
	2.2nm,1.0s,mb3.7,baz=332,slow=17,SNR=2.4						
MKAR	**Makanchi Array**	**54.85**	**324**	P	**P**	**17 34 04.3**	**-0.5**
	0.1nm,0.4s,mb3.2,baz=110,slow=6.8,SNR=2.5						

GUC 07 17:43:30.2±0.7, 23.°09S×71.°01W, h34km±11km, MD3.7, ML3.6, 2C-2D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.52**	**92⇓**	*i*P	Pb	17 43 40.7	-0.4
MECH				*i* S	Sb	17 43 47.8	-0.8
MECH				AML	AML	17 43 55.9	
	comp=N,3μm,0.4s						
PECH	**Pedro de Valdi**	**1.33**	**69⇓**	*i*P	Pn	17 43 53.4	+1.0
PECH				*i* S	Sn	17 44 11.3	+2.3
PECH				AML	AML	17 44 14.0	
	comp=N,2μm,0.8s						
MACH	**Maria Elena**	**1.46**	**53⇑**	*i*P	Pn	17 43 55.8	+1.6
MACH				*i* S	Sn	17 44 15.5	+3.3
PB04	**Plate Boundary**	**1.63**	**60⇑**	*i*P	Pn	17 43 49.5	-7.0
PB04				*i* S	Sn	17 44 04.6	-12
PB04				AML	AML	17 44 06.9	
	comp=E,3μm,0.4s						
HMBC	**Humberston**	**2.99**	**21**	AML	AML	17 45 13.5	
	comp=N,273nm,0.5s						
PSGC	**Pisagua**	**3.57**	**14**	AML	AML	17 45 29.7	
	comp=N,74nm,0.5s						

IDC 07 17:59:33.8±3.3, 33.°38S×179.°01W, h0km, mb3.5/2, mb1 3.7/3, mb1mx3.5/16, mbtmp3.5/3, ML3.0/1, Error ellipse: s-maj=73.4km s-min=47.7km az=115.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.80**	**212**	Pn	Pn	18 01 00.7	-0.4
	0.4nm,0.3s,baz=354,slow=13,SNR=7.4						
URZ				Sn	Sn	18 02 01.3	-7.1
	0.3nm,0.3s,baz=270,slow=20,SNR=3.4						
ASAR	**Alice Springs**	**42.19**	**271**	P	P	18 07 28.4	0.0
	0.5nm,1.0s,baz=112,slow=7.7,SNR=5.1						
WRA	**Warramunga Arr**	**43.45**	**276**	P	P	18 07 38.7	0.0
	0.4nm,0.4s,baz=116,slow=7.8,SNR=18						
FINES	**FINESS Array B**	**147.60**	**338**	PKPbc	PKPbc	18 19 18.6	-0.7
	2.1nm,1.1s,baz=35,slow=5.6,SNR=3.2						

NDI 07 18:05:21.1±3.1, 12.°72N×78.°84E, h19km, ML3.7, Southern India

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDRS	**Chennai**	**1.42**	**76**	*e*PKP	Pn	18 05 47.7	+1.9
MDRS				*e*S	Sn	18 06 04.4	+0.4
MDRS	**Chennai**	**1.42**	**76**	*e*PKP	Pn	18 05 48.3	+2.4
MDRS				*e*x	x	18 05 50.7	
MDRS				*e*PP		18 05 54.9	
MDRS				*e*x	x	18 05 57.4	
MDRS				*e*S	Sn	18 06 03.2	-0.8
MDRS				*e*x	x	18 06 07.5	
MDRS				*e*x	x	18 06 08.6	
MDRS				*e*x	x	18 06 15.9	
MDRS				*e*x	x	18 06 22.9	
TRD	**Trivandrum**	**4.57**	**204**	*e*S	Sn	18 07 18.3	-3.6
GOA	**Goa**	**5.59**	**300**	*e*x	x	18 07 30.6	
GOA				*e*x	x	18 07 52.7	
KAD	**Karad**	**6.41**	**316**	*e*S	Sn	18 08 03.0	-4.2
KAD				AML	AML	18 08 19.7	
	comp=N,66nm,0.5s						
KAD				AML	AML	18 08 19.9	
	comp=E,62nm,0.5s						
POO	**Poona**	**7.52**	**321**	*e*S	Sn	18 08 28.4	-6.1
POO				AML	AML	18 08 56.5	
	comp=E,100nm,0.2s						
POO				AML	AML	18 08 57.8	
	comp=N,133nm,0.3s						
NGP	**Nagpur**	**8.39**	**1**	*e*S	Sn	18 08 46.4	-10
NGP				AML	AML	18 09 18.0	
	comp=E,56nm,0.3s						
NGP				AML	AML	18 09 19.5	
	comp=N,34nm,0.3s						
BOM	**Bombay**	**8.45**	**317**	*e*x	x	18 07 14.2	
BOM				*e*x	x	18 08 51.0	
BHPL	**Bhopal**	**10.55**	**353**	*e*PKP	Pn	18 07 50.1	-1.3
BHPL				*e*x	x	18 09 17.2	
BHPL				AML	AML	18 10 31.0	
	comp=E,23nm,0.6s						
BHPL				AML	AML	18 10 33.0	
	comp=N,15nm,0.5s						

IDC 07 18:21:18.7±3.7, 23.°23S×179.°98E, h531km±35km, mb3.5/7, mb1 3.7/7, mb1mx3.3/18, mbtmp3.5/7, Error ellipse: s-maj=75.5km s-min=29.0km az=161.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**31.46**	**269**	P	P	18 26 57.9	+1.0
	12nm,0.4s,baz=98,slow=11,SNR=17						
STKA	**Stephens Creek**	**34.96**	**247**	P	P	18 27 26.1	-0.2
	3.9nm,0.7s,baz=95,slow=8.3,SNR=7.9						
ASAR	**Alice Springs**	**42.13**	**260**	P	P	18 28 24.2	-0.2
	4.7nm,0.8s,baz=94,slow=7.3,SNR=50						
ASAR				ScP	ScP	18 33 06.7	0.0
	0.5nm,0.9s,baz=116,slow=4.4,SNR=4.5						
WRA	**Warramunga Arr**	**42.43**	**265**	P	P	18 28 26.3	-0.6
	3.7nm,0.4s,baz=93,slow=8.5,SNR=54						
FITZ	**Fitzroy Crossi**	**50.86**	**265**	P	P	18 29 30.9	+0.2
	2.0nm,0.5s,baz=84,slow=9.8,SNR=6.8						
NWAO	**Narrogin (SRO)**	**55.49**	**245**	P	P	18 30 02.3	-1.1
	5.5nm,0.9s,baz=118,slow=15,SNR=3.3						
TXAR	**Lajitas Array**	**90.10**	**58**	P	P	18 33 22.4	+0.2
	0.3nm,0.6s,baz=201,slow=7.2,SNR=4.5						

IDC ***07*** *18:24:49.8±1.2, 32.°28N×105.°17E, h0km, mb3.4/5, mb1 3.5/7, mb1mx3.4/28, mbtmp3.3/7, ML3.2/2, Error ellipse: s-maj=61.3km s-min=19.5km az=61.0*
ISCJB ***07*** *18:24:49.1±0.4, 32.°25N±0.°03×105.°33E±0.°04, h10km, mb3.3/5, Error ellipse: s-maj=4.9km s-min=4.0km az=142.9*
NEIC ***07*** *18:24:52.1±0.8, 32.°35N×105.°06E, h10km, Error ellipse: s-maj=18.8km s-min=11.4km az=70.0*
BJI ***07*** *18:24:52.3, 32.°26N×105.°00E, h13km, mB4.4/2, mb3.7/2, ML3.6/13, Ms3.4/6, Ms7 3.4/5*
ISC 07 18:24:51.2±0.4, 32.°27N±0.°03×105.°25E±0.°04, h10km, n19, σ1§17/32, mb3.3/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.86**	**224**	Pn	**Pn**	**18 25

CD2			Sn	Sn	18 25 47.0	+0.3
CD2			Sg	Sg	18 25 49.4	-1.7
CD2			smax			
	comp=N,2μm,0.5s					
CD2			smax			
	comp=E,4μm,1.0s					
XAN	**Xi'an**	**3.55 59**	Pn	Pn	18 25 52.4	+6.1
XAN			Pg	Pg	18 25 58.4	-0.7
XAN			Sn	Sn	18 26 28.9	+0.7
XAN			Sg	Sg	18 26 43.8	-1.3
XAN			smax			
	comp=N,210nm,0.9s					
XAN			smax			
	comp=E,110nm,0.9s					
LZH	**Lanzhou**	**3.98 343**	*e*Pn	Pn	18 25 54.7	+2.5
LZH			Pg	Pg	18 26 04.2	-3.2
LZH			Sn	Sn	18 26 43.5	+4.6
LZH			Sg	Sg	18 26 52.0	-6.9
LZH			smax			
	comp=N,200nm,0.6s					
LZH			smax			
	comp=E,750nm,0.6s					
LZH			LR	LR		
	comp=E,540nm,5.6s					
LZH			LR	LR		
	comp=Z,750nm,6.1s					
ENH	**Enshi**	**4.14 118**	*e*Pn	Pn	18 25 59.9	+5.5
ENH			*e*Sg	Sg	18 27 03.8	-0.3
GYA	**Guiyang**	**5.92 168**	Pn	Pn	18 26 24.0	+5.0
GYA			Sn	Sn	18 27 30.2	+3.3
GYA			smax			
	comp=N,70nm,0.8s					
GYA			smax			
	comp=E,120nm,0.7s					
KMI	**Kunming**	**7.46 198**	Pn	Pn	18 26 41.1	+1.1
KMI			Sn	Sn	18 28 04.5	-0.2
KMI			smax			
	comp=N,9.0nm,1.4s					
KMI			smax			
	comp=E,10.0nm,1.8s					
KMI			LR	LR		
	comp=N,84nm,8.3s					
KMI			LR	LR		
	comp=E,77nm,8.8s					
WHN	**Wuhan**	**7.97 100**	*e*P	Pn	18 26 40.3	-6.7
WHN			S	Sn	18 28 17.3	+0.1
WHN			LR	LR		
	comp=N,410nm,3.1s					
WHN			LR	LR		
	comp=E,200nm,4.3s					
WHN			LR	LR		
	comp=Z,200nm,7.9s					
GTA	**Gaotai**	**8.38 330**	*e*P	Px	18 27 03.6	
GTA			pP		18 27 08.2	
GTA			sP		18 27 11.1	
GTA			S	Sn	18 28 29.8	+2.6
GTA			sS		18 28 36.1	
GTA			pmax	pmax		
	comp=Z,3.0nm,0.8s					
GTA			pmax	pmax		
	comp=Z,53nm,4.8s					
GTA			LR	LR		
	comp=N,140nm,12.6s					
GTA			LR	LR		
	comp=E,130nm,10.2s					
GTA			LR	LR		
	comp=Z,140nm,11.1s					
CM31	**Chiang Mai Arr**	**14.89 204**	P	Pn	18 28 25.1	+3.4
CMAR	**Chiang Mai Arr**	**14.89 204**	Pn	Pn	18 28 20.8	-1.0
	comp=Z,0.1nm,0.3s,baz=15,slow=11,SNR=2.7					
SONM	**Songino Array**	**15.57 3**	Pn	Pn	18 28 29.9	-0.7
	comp=Z,0.0nm,0.3s,baz=179,slow=13,SNR=2.6					
MK31	**Makanchi Array**	**22.78 316**	*e*P	P	18 29 53.0	-0.6
MKAR	**Makanchi Array**	**22.78 316**	P	P	18 29 53.0	-0.7
	comp=Z,0.4nm,0.6s,mb3.1,baz=112,slow=14,SNR=6.6					
ZALV	**Zalesovo Beam**	**26.12 332**	P	P	18 30 24.9	-0.1
	comp=Z,0.7nm,0.6s,mb3.3,baz=131,slow=8.2,SNR=2.4					
UCH	**Uchtor**	**26.28 301**	P	P	18 30 27.4	+0.7
KURK	**Kurchatov**	**26.93 321**	P	P	18 30 32.3	0.0
	comp=Z,0.4nm,0.8s,mb3.0,baz=124,slow=11,SNR=5.6					
WRA	**Warramunga Arr**	**58.92 148**	P	P	18 34 50.7	+0.1
	comp=Z,0.3nm,0.7s,mb3.4,baz=326,slow=9.3,SNR=4.2					
WRA	**Warramunga Arr**	**58.92 148**	P	P	18 34 50.7	+0.1
ASAR	**Alice Springs**	**62.00 150**	P	P	18 35 12.6	+1.0
	comp=Z,0.6nm,1.0s,mb3.7,baz=331,slow=6.6,SNR=4.1					

DJA 07 18:32:50, 1°.79N×122°.62E, h142km, MLv3.9/6, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**1.47**	**208**	P	Pn	18 33 19.2	+0.5
MRSI				S	Sn	18 33 38.1	-2.5
MNI	**Manado**	**2.25**	**99**	P	Pn	18 33 28.7	+1.1
LUWI	**Luwuk**	**2.82**	**177**	P	Pn	18 33 35.3	+0.5
LUWI				S	Sn	18 34 12.2	+2.9
APSI	**Ampana**	**2.85**	**200**	P	Pn	18 33 39.7	+4.5
APSI				S	Sn	18 34 15.7	+5.6
TTSI	**Tana Toraja**	**5.56**	**210**	P	Pn	18 34 18.5	+7.7
	0.1nm18nm,1.3s						

*DDA **07** 18:33:55.5, 39°.45N×35°.59E, h10km±4km, Md3.3*
*ISK **07** 18:33:55.5, 39°.52N×35°.66E, h6km, MD2.9*
*CSEM **07** 18:33:55.5±0.2, 39°.46N×35°.65E, h2km, MD2.9, Error ellipse: s-maj=4.6km s-min=4.3km az=30.0*
*ISCJB **07** 18:33:55.5±0.4, 39°.46N±0°.03×35°.65E±0°.03, h10km, Error ellipse: s-maj=3.8km s-min=3.1km az=20.7*

ISC 07 18:33:56.0±0.5, 39°.47N±0°.03×35°.62E±0°.03, h1km±7km, n31, σ0°90/51, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOZ	**Yozgat**	**0.29**	**306**	*e*PG	Pg	18 34 01.8	+0.3
YOZ				*e*SG	Sg	18 34 06.5	+1.3
YOZ	**Yozgat**	**0.29**	**306**	*e*Pg	Pg	18 34 01.8	+0.3
YOZ				*e*Sg	Sg	18 34 06.5	+1.3
AVNT	**Avonos**	**0.91**	**221**	*i* P	Pg	18 34 12.5	-0.9
AVNT				*i* S	Sg	18 34 25.0	-0.2
AVNT	**Avonos**	**0.91**	**221**	*i* P	Pg	18 34 12.5	-0.9
AVNT				*i* S	Sg	18 34 25.0	-0.2
CDAG	**Cicekdag**	**0.98**	**279**	*i* P	Pg	18 34 14.1	-0.6
CDAG				*i* S	Sg	18 34 25.7	-1.7
CDAG	**Cicekdag**	**0.98**	**279**	*i* P	Pg	18 34 14.1	-0.6
CDAG				*i* S	Sg	18 34 25.7	-1.7
PINB	**Pinarbasi**	**1.00**	**142**	*i* P	Pg	18 34 14.6	-0.6
PINB				*i* S	Sg	18 34 28.9	+0.8
PINB	**Pinarbasi**	**1.00**	**142**	*i* P	Pg	18 34 14.6	-0.5
PINB				*i* S	Sg	18 34 28.9	+0.9
CORM	**Corum**	**1.04**	**313**	*e*PG	Pg	18 34 15.6	-0.3
CORM				*e*SG	Sg	18 34 30.6	+1.1
CORM	**Corum**	**1.04**	**313**	*e*Pg	Pg	18 34 15.6	-0.3
CORM				*e*Sg	Sg	18 34 30.6	+1.2
TOKT	**Tokat**	**1.11**	**40**	*e*PG	Pg	18 34 16.1	-1.1
TOKT				*e*SG	Sg	18 34 31.0	-0.6
TOKT	**Tokat**	**1.11**	**40**	*e*Pg	Pg	18 34 16.1	-1.1
TOKT				*e*Sg	Sg	18 34 31.0	-0.6
SARI	**SarD1z-Kayseri**	**1.15**	**133**	*e*PN	Pg	18 34 19.8	+1.7
SARI				*e*SN	Sg	18 34 37.8	+4.8
SVSK	**Karacayir**	**1.15**	**67**	*e*PN	Pg	18 34 16.8	-1.3
SVSK				*e*SN	Sg	18 34 32.7	-0.3
SVSK	**Karacayir**	**1.15**	**67**	*e*Pn	Pg	18 34 16.8	-1.3
SVSK				*e*Sn	Sg	18 34 32.7	-0.3
CTKT	**Corum**	**1.32**	**331**	*i* P	Pg	18 34 21.4	+0.2
CTKT				*i* S	Sg	18 34 38.9	+0.6
CTKT	**Corum**	**1.32**	**331**	*i* P	Pg	18 34 21.4	+0.2
CTKT				*i* S	Sg	18 34 38.8	+0.5
ERBA	**Erbaa**	**1.49**	**35**	*i* P	Pn	18 34 24.6	+0.7
ERBA				*i* S	Sg	18 34 44.8	+0.9
ERBA	**Erbaa**	**1.49**	**35**	*i* P	Pn	18 34 24.6	+0.7
ERBA				*i* S	Sg	18 34 44.8	+0.9
KVT	**Kavak**	**1.64**	**11**	*e*PN	Pn	18 34 24.9	-1.0
KVT	**Kavak**	**1.64**	**11**	*e*Pn	Pn	18 34 25.0	-1.0
DARE	**Darende-Malaty**	**1.77**	**106**	*e*PN	Pn	18 34 26.5	-1.3
DARE	**Darende-Malaty**	**1.77**	**106**	*e*Pn	Pn	18 34 26.5	-1.3
KOZT	**Kozan**	**1.99**	**175**	*e*PN	Pn	18 34 31.5	+0.7
SULT	**Sultanhani-AKS**	**2.08**	**233**	*e*PN	Pn	18 34 32.8	+0.8
SULT	**Sultanhani-AKS**	**2.08**	**233**	*e*Pn	Pn	18 34 32.8	+0.8
DIKM	**Dikmen**	**2.19**	**353**	*e*PN	Pn	18 34 33.0	-0.7
DIKM	**Dikmen**	**2.19**	**353**	*e*Pn	Pn	18 34 33.0	-0.6
KEMA	**Kemaliye**	**2.23**	**94**	*i* P	Pg	18 34 38.5	-0.4
KEMA				*i* S	Sg	18 35 08.8	+1.0
BALT	**Daday**	**2.67**	**321**	*i* P	Pn	18 34 41.0	+0.8
BALT	**Daday**	**2.67**	**321**	*i* P	Pn	18 34 41.0	+0.8

*TRN **07** 19:02:03.0, 19°.37N×64°.45W, h18km*
*NEIC **07** 19:02:04.8, 19°.55N×64°.35W, h31km, MD3.5(RSPR), After RSPR.*
*RSPR **07** 19:02:04.8, 19°.55N×64°.35W, h31km±28km, MD3.5/10, MD3.5/10*

ISC 07 19:02:03.6±1.6, 19°.52N±0°.07×64°.4W±0°.1, h24km±18km, n21, σ0°45/38, 20C, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.79**	**175**	*e*P	Pb	19 02 18.9	+0.3
ABV				*e*S	Sb	19 02 28.5	-0.4
ABV	**Anegada**	**0.79**	**175**	*e*P	Pb	19 02 18.9	+0.3
ABV				*e*S	Sb	19 02 28.5	-0.4
TBVI	**Tortola**	**1.11**	**191**	*e*P	Pn	19 02 22.7	-1.0
TBVI	**Tortola**	**1.11**	**191**	*e*P	Pn	19 02 22.7	-1.0
STVI	**Saint Thomas**	**1.27**	**204**	*e*P	Pn	19 02 25.5	-0.3
STVI				*e*S	Sn	19 02 42.6	+0.5
STVI	**Saint Thomas**	**1.27**	**204**	*e*P	Pn	19 02 25.5	-0.3
STVI				*e*S	Sn	19 02 42.6	+0.5
MTP	**Monte Pirata**	**1.79**	**218**	*e*P	Pn	19 02 33.3	+0.4
MTP				*e*S	Sn	19 02 54.9	+0.1
MTP	**Monte Pirata**	**1.79**	**218**	*e*P	Pn	19 02 33.3	+0.4
MTP				*e*S	Sn	19 02 54.9	+0.1
CBYP	**Canovanas**	**1.85**	**228**	*e*P	Pn	19 02 34.5	+0.6
CBYP				*e*S	Sn	19 02 56.5	0.0
CBYP	**Canovanas**	**1.85**	**228**	*e*P	Pn	19 02 34.5	+0.6
CBYP				*e*S	Sn	19 02 56.5	0.0
HUMP	**Col San Antoni**	**1.94**	**225**	*e*P	Pn	19 02 35.0	-0.1
HUMP				*e*S	Sn	19 02 58.4	-0.2
HUMP	**Col San Antoni**	**1.94**	**225**	*e*P	Pn	19 02 35.0	-0.1
HUMP				*e*S	Sn	19 02 58.4	-0.2
SJG	**San Juan**	**2.17**	**230**	*e*P	Pn	19 02 37.6	-0.5
SJG	**San Juan**	**2.17**	**230**	*e*P	Pn	19 02 38.6	+0.4
SJG				*e*S	Sn	19 03 04.0	-0.3
SJG	**San Juan**	**2.17**	**230**	*e*P	Pn	19 02 37.6	-0.5
SJG	**San Juan**	**2.17**	**230**	*e*P	Pn	19 02 38.6	+0.4
SJG				*e*S	Sn	19 03 04.0	-0.3
CELP	**Cerrillos**	**2.51**	**236**	*e*P	Pn	19 02 43.6	+0.7
CELP				*e*S	Sn	19 03 12.7	-0.1
CELP	**Cerrillos**	**2.51**	**236**	*e*P	Pn	19 02 43.6	+0.7
CELP				*e*S	Sn	19 03 12.7	-0.1
CRPR	**Cabo Rojo, PR**	**2.98**	**240**	*e*P	Pn	19 02 49.6	+0.3
CRPR				*e*S	Sn	19 03 24.7	+0.5
CRPR	**Cabo Rojo, PR**	**2.98**	**240**	*e*P	Pn	19 02 49.6	+0.3
CRPR				*e*S	Sn	19 03 24.7	+0.5
SDDR	**Presa de Saban**	**6.53**	**266**	*e*Pn	Pn	19 03 38.1	-0.1
	28nm,0.6s						
SDDR				*e*Sn	Sn	19 04 51.1	-0.8

IDC 07 19:07:08.9±1.8, 7°.90S×120°.81E, h0km, mb3.4/3, mb1 3.5/5, mb1mx3.3/21, mbtmp3.4/5, ML3.2/2, Error ellipse: s-maj=139.2km s-min=22.7km az=57.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**3.06**	**340**	Pn	Pn	19 07 56.3	-2.2
	3.0nm,0.3s,baz=156,slow=10,SNR=18						
KAPI				Sn	Sn	19 08 30.6	-5.2
	2.6nm,0.3s,baz=164,slow=15,SNR=6.8						
WRA	**Warramunga Arr**	**17.75**	**134**	P	Pn	19 11 17.3	-0.3
	0.1nm,0.3s,baz=308,slow=12,SNR=6.7						
ASAR	**Alice Springs**	**20.08**	**143**	P	P	19 11 43.9	-0.2
	0.5nm,0.6s,baz=315,slow=9.3,SNR=16						
MKAR	**Makanchi Array**	**64.33**	**332**	P	P	19 17 46.8	+0.5
	0.2nm,0.6s,baz=124,slow=7.8,SNR=2.8						
ZALV	**Zalesovo Beam**	**68.68**	**338**	P	P	19 18 14.6	+0.6
	0.3nm,0.4s,baz=140,slow=5.6,SNR=2.5						

*IDC **07** 19:10:41.3±0.9, 3°.46S×140°.86E, h0km, mb4.0/11, mb1 4.1/13, mb1mx4.1/17, mbtmp4.0/13, ML4.5/1, MS3.3/5, Ms1 3.3/5, ms1mx2.8/22, Error ellipse: s-maj=28.9km s-min=16.7km az=94.0*
*BJI **07** 19:10:46.3, 3°.60S×140°.90E, h54km, mB5.0/1, mb4.6/4*
*ISCJB **07** 19:10:47.0±2.0, 3°.57S±0°.05×140°.82E±0°.08, h57km±19km, mb4.5/31, MS3.2/3, Error ellipse: s-maj=13.8km s-min=8.4km az=9.2*
*NEIC **07** 19:10:48.4±1.5, 3°.55S×140°.85E, h54km±14km, mb5.0/15, Error ellipse: s-maj=11.6km s-min=7.9km az=64.0*

ISC 07 19:10:49.0±1.5, 3°.57S±0°.06×140°.86E±0°.09, h59km±15km, n54, σ0°83/59, mb4.5/31, MS3.2/3, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**10.57**	**168**	*e*P	Pn	19 13 18.1	+0.3
COEN	**Coen**	**10.57**	**168**	*e*Pn	Pn	19 13 18.2	+0.4
	29nm,1.3s						
KAKA	**Kakadu**	**12.32**	**222**	*e*P	Pn	19 13 42.4	+0.7
	29nm,0.5s						
KAKA				*e*S	Sn	19 15 53.4	-4.1
KAKA	**Kakadu**	**12.32**	**222**	*e*Pn	Pn	19 13 41.7	0.0
	105nm,0.6s						
KAKA				*e*Sn	Sn	19 15 53.0	-4.5
KNA	**Kununurra**	**16.97**	**224**	*e*P	Pn	19 14 43.0	+0.4
	15nm,0.4s						
KNA				*e*S	S	19 17 44.5	-13
CTA	**Charters Tower**	**17.24**	**163**	P	Pn	19 14 45.0	-0.8
	0.2nm,0.3s,baz=27,slow=9.0,SNR=3.2						
CTA				LR	LR	19 21 16.6	
	comp=Z,198nm,19.9s,baz=52,slow=37						
WRAB	**Tennant Creek**	**17.46**	**201**	*e*Pn	Pn	19 14 47.6	-0.9
WRA	**Warramunga Arr**	**17.47**	**201**	P	Pn	19 14 48.8	+0.1
	1.6nm,0.3s,baz=22,slow=11,SNR=47						
WRA				S	S	19 17 57.5	-10
	0.3nm,0.3s,baz=18,slow=24,SNR=3.5						
HNR	**Honiara**	**19.83**	**108**	LR	LR	19 21 28.8	
	comp=Z,92nm,21.0s,baz=207,slow=33						
FITZ	**Fitzroy Crossi**	**20.76**	**225**	*e*P	P	19 15 25.4	+0.3
	8.8nm,0.4s						
FITZ				*e*S	S	19 19 10.4	-3.3
FITZ	**Fitzroy Crossi**	**20.76**	**225**	P	P	19 15 25.1	0.0
	2.0nm,0.4s,baz=72,slow=19,SNR=17						
FITZ				S	S	19 19 11.3	-2.4
	10nm,0.9s,baz=171,slow=5.6,SNR=6.3						
FITZ				LR	LR	19 24 16.9	
	comp=Z,108nm,18.8s,MS3.2,baz=290,slow=39						
FITZ	**Fitzroy Crossi**	**20.76**	**225**	P	P	19 15 25.1	0.0
FITZ				S	S	19 19 11.3	-2.4
FITZ				LR	LR	19 24 16.9	
ASAR	**Alice Springs**	**21.08**	**198**	P	P	19 15 28.3	-0.2
	2.8nm,0.5s,mb3.8,baz=27,slow=9.6,SNR=78						
ASAR				S	S	19 19 21.6	+1.6
	0.7nm,0.7s,baz=9.3,slow=28,SNR=4.1						
EIDS	**Eidsvold**	**23.79**	**157**	*e*P	P	19 15 56.6	+0.2
EIDS	**Eidsvold**	**23.79**	**157**	*e*P	P	19 15 56.2	-0.3
	21nm,0.8s,mb4.6						
RMQ	**Roma**	**24.01**	**162**	*e*P	P	19 15 58.5	+0.1
	9.7nm,0.6s,mb4.4						
MBWA	**Marble Bar**	**26.98**	**228**	*e*Pn	P	19 16 25.4	0.0
STKA	**Stephens Creek**	**28.16**	**179**	*e*Pn	P	19 16 37.3	+1.4
YNG	**Young**	**31.36**	**168**	*e*P	P	19 17 04.5	+0.4
	4.2nm,0.5s,mb4.5						
KMBL	**Kambalda**	**32.92**	**211**	*e*P	P	19 17 18.0	+0.1
	30nm,1.4s,mb5.0						
MORW	**Morawa**	**34.62**	**220**	*e*P	P	19 17 33.3	+0.7
NWAO	**Narrogin (SRO)**	**36.63**	**214**	*e*P	P	19 17 48.4	-1.4
	36nm,1.4s,mb5.0						
MJAR	**Matsushiro Arr**	**39.98**	**357**	P	P	19 18 16.9	-1.0
	0.5nm,0.7s,mb3.4,baz=173,slow=9.9,SNR=3.9						
PSI	**Prapat**	**42.39**	**278**	P	P	19 18 36.7	-1.4
	3.9nm,0.6s,mb4.2,baz=172,slow=7.1,SNR=2.8						
KSRS	**Korea Array**	**42.55**	**345**	P	P	19 18 38.1	-0.9
	0.6nm,0.8s,mb3.4,baz=149,slow=8.8,SNR=4.5						
KSRS				PcP	PcP	19 20 29.6	-1.1
	0.9nm,0.8s,baz=161,slow=4.7,SNR=6.3						
KSRS				LR	LR	19 33 06.8	
	comp=Z,27nm,21.2s,MS3.1,baz=157,slow=32						
CMAR	**Chiang Mai Arr**	**46.73**	**299**	P	P	19 19 12.3	-0.3
	1.6nm,0.7s,mb4.0,baz=118,slow=6.3,SNR=12						
GTA	**Gaotai**	**57.05**	**323**	*e*P	P	19 20 29.8	+0.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.2						
LSA	**Lhasa**	**57.93**	**308**	*e*P	P	19 20 36.9	+1.4
	comp=Z,10nm,1.1s,mb4.8						
LSA				*e*	pP	19 20 49.0	-2.3
PETK	**Petropavlovsk-**	**58.23**	**12**	P	P	19 20 36.0	-1.1
	comp=Z,2.8nm,0.6s,mb4.5,baz=171,slow=5.5,SNR=8.9						
PETK	**Petropavlovsk-**	**58.23**	**12**	P	P	19 20 36.0	-1.1
SONM	**Songino Array**	**59.43**	**334**	P	P	19 20 47.1	+1.6
	comp=Z,0.3nm,0.5s,mb3.5,baz=119,slow=7.1,SNR=2.9						
TAPN	**Taplejung**	**59.73**	**304**	*e*P	P	19 20 47.6	-0.4
	comp=Z,12nm,0.7s,mb5.1						
ODAN	**Odare**	**59.81**	**304**	*e*P	P	19 20 49.3	+0.7
	comp=Z,11nm,0.6s,mb5.0						
RAMN	**Ramite**	**60.50**	**304**	*e*P	P	19 20 53.3	0.0
	comp=Z,20nm,0.8s,mb5.2						
JIRN	**Jiri**	**61.10**	**304**	*e*P	P	19 20 57.6	+0.2
	comp=Z,14nm,0.7s,mb5.2						
GUN	**Gumba**	**61.45**	**304**	*e*P	P	19 20 59.8	+0.1
	comp=Z,31nm,0.9s,mb5.5						
PKI	**Pulchoki**	**61.71**	**304**	*e*P	P	19 21 02.8	+1.3
	comp=Z,8.9nm,0.7s,mb5.0						
PKIN	**Phulchoki**	**61.72**	**304**	*e*P	P	19 21 02.8	+1.2
	comp=Z,8.9nm,0.7s,mb5.0						
KKN	**Kakani**	**61.90**	**304**	*e*P	P	19 21 03.4	+0.7
	comp=Z,34nm,0.8s,mb5.5						
DMN	**Daman**	**61.98**	**304**	*e*P	P	19 21 03.9	+0.6
	comp=Z,29nm,0.9s,mb5.4						
MK31	**Makanchi Array**	**71.78**	**322**	*e*P	P	19 22 05.1	-0.1
MKAR	**Makanchi Array**	**71.78**	**322**	P	P	19 22 05.4	+0.2
	comp=Z,2.1nm,0.5s,mb4.3,baz=91,slow=13,SNR=32						
ZAA0	**Zalesovo Array**	**73.76**	**329**	*e*P	P	19 22 15.6	-1.2
ZALV	**Zalesovo Beam**	**73.76**	**329**	P	P	19 22 15.8	-1.0
	comp=Z,0.9nm,0.6s,mb3.9,baz=102,slow=5.1,SNR=5.8						
ZALV				LR	LR	19 55 40.8	
	comp=Z,14nm,18.9s,MS3.3,baz=129,slow=37						
ZALV	**Zalesovo Beam**	**73.76**	**329**	P	P	19 22 15.8	-1.0
ZALV				LR	LR	19 55 40.8	
UCH	**Uchtor**	**75.17**	**315**	*e*P	P	19 22 26.3	+1.0
	comp=Z,2.8nm,0.8s,mb4.2						
KURK	**Kurchatov**	**75.66**	**325**	*e*P	P	19 22 27.3	-0.6
	comp=Z,2.3nm,0.8s,mb4.2						
EKS2	**Erkin-Say**	**75.83**	**316**	*e*P	P	19 22 29.1	+0.1
	comp=Z,1.2nm,0.8s,mb3.9						
EKS2				*e*	pP	19 22 41.9	-3.4
KBL	**Kabul**	**77.17**	**306**	*e*P	P	19 22 35.9	-0.9
BVAR	**Borovoye Array**	**81.25**	**325**	P	P	19 22 58.8	+0.2
	comp=Z,1.8nm,0.5s,mb4.3,baz=119,slow=5.2,SNR=18						
BRVK	**Borovoye**	**81.32**	**325**	*e*P	P	19 22 59.3	+0.3
	comp=Z,3.8nm,0.8s,mb4.4						
ABKAR	**Akbulak array**	**86.77**	**320**	*e*P	P	19 23 25.5	-1.3
	comp=Z,1.5nm,0.6s,mb4.4						
LPAZ	**La Paz**	**145.20**	**125**	PKPbc	PKPbc	19 30 21.6	+0.9
	comp=Z,1.4nm,0.8s,baz=264,slow=3.0,SNR=5.8						
CPUP	**Villa Florida**	**145.45**	**150**	PKPbc	PKPbc	19 30 22.4	+1.1
	comp=Z,0.3nm,0.4s,baz=294,slow=20,SNR=2.9						

DJA 07 19:15:43, 7°.99S×120°.11E, h17km, MLv4.2/3, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.68**	**174**	P	Pn	19 16 11.3	-0.3
WSI				S	Sn	19 16 33.0	+0.3
MMRI	**Maumere**	**2.20**	**107**	P	Pn	19 16 20.3	+1.5
MMRI				S	Sn	19 16 46.3	+0.6
BKSI	**Bulukumba**	**2.65**	**0**	P	Pn	19 16 25.0	0.0

IDC 07 19:19:26.5±3.1, 33°.42S×178°.93W, h0km, mb3.5/2, mb1 3.8/3, mb1mx3.6/16, mbtmp3.6/3, ML3.2/1, Error ellipse: s-maj=72.3km s-min=46.7km az=121.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.81**	**213**	Pn	Pn	19 20 53.3	-0.5
	0.7nm,0.3s,baz=355,slow=11,SNR=5.4						
URZ				Sn	Sn	19 21 54.0	-7.2
	0.5nm,0.3s,baz=270,slow=19,SNR=4.5						
ASAR	**Alice Springs**	**42.26**	**271**	P	P	19 27 22.0	+0.3
	0.5nm,0.9s,baz=105,slow=7.7,SNR=3.6						
WRA	**Warramunga Arr**	**43.52**	**276**	P	P	19 27 31.8	-0.2
	0.4nm,0.4s,baz=116,slow=7.8,SNR=17						
FINES	**FINESS Array B**	**147.66**	**338**	PKPbc	PKPbc	19 39 11.4	-0.7
	0.5nm,0.5s,baz=46,slow=4.0,SNR=5.3						

*ROM **07** 19:28:02.4±0.3, 42°.00N×15°.49E, h0km, Md2.4/14, Ml2.1/6, Error ellipse: s-maj=2.9km s-min=1.4km az=9.0*
*ISCJB **07** 19:28:03.9±0.6, 41°.95N±0°.05×15°.45E±0°.04, h13km±7km, Error ellipse: s-maj=8.7km s-min=4.0km az=13.8*
*CSEM **07** 19:28:04.0±0.3, 41°.98N×15°.46E, h2km, ML2.6/4, Error ellipse: s-maj=5.0km s-min=3.6km az=19.0*

ISC 07 19:28:04.2±0.7, 41°.98N±0°.05×15°.46E±0°.03, h8km±9km, n34, σ0°78/51, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FG2	**Serracapriola**	**0.28**	**232**	Pg	Pg	19 28 09.9	+0.2
FG2				Sg	Sg	19 28 15.0	+1.5
	202nm,0.2s						
FG2	**Serracapriola**	**0.28**	**232**	Pg	Pg	19 28 09.9	+0.2
FG2				Sg	Sg	19 28 15.0	+1.5
	202nm,0.2s						
SGRT	**San Giovanni R**	**0.31**	**136**	Pg	Pg	19 28 09.6	-0.7
SGRT				Sg	Sg	19 28 14.5	+0.1
	140nm,0.3s						
SGRT	**San Giovanni R**	**0.31**	**136**	Pg	Pg	19 28 09.6	-0.7
SGRT				Sg	Sg	19 28 14.5	+0.1
	140nm,0.3s						
RGNG	**Rignano Grg**	**0.32**	**162**	Pg	Pg	19 28 09.9	-0.5
RGNG				Sg	Sg	19 28 14.5	-0.2
RGNG	**Rignano Grg**	**0.32**	**162**	Pg	Pg	19 28 09.9	-0.5
RGNG				Sg	Sg	19 28 14.5	-0.2
MELA	**Melanico ??? S**	**0.37**	**222**	P

ellipse: s-maj=7.6km s-min=4.5km az=59.0
ISCJB ***07*** *19:33:57.2±1.1,38°.18N±0°.06×20°.37E±0°.06,h11km±5km, Error ellipse: s-maj=10.5km s-min=7.3km az=32.4*
THE ***07*** *19:33:58.2,38°.14N×20°.41E,h14km,ML3.5/5, Error ellipse: s-maj=1.3km s-min=0.6km az=206.0*
ISC 07 19:33:56.9±1.1,38°.18N±0°.06×20°.32E±0°.06,h9km±6km, n41,σ0°98/61,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.21**	**91**	*e*Pb	**Pg**	**19 34 01.7**	**+0.4**
VLS				*e*Sb	**Sg**	**19 34 04.9**	**+0.7**
VLS	**Valsamata**	**0.21**	**91**	P	**Pg**	**19 34 01.7**	**+0.4**
VLS				S	**Sg**	**19 34 04.7**	**+0.5**
VLS	**Valsamata**	**0.21**	**91**	*e*PB	**Pg**	**19 34 01.7**	**+0.4**
VLS				*e*SB	**Sg**	**19 34 04.9**	**+0.7**
VLS	**Valsamata**	**0.21**	**91**	P	**Pg**	**19 34 01.7**	**+0.4**
VLS				S	**Sg**	**19 34 04.7**	**+0.5**
RLS	**Riolos of Patr**	**0.91**	**98**	*e*Pb	**Pg**	**19 34 13.1**	**-1.3**
RLS				*e*Sn	**Sg**	**19 34 26.5**	**+0.2**
RLS	**Riolos of Patr**	**0.91**	**98**	*e*PB	**Pg**	**19 34 13.1**	**-1.3**
RLS				*e*SN	**Sg**	**19 34 26.5**	**+0.2**
RLS	**Riolos of Patr**	**0.91**	**98**	*e*Pb	**Pg**	**19 34 13.1**	**-1.3**
RLS				*e*Sn	**Sg**	**19 34 26.5**	**+0.2**
IGT	**Igoumenitsa**	**1.35**	**0**	P	**Pn**	**19 34 22.5**	**+0.6**
IGT	**Igoumenitsa**	**1.35**	**0**	P	**Pn**	**19 34 22.5**	**+0.6**
EVR	**Evrytania**	**1.38**	**57**	*e*Pn	**Pn**	**19 34 22.2**	**0.0**
EVR				*e*Sb	**Sb**	**19 34 41.8**	**+1.4**
EVR	**Evrytania**	**1.38**	**57**	*e*PN	**Pn**	**19 34 22.2**	**0.0**
EVR				*e*SB	**Sb**	**19 34 41.8**	**+1.4**
EVR	**Evrytania**	**1.38**	**57**	*e*Pn	**Pn**	**19 34 22.2**	**0.0**
EVR				*e*Sb	**Sb**	**19 34 41.8**	**+1.4**
KEK	**Kerkira**	**1.58**	**345**	*e*Pn	**Pn**	**19 34 25.8**	**+0.7**
KEK	**Kerkira**	**1.58**	**345**	P	**Pn**	**19 34 26.1**	**+1.0**
KEK				S	**Sn**	**19 34 47.6**	**+2.0**
KEK	**Kerkira**	**1.58**	**345**	*e*PN	**Pn**	**19 34 25.8**	**+0.7**
KEK	**Kerkira**	**1.58**	**345**	*e*Pn	**Pn**	**19 34 25.8**	**+0.7**
KEK	**Kerkira**	**1.58**	**345**	P	**Pn**	**19 34 26.1**	**+1.0**
KEK				S	**Sn**	**19 34 47.6**	**+2.0**
GUR	**Goura**	**1.61**	**98**	*e*PN	**Pn**	**19 34 25.4**	**-0.1**
GUR	**Goura**	**1.61**	**98**	*e*Pn	**Pn**	**19 34 25.4**	**-0.1**
ITM	**Ithomi**	**1.62**	**128**	*e*Pn	**Pn**	**19 34 26.4**	**+0.8**
ITM	**Ithomi**	**1.62**	**128**	P	**Pn**	**19 34 24.4**	**-1.2**
ITM	**Ithomi**	**1.62**	**128**	*e*PN	**Pn**	**19 34 26.4**	**+0.8**
ITM	**Ithomi**	**1.62**	**128**	P	**Pn**	**19 34 24.4**	**-1.2**
ITM	**Ithomi**	**1.62**	**128**	*e*Pn	**Pn**	**19 34 26.4**	**+0.8**
PYL	**PYLOS**	**1.71**	**138**	*e*PN	**Pn**	**19 34 27.9**	**+1.1**
PYL	**PYLOS**	**1.71**	**138**	*e*Pn	**Pn**	**19 34 27.9**	**+1.1**
MEV	**Metsovon**	**1.75**	**24**	P	**Pn**	**19 34 27.6**	**+0.2**
MEV	**Metsovon**	**1.75**	**24**	P	**Pn**	**19 34 27.6**	**+0.2**
AGG	**Agios Georgios**	**1.78**	**61**	*e*Pn	**Pn**	**19 34 27.6**	**-0.2**
AGG	**Agios Georgios**	**1.78**	**61**	P	**Pn**	**19 34 27.4**	**-0.4**
AGG				S	**Sn**	**19 34 50.1**	**-0.4**
AGG	**Agios Georgios**	**1.78**	**61**	*e*PN	**Pn**	**19 34 27.6**	**-0.2**
AGG	**Agios Georgios**	**1.78**	**61**	*e*Pn	**Pn**	**19 34 27.6**	**-0.2**
AGG				S	**Sn**	**19 34 50.1**	**-0.4**
THL	**Klokotos Trika**	**1.91**	**43**	P	**Pn**	**19 34 30.0**	**+0.4**
THL				S	**Sn**	**19 34 53.6**	**-0.1**
THL	**Klokotos Trika**	**1.91**	**43**	*e*PB	**Pb**	**19 34 29.4**	**-2.5**
THL	**Klokotos Trika**	**1.91**	**43**	P	**Pn**	**19 34 30.0**	**+0.4**
THL				S	**Sn**	**19 34 53.6**	**-0.1**
LKR	**Lokris**	**2.15**	**77**	P	**Pn**	**19 34 32.4**	**-0.5**
LKR				S	**Sn**	**19 34 59.4**	**-0.3**
LKR	**Lokris**	**2.15**	**77**	P	**Pn**	**19 34 32.4**	**-0.5**
LKR				S	**Sn**	**19 34 59.4**	**-0.3**
LIT	**Litokhoron**	**2.55**	**41**	P	**Pn**	**19 34 38.3**	**-0.1**
LIT	**Litokhoron**	**2.55**	**41**	P	**Pn**	**19 34 38.3**	**-0.1**
KRUS	**Krusevo**	**3.26**	**12**	*e*Pn	**Pn**	**19 34 47.9**	**-0.3**
KRUS				*e*Sn	**Sn**	**19 35 23.3**	**-3.7**
STON	**Ston**	**5.09**	**338**	*e*Pn	**Pn**	**19 35 11.2**	**-2.1**
STON				Sn	**Sn**	**19 36 07.9**	**-4.3**

ISCJB ***07*** *19:50:20.6±0.9,39°.48N±0°.06×35°.35E±0°.07,h10km, Error ellipse: s-maj=8.6km s-min=7.4km az=136.3*
DDA ***07*** *19:50:24.8,39°.40N×35°.09E,h3km,Md2.9*
ISC 07 19:50:21.3±0.9,39°.48N±0°.05×35°.33E±0°.07,h10km,n6, σ1°22/9,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOZ	**Yozgat**	**0.16**	**358**	*e*PG	**Pg**	**19 50 25.7**	**+0.9**
CDAG	**Cicekdag**	**0.75**	**281**	*i* P	**Pg**	**19 50 33.9**	**-1.9**
CDAG				*i* S	**Sg**	**19 50 44.7**	**-0.9**
AVNT	**Avonos**	**0.79**	**208**	*i* P	**Pg**	**19 50 36.2**	**-0.2**
AVNT				*i* S	**Sg**	**19 50 46.6**	**-0.1**
CORM	**Corum**	**0.88**	**323**	*e*PG	**Pg**	**19 50 37.7**	**-0.6**
SVSK	**Karacayir**	**1.36**	**71**	*e*PG	**Pg**	**19 50 46.9**	**-0.5**
BBAL	**Bala**	**1.71**	**273**	*i* P	**Pn**	**19 50 54.0**	**+2.9**
BBAL				*i* S	**Sn**	**19 51 14.8**	**+1.9**

GUC 07 19:50:40.2±0.6,20°.79S×68°.88W,h65km±30km,MD3.5, ML3.9,3C-1D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMBC	**Humberston**	**1.07**	**298**	⇑*i* P	Pn	19 51 00.0	+0.6
HMBC				*i* S	Sn	19 51 15.0	+1.3
HMBC				AML	AML	19 51 16.1	
	comp=E,4μm,0.2s						
PB04	**Plate Boundary**	**1.58**	**201**	⇑*i* P	Pn	19 51 11.5	+5.4
PB04				*i* S	Sn	19 51 34.6	+9.0
PB04				AML	AML	19 51 41.1	
	comp=N,792nm,0.4s						
MACH	**Maria Elena**	**1.62**	**210**	⇓*i* P	Pn	19 51 08.0	+1.3
MACH				*i* S	Sn	19 51 28.9	+2.2
MNMC	**Miæe Miæ**	**1.78**	**338**	*e*P	Pn	19 51 09.7	+0.9
MNMC				*i* S	Sn	19 51 32.4	+1.9
MNMC				AML	AML	19 51 35.9	
	comp=E,2μm,0.2s						
PECH	**Pedro de Valdi**	**1.95**	**202**	⇑*i* P	Pn	19 51 12.2	+1.2
PECH				*i* S	Sn	19 51 36.3	+1.7
PECH				AML	AML	19 51 37.0	
	comp=E,1μm,0.4s						

KRSC 07 20:04:27.2±0.9,55°.79N×163°.84E,h20km±20km,ML3.5, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.71**	**307**	*i* P	Pb	20 04 39.8	-1.1
KBTR				*e*S	Sb	20 04 49.0	-1.2
BKI	**Bering**	**1.35**	**115**	*e*P	Pn	20 04 49.6	-1.2
BKI				*e*S	Sn	20 05 06.3	-1.8
SRKR	**Sorokina**	**1.73**	**301**	*e*P	Pn	20 04 56.2	+0.2
SRKR				*e*S	Sn	20 05 17.6	+0.2
ZLN	**Zelenaya**	**1.73**	**279**	*i* P	Pn	20 04 57.4	+1.4
ZLN				*e*S	Sn	20 05 19.3	+1.9
MKZ	**Mys Kozlova**	**1.73**	**225**	*e*P	Pn	20 04 56.5	+0.4
MKZ				*e*S	Sn	20 05 17.6	+0.1
BZGR	**Bezymyannyi-Gr**	**1.78**	**276**	*e*P	Pn	20 04 58.0	+1.3
BZGR				*e*S	Sn	20 05 20.7	+2.0
KLY	**Klyuchi**	**1.86**	**288**	*i* P	Pn	20 04 57.2	-0.7
KLY				*e*S	Sn	20 05 19.4	-1.4
KRSR	**Krestovskiy**	**1.89**	**284**	P	Pn	20 04 59.3	+1.1
KRSR				S	Sn	20 05 22.8	+1.4
KMNR	**Kamenistaya**	**2.04**	**271**	*i* P	Pn	20 05 01.8	+1.5
KMNR				*e*S	Sn	20 05 27.5	+2.4
KPT	**Kopyto**	**2.05**	**276**	*e*P	Pn	20 05 01.7	+1.3
KPT				*e*S	Sn	20 05 27.0	+1.7
SRDR	**Sredinnyy**	**2.37**	**285**	*e*P	Pn	20 05 06.8	+1.9
SRDR				S	Sn	20 05 35.8	+2.4
SPN	**Mys Shipunski**	**3.50**	**221**	S	Sn	20 05 57.5	-3.6
NLC	**Nalytchevo**	**3.71**	**227**	S	Sn	20 06 05.9	-0.4
AVH	**Avacha**	**3.90**	**232**	P	Pn	20 05 28.0	+2.1
GNL	**Ganaly**	**4.01**	**241**	P	Pn	20 05 29.3	+1.9
PET	**Petropavlovsk**	**4.11**	**230**	S	Sn	20 06 16.9	+0.8

DJA ***07*** *20:04:32,14°.66N×120°.92E,h59km,Mw5.3/18*
SZGRF ***07*** *20:04:34.5,13°.59N×120°.59E,h132km,mb4.8,Mindoro, Philippine Islands*
MOS ***07*** *20:04:40.7±0.9,13°.72N×120°.92E,h11km,mb4.8/28, Error ellipse: s-maj=11.5km s-min=5.7km az=119.5*
BJI ***07*** *20:04:40.7,13°.62N×120°.91E,h116km,mB4.8/29, mb4.8/48*
MAN ***07*** *20:04:41,13°.66N×120°.52E,h79km,mb5.7,ML4.8,MS5.2*
MAN INTENSITY IV - LUBANG OCCIDENTAL MINDORO;
INTENSITY II - PTO GALERA.
NEIC ***07*** *20:04:41.9±0.4,13°.70N×120°.86E,h106km±3km,mb5.0/45, Error ellipse: s-maj=5.2km s-min=3.4km az=76.0*
NEIC Felt [IV PIVS] on Lubang Island and [II PIVS] at Puerto Galera.
ISCJB ***07*** *20:04:41.8±0.2,13°.68N±0°.02×120°.81E±0°.04, h118km±2km,mb4.8/88,Error ellipse: s-maj=5.9km s-min=3.4km az=177.5*
GCMT ***07*** *20:04:41.8±0.3,13°.78N×120°.63E,h103km±4km,MW4.8, Moment Tensor Solution. s25,c27; s65,c96; Moment tensor: Scale 10^16Nm; Mrr=0.75±.11; Mθθ=1.25±.11; Mφφ=0.50±.12; Mrθ=1.69±.05; Mrφ=0.93±.10; Mθφ=0.59±.08; Best double couple: M0=2.30000×10^16 NP1:φs=30.00000°, δ34.00000°,λ=159.00000°. NP2:φs=282.00000°, δ79.00000°,λ=58.00000°. Principal axes: T 2.3200, Plg26.0000°, Azm347.0000°; N -0.0500, Plg32.0000°, Azm95.0000°; P -2.2700, Plg47.0000°, Azm226.0000°; Data Used: II IC G IU CN.*
IDC ***07*** *20:04:41.7±0.3,13°.71N×120°.84E,h102km±2km,mb4.3/26, mb1 4.4/27,mb1mx4.3/32,mbtmp4.3/27,MS3.4/14, Ms1 3.4/14,ms1mx3.2/33 Error ellipse: s-maj=13.6km s-min=7.0km az=78.0*
TEH ***07*** *20:04:42.0,13°.67N×120°.89E,h105km*
ISC 07 20:04:43.0±0.2,13°.70N±0°.02×120°.80E±0°.03,h112km±2km, h104km±1.9km:pP-P,n249,σ1°07/267,mb4.8/88,11C-7D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.42**	**18**	P	**Pn**	**20 04 58.3**	**-1.4**
	14μm,0.3s,baz=248,slow=1.0,SNR=1497						
TGY				S	**Sn**	**20 05 10.6**	**-1.6**
	12μm,0.3s,baz=158,slow=23,SNR=26						
TGY	**Tagaytay City**	**0.42**	**18**	⇓*i* P	**Pn**	**20 04 58.2**	**-1.4**
LUBP	**Lubang**	**0.54**	**274**	*e*P	**Pn**	**20 04 56.5**	**-3.8**
LUBP				*e*S	**Sn**	**20 05 05.0**	**-8.4**
BOAC	**Boac**	**1.04**	**103**	*e*P	**Pn**	**20 05 05.3**	**+0.5**
BOAC				*e*S	**Sn**	**20 05 22.6**	**+1.3**
SJMP	**San Jose**	**1.27**	**166**	*e*P	**Pn**	**20 05 06.6**	**-0.7**
SJMP				*e*S	**Sn**	**20 05 19.2**	**-6.4**
POLP	**Polilio Island**	**1.51**	**47**	*e*P	**Pn**	**20 05 11.4**	**+1.4**
GQP	**Guinayangan**	**1.61**	**82**	⇓*e*P	**Pn**	**20 05 13.3**	**+2.1**
GQP				*e*S	**Sn**	**20 05 37.7**	**+4.8**
BUSP	**Coron**	**1.78**	**199**	*e*P	**Pn**	**20 05 10.6**	**-2.8**
OTRP	**Odiongan**	**1.78**	**138**	*e*P	**Pn**	**20 05 13.8**	**+0.4**
AUQP	**San Andres**	**1.86**	**101**	*e*P	**Pn**	**20 05 18.8**	**+4.4**
PCPH	**Palayan**	**1.88**	**9**	⇓*i* P	**Pn**	**20 05 13.4**	**-1.1**
BALP	**Baler**	**2.17**	**20**	*e*P	**Pn**	**20 05 19.5**	**+1.3**
BCPH	**Baguio City Da**	**2.68**	**356**	⇓*e*P	**Pn**	**20 05 23.6**	**-1.2**
BOLP	**Bolinao**	**2.80**	**342**	*e*P	**Pn**	**20 05 25.1**	**-1.4**
CUYO	**Cuyo Island**	**2.84**	**176**	*e*P	**Pn**	**20 05 25.5**	**-1.5**
PVCP	**Virac**	**3.26**	**91**	*e*P	**Pn**	**20 05 35.7**	**+3.1**
CAUP	**Cauayan**	**3.38**	**17**	*e*P	**Pn**	**20 05 35.2**	**+1.2**
GUIM	**Jordan**	**3.52**	**150**	*e*P	**Pn**	**20 05 37.4**	**+1.5**
PALP	**Palanan**	**3.69**	**25**	*e*P	**Pn**	**20 05 39.5**	**+1.1**
ABRA	**Dolores**	**3.93**	**359**	*e*P	**Pn**	**20 05 40.4**	**-1.0**
CNP	**Catarman**	**3.95**	**107**	*e*P	**Pn**	**20 05 45.5**	**+3.8**
APYP	**Conner**	**4.16**	**6**	*e*P	**Pn**	**20 05 45.4**	**+0.9**
OCLP	**Ormoc**	**4.56**	**125**	*e*P	**Pn**	**20 05 56.6**	**+6.7**
TBP	**Tagbilaran**	**4.99**	**143**	*e*P	**Pn**	**20 05 57.9**	**+2.2**
MSLP	**Maasin**	**5.32**	**131**	*e*P	**Pn**	**20 06 03.6**	**+3.4**
BATP	**Bataraza**	**5.69**	**211**	*e*P	**Pn**	**20 06 02.7**	**-2.5**
IPIL	**Ipil**	**6.13**	**163**	*e*P	**Pn**	**20 06 12.0**	**+0.9**
PAGZ	**Pagadian**	**6.34**	**156**	*e*P	**Pn**	**20 06 17.4**	**+3.4**
BBP	**Basco**	**6.80**	**9**	*e*P	**Pn**	**20 06 19.4**	**-0.8**
BUKP	**Musuan**	**7.14**	**144**	*e*P	**Pn**	**20 06 29.1**	**+4.2**
KDM	**Kudat**	**7.79**	**210**	P	**Pn**	**20 06 34.4**	**+0.8**
DAV	**Davao City (W)**	**8.09**	**144**	LR	LR	20 10 49.4	
	comp=Z,182nm,19.8s,baz=46,slow=46						
DAV	**Davao City (W)**	**8.09**	**144**	*e*Pn	**Pn**	**20 06 35.3**	**-2.5**
SDKM	**Sandakan**	**8.76**	**204**	P	**Pn**	**20 06 46.6**	**-0.2**
MYLDM	**Lahad Datu**	**8.76**	**195**	P	**Pn**	**20 06 48.4**	**+1.5**
TWG	**Pinlang**	**9.08**	**2**	*e*Pn	**Pn**	**20 06 49.2**	**-1.9**
	28nm,0.6s						
TPUB	**Ta-pu**	**9.55**	**359**	*e*P	**Pn**	**20 06 57.8**	**+0.2**
	80nm,0.9s						
YULB	**Yu-li**	**9.65**	**3**	*e*Pn	**Pn**	**20 06 58.9**	**0.0**
	29nm,0.6s						
TSM	**Tawau**	**9.78**	**197**	P	**Pn**	**20 07 01.9**	**+1.2**
SSLB	**Suanglung**	**10.04**	**1**	*e*P	**Pn**	**20 07 02.6**	**-1.6**
	27nm,0.6s						
NACB	**Ninganchiao**	**10.45**	**4**	*e*Pn	**Pn**	**20 07 07.7**	**-2.0**
YHNB	**Yeheng**	**10.93**	**3**	*e*Pn	**Pn**	**20 07 15.5**	**-0.5**
	32nm,0.8s						
TATO	**Taipei**	**11.24**	**3**	*e*Pn	**Pn**	**20 07 20.0**	**-0.2**
	98nm,1.1s						
QIZ	**Qiongzhong**	**11.77**	**298**	P	**Pn**	**20 07 26.1**	**-1.2**
QIZ				sP		20 07 54.6	
QIZ				S	**Sn**	**20 09 29.2**	**-7.7**
QIZ				pmax	pmax		
	comp=Z,36nm,1.1s						
QIZ				pmax	pmax		
	comp=Z,110nm,5.8s						
QIZ				LR	LR		
	comp=N,270nm,17.9s						
QIZ				LR	LR		
	comp=Z,300nm,10.4s						
QIZ	**Qiongzhong**	**11.77**	**298**	*e*Pn	**Pn**	**20 07 25.4**	**-1.9**
	comp=Z,18nm,0.6s						
QIZ				*e*Sn	**Sn**	**20 09 27.8**	**-9.2**
KSM	**Kuching**	**15.98**	**221**	P	**Pn**	**20 08 22.4**	**+0.9**
KSM	**Kuching**	**15.98**	**221**	*e*Pn	**Pn**	**20 08 21.9**	**+0.5**
	comp=Z,34nm,0.7s						
KSM				*e*Sn	**Sn**	**20 11 03.6**	**-15**
WHN	**Wuhan**	**17.79**	**342**	P	**Pn**	**20 08 43.8**	**+0.4**
WHN				sP	sP	20 09 13.2	-4.2
WHN				S	**S**	**20 11 58.5**	**-2.9**
WHN				pmax	pmax		
	comp=Z,80nm,0.9s						
WHN				pmax	pmax		
	comp=Z,900nm,3.6s						
GYA	**Guiyang**	**18.35**	**316**	⇑*i* P	**P**	**20 08 50.2**	**+1.4**
GYA				sP	sP	20 09 26.9	+3.3
GYA				S	**S**	**20 12 12.5**	**-0.2**
GYA				PcP	PcP	20 13 18.7	+3.1
GYA				pmax	pmax		
	comp=Z,20nm,0.9s						
GYA				pmax	pmax		
	comp=Z,140nm,4.5s						
GYA				LR	LR		
	comp=N,1μm,11.8s						
GYA				LR	LR		
	comp=E,1μm,13.7s						
GYA				LR	LR		
	comp=Z,2μm,13.0s						
NJ2	**Nanjing**	**18.36**	**355**	*e*P	**P**	**20 08 51.6**	**+2.8**
NJ2				sP	sP	20 09 24.8	+1.2
NJ2				S	**S**	**20 12 08.5**	**-4.2**
NJ2				pmax	pmax		
	comp=Z,40nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,310nm,8.8s						
NJ2				LR	LR		
	comp=N,300nm,22.1s						
NJ2				LR	LR		
	comp=E,250nm,26.1s						
NJ2				LR	LR		
	comp=Z,390nm,22.2s						
KAPI	**Kappang**	**18.62**	**183**	P	**P**	**20 08 52.8**	**+1.0**
	comp=Z,588nm,0.5s,SNR=35						
KAPI	**Kappang**	**18.62**	**183**	P	**P**	**20 08 52.6**	**+0.8**
	comp=Z,8.7nm,0.3s,baz=12,slow=4.3,SNR=58						
ENH	**Enshi**	**19.52**	**329**	*e*P	**P**	**20 09 01.3**	**-0.3**
	comp=Z,27nm,0.6s						
KMI	**Kunming**	**20.45**	**306**	⇑P	**P**	**20 09 13.1**	**+1.5**
KMI				pP		20 09 34.9	
KMI				PP		20 09 40.1	
KMI				sP	sP	20 09 48.3	+1.6
KMI				S	**S**	**20 12 53.6**	**-0.9**
KMI				sS	sS	20 13 24.5	-4.8
KMI				SS		20 13 30.4	
KMI				pmax	pmax		
	comp=Z,18nm,1.0s						
KMI				pmax	pmax		
	comp=Z,110nm,4.6s						
KMI				LR	LR		
	comp=N,91nm,13.4s						
KMI				LR	LR		
	comp=E,130nm,13.4s						
KMI				LR	LR		
	comp=Z,180nm,11.1s						
MYKOM	**Kota Tinggi**	**20.52**	**236**	P	**P**	**20 09 13.0**	**+0.5**
KGM	**Kluang**	**20.82**	**238**	P	**P**	**20 09 16.4**	**+0.7**
CM31	**Chiang Mai Arr**	**21.52**	**286**	*e*P	**P**	**20 09 25.0**	**+1.9**
CMAR	**Chiang Mai Arr**	**21.52**	**286**	P	**P**	**20 09 23.7**	**+0.5**
	comp=Z,15nm,0.9s,mb4.3,baz=95,slow=7.9,SNR=28						
CMAR				ScP	ScP	20 16 47.6	-0.9
	comp=Z,1.3nm,0.9s,baz=61,slow=1.7,SNR=8.9						
KULM	**Kulim**	**21.54**	**249**	P	**P**	**20 09 23.3**	**-0.1**
KULM	**Kulim**	**21.54**	**249**	*e*P	**P**	**20 09 22.8**	**-0.6**
	comp=Z,18nm,0.8s,mb4.5						
IPM	**Ipoh**	**21.55**	**247**	P	**P**	**20 09 23.0**	**-0.5**
CHTO	**Chiang Mai**	**21.58**	**287**	*e*P	**P**	**20 09 24.1**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.0						
CHTO	**Chiang Mai**	**21.58**	**287**	*e*P	**P**	**20 09 24.1**	**+0.3**
	comp=Z,5.9nm,0.8s,mb4.0						
FRIM	**Kepong**	**21.60**	**243**	P	**P**	**20 09 24.1**	**0.0**
XAN	**Xi'an**	**22.94**	**334**	P	**P**	**20 09 36.8**	**-0.8**
XAN				pmax	pmax		
	comp=Z,16nm,0.7s,mb4.5						
CD2	**Chengdu**	**23.23**	**320**	⇑*i* P	**P**	**20 09 40.6**	**+0.4**
CD2				pP		20 10 03.6	
CD2				PP		20 10 17.4	
CD2				S	**S**	**20 13 40.5**	**-3.2**
CD2				sS	sS	20 14 20.5	-3.9
CD2				SS		20 14 35.7	
CD2				pmax	pmax		
	comp=Z,170nm,0.8s,mb5.4						
CD2				pmax	pmax		
	comp=Z,210nm,4.2s						
CD2				LR	LR		
	comp=N,250nm,15.6s						
CD2				LR	LR		
	comp=E,230nm,15.6s						
CD2				LR	LR		
	comp=Z,210nm,12.0s						
CBIJ	**Chichi jima**	**24.02**	**53**	P	**P**	**20 09 48.0**	**+0.4**
	comp=Z,23nm,0.4s,mb4.8,baz=260,slow=17,SNR=6.0						
PSI	**Prapat**	**24.17**	**245**	P	**P**	**20 09 49.3**	**+0.2**
	comp=Z,64nm,0.9s,mb5.0,baz=50,slow=5.5,SNR=30						
PSI				LR	LR	20 18 00.1	
	comp=Z,77nm,20.2s,baz=18,slow=33						
KSRS	**Korea Array**	**24.50**	**14**	P	**P**	**20 09 51.8**	**+0.1**
	comp=Z,2.9nm,0.6s,mb3.8,baz=192,slow=10,SNR=14						
KSRS				pP		20 10 13.7	
	comp=Z,3.6nm,0.8s,baz=198,slow=12,SNR=4.6						
KSRS				LR	LR	20 19 51.0	
	comp=Z,90nm,19.7s,baz=183,slow=37						
JHJ	**Hachijo jima 2**	**25.94**	**39**	LR	LR	20 19 48.1	
	comp=Z,54nm,18.5s,baz=80,slow=35						
BJT	**Baijiatuau**	**26.53**	**352**	*e*P	**P**	**20 10 10.0**	**-0.1**
BJT				pmax	pmax		
	comp=Z,25nm,0.6s						
BJT	**Baijiatuau**	**26.53**	**352**	*e*P	**P**	**20 10 10.0**	**-0.1**
	comp=Z,25nm,0.6s,mb4.9						
BJI	**Beijing**	**26.55**	**352**	P	**P**	**20 10 11.3**	**+1.0**
BJI				pP	pP	20 10 33.0	-1.8
BJI				sP	sP	20 10 45.6	-2.3
BJI				S	**S**	**20 14 36.2**	**-0.3**
BJI				sS	sS	20 15 19.4	0.0
BJI				pmax	pmax		
	comp=Z,30nm,0.7s,mb4.9						
LZH	**Lanzhou**	**27.00**	**329**	*e*P	**P**	**20 10 15.4**	**+1.1**
LZH				pP	pP	20 10 38.4	-0.4
LZH				sP	sP	20 10 52.0	+0.1
LZH				PP	PP	20 11 07.6	-10
LZH				*e*S	**S**	**20 14 38.0**	**-5.6**
LZH				sS	sS	20 15 26.3	-0.3
LZH				SS		20 16 11.7	
LZH				pmax	pmax		
	comp=Z,30nm,1.0s,mb4.8						
LZH				pmax	pmax		
	comp=Z,100nm,4.1s						
LZH				LR	LR		
	comp=N,680nm,11.6s						
LZH				LR	LR		
	comp=Z,990nm,13.1s						
MAJO	**Matsushiro**	**27.58**	**31**	*e*P	**P**	**20 10 18.5**	**-1.0**
MAJO				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.2						
MAJO	**Matsushiro**	**27.58**	**31**	*e*P	**P**	**20 10 18.4**	**-1.1**
	comp=Z,10nm,1.2s,mb4.2						
MAT	**Matsushiro**	**27.58**	**31**	P	**P**	**20 10 19.0**	**-0.5**
MAT				*e*S	**S**	**20 14 40.0**	**-13**
MJAR	**Matsushiro Arr**	**27.58**	**31**	P	**P**	**20 10 17.8**	**-1.7**
	comp=Z,1.5nm,0.5s,mb3.7,baz=211,slow=8.7,SNR=12						
MJAR				LR	LR	20 20 37.2	
	comp=Z,31nm,18.1s,baz=180,slow=35						
MJAR	**Matsushiro Arr**	**27.58**	**31**	P	**P**	**20 10 17.8**	**-1.7**
MJAR				LR	LR	20 20 37.2	
HHC	**Hu-ho-hao-te**	**28.23**	**345**	*e*P	**P**	**20 10 26.1**	**+0.9**
HHC				pP	pP	20 10 50.2	+0.3
HHC				sP	sP	20 11 03.5	+0.6
HHC				PP	PP	20 11 22.7	-8.4
HHC				PcP	PcP	20 13 36.0	-0.1
HHC				S	**S**	**20 15 04.7**	**+1.9**
HHC				sS	sS	20 15 46.6	+0.7
HHC				SS	SS	20 16 36.1	-31
HHC				ScP	ScP	20 17 06.4	-0.6
HHC				PcS	PcS	20 17 17.3	-1.0
HHC				ScS	ScS	20 20 57.0	-2.8
HHC				pmax	pmax		
	comp=Z,28nm,1.0s,mb4.8						
HHC				pmax	pmax		
	comp=Z,79nm,6.7s						
HHC				LR	LR		
	comp=N,99nm,16.8s						
HHC				LR	LR		
	comp=E,78nm,16.8s						
HHC				LR	LR		

comp=Z,44nm,0.9s,mb5.3
JIRN Jiri 35.09 299 *e*P **P 20 11 25.9 +0.3**
comp=Z,101nm,0.9s,mb5.7
GUN Gumba 35.43 299 *e*P **P 20 11 28.7 +0.3**
comp=Z,67nm,0.5s,mb5.8
PKI Pulchoki 35.74 298 *e*P **P 20 11 30.7 -0.4**
PKI Pulchoki 35.74 298 *e*P **P 20 11 31.4 +0.3**
PKI pmax pmax
comp=Z,24nm,0.5s,mb5.4
PKI Pulchoki 35.74 298 *e*P **P 20 11 31.4 +0.3**
comp=Z,24nm,0.5s,mb5.4
PKIN Phulchoki 35.75 298 *e*P **P 20 11 31.4 +0.2**
comp=Z,24nm,0.5s,mb5.4
KKN Kakani 35.91 299 *e*P **P 20 11 32.2 -0.3**
comp=Z,39nm,0.8s,mb5.4
KKN Kakani 35.91 299 *e*P **P 20 11 32.2 -0.3**
KKN pmax pmax
comp=Z,39nm,0.8s,mb5.4
ULN Ulaanbaatar 35.94 344 *e*P **P 20 11 33.0 +0.5**
ULN pmax pmax
comp=Z,17nm,0.9s,mb5.0
ULN Ulaanbaatar 35.94 344 *e*P **P 20 11 33.0 +0.6**
comp=Z,17nm,0.9s,mb5.0
WRAB Tennant Creek 35.98 158 P **P 20 11 32.0 -1.2**
comp=Z,122nm,0.6s,SNR=18
WRAB Tennant Creek 35.98 158 *e*P **P 20 11 31.4 -1.8**
WRAB pmax pmax
comp=Z,20nm,1.0s,mb5.0
WRAB Tennant Creek 35.98 158 *e*P **P 20 11 31.4 -1.8**
comp=Z,20nm,1.0s,mb5.0
WRA Warramunga Arr 35.99 158 P **P 20 11 31.9 -1.3**
comp=Z,9.1nm,0.4s,mb5.0,baz=336,slow=9.8,SNR=110
WRA pP pP 20 11 55.0 -3.3
comp=Z,9.0nm,0.7s,baz=336,slow=9.7,SNR=5.5
WRA ScP ScP 20 17 34.0 +0.4
comp=Z,1.4nm,0.7s,baz=344,slow=4.0,SNR=9.4
WRA Warramunga Arr 35.99 158 P **P 20 11 31.9 -1.3**
WRA *PP pP 20 11 55.0 -3.4
DMN Daman 36.01 298 *e*P **P 20 11 33.0 -0.4**
comp=Z,31nm,0.5s,mb5.5
SONM Songino Array 36.09 343 P **P 20 11 34.0 +0.3**
comp=Z,22nm,0.6s,mb5.3,baz=164,slow=10.0,SNR=58
SONM ScP ScP 20 17 33.7 +0.1
comp=Z,0.7nm,0.5s,baz=151,slow=3.4,SNR=3.9
SONM LR LR 20 26 47.7
comp=Z,69nm,21.0s,baz=94,slow=37
KLR Kul'dur 36.56 12 *e*P **P 20 11 33.8 -4.0**
KLR *e* pP 20 11 56.2 -6.8
KLR pmax pmax
comp=Z,34nm,1.6s,mb5.0
HABR Khabarovsk 36.63 16 *e*P **P 20 11 34.6 -3.8**
HABR *e**SP sP 20 12 09.9 -6.6
HABR *e*S **S 20 17 11.4 -1.6**
HABR *e**SS sS 20 17 51.4 -5.3
HABR *e* 20 21 40.3
HABR MLR MLR
comp=Z,35nm,14.0s
ZAK Zakamensk 39.27 342 *e*P **P 20 12 00.3 -0.2**
ZAK pmax pmax
comp=Z,11nm,0.9s,mb4.7
ASAR Alice Springs 39.28 161 P **P 20 12 00.2 -0.7**
comp=Z,9.8nm,0.6s,mb4.8,baz=335,slow=6.6,SNR=234
ASAR pP pP 20 12 24.0 -2.4
comp=Z,6.0nm,0.6s,baz=338,slow=6.7,SNR=6.0
ASAR sP sP 20 12 36.6 -2.6
comp=Z,6.0nm,0.6s,baz=337,slow=7.0,SNR=4.5
ASAR PcP PcP 20 14 07.8 +0.1
comp=Z,2.7nm,0.8s,baz=352,slow=3.9,SNR=5.9
ASAR ScP ScP 20 17 46.2 +0.2
comp=Z,0.7nm,0.7s,baz=335,slow=2.8,SNR=5.1
PALK Pallekele 39.90 265 P **P 20 12 06.3 +0.1**
comp=Z,13nm,1.2s,mb4.6,baz=140,slow=12,SNR=3.0
MEEK Meekatharra 40.15 183 *e*P **P 20 12 07.4 -0.6**
TLY Talaya 40.33 344 P **P 20 12 09.1 -0.2**
comp=Z,126nm,0.5s,SNR=7.0
TLY Talaya 40.33 344 *e*P **P 20 12 09.5 +0.2**
TLY *e*S **S 20 18 16.5 +7.9**
TLY *e* 20 22 03.3
TLY pmax pmax
comp=Z,4.0nm,0.5s,mb4.5
TLY MLR MLR
comp=Z,51nm,20.0s
TLY Talaya 40.33 344 *e*P **P 20 12 09.6 +0.4**
comp=Z,14nm,0.5s,mb5.0
MOY Mondy 41.10 341 *e*P **P 20 12 16.1 +0.5**
MOY pmax pmax
comp=Z,16nm,1.5s,mb4.6
WMQ Urumqi 41.27 323 P **P 20 12 18.0 +0.9**
WMQ pP pP 20 12 43.0 +0.3
WMQ sP sP 20 12 57.0 +1.5
WMQ PP PP 20 13 58.0 +3.5
WMQ S **S 20 18 24.0 +1.3**
WMQ SS SS 20 21 27.0 -3.4
WMQ pmax pmax
comp=Z,21nm,1.0s,mb4.9
WMQ pmax pmax
comp=Z,85nm,4.0s
WMQ LR LR
comp=N,130nm,15.0s
WMQ LR LR
comp=E,90nm,15.0s
WMQ LR LR
comp=Z,65nm,15.0s
CTA Charters Tower 41.88 143 *e*P **P 20 12 23.5 +1.1**
comp=Z,5.1nm,0.6s,mb4.4
CTA Charters Tower 41.88 143 P **P 20 12 22.6 +0.2**
comp=Z,5.0nm,0.6s,mb4.4,baz=325,slow=9.7,SNR=10
CTAO Charters Tower 41.88 143 *e*P **P 20 12 22.5 +0.1**
CTAO pmax pmax
comp=Z,7.0nm,0.7s,mb4.5
CTAO Charters Tower 41.88 143 *e*P **P 20 12 22.5 +0.1**
comp=Z,6.8nm,0.7s,mb4.5
FORT Forrest 44.77 171 *e*P **P 20 12 44.0 -1.4**
comp=Z,40nm,0.7s,mb5.3
FORT Forrest 44.77 171 *e*P **P 20 12 45.4 0.0**
KMBL Kambalda 44.82 179 *e*P **P 20 12 45.0 -0.8**
comp=Z,208nm,0.4s
KLBR Kellerberrin 45.12 184 *e*P **P 20 12 47.2 -1.0**
comp=Z,36nm,0.7s,mb5.2
MK31 Makanchi Array 46.09 324 *e*P **P 20 12 56.2 +0.5**
MK31 *e* 20 13 30.6
MK31 Makanchi Array 46.09 324 *e*P **P 20 12 56.1 +0.5**
MK31 *e* 20 13 30.6
MK31 *e*ScP ScP 20 18 11.8 -1.3
MKAR Makanchi Array 46.09 324 P **P 20 12 56.2 +0.5**
comp=Z,16nm,0.7s,mb4.9,baz=112,slow=9.7,SNR=166
MKAR ScP ScP 20 18 13.0 -0.1
comp=Z,2.0nm,0.9s,baz=97,slow=6.2,SNR=8.2
MKAR Makanchi Array 46.09 324 P **P 20 12 56.2 +0.5**
MKAR ScP ScP 20 18 13.0 -0.1
NWAO Narrogin (SRO) 46.48 184 *e*P **P 20 12 58.2 -0.7**
comp=Z,163nm,0.6s,mb5.9
NWAO Narrogin (SRO) 46.48 184 P **P 20 12 58.7 -0.2**
comp=Z,37nm,0.8s,mb5.2,baz=5.5,slow=6.8,SNR=28
NWAO Narrogin (SRO) 46.48 184 *e*P **P 20 12 58.1 -0.8**
NWAO *e*pP pP 20 13 20.4 -4.7
KSH Kashi 46.97 312 *e*P **P 20 13 05.0 +2.3**
KSH pP pP 20 13 30.8 +1.9
KSH sP sP 20 13 43.7 +2.1
KSH PcP PcP 20 14 35.1 +1.7
KSH PP PP 20 14 57.2 +2.9
KSH ScP ScP 20 18 17.4 +0.4
KSH PcS PcS 20 18 29.1 +0.6
KSH S **S 20 19 47.3 +1.6**
KSH sS sS 20 20 33.6 +2.8
KSH ScS ScS 20 22 45.0 -0.9
KSH SS SS 20 23 10.9 -3.0
KSH pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
KSH pmax pmax
comp=Z,83nm,5.5s
KSH LR LR
comp=N,66nm,4.3s
KSH LR LR
comp=E,120nm,5.2s
KSH LR LR
comp=Z,68nm,6.4s
ULHL Ulaho **47.79 315** P **P 20 13 10.4 +1.4**
SNR=7.7
KZA Kyzart 48.41 315 P **P 20 13 15.6 +1.9**
SNR=18
BBOO Buckleboo 48.49 163 *e*P **P 20 13 13.3 -1.1**
comp=Z,5.8nm,0.4s,mb4.8
TKM2 Tokmak 2 48.49 316 P **P 20 13 15.4 +1.1**
SNR=15
TKM2 Tokmak 2 48.49 316 *e*P **P 20 13 15.0 +0.6**
TKM2 pmax pmax
comp=Z,12nm,0.6s,mb4.9
TKM2 Tokmak 2 48.49 316 *e*P **P 20 13 15.0 +0.6**
comp=Z,12nm,0.6s,mb4.9
YAK Yakutsk 48.68 6 *e*P **P 20 13 14.3 -1.2**
YAK pmax pmax
comp=Z,11nm,0.9s,mb4.8
YAK pmax pmax
comp=N,4.0nm,1.0s
YAK Yakutsk 48.68 6 *e*P **P 20 13 14.2 -1.3**
comp=N,12nm,0.8s,mb4.9
KBK Karagaybulak 48.83 315 P **P 20 13 18.5 +1.5**
SNR=30
UCH Uchtor 48.97 315 P **P 20 13 19.9 +1.9**
SNR=46
UCH Uchtor 48.97 315 *e*P **P 20 13 19.6 +1.5**
UCH pmax pmax
comp=Z,23nm,0.8s,mb5.2
UCH Uchtor 48.97 315 *e*P **P 20 13 19.6 +1.5**
comp=Z,23nm,0.8s,mb5.2
PETK Petropavlovsk- 48.98 29 P **P 20 13 18.6 +0.7**
comp=Z,2.9nm,0.8s,mb4.3,baz=221,slow=7.7,SNR=7.5
PETK LR LR 20 32 32.6
comp=Z,35nm,21.5s,baz=32,slow=34
CHMS Chumysh 49.09 316 P **P 20 13 19.5 +0.5**
SNR=11
ZAA0 Zalesovo Array 49.10 333 *e*P **P 20 13 18.1 -0.7**
ZALV Zalesovo Beam 49.10 333 P **P 20 13 18.3 -0.6**
comp=Z,12nm,0.5s,mb5.1,baz=127,slow=6.6,SNR=59
ZALV LR LR 20 34 27.6
comp=Z,24nm,18.7s,baz=177,slow=36
ZALV Zalesovo Beam 49.10 333 P **P 20 13 18.3 -0.6**
ZALV LR LR 20 34 27.6
AAK Ala-Archa 49.13 315 P **P 20 13 20.0 +0.7**
comp=Z,4.0nm,0.5s,mb4.6,baz=129,slow=6.7,SNR=12
AAK LR LR 20 35 05.3
comp=Z,67nm,20.5s,baz=269,slow=37
AAK Ala-Archa 49.13 315*c i*P **P 20 13 19.9 +0.6**
AAK pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
AAK Ala-Archa 49.13 315 *e*P **P 20 13 19.6 +0.3**
AAK LR LR 20 35 05.3
USP Ospenovka 49.37 316 P **P 20 13 21.7 +0.6**
SNR=20
AML Almayashu 49.51 314 P **P 20 13 23.8 +1.6**
SNR=9.7
AML Almayashu 49.51 314 *e*P **P 20 13 23.3 +1.2**
AML *e**PP pP 20 13 46.2 -2.4
AML pmax pmax
comp=Z,20nm,0.8s,mb5.1
AML Almayashu 49.51 314 *e*P **P 20 13 23.3 +1.1**
comp=Z,20nm,0.8s,mb5.1
AML *e*pP pP 20 13 46.2 -2.4
STKA Stephens Creek 49.51 157 *e*P **P 20 13 21.0 -1.2**
comp=Z,2.0nm,0.7s,mb4.2
STKA Stephens Creek 49.51 157 P **P 20 13 21.4 -0.8**
comp=Z,1.5nm,0.3s,mb4.3,baz=337,slow=8.7,SNR=11
STKA pP pP 20 13 46.8 -1.8
comp=Z,5.2nm,0.8s,baz=330,slow=8.6,SNR=4.4
STKA LR LR 20 36 46.4
comp=Z,189nm,18.2s,baz=28,slow=39
STKA Stephens Creek 49.51 157 *e*P **P 20 13 21.0 -1.2**
STKA *PP pP 20 13 46.8 -1.8
STKA Stephens Creek 49.51 157 *e*P **P 20 13 21.0 -1.2**
STKA *e*pP pP 20 13 45.3 -3.3
STKA pP pP 20 13 46.8 -1.8
STKA LR LR 20 36 46.4
EKS2 Erkin-Say 49.64 315 P **P 20 13 24.1 +1.0**
SNR=23
EKS2 Erkin-Say 49.64 315 *e*P **P 20 13 24.1 +1.0**
EKS2 pmax pmax
comp=Z,13nm,0.8s,mb4.9
EKS2 Erkin-Say 49.64 315 *e*P **P 20 13 24.1 +1.0**
comp=Z,13nm,0.8s,mb4.9
KURK Kurchatov 50.24 326 P **P 20 13 28.4 +0.9**
comp=Z,917nm,0.5s,SNR=96
KURK Kurchatov 50.24 326 P **P 20 13 28.0 +0.4**
comp=Z,34nm,0.6s,mb5.5,baz=134,slow=7.8,SNR=107
KURK Kurchatov 50.24 326 *e*P **P 20 13 28.1 +0.5**
NVS Novosibirsk 50.39 333 *e*P **P 20 13 27.9 -0.7**
NVS *e**PP pP 20 14 03.4 +8.3
NVS *e*S **S 20 20 32.0 -1.1**
NVS pmax pmax
comp=E,17nm,1.2s
NVS pmax pmax
comp=Z,27nm,1.2s,mb5.0
NVS pmax pmax
comp=N,20nm,1.5s
NVS smax
comp=N,43nm,3.2s
CMSA Cobar Meteorol 50.93 152 *e*P **P 20 13 25.7 -7.2**
KBL Kabul 50.99 303 *e*P **P 20 13 33.6 +0.1**
KBL pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
KBL Kabul 50.99 303 *e*P **P 20 13 33.6 +0.1**
comp=Z,6.9nm,0.9s,mb4.7
SEY Seymchan 53.98 17⇑ *e*P **P 20 13 54.7 -0.3**
BVAR Borovoye Array 55.83 326 P **P 20 14 08.7 +0.2**
comp=Z,7.4nm,0.7s,mb4.8,baz=122,slow=8.9,SNR=62
BVAR ScP ScP 20 18 54.3 -0.6
comp=Z,1.1nm,0.9s,baz=96,slow=4.5,SNR=4.2
BRVK Borovoye 55.90 326 P **P 20 14 09.1 +0.1**
comp=Z,170nm,1.0s,SNR=24
BRVK Borovoye 55.90 326*c i*P **P 20 14 09.2 +0.2**
BRVK pmax pmax
comp=Z,42nm,1.2s,mb5.3
BRVK Borovoye 55.90 326 *e*P **P 20 14 08.8 -0.1**
comp=Z,23nm,0.9s,mb5.2
TIXI Tiksi 58.13 3 *e*P **P 20 14 23.0 -1.4**
TIXI pmax pmax
comp=Z,12nm,1.0s,mb4.9
TIXI Tiksi 58.13 3 *e*P **P 20 14 23.0 -1.4**
comp=Z,12nm,1.0s,mb4.9
IMYA Miami 58.47 304 *e*P **P 20 14 28.1 +0.7**
ISRO Mashad 58.98 304 *e*P **P 20 14 31.4 +0.5**
IPAY Payeh 59.37 304 *e*P **P 20 14 34.4 +0.8**
IKRD Kardeh 59.79 305 *e*P **P 20 14 32.1 -4.4**
ABKAR Akbulak array 60.80 319 *e*P **P 20 14 42.7 -0.4**
comp=Z,7.3nm,0.5s,mb5.0
BILL Biiibino 61.68 18⇑ *e*P **P 20 14 49.1 +0.4**
BILL *e**PP pP 20 15 13.3 -2.9
BILL *e**SP sP 20 15 25.2 -3.3
BILL S **S 20 23 14.0 +12**
BILL pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
BILL Biiibino 61.68 18 *e*P **P 20 14 48.9 +0.1**
comp=Z,5.7nm,0.6s,mb4.8
SVE Sverdlovsk 62.46 327 *e*P **P 20 14 54.4 +0.3**
ARU Arti 63.44 327 P **P 20 14 59.7 -0.9**
comp=Z,152nm,0.5s,SNR=7.3
ARU Arti 63.44 327*c i*P **P 20 14 59.7 -0.9**
ARU *e* 20 15 34.5
ARU S **S 20 23 27.3 +2.7**
ARU SS SS 20 27 30.1 -3.1
ARU pmax pmax
comp=Z,11nm,0.6s,mb5.0
ARU Arti 63.44 327 *e*P **P 20 14 59.4 -1.2**
comp=Z,9.1nm,0.6s,mb4.9
ZEI Tsey 71.25 311 *e*P **P 20 15 48.5 -1.7**
ZEI pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
KIV Kislovodsk 72.10 312*c e*P **P 20 15 55.7 +0.5**
KIV pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
KIV Kislovodsk 72.10 312 *e*P **P 20 15 55.4 +0.1**
comp=Z,8.3nm,0.7s,mb4.7
VRHR Novokhopersk 72.68 320 *e*P **P 20 15 57.5 -1.0**
VRHR pmax pmax
comp=Z,10.0nm,0.4s,mb5.0
VRHR pmax pmax
comp=N,4.0nm,0.5s
VRHR pmax pmax
comp=E,10.0nm,0.6s
VSR Storozhevoye 74.22 320 *e*P **P 20 16 06.4 -1.2**
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
VSR pmax pmax
comp=N,4.0nm,1.1s
VSR pmax pmax
comp=E,5.0nm,0.7s
OBN Obninsk 75.60 324*ce*P **P 20 16 14.3 -1.1**
OBN *e*S S 20 25 46.3 -0.9
OBN pmax pmax
comp=Z,15nm,1.7s,mb4.5
BPAW Bear Paw Mtn. 77.02 27 *e*P **P 20 16 23.9 +0.7**
comp=Z,7.8nm,0.9s,mb4.4
BPAW *e*pP pP 20 16 50.0 -1.8
JOF Joensuu 77.69 332 *e*p **P 20 16 25.5 -1.5**
comp=Z,3.0nm,0.3s,mb4.5
JOF Joensuu 77.69 332 *e*p **P 20 16 25.5 -1.5**
comp=Z,3.0nm,0.3s,mb4.5
KEV Kevo 78.57 339 *e*P **P 20 16 30.5 -1.2**
KEV pmax pmax
comp=Z,1.0nm,0.4s,mb4.0
KEV Kevo 78.57 339 *e*p **P 20 16 30.5 -1.2**
comp=Z,1.2nm,0.4s,mb4.1
KEV Kevo 78.57 339 *e*p **P 20 16 30.5 -1.2**
comp=Z,1.2nm,0.4s,mb4.1
MMAI Mount Meron Ar 78.86 301 P **P 20 16 34.4 +0.3**
comp=Z,1.4nm,0.5s,mb4.1,baz=78,slow=8.1,SNR=5.8
ARCES ARCESS Array B 79.12 339 P **P 20 16 34.2 -0.5**
comp=Z,2.6nm,0.5s,mb4.4,baz=75,slow=7.3,SNR=36
BR131 Keskin Array S 79.23 308 *e*P **P 20 16 35.2 -0.7**
comp=Z,0.9nm,0.5s,mb3.9
BR131 *e*pP pP 20 17 02.5 -2.1
BRTR Keskin Array B 79.23 308 P **P 20 16 35.6 -0.3**
comp=Z,1.2nm,0.6s,mb3.9,baz=138,slow=5.7,SNR=12
KAF Kangasniemi 80.10 332 *e*P **P 20 16 37.8 -2.4**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb4.0
KAF Kangasniemi 80.10 332 *e*p **P 20 16 37.8 -2.4**
comp=Z,0.8nm,0.4s,mb3.9
KAF Kangasniemi 80.10 332 *e*p **P 20 16 37.8 -2.4**
comp=Z,0.8nm,0.4s,mb3.9
FINES FINESS Array B 80.33 331 P **P 20 16 40.4 -1.0**
comp=Z,1.1nm,0.5s,mb4.0,baz=50,slow=4.3,SNR=18
FINES FINESS Array B 80.33 331 P **P 20 16 40.4 -1.0**
INK Inuvik 83.06 21 *e*P **P 20 16 55.4 -0.3**
INK *e**PP pP 20 17 21.0 -3.5
INK pmax pmax
comp=Z,3.0nm,1.0s
INK Inuvik 83.06 21 *e*P **P 20 16 55.4 -0.3**
comp=Z,3.2nm,1.0s,mb4.1
INK *e*pP pP 20 17 20.9 -3.6
VRI Vrincioaia 83.10 315⇓ *i*P **P 20 16 56.9 +0.6**
MLR Muntele Rosu 83.72 315 LR LR 20 57 23.9
comp=Z,40nm,20.9s,baz=228,slow=38
BURAR Bucovina Array 83.72 317⇑ *i*P **P 20 16 59.3 -0.2**
BUR08 Bucovina Ar. S 83.73 317 *e*P **P 20 16 59.3 -0.2**
KWP Kalwaria Pacla 84.85 320 *e*P **P 20 17 04.3 -0.8**
KWP pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
KWP Kalwaria Pacla 84.85 320 *e*P **P 20 17 04.3 -0.8**
comp=Z,5.3nm,0.8s,mb4.5
KOLS Kolonicke sedl 85.30 319 *e*P **P 20 17 08.0 +0.6**
KOLS pmax pmax
comp=Z,8.0nm,1.7s,mb4.4
KOLS Kolonicke sedl 85.30 319 *e*P **P 20 17 08.0 +0.6**
comp=Z,8.0nm,1.7s,mb4.4
KOLS Kolonicke sedl 85.30 319 *e*P **P 20 17 08.0 +0.6**
KOLS *e*pP pP 20 17 34.0 -2.4
UZH Uzhgorod 85.37 319 *e*P **P 20 17 08.0 +0.3**
UZH *e* pP 20 17 40.0 +3.3
CRVS Cervenica-Dubn 85.83 319 *e*P **P 20 17 10.5 +0.5**
CRVS pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
CRVS Cervenica-Dubn 85.83 319 *e*P **P 20 17 10.5 +0.5**
comp=Z,6.5nm,1.1s,mb4.5
CRVS *e*SP 20 17 45.7
CRVS Cervenica-Dubn 85.83 319 *e*P **P 20 17 10.5 +0.5**
CRVS *e*pP pP 20 17 33.1 -5.9
CRVS *e*sP sP 20 17 45.7 -5.3
NIE Niedzica 86.41 320 *e*P **P 20 17 12.8 0.0**
OJC Ojcow 86.49 321 *e*P **P 20 17 11.9 -1.3**
NB2 NORSAR Subarra 87.31 333 P **P 20 17 15.5 -1.4**
comp=Z,2.0nm,0.7s,mb4.2,baz=68,slow=4.8
NOA NORSAR Array B 87.31 333 P **P 20 17 15.3 -1.7**
comp=Z,1.4nm,0.6s,mb4.1,baz=68,slow=4.7,SNR=9.1
NOA LR LR 20 57 30.5
comp=Z,25nm,21.4s,baz=65,slow=36
NOA NORSAR Array B 87.31 333 P **P 20 17 15.3 -1.7**
NOA LR LR 20 57 30.5
VYHS Vyhne 87.61 319 *e*P **P 20 17 18.4 -0.3**
VYHS Vyhne 87.61 319 *e*P **P 20 17 18.4 -0.3**
VYHS *e*pP pP 20 17 46.2 -1.6
CLL Collm 90.19 323 *e*(pP) pP 20 17 55.0 -5.0
CLL *i* 20 18 05.0
comp=Z,4.0nm,1.0s
GERES GERESS Array B 90.69 321 P **P 20 17 33.2 0.0**
comp=Z,0.3nm,0.5s,mb3.7,baz=12,slow=1.4,SNR=4.1
MAW Mawson 91.12 199 P **P 20 17 35.3 +0.8**
comp=Z,0.9nm,0.5s,mb4.2,baz=52,slow=5.6,SNR=4.2
GRF Grafenberg Arr 91.87 322 *e*P **P 20 17 38.8 +0.3**
comp=Z,4.0nm,0.9s,mb4.7
GRF *e*pP pP 20 18 12.6 +4.8
GRF Grafenberg Arr 91.87 322 *e*P **P 20 17 38.8 +0.3**
GRF *e**PP pP 20 18 12.6 +4.8
GRF pmax pmax
comp=Z,4.0nm,0.9s,mb4.7
YKA Yellowknife Ar 92.74 22 pP pP 20 18 07.4 -4.2
comp=Z,1.2nm,0.8s,baz=309,slow=4.4,SNR=5.0
YKA LR LR 21 05 55.5
comp=Z,6.6nm,20.0s,baz=150,slow=40
MEM Membach 94.49 325 P **P 20 17 49.5 -1.1**
WLF Walferdange 94.85 324 P **P 20 17 50.8 -1.4**
TXAR Lajitas Array 119.41 45 PKP PKPdf 20 23 20.2 +0.3
comp=Z,0.2nm,0.4s,baz=281,slow=0.8,SNR=5.8
TXAR pPKP pPKPdf 20 23 47.2 -3.2
comp=Z,0.2nm,0.6s,baz=254,slow=0.9,SNR=3.1
TXAR Lajitas Array 119.41 45 PKP PKPdf 20 23 20.2 +0.3
TXAR pPKP pPKPdf 20 23 47.2 -3.2
PLCA Paso Flores 151.29 162 PKPbc PKPbc 20 24 24.6 +1.0
comp=Z,3.7nm,0.7s,baz=183,slow=5.1,SNR=10

IDC ***07*** *20:22:12.9±1.6, 0.°71S×122.°72E, h0km, mb3.4/3, mb1 3.8/4, mb1mx3.4/21, mbtmp3.6/4, ML4.2/1, MS2.8/1, Ms1 2.8/1, ms1mx2.2/16, Error ellipse: s-maj=54.5km s-min=25.9km az=64.0*
DJA ***07*** *20:22:14, 0.°55S×122.°61E, h3km, MLv4.0/8*
ISCJB ***07*** *20:22:14.0±1.0, 0.°61S±0.°06×122.°63E±0.°05, h25km±8km, mb3.5/3, Error ellipse: s-maj=9.4km s-min=7.6km az=14.4*
ISC 07 20:22:15.1±1.3,**0.°66S**±0.°06×**122.°60E**±0.°05,**h15**km±8km, **n18**,σ1**§18**/20,**mb3.5**/3,**Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.42**	**155**	P	**Pg**	**20 22 22.5**	**-1.0**
LUWI				S	**Sg**	**20 22 29.7**	**+0.5**
APSI	**Ampana**	**0.98**	**255**	P	**Pb**	**20 22 33.2**	**-0.6**
APSI				S	**Sb**	**20 22 47.4**	**+0.9**
MRSI	**Marisa**	**1.31**	**330**	P	**Pn**	**20 22 34.8**	**-4.0**
PCI	**Palu**	**2.77**	**265**	S	**Sn**	**20 23 38.4**	**+6.3**
MNI	**Manado**	**3.07**	**47**	P	**Pn**	**20 23 01.1**	**-1.9**
KDI	**Kendari**	**3.27**	**180**	P	**Pn**	**20 23 05.4**	**-0.5**
TTSI	**Tana Toraja**	**3.65**	**230**	P	**Pn**	**20 23 11.8**	**+0.8**
BNSI	**Bone**	**4.47**	**214**	P	**Pn**	**20 23 23.4**	**+1.1**
TNTI	**Ternate**	**4.98**	**73**	P	**Pn**	**20 23 31.8**	**+2.5**
KAPI	**Kappang**	**5.17**	**213**	Pn	**Pn**	**20 23 31.5**	**-0.6**
	8.2nm,0.3s,baz=9.9,slow=6.2,SNR=38						
KAPI				Sn	**Sn**	**20 24 29.8**	**-1.7**
	2.4nm,0.3s,baz=50,slow=12,SNR=6.8						
NLAI	**Namlea**	**5.18**	**120**	P	**Pn**	**20 23 31.7**	**-0.4**
	2μm171nm,0.6s						
BKSI	**Bulukumba**	**5.25**	**208**	P	**Pn**	**20 23 34.3**	**+1.3**
	15nm,0.6s						
AAI	**Ambon**	**6.35**	**118**	P	**Pn**	**20 23 50.0**	**+1.8**
	712nm72nm,0.6s						
MYLDM	**Lahad Datu**	**7.10**	**325**	P	**Pn**	**20 23 57.8**	**-0.7**
WRA	**Warramunga Arr**	**22.34**	**150**	P	**P**	**20 27 12.2**	**-0.4**
	1.3nm,0.6s,mb3.5,baz=335,slow=9.9,SNR=13						
ASAR	**Alice Springs**	**25.36**	**155**	P	**P**	**20 27 40.5**	**-1.3**
	0.7nm,0.6s,mb3.4,baz=335,slow=8.8,SNR=16						
GUMO	**Guam**	**26.22**	**57**	LR	LR	20 35 51.8	
	comp=Z,22nm,19.8s,slow=31						
MKAR	**Makanchi Array**	**58.96**	**329**	P	**P**	**20 32 15.2**	**+1.3**
	0.5nm,0.9s,mb3.5,baz=123,slow=8.8,SNR=4.4						

NEIC ***07*** *20:26:18.2±1.0, 38.°51N×75.°10E, h10km, mb3.6/3, Error ellipse: s-maj=18.4km s-min=11.3km az=52.0*
ISCJB ***07*** *20:26:20.5±1.4, 38.°79N±0.°08×75.°1E±0.°1, h10km, Error ellipse: s-maj=13.3km s-min=11.4km az=12.9*
ISC 07 20:26:19.7±1.0,**38.°66N**±0.°07×**75.°2E**±0.°1,**h10**km,**n18**, σ1**§32**/26,**2C-5D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.07**	**37**⇓	*i*P*g*	**Pg**	**20 26 39.3**	**-0.9**
KSH				Sg	**Sg**	**20 26 47.4**	**-6.7**

KSH smax
comp=N,690nm,0.2s
KSH smax
comp=E,480nm,0.2s
KZA Kyzart 3.41 1 P **Pn 20 27 13.5 +0.6**
SNR=16
UCH Uchtor 3.59 352 P **Pn 20 27 16.3 +1.0**
SNR=26
UCH Uchtor 3.59 352 *e*Pn **Pn 20 27 16.0 +0.6**
UCH *e*Sn **Sn 20 27 55.8 -2.1**
AML Almayashu 3.64 343 P **Pn 20 27 17.3 +1.3**
SNR=12
AML Almayashu 3.64 343 *e*Pn **Pn 20 27 16.8 +0.8**
AML *e*Sn **Sn 20 27 57.1 -1.8**
KBK Karagaybulak 3.99 358 P **Pn 20 27 22.8 +1.9**
SNR=9.0
AAK Ala-Archa 4.00 353 P **Pn 20 27 22.3 +1.4**
SNR=10.0
AAK Ala-Archa 4.00 353 *e*Pn **Pn 20 27 22.1 +1.2**
AAK *e*Sn **Sn 20 28 07.5 -0.3**
EKS2 Erkin-Say 4.13 346 P **Pn 20 27 25.2 +2.5**
SNR=7.3
EKS2 Erkin-Say 4.13 346 *e*Pn **Pn 20 27 23.9 +1.2**
EKS2 *e*Sn **Sn 20 28 11.2 +0.2**
TKM2 Tokmak 2 4.27 4 ⇓Pn **Pn 20 27 26.2 +1.5**
comp=E,3.2nm,0.6s
TKM2 ⇑Lg 20 28 08.0
comp=E,45nm,0.6s
TKM2 Tokmak 2 4.27 4 P **Pn 20 27 26.3 +1.6**
SNR=18
TKM2 Tokmak 2 4.27 4 *e*Pn **Pn 20 27 26.1 +1.5**
TKM2 *e*Sn **Sn 20 28 07.8 -6.6**
KK06 Karatay Array 5.64 323 ⇓Pn **Pn 20 27 44.5 +0.9**
comp=E,0.5nm,0.3s,baz=136,slow=15
KK06 ⇑Pg **Pb 20 27 56.7 -1.5**
comp=E,6.3nm,0.7s,baz=139,slow=15
KK06 ⇓Sn **Sn 20 28 36.0 -12**
comp=E,4.7nm,0.7s
KK06 ⇓Lg 20 29 01.4
comp=E,10nm,0.8s,baz=135,slow=29
ABKAR Akbulak array 15.20 319 Pn **Pn 20 29 52.6 -1.7**
comp=E,0.9nm,0.7s
LSA Lhasa 15.96 119 P **Pn 20 30 02.5 -1.8**
comp=E,3.3nm,0.9s
GNI Garni 23.49 283 *e*P **P 20 31 29.4 -0.3**
comp=E,11nm,0.8s

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*ISCJB **07** 20:46:50.7±1.7, 19°.96N×0°.09×144°.2E±0°.2, h456km±18km, mb3.7/21, Error ellipse: s-maj=24.8km s-min=14.5km az=174.7*
*NEIC **07** 20:46:51.7±5.5, 19°.96N×144°.22E, h455km±64km, mb4.0/6, Error ellipse: s-maj=29.4km s-min=12.8km az=69.0*
*IDC **07** 20:46:51.2±2.7, 19°.98N×144°.39E, h451km±29km, mb3.1/12, mb1 3.2/13, mb1mx3.1/25, mbtmp3.2/13, Error ellipse: s-maj=31.6km s-min=12.9km az=82.0*
ISC 07 20:46:51.7±1.7, 19°.96N±0°.09×144°.3E±0°.2, h455km±18km, n29, σ0s88/29, mb3.7/21, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**7.35**	**345**	P	**P**	**20 48 40.0**	**-0.1**
	4.2nm,0.3s,baz=281,slow=21,SNR=3.9						
YHNB	**Yeheng**	**21.67**	**287**	P	**P**	**20 51 07.0**	**-1.0**
KSRS	**Korea Array**	**22.50**	**324**	P	**P**	**20 51 15.7**	**+0.3**
	1.2nm,0.5s,mb3.6,baz=149,slow=9.7,SNR=10						
WRAB	**Tennant Creek**	**40.82**	**194**	*e*P	**P**	**20 53 52.5**	**+0.2**
	0.8nm,0.4s,mb3.5						
WRA	**Warramunga Arr**	**40.83**	**194**	P	**P**	**20 53 52.8**	**+0.3**
	0.8nm,0.4s,mb3.5,baz=16,slow=8.9,SNR=15						
ULN	**Ulaanbaatar**	**40.94**	**322**	P	**P**	**20 53 54.1**	**+1.1**
SONM	**Songino Array**	**41.31**	**321**	P	**P**	**20 53 55.1**	**-0.9**
	0.6nm,0.4s,mb3.3,baz=139,slow=9.5,SNR=2.7						
CMAR	**Chiang Mai Arr**	**42.72**	**276**	P	**P**	**20 54 08.9**	**+1.2**
	1.4nm,1.0s,mb3.3,baz=74,slow=9.5,SNR=4.8						
ASAR	**Alice Springs**	**44.52**	**194**	P	**P**	**20 54 21.1**	**-0.4**
	0.2nm,0.3s,mb3.0,baz=10,slow=6.8,SNR=6.9						
ODAN	**Odare**	**52.28**	**289**	*e*P	**P**	**20 55 17.4**	**-2.4**
	5.6nm,0.4s,mb4.2						
RAMN	**Ramite**	**52.98**	**289**	*e*P	**P**	**20 55 22.8**	**-2.0**
	6.6nm,0.2s,mb4.5						
JIRN	**Jiri**	**53.27**	**290**	*e*P	**P**	**20 55 27.7**	**+0.8**
	11nm,0.6s,mb4.3						
PKI	**Pulchoki**	**53.97**	**290**	*e*P	**P**	**20 55 32.5**	**+0.6**
PKIN	**Phulchoki**	**53.98**	**290**	*e*P	**P**	**20 55 32.3**	**+0.4**
	7.5nm,0.9s,mb4.0						
PKIN	**Phulchoki**	**53.98**	**290**	*e*P	**P**	**20 55 32.5**	**+0.6**
KKN	**Kakani**	**54.07**	**290**	*e*P	**P**	**20 55 33.0**	**+0.5**
	3.7nm,0.5s,mb4.0						
DMN	**Daman**	**54.24**	**290**	*e*P	**P**	**20 55 33.8**	**+0.1**
	7.7nm,0.7s,mb4.1						
ZALV	**Zalesovo Beam**	**56.19**	**322**	P	**P**	**20 55 47.1**	**+0.2**
	0.5nm,0.3s,mb3.3,baz=116,slow=6.9,SNR=4.6						
MKAR	**Makanchi Array**	**56.61**	**313**	P	**P**	**20 55 51.0**	**+1.0**
	0.9nm,0.5s,mb3.3,baz=82,slow=14,SNR=14						
KURK	**Kurchatov**	**59.43**	**318**	P	**P**	**20 56 09.7**	**+0.5**
	2.3nm,0.4s,mb3.8,baz=95,slow=7.5,SNR=9.6						
KURK	**Kurchatov**	**59.43**	**318**	*e*P	**P**	**20 56 09.1**	**-0.1**
	1.6nm,0.6s,mb3.5						
BVAR	**Borovoye Array**	**64.64**	**320**	P	**P**	**20 56 43.8**	**+0.6**
	2.8nm,0.4s,mb4.2,baz=99,slow=7.6,SNR=33						
YKA	**Yellowknife Ar**	**77.51**	**28**	P	**P**	**20 57 59.4**	**+0.4**
	0.4nm,0.5s,mb3.1,baz=282,slow=4.5,SNR=3.9						
KEV	**Kevo**	**80.32**	**342**	*e*p	**P**	**20 58 12.8**	**-1.1**
	0.3nm,0.4s,mb3.2						
KEV	**Kevo**	**80.32**	**342**	*e*p	**P**	**20 58 12.8**	**-1.1**
	0.3nm,0.4s,mb3.2						
ARCES	**ARCESS Array B**	**80.88**	**342**	P	**P**	**20 58 17.1**	**+0.2**
	3.0nm,0.8s,mb3.9,baz=79,slow=8.2,SNR=6.8						
JOF	**Joensuu**	**82.31**	**335**	*e*p	**P**	**20 58 15.2**	**-9.1**
	0.3nm,0.3s,mb3.3						
JOF	**Joensuu**	**82.31**	**335**	*e*p	**P**	**20 58 15.2**	**-9.1**
	0.3nm,0.3s,mb3.3						
FINES	**FINESS Array B**	**85.17**	**335**	P	**P**	**20 58 37.4**	**-1.2**
	0.9nm,0.4s,mb3.7,baz=64,slow=4.4,SNR=19						

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*CASC **07** 21:15:52.6±2.8, 9°.36N×84°.59W, h6km±9km, MD4.2, ML3.9, mb4.5(NEIC)*
*ISCJB **07** 21:15:54.5±0.5, 9°.39N±0°.06×84°.57W±0°.03, h43km±3km, mb4.5/57, MS4.1/16, Error ellipse: s-maj=10.3km s-min=3.4km az=28.0*
*IDC **07** 21:15:58.0±1.8, 10°.04N×84°.40W, h34km±14km, mb3.9/14, mb1 4.1/15, mb1mx4.1/22, mbtmp3.9/15, ML3.6/1, MS4.1/14, Ms1 4.1/14, ms1mx3.8/36, Error ellipse: s-maj=25.6km s-min=14.8km az=53.0*
*NEIC **07** 21:15:59.1±1.1, 9°.83N×84°.37W, h48km±9km, mb4.5/25, Error ellipse: s-maj=16.3km s-min=8.2km az=223.0*
*SZGRF **07** 21:16:12.2, 12°.14N×82°.36W, h33km, mb4.8, Caribbean Sea*
ISC 07 21:15:56.1±0.5, 9°.48N±0°.06×84°.47W±0°.04, h38km±3km, n215, σ1s09/207, mb4.5/57, MS4.1/16, 34C-45D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QCR	**Quepos**	**0.31**	**99**	⇓*e*P	**Pn**	**21 16 02.0**	**-2.3**
LAJ	**Bijagual**	**0.52**	**42**	⇑*e*P	**Pn**	**21 15 59.6**	**-7.4**
PRS1	**Puriscal**	**0.53**	**18**	⇓*e*P	**Pn**	**21 16 03.7**	**-3.5**
CGA2	**Cerro Gallo 2**	**0.54**	**1**	⇓*iP*	**Pn**	**21 16 05.4**	**-1.9**
SJS	**Escuela Geolog**	**0.62**	**42**	⇓*e*P	**Pn**	**21 16 07.7**	**-0.7**
SJS				*e*S	**Sn**	**21 16 20.1**	**+3.0**
BUS	**Buena Vista**	**0.71**	**84**	⇓*e*P	**Pn**	**21 16 09.1**	**-0.5**
JCR	**Jicaral**	**0.73**	**301**	⇓*e*P	**Pn**	**21 16 05.9**	**-4.0**
URSC	**Urasca**	**0.77**	**62**	⇓*e*P	**Pn**	**21 16 10.5**	**0.0**
JTS	**JuntasAbangare**	**0.94**	**330**	Pg	**Pn**	**21 16 10.2**	**-2.6**
	1μm,0.3s,baz=139,slow=5.5,SNR=1551						
JTS				Lg		21 16 23.3	
	985nm,0.3s,baz=360,slow=19,SNR=24						
JTS	**JuntasAbangare**	**0.94**	**330**	*e*Pg	**Pn**	**21 16 10.2**	**-2.6**
BAR1		**1.17**	**101**	⇓*e*P	**Pn**	**21 16 15.9**	**-0.1**
AMAS	**Alto Masis**	**1.24**	**336**	*i* P	**Pn**	**21 16 15.7**	**-1.3**
VCR	**Vista de Mar**	**1.31**	**300**	⇑*e*P	**Pn**	**21 16 14.3**	**-3.6**
PTEN	**Parque Tenorio**	**1.33**	**338**	*i* P	**Pn**	**21 16 17.9**	**-0.3**
CUI	**Cuipilapa**	**1.36**	**330**	*i* P	**Pn**	**21 16 17.7**	**-0.8**
CUI				*i* S	**Sn**	**21 16 37.0**	**+1.6**
COLC	**Colonia**	**1.38**	**329**	*i* P	**Pn**	**21 16 17.7**	**-1.2**
COLC				*i* S	**Sn**	**21 16 38.2**	**+2.2**
LIM1	**Limonal**	**1.44**	**328**	*i* P	**Pn**	**21 16 18.5**	**-1.1**
MESS	**Mesas**	**1.44**	**331**	*i* P	**Pn**	**21 16 19.0**	**-0.8**
MESS				*i* S	**Sn**	**21 16 39.0**	**+1.5**
ACR	**Cerro Adams**	**1.53**	**122**	⇓*e*P	**Pn**	**21 16 19.8**	**-1.1**
ACR				*e*S	**Sn**	**21 16 40.5**	**+0.9**
GPS2	**Hotel Rinc^‡n**	**1.54**	**326**	*i* P	**Pn**	**21 16 20.3**	**-0.7**
GPS3	**Bodega del ICE**	**1.54**	**325**	*i* P	**Pn**	**21 16 20.1**	**-1.0**
GPS1	**Guardaparques**	**1.55**	**326**	*i* P	**Pn**	**21 16 20.5**	**-0.7**
NY14	**Universidad de**	**1.56**	**318**	*i* P	**Pn**	**21 16 20.3**	**-1.1**
LAPC	**Finca la Perla**	**1.59**	**324**	*i* P	**Pn**	**21 16 20.6**	**-1.2**
BUEV	**Buena Vista**	**1.60**	**325**	*i* P	**Pn**	**21 16 21.1**	**-0.8**
GB1A	**Borinquen Arri**	**1.62**	**326**	*i* P	**Pn**	**21 16 21.4**	**-0.7**
GBS3	**Finca Las Im^¡**	**1.62**	**323**	*i* P	**Pn**	**21 16 21.1**	**-1.1**
BRU2	**Volcan**	**1.89**	**111**	*e*P	**Pn**	**21 16 25.7**	**-0.1**
BRU2				*e*S	**Sn**	**21 16 51.7**	**+3.3**
CNI	**Changuinola**	**1.93**	**92**	⇑*iP*	**Pn**	**21 16 28.7**	**+2.3**
SSN	**San Juan del S**	**2.27**	**323**	*e*P	**Pn**	**21 16 33.0**	**+2.0**
CONN	**Concepcion**	**2.37**	**331**	*e*P	**Pn**	**21 16 34.5**	**+2.1**
CSAN		**3.30**	**325**	*e*P	**Pn**	**21 16 46.8**	**+1.4**
APYN	**Apoyeque**	**3.30**	**326**	*e*P	**Pn**	**21 16 48.0**	**+2.6**
COPN	**Copaltepe**	**3.40**	**322**	*e*P	**Pn**	**21 16 47.6**	**+1.0**
MOMN	**Momotombo**	**3.55**	**325**	*e*P	**Pn**	**21 16 50.5**	**+1.8**
CNGN	**Cerro Negro**	**3.72**	**324**	*e*P	**Pn**	**21 16 52.0**	**+1.0**
BCIP	**Isla Barro Col**	**4.59**	**93**	*e*Pn	**Pn**	**21 17 04.3**	**+1.3**
BCIP	**Isla Barro Col**	**4.59**	**93**	⇑*iP*	**Pn**	**21 17 04.5**	**+1.5**
TGUH	**Tegucigalpa,Un**	**5.32**	**329**	*e*Pn	**Pn**	**21 17 15.0**	**+2.0**
TGUH	**Tegucigalpa,Un**	**5.32**	**329**	*e*P	**Pn**	**21 17 14.0**	**+1.0**
SBLS	**San Blas**	**6.65**	**311**	*e*P	**Pn**	**21 17 31.7**	**+0.3**
APG	**El Apazote**	**8.03**	**314**	Pn	**Pn**	**21 17 52.0**	**+1.7**
	1.6nm,0.3s,baz=128,slow=8.2,SNR=13						
SDV	**Santo Domingo**	**13.68**	**91**	Pn	**Pn**	**21 19 10.6**	**+3.0**
	0.3nm,0.3s,baz=280,slow=7.5,SNR=4.1						
SDV	**Santo Domingo**	**13.68**	**91**	*e*Pn	**Pn**	**21 19 08.9**	**+1.3**
ATAH	**Atahualpa**	**17.58**	**160**	LR	LR	21 25 58.8	
	comp=Z,1μm,19.4s,baz=155,slow=33						
SJG	**San Juan**	**19.74**	**62**	LR	LR	21 27 09.8	
	comp=Z,347nm,20.9s,baz=85,slow=35						
BRAL	**Brewton**	**21.56**	**354**	*e*P	**P**	**21 20 45.9**	**+3.5**
	134nm,1.1s,mb5.3						
LRAL	**Lakeview Retre**	**23.56**	**355**	*e*P	**P**	**21 21 03.5**	**+0.3**
	21nm,0.8s,mb4.6						
GOGA	**Godfrey**	**23.84**	**2**	*e*P	**P**	**21 21 06.2**	**+0.4**
	18nm,0.8s,mb4.5						
NHSC	**New Hope**	**23.85**	**9**	*e*P	**P**	**21 21 07.7**	**+1.8**
	34nm,0.9s,mb4.8						
JCT	**Junction City**	**25.32**	**328**	*e*P	**P**	**21 21 20.8**	**+1.4**
	11nm,0.8s,mb4.4						
SWET	**Sewanee**	**25.66**	**357**	*e*P	**P**	**21 21 22.8**	**+0.5**
CPCT	**Cooper Cave**	**25.86**	**360**	*e*P	**P**	**21 21 24.8**	**+0.7**
TKL	**Tuckaleechee C**	**26.07**	**1**	P	**P**	**21 21 26.9**	**+0.9**
	6.1nm,0.8s,mb4.2,baz=178,slow=11,SNR=7.8						
TKL				LR	LR	21 31 29.6	
	comp=Z,298nm,20.8s,MS3.8,baz=282,slow=36						
TKL	**Tuckaleechee C**	**26.07**	**1**	*e*P	**P**	**21 21 26.7**	**+0.6**
MIAR	**Mount Ida**	**26.31**	**343**	*e*P	**P**	**21 21 27.1**	**-1.1**
	9.2nm,0.6s,mb4.5						
628A	**Black Gap, Mar**	**26.34**	**322**	⇑P	**P**	**21 21 27.4**	**-1.2**
	baz=26,SNR=15						
627A	**Terlingua Ranc**	**26.62**	**321**	⇑P	**P**	**21 21 30.4**	**-0.8**
	baz=26,SNR=11						
WVT	**Waverly**	**26.71**	**354**	*e*P	**P**	**21 21 30.8**	**-1.0**
	3.8nm,0.8s,mb4.0						
TXAR	**Lajitas Array**	**26.71**	**320**	P	**P**	**21 21 31.1**	**-0.9**
	1.8nm,0.4s,mb3.9,baz=148,slow=9.5,SNR=31						
TXAR				PcP	PcP	21 24 56.9	+2.0
	0.8nm,0.8s,baz=127,slow=5.1,SNR=5.4						
TXAR	**Lajitas Array**	**26.71**	**320**	P	**P**	**21 21 31.1**	**-0.9**
TXAR				PcP	PcP	21 24 56.9	+2.0
528A	**Cox Ranch, San**	**26.76**	**323**	⇑P	**P**	**21 21 31.4**	**-1.0**
	baz=27,SNR=13						
TZTN	**Tazewell**	**26.96**	**2**	*e*P	**P**	**21 21 34.0**	**-0.1**
	8.2nm,0.9s,mb4.3						
428A	**Kincaid Ranch,**	**27.11**	**324**	⇑P	**P**	**21 21 35.4**	**-0.2**
	baz=27,SNR=5.9						
626A	**Big Bend Ranch**	**27.16**	**320**	⇓P	**P**	**21 21 34.8**	**-1.2**
	baz=27,SNR=6.3						
527A	**Woodward Ranch**	**27.25**	**322**	⇓P	**P**	**21 21 35.1**	**-1.7**
	baz=27,SNR=9.6						
526A	**Mary Lane Ranc**	**27.48**	**321**	⇓P	**P**	**21 21 37.8**	**-1.1**
	baz=27,SNR=5.3						
328A	**Wristen Ranch,**	**27.67**	**325**	⇓P	**P**	**21 21 38.5**	**-2.0**
	baz=28						
426A	**McDonald Obser**	**27.87**	**322**	⇑P	**P**	**21 21 40.7**	**-1.7**
	baz=28						
227A	**Bennet, Jal**	**28.41**	**325**	⇑P	**P**	**21 21 45.6**	**-1.6**
	baz=28						
425A	**Indio Mountain**	**28.54**	**321**	⇓P	**P**	**21 21 46.9**	**-1.4**
	baz=28,SNR=6.7						
WCI	**Wyandotte Cave**	**28.68**	**357**	*e*P	**P**	**21 21 49.1**	**-0.3**
	12nm,0.9s,mb4.6						
JSRW	**J. Sargeant Re**	**28.72**	**11**	*e*P	**P**	**21 21 50.5**	**+0.7**
226A	**Malaga, Loving**	**28.91**	**324**	⇑P	**P**	**21 21 50.4**	**-1.2**
	baz=29						
CCM	**Cathedral Cave**	**29.10**	**349**	*e*P	**P**	**21 21 51.9**	**-1.4**
	6.3nm,0.9s,mb4.3						
324A	**Moseley Ranch,**	**29.30**	**321**	⇑P	**P**	**21 21 53.9**	**-1.2**
	baz=29						
225A	**Deer Hill, Car**	**29.37**	**323**	⇓P	**P**	**21 21 54.8**	**-0.9**
	baz=29						
MNTX	**Cornudas Mount**	**29.42**	**322**	*e*P	**P**	**21 21 55.0**	**-1.1**
	2.4nm,0.7s,mb4.0						
125A	**Gardner Draw,**	**29.67**	**324**	⇑P	**P**	**21 21 57.1**	**-1.2**
	baz=30						
224A	**Cornudas Mount**	**29.77**	**322**	⇓P	**P**	**21 21 57.9**	**-1.3**
	baz=30,SNR=6.7						
124A	**Stringfield Ra**	**30.16**	**323**	⇓P	**P**	**21 22 01.9**	**-0.8**
	baz=30,SNR=10						
LPAZ	**La Paz**	**30.28**	**148**	P	**P**	**21 22 11.2**	**+7.4**
	0.7nm,0.6s,mb3.6,baz=337,slow=7.9,SNR=3.5						
Y25A	**Mesa, Roswell**	**30.61**	**326**	⇑P	**P**	**21 22 05.6**	**-1.1**
	baz=30						
W27A	**Bowe Ranch, En**	**30.62**	**329**	⇑P	**P**	**21 22 05.4**	**-1.3**
	baz=30						
ACSO	**Alum Creek Sta**	**30.66**	**2**	*e*P	**P**	**21 22 06.7**	**-0.3**
	32nm,1.3s,mb5.0						
320A	**Kipp Ranch, An**	**31.19**	**318**	⇓P	**P**	**21 22 11.8**	**+0.1**
	baz=31						
121A	**Cookes Peak, D**	**31.48**	**320**	⇑P	**P**	**21 22 14.6**	**+0.3**
	baz=31						
220A	**Playas Peak, P**	**31.55**	**318**	⇓P	**P**	**21 22 15.6**	**+0.7**
	baz=31						
SSPA	**Standing Stone**	**31.58**	**10**	*e*P	**P**	**21 22 16.2**	**+1.2**
	3.1nm,0.8s,mb4.2						
319A	**Douglas**	**31.71**	**317**	⇓P	**P**	**21 22 17.3**	**+0.9**
	baz=32,SNR=5.4						
120A	**U Bar Ranch, L**	**32.03**	**319**	⇓P	**P**	**21 22 20.2**	**+1.0**
	baz=32						
219A	**White Tail Can**	**32.09**	**318**	⇓P	**P**	**21 22 20.4**	**+0.7**
	baz=32,SNR=5.6						
318A	**Bisbee**	**32.23**	**316**	⇑P	**P**	**21 22 22.2**	**+1.2**
	baz=32						
ANMO	**Albuquerque**	**32.36**	**325**	LR	LR	21 39 05.8	
	comp=Z,140nm,19.7s,MS3.7,baz=353,slow=43						
Z20A	**Nine Sixteen R**	**32.37**	**320**	⇑P	**P**	**21 22 22.9**	**+0.8**
	baz=32,SNR=7.7						
218A	**Dragoon**	**32.60**	**317**	⇓P	**P**	**21 22 24.6**	**+0.5**
	baz=32,SNR=9.1						
119A	**Ashpeak Ranch,**	**32.60**	**319**	⇑P	**P**	**21 22 23.9**	**-0.2**
	baz=32,SNR=6.6						
Y20A	**Horse Springs,**	**32.76**	**321**	⇓P	**P**	**21 22 25.9**	**+0.3**
	baz=33						
118A	**Homack Ranch,**	**32.96**	**318**	⇓P	**P**	**21 22 27.7**	**+0.4**
	baz=33,SNR=7.1						
217A	**Green Valley**	**33.00**	**316**	⇑P	**P**	**21 22 27.7**	**0.0**
	baz=33,SNR=5.3						
117A	**Oracle**	**33.42**	**317**	⇑P	**P**	**21 22 32.0**	**+0.6**
	baz=33,SNR=5.3						
Y18A	**Canyon Day Jun**	**33.72**	**320**	⇓P	**P**	**21 22 34.4**	**+0.5**
	baz=34						
116A	**Eloy**	**34.07**	**316**	⇓P	**P**	**21 22 37.8**	**+0.8**
	baz=34						
Z16A	**Peralta Trail,**	**34.35**	**318**	⇑P	**P**	**21 22 39.4**	**0.0**
	baz=34						
Y16A	**Circle Bar Ran**	**34.72**	**318**	⇑P	**P**	**21 22 43.2**	**+0.6**
	baz=35,SNR=6.4						
X16A	**Lo Mia Camp, P**	**35.02**	**319**	⇑P	**P**	**21 22 45.5**	**+0.3**
	baz=35,SNR=8.8						
V17A	**Tonalea, Kykot**	**35.39**	**321**	⇑P	**P**	**21 22 48.3**	**-0.1**
	baz=35						
SADO	**Sadowa**	**35.47**	**7**	LR	LR	21 37 44.3	
	comp=Z,388nm,18.8s,MS4.2,baz=326,slow=37						
X15A	**Humboldt**	**35.58**	**319**	⇓P	**P**	**21 22 50.0**	**0.0**
	baz=35						
Y14A	**Wickenburg**	**35.76**	**317**	⇑P	**P**	**21 22 52.1**	**+0.6**
	baz=36						
X14A	**Yava**	**36.00**	**318**	⇓P	**P**	**21 22 53.5**	**-0.2**
	baz=36,SNR=8.0						
V15A	**Kaibab Nationa**	**36.37**	**320**	⇑P	**P**	**21 22 56.7**	**0.0**
	baz=36						
X13A	**Yucca**	**36.70**	**317**	⇑P	**P**	**21 22 59.4**	**-0.1**
	baz=37						
PDMCI	**Parker Dam,Lak**	**36.74**	**317**	⇑P	**P**	**21 23 00.3**	**+0.4**
	baz=37						
V14A	**Boquillas Ranc**	**36.85**	**319**	⇓P	**P**	**21 23 01.1**	**+0.3**
	baz=37,SNR=5.7						
W13A	**Hualapai Mount**	**37.03**	**318**	⇑P	**P**	**21 23 03.1**	**+0.7**
	baz=37,SNR=7.3						
T15A	**Red Dirt Ranch**	**37.27**	**322**	⇑P	**P**	**21 23 05.0**	**+0.7**
	baz=37						
BC3	**Big Chuckawall**	**37.28**	**315**	⇓P	**P**	**21 23 07.0**	**+2.5**
	baz=37						
V13A	**Grand Canyon W**	**37.55**	**319**	⇓P	**P**	**21 23 08.2**	**+1.4**
	baz=37						
U13A	**Pakoon Wash**	**37.88**	**320**	⇓P	**P**	**21 23 09.9**	**+0.3**
	baz=38						
T13A	**Saint George**	**38.21**	**321**	⇓P	**P**	**21 23 13.9**	**+1.5**
	baz=38						
S13A	**Holt Ranch, En**	**38.53**	**321**	⇓P	**P**	**21 23 16.5**	**+1.4**
	baz=38						
TUQ	**Turquoise Moun**	**38.59**	**317**	⇓P	**P**	**21 23 17.2**	**+1.7**
	baz=38						
PDAR	**Pinedale Array**	**39.77**	**331**	P	**P**	**21 23 23.9**	**-1.4**
	0.4nm,0.6s,baz=119,slow=9.4,SNR=2.9						
PDAR				PcP	PcP	21 25 32.8	+1.6
	0.8nm,0.8s,baz=100,slow=1.8,SNR=6.0						
FURC	**Furnace Creek,**	**39.80**	**318**	⇓P	**P**	**21 23 28.1**	**+2.5**
	baz=40						
MPMC	**Manual Prospec**	**39.99**	**317**	⇓P	**P**	**21 23 28.6**	**+1.4**
	baz=40						
J18A	**Kendall Valley**	**40.33**	**331**	⇓P	**P**	**21 23 32.1**	**+2.2**
	baz=40						
Q11A	**Duckwater**	**40.42**	**321**	⇓P	**P**	**21 23 31.2**	**+0.4**
	baz=40						
S10A	**Tonopah Range,**	**40.46**	**320**	⇑P	**P**	**21 23 31.7**	**+0.6**
	baz=40						
M14A	**Sheep Mountain**	**40.81**	**326**	⇑P	**P**	**21 23 33.5**	**-0.5**
	baz=41						
ELK	**Elko**	**41.37**	**324**	P	**P**	**21 23 37.7**	**-0.9**
	0.7nm,0.5s,mb3.5,baz=106,slow=15,SNR=2.2						
ELK				PcP	PcP	21 25 39.3	+3.0
	0.3nm,0.4s,baz=168,slow=2.3,SNR=3.2						
ULM	**Lac du Bonnet**	**41.73**	**349**	P	**P**	**21 23 38.7**	**-2.7**
	5.2nm,0.9s,mb4.2,baz=183,slow=12,SNR=3.5						
ULM				LR	LR	21 45 13.2	
	comp=Z,94nm,18.0s,MS3.7,baz=218,slow=43						
NVAR	**Mina Array Bea**	**41.85**	**319**	P	**P**	**21 23 43.6**	**+1.1**
	2.9nm,0.8s,mb4.0,baz=133,slow=6.8,SNR=10						
NVAR				PcP	PcP	21 25 39.8	+1.8
	1.6nm,0.7s,baz=132,slow=3.6,SNR=5.3						
K13A	**Stover Farm, H**	**42.00**	**327**	⇑P	**P**	**21 23 44.4**	**+0.8**
	baz=42						
CFAA	**Coronel Fontan**	**43.70**	**160**	P	**P**	**21 24 03.9**	**+6.4**
	0.1nm,0.6s,baz=310,slow=5.5,SNR=3.2						
CFAA	**Coronel Fontan**	**43.70**	**160**	P	**P**	**21 24 03.9**	**+6.4**
CPUP	**Villa Florida**	**44.30**	**144**	LR	LR	21 45 59.4	
	comp=Z,160nm,20.0s,MS3.9,baz=211,slow=40						
SCHQ	**Schefferville**	**47.36**	**14**	P	**P**	**21 24 24.6**	**-1.6**
	1.6nm,0.4s,mb4.3,baz=213,slow=13,SNR=4.5						
SCHQ				LR	LR	21 45 16.3	
	comp=Z,324nm,19.1s,MS4.3,baz=91,slow=38						
PLCA	**Paso Flores**	**51.58**	**167**	P	**P**	**21 25 04.8**	**+6.3**
	3.9nm,1.0s,mb4.3,baz=13,slow=11,SNR=3.3						
FRB	**Frobisher Bay**	**55.36**	**9**	LR	LR	21 49 27.4	
	comp=Z,280nm,18.3s,MS4.4,baz=34,slow=37						
YKA	**Yellowknife Ar**	**57.25**	**344**	P	**P**	**21 25 36.8**	**-2.6**
	1.1nm,0.7s,mb4.0,baz=138,slow=6.4,SNR=6.5						
EVO	**Evora**	**73.58**	**53**	*e*P	**P**	**21 27 26.0**	**+0.4**
	11nm,0.8s,mb4.5						
EVO				*e*MLR	MLR		
	comp=Z,120nm,20.0s,MS3.9						
ESDC	**Sonseca Array**	**76.73**	**51**	P	**P**	**21 27 44.9**	**+1.2**
	comp=Z,1.7nm,0.6s,mb4.2,baz=279,slow=5.8,SNR=20						
QUIF	**Quistinic**	**77.21**	**43**	*e*P	**P**	**21 27 46.0**	**-0.3**
LIC	**Lamto**	**78.62**	**86**	*e*P	**P**	**21 27 54.3**	**-0.5**
	comp=Z,37nm,1.1s,mb4.9						
LIC	**Lamto**	**78.62**	**86**	*e*P	**P**	**21 27 54.3**	**-0.5**
	comp=Z,19nm,1.1s

WET **Wettzell 87.68 41** *e*P **P 21 28 41.3 +0.5**
comp=Z,15nm,1.4s,mb5.0
RJOB **Jochberg 87.91 42** *e*P **P 21 28 41.6 -0.4**
comp=Z,9.0nm,1.5s,mb4.8
ABTA **Abfaltersbach 87.92 43** ⇓*i*P **P 21 28 42.7 +0.7**
comp=Z,7.0nm,1.1s,mb4.8
BRG **Berggiesshubel 87.99 39** *e*P **P 21 28 41.4 -0.9**
comp=Z,9.7nm,1.8s,mb4.7
GEC2 **GERESS Array S 88.28 41** *e*P **P 21 28 43.9 +0.3**
comp=Z,5.0nm,1.0s,mb4.7
GERES **GERESS Array B 88.28 41** P **P 21 28 44.0 +0.4**
comp=Z,0.8nm,0.6s,mb4.1,baz=276,slow=3.8,SNR=11
KBA **Koelnbreinsper 88.41 43** ⇓*i*P **P 21 28 45.1 +0.7**
comp=Z,11nm,1.4s,mb4.9
CONA **Conrad Observa 89.89 41** ⇓*i*P **P 21 28 52.0 +0.8**
comp=Z,3.6nm,1.0s,mb4.7
FINES **FINESS Array B 91.32 27** P **P 21 28 55.5 -2.1**
comp=Z,1.7nm,0.9s,mb4.4,baz=259,slow=3.1,SNR=5.3
FINES LR LR 22 10 20.6
comp=Z,76nm,18.0s,MS4.2,baz=249,slow=36
VYHS **Vyhne 91.66 40** *e*P **P 21 29 00.6 +1.1**
comp=Z,1.4nm,1.4s,mb4.1
VYHS *e*PP pP 21 29 07.4 -3.9
VYHS **Vyhne 91.66 40** *e*P **P 21 29 00.6 +1.1**
VYHS *e*pP pP 21 29 07.4 -3.9
KECS **Kecovo 92.71 40** *e*P **P 21 28 59.8 -4.5**
STHS **Stebnicka Huta 92.91 39** *e*P **P 21 29 06.8 +1.6**
comp=Z,1.4nm,0.9s,mb4.4
STHS **Stebnicka Huta 92.91 39** *e*P **P 21 29 06.8 +1.6**
CRVS **Cervenica-Dubn 93.20 39** *e*P **P 21 29 08.0 +1.4**
comp=Z,2.3nm,1.0s,mb4.6
CRVS **Cervenica-Dubn 93.20 39** *e*P **P 21 29 08.0 +1.4**
KOLS **Kolonicke sedl 93.70 39** *e*P **P 21 29 10.6 +1.7**
comp=Z,14nm,2.5s,mb5.0
KOLS **Kolonicke sedl 93.70 39** *e*P **P 21 29 10.6 +1.7**
AKASG **Malin Array Be 97.23 36** LR LR 22 13 20.1
comp=Z,108nm,20.3s,MS4.3,baz=265,slow=36
MKAR **Makanchi Array 122.75 11** PKP PKPdf 21 34 47.7 -0.5
comp=Z,0.4nm,0.7s,baz=32,slow=3.6,SNR=3.7
KSRS **Korea Array 124.33 329** PKP PKPdf 21 34 51.6 +0.2
comp=Z,1.0nm,0.7s,baz=58,slow=1.1,SNR=6.5
ASAR **Alice Springs 140.75 244** PKhKP 21 35 17.0
comp=Z,0.2nm,0.6s,baz=110,slow=3.0,SNR=2.9
ASAR PKP PKPdf 21 35 23.1 +0.5
comp=Z,0.6nm,0.7s,baz=111,slow=3.0,SNR=7.3
WRA **Warramunga Arr 141.14 250** PKhKP 21 35 16.4
comp=Z,0.6nm,0.7s,baz=107,slow=3.0,SNR=6.0
WRA PKP PKPdf 21 35 23.8 +0.3
comp=Z,1.5nm,0.8s,baz=89,slow=2.8,SNR=6.8
CMAR **Chiang Mai Arr 152.04 353** PKPbc PKPbc 21 35 48.5 +0.3
comp=Z,1.6nm,0.9s,baz=336,slow=3.0,SNR=7.6
CMAR PKPab PKPab 21 35 58.0 +0.5
comp=Z,1.8nm,0.8s,baz=333,slow=2.6,SNR=8.1

IDC 07 21:19:06.7±6.6, 10°.89N×42°.61W, h0km, mb4.2/3, mb1 4.2/3, mb1mx3.6/24, mbtmp4.2/3, Error ellipse: s-maj=300.8km s-min=25.9km az=155.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**36.97**	**223**	P	P	21 26 18.6	+0.7
	2.6nm,0.7s,baz=30,slow=9.9,SNR=11						
DBIC	**Dimbokro**	**37.53**	**93**	P	P	21 26 22.8	-0.1
	4.5nm,1.0s,baz=258,slow=7.6,SNR=4.8						
TORD	**Torodi Ar. Bea**	**43.35**	**82**	P	P	21 27 11.1	-0.1
	1.3nm,0.6s,baz=278,slow=7.6,SNR=19						

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*IDC **07** 21:23:55.6±3.1, 12°.46N×145°.06E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/23, mbtmp3.5/4, Error ellipse: s-maj=97.6km s-min=30.6km az=82.0*
*ISCJB **07** 21:24:01.6±2.1, 12°.4N±0°.2×145°.0E±0°.6, h59km±30km, mb3.6/5, Error ellipse: s-maj=102.9km s-min=23.5km az=171.5*
*NEIC **07** 21:24:02.9±1.7, 12°.38N×144°.94E, h51km±26km, mb4.1/1, Error ellipse: s-maj=66.7km s-min=16.2km az=83.0*
ISC 07 21:24:02.6±2.4, 12°.4N±0°.2×144°.9E±0°.6, h48km±36km, n6, σ0°60/7, mb3.6/5, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.17**	**357**	*e*Pn	**Pn**	**21 24 23.4**	**+0.8**
GUMO				*e*Sn	**Sn**	**21 24 36.9**	**-0.6**
WRAB	**Tennant Creek**	**33.79**	**198**	P	**P**	**21 30 39.6**	**-0.5**
	1.4nm,0.6s,mb4.1						
WRA	**Warramunga Arr**	**33.80**	**198**	P	**P**	**21 30 40.3**	**0.0**
	0.6nm,0.5s,mb3.8,baz=22,slow=9.7,SNR=9.6						
CMAR	**Chiang Mai Arr**	**44.65**	**284**	P	**P**	**21 32 11.0**	**+0.1**
	0.4nm,0.6s,mb3.5,baz=79,slow=7.4,SNR=4.3						
MKAR	**Makanchi Array**	**62.38**	**316**	P	**P**	**21 34 20.6**	**+0.1**
	0.2nm,0.8s,mb3.3,baz=114,slow=7.1,SNR=2.7						
BVAR	**Borovoye Array**	**70.89**	**322**	P	**P**	**21 35 14.8**	**+0.2**
	0.3nm,0.5s,mb3.5,baz=107,slow=9.2,SNR=3.7						

IDC 07 21:26:02.1±3.6, 56°.74S×27°.01W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.9/14, mbtmp4.0/3, Error ellipse: s-maj=123.0km s-min=40.0km az=6.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPUP	**Villa Florida**	**37.34**	**312**	P	P	21 33 15.2	-0.9
	0.2nm,0.3s,baz=131,slow=9.3,SNR=3.9						
LPAZ	**La Paz**	**50.86**	**305**	P	P	21 35 05.7	+1.2
	3.1nm,0.5s,baz=159,slow=4.2,SNR=18						
TORD	**Torodi Ar. Bea**	**73.61**	**29**	P	P	21 37 37.1	+0.2
	0.5nm,0.8s,baz=195,slow=5.7,SNR=5.7						
FINES	**FINESS Array B**	**124.94**	**28**	PKP	PKPdf	21 45 01.9	-0.5
	0.9nm,0.8s,baz=232,slow=1.6,SNR=5.4						

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*ISCJB **07** 21:53:07.5±4.2, 22°.57S±0°.05×174°.99W±0°.04, h12km±25km, mb5.2/91, MS5.0/39, Error ellipse: s-maj=8.9km s-min=5.0km az=149.3*
*IDC **07** 21:53:07.5±0.4, 22°.47S×175°.06W, h0km, mb5.1/23, mb1 5.2/24, mb1mx5.2/25, mbtmp5.1/24, ML5.4/1, MS4.7/12, Ms1 4.7/12, ms1mx4.3/31, Error ellipse: s-maj=17.1km s-min=13.5km az=137.0*
*MOS **07** 21:53:12.1±2.0, 22°.44S×175°.08W, h33km, mb5.4/29, MS5.0/18, Error ellipse: s-maj=9.8km s-min=7.9km az=80.2*
*GCMT **07** 21:53:12.6±0.3, 22°.57S×174°.27W, h29km±1km, MW5.2, Moment Tensor Solution. s46,c63; s78,c109; Moment tensor: Scale 10^16 Nm; Mrr6.76±.36; Mθθ-1.29±.22; Mφφ-5.47±.23; Mrφ2.47±.33; Mθφ-2.44±.15; Mθr5.99±.33; Best double couple: M0 9.30000×10^16 NP1:φs206.00000°, δ23.00000°, λ93.00000°. NP2:φs23.00000°, δ67.00000°, λ89.00000°. Principal axes: T 9.3900, Plg68.0000°, Azm291.0000°; N -0.1700, Plg1.0000°, Azm24.0000°; P -9.2200, Plg22.0000°, Azm114.0000°; Data Used: II IU IC G CN.*
*BJI **07** 21:53:12.3, 22°.28S×174°.56W, h45km, mB5.5/24, mb5.4/33, Ms5.3/27, Ms7 5.0/27*
*SZGRF **07** 21:53:12.9, 22°.42S×174°.83W, h33km, Tonga Islands region*
*NEIC **07** 21:53:12.9±1.4, 22°.46S×175°.07W, h35km±12km, mb5.3/52, Error ellipse: s-maj=8.9km s-min=5.4km az=152.0*
ISC 07 21:53:12.1±4.4, 22°.55S±0°.06×174°.96W±0°.04, h31km±30km, h34km±2.5km: pP-P, n777, σ0°76/489, mb5.2/91, MS5.0/39, 196C-180D, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**7.19**	**201**	Pn	**Pn**	**21 54 56.3**	**+1.2**
	62nm,0.3s,baz=248,slow=20,SNR=4.4						
RAO				Sn	**Sn**	**21 56 15.4**	**-0.3**
	113nm,0.3s,baz=270,slow=20,SNR=5.7						
MSVF	**Nonsavu**	**8.12**	**305**	Pn	**Pn**	**21 55 13.0**	**+5.0**
	2μm,1.0s,SNR=39						
MSVF	**Nonsavu**	**8.12**	**305**	*e*Pn	**Pn**	**21 55 12.7**	**+4.7**
	1μm,1.6s						
MSVF	**Nonsavu**	**8.12**	**305**	Pn	**Pn**	**21 55 13.9**	**+5.9**
	366nm,1.4s,SNR=39						
AFI	**Afiamalu**	**9.11**	**20**	Pn	**Pn**	**21 55 14.6**	**-6.9**
	11nm,0.3s,baz=326,slow=5.4,SNR=12						
AFI				Sn	**Sn**	**21 56 48.3**	**-15**
	21nm,0.3s,baz=263,slow=22,SNR=4.4						
AFI	**Afiamalu**	**9.11**	**20**	*e*Pn	**Pn**	**21 55 14.2**	**-7.3**
	168nm,0.8s						
RAR	**Rarotonga**	**14.16**	**87**	*e*P	**Pn**	**21 56 21.7**	**-8.9**
URZ	**Urewera**	**17.08**	**202**	P	**Pn**	**21 57 05.4**	**-3.2**
	0.7nm,0.3s,baz=360,slow=17,SNR=3.3						
URZ				S	**Sn**	**22 00 03.8**	**-14**
	1.6nm,0.3s,baz=150,slow=22,SNR=7.4						
URZ				LR	LR	22 02 51.3	
	comp=Z,2μm,18.0s,baz=214,slow=34						
URZ	**Urewera**	**17.08**	**202**	*e*Pn	**Pn**	**21 57 06.1**	**-2.4**
	65nm,1.3s						
DZM	**Mont Dzumac**	**17.21**	**268**	*e*P	**Pn**	**21 57 15.7**	**+5.4**
	240nm,1.4s						
DZM				*e*LR	LR	22 01 22.8	
	4μm,21.4s						
DZM	**Mont Dzumac**	**17.21**	**268**	*e*P	**Pn**	**21 57 13.5**	**+3.2**
DZM	**Mont Dzumac**	**17.21**	**268**	*e*Pn	**Pn**	**21 57 14.7**	**+4.3**
	164nm,1.5s						
NOUC	**Port Laguerre**	**17.34**	**268**	*e*P	**Pn**	**21 57 14.9**	**+3.0**
RPZ	**Rata Peaks**	**24.08**	**205**	P	**P**	**21 58 27.5**	**+2.9**
	29nm,1.0s,mb4.7,baz=85,slow=14,SNR=4.1						
RPZ				LR	LR	22 07 46.5	
	comp=Z,4μm,18.9s,MS4.9,baz=19,slow=36						
PPT	**Papeete**	**24.34**	**83**	*e*LQ		22 03 11.4	
	2μm,24.5s						
PPT				*e*LR	LR	22 04 14.9	
	2μm,21.8s,baz=254						
PPT	**Papeete**	**24.34**	**83**	LR	LR	22 05 27.9	
	comp=Z,1μm,20.0s,MS4.4,baz=235,slow=30						
HNR	**Honiara**	**27.36**	**294**	LR	LR	22 07 52.5	
	comp=Z,1μm,21.4s,MS4.4,baz=242,slow=32						
ARMA	**Armidale**	**30.83**	**248**	*e*P	**P**	**21 59 26.3**	**+0.9**
EIDS	**Eidsvold**	**31.11**	**258**	*e*P	**P**	**21 59 27.6**	**-0.3**
	20nm,1.0s,mb4.9						
CMSA	**Cobar Meteorol**	**36.02**	**247**	*e*P	**P**	**22 00 09.6**	**-0.9**
TAOE	**Nuku Hiva Isla**	**36.06**	**73**	*e*LR	LR	22 09 47.8	
	1μm,24.2s						
CTA	**Charters Tower**	**36.15**	**266**	*e*P	**P**	**22 00 11.6**	**-0.2**
	18nm,0.9s,mb5.0						
CTA	**Charters Tower**	**36.15**	**266**	P	**P**	**22 00 10.6**	**-1.2**
	22nm,0.9s,mb5.1,baz=90,slow=10,SNR=14						
CTA	**Charters Tower**	**36.15**	**266**	P	**P**	**22 00 10.6**	**-1.2**
CTAO	**Charters Tower**	**36.15**	**266**	*e*P	**P**	**22 00 11.8**	**0.0**
CTAO				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.2						
CTAO	**Charters Tower**	**36.15**	**266**	*e*P	**P**	**22 00 11.8**	**0.0**
	comp=Z,26nm,0.9s,mb5.2						
RKT	**Rikitea**	**36.78**	**99**	*e*LR	LR	22 09 57.7	
	comp=Z,2μm,29.5s						
TOO	**Toolangi**	**37.07**	**237**	*e*P	**P**	**22 00 20.3**	**+0.8**
STKA	**Stephens Creek**	**39.52**	**247**	*e*P	**P**	**22 00 39.4**	**-0.8**
	comp=Z,8.0nm,1.0s,mb4.4						
STKA	**Stephens Creek**	**39.52**	**247**	P	**P**	**22 00 39.6**	**-0.6**
	comp=Z,5.5nm,0.8s,mb4.3,baz=100,slow=10,SNR=8.5						
STKA	**Stephens Creek**	**39.52**	**247**	*e*P	**P**	**22 00 39.5**	**-0.7**
	comp=Z,2.3nm,1.2s						
ARPS	**Mount Arapiles**	**39.80**	**239**	*e*P	**P**	**22 00 41.4**	**-1.0**
	comp=Z,74nm,1.1s,mb5.3						
COEN	**Coen**	**40.55**	**275**	*e*P	**P**	**22 00 48.8**	**-0.1**
	comp=Z,332nm,1.0s,mb5.9						
ASAR	**Alice Springs**	**46.84**	**258**	P	**P**	**22 01 38.1**	**-1.3**
	comp=Z,35nm,0.9s,mb5.3,baz=91,slow=8.3,SNR=145						
ASAR				PcP	PcP	22 03 12.3	+0.2
	comp=Z,6.1nm,0.8s,baz=105,slow=5.0,SNR=4.9						
WRAB	**Tennant Creek**	**47.14**	**263**	P	**P**	**22 01 40.6**	**-1.2**
	comp=Z,161nm,0.9s,mb6.0,SNR=9.0						
WRAB	**Tennant Creek**	**47.14**	**263**	*e*P	**P**	**22 01 40.3**	**-1.5**
WRA	**Warramunga Arr**	**47.15**	**263**	P	**P**	**22 01 39.6**	**-2.3**
	comp=Z,20nm,0.9s,mb5.1,baz=91,slow=8.5,SNR=212						
WRA				PcP	PcP	22 03 14.3	+1.0
	comp=Z,7.8nm,1.0s,baz=96,slow=4.0,SNR=5.5						
WRA	**Warramunga Arr**	**47.15**	**263**	P	**P**	**22 01 39.6**	**-2.3**
WRA				PcP	PcP	22 03 14.3	+1.0
KAKA	**Kakadu**	**50.85**	**272**	*e*P	**P**	**22 02 10.0**	**-0.4**
	comp=Z,33nm,1.1s,mb5.2						
FORT	**Forrest**	**51.12**	**248**	*e*P	**P**	**22 02 10.0**	**-2.2**
	comp=Z,26nm,0.6s,mb5.3						
FORT	**Forrest**	**51.12**	**248**	*e*P	**P**	**22 02 10.7**	**-1.5**
	comp=Z,39nm,1.0s,mb5.3						
KNA	**Kununurra**	**53.34**	**267**	*e*P	**P**	**22 02 27.9**	**-0.9**
	comp=Z,46nm,1.0s,mb5.4						
FITZ	**Fitzroy Crossi**	**55.58**	**263**	*e*P	**P**	**22 02 44.2**	**-0.9**
	comp=Z,34nm,1.0s,mb5.3						
FITZ	**Fitzroy Crossi**	**55.58**	**263**	P	**P**	**22 02 44.3**	**-0.8**
	comp=Z,32nm,1.1s,mb5.2,baz=156,slow=8.5,SNR=9.8						
FITZ	**Fitzroy Crossi**	**55.58**	**263**	*e*P	**P**	**22 02 44.1**	**-0.9**
	comp=Z,26nm,1.1s,mb5.2						
SBA	**Scott Base**	**56.05**	**185**	*e*P	**P**	**22 02 51.6**	**+4.0**
SBA				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.2						
SBA	**Scott Base**	**56.05**	**185**	*e*P	**P**	**22 02 51.6**	**+4.1**
	comp=Z,24nm,1.0s,mb5.2						
KLBR	**Kellerberrin**	**59.78**	**246**	*e*P	**P**	**22 03 13.5**	**-1.0**
	comp=Z,29nm,1.2s,mb5.2						
MBWA	**Marble Bar**	**60.18**	**258**	*e*P	**P**	**22 03 16.3**	**-1.1**
	comp=Z,15nm,1.0s,mb5.0						
MORW	**Morawa**	**61.69**	**248**	*e*P	**P**	**22 03 26.1**	**-1.4**
CASY	**Casey**	**63.35**	**206**	*e*P	**P**	**22 03 39.2**	**+1.3**
CASY	**Casey**	**63.35**	**206**	*e*P	**P**	**22 03 39.2**	**+1.2**
	comp=Z,40nm,1.2s,mb5.4						
QSPA	**South Pole Qui**	**67.54**	**180**	P	**P**	**22 04 07.0**	**+2.1**
	comp=Z,27nm,0.9s,mb5.3,baz=37,slow=3.1,SNR=46						
QSPA				LR	LR	22 29 09.9	
	comp=Z,262nm,19.2s,MS4.5,baz=242,slow=32						
JHJ	**Hachijo jima 2**	**70.19**	**321**	P	**P**	**22 04 22.2**	**+0.3**
	comp=Z,69nm,0.4s,mb5.9,baz=128,slow=13,SNR=3.6						
JHJ				LR	LR	22 33 18.2	
	comp=Z,439nm,18.7s,MS4.7,baz=325,slow=34						
MJAR	**Matsushiro Arr**	**73.54**	**322**	P	**P**	**22 04 41.1**	**-0.9**
	comp=Z,6.8nm,0.8s,mb4.7,baz=160,slow=5.8,SNR=35						
MAJO	**Matsushiro**	**73.54**	**322**	*e*P	**P**	**22 04 41.5**	**-0.5**
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
MAJO	**Matsushiro**	**73.54**	**322**	*e*P	**P**	**22 04 41.5**	**-0.5**
	comp=Z,8.7nm,0.6s,mb4.9						
MAT	**Matsushiro**	**73.54**	**322**	P	**P**	**22 04 41.2**	**-0.8**
MAT				S	S	22 14 03.0	-6.8
ADK	**Adak**	**74.12**	**359**	*e*P	**P**	**22 04 44.3**	**-0.7**
ADK				pmax	pmax		
	comp=Z,106nm,1.5s,mb5.5						
ADK	**Adak**	**74.12**	**359**	*e*P	**P**	**22 04 44.3**	**-0.7**
	comp=Z,106nm,1.5s,mb5.5						
NIKO	**Nikolski**	**75.38**	**4**	*e*P	**P**	**22 04 51.1**	**-1.2**
	comp=Z,29nm,1.0s,mb5.2						
UNV	**Unalaska Valle**	**76.42**	**5**	*e*P	**P**	**22 04 57.4**	**-0.8**
	comp=Z,28nm,1.0s,mb5.2						
KSM	**Kuching**	**76.49**	**277**	*e*P	**P**	**22 04 56.3**	**-3.3**
	comp=Z,23nm,0.9s,mb5.1						
ASAJ	**Asahikawa**	**76.88**	**330**	P	**P**	**22 05 02.2**	**+1.1**
	comp=Z,55nm,1.0s,mb5.5,baz=230,slow=11,SNR=25						
ASAJ				LR	LR	22 36 07.0	
	comp=Z,686nm,19.7s,MS5.0,baz=178,slow=34						
ASAJ	**Asahikawa**	**76.88**	**330**	P	**P**	**22 05 02.2**	**+1.1**
ASAJ				pmax	pmax		
	comp=Z,55nm,1.0s						
ASAJ				MLR	MLR		
	comp=Z,687nm,19.7s						
TPUB	**Ta-pu**	**77.45**	**302**	*e*P	**P**	**22 05 02.7**	**-2.1**
	comp=Z,28nm,0.8s,mb5.2						
ARVC	**Arvin**	**78.23**	**44**	⇓P	**P**	**22 05 08.2**	**-0.6**
	baz=78						
PMSA	**Palmer Station**	**78.29**	**156**	LR	LR	22 34 53.6	
	comp=Z,205nm,19.1s,MS4.5,baz=261,slow=32						
BFSC	**Mount Baldy Ra**	**78.45**	**45**	⇑P	**P**	**22 05 10.6**	**+0.5**
	baz=79						
VES	**Vestal, Richgr**	**78.51**	**43**	⇓P	**P**	**22 05 10.4**	**+0.1**
	baz=79,SNR=6.6						
EDW2	**Edwards Air Fo**	**78.62**	**45**	⇓P	**P**	**22 05 10.5**	**-0.5**
	baz=79,SNR=7.9						
PET	**Petropavlovsk**	**78.67**	**344**	*e*P	**P**	**22 05 10.3**	**-0.5**
PET				*e*S	S	22 15 04.4	-1.1
PET				*e*PS		22 15 41.7	
PET				*e*SS	SS	22 20 13.9	+3.2
PET				*e*SSS		22 23 28.3	
PET				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.1						
PET				pmax	pmax		
	comp=Z,200nm,14.8s						
PET				MLR	MLR		
	comp=Z,600nm,21.0s,MS4.9						
PET				MLR	MLR		
	comp=Z,600nm,17.0s						
PET	**Petropavlovsk**	**78.67**	**344**	⇑*e*P	**P**	**22 05 10.6**	**-0.2**
ISA	**Isabella**	**78.79**	**44**	⇑P	**P**	**22 05 11.5**	**-0.4**
	baz=79,SNR=6.8						
ISA	**Isabella**	**78.79**	**44**	*e*P	**P**	**22 05 12.0**	**+0.1**
ISA				pmax	pmax		
	comp=Z,72nm,1.6s,mb5.3						
ISA	**Isabella**	**78.79**	**44**	*e*P	**P**	**22 05 12.0**	**+0.1**
	comp=Z,72nm,1.6s,mb5.3						
PFO	**Pinyon Flat Ob**	**78.87**	**46**	*i*P	**P**	**22 05 13.8**	**+1.4**
PFO	**Pinyon Flat Ob**	**78.87**	**46**	*e*P	**P**	**22 05 13.0**	**+0.6**
	comp=Z,267nm,3.0s						
SWSC	**Sam W. Stewart**	**78.92**	**47**	⇑P	**P**	**22 05 12.9**	**+0.3**
	baz=79						
PEA0B	**Petropavlovsk-**	**78.99**	**344**	*e*P	**P**	**22 05 12.5**	**0.0**
PETK	**Petropavlovsk-**	**78.99**	**344**	P	**P**	**22 05 12.3**	**-0.2**
	comp=Z,35nm,0.9s,mb5.3,baz=124,slow=7.9,SNR=35						
YSS	**Yuzh-Sakhalins**	**79.00**	**332**	*e*P	**P**	**22 05 13.5**	**+0.8**
YSS				*e**PP	pP	22 05 26.9	+4.2
YSS				*e*S	S	22 15 15.0	+5.7
YSS				pmax	pmax		
	comp=E,50nm,1.0s						
YSS				pmax	pmax		
	comp=Z,90nm,1.0s,mb5.7						
YSS	**Yuzh-Sakhalins**	**79.00**	**332**	*e*P	**P**	**22 05 13.5**	**+0.7**
	comp=Z,90nm,1.1s,mb5.6						
CMB	**Columbia Colle**	**79.09**	**41**	*e*P	**P**	**22 05 13.5**	**0.0**
LRMC	**Laurel Mountai**	**79.18**	**44**	⇑P	**P**	**22 05 14.0**	**0.0**
	baz=79,SNR=7.1						
BELC	**Belle Mtn. Jos**	**79.41**	**46**	⇓P	**P**	**22 05 15.7**	**+0.4**
	baz=80,SNR=7.3						
WDC	**Whiskeytown Da**	**79.49**	**38**	*e*P	**P**	**22 05 16.3**	**+0.7**
WDC				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.1						
WDC	**Whiskeytown Da**	**79.49**	**38**	*e*P	**P**	**22 05 16.3**	**+0.7**
	comp=Z,24nm,1.0s,mb5.1						
BC3	**Big Chuckawall**	**79.57**	**47**	⇑P	**P**	**22 05 16.4**	**+0.2**
	baz=80,SNR=6.3						
GLA	**Glamis**	**79.65**	**48**	*e*P	**P**	**22 05 18.0**	**+1.4**
GLA				pmax	pmax		
	comp=Z,37nm,1.3s,mb5.2						
GLA	**Glamis**	**79.65**	**48**	*e*P	**P**	**22 05 18.0**	**+1.4**
	comp=Z,37nm,1.3s,mb5.2						
GSC	**Goldstone**	**79.65**	**45**	⇓P	**P**	**22 05 16.1**	**-0.5**
	baz=80						
GSC	**Goldstone**	**79.65**	**45**	*e*P	**P**	**22 05 17.2**	**+0.6**
GSC				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.9						
GSC	**Goldstone**	**79.65**	**45**	*e*P	**P**	**22 05 17.2**	**+0.6**
	comp=Z,20nm,1.3s,mb4.9						
MPMC	**Manual Prospec**	**79.67**	**44**	⇑P	**P**	**22 05 17.1**	**+0.4**
	baz=80,SNR=15						
HEC	**Hector,Ludlow**	**79.68**	**46**	⇓P	**P**	**22 05 16.6**	**-0.1**
	baz=80,SNR=14						
MTUM	**Tungsten Hills**	**79.78**	**42**	*e*P	**P**	**22 05 18.3**	**+1.0**
IRM	**Iron Mountain**	**80.07**	**47**	⇓P	**P**	**22 05 18.7**	**-0.2**
	baz=80,SNR=12						
GMRC	**Granite Mounta**	**80.09**	**46**	⇓P	**P**	**22 05 18.4**	**-0.6**
	baz=80,SNR=5.9						
YBH	**Yreka Blue Hor**	**80.16**	**37**	P	**P**	**22 05 20.1**	**+0.8**
	comp=Z,15nm,0.9s,mb4.9,baz=206,slow=3.7,SNR=19						
YBH	**Yreka Blue Hor**	**80.16**	**37**	P	**P**	**22 05 20.1**	**+0.9**
YBH				pmax	pmax		
	comp=Z,15nm,0.9s						
113A	**Mohawk Valley,**	**80.21**	**49**	⇑P	**P**	**22 05 19.6**	**-0.1**
	baz=80						
Y12C	**Blythe**	**80.26**	**47**	⇑P	**P**	**22 05 19.5**	**-0.5**
	baz=80						
WCN	**Washoe City**	**80.28**	**40**	⇑P	**P**	**22 05 19.8**	**-0.1**
	baz=80,SNR=7.1						
BEKR	**Beckworth**	**80.28**	**40**	⇓P	**P**	**22 05 19.3**	**-0.7**
	baz=80,SNR=8.3						
KSRS	**Korea Array**	**80.29**	**317**	P	**P**	**22 05 20.4**	**+0.4**
	comp=Z,14nm,1.1s,mb4.8,baz=142,slow=6.2,SNR=35						
KSRS	**Korea Array**	**80.29**	**317**	P	**P**	**22 05 20.5**	**+0.5**
KSRS				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
GRAC	**Grapevine Rang**	**80.31**	**43**	⇑P	**P**	**22 05 20.9**	**+0.8**
	baz=80						
FURC	**Furnace Creek,**	**80.32**	**44**	⇓P	**P**	**22 05 20.8**	**+0.6**
	baz=80						
LBCM	**Butte Creek Ri**	**80.34**	**38**	P	**P**	**22 05 20.9**	**+0.7**
214A	**Organ Pipe Nat**	**80.42**	**50**	⇑P	**P**	**22 05 21.0**	**+0.1**
	baz=81						
Z13A	**Yuma Proving G**	**80.53**	**48**	⇑P	**P**	**22 05 21.1**	**-0.3**
	baz=81						
MAW	**Mawson**	**80.59**	**199**	*e*P	**P**	**22 05 23.0**	**+1.8**
	comp=Z,21nm,1.5s,mb4.8						
MAW	**Mawson**	**80.59**	**199**	P	**P**	**22 05 22.6**	**+1.3**
	comp=Z,17nm,1.0s,mb4.9,baz=115,slow=6.9,SNR=22						
MAW	**Mawson**	**80.59**	**199**	P	**P**	**22 05 22.6**	**+1.4**
MAW				pmax	pmax		
	comp=Z,17nm,1.0s						
NVAR	**Mina Array Bea**	**80.61**	**42**	P	**P**	**22 05 22.5**	**+0.8**
	comp=Z,16nm,0.9s,mb4.9,baz=222,slow=9.0,SNR=55						
U10A	**Ash Meadows, A**	**80.63**	**44**	⇑P	**P**	**22 05 22.0**	**+0.1**
	baz=81						
Y13A	**Salome**	**80.77**	**48**	⇑P	**P**	**22 05 22.9**	**+0.3**
	baz=81,SNR=8.2						
114A	**Black Gap (USA**	**80.82**	**49**	⇓P	**P**	**22 05 23.1**	**+0.1**
	baz=81						
V11A	**Goodsprings**	**80.87**	**45**	⇓P	**P**	**22 05 22.6**	**-0.5**
	baz=81						
Z14A	**Wintersburg**	**81.12**	**48**	⇑P	**P**	**22 05 24.1**	**-0.4**
	baz=81,SNR=5.2						
V12A	**Nelson**	**81.18**	**46**	⇓P	**P**	**22 05 24.8**	**0.0**
	baz=81,SNR=6.5						
X13A	**Yucca**	**81.21**	**47**	⇓P	**P**	**22 05 24.6**	**-0.5**
	baz=81						
S10A	**Tonopah Range,**	**81.36**	**43**	⇓P	**P**	**22 05 24.8**	**-1.0**
	baz=82						
Y14A	**Wickenburg**	**81.40**	**48**	⇓P	**P**	**22 05 25.1**	**-1.0**
	baz=82,SNR=6.4						
216A	**Three Points,**	**81.41**	**50**	⇑P	**P**	**22 05 23.9**

319A	Douglas	82.64	52	⇓P	P	22 05 32.5	-0.1
	baz=83,SNR=5.9						
U14A	Mt Trumbull	82.69	46	⇓P	P	22 05 33.6	+0.8
	baz=83						
X16A	Lo Mia Camp, P	82.74	48	⇑P	P	22 05 33.9	+0.8
	baz=83,SNR=12						
Y17A	Roosevelt	82.76	49	⇓P	P	22 05 33.7	+0.5
	baz=83						
118A	Homack Ranch,	82.81	50	⇓P	P	22 05 33.1	-0.3
	baz=83,SNR=8.7						
R12A	Pony Springs,	82.86	44	⇓P	P	22 05 34.4	+0.8
	baz=83,SNR=9.4						
S13A	Holt Ranch, En	82.91	44	⇑P	P	22 05 33.5	-0.3
	baz=83						
WVOR	Wild Horse Val	82.92	38	eP	P	22 05 34.0	+0.2
WVOR				pmax	pmax		
	comp=Z,29nm,1.1s,mb5.2						
WVOR	Wild Horse Val	82.92	38	eP	P	22 05 34.0	+0.2
	comp=Z,29nm,1.1s,mb5.2						
219A	White Tail Can	82.98	51	⇑P	P	22 05 34.5	+0.1
	baz=83						
V15A	Kaibab Nationa	83.02	47	⇓P	P	22 05 34.8	+0.3
	baz=83,SNR=12						
W16A	Flagstaff	83.06	48	⇑P	P	22 05 34.6	-0.1
	baz=83,SNR=7.3						
T14A	Hurricane	83.12	45	⇑P	P	22 05 35.3	+0.4
	baz=83,SNR=7.9						
Q12A	Willow Creek R	83.14	43	⇓P	P	22 05 35.4	+0.4
	baz=83,SNR=10.0						
F04A	Amboy	83.14	34	⇓P	P	22 05 34.8	0.0
	baz=83,SNR=6.3						
VIPM	Ingram Point	83.15	36	P	P	22 05 35.7	+0.8
320A	Kipp Ranch, An	83.17	52	⇓P	P	22 05 35.4	0.0
	baz=83,SNR=6.7						
R13A	O'Grain Ranch,	83.19	44	⇓P	P	22 05 35.6	+0.4
	baz=83,SNR=8.3						
VFP	Flag Point	83.23	35	P	P	22 05 36.1	+0.8
O11A	Cowboy Ranch,	83.28	42	⇑P	P	22 05 36.3	+0.6
	baz=84,SNR=14						
U15A	North Rim	83.28	46	⇓P	P	22 05 36.9	+1.1
	baz=84,SNR=17						
P12A	McGill	83.35	42	⇓P	P	22 05 36.4	+0.4
	baz=84,SNR=13						
119A	Ashpeak Ranch,	83.35	51	⇓P	P	22 05 36.4	+0.2
	baz=84,SNR=7.5						
NJ2	Nanjing	83.36	309	eP	P	22 05 36.8	+0.5
NJ2				pmax	pmax		
	comp=Z,110nm,1.0s,mb5.8						
Y18A	Canyon Day Jun	83.38	49	⇑P	P	22 05 36.9	+0.5
	baz=84,SNR=14						
WUAZ	Wupatki	83.39	47	⇓P	P	22 05 36.6	+0.2
	baz=84						
NLWA	Neilton Lookou	83.41	32	eP	P	22 05 36.6	+0.4
	comp=Z,41nm,1.2s,mb5.3						
220A	Playas Peak, P	83.46	52	⇑P	P	22 05 37.3	+0.5
	baz=84,SNR=13						
S14A	Cedar City	83.46	45	⇑P	P	22 05 37.3	+0.6
	baz=84,SNR=5.4						
I07A	Izee	83.48	37	⇓P	P	22 05 37.0	+0.4
	baz=84,SNR=12						
TDL	Tradedollar La	83.53	34	P	P	22 05 38.0	+1.1
T15A	Red Dirt Ranch	83.56	46	⇑P	P	22 05 37.3	+0.1
	baz=84,SNR=26						
M10A	I.L. Ranch, Tu	83.58	40	⇑P	P	22 05 36.9	-0.3
	baz=84						
J08A	Circle Bar Ran	83.60	38	⇓P	P	22 05 37.0	-0.2
	baz=84,SNR=25						
Q13A	Wheeler Ranch,	83.60	43	⇑P	P	22 05 37.1	-0.3
	baz=84,SNR=9.7						
G06A	Carlson Farm,	83.62	35	⇑P	P	22 05 37.8	+0.5
	baz=84,SNR=9.5						
HABR	Khabarovsk	83.63	329	ceP	P	22 05 38.5	+1.2
HABR				e*PP	pP	22 05 47.0	-0.2
HABR				e*SP	sP	22 05 51.0	+0.2
HABR				eS	S	22 15 57.9	+0.6
HABR				eSS	SS	22 21 26.9	+2.0
HABR				eSSS		22 24 57.3	
HABR				pmax	pmax		
	comp=Z,110nm,1.5s,mb5.8						
HABR				pmax	pmax		
	comp=N,15nm,1.2s						
HABR				pmax	pmax		
	comp=E,22nm,0.9s						
HABR				MLR	MLR		
	comp=Z,337nm,17.0s,MS4.8						
120A	U Bar Ranch, L	83.72	51	⇑P	P	22 05 38.7	+0.6
	baz=84,SNR=6.5						
COCO	West Island	83.78	259	i P	P	22 05 43.0	+4.1
MDJ	Mudanjiang	83.82	324	P	P	22 05 39.6	+1.2
MDJ				pP	pP	22 05 47.2	-1.1
MDJ				sP	sP	22 05 52.3	+0.4
MDJ				PP	PP	22 08 54.2	+2.0
MDJ				S	S	22 15 58.0	-1.4
MDJ				sS	sS	22 16 18.7	+2.8
MDJ				pmax	pmax		
	comp=Z,67nm,1.0s,mb5.7						
MDJ				pmax	pmax		
	comp=Z,310nm,6.5s						
MDJ				LR	LR		
	comp=N,190nm,13.8s,MS5.1						
MDJ				LR	LR		
	comp=E,470nm,12.2s,MS5.1						
MDJ				LR	LR		
	comp=Z,530nm,13.8s,MS5.1						
MDJ	Mudanjiang	83.82	324	eP	P	22 05 39.6	+1.2
	comp=Z,65nm,1.0s,mb5.7						
X18A	Snowflake	83.84	49	⇓P	P	22 05 39.1	+0.4
	baz=84						
V17A	Tonalea, Kykot	83.85	48	⇑P	P	22 05 39.6	+0.8
	baz=84,SNR=20						
R14A	James Farms, M	83.86	44	⇓P	P	22 05 38.6	-0.1
	baz=84						
P13A	Bates Ranch, G	83.90	43	⇓P	P	22 05 38.8	-0.1
	baz=84,SNR=14						
O12A	Currie	83.92	42	⇓P	P	22 05 38.9	-0.1
	baz=84						
S15A	Panguitch	83.94	45	⇑P	P	22 05 40.4	+1.2
	baz=84,SNR=9.8						
L10A	Juniper Basin	83.96	40	⇑P	P	22 05 39.4	+0.2
	baz=84,SNR=27						
M11A	Holland Ranch,	83.97	40	⇓P	P	22 05 39.6	+0.3
	baz=84,SNR=21						
HDW	Hoodsport	83.98	32	P	P	22 05 40.4	+1.2
J09A	Fry Pan Ranch,	84.00	38	⇑P	P	22 05 38.9	-0.4
	baz=84,SNR=21						
Y19A	Nutrioso	84.02	50	⇑P	P	22 05 39.2	-0.5
	baz=84,SNR=11						
GNW	Green Mountain	84.04	33	eP	P	22 05 39.4	0.0
	comp=Z,9.7nm,1.0s,mb4.9						
Z20A	Nine Sixteen R	84.05	51	⇑P	P	22 05 39.5	-0.3
	baz=84,SNR=13						
N12A	Clover Valley,	84.08	41	⇑P	P	22 05 40.3	+0.5
	baz=84,SNR=22						
N12A	Clover Valley,	84.08	41	eP	P	22 05 40.2	+0.4
	comp=Z,34nm,1.0s,mb5.4						
Q14A	Sevier Lake (B	84.09	44	⇓P	P	22 05 40.4	+0.5
	baz=84,SNR=43						
WPW	White Pass	84.10	34	P	P	22 05 40.5	+0.7
K10A	MacKenzie Ranc	84.16	39	⇓P	P	22 05 40.1	0.0
	baz=84,SNR=28						
D05A	Enumclaw	84.21	33	⇑P	P	22 05 40.0	-0.2
	baz=84,SNR=12						
H08A	Prairie City	84.22	37	⇑P	P	22 05 39.3	-1.1
	baz=84,SNR=9.2						
X19A	St. Johns	84.24	49	⇓P	P	22 05 41.4	+0.6
	baz=84,SNR=9.1						
QIZ	Qiongzhong	84.27	293	P	P	22 05 41.8	+0.6
QIZ				sP	sP	22 05 55.4	+0.6
QIZ				S	S	22 16 03.3	-1.6
QIZ				pmax	pmax		
	comp=Z,170nm,9.6s						
QIZ				LR	LR		
	comp=N,380nm,14.3s,MS5.0						
QIZ				LR	LR		
	comp=E,290nm,18.1s,MS5.0						
QIZ				LR	LR		
	comp=Z,590nm,19.6s,MS5.0						
121A	Cookes Peak, D	84.32	51	⇓P	P	22 05 40.8	-0.4
	baz=84,SNR=6.9						
I09A	Lost Marbles R	84.40	38	⇓P	P	22 05 40.9	-0.4
	baz=85,SNR=8.1						
L11A	Cat Creek Ranc	84.44	40	P	P	22 05 42.1	+0.5
	baz=85,SNR=28						
U17A	Shonto	84.47	47	⇑P	P	22 05 42.9	+1.1
	baz=85						
RMW	Rattlesnake Mo	84.48	33	P	P	22 05 42.4	+0.8
V18A	Ganado	84.48	48	⇓P	P	22 05 42.0	0.0
	baz=85,SNR=7.5						
M12A	Wells	84.49	41	⇓P	P	22 05 42.2	+0.3
	baz=85,SNR=17						
W19A	Sanders	84.54	49	⇓P	P	22 05 42.0	-0.3
	baz=85,SNR=9.0						
G08A	Pilot Rock	84.55	36	P	P	22 05 42.5	+0.4
	baz=85,SNR=28						
P14A	Drum Mountains	84.57	43	⇑P	P	22 05 42.5	+0.2
	baz=85,SNR=18						
T17A	Navajo Res., N	84.59	46	⇓P	P	22 05 43.1	+0.6
	baz=85,SNR=9.6						
N13A	Wendover, West	84.60	42	⇑P	P	22 05 42.8	+0.3
	baz=85,SNR=6.6						
N13A	Wendover, West	84.60	42	eP	P	22 05 42.8	+0.4
	comp=Z,47nm,1.0s,mb5.6						
Y20A	Horse Springs,	84.61	50	⇓P	P	22 05 43.5	+0.8
	baz=85,SNR=12						
J10A	Berg Farm, Mel	84.61	38	⇓P	P	22 05 42.7	+0.3
	baz=85						
K11A	Parker Ranch,	84.64	39	⇑P	P	22 05 43.0	+0.4
	baz=85,SNR=17						
Q15A	Fillmore	84.67	44	⇓P	P	22 05 43.6	+0.7
	baz=85,SNR=9.1						
Z21A	St. Cloud Mine	84.81	51	⇑P	P	22 05 44.4	+0.8
	baz=85,SNR=12						
SVW2	Sparrevohn	84.81	9	eP	P	22 05 42.7	-0.3
R16A	Teasdale	84.86	45	⇑P	P	22 05 45.0	+1.2
	baz=85,SNR=6.3						
X20A	Quemado	84.86	49	⇓P	P	22 05 44.4	+0.6
	baz=85,SNR=14						
L12A	House Creek Ra	84.87	40	⇓P	P	22 05 43.9	+0.2
	baz=85,SNR=16						
H09A	Durkee	84.87	37	⇓P	P	22 05 43.9	+0.2
	baz=85,SNR=8.9						
U18A	Rough Rock, Ch	84.91	47	⇑P	P	22 05 45.0	+0.9
	baz=85						
M13A	Montello	84.92	41	⇓P	P	22 05 44.4	+0.4
	baz=85						
M13A	Montello	84.92	41	eP	P	22 05 44.3	+0.3
	comp=Z,30nm,1.0s,mb5.4						
S17A	Black Ridge (B	84.94	46	⇑P	P	22 05 44.4	+0.2
	baz=85,SNR=5.1						
SEW	Seward	84.95	13	eP	P	22 05 42.4	-1.3
	comp=Z,36nm,1.1s,mb5.4						
122A	Conniff Cattle	84.98	52	⇓P	P	22 05 46.0	+1.4
	baz=85						
I10A	Payette	85.00	38	⇓P	P	22 05 44.6	+0.3
	baz=85,SNR=5.1						
P15A	Leamington	85.06	44	⇓P	P	22 05 45.2	+0.4
	baz=85,SNR=9.4						
DUG	Dugway	85.08	43	P	P	22 05 45.4	+0.5
	baz=85,SNR=7.2						
V19A	Window Rock	85.10	48	⇓P	P	22 05 44.9	-0.2
	baz=85,SNR=7.3						
MFID	Camas Ranch	85.15	39	⇑P	P	22 05 45.4	+0.3
	baz=85,SNR=12						
W20A	Ramah	85.16	49	⇑P	P	22 05 46.5	+1.1
	baz=85,SNR=30						
Y21A	Point of Rocks	85.16	50	⇑P	P	22 05 46.6	+1.1
	baz=85,SNR=16						
G09A	Cove	85.19	37	⇓P	P	22 05 45.6	+0.3
	baz=85						
N14A	Grayback Hills	85.22	42	⇑P	P	22 05 45.6	0.0
	baz=85						
K12A	Draper Farm, C	85.22	40	⇑P	P	22 05 45.7	+0.2
	baz=85,SNR=8.0						
E08A	Dider Farm, El	85.27	35	⇑P	P	22 05 46.5	+0.9
	baz=86						
Z22A	Elephant Butte	85.29	51	⇓P	P	22 05 46.1	0.0
	baz=86,SNR=5.4						
T18A	Mexican Hat	85.29	47	⇓P	P	22 05 46.9	+0.9
	baz=86						
X21A	Alamocita Cree	85.31	50	⇑P	P	22 05 47.0	+0.8
	baz=86,SNR=17						
H10A	Noah's Angus R	85.34	38	⇓P	P	22 05 45.7	-0.4
	baz=86,SNR=24						
SYO	Syowa Base	85.34	192	⇑i P	P	22 05 45.0	-0.8
A05A	Maple Falls	85.38	32	⇑P	P	22 05 46.3	+0.2
	baz=86						
I11A	Placerville	85.38	38	⇑P	P	22 05 46.1	-0.2
	baz=86,SNR=6.5						
F09A	S2 Ranch, Elgi	85.39	36	⇑P	P	22 05 47.1	+0.8
	baz=86						
Q16A	Castle Valley	85.41	45	⇑P	P	22 05 46.7	+0.1
	baz=86,SNR=9.6						
R17A	Hanksville Air	85.44	45	⇓P	P	22 05 46.0	-0.7
	baz=86,SNR=18						
324A	Moseley Ranch,	85.46	53	⇑P	P	22 05 47.0	+0.1
	baz=86,SNR=14						
J12A	Stokes Ranch,	85.47	39	⇓P	P	22 05 46.7	0.0
	baz=86						
L13A	Double Diamond	85.48	41	⇓P	P	22 05 47.3	+0.5
	baz=86						
M14A	Sheep Mountain	85.50	42	⇑P	P	22 05 46.8	-0.1
	baz=86,SNR=15						
425A	Indio Mountain	85.51	54	⇓P	P	22 05 47.0	-0.2
	baz=86,SNR=14						
S18A	Hurst Farm, Bl	85.51	46	⇑P	P	22 05 47.8	+0.7
	baz=86						
V20A	Brimhall	85.54	48	⇑P	P	22 05 47.2	-0.1
	baz=86,SNR=9.6						
626A	Big Bend Ranch	85.56	56	⇓P	P	22 05 47.8	+0.3
	baz=86,SNR=20						
G10A	Bishop Farm, J	85.56	37	⇓P	P	22 05 47.1	0.0
	baz=86,SNR=13						
SNY	Shenyang	85.59	319	⇓P	P	22 05 47.8	+0.4
SNY				pmax	pmax		
	comp=Z,17nm,1.8s,mb5.0						
SNY				pmax	pmax		
	comp=Z,280nm,5.3s						
SNY				LR	LR		
	comp=N,400nm,17.8s						
SNY				LR	LR		
	comp=Z,510nm,17.5s,MS5.0						
Y22A	Socorro	85.63	51	⇓P	P	22 05 48.0	+0.2
	baz=86,SNR=11						
CN2	Changchun	85.65	321	⇑P	P	22 05 48.6	+1.0
CN2				epP	pP	22 05 59.2	+1.6
CN2				esP	sP	22 06 02.9	+1.7
CN2				eS	S	22 16 17.7	+0.1
CN2				pmax	pmax		
	comp=Z,60nm,1.1s,mb5.7						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,400nm,18.0s,MS5.0						
CN2				LR	LR		
	comp=E,400nm,18.0s,MS5.0						
CN2				LR	LR		
	comp=Z,400nm,17.0s,MS4.9						
MNTX	Cornudas Mount	85.66	53	eP	P	22 05 48.2	+0.2
	comp=Z,18nm,1.1s,mb5.2						
T19A	Beclabito	85.70	47	⇑P	P	22 05 48.4	+0.3
	baz=86,SNR=11						
D08A	Wollman Farm,	85.70	35	⇑P	P	22 05 47.8	0.0
	baz=86,SNR=5.7						
KLR	Kul'dur	85.73	328	eP	P	22 05 44.6	-3.3
KLR				pmax	pmax		
	comp=E,24nm,1.4s						
KLR				pmax	pmax		
	comp=Z,38nm,1.4s,mb5.4						
224A	Cornudas Mount	85.75	53	⇑P	P	22 05 48.3	-0.1
	baz=86,SNR=11						
LAZ	Ladron	85.75	50	eP	P	22 05 49.4	+1.1
	comp=Z,11nm,1.1s,mb5.0						
I12A	Atlanta	85.78	39	⇑P	P	22 05 48.8	+0.5
	baz=86						
325A	Bean Ranch, Si	85.81	54	⇑P	P	22 05 48.2	-0.5
	baz=86,SNR=21						
U20A	Newcomb	85.81	48	⇓P	P	22 05 48.3	-0.2
	baz=86						
TXAR	Lajitas Array	85.81	56	P	P	22 05 49.2	+0.4
	comp=Z,16nm,1.0s,mb5.2,baz=210,slow=7.0,SNR=76						
TXAR				LR	LR	22 40 18.1	
	comp=Z,370nm,18.2s,MS4.8,baz=70,slow=33						
PLCA	Paso Flores	85.82	132	P	P	22 05 48.3	-0.5
	comp=Z,7.8nm,1.1s,mb4.8,baz=244,slow=4.4,SNR=4.0						
PLCA				LR	LR	22 39 49.8	
	comp=Z,361nm,18.0s,MS4.8,baz=100,slow=33						
H11A	Donnelly	85.82	38	⇑P	P	22 05 48.5	0.0
	baz=86,SNR=9.8						
526A	Mary Lane Ranc	85.83	55	⇑P	P	22 05 48.9	0.0
	baz=86,SNR=14						
L14A	Malta	85.87	41	⇑P	P	22 05 48.7	0.0
	baz=86						
X22A	Bernardo	85.89	50	⇓P	P	22 05 49.5	+0.5
	baz=86,SNR=6.9						
O16A	Springville	85.91	43	⇑P	P	22 05 49.5	+0.5
	baz=86						
F10A	Beach Ranch, E	85.93	36	⇑P	P	22 05 48.5	-0.4
	baz=86,SNR=13						
WHN	Wuhan	85.93	305	⇓P	P	22 05 50.6	+1.3
SRU	San Rafael	85.94	45	⇑P	P	22 05 49.1	0.0
	baz=86,SNR=19						
R18A	Canyonlands Na	85.95	46	⇓P	P	22 05 49.6	+0.3
	baz=86,SNR=13						
BNM	Barren Site	85.98	51	eP	P	22 05 49.7	+0.2
	comp=Z,12nm,1.0s,mb5.1						
P17A	Butcher Ranch,	86.00	44	⇑P	P	22 05 49.5	+0.1
	baz=86,SNR=14						
D09A	Jones Farm, Ri	86.03	35	⇑P	P	22 05 49.3	-0.1
	baz=86						
HLID	Hailey	86.06	39	⇑P	P	22 05 50.4	+0.8
	baz=86						
HLID	Hailey	86.06	39	eP	P	22 05 50.1	+0.5
	comp=Z,10nm,0.2s,mb5.7						
627A	Terlingua Ranc	86.08	56	⇓P	P	22 05 50.1	0.0
	baz=86,SNR=26						
124A	Stringfield Ra	86.10	52	⇓P	P	22 05 50.5	+0.3
	baz=86,SNR=12						
G11A	Walters Elk Ra	86.10	37	⇑P	P	22 05 49.8	0.0
	baz=86						
J13A	Cove Ranch, Pi	86.11	40	⇓P	P	22 05 49.7	-0.2
	baz=86,SNR=11						
S19A	Harvey Farm, M	86.11	46	⇑P	P	22 05 50.0	-0.1
	baz=86						
V21A	Milan	86.12	49	⇓P	P	22 05 51.0	+0.9
	baz=86						
426A	McDonald Obser	86.17	55	⇓P	P	22 05 50.5	0.0
	baz=86,SNR=21						
Q18A	Rafter H Ranch	86.19	45	⇓P	P	22 05 50.9	+0.6
	baz=86						
K14A	Jones Ranch, D	86.20	41	⇑P	P	22 05 50.8	+0.4
	baz=86						
527A	Woodward Ranch	86.24	55	⇑P	P	22 05 50.3	-0.6
	baz=86,SNR=16						
A07A	Ashnola River,	86.25	33	⇑P	P	22 05 50.0	-0.4
	baz=86,SNR=7.8						
MVCO	Mesa Verde	86.26	47	⇓P	P	22 05 51.5	+0.7
	baz=86						
225A	Deer Hill, Car	86.28	53	⇑P	P	22 05 50.7	-0.3
	baz=86						
Y23A	Lovelace Mesa,	86.28	51	⇓P	P	22 05 50.8	-0.2
	baz=86,SNR=6.4						
E10A	Myers Farm, Un	86.31	36	⇑P	P	22 05 50.4	-0.4
	baz=86						
B08A	Colville Reser	86.33	33	⇓P	P	22 05 50.4	-0.4
	baz=86,SNR=6.2						
N16A	Rees Ranch, Co	86.33	43	⇑P	P	22 05 51.3	+0.3
	baz=86,SNR=5.0						
L15A	Malad City	86.38	42	⇑P	P	22 05 50.3	-1.0
	baz=87,SNR=7.2						
PMR	Palmer	86.38	12	eP	P	22 05 51.0	+0.2
PMR				pmax	pmax		
	comp=Z,55nm,1.5s,mb5.6						
PMR	Palmer	86.38	12	eP	P	22 05 51.0	+0.2
	comp=Z,55nm,1.5s,mb5.6						
H12A	Diamond D Ranc	86.39	38	⇑P	P	22 05 50.6	-0.6
	baz=87,SNR=13						
O17A	Robinson Place	86.39	44	⇑P	P	22 05 51.4	+0.1
	baz=87,SNR=32						
P18A	Preston Nutter	86.40	44	⇓P	P	22 05 51.9	+0.5
	baz=87						
U21A	Nageezi	86.43	48	⇓P	P	22 05 51.8	+0.2
	baz=87,SNR=21						
I13A	Wildhorse Cree	86.44	39	⇓P	P	22 05 50.9	-0.6
	baz=87						
J14A	Carey	86.45	40	⇑P	P	22 05 50.6	-1.0
	baz=87,SNR=6.8						
M16A	Huntsville	86.45	42	⇑P	P	22 05 51.4	-0.3
	baz=87						
F11A	Grangeville	86.47	37	⇑P	P	22 05 50.1	-1.5
	baz=87						
G12A	Big Creek, Yel	86.47	38	⇑P	P	22 05 51.1	-0.5
	baz=87						
628A	Black Gap, Mar	86.48	56	⇓P	P	22 05 51.7	-0.3
	baz=87,SNR=23						
Z24A	Sheeppen Canyo	86.48	52	⇑P	P	22 05 50.8	-1.2
	baz=87						
ANMO	Albuquerque	86.51	50	eP	P	22 05 52.4	+0.3
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ANMO	Albuquerque	86.51	50	eP	P	22 05 52.4	+0.3
	comp=Z,4.5nm,1.1s,mb4.6						
PV10	Paradox Valley	86.52	46	eP	P	22 05 52.3	+0.3
	comp=Z,130nm,0.8s,mb6.2						
326A	Caldwell Ranch	86.52	54	⇑P	P	22 05 50.9	-1.3
	baz=87						
D10A	Wagner Farm, O	86.57	35	⇓P	P	22 05 51.7	-0.4
	baz=87						
HWUT	Hardware Ranch	86.66	42	eP	P	22 05 51.4	-1.2
	comp=Z,6.1nm,1.0s,mb4.8						
125A	Gardner Draw,	86.67	53	⇓P	P	22 05 53.0	+0.1
	baz=87,SNR=9.1						
K15A	Arbon	86.67	41	⇑P	P	22 05 53.4	+0.7
	baz=87						
Q19A	Hogan Spring (	86.68	45	⇓P	P	22 05 53.2	+0.4
	baz=87						
V22A	San Miguel Ran	86.68	49	⇑P	P	22 05 53.3	+0.4
	baz=87						
Y24A	Capitan	86.72	51	P	P	22 05 53.8	+0.6
	baz=87,SNR=35						
427A	Hayter Ranch,	86.73	55	⇑P	P	22 05 53.1	-0.2
	baz=87,SNR=23						
H13A	Challis	86.75	39	⇓P	P	22 05 52.5	-0.5
	baz=87,SNR=8.3						
N17A	Moffit Pass	86.75	43	⇓P	P	22 05 53.7	+0.6
	baz=87						
BMRM	Bremner River	86.77	14	eP	P	22 05 52.7	0.0
	comp=Z,54nm,1.2s,mb5.7						
226A	Malaga, Loving	86.79	53	⇓P	P	22 05 52.0	-1.6
	baz=87,SNR=7.3						
T21A	Navajo Lake	86.80	48	⇑P	P	22 05 52.9	-0.6
	baz=87						
W23A	Werner Place,	86.83	50	⇑P	P	22 05 53.5	-0.2
	baz=87,SNR=6.6						
I14A	Mackay	86.84	39	⇑P	P	22 05 53.5	0.0
	baz=87						
KULM	Kulim	86.84	277	eP	P	22 05 55.2	+1.0
528A	Cox Ranch, San	86.87	56	⇑P	P	22 05 53.1	-0.9
	baz=87,SNR=19						
F12A	Elk City	86.89	37	⇓P	P	22 05 53.4	-0.2
	baz=87,SNR=9.8						
Z25A	Roswell	86.93	52	⇑P	P	22 05 53.6	-0.6
	baz=87,SNR=12						
L16A	Fish Haven	86.97	42	⇑P	P	22 05 53.4	-0.7
	baz=87,SNR=6.4						
B09A	Rice	86.97	34	P	P	22 05 54.2	+0.2
	baz=87,SNR=5.9						
S21A	Coal Bank Pass	86.98	47	⇓P	P	22 05 54.7	+0.4
	baz=87						
G13A	Cobalt	87.07	38	⇓P	P	22 05 54.0	-0.6
	baz=87						
V23A	Ortiz Mt. (NFS	87.10	49	⇓P	P	22 05 54.2	-0.7
	baz=87,SNR=6.3						
126A	Clayton Basin,	87.13	53	⇓P	P	22 05 54.0	-1.2
	baz=87						
J15A	Blackfoot	87.14	40	⇑P	P	22 05 54.5	-0.4
	baz=87	

baz=88
M18A Lyman 87.50 43 ⇑P P 22 05 56.6 -0.1
baz=88,SNR=6.9
N18A Larsen Ranch, 87.50 44 ⇓P P 22 05 56.6 -0.1
baz=88,SNR=5.2
R21A Cimarron 87.51 47 ⇑P P 22 05 55.9 -0.9
baz=88,SNR=5.7
P20A De Beque 87.54 45 ⇓P P 22 05 57.1 +0.1
baz=88
X25A Clemmons Ranch 87.58 51 ⇑P P 22 05 57.5 +0.2
baz=88
D12A Red Ives Fores 87.61 36 ⇑P P 22 05 56.6 -0.6
baz=88
127A Arkansas Junct 87.64 53 ⇓P P 22 05 56.8 -0.8
baz=88,SNR=6.9
K17A Gardner Place, 87.69 42 ⇑P P 22 05 57.9 +0.3
baz=88
H15A Lima 87.71 39 ⇓P P 22 05 57.3 -0.4
baz=88
Q21A Lamborn Mesa, 87.73 46 ⇑P P 22 05 58.7 +0.8
baz=88
N19A John Jarvie Ra 87.77 44 ⇑P P 22 05 57.2 -0.8
baz=88
KTH Kantishna Hill 87.87 11 eP P 22 05 57.1 -0.9
comp=Z,4µm,1.2s
E13A Victor 87.89 37 ⇓P P 22 05 57.4 -1.1
baz=88
Y26A Elida 87.89 52 ⇓P P 22 05 57.9 -0.9
baz=88
B11A Sandpoint 87.91 35 ⇓P P 22 05 56.9 -1.7
baz=88
C12B Naegeli Ranch, 87.94 36 ⇑P P 22 05 58.0 -0.7
baz=88
CHUM Lake Minchumin 87.95 10 eP P 22 05 57.2 -1.1
comp=Z,65nm,1.6s,mb5.6
R22A Saguache, Gunn 87.97 47 ⇓P P 22 05 57.2 -1.9
baz=88
O20A White River Ci 87.97 45 ⇓P P 22 05 57.9 -1.1
baz=88
Z27A Tatum 88.05 53 ⇓P P 22 05 59.2 -0.4
baz=88,SNR=7.5
W25A X Bar L Ranch, 88.06 51 P P 22 05 59.8 +0.2
baz=88,SNR=12
REDW Red Top Meadow 88.07 41 eP P 22 05 59.5 +0.1
D13A Huson 88.13 37 ⇑P P 22 05 59.7 +0.1
baz=88
J17A Brown Place, J 88.16 41 ⇓P P 22 05 59.7 -0.1
baz=88
K18A Toltan Ranch, 88.17 42 ⇓P P 22 05 58.6 -1.3
baz=88,SNR=13
Q22A Crested Butte, 88.19 46 ⇓P P 22 05 59.4 -0.7
baz=88
A11A Hall Mountain, 88.23 34 ⇑P P 22 05 58.8 -1.2
baz=88,SNR=7.2
L19A Farson 88.31 43 ⇑P P 22 05 59.7 -0.9
baz=88,SNR=7.8
N20A Spence Gulch, 88.33 44 ⇓P P 22 06 00.9 +0.2
baz=88,SNR=16
Y27A Causey 88.36 52 ⇓P P 22 06 00.6 -0.4
baz=88,SNR=5.9
LOHW Long Hollow 88.36 41 eP P 22 05 58.1 -2.6
comp=Z,2.5nm,0.8s,mb4.5
BPAW Bear Paw Mtn. 88.37 10 eP P 22 05 59.2 -1.1
comp=Z,29nm,1.5s,mb5.3
J18A Kendall Valley 88.50 41 ⇑P P 22 06 01.5 +0.1
baz=89,SNR=16
BW06 Boulder Array 88.54 42 ⇓P P 22 06 00.7 -0.9
baz=89,SNR=8.1
PDAR Pinedale Array 88.54 42 P P 22 06 01.5 -0.1
comp=Z,6.3nm,0.9s,mb4.9,baz=223,slow=3.3,SNR=35
PDAR LR LR 22 40 59.6
comp=Z,441nm,18.3s,MS4.9,baz=269,slow=32
G16A Moss Hill, Enn 88.55 39 ⇓P P 22 06 01.9 +0.3
baz=89
H16A Russell Place, 88.58 40 ⇓P P 22 06 01.6 -0.2
baz=89
D14A Greenough 88.65 37 ⇑P P 22 06 01.1 -0.9
baz=89
U25A Circle Dot Ran 88.68 50 ⇑P P 22 06 01.9 -0.6
baz=89
MENT Mentasta 88.71 14 eP P 22 06 00.8 -1.1
M20A Sweetwater, Wa 88.72 44 ⇑P P 22 06 01.7 -0.9
baz=89,SNR=8.3
E15A Deer Lodge 88.75 38 ⇓P P 22 06 00.8 -1.8
baz=89
X27A F and S Farms, 88.77 52 ⇑P P 22 06 03.0 0.0
baz=89
N21A Black Mountain 88.77 45 ⇑P P 22 06 02.3 -0.4
baz=89,SNR=11
B13A Whitefish 88.88 35 ⇓P P 22 06 01.9 -1.2
baz=89
BOZ Bozeman (W) 88.89 39 ⇓P P 22 06 02.3 -0.9
baz=89,SNR=9.7
L20A Wamsutter 88.90 43 ⇓P P 22 06 02.7 -0.6
baz=89,SNR=12
K19A Absolon Red Bu 89.01 42 ⇓P P 22 06 02.6 -1.3
baz=89
SEY Seymchan 89.02 346 ⇑iP P 22 06 03.7 +0.3
T25A Trinidad 89.03 49 ⇓P P 22 06 03.4 -0.7
baz=89
D15A Lincoln 89.17 37 ⇑P P 22 06 03.5 -1.0
baz=89
KKTK Khon Kaen 89.22 288 P P 22 06 07.0 +1.6
M21A Separation Pea 89.31 44 ⇑P P 22 06 04.0 -1.3
baz=90,SNR=8.5
JCT Junction City 89.31 57 eP P 22 06 05.3 -0.3
JCT pmax pmax
comp=Z,28nm,1.9s,mb5.3
JCT Junction City 89.31 57 eP P 22 06 05.3 -0.3
comp=Z,28nm,1.9s,mb5.3
BJT Baijiatuau 89.33 314 eP P 22 06 05.9 +0.5
BJT pmax pmax
comp=Z,23nm,1.2s
BJT Baijiatuau 89.33 314 eP P 22 06 05.9 +0.5
comp=Z,23nm,1.2s,mb5.4
BJI Beijing 89.33 314 P P 22 06 05.8 +0.4
BJI PP PP 22 09 38.7 +1.8
BJI SS SS 22 22 52.1 +3.2
BJI pmax pmax
comp=Z,21nm,1.1s,mb5.4
BJI pmax pmax
comp=Z,230nm,5.1s
BJI LR LR
comp=N,620nm,14.8s,MS5.2
BJI LR LR
comp=E,160nm,16.1s,MS5.2
BJI LR LR
comp=Z,330nm,19.3s,MS4.8
N22A Wattenberg Ran 89.48 45 ⇓P P 22 06 05.8 -0.3
baz=90
L21A Rawlins 89.49 44 ⇑P P 22 06 06.0 -0.1
baz=90
B14A Marquette Ranc 89.52 36 ⇑P P 22 06 05.8 -0.3
baz=90,SNR=7.7
ENH Enshi 89.52 303 eP P 22 06 08.0 +1.4
comp=Z,80nm,1.1s,mb6.0
C15A Salmond Ranch, 89.55 37 ⇓P P 22 06 06.1 -0.2
baz=90,SNR=6.5
WALA Waterton Lakes 89.58 35 eP P 22 06 06.4 0.0
comp=Z,0.4nm,1.1s
COLA College 89.62 11 eP P 22 06 06.0 -0.2
COLA pmax pmax
comp=Z,45nm,1.4s,mb5.6
COLA College 89.62 11 eP P 22 06 06.0 -0.1
comp=Z,45nm,1.4s,mb5.6
D16A Dana Ranch, Ca 89.71 38 ⇓P P 22 06 06.3 -0.7
baz=90,SNR=7.5
E17A Martinsdale 89.79 38 ⇑P P 22 06 07.1 -0.3
baz=90
A14A Double T Ranch 89.80 35 P P 22 06 07.8 +0.4
baz=90,SNR=15
C16A Fuhringer Ranc 90.04 37 ⇓P P 22 06 07.9 -0.6
baz=90
GYA Guiyang 90.11 299 ⇑iP P 22 06 10.4 +1.0
GYA pP pP 22 06 23.4 +3.9
GYA sP sP 22 06 27.8 +4.7
GYA PP PP 22 09 47.4 +4.0
GYA S S 22 17 00.8 -0.2
GYA sS sS 22 17 18.5 +0.9
GYA SS SS 22 23 03.0 +2.3
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.4
GYA pmax pmax
comp=Z,110nm,6.4s
GYA LR LR
comp=N,460nm,20.0s,MS5.1
GYA LR LR
comp=E,520nm,22.1s,MS5.1
GYA LR LR
comp=Z,580nm,24.3s,MS4.9
L22A Ellis Ranch, M 90.12 44 ⇑P P 22 06 08.6 -0.5
baz=90
F18A Big Timber 90.15 39 ⇑P P 22 06 08.7 -0.4
baz=90
A15A Johnson Ranch, 90.17 36 ⇓P P 22 06 08.4 -0.7
baz=90
D17A Six Diamond Ra 90.27 38 P P 22 06 10.5 +0.9
baz=90,SNR=14
E18A Harlowton 90.39 39 ⇓P P 22 06 10.4 +0.2
baz=91,SNR=7.7
B16A M & M Farms, S 90.41 37 ⇓P P 22 06 09.6 -0.6
baz=91
C17A Wharram Farm, 90.49 38 P P 22 06 11.2 +0.5
baz=91,SNR=8.4
B17A L&G Farms, Che 90.84 37 ⇑P P 22 06 11.8 -0.5
baz=91
A17A Triple J Farms 91.26 36 ⇓P P 22 06 13.5 -0.6
baz=92,SNR=5.0
EGMT Eagleton 91.28 38 ⇑P P 22 06 14.3 0.0
baz=92
NST Nakhon Sawan 91.33 286 P P 22 06 08.0 -7.3
BILL Bilibino 91.37 353 ⇑eP P 22 06 14.5 +0.2
BILL e 22 06 30.1
BILL 22 09 59.0
BILL PS PS 22 18 30.0 +6.2
BILL pmax pmax
comp=Z,2.0nm,1.7s,mb4.2
BILL MLR MLR
comp=Z,900nm,16.0s,MS5.3
BILL Bilibino 91.37 353 eP P 22 06 13.9 -0.3
comp=Z,8.1nm,0.9s,mb5.0
COLD Coldfoot 91.39 9 eP P 22 06 15.4 +1.0
comp=Z,13nm,1.1s,mb5.2
B18A Beardsley Farm 91.47 37 ⇑P P 22 06 14.9 -0.3
baz=92,SNR=5.4
XAN Xi'an 91.62 306 P P 22 06 17.3 +1.1
A18A Metzger Ranch, 91.71 37 ⇓P P 22 06 15.8 -0.5
baz=92,SNR=12
HIA Hailar 92.00 323 eP P 22 06 18.7 +1.1
HIA pmax pmax
comp=Z,5.0nm,1.2s
HIA Hailar 92.00 323 eP P 22 06 18.7 +1.1
comp=Z,4.7nm,1.2s,mb4.7
RSSD Black Hills 92.69 43 eP P 22 06 21.0 +0.1
RSSD pmax pmax
comp=Z,11nm,1.2s,mb5.2
RSSD Black Hills 92.69 43 eP P 22 06 20.9 0.0
comp=Z,11nm,1.2s,mb5.2
KMI Kunming 92.79 296 ⇑P P 22 06 23.9 +2.0
KMI pP pP 22 06 34.8 +2.9
KMI sP sP 22 06 38.7 +3.2
KMI PP PP 22 10 08.6 +4.0
KMI SKS 22 16 53.0
KMI S S 22 17 23.7 -1.6
KMI sS sS 22 17 41.8 -0.2
KMI SS SS 22 23 41.6 +2.2
KMI pmax pmax
comp=Z,38nm,1.2s,mb5.7
KMI pmax pmax
comp=Z,170nm,4.9s
KMI LR LR
comp=N,790nm,17.8s,MS5.5
KMI LR LR
comp=E,1µm,15.6s,MS5.5
KMI LR LR
comp=Z,940nm,9.3s
HHC Hu-ho-hao-te 92.80 313 eP P 22 06 22.9 +1.3
HHC PP PP 22 10 10.1 +5.7
HHC SKS 22 16 49.2
HHC S S 22 17 20.1 -4.7
HHC SS SS 22 23 40.6 +1.6
HHC pmax pmax
comp=Z,22nm,0.9s,mb5.6
HHC pmax pmax
comp=Z,250nm,5.4s
HHC LR LR
comp=N,280nm,19.2s,MS5.0
HHC LR LR
comp=E,440nm,21.6s,MS5.0
HHC LR LR
comp=Z,400nm,22.8s,MS4.8
BDT Bhumibol Dam 92.94 287 P P 22 06 25.0 +2.3
comp=Z,22nm,0.9s,mb5.6
CMAR Chiang Mai Arr 93.45 288 P P 22 06 26.5 +1.4
comp=Z,29nm,1.0s,mb5.7,baz=122,slow=3.0,SNR=100
CHG Chiang Mai 93.59 289 ⇑P P 22 06 26.9 +1.2
comp=Z,33nm,1.5s,mb5.5
CHTO Chiang Mai 93.59 289 eP P 22 06 27.2 +1.5
CHTO pmax pmax
comp=Z,35nm,1.1s,mb5.7
CHTO Chiang Mai 93.59 289 eP P 22 06 27.2 +1.5
comp=Z,35nm,1.1s,mb5.7
CD2 Chengdu 94.27 302 eP P 22 06 29.3 +0.7
CD2 pP pP 22 06 39.9 +1.3
CD2 sP sP 22 06 43.8 +1.6
CD2 PP PP 22 10 19.5 +3.4
CD2 SKS 22 17 00.4
CD2 S S 22 17 35.9 -2.2
CD2 sS sS 22 17 53.6 -1.2
CD2 SS SS 22 24 02.3 +2.0
CD2 pmax pmax
comp=Z,20nm,1.1s,mb5.5
CD2 pmax pmax
comp=Z,120nm,6.8s
CD2 LR LR
comp=N,550nm,13.0s,MS5.3
CD2 LR LR
comp=E,600nm,14.4s,MS5.3
CD2 LR LR
comp=Z,670nm,15.2s,MS5.2
DGMT Dagmar 94.69 39 ⇑P P 22 06 29.9 -0.1
baz=95
YAK Yakutsk 95.07 337 eP P 22 06 30.1 -1.4
YAK pmax pmax
comp=Z,16nm,1.4s,mb5.3
YAK Yakutsk 95.07 337 eP P 22 06 31.2 -0.2
INK Inuvik 95.52 14 eP P 22 06 33.2 -0.2
INK pmax pmax
comp=Z,5.0nm,0.9s
INK Inuvik 95.52 14 eP P 22 06 33.2 -0.1
comp=Z,4.9nm,0.9s,mb4.9
LZH Lanzhou 96.25 306 eP P 22 06 39.9 +2.4
LZH pP pP 22 06 48.1 +0.5
LZH sP sP 22 06 52.6 +1.4
LZH PP PP 22 10 34.2 +2.8
LZH eS S 22 17 53.5 -1.6
LZH sS sS 22 18 12.1 +0.2
LZH SS SS 22 24 28.4 0.0
LZH pmax pmax
comp=Z,20nm,1.0s,mb5.5
LZH pmax pmax
comp=Z,170nm,6.6s
LZH LR LR
comp=N,520nm,14.5s
LZH LR LR
comp=Z,610nm,16.7s,MS5.2
YKA Yellowknife Ar 97.20 24 P P 22 06 40.5 -0.6
comp=Z,4.0nm,0.9s,mb4.8,baz=232,slow=4.1,SNR=17
YKA Yellowknife Ar 97.20 24 P P 22 06 40.5 -0.6
LPAZ La Paz 98.67 112 P P 22 06 50.5 +1.6
comp=Z,1.1nm,0.8s,mb4.4,baz=196,slow=7.0,SNR=3.3
LPAZ LR LR 22 46 07.3
comp=Z,282nm,18.3s,MS4.8,baz=39,slow=32
ULN Ulaanbaatar 98.76 318 ⇑eP P 22 06 47.6 -0.9
SONM Songino Array 99.15 318 P P 22 06 50.0 -0.3
comp=Z,1.3nm,0.9s,mb4.4,baz=136,slow=3.4,SNR=6.7
GTA Gaotai 100.45 308 eP Pdif 22 06 56.8 +0.6
GTA pP 22 07 06.0
GTA PP PP 22 11 06.4 +2.9
GTA SKS 22 17 32.3
GTA S Sdif 22 18 27.8 -2.6
GTA SS SS 22 25 25.7 -1.5
GTA pmax pmax
comp=Z,4.0nm,1.3s
GTA pmax pmax
comp=Z,58nm,5.7s
GTA LR LR
comp=N,230nm,18.9s,MS5.0
GTA LR LR
comp=E,350nm,18.6s,MS5.0
GTA LR LR
comp=Z,520nm,20.4s,MS5.0
ZAK Zakamensk 102.00 320 eP Pdif 22 07 00.8 -2.3
ZAK pmax pmax
comp=Z,1.0nm,1.2s
ZALV Zalesovo Beam 113.86 320 PKiKP PKiKP 22 11 46.4 -1.0
comp=Z,0.6nm,0.4s,baz=100,slow=1.7,SNR=7.8
ZALV Zalesovo Beam 113.86 320 PKPdf PKiKP 22 11 46.4 -1.0
MK31 Makanchi Array 114.65 312 ePKIKP PKiKP 22 11 48.6 -0.6
MKAR Makanchi Array 114.65 312 PKP PKiKP 22 11 48.2 -1.0
comp=Z,1.3nm,0.8s,baz=65,slow=5.8,SNR=12
MKAR Makanchi Array 114.65 312 PKP PKiKP 22 11 48.2 -1.0
NVS Novosibirsk 114.86 321 ePKIKP PKiKP 22 11 49.1 -0.2
KURK Kurchatov 117.41 317 PKP PKPdf 22 11 53.4 -1.0
comp=Z,2.0nm,0.7s,baz=98,slow=2.0,SNR=8.0
KURK PP PP 22 13 01.6 -4.8
comp=Z,0.7nm,0.2s,baz=96,slow=6.4,SNR=5.3
KURK Kurchatov 117.41 317 ePKPdf PKPdf 22 11 53.9 -0.5
KSH Kashi 118.37 304 PKP PKPdf 22 11 58.1 +1.5
KSH sPKP 22 12 12.4
KSH PKS 22 15 33.5
KSH SKS SKSdf 22 19 05.2 -1.2
KSH SKKS SKKSac 22 20 09.6 -1.7
KSH SS SS 22 29 34.3 +6.1
KSH AMB AMB
comp=Z,110nm,6.2s
KSH LR LR
comp=N,190nm,8.3s
KSH LR LR
comp=E,200nm,8.8s
KSH LR LR
comp=Z,320nm,10.9s,MS5.2
TKM2 Tokmak 2 118.99 308 ePKIKP PKPdf 22 11 57.4 -0.3
UCH Uchtor 119.74 307 ePKPdf PKPdf 22 12 00.3 +1.2
AAK Ala-Archa 119.78 307 PKP PKPdf 22 11 59.8 +0.6
comp=Z,1.2nm,0.3s,baz=251,slow=4.0,SNR=5.0
AAK Ala-Archa 119.78 307 e iPKIKP PKPdf 22 11 57.8 -1.4
AAK pmax pmax
comp=Z,4.0nm,1.7s
AAK Ala-Archa 119.78 307 PKP PKPdf 22 11 59.8 +0.6
AML Almayashu 120.34 307 ePKPdf PKPdf 22 12 01.1 +0.9
BVAR Borovoye Array 122.46 319 PKP PKPdf 22 12 03.5 -0.5
comp=Z,5.0nm,1.0s,baz=90,slow=3.0,SNR=23
BRVK Borovoye 122.52 319 e iPKIKP PKPdf 22 12 03.4 -0.7
BRVK pmax pmax
comp=Z,12nm,1.7s
BRVK Borovoye 122.52 319 ePKPdf PKPdf 22 12 04.0 -0.1
KBL Kabul 123.34 297 ePKIKP PKPdf 22 12 07.0 +0.7
KBS Kingsbay 123.47 358 ⇑ePKIKP PKPdf 22 12 05.7 +0.4
SPITS Spitsbergen Ar 124.05 357 PKP PKPdf 22 12 06.5 +0.1
comp=Z,16nm,1.0s,baz=351,slow=10,SNR=4.9
SUMG Summit 124.44 15 ePKPdf PKPdf 22 12 07.7 +0.4
SUMG Summit 124.44 15 ⇑iP PKPdf 22 12 08.7 +1.4
comp=Z,7.2nm,0.9s
BOSA Boshof 125.53 202 PKP PKPdf 22 12 11.6 +0.8
comp=Z,6.6nm,1.0s,baz=158,slow=5.4,SNR=4.2
SVE Sverdlovsk 127.27 325 ePKIKP PKPdf 22 12 13.4 +0.3
SVE pmax pmax
comp=Z,14nm,1.1s
ARU Arti 128.48 325 i PKIKP PKPdf 22 12 15.5 +0.1
ARU 22 14 20.4
ARU 22 19 19.6
ARU SS SS 22 31 28.8 -6.1
ARU Arti 128.48 325 ePKPdf PKPdf 22 12 15.8 +0.4
ABKAR Akbulak array 129.51 316 ePKPdf PKPdf 22 12 18.2 +0.7
AKTK Aktyubinsk 130.47 318 PKP PKPdf 22 12 19.1 -0.3
AKTO Aktyubinsk 130.47 318 PKP PKPdf 22 12 19.1 -0.3
comp=Z,2.3nm,0.8s,baz=348,slow=2.5,SNR=4.8
ARCES ARCESS Array B 131.41 351 PKP PKPdf 22 12 20.4 -0.2
comp=Z,3.1nm,0.8s,baz=51,slow=0.6,SNR=9.7
APA Apatity 131.62 346 ⇑iPKHKP 22 12 03.0
APA MLR MLR
comp=Z,400nm,20.0s,MS5.1
JOF Joensuu 135.92 343 ep PKPdf 22 12 27.7 -1.6
comp=Z,0.4nm,0.3s
JOF Joensuu 135.92 343 ep PKPdf 22 12 27.7 -1.6
comp=Z,0.4nm,0.3s
LSZ Lusaka 136.10 213 PKP PKPdf 22 12 31.3 +0.2
comp=Z,3.9nm,0.9s,baz=124,slow=7.3,SNR=4.1
KAF Kangasniemi 137.86 345 ep PKPdf 22 12 33.2 +0.3
comp=Z,0.4nm,0.4s
KAF Kangasniemi 137.86 345 ep PKPdf 22 12 33.2 +0.3
comp=Z,0.4nm,0.4s
FINES FINESS Array B 138.50 345 PKhKP 22 12 23.6
comp=Z,0.9nm,0.8s,baz=354,slow=8.4,SNR=2.7
FINES PKP PKPdf 22 12 35.3 +1.2
comp=Z,3.5nm,0.9s,baz=77,slow=3.2,SNR=9.3
MOS Moscow 139.02 332 ePKIKP PKPdf 22 12 36.4 +1.2
MOS pmax pmax
comp=Z,47nm,1.3s
MAK Makhachkala 139.42 310 ePKIKP PKPdf 22 12 34.1 -2.2
MAK e 22 15 28.8
OBN Obninsk 139.88 332 i PKIKP PKPdf 22 12 36.0 -0.8
OBN e 22 12 50.3
OBN 22 15 30.0
OBN e 22 26 08.7
OBN pmax pmax
comp=Z,42nm,1.7s
OBN Obninsk 139.88 332 ePKPdf PKPdf 22 12 36.8 0.0
VSR Storozhevoye 141.05 326 ePKIKP PKPdf 22 12 39.7 +0.7
VSR pmax pmax
comp=Z,7.0nm,0.7s
VSR pmax pmax
comp=N,3.0nm,0.4s
VSR pmax pmax
comp=E,8.0nm,1.1s
NOA NORSAR Array B 141.29 355 PKhKP 22 12 32.8
comp=E,1.7nm,0.9s,baz=14,slow=4.5,SNR=5.6
HFS Hagfors 141.95 353 PKhKP 22 12 34.3
comp=E,6.5nm,0.8s,baz=108,slow=4.8,SNR=14
ZEI Tsey 142.00 311 ePKHKP 22 12 35.4
ZEI pmax pmax
comp=Z,12nm,1.3s
KIV Kislovodsk 142.40 314 i PKIKP PKPdf 22 12 38.0 -3.7
KIV e 22 12 50.1
KIV pmax pmax
comp=Z,5.0nm,0.9s
KONO Kongsberg 142.79 356 ePKHKP 22 12 37.6
IZAR Zarasai 143.30 340 eP PKPdf 22 12 40.8 -2.1
IZAR AMB AMB 22 12 47.1
comp=Z,3.4nm,1.5s
ISAL Salakas 143.48 340 eP PKPdf 22 12 40.9 -2.3
ISAL AMB AMB 22 12 42.5
comp=Z,5.5nm,1.0s
IDID Didziasalis 143.50 339 eP PKPdf 22 12 40.9 -2.4
IDID AMB AMB 22 12 42.3
comp=Z,4.3nm,1.0s
IIGN Ignalina 143.63 340 eP PKPdf 22 12 41.3 -2.2
IIGN AMB AMB 22 12 43.1
comp=Z,5.2nm,1.2s
ARTV Artvin 143.91 310 i P PKPdf 22 12 43.1 -1.3
DBAD Bademkaya 144.14 310 i P PKPdf 22 12 43.7 -1.2
SOC Sochi 144.52 315 i PKIKP PKPdf 22 12 46.6 +1.2
SOC e 22 16 02.3
KOPT Kop Dagi 145.33 308 i P PKPbc 22 12 48.7 +1.9
BEST Besiri 145.40 305 i P PKPbc 22 12 48.3 +1.2
ANN Anapa 145.43 318 ⇑iPKIKP PKPdf 22 12 47.1 +0.1
ANN pmax pmax
comp=Z,198nm,1.5s
SUW Suwalki 145.71 341 ePKPc PKPdf 22 12 47.6 +0.5
MUD Monsted U'grnd 145.99 356 ⇑iPKP2 PKPab 22 12 48.3 -0.6
MUD pmax pmax
comp=Z,28nm,1.2s
MUD Monsted U'grnd 145.99 356 ⇑iP PKPdf 22 12 48.3 +0.8
comp=Z,28nm,1.2s
AKASG Malin Array Be 146.15 332 PKPbc PKPbc 22 12 48.2 -0.8
comp=Z,22nm,0.7s,baz=41,slow=4.1,SNR=71
AKASG Malin Array Be 146.15 332 PKPbc PKPbc 22 12 48.2 -0.8
AKBB Malin Array Si 146.15 332 ePKP2 PKPab 22 12 48.7 -0.9
KIEV Kiev 146.16 332 ePKP2 PKPab 22 12 48.6 -1.1
DIYA Diyarbakir 146.26 305 i P PKPab 22 12 51.5 +0.9
COP Copenhagen 146.45 352 ⇑iPKP2 PKPab 22 12 49.7 -0.9
COP pmax pmax
comp=Z,9.0nm,0.9s
COP Copenhagen 146.45 352 ⇑iP PKPdf 22 12 49.7 +1.4
comp=Z,9.0nm,0.9s
GRSN GIRESUNGRSN 146.59 311 i P PKPab 22 12 51.0 -0.7
BSD Bornholm Skovb 146.65 350 ⇑iPKP2 PKPab 22 12 49.9 -1.5
BSD pmax pmax
comp=Z,18nm,0.8s
BSD Bornholm Skovb 146.65 350 ⇑iP PKPdf 22 12 49.9 +1.2
comp=Z,18nm,0.8s
EKA Eskdalemuir Ar 146.69 9 PKPbc PKPbc 22 12 50.2 -0.2
comp=Z,13nm,0.9s,baz=337,slow=2.6,SNR=28
ESK Eskdalemuir 146.70 9 ePKP2 PKPbc 22 12 49.6 -0.8
ELZG Elazig 146.94 307 i P PKPab 22 12 53.4 +0.3
KEMA Kemaliye 147.04 308 i P PKPab 22 12 53.3 -0.2
SIM Simferopol' 147.37 320 ePKP2 PKPab 22 12 54.9 +0.3
SIM ePPS 22 29 06.0

SIM			pmax	pmax		
	comp=Z,86nm,18.1s					
ERBA	**Erbaa**	**147.74 311**	*i* P	PKPbc	22 12 54.9	+1.1
ATAB	**Bozova**	**147.78 305**	*i* P	PKPbc	22 12 55.2	+1.1
AKCD	**Akcadag**	**147.79 307**	*i* P	PKPbc	22 12 55.1	+1.1
GKP	**Gorka Klasztor**	**147.94 346**	*e*PKP	PKPbc	22 12 54.3	+0.3
DSB	**Dublin**	**148.13 13**	*e*PKPbc	PKPbc	22 12 54.8	+0.3
GZT	**Gaziantep**	**148.37 305**	*i* P	PKPbc	22 12 56.0	+0.4
BSEG	**Bad Segeberg**	**148.40 354**	*e*PKPbc	PKPbc	22 12 55.6	+0.5
KUZU	**Kuzuini**	**148.92 304**	*i* P	PKPbc	22 12 58.3	+1.3
LVV	**L'vov**	**148.94 336**	*e*PKP2	PKPbc	22 12 56.5	-0.2
LVV			MLR	MLR		
	comp=Z,200nm,21.0s,MS4.9					
KIS	**Kishinev**	**148.98 328**	*e*PKIKP	PKPbc	22 12 55.0	-1.9
KIS			LRM		23 16 34.0	
	comp=Z,300nm,22.0s					
KIS	**Kishinev**	**148.98 328**	*i* PKIKP	PKPbc	22 12 55.0	-1.9
KIS			*e*		22 13 10.0	
KIS			*e*		22 20 00.0	
KIS			MLR	MLR		
	comp=Z,400nm,22.0s,MS5.2					
KIS			MLR	MLR		
	comp=Z,300nm,22.0s					
KIS	**Kishinev**	**148.98 328**	⇓*i*P	PKPbc	22 12 57.4	+0.6
CTKT	**Corum**	**149.11 313**	*i* P	PKPbc	22 12 58.5	+1.1
RUE	**Ruedersdorf**	**149.37 349**	*e*PKPbc	PKPbc	22 12 58.4	+0.7
IAS	**Iasi**	**149.45 329**	PKP2	PKPbc	22 12 58.9	+0.9
IAS	**Iasi**	**149.45 329**	⇓*i*P	PKPbc	22 12 58.6	+0.6
KWP	**Kalwaria Pacla**	**149.59 337**	*e*PKPc	PKPbc	22 12 58.7	+0.4
KWP	**Kalwaria Pacla**	**149.59 337**	*e*PKPbc	PKPbc	22 12 58.8	+0.5
BALT	**Daday**	**149.62 315**	*i* P	PKPbc	22 12 59.1	+0.5
LEOM	**Leova**	**149.63 327**	⇓*i*P	PKPbc	22 12 59.2	+0.7
WIT	**Witteveen**	**149.75 358**	*e*PKP	PKPbc	22 12 59.7	+1.1
	comp=Z,262nm,1.6s					
CDAG	**Cicekdag**	**149.84 311**	*i* P	PKPbc	22 12 59.5	+0.3
NRDL	**Niedersach Rie**	**149.85 354**	*e*PKPbc	PKPbc	22 12 59.3	+0.5
AVNT	**Avonos**	**149.85 309**	*i* P	PKPbc	22 13 00.0	+0.7
YAYL	**Yayladag**	**149.90 303**	*i* P	PKPbc	22 12 58.9	-0.6
OJC	**Ojcow**	**150.05 341**	*e*PKPdf	PKPdf	22 12 53.9	-0.5
OJC			*i* PKPbc	PKPbc	22 12 57.9	-1.5
BUR08	**Bucovina Ar. S**	**150.19 332**	*e*PKPbc	PKPbc	22 13 00.8	+1.0
BUR01	**Bucovina Ar. S**	**150.21 332**	P	PKPbc	22 13 01.4	+1.5
BURAR	**Bucovina Array**	**150.21 332**	⇓PKIKP	PKPbc	22 13 01.3	+1.5
BURAR	**Bucovina Array**	**150.21 332**	⇓*i*P	PKPbc	22 13 01.3	+1.5
TLCR		**150.21 325**	⇓PKIKP	PKPbc	22 13 00.4	+0.5
TLCR		**150.21 325**	⇓*i*P	PKPbc	22 13 00.4	+0.5
IBBN	**Ibbenburen**	**150.21 357**	*e*PKPbc	PKPbc	22 13 00.3	+0.6
STHS	**Stebnicka Huta**	**150.28 338**	*e*PKIKP	PKPbc	22 12 59.6	-0.4
STHS	**Stebnicka Huta**	**150.28 338**	*e*PKP	PKPbc	22 12 59.5	-0.5
BR131	**Keskin Array S**	**150.30 312**	*e*PKPbc	PKPbc	22 13 00.4	+0.1
BRTR	**Keskin Array B**	**150.30 312**	PKP	PKPdf	22 12 54.7	-0.4
	comp=Z,0.7nm,1.0s,baz=12,slow=6.3,SNR=4.7					
BRTR			PKPbc	PKPbc	22 13 00.6	+0.3
	comp=Z,17nm,0.9s,baz=125,slow=2.0,SNR=82					
KOLS	**Kolonicke sedl**	**150.33 337**	*e*PKIKP	PKPdf	22 12 55.8	+0.9
KOLS			*e*		22 13 01.1	
KOLS	**Kolonicke sedl**	**150.33 337**	*e*PKP	PKPdf	22 12 55.8	+0.9
KOLS			*e*		22 13 01.1	
KSP	**Ksiaz**	**150.42 345**	*e*PKPc	PKPbc	22 13 00.6	+0.3
KSP	**Ksiaz**	**150.42 345**	*e*PKIKP	PKPbc	22 13 00.5	+0.3
CLZ	**Clausthal**	**150.47 353**	*e*PKPbc	PKPbc	22 13 00.7	+0.4
GULE	**Gulek**	**150.48 307**	*i* P	PKPbc	22 13 01.7	+0.8
CFR	**Carcaliu**	**150.57 326**	⇓PKIKP	PKPbc	22 13 02.0	+1.2
CFR	**Carcaliu**	**150.57 326**	⇓*i*P	PKPbc	22 13 02.0	+1.2
UZH	**Uzhgorod**	**150.57 336**	⇓*i*PKIKP	PKPbc	22 13 01.2	+0.5
UZH			*e*		22 13 09.8	
NIE	**Niedzica**	**150.59 339**	*e*PKPbc	PKPbc	22 13 01.5	+0.8
WTSB	**Winterswijk**	**150.60 358**	*e*PKP	PKPbc	22 12 59.6	-1.0
	comp=Z,88nm,1.6s					
CLL	**Collm**	**150.63 350**	⇑*e*PKIKP	PKPdf	22 12 55.0	-0.3
CLL			*i*		22 13 01.2	
CLL			*i*		22 13 03.9	
CLL			*i*		22 13 08.4	
CLL			MLR	MLR		
	comp=Z,200nm,18.5s,MS5.0					
CLL	**Collm**	**150.63 350**	*e*PKP	PKPdf	22 12 55.0	-0.3
CLL			⇑*i*PKP	PKPdf	22 13 01.2	+5.9
CLL			*i*		22 13 03.9	
CLL			*i* PKP	PKPdf	22 13 08.4	+13
CLL			LR	LR		
	comp=Z,200nm,18.5s,MS5.0					
CLL	**Collm**	**150.63 350**	*e*PKPdf	PKPdf	22 12 55.0	-0.3
CLL			⇑*i*PKPbc	PKPbc	22 13 01.2	+0.5
	comp=Z,60nm,1.0s					
CLL			*i* pPKPdf	pPKPdf	22 13 03.9	-1.7
	comp=Z,83nm,1.2s					
CLL			*i* PKPab	PKPab	22 13 08.4	+0.9
	comp=Z,52nm,1.0s					
CLL			*e*PP	PP	22 16 34.0	-2.5
CLL			*e*SKKSac	SKKSac	22 23 32.0	+6.4
CLL			*e*(PPS)		22 29 54.0	
CLL			*e*SS	SS	22 36 06.0	+12
CLL			*e*SSS		22 41 40.0	
CLL			*e*SSSS		22 46 00.0	
CLL			LmV		23 24 00.0	
	comp=Z,200nm,18.5s					
CRVS	**Cervenica-Dubn**	**150.64 338**	*e*PKIKP	PKPdf	22 12 56.6	+1.2
CRVS			*e*		22 13 01.7	
CRVS	**Cervenica-Dubn**	**150.64 338**	*e*PKP	PKPdf	22 12 56.6	+1.2
CRVS			*e*		22 13 01.7	
BBAL	**Bala**	**150.74 312**	*i* P	PKPbc	22 13 02.1	+0.7
UPC	**Upice**	**150.80 346**	*e*PKIKP	PKPbc	22 13 01.8	+0.6
UPC	**Upice**	**150.80 346**	⇑*e*PKP	PKPbc	22 13 01.8	+0.6
VRI	**Vrincioaia**	**150.80 328**	⇑PKIKP	PKPbc	22 13 01.9	+0.6
VRI	**Vrincioaia**	**150.80 328**	⇑*i*P	PKPbc	22 13 01.9	+0.6
PLOR	**Plostina**	**150.85 328**	⇑PKIKP	PKPbc	22 13 01.3	-0.1
PLOR	**Plostina**	**150.85 328**	⇑*i*P	PKPbc	22 13 01.3	-0.1
OKC	**Ostrava-Krasne**	**150.87 342**	*e*PKIKP	PKPbc	22 13 01.7	+0.4
OKC			MLR	MLR		
	comp=Z,300nm,14.2s,MS5.2					
OKC	**Ostrava-Krasne**	**150.87 342**	⇑*e*PKP	PKPbc	22 13 01.7	+0.4
OKC			AMS	AMS	23 29 00.0	
	comp=Z,300nm,14.2s					
DPC	**Dobruska-Polom**	**150.87 345**	*e*PKIKP	PKPdf	22 12 56.3	+0.6
DPC			*e*		22 13 02.1	
DPC			MLR	MLR		
	comp=Z,200nm,15.2s,MS5.0					
DPC	**Dobruska-Polom**	**150.87 345**	*e*PKPDF	PKPdf	22 12 56.3	+0.6
DPC			⇑*e*PKP	PKPbc	22 13 02.1	+0.8
DPC			AMS	AMS	23 31 20.0	
	comp=Z,200nm,15.2s					
BRG	**Berggiesshubel**	**150.88 348**	*e*PKP	PKPdf	22 12 55.9	+0.2
	comp=Z,9.4nm,1.5s					
BRG			*i*		22 13 01.8	
	comp=Z,40nm,1.0s					
BRG			*i*		22 13 05.3	
	comp=Z,101nm,1.6s					
BRG			*e*PP	PP	22 16 34.8	-3.2
	comp=Z,9.7nm,1.7s					
BRG						
	comp=N,376nm,16.7s					
BRG						
	comp=E,147nm,13.8s					
BRG						
	comp=Z,187nm,17.1s					
BRG	**Berggiesshubel**	**150.88 348**	*e*PKIKP	PKPdf	22 12 55.9	+0.2
BRG			*i*		22 13 01.8	
BRG			*i*		22 13 05.3	
BRG			*e*		22 16 34.8	
BRG			pmax	pmax		
	comp=Z,6.0nm,1.5s					
BRG			MLR	MLR		
	comp=N,225nm,16.7s,MS5.1					
BRG			MLR	MLR		
	comp=E,88nm,13.8s,MS5.1					
BRG			MLR	MLR		
	comp=Z,112nm,17.1s,MS4.7					
BMR	**Baia Mare**	**150.88 334**	⇑PKIKP	PKPbc	22 13 01.4	-0.1
BMR	**Baia Mare**	**150.88 334**	P	PKPbc	22 13 02.5	+1.0
BMR	**Baia Mare**	**150.88 334**	⇑*i*P	PKPbc	22 13 01.4	-0.1
TRPA	**Tarpa**	**150.89 336**	⇓*i*P	PKPbc	22 13 02.3	+0.8
TIRR	**Tirgusor**	**150.90 324**	⇓PKIKP	PKPbc	22 13 00.3	-1.3
TIRR	**Tirgusor**	**150.90 324**	*e*PKPbc	PKPbc	22 13 02.0	+0.4
TIRR	**Tirgusor**	**150.90 324**	⇓*i*P	PKPbc	22 13 00.3	-1.3
SGKT	**Sivrigoynuk**	**150.97 315**	*i* P	PKPbc	22 13 02.1	+0.2
HARR	**Harsova**	**151.00 325**	⇑PKIKP	PKPbc	22 13 02.7	+0.9
HARR	**Harsova**	**151.00 325**	⇑*i*P	PKPbc	22 13 02.7	+0.9
PVCC	**Panska Ves**	**151.09 347**	*e*PKIKP	PKPbc	22 13 02.0	+0.2
PVCC	**Panska Ves**	**151.09 347**	⇑*e*PKP	PKPbc	22 13 02.0	+0.2
MORC	**Moravsky Berou**	**151.09 343**	PKIKP	PKPbc	22 13 03.1	+1.2
MORC	**Moravsky Berou**	**151.09 343**	*e*PKPbc	PKPbc	22 13 02.1	+0.2
MORC	**Moravsky Berou**	**151.09 343**	⇓*i*P	PKPbc	22 13 02.9	+1.0
BUG	**Bochum--Univer**	**151.10 357**	*e*PKPbc	PKPbc	22 13 02.2	+0.4
CVD	**Cernavoda**	**151.20 324**	⇓PKIKP	PKPbc	22 13 02.6	+0.3
CVD	**Cernavoda**	**151.20 324**	⇓*i*P	PKPbc	22 13 02.6	+0.3
MMAI	**Mount Meron Ar**	**151.27 298**	PKPbc	PKPbc	22 13 03.7	+0.8
	comp=Z,44nm,0.9s,baz=64,slow=5.7,SNR=22					
KECS	**Kecovo**	**151.34 338**	*e*PKIKP	PKPbc	22 13 03.7	+1.2
KECS			*e*		22 13 11.7	
KECS	**Kecovo**	**151.34 338**	*e*PKP	PKPbc	22 13 03.7	+1.2
KECS			*e*		22 13 11.7	
AMRR	**Amara**	**151.37 326**	⇑P	PKPbc	22 13 03.2	+0.5
AMRR	**Amara**	**151.37 326**	⇑*i*P	PKPbc	22 13 03.2	+0.5
MLR	**Muntele Rosu**	**151.46 328**	PKPbc	PKPbc	22 13 03.0	+0.1
	comp=Z,24nm,1.0s,baz=356,slow=3.0,SNR=39					
MLR	**Muntele Rosu**	**151.46 328**	P	PKPbc	22 13 03.5	+0.7
MLR	**Muntele Rosu**	**151.46 328**	⇓*i*P	PKPbc	22 13 03.3	+0.4
MOX	**Moxa**	**151.49 351**	*e*PKP	PKPbc	22 13 02.6	-0.1
	comp=Z,55nm,1.6s					
MOX						
	comp=Z,200nm,19.0s					
MOX	**Moxa**	**151.49 351**	*e*PKPbc	PKPbc	22 13 03.3	+0.6
UBBA	**Unterbreizbach**	**151.51 353**	*e*PKPbc	PKPbc	22 13 03.1	+0.3
TANN	**Tannenbergstha**	**151.58 350**	*e*PKPbc	PKPbc	22 13 03.7	+0.7
PRU	**Pruhonice**	**151.61 347**	*e*PKIKP	PKPbc	22 13 03.6	+0.5
PRU			MLR	MLR		
	comp=Z,300nm,22.5s,MS5.0					
PRU	**Pruhonice**	**151.61 347**	⇑*e*PKP	PKPbc	22 13 03.6	+0.5
PRU			AMS	AMS	23 24 20.0	
	comp=Z,300nm,22.5s					
NKC	**Novy Kostel**	**151.76 350**	*e*PKIKP	PKPbc	22 13 04.0	+0.6
NKC	**Novy Kostel**	**151.76 350**	⇑*e*PKP	PKPbc	22 13 04.0	+0.6
VRAC	**Vranov**	**151.77 344**	PKPbc	PKPbc	22 13 03.4	0.0
	comp=Z,7.0nm,1.0s,baz=22,slow=0.8,SNR=12					
VRAC	**Vranov**	**151.77 344**	PKIKP	PKPbc	22 13 04.6	+1.2
VRAC	**Vranov**	**151.77 344**	⇑P	PKPbc	22 13 04.5	+1.0
VRAC	**Vranov**	**151.77 344**	⇑*i*P	PKPbc	22 13 04.4	+1.0
UCC	**Uccle**	**151.79 1**	PKPbc	PKPbc	22 13 03.7	+0.2
BEBN	**Eben Emael**	**151.80 359**	PKPbc	PKPbc	22 13 03.7	+0.3
HGN	**Heimansgroeve**	**151.82 359**	*e*PKP	PKPbc	22 13 03.3	-0.2
	comp=Z,35nm,1.6s					
VYHS	**Vyhne**	**151.87 340**	*e*PKIKP	PKPdf	22 12 58.3	+1.0
VYHS			*e*		22 13 04.3	
VYHS			*e*		22 13 12.6	
VYHS	**Vyhne**	**151.87 340**	*e*PKP	PKPdf	22 12 58.3	+1.0
VYHS			*e*		22 13 04.3	
VYHS			*e*		22 13 12.6	
VYHS			*e*		22 16 36.1	
VYHS	**Vyhne**	**151.87 340**	*e*PKP	PKPdf	22 12 58.3	+1.0
VYHS			*e*		22 13 04.3	
VYHS			*e*		22 13 12.6	
VYHS			*e*		22 16 36.1	
DRGR		**151.91 334**	PKIKP	PKPbc	22 13 04.6	+0.7
DRGR		**151.91 334**	⇓P	PKPbc	22 13 04.5	+0.6
DRGR		**151.91 334**	⇓*i*P	PKPbc	22 13 04.5	+0.6
MEM	**Membach**	**151.98 359**	PKPbc	PKPbc	22 13 03.7	-0.1
MEM			PKPab	PKPab	22 13 11.9	-1.2
PSZ	**Piszkesteto**	**152.03 338**	PKIKP	PKPbc	22 13 05.3	+1.2
PSZ	**Piszkesteto**	**152.03 338**	*e*PKPbc	PKPbc	22 13 04.8	+0.7
PSZ	**Piszkesteto**	**152.03 338**	⇑*e*pPKP/A	PKPbc	22 13 04.5	+0.4
PSZ	**Piszkesteto**	**152.03 338**	⇓*i*P	PKPbc	22 13 05.1	+1.0
TREC	**Trest**	**152.05 345**	*e*PKIKP	PKPbc	22 13 04.0	-0.1
TREC			MLR	MLR		
	comp=Z,300nm,23.5s,MS5.0					
TREC	**Trest**	**152.05 345**	⇑*e*PKP	PKPbc	22 13 04.0	-0.1
TREC			AMS	AMS	23 26 20.0	
	comp=Z,300nm,23.5s					
SNF	**Seneffe**	**152.08 1**	PKPbc	PKPbc	22 13 04.1	0.0
BCLA	**Clavier**	**152.18 360**	PKPbc	PKPbc	22 13 04.7	+0.3
TNS	**Taunus Mts**	**152.25 355**	*e*PKPbc	PKPbc	22 13 05.1	+0.6
TNS			*e*PKPab	PKPab	22 13 13.1	-1.2
ROTZ	**Rotzenmuhle**	**152.25 350**	*e*PKPbc	PKPbc	22 13 05.3	+0.8
SMOL	**Smolenice**	**152.27 342**	*e*PKIKP	PKPbc	22 13 06.3	+1.7
SMOL			*e*		22 13 14.3	
SMOL	**Smolenice**	**152.27 342**	*e*PKP	PKPbc	22 13 06.3	+1.7
SMOL			*e*		22 13 14.3	
SMOL			*e*		22 13 30.4	
SMOL	**Smolenice**	**152.27 342**	*e*PKP	PKPbc	22 13 06.3	+1.7
SMOL			*e*		22 13 14.3	
SMOL			*e*		22 13 30.4	
PRD	**Provadia**	**152.28 323**	*e*P	PKPbc	22 13 05.4	+0.6
BORA	**Eskisehir**	**152.38 315**	*i* P	PKPbc	22 13 05.3	+0.2
GRF	**Grafenberg Arr**	**152.47 351**	*e*PKPbc	PKPbc	22 13 06.2	+1.2
GIVF	**Givet**	**152.50 0**	*e*PKP1	PKPbc	22 13 05.3	+0.2
	comp=Z,214nm,1.7s					
DOU	**Dourbes**	**152.50 1**	PKPbc	PKPbc	22 13 05.8	+0.7
BAIF	**Baives**	**152.53 1**	*e*PKP1	PKPbc	22 13 05.5	+0.4
	comp=Z,65nm,1.2s					
DEV	**Deva**	**152.55 332**	⇓PKIKP	PKPbc	22 13 06.4	+1.1
DEV	**Deva**	**152.55 332**	⇓*i*P	PKPbc	22 13 06.4	+1.1
KHC	**Kasperske Hory**	**152.62 348**	*e*PKIKP	PKPdf	22 12 58.7	+0.4
KHC			*e*		22 13 06.1	
KHC			MLR	MLR		
	comp=Z,300nm,22.8s,MS5.0					
KHC	**Kasperske Hory**	**152.62 348**	*e*PKPbc	PKPbc	22 13 06.4	+1.0
KHC	**Kasperske Hory**	**152.62 348**	*e*PKPDF	PKPdf	22 12 58.7	+0.4
KHC			⇑*e*PKP	PKPbc	22 13 06.1	+0.7
KHC			*es*PKP		22 13 21.0	
KHC			*ex*	x	22 13 58.0	
KHC			AMS	AMS	23 24 20.0	
	comp=Z,300nm,22.8s					
ABH	**Alteburg**	**152.65 356**	*e*P	PKPbc	22 13 06.0	+0.6
WET	**Wettzell**	**152.74 349**	*e*PKPbc	PKPbc	22 13 06.3	+0.7
WET			*e*PKPab	PKPab	22 13 17.0	+0.6
TOD	**Tromm**	**152.83 355**	*e*PKIKP	PKPbc	22 13 05.7	-0.1
RUP	**Ruppelstein**	**152.85 357**	*e*PKIKP	PKPbc	22 13 06.5	+0.6
GEC2	**GERESS Array S**	**152.87 347**	*e*PKPbc	PKPbc	22 13 06.4	+0.5
GEC2	**GERESS Array S**	**152.87 347**	*e*PKPbc	PKPbc	22 13 06.4	+0.4
GERES	**GERESS Array B**	**152.87 347**	PKP	PKPdf	22 12 58.8	+0.1
	comp=Z,0.6nm,0.9s,baz=252,slow=0.4,SNR=6.1					
GERES			PKPbc	PKPbc	22 13 06.0	0.0
	comp=Z,5.2nm,0.9s,baz=48,slow=2.0,SNR=33					
WLF	**Walferdange**	**152.92 358**	PKPbc	PKPbc	22 13 07.0	+1.0
WLF	**Walferdange**	**152.92 358**	*e*PKPbc	PKPbc	22 13 07.0	+1.0
WLF	**Walferdange**	**152.92 358**	*e*PKPbc	PKPbc	22 13 06.9	+0.9
GZR	**Gura Zlata**	**152.99 332**	⇓PKIKP	PKPbc	22 13 06.6	+0.3
GZR	**Gura Zlata**	**152.99 332**	P	PKPbc	22 13 07.0	+0.7
GZR	**Gura Zlata**	**152.99 332**	⇓*i*P	PKPbc	22 13 06.6	+0.3
ULDT	**Uludag**	**153.09 316**	*i* P	PKPbc	22 13 07.5	+0.8
JMB	**Yambol**	**153.21 323**	*e*P	PKPbc	22 13 07.9	+1.0
CONA	**Conrad Observa**	**153.23 344**	P	PKPbc	22 13 07.0	+0.2
	comp=Z,67nm,1.6s,SNR=8.5					
SOP	**Sopron**	**153.27 343**	⇓*e*PKP	PKPab	22 13 20.1	+1.4
BZS	**Buzias**	**153.31 334**	⇓PKIKP	PKPbc	22 13 07.4	+0.4
BZS	**Buzias**	**153.31 334**	P	PKPbc	22 13 07.6	+0.6
BZS	**Buzias**	**153.31 334**	⇓*i*P	PKPbc	22 13 07.4	+0.4
PVL	**Pavlikeni**	**153.38 326**	*i* P	PKPbc	22 13 03.5	-3.7
ROSF	**Rostrenen**	**153.42 12**	*e*PKP1	PKPbc	22 13 06.6	-0.6
	comp=Z,74nm,1.4s					
FLN	**La Foliniere**	**153.47 8**	*e*PKP1	PKPbc	22 13 07.1	-0.2
	comp=Z,44nm,1.0s					
FLN			*e*MLR	MLR		
	comp=Z,398nm,20.0s,MS4.9					
FLN	**La Foliniere**	**153.47 8**	*e*PKP	PKPbc	22 13 07.1	-0.2
FLN			LR	LR		
	comp=Z,400nm,20.0s,MS5.2					
STU	**Suttgart**	**153.62 354**	*e*PKPab	PKPab	22 13 20.1	0.0
SGMF	**Saint Gilles**	**153.64 11**	*e*PKP1	PKPbc	22 13 07.1	-0.5
LDF	**La Druitiere**	**153.68 8**	*e*PKP1	PKPbc	22 13 07.4	-0.3
	comp=Z,47nm,1.3s					
GRR	**Gorron**	**153.79 9**	*e*PKP1	PKPbc	22 13 07.8	-0.1
	comp=Z,34nm,0.9s					
QUIF	**Quistinic**	**153.84 13**	*e*PKP1	PKPbc	22 13 07.5	-0.6
PKSM	**Moragy**	**153.93 338**	⇓PKIKP	PKPbc	22 13 08.6	+0.3
PKSM	**Moragy**	**153.93 338**	⇓*i*P	PKPbc	22 13 08.6	+0.3
FUR	**Furstenfeldbru**	**153.95 350**	*e*PKPab	PKPab	22 13 22.2	+0.6
DIM	**Dimitrovgrad**	**154.07 323**	*i* P	PKPbc	22 13 09.5	+0.7
MEZF	**Maizieres J'vi**	**154.10 360**	*e*PKP1	PKPbc	22 13 09.1	+0.5
RJOB	**Jochberg**	**154.10 348**	*e*PKPab	PKPab	22 13 23.2	+1.0
CDF	**Champ du Feu**	**154.13 357**	*e*PKP1	PKPbc	22 13 08.8	+0.1
BFO	**Black Forest**	**154.14 355**	*e*PKPbc	PKPbc	22 13 08.9	+0.2
BFO			*e*PKPab	PKPab	22 13 22.8	+0.5
BFO	**Black Forest**	**154.14 355**	*e*PKPbc	PKPbc	22 13 09.1	+0.4
PGB	**Panagyurishte**	**154.46 326**	*e*P	PKPbc	22 13 10.2	+0.6
KOGS	**Kog**	**154.48 342**	*e*PKPbc	PKPbc	22 13 09.7	+0.2
KOGS			*e*PKPab	PKPab	22 13 24.4	+0.6
HAU	**Haudompre**	**154.57 358**	*e*PKP1	PKPbc	22 13 09.7	+0.1
HAU			*e*MLR	MLR		
	comp=Z,422nm,19.0s,MS5.0					
HAU	**Haudompre**	**154.57 358**	*e*PKP	PKPbc	22 13 09.7	+0.1
HAU			LR	LR		
	comp=Z,420nm,19.0s,MS5.3					
FELD	**Feldberg im Sc**	**154.61 355**	*e*P	PKPbc	22 13 05.9	-3.8
RETA	**Reutte**	**154.69 351**	P	PKPbc	22 13 11.0	+1.1
HINF	**Hinteralfeld**	**154.74 357**	*e*PKP1	PKPbc	22 13 09.8	-0.2
RZN	**Rozhen**	**154.77 324**	*e*P	PKPab	22 13 26.3	+1.0
WTTA	**Wattenberg**	**154.77 349**	P	PKPbc	22 13 11.3	+1.2
	comp=Z,13nm,1.7s					
WTTA					00 47 33.3	
	comp=Z,24nm,1.1s					
MOTA	**Moosalm**	**154.78 350**	P	PKPbc	22 13 10.2	+0.1
	comp=Z,6.5nm,1.0s					
VTS	**Vitosha**	**154.92 327**	*e*P	PKPab	22 13 26.2	+0.3
DAVA	**Damuels**	**155.01 352**	P	PKPdf	22 13 11.8	+10
	comp=Z,25nm,1.8s					
ABTA	**Abfaltersbach**	**155.11 348**	⇑*i*PKPdf	PKPdf	22 13 02.1	+0.2
	comp=Z,13nm,1.4s					
HYF	**Humbligny**	**155.26 4**	*e*PKP1	PKPdf	22 13 11.5	+9.4
KDAG	**Bornova**	**155.26 315**	*i* P	PKPab	22 13 29.8	+2.2
LOR	**Lormes**	**155.31 2**	*e*PKP1	PKPdf	22 13 11.4	+9.2
	comp=Z,30nm,1.4s					
LOR			*e*MLR	MLR		
	comp=Z,545nm,18.5s,MS5.1					
LOR	**Lormes**	**155.31 2**	*e*PKP	PKPdf	22 13 11.4	+9.2
LOR			LR	LR		
	comp=Z,540nm,18.5s,MS5.4					
LJU	**Ljubljana**	**155.32 344**	*e*PKPdf	PKPdf	22 12 59.8	-2.5
LJU			*e*PKPbc	PKPdf	22 13 11.9	+10
VOJS	**Vojsko**	**155.49 345**	*e*PKPbc	PKPdf	22 13 11.7	+9.2
DAVOX	**Davos/Dischmat**	**155.50 352**	PKPbc	PKPdf	22 13 16.1	+14
	comp=Z,2.3nm,0.6s,baz=323,slow=5.1,SNR=6.2					
DAVOX			PKPab	PKPab	22 13 28.9	+0.7
	comp=Z,3.5nm,0.7s,baz=59,slow=9.0,SNR=5.1					
DAVOX	**Davos/Dischmat**	**155.50 352**	PKPbc	PKPdf	22 13 16.1	+14
DAVOX			PKPab	PKPab	22 13 28.9	+0.7
SSF	**Saint Saulge**	**155.51 3**	*e*PKP1	PKPdf	22 13 11.9	+9.4
	comp=Z,26nm,1.2s					
MFF	**Saint Martin d**	**155.63 9**	*e*PKP1	PKPdf	22 13 11.8	+9.1
	comp=Z,22nm,1.3s					
BRMO	**Bormio**	**155.74 351**	PKP	PKPab	22 13 30.2	+1.0
AVF	**Avril sur Loir**	**155.77 3**	*e*PKP1	PKPdf	22 13 12.1	+9.2
	comp=Z,7.1nm,1.0s					
TRI	**Trieste**	**155.82 345**	PKP2	PKPab	22 13 29.2	-0.4
TCF	**Toulx Ste Croi**	**156.20 5**	*e*PKP1	PKPdf	22 13 13.0	+10
	comp=Z,17nm,1.3s					
ESDC	**Sonseca Array**	**161.28 22**	PKP	PKPdf	22 13 09.3	-0.4
	comp=Z,1.5nm,1.0s,baz=298,slow=2.8,SNR=4.5					
ESDC			PKPab	PKPab	22 13 53.5	+0.1
	comp=Z,1.5nm,0.8s,baz=322,slow=3.5,SNR=5.6					
KEST	**Kesra**	**166.33 345**	PKPab	PKPab	22 14 15.1	-0.6
	comp=Z,4.0nm,1.1s,baz=329,slow=7.4,SNR=4.2					
TORD	**Torodi Ar. Bea**	**170.13 161**	PKP	PKPdf	22 13 16.2	-1.4
	comp=Z,2.0nm,1.0s,baz=222,slow=3.9,SNR=8.1					
TORD			PKPab	PKPab	22 14 33.5	+0.5
	comp=Z,3.5nm,0.9s,baz=201,slow=2.5,SNR=8.1					
TORD	**Torodi Ar.

KU6	**Riekki**	**2.38 228**	Sg	Sg	22 02 47.5	-5.3
KU6	**Riekki**	**2.38 228**	Pn	Pn	22 02 17.5	+0.9
KU6			Sg	Sg	22 02 47.5	-5.3
MSF	**Maaselka**	**2.71 231**	PN	Pn	22 02 23.5	+2.4
MSF			SG	Sg	22 02 57.9	-5.4
MSF	**Maaselka**	**2.71 231**	Pn	Pn	22 02 23.5	+2.4
MSF			Sg	Sg	22 02 57.9	-5.4
SGF	**Sodankyl**	**2.96 269**	PN	Pn	22 02 27.3	+2.8
	baz=75					
SGF			SG	Sg	22 03 03.6	-7.6
SGF			MSG		22 03 03.6	
	comp=Z,5.3nm,0.4s					
SGF	**Sodankyl**	**2.96 269**	Pn	Pn	22 02 27.3	+2.8
SGF			Sg	Sg	22 03 03.6	-7.6
KEV	**Kevo**	**3.35 312**	PN	Pn	22 02 30.6	+0.7
	baz=130					
KEV			SG	Sg	22 03 16.3	-7.6
KEV			MSG		22 03 16.3	
	comp=Z,5.0nm,0.4s					
KEV	**Kevo**	**3.35 312**	Pn	Pn	22 02 30.6	+0.7
KEV			Sg	Sg	22 03 16.3	-7.6
RNF	**Rovaniemi**	**3.37 255**	PN	Pn	22 02 29.5	-0.7
	baz=68					
RNF			SG	Sg	22 03 23.2	-1.4
RNF			MSG		22 03 23.2	
	comp=Z,8.5nm,0.4s					
RNF	**Rovaniemi**	**3.37 255**	Pn	Pn	22 02 29.5	-0.7
RNF			Sg	Sg	22 03 23.2	-1.4
ARA0	**ARCESS Array S**	**3.69 304**	PN	Pn	22 02 33.9	-0.7
	baz=119					
ARA0			SG	Sg	22 03 29.9	-4.9
ARA0			MSG		22 03 29.9	
	comp=Z,4.6nm,0.4s					
ARA0	**ARCESS Array S**	**3.69 304**	Pn	Pn	22 02 33.9	-0.7
ARA0			Sg	Sg	22 03 29.9	-4.9

*IDC **07** 22:03:16.7±0.4, 8.°13S×120.°31E, h0km, mb4.8/23, mb1 4.8/26, mb1mx4.8/33, mbtmp4.8/26, ML4.6/3, MS4.6/12, Ms1 4.6/12, ms1mx4.2/31, Error ellipse: s-maj=17.7km s-min=9.7km az=70.0*

*NEIC **07** 22:03:18.1±0.2, 8.°16S×120.°34E, h10km, mb5.1/36, Error ellipse: s-maj=9.3km s-min=4.6km az=58.0*

NEIC Felt [III] at Ruteng.

*TEH **07** 22:03:19.0, 8.°15S×120.°38E, h10km*

*MOS **07** 22:03:20.4±1.0, 8.°00S×120.°23E, h33km, mb5.2/20, Error ellipse: s-maj=26.0km s-min=10.8km az=106.0*

*ISCJB **07** 22:03:22.7±0.5, 8.°17S±0.°03×120.°49E±0.°03, h61km±4km, mb5.0/83, Error ellipse: s-maj=5.2km s-min=3.4km az=140.5*

*DJA **07** 22:03:23, 8.°04S×120.°58E, h21km, Mw5.4/29*

*GCMT **07** 22:03:27.3±0.1, 8.°05S×120.°38E, h18km, MW5.3, Moment Tensor Solution. s68,c113; s97,c178; Moment tensor: Scale 10^{17}Nm; M_{rr}0.00; M_{tt}0.00; M_{pp}0.00; M_{rt}0.00; M_{rp}0.00; M_{tp}0.00; Best double couple: $M_0$1.10000×10^{17} NP1:ϕ_s102.00000°, δ25.00000°, λ114.00000°. NP2: ϕ_s256.00000°, δ67.00000°, λ79.00000°. Principal axes: T 1.1000, Plg66.0000°, Azm146.0000°; N 0.0100, Plg10.0000°, Azm260.0000°; P -1.1100, Plg21.0000°, Azm354.0000°; Data Used: IU IC II G CN.*

ISC 07 22:03:24.3±0.4, 8.°18S±0.°03×120.°47E±0.°03, h57km±4km, h11km±4.7km: pP-P, n231, σ1s 27/238, mb5.0/83, MS4.6/22, 4C-2D, Flores region

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.50 187**	P	**Pn**	**22 03 48.1**	**-0.7**
MMRI	**Maumere**	**1.80 105**	P	**Pn**	**22 03 52.2**	**-0.8**
BKSI	**Bulukumba**	**2.86 353**	P	**Pn**	**22 04 02.1**	**-5.3**
KAPI	**Kappang**	**3.22 347**	Pn	**Pn**	**22 04 06.9**	**-5.5**
	2μm,0.6s,SNR=89					
KAPI	**Kappang**	**3.22 347**	Pn	**Pn**	**22 04 06.0**	**-6.4**
	38nm,0.3s,baz=165,slow=7.5,SNR=93					
KAPI			Sn	**Sn**	**22 04 40.6**	**-9.0**
	57nm,0.3s,baz=251,slow=19,SNR=5.9					
KAPI			LR	LR	22 05 41.7	
	comp=Z,21μm,18.6s,baz=149,slow=46					
KAPI	**Kappang**	**3.22 347**	*e*Pn	**Pn**	**22 04 06.4**	**-6.0**
KAPI	**Kappang**	**3.22 347**	Pn	**Pn**	**22 04 06.5**	**-5.9**
	2μm,0.6s,SNR=89					
KAPI	**Kappang**	**3.22 347**	P	**Pn**	**22 04 07.7**	**-4.7**
BNSI	**Bone**	**3.77 354**	P	**Pn**	**22 04 17.7**	**-2.2**
KDI	**Kendari**	**4.70 27**	P	**Pn**	**22 04 30.3**	**-2.4**
KHKI	**Kahang-Kahang**	**4.82 267**	P	**Pn**	**22 04 36.5**	**+2.2**
TTSI	**Tana Toraja**	**5.14 353**	P	**Pn**	**22 04 38.8**	**+0.1**
	1.5nm7μm288nm,0.9s					
SRBI	**Singaraja**	**5.21 271**	P	**Pn**	**22 04 41.8**	**+2.1**
	5.0nm602nm,1.0s					
DNP	**Denpasar**	**5.23 264**	P	**Pn**	**22 04 44.4**	**+4.5**
	30nm2μm,0.6s					
IGBI	**Denpasar**	**5.31 263**	P	**Pn**	**22 04 42.1**	**+1.1**
	24nm4μm,0.8s					
NBBI	**Negara**	**5.80 268**	P	**Pn**	**22 04 52.3**	**+4.6**
	13nm862nm,0.8s					
BYJI	**Banyuwangi**	**6.06 269**	P	**Pn**	**22 04 52.0**	**+0.7**
	6.2nm1μm,0.8s					
ABJI	**Asem Bagus**	**6.19 273**	P	**Pn**	**22 04 49.8**	**-3.3**
KBKI	**Kotabaru**	**6.47 318**	P	**Pn**	**22 05 05.0**	**+8.1**
KMMI	**Kalianget**	**6.55 279**	P	**Pn**	**22 04 54.6**	**-3.4**
GMJI	**Gumukmas**	**6.96 269**	P	**Pn**	**22 05 04.1**	**+0.5**
	3.1nm4μm315nm,0.9s					
LUWI	**Luwuk**	**7.45 18**	P	**Pn**	**22 05 06.2**	**-4.1**
	0.7nm2μm149nm,0.9s					
GRJI	**Gresik**	**8.02 278**	P	**Pn**	**22 05 27.7**	**+9.5**
NLAI	**Namlea**	**8.22 54**	P	**Pn**	**22 05 22.8**	**+1.9**
	1μm130nm,0.9s					
PWJI	**Pagerwojo**	**8.59 270**	P	**Pn**	**22 05 30.9**	**+5.0**
	2μm178nm,0.7s					
MRSI	**Marisa**	**8.72 10**	P	**Pn**	**22 05 25.4**	**-2.4**
	715nm48nm,1.1s					
PCJI	**Pacitan**	**9.20 269**	P	**Pn**	**22 05 36.6**	**+2.2**
SMRI	**Semarang**	**10.01 276**	P	**Pn**	**22 05 44.5**	**-0.9**
	124nm,1.0s					
KNA	**Kununurra**	**11.06 134**	*e*P	**Pn**	**22 05 58.5**	**-1.3**
	87nm,0.7s					
KNA	**Kununurra**	**11.06 134**	P	**Pn**	**22 05 59.4**	**-0.4**
	3μm470nm,0.7s					
FITZ	**Fitzroy Crossi**	**11.07 154**	*e*P	**Pn**	**22 05 58.6**	**-1.3**
	50nm,0.4s					
FITZ			*e*S	**Sn**	**22 07 58.9**	**-3.4**
FITZ	**Fitzroy Crossi**	**11.07 154**	Pn	**Pn**	**22 05 58.8**	**-1.1**
	2.9nm,0.3s,baz=328,slow=8.8,SNR=32					
FITZ			Sn	**Sn**	**22 08 02.1**	**-0.2**
	3.6nm,0.3s,baz=71,slow=21,SNR=3.8					
FITZ			LR	LR	22 11 00.9	
	comp=Z,3μm,18.2s,baz=87,slow=42					
FITZ	**Fitzroy Crossi**	**11.07 154**	*e*Pn	**Pn**	**22 05 59.0**	**-1.0**
FITZ			*e*Sn	**Sn**	**22 08 01.4**	**-0.9**
FITZ	**Fitzroy Crossi**	**11.07 154**	P	**Pn**	**22 06 01.8**	**+1.9**
	121nm,0.8s					
TNTI	**Ternate**	**11.23 38**	P	**Pn**	**22 06 02.1**	**-0.1**
	1μm66nm,1.1s					
STKI	**Sintang**	**12.14 312**	P	**Pn**	**22 06 14.9**	**+0.3**
	3μm57nm,1.3s					
KAKA	**Kakadu**	**12.60 112**	*e*P	**Pn**	**22 06 20.1**	**-0.7**
	23nm,0.4s					
KAKA	**Kakadu**	**12.60 112**	*e*Pn	**Pn**	**22 06 19.4**	**-1.4**
KAKA			*e*S	**Sn**	**22 08 38.6**	**-1.0**
KAKA	**Kakadu**	**12.60 112**	P	**Pn**	**22 06 21.4**	**+0.6**
	1μm88nm,0.8s					
LEM	**Lembang**	**12.82 275**	P	**Pn**	**22 06 26.9**	**+3.1**
	2μm97nm,0.7s					
MBWA	**Marble Bar**	**12.93 183**	*e*P	**Pn**	**22 06 22.8**	**-2.5**
MBWA			*e*S	**Sn**	**22 08 37.1**	**-10**
MBWA	**Marble Bar**	**12.93 183**	*e*Pn	**Pn**	**22 06 22.7**	**-2.6**
	28nm,0.6s					
MBWA			*e*S	**Sn**	**22 08 37.9**	**-10**
MBWA	**Marble Bar**	**12.93 183**	P	**Pn**	**22 06 23.8**	**-1.5**
	66nm,0.8s					
SBUM	**Sibu**	**13.38 322**	P	**Pn**	**22 06 31.8**	**+0.3**
	780nm29nm,1.0s					
MYLDM	**Lahad Datu**	**13.41 351**	P	**Pn**	**22 06 33.6**	**+1.7**
	1μm48nm,1.4s					
TPI	**Tanjungpandan**	**13.85 292**	P	**Pn**	**22 06 38.3**	**+0.5**
	922nm40nm,1.5s					
KSM	**Kuching**	**13.95 313**	*e*Pn	**Pn**	**22 06 37.0**	**-2.1**
KSM	**Kuching**	**13.95 313**	P	**Pn**	**22 06 39.6**	**+0.4**
	956nm41nm,1.4s					
CGJI	**Cibinong**	**14.74 275**	P	**Pn**	**22 06 55.1**	**+5.5**
	1μm139nm,0.9s					
KLI	**Kotabumi**	**15.86 281**	P	Px	22 07 14.0	
DAV	**Davao City (W)**	**15.98 19**	LR	LR	22 13 32.7	
	comp=Z,1μm,20.2s,baz=16,slow=38					
LWLI	**Liwa**	**16.60 280**	P	**Pn**	**22 07 18.2**	**+4.8**
	2μm146nm,0.8s					
MDSI	**Maura Dua**	**16.60 282**	P	**Pn**	**22 07 12.7**	**-0.7**
	1μm36nm,1.5s					
WRA	**Warramunga Arr**	**17.81 133**	P	**Pn**	**22 07 26.8**	**-1.4**
	3.0nm,0.3s,baz=307,slow=13,SNR=60					
WRA			S	**S**	**22 10 40.1**	**-10**
	0.1nm,0.3s,baz=309,slow=24,SNR=8.6					
WRA			LR	LR	22 15 46.0	
	comp=Z,3μm,18.2s,baz=340,slow=42					
WRA	**Warramunga Arr**	**17.81 133**	P	**Pn**	**22 07 26.8**	**-1.4**
WRA			S	**S**	**22 10 40.1**	**-10**
WRAB	**Tennant Creek**	**17.81 132**	P	**Pn**	**22 07 28.0**	**-0.2**
	250nm,0.6s,SNR=16					
WRAB	**Tennant Creek**	**17.81 132**	*e*P	**Pn**	**22 07 27.9**	**-0.3**
WRAB			*e*		22 10 40.0	
WRAB			pmax	pmax		
	comp=Z,41nm,0.8s					
WRAB	**Tennant Creek**	**17.81 132**	*e*Pn	**Pn**	**22 07 27.9**	**-0.3**
	comp=Z,41nm,0.8s					
WRAB			*e*Sn	**Sn**	**22 10 40.0**	**-6.1**
WRAB	**Tennant Creek**	**17.81 132**	P	**Pn**	**22 07 28.6**	**+0.4**
	comp=Z,250nm,0.6s,SNR=16					
WRAB	**Tennant Creek**	**17.81 132**	P	**Pn**	**22 07 30.0**	**+1.8**
	comp=Z,58nm,1.3s					
TBP	**Tagbilaran**	**18.07 11**	*e*P	**Pn**	**22 07 31.9**	**+0.6**
MEEK	**Meekatharra**	**18.45 185**	*e*P	**Pn**	**22 07 36.8**	**+0.9**
MEEK			*e*S	**S**	**22 10 49.6**	**-13**
SMPI	**Sarmi**	**19.17 72**	P	**Pn**	**22 07 44.5**	**-0.2**
	comp=Z,2μmcomp=Z,68nm,1.2s					
MYKOM	**Kota Tinggi**	**19.31 300**	P	**Pn**	**22 07 53.5**	**+7.2**
ASAR	**Alice Springs**	**20.07 142**	P	**P**	**22 07 53.3**	**+0.2**
	comp=Z,47nm,0.7s,baz=313,slow=9.9,SNR=149					
SDSI	**Sungai Dareh**	**20.29 290**	P	**P**	**22 07 59.3**	**+3.8**
	comp=Z,33nm,1.5s					
JAY	**Jayapura**	**20.91 76**	P	**P**	**22 08 06.0**	**+3.8**
	comp=Z,32nm,1.0s					
BKNI	**Bangkinang**	**21.13 293**	P	**P**	**22 08 07.9**	**+3.3**
	comp=Z,1μmcomp=Z,97nm,1.3s,mb5.0					
MORW	**Morawa**	**21.20 191**	*e*P	**P**	**22 08 04.5**	**-0.6**
MORW			*e*S	**S**	**22 11 50.6**	**-7.1**
PPI	**Padang Panjang**	**21.42 290**	P	**P**	**22 08 10.9**	**+3.2**
	comp=Z,54nm,1.3s,mb4.7					
TGY	**Tagaytay City**	**22.14 1**	P	**P**	**22 08 14.4**	**-0.9**
	comp=Z,161nm,0.4s,mb5.8,baz=148,slow=6.0,SNR=4.7					
COEN	**Coen**	**23.00 106**	*e*P	**P**	**22 08 23.7**	**-0.7**
COEN	**Coen**	**23.00 106**	*e*P	**P**	**22 08 23.5**	**-0.9**
	comp=Z,677nm,1.1s,mb6.0					
COEN	**Coen**	**23.00 106**	P	**P**	**22 08 25.3**	**+0.9**
	comp=Z,297nm,1.1s,mb5.6					
KMBL	**Kambalda**	**23.11 177**	*e*P	**P**	**22 08 25.0**	**-0.5**
	comp=Z,442nm,0.9s,mb5.9					
KMBL			*e*S	**S**	**22 12 37.7**	**+5.4**
IPM	**Ipoh**	**23.11 302**	P	**P**	**22 08 27.5**	**+1.8**
	comp=Z,1μmcomp=Z,60nm,1.1s,mb4.9					
KLBR	**Kellerberrin**	**23.44 186**	*e*P	**P**	**22 08 27.1**	**-1.4**
	comp=Z,32nm,0.4s,mb5.1					
KLBR			*e*S	**S**	**22 12 42.8**	**+5.2**
FORT	**Forrest**	**23.58 164**	*e*P	**P**	**22 08 29.4**	**-0.5**
	comp=Z,79nm,0.6s,mb5.3					
FORT	**Forrest**	**23.58 164**	*e*P	**P**	**22 08 29.5**	**-0.4**
	comp=Z,98nm,0.8s,mb5.3					
KULM	**Kulim**	**23.87 303**	*e*P	**P**	**22 08 31.5**	**-1.2**
	comp=Z,15nm,0.8s,mb4.5					
KULM	**Kulim**	**23.87 303**	P	**P**	**22 08 33.0**	**+0.3**
	comp=Z,1μmcomp=Z,87nm,1.1s,mb5.1					
PSI	**Prapat**	**24.10 296**	P	**P**	**22 08 33.8**	**-1.0**
	comp=Z,61nm,1.2s,mb4.9,baz=183,slow=8.7,SNR=10					
NWAO	**Narrogin (SRO)**	**24.81 187**	*e*P	**P**	**22 08 40.9**	**-0.2**
	comp=Z,569nm,1.1s,mb6.0					
NWAO	**Narrogin (SRO)**	**24.81 187**	P	**P**	**22 08 40.7**	**-0.3**
	comp=Z,62nm,0.9s,mb5.1,baz=22,slow=10,SNR=19					
NWAO	**Narrogin (SRO)**	**24.81 187**	*e*P	**P**	**22 08 40.8**	**-0.3**
NWAO			pmax	pmax		
	comp=Z,113nm,1.2s					
NWAO	**Narrogin (SRO)**	**24.81 187**	*e*P	**P**	**22 08 40.8**	**-0.2**
	comp=Z,113nm,1.2s,mb5.3					
MTSU	**Mount Surprise**	**25.21 116**	*e*P	**P**	**22 08 45.9**	**+1.1**
	comp=Z,344nm,1.1s,mb5.8					
CTA	**Charters Tower**	**27.61 118**	P	**P**	**22 09 07.5**	**+1.0**
	comp=Z,9.0nm,0.8s,mb4.5,baz=276,slow=14,SNR=5.2					
CTA	**Charters Tower**	**27.61 118**	P	**P**	**22 09 07.5**	**+0.9**
CTAO	**Charters Tower**	**27.61 118**	*e*P	**P**	**22 09 07.7**	**+1.2**
CTAO			pmax	pmax		
	comp=Z,14nm,0.9s,mb4.6					
CTAO	**Charters Tower**	**27.61 118**	*e*P	**P**	**22 09 07.7**	**+1.2**
	comp=Z,14nm,0.9s,mb4.6					
BBOO	**Buckleboo**	**28.45 152**	*e*P	**P**	**22 09 13.7**	**-0.1**
	comp=Z,25nm,0.6s,mb5.0					
QIZ	**Qiongzhong**	**28.99 339**	P	**P**	**22 09 18.8**	**+0.1**
QIZ			S	**S**	**22 14 10.4**	**+4.5**
QIZ			LR	LR		
	comp=N,520nm,18.8s					
QIZ			LR	LR		
	comp=Z,630nm,21.9s,MS4.2					
STKA	**Stephens Creek**	**30.70 143**	*e*P	**P**	**22 09 34.3**	**+0.6**
	comp=Z,18nm,0.6s,mb5.1					
STKA	**Stephens Creek**	**30.70 143**	P	**P**	**22 09 34.5**	**+0.8**
	comp=Z,20nm,0.6s,mb5.2,baz=310,slow=8.8,SNR=54					
STKA			LR	LR	22 21 59.2	
	comp=Z,2μm,21.0s,MS4.7,baz=315,slow=36					
STKA	**Stephens Creek**	**30.70 143**	*e*P	**P**	**22 09 34.5**	**+0.7**
	comp=Z,5.4nm,0.8s,mb4.4					
TPUB	**Ta-pu**	**31.28 0**	*e*P	**P**	**22 09 41.1**	**+2.1**
	comp=Z,16nm,0.9s,mb4.9					
YULB	**Yu-li**	**31.38 1**	*e*P	**P**	**22 09 40.8**	**+0.9**
	comp=Z,21nm,0.6s,mb5.1					
SSLB	**Suanglung**	**31.77 1**	*e*P	**P**	**22 09 44.4**	**+1.1**
	comp=Z,15nm,0.7s,mb4.9					
CMSA	**Cobar Meteorol**	**33.04 138**	*e*P	**P**	**22 09 55.6**	**+1.2**
CM31	**Chiang Mai Arr**	**33.94 321**	*e*P	**P**	**22 10 04.0**	**+1.7**
CMAR	**Chiang Mai Arr**	**33.94 321**	P	**P**	**22 10 01.7**	**-0.5**
	comp=Z,3.2nm,0.8s,mb4.3,baz=151,slow=7.0,SNR=9.7					
CMAR			LR	LR	22 26 14.6	
	comp=Z,969nm,18.1s,MS4.6,baz=158,slow=41					
CHTO	**Chiang Mai**	**34.21 322**	*e*P	**P**	**22 10 04.2**	**-0.4**
CHTO			pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9					
CHTO	**Chiang Mai**	**34.21 322**	*e*P	**P**	**22 10 04.2**	**-0.4**
	comp=Z,13nm,0.8s,mb4.9					
CHTO	**Chiang Mai**	**34.21 322**	P	**P**	**22 10 05.5**	**+0.9**
	comp=Z,23nm,1.2s,mb5.0					
ARPS	**Mount Arapiles**	**34.46 149**	*e*P	**P**	**22 10 07.5**	**+0.9**
	comp=Z,83nm,0.7s,mb5.8					
YNG	**Young**	**36.54 139**	*e*P	**P**	**22 10 26.2**	**+1.7**
	comp=Z,26nm,0.5s,mb5.3					
ARMA	**Armidale**	**36.58 131**	*e*P	**P**	**22 10 27.8**	**+2.9**
GYA	**Guiyang**	**36.95 339**	*e*P	**P**	**22 10 30.8**	**+2.8**
GYA			PP	PP	22 11 57.2	+4.0
GYA			PcP	PcP	22 12 52.3	+3.9
GYA			S	**S**	**22 16 16.9**	**+7.7**
GYA			ScP	ScP	22 16 37.8	+7.2
GYA			SS	SS	22 18 45.3	-7.7
GYA			pmax	pmax		
	comp=Z,20nm,0.8s,mb5.0					
GYA			pmax	pmax		
	comp=Z,120nm,4.8s					
GYA			LR	LR		
	comp=N,540nm,17.6s,MS4.5					
GYA			LR	LR		
	comp=E,510nm,16.9s,MS4.5					
GYA			LR	LR		
	comp=Z,630nm,16.4s,MS4.5					
GYA	**Guiyang**	**36.95 339**	SKS	ScP	22 16 37.5	+6.9
TOO	**Toolangi**	**37.01 146**	*e*P	**P**	**22 10 30.6**	**+2.2**
KMI	**Kunming**	**37.33 333**	P	**P**	**22 10 34.4**	**+3.1**
KMI			pP	pP	22 10 37.6	-8.2
KMI			sP	sP	22 10 38.9	-14
KMI			PP	PP	22 12 02.9	+5.4
KMI			sS	ScP	22 16 27.6	-4.5
KMI			pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.3					
KMI			LR	LR		
	comp=N,610nm,16.5s,MS4.6					
KMI			LR	LR		
	comp=E,760nm,21.0s,MS4.6					
KMI			LR	LR		
	comp=Z,640nm,25.6s,MS4.3					
WHN	**Wuhan**	**38.94 352**	P	**P**	**22 10 46.5**	**+1.8**
NJ2	**Nanjing**	**40.03 358**	*e*P	**P**	**22 10 56.0**	**+2.2**
NJ2			pmax	pmax		
	comp=Z,40nm,1.2s,mb5.0					
CBIJ	**Chichi jima**	**40.89 30**	P	**P**	**22 11 01.7**	**+0.7**
	comp=Z,36nm,0.8s,mb5.0,baz=299,slow=22,SNR=4.2					
CD2	**Chengdu**	**42.04 338**	*e*P	**P**	**22 11 12.2**	**+1.9**
CD2			pP	pP	22 11 16.7	-8.3
CD2			sP	sP	22 11 19.5	-12
CD2			PP	PP	22 12 53.2	+4.6
CD2			S	**S**	**22 17 31.7**	**+6.3**
CD2			sS	sS	22 17 38.1	-12
CD2			SS	SS	22 20 33.9	-0.8
CD2			pmax	pmax		
	comp=Z,50nm,0.7s,mb5.2					
CD2			pmax	pmax		
	comp=Z,150nm,5.6s					
CD2			LR	LR		
	comp=N,700nm,16.6s,MS4.9					
CD2			LR	LR		
	comp=E,1μm,17.8s,MS4.9					
CD2			LR	LR		
	comp=Z,660nm,19.0s,MS4.5					
PALK	**Pallekele**	**42.52 290**	LR	LR	22 29 52.3	
	comp=Z,796nm,18.0s,MS4.7,baz=117,slow=38					
XAN	**Xi'an**	**43.39 346**	P	**P**	**22 11 21.2**	**0.0**
XAN			pP	pP	22 11 28.8	-7.2
XAN			pmax	pmax		
	comp=Z,3.0nm,1.2s,mb3.9					
SHL	**Shillong**	**43.57 321**	*e*PKP	**P**	**22 11 23.0**	**+0.2**
CAL	**Calcutta**	**43.85 315**	*e*x	x	22 11 46.4	
CAL			*e*x	x	22 18 27.7	
KSRS	**Korea Array**	**45.92 8**	P	**P**	**22 11 42.5**	**+1.2**
	comp=Z,3.1nm,1.0s,mb4.2,baz=183,slow=8.9,SNR=15					
KSRS			LR	LR	22 32 40.2	
	comp=Z,256nm,19.9s,MS4.2,baz=200,slow=38					
LZH	**Lanzhou**	**46.72 341**	*e*P	**P**	**22 11 52.4**	**+4.7**
LZH			pP	pP	22 11 56.7	-5.9
LZH			sP	sP	22 11 59.4	-10
LZH			PcP	PcP	22 13 25.1	+4.7
LZH			PP	PP	22 13 43.6	+5.1
LZH			*e*S	**S**	**22 18 42.4**	**+9.0**
LZH			sS	sS	22 18 50.1	-8.5
LZH			SS	SS	22 21 58.3	-2.3
LZH			pmax	pmax		
	comp=Z,28nm,1.4s,mb5.0					
LZH			pmax	pmax		
	comp=Z,95nm,4.4s					
LZH			LR	LR		
	comp=N,600nm,14.1s					
LZH			LR	LR		
	comp=Z,810nm,17.2s,MS4.7					
LSA	**Lhasa**	**47.05 324**	P	**P**	**22 11 48.1**	**-2.2**
LSA			LR	LR		
	comp=E,750nm,8.8s					
LSA			LR	LR		
	comp=Z,990nm,9.4s					
ODAN	**Odare**	**47.35 318**	*e*P	**P**	**22 11 52.6**	**-0.1**
	comp=Z,60nm,1.0s,mb5.5					
TAPN	**Taplejung**	**47.48 319**	*e*P	**P**	**22 11 51.3**	**-2.4**
	comp=Z,77nm,0.9s,mb5.6					
MAJO	**Matsushiro**	**47.50 19**	*e*P	**P**	**22 11 54.1**	**+0.4**
MAJO			pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8					
MAJO	**Matsushiro**	**47.50 19**	*e*P	**P**	**22 11 54.1**	**+0.5**
	comp=Z,12nm,1.0s,mb4.8					
MAT	**Matsushiro**	**47.50 19**	P	**P**	**22 11 53.9**	**+0.2**
MAT			S	**S**	**22 18 43.0**	**-1.4**
MJAR	**Matsushiro Arr**	**47.50 19**	P	**P**	**22 11 53.6**	**-0.1**
	comp=Z,6.6nm,1.0s,mb4.5,baz=196,slow=8.5,SNR=11					
RAMN	**Ramite**	**47.93 318**	*e*P	**P**	**22 11 56.5**	**-0.7**
BJT	**Baijiatuau**	**48.11 356**	*e*P	**P**	**22 11 58.2**	**-0.2**
BJT			pmax	pmax		
	comp=Z,33nm,0.6s					
BJT	**Baijiatuau**	**48.11 356**	*e*P	**P**	**22 11 58.2**	**-0.2**
	comp=Z,33nm,0.6s,mb5.5					
BJI	**Beijing**	**48.13 356**	P	**P**	**22 11 57.8**	**-0.7**
BJI			S	**S**	**22 19 01.8**	**+8.5**
BJI			pmax	pmax		
	comp=Z,12nm,1.2s,mb4.8					
BJI			pmax	pmax		
	comp=Z,170nm,4.2s					
BJI			LR	LR		
	comp=N,420nm,21.4s,MS4.5					
BJI			LR	LR		
	comp=E,290nm,23.3s,MS4.5					
BJI			LR	LR		
	comp=Z,300nm,21.4s,MS4.2					
JIRN	**Jiri**	**48.68 318**	*e*P	**P**	**22 12 01.9**	**-1.1**
	comp=Z,54nm,0.8s,mb5.6					
GUN	**Gumba**	**49.05 318**	*e*P	**P**	**22 12 04.9**	**-0.9**
	comp=Z,57nm,0.7s,mb5.7					
PKI	**Pulchoki**	**49.13 318**	*e*P	**P**	**22 12 06.3**	**-0.2**
PKIN	**Phulchoki**	**49.15 318**	*e*P	**P**	**22 12 05.5**	**-1.1**
	comp=Z,19nm,0.6s,mb5.3					
PKIN	**Phulchoki**	**49.15 318**	*e*P	**P**	**22 12 05.9**	**-0.7**
	comp=Z,22nm,0.6s,mb5.4					
DMN	**Daman**	**49.36 317**	*e*P	**P**	**22 12 06.9**	**-1.3**
	comp=Z,61nm,1.0s,mb5.6					
KKN	**Kakani**	**49.37 318**	*e*P	**P**	**22 12 06.9**	**-1.3**
	comp=Z,66nm,1.2s,mb5.5					
KKN	**Kakani**	**49.37 318**	*e*P	**P**	**22 12 06.9**	**-1.3**
KKN			pmax	pmax		
	comp=Z,66nm,1.2s,mb5.5					
HHC	**Hu-ho-hao-te**	**49.47 351**	*e*P	**P**	**22 12 11.5**	**+2.8**
HHC			pP	pP	22 12 16.1	-7.7
HHC			sP	sP	22 12 18.5	-12
HHC			PcP	PcP	22 13 33.6	+3.5
HHC			PP	PP	22 14 06.6	+3.1
HHC			ScP	ScP	22 17 26.5	+5.7
HHC			PcS	PcS	22 17 30.8	+4.1
HHC			S	**S**	**22 19 19.6**	**+7.6**
HHC			ScS	ScS	22 22 00.9	+5.5
HHC			SS	SS	22 22 46.6	+1.8
HHC			pmax	pmax		
	comp=Z,21nm,0.8s,mb5.2					
HHC			pmax	pmax		
	comp=Z,190nm,6.5s					
HHC			LR	LR		
	comp=N,370nm,18.0s,MS4.5					
HHC			LR	LR		
	comp=E,170nm,18.0s,MS4.5					
HHC			LR	LR		
	comp=Z,330nm,20.4s,M

AYAN AMb AMB 22 12 56.3
comp=Z,13nm,0.8s,mb5.0
KHET Khetri 56.22 312 *e*PKP **P** **22 12 57.4 -1.4**
RPZ Rata Peaks 56.42 138 P **P** **22 13 01.0 +1.0**
comp=Z,52nm,0.9s,mb5.5,baz=306,slow=3.1,SNR=5.5
KLP Kalpa 56.46 316 *e*PKP **P** **22 13 00.5 0.0**
KLP AMb AMB 22 13 02.1
KKR Kurukshetra 56.54 314 *e*PKP **P** **22 13 00.1 -1.0**
MSVF Nonsavu 56.73 106 *e*P **P** **22 13 04.8 +2.2**
comp=Z,8.8nm,0.8s,mb4.8
ULN Ulaanbaatar 57.05 349 *e*P **P** **22 13 03.7 -0.6**
ULN pmax pmax
comp=Z,20nm,1.1s,mb5.1
ULN Ulaanbaatar 57.05 349 *e*P **P** **22 13 03.7 -0.6**
comp=Z,20nm,1.1s,mb5.0
SONM Songino Array 57.14 349 P **P** **22 13 05.1 +0.2**
comp=Z,12nm,1.1s,mb4.8,baz=170,slow=7.3,SNR=27
SONM LR LR 22 38 56.8
comp=Z,390nm,21.8s,MS4.5,baz=184,slow=38
HIA Hailar 57.20 359 *e*P **P** **22 13 06.1 +0.8**
HIA pmax pmax
comp=Z,16nm,1.8s
HIA Hailar 57.20 359 *e*P **P** **22 13 06.1 +0.8**
comp=Z,16nm,1.8s,mb4.7
KLR Kul'dur 58.01 9 *e*P **P** **22 13 08.0 -3.0**
CASY Casey 58.42 185 *e*P **P** **22 13 13.9 +0.2**
comp=Z,3.4nm,0.8s,mb4.4
URZ Urewera 58.96 130 P **P** **22 13 19.2 +1.2**
comp=Z,12nm,0.6s,mb5.1,baz=270,slow=3.0,SNR=5.6
WMQ Urumqi 59.67 333 *e*P **P** **22 13 15.4 -7.3**
WMQ Urumqi 59.67 333 *e*P **P** **22 13 24.0 +1.3**
WMQ sP sP 22 13 31.0 -14
WMQ PP PP 22 15 37.0 +1.9
WMQ S **S** **22 21 32.0 +3.0**
WMQ ScS ScS 22 23 10.0 +2.0
WMQ SS SS 22 25 29.0 +3.2
WMQ pmax pmax
comp=Z,18nm,1.0s,mb5.1
WMQ pmax pmax
comp=Z,85nm,5.0s
WMQ LR LR
comp=N,310nm,18.0s,MS4.6
WMQ LR LR
comp=E,300nm,18.0s,MS4.6
WMQ LR LR
comp=Z,280nm,18.0s,MS4.4
ZAK Zakamensk 60.20 347 *e*P **P** **22 13 26.6 +0.4**
ZAK pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
TLY Talaya 61.35 348 *e*P **P** **22 13 34.5 +0.5**
TLY *e* 22 14 11.4
TLY *e*S **S** **22 21 54.8 +4.6**
TLY pmax pmax
comp=Z,12nm,0.8s,mb5.1
TLY MLR MLR
comp=Z,394nm,22.0s,MS4.5
TLY Talaya 61.35 348 *e*P **P** **22 13 34.2 +0.2**
comp=Z,12nm,0.9s,mb5.0
KSH Kashi 62.83 322 *e*P **P** **22 13 42.7 -1.4**
KSH PcP PcP 22 14 22.3 +0.2
KSH PP PP 22 16 01.6 -1.5
KSH ScP ScP 22 18 22.3 +2.7
KSH PcS PcS 22 18 24.1 -1.4
KSH S **S** **22 22 06.0 -3.3**
KSH ScS ScS 22 23 30.4 -1.5
KSH pmax pmax
comp=Z,12nm,0.8s,mb5.1
KSH LR LR
comp=N,250nm,7.9s
KSH LR LR
comp=E,350nm,10.0s
KSH LR LR
comp=Z,640nm,12.7s,MS5.0
MK31 Makanchi Array 64.40 332 *e*P **P** **22 13 53.5 -0.9**
MKAR Makanchi Array 64.40 332 P **P** **22 13 53.7 -0.7**
comp=Z,5.0nm,0.8s,mb4.6,baz=122,slow=7.8,SNR=21
KBL Kabul 64.55 314 *e*P **P** **22 13 53.0 -2.6**
KBL pmax pmax
comp=Z,43nm,1.1s,mb5.4
KBL Kabul 64.55 314 *e*P **P** **22 13 53.0 -2.5**
comp=Z,43nm,1.1s,mb5.4
TKM2 Tokmak 2 65.20 325 *e*P **P** **22 13 59.5 -0.1**
TKM2 pmax pmax
comp=Z,12nm,0.8s,mb5.0
TKM2 Tokmak 2 65.20 325 *e*P **P** **22 13 59.5 -0.1**
comp=Z,12nm,0.8s,mb5.0
UCH Uchtor 65.38 324 *e*P **P** **22 13 03.4 +2.6**
comp=Z,13nm,1.0s,mb4.9
AAK Ala-Archa 65.65 324 P **P** **22 14 02.4 -0.2**
comp=Z,2.2nm,0.4s,mb4.5,baz=142,slow=4.8,SNR=7.1
AAK Ala-Archa 65.65 324 *c i*P **P** **22 14 02.4 -0.1**
AAK pmax pmax
comp=Z,10.0nm,1.6s,mb4.6
AAK Ala-Archa 65.65 324 *e*P **P** **22 14 01.9 -0.6**
comp=Z,23nm,0.8s,mb5.2
AML Almayashu 65.80 324 *e*P **P** **22 14 03.8 +0.3**
comp=Z,40nm,0.8s,mb5.5
EKS2 Erkin-Say 66.08 324 *e*P **P** **22 14 04.9 -0.4**
comp=Z,18nm,0.9s,mb5.1
SKR Severo-Kuril's 66.25 24 *e*P **P** **22 14 08.0 +1.8**
SKR MLR MLR
comp=E,900nm,18.0s
SKR MLR MLR
comp=Z,900nm,18.0s,MS5.0
PETK Petropavlovsk- 68.74 23 P **P** **22 14 22.9 +1.0**
comp=Z,3.2nm,0.4s,mb4.6,baz=212,slow=5.3,SNR=4.2
ZAA0 Zalesovo Array 68.81 338 *e*P **P** **22 14 20.2 -2.0**
ZALV Zalesovo Beam 68.81 338 P **P** **22 14 20.9 -1.4**
comp=Z,14nm,0.8s,mb4.9,baz=138,slow=4.8,SNR=29
KURK Kurchatov 68.92 333 P **P** **22 14 22.4 -0.6**
comp=Z,143nm,0.9s,mb5.9,SNR=11
KURK Kurchatov 68.92 333 P **P** **22 14 21.6 -1.5**
comp=Z,4.1nm,0.8s,mb4.4,baz=146,slow=5.4,SNR=9.6
KURK Kurchatov 68.92 333 *e*P **P** **22 14 22.7 -0.3**
KURK pmax pmax
comp=Z,14nm,1.2s,mb4.8
KURK Kurchatov 68.92 333 *e*P **P** **22 14 22.7 -0.3**
comp=Z,14nm,1.2s,mb4.8
KURK Kurchatov 68.92 333 P **P** **22 14 22.4 -0.6**
comp=Z,143nm,0.9s,mb5.9,SNR=11
PET Petropavlovsk 69.05 24 *e*P **P** **22 14 30.3 +6.5**
PET pmax pmax
comp=Z,53nm,0.3s,mb6.0
PET pmax pmax
comp=E,123nm,0.4s
NVS Novosibirsk 70.08 338 *i*P **P** **22 14 28.3 -1.8**
NVS pmax pmax
comp=Z,48nm,1.6s,mb5.2
NVS pmax pmax
comp=N,26nm,1.3s
NVS pmax pmax
comp=E,22nm,1.2s
MAW Mawson 70.50 200 *e*P **P** **22 14 33.5 +0.9**
comp=E,11nm,0.8s,mb4.8
MAW Mawson 70.50 200 P **P** **22 14 33.2 +0.6**
comp=E,11nm,0.7s,mb4.9,baz=65,slow=8.5,SNR=23
MAW LR LR 22 40 12.7
comp=E,1μm,18.3s,MS5.1,baz=103,slow=31
MAW Mawson 70.50 200 *e*P **P** **22 14 33.3 +0.7**
MAW pmax pmax
comp=Z,8.0nm,1.2s
MAW Mawson 70.50 200 *e*P **P** **22 14 33.3 +0.8**
comp=Z,8.4nm,1.2s,mb4.5
OPO Ambohidratompo 71.65 253 P **P** **22 14 40.2 -0.3**
baz=61,slow=8.3
BVAR Borovoye Array 74.27 331 P **P** **22 14 54.2 -1.0**
comp=Z,2.9nm,0.8s,mb4.2,baz=123,slow=7.3,SNR=9.1
BRVK Borovoye 74.34 331 *c i*P **P** **22 14 56.1 +0.5**
BRVK pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
BRVK Borovoye 74.34 331 *e*P **P** **22 14 55.8 +0.2**
comp=Z,9.6nm,1.0s,mb4.7
SEY Seymchan 75.00 14 *i*P **P** **22 14 58.9 -0.3**
ABKAR Akbulak array 77.74 324 *e*P **P** **22 15 14.0 -1.0**
comp=Z,6.7nm,0.8s,mb4.6
SYO Syowa Base 79.15 201 ⇑*i*P **P** **22 15 21.6 -0.9**
AKTK Aktyubinsk 79.39 325 P **P** **22 15 23.7 -0.4**
AKTO Aktyubinsk 79.39 325 P **P** **22 15 23.7 -0.4**
comp=Z,4.7nm,0.8s,mb4.5,baz=109,slow=4.4,SNR=8.8
TIXI Tiksi 79.85 3 *e*P **P** **22 15 24.5 -1.7**
TIXI *e* 22 15 33.9
TIXI pmax pmax
comp=Z,12nm,0.9s,mb4.8
TIXI Tiksi 79.85 3 *e*P **P** **22 15 24.5 -1.7**
comp=Z,12nm,0.9s,mb4.8
TIXI *e*PcP PcP 22 15 33.9 +0.3

SVE Sverdlovsk 81.06 331 *e*P **P** **22 15 32.1 -0.8**
SVE pmax pmax
comp=Z,15nm,1.0s,mb4.9
QSPA South Pole Qui 81.81 180 P **P** **22 15 37.3 +0.6**
comp=Z,14nm,0.8s,mb4.9,baz=340,slow=1.6,SNR=35
ARU Arti 81.87 330 *d i*P **P** **22 15 38.6 +1.4**
ARU 22 18 38.0
ARU S S 22 25 51.5 +5.3
ARU pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
BILL Bilibino 82.60 16 P **P** **22 15 45.0 +4.2**
BILL *e* pP 22 15 56.2 -0.8
BILL 22 18 55.0
BILL pmax pmax
comp=Z,3.0nm,1.2s,mb4.2
ZEI Tsey 85.78 314 *e*P **P** **22 15 57.5 0.0**
ZEI pmax pmax
comp=Z,21nm,1.4s,mb5.2
MAIT Maitri 88.40 198 *e*P **P** **22 16 08.0 -1.7**
BOSA Boshof 90.68 241 P **P** **22 16 21.8 +0.5**
comp=Z,5.8nm,0.9s,mb4.9,baz=104,slow=10.0,SNR=7.2
BOSA LR LR 22 50 53.8
comp=Z,344nm,20.1s,MS4.8,baz=282,slow=32
BOSA Boshof 90.68 241 *e*P **P** **22 16 21.0 -0.3**
LBTB Lobatse 90.97 245 P **P** **22 16 23.2 +0.5**
comp=Z,3.1nm,0.7s,mb4.8,baz=166,slow=6.4,SNR=4.1
BRTR Keskin Array B 92.74 310 LR LR 23 08 36.3
comp=Z,147nm,18.9s,MS4.5,baz=342,slow=42
CLL Collm 107.25 321 *e*PP PP 22 22 03.0 +0.1
CLL *i* 22 22 18.6
CLL *e*PPS 22 32 19.0
CLL Collm 107.25 321 *e*PP PP 22 22 03.0 +0.1
CLL *i* 22 22 18.6
TORD Torodi Ar. Bea 119.75 280 PKhKP 22 22 06.6
comp=Z,1.2nm,0.6s,baz=80,slow=1.9,SNR=13
CFAA Coronel Fontan 139.58 169 PKhKP 22 22 42.5
comp=Z,0.2nm,0.6s,baz=285,slow=2.1,SNR=4.9
CFAA PKP PKPdf 22 22 48.4 +2.2
comp=Z,0.4nm,0.8s,baz=222,slow=1.9,SNR=4.5
TZTN Tazewell 144.28 34 *e*PKPdf PKPdf 22 22 51.7 -2.6
CPCT Cooper Cave 144.50 36 *e*PKPdf PKPdf 22 22 52.6 -2.2
LRAL Lakeview Retre 144.53 42 *e*PKPdf PKPdf 22 22 53.0 -1.8
TKL Tuckaleechee C 144.79 35 *e*PKIKP PKPdf 22 22 52.9 -2.3
ELN Prospectdale 145.25 30 *e*PKPbc PKPbc 22 22 55.3 -0.5
CAM4 Nova Friburgo 145.40 208 ⇑*i*P PKPbc 22 22 55.5 -1.1
CAM4 *i* 22 22 59.7
CAM4 *i* 22 23 02.5
CAM4 *i* 22 23 06.2
CAM4 *i* 22 23 08.5
CAM4 *i* 22 23 13.4
CAM4 *i* 22 23 13.4
CAM4 *i* 22 23 30.0
CAM4 *i* 22 23 58.1
CPUP Villa Florida 145.64 183 PKPbc PKPbc 22 22 57.4 +0.1
comp=Z,6.7nm,0.6s,baz=132,slow=2.0,SNR=28
LPAZ La Paz 154.25 161 PKPbc PKPbc 22 23 18.8 -0.1
comp=Z,0.8nm,0.6s,baz=239,slow=4.8,SNR=4.3
LPAZ PKPab PKPab 22 23 36.3 +3.5
comp=Z,11nm,0.9s,baz=164,slow=2.2,SNR=6.2
SIV San Ignacio 155.94 176 PKP PKPdf 22 23 13.3 +0.2
comp=Z,0.9nm,0.8s,baz=173,slow=4.9,SNR=3.3
SIV PKPab PKPab 22 23 41.3 +1.4
comp=Z,10.0nm,0.9s,baz=178,slow=4.0,SNR=25

*ISCJB **07** 22:09:02.9±4.7, 8°.13S±0°.07×120°.41E±0°.10, h9km±30km, mb4.4/21, MS5.0/2, Error ellipse: s-maj=18.7km s-min=8.5km az=147.1*
*BJI **07** 22:09:03.5, 8°.10S×120°.40E, h10km, mB5.0/4, mb4.7/6, Ms5.2/4, Ms7 5.0/3*
*IDC **07** 22:09:03.1±0.6, 8°.18S×120°.37E, h0km, mb4.2/14, mb1 4.4/17, mb1mx4.3/27, mbtmp4.3/17, ML4.4/2, Error ellipse: s-maj=24.9km s-min=13.4km az=68.0*
*NEIC **07** 22:09:04.6±0.3, 8°.12S×120°.43E, h10km, mb4.7/5, Error ellipse: s-maj=15.5km s-min=6.6km az=59.0*
*GCMT **07** 22:09:10.2±0.3, 8°.06S×120°.29E, h18km±1km, MW5.1, Moment Tensor Solution. s23,c28; s73,c115; Moment tensor: Scale 10^{16}Nm; M_{rr}3.34±.31; $M_{\theta\theta}$-3.50±.18; $M_{\phi\phi}$0.15±.20; $M_{r\theta}$-3.22±.42; $M_{\theta\phi}$-0.61±.12; $M_{\phi r}$-3.31±.59; Best double couple: $M_0$5.80000×10^{16} NP1:ϕ_s100.00000°, δ24.00000°, λ134.00000°. NP2:ϕ_s234.00000°, δ73.00000°, λ73.00000°. Principal axes: T 6.0700, Plg59.0000°, Azm120.0000°; N -0.6300, Plg17.0000°, Azm239.0000°; P -5.4400, Plg26.0000°, Azm337.0000°; Data Used: II IU IC CN G.*

ISC 07 22:09:03.8±5.2, 8°.12S±0°.07×120°.38E±0°.10, h3km±33km, n34, σ0°.79/31, mb4.4/21, MS5.0/2, 1D, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**3.15**	**348**	Pn	**Pn**	**22 09 53.0**	**-1.3**
	55nm,0.3s,baz=153,slow=7.1,SNR=15						
FITZ	**Fitzroy Crossi**	**11.16**	**153**	Pn	**Pn**	**22 11 44.7**	**+0.2**
	1.5nm,0.3s,baz=323,slow=10,SNR=6.2						
WRA	**Warramunga Arr**	**17.91**	**132**	P	**Pn**	**22 13 13.8**	**-0.4**
	1.2nm,0.3s,baz=303,slow=14,SNR=6.1						
WRA	**Warramunga Arr**	**17.91**	**132**	P	**Pn**	**22 13 13.8**	**-0.4**
ASAR	**Alice Springs**	**20.17**	**142**	P	**P**	**22 13 40.7**	**+1.0**
	10nm,0.4s,baz=317,slow=9.7,SNR=11						
COEN	**Coen**	**23.10**	**107**	*e*P	**P**	**22 14 10.3**	**-0.9**
KULM	**Kulim**	**23.76**	**303**	*e*P	**P**	**22 14 18.5**	**+0.6**
	13nm,0.8s,mb4.4						
PSI	**Prapat**	**23.99**	**296**	P	**P**	**22 14 20.9**	**+0.9**
	30nm,1.1s,mb4.6,baz=200,slow=12,SNR=3.0						
MTSU	**Mount Surprise**	**25.31**	**116**	*e*P	**P**	**22 14 33.5**	**+1.4**
	67nm,1.0s,mb5.1						
STKA	**Stephens Creek**	**30.80**	**143**	*e*P	**P**	**22 15 20.5**	**-0.4**
	3.7nm,0.5s,mb4.5						
STKA	**Stephens Creek**	**30.80**	**143**	P	**P**	**22 15 20.4**	**-0.5**
	3.9nm,0.4s,mb4.5,baz=312,slow=8.3,SNR=9.9						
CMSA	**Cobar Meteorol**	**33.15**	**138**	*e*P	**P**	**22 15 41.6**	**0.0**
CMAR	**Chiang Mai Arr**	**33.84**	**321**	P	**P**	**22 15 49.0**	**+1.2**
	1.2nm,0.8s,mb3.9,baz=163,slow=6.4,SNR=4.3						
CHTO	**Chiang Mai**	**34.10**	**322**	*e*P	**P**	**22 15 50.4**	**+0.3**
	16nm,1.4s,mb4.8						
YNG	**Young**	**36.65**	**139**	*e*P	**P**	**22 16 11.9**	**+0.1**
	14nm,1.5s,mb4.6						
KSRS	**Korea Array**	**45.88**	**8**	P	**P**	**22 17 29.4**	**+1.7**
	0.3nm,0.3s,mb3.7,baz=194,slow=9.8,SNR=4.3						
MJAR	**Matsushiro Arr**	**47.47**	**20**	P	**P**	**22 17 39.2**	**-1.0**
	2.0nm,1.0s,mb4.0,baz=196,slow=8.5,SNR=4.6						
SNY	**Shenyang**	**49.79**	**3**	⇓P	**P**	**22 17 58.2**	**+0.3**
SNY				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.9						
SNY				pmax	pmax		
	comp=Z,120nm,5.3s						
SNY				LR	LR		
	comp=N,480nm,8.4s						
SNY				LR	LR		
	comp=E,870nm,15.1s						
SNY				LR	LR		
	comp=Z,820nm,12.5s,MS4.9						
KSH	**Kashi**	**62.73**	**322**	*e*P	**P**	**22 19 29.0**	**-1.4**
KSH				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb5.0						
KSH				pmax	pmax		
	comp=Z,59nm,3.1s						
KSH				LR	LR		
	comp=N,250nm,7.9s						
KSH				LR	LR		
	comp=E,350nm,10.0s						
KSH				LR	LR		
	comp=Z,640nm,12.7s,MS5.0						
AAK	**Ala-Archa**	**65.55**	**324**	P	**P**	**22 19 48.9**	**0.0**
	comp=Z,0.9nm,0.3s,mb4.2,baz=126,slow=8.8,SNR=2.9						
AAK	**Ala-Archa**	**65.55**	**324**	*e*P	**P**	**22 19 49.1**	**+0.2**
	comp=Z,6.9nm,1.0s,mb4.6						
AML	**Almayashu**	**65.70**	**324**	*e*P	**P**	**22 19 50.1**	**+0.3**
	comp=Z,8.9nm,1.1s,mb4.7						
EKS2	**Erkin-Say**	**65.98**	**324**	*e*P	**P**	**22 19 51.6**	**0.0**
	comp=Z,2.2nm,1.1s,mb4.1						
PETK	**Petropavlovsk-**	**68.73**	**23**	P	**P**	**22 20 08.7**	**-0.1**
	comp=Z,0.7nm,0.5s,mb3.9,baz=235,slow=4.7,SNR=2.8						
MAW	**Mawson**	**70.53**	**200**	P	**P**	**22 20 20.1**	**+0.3**
	comp=Z,1.8nm,0.5s,mb4.2,baz=67,slow=13,SNR=4.2						
OPO	**Ambohidratompo**	**71.58**	**253**	P	**P**	**22 20 26.4**	**-0.7**
	comp=Z,0.9nm,0.5s,mb4.0,baz=93,slow=12,SNR=3.6						
BVAR	**Borovoye Array**	**74.17**	**331**	P	**P**	**22 20 41.7**	**-0.1**
	comp=Z,1.3nm,0.7s,mb4.0,baz=143,slow=3.6,SNR=5.9						
AKTK	**Aktyubinsk**	**79.29**	**325**	P	**P**	**22 21 10.7**	**0.0**
AKTO	**Aktyubinsk**	**79.29**	**325**	P	**P**	**22 21 10.7**	**0.0**
	comp=Z,2.0nm,0.8s,mb4.1,baz=102,slow=8.5,SNR=3.6						
QSPA	**South Pole Qui**	**81.87**	**180**	P	**P**	**22 21 23.4**	**-0.7**
	comp=Z,1.7nm,0.4s,mb4.3,baz=169,slow=1.6,SNR=22						
BOSA	**Boshof**	**90.63**	**241**	P	**P**	**22 22 07.0**	**-1.3**
	comp=Z,1.3nm,0.7s,mb4.3,baz=89,slow=3.7,SNR=7.2						
CPUP	**Villa Florida**	**145.69**	**184**	PKPbc	PKPbc	22 28 43.6	-1.3
	comp=Z,0.8nm,0.4s,baz=162,slow=4.8,SNR=5.4						
LPAZ	**La Paz**	**154.33**	**161**	PKPab	PKPab	22 29 20.1	-0.3
	comp=Z,1.0nm,0.4s,baz=95,slow=2.2,SNR=4.9						
SIV	**San Ignacio**	**156.00**	**177**	PKPab	PKPab	22 29 25.3	-2.3
	comp=Z,1.5nm,0.6s,baz=168,slow=7.5,SNR=4.9						

*IDC **07** 22:14:27.7±0.4, 32°.45N×105°.12E, h0km, mb4.7/27, mb1 4.7/30, mb1mx4.7/38, mbtmp4.6/30, ML3.8/3, MS4.1/5, Ms1 4.1/5, ms1mx3.5/45, Error ellipse: s-maj=20.2km s-min=9.5km az=56.0*
*ISCJB **07** 22:14:27.7±0.8, 32°.51N±0°.02×105°.19E±0°.03, h9km±5km, mb4.9/152, MS4.3/14, Error ellipse: s-maj=3.9km s-min=3.6km az=12.9*
*BJI **07** 22:14:28.3, 32°.43N×105°.22E, h15km, mB4.7/17, mb4.7/27, ML4.6/19, Ms4.7/41, Ms7 4.5/33*
*SZGRF **07** 22:14:28.4, 31°.55N×105°.53E, h15km, mb5.3, MS4.5, Sichuan, China*
*NEIC **07** 22:14:29.7±0.1, 32°.50N×105°.16E, h10km, mb4.9/79, Error ellipse: s-maj=4.0km s-min=3.2km az=46.0*
*MOS **07** 22:14:30.6±0.9, 32°.47N×105°.23E, h33km, mb5.1/57, MS4.4/7, Error ellipse: s-maj=7.3km s-min=3.9km az=120.4*

ISC 07 22:14:28.7±0.7, 32°.52N±0°.02×105°.24E±0°.03, h4km±4km, h13km±.8km; pP-P, n422, σ0°.89/434, mb4.9/152, MS4.3/14, 51C-46D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.04**	**219**	⇑*i*Pn	**Pn**	**22 15 04.2**	**+0.4**
CD2				Pg	**Pg**	**22 15 07.1**	**-0.7**
CD2				Sn	**Sn**	**22 15 31.2**	**+1.6**
CD2				Sg	**Sg**	**22 15 34.1**	**-0.1**
CD2				smax			
	comp=N,34μm,1.0s						
CD2				smax			
	comp=E,18μm,0.7s						
XAN	**Xi'an**	**3.44**	**63**	Pn	**Pn**	**22 15 24.3**	**+1.3**
XAN				Pg	**Pg**	**22 15 32.2**	**-2.3**
XAN				Sn	**Sn**	**22 16 03.3**	**-0.8**
XAN				Sg	**Sg**	**22 16 17.3**	**-1.8**
XAN				smax			
	comp=N,4μm,1.0s						
XAN				smax			
	comp=E,2μm,1.2s						
XAN				LR	LR		
	comp=N,3μm,6.6s						
XAN				LR	LR		
	comp=E,3μm,8.9s						
XAN				LR	LR		
	comp=Z,3μm,8.2s						
LZH	**Lanzhou**	**3.74**	**342**	*e*Pn	**Pn**	**22 15 29.8**	**+2.6**
LZH				Pg	**Pg**	**22 15 40.2**	**-0.2**
LZH				Sn	**Sn**	**22 16 15.6**	**+4.0**
LZH				Sg	**Sg**	**22 16 26.6**	**-2.3**
LZH				smax			
	comp=N,4μm,0.8s						
LZH				smax			
	comp=E,8μm,0.8s						
LZH				LR	LR		
	comp=E,7μm,4.8s						
LZH				LR	LR		
	comp=Z,10μm,6.3s						
ENH	**Enshi**	**4.27**	**121**	*e*Pn	**Pn**	**22 15 36.8**	**+2.4**
ENH				*e*Sn	**Sn**	**22 16 31.0**	**+6.5**
GYA	**Guiyang**	**6.16**	**168**	Pg	**Pn**	**22 16 01.2**	**+0.7**
GYA				Sg	**Sn**	**22 17 09.2**	**-2.2**
GYA				smax			
	comp=N,510nm,0.7s						
GYA				smax			
	comp=E,660nm,0.8s						
GYA				LR	LR		
	comp=N,1μm,3.1s						
GYA				LR	LR		
	comp=E,2μm,3.4s						
GYA				LR	LR		
	comp=Z,2μm,2.8s						
KMI	**Kunming**	**7.69**	**197**	Pn	**Pn**	**22 16 21.7**	**+0.3**
KMI				Sn	**Sn**	**22 17 47.9**	**-1.0**
KMI				smax			
	comp=N,220nm,1.5s						
KMI				smax			
	comp=E,180nm,1.5s						
KMI				LR	LR		
	comp=N,3μm,6.1s						
KMI				LR	LR		
	comp=E,3μm,6.3s						
KMI	**Kunming**	**7.69**	**197**	S	**Pn**	**22 16 21.3**	**-0.1**
WHN	**Wuhan**	**8.02**	**102**	P	**Pn**	**22 16 29.5**	**+3.5**
WHN				S	**Sn**	**22 17 51.9**	**-5.2**
WHN				LR	LR		
	comp=E,7μm,6.1s						
WHN				LR	LR		
	comp=Z,5μm,6.0s						
GTA	**Gaotai**	**8.16**	**329**	⇓P	**Pn**	**22 16 28.4**	**+0.6**
GTA				pP		22 16 32.5	
GTA				sP		22 16 36.0	
GTA				S	**Sn**	**22 18 00.2**	**-0.3**
GTA				pmax	pmax		
	comp=Z,19nm,0.8s						
GTA				pmax	pmax		
	comp=Z,100nm,5.7s						
GTA				LR	LR		
	comp=N,4μm,11.4s						
GTA				LR	LR		
	comp=E,2μm,11.7s						
GTA				LR	LR		
	comp=Z,5μm,10.8s						
BTO	**Baotou**	**8.94**	**24**	*e*P	**Pn**	**22 16 38.8**	**+0.3**
BTO				S	**Sn**	**22 18 26.5**	**+6.9**
BTO				LR	LR		
	comp=N,2μm,8.4s						
BTO				LR	LR		
	comp=E,810nm,9.8s						
TIA	**Tai'an**	**10.49**	**66**	*e*P	**Pn**	**22 17 06.0**	**+6.2**
TIA				LR	LR		
	comp=N,1μm,10.0s						
TIA				LR	LR		
	comp=E,670nm,8.0s						
BJT	**Baijiatuau**	**11.56**	**47**	*e*P	**Pn**	**22 17 15.1**	**+0.7**
BJI	**Beijing**	**11.58**	**47**	P	**Pn**	**22 17 15.5**	**+0.9**
BJI				pmax	pmax		
	comp=Z,11nm,0.5s						
BJI				LR	LR		
	comp=N,2μm,12.1s						
BJI				LR	LR		
	comp=E,2μm,8.3s						
BJI				LR	LR		
	comp=Z,700nm,18.2s						
GZH	**Guangzhou**	**11.81**	**141**	P	**Pn**	**22 17 16.8**	**-1.2**
GZH				S	**Sn**	**22 19 26.7**	**-3.6**
GZH				LR	LR		
	comp=N,2μm,10.1s						
GZH				LR	LR		
	comp=E,2μm,9.3s						
GZH				LR	LR		
	comp=Z,3μm,11.9s						
LSA	**Lhasa**	**12.40**	**261**	*e*P	**Pn**	**22 17 26.6**	**+0.7**
LSA				pmax	pmax		
	comp=Z,24nm,0.8s						
LSA	**Lhasa**	**12.40**	**261**	*e*Pn	**Pn**	**22 17 26.6**	**+0.7**
	comp=Z,24nm,0.8s						
SSE	**Sheshan**	**13.64**	**92**	P	**Pn**	**22 17 40.2**	**-2.7**
SSE				S	**Sn**	**22 20 11.7**	**-3.1**
SSE				pmax	pmax		
	comp=Z,14nm,1.0s						
SSE				pmax	pmax		
	comp=Z,190nm,12.0s						
SSE				LR	LR		
	comp=N,680nm,9.6s						
SSE				LR	LR		
	comp=E,2μm,9.6s						
SSE				LR	LR		
	comp=Z,2μm,10.4s						
QZH	**Quanzhou**	**13.93**	**119**	P	**Pn**	**22 17 59.0**	**+12**
QZH				S	Sn	22 20 44.1	+22
QZH				LR	LR		
	comp=N,6μm,8.0s						
QZH				LR	LR		
	comp=E,3μm,6.8s						

QZH LR LR
comp=Z,7µm,11.6s
QIZ Qiongzhong 14.05 162 P **Pn 22 17 49.8 +1.2**
QIZ S **Sn 22 20 27.4 +2.3**
QIZ pmax pmax
comp=Z,19nm,1.6s
QIZ LR LR
comp=N,2µm,10.5s
QIZ LR LR
comp=Z,2µm,11.8s
CHG Chiang Mai 14.77 204 ⇑P **Pn 22 18 00.4 +2.0**
comp=Z,21nm,1.1s
CHTO Chiang Mai 14.77 204 *e*P **Pn 22 17 58.1 -0.3**
CM31 Chiang Mai Arr 15.11 204 *e*Pn **Pn 22 18 02.8 -0.1**
CMAR Chiang Mai Arr 15.11 204 Pn **Pn 22 18 02.5 -0.4**
comp=Z,0.1nm,0.3s,baz=13,slow=11,SNR=20
SONM Songino Array 15.32 3 Pn **Pn 22 18 06.3 +0.7**
comp=Z,0.3nm,0.3s,baz=185,slow=14,SNR=15
SONM Lg 22 22 31.2
baz=198,slow=24,SNR=3.1
SONM LR LR 22 24 44.8
comp=Z,747nm,19.9s,baz=110,slow=40
ULN Ulaanbaatar 15.39 5 *e*P **Pn 22 18 07.5 +1.0**
ULN pmax pmax
comp=Z,25nm,0.9s
ULN Ulaanbaatar 15.39 5 *e*Pn **Pn 22 18 07.5 +1.0**
comp=Z,26nm,0.9s
TATO Taipei 16.10 114 *e*Pn **Pn 22 18 17.8 +2.0**
comp=Z,49nm,1.0s
BDT Bhumibol Dam 16.22 202 P **Pn 22 18 22.0 +4.6**
comp=Z,22nm,1.0s
KKTK Khon Kaen 16.26 188 P **Pn 22 18 16.0 -1.9**
SSLB Suanglung 16.35 118 *e*Pn **Pn 22 18 21.6 +2.6**
comp=Z,132nm,1.5s
TPUB Ta-pu 16.40 120 *e*Pn **Pn 22 18 21.8 +2.1**
comp=Z,26nm,0.9s
NACB Ninganchiao 16.61 116 *e*Pn **Pn 22 18 27.4 +5.0**
comp=Z,53nm,1.1s
NST Nakhon Sawan 17.40 197 P **Pn 22 18 33.0 +0.6**
WMQ Urumqi 17.78 314 *e*P **Pn 22 18 40.0 +3.0**
WMQ sP sP 22 18 47.0 +7.5
WMQ PP 22 18 55.0
WMQ S **Sn 22 21 56.0 +0.5**
WMQ SS 22 22 20.0
WMQ pmax pmax
comp=Z,19nm,0.8s
WMQ LR LR
comp=N,620nm,6.0s
WMQ LR LR
comp=E,330nm,6.0s
WMQ LR LR
comp=Z,290nm,6.0s
ZAK Zakamensk 17.91 356 *e*P **Pn 22 18 41.7 +3.3**
ZAK pmax pmax
comp=Z,14nm,1.3s
TLY Talaya 19.18 357 *e*P **Pn 22 18 57.6 +3.6**
TLY pmax pmax
comp=Z,10.0nm,1.0s
TLY MLR MLR
comp=Z,747nm,11.0s
TLY Talaya 19.18 357 *e*P **Pn 22 18 53.8 -0.2**
KSRS Korea Array 19.21 69 P **Pn 22 18 55.1 +0.7**
comp=Z,0.5nm,0.3s,baz=253,slow=11,SNR=28
KSRS Korea Array 19.21 69 P **Pn 22 18 55.2 +0.7**
KSRS pmax pmax
comp=Z,1.0nm,0.3s
MOY Mondy 19.39 352 *e*P **Pn 22 18 58.0 +1.6**
MOY pmax pmax
comp=Z,42nm,2.6s
CN2 Changchun 19.43 49 *e*P **Pn 22 18 58.0 +1.0**
CN2 *e*pP pP 22 19 01.6 +4.6
CN2 *e*sP sP 22 19 04.9 +7.3
CN2 *e*S **Sn 22 22 31.5 -3.6**
CN2 pmax pmax
comp=Z,20nm,0.9s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,600nm,10.0s
CN2 LR LR
comp=E,700nm,10.0s
CN2 LR LR
comp=Z,500nm,12.0s
IRK Irkutsk 19.73 358 *e*P **Pn 22 19 01.5 +1.0**
IRK pmax pmax
comp=Z,84nm,1.5s
HIA Hailar 19.94 29 *e*P **Pn 22 19 02.7 -0.4**
HIA pmax pmax
comp=Z,20nm,0.8s
HIA Hailar 19.94 29 *e*P **Pn 22 19 02.7 -0.4**
comp=Z,20nm,0.8s
CIT Chita 20.41 15 *e*P **P 22 19 11.0 +4.5**
CIT pmax pmax
comp=Z,83nm,1.2s
PTH Pithoragarh 21.63 269 *e*PKP **P 22 19 19.0 -0.9**
MDJ Mudanjiang 22.46 50 P **P 22 19 30.7 +2.1**
MDJ pmax pmax
comp=Z,7.0nm,0.9s,mb4.1
MDJ pmax pmax
comp=Z,100nm,6.6s
MDJ Mudanjiang 22.46 50 *e*P **P 22 19 29.8 +1.2**
comp=Z,18nm,1.3s,mb4.3
MK31 Makanchi Array 22.59 316 *e*P **P 22 19 30.3 +0.3**
MKAR Makanchi Array 22.59 316 P **P 22 19 30.1 0.0**
comp=Z,30nm,1.0s,mb4.7,baz=104,slow=13,SNR=36
MKAR LR LR 22 29 59.9
comp=Z,62nm,19.2s,MS3.1,baz=236,slow=41
KLP Kalpa 22.89 275 *e*PKP **P 22 19 33.5 +0.2**
KLP AMb AMB 22 19 36.5
comp=Z,79nm,1.4s,mb5.0
DDI Dehra Dun 23.28 272 *ex* **P 22 19 33.2 -4.3**
VLA Vladivostok 23.47 56 *e*P **P 22 19 38.6 -0.8**
VLA pmax pmax
comp=Z,7.0nm,1.2s,mb4.0
AGRA Agra 24.22 265 *e*PKP **P 22 19 46.2 -0.2**
NDI New Delhi 24.39 268 *e*PKP **P 22 19 46.5 -1.5**
AYAN Aya Nagar 24.52 268 *e*PKP **P 22 19 48.8 -0.4**
AYAN AMb AMB 22 19 50.4
comp=Z,38nm,0.9s,mb4.9
SONA Sohna 24.63 267 *e*PKP **P 22 19 49.9 -0.2**
ULHL Ulahol 24.90 301 P **P 22 19 54.3 +1.8**
SNR=8.9
TKM2 Tokmak 2 25.53 303 P **P 22 19 59.9 +1.7**
SNR=7.9
KZA Kyzart 25.59 300 P **P 22 20 00.7 +2.0**
SNR=6.1
KHET Khetri 25.76 268 *e*PKP **P 22 20 00.6 +0.1**
KLR Kul'dur 25.89 42 *e*P **P 22 20 00.0 -1.5**
KLR pmax pmax
comp=E,140nm,1.8s
KLR pmax pmax
comp=Z,120nm,1.8s,mb5.1
KLR MLR MLR
comp=E,1µm,11.0s
KLR MLR MLR
comp=Z,3µm,11.0s,MS5.1
ZAA0 Zalesovo Array 25.90 332 *e*P **P 22 20 01.4 0.0**
ZALV Zalesovo Beam 25.90 332 P **P 22 20 01.5 0.0**
comp=Z,10.0nm,0.7s,mb4.4,baz=127,slow=9.5,SNR=24
KBK Karagaybulak 25.93 302 P **P 22 20 03.8 +1.9**
SNR=6.0
BOD Bodaibo 26.00 11 *e*P **P 22 20 07.7 +5.4**
BOD pmax pmax
comp=Z,28nm,0.9s,mb4.8
UCH Uchtor 26.15 301 P **P 22 20 06.3 +2.4**
SNR=15
UCH Uchtor 26.15 301 *e*P **P 22 20 05.5 +1.7**
comp=Z,62nm,1.3s,mb5.0
BHPL Bhopal 26.20 256 *e*PKP **P 22 20 03.5 -1.0**
FRU Bishkek 26.20 302 *e*P **P 22 20 05.0 +0.6**
FRU pmax pmax
comp=Z,80nm,2.2s,mb4.9
AAK Ala-Archa 26.25 301 LR LR 22 31 29.4
comp=Z,415nm,18.6s,MS4.0,baz=314,slow=39
AAK Ala-Archa 26.25 301 *e*P **P 22 20 05.8 +1.0**
AAK pmax pmax
comp=Z,11nm,1.3s,mb4.2
KURK Kurchatov 26.73 321 P **P 22 20 07.8 -1.2**
comp=Z,19nm,1.1s,mb4.6,baz=132,slow=8.9,SNR=38
KURK PcP PcP 22 23 30.8 -1.4
comp=Z,3.1nm,0.8s,baz=125,slow=1.9,SNR=4.9
KURK Kurchatov 26.73 321 *e*P **P 22 20 08.9 -0.1**
KURK pmax pmax
comp=Z,30nm,1.2s,mb4.7
KURK Kurchatov 26.73 321 *e*P **P 22 20 08.9 -0.1**
comp=Z,30nm,1.2s,mb4.7

NVS Novosibirsk 27.19 332 *e*P **P 22 20 12.3 -0.8**
NVS pmax pmax
comp=Z,21nm,1.5s,mb4.5
NVS pmax pmax
comp=N,14nm,1.7s
NVS pmax pmax
comp=E,11nm,1.2s
AJM Ajmer 27.25 265 *e*PKP **P 22 20 13.9 0.0**
MAT Matsushiro 27.38 72 P **P 22 20 16.2 +1.2**
MJAR Matsushiro Arr 27.38 72 P **P 22 20 17.4 +2.4**
comp=E,2.0nm,0.9s,baz=275,slow=10,SNR=5.5
MJAR Matsushiro Arr 27.38 72 P **P 22 20 17.4 +2.4**
HABR Khabarovsk 27.48 46 *e*P **P 22 20 14.1 -1.7**
HABR *e**SP sP 22 20 27.6 +10
HABR *e* 22 20 59.2
HABR *e*S **S 22 24 53.4 -3.6**
HABR *e**SS sS 22 25 09.5 +10
HABR pmax pmax
comp=Z,23nm,1.9s,mb4.4
HABR pmax pmax
comp=E,19nm,1.6s
HABR pmax pmax
comp=N,7.0nm,1.7s
HABR MLR MLR
comp=Z,812nm,10.0s,MS4.6
KBL Kabul 30.14 284 *e*P **P 22 20 40.0 +0.4**
KBL pmax pmax
comp=Z,24nm,0.9s,mb4.9
KBL Kabul 30.14 284 *e*P **P 22 20 40.0 +0.4**
comp=Z,24nm,0.9s,mb4.9
PSI Prapat 30.15 193 P **P 22 20 39.6 -0.2**
comp=Z,10nm,0.7s,mb4.7,baz=338,slow=7.0,SNR=7.7
BVAR Borovoye Array 32.31 320 P **P 22 20 58.7 +0.2**
comp=Z,3.3nm,0.7s,mb4.2,baz=120,slow=9.0,SNR=9.4
BVAR PcP PcP 22 23 45.8 -0.6
comp=Z,2.7nm,0.8s,baz=120,slow=5.8,SNR=5.2
BRVK Borovoye 32.38 320⇑ *e*P **P 22 20 59.0 -0.1**
BRVK pmax pmax
comp=Z,17nm,1.2s,mb4.8
BRVK Borovoye 32.38 320 *e*P **P 22 20 59.9 +0.8**
comp=Z,10nm,0.8s,mb4.7
ABKAR Aktbulak array 37.48 310 *e*P **P 22 21 43.6 +0.4**
comp=Z,12nm,0.9s,mb4.7
AKTK Aktyubinsk 38.90 312 P **P 22 21 55.5 +0.4**
AKTO Aktyubinsk 38.90 312 P **P 22 21 55.5 +0.4**
comp=Z,6.7nm,0.9s,mb4.3,baz=93,slow=9.2,SNR=8.9
SVE Sverdlovsk 38.96 322⇑ *e*P **P 22 21 56.5 +1.0**
SVE pmax pmax
comp=Z,28nm,1.2s,mb4.9
KAPI Kappang 39.79 157 P **P 22 22 02.4 -0.6**
comp=Z,20nm,0.8s,mb4.9,baz=313,slow=6.2,SNR=10
KAPI Kappang 39.79 157 *e*P **P 22 22 02.0 -0.9**
comp=Z,29nm,0.9s,mb5.0
ARU Arti 39.93 321 *c i*P **P 22 22 03.6 0.0**
ARU *e* 22 23 33.4
ARU *e*PPP 22 23 59.9
ARU S **S 22 28 09.2 +0.2**
ARU SS SS 22 31 02.3 -2.9
ARU pmax pmax
comp=Z,48nm,1.2s,mb5.1
ARU Arti 39.93 321 *e*P **P 22 22 03.8 +0.1**
comp=Z,33nm,1.0s,mb5.0
ARU Arti 39.93 321 SS SS 22 31 01.9 -3.3
TIXI Tiksi 41.18 11 *e*P **P 22 22 13.6 -0.2**
TIXI pmax pmax
comp=Z,18nm,1.0s,mb4.7
TIXI Tiksi 41.18 11 *e*P **P 22 22 13.6 -0.2**
comp=Z,18nm,1.0s,mb4.7
SOKR Solikamsk 41.78 325⇓ *i*P **P 22 22 19.7 +0.9**
SOKR pmax pmax
comp=Z,30nm,1.2s,mb4.8
SEY Seymchan 42.39 30 *e*P **P 22 22 22.7 -1.1**
PETK Petropavlovsk- 42.51 45 LR LR 22 40 10.5
comp=Z,266nm,19.3s,MS4.1,baz=210,slow=36
DGRG David-gareji 47.81 299 P **P 22 23 08.4 +1.2**
TBLG Delisi 48.23 299 *e*P **P 22 23 08.0 -2.4**
TBLG Delisi 48.23 299 P **P 22 23 08.0 -2.4**
GNI Garni 48.51 297 P **P 22 23 13.2 +0.5**
comp=Z,23nm,1.0s,mb5.2,baz=339,slow=9.6,SNR=6.0
GNI Garni 48.51 297 *c i*P **P 22 23 13.8 +1.2**
GNI pmax pmax
comp=Z,50nm,1.2s
GNI Garni 48.51 297 *e*P **P 22 23 13.6 +0.9**
comp=Z,47nm,1.2s,mb5.4
ZEI Tsey 48.67 301 *e*P **P 22 23 13.3 -0.6**
ZEI pmax pmax
comp=Z,16nm,1.0s,mb5.0
KEH Kehvi 48.72 300 P **P 22 23 13.4 -0.8**
ONI Oni 49.03 300 P **P 22 23 17.4 +0.9**
MIB Mutribah 49.10 283 *e*P **P 22 23 16.1 -1.2**
MIB AMb AMB 22 23 17.8
comp=Z,57nm,0.9s,mb5.6
RDF Al-Radifah 49.21 282 *e*P **P 22 23 17.3 -0.9**
RDF AMb AMB 22 23 19.3
comp=Z,75nm,1.0s,mb5.7
VRHR Novokhopersk 49.31 312 *e*P **P 22 23 18.0 -0.6**
VRHR pmax pmax
comp=Z,20nm,0.8s,mb5.2
VRHR pmax pmax
comp=N,3.0nm,0.3s
VRHR pmax pmax
comp=E,7.0nm,0.6s
NAY Al-Naaiem 49.36 282 *e*P **P 22 23 17.9 -1.3**
NAY AMb AMB 22 23 19.7
comp=Z,45nm,0.9s,mb5.5
KIV Kislovodsk 49.36 302 *c i*P **P 22 23 19.3 +0.2**
KIV *e**SP sP 22 23 27.7 +6.7
KIV *e* 22 23 32.3
KIV pmax pmax
comp=Z,33nm,1.0s,mb5.3
KIV MLR MLR
comp=Z,100nm,16.0s,MS3.9
KIV Kislovodsk 49.36 302 *e*P **P 22 23 19.8 +0.6**
comp=Z,34nm,1.1s,mb5.3
BILL Bilibino 49.49 26⇓ *e*P **P 22 23 20.1 +0.4**
BILL *e* 22 23 28.0
BILL pmax pmax
comp=Z,17nm,1.3s,mb4.9
BILL MLR MLR
comp=Z,1µm,17.0s,MS4.9
BILL Bilibino 49.49 26 *e*P **P 22 23 20.5 +0.8**
comp=Z,13nm,1.0s,mb4.9
VSR Storozhevoye 50.84 312 *e*P **P 22 23 30.0 -0.2**
VSR pmax pmax
comp=N,10.0nm,1.0s
VSR pmax pmax
comp=Z,30nm,1.0s,mb5.2
VSR pmax pmax
comp=E,10.0nm,0.6s
MOS Moscow 51.45 318 *e*P **P 22 23 33.4 -1.3**
MOS pmax pmax
comp=Z,76nm,1.1s,mb5.5
OBN Obninsk 52.09 317 *c i*P **P 22 23 39.0 -0.5**
OBN pmax pmax
comp=Z,47nm,1.2s,mb5.3
OBN MLR MLR
comp=Z,100nm,16.0s,MS4.0
OBN Obninsk 52.09 317 *e*P **P 22 23 39.0 -0.5**
comp=Z,38nm,1.1s,mb5.2
KEMA Kemaliye 53.40 297 *i*P **P 22 23 49.9 +0.4**
APA Apatity 53.48 333⇓ *i*P **P 22 23 53.6 +4.0**
APA pmax pmax
comp=Z,20nm,1.0s,mb5.0
APA MLR MLR
comp=Z,400nm,12.0s,MS4.7
FITZ Fitzroy Crossi 53.99 156 P **P 22 23 53.5 -0.3**
comp=Z,8.6nm,1.0s,mb4.7,baz=64,slow=11,SNR=4.9
AKCD Akcadag 54.09 296 *i*P **P 22 23 54.7 +0.2**
JOF Joensuu 54.36 327 *e*P **P 22 23 54.3 -1.8**
JOF pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
JOF Joensuu 54.36 327 *e*p **P 22 23 54.3 -1.8**
comp=Z,0.6nm,0.3s,mb4.0
SIM Simferopol' 55.20 305 *e*P **P 22 24 04.0 +1.5**
SIM pmax pmax
comp=Z,13nm,0.7s,mb5.1
CTKT Corum 55.80 300 *i*P **P 22 24 07.2 +0.3**
KEV Kevo 55.84 336 *e*P **P 22 24 04.5 -2.2**
KEV pmax pmax
comp=Z,2.0nm,0.3s,mb4.6
KEV Kevo 55.84 336 *e*p **P 22 24 04.5 -2.2**
comp=Z,1.6nm,0.3s,mb4.5
AVNT Avonos 56.26 298 *i*P **P 22 24 10.3 +0.1**
ARCES ARCESS Array B 56.37 335 P **P 22 24 11.1 +0.6**
comp=Z,15nm,0.8s,mb5.1,baz=73,slow=8.1,SNR=17
ARCES PcP PcP 22 25 07.0 -0.7
comp=Z,6.5nm,1.0s,baz=72,slow=4.0,SNR=3.7
CDAG Cicekdag 56.38 299 *i*P **P 22 24 10.6 -0.4**
KAF Kangasniemi 56.74 327 *e*P **P 22 24 12.0 -1.2**
KAF pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
KAF Kangasniemi 56.74 327 *e*p **P 22 24 12.0 -1.2**
comp=Z,0.7nm,0.3s,mb4.2
BR131 Keskin Array S 56.89 299 *e*P **P 22 24 14.3 -0.4**
comp=Z,5.6nm,0.9s,mb4.6
BRTR Keskin Array B 56.89 299 P **P 22 24 14.3 -0.4**
comp=Z,6.8nm,0.9s,mb4.7,baz=97,slow=7.6,SNR=30
FINES FINESS Array B 56.94 326 P **P 22 24 14.5 -0.2**
comp=Z,8.0nm,0.7s,mb4.9,baz=95,slow=7.7,SNR=34
VSU Vasula 57.07 322 *e*P **P 22 24 15.5 -0.1**
VSU pmax pmax
comp=Z,40nm,1.0s,mb5.4
AKASG Malin Array Be 57.13 313 P **P 22 24 15.4 -0.7**
comp=Z,15nm,0.8s,mb5.1,baz=69,slow=6.6,SNR=38
AKBB Malin Array Si 57.13 313 *e*P **P 22 24 15.4 -0.8**
KIEV Kiev 57.14 313 *e*P **P 22 24 15.5 -0.8**
KIEV pmax pmax
comp=Z,22nm,1.1s,mb5.1
KIEV Kiev 57.14 313 *e*P **P 22 24 15.5 -0.8**
comp=Z,22nm,1.1s,mb5.1
BBAL Bala 57.33 299 *i*P **P 22 24 17.6 -0.2**
IDID Didziasalis 57.64 318 *e*P **P 22 24 19.7 0.0**
IDID AMB AMB 22 24 21.4
comp=Z,10nm,1.1s,mb4.8
SGKT Sivrigoynuk 57.81 300 *i*P **P 22 24 21.0 -0.1**
IZAR Zarasai 57.83 319 *e*P **P 22 24 20.7 -0.3**
IZAR AMB AMB 22 24 22.7
comp=Z,8.7nm,1.1s,mb4.7
IIGN Ignalina 57.92 319 *e*P **P 22 24 21.6 -0.1**
IIGN AMB AMB 22 24 23.4
comp=Z,13nm,0.9s,mb5.0
ISAL Salakas 57.93 319 *e*P **P 22 24 21.7 0.0**
ISAL AMB AMB 22 24 23.4
comp=Z,8.8nm,1.0s,mb4.7
KIS Kishinev 58.28 309 *e*P **P 22 24 22.0 -2.3**
KIS Kishinev 58.28 309 ⇓P **P 22 24 23.8 -0.5**
KIS Kishinev 58.28 309 ⇓*i*P **P 22 24 23.8 -0.5**
TLCR 58.77 306 ⇑P **P 22 24 27.3 -0.5**
TLCR 58.77 306 ⇑*i*P **P 22 24 27.3 -0.5**
LEOM Leova 58.80 308 ⇓P **P 22 24 28.0 0.0**
LEOM Leova 58.80 308 ⇓*i*P **P 22 24 28.0 0.0**
ESKT Eskisehir 59.01 300 *i*P **P 22 24 28.6 -0.9**
IAS Iasi 59.05 309 ⇓P **P 22 24 34.5 +4.8**
IAS Iasi 59.05 309 ⇓*i*P **P 22 24 34.5 +4.8**
WRAB Tennant Creek 59.13 148 *e*P **P 22 24 30.0 -0.4**
WRAB pmax pmax
comp=Z,18nm,0.9s,mb5.1
WRAB Tennant Creek 59.13 148 *e*P **P 22 24 30.0 -0.4**
comp=Z,18nm,0.9s,mb5.1
WRA Warramunga Arr 59.13 148 P **P 22 24 30.0 -0.5**
comp=Z,11nm,0.8s,mb5.0,baz=340,slow=7.4,SNR=37
TIRR Tirgusor 59.25 306 ⇓P **P 22 24 30.1 -1.0**
TIRR Tirgusor 59.25 306 ⇓*i*P **P 22 24 30.1 -1.0**
HARR Harsova 59.51 306 ⇓P **P 22 24 33.2 +0.3**
HARR Harsova 59.51 306 ⇓*i*P **P 22 24 33.2 +0.3**
ISP Isparta 59.80 298 ⇓P **P 22 24 34.8 -0.2**
ISP Isparta 59.80 298 ⇓*i*P **P 22 24 34.8 -0.2**
AMRR Amara 59.94 306 ⇓P **P 22 24 36.9 +1.0**
AMRR Amara 59.94 306 ⇓*i*P **P 22 24 36.9 +1.0**
SUW Suwalki 59.95 318 *e*P **P 22 24 34.9 -0.9**
VRI Vrincioaia 59.98 308 ⇓P **P 22 24 36.7 +0.6**
VRI Vrincioaia 59.98 308 ⇓*i*P **P 22 24 36.7 +0.6**
PLOR Plostina 60.04 308 ⇑P **P 22 24 37.4 +0.9**
PLOR Plostina 60.04 308 ⇑*i*P **P 22 24 37.4 +0.9**
BURAR Bucovina Array 60.46 310 ⇓P **P 22 24 39.8 +0.4**
BURAR Bucovina Array 60.46 310 ⇓*i*P **P 22 24 39.8 +0.4**
BUR08 Bucovina Ar. S 60.47 310 *e*P **P 22 24 39.4 0.0**
LVV L'vov 60.58 313 *e*P **P 22 24 39.3 -0.9**
MLR Muntele Rosu 60.62 308 P **P 22 24 40.5 0.0**
comp=Z,6.9nm,1.0s,mb4.7,baz=54,slow=3.3,SNR=8.1
MLR Muntele Rosu 60.62 308 P **P 22 24 40.5 0.0**
MLR pmax pmax
comp=Z,7.0nm,1.0s
MLR Muntele Rosu 60.62 308 ⇓P **P 22 24 41.1 +0.6**
MLR Muntele Rosu 60.62 308 ⇓*i*P **P 22 24 41.1 +0.6**
KWP Kalwaria Pacla 61.45 313 *e*P **P 22 24 46.2 +0.1**
KWP Kalwaria Pacla 61.45 313 *e*P **P 22 24 46.0 -0.1**
comp=Z,95nm,1.0s,mb5.9
BMR Baia Mare 61.56 310 ⇓P **P 22 24 47.9 +1.1**
BMR Baia Mare 61.56 310 ⇓*i*P **P 22 24 47.9 +1.1**
KOLS Kolonicke sedl 61.94 312 *e*P **P 22 24 49.3 -0.1**
KOLS pmax pmax
comp=Z,8.0nm,1.1s,mb4.8
KOLS Kolonicke sedl 61.94 312 *e*P **P 22 24 49.3 -0.1**
comp=Z,8.3nm,1.1s,mb4.8
KOLS Kolonicke sedl 61.94 312 *e*P **P 22 24 49.3 -0.1**
UZH Uzhgorod 62.02 312⇑ *i*P **P 22 24 49.8 -0.2**
UZH *e* 22 25 06.0
TRPA Tarpa 62.02 311 ⇓*i*P **P 22 24 51.5 +1.5**
ASAR Alice Springs 62.21 150 P **P 22 24 50.8 -0.7**
comp=Z,7.1nm,0.9s,mb4.8,baz=327,slow=6.1,SNR=33
DRGR 62.34 310 ⇓P **P 22 24 52.8 +0.6**
DRGR P pP 22 24 53.1 -0.4
DRGR 62.34 310 ⇓*i*P **P 22 24 52.8 +0.6**
STHS Stebnicka Huta 62.43 313 *e*P **P 22 24 52.4 -0.3**
STHS pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
STHS Stebnicka Huta 62.43 313 *e*P **P 22 24 52.4 -0.3**
comp=Z,7.1nm,0.9s,mb4.8
STHS *e* 22 24 57.3
STHS Stebnicka Huta 62.43 313 *e*P **P 22 24 52.4 -0.3**
STHS *e*pP pP 22 24 57.2 +3.2
CRVS Cervenica-Dubn 62.46 312 *e*P **P 22 24 52.9 0.0**
CRVS pmax pmax
comp=Z,10.0nm,1.4s,mb4.8
CRVS Cervenica-Dubn 62.46 312 *e*P **P 22 24 52.9 0.0**
comp=Z,9.8nm,1.4s,mb4.8
CRVS *e* 22 24 57.7
CRVS Cervenica-Dubn 62.46 312 *e*P **P 22 24 52.9 0.0**
CRVS *e*pP pP 22 24 57.6 +3.4
DEV Deva 62.52 309 ⇓P **P 22 24 54.8 +1.5**
DEV Deva 62.52 309 ⇓*i*P **P 22 24 54.8 +1.5**
GZR Gura Zlata 62.76 308 ⇓P **P 22 24 56.3 +1.3**
GZR Gura Zlata 62.76 308 ⇓*i*P **P 22 24 56.3 +1.3**
NIE Niedzica 63.00 313 *e*P **P 22 24 56.9 +0.4**
OJC Ojcow 63.05 314 *e*P **P 22 24 55.8 -1.0**
KECS Kecovo 63.21 312 *e*P **P 22 24 58.1 +0.2**
KECS pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
KECS Kecovo 63.21 312 *e*P **P 22 24 58.1 +0.2**
comp=Z,3.6nm,0.8s,mb4.5
KECS *e* 22 25 01.7
KECS Kecovo 63.21 312 *e*P **P 22 24 58.0 +0.1**
KECS *e*pP pP 22 25 01.7 +2.5
BZS Buzias 63.45 309 ⇓P **P 22 24 59.5 -0.1**
BZS Buzias 63.45 309 ⇓*i*P **P 22 24 59.5 -0.1**
GKP Gorka Klasztor 63.55 318 *e*P **P 22 24 59.9 -0.2**
PSZ Piszkesteto 63.77 312 ⇓P **P 22 25 02.5 +0.9**
PSZ Piszkesteto 63.77 312⇓ *e*P **P 22 25 02.3 +0.7**
PSZ Piszkesteto 63.77 312 ⇓*i*P **P 22 25 02.5 +0.9**
APE Apeiranthos 63.78 299 ⇓P **P 22 25 00.4 -1.5**
APE Apeiranthos 63.78 299 ⇓*i*P **P 22 25 00.4 -1.5**
NB2 NORSAR Subarra 63.99 327 P **P 22 25 01.6 -1.2**
comp=Z,1.7nm,0.9s,mb5.1,baz=71,slow=6.9
NOA NORSAR Array B 63.99 327 P **P 22 25 01.6 -1.3**
comp=Z,8.7nm,0.8s,mb4.8,baz=70,slow=6.6,SNR=21
OKC Ostrava-Krasne 64.19 314 *e*P **P 22 25 04.3 0.0**
OKC Ostrava-Krasne 64.19 314 *e*P **P 22 25 04.3 0.0**
OKC *e*pP pP 22 25 08.2 +2.5
BSD Bornholm Skovb 64.21 320 *i*P **P 22 25 03.2 -1.2**
BSD pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
BSD MLR MLR
comp=Z,260nm,18.0s,MS4.5
BSD Bornholm Skovb 64.21 320 *i*P **P 22 25 03.2 -1.2**
comp=Z,9.3nm,1.0s,mb4.8
BSD
comp=Z,260nm,18.0s
VYHS Vyhne 64.23 313 *e*P **P 22 25 05.1 +0.4**
VYHS pmax pmax
comp=Z,14nm,1.1s,mb4.9
VYHS Vyhne 64.23 313 *e*P **P 22 25 05.1 +0.4**
comp=Z,14nm,1.1s,mb4.9
VYHS *e* 22 25 08.9
VYHS Vyhne 64.23 313 *e*P **P 22 25 05.1 +0.4**
VYHS *e*pP pP 22 25 08.9 +2.9
MORC Moravsky Berou 64.58 314 *e*P **P 22 25 06.7 -0.2**
MORC pmax pmax
comp=Z,19nm,1.0s,mb5.1

MORC Moravsky Berou 64.58 314 *eP* **P 22 25 06.7 -0.1**
comp=Z,19nm,1.0s,mb5.1
MORC Moravsky Berou 64.58 314 ⇓*iP* **P 22 25 07.2 +0.3**
KSP Ksiaz 64.94 316 *eP* **P 22 25 09.3 +0.1**
KSP Ksiaz 64.94 316 *eP* **P 22 25 09.2 0.0**
SMOL Smolenice 65.10 313 *eP* **P 22 25 11.5 +1.2**
SMOL Smolenice 65.10 313 *eP* **P 22 25 11.5 +1.2**
DPC Dobruska-Polom 65.10 315 *eP* **P 22 25 10.5 +0.2**
DPC Dobruska-Polom 65.10 315 *eP* **P 22 25 10.5 +0.2**
DPC *epP* pP 22 25 14.3 +2.6
PKSM Moragy 65.18 310 P **P 22 25 10.7 -0.1**
PKSM ⇓P pP 22 25 10.9 -1.4
PKSM Moragy 65.18 310 ⇓*iP* **P 22 25 10.9 0.0**
UPC Upice 65.23 315 *eP* **P 22 25 11.1 0.0**
UPC Upice 65.23 315 *eP* **P 22 25 11.1 0.0**
UPC *epP* pP 22 25 15.0 +2.5
VRAC Vranov 65.32 314 P **P 22 25 11.4 -0.3**
comp=Z,9.8nm,0.9s,mb4.8,baz=67,slow=8.9,SNR=14
VRAC Vranov 65.32 314 P **P 22 25 11.4 -0.3**
VRAC pmax pmax
comp=Z,10.0nm,0.9s
VRAC Vranov 65.32 314 P **P 22 25 12.1 +0.4**
VRAC ⇓P pP 22 25 12.3 -0.8
VRAC Vranov 65.32 314 ⇓*iP* **P 22 25 12.4 +0.7**
COP Copenhagen 65.32 322 *i P* **P 22 25 11.5 -0.1**
COP pmax pmax
comp=Z,13nm,0.8s,mb5.0
COP MLR MLR
comp=Z,110nm,20.0s,MS4.0
COP Copenhagen 65.32 322 *i* P **P 22 25 11.5 -0.1**
comp=Z,13nm,0.8s,mb5.0
COP
comp=Z,100nm,20.0s
DAG Danmarks Havn 65.66 348 *eP* **P 22 25 12.0 -1.5**
SOP Sopron 65.95 312⇓*eP* **P 22 25 16.5 +0.7**
TREC Trest 66.00 314 *eP* **P 22 25 16.2 +0.1**
TREC Trest 66.00 314 *eP* **P 22 25 16.2 +0.1**
TREC *epP* pP 22 25 19.8 +2.3
NWAO Narrogin (SRO) 66.07 169 P **P 22 25 16.6 +0.1**
comp=Z,19nm,1.1s,mb5.0,baz=31,slow=10.0,SNR=3.2
PVCC Panska Ves 66.08 316 *eP* **P 22 25 16.6 0.0**
PVCC Panska Ves 66.08 316 *eP* **P 22 25 16.6 0.0**
PVCC *epP* pP 22 25 20.4 +2.4
CONA Conrad Observa 66.29 313⇑*iP* **P 22 25 18.3 +0.3**
comp=Z,16nm,1.3s,mb4.9,SNR=11
PRU Pruhonice 66.30 315 *eP* **P 22 25 18.4 +0.4**
PRU Pruhonice 66.30 315 *eP* **P 22 25 18.4 +0.4**
PRU *epP* pP 22 25 22.2 +2.8
BRG Berggiesshubel 66.31 316 *i* P **P 22 25 17.8 -0.3**
comp=Z,16nm,1.1s,mb5.0
BRG *i* 22 25 21.6
comp=Z,14nm,0.9s
BRG Berggiesshubel 66.31 316 *i* P **P 22 25 17.8 -0.3**
BRG pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
BRG pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
KOGS Kog 66.62 311 *eP* **P 22 25 19.7 -0.5**
CLL Collm 66.69 317 *eP* **P 22 25 19.6 -0.9**
comp=Z,17nm,1.1s,mb5.0
CLL *epP* pP 22 25 23.7 +1.8
CLL Collm 66.69 317⇑*iP* **P 22 25 19.8 -0.7**
CLL *e* 22 25 52.0
CLL pmax pmax
comp=Z,17nm,1.1s,mb5.0
CLL Collm 66.69 317⇑*iP* **P 22 25 19.8 -0.7**
comp=Z,17nm,1.1s,mb5.0
CLL *i* 22 25 23.7
CLL *e*PcP PcP 22 25 52.0 +2.4
CLL Collm 66.69 317⇑*iP* **P 22 25 19.8 -0.7**
comp=Z,17nm,1.1s,mb5.0
CLL *i* pP pP 22 25 23.7 +1.8
CLL *e*PcP PcP 22 25 52.0 +2.4
MUD Monsted U'grnd 66.71 323⇑*iP* **P 22 25 20.4 -0.1**
MUD pmax pmax
comp=Z,16nm,1.0s,mb5.0
MUD MLR MLR
comp=Z,240nm,18.0s,MS4.5
MUD Monsted U'grnd 66.71 323⇑*iP* **P 22 25 20.4 -0.1**
comp=Z,16nm,1.0s,mb5.0
MUD
comp=Z,240nm,18.0s
ARSA Arzberg 66.77 312⇑*iP* **P 22 25 20.6 -0.5**
comp=Z,7.9nm,1.0s,mb4.7,SNR=6.0
BPAW Bear Paw Mtn. 66.90 28 *eP* **P 22 25 21.4 -0.2**
comp=Z,10nm,1.2s,mb4.7
PPLA Purkeypile 66.96 29 *eP* **P 22 25 22.7 +0.7**
comp=Z,56nm,1.1s,mb5.5
BSEG Bad Segeberg 67.13 320 *eP* **P 22 25 23.3 0.0**
comp=Z,32nm,1.0s,mb5.3
BSEG *epP* pP 22 25 27.3 +2.6
KHC Kasperske Hory 67.21 315 *eP* **P 22 25 23.7 -0.2**
comp=Z,3.8nm,0.8s,mb4.5
KHC Kasperske Hory 67.21 315 *eP* **P 22 25 23.3 -0.6**
KHC *epP* pP 22 25 27.7 +2.4
GCIS Gornji Cirnik 67.25 311 *eP* **P 22 25 23.6 -0.5**
GEC2 GERESS Array S 67.25 314 *eP* **P 22 25 23.7 -0.4**
comp=Z,16nm,1.1s,mb5.0
GEC2 GERESS Array S 67.25 314 *eP* **P 22 25 23.7 -0.4**
comp=Z,3μm,1.1s
GERES GERESS Array B 67.25 314 P **P 22 25 23.9 -0.3**
comp=Z,8.6nm,1.0s,mb4.8,baz=74,slow=5.7,SNR=44
SOKA Soboth 67.30 312⇑*iP* **P 22 25 24.1 -0.3**
comp=Z,16nm,1.1s,mb5.0
MOA Molln 67.31 313⇑*iP* **P 22 25 24.6 +0.1**
comp=Z,30nm,1.6s,mb5.1,SNR=12
TANN Tannenbergstha 67.36 316 *eP* **P 22 25 24.3 -0.5**
comp=Z,14nm,1.1s,mb4.9
NKC Novy Kostel 67.44 316 *eP* **P 22 25 24.2 -1.1**
NKC Novy Kostel 67.44 316 *eP* **P 22 25 24.2 -1.1**
WET Wettzell 67.63 315 *eP* **P 22 25 26.3 -0.2**
comp=Z,13nm,1.2s,mb4.8
WET *epP* pP 22 25 30.5 +2.6
OBKA Obir 67.68 312⇑*iP* **P 22 25 26.5 -0.4**
comp=Z,8.6nm,1.0s,mb4.7
MOX Moxa 67.76 317 *eP* **P 22 25 27.2 -0.1**
comp=Z,19nm,1.5s,mb4.9
MOX *e* 22 25 30.8
MOX Moxa 67.76 317 *eP* **P 22 25 26.8 -0.5**
comp=Z,16nm,1.3s,mb4.9
MOX Moxa 67.76 317 *eP* **P 22 25 27.2 -0.1**
MOX pmax pmax
comp=Z,19nm,1.5s,mb4.9
ROTZ Rotzenmuhle 67.77 316 *eP* **P 22 25 27.4 0.0**
comp=Z,26nm,1.1s,mb5.2
ROTZ *epP* pP 22 25 31.5 +2.7
NRDL Niedersach Rie 67.84 319 *eP* **P 22 25 27.8 0.0**
comp=Z,31nm,1.1s,mb5.2
NRDL *epP* pP 22 25 32.0 +2.8
LJU Ljubljana 67.88 311 *eP* **P 22 25 27.8 -0.4**
LJU *e* 22 25 31.7
CLZ Clausthal 67.97 318 *eP* **P 22 25 28.4 -0.2**
comp=Z,31nm,1.0s,mb5.3
CLZ *epP* pP 22 25 32.5 +2.5
RJOB Jochberg 68.26 313 *eP* **P 22 25 30.2 -0.3**
comp=Z,9.0nm,1.5s,mb4.6
CADS Cadrg 68.30 312 *eP* **P 22 25 29.7 -1.2**
GRF Grafenberg Arr 68.39 316 *eP* **P 22 25 31.2 -0.1**
comp=Z,37nm,1.1s,mb5.3
GRF *epP* pP 22 25 35.5 +2.9
GRF *eL* 23 15 51.6
comp=Z,335nm,21.5s
GRF Grafenberg Arr 68.39 316 *eP* **P 22 25 31.2 -0.1**
GRF pmax pmax
comp=Z,37nm,1.1s,mb5.3
GRF MLR MLR
comp=Z,300nm,21.5s,MS4.5
TRI Trieste 68.50 311 *eP* **P 22 25 31.5 -0.6**
TRI pmax pmax
comp=Z,18nm,1.0s,mb5.0
TRI Trieste 68.50 311 *eP* **P 22 25 31.5 -0.6**
comp=Z,18nm,1.0s,mb5.0
UBBA Unterbreizbach 68.61 317 *eP* **P 22 25 32.1 -0.6**
comp=Z,14nm,1.5s,mb4.7
FUR Furstenfeldbru 69.00 314 *eP* **P 22 25 35.2 +0.1**
comp=Z,64nm,1.2s,mb5.4
WTTA Wattenberg 69.17 313⇑*iP* **P 22 25 35.8 -0.4**
comp=Z,25nm,1.0s,mb5.1,SNR=9.6
WATA Walderalm 69.18 313⇑*iP* **P 22 25 36.3 0.0**
comp=Z,12nm,0.9s,mb4.8
IBBN Ibbenburen 69.22 319 *eP* **P 22 25 36.1 -0.3**
comp=Z,30nm,1.3s,mb5.1
MOTA Moosalm 69.46 314⇑*iP* **P 22 25 37.3 -0.7**
comp=Z,16nm,1.0s,mb4.9,SNR=10
RETA Reutte 69.61 314⇑*iP* **P 22 25 38.2 -0.7**
comp=Z,7.4nm,1.2s,mb4.5
TNS Taunus Mts 69.77 317 *eP* **P 22 25 39.4 -0.4**
comp=Z,15nm,1.0s,mb4.9
TNS *epP* pP 22 25 43.8 +2.6
FETA Feichten 69.84 313⇑*iP* **P 22 25 39.7 -0.6**
comp=Z,22nm,1.0s,mb5.1,SNR=9.3
BUG Bochum--Univer 69.88 319 *eP* **P 22 25 40.2 -0.3**
comp=Z,26nm,1.1s,mb5.1
STU Stuttgart 69.98 316 *eP* **P 22 25 40.5 -0.7**
comp=Z,19nm,1.0s,mb5.0
STU *epP* pP 22 25 44.9 +2.3
STU Stuttgart 69.98 316 *eP* **P 22 25 41.0 -0.2**
STU pmax pmax
comp=Z,5.0nm,0.4s,mb4.8
STU Stuttgart 69.98 316 *eP* **P 22 25 41.0 -0.2**
comp=Z,5.4nm,0.4s,mb4.8
AQU L'Aquila 70.18 308⇑P **P 22 25 40.6 -1.9**
AQU L'Aquila 70.18 308 *eP* **P 22 25 42.8 +0.2**
comp=Z,30nm,1.2s,mb5.1
AQU L'Aquila 70.18 308⇑*iP* **P 22 25 40.6 -1.9**
DAVA Damuels 70.24 314⇑*iP* **P 22 25 43.2 +0.4**
comp=Z,10nm,1.0s,mb4.7
MURB Monte Urbino 70.36 309 P **P 22 25 44.0 +0.4**
comp=Z,19nm,1.4s,mb4.8
ASS Assisi 70.37 309 P **P 22 25 44.8 +1.2**
comp=Z,25nm,0.1s,mb6.1
ABH Alteburg 70.44 317 *eP* **P 22 25 44.0 0.0**
DAVOX Davos/Dischmat 70.47 313 P **P 22 25 43.7 -0.5**
comp=Z,13nm,0.8s,mb4.9,baz=104,slow=4.9,SNR=18
INK Inuvik 70.50 20 *eP* **P 22 25 43.1 -0.9**
INK pmax pmax
comp=Z,4.0nm,1.0s
INK Inuvik 70.50 20 *eP* **P 22 25 43.1 -0.9**
comp=Z,4.4nm,1.0s,mb4.3
SPAK Spaichingen-Ko 70.53 315 *eP* **P 22 25 44.6 +0.1**
BFO Black Forest 70.69 315 *eP* **P 22 25 44.7 -0.8**
comp=Z,11nm,1.1s,mb4.7
BFO *epP* pP 22 25 49.1 +2.2
BFO Black Forest 70.69 315 *eP* **P 22 25 44.8 -0.7**
BFO pmax pmax
comp=Z,20nm,1.3s,mb4.9
BFO Black Forest 70.69 315 *eP* **P 22 25 44.8 -0.8**
comp=Z,20nm,1.3s,mb4.9
RUP Ruppelstein 70.80 317 *eP* **P 22 25 46.4 +0.2**
FELD Feldberg im Sc 71.10 315 *eP* **P 22 25 47.8 -0.2**
GSCL Gusciola 71.12 311 P **P 22 25 49.4 +1.2**
comp=Z,18nm,1.0s,mb5.0
DAWY Dawson 71.26 25 *eP* **P 22 25 48.2 -0.5**
CDF Champ du Feu 71.28 316⇑*iP* **P 22 25 48.5 -0.6**
comp=Z,41nm,1.0s,mb5.0
CDF Champ du Feu 71.28 316⇑*iP* **P 22 25 48.5 -0.6**
CDF pmax pmax
comp=Z,21nm,1.0s,mb5.0
CDF Champ du Feu 71.28 316⇑*iP* **P 22 25 48.5 -0.6**
comp=Z,20nm,1.0s,mb5.0
WLF Walferdange 71.34 317 *eP* **P 22 25 49.6 +0.2**
comp=Z,50nm,1.1s,mb5.4
WLF *epP* pP 22 25 53.7 +2.9
WLF Walferdange 71.34 317 *eP* **P 22 25 49.6 +0.2**
WLF pmax pmax
comp=Z,34nm,1.0s,mb5.2
WLF Walferdange 71.34 317 *eP* **P 22 25 49.6 +0.2**
comp=Z,34nm,1.0s,mb5.2
ECH Echery 71.44 316 *eP* **P 22 25 49.5 -0.6**
ECH Echery 71.44 316 *eP* **P 22 25 49.6 -0.5**
ECH pmax pmax
comp=Z,13nm,1.0s,mb4.8
ECH Echery 71.44 316 *eP* **P 22 25 49.6 -0.5**
comp=Z,13nm,1.0s,mb4.8
MOF Molkenrain 71.63 315 *eP* **P 22 25 50.8 -0.4**
THEF They Montfort 72.12 316 *eP* **P 22 25 54.0 -0.2**
KMBO Kilima Mbogo 72.17 257 *eP* **P 22 25 55.1 +0.1**
KMBO pmax pmax
comp=Z,12nm,1.3s
KMBO Kilima Mbogo 72.17 257 *eP* **P 22 25 55.1 +0.1**
comp=Z,12nm,1.3s,mb4.7
SUMG Summit 72.24 349 *eP* **P 22 25 54.5 0.0**
comp=Z,21nm,1.1s,mb5.0
SUMG Summit 72.24 349 *i P* **P 22 25 54.3 -0.2**
comp=Z,12nm,1.0s,mb4.8
RES Resolute Bay 72.25 6 *eP* **P 22 25 54.7 +0.2**
RES pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
RES Resolute Bay 72.25 6 *eP* **P 22 25 54.7 +0.2**
comp=Z,6.5nm,1.0s,mb4.5
STKA Stephens Creek 72.68 148 P **P 22 25 56.8 -0.8**
comp=Z,5.1nm,0.8s,mb4.5,baz=18,slow=5.1,SNR=6.4
LPG La Plagne 72.99 313⇑*iP* **P 22 25 59.6 +0.2**
comp=Z,74nm,0.8s,mb5.3
LPG La Plagne 72.99 313⇑*iP* **P 22 25 59.6 +0.2**
LPG pmax pmax
comp=Z,37nm,0.8s,mb5.4
LPG La Plagne 72.99 313⇑*iP* **P 22 25 59.6 +0.2**
comp=Z,37nm,0.8s,mb5.4
LPL La Plagne 72.99 313⇑*iP* **P 22 25 59.5 +0.1**
comp=Z,118nm,1.2s,mb5.4
LPL La Plagne 72.99 313⇑*iP* **P 22 25 59.5 +0.1**
LPL pmax pmax
comp=Z,59nm,1.2s,mb5.4
LPL La Plagne 72.99 313⇑*iP* **P 22 25 59.5 +0.1**
comp=Z,59nm,1.2s,mb5.4
MENF Mencas 73.14 320 *eP* **P 22 26 00.2 0.0**
SAOF Saorge 73.22 312 *eP* **P 22 26 00.5 -0.3**
BNI Bardonecchia 73.25 313 *eP* **P 22 26 00.7 -0.2**
BNI pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
BNI Bardonecchia 73.25 313 *eP* **P 22 26 00.7 -0.3**
comp=Z,10nm,0.9s,mb4.8
EKA Eskdalemuir Ar 73.34 326 P **P 22 26 00.5 -0.8**
baz=50,slow=6.6
ESK Eskdalemuir 73.37 326 *i P* **P 22 26 02.4 +0.9**
LUCF Luceram 73.40 312 *eP* **P 22 26 01.1 -0.7**
TOUF Mont Tournerai 73.40 312 *eP* **P 22 26 01.6 -0.3**
HYT Haines Junctio 73.93 27 *eP* **P 22 26 08.7 +4.1**
SMF Signal de Mont 74.17 315⇑*iP* **P 22 26 05.6 -0.7**
comp=Z,55nm,1.0s,mb5.1
SMF Signal de Mont 74.17 315⇑*iP* **P 22 26 05.6 -0.7**
SMF pmax pmax
comp=Z,27nm,1.0s,mb5.1
SMF Signal de Mont 74.17 315⇑*iP* **P 22 26 05.6 -0.7**
comp=Z,28nm,1.0s,mb5.1
PLDF La Plantade 74.65 315 *eP* **P 22 26 09.9 +0.8**
AGO Saint Agoulin 74.90 315 *eP* **P 22 26 11.5 +0.9**
PYM Petit Puy Mans 75.13 315 *eP* **P 22 26 12.4 +0.5**
TCF Toulx Ste Croi 75.32 316⇑*iP* **P 22 26 12.5 -0.5**
comp=Z,34nm,1.0s,mb4.9
TCF Toulx Ste Croi 75.32 316⇑*iP* **P 22 26 12.5 -0.5**
TCF pmax pmax
comp=Z,17nm,1.0s,mb4.9
TCF Toulx Ste Croi 75.32 316⇑*iP* **P 22 26 12.5 -0.5**
comp=Z,17nm,1.0s,mb4.9
KEST Kesra 76.09 304 P **P 22 26 16.6 -1.0**
comp=Z,2.0nm,1.0s,mb4.0,baz=22,slow=14,SNR=4.0
CAF Calviac 76.13 315⇑*iP* **P 22 26 17.5 -0.2**
comp=Z,28nm,1.1s,mb4.8
CAF Calviac 76.13 315⇑*iP* **P 22 26 17.5 -0.2**
CAF pmax pmax
comp=Z,14nm,1.1s,mb4.8
CAF Calviac 76.13 315⇑*iP* **P 22 26 17.5 -0.2**
comp=Z,14nm,1.1s,mb4.8
CLLI Llivia 77.49 312 P **P 22 26 25.1 -0.3**
CFON Fontmartina 77.59 312 P **P 22 26 26.1 +0.2**
comp=Z,2.7nm,0.7s,mb4.3
EBIE Bielsa 78.51 313 P **P 22 26 31.7 +0.7**
comp=Z,6.0nm,1.1s,mb4.4
ELIZ Elizondo 79.26 315 P **P 22 26 36.0 +0.8**
ELIZ pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
ELIZ Elizondo 79.26 315 P **P 22 26 36.0 +0.8**
comp=Z,8.7nm,0.9s,mb4.7
YKA Yellowknife Ar 80.06 18 P **P 22 26 38.5 -0.6**
comp=Z,4.1nm,0.8s,mb4.4,baz=326,slow=5.0,SNR=14
YKA Yellowknife Ar 80.06 18 P **P 22 26 38.5 -0.6**
EMOS Mosqueruela 80.19 312 P **P 22 26 41.1 +0.8**
comp=Z,13nm,1.7s,mb4.6
ELAN Lanestosa 80.36 315 P **P 22 26 41.9 +0.7**
comp=Z,19nm,0.9s,mb5.0
EARI Arriondas 81.37 316 P **P 22 26 46.4 -0.1**
comp=Z,9.0nm,1.6s,mb4.5
ETOB Tobarra 81.86 311 P **P 22 26 50.0 +0.8**
comp=Z,6.2nm,0.8s,mb4.6
EMUR La Murta 82.12 310 P **P 22 26 50.6 0.0**
comp=Z,8.0nm,1.0s,mb4.6
GUD Guadarrama 82.32 314 P **P 22 26 52.0 +0.4**
GUD pmax pmax
comp=Z,16nm,1.6s,mb4.7
GUD Guadarrama 82.32 314 P **P 22 26 52.0 +0.4**
comp=Z,16nm,1.6s,mb4.7
EPON Pontenova 82.48 317 P **P 22 26 52.6 +0.3**
comp=Z,7.0nm,1.1s,mb4.5
ESDC Sonseca Array 82.78 313 P **P 22 26 53.6 -0.3**
comp=Z,2.3nm,0.8s,mb4.3,baz=40,slow=4.9,SNR=12
EHUE Huescar 83.01 311 P **P 22 26 57.8 +2.6**
EHUE pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
EHUE Huescar 83.01 311 P **P 22 26 57.8 +2.5**
comp=Z,1.7nm,0.7s,mb4.2
EQES Quesada 83.32 311 P **P 22 26 57.1 +0.3**
comp=Z,5.1nm,0.9s,mb4.5
MVO Moncorvo 83.74 315 P **P 22 26 59.0 +0.1**
MVO Moncorvo 83.74 315 *eP* **P 22 26 59.5 +0.6**
comp=Z,26nm,1.1s,mb5.3
EADA Adamuz 84.06 312 P **P 22 27 00.8 +0.2**
comp=Z,3.7nm,0.9s,mb4.5
EGUA Guajares 84.21 310 P **P 22 27 01.2 -0.2**
EGUA pmax pmax
comp=Z,36nm,1.7s,mb5.2
EGUA Guajares 84.21 310 P **P 22 27 01.1 -0.3**
comp=Z,36nm,1.7s,mb5.2
ELUQ Luque 84.23 311 P **P 22 27 01.3 -0.2**
ELUQ pmax pmax
comp=Z,8.0nm,0.7s,mb5.0
ELUQ Luque 84.23 311 P **P 22 27 01.3 -0.2**
comp=Z,7.6nm,0.7s,mb4.9
ECAB El Cabril 84.65 312 P **P 22 27 03.4 -0.2**
comp=Z,8.4nm,1.0s,mb4.8
PMRV Marv??o 85.03 314 *eP* **P 22 27 05.0 -0.5**
comp=Z,24nm,1.7s,mb5.0
EMIJ Mijas 85.15 311 P **P 22 27 07.4 +1.2**
comp=Z,6.0nm,0.9s,mb4.7
EBAD Badajoz 85.22 313 P **P 22 27 06.5 +0.1**
comp=Z,4.1nm,0.8s,mb4.6
PBAR Barrancos 85.59 313 *eP* **P 22 27 08.7 +0.4**
comp=Z,17nm,1.6s,mb5.0
EMIN Mina Concepcio 85.62 312 P **P 22 27 08.1 -0.4**
comp=Z,5.3nm,0.9s,mb4.8
ESPR Espera 85.66 311 P **P 22 27 08.0 -0.7**
comp=Z,2.1nm,1.6s,mb4.1
TAM Tamanrasset 85.73 294 *eP* **P 22 27 09.3 0.0**
TAM pmax pmax
comp=Z,11nm,1.6s,mb4.8
TAM Tamanrasset 85.73 294 *eP* **P 22 27 09.3 0.0**
comp=Z,11nm,1.6s,mb4.8
EDM Edmonton 88.26 22 *eP* **P 22 27 21.2 +0.2**
JCW Jim Creek 89.24 29 *eP* **P 22 27 26.8 +1.0**
FFC Flin Flon 90.00 15 *i P* **P 22 27 29.4 +0.2**
FFC Flin Flon 90.00 15 *eP* **P 22 27 28.8 -0.4**
comp=Z,12nm,0.9s,mb5.2
SLMT Seeley Lake 93.30 25 *eP* **P 22 27 44.7 +0.1**
comp=Z,8.2nm,1.1s,mb5.1
TORD Torodi Ar. Bea 94.12 288 P **P 22 27 48.2 -0.7**
comp=Z,1.6nm,0.9s,mb4.5,baz=57,slow=3.5,SNR=6.5
ULM Lac du Bonnet 95.50 13 LR LR 23 14 00.7
comp=Z,304nm,18.7s,MS4.8,baz=356,slow=37
SDV Santo Domingo 138.64 354 PKhKP PKPpre 22 33 43.7
comp=Z,2.5nm,0.6s,baz=56,slow=7.3,SNR=3.6
OTAV Otavalo 147.24 7 *e*PKPbc PKPbc 22 34 13.8 -0.2
CAM4 Nova Friburgo 149.79 281⇑*iP* PKPdf 22 34 17.4 +1.8
CAM4 *i* 22 34 22.4
CAM4 *i* 22 34 24.6
CAM4 *i* 22 34 40.2
CAM4 *i* 22 34 44.8
CAM4 *i* 22 35 01.9
CAM4 *i* 22 35 11.0
CAM4 *i* 22 35 31.7
USHA Ushuaia 157.25 189 PKPab PKPab 22 34 55.4 -0.7
comp=Z,4.8nm,0.9s,baz=166,slow=4.2,SNR=2.6
SIV San Ignacio 159.39 320 PKPab PKPab 22 35 05.4 -1.0
comp=Z,3.8nm,1.0s,baz=66,slow=8.9,SNR=8.5
LPAZ La Paz 162.76 338 PKP PKPdf 22 34 32.9 +0.3
comp=Z,2.1nm,1.0s,baz=35,slow=3.7,SNR=4.4

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*IDC **07** 23:02:53.8±0.9, 8°.07S×120°.36E, h0km, mb4.0/6, mb1 4.1/9, mb1mx3.9/23, mbtmp4.0/9, ML3.8/3, MS3.3/1, Ms1 3.3/1, ms1mx2.3/23, Error ellipse: s-maj=55.8km s-min=15.6km az=67.0*
*NEIC **07** 23:02:55.3±0.5, 8°.11S×120°.27E, h10km, mb4.2/2, Error ellipse: s-maj=17.0km s-min=7.4km az=65.0*
*ISCJB **07** 23:02:56.7±0.5, 8°.14S±0°.05×120°.30E±0°.07, h33km, mb4.0/5, Error ellipse: s-maj=11.1km s-min=5.5km az=154.0*
*DJA **07** 23:03:01, 8°.04S×120°.54E, h41km, MLv4.1/3*
ISC 07 23:02:58.9±0.5, 8°.12S±0°.05×120°.34E±0°.07, h35km, n22, σ19°05/28, mb4.0/5, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.54**	**182**	P		**Pn**	**Pn**	**23 03 24.5**	**+0.7**
WSI				S			**Sn**	**23 03 47.7**	**+5.2**
MMRI	**Maumere**	**1.94**	**105**	P		**Pn**	**Pn**	**23 03 29.5**	**+0.1**
MMRI				S			**Sn**	**23 03 52.5**	**0.0**
BKSI	**Bulukumba**	**2.79**	**355**	P		**Pn**	**Pn**	**23 03 41.1**	**0.0**
KAPI	**Kappang**	**3.14**	**349**	Pn		**Pn**	**Pn**	**23 03 44.0**	**-1.9**
	16nm,0.3s,baz=156,slow=7.8,SNR=51								
KAPI				Sn			**Sn**	**23 04 19.7**	**-2.6**
	4.7nm,0.3s,baz=230,slow=17,SNR=3.1								
KAPI	**Kappang**	**3.14**	**349**	Pn		**Pn**	**Pn**	**23 03 44.0**	**-1.9**
KAPI				Sn			**Sn**	**23 04 19.7**	**-2.6**
BNSI	**Bone**	**3.71**	**356**	P		**Pn**	**Pn**	**23 03 54.8**	**+1.1**
TTSI	**Tana Toraja**	**5.07**	**354**	P		**Pn**	**Pn**	**23 04 14.4**	**+2.0**
	2μm28nm,1.0s								
IGBI	**Denpasar**	**5.19**	**262**	P		**Pn**	**Pn**	**23 04 20.3**	**+6.2**
FITZ	**Fitzroy Crossi**	**11.18**	**153**	Pn		**Pn**	**Pn**	**23 05 36.8**	**+0.6**
	0.4nm,0.3s,baz=88,slow=6.5,SNR=7.8								
FITZ				Sn			**Sn**	**23 07 38.2**	**-1.8**
	0.4nm,0.3s,baz=75,slow=18,SNR=2.9								
FITZ				LR		LR	LR	23 10 18.6	
	comp=Z,165nm,20.4s,baz=6.7,slow=40								
FITZ	**Fitzroy Crossi**	**11.18**	**153**	*e*Pn		**Pn**	**Pn**	**23 05 36.1**	**-0.1**
FITZ				*e*S			**Sn**	**23 07 36.2**	**-3.8**
FITZ				LR		LR	LR	23 10 18.6	
KAKA	**Kakadu**	**12.74**	**112**	*e*Pn		**Pn**	**Pn**	**23 05 58.4**	**+0.8**
MBWA	**Marble Bar**	**12.97**	**183**	*e*Pn		**Pn**	**Pn**	**23 05 60.0**	**-0.8**
MBWA				*e*S			Sx	23 08 15.8	
WRA	**Warramunga Arr**	**17.94**	**132**	P		**Pn**	**Pn**	**23 07 04.8**	**-0.9**
	0.4nm,0.3s,baz=302,slow=14,SNR=19								
WRA				S			Sx	23 10 15.0	
	0.1nm,0.3s,baz=310,slow=26,SNR=4.2								
WRAB	**Tennant Creek**	**17.94**	**132**	*e*Pn		**Pn**	**Pn**	**23 07 05.1**	**-0.6**
	55nm,2.2s								
ASAR	**Alice Springs**	**20.19**	**141**	P		**P**	**P**	**23 07 31.2**	**+0.6**
	3.1nm,0.5s,baz=312,slow=8.8,SNR=28								
NWAO	**Narrogin (SRO)**	**24.85**	**186**	P		**P**	**P**	**23 08 18.5**	**+0.5**
	12nm,0.9s,mb4.5,baz=48,slow=9.1,SNR=4.3								
NWAO	**Narrogin (SRO)**	**24.85**	**186**	P		**P**	**P**	**23 08 18.5**	**+0.4**
STKA	**Stephens Creek**	**30.81**	**143**	P		**P**	**P**	**23 09 11.2**	**-0.3**
	1.0nm,0.4s,mb4.0,baz=319,slow=10,SNR=5.0								
STKA	**Stephens Creek**	**30.81**	**143**	*e*P		**P**	**P**	**23 09 12.1**	**+0.6**
	5.7nm,2.3s,mb4.0								
SONM	**Songino Array**	**57.06**	**349**	P		**P**	**P**	**23 12 42.2**	**+0.9**
	0.5nm,0.7s,mb3.7,baz=172,slow=9.1,SNR=4.7								
MKAR	**Makanchi Array**	**64.30**	**332**	P		**P**	**P**	**23 13 31.6**	**+0.8**
	1.2nm,0.6s,mb4.1,baz=108,slow=10,SNR=11								
ZALV	**Zalesovo Beam**	**68.71**	**338**	P		**P**	**P**	**23 13 57.6**	**-1.1**
	1.4nm,0.7s,mb4.0,baz=142,slow=5.6,SNR=7.4								

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*THR **07** 23:09:28.8±0.6, 37°.21N×47°.63E, h14km±5km, ML3.5*
*CSEM **07** 23:09:28.4±0.2, 37°.20N×47°.63E, h2km, ML3.5, Error ellipse: s-maj=8.3km s-min=4.8km az=66.0*
*ISCJB **07** 23:09:28.9±0.4, 37°.22N±0°.03×47°.59E±0°.04, h10km, Error ellipse: s-maj=5.6km s-min=3.6km az=144.8*
*TEH **07** 23:09:29.2, 37°.21N×47°.66E, h3km*
ISC 07 23:09:29.6±0.4, 37°.24N±0°.03×47°.65E±0°.04, h10km, n38, σ09°93/46, 2D, Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ISRB	**Sarab**	**0.58**		**2**⇓*e*Pg		**Pg**	**Pg**	**23 09 40.4**	**-0.5**
ISRB				*e*Sg			**Sg**	**23 09 49.3**	**+0.7**
ISRB				*e*				23 09 50.0	
	comp=Z,62μm,0.1s								
ISRB	**Sarab**	**0.58**		**2**⇓*e*Pg		**Pg**	**Pg**	**23 09 40.4**	**-0.5**
ISRB				*e*Sg			**Sg**	**23 09 49.3**	**+0.7**
ZNJK	**Zanjan**	**1.01**	**124**	*e*Pg		**Pg**	**Pg**	**23 09 47.7**	**-1.3**
ZNJK	**Zanjan**	**1.01**	**124**	*e*Pg		**Pg**	**Pg**	**23 09 47.7**	**-1.3**
IHRS	**Heris**	**1.18**	**336**	*e*Pg		**Pg**	**Pg**	**23 09 51.1**	**-1.1**
IHRS				*e*Sg			**Sg**	**23 10 07.4**	**-0.1**
IHRS				*e*				23 10 09.1	

	comp=Z,15μm,0.1s					
IFTB	**Fath-abad**	**1.26**	**308**	*e*Pg	**Pg**	**23 09 52.6 -1.2**
IFTB				*e*		23 09 53.8
	comp=Z,100μm,0.0s					
IAZR	**Azarshahr**	**1.40**	**289**	*e*Pg	**Pn**	**23 09 54.8 -0.3**
IAZR				*e*		23 09 55.5
	comp=Z,25μm,0.1s					
IAZR	**Azarshahr**	**1.40**	**289**	*e*Pg	**Pn**	**23 09 54.8 -0.3**
ITBZ	**Tabriz**	**1.55**	**310**	*e*Pn	**Pn**	**23 09 57.3 +0.1**
ITBZ				*e*		23 09 58.5
	comp=Z,5μm,0.2s					
ITBZ	**Tabriz**	**1.55**	**310**	*e*Pn	**Pn**	**23 09 57.3 +0.1**
GRMI	**Germi**	**1.58**	**7**	*e*Pg	**Pn**	**23 09 58.4 +0.8**
GRMI	**Germi**	**1.58**	**7**	*e*Pg	**Pn**	**23 09 58.5 +0.9**
ISHB	**Shabestar**	**1.92**	**304**	*e*	**Pg**	**23 10 07.4 +1.1**
	comp=Z,6μm,0.2s					
ISHB				*e*Pn	**Pn**	**23 10 03.2 +1.0**
IMRD	**Marand**	**2.12**	**314**	*e*	**Sg**	**23 10 43.2 +5.3**
	comp=Z,8μm,0.2s					
IMRD				*e*Pn	**Pn**	**23 10 06.7 +1.6**
SNGE	**Sanandaj**	**2.16**	**187**	*e*Pg	**Pn**	**23 10 07.5 +1.9**
SNGE	**Sanandaj**	**2.16**	**187**	*e*Pg	**Pn**	**23 10 07.5 +1.9**
ILIN	**Lien**	**2.38**	**194**	*e*	**Sg**	**23 10 52.5 +6.3**
	comp=N,2μm,0.2s					
ILIN				*e*Pn	**Pn**	**23 10 08.1 -0.6**
IRAZ	**Razeghan**	**2.60**	**134**	*e*Pn	**Pn**	**23 10 11.6 -0.1**
IRAZ				*e*		23 10 17.2
	comp=Z,2μm,0.2s					
IRAZ	**Razeghan**	**2.60**	**134**	*e*Pn	**Pn**	**23 10 11.6 -0.1**
IVIS	**Veis**	**2.79**	**194**	*e*Pn	**Pn**	**23 10 14.2 0.0**
IVIS						23 10 32.8
	comp=Z,490nm,0.2s					
IVIS	**Veis**	**2.79**	**194**	*e*Pn	**Pn**	**23 10 14.2 0.0**
IMHD	**Mahdasht**	**2.89**	**122**	*e*	**Pb**	**23 10 20.2 -1.0**
	comp=Z,2μm,0.1s					
THKV	**Tehran--Karaj**	**2.92**	**116**	*e*Pn	**Pn**	**23 10 17.1 +1.0**
THKV				AML	AML	23 11 01.4
	comp=N,186nm,1.0s					
THKV				AML	AML	23 11 02.7
	comp=E,168nm,0.4s					
THKV	**Tehran--Karaj**	**2.92**	**116**	*e*Pn	**Pn**	**23 10 17.1 +1.0**
IKOM	**Komasi**	**3.06**	**182**	*e*Pn	**Pn**	**23 10 17.9 -0.1**
IKOM				*e*		23 11 14.3
	comp=Z,914nm,0.3s					
IKOM	**Komasi**	**3.06**	**182**	*e*Pn	**Pn**	**23 10 17.9 -0.1**
CHTH	**Charan**	**3.10**	**114**	*e*Pn	**Pn**	**23 10 19.1 +0.5**
ASAO	**Ashtian**	**3.31**	**144**	*e*Pn	**Pn**	**23 10 22.3 +0.8**
MSL	**Mosul**	**3.73**	**258**	*e*Pn	**Pg**	**23 10 41.0 -0.1**
MSL				*e*Sn	**Sg**	**23 11 29.0 -0.5**
DAMV	**Damavand**	**3.84**	**113**	*e*Pn	**Pn**	**23 10 29.6 +0.9**
DAMV				AML	AML	23 11 32.4
	comp=E,64nm,0.1s					
IDMV	**Damavand**	**3.91**	**114**	*e*Pn	**Pn**	**23 10 29.7 0.0**
IDMV				*e*		23 11 36.8
	comp=Z,540nm,0.2s					
IDMV	**Damavand**	**3.91**	**114**	*e*Pn	**Pn**	**23 10 29.7 0.0**
DGRG	**David-gareji**	**4.56**	**338**	P	**Pg**	**23 10 52.2 -4.7**
DGRG				S	**Sg**	**23 11 52.7 -3.2**
ISFB	**Sefidab**	**4.72**	**126**	*e*	**Pg**	**23 10 59.4 -0.6**
	comp=Z,346nm,0.2s					
ISHM	**Shahmirzad**	**4.77**	**106**	*e*	**Pg**	**23 11 08.0 +7.0**
	comp=Z,402nm,0.2s					
TBLG	**Delisi**	**5.02**	**334**	P	**Sg**	**23 12 06.0 -4.6**
IKLH	**Kolahrood**	**5.07**	**139**	*e*	**Pg**	**23 11 05.2 -1.5**
	comp=Z,147nm,0.3s					
IANJ	**Anjilo**	**5.36**	**107**	*e*	**Pg**	**23 11 19.1 +6.8**
	comp=Z,90nm,0.2s					

IDC 07 23:17:28.1±1.9, 8°.04S×120°.19E, h0km, mb3.2/2, mb1 3.5/4, mb1mx3.3/21, mbtmp3.3/4, ML3.3/2, Error ellipse: s-maj=92.6km s-min=21.7km az=62.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**3.04**	**352**	Pn	Pn	23 18 18.2	+0.7
	2.7nm,0.3s,baz=217,slow=5.5,SNR=8.2						
KAPI				Sn	Sn	23 18 53.6	-0.9
	2.6nm,0.3s,baz=73,slow=19,SNR=3.2						
WRA	**Warramunga Arr**	**18.10**	**132**	P	Pn	23 21 40.8	-0.3
	0.1nm,0.3s,baz=308,slow=12,SNR=8.1						
ASAR	**Alice Springs**	**20.35**	**141**	P	P	23 22 06.4	+0.2
	0.9nm,0.6s,baz=316,slow=8.8,SNR=15						
MKAR	**Makanchi Array**	**64.16**	**332**	P	P	23 28 04.4	+0.1
	0.1nm,0.5s,baz=126,slow=7.7,SNR=3.0						

MEX 07 23:26:57.8±0.7, 16°.02N×97°.58W, h21km±32km, MD3.7, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.64**	**305**	*i* P	Pb	23 27 08.0	-2.3
PNIG				*i* S	Sb	23 27 16.4	-2.4
VHO	**Vista Hermosa**	**1.33**	**38**	*i* P	Pn	23 27 18.4	-2.7
VHO				*i* S	Sn	23 27 33.7	-4.4
HUIG	**Huatulco**	**1.44**	**100**	*i* P	Pn	23 27 20.6	-2.1
HUIG				*i* S	Sn	23 27 35.6	-5.4
UTMO	**Huajuapan**	**1.81**	**353**	*i* P	Pn	23 27 25.8	-2.1
UTMO				*i* S	Sn	23 27 47.2	-2.9
ACX	**Acapulco**	**2.39**	**291**	*e*P	Pn	23 27 34.0	-1.7
ACX				*i* S	Sn	23 28 02.2	-2.3
CAIG	**El Cayaco**	**2.77**	**292**	*e*P	Pn	23 27 38.6	-2.4
CAIG				*i* S	Sn	23 28 09.9	-4.0
MZVM		**3.52**	**334**	*i* P	Pn	23 27 49.3	-2.0
MZVM				*i* S	Sn	23 28 29.0	-3.3
IIO	**Organos**	**3.71**	**343**	*e*P	Pn	23 27 52.4	-1.6
IIO				*i* S	Sn	23 28 35.3	-1.8
PTVM	**Pico Tres Padr**	**3.84**	**338**	*e*P	Pn	23 27 53.4	-2.3
PTVM				*i* S	Sn	23 28 37.7	-2.6

IDC 07 23:32:32.1±1.4, 7°.01N×33°.95W, h0km, mb3.9/4, mb1 4.2/4, mb1mx3.6/25, mbtmp3.9/4, Error ellipse: s-maj=49.9km s-min=30.5km az=158.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**35.59**	**77**	P	P	23 39 31.4	-0.3
	0.9nm,0.9s,baz=263,slow=8.6,SNR=4.1						
LPAZ	**La Paz**	**40.99**	**235**	P	P	23 40 17.9	+0.8
	1.8nm,0.8s,baz=59,slow=5.9,SNR=8.7						
PDAR	**Pinedale Array**	**74.72**	**312**	P	P	23 44 12.8	-1.1
	0.5nm,0.6s,baz=81,slow=8.3,SNR=4.0						
YKA	**Yellowknife Ar**	**79.51**	**332**	P	P	23 44 41.9	+1.5
	0.7nm,0.8s,baz=94,slow=6.1,SNR=4.4						

*ISK **07** 23:40:46.6, 38°.12N×38°.56E, h7km, MD3.3*
*CSEM **07** 23:40:46.9±0.1, 38°.13N×38°.54E, h2km, MD3.3, Error ellipse: s-maj=2.0km s-min=1.7km az=147.0*
*DDA **07** 23:40:47.2, 38°.16N×38°.55E, h10km±2km, MD3.3*
*ISCJB **07** 23:40:47.2±0.5, 38°.15N±0°.02×38°.57E±0°.03, h4km±4km, Error ellipse: s-maj=4.1km s-min=3.6km az=162.7*
ISC 07 23:40:47.8±0.4, 38°.15N±0°.02×38°.57E±0°.03, h8km±4km, n43, σ0°89/62, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MYA	**Malataya**	**0.21**	**327**	PG	**Pg**	**23 40 52.3**	**+0.3**
MYA				*e*SG	**Sg**	**23 40 55.7**	**+0.9**
MYA	**Malataya**	**0.21**	**327**	*i* Pg	**Pg**	**23 40 52.3**	**+0.3**
MYA				*e*Sg	**Sg**	**23 40 55.7**	**+0.8**
ELZG	**Elazig**	**0.48**	**43**	*i* P	**Pg**	**23 40 56.8**	**-0.2**
ELZG				*i* S	**Sg**	**23 41 03.8**	**+0.5**
ELZG	**Elazig**	**0.48**	**43**	*i* P	**Pg**	**23 40 56.8**	**-0.2**
ELZG				*i* S	**Sg**	**23 41 03.8**	**+0.6**
AKCD	**Akcadag**	**0.53**	**286**	*i* P	**Pg**	**23 40 57.8**	**-0.2**
AKCD				*i* S	**Sg**	**23 41 05.7**	**+0.8**
AKCD	**Akcadag**	**0.53**	**286**	*i* P	**Pg**	**23 40 57.8**	**-0.2**
AKCD				*i* S	**Sg**	**23 41 05.7**	**+0.7**
SVRC	**Sivrice-ELAZID**	**0.62**	**68**	*e*PG	**Pg**	**23 40 59.3**	**-0.5**
SVRC				*e*SG	**Sg**	**23 41 08.7**	**+0.8**
SVRC	**Sivrice-ELAZID**	**0.62**	**68**	*e*Pg	**Pg**	**23 40 59.3**	**-0.5**
SVRC				*e*Sg	**Sg**	**23 41 08.7**	**+0.8**
ATAB	**Bozova**	**0.71**	**198**	*i* P	**Pg**	**23 41 01.0**	**-0.5**
ATAB				*i* S	**Sg**	**23 41 14.0**	**+3.2**
ATAB	**Bozova**	**0.71**	**198**	*i* P	**Pg**	**23 41 01.0**	**-0.5**
URFA	**Urfa**	**0.74**	**164**	*e*PG	**Pg**	**23 41 00.8**	**-1.2**
URFA				*e*SG	**Sg**	**23 41 11.1**	**-0.4**
URFA	**Urfa**	**0.74**	**164**	*e*Pg	**Pg**	**23 41 00.8**	**-1.1**
URFA				*e*Sg	**Sg**	**23 41 11.1**	**-0.4**
PTK	**Pertek**	**0.98**	**41**	*e*PG	**Pg**	**23 41 05.6**	**-1.1**
PTK	**Pertek**	**0.98**	**41**	*e*Pg	**Pg**	**23 41 05.6**	**-1.0**
DARE	**Darende-Malaty**	**1.00**	**323**	*e*PG	**Pg**	**23 41 05.0**	**-2.0**
DARE	**Darende-Malaty**	**1.00**	**323**	*e*Pg	**Pg**	**23 41 05.0**	**-2.0**
KEMA	**Kemaliye**	**1.12**	**357**	*i* P	**Pg**	**23 41 08.0**	**-1.3**
KEMA				*i* S	**Sg**	**23 41 23.3**	**-0.5**
KEMA	**Kemaliye**	**1.12**	**357**	*i* P	**Pg**	**23 41 08.0**	**-1.2**
KEMA				*i* S	**Sg**	**23 41 23.3**	**-0.5**
GZT	**Gaziantep**	**1.12**	**225**	*i* P	**Pg**	**23 41 09.9**	**+0.5**
GZT				*i* S	**Sg**	**23 41 24.9**	**+1.0**
DIYA	**Diyarbakir**	**1.25**	**100**	*i* P	**Pb**	**23 41 11.4**	**-0.2**
DIYA				*i* S	**Sg**	**23 41 29.4**	**+1.5**
DIYA	**Diyarbakir**	**1.25**	**100**	*i* P	**Pb**	**23 41 11.4**	**-0.1**
DIYA				*i* S	**Sg**	**23 41 29.4**	**+1.6**
DIY	**Diyarbakir**	**1.33**	**101**	*e*PN	**Pn**	**23 41 12.1**	**-0.6**
DIY				*e*SN	**Sn**	**23 41 31.2**	**+0.6**
DIY	**Diyarbakir**	**1.33**	**101**	*e*Pn	**Pn**	**23 41 12.1**	**-0.6**
DIY				*e*Sn	**Sn**	**23 41 31.2**	**+0.6**
GAZ	**Gaziantep**	**1.46**	**228**	*e*PN	**Pn**	**23 41 13.7**	**-0.7**
GAZ	**Gaziantep**	**1.46**	**228**	*e*Pn	**Pn**	**23 41 13.7**	**-0.7**
KMRS	**Kahramanmaras**	**1.47**	**245**	*e*PN	**Pn**	**23 41 14.1**	**-0.5**
KMRS	**Kahramanmaras**	**1.47**	**245**	*e*Pn	**Pn**	**23 41 14.1**	**-0.5**
SARI	**SarD1z-Kayseri**	**1.56**	**290**	*e*PN	**Pn**	**23 41 17.7**	**+1.9**
BINT	**Bingol**	**1.67**	**64**	*e*PN	**Pn**	**23 41 17.4**	**0.0**
BINT	**Bingol**	**1.67**	**64**	*e*Pn	**Pn**	**23 41 17.4**	**+0.1**
EZC	**Erzincan**	**1.71**	**21**	*e*PN	**Pn**	**23 41 18.1**	**+0.2**
SVSK	**Karacayir**	**2.15**	**326**	*e*PN	**Pn**	**23 41 24.2**	**+0.3**
SVSK	**Karacayir**	**2.15**	**326**	*e*Pn	**Pn**	**23 41 24.2**	**+0.3**
BEST	**Besiri**	**2.15**	**96**	*i* P	**Pn**	**23 41 24.0**	**+0.1**
BEST				*i* S	**Sn**	**23 41 56.5**	**+5.7**
KOZT	**Kozan**	**2.27**	**254**	*e*PN	**Pn**	**23 41 24.9**	**-0.7**
BTMT	**Batman**	**2.30**	**88**	*e*PN	**Pn**	**23 41 24.3**	**-1.7**
GUMT	**Gumushane**	**2.41**	**17**	*e*PN	**Pn**	**23 41 28.1**	**+0.6**
GUMT	**Gumushane**	**2.41**	**17**	*e*Pn	**Pn**	**23 41 28.2**	**+0.7**
EZM	**Erzurum**	**2.79**	**50**	*e*PN	**Pn**	**23 41 33.8**	**+1.1**
KARA	**Karaisali**	**2.93**	**253**	*e*PN	**Pn**	**23 41 34.0**	**-0.5**
KARA	**Karaisali**	**2.93**	**253**	*e*Pn	**Pn**	**23 41 34.0**	**-0.6**
YOZ	**Yozgat**	**2.94**	**301**	*e*PN	**Pn**	**23 41 35.2**	**+0.4**
YOZ	**Yozgat**	**2.94**	**301**	*e*Pn	**Pn**	**23 41 35.2**	**+0.4**

*IDC **07** 23:47:45.8±0.9, 32°.56N×105°.48E, h0km, mb3.6/7, mb1 3.7/9, mb1mx3.5/28, mbtmp3.6/9, ML3.5/2, MS3.3/1, Ms1 3.3/1, ms1mx2.4/36, Error ellipse: s-maj=38.9km s-min=17.9km az=55.0*
*ISCJB **07** 23:47:45.4±0.4, 32°.45N±0°.04×105°.34E±0°.05, h10km, mb3.5/7, Error ellipse: s-maj=5.9km s-min=5.1km az=160.7*
*BJI **07** 23:47:46.6, 32°.50N×105°.27E, h15km, mb3.6/1, ML3.6/12, Ms3.6/5, Ms7 3.2/5*
*NEIC **07** 23:47:47.4±0.6, 32°.61N×105°.56E, h10km, Error ellipse: s-maj=23.4km s-min=8.6km az=54.0*
ISC 07 23:47:47.2±0.4, 32°.50N±0°.04×105°.29E±0°.05, h10km, n17, σ1°24/27, mb3.5/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.05**	**220**	Pn	**Pn**	**23 48 22.4**	**+0.7**
CD2				Pg	**Pg**	**23 48 24.5**	**-2.0**
CD2				Sg	**Sg**	**23 48 52.1**	**-1.0**
CD2				smax			
	comp=N,4μm,0.5s						
CD2				smax			
	comp=E,4μm,0.6s						
XAN	**Xi'an**	**3.41**	**62**	Pn	**Pn**	**23 48 41.3**	**+0.9**
XAN				Pg	**Pg**	**23 48 47.2**	**-5.3**
XAN				Sn	**Sn**	**23 49 26.8**	**+6.0**
XAN				Sg	**Sg**	**23 49 30.4**	**-6.2**
XAN				smax			
	comp=N,230nm,0.7s						
XAN				smax			
	comp=E,110nm,0.8s						
XAN				LR	LR		
	comp=N,340nm,7.5s						
XAN				LR	LR		
	comp=E,73nm,5.7s						
XAN				LR	LR		
	comp=Z,67nm,9.2s						
LZH	**Lanzhou**	**3.78**	**342**	*e*Pn	**Pn**	**23 48 47.5**	**+2.0**
LZH				Pg	**Pg**	**23 48 57.2**	**-2.4**
LZH				Sn	**Sn**	**23 49 34.1**	**+4.1**
LZH				Sg	**Sg**	**23 49 44.0**	**-4.5**
LZH				smax			
	comp=N,340nm,0.5s						
LZH				smax			
	comp=E,400nm,0.6s						
LZH				LR	LR		
	comp=N,470nm,4.3s						
LZH				LR	LR		
	comp=Z,680nm,6.6s						
ENH	**Enshi**	**4.21**	**121**	*e*Pn	**Pn**	**23 48 50.3**	**-1.2**
ENH				*e*Sg	**Sg**	**23 50 02.3**	**-0.3**
GYA	**Guiyang**	**6.13**	**168**	Pn	**Pn**	**23 49 18.5**	**+0.6**
GYA				Sn	**Sn**	**23 50 30.1**	**+2.0**
GYA				smax			
	comp=N,40nm,0.7s						
GYA				smax			
	comp=E,60nm,0.8s						
WHN	**Wuhan**	**7.97**	**102**	P	**Pn**	**23 49 44.4**	**+1.3**
WHN				S	**Sn**	**23 51 09.8**	**-3.5**
WHN				LR	LR		
	comp=N,280nm,3.8s						
WHN				LR	LR		
	comp=E,370nm,3.7s						
WHN				LR	LR		
	comp=Z,270nm,7.4s						
GTA	**Gaotai**	**8.21**	**329**	*e*P	**Pn**	**23 49 46.2**	**-0.1**
GTA				pP		23 49 50.6	
GTA				sP		23 49 54.1	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SONM	**Songino Array**	**15.35**	**3**	Pn	**Pn**	**23 51 22.9**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=186,slow=11,SNR=3.2						
KSRS	**Korea Array**	**19.18**	**69**	P	**Pn**	**23 52 10.7**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=251,slow=12,SNR=4.3						
MKAR	**Makanchi Array**	**22.64**	**316**	P	**P**	**23 52 49.4**	**+1.2**
	comp=Z,0.8nm,0.6s,mb3.3,baz=93,slow=13,SNR=6.3						
ZALV	**Zalesovo Beam**	**25.95**	**332**	P	**P**	**23 53 19.9**	**+0.4**
	comp=Z,0.3nm,0.4s,mb3.2,baz=149,slow=6.7,SNR=2.8						
KURK	**Kurchatov**	**26.78**	**321**	P	**P**	**23 53 27.8**	**+0.8**
	comp=Z,0.2nm,0.5s,mb2.9,baz=134,slow=8.3,SNR=2.7						
GUMO	**Guam**	**40.69**	**108**	LR	LR	00 10 47.4	
	comp=Z,37nm,19.4s,baz=233,slow=34						
FINES	**FINESS Array B**	**56.98**	**326**	P	**P**	**23 57 33.5**	**+0.9**
	comp=Z,1.7nm,0.8s,mb4.1,baz=61,slow=18,SNR=2.7						
WRA	**Warramunga Arr**	**59.09**	**148**	P	**P**	**23 57 47.6**	**-0.1**
	comp=Z,1.0nm,0.7s,mb4.0,baz=341,slow=7.2,SNR=9.0						
ASAR	**Alice Springs**	**62.17**	**150**	P	**P**	**23 58 09.2**	**+0.4**
	comp=Z,0.4nm,0.6s,mb3.8,baz=329,slow=7.1,SNR=8.7						
YKA	**Yellowknife Ar**	**80.07**	**18**	P	**P**	**23 59 54.9**	**-1.8**
	comp=Z,0.4nm,0.7s,mb3.5,baz=324,slow=5.2,SNR=3.3						

*IDC **07** 23:55:58.1±1.4, 8°.08S×120°.39E, h0km, mb3.8/6, mb1 4.0/9, mb1mx3.8/23, mbtmp3.9/9, ML4.0/3, MS3.0/2, Ms1 3.1/2, ms1mx2.5/24, Error ellipse: s-maj=106.5km s-min=12.5km az=58.0*
*NEIC **07** 23:55:59.5±0.5, 8°.12S×120°.29E, h10km, Error ellipse: s-maj=25.0km s-min=7.1km az=68.0*
*DJA **07** 23:56:02, 8°.00S×120°.36E, h28km, MLv4.2/4*
ISC 07 23:55:59.9±2.6, 8°.03S±0°.05×120°.37E±0°.07, h8km±18km, n19, σ1°26/22, mb3.7/5, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.63**	**183**	P	**Pn**	**23 56 28.9**	**-0.1**
WSI				S	**Sn**	**23 56 52.7**	**+2.4**
MMRI	**Maumere**	**1.94**	**108**	P	**Pn**	**23 56 33.9**	**+0.6**
MMRI				S	**Sn**	**23 56 59.5**	**+1.6**
BKSI	**Bulukumba**	**2.70**	**355**	P	**Pn**	**23 56 44.6**	**+0.9**
KAPI	**Kappang**	**3.06**	**348**	Pn	**Pn**	**23 56 48.4**	**-0.3**
	15nm,0.3s,baz=160,slow=10,SNR=32						
KAPI				Sn	**Sn**	**23 57 23.0**	**-2.5**
	5.0nm,0.3s,baz=231,slow=19,SNR=3.2						
KAPI	**Kappang**	**3.06**	**348**	P	**Pn**	**23 56 49.1**	**+0.5**
BNSI	**Bone**	**3.61**	**356**	P	**Pn**	**23 56 57.9**	**+1.6**
IGBI	**Denpasar**	**5.23**	**261**	P	**Pn**	**23 57 21.4**	**+2.9**
KMMI	**Kalianget**	**6.42**	**278**	P	**Pn**	**23 57 35.4**	**+0.4**
FITZ	**Fitzroy Crossi**	**11.25**	**153**	Pn	**Pn**	**23 58 39.8**	**-1.4**
	0.8nm,0.3s,baz=356,slow=6.3,SNR=23						
FITZ				Sn	Sx	00 00 38.2	
	0.3nm,0.3s,baz=149,slow=5.9,SNR=2.4						
FITZ				LR	LR	00 03 32.7	
	comp=Z,93nm,20.7s,baz=88,slow=41						
FITZ	**Fitzroy Crossi**	**11.25**	**153**	*e*Pn	**Pn**	**23 58 41.0**	**-0.2**
FITZ				LR	LR	00 03 32.7	
MBWA	**Marble Bar**	**13.07**	**183**	*e*Pn	**Pn**	**23 59 03.5**	**-2.6**
MBWA				*e*S	Sx	00 01 20.3	
WRA	**Warramunga Arr**	**17.98**	**133**	P	**Pn**	**00 00 09.1**	**-1.4**
	0.6nm,0.3s,baz=307,slow=12,SNR=26						
WRA				S	Sx	00 03 20.7	
	0.0nm,0.3s,baz=301,slow=23,SNR=3.2						
ASAR	**Alice Springs**	**20.25**	**142**	P	**P**	**00 00 35.4**	**-0.5**
	3.5nm,0.4s,baz=312,slow=9.8,SNR=58						
ASAR				S	**S**	**00 04 23.4**	**+0.1**
	1.7nm,1.0s,baz=320,slow=23,SNR=4.6						
STKA	**Stephens Creek**	**30.87**	**143**	P	**P**	**00 02 15.8**	**-1.2**
	1.6nm,0.5s,mb4.1,baz=308,slow=8.6,SNR=4.4						
CMAR	**Chiang Mai Arr**	**33.76**	**321**	LR	LR	00 17 30.9	
	comp=Z,23nm,20.0s,baz=170,slow=38						
SONM	**Songino Array**	**56.98**	**349**	P	**P**	**00 05 46.3**	**+0.3**
	0.2nm,0.4s,mb3.5,baz=142,slow=4.9,SNR=2.9						
MKAR	**Makanchi Array**	**64.23**	**332**	P	**P**	**00 06 35.0**	**-0.5**
	0.2nm,0.3s,mb3.6,baz=108,slow=11,SNR=3.9						
ZALV	**Zalesovo Beam**	**68.63**	**338**	P	**P**	**00 07 03.1**	**-0.4**
	0.9nm,0.6s,mb3.9,baz=123,slow=5.3,SNR=3.2						
KURK	**Kurchatov**	**68.74**	**333**	P	**P**	**00 07 04.2**	**0.0**
	0.2nm,0.3s,mb3.5,baz=141,slow=4.9,SNR=2.2						

*ISCJB **08** 00:07:12.5±7.3, 5°.46S±0°.09×151°.8E±0°.1, h21km±51km, mb4.5/23, MS3.7/7, Error ellipse: s-maj=21.4km s-min=15.4km az=1.9*
*SZGRF **08** 00:07:16.2, 7°.41S×150°.51E, h33km, New Britain, Papua New Guinea, region*
*IDC **08** 00:07:17.0±0.8, 5°.48S×151°.75E, h45km±5km, mb4.2/18, mb1 4.3/19, mb1mx4.3/20, mbtmp4.2/19, ML3.3/1, MS3.7/7, Ms1 3.7/7, ms1mx3.4/17, Error ellipse: s-maj=22.7km s-min=13.6km az=108.0*
*BJI **08** 00:07:19.9, 5°.23S×151°.23E, h61km, mB5.0/6, mb4.7/10, Ms4.4/3, Ms7 4.2/3*
*NEIC **08** 00:07:21.3±1.7, 5°.52S×151°.68E, h84km±14km, mb4.5/7, Error ellipse: s-maj=10.8km s-min=7.4km az=82.0*
ISC 08 00:07:17.2±3.5, 5°.52S±0°.09×151°.8E±0°.1, h47km±33km, h54km±6.9km; pP-P, n107, σ0°90/47, mb4.5/23, MS3.7/7, 1C-5D, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**8.93**	**116**	LR	LR	00 12 24.1	
	comp=Z,342nm,20.1s,baz=152,slow=34						
CTA	**Charters Tower**	**15.46**	**200**	*e*P	**Pn**	**00 10 57.6**	**+5.3**
	5.0nm,0.6s						
CTA	**Charters Tower**	**15.46**	**200**	P	**Pn**	**00 10 52.9**	**+0.6**
	0.1nm,0.3s,baz=24,slow=18,SNR=2.2						
CTA				LR	LR	00 16 10.6	
	comp=Z,326nm,20.0s,baz=44,slow=34						
CTA	**Charters Tower**	**15.46**	**200**	P	**Pn**	**00 10 52.9**	**+0.6**
CTA				LR	LR	00 16 10.6	
CTAO	**Charters Tower**	**15.46**	**200**	*e*Pn	**Pn**	**00 10 55.2**	**+2.9**
EIDS	**Eidsvold**	**19.75**	**182**	*e*P	**Pn**	**00 11 44.2**	**-0.9**
EIDS	**Eidsvold**	**19.75**	**182**	*e*P	**Pn**	**00 11 44.3**	**-0.7**
	8.9nm,0.7s						
KAKA	**Kakadu**	**20.43**	**248**	*e*P	**P**	**00 11 50.9**	**+0.2**
	36nm,0.5s						
KAKA	**Kakadu**	**20.43**	**248**	*e*P	**P**	**00 11 50.9**	**+0.2**
	106nm,0.5s						
WRAB	**Tennant Creek**	**22.23**	**228**	*e*P	**P**	**00 12 10.1**	**0.0**
	20nm,0.8s,mb4.6						
WRA	**Warramunga Arr**	**22.25**	**228**	P	**P**	**00 12 09.7**	**-0.6**
	12nm,0.6s,mb4.5,baz=52,slow=10.0,SNR=56						
WRA				ScP	ScP	00 19 40.6	+1.4
	0.6nm,0.6s,baz=46,slow=2.8,SNR=8.1						
KNA	**Kununurra**	**24.81**	**244**	*e*P	**P**	**00 12 35.0**	**-0.2**
	53nm,0.6s,mb5.2						
ASAR	**Alice Springs**	**24.97**	**222**	P	**P**	**00 12 36.5**	**-0.1**
	16nm,0.7s,mb4.7,baz=59,slow=8.0,SNR=104						
ASAR				ScP	ScP	00 19 48.7	+2.2
	0.4nm,0.6s,baz=46,slow=3.1,SNR=4.1						
STKA	**Stephens Creek**	**27.92**	**199**	P	**P**	**00 13 02.4**	**-0.6**
	2.4nm,0.7s,mb4.0,baz=21,slow=16,SNR=6.9						
STKA				LR	LR	00 22 22.8	
	comp=Z,184nm,20.0s,MS3.7,baz=296,slow=32						
STKA	**Stephens Creek**	**27.92**	**199**	*e*P	**P**	**00 13 02.7**	**-0.3**
	0.5nm,0.6s,mb3.3						
STKA				LR	LR	00 22 22.8	
FITZ	**Fitzroy Crossi**	**28.47**	**242**	*e*P	**P**	**00 13 07.3**	**-0.8**
	47nm,1.0s,mb5.1						
FITZ	**Fitzroy Crossi**	**28.47**	**242**	P	**P**	**00 13 07.3**	**-0.8**
	29nm,0.8s,mb5.0,baz=70,slow=7.8,SNR=27						
FITZ	**Fitzroy Crossi**	**28.47**	**242**	*e*P	**P**	**00 13 07.4**	**-0.8**
	8.8nm,0.6s,mb4.6						
DAV	**Davao City (W)**	**29.03**	**295**	LR	LR	00 24

comp=E,1.8nm,0.9s,mb4.4,baz=302,slow=9.9,SNR=4.1
NVAR Mina Array Bea 93.29 52 P P 00 20 28.9 +1.6
comp=E,4.4nm,0.8s,mb5.0,baz=252,slow=6.8,SNR=18
NVAR Mina Array Bea 93.29 52 P P 00 20 28.9 +1.6
YKA Yellowknife Ar 96.51 28 P P 00 20 41.3 -0.1
comp=E,0.6nm,0.7s,mb4.1,baz=275,slow=4.9,SNR=4.1
PDAR Pinedale Array 100.04 48 P Pdif 00 20 58.0 +0.5
comp=E,2.1nm,0.8s,baz=259,slow=1.5,SNR=12
PDAR pP 00 21 09.8
comp=E,0.9nm,0.7s,baz=276,slow=2.8,SNR=4.2
AKASG Malin Array Be 114.51 324 PKP PKiKP 00 25 50.0 -2.1
comp=E,0.9nm,0.5s,baz=59,slow=2.2,SNR=4.8
BRTR Keskin Array B 115.06 311 PKP PKiKP 00 25 52.9 -0.7
comp=E,0.9nm,0.9s,baz=59,slow=0.8,SNR=6.5
NB2 NORSAR Subarra117.26 340 PKPdf PKPdf 00 25 55.7 -1.4
comp=Z,0.4nm,0.6s,baz=44,slow=1.9
NOA NORSAR Array B 117.26 340 PKPdf PKPdf 00 25 56.3 -0.9
comp=Z,0.7nm,0.7s,baz=48,slow=1.8,SNR=5.5
STHS Stebnicka Huta 119.69 325 *e* PKPdf 00 26 01.9 -0.3
DRGR 120.07 322 ||*i*P PKPdf 00 26 02.5 -0.5
LSZ Lusaka 120.48 249 PKP PKPdf 00 26 04.4 -0.2
comp=Z,0.7nm,0.5s,baz=153,slow=2.3,SNR=3.0
GZR Gura Zlata 120.65 321 ⇑*i*P PKPdf 00 26 04.6 +0.5
TKL Tuckaleechee C 120.89 52 PKP PKPdf 00 26 04.6 -0.3
comp=Z,0.8nm,0.6s,baz=90,slow=5.1,SNR=3.7
TKL Tuckaleechee C 120.89 52 PKP PKPdf 00 26 04.6 -0.4
BZS Buzias 121.28 321 ||*i*P PKPdf 00 26 04.8 -0.6
MORC Moravsky Berou 121.56 327 ||*i*P PKPdf 00 26 05.7 -0.1
DPC Dobruska-Polom 121.89 328 *e*PKPdf PKPdf 00 26 06.1 -0.3
BSEG Bad Segeberg 122.53 334 *e*PKPdf PKPdf 00 26 07.4 -0.1
BRG Berggiesshubel 122.81 330 *e*PKP PKPdf 00 26 07.6 -0.5
comp=Z,1.5nm,0.5s
PKSM Moragy 122.81 323 ||*i*P PKPdf 00 26 07.8 -0.5
TREC Trest 122.94 327 *e*PKPdf PKPdf 00 26 08.0 -0.4
CLL Collm 123.01 330 *e*PKPdf PKPdf 00 26 08.2 -0.3
CLL Collm 123.01 330 ||*i*PKPdf PKPdf 00 26 08.2 -0.3
comp=Z,4.0nm,0.7s
CLL *e*(pPKPdf) 00 26 27.0
PRU Pruhonice 123.03 329 *e*PKPdf PKPdf 00 26 08.4 -0.2
TANN Tannenbergstha 123.83 330 *e*PKPdf PKPdf 00 26 09.7 -0.4
CLZ Clausthal 123.92 332 *e*PKPdf PKPdf 00 26 10.2 0.0
NKC Novy Kostel 123.95 330 *e*PKPdf PKPdf 00 26 10.2 -0.1
NKC Novy Kostel 123.95 330 *e*PKPdf PKPdf 00 26 10.1 -0.2
KHC Kasperske Hory 124.05 328 *e*PKPdf PKPdf 00 26 10.3 -0.3
GEC2 GERESS Array S 124.16 328 *e*PKPdf PKPdf 00 26 10.2 -0.6
GERES GERESS Array B 124.16 328 PKP PKPdf 00 26 10.6 -0.1
comp=Z,2.6nm,0.6s,baz=73,slow=1.5,SNR=38
WET Wettzell 124.41 328 *e*PKPdf PKPdf 00 26 11.1 -0.1
GRF Grafenberg Arr 124.91 330 *e*PKPdf PKPdf 00 26 11.2 -1.0
GRF Grafenberg Arr 124.91 330 *e*PKP PKPdf 00 26 11.2 -1.0
RJOB Jochberg 125.30 327 *e*PKPdf PKPdf 00 26 12.3 -0.7
TNS Taunus Mts 125.91 332 *e*PKPdf PKPdf 00 26 14.5 +0.4
DAVOX Davos/Dischmat 127.46 328 PKP PKPdf 00 26 17.5 +0.3
comp=Z,2.4nm,0.4s,baz=54,slow=1.6,SNR=6.8
CDF Champ du Feu 127.70 331 *e*PKIKP PKPdf 00 26 16.6 -1.0
comp=Z,2.7nm,0.7s
HINF Hinteralfeld 128.32 330 *e*PKIKP PKPdf 00 26 17.9 -0.9
HAU Haudompre 128.44 331 *e*PKIKP PKPdf 00 26 18.4 -0.6
comp=Z,5.0nm,0.6s
MEZF Maizieres J'vi 128.70 332 *e*PKIKP PKPdf 00 26 19.3 -0.2
CABF La Chapelle 129.53 330 *e*PKIKP PKPdf 00 26 20.7 -0.4
LPL La Plagne 129.94 328 *e*PKIKP PKPdf 00 26 21.5 -0.4
LPG La Plagne 129.94 328 *e*PKIKP PKPdf 00 26 21.5 -0.4
comp=Z,3.9nm,0.6s
LOR Lormes 130.15 332 *e*PKIKP PKPdf 00 26 21.5 -0.8
SSF Saint Saulge 130.46 332 *e*PKIKP PKPdf 00 26 22.7 -0.2
comp=Z,6.1nm,0.9s
PGF Pioggiola 130.59 324 *e*PKIKP PKPdf 00 26 22.6 -0.7
comp=Z,22nm,0.9s
SMF Signal de Mont 130.60 331 *e*PKIKP PKPdf 00 26 22.7 -0.5
AVF Avril sur Loir 130.73 332 *e*PKIKP PKPdf 00 26 22.8 -0.6
ORIF Oris-en-Rattie 130.79 328 *e*PKIKP PKPdf 00 26 22.8 -0.8
comp=Z,9.0nm,0.8s
BGF Bois d'Agland 131.14 332 *e*PKIKP PKPdf 00 26 23.1 -1.1
GRR Gorron 131.36 336 *e*PKIKP PKPdf 00 26 24.4 -0.1
TCF Toulx Ste Croi 131.64 332 *e*PKIKP PKPdf 00 26 24.4 -0.7
comp=Z,5.5nm,0.8s
SGMF Saint Gilles 132.15 337 *e*PKIKP PKPdf 00 26 25.8 -0.2
ROSF Rostrenen 132.35 338 *e*PKIKP PKPdf 00 26 26.0 -0.4
MFF Saint Martin d 132.46 334 *e*PKIKP PKPdf 00 26 26.6 -0.1
comp=Z,7.6nm,0.9s
ROSC El Rosal 134.03 89 PKP PKPdf 00 26 32.0 +1.4
comp=Z,3.5nm,0.3s,baz=102,slow=20,SNR=4.1
KEST Kesra 134.27 316 PKP PKPdf 00 26 30.4 0.0
comp=Z,0.6nm,0.5s,baz=249,slow=2.5,SNR=7.0
LPAZ La Paz 134.92 119 PKP PKPdf 00 26 33.0 +0.9
comp=Z,1.4nm,0.8s,baz=48,slow=2.8,SNR=6.5
CPUP Villa Florida 137.56 140 PKP PKPdf 00 26 37.3 +0.5
comp=Z,0.7nm,0.6s,baz=108,slow=20,SNR=3.4
TORD Torodi Ar. Bea 149.60 287 PKP PKPdf 00 26 56.9 -1.2
comp=Z,19nm,0.7s,baz=59,slow=2.4,SNR=92
TORD PKPbc PKPbc 00 27 01.9 -0.8
comp=Z,19nm,0.7s,baz=72,slow=2.9,SNR=94
TORD pPKP pPKPdf 00 27 12.3 -0.1
comp=Z,6.1nm,0.8s,baz=64,slow=2.7,SNR=7.1
TORD pPKPbc pPKPbc 00 27 17.2 +0.2
comp=Z,5.0nm,0.7s,baz=80,slow=2.5,SNR=4.8
TORD Torodi Ar. Bea 149.60 287 PKP PKPdf 00 26 56.9 -1.2
TORD PKPbc PKPbc 00 27 01.9 -0.8
TORD pPKP pPKPdf 00 27 12.3 -0.1
TORD pPKPbc pPKPbc 00 27 17.2 +0.2

MEX 08 00:20:13.7±0.7, 16°.11N×98°.52W, h18km±29km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.47**	**53**	*i* P	Pg	00 20 21.0	-2.2
PNIG				*i* S	Sg	00 20 28.6	-1.1
ACX	**Acapulco**	**1.54**	**300**	*i* P	Pn	00 20 36.9	-3.4
ACX				*i* S	Sn	00 20 55.4	-4.5
UTMO	**Huajuapan**	**1.84**	**22**	*i* P	Pn	00 20 41.8	-2.7
UTMO				*i* S	Sn	00 21 02.7	-4.8
CAIG	**El Cayaco**	**1.92**	**299**	*e*P	Pn	00 20 42.5	-3.0
CAIG				*i* S	Sn	00 21 05.5	-3.8
VHO	**Vista Hermosa**	**1.96**	**60**	*i* P	Pn	00 20 43.6	-2.5
VHO				*i* S	Sn	00 21 07.1	-3.3
OXX	**Oaxaca**	**1.98**	**60**	*i* P	Pn	00 20 44.2	-2.1
OXX				*i* S	Sn	00 21 06.5	-4.2
HUIG	**Huatulco**	**2.34**	**98**	*i* P	Pn	00 20 49.3	-2.1
HUIG				*i* S	Sn	00 21 15.5	-4.2
HUIG				*i* S	Sn	00 21 18.8	-1.0
PLIG	**Platanillo**	**2.46**	**338**	*i* P	Pn	00 20 49.6	-3.4
PLIG				*i* S	Sn	00 21 17.8	-4.8
TPIG	**Tehuac#an**	**2.55**	**26**	*i* P	Pn	00 20 51.0	-3.2
TPIG				*i* S	Sn	00 21 21.5	-3.4
MZVM		**3.14**	**348**	*i* P	Pn	00 20 59.4	-3.0
MZVM				*i* S	Sn	00 21 35.9	-3.5
ZIIG	**Zihuatanejo**	**3.19**	**298**	*e*P	Pn	00 21 00.8	-2.2
ZIIG				*i* S	Sn	00 21 37.7	-3.0
PBVM	**Pinon**	**3.36**	**351**	*i* P	Pn	00 21 02.3	-3.0
PBVM				*i* S	Sn	00 21 40.3	-4.5
IIO	**Organos**	**3.47**	**357**	*i* P	Pn	00 21 05.2	-1.7
IIO				*i* S	Sn	00 21 44.8	-2.8
PTVM	**Pico Tres Padr**	**3.51**	**351**	*i* P	Pn	00 21 05.2	-2.3
PTVM				*i* S	Sn	00 21 45.6	-3.0
SFJM	**Santa Fe**	**6.12**	**316**	*e*P	Pn	00 21 43.4	+0.1

DHMR 08 00:23:54.3±1.1, 11°.71N×43°.93E, h4km±12km, ML3.8, 1C, Ethiopia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADEN	**Aden**	**1.48**	**44**	*i* P	Pn	00 24 21.6	-0.1
ADEN				*i* S	Sn	00 24 42.3	+0.8
ADEN				AML	AML	00 24 55.5	
	comp=E,2μm,0.5s						
TRBA	**At Turbah**	**1.53**	**7**	⇑*i*P	Pn	00 24 22.6	+0.2
TRBA				*i* S	Sn	00 24 45.2	+2.5
TRBA				AML	AML	00 24 47.5	
	comp=N,980nm,0.4s						
UDYN	**Al 'Udayn**	**2.25**	**1**	*i* P	Pn	00 24 34.2	+1.9
UDYN				*i* S	Sn	00 25 04.7	+4.1
UDYN				AML	AML	00 25 15.0	
	comp=E,1μm,0.5s						
LBOS		**2.51**	**31**	*i* P	Pn	00 24 38.5	+2.7
LBOS				*i* S	Sn	00 25 12.5	+5.6
BDHA	**Al Bayda'**	**2.76**	**35**	*i* P	Pn	00 24 42.6	+3.2
BDHA				*i* S	Sn	00 25 20.2	+6.9
BDHA				AML	AML	00 25 28.2	
	comp=E,758nm,0.5s						
DHBB	**Dhamar BB**	**2.88**	**9**	*i* P	Pn	00 24 43.4	+2.3
DHBB				*i* S	Sn	00 25 22.8	+6.6

IDC 08 00:34:25.7±2.8, 6°.06N×126°.88E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/21, mbtmp3.4/3, Error ellipse: s-maj=228.5km s-min=25.6km az=66.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.86**	**164**	P	P	00 40 08.4	+0.2
	1.2nm,0.5s,baz=346,slow=9.9,SNR=7.9						
ASAR	**Alice Springs**	**30.33**	**167**	P	P	00 40 39.0	0.0
	0.3nm,0.4s,baz=344,slow=7.2,SNR=9.4						
MKAR	**Makanchi Array**	**55.76**	**324**	P	P	00 44 04.3	0.0
	0.2nm,0.5s,baz=107,slow=7.6,SNR=4.2						

MEX 08 00:56:11.4±1.3, 16°.77N×99°.48W, h16km±21km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.43**	**284**	*i* P	Pg	00 56 18.4	-1.6
ACX				*i* S	Sg	00 56 23.7	-2.1
CAIG	**El Cayaco**	**0.80**	**291**	*i* P	Pb	00 56 24.6	-2.5
CAIG				*i* S	Sg	00 56 35.1	-2.5
PNIG	**Pinotepa**	**1.35**	**106**	*e*P	Pn	00 56 32.4	-3.2
PNIG				*i* S	Sn	00 56 49.4	-3.9
UTMO	**Huajuapan**	**1.92**	**56**	*e*P	Pn	00 56 40.5	-3.1
UTMO				*i* S	Sn	00 57 02.5	-4.9
MZVM		**2.42**	**6**	*e*P	Pn	00 56 47.1	-3.3
MZVM				*i* S	Sn	00 57 16.0	-3.8
IIO	**Organos**	**2.90**	**14**	*e*P	Pn	00 56 57.0	0.0
IIO				*i* S	Sn	00 57 28.6	-3.0

*ISCJB **08** 00:59:30.8±0.4, 34°.80N±0°.02×3°.15W±0°.03, h10km, Error ellipse: s-maj=4.3km s-min=2.6km az=29.6*
*MDD **08** 00:59:31.2±0.6, 34°.70N×2°.98W, h0km, mb3.5/11, Error ellipse: s-maj=6.7km s-min=3.4km az=136.0, PRIMO*
*CNRM **08** 00:59:31.2, 34°.94N×2°.88W, h32km, MD3.5*
*CSEM **08** 00:59:31.0±0.3, 34°.72N×3°.04W, h10km, MD3.5, Error ellipse: s-maj=7.7km s-min=4.2km az=123.0*
*INMG **08** 00:59:33.5±0.9, 34°.72N×3°.08W, h31km, ML2.2, Error ellipse: s-maj=5.3km s-min=3.9km az=162.0*
*NEIC **08** 00:59:34.2, 34°.85N×3°.07W, h10km, MG3.6(MDD), After MDD.*
ISC 08 00:59:32.0±0.4, 34°.80N±0°.02×3°.16W±0°.03, h10km, n128, σ1§49/221, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAI	**Zaio**	**0.38**	**63**	P	**Pg**	**00 59 37.0**	**-2.4**
ZAI				S	**Sg**	**00 59 42.0**	**-2.5**
ZAI	**Zaio**	**0.38**	**63**	P	**Pg**	**00 59 37.0**	**-2.4**
ZAI				S	**Sg**	**00 59 42.0**	**-2.5**
ZAI	**Zaio**	**0.38**	**63**	*i* P	**Pg**	**00 59 37.0**	**-2.4**
ZAI				*i* S	**Sg**	**00 59 42.0**	**-2.5**
TOU	**Touzarine**	**0.52**	**288**	P	**Pg**	**00 59 44.0**	**+2.0**
TOU				S	**Sg**	**00 59 54.0**	**+5.1**
TOU	**Touzarine**	**0.52**	**288**	P	**Pg**	**00 59 44.0**	**+2.0**
TOU				S	**Sg**	**00 59 54.0**	**+5.1**
TOU	**Touzarine**	**0.52**	**288**	*i* P	**Pg**	**00 59 44.0**	**+2.0**
MPAL	**Palemas**	**0.77**	**304**	P	**Pg**	**00 59 48.0**	**+1.1**
MPAL				S	**Sg**	**00 59 58.0**	**+1.0**
MPAL	**Palemas**	**0.77**	**304**	P	**Pg**	**00 59 48.0**	**+1.1**
MPAL				S	**Sg**	**00 59 58.0**	**+1.0**
MPAL	**Palemas**	**0.77**	**304**	*e*P	**Pg**	**00 59 48.0**	**+1.1**
MPAL				*e*S	**Sg**	**00 59 58.0**	**+1.0**
TZK	**Tazeka**	**1.11**	**230**	P	**Pg**	**00 59 52.0**	**-1.2**
TZK				S	**Sg**	**01 00 09.0**	**+1.4**
TZK	**Tazeka**	**1.11**	**230**	P	**Pg**	**00 59 52.0**	**-1.2**
TZK				S	**Sg**	**01 00 09.0**	**+1.4**
TZK	**Tazeka**	**1.11**	**230**	*i* P	**Pg**	**00 59 52.0**	**-1.2**
TZK				*i* S	**Sg**	**01 00 09.0**	**+1.4**
EALB	**Alboran**	**1.14**	**5**	P	**Pg**	**00 59 52.9**	**-1.0**
EALB				S	**Sg**	**01 00 10.4**	**+1.6**
EALB	**Alboran**	**1.14**	**5**	P	**Pg**	**00 59 52.9**	**-1.0**
	41nm,0.3s,SNR=19						
EALB				S	**Sg**	**01 00 10.4**	**+1.6**
	124nm,0.5s,SNR=7.8					

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
	2.0nm,0.3s,SNR=7.9							
EGRO	**El Granado**	**4.44**	**309**	P	**Pn**		**01 00 39.7**	**+0.4**
	1.0nm,0.3s,SNR=5.3							
EGRO				S	**Sn**		**01 01 29.5**	**-1.6**
	2.0nm,0.3s,SNR=7.9							
EGRO	**El Granado**	**4.44**	**309**	P	**Pn**		**01 00 39.7**	**+0.4**
	1.0nm,0.3s,SNR=5.3							
EGRO				S	**Sn**		**01 01 29.5**	**-1.5**
	2.0nm,0.3s,SNR=7.9							
PVAQ	**Vaqueiros**	**4.51**	**306**	*e*Sn	**Sn**		**01 01 30.5**	**-2.4**
PVAQ				A			01 01 40.3	
	3.6nm,0.8s							
PVAQ	**Vaqueiros**	**4.51**	**306**	*e*Sn	**Sn**		**01 01 30.5**	**-2.4**
	3.6nm,0.8s							
EBEN	**Beniarda**	**4.55**	**30**	P	**Pn**		**01 00 42.4**	**+1.5**
EBEN	**Beniarda**	**4.55**	**30**	P	**Pn**		**01 00 42.4**	**+1.5**
	0.2nm,0.2s,SNR=7.9							
EBEN	**Beniarda**	**4.55**	**30**	P	**Pn**		**01 00 42.4**	**+1.5**
	0.2nm,0.2s,SNR=7.9							
EBEN	**Beniarda**	**4.55**	**30**	P	**Pn**		**01 00 42.4**	**+1.5**
	0.2nm,0.2s,SNR=7.9							
PBDV	**Barranco-do-Ve**	**4.57**	**304**	*e*Pn	**Pn**		**01 00 41.2**	**0.0**
PBDV	**Barranco-do-Ve**	**4.57**	**304**	*e*Pn	**Pn**		**01 00 41.2**	**0.0**
PBAR	**Barrancos**	**4.60**	**318**	*e*Pn	**Pn**		**01 00 41.5**	**0.0**
PBAR				*e*Sn	**Sn**		**01 01 33.0**	**-1.9**
PBAR	**Barrancos**	**4.60**	**318**	*e*Pn	**Pn**		**01 00 41.5**	**0.0**
PBAR				*e*Sn	**Sn**		**01 01 33.0**	**-1.9**
PCVE	**Castro Verde**	**4.86**	**307**	*e*Pn	**Pn**		**01 00 45.2**	**+0.2**
PCVE				*e*Sn	**Sn**		**01 01 40.3**	**-1.0**
PCVE				A			01 01 50.1	
	2.6nm,0.7s							
PCVE	**Castro Verde**	**4.86**	**307**	*e*Pn	**Pn**		**01 00 45.2**	**+0.2**
PCVE				*e*Sn	**Sn**		**01 01 40.3**	**-1.0**
	2.6nm,0.7s							
EBAD	**Badajoz**	**5.02**	**323**	P	**Pn**		**01 00 48.1**	**+0.9**
EBAD				S	**Sn**		**01 01 43.1**	**-2.2**
EBAD	**Badajoz**	**5.02**	**323**	P	**Pn**		**01 00 48.1**	**+0.9**
	0.6nm,0.2s,SNR=5.7							
EBAD				S	**Sn**		**01 01 43.1**	**-2.2**
	0.6nm,0.3s,SNR=7.9							
EBAD	**Badajoz**	**5.02**	**323**	P	**Pn**		**01 00 48.1**	**+0.9**
	0.6nm,0.2s,SNR=5.7							
EBAD				S	**Sn**		**01 01 43.1**	**-2.2**
	0.6nm,0.3s,SNR=7.9							
EBAD	**Badajoz**	**5.02**	**323**	P	**Pn**		**01 00 48.1**	**+0.8**
	0.6nm,0.2s,SNR=5.7							
EBAD				S	**Sn**		**01 01 43.1**	**-2.2**
	0.6nm,0.3s,SNR=7.9							
PFVI	**Vila Bisbo**	**5.15**	**298**	P	**Pn**		**01 00 49.8**	**+0.7**
PFVI				S	**Sn**		**01 01 46.5**	**-2.2**
PFVI	**Vila Bisbo**	**5.15**	**298**	P	**Pn**		**01 00 49.8**	**+0.7**
	1.1nm,0.2s,SNR=7.9							
PFVI				S	**Sn**		**01 01 46.5**	**-2.2**
	1.3nm,0.3s,SNR=7.9							
PFVI	**Vila Bisbo**	**5.15**	**298**	P	**Pn**		**01 00 49.8**	**+0.7**
	1.1nm,0.2s,SNR=7.9							
PFVI				S	**Sn**		**01 01 46.5**	**-2.2**
	1.3nm,0.3s,SNR=7.9							
PFVI	**Vila Bisbo**	**5.15**	**298**	*e*Pn	**Pn**		**01 00 49.5**	**+0.3**
PFVI	**Vila Bisbo**	**5.15**	**298**	*e*Pn	**Pn**		**01 00 49.5**	**+0.3**
PFVI	**Vila Bisbo**	**5.15**	**298**	P	**Pn**		**01 00 49.8**	**+0.6**
	1.1nm,0.2s,SNR=7.9							
PFVI				S	**Sn**		**01 01 46.5**	**-2.2**
	1.3nm,0.3s,SNR=7.9							
ETOR	**Torete**	**6.07**	**8**	P	**Pn**		**01 01 03.6**	**+1.8**
ETOR	**Torete**	**6.07**	**8**	P	**Pn**		**01 01 03.6**	**+1.8**
	2.7nm,0.6s,SNR=7.9							
ETOR	**Torete**	**6.07**	**8**	P	**Pn**		**01 01 03.6**	**+1.8**
	2.7nm,0.6s,SNR=7.9							
ETOR	**Torete**	**6.07**	**8**	P	**Pn**		**01 01 03.6**	**+1.8**
	2.7nm,0.6s,SNR=7.9							

*ISK **08** 01:08:13.3, 36.°07N×40.°84E, h14km, MD3.9*
*DDA **08** 01:08:13.9, 36.°21N×40.°90E, h25km, Md3.9*
*NSSC **08** 01:08:15, 36.°42N×40.°89E, h9km±3km*
*CSEM **08** 01:08:15.6±0.3, 36.°29N×40.°84E, h5km, Mc2.6, Error ellipse: s-maj=8.6km s-min=4.7km az=170.0*
*ISCJB **08** 01:08:15.7±0.9, 36.°35N±0.°04×40.°81E±0.°03, h7km±5km, Error ellipse: s-maj=6.7km s-min=4.1km az=161.8*

ISC 08 01:08:16.3±1.0, 36.°35N±0.°04×40.°82E±0.°03, h6km±6km, n59, σ1§06/79, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SFNV	**Sufian**	**0.57**	**277**	⇑P		**Pg**	**01 08 28.0**	**+0.7**
SFNV				⇑S		**Sg**	**01 08 36.0**	**+1.2**
SFNV	**Sufian**	**0.57**	**277**	⇑*i*P		**Pg**	**01 08 28.4**	**+1.1**
SFNV				⇑*i*S		**Sg**	**01 08 36.6**	**+1.8**
KBSD	**Kabsdagh**	**0.68**	**341**	⇑P		**Pg**	**01 08 28.0**	**-1.4**
KBSD				⇑S		**Sg**	**01 08 37.0**	**-1.3**
KBSD	**Kabsdagh**	**0.68**	**341**	⇑*i*P		**Pg**	**01 08 28.6**	**-0.8**
KBSD				⇑*i*S		**Sg**	**01 08 37.4**	**-0.9**
BEST	**Besiri**	**1.58**	**13**	*i*P		**Pn**	**01 08 43.8**	**-1.0**
BEST				*i*S		**Sn**	**01 09 05.4**	**-0.2**
DIY	**Diyarbakir**	**1.61**	**343**	*e*PN		**Pn**	**01 08 45.1**	**-0.2**
DIY	**Diyarbakir**	**1.61**	**343**	*e*Pn		**Pn**	**01 08 45.1**	**-0.2**
DIYA	**Diyarbakir**	**1.66**	**341**	*i*P		**Pn**	**01 08 45.6**	**-0.4**
DIYA				*i*S		**Sn**	**01 09 06.4**	**-1.3**
DIYA	**Diyarbakir**	**1.66**	**341**	*i*P		**Pn**	**01 08 45.6**	**-0.4**
DIYA				*i*S		**Sn**	**01 09 06.4**	**-1.3**
MSL	**Mosul**	**1.85**	**88**	*e*Pn		**Pn**	**01 08 49.0**	**+0.4**
MSL				*e*Sn		**Sn**	**01 09 14.0**	**+1.7**
BTMT	**Batman**	**1.91**	**16**	*e*PN		**Pn**	**01 08 48.7**	**-0.8**
BTMT				*e*SN		**Sn**	**01 09 14.4**	**+0.6**
URFA	**Urfa**	**1.93**	**305**	*e*PN		**Pn**	**01 08 49.4**	**-0.4**
URFA	**Urfa**	**1.93**	**305**	*e*Pn		**Pn**	**01 08 49.4**	**-0.3**
JHLN	**Al Jahlan**	**2.04**	**251**	⇑P		**Pn**	**01 08 51.0**	**-0.2**
JHLN				⇑S		**Sn**	**01 09 17.0**	**-0.1**
JHLN	**Al Jahlan**	**2.04**	**251**	⇑*i*P		**Pn**	**01 08 51.3**	**+0.1**
JHLN				⇑*i*S		**Sn**	**01 09 17.6**	**+0.5**
ATAB	**Bozova**	**2.31**	**300**	*i*P		**Pn**	**01 08 54.5**	**-0.4**
ATAB				*i*S		**Sn**	**01 09 28.7**	**+5.1**
ATAB	**Bozova**	**2.31**	**300**	*i*P		**Pn**	**01 08 54.5**	**-0.4**
SLMH	**Al Salmeh**	**2.34**	**267**	⇑P		**Pn**	**01 08 54.0**	**-1.3**
SLMH				⇑S		**Sn**	**01 09 24.0**	**-0.4**
SLMH	**Al Salmeh**	**2.34**	**267**	⇑*i*P		**Pn**	**01 08 54.6**	**-0.7**
SLMH				⇑*i*S		**Sn**	**01 09 24.1**	**-0.3**
SVRC	**Sivrice-ELAZID**	**2.35**	**330**	*e*PN		**Pn**	**01 08 56.5**	**+0.9**
SVRC	**Sivrice-ELAZID**	**2.35**	**330**	*e*Pn		**Pn**	**01 08 56.5**	**+1.0**
CUKT	**Cukurca**	**2.41**	**67**	*e*PN		**Pn**	**01 08 55.0**	**-1.3**
CUKT	**Cukurca**	**2.41**	**67**	*e*Pn		**Pn**	**01 08 55.0**	**-1.3**
BINT	**Bingol**	**2.53**	**354**	*e*PN		**Pn**	**01 08 59.7**	**+1.7**
BINT	**Bingol**	**2.53**	**354**	*e*Pn		**Pn**	**01 08 59.7**	**+1.7**
ELZG	**Elazig**	**2.59**	**326**	*e*P		**Pn**	**01 08 59.9**	**+1.1**
ELZG				*e*S		**Sn**	**01 09 35.8**	**+5.2**
ELZG	**Elazig**	**2.59**	**326**	*e*P		**Pn**	**01 08 59.9**	**+1.1**
HAKT	**HAKKARI**	**2.61**	**62**	*i*P		**Pn**	**01 08 57.2**	**-1.8**
HAKT				*i*S		**Sn**	**01 09 29.8**	**-1.3**
HAKT	**HAKKARI**	**2.61**	**62**	*i*P		**Pn**	**01 08 57.2**	**-1.8**
HAKT				*i*S		**Sn**	**01 09 29.8**	**-1.2**
HKR	**Hakkari**	**2.64**	**62**	*e*PN		**Pn**	**01 08 58.3**	**-1.1**
HKR	**Hakkari**	**2.64**	**62**	*e*Pn		**Pn**	**01 08 58.3**	**-1.2**
MYA	**Malataya**	**2.74**	**317**	*e*PN		**Pn**	**01 09 01.4**	**+0.6**
MYA	**Malataya**	**2.74**	**317**	*e*Pn		**Pn**	**01 09 01.4**	**+0.6**
PTK	**Pertek**	**2.78**	**336**	*e*PN		**Pn**	**01 09 02.6**	**+1.3**
PTK	**Pertek**	**2.78**	**336**	*e*Pn		**Pn**	**01 09 02.7**	**+1.4**
GAZ	**Gaziantep**	**3.01**	**287**	*e*PN		**Pn**	**01 09 03.7**	**-0.8**
GAZ	**Gaziantep**	**3.01**	**287**	*e*Pn		**Pn**	**01 09 03.7**	**-0.8**
AKCD	**Akcadag**	**3.01**	**311**	*i*P		**Pn**	**01 09 05.1**	**+0.5**
AKCD				*e*S		**Sn**	**01 09 40.6**	**-0.4**
AKCD	**Akcadag**	**3.01**	**311**	*i*P		**Pn**	**01 09 05.1**	**+0.5**
AKCD				*e*S		**Sn**	**01 09 40.6**	**-0.4**
VANB	**Van**	**3.03**	**42**	*e*PN		**Pn**	**01 09 05.2**	**+0.4**
VANB	**Van**	**3.03**	**42**	*e*Pn		**Pn**	**01 09 05.3**	**+0.5**
KUZU	**Kuzuini**	**3.04**	**279**	*i*P		**Pn**	**01 09 04.7**	**-0.3**
KUZU				*e*S		**Sg**	**01 09 53.2**	**-0.8**
KUZU	**Kuzuini**	**3.04**	**279**	*i*P		**Pn**	**01 09 04.7**	**-0.3**
KMRS	**Kahramanmaras**	**3.34**	**291**	*e*PN		**Pn**	**01 09 08.6**	**-0.5**
KMRS	**Kahramanmaras**	**3.34**	**291**	*e*Pn		**Pn**	**01 09 08.6**	**-0.5**
DARE	**Darende-Malaty**	**3.53**	**318**	*e*PN		**Pn**	**01 09 11.4**	**-0.3**
DARE	**Darende-Malaty**	**3.53**	**318**	*e*Pn		**Pn**	**01 09 11.4**	**-0.3**
EZM	**Erzurum**	**3.57**	**7**	*e*PN		**Pn**	**01 09 14.4**	**+2.1**
AGRB	**Hanur-Agry**	**3.65**	**27**	*e*PN		**Pn**	**01 09 15.1**	**+1.8**
AGRB	**Hanur-Agry**	**3.65**	**27**	*e*Pn		**Pn**	**01 09 15.1**	**+1.8**
HTY	**Hatay**	**3.79**	**268**	*e*PN		**Pn**	**01 09 13.5**	**-1.8**
HTY	**Hatay**	**3.79**	**268**	*e*Pn		**Pn**	**01 09 13.5**	**-1.8**
SARI	**SarD1z-Kayseri**	**4.01**	**307**	*e*PN		**Pn**	**01 09 19.6**	**+1.3**
KOZT	**Kozan**	**4.15**	**287**	*e*PN		**Pn**	**01 09 19.8**	**-0.5**
KOZT	**Kozan**	**4.15**	**287**	*e*Pn		**Pn**	**01 09 19.8**	**-0.5**
GUMT	**Gumushane**	**4.23**	**346**	*e*PN		**Pn**	**01 09 23.6**	**+2.2**
GUMT	**Gumushane**	**4.23**	**346**	*e*Pn		**Pn**	**01 09 23.6**	**+2.3**
SVSK	**Karacayir**	**4.66**	**321**	*e*PN		**Pn**	**01 09 28.1**	**+0.9**
SVSK	**Karacayir**	**4.66**	**321**	*e*Pn		**Pn**	**01 09 28.1**	**+0.9**

*TAP **08** 01:14:44.7, 23.°42N×122.°89E, h83km±1km, ML3.3, D*
*ISCJB **08** 01:14:45.0±0.4, 23.°38N±0.°03×122.°92E±0.°02, h33km, Error ellipse: s-maj=4.2km s-min=2.5km az=153.4*
*JMA **08** 01:14:45.1±0.3, 23.°39N×122.°94E, h50km, M2.2*

ISC 08 01:14:45.6±0.4, 23.°38N±0.°03×122.°93E±0.°02, h35km, n38, σ1§10/70, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**1.05**	**50**	P	**Pn**		**01 15 03.5**	**-0.2**
HATJ				S	**Sn**		**01 15 16.9**	**-0.2**
YOJ	**Yonaguni jima**	**1.08**	**4**	P	**Pn**		**01 15 04.0**	**-0.2**
YOJ				*e*S	**Sn**		**01 15 18.0**	**0.0**
IRIF	**Iriomote-Funau**	**1.20**	**37**	P	**Pn**		**01 15 06.0**	**+0.2**
IRIF				*e*S	**Sn**		**01 15 21.1**	**+0.2**
JKRS	**Kuro-shima**	**1.30**	**49**	P	**Pn**		**01 15 07.4**	**+0.1**
JKRS				S	**Sn**		**01 15 23.3**	**-0.2**
TWD	**Chiawan**	**1.41**	**300**	*e*P	**Pn**		**01 15 08.0**	**-0.7**
	baz=293							
TWD				*e*S	**Sn**		**01 15 23.7**	**-2.5**
	baz=293							
ESL	**Shilin**	**1.45**	**288**	P	**Pn**		**01 15 07.9**	**-1.3**
	baz=282							
ESL				*e*S	**Sn**		**01 15 24.7**	**-2.2**
	baz=282							
JIJ	**Ishigaki jima**	**1.48**	**48**	P	**Pn**		**01 15 09.3**	**-0.4**
JIJ				*e*S	**Sn**		**01 15 27.0**	**-0.8**
EHY	**Hungye**	**1.49**	**275**	P	**Pn**		**01 15 09.0**	**-0.7**
	baz=278							
EHY				*e*S	**Sn**		**01 15 26.5**	**-1.5**
	baz=278							
TWF1	**Yuli**	**1.50**	**269**	⇑*i*P	**Pn**		**01 15 09.4**	**-0.6**
	baz=265							
TWF1				*i*S	**Sn**		**01 15 27.8**	**-0.6**
	baz=265							
ENA	**Nanau**	**1.51**	**314**	*e*P	**Pn**		**01 15 10.5**	**+0.4**
	baz=321							
ENA				S	**Sn**		**01 15 28.6**	**0.0**
	baz=321							
TWC	**Suao**	**1.58**	**321**	P	**Pn**		**01 15 11.3**	**+0.3**
	baz=321							
TWC				*e*S	**Sn**		**01 15 29.1**	**-1.2**
	baz=321							
WHF	**Hehuan Shan**	**1.71**	**297**	P	**Pn**		**01 15 12.5**	**-0.3**
	baz=290							
WHF				*e*S	**Sn**		**01 15 32.4**	**-1.1**
	baz=290							
TTN	**Taitung**	**1.76**	**250**	*e*P	**Pn**		**01 15 14.4**	**+0.9**
	baz=249							
TTN				*e*S	**Sn**		**01 15 33.4**	**-1.3**
	baz=249							
TWE	**Neicheng**	**1.77**	**319**	*e*P	**Pn**		**01 15 14.4**	**+0.7**
	baz=319							
TWE				*e*S	**Sn**		**01 15 34.0**	**-1.0**
	baz=319							
ENTT	**Nioudou**	**1.77**	**315**	*e*S	**Sn**		**01 15 35.0**	**0.0**
	baz=320							
NNS	**Nan Shan**	**1.78**	**307**	P	**Pn**		**01 15 13.8**	**0.0**
	baz=298							
NNS				*e*S	**Sn**		**01 15 34.6**	**-0.6**
	baz=298							
TWG	**Pinlang**	**1.80**	**252**	P	**Pn**		**01 15 14.1**	**0.0**
	baz=253							
TWG				*e*S	**Sn**		**01 15 34.6**	**-1.1**
	baz=253							
YUS	**Yu-Shan**	**1.82**	**274**	P	**Pn**		**01 15 14.9**	**+0.5**
	baz=272							
YUS				*e*S	**Sn**		**01 15 36.2**	**-0.1**
	baz=272							
TWT	**Tachien**	**1.83**	**299**	*e*P	**Pn**		**01 15 14.4**	**-0.1**
	baz=298							
TWT				*e*S	**Sn**		**01 15 37.0**	**+0.4**
	baz=298							
LAY	**Lan-yu**	**1.84**	**224**	*e*P	**Pn**		**01 15 14.5**	**-0.3**
	baz=222							
LAY				*e*S	**Sn**		**01 15 34.5**	**-2.4**
	baz=222							
SMLT	**Sun Moon Lake**	**1.93**	**286**	P	**Pn**		**01 15 16.4**	**+0.5**
	baz=288							
SMLT				*e*S	**Sn**		**01 15 39.7**	**+0.7**
	baz=288							
NSK	**Sanguang**	**1.94**	**312**	*e*P	**Pn**		**01 15 16.9**	**+0.9**
	baz=312							
NSK				*e*S	**Sn**		**01 15 38.1**	**-0.9**
	baz=312							
ALS	**Alishan**	**1.96**	**274**	P	**Pn**		**01 15 17.3**	**+1.0**
	baz=269							
TYC	**Yuchr**	**1.98**	**286**	P	**Pn**		**01 15 16.7**	**+0.2**
	baz=288							
TYC				*e*S	**Sn**		**01 15 39.6**	**-0.4**
	baz=288							
ECL	**Taimali**	**1.98**	**247**	*i*P	**Pn**		**01 15 16.0**	**-0.6**
	baz=245							
ECL				*e*S	**Sn**		**01 15 37.9**	**-2.3**
	baz=245							
NWF	**Wu-fen Shan**	**1.99**	**328**	*e*P	**Pn**		**01 15 13.7**	**-3.0**
	baz=329							
JTJ	**Tarama**	**2.05**	**52**	P	**Pn**		**01 15 17.6**	**+0.1**
JTJ				*e*S	**Sn**		**01 15 41.6**	**-0.3**
CHN5	**Tsauling**	**2.08**	**276**	P	**Pn**		**01 15 19.1**	**+1.1**
	baz=275							
CHN5				*e*S	**Sn**		**01 15 44.5**	**+1.8**
	baz=275							
WTP	**Ta-pu**	**2.14**	**267**	P	**Pn**		**01 15 20.2**	**+1.5**
	baz=267							
WTP				*e*S	**Sn**		**01 15 45.7**	**+1.6**
	baz=267							
EAST	**Anshuo**	**2.16**	**243**	*e*S	**Sn**		**01 15 43.3**	**-1.4**
	baz=241							
NSTT	**Nanjuang**	**2.17**	**306**	*e*P	**Pn**		**01 15 21.0**	**+1.9**
	baz=305							
NSTT				S	**Sn**		**01 15 44.6**	**-0.1**
	baz=305							
SGST	**Jiashian**	**2.18**	**263**	*e*P	**Pn**		**01 15 21.0**	**+1.7**
	baz=259							
TWQ1	**Liyutan**	**2.20**	**296**	*e*P	**Pn**		**01 15 21.5**	**+1.9**
	baz=296							
TWQ1				*e*S	**Sn**		**01 15 46.1**	**+0.5**
	baz=296							
TWS1	**Kuangyinshan**	**2.21**	**321**	*e*P	**Pn**		**01 15 20.2**	**+0.5**
	baz=332							
TWS1				*e*S	**Sn**		**01 15 46.8**	**+1.1**
	baz=332							
CHN1	**Nanshi**	**2.22**	**266**	*i*P	**Pn**		**01 15 21.8**	**+1.9**
	baz=274							
CHN1				S	**Sn**		**01 15 48.5**	**+2.4**
	baz=274							
TWK	**Hsinying**	**2.25**	**268**	P	**Pn**		**01 15 22.2**	**+1.9**
	baz=266							
TWK				*e*S	**Sn**		**01 15 49.1**	**+2.2**
	baz=266							
SCZT	**Fangliau**	**2.36**	**245**	*e*P	**Pn**		**01 15 23.8**	**+2.0**
	baz=241							
TWK1	**Hengchun**	**2.43**	**234**	*e*P	**Pn**		**01 15 21.1**	**-1.7**
	baz=226							
TWK1				*e*S	**Sn**		**01 15 50.9**	**-0.4**
	baz=226							

*ISK **08** 01:18:41.8, 39.°49N×40.°67E, h8km, MD3.3*
*CSEM **08** 01:18:42.8±0.1, 39.°48N×40.°65E, h10km, MD3.3, Error ellipse: s-maj=2.4km s-min=1.7km az=97.0*

DDA 08 01:18:41.6, 39.°44N×40.°68E, h7km±3km, Md3.3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BINT	**Bingol**	**0.58**	**195**	PG	Pg		01 18 54.4	+1.6
BINT				*e*SG	Sg		01 19 03.7	+3.3
BINT	**Bingol**	**0.58**	**195**	*i* Pg	Pg		01 18 54.4	+1.6
BINT				*e*Sg	Sg		01 19 03.7	+3.3
KOPT	**Kop Dagi**	**0.59**	**346**	*i* P	Pg		01 18 53.8	+0.7
KOPT				*i* S	Sg		01 19 03.9	+3.1
KOPT	**Kop Dagi**	**0.59**	**346**	*i* P	Pg		01 18 53.8	+0.7
EZM	**Erzurum**	**0.70**	**48**	PG	Pg		01 18 55.3	+0.2
EZM				*e*SG	Sg		01 19 05.2	+1.0
ERZM	**Erzurum**	**0.70**	**48**	*i* P	Pg		01 18 55.4	+0.3
ERZM				*i* S	Sg		01 19 06.1	+1.8
ERZM	**Erzurum**	**0.70**	**48**	*i* P	Pg		01 18 55.4	+0.3
ERZM				*i* S	Sg		01 19 06.1	+1.8
EZC	**Erzincan**	**1.07**	**287**	*e*PG	Pg		01 19 02.2	+0.1
HOMI	**Horasan**	**1.12**	**57**	*i* P	Pg		01 19 03.1	0.0
HOMI				*i* S	Sg		01 19 19.0	+1.4
PTK	**Pertek**	**1.14**	**242**	*e*PN	Pn		01 19 04.0	0.0
PTK	**Pertek**	**1.14**	**242**	*e*Pn	Pn		01 19 04.0	+0.1
GUMT	**Gumushane**	**1.38**	**318**	*e*PN	Pn		01 19 07.3	+0.1
GUMT	**Gumushane**	**1.38**	**318**	*e*Pn	Pn		01 19 07.3	+0.1
BTMT	**Batman**	**1.40**	**153**	*e*PN	Pn		01 19 08.9	+1.5
BTMT	**Batman**	**1.40**	**153**	*e*Pn	Pn		01 19 08.9	+1.5
SVRC	**Sivrice-ELAZID**	**1.51**	**226**	*e*PN	Pn		01 19 10.1	+1.1
SVRC	**Sivrice-ELAZID**	**1.51**	**226**	*e*Pn	Pn		01 19 10.1	+1.1
DIYA	**Diyarbakir**	**1.58**	**196**	*i* P	Pn		01 19 11.6	+1.7
DIYA				*i* S	Sn		01 19 34.0	+3.4
DIYA	**Diyarbakir**	**1.58**	**196**	*i* P	Pn		01 19 11.6	+1.7
DIYA				*i* S	Sn		01 19 34.0	+3.5
DIY	**Diyarbakir**	**1.58**	**193**	*e*PN	Pn		01 19 11.4	+1.4
DIY	**Diyarbakir**	**1.58**	**193**	*e*Pn	Pn		01 19 11.4	+1.4
BEST	**Besiri**	**1.61**	**163**	*i* P	Pn		01 19 12.3	+1.9
BEST				*i* S	Sn		01 19 34.5	+3.0
DDEM	**Demirkent**	**1.67**	**29**	*i* P	Pn		01 19 13.2	+2.0
DDEM				*i* S	Sn		01 19 35.6	+2.8
DDEM	**Demirkent**	**1.67**	**29**	*i* P	Pn		01 19 13.2	+2.0
KTUT	**Trabzon**	**1.70**	**336**	*e*PN	Pn		01 19 11.9	+0.3
KTUT	**Trabzon**	**1.70**	**336**	*e*Pn	Pn		01 19 11.9	+0.3
KEMA	**Kemaliye**	**1.71**	**265**	*i* P	Pn		01 19 13.2	+1.5
KEMA				*i* S	Sn		01 19 37.7	+4.0
KEMA	**Kemaliye**	**1.71**	**265**	*i* P	Pn		01 19 13.1	+1.4
PZAR	**Pazar-Rize**	**1.75**	**5**	*e*PN	Pn		01 19 12.6	+0.3
PZAR	**Pazar-Rize**	**1.75**	**5**	*e*Pn	Pn		01 19 12.6	+0.3
AGRB	**Hanur-Agry**	**1.79**	**85**	*e*PN	Pn		01 19 13.7	+0.8
AGRB	**Hanur-Agry**	**1.79**	**85**	*e*Pn	Pn		01 19 13.7	+0.8
ESPY	**Espiye-Giresun**	**2.10**	**315**	*e*PN	Pn		01 19 17.7	+0.5
ESPY	**Espiye-Giresun**	**2.10**	**315**	*e*Pn	Pn		01 19 17.7	+0.5
BCA	**Borcka**	**2.13**	**19**	*e*PN	Pn		01 19 18.0	+0.5
BCA	**Borcka**	**2.13**	**19**	*e*Pn	Pn		01 19 18.0	+0.5
KARS	**Kars**	**2.19**	**56**	*e*PN	Pn		01 19 19.2	+0.8
KARS	**Kars**	**2.19**	**56**	*e*Pn	Pn		01 19 19.2	+0.8
URFA	**Urfa**	**2.47**	**217**	*e*PN	Pn		01 19 24.2	+2.0
URFA	**Urfa**	**2.47**	**217**	*e*Pn	Pn		01 19 24.3	+2.0
CLDR	**Caldiran**	**2.53**	**96**	*e*PN	Pn		01 19 24.2	+1.2
CLDR	**Caldiran**	**2.53**	**96**	*e*Pn	Pn		01 19 24.2	+1.2
SVSK	**Karacayir**	**2.88**	**281**	*e*PN	Pn		01 19 29.1	+1.3
SVSK	**Karacayir**	**2.88**	**281**	*e*Pn	Pn		01 19 29.2	+1.3
CUKT	**Cukurca**	**3.17**	**133**	*e*PN	Pn		01 19 34.0	+2.1
CUKT	**Cukurca**	**3.17**	**133**	*e*Pn	Pn		01 19 34.0	+2.1

DJA 08 01:23:32, 8.°04S×120.°11E, h23km, MLv3.8/5, Flores region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.63**	**173**	P		Pn	01 24 00.0	+0.7
WSI				S		Sn	01 24 20.2	+0.6
MMRI	**Maumere**	**2.19**	**106**	P		Pn	01 24 03.9	-3.1
MMRI				S		Sn	01 24 36.5	+3.2
BKSI	**Bulukumba**	**2.70**	**0**	P		Pn	01 24 14.2	+0.2
BKSI				S		Sn	01 24 47.6	+1.6
KAPI	**Kappang**	**3.03**	**353**	P		Pn	01 24 19.7	+1.2
BNSI	**Bone**	**3.62**	**360**	P		Pn	01 24 27.0	+0.4
BNSI				S		Sn	01 25 10.8	+2.2

MEX 08 02:02:44.1±0.4, 15.°93N×93.°69W, h100km±3km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PCIG		**0.51**	**116**	*i* P		Pn	02 02 58.6	-1.3
PCIG				*i* S	

ZAI				S	Sg	02 50 07.0	-0.3
ZAI	**Zaio**	**0.32**	**59**	P	Pg	02 50 02.0	-0.9
ZAI				S	Sg	02 50 07.0	-0.3
ZAI	**Zaio**	**0.32**	**59**	*i* P	Pg	02 50 02.0	-0.9
ZAI				*i* S	Sg	02 50 07.0	-0.3
TOU	**Touzarine**	**0.57**	**286**	P	Pg	02 50 10.5	+2.9
TOU				S	Sg	02 50 21.5	+6.3
TOU	**Touzarine**	**0.57**	**286**	P	Pg	02 50 10.5	+2.9
TOU				S	Sg	02 50 21.5	+6.3
TOU	**Touzarine**	**0.57**	**286**	*i* P	Pg	02 50 10.5	+2.9
EALB	**Alboran**	**1.14**	**2**	P	Pb	02 50 17.7	-0.5
32nm,0.4s,SNR=15							
EALB				S	Sb	02 50 35.0	+2.0
85nm,0.5s,SNR=6.6						

0.4nm,0.2s,SNR=7.9
EADA Adamuz 7.42 17 P Pn 03 47 35.0 -2.5
0.1nm,0.1s,SNR=7.9
EADA S Sn 03 48 55.4 -6.4
0.4nm,0.2s,SNR=7.9
EBAD Badajoz 7.65 2 P Pn 03 47 37.8 -3.0
0.2nm,0.2s,SNR=7.9
EBAD S Sn 03 49 00.4 -7.3
1.0nm,0.2s,SNR=7.9
EBAD Badajoz 7.65 2 P Pn 03 47 37.8 -3.0
0.2nm,0.2s,SNR=7.9
EBAD S Sn 03 49 00.4 -7.3
1.0nm,0.2s,SNR=7.9

*CSEM **08** 03:53:35.5, 42°.93N×45°.71E, h19km, mb3.9, After OBN*
MOS 08 03:53:35.5±1.7, 42°.93N×45°.71E, h19km, mb3.9/1, 1C-2D, Error ellipse: s-maj=26.3km s-min=7.3km az=21.3, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNJR	**Sundja**	**0.67**	**283**	*e*PG	Pg	03 53 49.7	+0.9
SNJR				*e*S	Sb	03 54 02.8	+5.3
SNJR	**Sundja**	**0.67**	**283**	*e*Pg	Pg	03 53 49.7	+0.9
SNJR				*e*Sg	Sg	03 54 02.8	+5.0
VLKR	**Vladikavkaz**	**0.77**	**279**	*e*PG	Pg	03 53 50.9	+0.4
VLKR				*e*S	Sb	03 54 04.8	+4.6
VLKR	**Vladikavkaz**	**0.77**	**279**	*e*Pg	Pg	03 53 50.9	+0.4
VLKR				*e*Sg	Sg	03 54 04.8	+4.1
UNCR	**Uncukul**	**0.83**	**104**	*i* PG	Pg	03 53 52.0	+0.3
UNCR				*i* S	Sb	03 54 04.0	+2.0
UNCR				pmax	pmax		
	comp=Z,34nm,0.2s						
UNCR	**Uncukul**	**0.83**	**104**	*i* Pg	Pg	03 53 52.0	+0.3
	comp=Z,34nm,0.2s						
UNCR				*i* Sg	Sg	03 54 04.0	+1.4
KRNR	**Karanay**	**0.89**	**96**	⇑*i*PG	Pg	03 53 52.0	-0.8
KRNR				*i* S	Sb	03 54 04.5	+0.8
KRNR	**Karanay**	**0.89**	**96**	*i* Pg	Pg	03 53 52.0	-0.8
KRNR				*i* Sg	Sg	03 54 04.5	0.0
BTKR	**Batakoyurt**	**0.96**	**298**	*e*PG	Pg	03 53 55.4	+1.2
BTKR				*e*S	Sb	03 54 12.8	+6.9
BTKR	**Batakoyurt**	**0.96**	**298**	*e*Pg	Pg	03 53 55.4	+1.2
BTKR				*e*Sg	Sg	03 54 12.8	+5.9
LACR	**Lac**	**1.04**	**265**	*e*PG	Pg	03 53 56.3	+0.6
LACR				*i* S	Sb	03 54 12.3	+4.1
LACR	**Lac**	**1.04**	**265**	*e*Pg	Pg	03 53 56.3	+0.6
LACR				*i* Sg	Sg	03 54 12.3	+2.9
ARNR	**Ardon**	**1.08**	**285**	*e*PG	Pg	03 53 56.3	-0.1
ARNR				*e*S	Sb	03 54 14.3	+5.1
ARNR	**Ardon**	**1.08**	**285**	*e*Pg	Pg	03 53 56.3	-0.1
ARNR				*e*Sg	Sg	03 54 14.3	+3.7
KMSR	**Komsomolskaya**	**1.13**	**294**	*e*PG	Pg	03 53 57.6	+0.3
KMSR				*i* S	Sb	03 54 16.7	+6.1
KMSR	**Komsomolskaya**	**1.13**	**294**	*e*Pg	Pg	03 53 57.6	+0.3
KMSR				*i* Sg	Sg	03 54 16.7	+4.6
KORR	**Kora**	**1.21**	**278**	*e*PG	Pg	03 53 57.7	-1.3
KORR				*i* S	Sb	03 54 16.8	+3.7
KORR	**Kora**	**1.21**	**278**	*e*Pg	Pg	03 53 57.7	-1.3
KORR				*i* Sg	Sg	03 54 16.8	+1.9
KMKR	**Kumukh**	**1.30**	**127**	*i* PG	Pg	03 53 59.0	-1.6
KMKR				*e*S	Sn	03 54 18.0	+2.6
KMKR				pmax	pmax		
	comp=Z,35nm,0.2s						
KMKR	**Kumukh**	**1.30**	**127**	*i* Pg	Pg	03 53 59.0	-1.6
	comp=Z,35nm,0.2s						
KMKR				*e*Sg	Sg	03 54 18.0	+0.4
ZEI	**Tsey**	**1.34**	**264**	*e*PG	Pg	03 53 58.2	-3.2
ZEI				*e*S	Sn	03 54 17.9	+1.5
ZEI	**Tsey**	**1.34**	**264**	*e*Pg	Pg	03 53 58.2	-3.2
ZEI				*e*Sg	Sg	03 54 17.9	-1.0
LSNR	**Lesken**	**1.43**	**285**	*e*PG	Pg	03 53 58.8	-4.2
LSNR				*i* S	Sn	03 54 21.0	+2.4
LSNR	**Lesken**	**1.43**	**285**	*e*Pg	Pg	03 53 58.8	-4.2
LSNR				*i* Sg	Sg	03 54 21.0	-0.7
DGRG	**David-gareji**	**1.50**	**190**	P	Pn	03 54 03.8	+2.5
DGRG				S	Sn	03 54 26.0	+5.8
DIGR	**Digorskoe uzhe**	**1.56**	**270**	*e*PG	Pg	03 54 01.9	-3.7
DIGR				*e*S	Sn	03 54 24.5	+2.6
DIGR	**Digorskoe uzhe**	**1.56**	**270**	*e*Pg	Pg	03 54 01.9	-3.7
DIGR				*e*Sg	Sg	03 54 24.5	-1.4
KUBR	**Kubataba**	**1.89**	**298**	*e*PN	Pn	03 54 11.0	+4.3
KUBR	**Kubataba**	**1.89**	**298**	*e*Pn	Pn	03 54 11.0	+4.3
PYA	**Pyatigorsk**	**2.22**	**301**	*e*PN	Pn	03 54 10.1	-1.2
PYA	**Pyatigorsk**	**2.22**	**301**	*e*Pn	Pn	03 54 10.1	-1.2
SHAR	**Shatzhatmas**	**2.36**	**291**	⇓*e*PN	Pn	03 54 12.7	-0.5
SHAR	**Shatzhatmas**	**2.36**	**291**	*e*Pn	Pn	03 54 12.7	-0.5
KIV	**Kislovodsk**	**2.43**	**296**	⇓*e*PN	Pn	03 54 13.1	-1.0
KIV	**Kislovodsk**	**2.43**	**296**	*e*Pn	Pn	03 54 13.1	-1.0

IDC 08 03:55:15.4±3.5, 23°.78S×69°.58E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.5/24, mbtmp3.7/5, Error ellipse: s-maj=129.2km s-min=29.5km az=43.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**58.40**	**104**	P	P	04 05 13.2	+0.2
	0.5nm,0.7s,baz=255,slow=6.3,SNR=8.8						
WRA	**Warramunga Arr**	**59.77**	**100**	P	P	04 05 22.4	-0.2
	0.4nm,0.8s,baz=257,slow=6.1,SNR=2.6						
MKAR	**Makanchi Array**	**71.18**	**9**	P	P	04 06 36.0	+0.3
	0.7nm,0.7s,baz=182,slow=4.5,SNR=8.7						
BRTR	**Keskin Array B**	**71.53**	**331**	P	P	04 06 38.5	+0.4
	0.5nm,0.6s,baz=165,slow=7.4,SNR=4.3						
ZALV	**Zalesovo Beam**	**78.52**	**9**	P	P	04 07 17.9	-0.1
	0.8nm,0.7s,baz=188,slow=4.4,SNR=4.2						

IDC 08 04:10:41.8±3.6, 6°.54S×148°.51E, h0km, mb3.6/2, mb1 3.7/3, mb1mx3.4/16, mbtmp3.5/3, Error ellipse: s-maj=115.8km s-min=45.2km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.16**	**225**	P	Pn	04 15 06.7	-1.0
	0.1nm,0.3s,baz=51,slow=10,SNR=7.4						
ASAR	**Alice Springs**	**22.07**	**218**	P	P	04 15 39.4	+0.9
	0.9nm,0.4s,baz=52,slow=9.1,SNR=30						
FITZ	**Fitzroy Crossi**	**25.09**	**241**	P	P	04 16 07.3	-1.0
	1.1nm,0.4s,baz=56,slow=9.5,SNR=4.7						
TORD	**Torodi Ar. Bea**	**146.67**	**284**	PKPbc	PKPbc	04 30 26.2	-0.4
	0.3nm,0.7s,baz=66,slow=5.2,SNR=6.3						

IDC 08 04:15:24.8±3.9, 7°.13S×151°.02E, h0km, mb2.9/2, mb1 3.3/2, mb1mx3.2/15, mbtmp3.1/2, Error ellipse: s-maj=166.9km s-min=48.3km az=122.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.59**	**230**	P	P	04 20 04.9	-0.7
	0.3nm,0.5s,baz=55,slow=11,SNR=6.3						
ASAR	**Alice Springs**	**23.25**	**223**	P	P	04 20 34.0	+0.1
	0.3nm,0.6s,baz=60,slow=9.1,SNR=5.3						
TORD	**Torodi Ar. Bea**	**149.24**	**284**	PKPbc	PKPbc	04 35 16.3	-0.2
	0.3nm,0.8s,baz=85,slow=3.3,SNR=3.0						

MAN 08 04:36:36, 5°.77N×123°.71E, h35km, mb4.8, ML3.7, MS3.7, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**1.27**	**76**	⇑*e*P	Pn	04 37 02.1	+4.8
GSPH				*i* S	Sn	04 37 19.8	+6.6
CTBH	**Cotabato--PC H**	**1.54**	**20**	⇑*i*P	Pn	04 37 01.1	+0.2
ZMPH	**Zamboanga City**	**2.01**	**306**	⇓*i*P	Pn	04 37 07.9	+0.4
ZMPH				*i* S	Sn	04 37 29.5	-2.0
PAGZ	**Pagadian**	**2.09**	**351**	*e*P	Pn	04 37 09.2	+0.6
PAGZ				*e*S	Sn	04 37 25.2	-8.2
IPIL	**Ipil**	**2.30**	**331**	*e*P	Pn	04 37 12.7	+1.2
IPIL				*e*S	Sn	04 37 29.9	-8.8
BUKP	**Musuan**	**2.49**	**33**	*e*P	Pn	04 37 16.4	+2.3

KRSC 08 05:02:24.5±0.6, 55°.40N×159°.24E, h315km±25km, ML4.0, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMNR	**Kamenistaya**	**0.67**	**57**	*e*P	Pn	05 03 06.3	+1.2
KPT	**Kopyto**	**0.80**	**44**	*e*P	Pn	05 03 06.5	+1.0
KIRR	**Kirishev**	**0.83**	**48**	*e*P	Pn	05 03 06.8	+1.1
BZMR	**Bezymyannaya**	**0.89**	**52**	*e*P	Pn	05 03 07.2	+1.3
SRDR	**Sredinnyy**	**0.96**	**16**	*e*P	Pn	05 03 06.9	+0.8
ZLN	**Zelenaya**	**1.08**	**54**	*e*P	Pn	05 03 08.3	+1.6
KLY	**Klyuchi**	**1.21**	**40**	*e*P	Pn	05 03 08.7	+1.4
KLY				*i* S	S	05 03 41.8	+0.2
BDR	**Baidarnaya**	**1.61**	**43**	*e*P	Pn	05 03 11.2	+1.5
SRKR	**Sorokina**	**1.66**	**40**	*e*P	Pn	05 03 10.9	+0.9
MKZ	**Mys Kozlova**	**1.67**	**119**	*e*P	Pn	05 03 09.9	-0.3
MKZ				*i* S	S	05 03 43.7	-2.9
SMKR	**Semkarok**	**1.72**	**46**	*e*P	Pn	05 03 11.6	+1.2
GNL	**Ganaly**	**1.87**	**204**	*e*P	Pn	05 03 13.9	+2.3
GNL				*i* S	S	05 03 51.0	+1.8
AVH	**Avacha**	**2.16**	**188**	*e*P	Pn	05 03 14.4	+0.5
KBTR	**Krutoberegovo**	**2.18**	**67**	*e*P	Pn	05 03 13.9	+0.1
KBTR				*i* S	S	05 03 50.4	-2.9
SPN	**Mys Shipunski**	**2.35**	**168**	*e*P	Pn	05 03 15.8	+0.4
SPN				*i* S	S	05 03 52.6	-3.5
BKI	**Bering**	**3.85**	**90**	*e*P	Pn	05 03 33.6	+3.8
BKI				*i* S	S	05 04 22.5	+0.2

*MAN **08** 05:20:35, 11°.50N×126°.32E, h88km, mb5.1, ML4.0, MS4.2*
*IDC **08** 05:20:38.0±1.0, 11°.23N×126°.03E, h41km±8km, mb3.5/6, mb1 3.7/6, mb1mx3.4/21, mbtmp3.5/6, MS3.0/1, Ms1 3.0/1, ms1mx2.4/18, Error ellipse: s-maj=34.9km s-min=18.6km az=71.0*
*ISCJB **08** 05:20:37.0±1.6, 11°.44N±0°.06×126°.3E±0°.1, h54km±15km, mb3.7/6, Error ellipse: s-maj=19.8km s-min=9.6km az=168.0*
ISC 08 05:20:38.5±1.6, 11°.44N±0°.06×126°.2E±0°.1, h49km±16km, h44km±1.9km; pP-P, n16, σ19°.20/16, mb3.7/6, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**1.63**	**256**	*e*P	**Pn**	**05 21 05.6**	**+0.9**
OCLP				*e*S	**Sn**	**05 21 22.8**	**-1.8**
CNP	**Catarman**	**1.86**	**305**	*e*P	**Pn**	**05 21 06.9**	**-1.0**
CNP				*e*S	**Sn**	**05 21 30.9**	**+0.6**
MSLP	**Maasin**	**1.87**	**226**	*e*P	**Pn**	**05 21 07.8**	**-0.2**
MSLP				*e*S	**Sn**	**05 21 32.3**	**+2.0**
TBP	**Tagbilaran**	**2.90**	**233**	*e*P	**Pn**	**05 21 21.6**	**-0.6**
PVCP	**Virac**	**2.95**	**317**	*e*P	**Pn**	**05 21 21.3**	**-1.5**
RCP	**Roxas**	**3.41**	**272**	⇑*e*P	**Pn**	**05 21 30.1**	**+0.9**
BUKP	**Musuan**	**3.72**	**198**	*e*P	**Pn**	**05 21 34.0**	**+0.6**
DAV	**Davao City (W)**	**4.39**	**188**	LR	LR	05 23 41.8	
	comp=Z,186nm,18.1s,baz=320,slow=44						
KSRS	**Korea Array**	**25.95**	**3**	P	**P**	**05 26 08.3**	**+2.0**
	1.0nm,0.8s,mb3.4,baz=186,slow=11,SNR=4.4						
KSRS				pP	pP	05 26 20.1	+1.2
	1.1nm,0.7s,baz=182,slow=10.0,SNR=3.9						
CMAR	**Chiang Mai Arr**	**27.24**	**288**	P	**P**	**05 26 17.9**	**-0.3**
	1.0nm,0.6s,mb3.5,baz=101,slow=7.1,SNR=6.1						
CMAR				pP	pP	05 26 28.6	-2.2
	0.9nm,0.4s,baz=91,slow=6.3,SNR=2.6						
WRA	**Warramunga Arr**	**32.19**	**166**	P	**P**	**05 27 00.2**	**-1.7**
	1.0nm,0.9s,mb3.6,baz=344,slow=9.7,SNR=5.7						
ASAR	**Alice Springs**	**35.69**	**168**	P	**P**	**05 27 32.1**	**-0.2**
	0.8nm,0.9s,mb3.7,baz=351,slow=7.1,SNR=6.9						
MKAR	**Makanchi Array**	**51.08**	**322**	P	**P**	**05 29 37.7**	**+1.7**
	1.1nm,0.7s,mb3.9,baz=104,slow=9.3,SNR=9.6						
MKAR				pP	pP	05 29 48.6	-0.8
	2.3nm,0.7s,baz=104,slow=9.2,SNR=14						
BRTR	**Keskin Array B**	**84.76**	**309**	P	**P**	**05 33 06.6**	**-1.2**
	0.7nm,0.7s,mb3.9,baz=99,slow=5.6,SNR=4.2						
BRTR				pP	pP	05 33 20.0	-2.0
	0.4nm,0.6s,baz=79,slow=7.5,SNR=2.2						
AKASG	**Malin Array Be**	**85.64**	**321**	pP	pP	05 33 22.1	-4.1
	0.2nm,0.3s,baz=84,slow=2.7,SNR=2.7						
TORD	**Torodi Ar. Bea**	**119.79**	**292**	PKP	PKPdf	05 39 24.4	+0.1
	0.2nm,0.6s,baz=76,slow=1.9,SNR=3.1						

*NNC **08** 05:36:29.5±4.7, 43°.02N×84°.68E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=41.5km s-min=23.7km az=132.0*
BJI 08 05:36:30.5, 42°.86N×84°.56E, h10km, ML3.2/8, 6C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.48**	**66**	Pn	Pn	05 37 14.1	+3.2
WMQ				Sn	Sn	05 37 46.1	+4.9
WMQ				smax			
	comp=N,170nm,0.5s						
WMQ				smax			
	comp=E,190nm,0.5s						
MK31	**Makanchi Array**	**4.25**	**338**	Pn	Pn	05 37 35.3	+0.1
	comp=E,2.5nm,0.4s,baz=151,slow=15,SNR=62						
MK31				⇓Pg	Pg	05 37 46.1	-5.8
	comp=E,2.5nm,0.4s,baz=150,slow=17,SNR=40						
MK31				⇑Lg		05 38 38.1	
	comp=E,36nm,0.6s,baz=152,slow=28,SNR=9.8						
TKM2	**Tokmak 2**	**6.58**	**274**	⇑Pn	Pn	05 38 08.1	+0.8
	comp=E,1.2nm,0.6s						
TKM2				⇑Pg	Pg	05 38 28.5	-8.0
	comp=E,2.6nm,0.7s						
TKM2				⇑Lg		05 39 57.1	
	comp=E,11nm,0.7s						
KURBB	**Kurchatov Arra**	**8.80**	**334**	⇑Lg		05 41 05.3	
	comp=E,2.4nm,0.7s						
KURK	**Kurchatov**	**8.85**	**335**	⇑Lg		05 41 07.9	
	comp=E,8.4nm,0.8s						
KK09	**Karatay Array**	**10.31**	**276**	⇓Lg		05 41 58.0	
	comp=E,1.4nm,0.7s						

MEX 08 05:38:30.0±0.9, 16°.70N×99°.66W, h8km±8km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.26**	**312**	*i* P	Pg	05 38 36.0	+0.8
ACX				*i* S	Sg	05 38 39.0	+0.4
CAIG	**El Cayaco**	**0.68**	**301**	*i* P	Pg	05 38 42.5	-0.7
CAIG				*i* S	Sg	05 38 51.5	-0.6
PNIG	**Pinotepa**	**1.50**	**101**	*i* P	Pn	05 38 53.9	-3.3
PNIG				*i* S	Sn	05 39 11.2	-5.8
UTMO	**Huajuapan**	**2.10**	**57**	*i* P	Pn	05 39 03.2	-2.2
UTMO				*i* S	Sn	05 39 28.3	-3.5
MZVM		**2.51**	**9**	*e*P	Pn	05 39 08.5	-2.7
MZVM				*i* S	Sn	05 39 38.5	-3.5
VHO	**Vista Hermosa**	**2.82**	**82**	*e*P	Pn	05 39 13.7	-1.8
VHO				*i* S	Sn	05 39 46.2	-3.5
IIO	**Organos**	**3.01**	**17**	*e*P	Pn	05 39 16.0	-2.1
IIO				*i* S	Sn	05 39 49.3	-5.1

*ISCJB **08** 05:42:10.8±0.6, 13°.48N±0°.07×90°.01W±0°.05, h73km±7km, mb3.9/3, Error ellipse: s-maj=13.7km s-min=4.1km az=29.9*
*NEIC **08** 05:42:11.8±1.3, 13°.44N×89°.97W, h60km±19km, Error ellipse: s-maj=22.8km s-min=11.4km az=216.0*
*CASC **08** 05:42:11.7±1.4, 13°.47N×90°.04W, h47km±11km, MD3.8, ML3.1*
*IDC **08** 05:42:12.7±2.3, 13°.87N×89°.67W, h67km±15km, mb3.4/4, mb1 3.7/6, mb1mx3.4/22, mbtmp3.4/6, Error ellipse: s-maj=37.5km s-min=17.4km az=40.0*
ISC 08 05:42:11.8±0.6, 13°.44N±0°.07×90°.03W±0°.05, h55km±10km, h34, σ0°.64/50, mb3.9/3, 2C-7D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.56**	**45**	⇓*e*P	**Pn**	**05 42 23.6**	**-0.5**
SBLS				*e*S	**Sn**	**05 42 32.6**	**-0.4**
RTR	**El Retiro**	**0.59**	**39**	⇓*e*P	**Pn**	**05 42 24.1**	**-0.3**
SNJE	**San Jose**	**0.59**	**44**	⇓*e*P	**Pn**	**05 42 24.1**	**-0.4**
SNJE				*e*S	**Sn**	**05 42 33.4**	**-0.3**
RBDL	**Robledal**	**0.75**	**27**	⇓*i*P	**Pn**	**05 42 25.5**	**-0.9**
BOQS	**Boqueron**	**0.79**	**68**	*e*P	**Pn**	**05 42 26.8**	**-0.1**
BOQS				*e*S	**Sn**	**05 42 39.0**	**+1.0**
SNET	**Serv Nac Est T**	**0.82**	**72**	*e*P	**Pn**	**05 42 27.1**	**-0.2**
SNET				*e*S	**Sn**	**05 42 39.2**	**+0.6**
LFRS	**El Faro**	**0.96**	**79**	*e*P	**Pn**	**05 42 28.8**	**-0.3**
LFRS				*e*S	**Sn**	**05 42 42.9**	**+1.0**
LBRS	**Las Brisas**	**1.00**	**73**	⇓*e*P	**Pn**	**05 42 29.5**	**-0.3**
LBRS				*e*S	**Sn**	**05 42 43.5**	**+0.4**
PCG	**Pacaya**	**1.10**	**330**	⇑*e*P	**Pn**	**05 42 31.0**	**-0.1**
PCG				*e*S	**Sn**	**05 42 45.3**	**0.0**
MTO2	**Montecristo 2**	**1.16**	**34**	⇓*e*P	**Pn**	**05 42 30.8**	**-0.9**
MTO2				*e*S	**Sn**	**05 42 45.9**	**-0.6**
SNVI	**San Vicente**	**1.17**	**81**	*e*P	**Pn**	**05 42 31.8**	**-0.1**
NBG	**Las Nubes**	**1.18**	**345**	*e*P	**Pn**	**05 42 32.4**	**+0.3**
NBG				*e*S	**Sn**	**05 42 48.5**	**+1.3**
FUG	**Fuego 3**	**1.27**	**322**	*e*P	**Pn**	**05 42 32.6**	**-0.7**
FG6		**1.39**	**324**	*e*P	**Pn**	**05 42 34.4**	**-0.5**
FG6				*e*S	**Sn**	**05 42 51.7**	**-0.4**
APG	**El Apazote**	**1.61**	**345**	P	**Pn**	**05 42 37.0**	**-1.0**
	16nm,0.3s,baz=142,slow=12,SNR=70						
APG				S	**Sn**	**05 42 53.3**	**-4.3**
	20nm,0.3s,baz=142,slow=17,SNR=11						
TP2	**Tecpan 2**	**1.65**	**324**	⇑*e*P	**Pn**	**05 42 38.9**	**+0.5**
TP2				*e*S	**Sn**	**05 43 00.1**	**+1.7**
MRL	**Marmol**	**1.65**	**11**	⇓*e*P	**Pn**	**05 42 38.8**	**+0.3**
JAT	**Jato**	**1.79**	**299**	*e*P	**Pn**	**05 42 39.8**	**-0.5**
CAHU	**Cacacuatique**	**1.80**	**79**	*e*P	**Pn**	**05 42 40.3**	**-0.2**
CNCH	**Conchagua**	**2.15**	**94**	*e*P	**Pn**	**05 42 45.3**	**+0.1**
TGUH	**Tegucigalpa,Un**	**2.75**	**77**	*e*Pn	**Pn**	**05 42 52.6**	**-0.9**
CRIN	**San Cristobal**	**3.00**	**104**	*e*P	**Pn**	**05 42 57.6**	**+0.8**
CRIN				AML	AML	05 43 27.4	
	comp=E,222nm,0.4s						
CNGN	**Cerro Negro**	**3.38**	**106**	*e*P	**Pn**	**05 43 02.8**	**+0.7**
CNGN				*e*S	**Sn**	**05 43 41.0**	**0.0**
CNGN				AML	AML	05 43 52.2	
	comp=E,109nm,0.8s						
COPN	**Copaltepe**	**3.58**	**110**	*e*P	**Pn**	**05 43 05.7**	**+0.8**
JTS	**JuntasAbangare**	**5.87**	**122**	P	**Pn**	**05 43 35.7**	**-0.6**
	comp=E,1.1nm,0.3s,baz=311,slow=18,SNR=6.5						
JTS				S	**Sn**	**05 45 01.2**	**+19**
	comp=E,1.0nm,0.3s,baz=116,slow=21,SNR=6.3						
JTS	**JuntasAbangare**	**5.87**	**122**	P	**Pn**	**05 43 35.7**	**-0.6**
JTS				S	**Sn**	**05 45 01.2**	**+19**
CMIG	**Matias Romero**	**5.92**	**308**	P	**Pn**	**05 43 37.5**	**+0.5**
	comp=E,1.2nm,0.3s,baz=118,slow=11,SNR=29						
CMIG				S	**Sn**	**05 44 44.0**	**+0.4**
	comp=E,3.3nm,0.3s,baz=101,slow=5.2,SNR=5.8						
TEIG	**Tepich**	**6.95**	**14**	*e*Pn	**Pn**	**05 43 50.8**	**-0.3**
	comp=E,46nm,0.8s						
TXAR	**Lajitas Array**	**20.25**	**324**	P	**P**	**05 46 43.2**	**+0.6**
	comp=E,0.3nm,0.5s,baz=151,slow=13,SNR=6.4						
TXAR	**Lajitas Array**	**20.25**	**324**	P	**P**	**05 46 43.2**	**+0.6**
NVAR	**Mina Array Bea**	**35.32**	**320**	P	**P**	**05 49 01.5**	**-0.2**
	comp=E,1.5nm,0.8s,mb4.0,baz=137,slow=8.6,SNR=12						
SCHQ	**Schefferville**	**45.11**	**19**	P	**P**	**05 50 17.9**	**-4.6**
	comp=E,1.9nm,0.5s,mb4.2,baz=201,slow=8.6,SNR=4.8						
YKA	**Yellowknife Ar**	**52.02**	**346**	P	**P**	**05 51 11.1**	**-4.4**
	comp=E,0.3nm,0.5s,mb3.5,baz=138,slow=7.4,SNR=3.6						
YKA	**Yellowknife Ar**	**52.02**	**346**	P	**P**	**05 51 11.1**	**-4.4**

MEX 08 06:21:29.4±1.5, 14°.06N×93°.37W, h18km±54km, MD4.1, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.37**	**52**	*i* P	Pn	06 21 50.1	-3.5
THIG				*i* S	Sn	06 22 06.4	-4.9
PCIG		**1.65**	**5**	*i* P	Pn	06 21 52.3	-5.1
PCIG				*i* S	Sn	06 22 14.5	-3.7
CCIG	**Comitan**	**2.52**	**28**	*i* P	Pn	06 22 08.2	-1.2
CCIG				*i* S	Sn	06 22 35.6	-4.0
TGIG		**2.72**	**5**	*i* P	Pn	06 22 10.7	-1.5
TGIG				*i* S	Sn	06 22 40.7	-4.0
SCX	**San Cristobal**	**2.76**	**15**	*i* P	Pn	06 22 11.1	-1.7
SCX				*i* S	Sn	06 22 42.7	-2.9
SCIG	**Sabancuy**	**5.32**	**23**	*i* P	Pn	06 22 45.9	-2.0
SCIG				*i* S	Sn	06 23 45.3	-3.4
UTMO	**Huajuapan**	**5.68**	**312**	*i* P	Pn	06 22 54.5	+1.6
UTMO				*i* S	Sn	06 23 58.0	+0.3

IDC 08 06:31:28.4±56.0, 19°.52S×177°.15W, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.7/16, mbtmp3.8/3, Error ellipse: s-maj=1028.0km s-min=159.1km az=82.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.94**	**243**	P	P	06 38 56.2	0.0
	0.9nm,0.4s,baz=98,slow=7.1,SNR=4.9						
ASAR	**Alice Springs**	**45.53**	**256**	P	P	06 39 50.0	-0.1
	1.0nm,0.8s,baz=98,slow=7.5,SNR=8.3						
WRA	**Warramunga Arr**	**45.53**	**261**	P	P	06 39 50.1	-0.1
	0.2nm,0.3s,baz=97,slow=7.5,SNR=19						

MAN 08 06:35:49, 8°.39N×123°.15E, h30km, mb4.3, ML3.1, MS2.9, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAGZ	**Pagadian**	**0.59**	**157**	*e*P	Pb	06 36 01.1	+0.2
PAGZ				*e*S	Sb	06 36 06.9	-2.1
IPIL	**Ipil**	**0.83**	**224**	*e*P	Pn	06 36 06.5	+1.9
IPIL				*e*S	Sb	06 36 16.6	+1.0
SNPH	**Sibulan**	**0.95**	**5**	⇓*e*P	Pn	06 36 07.0	+0.7
SNPH				*i* S	Sn	06 36 19.7	+0.8
TBP	**Tagbilaran**	**1.47**	**29**	*i* P	Pn	06 36 14.2	+0.6
TBP				*e*S	Sn	06 36 32.4	+0.6
CTBH	**Cotabato--PC H**	**1.59**	**137**	⇓*i*P	Pn	06 36 16.2	+1.1
CTB

KAKA *e*Sn **Sn** **07 14 14.8 -3.4**
WRA Warramunga Arr 17.95 131 P **Pn** **07 12 56.6 -0.7**
0.3nm,0.3s,baz=304,slow=12,SNR=18
WRA S **S** **07 16 11.8 -0.5**
0.3nm,0.3s,baz=306,slow=24,SNR=6.9
WRA Warramunga Arr 17.95 131 P **Pn** **07 12 56.6 -0.7**
WRA S **S** **07 16 11.8 -0.5**
WRAB Tennant Creek 17.95 131 *e*P **Pn** **07 12 57.2 -0.2**
2.2nm,0.9s
ASAR Alice Springs 20.16 141 P **P** **07 13 20.6 +1.3**
0.5nm,0.4s,baz=315,slow=8.9,SNR=10
ASAR S **S** **07 16 55.5 -0.4**
0.9nm,0.8s,baz=326,slow=23,SNR=4.1
STKA Stephens Creek 30.77 143 P **P** **07 14 58.6 +1.3**
1.0nm,0.6s,mb3.7,baz=323,slow=12,SNR=3.5
MKAR Makanchi Array 64.39 332 P **P** **07 19 13.2 -2.3**
0.3nm,0.4s,mb3.5,baz=130,slow=7.4,SNR=7.7
ZALV Zalesovo Beam 68.83 339 P **P** **07 19 41.1 -2.4**
0.4nm,0.3s,mb3.6,baz=132,slow=6.0,SNR=2.7

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*NIED **08** 07:10:00,31.°30N×142.°70E,h5km,Mw4.1 Best double couple: M0 1.75000×10^15 NP1:φs332.00000°,δ87.00000°, λ85.00000°. NP2:φs212.00000°,δ6.00000°,λ150.00000°.*
*NEIC **08** 07:10:36.1,31.°28N×142.°67E,h53km,MG3.7(JMA),After JMA.*
*JMA **08** 07:10:36.0±0.3,31.°28N×142.°67E,h53km,M3.7*
*IDC **08** 07:10:38.0±2.7,30.°75N×140.°64E,h0km,mb3.7/5, mb1 3.8/7,mb1mx3.6/26,mbtmp3.7/7,ML3.5/2,Error ellipse: s-maj=133.5km s-min=18.9km az=72.0*
*ISCJB **08** 07:10:37.1±1.1,31.°27N±0.°07×142.°3E±0.°2,h41km±13km, mb3.9/5,Error ellipse: s-maj=33.5km s-min=7.5km az=163.4*
ISC 08 07:10:38.6±1.1,**31.°28N**±0.°07×**142.°4E**±0.°2,**h39**km±12km, **n19**,σ0**°71**/28,**mb3.9**/5,**Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**3.58**	**341**	P	**Pn**	**07 11 31.6**	**0.0**
BSO1				*e*S	**Sn**	**07 12 12.2**	**-0.4**
BSO3	**Boso 3**	**3.86**	**336**	P	**Pn**	**07 11 36.4**	**+0.9**
BSO4	**Boso 4**	**4.09**	**335**	*e*S	**Sn**	**07 12 26.0**	**+0.7**
CBIJ	**Chichi jima**	**4.18**	**183**	P	**Pn**	**07 11 38.8**	**-1.0**
CBIJ	**Chichi jima**	**4.18**	**183**	Pn	**Pn**	**07 11 39.5**	**-0.3**
	5.3nm,0.3s,baz=292,slow=19,SNR=10						
CBIJ				Sn	**Sn**	**07 12 21.1**	**-6.2**
	7.7nm,0.3s,baz=300,slow=20,SNR=4.2						
JOD2	**Odawara 2**	**4.86**	**326**	P	**Pn**	**07 11 49.3**	**+0.2**
JHU	**Hanno**	**5.26**	**331**	P	**Pn**	**07 11 54.9**	**+0.2**
JHU				*e*S	**Sn**	**07 12 53.4**	**-0.6**
JHO	**Hitachi**	**5.54**	**344**	P	**Pn**	**07 11 58.9**	**+0.4**
JHO				*e*S	**Sn**	**07 13 00.1**	**-0.7**
JRY	**Ryogami san**	**5.56**	**329**	P	**Pn**	**07 11 59.3**	**+0.5**
JRY				*e*S	**Sn**	**07 13 00.8**	**-0.7**
JAG	**Ashikaga**	**5.69**	**335**	P	**Pn**	**07 12 01.3**	**+0.6**
JAG				*e*S	**Sn**	**07 13 03.9**	**-0.8**
MJAR	**Matsushiro Arr**	**6.31**	**327**	Pn	**Pn**	**07 12 08.9**	**-0.2**
	0.9nm,0.3s,baz=158,slow=11,SNR=17						
MJAR				Sn	**Sn**	**07 13 11.6**	**-8.3**
	baz=176,slow=19,SNR=2.3						
MAJO	**Matsushiro**	**6.31**	**327**	*e*Pn	**Pn**	**07 12 09.1**	**0.0**
	4.1nm,0.4s						
MAT	**Matsushiro**	**6.31**	**327**	P	**Pn**	**07 12 09.2**	**+0.1**
MAT				*e*S	**Sn**	**07 13 20.3**	**+0.4**
JMK	**Ichinoseki**	**7.72**	**353**	P	**Pn**	**07 12 29.1**	**+0.7**
JMK				*e*S	**Sn**	**07 13 51.7**	**-2.8**
ZALV	**Zalesovo Beam**	**46.54**	**317**	P	**P**	**07 19 02.5**	**+0.5**
	0.6nm,0.4s,mb3.9,baz=81,slow=10,SNR=3.3						
WRA	**Warramunga Arr**	**51.52**	**190**	P	**P**	**07 19 39.6**	**-0.9**
	0.5nm,0.4s,mb3.8,baz=5.9,slow=7.6,SNR=8.9						
BVAR	**Borovoye Array**	**55.16**	**316**	P	**P**	**07 20 07.0**	**0.0**
	0.5nm,0.5s,mb3.8,baz=79,slow=10,SNR=3.6						
ASAR	**Alice Springs**	**55.24**	**190**	P	**P**	**07 20 07.3**	**-0.5**
	0.5nm,0.4s,mb3.9,baz=1.2,slow=5.0,SNR=16						
BRTR	**Keskin Array B**	**83.32**	**313**	P	**P**	**07 23 02.5**	**+1.1**
	0.8nm,0.9s,mb3.8,baz=75,slow=4.7,SNR=4.3						

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*IDC **08** 07:15:00.4±1.4,3.°88N×127.°89E,h0km,mb4.1/6, mb1 4.3/6,mb1mx3.9/22,mbtmp4.2/6,Error ellipse: s-maj=88.0km s-min=18.0km az=69.0*
*ISCJB **08** 07:15:02.4±0.9,4.°1N±0.°1×128.°4E±0.°3,h33km,mb4.2/10, Error ellipse: s-maj=41.4km s-min=11.2km az=156.3*
*NEIC **08** 07:15:04.7±0.8,4.°01N×128.°42E,h35km,mb4.4/4,Error ellipse: s-maj=35.3km s-min=9.7km az=67.0*
ISC 08 07:15:04.7±0.9,**4.°0N**±0.°1×**128.°4E**±0.°3,**h35**km,**n11**, σ0**84**/11,**mb4.2**/10,**North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**17.09**	**167**	Pn	**Pn**	**07 18 59.3**	**-1.7**
FITZ	**Fitzroy Crossi**	**22.14**	**187**	P	**P**	**07 19 56.3**	**-1.2**
	2.2nm,0.4s,mb3.9,baz=6.1,slow=10,SNR=9.4						
WRAB	**Tennant Creek**	**24.50**	**166**	*e*P	**P**	**07 20 21.5**	**+0.7**
	3.6nm,0.4s,mb4.2						
WRA	**Warramunga Arr**	**24.50**	**166**	P	**P**	**07 20 21.5**	**+0.6**
	3.3nm,0.4s,mb4.2,baz=344,slow=10,SNR=22						
KULM	**Kulim**	**27.70**	**274**	*e*P	**P**	**07 20 50.8**	**+0.9**
	11nm,1.0s,mb4.5						
ASAR	**Alice Springs**	**28.02**	**169**	P	**P**	**07 20 53.2**	**+0.6**
	1.8nm,0.5s,mb4.0,baz=354,slow=7.9,SNR=36						
STKA	**Stephens Creek**	**37.83**	**162**	P	**P**	**07 22 19.1**	**+1.1**
	1.5nm,0.3s,mb4.2,baz=337,slow=7.9,SNR=12						
MKAR	**Makanchi Array**	**58.30**	**324**	P	**P**	**07 24 56.1**	**+0.1**
	1.9nm,0.4s,mb4.5,baz=134,slow=5.4,SNR=43						
KURK	**Kurchatov**	**62.42**	**327**	*e*P	**P**	**07 25 23.7**	**-0.4**
	1.7nm,0.5s,mb4.4						
KURK				*e*PcP	PcP	07 26 01.7	-1.7
BVAR	**Borovoye Array**	**68.01**	**326**	P	**P**	**07 25 59.8**	**-0.6**
	0.5nm,0.5s,mb3.9,baz=116,slow=10,SNR=4.7						
BRVK	**Borovoye**	**68.08**	**326**	*e*P	**P**	**07 26 00.5**	**-0.3**
	1.4nm,0.4s,mb4.3						

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*ISCJB **08** 07:19:52.4±1.6,7.°07N±0.°06×123.°46E±0.°05,h1km±11km, mb3.8/6,Error ellipse: s-maj=12.0km s-min=6.0km az=29.0*
*IDC **08** 07:19:57.4±1.0,6.°66N×123.°71E,h0km,mb3.8/6, mb1 4.0/6,mb1mx3.7/23,mbtmp3.8/6,Error ellipse: s-maj=27.3km s-min=18.4km az=65.0*
*MAN **08** 07:19:58,7.°43N×123.°53E,h32km,mb4.5,ML3.4,MS3.3*
*NEIC **08** 07:20:02.5±0.7,6.°71N×123.°80E,h35km,Error ellipse: s-maj=18.1km s-min=12.6km az=72.0*
ISC 08 07:19:54.2±1.2,**7.°14N**±0.°07×**123.°48E**±0.°04,**h6**km±9km, **n16**,σ0**92**/22,**mb3.7**/6,**1C-1D**,**Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAGZ	**Pagadian**	**0.71**	**352**	*e*P	**Pg**	**07 20 09.0**	**+1.1**
PAGZ				*e*S	**Sg**	**07 20 16.4**	**-0.8**
CTBH	**Cotabato--PC H**	**0.76**	**84**	⇓*i*P	**Pg**	**07 20 08.7**	**-0.1**
CTBH				*i* S	**Sg**	**07 20 17.8**	**-1.0**
IPIL	**Ipil**	**1.11**	**305**	*e*P	**Pg**	**07 20 16.7**	**+1.1**
IPIL				*e*S	**Sg**	**07 20 29.9**	**0.0**
BUKP	**Musuan**	**1.73**	**65**	*e*P	**Pn**	**07 20 24.4**	**-0.4**
BUKP				*e*S	**Sn**	**07 20 37.5**	**-10**
DMPH	**Davao City--Mi**	**2.01**	**92**	⇑*e*P	**Pn**	**07 20 29.8**	**+1.1**
DAV	**Davao City (W)**	**2.08**	**92**	Pn	**Pn**	**07 20 31.6**	**+1.9**
	33nm,0.3s,baz=193,slow=5.0,SNR=4.1						
DAV				Sn	**Sn**	**07 20 57.2**	**+1.3**
	22nm,0.3s,baz=298,slow=22,SNR=10						
DAV	**Davao City (W)**	**2.08**	**92**	*e*Pn	**Pn**	**07 20 31.1**	**+1.4**
DAV				Sn	**Sn**	**07 20 57.2**	**+1.2**
TBP	**Tagbilaran**	**2.56**	**8**	*e*P	**Pn**	**07 20 34.9**	**-1.4**
KAKA	**Kakadu**	**21.64**	**156**	P	**P**	**07 24 44.9**	**-0.6**
FITZ	**Fitzroy Crossi**	**25.17**	**175**	P	**P**	**07 25 20.4**	**-0.2**
	5.5nm,0.9s,mb4.1,baz=55,slow=8.1,SNR=4.4						
WRA	**Warramunga Arr**	**28.96**	**159**	P	**P**	**07 25 53.4**	**-1.2**
	1.1nm,0.7s,mb3.7,baz=341,slow=9.8,SNR=7.0						
ASAR	**Alice Springs**	**32.27**	**162**	P	**P**	**07 26 23.9**	**+0.1**
	0.4nm,0.6s,mb3.5,baz=339,slow=7.4,SNR=8.4						
STKA	**Stephens Creek**	**42.48**	**157**	P	**P**	**07 27 50.0**	**-0.3**
	3.0nm,0.7s,mb4.0,baz=331,slow=7.9,SNR=9.3						
MKAR	**Makanchi Array**	**52.93**	**325**	P	**P**	**07 29 20.3**	**+9.0**
	0.3nm,0.7s,mb3.4,baz=118,slow=8.3,SNR=2.9						
MKAR	**Makanchi Array**	**52.93**	**325**	P	**P**	**07 29 20.3**	**+9.0**
ZALV	**Zalesovo Beam**	**56.11**	**334**	P	**P**	**07 29 41.0**	**+6.7**
	0.5nm,0.5s,mb3.8,baz=160,slow=4.6,SNR=2.5						

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*FUNV **08** 07:21:08.9,6.°74N×73.°13W,h170km,MW3.5*
*ISCJB **08** 07:21:08.4±0.7,6.°82N±0.°07×72.°99W±0.°07,h171km±7km, Error ellipse: s-maj=14.1km s-min=7.1km az=41.2*
*IDC **08** 07:21:09.1±0.8,6.°80N×73.°03W,h159km±12km,mb2.8/1, mb1 3.6/3,mb1mx3.1/22,mbtmp3.4/3,Error ellipse: s-maj=43.9km s-min=7.5km az=132.0*
ISC 08 07:21:09.3±0.7,**6.°81N**±0.°07×**72.°98W**±0.°07,**h168**km±7km, **n23**,σ0**°75**/27,**1C-1D**,**Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.24**	**32**	⇓*i*P	**Pn**	**07 21 38.5**	**+0.7**
CAPV				*e*S	**Sn**	**07 21 59.7**	**0.0**
ROSC	**El Rosal**	**2.36**	**215**	P	**Pn**	**07 21 50.2**	**+0.5**
	36nm,0.3s,baz=90,slow=20,SNR=114						
ROSC				S	**Sn**	**07 22 20.1**	**-0.8**
	52nm,0.3s,baz=79,slow=19,SNR=22						
SOCV	**Socops**	**2.56**	**55**	⇓*i*P	**Pn**	**07 21 53.0**	**+0.9**
SOCV				*e*S	**Sn**	**07 22 25.1**	**-0.1**
VIGV	**El Vigia**	**2.58**	**38**	⇓*i*P	**Pn**	**07 21 53.0**	**+0.7**
VIGV				*e*S	**Sn**	**07 22 25.6**	**0.0**
SDV	**Santo Domingo**	**3.11**	**48**	P	**Pn**	**07 21 59.8**	**+1.0**
	50nm,0.3s,baz=241,slow=6.2,SNR=463						
SDV				S	**Sn**	**07 22 37.5**	**+0.3**
	23nm,0.3s,baz=246,slow=18,SNR=18						
ELOV	**Elorza**	**3.48**	**87**	⇓*i*P	**Pn**	**07 22 04.4**	**+1.0**
VIRV	**Villa del Rosa**	**3.71**	**9**	⇑*i*P	**Pn**	**07 22 05.4**	**-1.0**
VIRV				*e*S	**Sn**	**07 22 47.9**	**-3.0**
QARV	**Quebrada Arrib**	**4.16**	**36**	⇓*i*P	**Pn**	**07 22 12.8**	**+0.6**
SANV	**Sanarito**	**4.33**	**52**	⇓*i*P	**Pn**	**07 22 14.6**	**+0.2**
CURV	**Curarigua**	**4.36**	**43**	⇓*i*P	**Pn**	**07 22 15.0**	**+0.2**
DABV	**Dabajuro**	**4.70**	**29**	*e*P	**Pn**	**07 22 19.5**	**+0.4**
TEPV	**Terepaima**	**4.88**	**50**	⇓*i*P	**Pn**	**07 22 21.7**	**+0.1**
SIQV	**Siquisique**	**4.94**	**39**	⇓*i*P	**Pn**	**07 22 22.2**	**0.0**
BAUV	**El Baul**	**5.33**	**66**	⇓*i*P	**Pn**	**07 22 26.5**	**-0.9**
MONV	**Montecano**	**5.91**	**30**	⇓*i*P	**Pn**	**07 22 34.6**	**-0.5**
TURV	**Turiamo**	**6.24**	**54**	*e*P	**Pn**	**07 22 38.7**	**-0.6**
CAOV	**Caicara del Or**	**6.63**	**85**	*e*P	**Pn**	**07 22 43.3**	**-1.2**
BIRV	**Birongo**	**7.57**	**61**	*e*P	**Pn**	**07 22 56.2**	**-0.8**
CUPV	**Cepira**	**7.81**	**65**	*e*P	**Pn**	**07 22 59.7**	**-0.5**
PCRV	**Puerto La Cruz**	**8.90**	**67**	*e*P	**Pn**	**07 23 14.6**	**-0.1**
TXAR	**Lajitas Array**	**36.57**	**312**	P	**P**	**07 28 00.1**	**+0.9**
	0.3nm,0.7s,baz=125,slow=11,SNR=3.6						
ASAR	**Alice Springs**	**149.22**	**234**	PKPbc	PKPbc	07 40 39.0	+0.1
	0.3nm,0.5s,baz=119,slow=2.6,SNR=4.2						
WRA	**Warramunga Arr**	**150.45**	**241**	PKPbc	PKPbc	07 40 42.0	+0.1
	1.3nm,1.1s,baz=106,slow=2.8,SNR=5.3						

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*ISCJB **08** 07:28:11.8±3.3,34.°63N±0.°07×74.°0E±0.°2,h26km±30km, Error ellipse: s-maj=31.5km s-min=5.6km az=161.4*
*NNC **08** 07:28:17.6±5.1,34.°97N×74.°07E,h0km,mb3.6,mpv3.4, Error ellipse: s-maj=50.9km s-min=34.8km az=131.0*
ISC 08 07:28:11.8±3.2,**34.°57N**±0.°07×**73.°9E**±0.°2,**h9**km±20km,**n9**, σ0**°79**/12,**3C-2D**,**Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMU	**Jammu**	**2.02**	**156**	*e*x	**Sn**	**07 29 11.0**	**-0.3**
THN	**Thein Dam**	**2.60**	**144**	*e*PKP	**Pn**	**07 28 54.0**	**-0.1**
THN				*e*S	**Sn**	**07 29 27.0**	**+1.2**
SDNR	**Sundarnagar**	**3.99**	**139**	*e*x	**Pn**	**07 29 11.5**	**-1.6**
SDNR				*e*x	x	07 30 10.1	
KLP	**Kalpa**	**4.73**	**129**	*e*x	x	07 30 32.8	
KLP				AML	AML	07 30 38.1	
	comp=N,108nm,0.6s						
KLP				AML	AML	07 30 38.9	
	comp=E,141nm,0.6s						
KSH	**Kashi**	**5.20**	**18**	Pn	**Pn**	**07 29 29.6**	**-0.2**
KSH				Sn	**Sn**	**07 30 23.1**	**-6.8**
KSH				smax			
	comp=N,9.0nm,0.2s						
KSH				smax			
	comp=E,15nm,0.2s						
DDI	**Dehra Dun**	**5.49**	**139**	*e*x	**Sn**	**07 30 37.0**	**0.0**
TKM2	**Tokmak 2**	**8.44**	**8**	⇑Pn	**Pn**	**07 30 15.0**	**+0.7**
TKM2	comp=E,2.5nm,1.1s			⇓Sn	**Sn**	**07 31 49.4**	**-0.2**
	comp=E,2.1nm,0.6s						
KK09	**Karatay Array**	**8.95**	**344**	⇑Pn	**Pn**	**07 30 22.3**	**+1.1**
	comp=E,0.7nm,0.5s,baz=162,slow=11						
KK09				⇓Sn	**Sn**	**07 32 01.4**	**-0.6**
	comp=E,1.8nm,0.5s,baz=160,slow=23						
AB31	**Akbulak array**	**17.95**	**329**	⇑Pn	**Pn**	**07 32 27.3**	**+5.8**
	comp=E,0.7nm,0.7s,baz=135,slow=12,SNR=4.3						

ISC 08 07:38:03.6±12.0,**5.°06N**×**123.°34E**,**h469**km±177km, **mb3.4**/6,**mb1 3.6**/6,**mb1mx3.1**/24,**mbtmp3.4**/6,**Error ellipse: s-maj=84.8km s-min=24.4km az=64.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**23.13**	**174**	P	P	07 42 32.0	-0.3
	8.4nm,1.3s,baz=276,slow=9.2,SNR=4.5						
WRA	**Warramunga Arr**	**27.10**	**157**	P	P	07 43 07.5	-0.1
	5.6nm,0.4s,baz=338,slow=9.5,SNR=110						
ASAR	**Alice Springs**	**30.36**	**161**	P	P	07 43 36.3	+0.3
	2.2nm,0.4s,baz=339,slow=7.0,SNR=53						
STKA	**Stephens Creek**	**40.64**	**156**	P	P	07 45 01.7	-0.1
	2.2nm,0.4s,baz=344,slow=8.1,SNR=12						
SONM	**Songino Array**	**45.03**	**344**	P	P	07 45 36.3	+0.3
	1.2nm,0.5s,baz=136,slow=11,SNR=4.2						
MKAR	**Makanchi Array**	**54.56**	**326**	P	P	07 46 46.5	-0.1
	0.9nm,0.3s,baz=134,slow=8.2,SNR=28						

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*ISCJB **08** 07:39:17.9±0.5,37.°09N±0.°02×22.°00E±0.°03,h10km±3km, mb3.6/5,Error ellipse: s-maj=4.1km s-min=3.3km az=38.7*
*ATH **08** 07:39:18.0,37.°11N×22.°05E,h17km±1km,MD3.4/7,ML3.4*
*NEIC **08** 07:39:18.0,37.°11N×22.°05E,h17km,ML3.4(ATH),After ATH.*
NEIC Felt at Kalamata.
*CSEM **08** 07:39:18.4±0.2,37.°07N×22.°02E,h10km,ML3.4,Error ellipse: s-maj=6.2km s-min=4.9km az=29.0*
*THE **08** 07:39:19.7,37.°19N×22.°07E,h0km±2km,Error ellipse: s-maj=3.0km s-min=0.9km az=160.0*
*HLW **08** 07:39:21.4,37.°16N×22.°04E,h33km±14km,Md3.5,Ml3.3*
*IDC **08** 07:39:23.1±1.4,37.°01N×22.°01E,h73km±25km,mb3.4/5, mb1 3.5/9,mb1mx3.3/31,mbtmp3.4/9,Error ellipse: s-maj=30.3km s-min=11.1km az=21.0*
ISC 08 07:39:18.7±0.5,**37.°09N**±0.°02×**22.°03E**±0.°03,**h7**km±3km, **n130**,σ1**°34**/166,**mb3.6**/5,**Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITM	**Ithomi**	**0.12**	**317**	*e*Pb	**Pg**	**07 39 21.8**	**+0.5**
ITM				*e*Sb	**Sg**	**07 39 24.3**	**+1.1**
ITM	**Ithomi**	**0.12**	**317**	P	**Pg**	**07 39 21.8**	**+0.5**
ITM				S	**Sg**	**07 39 24.0**	**+0.8**
ITM	**Ithomi**	**0.12**	**317**	*e*PB	**Pg**	**07 39 21.8**	**+0.5**
ITM				*e*SB	**Sg**	**07 39 24.3**	**+1.1**
ITM	**Ithomi**	**0.12**	**317**	P	**Pg**	**07 39 21.8**	**+0.5**
ITM				S	**Sg**	**07 39 24.0**	**+0.8**
ITM				*e*Sb	**Sg**	**07 39 24.3**	**+1.1**
PYL	**PYLOS**	**0.30**	**230**	*e*PB	**Pg**	**07 39 24.9**	**+0.3**
PYL	**PYLOS**	**0.30**	**230**	*e*Pb	**Pg**	**07 39 24.9**	**+0.3**
VLX	**Vlachokerasia**	**0.39**	**44**	*e*PB	**Pg**	**07 39 25.7**	**-0.6**
VLX				*e*SB	**Sg**	**07 39 31.1**	**-0.4**
VLX	**Vlachokerasia**	**0.39**	**44**	*e*Pb	**Pg**	**07 39 25.7**	**-0.6**
VLX				*e*Sb	**Sg**	**07 39 31.1**	**-0.4**
VLI	**Veliai**	**0.81**	**117**	*e*Pn	**Pg**	**07 39 33.5**	**-0.8**
VLI	**Veliai**	**0.81**	**117**	*e*PN	**Pg**	**07 39 33.5**	**-0.8**
VLI	**Veliai**	**0.81**	**117**	*e*Pn	**Pg**	**07 39 33.5**	**-0.8**
GUR	**Goura**	**0.88**	**16**	*e*PB	**Pg**	**07 39 33.8**	**-1.8**
GUR				*e*SN	**Sg**	**07 39 46.5**	**-0.5**
GUR	**Goura**	**0.88**	**16**	*e*Pb	**Pg**	**07 39 33.8**	**-1.8**
GUR				*e*Sn	**Sg**	**07 39 46.5**	**-0.5**
RLS	**Riolos of Patr**	**1.07**	**335**	*e*Pn	**Pg**	**07 39 38.4**	**-0.7**
RLS				*e*Sn	**Sg**	**07 39 53.1**	**+0.1**
RLS	**Riolos of Patr**	**1.07**	**335**	*e*PN	**Pg**	**07 39 38.4**	**-0.7**
RLS				*e*SN	**Sg**	**07 39 53.1**	**+0.1**
RLS	**Riolos of Patr**	**1.07**	**335**	*e*Pn	**Pg**	**07 39 38.4**	**-0.7**
RLS				*e*Sn	**Sg**	**07 39 53.1**	**+0.1**
KYTH	**Kithira**	**1.14**	**135**	*e*Pn	**Pn**	**07 39 40.1**	**-0.9**
KYTH	**Kithira**	**1.14**	**135**	*e*PN	**Pn**	**07 39 40.1**	**-0.9**
KYTH	**Kithira**	**1.14**	**135**	*e*Pn	**Pn**	**07 39 40.1**	**-0.9**
LTK	**Loutraki**	**1.19**	**38**	*e*PN	**Pn**	**07 39 40.0**	**-1.7**
LTK				*e*SN	**Sn**	**07 39 56.1**	**-2.0**
LTK	**Loutraki**	**1.19**	**38**	*e*Pn	**Pn**	**07 39 40.0**	**-1.7**
LTK				*e*Sn	**Sn**	**07 39 56.1**	**-2.0**
UPR	**University Cam**	**1.21**	**351**	*e*PN	**Pn**	**07 39 41.2**	**-0.7**
UPR	**University Cam**	**1.21**	**351**	*e*Pn	**Pn**	**07 39 41.3**	**-0.6**
EFP	**Efpalio**	**1.34**	**356**	*e*PN	**Pn**	**07 39 42.9**	**-0.8**
EFP	**Efpalio**	**1.34**	**356**	*e*Pn	**Pn**	**07 39 42.9**	**-0.8**
VLS	**Valsamata**	**1.58**	**314**	*e*Pn	**Pn**	**07 39 47.3**	**+0.3**
VLS	**Valsamata**	**1.58**	**314**	P	**Pn**	**07 39 47.0**	**0.0**
VLS				S	**Sn**	**07 40 09.4**	**+1.7**
VLS	**Valsamata**	**1.58**	**314**	*e*PN	**Pn**	**07 39 47.3**	**+0.3**
VLS	**Valsamata**	**1.58**	**314**	P	**Pn**	**07 39 47.0**	**0.0**
VLS	**Valsamata**	**1.58**	**314**	*e*Pn	**Pn**	**07 39 47.3**	**+0.3**
VLY	**Voula,Athens**	**1.59**	**61**	*e*Pn	**Pn**	**07 39 46.5**	**-0.7**
VLY	**Voula,Athens**	**1.59**	**61**	*e*PN	**Pn**	**07 39 46.5**	**-0.7**
VLY	**Voula,Athens**	**1.59**	**61**	*e*Pn	**Pn**	**07 39 46.5**	**-0.7**
ATH	**Athens Observa**	**1.60**	**56**	*e*Pn	**Pn**	**07 39 46.6**	**-0.8**
ATH	**Athens Observa**	**1.60**	**56**	*e*PN	**Pn**	**07 39 46.6**	**-0.8**
ATH	**Athens Observa**	**1.60**	**56**	*e*Pn	**Pn**	**07 39 46.6**	**-0.8**
LKR	**Lokris**	**1.74**	**26**	P	**Pn**	**07 39 50.0**	**+0.8**
LKR	**Lokris**	**1.74**	**26**	P	**Pn**	**07 39 49.1**	**-0.1**
LKR	**Lokris**	**1.74**	**26**	P	**Pn**	**07 39 49.1**	**-0.1**
PTL	**Penteli**	**1.74**	**56**	*e*Pn	**Pn**	**07 39 48.8**	**-0.5**
PTL	**Penteli**	**1.74**	**56**	*e*PN	**Pn**	**07 39 48.8**	**-0.5**
PTL	**Penteli**	**1.74**	**56**	*e*Pn	**Pn**	**07 39 48.8**	**-0.5**
AGG	**Agios Georgios**	**1.94**	**7**	P	**Pn**	**07 39 52.7**	**+0.6**
AGG				S	**Sn**	**07 40 17.1**	**+0.4**
AGG	**Agios Georgios**	**1.94**	**7**	P	**Pn**	**07 39 52.7**	**+0.6**
AGG				S	**Sn**	**07 40 17.1**	**+0.4**
KARN	**Karanos**	**2.27**	**137**	P	**Pn**	**07 39 58.8**	**+2.3**
NEO	**Neokhori**	**2.40**	**23**	P	**Pn**	**07 39 59.4**	**+1.0**
NEO	**Neokhori**	**2.40**	**23**	P	**Pn**	**07 39 59.4**	**+1.0**
VAM	**Vamos**	**2.43**	**133**	P	**Pn**	**07 40 01.7**	**+3.0**
VAM	**Vamos**	**2.43**	**133**	P	**Pn**	**07 40 01.7**	**+3.0**
XOR	**Xorichti**	**2.45**	**22**	P	**Pn**	**07 39 59.1**	**+0.1**
XOR				S	**Sn**	**07 40 28.4**	**-0.8**
XOR	**Xorichti**	**2.45**	**22**	P	**Pn**	**07 39 59.1**	**+0.1**
XOR				S	**Sn**	**07 40 28.4**	**-0.8**
THL	**Klokotos Trika**	**2.47**	**360**	P	**Pn**	**07 40 00.6**	**+1.3**
THL				S	**Sn**	**07 40 32.1**	**+2.4**
THL	**Klokotos Trika**	**2.47**	**360**	P	**Pn**	**07 40 00.6**	**+1.3**
AOS	**Alonnisos**	**2.54**	**34**	P	**Pn**	**07 39 59.6**	**-0.6**
AOS	**Alonnisos**	**2.54**	**34**	P	**Pn**	**07 39 59.6**	**-0.6**
THR5	**Thira Island,**	**2.75**	**103**	P	**Pn**	**07 40 03.9**	**+0.8**
THR5	**Thira Island,**	**2.75**	**103**	P	**Pn**	**07 40 03.9**	**+0.8**
MEV	**Metsovon**	**2.76**	**347**	P	**Pn**	**07 40 04.8**	**+1.5**
MEV	**Metsovon**	**2.76**	**347**	P	**Pn**	**07 40 04.8**	**+1.5**
IGT	**Igoumenitsa**	**2.78**	**332**	P	**Pn**	**07 40 04.5**	**+0.9**
IGT	**Igoumenitsa**	**2.78**	**332**	P	**Pn**	**07 40 04.5**	**+0.9**
APE	**Apeiranthos**	**2.80**	**89**	P	**Pn**	**07 40 03.3**	**-0.5**
APE	**Apeiranthos**	**2.80**	**89**	P	**Pn**	**07 40 03.3**	**-0.5**
THR6	**Thira Island,**	**2.80**	**104**	P	**Pn**	**07 40 04.5**	**+0.7**
THR6	**Thira Island,**	**2.80**	**104**	P	**Pn**	**07 40 04.5**	**+0.7**
IDI	**Anoyia**	**2.93**	**127**	P	**Pn**	**07 40 05.4**	**-0.2**
	2.9nm,0.3s,baz=307,slow=15,SNR=16						
IDI				S	**Sn**	**07 40 41.8**	**+0.8**
	4.6nm,0.3s,baz=293,slow=14,SNR=5.7						
IDI	**Anoyia**	**2.93**	**127**	P	**Pn**	**07 40 05.4**	**-0.2**
IDI				S	**Sn**	**07 40 41.8**	**+0.8**
LIT	**Litokhoron**	**3.03**	**7**	P	**Pn**	**07 40 08.3**	**+1.3**
LIT	**Litokhoron**	**3.03**	**7**	P	**Pn**	**07 40 08.3**	**+1.3**
SIVA	**Sivas**	**3.06**	**132**	P	**Pn**	**07 40 09.1**	**+1.8**
SIVA	**Sivas**	**3.06**	**132**	P	**Pn**	**07 40 09.1**	**+1.8**
LAST	**Lasithi**	**3.39**	**124**	P	**Pn**	**07 40 13.2**	**+1.3**
LAST	**Lasithi**	**3.39**	**124**	P	**Pn**	**07 40 13.2**	**+1.3**

CAIG				*i* S	Sg	08 15 58.9	-0.6
ACX	**Acapulco**	**0.42**	**98**	*i* P	Pg	08 16 00.9	-1.4
ACX				*i* S	Sg	08 16 05.6	-2.3
PLIG	**Platanillo**	**1.64**	**27**	*e*P	Pn	08 16 18.9	-3.4
PLIG				*i* S	Sn	08 16 38.9	-4.5
PNIG	**Pinotepa**	**2.14**	**104**	*i* P	Pn	08 16 26.5	-2.8
PNIG				*i* S	Sn	08 16 51.3	-4.5
MZVM		**2.46**	**24**	*i* P	Pn	08 16 31.4	-2.4
MZVM				*i* S	Sn	08 17 00.5	-3.2
UTMO	**Huajuapan**	**2.54**	**69**	*i* P	Pn	08 16 32.5	-2.3
UTMO				*i* S	Sn	08 17 02.5	-3.1
PPM	**Popocatepetl**	**2.65**	**36**	*e*P	Pn	08 16 34.1	-2.2
PPM				*i* S	Sn	08 17 05.5	-2.8
PTVM	**Pico Tres Padr**	**2.88**	**23**	*e*P	Pn	08 16 37.0	-2.4
PTVM				*i* S	Sn	08 17 11.0	-2.9
IIO	**Organos**	**3.04**	**29**	*e*P	Pn	08 16 38.2	-3.4
IIO				*i* S	Sn	08 17 15.0	-2.9

*IDC **08** 08:21:56.3±43.0, 19.°25S×169.°50E, h45km±11km, mb3.6/3, mb1 3.8/3, mb1mx3.5/14, mbtmp3.6/3, MS3.5/1, Ms1 3.5/1, ms1mx2.7/18, Error ellipse: s-maj=719.6km s-min=83.4km az=75.0*
*NOU **08** 08:22:05.4±0.5, 19.°83S×168.°04E, h10km, MD2.8, ML3.5*
ISC 08 08:22:06.2±4.0, 20.°1S±0.°1×167.°9E±0.°6, h9km±44km, h44km±2.1km:pP-P, n9, σ0s57/11, mb3.8/3, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.26**	**205**	*e*S	**Sn**	**08 23 11.6**	**-0.2**
DZM	**Mont Dzumac**	**2.40**	**214**	*e*P	**Pn**	**08 22 45.3**	**-0.3**
DZM				*e*S	**Sn**	**08 23 15.2**	**+0.1**
DZM				AMP		08 23 20.4	
	comp=Z,2μm,1.1s						
NOUC	**Port Laguerre**	**2.50**	**217**	*e*P	**Pn**	**08 22 47.3**	**+0.3**
NOUC				*e*S	**Sn**	**08 23 18.0**	**+0.4**
NOUC				AMP		08 23 34.0	
	comp=Z,95nm,2.5s						
NORM	**Noumea**	**2.50**	**212**	*e*P	**Pn**	**08 22 47.0**	**-0.2**
NORM				*e*S	**Sn**	**08 23 17.4**	**-0.4**
ONTRN	**Noumea**	**2.59**	**211**	*e*S	**Sn**	**08 23 19.9**	**+0.1**
CTA	**Charters Tower**	**20.34**	**266**	LR	LR	08 33 47.6	
	comp=Z,104nm,18.1s,baz=53,slow=32						
STKA	**Stephens Creek**	**26.33**	**238**	P	**P**	**08 27 43.6**	**+1.1**
	comp=Z,2.2nm,1.0s,mb3.6,baz=72,slow=9.7,SNR=5.9						
STKA				pP	pP	08 27 55.4	+10
	comp=Z,3.0nm,0.9s,baz=69,slow=11,SNR=4.0						
WRA	**Warramunga Arr**	**31.51**	**264**	P	**P**	**08 28 27.4**	**-1.3**
	comp=Z,2.3nm,1.3s,mb3.9,baz=94,slow=9.1,SNR=8.1						
WRA				pP	pP	08 28 40.3	+8.8
	comp=Z,1.1nm,1.2s,baz=94,slow=9.1,SNR=1.6						
ASAR	**Alice Springs**	**31.71**	**257**	P	**P**	**08 28 30.9**	**+0.4**
	comp=Z,1.5nm,0.7s,mb3.9,baz=85,slow=9.3,SNR=14						
ASAR				pP	pP	08 28 42.5	+9.4
	comp=Z,1.8nm,0.7s,baz=84,slow=8.7,SNR=7.8						

*DDA **08** 08:29:06.7, 38.°91N×26.°12E, h7km±5km, Md2.9*
*THE **08** 08:29:06.3, 38.°87N×26.°02E, h7km±1km, ML2.7/3, Error ellipse: s-maj=2.1km s-min=0.6km az=90.0*
*CSEM **08** 08:29:06.3±0.1, 38.°87N×26.°00E, h12km, ML2.7/3, Error ellipse: s-maj=3.6km s-min=2.1km az=78.0*
*ISCJB **08** 08:29:06.4±0.6, 38.°87N±0.°03×26.°03E±0.°05, h8km±6km, Error ellipse: s-maj=7.1km s-min=4.5km az=169.0*
ISC 08 08:29:06.6±0.6, 38.°88N±0.°03×26.°01E±0.°06, h12km±6km, n15, σ0s49/30, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.36**	**340**	P	**Pg**	**08 29 13.8**	**+0.1**
SIGR				S	**Sg**	**08 29 18.7**	**+0.2**
SIGR	**SIGRI**	**0.36**	**340**	P	**Pg**	**08 29 13.8**	**+0.1**
SIGR				S	**Sg**	**08 29 18.7**	**+0.2**
PRK	**Paraskevi**	**0.42**	**29**	P	**Pg**	**08 29 14.8**	**-0.2**
PRK				S	**Sg**	**08 29 20.7**	**+0.1**
PRK	**Paraskevi**	**0.42**	**29**	P	**Pg**	**08 29 14.8**	**-0.2**
PRK				S	**Sg**	**08 29 20.7**	**+0.1**
CHOS	**Chios island**	**0.49**	**176**	P	**Pg**	**08 29 15.8**	**-0.4**
CHOS				S	**Sg**	**08 29 22.5**	**-0.2**
CHOS	**Chios island**	**0.49**	**176**	P	**Pg**	**08 29 15.8**	**-0.4**
CHOS				S	**Sg**	**08 29 22.5**	**-0.2**
AYVA	**Ayvalik**	**0.68**	**51**	*i* P	**Pg**	**08 29 15.5**	**-4.4**
AYVA				*i* S	**Sg**	**08 29 28.6**	**-0.2**
AYVA	**Ayvalik**	**0.68**	**51**	*i* P	**Pg**	**08 29 15.5**	**-4.4**
AYVA				*i* S	**Sg**	**08 29 28.6**	**-0.3**
URLA	**Izmir**	**0.69**	**138**	*i* P	**Pg**	**08 29 19.6**	**-0.4**
URLA				*i* S	**Sg**	**08 29 30.3**	**+1.3**
URLA	**Izmir**	**0.69**	**138**	*i* P	**Pg**	**08 29 19.6**	**-0.4**
URLA				*i* S	**Sg**	**08 29 30.3**	**+1.3**
BOZC	**Bozcaada**	**0.96**	**2**	*i* P	**Pg**	**08 29 24.7**	**-0.5**
BOZC				*i* S	**Sg**	**08 29 38.1**	**+0.3**
LIA	**Limnos Island**	**1.21**	**328**	P	**Pn**	**08 29 28.7**	**-0.6**
LIA				S	**Sb**	**08 29 45.7**	**+0.8**
LIA	**Limnos Island**	**1.21**	**328**	P	**Pn**	**08 29 28.7**	**-0.6**
LIA				S	**Sb**	**08 29 45.7**	**+0.8**
BALY	**Balya**	**1.52**	**55**	*i* P	**Pn**	**08 29 33.5**	**0.0**
BALY				*i* S	**Sn**	**08 29 53.2**	**-0.1**
BALY	**Balya**	**1.52**	**55**	*i* P	**Pn**	**08 29 33.5**	**-0.1**
BALY				*i* S	**Sn**	**08 29 53.2**	**-0.1**

*NEIC **08** 08:31:29.6, 35.°06S×70.°56W, h8km, ML3.2(GUC), After GUC.*
GUC 08 08:31:29.4±0.5, 35.°05S×70.°53W, h35km±11km, MD3.5, ML3.2, 6C-5D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NICH	**Los Niches**	**0.57**	**275**	⇑*i* P	Pn	08 31 40.9	-0.2
NICH				*i* S	Sn	08 31 49.4	+0.2
CACH	**El Canelo**	**0.93**	**357**	⇑*i* P	Pn	08 31 46.3	+0.3
CACH				*e*S	Sn	08 31 59.2	+1.1
TALC	**Talca**	**0.97**	**249**	⇓*i* P	Pn	08 31 47.1	+0.6
TALC				*i* S	Sn	08 32 00.5	+1.6
CHCH	**Chadas Angostu**	**1.12**	**355**	⇓*i* P	Pn	08 31 49.7	+1.2
CHCH				*i* S	Sn	08 32 05.2	+2.5
LNV	**Longovilo**	**1.31**	**326**	⇑*i* P	Pn	08 31 52.8	+1.6
LNV				*i* S	Sn	08 32 10.8	+3.3
ANTU	**Antumapu**	**1.48**	**357**	⇑*i* P	Pn	08 31 56.1	+2.6
ANTU				*i* S	Sn	08 32 16.1	+4.4
ANTU	**Antumapu**	**1.48**	**357**	⇑*i* P	Pn	08 31 56.1	+2.6
ANTU				*i* S	Sn	08 32 16.1	+4.4
ANTU				AML	AML	08 32 18.0	
	comp=E,352nm,0.4s						
FSR	**Penalolen**	**1.57**	**0**	⇓*i* P	Pn	08 31 57.5	+2.8
FSR				*i* S	Sn	08 32 19.4	+5.6
CLCH	**Cerro Calan**	**1.65**	**360**	⇓*i* P	Pn	08 31 59.7	+3.9
CLCH				*i* S	Sn	08 32 22.4	+6.6
CLCH	**Cerro Calan**	**1.65**	**360**	⇓*i* P	Pn	08 31 59.7	+3.9
CLCH				*i* S	Sn	08 32 22.4	+6.6
CLCH				AML	AML	08 32 24.6	
	comp=E,303nm,0.2s						
FCH	**Farellones**	**1.73**	**7**	*i* P	Pn	08 32 00.7	+3.8
FCH				AML	AML	08 32 19.4	
	comp=N,499nm,0.3s						
FCH				*i* S	Sn	08 32 24.1	+6.3
PEL	**Peldehue**	**1.91**	**356**	⇑*i* P	Pn	08 32 03.0	+3.6
PEL				*i* S	Sn	08 32 28.6	+6.5
PEL				AML	AML	08 32 30.4	
	comp=N,482nm,0.3s						

KRSC 08 08:51:12.2±0.2, 50.°76N×157.°01E, h35km±34km, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**0.93**	**277**	*e*P	Pn	08 51 28.2	-0.6
ALID				*e*S	Sn	08 51 41.6	+0.7
MIPR	**Malaya Ipel'ka**	**1.53**	**354**	*e*P	Pn	08 51 38.7	+1.8
GRL	**Gorelyy**	**1.91**	**20**	P	Pn	08 51 44.1	+1.9
PET	**Petropavlovsk**	**2.48**	**24**	*e*P	Pn	08 51 53.4	+3.3
PET				*e*S	Sn	08 52 22.4	+3.2
AVH	**Avacha**	**2.73**	**22**	*e*P	Pn	08 51 56.4	+3.0
NLC	**Nalytchevo**	**2.81**	**30**	*e*S	Sn	08 52 28.7	+1.4
SPN	**Mys Shipunski**	**2.99**	**37**	*e*P	Pn	08 51 58.9	+1.8
SPN				*e*S	Sn	08 52 32.9	+1.2
GNL	**Ganaly**	**3.00**	**11**	P	Pn	08 52 01.9	+4.8
MKZ	**Mys Kozlova**	**4.76**	**35**	*e*P	Pn	08 52 23.6	+2.2

*IDC **08** 09:03:22.7±0.6, 32.°16N×104.°80E, h0km, mb3.9/17, mb1 4.0/19, mb1mx3.9/30, mbtmp3.9/19, ML3.6/2, Error ellipse: s-maj=27.0km s-min=12.3km az=50.0*
*ISCJB **08** 09:03:22.6±0.3, 32.°15N±0.°03×104.°84E±0.°04, h10km, mb4.0/25, Error ellipse: s-maj=5.0km s-min=4.1km az=165.6*
*NEIC **08** 09:03:24.8±0.4, 32.°23N×104.°79E, h10km, mb4.1/6, Error ellipse: s-maj=13.7km s-min=7.5km az=52.0*
*BJI **08** 09:03:25.9, 32.°17N×104.°72E, h14km, mB4.3/2, mb3.8/4, ML3.8/14, Ms3.7/7, Ms7 3.5/7*
ISC 08 09:03:24.4±0.3, 32.°16N±0.°03×104.°89E±0.°04, h10km, n43, σ1s10/54, mb4.0/25, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.58**	**218**	⇑*i* Pg	**Pg**	**09 03 53.2**	**-1.5**
CD2				Sg	**Sg**	**09 04 15.2**	**+0.1**
CD2				smax			
	comp=N,5μm,0.8s						
CD2				smax			
	comp=E,8μm,0.6s						
XAN	**Xi'an**	**3.87**	**60**	Pn	**Pn**	**09 04 30.0**	**+6.1**
XAN				Pg	**Pg**	**09 04 40.7**	**+2.2**
XAN				Sn	**Sn**	**09 05 10.1**	**+0.7**
XAN				Sg	**Sg**	**09 05 26.2**	**-2.4**
XAN				smax			
	comp=N,260nm,0.8s						
XAN				smax			
	comp=E,130nm,0.7s						
LZH	**Lanzhou**	**4.01**	**348**	*e*Pn	**Pn**	**09 04 28.5**	**+2.6**
LZH				Pg	**Pg**	**09 04 38.9**	**-2.3**
LZH				Sn	**Sn**	**09 05 14.6**	**+1.7**
LZH				Sg	**Sg**	**09 05 28.8**	**-4.4**
LZH				smax			
	comp=N,220nm,0.6s						
LZH				smax			
	comp=E,630nm,0.9s						
LZH				LR	LR		
	comp=E,690nm,4.7s						
LZH				LR	LR		
	comp=Z,750nm,5.9s						
ENH	**Enshi**	**4.37**	**114**	Pn	**Pn**	**09 04 36.0**	**+5.2**
ENH				*e*Pg	**Pg**	**09 04 46.0**	**-2.0**
ENH				*e*Sg	**Sg**	**09 05 51.1**	**+6.5**
GYA	**Guiyang**	**5.89**	**164**	Pg	**Pb**	**09 05 02.3**	**-4.9**
GYA				Sg	**Sn**	**09 06 00.1**	**+0.8**
GYA				smax			
	comp=N,170nm,0.9s						
GYA				smax			
	comp=E,120nm,1.0s						
WHN	**Wuhan**	**8.25**	**99**	P	**Pb**	**09 05 38.0**	**-9.4**
WHN				S	**Sn**	**09 06 52.3**	**-5.1**
WHN				LR	LR		
	comp=N,670nm,3.3s						
WHN				LR	LR		
	comp=E,320nm,3.1s						
WHN				LR	LR		
	comp=Z,530nm,4.9s						
GTA	**Gaotai**	**8.32**	**332**	*e*P	**Pn**	**09 05 28.3**	**+3.2**
GTA				pP		09 05 32.1	
GTA				sP		09 05 34.6	
GTA				S	**Sn**	**09 06 59.7**	**+0.5**
GTA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GTA				LR	LR		
	comp=N,190nm,10.1s						
GTA				LR	LR		
	comp=E,200nm,8.9s						
GTA				LR	LR		
	comp=Z,140nm,11.0s						
CMAR	**Chiang Mai Arr**	**14.66**	**203**	Pn	**Pn**	**09 06 53.7**	**+1.8**
	comp=Z,0.3nm,0.3s,baz=7.7,slow=9.4,SNR=3.0						
SONM	**Songino Array**	**15.70**	**4**	Pn	**Pn**	**09 07 05.9**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=181,slow=8.6,SNR=2.7						
KSRS	**Korea Array**	**19.62**	**68**	P	**Pn**	**09 07 54.6**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=254,slow=11,SNR=4.8						
MK31	**Makanchi Array**	**22.65**	**317**	*e*P	**P**	**09 08 25.7**	**+0.2**
MKAR	**Makanchi Array**	**22.65**	**317**	P	**P**	**09 08 25.2**	**-0.2**
	comp=Z,2.0nm,0.8s,mb3.6,baz=99,slow=12,SNR=15						
TKM2	**Tokmak 2**	**25.47**	**303**	*e*P	**P**	**09 08 53.3**	**+0.8**
	comp=Z,1.4nm,0.6s,mb3.7						
ZALV	**Zalesovo Beam**	**26.08**	**333**	P	**P**	**09 08 58.0**	**+0.1**
	comp=Z,2.3nm,0.6s,mb3.9,baz=128,slow=11,SNR=7.5						
UCH	**Uchtor**	**26.08**	**301**	*e*P	**P**	**09 08 59.7**	**+1.6**
	comp=Z,4.1nm,1.2s,mb3.8						
KURK	**Kurchatov**	**26.82**	**321**	P	**P**	**09 09 04.6**	**-0.1**
	comp=Z,1.9nm,0.8s,mb3.6,baz=129,slow=8.8,SNR=11						
KURK				PcP	PcP	09 12 26.6	-0.6
	comp=Z,0.7nm,0.7s,baz=112,slow=2.1,SNR=3.9						
KURK	**Kurchatov**	**26.82**	**321**	*e*P	**P**	**09 09 04.7**	**+0.1**
	comp=Z,3.9nm,1.2s,mb3.8						
KURK				PcP	PcP	09 12 26.6	-0.6
MJAR	**Matsushiro Arr**	**27.77**	**72**	P	**P**	**09 09 13.5**	**+0.1**
	comp=Z,0.7nm,0.6s,mb3.5,baz=276,slow=10,SNR=3.6						
BVAR	**Borovoye Array**	**32.39**	**320**	P	**P**	**09 09 54.3**	**+0.2**
	comp=Z,0.5nm,0.6s,mb3.5,baz=92,slow=13,SNR=3.2						
ABKAR	**Akbulak array**	**37.48**	**310**	*e*P	**P**	**09 10 38.5**	**+0.4**
	comp=Z,1.5nm,0.8s,mb3.9						
AKTK	**Aktyubinsk**	**38.92**	**312**	P	**P**	**09 10 49.0**	**-1.1**
AKTO	**Aktyubinsk**	**38.92**	**312**	P	**P**	**09 10 49.0**	**-1.1**
	comp=Z,0.9nm,0.6s,mb3.6,baz=100,slow=12,SNR=4.2						
ARU	**Arti**	**40.02**	**321**	*e*P	**P**	**09 10 56.6**	**-2.6**
	comp=Z,9.6nm,0.8s,mb4.6						
FITZ	**Fitzroy Crossi**	**53.79**	**155**	P	**P**	**09 12 47.4**	**+0.2**
	comp=Z,5.3nm,0.9s,mb4.5,baz=270,slow=10,SNR=2.8						
ARCES	**ARCESS Array B**	**56.58**	**336**	P	**P**	**09 13 06.1**	**-0.6**
	comp=Z,6.0nm,1.1s,mb4.5,baz=64,slow=8.2,SNR=3.9						
BRTR	**Keskin Array B**	**56.81**	**299**	P	**P**	**09 13 08.4**	**-0.5**
	comp=Z,0.7nm,0.8s,mb3.8,baz=76,slow=6.6,SNR=4.8						
KAF	**Kangasniemi**	**56.88**	**327**	*e*p	**P**	**09 13 04.9**	**-4.1**
	comp=Z,9.7nm,1.1s,mb4.8						
KAF	**Kangasniemi**	**56.88**	**327**	*e*p	**P**	**09 13 04.9**	**-4.1**
	comp=Z,9.7nm,1.1s,mb4.8						
FINES	**FINESS Array B**	**57.07**	**326**	P	**P**	**09 13 09.7**	**-0.7**
	comp=Z,2.6nm,0.7s,mb4.4,baz=95,slow=8.4,SNR=12						
AKASG	**Malin Array Be**	**57.16**	**313**	P	**P**	**09 13 10.1**	**-1.1**
	comp=Z,0.4nm,0.4s,mb3.9,baz=65,slow=7.9,SNR=4.5						
WRAB	**Tennant Creek**	**58.98**	**147**	*e*P	**P**	**09 13 24.4**	**+0.1**
	comp=Z,3.6nm,0.7s,mb4.5						
WRA	**Warramunga Arr**	**58.99**	**147**	P	**P**	**09 13 24.5**	**+0.2**
	comp=Z,1.4nm,0.5s,mb4.2,baz=340,slow=7.6,SNR=25						
WRA	**Warramunga Arr**	**58.99**	**147**	P	**P**	**09 13 24.5**	**+0.2**
ASAR	**Alice Springs**	**62.05**	**150**	P	**P**	**09 13 45.5**	**+0.3**
	comp=Z,0.6nm,0.5s,mb4.0,baz=333,slow=6.4,SNR=18						
NOA	**NORSAR Array B**	**64.13**	**327**	P	**P**	**09 13 57.4**	**-1.2**
	comp=Z,1.3nm,0.9s,mb4.0,baz=72,slow=6.7,SNR=3.5						
GERES	**GERESS Array B**	**67.29**	**314**	P	**P**	**09 14 19.1**	**-0.1**
	comp=Z,0.4nm,0.7s,mb3.5,baz=62,slow=6.8,SNR=3.3						
STKA	**Stephens Creek**	**72.53**	**148**	P	**P**	**09 14 51.8**	**+0.4**
	comp=Z,0.8nm,0.7s,mb3.8,baz=333,slow=9.0,SNR=4.3						
LPG	**La Plagne**	**73.02**	**313**	*e*P	**P**	**09 14 54.6**	**+0.3**
	comp=Z,6.5nm,0.7s,mb4.4						
LPL	**La Plagne**	**73.02**	**313**	*e*P	**P**	**09 14 54.5**	**+0.2**
	comp=Z,6.5nm,0.8s,mb4.3						
SMF	**Signal de Mont**	**74.22**	**315**	*e*P	**P**	**09 15 01.4**	**0.0**
YKA	**Yellowknife Ar**	**80.49**	**17**	P	**P**	**09 15 36.0**	**-0.2**
	comp=Z,0.8nm,0.8s,mb3.7,baz=322,slow=5.7,SNR=4.3						
YKA	**Yellowknife Ar**	**80.49**	**17**	P	**P**	**09 15 36.0**	**-0.2**
OTAV	**Otavalo**	**147.62**	**6**	*e*PKPbc	PKPbc	09 23 10.2	+0.5

*ISK **08** 09:07:29.2, 37.°22N×28.°16E, h5km, MD2.5*
*ISCJB **08** 09:07:29.7±0.8, 37.°25N±0.°04×28.°21E±0.°03, h11km±19km, Error ellipse: s-maj=6.6km s-min=4.3km az=21.0*
*CSEM **08** 09:07:30.1±0.2, 37.°25N×28.°20E, h2km, MD2.5, Error ellipse: s-maj=5.9km s-min=4.2km az=24.0*
ISC 08 09:07:30.5±0.8, 37.°25N±0.°04×28.°20E±0.°04, h1km±36km, n20, σ0s75/27, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.13**	**150**	PG	**Pg**	**09 07 32.3**	**-0.6**
YER				*e*SG	**Sg**	**09 07 34.7**	**+0.1**
YER	**Yerkesik**	**0.13**	**150**	*i* Pg	**Pg**	**09 07 32.3**	**-0.6**
YER				*e*Sg	**Sg**	**09 07 34.7**	**+0.1**
MLSB	**Milas**	**0.34**	**278**	*e*PG	**Pg**	**09 07 36.5**	**-0.6**
MLSB				*e*SG	**Sg**	**09 07 41.8**	**+0.3**
MLSB	**Milas**	**0.34**	**278**	*e*Pg	**Pg**	**09 07 36.5**	**-0.6**
MLSB				*e*Sg	**Sg**	**09 07 41.8**	**+0.3**
AYDN	**Tasoluk**	**0.49**	**328**	*i* P	**Pg**	**09 07 39.4**	**-0.5**
AYDN	**Tasoluk**	**0.49**	**328**	*i* P	**Pg**	**09 07 39.4**	**-0.4**
AYDN				*i* S	**Sg**	**09 07 46.8**	**+0.6**
TURN	**Turunc**	**0.49**	**139**	*i* P	**Pg**	**09 07 38.2**	**-1.7**
TURN	**Turunc**	**0.49**	**139**	*i* P	**Pg**	**09 07 38.2**	**-1.7**
TURN				*i* S	**Sg**	**09 07 47.5**	**+1.2**
BDRM	**Kayabasi**	**0.63**	**254**	*i* P	**Pg**	**09 07 33.9**	**-8.7**
BDRM	**Kayabasi**	**0.63**	**254**	*i* S	**Sg**	**09 07 51.4**	**+0.7**
DAT	**Datca**	**0.72**	**224**	*e*PG	**Pg**	**09 07 43.7**	**-0.5**
DAT	**Datca**	**0.72**	**224**	*e*Pg	**Pg**	**09 07 43.7**	**-0.5**
DNZL	**Cakiroluk**	**0.81**	**56**	*i* P	**Pg**	**09 07 44.9**	**-1.1**
DNZL	**Cakiroluk**	**0.81**	**56**	*i* P	**Pg**	**09 07 44.8**	**-1.1**
DNZL				*i* S	**Sg**	**09 07 56.8**	**+0.4**
FETY	**Fethiye**	**0.93**	**130**	*e*PG	**Pg**	**09 07 48.8**	**+0.4**
FETY	**Fethiye**	**0.93**	**130**	*e*Pg	**Pg**	**09 07 48.8**	**+0.4**
GLHS	**Ghisar (BURDU**	**1.04**	**95**	*e*PG	**Pg**	**09 07 51.1**	**+0.7**
GLHS	**Ghisar (BURDU**	**1.04**	**95**	*e*Pg	**Pg**	**09 07 51.2**	**+0.8**
ELL	**Elmali**	**1.45**	**109**	*e*PN	**Pg**	**09 07 58.5**	**+0.1**
ELL	**Elmali**	**1.45**	**109**	*e*Pn	**Pg**	**09 07 58.5**	**+0.1**

*CSEM **08** 09:23:44.7±1.5, 36.°73N×27.°36E, h20km, MD2.8, Error ellipse: s-maj=30.4km s-min=14.7km az=43.0*
*DDA **08** 09:23:48.0, 36.°94N×27.°27E, h8km±2km, Md2.8*
ISC 08 09:23:47.8±1.9, 36.°94N±0.°05×27.°2E±0.°1, h14km±17km, n12, σ0s45/21, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.21**	**54**	*i* P	**Pg**	**09 23 52.1**	**-0.3**
BDRM				*i* S	**Sg**	**09 23 55.6**	**-0.1**
BDRM	**Kayabasi**	**0.21**	**54**	*i* P	**Pg**	**09 23 52.2**	**-0.3**
BDRM				*i* S	**Sg**	**09 23 55.6**	**-0.1**
DAT	**Datca**	**0.35**	**127**	*e*PG	**Pg**	**09 23 54.2**	**-0.7**
DAT				*e*SG	**Sg**	**09 24 00.2**	**+0.6**
MLSB	**Milas**	**0.56**	**51**	*e*PG	**Pg**	**09 23 59.2**	**+0.4**
MLSB	**Milas**	**0.56**	**51**	*e*Pg	**Pg**	**09 23 59.2**	**+0.4**
GCAM	**G?zelcaml?**	**0.76**	**0**	*i* P	**Pg**	**09 24 02.4**	**-0.2**
GCAM				*i* S	**Sg**	**09 24 13.2**	**+0.7**
GCAM	**G?zelcaml?**	**0.76**	**0**	*i* P	**Pg**	**09 24 02.4**	**-0.2**
GCAM				*i* S	**Sg**	**09 24 13.2**	**+0.7**
YER	**Yerkesik**	**0.86**	**77**	*e*PG	**Pg**	**09 24 04.9**	**+0.4**
AYDN	**Tasoluk**	**0.88**	**35**	*i* P	**Pg**	**09 24 04.5**	**-0.5**
AYDN				*i* S	**Sg**	**09 24 16.2**	**-0.3**
AYDN	**Tasoluk**	**0.88**	**35**	*i* P	**Pg**	**09 24 04.5**	**-0.4**
AYDN				*i* S	**Sg**	**09 24 16.2**	**-0.3**
TURN	**Turunc**	**1.10**	**93**	*i* P	**Pg**	**09 24 02.6**	**-6.4**
TURN				*i* S	**Sg**	**09 24 15.3**	**-8.1**
TURN	**Turunc**	**1.10**	**93**	*i* P	**Pg**	**09 24 02.6**	**-6.4**
TURN				*i* S	**Sg**	**09 24 15.3**	**-8.1**

DJA 08 09:25:30, 0.°05N×124.°63E, h15km, MLv3.8/5, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**2.15**	**240**	P	Pn	09 26 05.3	-0.1
LUWI				S	Sn	09 26 32.3	+0.5
MRSI	**Marisa**	**2.72**	**279**	P	Pn	09 26 13.3	+0.1
APSI	**Ampana**	**3.13**	**252**	P	Pn	09 26 20.7	+1.9
APSI				S	Sn	09 26 58.0	+2.0
NLAI	**Namlea**	**4.09**	**143**	P	Pn	09 26 33.4	+1.3
KDI	**Kendari**	**4.46**	**207**	P	Pn	09 26 36.1	-1.0

*ISCJB **08** 09:53:27.4±1.5, 44.°1N±0.°2×148.°0E±0.°2, h163km±9km, mb3.7/7, Error ellipse: s-maj=37.4km s-min=12.3km az=141.6*
*JMA **08** 09:53:29.6±0.6, 44.°21N×148.°05E, h101km, M3.8*
*IDC **08** 09:53:31.3±3.8, 45.°52N×147.°55E, h102km±113km, mb3.5/7, mb1 3.6/7, mb1mx3.3/27, mbtmp3.5/7, ML2.6/1, Error ellipse: s-maj=252.3km s-min=26.4km az=165.0*
ISC 08 09:53:28.3±1.5, 44.°1N±0.°2×148.°0E±0.°2, h154km±10km, n19, σ0s82/24, mb3.7/7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.79**	**246**	P	**Pn**	**09 54 00.7**	**-0.6**
NEM2				*e*S	**Sn**	**09 54 25.1**	**-1.5**
JRA	**Rausu**	**2.08**	**266**	P	**Pn**	**09 54 04.0**	**-0.5**
JNK	**Nakash**	**2.42**	**258**	P	**Pn**	**09 54 08.8**	**+0.1**
JAK	**Akkeshi**	**2.64**	**246**	P	**Pn**	**09 54 11.8**	**+0.5**
JAK				*e*S	**Sn**	**09 54 44.5**	**0.0**
JTKR	**Abashiri--Toko**	**2.95**	**269**	P	**Pn**	**09 54 15.0**	**-0.1**
JAR	**Ashorobuto**	**3.17**	**256**	P	**Pn**	**09 54 19.3**	**+1.4**
JCH	**Churui**	**3.69**	**248**	P	**Pn**	**09 54 25.6**	**+1.0**
JCH				*e*S	**Sn**	**09 55 09.0**	**+0.6**
ASAJ	**Asahikawa**	**3.88**	**272**	P	**Pn**	**09 54 27.6**	**+0.5**
	0.4nm,0.3s,baz=72,slow=19,SNR=4.3						
ASAJ				S	**Sn**	**09 55 27.1**	**+14**
	0.5nm,0.3s,baz=343,slow=17,SNR=3.7						
JNBK	**Urakawa-nobuka**	**4.25**	**246**	P	**P

VANB	**Van**	**0.14 121**	*i* Pg	**Pg**	**10 14 53.4**	**-0.1**
VANB			*e*Sg	**Sg**	**10 14 56.4**	**+1.0**
TVAN	**Van**	**0.20 136**	*i* P	**Pg**	**10 14 53.1**	**-1.3**
TVAN			*i* S	**Sg**	**10 14 56.3**	**-0.7**
TVAN	**Van**	**0.20 136**	*i* P	**Pg**	**10 14 53.1**	**-1.3**
TVAN			*i* S	**Sg**	**10 14 56.3**	**-0.7**
VANT	**Van**	**0.26 152**	PG	**Pg**	**10 14 56.4**	**+0.9**
VANT			*e*SG	**Sg**	**10 15 01.3**	**+2.4**
VANT	**Van**	**0.26 152**	*i* Pg	**Pg**	**10 14 56.4**	**+0.8**
VANT			*e*Sg	**Sg**	**10 15 01.3**	**+2.4**
CLDR	**Caldiran**	**0.71 48**	*e*PG	**Pg**	**10 15 03.6**	**-0.6**
CLDR	**Caldiran**	**0.71 48**	*e*Pg	**Pg**	**10 15 03.7**	**-0.6**
TATV	**Tatvan**	**0.78 258**	*i* P	**Pg**	**10 15 04.8**	**-0.7**
TATV			*i* S	**Sg**	**10 15 15.6**	**0.0**
TATV	**Tatvan**	**0.78 258**	*i* P	**Pg**	**10 15 04.8**	**-0.7**
TATV			*i* S	**Sg**	**10 15 15.6**	**+0.1**
AGRB	**Hanur-Agry**	**0.92 348**	*e*PG	**Pg**	**10 15 08.0**	**-0.3**
AGRB			*e*SG	**Sg**	**10 15 21.2**	**+0.9**
AGRB	**Hanur-Agry**	**0.92 348**	*e*Pg	**Pg**	**10 15 08.0**	**-0.3**
AGRB			*e*Sg	**Sg**	**10 15 21.2**	**+0.9**
HAKT	**HAKKARI**	**1.17 161**	*i* P	**Pg**	**10 15 09.2**	**-3.8**
HAKT			*i* S	**Sg**	**10 15 27.0**	**-1.2**
HAKT	**HAKKARI**	**1.17 161**	*i* P	**Pg**	**10 15 09.2**	**-3.9**
HAKT			*i* S	**Sg**	**10 15 27.0**	**-1.2**
CUKT	**Cukurca**	**1.45 168**	*e*PN	**Pn**	**10 15 17.8**	**+0.3**
CUKT	**Cukurca**	**1.45 168**	*e*Pn	**Pn**	**10 15 17.8**	**+0.3**
BEST	**Besiri**	**1.73 244**	*i* P	**Pn**	**10 15 22.3**	**+1.0**
BEST			*i* S	**Sn**	**10 15 43.6**	**-0.1**
GNI	**Garni**	**1.88 38**	*e*PN	**Pn**	**10 15 23.1**	**-0.4**
GNI	**Garni**	**1.88 38**	*e*Pn	**Pn**	**10 15 23.1**	**-0.4**

*ISK **08** 10:31:39.5, 40°.89N×30°.38E, h5km, MD2.7*
*DDA **08** 10:31:40.9, 40°.87N×30°.36E, h11km±3km, Md2.8*
*CSEM **08** 10:31:41.0±0.1, 40°.87N×30°.37E, h2km, MD2.8, Error ellipse: s-maj=2.5km s-min=1.5km az=22.0*
*ISCJB **08** 10:31:41.2±0.4, 40°.89N±0°.03×30°.36E±0°.03, h10km, Error ellipse: s-maj=4.8km s-min=3.0km az=18.9*
ISC 08 10:31:41.2±0.5, 40°.89N±0°.03×30°.35E±0°.03, h1km±6km, n45, σ0°.83/64, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HENT	**Hendek**	**0.42**	**98**	*i* P	**Pg**	**10 31 48.8**	**-0.6**
HENT				*i* S	**Sg**	**10 31 55.0**	**+0.2**
HENT	**Hendek**	**0.42**	**98**	*i* P	**Pg**	**10 31 48.8**	**-0.5**
HENT				*i* S	**Sg**	**10 31 55.0**	**+0.2**
GULT	**Gulveren**	**0.47**	**164**	PG	**Pg**	**10 31 50.0**	**-0.2**
GULT				*e*SG	**Sg**	**10 31 57.4**	**+1.0**
GULT	**Gulveren**	**0.47**	**164**	*i* Pg	**Pg**	**10 31 50.0**	**-0.2**
GULT				*e*Sg	**Sg**	**10 31 57.4**	**+1.1**
SILT	**Sile**	**0.60**	**297**	*e*PG	**Pg**	**10 31 53.5**	**+0.9**
SILT				*e*SG	**Sg**	**10 32 01.7**	**+1.3**
SILT	**Sile**	**0.60**	**297**	*e*Pg	**Pg**	**10 31 53.5**	**+0.8**
SILT				*e*Sg	**Sg**	**10 32 01.7**	**+1.3**
GPA	**Golpazari**	**0.60**	**183**	*e*PG	**Pg**	**10 31 52.1**	**-0.6**
GPA	**Golpazari**	**0.60**	**183**	*e*Pg	**Pg**	**10 31 52.1**	**-0.6**
ADVT	**Abdulvahap**	**0.65**	**226**	*e*PG	**Pg**	**10 31 53.3**	**-0.3**
ADVT	**Abdulvahap**	**0.65**	**226**	*e*Pg	**Pg**	**10 31 53.3**	**-0.3**
MDU	**Mudurnu**	**0.78**	**122**	*e*PG	**Pg**	**10 31 55.2**	**-1.0**
MDU	**Mudurnu**	**0.78**	**122**	*e*Pg	**Pg**	**10 31 55.2**	**-1.0**
YLV	**Yalova**	**0.81**	**247**	*e*PG	**Pg**	**10 31 56.4**	**-0.3**
YLV	**Yalova**	**0.81**	**247**	*e*Pg	**Pg**	**10 31 56.4**	**-0.3**
KDZE	**Karadeniz Ereo**	**0.93**	**62**	*e*PG	**Pg**	**10 31 57.8**	**-1.2**
KDZE	**Karadeniz Ereo**	**0.93**	**62**	*e*Pg	**Pg**	**10 31 57.8**	**-1.3**
GEMT	**Gemlik**	**0.99**	**243**	*e*PG	**Pg**	**10 31 59.6**	**-0.6**
GEMT	**Gemlik**	**0.99**	**243**	*e*Pg	**Pg**	**10 31 59.6**	**-0.6**
ISK	**Istanbul-Kandi**	**0.99**	**281**	*e*PG	**Pg**	**10 31 59.9**	**-0.3**
ISK	**Istanbul-Kandi**	**0.99**	**281**	*e*Pg	**Pg**	**10 31 59.9**	**-0.3**
BORA	**Eskisehir**	**1.01**	**175**	*i* P	**Pg**	**10 32 00.3**	**-0.2**
BORA				*i* S	**Sg**	**10 32 13.6**	**0.0**
BORA	**Eskisehir**	**1.01**	**175**	*i* P	**Pg**	**10 32 00.3**	**-0.2**
BORA				*i* S	**Sg**	**10 32 13.6**	**0.0**
KLYT	**Kilyos**	**1.05**	**291**	*e*PG	**Pg**	**10 32 01.6**	**+0.2**
KLYT	**Kilyos**	**1.05**	**291**	*e*Pg	**Pg**	**10 32 01.6**	**+0.2**
ARMT	**Armutlu**	**1.18**	**255**	*e*PN	**Pn**	**10 32 03.3**	**-1.4**
ARMT	**Armutlu**	**1.18**	**255**	*e*Pn	**Pn**	**10 32 03.3**	**-1.4**
ULDT	**Uludag**	**1.19**	**232**	*i* P	**Pg**	**10 32 03.0**	**-0.9**
ULDT				*i* S	**Sg**	**10 32 20.2**	**+0.9**
ULDT	**Uludag**	**1.19**	**232**	*i* P	**Pg**	**10 32 03.0**	**-0.9**
ULDT				*i* S	**Sg**	**10 32 20.2**	**+0.9**
BGKT	**Bogazkoy**	**1.23**	**284**	*e*PN	**Pn**	**10 32 04.4**	**-1.1**
BGKT	**Bogazkoy**	**1.23**	**284**	*e*Pn	**Pn**	**10 32 04.4**	**-1.1**
SGKT	**Sivrigoynuk**	**1.33**	**103**	*i* P	**Pg**	**10 32 06.2**	**-0.6**
SGKT				*i* S	**Sg**	**10 32 24.9**	**+0.8**
SGKT	**Sivrigoynuk**	**1.33**	**103**	*i* P	**Pg**	**10 32 06.2**	**-0.6**
SGKT				*i* S	**Sg**	**10 32 24.9**	**+0.8**
ESKT	**Eskisehir**	**1.42**	**164**	*i* P	**Pn**	**10 32 07.5**	**-0.5**
ESKT				*i* S	**Sg**	**10 32 28.2**	**+1.5**
SEYT	**Eskypehyr**	**1.42**	**164**	*i* P	**Pn**	**10 32 07.6**	**-0.5**
SEYT				*i* S	**Sg**	**10 32 28.2**	**+1.4**
CTKS	**Kestanelik-??a**	**1.44**	**285**	*e*PN	**Pn**	**10 32 08.3**	**0.0**
CTKS	**Kestanelik-??a**	**1.44**	**285**	*e*Pn	**Pn**	**10 32 08.3**	**0.0**
ELBA	**Catalca**	**1.47**	**281**	*i* P	**Pn**	**10 32 08.8**	**-0.1**
ELBA				*e*S	**Sg**	**10 32 29.4**	**+0.8**
ELBA	**Catalca**	**1.47**	**281**	*i* P	**Pn**	**10 32 08.8**	**-0.1**
ELBA				*e*S	**Sg**	**10 32 29.4**	**+0.8**
SLVT	**Silivri**	**1.65**	**283**	*e*PN	**Pn**	**10 32 11.7**	**+0.4**
SLVT	**Silivri**	**1.65**	**283**	*e*Pn	**Pn**	**10 32 11.7**	**+0.4**
ALT	**Altintas**	**1.84**	**186**	*i* P	**Pn**	**10 32 05.4**	**-8.4**
ALT				*e*S	**Sn**	**10 32 22.2**	**-16**
DURS	**Dursunbey**	**1.93**	**229**	*e*P	**Pn**	**10 32 15.0**	**-0.1**
DURS				*e*S	**Sn**	**10 32 35.0**	**-4.9**
DURS	**Dursunbey**	**1.93**	**229**	*e*P	**Pn**	**10 32 15.0**	**-0.1**
BALT	**Daday**	**2.38**	**73**	*i* P	**Pn**	**10 32 22.3**	**+1.0**
BALT				*i* S	**Sn**	**10 32 54.2**	**+3.1**
BALT	**Daday**	**2.38**	**73**	*i* P	**Pn**	**10 32 22.3**	**+1.0**

IDC 08 10:45:29.8±1.1, 28°.66S×178°.43W, h257km±12km, mb3.4/3, mb1 3.6/4, mb1mx3.3/16, mbtmp3.4/4, Error ellipse: s-maj=44.6km s-min=28.6km az=117.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.74**	**143**	P	Pn	10 46 05.0	+0.8
	172nm,0.3s,baz=127,slow=21,SNR=9.2						
RAO				S	S	10 46 31.8	+0.5
	269nm,0.3s,baz=89,slow=22,SNR=9.1						
URZ	**Urewera**	**10.27**	**200**	P	Pn	10 47 52.2	+0.7
	0.3nm,0.3s,baz=22,slow=18,SNR=5.2						
URZ				S	S	10 49 45.2	-1.6
	2.6nm,0.3s,baz=36,slow=24,SNR=11						
ASAR	**Alice Springs**	**42.86**	**265**	P	P	10 53 03.2	+0.1
	1.0nm,0.6s,baz=94,slow=7.5,SNR=23						
WRA	**Warramunga Arr**	**43.69**	**271**	P	P	10 53 09.5	-0.3
	0.9nm,0.5s,baz=109,slow=7.5,SNR=19						
FITZ	**Fitzroy Crossi**	**52.01**	**269**	P	P	10 54 13.6	+0.2
	6.5nm,1.1s,baz=140,slow=7.9,SNR=3.3						
BRTR	**Keskin Array B**	**151.41**	**301**	PKPbc	PKPbc	11 04 52.9	-0.2
	1.0nm,0.9s,baz=90,slow=3.5,SNR=3.0						

*CSEM **08** 10:45:50.3, 34°.36N×26°.52E, h23km, MD3.7, After ATH*
*NEIC **08** 10:45:50.3, 34°.36N×26°.52E, h23km, MD3.7(ATH), After ATH.*
ATH 08 10:45:50.3, 34°.36N×26°.52E, h23km±5km, MD3.7/8, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.79**	**342**	*e*Pn	Pn	10 46 04.2	-1.9
ZKR	**Zakros**	**0.79**	**342**	*e*PN	Pn	10 46 04.2	-1.9
ZKR	**Zakros**	**0.79**	**342**	*e*Pn	Pn	10 46 04.2	-1.9
NPS	**Neapolis**	**1.17**	**321**	*e*Pn	Pn	10 46 12.1	+0.9
NPS				*e*Sn	Sn	10 46 27.9	+1.4
NPS	**Neapolis**	**1.17**	**321**	*e*PN	Pn	10 46 12.1	+0.9
NPS				*e*SN	Sn	10 46 27.9	+1.4
NPS	**Neapolis**	**1.17**	**321**	*e*Pn	Pn	10 46 12.1	+0.9
NPS				*e*Sn	Sn	10 46 27.9	+1.4
LAST	**Lasithi**	**1.17**	**313**	*e*Pb	Pb	10 46 11.6	-0.3
LAST				*e*Sn	Sn	10 46 29.7	+3.2
LAST	**Lasithi**	**1.17**	**313**	*e*PB	Pb	10 46 11.6	-0.3
LAST				*e*SN	Sn	10 46 29.7	+3.2
LAST	**Lasithi**	**1.17**	**313**	*e*Pb	Pb	10 46 11.6	-0.3
LAST				*e*Sn	Sn	10 46 29.7	+3.2
KARP	**Karpathos**	**1.30**	**24**	*e*Pn	Pn	10 46 15.3	+2.3
KARP	**Karpathos**	**1.30**	**24**	*e*PN	Pn	10 46 15.3	+2.3
KARP	**Karpathos**	**1.30**	**24**	*e*Pn	Pn	10 46 15.3	+2.3
SIVA	**Sivas**	**1.55**	**295**	*e*Pn	Pn	10 46 18.8	+2.3
SIVA	**Sivas**	**1.55**	**295**	*e*PN	Pn	10 46 18.8	+2.3
SIVA	**Sivas**	**1.55**	**295**	*e*Pn	Pn	10 46 18.8	+2.3
IDI	**Anoyia**	**1.63**	**305**	*e*Pn	Pn	10 46 20.4	+2.8
IDI	**Anoyia**	**1.63**	**305**	*e*PN	Pn	10 46 20.4	+2.8
IDI	**Anoyia**	**1.63**	**305**	*e*Pn	Pn	10 46 20.4	+2.8
VAM	**Vamos**	**2.17**	**299**	*e*Pn	Pn	10 46 28.4	+3.3
VAM	**Vamos**	**2.17**	**299**	*e*PN	Pn	10 46 28.4	+3.3
VAM	**Vamos**	**2.17**	**299**	*e*Pn	Pn	10 46 28.4	+3.3
ARG	**Arkhangelos**	**2.27**	**35**	*e*Pn	Pn	10 46 28.7	+2.3
ARG	**Arkhangelos**	**2.27**	**35**	*e*PN	Pn	10 46 28.7	+2.3
ARG	**Arkhangelos**	**2.27**	**35**	*e*Pn	Pn	10 46 28.7	+2.3
KARN	**Karanos**	**2.38**	**297**	*e*PB	Pb	10 46 31.8	-0.6
KARN	**Karanos**	**2.38**	**297**	*e*Pb	Pb	10 46 31.8	-0.6
KYTH	**Kithira**	**3.43**	**305**	*e*Pn	Pn	10 46 44.7	+2.3
KYTH	**Kithira**	**3.43**	**305**	*e*PN	Pn	10 46 44.7	+2.3
KYTH	**Kithira**	**3.43**	**305**	*e*Pn	Pn	10 46 44.7	+2.3
VLI	**Veliai**	**3.75**	**310**	*e*Pn	Pn	10 46 48.6	+1.9
VLI	**Veliai**	**3.75**	**310**	*e*PN	Pn	10 46 48.6	+1.9
VLI	**Veliai**	**3.75**	**310**	*e*Pn	Pn	10 46 48.6	+1.9
ITM	**Ithomi**	**4.67**	**308**	*e*Pn	Pn	10 47 02.3	+2.9
ITM	**Ithomi**	**4.67**	**308**	*e*PN	Pn	10 47 02.2	+2.8
ITM	**Ithomi**	**4.67**	**308**	*e*Pn	Pn	10 47 02.3	+2.9

IDC 08 10:46:12.7±17.0, 22°.14S×177°.79W, h447km±202km, mb3.1/5, mb1 3.3/5, mb1mx3.2/16, mbtmp3.1/5, Error ellipse: s-maj=117.6km s-min=52.5km az=152.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.56**	**267**	P	P	10 52 14.7	+0.6
	baz=99,slow=11						
STKA	**Stephens Creek**	**37.28**	**246**	P	P	10 52 44.8	-0.4
	1.0nm,0.7s,baz=83,slow=17,SNR=2.8						
ASAR	**Alice Springs**	**44.36**	**258**	P	P	10 53 41.0	-0.9
	0.4nm,0.3s,baz=95,slow=7.3,SNR=8.8						
WRA	**Warramunga Arr**	**44.59**	**264**	P	P	10 53 43.5	-0.4
	1.4nm,0.3s,baz=96,slow=8.4,SNR=31						
FITZ	**Fitzroy Crossi**	**53.02**	**264**	P	P	10 54 47.4	+0.6
	1.4nm,0.7s,baz=94,slow=14,SNR=3.6						
NVAR	**Mina Array Bea**	**82.08**	**43**	P	P	10 57 45.5	+0.3
	0.5nm,0.7s,baz=233,slow=8.6,SNR=4.1						

*IDC **08** 10:46:36.7±2.5, 54°.23N×87°.50E, h0km, mb1 3.7/3, mb1mx3.3/29, mbtmp3.7/3, ML3.7/3, Error ellipse: s-maj=21.7km s-min=14.6km az=47.0*
*NNC **08** 10:46:40.4±4.8, 53°.84N×87°.38E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=36.4km s-min=27.3km az=68.0*
ISC 08 10:46:44.6±1.9, 54°.06N±0°.07×86°.8E±0°.2, h10km, n12, σ1°.24/18, 6C-6D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.17**	**265**	Pg	**Pg**	**10 47 04.1**	**-2.9**
	28nm,0.3s,baz=80,slow=17,SNR=86						
ZALV				Lg		10 47 27.8	
	8.5nm,0.3s,baz=81,slow=29,SNR=16						
ZALV				Rg		10 47 44.5	
	66nm,0.8s,baz=79,slow=35,SNR=5.4						
KURK	**Kurchatov**	**6.02**	**240**	⇓Pn	**Pn**	**10 48 13.3**	**-0.3**
	3.4nm,0.6s						
KURK				⇓Sn	**Sn**	**10 49 28.0**	**+5.5**
	5.5nm,0.7s						
KURK				⇑Lg		10 50 03.0	
	42nm,1.0s						
KURK	**Kurchatov**	**6.02**	**240**	Pn	**Pn**	**10 48 14.9**	**+1.3**
	1.1nm,0.3s,baz=55,slow=14,SNR=41						
KURK				Sn	**Sn**	**10 49 29.7**	**+7.2**
	0.2nm,0.3s,baz=57,slow=22,SNR=5.1						
KURK				Lg		10 50 07.9	
	0.2nm,0.3s,baz=56,slow=34,SNR=9.0						
KURBB	**Kurchatov Arra**	**6.12**	**239**	⇑Pn	**Pn**	**10 48 14.8**	**-0.2**
	0.8nm,0.3s,baz=58,slow=14						
KURBB				⇑Sn	**Sn**	**10 49 25.3**	**+0.3**
	2.9nm,0.7s,baz=58,slow=22						
KURBB				⇓Lg		10 50 04.4	
	8.3nm,0.7s,baz=61,slow=31						
MK31	**Makanchi Array**	**7.82**	**203**	⇑Pn	**Pn**	**10 48 37.5**	**-0.7**
	0.9nm,0.6s,baz=24,slow=13,SNR=28						
MK31				Sn	**Sn**	**10 50 06.0**	**-0.7**
	4.0nm,0.8s,baz=311,slow=22,SNR=4.4						
MK31				⇓Lg		10 50 50.2	
	17nm,0.8s,baz=310,slow=29,SNR=5.4						
MKAR	**Makanchi Array**	**7.82**	**203**	Pn	**Pn**	**10 48 37.6**	**-0.6**
	0.6nm,0.3s,baz=26,slow=13,SNR=26						
MKAR				Sn	**Sn**	**10 50 08.1**	**+1.4**
	0.4nm,0.3s,baz=26,slow=29,SNR=5.2						
MKAR				Lg		10 50 54.4	
	0.3nm,0.3s,baz=23,slow=31,SNR=8.2						
VOSK	**Vostochnaya**	**9.55**	**268**	⇓Pn	**Pn**	**10 49 00.9**	**-1.0**
	4.5nm,0.8s						
BVA0	**Borovoye Array**	**9.83**	**271**	⇓Pn	**Pn**	**10 49 06.4**	**+0.7**
	0.3nm,0.7s,baz=76,slow=13,SNR=8.9						
BVA0				⇑Sn	**Sn**	**10 51 01.4**	**+5.4**
	1.3nm,0.8s,baz=76,slow=24,SNR=6.3						
BVAR	**Borovoye Array**	**9.83**	**271**	Pn	**Pn**	**10 49 03.6**	**-2.1**
	0.4nm,0.3s,baz=80,slow=12,SNR=10						
BVAR				Sn	**Sn**	**10 50 55.7**	**-0.3**
	0.4nm,0.3s,baz=76,slow=24,SNR=8.5						
ZRNK	**Zerenda**	**10.66**	**271**	⇑Pn	**Pn**	**10 49 18.9**	**+1.8**
	3.0nm,0.6s						
AAK	**Ala-Archa**	**14.03**	**220**	Lg		10 54 15.9	
	0.0nm,0.3s,baz=248,slow=19,SNR=2.3						
AKTO	**Aktyubinsk**	**17.93**	**270**	P	**Pn**	**10 50 55.8**	**+2.1**
	0.1nm,0.3s,baz=74,slow=16,SNR=3.0						

*IDC **08** 10:51:15.8±0.4, 31°.88N×104°.41E, h0km, mb4.7/32, mb1 4.7/34, mb1mx4.7/39, mbtmp4.7/34, ML4.1/2, MS4.2/20, Ms1 4.2/20, ms1mx4.0/35, Error ellipse: s-maj=14.7km s-min=9.3km az=42.0*
*ISCJB **08** 10:51:16.5±0.8, 31°.86N±0°.02×104°.32E±0°.02, h15km±5km, mb5.0/153, MS4.5/53, Error ellipse: s-maj=4.0km s-min=3.0km az=5.8*
*BJI **08** 10:51:16.6, 31°.88N×104°.45E, h15km, mB4.9/16, mb4.9/35, ML5.0/17, Ms5.0/52, Ms7 4.7/44*
*NEIC **08** 10:51:17.5±0.1, 31°.82N×104°.24E, h10km, mb5.1/93, Error ellipse: s-maj=4.4km s-min=3.1km az=198.0*
*MOS **08** 10:51:18.9±0.8, 31°.89N×104°.39E, h33km, mb5.1/73, MS4.5/40, Error ellipse: s-maj=6.7km s-min=4.1km az=118.8*
*GCMT **08** 10:51:18.5±0.3, 31°.85N×104°.33E, h22km±1km, MW4.8, Moment Tensor Solution. s14,c16; s65,c88; Moment tensor: Scale 10^{16}Nm; M_{rr}0.87±.13; $M_{\theta\theta}$-0.66±.10; $M_{\phi\phi}$-0.20±.09; $M_{r\theta}$0.53±.12; $M_{r\phi}$1.72±.07; $M_{\theta\phi}$0.66±.12; Best double couple: $M_0$2.10000×10^{16} NP1:$\phi_0$93.00000°, δ64.00000°, λ28.00000°. NP2:$\phi_0$349.00000°, δ65.00000°, λ151.00000°. Principal axes: T 1.9600, Plg38.0000°, Azm311.0000°; N 0.2100, Plg52.0000°, Azm132.0000°; P -2.1700, Plg1.0000°, Azm41.0000°; Data Used: IU II IC G CN.*
*TEH **08** 10:51:19.0, 31°.95N×104°.30E, h10km*
*SZGRF **08** 10:51:20.7, 31°.34N×104°.10E, h33km, mb5.3, MS5.0, Sichuan, China*
*DJA **08** 10:51:27, 31°.93N×104°.21E, h71km, Mw5.4/14*
ISC 08 10:51:17.6±0.7, 31°.88N±0°.02×104°.34E±0°.02, h9km±4km, h12km±1.8km: pP-P, n465, σ1°.00/488, mb5.0/153, MS4.5/53, 42C-20D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.09**	**207**	⇑*i*Pg	**Pg**	**10 51 36.8**	**-1.8**
CD2				Sg	**Sg**	**10 51 52.5**	**-0.2**
CD2				smax			
	comp=N,52μm,0.6s						
CD2				smax			
	comp=E,75μm,0.8s						
LZH	**Lanzhou**	**4.21**	**355**	*e*Pn	**Pn**	**10 52 24.9**	**+2.9**
LZH				Pg	**Pg**	**10 52 35.8**	**-2.6**
LZH				Sn	**Sn**	**10 53 10.4**	**-0.9**
LZH				Sg	**Sg**	**10 53 26.7**	**-6.3**
LZH				smax			
	comp=N,8μm,1.4s						
LZH				smax			
	comp=E,8μm,1.4s						
LZH				LR	LR		
	comp=E,27μm,6.4s						
LZH				LR	LR		
	comp=Z,27μm,7.6s						
XAN	**Xi'an**	**4.41**	**60**	Pn	**Pn**	**10 52 24.3**	**-0.4**
XAN				Sn	**Sn**	**10 53 10.6**	**-5.5**
XAN				Sg	**Sg**	**10 53 30.9**	**-8.4**
XAN				smax			
	comp=N,4μm,1.1s						
XAN				smax			
	comp=E,1μm,1.0s						
XAN				LR	LR		
	comp=N,8μm,11.1s						
XAN				LR	LR		
	comp=E,2μm,10.4s						
XAN				LR	LR		
	comp=Z,4μm,9.5s						
ENH	**Enshi**	**4.70**	**109**	*e*Pn	**Pn**	**10 52 29.4**	**+0.8**
ENH				*e*Sg	**Sg**	**10 53 47.0**	**-1.5**
GYA	**Guiyang**	**5.77**	**159**	Pn	**Pn**	**10 52 43.9**	**+0.5**
GYA				Sn	**Sn**	**10 53 47.9**	**-1.9**
GYA				smax			
	comp=N,3μm,1.1s						
GYA				smax			
	comp=E,3μm,1.1s						
GYA				LR	LR		
	comp=N,14μm,5.0s						
GYA				LR	LR		
	comp=E,16μm,5.4s						
GYA				LR	LR		
	comp=Z,14μm,5.2s						
KMI	**Kunming**	**6.88**	**192**	Pn	**Pn**	**10 53 00.8**	**+2.2**
GTA	**Gaotai**	**8.37**	**335**	⇑P	**Pn**	**10 53 19.6**	**+0.6**
GTA				pP		10 53 23.0	
GTA				sP		10 53 26.0	
GTA				S	**Sn**	**10 54 54.0**	**+0.5**
GTA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,130nm,4.8s						
GTA				LR	LR		
	comp=N,6μm,12.5s						
GTA				LR	LR		
	comp=E,8μm,12.3s						
GTA				LR	LR		
	comp=Z,6μm,9.8s						
WHN	**Wuhan**	**8.68**	**96**	⇓P	**Pn**	**10 53 22.4**	**-0.9**
WHN				S	**Sn**	**10 54 53.9**	**-7.3**
WHN				LR	LR		
	comp=N,28μm,5.9s						
WHN				LR	LR		
	comp=E,18μm,5.0s						
WHN				LR	LR		
	comp=Z,22μm,5.7s						
BTO	**Baotou**	**9.84**	**26**	*e*P	**Pn**	**10 53 36.9**	**-2.2**
BTO				S	**Sn**	**10 55 22.1**	**-7.5**
BTO				LR	LR		
	comp=N,2μm,9.6s						
BTO				LR	LR		
	comp=E,1μm,4.9s						
HHC	**Hu-ho-hao-te**	**10.67**	**31**	*e*P	**Pn**	**10 53 53.2**	**+2.6**
HHC				pP		10 53 56.4	
HHC				sP		10 53 59.3	
HHC				PP		10 54 01.7	
HHC				S	**Sn**	**10 55 54.2**	**+4.1**
HHC				sS		10 55 57.8	
HHC				SS		10 56 06.8	
HHC				pmax	pmax		
	comp=Z,16nm,0.9s						
HHC				pmax	pmax		
	comp=Z,150nm,5.9s						
HHC				LR	LR		
	comp=N,4μm,6.8s						
HHC				LR	LR		
	comp=E,4μm,6.4s						
HHC				LR	LR		
	comp=Z,3μm,8.0s						
LSA	**Lhasa**	**11.55**	**263**	*e*P	**Pn**	**10 54 05.5**	**+2.8**
LSA				pmax	pmax		
	comp=Z,23nm,0.6s						
LSA	**Lhasa**	**11.55**	**263**	*e*Pn	**Pn**	**10 54 05.5**	**+2.8**
	comp=Z,23nm,0.6s						
GZH	**Guangzhou**	**11.85**	**135**	P	**Pn**	**10 54 00.6**	**-6.2**
GZH				S	**Sn**	**10 56 07.4**	**-12**
GZH				LR	LR		
	comp=N,5μm,10.6s						
GZH				LR	LR		
	comp=E,5μm,9.7s						
GZH				LR	LR		
	comp=Z,10μm,10.2s						
NJ2	**Nanjing**	**12.33**	**85**	*e*P	**Pn**	**10 54 11.9**	**-1.4**
NJ2				pP		10 54 14.7	
NJ2				sP		10 54 17.1	
NJ2				PP		10 54 20.4	
NJ2				S	**Sn**	**10 56 28.4**	**-2.4**
NJ2				pmax	pmax		
	comp=Z,40nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,160nm,5.6s						
NJ2				LR	LR		
	comp=N,3μm,11.9s						
NJ2				LR	LR		
	comp=E,5μm,11.5s						
NJ2				LR	LR		
	comp=Z,7μm,11.2s						
BJT	**Baijiatuau**	**12.55**	**46**	*e*P	**Pn**	**10 54 16.9**	**+0.6**
BJI	**Beijing**	**12.57**	**46**	P	**Pn**	**10 54 17.4**	**+0.9**
BJI				pmax	pmax		
	comp=Z,12nm,0.6s						
BJI				LR	LR		
	comp=N,2μm,10.9s						
BJI				LR	LR		
	comp=E,1μm,11.5s						
BJI				LR	LR		
	comp=Z,640nm,19.1s						
SHL	**Shillong**	**12.61**	**243**	⇓*i*P	**Pn**	**10 54 16.5**	**-0.6**
SHL				*e*S	Sx	10 58 04.5	
QIZ	**Qiongzhong**	**13.72**	**158**	P	**Pn**	**10 54 34.5

SONM	**Songino Array**	**16.01**	**5**	Pn	**Pn**	**10 55 03.5**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=186,slow=14,SNR=31						
SONM				Lq		10 59 45.1	
	comp=Z,0.3nm,0.3s,baz=204,slow=28,SNR=3.0						
SONM				LR	LR	11 01 53.2	
	comp=Z,993nm,19.4s,baz=202,slow=40						
ULN	**Ulaanbaatar**	**16.10**	**7**	*e*P	**Pn**	**10 55 04.6**	**+0.6**
ULN				pmax	pmax		
	comp=Z,41nm,1.1s						
ULN	**Ulaanbaatar**	**16.10**	**7**	*e*P	**Pn**	**10 55 04.6**	**+0.6**
	comp=Z,41nm,1.1s						
ULN	**Ulaanbaatar**	**16.10**	**7**	Pn	**Pn**	**10 55 06.8**	**+2.9**
	SNR=19						
ULN				Pn	**Pn**	**10 55 06.8**	**+2.9**
	SNR=19						
RAMN	**Ramite**	**16.22**	**257**	*e*P	**Pn**	**10 55 02.7**	**-3.0**
	comp=Z,91nm,0.9s						
JIRN	**Jiri**	**16.31**	**260**	*e*P	**Pn**	**10 55 04.2**	**-2.7**
	comp=Z,132nm,1.2s						
GUN	**Gumba**	**16.49**	**261**	*e*P	**Pn**	**10 55 06.4**	**-2.8**
	comp=Z,382nm,1.1s						
TATO	**Taipei**	**16.57**	**110**	*e*P	**Pn**	**10 55 12.2**	**+2.1**
	comp=Z,366nm,1.8s						
NST	**Nakhon Sawan**	**16.59**	**194**	P	**Pn**	**10 55 05.0**	**-5.4**
YHNB	**Yeheng**	**16.63**	**111**	*e*P	**Pn**	**10 55 10.5**	**-0.4**
	comp=Z,235nm,1.5s						
SSLB	**Suanglung**	**16.75**	**115**	*e*P	**Pn**	**10 55 13.5**	**+1.0**
	comp=Z,221nm,1.4s						
TPUB	**Ta-pu**	**16.77**	**117**	*e*P	**Pn**	**10 55 13.6**	**+1.0**
	comp=Z,174nm,1.6s						
PKI	**Pulchoki**	**16.99**	**260**	*e*P	**Pn**	**10 55 12.6**	**-2.9**
	comp=Z,448nm,1.2s						
PKI	**Pulchoki**	**16.99**	**260**	*e*P	**Pn**	**10 55 12.7**	**-2.8**
PKI				pmax	pmax		
	comp=Z,147nm,0.7s						
PKI	**Pulchoki**	**16.99**	**260**	*e*P	**Pn**	**10 55 12.7**	**-2.8**
	comp=Z,147nm,0.7s						
PKIN	**Phulchoki**	**17.00**	**260**	*e*P	**Pn**	**10 55 12.7**	**-2.9**
	comp=Z,147nm,0.7s						
KKN	**Kakani**	**17.03**	**261**	*e*P	**Pn**	**10 55 12.8**	**-3.2**
	comp=Z,122nm,0.9s						
KKN	**Kakani**	**17.03**	**261**	*e*P	**Pn**	**10 55 12.8**	**-3.2**
KKN				pmax	pmax		
	comp=Z,122nm,0.9s						
NACB	**Ninganchiao**	**17.05**	**112**	*e*P	**Pn**	**10 55 17.4**	**+1.2**
	comp=Z,249nm,1.5s						
YULB	**Yu-li**	**17.23**	**115**	*e*P	**Pn**	**10 55 20.4**	**+1.9**
	comp=Z,118nm,1.6s						
DMN	**Daman**	**17.23**	**261**	*e*P	**Pn**	**10 55 15.6**	**-3.0**
	comp=Z,208nm,0.9s						
TWG	**Pinlang**	**17.37**	**117**	*e*P	**Pn**	**10 55 22.4**	**+2.2**
	comp=Z,354nm,1.7s						
WMQ	**Urumqi**	**17.70**	**317**	P	**Pn**	**10 55 24.5**	**+0.2**
WMQ				sP	sP	10 55 31.5	+2.4
WMQ				PP		10 55 39.5	
WMQ				S	**Sn**	**10 58 39.5**	**-2.0**
WMQ				SS		10 59 01.5	
WMQ				pmax	pmax		
	comp=Z,45nm,0.8s						
WMQ				LR	LR		
	comp=N,770nm,6.0s						
WMQ				LR	LR		
	comp=E,810nm,6.0s						
WMQ				LR	LR		
	comp=Z,1μm,6.0s						
SNY	**Shenyang**	**18.28**	**52**	⇓P	**Pn**	**10 55 30.9**	**-0.5**
SNY				S	**Sn**	**10 58 55.6**	**+0.1**
SNY				pmax	pmax		
	comp=Z,14nm,1.4s						
SNY				LR	LR		
	comp=N,400nm,22.8s						
SNY				LR	LR		
	comp=E,1μm,16.5s						
SNY				LR	LR		
	comp=Z,1μm,14.4s						
ZAK	**Zakamensk**	**18.50**	**358**	*e*P	**Pn**	**10 55 34.4**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
INCN	**Inchon**	**19.15**	**67**	*e*P	**Pn**	**10 55 41.6**	**-0.4**
	comp=Z,46nm,1.0s						
TLY	**Talaya**	**19.79**	**359**	Pn	**Pn**	**10 55 50.8**	**+1.3**
	comp=Z,94nm,1.2s,SNR=5.1						
TLY	**Talaya**	**19.79**	**359**	*e*P	**Pn**	**10 55 49.6**	**+0.1**
TLY				pmax	pmax		
	comp=Z,22nm,1.1s						
TLY				MLR	MLR		
	comp=Z,426nm,10.0s						
TLY	**Talaya**	**19.79**	**359**	*e*P	**Pn**	**10 55 50.3**	**+0.8**
	comp=Z,122nm,2.2s						
TLY	**Talaya**	**19.79**	**359**	P	**Pn**	**10 55 50.8**	**+1.3**
	SNR=16						
TLY				P		10 55 50.8	
	SNR=16						
MOY	**Mondy**	**19.92**	**354**	*e*P	**Pn**	**10 55 56.8**	**+5.7**
MOY				pmax	pmax		
	comp=Z,42nm,1.8s						
KSRS	**Korea Array**	**20.16**	**68**	P	**P**	**10 55 52.1**	**0.0**
	comp=Z,30nm,0.9s,baz=256,slow=10,SNR=118						
KSRS				LR	LR	11 05 05.0	
	comp=Z,539nm,18.5s,MS3.9,baz=261,slow=41						
KSRS	**Korea Array**	**20.16**	**68**	P	**P**	**10 55 52.1**	**0.0**
KSRS				pmax	pmax		
	comp=Z,30nm,0.9s						
KSRS				MLR	MLR		
	comp=Z,539nm,18.5s,MS3.9						
IRK	**Irkutsk**	**20.35**	**360**	*e*P	**P**	**10 55 55.6**	**+1.6**
IRK				pmax	pmax		
	comp=Z,124nm,1.3s						
CN2	**Changchun**	**20.42**	**48**	*e*P	**P**	**10 55 55.7**	**+0.8**
CN2				*ep*P		10 55 59.9	
CN2				*es*P	sP	10 56 02.8	+4.0
CN2				*e*S	**S**	**10 59 47.2**	**+3.7**
CN2				pmax	pmax		
	comp=Z,60nm,1.2s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,900nm,20.0s,MS4.2						
CN2				LR	LR		
	comp=E,600nm,20.0s,MS4.2						
CN2				LR	LR		
	comp=Z,800nm,21.0s,MS4.1						
HIA	**Hailar**	**20.87**	**29**	*e*P	**P**	**10 56 00.5**	**+0.8**
HIA				pmax	pmax		
	comp=Z,28nm,0.9s						
HIA	**Hailar**	**20.87**	**29**	*e*P	**P**	**10 56 00.5**	**+0.8**
	comp=Z,28nm,0.9s						
CIT	**Chita**	**21.23**	**16**	*e*P	**P**	**10 56 03.7**	**+0.2**
CIT				*e*		10 56 13.1	
MK31	**Makanchi Array**	**22.53**	**318**	*e*P	**P**	**10 56 17.7**	**+0.1**
MKAR	**Makanchi Array**	**22.53**	**318**	P	**P**	**10 56 17.9**	**+0.4**
	comp=Z,43nm,0.8s,mb5.0,baz=102,slow=13,SNR=191						
MKAR				ScP	ScP	11 03 47.7	-1.1
	comp=Z,1.5nm,0.9s,baz=80,slow=3.4,SNR=5.7						
MKAR				LR	LR	11 06 04.3	
	comp=Z,2μm,18.8s,MS4.5,baz=113,slow=39						
DDI	**Dehra Dun**	**22.55**	**273**	*e*PKP	**P**	**10 56 15.4**	**-2.5**
DDI				*ex*	x	11 00 31.5	
MDJ	**Mudanjiang**	**23.45**	**50**	P	**P**	**10 56 27.5**	**+0.2**
MDJ				pP		10 56 30.7	
MDJ				sP	sP	10 56 31.9	+0.7
MDJ				S	**S**	**11 00 42.5**	**+2.1**
MDJ				PcS	PcS	11 03 48.0	-4.3
MDJ				ScS	ScS	11 07 34.9	-2.7
MDJ				pmax	pmax		
	comp=Z,47nm,1.6s,mb4.7						
MDJ				pmax	pmax		
	comp=Z,170nm,3.9s						
MDJ				LR	LR		
	comp=N,580nm,10.0s,MS4.4						
MDJ				LR	LR		
	comp=E,520nm,15.0s,MS4.4						
MDJ				LR	LR		
	comp=Z,900nm,13.0s,MS4.4						
MDJ	**Mudanjiang**	**23.45**	**50**	*e*P	**P**	**10 56 27.6**	**+0.4**
	comp=Z,210nm,1.8s,mb5.3						
KSH	**Kashi**	**24.20**	**296**	⇑*i*P	**P**	**10 56 38.0**	**+3.7**
KSH				pP		10 56 42.3	
KSH				sP	sP	10 56 45.1	+6.7
KSH				PP		10 57 13.5	
KSH				PcP	PcP	11 00 18.5	+3.7
KSH				S	**S**	**11 00 54.0**	**+1.4**
KSH				sS	sS	11 01 01.3	+4.0
KSH				SS		11 01 48.4	
KSH				ScP	ScP	11 03 55.1	+1.6
KSH				PcS	PcS	11 03 57.0	+2.5
KSH				ScS	ScS	11 07 41.4	+0.7
KSH				pmax	pmax		
	comp=Z,35nm,0.8s,mb4.8						
KSH				pmax	pmax		
	comp=Z,290nm,3.1s						
KSH				LR	LR		
	comp=N,1μm,10.0s						
KSH				LR	LR		
	comp=E,720nm,9.3s						
KSH				LR	LR		
	comp=Z,1μm,9.1s						
VLA	**Vladivostok**	**24.46**	**55**	*e*P	**P**	**10 56 35.8**	**-0.9**
VLA				*e*S	**S**	**11 00 54.9**	**-1.9**
VLA				pmax	pmax		
	comp=Z,56nm,1.7s,mb4.7						
VLA				MLR	MLR		
	comp=Z,900nm,15.3s,MS4.4						
ULHL	**Ulahol**	**24.59**	**303**	P	**P**	**10 56 39.4**	**+1.5**
	SNR=9.8						
TKM2	**Tokmak 2**	**25.24**	**304**	P	**P**	**10 56 44.9**	**+1.2**
	SNR=31						
TKM2	**Tokmak 2**	**25.24**	**304**	*e*P	**P**	**10 56 45.1**	**+1.4**
TKM2				pmax	pmax		
	comp=Z,23nm,0.8s,mb4.8						
TKM2	**Tokmak 2**	**25.24**	**304**	*e*P	**P**	**10 56 45.1**	**+1.4**
	comp=Z,23nm,0.8s,mb4.8						
KZA	**Kyzart**	**25.26**	**302**	P	**P**	**10 56 46.1**	**+2.1**
	SNR=66						
KBK	**Karagaybulak**	**25.62**	**303**	P	**P**	**10 56 48.9**	**+1.6**
	SNR=47						
UCH	**Uchtor**	**25.83**	**302**	P	**P**	**10 56 51.3**	**+2.1**
	SNR=99						
UCH	**Uchtor**	**25.83**	**302**	*e*P	**P**	**10 56 51.2**	**+2.1**
	comp=Z,115nm,1.1s,mb5.3						
CHMS	**Chumysh**	**25.85**	**304**	P	**P**	**10 56 52.7**	**+3.4**
	SNR=7.1						
FRU	**Bishkek**	**25.91**	**303**	*e*P	**P**	**10 56 50.0**	**+0.2**
FRU				*e*		10 57 24.0	
FRU				pmax	pmax		
	comp=Z,80nm,1.6s,mb5.0						
AAK	**Ala-Archa**	**25.94**	**303**	P	**P**	**10 56 51.9**	**+1.7**
	SNR=8.4						
AAK	**Ala-Archa**	**25.94**	**303**	P	**P**	**10 56 51.8**	**+1.7**
	comp=Z,7.7nm,0.6s,mb4.4,baz=100,slow=4.9,SNR=18						
AAK				LR	LR	11 08 53.0	
	comp=Z,1μm,20.3s,MS4.4,baz=95,slow=41						
AAK	**Ala-Archa**	**25.94**	**303**	*c i*P	**P**	**10 56 52.2**	**+2.0**
AAK				pmax	pmax		
	comp=Z,26nm,1.7s,mb4.5						
AAK				MLR	MLR		
	comp=Z,623nm,21.0s,MS4.1						
AAK	**Ala-Archa**	**25.94**	**303**	*e*P	**P**	**10 56 51.9**	**+1.7**
	comp=Z,26nm,1.0s,mb4.7						
AAK	**Ala-Archa**	**25.94**	**303**	P	**P**	**10 56 52.1**	**+2.0**
	SNR=19						
AAK				P		10 56 52.1	
	SNR=19						
USP	**Ospenovka**	**26.10**	**304**	P	**P**	**10 56 52.9**	**+1.3**
	SNR=40						
ZAA0	**Zalesovo Array**	**26.11**	**333**	*e*P	**P**	**10 56 51.3**	**-0.3**
ZALV	**Zalesovo Beam**	**26.11**	**333**	P	**P**	**10 56 51.5**	**0.0**
	comp=Z,25nm,0.8s,mb4.8,baz=133,slow=9.7,SNR=88						
ZALV				LR	LR	11 06 45.3	
	comp=Z,432nm,19.0s,MS4.0,baz=308,slow=36						
ZALV	**Zalesovo Beam**	**26.11**	**333**	P	**P**	**10 56 51.6**	**0.0**
ZALV				pmax	pmax		
	comp=Z,25nm,0.8s,mb4.8						
ZALV				MLR	MLR		
	comp=Z,432nm,19.0s,MS4.0						
AML	**Almayashu**	**26.40**	**301**	P	**P**	**10 56 56.7**	**+2.4**
	SNR=6.4						
AML	**Almayashu**	**26.40**	**301**	*e*P	**P**	**10 56 56.4**	**+2.1**
	comp=Z,23nm,0.8s,mb4.8						
EKS2	**Erkin-Say**	**26.46**	**303**	P	**P**	**10 56 56.5**	**+1.6**
	SNR=9.4						
EKS2	**Erkin-Say**	**26.46**	**303**	*e*P	**P**	**10 56 55.8**	**+0.9**
	comp=Z,22nm,1.1s,mb4.6						
KURK	**Kurchatov**	**26.75**	**322**	P	**P**	**10 56 57.3**	**-0.1**
	comp=Z,245nm,0.9s,mb5.7,SNR=36						
KURK	**Kurchatov**	**26.75**	**322**	P	**P**	**10 56 57.5**	**+0.2**
	comp=Z,33nm,0.8s,mb4.9,baz=129,slow=8.6,SNR=66						
KURK				LR	LR	11 08 41.0	
	comp=Z,474nm,19.6s,MS4.0,baz=125,slow=39						
KURK	**Kurchatov**	**26.75**	**322**	P	**P**	**10 56 57.5**	**+0.1**
KURK				pmax	pmax		
	comp=Z,33nm,0.8s,mb4.9						
KURK				MLR	MLR		
	comp=Z,474nm,19.6s,MS4.0						
KURK	**Kurchatov**	**26.75**	**322**	*e*P	**P**	**10 56 57.5**	**+0.1**
	comp=Z,40nm,0.9s,mb4.9						
KURK	**Kurchatov**	**26.75**	**322**	P	**P**	**10 56 58.0**	**+0.6**
	SNR=30						
KURK				P		10 56 58.0	
	SNR=30						
KLR	**Kul'dur**	**26.87**	**42**	*e*P	**P**	**10 56 54.3**	**-4.2**
KLR				*e*S	**S**	**11 01 31.5**	**-3.5**
KLR				pmax	pmax		
	comp=E,45nm,1.6s						
KLR				pmax	pmax		
	comp=Z,40nm,1.6s,mb4.7						
KLR				MLR	MLR		
	comp=E,2μm,11.0s						
KLR				MLR	MLR		
	comp=Z,4μm,11.0s,MS5.2						
NVS	**Novosibirsk**	**27.40**	**333**	⇑*i*P	**P**	**10 57 02.5**	**-0.6**
NVS				*e*		10 57 59.1	
NVS				*e*S	**S**	**11 01 40.7**	**-2.4**
NVS				pmax	pmax		
	comp=N,64nm,1.7s						
NVS				pmax	pmax		
	comp=Z,53nm,1.7s,mb4.8						
NVS				pmax	pmax		
	comp=E,36nm,1.8s						
NVS				smax			
	comp=N,24nm,1.9s						
NVS				smax			
	comp=E,23nm,2.3s						
HYB	**Hyderabad**	**27.42**	**244**	*e*P	**P**	**10 57 02.0**	**-1.7**
HYB	**Hyderabad**	**27.42**	**244**	*i* P	**P**	**10 57 02.0**	**-1.7**
KKM	**Kota Kinabalu**	**28.00**	**154**	*e*P	**P**	**10 57 08.5**	**-0.4**
	comp=E,28nm,1.2s,mb4.8						
MAJO	**Matsushiro**	**28.30**	**71**	*e*P	**P**	**10 57 11.3**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.3						
MAJO	**Matsushiro**	**28.30**	**71**	*e*P	**P**	**10 57 11.3**	**-0.1**
	comp=Z,5.2nm,0.6s,mb4.3						
MAT	**Matsushiro**	**28.30**	**71**	P	**P**	**10 57 09.5**	**-1.9**
MAT				S	**S**	**11 02 11.0**	**+13**
MJAR	**Matsushiro Arr**	**28.30**	**71**	P	**P**	**10 57 10.2**	**-1.3**
	comp=Z,2.5nm,0.8s,mb3.9,baz=272,slow=10.0,SNR=14						
MJAR				PcP	PcP	11 00 24.6	+0.2
	comp=Z,0.6nm,0.6s,baz=247,slow=1.3,SNR=4.0						
MJAR				LR	LR	11 08 46.3	
	comp=Z,209nm,19.8s,MS3.7,baz=265,slow=37						
MJAR	**Matsushiro Arr**	**28.30**	**71**	P	**P**	**10 57 10.2**	**-1.2**
MJAR						11 00 24.6	
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MJAR				MLR	MLR		
	comp=Z,209nm,19.8s						
HABR	**Khabarovsk**	**28.47**	**45**	*e*P	**P**	**10 57 11.4**	**-1.4**
HABR				*e**PP	pP	10 57 21.0	+5.3
HABR				*e*		10 58 02.1	
HABR				*e*PPP		10 58 10.5	
HABR				*e*		11 00 22.5	
HABR				*e*S	**S**	**11 01 57.9**	**-2.3**
HABR				*e**SS	sS	11 02 14.0	+9.1
HABR				*e*SSS		11 03 34.0	
HABR				pmax	pmax		
	comp=E,27nm,1.6s						
HABR				pmax	pmax		
	comp=Z,30nm,1.8s,mb4.6						
HABR				pmax	pmax		
	comp=N,6.0nm,0.9s						
HABR				MLR	MLR		
	comp=Z,732nm,10.0s,MS4.6						
KBL	**Kabul**	**29.56**	**285**	*e*P	**P**	**10 57 24.3**	**+1.6**
KBL				pmax	pmax		
	comp=Z,51nm,1.3s,mb5.1						
KBL	**Kabul**	**29.56**	**285**	*e*P	**P**	**10 57 24.3**	**+1.6**
	comp=Z,51nm,1.3s,mb5.1						
JHJ	**Hachijo jima 2**	**29.83**	**78**	LR	LR	11 11 03.0	
	comp=Z,427nm,18.5s,MS4.1,baz=302,slow=40						
DAV	**Davao City (W)**	**31.65**	**137**	LR	LR	11 12 15.4	
	comp=Z,466nm,18.2s,MS4.2,baz=328,slow=40						
ASAJ	**Asahikawa**	**32.24**	**57**	P	**P**	**10 57 45.0**	**-1.2**
	comp=Z,4.0nm,0.8s,mb4.3,baz=281,slow=10,SNR=3.9						
ASAJ	**Asahikawa**	**32.24**	**57**	P	**P**	**10 57 45.1**	**-1.1**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BVAR	**Borovoye Array**	**32.31**	**321**	P	**P**	**10 57 47.1**	**+0.5**
	comp=Z,7.2nm,0.8s,mb4.6,baz=115,slow=10.0,SNR=38						
BVAR				PcP	PcP	11 00 34.8	+0.3
	comp=Z,1.7nm,0.7s,baz=139,slow=5.5,SNR=3.4						
BVAR	**Borovoye Array**	**32.31**	**321**	P	**P**	**10 57 47.1**	**+0.4**
BVAR						11 00 34.8	
BVAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BRVK	**Borovoye**	**32.38**	**321**	P	**P**	**10 57 48.8**	**+1.5**
	comp=Z,113nm,0.8s,mb5.8,SNR=7.0						
BRVK	**Borovoye**	**32.38**	**321**	*c i*P	**P**	**10 57 47.7**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,34nm,1.7s,mb4.9						
BRVK				MLR	MLR		
	comp=Z,465nm,15.0s,MS4.3						
BRVK	**Borovoye**	**32.38**	**321**	*e*P	**P**	**10 57 48.0**	**+0.6**
	comp=Z,15nm,0.8s,mb4.9						
BRVK	**Borovoye**	**32.38**	**321**	P	**P**	**10 57 48.3**	**+1.0**
	SNR=11						
BRVK				P		10 57 48.3	
	SNR=11						
YSS	**Yuzh-Sakhalins**	**32.91**	**52**	⇑*e*P	**P**	**10 57 51.2**	**-0.8**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
YSS				MLR	MLR		
	comp=Z,500nm,17.0s,MS4.3						
YSS	**Yuzh-Sakhalins**	**32.91**	**52**	*e*P	**P**	**10 57 51.5**	**-0.5**
	comp=Z,30nm,1.3s,mb5.1						
CBIJ	**Chichi jima**	**33.17**	**88**	P	**P**	**10 57 54.5**	**-0.1**
	comp=Z,22nm,0.8s,mb5.2,baz=318,slow=18,SNR=4.7						
YAK	**Yakutsk**	**34.31**	**21**	*e*P	**P**	**10 58 00.9**	**-3.1**
YAK				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.0						
YAK				MLR	MLR		
	comp=Z,409nm,13.0s,MS4.3						
YAK	**Yakutsk**	**34.31**	**21**	*e*P	**P**	**10 58 03.9**	**0.0**
	comp=Z,28nm,0.9s,mb5.2						
IMYA	**Miami**	**36.66**	**289**	*e*P	**P**	**10 58 26.8**	**+2.3**
ISRO	**Mashad**	**37.17**	**289**	*e*P	**P**	**10 58 31.1**	**+2.2**
IMOG	**Moghan**	**37.30**	**289**	*e*P	**P**	**10 58 30.7**	**+0.7**
ABKAR	**Akbulak array**	**37.31**	**311**	*e*P	**P**	**10 58 30.0**	**+0.1**
	comp=Z,10.0nm,0.7s,mb4.8						
IDAH	**Dahanechah**	**37.39**	**284**	*e*P	**P**	**10 58 31.0**	**+0.2**
IKRD	**Kardeh**	**37.88**	**290**	*e*P	**P**	**10 58 30.7**	**-4.2**
ABKT	**Ailbek**	**38.08**	**292**	P	**P**	**10 58 38.0**	**+1.4**
	comp=Z,321nm,0.8s,SNR=22						
ISFR	**Sfrayin**	**38.26**	**291**	*e*P	**P**	**10 58 40.1**	**+2.0**
AKTK	**Aktyubinsk**	**38.76**	**312**	P	**P**	**10 58 42.5**	**+0.4**
AKTO	**Aktyubinsk**	**38.76**	**312**	P	**P**	**10 58 42.5**	**+0.4**
	comp=Z,7.8nm,0.7s,mb4.6,baz=95,slow=9.1,SNR=16						
AKTO	**Aktyubinsk**	**38.76**	**312**	P	**P**	**10 58 42.5**	**+0.4**
AKTO				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.6						
SVE	**Sverdlovsk**	**39.00**	**323**	⇑*e*P	**P**	**10 58 44.7**	**+0.7**
SVE				pmax	pmax		
	comp=Z,80nm,1.1s,mb5.4						
ARU	**Arti**	**39.95**	**322**	P	**P**	**10 58 52.7**	**+0.8**
	comp=Z,591nm,0.8s,SNR=26						
ARU	**Arti**	**39.95**	**322**	*c i*P	**P**	**10 58 52.1**	**+0.2**
ARU				*e*		11 00 23.9	
ARU				*e*PPP		11 00 48.0	
ARU				*e*		11 00 56.0	
ARU				S	**S**	**11 04 57.3**	**+0.4**
ARU				SS	SS	11 07 49.6	-3.8
ARU				pmax	pmax		
	comp=Z,110nm,1.0s,mb5.5						
ARU				MLR	MLR		
	comp=Z,369nm,16.0s,MS4.3						
ARU	**Arti**	**39.95**	**322**	*e*P	**P**	**10 58 52.2**	**+0.3**
	comp=Z,132nm,1.1s,mb5.6						
IBAF	**Bafgh**	**41.20**	**283**	*e*P	**P**	**10 59 03.0**	**+0.4**
SOKR	**Solikamsk**	**41.87**	**326**	*c i*P	**P**	**10 59 08.1**	**+0.4**
SOKR				pmax	pmax		
	comp=Z,80nm,1.1s,mb5.3						
SOKR				MLR	MLR		
	comp=Z,540nm,16.0s,MS4.5						
TIXI	**Tiksi**	**41.95**	**11**	*e*P	**P**	**10 59 07.3**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.2						
TIXI	**Tiksi**	**41.95**	**11**	*e*P	**P**	**10 59 07.3**	**-1.0**
	comp=Z,5.1nm,0.8s,mb4.2						
IMEH	**Mehriz**	**42.04**	**283**	*e*P	**P**	**10 59 09.4**	**-0.1**
BSY	**Bisya**	**42.59**	**270**	P	**P**	**10 59 15.3**	**+1.2**
	SNR=7.0						
IDMV	**Damavand**	**43.24**	**290**	*e*P	**P**	**10 59 20.6**	**+1.3**
SEY	**Seymchan**	**43.31**	**30**	⇓*e*P	**P**	**10 59 20.5**	**+1.1**
PETK	**Petropavlovsk-**	**43.49**	**45**	P	**P**	**10 59 21.0**	**0.0**
	comp=Z,15nm,1.1s,mb4.6,baz=275,slow=1.8,SNR=7.8						
PETK				LR	LR	11 19 29.4	
	comp=Z,365nm,18.6s,MS4.3,baz=252,slow=39						
PETK	**Petropavlovsk-**	**43.49**	**45**	P	**P**	**10 59 21.0**	**0.0**
PETK				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.6						
PETK				MLR	MLR		
	comp=Z,365nm,18.6s,MS4.3						
PETK	**Petropavlovsk-**	**43.49**	**45**	P	**P**	**10 59 21.0**	**0.0**
PETK				LR	LR	11 19 29.4	
IVRN	**Varamin**	**43.60**	**289**	*e*P	**P**	**10 59 22.5**	**+0.3**
IR3	**Iran Long-Peri**	**44.07**	**290**	*e*P	**P**	**10 59 26.2**	**+0.3**
GNI	**Garni**	**48.12**	**297**	P	**P**	**10 59 59.0**	**+1.2**
	comp=Z,2.6nm,0.3s,mb4.7,baz=60,slow=16,SNR=6.5						
GNI	**Garni**	**48.12**	**297**	*c i*P	**P**	**10 59 59.1**	**+1.3**
GNI				pmax	pmax		
	comp=Z,48nm,1.7s						
GNI				MLR	MLR		
	comp=Z,297nm,18.0s						
GNI	**Garni**	**48.12**	**297**	*e*P	**P**	**10 59 59.0**	**+1.2**
	comp=Z,28nm,1.1s,mb5.2						
GNI	**Garni**	**48.12**	**297**	P	**P**	**10 59 59.5**	**+1.7**
	SNR=7.5						
GNI				P		10 59 59.5	
	SNR=7.5						
MIB	**Mutribah**	**48.50**	**283**	*e*P	**P**	**11 00 00.7**	**-0.2**
MIB				AMb	AMB	11 00 04.3	
	comp=Z,88nm,1.2s,mb5.7						
RDF	**Al-Radifah**	**48.60**	**282**	*e*P	**P**	**11 00 01.9**	**+0.3**
RDF				AMb	AMB	11 00 05.7	
	comp=Z,142nm,1.1s,mb5.9						
NAY	**Al-Naaiem**	**48.75**	**283**	*e*P	**P**	**11 00 02.3**	**-0.5**
NAY				AMb	AMB	11 00 06.2	
	comp=Z,60nm,1.0s,mb5.6						
KIV	**Kislovodsk**	**49.06**	**303**	P	**P**	**11 00 06.2**	**+1.2**
	comp=Z,205nm,1.1s,SNR=6.6						
KIV	**Kislovodsk**	**49.06**	**303**	*e*P	**P**	**11 00 05.5**	**+0.5**
KIV				*e*S	**S**	**11 07 08.4**	**-1.3**
KIV				pmax	pmax		
	comp=Z,43nm,1.1s,mb5.4						
KIV	

comp=E,20nm,1.3s
VSR MLR MLR
comp=Z,250nm,10.0s,MS4.5
VSR MLR MLR
comp=N,460nm,15.0s,MS4.7
VSR MLR MLR
comp=E,240nm,11.0s,MS4.7
SOC Sochi 51.24 303 *e*P **P** **11 00 19.5 -2.0**
SOC *e*S **S** **11 07 34.4 -5.8**
SOC *e*SS SS 11 11 14.9 -0.4
SOC pmax pmax
comp=Z,72nm,1.4s,mb5.4
SOC MLR MLR
comp=Z,479nm,18.0s,MS4.6
MOS Moscow 51.42 318 *e*P **P** **11 00 21.9 -0.7**
MOS *e* 11 02 20.1
MOS *e*PPP 11 03 20.1
MOS pmax pmax
comp=Z,200nm,1.4s,mb5.8
MOS pmax pmax
comp=Z,124nm,1.2s,mb5.7
OBN Obninsk 52.04 318*c i*P **P** **11 00 26.8 -0.5**
OBN *e* 11 02 24.5
OBN *e*S **S** **11 07 44.2 -6.6**
OBN pmax pmax
comp=Z,78nm,1.7s,mb5.4
OBN MLR MLR
comp=Z,600nm,22.0s,MS4.6
OBN Obninsk 52.04 318 *e*P **P** **11 00 26.9 -0.4**
comp=Z,103nm,1.4s,mb5.6
ANN Anapa 52.65 305 *e*P **P** **11 00 30.7 -1.3**
ANN *e**PP pP 11 00 39.9 +4.9
ANN *e* 11 01 42.2
ANN *e* 11 02 29.5
ANN *e*S **S** **11 07 55.5 -4.0**
ANN *e*SS SS 11 11 29.3 -8.2
ANN pmax pmax
comp=N,17nm,1.1s
ANN pmax pmax
comp=E,14nm,1.1s
ANN pmax pmax
comp=Z,43nm,1.1s,mb5.3
ANN MLR MLR
comp=Z,360nm,20.0s,MS4.4
KNA Kununurra 52.84 150⇓*i*P **P** **11 00 33.0 -0.6**
comp=Z,33nm,0.6s,mb5.4
APA Apatity 53.70 333⇑*i*P **P** **11 00 45.2 +5.8**
APA *i* 11 02 36.0
APA pmax pmax
comp=Z,34nm,1.3s,mb5.1
APA MLR MLR
comp=Z,2µm,13.0s,MS5.2
FITZ Fitzroy Crossi 53.73 155 *e*P **P** **11 00 39.3 -0.8**
comp=Z,22nm,0.9s,mb5.1
FITZ Fitzroy Crossi 53.73 155 P **P** **11 00 39.4 -0.7**
comp=Z,7.4nm,0.8s,mb4.6,baz=336,slow=5.5,SNR=14
FITZ Fitzroy Crossi 53.73 155 *e*P **P** **11 00 39.1 -1.0**
comp=Z,17nm,1.0s,mb4.9
JOF Joensuu 54.48 327 *e*P **P** **11 00 44.3 -0.8**
JOF pmax pmax
comp=Z,23nm,0.9s,mb5.1
JOF Joensuu 54.48 327 *e*p **P** **11 00 44.3 -0.8**
comp=Z,23nm,0.9s,mb5.1
JOF Joensuu 54.48 327 *e*p **P** **11 00 44.3 -0.8**
comp=Z,23nm,0.9s,mb5.1
SIM Simferopol' 54.94 305*de*P **P** **11 00 50.4 +1.7**
SIM pmax pmax
comp=Z,18nm,0.8s,mb5.2
SIM MLR MLR
comp=Z,184nm,15.1s,MS4.3
PUL Pulkovo 55.12 324 *e*P **P** **11 00 50.3 +0.5**
PUL pmax pmax
comp=Z,50nm,0.8s,mb5.6
PUL MLR MLR
comp=Z,360nm,22.0s,MS4.4
KEV Kevo 56.10 336 *e*P **P** **11 00 55.8 -0.9**
KEV pmax pmax
comp=Z,15nm,1.0s,mb5.0
KEV Kevo 56.10 336 *e*p **P** **11 00 55.8 -0.9**
comp=Z,15nm,1.0s,mb5.0
KEV Kevo 56.10 336 *e*p **P** **11 00 55.8 -0.9**
comp=Z,15nm,1.0s,mb5.0
ASF Jabal al Asfar 56.27 290 P **P** **11 00 59.3 +0.8**
comp=Z,16nm,0.9s,mb5.0,baz=317,slow=2.0,SNR=14
ASF Jabal al Asfar 56.27 290 P **P** **11 00 59.3 +0.8**
ASF pmax pmax
comp=Z,16nm,0.9s
BR131 Keskin Array S 56.54 299 *e*P **P** **11 01 00.2 -0.1**
comp=Z,4.4nm,0.7s,mb4.6
BRTR Keskin Array B 56.54 299 P **P** **11 01 00.1 -0.2**
comp=Z,7.2nm,0.9s,mb4.7,baz=102,slow=6.6,SNR=30
BRTR LR LR 11 30 53.0
comp=Z,87nm,18.1s,MS3.9,baz=298,slow=42
BRTR Keskin Array B 56.54 299 *i* P **P** **11 01 00.4 +0.1**
BRTR pmax pmax
comp=Z,7.0nm,0.9s
ARCES ARCESS Array B 56.64 336 P **P** **11 00 60.0 -0.6**
comp=Z,8.0nm,0.8s,mb4.8,baz=82,slow=7.8,SNR=14
ARCES ARCESS Array B 56.64 336 P **P** **11 01 00.0 -0.5**
ARCES pmax pmax
comp=Z,8.0nm,0.8s
KAF Kangasniemi 56.85 327 *e*P **P** **11 01 00.9 -1.3**
KAF pmax pmax
comp=Z,12nm,0.7s,mb5.0
KAF Kangasniemi 56.85 327 *e*p **P** **11 01 00.9 -1.3**
comp=Z,12nm,0.7s,mb5.0,baz=83,slow=6.8
KAF Kangasniemi 56.85 327 *e*p **P** **11 01 00.9 -1.3**
comp=Z,12nm,0.7s,mb5.0,baz=83,slow=6.8
AKASG Malin Array Be 57.00 313 P **P** **11 01 02.7 -0.7**
comp=Z,13nm,0.7s,mb5.0,baz=71,slow=6.5,SNR=31
AKASG LR LR 11 26 58.8
comp=Z,598nm,18.9s,MS4.7,baz=75,slow=38
AKASG Malin Array Be 57.00 313 P **P** **11 01 02.7 -0.7**
AKASG pmax pmax
comp=Z,13nm,0.7s
AKASG MLR MLR
comp=Z,598nm,18.9s
AKASG Malin Array Be 57.00 313 P **P** **11 01 02.7 -0.7**
AKASG LR LR 11 26 58.8
AKBB Malin Array Si 57.00 313 *e*P **P** **11 01 02.8 -0.6**
KIEV Kiev 57.01 313 *e*P **P** **11 01 02.5 -1.0**
KIEV pmax pmax
comp=Z,26nm,1.3s,mb5.1
KIEV Kiev 57.01 313 *e*P **P** **11 01 02.5 -1.0**
comp=Z,26nm,1.3s,mb5.1
FINES FINESS Array B 57.04 326 P **P** **11 01 03.4 -0.1**
comp=Z,14nm,0.7s,mb5.1,baz=84,slow=7.2,SNR=67
FINES LR LR 11 27 10.7
comp=Z,423nm,19.9s,MS4.5,baz=138,slow=38
FINES FINESS Array B 57.04 326 P **P** **11 01 03.4 -0.1**
FINES pmax pmax
comp=Z,14nm,0.7s
FINES MLR MLR
comp=Z,423nm,19.9s
VSU Vasula 57.10 322*c i*P **P** **11 01 03.7 -0.3**
VSU pmax pmax
comp=Z,64nm,1.2s,mb5.5
IDID Didziasalis 57.61 319 *e*P **P** **11 01 07.9 +0.3**
IDID AMB AMB 11 01 08.9
comp=Z,12nm,0.9s,mb4.9
IZAR Zarasai 57.81 319 *e*P **P** **11 01 09.3 +0.3**
IZAR AMB AMB 11 01 10.3
comp=Z,9.7nm,0.9s,mb4.8
IIGN Ignalina 57.89 319 *e*P **P** **11 01 09.9 +0.3**
IIGN AMB AMB 11 01 11.1
comp=Z,13nm,1.0s,mb4.9
ISAL Salakas 57.91 319 *e*P **P** **11 01 10.1 +0.4**
ISAL AMB AMB 11 01 11.0
comp=Z,12nm,0.9s,mb4.9
KIS Kishinev 58.08 309 *e*P **P** **11 01 07.0 -4.1**
KIS LRM 11 27 18.0
comp=Z,600nm,16.0s
KIS Kishinev 58.08 309 *e*P **P** **11 01 07.0 -4.1**
KIS MLR MLR
comp=Z,600nm,15.0s,MS4.8
KIS MLR MLR
comp=Z,600nm,16.0s
COEN Coen 58.84 135 *e*P **P** **11 01 16.8 +0.1**
COEN Coen 58.84 135 *e*P **P** **11 01 16.5 -0.2**
comp=Z,513nm,1.4s
TIRR Tirgusor 59.00 306⇑P **P** **11 01 17.1 -0.5**
TIRR Tirgusor 59.00 306⇑*i*P **P** **11 01 17.0 -0.6**
WRAB Tennant Creek 59.01 147 P **P** **11 01 17.0 -0.7**
comp=Z,301nm,0.6s,SNR=51
WRAB Tennant Creek 59.01 147 *e*P **P** **11 01 17.4 -0.3**
WRAB pmax pmax
comp=Z,26nm,0.6s,mb5.4
WRAB Tennant Creek 59.01 147 *e*P **P** **11 01 17.4 -0.3**
comp=Z,26nm,0.6s,mb5.4
WRA Warramunga Arr 59.01 147 P **P** **11 01 17.2 -0.5**
comp=Z,14nm,0.5s,mb5.2,baz=324,slow=9.8,SNR=253
WRA Warramunga Arr 59.01 147 P **P** **11 01 17.3 -0.5**
WRA pmax pmax
comp=Z,14nm,0.5s
HARR Harsova 59.27 306⇓P **P** **11 01 19.7 +0.3**
HARR Harsova 59.27 306⇓*i*P **P** **11 01 19.7 +0.3**
ISP Isparta 59.42 298 *e*P **P** **11 01 19.9 -0.6**
comp=Z,34nm,0.9s,mb5.4
ISP Isparta 59.42 298⇑*i*P **P** **11 01 20.5 -0.1**
VRI Vrincioaia 59.77 308 P **P** **11 01 23.5 +0.7**
VRI Vrincioaia 59.77 308⇓*i*P **P** **11 01 23.6 +0.8**
PLOR Plostina 59.82 308⇓P **P** **11 01 24.0 +0.8**
PLOR Plostina 59.82 308⇓*i*P **P** **11 01 24.0 +0.8**
SUW Suwalki 59.90 318 *e*P **P** **11 01 22.8 -0.8**
BUR4R Bucovina Array 60.29 310⇓P **P** **11 01 26.1 -0.3**
BUR4R Bucovina Array 60.29 310⇓*i*P **P** **11 01 26.1 -0.3**
BUR08 Bucovina Ar. S 60.29 310 *e*P **P** **11 01 26.2 -0.2**
MLR Muntele Rosu 60.40 308⇓P **P** **11 01 27.8 +0.7**
MLR P 11 01 28.1
MLR Muntele Rosu 60.40 308⇓*i*P **P** **11 01 27.8 +0.6**
LVV L'vov 60.45 313 *e*P **P** **11 01 26.7 -0.7**
LVV MLR MLR
comp=Z,300nm,14.0s,MS4.6
LVV MLR MLR
comp=N,100nm,13.0s,MS4.7
LVV MLR MLR
comp=E,400nm,14.0s,MS4.7
SZH Strazhica 61.06 305 *e*P **P** **11 01 30.9 -0.8**
BMR Baia Mare 61.39 311 P **P** **11 01 35.0 +1.2**
KOLS Kolonicke sedl 61.80 312 *e*P **P** **11 01 36.5 -0.1**
KOLS pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
KOLS Kolonicke sedl 61.80 312 *e*P **P** **11 01 36.5 -0.1**
comp=Z,5.6nm,1.0s,mb4.7
KOLS *e*PP pP 11 01 41.6 +1.9
KOLS *e* 11 02 01.3
KOLS Kolonicke sedl 61.80 312 *e*P **P** **11 01 36.5 -0.1**
KOLS *e*pP pP 11 01 41.6 +1.9
KOLS *e* 11 02 01.3
TRPA Tarpa 61.87 311⇑*i*P **P** **11 01 37.3 +0.2**
UZH Uzhgorod 61.88 312 *e*P **P** **11 01 35.4 -1.7**
UZH *e* 11 02 13.6
UZH *e* 11 03 54.8
UZH *e*S **S** **11 09 55.0 -5.8**
UZH *e*PS 11 10 11.0
UZH MLR MLR
comp=N,200nm,12.0s,MS4.8
UZH MLR MLR
comp=E,400nm,12.0s,MS4.8
UZH MLR MLR
comp=Z,300nm,12.0s,MS4.7
KDZ Kurdzhali 61.94 304 *e*P **P** **11 01 38.2 +0.6**
ASAR Alice Springs 62.05 149 P **P** **11 01 38.4 -0.1**
comp=Z,4.3nm,0.5s,mb4.9,baz=334,slow=6.7,SNR=114
ASAR Alice Springs 62.05 149 P **P** **11 01 38.4 -0.1**
ASAR pmax pmax
comp=Z,4.0nm,0.5s
DRGR 62.16 310⇑P **P** **11 01 39.4 +0.4**
DRGR P 11 01 39.8
DRGR 62.16 310⇑*i*P **P** **11 01 39.4 +0.3**
STHS Stebnicka Huta 62.30 313 *e*P **P** **11 01 40.2 +0.2**
STHS pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
STHS Stebnicka Huta 62.30 313 *e*P **P** **11 01 40.2 +0.2**
comp=Z,5.6nm,0.9s,mb4.7
STHS *e*PP pP 11 01 43.2 +0.2
STHS Stebnicka Huta 62.30 313 *e*P **P** **11 01 40.2 +0.2**
STHS *e*pP pP 11 01 43.2 +0.2
CRVS Cervenica-Dubn 62.32 312 *e*P **P** **11 01 39.9 -0.2**
CRVS pmax pmax
comp=Z,24nm,2.3s,mb4.9
CRVS Cervenica-Dubn 62.32 312 *e*P **P** **11 01 39.9 -0.2**
comp=Z,24nm,2.3s,mb4.9
CRVS *e*PP pP 11 01 43.1 -0.1
CRVS Cervenica-Dubn 62.32 312 *e*P **P** **11 01 39.9 -0.2**
CRVS *e*pP pP 11 01 43.1 -0.1
RZN Rozhen 62.42 304 *e*P **P** **11 01 40.0 -0.9**
NIE Niedzica 62.88 313 *e*P **P** **11 01 44.4 +0.6**
OJC Ojcow 62.95 314 *e*P **P** **11 01 43.2 -1.1**
KECS Kecovo 63.07 312 *e*P **P** **11 01 44.3 -0.8**
KECS pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
KECS Kecovo 63.07 312 *e*P **P** **11 01 44.3 -0.8**
comp=Z,3.8nm,0.8s,mb4.6
KECS *e*PP pP 11 01 48.1 0.0
KECS Kecovo 63.07 312 *e*P **P** **11 01 44.2 -0.9**
KECS *e*pP pP 11 01 48.1 0.0
MMB Musomiste 63.15 304 *e*P **P** **11 01 44.3 -1.5**
VTS Vitosha 63.18 305 *e*P **P** **11 01 44.8 -1.1**
BZS Buzias 63.26 309⇑P **P** **11 01 46.2 -0.2**
BZS Buzias 63.26 309⇑*i*P **P** **11 01 46.2 -0.2**
KKB Krupnik 63.51 304 *e*P **P** **11 01 46.5 -1.6**
PSZ Piszkesteto 63.62 312⇓P **P** **11 01 48.9 +0.1**
PSZ Piszkesteto 63.62 312 *e*P **P** **11 01 49.1 +0.3**
comp=Z,26nm,1.4s,mb5.1
PSZ Piszkesteto 63.62 312⇓*i*P **P** **11 01 48.9 +0.1**
OKC Ostrava-Krasne 64.08 314 *e*P **P** **11 01 51.4 -0.3**
OKC MLR MLR
comp=Z,600nm,14.8s,MS4.9
OKC Ostrava-Krasne 64.08 314 *e*P **P** **11 01 51.4 -0.3**
OKC AMS AMS 11 30 50.0
comp=Z,600nm,14.8s
VYHS Vyhne 64.10 313 *i* P **P** **11 01 52.3 +0.4**
VYHS pmax pmax
comp=Z,13nm,1.3s,mb4.8
VYHS Vyhne 64.10 313 *i* P **P** **11 01 52.3 +0.4**
comp=Z,13nm,1.3s,mb4.8
VYHS *e*PP pP 11 01 55.4 +0.4
VYHS Vyhne 64.10 313 *i* P **P** **11 01 52.3 +0.4**
VYHS *e*pP pP 11 01 55.4 +0.4
NB2 NORSAR Subarra 64.11 327 P **P** **11 01 50.8 -1.0**
comp=Z,34nm,1.2s,mb5.3,baz=73,slow=6.9
NOA NORSAR Array B 64.11 327 P **P** **11 01 50.7 -1.1**
comp=Z,5.4nm,0.6s,mb4.7,baz=72,slow=6.9,SNR=23
NOA LR LR 11 31 29.3
comp=Z,298nm,18.5s,MS4.5,baz=65,slow=38
NOA NORSAR Array B 64.11 327 P **P** **11 01 50.7 -1.1**
NOA pmax pmax
comp=Z,5.0nm,0.6s
NOA MLR MLR
comp=Z,298nm,18.5s
NAO01 NORSAR Array S 64.33 327 *e*P **P** **11 01 52.1 -1.1**
comp=Z,5.6nm,0.7s,mb4.7
MORC Moravsky Berou 64.47 314⇑P **P** **11 01 54.3 0.0**
MORC Moravsky Berou 64.47 314 *e*P **P** **11 01 54.2 -0.1**
comp=Z,16nm,1.1s,mb5.0
MORC Moravsky Berou 64.47 314⇑*i*P **P** **11 01 54.3 0.0**
KSP Ksiaz 64.86 316 *e*P **P** **11 01 57.0 +0.2**
KSP Ksiaz 64.86 316⇑*e*P **P** **11 01 56.8 0.0**
KSP MLR MLR
comp=Z,2µm,19.4s,MS5.2
SMOL Smolenice 64.97 313 *e*P **P** **11 01 58.2 +0.6**
SMOL Smolenice 64.97 313 *e*P **P** **11 01 58.2 +0.6**
PKSM Moragy 65.01 310⇑P **P** **11 01 57.9 0.0**
PKSM Moragy 65.01 310⇑*i*P **P** **11 01 57.9 0.0**
DPC Dobruska-Polom 65.01 315 *e*P **P** **11 01 57.9 +0.1**
DPC MLR MLR
comp=Z,800nm,18.9s,MS4.9
DPC Dobruska-Polom 65.01 315 *e*P **P** **11 01 57.9 +0.1**
DPC AMS AMS 11 31 20.0
comp=Z,800nm,18.9s
UPC Upice 65.14 315 *e*P **P** **11 01 59.0 +0.3**
UPC Upice 65.14 315 *e*P **P** **11 01 59.0 +0.3**
UPC *e*pP pP 11 02 01.9 +0.1
VRAC Vranov 65.21 314⇓P **P** **11 01 59.9 +0.8**
VRAC Vranov 65.21 314⇓*i*P **P** **11 01 59.9 +0.8**
CTA Charters Tower 65.44 136 P **P** **11 02 00.9 0.0**
comp=Z,3.6nm,0.6s,mb4.6,baz=354,slow=4.9,SNR=5.0
CTA Charters Tower 65.44 136 P **P** **11 02 00.9 0.0**
CTA pmax pmax
comp=Z,4.0nm,0.6s
NWAO Narrogin (SRO) 65.60 168 P **P** **11 02 01.2 -0.5**
comp=Z,12nm,0.8s,mb5.0,baz=333,slow=6.8
NWAO Narrogin (SRO) 65.60 168 P **P** **11 02 01.2 -0.5**
NWAO pmax pmax
comp=Z,12nm,0.8s
RUE Ruedersdorf 65.75 318 *e*P **P** **11 02 02.5 -0.1**
comp=Z,34nm,1.1s,mb5.3
RUE Ruedersdorf 65.75 318 *e*P **P** **11 02 02.9 +0.3**
TREC Trest 65.89 314 *e*P **P** **11 02 03.7 +0.1**
TREC MLR MLR
comp=Z,700nm,21.8s,MS4.8
TREC Trest 65.89 314 *e*P **P** **11 02 03.7 +0.1**
TREC *e*pP pP 11 02 06.9 +0.3
TREC AMS AMS 11 32 00.0
comp=Z,700nm,21.8s
PVCC Panska Ves 66.00 316 *e*P **P** **11 02 04.6 +0.4**
PVCC MLR MLR
comp=Z,600nm,18.6s,MS4.8
PVCC Panska Ves 66.00 316 *e*P **P** **11 02 04.6 +0.4**
PVCC AMS AMS 11 32 00.0
comp=Z,600nm,18.6s
CONA Conrad Observa 66.16 313⇑*i*P **P** **11 02 05.6 +0.3**
comp=Z,18nm,1.4s,mb4.9,SNR=12
PRU Pruhonice 66.21 315 *e*P **P** **11 02 06.0 +0.4**
PRU MLR MLR
comp=Z,800nm,18.3s,MS5.0
PRU Pruhonice 66.21 315 *e*P **P** **11 02 06.0 +0.4**
PRU AMS AMS 11 32 10.0
comp=Z,800nm,18.3s
BRG Berggiesshubel 66.24 316 *e*P **P** **11 02 05.1 -0.6**
comp=Z,13nm,0.9s,mb4.9
BRG
comp=N,235nm,13.8s
BRG
comp=E,369nm,13.8s
BRG
comp=Z,578nm,15.5s
BRG Berggiesshubel 66.24 316 *e*P **P** **11 02 05.1 -0.7**
BRG pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
BRG MLR MLR
comp=N,141nm,13.8s,MS4.6
BRG MLR MLR
comp=E,221nm,13.8s,MS4.6
BRG MLR MLR
comp=Z,346nm,15.5s,MS4.7
FORT Forrest 66.25 158 *e*P **P** **11 02 06.3 +0.4**
comp=Z,34nm,0.9s,mb5.4
ARSA Arzberg 66.63 312⇑*i*P **P** **11 02 08.0 -0.3**
comp=Z,9.2nm,1.1s,mb4.7,SNR=7.7
CLL Collm 66.63 317 *e*P **P** **11 02 07.7 -0.5**
comp=Z,17nm,1.2s,mb5.0
CLL Collm 66.63 317⇑*i*P **P** **11 02 07.8 -0.4**
CLL pmax pmax
comp=Z,18nm,1.2s,mb5.0
CLL MLR MLR
comp=Z,400nm,18.0s,MS4.7
CLL Collm 66.63 317⇑*i*P **P** **11 02 07.8 -0.4**
comp=Z,18nm,1.2s,mb5.0
CLL *i* pP 11 02 10.7 -0.6
CLL LR LR
comp=Z,400nm,18.0s,MS4.7
CLL Collm 66.63 317⇑*i*P **P** **11 02 07.8 -0.4**
comp=Z,18nm,1.2s,mb5.0
CLL *i* pP pP 11 02 10.7 -0.6
CLL *e*(PP) 11 04 25.0
CLL Lm 11 32 00.0
comp=Z,400nm,18.0s
COLD Coldfoot 66.68 24 *e*P **P** **11 02 08.4 +0.1**
comp=Z,10nm,1.1s,mb4.8
MUD Monsted U'grnd 66.76 323 *i* P **P** **11 02 08.9 -0.1**
MUD pmax pmax
comp=Z,15nm,0.9s,mb5.0
MUD Monsted U'grnd 66.76 323 *i* P **P** **11 02 08.9 -0.1**
comp=Z,15nm,0.9s,mb5.0
KHC Kasperske Hory 67.11 315 *e*P **P** **11 02 11.4 0.0**
KHC MLR MLR
comp=Z,800nm,20.9s,MS4.9
KHC Kasperske Hory 67.11 315 *e*P **P** **11 02 11.5 +0.2**
comp=Z,21nm,1.6s,mb4.9
KHC Kasperske Hory 67.11 315 *e*P **P** **11 02 11.4 0.0**
KHC AMS AMS 11 32 40.0
comp=Z,800nm,20.9s
PERS Pernice 67.12 312 *i* P **P** **11 02 11.2 -0.2**
BSEG Bad Segeberg 67.13 320 *e*P **P** **11 02 11.8 +0.4**
comp=Z,33nm,1.1s,mb5.3
GEC2 GERESS Array S 67.15 314 *e*P **P** **11 02 11.6 0.0**
comp=Z,22nm,1.3s,mb5.0
GEC2 GERESS Array S 67.15 314 *e*P **P** **11 02 11.4 -0.2**
comp=Z,3um,1.1s
GERES GERESS Array B 67.15 314 P **P** **11 02 11.8 +0.2**
comp=Z,5.1nm,0.9s,mb4.6,baz=71,slow=5.8,SNR=33
GERES LR LR 11 33 13.5
comp=Z,642nm,19.2s,MS4.9,baz=75,slow=38
GERES GERESS Array B 67.15 314 P **P** **11 02 11.8 +0.2**
GERES pmax pmax
comp=Z,5.0nm,0.9s
GERES MLR MLR
comp=Z,642nm,19.2s
SOKA Soboth 67.16 312⇑*i*P **P** **11 02 11.6 -0.1**
comp=Z,16nm,1.0s,mb5.0
MOA Molln 67.19 313⇑*i*P **P** **11 02 12.2 +0.3**
comp=Z,18nm,1.4s,mb4.9,SNR=7.3
TANN Tannenbergstha 67.29 316 *e*P **P** **11 02 12.4 0.0**
comp=Z,19nm,1.4s,mb4.9
NKC Novy Kostel 67.37 316 *e*P **P** **11 02 12.9 0.0**
NKC MLR MLR
comp=Z,700nm,18.8s,MS4.9
NKC Novy Kostel 67.37 316 *e*P **P** **11 02 12.9 0.0**
NKC AMS AMS 11 33 00.0
comp=Z,700nm,18.8s
WERD Werda 67.37 316 *e*P **P** **11 02 12.8 -0.1**
comp=Z,32nm,1.8s,mb5.0
WERN Wernitzgruen 67.39 316 *e*P **P** **11 02 13.1 0.0**
comp=Z,12nm,0.9s,mb4.9
CHUM Lake Minchumin 67.39 28 *e*P **P** **11 02 13.5 +0.6**
comp=Z,10nm,1.0s,mb4.8
BOJS Bojanci 67.47 310 *e*P **P** **11 02 13.5 -0.2**
WET Wettzell 67.53 315 *e*P **P** **11 02 14.2 +0.2**
comp=Z,27nm,1.6s,mb5.0
VISS Visnje 67.62 311 *i* P **P** **11 02 13.9 -0.7**
MOX Moxa 67.69 317 *e*P **P** **11 02 15.1 +0.1**
comp=Z,27nm,1.6s,mb5.0
MOX
comp=Z,300nm,17.0s
MOX Moxa 67.69 317 *e*P **P** **11 02 14.9 -0.1**
comp=Z,9.0nm,0.9s,mb4.8
MOX Moxa 67.69 317 *e*P **P** **11 02 15.1 +0.1**
MOX pmax pmax
comp=Z,27nm,1.6s,mb5.0
MOX MLR MLR
comp=Z,300nm,17.0s,MS4.6
BPAW Bear Paw Mtn. 67.82 27 *e*P **P** **11 02 15.5 -0.1**
comp=Z,12nm,1.2s,mb4.8
NRDL Niedersach Rie 67.82 319 *e*P **P** **11 02 16.1 +0.3**
comp=Z,31nm,1.3s,mb5.2
PPLA Purkeypile 67.89 29 *e*P **P** **11 02 16.3 +0.3**
comp=Z,10nm,0.9s,mb4.9
CLZ Clausthal 67.93 318 *e*P **P** **11 02 16.7 +0.2**
comp=Z,33nm,1.2s,mb5.2
KBA Koelnbreinsper 68.06 313⇑*i*P **P** **11 02 17.3 -0.1**
comp=Z,12nm,1.0s,mb4.9
JAVS Javornik 68.08 311 *i* P **P** **11 02 17.1 -0.5**
KTH Kantishna Hill 68.09 28 *e*P **P** **11 02 17.5 +0.2**
comp=Z,29nm,1.7s,mb5.0
RJOB Jochberg 68.14 313 *e*P **P** **11 02 17.7 -0.2**
comp=Z,14nm,1.4s,mb4.8
GRF Grafenberg Arr 68.31 316 *e*P **P** **11 02 19.2 +0.3**
comp=Z,26nm,0.9s,mb5.3
GRF *e*L 11 33 49.3
comp=Z,835nm,19.1s
GRF Grafenberg Arr 68.31 316 *e*P **P** **11 02 19.2 +0.3**
GRF pmax pmax
comp=Z,26nm,0.9s,mb5.3
GRF MLR MLR
comp=Z,800nm,19.1s,MS5.0
UBBA Unterbreizbach 68.56 317 *e*P **P** **11 02 20.2 -0.3**
comp=Z,26nm,1.8s,mb4.9
COLA College 68.64 26 *e*P **P** **11 02 20.6 -0.1**
COLA pmax pmax
comp=Z,17nm,1.1s,mb4.9
COLA College 68.64 26 *e*P **P** **11 02 20.6 -0.2**
comp=Z,17nm,1.1s,mb4.9
ABTA Abfaltersbach 68.72 312⇑*i*P **P** **11 02 20.4 -1.1**
comp=Z,9.1nm,1.2s,mb4.6
FUR Furstenfeldbru 68.90 314 *e*P **P** **11 02 23.1 +0.5**
comp=Z,55nm,1.1s,mb5.4
TIP Timpagrande 68.99 304 *e*P **P** **11 02 22.9 -0.4**
comp=Z,30nm,1.3s,mb5.1
WTTA Wattenberg 69.05 313⇑*i*P **P** **11 02 23.4 -0.2**
comp=Z,23nm,1.2s,mb5.0,SNR=7.3
WATA Walderalm 69.06 313⇑*i*P **P** **11 02 23.1 -0.5**
comp=Z,9.8nm,0.9s,mb4.7
IBBN Ibbenburen 69.21 319 *e*P **P** **11 02 24.4 -0.1**
comp=Z,16nm,1.1s,mb4.9
MOTA Moosalm 69.35 313⇑*i*P **P** **11 02 24.9 -0.5**

comp=Z,15nm,1.0s,mb4.9,SNR=8.2
TNS Taunus Mts 69.71 317 *e*P **P 11 02 27.5 -0.1**
comp=Z,20nm,1.3s,mb4.9
FETA Feichten 69.72 313⇑ *i*P **P 11 02 27.4 -0.3**
comp=Z,18nm,1.0s,mb5.0,SNR=12
PMR Palmer 69.77 29 *e*P **P 11 02 27.1 -0.6**
PMR pmax pmax
comp=Z,11nm,1.0s,mb4.7
PMR Palmer 69.77 29 *e*P **P 11 02 27.1 -0.7**
comp=Z,11nm,1.0s,mb4.7
TOD Tromm 69.77 316 *e*P **P 11 02 27.7 -0.3**
BUG Bochum--Univer 69.86 319 *e*P **P 11 02 28.5 0.0**
comp=Z,24nm,1.3s,mb5.0
SNTG Esanatoglia 69.90 309 P **P 11 02 29.5 +0.6**
comp=Z,25nm,1.1s,mb5.1
STU Stuttgart 69.90 315 *e*P **P 11 02 28.6 -0.2**
comp=Z,18nm,0.9s,mb5.0
STU Stuttgart 69.90 315 *e*P **P 11 02 28.9 +0.1**
STU pmax pmax
comp=Z,12nm,0.6s,mb5.0
STU Stuttgart 69.90 315 *e*P **P 11 02 28.9 +0.1**
comp=Z,12nm,0.6s,mb5.0
NRCA Norcia 69.96 308 P **P 11 02 29.8 +0.5**
comp=Z,8.2nm,0.8s,mb4.7
SDI San Donato 69.97 307 P **P 11 02 29.3 -0.1**
SDI pmax pmax
comp=Z,12nm,0.8s,mb4.9
SDI San Donato 69.97 307 P **P 11 02 29.3 -0.1**
comp=Z,12nm,0.8s,mb4.9
AQU L'Aquila 69.97 308 *e*P **P 11 02 29.7 +0.3**
AQU pmax pmax
comp=Z,51nm,1.3s,mb5.3
AQU L'Aquila 69.97 308 *e*P **P 11 02 29.7 +0.4**
comp=Z,51nm,1.3s,mb5.3
CEL Celeste 69.98 303 *e*P **P 11 02 28.9 -0.6**
comp=Z,34nm,1.0s,mb5.2
KDAK Kodiak Island 70.08 34 P **P 11 02 28.9 -0.8**
comp=Z,6.6nm,0.7s,mb4.7,baz=346,slow=4.7,SNR=5.0
KDAK Kodiak Island 70.08 34 P **P 11 02 29.0 -0.7**
KDAK pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
DAVA Damuels 70.13 314⇑ *i*P **P 11 02 29.8 -0.4**
MURB Monte Urbino 70.17 309 P **P 11 02 31.1 +0.5**
comp=Z,142nm,2.1s,mb5.5
ASS Assisi 70.17 309 P **P 11 02 31.0 +0.4**
ASS pmax pmax
comp=Z,12nm,0.7s,mb4.9
ASS Assisi 70.17 309 P **P 11 02 31.0 +0.4**
comp=Z,12nm,0.7s,mb5.0
SPAK Spaichingen-Ko 70.44 315 *e*P **P 11 02 32.0 -0.1**
BFO Black Forest 70.61 315 P **P 11 02 33.3 +0.1**
comp=Z,70nm,1.0s,mb5.5,SNR=6.7
BFO Black Forest 70.61 315 *e*P **P 11 02 32.7 -0.5**
comp=Z,18nm,1.2s,mb4.9
BFO Black Forest 70.61 315 *i*P **P 11 02 33.1 -0.1**
BFO Black Forest 70.61 315 *e*P **P 11 02 32.6 -0.6**
comp=Z,17nm,1.1s,mb4.9
MEM Membach 70.94 318 P **P 11 02 35.1 -0.1**
comp=Z,3.4nm,1.0s,mb4.2
FELD Feldberg im Sc 71.01 315 *e*P **P 11 02 35.2 -0.4**
CDF Champ du Feu 71.20 316 *e*P **P 11 02 36.5 -0.2**
comp=Z,17nm,0.8s,mb4.7
CDF Champ du Feu 71.20 316 *e*P **P 11 02 36.5 -0.2**
CDF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
CDF Champ du Feu 71.20 316 *e*P **P 11 02 36.5 -0.2**
comp=Z,8.6nm,0.8s,mb4.7
MENT Mentasta 71.22 27 *e*P **P 11 02 37.8 +1.3**
KMBO Kilima Mbogo 71.28 256 P **P 11 02 38.2 +0.5**
comp=Z,9.3nm,1.0s,mb4.7,baz=39,slow=10,SNR=18
KMBO Kilima Mbogo 71.28 256 P **P 11 02 38.3 +0.5**
KMBO pmax pmax
comp=Z,9.0nm,1.0s
KMBO Kilima Mbogo 71.28 256 *e*P **P 11 02 38.1 +0.4**
comp=Z,17nm,1.1s,mb4.9
KMBO Kilima Mbogo 71.28 256 P **P 11 02 38.9 +1.1**
SNR=6.7
KMBO P 11 02 38.9
SNR=6.7
WLF Walferdange 71.29 317 P **P 11 02 37.8 +0.6**
comp=Z,31nm,1.4s,mb5.0
WLF Walferdange 71.29 317 *e*P **P 11 02 37.8 +0.5**
comp=Z,61nm,1.3s,mb5.4
WLF Walferdange 71.29 317 *e*P **P 11 02 37.7 +0.4**
WLF pmax pmax
comp=Z,48nm,1.2s,mb5.3
WLF Walferdange 71.29 317 *e*P **P 11 02 37.7 +0.4**
comp=Z,48nm,1.2s,mb5.3
INK Inuvik 71.36 19 *e*P **P 11 02 36.8 -0.5**
INK pmax pmax
comp=Z,14nm,1.0s
INK Inuvik 71.36 19 *e*P **P 11 02 36.8 -0.6**
comp=Z,14nm,1.0s,mb4.8
ECH Echery 71.36 316 *e*P **P 11 02 37.3 -0.4**
ECH Echery 71.36 316 *e*P **P 11 02 36.7 -1.0**
ECH pmax pmax
comp=Z,13nm,1.2s,mb4.7
ECH Echery 71.36 316 *e*P **P 11 02 36.7 -1.0**
comp=Z,13nm,1.2s,mb4.7
BCLA Clavier 71.43 318 P **P 11 02 36.8 -1.3**
comp=Z,7.4nm,1.3s,mb4.5
MOF Molkenrain 71.54 315 *e*P **P 11 02 38.2 -0.6**
UCC Uccle 71.78 319 P **P 11 02 40.1 -0.1**
SNF Seneffe 71.96 319 P **P 11 02 41.2 -0.1**
comp=Z,6.3nm,1.2s,mb4.4
DOU Dourbes 71.98 318 P **P 11 02 41.6 +0.2**
comp=Z,6.5nm,1.3s,mb4.4
STKA Stephens Creek 72.55 147 *e*P **P 11 02 44.0 -0.9**
comp=Z,6.6nm,0.8s,mb4.6
STKA Stephens Creek 72.55 147 P **P 11 02 44.2 -0.7**
comp=Z,8.6nm,0.8s,mb4.7,baz=342,slow=6.5,SNR=17
STKA Stephens Creek 72.55 147 *e*P **P 11 02 44.2 -0.7**
comp=Z,2.7nm,1.0s,mb4.1
LSD Lago del Serru 72.65 313 P **P 11 02 46.0 +0.5**
SUMG Summit 72.72 349 *e*P **P 11 02 44.8 -0.6**
comp=Z,5.1nm,0.9s,mb4.5
SUMG Summit 72.72 349 *i*P **P 11 02 45.1 -0.3**
comp=Z,4.6nm,0.9s,mb4.4
LPG La Plagne 72.87 313 *e*P **P 11 02 47.3 +0.5**
comp=Z,66nm,0.9s,mb5.3
LPG La Plagne 72.87 313 *e*P **P 11 02 47.3 +0.5**
LPG pmax pmax
comp=Z,33nm,0.9s,mb5.3
LPG La Plagne 72.87 313 *e*P **P 11 02 47.3 +0.5**
comp=Z,33nm,0.9s,mb5.3
LPL La Plagne 72.87 313 *e*P **P 11 02 47.2 +0.4**
comp=Z,48nm,0.7s,mb5.2
LPL La Plagne 72.87 313 *e*P **P 11 02 47.2 +0.4**
LPL pmax pmax
comp=Z,24nm,0.7s,mb5.2
LPL La Plagne 72.87 313 *e*P **P 11 02 47.2 +0.4**
comp=Z,24nm,0.7s,mb5.2
BNI Bardonecchia 73.12 313 *e*P **P 11 02 47.8 -0.5**
BNI pmax pmax
comp=Z,20nm,1.0s,mb5.0
BNI Bardonecchia 73.12 313 *e*P **P 11 02 47.8 -0.5**
comp=Z,20nm,1.0s,mb5.0
AUTN L'Aution 73.15 312 *e*P **P 11 02 48.3 -0.2**
LUCF Luceram 73.25 311 *e*P **P 11 02 48.0 -1.1**
TOUF Mont Tournerai 73.25 312 *e*P **P 11 02 48.5 -0.6**
SMF Signal de Mont 74.09 315 *e*P **P 11 02 53.4 -0.6**
comp=Z,46nm,1.1s,mb5.0
SMF Signal de Mont 74.09 315 *e*P **P 11 02 53.4 -0.6**
SMF pmax pmax
comp=Z,23nm,1.1s,mb5.0
SMF Signal de Mont 74.09 315 *e*P **P 11 02 53.4 -0.6**
comp=Z,23nm,1.1s,mb5.0
CMSA Cobar Meteorol 74.23 144 *e*P **P 11 02 55.1 +0.3**
PLDF La Plantade 74.56 315 *e*P **P 11 02 55.9 -0.8**
AGO Saint Agoulin 74.81 315 *e*P **P 11 02 57.8 -0.4**
PYM Petit Puy Mans 75.04 315 *e*P **P 11 02 58.7 -0.8**
TCF Toulx Ste Croi 75.24 315 *e*P **P 11 03 00.4 -0.3**
comp=Z,54nm,1.3s,mb5.0
TCF Toulx Ste Croi 75.24 315 *e*P **P 11 03 00.4 -0.3**
TCF pmax pmax
comp=Z,27nm,1.3s,mb5.0
TCF Toulx Ste Croi 75.24 315 *e*P **P 11 03 00.4 -0.3**
comp=Z,27nm,1.3s,mb5.0
KEST Kesra 75.80 303 P **P 11 03 03.8 -0.3**
comp=Z,5.8nm,1.2s,mb4.4,baz=279,slow=9.2,SNR=5.1
SKAG Skagway 76.56 27 *e*P **P 11 03 08.0 +0.1**
comp=Z,17nm,1.1s,mb4.9
YKA Yellowknife Ar 80.89 17 P **P 11 03 31.2 -0.5**
comp=Z,2.8nm,0.8s,mb4.3,baz=330,slow=5.2,SNR=10
YKA LR LR 11 43 54.2
comp=Z,16nm,18.2s,MS3.4,baz=195,slow=39
YKA Yellowknife Ar 80.89 17 P **P 11 03 31.2 -0.5**
YKA pmax pmax
comp=Z,3.0nm,0.8s
YKA MLR MLR
comp=Z,16nm,18.2s
YKA Yellowknife Ar 80.89 17 P **P 11 03 31.2 -0.5**
YKA LR LR 11 43 54.2
ESDC Sonseca Array 82.64 312 P **P 11 03 41.4 0.0**
comp=Z,0.4nm,0.4s,baz=46,slow=6.2,SNR=4.5
MSVF Nonsavu 86.08 114 *e*P **P 11 04 01.1 +2.0**
comp=Z,11nm,1.3s,mb4.9
LSZ Lusaka 86.62 250 *e*P **P 11 04 01.4 -0.4**
LSZ pmax pmax
comp=Z,8.0nm,1.0s,mb4.9
LSZ Lusaka 86.62 250 *e*P **P 11 04 01.4 -0.3**
comp=Z,8.3nm,1.0s,mb4.9
FFC Flin Flon 90.81 15 *i*P **P 11 04 21.8 +0.8**
NEW Newport 92.00 26 *e*P **P 11 04 27.7 +1.0**
NEW pmax pmax
comp=Z,2.0nm,0.6s
NEW Newport 92.00 26 *e*P **P 11 04 27.7 +1.0**
comp=Z,2.2nm,0.6s,mb4.7
SCHQ Schefferville 93.31 355 P **P 11 04 31.6 -1.0**
comp=Z,2.7nm,0.6s,mb4.8,baz=36,slow=8.6,SNR=5.2
TORD Torodi Ar. Bea 93.59 288 P **P 11 04 33.6 -1.0**
comp=Z,1.5nm,0.8s,mb4.5,baz=48,slow=3.2,SNR=6.5
TORD LR LR 11 52 45.6
comp=Z,85nm,19.3s,MS4.2,baz=100,slow=39
SLMT Seeley Lake 94.19 25 *e*P **P 11 04 38.9 +2.1**
comp=Z,6.5nm,1.3s,mb4.9
ULM Lac du Bonnet 96.29 13 LR LR 11 48 35.6
comp=Z,114nm,18.5s,MS4.4,baz=14,slow=36
PDAR Pinedale Array 99.46 25 LR LR 11 56 07.9
comp=Z,113nm,18.0s,MS4.4,baz=199,slow=39
TXAR Lajitas Array 113.56 27 PKiKP PKiKP 11 09 55.0 -1.6
comp=Z,0.2nm,0.5s,baz=5.7,slow=1.3,SNR=3.6
TXAR Lajitas Array 113.56 27 *i*PKIKP PKiKP 11 09 55.0 -1.6
QSPA South Pole Qui 121.65 180 PKP PKPdf 11 10 09.7 -0.8
comp=Z,2.1nm,0.6s,baz=48,slow=1.5,SNR=16
QSPA South Pole Qui 121.65 180 *e*PKPdf PKPdf 11 10 09.2 -1.3
OTAV Otavalo 147.95 5 *e*PKPbc PKPbc 11 11 04.5 +0.5
LPAZ La Paz 163.03 334 PKP PKPdf 11 11 21.0 +0.1
comp=Z,1.6nm,1.0s,baz=66,slow=8.5,SNR=3.9
LPAZ La Paz 163.03 334 PKIKP PKPdf 11 11 21.0 +0.1
LPAZ pmax pmax
comp=Z,2.0nm,1.0s
CPUP Villa Florida 163.06 284 PKP PKPdf 11 11 19.4 -1.3
comp=Z,0.4nm,0.3s,baz=133,slow=1.8,SNR=4.1
CPUP Villa Florida 163.06 284 PKP PKPdf 11 11 19.4 -1.3

IDC 08 11:01:58.4±11.0, **6°.71S**×**129°.46E**, **h169**km±108km, **mb3.1**/1, **mb1 3.0**/4, **mb1mx2.9**/18, **mbtmp2.9**/4, **Error ellipse: s-maj=105.0km s-min=40.0km az=47.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.92**	**198**	P	Pn	11 04 44.7	+1.5
	0.1nm,0.3s,baz=50,slow=7.9,SNR=3.0						
FITZ				S	Sn	11 06 49.7	-5.8
	0.1nm,0.3s,baz=137,slow=18,SNR=3.7						
WRA	**Warramunga Arr**	**13.98**	**161**	P	Pn	11 05 08.3	-1.1
	0.1nm,0.3s,baz=337,slow=12,SNR=7.0						
WRA				S	Sn	11 07 33.0	-12
	0.2nm,0.3s,baz=337,slow=22,SNR=6.8						
ASAR	**Alice Springs**	**17.39**	**166**	P	Pn	11 05 49.0	-2.0
	0.1nm,0.3s,baz=349,slow=11,SNR=4.4						
MKAR	**Makanchi Array**	**67.69**	**327**	P	P	11 12 37.2	-0.1
	0.3nm,0.4s,baz=134,slow=6.2,SNR=3.9						
TXAR	**Lajitas Array**	**125.23**	**59**	PKP	PKPdf	11 20 39.7	+0.1
	0.2nm,0.8s,baz=191,slow=1.8,SNR=2.9						

KRSC 08 11:03:40.6±0.6, **49°.15N**×**156°.20E**, **h5**km±5km, **ML4.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**1.77**	**347**	*e*P	Pn	11 04 12.0	+0.1
ALID				*i*S	Sn	11 04 34.5	-0.2
MIPR	**Malaya Ipel'ka**	**3.15**	**6**	*e*P	Pn	11 04 33.2	+2.4
PET	**Petropavlovsk**	**4.18**	**21**	P	Pn	11 04 48.0	+3.1
PET				*i*S	Sn	11 05 38.8	+4.8
AVH	**Avacha**	**4.42**	**20**	*e*P	Pn	11 04 52.5	+4.3
GNL	**Ganaly**	**4.68**	**13**	*e*P	Pn	11 04 55.4	+3.6
MKZ	**Mys Kozlova**	**6.41**	**30**	*e*P	Pn	11 05 16.6	+1.1
MKZ				*i*S	Sn	11 06 28.5	-0.4

IDC ***08*** *11:53:56.9*±*0.6, 16°.48S*×*167°.25E, h0km, mb4.3/13, mb1 4.5/13, mb1mx4.4/17, mbtmp4.3/13, MS3.8/7, Ms1 3.7/7, ms1mx3.4/37, Error ellipse: s-maj=22.0km s-min=18.0km az=119.0*

BJI ***08*** *11:53:58.3, 16°.50S*×*167°.10E, h22km, mB5.2/8, mb5.0/17*

ISCJB ***08*** *11:53:59.3*±*3.6, 16°.60S*±*0°.05*×*167°.21E*±*0°.09, h27km*±*25km, mb4.6/30, MS3.6/6, Error ellipse: s-maj=13.7km s-min=7.7km az=175.5*

LDG ***08*** *11:54:00.3*±*0.2, 16°.38S*×*166°.28E, h10km, Mb4.8/3, Error ellipse: s-maj=23.3km s-min=7.8km az=83.0*

NEIC ***08*** *11:54:05.3*±*1.3, 16°.53S*×*167°.12E, h62km*±*12km, mb4.7/17, Error ellipse: s-maj=10.7km s-min=6.8km az=161.0*

ISC 08 11:53:59.8±3.7, **16°.57S**±0°.04×**167°.26E**±0°.09, **h19**km±22km, **n106**, n_0**0**≥**91**/54, **mb4.6**/30, **MS3.6**/6, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.53**	**188**	*e*Pn	**Pn**	**11 55 20.6**	**-0.6**
	46nm,0.3s						
DZM				*e*Sn	**Sn**	**11 56 24.9**	**+0.7**
	57nm,0.3s						
DZM				*e*LR	LR	11 56 33.5	
	2μm,24.9s						
DZM	**Mont Dzumac**	**5.53**	**188**	*e*P	**Pn**	**11 55 20.3**	**-0.9**
DZM				*e*S	**Sn**	**11 56 21.9**	**-2.3**
DZM	**Mont Dzumac**	**5.53**	**188**	*e*Pn	**Pn**	**11 55 20.2**	**-1.0**
	65nm,0.5s						
DZM				*e*Sn	**Sn**	**11 56 26.7**	**+2.4**
BAYA	**Yate Dam**	**5.57**	**184**	*e*S	**Sn**	**11 56 24.1**	**-1.1**
NOUC	**Port Laguerre**	**5.58**	**189**	*e*P	**Pn**	**11 55 21.5**	**-0.4**
NOUC				*e*S	**Sn**	**11 56 25.8**	**+0.4**
MSVF	**Nonsavu**	**10.38**	**98**	*e*Pn	**Pn**	**11 56 34.1**	**+6.4**
	92nm,1.5s						
EIDS	**Eidsvold**	**17.45**	**237**	*e*P	**Pn**	**11 58 04.7**	**+2.5**
EIDS	**Eidsvold**	**17.45**	**237**	*e*P	**Pn**	**11 58 03.4**	**+1.2**
	80nm,1.5s						
RAO	**Raoul Island**	**18.57**	**135**	LR	LR	12 04 12.3	
	comp=Z,227nm,19.9s,baz=318,slow=33						
RMQ	**Roma**	**19.82**	**237**	*e*P	**Pn**	**11 58 31.4**	**+0.4**
	77nm,1.1s						
ARMA	**Armidale**	**19.86**	**223**	*e*P	**Pn**	**11 58 29.9**	**-1.5**
	28nm,1.1s						
CTA	**Charters Tower**	**20.24**	**257**	*e*P	**P**	**11 58 34.7**	**+0.6**
	9.2nm,0.8s						
CTA	**Charters Tower**	**20.24**	**257**	P	**P**	**11 58 35.6**	**+1.5**
	14nm,0.9s,baz=92,slow=12,SNR=10						
CTA				LR	LR	12 05 32.1	
	comp=Z,175nm,18.3s,MS3.5,baz=266,slow=34						
CTAO	**Charters Tower**	**20.24**	**257**	*e*P	**P**	**11 58 35.0**	**+0.9**
	20nm,0.9s						
AFI	**Afiamalu**	**20.40**	**85**	LR	LR	12 05 06.6	
	comp=Z,252nm,19.2s,MS3.6,baz=253,slow=33						
URZ	**Urewera**	**23.28**	**160**	P	**P**	**11 59 08.1**	**+1.6**
	16nm,0.8s,mb4.5,baz=329,slow=13,SNR=14						
URZ				LR	LR	12 06 28.2	
	comp=Z,308nm,19.4s,MS3.8,baz=8.5,slow=32						
URZ	**Urewera**	**23.28**	**160**	*e*P	**P**	**11 59 07.7**	**+1.3**
	22nm,0.9s,mb4.6						
URZ				LR	LR	12 06 28.2	
COEN	**Coen**	**23.38**	**273**	*e*P	**P**	**11 59 08.3**	**+0.6**
	104nm,1.2s,mb5.1						
CMSA	**Cobar Meteorol**	**24.63**	**229**	*e*P	**P**	**11 59 19.7**	**+0.6**
RPZ	**Rata Peaks**	**27.25**	**174**	LR	LR	12 09 04.9	
	comp=Z,268nm,20.9s,MS3.8,baz=19,slow=33						
STKA	**Stephens Creek**	**27.83**	**232**	*e*P	**P**	**11 59 48.8**	**+0.7**
	15nm,0.9s,mb4.6						
STKA	**Stephens Creek**	**27.83**	**232**	P	**P**	**11 59 48.6**	**+0.6**
	20nm,1.0s,mb4.7,baz=53,slow=8.0,SNR=28						
STKA				PcP	PcP	12 03 04.0	0.0
	5.6nm,0.7s,baz=345,slow=3.8,SNR=6.6						
STKA				LR	LR	12 09 24.6	
	comp=Z,103nm,19.2s,MS3.4,baz=206,slow=33						
STKA	**Stephens Creek**	**27.83**	**232**	*e*P	**P**	**11 59 48.2**	**+0.1**
	4.4nm,0.9s,mb4.1						
STKA				PcP	PcP	12 03 04.0	0.0
STKA				LR	LR	12 09 24.6	
WRAB	**Tennant Creek**	**31.41**	**259**	*e*P	**P**	**12 00 18.1**	**-1.8**
	8.7nm,1.0s,mb4.5						
WRA	**Warramunga Arr**	**31.42**	**259**	P	**P**	**12 00 18.7**	**-1.3**
	5.3nm,0.9s,mb4.3,baz=89,slow=9.0,SNR=24						
ASAR	**Alice Springs**	**32.05**	**252**	P	**P**	**12 00 25.5**	**-0.1**
	50nm,0.8s,mb5.4,baz=78,slow=8.5,SNR=513						
FORT	**Forrest**	**38.38**	**241**	*e*P	**P**	**12 01 19.9**	**-0.1**
	14nm,0.8s,mb4.7						
FITZ	**Fitzroy Crossi**	**39.70**	**261**	*e*P	**P**	**12 01 30.7**	**-0.5**
	19nm,0.9s,mb4.8						
FITZ	**Fitzroy Crossi**	**39.70**	**261**	*e*P	**P**	**12 01 30.1**	**-1.1**
	11nm,0.9s,mb4.6						
PPT	**Papeete**	**41.21**	**98**	*e*LR	LR	12 13 04.1	
	265nm,29.0s						
MBWA	**Marble Bar**	**45.08**	**256**	*e*P	**P**	**12 02 14.5**	**-0.5**
	23nm,1.1s,mb4.9						
KLBR	**Kellerberrin**	**47.22**	**242**	*e*P	**P**	**12 02 31.1**	**-0.6**
	65nm,1.4s,mb5.4						
DAV	**Davao City (W)**	**47.45**	**296**	LR	LR	12 20 06.9	
	comp=Z,121nm,20.5s,MS3.9,baz=213,slow=33						
MJAR	**Matsushiro Arr**	**59.52**	**333**	P	**P**	**12 04 00.6**	**-1.3**
	1.4nm,0.9s,mb4.0,baz=167,slow=7.6,SNR=6.5						
CASY	**Casey**	**61.84**	**203**	*e*P	**P**	**12 04 17.4**	**+0.1**
	8.1nm,0.8s,mb4.9						
KSRS	**Korea Array**	**65.25**	**326**	P	**P**	**12 04 40.4**	**+0.2**
	2.2nm,0.8s,mb4.2,baz=140,slow=7.1,SNR=14						
PETK	**Petropavlovsk-**	**69.87**	**354**	P	**P**	**12 05 09.1**	**0.0**
	5.5nm,0.8s,mb4.5,baz=134,slow=6.4,SNR=5.8						
MDJ	**Mudanjiang**	**69.89**	**332**	P	**P**	**12 05 09.4**	**0.0**
MDJ				pmax	pmax		
	comp=Z,12nm,1.5s,mb4.6						
MDJ				pmax	pmax		
	comp=Z,47nm,6.5s						
CN2	**Changchun**	**71.21**	**329**	*e*P	**P**	**12 05 17.5**	**+0.1**
CN2				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
ENH	**Enshi**	**72.52**	**310**	*e*P	**P**	**12 05 25.0**	**-0.7**
	comp=Z,16nm,1.2s,mb4.8						
QSPA	**South Pole Qui**	**73.47**	**180**	*e*P	**P**	**12 05 31.9**	**+1.4**
	comp=Z,20nm,1.0s,mb5.0						
XAN	**Xi'an**	**74.92**	**313**	P	**P**	**12 05 40.2**	**+0.5**
XAN				pP	pP	12 05 44.8	-1.2
XAN				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
CMAR	**Chiang Mai Arr**	**75.69**	**294**	P	**P**	**12 05 45.5**	**+1.0**
	comp=Z,1.4nm,0.6s,mb4.1,baz=130,slow=5.1,SNR=8.9						
LZH	**Lanzhou**	**79.54**	**313**	*e*P	**P**	**12 06 07.1**	**+1.5**
LZH				pmax	pmax		
	comp=Z,33nm,1.3s,mb5.1						
LZH				pmax	pmax		
	comp=Z,120nm,4.3s						
MAW	**Mawson**	**80.19**	**202**	P	**P**	**12 06 08.6**	**0.0**
	comp=Z,4.1nm,0.8s,mb4.4,baz=106,slow=6.8,SNR=6.8						
MAW	**Mawson**	**80.19**	**202**	*e*P	**P**	**12 06 09.6**	**+1.0**
	comp=Z,1.0nm,0.8s,mb3.8						
ULN	**Ulaanbaatar**	**83.61**	**324**	*e*P	**P**	**12 06 27.0**	**+0.2**
	comp=Z,3.1nm,0.7s,mb4.5						
GTA	**Gaotai**	**83.93**	**314**	P	**P**	**12 06 30.1**	**+1.5**
GTA				pP	pP	12 06 33.1	-1.9
GTA				sP	sP	12 06 36.1	-1.2
GTA				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.2						
SONM	**Songino Array**	**83.96**	**324**	P	**P**	**12 06 28.5**	**-0.1**
	comp=Z,1.8nm,0.6s,mb4.4,baz=153,slow=7.2,SNR=8.1						
BILL	**Bilibino**	**84.37**	**360**	*e*P	**P**	**12 06 29.4**	**-0.8**
	comp=Z,32nm,1.3s,mb5.3						
BPAW	**Bear Paw Mtn.**	**86.58**	**17**	*e*P	**P**	**12 06 39.8**	**-1.5**
	comp=Z,1.6nm,0.7s,mb4.4						
NVAR	**Mina Array Bea**	**88.47**	**49**	P	**P**	**12 06 51.0**	**0.0**
	comp=Z,0.5nm,0.8s,mb3.8,baz=236,slow=9.6,SNR=3.4						
TXAR	**Lajitas Array**	**97.16**	**62**	P	**P**	**12 07 31.2**	**-0.1**
	comp=Z,0.2nm,0.9s,mb3.5,baz=245,slow=7.9,SNR=3.3						
MK31	**Makanchi Array**	**98.52**	**316**	*e*P	**P**	**12 07 36.8**	**-0.3**
MKAR	**Makanchi Array**	**98.52**	**316**	P	**P**	**12 07 37.0**	**0.0**
	comp=Z,0.5nm,0.5s,mb4.3,baz=74,slow=8.9,SNR=7.5						
ARCES	**ARCESS Array B**	**122.02**	**345**	PKP	PKPdf	12 12 52.1	-0.2
	comp=Z,2.2nm,0.4s,baz=87,slow=2.0,SNR=27						
FINES	**FINESS Array B**	**127.41**	**338**	PKP	PKPdf	12 13 02.9	0.0
	comp=Z,0.8nm,0.4s,baz=54,slow=1.0,SNR=10						
AKASG	**Malin Array Be**	**132.23**	**325**	PKP	PKPdf	12 13 12.5	+0.1
	comp=Z,0.2nm,0.3s,baz=65,slow=2.6,SNR=7.3						
NOA	**NORSAR Array B**	**132.38**	**344**	PKP	PKPdf	12 13 11.1	-1.2
	comp=Z,0.8nm,0.7s,baz=34,slow=2.0,SNR=4.0						
BRTR	**Keskin Array B**	**133.68**	**309**	PKP	PKPdf	12 13 15.9	+0.4
	comp=Z,0.4nm,0.5s,baz=143,slow=2.8,SNR=3.3						
BRG	**Berggiesshubel**	**139.65**	**334**	*e*P	PKPdf	12 13 26.7	+0.5
	comp=Z,6.3nm,1.4s						
CLL	**Collm**	**139.71**	**335**	*e*PKPdf	PKPdf	12 13 28.0	+1.7
GERES	**GERESS Array B**	**141.26**	**332**	PKhKP		12 13 23.5	
	comp=Z,0.2nm,0.5s,baz=270,slow=1.0,SNR=2.9						
GERES				PKP	PKPdf	12 13 29.8	+0.7
	comp=Z,0.6nm,0.6s,baz=0.0,slow=5.3,SNR=7.2						
BAIF	**Baives**	**143.89**	**341**	*e*PKP1	PKPdf	12 13 33.9	+0.1
CDF	**Champ du Feu**	**144.26**	**337**	*e*PKP1	PKPdf	12 13 32.6	-1.9
HINF	**Hinteralfeld**	**144.91**	**337**	*e*PKP1	PKPdf	12 13 34.9	-0.7
HAU	**Haudompre**	**144.94**	**338**	*e*PKP1	PKPdf	12 13 35.3	-0.4
MEZF	**Maizieres J'vi**	**144.98**	**339**	*e*PKP1	PKPdf	12 13 35.4	-0.3
TIP	**Timpagrande**	**145.80**	**317**	*e*PKPdf	PKPdf	12 13 38.3	+0.9
AQU	**L'Aquila**	**145.93**	**324**	*e*PKPdf	PKPdf	12 13 38.0	+0.4
CABF	**La Chapelle**	**146.20**	**336**	*e*PKP1	PKPbc	12 13 39.3	+0.4
FLN	**La Foliniere**	**146.36**	**345**	*e*PKP1	PKPbc	12 13 39.1	-0.2
	comp=Z,17nm,0.5s						
LDF	**La Druitiere**	**146.43**	**345**	*e*PKP1	PKPbc	12 13 39.2	-0.3
	comp=Z,20nm,0.7s						
LOR	**Lormes**	**146.45**	**339**	*e*PKP1	PKPbc	12 13 40.0	+0.4
	comp=Z,32nm,0.9s						
SSF	**Saint Saulge**	**146.75**	**340**	*e*PKP1	PKPbc	12 13 40.9	+0.4
	comp=Z,42nm,0.8s						
GRR	**Gorron**	**146.80**	**345**	*e*PKP1	PKPbc	12 13 40.6	0.0
	comp=Z,24nm,0.6s						
LPL	**La Plagne**	**146.85**	**335**	*e*PKP1	PKPbc	12 13 41.4	+0.6
	comp=Z,12nm,0.7s						
HYF	**Humbligny**	**146.85**	**341**	*e*PKP1	PKPbc	12 13 41.4	+0.6
LPG	**La Plagne**	**146.85**	**335**	*e*PKP1	PKPbc	12 13 41.8	+0.9
	comp=Z,18nm,0.8s						
SMF	**Signal de Mont**	**146.99**	**339**	*e*PKP1	PKPbc	12 13 41.3	+0.1
AVF	**Avril sur Loir**	**147.03**	**340**	*e*PKP1	PKPbc	12 13 41.3	0.0
	comp=Z,7.1nm,0.7s						
BNI	**Bardonecchia**	**147.24**	**334**	*e*PKPbc	PKPbc	12 13 42.5	+0.5
SGMF	**Saint Gilles**	**147.31**	**347**	*e*PKP1	PKPbc	12 13 41.3	-0.7
	comp=Z,26nm,0.7s						
ROSF	**Rostrenen**	**147.38**	**348**	*e*PKP1	PKPbc	12 13 41.4	-0.8
BGF	**Bois d'Agland**	**147.41**	**340**	*e*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**46.41**	**258**	P	P	12 13 27.9	0.0
	0.7nm,0.5s,baz=93,slow=7.4,SNR=28						
ASAR	**Alice Springs**	**46.62**	**253**	P	P	12 13 29.4	-0.1
	2.6nm,0.6s,baz=88,slow=8.4,SNR=68						
BRTR	**Keskin Array B**	**145.28**	**317**	PKPbc	PKPbc	12 24 37.1	-1.7
	0.7nm,0.8s,baz=98,slow=3.2,SNR=3.9						
GERES	**GERESS Array B**	**147.13**	**347**	PKPbc	PKPbc	12 24 44.5	+0.4
	0.8nm,0.7s,baz=0.0,slow=2.7,SNR=4.6						

NEIC ***08*** *12:07:20.9±5.0, 18.08S×178.30W, h592km±60km, mb4.0/2, Error ellipse: s-maj=33.9km s-min=23.3km az=183.0*

IDC 08 12:07:21.6±4.5, 18.22S×178.24W, h602km±56km, mb3.0/6, mb1 3.3/6, mb1mx3.1/17, mbtmp3.0/6, Error ellipse: s-maj=41.6km s-min=19.8km az=166.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**20.38**	**191**	P	P	12 11 18.1	-0.3
	7.9nm,0.8s,baz=292,slow=5.4,SNR=5.8						
WRAB	**Tennant Creek**	**44.73**	**260**	*e*P	P	12 14 43.4	+0.4
	7.5nm,1.1s						
WRA	**Warramunga Arr**	**44.73**	**260**	P	P	12 14 42.9	-0.2
	0.7nm,0.4s,baz=93,slow=7.5,SNR=13						
WRA				PcP	PcP	12 16 11.8	-0.2
	0.4nm,0.4s,baz=91,slow=3.8,SNR=7.4						
ASAR	**Alice Springs**	**44.86**	**255**	P	P	12 14 44.3	+0.3
	2.1nm,0.6s,baz=88,slow=8.5,SNR=17						
ASAR				PcP	PcP	12 16 12.4	0.0
	0.8nm,0.5s,baz=103,slow=4.0,SNR=14						
QSPA	**South Pole Qui**	**71.84**	**180**	*e*P	P	12 17 46.5	+2.4
	4.0nm,0.9s						
NVAR	**Mina Array Bea**	**79.53**	**44**	P	P	12 18 26.5	-0.6
	0.2nm,0.5s,baz=230,slow=7.9,SNR=2.7						
TXAR	**Lajitas Array**	**86.02**	**58**	P	P	12 19 01.4	+1.7
	0.7nm,0.7s,baz=218,slow=5.7,SNR=9.6						
TXAR	**Lajitas Array**	**86.02**	**58**	P	P	12 19 01.4	+1.7
PDAR	**Pinedale Array**	**87.46**	**43**	P	P	12 19 06.8	+0.6
	0.4nm,0.6s,baz=300,slow=1.8,SNR=2.9						
ARCES	**ARCESS Array B**	**126.65**	**350**	PKP	PKPdf	12 25 15.8	-1.0
	4.1nm,0.9s,baz=38,slow=1.6,SNR=3.2						
BRTR	**Keskin Array B**	**145.11**	**315**	PKPbc	PKPbc	12 25 51.8	-0.9
	0.9nm,0.7s,baz=85,slow=2.5,SNR=5.1						
GERES	**GERESS Array B**	**147.95**	**345**	PKPbc	PKPbc	12 25 59.8	-0.2
	1.0nm,0.6s,baz=2.7,slow=2.8,SNR=5.4						

IDC ***08*** *12:15:37.9±0.7, 32.64N×105.52E, h0km, mb4.0/11, mb1 4.1/14, mb1mx3.9/32, mbtmp3.9/14, ML3.8/2, MS3.1/3, Ms1 3.2/3, ms1mx2.7/62, Error ellipse: s-maj=28.4km s-min=13.9km az=63.0*

ISCJB ***08*** *12:15:37.4±0.3, 32.67N±0.03×105.69E±0.04, h10km, mb4.1/18, Error ellipse: s-maj=4.8km s-min=4.4km az=39.9*

BJI ***08*** *12:15:38.7, 32.65N×105.60E, h9km, mB4.5/7, mb4.3/10, ML4.1/17, Ms3.9/9, Ms7 3.7/10*

NEIC ***08*** *12:15:39.7±0.3, 32.69N×105.58E, h10km, mb4.2/15, Error ellipse: s-maj=6.7km s-min=5.9km az=69.0*

ISC 08 12:15:39.7±0.3, 32.68N±0.03×105.59E±0.03, h10km, n44, σ1§12/58, mb4.1/18, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.36**	**222**	⇑*i*Pn	**Pn**	**12 16 19.0**	**+0.6**
CD2				Pg	**Pg**	**12 16 22.5**	**-2.4**
CD2				Sn	**Sn**	**12 16 48.2**	**+0.8**
CD2				Sg	**Sg**	**12 16 53.6**	**-1.8**
CD2				smax			
	comp=N,5μm,0.6s						
CD2				smax			
	comp=E,3μm,0.6s						
XAN	**Xi'an**	**3.10**	**63**	Pn	**Pn**	**12 16 30.6**	**+2.0**
XAN				Pg	**Pg**	**12 16 34.2**	**-4.9**
XAN				Sn	**Sn**	**12 17 08.1**	**+2.4**
XAN				Sg	**Sg**	**12 17 15.9**	**-3.3**
XAN				smax			
	comp=N,850nm,0.8s						
XAN				smax			
	comp=E,470nm,0.7s						
XAN				LR	LR		
	comp=Z,200nm,10.0s						
LZH	**Lanzhou**	**3.69**	**337**	Pn	**Pn**	**12 16 38.5**	**+1.8**
LZH				Pg	**Pg**	**12 16 48.3**	**-2.0**
LZH				Sn	**Sn**	**12 17 24.7**	**+4.4**
LZH				Sg	**Sg**	**12 17 34.0**	**-4.1**
LZH				smax			
	comp=N,1μm,0.5s						
LZH				smax			
	comp=E,3μm,0.6s						
LZH				LR	LR		
	comp=N,3μm,5.5s						
LZH				LR	LR		
	comp=Z,3μm,7.1s						
ENH	**Enshi**	**4.11**	**125**	*e*Pn	**Pn**	**12 16 44.4**	**+1.9**
ENH				*e*Sg	**Sg**	**12 17 50.0**	**-1.6**
GYA	**Guiyang**	**6.27**	**171**	Pn	**Pn**	**12 17 13.3**	**+1.0**
GYA				Sn	**Sn**	**12 18 24.0**	**0.0**
GYA				smax			
	comp=N,140nm,0.8s						
GYA				smax			
	comp=E,150nm,0.9s						
WHN	**Wuhan**	**7.77**	**104**	Pn	**Pn**	**12 17 32.2**	**-0.6**
WHN				Sn	**Sn**	**12 18 59.2**	**-1.7**
WHN				LR	LR		
	comp=N,1μm,4.3s						
WHN				LR	LR		
	comp=E,730nm,3.2s						
WHN				LR	LR		
	comp=Z,540nm,12.7s						
KMI	**Kunming**	**7.94**	**199**	P	**Pn**	**12 17 35.9**	**+0.8**
GTA	**Gaotai**	**8.18**	**327**	*e*P	**Pn**	**12 17 38.1**	**-0.3**
GTA				pP		12 17 42.0	
GTA				sP		12 17 44.6	
GTA				S	**Sn**	**12 19 08.8**	**-2.1**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				LR	LR		
	comp=N,680nm,8.9s						
GTA				LR	LR		
	comp=E,580nm,10.1s						
GTA				LR	LR		
	comp=Z,810nm,9.8s						
NJ2	**Nanjing**	**11.24**	**90**	*e*P	**Pn**	**12 18 23.6**	**+3.3**
NJ2				pP		12 18 27.6	
NJ2				sP		12 18 31.0	
NJ2				PP		12 18 33.3	
NJ2				S	**Sn**	**12 20 31.2**	**+5.2**
NJ2				sS		12 20 37.6	
NJ2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
NJ2				LR	LR		
	comp=N,160nm,7.4s						
NJ2				LR	LR		
	comp=E,210nm,7.8s						
NJ2				LR	LR		
	comp=Z,680nm,9.1s						
SONM	**Songino Array**	**15.15**	**2**	Pn	**Pn**	**12 19 14.9**	**+1.3**
	baz=188,slow=16,SNR=4.2						
SONM				LR	LR	12 25 36.8	
	comp=Z,122nm,19.6s,baz=80,slow=39						
ULN	**Ulaanbaatar**	**15.21**	**4**	*e*P	**Pn**	**12 19 21.7**	**+7.3**
	comp=Z,3.5nm,0.9s						
CMAR	**Chiang Mai Arr**	**15.38**	**204**	Pn	**Pn**	**12 19 16.8**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=21,slow=7.7,SNR=3.7						
CMAR				LR	LR	12 25 50.5	
	comp=Z,51nm,18.2s,baz=190,slow=40						
TAPN	**Taplejung**	**16.37**	**256**	*e*P	**Pn**	**12 19 29.4**	**-0.2**
	comp=Z,44nm,1.3s						
ODAN	**Odare**	**16.83**	**255**	*e*P	**Pn**	**12 19 34.9**	**-0.5**
	comp=Z,14nm,0.6s						
RAMN	**Ramite**	**17.43**	**256**	*e*P	**Pn**	**12 19 43.3**	**+0.3**
	comp=Z,18nm,0.8s						
GUN	**Gumba**	**17.67**	**260**	*e*P	**Pn**	**12 19 47.0**	**+1.1**
	comp=Z,14nm,0.6s						
KKN	**Kakani**	**18.21**	**260**	*e*P	**Pn**	**12 19 53.3**	**+0.7**
	comp=Z,17nm,0.7s						
DMN	**Daman**	**18.41**	**259**	*e*P	**Pn**	**12 19 55.8**	**+0.7**
	comp=Z,20nm,0.9s						
KSRS	**Korea Array**	**18.88**	**69**	P	**Pn**	**12 20 00.5**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=252,slow=9.9,SNR=8.4						
KSRS				LR	LR	12 27 55.6	

	comp=Z,38nm,19.1s,baz=115,slow=39						
MK31	**Makanchi Array**	**22.68**	**315**	*e*P	**P**	**12 20 40.9**	**-0.3**
MKAR	**Makanchi Array**	**22.68**	**315**	P	**P**	**12 20 41.0**	**-0.1**
	comp=Z,1.2nm,0.6s,mb3.5,baz=108,slow=14,SNR=21						
TKM2	**Tokmak 2**	**25.69**	**302**	*e*P	**P**	**12 21 10.9**	**+1.2**
	comp=Z,2.3nm,0.6s,mb3.9						
ZALV	**Zalesovo Beam**	**25.90**	**331**	P	**P**	**12 21 11.5**	**0.0**
	comp=Z,0.7nm,0.3s,mb3.6,baz=138,slow=9.7,SNR=3.2						
ZALV	**Zalesovo Beam**	**25.90**	**331**	P	**P**	**12 21 11.5**	**0.0**
UCH	**Uchtor**	**26.32**	**300**	*e*P	**P**	**12 21 17.3**	**+1.8**
	comp=Z,6.2nm,1.1s,mb4.0						
KURK	**Kurchatov**	**26.79**	**320**	P	**P**	**12 21 19.9**	**+0.2**
	comp=Z,1.0nm,0.6s,mb3.5,baz=131,slow=8.5,SNR=7.6						
KURK	**Kurchatov**	**26.79**	**320**	*e*P	**P**	**12 21 19.4**	**-0.3**
	comp=Z,5.6nm,1.1s,mb4.0						
PSI	**Prapat**	**30.38**	**193**	P	**P**	**12 21 52.0**	**+0.1**
	comp=Z,1.4nm,0.3s,mb4.1,baz=0.0,slow=8.1,SNR=3.1						
BVAR	**Borovoye Array**	**32.38**	**319**	P	**P**	**12 22 09.5**	**+0.3**
	comp=Z,0.3nm,0.5s,mb3.4,baz=74,slow=5.1,SNR=2.5						
ABKAR	**Akbulak array**	**37.60**	**310**	*e*P	**P**	**12 22 54.6**	**+0.3**
	comp=Z,0.8nm,0.6s,mb3.6						
TIXI	**Tiksi**	**40.96**	**11**	*e*P	**P**	**12 23 21.1**	**-1.0**
	comp=Z,2.4nm,0.8s,mb3.9						
JOF	**Joensuu**	**54.38**	**327**	*e*p	**P**	**12 25 05.9**	**-0.4**
	comp=Z,2.9nm,0.6s,mb4.4						
JOF	**Joensuu**	**54.38**	**327**	*e*p	**P**	**12 25 05.9**	**-0.4**
	comp=Z,2.9nm,0.6s,mb4.4						
KAF	**Kangasniemi**	**56.77**	**326**	*e*p	**P**	**12 25 22.3**	**-1.2**
	comp=Z,7.5nm,1.0s,mb4.7						
KAF	**Kangasniemi**	**56.77**	**326**	*e*p	**P**	**12 25 22.3**	**-1.2**
	comp=Z,7.5nm,1.0s,mb4.7						
FINES	**FINESS Array B**	**56.97**	**326**	P	**P**	**12 25 24.6**	**-0.4**
	comp=Z,2.2nm,0.5s,mb4.4,baz=92,slow=8.2,SNR=16						
WRAB	**Tennant Creek**	**59.11**	**148**	*e*P	**P**	**12 25 40.2**	**-0.2**
	comp=Z,3.2nm,0.7s,mb4.5						
WRA	**Warramunga Arr**	**59.11**	**148**	P	**P**	**12 25 40.2**	**-0.2**
	comp=Z,2.5nm,0.6s,mb4.4,baz=342,slow=7.3,SNR=19						
WRA	**Warramunga Arr**	**59.11**	**148**	P	**P**	**12 25 40.2**	**-0.2**
ASAR	**Alice Springs**	**62.21**	**151**	P	**P**	**12 26 01.5**	**0.0**
	comp=Z,1.5nm,0.6s,mb4.3,baz=334,slow=6.9,SNR=21						
HFS	**Hagfors**	**63.17**	**326**	P	**P**	**12 26 06.7**	**-0.8**
	comp=Z,2.3nm,0.8s,mb4.4,baz=111,slow=8.1,SNR=4.5						
NOA	**NORSAR Array B**	**64.01**	**327**	P	**P**	**12 26 12.5**	**-0.6**
	comp=Z,1.5nm,0.8s,mb4.0,baz=66,slow=6.1,SNR=3.3						
INK	**Inuvik**	**70.25**	**20**	P	**P**	**12 26 52.6**	**+0.1**
	comp=Z,1.7nm,0.8s,mb4.1,baz=329,slow=10,SNR=5.0						
INK	**Inuvik**	**70.25**	**20**	*e*P	**P**	**12 26 52.1**	**-0.5**
	comp=Z,3.7nm,1.1s,mb4.2						

TIR ***08*** *12:25:14.5±6.9, 37.55N×22.04E, h0km±999km*

SZGRF ***08*** *12:25:21.8, 37.47N×21.64E, h10km, mb6.1, MS6.2, Southern Greece*

PRU ***08*** *12:25:22.5, 37.84N×22.15E, h0km, M6.2*

IDC ***08*** *12:25:26.6±0.3, 38.01N×21.64E, h0km, mb5.4/57, mb1 5.4/67, mb1mx5.4/67, mbtmp5.4/67, ML4.8/9, MS6.2/45, Ms1 6.2/45, ms1mx6.1/61, Error ellipse: s-maj=6.5km s-min=5.8km az=74.0*

BJI ***08*** *12:25:26.4, 38.24N×21.41E, h13km, mB5.9/30, mb5.7/62, Ms6.5/71, Ms7 6.2/55*

MOS ***08*** *12:25:27.5±1.4, 37.99N×21.45E, h14km, mb6.2/105, MS6.3/104, Error ellipse: s-maj=3.1km s-min=1.8km az=106.7*

NIC ***08*** *12:25:27.7±0.2, 38.57N×21.72E, h8km, mb6.4, ML6.1, MW4.5, Greece 7km. E Vardha*

ATH ***08*** *12:25:27.9, 37.98N×21.51E, h25km, ML6.5*

ISCJB ***08*** *12:25:28.5±0.2, 37.98N±0.009×21.429E±0.008, h17km±1km, mb6.0/380, MS6.3/266, Error ellipse: s-maj=1.6km s-min=1.0km az=18.1*

SGS ***08*** *12:25:28.6, 37.92N×21.41E, h15km*

THE ***08*** *12:25:28.4, 37.95N×21.54E, h3km±1km, ML6.8/6, Error ellipse: s-maj=1.8km s-min=1.0km az=130.0*

BGS ***08*** *12:25:28.8±1.4, 37.90N×21.36E, h10km, mb6.2, MS6.3*

PDG ***08*** *12:25:28.1±1.1, 37.95N×21.45E, h14km±2km, MD6.2/9, ML6.2/10, Error ellipse: s-maj=1.3km s-min=1.1km az=90.0*

NEIC ***08*** *12:25:29.7±0.1, 37.96N×21.53E, h16km, mb6.2/272, ME7.0, MS6.3/189, MW6.3, MW6.2, ML6.5(ATH), Error ellipse: s-maj=2.8km s-min=1.9km az=199.0 Broadband fault plane solution: P waves. NP1:φs215.00000°, δ85.00000°, λ175.00000°. NP2:φs305.00000°, δ85.00000°, λ5.00000°. Principal axes: T Plg7.0000°, Azm170.0000°; N Plg0.0000°, Azm0.0000°; P Plg0.0000°, Azm80.0000°; Moment Tension Solution. s145 Moment tensor: Scale 1018 Nm; Mrr0.16; Mθθ1.88; Mφφ-2.05; Mrθ-0.30; Mθφ1.45; Mφr-0.11; Best double couple: M0 2.50000×1018 NP1: φs297.00000°, δ84.00000°, λ6.00000°. NP2:φs206.00000°, δ84.00000°, λ174.00000°. Principal axes: T 2.4000, Plg8.0000°, Azm161.0000°; N 0.1200, Plg81.0000°, Azm343.0000°; P -2.5300, Plg0.0000°, Azm251.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*

NEIC Two people killed, at least 240 injured and at least 1,156 buildings damaged or destroyed in Achaia and Ileia. Felt [VIII] at Kato Achaia; [VII] at Patrai and Rion; [VI] at Agrinion; [V] at Corinth, Tripolis and Zakynthos; [IV] at Agia Paraskevi, Aigina, Argostolion, Athens, Ioannina, Kallithea, Karditsa, Kifisia, Nydri, Preveza, Trikala and Volos; [III] at Amarousion, Galatsion, Glifadha, Kalamakion, Khalandrion, Larisa, Nea Erithraia, Nea Ionia, Nea Smirni, Nikaia, Palaion Faliron and Piraeus; [II] at Aigaleo, Chani, Korydallos and Voula. Felt in most parts of Greece. Also felt at Tirana, Albania; Barletta, Brindisi, Cosenza, Lecce, Matera, Naples and Taranto, Italy; Ohrid, Macedonia.

SFS ***08*** *12:25:29.0, 38.04N×21.54E, h10km*

CSEM ***08*** *12:25:29.7±0.1, 37.99N×21.49E, h15km, mb6.1/99, Ms6.2, Mw6.4, Error ellipse: s-maj=2.3km s-min=1.6km az=14.0*

IPEC ***08*** *12:25:30.0±0.1, 37.82N×21.19E, h53km±8km, Error ellipse: s-maj=2.0km s-min=1.1km az=42.0*

PDA ***08*** *12:25:30.2, 38.00N×21.47E, h16km, mb6.2*

TEH ***08*** *12:25:30.0, 37.82N×21.41E, h26km*

GCMT ***08*** *12:25:36.9±0.1, 37.93N×21.63E, h25km, MW6.4, Moment Tension Solution. s104, c238; s95, c176; Moment tensor: Scale 1018Nm; Mrr-0.29±.03; Mθθ3.87±.03; Mφφ-3.58±.03; Mrθ-1.39±.07; Mrφ2.16±.02; Mθr-0.79±.07; Best double couple: M0 4.60000×1018 NP1:φs301.00000°, δ74.00000°, λ7.00000°. NP2:φs209.00000°, δ83.00000°, λ164.00000°. Principal axes: T 4.9100, Plg17.0000°, Azm164.0000°; N -0.7100, Plg72.0000°, Azm6.0000°; P -4.2100, Plg6.0000°, Azm256.0000°; Data Used: II IU IC G CN. Surface waves: sta=109, comp=254, per= 50.*

HLW ***08*** *12:25:37.6, 37.50N×23.08E, h11km±18km, Md5.5, Ml5.7*

DJA ***08*** *12:25:41, 38.10N×21.31E, h115km, Mw6.1/17*

ISC 08 12:25:29.7±0.2, 37.961N±0.008×21.449E±0.008, h16km±1km, h15km±1.0km:pP-P, n3163, σ1§26/3407, mb6.0/379, MS6.3/266, 300C-312D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.10**	**8**	*e*Pb	**Pg**	**12 25 32.5**	**-0.5**
RLS				*e*Sb	**Sg**	**12 25 36.1**	**+0.8**
RLS	**Riolos of Patr**	**0.10**	**8**	*e*PB	**Pg**	**12 25 32.5**	**-0.5**
RLS				*e*SB	**Sg**	**12 25 36.1**	**+0.8**
RLS	**Riolos of Patr**	**0.10**	**8**	*e*Pb	**Pg**	**12 25 32.5**	**-0.5**
RLS				*e*Sb	**Sg**	**12 25 36.1**	**+0.8**
UPR	**University Cam**	**0.42**	**39**	*e*PB	**Pg**	**12 25 36.8**	**-1.4**
UPR				*e*SB	**Sg**	**12 25 42.2**	**-1.7**
UPR	**University Cam**	**0.42**	**39**	*e*Pb	**Pg**	**12 25 36.8**	**-1.4**
UPR				*e*Sb	**Sg**	**12 25 42.2**	**-1.7**
LAKA	**Lakka**	**0.50**	**56**	P	**Pg**	**12 25 37.8**	**-1.9**
LAKA				S	**Sg**	**12 25 43.0**	**-3.5**
LAKA	**Lakka**	**0.50**	**56**	P	**Pg**	**12 25 37.8**	**-1.9**
LAKA				S	**Sg**	**12 25 43.0**	**-3.5**
KFL	**Anninata**	**0.54**	**286**	P	**Pg**	**12 25 39.9**	**-0.5**
EFP	**Efpalio**	**0.59**	**38**	P	**Pg**	**12 25 39.4**	**-1.9**
EFP				S	**Sg**	**12 25 47.4**	**-1.8**
EFP	**Efpalio**	**0.59**	**38**	*e*PN	**Pg**	**12 25 39.3**	**-2.0**
EFP				*e*SN	**Sg**	**12 25 47.6**	**-1.6**
EFP	**Efpalio**	**0.59**	**38**	*e*Pn	**Pg**	**12 25 39.3**	**-2.0**
EFP				S	**Sg**	**12 25 47.4**	**-1.8**
KALE	**Kalithea**	**0.69**	**52**	P	**Pg**	**12 25 40.8**	**-2.5**
KALE				S	**Sg**	**12 25 50.7**	**-1.8**
KALE	**Kalithea**	**0.69**	**52**	P	**Pg**	**12 25 40.8**	**-2.5**

KALE				S	**Sg**	**12 25 50.7**	**-1.8**
GUR	**Goura**	**0.71**	**92**	P	**Pg**	**12 25 40.9**	**-2.6**
GUR	**Goura**	**0.71**	**92**	*e*PN	**Pg**	**12 25 40.9**	**-2.6**
GUR				*e*SN	**Sg**	**12 25 51.2**	**-1.7**
GUR	**Goura**	**0.71**	**92**	*e*Pn	**Pg**	**12 25 40.9**	**-2.6**
GUR				*e*Sn	**Sg**	**12 25 51.2**	**-1.7**
VLS	**Valsamata**	**0.71**	**288**	P	**Pg**	**12 25 42.1**	**-1.5**
VLS				*e*Sn	**Sg**	**12 25 54.6**	**+1.6**
VLS	**Valsamata**	**0.71**	**288**	P	**Pg**	**12 25 42.1**	**-1.5**
VLS	**Valsamata**	**0.71**	**288**	*e*PN	**Pg**	**12 25 42.2**	**-1.4**
VLS				*e*SN	**Sg**	**12 25 54.6**	**+1.6**
VLS	**Valsamata**	**0.71**	**288**	*e*Pn	**Pg**	**12 25 42.2**	**-1.4**
VLS				*e*Sn	**Sg**	**12 25 54.6**	**+1.6**
ITM	**Ithomi**	**0.87**	**154**	P	**Pg**	**12 25 44.2**	**-2.3**
ITM				*e*Sn	**Sg**	**12 25 57.4**	**-0.5**
ITM	**Ithomi**	**0.87**	**154**	P	**Pg**	**12 25 44.2**	**-2.3**
ITM	**Ithomi**	**0.87**	**154**	*e*PN	**Pg**	**12 25 44.3**	**-2.2**
ITM				*e*SN	**Sg**	**12 25 57.4**	**-0.5**
ITM	**Ithomi**	**0.87**	**154**	P	**Pg**	**12 25 44.2**	**-2.3**
ITM				*e*Sn	**Sg**	**12 25 57.4**	**-0.5**
VLX	**Vlachokerasia**	**0.94**	**128**	P	**Pg**	**12 25 45.0**	**-3.0**
VLX				S	**Sg**	**12 25 58.6**	**-1.8**
VLX	**Vlachokerasia**	**0.94**	**128**	*e*PB	**Pg**	**12 25 44.9**	**-3.1**
VLX				*e*SN	**Sg**	**12 25 58.5**	**-1.9**
VLX	**Vlachokerasia**	**0.94**	**128**	P	**Pg**	**12 25 45.0**	**-3.0**
VLX				*e*Sn	**Sg**	**12 25 58.5**	**-1.9**
DSF	**Desfina**	**0.96**	**62**	P	**Pg**	**12 25 45.2**	**-3.1**
DSF				S	**Sg**	**12 25 58.1**	**-2.9**
DSF	**Desfina**	**0.96**	**62**	P	**Pg**	**12 25 45.2**	**-3.1**
DSF				S	**Sg**	**12 25 58.1**	**-2.9**
EVR	**Evrytania**	**0.99**	**16**	*e*Pn	**Pg**	**12 25 46.5**	**-2.5**
EVR				*e*Sn	**Sg**	**12 26 00.0**	**-2.0**
EVR	**Evrytania**	**0.99**	**16**	*e*PN	**Pg**	**12 25 46.5**	**-2.5**
EVR				*e*SN	**Sg**	**12 26 00.0**	**-2.0**
EVR	**Evrytania**	**0.99**	**16**	*e*Pn	**Pg**	**12 25 46.5**	**-2.5**
EVR				*e*Sn	**Sg**	**12 26 00.0**	**-2.0**
PYL	**PYLOS**	**1.09**	**168**	P	**Pg**	**12 25 47.2**	**-3.5**
PYL	**PYLOS**	**1.09**	**168**	*e*PN	**Pg**	**12 25 48.3**	**-2.4**
PYL				*e*SN	**Sg**	**12 26 04.4**	**-0.6**
PYL	**PYLOS**	**1.09**	**168**	P	**Pg**	**12 25 47.2**	**-3.5**
PYL	**PYLOS**	**1.09**	**168**	*e*Pn	**Pg**	**12 25 48.3**	**-2.4**
PYL				*e*Sn	**Sg**	**12 26 04.4**	**-0.6**
LTK	**Loutraki**	**1.20**	**87**	P	**Pn**	**12 25 49.3**	**-2.6**
LTK				S	**Sb**	**12 26 06.3**	**-1.1**
LTK	**Loutraki**	**1.20**	**87**	*e*PN	**Pn**	**12 25 49.5**	**-2.4**
LTK				*e*SN	**Sn**	**12 26 06.9**	**-0.9**
LTK	**Loutraki**	**1.20**	**87**	P	**Pn**	**12 25 49.3**	**-2.6**
LTK				S	**Sb**	**12 26 06.3**	**-1.1**
LTK				*e*Sn	**Sn**	**12 26 06.9**	**-0.9**
AGG	**Agios Georgios**	**1.27**	**33**	*e*Pn	**Pn**	**12 25 50.6**	**-2.1**
AGG				P		12 25 51.0	
AGG				*e*Sn	**Sn**	**12 26 08.6**	**-0.8**
AGG	**Agios Georgios**	**1.27**	**33**	P	**Pn**	**12 25 51.0**	**-1.7**
AGG				S	**Sb**	**12 26 08.7**	**-0.5**
AGG	**Agios Georgios**	**1.27**	**33**	*e*PN	**Pn**	**12 25 50.6**	**-2.1**
AGG				*e*SN	**Sn**	**12 26 08.6**	**-0.8**
AGG	**Agios Georgios**	**1.27**	**33**	*e*Pn	**Pn**	**12 25 50.6**	**-2.1**
LKR	**Lokris**	**1.40**	**60**	P	**Pn**	**12 25 52.7**	**-1.9**
LKR				*e*Pn	**Pn**	**12 25 53.0**	**-1.6**
LKR				*e*Sn	**Sn**	**12 26 11.2**	**-1.6**
LKR				S	**Sn**	**12 26 12.3**	**-0.5**
LKR	**Lokris**	**1.40**	**60**	P	**Pn**	**12 25 52.7**	**-1.9**
LKR				S	**Sn**	**12 26 12.3**	**-0.5**
LKR	**Lokris**	**1.40**	**60**	*e*PN	**Pn**	**12 25 53.0**	**-1.6**
LKR				*e*SN	**Sn**	**12 26 11.2**	**-1.6**
LKR	**Lokris**	**1.40**	**60**	P	**Pn**	**12 25 52.7**	**-1.9**
LKR	**Lokris**	**1.40**	**60**	*e*Pn	**Pn**	**12 25 53.0**	**-1.6**
LKR				*e*Sn	**Sn**	**12 26 11.2**	**-1.6**
LKR				S	**Sn**	**12 26 12.3**	**-0.5**
ATAL	**Atalanti**	**1.44**	**59**	P	**Pn**	**12 25 53.0**	**-2.1**
ATAL				S	**Sn**	**12 26 13.5**	**-0.1**
ATAL	**Atalanti**	**1.44**	**59**	P	**Pn**	**12 25 53.0**	**-2.1**
ATAL				S	**Sn**	**12 26 13.5**	**-0.1**
THL	**Klokotos Trika**	**1.66**	**15**	P	**Pn**	**12 25 58.6**	**+0.4**
THL				S	**Sn**	**12 26 20.2**	**+1.0**
THL	**Klokotos Trika**	**1.66**	**15**	*e*PN	**Pn**	**12 25 57.8**	**-0.4**
THL				*e*SN	**Sn**	**12 26 18.3**	**-0.9**
THL	**Klokotos Trika**	**1.66**	**15**	*e*Pn	**Pn**	**12 25 57.8**	**-0.4**
THL	**Klokotos Trika**	**1.66**	**15**	P	**Pn**	**12 25 58.6**	**+0.4**
THL				*e*Sn	**Sn**	**12 26 18.3**	**-0.9**
THL				S	**Sn**	**12 26 20.2**	**+1.0**
VLI	**Veliai**	**1.72**	**136**	*e*Pn	**Pn**	**12 25 58.8**	**-0.1**
VLI				*e*Sn	**Sn**	**12 26 20.5**	**0.0**
VLI	**Veliai**	**1.72**	**136**	*e*PN	**Pn**	**12 25 58.8**	**-0.1**
VLI				*e*SN	**Sn**	**12 26 20.5**	**0.0**
VLI	**Veliai**	**1.72**	**136**	*e*Pn	**Pn**	**12 25 58.8**	**-0.1**
VLI				*e*Sn	**Sn**	**12 26 20.5**	**0.0**
JAN	**Janina**	**1.76**	**345**	*e*PN	**Pn**	**12 25 59.7**	**+0.2**
JAN				*e*SN	**Sn**	**12 26 21.8**	**+0.3**
JAN	**Janina**	**1.76**	**345**	*e*Pn	**Pn**	**12 25 59.7**	**+0.2**
JAN				*e*Sn	**Sn**	**12 26 21.8**	**+0.3**
ATH	**Athens Observa**	**1.79**	**89**	*e*Pn	**Pn**	**12 25 58.3**	**-1.7**
ATH				P		12 25 58.7	
ATH	**Athens Observa**	**1.79**	**89**	*e*PN	**Pn**	**12 25 58.3**	**-1.7**
ATH	**Athens Observa**	**1.79**	**89**	*e*Pn	**Pn**	**12 25 58.3**	**-1.7**
IGT	**Igoumenitsa**	**1.80**	**331**	P	**Pn**	**12 26 00.4**	**+0.4**
IGT	**Igoumenitsa**	**1.80**	**331**	P	**Pn**	**12 26 00.4**	**+0.4**

BIA	Bitola	3.06	358	P	Pn	12 26 17.4	0.0
BIA	Bitola	3.06	358	*i* Pn	Pn	12 26 17.3	0.0
BIA	Bitola	3.06	358	P	Pn	12 26 17.4	0.0
BIA	Bitola	3.06	358	P	Pn	12 26 17.4	0.0
OUR	Ouranopolis	3.08	39	P	Pn	12 26 16.3	-1.4
OUR	Ouranopolis	3.08	39	P	Pn	12 26 16.3	-1.4
OUR	Ouranopolis	3.08	39	P	Pn	12 26 16.3	-1.4
SCTE	Santa Cesarea	3.14	313	*e*PN	Pn	12 26 18.3	-0.2
SCTE				*e*SN	Sn	12 26 55.9	+0.3
SCTE	Santa Cesarea	3.14	313	*e*Pn	Pn	12 26 18.3	-0.2
SCTE				*e*Sn	Sn	12 26 55.9	+0.3
OHR	Ohrid	3.19	351	P	Pn	12 26 19.5	+0.4
OHR	Ohrid	3.19	351	*i* Pn	Pn	12 26 19.4	+0.2
OHR				*e*Lg		12 27 13.7	
	comp=E,421µm,2.1s						
OHR				*e*Lg		12 27 18.0	
	comp=N,251µm,1.7s						
OHR	Ohrid	3.19	351	P	Pn	12 26 19.5	+0.4
OHR	Ohrid	3.19	351	P	Pn	12 26 19.5	+0.4
SOH	Sokhos	3.22	27	*e*Pn	Pn	12 26 19.7	+0.1
SOH				P		12 26 20.9	
SOH				*e*Sn	Sn	12 26 56.7	-0.8
SOH	Sokhos	3.22	27	*e*PN	Pn	12 26 19.7	+0.1
SOH				*e*SN	Sn	12 26 56.7	-0.8
SOH	Sokhos	3.22	27	*e*Pn	Pn	12 26 19.7	+0.1
KARN	Karanos	3.23	141	*e*PN	Pn	12 26 20.1	+0.3
KARN				*e*SN	Sn	12 26 57.8	-0.2
KARN	Karanos	3.23	141	*e*Pn	Pn	12 26 20.1	+0.3
KARN				*e*Sn	Sn	12 26 57.8	-0.2
APE	Apeiranthos	3.37	104	*e*Pn	Pn	12 26 20.4	-1.2
APE				P		12 26 20.6	
APE	Apeiranthos	3.37	104	P	Pn	12 26 20.6	-1.0
APE	Apeiranthos	3.37	104	⇓*i*P	Pb	12 26 29.5	+0.5
APE	Apeiranthos	3.37	104	*e*PN	Pn	12 26 20.4	-1.2
APE	Apeiranthos	3.37	104	P	Pn	12 26 20.6	-1.0
VAM	Vamos	3.37	138	*e*PN	Pn	12 26 21.5	-0.2
VAM				*e*SN	Sn	12 27 01.7	+0.3
VAM	Vamos	3.37	138	*e*Pn	Pn	12 26 21.5	-0.2
VAM				*e*Sn	Sn	12 27 01.7	+0.3
KRUS	Krusevo	3.41	357	*i* Pn	Pn	12 26 21.9	-0.3
VAY	Valandovo	3.47	14	*i* Pn	Pn	12 26 22.8	-0.2
VAY				*e*Lg		12 27 14.1	
	comp=N,87µm,1.3s						
VAY				*e*Lg		12 27 14.5	
	comp=E,599µm,3.3s						
VAY	Valandovo	3.47	14	P	Pn	12 26 22.8	-0.2
LIA	Limnos Island	3.50	55	P	Pn	12 26 21.6	-1.8
LIA				*e*Pn	Pn	12 26 22.8	-0.6
LIA				*e*Sn	Sn	12 27 03.1	-1.3
LIA	Limnos Island	3.50	55	P	Pn	12 26 21.6	-1.8
LIA	Limnos Island	3.50	55	*e*PN	Pn	12 26 22.8	-0.6
LIA				*e*SN	Sn	12 27 03.1	-1.3
LIA	Limnos Island	3.50	55	P	Pn	12 26 21.6	-1.8
LIA	Limnos Island	3.50	55	*e*Pn	Pn	12 26 22.8	-0.6
LIA				*e*Sn	Sn	12 27 03.1	-1.3
SRS	Serrai	3.56	27	P	Pn	12 26 23.9	-0.4
SRS	Serrai	3.56	27	P	Pn	12 26 23.9	-0.4
SRS	Serrai	3.56	27	P	Pn	12 26 23.9	-0.4
TIR	Tirane	3.60	341	*e*Pn	Pn	12 26 25.1	+0.3
TIR				*e*Sn	Sn	12 27 06.3	-0.6
TIR	Tirane	3.60	341	*e*PN	Pn	12 26 25.1	+0.3
TIR				*e*SN	Sn	12 27 06.2	-0.7
TIR	Tirane	3.60	341	*e*Pn	Pn	12 26 25.1	+0.3
TIR				*e*Sn	Sn	12 27 06.3	-0.6
CHOS	Chios island	3.66	82	P	Pn	12 26 24.2	-1.4
CHOS	Chios island	3.66	82	*e*PN	Pn	12 26 24.4	-1.2
CHOS				*e*SN	Sn	12 27 05.8	-2.6
CHOS	Chios island	3.66	82	P	Pn	12 26 24.2	-1.4
CHOS				*e*Sn	Sn	12 27 05.8	-2.6
SIGR	SIGRI	3.67	69	P	Pn	12 26 25.9	+0.1
SIGR	SIGRI	3.67	69	P	Pn	12 26 25.9	+0.1
SIGR	SIGRI	3.67	69	P	Pn	12 26 25.9	+0.1
STIP	Stip	3.77	8	*i* Pn	Pn	12 26 27.8	+0.6
STIP	Stip	3.77	8	P	Pn	12 26 27.7	+0.5
STIP	Stip	3.77	8	P	Pn	12 26 27.7	+0.5
GVD	Gavdhos	3.77	145	*e*Pn	Pn	12 26 27.0	-0.2
GVD	Gavdhos	3.77	145	*e*PN	Pn	12 26 27.0	-0.2
GVD	Gavdhos	3.77	145	*e*Pn	Pn	12 26 27.0	-0.2
IDI	Anoyia	3.84	133	Pn	Pn	12 26 26.8	-1.4
	comp=E,69nm,0.3s,baz=308,slow=13,SNR=119						
IDI				Sn	Sn	12 27 17.1	+4.0
	comp=E,639nm,0.3s,baz=36,slow=18,SNR=4.4						
IDI				LR	LR	12 27 37.7	
	comp=E,98µm,20.0s,baz=315,slow=35						
IDI	Anoyia	3.84	133	*e*PN	Pn	12 26 27.2	-1.0
IDI				*e*SN	Sn	12 27 11.4	-1.6
IDI	Anoyia	3.84	133	*e*Pn	Pn	12 26 27.2	-1.0
IDI				*e*Sn	Sn	12 27 11.4	-1.6
KAVA	Kavala	3.85	37	P	Pn	12 26 26.7	-1.6
KAVA	Kavala	3.85	37	P	Pn	12 26 26.7	-1.6
TIP	Timpagrande	3.87	290	*e*Pn	Pn	12 26 28.3	-0.3
TIP	Timpagrande	3.87	290	*e*Pn	Pn	12 26 28.3	-0.3
PRK	Paraskevi	3.99	70	P	Pn	12 26 28.0	-2.2
PRK				*e*Pn	Pn	12 26 29.3	-0.9
PRK	Paraskevi	3.99	70	P	Pn	12 26 28.0	-2.2
PRK	Paraskevi	3.99	70	*e*PN	Pn	12 26 29.3	-0.9
PRK	Paraskevi	3.99	70	P	Pn	12 26 28.0	-2.2
PRK	Paraskevi	3.99	70	*e*Pn	Pn	12 26 29.3	-0.9
SIVA	Sivas	4.00	136	*e*Pn	Pn	12 26 30.8	+0.5
SIVA	Sivas	4.00	136	*e*PN	Pn	12 26 30.8	+0.5
SIVA	Sivas	4.00	136	*e*Pn	Pn	12 26 30.8	+0.5
SKO	Skopje	4.01	360	P	Pn	12 26 30.6	+0.2
SKO	Skopje	4.01	360	*i* Pn	Pn	12 26 31.0	+0.6
SKO				*e*Lg		12 27 45.3	
	comp=N,179µm,2.3s						
SKO				*e*Lg		12 27 45.8	
	comp=E,373µm,3.0s						
SKO	Skopje	4.01	360	P	Pn	12 26 30.6	+0.2
SKO	Skopje	4.01	360	P	Pn	12 26 30.6	+0.2
GRI	Girifalco	4.04	284	P	Pn	12 26 31.3	+0.4
URLA	Izmir	4.08	83	*i* P	Pn	12 26 32.7	+1.3
GADA	Gvkgeada	4.12	56	*e*P	Pn	12 26 32.6	+0.6
EZN	Ezine	4.24	62	*e*P	Pn	12 26 34.5	+0.9
PUK	Puka	4.25	344	*e*PN	Pn	12 26 33.1	-0.6
SOI	Samo	4.26	273	P	Pn	12 26 32.9	-1.0
SMG	Samos	4.27	92	*e*Pn	Pn	12 26 33.2	-0.9
SMG	Samos	4.27	92	*e*PN	Pn	12 26 33.2	-0.9
SMG	Samos	4.27	92	*e*Pn	Pn	12 26 33.2	-0.9
LAST	Lasithi	4.28	130	P	Pn	12 26 33.6	-0.6
LAST				*e*Pn	Pn	12 26 33.8	-0.4
LAST	Lasithi	4.28	130	P	Pn	12 26 33.6	-0.6
LAST	Lasithi	4.28	130	*e*PN	Pn	12 26 33.8	-0.4
LAST	Lasithi	4.28	130	P	Pn	12 26 33.6	-0.6
NPS	Neapolis	4.30	128	*e*PN	Pn	12 26 33.7	-0.7
NPS	Neapolis	4.30	128	*e*Pn	Pn	12 26 33.7	-0.7
AYVA	Ayvalik	4.32	70	*i* P	Pn	12 26 36.1	+1.4
ULC	Ulcinj	4.34	338	⇓*i*Pn	Pn	12 26 34.4	-0.6
ULC				*e*Sn	Sn	12 27 26.2	+1.0
ULC	Ulcinj	4.34	338	P	Pn	12 26 34.0	-1.0
ULC	Ulcinj	4.34	338	P	Pn	12 26 34.0	-1.0
CEL	Celeste	4.39	276	⇓*e*Pn	Pn	12 26 34.7	-1.0
CEL	Celeste	4.39	276	⇓*e*Pn	Pn	12 26 34.7	-1.0
ORI	Oriolo Calabro	4.42	300	P	Pn	12 26 37.2	+1.0
BLCB	Balcova	4.43	83	*e*P	Pn	12 26 37.4	+1.2
BLCB	Balcova	4.43	83	P	Pn	12 26 35.6	-0.6
BLCB	Balcova	4.43	83	P	Pn	12 26 35.6	-0.6
BLCB	Balcova	4.43	83	P	Pn	12 26 35.6	-0.6
LTRZ	Laterza	4.46	308	P	Pn	12 26 36.1	-0.5
LTRZ	Laterza	4.46	308	P	Pn	12 26 36.1	-0.5
RDO	Rodhopi	4.48	44	P	Pn	12 26 35.4	-1.6
RDO				*e*Pn	Pn	12 26 36.1	-0.9
RDO	Rodhopi	4.48	44	P	Pn	12 26 35.4	-1.6
RDO	Rodhopi	4.48	44	*e*PN	Pn	12 26 36.1	-0.9
RDO	Rodhopi	4.48	44	P	Pn	12 26 35.4	-1.6
RDO	Rodhopi	4.48	44	*e*Pn	Pn	12 26 36.1	-0.9
BCI	Bajram Curri	4.53	347	*e*PN	Pn	12 26 38.3	+0.7
SCLL	Scilla	4.53	275	P	Pn	12 26 37.3	-0.4
SCLL	Scilla	4.53	275	P	Pn	12 26 37.3	-0.4
MTTG	Motta San Giov	4.55	272	P	Pn	12 26 36.7	-1.2
MTTG	Motta San Giov	4.55	272	P	Pn	12 26 36.7	-1.2
ENEZ	Enez	4.58	51	*e*P	Pn	12 26 39.1	+0.8
GCAM	G?zelcaml?	4.59	91	*i* P	Pn	12 26 39.5	+1.1
IZM	Izmir	4.60	83	*e*P	Pn	12 26 40.6	+2.0
ALN	Alexandroupoli	4.61	49	P	Pn	12 26 37.0	-1.7
ALN				*e*Pn	Pn	12 26 38.7	0.0
ALN	Alexandroupoli	4.61	49	P	Pn	12 26 37.0	-1.7
ALN	Alexandroupoli	4.61	49	*e*PN	Pn	12 26 38.7	0.0
ALN	Alexandroupoli	4.61	49	P	Pn	12 26 37.0	-1.7
ALN	Alexandroupoli	4.61	49	*e*Pn	Pn	12 26 38.7	0.0
BUM	Brajici-Budva	4.75	337	⇓*i*Pn	Pn	12 26 40.1	-0.6
BUM				*e*Sn	Sn	12 27 36.1	+0.6
BUM	Brajici-Budva	4.75	337	P	Pn	12 26 39.0	-1.7
BUM	Brajici-Budva	4.75	337	P	Pn	12 26 39.0	-1.7
PVY	Plav	4.76	347	⇑*i*Pn	Pn	12 26 41.3	+0.5
PVY				*e*Sn	Sn	12 27 36.5	+0.8
PVY	Plav	4.76	347	P	Pn	12 26 41.0	+0.2
PVY	Plav	4.76	347	P	Pn	12 26 41.0	+0.2
NIS1	Nisyros Isl.	4.77	105	P	Pn	12 26 42.4	+1.5
NIS1	Nisyros Isl.	4.77	105	P	Pn	12 26 42.4	+1.5
TTG	Podgorica	4.77	340	⇓*i*Pn	Pn	12 26 40.2	-0.7
TTG				*e*Sn	Sn	12 27 36.1	+0.3
TTG	Podgorica	4.77	340	P	Pn	12 26 40.0	-0.9
TTG	Podgorica	4.77	340	P	Pn	12 26 40.0	-0.9
ZKR	Zakros	4.78	125	*e*Pn	Pn	12 26 41.0	0.0
ZKR	Zakros	4.78	125	*e*PN	Pn	12 26 41.0	0.0
ZKR	Zakros	4.78	125	*e*Pn	Pn	12 26 41.0	0.0
LPK	Lapseki	4.78	58	*e*P	Pn	12 26 42.8	+1.7
PLD	Plovdiv	4.83	30	P	Pn	12 26 43.8	+2.0
PLD	Plovdiv	4.83	30	P	Pn	12 26 43.8	+2.0
PLD	Plovdiv	4.83	30	P	Pn	12 26 43.8	+2.0
BDRM	Kayabasi	4.85	99	*i* P	Pn	12 26 44.3	+2.3
BDRM	Kayabasi	4.85	99	*i* P	Pn	12 26 44.3	+2.3
PTRP	Pietrapertosa	4.90	303	P	Pn	12 26 44.3	+1.6
PTRP	Pietrapertosa	4.90	303	P	Pn	12 26 44.3	+1.6
AGST	Augusta-Monte	4.99	264	P	Pn	12 26 41.1	-2.8
AGST	Augusta-Monte	4.99	264	P	Pn	12 26 41.1	-2.8
HCY	Herceg Novi	5.02	334	⇓*i*Pn	Pn	12 26 44.3	0.0
HCY				*e*Sn	Sn	12 27 42.1	+0.1
HCY	Herceg Novi	5.02	334	P	Pn	12 26 42.0	-2.3
HCY	Herceg Novi	5.02	334	P	Pn	12 26 42.0	-2.3
DAT	Datca	5.04	102	*e*P	Pn	12 26 48.7	+4.1
DAT	Datca	5.04	102	*e*P	Pn	12 26 48.7	+4.1
IVA	Berane	5.05	347	⇓*i*Pn	Pn	12 26 45.2	+0.5
IVA				*e*Sn	Sn	12 27 43.7	+1.1
IVA	Berane	5.05	347	P	Pn	12 26 45.0	+0.3
IVA	Berane	5.05	347	P	Pn	12 26 45.0	+0.3
MLSB	Milas	5.07	96	*e*P	Pn	12 26 47.2	+2.2
MLSB	Milas	5.07	96	*e*P	Pn	12 26 47.2	+2.2
AKHS	Akhisar	5.08	78	*i* P	Pn	12 26 46.9	+1.7
AYDN	Tasoluk	5.10	91	*i* P	Pn	12 26 47.2	+1.7
ACER	Acerenza	5.12	305	P	Pn	12 26 45.9	+0.3
ACER	Acerenza	5.12	305	P	Pn	12 26 45.9	+0.3
HAVL	Avola	5.13	261	P	Pn	12 26 43.6	-2.3
HAVL	Avola	5.13	261	P	Pn	12 26 43.6	-2.3
SSY	Sortino	5.13	263	P	Pn	12 26 43.1	-2.8
SSY	Sortino	5.13	263	P	Pn	12 26 43.1	-2.8
BALY	Balya	5.13	68	*i* P	Pn	12 26 47.3	+1.4
NKY	Niksic	5.20	340	⇓*i*Pn	Pn	12 26 45.1	-1.6
NKY				*e*Sn	Sn	12 27 47.1	+0.8
RKY	Sarkoy-Tekirda	5.21	57	*e*P	Pn	12 26 48.1	+1.1
SART	Tekirdag	5.21	57	*i* P	Pn	12 26 47.7	+0.7
SLNA	Salina	5.24	279	P	Pn	12 26 46.9	-0.5
SLNA	Salina	5.24	279	P	Pn	12 26 46.9	-0.5
BALB	Balikesir	5.30	70	*e*P	Pn	12 26 50.1	+2.0
BALB	Balikesir	5.30	70	*e*P	Pn	12 26 50.1	+2.0
TREB	Trebinje	5.31	334	P	Pn	12 26 46.0	-2.3
TREB	Trebinje	5.31	334	P	Pn	12 26 46.0	-2.3
HMDC	Modica	5.40	261	P	Pn	12 26 47.2	-2.3
HMDC	Modica	5.40	261	P	Pn	12 26 47.2	-2.3
HVZN	Vizzini	5.41	264	P	Pn	12 26 47.3	-2.4
HVZN	Vizzini	5.41	264	P	Pn	12 26 47.3	-2.4
BRY	Bratogost	5.41	337	⇓*i*Pn	Pn	12 26 48.4	-1.3
BRY				*e*Sn	Sn	12 27 51.4	-0.2
BRY	Bratogost	5.41	337	P	Pn	12 26 48.0	-1.7
BRY	Bratogost	5.41	337	P	Pn	12 26 48.0	-1.7
SGO	Sicignano	5.43	300	P	Pn	12 26 50.9	+1.0
YER	Yerkesik	5.49	97	*e*P	Pn	12 26 53.8	+2.9
YER	Yerkesik	5.49	97	*e*P	Pn	12 26 53.8	+2.9
EDC	Edincik	5.53	62	*e*P	Pn	12 26 53.6	+2.3
EDC	Edincik	5.53	62	*e*P	Pn	12 26 53.6	+2.3
BNT	Bandirma	5.57	63	*e*P	Pn	12 26 53.0	+1.2
UPM	Unac-Piva	5.58	341	⇑*i*Pn	Pn	12 26 51.9	-0.1
UPM				*e*Sn	Sn	12 27 56.5	+0.7
UPM	Unac-Piva	5.58	341	P	Pn	12 26 51.0	-1.0
UPM	Unac-Piva	5.58	341	P	Pn	12 26 51.0	-1.0
PLE	Pljevlja	5.59	344	⇓*i*Pn	Pn	12 26 52.2	+0.1
PLE				*e*Sn	Sn	12 27 56.8	+0.9
TKR	Tekirdag	5.60	55	*e*P	Pn	12 26 53.4	+1.1
VAE	Valguarnera	5.60	267	Pn	Pn	12 26 52.0	-0.3
	comp=E,22nm,0.3s,baz=360,slow=1.9,SNR=26						
VAE				Sn	Sn	12 28 03.3	+7.0
	comp=E,126nm,0.3s,baz=131,slow=14,SNR=5.5						
VAE	Valguarnera	5.60	267	Pn	Pn	12 26 52.0	-0.3
VAE				Sn	Sn	12 28 03.3	+7.0
ARG	Arkhangelos	5.62	106	*e*Pn	Pn	12 26 53.3	+0.8
ARG				P		12 26 54.0	
ARG	Arkhangelos	5.62	106	*e*PN	Pn	12 26 53.3	+0.8
ARG	Arkhangelos	5.62	106	*e*Pn	Pn	12 26 53.3	+0.8
MANT	Manisa	5.62	82	*i* P	Pn	12 26 53.9	+1.2
EDRB	Edirne	5.62	45	*e*P	Pn	12 26 55.8	+3.1
EDRB	Edirne	5.62	45	*e*P	Pn	12 26 55.8	+3.2
MSAG	Monte S. Angel	5.67	313	P	Pn	12 26 52.7	-0.6
MSAG	Monte S. Angel	5.67	313	P	Pn	12 26 52.7	-0.6
RAFF	Raffo Rosso	5.68	265	P	Pn	12 26 51.6	-1.8
RAFF	Raffo Rosso	5.68	265	P	Pn	12 26 51.6	-1.8
STON	Ston	5.68	331	*e*Pn	Pn	12 26 53.3	0.0
STON				Sn	Sn	12 27 55.1	-3.1
STON	Ston	5.68	331	*e*Pn	Pn	12 26 53.3	-0.1
STON				Sn	Sn	12 27 55.2	-3.0
KULA	Kula-Manisa	5.71	82	*e*P	Pn	12 26 57.4	+3.7
KULA	Kula-Manisa	5.71	82	*e*P	Pn	12 26 57.4	+3.6
DURS	Dursunbey	5.73	71	*i* P	Pn	12 26 55.6	+1.5
CSSN	Cassano Irpino	5.76	302	P	Pn	12 26 56.0	+1.5
CSSN	Cassano Irpino	5.76	302	P	Pn	12 26 56.0	+1.5
TURN	Turunc	5.80	99	*i* P	Pn	12 26 53.8	-1.2
CRLT	Corlu	5.80	55	*e*P	Pn	12 26 59.2	+4.2
CRLT	Corlu	5.80	55	*e*P	Pn	12 26 59.2	+4.2
SGRT	San Giovanni R	5.80	313	P	Pn	12 26 54.3	-0.7
SGRT	San Giovanni R	5.80	313	P	Pn	12 26 54.3	-0.7
DEMI	Demirci	5.80	77	*i* P	Pn	12 26 56.9	+1.8
FG5	Orsara di Pugl	5.81	307	P	Pn	12 26 56.0	+0.8
FG5	Orsara di Pugl	5.81	307	P	Pn	12 26 56.0	+0.8
DST	Dursunbey	5.84	71	*e*P	Pn	12 26 58.6	+3.1
DST	Dursunbey	5.84	71	*e*P	Pn	12 26 58.6	+3.0
RGNG	Rignano Grg	5.84	311	P	Pn	12 26 55.0	-0.6
RGNG	Rignano Grg	5.84	311	P	Pn	12 26 55.0	-0.6
KCT	Karacabey	5.84	65	*e*P	Pn	12 26 58.1	+2.4
KCT	Karacabey	5.84	65	*e*P	Pn	12 26 58.1	+2.4
GIB	Gibilmanna	5.86	273	P	Pn	12 26 55.5	-0.4
MRB1	Monte Rocchett	5.92	304	Pn	Pn	12 26 59.0	+2.3
MRB1	Monte Rocchett	5.92	304	Pn	Pn	12 26 59.0	+2.3
WDD	Wield Dalam	5.93	251	⇓*i*Pn	Pn	12 26 56.0	-0.9
	comp=E,12µm,0.8s						
WDD	Wield Dalam	5.93	251	⇓*i*Pn	Pn	12 26 56.0	-0.9
	comp=E,10µm,0.8s						
GRUS	Gruza	5.95	355	P	Pn	12 26 55.6	-1.5
GRUS	Gruza	5.95	355	P	Pn	12 26 55.6	-1.5
JMB	Yambol	5.97	40	P	Pn	12 26 57.0	-0.4
JMB	Yambol	5.97	40	P	Pn	12 26 57.0	-0.4
JMB	Yambol	5.97	40	P	Pn	12 26 57.0	-0.4
DENT	Denizli	6.00	90	*e*P	Pn	12 27 00.1	+2.3
DENT	Denizli	6.00	90	*e*P	Pn	12 27 00.1	+2.2
DNZL	Cakiroluk	6.02	90	*i* P	Pn	12 27 00.4	+2.3
DNZL	Cakiroluk	6.02	90	*i* P	Pn	12 27 00.4	+2.3
PSB1	Pescosannita	6.07	305	P	Pn	12 26 59.7	+0.9
PSB1	Pescosannita	6.07	305	P	Pn	12 26 59.7	+0.9
BBLS	Lazići	6.10	346	P	Pn	12 26 57.6	-1.5
BBLS	Lazići	6.10	346	P	Pn	12 26 57.6	-1.5
SLVT	Silivri	6.16	56	*e*P	Pn	12 27 01.8	+1.8
FAVR	Favara	6.22	266	P	Pn	12 27 01.0	+0.2
FAVR	Favara	6.22	266	P	Pn	12 27 01.0	+0.2
FETY	Fethiye	6.23	100	*e*P	Pn	12 27 05.3	+4.3
FETY	Fethiye	6.23	100	*e*P	Pn	12 27 05.3	+4.3
DIVS	Divibare	6.23	350	P	Pn	12 26 59.4	-1.5
DIVS	Divibare	6.23	350	P	Pn	12 26 59.4	-1.5
LTBQ	Tobrug	6.23	160	*i* P	Pn	12 27 00.7	-0.3
	comp=E,8µm,0.6s,SNR=22						
CIGN	Sant'Elia a Pi	6.24	308	P	Pn	12 27 01.7	+0.6
CIGN	Sant'Elia a Pi	6.24	308	P	Pn	12 27 01.7	+0.6
ELBA	Catalca	6.26	57	*i* P	Pn	12 27 02.1	+0.7
ARMT	Armutlu	6.31	63	*e*P	Pn	12 27 04.1	+2.0
ARMT	Armutlu	6.31	63	*e*P	Pn	12 27 04.1	+2.0
CTYL	Yal??k??y-??at	6.33	54	*e*P	Pn	12 27 04.5	+2.1
CTYL	Yal??k??y-??at	6.33	54	*e*P	Pn	12 27 04.5	+2.1
KHAL	Karahalli	6.35	84	*i* P	Pn	12 27 05.1	+2.4
KHAL	Karahalli	6.35	84	*i* P	Pn	12 27 05.1	+2.5
CTKS	Kestanelik-??a	6.36	57	*e*P	Pn	12 27 05.0	+2.4
CTKS	Kestanelik-??a	6.36	57	*e*P	Pn	12 27 05.1	+2.4
ULDT	Uludag	6.37	68	*i* P	Pn	12 27 04.8	+1.9
GDZ	Gediz	6.40	77	*i* P	Pn	12 27 07.1	+3.8
GDZ	Gediz	6.40	77	*i* P	Pn	12 27 07.1	+3.8
ZIMR		6.42	26	⇓*i*P	Pn	12 27 08.6	+5.1
SGG	Gregorio Mates	6.44	304	P	Pn	12 27 05.0	+1.2
SGG	Gregorio Mates	6.44	304	P	Pn	12 27 05.0	+1.2
GLHS	Glhisar (BURDU	6.45	95	*e*P	Pn	12 27 09.4	+5.5
GOLH	Golhisar	6.48	94	*i* P	Pn	12 27 08.6	+4.2
GOLH	Golhisar	6.48	94	*i* P	Pn	12 27 08.6	+4.2
GEMT	Gemlik	6.50	65	*e*P	Pn	12 27 07.4	+2.7
GEMT	Gemlik	6.50	65	*e*P	Pn	12 27 07.4	+2.7
BGKT	Bogazkoy	6.51	58	*e*P	Pn	12 27 07.1	+2.3
BGKT	Bogazkoy	6.51	58	*e*P	Pn	12 27 07.1	+2.3
USI	Ustica	6.54	279	P	Pn	12 27 04.0	-1.3
USI	Ustica	6.54	279	P	Pn	12 27 04.0	-1.3
MIDA	Miranda	6.65	306	P	Pn	12 27 07.6	+0.9
MIDA	Miranda	6.65	306	P	Pn	12 27 07.6	+0.9
ISK	Istanbul-Kandi	6.65	60	*e*P	Pn	12 27 08.7	+2.0
ISK	Istanbul-Kandi	6.65	60	*e*P	Pn	12 27 08.7	+2.0
RFI	Roccamonfina	6.66	302	P	Pn	12 27 08.1	+1.3
RFI	Roccamonfina	6.66	302	P	Pn	12 27 08.1	+1.3
YLV	Yalova	6.68	65	*e*P	Pn	12 27 10.0	+2.9
YLV	Yalova	6.68	65	*e*P	Pn	12 27 10.0	+2.9
KLYT	Kilyos	6.72	58	*e*P	Pn	12 27 09.4	+1.7
AKAS	Kas	6.74	102	*i* P	Pn	12 27 10.4	+2.4
AKAS	Kas	6.74	102	*i* P	Pn	12 27 10.4	+2.4
RNI2	Rionero Sannit	6.74	306	P	Pn	12 27 10.0	+2.0
RNI2	Rionero Sannit	6.74	306	P	Pn	12 27 10.0	+2.0
DJES	Djerdap	6.75	7	P	Pn	12 27 08.9	+0.8
VENT	Ventotene	6.83	297	P	Pn	12 27 10.4	+1.2
VENT	Ventotene	6.83	297	P	Pn	12 27 10.4	+1.2
ELL	Elmali	6.85	98	*e*P	Pn	12 27 13.5	+4.1
ELL	Elmali	6.85	98	*e*P	Pn	12 27 13.5	+4.1
ALT	Altintas	6.88	78	*e*P	Pn	12 27 12.0	+2.1
ALT	Altintas	6.88	78	*e*P	Pn	12 27 12.0	+2.1
ADVT	Abdulvahap	6.89	66	*e*P	Pn	12 27 15.1	+5.0
SDI	San Donato	6.97	305	P	Pn	12 27 11.1	0.0
ERC	Erice	7.00	273	P	Pn	12 27 12.0	+0.5
ERC	Erice	7.00	273	P	Pn	12 27 12.0	+0.5
INTR	Introdacqua	7.06	307	P	Pn	12 27 13.

TIRR	**Tirgusor**	**8.35**	**37**	⇓P	**Pn**	**12 27 32.7**	**+2.7**
TIRR	**Tirgusor**	**8.35**	**37**	*e*Pn	**Pn**	**12 27 30.9**	**+0.9**
	comp=N,1μm,0.9s						
TIRR				P		12 27 35.0	
TIRR	**Tirgusor**	**8.35**	**37**	⇓*i*P	**Pn**	**12 27 32.7**	**+2.7**
TIRR	**Tirgusor**	**8.35**	**37**	*e*Pn	**Pn**	**12 27 30.9**	**+0.9**
	comp=N,1μm,0.9s						
SNTG	**Esanatoglia**	**8.36**	**312**	P	**Pn**	**12 27 28.8**	**-1.3**
SNTG	**Esanatoglia**	**8.36**	**312**	P	**Pn**	**12 27 28.8**	**-1.3**
KDZE	**Karadeniz Ereo**	**8.41**	**63**	*e*P	**Pn**	**12 27 34.0**	**+3.2**
KDZE	**Karadeniz Ereo**	**8.41**	**63**	*e*P	**Pn**	**12 27 34.0**	**+3.2**
SISC	**Sisak**	**8.41**	**335**	*e*Pn	**Pn**	**12 27 30.8**	**0.0**
SISC				Sn	**Sn**	**12 29 04.2**	**-1.2**
SISC	**Sisak**	**8.41**	**335**	*e*Pn	**Pn**	**12 27 30.8**	**0.0**
SISC				Sn	**Sn**	**12 29 04.2**	**-1.2**
KDHN	**Kadinhani**	**8.41**	**83**	*i* P	**Pn**	**12 27 34.4**	**+3.4**
KDHN	**Kadinhani**	**8.41**	**83**	*i* P	**Pn**	**12 27 34.3**	**+3.4**
MDB	**Medias**	**8.46**	**14**	⇓*i*P	**Pn**	**12 27 35.8**	**+4.3**
MDB	**Medias**	**8.46**	**14**	P	**Pn**	**12 27 35.1**	**+3.6**
PKSM	**Moragy**	**8.50**	**347**	P	**Pn**	**12 27 31.8**	**-0.3**
PKSM	**Moragy**	**8.50**	**347**	⇓*i*P	**Pn**	**12 27 31.7**	**-0.4**
PKSM	**Moragy**	**8.50**	**347**	P	**Pn**	**12 27 31.8**	**-0.3**
MURB	**Monte Urbino**	**8.61**	**311**	P	**Pn**	**12 27 35.0**	**+1.4**
MURB	**Monte Urbino**	**8.61**	**311**	P	**Pn**	**12 27 35.0**	**+1.4**
LADK	**Ladik-KONYA**	**8.61**	**85**	*e*P	**Pn**	**12 27 39.1**	**+5.5**
KONT	**Konya--Tatoy**	**8.62**	**87**	*e*P	**Pn**	**12 27 40.0**	**+6.3**
SGKT	**Sivrigoynuk**	**8.63**	**69**	*i* P	**Pn**	**12 27 35.0**	**+1.1**
LATE	**Laterza**	**8.71**	**305**	P	**Pn**	**12 27 37.8**	**+2.8**
LATE	**Laterza**	**8.71**	**305**	P	**Pn**	**12 27 37.8**	**+2.8**
FSSB	**Fossombrone**	**8.71**	**314**	P	**Pn**	**12 27 34.9**	**-0.1**
FSSB	**Fossombrone**	**8.71**	**314**	P	**Pn**	**12 27 34.9**	**-0.1**
PIEI	**Pieia**	**8.76**	**312**	P	**Pn**	**12 27 33.5**	**-2.2**
PIEI	**Pieia**	**8.76**	**312**	P	**Pn**	**12 27 33.5**	**-2.2**
CFR	**Carcaliu**	**8.78**	**33**	⇓P	**Pn**	**12 27 38.9**	**+3.0**
CFR				P		12 27 39.6	
CFR	**Carcaliu**	**8.78**	**33**	⇓*i*P	**Pn**	**12 27 38.9**	**+3.0**
CFR	**Carcaliu**	**8.78**	**33**	P	**Pn**	**12 27 39.6**	**+3.7**
PLOR	**Plostina**	**8.78**	**25**	P	**Pn**	**12 27 40.1**	**+4.1**
PLOR	**Plostina**	**8.78**	**25**	⇑*i*P	**Pn**	**12 27 40.3**	**+4.3**
PLOR	**Plostina**	**8.78**	**25**	P	**Pn**	**12 27 40.1**	**+4.1**
VRI	**Vrincioaia**	**8.82**	**25**	⇑P	**Pn**	**12 27 39.6**	**+3.1**
VRI				P		12 27 41.4	
VRI	**Vrincioaia**	**8.82**	**25**	⇑*i*P	**Pn**	**12 27 39.7**	**+3.2**
VRI	**Vrincioaia**	**8.82**	**25**	P	**Pn**	**12 27 41.4**	**+4.9**
HDMB	**Hadim**	**8.83**	**93**	*e*P	**Pn**	**12 27 40.6**	**+3.9**
HDMB	**Hadim**	**8.83**	**93**	*e*P	**Pn**	**12 27 40.6**	**+3.9**
BOJS	**Bojanci**	**8.84**	**330**	*i* Pn	**Pn**	**12 27 37.1**	**+0.3**
BOJS				*i* Sn	**Sn**	**12 29 15.7**	**-0.4**
BOJS	**Bojanci**	**8.84**	**330**	*i* Pn	**Pn**	**12 27 37.1**	**+0.3**
BOJS				*i* Sn	**Sn**	**12 29 15.7**	**-0.4**
GAZI	**Gazipasa**	**8.85**	**98**	*i* P	**Pn**	**12 27 38.3**	**+1.3**
ODB	**Odobesti**	**8.86**	**26**	⇓*i*P	**Pn**	**12 27 44.8**	**+7.8**
DRGR		**8.87**	**6**	⇓P	**Pn**	**12 27 39.8**	**+2.6**
DRGR		**8.87**	**6**	P	**Pn**	**12 27 39.1**	**+1.8**
DRGR				⇓P		12 27 39.8	
DRGR		**8.87**	**6**	⇓*i*P	**Pn**	**12 27 39.8**	**+2.6**
DRGR		**8.87**	**6**	⇓P	**Pn**	**12 27 39.8**	**+2.6**
CDCA	**Citt' di Caste**	**8.89**	**311**	P	**Pn**	**12 27 39.8**	**+2.3**
CDCA	**Citt' di Caste**	**8.89**	**311**	P	**Pn**	**12 27 39.8**	**+2.3**
BADI	**Badiali**	**8.91**	**311**	P	**Pn**	**12 27 39.5**	**+1.7**
BADI	**Badiali**	**8.91**	**311**	P	**Pn**	**12 27 39.5**	**+1.7**
LOD	**Lodumlu**	**9.03**	**74**	*e*P	**Pn**	**12 27 41.7**	**+2.4**
LOD	**Lodumlu**	**9.03**	**74**	*e*P	**Pn**	**12 27 41.7**	**+2.4**
CRES	**Cresnjev**	**9.04**	**332**	P	**Pn**	**12 27 37.6**	**-1.9**
CRES	**Cresnjev**	**9.04**	**332**	P	**Pn**	**12 27 37.6**	**-1.9**
RSM	**Repubblica di**	**9.05**	**314**	P	**Pn**	**12 27 40.2**	**+0.6**
MAON	**Monte Argentar**	**9.07**	**303**	P	**Pn**	**12 27 42.2**	**+2.3**
MAON	**Monte Argentar**	**9.07**	**303**	P	**Pn**	**12 27 42.2**	**+2.3**
TLCR		**9.08**	**35**	⇓P	**Pn**	**12 27 44.0**	**+3.9**
TLCR		**9.08**	**35**	⇓*i*P	**Pn**	**12 27 44.0**	**+3.9**
TLCR		**9.08**	**35**	⇓P	**Pn**	**12 27 44.0**	**+3.9**
ERMK	**Ermenek**	**9.23**	**95**	*i* P	**Pn**	**12 27 53.4**	**+11**
VISS	**Visnje**	**9.25**	**330**	*i* Pn	**Pn**	**12 27 41.7**	**-0.8**
VISS				*e*Sn	**Sn**	**12 29 25.8**	**-0.4**
VISS	**Visnje**	**9.25**	**330**	*i* Pn	**Pn**	**12 27 41.7**	**-0.7**
VISS				*e*Sn	**Sn**	**12 29 25.8**	**-0.3**
BBAL	**Bala**	**9.26**	**77**	*i* P	**Pn**	**12 27 46.2**	**+3.7**
BBAL	**Bala**	**9.26**	**77**	*i* P	**Pn**	**12 27 46.2**	**+3.7**
SAFT	**Safranbolu**	**9.27**	**66**	*e*P	**Pn**	**12 27 45.0**	**+2.3**
SAFT	**Safranbolu**	**9.27**	**66**	*e*P	**Pn**	**12 27 45.0**	**+2.3**
PPCY	**Paphos**	**9.30**	**106**	P	**Pn**	**12 27 43.2**	**+0.1**
SWA2		**9.31**	**158**	P	**Pn**	**12 27 40.5**	**-2.9**
	baz=165						
SWA2				S	**Sn**	**12 29 13.8**	**-14**
	baz=165						
SWA2		**9.31**	**158**	P	**Pn**	**12 27 40.4**	**-2.9**
SWA2				S	**Sn**	**12 29 13.8**	**-14**
CEY	**Cerknica**	**9.37**	**328**	P	**Pn**	**12 27 43.3**	**-0.7**
CEY	**Cerknica**	**9.37**	**328**	P	**Pn**	**12 27 43.3**	**-0.7**
ALFC	**Alevga**	**9.40**	**104**	P	**Pn**	**12 27 43.9**	**-0.5**
	comp=N,28nm,0.5s						
ALFC				S	**Sn**	**12 29 30.3**	**+0.5**
CSNT	**Castellina Chi**	**9.47**	**309**	P	**Pn**	**12 27 46.3**	**+0.9**
CSNT	**Castellina Chi**	**9.47**	**309**	P	**Pn**	**12 27 46.3**	**+0.9**
DGI	**Dorgali Grotta**	**9.50**	**288**	P	**Pn**	**12 27 46.3**	**+0.5**
DGI	**Dorgali Grotta**	**9.50**	**288**	P	**Pn**	**12 27 46.3**	**+0.5**
SULT	**Sultanhani-AKS**	**9.52**	**85**	*e*P	**Pn**	**12 27 50.4**	**+4.3**
SULT	**Sultanhani-AKS**	**9.52**	**85**	*e*P	**Pn**	**12 27 50.4**	**+4.3**
VSL	**Villasalto**	**9.56**	**283**	*e*Pn	**Pn**	**12 27 46.5**	**-0.1**
VSL	**Villasalto**	**9.56**	**283**	*e*Pn	**Pn**	**12 27 46.5**	**-0.1**
LJU	**Ljubljana**	**9.57**	**330**	*e*Pn	**Pn**	**12 27 44.6**	**-2.2**
LJU				*e*Sn	**Sn**	**12 29 30.0**	**-4.0**
LJU	**Ljubljana**	**9.57**	**330**	P	**Pn**	**12 27 45.9**	**-0.9**
LJU	**Ljubljana**	**9.57**	**330**	P	**Pn**	**12 27 45.9**	**-0.9**
VMG	**Vicchio**	**9.59**	**312**	P	**Pn**	**12 27 48.3**	**+1.3**
VMG	**Vicchio**	**9.59**	**312**	P	**Pn**	**12 27 48.3**	**+1.3**
TRI	**Trieste**	**9.63**	**326**	*e*P	**Pn**	**12 27 46.0**	**-1.6**
TRI				pmax	pmax		
	comp=Z,2μm,0.7s						
TRI	**Trieste**	**9.63**	**326**	*e*Pn	**Pn**	**12 27 46.0**	**-1.6**
	comp=Z,2μm,0.7s						
TRI	**Trieste**	**9.63**	**326**	*e*Pn	**Pn**	**12 27 46.0**	**-1.6**
	comp=Z,2μm,0.7s						
ELDT	**Eldivan**	**9.63**	**71**	*i* P	**Pn**	**12 27 49.4**	**+1.8**
LEF	**Lefka**	**9.63**	**104**	*e*P	**Pn**	**12 27 47.4**	**-0.3**
JAVS	**Javornik**	**9.64**	**328**	*e*Pn	**Pn**	**12 27 48.1**	**+0.3**
JAVS				*i* Sn	**Sn**	**12 29 33.2**	**-2.5**
JAVS	**Javornik**	**9.64**	**328**	*e*Pn	**Pn**	**12 27 48.1**	**+0.3**
JAVS				*i* Sn	**Sn**	**12 29 33.2**	**-2.5**
BR131	**Keskin Array S**	**9.67**	**76**	*e*Pn	**Pn**	**12 27 48.7**	**+0.5**
BR131	**Keskin Array S**	**9.67**	**76**	*e*Pn	**Pn**	**12 27 48.7**	**+0.5**
BRTR	**Keskin Array B**	**9.67**	**76**	Pn	**Pn**	**12 27 49.3**	**+1.1**
	comp=Z,18nm,0.3s,baz=259,slow=12,SNR=206						
BRTR				LR	LR	12 32 03.8	
	comp=Z,181μm,20.0s,baz=54,slow=42						
BRTR				P3KP		13 05 14.9	
	comp=Z,0.1nm,0.3s,baz=111,slow=2.8,SNR=5.9						
BRTR	**Keskin Array B**	**9.67**	**76**	*i* P	**Pn**	**12 27 49.2**	**+1.0**
BRTR				pmax	pmax		
	comp=Z,103nm,0.5s						
BRTR	**Keskin Array B**	**9.67**	**76**	Pn	**Pn**	**12 27 49.3**	**+1.1**
BRTR				LR	LR	12 32 03.8	
BRTR	**Keskin Array B**	**9.67**	**76**	*i* P	**Pn**	**12 27 49.2**	**+1.0**
	comp=Z,103nm,0.5s						
BUD	**Budapest**	**9.68**	**350**	⇓*e*P	**Pn**	**12 27 52.5**	**+4.2**
BUD	**Budapest**	**9.68**	**350**	P	**Pn**	**12 27 48.0**	**-0.3**
SEI	**Scarperia**	**9.76**	**312**	P	**Pn**	**12 27 51.2**	**+1.9**
SEI	**Scarperia**	**9.76**	**312**	P	**Pn**	**12 27 51.2**	**+1.9**
SZAC	**Souni-Zanaja**	**9.76**	**106**	P	**Pn**	**12 27 49.1**	**-0.3**
CANT	**Cankiri**	**9.80**	**71**	*e*P	**Pn**	**12 27 54.4**	**+4.5**
BMR	**Baia Mare**	**9.82**	**8**	⇑*i*P	**Pn**	**12 27 52.8**	**+2.6**
BMR	**Baia Mare**	**9.82**	**8**	P	**Pn**	**12 27 52.8**	**+2.6**
VOY	**Vojsko**	**9.83**	**328**	*e*Pn	**Pn**	**12 27 48.3**	**-2.0**
VOY				*e*		12 27 50.5	
VOY	**Vojsko**	**9.83**	**328**	*e*Pn	**Pn**	**12 27 48.3**	**-2.0**
MAMC	**Mammari**	**9.87**	**103**	P	**Pn**	**12 27 50.3**	**-0.6**
LEOM	**Leova**	**9.88**	**28**	⇑P	**Pn**	**12 27 54.2**	**+3.1**
LEOM	**Leova**	**9.88**	**28**	⇑*i*P	**Pn**	**12 27 54.2**	**+3.1**
LEOM	**Leova**	**9.88**	**28**	P	**Pn**	**12 27 54.2**	**+3.1**
SOKA	**Soboth**	**9.92**	**333**	*e*Pn	**Pn**	**12 27 50.2**	**-1.3**
	comp=Z,2μm,0.8s						
SOKA				⇓*e*Sn	**Sn**	**12 29 41.3**	**-1.2**
	comp=Z,3μm,1.5s						
IKL	**Isikli**	**9.93**	**96**	*e*P	**Pn**	**12 27 53.0**	**+1.3**
KEST	**Kesra**	**9.95**	**261**	Pn	**Pn**	**12 27 52.0**	**-0.1**
	comp=Z,2.4nm,0.3s,baz=49,slow=2.1,SNR=59						
OBKA	**Obir**	**9.95**	**331**	P	**Pn**	**12 27 50.5**	**-1.5**
OBKA	**Obir**	**9.95**	**331**	⇓*e*Pn	**Pn**	**12 27 50.3**	**-1.7**
	comp=Z,2μm,0.7s,SNR=352						
OBKA				⇑*e*Sn	**Sn**	**12 29 42.6**	**-0.7**
	comp=Z,3μm,0.8s						
OBKA	**Obir**	**9.95**	**331**	P	**Pn**	**12 27 50.5**	**-1.5**
OBKA				Sn	**Sn**	**12 29 42.6**	**-0.7**
	comp=Z,3μm,0.8s						
FNVD	**Fontana Vidola**	**9.96**	**312**	P	**Pn**	**12 27 54.0**	**+1.9**
FNVD	**Fontana Vidola**	**9.96**	**312**	P	**Pn**	**12 27 54.0**	**+1.9**
ILGA	**Ilgaz**	**9.97**	**68**	*i* P	**Pn**	**12 27 55.0**	**+2.7**
ILGA	**Ilgaz**	**9.97**	**68**	*i* P	**Pn**	**12 27 55.0**	**+2.7**
PSZ	**Piszkesteto**	**10.02**	**354**	⇓P	**Pn**	**12 27 54.1**	**+1.2**
PSZ	**Piszkesteto**	**10.02**	**354**	*e*Pn	**Pn**	**12 27 51.4**	**-1.4**
PSZ	**Piszkesteto**	**10.02**	**354**	⇑*e*P	**Pn**	**12 27 55.3**	**+2.4**
PSZ	**Piszkesteto**	**10.02**	**354**	⇓*i*P	**Pn**	**12 27 54.1**	**+1.2**
PSZ	**Piszkesteto**	**10.02**	**354**	*e*Pn	**Pn**	**12 27 51.4**	**-1.5**
PSZ	**Piszkesteto**	**10.02**	**354**	P	**Pn**	**12 27 54.1**	**+1.2**
CSS	**Prodhromos**	**10.03**	**104**	P	**Pn**	**12 27 52.4**	**-0.7**
	comp=Z,25nm,0.9s						
CSS				S	**Sn**	**12 29 46.2**	**+1.0**
FIU	**Minerbio Fiu**	**10.03**	**315**	P	**Pn**	**12 27 54.7**	**+1.7**
FIU	**Minerbio Fiu**	**10.03**	**315**	P	**Pn**	**12 27 54.7**	**+1.7**
BURAR	**Bucovina Array**	**10.04**	**15**	⇓P	**Pn**	**12 27 55.0**	**+1.9**
BURAR	**Bucovina Array**	**10.04**	**15**	⇓*i*P	**Pn**	**12 27 55.0**	**+1.9**
BURAR	**Bucovina Array**	**10.04**	**15**	⇓P	**Pn**	**12 27 55.0**	**+1.9**
DRE	**Drenchia**	**10.04**	**327**	⇑*i*P	**Pn**	**12 27 57.0**	**+3.7**
DRE	**Drenchia**	**10.04**	**327**	⇑*i*P	**Pn**	**12 27 57.0**	**+3.7**
BUR08	**Bucovina Ar. S**	**10.06**	**15**	*e*Pn	**Pn**	**12 27 54.3**	**+0.8**
BUR08	**Bucovina Ar. S**	**10.06**	**15**	*e*Pn	**Pn**	**12 27 54.3**	**+0.8**
LFK	**Lefkose**	**10.07**	**102**	*e*P	**Pn**	**12 27 57.1**	**+3.4**
LFK	**Lefkose**	**10.07**	**102**	*e*P	**Pn**	**12 27 57.1**	**+3.4**
PII	**Pisa**	**10.08**	**308**	P	**Pn**	**12 27 57.0**	**+3.3**
TLI	**Talmassons**	**10.09**	**325**	⇑*e*P	**Pn**	**12 27 52.0**	**-1.9**
TLI	**Talmassons**	**10.09**	**325**	⇑*e*P	**Pn**	**12 27 52.0**	**-1.9**
COLI	**Coloredo**	**10.13**	**326**	⇑*i*P	**Pn**	**12 27 54.0**	**-0.4**
COLI	**Coloredo**	**10.13**	**326**	⇑*i*P	**Pn**	**12 27 54.0**	**-0.4**
ZCCA	**Zocca**	**10.15**	**312**	P	**Pn**	**12 27 58.5**	**+3.8**
ZCCA	**Zocca**	**10.15**	**312**	P	**Pn**	**12 27 58.5**	**+3.8**
TOS	**Tosya**	**10.19**	**69**	*e*P	**Pn**	**12 27 57.8**	**+2.5**
TOS	**Tosya**	**10.19**	**69**	*e*P	**Pn**	**12 27 57.8**	**+2.5**
TRPA	**Tarpa**	**10.20**	**4**	⇑*i*P	**Pn**	**12 27 55.7**	**+0.4**
BDI	**Bagni Di Lucca**	**10.21**	**310**	P	**Pn**	**12 27 58.6**	**+3.0**
CDAG	**Cicekdag**	**10.23**	**77**	*i* P	**Pn**	**12 27 59.3**	**+3.5**
CDAG	**Cicekdag**	**10.23**	**77**	*i* P	**Pn**	**12 27 59.3**	**+3.5**
ARSA	**Arzberg**	**10.26**	**337**	P	**Pn**	**12 27 54.1**	**-2.0**
ARSA	**Arzberg**	**10.26**	**337**	⇑*e*Pn	**Pn**	**12 27 54.4**	**-1.7**
	comp=Z,2μm,1.2s,SNR=404						
ARSA				⇑*e*Sn	**Sn**	**12 29 51.1**	**+0.3**
	comp=Z,1μm,1.3s						
ARSA	**Arzberg**	**10.26**	**337**	P	**Pn**	**12 27 54.1**	**-2.0**
ARSA				Sn	**Sn**	**12 29 51.1**	**+0.4**
	comp=Z,1μm,1.3s						
IAS	**Iasi**	**10.27**	**24**	⇓P	**Pn**	**12 27 59.9**	**+3.6**
IAS	**Iasi**	**10.27**	**24**	⇓*i*P	**Pn**	**12 27 59.9**	**+3.6**
IAS	**Iasi**	**10.27**	**24**	⇓P	**Pn**	**12 27 59.9**	**+3.6**
BAD	**Bernadia**	**10.27**	**326**	⇑*e*P	**Pn**	**12 27 56.0**	**-0.3**
BAD	**Bernadia**	**10.27**	**326**	⇑*e*P	**Pn**	**12 27 56.0**	**-0.3**
BUA	**Buia**	**10.31**	**326**	⇓*e*P	**Pn**	**12 27 57.0**	**+0.2**
BUA	**Buia**	**10.31**	**326**	⇓*e*P	**Pn**	**12 27 57.0**	**+0.2**
LSR	**Lussari**	**10.33**	**328**	⇓*i*P	**Pn**	**12 28 00.0**	**+2.8**
LSR	**Lussari**	**10.33**	**328**	⇓*i*P	**Pn**	**12 28 00.0**	**+2.8**
SOP	**Sopron**	**10.36**	**341**	⇓*e*P	**Pn**	**12 27 59.9**	**+2.4**
MPRI	**Monte Prat**	**10.38**	**325**	⇓*e*P	**Pn**	**12 27 57.0**	**-0.9**
MPRI	**Monte Prat**	**10.38**	**325**	⇓*e*P	**Pn**	**12 27 57.0**	**-0.9**
VLC	**Villacollemand**	**10.39**	**310**	*e*Pn	**Pn**	**12 28 00.5**	**+2.5**
VLC	**Villacollemand**	**10.39**	**310**	*e*Pn	**Pn**	**12 28 00.5**	**+2.5**
MYKA	**Terra Mystica**	**10.41**	**329**	⇑*i*Pn	**Pn**	**12 27 58.3**	**0.0**
	comp=Z,1μm,1.1s						
MYKA				⇓*e*Sn	**Sn**	**12 29 54.3**	**-0.2**
	comp=Z,1μm,1.0s						
BZK	**Bozkurt**	**10.43**	**64**	*e*P	**Pn**	**12 28 00.4**	**+1.9**
MERS	**Mersin**	**10.46**	**92**	*e*P	**Pn**	**12 28 01.8**	**+2.9**
MERS	**Mersin**	**10.46**	**92**	*e*P	**Pn**	**12 28 01.8**	**+2.8**
CORM	**Corum**	**10.49**	**74**	*e*P	**Pn**	**12 28 04.3**	**+4.9**
EREN	**Erenkoy**	**10.49**	**100**	*e*P	**Pn**	**12 28 02.5**	**+3.1**
EREN	**Erenkoy**	**10.49**	**100**	*e*P	**Pn**	**12 28 02.5**	**+3.1**
KIS	**Kishinev**	**10.54**	**29**	⇓*i*P	**Pn**	**12 28 02.0**	**+2.0**
	comp=Z,6μm,4.0s						
KIS				*i* S	**Sn**	**12 30 10.0**	**+12**
KIS				*i* Li		12 31 02.0	
KIS				*i* LQ		12 31 30.0	
KIS				LRM		12 33 20.0	
	comp=Z,337μm,12.0s						
KIS	**Kishinev**	**10.54**	**29**κ	*i*P	**Pn**	**12 28 02.0**	**+2.0**
KIS				pmax	pmax		
	comp=N,6μm,3.0s						
KIS				pmax	pmax		
	comp=E,4μm,3.0s						
KIS				pmax	pmax		
	comp=Z,4μm,3.0s						
KIS				pmax	pmax		
	comp=Z,6μm,4.0s						
KIS				pmax	pmax		
	comp=N,8μm,3.0s						
KIS				pmax	pmax		
	comp=E,5μm,3.5s						
KIS				pmax	pmax		
	comp=Z,6μm,12.0s						
KIS				MLR	MLR		
	comp=Z,259μm,11.0s						
KIS	**Kishinev**	**10.54**	**29**	⇓P	**Pn**	**12 28 02.3**	**+2.3**
KIS				P		12 28 05.0	
KIS	**Kishinev**	**10.54**	**29**	⇓*i*P	**Pn**	**12 28 02.3**	**+2.3**
KIS	**Kishinev**	**10.54**	**29**	P	**Pn**	**12 28 05.0**	**+5.0**
KECS	**Kecovo**	**10.54**	**356**	*e*P	**Pn**	**12 27 58.3**	**-1.7**
KECS				*e*		12 29 54.3	
KECS	**Kecovo**	**10.54**	**356**	*e*Pn	**Pn**	**12 27 58.3**	**-1.7**
KECS				*e*Sn	**Sn**	**12 29 54.3**	**-3.4**
KECS				*e*Sg		12 31 31.4	
KECS	**Kecovo**	**10.54**	**356**	*e*PN	**Pn**	**12 27 58.3**	**-1.7**
KECS				*e*SN	**Sn**	**12 29 54.3**	**-3.4**
KECS				*e*SG		12 31 31.4	
PHNC	**Paralimni**	**10.55**	**102**	P	**Pn**	**12 28 02.3**	**+2.0**
	comp=Z,68nm,1.4s						
PHNC				S	**Sn**	**12 29 58.9**	**+0.8**
PHNC	**Paralimni**	**10.55**	**102**	P	**Pn**	**12 28 02.3**	**+2.0**
	comp=Z,68nm,1.4s						
PLRO	**Paularo**	**10.55**	**327**	⇑*i*P	**Pn**	**12 28 02.0**	**+1.8**
PLRO	**Paularo**	**10.55**	**327**	⇑*i*P	**Pn**	**12 28 02.0**	**+1.8**
PGF	**Pioggiola**	**10.56**	**300**	*e*P	**Pn**	**12 28 00.5**	**+0.2**
	comp=Z,8μm,1.7s						
PGF	**Pioggiola**	**10.56**	**300**	*e*P	**Pn**	**12 28 00.5**	**+0.2**
PGF				pmax	pmax		
	comp=Z,4μm,1.7s						
PGF	**Pioggiola**	**10.56**	**300**	*e*P	**Pn**	**12 28 00.5**	**+0.2**
	comp=Z,4μm,1.7s						
PGF	**Pioggiola**	**10.56**	**300**	*e*P	**Pn**	**12 28 00.5**	**+0.2**
	comp=Z,4μm,1.7s						
AVNT	**Avonos**	**10.56**	**81**	*i* P	**Pn**	**12 28 05.4**	**+5.1**
GULE	**Gulek**	**10.60**	**90**	*i* P	**Pn**	**12 28 05.2**	**+4.3**
GULE	**Gulek**	**10.60**	**90**	*i* P	**Pn**	**12 28 05.2**	**+4.4**
ZOU	**Zoufplan**	**10.63**	**327**	⇑*e*P	**Pn**	**12 28 01.0**	**-0.3**
ZOU	**Zoufplan**	**10.63**	**327**	⇑*e*P	**Pn**	**12 28 01.0**	**-0.3**
CTKT	**Corum**	**10.68**	**71**	*i* P	**Pn**	**12 28 05.0**	**+3.0**
CTKT	**Corum**	**10.68**	**71**	*i* P	**Pn**	**12 28 05.0**	**+3.1**
UZH	**Uzhgorod**	**10.68**	**3**c	*i*P	**Pn**	**12 28 03.0**	**+1.0**
UZH				*e*S	**Sn**	**12 30 04.0**	**+2.8**
UZH				MLR	MLR		
	comp=N,117μm,12.0s						
UZH				MLR	MLR		
	comp=E,128μm,12.0s						
UZH				MLR	MLR		
	comp=Z,104μm,12.0s						
UZH	**Uzhgorod**	**10.68**	**3**	*i* P	**Pn**	**12 28 03.0**	**+1.0**
UZH				*e*S	**Sn**	**12 30 04.0**	**+2.8**
VYHS	**Vyhne**	**10.70**	**351**	*e*P	**Pn**	**12 28 00.4**	**-1.8**
VYHS				MLR	MLR		
	comp=Z,56μm,17.8s						
VYHS	**Vyhne**	**10.70**	**351**	*e*Pn	**Pn**	**12 28 00.4**	**-1.8**
VYHS				*e*Sn	**Sn**	**12 29 50.6**	**-11**
VYHS	**Vyhne**	**10.70**	**351**	*e*PN	**Pn**	**12 28 00.4**	**-1.8**
VYHS				*e*SN	**Sn**	**12 29 50.6**	**-11**
VYHS	**Vyhne**	**10.70**	**351**	*e*Pn	**Pn**	**12 28 00.4**	**-1.8**
VYHS				*e*Sn	**Sn**	**12 29 50.6**	**-11**
CSMI	**Casera Mimoias**	**10.74**	**325**	⇓*e*P	**Pn**	**12 28 01.0**	**-1.8**
CSMI	**Casera Mimoias**	**10.74**	**325**	⇓*e*P	**Pn**	**12 28 01.0**	**-1.8**
CONA	**Conrad Observa**	**10.77**	**339**	⇑*e*Pn	**Pn**	**12 28 02.7**	**-0.4**
	comp=Z,378nm,0.8s,SNR=237						
CONA				⇓Sn	**Sn**	**12 30 02.3**	**-0.9**
	comp=Z,890nm,1.0s						
CSNA	**Conrad Observa**	**10.77**	**339**	⇑*i*Pn	**Pn**	**12 28 02.8**	**-0.3**
	comp=Z,2μm,1.6s						
KARA	**Karaisali**	**10.82**	**90**	*e*P	**Pn**	**12 28 07.2**	**+3.3**
KARA	**Karaisali**	**10.82**	**90**	*e*P	**Pn**	**12 28 07.2**	**+3.3**
BYBT	**Boyabat**	**10.84**	**67**	*e*P	**Pn**	**12 28 05.8**	**+1.7**
KBA	**Koelnbreinsper**	**10.89**	**329**	*e*Pn	**Pn**	**12 28 03.8**	**-1.1**
	comp=Z,879nm,0.8s,SNR=203						
KBA				⇓*e*Sn	**Sn**	**12 30 06.4**	**+0.1**
	comp=Z,3μm,1.3s						
KBA	**Koelnbreinsper**	**10.89**	**329**	P	**Pn**	**12 28 03.6**	**-1.2**
KBA				Sn	**Sn**	**12 30 06.4**	**+0.1**
	comp=Z,3μm,1.3s						
BOYT	**Boyabat**	**10.93**	**67**	*i* P	**Pn**	**12 28 15.7**	**+10**
CRVS	**Cervenica-Dubn**	**10.94**	**0**	*e*P	**Pn**	**12 28 04.8**	**-0.7**
CRVS				MLR	MLR		
	comp=Z,73μm,18.3s						
CRVS	**Cervenica-Dubn**	**10.94**	**0**	*e*Pn	**Pn**	**12 28 04.8**	**-0.7**
CRVS				*e*Sn	**Sn**	**12 29 52.8**	**-15**
CRVS	**Cervenica-Dubn**	**10.94**	**0**	*e*PN	**Pn**	**12 28 04.8**	**-0.7**
CRVS				*e*SN	**Sn**	**12 29 52.8**	**-15**
CRVS	**Cervenica-Dubn**	**10.94**	**0**	*e*Pn	**Pn**	**12 28 04.8**	**-0.7**
CRVS				*e*Sn	**Sn**	**12 29 52.8**	**-15**
SMOL	**Smolenice**	**10.95**	**346**	*e*P	**Pn**	**12 28 06.6**	**+1.0**
SMOL				*e*		12 30 03.8	
SMOL	**Smolenice**	**10.95**	**346**	*e*Pn	**Pn**	**12 28 06.6**	**+1.0**
SMOL				*e*Sn	**Sn**	**12 30 03.8**	**-3.8**
SMOL				*e*Sg		12 31 56.9	
SMOL	**Smolenice**	**10.95**	**346**	*e*PN	**Pn**	**12 28 06.6**	**+1.0**
SMOL				*e*SN	**Sn**	**12 30 03.8**	**-3.8**
SMOL				*e*SG		12 31 56.9	
SMOL	**Smolenice**	**10.95**	**346**	*e*P	**Pn**

LVV L'vov 12.00 8 *eP* **Pn 12 28 22.0 +2.0**
LVV L'vov 12.00 8 *eP* **Pn 12 28 22.3 +2.3**
SARI SarD1z-Kayseri 12.00 82 *eP* **Pn 12 28 19.9 -0.1**
FETA Feichten 12.01 322⇑*ePn* **Pn 12 28 20.6 +0.5**
comp=Z,2µm,1.2s,SNR=61
FETA ⇓*e*Sn **Sn 12 30 33.2 -0.5**
comp=Z,2µm,1.4s
CASM Ain Smara 12.06 266 P **Pn 12 28 23.4 +2.4**
MOTA Moosalm 12.07 324 *ePn* **Pn 12 28 21.1 +0.1**
comp=Z,2µm,0.7s,SNR=169
MOTA Moosalm 12.07 324 P **Pn 12 28 21.0 +0.1**
SAOF Saorge 12.10 304 *eP* **Pn 12 28 25.5 +4.2**
OKC Ostrava-Krasne 12.11 350 P **Pn 12 28 21.6 +0.1**
OKC Ostrava-Krasne 12.11 350 *eP* **Pn 12 28 19.6 -1.9**
OKC *ex* x 12 28 25.4
OKC AMS AMS 12 33 50.0
comp=Z,145µm,11.1s
OKC Ostrava-Krasne 12.11 350 P **Pn 12 28 21.6 +0.1**
REVF Revere 12.12 303 *eP* **Pn 12 28 25.5 +3.8**
TREC Trest 12.12 341 *eP* **Pn 12 28 19.4 -2.2**
TREC MLR MLR
comp=Z,308µm,16.5s
TREC Trest 12.12 341 *eP* **Pn 12 28 19.4 -2.2**
TREC *ex* x 12 28 25.1
TREC AMS AMS 12 33 30.0
comp=Z,308µm,16.5s
TREC Trest 12.12 341 *eP* **Pn 12 28 19.4 -2.2**
comp=Z,8µm,16.5s
SBF Sospel 12.12 303 *eP* **Pn 12 28 23.7 +2.0**
comp=Z,2µm,1.0s
SBF Sospel 12.12 303 *eP* **Pn 12 28 23.7 +2.0**
SBF pmax pmax
comp=Z,1µm,1.0s
SBF Sospel 12.12 303 *eP* **Pn 12 28 23.7 +2.0**
comp=Z,1µm,1.0s
MORC Moravsky Berou 12.14 348 ⇑P **Pn 12 28 22.6 +0.7**
MORC Moravsky Berou 12.14 348 *ePn* **Pn 12 28 20.5 -1.5**
MORC Moravsky Berou 12.14 348⇑*iP* **Pn 12 28 22.6 +0.7**
MORC Moravsky Berou 12.14 348 *ePn* **Pn 12 28 20.5 -1.4**
MORC Moravsky Berou 12.14 348 P **Pn 12 28 22.6 +0.7**
BTCH Batrach 12.16 95⇑*iP* **Pn 12 28 25.5 +3.3**
ERBA Erbaa 12.16 72 *i P* **Pn 12 28 25.6 +3.4**
ERBA Erbaa 12.16 72 *i P* **Pn 12 28 25.6 +3.3**
CTEI Djebel Teioual 12.18 266 P **Pn 12 28 25.6 +3.1**
AUTN L'Aution 12.19 304 *eP* **Pn 12 28 25.7 +3.2**
HNTI Hanita 12.19 109 Pn **Pn 12 28 20.2 -2.5**
HNTI Hanita 12.19 109 Pn **Pn 12 28 20.2 -2.5**
DRWC Darouich 12.20 92⇑*iP* **Pn 12 28 27.0 +4.2**
BHL Bhannes 12.20 105 *ePn* **Pn 12 28 20.8 -2.0**
GEC2 GERESS Array S 12.24 335 *ePn* **Pn 12 28 21.7 -1.6**
GEC2 GERESS Array S 12.24 335 *eP* **Pn 12 28 21.2 -2.1**
GEC2 *e* 12 30 40.1
GEC2 pmax pmax
comp=Z,10µm,0.6s
GEC2 GERESS Array S 12.24 335 *ePn* **Pn 12 28 21.2 -2.1**
comp=Z,48µm,0.6s
GEC2 *e*Sn **Sn 12 30 40.1 +0.7**
GEC2 GERESS Array S 12.24 335 *ePn* **Pn 12 28 21.2 -2.1**
comp=Z,10µm,0.6s
GEC2 *e*Sn **Sn 12 30 40.1 +0.7**
GERES GERESS Array B 12.24 335 Pn **Pn 12 28 22.9 -0.4**
comp=Z,7.4nm,0.3s,baz=156,slow=13,SNR=108
GERES Sn **Sn 12 30 41.1 +1.8**
comp=Z,24nm,0.3s,baz=158,slow=23,SNR=10
GERES P3KP 13 05 09.9
comp=Z,0.1nm,0.3s,baz=64,slow=3.1,SNR=3.8
GERES GERESS Array B 12.24 335 P **Pn 12 28 22.9 -0.4**
GERES 12 30 41.1
GERES pmax pmax
comp=Z,7.0nm,0.3s
GERES smax
comp=N,24nm,0.3s
GERES GERESS Array B 12.24 335 Pn **Pn 12 28 22.9 -0.4**
GERES Sn **Sn 12 30 41.1 +1.8**
GERES GERESS Array B 12.24 335 Pn **Pn 12 28 22.9 -0.4**
GERES Sn **Sn 12 30 41.1 +1.7**
KMRS Kahramanmaras 12.24 87 *eP* **Pn 12 28 26.6 +3.2**
KMRS Kahramanmaras 12.24 87 *eP* **Pn 12 28 26.7 +3.3**
WRDH Warideh 12.25 97⇑*iP* **Pn 12 28 26.0 +2.5**
SVSK Karacayir 12.27 76 *eP* **Pn 12 28 25.3 +1.6**
DAVOX Davos/Dischmat 12.27 320 Pn **Pn 12 28 23.1 -0.6**
comp=N,7.6nm,0.3s,baz=140,slow=16,SNR=41
DAVOX Sn **Sn 12 30 39.2 -0.9**
comp=N,36nm,0.3s,baz=163,slow=19,SNR=5.0
DAVOX LR LR 12 33 46.5
comp=N,140µm,20.1s,baz=127,slow=40
DAVOX Davos/Dischmat 12.27 320 P **Pn 12 28 23.1 -0.6**
DAVOX 12 30 39.2
DAVOX Davos/Dischmat 12.27 320 P **Pn 12 28 23.1 -0.6**
DAVOX Sn **Sn 12 30 39.2 -0.9**
OFRI 'Ofer 12.27 112 Pn **Pn 12 28 21.1 -2.7**
OFRI 'Ofer 12.27 112 Pn **Pn 12 28 21.1 -2.7**
HWQ Hawqa 12.29 103 *ePn* **Pn 12 28 23.1 -0.9**
TOUF Mont Tournerai 12.31 304 *eP* **Pn 12 28 28.5 +4.2**
OJC Ojcow 12.31 355 *eP* **Pn 12 28 23.4 -0.9**
OJC *e*PP 12 28 33.4
OJC *e*S **Sn 12 30 40.0 -1.1**
OJC L 12 33 39.4
comp=N,195nm,16.1s
OJC Ojcow 12.31 355 *eP* **Pn 12 28 23.4 -0.9**
OJC *e*S **Sn 12 30 40.0 -1.1**
MVIF Mont Vial 12.32 303 *eP* **Pn 12 28 27.7 +3.2**
RETA Reutte 12.33 324 *ePn* **Pn 12 28 23.9 -0.7**
comp=N,3µm,1.8s,SNR=256
RETA ⇑*e*Sn **Sn 12 30 39.9 -1.7**
comp=N,2µm,1.1s
RAC Raciborz 12.34 350 *eP* **Pn 12 28 24.3 -0.3**
RAC *e*S **Sn 12 30 47.7 +5.9**
RAC MLR MLR
comp=E,200µm,14.0s
RAC MLR MLR
comp=N,80µm,10.0s
RAC MLR MLR
comp=Z,78µm,14.0s
RAC Raciborz 12.34 350 *eP* **Pn 12 28 24.3 -0.3**
RAC *e*S **Sn 12 30 47.7 +5.9**
comp=Z,78µm,14.0s
STV Sant Anna di V 12.36 305 P **Pn 12 28 27.3 +2.4**
MMAI Mount Meron Ar 12.39 109 Pn **Pn 12 28 23.2 -2.3**
comp=Z,23nm,0.3s,baz=302,slow=12,SNR=36
MMAI Sn **Sn 12 30 40.3 -3.0**
comp=Z,42nm,0.3s,baz=313,slow=27,SNR=7.0
CALN Calern 12.44 302 *eP* **Pn 12 28 28.8 +2.7**
DFRA Djebel Bou Aff 12.49 268 P **Pn 12 28 29.2 +2.4**
KUZU Kuzuini 12.49 91 *i P* **Pn 12 28 27.9 +1.1**
RCY Rachaya 12.50 107 *ePn* **Pn 12 28 24.4 -2.6**
SLTI Sal'it 12.50 113 Pn **Pn 12 28 24.1 -2.9**
SLTI S **Sn 12 30 37.3 -8.6**
SLTI Sal'it 12.50 113 Pn **Pn 12 28 24.1 -2.9**
SLTI S **Sn 12 30 37.3 -8.6**
KSDI Kefar Szold 12.51 108 Pn **Pn 12 28 23.6 -3.4**
KSDI Kefar Szold 12.51 108 Pn **Pn 12 28 23.6 -3.4**
HRI Mount Hermon 12.53 108 P **Pn 12 28 24.7 -2.6**
HRI Mount Hermon 12.53 108 Pn **Pn 12 28 24.7 -2.6**
KHC Kasperske Hory 12.53 336 *eP* **Pn 12 28 25.4 -1.8**
KHC MLR MLR
comp=Z,283µm,18.5s
KHC Kasperske Hory 12.53 336 *ePn* **Pn 12 28 25.0 -2.3**
comp=Z,583nm,0.8s
KHC Kasperske Hory 12.53 336 *eP* **Pn 12 28 25.4 -1.8**
KHC *ex* x 12 28 30.4
KHC AMS AMS 12 34 00.0
comp=Z,283µm,18.5s
KHC Kasperske Hory 12.53 336 *ePn* **Pn 12 28 25.0 -2.2**
comp=Z,583nm,0.8s
KHC Kasperske Hory 12.53 336 *eP* **Pn 12 28 25.4 -1.8**
comp=Z,83µm,18.5s
FRF La Foret Royal 12.53 301 *eP* **Pn 12 28 28.4 +1.1**
comp=Z,1µm,1.2s
FRF La Foret Royal 12.53 301 *eP* **Pn 12 28 28.4 +1.1**
FRF pmax pmax
comp=Z,624nm,1.2s
FRF La Foret Royal 12.53 301 *eP* **Pn 12 28 28.4 +1.1**
comp=Z,624nm,1.2s
FRF La Foret Royal 12.53 301 *eP* **Pn 12 28 28.4 +1.1**
comp=Z,624nm,1.2s
GAZ Gaziantep 12.54 89 *eP* **Pn 12 28 27.3 -0.1**
LMR La Mourre 12.55 300 *eP* **Pn 12 28 28.2 +0.7**
comp=Z,2µm,1.6s
LMR La Mourre 12.55 300 *eP* **Pn 12 28 28.2 +0.7**
LMR pmax pmax
comp=Z,1µm,1.6s
LMR La Mourre 12.55 300 *eP* **Pn 12 28 28.2 +0.7**
comp=Z,1µm,1.6s
LMR La Mourre 12.55 300 *eP* **Pn 12 28 28.2 +0.7**
comp=Z,1µm,1.6s
FUR Furstenfeldbru 12.61 327 *ePn* **Pn 12 28 26.9 -1.4**
FUR Furstenfeldbru 12.61 327 P **Pn 12 28 27.2 -1.1**
FUR Furstenfeldbru 12.61 327 P **Pn 12 28 27.2 -1.1**
DAVA Damuels 12.61 321 P **Pn 12 28 29.8 +1.4**
DAVA Damuels 12.61 321⇑*ePn* **Pn 12 28 29.7 +1.3**
comp=Z,1µm,0.9s,SNR=79
DAVA ⇑Sn **Sn 12 30 43.1 -5.4**
comp=Z,1µm,0.8s
DAVA Damuels 12.61 321 P **Pn 12 28 29.8 +1.4**
MMLI Mount Malkishu 12.68 112 Pn **Pn 12 28 26.7 -2.7**
MMLI Mount Malkishu 12.68 112 Pn **Pn 12 28 26.7 -2.7**
KSHT Keshet 12.71 109 Pn **Pn 12 28 27.2 -2.6**
KSHT Keshet 12.71 109 Pn **Pn 12 28 27.2 -2.6**
UBR Ueberruh 12.78 323 P **Pn 12 28 31.6 +1.0**
UBR Ueberruh 12.78 323 P **Pn 12 28 31.6 +1.0**
WET Wettzell 12.78 334 *ePn* **Pn 12 28 27.8 -2.8**
WET Wettzell 12.78 334 P **Pn 12 28 30.8 +0.2**
WET Wettzell 12.78 334 P **Pn 12 28 30.8 +0.2**
GZT Gaziantep 12.79 88 *i P* **Pn 12 28 34.3 +3.4**
KZIT Kziot 12.79 120 Pn **Pn 12 28 26.9 -4.0**
KZIT Kziot 12.79 120 Pn **Pn 12 28 26.9 -4.0**
SURF Saint Ours 12.79 305 *eP* **Pn 12 28 38.2 +7.4**
HMDT Nahal Hemdat 12.85 112 Pn **Pn 12 28 29.2 -2.5**
HMDT S **Sn 12 30 46.3 -8.1**
HMDT Nahal Hemdat 12.85 112 Pn **Pn 12 28 29.2 -2.5**
HMDT S **Sn 12 30 46.3 -8.1**
DARE Darende-Malaty 12.86 81 *eP* **Pn 12 28 30.7 -1.2**
CKHR Kef el Ahmar 12.89 266 P **Pn 12 28 35.6 +3.4**
RTMI Retamim 12.90 118 Pn **Pn 12 28 29.1 -3.4**
RTMI Retamim 12.90 118 Pn **Pn 12 28 29.1 -3.4**
DPC Dobruska-Polom 12.92 345 P **Pn 12 28 31.2 -1.3**
DPC Dobruska-Polom 12.92 345 *eP* **Pn 12 28 30.8 -1.7**
DPC *ex* x 12 28 35.3
DPC AMS AMS 12 34 30.0
DPC Dobruska-Polom 12.92 345 P **Pn 12 28 31.2 -1.3**
MBDF Montbardon 12.93 306 *eP* **Pn 12 28 34.7 +2.0**
comp=Z,2µm,1.1s
MBDF Montbardon 12.93 306 *eP* **Pn 12 28 34.7 +2.0**
MBDF pmax pmax
comp=Z,1µm,1.1s
MBDF Montbardon 12.93 306 *eP* **Pn 12 28 34.7 +2.0**
comp=Z,1µm,1.1s
SET Setif 12.94 267 P **Pn 12 28 37.0 +4.1**
TCHB Talchebab 12.98 110⇑*iP* **Pn 12 28 35.5 +2.1**
AKCD Akcadag 12.98 83 *i P* **Pn 12 28 36.6 +3.2**
AKCD Akcadag 12.98 83 *i P* **Pn 12 28 36.6 +3.2**
PRU Pruhonice 13.00 340 P **Pn 12 28 33.6 -0.1**
PRU Pruhonice 13.00 340 *eP* **Pn 12 28 31.6 -2.1**
PRU *ex* x 12 28 36.9
PRU AMS AMS 12 34 20.0
comp=Z,239µm,11.2s
PRU Pruhonice 13.00 340 P **Pn 12 28 33.6 -0.1**
YTIR Yattir 13.03 116 Pn **Pn 12 28 31.0 -3.1**
YTIR Yattir 13.03 116 Pn **Pn 12 28 31.0 -3.1**
PRA Prague 13.11 340 P **Pn 12 28 32.0 -3.1**
PRA *ex* x 12 28 37.0
PRA AMS AMS 12 34 29.0
UPC Upice 13.13 345 P **Pn 12 28 34.5 -0.9**
UPC Upice 13.13 345 *eP* **Pn 12 28 34.2 -1.2**
UPC *ex* x 12 28 38.0
UPC Upice 13.13 345 P **Pn 12 28 34.5 -0.9**
BNI Bardonecchia 13.13 307 *eP* **Pn 12 28 39.1 +3.6**
BNI Bardonecchia 13.13 307 *ePn* **Pn 12 28 39.1 +3.6**
RMNI Mount Ramon 13.23 120 Pn **Pn 12 28 33.7 -3.1**
RMNI Mount Ramon 13.23 120 Pn **Pn 12 28 33.7 -3.1**
MZDA Masada 13.23 116 Pn **Pn 12 28 34.0 -2.9**
MZDA S **Sn 12 30 54.4 -9.3**
MZDA Masada 13.23 116 Pn **Pn 12 28 34.0 -2.9**
MZDA S **Sn 12 30 54.4 -9.3**
SLMH Al Salmeh 13.28 93⇑*iP* **Pn 12 28 42.3 +4.8**
LPG La Plagne 13.30 309 *eP* **Pn 12 28 38.9 +1.1**
comp=Z,2µm,1.0s
LPG La Plagne 13.30 309 *eP* **Pn 12 28 38.9 +1.1**
LPG pmax pmax
comp=Z,907nm,1.0s
LPG La Plagne 13.30 309 *eP* **Pn 12 28 38.9 +1.1**
comp=Z,907nm,1.0s
LPG La Plagne 13.30 309 *eP* **Pn 12 28 38.9 +1.1**
comp=Z,907nm,1.0s
LPL La Plagne 13.32 309 *eP* **Pn 12 28 38.1 +0.1**
comp=Z,2µm,0.9s
LPL La Plagne 13.32 309 *eP* **Pn 12 28 38.1 +0.1**
LPL pmax pmax
comp=Z,805nm,0.9s
LPL La Plagne 13.32 309 *eP* **Pn 12 28 38.1 +0.1**
comp=Z,805nm,0.9s
LPL La Plagne 13.32 309 *eP* **Pn 12 28 38.1 +0.1**
comp=Z,805nm,0.9s
GRSN GIRESUNGRSN 13.33 72 *i P* **Pn 12 28 42.1 +3.8**
GRSN GIRESUNGRSN 13.33 72 *i P* **Pn 12 28 42.1 +3.8**
ATAB Bozova 13.35 87 *i P* **Pn 12 28 41.3 +2.8**
ATAB Bozova 13.35 87 *i P* **Pn 12 28 41.3 +2.8**
MYA Malataya 13.37 83 *eP* **Pn 12 28 43.1 +4.3**
MYA Malataya 13.37 83 *eP* **Pn 12 28 43.1 +4.3**
KSP Ksiaz 13.39 346 *eP* **Pn 12 28 37.5 -1.4**
KSP *e*S **Sn 12 31 22.0 +15**
KSP LMZ 12 34 54.0
comp=Z,245µm,18.4s
KSP Ksiaz 13.39 346⇑*eP* **Pn 12 28 37.5 -1.5**
KSP Ksiaz 13.39 346 *eP* **Pn 12 28 37.5 -1.5**
HDH Heidenheim-Cha 13.39 326 P **Pn 12 28 37.2 -1.8**
HDH Heidenheim-Cha 13.39 326 P **Pn 12 28 37.2 -1.8**
KEMA Kemaliye 13.40 79 *i P* **Pn 12 28 42.4 +3.3**
KEMA Kemaliye 13.40 79 *i P* **Pn 12 28 42.4 +3.3**
SMRF Simiane la Rot 13.41 302 *eP* **Pn 12 28 40.8 +1.5**
comp=Z,4µm,1.6s
SMRF Simiane la Rot 13.41 302 *eP* **Pn 12 28 40.8 +1.5**
comp=Z,4µm,1.6s
SMRF Simiane la Rot 13.41 302 *eP* **Pn 12 28 40.8 +1.5**
comp=Z,2µm,1.6s
PVCC Panska Ves 13.49 341 P **Pn 12 28 39.9 -0.4**
PVCC Panska Ves 13.49 341 *eP* **Pn 12 28 39.0 -1.3**
PVCC *ex* x 12 28 43.3
PVCC AMS AMS 12 34 30.0
comp=Z,203µm,15.9s
PVCC Panska Ves 13.49 341 P **Pn 12 28 39.9 -0.4**
KRMI Paran Flat 13.50 122 Pn **Pn 12 28 36.2 -4.3**
KRMI Paran Flat 13.50 122 Pn **Pn 12 28 36.2 -4.3**
AKF Akfadou 13.51 270 P **Pn 12 28 43.0 +2.3**
GUT Gutenstein 13.53 322 P **Pn 12 28 40.4 -0.5**
GUT Gutenstein 13.53 322 P **Pn 12 28 40.4 -0.5**
ZFRI Zfri 13.54 119 Pn **Pn 12 28 37.8 -3.3**
ZFRI Zfri 13.54 119 Pn **Pn 12 28 37.8 -3.3**
PRNI Paran 13.54 120 P **Pn 12 28 37.1 -4.0**
PRNI Paran 13.54 120 Pn **Pn 12 28 37.1 -4.0**
GDM Grand'Maison 13.55 307 *eP* **Pn 12 28 46.2 +4.9**
ORIF Oris-en-Rattie 13.58 306 *eP* **Pn 12 28 43.5 +1.9**
comp=Z,2µm,1.2s
ORIF *e*MLR MLR
comp=Z,160µm,21.0s
ORIF Oris-en-Rattie 13.58 306 *eP* **Pn 12 28 43.5 +1.9**
ORIF pmax pmax
comp=Z,877nm,1.2s
ORIF Oris-en-Rattie 13.58 306 *eP* **Pn 12 28 43.5 +1.9**
comp=Z,877nm,1.2s
SLE Schleitheim 13.63 320 P **Pn 12 28 43.6 +1.3**
ESPY Espiye-Giresun 13.68 72 *eP* **Pn 12 28 45.3 +2.3**
ESPY Espiye-Giresun 13.68 72 *eP* **Pn 12 28 45.3 +2.3**
SPAK Spaichingen-Ko 13.71 322 P **Pn 12 28 44.0 +0.6**
SPAK Spaichingen-Ko 13.71 322 P **Pn 12 28 44.0 +0.6**
HRFI Mount Harif 13.76 121 Pn **Pn 12 28 40.2 -3.9**
HRFI Mount Harif 13.76 121 Pn **Pn 12 28 40.2 -3.9**
URFA Urfa 13.77 87 *eP* **Pn 12 28 45.8 +1.6**
ANN Anapa 13.80 55*d iP* **Pn 12 28 43.7 -0.9**
ANN *i* S **Sn 12 31 19.4 +2.0**
ANN pmax pmax
comp=N,193nm,1.3s
ANN pmax pmax
comp=E,151nm,1.3s
ANN pmax pmax
comp=Z,375nm,1.3s
ANN Anapa 13.80 55 *i P* **Pn 12 28 43.7 -0.9**
ANN *i* S **Sn 12 31 19.4 +2.0**
ELZG Elazig 13.80 82 *i P* **Pn 12 28 48.1 +3.5**
ELZG Elazig 13.80 82 *i P* **Pn 12 28 48.1 +3.5**
GRN Grenoble 13.81 307 *eP* **Pn 12 28 49.0 +4.3**
OCF Saint Nazaire 13.82 304 *eP* **Pn 12 28 50.5 +5.7**
OCF Saint Nazaire 13.82 304 *eP* **Pn 12 28 50.5 +5.7**
OG26 St.-Nazaire-De 13.82 304 *eP* **Pn 12 28 50.5 +5.7**
GRFO Grafenberg 13.84 331 P **Pn 12 28 42.8 -2.3**
GRF Grafenberg Arr 13.84 331 *ePn* **Pn 12 28 42.3 -2.8**
GRF *e*L 12 35 09.9
comp=Z,212µm,19.9s
GRF Grafenberg Arr 13.84 331 *ePn* **Pn 12 28 42.3 -2.8**
NKC Novy Kostel 13.85 335 P **Pn 12 28 45.3 0.0**
NKC Novy Kostel 13.85 335 *eP* **Pn 12 28 44.5 -0.8**
NKC *ex* x 12 28 50.0
NKC AMS AMS 12 35 00.0
comp=Z,266µm,17.7s
NKC Novy Kostel 13.85 335 P **Pn 12 28 45.3 0.0**
KIEV Kiev 13.88 21⇑*iP* **Pn 12 28 44.9 -0.7**
KIEV pmax pmax
comp=Z,799nm,1.0s
KIEV Kiev 13.88 21⇑*iPn* **Pn 12 28 44.9 -0.7**
comp=Z,799nm,1.0s
KIEV Kiev 13.88 21⇑*iPn* **Pn 12 28 44.9 -0.7**
comp=Z,799nm,1.0s
AKASG Malin Array Be 13.89 21 Pn **Pn 12 28 43.1 -2.6**
comp=Z,4.9nm,0.3s,baz=209,slow=13,SNR=18
AKASG LR LR 12 34 27.4
comp=Z,190µm,18.7s,baz=200,slow=39
AKASG ScP ScP 12 37 40.8 +0.4
comp=Z,0.8nm,0.3s,baz=252,slow=1.3,SNR=2.5
AKASG Malin Array Be 13.89 21 *i P* **Pn 12 28 45.2 -0.6**
AKASG pmax pmax
comp=Z,24nm,0.8s
AKASG Malin Array Be 13.89 21 Pn **Pn 12 28 43.2 -2.6**
AKASG Malin Array Be 13.89 21 *i P* **Pn 12 28 45.2 -0.6**
comp=Z,24nm,0.8s
AKBB Malin Array Si 13.89 21 *eP* **Pn 12 28 45.1 -0.7**
AKBB Malin Array Si 13.89 21 *eP* **Pn 12 28 45.1 -0.7**
ASF Jabal al Asfar 13.90 110 Pn **Pn 12 28 46.5 +0.4**
comp=Z,4.0nm,0.3s,baz=164,slow=8.5,SNR=19
ASF Jabal al Asfar 13.90 110 P **Pn 12 28 46.5 +0.4**
ASF pmax pmax
comp=Z,4.0nm,0.3s
WERN Wernitzgruen 13.93 335 P **Pn 12 28 45.1 -1.2**
WERN Wernitzgruen 13.93 335 P **Pn 12 28 45.1 -1.2**
EIL Elat 13.93 122 Pn **Pn 12 28 42.2 -4.3**
comp=Z,5.0nm,0.3s,baz=333,slow=11,SNR=34
EIL Sn **Sn 12 31 08.9 -12**
comp=Z,22nm,0.3s,baz=277,slow=14,SNR=3.8
EIL Elat 13.93 122 Pn **Pn 12 28 42.2 -4.3**
EIL Sn **Sn 12 31 08.9 -12**
BBS Basel-Blauen 13.95 317 *eP* **Pn 12 28 50.5 +3.8**
FELD Feldberg im Sc 13.95 320 P **Pn 12 28 46.8 +0.1**
FELD Feldberg im Sc 13.95 320 P **Pn 12 28 46.8 +0.1**
BRG Berggiesshubel 13.97 340 *eP* **Pn 12 28 45.7 -1.2**
comp=Z,122nm,2.1s
BRG *i* 12 28 50.8
comp=Z,815nm,1.5s
BRG *i* 12 28 58.7
comp=Z,2µm,1.7s
BRG S **Sn 12 31 25.0 +3.5**
comp=N,147µm,11.5s
BRG S **Sn 12 31 25.0 +3.5**
comp=E,237µm,14.2s
BRG pmax pmax
comp=Z,73nm,2.1s
BRG MLR MLR
comp=N,88µm,11.5s
BRG MLR MLR
comp=E,142µm,14.2s
BRG MLR MLR
comp=Z,112µm,10.6s
BRG Berggiesshubel 13.97 340 *eP* **Pn 12 28 45.7 -1.1**
comp=Z,73nm,2.1s
BRG S **Sn 12 31 25.0 +3.5**
comp=Z,12µm,10.6s
BRG Berggiesshubel 13.97 340 *eP* **Pn 12 28 45.7 -1.1**
STU Stuttgart 13.99 324 *ePn* **Pn 12 28 45.5 -1.6**
STU *e*Sn **Sn 12 31 15.3 -6.7**
STU Stuttgart 13.99 324 *ePn* **Pn 12 28 45.6 -1.5**
STU Stuttgart 13.99 324 *eP* **Pn 12 28 45.6 -1.5**
TANN Tannenbergstha 14.01 336 *ePn* **Pn 12 28 45.3 -2.1**
TANN Tannenbergstha 14.01 336 P **Pn 12 28 47.0 -0.4**
TANN Tannenbergstha 14.01 336 P **Pn 12 28 47.0 -0.4**
KIZ Kirchzarten 14.05 320 P **Pn 12 28 46.7 -1.3**
SVRC Sivrice-ELAZID 14.06 83 *eP* **Pn 12 28 49.5 +1.3**
EZC Erzincan 14.07 77 *eP* **Pn 12 28 53.0 +4.7**
HKAT Jabal Katrina 14.09 128 P **Pn 12 28 41.5 -7.1**
baz=131
HKAT Jabal Katrina 14.09 128 P **Pn 12 28 41.5 -7.1**
BFO Black Forest 14.09 322 Pn **Pn 12 28 48.0 -0.5**
comp=Z,4µm,0.7s,SNR=28
BFO Black Forest 14.09 322 *ePn* **Pn 12 28 45.7 -2.8**
BFO Black Forest 14.09 322 *i P* **Pn 12 28 48.1 -0.4**
BFO Black Forest 14.09 322 *ePn* **Pn 12 28 46.3 -2.2**
comp=Z,910nm,1.0s
BFO Black Forest 14.09 322 *ePn* **Pn 12 28 46.3 -2.2**
comp=Z,910nm,1.0s
BFO Black Forest 14.09 322 *i P* **Pn 12 28 48.1 -0.4**
LBG Lerchenberg 14.10 323 P **Pn 12 28 47.3 -1.3**
LBG Lerchenberg 14.10 323 P **Pn 12 28 47.3 -1.3**
PTK Pertek 14.10 81 *eP* **Pn 12 28 50.1 +1.3**
AKET Djebel Ketaf 14.17 268 P **Pn 12 28 55.7 +6.0**
GUMT Gumushane 14.20 74 *eP* **Pn 12 28 54.1 +4.0**
SIND Sindeldorf 14.23 327 P **Pn 12 28 48.6 -1.8**
SIND Sindeldorf 14.23 327 P **Pn 12 28 48.6 -1.8**
LOMF Lomont 14.26 316 P **Pn 12 28 51.6 +0.8**
LOMF Lomont 14.26 316 P **Pn 12 28 51.6 +0.8**
CABF La Chapelle 14.26 312 *eP* **Pn 12 28 50.5 -0.4**
comp=Z,3µm,1.0s
CABF La Chapelle 14.26 312 *eP* **Pn 12 28 50.5 -0.4**
CABF pmax pmax
comp=Z,2µm,1.0s
CABF La Chapelle 14.26 312 *eP* **Pn 12 28 50.5 -0.4**
comp=Z,2µm,1.0s
CABF La Chapelle 14.26 312 *eP* **Pn 12 28 50.5 -0.4**
comp=Z,2µm,1.0s
WAR Warsaw 14.28 359 *eP* **Pn 12 28 55.5 +4.3**
WAR *e*S Sn 12 31 51.7 +23
WAR LMZ 12 34 26.0
comp=Z,99µm,21.6s
WAR Warsaw 14.28 359 *eP* **Pn 12 28 55.5 +4.4**
comp=Z,99µm,21.6s
VIVF Saint-Julien-I 14.34 304 *eP* **Pn 12 28 51.1 -0.8**
comp=Z,2µm,1.6s
VIVF Saint-Julien-I 14.34 304 *eP* **Pn 12 28 51.1 -0.8**
VIVF pmax pmax
comp=Z,1µm,1.6s
VIVF Saint-Julien-I 14.34 304 *eP* **Pn 12 28 51.1 -0.8**
comp=Z,1µm,1.6s
MOF Molkenrain 14.39 318 *eP* **Pn 12 28 57.0 +4.4**
TR1 14.43 130 P **Pn 12 28 46.4 -6.9**
baz=133
TR1 14.43 130 P **Pn 12 28 46.4 -6.9**
MACK Trabzon 14.46 72 *i P* **Pn 12 28 57.2 +3.5**
KTUT Trabzon 14.47 72 *eP* **Pn 12 28 56.5 +2.7**
MOX Moxa 14.48 334 *ePN* **Pn 12 28 51.4 -2.5**
MOX *e*SN **Sn 12 31 26.4 -7.7**
MOX Moxa 14.48 334 *ePn* **Pn 12 28 51.3 -2.6**
MOX Moxa 14.48 334 *ePn* **Pn 12 28 51.4 -2.5**
MOX *e*Sn **Sn 12 31 26.4 -7.7**
ADJB Djebel Djouab 14.50 268 P **Pn 12 28 56.1 +1.9**
HINF Hinteralfeld 14.52 317 *eP* **Pn 12 28 52.8 -1.6**
comp=Z,1µm,0.9s
HINF Hinteralfeld 14.52 317 *eP* **Pn 12 28 52.8 -1.6**
HINF pmax pmax
comp=Z,529nm,0.9s
HINF Hinteralfeld 14.52 317 *eP* **Pn 12 28 52.8 -1.6**
comp=Z,530nm,0.9s
SSB Saint Sauveur 14.59 305 *eP* **Pn 12 28 58.2 +2.8**
ECH Echery 14.61 319 P **Pn 12 28 55.7 +0.1**
LASF Ste Croix 14.61 300 *eP* **Pn 12 28 55.8 +0.2**
comp=Z,798nm,1.1s
CLL Collm 14.62 339 *ePn* **Pn 12 28 54.8 -0.9**
CLL Collm 14.62 339 *eP* **Pn 12 28 54.0 -1.7**
CLL *e*S **Sn 12 31 43.0 +5.6**
CLL Collm 14.62 339 *eP* **Pn 12 28 54.0 -1.7**
CLL *i* 12 28 57.9
CLL S **Sn 12 31 43.0 +5.6**
CLL Collm 14.62 339 *eP* **Pn 12 28 54.0 -1.7**
CLL *i* Pmax 12 28 57.9
comp=Z,735nm,1.6s
CLL *e*PP 12 29 03.0
CLL *es*PP 12 29 08.0
CLL *i* (PPP) 12 29 13.4
CLL *e* 12 30 05.0
CLL *e*S **Sn 12 31 43.0 +5.6**

CLL			LmH			12 33 54.0
	comp=N,184μm,19.1s					
CLL			LmH			12 33 54.0
	comp=E,323μm,18.4s					
CLL			Lmax			12 35 00.0
CLL	**Collm**	**14.62**	**339**	*e*P	**Pn**	**12 28 54.0 -1.7**
CLL				*e*S	**Sn**	**12 31 43.0 +5.6**
ETOS	**Mallorca**	**14.63**	**283**	P	**Pn**	**12 28 58.2 +2.3**
	comp=E,69nm,0.9s					
ETOS	**Mallorca**	**14.63**	**283**	P	**Pn**	**12 28 58.2 +2.2**
	comp=E,69nm,0.9s					
CDF	**Champ du Feu**	**14.67**	**320**	*e*P	**Pn**	**12 28 54.7 -1.8**
	comp=E,3μm,1.1s					
CDF	**Champ du Feu**	**14.67**	**320**	*e*P	**Pn**	**12 28 54.7 -1.8**
CDF				pmax	pmax	
	comp=Z,1μm,1.1s					
CDF	**Champ du Feu**	**14.67**	**320**	*e*P	**Pn**	**12 28 54.7 -1.8**
	comp=Z,1μm,1.1s					
ABA	**Alger-Bouzarea**	**14.69**	**271**	P	**Pn**	**12 29 05.6 +8.8**
SWS	**Schriesheim-Wi**	**14.73**	**326**	P	**Pn**	**12 28 56.7 -0.5**
SWS	**Schriesheim-Wi**	**14.73**	**326**	P	**Pn**	**12 28 56.7 -0.5**
DIYA	**Diyarbakir**	**14.74**	**84**	*i* P	**Pn**	**12 29 00.6 +3.1**
TOD	**Tromm**	**14.77**	**326**	P	**Pn**	**12 28 57.9 +0.1**
TOD	**Tromm**	**14.77**	**326**	P	**Pn**	**12 28 57.9 +0.1**
LANF	**Langenberg**	**14.79**	**322**	P	**Pn**	**12 28 59.4 +1.4**
LANF	**Langenberg**	**14.79**	**322**	P	**Pn**	**12 28 59.4 +1.4**
DIY	**Diyarbakir**	**14.82**	**84**	*e*P	**Pn**	**12 29 03.5 +4.9**
BDAS	**Al Bad'**	**14.85**	**126**	P	**Pn**	**12 28 59.0 0.0**
BDAS	**Al Bad'**	**14.85**	**126**	P	**Pn**	**12 28 59.0 0.0**
EJON	**La Jonquera**	**14.87**	**293**	P	**Pn**	**12 29 02.5 +3.4**
	comp=Z,19nm,0.7s					
EJON	**La Jonquera**	**14.87**	**293**	P	**Pn**	**12 29 02.5 +3.3**
	comp=Z,19nm,0.7s					
EMHD	**Djebel Mahouad**	**14.87**	**269**	P	**Pn**	**12 29 00.0 +0.8**
SJAF	**Saint Jean de**	**14.88**	**293**	*e*P	**Pn**	**12 29 04.4 +5.1**
JLOS		**14.90**	**124**	P	**Pn**	**12 28 56.7 -3.0**
JLOS		**14.90**	**124**	P	**Pn**	**12 28 56.7 -3.0**
HAU	**Haudompre**	**14.90**	**317**	*e*P	**Pn**	**12 28 57.4 -2.2**
	comp=Z,4μm,1.2s					
HAU				*e*MLR	MLR	
	comp=Z,149μm,20.2s					
HAU	**Haudompre**	**14.90**	**317**	*e*P	**Pn**	**12 28 57.4 -2.2**
HAU				pmax	pmax	
	comp=Z,2μm,1.2s					
HAU	**Haudompre**	**14.90**	**317**	*e*P	**Pn**	**12 28 57.4 -2.2**
	comp=Z,2μm,1.2s					
SOC	**Sochi**	**14.93**	**62**	*d i*P	**Pn**	**12 28 59.9 -0.1**
SOC				*e*		12 31 49.4
SOC				pmax	pmax	
	comp=Z,553nm,1.1s					
SOC				MLR	MLR	
	comp=Z,30μm,14.0s					
SOC	**Sochi**	**14.93**	**62** ⇓	*i*P	**Pn**	**12 28 59.9 -0.1**
SOC				*e*S	**Sn**	**12 31 49.4 +4.4**
	comp=Z,30μm,14.0s					
BINT	**Bingol**	**14.96**	**81**	*e*P	**Pn**	**12 29 06.7 +6.3**
KOPT	**Kop Dagi**	**14.96**	**76**	*i* P	**Pn**	**12 29 03.5 +3.1**
CFON	**Fontmartina**	**15.08**	**291**	P	**Pn**	**12 29 05.3 +3.2**
	comp=Z,32nm,0.9s					
CFON	**Fontmartina**	**15.08**	**291**	P	**Pn**	**12 29 05.3 +3.2**
	comp=Z,32nm,0.9s					
LRDF	**Laroque-de-Fa**	**15.22**	**295**	*e*P	**Pn**	**12 29 06.0 +2.1**
THEF	**They Montfort**	**15.23**	**317**	*e*P	**Pn**	**12 29 09.7 +5.7**
COLF	**Collangettes**	**15.23**	**305**	*e*P	**Pn**	**12 29 07.1 +3.1**
PZAR	**Pazar-Rize**	**15.34**	**72**	*e*P	**Pn**	**12 29 06.9 +1.5**
TNS	**Taunus Mts**	**15.38**	**327**	*e*Pn	**Pn**	**12 29 04.5 -1.4**
TNS				*e*Sn	**Sn**	**12 31 47.2 -8.7**
LBL	**Lubilhac**	**15.42**	**304**	*e*P	**Pn**	**12 29 08.0 +1.6**
PLDF	**La Plantade**	**15.47**	**307**	*e*P	**Pn**	**12 29 09.0 +1.9**
RUE	**Ruedersdorf**	**15.48**	**342**	*e*P	**Pn**	**12 29 08.3 +1.2**
	comp=Z,5μm,1.2s					
CARF	**Carcanieres**	**15.49**	**294**	*e*P	**Pn**	**12 29 11.3 +3.9**
HSFG		**15.49**	**134**	P	**Pn**	**12 29 01.9 -5.6**
	baz=137					
HSFG		**15.49**	**134**	P	**Pn**	**12 29 01.9 -5.6**
VALF	**Valcebollere**	**15.49**	**293**	*e*P	**Pn**	**12 29 10.1 +2.6**
ABH	**Alteburg**	**15.54**	**325**	P	**Pn**	**12 29 08.5 +0.6**
CLLI	**Llivia**	**15.54**	**293**	P	**Pn**	**12 29 11.3 +3.3**
CLLI	**Llivia**	**15.54**	**293**	P	**Pn**	**12 29 11.3 +3.3**
MTLF	**Montolieu**	**15.54**	**296**	*e*P	**Pn**	**12 29 08.1 0.0**
	comp=Z,684nm,1.0s					
MTLF	**Montolieu**	**15.54**	**296**	*e*P	**Pn**	**12 29 08.1 0.0**
MTLF				pmax	pmax	
	comp=Z,342nm,1.0s					
MTLF	**Montolieu**	**15.54**	**296**	*e*P	**Pn**	**12 29 08.1 0.0**
	comp=Z,342nm,1.0s					
GKP	**Gorka Klasztor**	**15.59**	**351**	*e*P	**Pn**	**12 29 10.8 +2.2**
GKP				*e*S	**Sn**	**12 32 15.8 +15**
GKP				LMZ		12 35 43.3
	comp=Z,104μm,18.0s					
GKP	**Gorka Klasztor**	**15.59**	**351**	*e*P	**Pn**	**12 29 10.8 +2.2**
	comp=Z,4μm,18.0s					
EZM	**Erzurum**	**15.62**	**77**	*e*P	**Pn**	**12 29 14.4 +5.3**
SMF	**Signal de Mont**	**15.63**	**309**	*e*P	**Pn**	**12 29 07.5 -1.6**
	comp=Z,2μm,1.0s					
SMF	**Signal de Mont**	**15.63**	**309**	*e*P	**Pn**	**12 29 07.5 -1.6**
SMF				pmax	pmax	
	comp=Z,873nm,1.0s					
SMF	**Signal de Mont**	**15.63**	**309**	*e*P	**Pn**	**12 29 07.5 -1.6**
	comp=Z,874nm,1.0s					
RUP	**Ruppelstein**	**15.64**	**323**	*e*P	**Pn**	**12 29 14.4 +5.1**
BEST	**Besiri**	**15.65**	**84**	*i* P	**Pn**	**12 29 13.8 +4.3**
EIBI	**Ibiza**	**15.78**	**280**	P	**Pn**	**12 29 12.9 +1.7**
	comp=Z,143nm,0.9s					
EIBI	**Ibiza**	**15.78**	**280**	P	**Pn**	**12 29 12.9 +1.7**
	comp=Z,143nm,0.9s					
BTMT	**Batman**	**15.79**	**83**	*e*P	**Pn**	**12 29 16.3 +5.0**
AGO	**Saint Agoulin**	**15.81**	**307**	*e*P	**Pn**	**12 29 14.7 +3.2**
MEZF	**Maizieres J'vi**	**15.90**	**317**	*e*P	**Pn**	**12 29 12.0 -0.6**
	comp=Z,9μm,1.7s					
MEZF	**Maizieres J'vi**	**15.90**	**317**	*e*P	**Pn**	**12 29 12.0 -0.6**
	comp=Z,9μm,1.7s					
BCA	**Borcka**	**15.91**	**71**	*e*P	**Pn**	**12 29 14.0 +1.1**
LOR	**Lormes**	**15.91**	**311**	*e*P	**Pn**	**12 29 10.8 -2.0**
	comp=Z,7μm,1.7s					
LOR				*e*MLR	MLR	
	comp=Z,89μm,22.0s					
LOR	**Lormes**	**15.91**	**311**	*e*P	**Pn**	**12 29 10.8 -2.0**
LOR				pmax	pmax	
	comp=Z,4μm,1.7s					
LOR	**Lormes**	**15.91**	**311**	*e*P	**Pn**	**12 29 10.8 -2.0**
	comp=Z,4μm,1.7s					
CLZ	**Clausthal**	**15.92**	**334**	*e*P	**Pn**	**12 29 11.5 -1.4**
	comp=Z,2μm,1.3s					
FRNF	**Fournols**	**15.92**	**304**	*e*P	**Pn**	**12 29 16.2 +3.2**
TBKS	**Tabuk**	**15.93**	**123**	P	**Pn**	**12 29 14.3 +1.1**
TBKS	**Tabuk**	**15.93**	**123**	P	**Pn**	**12 29 14.3 +1.1**
EBNR	**Beni Rached**	**15.98**	**270**	P	**Pn**	**12 29 15.5 +1.7**
AVF	**Avril sur Loir**	**15.99**	**309**	*e*P	**Pn**	**12 29 13.0 -0.9**
	comp=Z,5μm,1.6s					
AVF	**Avril sur Loir**	**15.99**	**309**	*e*P	**Pn**	**12 29 13.0 -0.9**
AVF				pmax	pmax	
	comp=Z,3μm,1.6s					
AVF	**Avril sur Loir**	**15.99**	**309**	*e*P	**Pn**	**12 29 13.0 -0.9**
	comp=Z,3μm,1.6s					
SSF	**Saint Saulge**	**16.02**	**310**	*e*P	**Pn**	**12 29 13.6 -0.7**
	comp=Z,6μm,1.4s					
SSF	**Saint Saulge**	**16.02**	**310**	*e*P	**Pn**	**12 29 13.6 -0.7**
SSF				pmax	pmax	
	comp=Z,3μm,1.4s					
SSF	**Saint Saulge**	**16.02**	**310**	*e*P	**Pn**	**12 29 13.6 -0.7**
	comp=Z,3μm,1.4s					
HOMI	**Horasan**	**16.04**	**76**	*i* P	**Pn**	**12 29 17.5 +3.0**
EPOB	**Poblet**	**16.05**	**289**	P	**Pn**	**12 29 18.0 +3.4**
	comp=Z,71nm,0.7s					
EPOB	**Poblet**	**16.05**	**289**	P	**Pn**	**12 29 18.0 +3.4**
	comp=Z,71nm,0.7s					
WLF	**Walferdange**	**16.05**	**322**	P	**Pn**	**12 29 16.1 +1.5**
	comp=Z,3μm,1.8s					
WLF	**Walferdange**	**16.05**	**322**	*e*P	**Pn**	**12 29 14.0 -0.6**
WLF	**Walferdange**	**16.05**	**322**	*e*P	**Pn**	**12 29 15.3 +0.7**
WLF				pmax	pmax	
	comp=Z,5μm,1.4s					
WLF	**Walferdange**	**16.05**	**322**	*e*P	**Pn**	**12 29 15.3 +0.7**
	comp=Z,5μm,1.4s					
WLF	**Walferdange**	**16.05**	**322**	*e*P	**Pn**	**12 29 15.3 +0.7**
	comp=Z,5μm,1.4s					
CAF	**Calviac**	**16.09**	**302**	*e*P	**Pn**	**12 29 16.0 +0.8**
	comp=Z,2μm,1.3s					
CAF	**Calviac**	**16.09**	**302**	*e*P	**Pn**	**12 29 16.0 +0.8**
CAF				pmax	pmax	
	comp=Z,1μm,1.3s					
CAF	**Calviac**	**16.09**	**302**	*e*P	**Pn**	**12 29 16.0 +0.8**
	comp=Z,1μm,1.3s					
CAF	**Calviac**	**16.09**	**302**	*e*P	**Pn**	**12 29 16.0 +0.8**
	comp=Z,1μm,1.3s					
SUW	**Suwalki**	**16.10**	**4**	*e*P	**Pn**	**12 29 13.7 -1.5**
SUW				*e*S	**Sn**	**12 32 25.8 +12**
SUW				LMZ		12 35 40.0
	comp=Z,81μm,21.8s					
ARTV	**Artvin**	**16.11**	**72**	*i* P	**Pn**	**12 29 16.8 +1.3**
CSOR	**Sort**	**16.14**	**292**	P	**Pn**	**12 29 19.5 +3.7**
	comp=Z,85nm,0.7s					
CSOR	**Sort**	**16.14**	**292**	P	**Pn**	**12 29 19.5 +3.7**
	comp=Z,85nm,0.7s					
ECHA	**Ech Chlef**	**16.14**	**270**	P	**Pn**	**12 29 16.5 +0.7**
BGF	**Bois d'Agland**	**16.20**	**308**	*e*P	**Pn**	**12 29 18.0 +1.4**
	comp=Z,3μm,1.1s					
BGF	**Bois d'Agland**	**16.20**	**308**	*e*P	**Pn**	**12 29 18.0 +1.4**
BGF				pmax	pmax	
	comp=Z,1μm,1.1s					
BGF	**Bois d'Agland**	**16.20**	**308**	*e*P	**Pn**	**12 29 18.0 +1.4**
	comp=Z,1μm,1.1s					
BGF	**Bois d'Agland**	**16.20**	**308**	*e*P	**Pn**	**12 29 18.0 +1.4**
	comp=Z,1μm,1.1s					
DBAS	**Duba**	**16.25**	**127**	P	**Pn**	**12 29 16.1 -1.2**
DBAS	**Duba**	**16.25**	**127**	P	**Pn**	**12 29 16.1 -1.2**
ETRT	**Tiaret**	**16.37**	**267**	P	**Pn**	**12 29 22.0 +3.2**
TATV	**Tatvan**	**16.37**	**82**	*i* P	**Pn**	**12 29 22.7 +3.9**
EANR	**'Ain N'Sour**	**16.39**	**269**	P	**Pn**	**12 29 19.0 -0.1**
MELF	**Melles**	**16.49**	**294**	*e*P	**Pn**	**12 29 25.1 +4.8**
TCF	**Toulx Ste Croi**	**16.49**	**306**	*e*P	**Pn**	**12 29 19.4 -0.9**
	comp=Z,972nm,1.3s					
TCF	**Toulx Ste Croi**	**16.49**	**306**	*e*P	**Pn**	**12 29 19.4 -0.9**
TCF				pmax	pmax	
	comp=Z,486nm,1.3s					
TCF	**Toulx Ste Croi**	**16.49**	**306**	*e*P	**Pn**	**12 29 19.4 -0.9**
	comp=Z,486nm,1.3s					
NRDL	**Niedersach Rie**	**16.55**	**335**	*e*P	**Pn**	**12 29 20.7 -0.3**
ERTA	**Horta de San J**	**16.58**	**287**	P	**Pn**	**12 29 24.2 +2.8**
	comp=Z,92nm,0.9s					
ERTA	**Horta de San J**	**16.58**	**287**	P	**Pn**	**12 29 24.2 +2.8**
	comp=Z,92nm,0.9s					
RJF	**Les Rejaudoux**	**16.59**	**303**	*e*P	**Pn**	**12 29 21.3 -0.2**
	comp=Z,3μm,1.6s					
RJF				*e*MLR	MLR	
	comp=Z,94μm,17.5s					
RJF	**Les Rejaudoux**	**16.59**	**303**	*e*P	**Pn**	**12 29 21.3 -0.2**
RJF				pmax	pmax	
	comp=Z,2μm,1.6s					
RJF	**Les Rejaudoux**	**16.59**	**303**	*e*P	**Pn**	**12 29 21.3 -0.2**
	comp=Z,2μm,1.6s					
RJF	**Les Rejaudoux**	**16.59**	**303**	*e*P	**Pn**	**12 29 21.3 -0.2**
	comp=Z,2μm,1.6s					
HYF	**Humbligny**	**16.64**	**310**	*e*P	**Pn**	**12 29 25.5 +3.3**
OKGL	**Djebel Kef Gue**	**16.73**	**270**	P	**Pn**	**12 29 24.0 +0.6**
MEM	**Membach**	**16.75**	**324**	P	**Pn**	**12 29 23.9 +0.3**
	comp=Z,575nm,1.2s					
OJGS	**Djebel Guires**	**16.77**	**268**	P	**Pn**	**12 29 25.0 +1.1**
RESF	**Ens**	**16.79**	**293**	*e*P	**Pn**	**12 29 25.9 +1.9**
EPF	**Esparros**	**16.82**	**294**	*e*P	**Pn**	**12 29 24.5 0.0**
	comp=Z,628nm,1.3s					
EPF	**Esparros**	**16.82**	**294**	*e*P	**Pn**	**12 29 24.5 0.0**
EPF				pmax	pmax	
	comp=Z,314nm,1.3s					
EPF	**Esparros**	**16.82**	**294**	*e*P	**Pn**	**12 29 24.5 0.0**
	comp=Z,314nm,1.3s					
EPF	**Esparros**	**16.82**	**294**	*e*P	**Pn**	**12 29 24.5 0.0**
	comp=Z,314nm,1.3s					
WJHS		**16.85**	**127**	P	**Pn**	**12 29 24.4 -0.5**
WJHS		**16.85**	**127**	P	**Pn**	**12 29 24.4 -0.6**
AGRB	**Hanur-Agry**	**16.88**	**78**	*e*P	**Pn**	**12 29 27.7 +2.5**
HGN	**Heimansgroeve**	**16.89**	**324**	*e*P	**Pn**	**12 29 26.4 +1.1**
	comp=Z,2μm,1.9s					
HGN	**Heimansgroeve**	**16.89**	**324**	*e*S	**Sn**	**12 32 36.5 +3.9**
EBIE	**Bielsa**	**16.91**	**293**	P	**Pn**	**12 29 29.0 +3.5**
	comp=Z,82nm,0.7s					
EBIE	**Bielsa**	**16.91**	**293**	P	**Pn**	**12 29 29.0 +3.4**
	comp=Z,82nm,0.7s					
KARS	**Kars**	**16.95**	**74**	*e*P	**Pn**	**12 29 28.7 +2.5**
BCLA	**Clavier**	**16.96**	**322**	P	**Pn**	**12 29 26.5 +0.4**
	comp=Z,1μm,2.2s					
GIVF	**Givet**	**16.99**	**321**	*e*P	**Pn**	**12 29 27.4 +0.9**
	comp=Z,4μm,1.3s					
GIVF	**Givet**	**16.99**	**321**	*e*P	**Pn**	**12 29 27.4 +0.9**
GIVF				pmax	pmax	
	comp=Z,2μm,1.3s					
GIVF	**Givet**	**16.99**	**321**	*e*P	**Pn**	**12 29 27.4 +0.9**
	comp=Z,2μm,1.3s					
GIVF	**Givet**	**16.99**	**321**	*e*P	**Pn**	**12 29 27.4 +0.9**
	comp=Z,2μm,1.3s					
LFF	**La Frestale**	**16.99**	**301**	*e*P	**Pn**	**12 29 28.3 +1.7**
	comp=Z,2μm,1.3s					
LFF	**La Frestale**	**16.99**	**301**	*e*P	**Pn**	**12 29 28.3 +1.7**
LFF				pmax	pmax	
	comp=Z,847nm,1.3s					
LFF	**La Frestale**	**16.99**	**301**	*e*P	**Pn**	**12 29 28.3 +1.7**
	comp=Z,847nm,1.3s					
LFF	**La Frestale**	**16.99**	**301**	*e*P	**Pn**	**12 29 28.3 +1.7**
	comp=Z,847nm,1.3s					
LABF	**Labassere**	**17.02**	**294**	*e*P	**Pn**	**12 29 30.1 +3.2**
EBEN	**Beniarda**	**17.02**	**279**	P	**Pn**	**12 29 28.9 +1.9**
	comp=Z,298nm,1.4s					
EBEN	**Beniarda**	**17.02**	**279**	P	**Pn**	**12 29 28.9 +1.9**
	comp=Z,298nm,1.4s					
BEBN	**Eben Emael**	**17.03**	**324**	P	**Pn**	**12 29 28.7 +1.6**
	comp=Z,880nm,2.4s					
OJBR	**Djebel Berber**	**17.07**	**268**	P	**Pn**	**12 29 20.0 -7.7**
DOU	**Dourbes**	**17.10**	**321**	P	**Pn**	**12 29 28.4 +0.5**
	comp=Z,735nm,1.5s					
KIV	**Kislovodsk**	**17.10**	**63**	P	**Pn**	**12 29 31.4 +3.4**
	comp=Z,8μm,1.2s					
KIV	**Kislovodsk**	**17.10**	**63**	*e*P	**Pn**	**12 29 28.7 +0.7**
KIV				*e*S	**Sn**	**12 32 40.4 +2.6**
KIV				pmax	pmax	
	comp=Z,961nm,1.0s					
KIV				MLR	MLR	
	comp=Z,17μm,13.0s					
KIV	**Kislovodsk**	**17.10**	**63**	*e*P	**Pn**	**12 29 29.1 +1.1**
	comp=Z,2μm,1.1s					
KIV	**Kislovodsk**	**17.10**	**63**	P	**Pn**	**12 29 31.7 +3.7**
	SNR=498					
KIV				P		12 29 31.7
	SNR=498					
KIV	**Kislovodsk**	**17.10**	**63**	*e*P	**Pn**	**12 29 28.7 +0.7**
	comp=Z,961nm,1.0s					
KIV				*e*S	**Sn**	**12 32 40.4 +2.6**
	comp=Z,17μm,13.0s					
MNK	**Minsk**	**17.11**	**13**	*e*P	**Pn**	**12 29 22.0 -6.0**
MNK				pmax	pmax	
	comp=N,1μm,1.0s					
MNK				pmax	pmax	
	comp=Z,890nm,1.0s					
MNK				pmax	pmax	
	comp=N,6μm,3.0s					
MNK				pmax	pmax	
	comp=Z,12μm,4.0s					
MNK				MLR	MLR	
	comp=Z,174μm,12.0s					
MNK				MLR	MLR	
	comp=E,213μm,14.0s					
MNK				MLR	MLR	
	comp=N,93μm,10.0s					
MNK	**Minsk**	**17.11**	**13**	*e*P	**Pn**	**12 29 22.0 -6.0**
	comp=N,93μm,10.0s					
MICGM	**Minsk**	**17.12**	**13** ⇑	*e*P	**Pn**	**12 29 22.0 -6.1**
EMOS	**Mosqueruela**	**17.16**	**285**	P	**Pn**	**12 29 31.3 +2.5**
	comp=N,53nm,0.6s					
EMOS	**Mosqueruela**	**17.16**	**285**	P	**Pn**	**12 29 31.3 +2.5**
	comp=N,53nm,0.6s					
DIGO	**Kars**	**17.17**	**75**	*i* P	**Pn**	**12 29 31.8 +2.9**
ESAC	**San Caprasio**	**17.24**	**289**	P	**Pn**	**12 29 31.9 +2.2**
	comp=N,224nm,0.7s					
ESAC	**San Caprasio**	**17.24**	**289**	P	**Pn**	**12 29 31.9 +2.2**
	comp=N,224nm,0.7s					
VANB	**Van**	**17.24**	**81**	*e*P	**Pn**	**12 29 32.9 +3.2**
TVAN	**Van**	**17.26**	**81**	*i* P	**Pn**	**12 29 33.8 +3.8**
BAIF	**Baives**	**17.27**	**320**	*e*P	**Pn**	**12 29 30.8 +0.7**
	comp=N,2μm,1.0s					
BAIF	**Baives**	**17.27**	**320**	*e*P	**Pn**	**12 29 30.8 +0.7**
BAIF				pmax	pmax	
	comp=Z,1μm,1.0s					
BAIF	**Baives**	**17.27**	**320**	*e*P	**Pn**	**12 29 30.8 +0.7**
	comp=Z,1μm,1.0s					
BAIF	**Baives**	**17.27**	**320**	*e*P	**Pn**	**12 29 30.8 +0.7**
	comp=Z,1μm,1.0s					
NACGM	**Naroch**	**17.33**	**10**	*e*P	**Pn**	**12 29 26.0 -4.7**
MSL	**Mosul**	**17.33**	**89**	*e*P	**Pn**	**12 29 36.0 +5.1**
MSL				*i* S	**Sn**	**12 33 01.0 +18**
REYF	**Montagne du Re**	**17.36**	**294**	*e*P	**Pn**	**12 29 33.0 +1.8**
WTSB	**Winterswijk**	**17.37**	**328**	*e*P	**Pn**	**12 29 32.4 +1.1**
	comp=Z,1μm,1.3s					
ONI	**Oni**	**17.40**	**68**	P	**Pn**	**12 29 33.6 +1.8**
ONI				S	**Sn**	**12 32 56.7 +12**
DYDN	**Diyadin**	**17.42**	**78**	*i* P	**Pn**	**12 29 34.3 +2.4**
ETSF	**Etsaut**	**17.45**	**293**	*e*P	**Pn**	**12 29 32.1 -0.3**
	comp=Z,2μm,1.3s					
ETSF	**Etsaut**	**17.45**	**293**	*e*P	**Pn**	**12 29 32.1 -0.3**
ETSF				pmax	pmax	
	comp=Z,938nm,1.3s					
ETSF	**Etsaut**	**17.45**	**293**	*e*P	**Pn**	**12 29 32.1 -0.3**
	comp=Z,938nm,1.3s					
ETSF	**Etsaut**	**17.45**	**293**	*e*P	**Pn**	**12 29 32.1 -0.3**
	comp=Z,938nm,1.3s					
RGN	**Rugen**	**17.50**	**344**	*e*P	**Pn**	**12 29 31.7 -1.1**
RGN	**Rugen**	**17.50**	**344**	*e*P	**Pn**	**12 29 30.8 -2.0**
	comp=Z,3μm,1.1s					
RGN	**Rugen**	**17.50**	**344**	*e*P	**Pn**	**12 29 30.8 -2.0**
	comp=Z,3μm,1.1s					
SNF	**Seneffe**	**17.51**	**321**	P	**Pn**	**12 29 33.3 +0.2**
	comp=Z,875nm,2.4s					
CUKT	**Cukurca**	**17.57**	**86**	*e*P	**Pn**	**12 29 35.8 +1.8**
HAKT	**HAKKARI**	**17.61**	**84**	*i* P	**Pn**	**12 29 36.0 +1.7**
CLDR	**Caldiran**	**17.61**	**79**	*e*P	**Pn**	**12 29 37.1 +2.7**
GOF	**Gofitskoye**	**17.62**	**59**	*e*P	**Pn**	**12 29 27.0 -7.5**
GOF	**Gofitskoye**	**17.62**	**59**	*e*P	**Pn**	**12 29 27.0 -7.5**
HKR	**Hakkari**	**17.63**	**84**	*e*P	**Pn**	**12 29 37.8 +3.2**
UCC	**Uccle**	**17.66**	**322**	P	**Pn**	**12 29 36.1 +1.2**
IIGN	**Ignalina**	**17.69**	**9**	*e*P	**Pn**	**12 29 34.5 -0.8**
IIGN				AMB	AMB	12 29 46.4
	comp=Z,863nm,1.2s					
IIGN	**Ignalina**	**17.69**	**9**	*e*P	**Pn**	**12 29 34.5 -0.7**
	comp=Z,863nm,1.2s,SNR=62					
BSEG	**Bad Segeberg**	**17.72**	**338**	*e*P	**Pn**	**12 29 32.3 -3.2**
KEH	**Kehvi**	**17.72**	**69**	P	**Pn**	**12 29 37.2 +1.5**
KEH				S	Sn	12 33 17.1 +24
BSD	**Bornholm Skovb**	**17.72**	**348**	*i* P	**Pn**	**12 29 32.3 -3.3**
BSD				*i* S	**Sn**	**12 32 59.6 +7.0**
BSD				pmax	pmax	
	comp=Z,1μm,0.9s					
BSD				MLR	MLR	
	comp=Z,71μm,17.0s					
BSD	**Bornholm Skovb**	**17.72**	**348**	*i* P	**Pn**	**12 29 32.3 -3.3**
	comp=Z,1μm,0.9s					
BSD				*i* S	**Sn**	**12 32 51.8 -0.8**
BSD				*i* S	**Sn**	**12 32 59.6 +7.0**
BSD						
	comp=Z,71μm,17.0s					
IDID	**Didziasalis**	**17.73**	**10**	*e*P	**Pn**	**12 29 34.7 -1.0**
IDID				AMB	AMB	12 29 42.5
	comp=Z,582nm,1.0s					
CART	**Cartagena**	**17.75**	**276**	*e*P	**Pn**	**12 29 34.0 -2.1**
	comp=Z,372nm,1.0s					
CART	**Cartagena**	**17.75**	**276**	*e*P	**Pn**	**12 29 34.0 -2.1**
	comp=Z,372nm,1.0s					
GOR	**Gori**	**17.82**	**70**	P	**Pn**	**12 29 41.2 +4.3**
ISAL	**Salakas**	**17.90**	**9**	*e*P	**Pn**	**12 29 36.7 -1.1**
ISAL				AMB	AMB	12 29 48.7
	comp=Z,504nm,1.1s					
ISAL	**Salakas**	**17.90**	**9**	*e*P	**Pn**	**12 29 36.7 -1.1**
	comp=Z,504nm,1.1s,SNR=53					
EMUR	**La Murta**	**17.91**	**277**	P	**Pn**	**12 29 37.8 -0.2**
	comp=Z,120nm,0.9s					
EMUR	**La Murta**	**17.91**	**277**	P	**Pn**	**12 29 37.8 -0.2**
	comp=Z,120nm,0.9s					
SJPF	**Ste Jean**	**17.97**	**294**	*e*P	**Pn**	**12 29 38.7 0.0**
	comp=Z,872nm,0.9s					
SJPF	**Ste Jean**	**17.97**	**294**	*e*P	**Pn**	**12 29 38.7 0.0**
SJPF				pmax	pmax	
	comp=Z,436nm,0.9s					
SJPF	**Ste Jean**	**17.97**	**294**	*e*P	**Pn**	**12 29 38.7 0.0**
	comp=Z,436nm,0.9s					
SJPF	**Ste Jean**	**17.97**	**294**	*e*P	**Pn**	**12 29 38.7 0.0**
	comp=Z,436nm,0.9s					
ETOB	**Tobarra**	**18.06**	**279**	P	**Pn**	**12 29 40.2 +0.3**
	comp=Z,42nm,0.8s					
ETOB	**Tobarra**	**18.06**	**279**	P	**Pn**	**12 29 40.2 +0.3**
	comp=Z,42nm,0.8s					
WIT	**Witteveen**	**18.06**	**330**	*e*P	**Pn**	**12 29 41.1 +1.3**
	comp=Z,3μm,1.2s					
IZAR	**Zarasai**	**18.09**	**9**	*e*P	**Pn**	**12 29 39.0 -1.1**
IZAR				AMB	AMB	12 29 50.9
	comp=Z,707nm,1.0s					
IZAR	**Zarasai**	**18.09**	**9**	*e*P	**Pn**	**12 29 39.0 -1.1**
	comp=Z,707nm,1.0s,SNR=53					
MFF	**Saint Martin d**	**18.12**	**305**	*e*P	**Pn**	**12 29 40.9 +0.3**
	comp=Z,6μm,1.4s					
MFF	**Saint Martin d**	**18.12**	**305**	*e*P	**Pn**	**12 29 40.9 +0.3**
MFF				pmax	pmax	
	comp=Z,3μm,1.4s					
MFF	**Saint Martin d**	**18.12**	**305**	*e*P	**Pn**	**12 29 40.9 +0.3**
	comp=Z,3μm,1.4s					
MFF	**Saint Martin d**	**18.12**	**305**	*e*P	**Pn**	**12 29 40.9 +0.3**
	comp=Z

COP pmax pmax
comp=Z,410nm,1.0s
COP MLR MLR
comp=Z,33µm,18.0s
COP Copenhagen 18.74 344 *i* P **Pn 12 29 46.5 -1.6**
comp=Z,409nm,1.0s
COP *i* S **Sn 12 33 21.0 +3.7**
COP *i* S **Sn 12 33 22.2 +4.9**
COP
comp=Z,33µm,18.0s
COP Copenhagen 18.74 344 *i* P **Pn 12 29 46.5 -1.6**
comp=Z,408nm,1.0s,SNR=35
COP *i* S **Sn 12 33 21.1 +3.8**
SNR=47
ENIJ Nijar 18.80 274 P **Pn 12 29 48.4 -0.5**
ENIJ pmax pmax
comp=Z,54nm,0.5s
ENIJ Nijar 18.80 274 P **Pn 12 29 48.4 -0.5**
comp=Z,54nm,0.5s
ENIJ Nijar 18.80 274 P **Pn 12 29 48.4 -0.5**
comp=Z,54nm,0.5s
EVIA Vianos 18.80 279 P **Pn 12 29 49.4 +0.4**
EVIA pmax pmax
comp=Z,68nm,0.8s
EVIA Vianos 18.80 279 P **Pn 12 29 49.4 +0.4**
comp=Z,68nm,0.8s
EVIA Vianos 18.80 279 P **Pn 12 29 49.4 +0.4**
comp=Z,68nm,0.8s
ECRI Cripan 18.84 292 P **Pn 12 29 50.3 +0.9**
ECRI pmax pmax
comp=Z,2µm,3.4s
ECRI Cripan 18.84 292 P **Pn 12 29 50.3 +1.0**
comp=Z,2µm,3.4s
ECRI Cripan 18.84 292 P **Pn 12 29 50.3 +0.9**
comp=Z,2µm,3.4s
LDF La Druitiere 18.90 311 *e*P **Pn 12 29 49.7 -0.3**
comp=Z,5µm,1.5s
LDF La Druitiere 18.90 311 *e*P **Pn 12 29 49.7 -0.3**
LDF pmax pmax
comp=Z,2µm,1.5s
LDF La Druitiere 18.90 311 *e*P **Pn 12 29 49.7 -0.3**
comp=Z,2µm,1.5s
EHUE Huescar 18.97 277 P **Pn 12 29 51.2 +0.2**
EHUE pmax pmax
comp=Z,309nm,1.3s
EHUE Huescar 18.97 277 P **Pn 12 29 51.2 +0.2**
comp=Z,309nm,1.3s
EHUE Huescar 18.97 277 P **Pn 12 29 51.2 +0.2**
comp=Z,309nm,1.3s
FLN La Foliniere 19.19 311 *e*P **Pn 12 29 53.3 -0.2**
comp=Z,6µm,1.5s
FLN *e*MLR MLR
comp=Z,38µm,22.2s
FLN La Foliniere 19.19 311 *e*P **Pn 12 29 53.3 -0.2**
FLN pmax pmax
comp=Z,3µm,1.5s
FLN La Foliniere 19.19 311 *e*P **Pn 12 29 53.3 -0.2**
comp=Z,3µm,1.5s
BHD Baghdad 19.21 97 *e*P **Pn 12 29 48.5 -5.4**
BHD *e*PP 12 30 08.0
BHD *e*S **Sn 12 33 18.0 -11**
BHD *e*SS 12 33 48.0
BHD *e*LR LR 12 37 08.0
BHD *e*RM 12 38 28.0
GRR Gorron 19.25 310 *e*P **Pn 12 29 52.7 -1.6**
comp=Z,2µm,1.2s
GRR Gorron 19.25 310 *e*P **Pn 12 29 52.7 -1.6**
GRR pmax pmax
comp=Z,1µm,1.2s
GRR Gorron 19.25 310 *e*P **Pn 12 29 52.7 -1.6**
comp=Z,1µm,1.2s
EQES Quesada 19.35 277 P **Pn 12 29 55.6 +0.1**
comp=Z,106nm,0.7s
EQES Quesada 19.35 277 P **Pn 12 29 55.6 +0.1**
comp=Z,106nm,0.7s
EBER Berja 19.35 274 P **Pn 12 29 55.5 -0.1**
comp=Z,94nm,1.0s
EBER Berja 19.35 274 P **Pn 12 29 55.5 -0.1**
comp=Z,94nm,1.0s
VRHR Novokhopersk 19.39 41 *e*P **Pn 12 29 54.5 -1.5**
VRHR *e*S **Sn 12 33 33.2 +0.2**
VRHR pmax pmax
comp=Z,40nm,0.4s
VRHR pmax pmax
comp=N,10.0nm,0.9s
VRHR pmax pmax
comp=E,40nm,0.8s
VRHR smax
comp=N,9µm,2.0s
VRHR smax
comp=Z,3µm,3.0s
VRHR smax
comp=E,7µm,1.8s
VRHR MLR MLR
comp=N,65µm,12.0s
VRHR MLR MLR
comp=Z,40µm,12.0s
VRHR MLR MLR
comp=E,28µm,13.0s
VRHR Novokhopersk 19.39 41 *e*P **Pn 12 29 54.5 -1.5**
comp=E,9µm,2.0s
VRHR *e*S **Sn 12 33 33.2 +0.2**
comp=E,3µm,3.0s
TFO1 Folkestone 19.47 319 *e*P **Pn 12 29 56.0 -1.0**
TFO1 AMb AMB 12 30 09.8
comp=Z,2µm,2.6s
TFO1 *e* 12 33 35.5
TFO1 AMS AMS 12 38 15.8
comp=Z,99µm,17.6s
TFO1 Folkestone 19.47 319 P **Pn 12 29 56.0 -1.0**
TFO1 AMb AMB 12 30 09.8
comp=Z,2µm,2.6s
TFO1 12 33 35.5
TFO1 AMS AMS 12 38 15.8
comp=Z,99µm,17.6s
TFO1 Folkestone 19.47 319 *e*P **Pn 12 29 56.0 -0.9**
comp=Z,2µm,2.6s
ELAN Lanestosa 19.58 293 P **Pn 12 29 58.2 -0.1**
comp=Z,72nm,0.7s
ELAN Lanestosa 19.58 293 P **Pn 12 29 58.2 -0.1**
comp=Z,72nm,0.7s
IFTB Fath-abad 19.65 82 *e*P **Pn 12 30 01.5 +2.3**
EALB Alboran 19.66 272 P **Pn 12 29 58.7 -0.6**
comp=Z,327nm,0.7s
EALB Alboran 19.66 272 P **Pn 12 29 58.7 -0.6**
comp=Z,327nm,0.7s
SLIT Slitere, Latvi 19.69 1 *e*P **Pn 12 29 57.5 -1.9**
comp=Z,154nm,0.2s,SNR=141
ECOG Cogollos-Vega 19.82 276 P **Pn 12 30 00.7 -0.4**
ECOG pmax pmax
comp=Z,76nm,0.6s
ECOG Cogollos-Vega 19.82 276 P **Pn 12 30 00.7 -0.4**
comp=Z,76nm,0.6s
ECOG Cogollos-Vega 19.82 276 P **Pn 12 30 00.7 -0.4**
comp=Z,76nm,0.6s
EBAN Banos Encina 19.86 278 P **Pn 12 30 00.1 -1.5**
EBAN pmax pmax
comp=Z,51nm,0.6s
EBAN Banos Encina 19.86 278 P **Pn 12 30 00.1 -1.5**
comp=Z,51nm,0.6s
EBAN Banos Encina 19.86 278 P **Pn 12 30 00.1 -1.5**
comp=Z,51nm,0.6s
ESDC Sonseca Array 19.86 283 P **Pn 12 30 00.1 -1.6**
comp=Z,10nm,0.3s,baz=75,slow=10,SNR=114
ESDC LR LR 12 37 54.1
comp=Z,32µm,19.4s,baz=80,slow=37
ESDC P3KPbc 13 04 25.9
comp=Z,0.1nm,0.3s,baz=277,slow=3.6,SNR=6.5
ESDC Sonseca Array 19.86 283 P **Pn 12 30 00.1 -1.6**
ESDC LR LR 12 37 54.1
ESDC Sonseca Array 19.86 283 P **Pn 12 30 00.1 -1.5**
ESLA Sonseca Array 19.86 283 *e*P **Pn 12 30 00.2 -1.4**
comp=Z,107nm,0.9s
ESLA Sonseca Array 19.86 283 *e*P **Pn 12 30 00.2 -1.4**
comp=Z,107nm,0.9s
EGUA Guajares 19.89 274 P **Pn 12 30 01.4 -0.7**
EGUA pmax pmax
comp=Z,4µm,2.5s
EGUA Guajares 19.89 274 P **Pn 12 30 01.4 -0.7**
comp=Z,4µm,2.5s
EGUA Guajares 19.89 274 P **Pn 12 30 01.4 -0.7**
comp=Z,4µm,2.5s
GUD Guadarrama 19.97 286 P **Pn 12 30 02.3 -0.7**
GUD pmax pmax
comp=Z,652nm,4.4s
GUD Guadarrama 19.97 286 P **Pn 12 30 02.3 -0.7**
comp=Z,652nm,4.4s
GUD Guadarrama 19.97 286 P **Pn 12 30 02.3 -0.7**
comp=Z,652nm,4.4s
OBN Obninsk 19.99 26 Pn **Pn 12 30 01.1 -1.9**
comp=Z,12µm,1.4s
OBN Obninsk 19.99 26⇑ *i*P **Pn 12 29 59.9 -3.1**
OBN *e*S **Sn 12 33 47.5 +0.2**
OBN pmax pmax
comp=Z,2µm,2.5s
OBN MLR MLR
comp=Z,142µm,16.0s
OBN Obninsk 19.99 26 *e*P **Pn 12 30 00.3 -2.7**
comp=Z,4µm,1.3s
OBN Obninsk 19.99 26 *e*P **Pn 12 30 00.3 -2.7**
comp=Z,4µm,1.3s
OBN *e*S **Sn 12 33 47.5 +0.2**
ERON Agron 20.05 275 P **P 12 30 02.7 +0.6**
comp=Z,77nm,1.8s
ERON Agron 20.05 275 P **P 12 30 02.7 +0.6**
comp=Z,77nm,1.8s
IHRS Heris 20.12 81 *e*P **P 12 30 03.2 +0.3**
PAB San Pablo 20.16 283 *e*P **P 12 30 03.2 -0.1**
PAB pmax pmax
comp=Z,664nm,1.0s
PAB MLR MLR
comp=Z,37µm,19.0s,MS5.8
PAB San Pablo 20.16 283 *e*P **P 12 30 03.2 -0.1**
comp=Z,664nm,1.0s
PAB LR LR
comp=Z,37µm,19.0s,MS5.8
PAB San Pablo 20.16 283 *e*P **P 12 30 03.2 -0.1**
comp=Z,664nm,1.0s
MUD Monsted U'grnd 20.24 340⇑ *i*P **P 12 30 04.3 +0.4**
MUD pmax pmax
comp=Z,500nm,1.4s
MUD MLR MLR
comp=Z,49µm,22.0s,MS5.8
MUD Monsted U'grnd 20.24 340⇑ *i*P **P 12 30 04.3 +0.4**
comp=Z,495nm,1.4s
MUD
comp=Z,49µm,22.0s
MUD Monsted U'grnd 20.24 340⇑ *i*P **P 12 30 04.3 +0.4**
comp=Z,495nm,1.4s,SNR=35
SGMF Saint Gilles 20.24 308 *e*P **P 12 30 03.6 -0.5**
comp=Z,2µm,1.0s
SGMF Saint Gilles 20.24 308 *e*P **P 12 30 03.6 -0.5**
SGMF pmax pmax
comp=Z,1µm,1.0s
SGMF Saint Gilles 20.24 308 *e*P **P 12 30 03.6 -0.5**
comp=Z,1µm,1.0s
ELOJ Sierra Loja 20.30 276 P **P 12 30 05.7 +0.8**
comp=Z,26nm,0.6s
ELOJ Sierra Loja 20.30 276 P **P 12 30 05.7 +0.9**
comp=Z,26nm,0.6s
JQE Queens East 20.30 311 *e*P **P 12 30 04.7 0.0**
JQE Queens East 20.30 311 P **P 12 30 04.7 0.0**
JQE Queens East 20.30 311 *e*P **P 12 30 04.7 0.0**
AEU East Anglia Un 20.32 323 *e*P **P 12 30 05.2 +0.3**
AEU East Anglia Un 20.32 323 P **P 12 30 05.2 +0.3**
AEU East Anglia Un 20.32 323 *e*P **P 12 30 05.2 +0.3**
JRS Jersey 20.33 311 *e*P **P 12 30 04.8 -0.2**
JRS Jersey 20.33 311 P **P 12 30 04.8 -0.2**
JRS Jersey 20.33 311 *e*P **P 12 30 04.8 -0.2**
IDHR Dehrash 20.34 92 *e*P **P 12 30 03.3 -1.9**
IDHR Dehrash 20.34 92 *e*P **P 12 30 03.3 -1.9**
JLP Les Platons 20.36 311 *e*P **P 12 30 04.9 -0.4**
JLP Les Platons 20.36 311 P **P 12 30 04.9 -0.4**
JLP Les Platons 20.36 311 *e*P **P 12 30 04.9 -0.4**
JSA Saint Aubin 20.38 311 *e*P **P 12 30 05.6 0.0**
JSA AMb AMB 12 30 18.6
comp=Z,2µm,1.4s
JSA *e* 12 33 48.1
JSA AMS AMS 12 39 34.7
comp=Z,72µm,12.8s,MS6.2
JSA Saint Aubin 20.38 311 P **P 12 30 05.6 0.0**
JSA AMb AMB 12 30 18.6
comp=Z,2µm,1.4s
JSA 12 33 48.1
JSA AMS AMS 12 39 34.7
comp=Z,72µm,12.8s
JSA Saint Aubin 20.38 311 *e*P **P 12 30 05.6 +0.1**
comp=Z,2µm,1.4s
TAM Tamanrasset 20.38 227 PFAKE 12 30 20.0 +14
TAM LR LR
comp=Z,50µm,21.0s,MS5.8
JVM Valle D.L. Mar 20.41 311 *e*P **P 12 30 06.3 +0.4**
JVM Valle D.L. Mar 20.41 311 P **P 12 30 06.3 +0.4**
JVM Valle D.L. Mar 20.41 311 *e*P **P 12 30 06.3 +0.4**
MAK Makhachkala 20.41 68 *d* *i*P **P 12 30 06.6 +0.6**
MAK *i* 12 30 20.6
MAK *i* S **S 12 33 55.5 +1.6**
MAK *e*SSS 12 34 22.9
MAK pmax pmax
comp=E,3µm,0.9s
MAK pmax pmax
comp=E,22µm,3.4s
MAK pmax pmax
comp=Z,5µm,1.8s
MAK pmax pmax
comp=N,3µm,1.0s
MAK smax
comp=N,14µm,3.1s
MAK Makhachkala 20.41 68 *i* P **P 12 30 06.6 +0.6**
comp=N,3µm,1.0s
MAK *i* S **S 12 33 55.5 +1.6**
comp=N,14µm,3.1s
EADA Adamuz 20.48 279 P **P 12 30 06.5 -0.3**
comp=N,165nm,0.9s
EADA Adamuz 20.48 279 P **P 12 30 06.4 -0.3**
comp=N,165nm,0.9s
QUIF Quistinic 20.50 307 *e*P **P 12 30 07.5 +0.6**
comp=N,3µm,1.2s
QUIF Quistinic 20.50 307 *e*P **P 12 30 07.5 +0.6**
QUIF pmax pmax
comp=Z,2µm,1.2s
QUIF Quistinic 20.50 307 *e*P **P 12 30 07.5 +0.6**
comp=Z,2µm,1.2s
ABA1 Baconsthorpe 20.53 323 *e*P **P 12 30 07.8 +0.6**
ABA1 Baconsthorpe 20.53 323 P **P 12 30 07.8 +0.6**
ABA1 Baconsthorpe 20.53 323 *e*P **P 12 30 07.8 +0.6**
MPAL Palemas 20.55 270 *i* P **P 12 30 09.0 +1.4**
IGHG Ghaleghazi 20.59 92 *e*P **P 12 30 06.5 -1.5**
IGHG Ghaleghazi 20.59 92 *e*P **P 12 30 06.5 -1.5**
ROSF Rostrenen 20.72 308 *e*P **P 12 30 09.2 -0.1**
comp=Z,3µm,1.0s
ROSF Rostrenen 20.72 308 *e*P **P 12 30 09.2 -0.1**
ROSF pmax pmax
comp=Z,1µm,1.0s
ROSF Rostrenen 20.72 308 *e*P **P 12 30 09.2 -0.1**
comp=Z,1µm,1.0s
VSU Vasula 20.80 8 *c* *i*P **P 12 30 07.9 -2.2**
VSU pmax pmax
comp=Z,344nm,0.9s
VSU MLR MLR
comp=Z,42µm,14.0s,MS6.0
VSU Vasula 20.80 8⇑ *i*P **P 12 30 07.0 -3.1**
VSU Vasula 20.80 8 *e*P **P 12 30 10.7 +0.6**
comp=Z,106nm,0.2s,SNR=38
WOL Wolverton 20.83 317 *e*P **P 12 30 10.9 +0.4**
WOL AMb AMB 12 30 20.8
comp=Z,3µm,2.7s
WOL *e* 12 34 02.0
WOL AMS AMS 12 39 30.1
comp=Z,99µm,19.2s,MS6.2
WOL Wolverton 20.83 317 P **P 12 30 10.9 +0.4**
WOL AMb AMB 12 30 20.8
comp=Z,3µm,2.7s
WOL 12 34 02.0
WOL AMS AMS 12 39 30.1
comp=Z,99µm,19.2s
WOL Wolverton 20.83 317 *e*P **P 12 30 10.9 +0.5**
comp=Z,3µm,2.7s
MOS Moscow 20.85 26 *e*P **P 12 30 07.7 -2.9**
MOS *i* 12 30 26.6
MOS *i* S **S 12 34 01.8 -0.7**
MOS *i* 12 34 13.1
MOS *i* SS 12 34 27.3
MOS pmax pmax
comp=Z,4µm,1.2s
MOS pmax pmax
comp=Z,9µm,2.0s
MOS MLR MLR
comp=Z,145µm,16.0s,MS6.5
MOS Moscow 20.85 26⇑ *i*P **P 12 30 09.3 -1.3**
MOS Moscow 20.85 26⇑ *i*P **P 12 30 09.3 -1.3**
MOS *i* S **S 12 34 01.8 -0.7**
EARI Arriondas 20.88 293 P **P 12 30 12.0 +1.0**
comp=Z,123nm,0.9s
EARI Arriondas 20.88 293 P **P 12 30 12.0 +0.9**
comp=Z,123nm,0.9s
EMIJ Mijas 20.90 274 P **P 12 30 11.2 -0.1**
comp=Z,50nm,0.7s
EMIJ Mijas 20.90 274 P **P 12 30 11.2 -0.1**
comp=Z,50nm,0.7s
TZK Tazeka 21.07 267 *i* P **P 12 30 14.5 +1.4**
LIJA Lijar 21.33 275 *e*P **P 12 30 14.5 -1.4**
EJIF Jimena Fronter 21.47 274 P **P 12 30 17.7 +0.2**
EJIF pmax pmax
comp=Z,3µm,2.4s,mb6.2
EJIF Jimena Fronter 21.47 274 P **P 12 30 17.7 +0.2**
comp=Z,3µm,2.4s,mb6.2
EJIF Jimena Fronter 21.47 274 P **P 12 30 17.7 +0.2**
comp=Z,3µm,2.4s,mb6.2
DKH Dar Kharkhour 21.61 272 *i* P **P 12 30 20.0 +1.1**
CWF Charnwood Fore 21.64 320 *e*P **P 12 30 19.0 -0.2**
CWF AMb AMB 12 30 31.5
comp=Z,2µm,1.5s,mb6.4
CWF *e* 12 34 19.4
CWF AMS AMS 12 39 13.9
comp=Z,78µm,16.8s,MS6.2
CWF Charnwood Fore 21.64 320 P **P 12 30 19.0 -0.2**
CWF AMb AMB 12 30 31.5
comp=Z,2µm,1.5s,mb6.4
CWF 12 34 19.4
CWF AMS AMS 12 39 13.9
comp=Z,78µm,16.8s
CWF Charnwood Fore 21.64 320 *e*P **P 12 30 19.0 -0.2**
comp=Z,2µm,1.5s,mb6.4
ESPR Espera 21.69 276 P **P 12 30 19.5 -0.3**
comp=Z,65nm,0.7s,mb5.2
ESPR Espera 21.69 276 P **P 12 30 19.5 -0.3**
comp=Z,65nm,0.7s,mb5.2
MDT Midelt 21.83 264 P **P 12 30 21.7 +0.4**
comp=Z,104nm,0.8s,mb5.3,baz=79,slow=12,SNR=74
MDT Midelt 21.83 264 P **P 12 30 21.7 +0.4**
ZFT Errachidia 21.91 262 *i* P **P 12 30 22.0 -0.2**
ECAL Calabor 21.93 289 P **P 12 30 23.8 +1.5**
comp=Z,130nm,0.8s,mb5.4
ECAL Calabor 21.93 289 P **P 12 30 23.8 +1.5**
comp=Z,130nm,0.8s,mb5.4
PBRG Braganca 21.93 289 *e*P **P 12 30 21.9 -0.4**
PBRG Braganca 21.93 289 *e*P **P 12 30 21.9 -0.4**
comp=Z,1µm,1.7s,mb6.0
PBRG *e*S **S 12 34 24.9 +1.0**
PBRG Braganca 21.93 289 *e*P **P 12 30 21.9 -0.4**
comp=Z,1µm,1.7s,mb6.0
PBRG *e*S **S 12 34 24.9 +1.0**
DYA Yadsworthy 21.93 313 *e*P **P 12 30 21.8 -0.5**
DYA AMb AMB 12 30 34.9
comp=Z,1µm,1.4s,mb6.1
DYA *e* 12 34 20.4
DYA AMS AMS 12 41 06.4
comp=Z,87µm,12.4s,MS6.4
DYA Yadsworthy 21.93 313 P **P 12 30 21.8 -0.5**
DYA AMb AMB 12 30 34.9
comp=Z,1µm,1.4s,mb6.1
DYA 12 34 20.4
DYA AMS AMS 12 41 06.4
comp=Z,87µm,12.4s
DYA Yadsworthy 21.93 313 *e*P **P 12 30 21.8 -0.5**
comp=Z,1µm,1.4s,mb6.1
CNIL Conil 21.95 274 *e*P **P 12 30 22.6 0.0**
KBI1 Birley Grange 22.04 321 *e*P **P 12 30 23.6 +0.2**
KBI1 Birley Grange 22.04 321 P **P 12 30 23.6 +0.2**
KBI1 Birley Grange 22.04 321 *e*P **P 12 30 23.6 +0.2**
SFS San Fernando 22.05 275 *e*P **P 12 30 26.9 +3.2**
SFS pmax pmax
comp=Z,2µm,1.0s,mb6.5
SFS MLR MLR
comp=Z,50µm,19.0s,MS6.0
SFS San Fernando 22.05 275 *e*P **P 12 30 26.9 +3.2**
comp=Z,2µm,1.0s,mb6.5
SFS LR LR
comp=Z,50µm,19.0s,MS6.0
SFS San Fernando 22.05 275 *e*P **P 12 30 26.9 +3.2**
comp=Z,2µm,1.0s,mb6.5
KWE Weaver Farm 22.07 321 *e*P **P 12 30 23.1 -0.6**
KWE Weaver Farm 22.07 321 P **P 12 30 23.1 -0.6**
KWE Weaver Farm 22.07 321 *e*P **P 12 30 23.1 -0.6**
CZD Col de Zad 22.09 265 *i* P **P 12 30 26.0 +1.9**
MIF Mishlifen 22.11 266 *i* P **P 12 30 26.0 +1.7**
RSA Sarsar 22.14 270 *i* P **P 12 30 25.0 +0.4**
MVO Moncorvo 22.14 287 P **P 12 30 24.8 +0.2**
MVO Moncorvo 22.14 287 *e*P **P 12 30 24.4 -0.3**
comp=Z,1µm,1.5s,mb6.1
MVO *e*S **S 12 34 29.6 +1.5**
MVO *e*LR LR 12 38 02.2
comp=Z,40µm,17.9s
MVO Moncorvo 22.14 287 *e*P **P 12 30 24.4 -0.3**
comp=Z,1µm,1.5s,mb6.1
MVO *e*S **S 12 34 29.6 +1.5**
EMIN Mina Concepcio 22.17 278 P **P 12 30 24.9 -0.1**
comp=Z,98nm,0.6s,mb5.4
EMIN Mina Concepcio 22.17 278 P **P 12 30 24.9 -0.1**
comp=Z,98nm,0.6s,mb5.4
ERUA La Rua 22.24 290 P **P 12 30 26.1 +0.5**
ERUA pmax pmax
comp=Z,1µm,2.4s,mb5.9
ERUA La Rua 22.24 290 P **P 12 30 26.1 +0.5**
comp=Z,1µm,2.4s,mb5.9
ERUA La Rua 22.24 290 P **P 12 30 26.1 +0.5**
comp=Z,1µm,2.4s,mb5.9
STNC Stoke 22.29 320 *e*P **P 12 30 25.7 -0.4**
STNC Stoke 22.29 320 P **P 12 30 25.7 -0.4**
STNC Stoke 22.29 320 *e*P **P 12 30 25.7 -0.4**
EPON Pontenova 22.29 293 P **P 12 30 26.8 +0.6**
comp=Z,2µm,2.2s,mb6.1
EPON Pontenova 22.29 293 P **P 12 30 26.8 +0.6**
comp=Z,2µm,2.2s,mb6.1
EBAD Badajoz 22.30 281 P **P 12 30 26.0 -0.4**
comp=Z,345nm,2.4s,mb5.4
EBAD Badajoz 22.30 281 P **P 12 30 26.0 -0.3**
comp=Z,345nm,2.4s,mb5.4
HLM1 Long Mynd 22.33 319 *e*P **P 12 30 26.2 -0.4**
HLM1 Long Mynd 22.33 319 P **P 12 30 26.2 -0.4**
HLM1 Long Mynd 22.33 319 *e*P **P 12 30 26.2 -0.3**
MEF Metsahovi 22.36 4 *e*P **P 12 30 26.1 -0.6**
SNR=29
LHO Holmfirth 22.37 322 *e*P **P 12 30 27.3 +0.3**
LHO Holmfirth 22.37 322 P **P 12 30 27.3 +0.3**
LHO Holmfirth 22.37 322 *e*P **P 12 30 27.3 +0.4**
LDU Leeds Universi 22.37 322 *e*P **P 12 30 27.1 +0.2**
LDU Leeds Universi 22.37 322 P **P 12 30 27.1 +0.2**
LDU Leeds Universi 22.37 322 *e*P **P 12 30 27.1 +0.1**
PBAR Barrancos 22.40 279 *e*P **P 12 30 26.5 -0.9**
comp=Z,1µm,1.7s,mb6.1
PBAR *e*S **S 12 34 34.1 +1.0**
PBAR Barrancos 22.40 279 *e*P **P 12 30 26.5 -0.9**
comp=Z,1µm,1.7s,mb6.1
PBAR *e*S **S 12 34 34.1 +1.0**
HTL Hartland 22.49 314 *e*P **P 12 30 28.2 0.0**
HTL AMb AMB 12 30 40.6
comp=Z,2µm,1.8s,mb6.2
HTL *e* 12 34 29.4
HTL AMS AMS 12 41 04.9
comp=Z,104µm,12.5s,MS6.5
HTL Hartland 22.49 314 P **P 12 30 28.2 0.0**
HTL AMb AMB 12 30 40.6
comp=Z,2µm,1.8s,mb6.2
HTL 12 34 29.4
HTL AMS AMS 12 41 04.9
HTL Hartland 22.49 314 *e*P **P 12 30 28.2 0.0**
comp=Z,2µm,1.8s,mb6.2
HPK Haverah Park 22.50 323 *e*P **P 12 30 27.7 -0.6**
HPK AMb AMB 12 30 43.4
comp=Z,2µm,1.3s,mb6.3
HPK *e* 12 34 32.3
HPK AMS AMS 12 39 19.2
comp=Z,53µm,20.4s,MS6.0
HPK Haverah Park 22.50 323 P **P 12 30 27.7 -0.6**
HPK AMb AMB 12 30 43.4
comp=Z,2µm,1.3s,mb6.3
HPK 12 34 32.3
HPK AMS AMS 12 39 19.2
comp=Z,53µm,20.4s
HPK Haverah Park 22.50 323 *e*P **P 12 30 27.7 -0.6**
comp=Z,2µm,1.3s,mb6.3
PMRV Marv??o 22.52 283 *e*P **P 12 30 27.8 -0.9**
PMRV Marv??o 22.52 283 *e*P **P 12 30 27.9 -0.8**
comp=Z,1µm,1.5s,mb6.1
PMRV *e*S **S 12 34 36.7 +1.3**

PMRV	**Marv??o**	**22.52**	**283**	*e*P	**P**	**12 30 27.9**	**-0.8**
	comp=Z,1μm,1.5s,mb6.1						
PMRV				*e*S	**S**	**12 34 36.7**	**+1.3**
PUL	**Pulkovo**	**22.55**	**12‖**	*e*P	**P**	**12 30 30.0**	**+1.2**
PUL	**Pulkovo**	**22.55**	**12‖**	*e*P	**P**	**12 30 30.0**	**+1.2**
PCBR	**Castelo Branco**	**22.55**	**284**	*e*P	**P**	**12 30 28.1**	**-0.9**
PCBR	**Castelo Branco**	**22.55**	**284**	*e*P	**P**	**12 30 28.2**	**-0.8**
	comp=Z,591nm,1.5s,mb5.8						
PCBR				*e*S	**S**	**12 34 38.2**	**+2.2**
PCBR	**Castelo Branco**	**22.55**	**284**	*e*P	**P**	**12 30 28.2**	**-0.8**
	comp=Z,591nm,1.5s,mb5.8						
PCBR				*e*S	**S**	**12 34 38.2**	**+2.2**
MTE	**Manteigas**	**22.57**	**285**	*e*P	**P**	**12 30 36.3**	**+7.1**
	comp=Z,616nm,1.0s,mb6.0						
MTE				LR	LR		
	comp=Z,28μm,19.0s,MS5.7						
MTE	**Manteigas**	**22.57**	**285**	*e*P	**P**	**12 30 36.6**	**+7.5**
	comp=Z,1μm,1.3s,mb6.2						
MTE				*e*S	**S**	**12 34 44.1**	**+7.8**
MTE	**Manteigas**	**22.57**	**285**	*e*P	**P**	**12 30 36.3**	**+7.2**
	comp=Z,616nm,1.0s,mb6.0						
MTE				*e*S	**S**	**12 34 44.1**	**+7.8**
CCA1	**Carnmenellis**	**22.59**	**311**	*e*P	**P**	**12 30 29.0**	**-0.4**
CCA1				AMb	AMB	12 30 38.4	
	comp=Z,688nm,2.1s,mb5.7						
CCA1				*e*		12 34 37.5	
CCA1				AMS	AMS	12 41 37.6	
	comp=Z,54μm,10.7s,MS6.2						
CCA1	**Carnmenellis**	**22.59**	**311**	P	**P**	**12 30 29.0**	**-0.4**
CCA1				AMb	AMB	12 30 38.4	
	comp=Z,688nm,2.1s,mb5.7						
CCA1						12 34 37.5	
CCA1				AMS	AMS	12 41 37.6	
	comp=Z,54μm,10.7s						
CCA1	**Carnmenellis**	**22.59**	**311**	*e*P	**P**	**12 30 29.0**	**-0.3**
	comp=Z,688nm,2.1s,mb5.7						
PVRL	**Vila Real**	**22.66**	**288**	*e*P	**P**	**12 30 29.1**	**-1.0**
PVRL	**Vila Real**	**22.66**	**288**	*e*P	**P**	**12 30 29.1**	**-1.0**
	comp=Z,700nm,1.7s,mb5.8						
PVRL				*e*S	**S**	**12 34 39.0**	**+1.0**
PVRL	**Vila Real**	**22.66**	**288**	*e*P	**P**	**12 30 29.1**	**-1.0**
	comp=Z,700nm,1.7s,mb5.8						
PVRL				*e*S	**S**	**12 34 39.0**	**+1.0**
HFS	**Hagfors**	**22.73**	**350**	P	**P**	**12 30 28.7**	**-2.1**
	comp=Z,204nm,0.5s,mb5.8,baz=165,slow=12,SNR=226						
HFS				S	**S**	**12 34 37.0**	**-1.9**
	comp=Z,257nm,1.0s,baz=156,slow=15,SNR=5.8						
HFS	**Hagfors**	**22.73**	**350**	P	**P**	**12 30 28.7**	**-2.0**
HFS				S	**S**	**12 34 37.0**	**-1.9**
HFS				pmax	pmax		
	comp=Z,204nm,0.5s						
HFS				smax			
	comp=N,257nm,1.0s						
HFS	**Hagfors**	**22.73**	**350**	P	**P**	**12 30 28.7**	**-2.0**
HFS				S	**S**	**12 34 37.0**	**-1.9**
PESTR	**Estremoz**	**22.73**	**281**	*e*P	**P**	**12 30 29.6**	**-1.3**
	comp=N,908nm,1.5s,mb6.0						
PESTR				*e*S	**S**	**12 34 41.1**	**+1.8**
PESTR				*e*LR	LR	12 39 18.9	
	comp=N,30μm,20.0s						
PESTR	**Estremoz**	**22.73**	**281**	*e*P	**P**	**12 30 29.6**	**-1.3**
	comp=N,908nm,1.5s,mb6.0						
PESTR				*e*S	**S**	**12 34 41.1**	**+1.8**
PVIS	**Viseu**	**22.82**	**286**	*e*P	**P**	**12 30 30.9**	**-0.9**
PVIS	**Viseu**	**22.82**	**286**	*e*P	**P**	**12 30 31.0**	**-0.8**
	comp=N,1μm,1.1s,mb6.3						
PVIS				*e*S	**S**	**12 34 42.9**	**+2.3**
PVIS	**Viseu**	**22.82**	**286**	*e*P	**P**	**12 30 31.0**	**-0.8**
	comp=N,1μm,1.1s,mb6.3						
PVIS				*e*S	**S**	**12 34 42.9**	**+2.3**
EGRO	**El Granado**	**22.85**	**278**	P	**P**	**12 30 32.9**	**+0.8**
	comp=N,71nm,0.6s,mb5.3						
EGRO	**El Granado**	**22.85**	**278**	P	**P**	**12 30 32.9**	**+0.8**
	comp=N,71nm,0.6s,mb5.3						
PCAB	**Cabril**	**22.89**	**289**	*e*P	**P**	**12 30 32.2**	**-0.4**
PCAB	**Cabril**	**22.89**	**289**	*e*P	**P**	**12 30 32.5**	**-0.1**
	comp=N,811nm,1.7s,mb5.9						
PCAB	**Cabril**	**22.89**	**289**	*e*P	**P**	**12 30 32.5**	**-0.1**
	comp=N,811nm,1.7s,mb5.9						
ELOB	**Lobios**	**22.91**	**289**	P	**P**	**12 30 32.5**	**-0.3**
	comp=N,31nm,0.7s						
ELOB	**Lobios**	**22.91**	**289**	P	**P**	**12 30 32.5**	**-0.3**
	comp=N,31nm,0.7s						
MIB	**Mutribah**	**22.93**	**103**	*e*P	**P**	**12 30 32.3**	**-0.8**
MIB				AMb	AMB	12 30 41.8	
	comp=Z,3μm,0.8s,mb6.8						
MIB	**Mutribah**	**22.93**	**103**	*e*P	**P**	**12 30 32.3**	**-0.8**
	comp=Z,3μm,0.8s,mb6.8						
KONO	**Kongsberg**	**23.00**	**345**	*e*P	**P**	**12 30 31.9**	**-1.6**
KONO				AMb	AMB	12 30 48.5	
	comp=Z,2μm,1.2s,mb6.3						
KONO				*e*S	**S**	**12 34 42.7**	**-0.5**
KONO				AMS	AMS	12 39 09.2	
	comp=Z,55μm,20.1s,MS6.0						
KONO	**Kongsberg**	**23.00**	**345**	*e*P	**P**	**12 30 32.1**	**-1.4**
	comp=Z,15nm,0.6s,mb4.6						
KONO				*e*S	**S**	**12 34 47.2**	**+4.1**
KONO				LR	LR		
	comp=Z,57μm,22.0s,MS6.0						
KONO	**Kongsberg**	**23.00**	**345**	*e*P	**P**	**12 30 32.1**	**-1.4**
	comp=Z,15nm,0.6s,mb4.6						
KIB	**El Ksiba**	**23.04**	**265**	*i* P	**P**	**12 30 35.0**	**+0.8**
OSL	**Oslo**	**23.04**	**346**	*e*P	**P**	**12 30 32.5**	**-1.5**
OSL				*e*S	**S**	**12 34 45.5**	**+1.7**
OSL	**Oslo**	**23.04**	**346**	*e*P	**P**	**12 30 32.5**	**-1.4**
	SNR=33						
OSL				*e*S	**S**	**12 34 45.5**	**+1.7**
	SNR=30						
PVAQ	**Vaqueiros**	**23.05**	**278**	*e*P	**P**	**12 30 32.8**	**-1.5**
	comp=Z,588nm,1.5s,mb5.8						
PVAQ				*e*S	**S**	**12 34 47.9**	**+3.4**
PVAQ	**Vaqueiros**	**23.05**	**278**	*e*P	**P**	**12 30 32.8**	**-1.5**
	comp=Z,588nm,1.5s,mb5.8						
PVAQ				*e*S	**S**	**12 34 47.9**	**+3.4**
PBEJ	**Beja**	**23.07**	**279**	*e*P	**P**	**12 30 33.5**	**-0.9**
PBEJ	**Beja**	**23.07**	**279**	*e*P	**P**	**12 30 33.0**	**-1.4**
	comp=Z,575nm,1.8s,mb5.7						
PBEJ				*e*S	**S**	**12 34 46.8**	**+2.1**
PBEJ	**Beja**	**23.07**	**279**	*e*P	**P**	**12 30 33.0**	**-1.4**
	comp=Z,575nm,1.8s,mb5.7						
PBEJ				*e*S	**S**	**12 34 46.8**	**+2.1**
RAF	**Rauma**	**23.09**	**0**	*e*P	**P**	**12 30 33.7**	**-0.7**
	SNR=146						
EVO	**Evora**	**23.11**	**281**	*e*P	**P**	**12 30 32.9**	**-2.0**
	comp=Z,1μm,1.4s,mb5.8						
EVO				*e*MLR	MLR		
	comp=Z,49μm,22.5s,MS5.6						
EVO	**Evora**	**23.11**	**281**	*e*P	**P**	**12 30 33.2**	**-1.7**
EVO	**Evora**	**23.11**	**281**	*e*P	**P**	**12 30 33.2**	**-1.7**
	comp=Z,662nm,1.3s,mb5.9						
EVO				*e*S	**S**	**12 34 45.6**	**+0.3**
EVO	**Evora**	**23.11**	**281**	*e*P	**P**	**12 30 33.2**	**-1.7**
	comp=Z,662nm,1.3s,mb5.9						
EVO				*e*S	**S**	**12 34 45.6**	**+0.3**
NAY	**Al-Naaiem**	**23.12**	**104**	*e*P	**P**	**12 30 34.1**	**-1.0**
NAY				AMb	AMB	12 30 50.0	
	comp=Z,999nm,1.0s,mb6.2						
NAY	**Al-Naaiem**	**23.12**	**104**	*e*P	**P**	**12 30 34.1**	**-1.0**
	comp=Z,999nm,1.0s,mb6.2						
EVOP	**Sao Brissos**	**23.19**	**281**	*e*P	**P**	**12 30 34.2**	**-1.5**
EVOP				AMb	AMB	12 31 05.9	
	comp=Z,676nm,1.4s,mb5.9						
EVOP				*e*S	**S**	**12 34 47.0**	**+0.3**
EVOP				*e*S	**S**	**12 34 47.2**	**+0.5**
EVOP	**Sao Brissos**	**23.19**	**281**	*e*P	**P**	**12 30 34.2**	**-1.6**
EVOP				*e*S	**S**	**12 34 47.0**	**+0.2**
EVOP	**Sao Brissos**	**23.19**	**281**	*e*P	**P**	**12 30 34.2**	**-1.6**
EVOP				*e*S	**S**	**12 34 47.0**	**+0.2**
RTC	**Rabat Centre**	**23.21**	**269**	*i* P	**P**	**12 30 37.0**	**+1.0**
PBDV	**Barranco-do-Ve**	**23.25**	**277**	*e*P	**P**	**12 30 35.0**	**-1.4**
	comp=Z,871nm,1.4s,mb6.0						
PBDV				*e*S	**S**	**12 34 49.0**	**+1.3**
PBDV				*e*LR	LR	12 43 13.6	
	comp=Z,24μm,20.0s						
PBDV	**Barranco-do-Ve**	**23.25**	**277**	*e*P	**P**	**12 30 35.0**	**-1.4**
	comp=Z,871nm,1.4s,mb6.0						
PBDV				*e*S	**S**	**12 34 49.0**	**+1.3**
PCVE	**Castro Verde**	**23.27**	**278**	*e*P	**P**	**12 30 36.6**	**0.0**
	comp=Z,568nm,1.7s,mb5.7						
PCVE				*e*S	**S**	**12 34 52.6**	**+4.7**
PCVE				*e*LR	LR	12 41 09.4	
	comp=Z,27μm,19.8s						
PCVE	**Castro Verde**	**23.27**	**278**	*e*P	**P**	**12 30 36.6**	**0.0**
	comp=Z,568nm,1.7s,mb5.7						
PCVE				*e*S	**S**	**12 34 52.6**	**+4.7**
PTOM	**Tomar**	**23.29**	**283**	*e*P	**P**	**12 30 36.8**	**0.0**
PTOM	**Tomar**	**23.29**	**283**	*e*P	**P**	**12 30 36.8**	**0.0**
	comp=Z,1μm,1.3s,mb6.2						
PTOM				*e*S	**S**	**12 34 50.8**	**+2.5**
PTOM	**Tomar**	**23.29**	**283**	*e*P	**P**	**12 30 36.8**	**0.0**
	comp=Z,1μm,1.3s,mb6.2						
PTOM				*e*S	**S**	**12 34 50.8**	**+2.5**
STS	**Santiago**	**23.30**	**292**	P	**P**	**12 30 36.4**	**-0.4**
STS				pmax	pmax		
	comp=Z,39nm,0.6s,mb5.0						
STS	**Santiago**	**23.30**	**292**	P	**P**	**12 30 36.4**	**-0.4**
	comp=Z,39nm,0.6s,mb5.0						
STS	**Santiago**	**23.30**	**292**	P	**P**	**12 30 36.4**	**-0.4**
	comp=Z,39nm,0.6s,mb5.0						
XAL	**Allendale**	**23.31**	**324**	*e*P	**P**	**12 30 37.0**	**+0.1**
XAL	**Allendale**	**23.31**	**324**	P	**P**	**12 30 37.0**	**+0.1**
XAL	**Allendale**	**23.31**	**324**	*e*P	**P**	**12 30 37.0**	**+0.1**
STAV	**Stavanger**	**23.33**	**339**	*e*P	**P**	**12 30 37.2**	**+0.2**
STAV				*e*pP		12 30 40.7	
STAV				AMb	AMB	12 30 49.5	
	comp=Z,1μm,1.3s,mb6.2						
STAV	**Stavanger**	**23.33**	**339**	*e*P	**P**	**12 30 37.2**	**+0.2**
	comp=Z,1μm,1.3s,mb6.2						
STAV	**Stavanger**	**23.33**	**339**	*e*P	**P**	**12 30 37.2**	**+0.2**
	SNR=33						
PTO	**Porto**	**23.33**	**287**	*e*P	**P**	**12 30 37.1**	**-0.1**
	comp=Z,898nm,1.7s,mb5.9						
PTO	**Porto**	**23.33**	**287**	*e*P	**P**	**12 30 37.1**	**-0.1**
	comp=Z,898nm,1.7s,mb5.9						
UMR	**Umm Al-Rimmam**	**23.34**	**103**	*e*P	**P**	**12 30 36.3**	**-1.1**
UMR				AMb	AMB	12 30 52.2	
	comp=Z,3μm,1.3s,mb6.6						
UMR	**Umm Al-Rimmam**	**23.34**	**103**	*e*P	**P**	**12 30 36.3**	**-1.1**
	comp=Z,3μm,1.3s,mb6.6						
EZAM	**Zamans**	**23.39**	**290**	P	**P**	**12 30 37.2**	**-0.6**
EZAM				pmax	pmax		
	comp=Z,128nm,3.0s						
EZAM	**Zamans**	**23.39**	**290**	P	**P**	**12 30 37.1**	**-0.6**
	comp=Z,128nm,3.0s						
EZAM	**Zamans**	**23.39**	**290**	P	**P**	**12 30 37.2**	**-0.6**
	comp=Z,128nm,3.0s						
ALMR	**Almeirim**	**23.46**	**282**	*e*P	**P**	**12 30 37.3**	**-1.4**
ALMR	**Almeirim**	**23.46**	**282**	*e*P	**P**	**12 30 37.3**	**-1.3**
WLF1	**Llynfaes**	**23.52**	**319**	*e*P	**P**	**12 30 39.0**	**0.0**
WLF1				AMb	AMB	12 30 53.6	
	comp=Z,5μm,2.2s,mb6.5						
WLF1				*e*		12 34 51.4	
WLF1				AMS	AMS	12 42 50.6	
	comp=Z,163μm,13.9s,MS6.7						
WLF1	**Llynfaes**	**23.52**	**319**	P	**P**	**12 30 39.0**	**0.0**
WLF1				AMb	AMB	12 30 53.6	
	comp=Z,5μm,2.2s,mb6.5						
WLF1						12 34 51.4	
WLF1				AMS	AMS	12 42 50.6	
WLF1	**Llynfaes**	**23.52**	**319**	*e*P	**P**	**12 30 39.0**	**0.0**
	comp=Z,5μm,2.2s,mb6.5						
BLS5	**Blasjo**	**23.54**	**341**	*e*P	**P**	**12 30 39.2**	**0.0**
BLS5				*e*pP		12 30 43.7	
BLS5				AMb	AMB	12 30 51.4	
	comp=Z,815nm,2.6s,mb5.7						
BLS5	**Blasjo**	**23.54**	**341**	*e*P	**P**	**12 30 39.2**	**0.0**
	comp=Z,815nm,2.6s,mb5.7						
BLS5	**Blasjo**	**23.54**	**341**	*e*P	**P**	**12 30 39.2**	**0.0**
	SNR=28						
EMAZ	**Mazaricos**	**23.61**	**292**	P	**P**	**12 30 39.6**	**-0.4**
	comp=Z,192nm,1.2s,mb5.4						
EMAZ	**Mazaricos**	**23.61**	**292**	P	**P**	**12 30 39.6**	**-0.4**
	comp=Z,192nm,1.2s,mb5.4						
FINES	**FINESS Array B**	**23.68**	**6**	P	**P**	**12 30 38.2**	**-2.2**
	comp=Z,122nm,0.6s,mb5.5,baz=172,slow=5.2,SNR=126						
FINES				S	**S**	**12 34 53.8**	**-0.5**
	comp=Z,113nm,1.0s,baz=161,slow=22,SNR=4.6						
FINES				LR	LR	12 40 49.2	
	comp=Z,162μm,19.5s,MS6.5,baz=190,slow=39						
FINES	**FINESS Array B**	**23.68**	**6**	P	**P**	**12 30 38.2**	**-2.3**
FINES				S	**S**	**12 34 53.8**	**-0.5**
FINES				pmax	pmax		
	comp=Z,122nm,0.6s						
FINES				smax			
	comp=N,113nm,1.0s						
FINES				MLR	MLR		
	comp=Z,162μm,19.5s						
FINES	**FINESS Array B**	**23.68**	**6**	P	**P**	**12 30 38.2**	**-2.3**
FINES				S	**S**	**12 34 53.8**	**-0.5**
FINES				LR	LR	12 40 49.2	
FINES	**FINESS Array B**	**23.68**	**6**	P	**P**	**12 30 38.2**	**-2.3**
FINES				S	**S**	**12 34 53.8**	**-0.5**
IR3	**Iran Long-Peri**	**23.79**	**87**	*e*P	**P**	**12 30 39.7**	**-2.0**
MORF	**Marmelete**	**23.80**	**278**	*e*P	**P**	**12 30 40.3**	**-1.5**
MORF				*e*S	**S**	**12 34 57.5**	**+0.8**
MORF	**Marmelete**	**23.80**	**278**	*e*P	**P**	**12 30 40.5**	**-1.3**
MORF	**Marmelete**	**23.80**	**278**	*e*P	**P**	**12 30 40.6**	**-1.2**
	comp=Z,365nm,1.6s,mb5.6						
MORF				*e*S	**S**	**12 35 01.0**	**+4.3**
MORF				*e*LR	LR	12 42 30.5	
	comp=Z,30μm,19.8s						
MORF	**Marmelete**	**23.80**	**278**	*e*P	**P**	**12 30 40.3**	**-1.5**
MORF				*e*S	**S**	**12 34 57.5**	**+0.8**
PTEO	**Sao Teotonio**	**23.82**	**278**	*e*P	**P**	**12 30 41.9**	**0.0**
	comp=Z,801nm,1.5s,mb5.9						
PTEO				*e*S	**S**	**12 35 01.9**	**+5.0**
PTEO	**Sao Teotonio**	**23.82**	**278**	*e*P	**P**	**12 30 41.9**	**0.0**
	comp=Z,801nm,1.5s,mb5.9						
PTEO				*e*S	**S**	**12 35 01.9**	**+5.0**
NAO01	**NORSAR Array S**	**23.85**	**347**	*e*P	**P**	**12 30 39.9**	**-2.1**
	comp=Z,29nm,0.5s,mb5.0						
NAO01				*e*S	**S**	**12 35 00.4**	**+3.3**
NAO01				LR	LR		
	comp=Z,52μm,20.0s,MS6.0						
NAO01	**NORSAR Array S**	**23.85**	**347**	*e*P	**P**	**12 30 39.9**	**-2.1**
	comp=Z,29nm,0.5s,mb5.0						
NAO01				*e*S	**S**	**12 35 00.4**	**+3.4**
ECK	**Cauldkaine Hil**	**23.93**	**324**	*e*P	**P**	**12 30 42.8**	**+0.1**
ECK	**Cauldkaine Hil**	**23.93**	**324**	P	**P**	**12 30 42.8**	**+0.1**
ECK	**Cauldkaine Hil**	**23.93**	**324**	*e*P	**P**	**12 30 42.8**	**+0.1**
LIS	**Lisbon**	**23.96**	**281**	*e*P	**P**	**12 30 42.2**	**-1.1**
LIS				AMb	AMB	12 31 01.6	
	comp=Z,1μm,1.8s,mb6.0						
LIS				*e*S	**S**	**12 34 59.1**	**-0.1**
LIS				*e*S	**S**	**12 34 59.1**	**-0.1**
PFVI	**Vila Bisbo**	**23.97**	**277**	*e*P	**P**	**12 30 42.0**	**-1.4**
PFVI	**Vila Bisbo**	**23.97**	**277**	*e*P	**P**	**12 30 42.1**	**-1.3**
	comp=Z,636nm,1.4s,mb5.9						
PFVI				*e*S	**S**	**12 35 03.9**	**+4.4**
PFVI				*e*LR	LR	12 42 17.4	
	comp=Z,23μm,19.9s						
PFVI	**Vila Bisbo**	**23.97**	**277**	*e*P	**P**	**12 30 42.1**	**-1.3**
	comp=Z,636nm,1.4s,mb5.9						
PFVI				*e*S	**S**	**12 35 03.9**	**+4.4**
NB2	**NORSAR Subarra**	**23.98**	**348**	P	**P**	**12 30 41.4**	**-1.8**
	comp=Z,887nm,1.1s,mb6.1,baz=160,slow=9.3						
NB2	**NORSAR Subarra**	**23.98**	**348**	P	**P**	**12 30 41.4**	**-1.8**
	comp=Z,887nm,1.1s,mb6.1						
NOA	**NORSAR Array B**	**23.98**	**348**	P	**P**	**12 30 41.0**	**-2.2**
	comp=Z,112nm,0.5s,mb5.5,baz=157,slow=8.8,SNR=339						
NOA				S	**S**	**12 35 03.2**	**+4.1**
	comp=Z,101nm,1.1s,baz=158,slow=19,SNR=2.8						
NOA				LR	LR	12 41 27.2	
	comp=Z,54μm,18.1s,MS6.1,baz=155,slow=40						
NOA	**NORSAR Array B**	**23.98**	**348**	P	**P**	**12 30 41.0**	**-2.2**
EKA	**Eskdalemuir Ar**	**24.03**	**324**	P	**P**	**12 30 42.4**	**-1.3**
	comp=Z,148nm,0.6s,mb5.6,baz=125,slow=7.6,SNR=345						
EKA				S	**S**	**12 35 05.0**	**+5.0**
	comp=Z,7.2nm,0.9s,baz=124,slow=10,SNR=2.1						
EKA	**Eskdalemuir Ar**	**24.03**	**324**	P	**P**	**12 30 42.4**	**-1.3**
EKA				S	**S**	**12 35 05.0**	**+5.0**
EKA				pmax	pmax		
	comp=Z,148nm,0.6s						
EKA				smax			
	comp=N,7.0nm,0.9s						
EKA	**Eskdalemuir Ar**	**24.03**	**324**	P	**P**	**12 30 42.4**	**-1.3**
	comp=N,148nm,0.6s,mb5.6						
PMAFR	**Mafra**	**24.03**	**282**	*e*P	**P**	**12 30 43.2**	**-0.7**
	comp=N,1μm,1.7s,mb6.0						
PMAFR				*e*S	**S**	**12 35 02.8**	**+2.4**
PMAFR				*e*LR	LR	12 39 53.1	
	comp=N,27μm,19.0s						
PMAFR	**Mafra**	**24.03**	**282**	*e*P	**P**	**12 30 43.2**	**-0.7**
	comp=N,1μm,1.7s,mb6.0						
PMAFR				*e*S	**S**	**12 35 02.8**	**+2.4**
ESK	**Eskdalemuir**	**24.04**	**324**	P	**P**	**12 30 44.4**	**+0.6**
	comp=N,9μm,1.2s,mb7.0,SNR=24						
ESK	**Eskdalemuir**	**24.04**	**324**	*e*P	**P**	**12 30 43.5**	**-0.3**
ESK				AMb	AMB	12 30 49.8	
	comp=Z,2μm,2.8s,mb6.0						
ESK				*e*		12 35 05.2	
ESK				AMS	AMS	12 41 38.8	
	comp=Z,72μm,17.8s,MS6.2						
ESK	**Eskdalemuir**	**24.04**	**324**	P	**P**	**12 30 43.5**	**-0.3**
ESK				AMb	AMB	12 30 49.8	
	comp=Z,2μm,2.8s,mb6.0						
ESK						12 35 05.2	
ESK				AMS	AMS	12 41 38.8	
	comp=Z,72μm,17.8s						
ESK	**Eskdalemuir**	**24.04**	**324**	*i* P	**P**	**12 30 43.2**	**-0.6**
ESK	**Eskdalemuir**	**24.04**	**324**	*e*P	**P**	**12 30 43.4**	**-0.4**
	comp=Z,2μm,1.0s,mb6.4						
ESK				LR	LR		
	comp=Z,86μm,19.0s,MS6.2						
ESK	**Eskdalemuir**	**24.04**	**324**	*e*P	**P**	**12 30 43.5**	**-0.3**
	comp=Z,2μm,2.8s,mb6.0						
GIM	**North Isle of**	**24.07**	**321**	*e*P	**P**	**12 30 43.7**	**-0.4**
GIM	**North Isle of**	**24.07**	**321**	P	**P**	**12 30 43.7**	**-0.4**
GIM	**North Isle of**	**24.07**	**321**	*e*P	**P**	**12 30 43.7**	**-0.4**
GCD	**Castle Douglas**	**24.13**	**323**	*e*P	**P**	**12 30 45.2**	**+0.6**
GCD	**Castle Douglas**	**24.13**	**323**	P	**P**	**12 30 45.2**	**+0.6**
GCD	**Castle Douglas**	**24.13**	**323**	*e*P	**P**	**12 30 45.2**	**+0.6**
ESY	**Stoneypath**	**24.14**	**326**	*e*P	**P**	**12 30 44.2**	**-0.5**
ESY	**Stoneypath**	**24.14**	**326**	P	**P**	**12 30 44.2**	**-0.5**
ESY	**Stoneypath**	**24.14**	**326**	*e*P	**P**	**12 30 44.2**	**-0.5**
EBL	**Broad Law**	**24.24**	**325**	*e*P	**P**	**12 30 46.2**	**+0.6**
EBL	**Broad Law**	**24.24**	**325**	P	**P**	**12 30 46.2**	**+0.6**
EBL	**Broad Law**	**24.24**	**325**	*e*P	**P**	**12 30 46.2**	**+0.6**
KAF	**Kangasniemi**	**24.36**	**6**	*e*P	**P**	**12 30 44.6**	**-2.1**
KAF				pmax	pmax		
	comp=Z,1μm,0.8s,mb6.4						
KAF	**Kangasniemi**	**24.36**	**6**	*e*p	**P**	**12 30 44.6**	**-2.1**
	comp=Z,1μm,0.8s,mb6.4						
KAF	**Kangasniemi**	**24.36**	**6**	*e*p	**P**	**12 30 44.6**	**-2.1**
	comp=Z,1μm,0.8s,mb6.4						
KAF	**Kangasniemi**	**24.36**	**6**	*e*P	**P**	**12 30 44.6**	**-2.1**
	comp=Z,1μm,0.8s,mb6.4						
EDI	**Edinburgh**	**24.39**	**325**	*e*P	**P**	**12 30 46.6**	**-0.4**
EDI				AMb	AMB	12 31 00.5	
	comp=Z,2μm,1.1s,mb6.4						
EDI				*e*		12 35 08.1	
EDI				AMS	AMS	12 42 29.6	
	comp=Z,98μm,17.3s,MS6.3						
EDI	**Edinburgh**	**24.39**	**325**	P	**P**	**12 30 46.6**	**-0.4**
EDI				AMb	AMB	12 31 00.5	
	comp=Z,2μm,1.1s,mb6.4						
EDI						12 35 08.1	
EDI				AMS	AMS	12 42 29.6	
	comp=Z,98μm,17.3s						
EDI	**Edinburgh**	**24.39**	**325**	*e*P	**P**	**12 30 46.6**	**-0.4**
	comp=Z,2μm,1.1s,mb6.4						
EAU	**Auchinoon**	**24.47**	**325**	*e*P	**P**	**12 30 48.4**	**+0.8**
EAU	**Auchinoon**	**24.47**	**325**	P	**P**	**12 30 48.4**	**+0.8**
EAU	**Auchinoon**	**24.47**	**325**	*e*P	**P**	**12 30 48.4**	**+0.7**
GAL1	**Galloway**	**24.50**	**322**	*e*P	**P**	**12 30 48.1**	**+0.1**
GAL1				AMb	AMB	12 31 00.5	
	comp=Z,2μm,1.5s,mb6.4						
GAL1				*e*		12 35 03.1	
GAL1				AMS	AMS	12 40 40.3	
	comp=Z,49μm,18.8s,MS6.0						
GAL1	**Galloway**	**24.50**	**322**	P	**P**	**12 30 48.1**	**+0.1**
GAL1				AMb	AMB	12 31 00.5	
	comp=Z,2μm,1.5s,mb6.4						
GAL1						12 35 03.1	
GAL1				AMS	AMS	12 40 40.3	
	comp=Z,49μm,18.8s						
GAL1	**Galloway**	**24.50**	**322**	*e*P	**P**	**12 30 48.1**	**+0.1**
	comp=Z,2μm,1.5s,mb6.4						
DSB	**Dublin**	**24.54**	**318**	*e*P	**P**	**12 30 48.2**	**-0.1**
DSB	**Dublin**	**24.54**	**318**	P	**P**	**12 30 48.2**	**-0.1**
DSB	**Dublin**	**24.54**	**318**	*e*P	**P**	**12 30 49.4**	**+1.1**
	comp=Z,1μm,1.3s,mb6.3						
DSB	**Dublin**	**24.54**	**318**	*e*P	**P**	**12 30 48.2**	**-0.1**
IDMV	**Damavand**	**24.56**	**86**	*e*P	**P**	**12 30 48.3**	**-0.5**
IDMV	**Damavand**	**24.56**	**86**	*e*P	**P**	**12 30 48.3**	**-0.5**
BER	**Bergen**	**24.66**	**341**	*e*P	**P**	**12 30 48.9**	**-0.5**
BER				*e*P		12 30 49.5	
BER				*e*pP		12 30 53.7	
BER				AMb	AMB	12 31 01.7	
	comp=Z,121nm,1.3s,mb5.3						
BER				AMb	AMB	12 31 01.8	
	comp=Z,2μm,1.0s,mb6.5						
BER				*e*S	**S**	**12 35 11.6**	**+1.6**
BER				AMS	AMS	12 42 16.1	
	comp=Z,89μm

FOO Floro 25.77 342 *eP* **P 12 30 58.1 -1.4**
comp=Z,732nm,2.1s,mb5.8,SNR=28
MOL Molde 26.07 345 *eP* **P 12 31 01.0 -1.1**
MOL AMb AMB 12 31 15.6
comp=Z,907nm,3.2s
MOL *eS* **S 12 35 34.2 +1.7**
MOL AMS AMS 12 42 15.4
comp=Z,36μm,24.8s,MS5.8
MOL Molde 26.07 345 *eP* **P 12 31 01.0 -1.1**
comp=Z,907nm,3.2s
MOL LR LR
comp=Z,36μm,24.8s,MS5.8
MOL Molde 26.07 345 *eP* **P 12 31 01.0 -1.2**
comp=Z,907nm,3.2s,SNR=28
MOL *eS* **S 12 35 34.2 +1.7**
SNR=29
KSB Sheil Bridge 26.16 326 *eP* **P 12 31 03.0 0.0**
KSB Sheil Bridge 26.16 326 P **P 12 31 03.0 0.0**
KSB Sheil Bridge 26.16 326 *eP* **P 12 31 03.0 0.0**
KAR1 Arisaig 26.17 325 *eP* **P 12 31 03.2 +0.1**
KAR1 Arisaig 26.17 325 P **P 12 31 03.2 +0.1**
KAR1 Arisaig 26.17 325 *eP* **P 12 31 03.2 +0.1**
VAL Valentia 26.18 313 *eP* **P 12 31 04.3 +1.0**
VAL Valentia 26.18 313⇑ *iS* **S 12 35 35.5 +1.1**
KAC Achnashellach 26.27 327 *eP* **P 12 31 04.3 +0.3**
KAC Achnashellach 26.27 327 P **P 12 31 04.3 +0.3**
KAC Achnashellach 26.27 327 *eP* **P 12 31 04.3 +0.2**
ORE Reay 26.29 330 *eP* **P 12 31 04.0 -0.2**
ORE Reay 26.29 330 P **P 12 31 04.0 -0.2**
ORE Reay 26.29 330 *eP* **P 12 31 04.0 -0.2**
KPL Plockton 26.33 326 *eP* **P 12 31 04.7 +0.1**
KPL AMb AMB 12 31 16.6
comp=Z,1μm,1.2s,mb6.2
KPL *e* 12 35 34.4
KPL AMS AMS 12 43 47.2
comp=Z,106μm,19.1s,MS6.4
KPL Plockton 26.33 326 P **P 12 31 04.7 +0.1**
KPL AMb AMB 12 31 16.6
comp=Z,1μm,1.2s,mb6.2
KPL 12 35 34.4
KPL AMS AMS 12 43 47.2
KPL Plockton 26.33 326 *eP* **P 12 31 04.7 +0.1**
comp=Z,1μm,1.2s,mb6.2
LRW Lerwick 26.43 334 *eP* **P 12 31 05.3 -0.1**
LRW AMb AMB 12 31 18.6
comp=Z,755nm,2.1s,mb5.9
LRW AMS AMS 12 47 20.5
comp=Z,59μm,14.9s,MS6.3
LRW Lerwick 26.43 334 P **P 12 31 05.3 -0.1**
LRW AMb AMB 12 31 18.6
comp=Z,755nm,2.1s,mb5.9
LRW AMS AMS 12 47 20.5
comp=Z,59μm,14.9s
LRW Lerwick 26.43 334 *eP* **P 12 31 05.3 -0.2**
comp=Z,755nm,2.1s,mb5.9
WAL1 Walls 26.67 334 *eP* **P 12 31 08.8 +1.2**
WAL1 Walls 26.67 334 P **P 12 31 08.8 +1.2**
WAL1 Walls 26.67 334 *eP* **P 12 31 08.8 +1.2**
RRR Rubha Reidh 26.71 327 *eP* **P 12 31 07.6 -0.3**
RRR Rubha Reidh 26.71 327 P **P 12 31 07.6 -0.3**
RRR Rubha Reidh 26.71 327 *eP* **P 12 31 07.6 -0.4**
RSC Scourie 26.73 328 *eP* **P 12 31 09.0 +0.8**
RSC Scourie 26.73 328 P **P 12 31 09.0 +0.8**
RSC Scourie 26.73 328 *eP* **P 12 31 09.0 +0.8**
KSK Scoval 26.87 326 *eP* **P 12 31 09.4 -0.1**
KSK Scoval 26.87 326 P **P 12 31 09.4 -0.1**
KSK Scoval 26.87 326 *eP* **P 12 31 09.4 -0.1**
RRH Rhenigidale 27.13 326 *eP* **P 12 31 11.9 +0.2**
RRH Rhenigidale 27.13 326 P **P 12 31 11.9 +0.2**
RRH Rhenigidale 27.13 326 *eP* **P 12 31 11.9 +0.2**
NSS Namsos 27.20 351 *eP* **P 12 31 10.1 -2.2**
NSS AMb AMB 12 31 24.1
comp=Z,825nm,0.8s,mb6.3
NSS *eS* **S 12 35 51.4 +1.2**
NSS AMS AMS 12 43 42.4
comp=Z,96μm,14.2s,MS6.5
NSS Namsos 27.20 351 *eP* **P 12 31 10.1 -2.2**
comp=Z,825nm,0.8s,mb6.3
NSS LR LR
comp=Z,96μm,14.2s,MS6.5
NSS Namsos 27.20 351 *eP* **P 12 31 10.1 -2.2**
comp=Z,825nm,0.8s,mb6.3,SNR=28
NSS *eS* **S 12 35 51.4 +1.2**
SNR=28
ICHK Chekchek 27.47 92 *eP* **P 12 31 14.5 -0.6**
ICHK Chekchek 27.47 92 *eP* **P 12 31 14.5 -0.6**
MOR8 Moi Rana 28.54 354 *eP* **P 12 31 23.2 -1.1**
MOR8 AMb AMB 12 31 42.4
comp=Z,286nm,0.8s,mb6.0
MOR8 Moi Rana 28.54 354 *eP* **P 12 31 23.2 -1.1**
comp=Z,286nm,0.8s,mb6.0
MOR8 Moi Rana 28.54 354 *eP* **P 12 31 23.2 -1.1**
comp=Z,286nm,0.8s,mb6.0,SNR=28
IBAF Bafgh 28.63 92 *eP* **P 12 31 23.2 -2.2**
IBAF Bafgh 28.63 92 *eP* **P 12 31 23.2 -2.2**
AKTK Aktyubinsk 28.73 52 P **P 12 31 25.6 -0.5**
AKTK S **S 12 36 14.6 0.0**
AKTK LR LR 12 44 55.3
AKTK *e* 13 03 46.1
AKTK Aktyubinsk 28.73 52 P **P 12 31 25.6 -0.5**
AKTK S **S 12 36 14.6 0.0**
AKTO Aktyubinsk 28.73 52 P **P 12 31 25.6 -0.5**
comp=Z,18nm,0.4s,mb5.2,baz=267,slow=8.7,SNR=33
AKTO S **S 12 36 14.6 0.0**
comp=Z,113nm,0.9s,baz=90,slow=20,SNR=3.6
AKTO LR LR 12 44 55.3
comp=Z,32μm,19.1s,MS6.0,baz=87,slow=41
AKTO P3KPbc 13 03 46.1
comp=Z,1.0nm,0.7s,baz=104,slow=4.2,SNR=3.6
AKTO Aktyubinsk 28.73 52 P **P 12 31 25.6 -0.5**
AKTO S **S 12 36 14.6 0.0**
AKTO pmax pmax
comp=Z,19nm,0.4s,mb5.2
AKTO smax
comp=N,113nm,1.0s
AKTO MLR MLR
comp=Z,32μm,19.1s,MS6.0
VAN Vannovskaya 28.79 79 *eP* **P 12 31 32.0 +5.2**
VAN Vannovskaya 28.79 79 *eP* **P 12 31 32.0 +5.2**
ABKT Ailbek 28.80 79 P **P 12 31 26.8 -0.1**
comp=Z,1μm,1.3s,mb6.4,SNR=42
STOK Stokkvaagen 28.83 353 *eP* **P 12 31 26.6 -0.2**
STOK *eS* **S 12 36 16.6 +0.7**
KONS Konsvik 28.98 353 *eP* **P 12 31 27.9 -0.3**
IEMG Emamgholi 29.32 79 *eP* **P 12 31 34.1 +2.5**
IEMG Emamgholi 29.32 79 *eP* **P 12 31 34.1 +2.5**
IAKL Akhelmad 29.59 81 *eP* **P 12 31 32.7 -1.2**
SOFL Sornfelli, Far 29.80 333 *eP* **P 12 31 36.1 +0.6**
SOFL AMS AMS 12 46 25.2
comp=Z,45μm,16.2s,MS6.2
SOFL Sornfelli, Far 29.80 333 P **P 12 31 36.1 +0.6**
SOFL AMS AMS 12 46 25.2
comp=Z,45μm,16.2s
SOFL Sornfelli, Far 29.80 333 *eP* **P 12 31 36.1 +0.6**
EFAM Famara 30.31 264 P **P 12 31 37.3 -3.1**
comp=Z,943nm,2.4s,mb6.1
EFAM Famara 30.31 264 P **P 12 31 37.3 -3.1**
comp=Z,943nm,2.4s,mb6.1
TORD Torodi Ar. Bea 30.33 221 P **P 12 31 39.8 -0.9**
comp=Z,84nm,1.0s,mb5.4,baz=31,slow=8.5,SNR=119
TORD P3KPbc 13 03 35.7
comp=Z,0.8nm,0.7s,baz=282,slow=3.0,SNR=3.7
TORD Torodi Ar. Bea 30.33 221 P **P 12 31 39.8 -0.9**
TORD *e* 13 03 35.7
APA Apatity 30.41 9⇑ *iP* **P 12 31 40.8 -0.1**
APA *i* 12 32 42.0
APA *i* S **S 12 36 40.0 -0.7**
APA *i* SS SS 12 38 21.0 -29
APA pmax pmax
comp=Z,130nm,1.2s,mb5.5
APA MLR MLR
comp=Z,85μm,14.0s,MS6.5
APA Apatity 30.41 9 *iP* **P 12 31 40.8 -0.1**
comp=Z,130nm,1.2s,mb5.5
APA *i* S **S 12 36 40.0 -0.7**
comp=Z,85μm,14.0s
LOF Lofoten 30.54 354 *eP* **P 12 31 42.8 +0.8**
LOF AMb AMB 12 31 56.4
comp=Z,550nm,1.1s,mb6.3
LOF Lofoten 30.54 354 *eP* **P 12 31 42.8 +0.8**
comp=Z,550nm,1.1s,mb6.3
LOF Lofoten 30.54 354 *eP* **P 12 31 42.8 +0.8**
comp=Z,550nm,1.1s,mb6.3,SNR=27
ARU Arti 30.74 41 P **P 12 31 44.5 +0.6**
comp=Z,3μm,1.1s,mb7.0
ARU Arti 30.74 41 *d iP* **P 12 31 42.6 -1.3**
ARU *eP*PP 12 32 48.9
ARU *e* 12 34 35.3
ARU S **S 12 36 42.0 -4.0**
ARU SSS 12 38 29.1
ARU pmax pmax
comp=Z,247nm,2.5s,mb5.6
ARU MLR MLR
comp=Z,80μm,17.0s,MS6.4
ARU Arti 30.74 41 *eP* **P 12 31 43.2 -0.6**
comp=Z,542nm,1.0s,mb6.3
ARU LR LR
comp=Z,73μm,21.0s,MS6.3
ARU Arti 30.74 41 *eP* **P 12 31 43.2 -0.7**
comp=Z,542nm,1.0s,mb6.3
LVZ Lovozero 30.88 10 P **P 12 31 45.1 +0.1**
comp=Z,1μm,0.7s,mb6.8,SNR=9.3
LVZ Lovozero 30.88 10 *i P* **P 12 31 45.4 +0.4**
LVZ MLR MLR
comp=Z,29μm,20.0s,MS5.9
LVZ Lovozero 30.88 10 *i P* **P 12 31 45.4 +0.4**
DHBB Dhamar BB 30.91 133⇑ *eP* **P 12 31 46.6 +0.9**
DHBB AMb AMB 12 31 48.3
comp=Z,326nm,1.2s,mb6.0
DHBB *i* S **S 12 36 52.5 +3.1**
CFTV Fuerteventura 31.07 263 P **P 12 31 44.1 -3.0**
comp=Z,11nm,1.6s
CFTV Fuerteventura 31.07 263 P **P 12 31 44.1 -3.0**
comp=Z,11nm,1.6s
KTK1 Kautokeino 31.12 1 *eP* **P 12 31 45.6 -1.5**
KTK1 *eS* **S 12 36 52.9 +1.1**
KTK1 AMS AMS 12 45 28.3
comp=Z,86μm,11.8s,MS6.6
KTK1 Kautokeino 31.12 1 *eP* **P 12 31 45.7 -1.4**
SNR=27
KTK1 *eS* **S 12 36 52.8 +1.0**
SNR=28
UDYN Al 'Udayn 31.16 134 *eP* **P 12 31 48.8 +0.9**
IBND Bandar-abas 31.17 99 *eP* **P 12 31 45.9 -2.1**
IBND *eP* 12 31 47.2
IBND Bandar-abas 31.17 99 *eP* **P 12 31 47.2 -0.8**
SOKR Solikamsk 31.19 35 *c iP* **P 12 31 48.9 +1.1**
SOKR S **S 12 36 51.7 -1.3**
SOKR SS SS 12 38 33.0 -33
SOKR pmax pmax
comp=Z,1μm,1.1s,mb6.7
SOKR MLR MLR
comp=Z,49μm,17.0s,MS6.2
SOKR Solikamsk 31.19 35 *i P* **P 12 31 48.9 +1.1**
comp=Z,1μm,1.1s,mb6.7
SOKR S **S 12 36 51.7 -1.3**
DESE Dese 31.31 144 *eP* **P 12 31 52.7 +3.5**
DESE *eS* **S 12 36 48.2 -7.4**
IDAH Dahanechah 31.61 88 *eP* **P 12 31 51.1 -0.7**
IDAH Dahanechah 31.61 88 *eP* **P 12 31 51.1 -0.7**
ASUD Al Ashush, Dub 31.67 105 P **P 12 31 57.0 +4.5**
SNR=54
ASUD Al Ashush, Dub 31.67 105 P **P 12 31 53.7 +1.3**
SNR=11
ARCES ARCESS Array B 31.71 3 P **P 12 31 49.9 -2.4**
comp=Z,73nm,0.5s,mb5.7,baz=185,slow=8.5,SNR=456
ARCES ARCESS Array B 31.71 3 P **P 12 31 49.9 -2.4**
ARCES pmax pmax
comp=Z,73nm,0.5s
ARCES ARCESS Array B 31.71 3 P **P 12 31 49.9 -2.4**
NAZ Nazwa, Dubai 31.73 104 P **P 12 31 53.9 +1.0**
SNR=67
NAZ Nazwa, Dubai 31.73 104 P **P 12 31 53.1 +0.1**
SNR=34
BANOM Banah 31.74 102 P **P 12 31 56.5 +3.5**
SNR=37
BANOM Banah 31.74 102 P **P 12 31 52.3 -0.7**
SNR=44
TRO Tromso 31.76 358 *eP* **P 12 31 52.2 -0.5**
TRO AMb AMB 12 32 06.5
comp=Z,648nm,1.1s,mb6.4
TRO *eS* **S 12 37 04.7 +3.0**
TRO AMS AMS 12 45 19.4
comp=Z,71μm,18.0s,MS6.4
TRO Tromso 31.76 358 *eP* **P 12 31 52.3 -0.4**
TRO pmax pmax
comp=Z,648nm,1.1s,mb6.4
TRO MLR MLR
comp=Z,71μm,18.0s,MS6.4
TRO Tromso 31.76 358 *eP* **P 12 31 52.2 -0.5**
comp=Z,648nm,1.1s,mb6.4
TRO LR LR
comp=Z,71μm,18.0s,MS6.4
TRO Tromso 31.76 358 *eP* **P 12 31 52.3 -0.4**
comp=Z,71μm,18.0s
TRO *eS* **S 12 37 04.7 +3.0**
SNR=28
FAQ Al Faqa, Dubai 31.81 104 P **P 12 31 53.7 +0.1**
SNR=28
SVE Sverdlovsk 31.95 41 *eP* **P 12 31 55.0 +0.5**
SVE *eS* **S 12 37 06.6 +1.6**
SVE pmax pmax
comp=Z,433nm,6.2s
SVE pmax pmax
comp=Z,2μm,1.1s,mb6.7
SVE MLR MLR
comp=Z,81μm,14.0s,MS6.6
SVE Sverdlovsk 31.95 41 *eP* **P 12 31 55.0 +0.5**
comp=Z,81μm,14.0s
SVE *eS* **S 12 37 06.6 +1.6**
LBOS 31.97 132⇑ *eP* **P 12 31 56.0 +0.9**
LBOS AMb AMB 12 31 59.1
comp=Z,270nm,1.6s,mb5.8
LBOS *i* S **S 12 37 09.0 +3.0**
KEV Kevo 32.00 4 *eP* **P 12 31 54.2 -0.6**
KEV pmax pmax
comp=Z,208nm,0.7s,mb6.1
KEV Kevo 32.00 4 *ep* **P 12 31 54.2 -0.6**
comp=Z,208nm,0.7s,mb6.1
KEV Kevo 32.00 4 *ep* **P 12 31 54.2 -0.6**
comp=Z,208nm,0.7s,mb6.1
KEV Kevo 32.00 4 *eP* **P 12 31 54.2 -0.6**
comp=Z,208nm,0.7s,mb6.1
BDHA Al Bayda' 32.08 132 *eP* **P 12 31 56.8 +0.8**
BDHA Al Bayda' 32.08 132 *eP* **P 12 31 56.8 +0.8**
HATD Hatta, Dubai 32.18 104 P **P 12 32 00.5 +3.7**
SNR=108
HATD Hatta, Dubai 32.18 104 P **P 12 31 56.4 -0.5**
SNR=32
ASHO Ashiyiah 32.20 104 P **P 12 31 56.1 -0.9**
SNR=130
ASHO Ashiyiah 32.20 104 P **P 12 31 56.9 -0.2**
SNR=22
EOSO Osorio 32.38 263 P **P 12 31 56.2 -2.3**
comp=Z,2μm,2.5s,mb6.5
EOSO Osorio 32.38 263 P **P 12 31 56.2 -2.4**
comp=Z,2μm,2.5s,mb6.5
ATD Arta Tunnel 32.55 138 P **P 12 32 00.2 +0.1**
comp=Z,63nm,0.9s,mb5.5,baz=189,slow=18,SNR=15
ATD LR LR 12 47 09.5
comp=Z,11μm,18.5s,MS5.6,baz=154,slow=40
ATD Arta Tunnel 32.55 138 P **P 12 32 00.2 +0.1**
ATD LR LR 12 47 09.5
ATD Arta Tunnel 32.55 138 P **P 12 32 00.2 0.0**
EBAJ Bajamar 32.78 265 P **P 12 31 59.8 -2.4**
comp=Z,1μm,4.1s
EBAJ Bajamar 32.78 265 P **P 12 31 59.8 -2.4**
comp=Z,1μm,4.1s
FURI Furi 32.85 147 *eP* **P 12 32 04.1 +1.3**
FURI S **S 12 37 24.0 +4.4**
CCAN Las Canadas 33.13 264 P **P 12 32 03.6 -1.6**
comp=Z,430nm,2.3s,mb6.0
CCAN Las Canadas 33.13 264 P **P 12 32 03.6 -1.6**
comp=Z,430nm,2.3s,mb6.0
ARQ Araqi 33.29 106 P **P 12 32 06.7 0.0**
SNR=135
HOQ Hoqain 33.76 105 P **P 12 32 08.8 -1.9**
SNR=43
MUKL Al Mukalla 33.82 126 *eP* **P 12 32 11.7 +0.4**
EHIG Higuera 33.93 266 P **P 12 32 09.4 -2.8**
comp=Z,97nm,2.2s,mb5.3
EHIG Higuera 33.93 266 P **P 12 32 09.4 -2.8**
comp=Z,97nm,2.2s,mb5.3
BSY Bisya 34.14 106 P **P 12 32 13.7 -0.3**
SNR=62
CHIE El Hierro 34.42 265 P **P 12 32 13.3 -3.2**
comp=Z,124nm,3.6s
CHIE El Hierro 34.42 265 P **P 12 32 13.3 -3.2**
comp=Z,124nm,3.6s
WNDE Wendo Genet 34.45 149 *eP* **P 12 32 22.4 +5.7**
WHFO Wadi Hawf 34.59 116 P **P 12 32 21.9 +4.0**
SNR=9.6
SMDO Samad 34.61 105 P **P 12 32 17.5 -0.6**
SNR=131
ABTO Aybut 34.63 118 P **P 12 32 19.2 +0.9**
SNR=18
JMDO Jabal Madar 35.04 106 P **P 12 32 20.7 -1.1**
SNR=80
RBK Rabkut 35.17 116 P **P 12 32 24.0 +1.0**
SNR=22
WBK Wadi Bani Khal 35.56 105 P **P 12 32 26.4 +0.1**
SNR=68
JMIC Jan Mayen 36.57 344 *eP* **P 12 32 34.9 +0.5**
JMIC AMS AMS 12 49 18.5
comp=Z,21μm,15.3s,MS6.0
JMIC Jan Mayen 36.57 344 P **P 12 32 34.8 +0.4**
comp=Z,318nm,0.9s,mb6.1,baz=205,slow=3.1,SNR=5.6
JMIC Jan Mayen 36.57 344 *eP* **P 12 32 34.9 +0.5**
SNR=26
JNW Jan Mayen West 36.58 344 *e* **P 12 32 40.0 +5.5**
PSMN Pico do Norte, 36.63 283 *eP* **P 12 32 43.7 +8.4**
PSMN Pico do Norte, 36.63 283 *eP* **P 12 32 43.7 +8.4**
BRVK Borovoye 36.64 50 P **P 12 32 35.9 +0.7**
comp=Z,4μm,1.1s,mb7.2
BRVK Borovoye 36.64 50 *d iP* **P 12 32 33.8 -1.4**
BRVK pmax pmax
comp=Z,185nm,1.0s,mb5.9
BRVK Borovoye 36.64 50 *eP* **P 12 32 34.8 -0.4**
comp=Z,919nm,1.0s,mb6.6
BRVK *eS* **S 12 38 15.5 -1.9**
BRVK LR LR
comp=Z,31μm,20.0s,MS6.1
BRVK Borovoye 36.64 50 P **P 12 32 34.3 -0.8**
SNR=393
BRVK P 12 32 34.3
SNR=393
BRVK Borovoye 36.64 50 *eP* **P 12 32 34.8 -0.4**
comp=Z,919nm,1.0s,mb6.6
BRVK *eS* **S 12 38 15.5 -1.9**
BJO1 Bjornoya 36.65 359 *eP* **P 12 32 33.7 -1.3**
BJO1 LR LR
comp=Z,38μm,15.0s,MS6.3
BJO1 Bjornoya 36.65 359 *eP* **P 12 32 33.7 -1.3**
BJO Bjornoya 36.65 359 *eP* **P 12 32 33.7 -1.3**
BJO *eS* **S 12 38 18.3 +1.1**
BJO AMS AMS 12 49 01.5
comp=Z,38μm,15.0s,MS6.3
BJO Bjornoya 36.65 359 *eP* **P 12 32 33.7 -1.3**
SNR=26
BJO *eS* **S 12 38 18.3 +1.2**
SNR=27
BORG Borgarnes 36.66 331 P **P 12 32 36.3 +1.1**
comp=Z,21nm,0.6s,mb5.1,baz=105,slow=6.5,SNR=13
BORG LR LR 12 48 24.0
comp=Z,29μm,19.2s,MS6.1,baz=129,slow=38
BORG Borgarnes 36.66 331 *eP* **P 12 32 38.4 +3.2**
BORG pmax pmax
comp=Z,771nm,1.3s
BORG MLR MLR
comp=Z,28μm,21.0s
BORG Borgarnes 36.66 331 *eP* **P 12 32 38.4 +3.2**
comp=Z,771nm,1.3s,mb6.4
BORG LR LR
comp=Z,28μm,21.0s,MS6.0
BORG Borgarnes 36.66 331 *eP* **P 12 32 38.4 +3.2**
comp=Z,771nm,1.3s,mb6.4
BVAR Borovoye Array 36.70 50 P **P 12 32 34.2 -1.5**
comp=Z,47nm,0.5s,mb5.6,baz=257,slow=5.9,SNR=120
BVAR S **S 12 38 20.5 +2.1**
comp=Z,8.9nm,0.9s,baz=268,slow=8.7,SNR=1.9
BVAR LR LR 12 51 21.4
comp=Z,245nm,20.6s,baz=269,slow=42
BVAR Borovoye Array 36.70 50 P **P 12 32 34.2 -1.5**
BVAR S **S 12 38 20.5 +2.2**
BVAR pmax pmax
comp=Z,47nm,0.5s
BVAR smax
comp=N,9.0nm,0.9s
BVAR MLR MLR
comp=Z,245nm,20.6s
BVAR Borovoye Array 36.70 50 P **P 12 32 34.2 -1.5**
BVAR S **S 12 38 20.5 +2.2**
CMLA Cha da Macela 36.77 285 P **P 12 32 39.6 +3.1**
comp=Z,2μm,1.0s,mb7.0,SNR=11
CMLA Cha da Macela 36.77 285 *eP* **P 12 32 42.0 +5.5**
comp=Z,390nm,1.4s,mb6.0
CMLA *e*LR LR 12 43 47.4
CMLA Cha da Macela 36.77 285 *eP* **P 12 32 38.9 +2.4**
CMLA pmax pmax
comp=Z,420nm,1.0s,mb6.2
CMLA MLR MLR
comp=Z,31μm,20.0s,MS6.1
CMLA Cha da Macela 36.77 285 *eP* **P 12 32 38.9 +2.4**
comp=Z,420nm,1.0s,mb6.2
CMLA LR LR
comp=Z,31μm,20.0s,MS6.1
CMLA Cha da Macela 36.77 285 *eP* **P 12 32 38.9 +2.4**
comp=Z,420nm,1.0s,mb6.2
GRON Grota Negra 36.78 285 *eP* **P 12 32 38.2 +1.6**
comp=Z,134nm,1.3s,mb5.6
PDA Ponta Delgada 36.88 285 *eP* **P 12 32 39.3 +1.8**
PDA *e*LQ 12 40 48.0
PDA *e*LR LR 12 42 43.0
PDA Ponta Delgada 36.88 285 *eP* **P 12 32 39.3 +1.8**
PSET Sete Cidades 36.91 285 *eP* **P 12 32 40.3 +2.6**
comp=Z,180nm,1.6s,mb5.7
PSET Sete Cidades 36.91 285 *eP* **P 12 32 40.3 +2.6**
comp=Z,180nm,1.6s,mb5.7
KBL Kabul 38.21 80 *eP* **P 12 32 48.9 +0.2**
KBL pmax pmax
comp=Z,147nm,1.3s,mb5.5
KBL Kabul 38.21 80 *eP* **P 12 32 48.9 +0.2**
comp=Z,147nm,1.3s,mb5.5
KBL Kabul 38.21 80 *eP* **P 12 32 48.9 +0.2**
comp=Z,147nm,1.3s,mb5.5
PMAN Manadas 38.50 287 *eP* **P 12 32 55.0 +3.9**
comp=Z,814nm,1.2s,mb6.3
PID Ribeirinha 38.57 287 *eP* **P 12 32 58.7 +7.0**
ROSA Rosais 38.59 287 *eP* **P 12 32 58.5 +6.6**
HOPEN Hopen 38.68 1 *eP* **P 12 32 51.5 -0.7**
HOPEN *e*PP PP 12 34 21.7 +1.1
HOPEN Hopen 38.68 1 *eP* **P 12 32 51.5 -0.7**
SNR=26
PICO Pico 38.79 287 *eP* **P 12 33 00.8 +7.2**
PCAN Candelaria 38.84 287 *eP* **P 12 32 58.8 +4.8**
comp=Z,1μm,1.4s,mb6.5
PCAN Candelaria 38.84 287 *eP* **P 12 32 58.8 +4.8**
comp=Z,1μm,1.4s,mb6.5
CALA Caldeira 38.98 287 *eP* **P 12 33 01.5 +6.4**
CALA Caldeira 38.98 287 *eP* **P 12 33 01.5 +6.4**
HSP Hornsund 39.24 358 *eP* **P 12 32 57.4 +0.6**
DBIC Dimbokro 39.24 224 P **P 12 32 57.1 -0.4**
comp=Z,127nm,1.0s,mb5.6,baz=17,slow=11,SNR=35
DBIC S **S 12 38 54.6 -2.9**
comp=Z,9.1nm,0.9s,baz=242,slow=18,SNR=2.6
DBIC LR LR 12 52 13.5
comp=Z,39μm,20.2s,MS6.2,baz=13,slow=41
DBIC Dimbokro 39.24 224 P **P 12 32 57.2 -0.3**
DBIC S **S 12 38 54.6 -2.9**
DBIC pmax pmax
comp=Z,127nm,1.0s
DBIC smax
comp=N,9.0nm,0.9s
DBIC MLR MLR
comp=Z,39μm,20.3s
DBIC Dimbokro 39.24 224 *eP* **P 12 32 56.7 -0.8**
comp=Z,327nm,0.8s,mb6.1
DBIC LR LR
comp=Z,41μm,20.0s,MS6.3
DBIC Dimbokro 39.24 224 P **P 12 32 57.2 -0.3**
comp=Z,127nm,1.0s,mb5.6
MBAR Mbarara 39.32 165 P **P 12 33 00.3 +2.2**
comp=Z,271nm,0.9s,mb6.0,SNR=25
TIC Toumodi 39.35 224 *eP* **P 12 32 57.3 -1.1**
comp=Z,522nm,0.9s,mb6.2
KIC Kosan Boka 39.43 224 *eP* **P 12 32 58.2 -0.9**
comp=Z,750nm,1.0s,mb6.4
SCO Scoresbysund 39.65 339⇑ *iP* **P 12 33 01.0 +0.7**
SCO *i* 12 34 42.4
SCO MLR MLR
comp=Z,27μm,18.0s,MS6.1
SCO Scoresbysund 39.65 339⇑ *iP* **P 12 33 01.0 +0.7**
SCO *i* 12 34 42.4
SCO
comp=Z,27μm,18.0s
SCO Scoresbysund 39.65 339⇑ *iP* **P 12 33 01.0 +0.7**

SNR=26
EKS2 Erkin-Say 39.65 66 P **P** **12 33 01.1 +0.4**
SNR=52
EKS2 Erkin-Say 39.65 66 PFAKE 12 33 10.0 +9.3
EKS2 LR LR
comp=Z,42µm,19.0s,MS6.3
AML Almayashu 39.70 67 P **P** **12 33 01.5 +0.4**
SNR=17
AML Almayashu 39.70 67 P **P** **12 33 01.5 +0.4**
SNR=29
LIC Lamto 39.70 224 *e*P **P** **12 33 00.4 -1.0**
comp=Z,948nm,0.9s,mb6.2
LIC *e*MLR MLR
comp=Z,52µm,21.5s,MS6.0
LIC Lamto 39.70 224 *e*P **P** **12 33 00.4 -1.0**
comp=Z,474nm,0.9s,mb6.2
LIC LR LR
comp=Z,26µm,21.5s,MS6.0
USP Ospenovka 40.06 65 P **P** **12 33 03.2 -0.8**
SNR=21
AAK Ala-Archa 40.18 66 P **P** **12 33 05.5 +0.4**
comp=Z,3µm,0.8s,SNR=43
AAK Ala-Archa 40.18 66 P **P** **12 33 05.2 +0.1**
SNR=27
AAK Ala-Archa 40.18 66 P **P** **12 33 04.8 -0.2**
comp=Z,68nm,0.8s,mb5.4,baz=253,slow=4.1,SNR=39
AAK S **S** **12 39 05.9 -5.2**
comp=Z,33nm,0.9s,baz=194,slow=4.2,SNR=4.4
AAK LR LR 12 53 04.8
comp=Z,40µm,20.5s,MS6.2,baz=52,slow=41
AAK Ala-Archa 40.18 66 *d i*P **P** **12 33 04.4 -0.7**
AAK pmax pmax
comp=Z,40nm,1.2s,mb5.0
AAK Ala-Archa 40.18 66 *e*P **P** **12 33 05.3 +0.2**
comp=Z,3µm,1.7s,mb6.7
AAK LR LR
comp=Z,38µm,19.0s,MS6.3
AAK Ala-Archa 40.18 66 P **P** **12 33 04.6 -0.5**
SNR=600
AAK P 12 33 04.6
SNR=600
AAK Ala-Archa 40.18 66 *i* P **P** **12 33 04.4 -0.7**
comp=Z,40nm,1.2s,mb5.0
FRU Bishkek 40.23 66 *e*P **P** **12 33 05.0 -0.5**
FRU *i* pP 12 33 10.0 -0.4
FRU *i* 12 34 44.0
FRU *i* S **S** **12 39 06.0 -5.8**
FRU smax
comp=E,8µm,6.0s
FRU Bishkek 40.23 66 *e*P **P** **12 33 05.0 -0.5**
UCH Uchtor 40.28 67 P **P** **12 33 05.6 -0.3**
SNR=38
UCH Uchtor 40.28 67 PFAKE 12 33 20.0 +14
UCH LR LR
comp=Z,39µm,21.0s,MS6.2
CHMS Chumysh 40.29 65 P **P** **12 33 05.9 -0.1**
SNR=24
SPITS Spitsbergen Ar 40.38 358 P **P** **12 33 05.8 -0.6**
comp=Z,86nm,0.6s,mb5.6,baz=164,slow=9.5,SNR=75
SPITS S **S** **12 39 00.0 -13**
comp=Z,29nm,1.0s,baz=142,slow=26,SNR=3.8
SPITS LR LR 12 50 24.3
comp=Z,96µm,21.6s,MS6.6,baz=125,slow=37
SPITS Spitsbergen Ar 40.38 358 P **P** **12 33 05.8 -0.6**
KBK Karagaybulak 40.50 66 P **P** **12 33 09.2 +1.4**
SNR=36
BBTS Babate 40.79 246 P **P** **12 33 10.9 +0.5**
comp=Z,124nm,0.8s,mb5.6,baz=53,slow=2.1,SNR=16
BBTS LR LR 12 52 35.8
comp=Z,38µm,19.4s,MS6.3,baz=240,slow=40
BBTS Babate 40.79 246 P **P** **12 33 10.9 +0.5**
KZA Kyzart 40.84 67 P **P** **12 33 11.2 +0.6**
SNR=39
TKM2 Tokmak 2 40.91 65 P **P** **12 33 10.9 -0.3**
SNR=18
KBS Kingsbay 41.26 357 *e*P **P** **12 33 13.1 -0.5**
KBS AMb AMB 12 33 27.1
comp=Z,471nm,0.7s,mb6.3
KBS *e*S **S** **12 39 26.5 0.0**
KBS *e*SS SS 12 42 29.5 0.0
KBS AMS AMS 12 51 28.6
comp=Z,58µm,18.1s,MS6.5
KBS Kingsbay 41.26 357 *c i*P **P** **12 33 14.0 +0.4**
KBS pmax pmax
comp=Z,136nm,0.8s,mb5.6
KBS Kingsbay 41.26 357 *e*P **P** **12 33 12.7 -0.9**
comp=Z,292nm,0.9s,mb5.9
KBS *e*PP PP 12 34 50.7 +2.0
KBS *e*ScP ScP 12 39 03.6 +2.4
KBS LR LR
comp=Z,58µm,19.0s,MS6.5
KBS Kingsbay 41.26 357 *i* P **P** **12 33 13.7 +0.1**
SNR=25
KBS Kingsbay 41.26 357 *e*PP PP 12 34 50.7 +2.0
KBS *e*S **S** **12 39 26.5 0.0**
SNR=27
KBS *e*SS SS 12 42 29.5 0.0
SNR=37
ULHL Ulahol 41.52 66 P **P** **12 33 16.6 +0.4**
SNR=27
KMBO Kilima Mbogo 41.54 156 P **P** **12 33 16.7 +0.2**
comp=Z,2.3nm,0.6s,baz=18,slow=14,SNR=6.8
KMBO S **S** **12 39 31.9 0.0**
comp=Z,5.5nm,1.0s,baz=36,slow=8.7,SNR=2.4
KMBO LR LR 12 52 41.5
comp=Z,24µm,19.2s,MS6.1,baz=340,slow=39
KMBO Kilima Mbogo 41.54 156 *e*P **P** **12 33 16.8 +0.2**
KMBO pmax pmax
comp=Z,116nm,1.2s
KMBO MLR MLR
comp=Z,23µm,20.0s
KMBO Kilima Mbogo 41.54 156 *e*P **P** **12 33 16.8 +0.3**
comp=Z,116nm,1.2s,mb5.4
KMBO LR LR
comp=Z,23µm,20.0s,MS6.0
KMBO Kilima Mbogo 41.54 156 P **P** **12 33 19.5 +3.0**
SNR=32
KMBO P 12 33 19.5
SNR=32
KMBO Kilima Mbogo 41.54 156 *e*P **P** **12 33 16.8 +0.2**
comp=Z,116nm,1.2s,mb5.4
AAA Alma-Ata 41.81 65 *e*P **P** **12 33 19.1 +0.6**
AAA *e*S **S** **12 39 37.3 +2.0**
AAA pmax pmax
comp=Z,5µm,3.4s
AAA smax
comp=E,7µm,6.4s
AAA MLR MLR
comp=Z,26µm,14.0s,MS6.3
AAA Alma-Ata 41.81 65 *e*P **P** **12 33 19.0 +0.5**
AAA Alma-Ata 41.81 65 *e*P **P** **12 33 19.0 +0.5**
AAA *e*S **S** **12 39 37.3 +2.0**
comp=Z,26µm,14.0s
KURK Kurchatov 41.82 53 P **P** **12 33 18.9 +0.4**
comp=Z,8µm,1.2s,mb7.2
KURK Kurchatov 41.82 53 P **P** **12 33 15.8 -2.7**
comp=Z,310nm,0.7s,mb6.0,baz=280,slow=8.6,SNR=313
KURK S **S** **12 39 33.9 -1.4**
comp=Z,28nm,1.0s,baz=281,slow=15,SNR=4.7
KURK LR LR 12 55 24.9
comp=Z,24µm,18.7s,MS6.1,baz=280,slow=43
KURK PKPPKP 13 05 29.7
comp=Z,1.9nm,1.1s,baz=148,slow=1.4,SNR=3.6
KURK Kurchatov 41.82 53 P **P** **12 33 15.8 -2.7**
KURK S **S** **12 39 33.9 -1.4**
KURK pmax pmax
comp=Z,310nm,0.7s,mb6.0
KURK smax
comp=N,28nm,1.0s
KURK MLR MLR
comp=Z,24µm,18.7s,MS6.1
KURK Kurchatov 41.82 53 *e*P **P** **12 33 17.5 -1.0**
comp=Z,2µm,1.2s,mb6.6
KURK LR LR
comp=Z,33µm,21.0s,MS6.2
KURK Kurchatov 41.82 53 P **P** **12 33 18.4 -0.1**
SNR=775
KURK P 12 33 18.4
SNR=775
KURK Kurchatov 41.82 53 *e*P **P** **12 33 17.5 -1.0**
comp=Z,2µm,1.2s,mb6.6
KURK S **S** **12 39 33.9 -1.4**
comp=Z,24µm,18.7s
KSH Kashi 42.01 70⇑ *i*P **P** **12 33 18.8 -1.4**
KSH pP pP 12 33 23.0 -2.1
KSH sP sP 12 33 25.5 -1.6
KSH PP PP 12 34 58.1 +0.8
KSH PcP PcP 12 35 16.1 +1.0
KSH ScP ScP 12 39 04.5 -0.4
KSH PcS PcS 12 39 05.6 -1.1
KSH S **S** **12 39 34.5 -3.9**
KSH sS sS 12 39 41.5 -5.0
KSH SS SS 12 42 33.8 -12
KSH ScS ScS 12 43 19.4 -2.8
KSH pmax pmax
comp=Z,37nm,0.6s,mb5.2
KSH LR LR
comp=N,7µm,11.7s
KSH LR LR
comp=E,15µm,17.0s
KSH LR LR
comp=Z,14µm,15.4s,MS5.9
DAG Danmarks Havn 42.67 347⇑ *i*P **P** **12 33 26.1 +1.0**
DAG pmax pmax
comp=Z,92nm,0.8s,mb5.6
DAG MLR MLR
comp=Z,40µm,22.0s,MS6.3
DAG MLR MLR
comp=N,22µm,21.0s,MS6.3
DAG MLR MLR
comp=E,32µm,21.0s,MS6.3
DAG Danmarks Havn 42.67 347⇑ *i*P **P** **12 33 26.1 +1.0**
comp=E,92nm,0.8s,mb5.6
DAG
comp=Z,40µm,22.0s
JASL Jaisalmer 42.72 90 *e*PKP **P** **12 33 25.5 -0.7**
JASL AMb AMB 12 33 32.8
comp=Z,523nm,1.1s,mb6.2
BHJ Bhuj 43.53 95 *e*PKP **P** **12 33 31.6 -1.2**
BHJ AMb AMB 12 33 39.6
comp=Z,822nm,1.4s,mb6.3
THN Thein Dam 44.17 80 *e*PKP **P** **12 33 36.0 -1.8**
THN *ex* x 12 40 49.2
NVS Novosibirsk 44.29 47 *e*P **P** **12 33 39.2 +0.8**
NVS *e* 12 35 24.0
NVS *i* S **S** **12 40 11.6 +0.1**
NVS *e* 12 43 39.7
NVS pmax pmax
comp=Z,3µm,1.2s,mb6.9
NVS pmax pmax
comp=N,780nm,1.3s
NVS pmax pmax
comp=E,1µm,1.1s
NVS smax
comp=N,1µm,1.8s
NVS smax
comp=E,1µm,2.0s
NVS Novosibirsk 44.29 47 *e*P **P** **12 33 39.2 +0.8**
comp=E,780nm,1.3s,mb6.3
NVS Novosibirsk 44.29 47 *e*PcP PcP 12 35 24.0 +1.5
NVS *i* S **S** **12 40 11.6 +0.1**
comp=E,1µm,1.8s
NVS *e*ScS ScS 12 43 39.7 +3.9
MK31 Makanchi Array 44.79 58 *e*P **P** **12 33 40.5 -2.0**
MK31 Makanchi Array 44.79 58 *e*P **P** **12 33 40.5 -2.0**
MKAR Makanchi Array 44.79 58 P **P** **12 33 39.9 -2.6**
comp=E,169nm,0.6s,mb6.0,baz=290,slow=6.3,SNR=516
MKAR ScP ScP 12 39 17.4 +1.4
comp=E,18nm,0.9s,baz=298,slow=2.9,SNR=4.1
MKAR S **S** **12 40 19.3 +0.3**
comp=E,13nm,0.8s,baz=278,slow=11,SNR=3.5
MKAR LR LR 12 56 43.7
comp=E,23µm,19.1s,MS6.1,baz=282,slow=42
MKAR PKPPKP 13 05 23.1
comp=E,1.1nm,1.0s,baz=98,slow=8.7,SNR=3.9
MKAR Makanchi Array 44.79 58 P **P** **12 33 39.9 -2.6**
MKAR S **S** **12 40 19.3 +0.3**
MKAR pmax pmax
comp=Z,169nm,0.6s
MKAR smax
comp=N,13nm,0.8s
MKAR MLR MLR
comp=Z,23µm,19.1s
SUMG Summit 45.29 338 *e*P **P** **12 33 47.2 +1.0**
comp=Z,520nm,1.0s,mb6.3
SUMG *e*PP PP 12 35 31.0 -0.9
SUMG *e*ScP ScP 12 39 19.1 +1.5
SUMG Summit 45.29 338 *i* P **P** **12 33 48.3 +2.1**
comp=Z,412nm,1.0s,mb6.2
SUMG *i* S **S** **12 40 29.2 +3.6**
SUMG *i* S **S** **12 40 32.7 +7.1**
SUMG Summit 45.29 338 *e*P **P** **12 33 47.2 +1.0**
comp=Z,520nm,1.0s,mb6.3
SUMG Summit 45.29 338 *e*PP PP 12 35 31.0 -0.9
SUMG *i* S **S** **12 40 29.3 +3.7**
SNR=26
ZALV Zalesovo Beam 45.29 48 P **P** **12 33 44.2 -2.2**
comp=Z,212nm,0.6s,mb6.2,baz=275,slow=9.0,SNR=180
ZALV S **S** **12 40 26.6 +0.6**
comp=Z,42nm,1.1s,baz=254,slow=9.9,SNR=3.6
ZALV LR LR 12 55 34.3
comp=Z,20µm,18.4s,MS6.1,baz=280,slow=40
ZALV Zalesovo Beam 45.29 48 P **P** **12 33 44.2 -2.2**
ZALV S **S** **12 40 26.6 +0.6**
ZALV pmax pmax
comp=Z,212nm,0.6s,mb6.2
ZALV smax
comp=N,42nm,1.1s
ZALV MLR MLR
comp=Z,20µm,18.5s,MS6.1
ZALV Zalesovo Beam 45.29 48 P **P** **12 33 44.2 -2.2**
ZALV S **S** **12 40 26.6 +0.6**
SDNR Sundarnagar 45.52 81 *e*PKP **P** **12 33 47.0 -1.5**
SDNR *ex* x 12 40 08.0
SACV Santiago Islan 45.82 253 *e*P **P** **12 33 53.5 +2.4**
comp=Z,331nm,1.1s,mb6.2
SACV LR LR
comp=Z,15µm,22.0s,MS5.9
SACV Santiago Islan 45.82 253 *e*P **P** **12 33 53.5 +2.4**
comp=Z,331nm,1.1s,mb6.2
AJM Ajmer 45.89 88 *e*PKP **P** **12 33 50.0 -1.5**
KHET Khetri 46.07 86 *e*PKP **P** **12 33 51.8 -1.1**
RTK Rohtak 46.12 84 *ex* **S** **12 40 37.4 -1.2**
BHV Bhavnagar 46.28 96 *i* P **P** **12 33 52.8 -1.9**
KLP Kalpa 46.50 80 *e*PKP **P** **12 33 55.4 -0.9**
KLP AMb AMB 12 34 01.2
comp=Z,252nm,1.1s,mb6.1
DDI Dehra Dun 46.85 82 *ex* **P** **12 33 54.1 -5.0**
DDI *ex* x 12 39 03.5
NDI New Delhi 46.91 84 *e*PKP **P** **12 33 55.5 -4.0**
NDI *e*S **S** **12 40 46.0 -3.9**
AYAN Aya Nagar 46.93 84 *e*PKP **P** **12 33 58.2 -1.4**
SONA Sohna 47.00 85 *e*PKP **P** **12 33 59.2 -0.9**
SONA AMb AMB 12 34 06.1
comp=Z,294nm,0.8s,mb6.3
JOSI Joshimath 47.93 81 *e*PKP **P** **12 34 07.0 -0.4**
AGRA Agra 48.14 85 *e*PKP **P** **12 34 07.7 -1.4**
AGRA AMb AMB 12 34 08.4
comp=Z,129nm,0.4s,mb6.3
SFJD Kangerlussuaq 48.78 330 P **P** **12 34 12.9 -0.6**
comp=Z,22nm,0.8s,mb5.2,baz=66,slow=12,SNR=5.4
SFJD LR LR 12 56 26.2
comp=Z,39µm,19.8s,MS6.4,baz=64,slow=38
SFJD Kangerlussuaq 48.78 330 *i* P **P** **12 34 12.5 -1.0**
SFJD *i* 12 36 14.1
SFJD *i* S **S** **12 41 19.1 +3.6**
SFJD *i* S **S** **12 41 19.9 +4.4**
SFJD pmax pmax
comp=Z,170nm,0.9s,mb6.1
SFJD MLR MLR
comp=Z,35µm,20.0s,MS6.3
SFJD Kangerlussuaq 48.78 330 *e*P **P** **12 34 16.0 +2.5**
comp=Z,599nm,1.3s,mb6.5
SFJD LR LR 12 56 26.2
SFJD Kangerlussuaq 48.78 330 *i* P **P** **12 34 12.5 -1.0**
comp=Z,171nm,0.9s,mb6.1
SFJD *i* 12 36 14.1
SFJD *i* S **S** **12 41 19.1 +3.6**
SFJD *i* S **S** **12 41 19.9 +4.4**
SFJD
comp=Z,35µm,20.0s
SFJD Kangerlussuaq 48.78 330 *i* P **P** **12 34 12.5 -1.0**
comp=Z,170nm,0.9s,mb6.1
SFJD *i* S **S** **12 41 19.1 +3.6**
WMQ Urumqi 49.22 61 P **P** **12 34 17.0 -0.2**
WMQ sP sP 12 34 24.0 -0.1
WMQ PP PP 12 36 09.0 -1.9
WMQ S **S** **12 41 21.0 -1.3**
WMQ ScS ScS 12 44 06.0 -2.5
WMQ SS SS 12 44 47.0 -6.4
WMQ pmax pmax
comp=Z,430nm,1.0s,mb6.4
WMQ pmax pmax
comp=Z,3µm,5.0s
WMQ LR LR
comp=N,31µm,16.0s,MS6.5
WMQ LR LR
comp=E,26µm,16.0s,MS6.5
WMQ LR LR
comp=Z,25µm,16.0s,MS6.3
POO Poona 49.38 98 *e*PKP **P** **12 34 17.5 -1.1**
POO AMb AMB 12 34 25.7
comp=Z,435nm,1.4s,mb6.3
BHPL Bhopal 49.67 90 *e*PKP **P** **12 34 19.9 -0.9**
BHPL AMb AMB 12 34 26.9
comp=Z,403nm,1.4s,mb6.3
KAD Karad 50.33 99 *e*PKP **P** **12 34 24.8 -1.1**
KAD AMb AMB 12 34 42.0
comp=Z,307nm,1.2s,mb6.2
AKL Akola 50.68 93⇓ *i*P **P** **12 34 27.6 -1.0**
AKL *ex* x 12 34 35.3
comp=Z,543nm,1.5s
AKL *i* x x 12 41 41.0
ALE Alert 51.80 350 P **P** **12 34 36.0 -0.2**
comp=Z,2µm,0.8s,SNR=33
NGP Nagpur 52.04 92 *e*PKP **P** **12 34 33.3 -5.5**
NGP *ex* x 12 34 40.1
comp=Z,367nm,1.3s
NGP *e*S **S** **12 41 54.0 -8.0**
MSEY Mahe Island 52.89 136 P **P** **12 34 46.9 +1.8**
comp=Z,1µm,1.0s,mb6.7,SNR=7.2
MSEY Mahe Island 52.89 136 *e*P **P** **12 34 44.6 -0.5**
MSEY pmax pmax
comp=Z,227nm,1.0s,mb6.1
MSEY MLR MLR
comp=Z,9µm,21.0s,MS5.8
MSEY Mahe Island 52.89 136 *e*P **P** **12 34 44.6 -0.4**
comp=Z,226nm,1.0s,mb6.1
MSEY LR LR
comp=Z,9µm,21.0s,MS5.8
MSEY Mahe Island 52.89 136 P **P** **12 34 50.4 +5.3**
SNR=9.9
MSEY P 12 34 50.4
SNR=9.9
MSEY Mahe Island 52.89 136 *e*P **P** **12 34 44.6 -0.5**
comp=Z,226nm,1.0s,mb6.1
LSZ Lusaka 53.33 172 *e*P **P** **12 34 47.8 -0.4**
LSZ pmax pmax
comp=Z,157nm,1.1s,mb5.8
LSZ MLR MLR
comp=Z,27µm,20.0s,MS6.3
LSZ Lusaka 53.33 172 *e*P **P** **12 34 47.8 -0.4**
comp=Z,157nm,1.1s,mb5.9
LSZ LR LR
comp=Z,27µm,20.0s,MS6.3
LSZ Lusaka 53.33 172 *e*P **P** **12 34 47.8 -0.4**
comp=Z,157nm,1.1s,mb5.9
DMN Daman 53.59 81 *e*P **P** **12 34 48.0 -2.1**
comp=Z,541nm,0.7s,mb6.6
DMN Daman 53.59 81 *e*P **P** **12 34 48.0 -2.1**
comp=Z,541nm,0.7s,mb6.6
KKN Kakani 53.64 81 *e*P **P** **12 34 47.9 -2.6**
comp=Z,629nm,1.1s,mb6.5
KKN Kakani 53.64 81 *e*P **P** **12 34 47.9 -2.6**
KKN pmax pmax
comp=Z,629nm,1.1s,mb6.5
KKN Kakani 53.64 81 *e*P **P** **12 34 47.9 -2.6**
comp=Z,629nm,1.1s,mb6.5
HYB Hyderabad 53.70 96 *e*P **P** **12 34 48.0 -3.0**
HYB *e*S **S** **12 42 16.0 -8.6**
HYB pmax pmax
comp=Z,170nm,1.0s,mb5.9
HYB Hyderabad 53.70 96 *e*P **P** **12 34 48.0 -3.0**
comp=Z,170nm,1.0s,mb5.9
HYB *e*S **S** **12 42 16.0 -8.6**
HYB Hyderabad 53.70 96 *i* P **P** **12 34 48.0 -3.0**
comp=Z,170nm,1.0s,mb5.9
HYB *e*S **S** **12 42 23.0 -1.6**
HYB LR LR 12 55 32.0
comp=Z,20nm,30.0s
PKIN Phulchoki 53.83 81 *e*P **P** **12 34 49.5 -2.4**
comp=Z,296nm,0.5s,mb6.5
PKI Pulchoki 53.84 81 *e*P **P** **12 34 49.5 -2.5**
comp=Z,404nm,1.0s,mb6.3
PKI Pulchoki 53.84 81 *e*P **P** **12 34 49.5 -2.5**
PKI pmax pmax
comp=Z,404nm,1.0s,mb6.3
PKI Pulchoki 53.84 81 *e*P **P** **12 34 49.5 -2.5**
comp=Z,404nm,1.0s,mb6.3
GUN Gumba 54.05 80 *e*P **P** **12 34 50.8 -2.7**
comp=Z,535nm,0.8s,mb6.5
GUN Gumba 54.05 80 *e*P **P** **12 34 50.8 -2.7**
comp=Z,535nm,0.8s,mb6.5
JIRN Jiri 54.41 81 *e*P **P** **12 34 53.8 -2.3**
comp=Z,372nm,0.8s,mb6.4
JIRN Jiri 54.41 81 *e*P **P** **12 34 53.8 -2.3**
comp=Z,372nm,0.8s,mb6.4
RAMN Ramite 55.07 81 *e*P **P** **12 34 58.2 -2.7**
comp=Z,719nm,0.7s,mb6.8
RAMN Ramite 55.07 81 *e*P **P** **12 34 58.2 -2.7**
comp=Z,719nm,0.7s,mb6.8
MOY Mondy 55.35 48 *e*P **P** **12 35 03.7 +1.1**
MOY pmax pmax
comp=Z,523nm,2.2s,mb6.2
MOY Mondy 55.35 48 *e*P **P** **12 35 03.7 +1.1**
comp=Z,523nm,2.2s,mb6.2
ODAN Odare 55.73 81 *e*P **P** **12 35 03.0 -2.7**
comp=Z,382nm,1.0s,mb6.4
ODAN Odare 55.73 81 *e*P **P** **12 35 03.0 -2.7**
comp=Z,382nm,1.0s,mb6.4
TAPN Taplejung 55.74 80 *e*P **P** **12 35 03.4 -2.4**
comp=Z,946nm,1.2s,mb6.7
TAPN Taplejung 55.74 80 *e*P **P** **12 35 03.4 -2.4**
comp=Z,946nm,1.2s,mb6.7
GTK Gangtok 56.45 80 *e*PKP **P** **12 35 09.0 -1.9**
ASCN Ascension 56.56 224 PFAKE 12 35 20.0 +8.3
ASCN LR LR
comp=Z,12µm,19.0s,MS6.0
FRB Frobisher Bay 56.73 328 P **P** **12 35 12.6 +0.3**
comp=Z,48nm,0.7s,mb5.6,baz=68,slow=8.0,SNR=13
FRB LR LR 13 01 53.4
comp=Z,31µm,19.0s,MS6.4,baz=70,slow=38
FRB Frobisher Bay 56.73 328 P **P** **12 35 12.6 +0.4**
FRB pmax pmax
comp=Z,48nm,0.7s
FRB MLR MLR
comp=Z,31µm,19.0s
FRB Frobisher Bay 56.73 328 P **P** **12 35 12.6 +0.4**
TLY Talaya 56.90 47 P **P** **12 35 14.6 +1.0**
comp=Z,2µm,1.1s,mb7.0,SNR=85
TLY Talaya 56.90 47 *c i*P **P** **12 35 14.3 +0.7**
TLY *e* 12 37 24.5
TLY *e*PPP 12 38 34.6
TLY *e*S **S** **12 43 04.0 -2.6**
TLY *e*PS 12 43 17.3
TLY *e*SSS 12 49 05.7
TLY pmax pmax
comp=Z,565nm,1.3s,mb6.4
TLY MLR MLR
comp=Z,30µm,18.0s,MS6.4
TLY Talaya 56.90 47 *e*P **P** **12 35 14.3 +0.6**
comp=Z,744nm,1.4s,mb6.5
TLY LR LR
comp=Z,36µm,20.0s,MS6.5
TLY Talaya 56.90 47 P **P** **12 35 15.3 +1.7**
SNR=323
TLY P 12 35 15.3
SNR=323
TLY Talaya 56.90 47 *e*P **P** **12 35 14.3 +0.7**
comp=Z,744nm,1.4s,mb6.5
TSUM Tsumeb 56.97 184 P **P** **12 35 13.3 -1.1**
comp=Z,20nm,0.9s,mb5.1,baz=352,slow=7.8,SNR=18
TSUM LR LR 13 02 55.5
comp=Z,42µm,19.6s,MS6.5,baz=357,slow=39
TSUM Tsumeb 56.97 184 *e*P **P** **12 35 12.9 -1.5**
comp=Z,132nm,1.2s,mb5.8
TSUM LR LR
comp=Z,43µm,22.0s,MS6.5
TSUM Tsumeb 56.97 184 *e*P **P** **12 35 12.9 -1.5**
comp=Z,132nm,1.2s,mb5.8
IRK Irkutsk 57.06 47 *e*P **P** **12 35 14.6 -0.2**
IRK *e* 12 38 43.2
IRK *e*S **S** **12 43 01.2 -7.5**
IRK pmax pmax
comp=Z,874nm,1.7s,mb6.5
IRK Irkutsk 57.06 47 *e*P **P** **12 35 14.6 -0.2**
comp=Z,874nm,1.7s,mb6.5
ZAK Zakamensk 57.15 49 *e*P **P** **12 35 16.2 +0.8**
ZAK *e* 12 43 10.6

ZAK pmax pmax
comp=Z,110nm,1.2s,mb5.8
ZAK Zakamensk 57.15 49 *e*P **P 12 35 16.2 +0.8**
comp=Z,110nm,1.2s,mb5.8
ZAK *e*S **S 12 43 10.6 +0.7**
LSA Lhasa 57.28 76 *e*P **P 12 35 16.0 -0.7**
LSA pmax pmax
comp=Z,168nm,0.8s,mb6.1
LSA MLR MLR
comp=Z,10μm,21.0s,MS5.9
LSA Lhasa 57.28 76 *e*P **P 12 35 16.0 -0.7**
comp=Z,168nm,0.8s,mb6.1
LSA LR LR
comp=Z,10μm,21.0s,MS5.9
LSA Lhasa 57.28 76 *e*P **P 12 35 16.0 -0.7**
comp=Z,168nm,0.8s,mb6.1
VIS Vishakhapatnam 57.29 92 *i* P **P 12 35 15.7 -1.2**
MDRS Chennai 57.55 99 *ex* x 12 35 30.5
TRD Trivandrum 57.81 106⇑ *ex* x 12 35 46.0
SCHQ Schefferville 59.12 318 P **P 12 35 29.2 +0.1**
comp=Z,24nm,0.4s,mb5.6,baz=71,slow=6.5,SNR=61
SCHQ LR LR 13 02 08.8
comp=Z,20μm,18.5s,MS6.3,baz=69,slow=37
SCHQ Schefferville 59.12 318 *e*P **P 12 35 29.1 0.0**
comp=Z,346nm,1.0s,mb6.3
SCHQ LR LR
comp=Z,23μm,20.0s,MS6.3
SCHQ Schefferville 59.12 318 *e*P **P 12 35 29.1 0.0**
comp=Z,346nm,1.0s,mb6.3
GTA Gaotai 59.28 62⇑ *i*P **P 12 35 29.9 -0.6**
GTA pP pP 12 35 33.7 -1.9
GTA sP sP 12 35 36.1 -1.4
GTA PP PP 12 37 44.0 +2.7
GTA S **S 12 43 36.4 -1.7**
GTA sS sS 12 43 44.1 -2.4
GTA SS SS 12 47 32.9 +0.6
GTA pmax pmax
comp=Z,85nm,0.9s,mb5.8
GTA pmax pmax
comp=Z,570nm,3.8s
GTA LR LR
comp=N,17μm,16.6s,MS6.4
GTA LR LR
comp=E,18μm,15.8s,MS6.4
GTA LR LR
comp=Z,24μm,23.5s
SHEL Horse Pasture 59.41 211 *e*P **P 12 35 32.0 +0.5**
SHEL pmax pmax
comp=Z,395nm,1.0s,mb6.4
SHEL MLR MLR
comp=Z,7μm,22.0s,MS5.7
SHEL Horse Pasture 59.41 211 *e*P **P 12 35 32.0 +0.5**
comp=Z,395nm,1.0s,mb6.4
SHEL LR LR
comp=Z,7μm,22.0s,MS5.7
SHEL Horse Pasture 59.41 211 *e*P **P 12 35 32.0 +0.5**
comp=Z,395nm,1.0s,mb6.4
TIXI Tiksi 59.60 21 *e*P **P 12 35 32.2 0.0**
TIXI pmax pmax
comp=Z,85nm,0.9s,mb5.8
TIXI MLR MLR
comp=Z,85μm,22.0s,MS6.8
TIXI Tiksi 59.60 21 *e*P **P 12 35 32.2 0.0**
comp=Z,86nm,0.9s,mb5.8
TIXI LR LR
comp=Z,85μm,22.0s,MS6.8
TIXI Tiksi 59.60 21 *e*P **P 12 35 32.2 0.0**
comp=Z,86nm,0.9s,mb5.8
SHL Shillong 59.87 80⇑ *i*P **P 12 35 33.5 -1.3**
SHL *ex* x 12 38 16.0
SHL *ex* x 12 43 40.5
SONM Songino Array 60.03 51 P **P 12 35 33.7 -1.8**
comp=Z,33nm,0.9s,mb5.3,baz=284,slow=8.7,SNR=80
SONM PKPPKP 13 05 03.0
comp=Z,1.7nm,1.0s,baz=306,slow=1.2,SNR=3.3
SONM LR LR 13 05 14.7
comp=Z,33μm,19.1s,MS6.5,baz=302,slow=40
SONM Songino Array 60.03 51 P **P 12 35 33.7 -1.9**
BOD Bodaibo 60.09 38 *e*P **P 12 35 35.2 -0.6**
BOD *e*S **S 12 43 46.8 -1.2**
BOD pmax pmax
comp=Z,271nm,1.5s,mb6.1
BOD Bodaibo 60.09 38 *e*P **P 12 35 35.2 -0.6**
comp=Z,271nm,1.5s,mb6.1
BOD *e*S **S 12 43 46.8 -1.2**
RES Resolute Bay 60.18 344 P **P 12 35 35.8 -0.4**
comp=Z,24nm,0.7s,mb5.4,baz=43,slow=9.4,SNR=70
RES LR LR 13 01 14.5
comp=Z,13μm,19.2s,MS6.1,baz=59,slow=36
RES PKPPKP 13 04 58.5
comp=Z,5.0nm,1.0s,baz=218,slow=6.6,SNR=3.9
RES Resolute Bay 60.18 344 *e*P **P 12 35 35.8 -0.4**
comp=Z,93nm,0.8s,mb5.9
RES Resolute Bay 60.18 344 *e*P **P 12 35 35.8 -0.4**
comp=Z,93nm,0.8s,mb5.9
AGT Agartala 60.24 82 *i* x x 12 36 31.0
AGT *i* x x 12 37 35.0
ULN Ulaanbaatar 60.42 51⇑ *e*P **P 12 35 36.8 -1.4**
ULN Ulaanbaatar 60.42 51 *e*P **P 12 35 37.4 -0.8**
comp=Z,302nm,1.1s,mb6.2
ULN LR LR
comp=Z,29μm,22.0s,MS6.4
ULN Ulaanbaatar 60.42 51 P **P 12 35 38.7 +0.5**
SNR=194
ULN P 12 35 38.7
SNR=194
ULN Ulaanbaatar 60.42 51 *e*P **P 12 35 37.4 -0.8**
comp=Z,302nm,1.1s,mb6.2
MSNA Messina 60.52 171 *e*P **P 12 35 39.2 +0.1**
MSNA AMb AMB 12 36 04.3
comp=Z,264nm,1.5s,mb6.2
OPO Ambohidratompo 61.22 152 P **P 12 35 44.4 +0.5**
comp=Z,58nm,0.8s,mb5.8,baz=332,slow=5.1,SNR=20
OPO LR LR 13 06 13.9
comp=Z,15μm,18.4s,MS6.2,baz=343,slow=40
OPO Ambohidratompo 61.22 152 P **P 12 35 44.4 +0.5**
PALK Pallekele 61.45 104 P **P 12 35 46.0 +0.3**
comp=Z,1μm,1.4s,mb6.8,SNR=6.1
PALK Pallekele 61.45 104 P **P 12 35 45.1 -0.5**
comp=Z,51nm,1.0s,mb5.6,baz=302,slow=11,SNR=8.9
PALK Pallekele 61.45 104 *i* P **P 12 35 47.0 +1.3**
PALK Pallekele 61.45 104 *e*P **P 12 35 46.2 +0.5**
comp=Z,676nm,1.5s,mb6.5
PALK Pallekele 61.45 104 *i* P **P 12 35 47.0 +1.3**
ABPO Ambohimpanom 61.64 152 *e*P **P 12 35 46.5 -0.2**
ABPO pmax pmax
comp=Z,113nm,1.0s,mb6.0
ABPO MLR MLR
comp=Z,14μm,19.0s,MS6.1
ABPO Ambohimpanom 61.64 152 *e*P **P 12 35 46.5 -0.2**
comp=Z,113nm,1.0s,mb6.0
ABPO LR LR
comp=Z,14μm,19.0s,MS6.1
ABPO Ambohimpanom 61.64 152 *e*P **P 12 35 46.5 -0.2**
comp=Z,113nm,1.0s,mb6.0
MOPA Mopani 61.86 170 *e*P **P 12 35 48.5 +0.4**
MOPA AMb AMB 12 36 16.1
comp=Z,387nm,1.4s,mb6.3
CIT Chita 62.38 44 *e*P **P 12 35 55.6 +4.2**
CIT *e* pP 12 36 02.2 +5.7
CIT *e* 12 36 04.4
CIT *e* 12 36 34.6
CIT *e* 12 38 11.4
CIT *e* 12 44 28.0
CIT pmax pmax
comp=Z,722nm,2.0s,mb6.5
LBTB Lobatse 62.76 176 P **P 12 35 54.0 -0.1**
comp=Z,62nm,0.9s,mb5.7,baz=357,slow=7.4,SNR=24
LBTB LR LR 13 05 44.7
comp=Z,31μm,19.2s,MS6.5,baz=11,slow=38
LBTB Lobatse 62.76 176 P **P 12 35 54.0 -0.1**
LBTB pmax pmax
comp=Z,62nm,1.0s,mb5.7
LBTB MLR MLR
comp=Z,31μm,19.3s,MS6.5
LBTB Lobatse 62.76 176 *e*P **P 12 35 53.7 -0.4**
comp=Z,146nm,1.0s,mb6.1
LBTB LR LR
comp=Z,36μm,22.0s,MS6.5
LBTB Lobatse 62.76 176 *e*P **P 12 35 53.7 -0.4**
comp=Z,146nm,1.0s,mb6.1
LZH Lanzhou 63.65 64 *e*P **P 12 35 59.8 -0.3**
LZH pP pP 12 36 03.8 -1.4
LZH sP sP 12 36 06.1 -1.0
LZH PcP PcP 12 36 37.2 +0.9
LZH PP PP 12 38 22.4 +2.6
LZH *e*S **S 12 44 30.2 -3.4**
LZH sS sS 12 44 43.5 +1.5
LZH SS SS 12 48 37.0 -3.7
LZH pmax pmax
comp=Z,110nm,1.0s,mb5.8
LZH pmax pmax
comp=Z,480nm,4.2s
LZH LR LR
comp=N,14μm,15.2s
LZH LR LR
comp=Z,23μm,16.9s,MS6.4
KSR Koster 63.68 175 *e*P **P 12 36 00.1 -0.1**
KSR AMb AMB 12 36 22.7
comp=Z,132nm,1.6s,mb5.7
KLOF Kloof 64.23 174 *e*P **P 12 36 03.3 -0.5**
KLOF AMb AMB 12 36 45.0
comp=Z,231nm,1.6s,mb6.0
ERPM east rand prop 64.28 173 *e*P **P 12 36 04.5 +0.3**
ERPM AMb AMB 12 36 27.0
comp=Z,255nm,1.6s,mb6.0
PRYS Parys 64.78 174 *e*P **P 12 36 07.3 -0.1**
PRYS AMb AMB 12 36 30.5
comp=Z,156nm,1.8s,mb5.7
SWZ Schweizer 64.90 176 *e*P **P 12 36 07.2 -1.0**
SWZ AMb AMB 12 36 30.4
comp=Z,181nm,1.4s,mb5.9
YAK Yakutsk 64.94 30 *e*P **P 12 36 07.8 -0.3**
YAK *e**PP pP 12 36 18.5 +5.3
YAK *e* 12 36 38.0
YAK *e* 12 38 34.9
YAK *e*PPP 12 40 04.7
YAK *e*S **S 12 44 46.9 -1.9**
YAK *e**SS sS 12 45 02.8 +5.6
YAK *e* 12 45 58.0
YAK *e*SS SS 12 49 00.1 +0.4
YAK pmax pmax
comp=E,769nm,3.0s
YAK pmax pmax
comp=N,748nm,2.8s
YAK pmax pmax
comp=Z,2μm,2.8s,mb6.5
YAK pmax pmax
comp=Z,336nm,2.2s,mb6.0
YAK pmax pmax
comp=E,128nm,1.5s
YAK pmax pmax
comp=N,256nm,1.6s
YAK smax
comp=N,1μm,3.5s
YAK smax
comp=E,1μm,2.5s
YAK MLR MLR
comp=Z,49μm,18.0s,MS6.7
YAK MLR MLR
comp=N,20μm,20.0s,MS6.8
YAK MLR MLR
comp=E,62μm,22.0s,MS6.8
YAK Yakutsk 64.94 30 *e*P **P 12 36 07.5 -0.6**
comp=E,198nm,0.6s,mb6.3
YAK *e*PP PP 12 38 29.7 -0.8
YAK LR LR
comp=Z,50μm,20.0s,MS6.7
YAK Yakutsk 64.94 30 *e*P **P 12 36 07.8 -0.3**
comp=Z,2μm,2.8s,mb6.5
YAK Yakutsk 64.94 30 *e*PP PP 12 38 29.7 -0.8
DGAR Diego Garcia 65.49 122 *e*P **P 12 36 13.5 +1.1**
DGAR pmax pmax
comp=Z,414nm,1.0s,mb6.4
DGAR MLR MLR
comp=Z,9μm,20.0s,MS6.0
DGAR Diego Garcia 65.49 122 *e*P **P 12 36 13.5 +1.1**
comp=Z,414nm,1.0s,mb6.4
DGAR LR LR
comp=Z,9μm,20.0s,MS6.0
DGAR Diego Garcia 65.49 122 *e*P **P 12 36 13.5 +1.1**
comp=Z,414nm,1.0s,mb6.4
BTO Baotou 65.66 57 *e*P **P 12 36 12.5 -0.7**
POGA Pongola 65.68 170 *e*P **P 12 36 12.3 -0.9**
POGA AMb AMB 12 36 37.6
comp=Z,336nm,1.7s,mb6.1
CLNS Chul'man 65.75 36 *e*P **P 12 36 14.1 +0.6**
CLNS *e**PP pP 12 36 23.8 +5.2
CLNS *e* 12 36 42.1
CLNS *e* 12 38 38.7
CLNS *e*PPP 12 40 20.1
CLNS *e*S S 12 44 56.4 -2.5
CLNS *e*SS SS 12 49 07.0 -5.5
CLNS *e*SSS 12 52 04.3
CLNS pmax pmax
comp=Z,80nm,1.0s,mb5.7
CLNS pmax pmax
comp=E,35nm,1.2s
CLNS pmax pmax
comp=N,18nm,1.1s
CLNS pmax pmax
comp=Z,130nm,1.1s,mb5.9
CLNS pmax pmax
comp=E,92nm,1.2s
CLNS pmax pmax
comp=N,91nm,1.1s
CLNS smax
comp=N,35μm,13.8s
CLNS smax
comp=E,30μm,12.8s
CLNS MLR MLR
comp=N,28μm,19.0s,MS6.6
CLNS MLR MLR
comp=Z,30μm,15.0s,MS6.6
CLNS MLR MLR
comp=E,18μm,15.0s,MS6.6
CLNS Chul'man 65.75 36 *e*P **P 12 36 14.1 +0.6**
UPI Upington 65.97 180⇑ *i*P **P 12 36 14.8 -0.3**
UPI AMb AMB 12 36 35.3
comp=Z,301nm,1.3s,mb6.2
CD2 Chengdu 66.17 69⇑ *i*P **P 12 36 15.6 -1.0**
CD2 pP pP 12 36 20.3 -1.4
CD2 sP sP 12 36 22.8 -0.8
CD2 PP PP 12 38 43.2 +1.1
CD2 PcS 12 40 49.2
CD2 S S 12 45 01.4 -3.4
CD2 sS sS 12 45 09.1 -4.2
CD2 ScS ScS 12 46 07.5 -5.1
CD2 SS SS 12 49 17.9 -2.4
CD2 pmax pmax
comp=Z,300nm,1.0s,mb6.3
CD2 pmax pmax
comp=Z,1μm,5.2s
CD2 LR LR
comp=N,19μm,23.8s
CD2 LR LR
comp=E,14μm,16.6s
CD2 LR LR
comp=Z,10μm,14.2s
SEK Senekal 66.19 174 *e*P **P 12 36 15.9 -0.5**
SEK AMb AMB 12 36 39.1
comp=Z,258nm,1.3s,mb6.1
BOSA Boshof 66.32 176 P **P 12 36 16.7 -0.6**
comp=Z,33nm,0.9s,mb5.3,baz=7.4,slow=7.0,SNR=18
BOSA LR LR 13 08 03.7
comp=Z,42μm,19.0s,MS6.7,baz=3.6,slow=38
BOSA Boshof 66.32 176 *e*P **P 12 36 17.5 +0.2**
BOSA pmax pmax
comp=Z,103nm,0.9s,mb5.9
BOSA MLR MLR
comp=Z,41μm,19.0s,MS6.7
BOSA Boshof 66.32 176 *e*P **P 12 36 17.4 +0.1**
comp=Z,103nm,0.9s,mb5.9
BOSA LR LR
comp=Z,41μm,19.0s,MS6.7
BOSA Boshof 66.32 176 *e*P **P 12 36 17.5 +0.2**
comp=Z,103nm,0.9s,mb5.9
HHC Hu-ho-hao-te 66.55 56 *e*P **P 12 36 18.8 -0.1**
HHC pP pP 12 36 23.6 -0.4
HHC sP sP 12 36 25.8 -0.1
HHC PcP PcP 12 36 49.7 +1.5
HHC PP PP 12 38 47.0 +1.9
HHC PcS 12 40 51.9
HHC S S 12 45 06.4 -2.8
HHC sS sS 12 45 13.0 -4.6
HHC ScS ScS 12 46 11.3 -3.9
HHC SS SS 12 49 23.4 -2.3
HHC pmax pmax
comp=Z,38nm,1.0s,mb5.4
HHC pmax pmax
comp=Z,650nm,5.0s
HHC LR LR
comp=N,18μm,17.7s,MS6.5
HHC LR LR
comp=E,19μm,17.5s,MS6.5
HHC LR LR
comp=Z,15μm,20.4s,MS6.2
LBNH Lisbon 66.89 309 *e*P **P 12 36 23.0 +2.0**
LBNH pmax pmax
comp=Z,196nm,0.9s,mb6.1
LBNH MLR MLR
comp=Z,13μm,20.0s,MS6.2
LBNH Lisbon 66.89 309 *e*P **P 12 36 23.0 +2.0**
comp=Z,196nm,0.9s,mb6.1
LBNH LR LR
comp=Z,13μm,20.0s,MS6.2
LBNH Lisbon 66.89 309 *e*P **P 12 36 23.0 +2.0**
comp=Z,196nm,0.9s,mb6.1
RER Riviere de l'E 67.06 145 PFAKE 12 36 30.0 +7.8
RER LR LR
comp=Z,12μm,22.0s,MS6.1
HIA Hailar 67.16 45 *e*P **P 12 36 22.8 +0.2**
HIA pmax pmax
comp=Z,495nm,0.9s
HIA MLR MLR
comp=Z,41μm,19.0s
HIA Hailar 67.16 45 *e*P **P 12 36 22.8 +0.2**
comp=Z,495nm,0.9s,mb6.5
HIA LR LR
comp=Z,41μm,19.0s,MS6.7
HIA Hailar 67.16 45 *e*P **P 12 36 22.8 +0.2**
comp=Z,495nm,0.9s,mb6.5
PKA Prieska 67.29 179 *e*P **P 12 36 22.8 -0.7**
PKA AMb AMB 12 36 42.8
comp=Z,55nm,1.3s,mb5.4
KOMG Komaggas 67.51 184 *e*P **P 12 36 24.3 -0.6**
KOMG AMb AMB 12 36 44.2
comp=Z,258nm,1.7s,mb6.0
BBSR BB Station 68.20 295 *e*P **P 12 36 32.4 +2.9**
comp=Z,105nm,0.9s,mb5.9
BBSR LR LR
comp=Z,10μm,20.0s,MS6.1
XAN Xi'an 68.27 63 P **P 12 36 29.0 -0.9**
XAN pP pP 12 36 34.3 -0.7
XAN S S 12 45 26.0 -4.0
XAN pmax pmax
comp=Z,20nm,1.1s,mb5.1
XAN pmax pmax
comp=Z,160nm,7.5s
XAN LR LR
comp=Z,4μm,17.7s,MS5.7
HVD Gariep Dam 68.31 176 *e*P **P 12 36 30.6 +0.7**
HVD AMb AMB 12 37 10.9
comp=Z,300nm,1.6s,mb6.1
LONY Lake Ozonia 68.32 310 *e*P **P 12 36 31.3 +1.3**
comp=Z,266nm,1.3s,mb6.1
LONY LR LR
comp=Z,18μm,20.0s,MS6.3
LONY Lake Ozonia 68.32 310 *e*P **P 12 36 31.3 +1.3**
comp=Z,266nm,1.3s,mb6.1
NCB Newcomb 68.45 309 *e*P **P 12 36 33.1 +2.3**
comp=Z,212nm,1.4s,mb6.0
NCB LR LR
comp=Z,13μm,21.0s,MS6.1
NCB Newcomb 68.45 309 *e*P **P 12 36 33.1 +2.3**
comp=Z,212nm,1.4s,mb6.0
KMI Kunming 68.46 74 P **P 12 36 30.8 -0.4**
KMI pP pP 12 36 34.1 -2.3
KMI sP sP 12 36 35.2 -3.1
KMI PcP PcP 12 36 57.9 +1.4
KMI PP PP 12 39 02.4 +0.2
KMI S S 12 45 25.8 -6.8
KMI SKS 12 46 24.6
KMI pmax pmax
comp=Z,73nm,1.3s,mb5.5
KMI pmax pmax
comp=Z,1μm,5.5s
KMI LR LR
comp=N,9μm,17.5s
KMI LR LR
comp=E,16μm,23.7s
KMI LR LR
comp=Z,18μm,25.7s
RCBR Riachuelo 68.75 244 *e*P **P 12 36 35.0 +2.0**
comp=Z,91nm,1.0s,mb5.7
RCBR LR LR
comp=Z,19μm,21.0s,MS6.3
RCBR Riachuelo 68.75 244 *e*P **P 12 36 35.0 +1.9**
comp=Z,91nm,1.0s,mb5.7
TIY Taiyuan 68.76 58 *e*P **P 12 36 34.4 +1.5**
TIY S S 12 45 33.7 -2.0
TIY LR LR
comp=N,6μm,12.3s,MS6.2
TIY LR LR
comp=E,5μm,11.1s,MS6.2
TIY LR LR
comp=Z,14μm,32.8s
CHG Chiang Mai 68.99 82 ⇑P **P 12 36 33.0 -1.6**
comp=Z,130nm,0.8s,mb5.9
CHTO Chiang Mai 68.99 82 *e*P **P 12 36 32.7 -1.9**
CHTO *e*S S 12 45 38.1 -0.9
CHTO pmax pmax
comp=Z,85nm,0.8s,mb5.7
CHTO MLR MLR
comp=Z,5μm,20.0s,MS5.7
CHTO Chiang Mai 68.99 82 *e*P **P 12 36 32.7 -1.9**
comp=Z,85nm,0.8s,mb5.7
CHTO *e*S S 12 45 38.1 -0.9
CHTO LR LR
comp=Z,5μm,20.0s,MS5.7
CHTO Chiang Mai 68.99 82 P **P 12 36 33.4 -1.2**
SNR=42
CHTO P 12 36 33.4
SNR=42
CHTO Chiang Mai 68.99 82 *e*P **P 12 36 32.7 -1.9**
comp=Z,85nm,0.8s,mb5.7
CHTO *e*S S 12 45 38.1 -0.9
CVNA Calvinia 69.10 182 *e*P **P 12 36 36.0 +1.2**
CVNA AMb AMB 12 37 26.0
comp=Z,329nm,1.7s,mb6.0
CM31 Chiang Mai Arr 69.19 82 *e*P **P 12 36 34.5 -1.3**
comp=Z,76nm,0.7s,mb5.7
CM31 LR LR
comp=Z,8μm,21.0s,MS6.0
CM31 Chiang Mai Arr 69.19 82 *e*P **P 12 36 34.5 -1.3**
comp=Z,76nm,0.7s,mb5.7
CMAR Chiang Mai Arr 69.19 82 P **P 12 36 32.5 -3.3**
comp=Z,35nm,0.8s,mb5.3,baz=299,slow=7.8,SNR=114
CMAR S S 12 45 42.1 +0.8
comp=Z,0.7nm,0.8s,baz=260,slow=16,SNR=4.0
CMAR PKPPKP 13 04 50.0
comp=Z,0.2nm,0.3s,baz=85,slow=1.0,SNR=3.7
CMAR Chiang Mai Arr 69.19 82 P **P 12 36 32.6 -3.2**
CMAR S S 12 45 42.1 +0.7
CMAR pmax pmax
comp=Z,35nm,0.8s
CMAR smax
comp=N,1.0nm,0.8s
CMAR Chiang Mai Arr 69.19 82 P **P 12 36 32.5 -3.3**
CMAR S S 12 45 42.1 +0.7
BDT Bhumibol Dam 69.92 83 P **P 12 36 39.0 -1.4**
comp=N,49nm,1.0s,mb5.4
BJI Beijing 69.97 55 P **P 12 36 40.2 -0.1**
BJI pP pP 12 36 42.3 -3.2
BJI sP sP 12 36 43.7 -3.7
BJI PP PP 12 39 12.7 -2.1
BJI S S 12 45 49.2 -0.7
BJI sS sS 12 45 54.3 -4.1
BJI pmax pmax
comp=Z,37nm,1.1s,mb5.2
BJI LR LR
comp=N,36μm,14.7s,MS6.9
BJI LR LR
comp=E,38μm,16.0s,MS6.9
BJI LR LR
comp=Z,15μm,25.2s
BJT Baijiatuau 69.98 55 *e*P **P 12 36 40.6 +0.2**
BJT pmax pmax
comp=Z,103nm,0.6s
BJT MLR MLR
comp=Z,27μm,20.0s
BJT Baijiatuau 69.98 55 *e*P **P 12 36 40.6 +0.3**
comp=Z,103nm,0.6s,mb5.9
BJT LR LR
comp=Z,27μm,20.0s,MS6.5
BJT Baijiatuau 69.98 55 *e*P **P 12 36 40.6 +0.2**
comp=Z,103nm,0.6s,mb5.9

SUR Sutherland 69.98 181 P **P** **12 36 39.8 -0.4**
comp=Z,15nm,0.8s,mb5.0,baz=336,slow=1.6,SNR=11
SUR LR LR 13 09 24.3
comp=Z,14μm,21.6s,MS6.2,baz=175,slow=38
SUR Sutherland 69.98 181 *e*P **P** **12 36 41.2 +1.0**
comp=Z,107nm,1.0s,mb5.7
SUR LR LR
comp=Z,23μm,20.0s,MS6.4
SUR Sutherland 69.98 181 *e*P **P** **12 36 41.2 +1.0**
comp=Z,107nm,1.0s,mb5.7
SOE Somerset East 70.41 176 *e*P **P** **12 36 42.4 -0.5**
SOE AMb AMB 12 37 07.7
comp=Z,226nm,1.6s,mb5.8
BINY Binghamton 70.49 309 *e*P **P** **12 36 45.6 +2.1**
comp=Z,284nm,1.1s,mb6.1
BINY LR LR
comp=Z,13μm,21.0s,MS6.2
BINY Binghamton 70.49 309 *e*P **P** **12 36 45.6 +2.1**
comp=Z,284nm,1.1s,mb6.1
ENH Enshi 70.69 66 *e*P **P** **12 36 43.2 -1.7**
comp=Z,40nm,0.6s,mb5.5
ENH LR LR
comp=Z,13μm,20.0s,MS6.2
ENH Enshi 70.69 66 *e*P **P** **12 36 43.2 -1.7**
comp=Z,40nm,0.6s,mb5.5
GYA Guiyang 70.70 71 P **P** **12 36 43.5 -1.5**
GYA PcP PcP 12 37 06.3 +0.4
GYA PP PP 12 39 19.7 -1.7
GYA S S 12 45 51.9 -7.0
GYA SKS 12 46 41.7
GYA pmax pmax
comp=Z,80nm,0.9s,mb5.7
GYA pmax pmax
comp=Z,640nm,6.9s
GYA LR LR
comp=N,12μm,23.9s,MS6.2
GYA LR LR
comp=E,9μm,22.4s,MS6.2
GYA LR LR
comp=Z,8μm,24.3s,MS5.9
SADO Sadowa 70.95 312 P **P** **12 36 45.8 -0.4**
comp=Z,29nm,0.7s,mb5.3,baz=69,slow=4.3,SNR=13
SADO LR LR 13 08 09.4
comp=Z,14μm,20.8s,MS6.2,baz=66,slow=36
SADO Sadowa 70.95 312 P **P** **12 36 45.8 -0.4**
BILL Bilibino 71.06 13⇑ *e*P **P** **12 36 45.8 -0.7**
BILL *e* 12 39 23.4
BILL *i* S S 12 46 02.5 +0.7
BILL pmax pmax
comp=Z,85nm,1.7s,mb5.4
BILL MLR MLR
comp=Z,39μm,20.0s,MS6.7
BILL Bilibino 71.06 13 *e*P **P** **12 36 46.2 -0.3**
comp=Z,368nm,1.0s,mb6.3
BILL *e*S S 12 46 03.4 +1.6
BILL LR LR
comp=Z,36μm,20.0s,MS6.6
BILL Bilibino 71.06 13 *e*P **P** **12 36 46.2 -0.3**
comp=Z,368nm,1.0s,mb6.3
BILL *e*S S 12 46 03.4 +1.6
GRM Grahamstown 71.07 176 *e*P **P** **12 36 47.2 +0.4**
GRM AMb AMB 12 37 12.0
comp=Z,278nm,1.6s,mb5.9
NST Nakhon Sawan 71.71 84 P **P** **12 36 43.0 -8.2**
comp=Z,158nm,0.8s,mb6.0
SEY Seymchan 72.08 21*c i*P **P** **12 36 52.9 +0.2**
SEY Seymchan 72.08 21⇑ *i*P **P** **12 36 52.0 -0.7**
SEY Seymchan 72.08 21 *i* P **P** **12 36 52.9 +0.2**
ELIM Elim 72.21 181 *e*P **P** **12 36 53.6 -0.1**
INK Inuvik 72.40 351 P **P** **12 36 52.9 -1.6**
comp=Z,41nm,0.8s,mb5.4,baz=23,slow=8.4,SNR=81
INK S S 12 46 20.4 +3.2
comp=Z,15nm,1.3s,baz=262,slow=27,SNR=15
INK PKPPKP 13 04 40.7
comp=Z,4.8nm,1.0s,baz=202,slow=2.5,SNR=6.5
INK LR LR 13 08 15.2
comp=Z,5μm,22.0s,MS5.7,baz=26,slow=36
INK Inuvik 72.40 351 P **P** **12 36 52.9 -1.6**
INK S S 12 46 20.4 +3.2
INK pmax pmax
comp=Z,41nm,0.8s
INK smax
comp=N,15nm,1.3s
INK MLR MLR
comp=Z,5μm,22.0s
INK Inuvik 72.40 351 *e*P **P** **12 36 54.1 -0.5**
comp=Z,395nm,1.2s,mb6.2
INK Inuvik 72.40 351 *e*P **P** **12 36 54.1 -0.5**
comp=Z,395nm,1.2s,mb6.2
INK S S 12 46 20.4 +3.2
comp=Z,5μm,22.0s
SSPA Standing Stone 72.56 308 *e*P **P** **12 36 56.8 +0.8**
comp=Z,198nm,0.9s,mb6.0
SSPA LR LR
comp=Z,11μm,20.0s,MS6.2
SSPA Standing Stone 72.56 308 *e*P **P** **12 36 56.8 +0.8**
comp=Z,198nm,0.9s,mb6.0
TIA Tai'an 72.72 57 *e*P **P** **12 36 55.4 -1.6**
TIA S S 12 46 20.0 -1.9
TIA pmax pmax
comp=Z,49nm,0.8s,mb5.5
TIA pmax pmax
comp=Z,370nm,7.0s
TIA LR LR
comp=N,6μm,13.0s,MS6.1
TIA LR LR
comp=E,2μm,13.0s,MS6.1
ERPA Erie 72.98 310 *e*P **P** **12 37 00.7 +2.2**
comp=E,502nm,1.0s,mb6.4
ERPA LR LR
comp=Z,15μm,19.0s,MS6.3
ERPA Erie 72.98 310 *e*P **P** **12 37 00.7 +2.2**
comp=Z,502nm,1.0s,mb6.4
NNT Nongplab 73.18 87 P **P** **12 36 59.0 -1.0**
CN2 Changchun 73.50 47 *e*P **P** **12 37 00.5 -1.0**
CN2 *e*pP pP 12 37 05.2 -1.5
CN2 *e*sP sP 12 37 07.6 -1.0
CN2 PcP PcP 12 37 16.7 -0.8
CN2 *e*S S 12 46 24.6 -5.9
CN2 SKS 12 47 01.3
CN2 SS SS 12 51 08.0 -4.3
CN2 pmax pmax
comp=Z,90nm,0.7s,mb5.8
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,8μm,23.0s,MS6.2
CN2 LR LR
comp=E,13μm,23.0s,MS6.2
CN2 LR LR
comp=Z,6μm,24.0s,MS5.8
SNY Shenyang 73.57 50 ⇑P **P** **12 37 01.1 -0.9**
SNY S S 12 46 20.9 -10
SNY pmax pmax
comp=Z,34nm,0.7s,mb5.4
SNY LR LR
comp=N,3μm,21.6s,MS5.6
SNY LR LR
comp=E,2μm,18.3s,MS5.6
SNY LR LR
comp=Z,3μm,30.0s
KLR Kul'dur 73.57 40 *e*P **P** **12 36 57.8 -4.0**
KLR *e*S S 12 46 25.5 -5.6
KLR pmax pmax
comp=E,650nm,2.2s
KLR pmax pmax
comp=Z,1μm,2.2s,mb6.4
KLR smax
comp=N,4μm,12.0s
KLR smax
comp=E,4μm,12.0s
KLR MLR MLR
comp=N,24μm,14.0s
KLR MLR MLR
comp=Z,26μm,14.0s,MS6.7
CBN Corbin 73.64 306 *e*P **P** **12 37 04.5 +2.1**
comp=Z,182nm,0.8s,mb6.1
CBN LR LR
comp=Z,12μm,20.0s,MS6.2
CBN Corbin 73.64 306 *e*P **P** **12 37 04.5 +2.1**
comp=Z,182nm,0.8s,mb6.1
YKA Yellowknife Ar 73.84 340 P **P** **12 37 01.9 -1.2**
comp=Z,31nm,0.9s,mb5.2,baz=35,slow=5.4,SNR=50
YKA PP PP 12 39 38.1 -9.1
comp=Z,28nm,1.1s,baz=21,slow=6.7,SNR=3.2
YKA PKPPKP 13 04 41.2
comp=Z,1.1nm,0.9s,baz=234,slow=2.1,SNR=3.2
YKA LR LR 13 13 31.1
comp=Z,2μm,18.2s,MS5.4,baz=315,slow=39
YKA Yellowknife Ar 73.84 340 P **P** **12 37 01.9 -1.2**
YKA PP PP 12 39 38.1 -9.1
YKA P'P' 13 04 41.2
YKA LR LR 13 13 31.1
YKA Yellowknife Ar 73.84 340 P **P** **12 37 02.0 -1.2**
WHN Wuhan 74.03 64 ⇓P **P** **12 37 03.7 -1.1**
WHN PP PP 12 39 44.5 -5.2
WHN S S 12 46 32.1 -4.7
WHN LR LR
comp=N,23μm,12.9s,MS6.7
WHN LR LR
comp=E,17μm,14.1s,MS6.7
WHN LR LR
comp=Z,20μm,17.3s,MS6.5
GLMI Grayling 74.06 315 *e*P **P** **12 37 08.3 +3.6**
comp=Z,414nm,0.8s,mb6.4
GLMI LR LR
comp=Z,24μm,22.0s,MS6.4
DL2 Dalian 74.09 53 P **P** **12 37 06.8 +1.8**
DL2 PP PP 12 39 53.2 +3.2
DL2 S S 12 46 32.7 -4.6
DL2 pmax pmax
comp=Z,30nm,1.1s,mb5.1
DL2 pmax pmax
comp=Z,180nm,3.3s
DL2 LR LR
comp=N,10μm,14.7s,MS6.4
DL2 LR LR
comp=E,12μm,15.3s,MS6.4
DL2 LR LR
comp=Z,11μm,23.7s
ANWB Willy Bob 74.12 280 *e*P **P** **12 37 05.5 -0.1**
comp=Z,112nm,0.8s,mb5.8
ANWB LR LR
comp=Z,5μm,22.0s,MS5.8
ANWB Willy Bob 74.12 280 *e*P **P** **12 37 05.5 -0.1**
comp=Z,112nm,0.8s,mb5.8
MCWV Mont Chateau 74.34 308 *e*P **P** **12 37 06.8 +0.3**
comp=Z,205nm,0.8s,mb6.1
MCWV LR LR
comp=Z,16μm,20.0s,MS6.3
MCWV Mont Chateau 74.34 308 *e*P **P** **12 37 06.8 +0.3**
comp=Z,205nm,0.8s,mb6.1
BPA Boggy Peak 74.54 280 *e*P **P** **12 37 10.1 +2.1**
BPA Boggy Peak 74.54 280 *e*P **P** **12 37 10.1 +2.1**
BPA Boggy Peak 74.54 280 *e*P **P** **12 37 10.1 +2.1**
MGG Marie-Galante 74.77 278 *e*P **P** **12 37 22.1 +13**
PHG Guadaloupe-2 74.97 279 *e*P **P** **12 37 17.9 +7.4**
LZG Guadaloupe-1 75.00 279 *e*P **P** **12 37 13.0 +2.4**
BBGH Gun Hill 75.00 275 PFAKE 12 37 20.0 +9.3
BBGH LR LR
comp=Z,6μm,20.0s,MS5.9
AAM Ann Arbor 75.05 312 *e*P **P** **12 37 11.3 +0.7**
AAM pmax pmax
comp=Z,147nm,1.0s,mb5.9
AAM MLR MLR
comp=Z,21μm,21.0s,MS6.4
AAM Ann Arbor 75.05 312 *e*P **P** **12 37 11.3 +0.7**
comp=Z,148nm,1.0s,mb5.9
AAM LR LR
comp=Z,21μm,21.0s,MS6.4
AAM Ann Arbor 75.05 312 *e*P **P** **12 37 11.3 +0.7**
comp=Z,148nm,1.0s,mb5.9
FDF Fort de France 75.33 277 PFAKE 12 37 20.0 +7.5
FDF LR LR
comp=Z,6μm,21.0s,MS5.9
MDJ Mudanjiang 75.35 45 P **P** **12 37 10.7 -1.5**
MDJ pP pP 12 37 14.0 -3.4
MDJ sP sP 12 37 15.4 -3.9
MDJ PcP PcP 12 37 24.5 -1.0
MDJ PP PP 12 39 58.2 -2.3
MDJ S S 12 46 43.9 -7.2
MDJ ScS ScS 12 47 22.3 -2.4
MDJ pmax pmax
comp=Z,15nm,0.9s
MDJ pmax pmax
comp=Z,250nm,6.2s
MDJ LR LR
comp=N,31μm,19.8s,MS6.7
MDJ LR LR
comp=E,26μm,21.6s,MS6.7
MDJ LR LR
comp=Z,31μm,15.0s
MDJ Mudanjiang 75.35 45 *e*P **P** **12 37 13.2 +0.9**
comp=Z,122nm,0.9s,mb5.8
MDJ LR LR
comp=Z,25μm,20.0s,MS6.5
MDJ Mudanjiang 75.35 45 *e*P **P** **12 37 13.2 +1.0**
comp=Z,122nm,0.9s,mb5.8
HABR Khabarovsk 75.72 39*c i*P **P** **12 37 13.8 -0.5**
HABR *e**PP pP 12 37 16.9 -2.6
HABR *e**SP sP 12 37 18.4 -3.0
HABR *e* 12 37 25.7
HABR 12 40 04.2
HABR PPP 12 41 50.5
HABR *e*S S 12 46 55.6 +0.4
HABR *e* 12 47 28.2
HABR *e*SS SS 12 51 51.1 +5.3
HABR pmax pmax
comp=Z,1μm,2.9s,mb6.4
HABR pmax pmax
comp=Z,397nm,1.7s,mb6.1
HABR pmax pmax
comp=N,125nm,1.7s
HABR pmax pmax
comp=E,69nm,0.8s
HABR MLR MLR
comp=Z,31μm,16.0s,MS6.7
HABR MLR MLR
comp=N,20μm,17.0s,MS6.8
HABR MLR MLR
comp=E,35μm,16.0s,MS6.8
HABR Khabarovsk 75.72 39 *i* P **P** **12 37 13.8 -0.5**
comp=E,125nm,1.7s,mb5.6
HABR Khabarovsk 75.72 39 *e*PcP PcP 12 37 25.7 -1.3
HABR *e*S S 12 46 55.6 +0.4
FFC Flin Flon 75.74 330 P **P** **12 37 15.2 +0.9**
comp=E,839nm,1.1s,mb6.6,SNR=16
FFC Flin Flon 75.74 330 *i* P **P** **12 37 14.3 0.0**
FFC Flin Flon 75.74 330 *e*P **P** **12 37 14.5 +0.2**
comp=E,110nm,0.8s,mb5.8
FFC LR LR
comp=Z,26μm,19.0s,MS6.6
FFC Flin Flon 75.74 330 *e*P **P** **12 37 14.5 +0.2**
comp=Z,110nm,0.8s,mb5.8
EYMN Ely 75.74 320 *e*P **P** **12 37 13.8 -0.6**
comp=Z,544nm,1.6s,mb6.2
EYMN LR LR
comp=Z,13μm,19.0s,MS6.2
EYMN Ely 75.74 320 *e*P **P** **12 37 13.8 -0.6**
comp=Z,544nm,1.6s,mb6.2
ACSO Alum Creek Sta 75.92 310 *e*P **P** **12 37 16.9 +1.3**
comp=Z,230nm,1.0s,mb6.1
ACSO LR LR
comp=Z,19μm,21.0s,MS6.4
ACSO Alum Creek Sta 75.92 310 *e*P **P** **12 37 16.9 +1.3**
comp=Z,230nm,1.0s,mb6.1
BLA Blacksburg 76.17 306 *e*P **P** **12 37 18.0 +0.9**
BLA pmax pmax
comp=Z,153nm,1.3s,mb5.8
BLA MLR MLR
comp=Z,15μm,20.0s,MS6.3
BLA Blacksburg 76.17 306 *e*P **P** **12 37 18.0 +0.9**
comp=Z,153nm,1.3s,mb5.8
BLA LR LR
comp=Z,15μm,20.0s,MS6.3
BLA Blacksburg 76.17 306 *e*P **P** **12 37 18.0 +0.9**
comp=Z,153nm,1.3s,mb5.8
NJ2 Nanjing 76.29 60 *e*P **P** **12 37 17.2 -0.7**
NJ2 pP pP 12 37 22.4 -0.6
NJ2 sP sP 12 37 24.5 -0.4
NJ2 PP PP 12 40 08.0 -0.9
NJ2 S S 12 47 00.4 -1.6
NJ2 sS sS 12 47 08.0 -2.6
NJ2 SS SS 12 51 55.5 +0.1
NJ2 pmax pmax
comp=Z,60nm,1.0s,mb5.5
NJ2 pmax pmax
comp=Z,860nm,6.1s
NJ2 LR LR
comp=N,460nm,17.2s,MS5.4
NJ2 LR LR
comp=E,2μm,14.8s,MS5.4
ULM Lac du Bonnet 76.31 324 P **P** **12 37 16.9 -0.8**
comp=E,44nm,0.7s,mb5.5,baz=46,slow=5.4,SNR=27
ULM S S 12 47 03.0 +1.4
comp=E,2.5nm,0.7s,baz=288,slow=20,SNR=1.9
ULM LR LR 13 11 22.5
comp=E,21μm,18.4s,MS6.5,baz=49,slow=36
ULM Lac du Bonnet 76.31 324 *e*P **P** **12 37 17.0 -0.6**
comp=E,532nm,0.9s,mb6.5
ULM LR LR
comp=Z,26μm,21.0s,MS6.5
ULM Lac du Bonnet 76.31 324 *e*P **P** **12 37 17.0 -0.6**
comp=Z,532nm,0.9s,mb6.5
ELN Prospectdale 76.37 307 *e*P **P** **12 37 18.5 +0.3**
ELN Prospectdale 76.37 307 *e*P **P** **12 37 18.5 +0.3**
EGAK Eagle 76.69 352 *e*P **P** **12 37 19.8 +0.3**
comp=Z,900nm,1.7s,mb6.4
EGAK LR LR
comp=Z,10μm,19.0s,MS6.1
EGAK Eagle 76.69 352 *e*P **P** **12 37 19.8 +0.3**
comp=Z,900nm,1.7s,mb6.4
MTP Monte Pirata 76.79 283 *e*P **P** **12 37 21.9 +1.1**
comp=Z,469nm,1.6s,mb6.2
MTP Monte Pirata 76.79 283 *e*P **P** **12 37 22.0 +1.1**
comp=Z,469nm,1.6s,mb6.2
CBYP Canovanas 76.93 283 *e*P **P** **12 37 23.3 +1.7**
comp=Z,167nm,1.0s,mb5.9
CBYP Canovanas 76.93 283 *e*P **P** **12 37 23.3 +1.7**
comp=Z,167nm,1.0s,mb5.9
COLA College 77.16 355 *e*P **P** **12 37 22.6 +0.5**
COLA pmax pmax
comp=Z,285nm,1.3s,mb6.0
COLA MLR MLR
comp=Z,14μm,22.0s,MS6.2
COLA College 77.16 355 *e*P **P** **12 37 22.6 +0.5**
comp=Z,285nm,1.3s,mb6.0
COLA LR LR
comp=Z,14μm,22.0s,MS6.2
COLA College 77.16 355 *e*P **P** **12 37 22.6 +0.5**
comp=Z,285nm,1.3s,mb6.0
DAWY Dawson 77.18 351 *e*P **P** **12 37 22.0 -0.3**
DAWY Dawson 77.18 351 *e*P **P** **12 37 22.0 -0.3**
SJG San Juan 77.25 283 P **P** **12 37 24.7 +1.3**
comp=Z,15nm,0.5s,mb5.2,baz=41,slow=13,SNR=5.0
SJG San Juan 77.25 283 *e*P **P** **12 37 25.6 +2.2**
SJG pmax pmax
comp=Z,168nm,1.0s
SJG MLR MLR
comp=Z,4μm,22.0s
SJG San Juan 77.25 283 *e*P **P** **12 37 25.6 +2.2**
comp=Z,168nm,1.0s,mb5.9
SJG LR LR
comp=Z,4μm,22.0s,MS5.7
SJG San Juan 77.25 283 *e*P **P** **12 37 25.6 +2.2**
comp=Z,168nm,1.0s,mb5.9
GRGR Grenville 77.25 275 *e*P **P** **12 37 26.4 +2.9**
comp=Z,1μm,1.2s,mb6.7
GRGR LR LR
comp=Z,4μm,21.0s,MS5.7
QIZ Qiongzhong 77.32 76 P **P** **12 37 22.8 -1.0**
QIZ pP pP 12 37 26.1 -2.9
QIZ sP sP 12 37 27.3 -3.6
QIZ PP PP 12 40 16.3 -1.6
QIZ S S 12 47 10.4 -3.2
QIZ SS SS 12 52 07.1 -4.5
QIZ pmax pmax
comp=Z,95nm,0.9s,mb5.7
QIZ pmax pmax
comp=Z,170nm,3.3s
QIZ LR LR
comp=N,8μm,31.4s
QIZ LR LR
comp=Z,7μm,20.3s
QIZ Qiongzhong 77.32 76 *e*P **P** **12 37 23.3 -0.5**
comp=Z,277nm,1.3s,mb6.0
QIZ LR LR
comp=Z,8μm,20.0s,MS6.0
QIZ Qiongzhong 77.32 76 *e*P **P** **12 37 23.3 -0.5**
comp=Z,277nm,1.3s,mb6.0
VLA Vladivostok 77.58 45*de*P **P** **12 37 24.1 -0.8**
VLA *i* *PP pP 12 37 28.0 -2.1
VLA *e* 12 37 33.6
VLA *e* 12 40 21.9
VLA *e*S S 12 47 09.0 -6.7
VLA pmax pmax
comp=Z,75nm,1.1s,mb5.5
VLA MLR MLR
comp=Z,23μm,17.5s,MS6.6
VLA Vladivostok 77.58 45 *i* P **P** **12 37 24.2 -0.7**
VLA Vladivostok 77.58 45 *e*P **P** **12 37 24.1 -0.8**
comp=Z,75nm,1.1s,mb5.5
VLA Vladivostok 77.58 45 *e*PcP PcP 12 37 33.6 -1.6
GZH Guangzhou 77.60 70 P **P** **12 37 24.3 -1.1**
GZH S S 12 47 14.3 -2.2
GZH LR LR
comp=N,14μm,20.2s
GZH LR LR
comp=E,11μm,13.1s
GZH LR LR
comp=Z,20μm,22.3s,MS6.4
AGMN Agassiz Nation 77.66 323 *e*P **P** **12 37 25.7 +0.4**
comp=Z,183nm,1.0s,mb6.0
AGMN LR LR
comp=Z,14μm,21.0s,MS6.3
AGMN Agassiz Nation 77.66 323 *e*P **P** **12 37 25.7 +0.5**
comp=Z,183nm,1.0s,mb6.0
AGPR Aguadilla, PR 77.78 284 *e*P **P** **12 37 26.5 +0.1**
comp=Z,483nm,1.2s,mb6.3
AGPR Aguadilla, PR 77.78 284 *e*P **P** **12 37 26.5 +0.1**
comp=Z,483nm,1.2s,mb6.3
CRPR Cabo Rojo, PR 78.05 283 *e*P **P** **12 37 29.7 +1.8**
comp=Z,140nm,1.1s,mb5.8
CRPR Cabo Rojo, PR 78.05 283 *e*P **P** **12 37 29.7 +1.8**
comp=Z,140nm,1.1s,mb5.8
INCN Inchon 78.08 52 *e*P **P** **12 37 27.2 -0.7**
comp=Z,106nm,0.8s,mb5.8
INCN LR LR
comp=Z,12μm,19.0s,MS6.2
INCN Inchon 78.08 52 P **P** **12 37 31.8 +4.0**
SNR=13
INCN P 12 37 31.8
SNR=13
INCN Inchon 78.08 52 *e*P **P** **12 37 27.2 -0.6**
comp=Z,106nm,0.8s,mb5.8
KULM Kulim 78.25 92 P **P** **12 37 28.9 -0.2**
KULM Kulim 78.25 92 PFAKE 12 37 40.0 +11
KULM LR LR
comp=Z,9μm,21.0s,MS6.1
PSI Prapat 78.41 96 P **P** **12 37 29.6 -0.3**
comp=Z,40nm,0.7s,mb5.4,baz=286,slow=6.7,SNR=25
PSI S S 12 47 20.2 -5.2
comp=Z,3.0nm,0.3s,baz=65,slow=23,SNR=19
PSI LR LR 13 17 09.0
comp=Z,8μm,20.4s,MS6.0,baz=300,slow=40
PSI Prapat 78.41 96 P **P** **12 37 29.7 -0.3**
PSI S S 12 47 20.2 -5.2
PSI pmax pmax
comp=Z,41nm,0.7s,mb5.5
PSI smax
comp=N,3.0nm,0.3s
PSI MLR MLR
comp=Z,8μm,20.4s,MS6.0
JFWS Jewell Farm 78.41 316 *e*P **P** **12 37 28.9 -0.6**
JFWS pmax pmax
comp=Z,212nm,0.9s,mb6.1
JFWS MLR MLR
comp=Z,23μm,20.0s,MS6.5
JFWS Jewell Farm 78.41 316 *e*P **P** **12 37 28.9 -0.7**
comp=Z,212nm,0.9s,mb6.1
JFWS LR LR
comp=Z,23μm,20.0s,MS6.5
JFWS Jewell Farm 78.41 316 *e*P **P** **12 37 28.9 -0.6**
comp=Z,212nm,0.9s,mb6.1
SSE Sheshan 78.46 60 P **P** **12 37 29.1 -0.9**
SSE sP sP 12 37 33.5 -3.6
SSE S S 12 47 19.6 -5.9
SSE ScS ScS 12 47 49.8 -0.5
SSE pmax pmax
comp=Z,54nm,1.2s,mb5.3
SSE pmax pmax
comp=Z,180nm,3.8s
SSE LR LR
comp=N,12μm,20.0s,MS6.5
SSE LR LR
comp=E,18μm,20.2s,MS6.5
SSE LR LR
comp=Z,14μm,14.7s
JSC Jenkinsville 78.50 304 *e*P **P** **12 37 31.2 +1.0**
JSC Jenkinsville 78.50 304 *e*P **P** **12 37 31.2 +1.0**

NHSC New Hope 78.50 303 *eP* **P 12 37 32.6 +2.4**
comp=Z,360nm,1.2s,mb6.2
NHSC LR LR
comp=Z,10μm,19.0s,MS6.2
NHSC New Hope 78.50 303 *eP* **P 12 37 32.6 +2.4**
comp=Z,360nm,1.2s,mb6.2
TZTN Tazewell 78.56 307 *eP* **P 12 37 31.4 +0.9**
comp=Z,195nm,1.1s,mb6.0
TZTN Tazewell 78.56 307 *eP* **P 12 37 31.4 +0.9**
comp=Z,195nm,1.1s,mb6.0
HKC Hong Kong Obse 78.68 71 P **P 12 37 32.0 +0.6**
COW Cow Castle Cre 78.68 303 *eP* **P 12 37 33.8 +2.6**
COW Cow Castle Cre 78.68 303 *eP* **P 12 37 33.8 +2.6**
BLO Bloomington 78.71 311 *eP* **P 12 37 31.5 +0.2**
BLO pmax pmax
comp=Z,418nm,1.0s,mb6.3
BLO Bloomington 78.71 311 *eP* **P 12 37 31.5 +0.2**
comp=Z,418nm,1.0s,mb6.3
BLO Bloomington 78.71 311 *eP* **P 12 37 31.5 +0.2**
comp=Z,418nm,1.0s,mb6.3
MENT Mentasta 78.74 353 *eP* **P 12 37 31.4 +0.4**
MENT Mentasta 78.74 353 *eP* **P 12 37 31.4 +0.4**
KSRS Korea Array 78.90 51 P **P 12 37 30.1 -2.3**
comp=Z,36nm,0.6s,mb5.5,baz=310,slow=4.7,SNR=138
KSRS S S 12 47 25.4 -4.7
comp=Z,2.3nm,1.1s,baz=313,slow=9.7,SNR=5.0
KSRS LR LR 13 17 23.8
comp=Z,23μm,18.4s,MS6.5,baz=142,slow=40
KSRS Korea Array 78.90 51 P **P 12 37 30.1 -2.2**
KSRS S S 12 47 25.4 -4.7
KSRS pmax pmax
comp=Z,36nm,0.6s,mb5.5
KSRS smax
comp=N,2.0nm,1.1s
KSRS Korea Array 78.90 51 P **P 12 37 30.1 -2.2**
comp=N,36nm,0.6s,mb5.5
GRTK Grand Turk 79.04 289 PFAKE 12 37 50.0 +17
GRTK LR LR
comp=Z,7μm,21.0s,MS6.0
IPM Ipoh 79.04 93 P **P 12 37 33.5 0.0**
WCI Wyandotte Cave 79.18 310 *eP* **P 12 37 33.1 -0.7**
WCI pmax pmax
comp=Z,151nm,0.8s,mb6.0
WCI MLR MLR
comp=Z,18μm,22.0s,MS6.4
WCI Wyandotte Cave 79.18 310 *eP* **P 12 37 33.1 -0.8**
comp=Z,151nm,0.8s,mb6.0
WCI LR LR
comp=Z,18μm,22.0s,MS6.4
WCI Wyandotte Cave 79.18 310 *eP* **P 12 37 33.1 -0.7**
comp=Z,151nm,0.8s,mb6.0
TKL Tuckaleechee C 79.25 307 P **P 12 37 35.5 +1.1**
comp=Z,12nm,0.8s,baz=88,slow=6.0,SNR=12
TKL LR LR 13 09 41.5
comp=Z,7μm,22.0s,baz=61,slow=34
TKL Tuckaleechee C 79.25 307 *eP* **P 12 37 33.7 -0.6**
TKL Tuckaleechee C 79.25 307 *eP* **P 12 37 33.7 -0.6**
HDIL Hopedale 79.43 314 *eP* **P 12 37 35.9 +0.7**
comp=Z,397nm,1.1s,mb6.3
HDIL LR LR
comp=Z,17μm,20.0s,MS6.4
HDIL Hopedale 79.43 314 *eP* **P 12 37 35.9 +0.7**
comp=Z,397nm,1.1s,mb6.3
TTA Tatalina 79.43 359 *eP* **P 12 37 35.1 +0.3**
TTA Tatalina 79.43 359 *eP* **P 12 37 35.1 +0.3**
CPCT Cooper Cave 79.86 307 *eP* **P 12 37 38.1 +0.5**
CPCT Cooper Cave 79.86 307 *eP* **P 12 37 38.1 +0.5**
OLIL Olney 79.93 312 *eP* **P 12 37 39.1 +1.2**
comp=Z,425nm,1.3s,mb6.2
OLIL Olney 79.93 312 *eP* **P 12 37 39.1 +1.2**
comp=Z,425nm,1.3s,mb6.2
USIN University of 80.17 311 *eP* **P 12 37 39.8 +0.6**
comp=Z,307nm,1.1s,mb6.2
USIN University of 80.17 311 *eP* **P 12 37 39.8 +0.5**
comp=Z,306nm,1.1s,mb6.2
KTGM Kuala Trenggan 80.19 91 P **P 12 37 40.1 +0.4**
FRIM Kepong 80.27 93 P **P 12 37 40.5 +0.3**
QZH Quanzhou 80.35 66⇑ *iP* **P 12 37 39.7 -0.7**
QZH S S 12 47 42.0 -3.8
QZH LR LR
comp=N,20μm,17.4s,MS6.6
QZH LR LR
comp=E,12μm,14.8s,MS6.6
QZH LR LR
comp=Z,20μm,16.8s,MS6.5
GOGA Godfrey 80.47 305 *eP* **P 12 37 40.9 0.0**
GOGA pmax pmax
comp=Z,307nm,1.3s,mb6.1
GOGA MLR MLR
comp=Z,14μm,22.0s,MS6.3
GOGA Godfrey 80.47 305 *eP* **P 12 37 40.9 0.0**
comp=Z,307nm,1.3s,mb6.1
GOGA LR LR
comp=Z,14μm,22.0s,MS6.3
GOGA Godfrey 80.47 305 *eP* **P 12 37 40.9 0.0**
comp=Z,307nm,1.3s,mb6.1
PMR Palmer 80.50 355 *eP* **P 12 37 40.7 +0.1**
PMR pmax pmax
comp=Z,114nm,1.5s,mb5.6
PMR Palmer 80.50 355 *eP* **P 12 37 40.7 +0.1**
comp=Z,114nm,1.5s,mb5.6
PMR Palmer 80.50 355 *eP* **P 12 37 40.7 +0.1**
comp=Z,114nm,1.5s,mb5.6
YSS Yuzh-Sakhalins 80.51 36*b iP* **P 12 37 40.0 -0.9**
YSS *e**SP sP 12 37 45.0 -3.0
YSS *e*S S 12 47 43.0 -3.7
YSS *e* 12 47 50.0
YSS *e*PS 12 48 26.0
YSS *e*PPS 12 48 44.0
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.2
YSS MLR MLR
comp=Z,24μm,14.0s,MS6.7
YSS MLR MLR
comp=N,22μm,17.0s,MS6.7
YSS MLR MLR
comp=E,15μm,16.0s,MS6.7
YSS Yuzh-Sakhalins 80.51 36 *eP* **P 12 37 40.9 0.0**
comp=E,878nm,1.0s,mb6.6
YSS LR LR
comp=Z,7μm,21.0s,MS6.0
YSS Yuzh-Sakhalins 80.51 36 *eP* **P 12 37 40.9 0.0**
comp=Z,878nm,1.0s,mb6.6
SDDR Presa de Saban 80.66 287 *eP* **P 12 37 44.6 +2.4**
comp=Z,97nm,0.8s,mb5.8
SDDR LR LR
comp=Z,10μm,20.0s,MS6.2
SDDR Presa de Saban 80.66 287 *eP* **P 12 37 44.6 +2.5**
comp=Z,97nm,0.8s,mb5.8
SCIA State Center 80.71 317 PFAKE 12 37 50.0 +7.9
SCIA LR LR
comp=Z,19μm,19.0s,MS6.5
PCRV Puerto La Cruz 80.75 276 P **P 12 37 44.2 +1.5**
comp=Z,16nm,1.0s,baz=58,slow=9.6,SNR=4.4
PCRV Puerto La Cruz 80.75 276 P **P 12 37 44.2 +1.5**
BMRM Bremner River 80.76 353 *eP* **P 12 37 42.5 +0.5**
comp=Z,869nm,1.3s,mb6.5
BMRM Bremner River 80.76 353 *eP* **P 12 37 42.5 +0.5**
comp=Z,869nm,1.3s,mb6.5
SWET Sewanee 80.89 308 *eP* **P 12 37 42.6 -0.6**
SWET Sewanee 80.89 308 *eP* **P 12 37 42.6 -0.6**
RC01 Rabbit Creek A 81.04 356 *eP* **P 12 37 44.0 +0.6**
comp=Z,704nm,1.1s,mb6.5
RC01 Rabbit Creek A 81.04 356 *eP* **P 12 37 44.0 +0.6**
comp=Z,704nm,1.1s,mb6.5
SKAG Skagway 81.04 348 *eP* **P 12 37 44.8 +1.3**
comp=Z,60nm,1.4s,mb5.3
SKAG Skagway 81.04 348 *eP* **P 12 37 44.8 +1.3**
comp=Z,60nm,1.4s,mb5.3
DLBC Dease Lake 81.05 345 P **P 12 37 44.7 +1.2**
comp=Z,15nm,0.8s,mb5.0,baz=6.1,slow=4.8,SNR=16
DLBC Dease Lake 81.05 345 *eP* **P 12 37 45.0 +1.5**
DLBC Dease Lake 81.05 345 *eP* **P 12 37 45.0 +1.5**
EDM Edmonton 81.11 334 *eP* **P 12 37 43.2 -0.8**
EDM Edmonton 81.11 334 *eP* **P 12 37 43.2 -0.8**
ECSD EROS Data Cent 81.23 320 *eP* **P 12 37 45.4 +0.6**
comp=Z,184nm,0.8s,mb6.1
ECSD LR LR
comp=Z,12μm,20.0s,MS6.2
ECSD EROS Data Cent 81.23 320 *eP* **P 12 37 45.4 +0.6**
comp=Z,184nm,0.8s,mb6.1
SLM Saint Louis 81.25 313 *eP* **P 12 37 46.9 +1.9**
SLM pmax pmax
comp=Z,341nm,1.1s,mb6.2
SLM Saint Louis 81.25 313 *eP* **P 12 37 46.9 +1.9**
comp=Z,341nm,1.1s,mb6.2
SLM Saint Louis 81.25 313 *eP* **P 12 37 46.9 +1.9**
comp=Z,341nm,1.1s,mb6.2
SIUC Southern Illin 81.26 311 *eP* **P 12 37 45.5 +0.4**
comp=Z,185nm,0.8s,mb6.1
SIUC Southern Illin 81.26 311 *eP* **P 12 37 45.5 +0.4**
comp=Z,185nm,0.8s,mb6.1
SVW2 Sparrevohn 81.26 359 *eP* **P 12 37 45.9 +1.3**
SVW2 Sparrevohn 81.26 359 *eP* **P 12 37 45.9 +1.3**
DGMT Dagmar 81.34 327 ⇑P **P 12 37 44.2 -1.1**
baz=81
DGMT ⇑S S 12 48 01.2 +5.9
baz=81
DGMT Dagmar 81.34 327 *eP* **P 12 37 47.2 +2.0**
comp=Z,1μm,1.8s,mb6.5
DGMT LR LR
comp=Z,20μm,20.0s,MS6.5
DGMT Dagmar 81.34 327 *eP* **P 12 37 47.2 +1.9**
comp=Z,1μm,1.8s,mb6.5
WVT Waverly 81.47 309 *eP* **P 12 37 45.6 -0.6**
WVT pmax pmax
comp=Z,109nm,0.9s,mb5.8
WVT MLR MLR
comp=Z,20μm,20.0s,MS6.5
WVT Waverly 81.47 309 *eP* **P 12 37 45.6 -0.6**
comp=Z,109nm,0.9s,mb5.8
WVT LR LR
comp=Z,20μm,20.0s,MS6.5
WVT Waverly 81.47 309 *eP* **P 12 37 45.6 -0.6**
comp=Z,109nm,0.9s,mb5.8
PEA0B Petropavlovsk- 81.69 25 *eP* **P 12 37 46.0 -1.0**
PEA0B Petropavlovsk- 81.69 25 *eP* **P 12 37 46.0 -1.1**
PETK Petropavlovsk- 81.69 25 P **P 12 37 45.8 -1.2**
comp=Z,18nm,0.7s,mb5.1,baz=325,slow=1.8,SNR=14
PETK LR LR 13 17 39.3
comp=Z,26μm,19.5s,MS6.6,baz=313,slow=38
PETK Petropavlovsk- 81.69 25 P **P 12 37 45.8 -1.3**
PETK pmax pmax
comp=Z,18nm,0.7s,mb5.1
PETK MLR MLR
comp=Z,26μm,19.5s,MS6.6
FVM French Village 81.80 312 *eP* **P 12 37 48.0 +0.1**
FVM pmax pmax
comp=Z,403nm,1.2s,mb6.2
FVM French Village 81.80 312 *eP* **P 12 37 48.0 +0.1**
comp=Z,403nm,1.2s,mb6.2
FVM French Village 81.80 312 *eP* **P 12 37 48.0 +0.1**
comp=Z,403nm,1.2s,mb6.2
RSO Redoubt South 81.81 357 *eP* **P 12 37 48.3 +0.8**
RSO Redoubt South 81.81 357 *eP* **P 12 37 48.3 +0.7**
UTMT University of 81.96 310 *eP* **P 12 37 51.5 +2.7**
comp=Z,345nm,1.1s,mb6.2
UTMT University of 81.96 310 *eP* **P 12 37 51.5 +2.7**
comp=Z,345nm,1.1s,mb6.2
PET Petropavlovsk 82.08 24 *eP* **P 12 37 51.9 +2.8**
PET *e*S S 12 47 56.4 -6.4
PET pmax pmax
comp=Z,120nm,1.4s,mb5.6
PET pmax pmax
comp=Z,400nm,15.9s
PET MLR MLR
comp=Z,24μm,22.0s,MS6.5
PET MLR MLR
comp=Z,26μm,17.0s
PET Petropavlovsk 82.08 24 *eP* **P 12 37 50.5 +1.4**
comp=Z,166nm,1.2s,mb5.8
PET LR LR
comp=Z,20μm,19.0s,MS6.5
PET Petropavlovsk 82.08 24 *eP* **P 12 37 50.5 +1.4**
comp=Z,166nm,1.2s,mb5.8
GLAT Glass 82.26 310 *eP* **P 12 37 52.0 +1.6**
GLAT Glass 82.26 310 *eP* **P 12 37 52.0 +1.6**
PARMO Parma 82.28 311 *eP* **P 12 37 55.5 +5.0**
KGM Kluang 82.35 93 P **P 12 37 51.8 +0.7**
TATO Taipei 82.41 64 *eP* **P 12 37 51.0 -0.4**
comp=Z,118nm,1.1s,mb5.7
TATO LR LR
comp=Z,9μm,20.0s,MS6.1
TATO Taipei 82.41 64 *eP* **P 12 37 51.0 -0.3**
comp=Z,118nm,1.1s,mb5.7
MID Middleton Isla 82.44 354 *eP* **P 12 37 50.9 0.0**
MID pmax pmax
comp=Z,78nm,0.7s,mb5.8
MID Middleton Isla 82.44 354 *eP* **P 12 37 50.9 0.0**
comp=Z,78nm,0.7s,mb5.8
MID Middleton Isla 82.44 354 *eP* **P 12 37 50.9 0.0**
comp=Z,78nm,0.7s,mb5.8
DWPF Disney 82.45 300 *eP* **P 12 37 54.2 +2.7**
comp=Z,248nm,1.3s,mb6.0
DWPF LR LR
comp=Z,6μm,21.0s,MS6.0
DWPF Disney 82.45 300 *eP* **P 12 37 54.2 +2.7**
comp=Z,248nm,1.3s,mb6.0
ASAJ Asahikawa 82.51 38 P **P 12 37 50.1 -1.4**
comp=Z,55nm,0.7s,mb5.7,baz=284,slow=8.1,SNR=41
ASAJ S S 12 48 03.0 -4.5
comp=Z,4.6nm,0.9s,baz=114,slow=12,SNR=2.9
ASAJ Asahikawa 82.51 38 P **P 12 37 50.2 -1.3**
ASAJ S S 12 48 03.1 -4.4
ASAJ pmax pmax
comp=Z,55nm,0.7s
ASAJ smax
comp=N,5.0nm,0.9s
YHNB Yeheng 82.52 65 PFAKE 12 38 00.0 +8.1
YHNB LR LR
comp=Z,13μm,19.0s,MS6.3
HALT Halls 82.53 310 *eP* **P 12 37 54.8 +3.0**
GNAR Gosnell 82.91 310 *eP* **P 12 37 55.4 +1.6**
comp=Z,3μm,0.9s
GNAR Gosnell 82.91 310 *eP* **P 12 37 55.4 +1.6**
comp=Z,3μm,0.9s
MYKOM Kota Tinggi 82.91 93 P **P 12 37 54.9 +0.8**
GTBY Guantanamo Bay 82.96 290 *eP* **P 12 37 57.4 +3.1**
comp=Z,172nm,1.3s,mb5.9
GTBY LR LR
comp=Z,9μm,21.0s,MS6.1
GTBY Guantanamo Bay 82.96 290 *eP* **P 12 37 57.4 +3.1**
comp=Z,172nm,1.3s,mb5.9
LRAL Lakeview Retre 82.98 307 *eP* **P 12 37 55.1 +0.9**
comp=Z,202nm,0.9s,mb6.2
LRAL LR LR
comp=Z,14μm,22.0s,MS6.3
LRAL Lakeview Retre 82.98 307 *eP* **P 12 37 55.1 +0.9**
comp=Z,202nm,0.9s,mb6.2
SKR Severo-Kuril's 83.16 27 *eP* **P 12 37 52.0 -2.8**
SKR *e* 12 41 07.0
SKR *e*PPP 12 42 54.0
SKR *e*S S 12 48 10.0 -3.9
SKR pmax pmax
comp=Z,1μm,4.0s
SKR smax
comp=E,2μm,10.0s
SKR MLR MLR
comp=E,34μm,20.0s,MS6.8
SKR MLR MLR
comp=Z,44μm,20.0s,MS6.8
SKR MLR MLR
comp=N,25μm,18.0s,MS6.8
A18A Metzger Ranch, 83.32 330 ⇑P **P 12 37 54.4 -1.3**
baz=83,SNR=34
A18A ⇑S S 12 48 14.7 -0.9
baz=83
SIT Sitka 83.33 347 *eP* **P 12 37 57.4 +1.9**
SIT pmax pmax
comp=Z,53nm,1.0s,mb5.5
SIT Sitka 83.33 347 *eP* **P 12 37 57.4 +1.9**
comp=Z,53nm,1.0s,mb5.5
SIT Sitka 83.33 347 *eP* **P 12 37 57.4 +1.9**
comp=Z,53nm,1.0s,mb5.5
MET Memphis--Engin 83.42 310 *eP* **P 12 37 57.2 +0.8**
comp=Z,348nm,0.8s,mb6.4
MET Memphis--Engin 83.42 310 *eP* **P 12 37 57.2 +0.8**
comp=Z,348nm,0.8s,mb6.4
OXF Oxford 83.51 309 *eP* **P 12 37 57.5 +0.6**
OXF pmax pmax
comp=Z,357nm,1.1s,mb6.4
OXF MLR MLR
comp=Z,11μm,20.0s,MS6.2
OXF Oxford 83.51 309 *eP* **P 12 37 57.5 +0.7**
comp=Z,357nm,1.1s,mb6.4
OXF LR LR
comp=Z,11μm,20.0s,MS6.2
OXF Oxford 83.51 309 *eP* **P 12 37 57.5 +0.6**
comp=Z,357nm,1.1s,mb6.4
LAO LASA Array 83.58 327 *eP* **P 12 37 57.8 +0.7**
comp=Z,631nm,1.1s,mb6.7
LAO LR LR
comp=Z,24μm,19.0s,MS6.6
LAO LASA Array 83.58 327 *eP* **P 12 37 57.8 +0.8**
comp=Z,631nm,1.1s,mb6.7
A17A Triple J Farms 83.64 331 ⇓P **P 12 37 57.1 -0.1**
baz=83,SNR=42
A17A ⇓S S 12 48 17.6 -1.2
baz=83
B18A Beardsley Farm 83.72 330 ⇓P **P 12 37 57.2 -0.5**
baz=83,SNR=80
B18A ⇓S S 12 48 18.0 -1.6
baz=83
EGMT Eagleton 84.00 329 ⇓P **P 12 37 58.5 -0.7**
baz=84,SNR=63
EGMT ⇑S S 12 48 21.4 -1.2
baz=84
EGMT Eagleton 84.00 329 *eP* **P 12 37 59.2 +0.1**
comp=Z,2μm,0.9s,mb7.2
EGMT LR LR
comp=Z,34μm,21.0s,MS6.7
EGMT Eagleton 84.00 329 *eP* **P 12 37 59.2 0.0**
comp=Z,2μm,0.9s,mb7.2
YUK Yuzh-Kuril'sk 84.14 37 P **P 12 38 00.5 +0.6**
YUK *i* S S 12 48 25.5 +1.4
YUK pmax pmax
comp=E,2μm,12.0s
YUK smax
comp=E,4μm,14.0s
YUK smax
comp=N,8μm,13.0s
YUK Yuzh-Kuril'sk 84.14 37 P **P 12 38 00.5 +0.6**
B17A L&G Farms, Che 84.20 330 ⇑P **P 12 37 59.6 -0.6**
baz=84,SNR=30
B17A ⇑S S 12 48 22.4 -2.2
baz=84
ERM Erimo 84.33 40 P **P 12 38 02.5 +1.6**
comp=N,3μm,1.2s,SNR=20
ERM Erimo 84.33 40 *eP* **P 12 38 02.2 +1.3**
ERM pmax pmax
comp=Z,869nm,1.3s,mb6.7
ERM MLR MLR
comp=Z,18μm,20.0s,MS6.5
ERM Erimo 84.33 40 *eP* **P 12 38 02.2 +1.2**
comp=Z,869nm,1.3s,mb6.7
ERM LR LR
comp=Z,18μm,20.0s,MS6.5
ERM Erimo 84.33 40 *eP* **P 12 38 02.2 +1.3**
comp=Z,869nm,1.3s,mb6.7
BRAL Brewton 84.34 305 *eP* **P 12 38 03.3 +2.1**
comp=Z,139nm,0.9s,mb6.1
BRAL LR LR
comp=Z,14μm,21.0s,MS6.3
BRAL Brewton 84.34 305 *eP* **P 12 38 03.3 +2.1**
comp=Z,139nm,0.9s,mb6.1
A15A Johnson Ranch, 84.39 332 ⇑P **P 12 38 00.3 -0.8**
baz=84,SNR=85
A15A ⇑S S 12 48 21.4 -4.9
baz=84
CRAG Craig 84.43 346 *eP* **P 12 38 03.1 +1.9**
comp=Z,402nm,1.4s,mb6.4
CRAG Craig 84.43 346 *eP* **P 12 38 03.1 +1.9**
comp=Z,402nm,1.4s,mb6.4
B16A M & M Farms, S 84.46 331 ⇓P **P 12 38 00.6 -0.9**
baz=84,SNR=9.8
B16A ⇑S S 12 48 22.5 -4.6
baz=84
KDAK Kodiak Island 84.49 357 P **P 12 38 01.6 +0.2**
comp=Z,27nm,0.6s,mb5.5,baz=32,slow=2.2,SNR=27
KDAK S S 12 48 24.4 -2.6
comp=Z,6.5nm,1.0s,baz=31,slow=19,SNR=3.5
KDAK Kodiak Island 84.49 357 P **P 12 38 01.7 +0.3**
KDAK S S 12 48 24.4 -2.6
KDAK pmax pmax
comp=Z,27nm,0.6s,mb5.5
KDAK smax
comp=N,7.0nm,1.0s
KDAK Kodiak Island 84.49 357 P **P 12 38 01.6 +0.2**
KSU1 Kansas State U 84.52 316 *eP* **P 12 38 01.9 -0.1**
comp=N,470nm,0.9s,mb6.6
KSU1 LR LR
comp=Z,26μm,20.0s,MS6.6
KSU1 Kansas State U 84.52 316 *eP* **P 12 38 01.9 -0.1**
comp=Z,470nm,0.9s,mb6.6
RSSD Black Hills 84.58 324 *eP* **P 12 38 02.1 -0.1**
RSSD pmax pmax
comp=Z,190nm,1.1s,mb6.1
RSSD MLR MLR
comp=Z,21μm,21.0s,MS6.5
RSSD Black Hills 84.58 324 *eP* **P 12 38 02.1 -0.1**
comp=Z,190nm,1.1s,mb6.1
RSSD LR LR
comp=Z,21μm,21.0s,MS6.5
RSSD Black Hills 84.58 324 *eP* **P 12 38 02.1 -0.1**
comp=Z,190nm,1.1s,mb6.1
A14A Double T Ranch 84.65 332 ⇓P **P 12 38 01.8 -0.6**
baz=84,SNR=63
A14A ⇑S S 12 48 22.7 -6.2
baz=84
D18A Linhart Farms, 84.69 329 ⇓P **P 12 38 02.1 -0.6**
baz=84,SNR=35
D18A ⇓S S 12 48 23.5 -5.9
baz=84
C17A Wharram Farm, 84.72 330 ⇑P **P 12 38 02.1 -0.7**
baz=84,SNR=30
C17A ⇓S S 12 48 23.7 -6.1
baz=84
WALA Waterton Lakes 84.76 332 *eP* **P 12 38 03.4 +0.4**
comp=Z,7.0nm,0.9s
WALA Waterton Lakes 84.76 332 *eP* **P 12 38 03.3 +0.3**
comp=Z,7.0nm,0.9s
B15A Bradely Ranch, 84.87 331 ⇓P **P 12 38 02.2 -1.4**
baz=85,SNR=70
B15A ⇑S S 12 48 24.2 -7.0
baz=85
CAM4 Nova Friburgo 84.90 237 ⇓*iP* **P 12 38 05.2 +1.2**
CAM4 *i* pP 12 38 10.2 +1.0
CAM4 *i* 12 38 13.6
CAM4 *i* 12 38 27.3
CAM4 *i* 12 38 30.7
CAM4 *i* 12 38 53.7
CAM4 *i* 12 39 16.7
CAM4 *i* 12 39 22.1
CAM4 *i* 12 39 51.9
CAM4 *i* 12 45 53.5
CAM4 *i* 12 46 12.3
C16A Fuhringer Ranc 84.97 330 ⇑P **P 12 38 03.3 -0.7**
baz=85,SNR=36
C16A ⇓S S 12 48 24.9 -7.3
baz=85
A13A Flathead Natio 85.05 333 ⇓P **P 12 38 03.0 -1.4**
baz=85
OHAK Old Harbor 85.08 357 *eP* **P 12 38 04.7 +0.3**
comp=Z,54nm,1.0s,mb5.6
OHAK Old Harbor 85.08 357 *eP* **P 12 38 04.7 +0.3**
comp=Z,54nm,1.0s,mb5.6
D17A Six Diamond Ra 85.08 329 ⇑P **P 12 38 03.7 -0.9**
baz=85,SNR=44
D17A ⇑S S 12 48 24.6 -8.7
baz=85
B14A Marquette Ranc 85.10 332 ⇓P **P 12 38 03.8 -0.9**
baz=85,SNR=44
UALR University of 85.11 311 *eP* **P 12 38 04.8 -0.2**
comp=Z,136nm,0.9s,mb6.1
UALR University of 85.11 311 *eP* **P 12 38 04.8 -0.2**
comp=Z,136nm,0.9s,mb6.1
E18A Harlowton 85.24 329 ⇑P **P 12 38 05.0 -0.4**
baz=85,SNR=40
E18A ⇓S S 12 48 28.8 -6.1
baz=85
C15A Salmond Ranch, 85.33 331 ⇑P **P 12 38 05.3 -0.6**
baz=85,SNR=33
C15A ⇑S S 12 48 27.3 -8.5
baz=85
A12A Yaak River Ran 85.49 333 ⇓P **P 12 38 06.2 -0.4**
baz=85,SNR=14
D16A Dana Ranch, Ca 85.52 330 ⇑P **P 12 38 06.3 -0.6**
baz=85,SNR=62
D16A ⇓S S 12 48 28.7 -9.0
baz=85
B13A Whitefish 85.53 332 ⇑P **P 12 38 05.9 -1.0**
baz=85,SNR=47
BBP Basco 85.56 68 *eP* **P 12 38 06.3 -1.2**
MAJO Matsushiro 85.61 46 *eP* **P 12 38 07.6 +0.1**
MAJO pmax pmax
comp=Z,289nm,1.1s,mb6.4
MAJO MLR MLR
comp=Z,14μm,20.0s,MS6.3
MAJO Matsushiro 85.61 46 *eP* **P 12 38 07.6 +0.1**
comp=Z,289nm,1.1s,mb6.4

MAJO LR LR
comp=Z,14µm,20.0s,MS6.3
MAJO Matsushiro 85.61 46 *e*P **P 12 38 07.6 +0.1**
comp=Z,289nm,1.1s,mb6.4
MAT Matsushiro 85.61 46 P **P 12 38 07.0 -0.5**
MAT S S 12 48 38.0 -1.0
MJAR Matsushiro Arr 85.61 46 P **P 12 38 05.9 -1.6**
comp=Z,33nm,0.9s,mb5.6,baz=315,slow=4.7,SNR=97
MJAR Matsushiro Arr 85.61 46 P **P 12 38 05.9 -1.6**
MJAR pmax pmax
comp=Z,33nm,0.9s
MJAR Matsushiro Arr 85.61 46 P **P 12 38 05.9 -1.6**
F18A Big Timber 85.69 328 ⇓P **P 12 38 07.5 -0.1**
baz=85,SNR=41
E17A Martinsdale 85.71 329 ⇓P **P 12 38 06.9 -0.8**
baz=85,SNR=45
A11A Hall Mountain, 85.72 334 ⇓P **P 12 38 06.3 -1.5**
baz=85,SNR=35
GCMT Greycliff 85.76 328 *e*P **P 12 38 09.7 +1.7**
comp=Z,138nm,1.0s,mb6.1
GCMT Greycliff 85.76 328 *e*P **P 12 38 09.7 +1.7**
comp=Z,138nm,1.0s,mb6.1
C14A Swan Lake 85.77 332 ⇓P **P 12 38 07.5 -0.5**
baz=86
C14A ⇑S S 12 48 30.9 -9.2
baz=86
YBMT Yellow Bay 85.79 332 *e*P **P 12 38 08.1 0.0**
comp=Z,244nm,1.0s,mb6.4
YBMT Yellow Bay 85.79 332 *e*P **P 12 38 08.1 0.0**
comp=Z,244nm,1.0s,mb6.4
MTDJ Mount Denham 85.81 290 PFAKE 12 38 20.0 +11
MTDJ LR LR
comp=Z,7µm,22.0s,MS6.0
B12A Libby 85.86 333 ⇑P **P 12 38 08.0 -0.5**
baz=86
D15A Lincoln 85.90 330 ⇑P **P 12 38 08.0 -0.7**
baz=86,SNR=28
D15A ⇓S S 12 48 32.5 -8.8
baz=86
HRY Holter Researc 85.90 330 *e*P **P 12 38 09.9 +1.2**
comp=Z,233nm,1.0s,mb6.4
HRY Holter Researc 85.90 330 *e*P **P 12 38 09.9 +1.2**
comp=Z,233nm,1.0s,mb6.4
E16A East Helena 85.98 330 ⇑P **P 12 38 08.5 -0.6**
baz=86,SNR=40
JTMT Jette 85.99 332 *e*P **P 12 38 09.6 +0.5**
comp=Z,424nm,1.1s,mb6.6
JTMT Jette 85.99 332 *e*P **P 12 38 09.6 +0.5**
comp=Z,424nm,1.1s,mb6.6
MIAR Mount Ida 86.00 311 *e*P **P 12 38 09.7 +0.3**
MIAR pmax pmax
comp=Z,585nm,1.4s,mb6.6
MIAR MLR MLR
comp=Z,19µm,20.0s,MS6.5
MIAR Mount Ida 86.00 311 *e*P **P 12 38 09.7 +0.2**
comp=Z,585nm,1.4s,mb6.6
MIAR LR LR
comp=Z,19µm,20.0s,MS6.5
MIAR Mount Ida 86.00 311 *e*P **P 12 38 09.7 +0.3**
comp=Z,585nm,1.4s,mb6.6
OGNE Ogallala 86.01 321 PFAKE 12 38 20.0 +11
OGNE LR LR
comp=Z,14µm,21.0s,MS6.3
SWMT Swartz Lake 86.08 332 *e*P **P 12 38 09.5 -0.1**
comp=Z,280nm,1.0s,mb6.5
SWMT Swartz Lake 86.08 332 *e*P **P 12 38 09.5 -0.1**
comp=Z,280nm,1.0s,mb6.5
F17A Fitzpatrick Pl 86.08 329 ⇑P **P 12 38 09.5 -0.1**
baz=86,SNR=36
BSMT Bassoo Peak 86.08 332 *e*P **P 12 38 09.6 0.0**
comp=Z,200nm,1.2s,mb6.2
BSMT Bassoo Peak 86.08 332 *e*P **P 12 38 09.6 0.0**
comp=Z,200nm,1.2s,mb6.2
G18A Lazy EL Ranch, 86.10 328 ⇑P **P 12 38 09.6 -0.1**
baz=86,SNR=21
G18A ⇑S S 12 48 31.4 -12
baz=86
CHGN Chignik 86.10 360 *e*P **P 12 38 09.4 -0.1**
CHGN Chignik 86.10 360 *e*P **P 12 38 09.4 -0.1**
SLMT Seeley Lake 86.11 331 *e*P **P 12 38 08.9 -0.8**
comp=Z,259nm,1.6s,mb6.2
SLMT Seeley Lake 86.11 331 *e*P **P 12 38 08.9 -0.8**
comp=Z,259nm,1.6s,mb6.2
A10A Northport 86.11 334 ⇓P **P 12 38 10.5 +0.8**
baz=86
RLMT Red Lodge 86.13 327 ⇓P **P 12 38 09.8 -0.1**
baz=86,SNR=95
RLMT Red Lodge 86.13 327 *e*P **P 12 38 10.5 +0.6**
comp=Z,344nm,1.3s,mb6.4
RLMT LR LR
comp=Z,28µm,19.0s,MS6.7
RLMT Red Lodge 86.13 327 *e*P **P 12 38 10.5 +0.6**
comp=Z,344nm,1.3s,mb6.4
C13A Hot Springs 86.15 332 ⇑P **P 12 38 09.7 -0.2**
baz=86,SNR=30
C13A ⇑S S 12 48 32.1 -12
baz=86
B11A Sandpoint 86.16 333 ⇑P **P 12 38 09.9 -0.1**
baz=86,SNR=12
COCO West Island 86.19 109 *i* P **P 12 38 10.4 -0.2**
COCO West Island 86.19 109 PFAKE 12 38 20.0 +9.4
COCO LR LR
comp=Z,6µm,21.0s,MS6.0
COCO West Island 86.19 109 P **P 12 38 19.3 +8.8**
COCO P 12 38 19.3
SNR=7.4
COCO West Island 86.19 109 *i* P **P 12 38 10.4 -0.2**
SDV Santo Domingo 86.24 278 P **P 12 38 11.2 +0.3**
comp=Z,59nm,0.9s,mb5.8,baz=69,slow=2.9,SNR=60
SDV S S 12 48 40.6 -5.2
comp=Z,0.9nm,0.5s,baz=92,slow=20,SNR=3.0
SDV PKKPbc PKKPbc 12 56 17.7 +10
comp=Z,3.9nm,0.7s,baz=284,slow=2.6,SNR=5.0
SDV PKPPKP 13 04 19.7
comp=Z,4.0nm,1.0s,baz=223,slow=4.5,SNR=3.1
SDV LR LR 13 13 41.0
comp=Z,4µm,21.9s,MS5.8,baz=64,slow=34
SDV Santo Domingo 86.24 278 *e*P **P 12 38 11.6 +0.7**
comp=Z,154nm,0.8s,mb6.3
SDV LR LR
comp=Z,2µm,22.0s,MS5.5
SDV Santo Domingo 86.24 278 *e*P **P 12 38 11.6 +0.7**
comp=Z,154nm,0.8s,mb6.3
D14A Greenough 86.25 331 ⇑P **P 12 38 09.2 -1.2**
baz=86,SNR=48
ATTU Attu Island--F 86.25 17 P **P 12 38 09.5 -0.8**
comp=Z,47nm,0.6s,mb5.9
FX1 Attu Island--F 86.25 17 P **P 12 38 09.5 -0.8**
comp=Z,47nm,0.6s,mb5.9,baz=217,slow=2.3,SNR=34
FX1 S S 12 48 31.9 -13
comp=Z,1.4nm,0.7s,baz=36,slow=19,SNR=1.9
FX1 Attu Island--F 86.25 17 P **P 12 38 09.5 -0.8**
FX1 S S 12 48 32.0 -13
FX1 pmax pmax
comp=Z,47nm,0.6s
FX1 smax
comp=N,1.0nm,0.7s
FX1 Attu Island--F 86.25 17 P **P 12 38 09.5 -0.8**
CHMT Chamberlain Mo 86.28 331 *e*P **P 12 38 10.3 -0.3**
comp=N,124nm,0.6s,mb6.3
CHMT Chamberlain Mo 86.28 331 *e*P **P 12 38 10.3 -0.3**
comp=N,124nm,0.6s,mb6.3
ABRA Dolores 86.37 71 *e*P **P 12 38 11.6 +0.1**
CBKS Cedar Bluff 86.41 318 *e*P **P 12 38 13.4 +2.0**
CBKS pmax pmax
comp=Z,200nm,0.9s,mb6.3
CBKS MLR MLR
comp=Z,21µm,20.0s,MS6.5
CBKS Cedar Bluff 86.41 318 *e*P **P 12 38 13.4 +2.0**
comp=Z,200nm,0.9s,mb6.3
CBKS LR LR
comp=Z,21µm,20.0s,MS6.5
CBKS Cedar Bluff 86.41 318 *e*P **P 12 38 13.4 +2.0**
comp=Z,200nm,0.9s,mb6.3
E15A Deer Lodge 86.45 330 ⇓P **P 12 38 11.3 -0.2**
baz=86,SNR=40
E15A ⇓S SKSac 12 48 33.1 -4.1
baz=86
C12B Naegeli Ranch, 86.46 332 ⇓P **P 12 38 11.0 -0.4**
baz=86,SNR=38
C12B ⇑S SKSac 12 48 34.8 -2.5
baz=86
BOLP Bolinao 86.56 72 *e*P **P 12 38 12.3 -0.1**
F16A Kennard Place, 86.57 329 ⇑P **P 12 38 11.6 -0.4**
baz=86,SNR=58
NEW Newport 86.58 334 *e*P **P 12 38 11.7 -0.3**
NEW pmax pmax
comp=Z,241nm,1.0s
NEW MLR MLR
comp=Z,21µm,20.0s
NEW Newport 86.58 334 *e*P **P 12 38 11.7 -0.3**
comp=Z,241nm,1.0s,mb6.4
NEW LR LR
comp=Z,21µm,20.0s,MS6.5
NEW Newport 86.58 334 *e*P **P 12 38 11.7 -0.3**
comp=Z,241nm,1.0s,mb6.4
B10A Chitwood Farm, 86.58 334 ⇓P **P 12 38 11.9 -0.1**
baz=86,SNR=9.6
B10A ⇑S SKSac 12 48 36.4 -1.6
baz=86
G17A Pierce Place, 86.58 328 ⇓P **P 12 38 12.3 +0.2**
baz=86,SNR=49
G17A ⇑S SKSac 12 48 34.9 -3.2
baz=86
D13A Huson 86.60 332 ⇓P **P 12 38 11.0 -1.1**
baz=86,SNR=52
MSO Missoula 86.62 331 *e*P **P 12 38 11.7 -0.6**
comp=Z,159nm,1.4s,mb6.1
MSO LR LR
comp=Z,24µm,19.0s,MS6.6
MSO Missoula 86.62 331 *e*P **P 12 38 11.7 -0.6**
comp=Z,159nm,1.4s,mb6.0
APYP Conner 86.64 70 *e*P **P 12 38 12.3 -0.5**
BOZ Bozeman (W) 86.68 329 ⇑P **P 12 38 12.2 -0.4**
baz=86,SNR=33
BOZ Bozeman (W) 86.68 329 *e*P **P 12 38 13.0 +0.4**
BOZ pmax pmax
comp=Z,161nm,1.1s,mb6.2
BOZ MLR MLR
comp=Z,24µm,21.0s,MS6.6
BOZ Bozeman (W) 86.68 329 *e*P **P 12 38 13.0 +0.4**
comp=Z,161nm,1.1s,mb6.2
BOZ LR LR
comp=Z,24µm,21.0s,MS6.6
BOZ Bozeman (W) 86.68 329 *e*P **P 12 38 13.0 +0.4**
comp=Z,161nm,1.1s,mb6.2
E14A Clinton 86.79 331 ⇑P **P 12 38 12.1 -1.0**
baz=86,SNR=49
E14A ⇑S SKSac 12 48 36.5 -2.9
baz=86
B09A Rice 86.80 334 ⇓P **P 12 38 12.6 -0.4**
baz=86,SNR=43
LRM Limekiln Ridge 86.87 330 *e*P **P 12 38 13.9 +0.4**
comp=Z,651nm,1.0s,mb6.8
LRM Limekiln Ridge 86.87 330 *e*P **P 12 38 13.9 +0.4**
comp=Z,651nm,1.0s,mb6.8
F15A Butte 86.87 330 ⇑P **P 12 38 12.6 -0.9**
baz=87,SNR=62
D12A Red Ives Fores 86.96 332 ⇓P **P 12 38 13.1 -0.9**
baz=87,SNR=30
A07A Ashnola River, 87.00 336 ⇑P **P 12 38 13.9 -0.1**
baz=87,SNR=29
C10A Spilker Farm, 87.02 334 ⇓P **P 12 38 13.8 -0.4**
baz=87,SNR=20
E13A Victor 87.04 331 ⇑P **P 12 38 13.5 -0.8**
baz=87,SNR=22
E13A ⇓S SKSac 12 48 38.5 -2.4
baz=87
SDPT Sand Point 87.04 1 *e*P **P 12 38 14.5 +0.3**
comp=Z,180nm,0.6s,mb6.5
SDPT Sand Point 87.04 1 *e*P **P 12 38 14.5 +0.3**
comp=Z,180nm,0.6s,mb6.5
LKWY Lake 87.05 328 PFAKE 12 38 30.0 +16
LKWY LR LR
comp=Z,39µm,22.0s,MS6.8
BCPH Baguio City Da 87.06 72 ⇓*e*P **P 12 38 14.3 -0.7**
G16A Moss Hill, Enn 87.10 329 ⇑P **P 12 38 14.3 -0.3**
baz=87,SNR=50
G16A ⇑S SKSac 12 48 41.5 +0.2
baz=87
YMR Madison River 87.21 328 *e*P **P 12 38 17.6 +2.4**
comp=Z,270nm,1.1s,mb6.4
YMR Madison River 87.21 328 *e*P **P 12 38 17.5 +2.3**
comp=Z,270nm,1.1s,mb6.4
F14A Wisdom 87.24 330 ⇑P **P 12 38 15.5 +0.2**
baz=87,SNR=23
B08A Colville Reser 87.25 335 ⇓P **P 12 38 15.1 -0.2**
baz=87,SNR=25
H17A Grant Village 87.27 328 ⇓P **P 12 38 18.0 +2.6**
baz=87,SNR=12
QLMT Earthquake Lak 87.27 329 *e*P **P 12 38 19.2 +3.7**
comp=Z,59nm,1.0s,mb5.8
DPW Davenport 87.29 334 P **P 12 38 17.0 +1.5**
DPW Davenport 87.29 334 P **P 12 38 17.0 +1.5**
H16A Russell Place, 87.30 328 ⇑P **P 12 38 16.0 +0.4**
baz=87,SNR=44
DLMT Dillon 87.31 330 *e*P **P 12 38 15.2 -0.4**
comp=Z,276nm,1.3s,mb6.3
DLMT Dillon 87.31 330 *e*P **P 12 38 15.2 -0.4**
comp=Z,276nm,1.3s,mb6.3
L22A Ellis Ranch, M 87.31 324 ⇑P **P 12 38 15.7 0.0**
baz=87
L22A ⇑S SKSac 12 48 41.3 -1.4
baz=87
YFT Old Faithful 87.33 328 *e*P **P 12 38 19.4 +3.6**
comp=Z,224nm,1.1s,mb6.3
C09A Chrisman Ranch 87.37 334 ⇑P **P 12 38 15.4 -0.5**
baz=87,SNR=43
PHWY Pilot Hill 87.41 323 *e*P **P 12 38 17.9 +1.6**
comp=Z,176nm,0.9s,mb6.3
PHWY Pilot Hill 87.41 323 *e*P **P 12 38 17.9 +1.7**
comp=Z,176nm,0.9s,mb6.3
G15A Dillon 87.42 329 ⇑P **P 12 38 16.5 +0.2**
baz=87,SNR=28
FALS False Pass 87.46 3 *e*P **P 12 38 15.4 -0.7**
comp=Z,100nm,0.8s,mb6.1
FALS False Pass 87.46 3 *e*P **P 12 38 15.4 -0.8**
comp=Z,100nm,0.8s,mb6.1
I18A Diamond G Ranc 87.50 327 ⇓P **P 12 38 17.0 +0.4**
baz=87,SNR=18
A05A Maple Falls 87.58 337 ⇑P **P 12 38 17.0 +0.2**
baz=87,SNR=8.4
E12A Beaver Dam Sad 87.58 332 ⇓P **P 12 38 15.3 -1.6**
baz=87
E12A ⇑S SKSac 12 48 43.0 -1.2
baz=87
F13A Darby 87.64 331 ⇓P **P 12 38 15.9 -1.3**
baz=87,SNR=70
F13A ⇑S SKSac 12 48 43.4 -1.1
baz=87
CAUP Cauayan 87.64 70 *e*P **P 12 38 18.1 +0.4**
I17A Pilgrim Ck. 87.65 328 ⇑P **P 12 38 18.4 +1.1**
baz=87,SNR=13
D10A Wagner Farm, O 87.66 333 ⇓P **P 12 38 15.8 -1.5**
baz=87,SNR=24
D10A ⇑S SKSac 12 48 44.2 -0.5
baz=87
K20A Yellowstone Ra 87.69 325 ⇓P **P 12 38 17.2 -0.3**
baz=87,SNR=42
K20A ⇓S SKSac 12 48 45.1 +0.2
baz=87
G14A Jackson 87.75 330 ⇑P **P 12 38 16.7 -1.0**
baz=88
G14A ⇑S SKSac 12 48 43.6 -1.6
baz=88
K19A Absolon Red Bu 87.78 326 ⇓P **P 12 38 16.8 -1.2**
baz=88,SNR=42
K19A ⇑S SKSac 12 48 44.7 -0.8
baz=88
L21A Rawlins 87.79 324 ⇓P **P 12 38 16.5 -1.5**
baz=88
L21A ⇓S SKSac 12 48 44.3 -1.3
baz=88
B06A Marblemount 87.81 336 ⇓P **P 12 38 17.0 -1.0**
baz=88,SNR=7.8
IMW Indian Meadow 87.82 328 *e*P **P 12 38 18.8 +0.7**
comp=Z,144nm,1.1s,mb6.1
IMW Indian Meadow 87.82 328 *e*P **P 12 38 18.8 +0.7**
comp=Z,144nm,1.1s,mb6.1
MCMT McKenzie Canyo 87.85 329 *e*P **P 12 38 19.5 +1.2**
comp=Z,59nm,1.2s,mb5.7
MCMT McKenzie Canyo 87.85 329 *e*P **P 12 38 19.5 +1.2**
comp=Z,59nm,1.2s,mb5.7
OD2 Odessa Site #2 87.88 334 P **P 12 38 18.3 0.0**
OD2 Odessa Site #2 87.88 334 P **P 12 38 18.3 0.0**
RPW Rockport 87.88 336 *e*P **P 12 38 17.7 -0.6**
comp=Z,224nm,1.7s,mb6.1
RPW Rockport 87.88 336 *e*P **P 12 38 17.7 -0.6**
comp=Z,224nm,1.7s,mb6.1
LOHW Long Hollow 87.91 327 *e*P **P 12 38 20.1 +1.6**
comp=Z,82nm,1.1s,mb5.9
LOHW Long Hollow 87.91 327 *e*P **P 12 38 20.1 +1.5**
comp=Z,82nm,1.1s,mb5.9
H15A Lima 87.94 329 ⇓P **P 12 38 18.7 0.0**
baz=88,SNR=40
H15A ⇑S SKSac 12 48 46.3 -0.2
baz=88
J18A Kendall Valley 87.98 327 ⇓P **P 12 38 18.0 -0.9**
baz=88,SNR=47
PALP Palanan 88.01 70 *e*P **P 12 38 19.1 -0.4**
F12A Elk City 88.02 331 ⇑P **P 12 38 18.3 -0.7**
baz=88,SNR=91
F12A ⇓S SKSac 12 48 45.2 -1.6
baz=88
D09A Jones Farm, Ri 88.02 334 ⇑P **P 12 38 18.4 -0.6**
baz=88,SNR=43
AKUT Akutan 88.06 4 *e*P **P 12 38 17.9 -1.2**
comp=Z,476nm,1.2s,mb6.6
AKUT Akutan 88.06 4 *e*P **P 12 38 17.9 -1.2**
comp=Z,476nm,1.2s,mb6.6
I16A Newdale 88.07 328 ⇑P **P 12 38 19.5 +0.2**
baz=88,SNR=32
M21A Separation Pea 88.07 324 ⇓P **P 12 38 18.4 -1.0**
baz=88,SNR=26
E10A Myers Farm, Un 88.09 333 ⇓P **P 12 38 18.8 -0.6**
baz=88,SNR=13
SNOW Snow King Moun 88.10 327 *e*P **P 12 38 22.8 +3.3**
comp=Z,48nm,0.6s,mb5.9
SNOW Snow King Moun 88.10 327 *e*P **P 12 38 22.8 +3.3**
comp=Z,48nm,0.6s,mb5.9
BW06 Boulder Array 88.14 326 ⇑P **P 12 38 18.5 -1.2**
baz=88,SNR=81
BW06 ⇓S SKSac 12 48 46.1 -1.6
baz=88
BW06 Boulder Array 88.14 326 *e*P **P 12 38 18.7 -1.0**
comp=Z,286nm,1.7s,mb6.2
BW06 LR LR
comp=Z,28µm,20.0s,MS6.7
BW06 Boulder Array 88.14 326 *e*P **P 12 38 18.7 -1.0**
comp=Z,286nm,1.7s,mb6.2
PDAR Pinedale Array 88.14 326 P **P 12 38 18.8 -0.9**
comp=Z,29nm,0.8s,mb5.6,baz=51,slow=3.7,SNR=20
PDAR PKKPbc PKKPbc 12 56 09.0 +5.8
comp=Z,2.2nm,1.1s,baz=236,slow=1.6,SNR=4.5
PDAR PKPPKP 13 04 04.8
comp=Z,0.6nm,0.9s,baz=240,slow=0.7,SNR=3.4
PDAR LR LR 13 19 43.8
comp=Z,24µm,20.7s,MS6.6,baz=42,slow=37
PDAR Pinedale Array 88.14 326 P **P 12 38 18.8 -0.9**
TPAW Teton Pass 88.16 327 *e*P **P 12 38 20.6 +0.9**
comp=Z,76nm,0.6s,mb6.1
TPAW Teton Pass 88.16 327 *e*P **P 12 38 20.6 +0.9**
comp=Z,76nm,0.6s,mb6.1
J17A Brown Place, J 88.16 327 ⇓P **P 12 38 19.4 -0.4**
baz=88,SNR=25
DCID1 Drake Creek 88.17 328 *e*P **P 12 38 24.1 +4.3**
comp=Z,315nm,1.1s,mb6.5
G13A Cobalt 88.18 330 ⇑P **P 12 38 19.2 -0.6**
baz=88,SNR=33
L20A Wamsutter 88.20 325 ⇑P **P 12 38 19.2 -0.7**
baz=88,SNR=36
L20A ⇑S SKSac 12 48 47.1 -1.0
baz=88
KSM Kuching 88.20 90 P **P 12 38 22.7 +2.2**
KSM Kuching 88.20 90 PFAKE 12 38 30.0 +10
KSM LR LR
comp=Z,7µm,22.0s,MS6.0
REDW Red Top Meadow 88.22 327 *e*P **P 12 38 21.4 +1.4**
comp=Z,93nm,1.0s,mb6.0
REDW Red Top Meadow 88.22 327 *e*P **P 12 38 21.4 +1.4**
comp=Z,93nm,1.0s,mb6.0
H14A Leadore 88.23 330 ⇑P **P 12 38 19.0 -1.1**
baz=88,SNR=28
H14A ⇑S SKSac 12 48 47.1 -1.0
baz=88
D08A Wollman Farm, 88.24 334 ⇓P **P 12 38 19.7 -0.3**
baz=88
ETW Entiat 88.24 335 *e*P **P 12 38 20.9 +0.8**
ETW Entiat 88.24 335 *e*P **P 12 38 20.9 +0.9**
JCW Jim Creek 88.24 336 *e*P **P 12 38 19.3 -0.8**
comp=Z,128nm,0.7s,mb6.3
JCW Jim Creek 88.24 336 *e*P **P 12 38 19.3 -0.7**
comp=Z,128nm,0.7s,mb6.3
F11A Grangeville 88.25 332 ⇑P **P 12 38 19.1 -1.0**
baz=88,SNR=38
F11A ⇓S SKSac 12 48 47.5 -0.7
baz=88
N22A Wattenberg Ran 88.28 323 ⇓P **P 12 38 19.7 -0.6**
baz=88,SNR=21
PGC Sidney 88.30 338 *e*P **P 12 38 22.0 +1.6**
comp=Z,3.7nm,0.8s
PGC Sidney 88.30 338 *e*P **P 12 38 22.0 +1.7**
comp=Z,3.7nm,0.8s
I15A Monteview 88.38 329 ⇑P **P 12 38 21.4 +0.6**
baz=88,SNR=23
RRI2 Red Ridge 88.43 328 *e*P **P 12 38 23.1 +2.0**
comp=Z,198nm,0.8s,mb6.2
E09A Wood Farm, Sta 88.43 333 ⇓P **P 12 38 21.1 +0.1**
baz=88,SNR=12
LUBP Lubang 88.45 74 *e*P **P 12 38 22.4 +0.9**
K18A Toltan Ranch, 88.45 326 ⇓P **P 12 38 20.0 -1.2**
baz=88,SNR=24
K18A ⇑S SKSac 12 48 48.8 -0.8
baz=88
M20A Sweetwater, Wa 88.54 325 ⇓P **P 12 38 20.3 -1.3**
baz=88,SNR=25
M20A ⇓S SKSac 12 48 49.7 -0.4
baz=88
F10A Beach Ranch, E 88.57 333 ⇓P **P 12 38 20.9 -0.7**
baz=88,SNR=46
G12A Big Creek, Yel 88.57 331 ⇑P **P 12 38 19.9 -1.8**
baz=88
L19A Farson 88.58 326 ⇑P **P 12 38 20.4 -1.4**
baz=88,SNR=32
L19A ⇓S SKSac 12 48 49.7 -0.6
baz=88
NATX Nacogdoches 88.59 310 *e*P **P 12 38 23.9 +1.8**
comp=Z,314nm,1.4s,mb6.5
NATX LR LR
comp=Z,17µm,22.0s,MS6.4
NATX Nacogdoches 88.59 310 *e*P **P 12 38 23.9 +1.9**
comp=Z,314nm,1.4s,mb6.5
H13A Challis 88.63 330 ⇑P **P 12 38 20.2 -1.7**
baz=88,SNR=39
H13A ⇑S SKSac 12 48 50.7 +0.1
baz=88
ISCO Idaho Springs 88.65 322 *e*P **P 12 38 22.6 +0.4**
ISCO pmax pmax
comp=Z,79nm,0.8s,mb6.1
ISCO MLR MLR
comp=Z,12µm,19.0s,MS6.3
ISCO Idaho Springs 88.65 322 *e*P **P 12 38 22.6 +0.5**
comp=Z,79nm,0.8s,mb6.1
ISCO LR LR
comp=Z,12µm,19.0s,MS6.3
ISCO Idaho Springs 88.65 322 *e*P **P 12 38 22.6 +0.4**
comp=Z,79nm,0.8s,mb6.1
K17A Gardner Place, 88.74 327 ⇑P **P 12 38 22.6 0.0**
baz=88,SNR=14
K17A ⇓S SKSac 12 48 51.5 +0.2
baz=88
E08A Dider Farm, El 88.78 334 ⇑P **P 12 38 22.2 -0.4**
baz=88,SNR=9.0
E08A ⇓S SKSac 12 48 50.4 -0.9
baz=88
AHID Auburn Hatcher 88.81 327 *e*P **P 12 38 25.4 +2.6**
comp=Z,121nm,0.8s,mb6.3
AHID LR LR
comp=Z,16µm,20.0s,MS6.4
AHID Auburn Hatcher 88.81 327 *e*P **P 12 38 25.4 +2.6**
comp=Z,121nm,0.8s,mb6.3
N21A Black Mountain 88.81 324 ⇑P **P 12 38 22.0 -0.9**
baz=88,SNR=29
N21A ⇑S SKSac 12 48 49.3 -2.4
baz=88
I14A Mackay 88.83 329 ⇓P **P 12 38 23.2 +0.2**
baz=88,SNR=28
I14A ⇑S SKSac 12 48 50.0 -1.8
baz=88
J15A Blackfoot 88.85 328 ⇓P **P 12 38 21.8 -1.2**
baz=89,SNR=40
WMOK Wichita Mounta 88.87 315 *e*P **P 12 38 24.5 +1.2**
WMOK pmax pmax
comp=Z,241nm,1.0s,mb6.5
WMOK MLR MLR
comp=Z,20µm,21.0s,MS6.5
WMOK Wichita Mounta 88.87 315 *e*P **P 12 38 24.5 +1.2**
comp=Z,241nm,1.0s,mb6.5
WMOK LR LR
comp=Z,20µm,21.0s,MS6.5
WMOK Wichita Mounta 88.87 315 *e*P **P 12 38 24.5 +1.2**
comp=Z,241nm,1.0s,mb6.5

H12A Diamond D Ranc 88.88 330 ⇓P P 12 38 21.9 -1.2
baz=89,SNR=38
K16A Soda Springs 88.96 327 ⇓P P 12 38 23.0 -0.6
baz=89,SNR=13
M19A Rock Springs 88.97 325 ⇑P P 12 38 22.9 -0.8
baz=89,SNR=26
M19A ⇑S SKSac 12 48 52.1 -0.6
baz=89
E07A Sunnyside 88.99 334 ⇑P P 12 38 23.1 -0.5
baz=89
SPB Sao Paulo 89.00 239 PFAKE 12 38 40.0 +16
SPB LR LR
comp=Z,19µm,21.0s,MS6.5
HAWA Hanford 89.02 334 eP P 12 38 23.8 +0.1
comp=Z,177nm,0.9s,mb6.4
HAWA LR LR
comp=Z,15µm,20.0s,MS6.4
HAWA Hanford 89.02 334 eP P 12 38 23.8 0.0
comp=Z,177nm,0.9s,mb6.4
L18A Fontenelle, Gr 89.03 326 ⇑P P 12 38 23.0 -0.9
baz=89,SNR=15
L18A ⇓S SKSac 12 48 53.0 0.0
baz=89
LNOR Lincton Mounta 89.04 333 eP P 12 38 26.1 +2.3
LNOR pmax pmax
comp=Z,81nm,1.2s,mb5.9
LNOR Lincton Mounta 89.04 333 eP P 12 38 26.1 +2.2
comp=Z,81nm,1.2s,mb5.9
LNOR Lincton Mounta 89.04 333 eP P 12 38 26.1 +2.3
comp=Z,81nm,1.2s,mb5.9
F09A S2 Ranch, Elgi 89.04 333 ⇓P P 12 38 23.8 0.0
baz=89,SNR=9.2
RSW Rattlesnake Hi 89.04 334 eP P 12 38 25.4 +1.5
comp=Z,204nm,1.0s,mb6.4
RSW Rattlesnake Hi 89.04 334 eP P 12 38 25.4 +1.5
comp=Z,204nm,1.0s,mb6.4
GNW Green Mountain 89.08 337 eP P 12 38 25.0 +1.0
comp=Z,78nm,0.9s,mb6.0
GNW Green Mountain 89.08 337 eP P 12 38 25.0 +1.0
comp=Z,78nm,0.9s,mb6.0
N20A Spence Gulch, 89.10 324 ⇓P P 12 38 22.9 -1.3
baz=89,SNR=23
G10A Bishop Farm, J 89.11 332 ⇑P P 12 38 23.1 -1.1
baz=89,SNR=45
I13A Wildhorse Cree 89.11 330 ⇓P P 12 38 24.2 0.0
baz=89,SNR=36
SBUM Sibu 89.12 88 P P 12 38 27.3 +2.6
ADK Adak 89.14 11 eP P 12 38 25.9 +1.7
ADK pmax pmax
comp=Z,49nm,1.0s,mb5.8
ADK MLR MLR
comp=Z,17µm,20.0s,MS6.5
ADK Adak 89.14 11 eP P 12 38 25.9 +1.7
comp=Z,50nm,1.0s,mb5.8
ADK LR LR
comp=Z,17µm,20.0s,MS6.5
ADK Adak 89.14 11 eP P 12 38 25.9 +1.7
comp=Z,50nm,1.0s,mb5.8
D05A Enumclaw 89.14 336 ⇑P P 12 38 23.9 -0.4
baz=89,SNR=7.7
D05A ⇑S SKSac 12 48 53.6 +0.1
baz=89
H11A Donnelly 89.19 331 ⇑P P 12 38 23.3 -1.3
baz=89,SNR=21
O21A Pagoda 89.22 323 ⇑P P 12 38 24.2 -0.6
baz=89,SNR=16
O21A ⇓S SKSac 12 48 52.1 -2.1
baz=89
L17A Cokeville 89.25 327 ⇓P P 12 38 24.5 -0.4
baz=89,SNR=12
L17A ⇓S SKSac 12 48 53.9 -0.5
baz=89
G09A Cove 89.36 333 S SKSac 12 48 53.7 -1.1
baz=89
J14A Carey 89.36 329 ⇓P P 12 38 25.7 +0.3
baz=89,SNR=26
ENPP El Nido 89.39 76 eP P 12 38 26.8 +0.8
M18A Lyman 89.44 326 ⇓P P 12 38 26.0 +0.2
baz=89,SNR=15
N19A John Jarvie Ra 89.47 325 ⇑P P 12 38 24.8 -1.2
baz=89,SNR=30
N19A ⇑S SKSac 12 48 52.9 -2.8
baz=89
LON Longmire 89.47 336 eP P 12 38 26.5 +0.6
LON pmax pmax
comp=Z,196nm,1.8s,mb6.1
LON Longmire 89.47 336 eP P 12 38 26.5 +0.6
comp=Z,196nm,1.8s,mb6.1
LON Longmire 89.47 336 eP P 12 38 26.5 +0.6
comp=Z,196nm,1.8s,mb6.1
K15A Arbon 89.48 328 ⇓P P 12 38 24.8 -1.2
baz=89,SNR=52
BUSP Coron 89.49 75 eP P 12 38 26.9 +0.4
HLID Hailey 89.53 330 ⇑P P 12 38 24.7 -1.5
baz=89,SNR=12
HLID Hailey 89.53 330 eP P 12 38 27.8 +1.6
comp=Z,97nm,1.6s,mb5.9
HLID LR LR
comp=Z,32µm,19.0s,MS6.8
HLID Hailey 89.53 330 eP P 12 38 27.8 +1.6
comp=Z,97nm,1.6s,mb5.9
BMO Blue Mountains 89.55 332 eP P 12 38 26.0 -0.3
comp=Z,42nm,0.7s,mb5.9
BMO LR LR
comp=Z,29µm,21.0s,MS6.7
BMO Blue Mountains 89.55 332 eP P 12 38 26.0 -0.3
comp=Z,42nm,0.7s,mb5.9
NLWA Neilton Lookou 89.55 337 eP P 12 38 27.5 +1.3
comp=Z,165nm,1.4s,mb6.2
NLWA LR LR
comp=Z,22µm,20.0s,MS6.6
NLWA Neilton Lookou 89.55 337 eP P 12 38 27.5 +1.3
comp=Z,165nm,1.4s,mb6.2
L16A Fish Haven 89.56 327 ⇓P P 12 38 25.1 -1.2
baz=89,SNR=27
L16A ⇑S SKSac 12 48 56.8 +0.7
baz=89
H10A Noah's Angus R 89.57 332 ⇓P P 12 38 25.2 -1.1
baz=89,SNR=37
H10A ⇑S SKSac 12 48 53.2 -2.9
baz=89
J13A Cove Ranch, Pi 89.57 329 ⇑P P 12 38 25.4 -1.0
baz=89,SNR=39
F07A Phinny Hill Vi 89.59 334 ⇑P P 12 38 26.1 -0.4
baz=89,SNR=9.4
I12A Atlanta 89.62 330 ⇑P P 12 38 25.6 -1.1
baz=89,SNR=28
BATP Bataraza 89.62 79 eP P 12 38 27.9 +0.7
N18A Larsen Ranch, 89.63 325 ⇑P P 12 38 25.8 -0.9
baz=89
N18A ⇓S SKSac 12 48 56.0 -0.6
baz=89
O20A White River Ci 89.64 324 ⇑P P 12 38 26.4 -0.4
baz=89,SNR=36
M17A Scullys Gap (B 89.67 326 ⇓P P 12 38 26.0 -0.9
baz=89,SNR=43
PPR Puerto Princes 89.74 78 eP P 12 38 28.4 +0.7
G08A Pilot Rock 89.78 333 ⇓P P 12 38 26.9 -0.5
baz=90,SNR=10.0
G08A ⇑S SKSac 12 48 55.7 -1.6
baz=90
SMCO Snowmass 89.80 322 eP P 12 38 30.2 +2.7
comp=Z,53nm,0.8s,mb5.9
SMCO Snowmass 89.80 322 eP P 12 38 30.2 +2.7
comp=Z,53nm,0.8s,mb5.9
I11A Placerville 89.84 331 ⇑P P 12 38 26.2 -1.4
baz=90,SNR=24
I11A ⇓S SKSac 12 48 56.9 -0.9
baz=90
H09A Durkee 89.84 332 ⇑P P 12 38 27.2 -0.5
baz=90
K14A Jones Ranch, D 89.87 328 ⇑P P 12 38 27.1 -0.7
baz=90,SNR=38
SJMP San Jose 89.91 74 eP P 12 38 29.2 +0.8
O19A Miners Draw (B 89.92 324 ⇓P P 12 38 26.2 -1.8
baz=90,SNR=38
O19A ⇓S SKSac 12 48 57.4 -0.9
baz=90
HWUT Hardware Ranch 89.95 327 eP P 12 38 28.9 +0.6
comp=Z,186nm,0.6s,mb6.6
HWUT LR LR
comp=Z,27µm,19.0s,MS6.7
HWUT Hardware Ranch 89.95 327 eP P 12 38 28.9 +0.7
comp=Z,186nm,0.6s,mb6.6
L15A Malad City 89.98 327 ⇑P P 12 38 27.9 -0.4
baz=90,SNR=26
Q22A Crested Butte, 90.01 322 ⇓P P 12 38 26.6 -1.9
baz=90,SNR=32

I10A Payette 90.02 331 ⇓P P 12 38 28.1 -0.4
baz=90,SNR=29
J12A Stokes Ranch, 90.06 330 ⇓P P 12 38 28.2 -0.5
baz=90,SNR=30
J12A ⇓S SKSac 12 48 57.6 -1.5
baz=90
KKM Kota Kinabalu 90.07 82 P P 12 38 32.4 +3.1
KKM Kota Kinabalu 90.07 82 PFAKE 12 38 40.0 +11
KKM LR LR
comp=Z,6µm,19.0s,MS6.0
T25A Trinidad 90.10 320 ⇑P P 12 38 28.2 -0.8
baz=90,SNR=19
K13A Stover Farm, H 90.16 329 ⇓P P 12 38 28.5 -0.6
baz=90,SNR=32
N17A Moffit Pass 90.17 326 ⇑P P 12 38 28.3 -0.9
baz=90,SNR=18
SDCO Great Sand Dun 90.19 321 eP P 12 38 29.2 -0.2
comp=Z,92nm,1.1s,mb6.0
SDCO LR LR
comp=Z,12µm,20.0s,MS6.3
SDCO Great Sand Dun 90.19 321 eP P 12 38 29.2 -0.2
comp=Z,92nm,1.1s,mb6.0
MFID Camas Ranch 90.21 330 ⇑P P 12 38 28.2 -1.2
baz=90,SNR=26
P20A De Beque 90.22 324 ⇑P P 12 38 28.7 -0.8
baz=90,SNR=23
M16A Huntsville 90.22 327 ⇓P P 12 38 28.5 -0.9
baz=90,SNR=47
L14A Malta 90.31 328 ⇑P P 12 38 29.3 -0.6
baz=90,SNR=32
U26A Atchley Ranch, 90.33 319 ⇑P P 12 38 28.9 -1.2
baz=90,SNR=10
HVU Hansel Valley 90.33 328 eP P 12 38 30.0 0.0
HVU pmax pmax
comp=Z,71nm,0.7s,mb6.1
HVU Hansel Valley 90.33 328 eP P 12 38 30.0 0.0
comp=Z,71nm,0.7s,mb6.1
HVU Hansel Valley 90.33 328 eP P 12 38 30.0 0.0
comp=Z,71nm,0.7s,mb6.1
H08A Prairie City 90.34 333 ⇑P P 12 38 29.7 -0.2
baz=90,SNR=7.8
O18A Roosevelt 90.35 325 ⇑P P 12 38 28.4 -1.7
baz=90,SNR=17
Q21A Lamborn Mesa, 90.35 323 ⇓P P 12 38 29.6 -0.6
baz=90,SNR=22
AMTX Amarillo 90.37 316 PFAKE 12 38 40.0 +10
AMTX LR LR
comp=Z,16µm,22.0s,MS6.4
P19A Cripple Cowboy 90.38 324 ⇓P P 12 38 29.5 -0.8
baz=90,SNR=41
F04A Amboy 90.39 336 ⇑P P 12 38 30.1 -0.1
baz=90,SNR=6.8
G06A Carlson Farm, 90.41 334 ⇑P P 12 38 29.9 -0.3
baz=90,SNR=8.7
R22A Saguache, Gunn 90.43 322 ⇓P P 12 38 29.8 -0.7
baz=90,SNR=27
M15A Larsen Ranch, 90.45 327 ⇑P P 12 38 28.0 -2.6
baz=90,SNR=40
I09A Lost Marbles R 90.47 332 ⇓P P 12 38 29.6 -1.0
baz=90,SNR=9.9
N16A Rees Ranch, Co 90.48 326 ⇑P P 12 38 29.6 -1.2
baz=90,SNR=12
K12A Draper Farm, C 90.50 329 ⇓P P 12 38 30.0 -0.7
baz=90,SNR=9.9
AUQP San Andres 90.55 73 eP P 12 38 37.8 +6.4
L13A Double Diamond 90.56 328 ⇓P P 12 38 31.0 -0.1
baz=90,SNR=39
SPUT South Promonto 90.58 327 eP P 12 38 33.4 +2.2
comp=Z,93nm,1.2s,mb6.0
SPUT South Promonto 90.58 327 eP P 12 38 33.4 +2.3
comp=Z,93nm,1.2s,mb6.0
HKT Hockley 90.58 310 eP P 12 38 32.0 +0.6
HKT pmax pmax
comp=Z,143nm,1.3s,mb6.1
HKT MLR MLR
comp=Z,19µm,22.0s,MS6.5
HKT Hockley 90.58 310 eP P 12 38 32.0 +0.6
comp=Z,143nm,1.3s,mb6.1
HKT LR LR
comp=Z,19µm,22.0s,MS6.5
HKT Hockley 90.58 310 eP P 12 38 32.0 +0.6
comp=Z,143nm,1.3s,mb6.1
Q20A Ridgley Place, 90.60 323 ⇓P P 12 38 30.0 -1.3
baz=90,SNR=16
U25A Circle Dot Ran 90.67 319 ⇑P P 12 38 30.4 -1.2
baz=90,SNR=17
R21A Cimarron 90.71 322 ⇑P P 12 38 30.8 -1.0
baz=90,SNR=17
JLU Jordanelle 90.72 326 eP P 12 38 31.7 -0.1
comp=Z,263nm,1.2s,mb6.4
JLU Jordanelle 90.72 326 eP P 12 38 31.7 -0.1
comp=Z,263nm,1.2s,mb6.4
O17A Robinson Place 90.73 325 ⇑P P 12 38 31.1 -0.8
baz=90,SNR=26
F03A Seaside 90.76 336 ⇓P P 12 38 30.4 -1.5
baz=90
CTU Camp Tracy 90.78 326 eP P 12 38 34.2 +2.1
comp=Z,118nm,1.0s,mb6.2
CTU Camp Tracy 90.78 326 eP P 12 38 34.2 +2.1
comp=Z,118nm,1.0s,mb6.2
DAU Daniels Canyon 90.79 326 eP P 12 38 32.6 +0.5
DAU pmax pmax
comp=Z,378nm,1.6s,mb6.5
DAU Daniels Canyon 90.79 326 eP P 12 38 32.6 +0.5
comp=Z,378nm,1.6s,mb6.5
DAU Daniels Canyon 90.79 326 eP P 12 38 32.6 +0.5
comp=Z,378nm,1.6s,mb6.5
M14A Sheep Mountain 90.80 328 ⇑P P 12 38 30.5 -1.6
baz=90,SNR=51
V26A Tequesquite Ra 90.81 318 ⇓P P 12 38 31.4 -0.9
baz=91,SNR=9.2
CUYO Cuyo Island 90.83 76 eP P 12 38 33.4 +0.6
K11A Parker Ranch, 90.83 330 ⇓P P 12 38 32.9 +0.6
baz=90,SNR=26
N15A Stansbury Isla 90.95 327 ⇓P P 12 38 33.2 +0.3
baz=91
L12A House Creek Ra 90.95 329 ⇑P P 12 38 32.8 -0.1
baz=91,SNR=24
P18A Preston Nutter 90.97 325 ⇑P P 12 38 32.3 -0.7
baz=91,SNR=26
NOQ North Oquirrh 90.97 327 eP P 12 38 35.1 +2.1
comp=Z,144nm,1.3s,mb6.1
NOQ North Oquirrh 90.97 327 eP P 12 38 35.1 +2.1
comp=Z,144nm,1.3s,mb6.1
W27A Bowe Ranch, En 90.98 317 ⇑P P 12 38 33.3 +0.1
baz=91,SNR=10
J09A Fry Pan Ranch, 91.01 332 ⇓P P 12 38 32.1 -1.0
baz=91,SNR=35
I07A Izee 91.02 333 ⇓P P 12 38 33.1 -0.1
baz=91,SNR=42
VIPM Ingram Point 91.04 334 P P 12 38 36.6 +3.4
G04A Mulino 91.06 335 ⇓P P 12 38 33.3 0.0
baz=91
Q19A Hogan Spring (91.06 324 ⇑P P 12 38 34.2 +0.7
baz=91,SNR=11
O16A Springville 91.07 326 ⇑P P 12 38 33.2 -0.2
baz=91
SDKM Sandakan 91.09 82 P P 12 38 37.2 +3.2
U24A Moreno Valley 91.11 320 ⇓P P 12 38 33.4 -0.3
baz=91,SNR=11
BGU Big Grassy Mou 91.14 327 eP P 12 38 33.5 -0.2
comp=Z,15nm,1.3s,mb5.2
BGU Big Grassy Mou 91.14 327 eP P 12 38 33.5 -0.3
comp=Z,15nm,1.3s,mb5.2
K10A MacKenzie Ranc 91.16 331 ⇓P P 12 38 33.6 -0.2
baz=91,SNR=10
V25A Rancho No Teng 91.21 319 ⇓P P 12 38 33.0 -1.2
baz=91,SNR=13
L11A Cat Creek Ranc 91.23 330 ⇓P P 12 38 34.3 +0.1
baz=91,SNR=20
R20A Redvale 91.25 323 ⇓P P 12 38 33.4 -0.9
baz=91,SNR=23
M13A Montello 91.26 328 ⇓P P 12 38 34.3 0.0
baz=91,SNR=42
J08A Circle Bar Ran 91.27 332 ⇑P P 12 38 34.0 -0.2
baz=91,SNR=28
N14A Grayback Hills 91.27 327 ⇑P P 12 38 30.6 -3.7
baz=91,SNR=28
MPU Maple Canyon 91.28 326 eP P 12 38 34.7 +0.3
comp=Z,166nm,1.3s,mb6.2
MPU Maple Canyon 91.28 326 eP P 12 38 34.7 +0.3
comp=Z,166nm,1.3s,mb6.2
X27A F and S Farms, 91.31 317 ⇓P P 12 38 34.6 0.0
baz=91
P17A Butcher Ranch, 91.32 325 ⇑P P 12 38 33.8 -0.8
baz=91,SNR=11
P17A ⇑S SKSac 12 49 05.7 -0.7
baz=91

W26A Owens Ranch, T 91.33 318 ⇓P P 12 38 34.7 -0.1
baz=91,SNR=7.1
PV04 Paradox Valley 91.34 323 eP P 12 38 34.7 0.0
PV04 Paradox Valley 91.34 323 eP P 12 38 34.7 0.0
Q18A Rafter H Ranch 91.34 324 ⇓P P 12 38 32.3 -2.4
baz=91,SNR=23
S21A Coal Bank Pass 91.38 322 ⇑P P 12 38 34.1 -0.8
baz=91,SNR=17
PV01 Paradox Valley 91.38 323 eP P 12 38 35.3 +0.4
comp=Z,378nm,0.4s
PV01 Paradox Valley 91.38 323 eP P 12 38 35.3 +0.4
comp=Z,378nm,0.4s
PV10 Paradox Valley 91.41 323 eP P 12 38 35.8 +0.7
comp=Z,5µm,0.9s
PV10 Paradox Valley 91.41 323 eP P 12 38 35.8 +0.7
comp=Z,5µm,0.9s
H04A Detroit Lake 91.42 335 ⇓P P 12 38 33.6 -1.4
baz=91,SNR=6.7
O15A The Old Anders 91.43 327 ⇓P P 12 38 35.3 +0.1
baz=91,SNR=9.7
T22A Edith 91.46 321 ⇓P P 12 38 34.5 -0.8
baz=91,SNR=22
T22A ⇑S SKSac 12 49 06.5 -0.8
baz=91
PVCP Virac 91.49 72 eP P 12 38 39.8 +4.0
SRU San Rafael 91.52 325 ⇑P P 12 38 34.7 -0.8
baz=91,SNR=115
SRU ⇓S SKSac 12 49 06.5 -1.1
baz=91
SRU San Rafael 91.52 325 eP P 12 38 35.0 -0.5
SRU pmax pmax
comp=Z,270nm,0.9s,mb6.6
SRU San Rafael 91.52 325 eP P 12 38 35.0 -0.5
comp=Z,270nm,0.9s,mb6.6
SRU San Rafael 91.52 325 eP P 12 38 35.0 -0.5
comp=Z,270nm,0.9s,mb6.6
M12A Wells 91.53 329 ⇑P P 12 38 34.7 -0.8
baz=91,SNR=31
M12A ⇑S SKSac 12 49 07.1 -0.4
baz=91
NLU North Lily Min 91.53 326 eP P 12 38 37.9 +2.3
comp=Z,86nm,1.0s,mb6.0
NLU North Lily Min 91.53 326 eP P 12 38 37.9 +2.3
comp=Z,86nm,1.0s,mb6.0
R19A Curley Farm, L 91.59 323 ⇑P P 12 38 35.1 -0.8
baz=91,SNR=14
ROSC El Rosal 91.59 277 P P 12 38 35.7 -0.6
comp=Z,4.9nm,0.4s,mb5.2,baz=252,slow=20,SNR=6.4
ROSC LR LR 13 16 44.1
comp=Z,8µm,21.4s,MS6.1,baz=13,slow=34
ROSC El Rosal 91.59 277 eP P 12 38 36.2 -0.1
ROSC El Rosal 91.59 277 eP P 12 38 36.2 -0.1
L10A Juniper Basin 91.59 330 ⇑P P 12 38 35.2 -0.6
baz=91,SNR=33
W25A X Bar L Ranch, 91.60 318 ⇓P P 12 38 35.1 -0.9
baz=91,SNR=17
P16A Fountain Green 91.62 326 ⇓P P 12 38 35.3 -0.7
baz=91,SNR=18
P16A ⇓S SKSac 12 49 07.4 -0.7
baz=91
U23A El Rito 91.63 320 ⇑P P 12 38 35.3 -0.9
baz=91,SNR=18
MSTX Muleshoe 91.65 317 ⇓P P 12 38 35.5 -0.7
baz=91,SNR=8.3
DUG Dugway 91.65 327 ⇑P P 12 38 35.0 -1.1
baz=91,SNR=140
DUG ⇓S SKSac 12 49 06.4 -1.9
baz=91
DUG Dugway 91.65 327 eP P 12 38 36.9 +0.8
DUG pmax pmax
comp=Z,140nm,1.0s,mb6.2
DUG MLR MLR
comp=Z,23µm,20.0s,MS6.6
DUG Dugway 91.65 327 eP P 12 38 36.9 +0.7
comp=Z,140nm,1.0s,mb6.2
DUG LR LR
comp=Z,23µm,20.0s,MS6.6
DUG Dugway 91.65 327 eP P 12 38 36.9 +0.8
comp=Z,140nm,1.0s,mb6.2
TMUT Trail Mountain 91.67 325 eP P 12 38 39.0 +2.7
comp=Z,81nm,0.8s,mb6.1
TMUT Trail Mountain 91.67 325 eP P 12 38 39.0 +2.7
comp=Z,81nm,0.8s,mb6.1
N13A Wendover, West 91.70 328 ⇓P P 12 38 35.4 -1.0
baz=91,SNR=20
RCP Roxas 91.71 74 ⇓eP P 12 38 36.4 -0.5
X26A CR and CF Fran 91.77 318 ⇓P P 12 38 36.7 -0.1
baz=92,SNR=8.6
T21A Navajo Lake 91.79 321 ⇓P P 12 38 36.6 -0.2
baz=92,SNR=10
R18A Canyonlands Na 91.81 324 ⇑P P 12 38 36.2 -0.7
baz=92,SNR=25
R18A ⇓S SKSac 12 49 07.8 -1.4
baz=92
M11A Holland Ranch, 91.87 329 ⇑P P 12 38 36.7 -0.5
baz=92,SNR=30
COR Corvallis 91.88 336 PFAKE 12 38 50.0 +13
COR LR LR
comp=Z,20µm,19.0s,MS6.6
Y27A Causey 91.92 317 ⇓P P 12 38 36.3 -1.2
baz=92,SNR=10
P15A Leamington 91.93 326 ⇓P P 12 38 37.3 -0.1
baz=92
U22A Llaves 91.93 321 ⇑P P 12 38 37.2 -0.3
baz=92,SNR=19
S19A Harvey Farm, M 91.96 323 ⇓P P 12 38 36.9 -0.8
baz=92,SNR=32
Q16A Castle Valley 91.97 325 ⇓P P 12 38 37.4 -0.3
baz=92,SNR=25
N12A Clover Valley, 92.05 328 ⇓P P 12 38 37.8 -0.1
baz=92,SNR=15
MVCO Mesa Verde 92.08 322 ⇑P P 12 38 37.9 -0.3
baz=92,SNR=19
MVCO Mesa Verde 92.08 322 eP P 12 38 39.6 +1.4
comp=Z,227nm,1.4s,mb6.3
MVCO LR LR
comp=Z,20µm,20.0s,MS6.5
MVCO Mesa Verde 92.08 322 eP P 12 38 39.6 +1.4
comp=Z,227nm,1.4s,mb6.3
V23A Ortiz Mt. (NFS 92.08 320 ⇓P P 12 38 38.1 -0.1
baz=92
M10A I.L. Ranch, Tu 92.09 330 ⇓P P 12 38 38.5 +0.4
baz=92
W24A Lazy 6 Ranch, 92.10 319 ⇓P P 12 38 37.7 -0.7
baz=92,SNR=16
WVOR Wild Horse Val 92.12 332 eP P 12 38 38.7 +0.4
WVOR pmax pmax
comp=Z,144nm,1.3s,mb6.1
WVOR MLR MLR
comp=Z,23µm,22.0s,MS6.6
WVOR Wild Horse Val 92.12 332 eP P 12 38 38.7 +0.4
comp=Z,144nm,1.3s,mb6.1
WVOR LR LR
comp=Z,23µm,22.0s,MS6.6
WVOR Wild Horse Val 92.12 332 eP P 12 38 38.7 +0.4
comp=Z,144nm,1.3s,mb6.1
R17A Hanksville Air 92.16 324 ⇓P P 12 38 37.7 -0.8
baz=92,SNR=36
R17A ⇓S SKSac 12 49 11.0 -0.2
baz=92
GUIM Jordan 92.17 75 eP P 12 38 39.1 +0.2
O13A Hicks Ranch, I 92.20 327 ⇓P P 12 38 39.4 +0.7
baz=92,SNR=7.6
ELK Elko 92.22 329 P P 12 38 38.6 -0.2
comp=Z,7.6nm,0.8s,mb5.1,baz=48,slow=6.0,SNR=17
ELK PKKPbc PKKPbc 12 55 52.7 -0.4
comp=Z,0.4nm,0.3s,baz=310,slow=7.9,SNR=2.6
ELK Elko 92.22 329 P P 12 38 38.6 -0.2
ELK PKKPbc PKKPbc 12 55 52.7 -0.4
ELK LR LR
comp=Z,16µm,20.0s,MS6.5
ELK Elko 92.22 329 P P 12 38 38.6 -0.2
X25A Clemmons Ranch 92.24 318 ⇓P P 12 38 38.9 0.0
baz=92
Y26A Elida 92.25 317 ⇑P P 12 38 39.1 +0.1
baz=92,SNR=7.1
P14A Drum Mountains 92.26 327 ⇓P P 12 38 38.6 -0.3
baz=92,SNR=40
P14A ⇑S SKSac 12 49 10.9 -0.8
baz=92
U21A Nageezi 92.29 321 ⇓P P 12 38 38.4 -0.7
baz=92,SNR=13
TEIG Tepich 92.29 298 eP P 12 38 40.9 +1.4
comp=Z,122nm,1.1s,mb6.1
TEIG LR LR
comp=Z,6µm,19.0s,MS6.0
TEIG Tepich 92.29 298 eP P 12 38 40.9 +1.4
comp=Z,122nm,1.1s,mb6.1

V22A **San Miguel Ran** 92.32 320 ⇓P P 12 38 39.3 0.0
baz=92,SNR=13
N11A **Elko Archery C** 92.36 329 ⇓P P 12 38 39.2 -0.2
baz=92,SNR=8.2
Z27A **Tatum** 92.38 316 ⇑P P 12 38 37.9 -1.8
baz=92,SNR=16
MYLDM **Lahad Datu** 92.39 82 P P 12 38 43.4 +3.4
O12A **Currie** 92.41 328 ⇓P P 12 38 39.9 +0.3
baz=92,SNR=11
S18A **Hurst Farm, Bl** 92.41 323 ⇓P P 12 38 38.4 -1.3
baz=92,SNR=23
Q15A **Fillmore** 92.44 326 ⇓P P 12 38 39.1 -0.7
baz=92
TSM **Tawau** 92.44 83 P P 12 38 43.6 +3.4
W23A **Werner Place,** 92.52 319 ⇑P P 12 38 40.2 -0.1
baz=92,SNR=9.9
JCT **Junction City** 92.57 312 eP P 12 38 42.5 +1.9
JCT pmax pmax
comp=Z,61nm,0.9s,mb6.0
JCT MLR MLR
comp=Z,17µm,22.0s,MS6.4
JCT **Junction City** 92.57 312 eP P 12 38 42.5 +1.9
comp=Z,61nm,0.9s,mb6.0
JCT LR LR
comp=Z,17µm,22.0s,MS6.4
JCT **Junction City** 92.57 312 eP P 12 38 42.5 +1.9
comp=Z,61nm,0.9s,mb6.0
R16A **Teasdale** 92.62 325 ⇑P P 12 38 40.0 -0.7
baz=92,SNR=44
T19A **Beclabito** 92.64 322 ⇑P P 12 38 40.3 -0.5
baz=92,SNR=10
K05A **Summer Lake** 92.70 333 ⇑P P 12 38 40.9 0.0
baz=92,SNR=32
Y25A **Mesa, Roswell** 92.72 318 ⇑P P 12 38 41.0 -0.2
baz=92,SNR=7.3
MSU **Marysvale** 92.75 325 eP P 12 38 41.7 +0.4
MSU pmax pmax
comp=Z,87nm,0.6s,mb6.4
MSU **Marysvale** 92.75 325 eP P 12 38 41.7 +0.4
comp=Z,87nm,0.6s,mb6.4
MSU **Marysvale** 92.75 325 eP P 12 38 41.7 +0.4
comp=Z,87nm,0.6s,mb6.4
V21A **Milan** 92.77 321 ⇑P P 12 38 41.1 -0.3
baz=92
MVU **Marysvale** 92.77 325 PFAKE 12 38 50.0 +8.6
MVU LR LR
comp=Z,26µm,19.0s,MS6.7
P13A **Bates Ranch, G** 92.78 327 ⇓P P 12 38 41.3 -0.1
baz=92,SNR=41
T18A **Mexican Hat** 92.80 323 ⇓P P 12 38 40.7 -0.8
baz=92,SNR=25
Z26A **Caprock** 92.83 317 ⇓P P 12 38 40.8 -0.9
baz=93,SNR=21
S17A **Black Ridge (B** 92.84 324 ⇑P P 12 38 40.9 -0.8
baz=93,SNR=16
S17A ⇓S SKSac 12 49 14.3 -0.7
baz=93
ANMO **Albuquerque** 92.84 320 P P 12 38 42.7 +0.9
comp=Z,7.0nm,0.8s,mb5.1,baz=28,slow=3.5,SNR=8.0
ANMO PKKPbc PKKPbc 12 55 53.2 +1.9
comp=Z,1.7nm,0.7s,baz=207,slow=5.0,SNR=6.5
ANMO PKPPKP 13 04 00.2
comp=Z,0.3nm,0.3s,baz=190,slow=6.1,SNR=2.2
ANMO **Albuquerque** 92.84 320 eP P 12 38 43.2 +1.4
ANMO pmax pmax
comp=Z,9.0nm,1.1s
ANMO MLR MLR
comp=Z,17µm,20.0s
ANMO **Albuquerque** 92.84 320 eP P 12 38 43.2 +1.5
comp=Z,9.0nm,1.1s,mb5.1
ANMO LR LR
comp=Z,17µm,20.0s,MS6.5
ANMO **Albuquerque** 92.84 320 eP P 12 38 43.2 +1.4
comp=Z,9.0nm,1.1s,mb5.1
Q14A **Sevier Lake (B** 92.85 326 ⇑P P 12 38 40.9 -0.8
baz=93,SNR=28
O11A **Cowboy Ranch,** 92.91 328 ⇓P P 12 38 41.4 -0.6
baz=93,SNR=9.6
127A **Arkansas Junct** 92.95 316 ⇑P P 12 38 42.4 +0.1
baz=93
127A ⇑S SKSac 12 49 15.5 -0.3
baz=93
W22A **Albuquerque** 92.96 320 ⇓P P 12 38 42.1 -0.2
baz=93
X23A **Hourglass Bar** 92.99 319 ⇑P P 12 38 41.9 -0.5
baz=93,SNR=9.7
R15A **Junction** 93.04 325 ⇓P P 12 38 42.4 -0.2
baz=93,SNR=16
R15A ⇓S SKSac 12 49 16.7 +0.6
baz=93
Y24A **Capitan** 93.11 318 ⇓P P 12 38 43.0 0.0
baz=93,SNR=11
O10A **Cortez Mining,** 93.12 329 ⇓P P 12 38 43.4 +0.5
baz=93
O10A ⇓S SKSac 12 49 18.0 +1.5
baz=93
P12A **McGill** 93.15 328 ⇑P P 12 38 43.8 +0.7
baz=93,SNR=16
U19A **Dine' College,** 93.16 322 ⇑P P 12 38 41.3 -1.9
baz=93,SNR=24
V20A **Brimhall** 93.19 321 ⇓P P 12 38 41.3 -2.0
baz=93,SNR=17
BCIP **Isla Barro Col** 93.20 284 eP P 12 38 43.3 -0.5
comp=Z,65nm,0.8s,mb6.1
BCIP LR LR
comp=Z,4µm,22.0s,MS5.8
BCIP **Isla Barro Col** 93.20 284 eP P 12 38 43.3 -0.4
comp=Z,65nm,0.8s,mb6.1
Q13A **Wheeler Ranch,** 93.20 327 ⇑P P 12 38 42.2 -1.1
baz=93,SNR=48
MOD **Modoc** 93.20 332 eP P 12 38 44.7 +1.5
comp=Z,154nm,1.2s,mb6.3
MOD LR LR
comp=Z,36µm,21.0s,MS6.8
MOD **Modoc** 93.20 332 eP P 12 38 44.7 +1.4
comp=Z,154nm,1.2s,mb6.3
Z25A **Roswell** 93.22 317 ⇓P P 12 38 42.5 -1.1
baz=93
BMN **Battle Mountai** 93.29 330 eP P 12 38 46.2 +2.5
BMN pmax pmax
comp=Z,73nm,1.4s,mb5.9
BMN MLR MLR
comp=Z,26µm,19.0s,MS6.7
BMN **Battle Mountai** 93.29 330 eP P 12 38 46.2 +2.5
comp=Z,73nm,1.4s,mb5.9
BMN LR LR
comp=Z,26µm,19.0s,MS6.7
BMN **Battle Mountai** 93.29 330 eP P 12 38 46.2 +2.5
comp=Z,73nm,1.4s,mb5.9
R14A **James Farms, M** 93.30 326 ⇑P P 12 38 43.6 -0.2
baz=93,SNR=8.1
W21A **San Fidel** 93.32 320 ⇓S SKSac 12 49 17.3 -0.5
baz=93
126A **Clayton Basin,** 93.33 317 ⇓P P 12 38 43.6 -0.4
baz=93,SNR=9.6
T17A **Navajo Res., N** 93.35 324 ⇓P P 12 38 43.8 -0.3
baz=93,SNR=17
U18A **Rough Rock, Ch** 93.38 323 ⇑P P 12 38 43.9 -0.3
baz=93,SNR=13
227A **Bennet, Jal** 93.41 316 ⇓P P 12 38 45.0 +0.6
baz=93
Y23A **Lovelace Mesa,** 93.43 319 ⇓P P 12 38 44.2 -0.2
baz=93,SNR=17
X22A **Bernardo** 93.47 320 ⇓P P 12 38 45.4 +0.7
baz=93,SNR=7.4
Q12A **Willow Creek R** 93.48 327 ⇑P P 12 38 44.2 -0.4
baz=93,SNR=11
HUMO **Hull Mountain** 93.52 334 eP P 12 38 45.9 +1.2
comp=Z,52nm,1.0s,mb5.9
HUMO LR LR
comp=Z,13µm,21.0s,MS6.4
HUMO **Hull Mountain** 93.52 334 eP P 12 38 45.9 +1.2
comp=Z,52nm,1.0s,mb5.9
S15A **Panguitch** 93.52 325 ⇑P P 12 38 44.1 -0.7
baz=93,SNR=11
Z24A **Sheeppen Canyo** 93.53 318 ⇑P P 12 38 44.0 -1.0
baz=93
V19A **Window Rock** 93.54 322 ⇓P P 12 38 44.3 -0.7
baz=93
CLNB **Carlsbad** 93.55 316 eP P 12 38 48.0 +3.0
comp=Z,28nm,1.2s,mb5.6
CLNB **Carlsbad** 93.55 316 eP P 12 38 48.0 +3.0
comp=Z,28nm,1.2s,mb5.6
BNM **Barren Site** 93.56 319 eP P 12 38 46.0 +1.0
comp=Z,62nm,1.3s,mb5.9
BNM **Barren Site** 93.56 319 eP P 12 38 46.0 +0.9
comp=Z,62nm,1.3s,mb5.9
KVTX **Kingsville** 93.56 309 PFAKE 12 39 00.0 +15
KVTX LR LR
comp=Z,9µm,22.0s,MS6.2
U17A **Shonto** 93.61 323 ⇓P P 12 38 45.0 -0.3
baz=93
328A **Wristen Ranch,** 93.62 315 ⇓P P 12 38 44.7 -0.7
baz=93,SNR=10
LAZ **Ladron** 93.62 320 eP P 12 38 48.5 +3.2
comp=Z,21nm,1.1s,mb5.5
LAZ **Ladron** 93.62 320 eP P 12 38 48.5 +3.1
comp=Z,21nm,1.1s,mb5.5
125A **Gardner Draw,** 93.67 317 ⇓P P 12 38 44.6 -1.0
baz=93,SNR=9.6
P10A **Eureka** 93.67 329 ⇑P P 12 38 45.5 +0.1
baz=93
T16A **Glen Canyon Da** 93.69 324 ⇓P P 12 38 45.4 -0.2
baz=93,SNR=11
S14A **Cedar City** 93.81 326 ⇓P P 12 38 46.6 +0.4
baz=94,SNR=12
226A **Malaga, Loving** 93.82 316 ⇑P P 12 38 45.7 -0.6
baz=94,SNR=13
R13A **O'Grain Ranch,** 93.82 326 ⇓P P 12 38 46.4 +0.2
baz=94,SNR=25
GDL2 **Guadalupe Moun** 93.86 316 eP P 12 38 46.9 +0.4
comp=Z,403nm,1.6s,mb6.6
GDL2 **Guadalupe Moun** 93.86 316 eP P 12 38 46.9 +0.4
comp=Z,403nm,1.6s,mb6.6
Y22A **Socorro** 93.89 319 ⇓P P 12 38 45.5 -1.1
baz=94,SNR=11
ARUT **Antelope Range** 93.91 326 eP P 12 38 50.1 +3.5
ARUT pmax pmax
comp=Z,64nm,1.1s,mb6.0
ARUT **Antelope Range** 93.91 326 eP P 12 38 50.1 +3.5
comp=Z,64nm,1.1s,mb6.0
X21A **Alamocita Cree** 93.92 320 ⇓P P 12 38 45.6 -1.1
baz=94,SNR=20
V18A **Ganado** 93.97 322 ⇑P P 12 38 45.7 -1.3
baz=94
R12A **Pony Springs,** 93.97 327 ⇑P P 12 38 46.4 -0.5
baz=94,SNR=13
Q11A **Duckwater** 93.99 328 ⇓P P 12 38 46.8 -0.2
baz=94,SNR=13
Z23A **Rita Site, Whi** 94.04 318 ⇓P P 12 38 46.8 -0.5
baz=94,SNR=11
428A **Kincaid Ranch,** 94.04 314 ⇓P P 12 38 47.9 +0.5
baz=94,SNR=7.8
T15A **Red Dirt Ranch** 94.07 325 ⇓P P 12 38 47.0 -0.3
baz=94,SNR=9.6
CCUT **Cedar City** 94.07 326 eP P 12 38 50.0 +2.7
comp=Z,64nm,1.1s,mb6.0
CCUT **Cedar City** 94.07 326 eP P 12 38 50.0 +2.6
comp=Z,64nm,1.1s,mb6.0
225A **Deer Hill, Car** 94.18 317 ⇓S SKSac 12 49 23.0 +0.4
baz=94
W19A **Sanders** 94.19 322 ⇓P P 12 38 48.6 +0.7
baz=94,SNR=5.9
X20A **Quemado** 94.20 321 ⇑P P 12 38 48.4 +0.4
baz=94,SNR=9.9
Y21A **Point of Rocks** 94.20 320 ⇑P P 12 38 48.2 +0.2
baz=94,SNR=13
YBH **Yreka Blue Hor** 94.21 334 P P 12 38 48.8 +0.9
comp=Z,21nm,1.1s,mb5.5,baz=57,slow=3.7,SNR=3.3
YBH **Yreka Blue Hor** 94.21 334 eP P 12 38 49.7 +1.8
YBH pmax pmax
comp=Z,42nm,1.3s
YBH MLR MLR
comp=Z,14µm,19.0s
YBH **Yreka Blue Hor** 94.21 334 eP P 12 38 49.6 +1.7
comp=Z,42nm,1.3s,mb5.7
YBH LR LR
comp=Z,14µm,19.0s,MS6.5
YBH **Yreka Blue Hor** 94.21 334 eP P 12 38 49.7 +1.8
comp=Z,42nm,1.3s,mb5.7
MSLP **Maasin** 94.21 74 eP P 12 38 51.7 +3.4
S13A **Holt Ranch, En** 94.27 326 ⇓P P 12 38 48.3 +0.1
baz=94,SNR=13
Q10A **Clear Creek Ra** 94.32 328 ⇑P P 12 38 47.5 -1.0
baz=94,SNR=9.8
326A **Caldwell Ranch** 94.32 316 ⇑P P 12 38 48.1 -0.5
baz=94
T14A **Hurricane** 94.35 325 ⇓P P 12 38 47.3 -1.3
baz=94,SNR=12
427A **Hayter Ranch,** 94.35 315 ⇓P P 12 38 48.2 -0.6
baz=94,SNR=9.8
R11A **Troy Canyon, C** 94.38 327 ⇓P P 12 38 46.8 -1.9
baz=94,SNR=40
Z22A **Elephant Butte** 94.43 319 ⇓P P 12 38 48.3 -0.8
baz=94,SNR=15
V17A **Tonalea, Kykot** 94.46 323 ⇓P P 12 38 48.4 -0.8
baz=94
U15A **North Rim** 94.51 324 ⇓P P 12 38 48.3 -1.1
baz=94,SNR=15
528A **Cox Ranch, San** 94.53 314 ⇑P P 12 38 49.4 -0.2
baz=94,SNR=18
224A **Cornudas Mount** 94.58 317 ⇓P P 12 38 48.8 -1.0
baz=94
Y20A **Horse Springs,** 94.64 320 ⇑P P 12 38 49.6 -0.4
baz=94,SNR=12
S12A **Delamar Landin** 94.68 327 ⇓P P 12 38 50.1 -0.1
baz=94,SNR=12
R10A **Warm Springs** 94.73 328 ⇑P P 12 38 50.0 -0.3
baz=94,SNR=14
CBIJ **Chichi jima** 94.74 50 P P 12 38 52.3 +1.7
comp=Z,33nm,0.6s,mb6.0,baz=47,slow=21,SNR=7.7
Z21A **St. Cloud Mine** 94.75 319 ⇑P P 12 38 50.2 -0.4
baz=94,SNR=13
T13A **Saint George** 94.75 326 ⇓P P 12 38 49.6 -0.9
baz=94,SNR=36
MNTX **Cornudas Mount** 94.80 317 eP P 12 38 51.2 +0.4
comp=Z,76nm,1.1s,mb6.0
MNTX LR LR
comp=Z,10µm,19.0s,MS6.3
MNTX **Cornudas Mount** 94.80 317 eP P 12 38 51.2 +0.4
comp=Z,76nm,1.1s,mb6.0
WUAZ **Wupatki** 94.82 323 ⇑P P 12 38 50.1 -0.7
baz=95,SNR=18
WUAZ **Wupatki** 94.82 323 eP P 12 38 51.6 +0.8
comp=Z,95nm,1.1s,mb6.1
WUAZ LR LR
comp=Z,16µm,21.0s,MS6.5
WUAZ **Wupatki** 94.82 323 eP P 12 38 51.6 +0.8
comp=Z,95nm,1.1s,mb6.1
325A **Bean Ranch, Si** 94.82 316 ⇑P P 12 38 50.9 0.0
baz=95
426A **McDonald Obser** 94.84 315 ⇑P P 12 38 51.0 0.0
baz=95,SNR=27
122A **Conniff Cattle** 94.88 318 ⇑P P 12 38 51.1 -0.1
baz=95,SNR=9.5
U14A **Mt Trumbull** 94.92 325 ⇑P P 12 38 50.2 -1.1
baz=95,SNR=36
X18A **Snowflake** 94.93 322 ⇑P P 12 38 50.7 -0.6
baz=95,SNR=10
V15A **Kaibab Nationa** 94.95 324 ⇑P P 12 38 50.4 -1.0
baz=95,SNR=20
BEKR **Beckworth** 94.99 331 ⇓P P 12 38 50.7 -0.9
baz=95,SNR=8.2
BEKR ⇓S SKSac 12 49 26.3 -0.3
baz=95
527A **Woodward Ranch** 95.00 315 ⇓P P 12 38 50.8 -1.0
baz=95,SNR=10
Y19A **Nutrioso** 95.04 321 ⇓P P 12 38 51.7 -0.2
baz=95,SNR=12
324A **Moseley Ranch,** 95.05 317 ⇑P P 12 38 50.3 -1.7
baz=95,SNR=25
628A **Black Gap, Mar** 95.09 314 ⇓P P 12 38 51.5 -0.7
baz=95,SNR=13
T11A **Corn Creek, Al** 95.15 327 ⇑P P 12 38 52.3 0.0
baz=95,SNR=23
S10A **Tonopah Range,** 95.16 328 ⇓P P 12 38 51.4 -1.0
baz=95,SNR=22
WDC **Whiskeytown Da** 95.17 333 PFAKE 12 39 00.0 +7.7
WDC LR LR
comp=Z,19µm,21.0s,MS6.5
W16A **Flagstaff** 95.24 323 ⇑P P 12 38 52.7 0.0
baz=95,SNR=9.6
WCN **Washoe City** 95.25 331 ⇑P P 12 38 51.6 -1.1
baz=95,SNR=12
425A **Indio Mountain** 95.28 316 ⇑P P 12 38 51.8 -1.2
baz=95,SNR=12
U13A **Pakoon Wash** 95.28 325 ⇑P P 12 38 52.8 -0.1
baz=95,SNR=18
TPH **Tonopah** 95.30 328 PFAKE 12 39 00.0 +7.0
TPH LR LR
comp=Z,22µm,22.0s,MS6.6
526A **Mary Lane Ranc** 95.34 315 ⇑P P 12 38 52.5 -0.8
baz=95,SNR=6.7
Z20A **Nine Sixteen R** 95.38 320 ⇑P P 12 38 52.2 -1.2
baz=95
627A **Terlingua Ranc** 95.40 314 ⇑P P 12 38 53.9 +0.2
baz=95,SNR=13
121A **Cookes Peak, D** 95.42 319 ⇑P P 12 38 52.9 -0.7
baz=95,SNR=9.8
NVAR **Mina Array Bea** 95.43 329 P P 12 38 54.6 +1.1
comp=Z,7.4nm,0.7s,mb5.2,baz=41,slow=4.6,SNR=20
NVAR PKKP PKKPbc 12 55 36.9 -7.8
comp=Z,1.4nm,0.8s,baz=207,slow=5.1,SNR=5.5
NVAR PKPPKP 13 04 02.2
comp=Z,0.4nm,0.7s,baz=152,slow=4.1,SNR=2.6
NVAR **Mina Array Bea** 95.43 329 P P 12 38 54.7 +1.1
X17A **Forest Lakes** 95.50 322 ⇓P P 12 38 54.3 +0.3
baz=95,SNR=10
W15A **Williams** 95.52 323 ⇑P P 12 38 53.9 -0.1
baz=95,SNR=8.2
V14A **Boquillas Ranc** 95.54 324 ⇑P P 12 38 53.7 -0.4
baz=95,SNR=21
Y18A **Canyon Day Jun** 95.57 321 ⇓P P 12 38 53.5 -0.8
baz=95,SNR=11
TGUH **Tegucigalpa,Un** 95.64 293 PFAKE 12 39 10.0 +15
TGUH LR LR
comp=Z,8µm,21.0s,MS6.1
TXAR **Lajitas Array** 95.65 314 P P 12 38 56.0 +1.2
comp=Z,7.8nm,1.1s,mb5.1,baz=58,slow=6.8,SNR=20
TXAR PP PP 12 42 53.0 +7.6
comp=Z,31nm,1.2s,baz=49,slow=5.8,SNR=4.9
TXAR PKKPbc PKKPbc 12 55 49.1 +5.2
comp=Z,1.4nm,0.8s,baz=202,slow=6.8,SNR=5.3
TXAR PKPPKP 13 03 49.5
comp=Z,0.5nm,0.9s,baz=190,slow=6.4,SNR=3.9
TXAR LR LR 13 22 51.5
comp=Z,8µm,19.2s,MS6.2,baz=0.0,slow=36
TXAR **Lajitas Array** 95.65 314 P P 12 38 56.0 +1.2
TXAR PP PP 12 42 53.0 +7.6
TXAR PKKPbc PKKPbc 12 55 49.1 +5.2
TXAR P'P' 13 03 49.5
TXAR LR LR 13 22 51.5
TXAR **Lajitas Array** 95.65 314 P P 12 38 56.0 +1.3
X16A **Lo Mia Camp, P** 95.75 322 ⇓P P 12 38 54.2 -0.9
baz=96,SNR=15
626A **Big Bend Ranch** 95.75 315 ⇓P P 12 38 54.0 -1.2
baz=96,SNR=7.1
V13A **Grand Canyon W** 95.76 325 ⇑P P 12 38 54.2 -0.9
baz=96,SNR=16
BUKP **Musuan** 95.79 75 eP P 12 38 59.5 +3.9
120A **U Bar Ranch, L** 95.85 319 ⇓P P 12 38 54.3 -1.3
baz=96,SNR=11
W14A **Seligman** 95.87 324 ⇓P P 12 38 54.1 -1.5
baz=96,SNR=19
Y17A **Roosevelt** 96.04 322 ⇓P P 12 38 56.1 -0.3
baz=96,SNR=9.6
X15A **Humboldt** 96.07 323 ⇑P P 12 38 55.8 -0.8
baz=96,SNR=16
Z17A **San Carlos Hig** 96.18 321 ⇑P P 12 38 56.5 -0.5
baz=96,SNR=8.5
V12A **Nelson** 96.25 326 ⇓P P 12 38 56.6 -0.8
baz=96,SNR=15
GRAC **Grapevine Rang** 96.27 328 ⇓P P 12 38 58.3 +0.8
baz=96,SNR=8.8
220A **Playas Peak, P** 96.30 319 ⇓P P 12 38 58.0 +0.3
baz=96,SNR=11
U10A **Ash Meadows, A** 96.32 327 ⇑P P 12 38 57.2 -0.5
baz=96,SNR=13
W13A **Hualapai Mount** 96.34 325 ⇓P P 12 38 57.6 -0.1
baz=96,SNR=9.7
JTS **JuntasAbangare** 96.37 288 PFAKE 12 39 10.0 +12
JTS LR LR
comp=Z,8µm,22.0s,MS6.1
X14A **Yava** 96.39 324 ⇑P P 12 38 57.6 -0.4
baz=96,SNR=14
V11A **Goodsprings** 96.42 326 ⇑P P 12 38 57.7 -0.4
baz=96,SNR=14
118A **Homack Ranch,** 96.45 320 ⇓P P 12 38 58.7 +0.4
baz=96
FURC **Furnace Creek,** 96.50 327 ⇑P P 12 38 57.6 -0.9
baz=96,SNR=10
Y15A **Casa Rosa Ranc** 96.55 323 ⇓P P 12 38 58.6 -0.1
baz=96,SNR=15
CMB **Columbia Colle** 96.60 331 eP P 12 39 01.7 +2.8
CMB pmax pmax
comp=Z,45nm,1.2s,mb5.8
CMB MLR MLR
comp=Z,20µm,20.0s,MS6.6
CMB **Columbia Colle** 96.60 331 eP P 12 39 01.7 +2.8
comp=Z,45nm,1.2s,mb5.8
CMB LR LR
comp=Z,20µm,20.0s,MS6.6
CMB **Columbia Colle** 96.60 331 eP P 12 39 01.7 +2.8
comp=Z,45nm,1.2s,mb5.8
219A **White Tail Can** 96.60 320 ⇑P P 12 38 58.6 -0.4
baz=96,SNR=17
Z16A **Peralta Trail,** 96.61 322 ⇑P P 12 38 58.7 -0.4
baz=96,SNR=8.7
DAV **Davao City (W)** 96.70 76 PFAKE 12 39 10.0 +10
DAV LR LR
comp=Z,9µm,22.0s,MS6.2
X13A **Yucca** 96.73 324 ⇓P P 12 38 59.3 -0.2
baz=96,SNR=18
320A **Kipp Ranch, An** 96.75 319 ⇓P P 12 38 59.4 -0.3
baz=96,SNR=11
HOPS **Hopland** 96.76 333 PFAKE 12 39 10.0 +10
HOPS LR LR
comp=Z,22µm,21.0s,MS6.6
117A **Oracle** 96.89 321 ⇓P P 12 39 00.2 -0.2
baz=97,SNR=15
LDFC **Landfair** 96.91 325 eP P 12 39 01.9 +1.6
comp=Z,136nm,1.2s,mb6.2
LDFC **Landfair** 96.91 325 eP P 12 39 01.9 +1.6
comp=Z,136nm,1.2s,mb6.2
DAC **Darwin (Calif)** 96.98 328 PFAKE 12 39 10.0 +9.4
DAC LR LR
comp=Z,13µm,19.0s,MS6.4
CWC **Cottonwood Cre** 97.05 328 ⇑P P 12 39 00.8 -0.1
baz=97,SNR=6.9
PAF **Port-aux-Franc** 97.05 150 PFAKE 12 39 10.0 +10
PAF LR LR
comp=Z,9µm,20.0s,MS6.2
PDMCI **Parker Dam,Lak** 97.11 324 ⇓P P 12 39 02.2 +0.9
baz=97,SNR=9.8
MPMC **Manual Prospec** 97.12 328 ⇑P P 12 39 00.9 -0.4
baz=97,SNR=14
TUC **Tucson** 97.13 321 eP P 12 39 02.3 +0.9
TUC pmax pmax
comp=Z,35nm,0.9s,mb5.8
TUC MLR MLR
comp=Z,13µm,20.0s,MS6.4
TUC **Tucson** 97.13 321 eP P 12 39 02.2 +0.9
comp=Z,35nm,0.9s,mb5.8
TUC LR LR
comp=Z,13µm,20.0s,MS6.4
TUC **Tucson** 97.13 321 eP P 12 39 02.2 +0.8
comp=Z,35nm,0.9s,mb5.8
APG **El Apazote** 97.32 295 P P 12 39 04.7 +2.1
comp=Z,6.4nm,0.9s,mb5.1,baz=109,slow=22,SNR=5.7
GMRC **Granite Mounta** 97.40 326 ⇓P P 12 39 02.3 -0.3
baz=97,SNR=12
MCCM **Marconi Confer** 97.44 332 PFAKE 12 39 10.0 +7.3
MCCM LR LR
comp=Z,23µm,22.0s,MS6.6
115A **Sonoran Desert** 97.52 322 ⇑P P 12 39 03.2 0.0
baz=97,SNR=11
217A **Green Valley** 97.57 321 ⇑P P 12 39 03.5 +0.1
baz=97
CPUP **Villa Florida** 97.59 243 P P 12 39 03.6 +0.2
comp=Z,3.7nm,0.9s,baz=46,slow=7.3,SNR=4.2
CPUP LR LR 13 23 11.5
comp=Z,18µm,21.5s,baz=37,slow=35
CPUP **Villa Florida** 97.59 243 P P 12 39 03.6 +0.2
CPUP pmax pmax
comp=Z,4.0nm,0.9s
CPUP MLR MLR
comp=Z,18µm,21.5s
CPUP **Villa Florida** 97.59 243 P P 12 39 03.6 +0.2
RCTC **Rector, Farmer** 97.64 329 ⇑P P 12 39 03.2 -0.4
baz=97
HEC **Hector,Ludlow** 97.66 326 ⇓P P 12 39 03.6 -0.1
baz=97,SNR=13
OTAV **Otavalo** 97.66 276 eP P 12 39 05.8 +1.6
comp=Z,70nm,1.4s,mb6.0
OTAV LR LR
comp=Z,4µm,21.0s,MS5.9
OTAV **Otavalo** 97.66 276 eP P 12 39 05.8 +1.7
comp=Z,70nm,1.4s,mb6.0
IRM **Iron Mountain** 97.69 325 ⇓P P 12 39 04.3 +0.4
baz=97,SNR=16
Z13A **Yuma Proving G** 97.80 323 ⇓P P 12 39 04.6 +0.2
baz=98
ISA **Isabella** 97.87 328 ⇓P P 12 39 05.0 +0.3

baz=98
ISA Isabella 97.87 328 *e*P **P 12 39 06.0 +1.3**
ISA pmax pmax
comp=Z,44nm,0.8s,mb6.0
ISA Isabella 97.87 328 *e*P **P 12 39 06.0 +1.3**
comp=Z,44nm,0.8s,mb6.0
ISA Isabella 97.87 328 *e*P **P 12 39 06.0 +1.3**
comp=Z,44nm,0.8s,mb6.0
BC3 Big Chuckawall 98.25 325 ⇑P **P 12 39 06.6 +0.2**
baz=98,SNR=9.1
BFSC Mount Baldy Ra 98.74 327 ⇑P **P 12 39 06.1 -2.5**
baz=98
PFO Pinyon Flat Ob 98.74 326 ⇑P **P 12 39 08.4 -0.3**
baz=98,SNR=18
PFO Pinyon Flat Ob 98.74 326 PFAKE 12 39 20.0 +11
PFO LR LR
comp=Z,18μm,21.0s,MS6.5
CMIG Matias Romero 99.00 300 P **P 12 39 12.7 +2.7**
comp=Z,11nm,1.2s,mb5.3,baz=84,slow=9.2,SNR=2.7
CMIG LR LR 13 21 04.8
comp=Z,5μm,20.8s,MS6.0,baz=193,slow=34
PKM Peak Mountain 99.09 329 ⇓P **P 12 39 11.0 +0.8**
baz=99
MONP Monument Peak 99.33 325 ⇑P **P 12 39 12.2 +1.0**
baz=99,SNR=11
DVTC Desert V Tower 99.38 325 ⇑P **P 12 39 11.5 0.0**
baz=99
LPAZ La Paz 99.51 257 P **P 12 39 14.8 +2.7**
comp=Z,2.5nm,0.7s,baz=12,slow=6.0,SNR=8.6
LPAZ PKKP PKKPbc 12 55 39.5 +6.0
comp=Z,1.6nm,0.9s,baz=107,slow=4.2,SNR=3.2
LPAZ LR LR 13 29 44.2
comp=Z,6μm,19.2s,MS6.1,baz=209,slow=39
LPAZ La Paz 99.51 257 *e*P **P 12 39 12.9 +0.7**
comp=Z,9.2nm,1.2s,mb5.1
LPAZ LR LR
comp=Z,8μm,20.0s,MS6.2
LPAZ La Paz 99.51 257 *e*P **P 12 39 12.9 +0.7**
comp=Z,9.2nm,1.2s,mb5.1
BAR Barrett 99.62 325 *e*P Pdif 12 39 14.0 +1.6
comp=Z,33nm,1.1s
BAR Barrett 99.62 325 *e*P Pdif 12 39 14.0 +1.6
comp=Z,33nm,1.1s
NNA Nana 103.76 265 PFAKE 12 39 40.0 +9.2
NNA LR LR
comp=Z,6μm,21.0s,MS6.1
GUMO Guam 106.28 58 PFAKE 12 44 10.0 +16
GUMO LR LR
comp=Z,6μm,20.0s,MS6.1
PAYG Puerto Ayora 107.45 283 PFAKE 12 44 10.0 +14
PAYG LR LR
comp=Z,3μm,22.0s,MS5.8
TRQA Tornquist 107.73 235 PFAKE 12 44 10.0 +14
TRQA LR LR
comp=Z,7μm,21.0s,MS6.2
CFAA Coronel Fontan 108.41 244 PKKPab PKKPab 12 55 13.9 -5.2
baz=151,slow=2.4
LCO Las Campanas 108.75 248 PFAKE 12 44 10.0 +12
LCO LR LR
comp=Z,10μm,19.0s,MS6.4
MBWA Marble Bar 109.03 102 PFAKE 12 44 10.0 +11
MBWA LR LR
comp=Z,4μm,20.0s,MS6.0
MAW Mawson 109.79 164 PKKPbc PKKPbc 12 55 05.1 +1.3
comp=Z,1.0nm,0.5s,baz=254,slow=7.0,SNR=2.5
MAW Mawson 109.79 164 *e*PKPdf PKiKP 12 44 02.5 +3.7
MAW LR LR
comp=Z,16μm,21.0s,MS6.6
MIDW Midway 111.85 18 PFAKE 12 44 20.0 +16
MIDW LR LR
comp=Z,12μm,21.0s,MS6.5
FITZ Fitzroy Crossi 111.93 96 Pdiff Pdif 12 40 06.8 -0.4
comp=Z,3.1nm,0.9s,baz=198,slow=3.2,SNR=2.9
FITZ PKKPbc PKKPbc 12 54 53.4 -2.0
comp=Z,6.3nm,1.1s,baz=101,slow=10,SNR=2.7
FITZ Fitzroy Crossi 111.93 96 *e*Pdif Pdif 12 40 07.1 0.0
NWAO Narrogin (SRO) 113.48 114 PFAKE 12 44 20.0 +13
NWAO LR LR
comp=Z,3μm,21.0s,MS5.9
KAKA Kakadu 114.22 87 *e*PKPdf PKiKP 12 44 10.6 +1.8
WAKE Wake Island 114.33 36 PFAKE 12 44 20.0 +11
WAKE LR LR
comp=Z,10μm,22.0s,MS6.4
PLCA Paso Flores 114.78 237 PKP PKiKP 12 44 10.5 +1.3
comp=Z,5.3nm,0.9s,baz=261,slow=1.1,SNR=6.4
PLCA PKKPab PKKPab 12 54 50.3 -0.2
comp=Z,2.0nm,0.9s,baz=198,slow=12,SNR=2.9
PLCA Paso Flores 114.78 237 PKIKP PKiKP 12 44 10.5 +1.3
PLCA 12 54 50.3
PLCA pmax pmax
comp=Z,5.0nm,0.9s
PLCA Paso Flores 114.78 237 *e*PKPdf PKiKP 12 44 11.2 +2.1
PLCA LR LR
comp=Z,8μm,21.0s,MS6.3
MIR Mirnyy 117.47 155 *e*PKIKP PKPdf 12 44 18.0 +4.5
MIR pmax pmax
comp=Z,37nm,1.0s
WRA Warramunga Arr 119.80 93 Pdiff Pdif 12 40 41.9 -0.2
comp=Z,0.5nm,0.8s,baz=319,slow=3.9,SNR=5.9
WRA PKP PKPdf 12 44 18.5 -1.0
comp=Z,10nm,0.9s,baz=321,slow=1.4,SNR=26
WRA PP PP 12 45 43.2 +0.1
comp=Z,20nm,1.0s,baz=314,slow=5.8,SNR=4.8
WRA PKKPab PKKPab 12 54 33.1 +2.6
comp=Z,2.5nm,0.8s,baz=113,slow=3.9,SNR=5.7
WRA Warramunga Arr 119.80 93 P Pdif 12 40 41.9 -0.2
WRA 12 44 18.5
WRA 12 45 43.3
WRA pmax pmax
comp=Z,1.0nm,0.8s
WRA pmax pmax
comp=Z,10.0nm,0.9s
WRA pmax pmax
comp=Z,20nm,1.0s
WRA Warramunga Arr 119.80 93 Pdif Pdif 12 40 41.9 -0.2
WRA PKP PKPdf 12 44 18.5 -1.0
WRA PP PP 12 45 43.2 +0.1
WRA PKKPab PKKPab 12 54 33.1 +2.6
WRA Warramunga Arr 119.80 93 PKIKP PKPdf 12 44 18.5 -0.9
WRAB Tennant Creek 119.80 93 *e*PKIKP PKPdf 12 44 21.7 +2.2
WRAB MLR MLR
comp=Z,4μm,21.0s,MS6.0
WRAB Tennant Creek 119.80 93 *e*PKIKP PKPdf 12 44 21.6 +2.1
FORT Forrest 120.42 107 *e*PKP PKPdf 12 44 20.1 -0.3
comp=Z,39nm,0.7s
FORT Forrest 120.42 107 *e*PKPdf PKPdf 12 44 20.8 +0.5
FORT Forrest 120.42 107 *e*PKIKP PKPdf 12 44 20.8 +0.4
KIP Kipapa 120.93 359 PFAKE 12 44 30.0 +8.2
KIP LR LR
comp=Z,5μm,20.0s,MS6.1
ASAR Alice Springs 121.42 97 Pdiff Pdif 12 40 58.4 +9.1
comp=Z,0.3nm,0.7s,baz=309,slow=4.7,SNR=7.5
ASAR PKP PKPdf 12 44 22.0 -0.5
comp=Z,9.8nm,0.8s,baz=306,slow=1.7,SNR=22
ASAR PP PP 12 45 51.7 -2.6
comp=Z,5.5nm,0.8s,baz=313,slow=1.9,SNR=2.1
ASAR PKKPab PKKPab 12 54 24.4 +1.2
comp=Z,1.3nm,0.6s,baz=121,slow=3.8,SNR=15
ASAR Alice Springs 121.42 97 PKIKP PKPdf 12 44 22.0 -0.5
ASAR 12 45 51.7
ASAR Alice Springs 121.42 97 PKP PKPdf 12 44 22.0 -0.5
ASAR PP PP 12 45 51.7 -2.6
ASAR PKKPab PKKPab 12 54 24.4 +1.2
ASAR Alice Springs 121.42 97 PKIKP PKPdf 12 44 22.0 -0.5
ASAR Alice Springs 121.42 97 PP PP 12 45 51.7 -2.6
PMSA Palmer Station 121.79 210 PKP PKPdf 12 44 22.8 +1.0
comp=Z,10nm,0.8s,baz=0.0,slow=0.0,SNR=3.8
PMSA Palmer Station 121.79 210 PKP PKPdf 12 44 22.9 +1.0
PMSA LR LR
comp=Z,6μm,20.0s,MS6.2
PMSA Palmer Station 121.79 210 PKIKP PKPdf 12 44 22.9 +1.0
POHA Pohakuloa 122.52 357 PFAKE 12 44 40.0 +15
POHA LR LR
comp=Z,7μm,21.0s,MS6.3
COEN Coen 123.39 82 *e*PKPdf PKPdf 12 44 28.2 +1.7
COEN Coen 123.39 82 *e*PKIKP PKPdf 12 44 28.2 +1.7
CASY Casey 123.72 151 *e*PKP PKPdf 12 44 24.6 -0.9
CASY Casey 123.72 151 *e*PKPdf PKPdf 12 44 26.7 +1.2
CASY LR LR
comp=Z,8μm,22.0s,MS6.4
CASY Casey 123.72 151 *e*PKIKP PKPdf 12 44 26.7 +1.2
JOHN Johnston Islan 124.63 13 PFAKE 12 44 40.0 +11
JOHN LR LR
comp=Z,8μm,21.0s,MS6.4
QSPA South Pole Qui 127.81 180 PKP PKPdf 12 44 34.3 +1.2
comp=Z,19nm,0.8s,baz=256,slow=1.9,SNR=27
QSPA South Pole Qui 127.81 180 *e*PKPdf PKPdf 12 44 34.0 +1.0
QSPA LR LR
comp=Z,23μm,21.0s,MS6.8
QSPA South Pole Qui 127.81 180 *e*PKIKP PKPdf 12 44 34.0 +0.9
CTA Charters Tower 129.29 86 PKP PKPdf 12 44 40.0 +2.4
comp=Z,14nm,0.6s,baz=283,slow=1.5,SNR=12
CTA Charters Tower 129.29 86 PKIKP PKPdf 12 44 40.1 +2.5
CTA pmax pmax
comp=Z,14nm,0.6s
CTA Charters Tower 129.29 86 PKIKP PKPdf 12 44 40.0 +2.4
CTAO Charters Tower 129.29 86 *e*PKIKP PKPdf 12 44 38.4 +0.8
CTAO MLR MLR
comp=Z,4μm,21.0s,MS6.1
CTAO Charters Tower 129.29 86 *e*PKIKP PKPdf 12 44 38.4 +0.8
STKA Stephens Creek 131.27 102 PKhKP PKPpre 12 44 34.6
comp=Z,3.4nm,0.8s,baz=355,slow=4.9,SNR=5.6
STKA PKP PKPdf 12 44 42.0 +1.0
comp=Z,6.8nm,0.6s,baz=331,slow=5.5,SNR=6.7
STKA SKPbc SKPbc 12 48 04.1 -1.2
comp=Z,13nm,0.8s,baz=250,slow=5.2,SNR=2.8
STKA SKP 12 48 15.1
comp=Z,48nm,1.1s,baz=325,slow=5.7,SNR=10
STKA Stephens Creek 131.27 102 *e*PKPdf PKPdf 12 44 42.7 +1.7
STKA *e*SKPbc SKPbc 12 48 03.9 -1.3
STKA Stephens Creek 131.27 102 *e*PKIKP PKPdf 12 44 42.7 +1.6
HNR Honiara 133.14 64 PFAKE 12 45 00.0 +15
HNR LR LR
comp=Z,6μm,20.0s,MS6.3
SBA Scott Base 137.42 170 PFAKE 12 45 00.0 +8.8
SBA LR LR
comp=Z,9μm,22.0s,MS6.4
RPN Rapa Nui 137.56 270 PFAKE 12 45 00.0 +7.0
RPN LR LR
comp=Z,2μm,20.0s,MS5.9
CAN Canberra 138.29 103 PFAKE 12 45 10.0 +16
CAN LR LR
comp=Z,4μm,20.0s,MS6.2
ARMA Armidale 138.51 95 *e*PKPdf PKPdf 12 44 54.9 +0.3
ARMA Armidale 138.51 95 *e*PKIKP PKPdf 12 44 54.9 +0.3
TAU Tasmania Unive 139.10 115 *e*PKIKP PKPdf 12 44 56.2 +0.9
TAU MLR MLR
comp=Z,4μm,21.0s,MS6.1
TAU Tasmania Unive 139.10 115 *e*PKIKP PKPdf 12 44 56.2 +0.9
XMAS Kiritimati 140.18 358 PFAKE 12 45 10.0 +12
XMAS LR LR
comp=Z,8μm,22.0s,MS6.4
FUNA Funafuti 144.47 40 PFAKE 12 45 20.0 +14
FUNA LR LR
comp=Z,14μm,19.0s,MS6.8
DZM Mont Dzumac 146.04 72 *e*PKPbc PKPbc 12 45 08.9 -0.2
comp=Z,2μm,1.4s
DZM *e*SS SS 13 07 25.5 -0.5
comp=Z,3μm,28.4s
DZM *e*LR LR 13 33 10.7
comp=Z,12μm,22.9s
DZM Mont Dzumac 146.04 72 *e*PKPdf PKPbc 12 45 10.7 +1.6
DZM Mont Dzumac 146.04 72 *e*PKIKP PKPbc 12 45 10.7 +1.6
TAOE Nuku Hiva Isla 146.60 325 *e*PKPbc PKPbc 12 45 09.2 -1.8
comp=Z,2μm,1.3s
TAOE *e*LR LR 13 33 19.2
comp=Z,10μm,22.1s
MSVF Nonsavu 151.26 52 *e*PKPbc PKPbc 12 45 24.1 +1.3
MSVF LR LR
comp=Z,5μm,21.0s,MS6.3
MSVF Nonsavu 151.26 52 *e*PKPbc PKPbc 12 45 24.1 +1.3
AFI Afiamalu 153.32 30 PKPbc PKPbc 12 45 26.8 -0.7
comp=Z,22nm,0.9s,baz=90,slow=2.0,SNR=2.4
AFI PKPab PKPab 12 45 36.9 -2.5
comp=Z,90nm,0.8s,baz=246,slow=9.2,SNR=8.2
AFI Afiamalu 153.32 30 *e*PKPbc PKPbc 12 45 30.3 +2.8
AFI LR LR
comp=Z,7μm,21.0s,MS6.5
RKT Rikitea 154.97 299 *e*LR LR 13 37 14.8
comp=Z,8μm,26.2s
RPZ Rata Peaks 156.38 114 PKPab PKPab 12 45 49.1 -2.7
comp=Z,34nm,1.0s,baz=137,slow=11,SNR=5.3
PPT Papeete 158.21 336 *e*LR LR 13 38 41.7
comp=Z,13μm,25.0s
SNZO South Karori 159.16 108 PFAKE 12 45 40.0 +13
SNZO LR LR
comp=Z,8μm,22.0s,MS6.5
URZ Urewera 160.85 98 PKPab PKPab 12 46 10.3 -1.1
comp=Z,19nm,0.7s,baz=299,slow=5.7,SNR=9.6
RAO Raoul Island 161.70 67 PFAKE 12 45 40.0 +10
RAO LR LR
comp=Z,8μm,22.0s
RAR Rarotonga 163.28 4 PFAKE 12 45 40.0 +8.2
RAR LR LR
comp=Z,8μm,19.0s

NEIC ***08*** *12:37:21.8,38°.06N×21°.60E,h28km,ML3.6(ATH),After ATH.*
ATH ***08*** *12:37:21.8,38°.06N×21°.60E,h28km,ML3.6*
CSEM ***08*** *12:37:22.7±0.3,38°.07N×21°.58E,h24km±2km,ML3.6, Error ellipse: s-maj=8.3km s-min=7.4km az=98.0*
ISCJB ***08*** *12:37:22.9±0.4,38°.08N±0°.03×21°.60E±0°.04,h24km±4km, mb4.0/3,Error ellipse: s-maj=5.2km s-min=4.7km az=177.7*
IDC ***08*** *12:37:25.7±2.2,38°.43N×22°.47E,h0km,mb4.1/3, mb1 4.0/5,mb1mx3.7/27,mbtmp4.0/5,ML3.7/2,Error ellipse: s-maj=43.6km s-min=24.5km az=66.0*
ISC 08 12:37:22.8±0.4,38°.07N±0°.03×21°.62E±0°.03,h19km±3km, n50,σ0°90/74,mb4.0/3,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.12**	**264**	*e*Pb	**Pg**	**12 37 27.3**	**+0.4**
RLS				*e*Sb	**Sg**	**12 37 30.8**	**+1.3**
RLS	**Riolos of Patr**	**0.12**	**264**	*e*PB	**Pg**	**12 37 27.2**	**+0.3**
RLS				*e*SB	**Sg**	**12 37 30.8**	**+1.3**
RLS	**Riolos of Patr**	**0.12**	**264**	*e*Pb	**Pg**	**12 37 27.3**	**+0.4**
RLS				*e*Sb	**Sg**	**12 37 30.8**	**+1.3**
EFP	**Efpalio**	**0.42**	**32**	*e*PB	**Pg**	**12 37 31.0**	**-0.5**
EFP				*e*SB	**Sg**	**12 37 37.9**	**+0.6**
EFP	**Efpalio**	**0.42**	**32**	*e*Pb	**Pg**	**12 37 31.0**	**-0.5**
EFP				*e*Sb	**Sg**	**12 37 37.9**	**+0.6**
GUR	**Goura**	**0.58**	**103**	*e*PN	**Pg**	**12 37 34.3**	**-0.1**
GUR				*e*SN	**Sg**	**12 37 42.8**	**+0.5**
GUR	**Goura**	**0.58**	**103**	*e*Pn	**Pg**	**12 37 34.3**	**-0.1**
GUR				*e*Sn	**Sg**	**12 37 42.8**	**+0.5**
VLS	**Valsamata**	**0.82**	**278**	*e*Pb	**Pg**	**12 37 37.2**	**-1.7**
VLS				*e*Sn	**Sg**	**12 37 50.2**	**+0.4**
VLS	**Valsamata**	**0.82**	**278**	*e*PB	**Pg**	**12 37 37.2**	**-1.7**
VLS				*e*SN	**Sg**	**12 37 50.2**	**+0.4**
VLS	**Valsamata**	**0.82**	**278**	*e*Pb	**Pg**	**12 37 37.2**	**-1.7**
VLS				*e*Sn	**Sg**	**12 37 50.2**	**+0.4**
VLX	**Vlachokerasia**	**0.92**	**139**	*e*PN	**Pg**	**12 37 40.1**	**-0.7**
VLX				*e*SN	**Sg**	**12 37 53.0**	**+0.1**
VLX	**Vlachokerasia**	**0.92**	**139**	*e*Pn	**Pg**	**12 37 40.1**	**-0.7**
VLX				*e*Sn	**Sg**	**12 37 53.0**	**+0.1**
ITM	**Ithomi**	**0.92**	**165**	*e*Pn	**Pg**	**12 37 39.3**	**-1.5**
ITM				*e*Sn	**Sg**	**12 37 53.6**	**+0.7**
ITM	**Ithomi**	**0.92**	**165**	*e*PN	**Pg**	**12 37 39.3**	**-1.5**
ITM				*e*SN	**Sg**	**12 37 53.6**	**+0.7**
ITM	**Ithomi**	**0.92**	**165**	*e*Pn	**Pg**	**12 37 39.3**	**-1.5**
ITM				*e*Sn	**Sg**	**12 37 53.6**	**+0.7**
LTK	**Loutraki**	**1.06**	**92**	*e*PN	**Pg**	**12 37 43.1**	**-0.3**
LTK				*e*SN	**Sg**	**12 37 57.2**	**-0.2**
LTK	**Loutraki**	**1.06**	**92**	*e*Pn	**Pg**	**12 37 43.1**	**-0.3**
LTK				*e*Sn	**Sg**	**12 37 57.2**	**-0.2**
AGG	**Agios Georgios**	**1.10**	**30**	*e*Pn	**Pg**	**12 37 43.8**	**-0.4**
AGG				*e*Sn	**Sg**	**12 37 58.5**	**-0.1**
AGG	**Agios Georgios**	**1.10**	**30**	*e*PN	**Pg**	**12 37 43.8**	**-0.4**
AGG				*e*SN	**Sg**	**12 37 58.5**	**-0.1**
AGG	**Agios Georgios**	**1.10**	**30**	*e*Pn	**Pg**	**12 37 43.8**	**-0.4**
AGG				*e*Sn	**Sg**	**12 37 58.5**	**-0.1**
PYL	**PYLOS**	**1.18**	**175**	*e*PN	**Pn**	**12 37 44.2**	**-0.1**
PYL				*e*SN	**Sn**	**12 37 59.5**	**-0.3**
PYL	**PYLOS**	**1.18**	**175**	*e*Pn	**Pn**	**12 37 44.2**	**-0.1**
PYL				*e*Sn	**Sn**	**12 37 59.5**	**-0.3**
LKR	**Lokris**	**1.23**	**61**	*e*Pn	**Pn**	**12 37 45.6**	**+0.6**
LKR	**Lokris**	**1.23**	**61**	*e*PN	**Pn**	**12 37 45.6**	**+0.6**
LKR	**Lokris**	**1.23**	**61**	*e*Pn	**Pn**	**12 37 45.6**	**+0.6**
NAIG	**Nisos Aigina**	**1.51**	**101**	*e*Pn	**Pn**	**12 37 49.2**	**+0.4**
NAIG	**Nisos Aigina**	**1.51**	**101**	*e*PN	**Pn**	**12 37 49.2**	**+0.4**
NAIG	**Nisos Aigina**	**1.51**	**101**	*e*Pn	**Pn**	**12 37 49.2**	**+0.4**
THL	**Klokotos Trika**	**1.52**	**11**	*e*PN	**Pn**	**12 37 49.3**	**+0.2**
THL	**Klokotos Trika**	**1.52**	**11**	*e*Pn	**Pn**	**12 37 49.3**	**+0.2**
ATH	**Athens Observa**	**1.66**	**93**	*e*Pn	**Pn**	**12 37 51.3**	**+0.4**
ATH	**Athens Observa**	**1.66**	**93**	*e*PN	**Pn**	**12 37 51.3**	**+0.4**
ATH	**Athens Observa**	**1.66**	**93**	*e*Pn	**Pn**	**12 37 51.3**	**+0.4**
VLI	**Veliai**	**1.71**	**142**	*e*Pb	**Pb**	**12 37 51.1**	**-2.5**
VLI	**Veliai**	**1.71**	**142**	*e*PB	**Pb**	**12 37 51.1**	**-2.5**
VLI	**Veliai**	**1.71**	**142**	*e*Pb	**Pb**	**12 37 51.1**	**-2.5**
VLY	**Voula,Athens**	**1.73**	**97**	*e*Pn	**Pn**	**12 37 52.1**	**+0.2**
VLY	**Voula,Athens**	**1.73**	**97**	*e*PN	**Pn**	**12 37 52.1**	**+0.2**
VLY	**Voula,Athens**	**1.73**	**97**	*e*Pn	**Pn**	**12 37 52.1**	**+0.2**
NEO	**Neokhori**	**1.76**	**45**	*e*Pb	**Pb**	**12 37 52.1**	**-2.4**
NEO	**Neokhori**	**1.76**	**45**	*e*PB	**Pb**	**12 37 52.1**	**-2.4**
NEO	**Neokhori**	**1.76**	**45**	*e*Pb	**Pb**	**12 37 52.1**	**-2.4**
CHOS	**Chios island**	**3.50**	**83**	*e*PN	**Pn**	**12 38 17.0**	**+0.7**
CHOS	**Chios island**	**3.50**	**83**	*e*Pn	**Pn**	**12 38 17.0**	**+0.7**
IDI	**Anoyia**	**3.82**	**136**	Pn	**Pn**	**12 38 22.5**	**+1.9**
	2.4nm,0.3s,baz=238,slow=19,SNR=2.9						
IDI				Sn	**Sn**	**12 39 09.3**	**+4.2**
	4.2nm,0.3s,baz=84,slow=19,SNR=2.7						
IDI	**Anoyia**	**3.82**	**136**	Pn	**Pn**	**12 38 22.5**	**+1.9**
IDI				Sn	**Sn**	**12 39 09.2**	**+4.2**
AKASG	**Malin Array Be**	**13.74**	**21**	Pn	**Pn**	**12 40 31.4**	**-5.0**
	0.9nm,0.3s,baz=222,slow=7.8,SNR=4.1						
EKA	**Eskdalemuir Ar**	**24.02**	**324**	P	**P**	**12 42 43.2**	**+6.9**
	1.5nm,0.8s,mb3.5,baz=123,slow=10.0,SNR=3.7						
MKAR	**Makanchi Array**	**44.62**	**59**	P	**P**	**12 45 34.5**	**+0.7**
	1.4nm,0.5s,mb4.1,baz=279,slow=7.1,SNR=7.9						
ZALV	**Zalesovo Beam**	**45.12**	**48**	P	**P**	**12 45 37.7**	**+0.1**
	3.7nm,0.5s,mb4.4,baz=275,slow=8.2,SNR=4.3						

IDC ***08*** *12:40:51.6±0.9,38°.19N×21°.63E,h0km,mb4.0/11, mb1 4.0/14,mb1mx3.9/30,mbtmp4.0/14,ML4.2/3,Error ellipse: s-maj=18.2km s-min=16.5km az=111.0*
THE ***08*** *12:40:53.9,38°.05N×21°.58E,h13km,ML4.6/8,Error ellipse: s-maj=0.7km s-min=0.5km az=335.0*
NEIC ***08*** *12:40:53.8,38°.10N×21°.55E,h19km,ML3.8(ATH),After ATH.*
ATH ***08*** *12:40:53.8,38°.10N×21°.55E,h19km,ML3.8*
ISCJB ***08*** *12:40:53.5±0.3,38°.08N±0°.02×21°.55E±0°.02,h8km±2km, mb3.9/11,Error ellipse: s-maj=2.9km s-min=2.8km az=139.1*
CSEM ***08*** *12:40:54.4±0.2,38°.08N×21°.55E,h15km,ML3.8,Error ellipse: s-maj=4.6km s-min=3.9km az=52.0*
ISC 08 12:40:54.4±0.3,38°.09N±0°.02×21°.55E±0°.02,h9km±2km, n153,σ1$20/234,mb3.9/11,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.07**	**245**	*e*Pb	**Pg**	**12 40 57.8**	**+1.3**
RLS				*e*Sb	**Sg**	**12 41 00.7**	**+2.7**
RLS	**Riolos of Patr**	**0.07**	**245**	*e*PB	**Pg**	**12 40 57.8**	**+1.3**
RLS				*e*SB	**Sg**	**12 41 00.7**	**+2.7**
RLS	**Riolos of Patr**	**0.07**	**245**	*e*Pb	**Pg**	**12 40 57.8**	**+1.3**
UPR	**University Cam**	**0.27**	**44**	P	**Pg**	**12 40 59.7**	**-0.1**
UPR				S	**Sg**	**12 41 04.7**	**+1.2**
UPR	**University Cam**	**0.27**	**44**	*e*PB	**Pg**	**12 41 00.1**	**+0.3**
UPR				*e*SB	**Sg**	**12 41 04.4**	**+0.9**
UPR	**University Cam**	**0.27**	**44**	P	**Pg**	**12 40 59.7**	**-0.1**
UPR	**University Cam**	**0.27**	**44**	*e*Pb	**Pg**	**12 41 00.1**	**+0.3**
UPR				*e*Sb	**Sg**	**12 41 04.4**	**+0.9**
UPR				S	**Sg**	**12 41 04.7**	**+1.2**
LAKA	**Lakka**	**0.37**	**66**	P	**Pg**	**12 41 01.3**	**-0.3**
LAKA				S	**Sg**	**12 41 06.9**	**+0.3**
LAKA	**Lakka**	**0.37**	**66**	P	**Pg**	**12 41 01.3**	**-0.3**
LAKA				S	**Sg**	**12 41 06.9**	**+0.3**
EFP	**Efpalio**	**0.44**	**40**	P	**Pg**	**12 41 02.4**	**-0.5**
EFP				S	**Sg**	**12 41 09.6**	**+0.8**
EFP	**Efpalio**	**0.44**	**40**	*e*PB	**Pg**	**12 41 02.4**	**-0.5**
EFP				*e*SB	**Sg**	**12 41 08.9**	**+0.1**
EFP	**Efpalio**	**0.44**	**40**	P	**Pg**	**12 41 02.4**	**-0.5**
EFP				*e*Sb	**Sg**	**12 41 08.9**	**+0.1**
EFP				S	**Sg**	**12 41 09.6**	**+0.8**
KALE	**Kalithea**	**0.56**	**57**	P	**Pg**	**12 41 04.2**	**-0.9**
KALE				S	**Sg**	**12 41 12.9**	**+0.5**
KALE	**Kalithea**	**0.56**	**57**	P	**Pg**	**12 41 04.2**	**-0.9**
KALE				S	**Sg**	**12 41 12.9**	**+0.5**
KFL	**Anninata**	**0.60**	**272**	P	**Pg**	**12 41 06.0**	**0.0**
GUR	**Goura**	**0.65**	**103**	P	**Pg**	**12 41 05.7**	**-1.1**
GUR				S	**Sg**	**12 41 15.1**	**-0.1**
GUR	**Goura**	**0.65**	**103**	*e*PB	**Pg**	**12 41 05.7**	**-1.1**
GUR				*e*SN	**Sg**	**12 41 15.4**	**+0.2**
GUR	**Goura**	**0.65**	**103**	P	**Pg**	**12 41 05.7**	**-1.1**
GUR				S	**Sg**	**12 41 15.1**	**-0.1**
VLS	**Valsamata**	**0.76**	**277**	*e*Pn	**Pg**	**12 41 08.3**	**-0.7**
VLS				*e*Sn	**Sg**	**12 41 19.6**	**+0.6**
VLS	**Valsamata**	**0.76**	**277**	P	**Pg**	**12 41 08.3**	**-0.7**
VLS				S	**Sg**	**12 41 20.6**	**+1.6**
VLS	**Valsamata**	**0.76**	**277**	*e*PN	**Pg**	**12 41 08.2**	**-0.8**
VLS				*e*SN	**Sg**	**12 41 19.6**	**+0.6**
VLS	**Valsamata**	**0.76**	**277**	P	**Pg**	**12 41 08.3**	**-0.7**
VLS				*e*Sn	**Sg**	**12 41 19.6**	**+0.6**
VLS				S	**Sg**	**12 41 20.6**	**+1.6**
DSF	**Desfina**	**0.83**	**67**	P	**Pg**	**12 41 09.1**	**-1.3**
DSF				S	**Sg**	**12 41 20.8**	**-0.5**
DSF	**Desfina**	**0.83**	**67**	P	**Pg**	**12 41 09.1**	**-1.3**
DSF				S	**Sg**	**12 41 20.8**	**-0.5**
EVR	**Evrytania**	**0.85**	**14**	*e*Pn	**Pg**	**12 41 10.5**	**-0.3**
EVR				*e*Sn	**Sg**	**12 41 21.9**	**0.0**
EVR	**Evrytania**	**0.85**	**14**	*e*PN	**Pg**	**12 41 10.5**	**-0.3**
EVR				*e*SN	**Sg**	**12 41 21.9**	**0.0**
EVR	**Evrytania**	**0.85**	**14**	*e*Pn	**Pg**	**12 41 10.5**	**-0.3**
ITM	**Ithomi**	**0.95**	**162**	*e*Pn	**Pg**	**12 41 12.7**	**0.0**
ITM				*e*Sn	**Sg**	**12 41 25.7**	**+0.6**
ITM	**Ithomi**	**0.95**	**162**	P	**Pg**	**12 41 11.2**	**-1.5**
ITM				S	**Sg**	**12 41 24.3**	**-0.8**
ITM	**Ithomi**	**0.95**	**162**	*e*PN	**Pg**	**12 41 12.7**	**0.0**
ITM				*e*SN	**Sg**	**12 41 25.7**	**+0.6**
ITM	**Ithomi**	**0.95**	**162**	P	**Pg**	**12 41 11.2**	**-1.5**
ITM	**Ithomi**	**0.95**	**162**	*e*Pn	**Pg**	**12 41 12.7**	**0.0**
ITM				S	**Sg**	**12 41 24.3**	**-0.8**
ITM				*e*Sn	**Sg**	**12 41 25.7**	**+0.6**
VLX	**Vlachokerasia**	**0.97**	**137**	P	**Pg**	**12 41 11.9**	**-1.2**
VLX				S	**Sg**	**12 41 25.1**	**-0.6**
VLX	**Vlachokerasia**	**0.97**	**137**	*e*PB	**Pg**	**12 41 12.0**	**-1.1**
VLX				*e*SN	**Sg**	**12 41 26.0**	**+0.3**
VLX	**Vlachokerasia**	**0.97**	**137**	*e*Pb	**Pg**	**12 41 12.0**	**-1.1**
VLX				S	**Sg**	**12 41 25.1**	**-0.6**
VLX				*e*Sn	**Sg**	**12 41 26.0**	**+0.3**
AGG	**Agios Georgios**	**1.11**	**33**	*e*Pn	**Pg**	**12 41 15.1**	**-0.7**
AGG				*e*Sn	**Sg**	**12 41 30.3**	**0.0**
AGG	**Agios Georgios**	**1.11**	**33**	P	**Pg**	**12 41 14.8**	**-1.0**
AGG				S	**Sg**	**12 41 30.9**	**+0.6**
AGG	**Agios Georgios**	**1.11**	**33**	*e*PN	**Pg**	**12 41 15.1**	**-0.7**
AGG				*e*SN	**Sg**	**12 41 30.2**	**-0.1**
AGG	**Agios Georgios**	**1.11**	**33**	P	**Pg**	**12 41 14.8**	**-1.0**
AGG	**Agios Georgios**	**1.11**	**33**	*e*Pn	**Pg**	**12 41 15.1**	**-0.7**
AGG				*e*Sn	**Sg**	**12 41 30.3**	**0.0**
AGG				S	**Sg**	**12 41 30.9**	**+0.6**
LTK	**Loutraki**	**1.12**	**93**	P	**Pg**	**12 41 14.2**	**-1.7**
LTK	**Loutraki**	**1.12**	**93**	*e*PB	**Pg**	**12 41 14.2**	**-1.7**
LTK				*e*SN	**Sg**	**12 41 30.0**	**-0.5**
LTK	**Loutraki**	**1.12**	**93**	P	**Pg**	**12 41 14.2**	**-1.7**
LTK				*e*Sn	**Sg**	**12 41 30.0**	**-0.5**
PYL	**PYLOS**	**1.20**	**173**	*e*PN	**Pn**	**12 41 16.6**	**-0.6**
PYL	**PYLOS**

ATH eSN Sn 12 41 47.7 +1.4
ATH Athens Observa 1.71 93 ePn Pn 12 41 24.8 +0.5
ATH eSn Sn 12 41 47.7 +1.4
VLI Veliai 1.76 141 ePn Pn 12 41 26.1 +1.2
VLI eSn Sn 12 41 49.0 +1.6
VLI Veliai 1.76 141 ePN Pn 12 41 26.1 +1.2
VLI eSN Sn 12 41 49.0 +1.6
VLI Veliai 1.76 141 ePn Pn 12 41 26.1 +1.2
NEO Neokhori 1.79 47 ePn Pn 12 41 25.3 0.0
NEO eSn Sn 12 41 49.6 +1.5
NEO Neokhori 1.79 47 ePn Pn 12 41 25.3 0.0
NEO eSN Sn 12 41 49.6 +1.5
NEO Neokhori 1.79 47 ePn Pn 12 41 25.3 0.0
NEO eSn Sn 12 41 49.6 +1.5
VLY Voula,Athens 1.79 97 ePn Pn 12 41 26.0 +0.6
VLY eSn Sn 12 41 49.9 +1.7
VLY Voula,Athens 1.79 97 ePN Pn 12 41 26.0 +0.6
VLY eSN Sn 12 41 49.9 +1.7
VLY Voula,Athens 1.79 97 ePn Pn 12 41 26.0 +0.6
PTL Penteli 1.83 91 ePn Pn 12 41 26.0 +0.1
PTL eSn Sn 12 41 50.1 +1.0
PTL Penteli 1.83 91 ePN Pn 12 41 26.0 +0.1
PTL eSN Sn 12 41 50.1 +1.0
PTL Penteli 1.83 91 ePn Pn 12 41 26.0 +0.1
PTL eSn Sn 12 41 50.1 +1.0
KEK Kerkira 2.12 320 ePn Pn 12 41 31.1 +1.2
KEK Kerkira 2.12 320 ePN Pn 12 41 31.1 +1.2
KEK Kerkira 2.12 320 ePn Pn 12 41 31.1 +1.2
LIT Litokhoron 2.14 20 ePn Pn 12 41 31.5 +1.3
LIT eSn Sn 12 41 57.1 +0.3
LIT Litokhoron 2.14 20 ePN Pn 12 41 31.5 +1.3
LIT eSN Sn 12 41 57.1 +0.3
LIT Litokhoron 2.14 20 ePn Pn 12 41 31.5 +1.3
LIT eSn Sn 12 41 57.1 +0.3
KZN Kozani 2.22 4 ePn Pn 12 41 32.1 +0.8
KZN eSn Sn 12 42 00.0 +1.2
KZN Kozani 2.22 4 ePN Pn 12 41 32.1 +0.8
KZN eSN Sn 12 42 00.0 +1.2
KZN Kozani 2.22 4 ePn Pn 12 41 32.1 +0.8
KZN eSn Sn 12 42 00.0 +1.2
PLG Polygyros 2.72 32 ePn Pn 12 41 38.5 +0.4
PLG eSn Sn 12 42 10.4 -0.6
PLG Polygyros 2.72 32 ePN Pn 12 41 38.5 +0.4
PLG eSN Sn 12 42 10.4 -0.6
PLG Polygyros 2.72 32 ePn Pn 12 41 38.5 +0.4
PLG eSn Sn 12 42 10.4 -0.6
BIA Bitola 2.93 357 ePn Pn 12 41 45.2 +4.2
SOH Sokhos 3.07 27 ePn Pn 12 41 43.0 +0.1
SOH eSn Sn 12 42 20.3 +0.6
SOH Sokhos 3.07 27 ePN Pn 12 41 43.0 +0.1
SOH eSN Sn 12 42 20.3 +0.6
SOH Sokhos 3.07 27 ePn Pn 12 41 43.0 +0.1
SOH eSn Sn 12 42 20.3 +0.6
OHR Ohrid 3.07 349 ePn Pn 12 41 44.3 +1.3
SCTE Santa Cesarea 3.11 311 ePN Pn 12 41 43.0 -0.5
SCTE Santa Cesarea 3.11 311 ePn Pn 12 41 43.0 -0.5
KRUS Krusevo 3.29 356 ePn Pn 12 41 46.4 +0.5
APE Apeiranthos 3.32 107 ePn Pn 12 41 45.8 -0.6
APE Apeiranthos 3.32 107 ePN Pn 12 41 45.8 -0.6
APE Apeiranthos 3.32 107 ePn Pn 12 41 45.8 -0.6
VAY Valandovo 3.32 13 ePn Pn 12 41 48.1 +1.7
LIA Limnos Island 3.36 56 ePn Pn 12 41 47.6 +0.7
LIA Limnos Island 3.36 56 ePN Pn 12 41 47.6 +0.7
LIA Limnos Island 3.36 56 ePn Pn 12 41 47.6 +0.7
TIR Tirane 3.50 339 ePn Pn 12 41 50.1 +1.2
TIR Tirane 3.50 339 ePN Pn 12 41 50.1 +1.2
TIR Tirane 3.50 339 ePn Pn 12 41 50.1 +1.2
CHOS Chios island 3.56 84 ePn Pn 12 41 50.0 +0.3
CHOS Chios island 3.56 84 ePN Pn 12 41 50.0 +0.3
CHOS Chios island 3.56 84 ePn Pn 12 41 50.0 +0.3
STIP Stip 3.63 8 ePn Pn 12 41 53.6 +2.9
NVR Nevrokopi 3.71 28 ePn Pn 12 41 52.8 +1.0
NVR Nevrokopi 3.71 28 ePN Pn 12 41 52.8 +1.0
NVR Nevrokopi 3.71 28 ePn Pn 12 41 52.8 +1.0
PRK Paraskevi 3.87 71 ePn Pn 12 41 53.7 -0.3
PRK Paraskevi 3.87 71 ePN Pn 12 41 53.7 -0.3
PRK Paraskevi 3.87 71 ePn Pn 12 41 53.7 -0.3
IDI Anoyia 3.88 135 Pn Pn 12 41 55.0 +0.9
7.3nm,0.3s,baz=316,slow=16,SNR=5.7
IDI Sn Sn 12 42 37.7 -1.9
2.7nm,0.3s,baz=294,slow=20,SNR=1.7
IDI Anoyia 3.88 135 ePN Pn 12 41 55.8 +1.8
TIP Timpagrande 3.91 288 P Pn 12 41 56.8 +2.3
TIP Timpagrande 3.91 288 P Pn 12 41 56.8 +2.3
SIVA Sivas 4.04 138 ePn Pn 12 41 57.4 +1.2
SIVA Sivas 4.04 138 ePN Pn 12 41 57.4 +1.2
SIVA Sivas 4.04 138 ePn Pn 12 41 57.4 +1.2
SMG Samos 4.20 94 ePn Pn 12 41 58.7 +0.2
SMG Samos 4.20 94 ePN Pn 12 41 58.7 +0.2
SMG Samos 4.20 94 ePn Pn 12 41 58.7 +0.2
LAST Lasithi 4.30 132 ePn Pn 12 42 01.2 +1.3
LAST Lasithi 4.30 132 ePN Pn 12 42 01.2 +1.3
LAST Lasithi 4.30 132 ePn Pn 12 42 01.2 +1.3
NPS Neapolis 4.32 130 P Pn 12 42 02.5 +2.4
NPS Neapolis 4.32 130 P Pn 12 42 02.5 +2.4
ZKR Zakros 4.79 127 ePn Pn 12 42 08.4 +1.8
ZKR Zakros 4.79 127 ePN Pn 12 42 08.4 +1.8
STON Ston 5.61 330 ePn Pn 12 42 16.1 -1.7
STON Sn Sn 12 43 17.8 -4.5
STON Ston 5.61 330 ePN Pn 12 42 16.1 -1.7
BOJS Bojanci 8.77 330 ePn Pn 12 42 59.6 -1.6
BOJS Bojanci 8.77 330 ePN Pn 12 42 59.6 -1.6
VISS Visnje 9.18 329 *i* Pn Pn 12 43 05.4 -1.5
VISS Visnje 9.18 329 *i* Pn Pn 12 43 05.4 -1.5
BRTR Keskin Array B 9.57 76 Pn Pn 12 43 13.9 +1.8
0.5nm,0.3s,baz=256,slow=13,SNR=8.1
BRTR Keskin Array B 9.57 76 Pn Pn 12 43 13.9 +1.8
JAVS Javornik 9.58 327 *i* Pn Pn 12 43 10.9 -1.4
JAVS Javornik 9.58 327 *i* Pn Pn 12 43 10.9 -1.4
GERES GERESS Array B 12.16 335 Pn Pn 12 43 46.3 -1.3
0.4nm,0.3s,baz=154,slow=13,SNR=8.3
ESDC Sonseca Array 19.91 283 P Pn 12 45 26.1 -1.6
0.3nm,0.3s,baz=76,slow=11,SNR=12
HFS Hagfors 22.62 350 P P 12 45 53.5 -1.6
2.8nm,0.7s,mb3.8,baz=165,slow=12,SNR=5.5
FINES FINESS Array B 23.55 5 P P 12 46 00.7 -4.2
1.1nm,0.5s,mb3.5,baz=179,slow=12,SNR=5.2
NB2 NORSAR Subarra 23.87 348 P P 12 46 04.9 -2.9
comp=Z,2.0nm,0.8s,mb3.6,baz=154,slow=11
NB2 NORSAR Subarra 23.87 348 P P 12 46 04.9 -2.9
comp=Z,2.0nm,0.8s,mb3.6,SNR=2.7
NOA NORSAR Array B 23.87 348 P P 12 46 07.2 -0.6
comp=Z,0.8nm,0.6s,mb3.4,baz=152,slow=8.6,SNR=3.1
EKA Eskdalemuir Ar 23.97 324 P P 12 46 07.8 -0.9
comp=Z,3.8nm,0.8s,mb3.9,baz=124,slow=9.9,SNR=13
TORD Torodi Ar. Bea 30.48 221 P P 12 47 07.5 -0.1
comp=Z,1.1nm,0.6s,mb3.8,baz=37,slow=9.0,SNR=5.4
ARCES ARCESS Array B 31.58 3 P P 12 47 14.8 -1.9
comp=Z,1.9nm,0.8s,mb4.0,baz=190,slow=10,SNR=7.6
DBIC Dimbokro 39.38 224 P P 12 48 23.1 -1.3
comp=Z,5.2nm,1.0s,mb4.2,baz=12,slow=9.3,SNR=3.0
KURK Kurchatov 41.68 53 P P 12 48 40.5 -2.5
comp=Z,1.9nm,0.6s,mb3.9,baz=280,slow=8.8,SNR=4.2
MKAR Makanchi Array 44.66 59 P P 12 49 04.7 -2.4
comp=Z,2.2nm,0.6s,mb4.2,baz=283,slow=6.3,SNR=13
ZALV Zalesovo Beam 45.15 48 P P 12 49 08.8 -2.1
comp=Z,4.7nm,0.5s,mb4.6,baz=277,slow=8.8,SNR=10
KSRS Korea Array 78.76 51 P P 12 52 54.6 -2.6
comp=Z,1.0nm,0.7s,mb3.8,baz=312,slow=4.6,SNR=4.3

*IDC **08** 12:42:38.8±1.1, 36°.27N×21°.58E, h0km, mb3.9/14, mb1 4.0/15, mb1mx3.9/30, mbtmp3.9/15, ML3.9/1, Error ellipse: s-maj=23.7km s-min=19.4km az=170.0*
*ISCJB **08** 12:42:43.2±1.7, 36°.3N±0°.1×21°.49E±0°.10, h44km±17km, mb3.8/13, Error ellipse: s-maj=18.0km s-min=11.6km az=23.5*
ISC 08 12:42:44.6±1.4, 36°.4N±0°.1×21°.54E±0°.10, h36km±15km, n18, σ0°80/19, mb3.8/13, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	**Anoyia**	**2.92**	**111**	Pn	**Pn**	**12 43 29.2**	**+0.7**
	baz=312,slow=16,SNR=1.2						
IDI				Sn	**Sn**	**12 44 02.5**	**+0.1**
	11nm,0.3s,baz=338,slow=19,SNR=3.6						
BRTR	**Keskin Array B**	**10.11**	**67**	Pn	**Pn**	**12 45 11.7**	**+4.5**
	0.0nm,0.3s,baz=250,slow=14,SNR=2.0						
GERES	**GERESS Array B**	**13.73**	**338**	Pn	**Pn**	**12 45 55.6**	**-1.1**
	0.3nm,0.3s,baz=166,slow=12,SNR=4.9						
ESDC	**Sonseca Array**	**20.34**	**287**	P	**P**	**12 47 18.8**	**+1.1**
	0.6nm,0.5s,baz=83,slow=10,SNR=4.2						
HFS	**Hagfors**	**24.32**	**350**	P	**P**	**12 47 57.9**	**-0.6**
	2.8nm,0.6s,mb3.9,baz=148,slow=12,SNR=7.8						
FINES	**FINESS Array B**	**25.26**	**5**	P	**P**	**12 48 07.2**	**+0.2**
	2.4nm,0.7s,mb3.8,baz=191,slow=8.7,SNR=4.3						
EKA	**Eskdalemuir Ar**	**25.38**	**326**	P	**P**	**12 48 09.2**	**+1.0**
	1.2nm,0.7s,mb3.5,baz=125,slow=9.6,SNR=3.4						
NB2	**NORSAR Subarra**	**25.55**	**348**	P	**P**	**12 48 09.5**	**-0.2**
	comp=Z,1.0nm,0.5s,mb3.6,baz=156,slow=9.3						
NOA	**NORSAR Array B**	**25.55**	**348**	P	**P**	**12 48 09.3**	**-0.4**
	comp=Z,1.0nm,0.5s,mb3.6,baz=158,slow=9.0,SNR=5.0						
TORD	**Torodi Ar. Bea**	**29.19**	**223**	P	**P**	**12 48 40.6**	**-2.1**
	comp=Z,0.4nm,0.5s,mb3.5,baz=29,slow=8.6,SNR=4.2						
ARCES	**ARCESS Array B**	**33.30**	**3**	P	**P**	**12 49 18.9**	**+0.6**
	comp=Z,2.6nm,0.9s,mb4.2,baz=190,slow=9.4,SNR=5.2						
BVAR	**Borovoye Array**	**37.69**	**48**	P	**P**	**12 49 56.5**	**+0.3**
	comp=Z,0.5nm,0.4s,mb3.6,baz=258,slow=6.9,SNR=2.8						
KURK	**Kurchatov**	**42.73**	**52**	P	**P**	**12 50 37.3**	**-0.7**
	comp=Z,0.5nm,0.4s,mb3.6,baz=284,slow=8.5,SNR=3.5						
MKAR	**Makanchi Array**	**45.58**	**57**	P	**P**	**12 51 00.7**	**-0.2**
	comp=Z,0.8nm,0.4s,mb4.0,baz=279,slow=6.7,SNR=6.8						
ZALV	**Zalesovo Beam**	**46.31**	**47**	P	**P**	**12 51 06.3**	**-0.2**
	comp=Z,1.7nm,0.3s,mb4.4,baz=263,slow=12,SNR=6.7						
CMAR	**Chiang Mai Arr**	**69.33**	**82**	P	**P**	**12 53 48.7**	**0.0**
	comp=Z,0.4nm,0.5s,mb3.6,baz=302,slow=7.4,SNR=3.3						
KSRS	**Korea Array**	**79.84**	**51**	P	**P**	**12 54 48.9**	**-0.5**
	comp=Z,0.6nm,0.6s,mb3.7,baz=315,slow=4.8,SNR=4.5						
SDV	**Santo Domingo**	**86.54**	**278**	P	**P**	**12 55 25.6**	**+1.3**
	comp=Z,2.0nm,0.6s,mb4.5,baz=339,slow=8.6,SNR=3.6						

*IDC **08** 12:43:37.0±0.9, 38°.16N×21°.54E, h0km, mb4.1/13, mb1 4.2/15, mb1mx4.0/30, mbtmp4.1/15, ML4.4/2, Error ellipse: s-maj=20.1km s-min=16.5km az=135.0*
*ISCJB **08** 12:43:38.7±0.4, 38°.06N±0°.02×21°.49E±0°.02, h15km±2km, mb4.1/13, Error ellipse: s-maj=3.8km s-min=2.8km az=25.0*
*NEIC **08** 12:43:38.8, 37°.98N×21°.60E, h15km, mb3.8/2, ML4.1(ATH), After ATH.*
*ATH **08** 12:43:38.8, 37°.98N×21°.60E, h15km, ML4.1*
*THE **08** 12:43:38.8, 38°.10N×21°.58E, h19km±3km, ML5.0/5, Error ellipse: s-maj=3.1km s-min=0.7km az=8.0*
*CSEM **08** 12:43:39.9±0.2, 38°.07N×21°.55E, h12km, ML4.1, Error ellipse: s-maj=5.7km s-min=3.6km az=20.0*
*PDG **08** 12:43:42.1±0.4, 38°.24N×21°.44E, h14km±11km, ML4.0/9, Error ellipse: s-maj=213.5km s-min=103.5km az=90.0*
ISC 08 12:43:39.7±0.4, 38°.05N±0°.02×21°.53E±0°.02, h12km±2km, n167, σ1°39/241, mb4.1/13, 6C-16D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.05**	**278**	*e*Pb	**Pg**	**12 43 42.5**	**+0.5**
RLS				*e*Sb	**Sg**	**12 43 45.3**	**+1.6**
RLS	**Riolos of Patr**	**0.05**	**278**	*e*PB	**Pg**	**12 43 42.5**	**+0.5**
RLS				*e*SB	**Sg**	**12 43 45.3**	**+1.6**
RLS	**Riolos of Patr**	**0.05**	**278**	*e*Pb	**Pg**	**12 43 42.5**	**+0.5**
RLS				*e*Sb	**Sg**	**12 43 45.3**	**+1.6**
UPR	**University Cam**	**0.31**	**41**	P	**Pg**	**12 43 45.5**	**-0.5**
UPR				S	**Sg**	**12 43 49.8**	**-0.4**
UPR	**University Cam**	**0.31**	**41**	*e*PB	**Pg**	**12 43 45.6**	**-0.4**
UPR				*e*SB	**Sg**	**12 43 50.2**	**0.0**
UPR	**University Cam**	**0.31**	**41**	*e*Pb	**Pg**	**12 43 45.6**	**-0.4**
UPR				S	**Sg**	**12 43 49.8**	**-0.4**
UPR				*e*Sb	**Sg**	**12 43 50.2**	**0.0**
LAKA	**Lakka**	**0.40**	**62**	P	**Pg**	**12 43 46.6**	**-1.1**
LAKA				S	**Sg**	**12 43 52.3**	**-0.8**
LAKA	**Lakka**	**0.40**	**62**	P	**Pg**	**12 43 46.6**	**-1.1**
LAKA				S	**Sg**	**12 43 52.3**	**-0.8**
EFP	**Efpalio**	**0.48**	**38**	P	**Pg**	**12 43 48.7**	**-0.4**
EFP				S	**Sg**	**12 43 54.8**	**-0.7**
EFP	**Efpalio**	**0.48**	**38**	*e*PN	**Pg**	**12 43 49.4**	**+0.3**
EFP				*e*SN	**Sg**	**12 43 54.9**	**-0.6**
EFP	**Efpalio**	**0.48**	**38**	P	**Pg**	**12 43 48.7**	**-0.4**
EFP	**Efpalio**	**0.48**	**38**	*e*Pn	**Pg**	**12 43 49.4**	**+0.3**
EFP				S	**Sg**	**12 43 54.8**	**-0.7**
KALE	**Kalithea**	**0.59**	**54**	P	**Pg**	**12 43 50.0**	**-1.2**
KALE				S	**Sg**	**12 43 58.2**	**-0.8**
KALE	**Kalithea**	**0.59**	**54**	P	**Pg**	**12 43 50.0**	**-1.2**
KALE				S	**Sg**	**12 43 58.2**	**-0.8**
GUR	**Goura**	**0.65**	**100**	P	**Pg**	**12 43 51.7**	**-0.7**
GUR				S	**Sg**	**12 44 00.3**	**-0.6**
GUR	**Goura**	**0.65**	**100**	P	**Pg**	**12 43 51.7**	**-0.7**
GUR				S	**Sg**	**12 44 00.3**	**-0.6**
VLS	**Valsamata**	**0.75**	**280**	P	**Pg**	**12 43 54.9**	**+0.6**
VLS				S	**Sg**	**12 44 05.8**	**+1.6**
VLS	**Valsamata**	**0.75**	**280**	P	**Pg**	**12 43 54.9**	**+0.6**
VLS				S	**Sg**	**12 44 05.8**	**+1.6**
VLS	**Valsamata**	**0.75**	**280**	P	**Pg**	**12 43 54.9**	**+0.6**
VLS				S	**Sg**	**12 44 05.8**	**+1.6**
DSF	**Desfina**	**0.86**	**65**	P	**Pg**	**12 43 54.4**	**-2.0**
DSF				S	**Sg**	**12 44 06.3**	**-1.4**
DSF	**Desfina**	**0.86**	**65**	P	**Pg**	**12 43 54.4**	**-2.0**
DSF				S	**Sg**	**12 44 06.3**	**-1.4**
EVR	**Evrytania**	**0.89**	**14**	*e*Pn	**Pg**	**12 43 56.7**	**-0.3**
EVR				*e*Sn	**Sg**	**12 44 09.5**	**+0.9**
EVR	**Evrytania**	**0.89**	**14**	*e*PN	**Pg**	**12 43 56.7**	**-0.3**
EVR				*e*SN	**Sg**	**12 44 09.5**	**+0.9**
EVR	**Evrytania**	**0.89**	**14**	*e*Pn	**Pg**	**12 43 56.7**	**-0.3**
EVR				*e*Sn	**Sg**	**12 44 09.5**	**+0.9**
ITM	**Ithomi**	**0.92**	**160**	*e*Pb	**Pg**	**12 43 54.5**	**-3.0**
ITM				*e*Sn	**Sg**	**12 44 06.6**	**-3.0**
ITM	**Ithomi**	**0.92**	**160**	*e*PB	**Pg**	**12 43 54.5**	**-3.0**
ITM				*e*SN	**Sg**	**12 44 06.6**	**-3.0**
VLX	**Vlachokerasia**	**0.96**	**135**	P	**Pg**	**12 43 57.5**	**-0.7**
VLX				S	**Sg**	**12 44 11.7**	**+1.1**
VLX	**Vlachokerasia**	**0.96**	**135**	P	**Pg**	**12 43 57.5**	**-0.7**
VLX				S	**Sg**	**12 44 11.7**	**+1.1**
AGG	**Agios Georgios**	**1.16**	**33**	*e*Pn	**Pg**	**12 44 01.4**	**-0.6**
AGG	**Agios Georgios**	**1.16**	**33**	*e*PN	**Pg**	**12 44 01.4**	**-0.6**
AGG	**Agios Georgios**	**1.16**	**33**	*e*Pn	**Pg**	**12 44 01.4**	**-0.6**
PYL	**PYLOS**	**1.17**	**172**	*e*PN	**Pn**	**12 43 59.9**	**-1.9**
LKR	**Lokris**	**1.30**	**62**	P	**Pn**	**12 43 58.6**	**-5.1**
THL	**Klokotos Trika**	**1.56**	**14**	*e*PN	**Pn**	**12 44 08.7**	**+1.5**
THL				*e*SN	**Sn**	**12 44 30.1**	**+2.7**
THL	**Klokotos Trika**	**1.56**	**14**	*e*Pn	**Pn**	**12 44 08.7**	**+1.5**
NAIG	**Nisos Aigina**	**1.58**	**100**	*e*Pn	**Pn**	**12 44 07.5**	**0.0**
NAIG	**Nisos Aigina**	**1.58**	**100**	*e*PN	**Pn**	**12 44 07.5**	**0.0**
NAIG	**Nisos Aigina**	**1.58**	**100**	*e*Pn	**Pn**	**12 44 07.5**	**0.0**
JAN	**Janina**	**1.69**	**342**	*e*Pn	**Pn**	**12 44 10.8**	**+1.8**
JAN				*e*Sn	**Sn**	**12 44 34.9**	**+4.3**
JAN	**Janina**	**1.69**	**342**	*e*PN	**Pn**	**12 44 10.8**	**+1.8**
JAN				*e*SN	**Sn**	**12 44 34.9**	**+4.3**
JAN	**Janina**	**1.69**	**342**	*e*Pn	**Pn**	**12 44 10.8**	**+1.8**
ATH	**Athens Observa**	**1.73**	**92**	*e*Pn	**Pn**	**12 44 09.9**	**+0.3**
ATH				*e*Sn	**Sn**	**12 44 32.1**	**+0.6**
ATH	**Athens Observa**	**1.73**	**92**	*e*PN	**Pn**	**12 44 09.9**	**+0.3**
ATH				*e*SN	**Sn**	**12 44 32.1**	**+0.6**
ATH	**Athens Observa**	**1.73**	**92**	*e*Pn	**Pn**	**12 44 09.9**	**+0.3**
ATH				*e*Sn	**Sn**	**12 44 32.1**	**+0.6**
VLY	**Voula,Athens**	**1.80**	**96**	*e*Pn	**Pn**	**12 44 10.2**	**-0.4**
VLY				*e*Sn	**Sn**	**12 44 34.5**	**+1.2**
VLY	**Voula,Athens**	**1.80**	**96**	*e*PN	**Pn**	**12 44 10.2**	**-0.4**
VLY				*e*SN	**Sn**	**12 44 34.5**	**+1.2**
VLY	**Voula,Athens**	**1.80**	**96**	*e*Pn	**Pn**	**12 44 10.2**	**-0.4**
VLY				*e*Sn	**Sn**	**12 44 34.5**	**+1.2**
NEO	**Neokhori**	**1.82**	**46**	*e*Pn	**Pn**	**12 44 11.9**	**+1.0**
NEO				*e*Sn	**Sn**	**12 44 35.6**	**+1.7**
NEO	**Neokhori**	**1.82**	**46**	*e*PN	**Pn**	**12 44 11.9**	**+1.0**
NEO				*e*SN	**Sn**	**12 44 35.6**	**+1.7**
NEO	**Neokhori**	**1.82**	**46**	*e*Pn	**Pn**	**12 44 11.9**	**+1.0**
NEO				*e*Sn	**Sn**	**12 44 35.6**	**+1.7**
PTL	**Penteli**	**1.84**	**89**	*e*Pn	**Pn**	**12 44 11.9**	**+0.8**
PTL				*e*Sn	**Sn**	**12 44 35.0**	**+0.6**
PTL	**Penteli**	**1.84**	**89**	*e*PN	**Pn**	**12 44 11.9**	**+0.8**
PTL				*e*SN	**Sn**	**12 44 35.0**	**+0.6**
PTL	**Penteli**	**1.84**	**89**	*e*Pn	**Pn**	**12 44 11.9**	**+0.8**
PTL				*e*Sn	**Sn**	**12 44 35.0**	**+0.6**
KEK	**Kerkira**	**2.14**	**321**	*e*Pn	**Pn**	**12 44 17.4**	**+2.2**
KEK				*e*Sn	**Sn**	**12 44 45.7**	**+4.0**
KEK	**Kerkira**	**2.14**	**321**	*e*PN	**Pn**	**12 44 17.4**	**+2.2**
KEK				*e*SN	**Sn**	**12 44 45.7**	**+4.0**
KEK	**Kerkira**	**2.14**	**321**	*e*Pn	**Pn**	**12 44 17.4**	**+2.2**
LIT	**Litokhoron**	**2.18**	**20**	*e*Pn	**Pn**	**12 44 17.6**	**+1.8**
LIT	**Litokhoron**	**2.18**	**20**	*e*PN	**Pn**	**12 44 17.6**	**+1.8**
LIT	**Litokhoron**	**2.18**	**20**	*e*Pn	**Pn**	**12 44 17.6**	**+1.8**
KZN	**Kozani**	**2.26**	**5**	*e*Pb	**Pb**	**12 44 18.4**	**-2.1**
KZN				*e*Sn	**Sn**	**12 44 48.6**	**+3.9**
KZN	**Kozani**	**2.26**	**5**	*e*PB	**Pb**	**12 44 18.4**	**-2.1**
KZN				*e*SN	**Sn**	**12 44 48.6**	**+3.9**
PLG	**Polygyros**	**2.76**	**32**	*e*Pn	**Pn**	**12 44 24.3**	**+0.6**
PLG				*e*Sn	**Sn**	**12 44 58.8**	**+1.9**
PLG	**Polygyros**	**2.76**	**32**	*e*PN	**Pn**	**12 44 24.3**	**+0.6**
PLG				*e*SN	**Sn**	**12 44 58.8**	**+1.9**
PLG	**Polygyros**	**2.76**	**32**	*e*Pn	**Pn**	**12 44 24.3**	**+0.6**
BIA	**Bitola**	**2.97**	**357**	*e*Pn	**Pn**	**12 44 29.2**	**+2.5**
SOH	**Sokhos**	**3.11**	**26**	*e*Pn	**Pn**	**12 44 30.9**	**+2.4**
SOH				*e*Sn	**Sn**	**12 45 08.6**	**+3.0**
SOH	**Sokhos**	**3.11**	**26**	*e*PN	**Pn**	**12 44 30.9**	**+2.4**
SOH				*e*SN	**Sn**	**12 45 08.6**	**+3.0**
OHR	**Ohrid**	**3.11**	**350**	*i* Pn	**Pn**	**12 44 35.2**	**+6.6**
KRUS	**Krusevo**	**3.32**	**356**	*i* Pn	**Pn**	**12 44 22.9**	**-8.6**
APE	**Apeiranthos**	**3.33**	**106**	*e*Pn	**Pn**	**12 44 31.9**	**+0.4**
APE	**Apeiranthos**	**3.33**	**106**	*e*PN	**Pn**	**12 44 31.9**	**+0.4**
APE	**Apeiranthos**	**3.33**	**106**	*e*Pn	**Pn**	**12 44 31.9**	**+0.4**
VAY	**Valandovo**	**3.36**	**13**	*i* Pn	**Pn**	**12 44 36.5**	**+4.5**
LIA	**Limnos Island**	**3.39**	**56**	*e*Pn	**Pn**	**12 44 33.0**	**+0.6**
LIA	**Limnos Island**	**3.39**	**56**	*e*PN	**Pn**	**12 44 33.0**	**+0.6**
LIA	**Limnos Island**	**3.39**	**56**	*e*Pn	**Pn**	**12 44 33.0**	**+0.6**
STIP	**Stip**	**3.67**	**8**	*i* Pn	**Pn**	**12 44 35.4**	**-0.9**
NVR	**Nevrokopi**	**3.75**	**28**	*e*Pn	**Pn**	**12 44 40.3**	**+2.9**
NVR	**Nevrokopi**	**3.75**	**28**	*e*PN	**Pn**	**12 44 40.3**	**+2.9**
PRK	**Paraskevi**	**3.90**	**71**	*e*Pn	**Pn**	**12 44 41.4**	**+2.0**
PRK	**Paraskevi**	**3.90**	**71**	*e*PN	**Pn**	**12 44 41.4**	**+2.0**
PRK	**Paraskevi**	**3.90**	**71**	*e*Pn	**Pn**	**12 44 41.4**	**+2.0**
SMG	**Samos**	**4.21**	**93**	*e*Pn	**Pn**	**12 44 44.7**	**+1.0**
SMG	**Samos**	**4.21**	**93**	*e*PN	**Pn**	**12 44 44.7**	**+1.0**
SMG	**Samos**	**4.21**	**93**	*e*Pn	**Pn**	**12 44 44.7**	**+1.0**
ULC	**Ulcinj**	**4.28**	**337**	⇓*i* Pn	**Pn**	**12 44 44.8**	**+0.1**
ULC				*e*Sn	**Sn**	**12 45 33.4**	**-1.1**
ULC	**Ulcinj**	**4.28**	**337**	⇓*i* Pn	**Pn**	**12 44 44.8**	**+0.1**
ULC				*e*Sn	**Sn**	**12 45 33.4**	**-1.1**
ALN	**Alexandroupoli**	**4.50**	**49**	*e*Pn	**Pn**	**12 44 49.1**	**+1.4**
ALN	**Alexandroupoli**	**4.50**	**49**	*e*PN	**Pn**	**12 44 49.1**	**+1.4**
ALN	**Alexandroupoli**	**4.50**	**49**	*e*Pn	**Pn**	**12 44 49.1**	**+1.4**
PVY	**Plav**	**4.69**	**346**	⇓*i* Pn	**Pn**	**12 44 51.6**	**+1.3**
PVY				*e*Sn	**Sn**	**12 45 43.6**	**-1.1**
PVY	**Plav**	**4.69**	**346**	⇓*i* Pn	**Pn**	**12 44 51.6**	**+1.3**
PVY				*e*Sn	**Sn**	**12 45 43.6**	**-1.1**
BUM	**Brajici-Budva**	**4.70**	**335**	⇑*i* Pn	**Pn**	**12 44 51.1**	**+0.7**
BUM				*e*Sn	**Sn**	**12 45 43.8**	**-1.0**
BUM	**Brajici-Budva**	**4.70**	**335**	⇑*i* Pn	**Pn**	**12 44 51.1**	**+0.7**
BUM				*e*Sn	**Sn**	**12 45 43.8**	**-1.0**
PDG	**Podgorica**	**4.71**	**339**	⇓*i* Pn	**Pn**	**12 44 51.5**	**+1.0**
PDG				*e*Sn	**Sn**	**12 45 43.4**	**-1.6**
TTG	**Podgorica**	**4.71**	**339**	⇓*i* Pn	**Pn**	**12 44 51.5**	**+1.0**
TTG				*e*Sn	**Sn**	**12 45 43.4**	**-1.6**
TTG	**Podgorica**	**4.71**	**339**	⇓*i* Pn	**Pn**	**12 44 51.5**	**+1.0**
TTG				*e*Sn	**Sn**	**12 45 43.4**	**-1.6**
HCY	**Herceg Novi**	**4.97**	**333**	⇑*i* Pn	**Pn**	**12 44 55.4**	**+1.3**
HCY				*e*Sn	**Sn**	**12 45 50.4**	**-1.0**
HCY	**Herceg Novi**	**4.97**	**333**	⇑*i* Pn	**Pn**	**12 44 55.4**	**+1.3**
HCY				*e*Sn	**Sn**	**12 45 50.4**	**-1.0**
BEY	**Berane**	**4.97**	**346**	⇓*i* Pn	**Pn**	**12 44 55.5**	**+1.3**
BEY				*e*Sn	**Sn**	**12 45 50.0**	**-1.6**
IVA	**Berane**	**4.97**	**346**	⇓*i* Pn	**Pn**	**12 44 55.5**	**+1.3**
IVA				*e*Sn	**Sn**	**12 45 50.0**	**-1.6**
IVA	**Berane**	**4.97**	**346**	⇓*i* Pn	**Pn**	**12 44 55.5**	**+1.3**
IVA				*e*Sn	**Sn**	**12 45 50.0**	**-1.6**
NKY	**Niksic**	**5.13**	**339**	⇓*i* Pn	**Pn**	**12 44 57.3**	**+0.9**
NKY				*e*Sn	**Sn**	**12 45 53.9**	**-1.6**
NKY	**Niksic**	**5.13**	**339**	⇓*i* Pn	**Pn**	**12 44 57.3**	**+0.9**
NKY				*e*Sn	**Sn**	**12 45 53.9**	**-1.6**
BRY	**Bratogost**	**5.35**	**336**	⇑*i*

mb1 3.8/11,mb1mx3.7/29,mbtmp3.7/11,ML3.7/3,Error ellipse: s-maj=20.4km s-min=19.3km az=21.0
*THE **08** 12:46:52.9,38°.11N×21°.62E,h18km,ML4.7/5,Error ellipse: s-maj=1.1km s-min=0.5km az=347.0*
*CSEM **08** 12:46:52.3±0.2,38°.11N×21°.60E,h17km±1km,ML4.7/5, Error ellipse: s-maj=3.7km s-min=3.2km az=25.0*
*ISCJB **08** 12:46:52.5±0.5,38°.12N±0°.03×21°.59E±0°.04,h24km±4km, mb3.7/9,Error ellipse: s-maj=5.9km s-min=5.0km az=151.0*
ISC 08 12:46:52.4±0.5,**38°.10N**±0°.03×**21°.57E**±0°.04,**h13**km±4km, **n40**,σ0°.**88**/54,**mb3.7**/9,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.25**	**43**	P	**Pg**	**12 46 58.3**	**+0.6**
UPR	**University Cam**	**0.25**	**43**	P	**Pg**	**12 46 58.3**	**+0.6**
LAKA	**Lakka**	**0.35**	**66**	P	**Pg**	**12 46 59.3**	**-0.2**
LAKA				S	**Sg**	**12 47 04.5**	**+0.2**
LAKA	**Lakka**	**0.35**	**66**	P	**Pg**	**12 46 59.3**	**-0.2**
LAKA				S	**Sg**	**12 47 04.5**	**+0.2**
EFP	**Efpalio**	**0.42**	**39**	P	**Pg**	**12 47 00.9**	**+0.1**
EFP				S	**Sg**	**12 47 07.0**	**+0.5**
EFP	**Efpalio**	**0.42**	**39**	P	**Pg**	**12 47 00.9**	**+0.1**
EFP				S	**Sg**	**12 47 07.0**	**+0.5**
KALE	**Kalithea** 19μm,0.3s	**0.54**	**57**	P	**Pg**	**12 47 02.6**	**-0.3**
KALE				S	**Sg**	**12 47 10.1**	**0.0**
KALE	**Kalithea** 19μm,0.3s	**0.54**	**57**	P	**Pg**	**12 47 02.6**	**-0.3**
KALE				S	**Sg**	**12 47 10.1**	**0.0**
KFL	**Anninata**	**0.62**	**271**	P	**Pg**	**12 47 05.4**	**+1.0**
GUR	**Goura**	**0.63**	**105**	P	**Pg**	**12 47 03.7**	**-1.0**
GUR				S	**Sg**	**12 47 13.1**	**+0.1**
GUR	**Goura**	**0.63**	**105**	P	**Pg**	**12 47 03.7**	**-1.0**
GUR				S	**Sg**	**12 47 13.1**	**+0.1**
VLS	**Valsamata**	**0.78**	**276**	P	**Pg**	**12 47 07.7**	**+0.2**
VLS	**Valsamata**	**0.78**	**276**	P	**Pg**	**12 47 07.7**	**+0.2**
DSF	**Desfina**	**0.82**	**67**	P	**Pg**	**12 47 07.2**	**-1.0**
DSF				S	**Sg**	**12 47 18.4**	**-0.5**
DSF	**Desfina**	**0.82**	**67**	P	**Pg**	**12 47 07.2**	**-1.0**
DSF				S	**Sg**	**12 47 18.4**	**-0.5**
ITM	**Ithomi**	**0.96**	**163**	P	**Pg**	**12 47 10.8**	**-0.1**
ITM	**Ithomi**	**0.96**	**163**	P	**Pg**	**12 47 10.8**	**-0.1**
VLX	**Vlachokerasia**	**0.97**	**138**	P	**Pg**	**12 47 10.2**	**-0.9**
VLX				S	**Sg**	**12 47 24.1**	**+0.3**
VLX	**Vlachokerasia**	**0.97**	**138**	P	**Pg**	**12 47 10.2**	**-0.9**
VLX				S	**Sg**	**12 47 24.1**	**+0.3**
PYL	**PYLOS**	**1.21**	**173**	P	**Pn**	**12 47 14.6**	**-0.4**
PYL	**PYLOS**	**1.21**	**173**	P	**Pn**	**12 47 14.6**	**-0.4**
OHR	**Ohrid**	**3.07**	**349**	*i* Pn	**Pn**	**12 47 46.6**	**+6.0**
KRUS	**Krusevo**	**3.28**	**356**	*i* Pn	**Pn**	**12 47 45.5**	**+2.1**
VAY	**Valandovo**	**3.31**	**13**	*e*Pn	**Pn**	**12 47 45.4**	**+1.5**
STIP	**Stip**	**3.62**	**7**	*e*Pn	**Pn**	**12 47 49.4**	**+1.2**
IDI	**Anoyia** 1.5nm,0.3s,baz=310,slow=15,SNR=1.5	**3.87**	**135**	Pn	**Pn**	**12 47 51.4**	**-0.3**
IDI				Sn	**Sn**	**12 48 38.0**	**+1.0**
STON	**Ston** 2.9nm,0.3s,baz=300,slow=20,SNR=3.2	**5.61**	**329**	*e*Pn	**Pn**	**12 48 14.9**	**-0.5**
STON				Sn	**Sn**	**12 49 17.6**	**-2.1**
BRTR	**Keskin Array B** 0.2nm,0.3s,baz=257,slow=12,SNR=4.9	**9.55**	**76**	Pn	**Pn**	**12 49 10.9**	**+1.3**
ESDC	**Sonseca Array** 0.2nm,0.3s,baz=78,slow=11,SNR=5.9	**19.92**	**283**	P	**Pn**	**12 51 24.9**	**-0.6**
HFS	**Hagfors** 2.0nm,0.7s,mb3.7,baz=125,slow=12,SNR=2.1	**22.62**	**350**	P	**P**	**12 51 52.2**	**-0.4**
FINES	**FINESS Array B** 1.1nm,0.5s,mb3.5,baz=180,slow=11,SNR=5.0	**23.54**	**5**	P	**P**	**12 52 00.2**	**-2.1**
NB2	**NORSAR Subarra** comp=Z,1.3nm,0.6s,mb3.5,baz=159,slow=11	**23.87**	**348**	P	**P**	**12 52 04.9**	**-0.4**
NB2	**NORSAR Subarra** comp=Z,1.3nm,0.6s,mb3.5,SNR=3.7	**23.87**	**348**	P	**P**	**12 52 04.9**	**-0.4**
NOA	**NORSAR Array B** comp=Z,2.1nm,0.7s,mb3.7,baz=154,slow=9.2,SNR=4.1	**23.87**	**348**	P	**P**	**12 52 07.6**	**+2.3**
EKA	**Eskdalemuir Ar** comp=Z,1.4nm,0.7s,mb3.5,baz=127,slow=9.9,SNR=5.4	**23.98**	**324**	P	**P**	**12 52 06.5**	**+0.2**
TORD	**Torodi Ar. Bea** comp=Z,0.3nm,0.4s,mb3.3,baz=29,slow=9.1,SNR=5.9	**30.50**	**221**	P	**P**	**12 53 05.9**	**+0.6**
ARCES	**ARCESS Array B** comp=Z,2.7nm,1.1s,mb4.0,baz=202,slow=12,SNR=3.6	**31.57**	**3**	P	**P**	**12 53 13.5**	**-0.7**
KURK	**Kurchatov** comp=Z,2.7nm,0.7s,mb4.0,baz=283,slow=8.5,SNR=2.7	**41.66**	**53**	P	**P**	**12 54 39.6**	**-0.8**
MKAR	**Makanchi Array** comp=Z,0.5nm,0.4s,mb3.7,baz=305,slow=5.9,SNR=3.3	**44.64**	**59**	P	**P**	**12 55 04.6**	**+0.1**
ZALV	**Zalesovo Beam** comp=Z,2.2nm,0.5s,mb4.3,baz=277,slow=9.2,SNR=4.5	**45.13**	**48**	P	**P**	**12 55 08.9**	**+0.6**

*IDC **08** 12:48:32.1±1.2,37°.90N×21°.54E,h0km,mb3.9/7, mb1 3.8/8,mb1mx3.6/28,mbtmp3.8/8,ML4.2/1,Error ellipse: s-maj=32.3km s-min=20.7km az=155.0*
*ISCJB **08** 12:48:33.9±0.7,37°.92N±0°.04×21°.30E±0°.06,h22km±5km, mb3.8/7,Error ellipse: s-maj=8.3km s-min=6.7km az=170.4*
*ATH **08** 12:48:34.8,37°.88N×21°.43E,h16km±1km,ML3.6*
*NEIC **08** 12:48:34.7,37°.88N×21°.43E,h15km,ML3.6(ATH),After ATH.*
*CSEM **08** 12:48:35.2±0.3,37°.88N×21°.48E,h20km,ML3.6,Error ellipse: s-maj=9.7km s-min=8.2km az=65.0*
ISC 08 12:48:34.7±0.7,**37°.87N**±0°.03×**21°.40E**±0°.06,**h15**km±4km, **n62**,σ1°.**22**/71,**mb3.8**/7,**Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.19**	**15**	*e*Pb	**Pg**	**12 48 39.1**	**-0.1**
RLS				*e*Sb	**Sg**	**12 48 42.8**	**+0.5**
RLS	**Riolos of Patr**	**0.19**	**15**	*e*PB	**Pg**	**12 48 39.1**	**-0.1**
RLS				*e*SB	**Sg**	**12 48 42.8**	**+0.5**
RLS	**Riolos of Patr**	**0.19**	**15**	*e*Pb	**Pg**	**12 48 39.1**	**-0.1**
RLS				*e*Sb	**Sg**	**12 48 42.8**	**+0.5**
UPR	**University Cam**	**0.51**	**36**	*e*PB	**Pg**	**12 48 44.5**	**-0.3**
UPR				*e*SB	**Sg**	**12 48 52.2**	**+0.5**
UPR	**University Cam**	**0.51**	**36**	*e*Pb	**Pg**	**12 48 44.5**	**-0.3**
UPR				*e*Sb	**Sg**	**12 48 52.2**	**+0.5**
EFP	**Efpalio**	**0.68**	**35**	*e*PB	**Pg**	**12 48 46.9**	**-1.1**
EFP				*e*SN	**Sg**	**12 48 57.3**	**+0.2**
EFP	**Efpalio**	**0.68**	**35**	*e*Pb	**Pg**	**12 48 46.9**	**-1.1**
EFP				*e*Sn	**Sg**	**12 48 57.3**	**+0.2**
GUR	**Goura**	**0.75**	**85**	*e*PN	**Pg**	**12 48 48.5**	**-0.7**
GUR				*e*SN	**Sg**	**12 48 59.2**	**+0.2**
GUR	**Goura**	**0.75**	**85**	*e*Pn	**Pg**	**12 48 48.5**	**-0.7**
GUR				*e*Sn	**Sg**	**12 48 59.2**	**+0.2**
ITM	**Ithomi**	**0.81**	**149**	*e*Pn	**Pg**	**12 48 51.1**	**+0.8**
ITM	**Ithomi**	**0.81**	**149**	*e*PN	**Pg**	**12 48 51.1**	**+0.8**
ITM	**Ithomi**	**0.81**	**149**	*e*Pn	**Pg**	**12 48 51.1**	**+0.8**
VLX	**Vlachokerasia**	**0.92**	**122**	*e*PN	**Pg**	**12 48 52.7**	**+0.2**
VLX	**Vlachokerasia**	**0.92**	**122**	*e*Pn	**Pg**	**12 48 52.7**	**+0.2**
PYL	**PYLOS**	**1.01**	**164**	*e*PB	**Pg**	**12 48 53.3**	**-0.9**
PYL	**PYLOS**	**1.01**	**164**	*e*Pb	**Pg**	**12 48 53.3**	**-0.9**
AGG	**Agios Georgios**	**1.36**	**32**	*e*Pb	**Pb**	**12 48 59.2**	**-0.7**
AGG	**Agios Georgios**	**1.36**	**32**	*e*PB	**Pb**	**12 48 59.2**	**-0.7**
AGG	**Agios Georgios**	**1.36**	**32**	*e*Pb	**Pb**	**12 48 59.2**	**-0.7**
VLI	**Veliai**	**1.68**	**133**	*e*Pn	**Pn**	**12 49 06.3**	**+2.8**
VLI	**Veliai**	**1.68**	**133**	*e*PN	**Pn**	**12 49 06.3**	**+2.8**
VLI	**Veliai**	**1.68**	**133**	*e*Pn	**Pn**	**12 49 06.3**	**+2.8**
THL	**Klokotos Trika**	**1.76**	**16**	*e*PN	**Pn**	**12 49 07.0**	**+2.4**
THL	**Klokotos Trika**	**1.76**	**16**	*e*Pn	**Pn**	**12 49 07.0**	**+2.4**
ATH	**Athens Observa**	**1.83**	**86**	*e*Pb	**Pb**	**12 49 06.4**	**-1.5**
ATH	**Athens Observa**	**1.83**	**86**	*e*PB	**Pb**	**12 49 06.4**	**-1.5**
ATH	**Athens Observa**	**1.83**	**86**	*e*Pb	**Pb**	**12 49 06.4**	**-1.5**
JAN	**Janina**	**1.84**	**347**	*e*Pn	**Pn**	**12 49 07.9**	**+2.2**
JAN	**Janina**	**1.84**	**347**	*e*PN	**Pn**	**12 49 07.9**	**+2.2**
JAN	**Janina**	**1.84**	**347**	*e*Pn	**Pn**	**12 49 07.9**	**+2.2**
VLY	**Voula,Athens**	**1.89**	**90**	*e*Pn	**Pn**	**12 49 07.9**	**+1.5**
VLY	**Voula,Athens**	**1.89**	**90**	*e*PN	**Pn**	**12 49 07.9**	**+1.5**
VLY	**Voula,Athens**	**1.89**	**90**	*e*Pn	**Pn**	**12 49 07.9**	**+1.5**
PTL	**Penteli**	**1.95**	**84**	*e*Pn	**Pn**	**12 49 08.6**	**+1.3**
PTL	**Penteli**	**1.95**	**84**	*e*PN	**Pn**	**12 49 08.6**	**+1.3**
PTL	**Penteli**	**1.95**	**84**	*e*Pn	**Pn**	**12 49 08.6**	**+1.3**
NEO	**Neokhori**	**2.02**	**44**	*e*Pb	**Pb**	**12 49 08.5**	**-2.6**
NEO	**Neokhori**	**2.02**	**44**	*e*Pb	**Pb**	**12 49 08.5**	**-2.6**
KZN	**Kozani**	**2.45**	**7**	*e*Pn	**Pn**	**12 49 17.0**	**+2.9**
KZN	**Kozani**	**2.45**	**7**	*e*PN	**Pn**	**12 49 17.0**	**+2.9**
KZN	**Kozani**	**2.45**	**7**	*e*Pn	**Pn**	**12 49 17.0**	**+2.9**
LIA	**Limnos Island**	**3.58**	**54**	*e*Pn	**Pn**	**12 49 30.8**	**+1.2**
LIA	**Limnos Island**	**3.58**	**54**	*e*Pn	**Pn**	**12 49 30.8**	**+1.2**
BOJS	**Bojanci**	**8.90**	**331**	*i* Pn	**Pn**	**12 50 35.4**	**-7.4**
VISS	**Visnje**	**9.31**	**330**	*i* Pn	**Pn**	**12 50 47.5**	**-0.8**
VISS	**Visnje**	**9.31**	**330**	*i* Pn	**Pn**	**12 50 47.5**	**-0.8**
JAVS	**Javornik**	**9.70**	**328**	*i* Pn	**Pn**	**12 50 53.6**	**0.0**
JAVS	**Javornik**	**9.70**	**328**	*i* Pn	**Pn**	**12 50 53.7**	**+0.1**
BRTR	**Keskin Array B** 0.1nm,0.3s,baz=258,slow=11,SNR=2.5	**9.73**	**75**	Pn	**Pn**	**12 50 58.1**	**+4.0**
ESDC	**Sonseca Array** 0.2nm,0.3s,baz=71,slow=11,SNR=5.1	**19.84**	**283**	P	**Pn**	**12 53 05.7**	**-0.9**
ESDC	**Sonseca Array**	**19.84**	**283**	P	**Pn**	**12 53 05.7**	**-0.8**
HFS	**Hagfors** 1.3nm,0.5s,mb3.6,baz=153,slow=9.7,SNR=3.3	**22.82**	**350**	P	**P**	**12 53 36.1**	**-0.6**
HFS	**Hagfors**	**22.82**	**350**	P	**P**	**12 53 36.1**	**-0.6**
EKA	**Eskdalemuir Ar** 1.6nm,0.7s,mb3.6,baz=128,slow=11,SNR=5.1	**24.08**	**324**	P	**P**	**12 53 50.0**	**+0.7**
EKA	**Eskdalemuir Ar**	**24.08**	**324**	P	**P**	**12 53 50.0**	**+0.7**
TORD	**Torodi Ar. Bea** 0.8nm,0.5s,mb3.7,baz=31,slow=9.0,SNR=7.2	**30.24**	**221**	P	**P**	**12 54 45.4**	**+0.4**
BVAR	**Borovoye Array** 0.8nm,0.6s,mb3.7,baz=258,slow=7.0,SNR=3.9	**36.79**	**50**	P	**P**	**12 55 40.8**	**-0.7**
BVAR	**Borovoye Array**	**36.79**	**50**	P	**P**	**12 55 40.8**	**-0.7**
KURK	**Kurchatov** 1.3nm,0.6s,mb3.7,baz=281,slow=8.7,SNR=4.1	**41.90**	**53**	P	**P**	**12 56 22.1**	**-2.1**
KURK	**Kurchatov**	**41.90**	**53**	P	**P**	**12 56 22.1**	**-2.2**
MKAR	**Makanchi Array** 1.6nm,0.5s,mb4.1,baz=289,slow=5.8,SNR=8.6	**44.87**	**58**	P	**P**	**12 56 47.2**	**-1.1**
ZALV	**Zalesovo Beam** 1.5nm,0.5s,mb4.1,baz=277,slow=9.2,SNR=4.2	**45.38**	**48**	P	**P**	**12 56 50.8**	**-1.4**

*CSEM **08** 12:52:55.1,38°.02N×21°.67E,h10km,ML3.9/6,After THE*
THE 08 12:52:55.1,38°.02N×21°.67E,h10km±5km,**ML3.9**/6,**Error ellipse: s-maj=5.0km s-min=0.5km az=35.0,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.28**	**19**	P	Pg	12 53 00.9	+0.2
UPR	**University Cam**	**0.28**	**19**	P	Pg	12 53 00.9	+0.2
LAKA	**Lakka**	**0.33**	**48**	P	Pg	12 53 01.4	-0.2
LAKA				S	Sg	12 53 06.6	+0.6
LAKA	**Lakka**	**0.33**	**48**	P	Pg	12 53 01.4	-0.2
LAKA				S	Sg	12 53 06.6	+0.6
EFP	**Efpalio**	**0.45**	**25**	P	Pg	12 53 03.6	-0.2
EFP				S	Sg	12 53 10.2	+0.4
EFP	**Efpalio**	**0.45**	**25**	P	Pg	12 53 03.6	-0.2
EFP				S	Sg	12 53 10.2	+0.4
KALE	**Kalithea**	**0.52**	**45**	P	Pg	12 53 05.3	0.0
KALE				S	Sg	12 53 12.8	+0.6
KALE	**Kalithea**	**0.52**	**45**	P	Pg	12 53 05.3	0.0
KALE				S	Sg	12 53 12.8	+0.6
GUR	**Goura**	**0.54**	**99**	P	Pg	12 53 05.6	0.0
GUR				S	Sg	12 53 13.3	+0.6
GUR	**Goura**	**0.54**	**99**	P	Pg	12 53 05.6	0.0
GUR				S	Sg	12 53 13.3	+0.6
DSF	**Desfina**	**0.78**	**60**	P	Pg	12 53 09.6	-0.5
DSF				S	Sg	12 53 21.5	+1.2
DSF	**Desfina**	**0.78**	**60**	P	Pg	12 53 09.6	-0.5
DSF				S	Sg	12 53 21.5	+1.2
VLX	**Vlachokerasia**	**0.86**	**139**	P	Pg	12 53 11.2	-0.5
VLX	**Vlachokerasia**	**0.86**	**139**	P	Pg	12 53 11.2	-0.5
ITM	**Ithomi**	**0.86**	**166**	P	Pg	12 53 11.4	-0.4
ITM	**Ithomi**	**0.86**	**166**	P	Pg	12 53 11.4	-0.4
VLS	**Valsamata**	**0.87**	**281**	P	Pg	12 53 11.4	-0.4
VLS	**Valsamata**	**0.87**	**281**	P	Pg	12 53 11.4	-0.4

*IDC **08** 12:55:00.1±15.0,36°.68N×20°.74E,h0km,mb3.8/3, mb1 3.7/4,mb1mx3.4/26,mbtmp3.7/4,ML3.3/1,MS5.0/1, Ms1 5.0/1,ms1mx3.7/45,Error ellipse: s-maj=389.2km s-min=108.1km az=4.0*
*THE **08** 12:55:13.9,38°.10N×21°.63E,h12km,ML4.7/3,Error ellipse: s-maj=1.1km s-min=0.6km az=85.0*
*NEIC **08** 12:55:13.9,38°.10N×21°.63E,h10km,ML3.4(ATH),After ATH.*
*ATH **08** 12:55:13.9,38°.10N×21°.63E,h10km±1km,ML3.4*
*CSEM **08** 12:55:13.4±0.2,38°.10N×21°.63E,h16km±1km,ML3.4, Error ellipse: s-maj=3.4km s-min=3.3km az=43.0*
*ISCJB **08** 12:55:13.2±0.4,38°.06N±0°.03×21°.65E±0°.04,h11km±4km, mb3.8/3,Error ellipse: s-maj=5.0km s-min=4.8km az=151.9*
ISC 08 12:55:13.9±0.4,**38°.08N**±0°.03×**21°.64E**±0°.04,**h10**km±3km, **n69**,σ1°.**17**/84,**mb3.8**/3,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.14**	**260**	*e*Pg	**Pg**	**12 55 17.4**	**+0.4**
RLS				*e*Sg	**Sg**	**12 55 19.6**	**+0.5**
RLS	**Riolos of Patr**	**0.14**	**260**	*e*PG	**Pg**	**12 55 17.4**	**+0.4**
RLS				*e*SG	**Sg**	**12 55 19.6**	**+0.5**
RLS	**Riolos of Patr**	**0.14**	**260**	*e*Pg	**Pg**	**12 55 17.4**	**+0.4**
RLS				*e*Sg	**Sg**	**12 55 19.6**	**+0.5**
UPR	**University Cam**	**0.23**	**30**	P	**Pg**	**12 55 18.8**	**+0.1**
UPR	**University Cam**	**0.23**	**30**	*e*PG	**Pg**	**12 55 18.6**	**-0.1**
UPR				*e*SG	**Sg**	**12 55 22.1**	**+0.2**
UPR	**University Cam**	**0.23**	**30**	*e*Pg	**Pg**	**12 55 18.6**	**-0.1**
UPR				*e*Sg	**Sg**	**12 55 22.1**	**+0.2**
LAKA	**Lakka**	**0.31**	**59**	P	**Pg**	**12 55 20.3**	**+0.2**
LAKA	**Lakka**	**0.31**	**59**	P	**Pg**	**12 55 20.3**	**+0.2**
EFP	**Efpalio**	**0.41**	**31**	P	**Pg**	**12 55 21.6**	**-0.2**
EFP				S	**Sg**	**12 55 27.9**	**+0.7**
EFP	**Efpalio**	**0.41**	**31**	*e*PB	**Pg**	**12 55 21.9**	**+0.1**
EFP				*e*SB	**Sg**	**12 55 27.3**	**+0.1**
EFP	**Efpalio**	**0.41**	**31**	P	**Pg**	**12 55 21.6**	**-0.2**
EFP	**Efpalio**	**0.41**	**31**	*e*Pb	**Pg**	**12 55 21.9**	**+0.1**
EFP				*e*Sb	**Sg**	**12 55 27.3**	**+0.1**
EFP				S	**Sg**	**12 55 27.9**	**+0.7**
KALE	**Kalithea**	**0.50**	**52**	P	**Pg**	**12 55 23.3**	**-0.4**
KALE				S	**Sg**	**12 55 31.2**	**+0.9**
KALE	**Kalithea**	**0.50**	**52**	P	**Pg**	**12 55 23.3**	**-0.4**
KALE				S	**Sg**	**12 55 31.2**	**+0.9**
GUR	**Goura**	**0.58**	**104**	P	**Pg**	**12 55 24.6**	**-0.4**
GUR				S	**Sg**	**12 55 33.8**	**+1.2**
GUR	**Goura**	**0.58**	**104**	*e*PB	**Pg**	**12 55 24.9**	**-0.1**
GUR				*e*SB	**Sg**	**12 55 33.8**	**+1.2**
GUR	**Goura**	**0.58**	**104**	P	**Pg**	**12 55 24.6**	**-0.4**
GUR	**Goura**	**0.58**	**104**	*e*Pg	**Pg**	**12 55 24.9**	**-0.1**
GUR				S	**Sg**	**12 55 33.8**	**+1.2**
VLS	**Valsamata**	**0.83**	**277**	*e*Pg	**Pg**	**12 55 29.4**	**-0.5**
VLS	**Valsamata**	**0.83**	**277**	*e*PG	**Pg**	**12 55 29.4**	**-0.5**
VLS	**Valsamata**	**0.83**	**277**	*e*Pg	**Pg**	**12 55 29.4**	**-0.5**
EVR	**Evrytania**	**0.85**	**9**	*e*Pg	**Pg**	**12 55 29.1**	**-1.1**
EVR	**Evrytania**	**0.85**	**9**	*e*PG	**Pg**	**12 55 29.1**	**-1.1**
EVR	**Evrytania**	**0.85**	**9**	*e*Pg	**Pg**	**12 55 29.1**	**-1.1**
ITM	**Ithomi**	**0.93**	**166**	*e*Pb	**Pg**	**12 55 32.0**	**+0.3**
ITM	**Ithomi**	**0.93**	**166**	*e*PB	**Pg**	**12 55 32.0**	**+0.3**
ITM	**Ithomi**	**0.93**	**166**	*e*Pb	**Pg**	**12 55 32.0**	**+0.3**
LTK	**Loutraki**	**1.05**	**93**	*e*PB	**Pg**	**12 55 34.0**	**-0.1**
LTK	**Loutraki**	**1.05**	**93**	*e*Pb	**Pg**	**12 55 34.0**	**-0.1**
AGG	**Agios Georgios**	**1.09**	**30**	*e*Pb	**Pg**	**12 55 34.0**	**-0.8**
AGG	**Agios Georgios**	**1.09**	**30**	*e*PG	**Pg**	**12 55 34.0**	**-0.8**
AGG	**Agios Georgios**	**1.09**	**30**	*e*Pb	**Pg**	**12 55 34.0**	**-0.8**
PYL	**PYLOS**	**1.19**	**176**	*e*PG	**Pg**	**12 55 36.5**	**-0.1**
PYL	**PYLOS**	**1.19**	**176**	*e*Pg	**Pg**	**12 55 36.5**	**-0.1**
LKR	**Lokris**	**1.21**	**62**	*e*Pn	**Pn**	**12 55 35.8**	**-1.1**
LKR	**Lokris**	**1.21**	**62**	*e*PN	**Pn**	**12 55 35.8**	**-1.1**
LKR	**Lokris**	**1.21**	**62**	*e*Pn	**Pn**	**12 55 35.8**	**-1.1**
THL	**Klokotos Trika**	**1.51**	**11**	*e*PG	**Pg**	**12 55 41.7**	**-1.2**
THL	**Klokotos Trika**	**1.51**	**11**	*e*Pg	**Pg**	**12 55 41.7**	**-1.2**
ATH	**Athens Observa**	**1.65**	**93**	*e*Pg	**Pg**	**12 55 44.6**	**-0.8**
ATH	**Athens Observa**	**1.65**	**93**	*e*PG	**Pg**	**12 55 44.6**	**-0.8**
ATH	**Athens Observa**	**1.65**	**93**	*e*Pg	**Pg**	**12 55 44.6**	**-0.8**
JAN	**Janina**	**1.69**	**339**	*e*Pb	**Pb**	**12 55 45.5**	**+0.5**
JAN	**Janina**	**1.69**	**339**	*e*PB	**Pb**	**12 55 45.5**	**+0.5**
JAN	**Janina**	**1.69**	**339**	*e*Pb	**Pb**	**12 55 45.5**	**+0.5**
VLI	**Veliai**	**1.71**	**142**	*e*Pn	**Pg**	**12 55 46.5**	**-0.1**
VLI	**Veliai**	**1.71**	**142**	*e*PG	**Pg**	**12 55 46.5**	**-0.1**
NEO	**Neokhori**	**1.74**	**45**	*e*Pb	**Pb**	**12 55 44.1**	**-1.9**
NEO	**Neokhori**	**1.74**	**45**	*e*Pb	**Pb**	**12 55 44.1**	**-1.9**
PTL	**Penteli**	**1.76**	**90**	*e*Pg	**Pg**	**12 55 46.8**	**-0.8**
PTL	**Penteli**	**1.76**	**90**	*e*PG	**Pg**	**12 55 46.8**	**-0.8**
PTL	**Penteli**	**1.76**	**90**	*e*Pg	**Pg**	**12 55 46.8**	**-0.8**
LIT	**Litokhoron**	**2.12**	**18**	*e*Pn	**Pn**	**12 55 51.7**	**+2.3**
LIT	**Litokhoron**	**2.12**	**18**	*e*PN	**Pn**	**12 55 51.7**	**+2.3**
OHR	**Ohrid**	**3.10**	**348**	*e*Pn	**Pn**	**12 56 04.7**	**+1.9**
KRUS	**Krusevo**	**3.30**	**355**	*e*Pn	**Pn**	**12 56 06.1**	**+0.5**
VAY	**Valandovo**	**3.32**	**12**	*e*Pn	**Pn**	**12 56 08.6**	**+2.8**
STIP	**Stip**	**3.63**	**7**	*e*Pn	**Pn**	**12 56 12.4**	**+2.2**
SMG	**Samos**	**4.13**	**94**	*e*Pn	**Pn**	**12 56 19.9**	**+2.9**
SMG	**Samos**	**4.13**	**94**	*e*PN	**Pn**	**12 56 19.9**	**+2.9**
STON	**Ston**	**5.65**	**329**	*e*Pn	**Pn**	**12 56 35.9**	**-1.9**
STON				Sn	**Sn**	**12 57 38.2**	**-4.6**
STON	**Ston**	**5.65**	**329**	*e*Pn	**Pn**	**12 56 35.8**	**-2.0**
STON				Sn	**Sn**	**12 57 38.2**	**-4.5**
MLR	**Muntele Rosu** comp=Z,8μm,18.8s,baz=12,slow=40	**8.07**	**22**	LR	LR	13 01 24.5	
BRTR	**Keskin Array B** 0.2nm,0.3s,baz=260,slow=13,SNR=6.0	**9.50**	**76**	Pn	**Pn**	**12 57 33.4**	**+2.7**
KURK	**Kurchatov** 0.7nm,0.4s,mb3.7,baz=281,slow=8.9,SNR=5.1	**41.63**	**53**	P	**P**	**13 03 01.1**	**-0.9**
KURK	**Kurchatov**	**41.63**	**53**	P	**P**	**13 03 01.1**	**-0.9**
MKAR	**Makanchi Array** 0.6nm,0.7s,mb3.6,baz=297,slow=6.8,SNR=4.8	**44.60**	**59**	P	**P**	**13 03 24.2**	**-2.0**
ZALV	**Zalesovo Beam** 1.5nm,0.5s,mb4.1,baz=285,slow=9.2,SNR=5.1	**45.10**	**48**	P	**P**	**13 03 29.6**	**-0.4**
ZALV	**Zalesovo Beam**	**45.10**	**48**	P	**P**	**13 03 29.5**	**-0.5**

*CSEM **08** 13:01:31.4,38°.07N×21°.54E,h18km,ML3.7/4,After THE*
THE 08 13:01:31.4,38°.07N×21°.54E,h18km±1km,**ML3.7**/4,**Error ellipse: s-maj=2.2km s-min=0.7km az=296.0,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAKA	**Lakka**	**0.39**	**64**	P	Pg	13 01 39.0	-0.4
LAKA				S	Sg	13 01 45.2	+0.4
LAKA	**Lakka**	**0.39**	**64**	P	Pg	13 01 39.0	-0.4
LAKA				S	Sg	13 01 45.2	+0.4
EFP	**Efpalio**	**0.46**	**39**	P	Pg	13 01 40.6	-0.1
EFP				S	Sg	13 01 48.2	+1.2
EFP	**Efpalio**	**0.46**	**39**	P	Pg	13 01 40.6	-0.1
EFP				S	Sg	13 01 48.2	+1.2
KALE	**Kalithea**	**0.57**	**56**	P	Pg	13 01 42.3	-0.5
KALE				S	Sg	13 01 51.5	+1.0
KALE	**Kalithea**	**0.57**	**56**	P	Pg	13 01 42.3	-0.5
KALE				S	Sg	13 01 51.5	+1.0
GUR	**Goura**	**0.65**	**102**	P	Pg	13 01 43.3	-0.9
GUR				S	Sg	13 01 53.4	+0.5
GUR	**Goura**	**0.65**	**102**	P	Pg	13 01 43.3	-0.9
GUR				S	Sg	13 01 53.4	+0.5
DSF	**Desfina**	**0.85**	**66**	P	Pb	13 01 46.8	-0.9
DSF				S	Sb	13 01 59.4	+0.7
DSF	**Desfina**	**0.85**	**66**	P	Pb	13 01 46.8	-0.9
DSF				S	Sb	13 01 59.4	+0.7
ITM	**Ithomi**	**0.94**	**161**	P	Pb	13 01 48.6	-0.6
ITM				S	Sb	13 02 02.8	+1.5
ITM	**Ithomi**	**0.94**	**161**	P	Pb	13 01 48.6	-0.6
ITM				S	Sb	13 02 02.8	+1.5

*ATH **08** 13:06:22.8,38°.04N×21°.54E,h27km±1km,ML2.8*
*NEIC **08** 13:06:22.7,38°.04N×21°.54E,h27km,ML2.8(ATH),After ATH.*
*THE **08** 13:06:23.8,38°.

MEV	Metsovon	1.79	352	P	Pg	13 06 58.3	+0.1
IGT	Igoumenitsa	1.80	328	P	Pn	13 06 56.2	+1.0
IGT				S	Sn	13 07 18.7	+0.6
IGT	Igoumenitsa	1.80	328	P	Pn	13 06 56.2	+1.0
IGT				S	Sn	13 07 18.7	+0.6
PTL	Penteli	1.81	88	ePb	Pn	13 06 54.5	-0.9
PTL	Penteli	1.81	88	ePB	Pn	13 06 54.5	-0.9
PTL	Penteli	1.81	88	ePb	Pn	13 06 54.5	-0.9
XOR	Xorichti	1.85	43	P	Pn	13 06 55.5	-0.4
XOR				S	Sn	13 07 20.8	+1.3
XOR	Xorichti	1.85	43	P	Pn	13 06 55.5	-0.4
XOR				S	Sn	13 07 20.8	+1.3
AOS	Alonnisos	2.15	57	P	Pn	13 06 59.2	-0.8
AOS				S	Sn	13 07 27.2	+0.5
AOS	Alonnisos	2.15	57	P	Pn	13 06 59.2	-0.8
AOS				S	Sn	13 07 27.2	+0.5
KEK	Kerkira	2.19	321	P	Pn	13 07 00.0	-0.5
KEK				S	Sn	13 07 29.2	+1.4
KEK	Kerkira	2.19	321	P	Pn	13 07 00.0	-0.5
KEK				S	Sn	13 07 29.2	+1.4
LIT	Litokhoron	2.20	19	P	Pn	13 07 00.5	-0.2
LIT				S	Sn	13 07 29.6	+1.5
LIT	Litokhoron	2.20	19	P	Pn	13 07 00.5	-0.2
LIT				S	Sn	13 07 29.6	+1.5
KARN	Karanos	3.22	143	P	Pn	13 07 20.7	+6.0
LAST	Lasithi	4.24	131	P	Pn	13 07 29.0	+0.2
LAST	Lasithi	4.24	131	P	Pn	13 07 29.0	+0.2

*THE **08** 13:10:23.5, 38°.09N×21°.63E, h9km±2km, ML3.9/5, Error ellipse: s-maj=2.1km s-min=0.8km az=259.0*
*CSEM **08** 13:10:23.5, 38°.09N×21°.63E, h9km, ML3.9/5, After THE*
*ISCJB **08** 13:10:23.1±0.7, 38°.08N±0°.04×21°.62E±0°.04, h5km±10km, Error ellipse: s-maj=6.5km s-min=4.7km az=148.7*
ISC 08 13:10:23.5±0.7, 38°.09N±0°.04×21°.62E±0°.04, h13km±8km, n15, σ0°91/30, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAKA	Lakka	0.32	62	P	Pg	13 10 28.9	-1.2
LAKA				S	Sg	13 10 35.1	+0.6
LAKA	Lakka	0.32	62	P	Pg	13 10 28.9	-1.2
LAKA				S	Sg	13 10 35.1	+0.6
EFP	Efpalio	0.41	34	P	Pg	13 10 31.2	-0.4
EFP				S	Sg	13 10 37.7	+0.6
EFP	Efpalio	0.41	34	P	Pg	13 10 31.2	-0.4
EFP				S	Sg	13 10 37.7	+0.6
KALE	Kalithea	0.51	54	P	Pg	13 10 33.0	-0.5
KALE				S	Sg	13 10 41.0	+0.7
KALE	Kalithea	0.51	54	P	Pg	13 10 33.0	-0.5
KALE				S	Sg	13 10 41.0	+0.7
GUR	Goura	0.59	105	P	Pg	13 10 34.2	-0.9
GUR				S	Sg	13 10 43.9	+1.0
GUR	Goura	0.59	105	P	Pg	13 10 34.2	-0.9
GUR				S	Sg	13 10 43.9	+1.0
KFL	Anninata	0.66	272	P	Pg	13 10 36.1	-0.2
KFL				S	Sg	13 10 46.0	+1.1
DSF	Desfina	0.78	66	P	Pg	13 10 37.3	-1.4
DSF				S	Sg	13 10 48.9	-0.1
DSF	Desfina	0.78	66	P	Pg	13 10 37.3	-1.4
DSF				S	Sg	13 10 48.9	-0.1
ITM	Ithomi	0.94	165	P	Pg	13 10 40.5	-1.2
ITM				S	Sg	13 10 55.2	+1.2
ITM	Ithomi	0.94	165	P	Pg	13 10 40.5	-1.2
ITM				S	Sg	13 10 55.2	+1.2
ATAL	Atalanti	1.26	61	P	Pn	13 10 46.0	-0.7
ATAL				S	Sb	13 11 04.5	+1.5
ATAL	Atalanti	1.26	61	P	Pn	13 10 46.0	-0.7
ATAL				S	Sb	13 11 04.5	+1.5

*ATH **08** 13:11:26.6, 38°.02N×21°.54E, h19km±1km, ML3.3*
*NEIC **08** 13:11:26.6, 38°.02N×21°.54E, h19km, ML3.3(ATH), After ATH.*
*CSEM **08** 13:11:26.8±0.3, 38°.00N×21°.53E, h10km, ML3.3, Error ellipse: s-maj=5.4km s-min=4.2km az=100.0*
*THE **08** 13:11:27.3, 38°.01N×21°.56E, h8km±1km, ML4.0/12, Error ellipse: s-maj=1.1km s-min=0.7km az=214.0*
*ISCJB **08** 13:11:27.0±0.4, 38°.00N±0°.02×21°.56E±0°.03, h9km±3km, Error ellipse: s-maj=3.8km s-min=3.4km az=14.9*
ISC 08 13:11:27.6±0.4, 38°.02N±0°.02×21°.56E±0°.03, h10km±3km, n79, σ0°91/117, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.08	298	ePb	Pg	13 11 30.5	+0.6
RLS				eSb	Sg	13 11 32.8	+1.2
RLS	Riolos of Patr	0.08	298	ePB	Pg	13 11 30.5	+0.6
RLS				eSB	Sg	13 11 32.8	+1.2
RLS	Riolos of Patr	0.08	298	ePb	Pg	13 11 30.5	+0.6
RLS				eSb	Sg	13 11 32.8	+1.2
UPR	University Cam	0.32	34	P	Pg	13 11 34.1	+0.1
UPR				S	Sg	13 11 39.4	+1.1
UPR	University Cam	0.32	34	ePB	Pg	13 11 34.0	0.0
UPR	University Cam	0.32	34	P	Pg	13 11 34.1	+0.1
UPR				S	Sg	13 11 39.4	+1.1
LAKA	Lakka	0.40	56	P	Pg	13 11 34.8	-0.7
LAKA				S	Sg	13 11 40.9	+0.1
LAKA	Lakka	0.40	56	P	Pg	13 11 34.8	-0.7
LAKA				S	Sg	13 11 40.9	+0.1
EFP	Efpalio	0.49	34	P	Pg	13 11 36.6	-0.6
EFP				S	Sg	13 11 44.5	+0.8
EFP	Efpalio	0.49	34	ePN	Pg	13 11 36.8	-0.4
EFP				eSN	Sg	13 11 43.5	-0.2
EFP	Efpalio	0.49	34	ePn	Pg	13 11 36.8	-0.4
EFP				S	Sg	13 11 44.5	+0.8
KALE	Kalithea	0.59	51	P	Pg	13 11 38.3	-0.8
KALE				S	Sg	13 11 48.0	+1.2
KALE	Kalithea	0.59	51	P	Pg	13 11 38.3	-0.8
KALE				S	Sg	13 11 48.0	+1.2
KFL	Anninata	0.61	279	P	Pg	13 11 38.8	-0.7
GUR	Goura	0.63	97	P	Pg	13 11 38.5	-1.3
GUR				S	Sg	13 11 48.0	+0.1
GUR	Goura	0.63	97	ePB	Pg	13 11 38.5	-1.3
GUR	Goura	0.63	97	P	Pg	13 11 38.5	-1.3
GUR				S	Sg	13 11 48.0	+0.1
VLS	Valsamata	0.78	282	ePn	Pg	13 11 41.3	-1.4
VLS	Valsamata	0.78	282	P	Pg	13 11 41.4	-1.3
VLS				S	Sg	13 11 54.0	+1.2
VLS	Valsamata	0.78	282	ePN	Pg	13 11 41.3	-1.4
VLS	Valsamata	0.78	282	P	Pg	13 11 41.4	-1.3
VLS				S	Sg	13 11 54.0	+1.2
DSF	Desfina	0.86	63	P	Pg	13 11 42.9	-1.3
DSF				S	Sg	13 11 55.9	+0.5
DSF	Desfina	0.86	63	P	Pg	13 11 42.9	-1.3
DSF				S	Sg	13 11 55.9	+0.5
ITM	Ithomi	0.89	161	ePn	Pg	13 11 43.4	-1.3
ITM	Ithomi	0.89	161	P	Pg	13 11 43.1	-1.6
ITM				S	Sg	13 11 57.7	+1.4
ITM	Ithomi	0.89	161	ePN	Pg	13 11 43.4	-1.3
ITM	Ithomi	0.89	161	P	Pg	13 11 43.1	-1.6
ITM	Ithomi	0.89	161	ePn	Pg	13 11 43.4	-1.3
ITM				S	Sg	13 11 57.7	+1.4
EVR	Evrytania	0.92	12	ePn	Pg	13 11 44.6	-0.7
EVR	Evrytania	0.92	12	ePN	Pg	13 11 44.6	-0.7
EVR	Evrytania	0.92	12	ePn	Pg	13 11 44.6	-0.7
VLX	Vlachokerasia	0.92	135	P	Pg	13 11 44.5	-0.8
VLX				S	Sg	13 11 57.7	+0.4
VLX	Vlachokerasia	0.92	135	ePN	Pg	13 11 44.9	-0.4
VLX	Vlachokerasia	0.92	135	P	Pg	13 11 44.5	-0.8
VLX	Vlachokerasia	0.92	135	ePn	Pg	13 11 44.9	-0.4
VLX				S	Sg	13 11 57.7	+0.4
LTK	Loutraki	1.11	89	P	Pg	13 11 47.2	-1.8
LTK				S	Sg	13 12 03.9	+0.4
LTK	Loutraki	1.11	89	ePB	Pg	13 11 47.3	-1.7
LTK	Loutraki	1.11	89	P	Pg	13 11 47.2	-1.8
LTK				S	Sg	13 12 03.9	+0.4
PYL	PYLOS	1.13	172	P	Pg	13 11 47.9	-1.5
PYL				S	Sg	13 12 05.4	+1.3
PYL	PYLOS	1.13	172	ePN	Pg	13 11 47.9	-1.5
PYL	PYLOS	1.13	172	P	Pg	13 11 47.9	-1.5
PYL				S	Sg	13 12 05.4	+1.3
AGG	Agios Georgios	1.17	31	P	Pb	13 11 49.9	-0.1
AGG				S	Sb	13 12 06.2	+1.0
AGG	Agios Georgios	1.17	31	P	Pb	13 11 49.9	-0.1
AGG				S	Sb	13 12 06.2	+1.0
LKR	Lokris	1.30	61	ePn	Pn	13 11 51.4	-0.5
LKR	Lokris	1.30	61	P	Pn	13 11 51.0	-0.9
LKR				S	Sb	13 12 08.2	-0.7
LKR	Lokris	1.30	61	ePN	Pn	13 11 51.4	-0.5
LKR	Lokris	1.30	61	P	Pn	13 11 51.0	-0.9
LKR	Lokris	1.30	61	ePn	Pn	13 11 51.4	-0.5
LKR				S	Sb	13 12 08.2	-0.7
ATAL	Atalanti	1.33	59	P	Pn	13 11 50.6	-1.7
ATAL				S	Sb	13 12 09.6	-0.3
ATAL	Atalanti	1.33	59	P	Pn	13 11 50.6	-1.7
ATAL				S	Sb	13 12 09.6	-0.3
VLI	Veliai	1.70	139	ePn	Pn	13 11 58.3	+0.9
VLI	Veliai	1.70	139	ePN	Pn	13 11 58.3	+0.9
VLI	Veliai	1.70	139	ePn	Pn	13 11 58.3	+0.9
ATH	Athens Observa	1.71	91	ePn	Pn	13 11 58.0	+0.5
ATH	Athens Observa	1.71	91	ePN	Pn	13 11 58.0	+0.5
ATH	Athens Observa	1.71	91	ePn	Pn	13 11 58.0	+0.5
ATHU	Athens Univers	1.76	91	P	Pn	13 11 57.2	-1.0
ATHU				S	Sn	13 12 21.2	+0.5
ATHU	Athens Univers	1.76	91	P	Pn	13 11 57.2	-1.0
ATHU				S	Sn	13 12 21.2	+0.5
NEO	Neokhori	1.83	45	ePn	Pn	13 11 59.2	0.0
NEO	Neokhori	1.83	45	ePN	Pn	13 11 59.2	0.0
NEO	Neokhori	1.83	45	ePn	Pn	13 11 59.2	0.0
XOR	Xorichti	1.86	43	P	Pn	13 11 58.6	-0.9
XOR				S	Sn	13 12 24.1	+1.0
XOR	Xorichti	1.86	43	P	Pn	13 11 58.6	-0.9
XOR				S	Sn	13 12 24.1	+1.0
AOS	Alonnisos	2.15	57	P	Pn	13 12 03.1	-0.5
AOS				S	Sn	13 12 30.6	+0.2
AOS	Alonnisos	2.15	57	P	Pn	13 12 03.1	-0.5
AOS				S	Sn	13 12 30.6	+0.2
LIT	Litokhoron	2.20	19	ePn	Pn	13 12 04.5	+0.2
LIT	Litokhoron	2.20	19	ePN	Pn	13 12 04.5	+0.2
LIT	Litokhoron	2.20	19	ePn	Pn	13 12 04.5	+0.2
APE	Apeiranthos	3.30	106	ePn	Pn	13 12 20.4	+1.0
APE	Apeiranthos	3.30	106	ePN	Pn	13 12 20.4	+1.0
APE	Apeiranthos	3.30	106	ePn	Pn	13 12 20.4	+1.0
CHOS	Chios island	3.56	83	ePN	Pn	13 12 23.9	+0.9
CHOS	Chios island	3.56	83	ePn	Pn	13 12 23.9	+0.9
SMG	Samos	4.19	93	ePn	Pn	13 12 32.2	+0.6
SMG	Samos	4.19	93	ePN	Pn	13 12 32.2	+0.6
SMG	Samos	4.19	93	ePn	Pn	13 12 32.2	+0.6
KARP	Karpathos	5.13	117	ePn	Pn	13 12 45.7	+1.2
KARP	Karpathos	5.13	117	ePN	Pn	13 12 45.7	+1.2
KARP	Karpathos	5.13	117	ePn	Pn	13 12 45.7	+1.2

*CSEM **08** 13:16:19.1, 38°.13N×21°.47E, h22km, ML3.5/6, After THE*
THE 08 13:16:19.1, 38°.13N×21°.47E, h22km±2km, ML3.5/6, Error ellipse: s-maj=3.2km s-min=1.8km az=153.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	University Cam	0.29	58	P	Pb	13 16 26.5	+0.7
UPR				S	Sb	13 16 31.2	+0.9
UPR	University Cam	0.29	58	P	Pb	13 16 26.5	+0.7
UPR				S	Sb	13 16 31.2	+0.9
LAKA	Lakka	0.41	74	P	Pb	13 16 28.2	+0.4
LAKA				S	Sb	13 16 33.1	-0.5
LAKA	Lakka	0.41	74	P	Pb	13 16 28.2	+0.4
LAKA				S	Sb	13 16 33.1	-0.5
EFP	Efpalio	0.45	49	P	Pb	13 16 28.8	+0.4
EFP				S	Sb	13 16 34.9	+0.2
EFP	Efpalio	0.45	49	P	Pb	13 16 28.8	+0.4
EFP				S	Sb	13 16 34.9	+0.2
KFL	Anninata	0.54	268	P	Pb	13 16 28.5	-1.4
KALE	Kalithea	0.59	63	P	Pb	13 16 31.0	+0.3
KALE				S	Sb	13 16 38.3	-0.3
KALE	Kalithea	0.59	63	P	Pb	13 16 31.0	+0.3
KALE				S	Sb	13 16 38.3	-0.3
GUR	Goura	0.71	105	P	Pb	13 16 32.6	-0.2
GUR				S	Sb	13 16 43.0	+0.9
GUR	Goura	0.71	105	P	Pb	13 16 32.6	-0.2
GUR				S	Sb	13 16 43.0	+0.9
DSF	Desfina	0.88	71	P	Pb	13 16 34.8	-0.8
DSF				S	Sb	13 16 47.4	+0.5
DSF	Desfina	0.88	71	P	Pb	13 16 34.8	-0.8
DSF				S	Sb	13 16 47.4	+0.5
AGG	Agios Georgios	1.12	37	P	Pn	13 16 39.5	+0.1
AGG				S	Sb	13 16 53.5	-0.3
AGG	Agios Georgios	1.12	37	P	Pn	13 16 39.5	+0.1
AGG				S	Sb	13 16 53.5	-0.3

*CSEM **08** 13:17:09.6, 38°.10N×21°.62E, h0km, ML3.9/6, After THE*
THE 08 13:17:09.6, 38°.10N×21°.62E, h0km±4km, ML3.9/6, Error ellipse: s-maj=4.9km s-min=1.0km az=282.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	University Cam	0.23	35	P	Pg	13 17 14.5	+0.5
UPR				S	Sg	13 17 19.2	+2.2
UPR	University Cam	0.23	35	P	Pg	13 17 14.5	+0.5
UPR				S	Sg	13 17 19.2	+2.2
LAKA	Lakka	0.32	63	P	Pg	13 17 15.9	+0.2
LAKA				S	Sg	13 17 21.0	+1.2
LAKA	Lakka	0.32	63	P	Pg	13 17 15.9	+0.2
LAKA				S	Sg	13 17 21.0	+1.2
EFP	Efpalio	0.40	34	P	Pg	13 17 17.2	-0.1
EFP				S	Sg	13 17 23.7	+1.2
EFP	Efpalio	0.40	34	P	Pg	13 17 17.2	-0.1
EFP				S	Sg	13 17 23.7	+1.2
KALE	Kalithea	0.51	54	P	Pg	13 17 18.9	-0.4
KALE				S	Sg	13 17 27.1	+1.2
KALE	Kalithea	0.51	54	P	Pg	13 17 18.9	-0.4
KALE				S	Sg	13 17 27.1	+1.2
GUR	Goura	0.59	105	P	Pg	13 17 20.4	-0.6
GUR				S	Sg	13 17 29.5	+0.9
GUR	Goura	0.59	105	P	Pg	13 17 20.4	-0.6
GUR				S	Sg	13 17 29.5	+0.9
KFL	Anninata	0.66	272	P	Pg	13 17 21.7	-0.5
DSF	Desfina	0.78	66	P	Pg	13 17 23.6	-1.0
DSF				S	Sg	13 17 35.1	+0.4
DSF	Desfina	0.78	66	P	Pg	13 17 23.6	-1.0
DSF				S	Sg	13 17 35.1	+0.4
VLX	Vlachokerasia	0.94	140	P	Pg	13 17 27.2	-0.4
VLX				S	Sg	13 17 41.0	+1.2
VLX	Vlachokerasia	0.94	140	P	Pg	13 17 27.2	-0.4
VLX				S	Sg	13 17 41.0	+1.2
ITM	Ithomi	0.94	165	P	Pg	13 17 26.5	-1.2
ITM				S	Sg	13 17 42.1	+2.1
ITM	Ithomi	0.94	165	P	Pg	13 17 26.5	-1.2
ITM				S	Sg	13 17 42.1	+2.1
PYL	PYLOS	1.20	175	P	Pg	13 17 31.5	-1.1
PYL				S	Sg	13 17 51.6	+3.4
PYL	PYLOS	1.20	175	P	Pg	13 17 31.5	-1.1
PYL				S	Sg	13 17 51.6	+3.4

*ISCJB **08** 13:18:53.0±0.5, 38°.04N±0°.02×21°.47E±0°.04, h8km±3km, Error ellipse: s-maj=4.9km s-min=3.7km az=177.1*
*NEIC **08** 13:18:53.3, 38°.06N×21°.49E, h22km, ML3.2(ATH), After ATH.*
*THE **08** 13:18:53.8, 38°.03N×21°.52E, h9km, ML4.3/6, Error ellipse: s-maj=1.1km s-min=0.5km az=95.0*
*CSEM **08** 13:18:53.6±0.3, 38°.05N×21°.49E, h10km, ML3.2, Error ellipse: s-maj=6.3km s-min=4.6km az=85.0*
*ATH **08** 13:18:53.3, 38°.06N×21°.49E, h22km, MD3.3/13, ML3.2*
ISC 08 13:18:54.1±0.5, 38°.05N±0°.02×21°.50E±0°.03, h11km±3km, n105, σ0°92/134, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.03	292	ePb	Pg	13 18 57.3	+1.1
RLS				eSb	Sg	13 19 00.0	+2.4
RLS	Riolos of Patr	0.03	292	ePB	Pg	13 18 57.3	+1.1
RLS				eSB	Sg	13 19 00.0	+2.4
RLS	Riolos of Patr	0.03	292	ePb	Pg	13 18 57.3	+1.1
RLS				eSb	Sg	13 19 00.0	+2.4
UPR	University Cam	0.33	43	P	Pg	13 19 00.4	-0.2
UPR				S	Sg	13 19 05.7	+0.7
UPR	University Cam	0.33	43	ePB	Pg	13 19 00.5	-0.1
UPR				eSB	Sg	13 19 06.2	+1.2
UPR	University Cam	0.33	43	P	Pg	13 19 00.4	-0.2
UPR				S	Sg	13 19 05.7	+0.7
UPR				eSb	Sg	13 19 06.2	+1.2
LAKA	Lakka	0.42	62	P	Pg	13 19 01.7	-0.7
LAKA				S	Sg	13 19 08.0	0.0
LAKA	Lakka	0.42	62	P	Pg	13 19 01.7	-0.7
LAKA				S	Sg	13 19 08.0	0.0
EFP	Efpalio	0.49	40	P	Pg	13 19 03.2	-0.6
EFP				S	Sg	13 19 10.8	+0.4
EFP	Efpalio	0.49	40	ePB	Pg	13 19 02.2	-1.6
EFP				eSB	Sg	13 19 10.8	+0.4
EFP	Efpalio	0.49	40	ePb	Pg	13 19 02.2	-1.6
EFP	Efpalio	0.49	40	P	Pg	13 19 03.2	-0.6
EFP				S	Sg	13 19 10.8	+0.4
KALE	Kalithea	0.61	55	P	Pg	13 19 05.0	-0.9
KALE				S	Sg	13 19 14.4	+0.5
KALE	Kalithea	0.61	55	P	Pg	13 19 05.0	-0.9
KALE				S	Sg	13 19 14.4	+0.5
GUR	Goura	0.67	99	P	Pg	13 19 05.9	-1.2
GUR				S	Sg	13 19 15.8	-0.1
GUR	Goura	0.67	99	ePB	Pg	13 19 05.9	-1.2
GUR				eSN	Sg	13 19 15.8	-0.1
GUR	Goura	0.67	99	P	Pg	13 19 05.9	-1.2
GUR				S	Sg	13 19 15.8	-0.1
VLS	Valsamata	0.73	281	ePn	Pg	13 19 07.3	-1.0
VLS	Valsamata	0.73	281	ePN	Pg	13 19 07.3	-1.0
VLS	Valsamata	0.73	281	ePn	Pg	13 19 07.3	-1.0
DSF	Desfina	0.89	65	P	Pg	13 19 09.5	-1.6
DSF	Desfina	0.89	65	P	Pg	13 19 09.5	-1.6
EVR	Evrytania	0.90	15	ePn	Pg	13 19 11.2	-0.3
EVR	Evrytania	0.90	15	ePN	Pg	13 19 11.2	-0.3
EVR	Evrytania	0.90	15	ePn	Pg	13 19 11.2	-0.3
ITM	Ithomi	0.93	159	ePn	Pg	13 19 11.1	-0.9
ITM				eSn	Sn	13 19 25.6	-0.6
ITM	Ithomi	0.93	159	P	Pg	13 19 10.9	-1.1
ITM				S	Sg	13 19 24.3	+0.3
ITM	Ithomi	0.93	159	ePN	Pg	13 19 11.1	-0.9
ITM				eSN	Sn	13 19 25.6	-0.6
ITM	Ithomi	0.93	159	P	Pg	13 19 10.9	-1.1
ITM				S	Sg	13 19 24.3	+0.3
ITM				eSn	Sn	13 19 25.6	-0.6
VLX	Vlachokerasia	0.97	134	P	Pg	13 19 11.4	-1.1
VLX				S	Sg	13 19 25.6	+0.3
VLX	Vlachokerasia	0.97	134	ePB	Pg	13 19 11.0	-1.7
VLX	Vlachokerasia	0.97	134	ePb	Pg	13 19 11.0	-1.7
VLX	Vlachokerasia	0.97	134	P	Pg	13 19 11.6	-1.1
VLX				S	Sg	13 19 25.6	+0.3
LTK	Loutraki	1.16	91	P	Pb	13 19 14.6	-1.4
LTK				S	Sb	13 19 31.8	+0.8
LTK	Loutraki	1.16	91	ePB	Pb	13 19 14.5	-1.5
LTK	Loutraki	1.16	91	P	Pb	13 19 14.6	-1.4
LTK				S	Sb	13 19 31.8	+0.8
PYL	PYLOS	1.16	171	ePN	Pn	13 19 16.1	-0.1
PYL	PYLOS	1.16	171	ePn	Pn	13 19 16.1	-0.1
AGG	Agios Georgios	1.17	33	ePn	Pn	13 19 15.9	-0.4
AGG	Agios Georgios	1.17	33	P	Pb	13 19 15.4	-0.9
AGG	Agios Georgios	1.17	33	ePN	Pn	13 19 15.9	-0.4
AGG	Agios Georgios	1.17	33	P	Pb	13 19 15.4	-0.9
AGG	Agios Georgios	1.17	33	ePn	Pn	13 19 15.9	-0.4
LKR	Lokris	1.32	62	ePn	Pn	13 19 18.0	-0.4
LKR	Lokris	1.32	62	P	Pn	13 19 17.7	-0.7
LKR				S	Sb	13 19 36.2	+0.4
LKR	Lokris	1.32	62	ePN	Pn	13 19 18.0	-0.4
LKR	Lokris	1.32	62	P	Pn	13 19 17.7	-0.7
LKR	Lokris	1.32	62	ePn	Pn	13 19 18.0	-0.4
LKR				S	Sb	13 19 36.2	+0.4
ATAL	Atalanti	1.36	61	P	Pn	13 19 18.1	-0.8
ATAL	Atalanti	1.36	61	P	Pn	13 19 18.1	-0.8
THL	Klokotos Trika	1.57	15	ePN	Pn	13 19 22.7	+0.9
THL	Klokotos Trika	1.57	15	ePn	Pn	13 19 22.7	+0.9
NAIG	Nisos Aigina	1.60	100	ePb	Pn	13 19 21.4	-0.8
NAIG	Nisos Aigina	1.60	100	ePB	Pn	13 19 21.4	-0.8
JAN	Janina	1.69	343	ePn	Pn	13 19 23.8	+0.4
JAN	Janina	1.69	343	ePN	Pn	13 19 23.8	+0.4
JAN	Janina	1.69	343	ePn	Pn	13 19 23.8	+0.4
VLI	Veliai	1.75	139	ePn	Pn	13 19 25.1	+0.8
VLI	Veliai	1.75	139	ePN	Pn	13 19 25.1	+0.8
VLI	Veliai	1.75	139	ePn	Pn	13 19 25.1	+0.8
ATH	Athens Observa	1.75	92	ePn	Pn	13 19 24.9	+0.6
ATH	Athens Observa	1.75	92	ePN	Pn	13 19 24.9	+0.6
ATH	Athens Observa	1.75	92	ePn	Pn	13 19 24.9	+0.6
VLY	Voula,Athens	1.82	95	ePb	Pn	13 19 24.8	-0.5
VLY	Voula,Athens	1.82	95	ePB	Pn	13 19 24.8	-0.5
NEO	Neokhori	1.84	46	ePn	Pn	13 19 25.7	+0.1
NEO	Neokhori	1.84	46	ePN	Pn	13 19 25.7	+0.1
NEO	Neokhori	1.84	46	ePn	Pn	13 19 25.7	+0.1
PTL	Penteli	1.86	89	ePb	Pn	13 19 25.6	-0.2
PTL	Penteli	1.86	89	ePB	Pn	13 19 25.6	-0.2
XOR	Xorichti	1.87	45	P	Pn	13 19 25.3	-0.6
XOR	Xorichti	1.87	45	P	Pn	13 19 25.3	-0.6
KEK	Kerkira	2.13	322	ePb	Pn	13 19 28.9	-0.6
KEK	Kerkira	2.13	322	ePB	Pn	13 19 28.9	-0.6
LIT	Litokhoron	2.19	20	ePb	Pn	13 19 30.0	-0.4
LIT	Litokhoron	2.19	20	ePB	Pn	13 19 30.0	-0.4
KZN	Kozani	2.27	5	ePb	Pn	13 19 31.4	0.0
KZN	Kozani	2.27	5	ePB	Pn	13 19 31.4	0.0
PLG	Polygyros	2.77	32	ePn	Pn	13 19 39.0	+0.7
PLG	Polygyros	2.77	32	ePN	Pn	13 19 39.0	+0.7
PLG	Polygyros	2.77	32	ePn	Pn	13 19 39.0	+0.7
SOH	Sokhos	3.12	27	ePn	Pn	13 19 44.4	+1.3
SOH	Sokhos	3.12	27	ePN	Pn	13 19 44.4	+1.3
SOH	Sokhos	3.12	27	ePn	Pn	13 19 44.4	+1.3
KARN	Karanos	3.27	143	ePN	Pn	13 19 46.9	+1.7
KARN	Karanos	3.27	143	ePn	Pn	13 19 46.9	+1.7
LIA	Limnos Island	3.41	56	ePn	Pn	13 19 47.7	+0

KALE	**Kalithea**	**0.57**	**58**	P		**Pg**	**13 20 41.0**	**-0.6**
KALE				S		**Sg**	**13 20 49.6**	**+0.5**
KFL	**Anninata**	**0.58**	**272**	P		**Pg**	**13 20 42.0**	**+0.1**
KFL				S		**Sg**	**13 20 51.3**	**+1.7**
GUR	**Goura**	**0.66**	**103**	P		**Pg**	**13 20 41.6**	**-1.7**
GUR				S		**Sg**	**13 20 51.3**	**-0.7**
GUR	**Goura**	**0.66**	**103**	*e*PB		**Pg**	**13 20 41.6**	**-1.7**
GUR				*e*SN		**Sg**	**13 20 51.8**	**-0.2**
GUR	**Goura**	**0.66**	**103**	*e*Pb		**Pg**	**13 20 41.6**	**-1.7**
GUR				S		**Sg**	**13 20 51.3**	**-0.7**
GUR				*e*Sn		**Sg**	**13 20 51.8**	**-0.2**
VLS	**Valsamata**	**0.75**	**277**	*e*Pn		**Pg**	**13 20 43.9**	**-1.0**
VLS	**Valsamata**	**0.75**	**277**	P		**Pg**	**13 20 44.1**	**-0.8**
VLS	**Valsamata**	**0.75**	**277**	*e*PN		**Pg**	**13 20 43.9**	**-1.0**
VLS	**Valsamata**	**0.75**	**277**	*e*Pn		**Pg**	**13 20 43.9**	**-1.0**
DSF	**Desfina**	**0.85**	**67**	P		**Pg**	**13 20 45.5**	**-1.4**
DSF				S		**Sg**	**13 20 58.2**	**+0.2**
DSF	**Desfina**	**0.85**	**67**	P		**Pg**	**13 20 45.5**	**-1.4**
DSF				S		**Sg**	**13 20 58.2**	**+0.2**
EVR	**Evrytania**	**0.86**	**15**	*e*Pb		**Pg**	**13 20 46.3**	**-0.7**
EVR	**Evrytania**	**0.86**	**15**	*e*PB		**Pg**	**13 20 46.3**	**-0.7**
EVR	**Evrytania**	**0.86**	**15**	*e*Pb		**Pg**	**13 20 46.3**	**-0.7**
ITM	**Ithomi**	**0.96**	**161**	*e*Pn		**Pg**	**13 20 47.4**	**-1.6**
ITM				*e*Sn		**Sg**	**13 21 00.5**	**-1.0**
ITM	**Ithomi**	**0.96**	**161**	P		**Pg**	**13 20 46.9**	**-2.1**
ITM				S		**Sg**	**13 21 00.5**	**-1.0**
ITM	**Ithomi**	**0.96**	**161**	*e*PN		**Pg**	**13 20 47.4**	**-1.6**
ITM				*e*SN		**Sg**	**13 21 00.5**	**-1.0**
ITM	**Ithomi**	**0.96**	**161**	P		**Pg**	**13 20 46.9**	**-2.1**
ITM	**Ithomi**	**0.96**	**161**	*e*Pn		**Pg**	**13 20 47.4**	**-1.6**
ITM				*e*Sn		**Sg**	**13 21 00.5**	**-1.0**
VLX	**Vlachokerasia**	**0.98**	**136**	P		**Pb**	**13 20 47.5**	**-1.9**
VLX				S		**Sg**	**13 21 01.0**	**-1.2**
VLX	**Vlachokerasia**	**0.98**	**136**	*e*PN		**Pg**	**13 20 47.8**	**-1.6**
VLX	**Vlachokerasia**	**0.98**	**136**	P		**Pb**	**13 20 47.5**	**-1.9**
VLX	**Vlachokerasia**	**0.98**	**136**	*e*Pn		**Pg**	**13 20 47.8**	**-1.6**
VLX				S		**Sg**	**13 21 01.0**	**-1.2**
AGG	**Agios Georgios**	**1.12**	**34**	*e*Pn		**Pg**	**13 20 51.8**	**-0.3**
AGG	**Agios Georgios**	**1.12**	**34**	P		**Pg**	**13 20 51.1**	**-1.0**
AGG	**Agios Georgios**	**1.12**	**34**	*e*PN		**Pg**	**13 20 51.8**	**-0.3**
AGG	**Agios Georgios**	**1.12**	**34**	P		**Pg**	**13 20 51.1**	**-1.0**
AGG	**Agios Georgios**	**1.12**	**34**	*e*Pn		**Pg**	**13 20 51.8**	**-0.3**
LTK	**Loutraki**	**1.14**	**93**	P		**Pg**	**13 20 50.6**	**-1.7**
LTK				S		**Sg**	**13 21 06.5**	**-0.6**
LTK	**Loutraki**	**1.14**	**93**	*e*PN		**Pg**	**13 20 50.8**	**-1.5**
LTK	**Loutraki**	**1.14**	**93**	P		**Pg**	**13 20 50.6**	**-1.7**
LTK				S		**Sg**	**13 21 06.5**	**-0.6**
PYL	**PYLOS**	**1.20**	**172**	*e*PN		**Pn**	**13 20 53.0**	**0.0**
PYL	**PYLOS**	**1.20**	**172**	*e*Pn		**Pn**	**13 20 53.0**	**0.0**
LKR	**Lokris**	**1.28**	**64**	*e*Pb		**Pb**	**13 20 53.2**	**-1.4**
LKR	**Lokris**	**1.28**	**64**	P		**Pb**	**13 20 53.4**	**-0.8**
LKR	**Lokris**	**1.28**	**64**	*e*PB		**Pb**	**13 20 53.2**	**-1.4**
LKR	**Lokris**	**1.28**	**64**	P		**Pn**	**13 20 53.4**	**-0.8**
ATAL	**Atalanti**	**1.32**	**62**	P		**Pn**	**13 20 54.0**	**-0.7**
ATAL				S		**Sb**	**13 21 12.0**	**0.0**
ATAL	**Atalanti**	**1.32**	**62**	P		**Pn**	**13 20 54.0**	**-0.7**
ATAL				S		**Sb**	**13 21 12.0**	**0.0**
THL	**Klokotos Trika**	**1.52**	**14**	*e*PN		**Pn**	**13 20 58.8**	**+1.3**
THL	**Klokotos Trika**	**1.52**	**14**	*e*Pn		**Pn**	**13 20 58.8**	**+1.3**
NAIG	**Nisos Aigina**	**1.58**	**101**	*e*Pn		**Pn**	**13 20 58.8**	**+0.5**
NAIG	**Nisos Aigina**	**1.58**	**101**	*e*PN		**Pn**	**13 20 58.8**	**+0.5**
NAIG	**Nisos Aigina**	**1.58**	**101**	*e*Pn		**Pn**	**13 20 58.8**	**+0.5**
JAN	**Janina**	**1.65**	**342**	*e*Pn		**Pn**	**13 21 00.8**	**+1.5**
JAN	**Janina**	**1.65**	**342**	*e*PN		**Pn**	**13 21 00.8**	**+1.5**
JAN	**Janina**	**1.65**	**342**	*e*Pn		**Pn**	**13 21 00.8**	**+1.5**
ATH	**Athens Observa**	**1.73**	**93**	*e*Pb		**Pb**	**13 20 59.5**	**-2.7**
ATH				*e*Sn		**Sn**	**13 21 22.7**	**+0.4**
ATH	**Athens Observa**	**1.73**	**93**	*e*PB		**Pb**	**13 20 59.5**	**-2.7**
ATH				*e*SN		**Sn**	**13 21 22.7**	**+0.4**
VLI	**Veliai**	**1.77**	**140**	*e*Pn		**Pn**	**13 21 01.9**	**+1.1**
VLI	**Veliai**	**1.77**	**140**	*e*PN		**Pn**	**13 21 01.9**	**+1.1**
VLI	**Veliai**	**1.77**	**140**	*e*Pn		**Pn**	**13 21 01.9**	**+1.1**
NEO	**Neokhori**	**1.80**	**47**	*e*Pb		**Pb**	**13 21 01.5**	**-1.8**
NEO	**Neokhori**	**1.80**	**47**	*e*PB		**Pb**	**13 21 01.5**	**-1.8**
VLY	**Voula,Athens**	**1.81**	**97**	*e*Pn		**Pn**	**13 21 01.5**	**+0.2**
VLY	**Voula,Athens**	**1.81**	**97**	*e*PN		**Pn**	**13 21 01.5**	**+0.2**
VLY	**Voula,Athens**	**1.81**	**97**	*e*Pn		**Pn**	**13 21 01.5**	**+0.2**
XOR	**Xorichti**	**1.82**	**45**	P		**Pn**	**13 21 01.5**	**-0.1**
XOR	**Xorichti**	**1.82**	**45**	P		**Pn**	**13 21 01.5**	**-0.1**
PTL	**Penteli**	**1.84**	**90**	*e*Pb		**Pb**	**13 21 01.6**	**-2.5**
PTL	**Penteli**	**1.84**	**90**	*e*PB		**Pb**	**13 21 01.6**	**-2.5**
KEK	**Kerkira**	**2.11**	**321**	*e*Pn		**Pn**	**13 21 06.7**	**+1.1**
KEK	**Kerkira**	**2.11**	**321**	*e*PN		**Pn**	**13 21 06.7**	**+1.1**
KEK	**Kerkira**	**2.11**	**321**	*e*Pn		**Pn**	**13 21 06.7**	**+1.1**
AOS	**Alonnisos**	**2.13**	**59**	P		**Pn**	**13 21 05.4**	**-0.5**
AOS				S		**Sn**	**13 21 32.4**	**+0.1**
AOS	**Alonnisos**	**2.13**	**59**	P		**Pn**	**13 21 05.4**	**-0.5**
AOS				S		**Sn**	**13 21 32.4**	**+0.1**
LIT	**Litokhoron**	**2.15**	**20**	*e*Pn		**Pn**	**13 21 07.7**	**+1.7**
LIT	**Litokhoron**	**2.15**	**20**	*e*PN		**Pn**	**13 21 07.7**	**+1.7**
LIT	**Litokhoron**	**2.15**	**20**	*e*Pn		**Pn**	**13 21 07.7**	**+1.7**
KZN	**Kozani**	**2.22**	**5**	*e*Pn		**Pn**	**13 21 08.8**	**+1.7**
KZN	**Kozani**	**2.22**	**5**	*e*PN		**Pn**	**13 21 08.8**	**+1.7**
KZN	**Kozani**	**2.22**	**5**	*e*Pn		**Pn**	**13 21 08.8**	**+1.7**
PLG	**Polygyros**	**2.73**	**32**	*e*Pn		**Pn**	**13 21 14.0**	**0.0**
PLG	**Polygyros**	**2.73**	**32**	*e*PN		**Pn**	**13 21 14.0**	**0.0**
PLG	**Polygyros**	**2.73**	**32**	*e*Pn		**Pn**	**13 21 14.0**	**0.0**
SOH	**Sokhos**	**3.07**	**27**	*e*Pb		**Pn**	**13 21 21.2**	**+2.4**
SOH	**Sokhos**	**3.07**	**27**	*e*PB		**Pn**	**13 21 21.2**	**+2.4**
KARN	**Karanos**	**3.30**	**144**	*e*PB		**Pn**	**13 21 24.1**	**+2.3**
APE	**Apeiranthos**	**3.34**	**107**	*e*Pn		**Pn**	**13 21 23.3**	**+0.9**
APE	**Apeiranthos**	**3.34**	**107**	*e*PN		**Pn**	**13 21 23.3**	**+0.9**
APE	**Apeiranthos**	**3.34**	**107**	*e*Pn		**Pn**	**13 21 23.3**	**+0.9**
LIA	**Limnos Island**	**3.37**	**56**	*e*Pn		**Pn**	**13 21 24.3**	**+1.4**
LIA	**Limnos Island**	**3.37**	**56**	*e*PN		**Pn**	**13 21 24.3**	**+1.4**
LIA	**Limnos Island**	**3.37**	**56**	*e*Pn		**Pn**	**13 21 24.3**	**+1.4**
VAM	**Vamos**	**3.43**	**140**	*e*Pn		**Pn**	**13 21 25.2**	**+1.5**
VAM	**Vamos**	**3.43**	**140**	*e*PN		**Pn**	**13 21 25.2**	**+1.5**
VAM	**Vamos**	**3.43**	**140**	*e*Pn		**Pn**	**13 21 25.2**	**+1.5**
CHOS	**Chios island**	**3.58**	**84**	*e*PN		**Pn**	**13 21 26.3**	**+0.6**
CHOS	**Chios island**	**3.58**	**84**	*e*Pn		**Pn**	**13 21 26.3**	**+0.6**
NVR	**Nevrokopi**	**3.72**	**28**	*e*Pn		**Pn**	**13 21 28.6**	**+0.9**
NVR	**Nevrokopi**	**3.72**	**28**	*e*PN		**Pn**	**13 21 28.6**	**+0.9**
NVR	**Nevrokopi**	**3.72**	**28**	*e*Pn		**Pn**	**13 21 28.6**	**+0.9**
MMB	**Musomiste**	**3.88**	**25**	*i* P		**Pn**	**13 21 30.4**	**+0.5**
IDI	**Anoyia**	**3.89**	**135**	Pn		**Pn**	**13 21 32.9**	**+3.0**
	1.4nm,0.3s,baz=333,slow=18,SNR=4.1							
IDI				Sn		**Sn**	**13 22 15.7**	**+0.3**
	2.1nm,0.3s,baz=302,slow=19,SNR=2.1							
IDI	**Anoyia**	**3.89**	**135**	Pn		**Pn**	**13 21 32.9**	**+2.9**
IDI				Sn		**Sn**	**13 22 15.7**	**+0.2**
PRK	**Paraskevi**	**3.89**	**71**	*e*Pn		**Pn**	**13 21 31.0**	**+1.0**
PRK	**Paraskevi**	**3.89**	**71**	*e*PN		**Pn**	**13 21 31.0**	**+1.0**
PRK	**Paraskevi**	**3.89**	**71**	*e*Pn		**Pn**	**13 21 31.0**	**+1.0**
TIP	**Timpagrande**	**3.89**	**288**	*e*P		**Pn**	**13 21 32.0**	**+2.0**
TIP	**Timpagrande**	**3.89**	**288**	*e*P		**Pn**	**13 21 32.0**	**+2.0**
SMG	**Samos**	**4.22**	**94**	*e*Pn		**Pn**	**13 21 35.3**	**+0.8**
SMG	**Samos**	**4.22**	**94**	*e*PN		**Pn**	**13 21 35.3**	**+0.8**
SMG	**Samos**	**4.22**	**94**	*e*Pn		**Pn**	**13 21 35.3**	**+0.8**
LAST	**Lasithi**	**4.32**	**131**	*e*Pn		**Pn**	**13 21 36.8**	**+0.9**
LAST	**Lasithi**	**4.32**	**131**	*e*PN		**Pn**	**13 21 36.8**	**+0.9**
LAST	**Lasithi**	**4.32**	**131**	*e*Pn		**Pn**	**13 21 36.8**	**+0.9**
NPS	**Neapolis**	**4.33**	**129**	*e*Pn		**Pn**	**13 21 37.6**	**+1.6**
NPS	**Neapolis**	**4.33**	**129**	*e*PN		**Pn**	**13 21 37.6**	**+1.6**
NPS	**Neapolis**	**4.33**	**129**	*e*Pn		**Pn**	**13 21 37.6**	**+1.6**
RDO	**Rodhopi**	**4.35**	**44**	*e*Pn		**Pn**	**13 21 38.3**	**+2.0**
RDO	**Rodhopi**	**4.35**	**44**	*e*PN		**Pn**	**13 21 38.3**	**+2.0**
RDO	**Rodhopi**	**4.35**	**44**	*e*Pn		**Pn**	**13 21 38.3**	**+2.0**
RZN	**Rozhen**	**4.35**	**33**	*i* P		**Pn**	**13 21 31.7**	**-4.7**
ALN	**Alexandroupoli**	**4.48**	**50**	*e*Pn		**Pn**	**13 21 38.9**	**+0.8**
ALN	**Alexandroupoli**	**4.48**	**50**	*e*PN		**Pn**	**13 21 38.9**	**+0.8**
ALN	**Alexandroupoli**	**4.48**	**50**	*e*Pn		**Pn**	**13 21 38.9**	**+0.8**
ZKR	**Zakros**	**4.80**	**127**	*e*Pn		**Pn**	**13 21 44.3**	**+1.8**
ZKR	**Zakros**	**4.80**	**127**	*e*PN		**Pn**	**13 21 44.2**	**+1.7**
ZKR	**Zakros**	**4.80**	**127**	*e*Pn		**Pn**	**13 21 44.3**	**+1.8**
KARP	**Karpathos**	**5.18**	**118**	*e*Pn		**Pn**	**13 21 50.0**	**+2.2**
KARP	**Karpathos**	**5.18**	**118**	*e*PN		**Pn**	**13 21 50.0**	**+2.2**
KARP	**Karpathos**	**5.18**	**118**	*e*Pn		**Pn**	**13 21 50.0**	**+2.2**
STON	**Ston**	**5.60**	**330**	*i* Pn		**Pn**	**13 21 53.0**	**-0.5**
STON				Sn		**Sn**	**13 22 55.4**	**-2.3**
STON	**Ston**	**5.60**	**330**	*i* Pn		**Pn**	**13 21 52.9**	**-0.6**
STON				Sn		**Sn**	**13 22 55.4**	**-2.3**
MLR	**Muntele Rosu**	**8.10**	**23**	LR		LR	13 25 41.6	
	comp=Z,3μm,20.9s,baz=152,slow=39							
BOJS	**Bojanci**	**8.77**	**330**	*i* Pn		**Pn**	**13 22 36.0**	**-0.9**
BOJS				*i* Sn		**Sn**	**13 24 11.2**	**-4.3**
BOJS	**Bojanci**	**8.77**	**330**	*i* Pn		**Pn**	**13 22 36.0**	**-0.9**
VISS	**Visnje**	**9.18**	**329**	*i* Pn		**Pn**	**13 22 41.6**	**-1.0**
VISS				*i* Sn		**Sn**	**13 24 24.2**	**-1.5**
VISS	**Visnje**	**9.18**	**329**	*i* Pn		**Pn**	**13 22 41.6**	**-1.0**
VISS				*i* Sn		**Sn**	**13 24 24.2**	**-1.5**
JAVS	**Javornik**	**9.57**	**327**	*i* Pn		**Pn**	**13 22 47.4**	**-0.6**
JAVS				*i* Sn		**Sn**	**13 24 30.0**	**-5.4**
JAVS	**Javornik**	**9.57**	**327**	*i* Pn		**Pn**	**13 22 47.4**	**-0.6**
BRTR	**Keskin Array B**	**9.58**	**76**	Pn		**Pn**	**13 22 50.2**	**+2.1**
	0.1nm,0.3s,baz=104,slow=11,SNR=2.4							
BRTR	**Keskin Array B**	**9.58**	**76**	Pn		**Pn**	**13 22 50.2**	**+2.1**
GERES	**GERESS Array B**	**12.15**	**335**	Pn		**Pn**	**13 23 20.9**	**-2.4**
	0.1nm,0.3s,baz=163,slow=14,SNR=5.4							
GERES	**GERESS Array B**	**12.15**	**335**	Pn		**Pn**	**13 23 20.9**	**-2.4**
GERES	**GERESS Array B**	**12.15**	**335**	Pn		**Pn**	**13 23 20.9**	**-2.4**
EIL	**Elat**	**13.95**	**123**	LR		LR	13 30 23.1	
	comp=Z,1μm,18.8s,baz=285,slow=42							
HFS	**Hagfors**	**22.62**	**350**	P		**P**	**13 25 28.5**	**-2.3**
	1.1nm,0.5s,mb3.6,baz=169,slow=12,SNR=5.5							
HFS	**Hagfors**	**22.62**	**350**	P		**P**	**13 25 28.5**	**-2.3**
NOA	**NORSAR Array B**	**23.87**	**348**	P		**P**	**13 25 42.3**	**-1.1**
	0.4nm,0.5s,mb3.1,baz=156,slow=9.6,SNR=3.2							
NOA	**NORSAR Array B**	**23.87**	**348**	P		**P**	**13 25 42.3**	**-1.2**
EKA	**Eskdalemuir Ar**	**23.96**	**324**	P		**P**	**13 25 42.2**	**-2.2**
	0.5nm,0.6s,mb3.2,baz=118,slow=9.0,SNR=4.8							
EKA	**Eskdalemuir Ar**	**23.96**	**324**	P		**P**	**13 25 42.2**	**-2.2**
TORD	**Torodi Ar. Bea**	**30.47**	**221**	P		**P**	**13 26 41.3**	**-1.9**
	0.8nm,0.7s,mb3.6,baz=32,slow=9.2,SNR=5.3							
MKAR	**Makanchi Array**	**44.67**	**59**	P		**P**	**13 28 41.8**	**-1.1**
	0.3nm,0.4s,mb3.5,baz=313,slow=6.0,SNR=3.3							
MKAR	**Makanchi Array**	**44.67**	**59**	P		**P**	**13 28 41.8**	**-1.1**
ZALV	**Zalesovo Beam**	**45.16**	**48**	P		**P**	**13 28 45.0**	**-1.7**
	0.8nm,0.4s,mb3.9,baz=271,slow=8.9,SNR=3.9							
ZALV	**Zalesovo Beam**	**45.16**	**48**	P		**P**	**13 28 45.0**	**-1.7**
TXAR	**Lajitas Array**	**95.61**	**314**	P		**P**	**13 33 55.8**	**-0.1**
	0.2nm,0.7s,mb3.6,baz=57,slow=6.6,SNR=2.5							
TXAR	**Lajitas Array**	**95.61**	**314**	P		**P**	**13 33 55.8**	**-0.1**

*CSEM **08** 13:24:23.9±0.3, 37°.90N×21°.41E, $h2^{km}$, ML3.0, Error ellipse: s-maj=5.1km s-min=4.3km az=63.0*
*ATH **08** 13:24:24.0, 37°.92N×21°.40E, $h14^{km}\pm1^{km}$, ML3.0*
*THE **08** 13:24:24.7, 37°.90N×21°.46E, $h6^{km}\pm2^{km}$, ML3.7/6, Error ellipse: s-maj=2.8km s-min=1.0km az=161.0*
*NEIC **08** 13:24:24.0, 37°.92N×21°.40E, $h14^{km}$, ML3.0(ATH), After ATH.*
*ISCJB **08** 13:24:24.4±0.4, 37°.89N±0°.02×21°.47E±0°.03, $h10^{km}$, Error ellipse: s-maj=3.6km s-min=3.3km az=175.0*
ISC 08 13:24:24.7±0.5, 37°.90N±0°.02×21°.45E±0°.03, $h3^{km}\pm4^{km}$, n89, σ1°.01/115, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.16**	**4**	*e*Pg	**Pg**	**13 24 28.6**	**+0.7**
RLS				*e*Sg	**Sg**	**13 24 31.6**	**+1.5**
RLS	**Riolos of Patr**	**0.16**	**4**	*e*PG	**Pg**	**13 24 28.6**	**+0.7**
RLS				*e*SG	**Sg**	**13 24 31.6**	**+1.5**
RLS	**Riolos of Patr**	**0.16**	**4**	*e*Pg	**Pg**	**13 24 28.6**	**+0.7**
RLS				*e*Sg	**Sg**	**13 24 31.6**	**+1.5**
UPR	**University Cam**	**0.47**	**34**	P	**Pg**	**13 24 33.6**	**-0.1**
UPR				S	**Sg**	**13 24 41.4**	**+1.6**
UPR	**University Cam**	**0.47**	**34**	*e*PB	**Pg**	**13 24 33.8**	**+0.1**
UPR				*e*SB	**Sg**	**13 24 40.0**	**+0.2**
UPR	**University Cam**	**0.47**	**34**	P	**Pg**	**13 24 33.6**	**-0.1**
UPR				*e*Sb	**Sg**	**13 24 40.0**	**+0.2**
UPR				S	**Sg**	**13 24 41.4**	**+1.6**
LAKA	**Lakka**	**0.54**	**50**	P	**Pg**	**13 24 34.5**	**-0.6**
LAKA				S	**Sg**	**13 24 43.2**	**+1.1**
LAKA	**Lakka**	**0.54**	**50**	P	**Pg**	**13 24 34.5**	**-0.6**
LAKA				S	**Sg**	**13 24 43.2**	**+1.1**
KFL	**Anninata**	**0.57**	**292**	P	**Pg**	**13 24 35.7**	**+0.1**
EFP	**Efpalio**	**0.64**	**34**	P	**Pg**	**13 24 35.7**	**-1.3**
EFP				S	**Sg**	**13 24 46.5**	**+1.2**
EFP	**Efpalio**	**0.64**	**34**	*e*PG	**Pg**	**13 24 36.3**	**-0.7**
EFP				*e*SB	**Sg**	**13 24 45.7**	**+0.4**
EFP	**Efpalio**	**0.64**	**34**	P	**Pg**	**13 24 35.7**	**-1.3**
EFP	**Efpalio**	**0.64**	**34**	*e*Pg	**Pg**	**13 24 36.3**	**-0.7**
EFP				*e*Sb	**Sg**	**13 24 45.7**	**+0.4**
EFP				S	**Sg**	**13 24 46.5**	**+1.2**
GUR	**Goura**	**0.70**	**86**	P	**Pg**	**13 24 37.3**	**-0.9**
GUR				S	**Sg**	**13 24 47.9**	**+0.5**
GUR	**Goura**	**0.70**	**86**	*e*PB	**Pg**	**13 24 37.3**	**-0.9**
GUR	**Goura**	**0.70**	**86**	P	**Pg**	**13 24 37.3**	**-0.9**
GUR				S	**Sg**	**13 24 47.9**	**+0.5**
KALE	**Kalithea**	**0.73**	**47**	P	**Pg**	**13 24 37.9**	**-0.9**
KALE				S	**Sg**	**13 24 49.4**	**+1.1**
KALE	**Kalithea**	**0.73**	**47**	P	**Pg**	**13 24 37.9**	**-0.9**
KALE				S	**Sg**	**13 24 49.4**	**+1.1**
VLS	**Valsamata**	**0.74**	**293**	*e*Pb	**Pg**	**13 24 37.4**	**-1.5**
VLS	**Valsamata**	**0.74**	**293**	P	**Pg**	**13 24 37.7**	**-1.2**
VLS				S	**Sg**	**13 24 50.0**	**+1.5**
VLS	**Valsamata**	**0.74**	**293**	*e*PB	**Pg**	**13 24 37.4**	**-1.5**
VLS	**Valsamata**	**0.74**	**293**	*e*Pb	**Pg**	**13 24 37.4**	**-1.5**
VLS	**Valsamata**	**0.74**	**293**	P	**Pg**	**13 24 37.7**	**-1.2**
VLS				S	**Sg**	**13 24 50.0**	**+1.5**
ITM	**Ithomi**	**0.81**	**152**	*e*Pg	**Pg**	**13 24 40.0**	**-0.2**
ITM	**Ithomi**	**0.81**	**152**	*e*PG	**Pg**	**13 24 40.0**	**-0.2**
ITM	**Ithomi**	**0.81**	**152**	*e*Pg	**Pg**	**13 24 40.0**	**-0.2**
VLX	**Vlachokerasia**	**0.90**	**125**	*e*PB	**Pg**	**13 24 42.3**	**+0.3**
VLX	**Vlachokerasia**	**0.90**	**125**	*e*Pb	**Pg**	**13 24 42.3**	**+0.3**
DSF	**Desfina**	**0.99**	**58**	P	**Pg**	**13 24 41.9**	**-1.8**
DSF				S	**Sg**	**13 24 57.1**	**+0.5**
DSF	**Desfina**	**0.99**	**58**	P	**Pg**	**13 24 41.9**	**-1.8**
DSF				S	**Sg**	**13 24 57.1**	**+0.5**
PYL	**PYLOS**	**1.02**	**167**	P	**Pg**	**13 24 44.5**	**+0.1**
PYL				S	**Sg**	**13 24 59.8**	**+2.2**
PYL	**PYLOS**	**1.02**	**167**	*e*PN	**Pg**	**13 24 44.4**	**0.0**
PYL	**PYLOS**	**1.02**	**167**	P	**Pg**	**13 24 44.5**	**+0.1**
PYL				S	**Sg**	**13 24 59.8**	**+2.2**
EVR	**Evrytania**	**1.06**	**15**	*e*Pg	**Pg**	**13 24 43.3**	**-1.7**
EVR	**Evrytania**	**1.06**	**15**	*e*PG	**Pg**	**13 24 43.3**	**-1.7**
EVR	**Evrytania**	**1.06**	**15**	*e*Pg	**Pg**	**13 24 43.3**	**-1.7**
LTK	**Loutraki**	**1.20**	**83**	*e*PB	**Pb**	**13 24 48.3**	**+0.2**
LTK	**Loutraki**	**1.20**	**83**	*e*Pb	**Pb**	**13 24 48.3**	**+0.2**
AGG	**Agios Georgios**	**1.32**	**31**	*e*Pg	**Pg**	**13 24 48.7**	**-1.3**
AGG	**Agios Georgios**	**1.32**	**31**	P	**Pn**	**13 24 48.6**	**-1.4**
AGG				S	**Sg**	**13 25 07.3**	**+0.2**
AGG	**Agios Georgios**	**1.32**	**31**	*e*PG	**Pg**	**13 24 48.7**	**-1.3**
AGG	**Agios Georgios**	**1.32**	**31**	P	**Pn**	**13 24 48.6**	**-1.4**
AGG				S	**Sg**	**13 25 07.3**	**+0.2**
LKR	**Lokris**	**1.43**	**58**	*e*Pg	**Pg**	**13 24 51.1**	**-1.1**
LKR	**Lokris**	**1.43**	**58**	*e*PG	**Pg**	**13 24 51.1**	**-1.1**
LKR	**Lokris**	**1.43**	**58**	*e*Pg	**Pg**	**13 24 51.1**	**-1.1**
NAIG	**Nisos Aigina**	**1.62**	**94**	*e*Pb	**Pb**	**13 24 54.4**	**-0.8**
NAIG	**Nisos Aigina**	**1.62**	**94**	*e*PB	**Pb**	**13 24 54.4**	**-0.8**
NAIG	**Nisos Aigina**	**1.62**	**94**	*e*Pb	**Pb**	**13 24 54.4**	**-0.8**
VLI	**Veliai**	**1.67**	**134**	*e*Pg	**Pg**	**13 24 56.6**	**-0.1**
VLI	**Veliai**	**1.67**	**134**	*e*PG	**Pg**	**13 24 56.6**	**-0.1**
VLI	**Veliai**	**1.67**	**134**	*e*Pg	**Pg**	**13 24 56.6**	**-0.1**
THL	**Klokotos Trika**	**1.72**	**15**	*e*PN	**Pn**	**13 24 55.6**	**+0.1**
THL	**Klokotos Trika**	**1.72**	**15**	*e*Pn	**Pn**	**13 24 55.6**	**+0.1**
ATH	**Athens Observa**	**1.79**	**87**	*e*Pb	**Pn**	**13 24 56.3**	**-0.2**
ATH	**Athens Observa**	**1.79**	**87**	*e*PB	**Pn**	**13 24 56.3**	**-0.2**
JAN	**Janina**	**1.82**	**345**	*e*Pg	**Pn**	**13 24 57.2**	**+0.3**
JAN	**Janina**	**1.82**	**345**	*e*PG	**Pn**	**13 24 57.2**	**+0.3**
JAN	**Janina**	**1.82**	**345**	*e*Pg	**Pn**	**13 24 57.2**	**+0.3**
VLY	**Voula,Athens**	**1.85**	**91**	*e*Pg	**Pg**	**13 24 58.9**	**-1.3**
VLY	**Voula,Athens**	**1.85**	**91**	*e*PG	**Pg**	**13 24 58.9**	**-1.3**
VLY	**Voula,Athens**	**1.85**	**91**	*e*Pg	**Pg**	**13 24 58.9**	**-1.3**
PTL	**Penteli**	**1.91**	**85**	*e*Pn	**Pn**	**13 24 59.0**	**+0.9**
PTL	**Penteli**	**1.91**	**85**	*e*PN	**Pn**	**13 24 59.0**	**+0.9**
PTL	**Penteli**	**1.91**	**85**	*e*Pn	**Pn**	**13 24 59.0**	**+0.9**
NEO	**Neokhori**	**1.98**	**44**	*e*Pb	**Pn**	**13 24 57.9**	**-1.1**
NEO	**Neokhori**	**1.98**	**44**	*e*PB	**Pn**	**13 24 57.9**	**-1.1**
KEK	**Kerkira**	**2.23**	**325**	*e*Pn	**Pn**	**13 25 02.6**	**+0.1**
KEK	**Kerkira**	**2.23**	**325**	*e*PN	**Pn**	**13 25 02.6**	**+0.1**
KEK	**Kerkira**	**2.23**	**325**	*e*Pn	**Pn**	**13 25 02.6**	**+0.1**
LIT	**Litokhoron**	**2.34**	**20**	*e*Pn	**Pn**	**13 25 05.2**	**+1.1**
LIT	**Litokhoron**	**2.34**	**20**	*e*PN	**Pn**	**13 25 05.2**	**+1.1**
LIT	**Litokhoron**	**2.34**	**20**	*e*Pn	**Pn**	**13 25 05.2**	**+1.1**
KZN	**Kozani**	**2.42**	**6**	*e*Pn	**Pn**	**13 25 06.2**	**+1.1**
KZN	**Kozani**	**2.42**	**6**	*e*PN	**Pn**	**13 25 06.2**	**+1.1**
KZN	**Kozani**	**2.42**	**6**	*e*Pn	**Pn**	**13 25 06.2**	**+1.1**
PLG	**Polygyros**	**2.92**	**31**	*e*Pn	**Pn**	**13 25 12.0**	**0.0**
PLG	**Polygyros**	**2.92**	**31**	*e*PN	**Pn**	**13 25 12.0**	**0.0**
PLG	**Polygyros**	**2.92**	**31**	*e*Pn	**Pn**	**13 25 12.0**	**0.0**
SOH	**Sokhos**	**3.27**	**26**	*e*Pn	**Pn**	**13 25 17.3**	**+0.5**
SOH	**Sokhos**	**3.27**	**26**	*e*PN	**Pn**	**13 25 17.3**	**+0.5**
SOH	**Sokhos**	**3.27**	**26**	*e*Pn	**Pn**	**13 25 17.3**	**+0.5**
APE	**Apeiranthos**	**3.35**	**103**	*e*Pn	**Pn**	**13 25 18.3**	**+0.4**
APE	**Ap

BRTR	Keskin Array B	9.54	77	Pn	Pn	13 30 05.6	-1.0
	0.1nm,0.3s,baz=259,slow=12,SNR=2.2						
BRTR	Keskin Array B	9.54	77	Pn	Pn	13 30 05.6	-1.0
JAVS	Javornik	9.57	327	*e*Pn	Pn	13 30 12.3	+5.4
JAVS				*i* Sn	Sn	13 31 50.6	-3.6
GERES	GERESS Array B	12.15	335	Pn	Pn	13 30 42.2	0.0
	baz=162,slow=14,SNR=2.7						
GERES	GERESS Array B	12.15	335	Pn	Pn	13 30 42.2	0.0
ESDC	Sonseca Array	19.92	282	P	Pn	13 32 19.9	-2.7
	0.1nm,0.3s,baz=77,slow=11,SNR=6.8						
ESDC	Sonseca Array	19.92	282	P	Pn	13 32 19.9	-2.7
HFS	Hagfors	22.61	350	P	P	13 32 49.8	+0.2
	1.4nm,0.6s,mb3.5,baz=154,slow=10,SNR=3.2						
HFS	Hagfors	22.61	350	P	P	13 32 49.8	+0.2
FINES	FINESS Array B	23.53	5	P	P	13 32 56.3	-3.0
	2.6nm,0.9s,mb3.7,baz=245,slow=2.9,SNR=3.3						
NOA	NORSAR Array B	23.86	348	P	P	13 33 00.5	-1.8
	0.8nm,0.8s,mb3.2,baz=160,slow=10,SNR=2.8						
NOA	NORSAR Array B	23.86	348	P	P	13 33 00.5	-1.7
EKA	Eskdalemuir Ar	23.97	324	P	P	13 33 03.1	-0.3
	0.8nm,0.6s,mb3.3,baz=116,slow=9.5,SNR=4.4						
EKA	Eskdalemuir Ar	23.97	324	P	P	13 33 03.1	-0.2
TORD	Torodi Ar. Bea	30.51	221	P	P	13 34 01.8	-0.6
	0.4nm,0.6s,mb3.4,baz=32,slow=8.4,SNR=4.5						
MK31	Makanchi Array	44.63	59	*e*P	P	13 36 03.0	+1.6
MK31	Makanchi Array	44.63	59	*e*P	P	13 36 03.0	+1.5
MKAR	Makanchi Array	44.63	59	P	P	13 36 01.1	-0.4
	0.5nm,0.4s,mb3.7,baz=327,slow=6.5,SNR=6.8						
MKAR	Makanchi Array	44.63	59	P	P	13 36 01.0	-0.5
ZALV	Zalesovo Beam	45.12	48	P	P	13 36 04.9	-0.3
	2.2nm,0.5s,mb4.2,baz=276,slow=8.3,SNR=11						
ZALV	Zalesovo Beam	45.12	48	P	P	13 36 04.9	-0.3

CSEM ***08*** *13:29:55.2±0.4, 33°.66N×36°.68E, h32km±4km, Mc2.0, Error ellipse: s-maj=10.2km s-min=6.2km az=54.0*
NSSC ***08*** *13:29:55, 33°.61N×36°.79E, h6km±3km*
ISCJB ***08*** *13:29:55.3±0.9, 33°.66N±0°.05×36°.68E±0°.07, h34km±19km, Error ellipse: s-maj=11.4km s-min=6.4km az=136.1*
GRAL ***08*** *13:29:57.9±0.3, 33°.73N×36°.54E, h30km±3km, MD3.2*
ISC 08 13:29:55.3±0.9, 33°.66N±0°.05×36°.68E±0°.07, h34km±4km, n18, σ0°90/31, 11D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QASN	Qassioun	0.36	249	⇑P	Pb	13 30 03.0	-1.0
QASN				⇑S	Sb	13 30 11.0	+1.1
QASN	Qassioun	0.36	249	⇑*i*P	Pb	13 30 03.4	-0.6
QASN				⇑*i*S	Sb	13 30 11.2	+1.3
TOTH	TOTAH	0.36	215	⇑P	Pb	13 30 03.0	-1.1
TOTH				⇓S	Sb	13 30 09.0	-1.0
TOTH	TOTAH	0.36	215	⇑*i*P	Pb	13 30 03.3	-0.8
TOTH				⇓*i*S	Sb	13 30 09.8	-0.2
MARH	Ras Al Marh	0.40	336	⇓P	Pb	13 30 05.0	+0.5
MARH	Ras Al Marh	0.40	336	⇓*i*P	Pb	13 30 05.1	+0.6
BRBR	Barbar	0.66	248	⇑P	Pn	13 30 09.0	+0.8
BRBR				⇓S	Sn	13 30 21.0	+3.7
BRBR	Barbar	0.66	248	⇑*i*P	Pn	13 30 10.0	+1.8
RCY	Rachaya	0.74	256	*e*P	Pn	13 30 09.6	+0.3
RCY				*e*S	Sn	13 30 18.4	-1.0
RCY	Rachaya	0.74	256	*e*P	Pn	13 30 09.6	+0.3
RCY				*e*S	Sn	13 30 18.4	-0.9
HWQ	Hawqa	0.86	316	*e*P	Pn	13 30 11.2	+0.2
HWQ	Hawqa	0.86	316	*e*P	Pn	13 30 11.2	+0.2
BHL	Bhannes	0.89	286	*e*P	Pn	13 30 11.5	+0.2
BHL				*e*S	Sn	13 30 21.7	-1.3
BHL	Bhannes	0.89	286	*e*P	Pn	13 30 11.5	+0.2
BHL				*e*S	Sn	13 30 21.7	-1.3
ZALF	Zalf	0.92	143	⇓P	Pn	13 30 11.0	-0.8
ZALF				⇓S	Sn	13 30 23.0	-0.8
ZALF	Zalf	0.92	143	⇓*i*P	Pn	13 30 11.7	-0.1
ZALF				⇓*i*S	Sn	13 30 23.1	-0.7
SALA	Sala	0.95	177	⇑P	Pn	13 30 13.0	+0.8
SALA				⇓S	Sn	13 30 25.0	+0.5
SALA	Sala	0.95	177	⇑*i*P	Pn	13 30 13.4	+1.2
SALA				⇓*i*S	Sn	13 30 25.4	+0.9

ATH ***08*** *13:31:34.1, 38°.01N×21°.54E, h20km±1km, ML3.4*
THE ***08*** *13:31:34.7, 38°.01N×21°.55E, h11km±1km, ML4.2/5, Error ellipse: s-maj=1.0km s-min=0.7km az=30.0*
NEIC ***08*** *13:31:34.1, 38°.01N×21°.54E, h20km, ML3.4(ATH), After ATH.*
CSEM ***08*** *13:31:34.4±0.2, 38°.01N×21°.55E, h9km, ML3.4, Error ellipse: s-maj=4.0km s-min=3.3km az=93.0*
ISCJB ***08*** *13:31:34.4±0.4, 38°.00N±0°.02×21°.55E±0°.03, h11km±3km, Error ellipse: s-maj=4.2km s-min=3.8km az=161.7*
ISC 08 13:31:34.8±0.4, 38°.01N±0°.02×21°.55E±0°.03, h13km±2km, n98, σ0°90/125, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.08	309	*e*Pb	Pg	13 31 37.8	+0.3
RLS				*e*Sb	Sg	13 31 40.5	+1.0
RLS	Riolos of Patr	0.08	309	*e*PB	Pg	13 31 37.8	+0.3
RLS				*e*SB	Sg	13 31 40.5	+1.0
RLS	Riolos of Patr	0.08	309	*e*Pb	Pg	13 31 37.8	+0.3
RLS				*e*Sb	Sg	13 31 40.5	+1.0
UPR	University Cam	0.33	34	P	Pg	13 31 41.5	-0.1
UPR	University Cam	0.33	34	*e*PB	Pg	13 31 41.2	-0.4
UPR				*e*SB	Sg	13 31 47.2	+1.0
UPR	University Cam	0.33	34	*e*Pb	Pg	13 31 41.2	-0.4
UPR	University Cam	0.33	34	P	Pg	13 31 41.5	-0.1
UPR				*e*Sb	Sg	13 31 47.2	+1.0
LAKA	Lakka	0.41	56	P	Pg	13 31 42.5	-0.5
LAKA				S	Sg	13 31 48.9	+0.3
LAKA	Lakka	0.41	56	P	Pg	13 31 42.5	-0.5
LAKA				S	Sg	13 31 48.9	+0.3
EFP	Efpalio	0.51	34	P	Pg	13 31 44.0	-0.8
EFP				S	Sg	13 31 52.0	+0.5
EFP	Efpalio	0.51	34	*e*PN	Pg	13 31 44.2	-0.6
EFP				*e*SN	Sg	13 31 52.2	+0.7
EFP	Efpalio	0.51	34	P	Pg	13 31 44.0	-0.8
EFP				S	Sg	13 31 52.0	+0.5
KALE	Kalithea	0.60	50	P	Pg	13 31 45.8	-0.8
KALE				S	Sg	13 31 55.0	+0.4
KALE	Kalithea	0.60	50	P	Pg	13 31 45.8	-0.8
KALE				S	Sg	13 31 55.0	+0.4
KFL	Anninata	0.61	280	P	Pg	13 31 46.4	-0.3
GUR	Goura	0.63	96	P	Pg	13 31 46.3	-0.9
GUR				S	Sg	13 31 56.2	+0.7
GUR	Goura	0.63	96	*e*PN	Pg	13 31 46.7	-0.5
GUR				*e*SN	Sg	13 31 56.3	+0.8
GUR	Goura	0.63	96	P	Pg	13 31 46.3	-0.9
GUR	Goura	0.63	96	*e*Pn	Pg	13 31 46.7	-0.5
GUR				S	Sg	13 31 56.2	+0.7
VLS	Valsamata	0.77	283	P	Pg	13 31 48.9	-0.9
VLS	Valsamata	0.77	283	P	Pg	13 31 48.9	-0.9
DSF	Desfina	0.87	62	P	Pg	13 31 50.4	-1.3
DSF				S	Sg	13 32 03.3	+0.2
DSF	Desfina	0.87	62	P	Pg	13 31 50.4	-1.3
DSF				S	Sg	13 32 03.3	+0.2
ITM	Ithomi	0.88	160	*e*Pb	Pg	13 31 50.2	-1.6
ITM				*e*Sn	Sg	13 32 03.6	+0.3
ITM	Ithomi	0.88	160	P	Pg	13 31 51.3	-0.5
ITM	Ithomi	0.88	160	*e*PB	Pg	13 31 50.2	-1.6
ITM				*e*SN	Sg	13 32 03.6	+0.3
ITM	Ithomi	0.88	160	*e*Pb	Pg	13 31 50.2	-1.6
ITM	Ithomi	0.88	160	P	Pg	13 31 51.3	-0.5
ITM				*e*Sn	Sg	13 32 03.6	+0.3
VLX	Vlachokerasia	0.92	134	P	Pg	13 31 51.6	-0.9
VLX				S	Sg	13 32 06.2	+1.7
VLX	Vlachokerasia	0.92	134	*e*PN	Pg	13 31 51.7	-0.8
VLX	Vlachokerasia	0.92	134	P	Pg	13 31 51.6	-0.9
VLX				S	Sg	13 32 06.2	+1.7
EVR	Evrytania	0.93	13	*e*Pn	Pg	13 31 52.8	0.0
EVR	Evrytania	0.93	13	*e*PN	Pg	13 31 52.8	0.0
EVR	Evrytania	0.93	13	*e*Pn	Pg	13 31 52.8	0.0
PYL	PYLOS	1.12	172	P	Pg	13 31 55.8	-0.6
PYL	PYLOS	1.12	172	*e*PN	Pg	13 31 56.5	+0.1
PYL	PYLOS	1.12	172	P	Pg	13 31 55.8	-0.6
PYL	PYLOS	1.12	172	*e*Pn	Pg	13 31 56.5	+0.1
LTK	Loutraki	1.12	89	P	Pg	13 31 55.2	-1.2
LTK	Loutraki	1.12	89	*e*PN	Pg	13 31 55.2	-1.2
LTK	Loutraki	1.12	89	*e*PN	Pg	13 31 55.3	-1.1
LTK	Loutraki	1.12	89	P	Pg	13 31 55.2	-1.2
AGG	Agios Georgios	1.19	31	*e*Pn	Pn	13 31 57.0	-0.1
AGG				*e*Sn	Sn	13 32 12.4	-0.7
AGG	Agios Georgios	1.19	31	P	Pn	13 31 56.9	-0.2
AGG	Agios Georgios	1.19	31	*e*PN	Pn	13 31 57.0	-0.1
AGG				*e*SN	Sn	13 32 12.4	-0.7
AGG	Agios Georgios	1.19	31	P	Pn	13 31 56.9	-0.2
AGG				*e*Sn	Sn	13 32 12.4	-0.7
LKR	Lokris	1.31	60	*e*Pb	Pb	13 31 58.1	-1.2
LKR	Lokris	1.31	60	P	Pn	13 31 57.9	-1.0
LKR	Lokris	1.31	60	*e*PB	Pb	13 31 58.1	-1.2
LKR	Lokris	1.31	60	P	Pn	13 31 57.9	-1.0
ATAL	Atalanti	1.35	59	P	Pn	13 31 58.4	-0.9
ATAL				S	Sb	13 32 17.0	-0.1
ATAL	Atalanti	1.35	59	P	Pn	13 31 58.4	-0.9
ATAL				S	Sb	13 32 17.0	-0.1
NAIG	Nisos Aigina	1.56	99	*e*Pn	Pn	13 32 03.1	+0.9
NAIG	Nisos Aigina	1.56	99	*e*PN	Pn	13 32 03.1	+0.9
NAIG	Nisos Aigina	1.56	99	*e*Pn	Pn	13 32 03.1	+0.9
THL	Klokotos Trika	1.60	13	P	Pn	13 32 02.8	0.0
THL	Klokotos Trika	1.60	13	*e*PN	Pn	13 32 04.3	+1.5
THL	Klokotos Trika	1.60	13	P	Pn	13 32 02.8	0.0
VLI	Veliai	1.70	139	*e*Pn	Pn	13 32 05.2	+1.0
VLI	Veliai	1.70	139	*e*PN	Pn	13 32 05.2	+1.0
VLI	Veliai	1.70	139	*e*Pn	Pn	13 32 05.2	+1.0
ATH	Athens Observa	1.71	91	*e*Pn	Pn	13 32 05.4	+1.0
ATH	Athens Observa	1.71	91	*e*PN	Pn	13 32 05.4	+1.0
ATH	Athens Observa	1.71	91	*e*Pn	Pn	13 32 05.4	+1.0
JAN	Janina	1.73	342	*e*Pb	Pn	13 32 03.5	-1.2
JAN	Janina	1.73	342	*e*PB	Pn	13 32 03.5	-1.2
ATHU	Athens Univers	1.77	91	S	Sn	13 32 27.1	-0.4
ATHU	Athens Univers	1.77	91	S	Sn	13 32 27.1	-0.4
VLY	Voula,Athens	1.78	94	*e*Pn	Pn	13 32 06.1	+0.7
VLY	Voula,Athens	1.78	94	*e*PN	Pn	13 32 06.1	+0.7
VLY	Voula,Athens	1.78	94	*e*Pn	Pn	13 32 06.1	+0.7
PTL	Penteli	1.83	88	*e*Pn	Pn	13 32 06.6	+0.6
PTL	Penteli	1.83	88	*e*PN	Pn	13 32 06.6	+0.6
PTL	Penteli	1.83	88	*e*Pn	Pn	13 32 06.6	+0.6
NEO	Neokhori	1.85	45	*e*Pb	Pn	13 32 05.4	-0.8
NEO	Neokhori	1.85	45	*e*PB	Pn	13 32 05.4	-0.8
XOR	Xorichti	1.87	43	P	Pn	13 32 05.8	-0.8
XOR	Xorichti	1.87	43	P	Pn	13 32 05.8	-0.8
KEK	Kerkira	2.18	322	*e*Pn	Pn	13 32 11.6	+0.8
KEK	Kerkira	2.18	322	*e*PN	Pn	13 32 11.6	+0.8
KEK	Kerkira	2.18	322	*e*Pn	Pn	13 32 11.6	+0.8
LIT	Litokhoron	2.22	19	*e*Pb	Pn	13 32 10.5	-0.8
LIT	Litokhoron	2.22	19	*e*PB	Pn	13 32 10.5	-0.8
KZN	Kozani	2.30	4	*e*Pn	Pn	13 32 14.6	+2.1
KZN	Kozani	2.30	4	*e*PN	Pn	13 32 14.6	+2.1
PLG	Polygyros	2.79	31	*e*Pn	Pn	13 32 18.6	-0.5
PLG	Polygyros	2.79	31	*e*PN	Pn	13 32 18.6	-0.5
PLG	Polygyros	2.79	31	*e*Pn	Pn	13 32 18.6	-0.5
SOH	Sokhos	3.14	26	*e*Pn	Pn	13 32 25.0	+1.0
SOH	Sokhos	3.14	26	*e*PN	Pn	13 32 25.0	+1.0
SOH	Sokhos	3.14	26	*e*Pn	Pn	13 32 25.0	+1.0
KRUS	Krusevo	3.37	356	*e*Pn	Pn	13 32 28.3	+1.2
VAY	Valandovo	3.40	13	*e*Pn	Pn	13 32 31.3	+3.7
LIA	Limnos Island	3.41	55	*e*Pn	Pn	13 32 28.9	+1.2
LIA	Limnos Island	3.41	55	*e*PN	Pn	13 32 28.9	+1.2
LIA	Limnos Island	3.41	55	*e*Pn	Pn	13 32 28.9	+1.2
STIP	Stip	3.71	7	*e*Pn	Pn	13 32 38.0	+6.0
SKO	Skopje	3.96	359	*e*Pn	Pn	13 32 39.2	+3.9

CSEM ***08*** *13:39:59.5, 37°.89N×21°.45E, h0km, ML3.6/8, After THE*
THE 08 13:39:59.5, 37°.89N×21°.45E, h0km±2km, ML3.6/8, Error ellipse: s-maj=2.7km s-min=0.8km az=257.0, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	University Cam	0.47	35	P	Pg	13 40 09.3	+0.7
UPR				S	Sg	13 40 17.4	+2.6
UPR	University Cam	0.47	35	P	Pg	13 40 09.3	+0.7
UPR				S	Sg	13 40 17.4	+2.6
LAKA	Lakka	0.55	50	P	Pg	13 40 09.9	-0.1
LAKA				S	Sg	13 40 18.6	+1.6
LAKA	Lakka	0.55	50	P	Pg	13 40 09.9	-0.1
LAKA				S	Sg	13 40 18.6	+1.6
KFL	Anninata	0.56	293	P	Pg	13 40 10.5	+0.2
EFP	Efpalio	0.65	34	P	Pg	13 40 11.4	-0.5
EFP				S	Sg	13 40 21.2	+1.0
EFP	Efpalio	0.65	34	P	Pg	13 40 11.4	-0.5
EFP				S	Sg	13 40 21.2	+1.0
GUR	Goura	0.71	86	P	Pg	13 40 12.4	-0.7
GUR				S	Sg	13 40 23.3	+0.9
GUR	Goura	0.71	86	P	Pg	13 40 12.4	-0.7
GUR				S	Sg	13 40 23.3	+0.9
VLS	Valsamata	0.73	293	P	Pg	13 40 12.7	-0.8
VLS				S	Sg	13 40 24.5	+1.5
VLS	Valsamata	0.73	293	P	Pg	13 40 12.7	-0.8
VLS				S	Sg	13 40 24.5	+1.5
KALE	Kalithea	0.74	48	P	Pg	13 40 13.1	-0.6
KALE				S	Sg	13 40 24.3	+1.0
KALE	Kalithea	0.74	48	P	Pg	13 40 13.1	-0.6
KALE				S	Sg	13 40 24.3	+1.0
ITM	Ithomi	0.81	152	P	Pg	13 40 15.4	+0.4
ITM				S	Sg	13 40 26.7	+1.2
ITM	Ithomi	0.81	152	P	Pg	13 40 15.4	+0.4
ITM				S	Sg	13 40 26.7	+1.2
VLX	Vlachokerasia	0.91	125	P	Pg	13 40 16.6	-0.3
VLX				S	Sg	13 40 30.2	+1.6
VLX	Vlachokerasia	0.91	125	P	Pg	13 40 16.6	-0.3
VLX				S	Sg	13 40 30.2	+1.6
DSF	Desfina	1.00	58	P	Pg	13 40 17.4	-1.2
DSF				S	Sg	13 40 32.5	+0.9
DSF	Desfina	1.00	58	P	Pg	13 40 17.4	-1.2
DSF				S	Sg	13 40 32.5	+0.9
PYL	PYLOS	1.02	167	P	Pg	13 40 18.1	-1.0
PYL				S	Sg	13 40 34.8	+2.4
PYL	PYLOS	1.02	167	P	Pg	13 40 18.1	-1.0
PYL				S	Sg	13 40 34.8	+2.4
AGG	Agios Georgios	1.32	31	P	Pg	13 40 23.7	-1.2
AGG				S	Sg	13 40 43.9	+1.8
AGG	Agios Georgios	1.32	31	P	Pg	13 40 23.7	-1.2
AGG				S	Sg	13 40 43.9	+1.8
ATAL	Atalanti	1.48	57	P	Pn	13 40 26.6	-0.7
ATAL				S	Sg	13 40 47.4	+0.5
ATAL	Atalanti	1.48	57	P	Pn	13 40 26.6	-0.7
ATAL				S	Sg	13 40 47.4	+0.5

NEIC ***08*** *13:40:46.9, 38°.05N×21°.62E, h6km, ML2.9(ATH), After ATH.*
CSEM ***08*** *13:40:46.9, 38°.05N×21°.62E, h6km, ML2.9, After ATH*
ATH 08 13:40:46.7, 38°.06N×21°.60E, h11km±2km, ML2.9, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.10	269	*e*Pg	Pg	13 40 49.3	-0.2
RLS				*e*Sg	Sg	13 40 51.7	+0.2
RLS	Riolos of Patr	0.10	269	*e*PG	Pg	13 40 49.3	-0.2
RLS				*e*SG	Sg	13 40 51.7	+0.2
RLS	Riolos of Patr	0.10	269	*e*Pg	Pg	13 40 49.3	-0.2
RLS				*e*Sg	Sg	13 40 51.7	+0.2
UPR	University Cam	0.27	33	*e*PG	Pg	13 40 52.3	+0.1
UPR	University Cam	0.27	33	*e*Pg	Pg	13 40 52.3	+0.1
EFP	Efpalio	0.44	33	*e*PB	Pg	13 40 55.2	-0.1
EFP				*e*SB	Sg	13 41 01.4	+0.2
EFP	Efpalio	0.44	33	*e*Pg	Pg	13 40 55.2	-0.1
EFP				*e*Sb	Sg	13 41 01.4	+0.2
GUR	Goura	0.60	102	*e*PB	Pb	13 40 57.7	-1.5
GUR	Goura	0.60	102	*e*Pb	Pb	13 40 57.7	-1.5
EVR	Evrytania	0.87	11	*e*Pb	Pb	13 41 03.8	0.0
EVR	Evrytania	0.87	11	*e*PB	Pb	13 41 03.8	0.0
EVR	Evrytania	0.87	11	*e*Pb	Pb	13 41 03.8	0.0
ITM	Ithomi	0.92	163	*e*Pg	Pg	13 41 03.5	-0.8
ITM	Ithomi	0.92	163	*e*PG	Pg	13 41 03.5	-0.8
ITM	Ithomi	0.92	163	*e*Pg	Pg	13 41 03.5	-0.8
VLX	Vlachokerasia	0.93	138	*e*PB	Pb	13 41 04.6	-0.1
VLX	Vlachokerasia	0.93	138	*e*Pb	Pb	13 41 04.6	-0.1
LTK	Loutraki	1.08	92	*e*PN	Pn	13 41 07.6	-0.1
LTK	Loutraki	1.08	92	*e*Pn	Pn	13 41 07.6	-0.1
AGG	Agios Georgios	1.12	31	*e*Pn	Pn	13 41 09.6	+1.3
AGG	Agios Georgios	1.12	31	*e*PB	Pn	13 41 09.6	+1.3
AGG	Agios Georgios	1.12	31	*e*Pn	Pn	13 41 09.6	+1.3
PYL	PYLOS	1.17	174	*e*PB	Pb	13 41 09.2	+0.3
PYL	PYLOS	1.17	174	*e*Pb	Pb	13 41 09.2	+0.3
THL	Klokotos Trika	1.54	12	*e*PB	Pb	13 41 15.9	+0.7
THL	Klokotos Trika	1.54	12	*e*Pb	Pb	13 41 15.9	+0.7
ATH	Athens Observa	1.67	92	*e*Pg	Pg	13 41 17.0	-1.8
ATH	Athens Observa	1.67	92	*e*PG	Pg	13 41 17.0	-1.8
ATH	Athens Observa	1.67	92	*e*Pg	Pg	13 41 17.0	-1.8
VLI	Veliai	1.71	141	*e*Pn	Pg	13 41 18.8	-0.7
VLI	Veliai	1.71	141	*e*PG	Pg	13 41 18.8	-0.7
VLI	Veliai	1.71	141	*e*Pn	Pg	13 41 18.8	-0.7

IDC ***08*** *13:41:17.0±2.0, 3°.71S×130°.57E, h0km, mb3.8/3, mb1 3.9/5, mb1mx3.6/18, mbtmp3.8/5, ML3.6/2, Error ellipse: s-maj=110.1km s-min=25.5km az=71.0*
DJA ***08*** *13:41:19, 3°.03S×131°.46E, h100km, MLv3.9/4*
NEIC ***08*** *13:41:21.7±1.0, 3°.64S×130°.81E, h35km, mb3.5/1, Error ellipse: s-maj=41.3km s-min=12.8km az=76.0*
ISCJB ***08*** *13:41:24.7±1.2, 3°.88S±0°.08×130°.88E±0°.10, h88km±13km, mb3.6/2, Error ellipse: s-maj=18.1km s-min=11.4km az=148.5*
ISC 08 13:41:26.0±1.2, 3°.95S±0°.07×130°.9E±0°.1, h84km±12km, n13, σ1°24/18, mb3.6/2, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	Tual	2.51	132	P	Pn	13 42 03.9	-0.9
AAI	Ambon	2.68	275	P	Pn	13 42 09.0	+1.9
AAI				S	Sn	13 42 50.6	+12
NLAI	Namlea	3.83	280	P	Pn	13 42 21.8	-0.8
LBMI	Labuha	4.70	314	P	Pn	13 42 27.6	-6.9
FITZ	Fitzroy Crossi	14.97	200	Pn	Pn	13 44 50.5	-2.6
	0.3nm,0.3s,baz=2.2,slow=17,SNR=24						
FITZ				Sn	Sn	13 47 36.6	-1.5
	0.1nm,0.3s,baz=255,slow=19,SNR=2.0						
FITZ	Fitzroy Crossi	14.97	200	P	Pn	13 44 54.4	+1.4
FITZ				Sn	Sn	13 47 36.6	-1.5
WRAB	Tennant Creek	16.25	168	*e*P	Pn	13 45 10.4	+1.2
	2.8nm,0.7s						
WRA	Warramunga Arr	16.25	168	Pn	Pn	13 45 08.6	-0.7
	0.2nm,0.3s,baz=353,slow=13,SNR=9.6						
WRA				Sn	Sn	13 48 00.6	-8.6
	0.1nm,0.3s,baz=344,slow=22,SNR=3.6						
ASAR	Alice Springs	19.82	172	P	Pn	13 45 53.7	+1.4
	2.5nm,0.5s,baz=348,slow=11,SNR=61						
ASAR				S	S	13 49 29.1	+0.3
	0.3nm,0.7s,baz=357,slow=26,SNR=3.1						
STKA	Stephens Creek	29.55	161	P	P	13 47 26.4	+3.7
	1.0nm,0.5s,mb3.7,baz=339,slow=7.5,SNR=3.9						
STKA	Stephens Creek	29.55	161	*e*P	P	13 47 26.4	+3.6
MK31	Makanchi Array	66.18	326	*e*P	P	13 52 03.8	-0.9
MKAR	Makanchi Array	66.18	326	P	P	13 52 04.2	-0.5
	0.5nm,0.7s,mb3.5,baz=105,slow=7.4,SNR=5.1						

IDC ***08*** *13:41:44.7±0.9, 38°.05N×21°.51E, h0km, mb3.9/11, mb1 3.9/14, mb1mx3.8/29, mbtmp3.8/14, ML3.5/3, Error ellipse: s-maj=19.5km s-min=15.2km az=55.0*
NEIC ***08*** *13:41:47.2, 37°.98N×21°.51E, h27km, mb4.0/2, ML3.5(ATH), After ATH.*
ATH ***08*** *13:41:47.2, 37°.98N×21°.51E, h27km±1km, ML3.5*
CSEM ***08*** *13:41:47.8±0.2, 37°.92N×21°.52E, h15km, ML3.5, Error ellipse: s-maj=4.4km s-min=3.7km az=14.0*
ISCJB ***08*** *13:41:47.9±0.3, 37°.96N±0°.02×21°.49E±0°.02, h29km±2km, mb3.9/13, Error ellipse: s-maj=4.0km s-min=2.9km az=14.8*
THE ***08*** *13:41:48.7, 37°.95N×21°.52E, h4km±1km, ML4.3/9, Error ellipse: s-maj=1.3km s-min=0.6km az=171.0*
ISC 08 13:41:48.1±0.4, 37°.93N±0°.02×21°.50E±0°.02, h18km±2km, n175, σ1°38/219, mb3.9/13, 1C, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.13	347	*e*Pb	Pg	13 41 52.0	-0.1
RLS				*e*Sb	Sg	13 41 55.7	+0.9
RLS	Riolos of Patr	0.13	347	*e*PB	Pg	13 41 52.0	-0.1
RLS				*e*SB	Sg	13 41 55.7	+0.9
RLS	Riolos of Patr	0.13	347	*e*Pb	Pg	13 41 52.0	-0.1
RLS				*e*Sb	Sg	13 41 55.7	+0.9
UPR	University Cam	0.41	33	P	Pg	13 41 56.4	-0.2
UPR				S	Sg	13 42 02.9	+0.5
UPR	University Cam	0.41	33	*e*PB	Pb	13 41 55.5	-1.3
UPR				*e*SB	Sb	13 42 02.4	-0.4
UPR	University Cam	0.41	33	*e*Pb	Pb	13 41 55.5	-1.3
UPR	University Cam	0.41	33	P	Pg	13 41 56.4	-0.2

JAN	Janina	1.79	344	*e*Pn	Pn	13 42 18.0	-0.1
JAN	Janina	1.79	344	*e*PN	Pn	13 42 18.0	-0.1
JAN	Janina	1.79	344	*e*Pn	Pn	13 42 18.0	-0.1
VLY	Voula,Athens	1.81	92	*e*Pb	Pb	13 42 18.0	-2.7
VLY	Voula,Athens	1.81	92	*e*PB	Pb	13 42 18.0	-2.7
PTL	Penteli	1.87	86	*e*Pb	Pb	13 42 19.7	-1.9
PTL	Penteli	1.87	86	*e*PB	Pb	13 42 19.7	-1.9
NEO	Neokhori	1.92	44	*e*Pb	Pb	13 42 18.6	-3.9
NEO	Neokhori	1.92	44	*e*PB	Pb	13 42 18.6	-3.9
XOR	Xorichti	1.95	42	P	Pn	13 42 21.9	+1.7
XOR				S	Sn	13 42 47.4	+3.3
XOR	Xorichti	1.95	42	P	Pn	13 42 21.9	+1.7
XOR				S	Sn	13 42 47.4	+3.3
KEK	Kerkira	2.22	324	*e*Pb	Pb	13 42 24.9	-2.7
KEK	Kerkira	2.22	324	*e*PB	Pb	13 42 24.9	-2.7
KZN	Kozani	2.38	5	*e*Pb	Pb	13 42 26.5	+0.4
KZN	Kozani	2.38	5	*e*PN	Pn	13 42 26.5	+0.4
KZN	Kozani	2.38	5	*e*Pn	Pn	13 42 26.5	+0.4
FNA	Florina	2.85	358	P	Pn	13 42 34.8	+2.3
FNA				S	Sn	13 43 09.4	+3.1
FNA	Florina	2.85	358	P	Pn	13 42 34.8	+2.3
FNA				S	Sn	13 43 09.4	+3.1
PLG	Polygyros	2.87	31	*e*Pn	Pn	13 42 33.1	+0.3
PLG	Polygyros	2.87	31	*e*PN	Pn	13 42 33.1	+0.3
PLG	Polygyros	2.87	31	*e*Pn	Pn	13 42 33.1	+0.3
OHR	Ohrid	3.22	350	*i* Pn	Pn	13 42 42.0	+4.3
KRUS	Krusevo	3.44	357	*i* Pn	Pn	13 42 42.3	+1.7
LIA	Limnos Island	3.48	55	*e*Pn	Pn	13 42 41.9	+0.7
LIA	Limnos Island	3.48	55	*e*PN	Pn	13 42 41.9	+0.7
LIA	Limnos Island	3.48	55	*e*Pn	Pn	13 42 41.9	+0.7
VAY	Valandovo	3.48	13	*i* Pn	Pn	13 42 43.8	+2.6
TIR	Tirane	3.64	340	*e*Pn	Pn	13 42 44.6	+1.3
TIR	Tirane	3.64	340	*e*PN	Pn	13 42 44.6	+1.2
STIP	Stip	3.79	8	*i* Pn	Pn	13 42 48.2	+2.7
IDI	Anoyia	3.79	133	Pn	Pn	13 42 46.8	+1.2
	0.8nm,0.3s,baz=316,slow=17,SNR=2.5						
IDI				Sn	Sn	13 43 31.7	+2.1
	1.7nm,0.3s,baz=333,slow=21,SNR=3.5						
IDI	Anoyia	3.79	133	Pn	Pn	13 42 46.8	+1.2
IDI				Sn	Sn	13 43 31.7	+2.0
NVR	Nevrokopi	3.87	27	P	Pn	13 42 50.7	+4.2
NVR	Nevrokopi	3.87	27	P	Pn	13 42 50.7	+4.2
TIP	Timpagrande	3.92	290	*e*P	Pn	13 42 48.6	+1.3
TIP	Timpagrande	3.92	290	*e*P	Pn	13 42 48.6	+1.3
SKO	Skopje	4.03	359	*i* Pn	Pn	13 42 50.5	+1.6
SKO	Skopje	4.03	359	*e*Pn	Pn	13 42 51.4	+2.6
SMG	Samos	4.23	91	P	Pn	13 42 56.6	+5.1
SMG	Samos	4.23	91	P	Pn	13 42 56.6	+5.1
CEL	Celeste	4.44	276	*e*Pn	Pn	13 42 55.1	+0.7
CEL	Celeste	4.44	276	*e*Pn	Pn	13 42 55.1	+0.7
LTRZ	Laterza	4.51	308	Pn	Pn	13 42 56.4	+1.0
LTRZ	Laterza	4.51	308	Pn	Pn	13 42 56.4	+1.0
SG1	Sgolgore (BA)	4.73	309	*e*Pn	Pn	13 42 59.4	+1.0
BAI	Bari	4.78	313	*e*Pn	Pn	13 42 59.6	+0.5
BARS	Barje	4.88	3	*e*Pn	Pn	13 43 01.8	+1.3
MS1	Monte Sant'Ang	5.70	313	*e*Pn	Pn	13 43 11.7	0.0
STON	Ston	5.72	331	*e*Pn	Pn	13 43 09.9	-2.1
STON				Sn	Sn	13 44 12.3	-4.9
CSSN	Cassano Irpino	5.81	302	Pn	Pn	13 43 15.6	+2.4
	15nm,0.6s						
CSSN	Cassano Irpino	5.81	302	Pn	Pn	13 43 15.6	+2.4
	15nm,0.6s						
FG5	Orsara di Pugl	5.86	307	Pn	Pn	13 43 15.6	+1.6
	24nm,0.6s						
FG5	Orsara di Pugl	5.86	307	Pn	Pn	13 43 15.6	+1.6
	24nm,0.6s						
RGNG	Rignano Grg	5.89	311	Pn	Pn	13 43 14.4	+0.1
RGNG	Rignano Grg	5.89	311	Pn	Pn	13 43 14.4	+0.1
MRB1	Monte Rocchett	5.97	304	Pn	Pn	13 43 17.8	+2.4
	76nm,0.6s						
MRB1	Monte Rocchett	5.97	304	Pn	Pn	13 43 17.8	+2.4
	76nm,0.6s						
DIVS	Divibare	6.26	350⇑	*i*Pn	Pn	13 43 19.2	-0.3
SGG	Gregorio Mates	6.49	304	Pn	Pn	13 43 25.6	+3.0
	33nm,0.7s						
SGG	Gregorio Mates	6.49	304	Pn	Pn	13 43 25.6	+3.0
	33nm,0.7s						
NRCA	Norcia	8.06	310	Pn	Pn	13 43 46.0	+1.9
	6.4nm,0.5s						
NRCA	Norcia	8.06	310	Pn	Pn	13 43 46.0	+1.9
	6.4nm,0.5s						
MLR	Muntele Rosu	8.25	22	Pn	Pn	13 43 50.1	+3.5
	0.2nm,0.3s,baz=176,slow=14,SNR=2.3						
BOJS	Bojanci	8.89	330	*i* Pn	Pn	13 43 55.7	+0.2
BOJS				*i* Sn	Sn	13 45 32.1	-2.9
BOJS	Bojanci	8.89	330	*i* Pn	Pn	13 43 55.7	+0.2
VISS	Visnje	9.30	330	*i* Pn	Pn	13 43 60.0	-1.1
VISS				*i* Sn	Sn	13 45 41.2	-3.9
VISS	Visnje	9.30	330	*i* Pn	Pn	13 44 00.0	-1.1
BRTR	Keskin Array B	9.64	76	Pn	Pn	13 44 09.8	+4.0
	0.2nm,0.3s,baz=263,slow=12,SNR=6.2						
JAVS	Javornik	9.69	328	*i* Pn	Pn	13 44 07.2	+0.7
JAVS				*i* Sn	Sn	13 45 49.1	-5.6
JAVS	Javornik	9.69	328	*i* Pn	Pn	13 44 07.2	+0.8
GERES	GERESS Array B	12.29	335	Pn	Pn	13 44 40.4	-1.5
	0.2nm,0.3s,baz=160,slow=14,SNR=5.8						
GERES				Sn	Sn	13 46 53.2	-5.1
	0.1nm,0.3s,baz=155,slow=19,SNR=3.4						
GERES	GERESS Array B	12.29	335	Pn	Pn	13 44 40.5	-1.4
FRF	La Foret Royal	12.58	301	*e*P	Pn	13 44 45.6	-0.5
	20nm,1.0s						
FRF	La Foret Royal	12.58	301	*e*P	Pn	13 44 45.6	-0.5
	10nm,1.0s						
FRF	La Foret Royal	12.58	301	*e*P	Pn	13 44 45.6	-0.5
	10nm,1.0s						
CABF	La Chapelle	14.31	312	*e*P	Pn	13 45 06.1	-3.5
	28nm,1.4s						
CABF	La Chapelle	14.31	312	*e*P	Pn	13 45 06.1	-3.5
	14nm,1.4s						
VIVF	Saint-Julien-l	14.39	304	*e*P	Pn	13 45 08.7	-2.0
	9.3nm,0.9s						
VIVF	Saint-Julien-l	14.39	304	*e*P	Pn	13 45 08.7	-2.0
	4.7nm,0.9s						
SSF	Saint Saulge	16.07	310	*e*P	Pn	13 45 30.9	-2.1
	19nm,1.1s						
SSF	Saint Saulge	16.07	310	*e*P	Pn	13 45 30.9	-2.1
	9.4nm,1.1s						
ESDC	Sonseca Array	19.91	283	P	Pn	13 46 18.5	-1.7
	0.1nm,0.3s,baz=80,slow=11,SNR=8.0						
ESDC	Sonseca Array	19.91	283	P	Pn	13 46 18.5	-1.7
ESDC	Sonseca Array	19.91	283	P	Pn	13 46 18.5	-1.7
HFS	Hagfors	22.77	350	P	P	13 46 47.1	-2.0
	5.2nm,0.6s,mb4.1,baz=165,slow=12,SNR=17						
FINES	FINESS Array B	23.71	5	P	P	13 46 56.5	-2.1
	1.8nm,0.6s,mb3.6,baz=170,slow=11,SNR=13						
NB2	NORSAR Subarra	24.02	348	P	P	13 47 00.2	-1.3
	comp=Z,1.1nm,0.5s,mb3.5,baz=153,slow=10						
NB2	NORSAR Subarra	24.02	348	P	P	13 47 00.2	-1.3
	comp=Z,1.1nm,0.5s,mb3.5,SNR=8.3						
NOA	NORSAR Array B	24.02	348	P	P	13 47 00.4	-1.1
	comp=Z,2.1nm,0.6s,mb3.8,baz=156,slow=8.7,SNR=8.3						
NOA	NORSAR Array B	24.02	348	P	P	13 47 00.4	-1.1
EKA	Eskdalemuir Ar	24.08	324	P	P	13 47 02.5	+0.4
	comp=Z,3.8nm,0.8s,mb3.9,baz=126,slow=10,SNR=13						
EKA	Eskdalemuir Ar	24.08	324	P	P	13 47 02.5	+0.4
EKA	Eskdalemuir Ar	24.08	324	P	P	13 47 02.5	+0.4
KAF	Kangasniemi	24.39	5	*e*p	P	13 47 03.0	-1.8
	comp=Z,3.9nm,0.6s,mb4.0,baz=186,slow=9.3						
JOF	Joensuu	25.72	10	*e*p	P	13 47 16.0	-1.0
	comp=Z,3.1nm,0.6s,mb4.0						
JOF	Joensuu	25.72	10	*e*P	P	13 47 16.0	-1.0
TOA0	Torodi Ar. Sit	30.34	221	*e*P	P	13 47 59.0	+0.4
TOA0	Torodi Ar. Sit	30.34	221	*e*P	P	13 47 59.0	+0.3
TORD	Torodi Ar. Bea	30.34	221	P	P	13 47 59.0	+0.3
	comp=Z,1.8nm,0.6s,mb4.0,baz=32,slow=9.0,SNR=18						
ARCES	ARCESS Array B	31.73	3	P	P	13 48 09.5	-0.9
	comp=Z,1.4nm,0.6s,mb4.0,baz=191,slow=11,SNR=5.3						
ARCES	ARCESS Array B	31.73	3	P	P	13 48 09.5	-0.9
ARCES	ARCESS Array B	31.73	3	P	P	13 48 09.5	-0.9
BVAR	Borovoye Array	36.68	50	P	P	13 48 52.7	-0.9
	comp=Z,0.4nm,0.5s,mb3.5,baz=258,slow=5.1,SNR=4.7						
BVAR	Borovoye Array	36.68	50	P	P	13 48 52.7	-0.8
MK31	Makanchi Array	44.77	58	*e*P	P	13 49 59.2	-1.2
MK31	Makanchi Array	44.77	58	*e*P	P	13 49 59.2	-1.1
MKAR	Makanchi Array	44.77	58	P	P	13 49 59.5	-0.8
	comp=Z,1.1nm,0.5s,mb4.0,baz=302,slow=6.5,SNR=19						
ZALV	Zalesovo Beam	45.28	48	P	P	13 50 03.4	-0.9
	comp=Z,1.9nm,0.5s,mb4.2,baz=279,slow=7.6,SNR=5.8						
ZALV	Zalesovo Beam	45.28	48	P	P	13 50 03.4	-0.8
YKA	Yellowknife Ar	73.88	340	P	P	13 53 19.8	-1.5
	comp=Z,0.5nm,0.6s,mb3.6,baz=41,slow=5.7,SNR=3.4						
YKA	Yellowknife Ar	73.88	340	P	P	13 53 19.8	-1.5
YKA	Yellowknife Ar	73.88	340	P	P	13 53 19.8	-1.5
KSRS	Korea Array	78.88	51	P	P	13 53 49.3	-0.9

	comp=Z,0.3nm,0.4s,mb3.6,baz=303,slow=4.0,SNR=3.7						
ASAR	Alice Springs	121.38	97	PKP	PKPdf	14 00 38.1	-2.2
	comp=Z,0.4nm,1.1s,baz=304,slow=1.9,SNR=3.0						
ASAR	Alice Springs	121.38	97	PKIKP	PKPdf	14 00 38.1	-2.2

*THE **08** 13:47:42.5, 37°.99N×21°.53E, h9km±1km, ML4.0/3, Error ellipse: s-maj=1.6km s-min=0.4km az=4.0*
*NEIC **08** 13:47:42.2, 38°.01N×21°.53E, h23km, ML2.8(ATH), After ATH.*
*ATH **08** 13:47:42.2, 38°.01N×21°.53E, h23km±1km, MD3.3/15, ML2.8*
*ISCJB **08** 13:47:42.6±0.4, 38°.00N±0°.03×21°.53E±0°.03, h17km±5km, Error ellipse: s-maj=5.1km s-min=4.1km az=6.0*
*CSEM **08** 13:47:43.0±0.3, 38°.01N×21°.55E, h20km, ML2.8, Error ellipse: s-maj=6.1km s-min=5.5km az=81.0*
ISC 08 13:47:42.3±0.4, 38°.00N±0°.03×21°.53E±0°.03, h19km±3km, n75, σ1°11/96, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.08	322	*e*Pb	Pg	13 47 46.5	+0.6
RLS				*e*Sb	Sg	13 47 49.6	+1.3
RLS	Riolos of Patr	0.08	322	*e*PB	Pg	13 47 46.5	+0.6
RLS				*e*SB	Sg	13 47 49.6	+1.3
RLS	Riolos of Patr	0.08	322	*e*Pb	Pg	13 47 46.5	+0.6
UPR	University Cam	0.35	35	P	Pg	13 47 50.0	+0.2
UPR	University Cam	0.35	35	*e*PB	Pg	13 47 49.4	-0.4
UPR				*e*SB	Sg	13 47 56.1	+1.2
UPR	University Cam	0.35	35	*e*Pb	Pg	13 47 49.4	-0.4
UPR	University Cam	0.35	35	P	Pg	13 47 50.0	+0.2
UPR				*e*Sb	Sg	13 47 56.1	+1.2
LAKA	Lakka	0.43	56	P	Pg	13 47 51.0	-0.2
LAKA				S	Sg	13 47 57.3	+0.1
LAKA	Lakka	0.43	56	P	Pg	13 47 51.0	-0.2
LAKA				S	Sg	13 47 57.3	+0.1
EFP	Efpalio	0.52	35	P	Pg	13 47 52.4	-0.5
EFP				S	Sg	13 48 00.1	+0.1
EFP	Efpalio	0.52	35	*e*PN	Pg	13 47 52.3	-0.6
EFP				*e*SN	Sg	13 48 00.8	+0.8
EFP	Efpalio	0.52	35	P	Pg	13 47 52.4	-0.5
EFP				S	Sg	13 48 00.1	+0.1
KFL	Anninata	0.59	281	P	Pg	13 47 54.1	0.0
KALE	Kalithea	0.62	51	P	Pg	13 47 54.1	-0.6
KALE				S	Sg	13 48 03.7	+0.6
KALE	Kalithea	0.62	51	P	Pg	13 47 54.1	-0.6
KALE				S	Sg	13 48 03.7	+0.6
GUR	Goura	0.65	95	P	Pg	13 47 54.6	-0.5
GUR				S	Sg	13 48 04.3	+0.5
GUR	Goura	0.65	95	*e*PB	Pg	13 47 54.3	-0.8
GUR				*e*SN	Sg	13 48 04.3	+0.5
GUR	Goura	0.65	95	*e*Pb	Pg	13 47 54.3	-0.8
GUR	Goura	0.65	95	P	Pg	13 47 54.6	-0.5
GUR				S	Sg	13 48 04.3	+0.5
VLS	Valsamata	0.76	284	*e*Pn	Pg	13 47 56.4	-0.9
VLS				*e*Sn	Sn	13 48 08.8	-0.2
VLS	Valsamata	0.76	284	P	Pg	13 47 56.5	-0.8
VLS				S	Sg	13 48 08.1	+0.7
VLS	Valsamata	0.76	284	*e*PN	Pg	13 47 56.4	-0.9
VLS				*e*SN	Sn	13 48 08.8	-0.2
VLS	Valsamata	0.76	284	P	Pg	13 47 56.5	-0.8
VLS				S	Sg	13 48 08.1	+0.7
VLS				*e*Sn	Sn	13 48 08.8	-0.2
ITM	Ithomi	0.88	159	*e*Pn	Pg	13 47 58.9	-0.5
ITM	Ithomi	0.88	159	P	Pg	13 47 58.8	-0.6
ITM	Ithomi	0.88	159	*e*PN	Pg	13 47 58.9	-0.5
ITM	Ithomi	0.88	159	P	Pg	13 47 58.8	-0.6
VLX	Vlachokerasia	0.92	132	P	Pb	13 47 59.5	-0.2
VLX	Vlachokerasia	0.92	132	*e*PB	Pb	13 47 59.3	-0.4
VLX				*e*SN	Sn	13 48 13.7	+0.7
VLX	Vlachokerasia	0.92	132	P	Pb	13 47 59.5	-0.2
VLX				*e*Sn	Sn	13 48 13.7	+0.7
EVR	Evrytania	0.94	13	*e*Pn	Pg	13 47 59.8	-0.9
EVR	Evrytania	0.94	13	*e*PN	Pg	13 47 59.8	-0.9
EVR	Evrytania	0.94	13	*e*Pn	Pg	13 47 59.8	-0.9
PYL	PYLOS	1.11	171	P	Pg	13 48 03.2	-0.7
PYL	PYLOS	1.11	171	*e*PN	Pg	13 48 03.7	-0.2
PYL	PYLOS	1.11	171	P	Pg	13 48 03.2	-0.7
PYL	PYLOS	1.11	171	*e*Pn	Pg	13 48 03.7	-0.2
LTK	Loutraki	1.14	88	*e*PN	Pg	13 48 03.4	-1.0
LTK	Loutraki	1.14	88	*e*Pn	Pg	13 48 03.4	-1.0
AGG	Agios Georgios	1.20	31	*e*Pn	Pn	13 48 04.7	+0.6
AGG	Agios Georgios	1.20	31	*e*PN	Pn	13 48 04.7	+0.6
AGG	Agios Georgios	1.20	31	*e*Pn	Pn	13 48 04.7	+0.6
LKR	Lokris	1.33	60	*e*Pn	Pn	13 48 06.5	+0.6
LKR	Lokris	1.33	60	P	Pn	13 48 06.4	+0.5
LKR	Lokris	1.33	60	*e*PN	Pn	13 48 06.5	+0.6
LKR	Lokris	1.33	60	*e*Pn	Pn	13 48 06.5	+0.6
THL	Klokotos Trika	1.61	14	*e*PN	Pn	13 48 11.6	+1.8
THL	Klokotos Trika	1.61	14	*e*Pn	Pn	13 48 11.6	+1.8
VLI	Veliai	1.70	138	*e*Pn	Pn	13 48 13.9	+2.9
VLI	Veliai	1.70	138	*e*PN	Pn	13 48 13.9	+2.9
VLI	Veliai	1.70	138	*e*Pn	Pn	13 48 13.9	+2.9
ATH	Athens Observa	1.73	90	*e*Pn	Pn	13 48 13.0	+1.6
ATH	Athens Observa	1.73	90	*e*PN	Pn	13 48 13.0	+1.6
ATH	Athens Observa	1.73	90	*e*Pn	Pn	13 48 13.0	+1.6
JAN	Janina	1.74	343	*e*Pn	Pn	13 48 14.6	+3.1
JAN	Janina	1.74	343	*e*PN	Pn	13 48 14.6	+3.1
JAN	Janina	1.74	343	*e*Pn	Pn	13 48 14.6	+3.1
VLY	Voula,Athens	1.80	94	*e*Pb	Pb	13 48 13.1	-1.6
VLY	Voula,Athens	1.80	94	*e*PB	Pb	13 48 13.1	-1.6
PTL	Penteli	1.85	88	*e*Pb	Pb	13 48 13.7	-1.8
PTL	Penteli	1.85	88	*e*PB	Pb	13 48 13.7	-1.8
NEO	Neokhori	1.86	45	*e*Pb	Pb	13 48 14.1	-1.7
NEO	Neokhori	1.86	45	*e*PB	Pb	13 48 14.1	-1.7
KEK	Kerkira	2.18	322	*e*Pb	Pb	13 48 19.4	-1.8
KEK	Kerkira	2.18	322	*e*PB	Pb	13 48 19.4	-1.8
LIT	Litokhoron	2.23	19	*e*Pb	Pb	13 48 20.3	-1.7
LIT	Litokhoron	2.23	19	*e*PB	Pb	13 48 20.3	-1.7
KZN	Kozani	2.31	5	*e*Pb	Pb	13 48 22.2	-1.3
KZN	Kozani	2.31	5	*e*PB	Pb	13 48 22.2	-1.3
SOH	Sokhos	3.16	26	*e*Pn	Pn	13 48 32.4	+1.4
SOH	Sokhos	3.16	26	*e*PN	Pn	13 48 32.4	+1.4
SOH	Sokhos	3.16	26	*e*Pn	Pn	13 48 32.4	+1.4
APE	Apeiranthos	3.31	105	*e*Pn	Pn	13 48 34.5	+1.3
APE	Apeiranthos	3.31	105	*e*PN	Pn	13 48 34.5	+1.3
APE	Apeiranthos	3.31	105	*e*Pn	Pn	13 48 34.5	+1.3

*ATH **08** 13:50:19.5, 38°.06N×21°.53E, h17km, MD3.3/18, ML3.0*
*THE **08** 13:50:19.9, 38°.04N×21°.58E, h16km±1km, ML3.7/7, Error ellipse: s-maj=1.4km s-min=0.7km az=351.0*
*NEIC **08** 13:50:19.5, 38°.06N×21°.53E, h17km, ML3.0(ATH), After ATH.*
*ISCJB **08** 13:50:19.4±0.6, 38°.05N±0°.02×21°.55E±0°.03, h9km±3km, Error ellipse: s-maj=4.0km s-min=3.6km az=14.7*
*CSEM **08** 13:50:20.2±0.3, 38°.04N×21°.59E, h15km, ML3.0, Error ellipse: s-maj=6.4km s-min=5.3km az=48.0*
ISC 08 13:50:19.8±0.4, 38°.03N±0°.02×21°.56E±0°.03, h11km±3km, n85, σ1°11/121, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.08	290	*e*Pb	Pg	13 50 22.8	+0.5
RLS				*e*Sb	Sg	13 50 25.0	+0.8
RLS	Riolos of Patr	0.08	290	*e*PB	Pg	13 50 22.8	+0.5
RLS				*e*SB	Sg	13 50 25.0	+0.8
RLS	Riolos of Patr	0.08	290	*e*Pb	Pg	13 50 22.8	+0.5
RLS				*e*Sb	Sg	13 50 25.0	+0.8
UPR	University Cam	0.31	35	P	Pg	13 50 25.8	-0.3
UPR	University Cam	0.31	35	*e*PB	Pg	13 50 25.6	-0.5
UPR				*e*SB	Sg	13 50 31.3	+1.0
UPR	University Cam	0.31	35	P	Pg	13 50 25.8	-0.3
UPR				*e*Sb	Sg	13 50 31.3	+1.0
LAKA	Lakka	0.39	57	P	Pg	13 50 27.2	-0.3
LAKA				S	Sg	13 50 32.9	+0.2
LAKA	Lakka	0.39	57	P	Pg	13 50 27.2	-0.3
LAKA				S	Sg	13 50 32.9	+0.2
EFP	Efpalio	0.48	34	P	Pg	13 50 28.9	-0.3
EFP				S	Sg	13 50 36.4	+0.8
EFP	Efpalio	0.48	34	*e*PB	Pg	13 50 29.1	-0.1
EFP				*e*SB	Sg	13 50 36.5	+0.9
EFP	Efpalio	0.48	34	P	Pg	13 50 28.9	-0.3
EFP				*e*Sb	Sg	13 50 36.5	+0.9
KALE	Kalithea	0.58	51	P	Pg	13 50 30.3	-0.8
KALE				S	Sg	13 50 39.8	+1.0
KALE	Kalithea	0.58	51	P	Pg	13 50 30.3	-0.8
KFL	Anninata	0.62	278	P	Pg	13 50 32.3	+0.5
GUR	Goura	0.62	98	P	Pg	13 50 31.1	-0.8
GUR				S	Sg	13 50 40.8	+0.7
GUR	Goura	0.62	98	*e*PB	Pb	13 50 30.9	-1.8
GUR				*e*SN	Sg	13 50 41.0	+0.9
GUR	Goura	0.62	98	P	Pg	13 50 31.1	-0.8
GUR				S	Sg	13 50 40.8	+0.7
VLS	Valsamata	0.78	281	*e*Pn	Pg	13 50 34.6	-0.4
VLS	Valsamata	0.78	281	P	Pg	13 50 34.6	-0.4
VLS	Valsamata	0.78	281	*e*PN	Pg	13 50 34.6	-0.4
VLS	Valsamata	0.78	281	P	Pg	13 50 34.6	-0.4
DSF	Desfina	0.85	63	P	Pg	13 50 35.0	-1.2
DSF				S	Sg	13 50 47.2	-0.1
DSF	Desfina	0.85	63	P	Pg	13 50 35.0	-1.2
ITM	Ithomi	0.90	161	*e*Pb	Pb	13 50 36.3	-1.0
ITM				*e*Sn	Sn	13 50 51.3	+0.1
ITM	Ithomi	0.90	161	*e*PB	Pb	13 50 36.3	-1.0
ITM				*e*SN	Sn	13 50 51.3	+0.1
ITM	Ithomi	0.90	161	P	Pg	13 50 36.4	-0.7
ITM				*e*Sn	Sn	13 50 51.3	+0.1
EVR	Evrytania	0.91	12	*e*Pn	Pn	13 50 36.7	-1.8
EVR				*e*Sn	Sn	13 50 49.0	-2.5
EVR	Evrytania	0.91	12	*e*PN	Pn	13 50 36.7	-1.8
EVR				*e*SN	Sn	13 50 49.0	-2.5
EVR	Evrytania	0.91	12	*e*Pn	Pn	13 50 36.7	-1.8
VLX	Vlachokerasia	0.92	135	P	Pg	13 50 37.4	-0.2
VLX				S	Sg	13 50 50.6	+1.0
VLX	Vlachokerasia	0.92	135	*e*PB	Pb	13 50 37.3	-0.5
VLX				*e*SN	Sn	13 50 51.7	-0.2
VLX	Vlachokerasia	0.92	135	*e*Pb	Pb	13 50 37.3	-0.5
VLX				S	Sg	13 50 50.6	+1.0
VLX				*e*Sn	Sn	13 50 51.7	-0.2
LTK	Loutraki	1.11	90	P	Pb	13 50 39.8	-1.1
LTK				S	Sb	13 50 55.5	+0.1
LTK	Loutraki	1.11	90	*e*PN	Pn	13 50 41.9	+0.7
LTK				*e*SN	Sn	13 50 57.0	+0.6
LTK	Loutraki	1.11	90	P	Pb	13 50 39.8	-1.1
LTK	Loutraki	1.11	90	*e*Pn	Pn	13 50 41.9	+0.7
LTK				S	Sb	13 50 55.5	+0.1
LTK				*e*Sn	Sn	13 50 57.0	+0.6
PYL	PYLOS	1.14	173	*e*PN	Pn	13 50 41.7	0.0
PYL	PYLOS	1.14	173	*e*Pn	Pn	13 50 41.7	0.0
AGG	Agios Georgios	1.16	31	*e*Pn	Pn	13 50 41.5	-0.4
AGG	Agios Georgios	1.16	31	*e*PN	Pn	13 50 41.5	-0.4
AGG	Agios Georgios	1.16	31	*e*Pn	Pn	13 50 41.5	-0.4
LKR	Lokris	1.29	61	*e*Pn	Pn	13 50 43.2	-0.5
LKR				*e*Sn	Sn	13 51 01.8	+0.9
LKR	Lokris	1.29	61	*e*PN	Pn	13 50 43.2	-0.5
LKR				*e*SN	Sn	13 51 01.8	+0.9
LKR	Lokris	1.29	61	*e*Pn	Pn	13 50 43.2	-0.5
LKR				*e*Sn	Sn	13 51 01.8	+0.9
NAIG	Nisos Aigina	1.55	99	*e*Pn	Pn	13 50 48.3	+1.1
NAIG	Nisos Aigina	1.55	99	*e*PN	Pn	13 50 48.3	+1.1
NAIG	Nisos Aigina	1.55	99	*e*Pn	Pn	13 50 48.3	+1.1
THL	Klokotos Trika	1.57	13	*e*PN	Pn	13 50 49.2	+1.6
THL	Klokotos Trika	1.57	13	*e*Pn	Pn	13 50 49.2	+1.6
ATH	Athens Observa	1.70	91	*e*Pb	Pb	13 50 49.9	-1.2
ATH	

UPI	**Upington**	**13.11**	**236**	*e*P	Pn	13 57 54.0 +1.5
UPI				*e*S	Sn	14 00 12.6 -6.3
UPI				AML	AML	14 01 47.7
	comp=Z,10nm,0.8s					

IDC ***08*** *14:01:05.2±1.5, 38°.27N×21°.47E, h0km, mb3.6/4, mb1 3.5/6, mb1mx3.4/27, mbtmp3.5/6, ML2.9/2, Error ellipse: s-maj=47.4km s-min=23.3km az=135.0*
THE ***08*** *14:01:07.7, 38°.07N×21°.57E, h11km±1km, ML4.4/8, Error ellipse: s-maj=1.3km s-min=0.9km az=32.0*
NEIC ***08*** *14:01:07.2, 38°.08N×21°.54E, h20km, ML3.3(ATH), After ATH.*
ATH ***08*** *14:01:07.2, 38°.08N×21°.54E, h20km, ML3.3*
CSEM ***08*** *14:01:07.6±0.2, 38°.06N×21°.59E, h10km, ML3.3, Error ellipse: s-maj=4.2km s-min=3.9km az=32.0*
ISCJB ***08*** *14:01:07.2±0.3, 38°.06N±0°.02×21°.56E±0°.02, h14km±2km, mb3.5/4, Error ellipse: s-maj=3.9km s-min=3.0km az=2.9*
ISC 08 14:01:08.0±0.3, 38°.07N±0°.02×21°.57E±0°.02, h11km±2km, n126, σ1$09/161, mb3.5/4, 1C-2D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.09**	**261**	*e*Pb	**Pg**	**14 01 11.0**	**+0.5**
RLS				*e*Sb	**Sg**	**14 01 13.6**	**+1.3**
RLS	**Riolos of Patr**	**0.09**	**261**	*e*PB	**Pg**	**14 01 11.0**	**+0.5**
RLS				*e*SB	**Sg**	**14 01 13.6**	**+1.3**
RLS	**Riolos of Patr**	**0.09**	**261**	*e*Pb	**Pg**	**14 01 11.0**	**+0.5**
RLS				*e*Sb	**Sg**	**14 01 13.6**	**+1.3**
UPR	**University Cam**	**0.27**	**38**	P	**Pg**	**14 01 13.6**	**+0.1**
UPR				S	**Sg**	**14 01 18.2**	**+1.0**
UPR	**University Cam**	**0.27**	**38**	*e*PB	**Pg**	**14 01 13.5**	**0.0**
UPR				*e*SB	**Sg**	**14 01 18.9**	**+1.7**
UPR	**University Cam**	**0.27**	**38**	*e*Pb	**Pg**	**14 01 13.5**	**0.0**
UPR				S	**Sg**	**14 01 18.2**	**+1.0**
UPR				*e*Sb	**Sg**	**14 01 18.9**	**+1.7**
LAKA	**Lakka**	**0.36**	**62**	P	**Pg**	**14 01 14.8**	**-0.4**
LAKA				S	**Sg**	**14 01 20.4**	**+0.4**
LAKA	**Lakka**	**0.36**	**62**	P	**Pg**	**14 01 14.8**	**-0.4**
LAKA				S	**Sg**	**14 01 20.4**	**+0.4**
EFP	**Efpalio**	**0.44**	**36**	P	**Pg**	**14 01 16.2**	**-0.5**
EFP				S	**Sg**	**14 01 23.3**	**+0.8**
EFP	**Efpalio**	**0.44**	**36**	*e*PB	**Pg**	**14 01 16.1**	**-0.6**
EFP				*e*SB	**Sg**	**14 01 23.6**	**+1.1**
EFP	**Efpalio**	**0.44**	**36**	P	**Pg**	**14 01 16.2**	**-0.5**
EFP				S	**Sg**	**14 01 23.3**	**+0.8**
EFP				*e*Sb	**Sg**	**14 01 23.6**	**+1.1**
KALE	**Kalithea**	**0.55**	**54**	P	**Pg**	**14 01 17.9**	**-0.8**
KALE				S	**Sg**	**14 01 26.4**	**+0.5**
KALE	**Kalithea**	**0.55**	**54**	P	**Pg**	**14 01 17.9**	**-0.8**
KALE				S	**Sg**	**14 01 26.4**	**+0.5**
KFL	**Anninata**	**0.62**	**274**	P	**Pg**	**14 01 19.6**	**-0.5**
GUR	**Goura**	**0.62**	**102**	P	**Pg**	**14 01 19.1**	**-1.0**
GUR				S	**Sg**	**14 01 28.4**	**+0.2**
GUR	**Goura**	**0.62**	**102**	*e*PB	**Pg**	**14 01 19.1**	**-1.0**
GUR				*e*SN	**Sg**	**14 01 28.7**	**+0.5**
GUR	**Goura**	**0.62**	**102**	P	**Pg**	**14 01 19.1**	**-1.0**
GUR				S	**Sg**	**14 01 28.4**	**+0.2**
VLS	**Valsamata**	**0.78**	**278**	*e*Pn	**Pg**	**14 01 21.6**	**-1.5**
VLS				*e*Sn	**Sg**	**14 01 33.4**	**0.0**
VLS	**Valsamata**	**0.78**	**278**	P	**Pg**	**14 01 21.7**	**-1.4**
VLS	**Valsamata**	**0.78**	**278**	*e*PN	**Pg**	**14 01 21.6**	**-1.5**
VLS				*e*SN	**Sg**	**14 01 33.4**	**0.0**
VLS	**Valsamata**	**0.78**	**278**	P	**Pg**	**14 01 21.7**	**-1.4**
DSF	**Desfina**	**0.82**	**65**	P	**Pg**	**14 01 22.5**	**-1.4**
DSF				S	**Sg**	**14 01 34.5**	**-0.2**
DSF	**Desfina**	**0.82**	**65**	P	**Pg**	**14 01 22.5**	**-1.4**
DSF				S	**Sg**	**14 01 34.5**	**-0.2**
EVR	**Evrytania**	**0.86**	**12**	*e*Pn	**Pg**	**14 01 23.4**	**-1.3**
EVR	**Evrytania**	**0.86**	**12**	*e*PN	**Pg**	**14 01 23.4**	**-1.3**
ITM	**Ithomi**	**0.93**	**162**	*e*Pn	**Pg**	**14 01 25.6**	**-0.4**
ITM	**Ithomi**	**0.93**	**162**	P	**Pg**	**14 01 25.3**	**-0.7**
ITM	**Ithomi**	**0.93**	**162**	*e*PN	**Pg**	**14 01 25.6**	**-0.4**
ITM	**Ithomi**	**0.93**	**162**	P	**Pg**	**14 01 25.3**	**-0.7**
ITM	**Ithomi**	**0.93**	**162**	*e*Pn	**Pg**	**14 01 25.6**	**-0.4**
VLX	**Vlachokerasia**	**0.95**	**137**	P	**Pg**	**14 01 25.4**	**-0.9**
VLX				S	**Sg**	**14 01 39.9**	**+1.3**
VLX	**Vlachokerasia**	**0.95**	**137**	*e*PN	**Pg**	**14 01 25.6**	**-0.7**
VLX				*e*SN	**Sg**	**14 01 39.9**	**+1.3**
VLX	**Vlachokerasia**	**0.95**	**137**	P	**Pg**	**14 01 25.4**	**-0.9**
VLX				*e*Sn	**Sg**	**14 01 39.9**	**+1.3**
LTK	**Loutraki**	**1.10**	**92**	P	**Pg**	**14 01 27.3**	**-1.9**
LTK				S	**Sg**	**14 01 44.5**	**+1.0**
LTK	**Loutraki**	**1.10**	**92**	*e*PB	**Pg**	**14 01 27.1**	**-2.1**
LTK	**Loutraki**	**1.10**	**92**	P	**Pg**	**14 01 27.3**	**-1.9**
LTK				S	**Sg**	**14 01 44.5**	**+1.0**
AGG	**Agios Georgios**	**1.12**	**32**	*e*Pn	**Pg**	**14 01 28.7**	**-0.8**
AGG	**Agios Georgios**	**1.12**	**32**	P	**Pg**	**14 01 27.9**	**-1.6**
AGG	**Agios Georgios**	**1.12**	**32**	*e*PN	**Pg**	**14 01 28.7**	**-0.8**
AGG	**Agios Georgios**	**1.12**	**32**	P	**Pg**	**14 01 27.9**	**-1.6**
AGG	**Agios Georgios**	**1.12**	**32**	*e*Pn	**Pg**	**14 01 28.7**	**-0.8**
PYL	**PYLOS**	**1.18**	**173**	P	**Pb**	**14 01 29.6**	**-0.8**
PYL	**PYLOS**	**1.18**	**173**	*e*PB	**Pb**	**14 01 29.0**	**-1.4**
PYL	**PYLOS**	**1.18**	**173**	*e*Pb	**Pb**	**14 01 29.0**	**-1.4**
PYL	**PYLOS**	**1.18**	**173**	P	**Pb**	**14 01 29.6**	**-0.8**
LKR	**Lokris**	**1.26**	**62**	*e*Pn	**Pn**	**14 01 30.7**	**-0.8**
LKR	**Lokris**	**1.26**	**62**	P	**Pn**	**14 01 30.4**	**-1.1**
LKR	**Lokris**	**1.26**	**62**	*e*PN	**Pn**	**14 01 30.7**	**-0.8**
LKR	**Lokris**	**1.26**	**62**	P	**Pn**	**14 01 30.4**	**-1.1**
LKR	**Lokris**	**1.26**	**62**	*e*Pn	**Pn**	**14 01 30.7**	**-0.8**
ATAL	**Atalanti**	**1.30**	**61**	P	**Pn**	**14 01 30.9**	**-1.1**
ATAL				S	**Sb**	**14 01 48.7**	**-0.3**
ATAL	**Atalanti**	**1.30**	**61**	P	**Pn**	**14 01 30.9**	**-1.1**
ATAL				S	**Sb**	**14 01 48.7**	**-0.3**
THL	**Klokotos Trika**	**1.53**	**13**	P	**Pn**	**14 01 35.4**	**+0.2**
THL	**Klokotos Trika**	**1.53**	**13**	*e*PN	**Pn**	**14 01 35.5**	**+0.3**
THL	**Klokotos Trika**	**1.53**	**13**	*e*Pn	**Pn**	**14 01 35.5**	**+0.3**
NAIG	**Nisos Aigina**	**1.55**	**101**	*e*Pn	**Pn**	**14 01 35.6**	**+0.1**
NAIG	**Nisos Aigina**	**1.55**	**101**	*e*PN	**Pn**	**14 01 35.6**	**+0.1**
NAIG	**Nisos Aigina**	**1.55**	**101**	*e*Pn	**Pn**	**14 01 35.6**	**+0.1**
JAN	**Janina**	**1.68**	**341**	*e*Pn	**Pn**	**14 01 37.9**	**+0.6**
JAN	**Janina**	**1.68**	**341**	*e*PN	**Pn**	**14 01 37.9**	**+0.6**
JAN	**Janina**	**1.68**	**341**	*e*Pn	**Pn**	**14 01 37.9**	**+0.6**
ATH	**Athens Observa**	**1.69**	**93**	*e*Pn	**Pn**	**14 01 37.9**	**+0.4**
ATH	**Athens Observa**	**1.69**	**93**	*e*PN	**Pn**	**14 01 37.9**	**+0.4**
ATH	**Athens Observa**	**1.69**	**93**	*e*Pn	**Pn**	**14 01 37.9**	**+0.4**
VLI	**Veliai**	**1.73**	**141**	*e*Pn	**Pn**	**14 01 39.6**	**+1.6**
VLI	**Veliai**	**1.73**	**141**	*e*PN	**Pn**	**14 01 39.6**	**+1.6**
VLI	**Veliai**	**1.73**	**141**	*e*Pn	**Pn**	**14 01 39.6**	**+1.6**
VLY	**Voula,Athens**	**1.77**	**96**	*e*Pb	**Pn**	**14 01 38.3**	**-0.2**
VLY	**Voula,Athens**	**1.77**	**96**	*e*PB	**Pn**	**14 01 38.3**	**-0.2**
NEO	**Neokhori**	**1.79**	**46**	*e*Pn	**Pn**	**14 01 38.9**	**+0.2**
NEO	**Neokhori**	**1.79**	**46**	*e*PN	**Pn**	**14 01 38.9**	**+0.2**
NEO	**Neokhori**	**1.79**	**46**	*e*Pn	**Pn**	**14 01 38.9**	**+0.2**
PTL	**Penteli**	**1.81**	**90**	*e*Pb	**Pn**	**14 01 38.3**	**-0.8**
PTL	**Penteli**	**1.81**	**90**	*e*PB	**Pn**	**14 01 38.3**	**-0.8**
AOS	**Alonnisos**	**2.11**	**58**	P	**Pn**	**14 01 42.2**	**-1.1**
AOS	**Alonnisos**	**2.11**	**58**	P	**Pn**	**14 01 42.2**	**-1.1**
KEK	**Kerkira**	**2.15**	**320**	*e*Pn	**Pn**	**14 01 43.9**	**+0.2**
KEK	**Kerkira**	**2.15**	**320**	*e*PN	**Pn**	**14 01 43.9**	**+0.2**
KEK	**Kerkira**	**2.15**	**320**	*e*Pn	**Pn**	**14 01 43.9**	**+0.2**
KZN	**Kozani**	**2.24**	**4**	*e*Pb	**Pn**	**14 01 45.3**	**+0.3**
KZN	**Kozani**	**2.24**	**4**	*e*PB	**Pn**	**14 01 45.3**	**+0.3**
PLG	**Polygyros**	**2.72**	**32**	*e*Pn	**Pn**	**14 01 51.8**	**+0.2**
PLG	**Polygyros**	**2.72**	**32**	*e*PN	**Pn**	**14 01 51.8**	**+0.2**
PLG	**Polygyros**	**2.72**	**32**	*e*Pn	**Pn**	**14 01 51.8**	**+0.2**
OHR	**Ohrid**	**3.09**	**349**	*i* Pn	**Pb**	**14 02 02.2**	**-0.8**
KRUS	**Krusevo**	**3.30**	**356**	*i* Pn	**Pn**	**14 01 59.7**	**+0.1**
VAY	**Valandovo**	**3.33**	**13**	*i* Pn	**Pn**	**14 02 00.9**	**+0.9**
TIR	**Tirane**	**3.53**	**339**	Pn	**Pn**	**14 02 04.5**	**+1.8**
TIR	**Tirane**	**3.53**	**339**	Pn	**Pn**	**14 02 04.5**	**+1.8**
STIP	**Stip**	**3.65**	**7**	*i* Pn	**Pn**	**14 02 07.2**	**+2.8**
IDI	**Anoyia**	**3.85**	**135**	Pn	**Pn**	**14 02 07.9**	**+0.8**
	1.3nm,0.3s,baz=346,slow=15,SNR=9.0						
IDI				Sn	**Sn**	**14 02 53.7**	**+1.3**
	1.8nm,0.3s,baz=286,slow=17,SNR=5.5						
IDI	**Anoyia**	**3.85**	**135**	Pn	**Pn**	**14 02 07.9**	**+0.8**
IDI				Sn	**Sn**	**14 02 53.7**	**+1.4**
MMB	**Musomiste**	**3.88**	**25**	*i* P	**Pn**	**14 02 08.6**	**+1.0**
MMB	**Musomiste**	**3.88**	**25**	*i* P	**Pn**	**14 02 08.6**	**+1.0**
TIP	**Timpagrande**	**3.93**	**288**	*e*Pn	**Pn**	**14 02 08.8**	**+0.6**
TIP	**Timpagrande**	**3.93**	**288**	*e*Pn	**Pn**	**14 02 08.8**	**+0.6**
KKB	**Krupnik**	**3.96**	**17**	*i* P	**Pn**	**14 02 15.6**	**+6.9**
CEL	**Celeste**	**4.48**	**274**	Pn	**Pn**	**14 02 16.6**	**+0.8**
CEL	**Celeste**	**4.48**	**274**	Pn	**Pn**	**14 02 16.6**	**+0.8**
KDZ	**Kurdzhali**	**4.64**	**38**	*e*P	**Pn**	**14 02 20.3**	**+2.4**
KDZ	**Kurdzhali**	**4.64**	**38**	*e*P	**Pn**	**14 02 20.3**	**+2.4**
VTS	**Vitosha**	**4.68**	**15**	*i* P	**Pn**	**14 02 19.9**	**+1.3**
VTS	**Vitosha**	**4.68**	**15**	*i* P	**Pn**	**14 02 19.9**	**+1.3**
BARS	**Barje**	**4.74**	**2**	‖ *i* Pn	**Pn**	**14 02 22.2**	**+2.8**
STON	**Ston**	**5.63**	**330**	*e*Pn	**Pn**	**14 02 30.1**	**-1.5**
STON				Sn	**Sn**	**14 03 31.9**	**-4.3**
STON	**Ston**	**5.63**	**330**	*e*Pn	**Pn**	**14 02 30.0**	**-1.6**
GRUS	**Gruza**	**5.85**	**354**	‖ *i* Pn	**Pn**	**14 02 35.3**	**+0.7**
PVL	**Pavlikeni**	**5.88**	**28**	*i* P	**Pn**	**14 02 43.4**	**+8.4**
DIVS	**Divibare**	**6.14**	**349**	‖ *i* Pn	**Pn**	**14 02 37.6**	**-0.9**
BOJS	**Bojanci**	**8.80**	**330**	*i* Pn	**Pn**	**14 03 13.7**	**-1.3**
BOJS				*i* Sn	**Sn**	**14 04 50.0**	**-4.1**
BOJS	**Bojanci**	**8.80**	**330**	*i* Pn	**Pn**	**14 03 13.7**	**-1.3**
VISS	**Visnje**	**9.21**	**329**	*i* Pn	**Pn**	**14 03 21.1**	**+0.5**
VISS				*i* Sn	**Sn**	**14 05 00.0**	**-4.2**
VISS	**Visnje**	**9.21**	**329**	*i* Pn	**Pn**	**14 03 21.1**	**+0.4**
BR131	**Keskin Array S**	**9.55**	**76**	P	**Pn**	**14 03 28.7**	**+3.4**
BRTR	**Keskin Array B**	**9.55**	**76**	Pn	**Pn**	**14 03 25.7**	**+0.3**
	0.1nm,0.3s,baz=262,slow=13,SNR=4.0						
BRTR	**Keskin Array B**	**9.55**	**76**	Pn	**Pn**	**14 03 25.7**	**+0.3**
	0.3nm,0.3s,mb3.4,baz=287,slow=8.7,SNR=3.6						
KURK	**Kurchatov**	**41.67**	**53**	P	**P**	**14 08 54.3**	**-2.0**
MK31	**Makanchi Array**	**44.65**	**59**	*e*P	**P**	**14 09 20.9**	**+0.4**
MK31	**Makanchi Array**	**44.65**	**59**	*e*P	**P**	**14 09 20.9**	**+0.5**
MKAR	**Makanchi Array**	**44.65**	**59**	P	**P**	**14 09 18.9**	**-1.6**
	0.4nm,0.4s,mb3.6,baz=291,slow=6.6,SNR=10.0						
ZALV	**Zalesovo Beam**	**45.14**	**48**	P	**P**	**14 09 22.3**	**-1.9**
	1.2nm,0.5s,mb4.0,baz=275,slow=9.1,SNR=4.5						
ZALV	**Zalesovo Beam**	**45.14**	**48**	P	**P**	**14 09 22.3**	**-2.0**

TAP ***08*** *14:10:15.8, 23°.95N×122°.52E, h7km±1km, ML3.0, D*
ISCJB ***08*** *14:10:15.2±1.1, 23°.94N±0°.03×122°.65E±0°.02, h13km±8km, Error ellipse: s-maj=4.8km s-min=2.6km az=170.1*
JMA ***08*** *14:10:16.2±0.2, 24°.08N×122°.60E, h35km, M2.5*
ISC 08 14:10:15.1±0.7, 23°.96N±0°.03×122°.65E±0°.02, h12km±4km, n33, σ0$91/57, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.60**	**34**	P	**Pg**	**14 10 27.1**	**+0.3**
YOJ				S	**Sg**	**14 10 34.7**	**0.0**
ENA	**Nanau**	**0.95**	**300**	*i* P	**Pg**	**14 10 33.3**	**-0.1**
	baz=303						
ENA				*e*S	**Sg**	**14 10 45.7**	**-0.1**
	baz=303						
TWD	**Chiawan**	**0.97**	**277**	*e*P	**Pg**	**14 10 33.5**	**-0.3**
	baz=278						
TWC	**Suao**	**0.97**	**312**	P	**Pg**	**14 10 33.5**	**-0.3**
	baz=317						
TWC				S	**Sg**	**14 10 46.4**	**-0.1**
	baz=317						
IRIF	**Iriomote-Funau**	**1.06**	**69**	P	**Pb**	**14 10 35.2**	**-0.1**
IRIF				S	**Sb**	**14 10 49.5**	**+0.4**
HATJ	**Hateruma jima**	**1.06**	**85**	P	**Pb**	**14 10 35.4**	**0.0**
HATJ				S	**Sb**	**14 10 50.0**	**+0.7**
ESL	**Shilin**	**1.12**	**263**	*e*P	**Pb**	**14 10 35.0**	**-1.3**
	baz=261						
ESL				S	**Sb**	**14 10 49.2**	**-1.7**
	baz=261						
ILA	**Ilan**	**1.15**	**315**	*e*S	**Sb**	**14 10 53.6**	**+2.0**
	baz=319						
TWE	**Neicheng**	**1.17**	**310**	P	**Pb**	**14 10 37.0**	**-0.2**
	baz=315						
TWE				*e*S	**Sb**	**14 10 53.8**	**+1.4**
	baz=315						
ENTT	**Nioudou**	**1.19**	**305**	P	**Pn**	**14 10 36.9**	**-0.7**
	baz=308						
ENTT				*e*S	**Sb**	**14 10 53.2**	**+0.2**
	baz=308						
TWB1	**Santiao Chiao**	**1.20**	**330**	P	**Pn**	**14 10 36.7**	**-1.0**
	baz=335						
NNS	**Nan Shan**	**1.26**	**293**	*e*P	**Pn**	**14 10 38.2**	**-0.2**
	baz=294						
NNS				*e*S	**Sb**	**14 10 54.2**	**-0.6**
	baz=294						
WHF	**Hehuan Shan**	**1.27**	**278**	*i* P	**Pn**	**14 10 38.1**	**-0.5**
	baz=279						
WHF				S	**Sb**	**14 10 54.8**	**-0.6**
	baz=279						
JKRS	**Kuro-shima**	**1.28**	**77**	P	**Pn**	**14 10 38.4**	**-0.3**
JKRS				S	**Sb**	**14 10 55.7**	**+0.3**
EHY	**Hungye**	**1.29**	**250**	*e*P	**Pn**	**14 10 38.6**	**-0.3**
	baz=247						
EHY				*e*S	**Sb**	**14 10 54.0**	**-1.9**
	baz=247						
NWF	**Wu-fen Shan**	**1.36**	**325**	P	**Pn**	**14 10 39.3**	**-0.5**
	baz=328						
NSK	**Sanguang**	**1.37**	**301**	P	**Pn**	**14 10 39.8**	**-0.2**
	baz=304						
NSK				*e*S	**Sn**	**14 10 57.2**	**-0.9**
	baz=304						
TWT	**Tachien**	**1.37**	**282**	*e*P	**Pn**	**14 10 40.8**	**+0.7**
	baz=283						
TWT				*e*S	**Sn**	**14 10 57.8**	**-0.4**
	baz=283						
TWF1	**Yuli**	**1.38**	**244**	*e*P	**Pn**	**14 10 39.5**	**-0.6**
	baz=241						
TWF1				*e*S	**Sn**	**14 10 57.8**	**-0.5**
	baz=241						
TWA	**Mucha**	**1.40**	**317**	P	**Pn**	**14 10 41.0**	**+0.6**
	baz=320						
TWA				S	**Sn**	**14 10 59.4**	**+0.5**
	baz=320						
JIJ	**Ishigaki jima**	**1.43**	**73**	P	**Pn**	**14 10 40.1**	**-0.6**
JIJ				S	**Sn**	**14 10 57.9**	**-1.5**
SMLT	**Sun Moon Lake**	**1.60**	**268**	*e*P	**Pn**	**14 10 43.6**	**+0.4**
	baz=267						
YUS	**Yu-Shan**	**1.62**	**253**	*e*P	**Pn**	**14 10 43.9**	**+0.5**
	baz=251						
YUS				*e*S	**Sn**	**14 11 03.5**	**-0.8**
	baz=251						
TYC	**Yuchr**	**1.64**	**268**	*e*P	**Pn**	**14 10 43.5**	**-0.1**
	baz=268						
ELDTW	**Lidau**	**1.68**	**243**	*e*P	**Pn**	**14 10 43.7**	**-0.6**
	baz=240						
ELDTW				*e*S	**Sn**	**14 11 03.8**	**-1.9**
	baz=240						
ALS	**Alishan**	**1.75**	**255**	*e*P	**Pn**	**14 10 46.0**	**+0.8**
	baz=254						
ALS				*e*S	**Sn**	**14 11 07.2**	**-0.1**
	baz=254						
TWG	**Pinlang**	**1.84**	**232**	*e*P	**Pn**	**14 10 47.1**	**+0.7**
	baz=229						
CHN5	**Tsauling**	**1.84**	**259**	*e*P	**Pn**	**14 10 46.8**	**+0.4**
	baz=258						
CHN5				*e*S	**Sn**	**14 11 11.6**	**+2.0**
	baz=258						
JTJ	**Tarama**	**2.00**	**70**	P	**Pn**	**14 10 48.4**	**-0.2**
JTJ				*e*S	**Sn**	**14 11 12.8**	**-0.7**
SGST	**Jiashian**	**2.09**	**246**	*e*P	**Pn**	**14 10 51.5**	**+1.6**
	baz=243						
SGST				*e*S	**Sn**	**14 11 16.2**	**+0.5**
	baz=243						
CHN1	**Nanshi**	**2.09**	**249**	*e*P	**Pn**	**14 10 52.0**	**+2.1**
	baz=247						
CHN1				S	**Sn**	**14 11 17.5**	**+1.6**
	baz=247						
SSD	**Sandimen**	**2.21**	**237**	*e*P	**Pn**	**14 10 54.5**	**+2.9**
	baz=235						
EAST	**Anshuo**	**2.28**	**227**	*e*P	**Pn**	**14 10 53.8**	**+1.3**
	baz=224						

CSEM ***08*** *14:16:25.8, 38°.08N×21°.57E, h16km, ML3.6/6, After THE*
THE 08 14:16:25.8, 38°.08N×21°.57E, h16km±1km, ML3.6/6, Error ellipse: s-maj=2.2km s-min=0.7km az=31.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.26**	**40**	P	Pg	14 16 31.9	+0.3
UPR				S	Sg	14 16 36.6	+1.1
UPR	**University Cam**	**0.26**	**40**	P	Pg	14 16 31.9	+0.3
UPR				S	Sg	14 16 36.6	+1.1
LAKA	**Lakka**	**0.36**	**63**	P	Pg	14 16 33.0	-0.2
LAKA				S	Sg	14 16 38.6	+0.4
LAKA	**Lakka**	**0.36**	**63**	P	Pg	14 16 33.0	-0.2
LAKA				S	Sg	14 16 38.6	+0.4
EFP	**Efpalio**	**0.43**	**37**	P	Pg	14 16 34.2	-0.4
EFP				S	Sg	14 16 41.6	+1.1
EFP	**Efpalio**	**0.43**	**37**	P	Pg	14 16 34.2	-0.4
EFP				S	Sg	14 16 41.6	+1.1
KALE	**Kalithea**	**0.54**	**55**	P	Pg	14 16 35.9	-0.7
KALE				S	Sg	14 16 44.4	+0.6
KALE	**Kalithea**	**0.54**	**55**	P	Pg	14 16 35.9	-0.7
KALE				S	Sg	14 16 44.4	+0.6
GUR	**Goura**	**0.62**	**103**	P	Pg	14 16 37.2	-0.9
GUR				S	Sg	14 16 46.7	+0.3
GUR	**Goura**	**0.62**	**103**	P	Pg	14 16 37.2	-0.9
GUR				S	Sg	14 16 46.7	+0.3
VLS	**Valsamata**	**0.78**	**277**	P	Pb	14 16 39.8	-1.2
VLS				S	Sb	14 16 52.3	+1.0
VLS	**Valsamata**	**0.78**	**277**	P	Pb	14 16 39.8	-1.2
VLS				S	Sb	14 16 52.3	+1.0
DSF	**Desfina**	**0.82**	**66**	P	Pb	14 16 40.4	-1.2
DSF				S	Sb	14 16 53.3	+0.9
DSF	**Desfina**	**0.82**	**66**	P	Pb	14 16 40.4	-1.2
DSF				S	Sb	14 16 53.3	+0.9
ITM	**Ithomi**	**0.94**	**163**	P	Pb	14 16 43.8	+0.1
ITM				S	Sb	14 16 56.8	+0.9
ITM	**Ithomi**	**0.94**	**163**	P	Pb	14 16 43.8	+0.1
ITM				S	Sb	14 16 56.8	+0.9
VLX	**Vlachokerasia**	**0.95**	**138**	P	Pb	14 16 44.0	+0.1
VLX				S	Sb	14 16 57.7	+1.4
VLX	**Vlachokerasia**	**0.95**	**138**	P	Pb	14 16 44.0	+0.1
VLX				S	Sb	14 16 57.7	+1.4

IDC ***08*** *14:22:09.1±2.0, 8°.98S×113°.39E, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.7/21, mbtmp3.7/7, ML3.7/1, Error ellipse: s-maj=80.5km s-min=18.8km az=56.0*
NEIC ***08*** *14:22:10.4±1.0, 9°.00S×113°.35E, h10km, mb4.0/2, Error ellipse: s-maj=43.7km s-min=9.5km az=51.0*
ISCJB ***08*** *14:22:16.4±0.8, 9°.2S±0°.1×113°.09E±0°.05, h83km±8km, mb3.7/8, Error ellipse: s-maj=17.3km s-min=6.5km az=13.5*
DJA ***08*** *14:22:17, 9°.21S×113°.09E, h30km, MLv4.0/10*
ISC 08 14:22:16.8±0.9, 9°.28S±0°.10×113°.09E±0°.05, h70km±9km, n29, σ1$07/33, mb3.7/8, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**1.06**	**19**	P	**Pn**	**14 22 34.2**	**-1.8**
KRKI	**Karangkates**	**1.28**	**331**	P	**Pn**	**14 22 38.9**	**+0.1**
BYJI	**Banyuwangi**	**1.64**	**50**	P	**Pn**	**14 22 43.4**	**-0.2**
NBBI	**Negara**	**1.76**	**59**	P	**Pn**	**14 22 46.2**	**+1.0**
NBBI				S	**Sn**	**14 23 06.4**	**-0.4**
PWJI	**Pagerwojo**	**1.78**	**314**	P	**Pn**	**14 22 45.5**	**0.0**
PWJI				S	**Sn**	**14 23 07.2**	**-0.1**
ABJI	**Asem Bagus**	**1.86**	**38**	P	**Pn**	**14 22 48.2**	**+1.7**
SJI	**Sawahan**	**2.02**	**320**	P	**Pn**	**14 22 49.3**	**+0.7**
IGBI	**Denpasar**	**2.08**	**77**	P	**Pn**	**14 22 47.6**	**-1.9**
PCJI	**Pacitan**	**2.17**	**300**	P	**Pn**	**14 22 50.2**	**-0.6**
DNP	**Denpasar**	**2.18**	**74**	P	**Pn**	**14 22 52.7**	**+1.8**
KMMI	**Kalianget**	**2.38**	**22**	P	**Pn**	**14 22 54.9**	**+1.3**
SRBI	**Singaraja**	**2.41**	**61**	P	**Pn**	**14 22 54.6**	**+0.6**
NGJI	**Ngawi**	**2.49**	**320**	P	**Pn**	**14 22 53.0**	**-2.1**
KHKI	**Kahang-Kahang**	**2.65**	**70**	P	**Pn**	**14 22 56.5**	**-0.7**
UGM	**Wanagama**	**2.88**	**298**	P	**Pn**	**14 23 01.3**	**+1.0**
MBWA	**Marble Bar**	**13.43**	**152**	*e*Pn	**Pn**	**14 25 16.8**	**-7.6**
FITZ	**Fitzroy Crossi**	**15.01**	**127**	Pn	**Pn**	**14 25 40.4**	**-4.6**
	0.2nm,0.3s,baz=287,slow=16,SNR=16						
FITZ				Sn	**Sn**	**14 28 15.2**	**-15**
	0.1nm,0.3s,baz=186,slow=18,SNR=3.1						
FITZ	**Fitzroy Crossi**	**15.01**	**127**	*e*Pn	**Pn**	**14 25 41.2**	**-3.9**
FITZ				Sn	**Sn**	**14 28 15.2**	**-15**
WRA	**Warramunga Arr**	**23.11**	**120**	P	**P**	**14 27 16.5**	**-0.4**
	1.1nm,0.7s,mb3.3,baz=295,slow=11,SNR=14						
WRA	**Warramunga Arr**	**23.11**	**120**	P	**P**	**14 27 16.5**	**-0.5**
WRAB	**Tennant Creek

ITM	Ithomi	0.91	161	ePN	Pn	14 22 46.9	-1.3
ITM	Ithomi	0.91	161	P	Pg	14 22 46.6	-0.6
ITM	Ithomi	0.91	161	ePn	Pn	14 22 46.9	-1.3
ITM				S	Sg	14 22 59.7	+0.6
VLX	Vlachokerasia	0.94	135	P	Pg	14 22 46.5	-1.2
VLX				S	Sg	14 23 01.1	+1.1
VLX	Vlachokerasia	0.94	135	ePB	Pb	14 22 45.9	-1.9
VLX	Vlachokerasia	0.94	135	ePb	Pb	14 22 45.9	-1.9
VLX	Vlachokerasia	0.94	135	P	Pg	14 22 46.5	-1.2
VLX				S	Sg	14 23 01.1	+1.1
LTK	Loutraki	1.12	91	P	Pb	14 22 49.6	-1.3
LTK				S	Sb	14 23 05.3	-0.1
LTK	Loutraki	1.12	91	ePN	Pb	14 22 49.6	-1.3
LTK	Loutraki	1.12	91	P	Pb	14 22 49.6	-1.3
LTK				S	Sb	14 23 05.3	-0.1
AGG	Agios Georgios	1.16	32	ePn	Pn	14 22 51.0	-0.5
AGG	Agios Georgios	1.16	32	P	Pb	14 22 49.9	-1.6
AGG				S	Sb	14 23 06.8	+0.4
AGG	Agios Georgios	1.16	32	ePN	Pn	14 22 51.0	-0.5
AGG	Agios Georgios	1.16	32	P	Pb	14 22 49.9	-1.6
AGG	Agios Georgios	1.16	32	ePn	Pn	14 22 51.0	-0.5
AGG				S	Sb	14 23 06.8	+0.4
PYL	PYLOS	1.16	172	P	Pb	14 22 50.9	-0.6
PYL				S	Sb	14 23 08.8	+2.4
PYL	PYLOS	1.16	172	ePN	Pn	14 22 51.1	-0.4
PYL	PYLOS	1.16	172	ePn	Pn	14 22 51.1	-0.4
PYL				S	Sb	14 23 08.8	+2.4
LKR	Lokris	1.29	62	ePn	Pn	14 22 52.2	-1.2
LKR	Lokris	1.29	62	P	Pn	14 22 52.4	-1.0
LKR				S	Sb	14 23 10.8	+0.5
LKR	Lokris	1.29	62	ePN	Pn	14 22 52.2	-1.2
LKR	Lokris	1.29	62	P	Pn	14 22 52.4	-1.0
LKR				S	Sb	14 23 10.8	+0.5
ATAL	Atalanti	1.33	60	P	Pn	14 22 52.9	-1.0
ATAL				S	Sb	14 23 13.3	+2.0
ATAL	Atalanti	1.33	60	P	Pn	14 22 52.9	-1.0
ATAL				S	Sb	14 23 13.3	+2.0
NAIG	Nisos Aigina	1.56	100	ePn	Pn	14 22 56.9	-0.2
NAIG	Nisos Aigina	1.56	100	ePN	Pn	14 22 56.9	-0.2
NAIG	Nisos Aigina	1.56	100	ePn	Pn	14 22 56.9	-0.2
THL	Klokotos Trika	1.56	13	P	Pn	14 22 57.7	+0.5
THL				S	Sn	14 23 19.9	+2.6
THL	Klokotos Trika	1.56	13	ePN	Pn	14 22 57.3	+0.1
THL	Klokotos Trika	1.56	13	ePn	Pn	14 22 57.3	+0.1
THL	Klokotos Trika	1.56	13	P	Pn	14 22 57.7	+0.5
THL				S	Sn	14 23 19.9	+2.6
JAN	Janina	1.70	342	ePn	Pn	14 23 00.2	+1.1
JAN	Janina	1.70	342	ePN	Pn	14 23 00.2	+1.1
JAN	Janina	1.70	342	ePn	Pn	14 23 00.2	+1.1
ATH	Athens Observa	1.71	92	ePn	Pn	14 22 58.9	-0.3
ATH	Athens Observa	1.71	92	ePN	Pn	14 22 58.9	-0.3
ATH	Athens Observa	1.71	92	ePn	Pn	14 22 58.9	-0.3
VLI	Veliai	1.72	140	ePn	Pn	14 23 00.7	+1.4
VLI	Veliai	1.72	140	ePN	Pn	14 23 00.7	+1.4
VLI	Veliai	1.72	140	ePn	Pn	14 23 00.7	+1.4
IGT	Igoumenitsa	1.77	328	P	Pn	14 23 00.6	+0.7
IGT				S	Sn	14 23 25.4	+3.1
IGT	Igoumenitsa	1.77	328	P	Pn	14 23 00.6	+0.7
IGT				S	Sn	14 23 25.4	+3.1
ATHU	Athens Univers	1.77	92	P	Pn	14 23 00.7	+0.7
ATHU				S	Sn	14 23 23.9	+1.6
ATHU	Athens Univers	1.77	92	P	Pn	14 23 00.7	+0.7
ATHU				S	Sn	14 23 23.9	+1.6
VLY	Voula,Athens	1.79	95	ePn	Pn	14 22 59.9	-0.3
VLY	Voula,Athens	1.79	95	ePN	Pn	14 22 59.9	-0.3
VLY	Voula,Athens	1.79	95	ePn	Pn	14 22 59.9	-0.3
NEO	Neokhori	1.82	46	ePb	Pb	14 23 00.3	-2.5
NEO	Neokhori	1.82	46	ePB	Pb	14 23 00.3	-2.5
PTL	Penteli	1.83	89	ePn	Pn	14 23 01.0	+0.2
PTL	Penteli	1.83	89	ePN	Pn	14 23 01.0	+0.2
PTL	Penteli	1.83	89	ePn	Pn	14 23 01.0	+0.2
XOR	Xorichti	1.84	44	P	Pn	14 23 00.7	-0.3
XOR				S	Sn	14 23 26.9	+2.7
XOR	Xorichti	1.84	44	P	Pn	14 23 00.7	-0.3
XOR				S	Sn	14 23 26.9	+2.7
AOS	Alonnisos	2.15	58	P	Pn	14 23 04.6	-0.6
AOS				S	Sn	14 23 33.3	+1.6
AOS	Alonnisos	2.15	58	P	Pn	14 23 04.6	-0.6
AOS				S	Sn	14 23 33.3	+1.6
KEK	Kerkira	2.16	321	ePb	Pn	14 23 05.8	+0.5
KEK	Kerkira	2.16	321	P	Pn	14 23 05.8	+0.5
KEK				S	Sn	14 23 35.7	+3.8
KEK	Kerkira	2.16	321	ePB	Pn	14 23 05.8	+0.5
KEK	Kerkira	2.16	321	P	Pn	14 23 05.8	+0.5
KEK				S	Sn	14 23 35.7	+3.8
LIT	Litokhoron	2.18	19	P	Pn	14 23 06.8	+1.1
LIT				S	Sn	14 23 35.1	+2.5
LIT	Litokhoron	2.18	19	P	Pn	14 23 06.8	+1.1
LIT				S	Sn	14 23 35.1	+2.5
KZN	Kozani	2.27	4	ePn	Pn	14 23 08.3	+1.5
KZN	Kozani	2.27	4	P	Pn	14 23 07.6	+0.8
KZN				S	Sn	14 23 36.7	+2.0
KZN	Kozani	2.27	4	ePN	Pn	14 23 08.3	+1.5
KZN	Kozani	2.27	4	P	Pn	14 23 07.6	+0.8
KZN	Kozani	2.27	4	ePn	Pn	14 23 08.3	+1.5
KZN				S	Sn	14 23 36.7	+2.0
FNA	Florina	2.74	357	P	Pn	14 23 14.6	+1.3
FNA	Florina	2.74	357	P	Pn	14 23 14.6	+1.3
SOH	Sokhos	3.11	26	P	Pn	14 23 19.1	+0.7
SOH				S	Sn	14 23 58.3	+2.9
SOH	Sokhos	3.11	26	P	Pn	14 23 19.1	+0.7
SOH				S	Sn	14 23 58.3	+2.9
OHR	Ohrid	3.12	350	ePn	Pn	14 23 18.8	+0.3
KRUS	Krusevo	3.33	356	ePn	Pn	14 23 21.8	+0.3
VAY	Valandovo	3.37	13	ePn	Pn	14 23 23.6	+1.6
LIA	Limnos Island	3.38	56	ePn	Pn	14 23 23.6	+1.4
LIA	Limnos Island	3.38	56	ePN	Pn	14 23 23.6	+1.4
LIA	Limnos Island	3.38	56	ePn	Pn	14 23 23.6	+1.4
TIR	Tirane	3.55	339	eP	Pn	14 23 26.5	+2.0
TIR	Tirane	3.55	339	eP	Pn	14 23 26.5	+2.1
STIP	Stip	3.68	7	ePn	Pn	14 23 28.1	+1.9
IDI	Anoyia	3.84	135	Pn	Pn	14 23 29.2	+0.7
	1.9nm,0.3s,baz=319,slow=15,SNR=12						
IDI				Sn	Sn	14 24 15.2	+1.6
	3.5nm,0.3s,baz=68,slow=20,SNR=3.7						
IDI	Anoyia	3.84	135	Pn	Pn	14 23 29.1	+0.6
IDI				Sn	Sn	14 24 15.1	+1.6
TIP	Timpagrande	3.92	288	ePn	Pn	14 23 29.9	+0.3
TIP	Timpagrande	3.92	288	ePn	Pn	14 23 29.9	+0.3
LAST	Lasithi	4.27	131	P	Pn	14 23 35.0	+0.6
LAST				S	Sn	14 24 27.9	+3.7
LAST	Lasithi	4.27	131	P	Pn	14 23 35.0	+0.6
LAST				S	Sn	14 24 27.9	+3.7
NPS	Neapolis	4.29	129	P	Pn	14 23 37.9	+3.3
NPS	Neapolis	4.29	129	P	Pn	14 23 37.9	+3.3
CEL	Celeste	4.46	275	P	Pn	14 23 39.0	+1.9
CEL	Celeste	4.46	275	P	Pn	14 23 39.0	+2.0
LTRZ	Laterza	4.47	306	Pn	Pn	14 23 37.4	+0.3
LTRZ	Laterza	4.47	306	Pn	Pn	14 23 37.4	+0.3
SG1	Sgolgore (BA)	4.69	308	ePn	Pn	14 23 40.3	+0.1
SG1				eSn	Sn	14 24 33.1	-1.4
BAI	Bari	4.73	312	ePn	Pn	14 23 40.4	-0.3
BARS	Barje	4.77	2	i/Pn	Pn	14 23 41.6	+0.3
ACER	Acerenza	5.13	304	Pn	Pn	14 23 47.0	+0.8
	33nm,0.6s						
ACER	Acerenza	5.13	304	Pn	Pn	14 23 47.0	+0.8
	33nm,0.6s						
STON	Ston	5.65	330	i Pn	Pn	14 23 51.4	-1.9
STON				Sn	Sn	14 24 52.3	-5.6
STON	Ston	5.65	330	i Pn	Pn	14 23 51.4	-1.9
VAE	Valguarnera	5.68	267	LR	LR	14 25 36.8	
	comp=Z,832nm,19.0s,baz=355,slow=33						
RGNG	Rignano Grg	5.85	310	Pn	Pn	14 23 55.8	-0.2
RGNG	Rignano Grg	5.85	310	Pn	Pn	14 23 55.8	-0.2
GRUS	Gruza	5.88	354	ePn	Pn	14 23 54.0	+1.3
MRB1	Monte Rocchett	5.94	303	Pn	Pn	14 23 58.7	+1.4
	56nm,0.5s						
MRB1	Monte Rocchett	5.94	303	Pn	Pn	14 23 58.7	+1.4
	56nm,0.5s						
BBLS	Lazići	6.04	345	ePn	Pn	14 23 58.2	-0.5
PSB1	Pescosannita	6.09	304	Pn	Pn	14 24 00.8	+1.4
PSB1	Pescosannita	6.09	304	Pn	Pn	14 24 00.8	+1.4
DIVS	Divibare	6.16	349	i/Pn	Pn	14 23 59.3	-1.1
SGG	Gregorio Mates	6.46	303	Pn	Pn	14 24 06.5	+2.1
	22nm,0.6s						
SGG	Gregorio Mates	6.46	303	Pn	Pn	14 24 06.5	+2.1
	22nm,0.6s						
MLR	Muntele Rosu	8.13	22	Pn	Pn	14 24 33.1	+5.7
	0.2nm,0.3s,baz=320,slow=22,SNR=2.8						
MLR				LR	LR	14 27 54.9	
	comp=Z,724nm,19.3s,baz=288,slow=41						
BOJS	Bojanci	8.81	330	i Pn	Pn	14 24 35.3	-1.4
BOJS				i Sn	Sn	14 26 12.8	-3.0
BOJS	Bojanci	8.81	330	i Pn	Pn	14 24 35.3	-1.4
VISS	Visnje	9.22	329	i Pn	Pn	14 24 40.8	-1.5
VISS				i Sn	Sn	14 26 24.0	-2.0
VISS	Visnje	9.22	329	i Pn	Pn	14 24 40.8	-1.5
BRTR	Keskin Array B	9.58	76	Pn	Pn	14 24 46.4	-0.8
	0.1nm,0.3s,baz=219,slow=38,SNR=2.6						
BRTR	Keskin Array B	9.58	76	Pn	Pn	14 24 46.4	-0.8
JAVS	Javornik	9.62	327	i Pn	Pn	14 24 47.2	-0.5
JAVS				i Sn	Sn	14 26 32.3	-3.4
JAVS	Javornik	9.62	327	i Pn	Pn	14 24 47.2	-0.5
GERES	GERESS Array B	12.20	335	Pn	Pn	14 25 19.7	-3.4
	0.2nm,0.3s,baz=162,slow=15,SNR=7.3						
ESDC	Sonseca Array	19.92	283	P	Pn	14 27 00.3	-2.4
	0.1nm,0.3s,baz=75,slow=10,SNR=5.5						
ESDC	Sonseca Array	19.92	283	P	Pn	14 27 00.3	-2.4
HFS	Hagfors	22.67	350	P	P	14 27 28.5	-1.9
	0.8nm,0.5s,mb3.5,baz=165,slow=12,SNR=6.1						
FINES	FINESS Array B	23.60	5	P	P	14 27 35.6	-4.5
	4.0nm,1.0s,mb3.8,baz=153,slow=13,SNR=5.2						
NOA	NORSAR Array B	23.92	348	P	P	14 27 42.0	-1.0
	0.5nm,0.6s,mb3.1,baz=168,slow=11,SNR=3.0						
NOA	NORSAR Array B	23.92	348	P	P	14 27 42.0	-1.0
EKA	Eskdalemuir Ar	24.01	324	P	P	14 27 43.4	-0.6
	2.3nm,0.9s,mb3.6,baz=131,slow=11,SNR=9.7						
EKA	Eskdalemuir Ar	24.01	324	P	P	14 27 43.3	-0.6
TOA0	Torodi Ar. Sit	30.45	221	eP	P	14 28 42.5	+0.5
TOA0	Torodi Ar. Sit	30.45	221	eP	P	14 28 42.5	+0.4
TORD	Torodi Ar. Bea	30.45	221	P	P	14 28 42.0	0.0
	0.9nm,0.7s,mb3.6,baz=35,slow=8.7,SNR=8.1						
MK31	Makanchi Array	44.68	58	eP	P	14 30 41.0	-1.1
MK31	Makanchi Array	44.68	58	eP	P	14 30 41.0	-1.1
MKAR	Makanchi Array	44.68	58	P	P	14 30 40.9	-1.2
	0.5nm,0.5s,mb3.6,baz=294,slow=6.6,SNR=10						
ZALV	Zalesovo Beam	45.18	48	P	P	14 30 43.9	-2.1
	0.9nm,0.5s,mb3.9,baz=278,slow=8.6,SNR=4.3						
ZALV	Zalesovo Beam	45.18	48	P	P	14 30 43.9	-2.0
KSRS	Korea Array	78.79	51	P	P	14 34 30.2	-2.0
	0.4nm,0.6s,mb3.5,baz=316,slow=5.1,SNR=3.5						

*CSEM **08** 14:29:40.5±0.4, 39°.86N×17°.32E, h5km, ML3.9/4, Error ellipse: s-maj=6.5km s-min=5.6km az=61.0*

ROM 08 14:29:40.4±0.2, 39°.87N×17°.31E, h5km, Md2.6/7, Ml2.4/6, Error ellipse: s-maj=2.8km s-min=2.4km az=53.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORI	Oriolo Calabro	0.69	287	Pg	Pg	14 29 53.8	+0.1
ORI				Sg	Sg	14 30 04.6	+1.9
	115nm,0.2s						
ORI	Oriolo Calabro	0.69	287	Pg	Pg	14 29 53.8	+0.1
ORI				Sg	Sg	14 30 04.6	+1.9
	115nm,0.2s						
TIP	Timpagrande	0.81	212	Pg	Pg	14 29 56.8	+0.9
	21nm,0.6s						
TIP	Timpagrande	0.81	212	Pg	Pg	14 29 56.8	+0.9
	21nm,0.6s						
LTRZ	Laterza	0.83	333	Pg	Pg	14 29 56.1	-0.2
LTRZ				Sg	Sg	14 30 08.8	+1.7
	198nm,0.2s						
LTRZ	Laterza	0.83	333	Pg	Pg	14 29 56.1	-0.2
LTRZ				Sg	Sg	14 30 08.8	+1.7
	198nm,0.2s						
CRAC	Craco	0.84	307	Pg	Pg	14 29 57.7	+1.2
CRAC				Sg	Sg	14 30 09.5	+2.1
CRAC	Craco	0.84	307	Pg	Pg	14 29 57.7	+1.2
CRAC				Sg	Sg	14 30 09.5	+2.1
MATE	Matera	0.91	330	Pg	Pg	14 29 57.7	-0.2
MATE				Sg	Sg	14 30 11.5	+1.8
	215nm,0.1s						
MATE	Matera	0.91	330	Pg	Pg	14 29 57.7	-0.2
MATE				Sg	Sg	14 30 11.5	+1.8
	215nm,0.1s						
SCTE	Santa Cesarea	0.91	76	Pg	Pg	14 29 58.5	+0.6
	121nm,0.9s						
SCTE	Santa Cesarea	0.91	76	Pg	Pg	14 29 58.5	+0.6
	121nm,0.9s						
NOCI	Noci	0.94	348	Pg	Pg	14 29 58.1	-0.4
NOCI				Sg	Sg	14 30 12.5	+1.8
	108nm,0.2s						
NOCI	Noci	0.94	348	Pg	Pg	14 29 58.1	-0.4
NOCI				Sg	Sg	14 30 12.5	+1.8
	108nm,0.2s						
MIGL	Miglionico	0.99	318	Pg	Pg	14 29 59.7	+0.2
MIGL				Sg	Sg	14 30 14.5	+2.1
MIGL	Miglionico	0.99	318	Pg	Pg	14 29 59.7	+0.2
MIGL				Sg	Sg	14 30 14.5	+2.1
SG1	Sgolgore (BA)	1.09	334	ePg	Pg	14 30 01.3	0.0
SG1				eSg	Sg	14 30 17.2	+1.8
AMUR	Altamura	1.17	333	Pg	Pg	14 30 02.6	-0.3
AMUR				Sg	Sg	14 30 18.2	+0.1
AMUR	Altamura	1.17	333	Pg	Pg	14 30 02.6	-0.3
AMUR				Sg	Sg	14 30 18.2	+0.1
MTSN	Montesano sull	1.26	289	Pg	Pg	14 30 03.6	-1.0
MTSN	Montesano sull	1.26	289	Pg	Pg	14 30 03.6	-1.0
BAI	Bari	1.28	345	eSg	Sg	14 30 25.3	+3.6

*ATH **08** 14:39:23.4, 38°.07N×21°.57E, h20km±1km, ML3.0*
*THE **08** 14:39:23.6, 38°.05N×21°.58E, h10km, ML3.7/11, Error ellipse: s-maj=0.9km s-min=0.6km az=306.0*
*CSEM **08** 14:39:23.2±0.2, 38°.07N×21°.55E, h15km, ML3.0, Error ellipse: s-maj=4.7km s-min=3.9km az=137.0*
*NEIC **08** 14:39:23.4, 38°.07N×21°.57E, h20km, ML3.0(ATH), After ATH.*
*ISCJB **08** 14:39:23.8±0.4, 38°.05N±0°.03×21°.57E±0°.03, h19km±4km, Error ellipse: s-maj=4.7km s-min=3.8km az=163.7*

ISC 08 14:39:23.6±0.4, 38°.05N±0°.03×21°.57E±0°.03, h15km±2km, n65, σ1§07/96, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.08	277	ePb	Pg	14 39 27.2	+0.4
RLS				eSb	Sg	14 39 30.3	+1.5
RLS	Riolos of Patr	0.08	277	ePB	Pg	14 39 27.2	+0.4
RLS				eSB	Sg	14 39 30.3	+1.5
RLS	Riolos of Patr	0.08	277	ePb	Pg	14 39 27.2	+0.4
RLS				eSb	Sg	14 39 30.3	+1.5
UPR	University Cam	0.29	36	P	Pg	14 39 29.7	-0.1
UPR	University Cam	0.29	36	ePB	Pg	14 39 29.7	-0.1
UPR				eSB	Sg	14 39 34.7	+0.7
UPR	University Cam	0.29	36	P	Pg	14 39 29.7	-0.1
UPR				eSb	Sg	14 39 34.7	+0.7
LAKA	Lakka	0.38	59	P	Pg	14 39 30.9	-0.4
LAKA				S	Sg	14 39 36.7	+0.2
LAKA	Lakka	0.38	59	P	Pg	14 39 30.9	-0.4
LAKA				S	Sg	14 39 36.7	+0.2
EFP	Efpalio	0.46	35	P	Pg	14 39 32.4	-0.5
EFP				S	Sg	14 39 39.1	0.0
EFP	Efpalio	0.46	35	ePB	Pb	14 39 32.3	-1.1
EFP				eSB	Sb	14 39 39.0	-1.1
EFP	Efpalio	0.46	35	P	Pg	14 39 32.4	-0.5
EFP				eSb	Sb	14 39 39.0	-1.1
KALE	Kalithea	0.56	52	P	Pg	14 39 34.0	-0.8
KALE				S	Sg	14 39 42.7	+0.4
KALE	Kalithea	0.56	52	P	Pg	14 39 34.0	-0.8
KALE				S	Sg	14 39 42.7	+0.4
GUR	Goura	0.62	100	P	Pg	14 39 34.8	-1.0
GUR				S	Sg	14 39 44.5	+0.4
GUR	Goura	0.62	100	ePB	Pb	14 39 35.0	-1.1
GUR				eSN	Sg	14 39 44.7	+0.6
GUR	Goura	0.62	100	P	Pg	14 39 34.8	-1.0
GUR				S	Sg	14 39 44.5	+0.4
KFL	Anninata	0.62	276	P	Pg	14 39 35.5	-0.3
VLS	Valsamata	0.78	280	ePn	Pn	14 39 38.0	-2.1
VLS	Valsamata	0.78	280	P	Pb	14 39 37.8	-1.1
VLS				S	Sb	14 39 50.9	+1.6
VLS	Valsamata	0.78	280	ePN	Pn	14 39 38.0	-2.1
VLS	Valsamata	0.78	280	P	Pb	14 39 37.8	-1.1
VLS				S	Sb	14 39 50.9	+1.6
DSF	Desfina	0.84	64	P	Pb	14 39 38.4	-1.4
DSF				S	Sb	14 39 51.2	+0.3
DSF	Desfina	0.84	64	P	Pb	14 39 38.4	-1.4
DSF				S	Sb	14 39 51.2	+0.3
EVR	Evrytania	0.89	12	ePn	Pn	14 39 40.2	-1.3
EVR	Evrytania	0.89	12	ePN	Pn	14 39 40.2	-1.3
EVR	Evrytania	0.89	12	ePn	Pn	14 39 40.2	-1.3
ITM	Ithomi	0.91	162	ePn	Pn	14 39 41.9	+0.1
ITM	Ithomi	0.91	162	ePN	Pn	14 39 41.9	+0.1
ITM	Ithomi	0.91	162	ePn	Pn	14 39 41.9	+0.1
VLX	Vlachokerasia	0.93	136	P	Pb	14 39 40.8	-0.7
VLX				S	Sb	14 39 54.5	+0.9
VLX	Vlachokerasia	0.93	136	ePN	Pn	14 39 41.3	-0.8
VLX	Vlachokerasia	0.93	136	P	Pb	14 39 40.8	-0.7
VLX	Vlachokerasia	0.93	136	ePn	Pn	14 39 41.3	-0.8
VLX				S	Sb	14 39 54.5	+0.9
LTK	Loutraki	1.10	91	P	Pb	14 39 43.5	-0.9
LTK				S	Sb	14 40 00.0	+1.5
LTK	Loutraki	1.10	91	ePN	Pn	14 39 43.9	-0.6
LTK	Loutraki	1.10	91	P	Pb	14 39 43.5	-0.9
LTK	Loutraki	1.10	91	ePn	Pn	14 39 43.9	-0.6
LTK				S	Sb	14 40 00.0	+1.5
AGG	Agios Georgios	1.14	31	P	Pn	14 39 44.6	-0.4
AGG				S	Sb	14 40 00.8	+1.2
AGG	Agios Georgios	1.14	31	P	Pn	14 39 44.6	-0.4
AGG				S	Sb	14 40 00.8	+1.2
PYL	PYLOS	1.16	173	P	Pn	14 39 45.4	+0.2
PYL	PYLOS	1.16	173	ePN	Pn	14 39 46.2	+1.0
PYL	PYLOS	1.16	173	P	Pn	14 39 45.4	+0.2
PYL	PYLOS	1.16	173	ePn	Pn	14 39 46.2	+1.0
LKR	Lokris	1.27	61	ePb	Pn	14 39 46.3	-0.5
LKR	Lokris	1.27	61	P	Pn	14 39 46.3	-0.5
LKR				S	Sb	14 40 04.5	+1.0
LKR	Lokris	1.27	61	ePB	Pn	14 39 46.3	-0.5
LKR	Lokris	1.27	61	P	Pn	14 39 46.3	-0.5
LKR				S	Sb	14 40 04.5	+1.0
ATAL	Atalanti	1.31	60	P	Pn	14 39 47.3	0.0
ATAL				S	Sn	14 40 05.0	+0.5
ATAL	Atalanti	1.31	60	P	Pn	14 39 47.3	0.0
ATAL				S	Sn	14 40 05.0	+0.5
THL	Klokotos Trika	1.55	13	ePN	Pn	14 39 52.0	+1.3
ATH	Athens Observa	1.70	92	ePn	Pn	14 39 54.1	+1.5
ATH	Athens Observa	1.70	92	ePN	Pn	14 39 54.1	+1.5
ATH	Athens Observa	1.70	92	ePn	Pn	14 39 54.1	+1.5
JAN	Janina	1.70	341	ePn	Pn	14 39 53.9	+1.2
JAN	Janina	1.70	341	ePN	Pn	14 39 53.9	+1.2
ATHU	Athens Univers	1.75	92	P	Pn	14 39 53.4	0.0
ATHU				S	Sn	14 40 16.6	+1.2
ATHU	Athens Univers	1.75	92	P	Pn	14 39 53.4	0.0
ATHU				S	Sn	14 40 16.6	+1.2
NEO	Neokhori	1.80	45	ePb	Pb	14 39 54.5	-1.8
NEO	Neokhori	1.80	45	ePB	Pb	14 39 54.5	-1.8
PTL	Penteli	1.81	89	ePb	Pb	14 39 54.4	-2.0
PTL	Penteli	1.81	89	ePB	Pb	14 39 54.4	-2.0
KZN	Kozani	2.26	4	ePn	Pn	14 40 02.8	+2.4
KZN	Kozani	2.26	4	ePN	Pn	14 40 02.8	+2.4
KARP	Karpathos	5.13	117	ePn	Pn	14 40 42.7	+2.8
KARP	Karpathos	5.13	117	ePN	Pn	14 40 42.7	+2.8

*IDC **08** 14:40:16.2±4.0, 52°.55N×170°.26W, h0km, mb3.6/4, mb1 4.0/4, mb1mx3.5/27, mbtmp3.6/4, Error ellipse: s-maj=280.9km s-min=33.4km az=163.0*
*ISCJB **08** 14:40:22.2±0.8, 52°.16N±0°.10×169°.7W±0°.1, h33km, mb3.5/4, Error ellipse: s-maj=17.7km s-min=7.3km az=139.1*
*NEIC **08** 14:40:24.1±0.9, 52°.12N×169°.54W, h35km, ML3.1(AEIC), Error ellipse: s-maj=24.7km s-min=10.9km az=156.0*

ISC 08 14:40:24.7±0.8, 52°.2N±0°.1×169°.6W±0°.1, h35km, n11, σ1§08/14, mb3.5/4, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	Nikolski	0.87	32	P	Pn	14 40 39.3	-1.1
NIKO				S	Sn	14 40 50.1	-1.7
OKFG	Magazine Ridge	1.56	41	P	Pn	14 40 50.5	+0.6
OKFG				S	Sn	14 41 09.5	+0.6
UNV	Unalaska Valle	2.47	48	P	Pn	14 41 02.7	+0.2
UNV				S	Sn	14 41 32.2	+0.8
AKUT	Akutan	2.99	49	eP	Pn	14 41 10.6	+1.1
ADK	Adak	4.38	268	P	Pn	14 41 30.8	+2.2
AMKA	Amchitka	5.93	267	eP	Pn	14 42 03.1	-0.5
NVAR	Mina Array Bea	37.81	91	P	P	14 47 38.0	+0.5
	0.3nm,0.7s,mb3.2,baz=316,slow=5.0,SNR=3.1						
PDAR	Pinedale Array	40.58	79	P	P	14 48 00.1	-0.5
	0.5nm,0.5s,mb3.4,baz=335,slow=4.0,SNR=5.0						
TXAR	Lajitas Array	52.90	89	P	P	14 49 36.4	-0.6
	0.7nm,0.7s,mb3.7,baz=293,slow=5.9,SNR=7.4						
TXAR	Lajitas Array	52.90	89	P	P	14 49 36.

VLI	Veliai	1.62	133	*e*PB	Pb	14 49 28.9	-1.8
ATH	Athens Observa	1.80	85	*e*Pb	Pb	14 49 31.5	-2.2
ATH	Athens Observa	1.80	85	*e*PB	Pb	14 49 31.5	-2.2
PTL	Penteli	1.92	83	*e*Pn	Pn	14 49 32.6	+0.2
PTL	Penteli	1.92	83	*e*PN	Pn	14 49 32.6	+0.2
PTL	Penteli	1.92	83	*e*Pn	Pn	14 49 32.6	+0.2

*ATH **08** 14:51:57.5, 37°.93N×21°.43E, h18km±2km, MD3.0/8, ML2.5*
*THE **08** 14:51:57.9, 37°.93N×21°.48E, h0km±2km, ML3.5/6, Error ellipse: s-maj=2.8km s-min=0.8km az=233.0*
*NEIC **08** 14:51:57.5, 37°.93N×21°.43E, h18km, ML2.5(ATH), After ATH.*
*CSEM **08** 14:51:57.3±0.2, 37°.93N×21°.44E, h15km, ML2.5, Error ellipse: s-maj=5.0km s-min=4.3km az=92.0*
*ISCJB **08** 14:51:57.1±0.7, 37°.91N±0°.02×21°.42E±0°.04, h11km±5km, Error ellipse: s-maj=4.8km s-min=4.1km az=6.8*

ISC 08 14:51:57.5±0.5, 37°.90N±0°.03×21°.45E±0°.03, h13km±3km, n58, σ1s04/89, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.16**	**6**	*e*Pb	**Pg**	**14 52 01.8**	**+0.5**
RLS				*e*Sb	**Sg**	**14 52 04.8**	**+0.8**
RLS	**Riolos of Patr**	**0.16**	**6**	*e*PB	**Pg**	**14 52 01.8**	**+0.5**
RLS				*e*SB	**Sg**	**14 52 04.8**	**+0.8**
RLS	**Riolos of Patr**	**0.16**	**6**	*e*Pb	**Pg**	**14 52 01.8**	**+0.5**
RLS				*e*Sb	**Sg**	**14 52 04.8**	**+0.8**
UPR	**University Cam**	**0.47**	**35**	P	**Pg**	**14 52 06.5**	**-0.3**
UPR	**University Cam**	**0.47**	**35**	*e*PB		14 52 06.4	
UPR				*e*SB	**Sg**	**14 52 13.7**	**+0.7**
UPR	**University Cam**	**0.47**	**35**	P	**Pg**	**14 52 06.5**	**-0.3**
UPR				*e*Sb	**Sg**	**14 52 13.7**	**+0.7**
LAKA	**Lakka**	**0.54**	**51**	P	**Pg**	**14 52 07.2**	**-0.9**
LAKA				S	**Sg**	**14 52 15.1**	**-0.2**
LAKA	**Lakka**	**0.54**	**51**	P	**Pg**	**14 52 07.2**	**-0.9**
LAKA				S	**Sg**	**14 52 15.1**	**-0.2**
KFL	**Anninata**	**0.56**	**292**	P	**Pg**	**14 52 09.6**	**+1.1**
EFP	**Efpalio**	**0.64**	**35**	P	**Pg**	**14 52 09.0**	**-1.0**
EFP				S	**Sg**	**14 52 18.8**	**+0.4**
EFP	**Efpalio**	**0.64**	**35**	*e*PB	**Pb**	**14 52 09.1**	**-1.4**
EFP				*e*SN	**Sg**	**14 52 18.4**	**0.0**
EFP	**Efpalio**	**0.64**	**35**	P	**Pg**	**14 52 09.0**	**-1.0**
EFP				S	**Sg**	**14 52 18.8**	**+0.4**
GUR	**Goura**	**0.71**	**87**	P	**Pg**	**14 52 10.4**	**-0.9**
GUR				S	**Sg**	**14 52 21.3**	**+0.6**
GUR	**Goura**	**0.71**	**87**	*e*PB	**Pb**	**14 52 10.7**	**-1.0**
GUR				*e*SN	**Sg**	**14 52 21.4**	**+0.7**
GUR	**Goura**	**0.71**	**87**	P	**Pg**	**14 52 10.4**	**-0.9**
GUR	**Goura**	**0.71**	**87**	*e*Pb	**Pb**	**14 52 10.7**	**-1.0**
GUR				S	**Sg**	**14 52 21.3**	**+0.6**
VLS	**Valsamata**	**0.73**	**292**	*e*Pn	**Pn**	**14 52 11.4**	**-2.1**
VLS				*e*Sn	**Sg**	**14 52 21.5**	**+0.2**
VLS	**Valsamata**	**0.73**	**292**	P	**Pg**	**14 52 11.9**	**+0.2**
VLS	**Valsamata**	**0.73**	**292**	*e*PN	**Pn**	**14 52 11.4**	**-2.1**
VLS				*e*SN	**Sg**	**14 52 21.5**	**+0.2**
VLS	**Valsamata**	**0.73**	**292**	*e*Pn	**Pn**	**14 52 11.4**	**-2.1**
VLS	**Valsamata**	**0.73**	**292**	P	**Pg**	**14 52 11.9**	**+0.2**
VLS				*e*Sn	**Sg**	**14 52 21.5**	**+0.2**
KALE	**Kalithea**	**0.73**	**48**	P	**Pg**	**14 52 10.7**	**-1.1**
KALE				S	**Sg**	**14 52 21.6**	**+0.1**
KALE	**Kalithea**	**0.73**	**48**	P	**Pg**	**14 52 10.7**	**-1.1**
KALE				S	**Sg**	**14 52 21.6**	**+0.1**
ITM	**Ithomi**	**0.82**	**152**	*e*Pn	**Pn**	**14 52 13.6**	**-1.0**
ITM				*e*Sn	**Sn**	**14 52 25.6**	**-0.9**
ITM	**Ithomi**	**0.82**	**152**	P	**Pg**	**14 52 13.7**	**+0.4**
ITM	**Ithomi**	**0.82**	**152**	*e*PN	**Pn**	**14 52 13.6**	**-1.0**
ITM				*e*SN	**Sn**	**14 52 25.6**	**-0.9**
ITM	**Ithomi**	**0.82**	**152**	P	**Pg**	**14 52 13.7**	**+0.4**
ITM				*e*Sn	**Sn**	**14 52 25.6**	**-0.9**
VLX	**Vlachokerasia**	**0.91**	**125**	P	**Pb**	**14 52 15.2**	**+0.1**
VLX				S	**Sb**	**14 52 29.0**	**+1.9**
VLX	**Vlachokerasia**	**0.91**	**125**	*e*PB	**Pb**	**14 52 14.5**	**-0.6**
VLX	**Vlachokerasia**	**0.91**	**125**	*e*Pb	**Pb**	**14 52 14.5**	**-0.6**
VLX	**Vlachokerasia**	**0.91**	**125**	P	**Pb**	**14 52 15.2**	**+0.1**
VLX				S	**Sb**	**14 52 29.0**	**+1.9**
DSF	**Desfina**	**0.99**	**59**	P	**Pb**	**14 52 15.0**	**-1.6**
DSF				S	**Sb**	**14 52 29.5**	**0.0**
DSF	**Desfina**	**0.99**	**59**	P	**Pb**	**14 52 15.0**	**-1.6**
DSF				S	**Sb**	**14 52 29.5**	**0.0**
PYL	**PYLOS**	**1.03**	**167**	P	**Pb**	**14 52 17.1**	**-0.1**
PYL	**PYLOS**	**1.03**	**167**	*e*PN	**Pn**	**14 52 18.5**	**+0.9**
PYL	**PYLOS**	**1.03**	**167**	P	**Pb**	**14 52 17.1**	**-0.1**
PYL	**PYLOS**	**1.03**	**167**	*e*Pn	**Pn**	**14 52 18.5**	**+0.9**
EVR	**Evrytania**	**1.05**	**16**	*e*Pn	**Pn**	**14 52 17.7**	**-0.2**
EVR				*e*Sn	**Sn**	**14 52 31.6**	**-0.9**
EVR	**Evrytania**	**1.05**	**16**	*e*PN	**Pn**	**14 52 17.7**	**-0.2**
EVR				*e*SN	**Sn**	**14 52 31.6**	**-0.9**
EVR	**Evrytania**	**1.05**	**16**	*e*Pn	**Pn**	**14 52 17.7**	**-0.2**
EVR				*e*Sn	**Sn**	**14 52 31.6**	**-0.9**
LTK	**Loutraki**	**1.21**	**84**	*e*PN	**Pn**	**14 52 21.5**	**+1.4**
LTK	**Loutraki**	**1.21**	**84**	*e*Pn	**Pn**	**14 52 21.5**	**+1.4**
AGG	**Agios Georgios**	**1.32**	**32**	*e*Pn	**Pn**	**14 52 21.9**	**+0.3**
AGG	**Agios Georgios**	**1.32**	**32**	P	**Pn**	**14 52 21.1**	**-0.5**
AGG				S	**Sb**	**14 52 39.9**	**+1.0**
AGG	**Agios Georgios**	**1.32**	**32**	*e*PN	**Pn**	**14 52 21.9**	**+0.3**
AGG	**Agios Georgios**	**1.32**	**32**	P	**Pn**	**14 52 21.1**	**-0.5**
AGG	**Agios Georgios**	**1.32**	**32**	*e*Pn	**Pn**	**14 52 21.9**	**+0.3**
AGG				S	**Sb**	**14 52 39.9**	**+1.0**
LKR	**Lokris**	**1.43**	**58**	*e*Pb	**Pb**	**14 52 23.3**	**-0.8**
LKR	**Lokris**	**1.43**	**58**	*e*PB	**Pb**	**14 52 23.3**	**-0.8**
LKR	**Lokris**	**1.43**	**58**	*e*Pb	**Pb**	**14 52 23.3**	**-0.8**
THL	**Klokotos Trika**	**1.72**	**15**	P	**Pn**	**14 52 28.6**	**+1.5**
THL				S	**Sn**	**14 52 51.6**	**+2.7**
THL	**Klokotos Trika**	**1.72**	**15**	*e*PN	**Pn**	**14 52 29.2**	**+2.1**
THL	**Klokotos Trika**	**1.72**	**15**	P	**Pn**	**14 52 28.6**	**+1.5**
THL				S	**Sn**	**14 52 51.6**	**+2.7**
ATH	**Athens Observa**	**1.80**	**87**	*e*Pn	**Pn**	**14 52 29.3**	**+1.1**
ATH	**Athens Observa**	**1.80**	**87**	*e*PN	**Pn**	**14 52 29.3**	**+1.1**
ATH	**Athens Observa**	**1.80**	**87**	*e*Pn	**Pn**	**14 52 29.3**	**+1.1**
PTL	**Penteli**	**1.92**	**85**	*e*Pn	**Pn**	**14 52 31.9**	**+2.1**
PTL	**Penteli**	**1.92**	**85**	*e*PN	**Pn**	**14 52 31.9**	**+2.1**

*CSEM **08** 15:00:35.9, 37°.92N×21°.58E, h3km, ML3.7/9, After THE*

THE 08 15:00:35.9, 37°.92N×21°.58E, h3km±1km, ML3.7/9, Error ellipse: s-maj=1.5km s-min=0.6km az=184.0, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.39**	**24**	P	Pg	15 00 43.3	-0.2
UPR				S	Sg	15 00 50.0	+1.4
UPR	**University Cam**	**0.39**	**24**	P	Pg	15 00 43.3	-0.2
UPR				S	Sg	15 00 50.0	+1.4
LAKA	**Lakka**	**0.45**	**44**	P	Pg	15 00 44.5	+0.1
LAKA				S	Sg	15 00 51.4	+1.2
LAKA	**Lakka**	**0.45**	**44**	P	Pg	15 00 44.5	+0.1
LAKA				S	Sg	15 00 51.4	+1.2
EFP	**Efpalio**	**0.56**	**27**	P	Pg	15 00 46.2	-0.5
EFP				S	Sg	15 00 54.3	+0.2
EFP	**Efpalio**	**0.56**	**27**	P	Pg	15 00 46.2	-0.5
EFP				S	Sg	15 00 54.3	+0.2
TRIZ	**Trizonia**	**0.59**	**41**	P	Pg	15 00 46.6	-0.6
TRIZ				S	Sg	15 00 55.2	+0.4
TRIZ	**Trizonia**	**0.59**	**41**	P	Pg	15 00 46.6	-0.6
TRIZ				S	Sg	15 00 55.2	+0.4
GUR	**Goura**	**0.60**	**88**	P	Pg	15 00 47.7	+0.3
GUR				S	Sg	15 00 56.5	+1.3
GUR	**Goura**	**0.60**	**88**	P	Pg	15 00 47.7	+0.3
GUR				S	Sg	15 00 56.5	+1.3
KALE	**Kalithea**	**0.64**	**43**	P	Pg	15 00 47.8	-0.4
KALE				S	Sg	15 00 57.5	+1.0
KALE	**Kalithea**	**0.64**	**43**	P	Pg	15 00 47.8	-0.4
KALE				S	Sg	15 00 57.5	+1.0
KFL	**Anninata**	**0.66**	**287**	P	Pg	15 00 48.6	+0.1
KFL				S	Sg	15 00 58.0	+1.0
VLS	**Valsamata**	**0.82**	**288**	P	Pg	15 00 50.9	-0.8
VLS				S	Sg	15 01 03.3	+0.9
VLS	**Valsamata**	**0.82**	**288**	P	Pg	15 00 50.9	-0.8
VLS				S	Sg	15 01 03.3	+0.9
VLX	**Vlachokerasia**	**0.84**	**131**	P	Pg	15 00 51.5	-0.5
VLX				S	Sg	15 01 03.7	+0.9
VLX	**Vlachokerasia**	**0.84**	**131**	P	Pg	15 00 51.5	-0.5
VLX				S	Sg	15 01 03.7	+0.9
DSF	**Desfina**	**0.89**	**56**	P	Pg	15 00 51.9	-1.1
DSF				S	Sg	15 01 05.2	+0.7
DSF	**Desfina**	**0.89**	**56**	P	Pg	15 00 51.9	-1.1
DSF				S	Sg	15 01 05.2	+0.7
LKR	**Lokris**	**1.33**	**56**	P	Pn	15 00 59.2	-2.2
LKR				S	Sg	15 01 19.5	+0.8
LKR	**Lokris**	**1.33**	**56**	P	Pn	15 00 59.2	-2.2
LKR				S	Sg	15 01 19.5	+0.8
THL	**Klokotos Trika**	**1.67**	**11**	P	Pn	15 01 06.0	-0.1
THL				S	Sn	15 01 28.1	0.0
THL	**Klokotos Trika**	**1.67**	**11**	P	Pn	15 01 06.0	-0.1
THL				S	Sn	15 01 28.1	0.0

*ATH **08** 15:04:50.7, 38°.11N×21°.59E, h26km±1km, MD3.2/14*
*NEIC **08** 15:04:50.7, 38°.11N×21°.59E, h26km, MD3.2(ATH), After ATH.*
*THE **08** 15:04:51.7, 38°.11N×21°.62E, h20km±2km, ML3.5/6, Error ellipse: s-maj=2.6km s-min=0.6km az=19.0*
*CSEM **08** 15:04:51.2±0.1, 38°.11N×21°.60E, h18km±1km, MD3.2, Error ellipse: s-maj=2.9km s-min=2.6km az=130.0*
*ISCJB **08** 15:04:51.4±0.4, 38°.12N±0°.03×21°.59E±0°.03, h23km±3km, Error ellipse: s-maj=4.7km s-min=4.2km az=160.1*

ISC 08 15:04:51.4±0.4, 38°.12N±0°.03×21°.58E±0°.03, h21km±4km, n51, σ0s63/81, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.11**	**236**	*e*Pb	**Pb**	**15 04 55.3**	**-0.2**
RLS				*e*Sb	**Sb**	**15 04 58.4**	**+0.1**
RLS	**Riolos of Patr**	**0.11**	**236**	*e*PB	**Pb**	**15 04 55.3**	**-0.2**
RLS				*e*SB	**Sb**	**15 04 58.4**	**+0.1**
RLS	**Riolos of Patr**	**0.11**	**236**	*e*Pb	**Pb**	**15 04 55.3**	**-0.2**
RLS				*e*Sb	**Sb**	**15 04 58.4**	**+0.1**
UPR	**University Cam**	**0.23**	**44**	P	**Pb**	**15 04 57.0**	**0.0**
UPR	**University Cam**	**0.23**	**44**	*e*PB	**Pb**	**15 04 57.0**	**0.0**
UPR				*e*SB	**Sb**	**15 05 02.0**	**+1.2**
UPR	**University Cam**	**0.23**	**44**	P	**Pb**	**15 04 57.0**	**0.0**
UPR				*e*Sb	**Sb**	**15 05 02.0**	**+1.2**
LAKA	**Lakka**	**0.33**	**69**	P	**Pb**	**15 04 58.4**	**-0.3**
LAKA				S	**Sb**	**15 05 03.3**	**-0.3**
LAKA	**Lakka**	**0.33**	**69**	P	**Pb**	**15 04 58.4**	**-0.3**
LAKA				S	**Sb**	**15 05 03.3**	**-0.3**
EFP	**Efpalio**	**0.40**	**39**	P	**Pb**	**15 04 59.6**	**-0.1**
EFP				S	**Sb**	**15 05 06.1**	**+0.7**
EFP	**Efpalio**	**0.40**	**39**	*e*PB	**Pb**	**15 04 59.6**	**-0.1**
EFP				*e*SB	**Sb**	**15 05 06.3**	**+0.9**
EFP	**Efpalio**	**0.40**	**39**	P	**Pb**	**15 04 59.6**	**-0.1**
EFP				S	**Sb**	**15 05 06.1**	**+0.7**
TRIZ	**Trizonia**	**0.46**	**57**	P	**Pb**	**15 05 00.4**	**-0.3**
TRIZ	**Trizonia**	**0.46**	**57**	P	**Pb**	**15 05 00.4**	**-0.3**
KALE	**Kalithea**	**0.52**	**58**	P	**Pb**	**15 05 01.4**	**-0.3**
KALE				S	**Sb**	**15 05 09.3**	**+0.5**
KALE	**Kalithea**	**0.52**	**58**	P	**Pb**	**15 05 01.4**	**-0.3**
KALE				S	**Sb**	**15 05 09.3**	**+0.5**
GUR	**Goura**	**0.63**	**107**	P	**Pb**	**15 05 02.6**	**-1.0**
GUR				S	**Sb**	**15 05 11.7**	**-0.3**
GUR	**Goura**	**0.63**	**107**	*e*PB	**Pb**	**15 05 02.5**	**-1.1**
GUR				*e*SN	**Sb**	**15 05 11.9**	**-0.1**
GUR	**Goura**	**0.63**	**107**	P	**Pb**	**15 05 02.6**	**-1.0**
GUR				S	**Sb**	**15 05 11.7**	**-0.3**
KFL	**Anninata**	**0.63**	**269**	P	**Pb**	**15 05 04.2**	**+0.6**
VLS	**Valsamata**	**0.79**	**274**	*e*Pn	**Pn**	**15 05 06.3**	**-0.9**
VLS				*e*Sn	**Sn**	**15 05 18.4**	**0.0**
VLS	**Valsamata**	**0.79**	**274**	P	**Pb**	**15 05 06.5**	**+0.2**
VLS	**Valsamata**	**0.79**	**274**	*e*PN	**Pn**	**15 05 06.3**	**-0.9**
VLS				*e*SN	**Sn**	**15 05 18.4**	**0.0**
VLS	**Valsamata**	**0.79**	**274**	P	**Pb**	**15 05 06.5**	**+0.2**
VLS				*e*Sn	**Sn**	**15 05 18.4**	**0.0**
DSF	**Desfina**	**0.80**	**68**	P	**Pb**	**15 05 05.9**	**-0.7**
DSF				S	**Sb**	**15 05 17.1**	**+0.2**
DSF	**Desfina**	**0.80**	**68**	P	**Pb**	**15 05 05.9**	**-0.7**
DSF				S	**Sb**	**15 05 17.1**	**+0.2**
EVR	**Evrytania**	**0.81**	**12**	*e*Pn	**Pn**	**15 05 07.6**	**-0.1**
EVR				*e*Sn	**Sn**	**15 05 18.7**	**-0.4**
EVR	**Evrytania**	**0.81**	**12**	*e*PN	**Pn**	**15 05 07.6**	**-0.1**
EVR				*e*SN	**Sn**	**15 05 18.7**	**-0.4**
EVR	**Evrytania**	**0.81**	**12**	*e*Pn	**Pn**	**15 05 07.6**	**-0.1**
EVR				*e*Sn	**Sn**	**15 05 18.7**	**-0.4**
ITM	**Ithomi**	**0.98**	**164**	*e*Pn	**Pb**	**15 05 09.6**	**0.0**
ITM				*e*Sn	**Sn**	**15 05 23.9**	**+0.8**
ITM	**Ithomi**	**0.98**	**164**	P	**Pb**	**15 05 09.6**	**0.0**
ITM	**Ithomi**	**0.98**	**164**	*e*PN	**Pb**	**15 05 09.6**	**0.0**
ITM				*e*SN	**Sn**	**15 05 23.9**	**+0.8**
ITM	**Ithomi**	**0.98**	**164**	P	**Pb**	**15 05 09.6**	**0.0**
ITM				*e*Sn	**Sn**	**15 05 23.9**	**+0.8**
VLX	**Vlachokerasia**	**0.98**	**140**	P	**Pb**	**15 05 09.4**	**-0.2**
VLX				S	**Sb**	**15 05 23.1**	**+1.0**
VLX	**Vlachokerasia**	**0.98**	**140**	*e*PN	**Pn**	**15 05 09.1**	**-0.8**
VLX				*e*SN	**Sn**	**15 05 23.9**	**+0.8**
VLX	**Vlachokerasia**	**0.98**	**140**	*e*Pn	**Pn**	**15 05 09.1**	**-0.8**
VLX	**Vlachokerasia**	**0.98**	**140**	P	**Pb**	**15 05 09.4**	**-0.2**
VLX				S	**Sb**	**15 05 23.1**	**+1.0**
VLX				*e*Sn	**Sn**	**15 05 23.9**	**+0.8**
AGG	**Agios Georgios**	**1.07**	**33**	*e*Pn	**Pn**	**15 05 11.3**	**+0.1**
AGG	**Agios Georgios**	**1.07**	**33**	*e*PN	**Pn**	**15 05 11.3**	**+0.1**
AGG	**Agios Georgios**	**1.07**	**33**	*e*Pn	**Pn**	**15 05 11.3**	**+0.1**
LTK	**Loutraki**	**1.10**	**95**	*e*PN	**Pn**	**15 05 11.5**	**0.0**
LTK	**Loutraki**	**1.10**	**95**	*e*Pn	**Pn**	**15 05 11.5**	**0.0**
PYL	**PYLOS**	**1.23**	**174**	*e*PN	**Pn**	**15 05 13.4**	**+0.1**
PYL	**PYLOS**	**1.23**	**174**	*e*Pn	**Pn**	**15 05 13.4**	**+0.1**
LKR	**Lokris**	**1.23**	**64**	*e*Pn	**Pn**	**15 05 13.7**	**+0.3**
LKR	**Lokris**	**1.23**	**64**	*e*PN	**Pn**	**15 05 13.7**	**+0.3**
LKR	**Lokris**	**1.23**	**64**	*e*Pn	**Pn**	**15 05 13.7**	**+0.3**
THL	**Klokotos Trika**	**1.48**	**13**	*e*PN	**Pn**	**15 05 17.9**	**+1.1**
THL	**Klokotos Trika**	**1.48**	**13**	*e*Pn	**Pn**	**15 05 17.9**	**+1.1**
VLY	**Voula,Athens**	**1.77**	**98**	*e*Pb	**Pb**	**15 05 21.2**	**-1.9**
VLY	**Voula,Athens**	**1.77**	**98**	*e*PB	**Pb**	**15 05 21.2**	**-1.9**
VLY	**Voula,Athens**	**1.77**	**98**	*e*Pb	**Pb**	**15 05 21.2**	**-1.9**

*GUC **08** 15:05:00.8±0.4, 21°.00S×68°.88W, h126km±3km, ML5.2*
*ISCJB **08** 15:05:00.7±0.2, 20°.91S±0°.04×68°.53W±0°.03, h119km, mb5.0/198, Error ellipse: s-maj=5.5km s-min=3.6km az=29.2*
*NEIC **08** 15:05:02.0±0.2, 20°.88S×68°.37W, mb5.2/144, Error ellipse: s-maj=6.3km s-min=3.9km az=225.0*
NEIC Felt [II] at Calama, Chile. Also felt at Iquique.
*IDC **08** 15:05:02.0±0.4, 20°.84S×68°.45W, h118km±2km, mb4.4/22, mb1 4.6/27, mb1mx4.6/28, mbtmp4.5/27, Error ellipse: s-maj=12.8km s-min=8.7km az=70.0*
*MOS **08** 15:05:02.0±1.1, 20°.62S×68°.30W, h119km, mb5.3/50, Error ellipse: s-maj=10.3km s-min=6.5km az=102.3*
*BJI **08** 15:05:03.9, 20°.90S×68°.40W, h117km, mB5.2/15*
*LDG **08** 15:05:07.1±0.3, 20°.26S×68°.20W, h150km, Mb5.1/34, Error ellipse: s-maj=34.2km s-min=12.8km az=156.0*
*SZGRF **08** 15:05:13.2, 17°.14S×65°.34W, h33km, mb5.1, Central Bolivia*

ISC 08 15:05:02.9±0.2, 20°.83S±0°.04×68°.38W±0°.03, h121km, h121km±.2km: pP-P, n819, σ0s77/633, mb5.0/194, 378C-285D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**1.06**	**258**	⇑*i*P	**Pn**	**15 05 20.2**	**-5.4**
PB01				*i* S	**Sn**	**15 05 34.9**	**-8.0**
PB01				AML	AML	15 05 36.1	
	comp=N,86μm,0.4s						
HMBC	**Humberston**	**1.52**	**291**	⇑*i*P	**Pn**	**15 05 26.0**	**-4.7**
HMBC				*i* S	**Sn**	**15 05 45.1**	**-6.7**
PB04	**Plate Boundary**	**1.76**	**216**	*e*S	**Sn**	**15 05 56.0**	**-0.9**
PB04				AML	AML	15 06 01.9	
	comp=N,24μm,0.8s						
MACH	**Maria Elena**	**1.87**	**223**	⇑*i*P	**Pn**	**15 05 29.3**	**-5.5**
MACH				*i* S	**Sn**	**15 05 50.5**	**-8.7**
MNMC	**Miæe Miæ**	**2.04**	**326**	⇑*i*P	**Pn**	**15 05 35.4**	**-1.6**
MNMC				*i* S	**Sn**	**15 06 01.6**	**-1.5**
PSGC	**Pisagua**	**2.05**	**307**	⇑*i*P	**Pn**	**15 05 32.9**	**-4.1**
PSGC				*i* S	**Sn**	**15 05 57.5**	**-5.7**
PSGC				AML	AML	15 06 00.6	
	comp=E,31μm,0.4s						
PECH	**Pedro de Valdi**	**2.13**	**214**	*e*P	**Pn**	**15 05 32.8**	**-5.3**
PECH				*i* S	**Sn**	**15 05 56.9**	**-8.2**
LPAZ	**La Paz**	**4.53**	**3**	P	**Pn**	**15 06 11.3**	**+1.7**
	comp=E,187nm,0.3s,baz=202,slow=4.5,SNR=1557						
LPAZ	**La Paz**	**4.53**	**3**	⇓*e*P	**Pn**	**15 06 11.9**	**+2.3**
LPAZ	**La Paz**	**4.53**	**3**	*i* P	**Pn**	**15 06 11.9**	**+2.3**
LCO	**Las Campanas**	**8.41**	**194**	*e*P	**Pn**	**15 06 51.4**	**-11**
	comp=E,269nm,0.8s						
SIV	**San Ignacio**	**8.44**	**56**	P	**Pn**	**15 07 01.8**	**-0.6**
	comp=E,31nm,0.3s,baz=250,slow=11,SNR=534						
SIV				S	**Sn**	**15 08 35.6**	**-0.4**
	baz=324,slow=21,SNR=7.7						
CFAA	**Coronel Fontan**	**10.73**	**179**	P	**Pn**	**15 07 25.2**	**-7.9**
	comp=E,0.8nm,0.3s,baz=353,slow=12,SNR=105						
CFAA				S	**Sn**	**15 09 17.7**	**-14**
	comp=E,1.9nm,0.3s,baz=171,slow=16,SNR=7.4						
CPUP	**Villa Florida**	**11.51**	**120**	P	**Pn**	**15 07 41.9**	**-1.7**
	comp=E,6.4nm,0.3s,baz=282,slow=12,SNR=69						
NNA	**Nana**	**11.97**	**316**	P	**Pn**	**15 07 42.6**	**-7.0**
	comp=E,1.3nm,0.3s,baz=227,slow=11,SNR=2.4						
NNA				S	**Sn**	**15 09 48.3**	**-13**
	comp=E,5.3nm,0.3s,baz=227,slow=7.7,SNR=3.0						
NNA	**Nana**	**11.97**	**316**	*e*P	**Pn**	**15 07 44.9**	**-4.8**
	comp=E,33nm,0.8s						
ATAH	**Atahualpa**	**16.72**	**323**	P	**Pn**	**15 08 50.1**	**+0.1**
	comp=E,0.6nm,0.3s,baz=134,slow=9.5,SNR=6.9						
TRQA	**Tornquist**	**18.04**	**164**	*e*P	**P**	**15 09 01.2**	**-3.3**
	comp=E,85nm,0.8s						
SPB	**Sao Paulo**	**19.58**	**102**	*e*P	**P**	**15 09 20.4**	**-1.2**
	comp=E,144nm,0.9s						
PLCA	**Paso Flores**	**19.92**	**185**	P	**P**	**15 09 22.8**	**-2.2**
	comp=E,5.5nm,0.3s,baz=6.0,slow=13,SNR=193						
PLCA	**Paso Flores**	**19.92**	**185**	*e*P	**P**	**15 09 22.2**	**-2.9**
PLCA				pmax	pmax		
	comp=Z,140nm,0.8s						
PLCA	**Paso Flores**	**19.92**	**185**	*e*P	**P**	**15 09 22.2**	**-2.8**
	comp=Z,140nm,0.8s						
OTAV	**Otavalo**	**23.14**	**334**	*e*P	**P**	**15 10 00.7**	**+2.0**
	comp=Z,155nm,1.3s,mb5.2						
CAM4	**Nova Friburgo**	**24.04**	**98**	⇑*i*P	**P**	**15 10 03.1**	**-3.8**
CAM4				*i*		15 10 07.4	
CAM4				*i*		15 10 10.2	
CAM4				*i*		15 10 33.0	
CAM4				*i*		15 10 39.4	
CAM4				*i*		15 10 47.7	
ROSC	**El Rosal**	**26.19**	**346**	P	**P**	**15 10 28.3**	**+2.0**
	comp=Z,9.2nm,0.6s,mb4.4,baz=256,slow=19,SNR=5.9						
ROSC	**El Rosal**	**26.19**	**346**	*e*P	**P**	**15 10 27.4**	**+1.1**
SDV	**Santo Domingo**	**29.61**	**355**	P	**P**	**15 10 56.0**	**-0.9**
	comp=Z,14nm,0.9s,mb4.6,baz=262,slow=11,SNR=9.2						
SDV	**Santo Domingo**	**29.61**	**355**	*e*P	**P**	**15 10 57.4**	**+0.6**
	comp=Z,22nm,0.8s,mb4.8						
PCRV	**Puerto La Cruz**	**31.03**	**7**	P	**P**	**15 11 07.3**	**-2.0**
	comp=Z,9.8nm,0.6s,mb4.7,baz=336,slow=2.4,SNR=3.6						
USHA	**Ushuaia**	**33.95**	**180**	P	**P**	**15 11 32.6**	**-1.8**
	comp=Z,28nm,0.8s,mb5.2,baz=354,slow=5.6,SNR=23						
JTS	**JuntasAbangare**	**34.96**	**331**	*d i*P	**P**	**15 11 46.0**	**+2.5**
JTS	**JuntasAbangare**	**34.96**	**331**	*e*P	**P**	**15 11 44.8**	**+1.3**
	comp=Z,8.0nm,0.9s,mb4.5						
CRPR	**Cabo Rojo, PR**	**38.62**	**2**	*e*P	**P**	**15 12 12.6**	**-1.9**
	comp=Z,20nm,0.9s,mb4.9						
SJG	**San Juan**	**38.76**	**3**	P	**P**	**15 12 13.4**	**-2.3**
	comp=Z,53nm,0.7s,mb5.5,baz=149,slow=3.4,SNR=25						
SJG	**San Juan**	**38.76**	**3**	*e*P	**P**	**15 12 13.4**	**-2.3**
SJG				pmax	pmax		
	comp=Z,43nm,0.6s						
SJG	**San Juan**	**38.76**	**3**	*e*P	**P**	**15 12 13.4**	**-2.3**
	comp=Z,43nm,0.6s,mb5.5						
CBYP	**Canovanas**	**38.94**	**4**	*e*P	**P**	**15 12 15.0**	**-2.1**
	comp=Z,41nm,1.0s,mb5.2						
APG	**El Apazote**	**41.70**	**327**	P	**P**	**15 12 39.4**	**-0.5**
	comp=Z,2.6nm,0.5s,mb4.2,baz=186,slow=14,SNR=4.0						
PMSA	**Palmer Station**	**44.02**	**177**	P	**P**

WCI Wyandotte Cave 61.11 344 *e*P **P 15 15 02.7 -1.5**
comp=Z,12nm,0.5s,mb5.2
WCI *e*pP pP 15 15 32.4 -1.1
MCWV Mont Chateau 61.12 350 *e*P **P 15 15 04.4 +0.2**
comp=Z,46nm,0.7s,mb5.6
MCWV *e*pP PcP 15 15 46.7 +0.7
526A Mary Lane Ranc 61.17 325 ⇑P **P 15 15 04.2 -0.5**
baz=61,SNR=8.1
526A ⇑pP pP 15 15 33.4 -0.7
baz=61,SNR=7.9
USIN University of 61.23 343 *e*P **P 15 15 03.5 -1.5**
comp=Z,15nm,0.7s,mb5.1
427A Hayter Ranch, 61.42 326 ⇓P **P 15 15 05.6 -0.9**
baz=62
427A pP pP 15 15 34.6 -1.1
baz=62,SNR=6.2
SIUC Southern Illin 61.45 341 *e*P **P 15 15 05.0 -1.5**
comp=Z,28nm,0.8s,mb5.3
SIUC *e*pP pP 15 15 34.7 -1.1
328A Wristen Ranch, 61.53 327 ⇑P **P 15 15 06.1 -1.1**
baz=62
426A McDonald Obser 61.61 325 ⇑P **P 15 15 07.4 -0.3**
baz=62,SNR=9.0
426A ⇓pP pP 15 15 36.5 -0.6
baz=62,SNR=6.4
SSPA Standing Stone 61.79 352 *e*P **P 15 15 08.6 -0.1**
comp=Z,26nm,1.3s,mb5.1
SSPA *e*pP pP 15 15 37.6 -0.4
BLO Bloomington 62.06 344 *e*P **P 15 15 09.2 -1.3**
BLO pmax pmax
comp=Z,31nm,0.7s,mb5.5
BLO Bloomington 62.06 344 *e*P **P 15 15 09.2 -1.3**
comp=Z,31nm,0.7s,mb5.4
FVM French Village 62.07 340 *e*P **P 15 15 09.5 -1.1**
FVM *e**PP pP 15 15 39.3 -0.7
FVM pmax pmax
comp=Z,75nm,1.0s,mb5.7
FVM French Village 62.07 340 *e*P **P 15 15 09.5 -1.1**
comp=Z,75nm,1.0s,mb5.7
FVM *e*pP pP 15 15 39.3 -0.7
OLIL Olney 62.07 343 *e*P **P 15 15 08.7 -2.0**
comp=Z,16nm,0.8s,mb5.1
326A Caldwell Ranch 62.09 326 ⇓P **P 15 15 10.3 -0.6**
baz=62
326A ⇓pP pP 15 15 39.1 -1.3
baz=62,SNR=5.8
425A Indio Mountain 62.22 325 ⇑P **P 15 15 11.2 -0.6**
baz=62,SNR=9.1
425A ⇑pP pP 15 15 40.3 -0.9
baz=62,SNR=8.2
ACSO Alum Creek Sta 62.26 347 *e*P **P 15 15 10.9 -0.9**
comp=Z,47nm,1.0s,mb5.5
ACSO *e*pP pP 15 15 40.0 -1.3
227A Bennet, Jal 62.28 327 ⇑pP pP 15 15 41.1 -0.5
baz=63,SNR=5.5
325A Bean Ranch, Si 62.66 325 P **P 15 15 14.1 -0.6**
baz=63,SNR=16
325A ⇓pP pP 15 15 43.2 -1.0
baz=63,SNR=11
226A Malaga, Loving 62.74 326 ⇑P **P 15 15 14.6 -0.6**
baz=63,SNR=7.2
226A ⇑pP pP 15 15 44.2 -0.5
baz=63,SNR=9.7
127A Arkansas Junct 62.84 327 ⇑P **P 15 15 15.8 -0.1**
baz=63
127A ⇑pP pP 15 15 44.0 -1.4
baz=63
GDL2 Guadalupe Moun 62.99 326 *e*P **P 15 15 15.8 -1.0**
comp=Z,5.8nm,1.2s,mb4.4
GDL2 *e*pP pP 15 15 45.8 -0.5
324A Moseley Ranch, 62.99 325 ⇓P **P 15 15 15.2 -1.7**
baz=63,SNR=9.5
324A pP pP 15 15 44.6 -1.7
baz=63,SNR=9.2
BINY Binghamton 63.10 354 *e*P **P 15 15 17.0 -0.4**
comp=Z,38nm,0.9s,mb5.3
BINY *e*pP pP 15 15 46.2 -0.7
MNTX Cornudas Mount 63.14 325 *e*P **P 15 15 16.1 -1.7**
comp=Z,15nm,1.0s,mb4.9
MNTX *e*pP pP 15 15 45.3 -2.1
225A Deer Hill, Car 63.16 326 ⇑P **P 15 15 17.6 -0.4**
baz=63
126A Clayton Basin, 63.16 327 ⇑P **P 15 15 16.8 -1.2**
baz=63
126A ⇓pP pP 15 15 46.7 -0.8
baz=63,SNR=7.4
Z27A Tatum 63.28 328 ⇑P **P 15 15 17.6 -1.2**
baz=64,SNR=5.4
Z27A ⇑pP pP 15 15 47.0 -1.3
baz=64,SNR=5.4
CPRX Cap Rock 63.38 327 *e*P **P 15 15 19.1 -0.3**
comp=Z,1.5nm,0.6s,mb4.1
125A Gardner Draw, 63.50 326 ⇑P **P 15 15 18.6 -1.6**
baz=64
125A ⇑pP pP 15 15 48.3 -1.5
baz=64
224A Cornudas Mount 63.50 325 ⇑P **P 15 15 18.5 -1.8**
baz=64,SNR=6.2
224A ⇓pP pP 15 15 48.4 -1.4
baz=64,SNR=9.0
ERPA Erie 63.55 350 *e*P **P 15 15 20.0 -0.3**
comp=Z,95nm,1.0s,mb5.6
ERPA *e*pP pP 15 15 49.3 -0.6
MSTX Muleshoe 63.59 328 ⇓P **P 15 15 18.9 -1.9**
baz=64,SNR=9.0
MSTX ⇑pP pP 15 15 49.4 -0.9
baz=64,SNR=9.7
Z26A Caprock 63.63 327 ⇓P **P 15 15 19.8 -1.3**
baz=64
Y27A Causey 63.71 328 ⇑P **P 15 15 20.3 -1.3**
baz=64
Y27A ⇓pP pP 15 15 49.7 -1.4
baz=64,SNR=6.4
124A Stringfield Ra 63.95 326 ⇓pP pP 15 15 51.8 -0.9
baz=64,SNR=8.0
Z25A Roswell 64.02 326 ⇑P **P 15 15 22.9 -0.7**
baz=64,SNR=5.6
Z25A ⇑pP pP 15 15 51.7 -1.5
baz=64,SNR=5.5
Y26A Elida 64.07 328 ⇑pP pP 15 15 52.7 -0.8
baz=64
Z24A Sheeppen Canyo 64.39 326 ⇑P **P 15 15 24.8 -1.2**
baz=65
Z24A ⇓pP pP 15 15 54.7 -1.0
baz=65
Y25A Mesa, Roswell 64.51 327 ⇑P **P 15 15 25.4 -1.5**
baz=65,SNR=6.6
Y25A ⇓pP pP 15 15 55.1 -1.4
baz=65,SNR=6.7
X26A CR and CF Fran 64.56 328 ⇑P **P 15 15 26.5 -0.7**
baz=65
X26A ⇑pP pP 15 15 56.1 -0.7
baz=65
320A Kipp Ranch, An 64.61 322 ⇑pP pP 15 15 56.9 -0.2
baz=65,SNR=5.7
W27A Bowe Ranch, En 64.61 329 ⇑P **P 15 15 26.1 -1.3**
baz=65
W27A ⇑pP pP 15 15 56.2 -0.9
baz=65
NCB Newcomb 64.70 355 *e*P **P 15 15 27.5 -0.4**
comp=Z,10nm,1.0s,mb4.6
NCB *e*pP pP 15 15 57.9 +0.5
Z23A Rita Site, Whi 64.80 325 ⇓pP pP 15 15 58.3 0.0
baz=65
Y24A Capitan 64.89 326 ⇑PcP PcP 15 16 02.2 +0.6
baz=65,SNR=5.1
X25A Clemmons Ranch 64.97 327 ⇑pP pP 15 15 58.6 -0.8
baz=65
W26A Owens Ranch, T 64.97 328 ⇓P **P 15 15 29.9 +0.1**
baz=65
W26A ⇑pP pP 15 15 59.0 -0.4
baz=65
220A Playas Peak, P 65.03 323 ⇓P **P 15 15 30.0 -0.2**
baz=65,SNR=6.3
220A pP pP 15 15 60.0 +0.1
baz=65,SNR=8.4
319A Douglas 65.07 322 ⇓P **P 15 15 30.8 +0.3**
baz=65,SNR=5.6
319A pP pP 15 16 00.8 +0.7
baz=65,SNR=6.1
121A Cookes Peak, D 65.08 324 ⇓P **P 15 15 30.6 0.0**
baz=65
121A ⇓pP pP 15 16 00.5 +0.3
baz=65,SNR=5.4
Z22A Elephant Butte 65.19 325 ⇓P **P 15 15 31.4 +0.2**
baz=66,SNR=9.5
Z22A ⇑pP pP 15 16 00.7 -0.2
baz=66,SNR=12

Y23A Lovelace Mesa, 65.22 326 ⇑P **P 15 15 31.1 -0.4**
baz=66
Y23A ⇑pP pP 15 16 00.1 -0.9
baz=66
LONY Lake Ozonia 65.38 355 *e*P **P 15 15 31.7 -0.5**
comp=Z,11nm,0.9s,mb4.7
LONY *e*pP pP 15 16 01.6 -0.3
X24A Lazy VL Ranch, 65.39 327 ⇑pP pP 15 16 01.3 -0.9
baz=66
W25A X Bar L Ranch, 65.42 328 P **P 15 15 32.2 -0.4**
baz=66,SNR=5.3
W25A ⇑pP pP 15 16 01.3 -1.1
baz=66,SNR=5.3
219A White Tail Can 65.52 322 ⇑P **P 15 15 33.0 -0.4**
baz=66
219A ⇓pP pP 15 16 02.7 -0.4
baz=66,SNR=8.1
318A Bisbee 65.53 321 ⇑P **P 15 15 33.6 +0.2**
baz=66,SNR=6.2
318A pP pP 15 16 02.6 -0.5
baz=66,SNR=10
V26A Tequesquite Ra 65.55 329 ⇑P **P 15 15 33.2 -0.3**
baz=66,SNR=9.4
V26A ⇓pP pP 15 16 02.7 -0.5
baz=66,SNR=7.0
120A U Bar Ranch, L 65.57 323 ⇓P **P 15 15 33.1 -0.6**
baz=66
120A ⇓pP pP 15 16 02.7 -0.7
baz=66,SNR=5.1
Z21A St. Cloud Mine 65.61 324 ⇑P **P 15 15 33.4 -0.5**
baz=66
Z21A ⇑pP pP 15 16 04.1 +0.4
baz=66,SNR=10
BNM Barren Site 65.69 326 *e*P **P 15 15 34.7 +0.2**
comp=Z,8.5nm,1.4s,mb4.4
BNM *e*pP pP 15 16 03.9 -0.2
Y22A Socorro 65.71 325 ⇓P **P 15 15 34.5 -0.1**
baz=66
Y22A ⇑pP pP 15 16 04.5 +0.2
baz=66
X23A Hourglass Bar 65.80 326 ⇑pP pP 15 16 04.6 -0.2
baz=66
W24A Lazy 6 Ranch, 65.89 327 ⇓P **P 15 15 34.9 -0.8**
baz=66
218A Dragoon 65.95 322 ⇓pP pP 15 16 05.9 +0.1
baz=66
Z20A Nine Sixteen R 65.97 324 ⇑P **P 15 15 36.2 -0.1**
baz=66
Z20A ⇑pP pP 15 16 05.8 -0.2
baz=66
V25A Rancho No Teng 65.99 328 ⇓P **P 15 15 36.4 +0.1**
baz=66,SNR=8.7
V25A ⇑pP pP 15 16 05.5 -0.5
baz=66,SNR=8.7
U26A Atchley Ranch, 66.01 329 P **P 15 15 36.3 -0.2**
baz=66,SNR=11
U26A ⇑pP pP 15 16 05.9 -0.2
baz=66,SNR=9.7
SADO Sadowa 66.02 352 P **P 15 15 35.2 -1.1**
comp=Z,4.6nm,0.6s,mb4.5,baz=190,slow=5.5,SNR=7.6
SADO pP pP 15 16 03.7 -2.3
comp=Z,12nm,1.0s,baz=210,slow=6.8,SNR=4.2
SADO Sadowa 66.02 352 P **P 15 15 35.2 -1.1**
SADO pP pP 15 16 03.7 -2.3
119A Ashpeak Ranch, 66.11 323 ⇑pP pP 15 16 06.6 -0.3
baz=66
Y21A Point of Rocks 66.14 325 ⇓P **P 15 15 37.7 +0.4**
baz=66,SNR=13
Y21A ⇑pP pP 15 16 07.8 +0.8
baz=66,SNR=12
CBKS Cedar Bluff 66.21 334 *e*P **P 15 15 37.9 +0.2**
CBKS pmax pmax
comp=Z,61nm,1.2s,mb5.3
CBKS Cedar Bluff 66.21 334 *e*P **P 15 15 37.9 +0.2**
comp=Z,62nm,1.2s,mb5.3
ANMO Albuquerque 66.22 326 P **P 15 15 37.4 -0.5**
comp=Z,2.4nm,0.8s,mb4.1,baz=157,slow=9.1,SNR=8.1
ANMO pP pP 15 16 07.2 -0.3
comp=Z,6.2nm,0.8s,baz=132,slow=7.9,SNR=9.5
ANMO Albuquerque 66.22 326⇑*e*P **P 15 15 38.2 +0.4**
ANMO pmax pmax
comp=Z,11nm,1.8s
ANMO Albuquerque 66.22 326 *e*P **P 15 15 37.5 -0.3**
comp=Z,2.4nm,1.4s,mb3.8
W23A Werner Place, 66.23 327 ⇓P **P 15 15 38.7 +0.8**
baz=66
W23A ⇑PcP PcP 15 16 07.2 +0.2
baz=66
217A Green Valley 66.25 321 ⇓PcP PcP 15 16 07.0 -0.3
baz=66
U25A Circle Dot Ran 66.33 329 ⇓P **P 15 15 38.5 0.0**
baz=67,SNR=8.7
U25A ⇓PcP PcP 15 16 07.6 +0.2
baz=67,SNR=8.8
118A Homack Ranch, 66.39 322 ⇑P **P 15 15 39.2 +0.2**
baz=67
118A ⇓PcP PcP 15 16 08.2 +0.4
baz=67,SNR=7.6
Y20A Horse Springs, 66.45 324 ⇓P **P 15 15 39.5 +0.2**
baz=67,SNR=6.8
Y20A ⇑PcP PcP 15 16 08.2 +0.3
baz=67
Y20A ⇓pP pP 15 16 10.0 +1.0
baz=67,SNR=11
SCIA State Center 66.52 340 P **P 15 15 38.2 -1.4**
comp=Z,18nm,0.6s,mb5.1
SCIA *e*pP pP 15 16 08.2 -1.1
W22A Albuquerque 66.53 326 ⇓PcP PcP 15 16 08.4 +0.1
baz=67
X21A Alamocita Cree 66.53 325 ⇑P **P 15 15 40.4 +0.6**
baz=67,SNR=7.4
X21A ⇓pP pP 15 16 10.5 +0.9
baz=67,SNR=10
JFWS Jewell Farm 66.55 343 *e*P **P 15 15 38.8 -1.0**
JFWS *e**PP pP 15 16 08.8 -0.7
JFWS pmax pmax
comp=Z,12nm,0.6s,mb4.9
JFWS Jewell Farm 66.55 343 *e*P **P 15 15 38.8 -1.0**
comp=Z,12nm,0.6s,mb4.9
JFWS *e*pP pP 15 16 08.8 -0.8
TUC Tucson 66.62 322 *e*P **P 15 15 40.6 +0.2**
TUC *e**PP pP 15 16 09.6 -0.6
TUC pmax pmax
comp=Z,6.0nm,1.2s,mb4.3
TUC Tucson 66.62 322 *e*P **P 15 15 40.6 +0.2**
comp=Z,5.7nm,1.2s,mb4.3
TUC *e*pP pP 15 16 09.6 -0.6
V23A Ortiz Mt. (NFS 66.70 327 ⇓P **P 15 15 40.7 -0.1**
baz=67,SNR=8.1
V23A pP pP 15 16 11.3 +0.7
baz=67,SNR=7.4
Z18A Geronimo 66.76 323 ⇓pP pP 15 16 11.5 +0.5
baz=67
117A Oracle 66.79 322 ⇑P **P 15 15 41.1 -0.4**
baz=67,SNR=11
117A ⇑PcP PcP 15 16 09.6 +0.2
baz=67
117A ⇓pP pP 15 16 11.8 +0.5
baz=67,SNR=15
216A Three Points, 66.80 321 ⇑P **P 15 15 41.7 +0.1**
baz=67,SNR=6.0
216A ⇑PcP PcP 15 16 09.7 +0.2
baz=67,SNR=5.6
T25A Trinidad 66.92 329 ⇑P **P 15 15 41.3 -1.0**
baz=67,SNR=10
T25A ⇑pP pP 15 16 13.0 +0.9
baz=67,SNR=7.0
Y19A Nutrioso 66.96 324 P **P 15 15 44.1 +1.6**
baz=67,SNR=11
Y19A ⇓pP pP 15 16 13.1 +0.7
baz=67,SNR=16
X20A Quemado 66.99 325 ⇓P **P 15 15 42.9 +0.2**
baz=67,SNR=6.4
X20A ⇓pP pP 15 16 12.8 +0.3
baz=67,SNR=14
U23A El Rito 67.16 328 ⇓P **P 15 15 43.9 +0.1**
baz=68
U23A ⇓pP pP 15 16 14.1 +0.5
baz=68
Z17A San Carlos Hig 67.16 322 ⇓P **P 15 15 43.5 -0.4**
baz=67
Z17A ⇓pP pP 15 16 14.2 +0.5
baz=67,SNR=6.3
V22A San Miguel Ran 67.20 327 ⇑P **P 15 15 44.0 0.0**
baz=68,SNR=7.2
V22A ⇓pP pP 15 16 14.4 +0.6
baz=68,SNR=6.3
MAIT Maitri 67.24 159 *e*P **P 15 15 44.3 +0.5**

MAIT *e*E pP 15 16 15.4 +1.8
Y18A Canyon Day Jun 67.27 323 ⇓P **P 15 15 44.7 +0.2**
baz=68,SNR=5.2
Y18A ⇓pP pP 15 16 14.8 +0.5
baz=68,SNR=9.5
NVL N'lazarevskaya 67.28 159⇓*e*P **P 15 15 43.9 -0.1**
NVL pmax pmax
comp=Z,14nm,0.7s,mb4.9
X19A St. Johns 67.33 324 ⇑P **P 15 15 45.2 +0.3**
baz=68
X19A ⇓pP pP 15 16 15.3 +0.6
baz=68,SNR=8.8
116A Eloy 67.34 321 ⇑P **P 15 15 45.7 +0.7**
baz=68
116A ⇓pP pP 15 16 14.9 +0.1
baz=68,SNR=7.4
W20A Ramah 67.43 325 ⇓P **P 15 15 45.6 +0.1**
baz=68,SNR=6.3
W20A ⇓pP pP 15 16 15.7 +0.4
baz=68,SNR=11
V21A Milan 67.49 326 ⇑P **P 15 15 46.7 +0.8**
baz=68
V21A ⇑PcP PcP 15 16 12.6 +0.3
baz=68
V21A ⇓pP pP 15 16 16.1 +0.4
baz=68
U22A Llaves 67.53 327 ⇓pP pP 15 16 16.5 +0.6
baz=68
214A Organ Pipe Nat 67.57 320 ⇑P **P 15 15 46.7 +0.3**
baz=68
214A ⇓pP pP 15 16 16.3 0.0
baz=68,SNR=9.5
Y17A Roosevelt 67.66 323 P **P 15 15 47.8 +0.8**
baz=68,SNR=8.5
Y17A ⇑pP pP 15 16 17.0 +0.2
baz=68,SNR=12
LIC Lamto 67.72 74⇑*i*P **P 15 15 47.7 -0.1**
comp=Z,79nm,0.7s,mb5.3,baz=250
LIC Lamto 67.72 74⇑*i*P **P 15 15 47.6 -0.2**
comp=Z,217nm,1.1s,mb5.9
LIC Lamto 67.72 74⇑*i*P **P 15 15 47.7 -0.1**
comp=Z,40nm,0.7s,mb5.3
Z16A Peralta Trail, 67.74 322 ⇑pP pP 15 16 17.2 -0.1
baz=68,SNR=10
115A Sonoran Desert 67.75 321 ⇑pP pP 15 16 17.5 +0.1
baz=68
X18A Snowflake 67.77 324 ⇓P **P 15 15 47.8 +0.1**
baz=68
X18A ⇓pP pP 15 16 17.9 +0.4
baz=68,SNR=9.7
W19A Sanders 67.90 325 ⇑PcP PcP 15 16 15.0 +1.0
baz=68
W19A ⇓pP pP 15 16 18.7 +0.4
baz=68,SNR=6.1
TIC Toumodi 67.91 73⇑*i*P **P 15 15 49.0 0.0**
comp=Z,321nm,1.1s,mb6.1
V20A Brimhall 67.92 326 ⇓P **P 15 15 48.6 0.0**
baz=68
V20A ⇑PcP PcP 15 16 15.4 +1.2
baz=68
V20A ⇑pP pP 15 16 18.5 +0.1
baz=68,SNR=8.4
SDCO Great Sand Dun 67.93 329 *e*P **P 15 15 48.6 0.0**
comp=Z,49nm,1.2s,mb5.2
SDCO *e*pP pP 15 16 18.4 0.0
U21A Nageezi 67.98 327 ⇑P **P 15 15 48.7 -0.2**
baz=68,SNR=6.5
U21A ⇓PcP PcP 15 16 15.4 +1.1
baz=68
U21A ⇑pP pP 15 16 19.2 +0.4
baz=68,SNR=8.8
KIC Kosan Boka 68.04 74⇑*i*P **P 15 15 49.9 +0.1**
comp=Z,313nm,0.8s,mb6.2
T22A Edith 68.05 327 ⇑P **P 15 15 49.5 +0.2**
baz=68
T22A ⇓pP pP 15 16 19.3 +0.1
baz=68,SNR=7.6
DBIC Dimbokro 68.07 73 P **P 15 15 49.9 -0.1**
comp=Z,145nm,0.8s,mb5.9,baz=217,slow=6.3,SNR=123
DBIC Dimbokro 68.07 73 *e*P **P 15 15 49.8 -0.1**
comp=Z,151nm,0.8s,mb5.9
W18A Petrified Fore 68.09 324 ⇓P **P 15 15 49.6 -0.1**
baz=68
W18A ⇑pP pP 15 16 19.7 +0.2
baz=68,SNR=6.2
Y16A Circle Bar Ran 68.16 322 ⇓P **P 15 15 50.8 +0.7**
baz=68
Y16A ⇑pP pP 15 16 20.2 +0.2
baz=68,SNR=12
V19A Window Rock 68.17 325 ⇑P **P 15 15 50.8 +0.7**
baz=68
V19A ⇓pP pP 15 16 20.2 +0.2
baz=68,SNR=10
114A Black Gap (USA 68.17 320 ⇑pP pP 15 16 19.5 -0.6
baz=68,SNR=6.2
T21A Navajo Lake 68.35 327 ⇑pP pP 15 16 21.5 +0.4
baz=69
U20A Newcomb 68.39 326 ⇓pP pP 15 16 21.2 -0.2
baz=69,SNR=5.8
X16A Lo Mia Camp, P 68.53 323 ⇓P **P 15 15 51.9 -0.5**
baz=69,SNR=7.2
X16A ⇑pP pP 15 16 22.5 +0.3
baz=69,SNR=8.7
W17A Winslow 68.60 324 ⇑pP pP 15 16 23.3 +0.5
baz=69
U19A Dine' College, 68.69 325 ⇓P **P 15 15 53.2 -0.2**
baz=69
U19A ⇑pP pP 15 16 22.4 -0.8
baz=69
Y15A Casa Rosa Ranc 68.70 322 ⇓P **P 15 15 53.3 -0.2**
baz=69
Y15A pP pP 15 16 22.4 -1.1
baz=69,SNR=7.1
R22A Saguache, Gunn 68.92 328 ⇓P **P 15 15 55.5 +0.7**
baz=69
Z13A Yuma Proving G 68.95 320 ⇓pP pP 15 16 24.7 -0.3
baz=69
OGNE Ogallala 68.96 333 P **P 15 15 55.2 +0.3**
T19A Beclabito 69.00 326 ⇑P **P 15 15 54.3 -0.9**
baz=69,SNR=8.6
T19A ⇓pP pP 15 16 24.6 -0.5
baz=69,SNR=8.0
S21A Coal Bank Pass 69.00 327 ⇓P **P 15 15 55.0 -0.2**
baz=69
S21A ⇓pP pP 15 16 24.8 -0.3
baz=69,SNR=6.3
MVCO Mesa Verde 69.01 327 ⇓P **P 15 15 55.3 -0.1**
baz=69,SNR=8.3
MVCO ⇑pP pP 15 16 24.4 -0.9
baz=69,SNR=6.0
MVCO Mesa Verde 69.01 327 *e*P **P 15 15 55.7 +0.4**
comp=Z,12nm,1.0s,mb4.7
MVCO *e*pP pP 15 16 25.2 0.0
X15A Humboldt 69.03 322 ⇑P **P 15 15 55.5 0.0**
baz=69,SNR=8.5
X15A ⇓pP pP 15 16 25.7 +0.3
baz=69,SNR=10
V17A Tonalea, Kykot 69.05 324 ⇓P **P 15 15 55.6 0.0**
baz=69,SNR=12
V17A ⇑pP pP 15 16 25.5 -0.1
baz=69,SNR=10
112A Yuma 69.05 319 ⇓pP pP 15 16 25.7 +0.2
baz=69
W16A Flagstaff 69.07 323 ⇓P **P 15 15 56.6 +0.8**
baz=69,SNR=6.0
W16A ⇑pP pP 15 16 26.1 +0.5
baz=69,SNR=12
Y14A Wickenburg 69.08 321 pP pP 15 16 25.4 -0.4
baz=69,SNR=6.2
U18A Rough Rock, Ch 69.14 325 ⇓P **P 15 15 56.5 +0.5**
baz=69,SNR=7.9
U18A ⇑pP pP 15 16 26.3 +0.2
baz=69,SNR=11
COWI Conover 69.22 345 *e*P **P 15 15 54.3 -2.1**
comp=Z,7.6nm,1.0s,mb4.5
COWI *e*pP pP 15 16 25.5 -0.9
ECSD EROS Data Cent 69.28 338 *e*P **P 15 15 55.8 -1.0**
comp=Z,32nm,1.3s,mb5.0
ECSD *e*pP pP 15 16 25.3 -1.4
WUAZ Wupatki 69.29 324 ⇓P **P 15 15 57.7 +0.6**
baz=70,SNR=7.0
WUAZ ⇑pP pP 15 16 27.6 +0.5
baz=70,SNR=12
WUAZ Wupatki 69.29 324 *e*P **P 15 15 57.7 +0.7**
comp=Z,11nm,1.0s,mb4.7
WUAZ *e*pP pP 15 16 27.5 +0.5
X14A Yava 69.40 322 ⇓P **P 15 15 57.9 +0.2**
baz=70,SNR=5.8

X14A P pP 15 16 27.7 0.0
baz=70,SNR=11
R21A Cimarron 69.42 328 ⇑P **P 15 15 58.4 +0.6**
baz=70
R21A ⇓pP pP 15 16 28.0 +0.2
baz=70,SNR=6.8
Y13A Salome 69.48 321 ⇑P **P 15 15 58.6 +0.3**
baz=70
Y13A pP pP 15 16 28.9 +0.6
baz=70,SNR=7.9
Q22A Crested Butte, 69.49 329 ⇓P **P 15 15 59.0 +0.7**
baz=70
Q22A ⇓pP pP 15 16 29.2 +0.9
baz=70
W15A Williams 69.55 323 ⇓pP pP 15 16 29.1 +0.4
baz=70,SNR=9.1
GLA Glamis 69.55 319 ⇓pP pP 15 16 29.3 +0.6
baz=70
ISCO Idaho Springs 69.61 330 *e*P **P 15 15 59.2 +0.2**
ISCO *e**PP pP 15 16 28.9 -0.1
ISCO pmax pmax
comp=Z,11nm,1.2s,mb4.6
ISCO Idaho Springs 69.61 330 *e*P **P 15 15 59.2 +0.3**
comp=Z,11nm,1.2s,mb4.6
ISCO *e*pP pP 15 16 28.9 0.0
T18A Mexican Hat 69.67 326 ⇑P **P 15 15 59.1 -0.3**
baz=70,SNR=15
T18A ⇑pP pP 15 16 29.3 0.0
baz=70,SNR=11
U17A Shonto 69.70 325 ⇑P **P 15 16 00.0 +0.5**
baz=70
U17A ⇑pP pP 15 16 30.3 +0.8
baz=70
R20A Redvale 69.70 327 ⇓P **P 15 16 00.3 +0.8**
baz=70,SNR=11
R20A ⇑pP pP 15 16 30.3 +0.8
baz=70,SNR=7.3
S19A Harvey Farm, M 69.75 327 ⇑P **P 15 16 00.3 +0.5**
baz=70,SNR=9.3
S19A pP pP 15 16 30.1 +0.3
baz=70,SNR=11
PV01 Paradox Valley 69.75 327 *e*P **P 15 16 00.5 +0.6**
comp=Z,4μm,1.3s
PV01 *e*pP pP 15 16 30.5 +0.6
PV01 *e*sP sP 15 16 42.7 -0.3
SMCO Snowmass 69.77 329 *e*P **P 15 16 00.6 +0.7**
comp=Z,49nm,1.5s,mb5.1
SMCO *e*pP pP 15 16 30.3 +0.3
Q21A Lamborn Mesa, 69.80 328 ⇓pP pP 15 16 30.5 +0.4
baz=70
Y12C Blythe 69.85 320 ⇓pP pP 15 16 30.1 -0.5
baz=70,SNR=6.7
V15A Kaibab Nationa 69.96 323 ⇓P **P 15 16 02.2 +1.1**
baz=70,SNR=9.5
V15A pP pP 15 16 31.4 +0.3
baz=70,SNR=15
PDMCI Parker Dam,Lak 70.01 321 ⇑pP pP 15 16 31.9 +0.4
baz=70
X13A Yucca 70.03 321 ⇓P **P 15 16 02.2 +0.5**
baz=70
X13A pP pP 15 16 31.4 -0.2
baz=70,SNR=10
W14A Seligman 70.04 322 ⇑P **P 15 16 02.6 +1.0**
baz=70,SNR=5.3
W14A ⇓pP pP 15 16 31.3 -0.4
baz=70,SNR=11
T17A Navajo Res., N 70.07 325 ⇑P **P 15 16 02.7 +0.9**
baz=70,SNR=13
T17A ⇓pP pP 15 16 32.7 +0.9
baz=70,SNR=13
DVTC Desert V Tower 70.07 318 ⇑P **P 15 16 03.2 +1.3**
baz=70,SNR=12
DVTC ⇓pP pP 15 16 31.7 -0.2
baz=70,SNR=5.6
S18A Hurst Farm, Bl 70.15 326 ⇑P **P 15 16 02.9 +0.6**
baz=70,SNR=28
S18A ⇑pP pP 15 16 33.5 +1.2
baz=70,SNR=9.8
R19A Curley Farm, L 70.23 327 ⇑pP pP 15 16 33.4 +0.6
baz=70
Q20A Ridgley Place, 70.25 328 ⇑pP pP 15 16 33.7 +0.8
baz=70
BC3 Big Chuckawall 70.35 320 ⇑pP pP 15 16 33.2 -0.4
baz=71,SNR=8.1
V14A Boquillas Ranc 70.35 322 ⇑P **P 15 16 04.5 +0.9**
baz=71,SNR=14
V14A ⇓pP pP 15 16 33.5 -0.1
baz=71,SNR=22
W13A Hualapai Mount 70.42 322 ⇓P **P 15 16 04.0 0.0**
baz=71,SNR=8.0
W13A ⇓pP pP 15 16 34.0 0.0
baz=71,SNR=8.7
MONP Monument Peak 70.42 318 ⇑pP pP 15 16 33.8 -0.3
baz=71
T16A Glen Canyon Da 70.44 324 ⇓pP pP 15 16 34.3 +0.2
baz=71,SNR=6.3
U15A North Rim 70.46 324 P **P 15 16 05.6 +1.4**
baz=71,SNR=15
U15A ⇓pP pP 15 16 34.2 -0.1
baz=71,SNR=13
IRM Iron Mountain 70.51 320 ⇓P **P 15 16 04.8 +0.2**
baz=71,SNR=6.0
IRM ⇓pP pP 15 16 34.0 -0.6
baz=71,SNR=15
S17A Black Ridge (B 70.54 325 ⇑pP pP 15 16 35.2 +0.5
baz=71,SNR=5.9
R18A Canyonlands Na 70.62 326 ⇓P **P 15 16 05.0 -0.1**
baz=71
R18A ⇑pP pP 15 16 34.7 -0.5
baz=71,SNR=5.2
Q19A Hogan Spring (70.73 327 ⇑P **P 15 16 06.8 +1.0**
baz=71,SNR=8.6
Q19A ⇓pP pP 15 16 36.1 +0.2
baz=71,SNR=6.3
N22A Wattenberg Ran 70.80 330 ⇑P **P 15 16 06.8 +0.6**
baz=71
N22A ⇑pP pP 15 16 36.8 +0.5
baz=71
O21A Pagoda 70.82 329 ⇓P **P 15 16 08.0 +1.7**
baz=71
109C Camp Elliot, M 70.85 318 ⇑pP pP 15 16 36.9 +0.2
baz=71
PFO Pinyon Flat Ob 70.93 319 ⇑P **P 15 16 07.6 +0.5**
baz=71
PFO ⇓PcP pP 15 16 37.0 -0.2
baz=71,SNR=6.1
PFO Pinyon Flat Ob 70.93 319 *e*P **P 15 16 07.7 +0.6**
PFO *e**PP pP 15 16 36.8 -0.4
PFO *e**SP sP 15 16 50.2 -0.1
PFO pmax pmax
comp=Z,23nm,1.2s,mb4.9
PFO Pinyon Flat Ob 70.93 319 *e*P **P 15 16 07.7 +0.6**
comp=Z,22nm,1.2s,mb4.9
PFO *e*pP pP 15 16 36.8 -0.4
PFO *e*sP sP 15 16 50.2 -0.1
T15A Red Dirt Ranch 70.94 324 ⇑P **P 15 16 07.8 +0.7**
baz=71,SNR=7.4
T15A ⇑pP pP 15 16 37.3 +0.1
baz=71,SNR=8.3
U14A Mt Trumbull 70.95 323 ⇑P **P 15 16 07.7 +0.5**
baz=71,SNR=19
U14A ⇑pP pP 15 16 37.4 +0.1
baz=71,SNR=18
V13A Grand Canyon W 71.01 322 P **P 15 16 08.9 +1.4**
baz=71,SNR=8.2
V13A ⇑pP pP 15 16 37.4 -0.2
baz=71,SNR=11
R17A Hanksville Air 71.07 326 P **P 15 16 08.7 +0.8**
baz=71,SNR=12
R17A ⇓pP pP 15 16 38.2 +0.2
baz=71,SNR=11
P19A Cripple Cowboy 71.11 328 ⇓P **P 15 16 08.7 +0.6**
baz=71,SNR=14
P19A ⇓pP pP 15 16 38.6 +0.5
baz=71,SNR=5.0
O20A White River Ci 71.13 329 ⇑P **P 15 16 08.4 +0.2**
baz=71,SNR=6.9
O20A ⇑pP pP 15 16 38.7 +0.4
baz=71,SNR=6.5
GMRC Granite Mounta 71.24 320 ⇓P **P 15 16 08.7 -0.3**
baz=72,SNR=7.7
GMRC ⇓pP pP 15 16 39.0 -0.1
baz=72,SNR=11
N21A Black Mountain 71.27 330 ⇑P **P 15 16 09.1 +0.1**
baz=72
N21A ⇑pP pP 15 16 39.0 -0.1
baz=72
Q18A Rafter H Ranch 71.28 327 ⇑pP pP 15 16 39.5 +0.3
baz=72,SNR=5.9
T14A Hurricane 71.36 324 ⇓P **P 15 16 10.2 +0.6**
baz=72,SNR=10.0
T14A pP pP 15 16 40.6 +0.9
baz=72,SNR=10
R16A Teasdale 71.38 325 ⇓P **P 15 16 10.2 +0.5**
baz=72
R16A ⇓pP pP 15 16 39.9 0.0
baz=72,SNR=6.5
MURC Murrieta 71.38 318 ⇑pP pP 15 16 40.1 +0.2
baz=72,SNR=7.4
U13A Pakoon Wash 71.39 323 ⇓P **P 15 16 10.0 +0.2**
baz=72
U13A ⇓pP pP 15 16 40.3 +0.3
baz=72,SNR=8.9
V12A Nelson 71.42 322 ⇓P **P 15 16 10.0 0.0**
baz=72
V12A ⇑pP pP 15 16 39.7 -0.5
baz=72,SNR=11
SRU San Rafael 71.49 327 ⇑P **P 15 16 10.4 0.0**
baz=72,SNR=12
SRU ⇑pP pP 15 16 41.0 +0.5
baz=72,SNR=9.0
SRU San Rafael 71.49 327 *e*P **P 15 16 10.8 +0.4**
SRU *e**PP pP 15 16 40.6 +0.1
SRU *e**SP sP 15 16 53.2 -0.4
SRU pmax pmax
comp=Z,43nm,1.1s,mb5.2
SRU San Rafael 71.49 327 *e*P **P 15 16 10.8 +0.4**
comp=Z,43nm,1.1s,mb5.2
SRU *e*pP pP 15 16 40.6 +0.1
SRU *e*sP sP 15 16 53.2 -0.3
EYMN Ely 71.54 344 *e*P **P 15 16 09.0 -1.5**
comp=Z,33nm,1.2s,mb5.0
EYMN *e*pP pP 15 16 38.5 -2.1
HEC Hector,Ludlow 71.68 320 ⇑pP pP 15 16 41.7 0.0
baz=72,SNR=5.8
N20A Spence Gulch, 71.68 329 ⇓P **P 15 16 11.5 0.0**
baz=72,SNR=6.5
N20A pP pP 15 16 42.1 +0.5
baz=72,SNR=6.7
Q16A Castle Valley 71.68 326 ⇑P **P 15 16 11.6 +0.1**
baz=72,SNR=7.4
Q16A pP pP 15 16 42.5 +0.8
baz=72,SNR=6.4
O19A Miners Draw (B 71.69 328 P **P 15 16 12.2 +0.7**
baz=72,SNR=15
O19A ⇓pP pP 15 16 41.7 0.0
baz=72,SNR=7.4
U12A Valley of Fire 71.73 322 ⇑P **P 15 16 12.1 +0.2**
baz=72,SNR=7.3
U12A ⇓pP pP 15 16 42.1 +0.1
baz=72,SNR=8.2
P18A Preston Nutter 71.74 327 ⇑P **P 15 16 12.6 +0.7**
baz=72,SNR=13
P18A ⇓pP pP 15 16 42.5 +0.6
baz=72,SNR=6.6
R15A Junction 71.75 325 ⇓pP pP 15 16 42.6 +0.5
baz=72,SNR=5.4
L22A Ellis Ranch, M 71.77 331 ⇑P **P 15 16 11.2 -0.7**
baz=72
T13A Saint George 71.79 323 ⇑P **P 15 16 12.2 0.0**
baz=72,SNR=5.7
T13A ⇑pP pP 15 16 42.9 +0.6
baz=72,SNR=9.8
V11A Goodsprings 71.84 321 ⇓pP pP 15 16 42.4 -0.3
baz=72
TUQ Turquoise Moun 71.85 321 ⇑pP pP 15 16 41.8 -1.0
baz=72
M21A Separation Pea 71.86 330 ⇓pP pP 15 16 42.1 -0.5
baz=72
CCUT Cedar City 71.86 324 *e*P **P 15 16 13.9 +1.3**
comp=Z,47nm,1.1s,mb5.2
CCUT *e*pP pP 15 16 42.9 +0.1
CCUT *e*sP sP 15 16 56.3 +0.5
P17A Butcher Ranch, 71.87 327 ⇓P **P 15 16 12.7 +0.1**
baz=72,SNR=7.1
P17A ⇓pP pP 15 16 42.6 -0.2
baz=72,SNR=12
MSU Marysvale 71.92 325 *e*P **P 15 16 13.8 +0.9**
MSU *e**PP pP 15 16 42.5 -0.6
MSU *e**SP sP 15 16 56.3 +0.2
MSU pmax pmax
comp=Z,80nm,1.4s,mb5.4
MSU Marysvale 71.92 325 *e*P **P 15 16 13.8 +0.9**
comp=Z,80nm,1.4s,mb5.3
MSU *e*pP pP 15 16 42.5 -0.6
MSU *e*sP sP 15 16 56.2 +0.1
TMUT Trail Mountain 71.98 326 *e*P **P 15 16 10.5 -2.9**
comp=Z,19nm,1.1s,mb4.8
TMUT *e*pP pP 15 16 44.0 +0.5
ARUT Antelope Range 72.08 324 P **P 15 16 14.6 +0.7**
ARUT *e**PP pP 15 16 44.5 +0.4
ARUT pmax pmax
comp=Z,12nm,0.8s,mb4.8
ARUT Antelope Range 72.08 324 P **P 15 16 14.6 +0.7**
comp=Z,12nm,0.8s,mb4.8
ARUT *e*pP pP 15 16 44.5 +0.4
BFSC Mount Baldy Ra 72.09 319 pP pP 15 16 44.1 -0.2
baz=72,SNR=6.5
O18A Roosevelt 72.10 328 ⇑P **P 15 16 14.8 +0.8**
baz=72
O18A ⇓pP pP 15 16 44.6 +0.5
baz=72
L21A Rawlins 72.14 330 ⇑P **P 15 16 14.3 +0.1**
baz=72
L21A ⇑pP pP 15 16 44.9 +0.5
baz=72
M20A Sweetwater, Wa 72.15 330 ⇑pP pP 15 16 44.6 +0.1
baz=72
S13A Holt Ranch, En 72.16 323 ⇓P **P 15 16 15.1 +0.7**
baz=72,SNR=11
S13A ⇓pP pP 15 16 44.5 -0.1
baz=72,SNR=14
N19A John Jarvie Ra 72.17 329 ⇓P **P 15 16 14.8 +0.4**
baz=72,SNR=5.8
N19A ⇓pP pP 15 16 44.3 -0.2
baz=72,SNR=7.1
U11A Corn Creek 72.21 322 ⇓pP pP 15 16 45.7 +0.7
baz=72
GSC Goldstone 72.28 320 ⇑P **P 15 16 15.4 +0.2**
baz=72
GSC ⇑pP pP 15 16 44.7 -0.7
baz=72,SNR=10.0
GSC Goldstone 72.28 320 *e*P **P 15 16 16.3 +1.1**
GSC *e**PP pP 15 16 45.0 -0.4
GSC *e**SP sP 15 16 58.3 -0.1
GSC pmax pmax
comp=Z,11nm,1.4s,mb4.5
GSC Goldstone 72.28 320 *e*P **P 15 16 16.3 +1.1**
comp=Z,11nm,1.4s,mb4.5
GSC *e*pP pP 15 16 45.0 -0.4
GSC *e*sP sP 15 16 58.3 -0.1
Q15A Fillmore 72.38 325 ⇓P **P 15 16 17.3 +1.6**
baz=73
Q15A ⇓pP pP 15 16 45.8 -0.1
baz=73
O17A Robinson Place 72.41 327 ⇓P **P 15 16 16.8 +1.0**
baz=73,SNR=14
O17A ⇓pP pP 15 16 46.5 +0.5
baz=73,SNR=12
RSSD Black Hills 72.42 334 *e*P **P 15 16 16.3 +0.5**
RSSD *e**PP pP 15 16 46.0 0.0
RSSD pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
RSSD Black Hills 72.42 334 *e*P **P 15 16 16.3 +0.5**
comp=Z,5.8nm,0.8s,mb4.5
RSSD *e*pP pP 15 16 46.0 0.0
P16A Fountain Green 72.45 326 ⇓P **P 15 16 16.6 +0.5**
baz=73
P16A ⇓pP pP 15 16 45.9 -0.4
baz=73
N18A Larsen Ranch, 72.47 328 ⇓pP pP 15 16 46.4 0.0
baz=73
DECC Green Verdugo 72.51 318 ⇓pP pP 15 16 46.0 -0.8
baz=73
L20A Wamsutter 72.63 330 ⇓P **P 15 16 16.1 -1.0**
baz=73
L20A ⇓P pP 15 16 47.0 -0.3
baz=73,SNR=7.7
M19A Rock Springs 72.63 329 ⇑pP pP 15 16 47.0 -0.2
baz=73
R13A O'Grain Ranch, 72.65 324 ⇑P **P 15 16 17.3 0.0**
baz=73,SNR=5.7
R13A ⇑pP pP 15 16 48.0 +0.5
baz=73,SNR=5.9
T11A Corn Creek, Al 72.69 322 ⇓P **P 15 16 17.5 -0.1**
baz=73
T11A ⇓pP pP 15 16 47.8 +0.1
baz=73
EDW2 Edwards Air Fo 72.72 319 ⇑P **P 15 16 17.0 -0.8**
baz=73
EDW2 ⇑pP pP 15 16 46.6 -1.4
baz=73,SNR=6.6
MPU Maple Canyon 72.74 327 *e*P **P 15 16 18.1 +0.3**
comp=Z,17nm,1.2s,mb4.8
MPU *e*pP pP 15 16 48.4 +0.4
P15A Leamington 72.75 326 ⇑pP pP 15 16 48.1 0.0
baz=73,SNR=7.4
U10A Ash Meadows, A 72.76 321 ⇑pP pP 15 16 47.3 -0.9
baz=73
O16A Springville 72.81 327 ⇓P **P 15 16 18.1 -0.2**
baz=73,SNR=9.3
O16A ⇑pP pP 15 16 48.5 +0.1
baz=73,SNR=13
DAU Daniels Canyon 72.84 327 *e*P **P 15 16 19.0 +0.6**
DAU *e**PP pP 15 16 48.1 -0.5
DAU pmax pmax
comp=Z,8.0nm,1.1s,mb4.5
DAU Daniels Canyon 72.84 327 *e*P **P 15 16 19.0 +0.7**
comp=Z,7.7nm,1.1s,mb4.5
DAU *e*pP pP 15 16 48.1 -0.5
Q14A Sevier Lake (B 72.85 325 ⇑P **P 15 16 18.7 +0.2**
baz=73,SNR=16
Q14A ⇓pP pP 15 16 49.0 +0.3
baz=73,SNR=11
BLG Laguna Peak 72.88 318 ⇓pP pP 15 16 49.0 -0.1
baz=73
NLU North Lily Min 72.92 326 *e*P **P 15 16 18.3 -0.6**
comp=Z,13nm,1.3s,mb4.6
NLU *e*pP pP 15 16 49.3 +0.2
LRMC Laurel Mountai 72.94 320 ⇑pP pP 15 16 48.4 -0.9
baz=73,SNR=5.5
M18A Lyman 73.01 328 ⇓P **P 15 16 19.2 -0.1**
baz=73
M18A ⇑pP pP 15 16 48.6 -1.0
baz=73,SNR=6.5
N17A Moffit Pass 73.02 328 ⇓P **P 15 16 20.6 +1.1**
baz=73,SNR=9.2
N17A ⇑pP pP 15 16 49.6 -0.1
baz=73,SNR=12
JLU Jordanelle 73.08 327 *e*P **P 15 16 20.4 +0.7**
comp=Z,17nm,1.0s,mb4.8
JLU *e*pP pP 15 16 50.4 +0.3
JLU *e*sP sP 15 17 02.5 -0.5
AGMN Agassiz Nation 73.08 341 *e*P **P 15 16 18.6 -1.1**
comp=Z,19nm,1.1s,mb4.8
AGMN *e*pP pP 15 16 48.7 -1.2
R12A Pony Springs, 73.11 324 ⇑P **P 15 16 20.0 0.0**
baz=73,SNR=10
R12A ⇑pP pP 15 16 50.0 -0.2
baz=73,SNR=8.6
FURC Furnace Creek, 73.11 321 ⇓P **P 15 16 20.5 +0.4**
baz=73
FURC ⇑pP pP 15 16 50.0 -0.3
baz=73,SNR=8.3
K20A Yellowstone Ra 73.13 330 P **P 15 16 20.4 +0.3**
baz=73,SNR=8.1
K20A ⇑pP pP 15 16 49.2 -1.1
baz=73,SNR=5.7
P14A Drum Mountains 73.18 325 ⇓P **P 15 16 21.1 +0.7**
baz=74,SNR=11
P14A ⇑pP pP 15 16 50.8 +0.1
baz=74,SNR=11
L19A Farson 73.18 329 ⇑P **P 15 16 20.8 +0.5**
baz=74,SNR=7.4
L19A ⇓pP pP 15 16 51.0 +0.4
baz=74,SNR=7.9
MPMC Manual Prospec 73.21 320 ⇑P **P 15 16 20.5 -0.2**
baz=74
MPMC ⇓pP pP 15 16 50.1 -0.8
baz=74,SNR=6.9
Q13A Wheeler Ranch, 73.23 324 ⇓pP pP 15 16 51.4 +0.4
baz=74,SNR=5.2
S11A Rachel 73.27 322 ⇓pP pP 15 16 51.7 +0.5
baz=74
N16A Rees Ranch, Co 73.28 327 ⇓pP pP 15 16 51.9 +0.7
baz=74,SNR=7.0
M17A Scullys Gap (B 73.34 328 ⇑P **P 15 16 20.8 -0.4**
baz=74,SNR=5.9
M17A ⇑pP pP 15 16 51.8 +0.3
baz=74
O15A The Old Anders 73.36 326 ⇓pP pP 15 16 52.5 +0.8
baz=74
L18A Fontenelle, Gr 73.37 329 ⇑P **P 15 16 21.4 0.0**
baz=74,SNR=13
L18A ⇑pP pP 15 16 50.9 -0.9
baz=74,SNR=11
ARVC Arvin 73.40 319 ⇓pP pP 15 16 52.6 +0.6
baz=74
DUG Dugway 73.48 326 ⇓P **P 15 16 22.0 -0.1**
baz=74,SNR=9.1
DUG ⇓pP pP 15 16 52.4 0.0
baz=74,SNR=11
DUG Dugway 73.48 326 *e*P **P 15 16 22.8 +0.6**
DUG *e**PP pP 15 16 51.9 -0.5
DUG *e**SP sP 15 17 05.5 +0.1
DUG pmax pmax
comp=Z,11nm,1.2s,mb4.6
DUG Dugway 73.48 326 *e*P **P 15 16 22.8 +0.6**
comp=Z,11nm,1.2s,mb4.6
DUG *e*pP pP 15 16 51.9 -0.5
DUG *e*sP sP 15 17 05.5 0.0
K19A Absolon Red Bu 73.50 330 ⇑P **P 15 16 21.6 -0.5**
baz=74,SNR=6.7
K19A ⇑pP pP 15 16 51.6 -0.8
baz=74,SNR=6.4
ISA Isabella 73.54 319 ⇑P **P 15 16 22.3 -0.3**
baz=74,SNR=6.3
ISA ⇑pP pP 15 16 52.2 -0.7
baz=74,SNR=9.9
ISA Isabella 73.54 319 *e*P **P 15 16 23.4 +0.8**
ISA *e**PP pP 15 16 52.0 -0.9
ISA pmax pmax
comp=Z,49nm,1.3s,mb5.1
ISA Isabella 73.54 319 *e*P **P 15 16 23.4 +0.8**
comp=Z,49nm,1.3s,mb5.1
ISA *e*pP pP 15 16 52.0 -0.9
P13A Bates Ranch, G 73.59 325 ⇑P **P 15 16 22.1 -0.7**
baz=74,SNR=7.4
P13A ⇑pP pP 15 16 52.9 -0.2
baz=74,SNR=9.0
R11A Troy Canyon, C 73.67 323 ⇑P **P 15 16 22.4 -0.9**
baz=74,SNR=8.2
R11A ⇑pP pP 15 16 53.4 -0.2
baz=74,SNR=10
Q12A Willow Creek R 73.73 324 ⇑P **P 15 16 21.8 -1.8**
baz=74
Q12A ⇑P pP 15 16 53.7 -0.3
baz=74,SNR=6.0
GRAC Grapevine Rang 73.77 321 ⇑P **P 15 16 22.3 -1.6**
baz=74
GRAC ⇑pP pP 15 16 53.8 -0.4
baz=74
BW06 Boulder Array 73.78 330 ⇓P **P 15 16 22.1 -1.7**
baz=74,SNR=6.8
BW06 ⇓pP pP 15 16 54.2 +0.1
baz=74
PDAR Pinedale Array 73.78 330 P **P 15 16 23.9 +0.1**
comp=Z,2.9nm,0.9s,mb4.0,baz=150,slow=6.3,SNR=18
PDAR pP pP 15 16 52.6 -1.6
comp=Z,3.8nm,0.7s,baz=149,slow=6.9,SNR=8.0
CWC Cottonwood Cre 73.81 320 ⇓pP pP 15 16 53.7 -0.7
baz=74,SNR=8.1
HWUT Hardware Ranch 73.88 328 *e*P **P 15 16 24.6 +0.2**
comp=Z,25nm,0.9s,mb5.0
HWUT *e*pP pP 15 16 54.4 -0.4
L17A Cokeville 73.91 328 ⇑P **P 15 16 24.3 -0.3**
baz=74,SNR=7.2
L17A ⇑pP pP 15 16 54.5 -0.4
baz=74
K18A Toltan Ranch, 73.92 329 ⇑P **P 15 16 24.7 +0.1**
baz=74,SNR=12
K18A ⇑pP pP 15 16 54.5 -0.4
baz=74,SNR=10
S10A Tonopah Range, 73.95 322 ⇑P **P 15 16 24.9 0.0**
baz=74,SNR=8.0
S10A ⇓pP pP 15 16 54.6 -0.6
baz=74,SNR=9.7
VES Vestal, Richgr 74.03 319 ⇑pP pP 15 16 55.4 -0.3
baz=74,SNR=7.9
R10A Warm Springs 74.03 323 ⇓pP pP 15 16 56.1 +0.4
baz=74,SNR=6.7
Q11A Duckwater 74.05 323 ⇓P **P 15 16 25.3 -0.2**
baz=74,SNR=8.8

Q11A ⇓pP pP 15 16 55.3 -0.6
baz=74,SNR=8.8
P12A McGill 74.08 324 ⇓P **P 15 16 25.8 +0.1**
baz=74
P12A ⇓pP pP 15 16 55.8 -0.2
baz=74,SNR=5.2
SPUT South Promonto 74.11 327 *e*P **P 15 16 25.9 +0.1**
comp=Z,43nm,1.3s,mb5.0
L16A Fish Haven 74.12 328 ⇓pP pP 15 16 56.2 +0.1
baz=74
BGU Big Grassy Mou 74.13 326 *e*P **P 15 16 26.2 +0.3**
comp=Z,13nm,1.3s,mb4.5
BGU *e*pP pP 15 16 55.2 -1.0
BGU *es*P sP 15 17 08.2 -1.0
N14A Grayback Hills 74.16 326 ⇓P **P 15 16 25.8 -0.3**
baz=74,SNR=7.6
N14A ⇑pP pP 15 16 56.4 0.0
baz=74,SNR=8.9
M15A Larsen Ranch, 74.22 327 ⇑P **P 15 16 26.7 +0.2**
baz=74
M15A pP pP 15 16 56.9 +0.1
baz=74,SNR=6.2
J18A Kendall Valley 74.34 330 ⇑P **P 15 16 27.0 -0.1**
baz=75,SNR=14
J18A ⇑pP pP 15 16 57.3 -0.1
baz=75,SNR=7.1
K17A Gardner Place, 74.42 329 ⇑P **P 15 16 27.9 +0.3**
baz=75,SNR=6.5
K17A ⇓pP pP 15 16 57.5 -0.4
baz=75
RCTC Rector, Farmer 74.43 319 ⇑pP pP 15 16 57.3 -0.8
baz=75
Q10A Clear Creek Ra 74.46 323 ⇑P **P 15 16 28.3 +0.4**
baz=75
Q10A ⇑pP pP 15 16 58.2 -0.1
baz=75,SNR=5.5
AHID Auburn Hatcher 74.52 329 *e*P **P 15 16 28.5 +0.3**
AHID *e* pP 15 16 58.3 -0.2
O12A Currie 74.56 325 ⇑P **P 15 16 29.1 +0.7**
baz=75,SNR=8.5
O12A pP pP 15 16 58.9 +0.1
baz=75,SNR=9.2
L15A Malad City 74.59 328 P **P 15 16 28.8 +0.3**
baz=75,SNR=13
L15A ⇓pP pP 15 16 58.9 0.0
baz=75,SNR=7.7
HVU Hansel Valley 74.62 327 *e*P **P 15 16 28.9 +0.2**
HVU *e**PP pP 15 16 58.0 -1.1
HVU *e**SP sP 15 17 11.4 -0.7
HVU pmax pmax
comp=Z,7.0nm,1.1s,mb4.3
HVU Hansel Valley 74.62 327 *e*P **P 15 16 28.9 +0.1**
comp=Z,7.2nm,1.1s,mb4.3
HVU *e*pP pP 15 16 58.0 -1.1
HVU *es*P sP 15 17 11.3 -0.7
I18A Diamond G Ranc 74.62 330 ⇓P **P 15 16 29.4 +0.6**
baz=75,SNR=9.2
I18A ⇑pP pP 15 16 59.3 +0.3
baz=75
M14A Sheep Mountain 74.71 327 ⇑P **P 15 16 29.1 -0.2**
baz=75,SNR=6.6
M14A ⇓pP pP 15 16 59.8 +0.1
baz=75,SNR=9.0
J17A Brown Place, J 74.79 329 ⇓P **P 15 16 29.4 -0.2**
baz=75,SNR=7.2
J17A ⇑pP pP 15 17 00.2 +0.1
baz=75
K16A Soda Springs 74.81 329 ⇓P **P 15 16 30.1 +0.3**
baz=75,SNR=17
K16A ⇓pP pP 15 17 00.4 +0.3
baz=75,SNR=11
ULM Lac du Bonnet 74.83 342 P **P 15 16 28.5 -1.3**
comp=Z,11nm,0.5s,mb4.9,baz=152,slow=6.3,SNR=14
ULM pP pP 15 16 59.0 -1.2
comp=Z,20nm,0.9s,baz=151,slow=5.9,SNR=8.6
ULM Lac du Bonnet 74.83 342 *e*P **P 15 16 28.3 -1.4**
comp=Z,4.0nm,0.4s,mb4.5
ULM *e*pP pP 15 16 58.5 -1.6
REDW Red Top Meadow 74.85 329 *e*P **P 15 16 30.4 +0.3**
comp=Z,66nm,1.5s,mb5.2
REDW *e*pP pP 15 16 59.7 -0.7
LOHW Long Hollow 74.92 330 *e*P **P 15 16 31.0 +0.6**
comp=Z,20nm,1.4s,mb4.7
LOHW *e*pP pP 15 17 00.5 -0.3
O11A Cowboy Ranch, 74.96 324 ⇓pP pP 15 17 00.9 -0.2
baz=75
TPAW Teton Pass 75.00 329 *e*P **P 15 16 31.5 +0.6**
comp=Z,16nm,1.1s,mb4.7
TPAW *e*pP pP 15 17 01.6 +0.4
M13A Montello 75.03 326 ⇓P **P 15 16 31.4 +0.3**
baz=75
M13A ⇑pP pP 15 17 00.6 -0.9
baz=75
M13A Montello 75.03 326 *e*P **P 15 16 31.4 +0.3**
comp=Z,2.9nm,0.8s,mb4.1
M13A *e*pP pP 15 17 00.4 -1.1
M13A *es*P sP 15 17 13.9 -0.6
L14A Malta 75.04 327 ⇓P **P 15 16 31.2 0.0**
baz=75
L14A ⇓pP pP 15 17 01.0 -0.6
baz=75
P10A Eureka 75.05 323 ⇑P **P 15 16 30.9 -0.3**
baz=75
P10A ⇑pP pP 15 17 01.3 -0.3
baz=75
MLAC Mammoth Lakes 75.06 321 ⇓pP pP 15 17 01.6 -0.1
baz=75
RRI2 Red Ridge 75.07 329 *e*P **P 15 16 31.9 +0.7**
comp=Z,24nm,1.2s,mb4.8
RRI2 *e*pP pP 15 17 01.4 -0.2
N12A Clover Valley, 75.13 325 ⇓P **P 15 16 32.0 +0.3**
baz=75
N12A ⇑pP pP 15 17 01.3 -0.7
baz=75
N12A Clover Valley, 75.13 325 *e*P **P 15 16 32.1 +0.4**
comp=Z,4.8nm,1.2s,mb4.1
N12A *e*pP pP 15 17 01.1 -1.0
I17A Pilgrim Ck. 75.14 330 ⇓pP pP 15 17 01.8 -0.3
baz=75
ELK Elko 75.16 325 P **P 15 16 32.4 +0.5**
comp=Z,3.2nm,1.0s,mb4.0,baz=122,slow=5.2,SNR=7.9
ELK pP pP 15 17 01.4 -0.9
comp=Z,8.3nm,1.1s,baz=128,slow=4.0,SNR=8.0
K15A Arbon 75.17 328 ⇓P **P 15 16 31.7 -0.1**
baz=76,SNR=5.6
K15A ⇑pP pP 15 17 02.5 +0.2
baz=76,SNR=6.8
DCID1 Drake Creek 75.19 329 P **P 15 16 32.9 +1.0**
comp=Z,40nm,1.0s,mb5.1
DCID1 *e*pP pP 15 17 02.0 -0.3
NVAR Mina Array Bea 75.28 322 P **P 15 16 32.9 +0.3**
comp=Z,2.2nm,0.9s,mb3.9,baz=148,slow=8.0,SNR=13
NVAR pP pP 15 17 02.0 -1.0
comp=Z,7.3nm,0.9s,baz=153,slow=6.7,SNR=12
IMW Indian Meadow 75.30 330 *e*P **P 15 16 32.9 +0.3**
comp=Z,19nm,1.2s,mb4.7
IMW *e*pP pP 15 17 02.5 -0.5
IMW *es*P sP 15 17 15.8 -0.2
SCHQ Schefferville 75.37 1 P **P 15 16 32.5 -0.2**
comp=Z,11nm,1.1s,mb4.5,baz=142,slow=3.6,SNR=6.3
SCHQ pP pP 15 17 03.4 +0.2
comp=Z,15nm,0.9s,baz=183,slow=3.7,SNR=5.6
SCHQ Schefferville 75.37 1 *e*P **P 15 16 32.0 -0.7**
comp=Z,20nm,1.0s,mb4.8
SCHQ *e*pP pP 15 17 03.2 +0.1
K14A Jones Ranch, D 75.39 327 ⇓P **P 15 16 33.1 0.0**
baz=76
K14A ⇑pP pP 15 17 03.4 -0.1
baz=76
LAO LASA Array 75.40 334 P **P 15 16 33.9 +0.8**
L13A Double Diamond 75.44 327 ⇑P **P 15 16 33.8 +0.4**
baz=76,SNR=8.7
L13A ⇑pP pP 15 17 03.5 -0.4
baz=76,SNR=6.0
M12A Wells 75.47 326 ⇑P **P 15 16 33.4 -0.2**
baz=76
M12A ⇓pP pP 15 17 04.0 0.0
baz=76,SNR=5.3
RLMT Red Lodge 75.47 331 ⇓P **P 15 16 33.9 +0.4**
baz=76,SNR=11
RLMT ⇑pP pP 15 17 04.3 +0.4
baz=76,SNR=6.2
RLMT Red Lodge 75.47 331 *e*P **P 15 16 33.5 0.0**
comp=Z,62nm,1.3s,mb5.2
RLMT *e*pP pP 15 17 04.2 +0.3
RLMT *es*P sP 15 17 16.7 -0.2
I16A Newdale 75.54 329 ⇑P **P 15 16 34.5 +0.5**
baz=76,SNR=6.9
I16A ⇑pP pP 15 17 04.5 +0.1
baz=76
J15A Blackfoot 75.64 328 ⇑P **P 15 16 35.3 +0.7**
baz=76,SNR=8.1
J15A ⇑pP pP 15 17 05.1 +0.1
baz=76,SNR=8.5
G18A Lazy EL Ranch, 75.75 331 ⇑P **P 15 16 35.5 +0.4**
baz=76,SNR=16
G18A pP pP 15 17 06.2 +0.6
baz=76,SNR=6.5
YMR Madison River 75.89 330 *e*P **P 15 16 36.9 +0.9**
comp=Z,81nm,1.2s,mb5.3
YMR *e*pP pP 15 17 06.7 +0.2
K13A Stover Farm, H 75.92 327 ⇑pP pP 15 17 06.7 +0.1
baz=76
M11A Holland Ranch, 75.94 325 ⇑P **P 15 16 37.3 +0.9**
baz=76,SNR=7.6
M11A ⇑pP pP 15 17 07.1 +0.4
baz=76,SNR=7.8
L12A House Creek Ra 76.04 326 ⇑P **P 15 16 37.2 +0.3**
baz=76,SNR=9.7
L12A ⇓pP pP 15 17 07.8 +0.5
baz=76,SNR=6.6
H16A Russell Place, 76.05 330 ⇑P **P 15 16 37.6 +0.8**
baz=76,SNR=7.8
H16A ⇓pP pP 15 17 08.3 +1.0
baz=76,SNR=7.8
DGMT Dagmar 76.06 336 ⇓P **P 15 16 36.7 -0.2**
baz=76
DGMT ⇓pP pP 15 17 07.8 +0.5
baz=76
DGMT Dagmar 76.06 336 *e*P **P 15 16 36.5 -0.3**
comp=Z,16nm,0.7s,mb4.9
DGMT *e*pP pP 15 17 07.4 +0.1
I15A Monteview 76.11 329 ⇑P **P 15 16 37.9 +0.7**
baz=76,SNR=7.9
I15A ⇓pP pP 15 17 08.6 +1.0
baz=76,SNR=5.9
J14A Carey 76.12 328 ⇑P **P 15 16 37.7 +0.4**
baz=76,SNR=7.3
J14A ⇑pP pP 15 17 08.2 +0.4
baz=76,SNR=6.8
F18A Big Timber 76.27 332 ⇓P **P 15 16 38.5 +0.4**
baz=77,SNR=19
F18A pP pP 15 17 08.9 +0.4
baz=77,SNR=8.6
K12A Draper Farm, C 76.33 327 ⇑P **P 15 16 39.3 +0.8**
baz=77,SNR=13
K12A ⇓pP pP 15 17 09.6 +0.6
baz=77,SNR=7.9
M10A I.L. Ranch, Tu 76.41 325 ⇓pP pP 15 17 09.5 +0.1
baz=77
L11A Cat Creek Ranc 76.44 326 ⇑P **P 15 16 40.0 +0.9**
baz=77,SNR=5.4
L11A ⇓pP pP 15 17 09.8 +0.2
baz=77,SNR=7.3
J13A Cove Ranch, Pi 76.51 327 ⇑P **P 15 16 40.0 +0.5**
baz=77,SNR=6.4
J13A pP pP 15 17 10.8 +0.8
baz=77,SNR=5.4
I14A Mackay 76.53 328 ⇓P **P 15 16 40.4 +0.8**
baz=77,SNR=13
I14A ⇓pP pP 15 17 11.0 +0.9
baz=77,SNR=5.6
H15A Lima 76.65 329 ⇓pP pP 15 17 11.8 +1.1
baz=77
TOA0 Torodi Ar. Sit 76.66 70 *e*P **P 15 16 40.7 -0.3**
TORD Torodi Ar. Bea 76.66 70 P **P 15 16 40.7 -0.3**
comp=Z,131nm,0.7s,mb5.8,baz=253,slow=5.7,SNR=546
TORD pP pP 15 17 10.9 -0.5
comp=Z,16nm,0.7s,baz=251,slow=5.1,SNR=2.2
F17A Fitzpatrick Pl 76.69 331 ⇓P **P 15 16 41.1 +0.6**
baz=77,SNR=13
F17A ⇑pP pP 15 17 11.6 +0.7
baz=77,SNR=7.0
WCN Washoe City 76.70 321 ⇑pP pP 15 17 11.4 +0.2
baz=77
G16A Moss Hill, Enn 76.71 330 ⇑P **P 15 16 40.4 -0.2**
baz=77
G16A ⇓pP pP 15 17 11.0 -0.1
baz=77,SNR=5.2
HLID Hailey 76.75 327 ⇑P **P 15 16 41.1 +0.3**
baz=77,SNR=23
HLID ⇓pP pP 15 17 12.0 +0.7
baz=77,SNR=8.0
HLID Hailey 76.75 327 *e*P **P 15 16 41.3 +0.5**
comp=Z,51nm,1.4s,mb5.1
HLID *e*pP pP 15 17 11.7 +0.4
L10A Juniper Basin 76.76 325 ⇑P **P 15 16 41.4 +0.5**
baz=77,SNR=8.7
L10A ⇓pP pP 15 17 11.7 +0.3
baz=77,SNR=9.5
I13A Wildhorse Cree 76.85 328 ⇑P **P 15 16 42.3 +0.9**
baz=77,SNR=9.7
I13A ⇓pP pP 15 17 12.8 +0.9
baz=77,SNR=9.3
E18A Harlowton 76.87 332 ⇑P **P 15 16 41.5 0.0**
baz=77,SNR=5.3
E18A ⇓pP pP 15 17 12.3 +0.4
baz=77,SNR=8.4
J12A Stokes Ranch, 76.87 327 ⇓P **P 15 16 41.9 +0.4**
baz=77,SNR=8.2
J12A ⇑pP pP 15 17 12.5 +0.5
baz=77,SNR=8.5
MCMT McKenzie Canyo 76.90 329 *e*P **P 15 16 42.8 +1.1**
comp=Z,5.9nm,1.0s,mb4.3
MCMT *e*pP pP 15 17 12.2 0.0
BOZ Bozeman (W) 76.94 330 ⇓P **P 15 16 41.7 -0.2**
baz=77,SNR=5.3
BOZ ⇓pP pP 15 17 11.8 -0.6
baz=77,SNR=9.4
BOZ Bozeman (W) 76.94 330 P **P 15 16 41.0 -0.8**
BOZ *e**PP pP 15 17 11.6 -0.8
BOZ pmax pmax
comp=Z,6.0nm,1.3s,mb4.2
BOZ Bozeman (W) 76.94 330 P **P 15 16 41.0 -0.9**
comp=Z,6.5nm,1.3s,mb4.2
BOZ *e*pP pP 15 17 11.6 -0.8
SYO Syowa Base 76.95 159 ⇑P **P 15 16 40.3 -1.4**
G15A Dillon 76.98 330 ⇓P **P 15 16 42.7 +0.6**
baz=77
G15A ⇓pP pP 15 17 12.7 0.0
baz=77
H14A Leadore 77.00 329 ⇓P **P 15 16 42.4 +0.2**
baz=77,SNR=8.1
H14A ⇑P pP 15 17 12.8 +0.1
baz=77
K11A Parker Ranch, 77.01 326 ⇑P **P 15 16 42.4 +0.1**
baz=77,SNR=6.2
K11A ⇓PcP PcP 15 17 12.7 +20
baz=77,SNR=7.1
F16A Kennard Place, 77.04 331 ⇑P **P 15 16 42.6 +0.1**
baz=77
F16A ⇑pP pP 15 17 13.3 +0.4
baz=77
DLMT Dillon 77.18 330 *e*P **P 15 16 43.8 +0.6**
comp=Z,12nm,1.1s,mb4.5
DLMT *e*pP pP 15 17 13.8 +0.1
E17A Martinsdale 77.21 331 ⇓P **P 15 16 43.4 +0.1**
baz=78,SNR=16
E17A ⇑pP pP 15 17 14.1 +0.2
baz=78,SNR=8.9
I12A Atlanta 77.28 327 ⇓P **P 15 16 44.6 +0.8**
baz=78,SNR=8.2
I12A ⇑pP pP 15 17 15.0 +0.7
baz=78,SNR=6.9
D18A Linhart Farms, 77.31 332 ⇓P **P 15 16 44.3 +0.4**
baz=78,SNR=6.8
D18A pP pP 15 17 14.7 +0.3
baz=78,SNR=9.1
MFID Camas Ranch 77.36 327 ⇑P **P 15 16 44.5 +0.3**
baz=78,SNR=5.7
MFID pP pP 15 17 15.2 +0.4
baz=78,SNR=9.1
H13A Challis 77.39 328 ⇓P **P 15 16 44.3 -0.1**
baz=78,SNR=17
H13A ⇑pP pP 15 17 15.5 +0.5
baz=78,SNR=7.8
BEKR Beckworth 77.43 322 ⇑pP pP 15 17 14.6 -0.7
baz=78,SNR=9.6
LRM Limekiln Ridge 77.45 330 *e*P **P 15 16 45.3 +0.6**
comp=Z,28nm,1.0s,mb5.0
LRM *e*pP pP 15 17 15.1 -0.2
K10A MacKenzie Ranc 77.46 326 ⇑P **P 15 16 45.3 +0.5**
baz=78,SNR=7.2
K10A ⇓pP pP 15 17 15.1 -0.3
baz=78,SNR=7.7
F15A Butte 77.49 330 ⇓P **P 15 16 45.6 +0.8**
baz=78,SNR=6.7
F15A ⇓pP pP 15 17 15.5 0.0
baz=78,SNR=7.4
E16A East Helena 77.63 331 ⇓pP pP 15 17 16.1 -0.1
baz=78,SNR=6.1
D17A Six Diamond Ra 77.66 332 ⇓P **P 15 16 45.9 +0.1**
baz=78,SNR=13
D17A ⇑pP pP 15 17 16.2 -0.2
baz=78,SNR=13
H12A Diamond D Ranc 77.68 328 ⇑P **P 15 16 46.4 +0.4**
baz=78,SNR=7.9
H12A ⇓pP pP 15 17 17.0 +0.5
baz=78,SNR=5.4
G13A Cobalt 77.77 329 ⇓P **P 15 16 47.1 +0.6**
baz=78,SNR=30
G13A ⇓pP pP 15 17 17.4 +0.4
baz=78,SNR=9.4
HRY Holter Researc 77.84 331 *e*P **P 15 16 47.4 +0.6**
comp=Z,24nm,0.3s,mb5.4
HRY *e*pP pP 15 17 16.8 -0.5
F14A Wisdom 77.88 330 ⇓P **P 15 16 47.7 +0.7**
baz=78,SNR=6.1
F14A ⇓pP pP 15 17 17.9 +0.3
baz=78,SNR=6.1
EGMT Eagleton 77.93 333 *e*P **P 15 16 46.6 -0.7**
comp=Z,12nm,1.1s,mb4.5
EGMT *e*pP pP 15 17 17.1 -0.8
EGMT *es*P sP 15 17 30.8 0.0
D16A Dana Ranch, Ca 77.95 331 ⇓P **P 15 16 48.0 +0.6**
baz=78,SNR=19
D16A ⇑pP pP 15 17 18.4 +0.4
baz=78,SNR=7.4
E15A Deer Lodge 77.99 330 ⇓P **P 15 16 47.4 -0.3**
baz=78,SNR=8.3
E15A pP pP 15 17 18.5 +0.3
baz=78,SNR=15
C17A Wharram Farm, 78.06 332 pP pP 15 17 18.3 -0.3
baz=78,SNR=8.1
B18A Beardsley Farm 78.22 333 ⇑P **P 15 16 49.1 +0.2**
baz=78,SNR=5.9
B18A pP pP 15 17 19.6 +0.1
baz=78,SNR=10
F13A Darby 78.32 329 ⇑P **P 15 16 49.9 +0.4**
baz=79,SNR=23
F13A ⇑pP pP 15 17 20.8 +0.7
baz=79,SNR=11
G12A Big Creek, Yel 78.33 328 ⇑P **P 15 16 49.4 -0.1**
baz=79
G12A ⇑pP pP 15 17 20.4 +0.3
baz=79
H11A Donnelly 78.37 327 ⇓P **P 15 16 48.5 -1.2**
baz=79
H11A ⇓pP pP 15 17 20.3 -0.1
baz=79,SNR=5.4
E14A Clinton 78.38 330 ⇓P **P 15 16 49.3 -0.5**
baz=79
E14A ⇓pP pP 15 17 20.8 +0.4
baz=79,SNR=7.9
D15A Lincoln 78.40 331 ⇓P **P 15 16 50.0 +0.1**
baz=79
D15A ⇑pP pP 15 17 20.1 -0.4
baz=79,SNR=9.2
SUR Sutherland 78.48 120 P **P 15 16 52.7 +1.8**
comp=Z,249nm,0.8s,mb6.0,SNR=6.9
B17A L&G Farms, Che 78.58 333 pP pP 15 17 21.1 -0.4
baz=79,SNR=6.5
C16A Fuhringer Ranc 78.62 332 P **P 15 16 51.8 +0.7**
baz=79,SNR=5.6
C16A pP pP 15 17 21.6 -0.1
baz=79,SNR=10
CHMT Chamberlain Mo 78.64 330 *e*P **P 15 16 51.5 +0.3**
comp=Z,10nm,1.7s,mb4.4
CHMT *e*pP pP 15 17 21.7 -0.2
H10A Noah's Angus R 78.66 327 ⇓P **P 15 16 51.2 -0.2**
baz=79,SNR=5.7
H10A ⇓pP pP 15 17 21.8 -0.3
baz=79,SNR=6.0
A18A Metzger Ranch, 78.66 334 ⇑P **P 15 16 50.9 -0.4**
baz=79,SNR=5.6
A18A ⇓pP pP 15 17 21.2 -0.7
baz=79,SNR=12
J08A Circle Bar Ran 78.71 325 ⇓P **P 15 16 51.6 -0.1**
baz=79
J08A ⇑pP pP 15 17 22.1 -0.3
baz=79
E13A Victor 78.73 330 ⇓P **P 15 16 51.8 +0.1**
baz=79,SNR=9.6
E13A ⇓pP pP 15 17 22.2 -0.1
baz=79,SNR=8.7
MOD Modoc 78.73 323 *e*P **P 15 16 52.6 +0.8**
comp=Z,10.0nm,1.1s,mb4.6
MOD *e*pP pP 15 17 21.8 -0.7
F12A Elk City 78.74 329 ⇑P **P 15 16 52.1 +0.3**
baz=79,SNR=6.1
F12A ⇓pP pP 15 17 22.3 -0.1
baz=79,SNR=5.6
I09A Lost Marbles R 78.74 326 ⇓P **P 15 16 52.1 +0.2**
baz=79,SNR=6.0
I09A pP pP 15 17 22.4 -0.2
baz=79,SNR=7.0
D14A Greenough 78.88 330 ⇓P **P 15 16 52.8 +0.3**
baz=79
D14A ⇑pP pP 15 17 23.2 +0.1
baz=79,SNR=8.1
MSO Missoula 78.89 330 *e*P **P 15 16 52.7 +0.1**
comp=Z,5.7nm,1.3s,mb4.2
MSO *e*pP pP 15 17 23.1 -0.2
C15A Salmond Ranch, 78.98 331 ⇑P **P 15 16 53.4 +0.3**
baz=79,SNR=16
C15A pP pP 15 17 24.1 +0.4
baz=79,SNR=15
G11A Walters Elk Ra 78.99 328 ⇑P **P 15 16 53.4 +0.3**
baz=79
G11A ⇓pP pP 15 17 23.2 -0.6
baz=79
SLMT Seeley Lake 78.99 331 *e*P **P 15 16 53.8 +0.7**
comp=Z,9.7nm,1.2s,mb4.5
SLMT *e*pP pP 15 17 23.4 -0.4
A17A Triple J Farms 79.04 333 pP pP 15 17 23.9 -0.1
baz=79,SNR=11
B16A M & M Farms, S 79.07 332 ⇓pP pP 15 17 23.3 -0.9
baz=79
BMO Blue Mountains 79.13 327 *e*P **P 15 16 54.3 +0.3**
comp=Z,36nm,1.3s,mb5.0
BMO *e*pP pP 15 17 22.9 -1.7
WDC Whiskeytown Da 79.16 321 *e*P **P 15 16 52.6 -1.6**
WDC *e**PP pP 15 17 22.4 -2.5
WDC pmax pmax
comp=Z,99nm,2.2s,mb5.2
WDC Whiskeytown Da 79.16 321 *e*P **P 15 16 52.6 -1.6**
comp=Z,99nm,2.2s,mb5.2
WDC *e*pP pP 15 17 22.4 -2.5
F11A Grangeville 79.28 328 ⇑P **P 15 16 54.8 +0.1**
baz=80,SNR=7.6
F11A ⇑pP pP 15 17 25.0 -0.4
baz=80,SNR=8.3
D13A Huson 79.33 330 ⇑pP pP 15 17 25.9 +0.2
baz=80,SNR=9.7
G10A Bishop Farm, J 79.34 327 ⇑P **P 15 16 56.1 +1.0**
baz=80,SNR=12
G10A ⇓pP pP 15 17 25.8 +0.1
baz=80,SNR=11
B15A Bradely Ranch, 79.37 332 ⇑P **P 15 16 55.0 -0.1**
baz=80,SNR=8.8
B15A pP pP 15 17 25.1 -0.8
baz=80,SNR=12
E12A Beaver Dam Sad 79.37 329 pP pP 15 17 26.0 +0.1
baz=80,SNR=6.5
SWMT Swartz Lake 79.42 330 *e*P **P 15 16 55.9 +0.5**
comp=Z,3.3nm,0.9s,mb4.2
SWMT *e*pP pP 15 17 25.7 -0.4
A16A West Butte Ran 79.42 333 ⇑P **P 15 16 55.8 +0.4**
baz=80
A16A ⇑pP pP 15 17 25.6 -0.6
baz=80
C14A Swan Lake 79.50 331 ⇑P **P 15 16 56.0 +0.1**
baz=80,SNR=6.0
C14A ⇓pP pP 15 17 26.8 +0.2
baz=80,SNR=10
H08A Prairie City 79.60 326 ⇑P **P 15 16 57.1 +0.6**
baz=80,SNR=5.1
H08A ⇑pP pP 15 17 27.7 +0.5
baz=80,SNR=7.1
K05A Summer Lake 79.61 324 ⇓P **P 15 16 57.0 +0.4**
baz=80,SNR=9.3
K05A pP pP 15 17 27.6 +0.4
baz=80,SNR=10.0

YBMT Yellow Bay 79.69 331 eP P 15 16 57.9 +1.0
comp=Z,4.2nm,0.3s,mb4.8
YBMT epP pP 15 17 27.9 +0.4
B14A Marquette Ranc 79.72 331 ⇓pP pP 15 17 27.6 -0.2
baz=80,SNR=6.8
D12A Red Ives Fores 79.72 329 ⇓P P 15 16 56.6 -0.5
baz=80
D12A ⇓pP pP 15 17 28.2 +0.3
baz=80
JTMT Jette 79.72 330 epP pP 15 17 27.9 +0.1
comp=Z,3.4nm,0.6s
I07A Izee 79.75 325 ⇑P P 15 16 58.0 +0.6
baz=80,SNR=7.7
I07A ⇑pP pP 15 17 28.4 +0.4
baz=80,SNR=6.9
TSUM Tsumeb 79.75 107 eP P 15 16 58.7 +0.7
comp=Z,71nm,0.8s,mb5.5
C13A Hot Springs 79.81 330 ⇑pP pP 15 17 28.7 +0.4
baz=80,SNR=9.9
F10A Beach Ranch, E 79.87 328 ⇑P P 15 16 58.1 +0.2
baz=80
A15A Johnson Ranch, 79.94 332 ⇓pP pP 15 17 27.8 -1.1
baz=80,SNR=8.4
YBH Yreka Blue Hor 79.99 322 P P 15 16 57.5 -1.2
comp=Z,3.4nm,0.8s,mb4.3,baz=149,slow=3.2,SNR=7.1
YBH pP pP 15 17 27.6 -1.8
comp=Z,5.2nm,0.7s,baz=116,slow=4.4,SNR=5.3
F09A S2 Ranch, Elgi 80.03 327 ⇑pP pP 15 17 28.7 -0.9
baz=80
BSMT Bassoo Peak 80.03 330 eP P 15 16 59.0 +0.2
comp=Z,2.9nm,0.9s,mb4.1
BSMT epP pP 15 17 29.1 -0.4
BSMT esP sP 15 17 42.9 +0.5
E10A Myers Farm, Un 80.17 328 ⇓pP pP 15 17 30.3 0.0
baz=80,SNR=6.1
A14A Double T Ranch 80.24 332 ⇓P P 15 16 59.7 -0.1
baz=80
A14A ⇓pP pP 15 17 30.4 -0.2
baz=80,SNR=9.8
C12B Naegeli Ranch, 80.25 330 ⇑pP pP 15 17 29.9 -0.8
baz=80
B13A Whitefish 80.27 331 ⇑P P 15 17 00.2 +0.2
baz=81,SNR=5.0
B13A ⇑pP pP 15 17 31.0 +0.3
baz=81,SNR=12
G08A Pilot Rock 80.28 326 ⇑P P 15 17 00.2 0.0
baz=81
G08A ⇑pP pP 15 17 31.1 +0.2
baz=81,SNR=7.2
LNOR Lincton Mounta 80.33 327 P P 15 17 00.1 -0.3
KTRM Thompson Ridge 80.49 322 P P 15 17 02.3 +0.9
WALA Waterton Lakes 80.52 332 eP P 15 17 01.5 +0.1
comp=Z,0.2nm,1.1s
WALA epP pP 15 17 31.7 -0.4
FFC Flin Flon 80.56 341 i P P 15 17 01.7 +0.3
FFC Flin Flon 80.56 341 eP P 15 17 01.1 -0.4
comp=Z,15nm,1.4s,mb4.6
FFC epP pP 15 17 31.0 -1.2
VIPM Ingram Point 80.63 325 P P 15 17 03.3 +1.3
MORF Marmelete 80.64 44 eP P 15 17 04.1 +1.8
comp=Z,46nm,1.1s,mb5.2
D10A Wagner Farm, O 80.65 329 ⇑P P 15 17 02.2 +0.1
baz=81
D10A pP pP 15 17 32.5 -0.4
baz=81,SNR=6.7
A13A Flathead Natio 80.65 331 ⇓P P 15 17 02.5 +0.5
baz=81
A13A ⇑pP pP 15 17 33.0 +0.1
baz=81
PTEO Sao Teotonio 80.73 44 eP P 15 17 04.7 +2.0
comp=Z,52nm,1.2s,mb5.2
B12A Libby 80.85 330 ⇓P P 15 17 03.5 +0.4
baz=81
B12A pP pP 15 17 34.3 +0.4
baz=81,SNR=6.7
PBDV Barranco-do-Ve 81.07 45 eP P 15 17 06.2 +1.6
comp=Z,55nm,1.2s,mb5.3
G06A Carlson Farm, 81.12 326 ⇑pP pP 15 17 35.1 -0.3
baz=81,SNR=8.1
D09A Jones Farm, Ri 81.16 328 ⇑P P 15 17 04.6 -0.2
baz=81
D09A pP pP 15 17 35.3 -0.3
baz=81,SNR=8.7
F07A Phinny Hill Vi 81.19 326 ⇑pP pP 15 17 35.5 -0.3
baz=82
B11A Sandpoint 81.19 330 ⇓P P 15 17 05.1 +0.2
baz=82
B11A ⇑pP pP 15 17 35.3 -0.4
baz=82,SNR=5.2
C10A Spilker Farm, 81.20 329 ⇓pP pP 15 17 36.1 +0.3
baz=82
A12A Yaak River Ran 81.22 331 ⇑pP pP 15 17 36.2 +0.3
baz=82,SNR=6.0
PCVE Castro Verde 81.22 44 eP P 15 17 08.1 +2.7
comp=Z,31nm,0.8s,mb5.2
PVAQ Vaqueiros 81.30 45 eP P 15 17 07.2 +1.4
comp=Z,43nm,1.7s,mb5.0
HAWA Hanford 81.32 327 eP P 15 17 05.7 0.0
comp=Z,7.7nm,0.9s,mb4.5
HAWA epP pP 15 17 35.9 -0.5
RSW Rattlesnake Hi 81.35 327 eP P 15 17 06.6 +0.8
comp=Z,151nm,1.6s,mb5.6
RSW epP pP 15 17 36.0 -0.7
D08A Wollman Farm, 81.47 328 pP pP 15 17 37.3 +0.1
baz=82,SNR=7.3
B10A Chitwood Farm, 81.50 329 ⇓pP pP 15 17 37.3 -0.1
baz=82
PBEJ Beja 81.56 44 eP P 15 17 08.6 +1.5
comp=Z,21nm,1.9s,mb4.6
A11A Hall Mountain, 81.56 330 ⇑P P 15 17 07.2 +0.3
baz=82,SNR=8.4
A11A pP pP 15 17 37.5 -0.2
baz=82,SNR=16
OD2 Odessa Site #2 81.59 328 P P 15 17 07.6 +0.5
H04A Detroit Lake 81.59 324 ⇑pP pP 15 17 37.6 -0.4
baz=82,SNR=8.8
E07A Sunnyside 81.60 327 ⇑pP pP 15 17 37.7 -0.2
baz=82
C09A Chrisman Ranch 81.66 329 ⇓P P 15 17 07.4 0.0
baz=82,SNR=7.0
C09A ⇑pP pP 15 17 38.2 0.0
baz=82,SNR=12
EVO Evora 81.75 44⇑i P P 15 17 08.7 +0.6
comp=Z,33nm,0.7s,mb4.9
EVO Evora 81.75 44 eP P 15 17 09.2 +1.1
comp=Z,27nm,1.0s,mb5.0
B09A Rice 82.03 329 ⇓P P 15 17 09.5 +0.1
baz=82
B09A pP pP 15 17 39.5 -0.7
baz=82,SNR=9.9
G04A Mulino 82.09 325 ⇑pP pP 15 17 40.2 -0.3
baz=82,SNR=5.9
PTOM Tomar 82.12 42 eP P 15 17 11.1 +1.1
comp=Z,40nm,0.6s,mb5.4
PBAR Barrancos 82.18 44 eP P 15 17 11.4 +1.0
comp=Z,31nm,1.3s,mb5.0
PESTR Estremoz 82.21 43 eP P 15 17 11.7 +1.2
comp=Z,38nm,0.9s,mb5.2
WTV Waterville 82.42 328 P P 15 17 11.9 +0.5
F04A Amboy 82.52 325 pP pP 15 17 42.2 -0.6
baz=83,SNR=14
ETW Entiat 82.54 327 P P 15 17 12.6 +0.5
B08A Colville Reser 82.56 329 ⇓pP pP 15 17 41.7 -1.2
baz=83,SNR=9.1
PMRV Marv??o 82.66 43 eP P 15 17 13.2 +0.4
comp=Z,23nm,1.8s,mb4.7
LON Longmire 82.73 326 P P 15 17 12.8 -0.2
LON e*PP pP 15 17 41.7 -2.2
LON pmax pmax
comp=Z,16nm,1.1s,mb4.8
LON Longmire 82.73 326 P P 15 17 12.8 -0.2
comp=Z,16nm,1.1s,mb4.8
LON epP pP 15 17 41.7 -2.2
PCBR Castelo Branco 82.84 43 eP P 15 17 21.0 +7.2
comp=Z,50nm,1.6s,mb5.1
PVIS Viseu 83.07 42 eP P 15 17 15.7 +0.8
comp=Z,33nm,1.3s,mb5.0
MTE Manteigas 83.11 42 eP P 15 17 23.4 +8.2
comp=Z,39nm,1.2s,mb5.1
D05A Enumclaw 83.11 326 ⇑P P 15 17 14.6 -0.4
baz=83
D05A ⇑pP pP 15 17 45.2 -0.7
baz=83,SNR=8.2
BOSA Boshof 83.32 118 P P 15 17 16.7 +0.1
comp=Z,40nm,0.8s,mb5.3,baz=249,slow=4.4,SNR=45
BOSA Boshof 83.32 118 eP P 15 17 16.4 -0.3
BOSA e*PP pP 15 17 47.9 +0.3
BOSA pmax pmax
comp=Z,46nm,0.9s,mb5.3
BOSA Boshof 83.32 118 eP P 15 17 16.4 -0.2
comp=Z,46nm,0.9s,mb5.3
BOSA epP pP 15 17 47.9 +0.3
EDM Edmonton 83.37 335 eP P 15 17 14.8 -1.4
EDM e*PP pP 15 17 45.0 -2.1
PVRL Vila Real 83.50 41 eP P 15 17 17.9 +0.8
comp=Z,43nm,1.9s,mb5.0
A07A Ashnola River, 83.53 329 P P 15 17 17.7 +0.6
baz=84,SNR=9.8
A07A ⇑pP pP 15 17 47.4 -0.7
baz=84,SNR=18
PCAB Cabril 83.56 41 eP P 15 17 18.2 +0.8
comp=Z,57nm,0.8s,mb5.5
RPW Rockport 83.70 328 eP P 15 17 17.5 -0.4
comp=Z,4.7nm,0.8s,mb4.4
RPW epP pP 15 17 47.2 -1.7
B06A Marblemount 83.73 328 ⇓P P 15 17 17.5 -0.6
baz=84
B06A ⇓pP pP 15 17 47.8 -1.3
baz=84,SNR=6.8
JCW Jim Creek 83.74 327 P P 15 17 17.7 -0.5
MVO Moncorvo 83.87 42 eP P 15 17 20.0 +1.0
comp=Z,52nm,1.1s,mb5.3
TAM Tamanrasset 84.07 63 eP P 15 17 21.5 +1.0
TAM e*PP pP 15 17 51.7 +0.2
TAM pmax pmax
comp=Z,29nm,1.1s,mb5.0
TAM Tamanrasset 84.07 63 eP P 15 17 21.5 +1.0
comp=Z,29nm,1.1s,mb5.0
TAM epP pP 15 17 51.7 +0.2
NLWA Neilton Lookou 84.22 326 ⇑pP pP 15 17 51.8 +0.1
baz=84
A05A Maple Falls 84.34 328 ⇓P P 15 17 21.1 -0.1
baz=85,SNR=5.6
A05A ⇑pP pP 15 17 50.8 -1.4
baz=85,SNR=12
PAB San Pablo 84.69 44 eP P 15 17 23.7 +0.5
PAB pmax pmax
comp=Z,44nm,0.9s,mb5.4
PAB San Pablo 84.69 44 eP P 15 17 23.7 +0.5
comp=Z,44nm,0.9s,mb5.4
MAW Mawson 84.82 163 P P 15 17 21.4 -2.1
comp=Z,5.3nm,0.6s,mb4.6,baz=214,slow=6.1,SNR=14
MAW pP pP 15 17 53.8 -0.7
comp=Z,16nm,0.9s,baz=222,slow=6.0,SNR=9.3
MAW Mawson 84.82 163 eP P 15 17 23.5 0.0
MAW e*PP pP 15 17 53.6 -0.9
MAW pmax pmax
comp=Z,1.0nm,0.8s
MAW Mawson 84.82 163 eP P 15 17 23.5 0.0
comp=Z,1.2nm,0.8s,mb3.9
MAW epP pP 15 17 53.5 -0.9
LBTB Lobatse 84.84 115 eP P 15 17 24.7 +0.3
LBTB pmax pmax
comp=Z,55nm,0.9s,mb5.5
LBTB Lobatse 84.84 115 eP P 15 17 24.7 +0.2
comp=Z,55nm,0.9s,mb5.5
ESDC Sonseca Array 85.01 44 P P 15 17 25.6 +0.8
comp=Z,19nm,0.9s,mb5.0,baz=245,slow=4.9,SNR=70
ESLA Sonseca Array 85.01 44 eP P 15 17 25.5 +0.7
comp=Z,9.9nm,1.1s,mb4.7
SJPF Ste Jean 88.55 42⇑i P P 15 17 42.3 +0.4
comp=Z,38nm,1.1s,mb5.0
SJPF Ste Jean 88.55 42⇑i P P 15 17 42.3 +0.4
SJPF pmax pmax
comp=Z,19nm,1.1s,mb5.0
SJPF Ste Jean 88.55 42⇑i P P 15 17 42.3 +0.4
comp=Z,19nm,1.1s,mb5.0
ETSF Etsaut 88.87 43⇑i P P 15 17 43.9 +0.5
comp=Z,16nm,1.0s,mb4.7
ETSF Etsaut 88.87 43⇑i P P 15 17 43.9 +0.5
ETSF pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
ETSF Etsaut 88.87 43⇑i P P 15 17 43.9 +0.5
comp=Z,7.9nm,1.0s,mb4.7
EPF Esparros 89.51 43⇑i P P 15 17 46.7 +0.3
comp=Z,11nm,0.9s,mb4.7
EPF Esparros 89.51 43⇑i P P 15 17 46.7 +0.3
EPF pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
EPF Esparros 89.51 43⇑i P P 15 17 46.7 +0.3
comp=Z,5.6nm,0.9s,mb4.7
QUIF Quistinic 89.87 38⇑i P P 15 17 47.3 -0.6
comp=Z,22nm,0.9s,mb5.0
QUIF Quistinic 89.87 38⇑i P P 15 17 47.3 -0.6
QUIF pmax pmax
comp=Z,11nm,0.9s,mb5.0
QUIF Quistinic 89.87 38⇑i P P 15 17 47.3 -0.6
comp=Z,11nm,0.9s,mb5.0
ROSF Rostrenen 90.03 37⇑i P P 15 17 48.1 -0.6
comp=Z,35nm,0.9s,mb5.2
ROSF Rostrenen 90.03 37⇑i P P 15 17 48.1 -0.6
ROSF pmax pmax
comp=Z,18nm,0.9s,mb5.2
ROSF Rostrenen 90.03 37⇑i P P 15 17 48.1 -0.6
comp=Z,18nm,0.9s,mb5.2
SGMF Saint Gilles 90.39 38 eP P 15 17 49.5 -0.9
LFF La Frestale 90.69 42⇑i P P 15 17 51.7 -0.1
comp=Z,92nm,0.8s,mb5.7
LFF La Frestale 90.69 42⇑i P P 15 17 51.7 -0.1
LFF pmax pmax
comp=Z,46nm,0.8s,mb5.7
LFF La Frestale 90.69 42⇑i P P 15 17 51.7 -0.1
comp=Z,46nm,0.8s,mb5.7
YKA Yellowknife Ar 90.73 340 P P 15 17 51.2 -0.3
comp=Z,7.2nm,0.8s,mb4.9,baz=133,slow=4.6,SNR=36
YKA pP pP 15 18 22.2 -0.6
comp=Z,45nm,0.9s,baz=135,slow=4.7,SNR=37
YKA Yellowknife Ar 90.73 340 P P 15 17 51.2 -0.3
YKA pP pP 15 18 22.2 -0.6
MTLF Montolieu 90.86 43 eP P 15 17 52.3 -0.4
comp=Z,43nm,1.3s,mb5.1
MTLF Montolieu 90.86 43 eP P 15 17 52.3 -0.4
MTLF pmax pmax
comp=Z,22nm,1.3s,mb5.1
MTLF Montolieu 90.86 43 eP P 15 17 52.3 -0.4
comp=Z,22nm,1.3s,mb5.1
MFF Saint Martin d 90.97 40 eP P 15 17 52.8 -0.3
comp=Z,91nm,1.0s,mb5.5
MFF Saint Martin d 90.97 40 eP P 15 17 52.8 -0.3
MFF pmax pmax
comp=Z,46nm,1.0s,mb5.6
MFF Saint Martin d 90.97 40 eP P 15 17 52.8 -0.3
comp=Z,46nm,1.0s,mb5.6
RJF Les Rejaudoux 91.35 42⇑i P P 15 17 54.5 -0.4
comp=Z,41nm,0.9s,mb5.2
RJF Les Rejaudoux 91.35 42⇑i P P 15 17 54.5 -0.4
RJF pmax pmax
comp=Z,20nm,0.9s,mb5.2
RJF Les Rejaudoux 91.35 42⇑i P P 15 17 54.5 -0.4
comp=Z,20nm,0.9s,mb5.2
GRR Gorron 91.44 38⇑i P P 15 17 54.4 -0.8
comp=Z,37nm,1.2s,mb5.1
GRR Gorron 91.44 38⇑i P P 15 17 54.4 -0.8
GRR pmax pmax
comp=Z,19nm,1.2s,mb5.1
GRR Gorron 91.44 38⇑i P P 15 17 54.4 -0.8
comp=Z,18nm,1.2s,mb5.1
CAF Calviac 91.51 42 eP P 15 17 55.5 -0.1
comp=Z,33nm,1.0s,mb5.2
CAF Calviac 91.51 42 eP P 15 17 55.5 -0.1
CAF pmax pmax
comp=Z,16nm,1.0s,mb5.2
CAF Calviac 91.51 42 eP P 15 17 55.5 -0.1
comp=Z,16nm,1.0s,mb5.2
FLN La Foliniere 91.84 38 eP P 15 17 56.5 -0.6
comp=Z,52nm,1.3s,mb5.3
FLN La Foliniere 91.84 38 eP P 15 17 56.5 -0.6
FLN pmax pmax
comp=Z,26nm,1.3s,mb5.3
FLN La Foliniere 91.84 38 eP P 15 17 56.5 -0.6
comp=Z,26nm,1.3s,mb5.3
LDF La Druitiere 91.97 38 eP P 15 17 56.9 -0.7
comp=Z,53nm,1.3s,mb5.3
LDF La Druitiere 91.97 38 eP P 15 17 56.9 -0.7
LDF pmax pmax
comp=Z,26nm,1.3s,mb5.3
LDF La Druitiere 91.97 38 eP P 15 17 56.9 -0.7
comp=Z,26nm,1.3s,mb5.3
TCF Toulx Ste Croi 92.24 41⇑i P P 15 17 58.4 -0.6
comp=Z,24nm,1.0s,mb5.1
TCF Toulx Ste Croi 92.24 41⇑i P P 15 17 58.4 -0.6
TCF pmax pmax
comp=Z,12nm,1.0s,mb5.1
TCF Toulx Ste Croi 92.24 41⇑i P P 15 17 58.4 -0.6
comp=Z,12nm,1.0s,mb5.1
LASF Ste Croix 92.25 43 eP P 15 17 59.1 0.0
KEST Kesra 92.50 53 P P 15 18 01.4 +1.0
comp=Z,3.2nm,0.9s,mb4.7,baz=234,slow=1.7,SNR=9.2
BGF Bois d'Agland 92.76 41⇑i P P 15 18 01.0 -0.4
comp=Z,54nm,0.9s,mb5.5
BGF Bois d'Agland 92.76 41⇑i P P 15 18 01.0 -0.4
BGF pmax pmax
comp=Z,27nm,0.9s,mb5.6
BGF Bois d'Agland 92.76 41⇑i P P 15 18 01.0 -0.4
comp=Z,27nm,0.9s,mb5.6
AVF Avril sur Loir 93.17 41⇑i P P 15 18 02.6 -0.7
comp=Z,29nm,1.2s,mb5.2
AVF Avril sur Loir 93.17 41⇑i P P 15 18 02.6 -0.7
AVF pmax pmax
comp=Z,14nm,1.2s,mb5.2
AVF Avril sur Loir 93.17 41⇑i P P 15 18 02.6 -0.7
comp=Z,14nm,1.2s,mb5.2
SSF Saint Saulge 93.39 41⇑i P P 15 18 03.4 -0.9
comp=Z,24nm,1.1s,mb5.1
SSF Saint Saulge 93.39 41⇑i P P 15 18 03.4 -0.9
SSF pmax pmax
comp=Z,12nm,1.1s,mb5.1
SSF Saint Saulge 93.39 41⇑i P P 15 18 03.4 -0.9
comp=Z,12nm,1.1s,mb5.1
SMF Signal de Mont 93.41 41⇑i P P 15 18 04.0 -0.3
comp=Z,62nm,1.1s,mb5.5
SMF Signal de Mont 93.41 41⇑i P P 15 18 04.0 -0.3
SMF pmax pmax
comp=Z,31nm,1.1s,mb5.5
SMF Signal de Mont 93.41 41⇑i P P 15 18 04.0 -0.3
comp=Z,31nm,1.1s,mb5.5
LMR La Mourre 93.66 45⇑i P P 15 18 05.7 +0.1
comp=Z,33nm,1.0s,mb5.3
LMR La Mourre 93.66 45⇑i P P 15 18 05.7 +0.1
LMR pmax pmax
comp=Z,17nm,1.0s,mb5.3
LMR La Mourre 93.66 45⇑i P P 15 18 05.7 +0.1
comp=Z,16nm,1.0s,mb5.3
LOR Lormes 93.70 41⇑i P P 15 18 04.8 -0.9
comp=Z,21nm,1.1s,mb5.1
LOR Lormes 93.70 41⇑i P P 15 18 04.8 -0.9
LOR pmax pmax
comp=Z,10.0nm,1.1s,mb5.1
LOR Lormes 93.70 41⇑i P P 15 18 04.8 -0.9
comp=Z,10nm,1.1s,mb5.1
DLBC Dease Lake 93.84 332 epP pP 15 18 36.9 -0.5
ORIF Oris-en-Rattie 93.92 43 eP P 15 18 07.4 +0.6
comp=Z,29nm,1.0s,mb5.2
ORIF Oris-en-Rattie 93.92 43 eP P 15 18 07.4 +0.6
ORIF pmax pmax
comp=Z,14nm,1.0s,mb5.2
ORIF Oris-en-Rattie 93.92 43 eP P 15 18 07.4 +0.6
comp=Z,14nm,1.0s,mb5.3
MBDF Montbardon 94.42 44 eP P 15 18 09.5 +0.5
comp=Z,17nm,1.0s,mb5.0
MBDF Montbardon 94.42 44 eP P 15 18 09.5 +0.5
MBDF pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
MBDF Montbardon 94.42 44 eP P 15 18 09.5 +0.5
comp=Z,8.5nm,1.0s,mb5.0
LPL La Plagne 94.72 43 eP P 15 18 11.1 +0.7
comp=Z,22nm,1.2s,mb5.2
LPL La Plagne 94.72 43 eP P 15 18 11.1 +0.7
LPL pmax pmax
comp=Z,11nm,1.2s,mb5.2
LPL La Plagne 94.72 43 eP P 15 18 11.1 +0.7
comp=Z,11nm,1.2s,mb5.2
LPG La Plagne 94.73 43⇑i P P 15 18 11.3 +0.9
comp=Z,20nm,1.1s,mb5.2
LPG La Plagne 94.73 43⇑i P P 15 18 11.3 +0.9
LPG pmax pmax
comp=Z,10.0nm,1.1s,mb5.2
LPG La Plagne 94.73 43⇑i P P 15 18 11.3 +0.9
comp=Z,9.8nm,1.1s,mb5.2
CABF La Chapelle 94.78 42 eP P 15 18 09.6 -1.1
comp=Z,8.8nm,1.1s,mb4.8
CABF La Chapelle 94.78 42 eP P 15 18 09.6 -1.1
CABF pmax pmax
comp=Z,4.0nm,1.1s,mb4.8
CABF La Chapelle 94.78 42 eP P 15 18 09.6 -1.1
comp=Z,4.4nm,1.1s,mb4.8
MEZF Maizieres J'vi 94.97 40⇑i P P 15 18 10.9 -0.6
comp=Z,20nm,0.8s,mb5.3
MEZF Maizieres J'vi 94.97 40⇑i P P 15 18 10.9 -0.6
comp=Z,20nm,0.8s,mb5.6
BAIF Baives 95.15 38⇑i P P 15 18 11.6 -0.7
SUMG Summit 95.33 9 eP P 15 18 13.2 +0.6
comp=Z,5.2nm,0.8s,mb5.0
SUMG Summit 95.33 9 i P P 15 18 13.9 +1.3
comp=Z,5.4nm,0.8s,mb5.0
DOU Dourbes 95.39 38 P P 15 18 13.4 0.0
comp=Z,7.7nm,1.9s,mb4.8
SNF Seneffe 95.40 38 P P 15 18 13.1 -0.3
comp=Z,5.1nm,1.6s,mb4.7
GIVF Givet 95.53 38⇑i P P 15 18 13.5 -0.5
comp=Z,38nm,1.1s,mb5.4
GIVF Givet 95.53 38⇑i P P 15 18 13.5 -0.5
GIVF pmax pmax
comp=Z,19nm,1.1s,mb5.4
GIVF Givet 95.53 38⇑i P P 15 18 13.5 -0.5
comp=Z,19nm,1.1s,mb5.4
HAU Haudompre 95.53 41 eP P 15 18 13.3 -0.8
comp=Z,14nm,1.0s,mb5.1
HAU Haudompre 95.53 41 eP P 15 18 13.3 -0.8
HAU pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
HAU Haudompre 95.53 41 eP P 15 18 13.3 -0.8
comp=Z,7.3nm,1.0s,mb5.1
UCC Uccle 95.57 38 P P 15 18 13.6 -0.5
HINF Hinteralfeld 95.76 41 eP P 15 18 14.4 -0.7
BCLA Clavier 95.94 38 P P 15 18 15.7 -0.2
comp=Z,7.0nm,1.7s,mb4.8
WLF Walferdange 96.12 39 P P 15 18 17.2 +0.5
comp=Z,14nm,1.3s,mb5.2
WLF Walferdange 96.12 39 eP P 15 18 16.4 -0.3
comp=Z,22nm,1.1s,mb5.5
CDF Champ du Feu 96.27 40 eP P 15 18 16.8 -0.6
comp=Z,30nm,1.4s,mb5.2
CDF Champ du Feu 96.27 40 eP P 15 18 16.8 -0.6
CDF pmax pmax
comp=Z,15nm,1.4s,mb5.2
CDF Champ du Feu 96.27 40 eP P 15 18 16.8 -0.6
comp=Z,15nm,1.4s,mb5.2
MEM Membach 96.43 38 P P 15 18 18.4 +0.4
comp=Z,2.3nm,0.9s,mb4.6
BFO Black Forest 96.88 41 i P P 15 18 21.0 +0.9
DAVA Damuels 97.43 42⇑i P P 15 18 23.0 +0.3
comp=Z,7.9nm,1.2s,mb5.0
BUG Bochum--Univer 97.50 38 eP P 15 18 22.9 0.0
comp=Z,19nm,1.2s,mb5.5
STU Stuttgart 97.58 41 eP P 15 18 23.3 0.0
comp=Z,12nm,0.7s,mb5.5
TNS Taunus Mts 97.70 39 eP P 15 18 23.5 -0.3
comp=Z,19nm,1.1s,mb5.5
FETA Feichten 97.87 43⇑iPdiff P 15 18 24.8 +0.2
comp=Z,8.6nm,1.2s,mb5.2
RETA Reutte 98.06 42⇑iPdiff P 15 18 25.7 +0.2
comp=Z,7.2nm,1.2s,mb5.1
IBBN Ibbenburen 98.13 37 eP P 15 18 25.7 0.0
comp=Z,23nm,1.1s,mb5.6
MOTA Moosalm 98.22 42⇑iPdiff P 15 18 26.3 +0.1
comp=Z,6.1nm,1.0s,mb5.1
WATA Walderalm 98.52 43⇑iPdiff P 15 18 27.5 -0.1
comp=Z,10nm,1.1s,mb5.3
WTTA Wattenberg 98.53 43⇑iPdiff P 15 18 27.8 +0.2
comp=Z,18nm,0.9s,mb5.6
ABTA Abfaltersbach 98.91 43⇑iPdiff P 15 18 29.2 -0.1
comp=Z,8.5nm,0.9s,mb5.3
GRF Grafenberg Arr 99.16 40 eP P 15 18 30.6 +0.3
comp=Z,13nm,1.3s,mb5.3
GRF Grafenberg Arr 99.16 40 eP P 15 18 30.6 +0.3
GRF pmax pmax
comp=Z,13nm,1.3s,mb5.3
GRF Grafenberg Arr 99.16 40 eP P 15 18 30.6 +0.3
comp=Z,13nm,1.3s,mb5.3
CLZ Clausthal 99.44 38 eP Pdif 15 18 32.0 +0.2
comp=Z,6.0nm,1.0s
NRDL Niedersach Rie 99.53 37 eP Pdif 15 18 32.4 +0.2
comp=Z,10.0nm,1.1s
MYKA Terra Mystica 99.59 44⇑iPdiff Pdif 15 18 32.6 +0.2
comp=Z,5.8nm,0.8s
MOX Moxa 99.74 40 eP Pdif 15 18 33.1 0.0
comp=Z,4.0nm,1.2s
WET Wettzell 99.97 41 eP Pdif 15 18 34.2 +0.1
comp=Z,3.0nm,1.0s
OBKA Obir 100.14 44⇑iPdiff Pdif 15 18 35.2 +0.3

comp=Z,7.9nm,0.9s
BSEG Bad Segeberg 100.17 36 *e*P Pdif 15 18 34.8 -0.2
comp=Z,7.0nm,0.8s
GEC2 GERESS Array S 100.38 42 *e*P Pdif 15 18 35.7 -0.2
comp=Z,3.0nm,0.8s
GEC2 GERESS Array S 100.38 42 *e*P Pdif 15 18 35.0 -0.9
GEC2 pmax pmax
comp=Z,539nm,0.8s
GEC2 GERESS Array S 100.38 42 *e*Pdif Pdif 15 18 35.0 -0.9
comp=Z,539nm,0.8s
GERES GERESS Array B 100.38 42 P Pdif 15 18 36.0 +0.1
comp=Z,1.4nm,0.8s,baz=250,slow=4.0,SNR=13
MOA Molln 100.41 43⇑ *i*Pdiff Pdif 15 18 36.5 +0.4
comp=Z,7.5nm,1.6s
SOKA Soboth 100.51 44⇑ *i*Pdiff Pdif 15 18 35.6 -0.9
comp=Z,3.5nm,1.0s
CLL Collm 100.79 39 *e*P Pdif 15 18 38.1 +0.4
comp=Z,6.0nm,1.0s
CLL Collm 100.79 39 *i* P Pdif 15 18 38.2 +0.5
CLL pmax pmax
comp=Z,6.0nm,1.0s
CLL Collm 100.79 39 *i* Pdif Pdif 15 18 38.2 +0.5
CLL Collm 100.79 39⇓ *i*Pdif Pdif 15 18 38.2 +0.5
comp=Z,6.0nm,1.0s
CLL *es*Pdif 15 19 20.0
ARSA Arzberg 101.02 44⇑ *i*Pdiff Pdif 15 18 38.5 -0.2
comp=Z,1.3nm,0.6s
BRG Berggiesshubel 101.20 40 *e*P Pdif 15 18 37.5 -2.1
comp=Z,2.0nm,0.9s
BRG Berggiesshubel 101.20 40 *e*P Pdif 15 18 37.5 -2.1
BRG pmax pmax
comp=Z,1.0nm,0.9s
CSNA Conrad Observa 101.44 43⇓ *i*Pdiff Pdif 15 18 40.7 0.0
comp=Z,4.8nm,1.3s
CONA Conrad Observa 101.45 43⇑ *i*Pdiff Pdif 15 18 40.7 0.0
comp=Z,4.7nm,1.3s
VYHS Vyhne 103.52 43 *e*P Pdif 15 18 49.9 0.0
VYHS Vyhne 103.52 43 PDIF Pdif 15 18 49.9 0.0
CRVS Cervenica-Dubn 105.30 43 *e*P Pdif 15 18 59.1 +1.3
CRVS Cervenica-Dubn 105.30 43 PDIF Pdif 15 18 59.1 +1.3
BRTR Keskin Array B 112.04 54 PKiKP PKiKP 15 23 24.2 +0.2
comp=Z,1.2nm,0.8s,baz=204,slow=2.5,SNR=7.6
OBN Obninsk 115.34 38⇓ *i*PKIKP PKPdf 15 23 29.4 -0.4
OBN *e* 15 24 30.9
OBN pmax pmax
comp=Z,7.0nm,0.6s
ANN Anapa 115.45 49 *i* PKIKP PKPdf 15 23 28.3 -2.1
ANN *es*SS SS 15 40 12.0 -11
ANN *es*SSS 15 44 33.1
ANN pmax pmax
comp=Z,38nm,1.1s
VSR Storozhevoye 116.88 42 *e*PKIKP PKPdf 15 23 32.7 -0.2
VSR pmax pmax
comp=Z,6.0nm,0.6s
VSR pmax pmax
comp=N,7.0nm,1.0s
VSR pmax pmax
comp=E,4.0nm,0.5s
KIV Kislovodsk 119.16 51 *e*PKIKP PKPdf 15 23 38.0 +0.4
KIV pmax pmax
comp=Z,9.0nm,1.1s
GNI Garni 120.57 55 *i* PKIKP PKPdf 15 23 41.4 +1.0
ARU Arti 127.32 34 *i* PKIKP PKPdf 15 23 53.3 +0.5
ARU 15 25 55.0
ARU 15 30 47.6
ARU SS SS 15 42 45.3 -8.5
ARU Arti 127.32 34 PKPdf PKPdf 15 23 52.2 -0.6
TIXI Tiksi 128.19 353 *e*PKIKP PKPdf 15 23 53.4 -0.7
SEY Seymchan 129.68 337⇓ *i*PKIKP PKPdf 15 23 57.8 +0.7
ABKAR Akbulak array 130.32 42 *e*PKPdf PKPdf 15 23 59.2 +0.4
ASAR Alice Springs 130.73 207 PKhKP 15 23 47.8
comp=Z,0.3nm,0.7s,baz=114,slow=1.2,SNR=7.9
ASAR PKP PKPdf 15 23 59.5 -0.9
comp=Z,1.3nm,0.9s,baz=125,slow=1.5,SNR=14
ASAR pPKP pPKPdf 15 24 31.1 -2.0
comp=Z,6.0nm,1.0s,baz=154,slow=2.6,SNR=13
ASAR SKPbc SKPbc 15 27 13.4 +0.1
comp=Z,2.7nm,1.1s,baz=171,slow=4.7,SNR=5.8
ASAR Alice Springs 130.73 207 PKHKP 15 23 47.8
ASAR 15 23 59.5
ASAR 15 24 31.2
PETK Petropavlovsk- 132.32 324 pPKP pPKPdf 15 24 34.8 -0.4
comp=Z,7.4nm,1.0s,baz=144,slow=3.5,SNR=3.7
WRA Warramunga Arr 133.78 210 PKP PKPdf 15 24 04.8 -1.5
comp=Z,1.5nm,0.6s,baz=154,slow=1.5,SNR=14
WRA pPKP pPKPdf 15 24 37.1 -1.9
comp=Z,4.3nm,0.9s,baz=161,slow=1.5,SNR=8.5
WRA SKPbc SKPbc 15 27 23.5 -0.7
comp=Z,1.6nm,1.0s,baz=174,slow=3.1,SNR=4.8
WRA Warramunga Arr 133.78 210 PKIKP PKPdf 15 24 04.8 -1.5
WRA 15 24 37.1
BRVK Borovoye 134.89 34*c* *i*PKIKP PKPdf 15 24 05.4 -1.9
BRVK pmax pmax
comp=Z,4.0nm,0.8s
BRVK Borovoye 134.89 34 *e*PKPdf PKPdf 15 24 07.7 +0.5
BVAR Borovoye Array 134.96 34 PKP PKPdf 15 24 08.0 +0.6
comp=Z,4.5nm,0.8s,baz=300,slow=2.9,SNR=27
FITZ Fitzroy Crossi 138.94 201 PKP PKPdf 15 24 13.4 -2.5
comp=Z,2.4nm,1.0s,baz=191,slow=2.7,SNR=2.6
FITZ pPKP pPKPdf 15 24 47.2 -1.4
comp=Z,4.2nm,0.8s,baz=125,slow=11,SNR=4.6
KURK Kurchatov 140.50 33 *e*PKIKP PKPdf 15 24 17.1 -0.6
ZAA0 Zalesovo Array 141.14 25 PKPpre 15 24 12.8
ZALV Zalesovo Beam 141.14 25 PKhKP 15 24 11.9
comp=Z,2.8nm,0.7s,baz=315,slow=3.8,SNR=12
ZALV PKP PKPdf 15 24 18.9 +0.2
comp=Z,11nm,0.6s,baz=289,slow=2.5,SNR=32
ZALV pPKP pPKPdf 15 24 51.1 -0.3
comp=Z,5.5nm,0.7s,baz=289,slow=2.5,SNR=3.2
ZALV Zalesovo Beam 141.14 25 PKP 15 24 11.9
ZALV PKP PKPdf 15 24 18.9 +0.2
ZALV pPKP pPKPdf 15 24 51.1 -0.3
EKS2 Erkin-Say 141.59 47 *e*PKPdf PKPdf 15 24 19.0 -0.9
AML Almayashu 141.73 48 *e*PKPdf PKPdf 15 24 19.5 -0.6
AAK Ala-Archa 142.09 46 *e*PKIKP PKPdf 15 24 20.9 +0.1
UCH Uchtor 142.26 47 *e*PKPpre PKPdf 15 24 19.8 -1.3
TKM2 Tokmak 2 142.71 45 *e*PKIKP PKPdf 15 24 18.9 -3.0
KSH Kashi 144.29 51 *e*PKP PKPdf 15 24 23.9 -0.9
KSH PKS 15 27 58.4
KSH SKS SKSdf 15 31 22.2 -0.9
KSH SKKS SKKSac 15 34 16.9 -5.2
KSH AMB AMB
comp=Z,150nm,5.0s
KSH LR LR
comp=N,80nm,5.0s
KSH LR LR
comp=E,74nm,8.4s
KSH LR LR
comp=Z,76nm,5.4s
MK31 Makanchi Array 144.80 36 *e*PKIKP PKPdf 15 24 25.0 -0.4
MK31 *e* 15 24 57.6
MKAR Makanchi Array 144.80 36 PKP PKPdf 15 24 25.2 -0.2
comp=Z,57nm,0.9s,baz=354,slow=3.9,SNR=363
MKAR pPKP pPKPdf 15 24 58.0 -0.2
comp=Z,17nm,0.8s,baz=4.0,slow=4.3,SNR=5.8
THN Thein Dam 146.04 63 *e*PKP PKPdf 15 24 28.0 0.0
ERM Erimo 146.09 316 *e*PKP2 PKPab 15 24 29.5 -0.2
HABR Khabarovsk 146.62 331⇑ *e*PKIKP PKPdf 15 24 28.5 0.0
HABR *i* 15 24 32.1
HABR *e* 15 25 01.6
HABR *e* 15 31 24.5
HABR *e* 15 40 28.5
HABR SS SS 15 46 43.6 +1.1
HABR *es*SSS 15 52 15.7
HABR pmax pmax
comp=Z,27nm,1.0s
HABR MLR MLR
comp=Z,99nm,23.0s
KHET Khetri 146.69 70 *e*PKP PKPdf 15 24 30.1 +0.8
KHET AMb AMB 15 24 31.4
comp=Z,31nm,0.9s
RTK Rohtak 147.14 69 *e*PKP PKPdf 15 24 30.5 +0.5
RTK AMb AMB 15 24 33.3
comp=Z,161nm,1.0s
KLR Kul'dur 147.43 335 *e*PKHKP 15 24 25.2
KLR pmax pmax
comp=Z,70nm,1.4s
SONA Sohna 147.80 70 *e*PKP PKPdf 15 24 31.7 +0.6
SONA AMb AMB 15 24 37.5
comp=Z,41nm,1.6s
AYAN Aya Nagar 147.82 69 *e*PKP PKPbc 15 24 34.4 +0.2
AYAN AMb AMB 15 24 39.0
comp=Z,43nm,0.9s
MOY Mondy 148.12 13 *e*PKP2 PKPbc 15 24 35.4 +1.2
MOY pmax pmax
comp=Z,52nm,1.7s
IRK Irkutsk 148.13 9 *e*PKIKP PKPdf 15 24 31.4 +0.6
IRK *e* 15 25 02.4
IRK pmax pmax
comp=Z,50nm,1.6s
KLP Kalpa 148.32 63 *e*PKP PKPdf 15 24 33.5 +1.6
KLP AMb AMB 15 24 37.6
comp=Z,54nm,1.2s
DDI Dehra Dun 148.38 66 *e*PKP PKPdf 15 24 29.8 -2.2
DDI *ex* x 15 25 10.8
TLY Talaya 148.59 10 *e*PKP2 PKPbc 15 24 36.1 +0.7
TLY pmax pmax
comp=Z,24nm,0.9s
TLY Talaya 148.59 10 *e*PKPbc PKPbc 15 24 35.4 0.0
HYB Hyderabad 148.60 91 *e*PKP2 PKPab 15 24 40.0 -0.3
HYB Hyderabad 148.60 91 *i* PKP PKPab 15 24 37.0 -3.3
CIT Chita 148.84 358 *e*PKP2 PKPbc 15 24 36.8 +0.8
CIT pmax pmax
comp=Z,96nm,2.0s
JOSI Joshimath 149.61 65 *e*PKP PKPdf 15 24 35.6 +1.7
JOSI AMb AMB 15 24 41.7
comp=Z,331nm,1.2s
WMQ Urumqi 149.63 36 *e*PKPbc PKPdf 15 24 35.0 +1.5
ZAK Zakamensk 149.78 11 *e*PKHKP PKPdf 15 24 34.2 +0.6
ZAK pmax pmax
comp=Z,7.0nm,1.6s
MDJ Mudanjiang 152.00 332 PKPbc PKPab 15 25 06.7 +13
MDJ pPKP pPKPdf 15 25 18.2 +8.2
MDJ sPKP 15 25 24.0
MDJ PKS 15 28 03.1
MDJ PP PP 15 28 27.3 +2.1
MDJ SKS SKSdf 15 31 30.2 -3.1
MDJ SKKS 15 40 17.6
MDJ SS SS 15 47 46.9 +4.5
MDJ AMB AMB
comp=Z,130nm,25.1s
MDJ LR LR
comp=N,71nm,20.3s
MDJ LR LR
comp=E,73nm,18.2s
MDJ LR LR
comp=Z,100nm,28.4s
MJAR Matsushiro Arr 152.04 310 PKPbc PKPbc 15 24 43.5 -0.6
comp=Z,4.5nm,0.7s,baz=89,slow=1.1,SNR=24
MJAR pPKPbc pPKPbc 15 25 13.9 -2.9
comp=Z,6.4nm,0.9s,baz=91,slow=1.0,SNR=8.0
MAJO Matsushiro 152.04 310 *e*PKIKP PKPbc 15 24 43.1 -1.1
MAT Matsushiro 152.04 310 PKP PKPbc 15 24 43.4 -0.8
SONM Songino Array 152.73 8 PKP PKPdf 15 24 38.7 +0.6
comp=Z,3.3nm,0.8s,baz=306,slow=0.8,SNR=9.5
SONM PKPbc PKPbc 15 24 45.8 +0.5
comp=Z,7.3nm,0.7s,baz=314,slow=1.1,SNR=16
SONM PKPab PKPab 15 24 57.4 +0.9
comp=Z,5.3nm,0.7s,baz=324,slow=3.8,SNR=8.3
SONM pPKPab pPKPab 15 25 25.5 -2.6
comp=Z,5.2nm,0.9s,baz=307,slow=1.8,SNR=2.7
ULN Ulaanbaatar 152.78 7 *e*PKPdf PKPdf 15 24 38.7 +0.5
ULN *e*PKPbc PKPbc 15 24 45.1 -0.3
ULN *e*PKPab PKPab 15 24 56.7 0.0
CN2 Changchun 154.36 336 *e*PKPbc PKPdf 15 24 42.3 +1.7
CN2 PP PP 15 28 44.3 +5.9
CN2 AMB AMB
comp=Z,200nm,8.0s
CN2 LR LR
comp=N,200nm,20.0s
CN2 LR LR
comp=E,200nm,20.0s
CN2 LR LR
comp=Z,200nm,21.0s
KSRS Korea Array 158.22 323 PKP PKPdf 15 24 46.2 +0.4
comp=Z,2.8nm,0.9s,baz=39,slow=1.1,SNR=18
KSRS PKPab PKPab 15 25 17.9 -2.4
comp=Z,4.7nm,1.1s,baz=38,slow=0.5,SNR=11
KSRS pPKPab pPKPab 15 25 51.2 -0.7
comp=Z,10nm,1.0s,baz=64,slow=4.4,SNR=12
GTA Gaotai 158.89 26 *e*PKP PKPdf 15 24 47.2 +0.6
GTA pPKP pPKPdf 15 25 19.7 +0.2
GTA PKPab PKPab 15 25 23.5 +0.4
GTA sPKP 15 25 27.3
GTA PP PP 15 29 05.4 +1.9
GTA SKKS SKKSac 15 35 39.5 -2.0
GTA SS SS 15 48 57.4 +0.9
GTA AMB AMB
comp=Z,170nm,5.9s
GTA LR LR
comp=N,120nm,15.5s
GTA LR LR
comp=E,85nm,20.5s
GTA LR LR
comp=Z,140nm,21.1s
HHC Hu-ho-hao-te 160.05 0 *e*PKP PKPdf 15 24 45.7 -2.2
HHC PKS 15 28 18.2
HHC SKS SKSdf 15 31 39.9 -2.1
HHC SKKS SKKSac 15 35 48.3 +1.0
HHC LR LR
comp=N,130nm,20.2s
HHC LR LR
comp=E,110nm,21.4s
HHC LR LR
comp=Z,150nm,22.6s
BJI Beijing 160.46 350 PKP PKPdf 15 24 47.7 -0.7
BJI pPKP pPKPdf 15 25 17.0 -4.2
BJI sPKP 15 25 28.9
BJI PP PP 15 29 12.9 +1.3
SHL Shillong 161.25 72 *e*PKP PKPdf 15 24 51.0 +1.3
LZH Lanzhou 163.34 22 *e*PKP PKPdf 15 24 52.9 +1.5
LZH pPKP pPKPdf 15 25 23.4 -0.9
LZH sPKP 15 25 35.0
LZH PKS 15 28 26.5
LZH PP PP 15 29 31.5 +4.3
LZH SKS SKSdf 15 31 47.7 +2.7
LZH SKKS SKKSac 15 36 09.5 +4.9
LZH SS SS 15 49 45.0 +2.1
LZH AMB AMB
comp=Z,41nm,4.6s
LZH LR LR
comp=N,330nm,16.2s
LZH LR LR
comp=Z,590nm,17.9s
NJ2 Nanjing 167.09 331 *e*PKP PKPdf 15 24 56.1 +1.4
CD2 Chengdu 167.72 34 *e*PKP PKPdf 15 24 55.1 -0.1
CD2 PKPab PKPab 15 26 04.4 +2.2
CD2 PP PP 15 29 53.7 +3.4
CD2 SKS SKSdf 15 31 47.4 -0.7
CD2 SKKS SKKSac 15 36 29.6 +2.8
CD2 SS SS 15 50 31.7 +3.6
CD2 AMB AMB
comp=Z,180nm,8.4s
CD2 LR LR
comp=N,180nm,21.8s
CMAR Chiang Mai Arr 167.82 99 PKP PKPdf 15 24 55.7 +0.1
comp=N,1.5nm,0.9s,baz=264,slow=2.7,SNR=9.6
CMAR PKPab PKPab 15 26 03.2 +0.1
comp=N,4.2nm,0.8s,baz=257,slow=6.3,SNR=27
CHTO Chiang Mai 167.90 97 *e*PKP2 PKPab 15 26 03.3 -0.2
GYA Guiyang 172.79 38 PKP PKPdf 15 24 55.8 -2.4
GYA pPKP pPKPdf 15 25 28.7 -2.4
GYA sPKP 15 25 41.0
GYA PKPab PKPab 15 26 25.3 +0.6
GYA PKS 15 28 27.9
GYA PP PP 15 30 17.4 +1.6
GYA SKKS SKKSac 15 36 50.0 -1.7
GYA SS SS 15 51 17.2 -1.2
GYA AMB AMB
comp=Z,140nm,8.3s
GYA LR LR
comp=N,130nm,24.9s
GYA LR LR
comp=E,120nm,25.0s
GYA LR LR
comp=Z,150nm,13.2s

IDC 08 15:06:44.7±5.7, 2°.58S×140°.06E, h0km, mb3.2/2, mb1 3.5/3, mb1mx3.3/14, mbtmp3.3/3, ML3.1/1, Error ellipse: s-maj=222.3km s-min=29.3km az=87.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.14**	**198**	P	Pn	15 10 56.5	-1.8
0.1nm,0.3s,baz=13,slow=13,SNR=5.6							
ASAR	**Alice Springs**	**21.80**	**195**	P	P	15 11 39.5	+1.1
0.9nm,0.6s,baz=27,slow=9.4,SNR=24							
MKAR	**Makanchi Array**	**70.51**	**322**	P	P	15 18 01.4	+0.1
0.1nm,0.5s,baz=103,slow=5.0,SNR=3.6							

TEH **08** *15:14:10.2, 37°.60N×43°.15E, h18km*
ISK **08** *15:14:14.7, 37°.72N×43°.73E, h5km, MD3.3*
CSEM **08** *15:14:15.3±0.3, 37°.74N×43°.76E, h2km, MD3.3, Error ellipse: s-maj=12.1km s-min=3.7km az=84.0*
ISCJB **08** *15:14:15.0±0.6, 37°.75N±0°.03×43°.75E±0°.05, h4km±6km, Error ellipse: s-maj=6.7km s-min=4.8km az=6.8*
ISC 08 15:14:15.6±0.7, 37°.76N±0°.03×43°.75E±0°.05, h2km±7km, n22, σ0s94/31, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HKR	**Hakkari**	**0.18**	**182**	PG	**Pg**	**15 14 18.3**	**-0.8**
HKR				*e*SG	**Sg**	**15 14 20.8**	**-0.5**
HKR	**Hakkari**	**0.18**	**182**	*i* Pg	**Pg**	**15 14 18.3**	**-0.7**
HKR				*e*Sg	**Sg**	**15 14 20.8**	**-0.6**
CUKT	**Cukurca**	**0.52**	**193**	PG	**Pg**	**15 14 24.4**	**-1.2**
CUKT				*e*SG	**Sg**	**15 14 31.5**	**-0.9**
CUKT	**Cukurca**	**0.52**	**193**	*i* Pg	**Pg**	**15 14 24.4**	**-1.2**
CUKT				*e*Sg	**Sg**	**15 14 31.5**	**-0.9**
VANT	**Van**	**0.77**	**330**	*e*PG	**Pg**	**15 14 30.6**	**+0.4**
VANB	**Van**	**0.88**	**341**	*e*PG	**Pg**	**15 14 32.5**	**-0.1**
VANB	**Van**	**0.88**	**341**	*e*Pg	**Pg**	**15 14 32.5**	**0.0**
CLDR	**Caldiran**	**1.39**	**5**	*e*PN	**Pn**	**15 14 42.0**	**0.0**
CLDR	**Caldiran**	**1.39**	**5**	*e*Pn	**Pn**	**15 14 42.0**	**0.0**
MSL	**Mosul**	**1.45**	**201**	*e*Pn	**Pg**	**15 14 46.0**	**+2.6**
MSL				*e*Sn	**Sg**	**15 15 04.5**	**+2.4**
MSL	**Mosul**	**1.45**	**201**	*e*Pn	**Pg**	**15 14 46.0**	**+2.6**
MSL				*e*Sn	**Sg**	**15 15 04.5**	**+2.4**
ISHB	**Shabestar**	**1.56**	**70**	*e*Pn	**Pn**	**15 14 43.4**	**-1.0**
ISHB				*e*		15 15 15.5	
comp=Z,802nm,0.3s							
IAZR	**Azarshahr**	**1.77**	**92**	*e*Pn	**Pn**	**15 14 46.8**	**-0.5**
IAZR				*e*		15 14 53.8	
comp=Z,2μm,0.1s							
IAZR				*e*Sn	**Sg**	**15 15 13.7**	**+1.2**
IMRD	**Marand**	**1.81**	**58**	*e*Pn	**Pn**	**15 14 47.7**	**-0.1**
IMRD				*e*		15 15 00.8	
comp=Z,1μm,0.2s							
BTMT	**Batman**	**1.84**	**284**	*e*PN	**Pg**	**15 14 49.8**	**-1.0**
AGRB	**Hanur-Agry**	**1.91**	**342**	*e*PN	**Pg**	**15 14 49.8**	**+0.6**
AGRB	**Hanur-Agry**	**1.91**	**342**	*e*Pn	**Pn**	**15 14 49.8**	**+0.6**
ITBZ	**Tabriz**	**1.95**	**75**	*e*Pn	**Pn**	**15 14 49.4**	**-0.4**
ITBZ				*e*		15 14 53.7	
comp=Z,349nm,0.2s							
SVRC	**Sivrice-ELAZID**	**3.56**	**281**	*e*PN	**Pn**	**15 15 12.5**	**+0.7**
SVRC	**Sivrice-ELAZID**	**3.56**	**281**	*e*Pn	**Pn**	**15 15 12.5**	**+0.6**
BHD	**Baghdad**	**4.51**	**173**	*e*Pn	**Pn**	**15 15 25.0**	**+0.1**
BHD				*e*Sn	**Sn**	**15 16 18.0**	**+0.1**
BHD	**Baghdad**	**4.51**	**173**	*e*Pn	**Pn**	**15 15 25.0**	**+0.1**
BHD				*e*Sn	**Sn**	**15 16 18.0**	**+0.1**

ATH **08** *15:23:21.1, 38°.03N×21°.52E, h22km, ML3.1*
NEIC **08** *15:23:21.1, 38°.03N×21°.52E, h22km, ML3.1(ATH), After ATH.*
CSEM **08** *15:23:21.6±0.2, 38°.02N×21°.54E, h10km, ML3.1, Error ellipse: s-maj=3.9km s-min=3.4km az=91.0*
ISCJB **08** *15:23:21.6±0.3, 38°.01N±0°.02×21°.55E±0°.02, h11km±2km, Error ellipse: s-maj=3.3km s-min=3.2km az=146.5*
THE **08** *15:23:22.2, 38°.02N×21°.57E, h7km±1km, ML3.9/12, Error ellipse: s-maj=1.3km s-min=0.6km az=184.0*
ISC 08 15:23:22.2±0.3, 38°.02N±0°.02×21°.55E±0°.02, h12km±2km, n101, σ1s02/148, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.08**	**302**	*e*Pb	**Pg**	**15 23 25.2**	**+0.5**
RLS				*e*Sb	**Sg**	**15 23 28.0**	**+1.4**
RLS	**Riolos of Patr**	**0.08**	**302**	*e*PB	**Pg**	**15 23 25.2**	**+0.5**
RLS				*e*SB	**Sg**	**15 23 28.0**	**+1.4**
RLS	**Riolos of Patr**	**0.08**	**302**	*e*Pb	**Pg**	**15 23 25.2**	**+0.5**
RLS				*e*Sb	**Sg**	**15 23 28.0**	**+1.4**
UPR	**University Cam**	**0.33**	**34**	P	**Pg**	**15 23 28.6**	**-0.1**
UPR				S	**Sg**	**15 23 33.3**	**+0.1**
UPR	**University Cam**	**0.33**	**34**	*e*PB	**Pg**	**15 23 28.6**	**-0.1**
UPR				*e*SB	**Sg**	**15 23 34.2**	**+1.0**
UPR	**University Cam**	**0.33**	**34**	P	**Pg**	**15 23 28.6**	**-0.1**
UPR				S	**Sg**	**15 23 33.3**	**+0.1**
UPR				*e*Sb	**Sg**	**15 23 34.2**	**+1.0**
LAKA	**Lakka**	**0.40**	**56**	P	**Pg**	**15 23 29.4**	**-0.8**
LAKA				S	**Sg**	**15 23 36.0**	**+0.4**
LAKA	**Lakka**	**0.40**	**56**	P	**Pg**	**15 23 29.4**	**-0.8**
LAKA				S	**Sg**	**15 23 36.0**	**+0.4**
EFP	**Efpalio**	**0.50**	**34**	P	**Pg**	**15 23 31.1**	**-0.8**
EFP				S	**Sg**	**15 23 38.3**	**-0.2**
EFP	**Efpalio**	**0.50**	**34**	*e*PN	**Pg**	**15 23 31.1**	**-0.8**
EFP				*e*SN	**Sg**	**15 23 38.5**	**0.0**
EFP	**Efpalio**	**0.50**	**34**	P	**Pg**	**15 23 31.1**	**-0.8**
EFP				S	**Sg**	**15 23 38.3**	**-0.2**
TRIZ	**Trizonia**	**0.54**	**49**	P	**Pg**	**15 23 31.9**	**-0.8**
TRIZ				S	**Sg**	**15 23 40.2**	**+0.4**
TRIZ	**Trizonia**	**0.54**	**49**	P	**Pg**	**15 23 31.9**	**-0.8**
TRIZ				S	**Sg**	**15 23 40.2**	**+0.4**
KALE	**Kalithea**	**0.60**	**51**	P	**Pg**	**15 23 32.8**	**-1.0**
KALE				S	**Sg**	**15 23 42.7**	**+1.1**
KALE	**Kalithea**	**0.60**	**51**	P	**Pg**	**15 23 32.8**	**-1.0**
KALE				S	**Sg**	**15 23 42.7**	**+1.1**
KFL	**Anninata**	**0.61**	**279**	P	**Pg**	**15 23 33.7**	**-0.4**
KFL				S	**Sg**	**15 23 43.2**	**+1.1**
GUR	**Goura**	**0.63**	**97**	P	**Pg**	**15 23 33.7**	**-0.7**
GUR				S	**Sg**	**15 23 43.6**	**+0.9**
GUR	**Goura**	**0.63**	**97**	*e*PB	**Pg**	**15 23 33.4**	**-1.0**
GUR				*e*SN	**Sg**	**15 23 43.4**	**+0.7**
GUR	**Goura**	**0.63**	**97**	*e*Pb	**Pg**	**15 23 33.4**	**-1.0**
GUR	**Goura**	**0.63**	**97**	P	**Pg**	**15 23 33.7**	**-0.7**
GUR				S	**Sg**	**15 23 43.6**	**+0.9**
VLS	**Valsamata**	**0.78**	**282**	*e*Pn	**Pg**	**15 23 35.8**	**-1.4**
VLS				*e*Sn	**Sg**	**15 23 46.8**	**-0.6**
VLS	**Valsamata**	**0.78**	**282**	P	**Pg**	**15 23 35.9**	**-1.3**
VLS				S	**Sg**	**15 23 48.8**	**+1.4**
VLS	**Valsamata**	**0.78**	**282**	*e*PN	**Pg**	**15 23 35.8**	**-1.4**
VLS				*e*SN	**Sg**	**15 23 46.8**	**-0.6**
VLS	**Valsamata**	**0.78**	**282**	P	**Pg**	**15 23 35.9**	**-1.3**
VLS				*e*Sn	**Sg**	**15 23 46.8**	**-0.6**
VLS				S	**Sg**	**15 23 48.8**	**+1.4**
DSF	**Desfina**	**0.86**	**62**	P	**Pg**	**15 23 37.4**	**-1.5**
DSF				S	**Sg**	**15 23 50.5**	**+0.4**
DSF	**Desfina**	**0.86**	**62**	P	**Pg**	**15 23 37.4**	**-1.5**
DSF				S	**Sg**	**15 23 50.5**	**+0.4**
ITM	**Ithomi**	**0.89**	**160**	*e*Pn	**Pg**	**15 23 38.2**	**-1.1**
ITM				*e*Sn	**Sg**	**15 23 51.6**	**+0.8**
ITM	**Ithomi**	**0.89**	**160**	P	**Pg**	**15 23 39.6**	**+0.3**
ITM				S	**Sg**	**15 23 51.6**	**+0.8**
ITM	**Ithomi**	**0.89**	**160**	*e*PN	**Pg**	**15 23 38.2**	**-1.1**
ITM				*e*SN	**Sg**	**15 23 51.6**	**+0.8**
ITM	**Ithomi**	**0.89**	**160**	*e*Pn	**Pg**	**15 23 38.2**	**-1.1**
ITM	**Ithomi**	**0.89**	**160**	P	**Pg**	**15 23 39.6**	**+0.3**
ITM				S	**Sg**	**15 23 51.6**	**+0.8**
VLX	**Vlachokerasia**	**0.92**	**134**	P	**Pg**	**15 23 39.3**	**-0.6**
VLX				S	**Sg**	**15 23 52.6**	**+0.7**
VLX	**Vlachokerasia**	**0.92**	**134**	*e*PN	**Pg**	**15 23 39.2**	**-0.7**
VLX	**Vlachokerasia**	**0.92**	**134**	P	**Pg**	**15 23 39.3**	**-0.6**
VLX				S	**Sg**	**15 23 52.6**	**+0.7**
EVR	**Evrytania**	**0.92**	**12**	*e*Pn	**Pg**	**15 23 39.5**	**-0.5**
EVR	**Evrytania**	**0.92**	**12**	*e*PN	**Pg**	**15 23 39.5**	**-0.5**
EVR	**Evrytania**	**0.92**	**12**	*e*Pn	**Pg**	**15 23 39.5**	**-0.5**
LTK	**Loutraki**	**1.12**	**89**	P	**Pg**	**15 23 42.2**	**-1.5**
LTK				S	**Sg**	**15 23 59.0**	**+0.8**
LTK	**Loutraki**	**1.12**	**89**	*e*PN	**Pg**	**15 23 42.3**	**-1.4**
LTK	**Loutraki**	**1.12**	**89**	*e*Pn	**Pg**	**15 23 42.3**	**-1.4**
LTK				S	**Sg**	**15 23 59.0**	**+0.8**
PYL	**PYLOS**	**1.13**	**172**	P	**Pg**	**15 23 44.1**	**+0.2**
PYL				S	**Sg**	**15 24 00.7**	**+2.2**
PYL	**PYLOS**	**1.13**	**172**	*e*PN	**Pg**	**15 23 43.2**	**-0.7**
PYL	**PYLOS**	**1.13**	**172**	*e*Pn	**Pg**	**15 23 43.2**	**-0.7**
PYL	**PYLOS**	**1.13**	**172**	P	**Pg**	**15 23 44.1**	**+0.2**
PYL				S	**Sg**	**15 24 00.7**	**+2.2**
AGG	**Agios Georgios**	**1.18**	**31**	*e*Pn	**Pn**	**15 23 44.3**	**-0.2**
AGG	**Agios Georgios**	**1.18**	**31**	P	**Pb**	**15 23 43.4**	**-1.1**
AGG				S	**Sb**	**15 24 01.7**	**+2.0**
AGG	**Agios Georgios**	**1.18**	**31**	*e*PN	**Pn**	**15 23 44.3**	**-0.2**
AGG	**Agios Georgios**	**1.18**	**31**	P	**Pb**	**15 23 43.4**	**-1.1**
AGG	**Agios Georgios**	**1.18**	**31**	*e*Pn	**Pn**	**15 23 44.3**	**-0.2**
AGG				S	**Sb**	**15 24 01.7**	**+2.0**

LKR	**Lokris**	**1.30**	**60**	*e*Pn	**Pn**	**15 23 45.5**	**-0.7**
LKR	**Lokris**	**1.30**	**60**	P	**Pn**	**15 23 45.9**	**-0.3**
LKR				S	**Sb**	**15 24 03.3**	**0.0**
LKR	**Lokris**	**1.30**	**60**	*e*PN	**Pn**	**15 23 45.5**	**-0.7**
LKR	**Lokris**	**1.30**	**60**	*e*Pn	**Pn**	**15 23 45.5**	**-0.7**
LKR	**Lokris**	**1.30**	**60**	P	**Pn**	**15 23 45.9**	**-0.3**
LKR				S	**Sb**	**15 24 03.3**	**0.0**
ATAL	**Atalanti**	**1.34**	**59**	P	**Pn**	**15 23 45.6**	**-1.1**
ATAL				S	**Sb**	**15 24 04.0**	**-0.3**
ATAL	**Atalanti**	**1.34**	**59**	P	**Pn**	**15 23 45.6**	**-1.1**
ATAL				S	**Sb**	**15 24 04.0**	**-0.3**
NAIG	**Nisos Aigina**	**1.55**	**99**	*e*Pn	**Pn**	**15 23 50.3**	**+0.6**
NAIG	**Nisos Aigina**	**1.55**	**99**	*e*PN	**Pn**	**15 23 50.3**	**+0.6**
NAIG	**Nisos Aigina**	**1.55**	**99**	*e*Pn	**Pn**	**15 23 50.3**	**+0.6**
THL	**Klokotos Trika**	**1.59**	**13**	P	**Pn**	**15 23 50.5**	**+0.3**
THL				S	**Sn**	**15 24 12.2**	**+1.5**
THL	**Klokotos Trika**	**1.59**	**13**	*e*PN	**Pn**	**15 23 49.6**	**-0.6**
THL	**Klokotos Trika**	**1.59**	**13**	*e*Pn	**Pn**	**15 23 49.6**	**-0.6**
THL	**Klokotos Trika**	**1.59**	**13**	P	**Pn**	**15 23 50.5**	**+0.3**
THL				S	**Sn**	**15 24 12.2**	**+1.5**
VLI	**Veliai**	**1.70**	**139**	*e*Pb	**Pb**	**15 23 51.5**	**-1.9**
VLI	**Veliai**	**1.70**	**139**	*e*PB	**Pb**	**15 23 51.5**	**-1.9**
ATH	**Athens Observa**	**1.71**	**91**	*e*Pn	**Pn**	**15 23 52.7**	**+0.9**
ATH	**Athens Observa**	**1.71**	**91**	*e*PN	**Pn**	**15 23 52.7**	**+0.9**
ATH	**Athens Observa**	**1.71**	**91**	*e*Pn	**Pn**	**15 23 52.7**	**+0.9**
JAN	**Janina**	**1.73**	**342**	*e*Pn	**Pn**	**15 23 51.7**	**-0.4**
JAN	**Janina**	**1.73**	**342**	*e*PN	**Pn**	**15 23 51.7**	**-0.4**
JAN	**Janina**	**1.73**	**342**	*e*Pn	**Pn**	**15 23 51.7**	**-0.4**
VLY	**Voula,Athens**	**1.78**	**95**	*e*Pn	**Pn**	**15 23 53.8**	**+1.0**
VLY	**Voula,Athens**	**1.78**	**95**	*e*PN	**Pn**	**15 23 53.8**	**+1.0**
VLY	**Voula,Athens**	**1.78**	**95**	*e*Pn	**Pn**	**15 23 53.8**	**+1.0**
PTL	**Penteli**	**1.82**	**88**	*e*Pn	**Pn**	**15 23 54.0**	**+0.6**
PTL	**Penteli**	**1.82**	**88**	*e*PN	**Pn**	**15 23 54.0**	**+0.6**
PTL	**Penteli**	**1.82**	**88**	*e*Pn	**Pn**	**15 23 54.0**	**+0.6**
NEO	**Neokhori**	**1.84**	**45**	*e*Pb	**Pb**	**15 23 53.3**	**-2.4**
NEO	**Neokhori**	**1.84**	**45**	*e*PB	**Pb**	**15 23 53.3**	**-2.4**
XOR	**Xorichti**	**1.86**	**43**	P	**Pn**	**15 23 53.5**	**-0.4**
XOR				S	**Sn**	**15 24 18.5**	**+1.1**
XOR	**Xorichti**	**1.86**	**43**	P	**Pn**	**15 23 53.5**	**-0.4**
XOR				S	**Sn**	**15 24 18.5**	**+1.1**
KYTH	**Kithira**	**2.10**	**145**	*e*Pb	**Pb**	**15 23 57.5**	**-2.7**
KYTH	**Kithira**	**2.10**	**145**	*e*PB	**Pb**	**15 23 57.5**	**-2.7**
KEK	**Kerkira**	**2.18**	**322**	*e*Pn	**Pn**	**15 23 58.6**	**+0.3**
KEK	**Kerkira**	**2.18**	**322**	*e*PN	**Pn**	**15 23 58.6**	**+0.3**
KEK	**Kerkira**	**2.18**	**322**	*e*Pn	**Pn**	**15 23 58.6**	**+0.3**
LIT	**Litokhoron**	**2.21**	**19**	*e*Pb	**Pb**	**15 23 59.0**	**-3.0**
LIT	**Litokhoron**	**2.21**	**19**	*e*PB	**Pb**	**15 23 59.0**	**-3.0**
PLG	**Polygyros**	**2.78**	**31**	*e*Pn	**Pn**	**15 24 06.3**	**-0.2**
PLG	**Polygyros**	**2.78**	**31**	*e*PN	**Pn**	**15 24 06.3**	**-0.2**
PLG	**Polygyros**	**2.78**	**31**	*e*Pn	**Pn**	**15 24 06.3**	**-0.2**
SOH	**Sokhos**	**3.13**	**26**	*e*Pn	**Pn**	**15 24 12.4**	**+1.0**
SOH	**Sokhos**	**3.13**	**26**	*e*PN	**Pn**	**15 24 12.4**	**+1.0**
APE	**Apeiranthos**	**3.30**	**105**	*e*Pn	**Pn**	**15 24 14.5**	**+0.8**
APE	**Apeiranthos**	**3.30**	**105**	*e*PN	**Pn**	**15 24 14.5**	**+0.8**
APE	**Apeiranthos**	**3.30**	**105**	*e*Pn	**Pn**	**15 24 14.5**	**+0.8**
MMB	**Musomiste**	**3.94**	**24**	*i* P	**Pn**	**15 24 22.6**	**+0.1**
MMB	**Musomiste**	**3.94**	**24**	*i* P	**Pn**	**15 24 22.6**	**+0.1**
RZN	**Rozhen**	**4.40**	**33**	*i* P	**Pn**	**15 24 29.9**	**+1.1**
RZN	**Rozhen**	**4.40**	**33**	*i* P	**Pn**	**15 24 29.9**	**+1.1**
VTS	**Vitosha**	**4.74**	**15**	*e*P	**Pn**	**15 24 41.8**	**+8.3**

DMN 08 15:24:12.8±17.0, 29°.31N×87°.86E, h60km, Error ellipse: s-maj=452.3km s-min=42.7km az=31.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAPN	**Taplejung** 10nm,0.6s	**1.96**	**184**	*e*P	Pn	15 24 45.4	+1.7
TAPN	**Taplejung**	**1.96**	**184**	*e*P	Pn	15 24 45.4	+1.7
GUN	**Gumba** 72nm,1.0s	**2.23**	**232**	*e*P	Pn	15 24 49.3	+1.9
GUN	**Gumba**	**2.23**	**232**	*e*P	Pn	15 24 49.3	+1.9
ODAN	**Odare** 30nm,0.7s	**2.48**	**190**	*e*P	Pn	15 24 51.2	+0.4
ODAN	**Odare**	**2.48**	**190**	*e*P	Pn	15 24 51.2	+0.4
RAMN	**Ramite** 80nm,0.9s	**2.60**	**206**	*e*P	Pn	15 24 54.9	+2.4
KKN	**Kakani** 54nm,0.8s	**2.73**	**237**	*e*P	Pn	15 24 56.8	+2.6
PKI	**Pulchoki** 40nm,1.0s	**2.77**	**232**	*e*P	Pn	15 24 54.5	-0.3
PKIN	**Phulchoki** 30nm,1.0s	**2.78**	**232**	*e*P	Pn	15 24 54.4	-0.4
DMN	**Daman** 79nm,1.2s	**2.96**	**236**	*e*P	Pn	15 25 03.7	+6.3

*THE **08** 15:41:55.9, 38°.03N×21°.56E, h8km±1km, ML3.5/11, Error ellipse: s-maj=1.1km s-min=0.5km az=203.0*
*CSEM **08** 15:41:55.8±0.2, 38°.02N×21°.57E, h10km, ML2.9, Error ellipse: s-maj=3.5km s-min=3.3km az=48.0*
*ISCJB **08** 15:41:55.5±0.4, 38°.00N±0°.02×21°.57E±0°.03, h6km±3km, Error ellipse: s-maj=3.7km s-min=3.4km az=4.6*
*ATH **08** 15:41:56.2, 38°.01N×21°.57E, h13km±2km, MD2.9/5, ML2.9*
*NEIC **08** 15:41:56.2, 38°.02N×21°.57E, h13km, ML2.9(ATH), After ATH.*
ISC 08 15:41:55.9±0.4, 38°.01N±0°.02×21°.56E±0°.02, h13km±3km, n68, σ0°.84/103, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.09**	**301**	*e*Pg	**Pg**	**15 41 59.5**	**+0.8**
RLS				*e*Sg	**Sg**	**15 42 01.5**	**+0.8**
RLS	**Riolos of Patr**	**0.09**	**301**	*e*PG	**Pg**	**15 41 59.5**	**+0.8**
RLS				*e*SG	**Sg**	**15 42 01.5**	**+0.8**
RLS	**Riolos of Patr**	**0.09**	**301**	*e*Pg	**Pg**	**15 41 59.5**	**+0.8**
RLS				*e*Sg	**Sg**	**15 42 01.5**	**+0.8**
UPR	**University Cam**	**0.32**	**33**	P	**Pg**	**15 42 01.6**	**-0.9**
UPR				S	**Sg**	**15 42 07.3**	**+0.4**
UPR	**University Cam**	**0.32**	**33**	*e*PB	**Pg**	**15 42 02.8**	**+0.3**
UPR				*e*SB	**Sg**	**15 42 08.0**	**+1.1**
UPR	**University Cam**	**0.32**	**33**	P	**Pg**	**15 42 01.6**	**-0.9**
UPR	**University Cam**	**0.32**	**33**	*e*Pb	**Pg**	**15 42 02.8**	**+0.3**
UPR				S	**Sg**	**15 42 07.3**	**+0.4**
UPR				*e*Sb	**Sg**	**15 42 08.0**	**+1.1**
LAKA	**Lakka**	**0.40**	**55**	P	**Pg**	**15 42 02.7**	**-1.2**
LAKA				S	**Sg**	**15 42 09.6**	**+0.3**
LAKA	**Lakka**	**0.40**	**55**	P	**Pg**	**15 42 02.7**	**-1.2**
LAKA				S	**Sg**	**15 42 09.6**	**+0.3**
EFP	**Efpalio**	**0.49**	**33**	P	**Pg**	**15 42 05.3**	**-0.4**
EFP				S	**Sg**	**15 42 12.5**	**+0.2**
EFP	**Efpalio**	**0.49**	**33**	*e*PB	**Pb**	**15 42 05.4**	**-1.1**
EFP				*e*SB	**Sg**	**15 42 12.3**	**0.0**
EFP	**Efpalio**	**0.49**	**33**	*e*Pb	**Pb**	**15 42 05.4**	**-1.1**
EFP				*e*Sb	**Sg**	**15 42 12.3**	**0.0**
TRIZ	**Trizonia**	**0.54**	**48**	P	**Pg**	**15 42 05.8**	**-0.6**
TRIZ				S	**Sg**	**15 42 13.7**	**+0.2**
TRIZ	**Trizonia**	**0.54**	**48**	P	**Pg**	**15 42 05.8**	**-0.6**
TRIZ				S	**Sg**	**15 42 13.7**	**+0.2**
KALE	**Kalithea**	**0.59**	**50**	P	**Pg**	**15 42 06.8**	**-0.7**
KALE				S	**Sg**	**15 42 15.8**	**+0.5**
KALE	**Kalithea**	**0.59**	**50**	P	**Pg**	**15 42 06.8**	**-0.7**
KALE				S	**Sg**	**15 42 15.8**	**+0.5**
GUR	**Goura**	**0.62**	**97**	P	**Pg**	**15 42 07.4**	**-0.6**
GUR				S	**Sg**	**15 42 16.8**	**+0.6**
GUR	**Goura**	**0.62**	**97**	*e*PB	**Pb**	**15 42 07.6**	**-1.0**
GUR				*e*SB	**Sb**	**15 42 16.9**	**-0.4**
GUR	**Goura**	**0.62**	**97**	*e*Pb	**Pb**	**15 42 07.6**	**-1.0**
GUR				S	**Sg**	**15 42 16.8**	**+0.6**
KFL	**Anninata**	**0.62**	**279**	P	**Pg**	**15 42 07.5**	**-0.5**
VLS	**Valsamata**	**0.79**	**282**	*e*Pb	**Pb**	**15 42 10.4**	**-1.1**
VLS				*e*Sb	**Sb**	**15 42 23.0**	**+1.0**
VLS	**Valsamata**	**0.79**	**282**	P	**Pg**	**15 42 10.3**	**-0.8**
VLS				S	**Sg**	**15 42 22.7**	**+1.3**
VLS	**Valsamata**	**0.79**	**282**	*e*PB	**Pb**	**15 42 10.4**	**-1.1**
VLS				*e*SB	**Sb**	**15 42 23.0**	**+1.0**
VLS	**Valsamata**	**0.79**	**282**	P	**Pg**	**15 42 10.3**	**-0.8**
VLS				S	**Sg**	**15 42 22.7**	**+1.3**
DSF	**Desfina**	**0.86**	**62**	P	**Pg**	**15 42 11.2**	**-1.3**
DSF				S	**Sg**	**15 42 23.9**	**+0.2**
DSF	**Desfina**	**0.86**	**62**	P	**Pg**	**15 42 11.2**	**-1.3**
DSF				S	**Sg**	**15 42 23.9**	**+0.2**
ITM	**Ithomi**	**0.88**	**161**	*e*Pb	**Pg**	**15 42 12.9**	**0.0**
ITM	**Ithomi**	**0.88**	**161**	P	**Pg**	**15 42 12.9**	**0.0**
ITM	**Ithomi**	**0.88**	**161**	*e*PB	**Pg**	**15 42 12.9**	**0.0**
ITM	**Ithomi**	**0.88**	**161**	P	**Pg**	**15 42 12.9**	**0.0**
VLX	**Vlachokerasia**	**0.91**	**134**	P	**Pg**	**15 42 13.1**	**-0.4**
VLX				S	**Sg**	**15 42 27.3**	**+1.9**
VLX	**Vlachokerasia**	**0.91**	**134**	*e*PG	**Pg**	**15 42 13.2**	**-0.3**
VLX	**Vlachokerasia**	**0.91**	**134**	*e*Pg	**Pg**	**15 42 13.2**	**-0.3**
VLX				S	**Sg**	**15 42 27.3**	**+1.9**
EVR	**Evrytania**	**0.92**	**12**	*e*Pn	**Pn**	**15 42 14.3**	**-0.3**
EVR	**Evrytania**	**0.92**	**12**	*e*PN	**Pn**	**15 42 14.3**	**-0.3**
EVR	**Evrytania**	**0.92**	**12**	*e*Pn	**Pn**	**15 42 14.3**	**-0.3**
LKD2	**Lefkada island**	**1.05**	**318**	P	**Pb**	**15 42 14.6**	**-1.4**
LKD2				S	**Sb**	**15 42 30.2**	**+0.5**
LKD2	**Lefkada island**	**1.05**	**318**	P	**Pb**	**15 42 14.6**	**-1.4**
LKD2				S	**Sb**	**15 42 30.2**	**+0.5**
LTK	**Loutraki**	**1.11**	**89**	P	**Pb**	**15 42 16.3**	**-0.7**
LTK				S	**Sb**	**15 42 33.1**	**+1.8**
LTK	**Loutraki**	**1.11**	**89**	*e*PG	**Pg**	**15 42 16.2**	**-1.1**
LTK	**Loutraki**	**1.11**	**89**	P	**Pb**	**15 42 16.3**	**-0.7**
LTK				S	**Sb**	**15 42 33.1**	**+1.8**
PYL	**PYLOS**	**1.12**	**173**	*e*PB	**Pb**	**15 42 17.6**	**+0.4**
PYL	**PYLOS**	**1.12**	**173**	*e*Pb	**Pb**	**15 42 17.6**	**+0.4**
AGG	**Agios Georgios**	**1.18**	**31**	P	**Pn**	**15 42 18.1**	**0.0**
AGG				S	**Sb**	**15 42 33.9**	**+0.6**
AGG	**Agios Georgios**	**1.18**	**31**	P	**Pn**	**15 42 18.1**	**0.0**
AGG				S	**Sb**	**15 42 33.9**	**+0.6**
LKR	**Lokris**	**1.30**	**60**	*e*Pn	**Pn**	**15 42 19.5**	**-0.3**
LKR	**Lokris**	**1.30**	**60**	P	**Pn**	**15 42 19.3**	**-0.5**
LKR				S	**Sb**	**15 42 37.5**	**+0.7**
LKR	**Lokris**	**1.30**	**60**	*e*PN	**Pn**	**15 42 19.5**	**-0.3**
LKR	**Lokris**	**1.30**	**60**	*e*Pn	**Pn**	**15 42 19.5**	**-0.3**
LKR				S	**Sb**	**15 42 37.5**	**+0.7**
ATAL	**Atalanti**	**1.33**	**59**	P	**Pn**	**15 42 19.9**	**-0.4**
ATAL				S	**Sb**	**15 42 38.6**	**+0.8**
ATAL	**Atalanti**	**1.33**	**59**	P	**Pn**	**15 42 19.9**	**-0.4**
ATAL				S	**Sb**	**15 42 38.6**	**+0.8**
THL	**Klokotos Trika**	**1.59**	**13**	*e*PB	**Pb**	**15 42 26.9**	**+1.7**
THL	**Klokotos Trika**	**1.59**	**13**	*e*Pb	**Pb**	**15 42 26.9**	**+1.7**
VLI	**Veliai**	**1.69**	**139**	*e*Pg	**Pg**	**15 42 28.7**	**+0.3**
VLI	**Veliai**	**1.69**	**139**	*e*PG	**Pg**	**15 42 28.7**	**+0.3**
VLI	**Veliai**	**1.69**	**139**	*e*Pg	**Pg**	**15 42 28.7**	**+0.3**
ATH	**Athens Observa**	**1.70**	**91**	*e*Pg	**Pg**	**15 42 27.9**	**-0.7**
ATH	**Athens Observa**	**1.70**	**91**	*e*PG	**Pg**	**15 42 27.9**	**-0.7**
ATH	**Athens Observa**	**1.70**	**91**	*e*Pg	**Pg**	**15 42 27.9**	**-0.7**
VLY	**Voula,Athens**	**1.77**	**94**	*e*Pb	**Pb**	**15 42 27.3**	**-1.0**
VLY	**Voula,Athens**	**1.77**	**94**	*e*PB	**Pb**	**15 42 27.3**	**-1.0**
PTL	**Penteli**	**1.82**	**88**	*e*Pn	**Pn**	**15 42 28.2**	**+1.3**
PTL	**Penteli**	**1.82**	**88**	*e*PN	**Pn**	**15 42 28.2**	**+1.3**
PTL	**Penteli**	**1.82**	**88**	*e*Pn	**Pn**	**15 42 28.2**	**+1.3**
KYTH	**Kithira**	**2.09**	**145**	*e*Pg	**Pg**	**15 42 36.2**	**+0.2**
KYTH	**Kithira**	**2.09**	**145**	*e*Pg	**Pg**	**15 42 36.2**	**+0.2**
KHC	**Kasperske Hory** 700nm,23.7s	**12.52**	**335**	AMS	AMS	15 44 20.0	
NACGM	**Naroch**	**17.26**	**10**	*e*LR	LR	15 45 51.0	

*BJI **08** 15:46:02.3, 36°.50N×70°.70E, h195km, mB4.4/5, mb4.5/9*
*MOS **08** 15:46:06.7±1.1, 36°.49N×70°.62E, h209km, mb4.5/5, Error ellipse: s-maj=16.4km s-min=8.3km az=85.2*
*IDC **08** 15:46:06.8±3.8, 36°.40N×70°.75E, h199km±40km, mb3.3/6, mb1 3.4/11, mb1mx3.1/30, mbtmp3.3/11, Error ellipse: s-maj=27.7km s-min=17.3km az=51.0*
*ISCJB **08** 15:46:06.3±0.4, 36°.45N±0°.03×70°.83E±0°.06, h209km±6km, mb3.9/11, Error ellipse: s-maj=7.9km s-min=4.8km az=161.9*
*NEIC **08** 15:46:07.4±0.6, 36°.50N×70°.69E, h195km±8km, mb4.7/13, Error ellipse: s-maj=9.0km s-min=5.6km az=63.0*
*NNC **08** 15:46:11.8±6.2, 36°.93N×70°.53E, h192km±56km, mb3.0, mpv4.3, Error ellipse: s-maj=55.1km s-min=29.6km az=19.0*
ISC 08 15:46:07.3±0.4, 36°.47N±0°.03×70°.79E±0°.06, h199km±5km, h226km±.6km: pP-P, n83, σ1°.16/99, mb3.9/11, 10C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.40**	**217**	*e*PN	**Pn**	**15 46 49.7**	**-0.2**
CEP	**Cherat**	**2.80**	**161**	⇑P	**Pn**	**15 46 55.2**	**+0.7**
CEP				S	**Sn**	**15 47 31.0**	**-0.3**
CHCP	**Chirah Chowk**	**3.46**	**143**	⇑P	**Pn**	**15 47 03.4**	**+1.0**
SARP	**Sargodha**	**4.80**	**161**	P	**Pn**	**15 47 18.7**	**-0.4**
KSH	**Kashi**	**5.10**	**52**	Pn	**Pn**	**15 47 18.8**	**-4.0**
KSH				Sn	**Sn**	**15 48 12.6**	**-10**
KSH				smax			
	comp=N,62nm,0.3s						
KSH				smax			
	comp=E,33nm,0.2s						
THN	**Thein Dam**	**5.73**	**133**	*e*PKP	**Pn**	**15 47 30.0**	**-1.0**
THN				*e*S	**Sn**	**15 48 35.0**	**-2.1**
AML	**Almayashu** SNR=58	**6.08**	**21**	P	**Pn**	**15 47 35.9**	**+0.4**
AML	**Almayashu** comp=E,66nm,0.4s	**6.08**	**21**	*e*P	**Pn**	**15 47 35.8**	**+0.4**
AML				*e*S	**Sn**	**15 48 33.1**	**-12**
UCH	**Uchtor** SNR=44	**6.43**	**26**	P	**Pn**	**15 47 40.6**	**+0.6**
UCH	**Uchtor** comp=E,17nm,0.4s	**6.43**	**26**	*e*P	**Pn**	**15 47 40.4**	**+0.4**
KZA	**Kyzart** SNR=8.8	**6.58**	**30**	P	**Pn**	**15 47 42.3**	**+0.4**
EKS2	**Erkin-Say** SNR=20	**6.60**	**20**	P	**Pn**	**15 47 42.4**	**+0.3**
EKS2	**Erkin-Say** comp=E,8.4nm,0.4s	**6.60**	**20**	*e*P	**Pn**	**15 47 42.3**	**+0.2**
KK09	**Karatay Array** comp=E,12nm,0.5s,baz=176,slow=13	**6.64**	**358**	⇑P	**Pn**	**15 47 42.4**	**-0.4**
KK09				⇑S	**Sn**	**15 48 53.3**	**-5.1**
	comp=E,39nm,0.4s,baz=184,slow=21						
AAK	**Ala-Archa** SNR=11	**6.79**	**24**	P	**Pn**	**15 47 44.9**	**+0.3**
AAK	**Ala-Archa** comp=E,0.1nm,0.3s,baz=171,slow=6.4,SNR=15	**6.79**	**24**	P	**Pn**	**15 47 45.2**	**+0.7**
AAK	**Ala-Archa**	**6.79**	**24**	PN	**Pn**	**15 47 45.3**	**+0.7**
AAK				pmax	pmax		
	comp=E,5.0nm,0.3s						
AAK	**Ala-Archa** comp=Z,10.0nm,0.3s	**6.79**	**24**	*e*P	**Pn**	**15 47 45.0**	**+0.4**
KBK	**Karagaybulak** SNR=14	**6.96**	**26**	P	**Pn**	**15 47 47.6**	**+0.8**
SDNR	**Sundarnagar**	**7.14**	**132**	*e*PKP	**Pn**	**15 47 47.5**	**-1.8**
SDNR				*e*S	**Sn**	**15 49 04.1**	**-6.1**
CHMS	**Chumysh** SNR=7.0	**7.20**	**24**	P	**Pn**	**15 47 50.2**	**+0.3**
USP	**Ospenovka** SNR=6.0	**7.36**	**22**	P	**Pn**	**15 47 51.9**	**-0.1**
TKM2	**Tokmak 2** comp=Z,8.5nm,0.4s	**7.43**	**28**	⇑P	**Pn**	**15 47 53.0**	**+0.1**
TKM2				⇓S	**Sn**	**15 49 14.1**	**-2.9**
	comp=Z,9.3nm,0.8s						
TKM2	**Tokmak 2** SNR=26	**7.43**	**28**	P	**Pn**	**15 47 53.4**	**+0.5**
TKM2	**Tokmak 2**	**7.43**	**28**	*e*PN	**Pn**	**15 47 53.0**	**+0.1**
TKM2				pmax	pmax		
	comp=Z,14nm,0.4s						
TKM2	**Tokmak 2** comp=Z,14nm,0.4s	**7.43**	**28**	*e*P	**Pn**	**15 47 53.0**	**+0.1**
KLP	**Kalpa**	**7.91**	**126**	*e*S	**Sn**	**15 49 22.6**	**-6.0**
KLP				AML	AML	15 49 27.4	
	comp=N,277nm,0.4s						
KLP				AML	AML	15 49 29.5	
	comp=E,283nm,0.5s						
DDI	**Dehra Dun**	**8.63**	**133**	*e*S	**Sn**	**15 49 38.5**	**-7.1**
JOSI	**Joshimath**	**9.40**	**126**	*e*S	**Sn**	**15 49 54.7**	**-9.2**
SONA	**Sohna**	**9.77**	**145**	*e*S	**Sn**	**15 50 03.4**	**-10**
AGRA	**Agra**	**11.04**	**145**	*e*S	**Sn**	**15 50 33.8**	**-9.2**
MK31	**Makanchi Array** comp=E,0.4nm,0.3s,baz=214,slow=5.9,SNR=4.4	**13.41**	**36**	⇑P	**Pn**	**15 49 09.4**	**-0.4**
MK31	**Makanchi Array**	**13.41**	**36**	P	**Pn**	**15 49 10.3**	**+0.5**
MKAR	**Makanchi Array** comp=E,0.3nm,0.3s,baz=224,slow=10,SNR=15	**13.41**	**36**	P	**Pn**	**15 49 08.9**	**-0.9**
WMQ	**Urumqi**	**14.85**	**55**	*e*P	**Pn**	**15 49 27.0**	**-0.6**
WMQ				S	**S**	**15 52 07.0**	**-5.5**
WMQ				PcP	PcP	15 54 21.0	-2.4
WMQ				pmax	pmax		
	comp=Z,16nm,0.8s						
DMN	**Daman**	**15.00**	**122**	*e*P	**Pn**	**15 49 32.5**	**+2.9**
KKN	**Kakani** comp=Z,26nm,0.5s	**15.01**	**121**	*e*P	**Pn**	**15 49 32.0**	**+2.4**
KKN	**Kakani**	**15.01**	**121**	*e*P	**Pn**	**15 49 32.0**	**+2.4**
KKN				pmax	pmax		
	comp=Z,27nm,0.5s						
AB31	**Akbulak array** comp=Z,3.4nm,0.7s,baz=122,slow=7.2,SNR=7.0	**15.03**	**332**	⇑P	**Pn**	**15 49 28.5**	**-1.1**
AB31				⇑S	**S**	**15 52 07.5**	**-8.9**
	comp=Z,1.9nm,0.6s,baz=149,slow=24,SNR=6.7						
ABKAR	**Akbulak array** comp=Z,2.2nm,0.3s	**15.03**	**332**	*e*P	**Pn**	**15 49 28.4**	**-1.2**
PKIN	**Phulchoki**	**15.22**	**122**	*e*P	**Pn**	**15 49 34.9**	**+2.6**
	comp=Z,28nm,0.4s						
PKI	**Pulchoki** comp=Z,42nm,0.7s	**15.23**	**121**	*e*P	**Pn**	**15 49 35.2**	**+2.8**
PKI				pmax	pmax		
	comp=Z,43nm,0.7s						
KURK	**Kurchatov** comp=Z,0.1nm,0.3s,baz=213,slow=10,SNR=4.2	**15.31**	**19**	P	**Pn**	**15 49 30.4**	**-2.7**
KURK	**Kurchatov**	**15.31**	**19**	P	**Pn**	**15 49 34.2**	**+1.1**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURK	**Kurchatov** comp=Z,0.7nm,0.5s	**15.31**	**19**	P	**Pn**	**15 49 34.1**	**+1.1**
GUN	**Gumba** comp=Z,16nm,0.3s	**15.35**	**120**	*e*P	**Pn**	**15 49 35.1**	**+1.3**
JIRN	**Jiri** comp=Z,50nm,0.4s	**15.72**	**120**	*e*P	**Pn**	**15 49 38.6**	**+0.3**
VOSK	**Vostochnaya** comp=Z,2.1nm,0.5s	**16.25**	**0**	⇑P	**P**	**15 49 44.6**	**+0.9**
ZRNK	**Zerenda** comp=Z,3.5nm,0.4s	**16.52**	**356**	⇓P	**P**	**15 49 47.4**	**+0.6**
BVA0	**Borovoye Array** comp=Z,0.4nm,0.6s,baz=184,slow=13,SNR=4.3	**16.55**	**359**	⇑P	**P**	**15 49 47.9**	**+0.8**
BVAR	**Borovoye Array** comp=Z,1.4nm,0.3s,baz=168,slow=11,SNR=23	**16.55**	**359**	P	**P**	**15 49 47.5**	**+0.5**
BVAR				S	**S**	**15 52 48.6**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=165,slow=18,SNR=4.5						
BVAR	**Borovoye Array**	**16.55**	**359**	P	**P**	**15 49 47.5**	**+0.4**
BVAR				S	**S**	**15 52 48.6**	**-1.2**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	**Borovoye**	**16.59**	**359**	*e*P	**P**	**15 49 48.2**	**+0.7**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BRVK	**Borovoye** comp=Z,3.7nm,0.6s	**16.59**	**359**	*e*P	**P**	**15 49 48.2**	**+0.7**
AKTK	**Aktyubinsk**	**16.72**	**331**	P	**P**	**15 49 50.5**	**+1.5**
AKTK				S	**S**	**15 52 52.0**	**-1.1**
AKTO	**Aktyubinsk** comp=Z,1.4nm,0.7s	**16.72**	**331**	⇓P	**P**	**15 49 49.8**	**+0.8**
AKTO	**Aktyubinsk** comp=Z,1.9nm,0.3s,baz=138,slow=9.3,SNR=37	**16.72**	**331**	P	**P**	**15 49 50.5**	**+1.5**
AKTO				S	**S**	**15 52 52.0**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=151,slow=19,SNR=5.9						
AKTO	**Aktyubinsk**	**16.72**	**331**	P	**P**	**15 49 50.5**	**+1.6**
AKTO				S	**S**	**15 52 52.1**	**-1.1**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
TAPN	**Taplejung**	**16.98**	**118**	*e*P	**P**	**15 49 53.5**	**+1.4**
ODAN	**Odare** comp=Z,13nm,0.5s	**17.05**	**120**	*e*P	**P**	**15 49 54.9**	**+2.0**
ZAA0	**Zalesovo Array**	**20.01**	**25**	*e*P	**P**	**15 50 25.2**	**+0.7**
ZALV	**Zalesovo Beam** comp=Z,2.3nm,0.3s,baz=217,slow=10,SNR=15	**20.01**	**25**	P	**P**	**15 50 25.7**	**+1.1**
ZALV	**Zalesovo Beam**	**20.01**	**25**	P	**P**	**15 50 25.7**	**+1.2**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZALV	**Zalesovo Beam**	**20.01**	**25**	P	**P**	**15 50 25.7**	**+1.1**
NVS	**Novosibirsk**	**20.27**	**21**	*e*P	**P**	**15 50 28.0**	**+0.7**
NVS				pmax	pmax		
	comp=Z,4.0nm,1.2s						
NVS				pmax	pmax		
	comp=N,3.0nm,1.0s						
NVS				pmax	pmax		
	comp=E,2.0nm,1.0s						
ARU	**Arti**	**21.60**	**341**	*e*P	**P**	**15 50 37.5**	**-3.9**
ARU				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.3						
ARU	**Arti** comp=Z,8.4nm,0.8s,mb4.3	**21.60**	**341**	*e*P	**P**	**15 50 37.5**	**-3.9**
ARU				*e*		15 50 49.7	
CD2	**Chengdu**	**27.90**	**92**	*e*P	**P**	**15 51 35.1**	**-3.7**
CD2				pP	pP	15

UPR				S	Sg	15 48 05.2	+0.6
UPR	**University Cam**	**0.31**	**35**	*e*PB	**Pg**	**15 48 00.2**	**-0.1**
UPR				*e*SB	**Sg**	**15 48 04.2**	**-0.4**
UPR	**University Cam**	**0.31**	**35**	*e*Pb	**Pg**	**15 48 00.2**	**-0.1**
UPR				*e*Sb	**Sg**	**15 48 04.3**	**-0.3**
UPR				S	**Sg**	**15 48 05.2**	**+0.6**
LAKA	**Lakka**	**0.40**	**58**	P	**Pg**	**15 48 01.3**	**-0.4**
LAKA				S	**Sg**	**15 48 07.4**	**+0.3**
LAKA	**Lakka**	**0.40**	**58**	P	**Pg**	**15 48 01.3**	**-0.4**
LAKA				S	**Sg**	**15 48 07.4**	**+0.3**
EFP	**Efpalio**	**0.48**	**35**	P	**Pg**	**15 48 02.7**	**-0.7**
EFP				S	**Sg**	**15 48 10.4**	**+0.5**
EFP	**Efpalio**	**0.48**	**35**	*e*PB	**Pg**	**15 48 02.7**	**-0.7**
EFP				*e*SB	**Sg**	**15 48 10.5**	**+0.6**
EFP	**Efpalio**	**0.48**	**35**	P	**Pg**	**15 48 02.7**	**-0.7**
EFP				S	**Sg**	**15 48 10.4**	**+0.5**
TRIZ	**Trizonia**	**0.53**	**50**	P	**Pg**	**15 48 03.5**	**-0.7**
TRIZ				S	**Sg**	**15 48 11.9**	**+0.6**
TRIZ	**Trizonia**	**0.53**	**50**	P	**Pg**	**15 48 03.5**	**-0.7**
TRIZ				S	**Sg**	**15 48 11.9**	**+0.6**
KALE	**Kalithea**	**0.59**	**52**	P	**Pg**	**15 48 04.4**	**-0.9**
KALE				S	**Sg**	**15 48 13.7**	**+0.6**
KALE	**Kalithea**	**0.59**	**52**	P	**Pg**	**15 48 04.4**	**-0.9**
KALE				S	**Sg**	**15 48 13.7**	**+0.6**
KFL	**Anninata**	**0.61**	**278**	P	**Pg**	**15 48 05.5**	**-0.2**
KFL				S	**Sg**	**15 48 14.2**	**+0.4**
GUR	**Goura**	**0.63**	**98**	P	**Pg**	**15 48 05.1**	**-1.0**
GUR				S	**Sg**	**15 48 15.6**	**+1.2**
GUR	**Goura**	**0.63**	**98**	*e*PB	**Pg**	**15 48 05.1**	**-1.0**
GUR				*e*SN	**Sg**	**15 48 14.8**	**+0.4**
GUR	**Goura**	**0.63**	**98**	P	**Pg**	**15 48 05.1**	**-1.0**
GUR				S	**Sg**	**15 48 15.6**	**+1.2**
VLS	**Valsamata**	**0.78**	**281**	*e*Pn	**Pg**	**15 48 07.9**	**-1.0**
VLS	**Valsamata**	**0.78**	**281**	P	**Pg**	**15 48 07.7**	**-1.2**
VLS				S	**Sg**	**15 48 20.1**	**+1.0**
VLS	**Valsamata**	**0.78**	**281**	*e*PN	**Pg**	**15 48 07.9**	**-1.0**
VLS	**Valsamata**	**0.78**	**281**	P	**Pg**	**15 48 07.7**	**-1.2**
VLS				S	**Sg**	**15 48 20.1**	**+1.0**
DSF	**Desfina**	**0.85**	**63**	P	**Pg**	**15 48 08.8**	**-1.6**
DSF				S	**Sg**	**15 48 21.7**	**+0.1**
DSF	**Desfina**	**0.85**	**63**	P	**Pg**	**15 48 08.8**	**-1.6**
DSF				S	**Sg**	**15 48 21.7**	**+0.1**
ITM	**Ithomi**	**0.90**	**161**	*e*Pb	**Pg**	**15 48 10.7**	**-0.4**
ITM	**Ithomi**	**0.90**	**161**	P	**Pg**	**15 48 10.6**	**-0.5**
ITM				S	**Sg**	**15 48 22.7**	**-0.2**
ITM	**Ithomi**	**0.90**	**161**	*e*PN	**Pg**	**15 48 10.7**	**-0.4**
ITM	**Ithomi**	**0.90**	**161**	P	**Pg**	**15 48 10.6**	**-0.5**
ITM				S	**Sg**	**15 48 22.7**	**-0.2**
EVR	**Evrytania**	**0.91**	**13**	*e*Pn	**Pg**	**15 48 09.1**	**-2.3**
EVR	**Evrytania**	**0.91**	**13**	*e*PN	**Pg**	**15 48 09.1**	**-2.3**
VLX	**Vlachokerasia**	**0.93**	**135**	P	**Pg**	**15 48 11.2**	**-0.5**
VLX				S	**Sg**	**15 48 25.1**	**+1.3**
VLX	**Vlachokerasia**	**0.93**	**135**	*e*PN	**Pg**	**15 48 11.3**	**-0.4**
VLX	**Vlachokerasia**	**0.93**	**135**	P	**Pg**	**15 48 11.2**	**-0.5**
VLX				S	**Sg**	**15 48 25.1**	**+1.3**
LKD2	**Lefkada island**	**1.04**	**317**	P	**Pg**	**15 48 12.4**	**-1.4**
LKD2				S	**Sg**	**15 48 28.9**	**+1.6**
LKD2	**Lefkada island**	**1.04**	**317**	P	**Pg**	**15 48 12.4**	**-1.4**
LKD2				S	**Sg**	**15 48 28.9**	**+1.6**
LTK	**Loutraki**	**1.11**	**90**	P	**Pg**	**15 48 14.0**	**-1.3**
LTK	**Loutraki**	**1.11**	**90**	*e*PN	**Pg**	**15 48 14.0**	**-1.3**
LTK	**Loutraki**	**1.11**	**90**	P	**Pg**	**15 48 14.0**	**-1.3**
PYL	**PYLOS**	**1.14**	**172**	P	**Pg**	**15 48 14.9**	**-0.9**
PYL				S	**Sg**	**15 48 31.9**	**+1.3**
PYL	**PYLOS**	**1.14**	**172**	*e*PN	**Pg**	**15 48 15.4**	**-0.4**
PYL	**PYLOS**	**1.14**	**172**	P	**Pg**	**15 48 14.9**	**-0.9**
PYL	**PYLOS**	**1.14**	**172**	*e*Pn	**Pg**	**15 48 15.4**	**-0.4**
PYL				S	**Sg**	**15 48 31.9**	**+1.3**
AGG	**Agios Georgios**	**1.16**	**31**	*e*Pn	**Pn**	**15 48 15.2**	**-0.4**
AGG	**Agios Georgios**	**1.16**	**31**	P	**Pn**	**15 48 14.8**	**-0.8**
AGG				S	**Sb**	**15 48 31.3**	**+0.7**
AGG	**Agios Georgios**	**1.16**	**31**	*e*PN	**Pn**	**15 48 15.2**	**-0.4**
AGG	**Agios Georgios**	**1.16**	**31**	P	**Pn**	**15 48 14.8**	**-0.8**
AGG	**Agios Georgios**	**1.16**	**31**	*e*Pn	**Pn**	**15 48 15.2**	**-0.4**
AGG				S	**Sb**	**15 48 31.3**	**+0.7**
LKR	**Lokris**	**1.29**	**61**	*e*Pn	**Pn**	**15 48 17.0**	**-0.4**
LKR	**Lokris**	**1.29**	**61**	P	**Pn**	**15 48 17.0**	**-0.4**
LKR				S	**Sb**	**15 48 35.6**	**+1.2**
LKR	**Lokris**	**1.29**	**61**	*e*PN	**Pn**	**15 48 17.0**	**-0.4**
LKR	**Lokris**	**1.29**	**61**	P	**Pn**	**15 48 17.0**	**-0.4**
LKR				S	**Sb**	**15 48 35.6**	**+1.2**
ATAL	**Atalanti**	**1.33**	**60**	P	**Pn**	**15 48 17.6**	**-0.3**
ATAL				S	**Sb**	**15 48 36.3**	**+0.9**
ATAL	**Atalanti**	**1.33**	**60**	P	**Pn**	**15 48 17.6**	**-0.3**
ATAL				S	**Sb**	**15 48 36.3**	**+0.9**
THL	**Klokotos Trika**	**1.57**	**13**	P	**Pn**	**15 48 21.9**	**+0.6**
THL				S	**Sn**	**15 48 44.3**	**+2.8**
THL	**Klokotos Trika**	**1.57**	**13**	*e*PN	**Pn**	**15 48 23.4**	**+2.1**
THL	**Klokotos Trika**	**1.57**	**13**	P	**Pn**	**15 48 21.9**	**+0.6**
THL				S	**Sn**	**15 48 44.3**	**+2.8**
ATH	**Athens Observa**	**1.71**	**91**	*e*Pn	**Pn**	**15 48 25.2**	**+2.1**
ATH	**Athens Observa**	**1.71**	**91**	*e*PN	**Pn**	**15 48 25.2**	**+2.1**
ATH	**Athens Observa**	**1.71**	**91**	*e*Pn	**Pn**	**15 48 25.2**	**+2.1**
VLI	**Veliai**	**1.71**	**139**	*e*Pn	**Pn**	**15 48 26.9**	**+3.8**
VLY	**Voula,Athens**	**1.78**	**95**	*e*Pb	**Pb**	**15 48 23.7**	**-2.4**
PTL	**Penteli**	**1.82**	**89**	*e*Pn	**Pn**	**15 48 27.6**	**+2.9**
PTL	**Penteli**	**1.82**	**89**	*e*PN	**Pn**	**15 48 27.6**	**+2.9**
NEO	**Neokhori**	**1.83**	**45**	*e*Pb	**Pb**	**15 48 24.9**	**-2.1**
NEO	**Neokhori**	**1.83**	**45**	*e*PB	**Pb**	**15 48 24.9**	**-2.1**
XOR	**Xorichti**	**1.85**	**43**	P	**Pn**	**15 48 25.1**	**0.0**
XOR	**Xorichti**	**1.85**	**43**	P	**Pn**	**15 48 25.1**	**0.0**
KYTH	**Kithira**	**2.11**	**145**	*e*Pn	**Pn**	**15 48 33.9**	**+5.3**
AOS	**Alonnisos**	**2.15**	**57**	P	**Pn**	**15 48 29.1**	**-0.1**
AOS	**Alonnisos**	**2.15**	**57**	P	**Pn**	**15 48 29.1**	**-0.1**
KEK	**Kerkira**	**2.17**	**321**	*e*Pn	**Pn**	**15 48 33.8**	**+4.3**
KEK	**Kerkira**	**2.17**	**321**	*e*PN	**Pn**	**15 48 33.8**	**+4.3**
LIT	**Litokhoron**	**2.19**	**19**	*e*Pn	**Pn**	**15 48 32.5**	**+2.7**
LIT	**Litokhoron**	**2.19**	**19**	P	**Pn**	**15 48 29.8**	**0.0**
LIT	**Litokhoron**	**2.19**	**19**	*e*PN	**Pn**	**15 48 32.5**	**+2.7**
LIT	**Litokhoron**	**2.19**	**19**	P	**Pn**	**15 48 29.8**	**0.0**
IDI	**Anoyia**	**3.83**	**135**	Pn	**Pn**	**15 48 54.0**	**+1.7**
	0.2nm,0.3s,baz=312,slow=14,SNR=3.6						
IDI				Sn	**Sn**	**15 49 43.5**	**+6.4**
	1.2nm,0.3s,baz=3.9,slow=21,SNR=3.8						
IDI				LR	LR	15 50 01.4	
	comp=Z,174nm,21.8s,baz=261,slow=32						
IDI	**Anoyia**	**3.83**	**135**	Pn	**Pn**	**15 48 54.0**	**+1.7**
TIP	**Timpagrande**	**3.93**	**288**	P	**Pn**	**15 48 53.0**	**-0.6**
TIP	**Timpagrande**	**3.93**	**288**	P	**Pn**	**15 48 53.0**	**-0.6**
TORD	**Torodi Ar. Bea**	**30.44**	**221**	P	**P**	**15 54 05.9**	**0.0**
	0.2nm,0.7s,mb2.9,baz=34,slow=8.5,SNR=4.0						
MK31	**Makanchi Array**	**44.69**	**58**	*e*P	**P**	**15 56 04.9**	**-1.2**
MK31	**Makanchi Array**	**44.69**	**58**	*e*P	**P**	**15 56 04.9**	**-1.1**
MKAR	**Makanchi Array**	**44.69**	**58**	P	**P**	**15 56 04.6**	**-1.4**
	0.2nm,0.4s,mb3.3,baz=274,slow=7.1,SNR=7.6						
ZALV	**Zalesovo Beam**	**45.18**	**48**	P	**P**	**15 56 08.4**	**-1.4**
	0.8nm,0.4s,mb3.9,baz=282,slow=8.1,SNR=3.8						
ZALV	**Zalesovo Beam**	**45.18**	**48**	P	**P**	**15 56 08.4**	**-1.5**

*IDC **08** 15:49:03.0±0.6, 15°.44S×173°.18W, h0km, mb4.2/12, mb1 4.4/13, mb1mx4.3/22, mbtmp4.2/13, Error ellipse: s-maj=30.8km s-min=14.9km az=135.0*
*ISCJB **08** 15:49:06.1±0.5, 15°.3S±0°.1×173°.3W±0°.1, h33km, mb4.2/16, Error ellipse: s-maj=22.1km s-min=8.4km az=137.1*
*NEIC **08** 15:49:07.9±4.3, 15°.35S×173°.20W, h33km±31km, mb4.2/3, Error ellipse: s-maj=24.5km s-min=10.3km az=129.0*

ISC 08 15:49:07.9±0.5, 15°.3S±0°.1×173°.2W±0°.1, h35km, n36, σ1§18/30, mb4.2/16, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.98**	**45**	Pn	**Pn**	**15 49 39.3**	**+0.4**
	449nm,0.3s,baz=84,slow=0.6,SNR=1368						
AFI				Sn	**Sn**	**15 50 00.4**	**-2.2**
	763nm,0.3s,baz=231,slow=23,SNR=17						
AFI	**Afiamalu**	**1.98**	**45**	*e*Pn	**Pn**	**15 49 38.9**	**0.0**
AFI				*e*Sn	**Sn**	**15 49 59.5**	**-3.0**
OUZ	**Omahuta**	**23.08**	**208**	*e*P	**P**	**15 54 12.6**	**+2.0**
URZ	**Urewera**	**24.40**	**199**	P	**P**	**15 54 23.9**	**+0.9**
	12nm,0.3s,mb4.8,baz=310,slow=3.2,SNR=26						
URZ	**Urewera**	**24.40**	**199**	*e*P	**P**	**15 54 23.8**	**+0.8**
RPZ	**Rata Peaks**	**31.32**	**202**	P	**P**	**15 55 25.7**	**+0.8**
	9.1nm,0.9s,mb4.6,baz=197,slow=23,SNR=2.9						
CMSA	**Cobar Meteorol**	**40.74**	**239**	*e*P	**P**	**15 56 44.3**	**-1.3**
TOO	**Toolangi**	**42.65**	**231**	*e*P	**P**	**15 56 59.6**	**-1.6**
STKA	**Stephens Creek**	**44.22**	**240**	*e*P	**P**	**15 57 13.3**	**-0.7**
	3.5nm,0.5s,mb4.3						
STKA	**Stephens Creek**	**44.22**	**240**	P	**P**	**15 57 13.4**	**-0.6**
	4.4nm,0.6s,mb4.4,baz=94,slow=11,SNR=27						
STKA	**Stephens Creek**	**44.22**	**240**	*e*P	**P**	**15 57 13.2**	**-0.8**
BBOO	**Buckleboo**	**49.00**	**240**	*e*P	**P**	**15 57 50.4**	**-1.0**
	2.8nm,0.5s,mb4.5						
WRAB	**Tennant Creek**	**50.02**	**257**	*e*P	**P**	**15 57 58.6**	**-0.7**
	1.7nm,0.6s,mb4.2						
WRA	**Warramunga Arr**	**50.03**	**257**	P	**P**	**15 57 58.7**	**-0.7**
	1.7nm,0.5s,mb4.3,baz=92,slow=6.9,SNR=42						
WRA				PcP	PcP	15 59 18.8	-0.2
	1.3nm,0.7s,baz=86,slow=3.8,SNR=5.9						
WRA	**Warramunga Arr**	**50.03**	**257**	P	**P**	**15 57 58.7**	**-0.7**
WRA				PcP	PcP	15 59 18.8	-0.2
ASAR	**Alice Springs**	**50.30**	**252**	P	**P**	**15 58 00.8**	**-0.6**
	11nm,0.6s,mb5.1,baz=88,slow=7.7,SNR=452						
ASAR				PcP	PcP	15 59 19.1	-0.9
	1.0nm,0.7s,baz=96,slow=5.3,SNR=4.4						
FITZ	**Fitzroy Crossi**	**58.39**	**258**	P	**P**	**15 59 01.6**	**+1.3**
	2.6nm,0.9s,mb4.2,baz=288,slow=6.4,SNR=2.9						
NVAR	**Mina Array Bea**	**74.15**	**42**	P	**P**	**16 00 41.5**	**+0.6**
	0.8nm,0.8s,mb3.7,baz=229,slow=10,SNR=5.3						
QSPA	**South Pole Qui**	**74.73**	**180**	*e*P	**P**	**16 00 43.0**	**-0.7**
	3.7nm,0.9s,mb4.3						
KSRS	**Korea Array**	**76.21**	**315**	P	**P**	**16 00 55.3**	**+2.5**
	0.6nm,0.8s,mb3.6,baz=136,slow=6.1,SNR=4.3						
HLID	**Hailey**	**79.45**	**39**	*e*P	**P**	**16 01 11.4**	**+0.6**
	1.3nm,0.9s,mb3.9						
TXAR	**Lajitas Array**	**80.42**	**56**	P	**P**	**16 01 17.2**	**+0.9**
	0.2nm,0.7s,mb3.1,baz=220,slow=5.5,SNR=3.5						
TXAR	**Lajitas Array**	**80.42**	**56**	P	**P**	**16 01 17.2**	**+0.9**
TXAR	**Lajitas Array**	**80.42**	**56**	P	**P**	**16 01 17.2**	**+0.9**
PDAR	**Pinedale Array**	**82.09**	**42**	P	**P**	**16 01 24.8**	**-0.1**
	0.5nm,0.8s,mb3.5,baz=222,slow=2.0,SNR=3.8						
MAW	**Mawson**	**87.93**	**199**	P	**P**	**16 01 52.2**	**-1.6**
	2.8nm,0.6s,mb4.7,baz=119,slow=6.5,SNR=6.0						
CMAR	**Chiang Mai Arr**	**92.75**	**288**	P	**P**	**16 02 18.6**	**+1.4**
	0.5nm,0.7s,mb4.1,baz=85,slow=1.9,SNR=4.9						
CMAR	**Chiang Mai Arr**	**92.75**	**288**	P	**P**	**16 02 18.6**	**+1.4**
BVAR	**Borovoye Array**	**117.92**	**322**	PKP	PKPdf	16 07 50.1	-0.5
	0.8nm,0.7s,baz=96,slow=1.5,SNR=4.8						
VRAC	**Vranov**	**145.16**	**349**	PKPbc	PKPbc	16 08 43.7	+2.4
	2.0nm,0.5s,baz=104,slow=21,SNR=4.5						
GRF	**Grafenberg Arr**	**145.52**	**355**	*e*PKP	PKPdf	16 08 42.5	+0.2
KMBO	**Kilima Mbogo**	**145.72**	**244**	PKPbc	PKPbc	16 08 44.5	+0.3
	1.2nm,0.8s,baz=36,slow=16,SNR=4.4						
MLR	**Muntele Rosu**	**145.86**	**336**	PKPbc	PKPbc	16 08 46.4	+2.8
	1.2nm,0.5s,baz=146,slow=16,SNR=3.6						
GERES	**GERESS Array B**	**146.08**	**352**	PKPbc	PKPbc	16 08 45.5	+1.3
	0.6nm,0.8s,baz=252,slow=1.3,SNR=4.5						
BR131	**Keskin Array S**	**146.19**	**321**	*e*PKPdf	PKPdf	16 08 44.5	+0.7
BRTR	**Keskin Array B**	**146.19**	**321**	PKPbc	PKPbc	16 08 45.9	+1.0
	3.3nm,0.7s,baz=108,slow=2.6,SNR=21						

JMA 08 15:59:52.8±0.1, 26°.14N×141°.01E, h6km, M4.1, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**1.16**	**65**	P	Pg	16 00 14.6	-0.4
JHHJ				S	Sg	16 00 29.7	-0.3
CBIJ	**Chichi jima**	**1.42**	**48**	P	Pn	16 00 18.8	-0.3
CBIJ				*e*S	Sb	16 00 37.6	-0.4
JRY	**Ryogami san**	**10.01**	**350**	P	Pn	16 02 19.0	+1.9

IDC 08 16:01:45.9±2.5, 2°.34S×132°.94E, h0km, mb3.4/2, mb1 3.8/4, mb1mx3.4/18, mbtmp3.5/4, ML3.4/2, Error ellipse: s-maj=97.0km s-min=27.8km az=79.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**17.23**	**204**	P	Pn	16 05 48.2	+0.1
	2.0nm,0.3s,baz=74,slow=18,SNR=7.0						
WRA	**Warramunga Arr**	**17.55**	**176**	P	Pn	16 05 50.9	-1.2
	0.1nm,0.3s,baz=354,slow=12,SNR=7.3						
ASAR	**Alice Springs**	**21.23**	**178**	P	P	16 06 34.1	+0.6
	2.6nm,0.9s,baz=3.3,slow=12,SNR=20						
MKAR	**Makanchi Array**	**66.05**	**324**	P	P	16 12 34.6	+0.1
	0.2nm,0.6s,baz=107,slow=11,SNR=4.0						

*NEIC **08** 16:05:57.1, 38°.08N×21°.60E, h18km, ML3.1(ATH), After ATH.*
*CSEM **08** 16:05:57.2±0.2, 38°.09N×21°.57E, h12km, ML3.1, Error ellipse: s-maj=5.2km s-min=4.5km az=87.0*
*THE **08** 16:05:57.3, 38°.08N×21°.58E, h12km±1km, ML3.6/7, Error ellipse: s-maj=1.2km s-min=0.5km az=11.0*
*ATH **08** 16:05:57.1, 38°.08N×21°.60E, h18km±1km, ML3.1*
*ISCJB **08** 16:05:57.6±0.6, 38°.08N±0°.02×21°.59E±0°.03, h12km±4km, Error ellipse: s-maj=3.8km s-min=3.5km az=171.2*

ISC 08 16:05:57.6±0.3, 38°.08N±0°.02×21°.59E±0°.03, h14km±3km, n56, σ1§02/84, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.10**	**257**	*e*Pb	**Pg**	**16 06 00.8**	**+0.2**
RLS				*e*Sb	**Sg**	**16 06 03.8**	**+1.0**
RLS	**Riolos of Patr**	**0.10**	**257**	*e*PB	**Pg**	**16 06 00.8**	**+0.2**
RLS				*e*SB	**Sg**	**16 06 03.8**	**+1.0**
RLS	**Riolos of Patr**	**0.10**	**257**	*e*Pb	**Pg**	**16 06 00.8**	**+0.2**
RLS				*e*Sb	**Sg**	**16 06 03.8**	**+1.0**
UPR	**University Cam**	**0.26**	**37**	P	**Pg**	**16 06 03.2**	**+0.1**
UPR				S	**Sg**	**16 06 07.6**	**+0.8**
UPR	**University Cam**	**0.26**	**37**	*e*PB	**Pg**	**16 06 03.2**	**+0.1**
UPR				*e*SB	**Sg**	**16 06 07.5**	**+0.7**
UPR	**University Cam**	**0.26**	**37**	*e*Pb	**Pg**	**16 06 03.2**	**+0.1**
UPR				S	**Sg**	**16 06 07.6**	**+0.8**
LAKA	**Lakka**	**0.35**	**62**	P	**Pg**	**16 06 04.4**	**-0.3**
LAKA				S	**Sg**	**16 06 10.0**	**+0.6**
EFP	**Efpalio**	**0.43**	**36**	P	**Pg**	**16 06 05.6**	**-0.5**
EFP				S	**Sg**	**16 06 12.7**	**+0.8**
EFP	**Efpalio**	**0.43**	**36**	*e*PB	**Pg**	**16 06 05.6**	**-0.5**
EFP				*e*SB	**Sg**	**16 06 12.1**	**+0.2**
EFP	**Efpalio**	**0.43**	**36**	*e*Pb	**Pg**	**16 06 05.6**	**-0.5**
EFP				*e*Sb	**Sg**	**16 06 12.1**	**+0.2**
EFP				S	**Sg**	**16 06 12.7**	**+0.8**
KALE	**Kalithea**	**0.53**	**54**	P	**Pg**	**16 06 07.4**	**-0.7**
KALE				S	**Sg**	**16 06 16.1**	**+0.9**
GUR	**Goura**	**0.61**	**103**	P	**Pg**	**16 06 08.7**	**-0.9**
GUR				S	**Sg**	**16 06 18.2**	**+0.5**
GUR	**Goura**	**0.61**	**103**	*e*PB	**Pb**	**16 06 08.6**	**-1.5**
GUR				*e*SN	**Sg**	**16 06 18.3**	**+0.6**
GUR	**Goura**	**0.61**	**103**	P	**Pg**	**16 06 08.7**	**-0.9**
GUR				S	**Sg**	**16 06 18.2**	**+0.5**
KFL	**Anninata**	**0.63**	**273**	P	**Pg**	**16 06 09.5**	**-0.5**
KFL				S	**Sg**	**16 06 18.6**	**+0.3**
VLS	**Valsamata**	**0.79**	**277**	P	**Pg**	**16 06 11.6**	**-1.4**
VLS				S	**Sg**	**16 06 24.0**	**+0.6**
VLS	**Valsamata**	**0.79**	**277**	P	**Pg**	**16 06 11.6**	**-1.4**
DSF	**Desfina**	**0.81**	**66**	P	**Pg**	**16 06 11.8**	**-1.5**
DSF				S	**Sg**	**16 06 24.1**	**+0.2**
EVR	**Evrytania**	**0.85**	**12**	*e*Pb	**Pb**	**16 06 12.9**	**-1.4**
EVR	**Evrytania**	**0.85**	**12**	*e*PB	**Pb**	**16 06 12.9**	**-1.4**
EVR	**Evrytania**	**0.85**	**12**	*e*Pb	**Pb**	**16 06 12.9**	**-1.4**
ITM	**Ithomi**	**0.94**	**163**	*e*Pn	**Pn**	**16 06 14.7**	**-1.7**
ITM	**Ithomi**	**0.94**	**163**	P	**Pb**	**16 06 14.8**	**-0.9**
ITM				S	**Sb**	**16 06 29.3**	**+1.3**
ITM	**Ithomi**	**0.94**	**163**	*e*PN	**Pn**	**16 06 14.7**	**-1.7**
ITM	**Ithomi**	**0.94**	**163**	P	**Pb**	**16 06 14.8**	**-0.9**
ITM				S	**Sb**	**16 06 29.3**	**+1.3**
VLX	**Vlachokerasia**	**0.94**	**138**	P	**Pb**	**16 06 14.7**	**-1.1**
VLX				S	**Sb**	**16 06 29.0**	**+0.8**
VLX	**Vlachokerasia**	**0.94**	**138**	*e*PB	**Pb**	**16 06 14.6**	**-1.2**
VLX	**Vlachokerasia**	**0.94**	**138**	*e*Pb	**Pb**	**16 06 14.6**	**-1.2**
VLX				S	**Sb**	**16 06 29.0**	**+0.8**
LKD2	**Lefkada island**	**1.02**	**314**	P	**Pb**	**16 06 15.6**	**-1.5**
LKD2				S	**Sb**	**16 06 30.8**	**+0.5**
LKD2	**Lefkada island**	**1.02**	**314**	P	**Pb**	**16 06 15.6**	**-1.5**
LKD2				S	**Sb**	**16 06 30.8**	**+0.5**
LTK	**Loutraki**	**1.09**	**93**	*e*PN	**Pn**	**16 06 18.3**	**-0.2**
LTK	**Loutraki**	**1.09**	**93**	*e*Pn	**Pn**	**16 06 18.3**	**-0.2**
AGG	**Agios Georgios**	**1.11**	**31**	*e*Pb	**Pb**	**16 06 16.9**	**-1.7**
AGG	**Agios Georgios**	**1.11**	**31**	P	**Pb**	**16 06 17.9**	**-0.7**
AGG				S	**Sb**	**16 06 33.6**	**+0.8**
AGG	**Agios Georgios**	**1.11**	**31**	*e*PB	**Pb**	**16 06 16.9**	**-1.7**
AGG	**Agios Georgios**	**1.11**	**31**	*e*Pb	**Pb**	**16 06 16.9**	**-1.7**
AGG	**Agios Georgios**	**1.11**	**31**	P	**Pb**	**16 06 17.9**	**-0.7**
AGG				S	**Sb**	**16 06 33.6**	**+0.8**
PYL	**PYLOS**	**1.19**	**174**	P	**Pn**	**16 06 19.4**	**-0.4**
PYL				S	**Sb**	**16 06 36.1**	**+0.9**
PYL	**PYLOS**	**1.19**	**174**	*e*PN	**Pn**	**16 06 19.6**	**-0.2**
PYL	**PYLOS**	**1.19**	**174**	P	**Pn**	**16 06 19.4**	**-0.4**
PYL				S	**Sb**	**16 06 36.1**	**-0.8**
LKR	**Lokris**	**1.25**	**62**	*e*Pb	**Pb**	**16 06 19.5**	**-1.4**
LKR	**Lokris**	**1.25**	**62**	*e*PB	**Pb**	**16 06 19.5**	**-1.4**
LKR	**Lokris**	**1.25**	**62**	*e*Pb	**Pb**	**16 06 19.5**	**-1.4**
THL	**Klokotos Trika**	**1.52**	**12**	*e*PN	**Pn**	**16 06 25.2**	**+0.8**
THL	**Klokotos Trika**	**1.52**	**12**	*e*Pn	**Pn**	**16 06 25.3**	**+0.9**
JAN	**Janina**	**1.68**	**340**	*e*Pn	**Pn**	**16 06 28.8**	**+2.2**
JAN	**Janina**	**1.68**	**340**	*e*PN	**Pn**	**16 06 28.8**	**+2.2**
ATH	**Athens Observa**	**1.68**	**93**	*e*Pn	**Pn**	**16 06 27.7**	**+1.0**
ATH	**Athens Observa**	**1.68**	**93**	*e*PN	**Pn**	**16 06 27.7**	**+1.0**
ATH	**Athens Observa**	**1.68**	**93**	*e*Pn	**Pn**	**16 06 27.7**	**+1.0**
VLI	**Veliai**	**1.73**	**141**	*e*Pn	**Pn**	**16 06 29.1**	**+1.8**
VLI	**Veliai**	**1.73**	**141**	*e*PN	**Pn**	**16 06 29.1**	**+1.8**
VLI	**Veliai**	**1.73**	**141**	*e*Pn	**Pn**	**16 06 29.1**	**+1.8**
LIT	**Litokhoron**	**2.14**	**19**	*e*Pn	**Pn**	**16 06 34.3**	**+1.4**
LIT	**Litokhoron**	**2.14**	**19**	*e*PN	**Pn**	**16 06 34.3**	**+1.4**
LIT	**Litokhoron**	**2.14**	**19**	*e*Pn	**Pn**	**16 06 34.3**	**+1.4**

*TIR **08** 16:10:00.1±4.7, 37°.77N×21°.08E, h0km±999km*
*ISCJB **08** 16:10:04.9±0.4, 37°.94N±0°.02×21°.44E±0°.02, h11km±2km, mb3.9/11, Error ellipse: s-maj=2.8km s-min=2.2km az=16.8*
*NEIC **08** 16:10:05.8, 38°.00N×21°.50E, h26km, mb3.9/3, ML3.9(ATH), After ATH.*
*ATH **08** 16:10:05.8, 38°.00N×21°.50E, h26km±1km, ML3.9*
*THE **08** 16:10:06.6, 37°.96N×21°.54E, h3km±1km, ML4.6/15, Error ellipse: s-maj=1.5km s-min=0.8km az=190.0*
*CSEM **08** 16:10:06.0±0.1, 37°.93N×21°.52E, h12km, ML3.9, Error ellipse: s-maj=4.0km s-min=3.0km az=17.0*
*IDC **08** 16:10:09.9±1.1, 38°.00N×21°.43E, h48km±14km, mb3.6/9, mb1 3.7/17, mb1mx3.6/34, mbtmp3.6/17, ML3.9/7, MS3.0/1, Ms1 3.0/1, ms1mx2.5/46, Error ellipse: s-maj=14.0km s-min=10.2km az=23.0*

ISC 08 16:10:06.5±0.3, 37°.95N±0°.02×21°.50E±0°.02, h14km±2km, n285, σ1§29/357, mb3.9/11, 11C-13D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.11**	**346**	*e*Pb	**Pg**	**16 10 10.8**	**+1.1**
RLS				*e*Sb	**Sg**	**16 10 13.7**	**+1.6**
RLS	**Riolos of Patr**	**0.11**	**346**	*e*PB	**Pg**	**16 10 10.8**	**+1.1**
RLS				*e*SB	**Sg**	**16 10 13.7**	**+1.6**
RLS	**Riolos of Patr**	**0.11

JAN	Janina	1.78	344	ePn		Pn	16 10 36.2 -0.6
ATHU	Athens Univers	1.81	89	P		Pn	16 10 36.4 -0.8
ATHU				S		Sn	16 11 01.7 +1.8
ATHU	Athens Univers	1.81	89	P		Pn	16 10 36.4 -0.8
ATHU				S		Sn	16 11 01.7 +1.8
VLY	Voula,Athens	1.82	92	ePb		Pn	16 10 36.8 -0.6
VLY	Voula,Athens	1.82	92	ePB		Pn	16 10 36.8 -0.6
IGT	Igoumenitsa	1.82	330	P		Pn	16 10 38.1 +0.6
IGT	Igoumenitsa	1.82	330	P		Pn	16 10 38.1 +0.6
IGT	Igoumenitsa	1.82	330	P		Pn	16 10 38.1 +0.6
MEV	Metsovon	1.84	353	P		Pn	16 10 40.2 +2.4
MEV	Metsovon	1.84	353	P		Pn	16 10 40.2 +2.4
MEV	Metsovon	1.84	353	P		Pn	16 10 40.2 +2.4
PTL	Penteli	1.87	86	ePn		Pn	16 10 37.0 -1.1
PTL	Penteli	1.87	86	ePN		Pn	16 10 37.0 -1.1
PTL	Penteli	1.87	86	ePn		Pn	16 10 37.0 -1.1
NEO	Neokhori	1.91	44	ePn		Pn	16 10 38.4 -0.3
NEO	Neokhori	1.91	44	ePN		Pn	16 10 38.4 -0.3
NEO	Neokhori	1.91	44	ePn		Pn	16 10 38.4 -0.3
XOR	Xorichti	1.94	43	P		Pn	16 10 38.5 -0.5
XOR	Xorichti	1.94	43	P		Pn	16 10 38.5 -0.5
XOR	Xorichti	1.94	43	P		Pn	16 10 38.5 -0.5
KEK	Kerkira	2.21	323	P		Pn	16 10 43.3 +0.6
KEK	Kerkira	2.21	323	P		Pn	16 10 43.3 +0.6
KEK	Kerkira	2.21	323	ePN		Pn	16 10 41.9 -0.8
KEK	Kerkira	2.21	323	ePn		Pn	16 10 41.9 -0.8
KEK	Kerkira	2.21	323	P		Pn	16 10 43.3 +0.6
AOS	Alonnisos	2.23	56	P		Pn	16 10 42.5 -0.5
AOS				S		Sn	16 11 11.2 +0.9
AOS	Alonnisos	2.23	56	P		Pn	16 10 42.5 -0.5
AOS				S		Sn	16 11 11.2 +0.9
AOS	Alonnisos	2.23	56	P		Pn	16 10 42.5 -0.5
AOS				S		Sn	16 11 11.2 +0.9
SRN	Sarande	2.25	329	ePN		Pn	16 10 44.4 +1.0
SRN				eSN		Sn	16 11 22.1 +1.2
SRN	Sarande	2.25	329	ePn		Pn	16 10 44.4 +1.0
	SNR=35						
SRN				eSn		Sn	16 11 12.2 +1.2
	SNR=35						
LIT	Litokhoron	2.28	19	P		Pn	16 10 44.3 +0.5
LIT				ePb		Pn	16 10 44.5 +0.7
LIT				S		Sn	16 11 13.6 +1.9
LIT	Litokhoron	2.28	19	P		Pn	16 10 44.3 +0.5
LIT				S		Sn	16 11 13.6 +1.9
LIT	Litokhoron	2.28	19	ePB		Pn	16 10 44.5 +0.7
LIT	Litokhoron	2.28	19	P		Pn	16 10 44.3 +0.5
LIT				S		Sn	16 11 13.6 +1.9
KZN	Kozani	2.36	5	ePn		Pn	16 10 44.8 -0.1
KZN	Kozani	2.36	5	P		Pn	16 10 47.1 +2.2
KZN	Kozani	2.36	5	ePN		Pn	16 10 44.8 -0.1
KZN	Kozani	2.36	5	ePn		Pn	16 10 44.8 -0.1
KZN	Kozani	2.36	5	P		Pn	16 10 47.1 +2.2
KBN	Korca	2.73	349	ePN		Pn	16 10 52.7 +2.8
KBN				eSN		Sb	16 11 29.9 +1.5
KBN	Korca	2.73	349	ePn		Pn	16 10 52.7 +2.8
	SNR=35						
FNA	Florina	2.83	358	P		Pn	16 10 53.2 +1.9
FNA	Florina	2.83	358	P		Pn	16 10 53.2 +1.9
FNA	Florina	2.83	358	P		Pn	16 10 53.2 +1.9
PLG	Polygyros	2.85	31	ePn		Pn	16 10 51.3 -0.3
PLG	Polygyros	2.85	31	P		Pn	16 10 54.1 +2.5
PLG	Polygyros	2.85	31	ePN		Pn	16 10 51.3 -0.3
PLG	Polygyros	2.85	31	ePn		Pn	16 10 51.3 -0.3
PLG	Polygyros	2.85	31	P		Pn	16 10 54.1 +2.5
OUR	Ouranopolis	3.06	38	P		Pn	16 10 54.3 -0.2
OUR	Ouranopolis	3.06	38	P		Pn	16 10 54.3 -0.2
OUR	Ouranopolis	3.06	38	P		Pn	16 10 54.3 -0.2
OHR	Ohrid	3.20	350	*i* Pn		Pn	16 10 58.3 +1.8
SOH	Sokhos	3.21	26	P		Pn	16 10 57.9 +1.4
SOH	Sokhos	3.21	26	P		Pn	16 10 57.9 +1.4
SOH	Sokhos	3.21	26	ePB		Pn	16 10 57.7 +1.2
SOH	Sokhos	3.21	26	P		Pn	16 10 57.9 +1.4
APE	Apeiranthos	3.32	104	P		Pn	16 10 57.8 -0.3
APE	Apeiranthos	3.32	104	P		Pn	16 10 57.8 -0.3
APE	Apeiranthos	3.32	104	⇑*i*P		Pn	16 10 58.8 +0.7
APE	Apeiranthos	3.32	104	P		Pn	16 10 57.8 -0.3
VAM	Vamos	3.34	139	P		Pn	16 11 02.2 +3.9
VAM	Vamos	3.34	139	P		Pn	16 11 02.2 +3.9
KRUS	Krusevo	3.42	357	*i* Pn		Pn	16 11 00.3 +0.9
VAV	Valandovo	3.47	13	*i* Pn		Pn	16 11 59.6 -0.5
SRS	Serrai	3.55	26	P		Pn	16 11 03.3 +2.1
SRS	Serrai	3.55	26	P		Pn	16 11 03.3 +2.1
SRS	Serrai	3.55	26	P		Pn	16 11 03.3 +2.1
TIR	Tirane	3.62	340	ePn		Pn	16 11 04.1 +1.9
TIR	Tirane	3.62	340	ePn		Pn	16 11 04.1 +1.9
STIP	Stip	3.78	8	*i* Pn		Pn	16 11 05.7 +1.4
IDI	Anoyia	3.81	133	P		Pn	16 11 06.2 +1.5
	3.1nm,0.3s,baz=317,slow=15,SNR=18						
IDI				S		Sn	16 11 51.9 +2.6
	6.6nm,0.3s,baz=0.5,slow=15,SNR=3.7						
IDI				LR		LR	16 12 47.1
	comp=Z,206nm,19.8s,baz=23,slow=40						
IDI	Anoyia	3.81	133	P		Pn	16 11 06.2 +1.5
IDI				S		Sn	16 11 51.9 +2.6
IDI				LR		LR	16 12 47.1
IDI	Anoyia	3.81	133	P		Pn	16 11 06.2 +1.5
IDI				S		Sn	16 11 51.9 +2.6
KAVA	Kavala	3.83	37	P		Pn	16 11 05.2 +0.1
KAVA	Kavala	3.83	37	P		Pn	16 11 05.2 +0.1
TIP	Timpagrande	3.91	290	P		Pn	16 11 07.5 +1.3
TIP	Timpagrande	3.91	290	P		Pn	16 11 07.5 +1.3
SKO	Skopje	4.02	359	*i* Pn		Pn	16 11 08.8 +1.1
SMG	Samos	4.23	92	P		Pn	16 11 11.5 +0.9
SMG	Samos	4.23	92	P		Pn	16 11 11.5 +0.9
NPS	Neapolis	4.26	128	P		Pn	16 11 14.0 +3.1
NPS	Neapolis	4.26	128	P		Pn	16 11 14.0 +3.1
PUK	Puka	4.27	344	ePN		Pn	16 11 12.4 +1.3
PUK	Puka	4.27	344	ePn		Pn	16 11 12.4 +1.3
	SNR=35						
CEL	Celeste	4.43	276	eP		Pn	16 11 12.8 -0.6
CEL	Celeste	4.43	276	eP		Pn	16 11 12.8 -0.5
SG1	Sgolgore (BA)	4.72	309	ePn		Pn	16 11 17.9 +0.6
SG1				eSn		Sn	16 12 13.3 +1.5
BAI	Bari	4.76	313	ePn		Pn	16 11 18.1 +0.2
BARS	Barje	4.87	3	⇓*i*Pn		Pn	16 11 20.1 +0.8
KARP	Karpathos	5.14	116	P		Pn	16 11 26.5 +3.5
KARP	Karpathos	5.14	116	P		Pn	16 11 26.5 +3.5
VAE	Valguarnera	5.64	267	P		Pn	16 11 30.5 +0.6
	0.7nm,0.3s,baz=216,slow=11,SNR=3.2						
VAE				S		Sn	16 12 32.9 -1.6
	1.6nm,0.3s,baz=128,slow=5.8,SNR=5.8						
VAE	Valguarnera	5.64	267	P		Pn	16 11 30.5 +0.6
VAE				S		Sn	16 12 32.9 -1.6
VAE	Valguarnera	5.64	267	P		Pn	16 11 30.5 +0.6
VAE				S		Sn	16 12 32.9 -1.6
STON	Ston	5.71	331	⇑*i*Pn		Pn	16 11 29.4 -1.4
STON				Sn		Sn	16 12 32.4 -3.7
STON	Ston	5.71	331	⇑*i*Pn		Pn	16 11 29.4 -1.4
CSSN	Cassano Irpino	5.80	302	Pn		Pn	16 11 34.2 +2.1
	22nm,0.6s						
CSSN	Cassano Irpino	5.80	302	Pn		Pn	16 11 34.2 +2.1
	22nm,0.6s						
FG5	Orsara di Pugl	5.85	307	Pn		Pn	16 11 34.1 +1.3
	149nm,1.4s						
FG5	Orsara di Pugl	5.85	307	Pn		Pn	16 11 34.1 +1.3
	149nm,1.4s						
RGNG	Rignano Grg	5.88	311	Pn		Pn	16 11 33.1 -0.1
RGNG	Rignano Grg	5.88	311	Pn		Pn	16 11 33.1 -0.1
WDD	Wield Dalam	5.96	252	eP		Pn	16 11 34.9 +0.6
	77nm,0.7s						
WDD	Wield Dalam	5.96	252	eP		Pn	16 11 34.9 +0.5
	77nm,0.7s						
PSB1	Pescosannita	6.11	304	Pn		Pn	16 11 37.7 +1.3
	65nm,0.8s						
PSB1	Pescosannita	6.11	304	Pn		Pn	16 11 37.7 +1.3
	65nm,0.8s						
BBLS	Lazići	6.12	346	ePn		Pn	16 11 36.7 +0.2
FG2	Serracapriola	6.21	310	Pn		Pn	16 11 38.2 +0.4
	46nm,0.2s						
FG2	Serracapriola	6.21	310	Pn		Pn	16 11 38.2 +0.4
	46nm,0.2s						
DIVS	Divibare	6.25	350	⇓*i*Pn		Pn	16 11 37.8 -0.4
CIGN	Sant'Elia a Pi	6.28	308	Pn		Pn	16 11 38.7 0.0
	166nm,1.7s						
CIGN	Sant'Elia a Pi	6.28	308	Pn		Pn	16 11 38.7 0.0
	166nm,1.7s						
AQU	L'Aquila	7.60	308	eP		Pn	16 11 58.5 +1.7
	33nm,0.9s						
AQU	L'Aquila	7.60	308	⇑*i*P		Pn	16 11 59.0 +2.2
AQU	L'Aquila	7.60	308	eP		Pn	16 11 58.5 +1.7
	33nm,0.9s						
MLR	Muntele Rosu	8.23	22	P		Pn	16 12 07.9 +2.4
	1.0nm,0.3s,baz=342,slow=16,SNR=10.0						
MLR	Muntele Rosu	8.23	22	⇓P		Pn	16 12 09.1 +3.6
MLR	Muntele Rosu	8.23	22	⇓*i*P		Pn	16 12 09.1 +3.6
NVLJ	Novalja	8.28	325	*i* Pn		Pn	16 12 05.0 -1.1
NVLJ				Sn		Sn	16 13 33.5 -5.8
NVLJ	Novalja	8.28	325	*i* Pn		Pn	16 12 05.0 -1.1
PKSM	Moragy	8.52	346	⇑*i*eP		Pn	16 12 12.3 +2.8
PLOR	Plostina	8.78	24	⇓*i*P		Pn	16 12 17.8 +4.9
VRI	Vrincioaia	8.82	25	⇓P		Pn	16 12 17.4 +4.0
VRI	Vrincioaia	8.82	25	⇓*i*P		Pn	16 12 17.4 +3.9
DRGR		8.88	5	⇓P		Pn	16 12 08.8 -5.6
DRGR		8.88	5	⇓*i*P		Pn	16 12 08.8 -5.6
BR131	Keskin Array S	9.64	76	eP		Pn	16 12 27.6 +2.8
	1.0nm,0.4s						
BRTR	Keskin Array B	9.64	76	P		Pn	16 12 27.4 +2.7
	0.5nm,0.3s,baz=258,slow=13,SNR=10						
SOKA	Soboth	9.95	333	⇓Pn		Pn	16 12 27.6 -1.4
	0.7nm,0.1s						
SOKA	Soboth	9.95	333	Pn		Pn	16 12 27.6 -1.4
	0.7nm,0.1s						
OBKA	Obir	9.98	331	⇓Pn		Pn	16 12 28.3 -1.1
	1.0nm,0.1s						
OBKA				⇑*i*Sn		Sn	16 14 19.7 -1.5
	10.0nm,0.7s						
OBKA	Obir	9.98	331	Pn		Pn	16 12 28.3 -1.1
	1.0nm,0.1s						
KEST	Kesra	9.99	261	P		Pn	16 12 31.8 +2.1
	0.1nm,0.3s,baz=214,slow=7.3,SNR=2.4						
PSZ	Piszkesteto	10.03	354	eP		Pn	16 12 35.2 +5.1
	6.6nm,0.8s						
ARSA	Arzberg	10.28	337	⇓*i*Pn		Pn	16 12 31.8 -1.7
	1.2nm,0.2s						
ARSA	Arzberg	10.28	337	Pn		Pn	16 12 31.8 -1.7
	1.2nm,0.2s						
KECS	Kecovo	10.55	356	ePn		Px	16 12 47.2
KECS	Kecovo	10.55	356	ePN		Px	16 12 47.2
VYHS	Vyhne	10.72	350	ePn		Pn	16 12 43.8 +4.3
VYHS				eSn		Sn	16 14 36.8 -2.4
CRVS	Cervenica-Dubn	10.95	360	ePn		Pn	16 12 52.2 +10
KOLS	Kolonicke sedl	10.99	3	ePn		Pn	16 12 52.5 +9.2
MOA	Molln	11.22	334	⇑*i*Pn		Pn	16 12 46.8 +0.4
	1.8nm,0.3s						
MOA				⇓*i*Sn		Sn	16 14 48.0 -3.5
	2.6nm,0.5s						
MOA	Molln	11.22	334	Pn		Pn	16 12 46.8 +0.4
	1.8nm,0.3s						
WTTA	Wattenberg	11.80	325	⇑*i*Pn		Pn	16 12 53.7 -0.6
	1.6nm,0.3s						
WTTA				⇑*i*Sn		Sn	16 15 01.6 -4.1
	4.4nm,0.6s						
WTTA	Wattenberg	11.80	325	Pn		Pn	16 12 53.7 -0.6
	1.6nm,0.3s						
MOTA	Moosalm	12.10	324	⇑*i*Pn		Pn	16 12 57.7 -0.7
	2.3nm,0.6s						
MOTA				⇑*i*Sn		Sn	16 15 08.0 -5.1
	3.0nm,0.6s						
MOTA	Moosalm	12.10	324	Pn		Pn	16 12 57.7 -0.7
	2.3nm,0.6s						
GERES	GERESS Array B	12.27	335	P		Pn	16 13 00.2 -0.5
	0.2nm,0.3s,baz=160,slow=13,SNR=8.0						
GERES				S		Sn	16 15 08.9 -8.3
	0.0nm,0.3s,baz=166,slow=28,SNR=2.4						
GERES	GERESS Array B	12.27	335	P		Pn	16 13 00.2 -0.5
DAVOX	Davos/Dischmat	12.31	319	P		Pn	16 13 03.4 +2.2
	0.2nm,0.3s,baz=89,slow=9.9,SNR=2.4						
DAVOX				S		Sn	16 15 13.3 -4.8
	0.2nm,0.3s,baz=270,slow=19,SNR=3.7						
DAVOX	Davos/Dischmat	12.31	319	P		Pn	16 13 03.4 +2.2
MMAI	Mount Meron Ar	12.35	109	P		Pn	16 12 59.3 -2.6
	1.1nm,0.3s,baz=303,slow=11,SNR=4.5						
ORIF	Oris-en-Rattie	13.62	306	eP		Pn	16 13 20.7 +1.5
ORIF	Oris-en-Rattie	13.62	306	eP		Pn	16 13 20.7 +1.5
EIL	Elat	13.89	123	P		Pn	16 13 21.1 -1.9
	0.3nm,0.3s,baz=359,slow=15,SNR=5.2						
EIL	Elat	13.89	123	P		Pn	16 13 21.0 -2.0
CABF	La Chapelle	14.30	312	eP		Pn	16 13 27.0 -1.5
	9.1nm,0.8s						
CABF	La Chapelle	14.30	312	eP		Pn	16 13 27.0 -1.5
	4.6nm,0.8s						
HINF	Hinteralfeld	14.55	317	eP		Pn	16 13 29.8 -2.1
SMF	Signal de Mont	15.66	309	eP		Pn	16 13 44.5 -2.2
MEZF	Maizieres J'vi	15.93	317	eP		Pn	16 13 48.6 -1.6
	12nm,0.7s						
LOR	Lormes	15.95	311	eP		Pn	16 13 47.6 -2.8
AVF	Avril sur Loir	16.03	309	eP		Pn	16 13 49.5 -1.9
SSF	Saint Saulge	16.06	310	eP		Pn	16 13 51.0 -0.8
	20nm,1.2s						
SSF	Saint Saulge	16.06	310	eP		Pn	16 13 51.0 -0.8
	9.9nm,1.2s						
BGF	Bois d'Agland	16.24	308	eP		Pn	16 13 55.2 +1.1
BGF	Bois d'Agland	16.24	308	eP		Pn	16 13 55.2 +1.1
LDF	La Druitiere	18.94	311	eP		Pn	16 14 26.6 -1.0
LDF	La Druitiere	18.94	311	eP		Pn	16 14 26.6 -1.0
FLN	La Foliniere	19.23	311	eP		Pn	16 14 30.0 -1.1
FLN	La Foliniere	19.23	311	eP		Pn	16 14 30.0 -1.1
GRR	Gorron	19.29	310	eP		Pn	16 14 29.4 -2.5
GRR	Gorron	19.29	310	eP		Pn	16 14 29.4 -2.5
ESDC	Sonseca Array	19.90	283	P		Pn	16 14 38.2 -1.0
	0.4nm,0.3s,baz=77,slow=11,SNR=14						
ESDC	Sonseca Array	19.90	283	P		Pn	16 14 38.2 -1.0
ESDC	Sonseca Array	19.90	283	P		Pn	16 14 38.2 -1.0
SGMF	Saint Gilles	20.28	308	eP		P	16 14 40.8 -0.8
SGMF	Saint Gilles	20.28	308	eP		P	16 14 40.8 -0.8
QUIF	Quistinic	20.55	307	eP		P	16 14 44.8 +0.3
	7.6nm,0.7s						
QUIF	Quistinic	20.55	307	eP		P	16 14 44.8 +0.3
	3.8nm,0.6s						
QUIF	Quistinic	20.55	307	eP		P	16 14 44.8 +0.3
	3.8nm,0.6s						
ROSF	Rostrenen	20.76	308	eP		P	16 14 46.3 -0.5
ROSF	Rostrenen	20.76	308	eP		P	16 14 46.3 -0.5
HFS	Hagfors	22.75	350	P		P	16 15 06.4 -1.7
	2.7nm,0.5s,mb3.9,baz=169,slow=9.1,SNR=12						
HFS	Hagfors	22.75	350	P		P	16 15 06.4 -1.6
FINES	FINESS Array B	23.69	5	P		P	16 15 15.9 -1.7
	1.5nm,0.5s,mb3.7,baz=173,slow=8.8,SNR=11						
FINES	FINESS Array B	23.69	5	P		P	16 15 15.9 -1.7
NB2	NORSAR Subarra	24.00	348	P		P	16 15 19.1 -1.4
	comp=Z,7.7nm,1.2s,mb4.0,baz=152,slow=10						
NB2	NORSAR Subarra	24.00	348	P		P	16 15 19.1 -1.4
	comp=Z,7.7nm,1.2s,mb4.0,SNR=4.6						
NOA	NORSAR Array B	24.00	348	P		P	16 15 19.1 -1.3
	comp=Z,1.6nm,0.7s,mb3.5,baz=156,slow=12,SNR=5.8						
NOA	NORSAR Array B	24.00	348	P		P	16 15 19.1 -1.4
EKA	Eskdalemuir Ar	24.06	324	P		P	16 15 20.5 -0.6
	comp=Z,1.8nm,0.7s,mb3.6,baz=130,slow=9.8,SNR=17						
EKA	Eskdalemuir Ar	24.06	324	P		P	16 15 20.5 -0.6
KAF	Kangasniemi	24.37	5	ep		P	16 15 22.4 -1.5
	comp=Z,3.7nm,0.8s,mb3.9						
KAF	Kangasniemi	24.37	5	eP		P	16 15 22.4 -1.5
	comp=Z,3.7nm,0.8s,mb3.9						
JOF	Joensuu	25.71	10	ep		P	16 15 33.7 -2.3
	comp=Z,5.5nm,0.8s,mb4.1						
TOA0	Torodi Ar. Sit	30.35	221	eP		P	16 16 17.8 -0.1
TOA0	Torodi Ar. Sit	30.35	221	eP		P	16 16 17.8 -0.1
TORD	Torodi Ar. Bea	30.35	221	P		P	16 16 17.9 0.0
	comp=Z,1.9nm,0.6s,mb4.0,baz=33,slow=9.0,SNR=25						
ARCES	ARCESS Array B	31.72	3	P		P	16 16 27.9 -1.6
	comp=Z,1.1nm,0.6s,mb3.9,baz=183,slow=9.7,SNR=8.1						
ARCES	ARCESS Array B	31.72	3	P		P	16 16 27.9 -1.6
BVAR	Borovoye Array	36.67	50	P		P	16 17 12.8 +0.2
	comp=Z,0.7nm,0.7s,mb3.6,baz=268,slow=3.9,SNR=4.9						
BVAR	Borovoye Array	36.67	50	P		P	16 17 12.8 +0.2
MK31	Makanchi Array	44.76	58	eP		P	16 18 17.7 -1.8
MK31	Makanchi Array	44.76	58	eP		P	16 18 17.7 -1.7
MKAR	Makanchi Array	44.76	58	P		P	16 18 17.9 -1.5
	comp=Z,0.9nm,0.5s,mb3.9,baz=288,slow=5.9,SNR=23						
MKAR	Makanchi Array	44.76	58	P		P	16 18 17.9 -1.5
MKAR	Makanchi Array	44.76	58	P		P	16 18 17.9 -1.5
ZAA0	Zalesovo Array	45.27	48	P		P	16 18 22.5 -0.8
ZAA0	Zalesovo Array	45.27	48	P		P	16 18 22.5 -0.8
ZALV	Zalesovo Beam	45.27	48	P		P	16 18 21.8 -1.6
	comp=Z,1.6nm,0.4s,mb4.2,baz=263,slow=8.3,SNR=9.4						
WRA	Warramunga Arr	119.75	93	PKP	PKPdf		16 28 54.6 -2.0
	comp=Z,0.5nm,1.1s,baz=317,slow=2.4,SNR=3.0						
WRA	Warramunga Arr	119.75	93	PKIKP	PKPdf		16 28 54.6 -1.9
ASAR	Alice Springs	121.38	97	PKP	PKPdf		16 28 58.0 -1.5
	comp=Z,0.2nm,0.8s,baz=312,slow=1.6,SNR=4.6						
ASAR	Alice Springs	121.38	97	PKIKP	PKPdf		16 28 58.0 -1.5

*IDC **08** 16:25:45.4±0.9, 2°.63N×126°.82E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.6/22, mbtmp3.8/7, Error ellipse: s-maj=70.0km s-min=16.6km az=73.0*

*ISCJB **08** 16:25:48.2±0.8, 2°.7N±0°.1×126°.8E±0°.4, h33km, mb3.7/7, Error ellipse: s-maj=56.9km s-min=12.8km az=164.6*

*NEIC **08** 16:25:49.8±0.9, 2°.76N×127°.15E, h35km, mb4.0/1, Error ellipse: s-maj=61.0km s-min=11.8km az=69.0*

ISC 08 16:25:50.4±0.8, 2°.7N±0°.1×126°.9E±0°.4, h35km, n10, σ0=52/11, mb3.7/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.67	184	P	P	16 30 28.0	+0.7
	2.2nm,0.8s,baz=4.8,slow=12,SNR=3.7						
FITZ	Fitzroy Crossi	20.67	184	P	P	16 30 28.0	+0.7
FITZ				ePn	P	16 30 28.4	+1.1
WRAB	Tennant Creek	23.60	162	eP	P	16 30 58.0	-0.3
	4.1nm,0.7s,mb4.0						
WRA	Warramunga Arr	23.61	162	P	P	16 30 57.6	-0.7
	0.7nm,0.4s,mb3.5,baz=340,slow=11,SNR=36						
ASAR	Alice Springs	27.03	166	P	P	16 31 29.6	+0.2
	0.4nm,0.5s,mb3.2,baz=345,slow=7.3,SNR=32						
ASAR				PcP	PcP	16 34 51.4	+1.0
	0.2nm,0.5s,baz=344,slow=2.0,SNR=5.1						
KSRS	Korea Array	34.64	1	P	P	16 32 37.1	+0.7
	0.4nm,0.4s,mb3.7,baz=177,slow=10,SNR=4.4						
STKA	Stephens Creek	37.06	159	P	P	16 32 57.2	0.0
	1.1nm,0.3s,mb4.2,baz=345,slow=8.6,SNR=8.6						
STKA	Stephens Creek	37.06	159	P	P	16 32 57.2	0.0
MKAR	Makanchi Array	58.55	326	P	P	16 35 43.1	-0.4
	0.3nm,0.5s,mb3.6,baz=108,slow=9.4,SNR=6.2						
KURK	Kurchatov	62.75	328	P	P	16 36 11.6	-0.4
	0.5nm,0.4s,mb4.0,baz=129,slow=6.3,SNR=4.2						

IDC 08 16:30:18.9±1.4, 31°.25N×103°.62E, h0km, mb3.3/4, mb1 3.6/4, mb1mx3.3/24, mbtmp3.4/4, Error ellipse: s-maj=45.4km s-min=27.3km az=54.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	13.42	199	Pn	Pn	16 33 36.2	+5.5
	0.0nm,0.3s,baz=5.8,slow=9.7,SNR=3.2						
KSRS	Korea Array	20.97	66	P	P	16 35 03.5	0.0
	1.2nm,0.6s,baz=260,slow=10,SNR=7.9						
MKAR	Makanchi Array	22.60	319	P	P	16 35 20.9	0.0
	0.7nm,0.9s,baz=116,slow=11,SNR=7.4						
WRA	Warramunga Arr	58.82	146	P	P	16 40 18.4	-0.9
	0.3nm,0.4s,baz=338,slow=7.9,SNR=11						
ASAR	Alice Springs	61.83	148	P	P	16 40 41.0	+1.2
	0.3nm,0.8s,baz=339,slow=6.6,SNR=4.9						

*BJI **08** 16:35:44.4, 3°.68N×126°.78E, h47km, mB4.9/21, mb4.9/44, Ms4.3/33, Ms7 4.3/28*

*ISCJB **08** 16:35:46.9±0.4, 3°.74N±0°.02×126°.77E±0°.03, h63km±3km, mb4.9/117, Error ellipse: s-maj=5.2km s-min=3.1km az=168.7*

*MOS **08** 16:35:46.6±1.2, 3°.74N×126°.65E, h58km, mb5.2/39, Error ellipse: s-maj=12.4km s-min=5.6km az=116.4*

*NEIC **08** 16:35:46.3±1.1, 3°.72N×126°.62E, h42km±10km, mb4.9/63, Error ellipse: s-maj=7.1km s-min=4.3km az=68.0*

*IDC **08** 16:35:48.6±1.9, 3°.68N×126°.56E, h61km±16km, mb4.4/26, mb1 4.5/27, mb1mx4.5/29, mbtmp4.5/27, MS3.9/10, Ms1 4.0/10, ms1mx3.5/28, Error ellipse: s-maj=18.4km s-min=8.2km az=73.0*

*DJA **08** 16:35:50, 3°.61N×126°.73E, h61km, mb5.0/27*

ISC 08 16:35:48.9±0.4, 3°.72N±0°.02×126°.76E±0°.03, h66km±3km, h58km±2.7km: pP-P, n283, σ1=22/296, mb4.8/116, 16C-9D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	Sangihe	1.23	268	P	Pn	16 36 07.6	-2.5
SGSI				S	Sn	16 36 25.3	-0.7
GSPH	General Santos	2.96	323	eP	Pn	16 36 30.

31nm,0.5s,mb4.9
FITZ eS **S** **16 44 28.3 -3.1**
FITZ Fitzroy Crossi 21.71 183 P **P** **16 40 33.8 -0.9**
17nm,0.6s,mb4.6,baz=21,slow=8.4,SNR=30
FITZ Fitzroy Crossi 21.71 183 eP **P** **16 40 32.7 -2.0**
15nm,0.6s,mb4.5
FITZ Fitzroy Crossi 21.71 183 P **P** **16 40 33.7 -1.0**
71nm,1.1s,mb4.9
LEM Lembang 21.79 241 P **P** **16 40 34.9 -0.7**
42nm,0.7s,mb4.9
CBJI Citeko 22.29 243 P **P** **16 40 41.3 +0.4**
191nm,0.9s,mb5.4
QIZ Qiongzhong 22.46 314 P **P** **16 40 42.5 -0.2**
QIZ pP 16 40 55.1
QIZ S **S** **16 44 46.8 +1.6**
QIZ pmax pmax
comp=Z,19nm,1.1s,mb4.3
QIZ pmax pmax
comp=Z,41nm,2.9s,mb4.2
QIZ LR LR
comp=N,150nm,17.4s
QIZ LR LR
comp=Z,220nm,18.5s
MYKOM Kota Tinggi 22.96 266 P **P** **16 40 49.5 +1.4**
MYKOM Kota Tinggi 22.96 266 P **P** **16 40 47.0 -1.0**
comp=Z,27nm,0.9s,mb4.6
RBSI Rajabasa 23.04 246 P **P** **16 40 49.0 +0.1**
comp=Z,1µmcomp=Z,175nm,0.7s,mb5.5
CGJI Cibinong 23.40 244 P **P** **16 40 51.0 -1.3**
comp=Z,101nm,0.8s,mb5.2
KGM Kluang 23.47 267 P **P** **16 40 53.6 +0.7**
KTGM Kuala Trenggan 23.60 275 P **P** **16 40 55.1 +1.0**
COEN Coen 23.95 137 eP **P** **16 40 56.2 -1.0**
MDSI Maura Dua 23.99 250 P **P** **16 41 00.0 +2.4**
comp=Z,662nmcomp=Z,47nm,0.8s,mb4.9
KASI Kota Agung 24.06 248 P **P** **16 40 58.2 -0.1**
comp=Z,63nm,0.8s,mb5.0
WRAB Tennant Creek 24.66 163 eP **P** **16 41 02.2 -1.4**
WRAB pmax pmax
comp=Z,79nm,0.9s,mb5.1
WRAB Tennant Creek 24.66 163 eP **P** **16 41 02.2 -1.4**
comp=Z,79nm,0.9s,mb5.2
WRAB Tennant Creek 24.66 163 P **P** **16 41 03.0 -0.6**
comp=Z,90nm,1.0s,mb5.2
WRA Warramunga Arr 24.67 163 P **P** **16 41 02.3 -1.4**
comp=Z,58nm,0.8s,mb5.0,baz=344,slow=10,SNR=142
FRIM Kepong 25.09 270 P **P** **16 41 08.7 +1.0**
MBWA Marble Bar 25.67 195 eP **P** **16 41 12.8 0.0**
MBWA Marble Bar 25.67 195 eP **P** **16 41 12.9 +0.1**
comp=Z,26nm,1.0s,mb4.6
IPM Ipoh 25.68 273 P **P** **16 41 14.0 +1.0**
IPM Ipoh 25.68 273 P **P** **16 41 12.4 -0.6**
CBIJ Chichi jima 27.53 31 P **P** **16 41 27.3 -2.2**
comp=Z,61nm,0.7s,mb5.2,baz=300,slow=10,SNR=6.3
PSI Prapat 27.80 269 P **P** **16 41 31.2 -0.9**
comp=Z,11nm,0.8s,mb4.5,baz=92,slow=4.7,SNR=15
ASAR Alice Springs 28.10 166 P **P** **16 41 34.5 -0.1**
comp=Z,3.9nm,0.6s,mb4.1,baz=346,slow=7.4,SNR=51
ASAR PcP PcP 16 44 48.9 +1.1
comp=Z,2.8nm,0.6s,baz=344,slow=1.6,SNR=6.5
WHN Wuhan 29.14 338 P **P** **16 41 43.0 -0.8**
WHN LR LR
comp=Z,840nm,20.8s
NJ2 Nanjing 29.14 346 eP **P** **16 41 44.6 +0.8**
NJ2 pP pP 16 41 59.1 -0.6
NJ2 sP sP 16 42 04.4 -3.0
NJ2 S **S** **16 46 31.3 0.0**
NJ2 sS sS 16 46 55.6 -2.8
NJ2 pmax pmax
comp=Z,30nm,1.0s,mb4.9
NJ2 pmax pmax
comp=Z,100nm,3.9s
NJ2 LR LR
comp=N,160nm,25.7s
NJ2 LR LR
comp=E,210nm,22.1s
GYA Guiyang 29.69 322 P **P** **16 41 50.0 +1.3**
GYA pP pP 16 42 05.3 +0.7
GYA PP PP 16 42 49.6 -7.2
GYA PcP PcP 16 44 53.2 +1.5
GYA sS sS 16 47 06.5 -0.7
GYA ScP ScP 16 48 29.5 +1.3
GYA PcS PcS 16 48 35.4 +0.4
GYA ScS ScS 16 52 22.0 -1.3
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
GYA pmax pmax
comp=Z,110nm,4.9s
GYA LR LR
comp=N,430nm,16.9s
GYA LR LR
comp=E,470nm,17.0s
GYA LR LR
comp=Z,520nm,15.2s
CTA Charters Tower 30.44 142 P **P** **16 41 56.0 +0.6**
comp=Z,8.1nm,1.0s,mb4.3,baz=316,slow=13,SNR=3.1
CM31 Chiang Mai Arr 30.90 300 eP **P** **16 41 59.1 -0.4**
comp=Z,3.1nm,0.7s,mb4.2
CMAR Chiang Mai Arr 30.90 300 P **P** **16 41 59.0 -0.5**
comp=Z,4.2nm,0.9s,mb4.2,baz=120,slow=7.6,SNR=30
CMAR PcP PcP 16 44 56.4 +1.3
comp=Z,0.6nm,0.8s,baz=149,slow=3.1,SNR=3.7
CMAR LR LR 16 56 03.8
comp=Z,192nm,18.3s,baz=268,slow=40
CMAR Chiang Mai Arr 30.90 300 P **P** **16 41 59.0 -0.5**
CMAR 16 44 56.4
ENH Enshi 31.05 330 eP **P** **16 41 59.0 -1.6**
comp=Z,18nm,0.8s,mb4.9
CHTO Chiang Mai 31.05 301 eP **P** **16 42 00.1 -0.7**
CHTO pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
CHTO Chiang Mai 31.05 301 eP **P** **16 42 00.1 -0.8**
comp=Z,6.2nm,0.8s,mb4.4
MEEK Meekatharra 31.19 194 eP **P** **16 42 01.9 0.0**
KMI Kunming 31.41 315 P **P** **16 42 06.4 +2.5**
KMI pP pP 16 42 21.1 +1.3
KMI PP PP 16 43 11.6 -4.3
KMI S **S** **16 47 08.2 +1.3**
KMI sS sS 16 47 34.0 -0.2
KMI SS SS 16 48 58.8 -25
KMI pmax pmax
comp=Z,8.0nm,1.0s,mb4.4
KMI pmax pmax
comp=Z,78nm,5.1s
KMI LR LR
comp=N,180nm,17.7s
KMI LR LR
comp=E,170nm,22.8s
KMI LR LR
comp=Z,210nm,26.6s
KSRS Korea Array 33.59 2 P **P** **16 42 23.1 +0.3**
comp=Z,7.3nm,0.8s,mb4.5,baz=179,slow=9.9,SNR=50
KSRS PcP PcP 16 45 03.6 +1.6
comp=Z,2.3nm,0.6s,baz=189,slow=2.6,SNR=15
KSRS LR LR 16 57 19.1
comp=Z,131nm,20.1s,baz=63,slow=38
MAT Matsushiro 34.32 16 P **P** **16 42 26.9 -2.3**
MAT S **S** **16 48 08.8 +17**
MJAR Matsushiro Arr 34.32 16 P **P** **16 42 26.7 -2.4**
comp=Z,2.4nm,1.1s,mb4.0,baz=205,slow=8.8,SNR=9.1
MJAR PcP PcP 16 45 06.4 +2.3
comp=Z,1.6nm,0.7s,baz=174,slow=3.5,SNR=5.6
MJAR LR LR 16 56 30.6
comp=Z,187nm,19.2s,baz=185,slow=36
MJAR Matsushiro Arr 34.32 16 P **P** **16 42 26.7 -2.5**
MJAR 16 45 06.4
FORT Forrest 34.33 178 eP **P** **16 42 29.2 -0.1**
comp=Z,35nm,0.7s,mb5.3
FORT Forrest 34.33 178 eP **P** **16 42 29.2 -0.1**
comp=Z,54nm,0.8s,mb5.4
XAN Xi'an 34.44 333 P **P** **16 42 28.5 -1.7**
XAN pP pP 16 42 37.8 -8.5
XAN pmax pmax
comp=Z,8.0nm,1.0s,mb4.5
XAN LR LR
comp=N,170nm,24.2s
XAN LR LR
comp=E,50nm,18.7s
XAN LR LR
comp=Z,110nm,19.8s
CD2 Chengdu 34.66 324 ⇓ *i*P **P** **16 42 31.2 -1.0**
CD2 pP pP 16 42 46.5 -1.8
CD2 sP sP 16 42 53.6 -2.4
CD2 PP PP 16 43 50.0 -2.0
CD2 S **S** **16 47 56.6 -0.8**
CD2 sS sS 16 48 22.3 -2.5
CD2 SS SS 16 50 13.2 -17
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.9
CD2 pmax pmax
comp=Z,30nm,5.2s
CD2 LR LR
comp=N,280nm,21.4s
CD2 LR LR
comp=E,270nm,19.0s
CD2 LR LR
comp=Z,280nm,15.5s
KMBL Kambalda 35.20 187 eP **P** **16 42 36.7 -0.1**
comp=Z,32nm,0.4s,mb5.5
EIDS Eidsvold 37.33 142 eP **P** **16 42 54.5 -0.6**
BJT Baijiatuau 37.38 347 eP **P** **16 42 55.2 -0.1**
BJT pmax pmax
comp=Z,89nm,0.6s
BJT Baijiatuau 37.38 347 eP **P** **16 42 55.2 -0.1**
comp=Z,89nm,0.6s,mb5.9
BBOO Buckleboo 37.39 167 eP **P** **16 42 55.0 -0.4**
comp=Z,5.4nm,0.4s,mb4.8
BJI Beijing 37.40 347 P **P** **16 42 55.8 +0.3**
BJI pP pP 16 43 10.3 -1.4
BJI sP sP 16 43 16.4 -2.9
BJI PP PP 16 44 23.6 +1.6
BJI S **S** **16 48 43.4 +4.4**
BJI sS sS 16 49 06.0 -0.5
BJI pmax pmax
comp=Z,130nm,0.6s,mb6.0
BJI LR LR
comp=N,91nm,27.0s
BJI LR LR
comp=E,120nm,22.5s
NWAO Narrogin (SRO) 37.55 193 eP **P** **16 42 57.1 +0.3**
comp=E,104nm,1.2s,mb5.5
NWAO Narrogin (SRO) 37.55 193 P **P** **16 42 56.9 +0.1**
comp=E,5.3nm,0.4s,mb4.7,baz=57,slow=14,SNR=13
SNY Shenyang 38.05 356 ⇑P **P** **16 43 01.6 +0.7**
SNY S **S** **16 48 49.4 +0.7**
SNY pmax pmax
comp=Z,48nm,0.8s,mb5.4
SNY LR LR
comp=N,130nm,15.0s
SNY LR LR
comp=E,120nm,19.8s
SNY LR LR
comp=Z,130nm,22.5s
STKA Stephens Creek 38.11 159 eP **P** **16 43 01.3 -0.3**
comp=Z,19nm,0.7s,mb5.0
STKA Stephens Creek 38.11 159 P **P** **16 43 01.7 +0.1**
comp=Z,20nm,0.6s,mb5.1,baz=335,slow=8.4,SNR=65
STKA PcP PcP 16 45 16.8 +1.2
comp=Z,5.1nm,0.7s,baz=321,slow=5.8,SNR=3.7
STKA Stephens Creek 38.11 159 eP **P** **16 43 01.4 -0.2**
comp=Z,4.0nm,0.7s,mb4.4
LZH Lanzhou 38.52 330 eP **P** **16 43 05.3 +0.3**
LZH pP pP 16 43 20.6 -0.7
LZH sP sP 16 43 28.0 -0.9
LZH PP PP 16 44 39.3 +5.0
LZH PcP PcP 16 45 15.2 -1.5
LZH eS **S** **16 48 58.0 +1.9**
LZH sS sS 16 49 21.4 -2.3
LZH SS SS 16 51 37.2 -11
LZH pmax pmax
comp=Z,22nm,1.0s,mb4.9
LZH pmax pmax
comp=Z,92nm,4.3s
LZH LR LR
comp=E,320nm,14.3s
LZH LR LR
comp=Z,520nm,16.2s
HHC Hu-ho-hao-te 39.41 342 eP **P** **16 43 13.6 +1.2**
HHC pP pP 16 43 28.9 +0.2
HHC PP PP 16 44 49.6 +5.6
HHC PcP PcP 16 45 18.8 -0.6
HHC ScP ScP 16 49 02.9 +0.3
HHC PcS PcS 16 49 10.4 +1.2
HHC S **S** **16 49 12.4 +3.1**
HHC SS SS 16 52 02.9 -2.9
HHC ScS ScS 16 53 13.9 -0.7
HHC pmax pmax
comp=Z,12nm,0.9s,mb4.7
HHC pmax pmax
comp=Z,120nm,5.2s
HHC LR LR
comp=N,150nm,22.6s
HHC LR LR
comp=E,170nm,22.6s
HHC LR LR
comp=Z,170nm,22.6s
VLA Vladivostok 39.49 6 eP **P** **16 43 11.1 -1.9**
VLA *e* pP 16 43 22.8 -6.5
VLA *e* pP 16 43 29.8 +0.5
VLA pmax pmax
comp=Z,37nm,1.3s,mb5.0
CN2 Changchun 39.93 359 eP **P** **16 43 16.6 0.0**
CN2 epP pP 16 43 26.5 -6.4
CN2 eS **S** **16 49 21.7 +4.8**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
CN2 LR LR
comp=N,200nm,21.0s
CN2 LR LR
comp=E,200nm,21.0s
CN2 LR LR
comp=Z,200nm,13.0s
MDJ Mudanjiang 40.80 3 P **P** **16 43 24.6 +0.8**
MDJ pP pP 16 43 37.9 -2.3
MDJ sP sP 16 43 44.1 -3.6
MDJ PP PP 16 45 01.2 +2.2
MDJ PcP PcP 16 45 21.1 -2.7
MDJ ScP ScP 16 49 06.5 -1.4
MDJ PcS PcS 16 49 12.4 -2.1
MDJ S **S** **16 49 34.8 +4.9**
MDJ ScS ScS 16 53 23.8 +1.1
MDJ pmax pmax
comp=Z,31nm,1.0s,mb5.1
MDJ pmax pmax
comp=Z,72nm,6.3s
MDJ LR LR
comp=N,79nm,19.5s
MDJ LR LR
comp=E,60nm,30.6s
MDJ LR LR
comp=Z,120nm,22.2s
MDJ Mudanjiang 40.80 3 eP **P** **16 43 24.3 +0.6**
comp=Z,28nm,0.9s,mb5.1
ARMA Armidale 41.44 147 eP **P** **16 43 30.1 +0.8**
ARMA Armidale 41.44 147 eP **P** **16 43 30.0 +0.7**
comp=Z,17nm,0.8s,mb4.9
LSA Lhasa 42.47 311 eP **P** **16 43 38.1 +0.4**
LSA pmax pmax
comp=Z,12nm,0.7s,mb4.7
LSA Lhasa 42.47 311 eP **P** **16 43 38.1 +0.4**
comp=Z,12nm,0.7s,mb4.7
ASAJ Asahikawa 42.59 17 P **P** **16 43 39.8 +1.3**
comp=Z,12nm,0.8s,mb4.7,baz=232,slow=14,SNR=11
ARPS Mount Arapiles 42.67 162 eP **P** **16 43 40.4 +1.2**
comp=Z,31nm,0.7s,mb5.2
GTA Gaotai 43.12 329 eP **P** **16 43 41.9 -0.9**
GTA pP pP 16 43 57.2 -2.1
GTA sP sP 16 44 04.1 -2.7
GTA PP PP 16 45 25.7 +1.6
GTA S **S** **16 50 03.1 -1.2**
GTA sS sS 16 50 30.1 -2.2
GTA SS SS 16 53 10.8 -8.3
GTA pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
GTA pmax pmax
comp=Z,59nm,4.5s
GTA LR LR
comp=N,140nm,19.9s
GTA LR LR
comp=E,220nm,18.7s
GTA LR LR
comp=Z,350nm,20.5s
TAPN Taplejung 44.04 306 eP **P** **16 43 49.7 -0.7**
comp=Z,17nm,0.8s,mb4.8
ODAN Odare 44.10 305 eP **P** **16 43 50.0 -0.9**
comp=Z,39nm,0.7s,mb5.2
TOO Toolangi 44.62 159 eP **P** **16 43 56.9 +2.1**
RAMN Ramite 44.78 305 eP **P** **16 43 54.7 -1.6**
comp=Z,30nm,0.9s,mb5.0
HABR Khabarovsk 45.15 8 eP **P** **16 43 57.2 -1.6**
HABR *e**PP pP 16 44 10.1 -5.3
HABR 16 45 43.5
HABR *e*S **S** **16 50 34.1 +0.6**
HABR *e**SS sS 16 50 56.1 -5.6
HABR pmax pmax
comp=N,26nm,2.4s
HABR pmax pmax
comp=Z,34nm,1.5s,mb4.9
HABR pmax pmax
comp=E,40nm,2.2s
HABR MLR MLR
comp=Z,134nm,17.0s
YSS Yuzh-Sakhalins 45.24 15 ⇑ eP **P** **16 44 01.2 +1.6**
YSS Yuzh-Sakhalins 45.24 15 eP **P** **16 43 59.3 -0.3**
comp=Z,59nm,1.4s,mb5.1
JIRN Jiri 45.40 306 eP **P** **16 44 00.7 -0.5**
comp=Z,8.5nm,0.4s,mb4.9
KLR Kul'dur 45.54 5 eP **P** **16 43 57.3 -4.6**
KLR pmax pmax
comp=Z,28nm,1.2s,mb4.9
GUN Gumba 45.75 306 eP **P** **16 44 03.3 -0.7**
comp=Z,27nm,0.7s,mb5.1
HIA Hailar 45.77 354 eP **P** **16 44 04.0 +0.2**
HIA pmax pmax
comp=Z,33nm,0.9s
HIA Hailar 45.77 354 eP **P** **16 44 04.0 +0.2**
comp=Z,33nm,0.9s,mb5.1
PKI Pulchoki 46.00 305 eP **P** **16 44 05.4 -0.5**
KKN Kakani 46.19 306 eP **P** **16 44 05.8 -1.6**
comp=Z,8.0nm,0.6s,mb4.7
KKN Kakani 46.19 306 eP **P** **16 44 05.8 -1.6**
KKN pmax pmax
comp=Z,8.0nm,0.6s,mb4.6
DMN Daman 46.26 305 eP **P** **16 44 06.9 -1.1**
comp=Z,13nm,0.7s,mb4.8
ULN Ulaanbaatar 47.13 342 eP **P** **16 44 14.4 -0.1**
ULN pmax pmax
comp=Z,16nm,1.1s,mb4.7
ULN Ulaanbaatar 47.13 342 eP **P** **16 44 14.3 -0.1**
comp=Z,16nm,1.1s,mb4.7
SONM Songino Array 47.31 341 P **P** **16 44 15.9 +0.1**
comp=Z,3.6nm,0.6s,mb4.3,baz=155,slow=8.7,SNR=17
SONM PcP PcP 16 45 46.4 +0.5
comp=Z,3.1nm,0.8s,baz=177,slow=3.9,SNR=4.7
SONM LR LR 17 07 18.5
comp=Z,115nm,19.9s,baz=138,slow=40
SONM Songino Array 47.31 341 P **P** **16 44 15.9 0.0**
SONM 16 45 46.4
ZAK Zakamensk 50.54 341 eP **P** **16 44 42.3 +1.8**
ZAK *e* 16 45 57.7
TLY Talaya 51.54 342 eP **P** **16 44 48.5 +0.5**
TLY pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
TLY MLR MLR
comp=Z,82nm,20.0s
TLY Talaya 51.54 342 eP **P** **16 44 47.6 -0.4**
comp=Z,5.5nm,0.6s,mb4.8
MOY Mondy 52.40 340 eP **P** **16 44 55.1 +0.7**
MOY pmax pmax
comp=Z,3.0nm,1.4s,mb4.1
WMQ Urumqi 52.75 325 eP **P** **16 44 58.0 +0.9**
WMQ pmax pmax
comp=Z,17nm,1.0s,mb5.0
PETK Petropavlovsk- 55.42 22 P **P** **16 45 17.1 +0.6**
comp=Z,12nm,0.7s,mb5.0,baz=201,slow=6.3,SNR=16
PETK LR LR 17 09 06.5
comp=Z,53nm,18.4s,baz=19,slow=36
THN Thein Dam 55.60 307 ePKP **P** **16 45 16.0 -2.1**
MK31 Makanchi Array 57.58 325 eP **P** **16 45 30.8 -1.1**
MKAR Makanchi Array 57.58 325 P **P** **16 45 31.1 -0.8**
comp=Z,3.9nm,0.5s,mb4.7,baz=103,slow=8.6,SNR=55
MKAR LR LR 17 12 15.2
comp=Z,196nm,18.3s,baz=105,slow=38
KSH Kashi 58.07 315 eP **P** **16 45 36.6 +1.1**
KSH pP pP 16 45 52.7 +0.1
KSH sP sP 16 45 59.6 -0.4
KSH PcP PcP 16 46 27.8 +1.1
KSH PP PP 16 47 47.3 +2.6
KSH ScP ScP 16 50 21.2 -0.1
KSH PcS PcS 16 50 27.8 -0.3
KSH S **S** **16 53 29.6 -2.0**
KSH sS sS 16 53 58.0 -2.7
KSH ScS ScS 16 55 17.0 -2.4
KSH SS SS 16 57 24.1 +0.2
KSH pmax pmax
comp=Z,15nm,1.5s,mb4.8
KSH pmax pmax
comp=Z,95nm,4.4s
KSH LR LR
comp=N,66nm,6.3s
KSH LR LR
comp=E,92nm,6.6s
KSH LR LR
comp=Z,84nm,4.7s
YAK Yakutsk 58.21 2 *c i*P **P** **16 45 36.2 +0.2**
YAK pmax pmax
comp=Z,53nm,0.8s,mb5.6
YAK pmax pmax
comp=E,5.0nm,1.5s
YAK pmax pmax
comp=N,36nm,1.5s
YAK Yakutsk 58.21 2 eP **P** **16 45 36.1 +0.1**
comp=N,71nm,0.9s,mb5.7
ULHL Ulahol 59.05 318 P **P** **16 45 43.7 +1.5**
SNR=5.5
KZA Kyzart 59.64 318 P **P** **16 45 48.0 +1.7**
SNR=16
TKM2 Tokmak 2 59.77 319 P **P** **16 45 48.2 +1.0**
SNR=12
TKM2 Tokmak 2 59.77 319 eP **P** **16 45 46.9 -0.3**
TKM2 pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
TKM2 Tokmak 2 59.77 319 eP **P** **16 45 46.9 -0.3**
comp=Z,9.2nm,0.9s,mb4.8
KBK Karagaybulak 60.09 318 P **P** **16 45 50.6 +1.3**
SNR=5.5
UCH Uchtor 60.20 317 P **P** **16 45 52.0 +1.8**
SNR=23
UCH Uchtor 60.20 317 eP **P** **16 45 50.2 +0.1**
UCH pmax pmax
comp=Z,15nm,0.9s,mb5.0
UCH Uchtor 60.20 317 eP **P** **16 45 50.2 0.0**
comp=Z,14nm,0.9s,mb5.0
AAK Ala-Archa 60.38 318 P **P** **16 45 50.3 -1.1**
comp=Z,1.3nm,0.3s,mb4.5,baz=168,slow=6.6,SNR=8.3
AAK Ala-Archa 60.38 318 ⇓ eP **P** **16 45 52.8 +1.4**
AAK pmax pmax
comp=Z,6.0nm,1.7s,mb4.3
AAK MLR MLR
comp=Z,55nm,20.0s
AAK Ala-Archa 60.38 318 eP **P** **16 45 52.1 +0.7**
comp=Z,7.1nm,1.0s,mb4.7
ZAA0 Zalesovo Array 60.61 333 eP **P** **16 45 51.4 -1.3**
ZALV Zalesovo Beam 60.61 333 P **P** **16 45 51.5 -1.2**
comp=Z,4.3nm,0.6s,mb4.6,baz=115,slow=7.0,SNR=22
ZALV LR LR 17 13 55.1
comp=Z,105nm,20.0s,baz=248,slow=38
USP Ospenovka 60.64 318 P **P** **16 45 53.4 +0.2**
SNR=11
AML Almayashu 60.71 317 P **P** **16 45 55.0 +1.3**
SNR=17
AML Almayashu 60.71 317 eP **P** **16 45 53.4 -0.2**
AML pmax pmax
comp=Z,17nm,0.8s,mb5.1
AML Almayashu 60.71 317 eP **P** **16 45 53.4 -0.3**
comp=Z,17nm,0.8s,mb5.1
EKS2 Erkin-Say 60.87 318 P **P** **16 45 55.7 +1.0**
SNR=16
EKS2 Erkin-Say 60.87 318 eP **P** **16 45 53.6 -1.1**
EKS2 pmax pmax
comp=Z,11nm,0.8s,mb4.9
EKS2 Erkin-Say 60.87 318 eP **P** **16 45 53.6 -1.1**
comp=Z,11nm,0.8s,mb5.0
KBL Kabul 61.55 307 eP **P** **16 45 58.7 -0.8**
KBL pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
KBL Kabul 61.55 307 eP **P** **16 45 58.7 -0.7**
comp=Z,9.4nm,0.7s,mb4.9
RPZ Rata Peaks 61.74 145 P **P** **16 46 01.3 +0.8**
comp=Z,26nm,0.9s,mb5.2,baz=44,slow=13,SNR=3.6
KURK Kurchatov 61.76 327 P **P** **16 45 59.9 -0.7**
comp=Z,8.7nm,0.6s,mb5.0,baz=126,slow=6.1,SNR=38
KURK Kurchatov 61.76 327 eP **P** **16 45 59.8 -0.7**
KURK pmax pmax
comp=Z,29nm,0.8s,mb5.4
KURK Kurchatov 61.76 327 eP **P** **16 45 59.8 -0.7**
comp=Z,29nm,0.8s,mb5.4

NVS **Novosibirsk 61.89 333** *i* P **P 16 45 59.7 -1.6**
NVS pmax pmax
comp=Z,13nm,0.9s,mb5.0
NVS pmax pmax
comp=N,8.0nm,1.0s
NVS pmax pmax
comp=E,5.0nm,1.0s
SEY Seymchan 62.03 13*d i*P **P 16 46 04.0 +1.9**
BVAR Borovoye Array 67.34 327 P **P 16 46 36.1 -0.8**
comp=E,11nm,0.8s,mb4.7,baz=122,slow=7.2,SNR=45
BRVK Borovoye 67.41 327*c i*P **P 16 46 36.6 -0.7**
BRVK pmax pmax
comp=Z,29nm,1.2s,mb5.0
BRVK Borovoye 67.41 327 *e*P **P 16 46 36.4 -0.9**
comp=Z,28nm,1.0s,mb5.0
TIXI Tiksi 67.85 1 *e*P **P 16 46 39.0 -0.8**
TIXI pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
TIXI Tiksi 67.85 1 *e*P **P 16 46 39.0 -0.8**
comp=Z,10nm,0.8s,mb4.7
BILL Bilibino 69.55 15⇑*e*P **P 16 46 50.5 +0.1**
BILL *e**PP pP 16 47 12.9 +4.8
BILL *e*S S 16 55 50.5 -2.5
BILL pmax pmax
comp=Z,12nm,1.7s,mb4.5
BILL Bilibino 69.55 15 *e*P **P 16 46 50.4 0.0**
comp=Z,6.8nm,0.9s,mb4.5
CASY Casey 70.81 187 *e*P **P 16 46 59.6 +1.5**
ABKAR Akbulak array 72.17 321 *e*P **P 16 47 05.7 -1.0**
comp=Z,8.4nm,0.7s,mb4.7
UNV Unalaska Valle 73.41 35 *e*P **P 16 47 14.3 +0.4**
comp=Z,10nm,0.6s,mb4.8
SVE Sverdlovsk 73.98 328⇑*e*P **P 16 47 17.0 -0.2**
SVE pmax pmax
comp=Z,22nm,0.9s,mb4.9
MIR Mirnyy 74.16 193 *e*P **P 16 47 18.0 0.0**
MIR pmax pmax
comp=Z,42nm,1.8s,mb4.9
ARU Arti 74.96 328*d i*P **P 16 47 22.0 -0.9**
ARU 16 50 06.4
ARU S S 16 56 57.3 +2.1
ARU SS SS 17 01 41.0 -3.8
ARU pmax pmax
comp=Z,13nm,0.8s,mb4.7
ARU Arti 74.96 328 *e*P **P 16 47 21.5 -1.4**
comp=Z,8.0nm,0.6s,mb4.6
SDPT Sand Point 77.18 34 *e*P **P 16 47 36.5 +1.0**
comp=Z,37nm,0.6s,mb5.3
SVW2 Sparrevohn 80.79 29 *e*P **P 16 47 56.9 +1.7**
TTA Tatalina 80.89 27 *e*P **P 16 47 57.0 +1.3**
ABPO Ambohimpanom 81.33 250 *e*P **P 16 47 59.2 +0.3**
ABPO pmax pmax
comp=Z,8.0nm,1.0s,mb4.5
ABPO Ambohimpanom 81.33 250 *e*P **P 16 47 59.2 +0.3**
comp=Z,7.6nm,1.0s,mb4.5
PPLA Purkeypile 82.62 27 *e*P **P 16 48 06.1 +1.3**
CHUM Lake Minchumin 82.67 26 *e*P **P 16 48 07.2 +2.2**
comp=Z,8.8nm,0.9s,mb4.6
GOF Gofitskoye 82.95 315 *e*P **P 16 48 05.5 -1.3**
KIV Kislovodsk 83.16 314 *e*P **P 16 48 10.1 +2.1**
KIV pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
KTH Kantishna Hill 83.26 27 P **P 16 48 07.4 -0.7**
comp=Z,38nm,1.5s,mb5.0
BPAW Bear Paw Mtn. 83.28 26 *e*P **P 16 48 09.3 +1.1**
comp=Z,4μm,1.2s
SEW Seward 83.69 30 *e*P **P 16 48 11.7 +1.3**
comp=Z,11nm,0.9s,mb4.7
MAW Mawson 83.76 200 P **P 16 48 10.7 +0.2**
comp=Z,1.6nm,0.5s,mb4.1,baz=58,slow=8.3,SNR=4.5
MAW Mawson 83.76 200 *e*P **P 16 48 12.1 +1.6**
comp=Z,1.2nm,1.0s,mb3.7
COLD Coldfoot 83.89 23 *e*P **P 16 48 13.2 +2.0**
comp=Z,18nm,1.2s,mb4.8
PMR Palmer 83.94 29 *e*P **P 16 48 12.0 +0.4**
PMR pmax pmax
comp=Z,19nm,1.0s,mb4.9
PMR Palmer 83.94 29 *e*P **P 16 48 12.0 +0.5**
comp=Z,19nm,1.0s,mb4.9
VRHR Novokhopersk 84.06 321 *e*P **P 16 48 12.5 +0.1**
VRHR pmax pmax
comp=Z,10.0nm,0.5s,mb4.9
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,1.1s
VSR Storozhevoye 85.61 321 *e*P **P 16 48 19.5 -0.7**
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
VSR pmax pmax
comp=N,7.0nm,0.9s
VSR pmax pmax
comp=E,9.0nm,1.2s
PAX Paxson 85.69 27 *e*P **P 16 48 22.0 +1.6**
PAX pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
PAX Paxson 85.69 27 *e*P **P 16 48 22.0 +1.6**
comp=Z,2.7nm,0.6s,mb4.3
ANN Anapa 86.92 315 *e*P **P 16 48 14.6 -12**
ANN *e**PP pP 16 48 28.7 -16
ANN pmax pmax
comp=Z,37nm,1.0s,mb5.3
OBN Obninsk 87.08 325⇓*i*P **P 16 48 27.3 0.0**
OBN *e**PP pP 16 48 45.9 +0.3
OBN *e*S S 16 58 56.1 -5.1
OBN pmax pmax
comp=Z,24nm,1.1s,mb5.0
EGAK Eagle 87.55 25 *e*P **P 16 48 30.6 +1.2**
comp=Z,1.6nm,0.8s,mb4.1
APA Apatity 87.87 337⇑*e*P **P 16 48 29.4 -1.5**
APA *e* 16 58 54.0
APA pmax pmax
comp=Z,15nm,1.0s,mb5.0
APA MLR MLR
comp=Z,200nm,16.0s
MMAI Mount Meron Ar 89.13 303 P **P 16 48 36.9 -0.7**
comp=Z,3.7nm,0.8s,mb4.4,baz=99,slow=4.8,SNR=3.5
JOF Joensuu 89.20 333 *ep* **P 16 48 36.2 -1.0**
comp=Z,10nm,0.7s,mb5.0
JOF Joensuu 89.20 333 *ep* **P 16 48 36.2 -1.0**
comp=Z,10nm,0.7s,mb5.0
KMBO Kilima Mbogo 89.58 269 P **P 16 48 40.3 +0.2**
comp=Z,3.9nm,0.8s,mb4.6,baz=49,slow=7.0,SNR=11
KMBO Kilima Mbogo 89.58 269 *e*P **P 16 48 40.8 +0.7**
KMBO pmax pmax
comp=Z,6.0nm,0.9s
KMBO Kilima Mbogo 89.58 269 *e*P **P 16 48 40.8 +0.7**
comp=Z,6.0nm,0.9s,mb4.7
BR131 Keskin Array S 90.05 310 *e*P **P 16 48 41.0 -0.7**
comp=Z,3.5nm,0.8s,mb4.5
BRTR Keskin Array B 90.05 310 P **P 16 48 40.9 -0.8**
comp=Z,4.8nm,0.9s,mb4.6,baz=117,slow=5.0,SNR=22
INK Inuvik 90.16 21 *e*P **P 16 48 42.3 +0.7**
ARCES ARCESS Array B 90.47 340 P **P 16 48 42.8 -0.2**
comp=Z,5.4nm,0.8s,mb4.8,baz=79,slow=6.7,SNR=16
KAF Kangasniemi 91.62 332 *e*P **P 16 48 47.0 -1.5**
KAF pmax pmax
comp=Z,6.0nm,0.7s,mb4.9
KAF Kangasniemi 91.62 332 *ep* **P 16 48 47.0 -1.5**
comp=Z,5.5nm,0.7s,mb4.9,baz=76,slow=4.3
KAF Kangasniemi 91.62 332 *ep* **P 16 48 47.0 -1.5**
comp=Z,5.5nm,0.7s,mb4.9,baz=76,slow=4.3
FINES FINESS Array B 91.85 332 P **P 16 48 47.7 -1.9**
comp=Z,2.0nm,0.6s,mb4.5,baz=42,slow=3.5,SNR=11
FINES LR LR 17 35 38.7
comp=Z,73nm,18.6s,baz=351,slow=39
FINES FINESS Array B 91.85 332 P **P 16 48 47.7 -1.9**
FINES LR LR 17 35 38.7
AKASG Malin Array Be 91.92 321 P **P 16 48 48.6 -1.5**
comp=Z,6.5nm,0.8s,mb4.9,baz=72,slow=4.4,SNR=11
AKASG LR LR 17 34 06.3
comp=Z,47nm,18.1s,baz=50,slow=38
AKBB Malin Array Si 91.92 321 *e*P **P 16 48 49.1 -1.0**
KIEV Kiev 91.93 321 *e*P **P 16 48 49.0 -1.2**
KIEV pmax pmax
comp=Z,3.0nm,0.8s,mb4.6
KIEV Kiev 91.93 321 *e*P **P 16 48 49.0 -1.2**
comp=Z,3.3nm,0.8s,mb4.6
SYO Syowa Base 92.43 201⇑*e*P **P 16 48 52.0 -0.1**
VRI Vrincioaia 94.32 316 ⇑P **P 16 49 01.6 +0.3**
VRI Vrincioaia 94.32 316⇑*i*P **P 16 49 01.6 +0.3**
MLR Muntele Rosu 94.92 316 ⇑P **P 16 49 04.6 +0.5**
MLR Muntele Rosu 94.92 316⇑*i*P **P 16 49 04.6 +0.5**
BUR08 Bucovina Ar. S 95.03 318 *e*P **P 16 49 04.8 +0.2**
KOLS Kolonicke sedl 96.67 320 *e*P **P 16 49 13.7 +1.7**
KOLS pmax pmax
comp=Z,4.0nm,1.1s,mb4.8
KOLS Kolonicke sedl 96.67 320 *e*P **P 16 49 13.7 +1.7**
comp=Z,3.8nm,1.1s,mb4.7
KOLS Kolonicke sedl 96.67 320 *e*P **P 16 49 13.7 +1.7**
UZH Uzhgorod 96.73 320⇑*i*P **P 16 49 12.0 -0.2**
DRGR 96.87 318 ⇓P **P 16 49 13.0 +0.1**
DRGR 96.87 318 ⇓*i*P **P 16 49 13.0 +0.1**
CRVS Cervenica-Dubn 97.20 320 *e*P **P 16 49 15.0 +0.7**
CRVS pmax pmax
comp=Z,9.0nm,1.2s,mb5.1
CRVS Cervenica-Dubn 97.20 320 *e*P **P 16 49 15.0 +0.7**
comp=Z,8.7nm,1.2s,mb5.1
CRVS Cervenica-Dubn 97.20 320 *e*P **P 16 49 15.0 +0.7**
STHS Stebnicka Huta 97.21 321 *e*P **P 16 49 15.7 +1.3**
STHS pmax pmax
comp=Z,3.0nm,1.0s,mb4.7
STHS Stebnicka Huta 97.21 321 *e*P **P 16 49 15.7 +1.3**
comp=Z,3.2nm,1.0s,mb4.7
STHS Stebnicka Huta 97.21 321 *e*P **P 16 49 15.7 +1.3**
KECS Kecovo 97.93 320 *e*P **P 16 49 18.1 +0.5**
KECS pmax pmax
comp=Z,3.0nm,1.0s,mb4.8
KECS Kecovo 97.93 320 *e*P **P 16 49 18.1 +0.5**
comp=Z,2.7nm,1.0s,mb4.7
KECS Kecovo 97.93 320 *e*P **P 16 49 18.1 +0.5**
NB2 NORSAR Subarra 98.81 334 P **P 16 49 20.4 -0.9**
comp=Z,1.6nm,0.8s,mb4.6,baz=69,slow=5.1
NOA NORSAR Array B 98.81 334 LR LR 17 38 42.5
comp=Z,96nm,21.0s,baz=50,slow=38
VYHS Vyhne 98.98 320 *e*P **P 16 49 22.9 +0.5**
VYHS pmax pmax
comp=Z,5.0nm,2.0s,mb4.7
VYHS Vyhne 98.98 320 *e*P **P 16 49 22.9 +0.5**
comp=Z,5.3nm,2.0s,mb4.7
VYHS Vyhne 98.98 320 PDIF **P 16 49 22.9 +0.5**
YKA Yellowknife Ar 99.49 24 P Pdif 16 49 25.3 +0.9
comp=Z,0.9nm,0.7s,baz=305,slow=4.6,SNR=6.8
YKA Yellowknife Ar 99.49 24 P Pdif 16 49 25.3 +0.9
GERES GERESS Array B 102.11 322 P Pdif 16 49 36.0 -0.1
comp=Z,1.0nm,0.9s,baz=29,slow=3.0,SNR=6.1
TXAR Lajitas Array 121.58 52 PKP PKPdf 16 54 36.9 +1.1
comp=Z,0.6nm,0.7s,baz=298,slow=0.6,SNR=7.0
TXAR Lajitas Array 121.58 52 PKP PKPdf 16 54 36.9 +1.1
TORD Torodi Ar. Bea 122.95 288 PKP PKPdf 16 54 38.8 +0.1
comp=Z,1.1nm,0.6s,baz=46,slow=2.2,SNR=7.9
PLCA Paso Flores 139.99 159 PKP PKPdf 16 55 11.9 +1.7
comp=Z,1.5nm,0.7s,baz=209,slow=20,SNR=5.4
JTS JuntasAbangare 145.49 66 *e*PKP2 PKPab 16 55 22.1 +1.1
CFAA Coronel Fontan 148.88 155 PKPbc PKPbc 16 55 30.9 +1.1
comp=Z,0.9nm,0.6s,baz=228,slow=2.9,SNR=16
SIV San Ignacio 165.58 148 PKPab PKPab 16 56 47.2 +1.5
comp=Z,0.5nm,0.5s,baz=220,slow=6.9,SNR=3.9

*MDD **08** 16:35:47.6±0.5, 35°.88N×0°.67W, h0km, mb3.4/6, Error ellipse: s-maj=10.5km s-min=4.4km az=46.0, PRIMO*
*CSEM **08** 16:35:47.6±0.3, 35°.97N×0°.72W, h2km, ML2.6, Error ellipse: s-maj=9.1km s-min=5.9km az=32.0*
*CRAAG **08** 16:35:48.3, 35°.64N×0°.49W, Ml2.6*
*ISCJB **08** 16:35:49.2±0.7, 36°.11N±0°.05×0°.68W±0°.04, h10km, Error ellipse: s-maj=6.5km s-min=4.8km az=5.6*
*NEIC **08** 16:35:50.2, 35°.94N×0°.64W, h17km, MG3.5(MDD), After MDD.*

ISC 08 16:35:49.5±0.7, 36°.07N±0°.05×0°.69W±0°.04, h10km, n66, σ1°.03/113, Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USTO	**Oran**	**0.35**	**162**	P	**Pg**	**16 35 51.0**	**-5.5**
USTO	**Oran**	**0.35**	**162**	P	**Pg**	**16 35 51.0**	**-5.5**
USTO	**Oran**	**0.35**	**162**	P	**Pg**	**16 35 51.0**	**-5.5**
EANR	**'Ain N'Sour**	**1.45**	**94**	P	**Pn**	**16 36 16.0**	**+0.2**
EANR	**'Ain N'Sour**	**1.45**	**94**	P	**Pn**	**16 36 16.0**	**+0.2**
EANR	**'Ain N'Sour**	**1.45**	**94**	P	**Pn**	**16 36 16.0**	**+0.2**
EANR	**'Ain N'Sour**	**1.45**	**94**	P	**Pn**	**16 36 16.0**	**+0.2**
ENIJ	**Nijar**	**1.52**	**307**	P	**Pn**	**16 36 16.6**	**-0.1**
ENIJ				S	**Sn**	**16 36 34.6**	**-1.9**
ENIJ	**Nijar**	**1.52**	**307**	P	**Pn**	**16 36 16.6**	**-0.1**
3.5nm,0.2s,SNR=7.9							
ENIJ				S	**Sn**	**16 36 34.6**	**-1.9**
11nm,0.2s,SNR=7.9							
ENIJ	**Nijar**	**1.52**	**307**	P	**Pn**	**16 36 16.6**	**-0.1**
3.5nm,0.2s,SNR=7.9							
ENIJ				S	**Sn**	**16 36 34.6**	**-1.9**
11nm,0.2s,SNR=7.9							
ENIJ	**Nijar**	**1.52**	**307**	P	**Pn**	**16 36 16.6**	**-0.1**
3.5nm,0.2s,SNR=7.9							
ENIJ				S	**Sn**	**16 36 34.6**	**-2.0**
11nm,0.2s,SNR=7.9							
ETRT	**Tiaret**	**1.75**	**112**	P	**Pn**	**16 36 19.0**	**-1.0**
ETRT	**Tiaret**	**1.75**	**112**	P	**Pn**	**16 36 19.0**	**-1.0**
ETRT	**Tiaret**	**1.75**	**112**	P	**Pn**	**16 36 19.0**	**-1.0**
ETRT	**Tiaret**	**1.75**	**112**	P	**Pn**	**16 36 19.0**	**-1.0**
EMUR	**La Murta**	**1.82**	**346**	P	**Pn**	**16 36 21.2**	**+0.3**
EMUR				S	**Sn**	**16 36 43.7**	**-0.3**
EMUR	**La Murta**	**1.82**	**346**	P	**Pn**	**16 36 21.2**	**+0.3**
1.6nm,0.1s,SNR=20							
EMUR				S	**Sn**	**16 36 43.7**	**-0.3**
9.3nm,0.4s,SNR=7.9						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNZO	**South Karori**	**1.12**	**191**	*e*P	Pb	17 00 44.7	-1.4
SNZO				*e*S	Sb	17 00 59.3	-1.4
KHZ	**Kahutara**	**2.46**	**206**	*e*Pn	Pn	17 01 03.2	-1.6
KHZ				*e*Sn	Sn	17 01 45.0	+10
URZ	**Urewera**	**2.55**	**41**	*e*Pn	Pn	17 01 03.6	-2.3
URZ				*e*S	Sn	17 01 39.6	+2.7
RPZ	**Rata Peaks**	**4.57**	**219**	*e*Pn	Pn	17 01 32.9	-0.9

*ISCJB **08** 17:02:45.7±0.4, 37.90N±0.02×21.50E±0.03, h4km±4km, Error ellipse: s-maj=3.8km s-min=3.2km az=158.9*
*ATH **08** 17:02:46.0, 37.93N×21.51E, h20km±1km, ML2.8*
*THE **08** 17:02:46.4, 37.90N×21.52E, h3km±1km, ML3.5/11, Error ellipse: s-maj=1.4km s-min=0.6km az=207.0*
*CSEM **08** 17:02:46.0±0.3, 37.90N×21.50E, h10km, ML2.8, Error ellipse: s-maj=5.5km s-min=3.7km az=84.0*
*NEIC **08** 17:02:46.0, 37.93N×21.51E, h20km, ML2.8(ATH), After ATH.*

ISC 08 17:02:46.6±0.4, 37.90N±0.02×21.52E±0.03, h8km±3km, n78, σ0.97/120, 3C, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.16**	**346**	⇑*i*Pb	**Pg**	**17 02 50.4**	**+0.4**
RLS				*e*Sb	**Sg**	**17 02 53.8**	**+1.5**
RLS	**Riolos of Patr**	**0.16**	**346**	⇑*i*PB	**Pg**	**17 02 50.4**	**+0.4**
RLS				*e*SB	**Sg**	**17 02 53.8**	**+1.5**
RLS	**Riolos of Patr**	**0.16**	**346**	⇑*i*Pb	**Pg**	**17 02 50.4**	**+0.4**
RLS				*e*Sb	**Sg**	**17 02 53.8**	**+1.5**
UPR	**University Cam**	**0.44**	**29**	P	**Pg**	**17 02 54.8**	**-0.3**
UPR				S	**Sg**	**17 03 01.1**	**+0.2**
UPR	**University Cam**	**0.44**	**29**	*e*PB	**Pg**	**17 02 54.7**	**-0.4**
UPR				*e*SB	**Sg**	**17 03 01.7**	**+0.8**
UPR	**University Cam**	**0.44**	**29**	P	**Pg**	**17 02 54.8**	**-0.3**
UPR				S	**Sg**	**17 03 01.1**	**+0.2**
UPR				*e*Sb	**Sg**	**17 03 01.7**	**+0.8**
LAKA	**Lakka**	**0.50**	**47**	P	**Pg**	**17 02 55.8**	**-0.4**
LAKA				S	**Sg**	**17 03 03.5**	**+0.7**
LAKA	**Lakka**	**0.50**	**47**	P	**Pg**	**17 02 55.8**	**-0.4**
LAKA				S	**Sg**	**17 03 03.5**	**+0.7**
EFP	**Efpalio**	**0.61**	**30**	P	**Pg**	**17 02 58.4**	**+0.1**
EFP				S	**Sg**	**17 03 07.4**	**+1.1**
EFP	**Efpalio**	**0.61**	**30**	*e*PN	**Pg**	**17 02 57.9**	**-0.4**
EFP				*e*SN	**Sg**	**17 03 06.1**	**-0.2**
EFP	**Efpalio**	**0.61**	**30**	*e*Pn	**Pg**	**17 02 57.9**	**-0.4**
EFP	**Efpalio**	**0.61**	**30**	P	**Pg**	**17 02 58.4**	**+0.1**
EFP				S	**Sg**	**17 03 07.4**	**+1.1**
KFL	**Anninata**	**0.61**	**290**	P	**Pg**	**17 02 57.3**	**-1.1**
KFL				S	**Sg**	**17 03 07.0**	**+0.6**
GUR	**Goura**	**0.66**	**87**	P	**Pg**	**17 02 58.0**	**-1.2**
GUR				S	**Sg**	**17 03 07.7**	**0.0**
GUR	**Goura**	**0.66**	**87**	*e*PB	**Pg**	**17 02 58.2**	**-1.0**
GUR				*e*SN	**Sg**	**17 03 07.7**	**0.0**
GUR	**Goura**	**0.66**	**87**	P	**Pg**	**17 02 58.0**	**-1.2**
GUR	**Goura**	**0.66**	**87**	*e*Pb	**Pg**	**17 02 58.3**	**-0.9**
GUR				S	**Sg**	**17 03 07.7**	**0.0**
KALE	**Kalithea**	**0.69**	**45**	P	**Pg**	**17 02 59.2**	**-0.8**
KALE				S	**Sg**	**17 03 09.2**	**+0.2**
KALE	**Kalithea**	**0.69**	**45**	P	**Pg**	**17 02 59.2**	**-0.8**
KALE				S	**Sg**	**17 03 09.2**	**+0.2**
VLS	**Valsamata**	**0.78**	**291**	*e*Pn	**Pg**	**17 03 01.1**	**-0.5**
VLS	**Valsamata**	**0.78**	**291**	*e*PN	**Pg**	**17 03 01.1**	**-0.5**
VLS	**Valsamata**	**0.78**	**291**	*e*Pn	**Pg**	**17 03 01.1**	**-0.5**
ITM	**Ithomi**	**0.79**	**155**	*e*Pn	**Pg**	**17 03 01.6**	**-0.2**
ITM				*e*Sn	**Sg**	**17 03 13.9**	**+1.8**
ITM	**Ithomi**	**0.79**	**155**	P	**Pg**	**17 03 01.7**	**-0.1**
ITM				S	**Sg**	**17 03 13.3**	**+1.2**
ITM	**Ithomi**	**0.79**	**155**	*e*PN	**Pg**	**17 03 01.6**	**-0.2**
ITM				*e*SN	**Sg**	**17 03 13.9**	**+1.8**
ITM	**Ithomi**	**0.79**	**155**	P	**Pg**	**17 03 01.7**	**-0.1**
ITM				S	**Sg**	**17 03 13.3**	**+1.2**
ITM				*e*Sn	**Sg**	**17 03 13.9**	**+1.8**
VLX	**Vlachokerasia**	**0.87**	**127**	P	**Pg**	**17 03 02.9**	**-0.3**
VLX				S	**Sg**	**17 03 15.6**	**+1.1**
VLX	**Vlachokerasia**	**0.87**	**127**	*e*PB	**Pg**	**17 03 02.0**	**-1.2**
VLX				*e*SN	**Sg**	**17 03 15.7**	**+1.2**
VLX	**Vlachokerasia**	**0.87**	**127**	*e*Pb	**Pg**	**17 03 02.0**	**-1.2**
VLX	**Vlachokerasia**	**0.87**	**127**	P	**Pg**	**17 03 02.9**	**-0.3**
VLX				*e*Sn	**Sg**	**17 03 15.7**	**+1.2**
DSF	**Desfina**	**0.95**	**57**	P	**Pg**	**17 03 03.5**	**-1.3**
DSF				S	**Sg**	**17 03 17.2**	**+0.1**
DSF	**Desfina**	**0.95**	**57**	P	**Pg**	**17 03 03.5**	**-1.3**
DSF				S	**Sg**	**17 03 17.2**	**+0.1**
PYL	**PYLOS**	**1.02**	**170**	P	**Pg**	**17 03 05.3**	**-0.9**
PYL				S	**Sg**	**17 03 20.2**	**+0.8**
PYL	**PYLOS**	**1.02**	**170**	*e*PN	**Pg**	**17 03 05.6**	**-0.6**
PYL	**PYLOS**	**1.02**	**170**	P	**Pg**	**17 03 05.3**	**-0.9**
PYL	**PYLOS**	**1.02**	**170**	*e*Pn	**Pg**	**17 03 05.6**	**-0.6**
PYL				S	**Sg**	**17 03 20.2**	**+0.8**
EVR	**Evrytania**	**1.04**	**13**	*e*Pn	**Pg**	**17 03 05.9**	**-0.7**
EVR	**Evrytania**	**1.04**	**13**	*e*PN	**Pg**	**17 03 05.9**	**-0.7**
EVR	**Evrytania**	**1.04**	**13**	*e*Pn	**Pg**	**17 03 05.9**	**-0.7**
LKD2	**Lefkada island**	**1.11**	**323**	P	**Pg**	**17 03 06.8**	**-1.2**
LKD2				S	**Sg**	**17 03 24.1**	**+1.6**
LKD2	**Lefkada island**	**1.11**	**323**	P	**Pg**	**17 03 06.8**	**-1.2**
LKD2				S	**Sg**	**17 03 24.1**	**+1.6**
LTK	**Loutraki**	**1.15**	**83**	P	**Pg**	**17 03 07.0**	**-1.7**
LTK				S	**Sg**	**17 03 24.4**	**+0.7**
LTK	**Loutraki**	**1.15**	**83**	*e*PB	**Pb**	**17 03 07.1**	**-1.7**
LTK	**Loutraki**	**1.15**	**83**	P	**Pg**	**17 03 07.0**	**-1.7**
LTK				S	**Sg**	**17 03 24.4**	**+0.7**
AGG	**Agios Georgios**	**1.29**	**29**	*e*Pn	**Pn**	**17 03 09.8**	**-1.1**
AGG	**Agios Georgios**	**1.29**	**29**	P	**Pn**	**17 03 09.8**	**-1.1**
AGG				S	**Sb**	**17 03 29.0**	**+1.2**
AGG	**Agios Georgios**	**1.29**	**29**	*e*PN	**Pn**	**17 03 09.8**	**-1.1**
AGG	**Agios Georgios**	**1.29**	**29**	P	**Pn**	**17 03 09.8**	**-1.1**
AGG				S	**Sb**	**17 03 29.0**	**+1.2**
LKR	**Lokris**	**1.39**	**57**	*e*Pn	**Pn**	**17 03 11.5**	**-0.7**
LKR	**Lokris**	**1.39**	**57**	P	**Pn**	**17 03 11.7**	**-0.5**
LKR				S	**Sb**	**17 03 31.7**	**+1.1**
LKR	**Lokris**	**1.39**	**57**	*e*PN	**Pn**	**17 03 11.5**	**-0.7**
LKR	**Lokris**	**1.39**	**57**	P	**Pn**	**17 03 11.7**	**-0.5**
LKR				S	**Sb**	**17 03 31.7**	**+1.1**
ATAL	**Atalanti**	**1.42**	**56**	P	**Pn**	**17 03 12.2**	**-0.6**
ATAL				S	**Sn**	**17 03 32.8**	**+1.1**
ATAL	**Atalanti**	**1.42**	**56**	P	**Pn**	**17 03 12.2**	**-0.6**
ATAL				S	**Sn**	**17 03 32.8**	**+1.1**
NAIG	**Nisos Aigina**	**1.57**	**95**	*e*Pn	**Pn**	**17 03 14.7**	**0.0**
NAIG	**Nisos Aigina**	**1.57**	**95**	*e*PN	**Pn**	**17 03 14.7**	**0.0**
NAIG	**Nisos Aigina**	**1.57**	**95**	*e*Pn	**Pn**	**17 03 14.7**	**0.0**
VLI	**Veliai**	**1.64**	**136**	*e*Pn	**Pn**	**17 03 17.2**	**+1.5**
VLI	**Veliai**	**1.64**	**136**	*e*PN	**Pn**	**17 03 17.2**	**+1.5**
VLI	**Veliai**	**1.64**	**136**	*e*Pn	**Pn**	**17 03 17.2**	**+1.5**
THL	**Klokotos Trika**	**1.71**	**13**	P	**Pn**	**17 03 16.6**	**0.0**
THL				S	**Sn**	**17 03 38.6**	**-0.1**
THL	**Klokotos Trika**	**1.71**	**13**	*e*PN	**Pn**	**17 03 16.9**	**+0.3**
THL	**Klokotos Trika**	**1.71**	**13**	P	**Pn**	**17 03 16.6**	**0.0**
THL	**Klokotos Trika**	**1.71**	**13**	*e*Pn	**Pn**	**17 03 16.9**	**+0.3**
THL				S	**Sn**	**17 03 38.6**	**-0.1**
ATH	**Athens Observa**	**1.74**	**87**	*e*Pb	**Pb**	**17 03 16.5**	**-2.3**
ATH	**Athens Observa**	**1.74**	**87**	*e*PB	**Pb**	**17 03 16.5**	**-2.3**
VLY	**Voula,Athens**	**1.80**	**91**	*e*Pn	**Pn**	**17 03 18.3**	**+0.3**
VLY	**Voula,Athens**	**1.80**	**91**	*e*PN	**Pn**	**17 03 18.3**	**+0.3**
VLY	**Voula,Athens**	**1.80**	**91**	*e*Pn	**Pn**	**17 03 18.3**	**+0.3**
PTL	**Penteli**	**1.86**	**85**	*e*Pn	**Pn**	**17 03 18.6**	**-0.2**
PTL	**Penteli**	**1.86**	**85**	*e*PN	**Pn**	**17 03 18.6**	**-0.2**
PTL	**Penteli**	**1.86**	**85**	*e*Pn	**Pn**	**17 03 18.6**	**-0.2**
NEO	**Neokhori**	**1.94**	**43**	*e*Pn	**Pn**	**17 03 19.4**	**-0.4**
NEO	**Neokhori**	**1.94**	**43**	*e*PN	**Pn**	**17 03 19.4**	**-0.4**
NEO	**Neokhori**	**1.94**	**43**	*e*Pn	**Pn**	**17 03 19.4**	**-0.4**
KYTH	**Kithira**	**2.02**	**143**	*e*Pn	**Pn**	**17 03 22.6**	**+1.6**
KYTH	**Kithira**	**2.02**	**143**	*e*PN	**Pn**	**17 03 22.6**	**+1.6**
KYTH	**Kithira**	**2.02**	**143**	*e*Pn	**Pn**	**17 03 22.6**	**+1.6**

NNC 08 17:07:42.9±18.0, 36.86N×70.64E, h108km±379km, mb2.9, mpv3.4, 4C-1D, Error ellipse: s-maj=152.6km s-min=107.2km az=175.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK09	**Karatay Array**	**6.26**	**359**	⇑Pn	Pn	17 09 13.0	+0.3
	1.9nm,0.4s,baz=181,slow=13						
KK09				⇑Sn	Sn	17 10 25.3	+2.5
	0.8nm,0.2s,baz=185,slow=24						
TKM2	**Tokmak 2**	**7.16**	**31**	⇑Pn	Pn	17 09 25.4	+0.5
	1.0nm,0.5s						
TKM2				⇓Sn	Sn	17 10 43.0	-1.6
	1.4nm,0.7s						
AB31	**Akbulak array**	**14.63**	**331**	⇑P	Pn	17 11 05.0	+0.6
	0.2nm,0.3s,baz=157,slow=11,SNR=15						

*IDC **08** 17:13:04.4±1.1, 2.60S×28.99E, h0km, mb3.9/5, mb1 3.9/6, mb1mx3.6/24, mbtmp3.9/6, ML3.8/1, Error ellipse: s-maj=27.1km s-min=19.5km az=170.0*
*NEIC **08** 17:13:05.4±0.7, 2.72S×28.94E, h10km, mb3.8/1, Error ellipse: s-maj=14.9km s-min=13.2km az=110.0*
*ISCJB **08** 17:13:05.9±6.5, 2.58S±0.08×29.04E±0.08, h24km±49km, mb3.9/5, Error ellipse: s-maj=13.6km s-min=11.8km az=43.5*

ISC 08 17:13:07.7±6.5, 2.53S±0.08×28.98E±0.07, h19km±41km, n9, σ0.52/12, mb3.9/5, Lake Tanganyika region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo**	**8.38**	**81**	Pn	**Pn**	**17 15 08.5**	**+0.3**
	1.1nm,0.3s,baz=230,slow=23,SNR=9.8						
KMBO				Sn	**Sn**	**17 16 41.9**	**-0.5**
	0.9nm,0.3s,baz=220,slow=20,SNR=6.9						
KMBO				Lg		17 17 29.5	
	4.8nm,0.3s,baz=156,slow=22,SNR=21						
KMBO	**Kilima Mbogo**	**8.38**	**81**	Pn	**Pn**	**17 15 08.5**	**+0.3**
KMBO				Sn	**Sn**	**17 16 41.9**	**-0.5**
KMBO				Lg		17 17 29.5	
LSZ	**Lusaka**	**12.69**	**183**	*e*Pn	**Pn**	**17 16 02.4**	**-4.8**
	1.1nm,0.4s						
LSZ				*e*Sn	**Sn**	**17 18 28.6**	**+0.5**
BOSA	**Boshof**	**26.18**	**187**	P	**P**	**17 18 40.5**	**-0.6**
	1.8nm,0.6s,mb3.8,baz=7.8,slow=10,SNR=6.8						
BOSA	**Boshof**	**26.18**	**187**	*e*P	**P**	**17 18 40.2**	**-0.9**
	1.2nm,0.5s,mb3.7						
TORD	**Torodi Ar. Bea**	**31.24**	**301**	P	**P**	**17 19 26.1**	**-0.3**
	1.3nm,0.5s,mb4.0,baz=108,slow=7.0,SNR=15						
DBIC	**Dimbokro**	**34.99**	**285**	P	**P**	**17 19 58.8**	**-0.4**
	3.1nm,1.1s,mb4.2,baz=76,slow=8.5,SNR=3.8						
BRTR	**Keskin Array B**	**42.27**	**5**	P	**P**	**17 21 00.6**	**+0.7**
	1.2nm,0.7s,mb3.6,baz=178,slow=9.6,SNR=11						
MKAR	**Makanchi Array**	**67.77**	**37**	P	**P**	**17 24 04.6**	**+0.5**
	0.6nm,0.6s,mb3.8,baz=257,slow=2.6,SNR=8.0						

*CSEM **08** 17:23:24.8±0.5, 40.98N×11.90E, h2km, ML4.0/4, Error ellipse: s-maj=10.8km s-min=6.2km az=174.0*
*NEIC **08** 17:23:26.3, 41.04N×11.90E, h5km, ML2.8(LDG), ML2.5(ROM), After ROM.*
*ROM **08** 17:23:26.3±0.3, 41.04N×11.90E, h5km, Md2.8/21, Ml2.5/18, Error ellipse: s-maj=4.0km s-min=3.3km az=36.0*
*LDG **08** 17:23:27.8±0.7, 40.63N×11.78E, h25km, Ml2.8/4, Error ellipse: s-maj=18.6km s-min=5.3km az=5.0*

ISC 08 17:23:25.7±0.9, 40.99N±0.05×11.84E±0.04, h6km±5km, n61, σ0.91/75, Tyrrhenian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAV9	**Lanuvio**	**0.95**	**43**	Pg	**Pg**	**17 23 45.3**	**+1.4**
LAV9	**Lanuvio**	**0.95**	**43**	Pg	**Pg**	**17 23 45.3**	**+1.4**
ROM9	**Roma**	**0.98**	**31**	Pg	**Pg**	**17 23 45.6**	**+1.0**
ROM9				Sg	**Sg**	**17 23 57.9**	**+0.5**
	396nm,0.4s						
ROM9	**Roma**	**0.98**	**31**	Pg	**Pg**	**17 23 45.6**	**+1.0**
ROM9				Sg	**Sg**	**17 23 57.9**	**+0.5**
	396nm,0.4s						
MA9	**Marino**	**1.00**	**38**	Pg	**Pg**	**17 23 45.8**	**+0.9**
	87nm,0.3s						
MA9	**Marino**	**1.00**	**38**	Pg	**Pg**	**17 23 45.8**	**+0.9**
	87nm,0.3s						
RDP	**Rocca di Papa**	**1.01**	**40**	Pg	**Pg**	**17 23 45.8**	**+0.6**
RDP				Sg	**Sg**	**17 23 58.3**	**-0.1**
	509nm,0.5s						
RDP	**Rocca di Papa**	**1.01**	**40**	Pg	**Pg**	**17 23 45.8**	**+0.6**
RDP				Sg	**Sg**	**17 23 58.3**	**-0.1**
	509nm,0.5s						
TOLF	**Tolfa**	**1.08**	**6**	Pg	**Pg**	**17 23 46.3**	**-0.3**
TOLF				Sg	**Sg**	**17 24 00.2**	**-0.4**
	475nm,0.4s						
TOLF	**Tolfa**	**1.08**	**6**	Pg	**Pg**	**17 23 46.3**	**-0.3**
TOLF				Sg	**Sg**	**17 24 00.2**	**-0.4**
	475nm,0.4s						
GIUL	**Giuliano Di Ro**	**1.21**	**61**	Pg	**Pg**	**17 23 47.7**	**-1.2**
GIUL				Sg	**Sg**	**17 24 03.0**	**-1.6**
	62nm,0.3s						
GIUL	**Giuliano Di Ro**	**1.21**	**61**	Pg	**Pg**	**17 23 47.7**	**-1.2**
GIUL				Sg	**Sg**	**17 24 03.0**	**-1.6**
	62nm,0.3s						
VENT	**Ventotene**	**1.21**	**99**	Pg	**Pg**	**17 23 49.3**	**+0.3**
VENT	**Ventotene**	**1.21**	**99**	Pg	**Pg**	**17 23 49.3**	**+0.3**
MTCE	**Montecelio**	**1.24**	**33**	Pg	**Pg**	**17 23 48.3**	**-1.2**
	70nm,0.3s						
MTCE	**Montecelio**	**1.24**	**33**	Pg	**Pg**	**17 23 48.3**	**-1.2**
	70nm,0.3s						
MAON	**Monte Argentar**	**1.54**	**340**	Pg	**Pn**	**17 23 53.3**	**-0.4**
	99nm,0.2s						
MAON	**Monte Argentar**	**1.54**	**340**	Pg	**Pn**	**17 23 53.3**	**-0.4**
	99nm,0.2s						
POFI	**Posta Fibreno**	**1.59**	**62**	Pg	**Pn**	**17 23 53.8**	**-0.5**
	38nm,0.7s						
POFI	**Posta Fibreno**	**1.59**	**62**	Pg	**Pn**	**17 23 53.8**	**-0.5**
	38nm,0.7s						
FIAM	**Fiamignano**	**1.60**	**36**	Pg	**Pn**	**17 23 54.0**	**-0.5**
	64nm,0.6s						
FIAM	**Fiamignano**	**1.60**	**36**	Pg	**Pn**	**17 23 54.0**	**-0.5**
	64nm,0.6s						
VVLD	**Villa Vallelon**	**1.60**	**56**	Pg	**Pn**	**17 23 54.0**	**-0.6**
	96nm,0.7s						
VVLD	**Villa Vallelon**	**1.60**	**56**	Pg	**Pn**	**17 23 54.0**	**-0.6**
	96nm,0.7s						
LATE	**Laterza**	**1.63**	**359**	Pg	**Pn**	**17 23 55.2**	**+0.3**
	10.0nm,0.5s						
LATE	**Laterza**	**1.63**	**359**	Pg	**Pn**	**17 23 55.2**	**+0.3**
	10.0nm,0.5s						
RFI	**Roccamonfina**	**1.65**	**78**	Pg	**Pg**	**17 23 55.8**	**-1.5**
	3.0nm,0.2s						
RFI	**Roccamonfina**	**1.65**	**78**	Pg	**Pg**	**17 23 55.8**	**-1.5**
	3.0nm,0.2s						
SDI	**San Donato**	**1.65**	**63**	Pg	**Pn**	**17 23 54.9**	**-0.3**
	14nm,0.3s						
SDI	**San Donato**	**1.65**	**63**	Pg	**Pn**	**17 23 54.9**	**-0.3**
	14nm,0.3s						
CERA	**Filignano**	**1.75**	**69**	Pg	**Pn**	**17 23 56.9**	**+0.3**
	101nm,1.1s						
CERA	**Filignano**	**1.75**	**69**	Pg	**Pn**	**17 23 56.9**	**+0.3**
	101nm,1.1s						
DGI	**Dorgali Grotta**	**1.83**	**249**	Pg	**Pg**	**17 24 00.5**	**-0.3**
	168nm,2.3s						
DGI	**Dorgali Grotta**	**1.83**	**249**	Pg	**Pg**	**17 24 00.5**	**-0.3**
	168nm,2.3s						
FAGN	**Fagnano**	**1.83**	**45**	Pg	**Pn**	**17 23 58.7**	**+1.0**
	54nm,0.5s						
FAGN	**Fagnano**	**1.83**	**45**	Pg	**Pn**	**17 23 58.7**	**+1.0**
	54nm,0.5s						
LNSS	**Leonessa**	**1.85**	**29**	Pg	**Pn**	**17 23 58.0**	**0.0**
	53nm,0.4s						
LNSS	**Leonessa**	**1.85**	**29**	Pg	**Pn**	**17 23 58.0**	**0.0**
	53nm,0.4s						
VAGA	**Valle Agricola**	**1.85**	**76**	Pg	**Pn**	**17 23 58.5**	**+0.5**
	28nm,0.5s						
VAGA	**Valle Agricola**	**1.85**	**76**	Pg	**Pn**	**17 23 58.5**	**+0.5**
	28nm,0.5s						
INTR	**Introdacqua**	**1.86**	**56**	Pg	**Pn**	**17 23 58.1**	**0.0**
	133nm,1.6s						
INTR	**Introdacqua**	**1.86**	**56**	Pg	**Pn**	**17 23 58.1**	**0.0**
	133nm,1.6s						
SACS	**San Casciano d**	**1.86**	**1**	Pg	**Pn**	**17 23 58.3**	**+0.1**
MGAB	**Montegabbione**	**1.94**	**6**	Pg	**Pn**	**17 23 59.5**	**+0.3**
	22nm,0.6s						
MGAB	**Montegabbione**	**1.94**	**6**	Pg	**Pn**	**17 23 59.5**	**+0.3**
	22nm,0.6s						
SGG	**Gregorio Mates**	**1.96**	**77**	Pg	**Pn**	**17 23 59.9**	**+0.5**
	24nm,0.6s						
SGG	**Gregorio Mates**	**1.96**	**77**	Pg	**Pn**	**17 23 59.9**	**+0.5**
	24nm,0.6s						
TERO	**Teramo**	**2.10**	**38**	Pg	**Pn**	**17 24 01.8**	**+0.4**
TERO	**Teramo**	**2.10**	**38**	Pg	**Pn**	**17 24 01.8**	**+0.4**
PGF	**Pioggiola**	**2.64**	**307**	*e*Pn	**Pn**	**17 24 09.8**	**+1.0**
PGF				*e*Sn	**Sn**	**17 24 40.9**	**-0.3**
	8.6nm,0.3s						
PGF	**Pioggiola**	**2.64**	**307**	*e*Pn	**Pn**	**17 24 09.8**	**+1.0**
PGF				*e*Sn	**Sn**	**17 24 40.9**	**-0.3**
	4.3nm,0.3s						
SBF	**Sospel**	**4.35**	**313**	*e*Pn	**Pn**	**17 24 33.0**	**+0.7**
SBF	**Sospel**	**4.35**	**313**	*e*Pn	**Pn**	**17 24 33.0**	**+0.7**
LMR	**La Mourre**	**4.61**	**302**	*e*Pn	**Pn**	**17 24 35.8**	**-0.1**
LMR				*e*Sn	**Sn**	**17 25 26.7**	**-3.0**
	1.9nm,0.2s						
LMR	**La Mourre**	**4.61**	**302**	*e*Pn	**Pn**	**17 24 35.8**	**-0.1**
LMR				*e*Sn	**Sn**	**17 25 26.7**	**-3.0**
	0.9nm,0.2s						
FRF	**La Foret Royal**	**4.64**	**305**	*e*Pn	**Pn**	**17 24 36.6**	**+0.3**
FRF				*e*Sn	**Sn**	**17 25 27.5**	**-2.9**
	1.2nm,0.3s						
FRF	**La Foret Royal**	**4.64**	**305**	*e*Pn	**Pn**	**17 24 36.6**	**+0.3**
FRF				*e*Sn	**Sn**	**17 25 27.5**	**-2.9**
	0.6nm,0.3s						
LPL	**La Plagne**	**5.87**	**322**	*e*Pn	**Pn**	**17 24 54.6**	**+1.4**
ORIF	**Oris-en-Rattie**	**5.88**	**314**	*e*Pn	**Pn**	**17 24 54.9**	**+1.5**
LASF	**Ste Croix**	**6.66**	**300**	*e*Pn	**Pn**	**17 25 02.5**	**-1.5**
LASF	**Ste Croix**	**6.66**	**300**	*e*Pn	**Pn**	**17 25 02.5**	**-1.5**

*CSEM **08** 17:37:47.3, 12.07N×43.98E, h5km, ML3.7, After DHMR*

DHMR 08 17:37:47.3±1.1, 12.07N×43.98E, h6km±10km, ML3.7, 4C-2D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRBA	**At Turbah**	**1.16**	**7**	⇑*e*P	Pg	17 38 09.3	-0.2
TRBA				*i* S	Sg	17 38 25.4	+0.8
TRBA				AML	AML	17 38 27.4	
	comp=E,1μm,0.4s						
ADEN	**Aden**	**1.21**	**55**	⇑*i*P	Pg	17 38 09.9	-0.6
ADEN				*i* S	Sg	17 38 26.8	+0.7
ADEN				AML	AML	17 38 33.8	
	comp=E,2μm,0.5s						
ADEN	**Aden**	**1.21**	**55**	⇑*i*P	Pg	17 38 09.9	-0.6
ADEN				*i* S	Sg	17 38 26.8	+0.7
	comp=E,1μm,0.5s						
UDYN	**Al 'Udayn**	**1.88**	**360**	⇓*i*P	Pn	17 38 20.2	+0.1
UDYN				*i* S	Sn	17 38 47.8	+3.6
UDYN				AML	AML	17 38 56.2	
	comp=E,623nm,0.4s						
UDYN	**Al 'Udayn**	**1.88**	**360**	⇓*i*P	Pn	17 38 20.2	+0.2
UDYN				*i* S	Sn	17 38 47.8	+3.7
	comp=E,312nm,0.4s						
LBOS		**2.17**	**35**	⇑*i*P	Pn	17 38 25.9	+1.8
LBOS				*i* S	Sn	17 38 56.0	+4.6
BDHA	**Al Bayda'**	**2.44**	**39**	*i* P	Pn	17 38 30.1	+2.3
BDHA				*i* S	Sn	17 39 03.1	+5.0
BDHA				AML	AML	17 39 13.8	
	comp=E,627nm,0.5s						
BDHA	**Al Bayda'**	**2.44**	**39**	*i* P	Pn	17 38 30.1	+2.3
BDHA				*i* S	Sn	17 39 03.1	+5.1
	comp=E,314nm,0.5s						
DHBB	**Dhamar BB**	**2.51**	**9**	*i* P	Pn	17 38 31.0	+2.2
DHBB				*i* S	Sn	17 39 05.8	+6.0

MEX 08 17:44:05.3±0.5, 16.84N×99.89W, h15km±1km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.04**	**320**	*i* P	Pg	17 44 07.0	-1.1
ACX				*i* S	Sg	17 44 08.9	-1.0
CAIG	**El Cayaco**	**0.42**	**300**	*i* P	Pg	17 44 12.6	-1.2
CAIG				*i* S	Sg	17 44 18.8	-0.6
PNIG	**Pinotepa**	**1.75**	**104**	*i* P	Pn	17 44 32.1	-2.9
PNIG				*i* S	Sn	17 44 51.7	-5.3
UTMO	**Huajuapan**	**2.23**	**63**	*e*P	Pn	17 44 38.7	-2.9
UTMO				*i* S	Sn	17 45 04.4	-4.4

IDC 08 17:48:13.8±8.9, 4.33S×100.85E, h0km, mb3.3/3, mb1 3.4/3, mb1mx3.2/23, mbtmp3.3/3, Error ellipse: s-maj=437.3km s-min=29.3km az=51.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**36.12**	**118**	P	P	17 55 18.0	+0.2
	0.4nm,1.0s,baz=307,slow=8.5,SNR=3.1						
ASAR	**Alice Springs**	**37.23**	**124**	P	P	17 55 27.1	-0.2
	0.2nm,0.8s,baz=295,slow=7.7,SNR=6.6						
MKAR	**Makanchi Array**	**53.48**	**344**	P	P	17 57 35.9	0.0
	0.3nm,0.7s,baz=150,slow=9.2,SNR=4.6			

P11A	Circle Ranch,	3.32	89	⇓Sb	Sb	17 55 21.8	+0.9
	baz=3.2						
O11A	Cowboy Ranch,	3.42	79	⇑Pn	Pn	17 54 33.5	-1.6
	baz=3.3						
O11A				⇓Sn	Sn	17 55 15.2	-0.5
	baz=3.3						
O11A				⇓Sb	Sb	17 55 24.6	+0.6
	baz=3.3						
Q11A	Duckwater	3.48	100	⇓Pn	Pn	17 54 34.6	-1.3
	baz=3.4,SNR=12						
Q11A				⇓Sb	Sb	17 55 26.1	+0.3
	baz=3.4						
N11A	Elko Archery C	3.53	68	⇓Sb	Sb	17 55 28.0	+1.0
	baz=3.4						
R11A	Troy Canyon, C	3.68	108	⇓Pn	Pn	17 54 37.2	-1.4
	baz=3.6						
R11A				⇓Sb	Sb	17 55 31.9	+0.4
	baz=3.6						
L10A	Juniper Basin	3.69	46	⇓Sn	Sn	17 55 22.9	+0.6
	baz=3.6						
L10A				⇑Sb	Sb	17 55 34.0	+2.1
	baz=3.6						
M11A	Holland Ranch,	3.74	59	⇓Sb	Sb	17 55 34.8	+1.7
	baz=3.7						
HUMO	Hull Mountain	3.75	325	*e*Pn	Pn	17 54 39.5	0.0
HUMO				*e*Pb	Pb	17 54 47.7	-0.3
HUMO				*e*Pg	Pg	17 54 52.5	-1.1
VES	Vestal, Richgr	3.79	168	⇑Sb	Sb	17 55 37.0	+2.3
	baz=3.8						
ELK	Elko	3.87	71	*e*Pn	Pn	17 54 39.5	-1.6
ELK				*e*Sg	Sg	17 55 39.0	-6.8
S11A	Rachel	3.87	118	⇑Sb	Sb	17 55 38.1	+1.1
	baz=3.8						
P12A	McGill	3.97	90	⇓Pn	Pn	17 54 41.2	-1.4
	baz=3.9,SNR=10						
P12A				⇓Sn	Sn	17 55 28.8	-0.4
	baz=3.9						
P12A				⇑Sb	Sb	17 55 40.8	+1.0
	baz=3.9						
K10A	MacKenzie Ranc	4.00	36	⇑Sn	Sn	17 55 30.0	0.0
	baz=4.0						
N12A	Clover Valley,	4.04	70	⇑Sb	Sb	17 55 42.8	+1.0
	baz=3.9						
N12A	Clover Valley,	4.04	70	*e*Pn	Pn	17 54 42.6	-1.0
N12A				*e*Pg	Pg	17 54 55.7	-3.3
Q12A	Willow Creek R	4.08	96	⇓Pn	Pn	17 54 43.1	-0.9
	baz=4.0,SNR=5.2						
Q12A				⇑Sb	Sb	17 55 43.7	+0.8
	baz=4.0						
ISA	Isabella	4.09	162	⇑Sb	Sb	17 55 45.5	+2.3
	baz=4.0						
ISA	Isabella	4.09	162	*e*Pn	Pn	17 54 44.8	+0.6
ISA				*e*Pg	Pg	17 54 56.0	-4.0
O12A	Currie	4.13	79	⇑Sb	Sb	17 55 45.5	+1.0
	baz=4.0						
L11A	Cat Creek Ranc	4.16	50	⇑Sn	Sn	17 55 34.0	+0.1
	baz=4.1						
L11A				⇓Sb	Sb	17 55 47.1	+1.8
	baz=4.1						
SMMC	Simmler	4.25	180	⇓Sb	Sb	17 55 50.2	+2.4
	baz=4.2						
M12A	Wells	4.33	63	⇓Pn	Pn	17 54 45.3	-2.1
	baz=4.2						
M12A				⇑Sb	Sb	17 55 52.0	+2.0
	baz=4.2						
T11A	Corn Creek, Al	4.44	120	⇓Pn	Pn	17 54 48.1	-1.0
	baz=4.3						
T11A				⇓Sb	Sb	17 55 54.8	+1.5
	baz=4.3						
S12A	Delamar Landin	4.51	114	⇓Pn	Pn	17 54 49.0	-1.0
	baz=4.4						
ARVC	Arvin	4.53	167	⇑Sb	Sb	17 55 58.3	+2.4
	baz=4.5						
J10A	Berg Farm, Mel	4.58	31	⇓Sb	Sb	17 55 59.6	+2.4
	baz=4.5						
L12A	House Creek Ra	4.60	54	⇓Sn	Sn	17 55 44.2	-0.5
	baz=4.5						
N13A	Wendover, West	4.65	72	*e*Pn	Pn	17 54 50.7	-1.2
N13A				*e*Sg	Sg	17 56 02.4	-8.6
PKM	Peak Mountain	4.66	178	⇑Sb	Sb	17 56 02.7	+3.0
	baz=4.7						
P13A	Bates Ranch, G	4.66	89	⇑Pn	Pn	17 54 50.9	-1.1
	baz=4.6,SNR=12						
Q13A	Wheeler Ranch,	4.71	96	⇓Pn	Pn	17 54 52.0	-0.8
	baz=4.6						
Q13A				⇑Sb	Sb	17 56 02.3	+1.1
	baz=4.6						
I09A	Lost Marbles R	4.73	21	⇓Sb	Sb	17 56 05.1	+3.5
	baz=4.7						
M13A	Montello	4.83	66	*e*Pn	Pn	17 54 52.5	-1.8
M13A				*e*Sg	Sg	17 56 09.4	-7.3
SHPR	Sheep Range	4.92	127	*e*Pn	Pn	17 54 55.6	+0.1
R13A	O'Grain Ranch,	4.94	104	⇓Pn	Pn	17 54 55.0	-0.9
	baz=4.8,SNR=9.5						
K12A	Draper Farm, C	4.95	50	⇑Sb	Sb	17 56 10.6	+2.7
	baz=4.9						
GSC	Goldstone	4.97	148	*e*Pn	Pn	17 54 59.6	+3.2
Q14A	Sevier Lake (B	5.28	94	⇑Pn	Pn	17 54 59.5	-1.1
	baz=5.2,SNR=8.1						
Q14A				⇑Sn	Sn	17 56 00.6	-0.9
	baz=5.2						
Q14A				⇑Sb	Sb	17 56 18.8	+1.3
	baz=5.2						
U12A	Valley of Fire	5.36	124	⇑Sb	Sb	17 56 21.4	+1.8
	baz=5.3						
P14A	Drum Mountains	5.39	88	⇓Pn	Pn	17 55 01.3	-0.8
	baz=5.3,SNR=9.7						
N14A	Grayback Hills	5.41	74	⇓Pn	Pn	17 55 00.6	-1.7
	baz=5.3						
BGU	Big Grassy Mou	5.54	74	*e*Pn	Pn	17 55 03.8	-0.3
	8.2nm,1.0s						
MWC	Mount Wilson	5.56	163	*e*Pn	Pn	17 55 07.2	+2.7
MWC				*e*Sg	Sg	17 56 34.4	-5.8
DUG	Dugway	5.60	81	⇓Pn	Pn	17 55 03.7	-1.2
	baz=5.5,SNR=13						
DUG				⇑Sn	Sn	17 56 08.6	-0.6
	baz=5.5						
DUG				⇑Sb	Sb	17 56 27.7	+1.1
	baz=5.5						
DUG	Dugway	5.60	81	*e*Pn	Pn	17 55 04.7	-0.2
CCUT	Cedar City	5.61	109	*e*Pn	Pn	17 55 04.3	-0.7
CCUT				*e*Pg	Pg	17 55 24.8	-4.3
CCUT				*e*Sg	Sg	17 56 34.2	-7.5
BMO	Blue Mountains	5.66	20	*e*Pg	Pg	17 55 24.0	-6.0
HVU	Hansel Valley	5.95	66	P	Pn	17 55 12.9	+3.1
NLU	North Lily Min	6.15	84	*e*Sg	Sg	17 56 51.8	-7.3
MSU	Marysvale	6.21	97	*e*Pn	Pn	17 55 13.8	+0.4
PFO	Pinyon Flat Ob	6.61	153	*e*Sg	Sg	17 57 16.8	+3.1
HWUT	Hardware Ranch	6.77	70	*e*Sg	Sg	17 57 12.4	-6.4
TMUT	Trail Mountain	6.85	89	*e*Pn	Pn	17 55 22.9	+0.8
SRU	San Rafael	7.39	90	*e*Pn	Pn	17 55 32.0	+2.4

NEIC ***08*** *17:55:19.0,39°.55N×119°.92W,h1km,mb4.1/1,*
ML3.9(REN),MW4.0(BRK),MW3.8(SLM),After REN.
NEIC Felt [V] at Reno and [III] at Sparks. Also felt at Sun Valley.
ISCJB ***08*** *17:55:19.9±0.4,39°.45N±0°.03×120°.04W±0°.04,h10km,*
mb3.6/3,MS3.7/2,Error ellipse: s-maj=4.7km s-min=3.4km
az=43.3
IDC ***08*** *17:55:20.8±0.9,39°.67N×119°.41W,h0km,mb3.6/2,*
mb1 3.8/5,mb1mx3.5/25,mbtmp3.4/5,ML3.8/2,MS3.6/3,
Ms1 3.5/3,ms1mx3.0/33,Error ellipse: s-maj=15.2km
s-min=9.4km az=34.0
ISC 08 17:55:20.5±0.4,39°.44N±0°.03×120°.06W±0°.04,h10km,n52,
σ1§39/69,mb3.6/3,MS3.7/2,18C-17D,Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WCN	Washoe City	0.27	121	⇓P	Pg	17 55 24.5	-1.4
	baz=0.3						
WCN				⇑S	Sg	17 55 28.5	-1.1
	baz=0.3						
BEKR	Beckworth	0.49	331	⇓P	Pg	17 55 28.2	-1.7
	baz=0.5						
BEKR				⇓S	Sg	17 55 34.4	-2.0
	baz=0.5						
CMB	Columbia Colle	1.43	191	*e*Pn	Pn	17 55 47.0	+0.6
CMB				*e*S	Sn	17 56 08.0	+2.8
NVAR	Mina Array Bea	1.70	126	Pg	Pg	17 55 50.0	-3.0
	158nm,0.3s,baz=249,slow=31,SNR=16						
NVAR				Lg		17 56 13.5	
	158nm,0.3s,baz=334,slow=17,SNR=12						
WDC	Whiskeytown Da	2.22	302	*e*Pn	Pn	17 55 58.1	+0.7
HOPS	Hopland	2.39	260	*e*Pn	Pn	17 56 02.6	+3.0
BMN	Battle Mountai	2.39	65	*e*Pn	Pn	17 55 56.0	-3.7
MOD	Modoc	2.47	356	*e*Pn	Pn	17 56 01.5	+0.8
MCCM	Marconi Confer	2.56	241	*e*Pn	Pn	17 56 02.4	+0.5
P10A	Eureka	2.78	85	⇓Pb	Pb	17 56 09.9	-0.4
	baz=2.7						
P10A				⇑Sn	Sn	17 56 41.1	+2.4
	baz=2.7						
O10A	Cortez Mining,	2.87	72	⇓Pn	Pn	17 56 06.3	+0.1
	baz=2.7						
O10A				⇓Sn	Sn	17 56 44.3	+3.6
	baz=2.7						
Q10A	Clear Creek Ra	2.91	101	⇑Pn	Pn	17 56 07.2	+0.4
	baz=2.8						
Q10A				⇓Pb	Pb	17 56 11.8	-0.6
	baz=2.8						
Q10A				⇓Sn	Sn	17 56 44.6	+2.8
	baz=2.8						
Q10A				⇑Sb	Sb	17 56 49.6	+1.6
	baz=2.8						
N10A	Dunphy	3.01	64	⇓Pb	Pb	17 56 13.8	-0.2
	baz=2.9						
N10A				⇓Sn	Sn	17 56 47.4	+3.2
	baz=2.9						
YBH	Yreka Blue Hor	3.05	319	Pn	Pn	17 56 14.1	+5.4
	3.9nm,0.3s,baz=151,slow=11,SNR=6.9						
YBH				Sn	Sn	17 56 54.5	+9.2
	2.7nm,0.3s,baz=77,slow=24,SNR=2.1						
YBH				LR	LR	17 57 31.2	
	comp=Z,320nm,18.3s,baz=138,slow=40						
YBH	Yreka Blue Hor	3.05	319	*e*Pn	Pn	17 56 10.6	+1.8
YBH				Pn	Pn	17 56 14.1	+5.4
YBH				Sn	Sn	17 56 54.5	+9.2
YBH				LR	LR	17 57 31.2	
S10A	Tonopah Range,	3.10	118	⇑Pn	Pn	17 56 09.3	-0.1
	baz=3.1						
R10A	Warm Springs	3.15	110	⇓Pn	Pn	17 56 10.2	+0.2
	baz=3.1						
WVOR	Wild Horse Val	3.18	19	*e*Pg	Pg	17 56 15.3	-6.0
RCTC	Rector, Farmer	3.19	168	⇑Sb	Sb	17 56 56.5	+0.4
	baz=3.3						
K05A	Summer Lake	3.34	349	⇑Pn	Pn	17 56 12.7	-0.1
	baz=3.3						
K05A				⇑Pb	Pb	17 56 19.2	-0.6
	baz=3.3						
K05A				⇑Sb	Sb	17 57 04.0	+3.5
	baz=3.3						
M10A	I.L. Ranch, Tu	3.39	51	⇑Pb	Pb	17 56 20.3	-0.4
	baz=3.2						
M10A				⇑Sn	Sn	17 56 57.6	+3.9
	baz=3.2						
O11A	Cowboy Ranch,	3.46	77	⇓Pn	Pn	17 56 14.5	+0.2
	baz=3.3						
Q11A	Duckwater	3.47	98	⇑Pn	Pn	17 56 14.3	-0.3
	baz=3.4						
VES	Vestal, Richgr	3.67	168	⇓Pg	Pg	17 56 28.5	-2.3
	baz=3.8						
L10A	Juniper Basin	3.79	45	⇑Pn	Pn	17 56 18.9	0.0
	baz=3.6						
S11A	Rachel	3.82	117	⇑Sb	Sb	17 57 19.2	+4.9
	baz=3.8						
HUMO	Hull Mountain	3.85	326	*e*Pn	Pn	17 56 22.1	+2.4
ELK	Elko	3.92	69	Pn	Pn	17 56 18.0	-2.7
	6.5nm,0.3s,baz=272,slow=14,SNR=2.5						
ELK				Pg	Pg	17 56 22.2	-13
	6.9nm,0.3s,baz=266,slow=16,SNR=3.5						
ELK				Lg		17 57 18.1	
	59nm,0.3s,baz=145,slow=16,SNR=19						
ELK	Elko	3.92	69	*e*Pn	Pn	17 56 16.7	-4.0
ISA	Isabella	3.97	161	Pg	Pg	17 56 33.9	-2.7
P12A	McGill	3.98	88	⇓Sn	Sn	17 57 08.1	-0.2
	baz=3.9						
P12A				⇑Sb	Sb	17 57 20.8	+1.8
	baz=3.9						
Q12A	Willow Creek R	4.08	94	⇑Pn	Pn	17 56 22.4	-0.4
	baz=4.0						
J08A	Circle Bar Ran	4.09	16	⇑Pb	Pb	17 56 32.4	-0.1
	baz=4.0						
N12A	Clover Valley,	4.09	68	⇓Pn	Pn	17 56 23.2	+0.2
	baz=4.0						
N12A				⇓Pb	Pb	17 56 32.8	+0.1
	baz=4.0						
N12A	Clover Valley,	4.09	68	*e*Pn	Pn	17 56 23.5	+0.4
J09A	Fry Pan Ranch,	4.27	23	⇑Pb	Pb	17 56 35.6	0.0
	baz=4.1						
I07A	Izee	4.66	5	⇓Pb	Pb	17 56 41.9	-0.3
	baz=4.5						
CCUT	Cedar City	5.58	108	Pg	Pg	17 57 03.6	-3.6
CCUT				*e*Sg	Sg	17 58 12.5	-7.0
HVU	Hansel Valley	6.01	65	*e*Sg	Sg	17 58 22.5	-11
NLU	North Lily Min	6.18	83	*e*Sg	Sg	17 58 29.9	-8.8
MSU	Marysvale	6.21	96	*e*Pn	Pn	17 56 52.4	+0.3
TMUT	Trail Mountain	6.86	88	*e*P	Pn	17 57 02.6	+1.6
SRU	San Rafael	7.40	90	*e*P	Pn	17 57 10.8	+2.3
PDAR	Pinedale Array	8.59	64	Pn	Pn	17 57 21.0	-3.8
	baz=237,slow=18,SNR=1.6						
PDAR				Pg	Pn	17 57 53.9	+29
	0.1nm,0.3s,baz=248,slow=12,SNR=3.3						
PDAR				Lg		17 59 44.4	
	0.3nm,0.3s,baz=228,slow=28,SNR=3.9						
PDAR	Pinedale Array	8.59	64	Pn	Pn	17 57 21.0	-3.8
PDAR				Pg	Pn	17 57 53.9	+29
PDAR				Lg		17 59 44.4	
TXAR	Lajitas Array	16.85	122	Pn	Pn	17 59 15.0	-1.3
	0.0nm,0.3s,baz=305,slow=12,SNR=2.6						
TXAR	Lajitas Array	16.85	122	Pn	Pn	17 59 15.0	-1.3
ULM	Lac du Bonnet	20.18	50	LR	LR	18 08 18.7	
	comp=Z,79nm,20.3s,MS3.1,baz=252,slow=40						
YKA	Yellowknife Ar	23.32	6	P	P	18 00 25.5	-2.9
	0.6nm,0.7s,mb3.1,baz=190,slow=10,SNR=4.8						
COWI	Conover	23.55	63	*e*P	P	18 00 28.0	-3.0
	4.9nm,0.8s,mb4.0						
PETK	Petropavlovsk-	55.40	313	LR	LR	18 28 28.6	
	comp=Z,295nm,18.7s,MS4.4,baz=93,slow=36						
LPAZ	La Paz	73.60	128	P	P	18 06 54.1	+0.1
	0.8nm,0.6s,mb3.9,baz=340,slow=6.1,SNR=4.7						

IDC ***08*** *17:56:01.2±1.4,38°.24N×21°.38E,h0km,mb3.7/4,*
mb1 3.7/5,mb1mx3.5/25,mbtmp3.7/5,ML3.5/1,Error
ellipse: s-maj=39.2km s-min=24.9km az=119.0
ATH ***08*** *17:56:03.3,38°.09N×21°.55E,h19km±1km,MD3.2/6,ML3.3*
CSEM ***08*** *17:56:03.5±0.2,38°.04N×21°.57E,h5km,ML3.0,Error*
ellipse: s-maj=4.1km s-min=3.3km az=33.0
ISCJB ***08*** *17:56:03.5±0.4,38°.06N±0°.02×21°.57E±0°.02,h8km±3km,*
mb3.6/4,Error ellipse: s-maj=3.0km s-min=2.7km az=17.0
THE ***08*** *17:56:04.0,38°.08N×21°.60E,h0km±1km,ML3.9/17,Error*
ellipse: s-maj=1.9km s-min=0.7km az=207.0
NEIC ***08*** *17:56:05.0,38°.07N×21°.50E,h10km,ML3.0(ATH),After*
ATH.
ISC 08 17:56:04.2±0.3,38°.05N±0°.02×21°.59E±0°.02,h10km±2km,
n116,σ1§12/168,mb3.6/4,3C,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.10	274	P	Pg	17 56 07.5	+0.7
RLS	Riolos of Patr	0.10	274	*e*PB	Pg	17 56 07.4	+0.6
RLS				*e*SB	Sg	17 56 09.7	+1.1
RLS	Riolos of Patr	0.10	274	*e*Pb	Pg	17 56 07.4	+0.6
RLS				*e*Sb	Sg	17 56 09.7	+1.1
UPR	University Cam	0.28	33	P	Pg	17 56 09.7	-0.1
UPR				S	Sg	17 56 14.2	+0.6
UPR	University Cam	0.28	33	*e*PB	Pg	17 56 09.6	-0.2
UPR				*e*SB	Sg	17 56 14.0	+0.4
UPR	University Cam	0.28	33	*e*Pb	Pg	17 56 09.6	-0.2
UPR				*e*Sb	Sg	17 56 14.0	+0.4
LAKA	Lakka	0.36	58	P	Pg	17 56 10.9	-0.4
LAKA				S	Sg	17 56 15.7	-0.4
LAKA	Lakka	0.36	58	P	Pg	17 56 10.9	-0.4
LAKA				S	Sg	17 56 15.7	-0.4
EFP	Efpalio	0.45	33	P	Pg	17 56 12.2	-0.8
EFP				S	Sg	17 56 18.4	-0.5
EFP	Efpalio	0.45	33	*e*PB	Pg	17 56 12.1	-0.9
EFP				*e*SB	Sg	17 56 18.4	-0.5
EFP	Efpalio	0.45	33	*e*Pb	Pg	17 56 12.1	-0.9
EFP				S	Sg	17 56 18.4	-0.5
KALE	Kalithea	0.55	52	P	Pg	17 56 13.9	-1.0
KALE				S	Sg	17 56 22.3	+0.2
GUR	Goura	0.60	101	P	Pg	17 56 15.6	-0.3
GUR				S	Sg	17 56 24.9	+1.1
GUR	Goura	0.60	101	*e*PB	Pb	17 56 15.3	-1.5
GUR				*e*SN	Sg	17 56 25.1	+1.3
GUR	Goura	0.60	101	*e*Pb	Pb	17 56 15.3	-1.5
GUR	Goura	0.60	101	P	Pg	17 56 15.6	-0.3
GUR				*e*Sn	Sg	17 56 25.1	+1.3
KFL	Anninata	0.64	275	P	Pg	17 56 15.8	-0.7
VLS	Valsamata	0.80	279	P	Pg	17 56 18.4	-1.2
VLS	Valsamata	0.80	279	P	Pg	17 56 18.1	-1.5
VLS				S	Sg	17 56 31.1	+1.0
VLS	Valsamata	0.80	279	*e*PN	Pg	17 56 18.1	-1.5
VLS	Valsamata	0.80	279	P	Pg	17 56 18.1	-1.5
VLS				S	Sg	17 56 31.1	+1.0
DSF	Desfina	0.82	64	P	Pg	17 56 18.6	-1.4
DSF				S	Sg	17 56 30.6	-0.1
EVR	Evrytania	0.88	11	P	Pg	17 56 22.3	+1.1
EVR	Evrytania	0.88	11	*e*PN	Pn	17 56 19.5	-3.1
EVR	Evrytania	0.88	11	*e*Pn	Pn	17 56 19.5	-3.1
EVR	Evrytania	0.88	11	P	Pg	17 56 22.3	+1.1
ITM	Ithomi	0.91	163	P	Pg	17 56 22.4	+0.7
ITM	Ithomi	0.91	163	P	Pg	17 56 22.4	+0.7
ITM				S	Sg	17 56 35.3	+1.8
ITM	Ithomi	0.91	163	*e*PN	Pn	17 56 21.2	-1.8
ITM				*e*SN	Sn	17 56 35.5	-0.7
ITM	Ithomi	0.91	163	*e*Pn	Pn	17 56 21.2	-1.8
ITM				*e*Sn	Sn	17 56 35.5	-0.7
VLX	Vlachokerasia	0.92	137	P	Pg	17 56 21.0	-1.0
VLX				S	Sg	17 56 35.2	+1.2
VLX	Vlachokerasia	0.92	137	*e*PB	Pb	17 56 21.3	-1.0
VLX				*e*SN	Sn	17 56 35.5	-1.0
VLX	Vlachokerasia	0.92	137	P	Pg	17 56 21.0	-1.0
VLX	Vlachokerasia	0.92	137	*e*Pb	Pb	17 56 21.3	-1.0
VLX				S	Sg	17 56 35.2	+1.2
VLX				*e*Sn	Sn	17 56 35.5	-1.0
LKD2	Lefkada island	1.04	315	P	Pg	17 56 21.9	-2.3
LKD2				S	Sg	17 56 38.4	+0.7
LKD2	Lefkada island	1.04	315	P	Pg	17 56 21.9	-2.3
LKD2				S	Sg	17 56 38.4	+0.7
LTK	Loutraki	1.09	91	P	Pb	17 56 24.0	-1.1
LTK				S	Sg	17 56 40.2	+1.0
LTK	Loutraki	1.09	91	*e*PN	Pn	17 56 24.1	-1.4
LTK	Loutraki	1.09	91	*e*Pn	Pn	17 56 24.1	-1.4
LTK				S	Sg	17 56 40.2	+1.0
AGG	Agios Georgios	1.13	31	P	Pb	17 56 24.8	-1.0
AGG				S	Sb	17 56 40.2	-0.3
AGG	Agios Georgios	1.13	31	P	Pb	17 56 24.8	-1.0
AGG				S	Sb	17 56 40.2	-0.3
PYL	PYLOS	1.16	174	P	Pb	17 56 26.6	+0.3
PYL				S	Sb	17 56 44.4	+3.0
PYL	PYLOS	1.16	174	*e*PN	Pn	17 56 25.8	-0.7
PYL	PYLOS	1.16	174	*e*Pn	Pn	17 56 25.8	-0.7
PYL				S	Sb	17 56 44.4	+3.0
LKR	Lokris	1.26	61	P	Pn	17 56 27.9	+0.1
LKR	Lokris	1.26	61	P	Pn	17 56 26.6	-1.2
LKR				S	Sb	17 56 45.0	+0.8
LKR	Lokris	1.26	61	P	Pn	17 56 27.9	+0.1
LKR				S	Sb	17 56 45.0	+0.8
ATAL	Atalanti	1.29	60	P	Pn	17 56 27.1	-1.2
ATAL				S	Sb	17 56 46.4	+1.1
ATAL	Atalanti	1.29	60	P	Pn	17 56 27.1	-1.2
ATAL				S	Sb	17 56 46.4	+1.1
THL	Klokotos Trika	1.55	12	P	Pn	17 56 32.1	+0.3
THL				S	Sn	17 56 52.6	+0.7
THL	Klokotos Trika	1.55	12	*e*PN	Pn	17 56 32.0	+0.2
THL	Klokotos Trika	1.55	12	P	Pn	17 56 32.1	+0.3
THL				S	Sn	17 56 52.6	+0.7
ATH	Athens Observa	1.68	92	*e*Pn	Pn	17 56 34.8	+1.2
ATH	Athens Observa	1.68	92	*e*PN	Pn	17 56 34.8	+1.2
ATH	Athens Observa	1.68	92	*e*Pn	Pn	17 56 34.8	+1.2
VLI	Veliai	1.71	141	P	Pn	17 56 37.1	+3.1
VLI	Veliai	1.71	141	*e*PN	Pn	17 56 35.9	+1.9
VLI	Veliai	1.71	141	*e*Pn	Pn	17 56 35.9	+1.9
ATHU	Athens Univers	1.73	92	P	Pn	17 56 35.1	+0.7
ATHU				S	Sn	17 56 58.9	+2.4
ATHU	Athens Univers	1.73	92	P	Pn	17 56 35.1	+0.7
ATHU				S	Sn	17 56 58.9	+2.4
VLY	Voula,Athens	1.75	96	*e*Pb	Pb	17 56 34.6	-1.8
VLY	Voula,Athens	1.75	96	*e*PB	Pb	17 56 34.6	-1.8
VLY	Voula,Athens	1.75	96	*e*Pb	Pb	17 56 34.6	-1.8
MEV	Metsovon	1.75	351	P	Pn	17 56 36.6	+2.0
MEV	Metsovon	1.75	351	P	Pn	17 56 36.6	+2.0
IGT	Igoumenitsa	1.78	327	P	Pn	17 56 34.8	-0.1
IGT	Igoumenitsa	1.78	327	P	Pn	17 56 34.8	-0.1
NEO	Neokhori	1.79	45	P	Pn	17 56 34.9	-0.2
NEO	Neokhori	1.79	45	P	Pn	17 56 34.9	-0.2
PTL	Penteli	1.79	89	*e*Pn	Pn	17 56 35.5	+0.3
PTL	Penteli	1.79	89	*e*PN	Pn	17 56 35.5	+0.3
PTL	Penteli	1.79	89	*e*Pn	Pn	17 56 35.5	+0.3
XOR	Xorichti	1.81	43	P	Pn	17 56 34.8	-0.7
XOR				S	Sn	17 56 59.4	+0.9
XOR	Xorichti	1.81	43	P	Pn	17 56 34.8	-0.7
XOR				S	Sn	17 56 59.4	+0.9
AOS	Alonnisos	2.11	57	P	Pn	17 56 38.5	-1.1
AOS				S	Sn	17 57 05.3	-0.6
AOS	Alonnisos	2.11	57	P	Pn	17 56 38.5	-1.1
AOS				S	Sn	17 57 05.3	-0.6
LIT	Litokhoron	2.16	19	P	Pn	17 56 40.8	+0.5
LIT				S	Sn	17 57 08.6	+1.5
LIT	Litokhoron	2.16	19	P	Pn	17 56 40.8	+0.5
LIT				S	Sn	17 57 08.6	+1.5
KEK	Kerkira	2.17	320	P	Pn	17 56 40.9	+0.5
KEK	Kerkira	2.17	320	P	Pn	17 56 40.1	-0.3
KEK				S	Sn	17 57 09.5	+2.2
KEK	Kerkira	2.17	320	P	Pn	17 56 40.1	-0.3
KEK				S	Sn	17 57 09.5	+2.2
KZN	Kozani	2.26	3	P	Pn	17 56 42.4	+0.9
KZN				S	Sn	17

Ms4.4/8, Error ellipse: s-maj=20.5km s-min=6.0km az=115.0
NEIC **08** *17:56:19.6±0.1, 33.°17N×92.°12E, h10km, mb5.2/83, MS4.6/7, Error ellipse: s-maj=3.7km s-min=3.5km az=60.0*
TEH **08** *17:56:20.0, 33.°10N×92.°09E, h10km*
MOS **08** *17:56:21.0±0.8, 33.°12N×92.°06E, h33km, mb5.2/90, MS4.5/44, Error ellipse: s-maj=6.6km s-min=3.7km az=119.7*
DJA **08** *17:56:21, 33.°00N×92.°01E, h10km, mb5.1/16*
GCMT **08** *17:56:24.3±0.2, 33.°08N×92.°19E, h18km, MW5.2, Moment Tensor Solution. s39,c53; s88,c159; Moment tensor: Scale 10^16^Nm; M_{rr}-3.20±.24; $M_{\theta\theta}$-4.22±.16; $M_{\phi\phi}$7.42±.20; $M_{r\theta}$-2.54±.44; $M_{\theta\phi}$2.82±.14; $M_{\phi r}$-0.03±.39; Best double couple: $M_0$7.40000×10^16^ NP1:ϕ_s154.00000°, δ63.00000°, λ-155.00000°. NP2:ϕ_s52.00000°, δ68.00000°, λ-29.00000°. Principal axes: T 8.1000, Plg3.0000°, Azm104.0000°; N -1.4500, Plg54.0000°, Azm198.0000°; P -6.6500, Plg36.0000°, Azm11.0000°; Data Used: II G IU IC CN.*
SZGRF **08** *17:56:35.0, 34.°03N×90.°12E, h33km, mb5.0, Qinghai, China*
ISC 08 17:56:20.2±0.8, **33.°10N**±0.°02×**92.°08E**±0.°02, **h13**km±4km, **h26**km±3.3km: **pP-P, n521**, σ**1**§**00**/564, **mb5.0**/180, **MS4.6**/68, **10C-32D, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.48**	**194**	Pg	**Pb**	**17 57 22.1**	**+0.5**
LSA				Sg	**Sg**	**17 58 10.0**	**-2.0**
LSA				smax			
	comp=N,980nm,0.9s						
LSA				smax			
	comp=E,2μm,1.3s						
LSA	**Lhasa**	**3.48**	**194**	*e*Pn	**Pb**	**17 57 20.4**	**-1.2**
LSA				*e*S	**Sg**	**17 58 11.1**	**-0.9**
TAPN	**Taplejung**	**6.86**	**215**	*e*P	**Pn**	**17 58 05.3**	**+4.8**
ODAN	**Odare**	**7.43**	**214**	*e*P	**Pn**	**17 58 10.9**	**+2.7**
JIRN	**Jiri**	**7.43**	**225**	*e*P	**Pn**	**17 58 12.1**	**+3.8**
	comp=E,83nm,0.7s						
GUN	**Gumba**	**7.44**	**228**	*e*P	**Pn**	**17 58 12.9**	**+4.5**
	comp=E,166nm,0.8s						
SHL	**Shillong**	**7.51**	**181**	⇑*i*P	**Pn**	**17 58 09.0**	**-0.3**
SHL				*ex*	x	18 00 20.0	
RAMN	**Ramite**	**7.75**	**219**	*e*P	**Pn**	**17 58 14.7**	**+2.0**
	comp=E,164nm,0.5s						
KKN	**Kakani**	**7.90**	**230**	*e*P	**Pn**	**17 58 17.6**	**+2.9**
	comp=E,87nm,0.6s						
KKN	**Kakani**	**7.90**	**230**	*e*P	**Pn**	**17 58 17.6**	**+2.9**
KKN				pmax	pmax		
	comp=Z,87nm,0.6s						
PKI	**Pulchoki**	**7.97**	**228**	*e*P	**Pn**	**17 58 19.6**	**+3.9**
	comp=Z,140nm,0.8s						
PKI	**Pulchoki**	**7.97**	**228**	*e*P	**Pn**	**17 58 19.6**	**+3.9**
PKI				pmax	pmax		
	comp=Z,140nm,0.8s						
PKIN	**Phulchoki**	**7.98**	**228**	*e*P	**Pn**	**17 58 19.6**	**+3.8**
	comp=Z,68nm,0.7s						
DMN	**Daman**	**8.14**	**230**	*e*P	**Pn**	**17 58 20.8**	**+2.8**
	comp=Z,137nm,0.7s						
GTA	**Gaotai**	**8.87**	**43**	⇓P	**Pn**	**17 58 29.3**	**+1.4**
GTA				pP		17 58 32.8	
GTA				sP		17 58 34.8	
GTA				S	**Sn**	**18 00 08.2**	**+0.6**
GTA				sS		18 00 12.1	
GTA				pmax	pmax		
	comp=Z,33nm,1.3s						
GTA				pmax	pmax		
	comp=Z,170nm,5.1s						
GTA				LR	LR		
	comp=N,11μm,10.4s						
GTA				LR	LR		
	comp=E,7μm,11.3s						
GTA				LR	LR		
	comp=Z,5μm,11.9s						
AGT	**Agartala**	**9.21**	**185**	*i* x	**Pn**	**17 58 29.0**	**-3.7**
AGT				*i* x	x	17 59 18.0	
LZH	**Lanzhou**	**10.14**	**70**	*e*P	**Pn**	**17 58 44.8**	**-0.6**
LZH				pP		17 58 47.8	
LZH				sP		17 58 50.4	
LZH				*e*S	**Sn**	**18 00 40.2**	**+1.2**
LZH				sS		18 00 46.4	
LZH				SS		18 00 50.5	
LZH				pmax	pmax		
	comp=Z,46nm,1.0s						
LZH				pmax	pmax		
	comp=Z,190nm,4.0s						
LZH				LR	LR		
	comp=N,20μm,9.9s						
LZH				LR	LR		
	comp=Z,20μm,10.6s						
CD2	**Chengdu**	**10.15**	**99**	P	**Pn**	**17 58 47.1**	**+1.5**
CD2				pP		17 58 50.3	
CD2				sP		17 58 53.1	
CD2				PP		17 58 55.8	
CD2				S	**Sn**	**18 00 40.9**	**+1.7**
CD2				sS		18 00 45.4	
CD2				SS		18 00 53.5	
CD2				pmax	pmax		
	comp=Z,40nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,3.8s						
CD2				LR	LR		
	comp=N,10μm,6.6s						
CD2				LR	LR		
	comp=E,17μm,8.2s						
CD2				LR	LR		
	comp=Z,18μm,7.1s						
JOSI	**Joshimath**	**10.95**	**260**	*ex*	**Pn**	**17 58 59.0**	**+2.5**
JOSI				AMb	AMB	17 59 00.7	
	comp=Z,150nm,1.4s						
WMQ	**Urumqi**	**11.24**	**343**	P	**Pn**	**17 59 01.0**	**+0.5**
WMQ				sP		17 59 07.0	
WMQ				PP		17 59 10.0	
WMQ				S	**Sn**	**18 01 08.0**	**+2.1**
WMQ				SS		18 01 21.0	
WMQ				pmax	pmax		
	comp=Z,38nm,0.7s						
WMQ				LR	LR		
	comp=N,4μm,6.0s						
WMQ				LR	LR		
	comp=E,7μm,6.0s						
KLP	**Kalpa**	**11.81**	**266**	*e*PKP	**Pn**	**17 59 08.1**	**-0.1**
KLP				AMb	AMB	17 59 13.5	
	comp=Z,22nm,1.1s						
KMI	**Kunming**	**12.24**	**128**	P	**Pn**	**17 59 14.7**	**+0.5**
KMI				sP		17 59 18.7	
KMI				PP		17 59 24.1	
KMI				S	**Sn**	**18 01 31.8**	**+1.4**
KMI				sS		18 01 35.2	
KMI				SS		18 01 45.9	
KMI				pmax	pmax		
	comp=Z,23nm,1.2s						
KMI				LR	LR		
	comp=N,6μm,8.6s						
KMI				LR	LR		
	comp=E,4μm,10.7s						
KMI				LR	LR		
	comp=Z,5μm,9.7s						
DDI	**Dehra Dun**	**12.26**	**261**	*ex*	**Pn**	**17 59 11.8**	**-2.6**
BISR	**Bishrakh**	**13.37**	**254**	*e*PKP	**Pn**	**17 59 29.1**	**-0.4**
KKR	**Kurukshetra**	**13.39**	**261**	*e*PKP	**Pn**	**17 59 28.6**	**-1.2**
AGRA	**Agra**	**13.55**	**248**	*ex*	**Pn**	**17 59 32.1**	**0.0**
AGRA				AMb	AMB	17 59 34.9	
	comp=Z,64nm,0.5s						
AYAN	**Aya Nagar**	**13.65**	**254**	*e*PKP	**Pn**	**17 59 32.9**	**-0.6**
AYAN				AMb	AMB	17 59 33.0	
	comp=Z,10nm,0.3s						
SONA	**Sohna**	**13.78**	**253**	*e*PKP	**Pn**	**17 59 34.3**	**-0.9**
SONA				AMb	AMB	17 59 38.8	
	comp=Z,26nm,0.9s						
RTK	**Rohtak**	**14.03**	**257**	*e*PKP	**Pn**	**17 59 37.7**	**-0.8**
RTK				AMb	AMB	17 59 38.9	
	comp=Z,60nm,0.3s						
XAN	**Xi'an**	**14.07**	**82**	P	**Pn**	**17 59 37.9**	**-1.3**
XAN				pP		17 59 46.8	
XAN				S	**Sn**	**18 02 10.9**	**-4.3**
XAN				SS		18 02 34.0	
XAN				pmax	pmax		
	comp=Z,31nm,4.8s						
XAN				LR	LR		
	comp=N,4μm,8.8s						
XAN				LR	LR		
	comp=E,2μm,8.8s						
GYA	**Guiyang**	**14.28**	**114**	⇑*i*P	**Pn**	**17 59 40.4**	**-1.6**
GYA				PP		17 59 52.8	
GYA				S	**Sn**	**18 02 18.1**	**-2.2**
GYA				SS		18 02 38.9	
GYA				pmax	pmax		
	comp=Z,90nm,1.0s						
GYA				LR	LR		
	comp=N,4μm,9.3s						
GYA				LR	LR		
	comp=E,4μm,9.3s						
GYA				LR	LR		
	comp=Z,4μm,9.9s						
KSH	**Kashi**	**14.47**	**301**	⇑*i*P	**Pn**	**17 59 46.0**	**+1.4**
KSH				pP	pP	17 59 49.4	-5.8
KSH				sP	sP	17 59 52.9	-4.0
KSH				PP		17 59 57.6	
KSH				S	**Sn**	**18 02 26.7**	**+1.8**
KSH				sS	sS	18 02 41.9	-8.7
KSH				SS		18 02 43.1	
KSH				PcP	PcP	18 05 02.3	+2.8
KSH				ScP	ScP	18 08 34.2	+1.3
KSH				PcS	PcS	18 08 36.0	+1.7
KSH				ScS	ScS	18 12 10.4	+0.1
KSH				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KSH				LR	LR		
	comp=N,2μm,7.3s						
KSH				LR	LR		
	comp=E,2μm,6.5s						
KSH				LR	LR		
	comp=Z,1μm,6.6s						
KHET	**Khetri**	**14.88**	**255**	*ex*	**Pn**	**17 59 48.2**	**-2.1**
KHET				AMb	AMB	17 59 52.8	
	comp=Z,39nm,1.1s						
ENH	**Enshi**	**15.08**	**96**	*e*Pn	**Pn**	**17 59 50.8**	**-2.2**
	comp=Z,103nm,1.1s						
ULHL	**Ulahol**	**15.49**	**311**	P	**Pn**	**17 59 58.5**	**+0.2**
	SNR=11						
CHTO	**Chiang Mai**	**15.50**	**155**	*e*P	**Pn**	**17 59 58.0**	**-0.4**
CHTO				pmax	pmax		
	comp=Z,27nm,1.3s						
CHTO	**Chiang Mai**	**15.50**	**155**	*e*Pn	**Pn**	**17 59 58.0**	**-0.4**
	comp=Z,27nm,1.3s						
MK31	**Makanchi Array**	**15.59**	**334**	*e*P	**Pn**	**17 59 57.7**	**-1.7**
MKAR	**Makanchi Array**	**15.59**	**334**	Pn	**Pn**	**17 59 57.9**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=133,slow=12,SNR=34						
MKAR				LR	LR	18 06 02.2	
	comp=Z,958nm,20.4s,baz=150,slow=38						
AAA	**Alma-Ata**	**15.62**	**315**	*e*P	**Pn**	**18 00 03.4**	**+3.5**
AAA				pmax	pmax		
	comp=Z,1μm,3.5s						
AAA				MLR	MLR		
	comp=Z,4μm,15.0s						
CHCP	**Chirah Chowk**	**15.74**	**277**	P	**Pn**	**17 59 59.2**	**-2.3**
CM31	**Chiang Mai Arr**	**15.82**	**155**	*e*Pn	**Pn**	**18 00 02.0**	**-0.7**
CMAR	**Chiang Mai Arr**	**15.82**	**155**	Pn	**Pn**	**18 00 02.0**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=333,slow=12,SNR=92						
CMAR				PcP	PcP	18 05 02.0	+0.4
	comp=Z,0.1nm,0.3s,baz=309,slow=1.6,SNR=5.5						
CMAR				LR	LR	18 07 19.2	
	comp=Z,1μm,21.5s,baz=337,slow=42						
KZA	**Kyzart**	**16.05**	**309**	P	**Pn**	**18 00 07.2**	**+1.7**
	SNR=39						
BHPL	**Bhopal**	**16.22**	**236**	*e*PKP	**Pn**	**18 00 06.2**	**-1.5**
BHPL				AMb	AMB	18 00 07.8	
	comp=Z,61nm,1.1s						
TKM2	**Tokmak 2**	**16.25**	**312**	P	**Pn**	**18 00 08.6**	**+0.5**
	SNR=8.8						
TKM2	**Tokmak 2**	**16.25**	**312**	*e*P	**Pn**	**18 00 08.3**	**+0.2**
TKM2				pmax	pmax		
	comp=Z,75nm,1.3s						
TKM2	**Tokmak 2**	**16.25**	**312**	*e*Pn	**Pn**	**18 00 08.3**	**+0.3**
	comp=Z,75nm,1.3s						
KBK	**Karagaybulak**	**16.53**	**310**	P	**Pn**	**18 00 12.8**	**+1.2**
	SNR=38						
UCH	**Uchtor**	**16.61**	**308**	P	**Pn**	**18 00 17.7**	**+5.2**
	SNR=44						
UCH	**Uchtor**	**16.61**	**308**	*e*Pn	**Pn**	**18 00 13.3**	**+0.8**
	comp=Z,28nm,0.7s						
AAK	**Ala-Archa**	**16.81**	**310**	P	**Pn**	**18 00 18.8**	**+3.7**
	comp=Z,282nm,1.2s,SNR=18						
AAK	**Ala-Archa**	**16.81**	**310**	P	**Pn**	**18 00 21.2**	**+6.0**
	SNR=11						
AAK	**Ala-Archa**	**16.81**	**310**	Pn	**Pn**	**18 00 16.9**	**+1.7**
	comp=Z,0.0nm,0.3s,baz=100,slow=4.8,SNR=18						
AAK				LR	LR	18 07 47.7	
	comp=Z,3μm,20.4s,baz=104,slow=41						
AAK	**Ala-Archa**	**16.81**	**310**	⇑*e*P	**Pn**	**18 00 16.6**	**+1.5**
AAK				pmax	pmax		
	comp=Z,61nm,2.8s						
AAK				MLR	MLR		
	comp=Z,769nm,13.0s						
AAK	**Ala-Archa**	**16.81**	**310**	*e*P	**Pn**	**18 00 18.3**	**+3.2**
	comp=Z,80nm,1.2s						
AAK	**Ala-Archa**	**16.81**	**310**	P	**Pn**	**18 00 20.4**	**+5.2**
	SNR=39						
AAK				P		18 00 20.4	
	SNR=39						
AAK	**Ala-Archa**	**16.81**	**310**	Pn	**Pn**	**18 00 20.4**	**+5.2**
	SNR=39						
AAK				Pn	**Pn**	**18 00 20.4**	**+5.2**
	SNR=39						
FRU	**Bishkek**	**16.83**	**310**	*e*P	**Pn**	**18 00 16.0**	**+0.6**
FRU				pmax	pmax		
	comp=Z,200nm,2.0s						
CEP	**Cherat**	**16.85**	**278**	P	**Pn**	**18 00 13.5**	**-2.3**
BDT	**Bhumibol Dam**	**16.97**	**157**	P	**Pn**	**18 00 19.0**	**+1.7**
AML	**Almayashu**	**17.11**	**307**	P	**Pn**	**18 00 21.6**	**+2.7**
	SNR=15						
AML	**Almayashu**	**17.11**	**307**	*e*Pn	**Pn**	**18 00 20.5**	**+1.6**
	comp=Z,18nm,0.8s						
USP	**Ospenovka**	**17.12**	**311**	P	**Pn**	**18 00 20.3**	**+1.3**
	SNR=5.9						
TIY	**Taiyuan**	**17.21**	**69**	*e*P	**Pn**	**18 00 21.7**	**+1.5**
TIY				S	**Sn**	**18 03 29.5**	**-2.0**
TIY				LR	LR		
	comp=N,4μm,6.8s						
TIY				LR	LR		
	comp=E,2μm,9.1s						
TIY				LR	LR		
	comp=Z,3μm,7.7s						
EKS2	**Erkin-Say**	**17.29**	**309**	P	**Pn**	**18 00 23.6**	**+2.4**
	SNR=32						
EKS2	**Erkin-Say**	**17.29**	**309**	*e*Pn	**Pn**	**18 00 22.5**	**+1.3**
	comp=Z,22nm,0.8s						
HHC	**Hu-ho-hao-te**	**17.36**	**58**	*e*P	**Pn**	**18 00 22.0**	**-0.1**
HHC				pP	pP	18 00 25.5	-1.7
HHC				sP	sP	18 00 29.0	+0.1
HHC				PP		18 00 36.7	
HHC				S	**Sn**	**18 03 34.6**	**-0.5**
HHC				sS	sS	18 03 40.0	-10
HHC				SS		18 03 56.0	
HHC				PcP	PcP	18 05 04.2	+0.5
HHC				ScS	ScS	18 12 16.0	-2.2
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,5.8s						
HHC				LR	LR		
	comp=N,3μm,13.7s						
HHC				LR	LR		
	comp=E,3μm,13.7s						
HHC				LR	LR		
	comp=Z,3μm,12.8s						
AKL	**Akola**	**18.22**	**231**	*ex*	**Pn**	**18 00 34.9**	**+2.1**
SONM	**Songino Array**	**18.27**	**32**	P	**Pn**	**18 00 33.8**	**+0.7**
	comp=Z,2.4nm,0.3s,baz=218,slow=11,SNR=92						
SONM				ScP	ScP	18 08 42.5	+2.4
	comp=Z,0.1nm,0.3s,baz=225,slow=1.9,SNR=4.2						
SONM				LR	LR	18 08 50.9	
	comp=Z,452nm,18.3s,baz=220,slow=41						
ULN	**Ulaanbaatar**	**18.59**	**33**	*e*P	**Pn**	**18 00 37.0**	**-0.1**
ULN				pmax	pmax		
	comp=Z,90nm,1.3s						
ULN	**Ulaanbaatar**	**18.59**	**33**	*e*Pn	**Pn**	**18 00 37.0**	**0.0**
	comp=Z,90nm,1.3s						
ULN	**Ulaanbaatar**	**18.59**	**33**	P	**Pn**	**18 00 37.4**	**+0.3**
	SNR=51						
ULN				P		18 00 37.4	
	SNR=51						
ULN	**Ulaanbaatar**	**18.59**	**33**	P	**Pn**	**18 00 37.4**	**+0.3**
	SNR=51						
ULN				P		18 00 37.4	
	SNR=51						
NST	**Nakhon Sawan**	**18.82**	**155**	P	**Pn**	**18 00 40.0**	**-0.1**
WHN	**Wuhan**	**19.09**	**92**	⇑P	**Pn**	**18 00 41.6**	**-1.7**
WHN				S	**Sn**	**18 04 14.8**	**-2.2**
WHN				LR	LR		
	comp=N,6μm,6.9s						
WHN				LR	LR		
	comp=E,7μm,8.1s						
WHN				LR	LR		
	comp=Z,8μm,8.1s						
ZAK	**Zakamensk**	**19.15**	**22**	⇓*i*P	**Pn**	**18 00 44.4**	**+0.6**
ZAK				pmax	pmax		
	comp=Z,29nm,1.3s						
KBL	**Kabul**	**19.19**	**281**	*e*P	**Pn**	**18 00 43.4**	**-1.2**
KBL				pmax	pmax		
	comp=Z,96nm,0.9s						
KBL	**Kabul**	**19.19**	**281**	*e*P	**Pn**	**18 00 43.4**	**-1.2**
	comp=Z,96nm,0.9s						
MOY	**Mondy**	**19.66**	**17**	*e*P	**Pn**	**18 00 50.1**	**+0.1**
MOY				pmax	pmax		
	comp=Z,92nm,1.7s						
HYB	**Hyderabad**	**19.80**	**221**	*e*P	**Pn**	**18 00 48.0**	**-3.9**
HYB				*e*S	**Sn**	**18 04 40.0**	**+5.6**
HYB	**Hyderabad**	**19.80**	**221**	*i* P	**Pn**	**18 00 50.0**	**-1.9**
HYB				*e*S	**Sn**	**18 04 43.0**	**+8.6**
KURK	**Kurchatov**	**20.20**	**335**	P	**P**	**18 00 53.9**	**-0.5**
	comp=Z,188nm,1.2s,SNR=16						
KURK	**Kurchatov**	**20.20**	**335**	P	**P**	**18 00 53.2**	**-1.2**
	comp=Z,26nm,1.0s,baz=142,slow=11,SNR=56						
KURK				LR	LR	18 08 40.6	
	comp=Z,1μm,19.9s,MS4.2,baz=140,slow=37						
KURK	**Kurchatov**	**20.20**	**335**	P	**P**	**18 00 53.2**	**-1.2**
KURK				pmax	pmax		
	comp=Z,26nm,1.0s						
KURK				MLR	MLR		
	comp=Z,1μm,19.9s,MS4.2						
KURK	**Kurchatov**	**20.20**	**335**	*e*P	**P**	**18 00 53.5**	**-0.9**
	comp=Z,39nm,1.1s						
KURK	**Kurchatov**	**20.20**	**335**	P	**P**	**18 00 53.8**	**-0.6**
	SNR=23						
KURK				P		18 00 53.8	
	SNR=23						
KURK	**Kurchatov**	**20.20**	**335**	P	**P**	**18 00 53.8**	**-0.6**
	SNR=23						
KURK				P		18 00 53.8	
	SNR=23						
TLY	**Talaya**	**20.39**	**21**	Pn	**P**	**18 00 58.2**	**+1.7**
	comp=Z,127nm,1.2s,SNR=10						
TLY	**Talaya**	**20.39**	**21**	*d i*P	**P**	**18 00 58.1**	**+1.6**
TLY				*e*		18 01 19.9	
TLY				*e*SS		18 05 12.2	
TLY				pmax	pmax		
	comp=Z,35nm,1.2s						
TLY				MLR	MLR		
	comp=Z,1μm,16.0s,MS4.3						
TLY	**Talaya**	**20.39**	**21**	*e*Pn	**P**	**18 00 58.2**	**+1.6**
	comp=Z,24nm,1.0s						
TLY	**Talaya**	**20.39**	**21**	P	**P**	**18 00 58.5**	**+2.0**
	SNR=28						
TLY				P		18 00 58.5	
	SNR=28						
TLY	**Talaya**	**20.39**	**21**	P	**P**	**18 00 58.5**	**+2.0**
	SNR=28						
TLY				P		18 00 58.5	
	SNR=28						
BJT	**Baijiatuau**	**20.51**	**63**	*e*P	**P**	**18 00 58.0**	**+0.1**
BJI	**Beijing**	**20.52**	**63**	P	**P**	**18 00 56.6**	**-1.4**
BJI				S	**S**	**18 04 48.3**	**+1.1**
BJI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BJI				pmax	pmax		
	comp=Z,90nm,4.1s						
BJI				LR	LR		
	comp=N,13μm,13.8s,MS5.5						
BJI				LR	LR		
	comp=E,3μm,13.8s,MS5.5						
BJI				LR	LR		
	comp=Z,940nm,15.7s,MS4.3						
TIA	**Tai'an**	**20.82**	**74**	*e*P	**P**	**18 01 01.0**	**-0.3**
TIA				S	**S**	**18 04 54.0**	**+0.8**
TIA				LR	LR		
	comp=N,2μm,10.0s						
TIA				LR	LR		
	comp=E,490nm,7.0s						
IRK	**Irkutsk**	**21.07**	**21**	*e*P	**P**	**18 01 05.3**	**+1.4**
IRK				pmax	pmax		
	comp=Z,277nm,1.4s,mb5.4						
QIZ	**Qiongzhong**	**21.19**	**127**	P	**P**	**18 01 05.6**	**+0.2**
QIZ				pP		18 01 09.2	
QIZ				sP	sP	18 01 12.6	+1.6
QIZ				PP		18 01 29.3	
QIZ				S	**S**	**18 05 02.7**	**+2.0**
QIZ				pmax	pmax		
	comp=Z,26nm,1.9s,mb4.2						
QIZ				LR	LR		
	comp=N,3μm,13.5s						
QIZ				LR	LR		
	comp=Z,3μm,9.7s						
QIZ	**Qiongzhong**	**21.19**	**127**	*e*P	**P**	**18 01 02.1**	**-3.3**
GZH	**Guangzhou**	**21.21**	**113**	P	**P**	**18 01 05.2**	**-0.4**
GZH				S	**S**	**18 04 56.4**	**-4.7**
GZH				LR	LR		
	comp=N,2μm,9.4s						
GZH				LR	LR		
	comp=E,4μm,9.7s						
GZH				LR	LR		
	comp=Z,5μm,9.8s						
ZAA0	**Zalesovo Array**	**21.48**	**348**	⇓*i*P	**P**	**18 01 07.2**	**-1.0**
ZALV	**Zalesovo Beam**	**21.48**	**348**	P	**P**	**18 01 07.4**	**-0.8**
	comp=Z,24nm,0.8s,mb4.6,baz=158,slow=9.6,SNR=96						
ZALV				LR	LR	18 10 40.1	
	comp=Z,324nm,19.4s,MS3.7,baz=344,slow=40						
ZALV	**Zalesovo Beam**	**21.48**	**348**	P	**P**	**18 01 07.4**	**-0.8**
ZALV				pmax	pmax		
	comp=Z,24nm,0.8s,mb4.6						
ZALV				MLR	MLR		
	comp=Z,324nm,19.4s,MS3.7						
QUE	**Quetta**	**21.58**	**269**	*e*P	**P**	**18 01 02.0**	**-7.6**
QUE				*e*S	**S**	**18 05 10.0**	**+1.7**
NJ2	**Nanjing**	**22.57**	**85**	*e*P	**P**	**18 01 21.2**	**+1.1**
NJ2				pP		18 01 25.8	
NJ2				sP	sP	18 01 28.5	+2.8
NJ2				PP		18 01 51.2	
NJ2				S	**S**	**18 05 25.7**	**-1.8**
NJ2				sS	sS	18 05 31.5	-2.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.5						
NJ2				pmax	pmax		
	comp=Z,100nm,3.6s						
NJ2				LR	LR		
	comp=N,3μm,10.0s,MS5.1						
NJ2				LR	LR		
	comp=E,3μm,11.7s,MS5.1						
NJ2				LR	LR		
	comp=Z,19μm,11.8s,MS5.8						
NVS	**Novosibirsk**	**22.61**	**347**	⇓*i*P	**P**	**18 01 19.2**	**-1.1**
NVS				*e*		18 05 07.8	
NVS				*e*S	**S**	**18 05 25.7**	**-2.3**
NVS				pmax	pmax		
	comp=E,74nm,1.7s						
NVS				pmax	pmax		
	comp=Z,148nm,1.7s,mb5.1						
NVS				pmax	pmax		
	comp=N,180nm,1.6s						
NVS				smax			
	comp=N,42nm,2.4s						
NVS				smax			
	comp=E,30nm,2.4s						
CIT	**Chita**	**24.49**	**33**	*e*P	**P**	**18 01 38.3**	**-0.5**
CIT				*e*		18 01 47.0	
CIT				*e*		18 02 07.6	
CIT				pmax	pmax		
	comp=Z,66nm,2.3s,mb4.7						
QZH	**Quanzhou**	**24.52**	**102**	P	**P**	**18 01 39.6**	**+0.3**
QZH				S	**S**	**18 05 55.6**	**-3.9**
QZH				LR	LR		
	comp=N,4μm,9.5s						
QZH				LR	LR		
	comp=E,2μm,9.3s						
QZH				LR	LR		
	comp=Z,4μm,20.1s,MS5.0						
DL2	**Dalian**	**24.53**	**68**	P	**P**	**18 01 41.1**	**+1.8**
DL2				S	**S**	**18 06 00.8**	**+1.2**
DL2				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.2						
DL2				pmax	pmax		

comp=Z,60nm,5.3s
DL2 LR LR
comp=N,2μm,17.9s,MS4.7
DL2 LR LR
comp=E,620nm,17.4s,MS4.7
DL2 LR LR
comp=Z,1μm,15.1s,MS4.4
SSE Sheshan 24.70 87 P **P 18 01 41.7 +0.7**
SSE pP 18 01 49.7
SSE S **S 18 06 03.8 +1.3**
SSE pmax pmax
comp=Z,11nm,0.8s,mb4.4
SSE pmax pmax
comp=Z,53nm,3.2s
SSE LR LR
comp=N,1μm,10.5s,MS5.0
SSE LR LR
comp=E,2μm,10.2s,MS5.0
SSE LR LR
comp=Z,3μm,10.8s,MS5.0
BVAR Borovoye Array 25.28 328 P **P 18 01 46.2 +0.3**
comp=Z,15nm,0.8s,mb4.6,baz=126,slow=9.8,SNR=58
BVAR PcP PcP 18 05 18.2 -0.6
comp=Z,1.6nm,0.8s,baz=186,slow=4.5,SNR=3.6
BVAR Borovoye Array 25.28 328 P **P 18 01 46.2 +0.3**
BVAR 18 05 18.2
BVAR pmax pmax
comp=Z,15nm,0.8s
BRVK Borovoye 25.34 328 P **P 18 01 46.9 +0.3**
comp=Z,216nm,1.1s,mb5.6,SNR=15
BRVK Borovoye 25.34 328 *d iP* **P 18 01 46.6 0.0**
BRVK pmax pmax
comp=Z,79nm,1.7s,mb5.0
BRVK MLR MLR
comp=Z,1μm,13.0s,MS4.7
BRVK Borovoye 25.34 328 *e*P **P 18 01 46.9 +0.3**
BRVK pmax pmax
comp=Z,37nm,0.9s,mb4.9
BRVK Borovoye 25.34 328 *e*P **P 18 01 46.9 +0.3**
comp=Z,37nm,0.9s,mb4.9
BRVK Borovoye 25.34 328 P **P 18 01 47.2 +0.7**
SNR=23
BRVK P 18 01 47.2
SNR=23
BRVK Borovoye 25.34 328 P **P 18 01 47.2 +0.7**
SNR=23
BRVK P 18 01 47.2
SNR=23
HIA Hailar 26.14 44 *e*P **P 18 01 55.3 +1.4**
HIA pmax pmax
comp=Z,39nm,1.4s
HIA Hailar 26.14 44 *e*P **P 18 01 55.2 +1.4**
comp=Z,38nm,1.4s,mb4.7
SNY Shenyang 26.36 62 ⇓P **P 18 01 56.2 +0.3**
SNY S **S 18 06 30.1 +1.5**
SNY pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
SNY LR LR
comp=N,6μm,12.6s,MS5.2
SNY LR LR
comp=E,870nm,16.5s,MS5.2
SNY LR LR
comp=Z,2μm,12.0s,MS4.8
IMYA Miami 26.42 286 *e*P **P 18 01 57.1 +0.6**
ISRO Mashad 26.93 286 *e*P **P 18 02 02.0 +0.9**
IMOG Moghan 27.05 286 *e*P **P 18 02 03.4 +1.2**
IPAY Payeh 27.31 286 *e*P **P 18 02 05.7 +1.2**
IEMG Emamgholi 27.55 288 *e*P **P 18 02 07.7 +1.0**
IKRD Kardeh 27.68 287 *e*P **P 18 02 02.3 -5.5**
PALK Pallekele 27.78 205 LR LR 18 12 58.9
comp=Z,406nm,19.9s,MS4.0,baz=31,slow=36
ITEG Tejag 27.89 279 *e*P **P 18 02 09.5 -0.3**
ABKT Ailbek 27.97 290 P **P 18 02 12.2 +1.8**
comp=Z,186nm,1.1s,mb5.6,SNR=13
CN2 Changchun 28.06 58 *e*P **P 18 02 11.7 +0.6**
CN2 *e*pP pP 18 02 16.1 +0.9
CN2 *e*sP sP 18 02 18.8 +1.9
CN2 *e*S **S 18 06 56.5 +1.2**
CN2 pmax pmax
comp=Z,20nm,0.9s,mb4.8
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,1μm,12.0s,MS4.8
CN2 LR LR
comp=E,1μm,12.0s,MS4.8
CN2 LR LR
comp=Z,1μm,15.0s,MS4.6
ABKAR Akbulak array 28.80 314 ⇓*iP* **P 18 02 18.1 +0.4**
comp=Z,16nm,0.9s,mb4.7
KSRS Korea Array 29.47 71 P **P 18 02 23.4 -0.3**
comp=Z,1.2nm,0.7s,mb3.8,baz=272,slow=9.9,SNR=5.2
KSRS ScP ScP 18 09 11.0 +0.4
comp=Z,2.6nm,1.1s,baz=264,slow=2.9,SNR=9.5
KSRS LR LR 18 14 54.2
comp=Z,607nm,18.5s,MS4.3,baz=273,slow=38
KSRS Korea Array 29.47 71 P **P 18 02 23.5 -0.2**
KSRS 18 09 11.0
KSRS pmax pmax
comp=Z,1.0nm,0.7s
KSRS MLR MLR
comp=Z,607nm,18.5s,MS4.3
AKTK Aktyubinsk 30.40 315 P **P 18 02 31.6 -0.2**
AKTK LR LR 18 15 40.1
AKTO Aktyubinsk 30.40 315 P **P 18 02 31.6 -0.2**
comp=Z,12nm,0.9s,mb4.6,baz=110,slow=7.9,SNR=31
AKTO LR LR 18 15 40.1
comp=Z,571nm,19.6s,MS4.2,baz=287,slow=38
AKTO Aktyubinsk 30.40 315 P **P 18 02 31.7 -0.1**
AKTO pmax pmax
comp=Z,13nm,0.9s,mb4.7
AKTO MLR MLR
comp=Z,571nm,19.6s,MS4.2
PSI Prapat 30.81 167 P **P 18 02 36.2 +0.5**
comp=Z,3.5nm,0.4s,mb4.5,baz=307,slow=9.1,SNR=4.1
PSI LR LR 18 16 56.0
comp=Z,604nm,20.6s,MS4.2,baz=80,slow=40
PSI Prapat 30.81 167 P **P 18 02 36.3 +0.5**
PSI pmax pmax
comp=Z,4.0nm,0.4s,mb4.6
PSI MLR MLR
comp=Z,605nm,20.6s,MS4.2
MDJ Mudanjiang 31.13 57 P **P 18 02 38.1 -0.3**
MDJ pP pP 18 02 41.2 -1.3
MDJ sP sP 18 02 42.5 -1.7
MDJ S **S 18 07 43.5 -0.1**
MDJ ScP ScP 18 09 17.2 +1.3
MDJ ScS ScS 18 13 13.2 +0.3
MDJ pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
MDJ pmax pmax
comp=Z,57nm,6.1s
MDJ LR LR
comp=N,6μm,15.8s,MS5.3
MDJ LR LR
comp=E,980nm,15.5s,MS5.3
MDJ LR LR
comp=Z,900nm,13.6s,MS4.6
IGLO Ghaloghah 31.46 287 *e*P **P 18 02 42.9 +1.6**
SVE Sverdlovsk 32.04 327⇑*e*P **P 18 02 46.9 +0.7**
SVE pmax pmax
comp=Z,65nm,1.1s,mb5.4
SVE MLR MLR
comp=Z,2μm,14.0s,MS4.9
VLA Vladivostok 32.62 60 P **P 18 02 49.0 -2.4**
VLA *e*S **S 18 08 09.5 +2.7**
VLA pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
VLA MLR MLR
comp=Z,700nm,13.4s,MS4.5
ARU Arti 32.79 325 P **P 18 02 53.7 +0.9**
comp=Z,128nm,1.0s,mb5.8,SNR=9.4
ARU Arti 32.79 325 *d iP* **P 18 02 52.7 -0.1**
ARU *e* 18 04 00.6
ARU *e*PPP 18 04 11.3
ARU *e* 18 05 35.7
ARU S **S 18 08 09.5 +0.4**
ARU SS SS 18 10 08.6 -22
ARU SSS 18 10 34.1
ARU pmax pmax
comp=Z,51nm,1.7s,mb5.2
ARU MLR MLR
comp=Z,1μm,17.0s,MS4.6
ARU Arti 32.79 325 *e*P **P 18 02 52.9 +0.1**
comp=Z,23nm,1.0s,mb5.1
IDMV Damavand 33.01 286 *e*P **P 18 02 56.5 +1.5**

ISFB Sefidab 33.02 283 *e*P **P 18 02 55.8 +0.8**
IVRN Varamin 33.34 285 *e*P **P 18 02 57.5 -0.3**
IVRN *e*P 18 02 58.4
KLR Kul'dur 33.49 49 *e*P **P 18 02 55.0 -4.0**
KLR *e*S **S 18 08 16.0 -4.2**
KLR MLR MLR
comp=N,1μm,10.0s,MS5.2
KLR MLR MLR
comp=E,2μm,10.0s,MS5.2
KLR MLR MLR
comp=Z,4μm,10.0s,MS5.4
SOKR Solikamsk 35.26 329 *d iP* **P 18 03 14.8 +0.7**
SOKR pmax pmax
comp=Z,70nm,1.7s,mb5.3
SOKR MLR MLR
comp=Z,1μm,17.0s,MS4.7
HABR Khabarovsk 35.47 51 *e*P **P 18 03 14.4 -1.7**
HABR *e**PP pP 18 03 23.6 +3.3
HABR *e**SP sP 18 03 27.9 +6.0
HABR 18 05 43.2
HABR S **S 18 08 48.3 -2.5**
HABR *e**SS sS 18 09 04.0 +6.4
HABR *e*SS SS 18 11 10.1 -15
HABR *e*SSS 18 11 28.2
HABR 18 13 30.5
HABR pmax pmax
comp=Z,21nm,1.2s,mb4.9
HABR pmax pmax
comp=E,15nm,1.6s
HABR pmax pmax
comp=N,14nm,2.4s
HABR MLR MLR
comp=Z,717nm,16.0s,MS4.5
KSM Kuching 35.81 148 *e*P **P 18 03 20.9 +1.6**
comp=Z,23nm,1.0s,mb5.1
MAK Makhachkala 36.10 299 *e*P **P 18 03 20.6 -1.0**
MAK *e* 18 04 43.4
MAK *e*PPP 18 04 56.5
MAK *e*S **S 18 08 58.7 -1.9**
MAK *e*SSS 18 11 46.4
MAK pmax pmax
comp=Z,179nm,2.0s,mb5.7
ISRB Sarab 36.23 290 *e*P **P 18 03 23.1 +0.3**
IHRS Heris 36.66 291 *e*P **P 18 03 27.2 +0.7**
ITBZ Tabriz 37.38 291 *e*P **P 18 03 34.1 +1.6**
YAK Yakutsk 37.55 28 *e*P **P 18 03 33.4 -0.3**
YAK *e**PP pP 18 03 42.5 +4.7
YAK *e* 18 05 02.4
YAK *e*S **S 18 09 25.2 +3.0**
YAK *e**SS sS 18 09 39.3 +10
YAK *e*SSS 18 12 29.7
YAK *e* 18 13 41.0
YAK pmax pmax
comp=Z,14nm,1.8s,mb4.4
YAK pmax pmax
comp=N,4.0nm,1.1s
YAK pmax pmax
comp=E,10.0nm,1.6s
YAK pmax pmax
comp=Z,47nm,2.0s,mb4.9
YAK smax
comp=E,71nm,4.0s
YAK smax
comp=N,101nm,4.4s
YAK MLR MLR
comp=E,587nm,19.0s,MS4.5
YAK MLR MLR
comp=Z,624nm,16.0s,MS4.5
YAK MLR MLR
comp=N,208nm,12.0s,MS4.5
IMRD Marand 37.67 292 *e*P **P 18 03 36.7 +1.7**
DGRG David-gareji 37.71 297 P **P 18 03 37.3 +2.0**
IDHR Dehrash 37.72 285 *e*P **P 18 03 36.7 +1.2**
MAT Matsushiro 37.75 71 P **P 18 03 35.5 -0.2**
MAT S **S 18 09 23.0 -2.8**
MJAR Matsushiro Arr 37.75 71 P **P 18 03 34.9 -0.8**
comp=N,0.3nm,0.4s,baz=98,slow=36,SNR=4.0
MJAR LR LR 18 20 16.6
comp=N,443nm,18.3s,MS4.3,baz=305,slow=38
ISHB Shabestar 37.78 291 *e*P **P 18 03 37.2 +1.2**
MIB Mutribah 38.10 277 *e*P **P 18 03 39.1 +0.4**
MIB AMb AMB 18 03 40.2
comp=Z,97nm,1.2s,mb5.4
RDF Al-Radifah 38.18 276 *e*P **P 18 03 40.1 +0.7**
RDF AMb AMB 18 03 40.7
comp=Z,61nm,1.0s,mb5.3
GNI Garni 38.28 294 P **P 18 03 41.8 +1.7**
comp=Z,19nm,0.9s,mb4.8,baz=337,slow=2.0,SNR=16
GNI Garni 38.28 294 *d iP* **P 18 03 42.1 +2.0**
GNI pmax pmax
comp=Z,43nm,1.0s
GNI Garni 38.28 294 P **P 18 03 43.1 +2.9**
SNR=11
GNI P 18 03 43.1
SNR=11
GNI Garni 38.28 294 P **P 18 03 43.1 +2.9**
SNR=11
GNI P 18 03 43.1
SNR=11
NAY Al-Naaiem 38.34 277 *e*P **P 18 03 41.0 +0.2**
NAY AMb AMB 18 03 42.2
comp=Z,34nm,1.5s,mb4.8
ONI Oni 39.09 298 P **P 18 03 48.9 +2.0**
KIV Kislovodsk 39.60 301 *e*P **P 18 03 51.4 +0.2**
KIV *e* 18 05 23.7
KIV *e*S **S 18 09 51.3 -2.4**
KIV pmax pmax
comp=Z,14nm,1.0s,mb4.7
KIV MLR MLR
comp=Z,280nm,15.0s,MS4.2
KIV Kislovodsk 39.60 301 *e*P **P 18 03 51.5 +0.3**
comp=Z,18nm,1.2s,mb4.7
BHD Baghdad 39.65 284 *e*P **P 18 03 46.5 -5.2**
BHD *e*S **S 18 09 44.0 -11**
YSS Yuzh-Sakhalins 40.50 55 *e*P **P 18 04 06.0 +7.4**
YSS *e* 18 10 09.0
YSS *e* 18 13 30.0
YSS MLR MLR
comp=E,500nm,12.0s
YSS MLR MLR
comp=Z,1μm,12.0s,MS4.9
VRHR Novokhopersk 40.64 312 *e*P **P 18 03 59.6 -0.1**
VRHR pmax pmax
comp=Z,40nm,0.8s,mb5.1
VRHR pmax pmax
comp=N,30nm,0.5s
VRHR pmax pmax
comp=E,30nm,0.7s
VRHR MLR MLR
comp=Z,450nm,15.0s,MS4.5
VRHR MLR MLR
comp=N,330nm,13.0s,MS4.6
VRHR MLR MLR
comp=E,500nm,14.0s,MS4.6
SOC Sochi 41.77 300 *e*P **P 18 04 07.5 -1.6**
SOC *e**SP sP 18 04 22.6 +7.7
SOC *e* 18 05 46.7
SOC *e*PPP 18 06 12.9
SOC *e*S **S 18 10 20.7 -5.3**
VSR Storozhevoye 42.20 312 *e*P **P 18 04 12.0 -0.4**
VSR *e**PP pP 18 04 17.7 +1.1
VSR *e*S **S 18 10 29.7 -2.3**
VSR pmax pmax
comp=Z,40nm,1.1s,mb5.0
VSR pmax pmax
comp=N,5.0nm,0.5s
VSR pmax pmax
comp=E,10.0nm,0.6s
VSR smax
comp=E,100nm,9.5s
VSR smax
comp=Z,10.0nm,7.4s
VSR smax
comp=N,20nm,4.6s
VSR MLR MLR
comp=Z,500nm,15.0s,MS4.5
VSR MLR MLR
comp=N,530nm,13.0s,MS4.7
VSR MLR MLR
comp=E,290nm,12.0s,MS4.7
TIXI Tiksi 43.24 16 *e*P **P 18 04 19.9 -0.8**
ANN Anapa 43.33 302 *e*P **P 18 04 21.1 -0.6**
ANN *e**PP pP 18 04 30.3 +4.3
ANN *e* 18 06 02.0
ANN *e* 18 06 09.0

ANN *e*PPP 18 06 36.3
ANN *e*S **S 18 10 47.5 -1.4**
ANN *e*SSS 18 14 38.7
ANN pmax pmax
comp=Z,53nm,1.4s,mb5.1
ANN MLR MLR
comp=N,600nm,21.0s,MS4.6
ANN MLR MLR
comp=E,422nm,21.0s,MS4.6
ANN MLR MLR
comp=Z,811nm,21.0s,MS4.6
MOS Moscow 43.60 318 *e*P **P 18 04 22.8 -1.0**
MOS *e*S **S 18 10 52.3 -0.2**
MOS pmax pmax
comp=Z,110nm,1.3s,mb5.4
MOS MLR MLR
comp=Z,1μm,17.0s,MS4.8
OBN Obninsk 44.12 317⇑*e*P **P 18 04 28.1 +0.2**
OBN *e* 18 06 12.3
OBN *e*S **S 18 11 09.0 +8.8**
OBN *e*SS SS 18 14 21.8 +4.4
OBN pmax pmax
comp=Z,71nm,1.7s,mb5.1
OBN MLR MLR
comp=Z,600nm,16.0s,MS4.6
ASF Jabal al Asfar 46.02 285 P **P 18 04 44.8 +1.4**
comp=Z,15nm,1.0s,mb4.9,baz=299,slow=2.9,SNR=17
ASF Jabal al Asfar 46.02 285 P **P 18 04 44.8 +1.4**
ASF pmax pmax
comp=Z,15nm,1.0s
BR131 Keskin Array S 46.78 296 *e*P **P 18 04 49.5 +0.2**
BRTR Keskin Array B 46.78 296 P **P 18 04 49.5 +0.2**
comp=Z,16nm,0.8s,mb5.0,baz=96,slow=7.6,SNR=102
BRTR Keskin Array B 46.78 296 P **P 18 04 49.5 +0.2**
BRTR pmax pmax
comp=Z,16nm,0.8s
MMAI Mount Meron Ar 46.99 286 P **P 18 04 52.4 +1.4**
comp=Z,5.6nm,0.9s,mb4.5,baz=105,slow=16,SNR=8.7
MMAI LR LR 18 28 19.3
comp=Z,314nm,21.4s,MS4.2,baz=85,slow=41
LVZ Lovozero 47.62 334⇑*e*P **P 18 04 55.3 -0.1**
LVZ pmax pmax
comp=Z,22nm,1.0s,mb5.1
LVZ MLR MLR
comp=Z,784nm,13.0s,MS4.9
SEY Seymchan 47.66 33⇑*e*P **P 18 04 56.8 +1.0**
JOF Joensuu 47.87 327 *e*P **P 18 04 57.7 +0.3**
JOF pmax pmax
comp=Z,37nm,1.4s,mb5.2
JOF Joensuu 47.87 327 *ep* **P 18 04 57.7 +0.3**
comp=Z,37nm,1.4s,mb5.2
JOF Joensuu 47.87 327 *ep* **P 18 04 57.7 +0.3**
comp=Z,37nm,1.4s,mb5.2
APA Apatity 47.98 334⇑*e*P **P 18 04 54.8 -3.4**
APA MLR MLR
comp=Z,2μm,14.0s,MS5.2
EIL Elat 48.38 282 P **P 18 05 02.0 +0.2**
comp=Z,35nm,0.8s,mb5.4,baz=40,slow=3.1,SNR=37
AKASG Malin Array Be 48.48 311 P **P 18 05 01.6 -0.7**
comp=Z,9.0nm,0.8s,mb4.9,baz=78,slow=6.5,SNR=31
AKASG PP PP 18 06 55.8 +1.0
comp=Z,0.1nm,0.3s,baz=73,slow=9.0,SNR=4.6
AKASG LR LR 18 29 32.5
comp=Z,939nm,18.6s,MS4.8,baz=100,slow=41
AKASG Malin Array Be 48.48 311 P **P 18 05 01.6 -0.7**
AKASG 18 06 55.8
AKASG pmax pmax
comp=Z,9.0nm,0.8s
AKASG MLR MLR
comp=Z,939nm,18.6s
AKBB Malin Array Si 48.48 311 *e*P **P 18 05 01.1 -1.2**
KIEV Kiev 48.49 311 *e*P **P 18 05 01.2 -1.1**
KIEV pmax pmax
comp=Z,27nm,1.3s,mb5.1
KIEV Kiev 48.49 311 *e*P **P 18 05 01.2 -1.1**
comp=Z,27nm,1.3s,mb5.1
KIS Kishinev 49.10 306 *e*PP PP 18 07 03.0 +2.4
KIS LRM 18 28 05.0
comp=Z,300nm,13.0s
KIS Kishinev 49.10 306 *e*P **P 18 05 08.0 +0.9**
KIS *e* 18 07 03.0
KIS MLR MLR
comp=Z,400nm,14.0s,MS4.6
KIS MLR MLR
comp=N,300nm,13.0s,MS4.6
KIS MLR MLR
comp=E,300nm,13.0s,MS4.6
KIS MLR MLR
comp=Z,500nm,14.0s
VSU Vasula 49.73 321 *d iP* **P 18 05 11.5 -0.2**
VSU pmax pmax
comp=Z,41nm,1.4s,mb5.3
VSU MLR MLR
comp=Z,928nm,17.0s,MS4.8
PETK Petropavlovsk- 50.02 46 P **P 18 05 14.2 +0.1**
comp=Z,5.3nm,0.9s,mb4.5,baz=147,slow=3.5,SNR=4.6
PETK Petropavlovsk- 50.02 46 P **P 18 05 14.2 +0.2**
PETK pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
KAF Kangasniemi 50.09 326 *e*P **P 18 05 13.5 -0.9**
KAF pmax pmax
comp=Z,18nm,1.2s,mb5.0
KAF Kangasniemi 50.09 326 *ep* **P 18 05 13.5 -0.9**
comp=Z,18nm,1.2s,mb5.0,baz=92,slow=7.5
KAF Kangasniemi 50.09 326 *ep* **P 18 05 13.5 -0.9**
comp=Z,18nm,1.2s,mb5.0,baz=92,slow=7.5
FINES FINESS Array B 50.16 325 P **P 18 05 15.5 +0.5**
comp=Z,3.2nm,0.8s,mb4.4,baz=89,slow=8.9,SNR=13
FINES LR LR 18 27 42.3
comp=Z,866nm,18.7s,MS4.8,baz=91,slow=38
FINES FINESS Array B 50.16 325 P **P 18 05 15.5 +0.5**
FINES pmax pmax
comp=Z,3.0nm,0.8s
FINES MLR MLR
comp=Z,866nm,18.7s
KEV Kevo 50.76 336 *e*P **P 18 05 19.2 -0.2**
KEV pmax pmax
comp=Z,12nm,0.9s,mb4.8
KEV Kevo 50.76 336 *ep* **P 18 05 19.2 -0.2**
comp=Z,12nm,0.9s,mb4.8
KEV Kevo 50.76 336 *ep* **P 18 05 19.2 -0.2**
comp=Z,12nm,0.9s,mb4.8
ARCES ARCESS Array B 51.24 336 P **P 18 05 23.2 +0.3**
comp=Z,2.7nm,0.4s,mb4.5,baz=94,slow=8.0,SNR=27
ARCES PcP PcP 18 06 37.9 -0.1
comp=Z,3.6nm,0.8s,baz=126,slow=6.2,SNR=5.2
ARCES ARCESS Array B 51.24 336 P **P 18 05 23.3 +0.3**
ARCES 18 06 37.9
ARCES pmax pmax
comp=Z,3.0nm,0.4s
LVV L'vov 51.88 310 *e*P **P 18 05 27.1 -1.0**
SUW Suwalki 51.90 316 *e*P **P 18 05 27.4 -0.7**
KWP Kalwaria Pacla 52.76 310 *e*P **P 18 05 35.0 +0.3**
KWP Kalwaria Pacla 52.76 310 *e*P **P 18 05 34.5 -0.1**
KWP pmax pmax
comp=Z,52nm,1.1s,mb5.4
KWP Kalwaria Pacla 52.76 310 *e*P **P 18 05 34.5 -0.1**
comp=Z,52nm,1.1s,mb5.4
KOLS Kolonicke sedl 53.16 309 *e*P **P 18 05 37.1 -0.5**
KOLS *e* 18 05 53.4
KOLS *e*S **S 18 13 05.0 -2.7**
KOLS *e*S **S 18 13 15.3 +7.6**
KOLS pmax pmax
comp=Z,34nm,2.6s,mb4.8
KOLS MLR MLR
comp=Z,700nm,20.5s,MS4.7
KOLS Kolonicke sedl 53.16 309 *e*P **P 18 05 37.1 -0.5**
comp=Z,34nm,2.6s,mb4.8
KOLS *e* 18 05 53.4
KOLS *e*S **S 18 13 05.0 -2.7**
KOLS *e*S **S 18 13 15.3 +7.6**
KOLS *e*SS SS 18 17 28.9 +42
KOLS LR LR
comp=Z,700nm,20.5s,MS4.7
KOLS Kolonicke sedl 53.16 309 *e*P **P 18 05 37.1 -0.5**
KOLS *e* 18 05 53.4
KOLS *e*S **S 18 13 05.0 -2.7**
KOLS *e*pS 18 13 15.3
KOLS *e*SS SS 18 17 28.9 +42
UZH Uzhgorod 53.20 309⇓*iP* **P 18 05 37.0 -0.9**
UZH *i* 18 05 44.8
UZH *e*S **S 18 13 00.0 -8.3**
UZH *e*PS 18 13 16.0
UZH MLR MLR
comp=N,300nm,22.0s,MS4.7

UZH MLR MLR
comp=E,700nm,22.0s,MS4.7
UZH MLR MLR
comp=Z,300nm,22.0s,MS4.3
CRVS Cervenica-Dubn 53.69 309 *e*P **P 18 05 41.6 +0.1**
CRVS *e* 18 05 57.0
CRVS pmax pmax
comp=Z,8.0nm,1.5s,mb4.4
CRVS MLR MLR
comp=Z,600nm,19.4s,MS4.7
CRVS Cervenica-Dubn 53.69 309 *e*P **P 18 05 41.6 +0.1**
comp=Z,8.4nm,1.5s,mb4.5
CRVS *e* 18 05 57.0
CRVS *e*SS SS 18 17 43.4 +48
CRVS LR LR
comp=Z,600nm,19.4s,MS4.7
CRVS Cervenica-Dubn 53.69 309 *e*P **P 18 05 41.6 +0.1**
CRVS *e* 18 05 57.0
CRVS *e*SS SS 18 17 43.4 +48
STHS Stebnicka Huta 53.74 310 *e*P **P 18 05 41.8 0.0**
STHS pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
STHS Stebnicka Huta 53.74 310 *e*P **P 18 05 41.8 0.0**
comp=Z,4.9nm,1.1s,mb4.3
STHS Stebnicka Huta 53.74 310 *e*P **P 18 05 41.8 0.0**
BILL Bilibino 53.87 27⇓*e*P **P 18 05 43.3 +0.8**
BILL *e* 18 07 43.0
BILL *e*S **S 18 13 10.1 -6.8**
BILL pmax pmax
comp=Z,26nm,1.2s,mb5.0
BILL MLR MLR
comp=Z,700nm,19.0s,MS4.7
BILL Bilibino 53.87 27 *e*P **P 18 05 43.2 +0.7**
comp=Z,37nm,1.4s,mb5.1
NIE Niedzica 54.33 310 *e*P **P 18 05 47.2 +1.0**
KECS Kecovo 54.41 309 *e*P **P 18 05 47.1 +0.4**
KECS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
KECS Kecovo 54.41 309 *e*P **P 18 05 47.1 +0.4**
comp=Z,3.6nm,1.0s,mb4.3
KECS Kecovo 54.41 309 *e*P **P 18 05 47.1 +0.4**
OJC Ojcow 54.51 311 *e*P **P 18 05 46.4 -1.0**
IDI Anoyia 54.64 292 P **P 18 05 47.6 -1.0**
comp=Z,16nm,0.8s,mb5.1,baz=48,slow=8.1,SNR=9.7
VYHS Vyhne 55.48 309 *e*P **P 18 05 55.0 +0.5**
VYHS *e* 18 06 09.3
VYHS *e*S **S 18 13 44.0 +5.0**
VYHS pmax pmax
comp=Z,13nm,1.5s,mb4.7
VYHS MLR MLR
comp=Z,400nm,19.9s,MS4.5
VYHS Vyhne 55.48 309 *e*P **P 18 05 55.0 +0.5**
comp=Z,13nm,1.5s,mb4.7
VYHS *e*PP pP 18 06 03.6 +4.8
VYHS *e* 18 06 09.3
VYHS *e*S **S 18 13 44.0 +5.0**
VYHS LR LR
comp=Z,400nm,19.9s,MS4.5
VYHS Vyhne 55.48 309 *e*P **P 18 05 55.0 +0.5**
VYHS *e* 18 06 03.6
VYHS *e* 18 06 09.3
VYHS *e*S **S 18 13 44.0 +5.0**
OKC Ostrava-Krasne 55.63 311 *e*P **P 18 05 55.3 -0.2**
OKC MLR MLR
comp=Z,400nm,12.3s,MS4.7
OKC Ostrava-Krasne 55.63 311 *e*P **P 18 05 55.3 -0.2**
OKC AMS AMS 18 31 50.0
comp=Z,400nm,12.3s
MORC Moravsky Berou 56.02 311 *e*P **P 18 05 58.3 -0.1**
MORC pmax pmax
comp=Z,21nm,1.4s,mb5.0
MORC Moravsky Berou 56.02 311 *e*P **P 18 05 58.3 0.0**
comp=Z,21nm,1.4s,mb5.0
KSP Ksiaz 56.57 313 *e*P **P 18 06 02.4 +0.2**
KSP Ksiaz 56.57 313 *e*P **P 18 06 02.2 0.0**
KSP MLR MLR
comp=Z,2μm,15.9s,MS5.2
DPC Dobruska-Polom 56.66 312 *e*P **P 18 06 03.2 +0.3**
DPC MLR MLR
comp=Z,400nm,13.8s,MS4.7
DPC Dobruska-Polom 56.66 312 *e*P **P 18 06 03.2 +0.3**
DPC AMS AMS 18 32 50.0
comp=Z,400nm,13.8s
UPC Upice 56.82 312 *e*P **P 18 06 04.3 +0.3**
UPC Upice 56.82 312 *e*P **P 18 06 04.3 +0.3**
NOA NORSAR Array B 57.34 325 P **P 18 06 07.2 -0.3**
comp=Z,6.5nm,0.8s,mb4.7,baz=80,slow=7.2,SNR=12
NOA LR LR 18 32 50.6
comp=Z,905nm,18.0s,MS4.9,baz=85,slow=38
NOA NORSAR Array B 57.34 325 P **P 18 06 07.2 -0.4**
NOA pmax pmax
comp=Z,7.0nm,0.9s
NOA MLR MLR
comp=Z,905nm,18.0s
NOA NORSAR Array B 57.34 325 P **P 18 06 07.2 -0.3**
NOA LR LR 18 32 50.6
TREC Trest 57.44 311 *e*P **P 18 06 08.9 +0.5**
TREC MLR MLR
comp=Z,700nm,15.8s,MS4.9
TREC Trest 57.44 311 *e*P **P 18 06 08.9 +0.5**
TREC AMS AMS 18 34 50.0
comp=Z,700nm,15.8s
CONA Conrad Observa 57.54 309⇓*i*P **P 18 06 09.4 +0.2**
comp=Z,24nm,1.1s,mb5.1
CSNA Conrad Observa 57.55 309⇓*i*P **P 18 06 09.3 +0.1**
comp=Z,22nm,1.2s,mb5.1
PVCC Panska Ves 57.71 313 *e*P **P 18 06 10.4 +0.1**
PVCC Panska Ves 57.71 313 *e*P **P 18 06 10.4 +0.1**
PRU Pruhonice 57.86 312 *e*P **P 18 06 11.7 +0.3**
PRU *e*S **S 18 14 12.6 +2.1**
PRU MLR MLR
comp=Z,500nm,17.3s,MS4.7
PRU Pruhonice 57.86 312 *e*P **P 18 06 11.7 +0.3**
PRU *e*S **S 18 14 12.6 +2.1**
PRU AMS AMS 18 36 00.0
comp=Z,500nm,17.3s
ARSA Arzberg 57.94 309⇓*i*P **P 18 06 11.9 -0.1**
comp=Z,9.3nm,1.6s,mb4.6
PERS Pernice 58.38 308 *i*P **P 18 06 14.9 -0.2**
SOKA Soboth 58.42 308⇓*i*P **P 18 06 15.1 -0.2**
comp=Z,16nm,1.2s,mb4.9
CLL Collm 58.47 314 *e*P **P 18 06 14.9 -0.8**
comp=Z,24nm,1.6s,mb5.0
CLL Collm 58.47 314⇓*i*P **P 18 06 15.0 -0.7**
CLL *e*S **S 18 14 18.0 -0.5**
CLL pmax pmax
comp=Z,24nm,1.6s,mb5.0
CLL Collm 58.47 314⇓*i*P **P 18 06 15.0 -0.7**
CLL *e*S **S 18 14 18.0 -0.5**
CLL Collm 58.47 314⇓*i*P **P 18 06 15.0 -0.7**
comp=Z,24nm,1.6s,mb5.0
CLL *e* 18 07 14.0
CLL *e*(PP) 18 08 36.0
CLL *e*S **S 18 14 18.0 -0.5**
CLL *e*SS SS 18 18 12.0 +1.6
CLL *e* 18 19 06.0
CLL *e*SSS 18 20 54.0
MOA Molln 58.60 310⇓*i*P **P 18 06 16.2 -0.4**
comp=Z,8.9nm,1.1s,mb4.7
GEC2 GERESS Array S 58.69 311 *e*P **P 18 06 16.8 -0.4**
comp=Z,28nm,1.5s,mb5.1
GEC2 GERESS Array S 58.69 311 *e*P **P 18 06 17.1 -0.1**
comp=Z,8μm,1.6s
GERES GERESS Array B 58.69 311 P **P 18 06 17.6 +0.4**
comp=Z,4.6nm,1.0s,mb4.5,baz=76,slow=7.0,SNR=35
GERES LR LR 18 36 05.4
comp=Z,704nm,18.7s,MS4.8,baz=330,slow=41
GERES GERESS Array B 58.69 311 P **P 18 06 17.6 +0.4**
GERES pmax pmax
comp=Z,5.0nm,1.0s
GERES MLR MLR
comp=Z,705nm,18.7s
KHC Kasperske Hory 58.69 311 *e*P **P 18 06 17.0 -0.2**
KHC pmax pmax
comp=Z,19nm,1.8s,mb4.8
KHC Kasperske Hory 58.69 311 *e*P **P 18 06 16.9 -0.2**
comp=Z,19nm,1.8s,mb4.8
KHC Kasperske Hory 58.69 311 *e*P **P 18 06 17.2 0.0**
KHC *e*S **S 18 14 23.2 +1.8**
KHC AMS AMS 18 35 40.0
comp=Z,700nm,14.5s
OBKA Obir 58.79 308⇓*i*P **P 18 06 17.6 -0.3**
comp=Z,12nm,1.2s,mb4.8
VISS Visnje 58.80 307 *e*P **P 18 06 17.9 -0.1**
TANN Tannenbergstha 59.04 313 *e*P **P 18 06 18.6 -1.0**
comp=Z,14nm,1.2s,mb4.9
NKC Novy Kostel 59.10 313 AMS AMS 18 33 30.0
comp=Z,700nm,13.4s
WERD Werda 59.13 313 *e*P **P 18 06 20.0 -0.2**
comp=Z,9.0nm,0.9s,mb4.8
WERN Wernitzgruen 59.13 313 *e*P **P 18 06 20.2 0.0**
comp=Z,25nm,1.6s,mb5.0
WET Wettzell 59.13 311 *e*P **P 18 06 19.6 -0.6**
comp=Z,14nm,1.3s,mb4.8
JAVS Javornik 59.29 307 *i*P **P 18 06 20.7 -0.8**
BSEG Bad Segeberg 59.38 317 *e*P **P 18 06 22.3 +0.4**
comp=Z,19nm,1.0s,mb5.1
MOX Moxa 59.50 313 *e*P **P 18 06 22.6 -0.2**
comp=Z,16nm,1.5s,mb4.8
MOX
comp=Z,200nm,16.0s
MOX Moxa 59.50 313 *e*P **P 18 06 22.4 -0.4**
comp=Z,16nm,1.4s,mb4.9
RJOB Jochberg 59.58 310 *e*P **P 18 06 23.3 -0.1**
comp=Z,18nm,1.5s,mb4.9
GRB3 Grafenberg Arr 59.74 312 *e*PP PP 18 08 34.4 -1.7
NRDL Niedersach Rie 59.89 316 *e*P **P 18 06 25.2 -0.2**
comp=Z,42nm,1.4s,mb5.3
KNA Kununurra 59.89 138 *e*P **P 18 06 26.5 +0.7**
comp=Z,20nm,1.0s,mb5.1
CLZ Clausthal 59.91 315 *e*P **P 18 06 25.5 -0.1**
comp=Z,29nm,1.2s,mb5.2
GRF Grafenberg Arr 60.01 312 *e*P **P 18 06 26.6 +0.3**
comp=Z,68nm,1.7s,mb5.4
GRF Grafenberg Arr 60.01 312 *e*P **P 18 06 26.6 +0.3**
GRF pmax pmax
comp=Z,68nm,1.7s,mb5.4
ABTA Abfaltersbach 60.06 309⇓*i*P **P 18 06 25.2 -1.5**
comp=Z,5.9nm,1.1s,mb4.5
MBWA Marble Bar 60.06 150 *e*P **P 18 06 27.4 +0.5**
MBWA Marble Bar 60.06 150 *e*P **P 18 06 26.9 0.0**
comp=Z,21nm,0.8s,mb5.2
FITZ Fitzroy Crossi 60.16 143 *e*P **P 18 06 27.9 +0.2**
comp=Z,8.3nm,0.9s,mb4.8
FITZ Fitzroy Crossi 60.16 143 P **P 18 06 27.3 -0.4**
comp=Z,5.6nm,0.9s,mb4.6,baz=298,slow=3.1,SNR=5.9
WTTA Wattenberg 60.47 309⇓*i*P **P 18 06 29.0 -0.5**
comp=Z,20nm,1.7s,mb4.9
WATA Walderalm 60.49 310⇓*i*P **P 18 06 28.8 -0.8**
comp=Z,14nm,1.4s,mb4.8
MOTA Moosalm 60.79 310⇓*i*P **P 18 06 30.9 -0.8**
comp=Z,6.5nm,0.9s,mb4.8
RETA Reutte 60.97 310⇓*i*P **P 18 06 32.4 -0.5**
comp=Z,11nm,1.1s,mb4.9
FETA Feichten 61.14 309⇓*i*P **P 18 06 33.4 -0.6**
comp=Z,12nm,1.1s,mb4.9
ASS Assisi 61.15 305 P **P 18 06 35.0 +0.8**
MURB Monte Urbino 61.17 305 P **P 18 06 35.2 +0.9**
BADI Badiali 61.28 305 P **P 18 06 35.9 +0.8**
comp=Z,746nm,7.3s
STU Stuttgart 61.56 312 *e*P **P 18 06 36.9 0.0**
comp=Z,47nm,1.7s,mb5.3
TNS Taunus Mts 61.56 313 *e*P **P 18 06 36.7 -0.1**
comp=Z,29nm,1.4s,mb5.2
DAVA Damuels 61.60 310⇓*i*P **P 18 06 36.8 -0.4**
comp=Z,13nm,1.4s,mb4.9
BFO Black Forest 62.24 311 P **P 18 06 41.6 +0.1**
comp=Z,53nm,1.2s,mb5.5,SNR=5.1
BFO Black Forest 62.24 311 *e*P **P 18 06 41.0 -0.5**
comp=Z,24nm,1.4s,mb5.1
BFO Black Forest 62.24 311 *e*P **P 18 06 40.8 -0.7**
BFO pmax pmax
comp=Z,32nm,1.6s,mb5.2
BFO Black Forest 62.24 311 *e*P **P 18 06 40.8 -0.7**
comp=Z,32nm,1.6s,mb5.2
CDF Champ du Feu 62.88 312 *e*P **P 18 06 45.0 -0.7**
comp=Z,27nm,1.2s,mb4.9
CDF Champ du Feu 62.88 312 *e*P **P 18 06 45.0 -0.7**
CDF pmax pmax
comp=Z,13nm,1.2s,mb4.9
CDF Champ du Feu 62.88 312 *e*P **P 18 06 45.0 -0.7**
comp=Z,13nm,1.2s,mb5.0
MEM Membach 62.91 314 P **P 18 06 46.3 +0.4**
WLF Walferdange 63.14 313 P **P 18 06 48.0 +0.6**
comp=Z,26nm,1.7s,mb5.1
WLF Walferdange 63.14 313 *e*P **P 18 06 47.9 +0.5**
comp=Z,45nm,1.3s,mb5.4
WLF Walferdange 63.14 313 *e*P **P 18 06 47.0 -0.4**
WLF pmax pmax
comp=Z,26nm,1.3s,mb5.2
WLF Walferdange 63.14 313 *e*P **P 18 06 47.0 -0.5**
comp=Z,26nm,1.3s,mb5.2
HINF Hinteralfeld 63.35 311 *e*P **P 18 06 48.0 -0.9**
comp=Z,69nm,1.8s,mb5.2
HINF Hinteralfeld 63.35 311 *e*P **P 18 06 48.0 -0.9**
HINF pmax pmax
comp=Z,35nm,1.8s,mb5.2
HINF Hinteralfeld 63.35 311 *e*P **P 18 06 48.0 -0.9**
comp=Z,35nm,1.8s,mb5.2
BCLA Clavier 63.39 314 P **P 18 06 49.3 +0.2**
comp=Z,12nm,1.8s,mb4.7
HAU Haudompre 63.60 312 *e*P **P 18 06 49.7 -0.8**
HAU *e*MLR MLR
comp=Z,516nm,20.0s,MS4.4
HAU Haudompre 63.60 312 *e*P **P 18 06 49.7 -0.8**
HAU LR LR
comp=Z,520nm,20.0s,MS4.7
GIVF Givet 63.79 314 *e*P **P 18 06 51.2 -0.5**
PGF Pioggiola 63.84 305 *e*P **P 18 06 51.3 -0.9**
comp=Z,86nm,1.5s,mb5.2
PGF Pioggiola 63.84 305 *e*P **P 18 06 51.3 -0.9**
PGF pmax pmax
comp=Z,43nm,1.5s,mb5.3
PGF Pioggiola 63.84 305 *e*P **P 18 06 51.3 -0.9**
comp=Z,43nm,1.5s,mb5.3
DOU Dourbes 63.93 314 P **P 18 06 52.9 +0.3**
SNF Seneffe 63.97 315 P **P 18 06 53.1 +0.2**
LSD Lago del Serru 64.02 309 P **P 18 06 53.2 -0.1**
LSD pmax pmax
comp=Z,47nm,1.6s,mb5.3
LSD Lago del Serru 64.02 309 P **P 18 06 53.2 -0.1**
comp=Z,47nm,1.6s,mb5.3
BAIF Baives 64.18 314 *e*P **P 18 06 53.8 -0.5**
comp=Z,22nm,1.2s,mb4.8
BAIF Baives 64.18 314 *e*P **P 18 06 53.8 -0.5**
BAIF pmax pmax
comp=Z,11nm,1.2s,mb4.8
BAIF Baives 64.18 314 *e*P **P 18 06 53.8 -0.5**
comp=Z,11nm,1.2s,mb4.8
MEZF Maizieres J'vi 64.23 312 *e*P **P 18 06 54.3 -0.4**
comp=Z,102nm,1.8s,mb5.3
MEZF Maizieres J'vi 64.23 312 *e*P **P 18 06 54.3 -0.4**
comp=Z,102nm,1.8s,mb5.5
LPG La Plagne 64.25 309 *e*P **P 18 06 55.0 +0.1**
comp=Z,106nm,1.5s,mb5.3
LPG La Plagne 64.25 309 *e*P **P 18 06 55.0 +0.1**
LPG pmax pmax
comp=Z,53nm,1.5s,mb5.3
LPG La Plagne 64.25 309 *e*P **P 18 06 55.0 +0.1**
comp=Z,53nm,1.5s,mb5.3
LPL La Plagne 64.26 309 *e*P **P 18 06 54.9 0.0**
comp=Z,103nm,1.4s,mb5.3
LPL La Plagne 64.26 309 *e*P **P 18 06 54.9 0.0**
LPL pmax pmax
comp=Z,52nm,1.4s,mb5.4
LPL La Plagne 64.26 309 *e*P **P 18 06 54.9 0.0**
comp=Z,52nm,1.4s,mb5.4
CABF La Chapelle 64.27 310 *e*P **P 18 06 53.9 -1.1**
SBF Sospel 64.41 307 *e*P **P 18 06 55.2 -0.7**
comp=Z,67nm,1.2s,mb5.3
SBF Sospel 64.41 307 *e*P **P 18 06 55.2 -0.7**
SBF pmax pmax
comp=Z,34nm,1.2s,mb5.2
SBF Sospel 64.41 307 *e*P **P 18 06 55.2 -0.7**
comp=Z,34nm,1.2s,mb5.2
BNI Bardonecchia 64.47 308 *e*P **P 18 06 55.2 -1.1**
BNI pmax pmax
comp=Z,18nm,1.4s,mb4.9
BNI Bardonecchia 64.47 308 *e*P **P 18 06 55.2 -1.1**
comp=Z,18nm,1.4s,mb4.9
MBDF Montbardon 64.53 308 *e*P **P 18 06 56.9 +0.2**
comp=Z,38nm,1.4s,mb5.0
MBDF Montbardon 64.53 308 *e*P **P 18 06 56.9 +0.2**
MBDF pmax pmax
comp=Z,19nm,1.4s,mb4.9
MBDF Montbardon 64.53 308 *e*P **P 18 06 56.9 +0.2**
comp=Z,19nm,1.4s,mb4.9
ORIF Oris-en-Rattie 65.04 309 *e*P **P 18 06 59.0 -1.0**
comp=Z,17nm,1.0s,mb4.7
ORIF *e*MLR MLR
comp=Z,640nm,19.5s,MS4.5
ORIF Oris-en-Rattie 65.04 309 *e*P **P 18 06 59.0 -1.0**
ORIF pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
ORIF Oris-en-Rattie 65.04 309 *e*P **P 18 06 59.0 -1.0**
comp=Z,8.3nm,1.0s,mb4.7
FRF La Foret Royal 65.06 307 *e*P **P 18 06 59.2 -0.9**
comp=Z,27nm,1.2s,mb4.9
FRF La Foret Royal 65.06 307 *e*P **P 18 06 59.2 -0.9**
FRF pmax pmax
comp=Z,13nm,1.2s,mb4.8
FRF La Foret Royal 65.06 307 *e*P **P 18 06 59.2 -0.9**
comp=Z,13nm,1.2s,mb4.8
LMR La Mourre 65.23 307 *e*P **P 18 07 00.5 -0.8**
comp=Z,49nm,1.2s,mb5.1
LMR La Mourre 65.23 307 *e*P **P 18 07 00.5 -0.8**
LMR pmax pmax
comp=Z,25nm,1.3s,mb5.1
LMR La Mourre 65.23 307 *e*P **P 18 07 00.5 -0.8**
comp=Z,24nm,1.3s,mb5.1
LOR Lormes 65.44 312 *e*P **P 18 07 01.2 -1.3**
comp=Z,42nm,1.6s,mb4.9
LOR *e*MLR MLR
comp=Z,365nm,20.0s,MS4.3
LOR Lormes 65.44 312 *e*P **P 18 07 01.2 -1.3**
LOR pmax pmax
comp=Z,21nm,1.6s,mb4.9
LOR MLR MLR
comp=Z,370nm,20.0s,MS4.6
LOR Lormes 65.44 312 *e*P **P 18 07 01.2 -1.3**
comp=Z,21nm,1.6s,mb4.9
LOR LR LR
comp=Z,370nm,20.0s,MS4.6
SMRF Simiane la Rot 65.61 308 *e*P **P 18 07 03.1 -0.6**
SMF Signal de Mont 65.69 311 *e*P **P 18 07 03.2 -1.0**
comp=Z,87nm,1.5s,mb5.3
SMF Signal de Mont 65.69 311 *e*P **P 18 07 03.2 -1.0**
SMF pmax pmax
comp=Z,43nm,1.5s,mb5.3
SMF Signal de Mont 65.69 311 *e*P **P 18 07 03.2 -1.0**
comp=Z,43nm,1.5s,mb5.3
SSF Saint Saulge 65.74 311 *e*P **P 18 07 03.4 -1.1**
comp=Z,43nm,1.4s,mb5.0
SSF Saint Saulge 65.74 311 *e*P **P 18 07 03.4 -1.1**
SSF pmax pmax
comp=Z,22nm,1.4s,mb5.0
SSF Saint Saulge 65.74 311 *e*P **P 18 07 03.4 -1.1**
comp=Z,22nm,1.4s,mb5.0
VIVF Saint-Julien-l 65.86 309 *e*P **P 18 07 04.6 -0.7**
comp=Z,93nm,1.5s,mb5.3
VIVF Saint-Julien-l 65.86 309 *e*P **P 18 07 04.6 -0.7**
VIVF pmax pmax
comp=Z,47nm,1.5s,mb5.3
VIVF Saint-Julien-l 65.86 309 *e*P **P 18 07 04.6 -0.7**
comp=Z,47nm,1.5s,mb5.3
AVF Avril sur Loir 65.94 311 *e*P **P 18 07 04.9 -0.9**
comp=Z,84nm,1.5s,mb5.3
AVF Avril sur Loir 65.94 311 *e*P **P 18 07 04.9 -0.9**
AVF pmax pmax
comp=Z,42nm,1.5s,mb5.2
AVF Avril sur Loir 65.94 311 *e*P **P 18 07 04.9 -0.9**
comp=Z,42nm,1.5s,mb5.2
KEST Kesra 66.28 298 P **P 18 07 06.9 -1.2**
comp=Z,3.9nm,1.0s,mb4.4,baz=311,slow=0.2,SNR=8.1
KEST LR LR 18 41 26.8
comp=Z,75nm,19.4s,MS3.9,baz=12,slow=41
ESK Eskdalemuir 66.31 322 *i*P **P 18 07 08.6 +0.6**
BGF Bois d'Agland 66.36 311 *e*P **P 18 07 07.5 -1.0**
comp=Z,39nm,1.4s,mb4.9
BGF Bois d'Agland 66.36 311 *e*P **P 18 07 07.5 -1.0**
BGF pmax pmax
comp=Z,19nm,1.4s,mb4.9
BGF Bois d'Agland 66.36 311 *e*P **P 18 07 07.5 -1.0**
comp=Z,19nm,1.4s,mb4.9
WRAB Tennant Creek 66.41 136 *e*P **P 18 07 09.0 0.0**
WRAB pmax pmax
comp=Z,30nm,1.3s,mb5.2
WRAB Tennant Creek 66.41 136 *e*P **P 18 07 09.0 0.0**
comp=Z,30nm,1.3s,mb5.2
WRA Warramunga Arr 66.41 136 P **P 18 07 09.6 +0.6**
comp=Z,12nm,1.1s,mb4.9,baz=333,slow=6.3,SNR=22
WRA Warramunga Arr 66.41 136 P **P 18 07 09.6 +0.6**
WRA pmax pmax
comp=Z,12nm,1.1s
SCO Scoresbysund 66.61 340⇓*i*P **P 18 07 10.3 +0.6**
SCO pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
SCO Scoresbysund 66.61 340⇓*i*P **P 18 07 10.3 +0.6**
comp=Z,8.8nm,0.8s,mb4.8
LASF Ste Croix 66.70 308 *e*P **P 18 07 10.3 -0.5**
comp=Z,102nm,1.5s,mb5.3
TCF Toulx Ste Croi 66.87 311 *e*P **P 18 07 11.2 -0.5**
comp=Z,100nm,1.4s,mb5.3
TCF Toulx Ste Croi 66.87 311 *e*P **P 18 07 11.2 -0.5**
TCF pmax pmax
comp=Z,50nm,1.4s,mb5.3
TCF Toulx Ste Croi 66.87 311 *e*P **P 18 07 11.2 -0.5**
comp=Z,50nm,1.4s,mb5.3
OPO Ambohidratompo 66.92 227 P **P 18 07 11.9 -0.5**
comp=Z,2.0nm,0.7s,mb4.3,baz=83,slow=16,SNR=4.0
LDF La Druitiere 67.36 314 *e*P **P 18 07 13.8 -1.0**
comp=Z,40nm,1.2s,mb5.0
LDF La Druitiere 67.36 314 *e*P **P 18 07 13.8 -1.0**
LDF pmax pmax
comp=Z,20nm,1.2s,mb5.0
LDF La Druitiere 67.36 314 *e*P **P 18 07 13.8 -1.0**
comp=Z,20nm,1.2s,mb5.0
FLN La Foliniere 67.50 314 *e*P **P 18 07 14.6 -1.1**
comp=Z,74nm,1.5s,mb5.2
FLN *e*MLR MLR
comp=Z,582nm,19.8s,MS4.5
FLN La Foliniere 67.50 314 *e*P **P 18 07 14.6 -1.1**
FLN pmax pmax
comp=Z,37nm,1.5s,mb5.2
FLN MLR MLR
comp=Z,580nm,19.8s,MS4.8
FLN La Foliniere 67.50 314 *e*P **P 18 07 14.6 -1.1**
comp=Z,37nm,1.5s,mb5.2
FLN LR LR
comp=Z,580nm,19.8s,MS4.8
CAF Calviac 67.52 310 *e*P **P 18 07 15.7 -0.2**
comp=Z,48nm,1.3s,mb5.1
CAF Calviac 67.52 310 *e*P **P 18 07 15.7 -0.2**
CAF pmax pmax
comp=Z,24nm,1.3s,mb5.1
CAF Calviac 67.52 310 *e*P **P 18 07 15.7 -0.2**
comp=Z,24nm,1.3s,mb5.1
RJF Les Rejaudoux 67.72 310 *e*P **P 18 07 17.1 -0.1**
comp=Z,75nm,1.4s,mb5.2
RJF *e*MLR MLR
comp=Z,262nm,20.8s,MS4.1
RJF Les Rejaudoux 67.72 310 *e*P **P 18 07 17.1 -0.1**
RJF pmax pmax
comp=Z,37nm,1.4s,mb5.2
RJF MLR MLR
comp=Z,260nm,20.8s,MS4.4
RJF Les Rejaudoux 67.72 310 *e*P **P 18 07 17.1 -0.1**
comp=Z,38nm,1.4s,mb5.2
RJF LR LR
comp=Z,260nm,20.8s,MS4.4
GRR Gorron 67.89 314 *e*P **P 18 07 17.1 -1.1**
comp=Z,24nm,1.0s,mb4.9
GRR Gorron 67.89 314 *e*P **P 18 07 17.1 -1.1**
GRR pmax pmax
comp=Z,12nm,1.0s,mb4.9
GRR Gorron 67.89 314 *e*P **P 18 07 17.1 -1.1**
comp=Z,12nm,1.0s,mb4.9
MTLF Montolieu 68.09 308 *e*P **P 18 07 19.0 -0.5**
comp=Z,38nm,1.3s,mb5.0
MTLF Montolieu 68.09 308 *e*P **P 18 07 19.0 -0.5**
MTLF pmax pmax
comp=Z,19nm,1.3s,mb5.0
MTLF Montolieu 68.09 308 *e*P **P 18 07 19.0 -0.5**
comp=Z,19nm,1.3s,mb5.0
MFF Saint Martin d 68.22 312 *e*P **P 18 07 19.3 -1.0**
comp=Z,112nm,1.8s,mb5.3
MFF Saint Martin d 68.22 312 *e*P **P 18 07 19.3 -1.0**
MFF pmax pmax
comp=Z,56nm,1.8s,mb5.3
MFF Saint Martin d 68.22 312 *e*P **P 18 07 19.3 -1.0**
comp=Z,56nm,1.8s,mb5.3
LFF La Frestale 68.37 310 *e*P **P 18 07 21.0 -0.3**
comp=Z,79nm,1.4s,mb5.2
LFF La Frestale 68.37 310 *e*P **P 18 07 21.0 -0.3**
LFF pmax pmax
comp=Z,39nm,1.4s,mb5.2
LFF La Frestale 68.37 310 *e*P **P 18 07 21.0 -0.3**
comp=Z,40nm,1.4s,mb5.2
SGMF Saint Gilles 68.97 314 *e*P **P 18 07 24.3 -0.6**

comp=Z,44nm,1.2s,mb5.0
SGMF Saint Gilles 68.97 314 *e*P **P 18 07 24.3 -0.6**
SGMF pmax pmax
comp=Z,22nm,1.2s,mb5.0
SGMF Saint Gilles 68.97 314 *e*P **P 18 07 24.3 -0.6**
comp=Z,22nm,1.2s,mb5.0
ASAR Alice Springs 69.11 139 P **P 18 07 26.8 +0.8**
comp=Z,8.0nm,0.5s,mb4.9,baz=327,slow=6.4,SNR=100
ASAR Alice Springs 69.11 139 P **P 18 07 26.8 +0.8**
ASAR pmax pmax
comp=Z,8.0nm,0.5s
SUMG Summit 69.28 346 *e*P **P 18 07 26.4 0.0**
comp=Z,13nm,0.9s,mb4.8
SUMG Summit 69.28 346 *i* P **P 18 07 26.0 -0.4**
comp=Z,8.5nm,0.9s,mb4.7
ROSF Rostrenen 69.36 315 *e*P **P 18 07 26.9 -0.5**
comp=Z,69nm,1.4s,mb5.1
ROSF Rostrenen 69.36 315 *e*P **P 18 07 26.9 -0.5**
ROSF pmax pmax
comp=Z,35nm,1.4s,mb5.1
ROSF Rostrenen 69.36 315 *e*P **P 18 07 26.9 -0.5**
comp=Z,34nm,1.4s,mb5.1
QUIF Quistinic 69.48 314 *e*P **P 18 07 27.4 -0.7**
comp=Z,70nm,1.4s,mb5.1
QUIF Quistinic 69.48 314 *e*P **P 18 07 27.4 -0.7**
QUIF pmax pmax
comp=Z,35nm,1.4s,mb5.1
QUIF Quistinic 69.48 314 *e*P **P 18 07 27.4 -0.7**
comp=Z,35nm,1.4s,mb5.1
COLD Coldfoot 69.60 22 *e*P **P 18 07 29.1 +0.7**
comp=Z,31nm,1.1s,mb5.2
ETSF Etsaut 70.11 309 *e*P **P 18 07 32.0 -0.1**
comp=Z,44nm,1.2s,mb5.0
ETSF Etsaut 70.11 309 *e*P **P 18 07 32.0 -0.1**
ETSF pmax pmax
comp=Z,22nm,1.2s,mb5.0
ETSF Etsaut 70.11 309 *e*P **P 18 07 32.0 -0.1**
comp=Z,22nm,1.2s,mb5.0
TTA Tatalina 70.12 27 *e*P **P 18 07 32.1 +0.3**
TTA pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
TTA Tatalina 70.12 27 *e*P **P 18 07 32.1 +0.3**
comp=Z,5.0nm,0.8s,mb4.5
CHUM Lake Minchumin 70.92 25 *e*P **P 18 07 37.8 +1.2**
comp=Z,12nm,0.9s,mb4.8
BPAW Bear Paw Mtn. 71.26 24 *e*P **P 18 07 38.9 +0.2**
comp=Z,22nm,1.2s,mb5.0
MTSU Mount Surprise 71.29 127 *e*P **P 18 07 40.6 +1.1**
comp=Z,21nm,0.8s,mb5.1
SVW2 Sparrevohn 71.33 28 *e*P **P 18 07 39.8 +0.6**
PPLA Purkeypile 71.57 26 *e*P **P 18 07 41.3 +0.8**
comp=Z,127nm,1.4s,mb5.7
KTH Kantishna Hill 71.62 25 *e*P **P 18 07 41.5 +0.7**
comp=Z,52nm,1.4s,mb5.3
COLA College 71.83 23 *e*P **P 18 07 42.2 +0.1**
COLA pmax pmax
comp=Z,37nm,1.0s,mb5.3
COLA College 71.83 23 *e*P **P 18 07 42.2 +0.1**
comp=Z,37nm,1.0s,mb5.3
RES Resolute Bay 72.39 2 P **P 18 07 44.8 -0.6**
comp=Z,7.3nm,1.1s,mb4.5,baz=6.5,slow=7.4,SNR=6.3
RES Resolute Bay 72.39 2 P **P 18 07 44.8 -0.6**
RES pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
RSO Redoubt South 72.83 28 *e*P **P 18 07 47.1 -1.1**
INK Inuvik 73.37 16 P **P 18 07 51.1 -0.1**
comp=Z,13nm,0.9s,mb4.9,baz=327,slow=6.5,SNR=30
INK Inuvik 73.37 16 P **P 18 07 51.1 -0.1**
INK pmax pmax
comp=Z,13nm,0.9s
PMR Palmer 73.50 26 *e*P **P 18 07 52.2 +0.1**
PMR *e* 18 08 05.0
PMR pmax pmax
comp=Z,72nm,1.3s,mb5.4
PMR Palmer 73.50 26 *e*P **P 18 07 52.2 0.0**
PMR *e*PcP PcP 18 08 05.0 -3.1
RC01 Rabbit Creek A 73.60 27 *e*P **P 18 07 52.4 -0.3**
comp=Z,42nm,1.0s,mb5.3
PAX Paxson 73.88 24 *e*P **P 18 07 53.9 -0.4**
PAX pmax pmax
comp=Z,11nm,1.0s,mb4.7
PAX Paxson 73.88 24 *e*P **P 18 07 53.9 -0.4**
comp=Z,11nm,1.0s,mb4.7
ESDC Sonseca Array 73.90 307 P **P 18 07 54.7 -0.2**
comp=Z,4.8nm,0.9s,mb4.4,baz=51,slow=6.4,SNR=20
ESDC LR LR 18 45 43.2
comp=Z,230nm,18.6s,MS4.5,baz=15,slow=40
ESDC Sonseca Array 73.90 307 P **P 18 07 54.7 -0.2**
ESDC LR LR 18 45 43.2
CTA Charters Tower 73.96 128 LR LR 18 41 31.3
comp=Z,132nm,18.8s,MS4.2,baz=84,slow=37
EGAK Eagle 73.99 21 *e*P **P 18 07 54.9 0.0**
comp=Z,22nm,1.0s,mb5.0
KDAK Kodiak Island 74.54 30 P **P 18 07 58.6 +0.3**
comp=Z,265nm,0.7s,mb6.3,SNR=7.4
KDAK Kodiak Island 74.54 30 P **P 18 07 58.7 +0.4**
comp=Z,32nm,0.8s,mb5.3,baz=346,slow=3.0,SNR=30
KDAK Kodiak Island 74.54 30 P **P 18 07 58.7 +0.4**
KDAK pmax pmax
comp=Z,32nm,0.8s,mb5.3
OHAK Old Harbor 74.59 31 *e*P **P 18 07 58.1 -0.4**
comp=Z,39nm,1.0s,mb5.3
DAWY Dawson 75.04 21 *e*P **P 18 08 01.2 +0.2**
MVO Moncorvo 75.17 310 *e*P **P 18 08 02.8 +0.6**
comp=Z,30nm,1.0s,mb5.2
TAM Tamanrasset 75.18 288 *e*P **P 18 08 02.8 +0.2**
TAM pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
TAM Tamanrasset 75.18 288 *e*P **P 18 08 02.8 +0.2**
comp=Z,8.2nm,1.2s,mb4.5
BMRM Bremner River 75.55 25 *e*P **P 18 08 05.0 +1.0**
comp=Z,45nm,1.0s,mb5.3
PVRL Vila Real 75.55 310 *e*P **P 18 08 04.9 +0.5**
comp=Z,19nm,0.9s,mb5.0
MTE Manteigas 75.90 309 *e*P **P 18 08 15.7 +9.3**
comp=Z,25nm,1.3s,mb5.0
PCBR Castelo Branco 76.15 309 *e*P **P 18 08 08.4 +0.6**
comp=Z,37nm,1.8s,mb5.0
SFJD Kangerlussuaq 76.27 346 *i* P **P 18 08 06.9 -1.2**
SFJD pmax pmax
comp=Z,19nm,1.1s,mb4.9
SFJD Kangerlussuaq 76.27 346 *i* P **P 18 08 06.9 -1.2**
comp=Z,19nm,1.1s,mb4.9
SFJD *i* 18 09 48.8
PBAR Barrancos 76.73 307 *e*P **P 18 08 11.4 +0.2**
comp=Z,36nm,1.4s,mb5.1
PESTR Estremoz 76.73 308 *e*P **P 18 08 11.7 +0.5**
comp=Z,34nm,1.7s,mb5.0
PTOM Tomar 76.88 309 *e*P **P 18 08 12.3 +0.3**
comp=Z,22nm,1.0s,mb5.0
HNR Honiara 77.08 110 LR LR 18 38 54.2
comp=Z,183nm,18.8s,MS4.4,baz=305,slow=33
EVO Evora 77.19 308 *e*P **P 18 08 13.8 0.0**
comp=Z,41nm,1.2s,mb4.9
EVO *e*MLR MLR
comp=Z,311nm,18.5s,MS4.4
BBOO Buckleboo 77.55 143 *e*P **P 18 08 15.8 +0.2**
comp=Z,7.0nm,0.8s,mb4.6
LSZ Lusaka 77.63 243 P **P 18 08 16.2 -0.2**
comp=Z,8.4nm,0.7s,mb4.8,baz=47,slow=7.4,SNR=19
LSZ Lusaka 77.63 243 P **P 18 08 16.2 -0.3**
LSZ pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
PBDV Barranco-do-Ve 77.82 306 *e*P **P 18 08 18.0 +0.7**
comp=Z,81nm,1.6s,mb5.4
PNL Peninsula 78.29 24 *e*P **P 18 08 20.6 +1.1**
comp=Z,19nm,0.8s,mb5.1
STKA Stephens Creek 79.74 139 *e*P **P 18 08 27.9 +0.2**
comp=Z,5.2nm,0.8s,mb4.5
STKA Stephens Creek 79.74 139 P **P 18 08 27.6 -0.1**
comp=Z,5.9nm,0.7s,mb4.6,baz=320,slow=5.5,SNR=13
STKA LR LR 18 43 52.1
comp=Z,264nm,19.8s,MS4.6,baz=164,slow=36
SKAG Skagway 79.80 22 *e*P **P 18 08 29.2 +1.5**
comp=Z,53nm,1.0s,mb5.4
RMQ Roma 80.08 131 *e*P **P 18 08 31.6 +1.9**
comp=Z,29nm,1.3s,mb5.0
CMSA Cobar Meteorol 81.81 136 *e*P **P 18 08 39.7 +0.9**
DLBC Dease Lake 82.26 21 P **P 18 08 41.8 +0.9**
comp=Z,14nm,1.0s,mb4.9,baz=343,slow=5.5,SNR=18
DLBC LR LR 18 50 38.5
comp=Z,192nm,19.1s,MS4.5,baz=303,slow=40
YKA Yellowknife Ar 82.35 12 P **P 18 08 40.9 -0.3**
comp=Z,10nm,0.9s,mb4.8,baz=334,slow=5.0,SNR=39
YKA LR LR 18 46 10.4
comp=Z,19nm,21.9s,MS3.4,baz=225,slow=36
YKA Yellowknife Ar 82.35 12 P **P 18 08 40.9 -0.4**
YKA pmax pmax
comp=Z,10.0nm,0.9s
YKA MLR MLR
comp=Z,19nm,21.9s
YKA Yellowknife Ar 82.35 12 P **P 18 08 40.9 -0.3**
YKA LR LR 18 46 10.4
TOA0 Torodi Ar. Sit 83.26 281 *e*P **P 18 08 44.4 -2.5**
TORD Torodi Ar. Bea 83.26 281 P **P 18 08 46.6 -0.3**
comp=Z,7.9nm,0.9s,mb4.8,baz=48,slow=4.4,SNR=38
TORD PP PP 18 11 56.8 -1.5
comp=Z,1.0nm,0.9s,baz=59,slow=8.1,SNR=4.0
TORD LR LR 18 50 25.4
comp=Z,218nm,18.6s,MS4.6,baz=80,slow=39
LBTB Lobatse 85.68 237 P **P 18 08 58.8 0.0**
comp=Z,20nm,0.8s,mb5.4,baz=83,slow=4.3,SNR=21
LBTB Lobatse 85.68 237 P **P 18 08 58.8 0.0**
LBTB pmax pmax
comp=Z,20nm,0.8s,mb5.4
BOSA Boshof 88.19 234 P **P 18 09 11.1 +0.1**
comp=Z,3.6nm,0.9s,mb4.6,baz=348,slow=6.2,SNR=3.1
BOSA Boshof 88.19 234 P **P 18 09 11.1 +0.2**
BOSA pmax pmax
comp=Z,4.0nm,0.9s,mb4.7
SCHQ Schefferville 90.57 348 P **P 18 09 21.1 -0.6**
comp=Z,7.2nm,0.9s,mb5.0,baz=65,slow=5.1,SNR=6.1
SCHQ LR LR 18 53 08.3
comp=Z,389nm,18.6s,MS4.9,baz=64,slow=38
SCHQ Schefferville 90.57 348 P **P 18 09 21.1 -0.6**
SCHQ LR LR 18 53 08.3
EDM Edmonton 91.24 15 *e*P **P 18 09 23.8 -1.1**
FFC Flin Flon 91.70 8 P **P 18 09 26.7 -0.3**
comp=Z,131nm,0.9s,mb6.3,SNR=8.6
FFC Flin Flon 91.70 8 *e*P **P 18 09 26.5 -0.5**
comp=Z,37nm,1.3s,mb5.6
DBIC Dimbokro 92.18 279 P **P 18 09 29.4 -0.5**
comp=Z,5.7nm,1.0s,mb4.9,baz=43,slow=8.6,SNR=3.7
DBIC LR LR 18 52 45.4
comp=Z,198nm,19.8s,MS4.6,baz=42,slow=37
DBIC Dimbokro 92.18 279 P **P 18 09 29.5 -0.5**
DBIC pmax pmax
comp=Z,6.0nm,1.0s
DBIC MLR MLR
comp=Z,198nm,19.8s
ULM Lac du Bonnet 96.72 5 P **P 18 09 48.6 -1.6**
comp=Z,2.4nm,0.6s,mb4.8,baz=296,slow=1.5,SNR=3.0
ULM LR LR 18 57 50.2
comp=Z,174nm,18.0s,MS4.6,baz=12,slow=38
YBH Yreka Blue Hor 98.95 26 LR LR 18 57 05.8
comp=Z,98nm,18.2s,MS4.3,baz=331,slow=37
TXAR Lajitas Array 116.14 15 PKP PKPdf 18 15 03.1 -0.3
comp=Z,0.5nm,0.8s,baz=254,slow=2.2,SNR=4.7
TXAR Lajitas Array 116.14 15 PKIKP PKPdf 18 15 03.1 -0.3
TXAR pmax pmax
comp=Z,1.0nm,0.8s
QSPA South Pole Qui 122.88 180 PKP PKPdf 18 15 14.8 +0.1
comp=Z,6.3nm,0.8s,baz=276,slow=2.1,SNR=23
QSPA South Pole Qui 122.88 180 PKP PKPdf 18 15 14.8 +0.1
OTAV Otavalo 145.66 343 *e*P PKPdf 18 15 59.7 +0.7
SIV San Ignacio 150.36 299 PKP PKPdf 18 16 06.3 -0.2
comp=Z,9.6nm,1.0s,baz=213,slow=8.0,SNR=4.0
SIV PKPbc PKPbc 18 16 11.6 -0.1
comp=Z,7.5nm,0.9s,baz=75,slow=3.5,SNR=27
CPUP Villa Florida 152.66 276 PKPbc PKPbc 18 16 16.1 -0.7
comp=Z,1.5nm,0.7s,baz=139,slow=3.0,SNR=4.4
LPAZ La Paz 155.51 308 PKPab PKPab 18 16 39.8 0.0
comp=Z,1.4nm,0.7s,baz=12,slow=12,SNR=7.2
LPAZ La Paz 155.51 308 PKP2 PKPab 18 16 39.8 +0.1
LPAZ pmax pmax
comp=Z,1.0nm,0.7s

IDC 08 18:07:18.1±3.2, 34°.60S×179°.20W, h0km, mb4.0/3, mb1 4.2/4, mb1mx3.9/17, mbtmp4.0/4, ML3.6/1, Error ellipse: s-maj=72.1km s-min=46.1km az=125.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**4.71**	**218**	Pn	Pn	18 08 29.5	-0.8
	2.7nm,0.3s,baz=31,slow=7.6,SNR=44						
URZ				Sn	Sn	18 09 20.9	-4.8
	2.3nm,0.3s,baz=225,slow=20,SNR=3.7						
ASAR	**Alice Springs**	**42.06**	**272**	P	P	18 15 11.8	+0.2
	1.4nm,0.7s,baz=114,slow=7.8,SNR=27						
WRA	**Warramunga Arr**	**43.43**	**277**	P	P	18 15 22.9	+0.1
	1.8nm,0.7s,baz=117,slow=7.8,SNR=18						
FITZ	**Fitzroy Crossi**	**51.48**	**274**	P	P	18 16 25.2	-0.3
	2.6nm,1.0s,baz=131,slow=15,SNR=2.9						
FINES	**FINESS Array B**	**148.66**	**337**	PKPbc	PKPbc	18 27 05.7	-0.6
	1.2nm,0.8s,baz=29,slow=4.4,SNR=4.3						

*IDC **08** 18:07:32.4±1.6, 31°.03N×103°.35E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.3/25, mbtmp3.4/4, Error ellipse: s-maj=49.1km s-min=25.9km az=43.0*
*ISCJB **08** 18:07:33.9±1.6, 31°.07N±0°.07×103°.3E±0°.1, h24km±12km, mb3.3/4, Error ellipse: s-maj=17.8km s-min=9.0km az=155.2*
ISC 08 18:07:34.0±1.8, 31°.11N±0°.06×103°.26E±0°.09, h9km±13km, n7, σ0°98/10, mb3.3/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.47**	**115**	Pg	**Pg**	**18 07 42.5**	**-0.7**
CD2				Sg	**Sg**	**18 07 49.7**	**+0.2**
CD2				smax			
	comp=N,3μm,0.6s						
LZH	**Lanzhou**	**4.99**	**5**	*e*Pg	**Pb**	**18 09 01.0**	**-0.4**
LZH				Sg	**Sb**	**18 10 00.3**	**-1.1**
LZH				smax			
	comp=N,60nm,0.8s						
LZH				smax			
	comp=E,91nm,0.6s						
XAN	**Xi'an**	**5.60**	**57**	Pg	**Pb**	**18 09 14.4**	**+2.5**
XAN				Sg	**Sb**	**18 10 19.4**	**+0.3**
XAN				smax			
	comp=N,26nm,0.9s						
XAN				smax			
	comp=E,14nm,1.0s						
KSRS	**Korea Array**	**21.31**	**66**	P	**P**	**18 12 20.1**	**-0.9**
	comp=E,1.3nm,0.7s,mb3.4,baz=261,slow=10,SNR=8.1						
MKAR	**Makanchi Array**	**22.50**	**320**	P	**P**	**18 12 34.3**	**+0.7**
	comp=E,0.4nm,0.7s,mb3.0,baz=112,slow=11,SNR=4.9						
KURK	**Kurchatov**	**26.81**	**324**	P	**P**	**18 13 15.3**	**+1.0**
	comp=E,0.5nm,0.7s,mb3.2,baz=128,slow=9.4,SNR=3.6						
WRA	**Warramunga Arr**	**58.89**	**145**	P	**P**	**18 17 32.4**	**-0.9**
	comp=E,0.4nm,0.6s,mb3.6,baz=338,slow=7.6,SNR=5.0						

DJA 08 18:09:10, 1°.88N×99°.08E, h10km, MLv3.7/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRSI	**Tarutung**	**0.19**	**320**	P	Pg	18 09 13.2	-0.8
MNSI	**Mandailing Nat**	**1.19**	**155**	P	Pb	18 09 30.0	-2.6
MNSI				S	Sb	18 09 45.2	-2.9
GSI	**Gunungsitoli**	**1.61**	**249**	P	Pn	18 09 39.0	+0.5
GSI				S	Sn	18 10 00.3	+1.0
BKNI	**Bangkinang**	**2.49**	**128**	P	Pn	18 09 52.6	+1.9
PPI	**Padang Panjang**	**2.67**	**150**	P	Pn	18 09 57.4	+4.3
IPM	**Ipoh**	**3.23**	**37**	P	Pn	18 10 01.4	+0.6

*ISCJB **08** 18:09:25.8±0.6, 33°.27N±0°.07×91°.9E±0°.2, h10km, mb3.5/6, Error ellipse: s-maj=19.6km s-min=9.6km az=163.9*
*IDC **08** 18:09:26.0±0.9, 33°.13N×91°.70E, h0km, mb3.6/6, mb1 3.6/9, mb1mx3.4/27, mbtmp3.5/9, ML3.0/2, Error ellipse: s-maj=37.8km s-min=18.3km az=55.0*
*NEIC **08** 18:09:27.5±0.6, 33°.23N×91°.85E, h10km, mb3.2/1, Error ellipse: s-maj=20.3km s-min=9.7km az=74.0*
ISC 08 18:09:27.5±0.6, 33°.27N±0°.07×91°.8E±0°.2, h10km, n14, σ1°25/15, mb3.5/6, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.60**	**189**	*e*Pn	**Pn**	**18 10 24.9**	**+1.5**
LSA				*e*S	**Sn**	**18 11 14.5**	**+8.5**
MK31	**Makanchi Array**	**15.34**	**335**	*e*Pn	**Pn**	**18 13 03.6**	**-0.3**
MKAR	**Makanchi Array**	**15.34**	**335**	Pn	**Pn**	**18 13 00.6**	**-3.3**
	0.0nm,0.3s,baz=129,slow=13,SNR=3.1						
CHTO	**Chiang Mai**	**15.75**	**154**	*e*Pn	**Pn**	**18 13 07.5**	**-1.9**
	1.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**16.07**	**155**	Pn	**Pn**	**18 13 08.7**	**-5.0**
	0.0nm,0.3s,baz=332,slow=12,SNR=8.7						
SONM	**Songino Array**	**18.24**	**33**	P	**Pn**	**18 13 40.8**	**+0.2**
	baz=206,slow=13,SNR=3.4						
KURK	**Kurchatov**	**19.95**	**335**	P	**Pn**	**18 14 00.2**	**-1.0**
	0.0nm,0.3s,baz=145,slow=11,SNR=5.3						
KURK	**Kurchatov**	**19.95**	**335**	P	**Pn**	**18 14 00.2**	**-1.0**
ZALV	**Zalesovo Beam**	**21.26**	**349**	P	**P**	**18 14 15.5**	**+1.8**
	0.7nm,0.6s,mb3.2,baz=177,slow=7.4,SNR=5.3						
BVAR	**Borovoye Array**	**25.01**	**329**	P	**P**	**18 14 53.4**	**+2.0**
	0.3nm,0.4s,mb3.2,baz=146,slow=14,SNR=3.4						
BRTR	**Keskin Array B**	**46.51**	**295**	P	**P**	**18 17 54.3**	**-0.7**
	0.4nm,0.8s,mb3.4,baz=89,slow=8.1,SNR=4.1						
WRA	**Warramunga Arr**	**66.68**	**136**	P	**P**	**18 20 19.0**	**+0.4**
	0.9nm,0.8s,mb3.8,baz=328,slow=6.7,SNR=4.5						
ASAR	**Alice Springs**	**69.38**	**139**	P	**P**	**18 20 35.6**	**+0.1**
	1.1nm,0.8s,mb3.8,baz=323,slow=6.5,SNR=8.9						
TORD	**Torodi Ar. Bea**	**83.01**	**281**	P	**P**	**18 21 52.7**	**-0.7**
	0.3nm,0.6s,mb3.5,baz=48,slow=4.2,SNR=3.0						

*ATH **08** 18:12:38.9, 37°.97N×21°.52E, h17km±1km, ML3.3*
*NEIC **08** 18:12:38.9, 37°.97N×21°.52E, h17km, ML3.3(ATH), After ATH.*
*ISCJB **08** 18:12:38.3±0.5, 37°.95N±0°.02×21°.50E±0°.03, h4km±3km, Error ellipse: s-maj=3.4km s-min=3.0km az=170.9*
*THE **08** 18:12:39.1, 37°.96N×21°.52E, h0km±1km, ML3.7/12, Error ellipse: s-maj=1.6km s-min=0.6km az=222.0*
*CSEM **08** 18:12:39.1±0.2, 37°.94N×21°.53E, h10km, ML3.3, Error ellipse: s-maj=5.0km s-min=3.9km az=66.0*
ISC 08 18:12:39.0±0.4, 37°.93N±0°.02×21°.51E±0°.03, h8km±3km, n91, σ1°16/138, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.13**	**345**	*e*Pb	**Pg**	**18 12 42.7**	**+0.8**
RLS				*e*Sb	**Sg**	**18 12 45.1**	**+1.3**
RLS	**Riolos of Patr**	**0.13**	**345**	*e*PB	**Pg**	**18 12 42.7**	**+0.8**
RLS				*e*SB	**Sg**	**18 12 45.1**	**+1.3**
RLS	**Riolos of Patr**	**0.13**	**345**	*e*Pb	**Pg**	**18 12 42.7**	**+0.8**
RLS				*e*Sb	**Sg**	**18 12 45.1**	**+1.3**
UPR	**University Cam**	**0.41**	**32**	P	**Pg**	**18 12 47.1**	**0.0**
UPR				S	**Sg**	**18 12 52.1**	**-0.4**
UPR	**University Cam**	**0.41**	**32**	*e*PB	**Pg**	**18 12 47.1**	**0.0**
UPR				*e*SB	**Sg**	**18 12 53.2**	**+0.7**
UPR	**University Cam**	**0.41**	**32**	P	**Pg**	**18 12 47.1**	**0.0**
UPR				S	**Sg**	**18 12 52.1**	**-0.4**
UPR				*e*Sb	**Sg**	**18 12 53.2**	**+0.7**
LAKA	**Lakka**	**0.48**	**50**	P	**Pg**	**18 12 47.9**	**-0.5**
LAKA				S	**Sg**	**18 12 54.2**	**-0.5**
LAKA	**Lakka**	**0.48**	**50**	P	**Pg**	**18 12 47.9**	**-0.5**
LAKA				S	**Sg**	**18 12 54.2**	**-0.5**
EFP	**Efpalio**	**0.58**	**32**	P	**Pg**	**18 12 49.6**	**-0.7**
EFP				S	**Sg**	**18 12 57.7**	**-0.3**
EFP	**Efpalio**	**0.58**	**32**	*e*PN	**Pg**	**18 12 49.6**	**-0.7**
EFP				*e*SN	**Sg**	**18 12 58.0**	**0.0**
EFP	**Efpalio**	**0.58**	**32**	P	**Pg**	**18 12 49.6**	**-0.7**
EFP				S	**Sg**	**18 12 57.7**	**-0.3**
KFL	**Anninata**	**0.59**	**287**	P	**Pg**	**18 12 50.7**	**+0.2**
TRIZ	**Trizonia**	**0.62**	**46**	P	**Pg**	**18 12 50.2**	**-0.8**
TRIZ				S	**Sg**	**18 12 59.0**	**-0.1**
TRIZ	**Trizonia**	**0.62**	**46**	P	**Pg**	**18 12 50.2**	**-0.8**
TRIZ				S	**Sg**	**18 12 59.0**	**-0.1**
GUR	**Goura**	**0.66**	**89**	P	**Pg**	**18 12 51.2**	**-0.6**
GUR				S	**Sg**	**18 13 00.8**	**+0.4**
GUR	**Goura**	**0.66**	**89**	*e*PB	**Pg**	**18 12 51.2**	**-0.6**
GUR				*e*SN	**Sg**	**18 13 00.9**	**+0.5**
GUR	**Goura**	**0.66**	**89**	P	**Pg**	**18 12 51.2**	**-0.6**
GUR				S	**Sg**	**18 13 00.8**	**+0.4**
KALE	**Kalithea**	**0.68**	**47**	P	**Pg**	**18 12 51.5**	**-0.6**
KALE				S	**Sg**	**18 13 00.9**	**0.0**
KALE	**Kalithea**	**0.68**	**47**	P	**Pg**	**18 12 51.5**	**-0.6**
KALE				S	**Sg**	**18 13 00.9**	**0.0**
VLS	**Valsamata**	**0.76**	**289**	*e*Pb	**Pb**	**18 12 53.0**	**-1.6**
VLS				*e*Sn	**Sg**	**18 13 05.3**	**+1.6**
VLS	**Valsamata**	**0.76**	**289**	P	**Pg**	**18 12 52.9**	**-0.8**
VLS				S	**Sg**	**18 13 05.6**	**+1.9**
VLS	**Valsamata**	**0.76**	**289**	*e*PB	**Pb**	**18 12 53.0**	**-1.6**
VLS				*e*SN	**Sg**	**18 13 05.3**	**+1.6**
VLS	**Valsamata**	**0.76**	**289**	*e*Pb	**Pb**	**18 12 53.0**	**-1.6**
VLS				*e*Sn	**Sg**	**18 13 05.3**	**+1.6**
VLS				S	**Sg**	**18 13 05.6**	**+1.9**
ITM	**Ithomi**	**0.82**	**156**	*e*Pn	**Pn**	**18 12 55.2**	**-1.7**
ITM				*e*Sn	**Sn**	**18 13 07.4**	**-1.8**
ITM	**Ithomi**	**0.82**	**156**	P	**Pg**	**18 12 55.1**	**+0.2**
ITM				S	**Sg**	**18 13 06.6**	**+1.1**
ITM	**Ithomi**	**0.82**	**156**	*e*PN	**Pn**	**18 12 55.2**	**-1.7**
ITM				*e*SN	**Sn**	**18 13 07.4**	**-1.8**
ITM	**Ithomi**	**0.82**	**156**	P	**Pg**	**18 12 55.1**	**+0.2**
ITM				S	**Sg**	**18 13 06.6**	**+1.1**
ITM				*e*Sn	**Sn**	**18 13 07.4**	**-1.8**
VLX	**Vlachokerasia**	**0.89**	**129**	P	**Pg**	**18 12 56.1**	**-0.1**
VLX				S	**Sg**	**18 13 09.3**	**+1.6**
VLX	**Vlachokerasia**	**0.89**	**129**	*e*PB	**Pb**	**18 12 55.8**	**-0.9**
VLX	**Vlachokerasia**	**0.89**	**129**	*e*Pb	**Pb**	**18 12 55.8**	**-0.9**
VLX	**Vlachokerasia**	**0.89**	**129**	P	**Pg**	**18 12 56.1**	**-0.1**
VLX				S	**Sg**	**18 13 09.3**	**+1.6**
DSF	**Desfina**	**0.94**	**59**	P	**Pg**	**18 12 55.6**	**-1.4**
DSF				S	**Sg**	**18 13 09.0**	**-0.1**
DSF	**Desfina**	**0.94**	**59**	P	**Pg**	**18 12 55.6**	**-1.4**
DSF				S	**Sg**	**18 13 09.0**	**-0.1**
EVR	**Evrytania**	**1.01**	**13**	*e*Pn	**Pn**	**18 12 57.4**	**-2.1**
EVR	**Evrytania**	**1.01**	**13**	*e*PN	**Pn**	**18 12 57.4**	**-2.1**
EVR	**Evrytania**	**1.01**	**13**	*e*Pn	**Pn**	**18 12 57.4**	**-2.1**
PYL	**PYLOS**	**1.05**	**170**	P	**Pg**	**18 12 59.6**	**+0.4**
PYL				S	**Sg**	**18 13 15.0**	**+2.1**
PYL	**PYLOS**	**1.05**	**170**	*e*PN	**Pn**	**18 12 59.8**	**-0.3**
PYL	**PYLOS**	**1.05**	**170**	*e*Pn	**Pn**	**18 12 59.8**	**-0.3**
PYL				S	**Sg**	**18 13 15.0**	**+2.1**
LKD2	**Lefkada island**	**1.08**	**322**	P	**Pg**	**18 12 58.4**	**-1.5**
LKD2				S	**Sg**	**18 13 14.2**	**+0.3**
LKD2	**Lefkada island**	**1.08**	**322**	P	**Pg**	**18 12 58.4**	**-1.5**
LKD2				S	**Sg**	**18 13 14.2**	**+0.3**
LTK	**Loutraki**	**1.16**	**85**	P	**Pg**	**18 13 00.4**	**-0.8**
LTK	**Loutraki**	**1.16**	**85**	*e*PN	**Pn**	**18 13 00.3**	**-1.2**
LTK	**Loutraki**	**1.16**	**85**	P	**Pg**	**18 13 00.4**	**-0.8**
AGG	**Agios Georgios**	**1.27**	**30**	*e*Pn	**Pn**	**18 13 01.9**	**-1.1**
AGG	**Agios Georgios**	**1.27**	**30**	P	**Pn**	**18 13 01.9**	**-1.1**
AGG				S	**Sb**	**18 13 20.2**	**+0.7**
AGG	**Agios Georgios**	**1.27**	**30**	*e*PN	**Pn**	**18 13 01.9**	**-1.1**
AGG	**Agios Georgios**	**1.27**	**30**	P	**Pn**	**18 13 01.9**	**-1.1**
AGG				S	**Sb**	**18 13 20.2**	**+0.7**
LKR	**Lokris**	**1.38**	**58**	*e*Pn	**Pn**	**18 13 03.5**	**-1.0**
LKR	**Lokris**	**1.38**	**58**	P	**Pn**	**18 13 03.5**	**-1.0**
LKR	**Lokris**	**1.38**	**58**	*e*PN	**Pn**	**18 13 03.5**	**-1.0**
LKR	**Lokris**	**1.38**	**58**	P	**Pn**	**18 13 03.5**	**-1.0**
ATAL	**Atalanti**	**1.41**	**57**	P	**Pn**	**18 13 04.4**	**-0.6**
ATAL				S	**Sb**	**18 13 25.4**	**+1.6**
ATAL	**Atalanti**	**1.41**	**57**	P	**Pn**	**18 13 04.4**	**-0.6**
ATAL				S	**Sb**	**18 13 25.4**	**+1.6**
NAIG	**Nisos Aigina**	**1.58**	**96**	*e*Pn	**Pn**	**18 13 07.6**	**+0.3**
NAIG	**Nisos Aigina**	**1.58**	**96**	*e*PN	**Pn**	**18 13 07.6**	**+0.3**
NAIG	**Nisos Aigina**	**1.58**	**96**	*e*Pn	**Pn**	**18 13 07.6**	**+0.3**
VLI	**Veliai**	**1.66**	**136**	*e*Pn	**Pn**	**18 13 10.8**	**+2.3**
VLI	**Veliai**	**1.66**	**136**	*e*PN	**Pn**	**18 13 10.8**	**+2.3**
THL	**Klokotos Trika**

LIT	**Litokhoron**	**2.30**	**19**	*e*Pn	**Pn**	**18 13 19.2**	**+2.0**
LIT				S	**Sn**	**18 13 46.9**	**+1.3**
FNA	**Florina**	**2.85**	**358**	P	**Pn**	**18 13 25.5**	**+0.7**
FNA	**Florina**	**2.85**	**358**	P	**Pn**	**18 13 25.5**	**+0.7**
MMB	**Musomiste**	**4.03**	**24**	*i* P	**Pn**	**18 13 41.8**	**+0.8**
MMB	**Musomiste**	**4.03**	**24**	*i* P	**Pn**	**18 13 41.8**	**+0.8**
RZN	**Rozhen**	**4.49**	**32**	*i* P	**Pn**	**18 13 48.6**	**+1.3**
RZN	**Rozhen**	**4.49**	**32**	*i* P	**Pn**	**18 13 48.6**	**+1.3**
KDZ	**Kurdzhali**	**4.78**	**38**	*i* P	**Pn**	**18 13 50.2**	**-1.1**
KDZ	**Kurdzhali**	**4.78**	**38**	*i* P	**Pn**	**18 13 50.2**	**-1.1**
VTS	**Vitosha**	**4.83**	**15**	*i* P	**Pn**	**18 13 54.2**	**+2.2**
VTS	**Vitosha**	**4.83**	**15**	*i* P	**Pn**	**18 13 54.2**	**+2.2**

SZGRF ***08*** *18:24:37.8, 31.°52N×86.°72E, h33km, mb5.0, Xizang*
IDC ***08*** *18:24:41.5±0.4, 32.°24N×85.°26E, h0km, mb4.5/26, mb1 4.6/30, mb1mx4.6/32, mbtmp4.5/30, ML3.8/4, MS4.1/33, Ms1 4.1/33, ms1mx4.0/43, Error ellipse: s-maj=14.7km s-min=10.0km az=40.0*
LDG ***08*** *18:24:41.4±0.1, 32.°45N×84.°99E, h10km, Mb5.0/24, Ms4.0/8, Error ellipse: s-maj=5.9km s-min=4.0km az=94.0*
ISCJB ***08*** *18:24:41.9±0.1, 32.°38N±0.°02×85.°31E±0.°02, h10km, mb4.8/143, MS4.2/66, Error ellipse: s-maj=3.3km s-min=2.5km az=21.9*
BJI ***08*** *18:24:41.8, 32.°35N×85.°24E, h10km, mB4.8/32, mb4.6/42, ML3.8/1, Ms4.7/46, Ms7 4.5/41*
NDI ***08*** *18:24:43.4±2.9, 32.°43N×85.°61E, h10km, mb5.1, mb4.9(NEIC)*
NEIC ***08*** *18:24:43.6±0.2, 32.°45N×85.°24E, h10km, mb4.9/64, MS4.4/3, Error ellipse: s-maj=6.6km s-min=4.3km az=56.0*
MOS ***08*** *18:24:45.3±1.6, 32.°33N×85.°25E, h33km, mb4.9/73, MS4.2/37, Error ellipse: s-maj=7.2km s-min=3.7km az=122.9*
DJA ***08*** *18:24:46, 32.°26N×85.°31E, h5km, mb5.1/25*
GCMT ***08*** *18:24:48.8±0.2, 32.°40N×85.°32E, h21km, MW5.1, Moment Tensor Solution. s32,c42; s75,c137; Moment tensor: Scale 10^16 Nm; Mrr=4.94±.24; Mθθ=0.34±.13; Mφφ=4.61±.15; Mrθ=1.77±.31; Mθφ=0.63±.09; Mφr=0.76±.21; Best double couple: M0=5.20000×10^16 NP1:φs=354.00000°, δ=41.00000°, λ=-114.00000°. NP2:φs=204.00000°, δ=53.00000°, λ=-70.00000°. Principal axes: T 4.8100, Plg=6.0000°, Azm=280.0000°; N 0.7000, Plg=16.0000°, Azm=12.0000°; P -5.5100, Plg=73.0000°, Azm=169.0000°; Data Used: IU II IC G CN.*

ISC 08 18:24:44.0±0.1, 32.°41N±0.°02×85.°36E±0.°02, h10km, (h11km±1.5km:pP-P), n437, σ1°36/450, mb4.8/143, MS4.2/66, 28C-12D, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUN	**Gumba**	**4.51**	**174**	*e*Pn	**Pn**	**18 25 54.9**	**+2.6**
KKN	**Kakani**	**4.61**	**181**	*e*Pn	**Pn**	**18 25 56.1**	**+2.5**
JIRN	**Jiri**	**4.79**	**171**	*e*Pn	**Pn**	**18 25 59.3**	**+3.1**
JIRN				*e*Sn	**Sn**	**18 27 01.1**	**+9.4**
	350nm,0.9s						
DMN	**Daman**	**4.79**	**183**	*e*Pn	**Pn**	**18 25 58.6**	**+2.4**
DMN				*e*Sn	**Sn**	**18 27 01.1**	**+9.3**
	589nm,1.0s						
PKIN	**Phulchoki**	**4.82**	**180**	*e*Pn	**Pn**	**18 25 59.2**	**+2.6**
PKI	**Pulchoki**	**4.82**	**179**	*e*Pn	**Pn**	**18 25 59.1**	**+2.5**
PKI				*e*Sn	**Sn**	**18 26 59.9**	**+7.3**
PKI	**Pulchoki**	**4.82**	**179**	*e*Pn	**Pn**	**18 25 59.2**	**+2.6**
PTH	**Pithoragarh**	**5.25**	**238**	*e*PKP	**Pn**	**18 26 06.0**	**+3.5**
PTH				*ex*	x	18 27 11.0	
JOSI	**Joshimath**	**5.29**	**251**	*e*PKP	**Pn**	**18 26 06.5**	**+3.5**
TAPN	**Taplejung**	**5.44**	**157**	*e*Pn	**Pn**	**18 26 07.4**	**+2.3**
TAPN				*e*Sn	**Sn**	**18 27 15.8**	**+8.0**
	692nm,1.0s						
RAMN	**Ramite**	**5.55**	**168**	*e*Pn	**Pn**	**18 26 08.1**	**+1.5**
RAMN				*e*Sn	**Sn**	**18 27 18.8**	**+8.3**
	513nm,0.8s						
LSA	**Lhasa**	**5.66**	**117**	Pn	**Pn**	**18 26 11.7**	**+3.6**
LSA				smax			
	comp=N,90nm,0.8s						
LSA				smax			
	comp=E,70nm,1.2s						
LSA	**Lhasa**	**5.66**	**117**	*e*Pn	**Pn**	**18 26 13.4**	**+5.3**
ODAN	**Odare**	**5.81**	**162**	*e*Pn	**Pn**	**18 26 11.8**	**+1.6**
KLP	**Kalpa**	**6.10**	**264**	*e*PKP	**Pn**	**18 26 16.3**	**+2.2**
SLGI	**Shiliguri**	**6.28**	**154**	*ex*	**Pn**	**18 26 18.0**	**+1.3**
DDI	**Dehra Dun**	**6.58**	**253**	*e*PKP	**Pn**	**18 26 23.0**	**+2.2**
DDI				*ex*	x	18 28 20.5	
SDNR	**Sundarnagar**	**7.18**	**265**	*e*PKP	**Pn**	**18 26 30.1**	**+1.0**
SDNR				*ex*	x	18 27 53.5	
BHK	**Bhakra**	**7.66**	**265**	*ex*	**Sn**	**18 28 01.2**	**-1.3**
KKR	**Kurukshetra**	**7.71**	**254**	*e*PKP	**Pn**	**18 26 37.1**	**+0.9**
BISR	**Bishrakh**	**7.83**	**243**	*e*PKP	**Pn**	**18 26 39.9**	**+1.9**
NDI	**New Delhi**	**7.94**	**244**	*e*PKP	**Pn**	**18 26 41.0**	**+1.5**
NDI				*e*PKP		18 26 41.0	
NDI				*ex*	x	18 28 05.0	
AYAN	**Aya Nagar**	**8.11**	**243**	*e*PKP	**Pn**	**18 26 44.8**	**+3.0**
THN	**Thein Dam**	**8.15**	**273**	*e*PKP	**Pn**	**18 26 43.0**	**+0.7**
THN				*ex*	x	18 28 20.0	
AGRA	**Agra**	**8.25**	**233**	*e*PKP	**Pn**	**18 26 44.4**	**+0.7**
SONA	**Sohna**	**8.26**	**242**	*e*PKP	**Pn**	**18 26 46.2**	**+2.3**
SHL	**Shillong**	**8.90**	**138**	*i* P	**Pn**	**18 26 53.0**	**+0.4**
SHL				*e*S	**Sn**	**18 28 25.0**	**-7.9**
KHET	**Khetri**	**9.32**	**245**	*e*PKP	**Pn**	**18 26 59.8**	**+1.4**
KSH	**Kashi**	**10.39**	**316**	*e*P	**Pn**	**18 27 16.0**	**+3.0**
KSH				pP		18 27 19.2	
KSH				sP		18 27 22.2	
KSH				PP		18 27 24.4	
KSH				S	**Sn**	**18 29 13.6**	**+4.1**
KSH				sS		18 29 18.6	
KSH				SS		18 29 27.0	
KSH				PcP	PcP	18 33 21.2	+2.1
KSH				pmax	pmax		
	comp=Z,16nm,0.8s						
KSH				pmax	pmax		
	comp=Z,62nm,3.4s						
KSH				LR	LR		
	comp=N,3μm,8.3s						
KSH				LR	LR		
	comp=E,3μm,7.0s						
KSH				LR	LR		
	comp=Z,4μm,7.3s						
AJM	**Ajmer**	**11.05**	**240**	*ex*	**Pn**	**18 27 22.0**	**0.0**
AJM				*ex*	**Sn**	**18 29 23.0**	**-2.7**
BHPL	**Bhopal**	**11.51**	**219**	*ex*	**Pn**	**18 27 26.3**	**-2.1**
BHPL				*e*S	**Sn**	**18 29 28.4**	**-8.7**
WMQ	**Urumqi**	**11.54**	**8**	*e*P	**Pn**	**18 27 32.0**	**+3.3**
WMQ				sP		18 27 38.0	
WMQ				PP		18 27 42.0	
WMQ				S	**Sn**	**18 29 42.0**	**+4.4**
WMQ				SS		18 29 56.0	
WMQ				pmax	pmax		
	comp=Z,17nm,0.8s						
WMQ				LR	LR		
	comp=N,650nm,6.0s						
WMQ				LR	LR		
	comp=E,500nm,6.0s						
WMQ				LR	LR		
	comp=Z,600nm,6.0s						
ULHL	**Ulahol**	**12.20**	**326**	P	**Pn**	**18 27 43.2**	**+5.5**
	SNR=12						
NGP	**Nagpur**	**12.54**	**208**	*e*PKP	**Pn**	**18 27 36.3**	**-6.3**
NGP				*ex*	x	18 27 37.4	
NGP				*e*S	**Sn**	**18 29 48.1**	**-14**
KZA	**Kyzart**	**12.56**	**323**	P	**Pn**	**18 27 44.2**	**+1.6**
	SNR=30						
TKM2	**Tokmak 2**	**13.02**	**326**	P	**Pn**	**18 27 50.0**	**+1.0**
	SNR=30						
TKM2	**Tokmak 2**	**13.02**	**326**	*e*P	**Pn**	**18 27 49.6**	**+0.7**
TKM2				pmax	pmax		
	comp=Z,22nm,0.9s						
TKM2	**Tokmak 2**	**13.02**	**326**	*e*P	**Pn**	**18 27 49.6**	**+0.6**
	comp=Z,22nm,0.9s						
UCH	**Uchtor**	**13.04**	**322**	P	**Pn**	**18 27 51.4**	**+2.1**
	SNR=47						
KBK	**Karagaybulak**	**13.13**	**324**	P	**Pn**	**18 27 51.8**	**+1.4**
	SNR=18						
AAK	**Ala-Archa**	**13.34**	**323**	Pn	**Pn**	**18 27 56.0**	**+2.6**
	comp=Z,0.0nm,0.3s,baz=247,slow=7.3,SNR=14						
AAK				LR	LR	18 33 53.4	
	comp=Z,1μm,18.5s,baz=124,slow=41						
AAK	**Ala-Archa**	**13.34**	**323⇓**	*e*P	**Pn**	**18 27 56.2**	**+2.8**
AAK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
AAK				MLR	MLR		
	comp=Z,492nm,22.0s						
AAK	**Ala-Archa**	**13.34**	**323**	*e*Pn	**Pn**	**18 27 56.1**	**+2.8**
AAK	**Ala-Archa**	**13.34**	**323**	Pn	**Pn**	**18 27 58.7**	**+5.3**
	SNR=9.3						
AAK				Pn	**Pn**	**18 27 58.7**	**+5.3**
	SNR=9.3						
AAK	**Ala-Archa**	**13.34**	**323**	P	**Pn**	**18 27 58.7**	**+5.3**
	SNR=9.3						
AAK				P		18 27 58.7	
	SNR=9.3						
AML	**Almayashu**	**13.42**	**320**	P	**Pn**	**18 27 54.9**	**+0.5**
	SNR=15						
FRU	**Bishkek**	**13.43**	**324**	*e*P	**Pn**	**18 27 56.0**	**+1.5**
FRU				pmax	pmax		
	comp=Z,100nm,1.2s						
CHMS	**Chumysh**	**13.48**	**325**	P	**Pn**	**18 27 56.8**	**+1.6**
	SNR=9.6						
GTA	**Gaotai**	**13.63**	**55**	*e*P	**Pn**	**18 27 59.8**	**+2.5**
GTA				pP		18 28 06.4	
GTA				sP		18 28 09.2	
GTA				S	**Sn**	**18 30 34.2**	**+5.4**
GTA				sS		18 30 42.8	
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,260nm,5.7s						
GTA				LR	LR		
	comp=N,3μm,13.7s						
GTA				LR	LR		
	comp=E,1μm,12.5s						
GTA				LR	LR		
	comp=Z,920nm,11.3s						
EKS2	**Erkin-Say**	**13.74**	**321**	P	**Pn**	**18 28 03.6**	**+4.8**
	SNR=17						
KBL	**Kabul**	**13.78**	**283**	*e*P	**Pn**	**18 27 56.7**	**-2.7**
MK31	**Makanchi Array**	**14.55**	**352**	*e*P	**Pn**	**18 28 10.2**	**+0.3**
MKAR	**Makanchi Array**	**14.55**	**352**	Pn	**Pn**	**18 28 10.2**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=173,slow=11,SNR=19						
MKAR				LR	LR	18 34 57.0	
	comp=Z,546nm,18.8s,baz=164,slow=42						
MKAR	**Makanchi Array**	**14.55**	**352**	*c*eP	**Pn**	**18 28 12.8**	**+2.9**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
LZH	**Lanzhou**	**15.72**	**71**	*e*P	**Pn**	**18 28 32.9**	**+7.4**
LZH				pP	pP	18 28 36.3	+4.0
LZH				sP	sP	18 28 38.8	+5.2
LZH				*e*S	**Sn**	**18 31 28.6**	**+8.9**
LZH				sS	sS	18 31 32.7	-6.5
LZH				SS		18 32 40.3	
LZH				pmax	pmax		
	comp=Z,33nm,1.1s						
LZH				pmax	pmax		
	comp=Z,160nm,4.4s						
LZH				LR	LR		
	comp=E,2μm,10.6s						
LZH				LR	LR		
	comp=Z,3μm,11.8s						
CD2	**Chengdu**	**15.74**	**91**	P	**Pn**	**18 28 29.4**	**+3.6**
CD2				pP	pP	18 28 32.9	+0.3
CD2				sP	sP	18 28 36.5	+2.6
CD2				PP		18 28 42.3	
CD2				S	**Sn**	**18 31 24.7**	**+4.3**
CD2				sS	sS	18 31 30.0	-10
CD2				SS		18 31 43.2	
CD2				pmax	pmax		
	comp=Z,50nm,0.6s						
CD2				pmax	pmax		
	comp=Z,130nm,3.8s						
CD2				LR	LR		
	comp=N,3μm,10.7s						
CD2				LR	LR		
	comp=E,3μm,9.5s						
CD2				LR	LR		
	comp=Z,4μm,9.4s						
HYB	**Hyderabad**	**16.14**	**204**	*e*P	**Pn**	**18 28 26.0**	**-5.0**
HYB	**Hyderabad**	**16.14**	**204**	*i* P	**Pn**	**18 28 26.0**	**-5.0**
HYB				*e*S	**Sn**	**18 31 43.0**	**+13**
KMI	**Kunming**	**16.87**	**111**	P	**Pn**	**18 28 40.9**	**+0.6**
KMI				sP	sP	18 28 45.2	-1.2
KMI				PP		18 28 54.4	
KMI				S	**Sn**	**18 31 45.4**	**-2.4**
KMI				SS		18 32 05.8	
KMI				pmax	pmax		
	comp=Z,18nm,1.1s						
KMI				pmax	pmax		
	comp=Z,360nm,7.8s						
KMI				LR	LR		
	comp=N,1μm,11.8s						
KMI				LR	LR		
	comp=E,1μm,9.1s						
KMI				LR	LR		
	comp=Z,1μm,8.7s						
POO	**Poona**	**17.27**	**220**	*e*PKP	**Pn**	**18 28 45.9**	**+0.6**
POO				AMb	AMB	18 28 49.1	
	comp=Z,130nm,2.2s						
POO				*ex*	x	18 31 42.9	
KAD	**Karad**	**18.11**	**217**	*ex*	**Pn**	**18 28 54.9**	**-0.9**
KAD				*ex*	x	18 32 09.6	
CHG	**Chiang Mai**	**18.23**	**135**	⇑P	**Pn**	**18 28 56.3**	**-0.9**
	comp=Z,37nm,0.9s						
CHTO	**Chiang Mai**	**18.23**	**135**	*e*P	**Pn**	**18 28 56.3**	**-0.9**
CHTO				pmax	pmax		
	comp=Z,50nm,1.2s						
CHTO	**Chiang Mai**	**18.23**	**135**	*e*Pn	**Pn**	**18 28 56.2**	**-1.0**
	comp=Z,50nm,1.2s						
CHTO	**Chiang Mai**	**18.23**	**135**	Pn	**Pn**	**18 28 59.0**	**+1.7**
	SNR=17						
CHTO				Pn	**Pn**	**18 28 59.0**	**+1.7**
	SNR=17						
CHTO	**Chiang Mai**	**18.23**	**135**	P	**Pn**	**18 28 59.0**	**+1.7**
	SNR=17						
CHTO				P		18 28 59.0	
	SNR=17						
CM31	**Chiang Mai Arr**	**18.51**	**135**	*e*Pn	**Pn**	**18 29 00.4**	**-0.2**
CMAR	**Chiang Mai Arr**	**18.51**	**135**	P	**Pn**	**18 28 58.8**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=313,slow=10,SNR=51						
CMAR				PcP	PcP	18 33 30.5	+0.2
	comp=Z,0.1nm,0.3s,baz=291,slow=2.4,SNR=9.1						
CMAR				LR	LR	18 36 54.8	
	comp=Z,413nm,19.0s,baz=323,slow=40						
CMAR	**Chiang Mai Arr**	**18.51**	**135**	P	**Pn**	**18 28 58.8**	**-1.8**
CMAR				PcP	PcP	18 33 30.5	+0.2
CMAR				LR	LR	18 36 54.8	
KURK	**Kurchatov**	**18.95**	**347**	P	**Pn**	**18 29 04.3**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=166,slow=11,SNR=43						
KURK				LR	LR	18 37 29.1	
	comp=Z,749nm,18.3s,baz=170,slow=40						
KURK	**Kurchatov**	**18.95**	**347**	*e*P	**Pn**	**18 29 04.7**	**-1.0**
	comp=Z,41nm,1.0s						
KURK	**Kurchatov**	**18.95**	**347**	P	**Pn**	**18 29 05.5**	**-0.3**
	SNR=29						
KURK				P		18 29 05.5	
	SNR=29						
KURK	**Kurchatov**	**18.95**	**347**	P	**Pn**	**18 29 05.5**	**-0.3**
	SNR=29						
KURK				P		18 29 05.5	
	SNR=29						
GYA	**Guiyang**	**19.47**	**102⇑**	*i*P	**Pn**	**18 29 12.2**	**0.0**
GYA				PP		18 29 30.7	
GYA				S	**Sn**	**18 32 46.4**	**-4.3**
GYA				SS		18 33 12.4	
GYA				pmax	pmax		
	comp=Z,30nm,0.9s						
GYA				pmax	pmax		
	comp=Z,120nm,4.3s						
GYA				LR	LR		
	comp=N,1μm,14.3s						
GYA				LR	LR		
	comp=E,1μm,13.2s						
GYA				LR	LR		
	comp=Z,2μm,13.9s						
BDT	**Bhumibol Dam**	**19.50**	**138**	P	**Pn**	**18 29 10.5**	**-2.0**
XAN	**Xi'an**	**19.78**	**79**	P	**Pn**	**18 29 14.9**	**-0.9**
XAN				pP	pP	18 29 19.7	+2.6
XAN				S	**Sn**	**18 32 59.3**	**+1.3**
XAN				SS		18 33 24.1	
XAN				pmax	pmax		
	comp=Z,3.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,120nm,10.2s						
XAN				LR	LR		
	comp=N,1μm,21.0s						
XAN				LR	LR		
	comp=E,180nm,14.6s						
XAN				LR	LR		
	comp=Z,770nm,9.5s						
ENH	**Enshi**	**20.71**	**89**	*e*P	**P**	**18 29 24.9**	**+0.4**
NST	**Nakhon Sawan**	**21.40**	**138**	P	**P**	**18 29 32.0**	**0.0**
	comp=Z,124nm,0.7s,mb5.3						
ZAA0	**Zalesovo Array**	**21.53**	**359**	*e*P	**P**	**18 29 32.8**	**-0.2**
ZALV	**Zalesovo Beam**	**21.53**	**359**	P	**P**	**18 29 33.4**	**+0.3**
	comp=Z,26nm,0.7s,mb4.8,baz=179,slow=10,SNR=46						
ZALV				LR	LR	18 39 47.0	
	comp=Z,197nm,18.4s,MS3.5,baz=14,slow=42						
ZALV	**Zalesovo Beam**	**21.53**	**359**	P	**P**	**18 29 33.4**	**+0.3**
ZALV				pmax	pmax		
	comp=Z,26nm,0.7s,mb4.8						
ZALV				MLR	MLR		
	comp=Z,197nm,18.4s,MS3.5						
SONM	**Songino Array**	**22.17**	**40**	P	**P**	**18 29 41.6**	**+1.6**
	comp=Z,14nm,1.1s,mb4.3,baz=229,slow=10,SNR=36						
SONM	**Songino Array**	**22.17**	**40**	P	**P**	**18 29 41.6**	**+1.6**
SONM				pmax	pmax		
	comp=Z,14nm,1.1s						
ZAK	**Zakamensk**	**22.33**	**31**	*e*P	**P**	**18 29 41.7**	**0.0**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.1						
MOY	**Mondy**	**22.39**	**26**	*e*P	**P**	**18 29 44.3**	**+2.1**
MOY				pmax	pmax		
	comp=Z,41nm,1.9s,mb4.5						
NVS	**Novosibirsk**	**22.47**	**357⇑**	*i*P	**P**	**18 29 43.9**	**+0.8**
NVS				*e*		18 29 59.7	
NVS				*e*S	**S**	**18 33 49.9**	**+0.1**
NVS				pmax	pmax		
	comp=N,80nm,1.5s						
NVS				pmax	pmax		
	comp=E,27nm,1.5s						
NVS				pmax	pmax		
	comp=Z,58nm,1.5s,mb4.8						
NVS				smax			
	comp=N,28nm,2.5s						
NVS				smax			
	comp=E,12nm,2.5s						
ULN	**Ulaanbaatar**	**22.55**	**40**	*e*P	**P**	**18 29 45.6**	**+1.6**
ULN				pmax	pmax		
	comp=Z,109nm,1.9s,mb5.0						
ULN	**Ulaanbaatar**	**22.55**	**40**	*e*P	**P**	**18 29 45.6**	**+1.6**
	comp=Z,109nm,1.9s,mb5.0						
ULN	**Ulaanbaatar**	**22.55**	**40**	P	**P**	**18 29 46.1**	**+2.2**
	SNR=21						
ULN				P		18 29 46.1	
	SNR=21						
ULN	**Ulaanbaatar**	**22.55**	**40**	P	**P**	**18 29 46.1**	**+2.2**
	SNR=21						
ULN				P		18 29 46.1	
	SNR=21						
HHC	**Hu-ho-hao-te**	**22.59**	**61**	*e*P	**P**	**18 29 45.4**	**+0.8**
HHC				pP		18 29 49.6	
HHC				sP	sP	18 29 52.4	+3.7
HHC				PP		18 30 13.6	
HHC				PcP	PcP	18 33 40.0	+2.4
HHC				S	**S**	**18 33 49.3**	**-3.2**
HHC				sS	sS	18 33 55.3	-1.8
HHC				SS		18 34 29.3	
HHC				ScP	ScP	18 37 15.5	+0.2
HHC				PcS	PcS	18 37 16.5	+0.1
HHC				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.4						
HHC				pmax	pmax		
	comp=Z,220nm,5.1s						
HHC				LR	LR		
	comp=N,600nm,10.5s,MS4.5						
HHC				LR	LR		
	comp=E,780nm,11.7s,MS4.5						
HHC				LR	LR		
	comp=Z,970nm,13.0s,MS4.4						
BVAR	**Borovoye Array**	**23.26**	**337**	P	**P**	**18 29 51.9**	**+0.4**
	comp=Z,2.2nm,0.5s,mb3.9,baz=155,slow=10,SNR=15						
BVAR	**Borovoye Array**	**23.26**	**337**	P	**P**	**18 29 51.9**	**+0.4**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BRVK	**Borovoye**	**23.32**	**337**	*c i*P	**P**	**18 29 56.1**	**+4.0**
BRVK				pmax	pmax		
	comp=Z,21nm,1.6s,mb4.3						
BRVK				MLR	MLR		
	comp=Z,648nm,16.0s,MS4.2						
BRVK	**Borovoye**	**23.32**	**337**	*e*P	**P**	**18 29 54.2**	**+2.1**
	comp=Z,9.2nm,0.8s,mb4.3						
BRVK	**Borovoye**	**23.32**	**337**	P	**P**	**18 29 54.2**	**+2.1**
	SNR=8.3						
BRVK				P		18 29 54.2	
	SNR=8.3						
BRVK	**Borovoye**	**23.32**	**337**	P	**P**	**18 29 54.2**	**+2.1**
	SNR=8.3						
BRVK				P		18 29 54.2	
	SNR=8.3						
TLY	**Talaya**	**23.44**	**29**	*e*P	**P**	**18 29 55.9**	**+2.5**
TLY				pmax	pmax		
	comp=Z,13nm,1.7s,mb4.1						
TLY				MLR	MLR		
	comp=Z,397nm,15.0s,MS4.0						
TLY	**Talaya**	**23.44**	**29**	*e*P	**P**	**18 29 56.1**	**+2.7**
	comp=Z,8.2nm,1.1s,mb4.1						
TLY	**Talaya**	**23.44**	**29**	P	**P**	**18 29 56.4**	**+3.0**
	SNR=7.9						
TLY				P		18 29 56.4	
	SNR=7.9						
TLY	**Talaya**	**23.44**	**29**	P	**P**	**18 29 56.4**	**+3.0**
	SNR=7.9						
TLY				P		18 29 56.4	
	SNR=7.9						
IRK	**Irkutsk**	**24.12**	**29**	*e*P	**P**	**18 30 02.5**	**+2.8**
IRK				pmax	pmax		
	comp=Z,50nm,1.9s,mb4.6						
WHN	**Wuhan**	**24.77**	**87**	⇑P	**P**	**18 30 09.8**	**+3.9**
WHN				S	**S**	**18 34 33.7**	**+5.5**
WHN				pmax	pmax		
	comp=Z,29nm,0.8s,mb4.9						
WHN				pmax	pmax		
	comp=Z,640nm,8.8s						
WHN				LR	LR		
	comp=N,3μm,8.8s						
WHN				LR	LR		
	comp=E,2μm,9.0s						
WHN				LR	LR		
	comp=Z,2μm,15.5s,MS4.8						
ABKAR	**Akbulak array**	**25.37**	**319**	*e*P	**P**	**18 30 10.9**	**-0.2**
	comp=Z,46nm,1.0s,mb5.0						
PALK	**Pallekele**	**25.38**	**191**	LR	LR	18 39 56.3	
	comp=Z,218nm,19.9s,MS3.7,baz=6.8,slow=36						
QIZ	**Qiongzhong**	**25.70**	**115**	P	**P**	**18 30 14.1**	**-0.3**
QIZ				S	**S**	**18 34 44.2**	**+1.1**
QIZ				sS	sS	18 34 50.7	+2.6
QIZ				pmax	pmax		
	comp=Z,160nm,6.4s						
QIZ				LR	LR		
	comp=N,410nm,11.5s						
QIZ				LR	LR		
	comp=Z,600nm,12.1s,MS4.3						
BJI	**Beijing**	**25.91**	**64**	P	**P**	**18 30 15.4**	**-0.7**
BJI				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.3						
BJI				LR	LR		
	comp=N,1μm,18.2s,MS4.6						
BJI				LR	LR		
	comp=E,150nm,17.0s,MS4.6						
BJI				LR	LR		
	comp=Z,280nm,18.4s,MS3.8						
AKTK	**Aktyubinsk**	**27.05**	**320**	P	**P**	**18 30 27.1**	**+0.7**
AKTK				LR	LR	18 41 35.7	
AKTO	**Aktyubinsk**	**27.05**	**320**	P	**P**	**18 30 27.1**	**+0.7**
	comp=Z,12nm,0.9s,mb4.4,baz=125,slow=10.0,SNR=26						
AKTO				LR	LR	18 41 35.7	
	comp=Z,230nm,21.1s,MS3.7,baz=126,slow=37						
AKTO	**Aktyubinsk**	**27.05**	**320**	P	**P**	**18 30 27.1**	**+0.8**
AKTO				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.4						
AKTO				MLR	MLR		
	comp=Z,230nm,21.1s,MS3.7						
NJ2	**Nanjing**	**28.28**	**82**	*e*P	**P**	**18 30 40.0**	**+2.5**
NJ2				pP	pP	18 30 44.2	+3.6
NJ2				sP	sP	18 30 46.8	+5.0
NJ2				S	**S**	**18 35 25.1**	**+1.4**
NJ2				sS	sS	18 35 32.4	+3.7
NJ2				pmax	pmax

SVE Sverdlovsk 29.77 332⇑ *e*P P 18 30 54.5 +4.0
SVE *e*S **S 18 35 52.9 +6.2**
SVE pmax pmax
comp=Z,16nm,1.2s,mb4.6
SVE MLR MLR
comp=Z,826nm,13.0s,MS4.5
ARU Arti 30.35 330*c* *i*P P 18 30 59.0 +3.4
ARU *e* 18 31 57.7
ARU S **S 18 36 01.8 +6.1**
ARU SS SS 18 37 41.2 -24
ARU pmax pmax
comp=Z,9.0nm,1.2s,mb4.4
ARU Arti 30.35 330 *e*P P 18 30 54.3 -1.3
comp=Z,7.6nm,1.0s,mb4.4
SSE Sheshan 30.41 83 P **P 18 30 52.5 -4.0**
SSE S **S 18 35 55.1 -2.1**
SSE pmax pmax
comp=Z,7.0nm,0.6s,mb4.6
SSE pmax pmax
comp=Z,64nm,4.3s
SSE LR LR
comp=N,350nm,21.2s,MS4.0
SSE LR LR
comp=E,130nm,21.6s,MS4.0
SSE LR LR
comp=Z,490nm,20.2s,MS4.2
PSI Prapat 32.09 154 P **P 18 31 10.9 -0.5**
comp=Z,4.1nm,0.8s,mb4.3,baz=228,slow=2.2,SNR=6.4
PSI PcP PcP 18 34 00.5 -0.3
comp=Z,12nm,0.7s,baz=280,slow=3.5,SNR=14
PSI Prapat 32.09 154 P **P 18 31 10.9 -0.5**
PSI 18 34 00.5
PSI pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
CN2 Changchun 33.23 58 *e*P **P 18 31 21.7 +0.6**
CN2 *ep*P pP 18 31 26.1 +1.9
CN2 *es*P sP 18 31 28.7 +3.3
CN2 *e*S **S 18 36 42.8 +1.8**
CN2 pmax pmax
comp=Z,10.0nm,0.4s,mb5.1
CN2 pmax pmax
comp=Z,300nm,11.0s
CN2 LR LR
comp=N,400nm,11.0s,MS4.8
CN2 LR LR
comp=E,900nm,11.0s,MS4.8
CN2 LR LR
comp=Z,900nm,13.0s,MS4.7
GNI Garni 33.41 295 LR LR 18 46 59.0
comp=Z,418nm,19.1s,MS4.2,baz=79,slow=40
GNI Garni 33.41 295*c* *i*P P 18 31 25.8 +3.1
GNI pmax pmax
comp=Z,42nm,1.2s
GNI MLR MLR
comp=Z,501nm,22.0s
GNI Garni 33.41 295 *e*P **P 18 31 22.8 0.0**
comp=Z,48nm,1.3s,mb5.3
GNI Garni 33.41 295 P **P 18 31 27.1 +4.3**
SNR=8.5
GNI P 18 31 27.1
SNR=8.5
GNI Garni 33.41 295 P **P 18 31 27.1 +4.3**
SNR=8.5
GNI P 18 31 27.1
SNR=8.5
INCN Inchon 34.01 70 *e*P **P 18 31 26.9 -1.1**
comp=Z,18nm,0.7s,mb5.1
KSRS Korea Array 35.04 70 P **P 18 31 37.1 +0.2**
comp=Z,5.0nm,0.7s,mb4.6,baz=274,slow=9.1,SNR=28
KSRS PcP PcP 18 34 09.0 +0.2
comp=Z,0.8nm,0.7s,baz=304,slow=2.3,SNR=4.9
KSRS LR LR 18 47 10.4
comp=Z,421nm,18.5s,MS4.2,baz=282,slow=38
KSRS Korea Array 35.04 70 P **P 18 31 37.1 +0.2**
KSRS 18 34 09.0
KSRS pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
KSRS MLR MLR
comp=Z,421nm,18.5s,MS4.2
KIV Kislovodsk 35.10 302 *e*P **P 18 31 39.5 +2.2**
KIV *e*S **S 18 37 11.8 +1.9**
KIV pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
KIV MLR MLR
comp=Z,472nm,16.0s,MS4.3
KIV Kislovodsk 35.10 302 *e*P **P 18 31 38.8 +1.4**
comp=Z,18nm,1.1s,mb4.9
MDJ Mudanjiang 36.28 57 P **P 18 31 47.4 0.0**
MDJ pP pP 18 31 50.4 -0.1
MDJ sP sP 18 31 52.4 +0.7
MDJ PP PP 18 33 08.5 -1.3
MDJ PcP PcP 18 34 13.0 +0.7
MDJ S **S 18 37 30.1 +2.2**
MDJ ScP ScP 18 37 58.9 +0.1
MDJ PcS PcS 18 38 00.0 +0.2
MDJ ScS ScS 18 42 05.1 +0.5
MDJ pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
MDJ pmax pmax
comp=Z,130nm,10.1s
MDJ LR LR
comp=N,280nm,11.0s
MDJ LR LR
comp=E,290nm,18.3s
MDJ LR LR
comp=Z,360nm,18.3s
VRHR Novokhopersk 36.93 313 *e*P **P 18 31 53.6 +0.7**
VRHR pmax pmax
comp=Z,60nm,1.0s,mb5.4
VRHR pmax pmax
comp=N,30nm,0.9s
VRHR pmax pmax
comp=E,30nm,0.7s
VRHR MLR MLR
comp=Z,580nm,17.0s,MS4.4
VRHR MLR MLR
comp=N,340nm,21.0s,MS4.3
VRHR MLR MLR
comp=E,400nm,16.0s,MS4.3
SOC Sochi 37.23 301 *e*P **P 18 31 57.6 +2.0**
SOC *e* 18 33 20.5
SOC *e*S **S 18 37 46.2 +3.7**
SOC *e**SS sS 18 37 59.1 +12
SOC *e*SS SS 18 40 15.5 -10
SOC pmax pmax
comp=Z,20nm,0.8s,mb5.0
SOC MLR MLR
comp=Z,370nm,13.0s,MS4.4
VLA Vladivostok 37.88 60 *e*P **P 18 32 00.2 -0.8**
VLA pmax pmax
comp=Z,10.0nm,1.4s,mb4.3
VLA MLR MLR
comp=Z,400nm,11.6s,MS4.5
KLR Kul'dur 38.26 50 *e*P **P 18 32 00.0 -4.1**
VSR Storozhevoye 38.47 313 *e*P **P 18 32 06.5 +0.6**
VSR pmax pmax
comp=N,2.0nm,0.5s
VSR pmax pmax
comp=Z,8.0nm,0.5s,mb4.7
VSR pmax pmax
comp=E,20nm,1.2s
VSR MLR MLR
comp=Z,660nm,14.0s,MS4.6
VSR MLR MLR
comp=N,100nm,16.0s,MS4.4
VSR MLR MLR
comp=E,480nm,15.0s,MS4.4
ANN Anapa 38.91 303 *e*P **P 18 32 03.5 -6.2**
ANN *e**PP pP 18 32 12.4 -0.4
ANN *e*S **S 18 37 56.6 -11**
ANN pmax pmax
comp=Z,31nm,1.0s,mb5.0
ANN MLR MLR
comp=N,322nm,16.0s,MS4.5
ANN MLR MLR
comp=E,418nm,16.0s,MS4.5
ANN MLR MLR
comp=Z,338nm,16.0s,MS4.3
HABR Khabarovsk 40.34 52 *e*P **P 18 32 19.5 -2.0**
HABR *e**PP pP 18 32 29.0 +4.4
HABR *e* 18 33 52.8
HABR *e*S **S 18 38 26.0 -3.2**
HABR *e**SS sS 18 38 42.5 +8.2
HABR *e*SS SS 18 41 26.8 -0.8
HABR *e* 18 42 22.8
HABR pmax pmax
comp=Z,15nm,1.6s,mb4.5
HABR pmax pmax
comp=N,13nm,1.5s
HABR pmax pmax
comp=E,4.0nm,1.0s
HABR MLR MLR
comp=Z,326nm,19.0s,MS4.2
MOS Moscow 40.39 320 *e*P **P 18 32 24.2 +2.4**
MOS pmax pmax
comp=Z,66nm,1.2s,mb5.2
ASF Jabal al Asfar 40.68 283 LR LR 18 52 05.0
comp=Z,297nm,20.4s,MS4.1,baz=116,slow=40
OBN Obninsk 40.82 319⇑ *e*P **P 18 32 27.5 +2.1**
OBN *e* 18 34 02.0
OBN *e*S **S 18 38 25.7 -11**
OBN *e*SS SS 18 41 23.7 -13
OBN pmax pmax
comp=Z,33nm,1.2s,mb4.8
OBN MLR MLR
comp=Z,300nm,22.0s,MS4.1
YAK Yakutsk 40.91 30 *e*P **P 18 32 27.6 +1.5**
YAK *e**PP pP 18 32 36.3 +7.1
YAK *e* 18 33 59.3
YAK *e* 18 34 21.7
YAK *e*PPP 18 34 31.9
YAK *e*S **S 18 38 42.9 +5.4**
YAK *e**SS sS 18 39 00.8 +18
YAK *e*SS SS 18 41 40.8 +2.1
YAK *e*SSS 18 42 17.8
YAK pmax pmax
comp=Z,18nm,0.8s,mb4.8
YAK pmax pmax
comp=Z,59nm,2.7s,mb4.7
YAK smax
comp=E,59nm,2.7s
YAK smax
comp=N,150nm,7.1s
YAK MLR MLR
comp=N,152nm,16.0s,MS4.2
YAK MLR MLR
comp=Z,180nm,11.0s,MS4.2
YAK MLR MLR
comp=E,199nm,14.0s,MS4.2
YAK Yakutsk 40.91 30 *e*P **P 18 32 26.3 +0.2**
comp=E,27nm,0.7s,mb5.0
SIM Simferopol' 41.27 303⇑ *e*P **P 18 32 32.5 +3.2**
SIM S **S 18 38 49.0 +5.8**
SIM SSS 18 42 27.0
SIM pmax pmax
comp=Z,33nm,0.9s,mb5.0
SIM MLR MLR
comp=Z,540nm,22.6s,MS4.4
MMAI Mount Meron Ar 41.71 285 P **P 18 32 31.5 -1.6**
comp=Z,0.6nm,0.5s,baz=97,slow=12,SNR=2.3
MMAI PcP PcP 18 34 28.9 -0.7
comp=Z,2.5nm,0.7s,baz=170,slow=5.9,SNR=4.0
MMAI LR LR 18 52 50.3
comp=Z,406nm,18.0s,baz=35,slow=40
BR131 Keskin Array S 41.95 295 *e*P **P 18 32 35.0 +0.1**
BRTR Keskin Array B 41.95 295 P **P 18 32 35.9 +0.9**
comp=Z,3.4nm,0.8s,mb4.0,baz=112,slow=8.4,SNR=18
BRTR LR LR 18 52 57.1
comp=Z,135nm,20.8s,MS3.8,baz=263,slow=40
BRTR Keskin Array B 41.95 295 P **P 18 32 35.9 +1.0**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
BRTR MLR MLR
comp=Z,135nm,20.8s
EIL Elat 42.95 280 LR LR 18 53 42.6
comp=Z,407nm,18.7s,MS4.3,baz=80,slow=41
MAJO Matsushiro 43.32 69 *e*P **P 18 32 45.6 -0.5**
MAJO pmax pmax
comp=Z,7.0nm,0.9s,mb4.4
MAJO Matsushiro 43.32 69 *e*P **P 18 32 45.6 -0.5**
comp=Z,6.6nm,0.9s,mb4.4
MAT Matsushiro 43.32 69 P **P 18 32 45.3 -0.8**
MAT *e*S **S 18 39 13.2 -0.4**
MJAR Matsushiro Arr 43.32 69 P **P 18 32 46.2 +0.1**
comp=Z,6.2nm,1.0s,mb4.3,baz=286,slow=9.7,SNR=20
MJAR PcP PcP 18 34 34.5 -0.4
comp=Z,0.8nm,0.7s,baz=274,slow=2.9,SNR=5.4
MJAR LR LR 18 51 55.0
comp=Z,236nm,18.6s,MS4.1,baz=275,slow=38
MJAR Matsushiro Arr 43.32 69 P **P 18 32 46.2 +0.1**
MJAR 18 34 34.5
MJAR pmax pmax
comp=Z,6.0nm,1.0s
MJAR MLR MLR
comp=Z,236nm,18.6s
MJAR Matsushiro Arr 43.32 69 P **P 18 32 46.2 +0.1**
MJAR PcP PcP 18 34 34.5 -0.4
MJAR LR LR 18 51 55.0
ATD Arta Tunnel 44.19 252 LR LR 18 52 38.9
comp=Z,184nm,18.2s,MS4.0,baz=303,slow=38
AKASG Malin Array Be 44.65 311 P **P 18 32 55.5 -1.1**
comp=Z,4.3nm,0.6s,mb4.5,baz=81,slow=7.2,SNR=20
AKASG PcP PcP 18 34 39.0 -0.1
comp=Z,0.6nm,0.4s,baz=87,slow=3.5,SNR=4.0
AKASG LR LR 18 55 07.2
comp=Z,336nm,19.6s,MS4.3,baz=85,slow=41
AKASG Malin Array Be 44.65 311 P **P 18 32 55.5 -1.1**
AKASG 18 34 39.0
AKASG pmax pmax
comp=Z,4.0nm,0.6s
AKASG MLR MLR
comp=Z,336nm,19.6s
AKASG Malin Array Be 44.65 311 P **P 18 32 55.5 -1.1**
AKASG PcP PcP 18 34 39.0 -0.1
AKASG LR LR 18 55 07.2
AKBB Malin Array Si 44.65 311 *e*P **P 18 32 54.9 -1.7**
KIEV Kiev 44.66 311 *e*P **P 18 32 55.7 -0.9**
KIEV pmax pmax
comp=Z,12nm,1.0s,mb4.7
KIEV Kiev 44.66 311 *e*P **P 18 32 55.7 -0.9**
comp=Z,12nm,1.0s,mb4.7
KIS Kishinev 44.92 306 *e*P **P 18 32 59.0 +0.2**
KIS LRM 18 55 40.0
comp=Z,300nm,14.0s
KIS Kishinev 44.92 306 *e*P **P 18 32 59.0 +0.2**
KIS MLR MLR
comp=Z,300nm,13.0s,MS4.4
KIS MLR MLR
comp=Z,500nm,14.0s
JHJ Hachijo jima 2 45.33 74 LR LR 18 53 59.2
comp=Z,160nm,21.4s,MS3.9,baz=288,slow=39
TIRR Tirgusor 45.35 302 ⇑P **P 18 33 05.2 +2.9**
TIRR Tirgusor 45.35 302 ⇑*i*P **P 18 33 05.2 +2.9**
JOF Joensuu 45.45 329 *e*P **P 18 33 02.5 -0.2**
JOF pmax pmax
comp=Z,13nm,0.7s,mb4.9
JOF Joensuu 45.45 329 *ep* **P 18 33 02.5 -0.2**
comp=Z,13nm,0.7s,mb4.9
JOF Joensuu 45.45 329 *ep* **P 18 33 02.5 -0.2**
comp=Z,13nm,0.7s,mb4.9
TIXI Tiksi 45.55 18 *e*P **P 18 33 03.2 -0.3**
TIXI pmax pmax
comp=Z,18nm,0.9s,mb5.0
TIXI Tiksi 45.55 18 *e*P **P 18 33 03.2 -0.3**
comp=Z,18nm,0.9s,mb5.0
APA Apatity 46.16 335⇓*e*P **P 18 33 10.8 +2.5**
APA MLR MLR
comp=Z,800nm,13.0s,MS4.8
IDID Didziasalis 46.41 318 *e*P **P 18 33 11.2 +0.7**
IDID AMB AMB 18 33 15.7
comp=Z,5.4nm,1.2s,mb4.3
VRI Vrincioaia 46.43 305 ⇓P **P 18 33 13.1 +2.4**
VRI Vrincioaia 46.43 305 ⇓*i*P **P 18 33 13.1 +2.4**
PLOR Plostina 46.48 305 ⇓P **P 18 33 12.3 +1.1**
PLOR Plostina 46.48 305 ⇓*i*P **P 18 33 12.3 +1.1**
IIGN Ignalina 46.71 318 *e*P **P 18 33 13.3 +0.5**
IIGN AMB AMB 18 33 17.1
comp=Z,12nm,1.2s,mb4.7
IZAR Zarasai 46.73 318 *e*P **P 18 33 12.8 -0.1**
IZAR AMB AMB 18 33 18.3
comp=Z,12nm,1.3s,mb4.7
VSU Vasula 46.74 322⇑*e*P **P 18 33 15.6 +2.6**
VSU pmax pmax
comp=Z,42nm,1.4s,mb5.2
VSU MLR MLR
comp=Z,163nm,14.0s,MS4.1
ISAL Salakas 46.78 318 *e*P **P 18 33 13.7 +0.4**
ISAL AMB AMB 18 33 18.7
comp=Z,11nm,1.1s,mb4.7
MLR Muntele Rosu 47.01 304 P **P 18 33 16.6 +1.3**
MLR Muntele Rosu 47.01 304⇑*i*P **P 18 33 16.8 +1.5**
BURAR Bucovina Array 47.33 307 ⇓P **P 18 33 18.9 +1.1**
BURAR Bucovina Array 47.33 307 ⇓*i*P **P 18 33 18.9 +1.1**
BUR08 Bucovina Ar. S 47.34 307 *e*P **P 18 33 16.3 -1.6**
FINES FINESS Array B 47.51 326 P **P 18 33 18.8 -0.1**
comp=Z,5.6nm,0.9s,mb4.6,baz=111,slow=10,SNR=9.3
FINES PcP PcP 18 34 48.8 -0.1
comp=Z,5.2nm,1.0s,baz=20,slow=6.1,SNR=4.0
FINES LR LR 18 54 04.4
comp=Z,202nm,18.6s,MS4.1,baz=287,slow=37
FINES FINESS Array B 47.51 326 P **P 18 33 18.8 -0.2**
FINES 18 34 48.8
FINES pmax pmax
comp=Z,6.0nm,0.9s
FINES MLR MLR
comp=Z,202nm,18.6s
KAF Kangasniemi 47.52 327 *e*P **P 18 33 22.4 +3.4**
KAF pmax pmax
comp=Z,21nm,1.4s,mb5.0
KAF Kangasniemi 47.52 327 *ep* **P 18 33 22.4 +3.4**
comp=Z,21nm,1.4s,mb5.0,baz=101,slow=7.7
KAF Kangasniemi 47.52 327 *ep* **P 18 33 22.4 +3.4**
comp=Z,21nm,1.4s,mb5.0,baz=101,slow=7.7
LVV L'vov 47.99 310 *e*P **P 18 33 24.3 +1.5**
KWP Kalwaria Pacla 48.86 310 *e*P **P 18 33 29.8 +0.3**
KWP pmax pmax
comp=Z,42nm,1.4s,mb5.3
KWP Kalwaria Pacla 48.86 310 *e*P **P 18 33 29.8 +0.3**
comp=Z,42nm,1.4s,mb5.3
DRGR 49.11 306 P **P 18 33 32.5 +1.0**
CBIJ Chichi jima 49.14 81 LR LR 18 54 31.9
comp=Z,234nm,20.0s,MS4.2,baz=278,slow=36
KOLS Kolonicke sedl 49.19 309 *e*P **P 18 33 32.3 +0.2**
comp=Z,5.2nm,1.1s,mb4.5
KOLS *e*PP pP 18 33 35.1 -0.2
KOLS LR LR
comp=Z,300nm,24.2s,MS4.2
KOLS Kolonicke sedl 49.19 309 *e*P **P 18 33 32.3 +0.2**
KOLS *ep*P pP 18 33 35.1 -0.2
UZH Uzhgorod 49.21 309⇑*i*P **P 18 33 34.0 +1.8**
ARCES ARCESS Array B 49.55 336 P **P 18 33 34.7 +0.1**
comp=Z,7.0nm,0.8s,mb4.8,baz=92,slow=8.5,SNR=11
ARCES ARCESS Array B 49.55 336 P **P 18 33 34.7 +0.1**
ARCES pmax pmax
comp=Z,7.0nm,0.8s
ARCES ARCESS Array B 49.55 336 P **P 18 33 34.7 +0.1**
CRVS Cervenica-Dubn 49.73 309 *e*P **P 18 33 37.1 +0.9**
comp=Z,3.8nm,1.0s,mb4.4
CRVS *e*PP pP 18 33 39.1 -0.3
CRVS LR LR
comp=Z,200nm,24.9s,MS4.0
CRVS Cervenica-Dubn 49.73 309 *e*P **P 18 33 37.1 +0.9**
CRVS *ep*P pP 18 33 39.1 -0.3
STHS Stebnicka Huta 49.82 310 *e*P **P 18 33 37.0 +0.1**
STHS pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
STHS Stebnicka Huta 49.82 310 *e*P **P 18 33 37.0 +0.1**
comp=Z,4.5nm,1.1s,mb4.4
STHS *e*PP pP 18 33 41.0 +0.9
STHS Stebnicka Huta 49.82 310 *e*P **P 18 33 37.0 +0.1**
STHS *ep*P pP 18 33 41.0 +0.9
BZS Buzias 50.01 305 P **P 18 33 41.4 +3.0**
BZS Buzias 50.01 305⇑*i*P **P 18 33 41.8 +3.4**
KECS Kecovo 50.42 309 *e*P **P 18 33 41.3 -0.1**
KECS pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
KECS Kecovo 50.42 309 *e*P **P 18 33 41.3 -0.1**
comp=Z,2.6nm,1.0s,mb4.2
KECS *e*PP pP 18 33 45.4 +0.8
KECS Kecovo 50.42 309 *e*P **P 18 33 41.3 -0.1**
KECS *ep*P pP 18 33 45.4 +0.8
NIE Niedzica 50.43 310 *e*P **P 18 33 45.0 +3.5**
SEY Seymchan 51.29 33⇑*e*P **P 18 33 48.8 +1.0**
VYHS Vyhne 51.50 309 *e*P **P 18 33 50.1 +0.5**
VYHS pmax pmax
comp=Z,8.0nm,1.4s,mb4.5
VYHS Vyhne 51.50 309 *e*P **P 18 33 50.1 +0.5**
comp=Z,7.7nm,1.4s,mb4.4
VYHS *e*PP pP 18 33 52.6 -0.2
VYHS Vyhne 51.50 309 *e*P **P 18 33 50.1 +0.5**
VYHS *ep*P pP 18 33 52.6 -0.2
OKC Ostrava-Krasne 51.78 311 *e*P **P 18 33 52.1 +0.4**
OKC MLR MLR
comp=Z,200nm,16.8s,MS4.2
OKC Ostrava-Krasne 51.78 311 *e*P **P 18 33 52.1 +0.4**
OKC *ep*P pP 18 33 54.3 -0.6
OKC AMS AMS 18 58 00.0
comp=Z,200nm,16.8s
MORC Moravsky Berou 52.18 311 ⇓P **P 18 33 54.6 0.0**
MORC Moravsky Berou 52.18 311 *e*P **P 18 33 54.8 +0.2**
comp=Z,20nm,1.4s,mb4.8
MORC Moravsky Berou 52.18 311 ⇓*i*P **P 18 33 54.6 0.0**
VRAC Vranov 52.85 310 ⇓P **P 18 34 00.6 +0.9**
VRAC Vranov 52.85 310 ⇓*i*P **P 18 34 00.6 +0.9**
DPC Dobruska-Polom 52.88 311 *e*P **P 18 33 59.4 -0.4**
DPC MLR MLR
comp=Z,400nm,16.6s,MS4.5
DPC Dobruska-Polom 52.88 311 *e*P **P 18 33 59.4 -0.4**
DPC *ep*P pP 18 34 02.6 -0.4
DPC AMS AMS 18 58 30.0
comp=Z,400nm,16.6s
UPC Upice 53.05 312 *e*P **P 18 34 00.8 -0.3**
UPC Upice 53.05 312 *e*P **P 18 34 00.8 -0.3**
UPC *ep*P pP 18 34 03.8 -0.5
CONA Conrad Observa 53.56 308⇑*i*P **P 18 34 05.1 +0.2**
comp=Z,29nm,1.3s,mb5.1
CSNA Conrad Observa 53.56 308⇑*i*P **P 18 34 05.1 +0.2**
comp=Z,26nm,1.3s,mb5.0
TREC Trest 53.57 310 *e*P **P 18 34 04.5 -0.4**
TREC MLR MLR
comp=Z,300nm,17.5s,MS4.4
TREC Trest 53.57 310 *e*P **P 18 34 04.5 -0.4**
TREC AMS AMS 18 58 00.0
comp=Z,300nm,17.5s
ARSA Arzberg 53.90 308⇑*i*P **P 18 34 07.6 +0.2**
comp=Z,10.0nm,1.1s,mb4.6
PVCC Panska Ves 53.96 312 *e*P **P 18 34 07.6 -0.2**
PVCC MLR MLR
comp=Z,400nm,18.9s,MS4.5
PVCC Panska Ves 53.96 312 *e*P **P 18 34 07.6 -0.2**
PVCC AMS AMS 18 59 10.0
comp=Z,400nm,18.9s
PRU Pruhonice 54.07 311 *e*P **P 18 34 09.7 +1.1**
PRU MLR MLR
comp=Z,400nm,17.4s,MS4.5
PRU Pruhonice 54.07 311 *e*P **P 18 34 09.7 +1.1**
PRU *ep*P pP 18 34 11.4 -0.3
PRU AMS AMS 18 59 10.0
comp=Z,400nm,17.4s
PERS Pernice 54.29 307 *i*P **P 18 34 10.9 +0.7**
SOKA Soboth 54.34 307⇑*i*P **P 18 34 11.0 +0.3**
comp=Z,21nm,1.2s,mb5.0
PETK Petropavlovsk- 54.53 45 P **P 18 34 11.9 0.0**
comp=Z,5.1nm,0.9s,mb4.5,baz=216,slow=7.3,SNR=4.3
PETK Petropavlovsk- 54.53 45 P **P 18 34 11.9 0.0**
PETK pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
MOA Molln 54.63 309⇑*i*P **P 18 34 12.3 -0.4**
comp=Z,16nm,1.6s,mb4.8
NB2 NORSAR Subarra 54.66 325 P **P 18 34 12.2 -0.5**
comp=Z,15nm,1.0s,mb5.0,baz=87,slow=7.4
NOA NORSAR Array B 54.66 325 P **P 18 34 12.3 -0.3**
comp=Z,7.0nm,0.9s,mb4.7,baz=86,slow=7.2,SNR=9.6
NOA LR LR 18 58 31.6
comp=Z,121nm,19.0s,MS4.0,baz=100,slow=37
NOA NORSAR Array B 54.66 325 P **P 18 34 12.4 -0.3**
NOA pmax pmax
comp=Z,7.0nm,0.9s
NOA MLR MLR
comp=Z,121nm,19.0s
GEC2 GERESS Array S 54.81 310 *e*P **P 18 34 13.7 -0.3**
comp=Z,3μm,1.3s
GERES GERESS Array B 54.81 310 P **P 18 34 13.9 -0.1**
comp=Z,6.2nm,0.9s,mb4.6,baz=75,slow=5.8,SNR=34
GERES LR LR 19 00 10.5
comp=Z,206nm,18.8s,MS4.2,baz=78,slow=39
GERES GERESS Array B 54.81 310 P **P 18 34 13.9 -0.1**
GERES pmax pmax
comp=Z,6.0nm,0.9s
GERES MLR MLR
comp=Z,206nm,18.8s
CLL Collm 54.82 313 *e*P **P 18 34 14.0 0.0**
CLL pmax pmax
comp=Z,7.0nm,1.2s,mb4.6
CLL Collm 54.82 313 *e*P **P 18 34 14.0 0.0**
comp=Z,7.0nm,1.2s,mb4.6

CLL *e*PcP PcP 18 35 16.0 -0.2
KHC Kasperske Hory 54.83 310 *e*P **P 18 34 14.6 +0.5**
KHC MLR MLR
comp=Z,300nm,27.0s,MS4.2
KHC Kasperske Hory 54.83 310 *e*P **P 18 34 14.5 +0.4**
comp=Z,15nm,1.4s,mb4.8
KHC Kasperske Hory 54.83 310 *e*P **P 18 34 14.6 +0.5**
KHC *e*pP pP 18 34 16.6 -0.7
KHC AMS AMS 18 58 40.0
comp=Z,300nm,27.0s
JAVS Javornik 55.16 306 *i* P **P 18 34 19.1 +2.5**
NKC Novy Kostel 55.35 312 *e*P **P 18 34 17.4 -0.5**
NKC Novy Kostel 55.35 312 *e*P **P 18 34 17.4 -0.5**
NKC *e*pP pP 18 34 20.9 -0.2
CEL Celeste 55.77 297 *e*P **P 18 34 20.6 -0.5**
comp=Z,22nm,1.0s,mb5.1
MOX Moxa 55.80 312 *e*P **P 18 34 21.1 0.0**
comp=Z,56nm,1.6s,mb5.3
GRF Grafenberg Arr 56.23 311 *e*P **P 18 34 24.3 +0.1**
comp=Z,20nm,1.4s,mb5.0
GRF Grafenberg Arr 56.23 311 *e*P **P 18 34 24.3 +0.1**
GRF pmax pmax
comp=Z,20nm,1.4s,mb5.0
KMBO Kilima Mbogo 56.34 243 P **P 18 34 23.6 -1.8**
comp=Z,1.6nm,0.8s,mb4.1,baz=58,slow=9.9,SNR=4.4
KMBO Kilima Mbogo 56.34 243 P **P 18 34 23.6 -1.8**
KMBO pmax pmax
comp=Z,2.0nm,0.8s
KMBO Kilima Mbogo 56.34 243 *e*P **P 18 34 25.3 -0.1**
comp=Z,11nm,1.5s,mb4.7
AQU L'Aquila 56.48 302 *e*P **P 18 34 28.2 +2.1**
AQU pmax pmax
comp=Z,16nm,1.1s,mb5.0
AQU L'Aquila 56.48 302 *e*P **P 18 34 28.2 +2.1**
comp=Z,16nm,1.1s,mb5.0
WTTA Wattenberg 56.49 308⇑ *i*P **P 18 34 25.1 -1.0**
comp=Z,14nm,1.2s,mb4.8
MOTA Moosalm 56.83 309⇑ *i*P **P 18 34 28.3 -0.2**
comp=Z,7.1nm,0.9s,mb4.7
BILL Bilibino 57.01 26⇑ *e*P **P 18 34 30.8 +1.4**
BILL *e* 18 36 34.7
BILL *e*S **S 18 42 20.0 -3.5**
BILL pmax pmax
comp=Z,23nm,1.7s,mb4.9
BILL MLR MLR
comp=Z,300nm,19.0s,MS4.4
BILL Bilibino 57.01 26 *e*P **P 18 34 29.9 +0.4**
comp=Z,26nm,1.4s,mb5.1
VAE Valguarnera 57.12 296 LR LR 19 01 05.9
comp=Z,175nm,19.6s,MS4.2,baz=341,slow=38
FETA Feichten 57.15 308⇑ *i*P **P 18 34 29.7 -1.1**
comp=Z,9.8nm,1.2s,mb4.7
GUMO Guam 57.19 94 LR LR 18 57 35.8
comp=Z,124nm,18.1s,MS4.1,slow=34
DAVA Damuels 57.65 309⇑ *i*P **P 18 34 33.6 -0.7**
comp=Z,19nm,1.1s,mb5.0
DAVOX Davos/Dischmat 57.77 308 LR LR 19 02 33.7
comp=Z,326nm,18.9s,MS4.5,baz=80,slow=39
BFO Black Forest 58.40 310 *e*P **P 18 34 40.3 +0.8**
BFO pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
BFO Black Forest 58.40 310 *e*P **P 18 34 40.3 +0.8**
comp=Z,3.6nm,0.9s,mb4.4
CDF Champ du Feu 59.06 311 *e*P **P 18 34 42.5 -1.6**
comp=Z,27nm,1.2s,mb4.9
CDF Champ du Feu 59.06 311 *e*P **P 18 34 42.5 -1.6**
CDF pmax pmax
comp=Z,13nm,1.2s,mb4.8
CDF Champ du Feu 59.06 311 *e*P **P 18 34 42.5 -1.6**
comp=Z,13nm,1.2s,mb4.8
ECH Echery 59.19 310 *e*P **P 18 34 44.9 -0.1**
ECH pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
ECH Echery 59.19 310 *e*P **P 18 34 44.9 -0.1**
comp=Z,4.9nm,1.0s,mb4.5
MEM Membach 59.29 313 P **P 18 34 45.6 0.0**
comp=Z,5.6nm,1.3s,mb4.4
WLF Walferdange 59.44 312 P **P 18 34 47.9 +1.1**
comp=Z,14nm,1.7s,mb4.7
HINF Hinteralfeld 59.49 310 *e*P **P 18 34 45.4 -1.7**
comp=Z,23nm,1.0s,mb4.8
HINF Hinteralfeld 59.49 310 *e*P **P 18 34 45.4 -1.7**
HINF pmax pmax
comp=Z,12nm,1.0s,mb4.9
HINF Hinteralfeld 59.49 310 *e*P **P 18 34 45.4 -1.7**
comp=Z,12nm,1.0s,mb4.9
HAU Haudompre 59.77 310 *e*P **P 18 34 47.3 -1.7**
HAU *e*MLR MLR
comp=Z,329nm,22.0s,MS4.1
HAU Haudompre 59.77 310 *e*P **P 18 34 47.3 -1.7**
HAU LR LR
comp=Z,330nm,22.0s,MS4.4
BCLA Clavier 59.77 313 P **P 18 34 49.2 +0.2**
comp=Z,4.2nm,1.3s,mb4.3
GIVF Givet 60.15 313 *e*P **P 18 34 50.5 -1.1**
LPG La Plagne 60.22 307 *e*P **P 18 34 51.1 -1.0**
comp=Z,25nm,1.0s,mb4.9
LPG La Plagne 60.22 307 *e*P **P 18 34 51.1 -1.0**
LPG pmax pmax
comp=Z,13nm,1.0s,mb4.9
LPG La Plagne 60.22 307 *e*P **P 18 34 51.1 -1.0**
comp=Z,13nm,1.0s,mb4.9
LPL La Plagne 60.22 307 *e*P **P 18 34 51.0 -1.2**
SBF Sospel 60.24 305 *e*P **P 18 34 50.2 -2.1**
DOU Dourbes 60.30 313 P **P 18 34 52.5 -0.2**
comp=Z,4.8nm,1.8s,mb4.2
CABF La Chapelle 60.33 309 *e*P **P 18 34 51.2 -1.7**
comp=Z,40nm,1.5s,mb4.9
CABF La Chapelle 60.33 309 *e*P **P 18 34 51.2 -1.7**
CABF pmax pmax
comp=Z,20nm,1.5s,mb4.9
CABF La Chapelle 60.33 309 *e*P **P 18 34 51.2 -1.7**
comp=Z,20nm,1.5s,mb4.9
SNF Seneffe 60.37 313 P **P 18 34 52.5 -0.6**
comp=Z,8.7nm,1.6s,mb4.5
MBDF Montbardon 60.43 307 *e*P **P 18 34 52.2 -1.4**
MEZF Maizieres J'vi 60.46 311 *e*P **P 18 34 52.4 -1.3**
BAIF Baives 60.55 313 *e*P **P 18 34 53.0 -1.3**
FRF La Foret Royal 60.88 305 *e*P **P 18 34 54.4 -2.3**
ORIF Oris-en-Rattie 60.98 307 *e*P **P 18 34 55.0 -2.4**
ORIF *e*MLR MLR
comp=Z,325nm,19.8s,MS4.2
SMRF Simiane la Rot 61.48 306 *e*P **P 18 34 59.2 -1.6**
comp=Z,62nm,1.5s,mb5.2
SMRF Simiane la Rot 61.48 306 *e*P **P 18 34 59.2 -1.6**
comp=Z,62nm,1.5s,mb5.5
KEST Kesra 61.54 296 P **P 18 35 01.4 +0.1**
comp=Z,1.7nm,0.7s,mb4.3,baz=262,slow=12,SNR=5.8
LOR Lormes 61.59 310 *e*P **P 18 34 59.2 -2.3**
LOR *e*MLR MLR
comp=Z,134nm,23.0s,MS3.7
LOR Lormes 61.59 310 *e*P **P 18 34 59.2 -2.3**
LOR pmax pmax
comp=Z,11nm,1.1s,mb4.9
LOR MLR MLR
comp=Z,130nm,23.0s,MS4.0
LOR Lormes 61.59 310 *e*P **P 18 34 59.2 -2.3**
comp=Z,11nm,1.1s,mb4.9
LOR LR LR
comp=Z,130nm,23.0s,MS4.0
SMF Signal de Mont 61.80 309 *e*P **P 18 35 00.8 -2.1**
comp=Z,35nm,1.1s,mb5.1
SMF Signal de Mont 61.80 309 *e*P **P 18 35 00.8 -2.1**
SMF pmax pmax
comp=Z,18nm,1.1s,mb5.1
SMF Signal de Mont 61.80 309 *e*P **P 18 35 00.8 -2.1**
comp=Z,18nm,1.1s,mb5.1
VIVF Saint-Julien-l 61.81 307 *e*P **P 18 35 01.0 -2.0**
comp=Z,7.3nm,0.6s,mb4.7
VIVF Saint-Julien-l 61.81 307 *e*P **P 18 35 01.0 -2.0**
VIVF pmax pmax
comp=Z,4.0nm,0.6s,mb4.7
VIVF Saint-Julien-l 61.81 307 *e*P **P 18 35 01.0 -2.0**
comp=Z,3.7nm,0.6s,mb4.7
SSF Saint Saulge 61.88 310 *e*P **P 18 35 01.4 -2.0**
comp=Z,28nm,1.1s,mb5.0
SSF Saint Saulge 61.88 310 *e*P **P 18 35 01.4 -2.0**
SSF pmax pmax
comp=Z,14nm,1.1s,mb5.0
SSF Saint Saulge 61.88 310 *e*P **P 18 35 01.4 -2.0**
comp=Z,14nm,1.1s,mb5.0
AVF Avril sur Loir 62.07 310 *e*P **P 18 35 02.7 -2.0**
comp=Z,24nm,1.1s,mb4.9
AVF Avril sur Loir 62.07 310 *e*P **P 18 35 02.7 -2.0**
AVF pmax pmax
comp=Z,12nm,1.1s,mb4.9
AVF Avril sur Loir 62.07 310 *e*P **P 18 35 02.7 -2.0**
comp=Z,12nm,1.1s,mb4.9
BGF Bois d'Agland 62.47 310 *e*P **P 18 35 05.4 -2.0**
MBWA Marble Bar 62.60 144 *e*P **P 18 35 07.3 -1.2**
comp=Z,13nm,1.0s,mb5.0
LASF Ste Croix 62.62 307 *e*P **P 18 35 06.8 -1.6**
comp=Z,39nm,1.5s,mb5.0
TCF Toulx Ste Croi 62.98 309 *e*P **P 18 35 09.2 -1.6**
comp=Z,76nm,1.3s,mb5.4
TCF Toulx Ste Croi 62.98 309 *e*P **P 18 35 09.2 -1.6**
TCF pmax pmax
comp=Z,38nm,1.3s,mb5.4
TCF Toulx Ste Croi 62.98 309 *e*P **P 18 35 09.2 -1.6**
comp=Z,38nm,1.3s,mb5.4
ESK Eskdalemuir 63.27 320 *e*P **P 18 35 10.6 -1.9**
ESK pmax pmax
comp=Z,20nm,1.2s,mb5.1
ESK Eskdalemuir 63.27 320 *i* P **P 18 35 12.1 -0.4**
ESK Eskdalemuir 63.27 320 *e*P **P 18 35 10.6 -1.9**
comp=Z,20nm,1.2s,mb5.1
FITZ Fitzroy Crossi 63.32 137 *e*P **P 18 35 12.8 -0.5**
comp=Z,5.8nm,0.6s,mb4.9
FITZ Fitzroy Crossi 63.32 137 LR LR 19 04 13.3
comp=Z,116nm,18.2s,MS4.1,baz=58,slow=38
CAF Calviac 63.54 308 *e*P **P 18 35 12.9 -1.6**
LDF La Druitiere 63.69 312 *e*P **P 18 35 13.5 -2.0**
comp=Z,32nm,0.8s,mb5.1
LDF La Druitiere 63.69 312 *e*P **P 18 35 13.5 -2.0**
LDF pmax pmax
comp=Z,16nm,0.8s,mb5.1
LDF La Druitiere 63.69 312 *e*P **P 18 35 13.5 -2.0**
comp=Z,16nm,0.8s,mb5.1
RJF Les Rejaudoux 63.77 309 *e*P **P 18 35 14.6 -1.4**
RJF *e*MLR MLR
comp=Z,217nm,21.2s,MS4.0
RJF Les Rejaudoux 63.77 309 *e*P **P 18 35 14.6 -1.4**
RJF LR LR
comp=Z,220nm,21.3s,MS4.3
FLN La Foliniere 63.86 313 *e*P **P 18 35 14.5 -2.1**
comp=Z,18nm,0.9s,mb4.8
FLN *e*MLR MLR
comp=Z,270nm,20.0s,MS4.1
FLN La Foliniere 63.86 313 *e*P **P 18 35 14.5 -2.1**
FLN pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
FLN MLR MLR
comp=Z,270nm,20.0s,MS4.4
FLN La Foliniere 63.86 313 *e*P **P 18 35 14.5 -2.1**
comp=Z,9.1nm,0.9s,mb4.8
FLN LR LR
comp=Z,270nm,20.0s,MS4.4
MTLF Montolieu 63.99 306 *e*P **P 18 35 15.8 -1.7**
GRR Gorron 64.22 312 *e*P **P 18 35 16.9 -2.1**
comp=Z,37nm,0.9s,mb5.1
GRR Gorron 64.22 312 *e*P **P 18 35 16.9 -2.1**
GRR pmax pmax
comp=Z,18nm,0.9s,mb5.1
GRR Gorron 64.22 312 *e*P **P 18 35 16.9 -2.1**
comp=Z,18nm,0.9s,mb5.1
MFF Saint Martin d 64.40 310 *e*P **P 18 35 18.2 -1.9**
comp=Z,21nm,1.1s,mb4.8
MFF Saint Martin d 64.40 310 *e*P **P 18 35 18.2 -1.9**
MFF pmax pmax
comp=Z,11nm,1.1s,mb4.8
MFF Saint Martin d 64.40 310 *e*P **P 18 35 18.2 -1.9**
comp=Z,11nm,1.1s,mb4.8
SGMF Saint Gilles 65.33 313 *e*P **P 18 35 24.4 -1.8**
comp=Z,29nm,0.9s,mb5.0
SGMF Saint Gilles 65.33 313 *e*P **P 18 35 24.4 -1.8**
SGMF pmax pmax
comp=Z,14nm,0.9s,mb5.0
SGMF Saint Gilles 65.33 313 *e*P **P 18 35 24.4 -1.8**
comp=Z,14nm,0.9s,mb5.0
EPF Esparros 65.38 307 *e*P **P 18 35 24.7 -1.9**
ROSF Rostrenen 65.75 313 *e*P **P 18 35 27.2 -1.7**
comp=Z,39nm,0.9s,mb5.1
ROSF Rostrenen 65.75 313 *e*P **P 18 35 27.2 -1.7**
ROSF pmax pmax
comp=Z,19nm,0.9s,mb5.1
ROSF Rostrenen 65.75 313 *e*P **P 18 35 27.2 -1.7**
comp=Z,19nm,0.9s,mb5.1
QUIF Quistinic 65.83 313 *e*P **P 18 35 27.2 -2.2**
ETSF Etsaut 66.04 307 *e*P **P 18 35 29.5 -1.4**
comp=Z,7.1nm,0.6s,mb4.6
ETSF Etsaut 66.04 307 *e*P **P 18 35 29.5 -1.4**
ETSF pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
ETSF Etsaut 66.04 307 *e*P **P 18 35 29.5 -1.4**
comp=Z,3.5nm,0.6s,mb4.6
SUMG Summit 68.48 344 *i* P **P 18 35 45.5 -0.3**
comp=Z,5.7nm,1.0s,mb4.6
ESDC Sonseca Array 69.70 305 P **P 18 35 53.0 -0.9**
comp=Z,3.2nm,0.8s,mb4.3,baz=53,slow=6.3,SNR=17
ESDC LR LR 19 10 11.7
comp=Z,108nm,18.3s,MS4.1,baz=110,slow=39
ESLA Sonseca Array 69.70 305 *e*P **P 18 35 54.0 0.0**
TAM Tamanrasset 69.92 285 *e*P **P 18 35 54.7 -0.9**
TAM pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
TAM Tamanrasset 69.92 285 *e*P **P 18 35 54.7 -0.9**
comp=Z,3.9nm,0.9s,mb4.3
WRA Warramunga Arr 70.04 131 P **P 18 35 55.6 -0.6**
comp=Z,4.9nm,0.5s,mb4.7,baz=327,slow=6.6,SNR=103
WRA Warramunga Arr 70.04 131 P **P 18 35 55.6 -0.6**
WRA pmax pmax
comp=Z,5.0nm,0.5s
WRAB Tennant Creek 70.04 131 *e*P **P 18 35 54.1 -2.1**
WRAB pmax pmax
comp=Z,62nm,1.9s,mb5.2
WRAB Tennant Creek 70.04 131 *e*P **P 18 35 54.1 -2.1**
comp=Z,62nm,1.9s,mb5.2
MVO Moncorvo 71.14 307 *e*P **P 18 36 03.6 +0.8**
comp=Z,19nm,1.7s,mb4.8
PVIS Viseu 71.93 307 *e*P **P 18 36 08.2 +0.7**
comp=Z,28nm,1.6s,mb5.0
COLD Coldfoot 72.24 20 *e*P **P 18 36 06.4 -2.5**
comp=Z,8.2nm,0.8s,mb4.7
ASAR Alice Springs 72.51 134 P **P 18 36 10.6 -0.5**
comp=Z,4.7nm,0.8s,mb4.5,baz=320,slow=5.9,SNR=80
ASAR Alice Springs 72.51 134 P **P 18 36 10.6 -0.5**
ASAR pmax pmax
comp=Z,5.0nm,0.8s
PBAR Barrancos 72.52 304 *e*P **P 18 36 11.6 +0.5**
comp=Z,39nm,1.3s,mb5.2
TTA Tatalina 73.21 25 *e*P **P 18 36 15.0 +0.3**
MDT Midelt 73.26 298 LR LR 19 13 11.9
comp=Z,136nm,18.2s,MS4.3,baz=142,slow=40
PVAQ Vaqueiros 73.35 304 *e*P **P 18 36 16.2 +0.2**
comp=Z,40nm,1.0s,mb5.3
PBDV Barranco-do-Ve 73.58 304 *e*P **P 18 36 17.3 -0.1**
comp=Z,82nm,2.1s,mb5.3
BPAW Bear Paw Mtn. 74.14 22 *e*P **P 18 36 18.8 -1.4**
comp=Z,15nm,1.3s,mb4.8
KTH Kantishna Hill 74.53 23 *e*P **P 18 36 21.1 -1.3**
comp=Z,18nm,1.3s,mb4.8
PPLA Purkeypile 74.56 24 *e*P **P 18 36 22.0 -0.6**
comp=Z,34nm,1.6s,mb5.0
COLA College 74.57 21 *e*P **P 18 36 22.5 -0.2**
COLA pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
COLA College 74.57 21 *e*P **P 18 36 22.5 -0.2**
comp=Z,8.9nm,0.8s,mb4.8
FORT Forrest 74.73 143 *e*P **P 18 36 22.8 -1.2**
comp=Z,8.1nm,0.8s,mb4.7
INK Inuvik 75.50 14 *e*P **P 18 36 28.0 0.0**
INK pmax pmax
comp=Z,14nm,1.3s
INK Inuvik 75.50 14 *e*P **P 18 36 28.0 0.0**
comp=Z,14nm,1.3s,mb4.7
PMR Palmer 76.50 24 *e*P **P 18 36 33.6 -0.2**
PMR pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
PMR Palmer 76.50 24 *e*P **P 18 36 33.6 -0.1**
comp=Z,8.0nm,0.6s,mb4.8
EGAK Eagle 76.55 19 *e*P **P 18 36 34.3 +0.3**
comp=Z,42nm,1.9s,mb5.0
DAWY Dawson 77.59 18 *e*P **P 18 36 40.0 +0.1**
TOA0 Torodi Ar. Sit 77.79 278 *e*P **P 18 36 38.7 -3.1**
TORD Torodi Ar. Bea 77.79 278 P **P 18 36 39.7 -2.1**
comp=Z,3.2nm,0.7s,mb4.4,baz=48,slow=4.8,SNR=35
TORD LR LR 19 15 33.6
comp=Z,206nm,18.4s,MS4.5,baz=40,slow=39
TORD Torodi Ar. Bea 77.79 278 P **P 18 36 39.7 -2.1**
TORD LR LR 19 15 33.6
OHAK Old Harbor 77.98 28 *e*P **P 18 36 43.1 +0.9**
comp=Z,22nm,1.3s,mb4.9
CTA Charters Tower 78.20 123 *e*P **P 18 36 43.9 0.0**
comp=Z,14nm,0.9s,mb4.9
CTA Charters Tower 78.20 123 P **P 18 36 43.3 -0.5**
comp=Z,14nm,0.9s,mb4.9,baz=292,slow=5.8,SNR=8.1
CTA Charters Tower 78.20 123 P **P 18 36 43.3 -0.6**
CTA pmax pmax
comp=Z,14nm,0.9s
CTAO Charters Tower 78.20 123 *e*P **P 18 36 44.1 +0.2**
comp=Z,982nm,0.8s
BMRM Bremner River 78.45 22 *e*P **P 18 36 43.9 -0.8**
comp=Z,6.8nm,0.9s,mb4.6
BBOO Buckleboo 80.59 139 *e*P **P 18 36 55.2 -1.5**
comp=Z,14nm,0.8s,mb4.9
HYT Haines Junctio 80.72 20 *e*P **P 18 37 00.8 +3.7**
STKA Stephens Creek 83.13 135 *e*P **P 18 37 08.7 -1.4**
comp=Z,8.7nm,0.9s,mb4.8
STKA Stephens Creek 83.13 135 P **P 18 37 07.2 -2.9**
comp=Z,12nm,0.9s,mb4.9,baz=300,slow=6.0,SNR=15
STKA LR LR 19 15 25.2
comp=Z,174nm,19.9s,MS4.4,baz=263,slow=37
STKA Stephens Creek 83.13 135 *e*P **P 18 37 07.9 -2.1**
comp=Z,2.6nm,0.9s,mb4.3
BOSA Boshof 83.30 230 P **P 18 37 09.3 -1.7**
comp=Z,3.0nm,0.5s,mb4.6,baz=0.6,slow=8.2,SNR=14
BOSA LR LR 19 08 51.3
comp=Z,138nm,21.7s,MS4.3,baz=259,slow=32
BOSA Boshof 83.30 230 P **P 18 37 09.3 -1.7**
BOSA pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
BOSA MLR MLR
comp=Z,138nm,21.7s,MS4.3
BOSA Boshof 83.30 230 *e*P **P 18 37 06.6 -4.4**
YKA Yellowknife Ar 84.07 9 P **P 18 37 13.3 -1.2**
comp=Z,4.0nm,0.9s,mb4.6,baz=339,slow=5.1,SNR=14
YKA LR LR 19 19 25.6
comp=Z,8.2nm,18.5s,MS3.1,baz=160,slow=39
YKA Yellowknife Ar 84.07 9 P **P 18 37 13.3 -1.2**
YKA pmax pmax
comp=Z,4.0nm,0.9s
YKA MLR MLR
comp=Z,8.0nm,18.5s
RMQ Roma 84.10 126 *e*P **P 18 37 15.5 +0.3**
comp=Z,35nm,0.9s,mb5.5
CMSA Cobar Meteorol 85.42 132 *e*P **P 18 37 21.0 -0.7**
DBIC Dimbokro 86.65 276 P **P 18 37 26.8 -1.5**
comp=Z,8.7nm,0.8s,mb5.0,baz=55,slow=6.3,SNR=6.4
DBIC LR LR 19 20 27.0
comp=Z,188nm,18.9s,MS4.5,baz=136,slow=39
DBIC Dimbokro 86.65 276 P **P 18 37 26.8 -1.5**
DBIC pmax pmax
comp=Z,9.0nm,0.8s
DBIC MLR MLR
comp=Z,188nm,18.9s
DBIC Dimbokro 86.65 276 *e*P **P 18 37 28.4 +0.1**
comp=Z,20nm,1.1s,mb5.3
KIC Kosan Boka 86.72 275 *e*P **P 18 37 27.6 -1.0**
comp=Z,21nm,0.9s,mb5.4
ARPS Mount Arapiles 86.72 138 *e*P **P 18 37 27.3 -0.7**
comp=Z,35nm,0.9s,mb5.6
TIC Toumodi 86.80 276 *e*P **P 18 37 28.3 -0.7**
comp=Z,30nm,1.1s,mb5.4
LIC Lamto 87.03 275 *e*P **P 18 37 27.0 -3.2**
comp=Z,74nm,1.4s,mb5.4
LIC *e*MLR MLR
comp=Z,284nm,22.2s,MS4.3
LIC Lamto 87.03 275 *e*P **P 18 37 30.0 -0.2**
comp=Z,68nm,1.4s,mb5.7
LIC Lamto 87.03 275 *e*P **P 18 37 27.0 -3.2**
comp=Z,37nm,1.4s,mb5.4
LIC LR LR
comp=Z,140nm,22.3s,MS4.3
TOO Toolangi 89.38 136 *e*P **P 18 37 40.2 -0.5**
SCHQ Schefferville 89.87 344 LR LR 19 26 32.6
comp=Z,92nm,20.1s,MS4.2,baz=110,slow=41
FFC Flin Flon 92.99 4 *i* P **P 18 37 58.6 +1.2**
ULM Lac du Bonnet 97.70 1 LR LR 19 23 31.1
comp=Z,102nm,21.9s,MS4.3,baz=5.8,slow=36
EGMT Eagleton 98.79 10 *e*PKKPbc PKKPbc 18 54 51.5 -0.2
LHS Liberty Hill 112.21 348 *e*PKKPbc PKKPbc 18 54 07.5 -3.3
WMOK Wichita Mounta 113.09 4 *e*PKKPbc PKKPbc 18 54 08.6 +0.8
GDL2 Guadalupe Moun 115.08 9 *e*PP PP 18 44 21.2 -2.5
TXAR Lajitas Array 118.00 9 PKP PKPdf 18 43 30.0 -1.3
comp=Z,0.1nm,0.7s,baz=117,slow=21,SNR=3.6
QSPA South Pole Qui 122.20 180 PKP PKPdf 18 43 36.1 -1.6
comp=Z,6.1nm,0.7s,baz=188,slow=0.7,SNR=28
OTAV Otavalo 144.10 332 *e*PKPdf PKPdf 18 44 20.6 0.0
CPUP Villa Florida 147.04 271 PKPbc PKPbc 18 44 23.8 -3.5
comp=Z,5.9nm,0.8s,baz=58,slow=3.9,SNR=14
LPAZ La Paz 151.11 297 PKP PKPdf 18 44 33.3 +1.3
comp=Z,3.3nm,0.7s,baz=28,slow=4.5,SNR=8.7
LPAZ PKPbc PKPbc 18 44 38.2 +0.4
comp=Z,3.3nm,0.7s,baz=27,slow=3.4,SNR=15
LPAZ La Paz 151.11 297 PKIKP PKPdf 18 44 33.3 +1.2
LPAZ 18 44 38.3
LPAZ pmax pmax
comp=Z,3.0nm,0.7s
LPAZ La Paz 151.11 297 *e*PKPdf PKPbc 18 44 36.3 -1.6
TRQA Tornquist 152.82 249 *e*PKPdf PKPbc 18 44 40.0 -1.1

IDC ***08*** *18:31:18.4±0.8, 33°.07N×92°.01E, h0km, mb3.9/11, mb1 4.0/15, mb1mx3.8/31, mbtmp3.9/15, ML3.5/4, Error ellipse: s-maj=29.7km s-min=15.2km az=52.0*
ISCJB ***08*** *18:31:18.1±4.6, 33°.18N±0°.08×92°.22E±0°.09, h11km±30km, mb3.9/11, Error ellipse: s-maj=15.5km s-min=11.0km az=38.1*
NEIC ***08*** *18:31:19.9±0.7, 33°.12N×92°.12E, h10km, mb3.9/1, Error ellipse: s-maj=13.0km s-min=10.9km az=48.0*
BJI ***08*** *18:31:25.8, 33°.64N×92°.40E, h10km, mb3.8/1, ML4.0/2*
ISC 08 18:31:20.2±4.6, 33°.15N±0°.08×92°.16E±0°.09, h12km±30km, n24, σ0°88/23, mb3.9/11, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTA	**Gaotai**	**8.78**	**42**	*e*P	**Pn**	**18 33 25.8**	**-1.2**
GTA				pP		18 33 30.5	
GTA				sP		18 33 33.3	
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MK31	**Makanchi Array**	**15.57**	**334**	*e*Pn	**Pn**	**18 34 57.2**	**-2.1**
MKAR	**Makanchi Array**	**15.57**	**334**	Pn	**Pn**	**18 34 58.6**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=129,slow=14,SNR=4.9						
CMAR	**Chiang Mai Arr**	**15.85**	**156**	Pn	**Pn**	**18 35 02.4**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=332,slow=12,SNR=9.8						
UCH	**Uchtor**	**16.63**	**308**	*e*Pn	**Pn**	**18 35 14.5**	**+1.5**
AAK	**Ala-Archa**	**16.83**	**309**	Pn	**Pn**	**18 35 16.2**	**+0.7**
	comp=Z,0.0nm,0.3s,baz=190,slow=12,SNR=1.9						
EKS2	**Erkin-Say**	**17.31**	**309**	*e*Pn	**Pn**	**18 35 22.0**	**+0.4**
SONM	**Songino Array**	**18.18**	**32**	P	**Pn**	**18 35 35.0**	**+2.6**
	comp=Z,0.4nm,0.3s,baz=215,slow=12,SNR=13						
ULN	**Ulaanbaatar**	**18.50**	**33**	*e*P	**Pn**	**18 35 37.1**	**+0.8**
KBL	**Kabul**	**19.25**	**281**	*e*P	**Pn**	**18 35 46.0**	**+0.6**
KURK	**Kurchatov**	**20.18**	**334**	P	**P**	**18 35 54.5**	**0.0**
	comp=Z,2.2nm,0.8s,baz=142,slow=11,SNR=10.0						
ZALV	**Zalesovo Beam**	**21.44**	**348**	P	**P**	**18 36 07.7**	**-0.3**
	comp=Z,3.4nm,0.9s,mb3.7,baz=173,slow=11,SNR=8.6						
BVAR	**Borovoye Array**	**25.27**	**328**	P	**P**	**18 36 46.1**	**0.0**
	comp=Z,1.1nm,0.6s,mb3.5,baz=129,slow=12,SNR=6.3						
ABKAR	**Akbulak array**	**28.82**	**314**	*e*P	**P**	**18 37 18.0**	**0.0**
	comp=Z,1.9nm,0.9s,mb3.8						
AKTK	**Aktyubinsk**	**30.41**	**315**	P	**P**	**18 37 32.4**	**+0.3**
AKTO	**Aktyubinsk**	**30.41**	**315**	P	**P**	**18 37 32.4**	**+0.3**
	comp=Z,1.7nm,0.8s,mb3.8,baz=120,slow=10,SNR=5.8						
BRTR	**Keskin Array B**	**46.82**	**296**	P	**P**	**18 39 49.1**	**-0.7**
	comp=Z,1.3nm,0.7s,mb4.0,baz=100,slow=6.7,SNR=8.9						
EIL	**Elat**	**48.44**	**282**	P	**P**	**18 40 02.2**	**-0.3**
	comp=Z,4.1nm,0.8s,mb4.5,baz=162,slow=19,SNR=2.6						
FINES	**FINESS Array B**	**50.16**	**325**	P	**P**	**18 40 15.0**	**-0.2**
	comp=Z,2.5nm,0.8s,mb4.3,baz=81,slow=8.6,SNR=6.1						
WRA	**Warramunga Arr**	**66.40**	**136**	P	**P**	**18 42 10.0**	**+0.7**
	comp=Z,1.5nm,0.8s,mb4.1,baz=324,slow=6.5,SNR=9.0						
ASAR	**Alice Springs**	**69.10**	**139**	P	**P**	**18 42 26.8**	**+0.6**
	comp=Z,2.5nm,0.9s,mb4.1,baz=329,slow=6.7,SNR=17						
YKA	**Yellowknife Ar**	**82.28**	**12**	P	**P**	**18 43 40.8**	**-0.3**
	comp=Z,0.8nm,0.7s,mb3.7,baz=327,slow=6.3,SNR=4.1						
TORD	**Torodi Ar. Bea**	**83.32**	**281**	P	**P**	**18 43 46.4**	**-1.1**
	comp=Z,0.5nm,0.5s,mb3.8,baz=53,slow=4.6,SNR=8.4						
DZM	**Mont Dzumac**	**89.57**	**117**	*e*LR	LR	18 43 23.5	
	comp=Z,615nm,24.7s						

IDC ***08*** *18:35:11.6±0.7, 33°.76S×178°.76W, h0km, mb4.6/10, mb1 4.7/11, mb1mx4.5/19, mbtmp4.6/11, ML4.4/1, MS3.9/4, Ms1 3.9/4, ms1mx3.5/20, Error ellipse: s-maj=25.1km*

s-min=22.8km az=158.0
*NEIC **08** 18:35:17.2±0.6, 34°.03S×178°.77W, h35km, mb4.8/11, Error ellipse: s-maj=15.0km s-min=12.4km az=119.0*
*ISCJB **08** 18:35:20.9±2.7, 34°.05S±0°.08×179°.0W±0°.2, h74km±20km, mb4.6/19, Error ellipse: s-maj=22.9km s-min=13.0km az=172.0*
ISC 08 18:35:21.5±2.4, 34°.02S±0°.08×178°.9W±0°.2, h67km±17km, n77, σ1°.20/39, mb4.6/19, 1D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.83**	**11**	Sn	**Sn**	**18 37 06.9**	**-19**
	95nm,0.3s,baz=273,slow=23,SNR=3.3						
URZ	**Urewera**	**5.31**	**216**	Pn	**Pn**	**18 36 35.7**	**-2.5**
	12nm,0.3s,baz=39,slow=6.9,SNR=67						
URZ				Sn	**Sn**	**18 37 39.6**	**+1.6**
	17nm,0.3s,baz=159,slow=21,SNR=12						
OUZ	**Omahuta**	**6.28**	**257**	*e*Pn	**Pn**	**18 36 51.8**	**+0.3**
	109nm,1.1s						
RPZ	**Rata Peaks**	**12.43**	**216**	Pn	**Pn**	**18 38 10.9**	**-4.5**
	1.6nm,0.3s,baz=86,slow=2.2,SNR=8.1						
RPZ				Sn	**Sn**	**18 40 21.9**	**-10**
	1.9nm,0.3s,baz=259,slow=23,SNR=9.8						
MSVF	**Nonsavu**	**16.44**	**350**	*e*P	**Pn**	**18 38 59.0**	**-8.9**
	12nm,0.9s						
DZM	**Mont Dzumac**	**17.54**	**309**	*e*Pn	**Pn**	**18 39 22.0**	**+0.5**
	57nm,1.1s						
EIDS	**Eidsvold**	**27.37**	**280**	*e*P	**P**	**18 41 01.7**	**+1.3**
CMSA	**Cobar Meteorol**	**29.77**	**265**	*e*P	**P**	**18 41 24.1**	**+2.4**
HNR	**Honiara**	**31.23**	**317**	*e*P	**P**	**18 41 36.6**	**+1.9**
	234nm,1.2s,mb5.8						
STKA	**Stephens Creek**	**33.06**	**263**	*e*P	**P**	**18 41 51.3**	**+0.6**
	4.7nm,1.4s,mb4.1						
STKA	**Stephens Creek**	**33.06**	**263**	P	**P**	**18 41 51.0**	**+0.3**
	4.7nm,1.0s,mb4.3,baz=92,slow=9.0,SNR=5.3						
STKA	**Stephens Creek**	**33.06**	**263**	*e*P	**P**	**18 41 50.8**	**+0.1**
	3.5nm,1.4s,mb4.0						
CTA	**Charters Tower**	**33.79**	**285**	*e*P	**P**	**18 41 58.1**	**+0.9**
	6.8nm,0.6s,mb4.7						
CTA	**Charters Tower**	**33.79**	**285**	P	**P**	**18 41 57.2**	**+0.1**
	8.2nm,0.7s,mb4.7,baz=107,slow=9.1,SNR=14						
CTA	**Charters Tower**	**33.79**	**285**	P	**P**	**18 41 57.2**	**+0.1**
CTAO	**Charters Tower**	**33.79**	**285**	*e*P	**P**	**18 41 57.1**	**-0.1**
	60nm,1.5s,mb5.2						
BBOO	**Buckleboo**	**37.37**	**259**	*e*P	**P**	**18 42 27.6**	**-0.1**
	5.5nm,0.9s,mb4.5						
ASAR	**Alice Springs**	**42.27**	**271**	P	**P**	**18 43 08.1**	**-0.3**
	16nm,0.8s,mb4.8,baz=112,slow=7.5,SNR=162						
WRAB	**Tennant Creek**	**43.58**	**276**	*e*P	**P**	**18 43 16.8**	**-2.2**
	32nm,1.1s,mb5.0						
WRA	**Warramunga Arr**	**43.59**	**276**	P	**P**	**18 43 17.7**	**-1.4**
	16nm,0.7s,mb4.8,baz=118,slow=7.6,SNR=116						
WRA				LR	LR	18 58 49.6	
	comp=Z,145nm,21.5s,baz=150,slow=32						
FORT	**Forrest**	**44.47**	**259**	*e*P	**P**	**18 43 25.6**	**-0.5**
	20nm,0.7s,mb5.0						
CASY	**Casey**	**51.60**	**209**	*e*P	**P**	**18 44 22.0**	**+1.5**
CASY	**Casey**	**51.60**	**209**	*e*P	**P**	**18 44 21.7**	**+1.1**
	8.7nm,0.8s,mb4.8						
FITZ	**Fitzroy Crossi**	**51.67**	**273**	*e*P	**P**	**18 44 21.2**	**-0.6**
	12nm,0.7s,mb5.0						
FITZ	**Fitzroy Crossi**	**51.67**	**273**	P	**P**	**18 44 21.2**	**-0.6**
	7.1nm,0.6s,mb4.8,baz=183,slow=10,SNR=15						
NWAO	**Narrogin (SRO)**	**52.47**	**252**	P	**P**	**18 44 26.3**	**-1.2**
	15nm,1.0s,mb5.0,baz=153,slow=8.4,SNR=7.0						
NWAO	**Narrogin (SRO)**	**52.47**	**252**	*e*P	**P**	**18 44 26.7**	**-0.8**
	3.4nm,0.4s,mb4.7						
MBWA	**Marble Bar**	**55.14**	**267**	P	**P**	**18 44 46.2**	**-0.9**
	22nm,1.4s,mb5.0						
QSPA	**South Pole Qui**	**56.10**	**180**	P	**P**	**18 44 55.4**	**+2.1**
	6.2nm,1.0s,mb4.6,baz=43,slow=5.3,SNR=6.3						
QSPA	**South Pole Qui**	**56.10**	**180**	*e*P	**P**	**18 44 55.2**	**+1.9**
	18nm,1.1s,mb5.0						
QSPA				*e*pP	pP	18 45 06.3	-4.4
QSPA				sP	sP	18 45 14.1	-4.1
MAW	**Mawson**	**68.66**	**201**	*e*P	**P**	**18 46 16.9**	**-0.3**
	2.1nm,1.1s,mb3.9						
SYO	**Syowa Base**	**73.43**	**194**	||*e*P	**P**	**18 46 45.0**	**-1.0**
MJAR	**Matsushiro Arr**	**80.78**	**326**	P	**P**	**18 47 28.0**	**+0.4**
	0.5nm,0.5s,mb3.6,baz=174,slow=2.8,SNR=4.7						
MJAR				LR	LR	19 17 17.3	
	comp=Z,52nm,18.5s,baz=320,slow=31						
KSRS	**Korea Array**	**86.60**	**320**	P	**P**	**18 47 56.2**	**-1.0**
	0.9nm,0.8s,mb3.8,baz=128,slow=5.0,SNR=5.6						
KSRS				LR	LR	19 23 12.1	
	comp=Z,31nm,18.2s,baz=240,slow=33						
PETK	**Petropavlovsk-**	**89.12**	**346**	P	**P**	**18 48 07.8**	**-1.1**
	8.8nm,1.0s,mb4.8,baz=196,slow=4.2,SNR=4.7						
MDJ	**Mudanjiang**	**91.16**	**326**	*e*P	**P**	**18 48 18.9**	**+0.3**
	2.6nm,0.4s,mb4.7						
NVAR	**Mina Array Bea**	**91.41**	**43**	P	**P**	**18 48 21.3**	**+1.4**
	0.3nm,0.6s,mb3.6,baz=213,slow=6.5,SNR=3.0						
PDAR	**Pinedale Array**	**99.28**	**44**	LR	LR	19 28 33.6	
	comp=Z,107nm,18.7s,baz=128,slow=32						
MKAR	**Makanchi Array**	**119.45**	**309**	PKP	PKPdf	18 54 02.4	-0.6
	1.7nm,0.9s,baz=68,slow=2.4,SNR=8.1						
ZALV	**Zalesovo Beam**	**120.17**	**317**	PKP	PKPdf	18 54 02.9	-1.1
	0.7nm,0.4s,baz=147,slow=3.0,SNR=5.8						
KURK	**Kurchatov**	**122.94**	**312**	PKP	PKPdf	18 54 08.1	-1.3
	3.3nm,0.6s,baz=119,slow=1.8,SNR=24						
UCH	**Uchtor**	**123.28**	**302**	*e*PKPdf	PKPdf	18 54 10.6	+0.2
BVAR	**Borovoye Array**	**128.39**	**314**	PKP	PKPdf	18 54 18.5	-1.4
	2.4nm,0.6s,baz=96,slow=1.8,SNR=16						
ABKAR	**Akbulak array**	**134.59**	**308**	*e*PKPdf	PKPdf	18 54 31.9	+0.2
AKTK	**Aktyubinsk**	**135.88**	**310**	PKP	PKPdf	18 54 33.3	-0.7
AKTO	**Aktyubinsk**	**135.88**	**310**	PKP	PKPdf	18 54 33.3	-0.7
	2.3nm,0.6s,baz=118,slow=4.8,SNR=11						
ARCES	**ARCESS Array B**	**141.93**	**346**	PKhKP		18 54 37.6	
	3.3nm,0.8s,baz=39,slow=7.8,SNR=2.9						
GNI	**Garni**	**144.90**	**293**	PKP	PKPdf	18 54 49.6	-1.1
	2.6nm,0.3s,baz=34,slow=14,SNR=4.8						
JOF	**Joensuu**	**145.44**	**336**	*e*p	PKPdf	18 54 47.9	-3.0
	17nm,0.9s						
JOF	**Joensuu**	**145.44**	**336**	*e*p	PKPdf	18 54 47.9	-3.0
	17nm,0.9s						
KIV	**Kislovodsk**	**146.48**	**300**	*e*PKPdf	PKPdf	18 54 53.6	+0.3
KAF	**Kangasniemi**	**147.64**	**338**	*e*p	PKPdf	18 54 55.0	+0.4
	15nm,0.9s						
KAF	**Kangasniemi**	**147.64**	**338**	*e*p	PKPdf	18 54 55.0	+0.4
	15nm,0.9s						
FINES	**FINESS Array B**	**148.22**	**337**	PKPbc	PKPbc	18 54 57.6	-1.3
	14nm,0.8s,baz=42,slow=3.6,SNR=38						
ASF	**Jabal al Asfar**	**150.02**	**277**	PKPbc	PKPbc	18 55 04.0	-0.5
	4.9nm,1.0s,baz=26,slow=2.2,SNR=6.4						
EIL	**Elat**	**150.98**	**271**	PKPbc	PKPbc	18 55 06.5	-0.3
	9.3nm,1.0s,baz=345,slow=1.4,SNR=7.4						
MMAI	**Mount Meron Ar**	**151.44**	**278**	PKPbc	PKPbc	18 55 08.4	+0.6
	4.9nm,0.6s,baz=78,slow=7.8,SNR=12						
LIC	**Lamto**	**151.77**	**167**	*e*PKP1	PKPab	18 55 19.3	+1.3
	64nm,1.3s						
KIC	**Kosan Boka**	**151.96**	**168**	*e*PKP1	PKPab	18 55 19.6	+0.8
	64nm,1.5s						
IZAR	**Zarasai**	**152.17**	**329**	*e*P	PKPbc	18 55 08.0	-0.7
IZAR				AMB	AMB	18 55 10.3	
	comp=Z,5.7nm,0.8s						
NOA	**NORSAR Array B**	**152.18**	**349**	PKPbc	PKPbc	18 55 07.1	-1.4
	comp=Z,3.0nm,0.8s,baz=14,slow=4.1,SNR=7.3						
NOA	**NORSAR Array B**	**152.18**	**349**	PKPbc	PKPbc	18 55 07.1	-1.4
TIC	**Toumodi**	**152.19**	**167**	*e*PKP1	PKPab	18 55 20.2	+0.5
	comp=Z,280nm,2.2s						
IDID	**Didziasalis**	**152.24**	**328**	*e*P	PKPbc	18 55 08.8	0.0
IDID				AMB	AMB	18 55 10.5	
	comp=Z,6.3nm,1.0s						
DBIC	**Dimbokro**	**152.24**	**167**	PKPbc	PKPab	18 55 20.4	+0.4
	comp=Z,1.9nm,0.3s,baz=146,slow=6.5,SNR=7.3						
ISAL	**Salakas**	**152.34**	**329**	*e*P	PKPbc	18 55 08.7	-0.4
ISAL				AMB	AMB	18 55 10.8	
	comp=Z,3.5nm,1.2s						
IIGN	**Ignalina**	**152.44**	**328**	*e*P	PKPbc	18 55 09.2	0.0
IIGN				AMB	AMB	18 55 11.0	
	comp=Z,5.6nm,0.8s						
NACGM	**Naroch**	**152.48**	**327**	*e*	PKPbc	18 55 06.0	-3.4
BR131	**Keskin Array S**	**153.43**	**292**	*e*PKPdf	PKPdf	18 55 04.5	+0.2
BR131				*e*PKPbc	PKPbc	18 55 11.7	-0.3
BRTR	**Keskin Array B**	**153.43**	**292**	PKPbc	PKPbc	18 55 11.8	-0.2
	comp=Z,2.4nm,0.5s,baz=140,slow=3.5,SNR=15						
AKASG	**Malin Array Be**	**153.57**	**318**	PKPbc	PKPbc	18 55 10.9	-1.0
	comp=Z,8.2nm,0.8s,baz=64,slow=2.1,SNR=4.2						
KIEV	**Kiev**	**153.58**	**318**	*e*PKPdf	PKPbc	18 55 09.7	-2.2
STHS	**Stebnicka Huta**	**158.57**	**322**	*e*PKP	PKPab	18 55 41.2	-5.0
CRVS	**Cervenica-Dubn**	**158.77**	**321**	*e*PKP	PKPab	18 55 43.1	-4.0
TORD	**Torodi Ar. Bea**	**159.22**	**182**	PKP	PKPdf	18 55 11.4	-1.2
	comp=Z,1.0nm,1.2s,baz=228,slow=1.7,SNR=2.7						
TORD				PKPab	PKPab	18 55 50.8	+1.1
	comp=Z,1.7nm,1.2s,baz=175,slow=3.5,SNR=4.6						
CLL	**Collm**	**160.66**	**337**	*i* PKPab	PKPab	18 55 52.4	-2.8
	comp=Z,8.0nm,1.2s						
BRG	**Berggiesshubel**	**160.71**	**335**	*e*P	PKPab	18 55 53.3	-2.1
	comp=Z,3.3nm,1.0s						

*CSEM **08** 18:37:48.3, 37°.88N×21°.46E, h4km, ML3.6/8, After THE*
THE 08 18:37:48.3, 37°.88N×21°.46E, h4km±2km, ML3.6/8, Error ellipse: s-maj=2.0km s-min=0.6km az=171.0, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.48**	**33**	P	Pg	18 37 57.9	+0.4
UPR				S	Sg	18 38 04.9	+1.2
UPR	**University Cam**	**0.48**	**33**	P	Pg	18 37 57.9	+0.4
UPR				S	Sg	18 38 04.9	+1.2
LAKA	**Lakka**	**0.55**	**49**	P	Pg	18 37 58.6	-0.2
LAKA				S	Sg	18 38 06.2	+0.3
LAKA	**Lakka**	**0.55**	**49**	P	Pg	18 37 58.6	-0.2
LAKA				S	Sg	18 38 06.2	+0.3
KFL	**Anninata**	**0.57**	**293**	P	Pg	18 37 59.3	0.0
EFP	**Efpalio**	**0.65**	**33**	P	Pg	18 38 00.1	-0.7
EFP				S	Sg	18 38 10.3	+1.1
EFP	**Efpalio**	**0.65**	**33**	P	Pg	18 38 00.1	-0.7
EFP				S	Sg	18 38 10.3	+1.1
TRIZ	**Trizonia**	**0.69**	**45**	P	Pg	18 38 00.7	-0.8
TRIZ				S	Sg	18 38 11.8	+1.4
TRIZ	**Trizonia**	**0.69**	**45**	P	Pg	18 38 00.7	-0.8
TRIZ				S	Sg	18 38 11.8	+1.4
GUR	**Goura**	**0.70**	**85**	P	Pg	18 38 01.4	-0.4
GUR				S	Sg	18 38 11.7	+0.8
GUR	**Goura**	**0.70**	**85**	P	Pg	18 38 01.4	-0.4
GUR				S	Sg	18 38 11.7	+0.8
KALE	**Kalithea**	**0.74**	**47**	P	Pg	18 38 01.7	-0.8
KALE				S	Sg	18 38 13.1	+1.0
KALE	**Kalithea**	**0.74**	**47**	P	Pg	18 38 01.7	-0.8
KALE				S	Sg	18 38 13.1	+1.0
VLS	**Valsamata**	**0.74**	**294**	P	Pg	18 38 01.5	-1.1
VLS				S	Sg	18 38 13.7	+1.5
VLS	**Valsamata**	**0.74**	**294**	P	Pg	18 38 01.5	-1.1
VLS				S	Sg	18 38 13.7	+1.5
ITM	**Ithomi**	**0.80**	**152**	P	Pg	18 38 03.4	-0.2
ITM				S	Sg	18 38 14.5	+0.6
ITM	**Ithomi**	**0.80**	**152**	P	Pg	18 38 03.4	-0.2
ITM				S	Sg	18 38 14.5	+0.6
VLX	**Vlachokerasia**	**0.90**	**125**	P	Pg	18 38 06.0	+0.5
VLX				S	Sg	18 38 18.8	+1.7
VLX	**Vlachokerasia**	**0.90**	**125**	P	Pg	18 38 06.0	+0.5
VLX				S	Sg	18 38 18.8	+1.7
DSF	**Desfina**	**1.00**	**58**	P	Pg	18 38 06.1	-1.3
DSF				S	Sg	18 38 21.2	+0.9
DSF	**Desfina**	**1.00**	**58**	P	Pg	18 38 06.1	-1.3
DSF				S	Sg	18 38 21.2	+0.9
PYL	**PYLOS**	**1.01**	**167**	P	Pg	18 38 07.1	-0.6
PYL				S	Sg	18 38 21.9	+1.1
PYL	**PYLOS**	**1.01**	**167**	P	Pg	18 38 07.1	-0.6
PYL				S	Sg	18 38 21.9	+1.1
LKD2	**Lefkada island**	**1.10**	**326**	P	Pg	18 38 08.0	-1.4
LKD2				S	Sg	18 38 25.1	+1.4
LKD2	**Lefkada island**	**1.10**	**326**	P	Pg	18 38 08.0	-1.4
LKD2				S	Sg	18 38 25.1	+1.4
LTK	**Loutraki**	**1.20**	**83**	P	Pg	18 38 10.0	-1.4
LTK	**Loutraki**	**1.20**	**83**	P	Pg	18 38 10.0	-1.4
AGG	**Agios Georgios**	**1.33**	**31**	P	Pn	18 38 13.1	-0.5
AGG				S	Sg	18 38 31.0	0.0
AGG	**Agios Georgios**	**1.33**	**31**	P	Pn	18 38 13.1	-0.5
AGG				S	Sg	18 38 31.0	0.0
LKR	**Lokris**	**1.44**	**57**	P	Pn	18 38 14.0	-1.1
LKR	**Lokris**	**1.44**	**57**	P	Pn	18 38 14.0	-1.1
THL	**Klokotos Trika**	**1.73**	**14**	P	Pn	18 38 19.1	-0.1
THL	**Klokotos Trika**	**1.73**	**14**	P	Pn	18 38 19.1	-0.1

*ATH **08** 18:42:25.4, 38°.02N×21°.52E, h17km±1km, MD3.3/6, ML3.2*
*THE **08** 18:42:25.9, 38°.02N×21°.55E, h5km±1km, ML3.8/10, Error ellipse: s-maj=1.2km s-min=0.6km az=149.0*
*NEIC **08** 18:42:25.4, 38°.02N×21°.52E, h17km, ML3.3(ATH), After ATH.*
*CSEM **08** 18:42:25.6±0.2, 38°.02N×21°.55E, h5km, ML3.3, Error ellipse: s-maj=3.6km s-min=3.4km az=33.0*
*ISCJB **08** 18:42:25.3±0.5, 38°.02N±0°.02×21°.53E±0°.02, h5km±4km, Error ellipse: s-maj=3.5km s-min=3.2km az=9.3*
ISC 08 18:42:26.1±0.3, 38°.02N±0°.02×21°.55E±0°.02, h11km±3km, n88, σ1°.02/124, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.07**	**302**	*e*Pb	**Pg**	**18 42 29.0**	**+0.5**
RLS				*e*Sb	**Sg**	**18 42 31.5**	**+1.2**
RLS	**Riolos of Patr**	**0.07**	**302**	*e*PB	**Pg**	**18 42 29.0**	**+0.5**
RLS				*e*SB	**Sg**	**18 42 31.5**	**+1.2**
RLS	**Riolos of Patr**	**0.07**	**302**	*e*Pb	**Pg**	**18 42 29.0**	**+0.5**
UPR	**University Cam**	**0.33**	**36**	P	**Pg**	**18 42 32.5**	**-0.2**
UPR				S	**Sg**	**18 42 37.0**	**-0.1**
UPR	**University Cam**	**0.33**	**36**	*e*PB	**Pg**	**18 42 32.5**	**-0.2**
UPR				*e*SB	**Sg**	**18 42 38.2**	**+1.1**
UPR	**University Cam**	**0.33**	**36**	P	**Pg**	**18 42 32.5**	**-0.2**
UPR				S	**Sg**	**18 42 37.0**	**-0.1**
UPR				*e*Sb	**Sg**	**18 42 38.2**	**+1.1**
LAKA	**Lakka**	**0.41**	**57**	P	**Pg**	**18 42 33.5**	**-0.7**
LAKA				S	**Sg**	**18 42 40.0**	**+0.4**
LAKA	**Lakka**	**0.41**	**57**	P	**Pg**	**18 42 33.5**	**-0.7**
LAKA				S	**Sg**	**18 42 40.0**	**+0.4**
EFP	**Efpalio**	**0.50**	**35**	P	**Pg**	**18 42 35.1**	**-0.7**
EFP				S	**Sg**	**18 42 43.1**	**+0.7**
EFP	**Efpalio**	**0.50**	**35**	*e*PN	**Pg**	**18 42 35.2**	**-0.6**
EFP				*e*SN	**Sg**	**18 42 42.4**	**0.0**
EFP	**Efpalio**	**0.50**	**35**	*e*Pn	**Pg**	**18 42 35.2**	**-0.6**
EFP				S	**Sg**	**18 42 43.1**	**+0.7**
TRIZ	**Trizonia**	**0.54**	**50**	P	**Pg**	**18 42 35.9**	**-0.8**
TRIZ				S	**Sg**	**18 42 44.0**	**+0.2**
TRIZ	**Trizonia**	**0.54**	**50**	P	**Pg**	**18 42 35.9**	**-0.8**
TRIZ				S	**Sg**	**18 42 44.0**	**+0.2**
KALE	**Kalithea**	**0.60**	**51**	P	**Pg**	**18 42 36.9**	**-0.9**
KALE				S	**Sg**	**18 42 46.1**	**+0.5**
KALE	**Kalithea**	**0.60**	**51**	P	**Pg**	**18 42 36.9**	**-0.9**
KALE				S	**Sg**	**18 42 46.1**	**+0.5**
KFL	**Anninata**	**0.60**	**279**	P	**Pg**	**18 42 37.7**	**-0.2**
GUR	**Goura**	**0.64**	**97**	P	**Pg**	**18 42 37.4**	**-1.1**
GUR				S	**Sg**	**18 42 47.3**	**+0.5**
GUR	**Goura**	**0.64**	**97**	*e*PB	**Pb**	**18 42 37.5**	**-1.7**
GUR				*e*SN	**Sg**	**18 42 47.4**	**+0.6**
GUR	**Goura**	**0.64**	**97**	*e*Pb	**Pb**	**18 42 37.5**	**-1.7**
GUR				S	**Sg**	**18 42 47.3**	**+0.5**
VLS	**Valsamata**	**0.77**	**282**	*e*Pn	**Pn**	**18 42 39.8**	**-3.0**
VLS	**Valsamata**	**0.77**	**282**	P	**Pg**	**18 42 39.9**	**-1.1**
VLS				S	**Sg**	**18 42 51.9**	**+0.8**
VLS	**Valsamata**	**0.77**	**282**	*e*PN	**Pn**	**18 42 39.8**	**-3.0**
VLS	**Valsamata**	**0.77**	**282**	P	**Pg**	**18 42 39.9**	**-1.1**
VLS				S	**Sg**	**18 42 51.9**	**+0.8**
DSF	**Desfina**	**0.87**	**63**	P	**Pg**	**18 42 41.5**	**-1.4**
DSF				S	**Sg**	**18 42 54.2**	**0.0**
DSF	**Desfina**	**0.87**	**63**	P	**Pg**	**18 42 41.5**	**-1.4**
DSF				S	**Sg**	**18 42 54.2**	**0.0**
ITM	**Ithomi**	**0.89**	**160**	*e*Pn	**Pg**	**18 42 42.5**	**-0.8**
ITM	**Ithomi**	**0.89**	**160**	P	**Pg**	**18 42 42.5**	**-0.8**
ITM				S	**Sg**	**18 42 56.2**	**+1.3**
ITM	**Ithomi**	**0.89**	**160**	*e*PN	**Pg**	**18 42 42.5**	**-0.8**
ITM	**Ithomi**	**0.89**	**160**	P	**Pg**	**18 42 42.5**	**-0.8**
ITM				S	**Sg**	**18 42 56.2**	**+1.3**
EVR	**Evrytania**	**0.92**	**13**	*e*Pn	**Pn**	**18 42 43.2**	**-1.7**
EVR	**Evrytania**	**0.92**	**13**	*e*PN	**Pn**	**18 42 43.2**	**-1.7**
VLX	**Vlachokerasia**	**0.93**	**134**	P	**Pg**	**18 42 43.0**	**-1.0**
VLX				S	**Sg**	**18 42 56.8**	**+0.8**
VLX	**Vlachokerasia**	**0.93**	**134**	*e*PN	**Pg**	**18 42 43.0**	**-1.0**
VLX	**Vlachokerasia**	**0.93**	**134**	P	**Pg**	**18 42 43.0**	**-1.0**
VLX				S	**Sg**	**18 42 56.8**	**+0.8**
LKD2	**Lefkada island**	**1.04**	**318**	P	**Pb**	**18 42 44.4**	**-1.6**
LKD2				S	**Sg**	**18 43 01.1**	**+1.5**
LKD2	**Lefkada island**	**1.04**	**318**	P	**Pb**	**18 42 44.4**	**-1.6**
LKD2				S	**Sg**	**18 43 01.1**	**+1.5**
LTK	**Loutraki**	**1.12**	**89**	P	**Pb**	**18 42 46.6**	**-0.9**
LTK	**Loutraki**	**1.12**	**89**	*e*PB	**Pb**	**18 42 46.2**	**-1.3**
LTK	**Loutraki**	**1.12**	**89**	*e*Pb	**Pb**	**18 42 46.2**	**-1.3**
LTK	**Loutraki**	**1.12**	**89**	P	**Pb**	**18 42 46.6**	**-0.9**
PYL	**PYLOS**	**1.13**	**172**	P	**Pb**	**18 42 47.0**	**-0.7**
PYL				S	**Sb**	**18 43 03.7**	**+1.4**
PYL	**PYLOS**	**1.13**	**172**	*e*PN	**Pn**	**18 42 46.7**	**-1.1**
PYL	**PYLOS**	**1.13**	**172**	*e*Pn	**Pn**	**18 42 46.7**	**-1.1**
PYL	**PYLOS**	**1.13**	**172**	P	**Pb**	**18 42 47.0**	**-0.7**
PYL				S	**Sb**	**18 43 03.7**	**+1.4**
AGG	**Agios Georgios**	**1.18**	**31**	P	**Pb**	**18 42 47.1**	**-1.3**
AGG				S	**Sb**	**18 43 05.2**	**+1.6**
AGG	**Agios Georgios**	**1.18**	**31**	P	**Pb**	**18 42 47.1**	**-1.3**
AGG				S	**Sb**	**18 43 05.2**	**+1.6**
LKR	**Lokris**	**1.31**	**61**	*e*Pb	**Pb**	**18 42 49.5**	**-1.1**
LKR	**Lokris**	**1.31**	**61**	P	**Pn**	**18 42 49.1**	**-1.1**
LKR				S	**Sb**	**18 43 08.5**	**+1.1**
LKR	**Lokris**	**1.31**	**61**	*e*PB	**Pb**	**18 42 49.5**	**-1.1**
LKR	**Lokris**	**1.31**	**61**	P	**Pn**	**18 42 49.1**	**-1.1**
LKR	**Lokris**	**1.31**	**61**	*e*Pb	**Pb**	**18 42 49.5**	**-1.1**
LKR				S	**Sb**	**18 43 08.5**	**+1.1**
ATAL	**Atalanti**	**1.34**	**59**	P	**Pn**	**18 42 50.0**	**-0.7**
ATAL	**Atalanti**	**1.34**	**59**	P	**Pn**	**18 42 50.0**	**-0.7**
NAIG	**Nisos Aigina**	**1.56**	**99**	*e*Pn	**Pn**	**18 42 55.2**	**+1.5**
NAIG	**Nisos Aigina**	**1.56**	**99**	*e*PN	**Pn**	**18 42 55.2**	**+1.5**
NAIG	**Nisos Aigina**	**1.56**	**99**	*e*Pn	**Pn**	**18 42 55.2**	**+1.5**
THL	**Klokotos Trika**	**1.59**	**13**	P	**Pn**	**18 42 53.5**	**-0.6**
THL				S	**Sn**	**18 43 15.4**	**+0.8**
THL	**Klokotos Trika**	**1.59**	**13**	*e*PN	**Pn**	**18 42 55.7**	**+1.6**
THL	**Klokotos Trika**	**1.59**	**13**	P	**Pn**	**18 42 53.5**	**-0.6**
THL	**Klokotos Trika**	**1.59**	**13**	*e*Pn	**Pn**	**18 42 55.7**	**+1.6**
THL				S	**Sn**	**18 43 15.4**	**+0.8**
VLI	**Veliai**	**1.71**	**139**	*e*Pn	**Pn**	**18 42 57.8**	**+2.1**
VLI	**Veliai**	**1.71**	**139**	*e*PN	**Pn**	**18 42 57.8**	**+2.1**
VLI	**Veliai**	**1.71**	**139**	*e*Pn	**Pn**	**18 42 57.8**	**+2.1**
ATH	**Athens Observa**	**1.72**	**91**	*e*Pn	**Pn**	**18 42 56.7**	**+0.8**
ATH	**Athens Observa**	**1.72**	**91**	*e*PN	**Pn**	**18 42 56.7**	**+0.8**
ATH	**Athens Observa**	**1.72**	**91**	*e*Pn	**Pn**	**18 42 56.7**	**+0.8**
ATHU	**Athens Univers**	**1.77**	**91**	P	**Pn**	**18 42 57.1**	**+0.5**
ATHU	**Athens Univers**	**1.77**	**91**	P	**Pn**	**18 42 57.1**	**+0.5**
IGT	**Igoumenitsa**	**1.78**	**328**	P	**Pn**	**18 42 57.4**	**+0.6**
IGT	**Igoumenitsa**	**1.78**	**328**	P	**Pn**	**18 42 57.4**	**+0.6**
VLY	**Voula,Athens**	**1.79**	**95**	*e*Pn	**Pn**	**18 42 57.6**	**+0.8**
VLY	**Voula,Athens**	**1.79**	**95**	*e*PN	**Pn**	**18 42 57.6**	**+0.8**
VLY	**Voula,Athens**	**1.79**	**95**	*e*Pn	**Pn**	**18 42 57.6**	**+0.8**
PTL	**Penteli**	**1.83**	**88**	*e*Pn	**Pn**	**18 42 58.2**	**+0.7**
PTL	**Penteli**	**1.83**	**88**	*e*PN	**Pn**	**18 42 58.2**	**+0.7**
PTL	**Penteli**	**1.83**	**88**	*e*Pn	**Pn**	**18 42 58.2**	**+0.7**
XOR	**Xorichti**	**1.86**	**43**	P	**Pn**	**18 42 57.4**	**-0.5**
XOR	**Xorichti**	**1.86**	**43**	P	**Pn**	**18 42 57.4**	**-0.5**
AOS	**Alonnisos**	**2.16**	**57**	P	**Pn**	**18 43 01.4**	**-0.6**
AOS	**Alonnisos**	**2.16**	**57**	P	**Pn**	**18 43 01.4**	**-0.6**
KEK	**Kerkira**	**2.17**	**322**	P	**Pn**	**18 43 02.4**	**+0.3**
KEK	**Kerkira**	**2.17**	**322**	P	**Pn**	**18 43 02.4**	**+0.3**
LIT	**Litokhoron**	**2.21**	**19**	P	**Pn**	**18 43 03.8**	**+1.2**
LIT	**Litokhoron**	**2.21**	**19**	P	**Pn**	**18 43 03.8**	**+1.2**
LIA	**Limnos Island**	**3.40**	**55**	*e*Pn	**Pn**	**18 43 19.9**	**+0.9**
LIA	**Limnos Island**	**3.40**	**55**	*e*PN	**Pn**	**18 43 19.9**	**+0.9**
LIA	**Limnos Island**	**3.40**	**55**	*e*Pn	**Pn**	**18 43 19.9**	**+0.9**
SG1	**Sgolgore (BA)**	**4.70**	**308**	*e*Pn	**Pn**	**18 43 36.7**	**-0.2**

*IDC **08** 18:43:02.4±1

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MKAR                                    pmax   pmax
     comp=Z,2.0nm,0.6s
KURK Kurchatov        47.65 303  P      P      18 51 40.8 +0.5
     comp=Z,4.7nm,0.6s,mb4.7,baz=68,slow=8.5,SNR=61
KURK Kurchatov        47.65 303  P      P      18 51 40.8 +0.5
KURK                                    pmax   pmax
     comp=Z,5.0nm,0.6s,mb4.7
BVAR Borovoye Array   50.95 309  P      P      18 52 04.1 -1.5
     comp=Z,1.2nm,0.5s,mb4.1,baz=62,slow=7.2,SNR=14
BVAR Borovoye Array   50.95 309  eP     P      18 52 04.8 -0.8
BVAR                                    pmax   pmax
     comp=Z,1.0nm,0.5s
BRVK Borovoye         50.99 309  i P    P      18 52 06.3 +0.4
CMAR Chiang Mai Arr   53.87 257  P      P      18 52 28.1 +0.6
     comp=Z,0.7nm,0.7s,mb3.7,baz=31,slow=7.8,SNR=7.7
CMAR Chiang Mai Arr   53.87 257  P      P      18 52 28.2 +0.6
CMAR                                    pmax   pmax
     comp=Z,1.0nm,0.7s
ARCES ARCESS Array B  56.99 341  P      P      18 52 48.1 -1.3
     comp=Z,1.5nm,0.8s,mb4.1,baz=33,slow=8.6,SNR=3.4
ARCES ARCESS Array B  56.99 341  P      P      18 52 48.1 -1.3
ARCES                                   pmax   pmax
     comp=Z,2.0nm,0.8s
ABKAR Akbulak array   58.50 310  eP     P      18 52 59.1 -1.2
     comp=Z,1.1nm,0.6s,mb4.1
AKTK Aktyubinsk       58.74 312  P      P      18 53 01.1 -0.8
AKTO Aktyubinsk       58.74 312  P      P      18 53 01.1 -0.8
     comp=Z,0.5nm,0.6s,mb3.7,baz=82,slow=14,SNR=2.5
AKTO Aktyubinsk       58.74 312  P      P      18 53 01.1 -0.9
AKTO                                    pmax   pmax
     comp=Z,1.0nm,0.6s,mb4.0
SUMG Summit           59.28   5  i P    P      18 53 05.5 +0.1
     comp=Z,7.1nm,1.0s,mb4.7
FINES FINESS Array B  63.34 335  P      P      18 53 32.6 -0.4
     comp=Z,4.7nm,1.1s,mb4.5,baz=26,slow=7.8,SNR=10
FINES FINESS Array B  63.34 335  P      P      18 53 32.6 -0.4
FINES                                   pmax   pmax
     comp=Z,5.0nm,1.1s
ASAR Alice Springs    73.87 200  P      P      18 54 38.8 -0.2
     comp=Z,0.2nm,0.5s,mb3.3,baz=12,slow=5.8,SNR=6.5
STHS Stebnicka Huta   74.96 331  eP     P      18 54 46.7 +1.5
STHS Stebnicka Huta   74.96 331  e      P      18 54 46.7 +1.5
BUR08 Bucovina Ar. S  75.11 327  eP     P      18 54 46.1  0.0
BURAR Bucovina Array  75.13 327  ||iP    P      18 54 46.7 +0.5
TRPA Tarpa            75.64 329  ||iP    P      18 54 50.0 +0.9
CLL  Collm            75.74 336  ||iP    P      18 54 49.7  0.0
CLL                                     pmax   pmax
     comp=Z,7.0nm,1.1s,mb4.5
CLL  Collm            75.74 336  ||iP    P      18 54 49.7  0.0
     comp=Z,7.0nm,1.1s,mb4.5
TXAR Lajitas Array    75.78  62  P      P      18 54 50.0 -0.3
     comp=Z,0.4nm,0.6s,mb3.5,baz=293,slow=4.3,SNR=5.7
TXAR Lajitas Array    75.78  62  P      P      18 54 50.0 -0.3
MORC Moravsky Berou   75.81 333  eP     P      18 54 50.5 +0.4
MORC                                    pmax   pmax
     comp=Z,3.0nm,1.0s,mb4.2
MORC Moravsky Berou   75.81 333  eP     P      18 54 50.5 +0.4
     comp=Z,3.4nm,1.0s,mb4.2
MORC Moravsky Berou   75.81 333  ⇑iP    P      18 54 50.7 +0.6
KECS Kecovo           76.02 331  eP     P      18 54 54.9 +3.6
KECS Kecovo           76.02 331  e      P      18 54 54.9 +3.6
VRAC Vranov           76.52 333  ⇑iP    P      18 54 54.9 +0.8
VYHS Vyhne            76.54 332  eP     P      18 54 54.9 +0.6
VYHS Vyhne            76.54 332  e      P      18 54 54.9 +0.6
MLR  Muntele Rosu     76.66 326  ||iP    P      18 54 56.3 +1.3
KHC  Kasperske Hory   77.55 335  eP     P      18 55 00.5 +0.6
KHC                                     pmax   pmax
     comp=Z,3.0nm,0.9s,mb4.2
KHC  Kasperske Hory   77.55 335  eP     P      18 55 00.5 +0.5
     comp=Z,3.2nm,0.9s,mb4.2
GRF  Grafenberg Arr   77.69 337  eP     P      18 55 01.1 +0.4
     comp=Z,3.0nm,0.9s,mb4.2
GRF                                     e      18 56 01.6
GERES GERESS Array B  77.78 335  P      P      18 55 01.6 +0.4
     comp=Z,1.0nm,0.6s,mb3.9,baz=28,slow=6.0,SNR=12
GERES GERESS Array B  77.78 335  P      P      18 55 01.6 +0.4
GERES                                   pmax   pmax
     comp=Z,1.0nm,0.6s
BZS  Buzias           78.13 329  ⇑iP    P      18 55 03.5 +0.3
BRTR Keskin Array B   78.24 318  P      P      18 55 04.1 +0.2
     comp=Z,0.9nm,0.7s,mb3.8,baz=78,slow=3.7,SNR=8.7
BRTR Keskin Array B   78.24 318  P      P      18 55 04.1 +0.2
BRTR                                    pmax   pmax
     comp=Z,1.0nm,0.7s
```

*IDC **08** 18:54:20.8±0.8, 33°.11N×92°.01E, h0km, mb3.8/10, mb1 4.0/14, mb1mx3.7/31, mbtmp3.8/14, ML3.3/4, MS3.4/6, Ms1 3.4/6, ms1mx3.1/35, Error ellipse: s-maj=32.1km s-min=15.3km az=51.0*

*ISCJB **08** 18:54:20.4±0.4, 33°.16N±0°.04×92°.10E±0°.07, h10km, mb3.9/10, MS3.2/4, Error ellipse: s-maj=8.5km s-min=5.6km az=152.5*

*BJI **08** 18:54:22.1, 33°.13N×92°.04E, h17km, mB4.3/2, mb4.4/5, ML4.1/3, Ms4.1/5, Ms7 3.7/4*

*NEIC **08** 18:54:22.3±0.5, 33°.17N×92°.10E, h10km, mb3.6/7, Error ellipse: s-maj=10.4km s-min=7.0km az=46.0*

ISC 08 18:54:22.5±0.4, 33°.20N±0°.04×92°.13E±0°.06, h10km, n30, σ1§03/30, mb3.9/10, MS3.2/4, 1C, Qinghai

```
Code Station Name      Δ°   AZ°   Phase ID          Time      Res
                                  Op     ISC        h m s     ISC
SHL  Shillong         7.61 182   ePN    Pn         18 56 16.0 +2.6
SHL                              eSN    Sn         18 57 39.0 -0.7
GTA  Gaotai           8.77  43   eP     Pn         18 56 31.0 +1.7
GTA                              pP                18 56 35.8
GTA                              sP                18 56 38.4
GTA                              S      Sn         18 58 05.6 -2.5
GTA                              pmax   pmax
     comp=Z,5.0nm,1.3s
GTA                              pmax   pmax
     comp=Z,61nm,4.5s
GTA                              LR     LR
     comp=N,950nm,11.6s
GTA                              LR     LR
     comp=E,590nm,11.0s
GTA                              LR     LR
     comp=Z,330nm,11.0s
KMI  Kunming         12.27 128   P      Pn         18 57 17.1 -0.2
KMI                              pmax   pmax
     comp=Z,7.0nm,0.9s
GYA  Guiyang         14.29 114   ⇑iP    Pn         18 57 44.6 -0.2
GYA                              pmax   pmax
     comp=Z,20nm,0.9s
ENH  Enshi           15.06  97   ePn    Pn         18 57 55.3 -0.1
     comp=Z,10.0nm,0.8s
MKAR Makanchi Array  15.51 334   Pn     Pn         18 58 00.4 -0.7
     comp=Z,0.1nm,0.3s,baz=131,slow=15,SNR=3.6
CM31 Chiang Mai Arr  15.90 156   ePn    Pn         18 58 07.2 +0.8
     comp=Z,1.2nm,0.6s
CMAR Chiang Mai Arr  15.90 156   Pn     Pn         18 58 04.7 -1.7
     comp=Z,0.1nm,0.3s,baz=332,slow=12,SNR=18
UCH  Uchtor          16.57 308   eP     Pn         18 58 19.1 +4.3
     comp=Z,3.5nm,0.8s
AAK  Ala-Archa       16.77 309   Pn     Pn         18 58 18.1 +0.7
     comp=Z,0.0nm,0.3s,baz=184,slow=13,SNR=1.7
AAK                              LR     LR         19 06 04.8
     comp=Z,168nm,19.5s,baz=105,slow=42
AML  Almayashu       17.07 307   ePn    Pn         18 58 22.5 +1.3
     comp=Z,3.4nm,1.2s
SONM Songino Array   18.16  32   P      Pn         18 58 36.3 +1.7
     comp=Z,0.2nm,0.3s,baz=216,slow=12,SNR=16
SONM                             LR     LR         19 06 27.3
     comp=Z,163nm,21.3s,baz=44,slow=40
ULN  Ulaanbaatar     18.48  33   eP     Pn         18 58 39.5 +1.0
     comp=Z,6.0nm,1.3s
KBL  Kabul           19.21 280   eP     Pn         18 58 46.8 -0.7
     comp=Z,4.5nm,0.8s
KURK Kurchatov       20.12 334   P      P          18 58 56.2 -0.1
     comp=Z,1.4nm,0.6s,baz=140,slow=12,SNR=12
KURK                             LR     LR         19 06 41.9
     comp=Z,99nm,20.8s,MS3.1,baz=150,slow=37
ZAA0 Zalesovo Array  21.38 348   eP     P          18 59 08.4 -1.6
ZALV Zalesovo Beam   21.38 348   P      P          18 59 09.5 -0.5
     comp=Z,2.0nm,0.7s,mb3.5,baz=163,slow=10,SNR=7.1
ZALV                             LR     LR         19 07 01.5
     comp=Z,38nm,18.9s,MS2.8,baz=167,slow=36
ZALV Zalesovo Beam   21.38 348   P      P          18 59 09.5 -0.5
ZALV                             LR     LR         19 07 01.5
BVAR Borovoye Array  25.21 328   P      P          18 59 48.3 +0.2
     comp=Z,0.6nm,0.6s,mb3.3,baz=130,slow=11,SNR=5.0
ABKAR Akbulak array  28.76 314   eP     P          19 00 20.3 +0.2
     comp=Z,0.8nm,0.7s,mb3.6
KSRS Korea Array     29.40  71   LR     LR         19 13 50.5
     comp=Z,42nm,21.1s,MS3.0,baz=281,slow=40
BRTR Keskin Array B  46.77 296   P      P          19 02 51.4 -0.7
     comp=Z,1.1nm,0.8s,mb3.8,baz=106,slow=6.1,SNR=7.8
EIL  Elat            48.40 282   P      P          19 03 04.6 -0.2
     comp=Z,2.6nm,0.7s,mb4.4,baz=60,slow=7.7,SNR=3.8
EIL  Elat            48.40 282   P      P          19 03 04.6 -0.2
FINES FINESS Array B 50.10 325   P      P          19 03 16.8 -0.5
     comp=Z,1.3nm,0.7s,mb4.0,baz=120,slow=9.8,SNR=2.7
MLR  Muntele Rosu    51.28 304   P      P          19 03 27.2 +0.7
     comp=Z,1.3nm,0.9s,mb3.9,baz=145,slow=8.9,SNR=3.8
WRA  Warramunga Arr  66.46 136   P      P          19 05 12.3 +0.1
     comp=Z,2.2nm,0.9s,mb4.2,baz=322,slow=6.3,SNR=10
ASAR Alice Springs   69.16 139   P      P          19 05 29.6 +0.4
     comp=Z,2.3nm,0.7s,mb4.2,baz=324,slow=6.0,SNR=37
TORD Torodi Ar. Bea  83.28 281   P      P          19 06 48.7 -1.1
     comp=Z,0.3nm,0.4s,mb3.6,baz=47,slow=4.1,SNR=8.5
TSUM Tsumeb          88.11 246   LR     LR         19 51 24.3
     comp=Z,56nm,18.8s,MS4.0,baz=165,slow=39
```

*IDC **08** 18:56:43.6±0.9, 33°.09N×92°.03E, h0km, mb3.6/8, mb1 3.7/11, mb1mx3.6/29, mbtmp3.6/11, ML3.1/3, Error ellipse: s-maj=36.7km s-min=17.0km az=54.0*

*ISCJB **08** 18:56:43.3±0.7, 33°.40N±0°.05×92°.5E±0°.2, h10km, mb3.6/7, Error ellipse: s-maj=18.1km s-min=7.2km az=175.4*

*NEIC **08** 18:56:45.8±0.8, 33°.28N×92°.18E, h10km, mb3.3/1, Error ellipse: s-maj=25.7km s-min=12.4km az=73.0*

ISC 08 18:56:45.2±0.7, 33°.34N±0°.05×92°.4E±0°.2, h10km, n15, σ1§07/16, mb3.6/7, Qinghai

```
Code Station Name      Δ°   AZ°   Phase ID          Time      Res
                                  Op     ISC        h m s     ISC
LSA  Lhasa           3.79 197   ePn    Pn         18 57 47.1 +3.4
LSA                              eS     Sb         18 58 38.5 +0.5
MK31 Makanchi Array 15.49 333   eP     Pn         19 00 23.4 -0.2
MKAR Makanchi Array 15.49 333   Pn     Pn         19 00 24.0 +0.4
     0.0nm,0.3s,baz=130,slow=14,SNR=3.4
CMAR Chiang Mai Arr 15.94 157   Pn     Pn         19 00 28.7 -1.0
     0.0nm,0.3s,baz=340,slow=12,SNR=4.1
SONM Songino Array  17.91  32   P      Pn         19 00 59.3 +4.9
     0.1nm,0.3s,baz=215,slow=11,SNR=5.7
KURK Kurchatov      20.10 334   P      P          19 01 19.6 +0.8
     1.2nm,0.6s,baz=142,slow=11,SNR=5.9
KURK Kurchatov      20.10 334   eP     P          19 01 19.9 +1.0
     1.0nm,0.6s
ZALV Zalesovo Beam  21.29 348   P      P          19 01 32.7 +0.9
     1.3nm,0.7s,mb3.4,baz=170,slow=10,SNR=4.7
ZALV Zalesovo Beam  21.29 348   P      P          19 01 32.7 +0.9
BVAR Borovoye Array 25.21 328   P      P          19 02 10.5 -0.4
     0.3nm,0.6s,mb3.0,baz=94,slow=8.7,SNR=3.0
BRTR Keskin Array B 46.92 295   P      P          19 05 13.9 -2.0
     0.5nm,0.6s,mb3.6,baz=44,slow=8.0,SNR=3.9
MLR  Muntele Rosu   51.39 304   P      P          19 05 51.2 +1.1
     1.1nm,0.7s,mb3.9,baz=133,slow=18,SNR=3.1
WRA  Warramunga Arr 66.40 137   P      P          19 07 34.8 +0.2
     0.9nm,1.0s,mb3.8,baz=310,slow=6.6,SNR=4.1
ASAR Alice Springs  69.11 139   P      P          19 07 52.0 +0.4
     1.2nm,0.9s,mb3.8,baz=329,slow=6.4,SNR=6.9
TORD Torodi Ar. Bea 83.48 281   P      P          19 09 11.6 -2.0
     0.3nm,0.6s,mb3.5,baz=42,slow=4.4,SNR=2.6
```

*ISCJB **08** 19:01:46.4±1.5, 34°.59N±0°.07×23°.80E±0°.08, h4km±7km, mb3.8/3, Error ellipse: s-maj=13.9km s-min=8.2km az=43.9*

*ATH **08** 19:01:49.5, 34°.72N×23°.83E, h13km±4km, MD3.5/10*

*NEIC **08** 19:01:49.5, 34°.72N×23°.83E, h13km, MD3.5(ATH), After ATH.*

*CSEM **08** 19:01:49.5, 34°.72N×23°.83E, h13km, MD3.5, After ATH*

*IDC **08** 19:01:59.7±1.1, 35°.70N×25°.09E, h0km, mb3.9/3, mb1 3.7/5, mb1mx3.3/27, mbtmp3.6/5, ML3.2/2, MS3.1/1, Ms1 3.1/1, ms1mx2.2/41, Error ellipse: s-maj=34.7km s-min=7.6km az=116.0*

ISC 08 19:01:48.0±1.5, 34°.68N±0°.07×23°.79E±0°.08, h4km±7km, n50, σ1§07/54, mb3.8/3, Crete

```
Code Station Name      Δ°   AZ°   Phase ID          Time      Res
                                  Op     ISC        h m s     ISC
GVD  Gavdhos         0.29  58   ePg    Pg         19 01 55.4 +1.7
GVD  Gavdhos         0.29  58   ePG    Pg         19 01 55.4 +1.7
GVD  Gavdhos         0.29  58   ePg    Pg         19 01 55.4 +1.7
KARN Karanos         0.72   8   ePG    Pg         19 02 02.2 +0.2
KARN                             eSB    Sb         19 02 12.2 -1.3
KARN Karanos         0.72   8   ePg    Pg         19 02 02.2 +0.2
KARN                             eSb    Sb         19 02 12.2 -1.3
VAM  Vamos           0.80  25   ePg    Pg         19 02 03.8 +0.5
VAM                              eSb    Sb         19 02 15.6  0.0
VAM  Vamos           0.80  25   ePG    Pg         19 02 03.8 +0.5
VAM                              eSB    Sb         19 02 15.6  0.0
VAM  Vamos           0.80  25   ePg    Pg         19 02 03.8 +0.5
VAM                              eSb    Sb         19 02 15.6  0.0
SIVA Sivas           0.90  68   ePb    Pb         19 02 06.2 -0.1
SIVA Sivas           0.90  68   ePB    Pb         19 02 06.2 -0.1
SIVA Sivas           0.90  68   ePb    Pb         19 02 06.2 -0.1
IDI  Anoyia          1.09  56   Pg     Pg         19 02 08.6 -0.3
     2.7nm,0.3s,baz=240,slow=17,SNR=52
IDI                              Lg                19 02 13.9
     16nm,0.3s,baz=313,slow=13,SNR=15
IDI  Anoyia          1.09  56   ePG    Pg         19 02 08.3 -0.6
IDI  Anoyia          1.09  56   ePg    Pg         19 02 08.3 -0.6
LAST Lasithi         1.47  71   ePn    Pn         19 02 15.4 +0.1
LAST Lasithi         1.47  71   ePN    Pn         19 02 15.4 +0.1
LAST Lasithi         1.47  71   ePn    Pn         19 02 15.4 +0.1
NPS  Neapolis        1.60  68   ePg    Pg         19 02 18.8  0.0
NPS  Neapolis        1.60  68   ePG    Pg         19 02 18.8  0.0
NPS  Neapolis        1.60  68   ePg    Pg         19 02 18.8  0.0
KYTH Kithira         1.71 339   ePb    Pb         19 02 19.9 -0.1
KYTH Kithira         1.71 339   ePB    Pb         19 02 19.9 -0.1
KYTH Kithira         1.71 339   ePb    Pb         19 02 19.9 -0.1
ZKR  Zakros          2.04  77   ePg    Pg         19 02 25.9 -1.3
ZKR  Zakros          2.04  77   ePG    Pg         19 02 25.9 -1.3
ZKR  Zakros          2.04  77   ePg    Pg         19 02 25.9 -1.3
VLI  Veliai          2.15 341   ePn    Pb         19 02 27.8 +0.4
VLI  Veliai          2.15 341   ePN    Pb         19 02 27.8 +0.4
VLI  Veliai          2.15 341   ePn    Pb         19 02 27.8 +0.4
APE  Apeiranthos     2.77  30   ePb    Pn         19 02 34.3 +1.2
APE  Apeiranthos     2.77  30   ePB    Pn         19 02 34.3 +1.2
APE  Apeiranthos     2.77  30   ePb    Pn         19 02 34.3 +1.2
KARP Karpathos       2.90  72   ePb    Pb         19 02 37.6 -2.6
KARP Karpathos       2.90  72   ePB    Pb         19 02 37.6 -2.6
KARP Karpathos       2.90  72   ePb    Pb         19 02 37.6 -2.6
ITM  Ithomi          2.91 329   ePb    Pb         19 02 38.8 -1.7
ITM  Ithomi          2.91 329   ePB    Pb         19 02 38.8 -1.7
ITM  Ithomi          2.91 329   ePb    Pb         19 02 38.8 -1.7
VLY  Voula,Athens    3.16   0   ePn    Pn         19 02 40.2 +1.6
VLY  Voula,Athens    3.16   0   ePN    Pn         19 02 40.2 +1.6
VLY  Voula,Athens    3.16   0   ePn    Pn         19 02 40.2 +1.6
ARG  Arkhangelos     3.86  65   ePn    Pn         19 02 50.4 +2.3
ARG  Arkhangelos     3.86  65   ePN    Pn         19 02 50.4 +2.3
ARG  Arkhangelos     3.86  65   ePn    Pn         19 02 50.4 +2.3
MMAI Mount Meron Ar  9.80  97   Pn     Pn         19 04 09.2 -0.6
     0.3nm,0.3s,baz=268,slow=11,SNR=3.0
GERES GERESS Array B 16.00 335   Pn     Pn         19 05 39.8 +6.0
     0.0nm,0.3s,baz=150,slow=11,SNR=4.1
HFS  Hagfors        26.30 349   LR     LR         19 18 26.6
     comp=Z,46nm,19.6s,baz=75,slow=39
KURK Kurchatov      42.35  50   P      P          19 09 42.7 -0.3
     0.6nm,0.7s,mb3.4,baz=279,slow=8.6,SNR=5.7
MKAR Makanchi Array 44.98  56   P      P          19 10 04.2  0.0
     0.3nm,0.3s,mb3.6,baz=272,slow=6.9,SNR=11
PETK Petropavlovsk- 83.84  26   P      P          19 14 25.2 +6.7
     4.8nm,1.0s,mb4.6,baz=94,slow=5.9,SNR=4.3
```

GUC 08 19:12:29.5±0.4, 21°.66S×68°.63W, h122km±6km, ML3.6, 3C-1D, Chile-Bolivia border region

```
Code Station Name      Δ°   AZ°   Phase ID          Time      Res
                                  Op     ISC        h m s     ISC
PB04 Plate Boundary  1.00 233   ⇑iP    Pn         19 12 58.5 +6.7
PB04                             i S    Sn         19 13 20.0 +11
PB04                              AML   AML        19 13 26.6
     comp=N,594nm,0.2s
PB01 Plate Boundary  1.01 307   ⇑iP    Pn         19 12 52.0 +0.2
PB01                             i S    Sn         19 13 09.5 +0.8
PB01                              AML   AML        19 13 10.6
     comp=E,835nm,0.1s
MACH Maria Elena     1.18 243   ⇑iP    Pn         19 12 54.4 +0.9
MACH                             i S    Sn         19 13 13.5 +1.7
PECH Pedro de Valdi  1.35 226   eP     Pn         19 12 56.1 +0.8
PECH                             i S    Sn         19 13 16.5 +1.4
PECH                              AML   AML        19 13 17.9
     comp=N,1μm,0.2s
TOCH Tocopilla       1.52 253   ||iP   Pn         19 12 57.9 +0.5
TOCH                             i S    Sn         19 13 19.3 +0.7
TOCH                              AML   AML        19 13 19.8
     comp=E,925nm,0.2s
HMBC Humberston      1.81 319   eP     Pn         19 13 00.2 -0.5
HMBC                             i S    Sn         19 13 24.6  0.0
HMBC                              AML   AML        19 13 26.0
     comp=E,605nm,0.1s
MNMC Miæe Miæ        2.67 340   eP     Pn         19 13 11.5 -0.1
MNMC                             i S    Sn         19 13 44.6 +0.6
MNMC                              AML   AML        19 13 46.6
     comp=N,461nm,0.3s
```

*CSEM **08** 19:18:11.1, 37°.95N×21°.50E, h13km, ML3.1/5, After THE*

THE 08 19:18:11.1, 37°.95N×21°.50E, h13km±2km, ML3.1/5, Error ellipse: s-maj=3.0km s-min=0.7km az=353.0, Southern Greece

```
Code Station Name      Δ°   AZ°   Phase ID          Time      Res
                                  Op     ISC        h m s     ISC
UPR  University Cam  0.40  35   P      Pg         19 18 19.2 +0.1
UPR                              S      Sg         19 18 26.1 +1.6
UPR  University Cam  0.40  35   P      Pg         19 18 19.2 +0.1
UPR                              S      Sg         19 18 26.1 +1.6
LAKA Lakka           0.48  53   P      Pg         19 18 19.9 -0.6
LAKA                             S      Sg         19 18 28.2 +1.3
LAKA Lakka           0.48  53   P      Pg         19 18 19.9 -0.6
LAKA                             S      Sg         19 18 28.2 +1.3
EFP  Efpalio         0.57  34   P      Pg         19 18 21.7 -0.6
EFP                              S      Sg         19 18 30.2 +0.3
EFP  Efpalio         0.57  34   P      Pg         19 18 21.7 -0.6
EFP                              S      Sg         19 18 30.2 +0.3
KFL  Anninata        0.58 286   P      Pg         19 18 22.0 -0.5
KFL                              S      Sg         19 18 31.2 +1.0
TRIZ Trizonia        0.61  48   P      Pg         19 18 22.3 -0.8
TRIZ                             S      Sg         19 18 32.1 +0.9
TRIZ Trizonia        0.61  48   P      Pg         19 18 22.3 -0.8
TRIZ                             S      Sg         19 18 32.1 +0.9
GUR  Goura           0.67  91   P      Pg         19 18 23.3 -0.8
GUR                              S      Sg         19 18 33.0 +0.1
GUR  Goura           0.67  91   P      Pg         19 18 23.4 -0.7
GUR  Goura           0.67  91   P      Pg         19 18 23.3 -0.8
GUR                              S      Sg         19 18 33.0 +0.1
GUR  Goura           0.67  91   P      Pg         19 18 23.4 -0.7
KALE Kalithea        0.67  49   P      Pg         19 18 23.2 -0.9
KALE                             S      Sg         19 18 34.0 +1.0
KALE Kalithea        0.67  49   P      Pg         19 18 23.2 -0.9
KALE                             S      Sg         19 18 34.0 +1.0
VLS  Valsamata       0.75 288   P      Pg         19 18 24.8 -0.9
VLS                              S      Sg         19 18 36.8 +1.3
VLS  Valsamata       0.75 288   P      Pg         19 18 24.8 -0.9
VLS                              S      Sg         19 18 36.8 +1.3
ITM  Ithomi          0.84 156   P      Pg         19 18 26.8 -0.6
ITM                              S      Sg         19 18 39.8 +1.3
ITM  Ithomi          0.84 156   P      Pg         19 18 26.8 -0.6
ITM                              S      Sg         19 18 39.8 +1.3
VLX  Vlachokerasia   0.91 129   P      Pg         19 18 28.2 -0.5
VLX                              S      Sg         19 18 42.2 +1.6
VLX  Vlachokerasia   0.91 129   P      Pg         19 18 28.2 -0.5
VLX                              S      Sg         19 18 42.2 +1.6
PYL  PYLOS           1.07 169   P      Pb         19 18 30.8 -0.7
PYL                              S      Sb         19 18 46.8 +1.4
PYL  PYLOS           1.07 169   P      Pb         19 18 30.8 -0.7
PYL                              S      Sb         19 18 46.8 +1.4
```

*ATH **08** 19:20:56.7, 35°.46N×27°.52E, h21km±2km, MD3.5/8*

*NEIC **08** 19:20:56.7, 35°.46N×27°.52E, h21km, MD3.5(ATH), After ATH.*

*ISCJB **08** 19:20:57.1±1.2, 35°.44N±0°.06×27°.46E±0°.07, h1km±10km, Error ellipse: s-maj=13.1km s-min=4.5km az=137.6*

*THE **08** 19:20:58.4, 35°.43N×27°.53E, h6km±5km, ML3.3/1, Error ellipse: s-maj=6.8km s-min=1.5km az=133.0*

*CSEM **08** 19:20:58.0±0.5, 35°.44N×27°.46E, h5km, MD3.5, Error ellipse: s-maj=12.0km s-min=4.4km az=139.0*

ISC 08 19:20:57.9±1.1, 35°.41N±0°.05×27°.49E±0°.06, h7km±5km, n41, σ1§11/57, Dodecanese Islands

```
Code Station Name      Δ°   AZ°   Phase ID          Time      Res
                                  Op     ISC        h m s     ISC
KARP Karpathos       0.30 297   ePb    Pg         19 21 03.5 -0.3
KARP                             eSb    Sg         19 21 08.6 +0.8
KARP Karpathos       0.30 297   ePB    Pg         19 21 03.5 -0.3
KARP                             eSB    Sg         19 21 08.6 +0.8
KARP Karpathos       0.30 297   ePb    Pg         19 21 03.5 -0.3
KARP                             eSb    Sg         19 21 08.6 +0.8
ARG  Arkhangelos     0.96  33   ePn    Pg         19 21 14.1 -2.2
ARG  Arkhangelos     0.96  33   P      Pg         19 21 15.3 -1.0
ARG                              S      Sg         19 21 29.7 +0.9
ARG  Arkhangelos     0.96  33   ePN    Pg         19 21 14.1 -2.2
ARG  Arkhangelos     0.96  33   P      Pg         19 21 15.3 -1.0
ARG                              S      Sg         19 21 29.7 +0.9
ZKR  Zakros          1.08 255   ePn    Pg         19 21 17.6 -1.1
ZKR  Zakros          1.08 255   P      Pg         19 21 17.6 -1.1
ZKR                              S      Sg         19 21 34.9 +2.2
ZKR  Zakros          1.08 255   ePN    Pg         19 21 17.6 -1.1
ZKR  Zakros          1.08 255   P      Pg         19 21 17.6 -1.1
ZKR                              S      Sg         19 21 34.9 +2.2
NIS1 Nisyros Isl.    1.22 348   P      Pb         19 21 20.1 -1.2
NIS1                             S      Sg         19 21 37.2 +0.1
NIS1 Nisyros Isl.    1.22 348   P      Pb         19 21 20.1 -1.2
NIS1                             S      Sg         19 21 37.2 +0.1
NPS  Neapolis        1.54 265   ePb    Pb         19 21 24.4 -2.4
NPS  Neapolis        1.54 265   ePB    Pb         19 21 24.4 -2.4
BDRM Kayabasi        1.65 359   i P    Pn         19 21 26.5 -0.8
BDRM Kayabasi        1.65 359   i P    Pn         19 21 26.5 -0.8
BDRM                             i S    Sn         19 21 50.5 +1.7
LAST Lasithi         1.66 262   ePn    Pn         19 21 27.6 +0.2
LAST Lasithi         1.66 262   P      Pn         19 21 27.5 +0.1
LAST                             S      Sn         19 21 49.3 +0.3
LAST Lasithi         1.66 262   ePN    Pn         19 21 27.6 +0.2
LAST Lasithi         1.66 262   P      Pn         19 21 27.5 +0.1
LAST                             S      Sn         19 21 49.3 +0.3
TURN Turunc          1.72  31   i P    Pn         19 21 22.4 -5.8
TURN Turunc          1.72  31   i S    Sn         19 21 45.7 -4.7
THR1 Thera Island    1.91 301   P      Pn         19 21 31.4 +0.6
THR1 Thera Island    1.91 301   P      Pn         19 21 31.4 +0.6
IDI  Anoyia          2.13 268   ePn    Pn         19 21 34.4 +0.6
IDI  Anoyia          2.13 268   ePN    Pn         19 21 34.4 +0.6
IDI  Anoyia          2.13 268   ePn    Pn         19 21 34.4 +0.6
AYDN Tasoluk         2.27   8   i P    Pn         19 21 35.5 -0.3
AYDN Tasoluk         2.27   8   i P    Pn         19 21 35.5 -0.3
AYDN                             i S    Sn         19 22 03.2 -0.8
APE  Apeiranthos     2.29 317   ePb    Pn         19 21 34.8 -1.3
APE  Apeiranthos     2.29 317   P      Pn         19 21 35.4 -0.7
APE                              S      Sn         19 22 03.1 -1.4
APE  Apeiranthos     2.29 317   ePB    Pn         19 21 34.8 -1.3
APE  Apeiranthos     2.29 317   P      Pn         19 21 35.4 -0.7
APE                              S      Sn         19 22 03.1 -1.4
DNZL Cakiroluk       2.60  28   i P    Pn         19 21 42.4 +2.1
DNZL Cakiroluk       2.60  28   i P    Pn         19 21 42.4 +2.1
DNZL                             i S    Sn         19 22 13.1 +1.0
VAM  Vamos           2.69 271   ePn    Pn         19 21 41.8 +0.3
VAM  Vamos           2.69 271   ePN    Pn         19 21 41.8 +0.3
VAM  Vamos           2.69 271   ePn    Pn         19 21 41.8 +0.3
KARN Karanos         2.92 271   ePN    Pn         19 21 45.0 +0.3
KARN Karanos         2.92 271   ePn    Pn         19 21 45.0 +0.3
```

*ISCJB **08** 19:29:24.5±0.5, 22°.79S±0°.04×66°.30W±0°.05, h228km±3km, mb4.2/39, Error ellipse: s-maj=8.6km s-min=5.5km az=43.3*

*NEIC **08** 19:29:25.4±0.8, 22°.80S×66°.28W, h225km±8km, mb4.3/25, Error ellipse: s-maj=10.4km s-min=7.3km az=71.0*

*IDC **08** 19:29:27.1±1.5, 22°.73S×66°.15W, h236km±14km, mb3.9/12, mb1 4.0/18, mb1mx4.0/22, mbtmp3.9/18, Error ellipse: s-maj=15.8km s-min=10.4km az=57.0*

*GUC **08** 19:29:27.2±0.7, 22°.56S×66°.80W, h260km±24km, ML5.9*

ISC 08 19:29:25.4±0.5, 22°.81S±0°.04×66°.29W±0°.05, h221km±3km, n210, σ0§88/199, mb4.2/39, 71C-50D, Jujuy Province

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Code Station Name      Δ°   AZ°   Phase ID          Time      Res
                                  Op     ISC        h m s     ISC
PB04 Plate Boundary  3.00 280   ⇑iP    Pn         19 30 24.1 +8.0
PB04                             i S    S          19 31 07.2 +11
PB04                              AML   AML        19 31 09.7
     comp=E,8μm,0.4s
```

PECH	Pedro de Valdi	3.13 273	⇓	iP	Pn	19 30 19.1 +1.5
PECH				i S	S	19 30 58.6 -0.1
PECH				AML	AML	19 30 59.9
	comp=E,12µm,0.3s					
MACH	Maria Elena	3.26 280	⇑	iP	Pn	19 30 20.5 +1.3
MACH				i S	S	19 31 00.8 -0.6
PB01	Plate Boundary	3.45 300		eP	Pn	19 30 22.1 +0.7
PB01				i S	S	19 31 04.6 -0.8
PB01				AML	AML	19 31 06.8
	comp=N,5µm,0.2s					
TOCH	Tocopilla	3.69 280	⇓	iP	Pn	19 30 25.0 +0.8
TOCH				i S	S	19 31 08.2 -2.2
TOCH				AML	AML	19 31 09.8
	comp=N,7µm,0.3s					
MECH	Mejillones	3.84 265		eP	Pn	19 30 27.1 +1.0
MECH				i S	S	19 31 13.2 -0.7
MECH				AML	AML	19 31 15.3
	comp=N,26µm,0.4s					
HMBC	Humberston	4.19 306	⇑	iP	Pn	19 30 30.4 +0.1
HMBC				i S	S	19 31 18.8 -2.7
HMBC				AML	AML	19 31 21.6
	comp=N,7µm,0.5s					
MNMC	Miæe Miæ	4.79 319		eP	Pn	19 30 38.5 +0.8
MNMC				i S	S	19 31 34.0 -1.0
MNMC				AML	AML	19 31 35.6
	comp=E,5µm,0.5s					
PSGC	Pisagua	4.79 311	⇑	iP	Pn	19 30 37.0 -0.8
PSGC				i S	S	19 31 31.1 -4.0
PSGC				AML	AML	19 31 34.4
	comp=E,2µm,0.3s					
LPAZ	La Paz	6.71 345		P	Pn	19 31 04.2 +2.0
	comp=E,11nm,0.3s,baz=151,slow=8.0,SNR=188					
LPAZ				S	S	19 32 22.0 +2.7
	comp=E,2.9nm,0.3s,baz=267,slow=23,SNR=8.4					
LPAZ	La Paz	6.71 345		ePn	Pn	19 31 04.1 +1.9
LCO	Las Campanas	7.34 212		ePn	Pn	19 31 09.5 -0.6
SIV	San Ignacio	8.38 37		P	Pn	19 31 24.4 +0.8
	comp=E,11nm,0.3s,baz=226,slow=10,SNR=227					
CPUP	Villa Florida	8.88 115		P	Pn	19 31 30.5 +0.6
	comp=E,0.4nm,0.3s,baz=278,slow=11,SNR=12					
CFAA	Coronel Fontan	8.93 191		P	Pn	19 31 29.8 -0.8
	comp=E,0.3nm,0.3s,baz=5.7,slow=12,SNR=27					
NNA	Nana	14.73 315		P	Pn	19 32 44.1 +0.6
	comp=E,3.3nm,0.3s,baz=160,slow=11,SNR=14					
TRQA	Tornquist	15.64 167		ePn	Pn	19 32 53.1 -1.2
	comp=E,21nm,0.6s					
SPB	Sao Paulo	17.36 96		eP	P	19 33 13.8 +0.9
	comp=E,45nm,0.8s					
PLCA	Paso Flores	18.23 190		P	P	19 33 23.3 +1.2
	comp=E,0.4nm,0.3s,baz=8.0,slow=12,SNR=15					
ATAH	Atahualpa	19.46 321		P	P	19 33 38.5 +2.8
	comp=E,0.7nm,0.3s,baz=148,slow=11,SNR=5.7					
CAM4	Nova Friburgo	21.91 93	⇑	iP	P	19 34 00.3 -0.7
CAM4				i		19 34 01.9
CAM4				i		19 34 04.9
CAM4				i		19 34 04.9
CAM4				i		19 34 10.0
CAM4				i		19 34 18.0
CAM4				i		19 34 27.2
OTAV	Otavalo	25.79 331		eP	P	19 34 39.8 +3.5
	comp=E,2.5nm,0.7s,mb4.0					
TEIG	Tepich	47.85 332		eP	P	19 37 39.7 -1.5
	comp=E,36nm,1.2s,mb4.6					
LRAL	Lakeview Retre	58.94 340		eP	P	19 38 59.8 -1.8
	comp=E,3.9nm,0.9s,mb4.0					
TKL	Tuckaleechee C	60.46 344		eP	P	19 39 09.7 -2.1
CPCT	Cooper Cave	60.46 343		eP	P	19 39 10.9 -0.9
SWET	Sewanee	60.64 342		eP	P	19 39 12.1 -1.0
ELN	Prospectdale	61.25 347		eP	P	19 39 16.0 -1.1
JCT	Junction City	61.99 327		eP	P	19 39 21.6 -0.6
	comp=E,8.6nm,0.8s,mb4.4					
WVT	Waverly	62.06 340		eP	P	19 39 21.0 -1.5
	comp=E,11nm,0.9s,mb4.5					
628A	Black Gap, Mar	62.80 324		P	P	19 39 27.8 +0.3
	baz=63,SNR=6.9					
627A	Terlingua Ranc	63.04 324	⇑	P	P	19 39 28.9 -0.3
	baz=63,SNR=5.2					
TXAR	Lajitas Array	63.10 324		P	P	19 39 29.1 -0.5
	comp=E,1.3nm,0.6s,mb3.7,baz=150,slow=8.4,SNR=25					
626A	Big Bend Ranch	63.53 323	⇑	P	P	19 39 32.4 0.0
	baz=64,SNR=12					
WCI	Wyandotte Cave	63.55 342		eP	P	19 39 29.8 -2.5
	comp=E,8.6nm,0.7s,mb4.5					
527A	Woodward Ranch	63.70 324	⇓	P	P	19 39 33.1 -0.4
	baz=64					
526A	Mary Lane Ranc	63.90 324	⇑	P	P	19 39 34.3 -0.4
	baz=64,SNR=8.3					
427A	Hayter Ranch,	64.14 325	⇑	P	P	19 39 35.5 -0.8
	baz=64					
328A	Wristen Ranch,	64.25 326	⇓	P	P	19 39 36.4 -0.6
	baz=64					
426A	McDonald Obser	64.33 324	⇓	P	P	19 39 37.1 -0.5
	baz=65,SNR=5.8					
425A	Indio Mountain	64.95 324	⇓	P	P	19 39 41.0 -0.6
	baz=65,SNR=10					
WMOK	Wichita Mounta	65.02 331		eP	P	19 39 41.0 -0.9
	comp=E,8.6nm,0.9s,mb4.4					
BINY	Binghamton	65.30 352		eP	P	19 39 43.6 0.0
	comp=E,7.9nm,0.9s,mb4.3					
325A	Bean Ranch, Si	65.39 324		P	P	19 39 43.9 -0.5
	baz=66,SNR=15					
226A	Malaga, Loving	65.46 325	⇓	P	P	19 39 44.0 -0.8
	baz=66					
GDL2	Guadalupe Moun	65.70 325		eP	P	19 39 45.9 -0.5
	comp=E,2.4nm,0.7s,mb3.9					
324A	Moseley Ranch,	65.72 324	⇑	P	P	19 39 45.6 -0.9
	baz=66					
MNTX	Cornudas Mount	65.86 324		eP	P	19 39 46.0 -1.4
	comp=E,3.4nm,1.0s,mb3.9					
Z27A	Tatum	65.98 327	⇑	P	P	19 39 46.6 -1.5
	baz=66					
CPRX	Cap Rock	66.09 326		eP	P	19 39 47.8 -1.0
	comp=E,2.5nm,0.6s,mb4.0					
125A	Gardner Draw,	66.22 325	⇓	P	P	19 39 48.8 -0.8
	baz=66					
224A	Cornudas Mount	66.23 324	⇑	P	P	19 39 48.9 -0.8
	baz=66,SNR=7.1					
MSTX	Muleshoe	66.28 327	⇓	P	P	19 39 49.1 -1.0
	baz=67					
Z26A	Caprock	66.34 326	⇓	P	P	19 39 49.6 -0.8
	baz=67					
LIC	Lamto	66.45 72		ePKIKP	P	19 39 52.7 +1.2
	comp=E,76nm,1.7s,mb5.1					
TIC	Toumodi	66.66 72		ePKIKP	P	19 39 52.4 -0.4
	comp=E,71nm,1.7s,mb5.0					
Z25A	Roswell	66.73 325	⇓	P	P	19 39 52.3 -0.6
	baz=67					
KIC	Kosan Boka	66.77 72		ePKIKP	P	19 39 52.9 -0.6
	comp=E,24nm,1.1s,mb4.8					
DBIC	Dimbokro	66.81 72		P	P	19 39 52.9 -0.9
	comp=E,7.5nm,0.9s,mb4.3,baz=204,slow=8.3,SNR=5.4					
DBIC	Dimbokro	66.81 72		P	P	19 39 52.9 -0.9
Z24A	Sheeppen Canyo	67.11 325	⇓	P	P	19 39 55.1 -0.1
	baz=67					
Y25A	Mesa, Roswell	67.22 326	⇑	P	P	19 39 55.2 -0.8
	baz=68					
W27A	Bowe Ranch, En	67.30 328	⇓	P	P	19 39 55.8 -0.6
	baz=68					
QSPA	South Pole Qui	67.39 180		P	P	19 39 58.0 +1.7
	comp=E,3.0nm,0.6s,mb4.1,baz=149,slow=2.3,SNR=30					
QSPA	South Pole Qui	67.39 180		P	P	19 39 58.0 +1.7
319A	Douglas	67.81 321	⇑	P	P	19 40 00.0 +0.3
	baz=68					
Z22A	Elephant Butte	67.91 324	⇓	P	P	19 40 00.2 -0.1
	baz=68,SNR=6.1					
W25A	X Bar L Ranch,	68.12 327	⇑	P	P	19 40 00.8 -0.8
	baz=68					
V25A	Rancho No Teng	68.68 327	⇓	P	P	19 40 04.9 -0.1
	baz=69					
U26A	Atchley Ranch,	68.69 328	⇑	P	P	19 40 04.5 -0.5
	baz=69					
218A	Dragoon	68.70 321	⇓	P	P	19 40 05.3 +0.1
	baz=69					
Z20A	Nine Sixteen R	68.70 323	⇓	P	P	19 40 05.8 +0.6
	baz=69					
ANMO	Albuquerque	68.94 325		eP	P	19 40 07.0 +0.4
	comp=E,1.0nm,0.8s,mb3.5					
217A	Green Valley	69.00 320	⇓	P	P	19 40 07.7 +0.6
	baz=69					
JFWS	Jewell Farm	69.02 341		eP	P	19 40 05.4 -1.5
	comp=E,10nm,0.8s,mb4.5					
U25A	Circle Dot Ran	69.02 328	⇑	P	P	19 40 06.7 -0.4
	baz=69					
118A	Homack Ranch,	69.14 321	⇑	P	P	19 40 08.4 +0.5
	baz=69					
117A	Oracle	69.53 321	⇑	P	P	19 40 10.4 +0.1
	baz=70					
216A	Three Points,	69.55 320	⇑	P	P	19 40 11.1 +0.7
	baz=70					
Y17A	Roosevelt	70.41 322	⇓	P	P	19 40 16.1 +0.5
	baz=71					
Z16A	Peralta Trail,	70.49 321	⇑	P	P	19 40 16.6 +0.6
	baz=71					
CALA	Caldeira	70.51 30		eS	SKSac	19 50 06.2 +10
PCAN	Candelaria	70.52 31		eS	SKSac	19 50 10.9 +14
PCAN				A		19 50 13.7
	comp=E,53nm,0.2s					
PICO	Pico	70.57 31		eS	SKSac	19 50 12.9 +16
X17A	Forest Lakes	70.85 322	⇓	P	P	19 40 18.6 +0.4
	baz=71					
V19A	Window Rock	70.89 324	⇑	P	P	19 40 19.1 +0.7
	baz=71					
Y16A	Circle Bar Ran	70.90 321	⇓	P	P	19 40 18.8 +0.2
	baz=71					
X16A	Lo Mia Camp, P	71.27 322	⇑	P	P	19 40 20.9 +0.2
	baz=72					
X15A	Humboldt	71.78 321	⇑	P	P	19 40 24.9 +1.2
	baz=72					
W16A	Flagstaff	71.81 322	⇓	P	P	19 40 24.8 +0.9
	baz=72					
Y14A	Wickenburg	71.83 320	⇑	P	P	19 40 24.8 +0.7
	baz=72					
WUAZ	Wupatki	72.03 323	⇑	P	P	19 40 25.7 +0.5
	baz=72					
X14A	Yava	72.14 321	⇑	P	P	19 40 26.3 +0.3
	baz=72					
Y13A	Salome	72.23 320	⇓	P	P	19 40 26.8 +0.3
	baz=72					
GLA	Glamis	72.31 319		eP	P	19 40 32.0 +5.1
	comp=E,181nm,0.8s					
R20A	Redvale	72.41 326	⇓	P	P	19 40 27.1 -0.3
	baz=73					
V14A	Boquillas Ranc	73.09 322	⇑	P	P	19 40 32.9 +1.3
	baz=73					
BAR	Barrett	73.20 317		eP	P	19 40 28.5 -3.7
	comp=E,644nm,0.3s					
U15A	North Rim	73.20 323	⇓	P	P	19 40 33.2 +1.1
	baz=74					
PFO	Pinyon Flat Ob	73.68 318		eP	P	19 40 37.6 +2.6
	comp=E,37nm,0.4s,mb5.4					
U14A	Mt Trumbull	73.69 322	⇑	P	P	19 40 36.0 +1.0
	baz=74					
V13A	Grand Canyon W	73.75 321	⇑	P	P	19 40 36.0 +0.6
	baz=74					
P19A	Cripple Cowboy	73.81 327	⇑	P	P	19 40 35.7 +0.1
	baz=74					
GMRC	Granite Mounta	73.99 319	⇑	P	P	19 40 37.5 +0.7
	baz=74					
V12A	Nelson	74.17 321	⇑	P	P	19 40 38.4 +0.7
	baz=74					
SRU	San Rafael	74.20 326	⇑	P	P	19 40 38.1 +0.2
	baz=74					
SRU	San Rafael	74.20 326		eP	P	19 40 38.9 +1.0
	comp=E,7.1nm,0.7s,mb4.4					
SYO	Syowa Base	74.42 159	⇑	eP	P	19 40 37.8 -1.0
P18A	Preston Nutter	74.44 326	⇓	P	P	19 40 40.3 +1.0
	baz=75					
U12A	Valley of Fire	74.48 321	⇑	P	P	19 40 40.5 +1.0
	baz=75					
T13A	Saint George	74.53 322	⇓	P	P	19 40 41.0 +1.2
	baz=75					
M21A	Separation Pea	74.53 329	⇓	P	P	19 40 38.1 -1.6
	baz=75					
CCUT	Cedar City	74.60 323		eP	P	19 40 42.0 +1.8
	comp=E,6.7nm,0.8s,mb4.3					
MSU	Marysvale	74.64 324		eP	P	19 40 41.7 +1.2
L21A	Rawlins	74.81 329	⇑	P	P	19 40 41.2 -0.1
	baz=75					
SHPR	Sheep Range	74.89 321		eP	P	19 40 43.0 +1.1
S13A	Holt Ranch, En	74.90 323	⇓	P	P	19 40 43.2 +1.3
	baz=75					
GSC	Goldstone	75.04 319	⇑	P	P	19 40 43.5 +0.7
	baz=75,SNR=6.4					
O17A	Robinson Place	75.12 326	⇑	P	P	19 40 43.4 +0.3
	baz=75					
T11A	Corn Creek, Al	75.43 322	⇑	P	P	19 40 45.8 +0.8
	baz=76					
EDW2	Edwards Air Fo	75.48 318	⇑	P	P	19 40 45.9 +0.6
	baz=76					
U10A	Ash Meadows, A	75.51 320	⇑	P	P	19 40 46.2 +0.7
	baz=76					
TOA0	Torodi Ar. Sit	75.53 69		eP	P	19 40 44.2 -1.9
TORD	Torodi Ar. Bea	75.53 69		P	P	19 40 44.3 -1.7
	comp=E,3.7nm,0.6s,mb4.2,baz=256,slow=5.9,SNR=48					
DAU	Daniels Canyon	75.55 326		eP	P	19 40 47.1 +1.5
Q14A	Sevier Lake (B	75.58 324	⇑	P	P	19 40 46.6 +0.8
	baz=76,SNR=7.7					
LRMC	Laurel Mountai	75.69 319	⇓	P	P	19 40 47.2 +0.7
	baz=76					
M18A	Lyman	75.70 328	⇓	P	P	19 40 46.3 -0.1
	baz=76					
N17A	Moffit Pass	75.72 327	⇑	P	P	19 40 46.6 +0.1
	baz=76					
R12A	Pony Springs,	75.84 323	⇓	P	P	19 40 47.2 0.0
	baz=76,SNR=6.9					
FURC	Furnace Creek,	75.86 320	⇑	P	P	19 40 48.2 +0.8
	baz=76					
P14A	Drum Mountains	75.90 325	⇓	P	P	19 40 47.7 +0.2
	baz=76,SNR=8.8					
MPMC	Manual Prospec	75.96 319	⇑	P	P	19 40 48.4 +0.4
	baz=76					
Q13A	Wheeler Ranch,	75.96 324	⇓	P	P	19 40 48.3 +0.4
	baz=76,SNR=5.9					
L18A	Fontenelle, Gr	76.06 328	⇑	P	P	19 40 47.6 -0.8
	baz=76					
DUG	Dugway	76.20 325	⇑	P	P	19 40 48.1 -1.1
	baz=76					
DUG	Dugway	76.20 325		eP	P	19 40 48.1 -1.1
	comp=E,2.2nm,0.8s,mb3.8					
ISA	Isabella	76.29 319	⇓	P	P	19 40 50.7 +0.8
	baz=77					
ISA	Isabella	76.29 319		eP	P	19 40 50.8 +1.0
	comp=E,9.6nm,0.8s,mb4.5					
P13A	Bates Ranch, G	76.31 324	⇑	P	P	19 40 49.5 -0.4
	baz=77					
R11A	Troy Canyon, C	76.41 322	⇑	P	P	19 40 50.8 +0.3
	baz=77					
PDAR	Pinedale Array	76.47 329		P	P	19 40 50.5 -0.1
	comp=E,0.8nm,0.5s,mb3.6,baz=116,slow=6.8,SNR=6.3					
Q12A	Willow Creek R	76.47 323	⇓	P	P	19 40 51.1 +0.3
	baz=77					
HWUT	Hardware Ranch	76.59 327		eP	P	19 40 50.6 -0.8
	comp=E,3.1nm,0.7s,mb4.0					
S10A	Tonopah Range,	76.69 321	⇑	P	P	19 40 52.6 +0.5
	baz=77					
VES	Vestal, Richgr	76.78 318	⇓	P	P	19 40 52.9 +0.2
	baz=77					
Q11A	Duckwater	76.79 323	⇓	P	P	19 40 52.8 +0.2
	baz=77					
N14A	Grayback Hills	76.87 325	⇑	P	P	19 40 53.2 +0.2
	baz=77					
M15A	Larsen Ranch,	76.93 326	⇑	P	P	19 40 53.1 -0.1
	baz=77					
L15A	Malad City	77.29 327	⇓	P	P	19 40 54.8 -0.5
	baz=78					
SCHQ	Schefferville	77.32 360		P	P	19 40 54.6 -0.5
	comp=E,3.0nm,0.7s,mb4.0,baz=173,slow=6.5,SNR=3.0					
TSUM	Tsumeb	77.35 106		P	P	19 40 55.9 -0.3
	comp=E,5.9nm,1.0s,mb4.2,baz=224,slow=3.9,SNR=5.9					
LOHW	Long Hollow	77.61 329		eP	P	19 40 57.7 +0.7
	comp=E,12nm,1.7s,mb4.2					
O11A	Cowboy Ranch,	77.69 323	⇓	P	P	19 40 57.4 -0.1
	baz=78					
L14A	Malta	77.75 326	⇑	P	P	19 40 57.8 -0.1
	baz=78					
IMW	Indian Meadow	77.98 329		eP	P	19 40 59.6 +0.5
	comp=E,2.5nm,0.8s,mb3.9					
NVAR	Mina Array Bea	78.03 321		P	P	19 41 00.2 +0.8
	comp=E,1.6nm,0.7s,mb3.8,baz=159,slow=4.7,SNR=12					
L13A	Double Diamond	78.16 326	⇑	P	P	19 40 59.8 -0.3
	baz=78					
M12A	Wells	78.19 325	⇓	P	P	19 40 59.8 -0.4
	baz=78,SNR=5.1					
M11A	Holland Ranch,	78.67 324	⇑	P	P	19 41 02.5 -0.4
	baz=79					
L12A	House Creek Ra	78.76 325	⇑	P	P	19 41 03.7 +0.4
	baz=79,SNR=5.6					
J14A	Carey	78.83 327	⇑	P	P	19 41 03.7 0.0
	baz=79					
F18A	Big Timber	78.93 331	⇓	P	P	19 41 02.7 -1.4
	baz=79					
K12A	Draper Farm, C	79.04 326	⇑	P	P	19 41 05.4 +0.5
	baz=79,SNR=7.4					
L11A	Cat Creek Ranc	79.16 325	⇑	P	P	19 41 06.5 +0.9
	baz=79,SNR=7.2					
I14A	Mackay	79.23 327	⇓	P	P	19 41 06.2 +0.3
	baz=80					
F17A	Fitzpatrick Pl	79.36 330	⇑	P	P	19 41 07.1 +0.6
	baz=80					
HLID	Hailey	79.45 327	⇓	P	P	19 41 07.4 +0.3
	baz=80,SNR=11					
HLID	Hailey	79.45 327		eP	P	19 41 07.7 +0.6
	comp=E,4.5nm,0.8s,mb4.2					
HLID				ePcP	PcP	19 41 14.4 +0.1
L10A	Juniper Basin	79.48 324		P	P	19 41 08.2 +1.0
	baz=80,SNR=13					
J12A	Stokes Ranch,	79.58 326	⇑	P	P	19 41 07.9 +0.1
	baz=80					
K11A	Parker Ranch,	79.73 325	⇑	P	P	19 41 08.1 -0.5
	baz=80,SNR=6.0					
E17A	Martinsdale	79.87 330	⇓	P	P	19 41 08.9 -0.3
	baz=80					
H13A	Challis	80.09 327	⇑	P	P	19 41 10.1 -0.4
	baz=80					
F15A	Butte	80.16 329	⇓	P	P	19 41 09.6 -1.3
	baz=80					
K10A	MacKenzie Ranc	80.18 325	⇑	P	P	19 41 10.2 -0.8
	baz=80					
H12A	Diamond D Ranc	80.38 327	⇓	P	P	19 41 11.8 -0.2
	baz=81					
G13A	Cobalt	80.46 328	⇑	P	P	19 41 12.8 +0.3
	baz=81					
BOSA	Boshof	80.69 117		P	P	19 41 14.1 -0.1
	comp=E,6.2nm,1.1s,mb4.2,baz=214,slow=3.6,SNR=6.8					
H10A	Noah's Angus R	81.37 326	⇑	P	P	19 41 17.7 +0.5
	baz=82					
J08A	Circle Bar Ran	81.43 324	⇑	P	P	19 41 17.9 +0.3
	baz=82,SNR=5.4					
I09A	Lost Marbles R	81.46 325	⇓	P	P	19 41 18.2 +0.4
	baz=82					
MOD	Modoc	81.47 322		eP	P	19 41 18.2 +0.4
	comp=E,5.1nm,0.8s,mb4.2					
C15A	Salmond Ranch,	81.64 330	⇑	P	P	19 41 18.4 -0.2
	baz=82					
G10A	Bishop Farm, J	82.05 326	⇓	P	P	19 41 21.0 +0.3
	baz=82,SNR=7.8					
A16A	West Butte Ran	82.07 332	⇓	P	P	19 41 20.0 -0.8
	baz=82					
K05A	Summer Lake	82.34 323	⇑	P	P	19 41 23.2 +0.8
	baz=83					
MAW	Mawson	82.37 163		P	P	19 41 22.5 +0.3
	comp=E,1.9nm,0.8s,mb3.8,baz=288,slow=2.0,SNR=4.2					
D12A	Red Ives Fores	82.41 329	⇑	P	P	19 41 22.4 -0.2
	baz=83					
TAM	Tamanrasset	83.26 62		eP	P	19 41 27.5 -0.1
	comp=E,6.3nm,1.0s,mb4.3					
ESDC	Sonseca Array	85.09 43		P	P	19 41 35.8 -0.5
	comp=E,7.6nm,1.0s,mb4.4,baz=239,slow=4.4,SNR=16					
YKA	Yellowknife Ar	93.24 340		P	P	19 42 13.5 -0.7
	comp=E,0.9nm,0.6s,mb4.0,baz=134,slow=4.7,SNR=8.4					
ASAR	Alice Springs	129.81 204		PKP	PKPdf	19 48 08.2 -0.8
	comp=E,0.6nm,0.6s,baz=134,slow=1.7,SNR=12					
ABKAR	Akbulak array	130.43 44		ePKPdf	PKPdf	19 48 10.4 +1.0
WRA	Warramunga Arr	132.98 207		PKP	PKPdf	19 48 14.5 -0.6
	comp=E,0.5nm,0.5s,baz=154,slow=1.6,SNR=12					
WRA	Warramunga Arr	132.98 207		PKP	PKPdf	19 48 14.5 -0.6
BVAR	Borovoye Array	135.46 36		PKP	PKPdf	19 48 20.0 +1.3
	comp=E,0.7nm,0.7s,baz=240,slow=2.9,SNR=4.6					
FITZ	Fitzroy Crossi	137.70 197		PKP	PKPdf	19 48 24.4 +0.4
	comp=E,2.4nm,1.0s,baz=39,slow=19,SNR=2.5					
KURK	Kurchatov	141.03 36		PKhKP		19 48 25.3
	comp=E,0.7nm,0.7s,baz=302,slow=2.6,SNR=3.1					
KURK				PKP	PKPdf	19 48 29.5 +0.5
	comp=E,0.3nm,0.5s,baz=235,slow=7.3,SNR=3.5					
ZALV	Zalesovo Beam	142.04 28		PKP	PKPdf	19 48 27.4 -3.3
	comp=E,1.3nm,0.4s,baz=295,slow=5.1,SNR=5.2					
MK31	Makanchi Array	145.19 39		ePKPdf	PKPdf	19 48 36.5 +0.1
MKAR	Makanchi Array	145.19 39		PKPbc	PKPbc	19 48 36.7 +0.1
	comp=E,9.7nm,0.8s,baz=351,slow=3.9,SNR=68					
MKAR	Makanchi Array	145.19 39		PKPbc	PKPbc	19 48 36.7 +0.1
SONM	Songino Array	154.35 11		PKPbc	PKPbc	19 48 58.9 -0.4
	comp=E,0.9nm,0.8s,baz=335,slow=3.4,SNR=3.3					
SONM				PKPab	PKPab	19 49 14.7 +0.4
	comp=E,1.2nm,0.7s,baz=322,slow=5.2,SNR=4.9					
MJAR	Matsushiro Arr	154.78 308		PKPbc	PKPbc	19 49 01.6 +1.0
	comp=E,0.6nm,0.7s,baz=110,slow=2.9,SNR=3.3					
MJAR				PKPab	PKPab	19 49 16.0 -0.5
	comp=E,1.0nm,0.8s,baz=68,slow=3.1,SNR=5.0					
MJAR	Matsushiro Arr	154.78 308		PKPbc	PKPbc	19 49 01.6 +1.0
MJAR				PKPab	PKPab	19 49 16.0 -0.6
HHC	Hu-ho-hao-te	161.92 5		ePKP	PKPdf	19 48 59.1 -1.1
HHC				pPKP	pPKPdf	19 49 57.1 -0.2
HHC				sPKP		19 50 20.2
HHC				PKS		19 52 31.4
HHC				PP	PP	19 53 34.1 +3.4
HHC				SKS	SKSdf	19 55 40.3 -3.7
HHC				SKKS	SKKSac	19 59 58.7 +0.8
HHC				SS	SS	20 13 32.5 +2.3
HHC				AMB	AMB	
	comp=Z,61nm,5.5s					
HHC				LR	LR	
	comp=N,99nm,25.2s					
HHC				LR	LR	
	comp=E,87nm,24.0s					
HHC				LR	LR	
	comp=Z,67nm,22.8s					
CMAR	Chiang Mai Arr	165.52 105		PKPab	PKPab	19 50 03.5 -0.3
	comp=Z,2.1nm,0.8s,baz=258,slow=5.2,SNR=13					
CD2	Chengdu	168.01 46		ePKP	PKPdf	19 49 03.6 -2.1
XAN	Xi'an	168.05 20		PKP	PKPdf	19 49 10.0 +4.4
XAN				LR	LR	
	comp=N,100nm,9.9s					
XAN				LR	LR	
	comp=E,30nm,10.1s					
XAN				LR	LR	
	comp=Z,17nm,6.4s					

ATH ***08*** *19:39:27.9, 38°.04N×21°.54E, h18km±1km, MD3.2/10*
NEIC ***08*** *19:39:27.9, 38°.04N×21°.54E, h18km, MD3.2(ATH), After ATH.*
ISCJB ***08*** *19:39:27.9±0.4, 38°.01N±0°.02×21°.57E±0°.02, h6km±3km, Error ellipse: s-maj=3.1km s-min=2.9km az=10.8*
THE ***08*** *19:39:28.1, 38°.03N×21°.58E, h0km±1km, ML3.7/13, Error ellipse: s-maj=1.7km s-min=0.6km az=201.0*
CSEM ***08*** *19:39:28.0±0.2, 38°.00N×21°.58E, h10km, MD3.2, Error ellipse: s-maj=3.9km s-min=3.6km az=26.0*
ISC 08 19:39:28.5±0.3,**38°.01N**±0°.02×**21°.57E**±0°.02,**h9**km±2km,
n77,σ1°.**02**/139,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.09**	**300**	*e*Pb	**Pg**	**19 39 31.2**	**+0.3**
RLS				*e*Sb	**Sg**	**19 39 33.8**	**+1.2**
RLS	**Riolos of Patr**	**0.09**	**300**	*e*PB	**Pg**	**19 39 31.2**	**+

GUR				S	Sg	19 39 49.2	+0.7
KFL	Anninata	0.62	279	P	Pg	19 39 40.1	-0.4
KFL				S	Sg	19 39 49.5	+0.8
VLS	Valsamata	0.79	282	ePn	Pg	19 39 42.2	-1.5
VLS				eSn	Sg	19 39 54.5	+0.5
VLS	Valsamata	0.79	282	P	Pg	19 39 42.2	-1.5
VLS				S	Sg	19 39 54.8	+0.8
VLS	Valsamata	0.79	282	ePN	Pg	19 39 42.2	-1.5
VLS				eSN	Sg	19 39 54.5	+0.5
VLS	Valsamata	0.79	282	P	Pg	19 39 42.2	-1.5
VLS				eSn	Sg	19 39 54.5	+0.5
VLS				S	Sg	19 39 54.8	+0.8
DSF	Desfina	0.85	62	P	Pg	19 39 43.4	-1.5
DSF				S	Sg	19 39 56.3	+0.2
DSF	Desfina	0.85	62	P	Pg	19 39 43.4	-1.5
DSF				S	Sg	19 39 56.3	+0.2
ITM	Ithomi	0.88	161	ePn	Pg	19 39 45.1	-0.3
ITM				eSn	Sn	19 39 59.2	-0.5
ITM	Ithomi	0.88	161	P	Pg	19 39 45.1	-0.3
ITM				S	Sg	19 39 58.6	+1.8
ITM	Ithomi	0.88	161	ePN	Pg	19 39 45.1	-0.3
ITM				eSN	Sn	19 39 59.2	-0.5
ITM	Ithomi	0.88	161	P	Pg	19 39 45.1	-0.3
ITM				S	Sg	19 39 58.6	+1.8
ITM				eSn	Sn	19 39 59.2	-0.5
VLX	Vlachokerasia	0.91	135	P	Pg	19 39 45.5	-0.4
VLX				S	Sg	19 39 59.1	+1.4
VLX	Vlachokerasia	0.91	135	ePN	Pg	19 39 45.8	-0.1
VLX				eSN	Sg	19 39 59.3	+1.6
VLX	Vlachokerasia	0.91	135	P	Pg	19 39 45.5	-0.4
VLX	Vlachokerasia	0.91	135	ePn	Pg	19 39 45.8	-0.1
VLX				eSn	Sg	19 39 59.3	+1.6
EVR	Evrytania	0.92	12	ePn	Pg	19 39 45.2	-1.0
EVR				eSn	Sg	19 39 58.3	0.0
EVR	Evrytania	0.92	12	ePN	Pg	19 39 45.2	-1.0
EVR				eSN	Sg	19 39 58.3	0.0
EVR	Evrytania	0.92	12	ePn	Pg	19 39 45.2	-1.0
LKD2	Lefkada island	1.05	318	P	Pg	19 39 48.8	+0.1
LKD2				S	Sg	19 40 04.0	+1.5
LKD2	Lefkada island	1.05	318	P	Pg	19 39 48.8	+0.1
LKD2				S	Sg	19 40 04.0	+1.5
LTK	Loutraki	1.10	89	P	Pg	19 39 48.6	-1.1
LTK				S	Sg	19 40 04.8	+0.7
LTK	Loutraki	1.10	89	ePB	Pg	19 39 48.6	-1.1
LTK	Loutraki	1.10	89	P	Pg	19 39 48.6	-1.1
LTK				S	Sg	19 40 04.8	+0.7
PYL	PYLOS	1.12	173	P	Pg	19 39 49.8	-0.2
PYL	PYLOS	1.12	173	ePN	Pg	19 39 49.8	-0.2
PYL	PYLOS	1.12	173	P	Pg	19 39 49.8	-0.2
AGG	Agios Georgios	1.17	30	ePn	Pn	19 39 50.0	-1.0
AGG	Agios Georgios	1.17	30	P	Pb	19 39 48.9	-2.0
AGG				S	Sb	19 40 05.6	-0.5
AGG	Agios Georgios	1.17	30	ePN	Pn	19 39 50.0	-1.0
AGG	Agios Georgios	1.17	30	P	Pb	19 39 48.9	-2.0
AGG	Agios Georgios	1.17	30	ePn	Pn	19 39 50.0	-1.0
AGG				S	Sb	19 40 05.6	-0.5
LKR	Lokris	1.29	60	ePb	Pb	19 39 51.6	-1.3
LKR				eSn	Sn	19 40 11.1	+1.1
LKR	Lokris	1.29	60	P	Pn	19 39 51.2	-1.4
LKR				S	Sb	19 40 10.5	+0.9
LKR	Lokris	1.29	60	ePB	Pb	19 39 51.6	-1.3
LKR				eSN	Sn	19 40 11.1	+1.1
LKR	Lokris	1.29	60	P	Pn	19 39 51.2	-1.4
LKR	Lokris	1.29	60	ePb	Pb	19 39 51.6	-1.3
LKR				S	Sb	19 40 10.5	+0.9
LKR				eSn	Sn	19 40 11.1	+1.1
ATAL	Atalanti	1.33	59	P	Pn	19 39 52.0	-1.1
ATAL				S	Sb	19 40 12.1	+1.5
ATAL	Atalanti	1.33	59	P	Pn	19 39 52.0	-1.1
ATAL				S	Sb	19 40 12.1	+1.5
NAIG	Nisos Aigina	1.54	99	ePn	Pn	19 39 57.3	+1.3
NAIG	Nisos Aigina	1.54	99	ePN	Pn	19 39 57.3	+1.3
NAIG	Nisos Aigina	1.54	99	ePn	Pn	19 39 57.3	+1.3
THL	Klokotos Trika	1.59	13	P	Pn	19 39 56.8	+0.1
THL				S	Sn	19 40 19.2	+1.9
THL	Klokotos Trika	1.59	13	ePN	Pn	19 39 57.1	+0.4
THL				eSN	Sn	19 40 17.8	+0.5
THL	Klokotos Trika	1.59	13	P	Pn	19 39 56.8	+0.1
THL	Klokotos Trika	1.59	13	ePn	Pn	19 39 57.1	+0.4
THL				eSn	Sn	19 40 17.8	+0.5
THL				S	Sn	19 40 19.2	+1.9
IGT	Igoumenitsa	1.80	328	P	Pn	19 40 00.0	+0.4
IGT	Igoumenitsa	1.80	328	P	Pn	19 40 00.0	+0.4
XOR	Xorichti	1.86	43	P	Pn	19 39 59.4	-1.0
XOR				S	Sn	19 40 25.1	+1.2
XOR	Xorichti	1.86	43	P	Pn	19 39 59.4	-1.0
XOR				S	Sn	19 40 25.1	+1.2
AOS	Alonnisos	2.15	57	P	Pn	19 40 02.9	-1.5
AOS				S	Sn	19 40 31.8	+0.6
AOS	Alonnisos	2.15	57	P	Pn	19 40 02.9	-1.5
AOS				S	Sn	19 40 31.8	+0.6
KEK	Kerkira	2.19	321	P	Pn	19 40 05.5	+0.6
KEK	Kerkira	2.19	321	P	Pn	19 40 05.5	+0.6
LIT	Litokhoron	2.21	19	ePn	Pn	19 40 06.0	+0.8
LIT	Litokhoron	2.21	19	P	Pn	19 40 05.2	0.0
LIT				S	Sn	19 40 34.3	+1.8
LIT	Litokhoron	2.21	19	ePN	Pn	19 40 06.0	+0.8
LIT	Litokhoron	2.21	19	P	Pn	19 40 05.2	0.0
LIT	Litokhoron	2.21	19	ePn	Pn	19 40 06.0	+0.8
LIT				S	Sn	19 40 34.3	+1.8
STON	Ston	5.68	330	i Pn	Pn	19 40 50.0	-2.9
STON				Sn	Sn	19 41 52.6	-5.5

*IDC **08** 19:50:39.6±0.8, 1°.10N×97°.05E, h0km, mb4.0/15, mb1 4.1/17, mb1mx3.9/28, mbtmp4.0/17, ML4.1/2, MS3.6/9, Ms1 3.6/9, ms1mx3.2/33, Error ellipse: s-maj=24.3km s-min=15.3km az=54.0*

*DJA **08** 19:50:40, 1°.15N×96°.94E, h21km, mb4.6/8*

*BJI **08** 19:50:42.0, 0°.80N×97°.44E, h50km, mB4.8/4, mb4.4/12, Ms4.2/3, Ms7 4.2/3*

*ISCJB **08** 19:50:42.5±0.3, 1°.10N±0°.04×97°.09E±0°.04, h33km, mb4.2/28, MS3.8/7, Error ellipse: s-maj=7.4km s-min=4.1km az=41.4*

*NEIC **08** 19:50:44.8±0.5, 1°.15N×97°.16E, h35km, mb4.3/13, Error ellipse: s-maj=11.5km s-min=8.2km az=51.0*

ISC 08 19:50:43.9±1.5, 1°.14N±0°.05×97°.11E±0°.07, h27km±10km, n64, σ0°97/62, mb4.2/28, MS3.8/7, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.49	71	P	Pb	19 50 53.9	-0.2
GSI				S	Sb	19 51 01.4	+0.5
TRSI	Tarutung	2.04	65	P	Pn	19 51 16.6	0.0
PSI	Prapat	2.45	48	Pn	Pn	19 51 21.5	-0.7
PSI	15nm,0.3s,baz=273,slow=7.5,SNR=78			LR	LR	19 52 00.6	
MNSI	comp=Z,494nm,18.7s,baz=302,slow=33 Mandailing Nat	2.49	98	P	Pn	19 51 22.6	-0.2
PPI	Padang Panjang	3.65	116	P	Pn	19 51 39.6	+0.9
PDSI	Padang	3.92	121	P	Pn	19 51 42.9	+0.4
BKNI	Bangkinang	4.01	102	P	Pn	19 51 45.1	+1.4
BSI	Banda Aceh	4.69	337	P	Pn	19 51 50.9	-2.1
BSI				S	Sn	19 52 41.7	-4.8
SDSI	Sungai Dareh	4.79	116	P	Pn	19 51 54.4	+0.1
PPSI	Pulau Pagai	4.84	143	S	Sn	19 52 47.3	-3.1
IPM	Ipoh	5.12	50	P	Pn	19 51 59.3	+0.3
MYKOM	0.2nm535nm37nm,0.8s Kota Tinggi	6.77	84	P	Pn	19 52 21.8	+0.2
KSI	13nm,0.9s Kapahiang	7.26	131	P	Pn	19 52 29.3	+1.0
MNAI	66nm,1.1s Manna	8.00	133	P	Pn	19 52 38.1	-0.4
MDSI	90nm,0.9s Maura Dua	9.01	128	P	Pn	19 52 52.2	-0.1
LWLI	16nm,0.8s Liwa	9.25	131	P	Pn	19 52 55.9	+0.2
KLI	39nm,0.6s Kotabumi	9.77	128	P	Pn	19 53 03.3	+0.5
KASI	64nm,0.5s Kota Agung	9.91	132	P	Pn	19 53 03.3	-1.5
CM31	1.4nm,0.3s Chiang Mai Arr	17.30	6	ePn	Pn	19 54 42.1	-1.5
CMAR	Chiang Mai Arr	17.30	6	Pn	Pn	19 54 42.2	-1.4
CMAR	0.5nm,0.3s,baz=195,slow=12,SNR=18			LR	LR	20 02 11.0	
PALK	comp=Z,184nm,19.4s,baz=190,slow=40 Pallekele	17.45	291	LR	LR	20 01 00.7	
PALK	comp=Z,184nm,19.3s,baz=123,slow=36 Pallekele	17.45	291	Pn	Pn	19 54 45.0	-0.6

	13nm,0.9s						
KMI	Kunming	24.45	12	P	P	19 56 02.0	+1.4
KMI				pP		19 56 08.1	
KMI				pmax	pmax		
	comp=Z,20nm,1.4s,mb4.3						
KMI				LR	LR		
	comp=N,440nm,15.3s,MS4.1						
KMI				LR	LR		
	comp=E,150nm,14.4s,MS4.1						
KMI				LR	LR		
	comp=Z,480nm,15.3s,MS4.1						
ODAN	Odare	27.22	341	eP	P	19 56 25.3	-0.4
	comp=Z,13nm,0.7s,mb4.6						
RAMN	Ramite	27.57	339	eP	P	19 56 29.3	+0.4
TAPN	Taplejung	27.57	342	eP	P	19 56 27.6	-1.3
	comp=Z,24nm,0.7s,mb5.0						
JIRN	Jiri	28.37	339	eP	P	19 56 37.2	+1.2
	comp=Z,15nm,0.7s,mb4.7						
PKI	Pulchoki	28.57	338	eP	P	19 56 39.6	+1.8
GUN	Gumba	28.71	339	eP	P	19 56 40.1	+1.1
	comp=Z,22nm,0.7s,mb5.0						
DMN	Daman	28.72	337	eP	P	19 56 41.7	+2.6
KKN	Kakani	28.82	338	eP	P	19 56 41.4	+1.4
ENH	Enshi	31.26	21	eP	P	19 56 59.8	-1.8
XAN	Xi'an	34.54	17	P	P	19 57 28.5	-1.7
XAN				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
GTA	Gaotai	38.16	3	eP	P	19 58 01.0	-0.1
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.3						
WRA	Warramunga Arr	42.08	122	P	P	19 58 33.3	-0.6
	comp=Z,1.4nm,0.5s,mb3.9,baz=302,slow=9.1,SNR=24						
WRAB	Tennant Creek	42.09	122	eP	P	19 58 32.9	-1.1
	comp=Z,2.3nm,0.5s,mb4.1						
ASAR	Alice Springs	43.43	127	P	P	19 58 44.9	0.0
	comp=Z,0.5nm,0.4s,mb3.6,baz=298,slow=7.5,SNR=36						
UCH	Uchtor	45.66	336	eP	P	19 59 03.7	+1.4
	comp=Z,3.3nm,0.9s,mb4.3						
AML	Almayashu	45.92	336	eP	P	19 59 05.7	+1.4
	comp=Z,6.7nm,1.1s,mb4.5						
KSRS	Korea Array	45.94	35	P	P	19 59 03.9	-0.8
	comp=Z,5.2nm,0.9s,mb4.5,baz=221,slow=9.3,SNR=25						
KSRS				LR	LR	20 18 58.0	
	comp=Z,44nm,19.8s,MS3.4,baz=235,slow=37						
AAK	Ala-Archa	46.01	337	LR	LR	20 21 48.7	
	comp=Z,76nm,18.2s,MS3.7,baz=16,slow=41						
EKS2	Erkin-Say	46.32	336	eP	P	19 59 08.6	+1.1
	comp=Z,1.5nm,0.5s,mb4.2						
SONM	Songino Array	47.20	9	P	P	19 59 14.8	+0.6
	comp=Z,0.9nm,0.4s,mb4.1,baz=187,slow=9.6,SNR=7.2						
MK31	Makanchi Array	47.27	346	eP	P	19 59 15.2	+0.3
MKAR	Makanchi Array	47.27	346	P	P	19 59 15.3	+0.5
	comp=Z,2.1nm,0.5s,mb4.3,baz=140,slow=8.6,SNR=71						
MKAR	Makanchi Array	47.27	346	P	P	19 59 15.3	+0.5
ULN	Ulaanbaatar	47.33	9	eP	P	19 59 14.3	-1.0
	comp=Z,1.7nm,0.9s,mb4.0						
KURK	Kurchatov	51.82	345	P	P	19 59 49.4	-0.1
	comp=Z,1.3nm,0.6s,mb4.0,baz=165,slow=6.7,SNR=9.1						
KURK				LR	LR	20 26 05.6	
	comp=Z,44nm,19.1s,MS3.5,baz=120,slow=41						
KURK	Kurchatov	51.82	345	P	P	19 59 49.4	-0.1
KURK				LR	LR	20 26 05.6	
CTA	Charters Tower	52.56	116	LR	LR	20 23 16.0	
	comp=Z,129nm,18.3s,MS4.0,baz=139,slow=37						
OPO	Ambohidratompo	52.82	246	P	P	19 59 56.5	-1.0
	comp=Z,1.0nm,0.8s,mb3.8,baz=49,slow=20,SNR=1.9						
STKA	Stephens Creek	53.38	132	P	P	20 00 02.3	+0.8
	comp=Z,0.8nm,0.5s,mb3.9,baz=319,slow=11,SNR=5.5						
STKA				LR	LR	20 24 43.8	
	comp=Z,172nm,19.0s,MS4.1,baz=231,slow=38						
STKA	Stephens Creek	53.38	132	eP	P	20 00 02.3	+0.8
	comp=Z,0.2nm,0.4s,mb3.4						
ZAA0	Zalesovo Array	53.60	351	eP	P	20 00 02.1	-0.5
ZALV	Zalesovo Beam	53.60	351	P	P	20 00 02.8	+0.2
	comp=Z,2.4nm,0.5s,mb4.4,baz=178,slow=5.5,SNR=22						
ZALV				LR	LR	20 26 15.5	
	comp=Z,32nm,18.4s,MS3.4,baz=79,slow=40						
BVAR	Borovoye Array	56.27	341	P	P	20 00 21.8	-0.1
	comp=Z,2.2nm,0.9s,mb4.2,baz=145,slow=8.1,SNR=6.6						
ABKAR	Akbulak array	57.52	332	eP	P	20 00 30.1	-0.7
	comp=Z,1.9nm,0.6s,mb4.3						
AKTK	Aktyubinsk	59.24	332	P	P	20 00 42.5	-0.4
AKTO	Aktyubinsk	59.24	332	P	P	20 00 42.5	-0.4
	comp=Z,0.6nm,0.5s,mb3.9,baz=135,slow=8.6,SNR=3.4						
BRTR	Keskin Array B	69.08	312	P	P	20 01 47.9	+0.2
	comp=Z,0.5nm,0.7s,mb3.5,baz=140,slow=14,SNR=2.9						
FINES	FINESS Array B	80.01	333	P	P	20 02 50.0	-0.6
	comp=Z,3.5nm,0.9s,mb4.3,baz=169,slow=15,SNR=3.0						
ARCES	ARCESS Array B	82.56	340	P	P	20 03 04.3	+0.2
	comp=Z,3.3nm,1.0s,mb4.3,baz=90,slow=7.3,SNR=2.7						
GERES	GERESS Array B	84.80	319	P	P	20 03 16.6	+0.7
	comp=Z,0.2nm,0.5s,mb3.5,baz=126,slow=6.8,SNR=4.1						
TXAR	Lajitas Array	143.76	32	PKP	PKPdf	20 10 15.9	-1.4
	comp=Z,0.1nm,0.4s,baz=86,slow=1.3,SNR=3.7						

MAN 08 19:55:42, 6°.08N×126°.14E, h150km, mb4.8, ML3.7, MS3.7, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	Mati	0.87	7	eP	Pn	19 56 06.6	+0.9
MATI				eS	Sn	19 56 14.8	-9.1
DMPH	Davao City--Mi	1.18	328	↓iP	Pn	19 56 08.7	+0.4
DMPH				i S	Sn	19 56 29.9	+1.4
GSPH	General Santos	1.19	270	eP	Pn	19 56 07.1	-1.3
GSPH				eS	Sn	19 56 35.4	+6.8
BUKP	Musuan	2.08	329	eP	Pn	19 56 19.6	+1.4
BUKP				eS	Sn	19 56 33.8	-12
PAGZ	Pagadian	3.26	303	eP	Pn	19 56 33.5	+0.8

*NEIC **08** 19:56:04.7±0.9, 23°.16S×66°.79W, h197km±10km, mb3.5/1, Error ellipse: s-maj=21.9km s-min=9.2km az=101.0*

*IDC **08** 19:56:04.7±1.8, 23°.12S×66°.60W, h193km±17km, mb3.1/2, mb1 3.3/7, mb1mx3.2/19, mbtmp3.1/7, Error ellipse: s-maj=22.7km s-min=15.8km az=98.0*

*ISCJB **08** 19:56:04.2±0.7, 23°.18S±0°.04×66°.78W±0°.09, h208km±11km, mb3.2/2, Error ellipse: s-maj=13.6km s-min=6.6km az=5.0*

*GUC **08** 19:56:07.4±0.4, 22°.91S×67°.12W, h223km±16km, ML4.5*

ISC 08 19:56:04.8±0.7, 23°.17S±0°.04×66°.72W±0°.09, h197km±11km, n19, σ1°23/27, mb3.2/2, 3D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	Plate Boundary	2.71	289	↓iP	Pn	19 56 58.9	+8.1
PB04				i S	Sn	19 57 38.2	+12
PB04				AML	AML	19 57 42.1	
	comp=N,692nm,0.2s						
PECH	Pedro de Valdi	2.78	281	↓iP	Pn	19 56 53.5	+1.8
PECH				i S	Sn	19 57 28.3	+0.1
PECH				AML	AML	19 57 30.1	
	comp=E,907nm,0.1s						
MACH	Maria Elena	2.97	288	eP	Pn	19 56 55.4	+1.6
MACH				i S	Sn	19 57 31.8	-0.3
TOCH	Tocopilla	3.39	288	↓iP	Pn	19 56 59.8	+0.9
TOCH				i S	Sn	19 57 39.4	-1.8
TOCH				AML	AML	19 57 42.2	
	comp=E,819nm,0.1s						
MECH	Mejillones	3.43	270	i P	Pn	19 57 01.0	+1.6
MECH				i S	Sn	19 57 42.0	-0.1
MECH				AML	AML	19 57 47.1	
	comp=E,378nm,0.4s						
HMBC	Humberston	4.12	314	eP	Pn	19 57 08.8	+0.9
HMBC				i S	Sn	19 57 55.0	-2.4
MNMC	Miæe Miæ	4.83	326	eP	Pn	19 57 18.4	+1.4
MNMC				i S	Sn	19 58 12.7	-1.1
LCO	Las Campanas	6.83	211	ePn	Pn	19 57 41.1	-1.6
LCO				eSn	Sn	19 58 57.6	-2.8
LPAZ	La Paz	6.97	349	P	Pn	19 57 46.0	+1.4
	comp=E,0.7nm,0.3s,baz=174,slow=8.4,SNR=3.8						
LPAZ				S	Sn	19 59 03.2	-0.7
	comp=E,0.3nm,0.3s,baz=174,slow=10,SNR=5.5						
CFAA	Coronel Fontan	8.51	189	P	Pn	19 58 04.8	+0.2
	comp=E,0.1nm,0.3s,baz=30,slow=10,SNR=2.9						
CFAA				S	Sn	19 59 34.2	-6.0
	comp=E,0.2nm,0.3s,baz=212,slow=16,SNR=4.9						
SIV	San Ignacio	8.90	38	P	Pn	19 58 09.8	-0.1
	comp=E,1.6nm,0.3s,baz=243,slow=9.9,SNR=26						
SIV				S	Sn	19 59 45.6	-4.2
	comp=E,0.1nm,0.3s,baz=207,slow=17,SNR=2.4						
TRQA	Tornquist	15.39	166	ePn	Pn	19 59 32.6	+0.8
	comp=E,1.1nm,0.5s						
PLCA	Paso Flores	17.81	190	P	Pn	19 59 59.8	-0.8

	comp=E,0.2nm,0.3s,baz=352,slow=11,SNR=8.6						
ATAH	Atahualpa	19.61	323	P	P	20 00 19.4	+1.1
	comp=E,0.5nm,0.3s,baz=115,slow=14,SNR=3.3						
TXAR	Lajitas Array	63.15	324	P	P	20 06 11.0	-0.8
	comp=E,0.1nm,0.5s,mb2.7,baz=160,slow=2.9,SNR=3.2						
TORD	Torodi Ar. Bea	76.03	69	P	P	20 07 30.1	-0.7
	comp=E,0.8nm,0.4s,mb3.7,baz=259,slow=5.6,SNR=16						
ASAR	Alice Springs	129.32	205	PKP	PKPdf	20 14 50.0	-0.4
	comp=E,0.2nm,0.8s,baz=260,slow=34,SNR=4.1						
WRA	Warramunga Arr	132.48	207	PKP	PKPdf	20 14 56.6	+0.1
	comp=E,0.3nm,0.8s,baz=147,slow=1.6,SNR=5.9						
MKAR	Makanchi Array	145.72	39	PKPbc	PKPbc	20 15 21.1	+0.7
	comp=E,0.8nm,0.7s,baz=351,slow=4.2,SNR=11						

*IDC **08** 20:02:02.2±37.0, 5°.73S×105°.49E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.3/22, mbtmp3.7/3, Error ellipse: s-maj=642.5km s-min=173.9km az=132.0*

*ISCJB **08** 20:02:04.5±1.1, 6°.17S±0°.10×105°.35E±0°.08, h17km±11km, mb3.6/3, Error ellipse: s-maj=20.1km s-min=8.2km az=38.1*

*DJA **08** 20:02:06, 6°.12S×105°.37E, h20km, MLv3.3/6*

ISC 08 20:02:04.2±1.1, 6°.16S±0°.09×105°.29E±0°.08, h3km±9km, n11, σ1°16/12, mb3.6/3, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RBSI	Rajabasa	0.55	56	P	Pg	20 02 14.4	-0.3
CGJI	Cibinong	0.61	139	P	Pg	20 02 15.8	-0.1
KASI	Kota Agung	1.01	308	P	Pg	20 02 24.7	+1.2
KASI				S	Sg	20 02 35.1	-1.5
KLI	Kotabumi	1.35	341	P	Pn	20 02 30.4	+0.4
LWLI	Liwa	1.67	313	P	Pn	20 02 34.7	+0.4
MDSI	Maura Dua	1.99	326	P	Pn	20 02 37.8	-1.0
LEM	Lembang	2.41	106	P	Pn	20 02 47.1	+2.6
MNAI	Manna	2.93	307	P	Pn	20 02 53.7	+2.0
WRA	Warramunga Arr	31.37	119	P	P	20 08 24.9	-1.5
	0.4nm,0.4s,mb3.6,baz=295,slow=9.8,SNR=8.3						
ASAR	Alice Springs	32.56	125	P	P	20 08 36.3	-0.6
	0.5nm,0.9s,mb3.4,baz=297,slow=8.2,SNR=7.0						
STKA	Stephens Creek	42.47	132	P	P	20 10 00.3	-0.4
	2.3nm,1.0s,mb3.8,baz=285,slow=11,SNR=5.2						

FUNV 08 20:10:45.7, 7°.76N×73°.32W, h126km, MW3.5, 3C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	Capacho	1.00	84	↓iP	Pn	20 11 08.4	+0.2
CAPV				eS	Sn	20 11 24.1	-1.2
VIGV	El Vigia	2.21	61	eP	Pn	20 11 21.9	-0.2
VIGV				eS	Sn	20 11 47.3	-2.7
SOCV	Socops	2.50	78	eP	Pn	20 11 25.2	-0.4
SOCV				eS	Sn	20 11 54.3	-2.1
VIRV	Villa del Rosa	2.87	18	eP	Pn	20 11 28.9	-1.6
VIRV				eS	Sn	20 12 01.4	-3.6
QARV	Quebrada Arrib	3.68	48	eP	Pn	20 11 40.5	-0.7
ELOV	Elorza	3.88	101	eP	Pn	20 11 42.0	-1.8
CURV	Curarigua	4.00	56	iP	Pn	20 11 44.2	-1.2
DABV	Dabajuro	4.41	40	eP	Pn	20 11 46.2	-0.6
SANV	Sanarito	4.12	65	eP	Pn	20 11 46.2	-0.8
SIQV	Siquisique	4.50	50	eP	Pn	20 11 50.5	-1.6
TEPV	Terepaima	4.63	62	eP	Pn	20 11 52.6	-1.2
MONV	Montecano	5.31	38	eP	Pn	20 12 01.0	-2.0
BAUV	El Baul	5.35	77	eP	Pn	20 12 00.6	-2.9
TURV	Turiamo	6.03	63	eP	Pn	20 12 10.0	-2.7
CAOV	Caicara del Or	6.95	93	eP	Pn	20 12 21.9	-3.2
BIRV	Birongo	7.47	68	eP	Pn	20 12 29.2	-2.8

CASC 08 20:17:08.2±1.7, 13°.45N×90°.10W, h30km±3km, MD3.6, ML3.1, 3D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	San Blas	0.60	50	eP	Pb	20 17 20.4	+0.1
SBLS				eS	Sb	20 17 29.8	+1.2
RTR	El Retiro	0.63	44	↓iP	Pb	20 17 20.9	+0.2
RTR				eS	Sb	20 17 30.2	+0.9
SNJE	San Jose	0.63	49	↓iP	Pb	20 17 20.9	+0.1
SNJE				eS	Sb	20 17 30.6	+1.2
RBDL	Robledal	0.77	31	↓iP	Pn	20 17 22.4	-0.6
BOQS	Boqueron	0.84	70	i P	Pn	20 17 23.7	-0.3
BOQS				eS	Sb	20 17 36.5	+1.2
SNET	Serv Nac Est T	0.87	74	eP	Pn	20 17 24.1	-0.3
SNET				eS	Sn	20 17 36.2	+0.1
LFRS	El Faro	1.02	80	i P	Pn	20 17 26.1	-0.4
LBRS	Las Brisas	1.06	74	eP	Pn	20 17 26.5	-0.5
LBRS				eS	Sn	20 17 41.3	+0.5
PCG	Pacaya	1.07	332	eP	Pn	20 17 27.9	+0.9
PCG				eS	Sn	20 17 41.8	+0.9
NBG	Las Nubes	1.16	348	eP	Pn	20 17 29.3	+0.9
NBG				eS	Sn	20 17 44.4	+1.1
FUG	Fuego 3	1.23	324	eP	Pn	20 17 29.7	+0.3
FUG				eS	Sn	20 17 46.1	+1.1
SNVI	San Vicente	1.23	82	eP	Pn	20 17 29.0	-0.4
SNVI				eS	Sn	20 17 46.4	+1.4
SNVI				AML	AML	20 17 48.7	
	comp=Z,366nm,0.2s						
FG6		1.35

VLS	**Valsamata**	**0.78**	**281**	P	Pg	20 22 20.8	-0.7
VLS				S	Sg	20 22 33.2	+1.6
VLS	**Valsamata**	**0.78**	**281**	P	Pg	20 22 20.8	-0.7
VLS				S	Sg	20 22 33.2	+1.6
DSF	**Desfina**	**0.85**	**63**	P	Pg	20 22 21.7	-1.2
DSF	**Desfina**	**0.85**	**63**	P	Pg	20 22 21.7	-1.2
ITM	**Ithomi**	**0.90**	**161**	P	Pg	20 22 23.9	+0.1
ITM	**Ithomi**	**0.90**	**161**	P	Pg	20 22 23.9	+0.1
VLX	**Vlachokerasia**	**0.93**	**135**	P	Pg	20 22 24.2	-0.1
VLX				S	Sg	20 22 37.3	+1.0
VLX	**Vlachokerasia**	**0.93**	**135**	P	Pg	20 22 24.2	-0.1
VLX				S	Sg	20 22 37.3	+1.0
LKD2	**Lefkada island**	**1.04**	**317**	P	Pg	20 22 25.4	-1.1
LKD2	**Lefkada island**	**1.04**	**317**	P	Pg	20 22 25.4	-1.1
AGG	**Agios Georgios**	**1.16**	**31**	P	Pg	20 22 27.8	-1.0
AGG	**Agios Georgios**	**1.16**	**31**	P	Pg	20 22 27.8	-1.0
THL	**Klokotos Trika**	**1.57**	**13**	P	Pn	20 22 35.8	+0.1
THL	**Klokotos Trika**	**1.57**	**13**	P	Pn	20 22 35.8	+0.1

*ATH **08** 20:26:26.9, 38.°00N×21.°58E, h23km±1km, MD3.3/6, ML2.9*
*CSEM **08** 20:26:26.8±0.2, 37.°97N×21.°58E, h15km, ML2.9, Error ellipse: s-maj=3.3km s-min=3.0km az=38.0*
*THE **08** 20:26:27.0, 37.°98N×21.°58E, h11km, ML3.9/11, Error ellipse: s-maj=0.7km s-min=0.4km az=133.0*
*NEIC **08** 20:26:27.0, 37.°99N×21.°59E, h22km, ML2.9(ATH), After ATH.*
*ISCJB **08** 20:26:27.3±0.3, 37.°99N±0.°02×21.°58E±0.°03, h23km±3km, Error ellipse: s-maj=3.7km s-min=3.5km az=15.3*
ISC 08 20:26:27.1±0.4, **37.°97N**±0.°02×**21.°58E**±0.°03, **h17**km±3km,
n72, σ0.°93/116, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.12**	**313**	*e*Pb	**Pg**	**20 26 31.1**	**+0.3**
RLS				*e*Sb	**Sg**	20 26 34.8	+1.5
RLS	**Riolos of Patr**	**0.12**	**313**	*e*PB	**Pg**	**20 26 31.1**	**+0.3**
RLS				*e*SB	**Sg**	20 26 34.8	+1.5
RLS	**Riolos of Patr**	**0.12**	**313**	*e*Pb	**Pg**	**20 26 31.1**	**+0.3**
UPR	**University Cam**	**0.35**	**28**	P	**Pg**	**20 26 34.3**	**-0.1**
UPR				S	**Sg**	20 26 39.4	+0.1
UPR	**University Cam**	**0.35**	**28**	*e*PB	**Pg**	**20 26 34.5**	**+0.1**
UPR				*e*SB	**Sg**	20 26 40.1	+0.8
UPR	**University Cam**	**0.35**	**28**	P	**Pg**	**20 26 34.3**	**-0.1**
UPR				S	**Sg**	20 26 39.4	+0.1
UPR				*e*Sb	**Sg**	20 26 40.1	+0.8
LAKA	**Lakka**	**0.41**	**50**	P	**Pg**	**20 26 35.3**	**-0.2**
LAKA				S	**Sg**	20 26 41.2	+0.1
LAKA	**Lakka**	**0.41**	**50**	P	**Pg**	20 26 35.3	-0.2
LAKA				S	**Sg**	20 26 41.2	+0.1
EFP	**Efpalio**	**0.52**	**29**	P	**Pg**	20 26 36.9	-0.6
EFP				S	**Sg**	20 26 44.5	0.0
EFP	**Efpalio**	**0.52**	**29**	*e*PN	**Pg**	20 26 36.9	-0.6
EFP				*e*SN	**Sg**	20 26 44.6	+0.1
EFP	**Efpalio**	**0.52**	**29**	P	**Pg**	20 26 36.9	-0.6
EFP				S	**Sg**	20 26 44.5	0.0
TRIZ	**Trizonia**	**0.55**	**45**	P	**Pg**	20 26 37.4	-0.6
TRIZ				S	**Sg**	20 26 45.7	+0.3
TRIZ	**Trizonia**	**0.55**	**45**	P	**Pg**	20 26 37.4	-0.6
TRIZ				S	**Sg**	20 26 45.7	+0.3
GUR	**Goura**	**0.60**	**93**	P	**Pg**	20 26 38.4	-0.6
GUR				S	**Sg**	20 26 47.3	+0.3
GUR	**Goura**	**0.60**	**93**	*e*PB	**Pb**	20 26 38.5	-0.7
GUR				*e*SN	**Sg**	20 26 47.5	+0.5
GUR	**Goura**	**0.60**	**93**	*e*Pb	**Pb**	20 26 38.5	-0.7
GUR				S	**Sg**	20 26 47.3	+0.3
KALE	**Kalithea**	**0.61**	**46**	P	**Pg**	20 26 38.3	-0.8
KALE				S	**Sg**	20 26 47.5	+0.3
KALE	**Kalithea**	**0.61**	**46**	P	**Pg**	20 26 38.3	-0.8
KALE				S	**Sg**	20 26 47.5	+0.3
KFL	**Anninata**	**0.64**	**282**	P	**Pg**	20 26 39.7	0.0
VLS	**Valsamata**	**0.81**	**285**	*e*Pb	**Pb**	20 26 41.9	-0.8
VLS				*e*Sn	**Sn**	20 26 55.0	-0.4
VLS	**Valsamata**	**0.81**	**285**	P	**Pb**	20 26 41.8	-0.9
VLS				S	**Sb**	20 26 54.5	+1.1
VLS	**Valsamata**	**0.81**	**285**	*e*PB	**Pb**	20 26 41.9	-0.8
VLS				*e*SN	**Sn**	20 26 55.0	-0.4
VLS	**Valsamata**	**0.81**	**285**	P	**Pb**	20 26 41.8	-0.9
VLS				S	**Sb**	20 26 54.5	+1.1
VLS				*e*Sn	**Sn**	20 26 55.0	-0.4
ITM	**Ithomi**	**0.84**	**161**	*e*Pn	**Pb**	20 26 43.2	0.0
ITM				*e*Sn	**Sn**	20 26 56.1	0.0
ITM	**Ithomi**	**0.84**	**161**	P	**Pb**	20 26 43.2	0.0
ITM				S	**Sb**	20 26 55.0	+0.8
ITM	**Ithomi**	**0.84**	**161**	*e*PB	**Pb**	20 26 43.2	0.0
ITM				*e*SN	**Sn**	20 26 56.1	0.0
ITM	**Ithomi**	**0.84**	**161**	P	**Pb**	20 26 43.2	0.0
ITM				S	**Sb**	20 26 55.0	+0.8
ITM				*e*Sn	**Sn**	20 26 56.1	0.0
DSF	**Desfina**	**0.86**	**59**	P	**Pb**	20 26 42.7	-1.0
DSF				S	**Sb**	20 26 55.8	+0.8
DSF	**Desfina**	**0.86**	**59**	P	**Pb**	20 26 42.7	-1.0
DSF				S	**Sb**	20 26 55.8	+0.8
VLX	**Vlachokerasia**	**0.87**	**133**	P	**Pb**	20 26 43.5	-0.3
VLX				S	**Sb**	20 26 56.5	+1.2
VLX	**Vlachokerasia**	**0.87**	**133**	*e*PN	**Pb**	20 26 43.5	-0.3
VLX				*e*SN	**Sn**	20 26 57.3	+0.3
VLX	**Vlachokerasia**	**0.87**	**133**	P	**Pb**	20 26 43.5	-0.3
VLX				S	**Sb**	20 26 56.5	+1.2
VLX				*e*Sn	**Sn**	20 26 57.3	+0.3
EVR	**Evrytania**	**0.96**	**11**	*e*Pn	**Pn**	20 26 44.7	-1.1
EVR	**Evrytania**	**0.96**	**11**	*e*PN	**Pn**	20 26 44.7	-1.1
EVR	**Evrytania**	**0.96**	**11**	*e*Pn	**Pn**	20 26 44.7	-1.1
PYL	**PYLOS**	**1.08**	**173**	P	**Pb**	20 26 47.3	-0.1
PYL	**PYLOS**	**1.08**	**173**	*e*PN	**Pn**	20 26 47.5	-0.1
PYL	**PYLOS**	**1.08**	**173**	*e*Pn	**Pn**	20 26 47.5	-0.1
LKD2	**Lefkada island**	**1.09**	**319**	P	**Pb**	20 26 46.7	-0.8
LKD2				S	**Sb**	20 27 02.9	+1.4
LKD2	**Lefkada island**	**1.09**	**319**	P	**Pb**	20 26 46.7	-0.8
LKD2				S	**Sb**	20 27 02.9	+1.4
LTK	**Loutraki**	**1.10**	**87**	P	**Pb**	20 26 47.2	-0.4
LTK	**Loutraki**	**1.10**	**87**	*e*PN	**Pn**	20 26 47.3	-0.4
LTK	**Loutraki**	**1.10**	**87**	P	**Pb**	20 26 47.2	-0.4
AGG	**Agios Georgios**	**1.20**	**29**	P	**Pn**	20 26 48.7	-0.5
AGG				S	**Sb**	20 27 05.3	+0.6
AGG	**Agios Georgios**	**1.20**	**29**	P	**Pn**	20 26 48.7	-0.5
AGG				S	**Sb**	20 27 05.3	+0.6
LKR	**Lokris**	**1.30**	**58**	*e*Pn	**Pn**	20 26 50.7	+0.1
LKR	**Lokris**	**1.30**	**58**	P	**Pn**	20 26 50.5	-0.1
LKR				S	**Sn**	20 27 08.8	+1.2
LKR	**Lokris**	**1.30**	**58**	*e*PN	**Pn**	20 26 50.7	+0.1
LKR	**Lokris**	**1.30**	**58**	*e*Pn	**Pn**	20 26 50.7	+0.1
LKR				S	**Sn**	20 27 08.8	+1.2
ATAL	**Atalanti**	**1.34**	**57**	P	**Pn**	20 26 50.9	-0.2
ATAL				S	**Sn**	20 27 09.5	+1.0
ATAL	**Atalanti**	**1.34**	**57**	P	**Pn**	20 26 50.9	-0.2
ATAL				S	**Sn**	20 27 09.5	+1.0
NAIG	**Nisos Aigina**	**1.52**	**98**	*e*Pb	**Pb**	20 26 53.9	-1.0
NAIG	**Nisos Aigina**	**1.52**	**98**	*e*PB	**Pb**	20 26 53.9	-1.0
NAIG	**Nisos Aigina**	**1.52**	**98**	*e*Pb	**Pb**	20 26 53.9	-1.0
THL	**Klokotos Trika**	**1.62**	**12**	P	**Pn**	20 26 56.6	+1.6
THL	**Klokotos Trika**	**1.62**	**12**	*e*PN	**Pn**	20 26 56.9	+1.9
THL	**Klokotos Trika**	**1.62**	**12**	P	**Pn**	20 26 56.6	+1.6
THL	**Klokotos Trika**	**1.62**	**12**	*e*Pn	**Pn**	20 26 56.9	+1.9
VLI	**Veliai**	**1.66**	**139**	*e*Pn	**Pn**	20 26 58.2	+2.8
VLI	**Veliai**	**1.66**	**139**	*e*PN	**Pn**	20 26 58.2	+2.8
ATH	**Athens Observa**	**1.69**	**89**	*e*Pn	**Pn**	20 26 58.9	+3.1
ATH	**Athens Observa**	**1.69**	**89**	*e*PN	**Pn**	20 26 58.9	+3.1
VLY	**Voula,Athens**	**1.75**	**93**	*e*Pb	**Pb**	20 26 56.8	-2.1
VLY	**Voula,Athens**	**1.75**	**93**	*e*PB	**Pb**	20 26 56.8	-2.1
PTL	**Penteli**	**1.81**	**87**	*e*Pb	**Pb**	20 26 58.0	-1.7
PTL	**Penteli**	**1.81**	**87**	*e*PB	**Pb**	20 26 58.0	-1.7
XOR	**Xorichti**	**1.88**	**42**	P	**Pn**	20 26 58.8	+0.3
XOR	**Xorichti**	**1.88**	**42**	P	**Pn**	20 26 58.8	+0.3
STON	**Ston**	**5.72**	**330**	*i* Pn	**Pn**	20 27 50.4	-0.8
STON				Sn	**Sn**	20 28 52.5	-4.0
STON	**Ston**	**5.72**	**330**	*i* Pn	**Pn**	20 27 50.4	-0.8
NVLJ	**Novalja**	**8.30**	**325**	*e*Pn	**Pn**	20 28 26.7	+0.1
NVLJ				Sn	**Sn**	20 29 56.8	-3.1
NVLJ	**Novalja**	**8.30**	**325**	*e*Pn	**Pn**	20 28 26.7	+0.1

*CSEM **08** 20:34:21.6, 12.°09N×43.°98E, h10km, ML4.0, After DHMR*
DHMR 08 20:34:21.6±1.1, **12.°09N×43.°98E, h11**km±9km, **ML4.0,**
Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRBA	**At Turbah**	**1.14**	**7**	*i* P	Pb	20 34 43.2	-0.1
TRBA				*i* S	Sb	20 34 58.9	+0.8
TRBA				AML	AML	20 35 01.3	
	comp=E,3μm,0.5s						
ADEN	**Aden**	**1.19**	**55**	*i* P	Pb	20 34 43.4	-0.8
ADEN				*i* S	Sb	20 35 00.4	+0.8
ADEN				AML	AML	20 35 07.6	
	comp=E,5μm,0.6s						
ADEN	**Aden**	**1.19**	**55**	*i* P	Pb	20 34 43.4	-0.8
ADEN				*i* S	Sb	20 35 00.4	+0.8
	comp=E,2μm,0.6s						
UDYN	**Al 'Udayn**	**1.86**	**360**	*i* P	Pn	20 34 54.0	+0.6
UDYN				*i* S	Sn	20 35 20.2	+3.1
UDYN				AML	AML	20 35 30.2	
	comp=E,1μm,0.9s						
UDYN	**Al 'Udayn**	**1.86**	**360**	*i* P	Pn	20 34 54.0	+0.5
UDYN				*i* S	Sn	20 35 20.2	+3.2
	comp=E,552nm,0.9s						
LBOS		**2.16**	**35**	*i* P	Pn	20 34 59.8	+2.3
LBOS				*i* S	Sn	20 35 28.6	+4.3
BDHA	**Al Bayda'**	**2.43**	**39**	*i* P	Pn	20 35 03.4	+2.1
BDHA				*i* S	Sn	20 35 36.8	+5.9
BDHA				AML	AML	20 35 47.7	
	comp=E,1μm,0.5s						
BDHA	**Al Bayda'**	**2.43**	**39**	*i* P	Pn	20 35 03.3	+2.1
BDHA				*i* S	Sn	20 35 36.8	+5.9
	comp=E,594nm,0.5s						
DHBB	**Dhamar BB**	**2.50**	**9**	*i* P	Pn	20 35 05.1	+2.9
DHBB				*i* S	Sn	20 35 39.1	+6.4
DHBB	**Dhamar BB**	**2.50**	**9**	*i* P	Pn	20 35 05.1	+2.9
DHBB				*i* S	Sn	20 35 39.1	+6.4

*ATH **08** 20:36:23.9, 38.°11N×21.°59E, h18km, MD3.2/7*
*THE **08** 20:36:23.4, 38.°09N×21.°58E, h11km±1km, ML3.6/6, Error ellipse: s-maj=1.3km s-min=0.5km az=27.0*
*NEIC **08** 20:36:23.9, 38.°11N×21.°59E, h18km, MD3.2(ATH), After ATH.*
*CSEM **08** 20:36:23.2±0.2, 38.°10N×21.°57E, h10km, MD3.2, Error ellipse: s-maj=4.3km s-min=4.0km az=125.0*
*ISCJB **08** 20:36:23.6±0.5, 38.°12N±0.°02×21.°57E±0.°02, h12km±3km, Error ellipse: s-maj=3.9km s-min=3.0km az=166.5*
ISC 08 20:36:23.7±0.3, **38.°12N**±0.°03×**21.°57E**±0.°02, **h16**km±2km,
n77, σ1.°03/119, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.10**	**232**	*e*Pb	**Pg**	**20 36 27.4**	**+0.3**
RLS				*e*Sb	**Sg**	20 36 30.6	+1.3
RLS	**Riolos of Patr**	**0.10**	**232**	*e*PB	**Pg**	**20 36 27.4**	**+0.3**
RLS				*e*SB	**Sg**	20 36 30.6	+1.3
RLS	**Riolos of Patr**	**0.10**	**232**	*e*Pb	**Pg**	**20 36 27.4**	**+0.3**
UPR	**University Cam**	**0.24**	**47**	P	**Pg**	20 36 29.2	+0.1
UPR				S	**Sg**	20 36 32.7	0.0
UPR	**University Cam**	**0.24**	**47**	*e*PB	**Pg**	20 36 29.3	+0.2
UPR				*e*SB	**Sg**	20 36 33.8	+1.1
UPR	**University Cam**	**0.24**	**47**	P	**Pg**	20 36 29.2	+0.1
UPR				S	**Sg**	20 36 32.7	0.0
UPR				*e*Sb	**Sg**	20 36 33.8	+1.1
LAKA	**Lakka**	**0.35**	**70**	P	**Pg**	20 36 30.5	-0.4
LAKA				S	**Sg**	20 36 35.6	-0.2
LAKA	**Lakka**	**0.35**	**70**	P	**Pg**	20 36 30.5	-0.4
LAKA				S	**Sg**	20 36 35.6	-0.2
EFP	**Efpalio**	**0.41**	**41**	P	**Pg**	20 36 31.6	-0.4
EFP				S	**Sg**	20 36 37.8	+0.2
EFP	**Efpalio**	**0.41**	**41**	*e*PB	**Pg**	20 36 31.7	-0.3
EFP				*e*SB	**Sg**	20 36 38.8	+1.2
EFP	**Efpalio**	**0.41**	**41**	P	**Pg**	20 36 31.6	-0.4
EFP				S	**Sg**	20 36 37.8	+0.2
EFP				*e*Sb	**Sg**	20 36 38.8	+1.2
TRIZ	**Trizonia**	**0.47**	**58**	P	**Pg**	20 36 32.5	-0.6
TRIZ				S	**Sg**	20 36 39.7	+0.3
TRIZ	**Trizonia**	**0.47**	**58**	P	**Pg**	20 36 32.5	-0.6
TRIZ				S	**Sg**	20 36 39.7	+0.3
KALE	**Kalithea**	**0.53**	**59**	P	**Pg**	20 36 33.4	-0.8
KALE				S	**Sg**	20 36 41.2	0.0
KALE	**Kalithea**	**0.53**	**59**	P	**Pg**	20 36 33.4	-0.8
KALE				S	**Sg**	20 36 41.2	0.0
KFL	**Anninata**	**0.61**	**269**	P	**Pg**	20 36 36.0	+0.2
KFL				S	**Sg**	20 36 44.9	+0.9
GUR	**Goura**	**0.64**	**106**	P	**Pg**	20 36 35.0	-1.3
GUR				S	**Sg**	20 36 44.5	-0.3
GUR	**Goura**	**0.64**	**106**	*e*PB	**Pb**	20 36 35.1	-1.4
GUR				*e*SN	**Sg**	20 36 44.7	-0.1
GUR	**Goura**	**0.64**	**106**	*e*Pb	**Pb**	20 36 35.1	-1.4
GUR				S	**Sg**	20 36 44.5	-0.3
VLS	**Valsamata**	**0.77**	**275**	*e*Pn	**Pn**	20 36 39.8	-0.1
VLS				*e*Sn	**Sn**	20 36 51.1	-0.1
VLS	**Valsamata**	**0.77**	**275**	P	**Pb**	20 36 38.0	-0.7
VLS				S	**Sb**	20 36 49.5	+0.5
VLS	**Valsamata**	**0.77**	**275**	*e*PN	**Pn**	20 36 39.8	-0.1
VLS				*e*SN	**Sn**	20 36 51.1	-0.1
VLS	**Valsamata**	**0.77**	**275**	P	**Pb**	20 36 38.0	-0.7
VLS	**Valsamata**	**0.77**	**275**	*e*Pn	**Pn**	20 36 39.8	-0.1
VLS				S	**Sb**	20 36 49.5	+0.5
DSF	**Desfina**	**0.81**	**69**	P	**Pb**	20 36 37.9	-1.5
DSF	**Desfina**	**0.81**	**69**	P	**Pb**	20 36 37.9	-1.5
EVR	**Evrytania**	**0.82**	**13**	*e*Pb	**Pb**	20 36 39.4	-0.1
EVR				*e*Sn	**Sn**	20 36 51.5	-0.8
EVR	**Evrytania**	**0.82**	**13**	*e*PB	**Pb**	20 36 39.4	-0.1
EVR				*e*SN	**Sn**	20 36 51.5	-0.8
EVR	**Evrytania**	**0.82**	**13**	*e*Pb	**Pb**	20 36 39.4	-0.1
EVR				*e*Sn	**Sn**	20 36 51.5	-0.8
LKD2	**Lefkada island**	**0.98**	**313**	P	**Pb**	20 36 41.7	-0.5
LKD2	**Lefkada island**	**0.98**	**313**	P	**Pb**	20 36 41.7	-0.5
ITM	**Ithomi**	**0.98**	**163**	*e*Pn	**Pn**	20 36 42.0	-0.8
ITM				*e*Sn	**Sn**	20 36 55.7	-0.6
ITM	**Ithomi**	**0.98**	**163**	P	**Pb**	20 36 41.1	-1.2
ITM	**Ithomi**	**0.98**	**163**	*e*PN	**Pn**	20 36 42.0	-0.8
ITM				*e*SN	**Sn**	20 36 55.7	-0.6
ITM	**Ithomi**	**0.98**	**163**	P	**Pb**	20 36 41.1	-1.2
ITM	**Ithomi**	**0.98**	**163**	*e*Pn	**Pn**	20 36 42.0	-0.8
ITM				*e*Sn	**Sn**	20 36 55.7	-0.6
VLX	**Vlachokerasia**	**0.99**	**139**	P	**Pb**	20 36 40.8	-1.6
VLX				S	**Sb**	20 36 55.3	+0.1
VLX	**Vlachokerasia**	**0.99**	**139**	*e*PB	**Pb**	20 36 41.4	-1.0
VLX				*e*SN	**Sn**	20 36 55.8	-0.7
VLX	**Vlachokerasia**	**0.99**	**139**	P	**Pb**	20 36 40.8	-1.6
VLX	**Vlachokerasia**	**0.99**	**139**	*e*Pb	**Pb**	20 36 41.4	-1.0
VLX				S	**Sb**	20 36 55.3	+0.1
VLX				*e*Sn	**Sn**	20 36 55.8	-0.7
AGG	**Agios Georgios**	**1.08**	**33**	*e*Pn	**Pn**	20 36 43.8	-0.4
AGG	**Agios Georgios**	**1.08**	**33**	P	**Pb**	20 36 43.3	-0.7
AGG	**Agios Georgios**	**1.08**	**33**	*e*PN	**Pn**	20 36 43.8	-0.4
AGG	**Agios Georgios**	**1.08**	**33**	P	**Pb**	20 36 43.3	-0.7
AGG	**Agios Georgios**	**1.08**	**33**	*e*Pn	**Pn**	20 36 43.8	-0.4
LTK	**Loutraki**	**1.11**	**95**	P	**Pb**	20 36 43.7	-0.8
LTK	**Loutraki**	**1.11**	**95**	*e*PB	**Pb**	20 36 43.8	-0.7
LTK				*e*SN	**Sn**	20 36 59.6	+0.1
LTK	**Loutraki**	**1.11**	**95**	*e*Pb	**Pb**	20 36 43.8	-0.7
LTK				*e*Sn	**Sn**	20 36 59.6	+0.1
PYL	**PYLOS**	**1.23**	**173**	P	**Pn**	20 36 46.1	-0.1
PYL	**PYLOS**	**1.23**	**173**	*e*PN	**Pn**	20 36 47.5	+1.3
PYL	**PYLOS**	**1.23**	**173**	P	**Pn**	20 36 46.1	-0.1
PYL	**PYLOS**	**1.23**	**173**	*e*Pn	**Pn**	20 36 47.5	+1.3
LKR	**Lokris**	**1.25**	**64**	*e*Pn	**Pn**	20 36 47.4	+1.0
LKR				*e*Sn	**Sn**	20 37 05.0	+2.2
LKR	**Lokris**	**1.25**	**64**	P	**Pn**	20 36 46.0	-0.4
LKR	**Lokris**	**1.25**	**64**	*e*PN	**Pn**	20 36 47.4	+1.0
LKR				*e*SN	**Sn**	20 37 05.0	+2.2
LKR	**Lokris**	**1.25**	**64**	P	**Pn**	20 36 46.0	-0.4
LKR	**Lokris**	**1.25**	**64**	*e*Pn	**Pn**	20 36 47.4	+1.0
LKR				*e*Sn	**Sn**	20 37 05.0	+2.2
THL	**Klokotos Trika**	**1.48**	**14**	P	**Pn**	20 36 49.6	-0.1
THL	**Klokotos Trika**	**1.48**	**14**	*e*PN	**Pn**	20 36 51.9	+2.2
THL	**Klokotos Trika**	**1.48**	**14**	P	**Pn**	20 36 49.6	-0.1
THL	**Klokotos Trika**	**1.48**	**14**	*e*Pn	**Pn**	20 36 51.9	+2.2
NAIG	**Nisos Aigina**	**1.56**	**103**	*e*Pn	**Pn**	20 36 52.7	+1.9
NAIG	**Nisos Aigina**	**1.56**	**103**	*e*PN	**Pn**	20 36 52.7	+1.9
NAIG	**Nisos Aigina**	**1.56**	**103**	*e*Pn	**Pn**	20 36 52.7	+1.9
VLI	**Veliai**	**1.77**	**142**	*e*Pn	**Pn**	20 36 56.0	+2.3
VLI	**Veliai**	**1.77**	**142**	*e*PN	**Pn**	20 36 56.0	+2.3
VLY	**Voula,Athens**	**1.78**	**98**	*e*Pn	**Pn**	20 36 55.8	+2.0
VLY	**Voula,Athens**	**1.78**	**98**	*e*PN	**Pn**	20 36 55.8	+2.0
VLY	**Voula,Athens**	**1.78**	**98**	*e*Pn	**Pn**	20 36 55.8	+2.0
PTL	**Penteli**	**1.81**	**92**	*e*Pn	**Pn**	20 36 56.5	+2.2
PTL				*e*Sn	**Sn**	20 37 19.1	+2.2
PTL	**Penteli**	**1.81**	**92**	*e*PN	**Pn**	20 36 56.5	+2.2
PTL				*e*SN	**Sn**	20 37 19.1	+2.2
PTL	**Penteli**	**1.81**	**92**	*e*Pn	**Pn**	20 36 56.5	+2.2
PTL				*e*Sn	**Sn**	20 37 19.1	+2.2
AOS	**Alonnisos**	**2.09**	**59**	P	**Pn**	20 36 57.7	-0.4
AOS	**Alonnisos**	**2.09**	**59**	P	**Pn**	20 36 57.7	-0.4
KEK	**Kerkira**	**2.10**	**320**	*e*Pb	**Pb**	20 36 59.9	-1.6
KEK	**Kerkira**	**2.10**	**320**	*e*PB	**Pb**	20 36 59.9	-1.6
KEK	**Kerkira**	**2.10**	**320**	*e*Pb	**Pb**	20 36 59.9	-1.6

*ISCJB **08** 20:46:25.8±0.6, 38.°02N±0.°03×21.°65E±0.°03, h5km±6km, Error ellipse: s-maj=4.6km s-min=4.1km az=3.5*
*THE **08** 20:46:26.2, 38.°03N×21.°66E, h4km±2km, ML3.5/9, Error ellipse: s-maj=2.7km s-min=0.6km az=52.0*
*CSEM **08** 20:46:26.2, 38.°03N×21.°66E, h4km, ML3.5/9, After THE*
ISC 08 20:46:26.2±0.5, **38.°02N**±0.°03×**21.°65E**±0.°03, **h12**km±5km,
n35, σ0.°74/57, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.28**	**22**	P	**Pg**	**20 46 32.1**	**+0.1**
UPR				S	**Sg**	20 46 35.8	0.0
UPR	**University Cam**	**0.28**	**22**	P	**Pg**	**20 46 32.1**	**+0.1**
UPR				S	**Sg**	20 46 35.8	0.0
LAKA	**Lakka**	**0.34**	**50**	P	**Pg**	20 46 33.0	0.0
LAKA				S	**Sg**	20 46 37.6	+0.1
LAKA	**Lakka**	**0.34**	**50**	P	**Pg**	20 46 33.0	0.0
LAKA				S	**Sg**	20 46 37.6	+0.1
EFP	**Efpalio**	**0.45**	**26**	P	**Pg**	20 46 34.6	-0.5
EFP				S	**Sg**	20 46 41.5	+0.4
EFP	**Efpalio**	**0.45**	**26**	P	**Pg**	20 46 34.6	-0.5
EFP				S	**Sg**	20 46 41.5	+0.4
TRIZ	**Trizonia**	**0.48**	**44**	P	**Pg**	20 46 35.2	-0.4
TRIZ				S	**Sg**	20 46 42.0	+0.1
TRIZ	**Trizonia**	**0.48**	**44**	P	**Pg**	20 46 35.2	-0.4
TRIZ				S	**Sg**	20 46 42.0	+0.1
KALE	**Kalithea**	**0.53**	**46**	P	**Pg**	20 46 36.3	-0.3
KALE				S	**Sg**	20 46 44.0	+0.3
KALE	**Kalithea**	**0.53**	**46**	P	**Pg**	20 46 36.3	-0.3
KALE				S	**Sg**	20 46 44.0	+0.3
GUR	**Goura**	**0.55**	**99**	P	**Pg**	20 46 36.6	-0.4
GUR				S	**Sg**	20 46 44.9	+0.6
GUR	**Goura**	**0.55**	**99**	P	**Pg**	20 46 36.6	-0.4
GUR				S	**Sg**	20 46 44.9	+0.6
KFL	**Anninata**	**0.69**	**278**	P	**Pg**	20 46 39.6	+0.1
DSF	**Desfina**	**0.79**	**60**	P	**Pg**	20 46 40.3	-1.2
DSF				S	**Sg**	20 46 52.0	+0.1
DSF	**Desfina**	**0.79**	**60**	P	**Pg**	20 46 40.3	-1.2
DSF				S	**Sg**	20 46 52.0	+0.1
VLS	**Valsamata**	**0.85**	**281**	P	**Pg**	20 46 41.7	-0.9
VLS				S	**Sg**	20 46 55.1	+1.4
VLS	**Valsamata**	**0.85**	**281**	P	**Pg**	20 46 41.7	-0.9
VLS				S	**Sg**	20 46 55.1	+1.4
ITM	**Ithomi**	**0.87**	**165**	P	**Pg**	20 46 43.0	0.0
ITM	**Ithomi**	**0.87**	**165**	P	**Pg**	20 46 43.0	0.0
VLX	**Vlachokerasia**	**0.87**	**138**	P	**Pg**	20 46 43.0	0.0
VLX				S	**Sg**	20 46 55.4	+1.1

MNSI	Mandailing Nat	26.47 281	P	P	21 00 39.7	-0.9
	959nm23nm,0.7s,mb4.7					
PSI	Prapat	27.56 285	P	P	21 00 49.2	-1.0
	3.9nm,0.6s,mb3.9,baz=80,slow=7.0,SNR=8.0					
NWAO	Narrogin (SRO)	29.43 194	P	P	21 01 07.2	+0.8
	9.7nm,0.9s,mb4.1,baz=18,slow=9.6,SNR=2.7					
STKA	Stephens Creek	31.20 153	eP	P	21 01 22.0	+0.2
	14nm,0.4s,mb4.6					
STKA	Stephens Creek	31.20 153	P	P	21 01 22.1	+0.3
	21nm,0.5s,mb4.7,baz=328,slow=8.6,SNR=134					
STKA	Stephens Creek	31.20 153	eP	P	21 01 21.6	-0.1
	4.0nm,0.5s,mb4.0					
CMSA	Cobar Meteorol	32.96 147	eP	P	21 01 37.5	+0.6
CM31	Chiang Mai Arr	34.70 312	eP	P	21 01 52.8	+1.0
	1.9nm,0.6s,mb3.6					
CMAR	Chiang Mai Arr	34.70 312	P	P	21 01 52.9	+1.0
	5.5nm,0.7s,mb4.0,baz=138,slow=7.0,SNR=70					
CHTO	Chiang Mai	34.92 312	eP	P	21 01 54.3	+0.7
	14nm,1.0s,mb4.2					
CHTO	Chiang Mai	34.92 312	P	P	21 01 54.6	+0.9
CBIJ	Chichi jima	35.19 26	P	P	21 01 55.2	-0.6
	18nm,0.5s,mb4.7,baz=108,slow=21,SNR=3.9					
ARPS	Mount Arapiles	35.52 157	eP	P	21 01 59.0	+0.6
	38nm,0.5s					
YNG	Young	36.53 147	eP	P	21 02 08.3	+1.4
	7.7nm,0.5s,mb4.3					
TOO	Toolangi	37.71 154	eP	P	21 02 18.1	+1.5
MJAR	Matsushiro Arr	42.41 15	P	P	21 02 54.3	-0.2
	1.5nm,0.5s,mb3.6,baz=193,slow=8.9,SNR=7.7					
LSA	Lhasa	47.30 318	eP	P	21 03 33.9	+1.3
	3.4nm,0.6s,mb3.9					
ODAN	Odare	48.24 312	eP	P	21 03 39.5	-0.2
	14nm,0.6s,mb4.5					
RAMN	Ramite	48.87 312	eP	P	21 03 44.6	+0.1
	37nm,0.6s					
JIRN	Jiri	49.57 312	eP	P	21 03 49.1	-0.6
	13nm,0.6s,mb4.4					
GUN	Gumba	49.94 312	eP	P	21 03 52.2	-0.2
	24nm,0.6s,mb4.7					
PKI	Pulchoki	50.10 312	eP	P	21 03 53.1	-0.5
	7.1nm,0.4s,mb4.3					
PKI	Pulchoki	50.10 312	eP	P	21 03 53.2	-0.4
	7.3nm,0.5s,mb4.3					
PKIN	Phulchoki	50.11 312	eP	P	21 03 53.2	-0.5
	7.3nm,0.5s,mb4.3					
KKN	Kakani	50.31 312	eP	P	21 03 54.7	-0.5
	12nm,0.6s,mb4.4					
DMN	Daman	50.35 312	eP	P	21 03 54.7	-0.7
	13nm,0.6s,mb4.4					
SONM	Songino Array	54.67 344	P	P	21 04 25.8	-0.4
	0.3nm,0.4s,baz=45,slow=4.3,SNR=2.7					
PETK	Petropavlovsk-	63.37 21	P	P	21 05 26.8	+1.9
	3.1nm,0.5s,mb4.1,baz=175,slow=5.6,SNR=6.8					
MK31	Makanchi Array	63.67 328	eP	P	21 05 27.0	0.0
MKAR	Makanchi Array	63.67 328	P	P	21 05 27.4	+0.4
	1.1nm,0.4s,mb3.7,baz=98,slow=10.0,SNR=30					
KBL	Kabul	65.73 311	eP	P	21 05 39.4	-0.9
	4.3nm,0.6s,mb4.3					
ZALV	Zalesovo Beam	67.35 335	P	P	21 05 49.2	-0.8
	0.9nm,0.5s,mb3.7,baz=113,slow=6.7,SNR=3.4					
BVAR	Borovoye Array	73.55 329	P	P	21 06 27.2	+0.2
	0.1nm,0.3s,baz=219,slow=50,SNR=3.6					
TORD	Torodi Ar. Bea	123.95 283	PKP	PKPdf	21 13 48.9	+0.4
	0.5nm,0.7s,baz=79,slow=1.1,SNR=3.7					
TXAR	Lajitas Array	127.28 56	PKP	PKPdf	21 13 55.7	+1.2
	0.1nm,0.7s,baz=254,slow=9.9,SNR=2.7					

*ISK **08** 21:02:49.5,36.°90N×29.°37E,h4km,MD3.1*
*DDA **08** 21:02:50.0,36.°94N×29.°33E,h21km±2km,Md3.1*
*CSEM **08** 21:02:50.2±0.1,36.°91N×29.°38E,h5km,MD3.1,Error ellipse: s-maj=3.1km s-min=2.9km az=174.0*
*ISCJB **08** 21:02:50.1±0.5,36.°90N±0.°03×29.°36E±0.°04,h2km±5km, Error ellipse: s-maj=5.2km s-min=4.2km az=43.5*
ISC 08 21:02:50.5±0.5,36.°90N±0.°03×29.°37E±0.°04,h5km±5km, n38,σ0§72/55,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.28	23	PG	Pg	21 02 55.1	-0.8
GLHS				eSG	Sg	21 03 00.3	+0.8
GLHS	Glhisar (BURDU	0.28	23	i Pg	Pg	21 02 55.1	-0.8
GLHS				eSg	Sg	21 03 00.3	+0.8
FETY	Fethiye	0.35	220	PG	Pg	21 02 56.9	-0.4
FETY				eSG	Sg	21 03 02.2	+0.3
FETY	Fethiye	0.35	220	i Pg	Pg	21 02 56.9	-0.4
FETY				eSg	Sg	21 03 02.2	+0.4
GOLH	Golhisar	0.37	25	i P	Pg	21 02 57.3	-0.4
GOLH				i S	Sg	21 03 03.5	+1.0
GOLH	Golhisar	0.37	25	i P	Pg	21 02 57.3	-0.4
GOLH				i S	Sg	21 03 03.5	+1.0
ELL	Elmali	0.46	109	ePG	Pg	21 02 59.3	-0.1
ELL	Elmali	0.46	109	ePg	Pg	21 02 59.3	-0.1
TURN	Turunc	0.61	268	i P	Pg	21 03 07.2	+4.9
TURN				i S	Sg	21 03 20.1	+10
AKAS	Kas	0.69	164	i P	Pg	21 03 04.2	+0.4
AKAS				i S	Sg	21 03 18.8	+5.9
AKAS	Kas	0.69	164	i P	Pg	21 03 04.2	+0.4
KORT	Korkueli	0.80	83	i P	Pg	21 03 05.7	-0.1
KORT				i S	Sg	21 03 19.1	+3.0
KORT	Korkueli	0.80	83	i P	Pg	21 03 05.7	-0.1
KORT				i S	Sg	21 03 19.1	+3.0
DNZL	Cakiroluk	0.83	342	i P	Pg	21 03 04.8	-1.5
DNZL				i S	Sg	21 03 17.4	+0.3
DNZL	Cakiroluk	0.83	342	i P	Pg	21 03 04.8	-1.6
DNZL				i S	Sg	21 03 17.4	+0.3
DENT	Denizli	0.89	343	ePG	Pg	21 03 07.2	-0.4
DENT	Denizli	0.89	343	ePg	Pg	21 03 07.2	-0.4
YER	Yerkesik	0.90	285	ePG	Pg	21 03 07.8	0.0
YER	Yerkesik	0.90	285	ePg	Pg	21 03 07.8	+0.1
ANTB	Antalya	1.03	90	ePG	Pg	21 03 09.9	-0.4
ANTB	Antalya	1.03	90	ePg	Pg	21 03 09.9	-0.4
BCK	Bucak	1.12	60	ePN	Pn	21 03 11.7	-1.2
BCK	Bucak	1.12	60	ePn	Pn	21 03 11.7	-1.2
MLSB	Milas	1.33	288	ePN	Pn	21 03 15.8	+0.1
MLSB	Milas	1.33	288	ePn	Pn	21 03 15.8	+0.1
AYDN	Tasoluk	1.41	303	i P	Pn	21 03 17.0	+0.3
AYDN				i S	Sb	21 03 35.6	+0.2
AYDN	Tasoluk	1.41	303	i P	Pn	21 03 17.0	+0.3
AYDN				i S	Sb	21 03 35.7	+0.3
SUTC	Sutluce-Ispart	1.43	66	ePN	Pn	21 03 16.9	-0.1
SUTC	Sutluce-Ispart	1.43	66	ePn	Pn	21 03 16.9	-0.1
DAT	Datca	1.45	264	ePN	Pn	21 03 17.4	+0.1
DAT	Datca	1.45	264	ePn	Pn	21 03 17.4	+0.1
KHAL	Karahalli	1.47	4	i P	Pn	21 03 16.2	-1.4
KHAL				i S	Sn	21 03 37.7	+0.5
KHAL	Karahalli	1.47	4	i P	Pn	21 03 16.2	-1.4
KHAL				i S	Sn	21 03 37.7	+0.5
BDRM	Kayabasi	1.55	277	i P	Pn	21 03 19.3	+0.6
BDRM				i S	Sn	21 03 39.5	+0.4
KULA	Kula-Manisa	1.70	341	ePN	Pn	21 03 21.0	+0.1
KULA	Kula-Manisa	1.70	341	ePn	Pn	21 03 21.0	+0.2
SHUT	Suhut-Afyon	1.90	29	ePN	Pn	21 03 23.6	+0.2
SHUT	Suhut-Afyon	1.90	29	ePn	Pn	21 03 23.7	+0.2

*CSEM **08** 21:04:32.9,38.°07N×21.°52E,h2km,ML2.5/4,After THE*
THE 08 21:04:32.9,38.°07N×21.°52E,h2km±35km,ML2.5/4,Error ellipse: s-maj=35.2km s-min=1.6km az=0.0,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAKA	Lakka	0.40	64	P	Pg	21 04 41.1	+0.5
LAKA				S	Sg	21 04 46.3	+0.4
LAKA	Lakka	0.40	64	P	Pg	21 04 41.1	+0.5
LAKA				S	Sg	21 04 46.3	+0.4
EFP	Efpalio	0.47	40	P	Pg	21 04 41.1	-0.9
EFP				S	Sg	21 04 48.9	+0.8
EFP	Efpalio	0.47	40	P	Pg	21 04 41.1	-0.9
EFP				S	Sg	21 04 48.9	+0.8
TRIZ	Trizonia	0.53	56	P	Pg	21 04 43.0	-0.1
TRIZ				S	Sg	21 04 50.6	+0.7
TRIZ	Trizonia	0.53	56	P	Pg	21 04 43.0	-0.1
TRIZ				S	Sg	21 04 50.6	+0.7
KALE	Kalithea	0.59	56	P	Pg	21 04 44.7	+0.5
KALE				S	Sg	21 04 52.6	+0.8
KALE	Kalithea	0.59	56	P	Pg	21 04 44.7	+0.5
KALE				S	Sg	21 04 52.6	+0.8
GUR	Goura	0.67	101	P	Pg	21 04 44.8	-0.8
GUR				S	Sg	21 04 55.4	+1.1
GUR	Goura	0.67	101	P	Pg	21 04 44.8	-0.8
GUR				S	Sg	21 04 55.4	+1.1
DSF	Desfina	0.87	66	P	Pg	21 04 49.3	-0.2
DSF				S	Sg	21 05 01.7	+0.9
DSF	Desfina	0.87	66	P	Pg	21 04 49.3	-0.2
DSF				S	Sg	21 05 01.7	+0.9

*CSEM **08** 21:09:20.6,12.°18N×44.°07E,h4km,ML3.5,After DHMR*
DHMR 08 21:09:20.6±1.5,12.°18N×44.°07E,h4km±7km,ML3.5,2D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRBA	At Turbah	1.04	2	i P	Pg	21 09 39.4	-1.3
TRBA				i S	Sg	21 09 55.6	+1.4
TRBA				AML	AML	21 10 03.1	
	comp=E,732nm,0.5s						
ADEN	Aden	1.07	56	⇓i P	Pg	21 09 40.3	-0.8
ADEN				i S	Sg	21 09 56.4	+1.3
ADEN				AML	AML	21 10 01.9	
	comp=E,3μm,0.3s						
ADEN	Aden	1.07	56	⇓i P	Pg	21 09 40.3	-0.9
ADEN				i S	Sg	21 09 56.4	+1.3
	comp=E,1μm,0.3s						
UDYN	Al 'Udayn	1.78	357	i P	Pn	21 09 52.9	+0.8
UDYN				i S	Sn	21 10 18.6	+3.4
UDYN				AML	AML	21 10 26.8	
	comp=N,238nm,0.3s						
UDYN	Al 'Udayn	1.78	357	i P	Pn	21 09 52.9	+0.8
UDYN				i S	Sn	21 10 18.5	+3.4
	comp=N,119nm,0.3s						
LBOS		2.04	34	i P	Pn	21 09 56.6	+1.0
LBOS				i S	Sn	21 10 25.4	+4.0
BDHA	Al Bayda'	2.30	39	i P	Pn	21 10 01.5	+2.2
BDHA				i S	Sn	21 10 32.8	+4.7
BDHA				AML	AML	21 10 43.9	
	comp=E,381nm,0.5s						
BDHA	Al Bayda'	2.30	39	i P	Pn	21 10 01.5	+2.2
BDHA				i S	Sn	21 10 32.8	+4.7
	comp=E,190nm,0.5s						
DHBB	Dhamar BB	2.40	7	i P	Pn	21 10 03.7	+3.1
DHBB				i S	Sn	21 10 35.0	+4.6

*NEIC **08** 21:10:22.5,38.°00N×21.°57E,h27km,ML3.3(ATH),After ATH.*
*ATH **08** 21:10:22.5,38.°00N×21.°57E,h27km±1km,ML3.3*
*ISCJB **08** 21:10:23.3±0.3,38.°02N±0.°02×21.°57E±0.°02,h26km±2km, mb3.6/9,Error ellipse: s-maj=3.5km s-min=2.6km az=25.1*
*THE **08** 21:10:23.1,37.°98N×21.°57E,h14km±1km,ML4.4/5,Error ellipse: s-maj=1.1km s-min=0.6km az=16.0*
*CSEM **08** 21:10:23.5±0.3,37.°99N×21.°61E,h17km±1km,ML3.3, Error ellipse: s-maj=3.9km s-min=2.9km az=32.0*
*IDC **08** 21:10:27.4±2.3,38.°07N×21.°61E,h51km±27km,mb3.4/9, mb1 3.5/13,mb1mx3.4/30,mbtmp3.4/13,ML3.5/4,Error ellipse: s-maj=18.3km s-min=14.8km az=57.0*
ISC 08 21:10:23.5±0.4,37.°99N±0.°02×21.°59E±0.°02,h18km±2km, n180,σ1§06/223,mb3.6/9,2D,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.12	306	ePb	Pg	21 10 27.5	+0.2
RLS				eSb	Sg	21 10 31.3	+1.4
RLS	Riolos of Patr	0.12	306	ePB	Pg	21 10 27.5	+0.2
RLS				eSB	Sg	21 10 31.2	+1.3
RLS	Riolos of Patr	0.12	306	ePb	Pg	21 10 27.5	+0.2
RLS				eSb	Sg	21 10 31.3	+1.4
UPR	University Cam	0.33	27	P	Pg	21 10 30.6	0.0
UPR				S	Sg	21 10 35.5	+0.2
UPR	University Cam	0.33	27	ePB	Pg	21 10 30.6	0.0
UPR				eSB	Sg	21 10 36.9	+1.6
UPR	University Cam	0.33	27	P	Pg	21 10 30.6	0.0
UPR				S	Sg	21 10 35.5	+0.2
UPR				eSb	Sg	21 10 36.9	+1.6
LAKA	Lakka	0.40	50	P	Pg	21 10 31.6	-0.1
LAKA				S	Sg	21 10 37.3	+0.1
LAKA	Lakka	0.40	50	P	Pg	21 10 31.6	-0.1
LAKA				S	Sg	21 10 37.3	+0.1
EFP	Efpalio	0.50	29	P	Pg	21 10 33.1	-0.5
EFP				S	Sg	21 10 41.0	+0.6
EFP	Efpalio	0.50	29	ePN	Pg	21 10 33.1	-0.5
EFP				eSN	Sg	21 10 41.1	+0.7
EFP	Efpalio	0.50	29	P	Pg	21 10 33.1	-0.5
EFP				S	Sg	21 10 41.0	+0.6
TRIZ	Trizonia	0.54	45	P	Pg	21 10 33.7	-0.5
TRIZ	Trizonia	0.54	45	P	Pg	21 10 33.7	-0.5
KALE	Kalithea	0.59	47	P	Pg	21 10 34.6	-0.6
KALE	Kalithea	0.59	47	P	Pg	21 10 34.6	-0.6
GUR	Goura	0.60	95	P	Pg	21 10 34.5	-0.8
GUR				S	Sg	21 10 43.9	+0.6
GUR	Goura	0.60	95	ePN	Pg	21 10 34.5	-0.8
GUR				eSN	Sg	21 10 43.0	-0.3
GUR	Goura	0.60	95	P	Pg	21 10 34.5	-0.8
GUR				S	Sg	21 10 43.9	+0.6
KFL	Anninata	0.65	281	P	Pg	21 10 35.3	-0.9
KFL				S	Sg	21 10 44.5	-0.3
VLS	Valsamata	0.81	284	ePb	Pb	21 10 37.7	-1.4
VLS				eSn	Sn	21 10 50.3	-1.3
VLS	Valsamata	0.81	284	P	Pb	21 10 37.6	-1.5
VLS				S	Sb	21 10 49.9	+0.2
VLS	Valsamata	0.81	284	ePB	Pb	21 10 37.7	-1.4
VLS				eSN	Sn	21 10 50.3	-1.3
VLS	Valsamata	0.81	284	ePb	Pb	21 10 37.7	-1.4
VLS				S	Sb	21 10 49.9	+0.2
VLS				eSn	Sn	21 10 50.3	-1.3
ITM	Ithomi	0.85	162	ePn	Pb	21 10 39.1	-0.6
ITM				eSn	Sn	21 10 52.2	-0.3
ITM	Ithomi	0.85	162	P	Pb	21 10 39.1	-0.6
ITM	Ithomi	0.85	162	ePN	Pb	21 10 39.1	-0.6
ITM				eSN	Sn	21 10 52.2	-0.3
ITM	Ithomi	0.85	162	P	Pb	21 10 39.1	-0.6
ITM				eSn	Sn	21 10 52.2	-0.3
DSF	Desfina	0.85	60	P	Pb	21 10 39.0	-0.7
DSF				S	Sb	21 10 51.3	+0.5
DSF	Desfina	0.85	60	P	Pb	21 10 39.0	-0.7
DSF				S	Sb	21 10 51.3	+0.5
VLX	Vlachokerasia	0.88	134	P	Pb	21 10 39.9	-0.3
VLX				S	Sb	21 10 52.0	+0.4
VLX	Vlachokerasia	0.88	134	ePN	Pn	21 10 39.4	-1.5
VLX				eSN	Sn	21 10 52.7	-0.5
VLX	Vlachokerasia	0.88	134	ePn	Pn	21 10 39.4	-1.5
VLX	Vlachokerasia	0.88	134	P	Pb	21 10 39.9	-0.3
VLX				S	Sb	21 10 52.0	+0.4
VLX				eSn	Sn	21 10 52.7	-0.5
EVR	Evrytania	0.94	10	ePn	Pn	21 10 40.6	-1.2
EVR	Evrytania	0.94	10	ePN	Pn	21 10 40.6	-1.2
EVR	Evrytania	0.94	10	ePn	Pn	21 10 40.6	-1.2
LKD2	Lefkada island	1.09	318	P	Pb	21 10 42.7	-1.0
LKD2	Lefkada island	1.09	318	P	Pb	21 10 42.7	-1.0
LTK	Loutraki	1.09	88	ePN	Pn	21 10 43.3	-0.5
LTK	Loutraki	1.09	88	ePn	Pn	21 10 43.3	-0.5
PYL	PYLOS	1.10	174	P	Pb	21 10 43.0	-0.9
PYL				S	Sb	21 10 59.1	+1.2
PYL	PYLOS	1.10	174	ePN	Pn	21 10 43.6	-0.3
PYL	PYLOS	1.10	174	P	Pb	21 10 43.0	-0.9
PYL	PYLOS	1.10	174	ePn	Pn	21 10 43.6	-0.3
PYL				S	Sb	21 10 59.1	+1.2
AGG	Agios Georgios	1.19	29	P	Pn	21 10 44.6	-0.6
AGG	Agios Georgios	1.19	29	P	Pn	21 10 44.6	-0.6
AGG	Agios Georgios	1.19	29	P	Pn	21 10 44.6	-0.6
LKR	Lokris	1.29	59	ePn	Pn	21 10 46.4	-0.2
LKR	Lokris	1.29	59	P	Pn	21 10 46.5	-0.1
LKR	Lokris	1.29	59	ePN	Pn	21 10 46.4	-0.2
LKR	Lokris	1.29	59	P	Pn	21 10 46.5	-0.1
ATAL	Atalanti	1.33	58	P	Pn	21 10 46.7	-0.4
ATAL	Atalanti	1.33	58	P	Pn	21 10 46.7	-0.4
NAIG	Nisos Aigina	1.52	98	ePn	Pn	21 10 50.3	+0.6
NAIG	Nisos Aigina	1.52	98	ePN	Pn	21 10 50.3	+0.6
NAIG	Nisos Aigina	1.52	98	ePn	Pn	21 10 50.3	+0.6
THL	Klokotos Trika	1.61	12	P	Pn	21 10 50.0	-1.0
THL	Klokotos Trika	1.61	12	ePN	Pn	21 10 52.5	+1.5
THL	Klokotos Trika	1.61	12	P	Pn	21 10 50.0	-1.0
THL	Klokotos Trika	1.61	12	ePn	Pn	21 10 52.5	+1.5
VLI	Veliai	1.66	139	ePn	Pn	21 10 53.7	+2.0
VLI	Veliai	1.66	139	ePN	Pn	21 10 53.7	+2.0
VLI	Veliai	1.66	139	ePn	Pn	21 10 53.7	+2.0
ATH	Athens Observa	1.68	90	ePb	Pb	21 10 52.0	-1.8
ATH	Athens Observa	1.68	90	ePB	Pb	21 10 52.0	-1.8
ATHU	Athens Univers	1.73	90	P	Pn	21 10 52.8	+0.1
ATHU	Athens Univers	1.73	90	P	Pn	21 10 52.8	+0.1
VLY	Voula,Athens	1.75	94	ePb	Pb	21 10 52.7	-2.3
VLY	Voula,Athens	1.75	94	ePB	Pb	21 10 52.7	-2.3
JAN	Janina	1.76	341	ePb	Pb	21 10 52.7	-2.6
JAN	Janina	1.76	341	ePB	Pb	21 10 52.7	-2.6
PTL	Penteli	1.80	87	ePn	Pn	21 10 53.6	0.0
PTL	Penteli	1.80	87	ePN	Pn	21 10 53.6	0.0
PTL	Penteli	1.80	87	ePn	Pn	21 10 53.6	0.0
IGT	Igoumenitsa	1.83	328	P	Pn	21 10 54.5	+0.5
IGT	Igoumenitsa	1.83	328	P	Pn	21 10 54.5	+0.5
IGT	Igoumenitsa	1.83	328	P	Pn	21 10 54.5	+0.5
NEO	Neokhori	1.83	44	ePn	Pn	21 10 54.5	+0.4
NEO	Neokhori	1.83	44	ePN	Pn	21 10 54.5	+0.4
NEO	Neokhori	1.83	44	ePn	Pn	21 10 54.5	+0.4
XOR	Xorichti	1.86	42	P	Pn	21 10 54.6	+0.1
XOR	Xorichti	1.86	42	P	Pn	21 10 54.6	+0.1
XOR	Xorichti	1.86	42	P	Pn	21 10 54.6	+0.1
AOS	Alonnisos	2.15	56	P	Pn	21 10 58.0	-0.4
AOS	Alonnisos	2.15	56	P	Pn	21 10 58.0	-0.4
AOS	Alonnisos	2.15	56	P	Pn	21 10 58.0	-0.4
KEK	Kerkira	2.22	321	ePb	Pb	21 11 00.6	-2.5
KEK	Kerkira	2.22	321	P	Pn	21 11 00.1	+0.7
KEK	Kerkira	2.22	321	ePB	Pb	21 11 00.6	-2.5
KEK	Kerkira	2.22	321	P	Pn	21 11 00.1	+0.7
LIT	Litokhoron	2.22	18	P	Pn	21 10 59.2	-0.2
LIT	Litokhoron	2.22	18	P	Pn	21 10 59.2	-0.2
LIT	Litokhoron	2.22	18	P	Pn	21 10 59.2	-0.2
KZN	Kozani	2.32	3	ePn	Pn	21 11 00.5	-0.3
KZN	Kozani	2.32	3	P	Pn	21 11 00.7	-0.1
KZN	Kozani	2.32	3	ePN	Pn	21 11 00.5	-0.3
KZN	Kozani	2.32	3	P	Pn	21 11 00.7	-0.1
PLG	Polygyros	2.79	31	ePn	Pn	21 11 07.7	+0.6
PLG	Polygyros	2.79	31	P	Pn	21 11 07.5	+0.4
PLG	Polygyros	2.79	31	ePN	Pn	21 11 07.7	+0.6
PLG	Polygyros	2.79	31	P	Pn	21 11 07.5	+0.4
FNA	Florina	2.80	357	P	Pn	21 11 06.6	-0.7
FNA	Florina	2.80	357	P	Pn	21 11 06.6	-0.7
FNA	Florina	2.80	357	P	Pn	21 11 06.6	-0.7
OUR	Ouranopolis	2.99	38	P	Pn	21 11 10.0	0.0
OUR	Ouranopolis	2.99	38	P	Pn	21 11 10.0	0.0
BIA	Bitola	3.04	356	i Pn	Pn	21 11 11.8	+1.3
OHR	Ohrid	3.18	349	i Pn	Pn	21 11 15.5	+2.9
OHR				eSn	Sg	21 12 04.3	-1.2
OHR				eLg		21 12 10.3	
	comp=N,62nm,0.7s						
OHR				eLg		21 12 11.8	
	comp=E,158nm,1.1s						
APE	Apeiranthos	3.26	105	ePn	Pn	21 11 13.8	+0.1
APE	Apeiranthos	3.26	105	ePN	Pn	21 11 13.8	+0.1
APE	Apeiranthos	3.26	105	ePn	Pn	21 11 13.8	+0.1
VAM	Vamos	3.32	140	P	Pn	21 11 19.0	+4.5
VAM	Vamos	3.32	140	P	Pn	21 11 19.0	+4.5
KRUS	Krusevo	3.39	356	i Pn	Pn	21 11 16.5	+1.1
LIA	Limnos Island	3.39	55	ePn	Pn	21 11 15.2	-0.2
LIA	Limnos Island	3.39	55	ePN	Pn	21 11 15.2	-0.2
LIA	Limnos Island	3.39	55	ePn	Pn	21 11 15.2	-0.2
SRS	Serrai	3.49	26	P	Pn	21 11 17.6	+0.8
SRS	Serrai	3.49	26	P	Pn	21 11 17.6	+0.8
SRS	Serrai	3.49	26	P	Pn	21 11 17.6	+0.8
CHOS	Chios island	3.54	82	P	Pn	21 11 17.8	+0.3
CHOS	Chios island	3.54	82	P	Pn	21 11 17.8	+0.3
STIP	Stip	3.73	7	i Pn	Pn	21 11 21.7	+1.5
IDI	Anoyia	3.78	134	P	Pn	21 11 22.2	+1.3
	comp=E,1.2nm,0.3s,baz=320,slow=14,SNR=18						
IDI				S	Sn	21 12 08.5	+3.6
	comp=E,3.9nm,0.3s,baz=286,slow=19,SNR=5.7						
IDI	Anoyia	3.78	134	P	Pn	21 11 22.2	+1.4
IDI				S	Sn	21 12 08.5	+3.6
NVR	Nevrokopi	3.79	27	ePn	Pn	21 11 22.7	+1.8
NVR				P		21 11 25.9	
NVR	Nevrokopi	3.79	27	ePN	Pn	21 11 22.7	+1.8
NVR	Nevrokopi	3.79	27	ePn	Pn	21 11 22.7	+1.8
TIP	Timpagrande	3.97	289	ePn	Pn	21 11 24.9	+1.5
TIP				Sn	Sn	21 12 10.1	+0.6
TIP	Timpagrande	3.97	289	ePn	Pn	21 11 24.9	+1.5
TIP				Sn	Sn	21 12 10.1	+0.6
SMG	Samos	4.16	92	P	Pn	21 11 27.2	+1.1
SMG	Samos	4.16	92	P	Pn	21 11 27.2	+1.1
LTRZ	Laterza	4.53	307	Pn	Pn	21 11 31.4	+0.3
LTRZ	Laterza	4.53	307	Pn	Pn	21 11 31.4	+0.3
SG1	Sgolgore (BA)	4.75	308	ePn	Pn	21 11 34.9	+0.7
SG1				eSn	Sn	21 12 27.9	-0.9
BAI	Bari	4.79	312	ePn	Pn	21 11 35.3	+0.6
BARS	Barje	4.83	2	⇓i Pn	Pn	21 11 36.5	+1.3
ACER	Acerenza	5.19	304	Pn	Pn	21 11 41.6	+1.4
	comp=E,102nm,0.8s						
ACER	Acerenza	5.19	304	Pn	Pn	21 11 41.6	+1.4
	comp=E,102nm,0.8s						
STON	Ston	5.71	330	i Pn	Pn	21 11 45.9	-1.4
STON				Sn	Sn	21 12

ML3.5
*CSEM **08** 21:24:50.0±0.2, 37.°99N×21.°54E, h5km, ML3.5, Error ellipse: s-maj=4.9km s-min=3.9km az=48.0*
*ISCJB **08** 21:24:50.4±0.6, 38.°03N±0.°02×21.°55E±0.°02, h13km±4km, mb3.5/3, Error ellipse: s-maj=3.3km s-min=2.9km az=40.7*
ISC 08 21:24:50.5±0.3, 38.°01N±0.°02×21.°53E±0.°02, h13km±2km, n179, σ1°33/219, mb3.5/3, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.07**	**311**	*e*Pb	**Pg**	21 24 53.6	+0.5
RLS				*e*Sb	**Sg**	21 24 56.2	+1.3
RLS	**Riolos of Patr**	**0.07**	**311**	*e*PB	**Pg**	21 24 53.6	+0.5
RLS				*e*SB	**Sg**	21 24 56.2	+1.3
RLS	**Riolos of Patr**	**0.07**	**311**	*e*Pb	**Pg**	21 24 53.6	+0.5
UPR	**University Cam**	**0.34**	**36**	P	**Pg**	21 24 57.2	-0.1
UPR				S	**Sg**	21 25 01.6	-0.3
UPR	**University Cam**	**0.34**	**36**	*e*PB	**Pg**	21 24 57.3	0.0
UPR				*e*SB	**Sg**	21 25 02.6	+0.7
UPR	**University Cam**	**0.34**	**36**	P	**Pg**	21 24 57.2	-0.1
UPR				S	**Sg**	21 25 01.6	-0.3
UPR				*e*Sb	**Sg**	21 25 02.6	+0.7
LAKA	**Lakka**	**0.42**	**57**	P	**Pg**	21 24 58.3	-0.5
LAKA				S	**Sg**	21 25 04.8	+0.3
LAKA	**Lakka**	**0.42**	**57**	P	**Pg**	21 24 58.3	-0.5
LAKA				S	**Sg**	21 25 04.8	+0.3
EFP	**Efpalio**	**0.51**	**35**	P	**Pg**	21 24 59.9	-0.6
EFP				S	**Sg**	21 25 06.9	-0.4
EFP	**Efpalio**	**0.51**	**35**	*e*PB	**Pg**	21 24 59.9	-0.6
EFP				*e*SB	**Sb**	21 25 07.1	-1.5
EFP	**Efpalio**	**0.51**	**35**	P	**Pg**	21 24 59.9	-0.6
EFP				*e*Sb	**Sb**	21 25 07.1	-1.5
TRIZ	**Trizonia**	**0.55**	**50**	P	**Pg**	21 25 00.7	-0.6
TRIZ				S	**Sg**	21 25 08.7	0.0
TRIZ	**Trizonia**	**0.55**	**50**	P	**Pg**	21 25 00.7	-0.6
TRIZ				S	**Sg**	21 25 08.7	0.0
KFL	**Anninata**	**0.59**	**280**	P	**Pg**	21 25 02.0	-0.1
KALE	**Kalithea**	**0.61**	**52**	P	**Pg**	21 25 01.5	-0.9
KALE				S	**Sg**	21 25 09.8	-0.7
KALE	**Kalithea**	**0.61**	**52**	P	**Pg**	21 25 01.5	-0.9
KALE				S	**Sg**	21 25 09.8	-0.7
GUR	**Goura**	**0.65**	**97**	P	**Pg**	21 25 02.1	-1.0
GUR				S	**Sg**	21 25 11.8	+0.2
GUR	**Goura**	**0.65**	**97**	*e*PB	**Pg**	21 25 02.1	-1.0
GUR				*e*SN	**Sg**	21 25 12.0	+0.4
GUR	**Goura**	**0.65**	**97**	P	**Pg**	21 25 02.1	-1.0
GUR				S	**Sg**	21 25 11.8	+0.2
VLS	**Valsamata**	**0.76**	**283**	*e*Pn	**Pn**	21 25 04.4	-2.6
VLS				S	**Sg**	21 25 16.2	+0.9
VLS				*e*Sn	**Sn**	21 25 17.3	-1.1
VLS	**Valsamata**	**0.76**	**283**	P	**Pg**	21 25 04.3	-1.0
VLS				S	**Sg**	21 25 16.2	+0.9
VLS	**Valsamata**	**0.76**	**283**	*e*PN	**Pn**	21 25 04.4	-2.6
VLS				*e*SN	**Sn**	21 25 17.3	-1.1
VLS	**Valsamata**	**0.76**	**283**	P	**Pg**	21 25 04.3	-1.0
VLS				S	**Sg**	21 25 16.2	+0.9
DSF	**Desfina**	**0.88**	**63**	P	**Pg**	21 25 05.8	-1.7
DSF				S	**Sg**	21 25 18.8	-0.2
DSF	**Desfina**	**0.88**	**63**	P	**Pg**	21 25 05.8	-1.7
DSF				S	**Sg**	21 25 18.8	-0.2
ITM	**Ithomi**	**0.89**	**159**	*e*Pn	**Pn**	21 25 07.1	-1.6
ITM				*e*Sn	**Sn**	21 25 20.2	-1.3
ITM	**Ithomi**	**0.89**	**159**	P	**Pg**	21 25 06.8	-0.9
ITM				S	**Sg**	21 25 20.1	+0.8
ITM	**Ithomi**	**0.89**	**159**	*e*PN	**Pn**	21 25 07.1	-1.6
ITM				*e*SN	**Sn**	21 25 20.2	-1.3
ITM	**Ithomi**	**0.89**	**159**	P	**Pg**	21 25 06.8	-0.9
ITM	**Ithomi**	**0.89**	**159**	*e*Pn	**Pn**	21 25 07.1	-1.6
ITM				S	**Sg**	21 25 20.1	+0.8
EVR	**Evrytania**	**0.93**	**13**	*e*Pn	**Pn**	21 25 08.2	-1.1
EVR				*e*Sn	**Sn**	21 25 21.0	-1.5
EVR	**Evrytania**	**0.93**	**13**	*e*PN	**Pn**	21 25 08.2	-1.1
EVR				*e*SN	**Sn**	21 25 21.0	-1.5
EVR	**Evrytania**	**0.93**	**13**	*e*Pn	**Pn**	21 25 08.2	-1.1
VLX	**Vlachokerasia**	**0.93**	**133**	P	**Pg**	21 25 07.2	-1.2
VLX				S	**Sg**	21 25 20.9	+0.3
VLX	**Vlachokerasia**	**0.93**	**133**	*e*PN	**Pn**	21 25 07.5	-1.8
VLX	**Vlachokerasia**	**0.93**	**133**	P	**Pg**	21 25 07.2	-1.2
VLX	**Vlachokerasia**	**0.93**	**133**	*e*Pn	**Pn**	21 25 07.5	-1.8
VLX				S	**Sg**	21 25 20.9	+0.3
LKD2	**Lefkada island**	**1.04**	**319**	P	**Pb**	21 25 08.7	-1.6
LKD2	**Lefkada island**	**1.04**	**319**	P	**Pb**	21 25 08.7	-1.6
PYL	**PYLOS**	**1.13**	**171**	P	**Pb**	21 25 10.9	-1.0
PYL				S	**Sb**	21 25 27.1	+0.7
PYL	**PYLOS**	**1.13**	**171**	*e*PN	**Pn**	21 25 11.6	-0.4
PYL	**PYLOS**	**1.13**	**171**	P	**Pb**	21 25 10.9	-1.0
PYL	**PYLOS**	**1.13**	**171**	*e*Pn	**Pn**	21 25 11.6	-0.4
PYL				S	**Sb**	21 25 27.1	+0.7
LTK	**Loutraki**	**1.13**	**89**	P	**Pb**	21 25 10.5	-1.5
LTK				S	**Sb**	21 25 26.5	-0.1
LTK	**Loutraki**	**1.13**	**89**	*e*PB	**Pb**	21 25 10.6	-1.4
LTK	**Loutraki**	**1.13**	**89**	*e*Pb	**Pb**	21 25 10.6	-1.4
LTK				S	**Sb**	21 25 26.5	-0.1
AGG	**Agios Georgios**	**1.19**	**32**	*e*Pn	**Pn**	21 25 12.1	-0.7
AGG	**Agios Georgios**	**1.19**	**32**	P	**Pn**	21 25 11.5	-1.3
AGG	**Agios Georgios**	**1.19**	**32**	*e*PN	**Pn**	21 25 12.1	-0.7
AGG	**Agios Georgios**	**1.19**	**32**	P	**Pn**	21 25 11.5	-1.3
AGG	**Agios Georgios**	**1.19**	**32**	*e*Pn	**Pn**	21 25 12.1	-0.7
LKR	**Lokris**	**1.32**	**61**	*e*Pn	**Pn**	21 25 14.0	-0.6
LKR	**Lokris**	**1.32**	**61**	P	**Pn**	21 25 13.4	-1.2
LKR	**Lokris**	**1.32**	**61**	*e*PN	**Pn**	21 25 14.0	-0.6
LKR	**Lokris**	**1.32**	**61**	P	**Pn**	21 25 13.4	-1.2
LKR	**Lokris**	**1.32**	**61**	*e*Pn	**Pn**	21 25 14.0	-0.6
ATAL	**Atalanti**	**1.35**	**59**	P	**Pn**	21 25 14.3	-0.8
ATAL	**Atalanti**	**1.35**	**59**	P	**Pn**	21 25 14.3	-0.8
NAIG	**Nisos Aigina**	**1.57**	**99**	*e*Pb	**Pb**	21 25 18.0	-1.4
NAIG	**Nisos Aigina**	**1.57**	**99**	*e*PB	**Pb**	21 25 18.0	-1.4
NAIG	**Nisos Aigina**	**1.57**	**99**	*e*Pb	**Pb**	21 25 18.0	-1.4
THL	**Klokotos Trika**	**1.59**	**14**	P	**Pn**	21 25 19.1	+0.6
THL	**Klokotos Trika**	**1.59**	**14**	*e*PN	**Pn**	21 25 19.8	+1.3
THL	**Klokotos Trika**	**1.59**	**14**	P	**Pn**	21 25 19.1	+0.6
THL	**Klokotos Trika**	**1.59**	**14**	*e*Pn	**Pn**	21 25 19.8	+1.3
VLI	**Veliai**	**1.71**	**139**	*e*Pn	**Pn**	21 25 22.4	+2.4
VLI	**Veliai**	**1.71**	**139**	*e*PN	**Pn**	21 25 22.4	+2.4
VLI	**Veliai**	**1.71**	**139**	*e*Pn	**Pn**	21 25 22.4	+2.4
ATH	**Athens Observa**	**1.73**	**91**	*e*Pn	**Pn**	21 25 21.9	+1.6
ATH	**Athens Observa**	**1.73**	**91**	*e*PN	**Pn**	21 25 21.9	+1.6
ATH	**Athens Observa**	**1.73**	**91**	*e*Pn	**Pn**	21 25 21.9	+1.6
ATHU	**Athens Univers**	**1.78**	**91**	P	**Pn**	21 25 20.9	-0.1
ATHU	**Athens Univers**	**1.78**	**91**	P	**Pn**	21 25 20.9	-0.1
IGT	**Igoumenitsa**	**1.78**	**329**	P	**Pn**	21 25 22.1	+1.0
IGT	**Igoumenitsa**	**1.78**	**329**	P	**Pn**	21 25 22.1	+1.0
IGT	**Igoumenitsa**	**1.78**	**329**	P	**Pn**	21 25 22.1	+1.0
MEV	**Metsovon**	**1.79**	**352**	P	**Pn**	21 25 23.8	+2.7
MEV	**Metsovon**	**1.79**	**352**	P	**Pn**	21 25 23.8	+2.7
MEV	**Metsovon**	**1.79**	**352**	P	**Pn**	21 25 23.8	+2.7
VLY	**Voula,Athens**	**1.80**	**94**	*e*Pn	**Pn**	21 25 21.9	+0.7
VLY	**Voula,Athens**	**1.80**	**94**	*e*PN	**Pn**	21 25 21.9	+0.7
VLY	**Voula,Athens**	**1.80**	**94**	*e*Pn	**Pn**	21 25 21.9	+0.7
PTL	**Penteli**	**1.84**	**88**	*e*Pn	**Pn**	21 25 22.4	+0.6
PTL	**Penteli**	**1.84**	**88**	*e*PN	**Pn**	21 25 22.4	+0.6
PTL	**Penteli**	**1.84**	**88**	*e*Pn	**Pn**	21 25 22.4	+0.6
NEO	**Neokhori**	**1.85**	**45**	*e*Pb	**Pb**	21 25 22.1	-2.1
NEO	**Neokhori**	**1.85**	**45**	*e*PB	**Pb**	21 25 22.1	-2.1
XOR	**Xorichti**	**1.88**	**43**	P	**Pn**	21 25 21.9	-0.4
XOR	**Xorichti**	**1.88**	**43**	P	**Pn**	21 25 21.9	-0.4
XOR	**Xorichti**	**1.88**	**43**	P	**Pn**	21 25 21.9	-0.4
KYTH	**Kithira**	**2.10**	**145**	*e*Pn	**Pn**	21 25 29.9	+4.4
KEK	**Kerkira**	**2.17**	**322**	*e*Pn	**Pn**	21 25 28.5	+2.1
KEK	**Kerkira**	**2.17**	**322**	P	**Pn**	21 25 26.9	+0.5
KEK	**Kerkira**	**2.17**	**322**	*e*PN	**Pn**	21 25 28.5	+2.1
KEK	**Kerkira**	**2.17**	**322**	P	**Pn**	21 25 26.9	+0.5
KEK	**Kerkira**	**2.17**	**322**	*e*Pn	**Pn**	21 25 28.5	+2.1
AOS	**Alonnisos**	**2.17**	**57**	P	**Pn**	21 25 25.5	-0.9
AOS	**Alonnisos**	**2.17**	**57**	P	**Pn**	21 25 25.5	-0.9
AOS	**Alonnisos**	**2.17**	**57**	P	**Pn**	21 25 25.5	-0.9
LIT	**Litokhoron**	**2.21**	**19**	*e*Pn	**Pn**	21 25 28.8	+1.8
LIT	**Litokhoron**	**2.21**	**19**	P	**Pn**	21 25 28.7	+1.7
LIT	**Litokhoron**	**2.21**	**19**	*e*PN	**Pn**	21 25 28.8	+1.8
LIT	**Litokhoron**	**2.21**	**19**	P	**Pn**	21 25 28.7	+1.7
KZN	**Kozani**	**2.30**	**5**	*e*Pn	**Pn**	21 25 31.5	+3.4
KZN	**Kozani**	**2.30**	**5**	P	**Pn**	21 25 30.5	+2.4
KZN	**Kozani**	**2.30**	**5**	*e*PN	**Pn**	21 25 31.5	+3.4
KZN	**Kozani**	**2.30**	**5**	P	**Pn**	21 25 30.5	+2.4
FNA	**Florina**	**2.77**	**358**	P	**Pn**	21 25 36.6	+2.0
FNA	**Florina**	**2.77**	**358**	P	**Pn**	21 25 36.6	+2.0
FNA	**Florina**	**2.77**	**358**	P	**Pn**	21 25 36.6	+2.0
PLG	**Polygyros**	**2.79**	**32**	*e*Pn	**Pn**	21 25 36.5	+1.7
PLG	**Polygyros**	**2.79**	**32**	P	**Pn**	21 25 34.9	+0.1
PLG	**Polygyros**	**2.79**	**32**	*e*PN	**Pn**	21 25 36.5	+1.7
PLG	**Polygyros**	**2.79**	**32**	P	**Pn**	21 25 34.9	+0.1
PLG	**Polygyros**	**2.79**	**32**	*e*Pn	**Pn**	21 25 36.5	+1.7
OUR	**Ouranopolis**	**3.00**	**39**	P	**Pn**	21 25 37.2	-0.6
OUR	**Ouranopolis**	**3.00**	**39**	P	**Pn**	21 25 37.2	-0.6
OUR	**Ouranopolis**	**3.00**	**39**	P	**Pn**	21 25 37.2	-0.6
BIA	**Bitola**	**3.01**	**357**	*i* Pn	**Pb**	21 25 46.0	+2.0
OHR	**Ohrid**	**3.15**	**350**	P	**Pn**	21 25 41.2	+1.4
OHR	**Ohrid**	**3.15**	**350**	*i* Pn	**Pn**	21 25 43.5	+3.8
OHR	**Ohrid**	**3.15**	**350**	P	**Pn**	21 25 41.2	+1.4
OHR	**Ohrid**	**3.15**	**350**	P	**Pn**	21 25 41.2	+1.4
KARN	**Karanos**	**3.23**	**143**	P	**Pn**	21 25 43.9	+2.9
KARN	**Karanos**	**3.23**	**143**	P	**Pn**	21 25 43.9	+2.9
APE	**Apeiranthos**	**3.31**	**105**	*e*Pn	**Pn**	21 25 43.8	+1.7
APE	**Apeiranthos**	**3.31**	**105**	P	**Pn**	21 25 42.4	+0.3
APE	**Apeiranthos**	**3.31**	**105**	*e*PN	**Pn**	21 25 43.8	+1.7
APE	**Apeiranthos**	**3.31**	**105**	P	**Pn**	21 25 42.4	+0.3
APE	**Apeiranthos**	**3.31**	**105**	*e*Pn	**Pn**	21 25 43.8	+1.7
KRUS	**Krusevo**	**3.36**	**356**	*i* Pn	**Pn**	21 25 44.2	+1.5
VAY	**Valandovo**	**3.40**	**13**	*i* Pn	**Pn**	21 25 44.5	+1.2
LIA	**Limnos Island**	**3.41**	**55**	P	**Pn**	21 25 44.8	+1.4
LIA	**Limnos Island**	**3.41**	**55**	P	**Pn**	21 25 43.1	-0.3
LIA	**Limnos Island**	**3.41**	**55**	P	**Pn**	21 25 44.8	+1.4
SRS	**Serrai**	**3.49**	**27**	P	**Pn**	21 25 45.5	+1.1
SRS	**Serrai**	**3.49**	**27**	P	**Pn**	21 25 45.5	+1.1
SRS	**Serrai**	**3.49**	**27**	P	**Pn**	21 25 45.5	+1.1
CHOS	**Chios island**	**3.58**	**83**	P	**Pn**	21 25 45.9	+0.1
CHOS	**Chios island**	**3.58**	**83**	*e*PN	**Pn**	21 25 46.7	+0.9
CHOS	**Chios island**	**3.58**	**83**	P	**Pn**	21 25 45.9	+0.1
CHOS	**Chios island**	**3.58**	**83**	*e*Pn	**Pn**	21 25 46.7	+0.9
NVR	**Nevrokopi**	**3.79**	**28**	P	**Pn**	21 25 53.3	+4.7
NVR	**Nevrokopi**	**3.79**	**28**	P	**Pn**	21 25 53.3	+4.7
PRK	**Paraskevi**	**3.91**	**70**	*e*Pn	**Pn**	21 25 51.6	+1.3
PRK	**Paraskevi**	**3.91**	**70**	*e*PN	**Pn**	21 25 51.6	+1.3
PRK	**Paraskevi**	**3.91**	**70**	*e*Pn	**Pn**	21 25 51.6	+1.3
MMB	**Musomiste**	**3.95**	**25**	*i* P	**Pn**	21 25 51.8	+0.9
MMB	**Musomiste**	**3.95**	**25**	*i* P	**Pn**	21 25 51.8	+0.9
SMG	**Samos**	**4.21**	**93**	*e*Pn	**Pn**	21 25 56.3	+1.9
SMG	**Samos**	**4.21**	**93**	*e*PN	**Pn**	21 25 56.3	+1.9
SMG	**Samos**	**4.21**	**93**	*e*Pn	**Pn**	21 25 56.3	+1.9
LAST	**Lasithi**	**4.26**	**131**	P	**Pn**	21 25 57.0	+1.9
LAST	**Lasithi**	**4.26**	**131**	P	**Pn**	21 25 57.0	+1.9
LAST	**Lasithi**	**4.26**	**131**	P	**Pn**	21 25 57.0	+1.9
RDO	**Rodhopi**	**4.40**	**43**	*e*Pn	**Pn**	21 25 59.2	+2.2
RDO	**Rodhopi**	**4.40**	**43**	P	**Pn**	21 25 57.8	+0.8
RDO	**Rodhopi**	**4.40**	**43**	*e*PN	**Pn**	21 25 59.2	+2.2
RDO	**Rodhopi**	**4.40**	**43**	P	**Pn**	21 25 57.8	+0.8
RDO	**Rodhopi**	**4.40**	**43**	*e*Pn	**Pn**	21 25 59.2	+2.2
RZN	**Rozhen**	**4.41**	**33**	*i* P	**Pn**	21 25 58.8	+1.6
RZN	**Rozhen**	**4.41**	**33**	*i* P	**Pn**	21 25 58.8	+1.6
SG1	**Sgolgore (BA)**	**4.70**	**308**	*e*Pn	**Pn**	21 26 01.0	-0.1
SG1				*e*Sn	**Sn**	21 26 53.9	-1.6
KDZ	**Kurdzhali**	**4.71**	**38**	*i* P	**Pn**	21 26 01.1	-0.1
KDZ	**Kurdzhali**	**4.71**	**38**	*i* P	**Pn**	21 26 01.1	-0.1
VTS	**Vitosha**	**4.75**	**15**	*i* P	**Pn**	21 26 04.2	+2.4
VTS	**Vitosha**	**4.75**	**15**	*i* P	**Pn**	21 26 04.2	+2.4
ZKR	**Zakros**	**4.75**	**126**	P	**Pn**	21 26 05.3	+3.4
ZKR	**Zakros**	**4.75**	**126**	P	**Pn**	21 26 05.3	+3.4
ZKR	**Zakros**	**4.75**	**126**	P	**Pn**	21 26 05.3	+3.4
STON	**Ston**	**5.67**	**330**	*e*Pn	**Pn**	21 26 13.0	-1.4
STON				Sn	**Sn**	21 27 15.8	-3.4
STON	**Ston**	**5.67**	**330**	*e*Pn	**Pn**	21 26 13.0	-1.4
NVLJ	**Novalja**	**8.24**	**325**	*i* Pn	**Pn**	21 26 48.2	-1.6
NVLJ				Sn	**Sn**	21 28 19.0	-3.7
NVLJ	**Novalja**	**8.24**	**325**	*i* Pn	**Pn**	21 26 48.2	-1.5
BRTR	**Keskin Array B**	**9.60**	**76**	Pn	**Pn**	21 27 11.5	+3.2
	0.1nm,0.3s,baz=262,slow=13,SNR=4.4						
BRTR	**Keskin Array B**	**9.60**	**76**	Pn	**Pn**	21 27 11.5	+3.2
KURK	**Kurchatov**	**41.74**	**53**	P	**P**	21 32 37.4	-1.7
	0.4nm,0.5s,mb3.4,baz=280,slow=8.8,SNR=4.1						
MKAR	**Makanchi Array**	**44.71**	**58**	P	**P**	21 33 00.6	-2.6
	0.3nm,0.5s,mb3.4,baz=291,slow=7.1,SNR=5.8						
ZALV	**Zalesovo Beam**	**45.21**	**48**	P	**P**	21 33 04.5	-2.6
	0.6nm,0.4s,mb3.8,baz=269,slow=7.3,SNR=4.0						

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*IDC **08** 21:27:30.8±7.6, 31.°05N×105.°61E, h0km, mb3.5/2, mb1 3.6/4, mb1mx3.3/27, mbtmp3.4/4, ML3.6/2, Error ellipse: s-maj=180.1km s-min=37.1km az=129.0*
*ISCJB **08** 21:27:30.7±3.4, 31.°01N±0.°07×105.°6E±0.°1, h17km±27km, mb3.8/5, Error ellipse: s-maj=14.9km s-min=12.4km az=166.2*
*NEIC **08** 21:27:31.9±0.5, 31.°04N×105.°51E, h10km, mb3.8/3, Error ellipse: s-maj=10.5km s-min=7.9km az=48.0*
ISC 08 21:27:31.4±1.9, 31.°06N±0.°07×105.°57E±0.°09, h7km±14km, n18, σ0°75/22, mb3.8/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENH	**Enshi**	**3.46**	**102**	*e*Pn	**Pn**	21 28 26.4	+0.7
ENH				*e*Pg	**Pg**	21 28 38.4	+0.7
XAN	**Xi'an**	**4.10**	**43**	Pg	**Pg**	21 28 49.2	-0.7
XAN				Sg	**Sg**	21 29 52.5	+9.5
XAN				smax			
	comp=N,45nm,1.0s						
XAN				smax			
	comp=E,19nm,0.7s						
GYA	**Guiyang**	**4.69**	**168**	Pg	**Pg**	21 29 09.0	+7.9
GYA				Sg	**Sg**	21 30 08.3	+6.4
GYA				smax			
	comp=N,30nm,0.8s						
GYA				smax			
	comp=E,40nm,0.8s						
LZH	**Lanzhou**	**5.21**	**344**	*e*Pg	**Pn**	21 28 50.8	+1.0
LZH				Sg	**Sn**	21 29 44.8	-5.4
LZH				smax			
	comp=N,22nm,0.5s						
LZH				smax			
	comp=E,43nm,0.7s						
CHTO	**Chiang Mai**	**13.59**	**208**	Pn	**Pn**	21 30 44.9	+0.2
CMAR	**Chiang Mai Arr**	**13.91**	**207**	Pn	**Pn**	21 30 48.1	-0.9
	comp=E,0.1nm,0.3s,baz=17,slow=9.4,SNR=5.0						
KSRS	**Korea Array**	**19.52**	**65**	P	**Pn**	21 31 58.8	-1.7
	comp=E,0.1nm,0.3s,baz=257,slow=9.7,SNR=2.4						
AAK	**Ala-Archa**	**27.27**	**304**	P	**P**	21 33 16.4	+0.1
EKS2	**Erkin-Say**	**27.79**	**304**	*e*P	**P**	21 33 21.8	+0.9
	comp=E,0.7nm,0.5s,mb3.5						
KBL	**Kabul**	**30.80**	**286**	*e*P	**P**	21 33 48.0	+0.3
	comp=E,0.6nm,0.5s,mb3.7						
PALK	**Pallekele**	**33.18**	**230**	P	**P**	21 34 07.8	-1.1
GNI	**Garni**	**49.44**	**298**	*e*P	**P**	21 36 21.9	-0.2
	comp=E,3.9nm,1.0s,mb4.4						
KIV	**Kislovodsk**	**50.39**	**303**	P	**P**	21 36 29.4	+0.2
WRA	**Warramunga Arr**	**57.75**	**148**	P	**P**	21 37 23.6	+0.4
	comp=E,0.6nm,0.9s,mb3.6,baz=340,slow=8.0,SNR=4.8						
BR131	**Keskin Array S**	**57.86**	**300**	P	**P**	21 37 24.1	+0.3
TIRR	**Tirgusor**	**60.34**	**307**	*e*P	**P**	21 37 41.0	+0.1
ASAR	**Alice Springs**	**60.81**	**150**	P	**P**	21 37 44.9	+0.7
	comp=E,0.4nm,1.0s,mb3.5,baz=337,slow=6.6,SNR=3.3						
MORC	**Moravsky Berou**	**65.79**	**315**	P	**P**	21 38 15.9	-1.2

MAN 08 21:28:29, 17.°16N×120.°78E, h1km, mb4.6, ML3.4, MS3.3, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABRA	**Dolores**	**0.49**	**353**	*e*P	**Pg**	21 28 38.7	+0.2
ABRA				*e*S	**Sg**	21 28 43.2	-1.6
APYP	**Conner**	**0.83**	**32**	*e*P	**Pg**	21 28 43.8	-1.1
APYP				*e*S	**Sg**	21 28 50.5	-5.1
CAUP	**Cauayan**	**1.02**	**102**	*e*P	**Pg**	21 28 50.2	+1.6
BOLP	**Bolinao**	**1.13**	**227**	*e*P	**Pg**	21 28 51.3	+0.6
BALP	**Baler**	**1.60**	**151**	*e*P	**Pn**	21 28 57.8	-0.7
BALP				*e*S	**Sn**	21 29 12.0	-7.8
PCPH	**Palayan**	**1.62**	**169**	*e*P	**Pn**	21 28 59.1	+0.4

IDC 08 21:30:37.5±3.1, 1.°70N×98.°92E, h115km±12km, mb2.9/4, mb1 3.1/5, mb1mx2.9/24, mbtmp2.9/5, Error ellipse: s-maj=87.1km s-min=18.4km az=62.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**1.09**	**0**	P	**Pn**	21 31 00.2	+0.2
	4.6nm,0.3s,baz=220,slow=11,SNR=35						
PSI				S	**Sn**	21 31 15.7	-1.4
	3.4nm,0.3s,baz=231,slow=6.5,SNR=41						
CMAR	**Chiang Mai Arr**	**16.65**	**0**	P	**Pn**	21 34 22.9	-1.2
	0.2nm,0.3s,baz=192,slow=11,SNR=7.8						
WRA	**Warramunga Arr**	**40.86**	**124**	P	**P**	21 38 07.1	-1.3
	0.3nm,0.4s,baz=304,slow=9.0,SNR=15						
ASAR	**Alice Springs**	**42.34**	**129**	P	**P**	21 38 21.5	+1.1
	0.1nm,0.5s,baz=303,slow=7.8,SNR=5.8						
SONM	**Songino Array**	**46.41**	**7**	P	**P**	21 38 54.1	+1.8
	0.4nm,0.4s,baz=177,slow=8.2,SNR=2.5						
MKAR	**Makanchi Array**	**47.20**	**344**	P	**P**	21 38 57.3	-1.3
	0.2nm,0.6s,baz=143,slow=8.6,SNR=3.3						

MEX 08 21:37:51.7±0.6, 17.°42N×95.°85W, h138km±8km, MD3.7, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OXX	**Oaxaca**	**0.90**	**248**	*i* P	Pn	21 38 13.1	-1.3
OXX				*i* S	Sn	21 38 29.7	-1.9
HUIG	**Huatulco**	**1.66**	**188**	*i* P	Pn	21 38 21.3	-0.9
HUIG				*i* S	Sn	21 38 43.5	-1.9
TPIG	**Tehuac#an**	**1.74**	**305**	*i* P	Pn	21 38 21.9	-1.2
TPIG				*i* S	Sn	21 38 46.1	-0.9
UTMO	**Huajuapan**	**1.90**	**283**	*i* P	Pn	21 38 23.8	-1.1
UTMO				*i* S	Sn	21 38 49.7	-0.7
PNIG	**Pinotepa**	**2.41**	**245**	*i* P	Pn	21 38 29.1	-1.9
PNIG				*i* S	Sn	21 38 59.8	-1.6
TGIG		**2.69**	**103**	*i* P	Pn	21 38 33.8	-0.8
TGIG				*i* S	Sn	21 39 05.2	-2.5
PCIG		**3.05**	**124**	*i* P	Pn	21 38 38.1	-1.2
PCIG				*i* S	Sn	21 39 14.2	-1.8

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*IDC **08** 21:39:41.7±1.0, 38.°11N×21.°58E, h0km, mb3.6/7, mb1 3.5/12, mb1mx3.4/32, mbtmp3.5/12, ML3.6/4, MS2.9/1, Ms1 2.9/1, ms1mx2.1/48, Error ellipse: s-maj=18.6km s-min=18.3km az=53.0*
*THE **08** 21:39:42.9, 38.°03N×21.°60E, h4km, ML4.0/19, Error ellipse: s-maj=0.9km s-min=0.5km az=183.0*
*NEIC **08** 21:39:42.8, 38.°05N×21.°55E, h16km, ML4.0(THE), ML3.4(ATH), After ATH.*
*ATH **08** 21:39:42.8, 38.°05N×21.°55E, h16km, MD3.2/9, ML3.4*
*CSEM **08** 21:39:42.6±0.1, 38.°03N×21.°58E, h2km, ML3.4, Error ellipse: s-maj=3.4km s-min=2.6km az=27.0*
*ISCJB **08** 21:39:42.3±0.4, 38.°04N±0.°02×21.°54E±0.°02, h8km±2km, mb3.5/7, Error ellipse: s-maj=2.7km s-min=2.2km az=12.9*
**ISC 08 21:39:43.2±0.3, 38.°04N±0.°02×21.°58E±0.°02, h7km±2km,

ATAL Atalanti 1.31 59 P **Pn 21 40 06.3 -1.6**
ATAL S **Sb 21 40 25.3 +0.1**
NAIG Nisos Aigina 1.54 100 *e*Pn **Pn 21 40 11.7 +0.7**
NAIG Nisos Aigina 1.54 100 *e*PN **Pn 21 40 11.7 +0.7**
NAIG Nisos Aigina 1.54 100 *e*Pn **Pn 21 40 11.7 +0.7**
THL Klokotos Trika 1.56 12 P **Pn 21 40 11.4 -0.1**
THL S **Sn 21 40 32.9 +0.9**
THL Klokotos Trika 1.56 12 *e*PN **Pn 21 40 11.9 +0.5**
THL Klokotos Trika 1.56 12 P **Pn 21 40 11.4 -0.1**
THL Klokotos Trika 1.56 12 *e*Pn **Pn 21 40 11.9 +0.5**
THL S **Sn 21 40 32.9 +0.9**
ATH Athens Observa 1.69 91 *e*Pn **Pn 21 40 13.4 +0.3**
ATH *e*Sn **Sn 21 40 36.5 +1.5**
ATH Athens Observa 1.69 91 *e*PN **Pn 21 40 13.4 +0.3**
ATH *e*SN **Sn 21 40 36.5 +1.5**
ATH Athens Observa 1.69 91 *e*Pn **Pn 21 40 13.4 +0.3**
ATH *e*Sn **Sn 21 40 36.5 +1.5**
VLI Veliai 1.70 140 *e*Pn **Pn 21 40 14.5 +1.2**
VLI *e*Sn **Sn 21 40 37.7 +2.4**
VLI Veliai 1.70 140 *e*PN **Pn 21 40 14.5 +1.2**
VLI *e*SN **Sn 21 40 37.7 +2.4**
VLI Veliai 1.70 140 *e*Pn **Pn 21 40 14.5 +1.2**
VLI *e*Sn **Sn 21 40 37.7 +2.4**
JAN Janina 1.72 341 *e*Pn **Pn 21 40 14.0 +0.5**
JAN P 21 40 19.0
JAN Janina 1.72 341 *e*PN **Pn 21 40 14.0 +0.5**
JAN Janina 1.72 341 *e*Pn **Pn 21 40 14.0 +0.5**
ATHU Athens Univers 1.74 92 P **Pn 21 40 13.5 -0.4**
ATHU S **Sn 21 40 37.2 +0.8**
ATHU Athens Univers 1.74 92 P **Pn 21 40 13.5 -0.4**
ATHU S **Sn 21 40 37.2 +0.8**
VLY Voula,Athens 1.76 95 *e*Pn **Pn 21 40 15.6 +1.5**
VLY *e*Sn **Sn 21 40 39.3 +2.5**
VLY Voula,Athens 1.76 95 *e*PN **Pn 21 40 15.6 +1.5**
VLY *e*SN **Sn 21 40 39.3 +2.5**
VLY Voula,Athens 1.76 95 *e*Pn **Pn 21 40 15.6 +1.5**
VLY *e*Sn **Sn 21 40 39.3 +2.5**
IGT Igoumenitsa 1.79 327 P **Pn 21 40 13.7 -0.8**
IGT S **Sn 21 40 37.3 -0.1**
IGT Igoumenitsa 1.79 327 P **Pn 21 40 13.7 -0.8**
IGT S **Sn 21 40 37.3 -0.1**
IGT Igoumenitsa 1.79 327 P **Pn 21 40 13.7 -0.8**
IGT S **Sn 21 40 37.3 -0.1**
PTL Penteli 1.81 89 *e*Pn **Pn 21 40 15.0 +0.3**
PTL *e*Sn **Sn 21 40 38.2 +0.3**
PTL Penteli 1.81 89 *e*PN **Pn 21 40 15.0 +0.3**
PTL *e*SN **Sn 21 40 38.2 +0.3**
PTL Penteli 1.81 89 *e*Pn **Pn 21 40 15.0 +0.3**
PTL *e*Sn **Sn 21 40 38.2 +0.3**
NEO Neokhori 1.81 45 *e*Pn **Pn 21 40 14.9 +0.1**
NEO Neokhori 1.81 45 *e*PN **Pn 21 40 14.9 +0.1**
NEO Neokhori 1.81 45 *e*Pn **Pn 21 40 14.9 +0.1**
XOR Xorichti 1.83 43 P **Pn 21 40 14.4 -0.7**
XOR S **Sn 21 40 38.6 0.0**
XOR Xorichti 1.83 43 P **Pn 21 40 14.4 -0.7**
XOR S **Sn 21 40 38.6 0.0**
XOR Xorichti 1.83 43 P **Pn 21 40 14.4 -0.7**
XOR S **Sn 21 40 38.6 0.0**
AOS Alonnisos 2.13 57 P **Pn 21 40 17.9 -1.3**
AOS S **Sn 21 40 45.9 0.0**
AOS Alonnisos 2.13 57 P **Pn 21 40 17.9 -1.3**
AOS S **Sn 21 40 45.9 0.0**
AOS Alonnisos 2.13 57 P **Pn 21 40 17.9 -1.3**
AOS S **Sn 21 40 45.9 0.0**
KEK Kerkira 2.18 321 *e*Pn **Pn 21 40 20.4 +0.5**
KEK Kerkira 2.18 321 P **Pn 21 40 20.2 +0.3**
KEK Kerkira 2.18 321 *e*PN **Pn 21 40 20.4 +0.5**
KEK Kerkira 2.18 321 P **Pn 21 40 20.2 +0.3**
LIT Litokhoron 2.18 19 *e*Pn **Pn 21 40 20.8 +0.9**
LIT Litokhoron 2.18 19 P **Pn 21 40 20.1 +0.2**
LIT Litokhoron 2.18 19 *e*PN **Pn 21 40 20.8 +0.9**
LIT Litokhoron 2.18 19 P **Pn 21 40 20.1 +0.2**
LIT Litokhoron 2.18 19 *e*Pn **Pn 21 40 20.8 +0.9**
SRN Sarande 2.22 327 *e*PN **Pn 21 40 21.5 +1.1**
SRN Sarande 2.22 327 *e*Pn **Pn 21 40 21.5 +1.1**
KBN Korca 2.66 347 *e*PN **Pn 21 40 28.8 +2.3**
KBN Korca 2.66 347 *e*Pn **Pn 21 40 28.8 +2.3**
PLG Polygyros 2.75 31 *e*Pn **Pn 21 40 28.6 +0.9**
PLG Polygyros 2.75 31 *e*PN **Pn 21 40 28.6 +0.9**
PLG Polygyros 2.75 31 *e*Pn **Pn 21 40 28.6 +0.9**
FNA Florina 2.75 357 P **Pn 21 40 27.9 +0.2**
FNA Florina 2.75 357 P **Pn 21 40 27.9 +0.2**
FNA Florina 2.75 357 P **Pn 21 40 27.9 +0.2**
OUR Ouranopolis 2.96 38 P **Pn 21 40 30.0 -0.6**
OUR Ouranopolis 2.96 38 P **Pn 21 40 30.0 -0.6**
OUR Ouranopolis 2.96 38 P **Pn 21 40 30.0 -0.6**
BIA Bitola 2.99 356 *e*Pn **Pn 21 40 37.1 +6.2**
SOH Sokhos 3.10 26 *e*Pn **Pn 21 40 33.9 +1.3**
SOH Sokhos 3.10 26 P **Pn 21 40 31.7 -0.9**
SOH Sokhos 3.10 26 *e*PN **Pn 21 40 33.9 +1.3**
SOH Sokhos 3.10 26 P **Pn 21 40 31.7 -0.9**
SOH Sokhos 3.10 26 *e*Pn **Pn 21 40 33.9 +1.3**
OHR Ohrid 3.13 349 *e*Pn **Pn 21 40 36.2 +3.2**
APE Apeiranthos 3.29 106 P **Pn 21 40 34.1 -1.0**
APE Apeiranthos 3.29 106 P **Pn 21 40 34.1 -1.0**
APE Apeiranthos 3.29 106 P **Pn 21 40 34.1 -1.0**
KRUS Krusevo 3.34 356 *e*Pn **Pn 21 40 36.8 +0.9**
VAM Vamos 3.36 140 *e*Pn **Pn 21 40 38.3 +2.1**
VAM Vamos 3.36 140 *e*PN **Pn 21 40 38.2 +2.0**
VAM Vamos 3.36 140 *e*Pn **Pn 21 40 38.3 +2.1**
LIA Limnos Island 3.37 55 P **Pn 21 40 36.8 +0.6**
LIA Limnos Island 3.37 55 P **Pn 21 40 35.8 -0.4**
LIA Limnos Island 3.37 55 P **Pn 21 40 36.8 +0.6**
VAY Valandovo 3.37 13 *e*Pn **Pn 21 40 38.9 +1.7**
SRS Serrai 3.45 26 P **Pn 21 40 37.3 0.0**
SRS Serrai 3.45 26 P **Pn 21 40 37.3 0.0**
SRS Serrai 3.45 26 P **Pn 21 40 37.3 0.0**
CHOS Chios island 3.54 83 P **Pn 21 40 38.1 -0.5**
CHOS Chios island 3.54 83 P **Pn 21 40 38.1 -0.5**
STIP Stip 3.69 7 *e*Pn **Pn 21 40 42.5 +2.0**
NVR Nevrokopi 3.75 27 *e*Pn **Pn 21 40 42.7 +1.2**
NVR Nevrokopi 3.75 27 *e*PN **Pn 21 40 42.7 +1.2**
NVR Nevrokopi 3.75 27 *e*Pn **Pn 21 40 42.7 +1.2**
IDI Anoyia 3.82 135 Pn **Pn 21 40 42.7 +0.2**
1.7nm,0.3s,baz=328,slow=12,SNR=15
IDI Sn **Sn 21 41 31.0 +3.4**
2.5nm,0.3s,baz=324,slow=17,SNR=2.7
IDI Anoyia 3.82 135 *e*PN **Pn 21 40 44.0 +1.5**
IDI Anoyia 3.82 135 *e*Pn **Pn 21 40 44.0 +1.5**
TIP Timpagrande 3.95 288 *e*Pn **Pn 21 40 44.0 -0.2**
TIP *e*Sn **Sn 21 41 29.8 -0.9**
TIP Timpagrande 3.95 288 *e*Pn **Pn 21 40 44.0 -0.2**
TIP *e*Sn **Sn 21 41 29.8 -0.9**
SMG Samos 4.17 93 P **Pn 21 40 48.6 +1.3**
SMG Samos 4.17 93 P **Pn 21 40 48.6 +1.3**
PUK Puka 4.21 343 *e*PN **Pn 21 40 48.3 +0.5**
PUK Puka 4.21 343 *e*Pn **Pn 21 40 48.3 +0.5**
LAST Lasithi 4.25 131 *e*Pn **Pn 21 40 50.3 +1.9**
LAST Lasithi 4.25 131 *e*PN **Pn 21 40 50.3 +1.9**
LAST Lasithi 4.25 131 *e*Pn **Pn 21 40 50.3 +1.9**
BCI Bajram Curri 4.48 346 *e*PN **Pn 21 40 52.6 +1.1**
BCI Bajram Curri 4.48 346 *e*Pn **Pn 21 40 52.6 +1.1**
ALN Alexandroupoli 4.49 49 P **Pn 21 40 51.3 -0.3**
ALN Alexandroupoli 4.49 49 P **Pn 21 40 51.3 -0.3**
ALN Alexandroupoli 4.49 49 P **Pn 21 40 51.3 -0.3**
SG1 Sgolgore (BA) 4.72 308 *e*Pn **Pn 21 40 54.9 +0.2**
BARS Barje 4.78 2⇑ *i*Pn **Pn 21 40 57.0 +1.4**
NISS 5.37 3⇑ *i*Pn **Pn 21 40 04.6 +0.9**
STON Ston 5.67 330 *e*Pn **Pn 21 41 05.9 -1.9**
STON Sn **Sn 21 42 08.8 -4.3**
STON Ston 5.67 330 *e*Pn **Pn 21 41 05.9 -1.9**
FG5 Orsara di Pugl 5.85 306 Pn **Pn 21 41 11.2 +0.9**
9.6nm,0.4s
FG5 Orsara di Pugl 5.85 306 Pn **Pn 21 41 11.2 +0.9**
9.6nm,0.4s
RGNG Rignano Grg 5.87 310 Pn **Pn 21 41 10.1 -0.5**
RGNG Rignano Grg 5.87 310 Pn **Pn 21 41 10.1 -0.5**
MRB1 Monte Rocchett 5.96 303 Pn **Pn 21 41 13.5 +1.6**
52nm,0.6s
MRB1 Monte Rocchett 5.96 303 Pn **Pn 21 41 13.5 +1.6**
52nm,0.6s
BBLS Lazići 6.05 345 *e*Pn **Pn 21 41 14.0 +0.9**
DIVS Divibare 6.17 349 *e*Pn **Pn 21 41 13.9 -0.9**
SGG Gregorio Mates 6.48 303 Pn **Pn 21 41 19.8 +0.8**
27nm,0.7s
SGG Gregorio Mates 6.48 303 Pn **Pn 21 41 19.8 +0.8**
27nm,0.7s
NRCA Norcia 8.04 309 Pn **Pn 21 41 41.4 +1.0**
4.2nm,0.5s
NRCA Norcia 8.04 309 Pn **Pn 21 41 41.4 +1.0**
4.2nm,0.5s
MLR Muntele Rosu 8.13 22 Pn **Pn 21 41 42.0 +0.4**
baz=238,slow=10
MLR Muntele Rosu 8.13 22 Pn **Pn 21 41 42.0 +0.4**
NVLJ Novalja 8.25 324 *e*Pn **Pn 21 41 41.0 -2.2**
NVLJ Sn **Sn 21 43 09.2 -7.4**
NVLJ Novalja 8.25 324 *e*Pn **Pn 21 41 41.0 -2.2**
BOJS Bojanci 8.83 330 *i*Pn **Pn 21 41 50.1 -1.1**
BOJS *i*Sn **Sn 21 43 29.7 -1.3**
BOJS Bojanci 8.83 330 *i*Pn **Pn 21 41 50.1 -1.1**
BOJS *i*Sn **Sn 21 43 29.7 -1.3**
VISS Visnje 9.24 329 *e*Pn **Pn 21 41 59.0 +2.1**
VISS Visnje 9.24 329 *e*Pn **Pn 21 41 59.0 +2.1**
BRTR Keskin Array B 9.55 76 Pn **Pn 21 42 02.4 +1.2**
0.1nm,0.3s,baz=260,slow=13,SNR=5.0
BRTR Keskin Array B 9.55 76 Pn **Pn 21 42 02.3 +1.1**
JAVS Javornik 9.64 327 *i*Pn **Pn 21 42 03.0 +0.8**
JAVS *i*Sn **Sn 21 43 47.2 -3.5**
JAVS Javornik 9.64 327 *i*Pn **Pn 21 42 03.0 +0.7**
MMAI Mount Meron Ar 12.32 110 Pn **Pn 21 42 38.9 -0.2**
0.3nm,0.3s,baz=300,slow=12,SNR=2.8
ESDC Sonseca Array 19.94 283 P **Pn 21 44 16.1 -1.2**
0.1nm,0.3s,baz=75,slow=11,SNR=4.1
HFS Hagfors 22.68 350 P **P 21 44 44.0 -1.0**
0.7nm,0.5s,mb3.3,baz=163,slow=10,SNR=3.4
HFS LR LR 21 54 50.1
comp=Z,29nm,19.9s,baz=194,slow=40
HFS Hagfors 22.68 350 P **P 21 44 44.0 -0.9**
FINES FINESS Array B 23.60 5 P **P 21 44 51.8 -2.8**
2.2nm,0.9s,mb3.6,baz=194,slow=10.0,SNR=2.3
EKA Eskdalemuir Ar 24.03 324 P **P 21 44 57.8 -0.8**
1.2nm,0.8s,mb3.4,baz=124,slow=10,SNR=6.2
EKA Eskdalemuir Ar 24.03 324 P **P 21 44 57.8 -0.8**
TORD Torodi Ar. Bea 30.45 221 P **P 21 45 56.4 -0.2**
0.3nm,0.6s,mb3.2,baz=28,slow=9.5,SNR=2.9
KURK Kurchatov 41.69 53 P **P 21 47 31.3 -1.1**
0.7nm,0.6s,mb3.5,baz=280,slow=8.6,SNR=4.2
MKAR Makanchi Array 44.66 58 P **P 21 47 55.0 -1.5**
0.5nm,0.6s,mb3.5,baz=289,slow=5.8,SNR=6.4
MKAR Makanchi Array 44.66 58 P **P 21 47 55.0 -1.4**
ZALV Zalesovo Beam 45.17 48 P **P 21 47 59.3 -1.1**
1.4nm,0.4s,mb4.1,baz=270,slow=6.8,SNR=2.9
ZALV Zalesovo Beam 45.17 48 P **P 21 47 59.3 -1.0**

IDC 08 21:42:53.6±1.7, 33°.17N×91°.51E, h0km, mb3.3/3, mb1 3.3/7, mb1mx3.2/28, mbtmp3.1/7, ML2.9/4, Error ellipse: s-maj=74.0km s-min=21.7km az=68.0, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**15.31**	**335**	Pn	Pn	21 46 28.4	-2.6
	0.0nm,0.3s,baz=143,slow=14,SNR=2.4						
CMAR	**Chiang Mai Arr**	**16.10**	**154**	Pn	Pn	21 46 39.3	-2.0
	0.0nm,0.3s,baz=336,slow=12,SNR=4.4						
SONM	**Songino Array**	**18.47**	**33**	P	Pn	21 47 10.4	-0.4
	0.1nm,0.3s,baz=213,slow=10,SNR=2.5						
KURK	**Kurchatov**	**19.93**	**335**	P	Pn	21 47 25.5	-2.9
	0.0nm,0.3s,baz=146,slow=11,SNR=2.4						
ZALV	**Zalesovo Beam**	**21.31**	**349**	P	P	21 47 42.2	+0.5
	0.3nm,0.3s,baz=157,slow=7.8,SNR=2.3						
WRA	**Warramunga Arr**	**66.80**	**136**	P	P	21 53 47.0	-0.2
	0.3nm,0.8s,baz=324,slow=6.3,SNR=3.2						
ASAR	**Alice Springs**	**69.48**	**139**	P	P	21 54 04.6	+0.7
	0.3nm,0.5s,baz=326,slow=6.8,SNR=7.0						

IDC 08 21:43:20.7±1.2, 0°.73N×126°.53E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.6/20, mbtmp3.7/6, Error ellipse: s-maj=154.5km s-min=17.4km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.93**	**160**	P	P	21 48 15.6	-0.3
	3.4nm,0.7s,baz=338,slow=12,SNR=18						
ASAR	**Alice Springs**	**25.29**	**164**	P	P	21 48 49.2	+0.2
	1.1nm,0.4s,baz=345,slow=11,SNR=22						
STKA	**Stephens Creek**	**35.44**	**158**	P	P	21 50 18.8	+0.1
	2.6nm,1.1s,baz=339,slow=12,SNR=3.9						
MKAR	**Makanchi Array**	**59.90**	**326**	P	P	21 53 29.2	+0.8
	0.2nm,0.4s,baz=115,slow=6.5,SNR=7.0						
ZALV	**Zalesovo Beam**	**63.16**	**334**	P	P	21 53 49.3	-1.0
	0.2nm,0.3s,baz=127,slow=3.8,SNR=2.6						
KURK	**Kurchatov**	**64.16**	**328**	P	P	21 53 57.3	+0.3
	0.3nm,0.5s,baz=131,slow=5.9,SNR=3.4						

*IDC **08** 21:44:27.7±0.6, 33°.14N×92°.06E, h0km, mb4.1/24, mb1 4.3/27, mb1mx4.2/36, mbtmp4.1/27, ML4.0/3, MS3.3/11, Ms1 3.4/11, ms1mx3.2/33, Error ellipse: s-maj=23.3km s-min=12.0km az=50.0*
*ISCJB **08** 21:44:27.4±0.2, 33°.18N±0°.03×92°.17E±0°.04, h10km, mb4.2/35, MS3.5/11, Error ellipse: s-maj=4.8km s-min=4.2km az=3.3*
*BJI **08** 21:44:28.2, 33°.09N×92°.01E, h15km, mB4.4/8, mb4.3/12, ML4.3/3, Ms4.0/13, Ms7 3.8/11*
*MOS **08** 21:44:30.5±1.0, 33°.13N×92°.10E, h33km, mb4.4/23, Error ellipse: s-maj=9.9km s-min=6.2km az=103.5*
*NEIC **08** 21:44:33.0±0.7, 33°.19N×92°.14E, h42km±7km, mb4.1/18, Error ellipse: s-maj=6.7km s-min=5.0km az=64.0*
ISC 08 21:44:29.3±0.2, 33°.18N±0°.03×92°.18E±0°.04, h10km, n115, σ1§17/126, **mb4.2**/35, **MS3.5**/11, **5C-4D, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.58**	**194**	Pg	**Pn**	**21 45 25.4**	**+0.5**
LSA				Sg	**Sg**	**21 46 18.2**	**-6.2**
LSA				smax			
	comp=N,2μm,1.3s						
LSA				smax			
	comp=E,4μm,1.5s						
LSA	**Lhasa**	**3.58**	**194**	*e*Pn	**Pn**	**21 45 29.6**	**+4.7**
LSA				*e*S	**Sg**	**21 46 22.1**	**-2.2**
TAPN	**Taplejung**	**6.98**	**215**	*e*P	**Pn**	**21 46 13.4**	**+1.8**
	comp=E,15nm,0.4s						
ODAN	**Odare**	**7.54**	**215**	*e*P	**Pn**	**21 46 20.1**	**+0.7**
	comp=E,21nm,0.4s						
JIRN	**Jiri**	**7.55**	**225**	*e*P	**Pn**	**21 46 21.7**	**+2.2**
	comp=E,27nm,0.5s						
GUN	**Gumba**	**7.55**	**228**	*e*P	**Pn**	**21 46 21.8**	**+2.3**
	comp=E,29nm,0.4s						
RAMN	**Ramite**	**7.87**	**219**	*e*P	**Pn**	**21 46 23.5**	**-0.3**
	comp=E,55nm,0.4s						
KKN	**Kakani**	**8.02**	**230**	*e*P	**Pn**	**21 46 27.4**	**+1.5**
	comp=E,34nm,0.6s						
KKN	**Kakani**	**8.02**	**230**	*e*P	**Pn**	**21 46 27.4**	**+1.5**
KKN				pmax	pmax		
	comp=Z,34nm,0.6s						
PKI	**Pulchoki**	**8.09**	**228**	*e*P	**Pn**	**21 46 28.5**	**+1.6**
	comp=Z,37nm,0.5s						
PKI	**Pulchoki**	**8.09**	**228**	*e*P	**Pn**	**21 46 28.6**	**+1.7**
PKI				pmax	pmax		
	comp=Z,30nm,0.5s						
PKI	**Pulchoki**	**8.09**	**228**	*e*P	**Pn**	**21 46 28.6**	**+1.7**
	comp=Z,30nm,0.5s						
PKIN	**Phulchoki**	**8.09**	**228**	*e*P	**Pn**	**21 46 28.6**	**+1.7**
	comp=Z,30nm,0.5s						
DMN	**Daman**	**8.25**	**230**	*e*P	**Pn**	**21 46 30.0**	**+0.9**
	comp=Z,36nm,0.6s						
GTA	**Gaotai**	**8.75**	**43**	*e*P	**Pn**	**21 46 39.0**	**+3.1**
GTA				pP		21 46 44.1	
GTA				sP		21 46 47.5	
GTA				S	**Sn**	**21 48 14.1**	**-0.5**
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,47nm,4.8s						
GTA				LR	LR		
	comp=N,700nm,10.7s						
GTA				LR	LR		
	comp=E,490nm,11.0s						
GTA				LR	LR		
	comp=Z,530nm,10.4s						
LZH	**Lanzhou**	**10.04**	**70**	*e*P	**Pn**	**21 47 00.5**	**+6.9**
LZH				pP		21 47 03.9	
LZH				sP		21 47 06.2	
LZH				*e*S	**Sn**	**21 48 55.2**	**+9.0**
LZH				sS		21 49 01.0	
LZH				SS		21 49 07.4	
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
LZH				pmax	pmax		
	comp=Z,51nm,4.9s						
LZH				LR	LR		
	comp=E,590nm,10.2s						
LZH				LR	LR		
	comp=Z,620nm,11.5s						
KMI	**Kunming**	**12.23**	**128**	P	**Pn**	**21 47 29.2**	**+5.6**
KMI				S	**Sn**	**21 49 37.1**	**-2.9**
KMI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KMI				LR	LR		
	comp=N,450nm,7.6s						
KMI				LR	LR		
	comp=E,200nm,6.9s						
KMI				LR	LR		
	comp=Z,340nm,7.1s						
GYA	**Guiyang**	**14.24**	**114⇑**	*i*P	**Pn**	**21 47 50.8**	**-0.3**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
ENH	**Enshi**	**15.01**	**96**	*e*Pn	**Pn**	**21 48 03.1**	**+1.6**
	comp=Z,15nm,0.8s						
CHTO	**Chiang Mai**	**15.54**	**155**	*e*P	**Pn**	**21 48 07.2**	**-1.4**
CHTO				pmax	pmax		
	comp=Z,6.0nm,1.1s						
CHTO	**Chiang Mai**	**15.54**	**155**	*e*Pn	**Pn**	**21 48 07.2**	**-1.4**
	comp=Z,5.8nm,1.1s						
MK31	**Makanchi Array**	**15.54**	**334**	P	**Pn**	**21 48 09.1**	**+0.6**
MKAR	**Makanchi Array**	**15.54**	**334**	Pn	**Pn**	**21 48 07.3**	**-1.1**
	comp=Z,0.5nm,0.3s,baz=136,slow=14,SNR=7.9						
MKAR				LR	LR	21 54 01.2	
	comp=Z,73nm,19.5s,baz=150,slow=37						
CM31	**Chiang Mai Arr**	**15.87**	**156**	*e*Pn	**Pn**	**21 48 11.5**	**-1.3**
	comp=Z,2.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**15.87**	**156**	Pn	**Pn**	**21 48 11.8**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=331,slow=12,SNR=27						
TKM2	**Tokmak 2**	**16.26**	**312**	*e*P	**Pn**	**21 48 17.9**	**+0.2**
TKM2				pmax	pmax		
	comp=Z,16nm,1.2s						
TKM2	**Tokmak 2**	**16.26**	**312**	*e*Pn	**Pn**	**21 48 17.9**	**+0.2**
	comp=Z,16nm,1.2s						
UCH	**Uchtor**	**16.62**	**308**	*e*Pn	**Pn**	**21 48 22.7**	**+0.4**
	comp=Z,14nm,0.8s						
AAK	**Ala-Archa**	**16.82**	**309**	Pn	**Pn**	**21 48 27.9**	**+3.0**
	comp=Z,0.0nm,0.3s,baz=146,slow=12,SNR=5.2						
AAK				LR	LR	21 56 22.0	
	comp=Z,125nm,18.6s,baz=99,slow=43						
AAK	**Ala-Archa**	**16.82**	**309⇓**	*e*P	**Pn**	**21 48 30.2**	**+5.4**
AAK				pmax	pmax		
	comp=Z,10.0nm,1.7s						
AAK				MLR	MLR		
	comp=Z,102nm,24.0s						
AAK	**Ala-Archa**	**16.82**	**309**	Pn	**Pn**	**21 48 24.8**	**-0.1**
	comp=Z,18nm,1.3s						
AAK				LR	LR	21 56 22.0	
AML	**Almayashu**	**17.12**	**307**	*e*Pn	**Pn**	**21 48 29.4**	**+0.7**
	comp=Z,5.5nm,0.8s						
EKS2	**Erkin-Say**	**17.30**	**308**	*e*Pn	**Pn**	**21 48 31.0**	**+0.1**
	comp=Z,9.0nm,0.8s						
SONM	**Songino Array**	**18.15**	**32**	P	**Pn**	**21 48 43.4**	**+2.1**
	comp=Z,0.4nm,0.3s,baz=217,slow=12,SNR=26						
SONM				LR	LR	21 57 10.1	
	comp=Z,36nm,20.5s,baz=77,slow=42						
ULN	**Ulaanbaatar**	**18.47**	**33**	*e*P	**Pn**	**21 48 45.5**	**+0.2**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ULN	**Ulaanbaatar**	**18.47**	**33**	*e*P	**Pn**	**21 48 45.5**	**+0.2**
	comp=Z,5.4nm,0.8s						
WHN	**Wuhan**	**19.01**	**92**	P	**Pn**	**21 48 52.2**	**+0.2**
ZAK	**Zakamensk**	**19.04**	**22**	*e*P	**Pn**	**21 48 53.3**	**+1.2**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KBL	**Kabul**	**19.26**	**280**	*e*P	**Pn**	**21 48 52.9**	**-2.0**
KBL				pmax	pmax		
	comp=Z,18nm,0.8s						
KBL	**Kabul**	**19.26**	**280**	*e*P	**Pn**	**21 48 52.9**	**-2.0**
	comp=Z,18nm,0.8s						
MOY	**Mondy**	**19.56**	**17**	*e*P	**Pn**	**21 49 00.0**	**+1.6**
KURK	**Kurchatov**	**20.16**	**334**	P	**P**	**21 49 02.2**	**-1.4**
	comp=Z,4.0nm,0.7s,baz=145,slow=11,SNR=30						
KURK				LR	LR	21 56 49.4	
	comp=Z,82nm,19.6s,MS3.1,baz=160,slow=37						
KURK	**Kurchatov**	**20.16**	**334**	*e*P	**P**	**21 49 03.3**	**-0.3**
KURK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KURK	**Kurchatov**	**20.16**	**334**	*e*P	**P**	**21 49 03.3**	**-0.3**
	comp=Z,8.1nm,0.8s						
BJT	**Baijiatuau**	**20.40**	**64**	*e*P	**P**	**21 49 06.6**	**+0.2**
BJT				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BJT	**Baijiatuau**	**20.40**	**64**	*e*P	**P**	**21 49 06.6**	**+0.2**
	comp=Z,7.3nm,0.7s						
BJI	**Beijing**	**20.41**	**64**	P	**P**	**21 49 11.6**	**+5.1**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BJI				LR	LR		
	comp=N,940nm,11.3s,MS4.4						
BJI				LR	LR		
	comp=E,290nm,14.2s,MS4.4						
BJI				LR	LR		
	comp=Z,95nm,18.4s,MS3.2						
QIZ	**Qiongzhong**	**21.17**	**127**	P	**P**	**21 49 09.8**	**-5.1**
QIZ				S	**S**	**21 53 03.2**	**-7.2**
QIZ				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.1						
QIZ				LR	LR		
	comp=E,110nm,6.8s						
QIZ				LR	LR		
	comp=Z,200nm,6.8s						
ZAA0	**Zalesovo Array**	**21.41**	**348**	*e*P	**P**	**21 49 16.6**	**-0.5**
ZALV	**Zalesovo Beam**	**21.41**	**348**	P	**P**	**21 49 16.9**	**-0.2**
	comp=Z,7.3nm,0.8s,mb4.1,baz=163,slow=11,SNR=23						
ZALV	**Zalesovo Beam**	**21.41**	**348**	P	**P**	**21 49 16.9**	**-0.2**
ZALV				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.0						
NJ2	**Nanjing**	**22.48**	**86**	*e*P	**P**	**21 49 26.0**	**-2.8**
NJ2				pP		21 49 36.7	
NJ2				sP	sP	21 49 40.0	+7.0
NJ2				PP		21 49 54.6	
NJ2				S	**S**	**21 53 25.5**	**-10**
NJ2				sS	sS	21 53 39.9	-0.5
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.4						
NJ2				pmax	pmax		
	comp=Z,50nm,4.4s						
NJ2				LR	LR		
	comp=N,220nm,11.2s,MS4.0						
NJ2				LR	LR		
	comp=E,240nm,12.4s,MS4.0						
NVS	**Novosibirsk**	**22.55**	**346**	*i*P	**P**	**21 49 27.8**	**-1.5**
NVS				*e*S	**S**	**21 53 29.6**	**-7.1**
NVS				pmax	pmax		
	comp=N,30nm,1.6s						
NVS				pmax	pmax		
	comp=E,13nm,1.6s						
NVS				pmax	pmax		
	comp=Z,26nm,1.6s,mb4.4						
NVS				smax			
	comp=N,18nm,2.3s						
NVS				smax			
	comp=E,13nm,2.3s						
BVAR	**Borovoye Array**	**25.25**	**328**	P	**P**	**21 49 55.5**	**+0.2**
	comp=E,1.9nm,0.6s,mb3.8,baz=135,slow=11,SNR=14						
BVAR	**Borovoye Array**	**25.25**	**328**	P	**P**	**21 49 55.5**	**+0.2**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
**BRV

n225,σ1♀**21**/279,**mb3.6**/9,**3C-4D,Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.10**	**333**	*e*Pb	**Pg**	**21 48 34.2**	**+0.7**
RLS				*e*Sb	**Sg**	21 48 37.4	+2.0
RLS	**Riolos of Patr**	**0.10**	**333**	*e*PB	**Pg**	**21 48 34.2**	**+0.7**
RLS				*e*SB	**Sg**	21 48 37.4	+2.0
RLS	**Riolos of Patr**	**0.10**	**333**	*e*Pb	**Pg**	**21 48 34.2**	**+0.7**
RLS				*e*Sb	**Sg**	21 48 37.4	+2.0
UPR	**University Cam**	**0.38**	**33**	P	**Pg**	**21 48 38.1**	**-0.1**
UPR				S	**Sg**	21 48 43.4	+0.2
UPR	**University Cam**	**0.38**	**33**	*e*PB	**Pg**	**21 48 38.0**	**-0.2**
UPR				*e*SB	**Sg**	21 48 45.1	+1.9
UPR	**University Cam**	**0.38**	**33**	P	**Pg**	**21 48 38.1**	**-0.1**
UPR				S	**Sg**	21 48 43.4	+0.2
UPR				*e*Sb	**Sg**	21 48 45.1	+1.9
LAKA	**Lakka**	**0.45**	**53**	P	**Pg**	**21 48 39.1**	**-0.4**
LAKA				S	**Sg**	21 48 45.0	-0.5
LAKA	**Lakka**	**0.45**	**53**	P	**Pg**	**21 48 39.1**	**-0.4**
LAKA				S	**Sg**	21 48 45.0	-0.5
EFP	**Efpalio**	**0.55**	**33**	P	**Pg**	**21 48 40.7**	**-0.7**
EFP				S	**Sg**	21 48 48.6	0.0
EFP	**Efpalio**	**0.55**	**33**	*e*PN	**Pg**	**21 48 40.7**	**-0.7**
EFP				*e*SN	**Sg**	21 48 49.6	+1.0
EFP	**Efpalio**	**0.55**	**33**	P	**Pg**	**21 48 40.7**	**-0.7**
EFP				S	**Sg**	21 48 48.6	0.0
TRIZ	**Trizonia**	**0.59**	**47**	P	**Pg**	**21 48 41.4**	**-0.7**
TRIZ				S	**Sg**	21 48 50.1	+0.2
TRIZ	**Trizonia**	**0.59**	**47**	P	**Pg**	**21 48 41.4**	**-0.7**
TRIZ				S	**Sg**	21 48 50.1	+0.2
KFL	**Anninata**	**0.60**	**284**	P	**Pg**	**21 48 42.1**	**-0.2**
KALE	**Kalithea**	**0.64**	**49**	P	**Pg**	**21 48 42.4**	**-0.8**
KALE				S	**Sg**	21 48 51.3	-0.3
KALE	**Kalithea**	**0.64**	**49**	P	**Pg**	**21 48 42.4**	**-0.8**
KALE				S	**Sg**	21 48 51.3	-0.3
GUR	**Goura**	**0.65**	**93**	P	**Pg**	**21 48 42.6**	**-0.7**
GUR				S	**Sg**	21 48 52.1	+0.3
GUR	**Goura**	**0.65**	**93**	*e*PB	**Pg**	**21 48 42.6**	**-0.7**
GUR	**Goura**	**0.65**	**93**	P	**Pg**	**21 48 42.6**	**-0.7**
GUR				S	**Sg**	21 48 52.1	+0.3
VLS	**Valsamata**	**0.77**	**286**	*e*Pb	**Pg**	**21 48 44.3**	**-1.2**
VLS				S	**Sg**	21 48 56.7	+1.1
VLS				*e*Sn	**Sg**	21 48 57.2	+1.6
VLS	**Valsamata**	**0.77**	**286**	P	**Pg**	**21 48 44.3**	**-1.2**
VLS				S	**Sg**	21 48 56.7	+1.1
VLS	**Valsamata**	**0.77**	**286**	*e*PB	**Pg**	**21 48 44.3**	**-1.2**
VLS				*e*SN	**Sg**	21 48 57.2	+1.6
VLS	**Valsamata**	**0.77**	**286**	P	**Pg**	**21 48 44.3**	**-1.2**
VLS				S	**Sg**	21 48 56.7	+1.1
VLS				*e*Sn	**Sg**	21 48 57.2	+1.6
ITM	**Ithomi**	**0.85**	**158**	*e*Pn	**Pg**	**21 48 46.6**	**-0.5**
ITM	**Ithomi**	**0.85**	**158**	P	**Pg**	**21 48 46.6**	**-0.5**
ITM				S	**Sg**	21 48 59.2	+1.0
ITM	**Ithomi**	**0.85**	**158**	*e*PN	**Pg**	**21 48 46.6**	**-0.5**
ITM	**Ithomi**	**0.85**	**158**	P	**Pg**	**21 48 46.6**	**-0.5**
ITM				S	**Sg**	21 48 59.2	+1.0
VLX	**Vlachokerasia**	**0.90**	**131**	P	**Pg**	**21 48 47.7**	**-0.4**
VLX				S	**Sg**	21 49 00.0	+0.1
VLX	**Vlachokerasia**	**0.90**	**131**	*e*PB	**Pb**	**21 48 47.2**	**-1.2**
VLX	**Vlachokerasia**	**0.90**	**131**	*e*Pb	**Pb**	**21 48 47.2**	**-1.2**
VLX	**Vlachokerasia**	**0.90**	**131**	P	**Pg**	**21 48 47.7**	**-0.4**
VLX				S	**Sg**	21 49 00.0	+0.1
DSF	**Desfina**	**0.91**	**60**	P	**Pg**	**21 48 46.6**	**-1.6**
DSF				S	**Sg**	21 48 59.9	-0.1
DSF	**Desfina**	**0.91**	**60**	P	**Pg**	**21 48 46.6**	**-1.6**
DSF				S	**Sg**	21 48 59.9	-0.1
EVR	**Evrytania**	**0.97**	**13**	*e*Pn	**Pn**	**21 48 48.3**	**-2.0**
EVR	**Evrytania**	**0.97**	**13**	*e*PN	**Pn**	**21 48 48.3**	**-2.0**
EVR	**Evrytania**	**0.97**	**13**	*e*Pn	**Pn**	**21 48 48.3**	**-2.0**
LKD2	**Lefkada island**	**1.06**	**321**	P	**Pb**	**21 48 49.6**	**-1.5**
LKD2				S	**Sb**	21 49 05.2	+0.1
LKD2	**Lefkada island**	**1.06**	**321**	P	**Pb**	**21 48 49.6**	**-1.5**
LKD2				S	**Sb**	21 49 05.2	+0.1
PYL	**PYLOS**	**1.08**	**171**	P	**Pb**	**21 48 50.5**	**-1.0**
PYL				S	**Sb**	21 49 06.6	+1.0
PYL	**PYLOS**	**1.08**	**171**	*e*PN	**Pn**	**21 48 51.3**	**-0.5**
PYL	**PYLOS**	**1.08**	**171**	P	**Pb**	**21 48 50.5**	**-1.0**
PYL	**PYLOS**	**1.08**	**171**	*e*Pn	**Pn**	**21 48 51.3**	**-0.5**
PYL				S	**Sb**	21 49 06.6	+1.0
LTK	**Loutraki**	**1.14**	**87**	P	**Pb**	**21 48 51.4**	**-1.0**
LTK				S	**Sb**	21 49 07.8	+0.6
LTK	**Loutraki**	**1.14**	**87**	*e*PN	**Pn**	**21 48 51.5**	**-1.1**
LTK	**Loutraki**	**1.14**	**87**	P	**Pb**	**21 48 51.4**	**-1.0**
LTK				S	**Sb**	21 49 07.8	+0.6
AGG	**Agios Georgios**	**1.23**	**31**	*e*Pb	**Pb**	**21 48 52.4**	**-1.5**
AGG	**Agios Georgios**	**1.23**	**31**	P	**Pn**	**21 48 52.3**	**-1.5**
AGG	**Agios Georgios**	**1.23**	**31**	*e*PB	**Pb**	**21 48 52.4**	**-1.5**
AGG	**Agios Georgios**	**1.23**	**31**	P	**Pn**	**21 48 52.3**	**-1.5**
LKR	**Lokris**	**1.35**	**59**	*e*Pb	**Pb**	**21 48 54.6**	**-1.3**
LKR				S	**Sb**	21 49 14.2	+1.1
LKR	**Lokris**	**1.35**	**59**	P	**Pn**	**21 48 54.4**	**-1.0**
LKR				S	**Sb**	21 49 14.2	+1.1
LKR	**Lokris**	**1.35**	**59**	*e*PB	**Pb**	**21 48 54.6**	**-1.3**
LKR	**Lokris**	**1.35**	**59**	P	**Pn**	**21 48 54.4**	**-1.0**
LKR				S	**Sb**	21 49 14.2	+1.1
ATAL	**Atalanti**	**1.38**	**58**	P	**Pn**	**21 48 55.2**	**-0.7**
ATAL				S	**Sn**	21 49 14.8	+0.7
ATAL	**Atalanti**	**1.38**	**58**	P	**Pn**	**21 48 55.2**	**-0.7**
ATAL				S	**Sn**	21 49 14.8	+0.7
NAIG	**Nisos Aigina**	**1.57**	**97**	*e*Pn	**Pn**	**21 49 00.0**	**+1.6**
NAIG	**Nisos Aigina**	**1.57**	**97**	*e*PN	**Pn**	**21 49 00.0**	**+1.6**
NAIG	**Nisos Aigina**	**1.57**	**97**	*e*Pn	**Pn**	**21 49 00.0**	**+1.6**
THL	**Klokotos Trika**	**1.64**	**13**	P	**Pn**	**21 49 00.0**	**+0.6**
THL	**Klokotos Trika**	**1.64**	**13**	P	**Pn**	**21 49 00.0**	**+0.6**
VLI	**Veliai**	**1.68**	**138**	*e*Pn	**Pn**	**21 49 02.4**	**+2.4**
VLI	**Veliai**	**1.68**	**138**	*e*PN	**Pn**	**21 49 02.4**	**+2.4**
ATH	**Athens Observa**	**1.73**	**89**	*e*Pn	**Pn**	**21 49 01.1**	**+0.4**
ATH	**Athens Observa**	**1.73**	**89**	*e*PN	**Pn**	**21 49 01.1**	**+0.4**
ATH	**Athens Observa**	**1.73**	**89**	*e*Pn	**Pn**	**21 49 01.1**	**+0.4**
JAN	**Janina**	**1.77**	**343**	*e*Pn	**Pn**	**21 49 03.2**	**+2.0**
JAN	**Janina**	**1.77**	**343**	*e*PN	**Pn**	**21 49 03.2**	**+2.0**
JAN	**Janina**	**1.77**	**343**	*e*Pn	**Pn**	**21 49 03.2**	**+2.0**
ATHU	**Athens Univers**	**1.79**	**89**	P	**Pn**	**21 49 00.9**	**-0.5**
ATHU	**Athens Univers**	**1.79**	**89**	P	**Pn**	**21 49 00.9**	**-0.5**
VLY	**Voula,Athens**	**1.80**	**93**	*e*Pb	**Pb**	**21 49 01.1**	**-2.5**
VLY	**Voula,Athens**	**1.80**	**93**	*e*PB	**Pb**	**21 49 01.1**	**-2.5**
IGT	**Igoumenitsa**	**1.82**	**330**	P	**Pn**	**21 49 02.5**	**+0.6**
IGT	**Igoumenitsa**	**1.82**	**330**	P	**Pn**	**21 49 02.5**	**+0.6**
IGT	**Igoumenitsa**	**1.82**	**330**	P	**Pn**	**21 49 02.5**	**+0.6**
MEV	**Metsovon**	**1.83**	**353**	P	**Pn**	**21 49 04.7**	**+2.7**
MEV	**Metsovon**	**1.83**	**353**	P	**Pn**	**21 49 04.7**	**+2.7**
MEV	**Metsovon**	**1.83**	**353**	P	**Pn**	**21 49 04.7**	**+2.7**
PTL	**Penteli**	**1.85**	**87**	*e*Pb	**Pb**	**21 49 02.1**	**-2.4**
PTL	**Penteli**	**1.85**	**87**	*e*PB	**Pb**	**21 49 02.1**	**-2.4**
NEO	**Neokhori**	**1.89**	**44**	*e*Pb	**Pb**	**21 49 02.1**	**-3.0**
NEO	**Neokhori**	**1.89**	**44**	*e*PB	**Pb**	**21 49 02.1**	**-3.0**
XOR	**Xorichti**	**1.91**	**43**	P	**Pn**	**21 49 02.7**	**-0.5**
XOR	**Xorichti**	**1.91**	**43**	P	**Pn**	**21 49 02.7**	**-0.5**
XOR	**Xorichti**	**1.91**	**43**	P	**Pn**	**21 49 02.7**	**-0.5**
KYTH	**Kithira**	**2.07**	**144**	*e*Pn	**Pn**	**21 49 09.4**	**+4.0**
AOS	**Alonnisos**	**2.20**	**56**	P	**Pn**	**21 49 06.1**	**-1.1**
AOS	**Alonnisos**	**2.20**	**56**	P	**Pn**	**21 49 06.1**	**-1.1**
AOS	**Alonnisos**	**2.20**	**56**	P	**Pn**	**21 49 06.1**	**-1.1**
KEK	**Kerkira**	**2.20**	**323**	*e*Pb	**Pb**	**21 49 07.6**	**-2.9**
KEK	**Kerkira**	**2.20**	**323**	P	**Pn**	**21 49 07.5**	**+0.3**
KEK	**Kerkira**	**2.20**	**323**	*e*PB	**Pb**	**21 49 07.6**	**-2.9**
KEK	**Kerkira**	**2.20**	**323**	P	**Pn**	**21 49 07.5**	**+0.3**
SRN	**Sarande**	**2.25**	**329**	*e*PN	**Pn**	**21 49 08.8**	**+1.0**
SRN				*e*SN	**Sg**	21 49 48.6	+5.6
SRN	**Sarande**	**2.25**	**329**	*e*Pn	**Pn**	**21 49 08.8**	**+1.0**
LIT	**Litokhoron**	**2.26**	**19**	*e*Pn	**Pn**	**21 49 08.9**	**+1.0**
LIT	**Litokhoron**	**2.26**	**19**	P	**Pn**	**21 49 08.5**	**+0.6**
LIT	**Litokhoron**	**2.26**	**19**	*e*PN	**Pn**	**21 49 08.9**	**+1.0**
LIT	**Litokhoron**	**2.26**	**19**	P	**Pn**	**21 49 08.5**	**+0.6**
LIT	**Litokhoron**	**2.26**	**19**	*e*Pn	**Pn**	**21 49 08.9**	**+1.0**
KZN	**Kozani**	**2.34**	**5**	*e*Pn	**Pn**	**21 49 10.9**	**+1.8**
KZN	**Kozani**	**2.34**	**5**	P	**Pn**	**21 49 10.7**	**+1.6**
KZN	**Kozani**	**2.34**	**5**	*e*PN	**Pn**	**21 49 10.9**	**+1.8**
KZN	**Kozani**	**2.34**	**5**	P	**Pn**	**21 49 10.7**	**+1.6**
KBN	**Korca**	**2.71**	**348**	*e*PN	**Pn**	**21 49 16.0**	**+1.8**
KBN	**Korca**	**2.71**	**348**	*e*Pn	**Pn**	**21 49 16.0**	**+1.8**
FNA	**Florina**	**2.81**	**358**	P	**Pn**	**21 49 16.5**	**+0.9**
FNA	**Florina**	**2.81**	**358**	P	**Pn**	**21 49 16.5**	**+0.9**
FNA	**Florina**	**2.81**	**358**	P	**Pn**	**21 49 16.5**	**+0.9**
PLG	**Polygyros**	**2.83**	**31**	P	**Pn**	**21 49 17.5**	**+1.7**
PLG	**Polygyros**	**2.83**	**31**	P	**Pn**	**21 49 15.4**	**-0.4**
PLG	**Polygyros**	**2.83**	**31**	P	**Pn**	**21 49 15.4**	**-0.4**
OUR	**Ouranopolis**	**3.04**	**38**	P	**Pn**	**21 49 18.2**	**-0.5**
OUR	**Ouranopolis**	**3.04**	**38**	P	**Pn**	**21 49 18.2**	**-0.5**
OUR	**Ouranopolis**	**3.04**	**38**	P	**Pn**	**21 49 18.2**	**-0.5**
BIA	**Bitola**	**3.05**	**357**	*i* Pn	**Pn**	**21 49 20.0**	**+1.1**
SOH	**Sokhos**	**3.18**	**26**	*e*Pn	**Pn**	**21 49 22.2**	**+1.6**
SOH	**Sokhos**	**3.18**	**26**	P	**Pn**	**21 49 21.7**	**+1.1**
SOH	**Sokhos**	**3.18**	**26**	*e*PN	**Pn**	**21 49 22.2**	**+1.6**
SOH	**Sokhos**	**3.18**	**26**	P	**Pn**	**21 49 21.7**	**+1.1**
SOH	**Sokhos**	**3.18**	**26**	*e*Pn	**Pn**	**21 49 22.2**	**+1.6**
OHR	**Ohrid**	**3.19**	**350**	P	**Pn**	**21 49 21.4**	**+0.7**
OHR	**Ohrid**	**3.19**	**350**	*i* Pn	**Pn**	**21 49 21.4**	**+0.6**
OHR	**Ohrid**	**3.19**	**350**	P	**Pn**	**21 49 21.4**	**+0.7**
OHR	**Ohrid**	**3.19**	**350**	P	**Pn**	**21 49 21.4**	**+0.7**
KARN	**Karanos**	**3.20**	**142**	*e*PB	**Pb**	**21 49 23.8**	**-3.8**
APE	**Apeiranthos**	**3.31**	**105**	*e*Pn	**Pn**	**21 49 23.1**	**+0.7**
APE	**Apeiranthos**	**3.31**	**105**	*e*PN	**Pn**	**21 49 23.1**	**+0.7**
APE	**Apeiranthos**	**3.31**	**105**	*e*Pn	**Pn**	**21 49 23.1**	**+0.7**
VAM	**Vamos**	**3.34**	**139**	P	**Pn**	**21 49 26.0**	**+3.2**
VAM	**Vamos**	**3.34**	**139**	P	**Pn**	**21 49 26.0**	**+3.2**
KRUS	**Krusevo**	**3.40**	**357**	*i* Pn	**Pn**	**21 49 24.2**	**+0.6**
LIA	**Limnos Island**	**3.44**	**55**	*e*Pn	**Pn**	**21 49 24.2**	**0.0**
LIA	**Limnos Island**	**3.44**	**55**	*e*PN	**Pn**	**21 49 24.2**	**0.0**
LIA	**Limnos Island**	**3.44**	**55**	*e*Pn	**Pn**	**21 49 24.2**	**0.0**
VAY	**Valandovo**	**3.44**	**13**	*i* Pn	**Pn**	**21 49 24.9**	**+0.7**
SRS	**Serrai**	**3.53**	**26**	P	**Pn**	**21 49 26.2**	**+0.8**
SRS	**Serrai**	**3.53**	**26**	P	**Pn**	**21 49 26.2**	**+0.8**
SRS	**Serrai**	**3.53**	**26**	P	**Pn**	**21 49 26.2**	**+0.8**
CHOS	**Chios island**	**3.59**	**82**	P	**Pn**	**21 49 26.7**	**+0.4**
CHOS	**Chios island**	**3.59**	**82**	*e*PN	**Pn**	**21 49 26.8**	**+0.5**
CHOS	**Chios island**	**3.59**	**82**	P	**Pn**	**21 49 26.7**	**+0.4**
STIP	**Stip**	**3.76**	**8**	*i* Pn	**Pn**	**21 49 29.8**	**+1.3**
IDI	**Anoyia**	**3.81**	**134**	Pn	**Pn**	**21 49 29.6**	**+0.4**
	1.0nm,0.3s,baz=334,slow=17,SNR=19						
IDI				Sn	**Sn**	**21 50 14.3**	**+0.4**
	2.4nm,0.3s,baz=319,slow=19,SNR=4.1						
IDI	**Anoyia**	**3.81**	**134**	Pn	**Pn**	**21 49 29.6**	**+0.4**
IDI				Sn	**Sn**	**21 50 14.3**	**+0.4**
NVR	**Nevrokopi**	**3.83**	**27**	P	**Pn**	**21 49 31.9**	**+2.4**
NVR	**Nevrokopi**	**3.83**	**27**	P	**Pn**	**21 49 31.9**	**+2.4**
PRK	**Paraskevi**	**3.93**	**70**	P	**Pn**	**21 49 31.2**	**+0.3**
PRK	**Paraskevi**	**3.93**	**70**	P	**Pn**	**21 49 31.2**	**+0.3**
PRK	**Paraskevi**	**3.93**	**70**	P	**Pn**	**21 49 31.2**	**+0.3**
MMB	**Musomiste**	**4.00**	**24**	*i* P	**Pn**	**21 49 32.6**	**+0.8**
MMB	**Musomiste**	**4.00**	**24**	*i* P	**Pn**	**21 49 32.6**	**+0.8**
SMG	**Samos**	**4.21**	**92**	P	**Pn**	**21 49 36.3**	**+1.5**
SMG	**Samos**	**4.21**	**92**	P	**Pn**	**21 49 36.3**	**+1.5**
LAST	**Lasithi**	**4.24**	**130**	*e*Pn	**Pn**	**21 49 37.3**	**+2.1**
LAST	**Lasithi**	**4.24**	**130**	*e*PN	**Pn**	**21 49 37.3**	**+2.1**
LAST	**Lasithi**	**4.24**	**130**	*e*Pn	**Pn**	**21 49 37.3**	**+2.1**
NPS	**Neapolis**	**4.25**	**128**	P	**Pn**	**21 49 38.0**	**+2.6**
NPS	**Neapolis**	**4.25**	**128**	P	**Pn**	**21 49 38.0**	**+2.6**
PUK	**Puka**	**4.26**	**343**	*e*PN	**Pn**	**21 49 36.1**	**+0.7**
PUK	**Puka**	**4.26**	**343**	*e*Pn	**Pn**	**21 49 36.1**	**+0.7**
RDO	**Rodhopi**	**4.44**	**43**	P	**Pn**	**21 49 39.7**	**+1.8**
RDO	**Rodhopi**	**4.44**	**43**	P	**Pn**	**21 49 38.9**	**+1.0**
RDO	**Rodhopi**	**4.44**	**43**	P	**Pn**	**21 49 38.9**	**+1.0**
RZN	**Rozhen**	**4.45**	**32**	*i* P	**Pn**	**21 49 39.8**	**+1.7**
RZN	**Rozhen**	**4.45**	**32**	*i* P	**Pn**	**21 49 39.8**	**+1.7**
LTRZ	**Laterza**	**4.50**	**307**	Pn	**Pn**	**21 49 38.8**	**+0.1**
LTRZ	**Laterza**	**4.50**	**307**	Pn	**Pn**	**21 49 38.8**	**+0.1**
BCI	**Bajram Curri**	**4.53**	**346**	*e*PN	**Pn**	**21 49 40.2**	**+1.0**
BCI	**Bajram Curri**	**4.53**	**346**	*e*Pn	**Pn**	**21 49 40.2**	**+1.0**
SG1	**Sgolgore (BA)**	**4.72**	**309**	*e*Pn	**Pn**	**21 49 42.0**	**+0.2**
SG1				*e*Sn	**Sn**	**21 50 36.0**	**-0.5**
ZKR	**Zakros**	**4.73**	**126**	*e*Pn	**Pn**	**21 49 44.8**	**+2.9**
ZKR	**Zakros**	**4.73**	**126**	*e*PN	**Pn**	**21 49 44.8**	**+2.9**
KDZ	**Kurdzhali**	**4.74**	**38**	*i* P	**Pn**	**21 49 41.8**	**-0.3**
KDZ	**Kurdzhali**	**4.74**	**38**	*i* P	**Pn**	**21 49 41.8**	**-0.3**
BAI	**Bari**	**4.77**	**313**	*e*Pn	**Pn**	**21 49 42.2**	**-0.2**
VTS	**Vitosha**	**4.79**	**15**	*i* P	**Pn**	**21 49 43.1**	**+0.3**
VTS	**Vitosha**	**4.79**	**15**	*i* P	**Pn**	**21 49 43.1**	**+0.3**
BARS	**Barje**	**4.85**	**3**	⇓*i* Pn	**Pn**	**21 49 44.0**	**+0.5**
ACER	**Acerenza**	**5.16**	**305**	Pn	**Pn**	**21 49 48.5**	**+0.7**
	24nm,0.4s						
ACER	**Acerenza**	**5.16**	**305**	Pn	**Pn**	**21 49 48.5**	**+0.7**
	24nm,0.4s						
HAVL	**Avola**	**5.19**	**261**	Pn	**Pn**	**21 49 45.9**	**-2.3**
HAVL				Sn	**Sn**	**21 50 44.1**	**-3.9**
HAVL	**Avola**	**5.19**	**261**	Pn	**Pn**	**21 49 45.9**	**-2.3**
HAVL				Sn	**Sn**	**21 50 44.1**	**-3.9**
NISS		**5.44**	**3**	⇓*i* Pn	**Pn**	**21 49 51.1**	**-0.5**
VAE	**Valguarnera**	**5.66**	**267**	Pn	**Pn**	**21 49 55.4**	**+0.7**
	0.5nm,0.3s,baz=39,slow=6.5,SNR=1.8						
VAE				Sn	**Sn**	**21 50 59.8**	**+0.2**
	baz=94,slow=19						
VAE	**Valguarnera**	**5.66**	**267**	Pn	**Pn**	**21 49 55.4**	**+0.8**
VAE				Sn	**Sn**	**21 50 59.8**	**+0.2**
VAE	**Valguarnera**	**5.66**	**267**	Pn	**Pn**	**21 49 55.4**	**+0.7**
VAE				Sn	**Sn**	**21 50 59.8**	**+0.2**
MS1	**Monte Sant'Ang**	**5.69**	**313**	*e*Pn	**Pn**	**21 49 55.2**	**+0.1**
STON	**Ston**	**5.70**	**330**	*i* Pn	**Pn**	**21 49 53.6**	**-1.6**
STON				Sn	**Sn**	**21 50 56.6**	**-4.0**
STON	**Ston**	**5.70**	**330**	*i* Pn	**Pn**	**21 49 53.6**	**-1.6**
FG5	**Orsara di Pugl**	**5.85**	**306**	Pn	**Pn**	**21 49 58.3**	**+1.0**
FG5	**Orsara di Pugl**	**5.85**	**306**	Pn	**Pn**	**21 49 58.3**	**+1.0**
RGNG	**Rignano Grg**	**5.88**	**311**	Pn	**Pn**	**21 49 57.2**	**-0.5**
RGNG				Sn	**Sn**	**21 51 04.7**	**-0.4**
RGNG	**Rignano Grg**	**5.88**	**311**	Pn	**Pn**	**21 49 57.2**	**-0.5**
RGNG				Sn	**Sn**	**21 51 04.7**	**-0.4**
BBLS	**Lazići**	**6.11**	**345**	⇑*i* Pn	**Pn**	**21 49 59.8**	**-1.0**
DIVS	**Divibare**	**6.23**	**350**	⇓*i* Pn	**Pn**	**21 50 01.8**	**-0.7**
MLR	**Muntele Rosu**	**8.21**	**22**	Pn	**Pn**	**21 50 32.7**	**+3.0**
	baz=236,slow=3.6						
MLR	**Muntele Rosu**	**8.21**	**22**	⇑*i* P	**Pn**	**21 50 36.0**	**+6.4**
MLR	**Muntele Rosu**	**8.21**	**22**	Pn	**Pn**	**21 50 32.7**	**+3.1**
NVLJ	**Novalja**	**8.27**	**325**	*e*Pn	**Pn**	**21 50 29.1**	**-1.4**
NVLJ				Sn	**Sn**	**21 51 55.4**	**-8.6**
NVLJ	**Novalja**	**8.27**	**325**	*e*Pn	**Pn**	**21 50 29.1**	**-1.4**
PLOR	**Plostina**	**8.75**	**24**	⇑*i* P	**Pn**	**21 50 40.6**	**+3.5**
VRI	**Vrincioaia**	**8.79**	**24**	⇓*i* P	**Pn**	**21 50 42.3**	**+4.7**
BRTR	**Keskin Array B**	**9.61**	**76**	Pn	**Pn**	**21 50 49.5**	**+0.5**
	0.2nm,0.3s,baz=256,slow=12,SNR=10.0						
BRTR	**Keskin Array B**	**9.61**	**76**	Pn	**Pn**	**21 50 49.5**	**+0.6**
GERES	**GERESS Array B**	**12.26**	**335**	Pn	**Pn**	**21 51 24.5**	**-0.6**
	0.1nm,0.3s,baz=153,slow=13,SNR=4.4						
GERES	**GERESS Array B**	**12.26**	**335**	Pn	**Pn**	**21 51 24.5**	**-0.6**
MMAI	**Mount Meron Ar**	**12.34**	**109**	Pn	**Pn**	**21 51 23.5**	**-2.8**
	0.5nm,0.3s,baz=325,slow=11,SNR=4.4						
ESDC	**Sonseca Array**	**19.92**	**283**	P	**Pn**	**21 53 01.0**	**-2.9**
	0.1nm,0.3s,baz=76,slow=10,SNR=4.3						
ESDC	**Sonseca Array**	**19.92**	**283**	P	**Pn**	**21 53 01.0**	**-2.9**
HFS	**Hagfors**	**22.74**	**350**	P	**P**	**21 53 30.8**	**-1.6**
	1.8nm,0.6s,mb3.7,baz=150,slow=12,SNR=7.5						
HFS	**Hagfors**	**22.74**	**350**	P	**P**	**21 53 30.8**	**-1.6**
FINES	**FINESS Array B**	**23.67**	**5**	P	**P**	**21 53 40.1**	**-2.0**
	1.5nm,0.7s,mb3.5,baz=171,slow=9.8,SNR=3.7						
NB2	**NORSAR Subarra**	**23.98**	**348**	P	**P**	**21 53 42.7**	**-2.2**
	comp=Z,2.6nm,1.0s,mb3.6,baz=157,slow=11						
NB2	**NORSAR Subarra**	**23.98**	**348**	P	**P**	**21 53 42.7**	**-2.2**
	comp=Z,2.6nm,1.0s,mb3.6,SNR=4.0						
NOA	**NORSAR Array B**	**23.98**	**348**	P	**P**	**21 53 43.3**	**-1.6**
	comp=Z,1.0nm,0.7s,mb3.4,baz=157,slow=8.7,SNR=4.1						
NOA				LR	LR	22 04 33.5	
	comp=Z,15nm,19.7s,baz=150,slow=40						
NOA	**NORSAR Array B**	**23.98**	**348**	P	**P**	**21 53 43.3**	**-1.6**
EKA	**Eskdalemuir Ar**	**24.06**	**324**	P	**P**	**21 53 45.1**	**-0.5**
	comp=Z,0.6nm,0.6s,mb3.2,baz=127,slow=9.7,SNR=4.7						
TORD	**Torodi Ar. Bea**	**30.38**	**221**	P	**P**	**21 54 42.1**	**-0.6**
	comp=Z,1.4nm,0.7s,mb3.8,baz=31,slow=9.0,SNR=8.7						
KURK	**Kurchatov**	**41.77**	**53**	P	**P**	**21 56 17.6**	**-2.2**
	comp=Z,0.7nm,0.7s,mb3.4,baz=279,slow=8.7,SNR=5.2						
MKAR	**Makanchi Array**	**44.74**	**58**	P	**P**	**21 56 41.8**	**-2.0**
	comp=Z,0.7nm,0.4s,mb3.9,baz=285,slow=6.2,SNR=18						
ZALV	**Zalesovo Beam**	**45.24**	**48**	P	**P**	**21 56 46.1**	**-1.6**
	comp=Z,1.4nm,0.5s,mb4.1,baz=279,slow=8.1,SNR=4.9						
ZALV	**Zalesovo Beam**	**45.24**	**48**	P	**P**	**21 56 46.1**	**-1.6**
SONM	**Songino Array**	**59.98**	**51**	P	**P**	**21 58 37.4**	**+0.5**
	comp=Z,0.2nm,0.4s,mb3.5,baz=297,slow=9.5,SNR=2.1						
SONM	**Songino Array**	**59.98**	**51**	P	**P**	**21 58 37.4**	**+0.5**

*IDC **08** 21:48:28.1±0.9, 38°.04N×21°.52E, h0km, mb3.7/9, mb1 3.6/15, mb1mx3.6/33, mbtmp3.6/15, ML3.5/6, MS2.6/1, Ms1 2.7/1, ms1mx2.0/48, Error ellipse: s-maj=18.7km s-min=15.0km az=15.0*

*THE **08** 21:48:30.4, 37°.97N×21°.54E, h3km±1km, ML4.3/9, Error ellipse: s-maj=1.1km s-min=0.6km az=166.0*

*NEIC **08** 21:48:30.4, 37°.99N×21°.54E, h18km, ML4.3(THE), ML3.4(ATH), After ATH.*

*ATH **08** 21:48:30.3, 37°.98N×21°.54E, h18km±2km, MD3.5/29, ML3.4*

*CSEM **08** 21:48:30.5±0.2, 37°.96N×21°.52E, h10km, ML3.4, Error ellipse: s-maj=3.9km s-min=3.0km az=27.0*

*ISCJB **08** 21:48:30.6±0.3, 37°.99N±0°.02×21°.49E±0°.02, h20km±2km, mb3.6/9, Error ellipse: s-maj=3.2km s-min=2.5km az=24.3*

ISC 08 21:48:30.7±0.3,**37°.97N**±0°.02×**21°.52E**±0°.02,**h11**km±2km,

*ATH **08** 21:57:26.7, 38°.07N×21°.53E, h20km±1km, MD3.1/21, ML3.0*

*NEIC **08** 21:57:26.8, 38°.07N×21°.54E, h19km, ML3.0(ATH), After ATH.*

*CSEM **08** 21:57:26.9±0.2, 38°.03N×21°.58E, h10km, ML3.0, Error ellipse: s-maj=3.8km s-min=3.5km az=18.0*

*ISCJB **08** 21:57:26.6±0.5, 38°.05N±0°.02×21°.56E±0°.02, h5km±4km, Error ellipse: s-maj=3.5km s-min=3.0km az=170.8*

*THE **08** 21:57:27.2, 38°.05N×21°.57E, h8km±1km, ML3.7/12, Error ellipse: s-maj=1.2km s-min=0.6km az=3.0*

**ISC 08 21:57:

n84,σ1$13/126, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.08**	**272**	*e*Pb	**Pg**	**21 57 30.2**	**+0.2**
RLS				*e*Sb	**Sg**	**21 57 33.1**	**+1.3**
RLS	**Riolos of Patr**	**0.08**	**272**	*e*PB	**Pg**	**21 57 30.2**	**+0.2**
RLS				*e*SB	**Sg**	**21 57 33.1**	**+1.3**
RLS	**Riolos of Patr**	**0.08**	**272**	*e*Pb	**Pg**	**21 57 30.2**	**+0.2**
RLS				*e*Sb	**Sg**	**21 57 33.1**	**+1.3**
UPR	**University Cam**	**0.29**	**37**	*e*PB	**Pg**	**21 57 33.3**	**0.0**
UPR	**University Cam**	**0.29**	**37**	*e*Pb	**Pg**	**21 57 33.3**	**0.0**
LAKA	**Lakka**	**0.38**	**60**	P	**Pg**	**21 57 34.5**	**-0.4**
LAKA				S	**Sg**	**21 57 40.7**	**+0.8**
LAKA	**Lakka**	**0.38**	**60**	P	**Pg**	**21 57 34.5**	**-0.4**
LAKA				S	**Sg**	**21 57 40.7**	**+0.8**
EFP	**Efpalio**	**0.46**	**36**	P	**Pg**	**21 57 36.0**	**-0.4**
EFP				S	**Sg**	**21 57 42.6**	**+0.1**
EFP	**Efpalio**	**0.46**	**36**	*e*PB	**Pg**	**21 57 36.1**	**-0.3**
EFP				*e*SB	**Sg**	**21 57 43.8**	**+1.2**
EFP	**Efpalio**	**0.46**	**36**	*e*Pb	**Pg**	**21 57 36.1**	**-0.3**
EFP				S	**Sg**	**21 57 42.6**	**+0.1**
EFP				*e*Sb	**Sg**	**21 57 43.8**	**+1.2**
TRIZ	**Trizonia**	**0.51**	**52**	P	**Pg**	**21 57 36.8**	**-0.5**
TRIZ				S	**Sg**	**21 57 43.7**	**-0.4**
TRIZ	**Trizonia**	**0.51**	**52**	P	**Pg**	**21 57 36.8**	**-0.5**
TRIZ				S	**Sg**	**21 57 43.7**	**-0.4**
KALE	**Kalithea**	**0.56**	**53**	P	**Pg**	**21 57 37.8**	**-0.6**
KALE				S	**Sg**	**21 57 46.6**	**+0.7**
KALE	**Kalithea**	**0.56**	**53**	P	**Pg**	**21 57 37.8**	**-0.6**
KALE				S	**Sg**	**21 57 46.6**	**+0.7**
KFL	**Anninata**	**0.61**	**275**	P	**Pg**	**21 57 38.9**	**-0.5**
GUR	**Goura**	**0.63**	**101**	P	**Pg**	**21 57 38.5**	**-1.1**
GUR				S	**Sg**	**21 57 48.3**	**+0.5**
GUR	**Goura**	**0.63**	**101**	*e*PB	**Pg**	**21 57 38.5**	**-1.1**
GUR				*e*SN	**Sg**	**21 57 49.2**	**+1.4**
GUR	**Goura**	**0.63**	**101**	P	**Pg**	**21 57 38.5**	**-1.1**
GUR				S	**Sg**	**21 57 48.3**	**+0.5**
VLS	**Valsamata**	**0.78**	**279**	P	**Pg**	**21 57 41.0**	**-1.5**
VLS				S	**Sg**	**21 57 53.9**	**+1.2**
VLS	**Valsamata**	**0.78**	**279**	P	**Pg**	**21 57 41.0**	**-1.5**
VLS				S	**Sg**	**21 57 53.9**	**+1.2**
DSF	**Desfina**	**0.84**	**65**	P	**Pg**	**21 57 42.3**	**-1.3**
DSF				S	**Sg**	**21 57 55.2**	**+0.7**
DSF	**Desfina**	**0.84**	**65**	P	**Pg**	**21 57 42.3**	**-1.3**
DSF				S	**Sg**	**21 57 55.2**	**+0.7**
EVR	**Evrytania**	**0.88**	**12**	*e*Pn	**Pn**	**21 57 43.4**	**-2.2**
EVR	**Evrytania**	**0.88**	**12**	*e*PN	**Pn**	**21 57 43.4**	**-2.2**
ITM	**Ithomi**	**0.92**	**162**	*e*Pb	**Pg**	**21 57 44.2**	**-0.9**
ITM				*e*Sn	**Sn**	**21 57 59.4**	**+0.1**
ITM	**Ithomi**	**0.92**	**162**	P	**Pg**	**21 57 44.2**	**-0.9**
ITM				S	**Sg**	**21 57 58.5**	**+1.4**
ITM	**Ithomi**	**0.92**	**162**	*e*PB	**Pg**	**21 57 44.2**	**-0.9**
ITM				*e*SN	**Sn**	**21 57 59.4**	**+0.1**
ITM	**Ithomi**	**0.92**	**162**	P	**Pg**	**21 57 44.2**	**-0.9**
ITM				S	**Sg**	**21 57 58.5**	**+1.4**
ITM				*e*Sn	**Sn**	**21 57 59.4**	**+0.1**
VLX	**Vlachokerasia**	**0.94**	**136**	P	**Pg**	**21 57 44.4**	**-1.1**
VLX				S	**Sg**	**21 57 59.1**	**+1.3**
VLX	**Vlachokerasia**	**0.94**	**136**	*e*PB	**Pg**	**21 57 44.4**	**-1.1**
VLX				*e*SN	**Sn**	**21 57 59.2**	**-0.6**
VLX	**Vlachokerasia**	**0.94**	**136**	P	**Pg**	**21 57 44.4**	**-1.1**
VLX				*e*Sn	**Sn**	**21 57 59.2**	**-0.6**
LKD2	**Lefkada island**	**1.02**	**316**	P	**Pb**	**21 57 45.6**	**-1.4**
LKD2				S	**Sb**	**21 58 02.4**	**+2.0**
LKD2	**Lefkada island**	**1.02**	**316**	P	**Pb**	**21 57 45.6**	**-1.4**
LKD2				S	**Sb**	**21 58 02.4**	**+2.0**
LTK	**Loutraki**	**1.11**	**91**	P	**Pb**	**21 57 47.5**	**-1.0**
LTK				S	**Sb**	**21 58 03.4**	**+0.5**
LTK	**Loutraki**	**1.11**	**91**	*e*PB	**Pb**	**21 57 47.5**	**-1.0**
LTK				*e*SN	**Sn**	**21 58 05.5**	**+1.6**
LTK	**Loutraki**	**1.11**	**91**	P	**Pb**	**21 57 47.5**	**-1.0**
LTK				S	**Sb**	**21 58 03.4**	**+0.5**
LTK				*e*Sn	**Sn**	**21 58 05.5**	**+1.6**
AGG	**Agios Georgios**	**1.14**	**32**	*e*Pn	**Pn**	**21 57 48.1**	**-1.0**
AGG	**Agios Georgios**	**1.14**	**32**	P	**Pb**	**21 57 48.9**	**-0.1**
AGG				S	**Sb**	**21 58 05.4**	**+1.7**
AGG	**Agios Georgios**	**1.14**	**32**	*e*PN	**Pn**	**21 57 48.1**	**-1.0**
AGG	**Agios Georgios**	**1.14**	**32**	*e*Pn	**Pn**	**21 57 48.1**	**-1.0**
AGG	**Agios Georgios**	**1.14**	**32**	P	**Pb**	**21 57 48.9**	**-0.1**
AGG				S	**Sb**	**21 58 05.4**	**+1.7**
PYL	**PYLOS**	**1.17**	**173**	P	**Pb**	**21 57 48.7**	**-0.8**
PYL				S	**Sb**	**21 58 05.3**	**+0.8**
PYL	**PYLOS**	**1.17**	**173**	*e*PN	**Pn**	**21 57 48.8**	**-0.7**
PYL	**PYLOS**	**1.17**	**173**	P	**Pb**	**21 57 48.7**	**-0.8**
PYL				S	**Sb**	**21 58 05.3**	**+0.8**
LKR	**Lokris**	**1.27**	**62**	*e*Pb	**Pn**	**21 57 50.0**	**-1.0**
LKR	**Lokris**	**1.27**	**62**	P	**Pn**	**21 57 50.0**	**-1.0**
LKR				S	**Sb**	**21 58 08.9**	**+1.2**
LKR	**Lokris**	**1.27**	**62**	*e*PB	**Pn**	**21 57 50.0**	**-1.0**
LKR	**Lokris**	**1.27**	**62**	P	**Pn**	**21 57 50.0**	**-1.0**
LKR				S	**Sb**	**21 58 08.9**	**+1.2**
ATAL	**Atalanti**	**1.31**	**60**	P	**Pn**	**21 57 50.5**	**-1.0**
ATAL				S	**Sb**	**21 58 09.4**	**+0.7**
ATAL	**Atalanti**	**1.31**	**60**	P	**Pn**	**21 57 50.5**	**-1.0**
ATAL				S	**Sb**	**21 58 09.4**	**+0.7**
THL	**Klokotos Trika**	**1.55**	**13**	P	**Pn**	**21 57 55.2**	**+0.4**
THL	**Klokotos Trika**	**1.55**	**13**	P	**Pn**	**21 57 55.2**	**+0.4**
NAIG	**Nisos Aigina**	**1.55**	**100**	*e*Pb	**Pb**	**21 57 54.6**	**-1.4**
NAIG	**Nisos Aigina**	**1.55**	**100**	*e*PB	**Pb**	**21 57 54.6**	**-1.4**
NAIG	**Nisos Aigina**	**1.55**	**100**	*e*Pb	**Pb**	**21 57 54.6**	**-1.4**
JAN	**Janina**	**1.69**	**341**	*e*Pn	**Pn**	**21 57 58.8**	**+2.0**
JAN	**Janina**	**1.69**	**341**	*e*PN	**Pn**	**21 57 58.8**	**+2.0**
JAN	**Janina**	**1.69**	**341**	*e*Pn	**Pn**	**21 57 58.8**	**+2.0**
ATH	**Athens Observa**	**1.70**	**92**	*e*Pn	**Pn**	**21 57 57.8**	**+0.9**
ATH	**Athens Observa**	**1.70**	**92**	*e*PN	**Pn**	**21 57 57.8**	**+0.9**
ATH	**Athens Observa**	**1.70**	**92**	*e*Pn	**Pn**	**21 57 57.8**	**+0.9**
VLI	**Veliai**	**1.73**	**140**	*e*Pn	**Pn**	**21 57 59.1**	**+1.9**
VLI	**Veliai**	**1.73**	**140**	*e*PN	**Pn**	**21 57 59.1**	**+1.9**
VLY	**Voula,Athens**	**1.77**	**96**	*e*Pb	**Pb**	**21 57 57.8**	**-2.0**
VLY	**Voula,Athens**	**1.77**	**96**	*e*PB	**Pb**	**21 57 57.8**	**-2.0**
VLY	**Voula,Athens**	**1.77**	**96**	*e*Pb	**Pb**	**21 57 57.8**	**-2.0**
NEO	**Neokhori**	**1.80**	**46**	*e*Pb	**Pb**	**21 57 58.0**	**-2.3**
NEO	**Neokhori**	**1.80**	**46**	*e*PB	**Pb**	**21 57 58.0**	**-2.3**
PTL	**Penteli**	**1.82**	**89**	*e*Pn	**Pn**	**21 57 59.1**	**+0.6**
PTL	**Penteli**	**1.82**	**89**	*e*PN	**Pn**	**21 57 59.1**	**+0.6**
PTL	**Penteli**	**1.82**	**89**	*e*Pn	**Pn**	**21 57 59.1**	**+0.6**
XOR	**Xorichti**	**1.83**	**44**	P	**Pn**	**21 57 58.6**	**0.0**
XOR	**Xorichti**	**1.83**	**44**	P	**Pn**	**21 57 58.6**	**0.0**
KYTH	**Kithira**	**2.13**	**146**	*e*Pn	**Pn**	**21 58 06.4**	**+3.7**
AOS	**Alonnisos**	**2.13**	**58**	P	**Pn**	**21 58 01.8**	**-1.0**
AOS	**Alonnisos**	**2.13**	**58**	P	**Pn**	**21 58 01.8**	**-1.0**
KEK	**Kerkira**	**2.15**	**321**	*e*Pn	**Pn**	**21 58 03.8**	**+0.7**
KEK	**Kerkira**	**2.15**	**321**	*e*PN	**Pn**	**21 58 03.8**	**+0.7**
KEK	**Kerkira**	**2.15**	**321**	*e*Pn	**Pn**	**21 58 03.8**	**+0.7**
LIT	**Litokhoron**	**2.17**	**19**	*e*Pn	**Pn**	**21 58 04.5**	**+1.2**
LIT	**Litokhoron**	**2.17**	**19**	*e*PN	**Pn**	**21 58 04.5**	**+1.2**
LIT	**Litokhoron**	**2.17**	**19**	*e*Pn	**Pn**	**21 58 04.5**	**+1.2**
KZN	**Kozani**	**2.25**	**4**	*e*Pb	**Pb**	**21 58 04.7**	**-3.3**
KZN	**Kozani**	**2.25**	**4**	*e*PB	**Pb**	**21 58 04.7**	**-3.3**

ISCJB ***08*** *22:32:01.9±1.2, 51°.05N±0°.04×174°.35E±0°.03, h14km±7km, mb4.6/148, MS3.8/33, Error ellipse: s-maj=7.2km s-min=3.3km az=7.4*
IDC ***08*** *22:32:01.5±0.5, 51°.14N×174°.23E, h0km, mb4.3/26, mb1 4.5/27, mb1mx4.4/32, mbtmp4.3/27, ML4.8/1, MS3.6/16, Ms1 3.6/16, ms1mx3.5/36, Error ellipse: s-maj=11.8km s-min=10.5km az=146.0*
NEIC ***08*** *22:32:03.2±1.7, 51°.14N×174°.22E, h10km±10km, mb4.8/98, ML4.8(PMR), ML4.3(AEIC), Error ellipse: s-maj=6.4km s-min=2.8km az=184.0*
MOS ***08*** *22:32:05.1±0.9, 51°.11N×174°.23E, h33km, mb4.8/67, Error ellipse: s-maj=9.3km s-min=4.9km az=95.4*
SZGRF ***08*** *22:32:05.8, 51°.12N×178°.98E, h33km, mb4.3, Rat Islands, Aleutian Islands, United States*
BJI ***08*** *22:32:05.2, 51°.76N×174°.23E, h26km, mB4.8/22, mb4.7/28, Ms4.5/20, Ms7 4.2/18*
GCMT ***08*** *22:32:05.7±0.4, 51°.24N×173°.74E, h12km±2km, MW4.9, Moment Tensor Solution. s24,c32; s63,c79; Moment tensor: Scale 10^16^Nm; Mrr-1.40±.20; Mθθ1.71±.16; Mφφ-0.31±.16; Mrθ0.32±.36; Mθφ-2.79±.15; Mφr0.98±.49; Best double couple: M0 3.30000×10^16^ NP1:φs265.00000°, δ64.00000°, λ-158.00000°. NP2:φs165.00000°, δ70.00000°, λ-27.00000°. Principal axes: T 3.6900, Plg4.0000°, Azm216.0000°; N -0.7700, Plg57.0000°, Azm311.0000°; P -2.9100, Plg33.0000°, Azm123.0000°;*

2008 JUN

Data Used: II G IU CN IC.

ISC 08 22:32:04.8±1.3, 51°.12N±0°.04×174°.31E±0°.03, h19km±8km, h33km±1.7km: pP-P, n475, σ0$91/483, mb4.6/148, MS3.8/33, 76C-69D, Near Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMY	**Shemya**	**1.62**	**355**	*e*P	**Pn**	**22 32 30.3**	**-1.9**
FX1	**Attu Island--F**	**1.90**	**339**	Pn	**Pn**	**22 32 33.4**	**-2.7**
	144nm,0.3s,baz=175,slow=7.7,SNR=454						
FX1				Sn	**Sn**	**22 32 55.6**	**-3.9**
	2μm,0.3s,baz=73,slow=19,SNR=75						
FX1	**Attu Island--F**	**1.90**	**339**	P	**Pn**	**22 32 33.5**	**-2.7**
FX1				S	**Sn**	**22 32 56.0**	**-3.6**
AMKA	**Amchitka**	**3.15**	**83**	*e*P	**Pn**	**22 32 52.3**	**-0.9**
ADK	**Adak**	**5.67**	**79**	P	**Pn**	**22 33 27.7**	**-0.2**
PET	**Petropavlovsk**	**9.83**	**287**	*e*P	**Pn**	**22 34 17.7**	**-7.2**
PET				pmax	pmax		
	comp=Z,43nm,1.4s						
PET				MLR	MLR		
	comp=Z,400nm,17.0s						
PEA0B	**Petropavlovsk-**	**10.41**	**287**	*e*Pn	**Pn**	**22 34 31.8**	**-1.1**
PEA0B				*e*S	**Sn**	**22 36 20.2**	**-8.7**
PETK	**Petropavlovsk-**	**10.41**	**287**	Pn	**Pn**	**22 34 31.9**	**-1.0**
	comp=Z,6.8nm,0.3s,baz=95,slow=18,SNR=66						
PETK				Sn	**Sn**	**22 36 21.4**	**-7.4**
	comp=Z,7.4nm,0.3s,baz=99,slow=26,SNR=13						
PETK				LR	LR	22 38 11.4	
	comp=Z,183nm,20.0s,baz=95,slow=36						
PETK	**Petropavlovsk-**	**10.41**	**287**	P	**Pn**	**22 34 31.9**	**-0.9**
PETK						22 36 21.4	
PETK				pmax	pmax		
	comp=Z,7.0nm,0.3s						
PETK				smax			
	comp=N,7.0nm,0.3s						
PETK				MLR	MLR		
	comp=Z,183nm,20.0s						
PETK	**Petropavlovsk-**	**10.41**	**287**	Pn	**Pn**	**22 34 31.9**	**-1.0**
PETK				Sn	**Sn**	**22 36 21.4**	**-7.4**
PETK				LR	LR	22 38 11.4	
NIKO	**Nikolski**	**10.54**	**73**	*e*Pn	**Pn**	**22 34 36.1**	**+1.6**
	comp=Z,67nm,1.0s						
SKR	**Severo-Kuril's**	**11.50**	**275**	*e*P	**Pn**	**22 34 44.0**	**-3.7**
SKR				pmax	pmax		
	comp=Z,90nm,0.5s						
UNV	**Unalaska Valle**	**12.01**	**69**	*e*Pn	**Pn**	**22 34 56.5**	**+1.8**
AKUT	**Akutan**	**12.46**	**68**	*e*P	**Pn**	**22 35 02.4**	**+1.5**
	comp=Z,65nm,1.1s						
GAMB	**Gambell**	**14.70**	**25**	*e*Pn	**Pn**	**22 35 31.6**	**+0.3**
SEY	**Seymchan**	**16.70**	**324**	⇓*e*P	**Pn**	**22 35 57.2**	**-0.1**
CHGN	**Chignik**	**16.89**	**62**	*e*Pn	**Pn**	**22 35 59.3**	**-0.5**
TNA	**Tin City**	**17.11**	**26**	*e*Pn	**Pn**	**22 36 02.3**	**-0.2**
	comp=Z,12nm,0.8s						
BILL	**Bilibino**	**17.43**	**350**	⇓*e*P	**Pn**	**22 36 06.7**	**+0.3**
BILL				*e*S	**Sn**	**22 39 17.2**	**-2.3**
BILL				pmax	pmax		
	comp=Z,17nm,1.1s						
BILL				MLR	MLR		
	comp=Z,400nm,19.0s						
BILL	**Bilibino**	**17.43**	**350**	*e*P	**Pn**	**22 36 05.7**	**-0.7**
	comp=Z,14nm,0.9s						
SVW2	**Sparrevohn**	**19.35**	**47**	*e*P	**Pn**	**22 36 31.3**	**+1.4**
OHAK	**Old Harbor**	**19.79**	**59**	*e*P	**Pn**	**22 36 32.0**	**-3.1**
	comp=Z,5.3nm,0.3s						
TTA	**Tatalina**	**19.80**	**42**	*e*P	**Pn**	**22 36 34.4**	**-0.8**
KDAK	**Kodiak Island**	**20.21**	**58**	P	**P**	**22 36 36.8**	**-1.4**
	comp=Z,14nm,0.7s,baz=223,slow=3.8,SNR=10						
KDAK				S	**S**	**22 40 15.1**	**-8.8**
	comp=Z,3.5nm,0.7s,baz=280,slow=6.1,SNR=2.7						
KDAK	**Kodiak Island**	**20.21**	**58**	*e*P	**P**	**22 36 36.6**	**-1.5**
KDAK				pmax	pmax		
	comp=Z,22nm,0.8s						
KDAK	**Kodiak Island**	**20.21**	**58**	*e*P	**P**	**22 36 36.6**	**-1.5**
	comp=Z,22nm,0.8s						
RSO	**Redoubt South**	**20.53**	**50**	*e*Pn	**P**	**22 36 42.7**	**+1.2**
YSS	**Yuzh-Sakhalins**	**21.01**	**271**	*e*P	**P**	**22 36 53.0**	**+6.1**
YSS				MLR	MLR		
	comp=Z,300nm,16.0s,MS3.8						
PPLA	**Purkeypile**	**21.43**	**44**	*e*P	**P**	**22 36 52.9**	**+1.7**
	comp=Z,38nm,1.3s,mb4.6						
CHUM	**Lake Minchumin**	**21.70**	**41**	*e*P	**P**	**22 36 53.5**	**-0.6**
	comp=Z,24nm,0.9s,mb4.6						
SEW	**Seward**	**22.09**	**52**	*e*P	**P**	**22 36 58.5**	**+0.2**
	comp=Z,36nm,0.9s,mb4.8						
RC01	**Rabbit Creek A**	**22.11**	**49**	*e*P	**P**	**22 36 59.2**	**+0.7**
	comp=Z,14nm,0.7s,mb4.5						
KTH	**Kantishna Hill**	**22.17**	**43**	*e*P	**P**	**22 37 00.4**	**+1.2**
	comp=Z,20nm,1.0s,mb4.5						
BPAW	**Bear Paw Mtn.**	**22.32**	**41**	*e*P	**P**	**22 37 01.5**	**+0.7**
	comp=Z,53nm,1.5s,mb4.8						
BPAW				*e*PcP	PcP	22 40 55.8	+0.3
ASAJ	**Asahikawa**	**22.37**	**264**	P	**P**	**22 37 00.6**	**-0.9**
	comp=Z,8.9nm,0.9s,mb4.2,baz=60,slow=20,SNR=2.8						
ASAJ				LR	LR	22 43 51.9	
	comp=Z,185nm,21.5s,MS3.5,baz=167,slow=32						
ASAJ	**Asahikawa**	**22.37**	**264**	P	**P**	**22 37 00.6**	**-0.9**
ASAJ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ASAJ				MLR	MLR		
	comp=Z,185nm,21.5s						
COLD	**Coldfoot**	**23.80**	**34**	*e*P	**P**	**22 37 14.6**	**-1.3**
	comp=Z,4.2nm,0.8s,mb3.9						
COLD				*e*PcP	PcP	22 40 56.0	-2.5
COLA	**College**	**23.85**	**40**	*e*P	**P**	**22 37 15.8**	**-0.6**
COLA				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.2						
COLA	**College**	**23.85**	**40**	*e*P	**P**	**22 37 15.8**	**-0.6**
	comp=Z,10nm,0.9s,mb4.3						
DIV	**Divide**	**24.02**	**50**	*e*P	**P**	**22 37 17.3**	**-0.6**
	comp=Z,11nm,0.7s,mb4.4						
PAX	**Paxson**	**24.43**	**46**	*e*P	**P**	**22 37 20.8**	**-0.8**
PAX				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.4						
PAX	**Paxson**	**24.43**	**46**	*e*P	**P**	**22 37 20.8**	**-0.8**
	comp=Z,18nm,1.1s,mb4.4						
MENT	**Mentasta**	**25.21**	**46**	*e*P	**P**	**22 37 29.0**	**+0.2**
YAK	**Yakutsk**	**26.35**	**312**	*e*P	**P**	**22 37 36.0**	**-3.1**
YAK				*e*		22 37 48.7	
YAK				pmax	pmax		
	comp=Z,21nm,0.9s,mb4.7						
YAK				pmax	pmax		
	comp=E,18nm,1.3s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK	**Yakutsk**	**26.35**	**312**	P	**P**	**22 37 38.5**	**-0.5**
EGAK	**Eagle**	**26.62**	**42**	P	**P**	**22 37 40.3**	**-1.1**
	comp=N,31nm,0.9s,mb4.8						
PNL	**Peninsula**	**27.13**	**54**	*e*P	**P**	**22 37 46.2**	**+0.1**
DAWY	**Dawson**	**27.28**	**44**	*e*P	**P**	**22 37 47.6**	**+0.2**
HYT	**Haines Junctio**	**28.03**	**51**	*e*P	**P**	**22 37 58.0**	**+3.8**
TIXI	**Tiksi**	**28.78**	**332**	*e*P	**P**	**22 38 04.1**	**+3.3**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
TIXI	**Tiksi**	**28.78**	**332**	*e*P	**P**	**22 38 04.1**	**+3.3**
	comp=Z,5.5nm,0.8s,mb4.3						
MJAR	**Matsushiro Arr**	**29.50**	**255**	LR	LR	22 47 35.2	
	comp=Z,146nm,21.0s,MS3.6,baz=55,slow=32						
MAJO	**Matsushiro**	**29.50**	**255**	P	**P**	**22 38 08.9**	**+1.4**
SIT	**Sitka**	**29.55**	**59**	*e*P	**P**	**22 38 07.8**	**+0.1**
INK	**Inuvik**	**30.18**	**36**	P	**P**	**22 38 12.9**	**-0.2**
	comp=Z,2.2nm,0.6s,mb4.1,baz=245,slow=5.5,SNR=11						
INK				PcP	PcP	22 41 13.2	-0.4
	comp=Z,1.9nm,0.9s,baz=319,slow=7.3,SNR=3.5						
INK				S	**S**	**22 43 11.7**	**+0.7**
	comp=Z,1.5nm,1.1s,baz=241,slow=19,SNR=5.2						
INK	**Inuvik**	**30.18**	**36**	*e*P	**P**	**22 38 13.3**	**+0.1**
INK				pmax	pmax		
	comp=Z,15nm,1.5s						
INK	**Inuvik**	**30.18**	**36**	*e*P	**P**	**22 38 13.3**	**+0.1**
	comp=Z,15nm,1.5s,mb4.5						
DLBC	**Dease Lake**	**32.08**	**55**	*e*P	**P**	**22 38 32.2**	**+2.2**
CN2	**Changchun**	**33.31**	**277**	*e*P	**P**	**22 38 43.3**	**+2.3**
CN2				*e*S	**S**	**22 44 01.7**	**+1.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
CN2				pmax	pmax		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=N,200nm,12.0s,MS4.2						
CN2				LR	LR		
	comp=E,200nm,12.0s,MS4.2						
CN2				LR	LR		
	comp=Z,200nm,11.0s,MS4.1						
KSRS	**Korea Array**	**35.31**	**266**	P	**P**	**22 38 55.8**	**-2.5**
	comp=Z,0.3nm,0.4s,mb3.6,baz=53,slow=9.0,SNR=3.1						
KSRS				LR	LR	22 50 25.8	
	comp=Z,68nm,21.3s,MS3.4,baz=219,slow=31						
YKA	**Yellowknife Ar**	**38.51**	**45**	P	**P**	**22 39 25.8**	**+0.6**
	comp=Z,4.4nm,0.7s,mb4.3,baz=290,slow=8.0,SNR=18						
YKA				LR	LR	22 56 52.4	
	comp=Z,14nm,19.6s,MS2.8,baz=65,slow=39						
YKA	**Yellowknife Ar**	**38.51**	**45**	P	**P**	**22 39 25.8**	**+0.6**
YKA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
YKA				MLR	MLR		
	comp=Z,14nm,19.7s						
YKA	**Yellowknife Ar**	**38.51**	**45**	P	**P**	**22 39 25.8**	**+0.6**
YKA				LR	LR	22 56 52.5	
NLWA	**Neilton Lookou**	**39.48**	**70**	⇑P	**P**	**22 39 34.2**	**+0.7**
	baz=39						
A07A	**Ashnola River,**	**40.72**	**66**	⇑P	**P**	**22 39 43.8**	**0.0**
	baz=41						
BJI	**Beijing**	**41.16**	**278**	P	**P**	**22 39 47.9**	**+0.4**
BJI				pP	pP	22 39 56.0	+2.5
BJI				sP	sP	22 40 00.6	+4.7
BJI				PP	PP	22 41 22.7	+0.3
BJI				S	**S**	**22 45 58.0**	**-1.6**
BJI				sS	sS	22 46 13.9	+4.4
BJI				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.4						
BJI				LR	LR		
	comp=N,140nm,14.2s,MS4.0						
BJI				LR	LR		
	comp=E,79nm,15.5s,MS4.0						
BJI				LR	LR		
	comp=Z,90nm,20.6s						
B08A	**Colville Reser**	**41.66**	**67**	⇑P	**P**	**22 39 51.4**	**-0.2**
	baz=42						
RES	**Resolute Bay**	**41.74**	**24**	*e*P	**P**	**22 39 52.2**	**+0.3**
RES				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.4						
RES	**Resolute Bay**	**41.74**	**24**	*e*P	**P**	**22 39 52.2**	**+0.3**
	comp=Z,12nm,1.1s,mb4.4						
H04A	**Detroit Lake**	**41.87**	**73**	⇓P	**P**	**22 39 53.4**	**+0.1**
	baz=42						
ULN	**Ulaanbaatar**	**42.44**	**293**	*e*P	**P**	**22 39 58.2**	**+0.3**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.1						
ULN	**Ulaanbaatar**	**42.44**	**293**	*e*P	**P**	**22 39 58.2**	**+0.3**
	comp=Z,4.8nm,1.1s,mb4.0						
TLY	**Talaya**	**42.49**	**300**	P	**P**	**22 39 57.5**	**-0.7**
EDM	**Edmonton**	**42.66**	**58**	*e*P	**P**	**22 40 01.3**	**+1.6**
SONM	**Songino Array**	**42.83**	**293**	P	**P**	**22 40 00.1**	**-1.0**
	comp=Z,1.5nm,0.7s,mb3.8,baz=61,slow=7.6,SNR=5.0						
SONM				PcP	PcP	22 41 52.0	+0.1
	comp=Z,1.3nm,0.8s,baz=48,slow=2.2,SNR=3.8						
SONM	**Songino Array**	**42.83**	**293**	P	**P**	**22 40 00.1**	**-1.0**
SONM						22 41 52.0	
SONM				pmax	pmax		
	comp=Z,2.0nm,0.7s						
A11A	**Hall Mountain,**	**43.07**	**65**	⇑P	**P**	**22 40 02.7**	**-0.3**
	baz=43						
YBH	**Yreka Blue Hor**	**43.18**	**77**	*e*P	**P**	**22 40 06.0**	**+2.0**
YBH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YBH	**Yreka Blue Hor**	**43.18**	**77**	*e*P	**P**	**22 40 06.0**	**+2.0**
	comp=Z,9.9nm,1.0s,mb4.5						
ZAK	**Zakamensk**	**43.32**	**298**	*e*P	**P**	**22 40 04.0**	**-1.0**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.6s,mb3.8						
HHC	**Hu-ho-hao-te**	**43.55**	**282**	*e*P	**P**	**22 40 07.6**	**+0.6**
HHC				pP	pP	22 40 15.1	+2.1
HHC				sP	sP	22 40 18.3	+2.9
HHC				PP	PP	22 41 50.7	+2.5
HHC				PcP	PcP	22 41 56.6	+2.2
HHC				ScP	ScP	22 45 45.9	+1.3
HHC				PcS	PcS	22 45 48.1	+1.0
HHC				S	**S**	**22 46 34.3**	**-0.6**
HHC				sS	sS	22 46 45.8	+1.0
HHC				SS	SS	22 49 41.3	-8.1
HHC				ScS	ScS	22 50 03.8	-1.5
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6				

BOZ pmax pmax
comp=Z,20nm,2.0s,mb4.8
BOZ Bozeman (W) 47.56 66 *e*P **P 22 40 39.0 +0.3**
comp=Z,20nm,2.0s,mb4.8
M11A Holland Ranch, 47.57 73 ⇑P **P 22 40 38.0 -0.8**
baz=47
L12A House Creek Ra 47.61 72 ⇓P **P 22 40 38.4 -0.7**
baz=48,SNR=11
FFC Flin Flon 47.74 51 *i*P **P 22 40 43.7 +3.8**
FFC Flin Flon 47.74 51 *e*P **P 22 40 43.1 +3.2**
comp=Z,5.4nm,0.8s,mb4.6
NVAR Mina Array Bea 47.86 78 P **P 22 40 41.8 +0.7**
comp=Z,1.9nm,0.7s,mb4.2,baz=291,slow=7.3,SNR=13
NVAR PcP PcP 22 42 10.3 +0.8
comp=Z,2.1nm,0.8s,baz=282,slow=3.0,SNR=6.2
NVAR Mina Array Bea 47.86 78 P **P 22 40 41.8 +0.7**
NVAR PcP PcP 22 42 10.3 +0.8
N12A Clover Valley, 48.37 73 ⇓P **P 22 40 44.9 -0.1**
baz=48,SNR=5.4
N12A Clover Valley, 48.37 73 *e*P **P 22 40 46.0 +1.0**
comp=Z,6.3nm,1.0s,mb4.6
M13A Montello 48.59 72 *e*P **P 22 40 47.8 +1.1**
comp=Z,15nm,1.5s,mb4.8
L14A Malta 48.74 71 ⇑P **P 22 40 47.3 -0.4**
baz=49
Q10A Clear Creek Ra 48.78 76 ⇑P **P 22 40 47.6 -0.6**
baz=49,SNR=5.9
O12A Currie 48.90 74 ⇑P **P 22 40 49.4 +0.3**
baz=49,SNR=11
RLMT Red Lodge 49.23 65 *e*P **P 22 40 52.9 +1.4**
comp=Z,7.6nm,1.1s,mb4.6
Q11A Duckwater 49.23 76 ⇓P **P 22 40 51.3 -0.3**
baz=49
S10A Tonopah Range, 49.23 77 ⇓P **P 22 40 51.2 -0.4**
baz=49
P12A McGill 49.29 75 ⇑P **P 22 40 51.6 -0.5**
baz=49
N14A Grayback Hills 49.48 72 ⇑P **P 22 40 53.3 -0.2**
baz=49,SNR=5.5
R11A Troy Canyon, C 49.58 76 ⇓P **P 22 40 53.3 -1.0**
baz=49,SNR=7.6
P13A Bates Ranch, G 49.85 74 ⇓P **P 22 40 55.4 -0.9**
baz=50,SNR=5.3
DUG Dugway 50.11 73 ⇓P **P 22 40 58.7 +0.3**
baz=50,SNR=12
DUG Dugway 50.11 73 *e*P **P 22 40 59.1 +0.8**
DUG pmax pmax
comp=Z,21nm,1.4s,mb5.0
DUG Dugway 50.11 73 *e*P **P 22 40 59.1 +0.8**
comp=Z,21nm,1.4s,mb5.0
M16A Huntsville 50.13 71 ⇓P **P 22 40 58.1 -0.4**
baz=50
Q13A Wheeler Ranch, 50.16 75 ⇓P **P 22 40 58.6 -0.1**
baz=50,SNR=9.5
R12A Pony Springs, 50.19 76 ⇑P **P 22 40 58.9 0.0**
baz=50
P14A Drum Mountains 50.34 73 ⇑P **P 22 41 00.3 +0.3**
baz=50,SNR=8.8
BW06 Boulder Array 50.47 68 *e*P **P 22 41 01.5 +0.5**
comp=Z,3.5nm,0.8s,mb4.4
PDAR Pinedale Array 50.47 68 P **P 22 41 01.4 +0.4**
comp=Z,1.6nm,0.7s,mb4.1,baz=316,slow=4.1,SNR=11
T11A Corn Creek, Al 50.51 77 ⇑P **P 22 41 01.1 -0.3**
baz=50,SNR=11
Q14A Sevier Lake (B 50.59 74 ⇑P **P 22 41 00.9 -1.0**
baz=50,SNR=8.9
R13A O'Grain Ranch, 50.67 75 ⇑P **P 22 41 02.3 -0.2**
baz=50
GSC Goldstone 50.77 80 ⇓P **P 22 41 03.0 -0.3**
baz=51
GSC Goldstone 50.77 80 *e*P **P 22 41 03.8 +0.4**
GSC pmax pmax
comp=Z,14nm,1.0s,mb4.8
GSC Goldstone 50.77 80 *e*P **P 22 41 03.8 +0.4**
comp=Z,14nm,1.0s,mb4.8
P15A Leamington 50.82 73 ⇓P **P 22 41 03.4 -0.3**
baz=51
K19A Absolon Red Bu 50.85 67 ⇓P **P 22 41 03.3 -0.5**
baz=51
ZALV Zalesovo Beam 50.99 310 P **P 22 41 02.6 -2.2**
comp=Z,1.4nm,0.7s,mb4.0,baz=53,slow=7.3,SNR=4.6
ZALV PcP PcP 22 42 20.7 +0.1
comp=Z,2.3nm,0.7s,baz=30,slow=3.9,SNR=7.3
ZALV LR LR 23 04 09.3
comp=Z,69nm,19.1s,MS3.7,baz=74,slow=38
ZALV Zalesovo Beam 50.99 310 P **P 22 41 02.6 -2.1**
ZALV 22 42 20.7
ZALV pmax pmax
comp=Z,1.0nm,0.7s,mb3.9
ZALV MLR MLR
comp=Z,69nm,19.1s,MS3.7
S13A Holt Ranch, En 51.12 76 ⇑P **P 22 41 06.4 +0.5**
baz=51,SNR=9.4
Q15A Fillmore 51.12 73 ⇓P **P 22 41 06.1 +0.1**
baz=51
NVS Novosibirsk 51.21 312 *i*P **P 22 41 05.6 -0.8**
NVS *e* 22 42 19.1
NVS pmax pmax
comp=N,12nm,1.8s
NVS pmax pmax
comp=E,17nm,1.8s
NVS pmax pmax
comp=Z,22nm,1.8s,mb4.8
LZH Lanzhou 51.25 282 *e*P **P 22 41 08.0 +1.1**
LZH pP pP 22 41 19.0 +5.9
LZH sP sP 22 41 23.0 +7.6
LZH pmax pmax
comp=Z,20nm,1.4s,mb4.8
LZH pmax pmax
comp=Z,86nm,4.5s
CCUT Cedar City 51.44 76 *e*P **P 22 41 09.3 +0.9**
comp=Z,28nm,2.2s,mb4.8
T13A Saint George 51.45 76 ⇑P **P 22 41 08.6 +0.2**
baz=51,SNR=5.8
MSU Marysvale 51.55 74 *e*P **P 22 41 10.3 +1.1**
GTA Gaotai 51.58 288 *e*P **P 22 41 09.6 +0.2**
GTA pP pP 22 41 20.0 +4.5
GTA sP sP 22 41 23.6 +5.7
GTA PP PP 22 43 07.8 +1.2
GTA S **S 22 48 26.2 -2.8**
GTA sS sS 22 48 42.8 +3.8
GTA SS SS 22 51 59.6 -5.1
GTA pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
GTA pmax pmax
comp=Z,55nm,4.5s
GTA LR LR
comp=N,220nm,13.7s,MS4.4
GTA LR LR
comp=E,120nm,16.7s,MS4.4
GTA LR LR
comp=Z,130nm,15.8s,MS4.1
U13A Pakoon Wash 51.81 77 ⇑P **P 22 41 11.3 +0.2**
baz=52
P17A Butcher Ranch, 51.81 72 ⇓P **P 22 41 11.2 +0.1**
baz=52
GMRC Granite Mounta 51.82 80 ⇑P **P 22 41 11.7 +0.4**
baz=52
N19A John Jarvie Ra 51.85 70 ⇓P **P 22 41 11.3 -0.1**
baz=52
Q16A Castle Valley 51.90 73 ⇑P **P 22 41 12.1 +0.3**
baz=52,SNR=6.1
T14A Hurricane 51.93 76 ⇑P **P 22 41 12.1 +0.1**
baz=52
P18A Preston Nutter 52.01 72 ⇑P **P 22 41 12.3 -0.2**
baz=52,SNR=7.9
R16A Teasdale 52.12 74 ⇑P **P 22 41 13.6 +0.2**
baz=52,SNR=7.9
V13A Grand Canyon W 52.16 78 ⇓P **P 22 41 13.6 -0.1**
baz=52
SRU San Rafael 52.17 72 ⇓P **P 22 41 13.7 -0.1**
baz=52,SNR=8.2
SRU San Rafael 52.17 72 *e*P **P 22 41 14.8 +1.0**
SRU pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
SRU San Rafael 52.17 72 *e*P **P 22 41 14.8 +1.0**
comp=Z,8.4nm,0.7s,mb4.8
O19A Miners Draw (B 52.25 70 ⇓P **P 22 41 13.7 -0.7**
baz=52,SNR=5.8
U14A Mt Trumbull 52.28 77 ⇑P **P 22 41 14.5 -0.2**
baz=52
T15A Red Dirt Ranch 52.38 75 ⇓P **P 22 41 15.3 -0.1**
baz=52,SNR=6.2
R17A Hanksville Air 52.50 73 ⇑P **P 22 41 16.3 0.0**
baz=52,SNR=9.0
P19A Cripple Cowboy 52.76 71 ⇑P **P 22 41 17.9 -0.2**
baz=53,SNR=6.3

U15A North Rim 52.82 76 ⇑P **P 22 41 19.2 +0.6**
baz=53,SNR=8.9
V14A Boquillas Ranc 52.84 77 ⇑P **P 22 41 19.1 +0.3**
baz=53
O20A White River Ci 52.88 70 ⇓P **P 22 41 19.0 -0.1**
baz=53
S17A Black Ridge (B 52.95 74 ⇓P **P 22 41 19.8 +0.3**
baz=53,SNR=5.9
R18A Canyonlands Na 53.01 73 ⇓P **P 22 41 19.4 -0.6**
baz=53,SNR=6.6
V15A Kaibab Nationa 53.29 76 ⇓P **P 22 41 22.9 +0.8**
baz=53,SNR=5.6
ULM Lac du Bonnet 53.37 53 P **P 22 41 21.4 -1.2**
comp=Z,3.6nm,0.7s,mb4.4,baz=301,slow=6.5,SNR=4.4
ULM LR LR 23 03 34.3
comp=Z,109nm,19.3s,MS3.9,baz=229,slow=35
S18A Hurst Farm, Bl 53.40 73 ⇓P **P 22 41 22.9 0.0**
baz=53,SNR=11
R19A Curley Farm, L 53.45 72 ⇑P **P 22 41 22.8 -0.5**
baz=53
PV04 Paradox Valley 53.60 72 *e*P **P 22 41 25.2 +0.8**
T18A Mexican Hat 53.83 74 ⇑P **P 22 41 25.8 -0.3**
baz=54,SNR=7.1
S19A Harvey Farm, M 53.88 73 ⇓P **P 22 41 26.4 0.0**
baz=54,SNR=7.7
PV01 Paradox Valley 53.97 72 *e*P **P 22 41 26.2 -0.8**
comp=Z,383nm,0.8s
PV01 *e*PcP PcP 22 42 32.4 +0.3
WUAZ Wupatki 53.98 76 ⇓P **P 22 41 27.1 0.0**
baz=54
WUAZ Wupatki 53.98 76 *e*P **P 22 41 28.5 +1.3**
comp=Z,9.3nm,1.0s,mb4.7
Q21A Lamborn Mesa, 54.11 71 ⇑P **P 22 41 27.4 -0.7**
baz=54
V17A Tonalea, Kykot 54.27 76 ⇓P **P 22 41 29.8 +0.6**
baz=54,SNR=9.0
SUMG Summit 54.51 12 *e*P **P 22 41 33.3 +2.8**
comp=Z,20nm,1.0s,mb5.1
T19A Beclabito 54.55 73 ⇑P **P 22 41 30.0 -1.3**
baz=54,SNR=7.8
AGMN Agassiz Nation 54.60 55 *e*P **P 22 41 30.8 -0.8**
comp=Z,9.1nm,1.0s,mb4.8
AGMN *e*PcP PcP 22 42 32.8 -1.6
MVCO Mesa Verde 54.61 73 ⇓P **P 22 41 32.2 +0.4**
baz=54
MVCO Mesa Verde 54.61 73 *e*P **P 22 41 32.7 +0.9**
comp=Z,29nm,1.6s,mb5.0
V18A Ganado 54.73 75 ⇑P **P 22 41 32.9 +0.3**
baz=55
S21A Coal Bank Pass 54.74 72 ⇓P **P 22 41 32.7 0.0**
baz=55
CD2 Chengdu 54.75 277 *e*P **P 22 41 34.2 +1.4**
CD2 pP pP 22 41 44.3 +5.3
CD2 sP sP 22 41 48.2 +6.9
CD2 PP PP 22 43 38.1 +2.8
CD2 S **S 22 49 09.9 -2.4**
CD2 sS sS 22 49 26.5 +4.1
CD2 SS SS 22 52 52.3 -2.7
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
CD2 pmax pmax
comp=Z,30nm,4.8s
CD2 LR LR
comp=N,150nm,16.2s
CD2 LR LR
comp=Z,130nm,14.2s,MS4.2
U19A Dine' College, 54.79 74 ⇑P **P 22 41 33.1 +0.1**
baz=55
WMQ Urumqi 55.77 299 *e*P **P 22 41 40.0 0.0**
WMQ pP pP 22 41 50.0 +3.9
WMQ sP sP 22 41 54.0 +5.5
WMQ PP PP 22 43 46.0 +1.9
WMQ S **S 22 49 22.0 -3.5**
WMQ ScS ScS 22 51 25.0 -2.8
WMQ SS SS 22 53 07.0 -3.5
WMQ pmax pmax
comp=Z,18nm,1.0s,mb5.1
WMQ LR LR
comp=N,220nm,16.0s,MS4.4
WMQ LR LR
comp=E,160nm,16.0s,MS4.4
WMQ LR LR
comp=Z,100nm,16.0s,MS4.0
Y18A Canyon Day Jun 55.96 77 ⇓P **P 22 41 41.5 0.0**
baz=56
KURK Kurchatov 55.98 310 *e*P **P 22 41 40.9 -0.5**
KURK pmax pmax
comp=Z,29nm,1.0s,mb5.3
KURK Kurchatov 55.98 310 *e*P **P 22 41 40.9 -0.5**
comp=Z,29nm,1.0s,mb5.3
GYA Guiyang 56.02 271 P **P 22 41 43.8 +1.8**
GYA pP pP 22 41 53.2 +5.0
GYA sP sP 22 41 59.7 +9.2
GYA PcP PcP 22 42 42.3 +2.1
GYA PP PP 22 43 50.8 +4.0
GYA ScP ScP 22 46 37.4 -0.6
GYA sS sS 22 49 45.7 +6.2
GYA SS SS 22 53 14.2 -1.0
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
GYA pmax pmax
comp=Z,90nm,5.2s
GYA LR LR
comp=N,420nm,18.2s,MS4.7
GYA LR LR
comp=E,380nm,19.0s,MS4.7
GYA LR LR
comp=Z,460nm,18.2s,MS4.6
SDCO Great Sand Dun 56.05 70 *e*P **P 22 41 43.1 +1.0**
comp=Z,16nm,1.6s,mb4.8
MK31 Makanchi Array 56.72 305 *e*P **P 22 41 45.4 -1.3**
MKAR Makanchi Array 56.72 305 P **P 22 41 46.0 -0.7**
comp=Z,3.0nm,0.7s,mb4.4,baz=62,slow=15,SNR=23
MKAR Makanchi Array 56.72 305 P **P 22 41 46.0 -0.7**
MKAR pmax pmax
comp=Z,3.0nm,0.7s
EYMN Ely 57.06 53 *e*P **P 22 41 49.4 +0.2**
comp=Z,7.6nm,0.7s,mb4.8
T25A Trinidad 57.10 70 ⇓P **P 22 41 49.7 +0.1**
baz=57,SNR=7.4
ECSD EROS Data Cent 57.16 60 *e*P **P 22 41 49.6 -0.3**
comp=Z,4.8nm,1.0s,mb4.5
LAZ Ladron 57.31 74 *e*P **P 22 41 51.1 +0.1**
comp=Z,0.7nm,0.8s,mb3.7
LAZ *e*PP PP 22 43 57.7 -0.4
ANMO Albuquerque 57.35 73 ⇑*e*P **P 22 41 52.6 +1.2**
ANMO pmax pmax
comp=Z,6.0nm,2.5s
ARCES ARCESS Array B 57.51 348 P **P 22 41 51.9 -0.1**
comp=Z,4.8nm,0.9s,mb4.5,baz=51,slow=9.6,SNR=3.6
ARCES ARCESS Array B 57.51 348 P **P 22 41 51.9 -0.1**
ARCES pmax pmax
comp=Z,5.0nm,0.9s
Z21A St. Cloud Mine 57.73 76 ⇑P **P 22 41 54.1 +0.1**
baz=58
BNM Barren Site 57.79 74 *e*P **P 22 41 53.8 -0.6**
comp=Z,3.0nm,1.1s,mb4.2
SCO Scoresbysund 58.14 6 *e*P **P 22 41 57.1 +0.7**
SCO pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
220A Playas Peak, P 58.17 77 ⇑P **P 22 41 57.4 +0.2**
baz=58
BVAR Borovoye Array 58.19 316 P **P 22 41 56.9 -0.1**
comp=Z,5.3nm,0.6s,mb4.8,baz=49,slow=8.3,SNR=23
BVAR PcP PcP 22 42 48.2 -0.1
comp=Z,1.7nm,0.6s,baz=73,slow=3.0,SNR=2.5
BVAR Borovoye Array 58.19 316 P **P 22 41 56.9 -0.1**
BVAR 22 42 48.2
BVAR pmax pmax
comp=Z,5.0nm,0.6s
BRVK Borovoye 58.21 316 *d i*P **P 22 41 56.8 -0.3**
BRVK pmax pmax
comp=Z,16nm,1.2s,mb4.9
BRVK MLR MLR
comp=Z,122nm,22.0s,MS4.0
BRVK Borovoye 58.21 316 *e*P **P 22 41 57.1 -0.1**
comp=Z,8.6nm,0.7s,mb4.9
Y23A Lovelace Mesa, 58.29 74 ⇑P **P 22 41 58.4 +0.5**
baz=58,SNR=6.3
W25A X Bar L Ranch, 58.37 72 ⇓P **P 22 41 58.7 +0.2**
baz=58,SNR=6.6
Y24A Capitan 58.66 74 ⇑P **P 22 42 01.2 +0.6**
baz=58,SNR=11
Y25A Mesa, Roswell 59.12 73 ⇑P **P 22 42 04.0 +0.3**
baz=59,SNR=6.8
X26A CR and CF Fran 59.22 72 ⇓P **P 22 42 04.9 +0.5**

baz=59,SNR=6.3
SVE Sverdlovsk 59.38 324 *e*P **P 22 42 06.1 +0.9**
SVE pmax pmax
comp=Z,12nm,1.4s,mb4.7
KMI Kunming 59.44 273 P **P 22 42 09.3 +3.2**
KMI pP pP 22 42 19.8 +7.5
KMI sP sP 22 42 24.0 +9.3
KMI PP PP 22 44 22.3 +5.1
KMI S **S 22 50 12.4 -1.8**
KMI sS sS 22 50 30.0 +5.5
KMI SS SS 22 54 08.4 -0.6
KMI pmax pmax
comp=Z,7.0nm,1.4s,mb4.5
KMI pmax pmax
comp=Z,65nm,4.8s
KMI LR LR
comp=N,81nm,11.7s,MS4.2
KMI LR LR
comp=E,84nm,16.6s,MS4.2
KMI LR LR
comp=Z,81nm,14.1s,MS4.0
125A Gardner Draw, 60.01 74 ⇑P **P 22 42 10.0 +0.1**
baz=60,SNR=6.7
Y27A Causey 60.06 72 ⇑P **P 22 42 10.4 +0.1**
baz=60,SNR=6.2
MNTX Cornudas Mount 60.23 75 *e*P **P 22 42 11.7 +0.2**
comp=Z,9.8nm,1.0s,mb4.8
MSTX Muleshoe 60.24 72 ⇑P **P 22 42 11.5 0.0**
baz=60
225A Deer Hill, Car 60.29 75 ⇓P **P 22 42 11.6 -0.2**
baz=60
324A Moseley Ranch, 60.35 76 ⇑P **P 22 42 12.3 0.0**
baz=60
Z27A Tatum 60.42 73 ⇓P **P 22 42 12.9 +0.2**
baz=60
ARU Arti 60.44 325 *d i*P **P 22 42 12.4 0.0**
ARU *e* 22 44 23.0
ARU S **S 22 50 27.4 +1.3**
ARU SS SS 22 54 22.8 -0.3
ARU pmax pmax
comp=Z,13nm,1.2s,mb4.8
ARU Arti 60.44 325 *e*P **P 22 42 12.5 0.0**
comp=Z,18nm,1.3s,mb4.9
GDL2 Guadalupe Moun 60.51 74 *e*P **P 22 42 14.5 +1.2**
325A Bean Ranch, Si 60.71 75 ⇓P **P 22 42 14.7 0.0**
baz=61
226A Malaga, Loving 60.76 74 ⇑P **P 22 42 14.6 -0.5**
baz=61
326A Caldwell Ranch 61.36 75 ⇑P **P 22 42 18.6 -0.5**
baz=61,SNR=6.7
328A Wristen Ranch, 62.02 74 ⇓P **P 22 42 23.5 0.0**
baz=62,SNR=7.1
526A Mary Lane Ranc 62.17 76 ⇓P **P 22 42 24.0 -0.6**
baz=62,SNR=6.3
626A Big Bend Ranch 62.51 76 ⇑P **P 22 42 26.4 -0.5**
baz=62
428A Kincaid Ranch, 62.56 74 ⇓P **P 22 42 27.6 +0.4**
baz=62,SNR=7.1
SCHQ Schefferville 62.79 35 P **P 22 42 28.5 +0.2**
comp=Z,14nm,0.8s,mb5.1,baz=324,slow=8.2,SNR=6.2
SCHQ LR LR 23 12 09.6
comp=Z,143nm,18.4s,MS4.2,baz=280,slow=38
SCHQ Schefferville 62.79 35 *e*P **P 22 42 29.3 +1.0**
comp=Z,20nm,1.0s,mb5.2
TKM2 Tokmak 2 62.83 305 *e*P **P 22 42 28.9 +0.1**
TKM2 pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
TKM2 Tokmak 2 62.83 305 *e*P **P 22 42 28.9 +0.1**
comp=Z,4.3nm,0.8s,mb4.6
528A Cox Ranch, San 62.90 75 ⇓P **P 22 42 29.3 -0.2**
baz=63,SNR=5.9
TXAR Lajitas Array 62.95 76 P **P 22 42 30.3 +0.5**
comp=Z,4.4nm,1.0s,mb4.5,baz=306,slow=4.2,SNR=31
TXAR Lajitas Array 62.95 76 P **P 22 42 30.3 +0.5**
TXAR pmax pmax
comp=Z,4.0nm,1.0s
627A Terlingua Ranc 63.03 76 ⇓P **P 22 42 30.5 +0.1**
baz=63,SNR=12
HDIL Hopedale 63.30 58 *e*P **P 22 42 31.6 -0.4**
comp=Z,17nm,0.7s,mb5.3
628A Black Gap, Mar 63.31 75 ⇓P **P 22 42 32.2 0.0**
baz=63
AAK Ala-Archa 63.60 306 ⇓*e*P **P 22 42 34.2 +0.3**
AAK pmax pmax
comp=Z,5.0nm,1.6s,mb4.3
AAK MLR MLR
comp=Z,38nm,17.0s,MS3.6
AAK Ala-Archa 63.60 306 *e*P **P 22 42 34.3 +0.4**
comp=Z,8.5nm,1.0s,mb4.7
UCH Uchtor 63.89 305 *e*P **P 22 42 36.3 +0.5**
comp=Z,6.0nm,1.3s,mb4.5
EKS2 Erkin-Say 63.95 306 *e*P **P 22 42 35.4 -0.8**
comp=Z,7.1nm,0.9s,mb4.7
AML Almayashu 64.38 306 *e*P **P 22 42 39.6 +0.5**
comp=Z,8.3nm,1.0s,mb4.7
JCT Junction City 64.48 73 *e*P **P 22 42 39.6 -0.3**
JCT pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
JCT Junction City 64.48 73 *e*P **P 22 42 39.6 -0.3**
comp=Z,4.9nm,0.8s,mb4.6
FINES FINESS Array B 64.95 344 P **P 22 42 42.5 0.0**
comp=Z,2.3nm,0.7s,mb4.3,baz=36,slow=10,SNR=5.2
FINES LR LR 23 12 29.8
comp=Z,64nm,19.0s,MS3.8,baz=213,slow=37
FINES FINESS Array B 64.95 344 P **P 22 42 42.5 0.0**
FINES pmax pmax
comp=Z,2.0nm,0.7s
FINES MLR MLR
comp=Z,64nm,19.0s
FINES FINESS Array B 64.95 344 P **P 22 42 42.5 0.0**
FINES LR LR 23 12 29.8
KSH Kashi 65.08 302 *e*P **P 22 42 47.3 +3.6**
KSH pP pP 22 42 57.6 +7.6
KSH sP sP 22 43 01.6 +9.3
KSH PcP PcP 22 43 20.0 +3.6
KSH PP PP 22 45 12.5 +6.0
KSH ScP 22 47 18.9
KSH PcS 22 47 22.7
KSH S S 22 51 24.7 -0.3
KSH sS sS 22 51 42.5 +7.2
KSH ScS ScS 22 52 35.9 -1.6
KSH SS SS 22 55 39.4 +2.9
KSH pmax pmax
comp=Z,11nm,1.0s,mb4.8
KSH pmax pmax
comp=Z,68nm,2.7s,mb5.2
KSH LR LR
comp=N,62nm,4.1s
KSH LR LR
comp=E,84nm,5.2s
KSH LR LR
comp=Z,89nm,5.6s
MIAR Mount Ida 65.22 65 *e*P **P 22 42 45.0 +0.3**
MIAR pmax pmax
comp=Z,18nm,1.1s,mb5.0
MIAR Mount Ida 65.22 65 *e*P **P 22 42 45.0 +0.4**
comp=Z,18nm,1.1s,mb5.0
USIN University of 66.04 59 *e*P **P 22 42 50.5 +0.6**
comp=Z,28nm,1.0s,mb5.2
WCI Wyandotte Cave 66.58 58 *e*P **P 22 42 53.6 +0.2**
WCI pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
WCI Wyandotte Cave 66.58 58 *e*P **P 22 42 53.5 +0.2**
comp=Z,9.5nm,0.9s,mb4.8
CMAR Chiang Mai Arr 66.71 271 P **P 22 42 54.1 -0.3**
comp=Z,0.9nm,0.4s,mb4.1,baz=23,slow=7.5,SNR=5.7
CMAR LR LR 23 13 44.2
comp=Z,46nm,18.6s,MS3.7,baz=65,slow=38
CMAR Chiang Mai Arr 66.71 271 P **P 22 42 54.1 -0.3**
CMAR pmax pmax
comp=Z,1.0nm,0.4s
CMAR MLR MLR
comp=Z,46nm,18.6s
ALLY Alegheny Colle 67.20 52 *e*P **P 22 42 58.2 +0.9**
comp=Z,23nm,0.9s,mb5.2
WVT Waverly 67.29 60 *e*P **P 22 42 57.6 -0.3**
WVT pmax pmax
comp=Z,16nm,1.0s,mb5.0
WVT Waverly 67.29 60 *e*P **P 22 42 57.6 -0.3**
comp=Z,16nm,1.0s,mb5.0
NB2 NORSAR Subarra 67.38 351 P **P 22 42 58.0 0.0**
comp=Z,4.1nm,1.0s,mb4.4,baz=13,slow=6.5
NOA NORSAR Array B 67.38 351 P **P 22 42 58.0 0.0**
comp=Z,2.0nm,0.7s,mb4.3,baz=12,slow=6.4,SNR=6.0
NOA LR LR 23 12 31.4
comp=Z,31nm,22.0s,MS3.5,baz=215,slow=36

NOA NORSAR Array B 67.38 351 P **P** **22 42 58.0 0.0**
NOA pmax pmax
comp=Z,2.0nm,0.7s
NOA MLR MLR
comp=Z,31nm,22.0s
OXF Oxford 67.61 63 *e*P **P** **22 42 59.2 -0.7**
comp=Z,80nm,1.3s,mb5.6
VSU Vasula 67.62 342 *i* P **P** **22 43 02.1 +2.5**
JIRN Jiri 67.86 287 *e*P **P** **22 43 01.2 -0.5**
comp=Z,19nm,0.8s,mb5.1
GUN Gumba 67.87 287 *e*P **P** **22 43 01.2 -0.5**
comp=Z,47nm,1.0s,mb5.5
KKN Kakani 68.32 288 *e*P **P** **22 43 04.0 -0.5**
PKI Pulchoki 68.40 287 *e*P **P** **22 43 04.0 -1.0**
OBN Obninsk 68.44 335⇑*e*P **P** **22 43 05.1 +0.3**
OBN *e* 22 45 37.9
OBN *i* S S 22 52 09.0 +3.9
OBN pmax pmax
comp=Z,30nm,2.5s,mb4.9
OBN MLR MLR
comp=Z,100nm,19.0s,MS4.1
DMN Daman 68.55 288 *e*P **P** **22 43 05.4 -0.6**
BINY Binghamton 68.80 49 *e*P **P** **22 43 07.8 +0.5**
comp=Z,26nm,1.4s,mb5.0
ACCN Adirondack Com 68.95 46 *e*P **P** **22 43 07.9 -0.4**
comp=Z,8.4nm,0.8s,mb4.7
SWET Sewanee 69.01 60 *e*P **P** **22 43 08.4 -0.3**
SSPA Standing Stone 69.08 51 *e*P **P** **22 43 08.7 -0.4**
comp=Z,31nm,1.4s,mb5.0
TZTN Tazewell 69.30 57 *e*P **P** **22 43 10.8 +0.3**
comp=Z,13nm,1.0s,mb4.8
CPCT Cooper Cave 69.60 59 *e*P **P** **22 43 12.3 0.0**
TKL Tuckaleechee C 69.84 58 *e*P **P** **22 43 13.6 -0.2**
LRAL Lakeview Retre 70.05 62 *e*P **P** **22 43 14.4 -0.8**
comp=Z,4.5nm,0.8s,mb4.5
ELN Prospectdale 70.24 55 *e*P **P** **22 43 16.4 +0.1**
IZAR Zarasai 70.25 341 *e*P **P** **22 43 16.2 +0.3**
MVL Millersville 70.32 50 *e*P **P** **22 43 16.9 +0.2**
comp=Z,9.0nm,0.8s,mb4.8
BLA Blacksburg 70.43 55 *e*P **P** **22 43 17.6 +0.2**
BLA pmax pmax
comp=Z,14nm,1.2s,mb4.8
BLA Blacksburg 70.43 55 *e*P **P** **22 43 17.6 +0.2**
comp=Z,14nm,1.2s,mb4.8
ISAL Salakas 70.44 341 *e*P **P** **22 43 17.6 +0.4**
IDID Didziasalis 70.56 341 *e*P **P** **22 43 18.4 +0.5**
IIGN Ignalina 70.63 341 *e*P **P** **22 43 18.7 +0.4**
VSR Storozhevoye 71.18 332 *e*P **P** **22 43 22.0 +0.2**
VSR pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
VSR pmax pmax
comp=N,7.0nm,0.7s
VSR pmax pmax
comp=E,7.0nm,1.0s
GOGA Godfrey 71.70 59 *e*P **P** **22 43 24.9 -0.3**
GOGA pmax pmax
comp=Z,11nm,1.1s,mb4.7
GOGA Godfrey 71.70 59 *e*P **P** **22 43 24.9 -0.3**
comp=Z,11nm,1.1s,mb4.7
JSC Jenkinsville 72.22 57 *e*P **P** **22 43 28.2 -0.1**
KBL Kabul 72.47 303 *e*P **P** **22 43 28.4 -1.4**
KBL pmax pmax
comp=Z,12nm,1.0s,mb4.8
KBL Kabul 72.47 303 *e*P **P** **22 43 28.4 -1.4**
comp=Z,12nm,1.0s,mb4.8
NHSC New Hope 73.70 57 *e*P **P** **22 43 38.0 +0.9**
comp=Z,27nm,0.9s,mb5.2
AKASG Malin Array Be 74.31 338 P **P** **22 43 39.9 -0.4**
comp=Z,3.4nm,0.7s,mb4.4,baz=27,slow=6.4,SNR=7.5
AKASG LR LR 23 21 21.4
comp=Z,70nm,18.8s,MS4.0,baz=10.0,slow=40
AKASG Malin Array Be 74.31 338 P **P** **22 43 39.9 -0.4**
AKASG pmax pmax
comp=Z,3.0nm,0.7s
AKASG MLR MLR
comp=Z,70nm,18.8s
KIEV Kiev 74.32 338 *e*P **P** **22 43 40.0 -0.4**
KIEV pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
KIEV Kiev 74.32 338 *e*P **P** **22 43 40.0 -0.4**
comp=Z,5.7nm,1.1s,mb4.4
KIV Kislovodsk 76.43 326 *e*P **P** **22 43 52.3 -0.3**
KIV pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
CLL Collm 76.73 348 *e*P **P** **22 43 54.0 -0.2**
CLL *e* pP 22 43 59.0 -1.5
CLL MLR MLR
comp=Z,100nm,21.4s,MS4.1
OJC Ojcow 76.73 344 *e*P **P** **22 43 51.2 -3.0**
KWP Kalwaria Pacla 76.74 341 *e*P **P** **22 43 53.3 -1.0**
KWP pmax pmax
comp=Z,26nm,1.1s,mb5.1
KWP Kalwaria Pacla 76.74 341 *e*P **P** **22 43 53.2 -1.1**
comp=Z,26nm,1.1s,mb5.1
BRG Berggiesshubel 77.03 347 *e*P **P** **22 43 55.6 -0.3**
comp=Z,2.3nm,0.7s,mb4.2
BRG *e* 22 44 07.9
comp=Z,1.3nm,0.8s
BRG Berggiesshubel 77.03 347 *e*P **P** **22 43 55.6 -0.3**
BRG *e* 22 44 07.9
BRG pmax pmax
comp=Z,1.0nm,0.7s,mb3.9
UPC Upice 77.08 346 *e*P **P** **22 43 56.7 +0.5**
UPC *e* 22 44 07.8
UPC Upice 77.08 346 *e*P **P** **22 43 56.7 +0.5**
UPC *e*PCP PcP 22 44 07.8 +0.8
DPC Dobruska-Polom 77.19 346 *e*P **P** **22 43 57.6 +0.8**
DPC *e* 22 44 09.3
DPC Dobruska-Polom 77.19 346 *e*P **P** **22 43 57.6 +0.8**
DPC *e*PCP PcP 22 44 09.3 +1.8
STHS Stebnicka Huta 77.23 342 *e*P **P** **22 43 58.9 +1.8**
STHS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
STHS Stebnicka Huta 77.23 342 *e*P **P** **22 43 58.9 +1.8**
comp=Z,4.0nm,1.0s,mb4.3
STHS *e*PcP PcP 22 44 11.8 +4.1
OKC Ostrava-Krasne 77.39 344 *e*P **P** **22 43 59.0 +1.1**
OKC *e* 22 44 10.3
OKC Ostrava-Krasne 77.39 344 *e*P **P** **22 43 59.0 +1.1**
OKC *e*PCP PcP 22 44 10.3 +1.9
NIE Niedzica 77.41 343 *e*P **P** **22 43 59.2 +1.2**
KOLS Kolonicke sedl 77.50 342 *i* P **P** **22 43 59.8 +1.3**
KOLS pmax pmax
comp=Z,9.0nm,1.4s,mb4.5
KOLS Kolonicke sedl 77.50 342 *i* P **P** **22 43 59.8 +1.3**
comp=Z,9.3nm,1.4s,mb4.5
MORC Moravsky Berou 77.55 345 *e*P **P** **22 43 59.0 +0.2**
MORC pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
MORC Moravsky Berou 77.55 345 *e*P **P** **22 43 59.0 +0.2**
comp=Z,1.8nm,0.9s,mb4.0
CRVS Cervenica-Dubn 77.69 342 *e*P **P** **22 44 00.6 +1.0**
CRVS pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
CRVS Cervenica-Dubn 77.69 342 *e*P **P** **22 44 00.6 +1.0**
comp=Z,4.8nm,1.0s,mb4.4
PRU Pruhonice 77.81 347 *e*P **P** **22 44 00.5 +0.2**
PRU *e* 22 44 09.9
PRU Pruhonice 77.81 347 *e*P **P** **22 44 00.5 +0.2**
PRU *e*PCP PcP 22 44 09.9 -0.3
NKC Novy Kostel 77.85 348 *e*P **P** **22 44 00.9 +0.4**
NKC Novy Kostel 77.85 348 *e*P **P** **22 44 00.9 +0.4**
BUR08 Bucovina Ar. S 78.10 339 *e*P **P** **22 44 02.4 +0.5**
BURAR Bucovina Array 78.12 339 ⇓P **P** **22 44 02.8 +0.7**
VRAC Vranov 78.16 345 ⇓P **P** **22 44 03.9 +1.7**
KECS Kecovo 78.27 343 *e*P **P** **22 44 04.1 +1.2**
KECS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
KECS Kecovo 78.27 343 *e*P **P** **22 44 04.1 +1.2**
comp=Z,3.5nm,1.0s,mb4.2
KECS *e*PcP PcP 22 44 17.5 +5.3
TREC Trest 78.34 346 *e*P **P** **22 44 03.8 +0.6**
TREC *e* 22 44 17.0
TREC Trest 78.34 346 *e*P **P** **22 44 03.8 +0.6**
TREC *ex* x 22 44 17.0
GRF Grafenberg Arr 78.54 349 *e*P **P** **22 44 04.8 +0.5**
comp=Z,3.0nm,1.1s,mb4.1
GRF Grafenberg Arr 78.54 349 *e*P **P** **22 44 04.8 +0.5**
GRF pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
GRF Grafenberg Arr 78.54 349 *e*P **P** **22 44 04.8 +0.5**
comp=Z,3.0nm,1.1s,mb4.1
VYHS Vyhne 78.57 344 *e*P **P** **22 44 05.6 +1.1**
VYHS *e* 22 44 17.6
PSI Prapat 78.67 260 LR LR 23 17 54.8
comp=Z,37nm,19.3s,MS3.7,baz=35,slow=35
KHC Kasperske Hory 78.78 347 *e*P **P** **22 44 06.0 +0.3**
KHC pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
KHC Kasperske Hory 78.78 347 *e*P **P** **22 44 06.0 +0.3**
comp=Z,5.4nm,1.0s,mb4.4
KHC Kasperske Hory 78.78 347 *e*P **P** **22 44 06.3 +0.6**
KHC *e*PCP PcP 22 44 18.5 +4.1
BAIF Baives 78.85 354 *e*P **P** **22 44 05.9 -0.1**
PSZ Piszkesteto 78.93 343 *e*P **P** **22 44 07.5 +1.0**
PSZ pmax pmax
comp=Z,24nm,1.8s,mb4.8
PSZ Piszkesteto 78.93 343 *e*P **P** **22 44 07.5 +1.0**
comp=Z,24nm,1.8s,mb4.8
WRA Warramunga Arr 78.98 218 P **P** **22 44 06.1 -0.9**
comp=Z,2.4nm,0.8s,mb4.2,baz=30,slow=6.4,SNR=11
WRA Warramunga Arr 78.98 218 P **P** **22 44 06.1 -0.9**
WRA pmax pmax
comp=Z,2.0nm,0.8s
GNI Garni 79.00 323 *e*P **P** **22 44 06.4 -0.6**
GERES GERESS Array B 79.04 347 P **P** **22 44 07.7 +0.6**
comp=Z,1.5nm,0.7s,mb4.0,baz=24,slow=5.6,SNR=15
GERES LR LR 23 22 13.9
comp=Z,35nm,19.5s,MS3.7,baz=202,slow=38
GERES GERESS Array B 79.04 347 P **P** **22 44 07.7 +0.6**
GERES pmax pmax
comp=Z,2.0nm,0.7s
GERES MLR MLR
comp=Z,35nm,19.5s
DRGR 79.45 341 ⇑P **P** **22 44 10.6 +1.2**
CONA Conrad Observa 79.61 345⇑*i*P **P** **22 44 11.8 +1.6**
comp=Z,7.4nm,1.3s,mb4.4
CSNA Conrad Observa 79.61 345⇑*i*P **P** **22 44 11.9 +1.6**
comp=Z,7.5nm,1.5s,mb4.4
MLR Muntele Rosu 79.96 338 ⇓P **P** **22 44 13.5 +1.3**
BFO Black Forest 80.20 351 *i* P **P** **22 44 14.1 +0.7**
CDF Champ du Feu 80.23 351 *e*P **P** **22 44 13.3 -0.3**
comp=Z,4.5nm,0.7s,mb4.2
CDF Champ du Feu 80.23 351 *e*P **P** **22 44 13.3 -0.3**
CDF pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
CDF Champ du Feu 80.23 351 *e*P **P** **22 44 13.3 -0.3**
comp=Z,2.3nm,0.7s,mb4.2
TIRR Tirgusor 80.32 336 ⇓P **P** **22 44 14.4 +0.3**
TIRR Tirgusor 80.32 336 P **P** **22 44 14.6 +0.5**
ARSA Arzberg 80.33 346⇑*i*P **P** **22 44 15.6 +1.5**
comp=Z,4.3nm,1.0s,mb4.3
MEZF Maizieres J'vi 80.33 353 *e*P **P** **22 44 14.0 -0.1**
FLN La Foliniere 80.40 357 *e*P **P** **22 44 14.0 -0.5**
FLN *e*MLR MLR
comp=Z,66nm,20.0s,MS3.7
FLN La Foliniere 80.40 357 *e*P **P** **22 44 14.0 -0.5**
FLN LR LR
comp=Z,70nm,20.0s,MS4.0
LDF La Druitiere 80.55 356 *e*P **P** **22 44 14.6 -0.7**
HAU Haudompre 80.72 352 *e*P **P** **22 44 15.9 -0.3**
HAU *e*MLR MLR
comp=Z,51nm,22.2s,MS3.5
HAU Haudompre 80.72 352 *e*P **P** **22 44 15.9 -0.3**
HAU LR LR
comp=Z,50nm,22.3s,MS3.8
GRR Gorron 80.79 357 *e*P **P** **22 44 16.1 -0.5**
comp=Z,35nm,1.3s,mb4.8
GRR Gorron 80.79 357 *e*P **P** **22 44 16.1 -0.5**
GRR pmax pmax
comp=Z,18nm,1.3s,mb4.8
GRR Gorron 80.79 357 *e*P **P** **22 44 16.1 -0.5**
comp=Z,18nm,1.3s,mb4.8
BZS Buzias 80.80 341 ⇓P **P** **22 44 16.4 -0.3**
WATA Walderalm 80.81 348⇑*i*P **P** **22 44 17.8 +1.1**
comp=Z,4.1nm,0.7s,mb4.5
KBA Koelnbreinsper 80.82 347⇑*i*P **P** **22 44 18.6 +1.9**
comp=Z,11nm,0.6s,mb5.0
HINF Hinteralfeld 80.86 351 *e*P **P** **22 44 16.4 -0.5**
MOTA Moosalm 80.86 349⇑*i*P **P** **22 44 17.9 +0.9**
comp=Z,2.1nm,0.7s,mb4.2
WTTA Wattenberg 80.87 348⇑*i*P **P** **22 44 18.5 +1.5**
comp=Z,8.7nm,0.6s,mb4.9
ROSF Rostrenen 80.90 358 *e*P **P** **22 44 16.8 -0.4**
comp=Z,65nm,1.3s,mb5.1
ROSF Rostrenen 80.90 358 *e*P **P** **22 44 16.8 -0.4**
ROSF pmax pmax
comp=Z,33nm,1.3s,mb5.1
ROSF Rostrenen 80.90 358 *e*P **P** **22 44 16.8 -0.4**
comp=Z,33nm,1.3s,mb5.1
SOKA Soboth 80.96 346⇑*i*P **P** **22 44 18.9 +1.4**
comp=Z,7.2nm,1.1s,mb4.5
SGMF Saint Gilles 80.97 358 *e*P **P** **22 44 17.3 -0.2**
FITZ Fitzroy Crossi 81.02 226 P **P** **22 44 17.8 -0.2**
comp=Z,3.6nm,0.7s,mb4.4,baz=12,slow=3.8,SNR=10
OBKA Obir 81.20 346⇑*i*P **P** **22 44 19.9 +1.1**
comp=Z,9.4nm,1.0s,mb4.7
FETA Feichten 81.22 349⇑*i*P **P** **22 44 19.2 +0.3**
comp=Z,4.5nm,0.8s,mb4.5
ABTA Abfaltersbach 81.26 347⇑*i*P **P** **22 44 20.1 +0.9**
comp=Z,5.7nm,1.1s,mb4.4
LOR Lormes 81.65 353 *e*P **P** **22 44 20.8 -0.4**
LOR *e*MLR MLR
comp=Z,61nm,20.8s,MS3.6
LOR Lormes 81.65 353 *e*P **P** **22 44 20.8 -0.4**
LOR LR LR
comp=Z,60nm,20.8s,MS3.9
SSF Saint Saulge 81.88 354 *e*P **P** **22 44 23.2 +0.8**
comp=Z,14nm,1.1s,mb4.5
SSF Saint Saulge 81.88 354 *e*P **P** **22 44 23.2 +0.8**
SSF pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
SSF Saint Saulge 81.88 354 *e*P **P** **22 44 23.2 +0.8**
comp=Z,7.1nm,1.1s,mb4.5
CABF La Chapelle 82.12 352 *e*P **P** **22 44 23.6 -0.1**
AVF Avril sur Loir 82.16 354 *e*P **P** **22 44 23.6 -0.3**
comp=Z,15nm,1.2s,mb4.5
AVF Avril sur Loir 82.16 354 *e*P **P** **22 44 23.6 -0.3**
AVF pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
AVF Avril sur Loir 82.16 354 *e*P **P** **22 44 23.6 -0.3**
comp=Z,7.6nm,1.2s,mb4.5
SMF Signal de Mont 82.27 353 *e*P **P** **22 44 24.2 -0.2**
comp=Z,14nm,0.9s,mb4.6
SMF Signal de Mont 82.27 353 *e*P **P** **22 44 24.2 -0.2**
SMF pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
SMF Signal de Mont 82.27 353 *e*P **P** **22 44 24.2 -0.2**
comp=Z,7.1nm,0.9s,mb4.6
BGF Bois d'Agland 82.43 354 *e*P **P** **22 44 24.3 -1.0**
ASAR Alice Springs 82.52 217 P **P** **22 44 25.8 -0.1**
comp=Z,2.2nm,0.8s,mb4.2,baz=20,slow=5.6,SNR=20
ASAR Alice Springs 82.52 217 P **P** **22 44 25.8 -0.1**
ASAR pmax pmax
comp=Z,2.0nm,0.8s
MFF Saint Martin d 82.54 356 *e*P **P** **22 44 26.5 +0.6**
comp=Z,21nm,1.2s,mb4.7
MFF Saint Martin d 82.54 356 *e*P **P** **22 44 26.5 +0.6**
MFF pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
MFF Saint Martin d 82.54 356 *e*P **P** **22 44 26.5 +0.6**
comp=Z,10nm,1.2s,mb4.7
TCF Toulx Ste Croi 82.74 354 *e*P **P** **22 44 26.7 -0.2**
comp=Z,26nm,1.4s,mb4.8
TCF Toulx Ste Croi 82.74 354 *e*P **P** **22 44 26.7 -0.2**
TCF pmax pmax
comp=Z,13nm,1.4s,mb4.8
TCF Toulx Ste Croi 82.74 354 *e*P **P** **22 44 26.7 -0.2**
comp=Z,13nm,1.4s,mb4.8
LPL La Plagne 83.15 351 *e*P **P** **22 44 31.0 +2.0**
LPG La Plagne 83.17 351 *e*P **P** **22 44 31.2 +2.1**
comp=Z,20nm,1.1s,mb4.8
LPG La Plagne 83.17 351 *e*P **P** **22 44 31.2 +2.1**
LPG pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
LPG La Plagne 83.17 351 *e*P **P** **22 44 31.2 +2.1**
comp=Z,9.9nm,1.1s,mb4.8
BR131 Keskin Array S 83.21 331 P **P** **22 44 29.6 +0.2**
comp=Z,1.1nm,0.3s,mb4.4
BRTR Keskin Array B 83.21 331 P **P** **22 44 29.9 +0.5**
comp=Z,2.3nm,0.7s,mb4.3,baz=34,slow=3.3,SNR=12
BRTR LR LR 23 23 57.8
comp=Z,31nm,20.4s,MS3.7,baz=15,slow=38
BRTR Keskin Array B 83.21 331 P **P** **22 44 30.0 +0.5**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
BRTR MLR MLR
comp=Z,31nm,20.4s
RJF Les Rejaudoux 83.76 355 *e*P **P** **22 44 31.4 -0.8**
RJF *e*MLR MLR
comp=Z,61nm,18.2s,MS3.7
RJF Les Rejaudoux 83.76 355 *e*P **P** **22 44 31.4 -0.8**
RJF LR LR
comp=Z,60nm,18.3s,MS4.0
ORIF Oris-en-Rattie 83.82 352 *e*P **P** **22 44 32.4 -0.1**
comp=Z,12nm,0.9s,mb4.7
ORIF *e*MLR MLR
comp=Z,65nm,20.5s,MS3.7
ORIF Oris-en-Rattie 83.82 352 *e*P **P** **22 44 32.4 -0.1**
ORIF pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
ORIF Oris-en-Rattie 83.82 352 *e*P **P** **22 44 32.4 -0.1**
comp=Z,6.2nm,0.9s,mb4.7
MBDF Montbardon 83.93 351 *e*P **P** **22 44 32.6 -0.4**
VIVF Saint-Julien-I 83.99 353 *e*P **P** **22 44 32.5 -0.8**
CAF Calviac 84.10 354 *e*P **P** **22 44 33.3 -0.6**
comp=Z,22nm,1.2s,mb4.8
CAF Calviac 84.10 354 *e*P **P** **22 44 33.3 -0.6**
CAF pmax pmax
comp=Z,11nm,1.2s,mb4.9
CAF Calviac 84.10 354 *e*P **P** **22 44 33.3 -0.6**
comp=Z,11nm,1.2s,mb4.9
TGUH Tegucigalpa,Un 84.38 75 *e*P **P** **22 44 36.0 +0.2**
comp=Z,98nm,1.3s,mb5.8
SMRF Simiane la Rot 84.78 352 *e*P **P** **22 44 37.2 -0.2**
FRF La Foret Royal 85.09 351 *e*P **P** **22 44 38.8 -0.2**
comp=Z,24nm,1.2s,mb4.9
FRF La Foret Royal 85.09 351 *e*P **P** **22 44 38.8 -0.2**
FRF pmax pmax
comp=Z,12nm,1.2s,mb4.9
FRF La Foret Royal 85.09 351 *e*P **P** **22 44 38.8 -0.2**
comp=Z,12nm,1.2s,mb4.9
LMR La Mourre 85.33 351 *e*P **P** **22 44 40.2 0.0**
comp=Z,38nm,1.4s,mb5.0
LMR La Mourre 85.33 351 *e*P **P** **22 44 40.2 0.0**
LMR pmax pmax
comp=Z,19nm,1.4s,mb5.0
LMR La Mourre 85.33 351 *e*P **P** **22 44 40.2 0.0**
comp=Z,19nm,1.4s,mb5.0
MTLF Montolieu 85.67 354 *e*P **P** **22 44 41.0 -0.8**
PGF Pioggiola 85.84 349 *e*P **P** **22 44 42.4 -0.3**
SJPF Ste Jean 86.07 357 *e*P **P** **22 44 43.3 -0.5**
comp=Z,11nm,0.9s,mb4.8
SJPF Ste Jean 86.07 357 *e*P **P** **22 44 43.3 -0.5**
SJPF pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
SJPF Ste Jean 86.07 357 *e*P **P** **22 44 43.3 -0.5**
comp=Z,5.7nm,0.9s,mb4.8
ETSF Etsaut 86.26 356 *e*P **P** **22 44 44.1 -0.7**
STKA Stephens Creek 87.53 207 P **P** **22 44 50.8 0.0**
comp=Z,2.1nm,0.9s,mb4.4,baz=32,slow=8.4,SNR=3.5
MMAI Mount Meron Ar 88.75 326 LR LR 23 32 12.4
comp=Z,42nm,18.2s,MS3.9,baz=305,slow=41
ESDC Sonseca Array 89.57 359 P **P** **22 45 00.2 -0.5**
comp=Z,0.8nm,0.7s,mb4.2,baz=4.0,slow=5.2,SNR=5.8
ESDC Sonseca Array 89.57 359 P **P** **22 45 00.2 -0.5**
CPUP Villa Florida 133.91 78 PKP PKPdf 22 51 20.0 -0.2
comp=Z,0.3nm,0.4s,baz=304,slow=11,SNR=2.8
MAW Mawson 143.65 217 PKhKP 22 51 33.2
comp=Z,9.6nm,0.6s,baz=90,slow=3.1,SNR=34
MAW Mawson 143.65 217 *e*PKPdf 22 51 33.4
LBTB Lobatse 144.60 306 *e*PKIKP PKPdf 22 51 38.5 -1.2
BOSA Boshof 147.69 302 PKPbc PKPbc 22 51 47.5 -0.2
comp=Z,3.9nm,0.9s,baz=10,slow=6.1,SNR=5.7

TRN ***08*** *22:43:16.5, 17°.49N×63°.42W, h165km, MD3.2*
RSPR ***08*** *22:43:17.5, 17°.65N×63°.40W, h171km±22km, MD3.9/4, MD3.9/4*
NEIC ***08*** *22:43:17.5, 17°.65N×63°.40W, h171km, MD3.9(RSPR), After RSPR.*
ISCJB ***08*** *22:43:17.4±1.9, 17°.6N±0°.2×63°.36W±0°.07, h166km±18km, Error ellipse: s-maj=29.5km s-min=5.6km az=19.1*
ISC 08 22:43:17.6±1.7, 17°.7N±0°.2×63°.35W±0°.07, h170km±16km, n18, σ0=95/29, 4C-4D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
ABV	**Anegada**	**1.42**	**319**	*e*S		**Sn**	**22 44 12.4**	**+1.1**
ABV	**Anegada**	**1.42**	**319**	*e*S		**Sn**	**22 44 12.4**	**+1.1**
TBVI	**Tortola**	**1.42**	**302**⇓	*e*P		**Pn**	**22 43 47.9**	**0.0**
TBVI				*e*S		**Sn**	**22 44 10.1**	**-1.2**
TBVI	**Tortola**	**1.42**	**302**⇓	*e*P		**Pn**	**22 43 47.9**	**0.0**
TBVI				*e*S		**Sn**	**22 44 10.5**	**-0.7**
ANWB	**Willy Bob**	**1.50**	**89**	*e*Pn		**Pn**	**22 43 49.2**	**+0.6**
ANWB				*e*Sn		**Sn**	**22 44 12.7**	**+0.3**
BPA	**Boggy Peak**	**1.55**	**113**	*e*P		**Pn**	**22 43 49.2**	**0.0**
BPA				*e*S		**Sn**	**22 44 12.6**	**-0.9**
BPA	**Boggy Peak**	**1.55**	**113**	*e*P		**Pn**	**22 43 49.2**	**0.0**
BPA				*e*S		**Sn**	**22 44 12.6**	**-0.9**
STVI	**Saint Thomas**	**1.67**	**295**⇓	*e*P		**Pn**	**22 43 50.5**	**+0.1**
STVI				*e*S		**Sn**	**22 44 14.8**	**-1.0**
STVI	**Saint Thomas**	**1.67**	**295**⇓	*e*P		**Pn**	**22 43 50.5**	**+0.1**
STVI				*e*S		**Sn**	**22 44 14.8**	**-1.0**
LZG	**Guadaloupe-1**	**2.13**	**135**	*e*P		**Pn**	**22 43 57.8**	**+2.3**
MTP	**Monte Pirata**	**2.14**	**282**⇑	*e*P		**Pn**	**22 43 55.0**	**-0.5**
MTP				*e*S		**Sn**	**22 44 26.1**	**+1.3**
MTP	**Monte Pirata**	**2.14**	**282**⇑	*e*P		**Pn**	**22 43 55.0**	**-0.5**
MTP				*e*S		**Sn**	**22 44 26.7**	**+1.9**
BCG	**Bois Riant Cap**	**2.28**	**133**	*e*P		**Pn**	**22 43 57.1**	**0.0**
HUMP	**Col San Antoni**	**2.43**	**282**	*e*S		**Sn**	**22 44 31.6**	**+0.9**
HUMP	**Col San Antoni**	**2.43**	**282**	*e*S		**Sn**	**22 44 31.6**	**+0.9**
CBYP	**Canovanas**	**2.46**	**285**⇑	*e*P		**Pn**	**22 43 58.5**	**-0.7**
CBYP				*e*S		**Sn**	**22 44 30.4**	**-1.0**
CBYP	**Canovanas**	**2.46**	**285**⇑	*e*P		**Pn**	**22 43 58.5**	**-0.7**
CBYP				*e*S		**Sn**	**22 44 30.4**	**-1.0**
DEG	**La Desirade**	**2.57**	**121**	*e*P		**Pn**	**22 43 59.2**	**-1.3**

KRSC 08 22:47:22.9±3.7, 49°.63N×156°.47E, h5km±5km, ML4.1, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
ALID	**Alaid**	**1.37**	**335**	*e*P		Pn	22 47 49.8	+1.1
MIPR	**Malaya Ipel'ka**	**2.66**	**4**	*e*P		Pn	22 48 07.4	+1.1
AVH	**Avacha**	**3.91**	**20**	P		Pn	22 48 27.8	+4.3
NLC	**Nalytchevo**	**3.98**	**26**	*e*S		Sn	22 49 13.3	+1.9
GNL	**Ganaly**	**4.17**	**12**	*e*P		Pn	22 48 30.0	+2.9
MKZ	**Mys Kozlova**	**5.90**	**31**	*e*P		Pn	22 48 52.7	+1.8
MKZ				*e*S		Sn	22 49 58.2	-0.6

IDC ***08*** *22:49:22.9±1.0, 33°.12N×91°.95E, h0km, mb3.6/6, mb1 3.7/9, mb1mx3.5/28, mbtmp3.5/9, ML3.4/3, MS2.5/1, Ms1 2.5/1, ms1mx2.1/32, Error ellipse: s-maj=45.7km s-min=17.6km az=58.0*
ISCJB ***08*** *22:49:28.0±1.5, 33°.25N±0°.06×92°.24E±0°.10, h55km±17km, mb3.5/6, Error ellipse: s-maj=14.1km s-min=9.4km az=155.6*
NEIC ***08*** *22:49:28.8±1.2, 33°.25N×92°.23E, h44km±15km, mb3.4/6, Error ellipse: s-maj=11.5km s-min=7.6km az=66.0*
ISC 08 22:49:29.1±1.3, 33°.26N±0°.06×92°.24E±0°.10, h46km±16km, n24, σ0=95/23, mb3.5/6, Qinghai

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.66**	**195**	*e*Pn		**Pn**	**22 50 23.6**	**+0.3**
MK31	**Makanchi Array**	**15.50**	**334**	*e*Pn		**Pn**	**22 53 04.8**	**+0.4**
MKAR	**Makanchi Array**	**15.50**	**334**	Pn		**Pn**	**22 53 01.8**	**-2.7**
	0.0nm,0.3s,baz=134,slow=13,SNR=2.8							
CMAR	**Chiang Mai Arr**	**15.91**	**156**	Pn		**Pn**	**22 53 08.0**	**-2.0**
	0.1nm,0.3s,baz=334,slow=13,SNR=6.9							
TKM2	**Tokmak 2**	**16.25**	**311**	Pn		**Pn**	**22 53 14.5**	**+0.5**
	4.9nm,1.3s							
UCH	**Uchtor**	**16.61**	**308**	*e*P		**Pn**	**22 53 24.0**	**+5.4**
	4.3nm,0.9s							
AAK	**Ala-Archa**	**16.81**	**309**	LR		LR	23 00 28.4	
	comp=Z,20nm,21.7s,baz=187,slow=40							
AAK	**Ala-Archa**	**16.81**	**309**	*e*Pn		**Pn**	**22 53 21.6**	**+0.5**
AML	**Almayashu**	**17.12**	**307**	*e*Pn		**Pn**	**22 53 25.8**	**+0.9**
EKS2	**Erkin-Say**	**17.30**	**308**	*e*Pn		**Pn**	**22 53 27.4**	**+0.3**
	0.7nm,0.5s							
SONM	**Songino Array**	**18.06**	**32**	P		**Pn**	**22 53 38.5**	**+2.0**
	0.2nm,0.3s,baz=215,slow=12,SNR=3.8							
ULN	**Ulaanbaatar**	**18.38**	**33**	*e*P		**Pn**	**22 53 40.0**	**-0.3**
	0.7nm,0.4s							
KBL	**Kabul**	**19.29**	**280**	*e*P		**Pn**	**22 53 51.7**	**+0.2**
	7.3nm,1.2s							
KURK	**Kurchatov**	**20.11**	**334**	P		**P**	**22 53 58.5**	**-0.4**
	1.7nm,0.9s,baz=147,slow=11,SNR=5.4							
ZALV	**Zalesovo Beam**	**21.35**	**348**	P		**P**	**22 54 11.3**	**-0.8**
	1.4nm,0.8s,mb3.3,baz=152,slow=6.7,SNR=4.2							
BVAR	**Borovoye Array**	**25.21**	**328**	P		**P**	**22 54 49.7**	**-0.5**

0.4nm,0.6s,mb3.1,baz=163,slow=10,SNR=4.4
BRVK Borovoye 25.28 328 *e*P **P 22 54 50.7 -0.2**
0.6nm,0.5s,mb3.4
PALK Pallekele 27.98 205 P **P 22 55 15.7 +0.2**
ARU Arti 32.73 325 P **P 22 55 57.0 -0.1**
YSS Yuzh-Sakhalins 40.31 55 P **P 22 57 01.2 -0.5**
BR131 Keskin Array S 46.83 296 P **P 22 57 53.3 -1.1**
BRTR Keskin Array B 46.83 296 P **P 22 57 53.5 -0.9**
0.3nm,0.5s,mb3.5,baz=113,slow=8.2,SNR=4.0
WRA Warramunga Arr 66.43 137 P **P 23 00 15.4 +1.8**
1.5nm,1.1s,mb3.9,baz=321,slow=6.7,SNR=3.8
ASAR Alice Springs 69.14 139 P **P 23 00 31.0 +0.4**
0.9nm,0.7s,mb3.8,baz=328,slow=6.6,SNR=10

*ISCJB **08** 22:55:34.6±0.6, 32°.30N±0°.03×105°.19E±0°.05, h10km, Error ellipse: s-maj=6.3km s-min=4.9km az=7.7*
*BJI **08** 22:55:36.2, 32°.39N×105°.03E, h15km, mB4.2/1, mb3.7/2, ML3.8/14, Ms3.4/6, Ms7 3.2/7*
ISC 08 22:55:37.1±0.6, 32°.27N±0°.03×105°.15E±0°.05, h10km, n6, σ1§22/17, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.80**	**221**	Pn	**Pn**	**22 56 08.6**	**+0.4**
CD2				Pg	**Pg**	**22 56 10.4**	**-1.3**
CD2				Sn	**Sn**	**22 56 32.0**	**+0.9**
CD2				Sg	**Sg**	**22 56 34.7**	**-0.3**
CD2				smax			
	comp=N,2μm,0.5s						
CD2				smax			
	comp=E,3μm,0.7s						
XAN	**Xi'an**	**3.62**	**60**	Pg	**Pg**	**22 56 42.7**	**-3.9**
XAN				Sn	**Sn**	**22 57 20.4**	**+4.3**
XAN				Sg	**Sg**	**22 57 29.0**	**-4.5**
XAN				smax			
	comp=N,320nm,0.5s						
XAN				smax			
	comp=E,180nm,0.7s						
XAN				LR	LR		
	comp=N,520nm,11.7s						
XAN				LR	LR		
	comp=E,79nm,9.1s						
XAN				LR	LR		
	comp=Z,62nm,6.9s						
LZH	**Lanzhou**	**3.96**	**345**	*e*Pn	**Pn**	**22 56 38.3**	**+0.5**
LZH				Sn	**Sn**	**22 57 23.0**	**-1.3**
LZH				Sg	**Sg**	**22 57 37.2**	**-6.9**
LZH				smax			
	comp=N,310nm,0.6s						
LZH				smax			
	comp=E,1μm,0.7s						
LZH				LR	LR		
	comp=N,1μm,4.5s						
LZH				LR	LR		
	comp=Z,2μm,5.6s						
GYA	**Guiyang**	**5.94**	**167**	Pn	**Pn**	**22 57 07.5**	**+2.3**
GYA				Pg	**Pg**	**22 57 27.3**	**-3.6**
GYA				Sn	**Sn**	**22 58 12.1**	**-1.2**
GYA				smax			
	comp=N,110nm,0.8s						
GYA				smax			
	comp=E,120nm,0.8s						
WHN	**Wuhan**	**8.05**	**100**	*e*P	**Pn**	**22 57 36.4**	**+2.3**
WHN				S	**Sn**	**22 59 05.2**	**-0.1**
WHN				LR	LR		
	comp=Z,280nm,11.8s						
GTA	**Gaotai**	**8.33**	**330**	P	**Pn**	**22 57 38.5**	**+0.6**
GTA				S	**Sn**	**22 59 12.3**	**+0.2**
GTA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GTA				LR	LR		
	comp=N,290nm,14.6s						
GTA				LR	LR		
	comp=E,150nm,9.2s						
GTA				LR	LR		
	comp=Z,130nm,9.8s						

*ISCJB **08** 23:14:27.7±0.3, 64°.01N±0°.02×21°.07W±0°.03, h10km±2km, Error ellipse: s-maj=3.2km s-min=2.4km az=16.0*
*REY **08** 23:14:28.4, 64°.03N×21°.05W, h4km, ML3.6, ML3.3*
*CSEM **08** 23:14:28.4, 64°.03N×21°.05W, h4km, ML3.6, After REY*
ISC 08 23:14:28.1±0.3, 64°.03N±0°.02×21°.02W±0°.03, h2km±3km, n44, σ0§90/77, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKRO	**Krokur**	**0.08**	**327**	P	**Pg**	**23 14 30.3**	**+0.7**
IKRO				S	**Sg**	**23 14 31.8**	**+1.1**
ISOL	**Solvholt**	**0.11**	**162**	P	**Pg**	**23 14 30.7**	**+0.6**
ISOL				S	**Sg**	**23 14 32.9**	**+1.4**
IBJA	**Bjarnastaoir**	**0.15**	**236**	P	**Pg**	**23 14 31.4**	**+0.4**
IHEI	**Heioarbar**	**0.19**	**331**	P	**Pg**	**23 14 32.3**	**+0.5**
IHEI				S	**Sg**	**23 14 35.6**	**+1.3**
ISAN	**Sandskeio**	**0.24**	**276**	P	**Pg**	**23 14 32.9**	**+0.2**
ISAN				S	**Sg**	**23 14 36.6**	**+0.7**
IASM	**Asmuli**	**0.27**	**138**	P	**Pg**	**23 14 33.7**	**+0.5**
IASM				S	**Sg**	**23 14 37.8**	**+1.2**
ISAU	**Saurbar**	**0.27**	**99**	P	**Pg**	**23 14 33.8**	**+0.6**
ISAU				S	**Sg**	**23 14 38.1**	**+1.4**
IVOS	**Vogsosar**	**0.35**	**240**	P	**Pg**	**23 14 34.8**	**0.0**
IVOS				S	**Sg**	**23 14 40.1**	**+0.8**
IKAS	**Kald??rsel**	**0.37**	**269**	P	**Pg**	**23 14 35.1**	**0.0**
IKAS				S	**Sg**	**23 14 40.6**	**+0.8**
IGYG	**Gygjarholskot**	**0.43**	**54**	P	**Pg**	**23 14 36.6**	**+0.3**
IGYG				S	**Sg**	**23 14 43.1**	**+1.2**
IHAU	**Haukadalur**	**0.47**	**97**	P	**Pg**	**23 14 37.2**	**+0.2**
IHAU				S	**Sg**	**23 14 44.1**	**+1.0**
IKUD	**Kuludalsa**	**0.47**	**308**	P	**Pg**	**23 14 36.7**	**-0.4**
IKUD				S	**Sg**	**23 14 43.2**	**-0.1**
IKRI	**Krysuvik**	**0.49**	**252**	P	**Pg**	**23 14 37.0**	**-0.5**
IKRI				S	**Sg**	**23 14 44.0**	**+0.2**
IVOG	**Vogar**	**0.61**	**265**	P	**Pg**	**23 14 39.0**	**-0.7**
IVOG				S	**Sg**	**23 14 47.6**	**0.0**
IMID	**Miomork**	**0.63**	**126**	P	**Pg**	**23 14 39.9**	**-0.2**
IMID				S	**Sg**	**23 14 48.9**	**+0.7**
IGRV	**Grindav??k**	**0.66**	**255**	P	**Pg**	**23 14 39.8**	**-0.8**
IVES	**Vestmannaeyjar**	**0.68**	**151**	P	**Pg**	**23 14 40.8**	**-0.2**
IVES				S	**Sg**	**23 14 50.4**	**+0.7**
IASB	**`sbjarnarst**	**0.73**	**350**	P	**Pg**	**23 14 41.4**	**-0.7**
IASB				S	**Sg**	**23 14 51.6**	**+0.1**
INYL	**Nylenda**	**0.76**	**266**	P	**Pg**	**23 14 41.3**	**-1.3**
INYL				S	**Sg**	**23 14 51.7**	**-0.7**
IESK	**Eystri-Skogar**	**0.86**	**125**	P	**Pg**	**23 14 43.7**	**-0.9**
IESK				S	**Sg**	**23 14 55.6**	**-0.1**
IVAT	**Vatnsfell**	**0.94**	**79**	P	**Pg**	**23 14 45.0**	**-1.0**
IVAT				S	**Sg**	**23 14 58.0**	**-0.1**
IHVE	**Hveravellir**	**1.05**	**36**	P	**Pg**	**23 14 46.6**	**-1.6**
IHVE				S	**Sg**	**23 15 01.1**	**-0.7**
IHVO	**Lagu-Hvolar**	**1.09**	**117**	P	**Pg**	**23 14 47.8**	**-1.1**
IHVO				S	**Sg**	**23 15 03.0**	**0.0**
ISNB	**Snabyli**	**1.10**	**105**	P	**Pg**	**23 14 47.6**	**-1.5**
ISNB				S	**Sg**	**23 15 02.8**	**-0.5**
ISKR	**Skrokkalda**	**1.27**	**64**	P	**Pg**	**23 14 50.6**	**-1.7**
ISKR				S	**Sg**	**23 15 07.9**	**-0.8**
IKAL	**Kalfafell**	**1.47**	**92**	P	**Pn**	**23 14 53.9**	**-1.7**
IKAL				S	**Sb**	**23 15 14.4**	**-0.8**
IGRF	**Grimsfjall**	**1.68**	**75**	P	**Pn**	**23 14 57.7**	**-0.8**
IFAG	**Fagurholsmyri**	**1.93**	**93**	P	**Pn**	**23 15 01.1**	**-0.8**
IFAG				S	**Sn**	**23 15 26.9**	**+0.1**
ISVA	**Svartarkot**	**2.08**	**49**	P	**Pn**	**23 15 02.5**	**-1.5**
ISVA				S	**Sn**	**23 15 31.1**	**+0.7**
IHRN	**Hraun**	**2.12**	**10**	P	**Pn**	**23 15 03.4**	**-1.1**
IHRN				S	**Sn**	**23 15 31.4**	**0.0**
IKRE	**Kreppuhraun**	**2.15**	**67**	P	**Pn**	**23 15 03.8**	**-1.1**
IHLA	**Hella**	**2.22**	**29**	P	**Pn**	**23 15 05.5**	**-0.4**
IHLA				S	**Sn**	**23 15 35.8**	**+1.9**
IMKO	**Mokollar**	**2.24**	**63**	P	**Pn**	**23 15 05.3**	**-0.8**
IMKO				S	**Sn**	**23 15 36.0**	**+1.8**
IBRU	**Bruarjokull**	**2.28**	**67**	P	**Pn**	**23 15 06.2**	**-0.5**
IBRU				S	**Sn**	**23 15 37.4**	**+2.0**
ISIG	**Siglufjorour**	**2.29**	**22**	P	**Pn**	**23 15 06.3**	**-0.5**
ISIG				S	**Sn**	**23 15 36.6**	**+1.0**
IGRA	**Granastaoir**	**2.39**	**36**	P	**Pn**	**23 15 08.3**	**+0.1**
IHVA	**Hvannstoosfjol**	**2.41**	**65**	P	**Pn**	**23 15 08.2**	**-0.3**
IVSH	**V-Sauoahnukur**	**2.42**	**69**	P	**Pn**	**23 15 08.4**	**-0.3**
IVSH				S	**Sn**	**23 15 41.6**	**+2.7**
IKVO	**Krokottuvotn**	**2.44**	**44**	P	**Pn**	**23 15 08.2**	**-0.7**
IADA	**Aoalbol**	**2.55**	**65**	P	**Pn**	**23 15 10.7**	**+0.3**
IHED	**Heoinshofoi**	**2.59**	**36**	P	**Pn**	**23 15 11.2**	**+0.3**
IGRS	**Grimsstaoir**	**2.64**	**50**	P	**Pn**	**23 15 11.9**	**+0.3**

SCO	**Scoresbysund**	**6.49**	**357**	*i* P	**Pb**	**23 16 14.4**	**-7.2**
SCO				*e*S	**Sb**	**23 17 32.5**	**-7.0**
SCO	**Scoresbysund**	**6.49**	**357**	*i* P	**Sb**	**23 17 42.2**	**+2.7**

*IDC **08** 23:20:04.5±1.1, 41°.18S×105°.59W, h0km, mb3.8/5, mb1 4.2/5, mb1mx3.9/14, mbtmp3.8/5, MS3.3/1, Ms1 3.3/1, ms1mx2.8/22, Error ellipse: s-maj=49.3km s-min=29.5km az=33.0*
*NEIC **08** 23:20:05.9±1.1, 41°.17S×105°.64W, h10km, mb4.1/3, Error ellipse: s-maj=36.8km s-min=24.7km az=210.0*
ISC 08 23:20:08.0±3.0, 40°.9S±0°.5×105°.4W±0°.5, h10km, n15, σ0§63/9, mb3.8/6, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**26.28**	**101**	P	**P**	**23 25 44.2**	**+0.6**
	2.0nm,0.9s,mb3.7,baz=259,slow=8.2,SNR=3.0						
PLCA				LR	LR	23 34 09.4	
	comp=Z,65nm,19.3s,baz=279,slow=32						
PLCA	**Paso Flores**	**26.28**	**101**	*e*P	**P**	**23 25 43.9**	**+0.4**
	4.1nm,1.0s,mb3.9						
PLCA				LR	LR	23 34 09.4	
CPUP	**Villa Florida**	**42.09**	**85**	P	**P**	**23 27 59.7**	**-0.5**
	0.8nm,0.7s,mb3.5,baz=227,slow=9.0,SNR=4.3						
CPUP	**Villa Florida**	**42.09**	**85**	*e*P	**P**	**23 27 59.2**	**-1.0**
	2.7nm,0.4s,mb4.2						
OTAV	**Otavalo**	**47.73**	**38**	*e*P	**P**	**23 28 45.6**	**+0.4**
	0.9nm,0.5s,mb4.1						
TXAR	**Lajitas Array**	**69.93**	**2**	P	**P**	**23 31 19.1**	**-0.1**
	0.3nm,0.6s,mb3.4,baz=179,slow=8.4,SNR=4.3						
NVAR	**Mina Array Bea**	**79.86**	**350**	P	**P**	**23 32 17.2**	**+0.8**
	0.3nm,0.5s,mb3.4,baz=180,slow=8.1,SNR=3.4						
NVAR	**Mina Array Bea**	**79.86**	**350**	P	**P**	**23 32 17.2**	**+0.8**
PDAR	**Pinedale Array**	**83.40**	**357**	P	**P**	**23 32 34.1**	**-0.9**
	1.0nm,0.7s,mb3.9,baz=161,slow=6.3,SNR=7.1						
FINES	**FINESS Array B**	**144.45**	**38**	PKP	PKPdf	23 39 40.0	-3.5
	3.0nm,0.6s,baz=302,slow=3.6,SNR=10						
AKASG	**Malin Array Be**	**147.38**	**57**	PKP	PKPdf	23 39 44.8	-4.0
	0.5nm,0.3s,baz=298,slow=2.7,SNR=5.2						
AKASG				PKPbc	PKPbc	23 39 49.0	-2.2
	0.3nm,0.3s,baz=273,slow=3.2,SNR=4.6						
MMAI	**Mount Meron Ar**	**147.93**	**92**	PKPbc	PKPbc	23 39 50.2	-3.2
	1.2nm,0.7s,baz=236,slow=1.6,SNR=5.1						
BRTR	**Keskin Array B**	**148.96**	**79**	PKPbc	PKPbc	23 39 53.3	-2.6
	1.5nm,0.8s,baz=207,slow=3.7,SNR=9.9						
CMAR	**Chiang Mai Arr**	**149.37**	**230**	PKPbc	PKPbc	23 39 55.5	-1.9
	2.3nm,1.0s,baz=196,slow=2.2,SNR=8.3						
ZALV	**Zalesovo Beam**	**165.28**	**336**	PKPab	PKPab	23 41 09.3	-0.1
	0.2nm,0.2s,baz=27,slow=4.2,SNR=3.8						

*THE **08** 23:23:36.8, 37°.94N×21°.49E, h0km±1km, ML3.5/14, Error ellipse: s-maj=1.5km s-min=0.5km az=207.0*
*CSEM **08** 23:23:36.8, 37°.94N×21°.49E, h0km, ML3.5/14, After THE*
*ISCJB **08** 23:23:36.3±0.5, 37°.92N±0°.03×21°.48E±0°.02, h1km±4km, Error ellipse: s-maj=4.4km s-min=3.2km az=4.6*
ISC 08 23:23:36.9±0.5, 37°.92N±0°.03×21°.47E±0°.02, h4km±4km, n56, σ0§92/92, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.44**	**34**	P	**Pg**	**23 23 45.5**	**+0.2**
UPR				S	**Sg**	**23 23 50.5**	**-0.6**
UPR	**University Cam**	**0.44**	**34**	P	**Pg**	**23 23 45.5**	**+0.2**
UPR				S	**Sg**	**23 23 50.5**	**-0.6**
LAKA	**Lakka**	**0.51**	**51**	P	**Pg**	**23 23 46.4**	**-0.3**
LAKA				S	**Sg**	**23 23 53.7**	**+0.3**
LAKA	**Lakka**	**0.51**	**51**	P	**Pg**	**23 23 46.4**	**-0.3**
LAKA				S	**Sg**	**23 23 53.7**	**+0.3**
KFL	**Anninata**	**0.57**	**290**	P	**Pg**	**23 23 48.1**	**+0.2**
KFL				S	**Sg**	**23 23 56.5**	**+1.2**
EFP	**Efpalio**	**0.61**	**34**	P	**Pg**	**23 23 47.9**	**-0.7**
EFP				S	**Sg**	**23 23 56.1**	**-0.4**
EFP	**Efpalio**	**0.61**	**34**	P	**Pg**	**23 23 47.9**	**-0.7**
EFP				S	**Sg**	**23 23 56.1**	**-0.4**
TRIZ	**Trizonia**	**0.65**	**47**	P	**Pg**	**23 23 48.7**	**-0.6**
TRIZ				S	**Sg**	**23 23 58.2**	**+0.4**
TRIZ	**Trizonia**	**0.65**	**47**	P	**Pg**	**23 23 48.7**	**-0.6**
TRIZ				S	**Sg**	**23 23 58.2**	**+0.4**
GUR	**Goura**	**0.69**	**88**	P	**Pg**	**23 23 49.3**	**-0.8**
GUR				S	**Sg**	**23 23 59.8**	**+0.8**
GUR	**Goura**	**0.69**	**88**	P	**Pg**	**23 23 49.3**	**-0.8**
GUR				S	**Sg**	**23 23 59.8**	**+0.8**
KALE	**Kalithea**	**0.71**	**48**	P	**Pg**	**23 23 49.7**	**-0.7**
KALE				S	**Sg**	**23 24 00.1**	**+0.5**
KALE	**Kalithea**	**0.71**	**48**	P	**Pg**	**23 23 49.7**	**-0.7**
KALE				S	**Sg**	**23 24 00.1**	**+0.5**
VLS	**Valsamata**	**0.74**	**291**	P	**Pg**	**23 23 50.5**	**-0.6**
VLS				S	**Sg**	**23 24 02.4**	**+1.6**
VLS	**Valsamata**	**0.74**	**291**	P	**Pg**	**23 23 50.5**	**-0.6**
VLS				S	**Sg**	**23 24 02.4**	**+1.6**
ITM	**Ithomi**	**0.82**	**154**	P	**Pg**	**23 23 52.9**	**+0.3**
ITM				S	**Sg**	**23 24 07.6**	**+4.3**
ITM	**Ithomi**	**0.82**	**154**	P	**Pg**	**23 23 52.9**	**+0.3**
ITM				S	**Sg**	**23 24 07.6**	**+4.3**
VLX	**Vlachokerasia**	**0.91**	**127**	P	**Pg**	**23 23 54.3**	**+0.1**
VLX				S	**Sg**	**23 24 07.4**	**+1.5**
VLX	**Vlachokerasia**	**0.91**	**127**	P	**Pg**	**23 23 54.3**	**+0.1**
VLX				S	**Sg**	**23 24 07.4**	**+1.5**
DSF	**Desfina**	**0.97**	**59**	P	**Pg**	**23 23 54.1**	**-1.3**
DSF				S	**Sg**	**23 24 08.4**	**+0.5**
DSF	**Desfina**	**0.97**	**59**	P	**Pg**	**23 23 54.1**	**-1.3**
DSF				S	**Sg**	**23 24 08.4**	**+0.5**
PYL	**PYLOS**	**1.04**	**168**	P	**Pg**	**23 23 56.5**	**-0.4**
PYL	**PYLOS**	**1.04**	**168**	P	**Pg**	**23 23 56.5**	**-0.4**
LKD2	**Lefkada island**	**1.08**	**324**	P	**Pg**	**23 23 56.4**	**-1.2**
LKD2				S	**Sg**	**23 24 12.3**	**+0.7**
LKD2	**Lefkada island**	**1.08**	**324**	P	**Pg**	**23 23 56.4**	**-1.2**
LKD2				S	**Sg**	**23 24 12.3**	**+0.7**
LTK	**Loutraki**	**1.19**	**85**	P	**Pg**	**23 23 58.4**	**-1.2**
LTK				S	**Sg**	**23 24 16.0**	**+1.0**
LTK	**Loutraki**	**1.19**	**85**	P	**Pg**	**23 23 58.4**	**-1.2**
LTK				S	**Sg**	**23 24 16.0**	**+1.0**
AGG	**Agios Georgios**	**1.29**	**31**	S	**Sg**	**23 24 18.4**	**0.0**
AGG	**Agios Georgios**	**1.29**	**31**	S	**Sg**	**23 24 18.4**	**0.0**
LKR	**Lokris**	**1.41**	**58**	P	**Pn**	**23 24 01.9**	**-1.4**
LKR				S	**Sb**	**23 24 23.0**	**+1.0**
LKR	**Lokris**	**1.41**	**58**	P	**Pn**	**23 24 01.9**	**-1.4**
LKR				S	**Sb**	**23 24 23.0**	**+1.0**
ATAL	**Atalanti**	**1.44**	**57**	P	**Pn**	**23 24 02.5**	**-1.3**
ATAL				S	**Sb**	**23 24 24.5**	**+1.5**
ATAL	**Atalanti**	**1.44**	**57**	P	**Pn**	**23 24 02.5**	**-1.3**
ATAL				S	**Sb**	**23 24 24.5**	**+1.5**
THL	**Klokotos Trika**	**1.70**	**14**	P	**Pn**	**23 24 06.9**	**-0.4**
THL				S	**Sn**	**23 24 29.6**	**+0.1**
THL	**Klokotos Trika**	**1.70**	**14**	P	**Pn**	**23 24 06.9**	**-0.4**
THL				S	**Sn**	**23 24 29.6**	**+0.1**
ATHU	**Athens Univers**	**1.83**	**88**	P	**Pn**	**23 24 08.2**	**-0.9**
ATHU				S	**Sn**	**23 24 33.5**	**+0.8**
ATHU	**Athens Univers**	**1.83**	**88**	P	**Pn**	**23 24 08.2**	**-0.9**
ATHU				S	**Sn**	**23 24 33.5**	**+0.8**
IGT	**Igoumenitsa**	**1.84**	**331**	P	**Pn**	**23 24 09.2**	**-0.1**
IGT	**Igoumenitsa**	**1.84**	**331**	P	**Pn**	**23 24 09.2**	**-0.1**
MEV	**Metsovon**	**1.87**	**354**	P	**Pn**	**23 24 11.1**	**+1.4**
MEV	**Metsovon**	**1.87**	**354**	P	**Pn**	**23 24 11.1**	**+1.4**
XOR	**Xorichti**	**1.98**	**42**	P	**Pn**	**23 24 10.1**	**-1.0**
XOR				S	**Sn**	**23 24 36.8**	**+0.5**
XOR	**Xorichti**	**1.98**	**42**	P	**Pn**	**23 24 10.1**	**-1.0**
XOR				S	**Sn**	**23 24 36.8**	**+0.5**
KEK	**Kerkira**	**2.22**	**324**	P	**Pn**	**23 24 14.1**	**-0.4**
KEK	**Kerkira**	**2.22**	**324**	P	**Pn**	**23 24 14.1**	**-0.4**
AOS	**Alonnisos**	**2.26**	**56**	P	**Pn**	**23 24 13.5**	**-1.6**
AOS	**Alonnisos**	**2.26**	**56**	P	**Pn**	**23 24 13.5**	**-1.6**
LIT	**Litokhoron**	**2.32**	**20**	P	**Pn**	**23 24 17.5**	**+1.7**
LIT	**Litokhoron**	**2.32**	**20**	P	**Pn**	**23 24 17.5**	**+1.7**
FNA	**Florina**	**2.86**	**359**	P	**Pn**	**23 24 23.9**	**+0.6**
FNA	**Florina**	**2.86**	**359**	P	**Pn**	**23 24 23.9**	**+0.6**
SOH	**Sokhos**	**3.25**	**26**	P	**Pn**	**23 24 29.2**	**+0.6**
SOH	**Sokhos**	**3.25**	**26**	P	**Pn**	**23 24 29.2**	**+0.6**
SRS	**Serrai**	**3.59**	**27**	P	**Pn**	**23 24 33.3**	**0.0**
SRS	**Serrai**	**3.59**	**27**	P	**Pn**	**23 24 33.3**	**0.0**
STON	**Ston**	**5.72**	**331**	*i* Pn	**Pn**	**23 24 59.9**	**-2.7**
STON				Sn	**Sn**	**23 26 01.8**	**-7.0**

*ISK **08** 23:26:12.0, 36°.98N×29°.21E, h5km, MD3.0*
*DDA **08** 23:26:13.6, 36°.99N×29°.19E, h20km±2km, Md3.0*
*CSEM **08** 23:26:13.5±0.1, 36°.99N×29°.20E, h5km, MD3.0, Error ellipse: s-maj=3.2km s-min=2.8km az=7.0*

*ISCJB **08** 23:26:13.8±0.4, 36°.98N±0°.03×29°.21E±0°.03, h10km, Error ellipse: s-maj=4.2km s-min=3.5km az=154.1*
ISC 08 23:26:13.8±0.5, 36°.99N±0°.03×29°.19E±0°.03, h4km±5km, n44, σ0§74/60, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**56**	*e*PG	**Pg**	**23 26 19.1**	**-0.5**
GLHS				*e*SG	**Sg**	**23 26 24.2**	**+0.7**
GLHS	**Glhisar (BURDU**	**0.30**	**56**	*e*Pg	**Pg**	**23 26 19.1**	**-0.5**
GLHS				*e*Sg	**Sg**	**23 26 24.2**	**+0.6**
FETY	**Fethiye**	**0.36**	**193**	*e*PG	**Pg**	**23 26 20.1**	**-0.6**
FETY				*e*SG	**Sg**	**23 26 26.4**	**+1.0**
FETY	**Fethiye**	**0.36**	**193**	*e*Pg	**Pg**	**23 26 20.1**	**-0.6**
FETY				*e*Sg	**Sg**	**23 26 26.4**	**+1.0**
GOLH	**Golhisar**	**0.39**	**50**	*i* P	**Pg**	**23 26 21.1**	**-0.2**
GOLH				*i* S	**Sg**	**23 26 28.1**	**+1.7**
GOLH	**Golhisar**	**0.39**	**50**	*i* P	**Pg**	**23 26 21.1**	**-0.2**
TURN	**Turunc**	**0.48**	**256**	*i* P	**Pg**	**23 26 28.4**	**+5.4**
TURN				*i* S	**Sg**	**23 26 40.5**	**+11**
ELL	**Elmali**	**0.63**	**112**	*e*PG	**Pg**	**23 26 24.9**	**-0.9**
ELL	**Elmali**	**0.63**	**112**	*e*Pg	**Pg**	**23 26 24.9**	**-0.9**
DNZL	**Cakiroluk**	**0.71**	**351**	*i* P	**Pg**	**23 26 26.4**	**-1.0**
DNZL				*i* S	**Sg**	**23 26 35.8**	**-0.8**
DNZL	**Cakiroluk**	**0.71**	**351**	*i* P	**Pg**	**23 26 26.4**	**-1.0**
DNZL				*i* S	**Sg**	**23 26 35.8**	**-0.8**
YER	**Yerkesik**	**0.74**	**282**	*e*PG	**Pg**	**23 26 28.0**	**+0.1**
YER	**Yerkesik**	**0.74**	**282**	*e*Pg	**Pg**	**23 26 28.0**	**+0.1**
DENT	**Denizli**	**0.77**	**351**	*e*PG	**Pg**	**23 26 27.7**	**-1.0**
DENT	**Denizli**	**0.77**	**351**	*e*Pg	**Pg**	**23 26 27.7**	**-0.9**
AKAS	**Kas**	**0.83**	**156**	*i* P	**Pg**	**23 26 29.7**	**+0.1**
AKAS				*i* S	**Sg**	**23 26 48.6**	**+8.3**
AKAS	**Kas**	**0.83**	**156**	*i* P	**Pg**	**23 26 29.7**	**+0.1**
KORT	**Korkueli**	**0.93**	**89**	*i* P	**Pg**	**23 26 32.4**	**+0.7**
KORT				*i* S	**Sg**	**23 26 48.2**	**+4.4**
KORT	**Korkueli**	**0.93**	**89**	*i* P	**Pg**	**23 26 32.4**	**+0.7**
MLSB	**Milas**	**1.17**	**286**	*e*PN	**Pn**	**23 26 35.9**	**-1.0**
MLSB	**Milas**	**1.17**	**286**	*e*Pn	**Pn**	**23 26 35.9**	**-0.9**
BCK	**Bucak**	**1.22**	**67**	*e*PN	**Pn**	**23 26 36.5**	**-1.1**
BCK	**Bucak**	**1.22**	**67**	*e*Pn	**Pn**	**23 26 36.5**	**-1.0**
AYDN	**Tasoluk**	**1.24**	**303**	*i* P	**Pg**	**23 26 37.4**	**-0.1**
AYDN				*i* S	**Sg**	**23 26 54.3**	**+0.7**
AYDN	**Tasoluk**	**1.24**	**303**	*i* P	**Pg**	**23 26 37.4**	**-0.1**
AYDN				*i* S	**Sg**	**23 26 54.3**	**+0.7**
DAT	**Datca**	**1.31**	**259**	*e*PN	**Pn**	**23 26 38.7**	**-0.2**
DAT	**Datca**	**1.31**	**259**	*e*Pn	**Pn**	**23 26 38.7**	**-0.2**
BDRM	**Kayabasi**	**1.40**	**274**	*i* P	**Pn**	**23 26 40.6**	**+0.6**
BDRM				*i* S	**Sb**	**23 26 59.5**	**+1.0**
BDRM	**Kayabasi**	**1.40**	**274**	*i* P	**Pn**	**23 26 40.6**	**+0.6**
BDRM				*i* S	**Sb**	**23 26 59.5**	**+1.0**
KHAL	**Karahalli**	**1.40**	**10**	*i* P	**Pn**	**23 26 39.9**	**-0.1**
KHAL				*i* S	**Sb**	**23 27 00.5**	**+1.7**
KHAL	**Karahalli**	**1.40**	**10**	*i* P	**Pn**	**23 26 39.9**	**-0.2**
KHAL				*i* S	**Sb**	**23 27 00.4**	**+1.7**
SUTC	**Sutluce-Ispart**	**1.53**	**71**	*e*PN	**Pn**	**23 26 41.8**	**0.0**
SUTC	**Sutluce-Ispart**	**1.53**	**71**	*e*Pn	**Pn**	**23 26 41.8**	**0.0**
KULA	**Kula-Manisa**	**1.58**	**345**	*e*PN	**Pn**	**23 26 42.3**	**-0.3**
KULA	**Kula-Manisa**	**1.58**	**345**	*e*Pn	**Pn**	**23 26 42.3**	**-0.2**
SHUT	**Suhut-Afyon**	**1.90**	**34**	*e*PN	**Pn**	**23 26 46.8**	**-0.2**
SHUT	**Suhut-Afyon**	**1.90**	**34**	*e*Pn	**Pn**	**23 26 46.8**	**-0.2**
IZM	**Izmir**	**2.08**	**313**	*e*PN	**Pn**	**23 26 49.6**	**+0.3**
DEMI	**Demirci**	**2.08**	**350**	*i* P	**Pn**	**23 26 49.4**	**0.0**
DEMI	**Demirci**	**2.08**	**350**	*i* P	**Pn**	**23 26 49.4**	**-0.1**
ALT	**Altintas**	**2.19**	**19**	*e*PN	**Pn**	**23 26 50.6**	**-0.3**
ALT	**Altintas**	**2.19**	**19**	*e*Pn	**Pn**	**23 26 50.6**	**-0.3**
HDMB	**Hadim**	**2.64**	**90**	*e*PN	**Pn**	**23 26 57.2**	**+0.1**
HDMB	**Hadim**	**2.64**	**90**	*e*Pn	**Pn**	**23 26 57.2**	**0.0**

*NIED **08** 23:33:00, 46°.80N×152°.80E, h23km, Mw4.0 Best double couple: M0 1.03000×10^15 NP1:φs307.00000°, δ84.00000°, λ33.00000°. NP2:φs213.00000°, δ57.00000°, λ172.00000°.*
*SZGRF **08** 23:33:50.2, 46°.94N×154°.88E, h33km, mb4.3, East of Kuril Islands,

INK	Inuvik	41.85	32	P	P	23 41 39.0	+0.1
	comp=Z,1.1nm,0.6s,mb3.6,baz=257,slow=2.1,SNR=6.6						
INK	Inuvik	41.85	32	*eP*	P	23 41 38.6	-0.4
ZALV	Zalesovo Beam	42.17	306	P	P	23 41 39.9	-1.9
	comp=Z,0.6nm,0.4s,mb3.6,baz=69,slow=6.2,SNR=3.7						
ZALV				PcP	PcP	23 43 34.9	-0.2
	comp=Z,0.7nm,0.6s,baz=79,slow=3.2,SNR=4.7						
ZALV				LR	LR	00 00 30.4	
	comp=Z,49nm,18.2s,MS3.4,baz=26,slow=38						
ZALV	Zalesovo Beam	42.17	306	P	P	23 41 39.9	-1.9
ZALV						23 43 34.9	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
ZALV				MLR	MLR		
	comp=Z,49nm,18.2s,MS3.4						
MKAR	Makanchi Array	46.48	297	P	P	23 42 15.6	-0.6
	comp=Z,0.7nm,0.6s,mb3.8,baz=48,slow=12,SNR=8.1						
MKAR				PcP	PcP	23 43 49.1	-0.9
	comp=Z,0.9nm,0.8s,baz=75,slow=2.5,SNR=5.6						
MKAR				LR	LR	00 03 03.1	
	comp=Z,63nm,19.0s,MS3.6,baz=354,slow=38						
MKAR	Makanchi Array	46.48	297	P	P	23 42 15.6	-0.7
MKAR						23 43 49.1	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR				MLR	MLR		
	comp=Z,63nm,19.0s						
KURK	Kurchatov	46.92	303	*eP*	P	23 42 18.7	-1.0
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
KURK	Kurchatov	46.92	303	*eP*	P	23 42 18.7	-1.0
	comp=Z,1.1nm,0.5s,mb4.0						
LSA	Lhasa	49.79	273	*eP*	P	23 42 43.1	+1.1
BVAR	Borovoye Array	50.44	309	P	P	23 42 46.3	-0.3
	comp=Z,0.6nm,0.4s,mb3.9,baz=48,slow=8.0,SNR=5.6						
BVAR				PcP	PcP	23 44 03.7	-0.4
	comp=Z,0.6nm,0.5s,baz=79,slow=2.2,SNR=5.3						
BVAR	Borovoye Array	50.44	309	*eP*	P	23 42 46.2	-0.4
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BRVK	Borovoye	50.48	309	*eP*	P	23 42 46.1	-0.8
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
BRVK	Borovoye	50.48	309	*eP*	P	23 42 46.1	-0.8
	comp=Z,0.9nm,0.6s,mb4.0						
YKA	Yellowknife Ar	51.15	37	P	P	23 42 51.4	-0.5
	comp=Z,0.4nm,0.6s,mb3.5,baz=293,slow=7.3,SNR=3.4						
CHTO	Chiang Mai	51.67	256	*eP*	P	23 42 56.4	+0.1
CHTO				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
CHTO	Chiang Mai	51.67	256	*eP*	P	23 42 56.4	+0.2
	comp=Z,2.1nm,0.7s,mb4.2						
CMAR	Chiang Mai Arr	51.92	256	P	P	23 42 59.0	+0.8
	comp=Z,1.8nm,0.9s,mb4.0,baz=38,slow=7.5,SNR=8.3						
CMAR	Chiang Mai Arr	51.92	256	P	P	23 42 59.0	+0.8
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
EKS2	Erkin-Say	53.79	296	P	P	23 43 11.4	-0.3
AML	Almayashu	54.14	296	*eP*	P	23 43 14.8	+0.6
ARU	Arti	54.63	317	*eP*	P	23 43 17.0	-0.5
ARU				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
ARU	Arti	54.63	317	*eP*	P	23 43 17.0	-0.6
	comp=Z,1.8nm,0.4s,mb4.5						
FINES	FINESS Array B	63.76	334	P	P	23 44 20.1	-0.4
	comp=Z,2.7nm,0.6s,mb4.5,baz=34,slow=10,SNR=13						
FINES	FINESS Array B	63.76	334	P	P	23 44 20.2	-0.4
FINES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
PDAR	Pinedale Array	65.09	54	P	P	23 44 30.2	+0.7
	comp=Z,0.3nm,0.3s,mb3.8,baz=330,slow=3.1,SNR=3.8						
NB2	NORSAR Subarra	68.00	341	P	P	23 44 47.0	-0.8
	comp=Z,1.3nm,0.6s,mb4.1,baz=28,slow=6.5						
NOA	NORSAR Array B	68.00	341	P	P	23 44 47.5	-0.2
	comp=Z,2.1nm,0.7s,mb4.3,baz=28,slow=6.3,SNR=6.1						
NOA	NORSAR Array B	68.00	341	P	P	23 44 47.6	-0.2
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
WRAB	Tennant Creek	68.42	198	P	P	23 44 51.9	+1.1
KIV	Kislovodsk	70.40	314	P	P	23 45 02.6	-0.3
KIV	Kislovodsk	70.40	314	P	P	23 45 02.6	-0.4
AKASG	Malin Array Be	71.21	326	P	P	23 45 07.0	-0.8
	comp=Z,2.4nm,0.4s,mb4.4,baz=36,slow=6.9,SNR=6.3						
AKASG	Malin Array Be	71.21	326	P	P	23 45 07.0	-0.8
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
STHS	Stebnicka Huta	75.20	329	*eP*	P	23 45 32.4	+1.1
STHS				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
STHS	Stebnicka Huta	75.20	329	*eP*	P	23 45 32.4	+1.1
	comp=Z,1.7nm,0.7s,mb4.1						
BUR08	Bucovina Ar. S	75.24	326	*eP*	P	23 45 31.7	+0.2
KOLS	Kolonicke sedl	75.25	329	*eP*	P	23 45 32.1	+0.5
CRVS	Cervenica-Dubn	75.56	329	*eP*	P	23 45 33.2	-0.2
CRVS				pmax	pmax		
	comp=Z,4.0nm,1.7s,mb4.1						
CRVS	Cervenica-Dubn	75.56	329	*eP*	P	23 45 33.2	-0.2
	comp=Z,4.2nm,1.7s,mb4.1						
DPC	Dobruska-Polom	76.04	333	*eP*	P	23 45 36.6	+0.5
DPC	Dobruska-Polom	76.04	333	*eP*	P	23 45 36.6	+0.5
MORC	Moravsky Berou	76.14	332	*eP*	P	23 45 36.7	0.0
CLL	Collm	76.19	335	*eP*	P	23 45 36.0	-0.9
CLL				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
BRG	Berggiesshubel	76.30	334	*eP*	P	23 45 37.0	-0.6
	comp=Z,1.3nm,0.6s,mb4.0						
BRG	Berggiesshubel	76.30	334	*eP*	P	23 45 37.0	-0.6
BRG				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
VYHS	Vyhne	76.82	330	*eP*	P	23 45 41.2	+0.7
VYHS				*e*		23 45 48.1	
VYHS				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.9						
VYHS	Vyhne	76.82	330	*eP*	P	23 45 41.2	+0.7
	comp=Z,2.0nm,1.3s,mb3.9						
VYHS				*e*		23 45 48.1	
TXAR	Lajitas Array	77.88	60	P	P	23 45 46.1	-0.6
	comp=Z,0.3nm,0.6s,mb3.4,baz=300,slow=4.5,SNR=6.3						
KHC	Kasperske Hory	77.96	334	*eP*	P	23 45 46.9	0.0
	comp=Z,1.0nm,0.6s,mb3.9						
KHC	Kasperske Hory	77.96	334	*eP*	P	23 45 46.9	0.0
BRTR	Keskin Array B	78.00	316	P	P	23 45 47.1	-0.2
	comp=Z,1.3nm,0.8s,mb3.9,baz=86,slow=4.5,SNR=12						
BRTR	Keskin Array B	78.00	316	*eP*	P	23 45 47.9	+0.6
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRTR	Keskin Array B	78.00	316	P	P	23 45 47.1	-0.2
GRF	Grafenberg Arr	78.15	335	*eP*	P	23 45 47.8	-0.1
	comp=Z,3.0nm,0.9s,mb4.2						
GRF	Grafenberg Arr	78.15	335	*eP*	P	23 45 47.8	-0.1
GRF				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
GERES	GERESS Array B	78.17	334	P	P	23 45 47.7	-0.4
	comp=Z,0.7nm,0.6s,mb3.8,baz=36,slow=5.3,SNR=9.8						
GERES	GERESS Array B	78.17	334	P	P	23 45 47.7	-0.4
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MMAI	Mount Meron Ar	82.40	311	P	P	23 46 11.8	+0.7
	comp=Z,1.9nm,0.5s,mb4.3,baz=46,slow=6.3,SNR=11						

IDC 08 23:35:29.4±3.0, 0°.73S×133°.97E, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.5/19, mbtmp3.7/3, ML3.5/1, Error ellipse: s-maj=146.2km s-min=27.0km az=76.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.09	179	P	Pn	23 39 53.6	-1.0
	0.2nm,0.3s,baz=358,slow=11,SNR=6.5						
ASAR	Alice Springs	22.80	180	P	P	23 40 34.2	+0.5
	1.6nm,0.7s,baz=11,slow=11,SNR=9.2						
MKAR	Makanchi Array	65.37	324	P	P	23 46 13.7	0.0
	0.7nm,0.7s,baz=108,slow=6.4,SNR=6.2						

IDC 08 23:40:15.0±3.0, 33°.82S×178°.77W, h0km, mb3.9/2, mb1 4.2/3, mb1mx3.8/16, mbtmp4.0/3, ML3.8/1, Error ellipse: s-maj=74.5km s-min=36.2km az=120.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	5.54	216	Pn	Pn	23 41 39.7	+1.0
	3.2nm,0.3s,baz=84,slow=10,SNR=24						
URZ				Sn	Sn	23 42 42.3	-0.9
	3.8nm,0.3s,baz=108,slow=19,SNR=7.4						
ASAR	Alice Springs	42.39	271	P	P	23 48 11.2	-0.1
	1.2nm,0.8s,baz=114,slow=7.2,SNR=6.3						
WRA	Warramunga Arr	43.69	276	P	P	23 48 21.8	-0.1
	1.2nm,0.7s,baz=122,slow=7.3,SNR=4.6						
FINES	FINESS Array B	148.09	338	PKPbc	PKPbc	00 00 01.0	-0.8
	3.1nm,0.9s,baz=46,slow=5.5,SNR=6.6						

*IDC **08** 23:41:21.1±1.7, 0°.66S×134°.13E, h0km, mb3.9/5, mb1 4.2/7, mb1mx3.9/20, mbtmp4.0/7, ML4.2/2, Error ellipse: s-maj=68.3km s-min=17.9km az=74.0*
*ISCJB **08** 23:41:24.5±0.6, 0°.75S±0°.07×134°.0E±0°.2, h33km, mb3.9/7, Error ellipse: s-maj=22.5km s-min=9.2km az=164.3*
*NEIC **08** 23:41:28.2±2.6, 0°.76S×133°.92E, h49km±24km, mb3.8/5, Error ellipse: s-maj=18.6km s-min=10.0km az=51.0*

ISC 08 23:41:28.2±4.0, 0°.8S±0°.2×133°.9E±0°.2, h49km±39km, n21, σ0°63/21, mb3.9/7, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	11.92	187	Pn	Pn	23 44 16.0	+0.4
FITZ	Fitzroy Crossi	19.01	205	P	Pn	23 45 47.7	+0.4
	0.4nm,0.3s,baz=297,slow=3.5,SNR=8.5						
FITZ	Fitzroy Crossi	19.01	205	*eP*	Pn	23 45 47.1	-0.1
	4.8nm,0.9s						
WRAB	Tennant Creek	19.02	179	*eP*	Pn	23 45 46.9	-0.4
	3.4nm,0.5s						
WRA	Warramunga Arr	19.03	179	P	Pn	23 45 46.2	-1.3
	1.0nm,0.3s,baz=358,slow=11,SNR=30						
WRA	Warramunga Arr	19.03	179	P	Pn	23 45 46.2	-1.3
CTAO	Charters Tower	22.66	149	*eP*	P	23 46 27.6	+2.1
	2.8nm,0.6s,mb3.9						
ASAR	Alice Springs	22.73	180	P	P	23 46 26.0	-0.1
	1.6nm,0.5s,mb3.7,baz=6.6,slow=10,SNR=24						
HNR	Honiara	27.30	109	P	P	23 47 07.7	-0.8
STKA	Stephens Creek	31.75	168	P	P	23 47 48.0	+0.3
	2.4nm,0.8s,mb4.1,baz=339,slow=8.6,SNR=4.8						
STKA	Stephens Creek	31.75	168	*eP*	P	23 47 47.8	0.0
	1.8nm,1.3s,mb3.7						
CMAR	Chiang Mai Arr	39.34	301	P	P	23 48 53.1	+0.1
	0.9nm,0.3s,mb4.0,baz=121,slow=7.1,SNR=10.0						
MK31	Makanchi Array	65.39	324	*eP*	P	23 52 05.6	-0.1
MKAR	Makanchi Array	65.39	324	P	P	23 52 05.9	+0.2
	0.4nm,0.4s,mb3.8,baz=88,slow=12,SNR=9.2						
ZALV	Zalesovo Beam	67.92	331	P	P	23 52 21.4	-0.3
	0.4nm,0.3s,mb3.9,baz=119,slow=9.4,SNR=2.9						
ZALV	Zalesovo Beam	67.92	331	P	P	23 52 21.4	-0.3
UCH	Uchtor	68.36	317	P	P	23 52 24.9	+0.2
KURK	Kurchatov	69.43	326	P	P	23 52 31.1	-0.1
BRVK	Borovoye	75.10	326	*eP*	P	23 53 05.0	0.0
	1.3nm,0.5s,mb4.1						
GNI	Garni	89.87	310	P	P	23 54 22.4	+0.2
KIV	Kislovodsk	91.43	314	*eP*	P	23 54 29.5	+0.1

*ISK **09** 00:14:55.9, 36°.93N×27°.26E, h2km, MD2.9*
*CSEM **09** 00:14:56.6±0.3, 36°.93N×27°.24E, h2km, MD2.9, Error ellipse: s-maj=7.2km s-min=3.4km az=65.0*
*DDA **09** 00:14:56.5, 36°.93N×27°.26E, h6km±2km, Md2.8*
*ISCJB **09** 00:14:56.9±1.4, 36°.94N±0°.04×27°.25E±0°.10, h8km±8km, Error ellipse: s-maj=13.8km s-min=6.5km az=161.9*

ISC 09 00:14:56.9±1.6, 36°.93N±0°.05×27°.2E±0°.1, h4km±11km, n17, σ0°55/26, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	Datca	0.34	126	*e*PG	Pg	00 15 03.1	-0.5
DAT				*e*SG	Sg	00 15 08.9	+0.8
DAT	Datca	0.34	126	*e*Pg	Pg	00 15 03.1	-0.5
DAT				*e*Sg	Sg	00 15 08.9	+0.8
MLSB	Milas	0.57	50	*e*PG	Pg	00 15 07.8	0.0
MLSB				*e*SG	Sg	00 15 15.8	+0.5
MLSB	Milas	0.57	50	*e*Pg	Pg	00 15 07.8	-0.1
MLSB				*e*Sg	Sg	00 15 15.8	+0.5
GCAM	G?zelcaml?	0.77	0	*i* P	Pg	00 15 11.5	-0.2
GCAM				*i* S	Sg	00 15 22.7	+1.0
GCAM	G?zelcaml?	0.77	0	*i* P	Pg	00 15 11.5	-0.2
GCAM				*i* S	Sg	00 15 22.7	+1.1
YER	Yerkesik	0.87	76	*e*PG	Pg	00 15 13.2	-0.3
YER	Yerkesik	0.87	76	*e*Pg	Pg	00 15 13.2	-0.4
AYDN	Tasoluk	0.89	35	*i* P	Pg	00 15 13.2	-0.9
AYDN				*i* S	Sg	00 15 25.1	-0.5
AYDN	Tasoluk	0.89	35	*i* P	Pg	00 15 13.2	-0.9
AYDN				*i* S	Sg	00 15 25.1	-0.6
TURN	Turunc	1.10	93	*i* P	Pg	00 15 11.9	-6.1
TURN				*i* S	Sg	00 15 24.1	-8.3
BLCB	Balcova	1.46	354	*e*PN	Pn	00 15 24.2	+0.1
BLCB	Balcova	1.46	354	*e*Pn	Pn	00 15 24.2	+0.1
FETY	Fethiye	1.52	101	*e*PN	Pn	00 15 24.8	0.0
FETY	Fethiye	1.52	101	*e*Pn	Pn	00 15 24.8	-0.1
ELL	Elmali	2.16	94	*e*PN	Pn	00 15 33.8	+0.1
ELL	Elmali	2.16	94	*e*Pn	Pn	00 15 33.8	+0.1

*ATH **09** 00:22:49.4, 37°.92N×21°.44E, h21km, MD3.2/19, ML2.6*
*THE **09** 00:22:49.7, 37°.89N×21°.48E, h5km±1km, ML3.5/5, Error ellipse: s-maj=1.6km s-min=0.6km az=115.0*
*NEIC **09** 00:22:49.4, 37°.92N×21°.44E, h22km, ML2.5(ATH), After ATH.*
*ISCJB **09** 00:22:49.4±0.4, 37°.91N±0°.02×21°.46E±0°.03, h7km±3km, Error ellipse: s-maj=4.1km s-min=3.6km az=140.6*
*CSEM **09** 00:22:50.2±0.2, 37°.90N×21°.46E, h20km, ML2.5, Error ellipse: s-maj=5.3km s-min=4.3km az=56.0*

ISC 09 00:22:50.0±0.4, 37°.91N±0°.02×21°.46E±0°.03, h9km±3km, n90, σ0°90/123, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.14	3	*e*Pb	Pg	00 22 54.0	+0.8
RLS				*e*Sb	Sg	00 22 57.7	+2.3
RLS	Riolos of Patr	0.14	3	*e*PB	Pg	00 22 54.0	+0.8
RLS				*e*SB	Sg	00 22 57.7	+2.3
RLS	Riolos of Patr	0.14	3	*e*Pb	Pg	00 22 54.0	+0.8
RLS				*e*Sb	Sg	00 22 57.7	+2.3
UPR	University Cam	0.45	35	P	Pg	00 22 58.9	+0.1
UPR				S	Sg	00 23 05.5	+0.7
UPR	University Cam	0.45	35	*e*PB	Pg	00 22 58.9	+0.1
UPR				*e*SB	Sg	00 23 05.8	+1.0
UPR	University Cam	0.45	35	P	Pg	00 22 58.9	+0.1
UPR				S	Sg	00 23 05.5	+0.7
UPR				*e*Sb	Sg	00 23 05.8	+1.0
LAKA	Lakka	0.53	51	P	Pg	00 22 59.7	-0.5
LAKA				S	Sg	00 23 07.5	+0.4
LAKA	Lakka	0.53	51	P	Pg	00 22 59.7	-0.5
LAKA				S	Sg	00 23 07.5	+0.4
KFL	Anninata	0.56	291	P	Pg	00 23 01.0	+0.1
EFP	Efpalio	0.62	34	P	Pg	00 23 01.3	-0.7
EFP				S	Sg	00 23 11.4	+1.2
EFP	Efpalio	0.62	34	*e*PB	Pg	00 23 01.3	-0.7
EFP	Efpalio	0.62	34	P	Pg	00 23 01.3	-0.7
EFP				S	Sg	00 23 11.4	+1.2
TRIZ	Trizonia	0.66	47	P	Pg	00 23 02.0	-0.8
TRIZ	Trizonia	0.66	47	P	Pg	00 23 02.0	-0.8
GUR	Goura	0.70	88	P	Pg	00 23 02.5	-1.0
GUR				S	Sg	00 23 12.0	-0.7
GUR	Goura	0.70	88	*e*PB	Pg	00 23 02.6	-0.9
GUR				*e*SN	Sg	00 23 13.8	+1.1
GUR	Goura	0.70	88	*e*Pb	Pg	00 23 02.6	-0.9
GUR				S	Sg	00 23 12.0	-0.7
KALE	Kalithea	0.72	48	P	Pg	00 23 02.9	-1.0
KALE				S	Sg	00 23 13.8	+0.5
KALE	Kalithea	0.72	48	P	Pg	00 23 02.9	-1.0
KALE				S	Sg	00 23 13.8	+0.5
VLS	Valsamata	0.73	291	P	Pg	00 23 03.5	-0.6
VLS				S	Sg	00 23 15.2	+1.5
VLS	Valsamata	0.73	291	P	Pg	00 23 03.5	-0.6
VLS				S	Sg	00 23 15.2	+1.5
ITM	Ithomi	0.82	153	*e*Pn	Pg	00 23 05.8	0.0
ITM				*e*Sn	Sg	00 23 17.2	+0.7
ITM	Ithomi	0.82	153	P	Pg	00 23 05.2	-0.6
ITM	Ithomi	0.82	153	*e*PN	Pg	00 23 05.8	0.0
ITM				*e*SN	Sg	00 23 17.2	+0.7
ITM	Ithomi	0.82	153	P	Pg	00 23 05.2	-0.6
ITM	Ithomi	0.82	153	*e*Pn	Pg	00 23 05.8	0.0
VLX	Vlachokerasia	0.91	126	P	Pg	00 23 06.5	-1.0
VLX				S	Sg	00 23 19.2	-0.2
VLX	Vlachokerasia	0.91	126	*e*PN	Pg	00 23 07.8	+0.3
VLX				*e*SN	Sg	00 23 20.0	+0.6
VLX	Vlachokerasia	0.91	126	P	Pg	00 23 06.5	-1.0
VLX	Vlachokerasia	0.91	126	*e*Pn	Pg	00 23 07.8	+0.3
VLX				S	Sg	00 23 19.2	-0.2
VLX				*e*Sn	Sg	00 23 20.0	+0.6
DSF	Desfina	0.98	59	P	Pg	00 23 07.3	-1.5
DSF	Desfina	0.98	59	P	Pg	00 23 07.3	-1.5
EVR	Evrytania	1.04	15	*e*Pn	Pg	00 23 08.6	-1.4
EVR	Evrytania	1.04	15	*e*PN	Pg	00 23 08.6	-1.4
EVR	Evrytania	1.04	15	*e*Pn	Pg	00 23 08.6	-1.4
PYL	PYLOS	1.04	167	P	Pg	00 23 09.1	-0.9
PYL	PYLOS	1.04	167	*e*PN	Pg	00 23 09.4	-0.6
PYL	PYLOS	1.04	167	P	Pg	00 23 09.1	-0.9
PYL	PYLOS	1.04	167	*e*Pn	Pg	00 23 09.4	-0.6
LKD2	Lefkada island	1.08	325	P	Pg	00 23 09.4	-1.3
LKD2	Lefkada island	1.08	325	P	Pg	00 23 09.4	-1.3
LTK	Loutraki	1.20	84	P	Pb	00 23 11.4	-1.4
LTK	Loutraki	1.20	84	*e*PB	Pb	00 23 11.4	-1.4
LTK	Loutraki	1.20	84	P	Pb	00 23 11.4	-1.4
AGG	Agios Georgios	1.30	32	*e*Pn	Pn	00 23 13.3	-1.0
AGG	Agios Georgios	1.30	32	P	Pn	00 23 13.2	-1.1
AGG	Agios Georgios	1.30	32	*e*PN	Pn	00 23 13.3	-1.0
AGG	Agios Georgios	1.30	32	*e*Pn	Pn	00 23 13.3	-1.0
LKR	Lokris	1.42	58	*e*Pn	Pn	00 23 16.1	+0.2
LKR				*e*Sn	Sn	00 23 34.8	+0.1
LKR	Lokris	1.42	58	P	Pn	00 23 14.9	-1.0
LKR	Lokris	1.42	58	*e*PN	Pn	00 23 16.1	+0.2
LKR				*e*SN	Sn	00 23 34.8	+0.1
LKR	Lokris	1.42	58	P	Pn	00 23 14.9	-1.0
LKR	Lokris	1.42	58	*e*Pn	Pn	00 23 16.1	+0.2
LKR				*e*Sn	Sn	00 23 34.8	+0.1
ATAL	Atalanti	1.46	57	P	Pn	00 23 15.7	-0.7
ATAL	Atalanti	1.46	57	P	Pn	00 23 15.7	-0.7
NAIG	Nisos Aigina	1.62	95	*e*Pn	Pn	00 23 18.9	+0.3
NAIG	Nisos Aigina	1.62	95	*e*PN	Pn	00 23 18.9	+0.3
NAIG	Nisos Aigina	1.62	95	*e*Pn	Pn	00 23 18.9	+0.3
VLI	Veliai	1.68	135	*e*Pn	Pn	00 23 20.7	+1.2
VLI	Veliai	1.68	135	*e*PN	Pn	00 23 20.7	+1.2
THL	Klokotos Trika	1.71	15	P	Pn	00 23 20.0	+0.1
THL	Klokotos Trika	1.71	15	*e*PN	Pn	00 23 20.1	+0.2
THL				*e*SN	Sn	00 23 42.0	+0.2
THL	Klokotos Trika	1.71	15	P	Pn	00 23 20.0	+0.1
ATH	Athens Observa	1.79	87	*e*Pn	Pn	00 23 21.6	+0.6
ATH	Athens Observa	1.79	87	*e*PN	Pn	00 23 21.6	+0.6
ATH	Athens Observa	1.79	87	*e*Pn	Pn	00 23 21.6	+0.6
JAN	Janina	1.80	345	*e*Pn	Pn	00 23 21.5	+0.3
JAN	Janina	1.80	345	*e*PN	Pn	00 23 21.5	+0.3
JAN	Janina	1.80	345	*e*Pn	Pn	00 23 21.5	+0.3
IGT	Igoumenitsa	1.84	332	P	Pn	00 23 22.2	+0.5
IGT	Igoumenitsa	1.84	332	P	Pn	00 23 22.2	+0.5
VLY	Voula,Athens	1.85	91	*e*Pn	Pn	00 23 22.5	+0.7
VLY				*e*Sn	Sn	00 23 45.7	+0.4
VLY	Voula,Athens	1.85	91	*e*PN	Pn	00 23 22.5	+0.7
VLY				*e*SN	Sn	00 23 45.7	+0.4
VLY	Voula,Athens	1.85	91	*e*Pn	Pn	00 23 22.5	+0.7
PTL	Penteli	1.91	85	*e*Pn	Pn	00 23 22.6	0.0
PTL				*e*Sn	Sn	00 23 47.5	+0.8
PTL	Penteli	1.91	85	*e*PN	Pn	00 23 22.6	0.0
PTL				*e*SN	Sn	00 23 47.5	+0.8
PTL	Penteli	1.91	85	*e*Pn	Pn	00 23 22.6	0.0
NEO	Neokhori	1.96	44	*e*Pn	Pn	00 23 24.1	+0.7
NEO	Neokhori	1.96	44	*e*PN	Pn	00 23 24.1	+0.7
NEO	Neokhori	1.96	44	*e*Pn	Pn	00 23 24.1	+0.7
KYTH	Kithira	2.06	142	*e*Pn	Pn	00 23 26.6	+1.9
KEK	Kerkira	2.21	325	*e*Pn	Pn	00 23 26.9	0.0
KEK	Kerkira	2.21	325	*e*PN	Pn	00 23 26.9	0.0
KEK	Kerkira	2.21	325	*e*Pn	Pn	00 23 26.9	0.0
AOS	Alonnisos	2.28	56	P	Pn	00 23 26.8	-0.9
AOS	Alonnisos	2.28	56	P	Pn	00 23 26.8	-0.9
FNA	Florina	2.87	359	P	Pn	00 23 36.3	+0.5
FNA	Florina	2.87	359	P	Pn	00 23 36.3	+0.5
STON	Ston	5.72	331	*e*Pn	Pn	00 24 13.0	-2.1
STON				Sn	Sn	00 25 14.4	-6.4
STON	Ston	5.72	331	*e*Pn	Pn	00 24 13.0	-2.1

THE 09 00:26:58.7, 37°.91N×21°.40E, h32km±29km, ML3.5/3, Error ellipse: s-maj=29.6km s-min=1.1km az=331.0, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	University Cam	0.48	39	P	Pb	00 27 08.7	-0.2
KFL	Anninata	0.52	293	P	Pb	00 27 09.5	0.0
LAKA	Lakka	0.56	54	P	Pb	00 27 09.4	-0.9
LAKA				S	Sb	00 27 18.5	+0.4
LAKA	Lakka	0.56	54	P	Pb	00 27 09.4	-0.9
LAKA				S	Sb	00 27 18.5	+0.4
EFP	Efpalio	0.65	38	P	Pb	00

VLI	Veliai	1.75 144	*e*Pb	Pn	00 27 42.9 +2.4
VLI	Veliai	1.75 144	*e*PB	Pn	00 27 42.9 +2.4
KYTH	Kithira	2.17 149	*e*Pn	Pn	00 27 48.6 +2.4
KYTH	Kithira	2.17 149	*e*PN	Pn	00 27 48.6 +2.4
KYTH	Kithira	2.17 149	*e*Pn	Pn	00 27 48.6 +2.4
STON	Ston	5.60 329	*i* Pn	Pn	00 28 39.2 +5.8
STON			Sn	Sn	00 29 41.4 +4.9

*SZGRF **09** 00:32:13.3, 19.′71S×178.′60W, h33km, Fiji Islands region*
*BJI **09** 00:33:20.4, 17.′80S×178.′70W, h610km, mB4.5/5, mb4.8/8*
*NEIC **09** 00:33:22.4±0.8, 17.′76S×178.′65W, h610km±9km, mb4.3/12, Error ellipse: s-maj=14.4km s-min=7.6km az=145.0*
*IDC **09** 00:33:22.8±2.1, 18.′00S×178.′60W, h618km±24km, mb3.5/18, mb1 3.7/18, mb1mx3.7/21, mbtmp3.5/18, Error ellipse: s-maj=25.4km s-min=9.6km az=151.0*
*ISCJB **09** 00:33:22.2±0.9, 17.′79S±0.′09×178.′75W±0.′06, h621km±11km, mb4.1/31, Error ellipse: s-maj=15.7km s-min=6.9km az=153.9*

ISC 09 00:33:23.0±0.9, 17.′76S±0.′09×178.′72W±0.′06, h614km±11km, n366, d0°48/247, mb4.0/31, 118C-80D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.08	270	*e*P	P	00 34 43.4	-0.3
CTA	Charters Tower	33.18	260	P	P	00 39 11.1	+0.1
	13nm,0.9s,mb4.6,baz=78,slow=9.4,SNR=7.7						
CTAO	Charters Tower	33.18	260	*e*P	P	00 39 11.1	+0.1
	8.4nm,0.6s,mb4.5						
STKA	Stephens Creek	38.44	241	P	P	00 39 54.3	+0.2
	1.7nm,0.6s,mb3.8,baz=81,slow=11,SNR=5.8						
STKA				PcP	PcP	00 41 50.3	-0.6
	1.2nm,0.8s,baz=18,slow=5.8,SNR=3.0						
STKA	Stephens Creek	38.44	241	*e*P	P	00 39 54.5	+0.4
	0.3nm,0.5s,mb3.1						
MCQ	Macquarie Isla	40.50	200	P	P	00 40 11.9	+1.7
WRAB	Tennant Creek	44.36	259	*e*P	P	00 40 41.4	+0.6
	1.9nm,0.4s,mb4.0						
WRA	Warramunga Arr	44.37	259	P	P	00 40 40.5	-0.4
	2.4nm,0.5s,mb4.0,baz=95,slow=7.1,SNR=71						
WRA				PcP	PcP	00 42 10.8	-0.2
	1.5nm,0.7s,baz=94,slow=3.1,SNR=5.9						
WRA				S	S	00 46 32.5	+0.3
	0.5nm,0.7s,baz=97,slow=12,SNR=3.4						
WRA	Warramunga Arr	44.37	259	P	P	00 40 40.5	-0.4
WRA				PcP	PcP	00 42 10.8	-0.2
WRA				S	S	00 46 32.5	+0.3
ASAR	Alice Springs	44.55	254	P	P	00 40 42.4	+0.2
	6.7nm,0.5s,mb4.4,baz=86,slow=9.0,SNR=145						
ASAR				PcP	PcP	00 42 11.2	-0.3
	2.0nm,0.5s,baz=100,slow=3.6,SNR=11						
ASAR				S	S	00 46 34.5	-0.2
	1.6nm,1.0s,baz=85,slow=14,SNR=5.8						
FITZ	Fitzroy Crossi	52.76	260	P	P	00 41 42.2	-0.6
	3.4nm,1.0s,mb3.6,baz=119,slow=10,SNR=6.3						
FITZ	Fitzroy Crossi	52.76	260	*e*P	P	00 41 44.0	+1.2
MBWA	Marble Bar	57.82	256	*e*P	P	00 42 17.2	-0.5
	16nm,1.0s,mb4.1						
NWAO	Narrogin (SRO)	59.02	242	P	P	00 42 25.4	-0.2
	17nm,1.1s,mb4.1,baz=108,slow=6.4,SNR=3.1						
NWAO	Narrogin (SRO)	59.02	242	P	P	00 42 25.4	-0.2
SBA	Scott Base	60.55	183	*e*P	P	00 42 33.9	-1.0
MJAR	Matsushiro Arr	67.61	324	P	P	00 43 20.8	+0.7
	0.8nm,0.6s,mb3.4,baz=156,slow=5.9,SNR=5.0						
QSPA	South Pole Qui	72.29	180	*e*P	P	00 43 45.3	-1.8
	13nm,1.2s,mb4.3						
YSS	Yuzh-Sakhalins	73.15	334	P	P	00 43 50.4	-2.0
PETK	Petropavlovsk-	73.46	345	P	P	00 43 54.8	+0.7
	4.8nm,0.6s,mb4.2,baz=135,slow=7.2,SNR=7.0						
KSRS	Korea Array	74.39	318	P	P	00 44 01.9	+2.3
	0.6nm,0.4s,mb3.5,baz=116,slow=5.5,SNR=5.1						
ARVC	Arvin	77.40	47	⇑P	P	00 44 16.2	0.0
	baz=78						
VES	Vestal, Richgr	77.61	46	⇑P	P	00 44 16.9	-0.4
	baz=78						
BFSC	Mount Baldy Ra	77.75	48	⇑P	P	00 44 17.6	-0.5
	baz=78						
EDW2	Edwards Air Fo	77.85	47	⇑P	P	00 44 18.6	0.0
	baz=78						
ISA	Isabella	77.93	46	⇓P	P	00 44 19.0	-0.1
	baz=78						
ISA	Isabella	77.93	46	*e*P	P	00 44 19.0	0.0
CMB	Columbia Colle	77.94	43	*e*P	P	00 44 18.8	-0.3
MONP	Monument Peak	77.95	50	⇓P	P	00 44 19.2	-0.1
	baz=78,SNR=6.0						
DVTC	Desert V Tower	78.06	50	⇑P	P	00 44 19.8	-0.1
	baz=78						
LRMC	Laurel Mountai	78.37	47	⇑P	P	00 44 21.2	-0.3
	baz=78						
SWSC	Sam W. Stewart	78.42	50	⇑P	P	00 44 21.5	-0.3
	baz=78						
YBH	Yreka Blue Hor	78.60	39	P	P	00 44 22.7	+0.2
	3.6nm,0.6s,mb3.9,baz=179,slow=4.6,SNR=14						
MTUM	Tungsten Hills	78.77	45	*e*P	P	00 44 24.1	+0.6
BELC	Belle Mtn. Jos	78.81	49	⇓P	P	00 44 23.9	+0.1
	baz=79						
MPMC	Manual Prospec	78.82	46	⇑P	P	00 44 23.8	0.0
	baz=79						
GSC	Goldstone	78.90	47	⇑P	P	00 44 24.2	-0.1
	baz=79						
BEKR	Beckworth	78.98	42	⇑P	P	00 44 24.5	-0.1
	baz=79						
HEC	Hector,Ludlow	78.99	48	⇑P	P	00 44 24.6	-0.2
	baz=79						
BC3	Big Chuckawall	79.03	49	⇓P	P	00 44 25.2	+0.3
	baz=79						
GRAC	Grapevine Rang	79.39	46	⇓P	P	00 44 26.8	0.0
	baz=80						
FURC	Furnace Creek,	79.46	46	⇑P	P	00 44 27.0	-0.2
	baz=80						
IRM	Iron Mountain	79.50	49	⇑P	P	00 44 27.5	+0.1
	baz=80						
NVAR	Mina Array Bea	79.52	44	P	P	00 44 27.5	0.0
	3.4nm,0.7s,mb3.8,baz=223,slow=8.7,SNR=29						
TUQ	Turquoise Moun	79.59	48	⇓P	P	00 44 27.8	0.0
	baz=80						
Y12C	Blythe	79.75	50	⇓P	P	00 44 28.7	0.0
	baz=80						
113A	Mohawk Valley,	79.83	51	⇓P	P	00 44 29.2	0.0
	baz=80						
Z13A	Yuma Proving G	80.12	51	⇓P	P	00 44 30.6	-0.1
	baz=80						
V11A	Goodsprings	80.14	47	⇑P	P	00 44 30.5	-0.2
	baz=80						
K05A	Summer Lake	80.27	39	⇑P	P	00 44 31.6	+0.3
	baz=80,SNR=8.8						
S10A	Tonopah Range,	80.40	45	⇓P	P	00 44 31.8	-0.3
	baz=80,SNR=7.7						
114A	Black Gap (USA	80.48	51	⇑P	P	00 44 32.6	+0.1
	baz=81						
V12A	Nelson	80.49	48	⇑P	P	00 44 32.7	+0.2
	baz=81						
H04A	Detroit Lake	80.65	37	⇑P	P	00 44 33.1	-0.1
	baz=81						
X13A	Yucca	80.66	49	⇓P	P	00 44 33.6	+0.2
	baz=81						
Z14A	Wintersburg	80.72	51	⇑P	P	00 44 34.0	+0.2
	baz=81						
R10A	Warm Springs	80.78	45	⇓P	P	00 44 34.3	+0.3
	baz=81						
G04A	Mulino	80.80	37	⇓P	P	00 44 33.6	-0.3
	baz=81						
W13A	Hualapai Mount	80.87	49	⇓P	P	00 44 34.5	0.0
	baz=81						
115A	Sonoran Desert	80.94	52	⇓P	P	00 44 35.1	+0.1
	baz=81						
T11A	Corn Creek, Al	80.99	46	⇓P	P	00 44 35.1	0.0
	baz=81,SNR=7.6						
Q10A	Clear Creek Ra	81.00	44	⇑P	P	00 44 35.1	0.0
	baz=81						
U12A	Valley of Fire	81.06	47	⇑P	P	00 44 35.4	0.0
	baz=81						
V13A	Grand Canyon W	81.16	48	⇓P	P	00 44 36.1	+0.1
	baz=81						
216A	Three Points,	81.20	52	⇓P	P	00 44 36.5	+0.3
	baz=81						
F04A	Amboy	81.26	36	⇑P	P	00 44 35.9	-0.3
	baz=81						
116A	Eloy	81.27	52	⇓P	P	00 44 36.9	+0.3
	baz=81						
X14A	Yava	81.28	50	⇓P	P	00 44 36.8	+0.1
	baz=81,SNR=5.1						
R11A	Troy Canyon, C	81.30	45	⇑P	P	00 44 36.3	-0.3
	baz=81						
NLWA	Neilton Lookou	81.36	34	⇑P	P	00 44 36.3	-0.4
	baz=82						
P10A	Eureka	81.37	44	⇑P	P	00 44 37.2	+0.2
	baz=82						
S12A	Delamar Landin	81.43	46	⇑P	P	00 44 37.8	+0.5
	baz=82,SNR=13						
Y15A	Casa Rosa Ranc	81.45	50	⇓P	P	00 44 37.6	+0.1
	baz=82						
U13A	Pakoon Wash	81.45	48	⇑P	P	00 44 37.5	+0.1
	baz=82,SNR=11						
WVOR	Wild Horse Val	81.49	40	*e*P	P	00 44 37.8	+0.3
	4.8nm,0.4s,mb4.3						
W14A	Seligman	81.50	49	⇑P	P	00 44 37.9	+0.2
	baz=82,SNR=7.5						
Q11A	Duckwater	81.51	45	⇓P	P	00 44 37.5	-0.2
	baz=82,SNR=7.1						
217A	Green Valley	81.58	53	⇓P	P	00 44 38.4	+0.2
	baz=82						
V14A	Boquillas Ranc	81.68	49	⇓P	P	00 44 38.8	+0.1
	baz=82,SNR=8.4						
O10A	Cortez Mining,	81.70	43	⇑P	P	00 44 38.8	+0.1
	baz=82						
X15A	Humboldt	81.77	50	⇓P	P	00 44 39.2	+0.1
	baz=82,SNR=6.5						
T13A	Saint George	81.79	47	⇓P	P	00 44 39.3	+0.2
	baz=82						
TUC	Tucson	81.84	52	*e*P	P	00 44 39.9	+0.3
G06A	Carlson Farm,	81.87	37	⇓P	P	00 44 39.3	0.0
	baz=82						
I07A	Izee	81.88	39	⇓P	P	00 44 39.5	+0.1
	baz=82,SNR=9.0						
R12A	Pony Springs,	81.95	46	⇑P	P	00 44 39.8	-0.1
	baz=82,SNR=5.2						
117A	Oracle	82.00	52	⇑P	P	00 44 40.4	+0.1
	baz=82						
U14A	Mt Trumbull	82.01	48	⇓P	P	00 44 40.7	+0.4
	baz=82,SNR=12						
Y16A	Circle Bar Ran	82.04	51	⇑P	P	00 44 40.8	+0.3
	baz=82						
318A	Bisbee	82.06	54	⇓P	P	00 44 41.1	+0.4
	baz=82						
J08A	Circle Bar Ran	82.09	40	⇑P	P	00 44 40.4	-0.2
	baz=82,SNR=6.7						
S13A	Holt Ranch, En	82.10	47	⇑P	P	00 44 40.9	+0.2
	baz=82						
Q12A	Willow Creek R	82.16	45	⇑P	P	00 44 41.1	+0.1
	baz=82						
O11A	Cowboy Ranch,	82.16	44	⇓P	P	00 44 41.1	+0.1
	baz=82,SNR=6.2						
218A	Dragoon	82.25	53	⇓P	P	00 44 41.8	+0.2
	baz=82						
R13A	O'Grain Ranch,	82.32	46	⇓P	P	00 44 42.1	+0.3
	baz=82						
X16A	Lo Mia Camp, P	82.32	50	⇑P	P	00 44 42.1	+0.2
	baz=82,SNR=5.9						
P12A	McGill	82.33	44	⇓P	P	00 44 41.8	0.0
	baz=82						
TTA	Tatalina	82.38	10	*e*P	P	00 44 40.1	-1.4
T14A	Hurricane	82.38	47	⇑P	P	00 44 42.2	0.0
	baz=82						
CCUT	Cedar City	82.43	47	*e*P	P	00 44 43.1	+0.7
Y17A	Roosevelt	82.43	51	⇓P	P	00 44 42.8	+0.3
	baz=82						
V15A	Kaibab Nationa	82.44	49	⇓P	P	00 44 42.7	+0.2
	baz=82						
PMR	Palmer	82.53	14	*e*P	P	00 44 40.9	-1.4
	5.1nm,0.6s,mb4.2						
J09A	Fry Pan Ranch,	82.53	40	⇑P	P	00 44 42.7	0.0
	baz=83,SNR=8.0						
W16A	Flagstaff	82.56	50	⇑P	P	00 44 43.4	+0.3
	baz=83						
319A	Douglas	82.58	54	⇓P	P	00 44 43.8	+0.5
	baz=83,SNR=5.4						
118A	Homack Ranch,	82.61	52	⇑P	P	00 44 43.6	+0.2
	baz=83						
H08A	Prairie City	82.62	39	⇓P	P	00 44 42.9	-0.2
	baz=83						
U15A	North Rim	82.64	48	⇓P	P	00 44 43.9	+0.5
	baz=83,SNR=14						
L10A	Juniper Basin	82.65	42	⇓P	P	00 44 43.4	+0.1
	baz=83,SNR=9.1						
Q13A	Wheeler Ranch,	82.66	45	⇑P	P	00 44 43.3	-0.2
	baz=83,SNR=9.9						
M11A	Holland Ranch,	82.75	42	⇑P	P	00 44 44.2	+0.4
	baz=83						
X17A	Forest Lakes	82.75	51	⇑P	P	00 44 44.6	+0.5
	baz=83						
K10A	MacKenzie Ranc	82.77	41	⇓P	P	00 44 44.0	0.0
	baz=83,SNR=6.6						
O12A	Currie	82.83	44	⇑P	P	00 44 44.2	-0.1
	baz=83						
T15A	Red Dirt Ranch	82.86	48	⇑P	P	00 44 44.7	+0.1
	baz=83						
219A	White Tail Can	82.87	53	⇑P	P	00 44 44.7	0.0
	baz=83						
WUAZ	Wupatki	82.87	49	⇓P	P	00 44 44.9	+0.2
	baz=83						
G08A	Pilot Rock	82.88	38	⇑P	P	00 44 44.3	-0.1
	baz=83						
I09A	Lost Marbles R	82.88	40	⇓P	P	00 44 44.1	-0.3
	baz=83						
N12A	Clover Valley,	82.94	43	⇑P	P	00 44 44.6	-0.2
	baz=83,SNR=5.6						
N12A	Clover Valley,	82.94	43	*e*P	P	00 44 45.2	+0.4
Y18A	Canyon Day Jun	83.07	51	⇑P	P	00 44 46.0	+0.3
	baz=83						
320A	Kipp Ranch, An	83.14	54	⇑P	P	00 44 46.9	+0.8
	baz=83						
L11A	Cat Creek Ranc	83.15	42	⇑P	P	00 44 45.9	0.0
	baz=83,SNR=5.1						
119A	Ashpeak Ranch,	83.17	53	⇑P	P	00 44 46.0	-0.2
	baz=83						
Q14A	Sevier Lake (B	83.19	46	⇑P	P	00 44 46.1	0.0
	baz=83,SNR=9.5						
K11A	Parker Ranch,	83.29	41	⇑P	P	00 44 46.6	0.0
	baz=83						
H09A	Durkee	83.30	39	⇑P	P	00 44 46.6	+0.1
	baz=83						
M12A	Wells	83.31	43	⇑P	P	00 44 46.8	+0.1
	baz=83						
V17A	Tonalea, Kykot	83.34	49	⇑P	P	00 44 47.2	+0.2
	baz=83						
220A	Playas Peak, P	83.39	54	⇑P	P	00 44 47.5	+0.2
	baz=84						
N13A	Wendover, West	83.49	44	⇓P	P	00 44 47.6	0.0
	baz=84						
PSI	Prapat	83.57	275	P	P	00 44 48.6	0.0
	1.2nm,0.3s,mb3.9,baz=139,slow=9.3,SNR=4.1						
L12A	House Creek Ra	83.61	42	⇑P	P	00 44 48.3	+0.2
	baz=84						
P14A	Drum Mountains	83.62	45	⇓P	P	00 44 48.4	+0.2
	baz=84						
Y19A	Nutrioso	83.73	52	⇑P	P	00 44 49.0	+0.1
	baz=84						
MFID	Camas Ranch	83.75	41	⇓P	P	00 44 48.8	0.0
	baz=84						
M13A	Montello	83.76	43	⇓P	P	00 44 49.0	0.0
	baz=84						
M13A	Montello	83.76	43	*e*P	P	00 44 48.2	-0.7
	5.6nm,1.0s,mb4.0						
H10A	Noah's Angus R	83.81	39	⇑P	P	00 44 48.7	-0.3
	baz=84,SNR=6.6						
D08A	Wollman Farm,	83.89	36	⇑P	P	00 44 49.0	-0.4
	baz=84						
MAW	Mawson	83.90	200	P	P	00 44 47.6	-1.6
	1.6nm,0.6s,mb3.8,baz=137,slow=7.7,SNR=4.4						
I11A	Placerville	83.93	40	⇑P	P	00 44 49.7	0.0
	baz=84						
K12A	Draper Farm, C	83.93	42	⇑P	P	00 44 49.5	-0.2
	baz=84						
G10A	Bishop Farm, J	83.96	39	⇓P	P	00 44 49.5	-0.3
	baz=84						
T17A	Navajo Res., N	83.96	48	⇓P	P	00 44 50.1	+0.1
	baz=84						
R16A	Teasdale	84.08	47	⇓P	P	00 44 50.7	+0.1
	baz=84						
DUG	Dugway	84.08	45	⇑P	P	00 44 50.7	+0.2
	baz=84						
J12A	Stokes Ranch,	84.12	41	⇑P	P	00 44 50.7	+0.1
	baz=84						
W19A	Sanders	84.14	50	⇑P	P	00 44 51.1	+0.2
	baz=84						
A07A	Ashnola River,	84.21	34	⇑P	P	00 44 50.7	-0.3
	baz=84						
121A	Cookes Peak, D	84.22	53	⇑P	P	00 44 51.8	+0.4
	baz=84						
D09A	Jones Farm, Ri	84.24	37	⇑P	P	00 44 51.0	-0.1
	baz=84						
S17A	Black Ridge (B	84.26	48	⇓P	P	00 44 51.9	+0.4
	baz=84						
F10A	Beach Ranch, E	84.27	38	⇑P	P	00 44 50.7	-0.6
	baz=84,SNR=8.3						
H11A	Donnelly	84.31	40	⇑P	P	00 44 51.5	-0.1
	baz=84,SNR=7.6						
M14A	Sheep Mountain	84.37	43	⇑P	P	00 44 51.9	0.0
	baz=84						
U18A	Rough Rock, Ch	84.37	49	⇑P	P	00 44 52.1	+0.1
	baz=84						
I12A	Atlanta	84.38	41	⇓P	P	00 44 52.0	+0.1
	baz=84						
B08A	Colville Reser	84.39	35	⇑P	P	00 44 51.3	-0.5
	baz=84						
G11A	Walters Elk Ra	84.53	39	⇓P	P	00 44 52.1	-0.5
	baz=85,SNR=9.7						
R17A	Hanksville Air	84.68	47	⇑P	P	00 44 53.1	-0.4
	baz=85						
T18A	Mexican Hat	84.69	48	⇓P	P	00 44 53.5	0.0
	baz=85,SNR=9.2						
HLID	Hailey	84.71	41	⇓P	P	00 44 53.8	+0.2
	baz=85,SNR=7.3						
HLID	Hailey	84.71	41	*e*P	P	00 44 54.1	+0.6
J13A	Cove Ranch, Pi	84.78	41	⇑P	P	00 44 54.1	+0.3
	baz=85,SNR=5.4						
U19A	Dine' College,	84.79	49	⇑P	P	00 44 54.3	+0.2
	baz=85						
W20A	Ramah	84.80	51	⇑P	P	00 44 54.2	+0.1
	baz=85						
D10A	Wagner Farm, O	84.82	37	⇑P	P	00 44 53.6	-0.4
	baz=85						
S18A	Hurst Farm, Bl	84.85	48	⇑P	P	00 44 54.3	-0.1
	baz=85						
Y21A	Point of Rocks	84.93	52	⇑P	P	00 44 55.3	+0.5
	baz=85						
H12A	Diamond D Ranc	84.94	40	⇑P	P	00 44 54.2	-0.3
	baz=85,SNR=7.6						
G12A	Big Creek, Yel	84.95	39	⇑P	P	00 44 54.3	-0.3
	baz=85						
K14A	Jones Ranch, D	84.99	42	⇑P	P	00 44 55.0	+0.1
	baz=85						
I13A	Wildhorse Cree	85.08	41	⇓P	P	00 44 55.6	+0.4
	baz=85						
B09A	Rice	85.08	36	⇓P	P	00 44 55.0	-0.2
	baz=85						
SRU	San Rafael	85.13	46	⇓P	P	00 44 55.6	-0.1
	baz=85						
SRU	San Rafael	85.13	46	*e*P	P	00 44 55.4	-0.3
J14A	Carey	85.16	42	⇓P	P	00 44 56.1	+0.4
	baz=85,SNR=5.0						
R18A	Canyonlands Na	85.24	47	⇓P	P	00 44 56.2	0.0
	baz=85						
H13A	Challis	85.32	40	⇑P	P	00 44 56.4	0.0
	baz=86						
F12A	Elk City	85.32	39	⇑P	P	00 44 56.0	-0.4
	baz=86,SNR=11						
Y22A	Socorro	85.44	52	⇑P	P	00 44 57.4	+0.2
	baz=86						
K15A	Arbon	85.48	43	⇑P	P	00 44 57.3	+0.2
	baz=86						
O17A	Robinson Place	85.48	45	⇑P	P	00 44 57.5	+0.2
	baz=86						
I14A	Mackay	85.50	41	⇓P	P	00 44 57.6	+0.3
	baz=86,SNR=9.1						
324A	Moseley Ranch,	85.55	55	⇓P	P	00 44 57.8	0.0
	baz=86						
P18A	Preston Nutter	85.56	46	⇑P	P	00 44 57.9	+0.2
	baz=86						
NEW	Newport	85.57	36	P	P	00 44 56.5	-1.0
G13A	Cobalt	85.60	40	⇓P	P	00 44 57.7	0.0
	baz=86						
425A	Indio Mountain	85.68	56	⇓P	P	00 44 58.5	+0.1
	baz=86						
COLA	College	85.69	13	*e*P	P	00 44 56.5	-1.2
	4.7nm,0.8s,mb4.2						
224A	Cornudas Mount	85.78	55	⇓P	P	00 44 59.3	+0.4
	baz=86,SNR=5.9						
L16A	Fish Haven	85.87	44	⇑P	P	00 44 58.9	-0.2
	baz=86						
626A	Big Bend Ranch	85.88	57	⇓P	P	00 44 59.6	+0.2
	baz=86,SNR=6.7						
J15A	Blackfoot	85.89	42	⇑P	P	00 44 59.6	+0.5
	baz=86,SNR=9.7						
F13A	Darby	85.89	39	⇑P	P	00 44 58.7	-0.4
	baz=86						
H14A	Leadore	85.89	41	⇑P	P	00 44 59.4	+0.2
	baz=86						
325A	Bean Ranch, Si	85.93	55	⇑P	P	00 44 59.5	-0.1
	baz=86						
Q19A	Hogan Spring (	85.94	47	⇓P	P	00 44 59.3	-0.1
	baz=86						
D12A	Red Ives Fores	85.94	38	⇓P	P	00 44 59.4	+0.1
	baz=86						
U21A	Nageezi	85.98	50	⇑P	P	00 44 59.7	0.0
	baz=86						
124A	Stringfield Ra	86.08	54	⇑P	P	00 45 00.1	-0.2
	baz=86						
B11A	Sandpoint	86.08	36	⇑P	P	00 44 59.6	-0.3
	baz=86						
Y23A	Lovelace Mesa,	86.12	53	⇑P	P	00 45 00.9	+0.4
	baz=86						
TXAR	Lajitas Array	86.17	58	P	P	00 45 01.1	+0.3
	5.3nm,0.8s,mb4.2,baz=216,slow=6.3,SNR=35						
ANMO	Albuquerque	86.24	52	*e*P	P	00 45 00.9	-0.1
BILL	Bilibino	86.25	354	P	P	00 44 59.0	-1.3
	2.1nm,0.4s,mb4.1						
MCMT	McKenzie Canyo	86.32	41	*e*P	P	00 45 00.7	-0.4
	1.9nm,0.7s,mb3.8						
225A	Deer Hill, Car	86.33	55	⇓P	P	00 45 01.6	0.0
	baz=86						
H15A	Lima	86.34	41	⇓P	P	00 45 01.4	+0.1
	baz=86,SNR=5.5						
A11A	Hall Mountain,	86.36	36	⇑P	P	00 45 01.3	+0.1
	baz=86						
426A	McDonald Obser	86.39	56	⇓P	P	00 45 01.8	0.0
	baz=86						
627A	Terlingua Ranc	86.44	58	⇑P	P	00 45 02.3	+0.2
	baz=86,SNR=11						
D13A	Huson	86.48	38	⇓P	P	00 45 01.3	-0.5
	baz=87						
527A	Woodward Ranch	86.52	57	⇑P	P	00 45 02.2	-0.2
	baz=87						
K17A	Gardner Place,	86.55	43	⇑P	P	00 45 02.4	+0.2
	baz=87						
N18A	Larsen Ranch,	86.56	45	⇑P	P	00 45 02.6	+0.3
	baz=87						
RRI2	Red Ridge	86.57	42	*e*P	P	00 45 03.0	+0.7
Y24A	Capitan	86.59	53	⇑P	P	00 45 02.4	-0.2
	baz=87,SNR=10						
125A	Gardner Draw,	86.68	54	⇓P	P	00 45 03.2	+0.1
	baz=87						
G15A	Dillon	86.71	40	⇓P	P	00 45 02.9	0.0
	baz=87,SNR=6.1						
E14A	Clinton	86.71	39

CHTO	Chiang Mai	88.67	290	eP	P	00 45 08.9	-3.8
EGMT	Eagleton	89.72	39	eP	P	00 45 16.1	-0.8
RSSD	Black Hills	91.67	44	eP	P	00 45 25.6	-0.4
INK	Inuvik	91.82	15	eP	P	00 45 25.0	-1.1
	comp=Z,3.3nm,0.8s,mb4.4						
SONM	Songino Array	93.24	319	P	P	00 45 35.0	+1.9
	comp=Z,0.2nm,0.4s,mb3.5,baz=123,slow=5.3,SNR=3.0						
YKA	Yellowknife Ar	94.32	25	P	P	00 45 36.9	-0.8
	comp=Z,0.7nm,0.5s,mb4.0,baz=240,slow=4.5,SNR=8.1						
ZALV	Zalesovo Beam	107.93	322	PKiKP	PKiKP	00 50 40.4	-1.3
	comp=Z,0.5nm,0.6s,baz=232,slow=3.2,SNR=3.6						
MK31	Makanchi Array	108.82	314	ePKiKP	PKiKP	00 50 40.5	-3.0
MKAR	Makanchi Array	108.82	314	PKiKP	PKiKP	00 50 41.7	-1.8
	comp=Z,0.7nm,0.5s,baz=345,slow=3.8,SNR=4.8						
MKAR	Makanchi Array	108.82	314	PKPdf	PKiKP	00 50 41.7	-1.8
KURK	Kurchatov	111.52	318	PKiKP	PKiKP	00 50 47.0	-1.6
	comp=Z,1.0nm,0.7s,baz=98,slow=1.7,SNR=8.3						
BVAR	Borovoye Array	116.54	321	PKP	PKPdf	00 50 57.1	-1.0
	comp=Z,1.3nm,0.5s,baz=85,slow=1.6,SNR=11						
AKTK	Aktyubinsk	124.56	320	PKP	PKPdf	00 51 13.1	-0.5
AKTO	Aktyubinsk	124.56	320	PKP	PKPdf	00 51 13.1	-0.5
	comp=Z,1.0nm,0.6s,baz=88,slow=3.3,SNR=5.8						
ARCES	ARCESS Array B	126.12	350	PKP	PKPdf	00 51 15.2	-0.8
	comp=Z,3.6nm,0.8s,baz=23,slow=1.4,SNR=11						
FINES	FINESS Array B	132.97	344	PKP	PKPdf	00 51 29.4	+0.2
	comp=Z,2.2nm,0.7s,baz=29,slow=3.2,SNR=5.9						
NOA	NORSAR Array B	136.19	353	PKP	PKPdf	00 51 36.5	+1.2
	comp=Z,1.0nm,0.7s,baz=14,slow=4.1,SNR=3.6						
AKASG	Malin Array Be	140.29	332	PKhKP		00 51 36.2	
	comp=Z,1.1nm,0.4s,baz=42,slow=4.0,SNR=7.6						
AKASG				PKP	PKPdf	00 51 43.8	+0.7
	comp=Z,1.1nm,0.5s,baz=45,slow=4.1,SNR=5.2						
WAR	Warsaw	142.24	340	ePKP	PKPdf	00 51 44.6	-1.9
KWP	Kalwaria Pacla	143.82	336	ePKP	PKPdf	00 51 49.0	-0.3
KWP	Kalwaria Pacla	143.82	336	ePKP	PKPdf	00 51 47.6	-1.7
RUE	Ruedersdorf	143.99	347	ePKPbc	PKPdf	00 51 49.2	-0.3
BUR08	Bucovina Ar. S	144.33	332	ePKP	PKPdf	00 51 51.7	+1.4
BURAR	Bucovina Array	144.34	332	⇑iP	PKPdf	00 51 51.5	+1.2
OJC	Ojcow	144.37	339	ePKP	PKPdf	00 51 49.5	-0.8
BR131	Keskin Array S	144.47	315	ePKP	PKPdf	00 51 50.6	-0.2
BRTR	Keskin Array B	144.47	315	PKP	PKPdf	00 51 51.4	+0.6
	comp=Z,3.7nm,0.8s,baz=127,slow=4.0,SNR=22						
BRTR				PKKP		01 00 53.9	
	comp=Z,0.5nm,0.9s,baz=289,slow=5.7,SNR=3.7						
STHS	Stebnicka Huta	144.54	337	ePKP	PKPdf	00 51 51.6	+1.0
STHS	Stebnicka Huta	144.54	337	ePKP	PKPdf	00 51 51.6	+1.0
KOLS	Kolonicke sedl	144.55	336	ePKP	PKPdf	00 51 51.5	+0.9
KOLS	Kolonicke sedl	144.55	336	ePKP	PKPdf	00 51 51.5	+0.9
NRDL	Niedersach Rie	144.65	351	ePKPbc	PKPdf	00 51 50.8	+0.1
ASF	Jabal al Asfar	144.84	301	PKPbc	PKPdf	00 51 52.4	+0.8
	comp=Z,2.4nm,0.7s,baz=344,slow=2.2,SNR=8.0						
NIE	Niedzica	144.87	338	ePKP	PKPdf	00 51 52.6	+1.5
CRVS	Cervenica-Dubn	144.88	337	ePKP	PKPdf	00 51 52.4	+1.2
CRVS	Cervenica-Dubn	144.88	337	ePKP	PKPdf	00 51 52.4	+1.2
KSP	Ksiaz	144.88	343	ePKP	PKPdf	00 51 52.2	+1.1
VRI	Vrincioaia	144.90	329	⇓iP	PKPdf	00 51 52.4	+1.1
TIRR	Tirgusor	144.98	325	⇑iP	PKPdf	00 51 52.5	+1.0
HARR	Harsova	145.08	326	⇓iP	PKPbc	00 51 53.3	+0.6
TRPA	Tarpa	145.09	335	⇑iP	PKPbc	00 51 52.7	+0.1
IBBN	Ibbenburen	145.15	353	ePKPbc	PKPbc	00 51 52.6	0.0
OKC	Ostrava-Krasne	145.24	341	ePKP	PKPbc	00 51 52.7	-0.3
CLZ	Clausthal	145.24	350	ePKPbc	PKPbc	00 51 53.2	+0.3
CLL	Collm	145.25	347	ePKPbc	PKPbc	00 51 52.8	-0.2
CLL	Collm	145.25	347	⇑iPKPbc	PKPbc	00 51 52.9	-0.1
	comp=Z,22nm,0.7s						
UPC	Upice	145.26	343	ePKP	PKPbc	00 51 53.4	+0.4
DPC	Dobruska-Polom	145.32	343	ePKP	PKPbc	00 51 53.7	+0.5
MORC	Moravsky Berou	145.48	341	ePKPab	PKPbc	00 51 53.5	-0.1
MORC	Moravsky Berou	145.48	341	⇑iP	PKPbc	00 51 53.9	+0.2
MLR	Muntele Rosu	145.55	329	PKPbc	PKPbc	00 51 54.1	+0.1
	comp=Z,3.7nm,0.6s,baz=352,slow=7.1,SNR=16						
MLR	Muntele Rosu	145.55	329	⇓iP	PKPbc	00 51 54.0	0.0
KECS	Kecovo	145.59	337	ePKP	PKPbc	00 51 54.6	+0.6
KECS	Kecovo	145.59	337	ePKP	PKPbc	00 51 54.6	+0.6
PVCC	Panska Ves	145.62	345	ePKP	PKPbc	00 51 54.4	+0.4
PVCC				ex	x	00 51 56.5	
MMAI	Mount Meron Ar	145.81	303	PKPbc	PKPbc	00 51 55.5	+0.4
	comp=Z,5.3nm,0.5s,baz=64,slow=3.4,SNR=30						
BUG	Bochum--Univer	146.06	353	ePKPbc	PKPbc	00 51 55.5	+0.3
DRGR		146.07	333	⇑iP	PKPbc	00 51 56.2	+0.8
PRU	Pruhonice	146.12	345	ePKP	PKPbc	00 51 55.8	+0.3
MOX	Moxa	146.17	348	ePKPbc	PKPbc	00 51 55.5	-0.1
VYHS	Vyhne	146.17	339	ePKP	PKPbc	00 51 56.2	+0.5
VYHS				e		00 52 06.6	
VYHS	Vyhne	146.17	339	ePKP	PKPbc	00 51 56.1	+0.4
VYHS				e		00 52 06.6	
VRAC	Vranov	146.18	342	⇓iP	PKPbc	00 51 56.0	+0.4
TANN	Tannenbergstha	146.21	347	ePKPbc	PKPbc	00 51 55.7	0.0
PSZ	Piszkesteto	146.28	337	⇑iP	PKPbc	00 51 56.2	+0.2
GUNZ	Gunzen	146.29	347	ePKPbc	PKPbc	00 51 56.1	+0.2
UBBA	Unterbreizbach	146.29	350	ePKPbc	PKPbc	00 51 55.6	-0.3
WERN	Wernitzgruen	146.35	347	ePKPbc	PKPbc	00 51 56.4	+0.3
NKC	Novy Kostel	146.38	347	ePKP	PKPbc	00 51 56.3	+0.1
TREC	Trest	146.51	343	ePKP	PKPbc	00 51 56.6	+0.1
SMOL	Smolenice	146.62	340	ePKP	PKPbc	00 51 57.6	+0.7
SMOL	Smolenice	146.62	340	ePKP	PKPbc	00 51 57.6	+0.7
ROTZ	Rotzenmuhle	146.88	347	ePKPbc	PKPbc	00 51 57.8	+0.3
UCC	Uccle	146.95	356	PKPbc	PKPbc	00 51 57.6	-0.1
MEM	Membach	147.01	354	PKPbc	PKPbc	00 51 57.8	0.0
EIL	Elat	147.09	297	PKPbc	PKPbc	00 51 58.6	-0.1
	comp=Z,3.2nm,0.8s,baz=25,slow=3.0,SNR=5.6						
SZH	Strazhica	147.11	326	⇓iP	PKPbc	00 51 58.0	-0.3
TNS	Taunus Mts	147.11	352	ePKPbc	PKPbc	00 51 58.1	0.0
GRF	Grafenberg Arr	147.15	348	ePKPbc	PKPbc	00 51 58.4	+0.2
GRF	Grafenberg Arr	147.15	348	ePKP	PKPbc	00 51 58.4	+0.2
KHC	Kasperske Hory	147.16	345	ePKPbc	PKPbc	00 51 58.0	-0.3
KHC	Kasperske Hory	147.16	345	ePKP	PKPbc	00 51 58.5	+0.2
KHC				ex	x	00 52 03.1	
SNF	Seneffe	147.24	356	PKPbc	PKPbc	00 51 57.6	-0.8
BCLA	Clavier	147.26	355	PKPbc	PKPbc	00 51 58.8	+0.4
WET	Wettzell	147.31	346	ePKPbc	PKPbc	00 51 58.4	-0.3
GEC2	GERESS Array S	147.39	345	ePKPbc	PKPbc	00 51 58.8	-0.1
GERES	GERESS Array B	147.39	345	PKPbc	PKPbc	00 51 58.9	0.0
	comp=Z,5.8nm,0.7s,baz=22,slow=2.9,SNR=68						
BZS	Buzias	147.47	333	⇑iP	PKPbc	00 51 59.0	-0.2
GIVF	Givet	147.61	356	ePKP1	PKPbc	00 51 59.3	-0.1
	comp=Z,15nm,0.5s						
DOU	Dourbes	147.63	356	PKPbc	PKPbc	00 51 59.2	-0.2
BAIF	Baives	147.69	356	ePKP1	PKPbc	00 51 59.6	0.0
	comp=Z,10nm,0.6s						
WLF	Walferdange	147.93	354	PKPbc	PKPbc	00 52 00.6	+0.4
WLF	Walferdange	147.93	354	ePKPbc	PKPbc	00 52 00.5	+0.3
WLF	Walferdange	147.93	354	ePKPbc	PKPbc	00 51 59.8	-0.5
PKSM	Moragy	148.18	337	⇓iP	PKPbc	00 52 01.1	+0.1
STU	Stuttgart	148.40	350	ePKPbc	PKPbc	00 52 01.4	0.0
FUR	Furstenfeldbru	148.59	347	ePKPbc	PKPbc	00 52 01.9	0.0
RJOB	Jochberg	148.65	345	ePKPbc	PKPbc	00 52 01.7	-0.3
RZN	Rozhen	148.84	325	iP	PKPbc	00 52 01.3	-1.4
BFO	Black Forest	148.97	351	ePKPbc	PKPbc	00 52 02.7	-0.1
BFO	Black Forest	148.97	351	ePKPbc	PKPbc	00 52 02.7	-0.1
CDF	Champ du Feu	149.04	352	ePKP1	PKPbc	00 52 02.9	-0.1
	comp=Z,12nm,0.8s						
FLN	La Foliniere	149.04	2	ePKP1	PKPbc	00 52 02.4	-0.6
	comp=Z,28nm,0.9s						
MEZF	Maizieres J'vi	149.18	355	ePKP1	PKPbc	00 52 03.4	+0.1
	comp=Z,12nm,0.7s						
LDF	La Druitiere	149.22	2	ePKP1	PKPbc	00 52 02.7	-0.7
	comp=Z,7.1nm,0.6s						
GRR	Gorron	149.40	3	ePKP1	PKPbc	00 52 03.3	-0.5
	comp=Z,8.5nm,0.5s						
SGMF	Saint Gilles	149.43	5	ePKP1	PKPbc	00 52 03.1	-0.8
	comp=Z,34nm,1.0s						
MMB	Musomiste	149.44	326	iP	PKPbc	00 52 03.5	-0.7
HAU	Haudompre	149.55	353	ePKP1	PKPbc	00 52 03.9	-0.3
	comp=Z,9.4nm,0.6s						
KKB	Krupnik	149.59	327	iP	PKPbc	00 52 04.0	-0.5
VNDS	Vrh nad Dolski	149.62	341	iPKPbc	PKPbc	00 52 04.0	-0.5
HINF	Hinteralfeld	149.68	353	ePKP1	PKPbc	00 52 04.0	-0.5
	comp=Z,8.1nm,0.8s						
LJU	Ljubljana	149.72	342	iPKPbc	PKPbc	00 52 04.2	-0.4
CRNS	Crni Vrh	149.77	342	iPKPbc	PKPbc	00 52 04.0	-0.8
BOJS	Bojanci	149.98	340	iPKPbc	PKPbc	00 52 05.3	0.0
LOR	Lormes	150.50	356	ePKP1	PKPbc	00 52 06.2	-0.2
	comp=Z,12nm,0.6s						
HYF	Humbligny	150.55	358	ePKP1	PKPbc	00 52 06.6	0.0
SSF	Saint Saulge	150.72	357	ePKP1	PKPbc	00 52 06.7	-0.3
	comp=Z,8.1nm,0.6s						
CABF	La Chapelle	150.96	353	ePKP1	PKPbc	00 52 07.8	+0.3
	comp=Z,14nm,0.9s						
AVF	Avril sur Loir	151.00	357	ePKP1	PKPbc	00 52 06.9	-0.7
	comp=Z,2.3nm,0.6s						
MFF	Saint Martin d	151.21	2	ePKP1	PKPbc	00 52 07.5	-0.6
	comp=Z,15nm,0.9s						
BGF	Bois d'Agland	151.25	358	ePKP1	PKPbc	00 52 07.8	-0.4
	comp=Z,10nm,0.7s						
TCF	Toulx Ste Croi	151.54	359	ePKP1	PKPbc	00 52 08.2	-0.6
	comp=Z,15nm,1.1s						
RJF	Les Rejaudoux	152.54	360	ePKP1	PKPbc	00 52 10.6	-0.5
	comp=Z,6.3nm,0.8s						
ORIF	Oris-en-Rattie	152.65	353	ePKP1	PKPbc	00 52 11.2	-0.1
IDI	Anoyia	152.71	314	PKPbc	PKPbc	00 52 12.0	+0.3
	comp=Z,6.5nm,0.8s,baz=301,slow=5.9,SNR=3.6						
MBDF	Montbardon	152.72	351	ePKP1	PKPbc	00 52 11.3	-0.2
ESDC	Sonseca Array	157.69	11	PKPab	PKPab	00 52 46.6	-0.4
	comp=Z,0.1nm,0.4s,baz=344,slow=5.7,SNR=3.4						

*DDA **09** 00:39:03.3,36°.96N×27°.22E,h7km±4km,Md2.8*
*ISCJB **09** 00:39:04.0±1.4,36°.93N±0°.04×27°.24E±0°.09,h6km±10km, Error ellipse: s-maj=12.5km s-min=5.8km az=158.2*
*CSEM **09** 00:39:04.3±0.2,36°.90N×27°.23E,h2km,MD2.8,Error ellipse: s-maj=4.6km s-min=2.2km az=57.0*
*ISK **09** 00:39:04.0,36°.91N×27°.26E,h4km,MD2.8*

ISC 09 00:39:04.2±1.3,36°.92N±0°.05×27°.25E±0°.10,h12km±8km, n23,σ0°75/34,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	Kayabasi	0.21	47	iP	Pg	00 39 08.4	-0.5
BDRM				iS	Sg	00 39 11.7	-0.2
BDRM	Kayabasi	0.21	47	iP	Pg	00 39 08.4	-0.4
BDRM				iS	Sg	00 39 11.7	-0.2
DAT	Datca	0.33	126	ePG	Pg	00 39 10.7	-0.1
DAT				eSG	Sg	00 39 15.8	+0.6
DAT	Datca	0.33	126	ePg	Pg	00 39 10.7	-0.1
DAT				eSg	Sg	00 39 15.8	+0.5
MLSB	Milas	0.56	48	ePG	Pg	00 39 15.8	+0.6
MLSB				eSG	Sg	00 39 24.1	+1.5
MLSB	Milas	0.56	48	ePg	Pg	00 39 15.8	+0.6
MLSB				eSg	Sg	00 39 24.1	+1.4
GCAM	G?zelcaml?	0.78	359	iP	Pg	00 39 18.4	-0.9
GCAM				iS	Sg	00 39 29.9	+0.4
GCAM	G?zelcaml?	0.78	359	iP	Pg	00 39 18.4	-0.9
GCAM				iS	Sg	00 39 29.9	+0.4
YER	Yerkesik	0.85	75	ePG	Pg	00 39 21.0	+0.3
YER	Yerkesik	0.85	75	ePg	Pg	00 39 21.0	+0.3
AYDN	Tasoluk	0.89	34	iP	Pg	00 39 20.7	-0.8
AYDN				iS	Sg	00 39 32.1	-1.0
AYDN	Tasoluk	0.89	34	iP	Pg	00 39 20.7	-0.8
AYDN				iS	Sg	00 39 32.1	-1.0
TURN	Turunc	1.08	92	iP	Pg	00 39 19.0	-6.2
TURN				iS	Sg	00 39 32.1	-7.1
BLCB	Balcova	1.47	354	ePN	Pb	00 39 32.2	+0.7
BLCB	Balcova	1.47	354	ePn	Pb	00 39 32.2	+0.7
IZM	Izmir	1.47	0	ePN	Pb	00 39 32.4	+0.9
IZM	Izmir	1.47	0	ePn	Pb	00 39 32.4	+0.9
FETY	Fethiye	1.50	100	ePN	Pb	00 39 32.3	+0.4
FETY	Fethiye	1.50	100	ePn	Pb	00 39 32.3	+0.3
KULA	Kula-Manisa	1.94	35	ePN	Pb	00 39 39.1	-0.4
KULA	Kula-Manisa	1.94	35	ePn	Pb	00 39 39.1	-0.4
ELL	Elmali	2.14	94	ePN	Pb	00 39 41.5	-1.4
ELL	Elmali	2.14	94	ePn	Pb	00 39 41.5	-1.4

*NEIC **09** 00:48:51.7,35°.44S×71°.22W,h103km,mb3.8/3, MD3.4(GUC),After GUC.*

GUC 09 00:48:51.7±0.7,35°.44S×71°.22W,h103km±4km,MD3.4, ML3.8,6C-5D,Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NICH	Los Niches	0.44	359	⇑iP	Pn	00 49 07.6	+0.3
NICH				iS	Sn	00 49 19.7	+0.6
CNCO	Chanco	1.11	254	⇓iP	Pn	00 49 13.7	+0.2
CNCO				iS	Sn	00 49 30.3	+0.3
CNCO	Chanco	1.11	254	⇓iP	Pn	00 49 13.7	+0.2
CNCO				iS	Sn	00 49 30.3	+0.3
CNCO				AML	AML	00 49 31.1	
	comp=E,586nm,0.3s						
CCHI	Chillan	1.35	211	⇑iP	Pn	00 49 15.5	-0.8
CCHI				iS	Sn	00 49 34.1	-0.8
CCHI	Chillan	1.35	211	⇑iP	Pn	00 49 15.5	-0.8
CCHI				iS	Sn	00 49 34.1	-0.8
CCHI				AML	AML	00 49 35.0	
	comp=E,1μm,0.2s						
CACH	El Canelo	1.42	21	iP	Pn	00 49 17.7	+0.6
CACH				iS	Sn	00 49 36.9	+0.6
LNV	Longovilo	1.49	354	⇑iP	Pn	00 49 18.5	+0.5
LNV				iS	Sn	00 49 38.3	+0.4
CHCH	Chadas Angostu	1.57	17	⇑iP	Pn	00 49 19.6	+0.6
CHCH				eS	Sn	00 49 40.4	+0.6
TACH	Talagante	1.80	8	⇓iP	Pn	00 49 22.1	+0.3
TACH				iS	Sn	00 49 44.4	-0.4
PCH	Pirque	1.91	18	eP	Pn	00 49 24.1	+0.9
PCH				iS	Sn	00 49 48.6	+1.4
ANTU	Antumapu	1.93	15	eP	Pn	00 49 24.6	+1.1
ANTU				iS	Sn	00 49 49.0	+1.3
ANTU	Antumapu	1.93	15	eP	Pn	00 49 24.6	+1.1
ANTU				iS	Sn	00 49 49.0	+1.3
ANTU				AML	AML	00 49 52.0	
	comp=E,1μm,0.4s						
SAN	Santiago	2.04	13	eP	Pn	00 49 25.1	+0.3
SAN				iS	Sn	00 49 50.3	+0.2
FCH	Farellones	2.24	20	⇓iP	Pn	00 49 28.5	+1.0
FCH				AML	AML	00 49 57.4	
	comp=N,1μm,0.5s						
PEL	Peldehue	2.33	11	⇓iP	Pn	00 49 29.3	+0.6
PEL				iS	Sn	00 49 58.1	+1.1
PEL				AML	AML	00 49 59.2	
	comp=E,2μm,0.4s						
IHA	Instituto Hidr	2.43	352	⇑iP	Pn	00 49 30.2	+0.2
IHA				iS	Sn	00 49 59.9	+0.5
PLCA	Paso Flores	5.31	175	ePn	Pn	00 50 07.2	-1.3
	comp=E,4.9nm,0.6s						
PLCA				eSn	Sn	00 51 07.6	-0.9
LCO	Las Campanas	6.42	4	ePn	Pn	00 50 23.0	-0.8
LCO				eSn	Sn	00 51 33.9	-1.7
TRQA	Tornquist	7.86	112	ePn	Pn	00 50 41.5	-1.8
	comp=E,2.6nm,0.5s						
TRQA				Sn	Sn	00 52 10.6	+0.1
LPAZ	La Paz	19.27	9	eP	P	00 53 09.4	+1.2
	comp=E,0.6nm,0.6s						

*NEIC **09** 00:49:22.1,19°.01N×67°.82W,h30km,MD3.6(RSPR), After RSPR.*

RSPR 09 00:49:22.1,19°.01N×67°.82W,h29km±29km,MD3.6/19, MD3.6/19,9C-8D,Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	0.73	227	⇑iP	Pb	00 49 34.1	-2.2
PCDR	Punta Cana, DR	0.73	227	eS	Sb	00 49 45.1	-0.8
AGPR	Aguadilla, PR	0.86	129	eP	Pn	00 49 34.5	-3.8
AGPR				eS	Sb	00 49 46.3	-3.5
AGP	Aguadilla	0.88	133	ePg	Pn	00 49 34.5	-4.0
IMO	Isla Mona	0.90	185	⇓iP	Pn	00 49 36.1	-2.7
IMO				eS	Sn	00 49 48.2	-2.7
MPR	Mayaguez	1.03	141	ePg	Pn	00 49 37.2	-3.3
MPR				eSg	Sn	00 49 52.7	-1.2
LSP	Las Mesas	1.09	140	⇓iP	Pn	00 49 38.0	-3.3
LSP				eS	Sn	00 49 55.1	-0.3
LRS	Lares	1.17	128	⇓eP	Pn	00 49 39.2	-3.3
LRS				eS	Sn	00 49 54.4	-3.1
CRPR	Cabo Rojo, PR	1.21	146	⇑eP	Pn	00 49 40.2	-2.8
CRPR				eS	Sn	00 49 58.3	-0.1
AOPR	Arecibo Observ	1.21	123	⇑eP	Pn	00 49 40.3	-2.7
AOPR				eS	Sn	00 49 56.3	-2.1
GBPR	Guanica, Bosqu	1.37	139	⇓eP	Pn	00 49 43.7	-1.5
GBPR				eS	Sn	00 50 03.1	+0.8
CELP	Cerrillos	1.50	128	⇓eP	Pn	00 49 44.8	-2.3
CELP				eS	Sn	00 50 05.8	+0.1
OBIP	Obispado Ponce	1.50	130	⇓eP	Pn	00 49 44.7	-2.4
OBIP				eS	Sn	00 50 04.6	-1.1
ICM	Isla Caja Muer	1.66	132	⇑eP	Pn	00 49 48.6	-0.7
ICM				eS	Sn	00 50 09.6	-0.1
SJG	San Juan	1.82	119	⇑eP	Pn	00 49 49.1	-2.3
SJG				eS	Sn	00 50 13.0	-0.6
SJG	San Juan	1.82	119	⇓eP	Pn	00 49 49.2	-2.2
SJG				eS	Sn	00 50 12.4	-1.1
CBYP	Canovanas	2.00	111	⇓eP	Pn	00 49 51.7	-2.2
CPD	Cerro la Pandu	2.05	118	⇑eP	Pn	00 49 52.6	-2.0
CPD				eS	Sn	00 50 19.4	+0.1
HUMP	Col San Antoni	2.06	115	⇑eP	Pn	00 49 52.7	-2.0
MTP	Monte Pirata	2.34	113	⇑eP	Pn	00 49 56.4	-2.2
STVI	Saint Thomas	2.80	103	eSb	Sb	00 50 36.2	-9.0
STVI	Saint Thomas	2.80	103	⇑eP	Pn	00 50 03.4	-1.5
STVI				eS	Sn	00 50 37.2	-0.5
SDDR	Presa de Saban	3.28	270	ePn	Pn	00 50 13.8	+2.2
SDDR				eSn	Sn	00 50 55.7	+6.1

*ATH **09** 00:57:40.6,37°.88N×21°.54E,h21km±1km,MD3.2/16, ML2.5*
*NEIC **09** 00:57:40.6,37°.88N×21°.54E,h21km,ML2.5(ATH),After ATH.*
*THE **09** 00:57:41.4,37°.90N×21°.55E,h13km±1km,ML3.4/7,Error ellipse: s-maj=1.4km s-min=0.7km az=68.0*
*CSEM **09** 00:57:41.0±0.2,37°.89N×21°.53E,h12km,ML2.5,Error ellipse: s-maj=4.7km s-min=4.1km az=54.0*
*ISCJB **09** 00:57:41.1±0.6,37°.85N±0°.03×21°.56E±0°.04,h20km±5km, Error ellipse: s-maj=5.3km s-min=4.8km az=12.4*

ISC 09 00:57:40.9±0.6,37°.85N±0°.03×21°.56E±0°.04,h17km±4km, n65,σ0°95/90,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.22	341	ePb	Pg	00 57 45.9	0.0
RLS	Riolos of Patr	0.22	341	ePB	Pg	00 57 45.9	0.0
RLS	Riolos of Patr	0.22	341	ePb	Pg	00 57 45.9	0.0
UPR	University Cam	0.47	23	P	Pg	00 57 49.8	-0.5
UPR				S	Sg	00 57 56.7	+0.1
UPR	University Cam	0.47	23	ePB	Pb	00 57 50.0	-0.7
UPR				eSB	Sb	00 57 56.8	-0.5
UPR	University Cam	0.47	23	P	Pg	00 57 49.8	-0.5
UPR				S	Sg	00 57 56.7	+0.1
LAKA	Lakka	0.51	41	P	Pg	00 57 50.7	-0.4
LAKA				S	Sg	00 57 58.2	+0.2
LAKA	Lakka	0.51	41	P	Pg	00 57 50.7	-0.4
LAKA				S	Sg	00 57 58.2	+0.2
GUR	Goura	0.63	82	P	Pg	00 57 52.9	-0.3
GUR				S	Sg	00 58 03.5	+1.9
GUR	Goura	0.63	82	ePN	Pn	00 57 53.1	-2.0
GUR				eSN	Sg	00 58 02.7	+1.1
GUR	Goura	0.63	82	P	Pg	00 57 52.9	-0.3
GUR				S	Sg	00 58 03.5	+1.9
EFP	Efpalio	0.64	26	P	Pg	00 57 52.4	-1.0
EFP				S	Sg	00 58 01.4	-0.5
EFP	Efpalio	0.64	26	ePB	Pb	00 57 52.5	-1.1
EFP				eSN	Sg	00 58 01.3	-0.6
EFP	Efpalio	0.64	26	ePb	Pb	00 57 52.5	-1.1
EFP				S	Sg	00 58 01.4	-0.5
TRIZ	Trizonia	0.66	38	P	Pg	00 57 53.0	-0.7
TRIZ				S	Sg	00 58 02.9	+0.4
TRIZ	Trizonia	0.66	38	P	Pg	00 57 53.0	-0.7
TRIZ				S	Sg	00 58 02.9	+0.4
KFL	Anninata	0.66	293	P	Pg	00 57 53.8	0.0
KALE	Kalithea	0.71	40	P	Pg	00 57 54.0	-0.8
KALE				S	Sg	00 58 04.5	+0.3
KALE	Kalithea	0.71	40	P	Pg	00 57 54.0	-0.8
KALE				S	Sg	00 58 04.5	+0.3
ITM	Ithomi	0.73	156	ePn	Pn	00 57 56.4	-0.1
ITM				eSn	Sn	00 58 05.8	-1.5
ITM	Ithomi	0.73	156	P	Pn	00 57 56.4	-0.1
ITM	Ithomi	0.73	156	ePN	Pn	00 57 56.4	-0.1
ITM

KALE	**Kalithea**	**0.59**	**50**	P		**Pg**	01 03 44.0	-0.8
KALE				S		**Sg**	01 03 53.2	+0.6
GUR	**Goura**	**0.62**	**97**	P		**Pg**	01 03 44.9	-0.4
GUR				S		**Sg**	01 03 54.3	+0.8
GUR	**Goura**	**0.62**	**97**	*e*PB		**Pg**	01 03 44.8	-0.5
GUR	**Goura**	**0.62**	**97**	P		**Pg**	01 03 44.9	-0.4
GUR				S		**Sg**	01 03 54.3	+0.8
KFL	**Anninata**	**0.62**	**279**	P		**Pg**	01 03 44.6	-0.8
KFL				S		**Sg**	01 03 55.1	+1.6
VLS	**Valsamata**	**0.79**	**282**	*e*Pn		**Pg**	01 03 46.8	-1.7
VLS	**Valsamata**	**0.79**	**282**	P		**Pg**	01 03 46.8	-1.7
VLS				S		**Sg**	01 03 59.5	+0.7
VLS	**Valsamata**	**0.79**	**282**	*e*PN		**Pg**	01 03 46.8	-1.7
VLS	**Valsamata**	**0.79**	**282**	P		**Pg**	01 03 46.8	-1.7
VLS				S		**Sg**	01 03 59.5	+0.7
DSF	**Desfina**	**0.86**	**62**	P		**Pg**	01 03 48.3	-1.5
DSF				S		**Sg**	01 04 00.9	-0.1
DSF	**Desfina**	**0.86**	**62**	P		**Pg**	01 03 48.3	-1.5
DSF				S		**Sg**	01 04 00.9	-0.1
ITM	**Ithomi**	**0.88**	**161**	*e*Pn		**Pg**	01 03 48.7	-1.5
ITM	**Ithomi**	**0.88**	**161**	P		**Pg**	01 03 50.2	0.0
ITM				S		**Sg**	01 04 05.5	+3.8
ITM	**Ithomi**	**0.88**	**161**	*e*PN		**Pg**	01 03 48.7	-1.5
ITM	**Ithomi**	**0.88**	**161**	P		**Pg**	01 03 50.2	0.0
ITM				S		**Sg**	01 04 05.5	+3.8
VLX	**Vlachokerasia**	**0.91**	**134**	P		**Pg**	01 03 50.7	-0.1
VLX				S		**Sg**	01 04 05.0	+2.3
VLX	**Vlachokerasia**	**0.91**	**134**	*e*PN		**Pg**	01 03 50.7	-0.1
VLX	**Vlachokerasia**	**0.91**	**134**	P		**Pg**	01 03 50.7	-0.1
VLX				S		**Sg**	01 04 05.0	+2.3
EVR	**Evrytania**	**0.92**	**12**	*e*Pn		**Pg**	01 03 49.4	-1.7
EVR	**Evrytania**	**0.92**	**12**	*e*PN		**Pg**	01 03 49.4	-1.7
LKD2	**Lefkada island**	**1.05**	**318**	P		**Pg**	01 03 51.4	-2.2
LKD2				S		**Sg**	01 04 07.7	+0.4
LKD2	**Lefkada island**	**1.05**	**318**	P		**Pg**	01 03 51.4	-2.2
LKD2				S		**Sg**	01 04 07.7	+0.4
LTK	**Loutraki**	**1.11**	**89**	P		**Pg**	01 03 53.6	-1.0
LTK				S		**Sg**	01 04 10.8	+1.8
LTK	**Loutraki**	**1.11**	**89**	*e*PN		**Pg**	01 03 53.7	-0.9
LTK	**Loutraki**	**1.11**	**89**	P		**Pg**	01 03 53.6	-1.0
LTK				S		**Sg**	01 04 10.8	+1.8
PYL	**PYLOS**	**1.12**	**173**	P		**Pg**	01 03 54.2	-0.7
PYL				S		**Sg**	01 04 12.9	+3.4
PYL	**PYLOS**	**1.12**	**173**	*e*PN		**Pg**	01 03 54.7	-0.2
PYL	**PYLOS**	**1.12**	**173**	P		**Pg**	01 03 54.2	-0.7
PYL	**PYLOS**	**1.12**	**173**	*e*Pn		**Pg**	01 03 54.7	-0.2
PYL				S		**Sg**	01 04 12.9	+3.4
AGG	**Agios Georgios**	**1.17**	**30**	*e*Pn		**Pn**	01 03 54.0	-1.6
AGG	**Agios Georgios**	**1.17**	**30**	P		**Pb**	01 03 53.6	-2.0
AGG				S		**Sb**	01 04 10.9	+0.1
AGG	**Agios Georgios**	**1.17**	**30**	*e*PN		**Pn**	01 03 54.0	-1.6
AGG	**Agios Georgios**	**1.17**	**30**	P		**Pb**	01 03 53.6	-2.0
AGG	**Agios Georgios**	**1.17**	**30**	*e*Pn		**Pn**	01 03 54.0	-1.6
AGG				S		**Sb**	01 04 10.9	+0.1
LKR	**Lokris**	**1.30**	**60**	*e*Pb		**Pb**	01 03 56.2	-1.4
LKR	**Lokris**	**1.30**	**60**	P		**Pn**	01 03 56.0	-1.3
LKR				S		**Sb**	01 04 15.2	+0.9
LKR	**Lokris**	**1.30**	**60**	*e*PB		**Pb**	01 03 56.2	-1.4
LKR	**Lokris**	**1.30**	**60**	P		**Pn**	01 03 56.0	-1.3
LKR				S		**Sb**	01 04 15.2	+0.9
ATAL	**Atalanti**	**1.33**	**59**	P		**Pn**	01 03 57.1	-0.7
ATAL				S		**Sb**	01 04 15.7	+0.4
ATAL	**Atalanti**	**1.33**	**59**	P		**Pn**	01 03 57.1	-0.7
ATAL				S		**Sb**	01 04 15.7	+0.4
NAIG	**Nisos Aigina**	**1.54**	**99**	*e*Pb		**Pn**	01 04 00.6	-0.1
NAIG	**Nisos Aigina**	**1.54**	**99**	*e*PN		**Pn**	01 04 00.6	-0.1
NAIG	**Nisos Aigina**	**1.54**	**99**	*e*Pb		**Pn**	01 04 00.6	-0.1
THL	**Klokotos Trika**	**1.59**	**13**	P		**Pn**	01 04 01.2	-0.1
THL				S		**Sn**	01 04 24.6	+2.7
THL	**Klokotos Trika**	**1.59**	**13**	*e*PN		**Pn**	01 04 01.2	-0.1
THL	**Klokotos Trika**	**1.59**	**13**	P		**Pn**	01 04 01.2	-0.1
THL				S		**Sn**	01 04 24.6	+2.7
VLI	**Veliai**	**1.69**	**139**	*e*Pn		**Pn**	01 04 05.6	+2.9
VLI	**Veliai**	**1.69**	**139**	*e*PN		**Pn**	01 04 05.6	+2.9
ATH	**Athens Observa**	**1.70**	**91**	*e*Pn		**Pn**	01 04 03.3	+0.5
ATH	**Athens Observa**	**1.70**	**91**	*e*PN		**Pn**	01 04 03.3	+0.5
ATH	**Athens Observa**	**1.70**	**91**	*e*Pn		**Pn**	01 04 03.3	+0.5
JAN	**Janina**	**1.73**	**341**	*e*Pn		**Pn**	01 04 04.5	+1.2
JAN	**Janina**	**1.73**	**341**	*e*PN		**Pn**	01 04 04.5	+1.2
JAN	**Janina**	**1.73**	**341**	*e*Pn		**Pn**	01 04 04.5	+1.2
ATHU	**Athens Univers**	**1.75**	**91**	P		**Pn**	01 04 03.0	-0.6
ATHU				S		**Sn**	01 04 26.3	+0.4
ATHU	**Athens Univers**	**1.75**	**91**	P		**Pn**	01 04 03.0	-0.6
ATHU				S		**Sn**	01 04 26.3	+0.4
VLY	**Voula,Athens**	**1.77**	**94**	*e*Pb		**Pb**	01 04 03.3	-2.4
VLY	**Voula,Athens**	**1.77**	**94**	*e*PB		**Pb**	01 04 03.3	-2.4
MEV	**Metsovon**	**1.79**	**352**	P		**Pn**	01 04 06.2	+2.1
MEV	**Metsovon**	**1.79**	**352**	P		**Pn**	01 04 06.2	+2.1
IGT	**Igoumenitsa**	**1.80**	**328**	P		**Pn**	01 04 04.4	+0.2
IGT				S		**Sn**	01 04 31.1	+4.1
IGT	**Igoumenitsa**	**1.80**	**328**	P		**Pn**	01 04 04.4	+0.2
IGT				S		**Sn**	01 04 31.1	+4.1
PTL	**Penteli**	**1.82**	**88**	*e*Pb		**Pb**	01 04 04.0	-2.5
PTL	**Penteli**	**1.82**	**88**	*e*PB		**Pb**	01 04 04.0	-2.5
NEO	**Neokhori**	**1.83**	**45**	*e*Pb		**Pb**	01 04 04.2	-2.6
NEO	**Neokhori**	**1.83**	**45**	*e*PB		**Pb**	01 04 04.2	-2.6
XOR	**Xorichti**	**1.86**	**43**	P		**Pn**	01 04 04.5	-0.5
XOR				S		**Sn**	01 04 28.9	+0.5
XOR	**Xorichti**	**1.86**	**43**	P		**Pn**	01 04 04.5	-0.5
XOR				S		**Sn**	01 04 28.9	+0.5
KYTH	**Kithira**	**2.09**	**145**	*e*Pn		**Pn**	01 04 11.5	+3.3
AOS	**Alonnisos**	**2.15**	**57**	P		**Pn**	01 04 07.8	-1.3
AOS				S		**Sn**	01 04 35.3	-0.4
AOS	**Alonnisos**	**2.15**	**57**	P		**Pn**	01 04 07.8	-1.3
AOS				S		**Sn**	01 04 35.3	-0.4
KEK	**Kerkira**	**2.19**	**321**	*e*Pn		**Pn**	01 04 09.4	-0.2
KEK	**Kerkira**	**2.19**	**321**	P		**Pn**	01 04 09.8	+0.2
KEK	**Kerkira**	**2.19**	**321**	*e*PN		**Pn**	01 04 09.4	-0.2
KEK	**Kerkira**	**2.19**	**321**	*e*Pn		**Pn**	01 04 09.4	-0.2
KEK	**Kerkira**	**2.19**	**321**	P		**Pn**	01 04 09.8	+0.2
LIT	**Litokhoron**	**2.21**	**19**	*e*Pn		**Pn**	01 04 11.1	+1.3
LIT	**Litokhoron**	**2.21**	**19**	P		**Pn**	01 04 11.0	+1.2
LIT				S		**Sn**	01 04 39.1	+2.0
LIT	**Litokhoron**	**2.21**	**19**	*e*PN		**Pn**	01 04 11.1	+1.3
LIT	**Litokhoron**	**2.21**	**19**	P		**Pn**	01 04 11.0	+1.2
LIT				S		**Sn**	01 04 39.1	+2.0
KZN	**Kozani**	**2.30**	**4**	*e*Pn		**Pn**	01 04 11.4	+0.3
KZN	**Kozani**	**2.30**	**4**	P		**Pn**	01 04 11.9	+0.8
KZN	**Kozani**	**2.30**	**4**	*e*PN		**Pn**	01 04 11.4	+0.3
KZN	**Kozani**	**2.30**	**4**	*e*Pn		**Pn**	01 04 11.4	+0.3
KZN	**Kozani**	**2.30**	**4**	P		**Pn**	01 04 11.9	+0.8
FNA	**Florina**	**2.77**	**357**	P		**Pn**	01 04 18.3	+0.7
FNA	**Florina**	**2.77**	**357**	P		**Pn**	01 04 18.3	+0.7
PLG	**Polygyros**	**2.77**	**31**	*e*Pn		**Pn**	01 04 18.0	+0.4
PLG	**Polygyros**	**2.77**	**31**	P		**Pn**	01 04 17.1	-0.5
PLG	**Polygyros**	**2.77**	**31**	*e*PN		**Pn**	01 04 18.0	+0.4
PLG	**Polygyros**	**2.77**	**31**	P		**Pn**	01 04 17.1	-0.5
PLG	**Polygyros**	**2.77**	**31**	*e*Pn		**Pn**	01 04 18.0	+0.4
BIA	**Bitola**	**3.01**	**357**	*i* Pn		**Pn**	01 04 21.4	+0.5
SOH	**Sokhos**	**3.13**	**26**	*e*Pn		**Pn**	01 04 22.9	+0.4
SOH	**Sokhos**	**3.13**	**26**	P		**Pn**	01 04 22.9	+0.4
SOH	**Sokhos**	**3.13**	**26**	*e*PN		**Pn**	01 04 22.9	+0.4
SOH	**Sokhos**	**3.13**	**26**	P		**Pn**	01 04 22.9	+0.4
OHR	**Ohrid**	**3.15**	**349**	*i* Pn		**Pn**	01 04 23.1	+0.3
OHR				*e*Lg			01 05 17.2	
	comp=E,47nm,0.9s							
KARN	**Karanos**	**3.22**	**143**	*e*PB		**Pb**	01 04 27.0	-3.4
APE	**Apeiranthos**	**3.29**	**105**	*e*Pn		**Pn**	01 04 24.7	0.0
APE	**Apeiranthos**	**3.29**	**105**	P		**Pn**	01 04 24.4	-0.3
APE	**Apeiranthos**	**3.29**	**105**	*e*PN		**Pn**	01 04 24.7	0.0
APE	**Apeiranthos**	**3.29**	**105**	P		**Pn**	01 04 24.4	-0.3
APE	**Apeiranthos**	**3.29**	**105**	*e*Pn		**Pn**	01 04 24.7	0.0
VAM	**Vamos**	**3.35**	**140**	*e*Pn		**Pn**	01 04 27.0	+1.4
VAM	**Vamos**	**3.35**	**140**	*e*PN		**Pn**	01 04 27.0	+1.4
VAM	**Vamos**	**3.35**	**140**	*e*Pn		**Pn**	01 04 27.0	+1.4
KRUS	**Krusevo**	**3.36**	**356**	*i* Pn		**Pn**	01 04 25.7	0.0
KRUS				*e*Lg			01 05 14.8	
	comp=N,5.6nm,0.4s							
LIA	**Limnos Island**	**3.39**	**55**	*e*Pn		**Pn**	01 04 26.5	+0.4
LIA	**Limnos Island**	**3.39**	**55**	P		**Pn**	01 04 25.1	-1.0
LIA	**Limnos Island**	**3.39**	**55**	*e*PN		**Pn**	01 04 26.5	+0.4
LIA	**Limnos Island**	**3.39**	**55**	P		**Pn**	01 04 25.1	-1.0
LIA	**Limnos Island**	**3.39**	**55**	*e*Pn		**Pn**	01 04 26.5	+0.4
VAY	**Valandovo**	**3.40**	**13**	*i* Pn		**Pn**	01 04 27.7	+1.5
VAY				*e*Sn		**Sn**	01 05 06.0	-0.4
VAY				*e*Lg			01 05 08.7	
	comp=E,36nm,1.1s							
VAY				*e*Lg			01 05 11.0	
	comp=N,58nm,1.3s							
CHOS	**Chios island**	**3.56**	**83**	P		**Pn**	01 04 28.4	0.0
CHOS	**Chios island**	**3.56**	**83**	*e*PN		**Pn**	01 04 28.5	+0.1
CHOS	**Chios island**	**3.56**	**83**	*e*Pn		**Pn**	01 04 28.5	+0.1
TIR	**Tirane**	**3.58**	**339**	*e*Pn		**Pn**	01 04 29.7	+1.0
TIR	**Tirane**	**3.58**	**339**	*e*Pn		**Pn**	01 04 29.7	+1.0
STIP	**Stip**	**3.71**	**7**	*i* Pn		**Pn**	01 04 31.4	+1.0
STIP	**Stip**	**3.71**	**7**	P		**Pn**	01 04 31.4	+0.9
STIP	**Stip**	**3.71**	**7**	P		**Pn**	01 04 31.4	+0.9
IDI	**Anoyia**	**3.81**	**134**	Pn		**Pn**	01 04 33.7	+1.8
	comp=N,0.5nm,0.3s,baz=301,slow=11,SNR=19							
IDI				Sn		**Sn**	01 05 16.5	-0.1
	comp=N,1.5nm,0.3s,baz=260,slow=18,SNR=3.1							
IDI	**Anoyia**	**3.81**	**134**	*e*Pn		**Pn**	01 04 32.6	+0.7
IDI				*e*Sn		**Sn**	01 05 14.9	-1.7
IDI	**Anoyia**	**3.81**	**134**	*e*Pn		**Pn**	01 04 32.6	+0.7
IDI				*e*Sn		**Sn**	01 05 14.9	-1.8
TIP	**Timpagrande**	**3.94**	**289**	*e*Pn		**Pn**	01 04 34.1	+0.4
TIP	**Timpagrande**	**3.94**	**289**	*e*Pn		**Pn**	01 04 34.1	+0.4
MMB	**Musomiste**	**3.94**	**24**	*i* P		**Pn**	01 04 34.0	+0.3
MMB	**Musomiste**	**3.94**	**24**	*i* P		**Pn**	01 04 34.0	+0.3
KKB	**Krupnik**	**4.02**	**16**	*e*P		**Pn**	01 04 35.7	+0.9
KKB	**Krupnik**	**4.02**	**16**	*e*P		**Pn**	01 04 35.7	+0.9
SMG	**Samos**	**4.18**	**93**	*e*Pn		**Pn**	01 04 37.0	0.0
SMG	**Samos**	**4.18**	**93**	*e*PN		**Pn**	01 04 37.0	0.0
SMG	**Samos**	**4.18**	**93**	*e*Pn		**Pn**	01 04 37.0	0.0
NPS	**Neapolis**	**4.26**	**129**	*e*Pn		**Pn**	01 04 39.8	+1.8
NPS	**Neapolis**	**4.26**	**129**	*e*PN		**Pn**	01 04 39.8	+1.8
NPS	**Neapolis**	**4.26**	**129**	*e*Pn		**Pn**	01 04 39.8	+1.8
RZN	**Rozhen**	**4.40**	**32**	*i* P		**Pn**	01 04 40.8	+0.8
RZN	**Rozhen**	**4.40**	**32**	*i* P		**Pn**	01 04 40.8	+0.8
CEL	**Celeste**	**4.48**	**275**	*e*Pn		**Pn**	01 04 37.4	-3.6
CEL	**Celeste**	**4.48**	**275**	*e*Pn		**Pn**	01 04 37.4	-3.6
SG1	**Sgolgore (BA)**	**4.72**	**308**	*e*Pn		**Pn**	01 04 44.0	-0.4
BAI	**Bari**	**4.76**	**312**	*e*Pn		**Pn**	01 04 44.6	-0.3
BARS	**Barje**	**4.80**	**2**	*i*Pn		**Pn**	01 04 45.4	-0.1
ACER	**Acerenza**	**5.16**	**304**	Pn		**Pn**	01 04 50.4	0.0
	comp=N,118nm,2.0s							
ACER	**Acerenza**	**5.16**	**304**	Pn		**Pn**	01 04 50.4	0.0
	comp=N,118nm,2.0s							
STON	**Ston**	**5.68**	**330**	*e*Pn		**Pn**	01 04 55.1	-2.4
STON				Sn		**Sn**	01 05 57.5	-5.1
FG5	**Orsara di Pugl**	**5.86**	**306**	Pn		**Pn**	01 05 00.2	+0.3
	comp=N,5.6nm,0.3s							
FG5	**Orsara di Pugl**	**5.86**	**306**	Pn		**Pn**	01 05 00.2	+0.3
	comp=N,5.6nm,0.3s							
RGNG	**Rignano Grg**	**5.88**	**310**	Pn		**Pn**	01 04 59.5	-0.7
RGNG	**Rignano Grg**	**5.88**	**310**	Pn		**Pn**	01 04 59.5	-0.7
MRB1	**Monte Rocchett**	**5.97**	**303**	Pn		**Pn**	01 05 02.7	+1.2
	comp=N,116nm,1.8s							
MRB1	**Monte Rocchett**	**5.97**	**303**	Pn		**Pn**	01 05 02.7	+1.2
	comp=N,116nm,1.8s							
BBLS	**Lazići**	**6.07**	**345**	*e*Pn		**Pn**	01 05 04.8	+1.9
DIVS	**Divibare**	**6.20**	**349**	*e*Pn		**Pn**	01 05 03.2	-1.4
SGG	**Gregorio Mates**	**6.49**	**304**	Pn		**Pn**	01 05 10.0	+1.4
	comp=N,11nm,0.5s							
SGG	**Gregorio Mates**	**6.49**	**304**	Pn		**Pn**	01 05 10.0	+1.4
	comp=N,11nm,0.5s							
SDI	**San Donato**	**7.01**	**304**	Pn		**Pn**	01 05 16.3	+0.4
	comp=N,1.8nm,0.2s							
SDI	**San Donato**	**7.01**	**304**	Pn		**Pn**	01 05 16.3	+0.4
	comp=N,1.8nm,0.2s							
NRCA	**Norcia**	**8.04**	**309**	Pn		**Pn**	01 05 31.1	+1.1
	comp=N,2.3nm,0.6s							
NRCA	**Norcia**	**8.04**	**309**	Pn		**Pn**	01 05 31.1	+1.1
	comp=N,2.3nm,0.6s							
MLR	**Muntele Rosu**	**8.16**	**22**	Pn		**Pn**	01 05 36.5	+5.0
	comp=N,0.1nm,0.3s,baz=198,slow=16,SNR=4.6							
NVLJ	**Novalja**	**8.26**	**325**	*e*Pn		**Pn**	01 05 31.3	-1.6
NVLJ				Sn		**Sn**	01 06 60.0	-6.2
NVLJ	**Novalja**	**8.26**	**325**	*e*Pn		**Pn**	01 05 31.3	-1.6
BRTR	**Keskin Array B**	**9.57**	**76**	Pn		**Pn**	01 05 51.5	+0.5
	comp=N,0.1nm,0.3s,baz=116,slow=3.4,SNR=3.1							
BRTR	**Keskin Array B**	**9.57**	**76**	Pn		**Pn**	01 05 51.5	+0.6
VRAC	**Vranov**	**11.85**	**344**	LR		LR	01 11 16.6	
	comp=N,31nm,19.9s,baz=202,slow=40							
GERES	**GERESS Array B**	**12.24**	**335**	Pn		**Pn**	01 06 26.1	-1.2
	comp=N,0.1nm,0.3s,baz=162,slow=14,SNR=7.1							
GERES	**GERESS Array B**	**12.24**	**335**	Pn		**Pn**	01 06 26.1	-1.2
MMAI	**Mount Meron Ar**	**12.32**	**110**	Pn		**Pn**	01 06 28.0	-0.6
	comp=N,0.3nm,0.3s,baz=317,slow=10,SNR=3.6							
HFS	**Hagfors**	**22.70**	**350**	P		**P**	01 08 32.1	-2.6
	comp=N,2.6nm,0.9s,mb3.7,baz=160,slow=13,SNR=3.6							
EKA	**Eskdalemuir Ar**	**24.04**	**324**	P		**P**	01 08 46.7	-1.4
	comp=N,0.5nm,0.6s,mb3.1,baz=126,slow=9.9,SNR=4.0							
EKA	**Eskdalemuir Ar**	**24.04**	**324**	P		**P**	01 08 46.7	-1.4
KURK	**Kurchatov**	**41.72**	**53**	P		**P**	01 11 20.3	-1.6
	comp=N,0.5nm,0.5s,mb3.4,baz=279,slow=9.1,SNR=4.2							
KURK	**Kurchatov**	**41.72**	**53**	P		**P**	01 11 20.3	-1.6
KURK	**Kurchatov**	**41.72**	**53**	P		**P**	01 11 20.3	-1.6
ZALV	**Zalesovo Beam**	**45.19**	**48**	P		**P**	01 11 48.3	-1.6
	comp=N,1.2nm,0.5s,mb4.0,baz=270,slow=7.1,SNR=5.4							
ZALV	**Zalesovo Beam**	**45.19**	**48**	P		**P**	01 11 48.3	-1.6

KRSC 09 01:16:57.9±1.3, 49°.59N×156°.57E, h10km±10km, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**1.44**	**333**	*e*P	Pn	01 17 24.5	+0.5
ALID				*i* S	Sn	01 17 44.0	+1.1
MIPR	**Malaya Ipel'ka**	**2.69**	**2**	*e*P	Pn	01 17 42.1	+0.9
MIPR				*i* S	Sn	01 18 14.3	+0.5
AVH	**Avacha**	**3.92**	**19**	*e*P	Pn	01 17 59.8	+1.7
GNL	**Ganaly**	**4.20**	**11**	P	Pn	01 18 05.3	+3.4

*NEIC **09** 01:21:31.9, 37°.94N×21°.46E, h7km, ML2.8(ATH), After ATH.*
*CSEM **09** 01:21:31.7±0.2, 37°.91N×21°.46E, h2km, ML2.8, Error ellipse: s-maj=4.0km s-min=3.2km az=33.0*
*ATH **09** 01:21:31.9, 37°.94N×21°.46E, h7km±3km, MD3.2/24, ML2.8*
*ISCJB **09** 01:21:31.6±0.4, 37°.91N±0°.02×21°.46E±0°.02, h2km±3km, Error ellipse: s-maj=3.3km s-min=2.9km az=44.3*
*THE **09** 01:21:32.4, 37°.92N×21°.49E, h3km±1km, ML3.5/17, Error ellipse: s-maj=1.3km s-min=0.7km az=178.0*
ISC 09 01:21:32.4±0.4, 37°.92N±0°.02×21°.46E±0°.02, h5km±3km, n129, σ1$06/176, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.14**	**1**	*e*Pg	**Pg**	01 21 35.9	+0.7
RLS	**Riolos of Patr**	**0.14**	**1**	*e*PG	**Pg**	01 21 35.9	+0.7
RLS	**Riolos of Patr**	**0.14**	**1**	*e*Pg	**Pg**	01 21 35.9	+0.7
UPR	**University Cam**	**0.44**	**35**	P	**Pg**	01 21 41.0	0.0
UPR				S	**Sg**	01 21 47.3	+0.5
UPR	**University Cam**	**0.44**	**35**	*e*PB	**Pg**	01 21 41.0	0.0
UPR	**University Cam**	**0.44**	**35**	P	**Pg**	01 21 41.0	0.0
UPR				S	**Sg**	01 21 47.3	+0.5
LAKA	**Lakka**	**0.52**	**52**	P	**Pg**	01 21 41.7	-0.6
LAKA				S	**Sg**	01 21 50.1	+1.0
LAKA	**Lakka**	**0.52**	**52**	P	**Pg**	01 21 41.7	-0.6
LAKA				S	**Sg**	01 21 50.1	+1.0
KFL	**Anninata**	**0.57**	**290**	P	**Pg**	01 21 43.4	+0.1
EFP	**Efpalio**	**0.61**	**34**	P	**Pg**	01 21 43.4	-0.8
EFP				S	**Sg**	01 21 52.8	+0.6
EFP	**Efpalio**	**0.61**	**34**	*e*PB	**Pg**	01 21 43.5	-0.7
EFP	**Efpalio**	**0.61**	**34**	P	**Pg**	01 21 43.4	-0.8
EFP				S	**Sg**	01 21 52.8	+0.6
TRIZ	**Trizonia**	**0.66**	**47**	P	**Pg**	01 21 44.2	-0.8
TRIZ				S	**Sg**	01 21 54.2	+0.7
TRIZ	**Trizonia**	**0.66**	**47**	P	**Pg**	01 21 44.2	-0.8
TRIZ				S	**Sg**	01 21 54.2	+0.7
GUR	**Goura**	**0.69**	**88**	P	**Pg**	01 21 44.5	-1.2
GUR				S	**Sg**	01 21 55.5	+0.8
GUR	**Goura**	**0.69**	**88**	*e*PB	**Pg**	01 21 44.6	-1.1
GUR	**Goura**	**0.69**	**88**	*e*Pb	**Pg**	01 21 44.6	-1.1
GUR				S	**Sg**	01 21 55.5	+0.8
KALE	**Kalithea**	**0.71**	**48**	P	**Pg**	01 21 45.1	-1.0
KALE				S	**Sg**	01 21 56.3	+1.0
KALE	**Kalithea**	**0.71**	**48**	P	**Pg**	01 21 45.1	-1.0
KALE				S	**Sg**	01 21 56.3	+1.0
VLS	**Valsamata**	**0.74**	**291**	*e*Pb	**Pg**	01 21 45.8	-0.8
VLS	**Valsamata**	**0.74**	**291**	P	**Pg**	01 21 45.8	-0.8
VLS				S	**Sg**	01 21 57.4	+1.3
VLS	**Valsamata**	**0.74**	**291**	*e*PB	**Pg**	01 21 45.8	-0.8
VLS	**Valsamata**	**0.74**	**291**	P	**Pg**	01 21 45.8	-0.8
VLS				S	**Sg**	01 21 57.4	+1.3
ITM	**Ithomi**	**0.82**	**153**	*e*Pg	**Pg**	01 21 47.7	-0.5
ITM	**Ithomi**	**0.82**	**153**	P	**Pg**	01 21 47.7	-0.5
ITM				S	**Sg**	01 22 00.7	+1.8
ITM	**Ithomi**	**0.82**	**153**	*e*PG	**Pg**	01 21 47.7	-0.5
ITM	**Ithomi**	**0.82**	**153**	P	**Pg**	01 21 47.7	-0.5
ITM				S	**Sg**	01 22 00.7	+1.8
VLX	**Vlachokerasia**	**0.91**	**127**	P	**Pg**	01 21 49.3	-0.5
VLX				S	**Sg**	01 22 03.0	+1.4
VLX	**Vlachokerasia**	**0.91**	**127**	*e*PG	**Pg**	01 21 49.2	-0.6
VLX	**Vlachokerasia**	**0.91**	**127**	P	**Pg**	01 21 49.3	-0.5
VLX				S	**Sg**	01 22 03.0	+1.4
DSF	**Desfina**	**0.97**	**59**	P	**Pg**	01 21 49.4	-1.6
DSF				S	**Sg**	01 22 04.1	+0.5
DSF	**Desfina**	**0.97**	**59**	P	**Pg**	01 21 49.4	-1.6
DSF				S	**Sg**	01 22 04.1	+0.5
EVR	**Evrytania**	**1.03**	**15**	*e*Pb	**Pg**	01 21 51.3	-0.9
EVR	**Evrytania**	**1.03**	**15**	*e*PB	**Pg**	01 21 51.3	-0.9
EVR	**Evrytania**	**1.03**	**15**	*e*Pb	**Pg**	01 21 51.3	-0.9
PYL	**PYLOS**	**1.04**	**168**	P	**Pg**	01 21 51.9	-0.5
PYL				S	**Sg**	01 22 08.1	+2.1
PYL	**PYLOS**	**1.04**	**168**	*e*PB	**Pg**	01 21 52.0	-0.4
PYL	**PYLOS**	**1.04**	**168**	P	**Pg**	01 21 51.9	-0.5
PYL				S	**Sg**	01 22 08.1	+2.1
LKD2	**Lefkada island**	**1.07**	**324**	P	**Pg**	01 21 51.8	-1.2
LKD2				S	**Sg**	01 22 09.6	+2.6
LKD2	**Lefkada island**	**1.07**	**324**	P	**Pg**	01 21 51.8	-1.2
LKD2				S	**Sg**	01 22 09.6	+2.6
LTK	**Loutraki**	**1.19**	**85**	P	**Pg**	01 21 53.6	-1.7
LTK				S	**Sg**	01

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC	Res
RLS	**Riolos of Patr**	**0.07**	**281**	*e*Pb	**Pg**	**01 32 07.0**	**+0.4**
RLS				*e*Sb	**Sg**	01 32 09.5	+1.2
RLS	**Riolos of Patr**	**0.07**	**281**	*e*PB	**Pg**	01 32 07.0	+0.4
RLS				*e*SB	**Sg**	01 32 09.5	+1.2
RLS	**Riolos of Patr**	**0.07**	**281**	*e*Pb	**Pg**	01 32 07.0	+0.4
RLS				*e*Sb	**Sg**	01 32 09.5	+1.2
UPR	**University Cam**	**0.30**	**37**	P	**Pg**	01 32 10.1	-0.1
UPR				S	**Sg**	01 32 13.3	-1.0
UPR	**University Cam**	**0.30**	**37**	*e*PB	**Pg**	01 32 10.1	-0.1
UPR				*e*SB	**Sg**	01 32 15.6	+1.3
UPR	**University Cam**	**0.30**	**37**	P	**Pg**	01 32 10.1	-0.1
UPR				S	**Sg**	01 32 13.3	-1.0
UPR				*e*Sb	**Sg**	01 32 15.6	+1.3
LAKA	**Lakka**	**0.39**	**59**	P	**Pg**	01 32 11.3	-0.5
LAKA				S	**Sg**	01 32 17.3	+0.3
LAKA	**Lakka**	**0.39**	**59**	P	**Pg**	01 32 11.3	-0.5
LAKA				S	**Sg**	01 32 17.3	+0.3
EFP	**Efpalio**	**0.47**	**36**	P	**Pg**	01 32 12.7	-0.7
EFP				S	**Sg**	01 32 20.2	+0.6
EFP	**Efpalio**	**0.47**	**36**	*e*PB	**Pg**	01 32 12.9	-0.5
EFP				*e*SB	**Sg**	01 32 19.7	+0.1
EFP	**Efpalio**	**0.47**	**36**	*e*Pb	**Pg**	01 32 12.9	-0.5
EFP				*e*Sb	**Sg**	01 32 19.7	+0.1
EFP				S	**Sg**	01 32 20.2	+0.6
TRIZ	**Trizonia**	**0.52**	**52**	P	**Pg**	01 32 13.5	-0.8
TRIZ				S	**Sg**	01 32 20.9	-0.2
TRIZ	**Trizonia**	**0.52**	**52**	P	**Pg**	01 32 13.5	-0.8
TRIZ				S	**Sg**	01 32 20.9	-0.2
KALE	**Kalithea**	**0.57**	**53**	P	**Pg**	01 32 14.5	-0.8
KALE				S	**Sg**	01 32 23.4	+0.5
KALE	**Kalithea**	**0.57**	**53**	P	**Pg**	01 32 14.5	-0.8
KALE				S	**Sg**	01 32 23.4	+0.5
KFL	**Anninata**	**0.61**	**276**	P	**Pg**	01 32 15.4	-0.6
GUR	**Goura**	**0.63**	**100**	P	**Pg**	01 32 15.4	-1.0
GUR				S	**Sg**	01 32 24.1	-0.5
GUR	**Goura**	**0.63**	**100**	*e*PB	**Pg**	01 32 15.4	-1.0
GUR				*e*SN	**Sg**	01 32 25.6	+1.0
GUR	**Goura**	**0.63**	**100**	P	**Pg**	01 32 15.4	-1.0
GUR				S	**Sg**	01 32 24.1	-0.5
VLS	**Valsamata**	**0.78**	**280**	*e*Pn	**Pg**	01 32 17.7	-1.4
VLS				*e*Sn	**Sg**	01 32 28.0	-1.3
VLS				S	**Sg**	01 32 30.4	+1.1
VLS	**Valsamata**	**0.78**	**280**	P	**Pg**	01 32 17.6	-1.5
VLS				S	**Sg**	01 32 30.4	+1.1
VLS	**Valsamata**	**0.78**	**280**	*e*PN	**Pg**	01 32 17.7	-1.4
VLS				*e*SN	**Sg**	01 32 28.0	-1.3
VLS	**Valsamata**	**0.78**	**280**	P	**Pg**	01 32 17.6	-1.5
VLS				S	**Sg**	01 32 30.4	+1.1
DSF	**Desfina**	**0.85**	**64**	P	**Pg**	01 32 18.8	-1.7
DSF				S	**Sg**	01 32 31.4	-0.2
DSF	**Desfina**	**0.85**	**64**	P	**Pg**	01 32 18.8	-1.7
DSF				S	**Sg**	01 32 31.4	-0.2
EVR	**Evrytania**	**0.89**	**13**	P	**Pg**	01 32 20.4	-1.0
EVR	**Evrytania**	**0.89**	**13**	P	**Pg**	01 32 20.4	-1.0
ITM	**Ithomi**	**0.91**	**161**	P	**Pg**	01 32 21.4	-0.3
ITM				S	**Sg**	01 32 34.6	+1.0
ITM	**Ithomi**	**0.91**	**161**	P	**Pg**	01 32 21.4	-0.3
ITM				S	**Sg**	01 32 34.6	+1.0
ITM	**Ithomi**	**0.91**	**161**	P	**Pg**	01 32 21.4	-0.3
ITM				S	**Sg**	01 32 34.6	+1.0
VLX	**Vlachokerasia**	**0.94**	**136**	P	**Pg**	01 32 21.0	-1.2
VLX				S	**Sg**	01 32 34.7	+0.3
VLX	**Vlachokerasia**	**0.94**	**136**	P	**Pg**	01 32 21.0	-1.2
VLX				S	**Sg**	01 32 34.7	+0.3
LKD2	**Lefkada island**	**1.03**	**317**	P	**Pg**	01 32 22.5	-1.9
LKD2				S	**Sg**	01 32 38.2	+0.9
LKD2	**Lefkada island**	**1.03**	**317**	P	**Pg**	01 32 22.0	-1.9
LKD2				S	**Sg**	01 32 38.2	+0.9
LTK	**Loutraki**	**1.11**	**91**	P	**Pg**	01 32 24.0	-1.6
LTK				S	**Sg**	01 32 40.6	+0.6
LTK	**Loutraki**	**1.11**	**91**	*e*PB	**Pg**	01 32 24.1	-1.5
LTK	**Loutraki**	**1.11**	**91**	P	**Pg**	01 32 24.0	-1.6
LTK				S	**Sg**	01 32 40.6	+0.6
AGG	**Agios Georgios**	**1.15**	**32**	P	**Pg**	01 32 23.9	-2.4
AGG				S	**Sg**	01 32 41.8	+0.6
AGG	**Agios Georgios**	**1.15**	**32**	P	**Pg**	01 32 23.9	-2.4
AGG				S	**Sg**	01 32 41.8	+0.6
AGG	**Agios Georgios**	**1.15**	**32**	*e*PN	**Pg**	01 32 25.6	-0.7
AGG	**Agios Georgios**	**1.15**	**32**	P	**Pg**	01 32 23.9	-2.4
AGG	**Agios Georgios**	**1.15**	**32**	*e*Pn	**Pg**	01 32 25.6	-0.7
AGG				S	**Sg**	01 32 41.8	+0.6
PYL	**PYLOS**	**1.16**	**173**	P	**Pb**	01 32 25.5	-0.6
PYL				S	**Sb**	01 32 41.7	+0.6
PYL	**PYLOS**	**1.16**	**173**	*e*PN	**Pb**	01 32 25.5	-0.6
PYL	**PYLOS**	**1.16**	**173**	P	**Pb**	01 32 25.5	-0.6
PYL				S	**Sb**	01 32 41.7	+0.6
LKR	**Lokris**	**1.28**	**61**	P	**Pn**	01 32 26.2	-1.8
LKR				S	**Sb**	01 32 46.5	+1.7
LKR	**Lokris**	**1.28**	**61**	P	**Pn**	01 32 26.2	-1.8
LKR				S	**Sb**	01 32 46.5	+1.7
LKR	**Lokris**	**1.28**	**61**	P	**Pn**	01 32 26.2	-1.8
LKR				S	**Sb**	01 32 46.5	+1.7
ATAL	**Atalanti**	**1.32**	**60**	P	**Pn**	01 32 27.1	-1.4
ATAL				S	**Sb**	01 32 45.2	-0.6
ATAL	**Atalanti**	**1.32**	**60**	P	**Pn**	01 32 27.1	-1.4
ATAL				S	**Sb**	01 32 45.2	-0.6
THL	**Klokotos Trika**	**1.56**	**13**	P	**Pn**	01 32 31.7	-0.1
THL				S	**Sn**	01 32 53.6	+1.7
THL	**Klokotos Trika**	**1.56**	**13**	*e*PN	**Pn**	01 32 32.1	+0.3
THL	**Klokotos Trika**	**1.56**	**13**	P	**Pn**	01 32 31.7	-0.1
THL	**Klokotos Trika**	**1.56**	**13**	*e*Pn	**Pn**	01 32 32.1	+0.3
THL				S	**Sn**	01 32 53.6	+1.7
JAN	**Janina**	**1.70**	**341**	*e*PN	**Pn**	01 32 34.6	+0.9
JAN	**Janina**	**1.70**	**341**	*e*Pn	**Pn**	01 32 34.6	+0.9
ATH	**Athens Observa**	**1.71**	**92**	P	**Pn**	01 32 33.7	-0.1
ATH				*e*Pb	**Pn**	01 32 33.9	+0.1
ATH				S	**Sn**	01 32 58.0	+2.5
ATH	**Athens Observa**	**1.71**	**92**	*e*PB	**Pn**	01 32 33.9	+0.1
ATH	**Athens Observa**	**1.71**	**92**	*e*Pb	**Pn**	01 32 33.9	+0.1
VLI	**Veliai**	**1.72**	**140**	*e*Pn	**Pn**	01 32 35.4	+1.5
VLI	**Veliai**	**1.72**	**140**	*e*PN	**Pn**	01 32 35.4	+1.5
VLI	**Veliai**	**1.72**	**140**	*e*Pn	**Pn**	01 32 35.4	+1.5
MEV	**Metsovon**	**1.76**	**352**	P	**Pn**	01 32 37.0	+2.5
MEV	**Metsovon**	**1.76**	**352**	P	**Pn**	01 32 37.0	+2.5
MEV	**Metsovon**	**1.76**	**352**	P	**Pn**	01 32 37.0	+2.5
ATHU	**Athens Univers**	**1.76**	**92**	P	**Pn**	01 32 33.7	-0.8
ATHU				S	**Sn**	01 32 58.0	+1.1
ATHU	**Athens Univers**	**1.76**	**92**	P	**Pn**	01 32 33.7	-0.8
ATHU				S	**Sn**	01 32 58.0	+1.1
IGT	**Igoumenitsa**	**1.77**	**328**	P	**Pn**	01 32 35.3	+0.7
IGT				S	**Sn**	01 32 57.2	+0.1
IGT	**Igoumenitsa**	**1.77**	**328**	P	**Pn**	01 32 35.3	+0.7
IGT				S	**Sn**	01 32 57.2	+0.1
IGT	**Igoumenitsa**	**1.77**	**328**	P	**Pn**	01 32 35.3	+0.7
IGT				S	**Sn**	01 32 57.2	+0.1
VLY	**Voula,Athens**	**1.78**	**95**	*e*Pb	**Pn**	01 32 34.6	-0.1
VLY	**Voula,Athens**	**1.78**	**95**	*e*PB	**Pn**	01 32 34.6	-0.1
NEO	**Neokhori**	**1.81**	**45**	*e*Pb	**Pn**	01 32 34.8	-0.4
NEO	**Neokhori**	**1.81**	**45**	*e*PB	**Pn**	01 32 34.8	-0.4
XOR	**Xorichti**	**1.84**	**44**	P	**Pn**	01 32 34.8	-0.8
XOR				S	**Sn**	01 32 58.2	-0.6
XOR	**Xorichti**	**1.84**	**44**	P	**Pn**	01 32 34.8	-0.8
XOR				S	**Sn**	01 32 58.2	-0.6
XOR	**Xorichti**	**1.84**	**44**	P	**Pn**	01 32 34.8	-0.8
XOR				S	**Sn**	01 32 58.2	-0.6
AOS	**Alonnisos**	**2.14**	**58**	P	**Pn**	01 32 38.4	-1.3
AOS				S	**Sn**	01 33 05.9	-0.3
AOS	**Alonnisos**	**2.14**	**58**	P	**Pn**	01 32 38.4	-1.3
AOS				S	**Sn**	01 33 05.9	-0.3
AOS	**Alonnisos**	**2.14**	**58**	P	**Pn**	01 32 38.4	-1.3
AOS				S	**Sn**	01 33 05.9	-0.3
KEK	**Kerkira**	**2.16**	**321**	P	**Pn**	01 32 40.1	+0.1
KEK	**Kerkira**	**2.16**	**321**	P	**Pn**	01 32 40.1	+0.1
KEK	**Kerkira**	**2.16**	**321**	P	**Pn**	01 32 40.1	+0.1
LIT	**Litokhoron**	**2.18**	**19**	P	**Pn**	01 32 40.7	+0.4
LIT	**Litokhoron**	**2.18**	**19**	P	**Pn**	01 32 40.7	+0.4
LIT	**Litokhoron**	**2.18**	**19**	P	**Pn**	01 32 40.7	+0.4
SRN	**Sarande**	**2.20**	**327**	*e*PN	**Pn**	01 32 41.0	+0.5
SRN				*i* SN	**Sn**	01 33 08.2	+0.5
SRN	**Sarande**	**2.20**	**327**	*e*Pn	**Pn**	01 32 41.0	+0.5
	SNR=35						
SRN				*i* Sn	**Sn**	01 33 08.2	+0.5
	SNR=35						
KZN	**Kozani**	**2.27**	**4**	*e*P	**Pn**	01 32 42.4	+0.9
KZN				S	**Sn**	01 33 12.4	+3.1
KZN	**Kozani**	**2.27**	**4**	P	**Pn**	01 32 42.3	+0.8
KZN				S	**Sn**	01 33 12.4	+3.1
KZN	**Kozani**	**2.27**	**4**	*e*PN	**Pn**	01 32 42.4	+0.9
KZN	**Kozani**	**2.27**	**4**	P	**Pn**	01 32 42.3	+0.8
KZN				S	**Sn**	01 33 12.4	+3.1
KBN	**Korca**	**2.64**	**347**	*e*PN	**Pn**	01 32 49.1	+2.4
KBN				*i* SN	**Sn**	01 33 23.2	+4.5
KBN	**Korca**	**2.64**	**347**	*e*Pn	**Pn**	01 32 49.1	+2.4
	SNR=35						
KBN				*i* Sn	**Sn**	01 33 23.2	+4.5
	SNR=35						
FNA	**Florina**	**2.74**	**357**	P	**Pn**	01 32 49.2	+1.2
FNA	**Florina**	**2.74**	**357**	P	**Pn**	01 32 49.2	+1.2
FNA	**Florina**	**2.74**	**357**	P	**Pn**	01 32 49.2	+1.2
PLG	**Polygyros**	**2.75**	**32**	P	**Pn**	01 32 47.6	-0.5
PLG	**Polygyros**	**2.75**	**32**	*e*PN	**Pn**	01 32 47.7	-0.4
PLG	**Polygyros**	**2.75**	**32**	P	**Pn**	01 32 47.6	-0.5
OUR	**Ouranopolis**	**2.96**	**39**	P	**Pn**	01 32 50.2	-0.8
OUR	**Ouranopolis**	**2.96**	**39**	P	**Pn**	01 32 50.2	-0.8
OUR	**Ouranopolis**	**2.96**	**39**	P	**Pn**	01 32 50.2	-0.8
BIA	**Bitola**	**2.98**	**357**	P	**Pn**	01 32 52.4	+1.2
BIA	**Bitola**	**2.98**	**357**	*i* Pn	**Pn**	01 32 52.4	+1.2
BIA				*e*Lg		01 33 32.6	
	comp=N,59nm,0.4s						
BIA				*e*Lg		01 33 36.1	
	comp=Z,47nm,0.5s						
BIA	**Bitola**	**2.98**	**357**	P	**Pn**	01 32 52.4	+1.2
BIA	**Bitola**	**2.98**	**357**	P	**Pn**	01 32 52.4	+1.2
SOH	**Sokhos**	**3.10**	**26**	P	**Pn**	01 32 53.4	+0.4
SOH	**Sokhos**	**3.10**	**26**	P	**Pn**	01 32 53.4	+0.4
SOH	**Sokhos**	**3.10**	**26**	P	**Pn**	01 32 53.4	+0.4
OHR	**Ohrid**	**3.12**	**349**	P	**Pn**	01 32 54.6	+1.4
OHR	**Ohrid**	**3.12**	**349**	*i* Pn	**Pn**	01 32 54.5	+1.3
OHR				*e*Lg		01 33 48.9	
	comp=E,158nm,0.6s						
OHR				*e*Lg		01 33 49.4	
	comp=N,170nm,1.0s						
OHR	**Ohrid**	**3.12**	**349**	P	**Pn**	01 32 54.6	+1.4
OHR	**Ohrid**	**3.12**	**349**	P	**Pn**	01 32 54.6	+1.4
KARN	**Karanos**	**3.25**	**144**	P	**Pn**	01 32 58.1	+3.1
KARN	**Karanos**	**3.25**	**144**	P	**Pn**	01 32 58.1	+3.1
APE	**Apeiranthos**	**3.30**	**106**	⇑P	**Pn**	01 32 55.4	-0.3
APE	**Apeiranthos**	**3.30**	**106**	P	**Pn**	01 32 55.3	-0.4
APE	**Apeiranthos**	**3.30**	**106**	P	**Pn**	01 32 55.3	-0.4
APE	**Apeiranthos**	**3.30**	**106**	⇑*i*P	**Pn**	01 32 55.4	-0.3
APE	**Apeiranthos**	**3.30**	**106**	P	**Pn**	01 32 55.3	-0.4
KRUS	**Krusevo**	**3.33**	**356**	*i* Pn	**Pn**	01 32 57.4	+1.3
KRUS				*e*Lg		01 33 50.7	
	comp=E,57nm,0.9s						
KRUS				*e*Lg		01 33 51.4	
	comp=N,24nm,0.4s						
VAY	**Valandovo**	**3.37**	**13**	*i* Pn	**Pn**	01 32 57.5	+1.0
VAY				*i* Sn	**Sn**	01 33 38.5	+2.0
VAY				*e*Lg		01 33 41.3	
	comp=E,116nm,1.0s						
VAY				*e*Lg		01 33 51.4	
	comp=N,102nm,0.8s						
VAY	**Valandovo**	**3.37**	**13**	P	**Pn**	01 32 57.5	+0.9
VAY	**Valandovo**	**3.37**	**13**	P	**Pn**	01 32 57.5	+0.9
LIA	**Limnos Island**	**3.38**	**56**	P	**Pn**	01 32 55.8	-0.9
LIA	**Limnos Island**	**3.38**	**56**	P	**Pn**	01 32 55.8	-0.9
LIA	**Limnos Island**	**3.38**	**56**	P	**Pn**	01 32 55.8	-0.9
VAM	**Vamos**	**3.38**	**140**	P	**Pn**	01 32 59.4	+2.6
VAM	**Vamos**	**3.38**	**140**	P	**Pn**	01 32 59.4	+2.6
SRS	**Serrai**	**3.45**	**26**	P	**Pn**	01 32 58.4	+0.7
SRS	**Serrai**	**3.45**	**26**	P	**Pn**	01 32 58.4	+0.7
SRS	**Serrai**	**3.45**	**26**	P	**Pn**	01 32 58.4	+0.7
THR2	**Thira island,**	**3.48**	**116**	P	**Pn**	01 32 58.4	+0.2
THR2	**Thira island,**	**3.48**	**116**	P	**Pn**	01 32 58.4	+0.2
TIR	**Tirane**	**3.55**	**339**	*e*P	**Pn**	01 33 00.6	+1.5
TIR	**Tirane**	**3.55**	**339**	*e*P	**Pn**	01 33 00.6	+1.5
CHOS	**Chios island**	**3.56**	**83**	P	**Pn**	01 32 59.2	0.0
CHOS	**Chios island**	**3.56**	**83**	P	**Pn**	01 32 59.2	0.0
STIP	**Stip**	**3.68**	**7**	*i* Pn	**Pn**	01 33 02.0	+1.1
KAVA	**Kavala**	**3.73**	**37**	P	**Pn**	01 33 00.8	-0.8
KAVA	**Kavala**	**3.73**	**37**	P	**Pn**	01 33 00.8	-0.8
PHP	**Peshkopia**	**3.74**	**347**	*e*PN	**Pn**	01 33 02.5	+0.8
PHP	**Peshkopia**	**3.74**	**347**	*e*Pn	**Pn**	01 33 02.5	+0.8
	SNR=35						
NVR	**Nevrokopi**	**3.75**	**28**	*e*Pn	**Pn**	01 33 02.9	+1.1
NVR	**Nevrokopi**	**3.75**	**28**	*e*PN	**Pn**	01 33 02.9	+1.1
NVR	**Nevrokopi**	**3.75**	**28**	*e*Pn	**Pn**	01 33 02.9	+1.1
IDI	**Anoyia**	**3.84**	**135**	Pn	**Pn**	01 33 04.6	+1.5
	comp=N,4.2nm,0.3s,baz=310,slow=16,SNR=28						
IDI				Sn	**Sn**	01 33 49.6	+1.4
	comp=N,3.6nm,0.3s,baz=73,slow=20,SNR=2.5						
IDI				LR	LR	01 34 48.1	
	comp=N,219nm,19.1s,baz=259,slow=43						
IDI	**Anoyia**	**3.84**	**135**	Pn	**Pn**	01 33 04.6	+1.5
IDI				Sn	**Sn**	01 33 49.6	+1.4
PRK	**Paraskevi**	**3.88**	**71**	P	**Pn**	01 33 03.9	+0.2
PRK	**Paraskevi**	**3.88**	**71**	*e*PN	**Pn**	01 33 03.7	0.0
PRK	**Paraskevi**	**3.88**	**71**	*e*Pn	**Pn**	01 33 03.7	0.0
MMB	**Musomiste**	**3.92**	**25**	*i* P	**Pn**	01 33 04.7	+0.6
MMB	**Musomiste**	**3.92**	**25**	*i* P	**Pn**	01 33 04.7	+0.6
TIP	**Timpagrande**	**3.93**	**288**	*e*Pn	**Pn**	01 33 04.5	+0.3
TIP	**Timpagrande**	**3.93**	**288**	*e*Pn	**Pn**	01 33 04.5	+0.2
KKB	**Krupnik**	**3.99**	**17**	*i* P	**Pn**	01 33 05.6	+0.4
KKB	**Krupnik**	**3.99**	**17**	*i* P	**Pn**	01 33 05.6	+0.4
SIVA	**Sivas**	**4.00**	**138**	P	**Pn**	01 33 09.4	+4.1
SIVA	**Sivas**	**4.00**	**138**	P	**Pn**	01 33 09.4	+4.1
SIVA	**Sivas**	**4.00**	**138**	P	**Pn**	01 33 09.4	+4.1
SMG	**Samos**	**4.19**	**93**	P	**Pn**	01 33 08.2	+0.3
SMG	**Samos**	**4.19**	**93**	P	**Pn**	01 33 08.2	+0.3
PUK	**Puka**	**4.19**	**343**	*e*PN	**Pn**	01 33 09.1	+1.2
PUK	**Puka**	**4.19**	**343**	*e*Pn	**Pn**	01 33 09.1	+1.2
	SNR=35						
LAST	**Lasithi**	**4.27**	**131**	P	**Pn**	01 33 09.8	+0.8
LAST	**Lasithi**	**4.27**	**131**	P	**Pn**	01 33 09.8	+0.8
LAST	**Lasithi**	**4.27**	**131**	P	**Pn**	01 33 09.8	+0.8
NPS	**Neapolis**	**4.28**	**129**	*e*PN	**Pn**	01 33 10.6	+1.4
NPS	**Neapolis**	**4.28**	**129**	*e*Pn	**Pn**	01 33 10.6	+1.4
ULC	**Ulcinj**	**4.30**	**336**	⇑*i*Pn	**Pn**	01 33 09.0	-0.4
ULC				*e*Sn	**Sn**	01 33 59.7	+0.3
ULC	**Ulcinj**	**4.30**	**336**	⇑*i*Pn	**Pn**	01 33 09.0	-0.4
ULC				*e*Sn	**Sn**	01 33 59.7	+0.3
BLCB	**Balcova**	**4.33**	**84**	P	**Pn**	01 33 10.6	+0.7
BLCB	**Balcova**	**4.33**	**84**	P	**Pn**	01 33 10.6	+0.7
BLCB	**Balcova**	**4.33**	**84**	P	**Pn**	01 33 10.6	+0.7
RDO	**Rodhopi**	**4.36**	**44**	P	**Pn**	01 33 10.6	+0.3
RDO	**Rodhopi**	**4.36**	**44**	P	**Pn**	01 33 10.6	+0.3
RDO	**Rodhopi**	**4.36**	**44**	P	**Pn**	01 33 10.6	+0.3
RZN	**Rozhen**	**4.38**	**33**	*i* P	**Pn**	01 33 11.6	+1.1
RZN	**Rozhen**	**4.38**	**33**	*i* P	**Pn**	01 33 11.6	+1.1
ORI	**Oriolo Calabro**	**4.46**	**298**	P	**Pn**	01 33 11.6	0.0
ORI	**Oriolo Calabro**	**4.46**	**298**	P	**Pn**	01 33 11.6	0.0
BCI	**Bajram Curri**	**4.46**	**346**	*e*PN	**Pn**	01 33 12.9	+1.2
BCI	**Bajram Curri**	**4.46**	**346**	*e*Pn	**Pn**	01 33 12.9	+1.2
	SNR=35						
CEL	**Celeste**	**4.47**	**274**	Pn	**Pn**	01 33 11.0	-0.8
CEL	**Celeste**	**4.47**	**274**	Pn	**Pn**	01 33 11.0	-0.8
LTRZ	**Laterza**	**4.48**	**306**	Pn	**Pn**	01 33 11.4	-0.4
LTRZ	**Laterza**	**4.48**	**306**	Pn	**Pn**	01 33 11.4	-0.4
ALN	**Alexandroupoli**	**4.49**	**49**	P	**Pn**	01 33 13.3	+1.3
ALN	**Alexandroupoli**	**4.49**	**49**	P	**Pn**	01 33 13.3	+1.3
ALN	**Alexandroupoli**	**4.49**	**49**	P	**Pn**	01 33 13.3	+1.3
KDZ	**Kurdzhali**	**4.67**	**38**	*i* P	**Pn**	01 33 14.0	-0.5
KDZ	**Kurdzhali**	**4.67**	**38**	*i* P	**Pn**	01 33 14.0	-0.5
SG1	**Sgolgore (BA)**	**4.70**	**308**	*e*Pn	**Pn**	01 33 14.4	-0.5
SG1				*e*Sn	**Sn**	01 34 07.6	-1.7
PVY	**Plav**	**4.70**	**346**	⇑*i*Pn	**Pn**	01 33 16.3	+1.3
PVY				*e*Sn	**Sn**	01 34 09.8	+0.3
PVY	**Plav**	**4.70**	**346**	⇑*i*Pn	**Pn**	01 33 16.3	+1.3
PVY				*e*Sn	**Sn**	01 34 09.8	+0.3
BUM	**Brajici-Budva**	**4.71**	**335**	⇑*i*Pn	**Pn**	01 33 14.6	-0.5
BUM				*e*Sn	**Sn**	01 34 09.6	-0.1
BUM	**Brajici-Budva**	**4.71**	**335**	⇑*i*Pn	**Pn**	01 33 14.6	-0.5
BUM				*e*Sn	**Sn**	01 34 09.6	-0.1
VTS	**Vitosha**	**4.71**	**15**	*i* P	**Pn**	01 33 17.0	+1.9
VTS	**Vitosha**	**4.71**	**15**	*i* P	**Pn**	01 33 17.0	+1.9
PLD	**Plovdiv**	**4.72**	**30**	*i* P	**Pn**	01 33 16.5	+1.3
PLD	**Plovdiv**	**4.72**	**30**	*i* P	**Pn**	01 33 16.5	+1.3
PDG	**Podgorica**	**4.72**	**339**	⇑*i*Pn	**Pn**	01 33 14.8	-0.4
PDG				*e*Sn	**Sn**	01 34 10.1	+0.3
TTG	**Podgorica**	**4.72**	**339**	⇑*i*Pn	**Pn**	01 33 14.8	-0.4
TTG				*e*Sn	**Sn**	01 34 10.1	+0.3
TTG	**Podgorica**	**4.72**	**339**	*i* P	**Pn**	01 33 14.8	-0.4
TTG				*e*S	**Sn**	01 34 10.1	+0.3
BAI	**Bari**	**4.74**	**312**	*e*Pn	**Pn**	01 33 15.1	-0.3
BAI				*e*Sn	**Sn**	01 34 09.2	-1.0
BARS	**Barje**	**4.77**	**2**	⇓*e*Pn	**Pn**	01 33 16.4	+0.5
HCY	**Herceg Novi**	**4.98**	**333**	⇑*i*Pn	**Pn**	01 33 17.5	-1.3
HCY				*e*Sn	**Sn**	01 34 15.9	-0.4
HCY	**Herceg Novi**	**4.98**	**333**	⇑*i*Pn	**Pn**	01 33 17.5	-1.3
HCY				*e*Sn	**Sn**	01 34 15.9	-0.4
BEY	**Berane**	**4.99**	**346**	⇑*i*Pn	**Pn**	01 33 19.5	+0.7
BEY				*e*Sn	**Sn**	01 34 16.1	-0.3
IVA	**Berane**	**4.99**	**346**	⇑*i*Pn	**Pn**	01 33 19.5	+0.7
IVA				*e*Sn	**Sn**	01 34 16.1	-0.3
IVA	**Berane**	**4.99**	**346**	⇑*i*Pn	**Pn**	01 33 19.5	+0.7
IVA				*e*Sn	**Sn**	01 34 16.1	-0.3
ACER	**Acerenza**	**5.14**	**304**	Pn	**Pn**	01 33 21.1	+0.2
	comp=N,271nm,1.0s						
ACER	**Acerenza**	**5.14**	**304**	Pn	**Pn**	01 33 21.1	+0.2
	comp=N,271nm,1.0s						
KARP	**Karpathos**	**5.14**	**117**	P	**Pn**	01 33 24.3	+3.3
KARP	**Karpathos**	**5.14**	**117**	P	**Pn**	01 33 24.3	+3.3
NKY	**Niksic**	**5.15**	**339**	⇑*i*Pn	**Pn**	01 33 20.7	-0.4
NKY				*e*Sn	**Sn**	01 34 19.7	-0.7
NKY	**Niksic**	**5.15**	**339**	⇑*i*Pn	**Pn**	01 33 20.7	-0.4
NKY				*e*Sn	**Sn**	01 34 19.7	-0.7
NISS		**5.36**	**3**	*e*Pn	**Pn**	01 33 22.6	-1.4
BRY	**Bratogost**	**5.37**	**336**	⇑*i*Pn	**Pn**	01 33 23.0	-1.1
BRY				*e*Sn	**Sn**	01 34 25.4	-0.4
BRY	**Bratogost**	**5.37**	**336**	⇑*i*Pn	**Pn**	01 33 23.0	-1.1
BRY				*e*Sn	**Sn**	01 34 25.4	-0.4
HVZN	**Vizzini**	**5.50**	**263**	Pn	**Pn**	01 33 23.1	-2.8
	comp=N,95nm,0.7s						
PLE	**Pljevlja**	**5.53**	**343**	⇑*i*Pn	**Pn**	01 33 26.8	+0.5
PLE				*e*Sn	**Sn**	01 34 29.3	-0.5
PLE	**Pljevlja**	**5.53**	**343**	⇑*i*Pn	**Pn**	01 33 26.8	+0.5
PLE				*e*Sn	**Sn**	01 34 29.3	-0.5
UPM	**Unac-Piva**	**5.53**	**339**	⇑*i*Pn	**Pn**	01 33 26.5	+0.2
UPM				*e*Sn	**Sn**	01 34 29.6	-0.3
UPM

comp=Z,7.0nm,0.7s
PGF Pioggiola 10.59 299 *e*P **Pn 01 34 36.0 +0.3**
PGF pmax pmax
comp=Z,4.0nm,0.7s
PGF Pioggiola 10.59 299 *e*P **Pn 01 34 36.0 +0.3**
comp=Z,3.5nm,0.7s
PGF Pioggiola 10.59 299 *e*P **Pn 01 34 36.0 +0.3**
comp=Z,3.5nm,0.7s
VYHS Vyhne 10.63 350 *e*Pn **Pn 01 34 39.8 +3.6**
VYHS *e*Sn **Sn 01 36 25.9 -9.3**
CRVS Cervenica-Dubn 10.85 360 *e*P **Pn 01 34 40.1 +0.8**
CRVS Cervenica-Dubn 10.85 360 *e*P **Pn 01 34 40.1 +0.8**
KBA Koelnbreinsper 10.87 329 ⇓Pn **Pn 01 34 38.1 -1.4**
comp=Z,2.2nm,0.6s
KBA ⇑*i*Sn **Sn 01 36 35.0 -5.9**
comp=Z,2.5nm,0.6s
KBA Koelnbreinsper 10.87 329 Pn **Pn 01 34 38.1 -1.3**
comp=Z,2.2nm,0.6s
KOLS Kolonicke sedl 10.90 2 *e*P **Pn 01 34 45.1 +5.2**
ABTA Abfaltersbach 10.96 325⇑*i*Pn **Pn 01 34 41.2 +0.4**
comp=Z,0.8nm,0.3s
ABTA ⇑*e*Sn **Sn 01 36 36.6 -6.7**
comp=Z,7.2nm,0.7s
ABTA Abfaltersbach 10.96 325 Pn **Pn 01 34 41.2 +0.4**
comp=Z,0.8nm,0.3s
MOA Molln 11.15 334⇑*e*Pn **Pn 01 34 43.5 +0.1**
comp=Z,2.3nm,0.2s
MOA ⇓*i*Sn **Sn 01 36 44.5 -3.5**
comp=Z,1.3nm,0.3s
MOA Molln 11.15 334 Pn **Pn 01 34 43.5 +0.1**
comp=Z,2.3nm,0.2s
STHS Stebnicka Huta 11.37 359 *e*P **Pn 01 34 53.7 +7.3**
WTTA Wattenberg 11.75 325 ⇓Pn **Pn 01 34 51.9 +0.3**
comp=Z,1.1nm,0.2s
WTTA ⇑*e*Sn **Sn 01 36 54.8 -7.7**
comp=Z,9.5nm,0.6s
WTTA Wattenberg 11.75 325 Pn **Pn 01 34 51.8 +0.3**
comp=Z,1.1nm,0.2s
VRAC Vranov 11.82 344 Pn **Pn 01 34 54.8 +2.4**
comp=Z,0.2nm,0.3s,baz=185,slow=11,SNR=1.9
VRAC Vranov 11.82 344 P **Pn 01 34 54.8 +2.4**
WATA Walderalm 11.83 325 ⇓Pn **Pn 01 34 52.6 0.0**
comp=Z,1.8nm,0.2s
WATA ⇓*e*Sn **Sn 01 36 59.6 -4.9**
comp=Z,2.0nm,0.4s
WATA Walderalm 11.83 325 Pn **Pn 01 34 52.6 0.0**
comp=Z,1.8nm,0.2s
MOTA Moosalm 12.05 324 ⇑Pn **Pn 01 34 55.5 -0.1**
comp=Z,1.4nm,0.3s
MOTA ⇑Sn **Sn 01 37 04.1 -5.8**
comp=Z,1.6nm,0.4s
MOTA Moosalm 12.05 324 Pn **Pn 01 34 55.5 -0.2**
comp=Z,1.4nm,0.3s
SBF Sospel 12.15 303 *e*P **Pn 01 34 59.2 +2.2**
SBF Sospel 12.15 303 *e*P **Pn 01 34 59.2 +2.2**
GERES GERESS Array B 12.20 335 Pn **Pn 01 34 56.2 -1.5**
comp=Z,0.3nm,0.3s,baz=162,slow=14,SNR=13
GERES Sn **Sn 01 37 09.5 -4.1**
comp=Z,0.3nm,0.3s,baz=153,slow=24,SNR=5.0
GERES GERESS Array B 12.20 335 P **Pn 01 34 56.2 -1.5**
DAVOX Davos/Dischmat 12.26 319 Pn **Pn 01 35 00.5 +2.0**
comp=Z,0.3nm,0.3s,baz=165,slow=20,SNR=2.4
DAVOX Sn **Sn 01 37 12.2 -2.9**
comp=Z,0.4nm,0.3s,baz=239,slow=8.0,SNR=3.4
DAVOX Davos/Dischmat 12.26 319 P **Pn 01 35 00.6 +2.0**
MMAI Mount Meron Ar 12.34 110 Pn **Pn 01 34 58.7 -1.0**
comp=Z,1.3nm,0.3s,baz=311,slow=13,SNR=12
MMAI Sn **Sn 01 37 14.5 -2.6**
comp=Z,0.3nm,0.3s,baz=312,slow=24,SNR=2.6
MMAI LR LR 01 40 07.3
comp=Z,32nm,19.0s,baz=110,slow=39
FRF La Foret Royal 12.56 301 *e*P **Pn 01 35 03.8 +1.1**
comp=Z,24nm,1.2s
FRF La Foret Royal 12.56 301 *e*P **Pn 01 35 03.8 +1.1**
FRF pmax pmax
comp=Z,12nm,1.2s
FRF La Foret Royal 12.56 301 *e*P **Pn 01 35 03.8 +1.1**
comp=Z,12nm,1.2s
FRF La Foret Royal 12.56 301 *e*P **Pn 01 35 03.8 +1.1**
comp=Z,12nm,1.2s
MBDF Montbardon 12.95 306 *e*P **Pn 01 35 10.2 +2.3**
MBDF Montbardon 12.95 306 *e*P **Pn 01 35 10.2 +2.3**
LPG La Plagne 13.31 309 *e*P **Pn 01 35 14.5 +1.6**
comp=Z,5.2nm,0.7s
LPG La Plagne 13.31 309 *e*P **Pn 01 35 14.5 +1.6**
LPG pmax pmax
comp=Z,3.0nm,0.7s
LPG La Plagne 13.31 309 *e*P **Pn 01 35 14.5 +1.6**
comp=Z,2.6nm,0.7s
LPG La Plagne 13.31 309 *e*P **Pn 01 35 14.5 +1.6**
comp=Z,2.6nm,0.7s
LPL La Plagne 13.33 309 *e*P **Pn 01 35 13.3 +0.1**
LPL La Plagne 13.33 309 *e*P **Pn 01 35 13.3 +0.1**
ORIF Oris-en-Rattie 13.60 305 *e*P **Pn 01 35 17.7 +0.8**
ORIF *e*MLR MLR
comp=Z,126nm,20.8s
ORIF Oris-en-Rattie 13.60 305 *e*P **Pn 01 35 17.7 +0.8**
AKASG Malin Array Be 13.78 21 Pn **Pn 01 35 19.8 +0.5**
comp=Z,0.3nm,0.3s,baz=208,slow=12,SNR=3.0
AKASG Malin Array Be 13.78 21 P **Pn 01 35 19.8 +0.6**
ASF Jabal al Asfar 13.85 110 Pn **Pn 01 35 18.6 -1.7**
comp=Z,0.1nm,0.3s,baz=301,slow=12,SNR=3.1
EIL Elat 13.90 123 Pn **Sn 01 35 18.6 -2.5**
comp=Z,0.4nm,0.3s,baz=308,slow=21,SNR=5.7
EIL Sn **Sn 01 37 47.8 -7.6**
comp=Z,0.3nm,0.3s,baz=70,slow=18,SNR=3.7
EIL Elat 13.90 123 Pn **Pn 01 35 18.6 -2.5**
CABF La Chapelle 14.27 312 *e*P **Pn 01 35 25.2 -0.8**
comp=Z,22nm,1.1s
CABF La Chapelle 14.27 312 *e*P **Pn 01 35 25.2 -0.8**
CABF pmax pmax
comp=Z,11nm,1.1s
CABF La Chapelle 14.27 312 *e*P **Pn 01 35 25.2 -0.8**
comp=Z,11nm,1.1s
HINF Hinteralfeld 14.52 317 *e*P **Pn 01 35 28.7 -0.6**
comp=Z,6.8nm,0.8s
HINF Hinteralfeld 14.52 317 *e*P **Pn 01 35 28.7 -0.6**
HINF pmax pmax
comp=Z,3.0nm,0.8s
HINF Hinteralfeld 14.52 317 *e*P **Pn 01 35 28.7 -0.6**
comp=Z,3.4nm,0.8s
CDF Champ du Feu 14.66 320 *e*P **Pn 01 35 30.1 -1.2**
comp=Z,10nm,1.0s
CDF Champ du Feu 14.66 320 *e*P **Pn 01 35 30.1 -1.2**
CDF pmax pmax
comp=Z,5.0nm,1.0s
CDF Champ du Feu 14.66 320 *e*P **Pn 01 35 30.1 -1.2**
comp=Z,5.1nm,1.0s
HAU Haudompre 14.90 317 *e*P **Pn 01 35 32.8 -1.8**
comp=Z,8.2nm,0.7s
HAU *e*MLR MLR
comp=Z,38nm,17.0s
HAU Haudompre 14.90 317 *e*P **Pn 01 35 32.8 -1.8**
HAU pmax pmax
comp=Z,4.0nm,0.7s
HAU Haudompre 14.90 317 *e*P **Pn 01 35 32.8 -1.8**
comp=Z,4.1nm,0.7s
SMF Signal de Mont 15.64 309 *e*P **Pn 01 35 42.9 -1.4**
MEZF Maizieres J'vi 15.89 316 *e*P **Pn 01 35 47.7 +0.1**
LOR Lormes 15.92 311 *e*P **Pn 01 35 46.7 -1.3**
comp=Z,5.2nm,0.6s
LOR *e*MLR MLR
comp=Z,43nm,22.9s
LOR Lormes 15.92 311 *e*P **Pn 01 35 46.7 -1.3**
LOR pmax pmax
comp=Z,3.0nm,0.6s
LOR Lormes 15.92 311 *e*P **Pn 01 35 46.7 -1.3**
comp=Z,2.6nm,0.6s
AVF Avril sur Loir 16.01 309 *e*P **Pn 01 35 48.3 -0.8**
comp=Z,16nm,1.2s
AVF Avril sur Loir 16.01 309 *e*P **Pn 01 35 48.3 -0.8**
AVF pmax pmax
comp=Z,8.0nm,1.2s
AVF Avril sur Loir 16.01 309 *e*P **Pn 01 35 48.3 -0.8**
comp=Z,8.1nm,1.2s
SUW Suwalki 16.01 3 *e*P **Pn 01 35 51.3 +2.2**
SUW Suwalki 16.01 3 *e*P **Pn 01 35 51.3 +2.2**
SSF Saint Saulge 16.04 310 *e*P **Pn 01 35 49.2 -0.2**
comp=Z,25nm,1.2s
SSF Saint Saulge 16.04 310 *e*P **Pn 01 35 49.2 -0.2**
SSF pmax pmax
comp=Z,12nm,1.2s
SSF Saint Saulge 16.04 310 *e*P **Pn 01 35 49.2 -0.2**
comp=Z,12nm,1.2s
CAF Calviac 16.12 301 *e*P **Pn 01 35 51.2 +0.6**
comp=Z,10nm,1.0s
CAF Calviac 16.12 301 *e*P **Pn 01 35 51.2 +0.6**
CAF pmax pmax
comp=Z,5.0nm,1.0s
CAF Calviac 16.12 301 *e*P **Pn 01 35 51.2 +0.6**
comp=Z,5.2nm,1.0s
BGF Bois d'Agland 16.22 308 *e*P **Pn 01 35 53.7 +1.9**
BGF Bois d'Agland 16.22 308 *e*P **Pn 01 35 53.7 +1.9**
TCF Toulx Ste Croi 16.51 306 *e*P **Pn 01 35 54.5 -1.0**
comp=Z,15nm,1.3s
TCF Toulx Ste Croi 16.51 306 *e*P **Pn 01 35 54.5 -1.0**
TCF pmax pmax
comp=Z,7.0nm,1.3s
TCF Toulx Ste Croi 16.51 306 *e*P **Pn 01 35 54.5 -1.0**
comp=Z,7.3nm,1.3s
RJF Les Rejaudoux 16.61 302 *e*P **Pn 01 35 56.7 -0.1**
RJF *e*MLR MLR
comp=Z,94nm,20.5s
RJF Les Rejaudoux 16.61 302 *e*P **Pn 01 35 56.7 -0.1**
EPF Esparros 16.87 294 *e*P **Pn 01 36 00.4 +0.3**
EPF Esparros 16.87 294 *e*P **Pn 01 36 00.4 +0.3**
GIVF Givet 16.98 321 *e*P **Pn 01 36 02.8 +1.4**
GIVF Givet 16.98 321 *e*P **Pn 01 36 02.8 +1.4**
LFF La Frestale 17.03 300 *e*P **Pn 01 36 03.7 +1.7**
LFF La Frestale 17.03 300 *e*P **Pn 01 36 03.7 +1.7**
BAIF Baives 17.26 320 *e*P **Pn 01 36 06.2 +1.2**
comp=Z,12nm,1.0s
BAIF Baives 17.26 320 *e*P **Pn 01 36 06.2 +1.2**
BAIF pmax pmax
comp=Z,6.0nm,1.0s
BAIF Baives 17.26 320 *e*P **Pn 01 36 06.2 +1.2**
comp=Z,6.1nm,1.0s
BAIF Baives 17.26 320 *e*P **Pn 01 36 06.2 +1.2**
comp=Z,6.1nm,1.0s
ZEI Tsey 17.64 67 *e*P **Pn 01 36 11.0 +1.3**
ZEI pmax pmax
comp=Z,3.0nm,0.4s
ZEI Tsey 17.64 67 *e*P **Pn 01 36 11.0 +1.3**
comp=Z,3.0nm,0.4s
GNI Garni 18.11 76 LR LR 01 43 41.4
comp=Z,44nm,21.7s,baz=100,slow=39
MFF Saint Martin d 18.14 305 *e*P **Pn 01 36 15.6 -0.3**
MFF Saint Martin d 18.14 305 *e*P **Pn 01 36 15.6 -0.3**
LDF La Druitiere 18.91 311 *e*P **Pn 01 36 24.2 -1.0**
LDF La Druitiere 18.91 311 *e*P **Pn 01 36 24.2 -1.0**
FLN La Foliniere 19.20 311 *e*P **Pn 01 36 28.5 -0.2**
FLN *e*MLR MLR
comp=Z,57nm,20.2s
FLN La Foliniere 19.20 311 *e*P **Pn 01 36 28.5 -0.2**
GRR Gorron 19.27 310 *e*P **Pn 01 36 27.6 -1.9**
GRR Gorron 19.27 310 *e*P **Pn 01 36 27.6 -1.9**
OBN Obninsk 19.87 26 P **Pn 01 36 35.0 -1.7**
OBN pmax pmax
comp=Z,5.0nm,0.8s
OBN Obninsk 19.87 26 P **Pn 01 36 35.0 -1.7**
comp=Z,5.0nm,0.8s
ESDC Sonseca Array 19.93 283 Pn **Pn 01 36 35.3 -2.2**
comp=Z,0.2nm,0.3s,baz=77,slow=12,SNR=13
ESDC Sonseca Array 19.93 283 Pn **Pn 01 36 35.3 -2.1**
SGMF Saint Gilles 20.26 308 *e*P **P 01 36 39.1 -0.2**
SGMF Saint Gilles 20.26 308 *e*P **P 01 36 39.1 -0.2**
QUIF Quistinic 20.52 307 *e*P **P 01 36 42.7 +0.5**
QUIF Quistinic 20.52 307 *e*P **P 01 36 42.7 +0.5**
VSU Vasula 20.71 8 *d i*P **P 01 36 42.6 -1.5**
VSU pmax pmax
comp=Z,44nm,0.9s
VSU Vasula 20.71 8 *i* P **P 01 36 42.6 -1.5**
comp=Z,44nm,0.9s
ROSF Rostrenen 20.74 308 *e*P **P 01 36 44.4 -0.1**
ROSF Rostrenen 20.74 308 *e*P **P 01 36 44.4 -0.1**
MDT Miolt 21.92 264 LR LR 01 47 20.8
comp=Z,28nm,18.2s,MS2.7,baz=127,slow=42
HFS Hagfors 22.67 350 P **P 01 37 03.4 -1.7**
comp=Z,3.0nm,0.7s,mb3.9,baz=165,slow=11,SNR=13
HFS Hagfors 22.67 350 P **P 01 37 03.4 -1.7**
HFS pmax pmax
comp=Z,3.0nm,0.7s
HFS Hagfors 22.67 350 P **P 01 37 03.4 -1.7**
comp=Z,3.0nm,0.7s,mb3.8
FINES FINESS Array B 23.59 5 P **P 01 37 11.7 -3.1**
comp=Z,2.6nm,0.7s,mb3.8,baz=178,slow=10,SNR=8.2
FINES FINESS Array B 23.59 5 P **P 01 37 11.7 -3.0**
FINES pmax pmax
comp=Z,3.0nm,0.7s
NB2 NORSAR Subarra 23.92 348 P **P 01 37 16.0 -1.7**
comp=Z,0.5nm,0.5s,mb3.2,baz=153,slow=10
NB2 NORSAR Subarra 23.92 348 P **P 01 37 16.0 -1.7**
comp=Z,0.5nm,0.5s,mb3.2,SNR=6.2
NOA NORSAR Array B 23.92 348 P **P 01 37 15.3 -2.4**
comp=Z,1.1nm,0.5s,mb3.5,baz=157,slow=8.7,SNR=6.5
NOA NORSAR Array B 23.92 348 P **P 01 37 15.4 -2.3**
EKA Eskdalemuir Ar 24.01 324 P **P 01 37 16.8 -1.9**
comp=Z,1.6nm,0.7s,mb3.6,baz=126,slow=9.7,SNR=16
EKA Eskdalemuir Ar 24.01 324 P **P 01 37 16.8 -1.8**
EKA pmax pmax
comp=Z,2.0nm,0.7s
EKA Eskdalemuir Ar 24.01 324 P **P 01 37 16.8 -1.8**
comp=Z,2.0nm,0.7s,mb3.7
KAF Kangasniemi 24.27 5 *e*P **P 01 37 17.4 -3.5**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb3.6
KAF Kangasniemi 24.27 5 *e*p **P 01 37 17.4 -3.5**
comp=Z,1.4nm,0.4s,mb3.7
JOF Joensuu 25.61 10 *e*P **P 01 37 26.4 -6.7**
JOF pmax pmax
comp=Z,10.0nm,1.2s,mb4.2
JOF Joensuu 25.61 10 *e*p **P 01 37 26.4 -6.7**
comp=Z,9.8nm,1.2s,mb4.2
AKTK Aktyubinsk 28.61 53 P **P 01 37 58.7 -1.5**
AKTK LR LR 01 50 16.1
AKTK Aktyubinsk 28.61 53 P **P 01 37 58.7 -1.5**
comp=Z,18nm,20.6s
AKTO Aktyubinsk 28.61 53 P **P 01 37 58.7 -1.5**
comp=Z,0.5nm,0.3s,mb3.7,baz=252,slow=9.8,SNR=3.5
AKTO LR LR 01 50 16.1
comp=Z,18nm,20.6s,MS2.6,baz=22,slow=38
AKTO Aktyubinsk 28.61 53 P **P 01 37 58.7 -1.5**
AKTO pmax pmax
comp=Z,1.0nm,0.3s,mb4.0
AKTO MLR MLR
comp=Z,18nm,20.6s,MS2.7
ARCES ARCESS Array B 31.62 3 P **P 01 38 24.3 -2.3**
comp=Z,1.5nm,0.7s,mb3.9,baz=193,slow=8.7,SNR=5.9
ARCES ARCESS Array B 31.62 3 P **P 01 38 24.3 -2.3**
ARCES pmax pmax
comp=Z,2.0nm,0.7s
ARCES ARCESS Array B 31.62 3 P **P 01 38 24.3 -2.3**
comp=Z,2.0nm,0.7s,mb4.1
BVAR Borovoye Array 36.58 50 P **P 01 39 08.2 -1.5**
comp=Z,0.8nm,0.7s,mb3.7,baz=234,slow=4.8,SNR=5.9
BVAR Borovoye Array 36.58 50 P **P 01 39 08.3 -1.5**
BVAR pmax pmax
comp=Z,1.0nm,0.7s
BVAR Borovoye Array 36.58 50 P **P 01 39 08.3 -1.5**
comp=Z,1.0nm,0.7s,mb3.8
DBIC Dimbokro 39.36 224 P **P 01 39 32.8 -0.8**
comp=Z,4.4nm,0.7s,mb4.3,baz=17,slow=9.8,SNR=6.7
DBIC Dimbokro 39.36 224 P **P 01 39 32.8 -0.8**
DBIC pmax pmax
comp=Z,4.0nm,0.7s
DBIC Dimbokro 39.36 224 P **P 01 39 32.8 -0.8**
comp=Z,4.0nm,0.7s,mb4.3
TIC Toumodi 39.47 224 *e*P **P 01 39 37.3 +2.8**
comp=Z,50nm,1.4s,mb5.0
KIC Kosan Boka 39.55 224 *e*P **P 01 39 34.8 -0.4**
comp=Z,36nm,1.2s,mb5.0
LIC Lamto 39.82 224 *e*P **P 01 39 36.7 -0.8**
comp=Z,15nm,0.8s,mb4.5
LIC Lamto 39.82 224 *e*P **P 01 39 37.3 -0.2**
comp=Z,37nm,0.9s,mb5.1
LIC Lamto 39.82 224 *e*P **P 01 39 36.7 -0.8**
comp=Z,7.7nm,0.8s,mb4.5
LIC Lamto 39.82 224 *e*P **P 01 39 36.7 -0.8**
comp=Z,7.7nm,0.8s,mb4.5
AAK Ala-Archa 40.07 66 LR LR 01 59 48.0
comp=Z,25nm,21.1s,MS3.0,baz=43,slow=42
KURK Kurchatov 41.70 53 P **P 01 39 50.1 -2.5**
comp=Z,4.0nm,0.7s,mb4.2,baz=281,slow=8.6,SNR=5.0
KURK LR LR 02 02 45.9
comp=Z,24nm,18.4s,MS3.1,baz=75,slow=44
KURK Kurchatov 41.70 53 P **P 01 39 50.1 -2.5**
comp=Z,4.0nm,0.7s,mb4.2
NVS Novosibirsk 44.17 47 *e*P **P 01 40 10.6 -2.0**
NVS pmax pmax
comp=Z,9.0nm,1.2s,mb4.4
NVS pmax pmax
comp=N,5.0nm,1.3s
NVS pmax pmax
comp=E,4.0nm,1.1s
NVS Novosibirsk 44.17 47 *e*P **P 01 40 10.6 -2.0**
comp=E,5.0nm,1.3s,mb4.1
MKAR Makanchi Array 44.67 58 P **P 01 40 14.9 -1.8**
comp=E,3.0nm,0.5s,mb4.4,baz=298,slow=5.8,SNR=23
MKAR Makanchi Array 44.67 58 P **P 01 40 14.9 -1.8**
MKAR pmax pmax
comp=Z,3.0nm,0.5s
ZALV Zalesovo Beam 45.17 48 P **P 01 40 18.3 -2.3**
comp=Z,7.2nm,0.5s,mb4.8,baz=278,slow=8.8,SNR=25
ZALV Zalesovo Beam 45.17 48 P **P 01 40 18.3 -2.3**
ZALV pmax pmax
comp=Z,7.0nm,0.5s,mb4.8
ZALV Zalesovo Beam 45.17 48 P **P 01 40 18.3 -2.3**
comp=Z,7.0nm,0.5s,mb4.8
SONM Songino Array 59.91 51 P **P 01 42 07.9 -1.9**
comp=Z,0.7nm,0.6s,mb3.9,baz=298,slow=3.1,SNR=3.9
SONM Songino Array 59.91 51 P **P 01 42 08.0 -1.9**
YKA Yellowknife Ar 73.79 340 P **P 01 43 34.8 -3.3**
comp=Z,0.5nm,0.8s,mb3.5,baz=64,slow=8.6,SNR=2.5
KSRS Korea Array 78.78 51 P **P 01 44 04.3 -2.5**
comp=Z,0.9nm,0.5s,mb4.0,baz=308,slow=4.7,SNR=4.6
KSRS Korea Array 78.78 51 P **P 01 44 04.3 -2.5**
KSRS pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
KSRS Korea Array 78.78 51 P **P 01 44 04.3 -2.5**
comp=Z,1.0nm,0.5s,mb4.0
ROSC El Rosal 91.67 277 LR LR 02 20 40.6
comp=Z,42nm,19.9s,MS3.9,baz=16,slow=32
CPUP Villa Florida 97.71 243 LR LR 02 29 44.1
comp=Z,48nm,21.5s,MS4.0,baz=354,slow=35
WRA Warramunga Arr 119.72 93 PKP PKPdf 01 50 53.3 -1.2
comp=Z,0.3nm,0.7s,baz=316,slow=2.1,SNR=3.6

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*AUST **09** 01:37:29.8, 30.17S×146.88E, h10km, ML3.7*
*NEIC **09** 01:37:29.0, 30.17S×146.88E, h10km, ML3.7(AUST), After AUST.*
*IDC **09** 01:37:31.5±7.4, 29.86S×146.57E, h0km, mb1 4.2/3, mb1mx3.8/13, mbtmp4.0/3, ML3.6/3, Error ellipse: s-maj=74.4km s-min=35.8km az=119.0*
ISC 09 01:37:29.0±1.5, 30.10S±0.04×146.85E±0.04, h1km±10km, n19, σ1.9 07/38, New South Wales

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC	Res
CMSA	**Cobar Meteorol**	**1.75**	**215**	*e*P	**Pn**	**01 38 00.9**	**+0.5**	
CMSA				*e*S	**Sn**	**01 38 24.4**	**+1.1**	
RMQ	**Roma**	**3.98**	**25**	*e*P	**Pn**	**01 38 33.7**	**+2.6**	
RMQ				*e*S	**Sn**	**01 39 17.9**	**-0.5**	
	16nm,0.2s							
ARMA	**Armidale**	**4.14**	**96**	*e*P	**Pn**	**01 38 33.7**	**+0.3**	
ARMA				*e*S	**Sn**	**01 39 19.9**	**-2.6**	
ARMA	**Armidale**	**4.14**	**96**	*e*Pn	**Pn**	**01 38 33.8**	**+0.4**	
ARMA				*e*Pg	**Pg**	**01 38 47.5**	**-1.0**	
ARMA				*e*Sn	**Sn**	**01 39 22.1**	**-0.4**	
QLP	**Quilpie**	**4.20**	**326**	*e*P	**Pn**	**01 38 36.1**	**+1.9**	
YNG	**Young**	**4.38**	**163**	*e*P	**Pn**	**01 38 37.0**	**+0.3**	
YNG				*e*S	**Sn**	**01 39 28.3**	**-0.1**	
	7.3nm,0.3s							
MGCD	**Mangrove Creek**	**4.77**	**132**	*e*P	**Pn**	**01 38 42.3**	**+0.3**	
MGCD				*e*S	**Sn**	**01 39 38.7**	**+0.8**	
	51nm,0.8s							
STKA	**Stephens Creek**	**4.85**	**247**	*e*P	**Pn**	**01 38 43.5**	**+0.4**	
STKA				*e*S	**Sn**	**01 39 38.0**	**-1.9**	
	10nm,0.3s							
STKA	**Stephens Creek**	**4.85**	**247**	Pn	**Pn**	**01 38 43.7**	**+0.5**	
	5.1nm,0.3s,baz=73,slow=14,SNR=76							
STKA				Sn	**Sn**	**01 39 37.7**	**-2.2**	
	4.3nm,0.3s,baz=166,slow=22,SNR=5.5							
STKA				Lg		01 40 03.2		
	3.8nm,0.3s,baz=311,slow=20,SNR=2.4							
STKA	**Stephens Creek**	**4.85**	**247**	*e*Pn	**Pn**	**01 38 43.5**	**+0.4**	
STKA				*e*Sn	**Sn**	**01 39 39.2**	**-0.7**	
STKA				Lg		01 40 03.2		
CAN	**Canberra**	**5.51**	**161**	*e*Pn	**Pn**	**01 38 51.4**	**-0.8**	
CAN				*e*Sn	**Sn**	**01 39 44.5**	**-12**	
CAN				*e*Sg	**Sg**	**01 40 18.5**	**-7.5**	
CNB	**Canberra Magne**	**5.61**	**159**	*e*P	**Pn**	**01 38 53.8**	**+0.2**	
CNB				*e*S	**Sn**	**01 40 06.0**	**+7.3**	
EIDS	**Eidsvold**	**6.02**	**39**	*e*P	**Pn**	**01 38 59.9**	**+0.6**	
EIDS				*e*S	**Sn**	**01 40 04.9**	**-3.9**	
MILA	**Mila**	**7.19**	**165**	*e*P	**Pn**	**01 39 14.8**	**-0.5**	
TOO	**Toolangi**	**7.54**	**188**	*e*P	**Pn**	**01 39 23.4**	**+3.4**	
TOO				*e*S	**Sn**	**01 40 40.8**	**-5.2**	
ARPS	**Mount Arapiles**	**7.86**	**211**	*e*P	**Pn**	**01 39 23.8**	**-0.6**	
ARPS				*e*S	**Sn**	**01 40 48.7**	**-5.3**	
	10nm,0.2s							
BBOO	**Buckleboo**	**9.61**	**251**	*e*P	**Pn**	**01 39 48.6**	**+0.2**	
BBOO				*e*S	**Sn**	**01 41 30.1**	**-6.9**	
	5.3nm,0.7s							
ASAR	**Alice Springs**	**13.21**	**296**	Pn	**Pn**	**01 40 35.8**	**-2.0**	
	0.1nm,0.3s,baz=119,slow=13,SNR=16							
ASAR				Sn	**Sn**	**01 42 58.8**	**-6.6**	
	0.2nm,0.3s,baz=117,slow=23,SNR=4.2							
WRA	**Warramunga Arr**	**15.19**	**309**	Pn	**Pn**	**01 41 04.5**	**-0.2**	
	0.1nm,0.3s,baz=138,slow=13,SNR=4.7							
WRA				Sn	**Sn**	**01 43 44.8**	**-8.9**	
	0.1nm,0.3s,baz=134,slow=24,SNR=3.7							

CASC 09 01:53:58.2±2.9, 8.35N×82.94W, h0km±7km, MD3.8, 7C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC	Res
ACR	**Cerro Adams**	**0.37**	**324**	⇓*i*P	Pg	01 54 05.5	+0.1	
ACR				*e*S	Sg	01 54 11.1	+0.8	
BRU2	**Volcan**	**0.51**	**30**	⇓*i*P	Pg	01 54 10.1	+2.2	
BRU2				*e*S	Sg	01 54 18.4	+3.9	
CTCR	**Cotoan**	**0.57**	**19**	*e*P	Pg	01 54 01.0	-8.2	
CTCR				*e*S	Sg	01 54 10.4	-6.2	
BAR1		**0.96**	**338**	⇑*i*P	Pg	01 54 16.0	-0.6	
CNI	**Changuinola**	**1.14**	**22**	*e*P	Pg	01 54 20.5	+0.5	
BUS	**Buena Vista**	**1.44**	**326**	⇑*i*P	Pn	01 54 24.1	-1.5	
QCR	**Quepos**	**1.61**	**312**	⇓*i*P	Pn	01 54 27.2	-0.7	
URSC	**Urasca**	**1.69**	**331**	*e*S	Sn	01 54 50.2	-1.1	
LAJ	**Bijagual**	**1.90**	**322**	⇑*i*P	Pn	01 54 33.9	+2.0	
PRS1	**Puriscal**	**2.11**	**320**	⇑*i*P	Pn	01 54 34.3	-0.5	
CGA2	**Cerro Gallo 2**	**2.23**	**318**	⇑*i*P	Pn	01 54 36.6	+0.1	
JCR	**Jicaral**	**2.61**	**305**	⇑*i*P	Pn	01 54 40.6	-1.0	
PTEN	**Parque Tenorio**	**3.10**	**320**	*i* P	Pn	01 54 51.4	+3.0	
CUI	**Cuipilapa**	**3.17**	**316**	*i* P	Pn	01 54 51.7	+2.3	
BCIP	**Isla Barro Col**	**3.18**	**75**	⇑*e*P	Pn	01 54 53.5	+4.1	
BCIP				*e*S	Sn	01 55 28.7	+0.6	
LIM1	**Limonal**	**3.26**	**316**	*i* P	Pn	01 54 53.6	+3.0	
LIM1				*i* S	Sn	01 55 33.3	+3.2	
GPS3	**Bodega del ICE**	**3.38**	**315**	*i* P	Pn	01 54 54.0	+1.8	

IDC 09 01:54:01.0±17.0, 24.47S×179.59W, h512km±155km, mb3.5/6, mb1 3.6/6, mb1mx3.3/17, mbtmp3.5/6, Error ellipse: s-maj=258.5km s-min=40.1km az=38.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC	Res
CTA	**Charters Tower**	**31.86**	**271**	P	P	01 59 44.5	+0.9	
	1.7nm,0.4s,baz=91,slow=12,SNR=7.3							
ASAR	**Alice Springs**	**42.31**	**261**	P	P	02 01 08.8	-0.7	
	1.5nm,0.5s,baz=90,slow=6.9,SNR=24							
WRA	**Warramunga Arr**	**42.74**	**267**	P	P	02 01 12.2	-0.8	
	2.1nm,0.4s,baz=102,slow=7.9,SNR=36							
FITZ	**Fitzroy Crossi**	**51.16**	**266**	P	P	02 02 17.3	+0.6	
	3.0nm,0.5s,baz=100,slow=8.5,SNR=14							
QSPA	**South Pole Qui**	**65.61**	**180**	P	P	02 03 53.8	+0.4	
	3.7nm,0.7s,baz=26,slow=4.4,SNR=23							
MAW	**Mawson**	**77.35**	**200**	P	P	02 05 02.2	+0.1	
	1.0nm,0.5s,baz=135,slow=4.3,SNR=7.1							

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*NIED **09** 02:37:00, 25.70N×125.20E, h92km, Mw4.0 Best double couple: M0=1.24000×10^15 NP1:φ=242.00000°, δ=86.00000°, λ=88.00000°. NP2:φ=92.00000°, δ=5.00000°, λ=120.00000°.*
*ISCJB **09** 02:37:58.4±0.3, 25.63N±0.05×125.25E±0.04, h107km±4km, mb4.0/16, Error ellipse: s-maj=9.3km s-min=3.4km az=146.5*
*JMA **09** 02:37:59.7±0.1, 25.72N×125.15E, h90km±5km, M3.8*
*NEIC **09** 02:38:02.0±1.3, 25.56N×125.06E, h124km±14km, mb4.2/1, Error ellipse: s-maj=17.7km s-min=12.3km az=94.0*
*IDC **09** 02:38:02.6±4.3, 25.62N×125.06E, h130km±41km, mb3.7/15, mb1 3.8/17, mb1mx3.6/31, mbtmp3.7/17, Error*

ellipse: s-maj=24.1km s-min=11.2km az=75.0

ISC 09 02:37:59.4±0.3, 25°.65N±0°.05×125°.24E±0°.04, h100km±4km, n40, σ0§98/59, mb4.0/16, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMJ	Miyako jima 2	0.83	177	P	Pn	02 38 18.7	+0.7
JMJ				S	Sn	02 38 32.3	+0.3
JOGS	Gusukube	0.90	170	P	Pn	02 38 19.5	+0.8
JOGS				S	Sn	02 38 34.0	+0.8
JTJ	Tarama	1.12	206	P	Pn	02 38 21.4	+0.3
JTJ				S	Sn	02 38 37.3	-0.1
JKE	Kume jima 2	1.54	64	P	Pn	02 38 26.8	+0.7
JKE				S	Sn	02 38 46.9	+0.4
JIJ	Ishigaki jima	1.62	218	P	Pn	02 38 27.1	-0.1
JIJ				S	Sn	02 38 46.8	-1.4
JKRS	Kuro-shima	1.80	219	P	Pn	02 38 29.4	+0.1
JKRS				S	Sn	02 38 51.4	-0.7
IRIF	Iriomote-Funau	1.90	227	P	Pn	02 38 30.8	+0.2
IRIF				S	Sn	02 38 54.4	0.0
JAGN	Aguni-jima	2.03	62	P	Pn	02 38 33.2	+0.9
JAGN				S	Sn	02 38 57.7	+0.3
HATJ	Hateruma jima	2.05	220	P	Pn	02 38 33.0	+0.3
HATJ				S	Sn	02 38 57.7	-0.3
YOJ	Yonaguni jima	2.34	240	P	Pn	02 38 37.5	+1.1
YOJ				S	Sn	02 39 05.1	+0.3
JIH	Iheya	2.81	60	P	Pn	02 38 43.0	+0.5
JIH				S	Sn	02 39 14.3	-1.5
JOW	Kunigami	2.97	66	P	Pn	02 38 44.6	-0.1
JOW				S	Sn	02 39 19.0	-0.6
TATO	Taipei	3.46	260	ePn	Pn	02 38 55.1	+3.8
NACB	Ninganchiao	3.62	247	ePn	Pn	02 38 53.6	+0.1
NACB				eSn	Sn	02 39 35.1	-0.2
YHNB	Yeheng	3.64	255	ePn	Pn	02 38 56.3	+2.7
JTK	Tokunoshima	3.94	56	P	Pn	02 38 57.3	-0.4
YULB	Yu-li	4.24	239	ePn	Pn	02 39 00.2	-1.5
YULB				eS	Sn	02 39 46.9	-3.3
SSLB	Suanglung	4.32	245	ePn	Pn	02 39 03.1	+0.2
SSLB				eS	Sn	02 39 50.5	-1.6
TWG	Pinlang	4.74	234	ePn	Pn	02 39 07.2	-1.3
TWG				eS	Sn	02 39 57.7	-4.5
JAM	Amami Oshima	4.76	54	P	Pn	02 39 07.9	-1.0
JAM				S	Sn	02 40 00.4	-2.5
TPUB	Ta-pu	4.81	242	ePn	Pn	02 39 10.5	+1.0
TPUB				eS	Sn	02 40 05.2	+1.1
JMZ	Minamidaito 2	5.39	87	P	Pn	02 39 14.8	-2.6
JMZ				S	Sn	02 40 10.5	-7.7
KSRS	Korea Array	11.99	10	P	Pn	02 40 49.5	+2.7
	0.2nm,0.3s,baz=193,slow=14,SNR=12						
MJAR	Matsushiro Arr	15.52	42	P	Pn	02 41 36.3	+3.8
	0.4nm,0.3s,baz=228,slow=9.5,SNR=6.1						
ASAJ	Asahikawa	23.20	33	P	P	02 42 59.0	+1.6
	2.4nm,0.3s,mb4.0,baz=212,slow=13,SNR=2.7						
SONM	Songino Array	26.67	331	P	P	02 43 29.4	+0.7
	0.6nm,0.3s,mb3.5,baz=149,slow=10,SNR=6.2						
PETK	Petropavlovsk-	36.62	33	P	P	02 44 56.8	+1.0
	1.2nm,0.5s,mb4.0,baz=210,slow=4.8,SNR=3.9						
MKAR	Makanchi Array	39.94	313	P	P	02 45 24.0	+0.2
	0.5nm,0.4s,mb3.7,baz=89,slow=9.9,SNR=6.2						
ZALV	Zalesovo Beam	41.12	324	P	P	02 45 32.6	-0.7
	2.3nm,0.5s,mb4.3,baz=106,slow=8.3,SNR=9.5						
KURK	Kurchatov	43.42	318	P	P	02 45 51.3	-0.8
	0.5nm,0.3s,mb3.7,baz=108,slow=8.2,SNR=3.1						
FITZ	Fitzroy Crossi	43.49	179	P	P	02 45 52.8	-0.1
	6.9nm,0.8s,mb4.5,baz=12,slow=9.3,SNR=14						
WRAB	Tennant Creek	46.16	168	eP	P	02 46 14.4	+0.3
	3.6nm,0.8s,mb4.2						
WRA	Warramunga Arr	46.17	168	P	P	02 46 14.2	+0.1
	2.5nm,0.6s,mb4.2,baz=350,slow=8.6,SNR=20						
ASAR	Alice Springs	49.73	170	P	P	02 46 42.1	+0.5
	1.5nm,0.5s,mb4.2,baz=353,slow=7.1,SNR=23						
STKA	Stephens Creek	59.30	164	P	P	02 47 50.6	0.0
	1.7nm,0.8s,mb4.1,baz=346,slow=4.2,SNR=4.0						
ARCES	ARCESS Array B	69.56	338	P	P	02 48 56.2	-0.9
	2.0nm,0.9s,mb3.9,baz=69,slow=4.9,SNR=3.4						
FINES	FINESS Array B	72.03	330	P	P	02 49 11.6	-0.6
	2.6nm,0.9s,mb4.1,baz=72,slow=4.5,SNR=3.8						
AKASG	Malin Array Be	74.21	319	P	P	02 49 24.4	-0.8
	0.6nm,0.4s,mb3.6,baz=72,slow=5.9,SNR=3.2						
HFS	Hagfors	78.07	332	P	P	02 49 46.3	-0.6
	1.2nm,0.6s,mb3.8,baz=79,slow=7.5,SNR=4.5						
YKA	Yellowknife Ar	80.17	24	P	P	02 49 59.1	+0.9
	2.3nm,0.8s,mb4.1,baz=305,slow=5.7,SNR=13						

NEIC 09 02:41:46.6, 42°.35S×172°.66E, h8km, ML3.8(WEL), After WEL., South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTZ	Lake Taylor	0.52	214	P	Pg	02 41 57.2	+0.5
LTZ				S	Sg	02 42 04.0	+0.5
THZ	Tophouse	0.61	17	P	Pg	02 41 58.5	+0.1
KHZ	Kahutara	0.66	96	P	Pg	02 41 59.5	+0.3
KHZ				S	Sg	02 42 07.7	-0.1
RPZ	Rata Peaks	1.80	220	ePn	Pn	02 42 17.6	-0.4
SNZO	South Karori	1.85	56	ePn	Pn	02 42 18.6	0.0
MSWZ	Moikau Station	2.15	65	P	Pn	02 42 21.8	-0.9
MTW	Mount Morrison	2.44	62	P	Pn	02 42 25.5	-1.1
ODZ	Otahua Downs	3.06	208	Pn	Pn	02 42 34.7	-0.6

*ISK **09** 02:45:14.9, 36°.97N×29°.21E, h5km, MD3.4*
*DDA **09** 02:45:15.9, 36°.95N×29°.23E, h24km±1km, Md3.2*
*CSEM **09** 02:45:16.3±0.1, 36°.97N×29°.20E, h2km, MD3.4, Error ellipse: s-maj=3.5km s-min=2.9km az=24.0*
*ISCJB **09** 02:45:16.4±0.5, 36°.99N±0°.02×29°.21E±0°.03, h4km±4km, Error ellipse: s-maj=3.8km s-min=3.0km az=31.3*

ISC 09 02:45:16.9±0.4, 36°.98N±0°.02×29°.20E±0°.03, h3km±3km, n98, σ1§02/130, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.29	54	PG	Pg	02 45 21.9	-0.6
GLHS				eSG	Sg	02 45 27.2	+0.9
GLHS	Glhisar (BURDU	0.29	54	i Pg	Pg	02 45 21.9	-0.6
GLHS				eSg	Sg	02 45 27.2	+0.9
FETY	Fethiye	0.36	196	PG	Pg	02 45 22.8	-1.0
FETY				eSG	Sg	02 45 29.0	+0.5
FETY	Fethiye	0.36	196	i Pg	Pg	02 45 22.8	-1.0
FETY				eSg	Sg	02 45 29.0	+0.5
GOLH	Golhisar	0.38	48	i P	Pg	02 45 23.9	-0.3
GOLH				i S	Sg	02 45 31.2	+2.1
GOLH	Golhisar	0.38	48	i P	Pg	02 45 23.9	-0.3
GOLH				i S	Sg	02 45 31.2	+2.0
TURN	Turunc	0.49	257	i P	Pg	02 45 31.3	+5.0
TURN				i S	Sg	02 45 43.3	+11
ELL	Elmali	0.61	112	ePG	Pg	02 45 27.8	-0.8
ELL	Elmali	0.61	112	ePg	Pg	02 45 27.8	-0.8
DNZL	Cakiroluk	0.72	350	i P	Pg	02 45 29.8	-0.8
DNZL				i S	Sg	02 45 41.9	+2.0
DNZL	Cakiroluk	0.72	350	i P	Pg	02 45 29.8	-0.8
DNZL				i S	Sg	02 45 41.9	+2.0
YER	Yerkesik	0.75	282	ePG	Pg	02 45 30.8	-0.5
YER	Yerkesik	0.75	282	ePg	Pg	02 45 30.8	-0.5
DENT	Denizli	0.78	350	ePG	Pg	02 45 30.5	-1.3
DENT	Denizli	0.78	350	ePg	Pg	02 45 30.5	-1.4
AKAS	Kas	0.81	157	i P	Pg	02 45 31.7	-0.8
AKAS				i S	Sg	02 45 46.6	+3.5
AKAS	Kas	0.81	157	i P	Pg	02 45 31.7	-0.8
AKAS				i S	Sg	02 45 46.6	+3.5
KSL	Kastellorizon	0.89	160	eP	Pg	02 45 33.9	0.0
KORT	Korkueli	0.92	89	i P	Pg	02 45 33.0	-1.5
KORT				i S	Sg	02 45 51.3	+4.9
KORT	Korkueli	0.92	89	i P	Pg	02 45 33.0	-1.5
KORT				i S	Sg	02 45 51.3	+4.9
ARG	Arkhangelos	1.16	229	eP	Pg	02 45 37.8	-1.3
ARG				eS	Sg	02 45 52.7	-1.4
ANTB	Antalya	1.17	94	ePN	Pn	02 45 37.6	-2.4
ANTB	Antalya	1.17	94	ePn	Pn	02 45 37.6	-2.5
MLSB	Milas	1.18	286	ePN	Pn	02 45 39.2	-1.1
MLSB	Milas	1.18	286	ePn	Pn	02 45 39.3	-1.0
BCK	Bucak	1.20	66	ePN	Pn	02 45 38.8	-1.9
BCK	Bucak	1.20	66	ePn	Pn	02 45 38.8	-1.8
AYDN	Tasoluk	1.25	303	i P	Pg	02 45 40.5	-0.4
AYDN				i S	Sg	02 46 00.1	+2.9
AYDN	Tasoluk	1.25	303	i P	Pg	02 45 40.5	-0.4
AYDN				i S	Sg	02 46 00.1	+2.9
DAT	Datca	1.33	259	ePN	Pn	02 45 41.5	-0.9
DAT	Datca	1.33	259	ePn	Pn	02 45 41.5	-0.8
KHAL	Karahalli	1.40	9	i P	Pn	02 45 42.8	-0.6
KHAL				i S	Sg	02 46 04.4	+2.4
KHAL	Karahalli	1.40	9	i P	Pn	02 45 42.8	-0.6
KHAL				i S	Sg	02 46 04.4	+2.4
BDRM	Kayabasi	1.41	274	i P	Pn	02 45 43.5	+0.1
BDRM				i S	Sg	02 46 03.5	+1.2
BDRM	Kayabasi	1.41	274	i P	Pn	02 45 43.5	0.0
BDRM				i S	Sg	02 46 03.5	+1.3
SUTC	Sutluce-Ispart	1.52	71	ePN	Pn	02 45 44.6	-0.3
SUTC	Sutluce-Ispart	1.52	71	ePn	Pn	02 45 44.7	-0.2
KULA	Kula-Manisa	1.59	344	ePN	Pn	02 45 45.4	-0.5
KULA	Kula-Manisa	1.59	344	ePn	Pn	02 45 45.4	-0.5
MANT	Manisa	1.59	341	i P	Pn	02 45 45.3	-0.7
MANT				i S	Sn	02 46 06.2	-0.8
MANT	Manisa	1.59	341	i P	Pn	02 45 45.3	-0.6
MANT				i S	Sn	02 46 06.2	-0.8
GCAM	G?zelcaml?	1.73	295	i P	Pn	02 45 47.5	-0.3
GCAM	G?zelcaml?	1.73	295	i P	Pn	02 45 47.5	-0.3
SHUT	Suhut-Afyon	1.90	34	ePN	Pn	02 45 49.3	-0.8
SHUT	Suhut-Afyon	1.90	34	ePn	Pn	02 45 49.3	-0.8
SMG	Samos	2.02	292	eP	Pn	02 45 51.6	-0.3
KDAG	Bornova	2.09	313	i P	Pn	02 45 52.9	+0.1
KDAG	Bornova	2.09	313	i P	Pn	02 45 52.9	+0.1
DEMI	Demirci	2.09	350	i P	Pn	02 45 52.6	-0.2
DEMI				i S	Sn	02 46 20.8	+1.4
DEMI	Demirci	2.09	350	i P	Pn	02 45 52.6	-0.2
DEMI				i S	Sn	02 46 20.8	+1.4
GDZ	Gediz	2.11	6	i P	Pn	02 45 53.1	0.0
GDZ	Gediz	2.11	6	i P	Pn	02 45 53.1	0.0
KARP	Karpathos	2.19	230	eP	Pn	02 45 55.0	+0.9
KARP				eS	Sn	02 46 23.0	+1.3
AKHS	Akhisar	2.19	330	i P	Pn	02 45 53.8	-0.4
AKHS	Akhisar	2.19	330	i P	Pn	02 45 53.8	-0.4
ALT	Altintas	2.19	19	ePN	Pn	02 45 54.2	0.0
ALT	Altintas	2.19	19	ePn	Pn	02 45 54.2	0.0
BLCB	Balcova	2.21	310	ePN	Pn	02 45 54.1	-0.4
BLCB	Balcova	2.21	310	ePn	Pn	02 45 54.1	-0.4
BOLV	Bolvadin	2.22	38	i P	Pn	02 45 55.4	+0.9
BOLV				i S	Sn	02 46 26.6	+4.1
BOLV	Bolvadin	2.22	38	i P	Pn	02 45 55.4	+0.9
BOLV				i S	Sn	02 46 26.5	+4.1
GAZI	Gazipasa	2.61	106	i P	Pn	02 46 01.0	+1.0
GAZI				i S	Sn	02 46 37.7	+5.5
GAZI	Gazipasa	2.61	106	i P	Pn	02 46 01.0	+1.0
HDMB	Hadim	2.63	89	ePN	Pn	02 46 01.0	+0.8
HDMB	Hadim	2.63	89	ePn	Pn	02 46 01.0	+0.8
DST	Dursunbey	2.66	350	ePN	Pn	02 46 00.6	0.0
DST	Dursunbey	2.66	350	ePn	Pn	02 46 00.6	0.0
DURS	Dursunbey	2.68	348	i P	Pn	02 46 00.5	-0.4
DURS				i S	Sn	02 46 32.3	-1.5
DURS	Dursunbey	2.68	348	i P	Pn	02 46 00.4	-0.5
DURS				i S	Sn	02 46 32.3	-1.5
KONT	Konya--Tatoy	2.69	68	ePN	Pn	02 46 01.2	+0.1
KONT	Konya--Tatoy	2.69	68	ePn	Pn	02 46 01.2	+0.2
LADK	Ladik-KONYA	2.79	63	ePN	Pn	02 46 02.4	0.0
LADK	Ladik-KONYA	2.79	63	ePn	Pn	02 46 02.4	0.0
KIZT	Kizilcal	2.84	47	ePN	Pn	02 46 03.9	+0.8
KIZT	Kizilcal	2.84	47	ePn	Pn	02 46 03.9	+0.8
APE	Apeiranthos	2.94	273	eP	Pn	02 46 04.9	+0.4
BALY	Balya	3.02	336	i P	Pn	02 46 04.8	-0.8
BALY				i S	Sn	02 46 39.9	-2.4
BALY	Balya	3.02	336	i P	Pn	02 46 04.8	-0.8
BALY				i S	Sn	02 46 39.9	-2.4
ZKR	Zakros	3.06	233	eP	Pn	02 46 07.6	+1.5
SVRH	Sivrihisar-ESK	3.06	36	ePN	Pn	02 46 06.6	+0.4
SVRH	Sivrihisar-ESK	3.06	36	ePn	Pn	02 46 06.6	+0.4
NPS	Neapolis	3.38	240	eP	Pn	02 46 11.5	+1.0
ADVT	Abdulvahap	3.47	7	ePN	Pn	02 46 11.9	+0.1
ADVT	Abdulvahap	3.47	7	ePn	Pn	02 46 11.9	+0.1
LEF	Lefka	3.52	121	ePN	Pn	02 46 12.5	0.0
LEF	Lefka	3.52	121	ePn	Pn	02 46 12.5	0.0
LAST	Lasithi	3.52	240	eP	Pn	02 46 14.2	+1.7
ARMT	Armutlu	3.59	356	ePN	Pn	02 46 13.8	+0.5
ARMT	Armutlu	3.59	356	ePn	Pn	02 46 13.8	+0.4
GULT	Gulveren	3.59	16	ePN	Pn	02 46 14.0	+0.5
GULT	Gulveren	3.59	16	ePn	Pn	02 46 14.0	+0.5
EZN	Ezine	3.63	322	ePN	Pn	02 46 14.1	+0.1
EZN	Ezine	3.63	322	ePn	Pn	02 46 14.1	+0.1
SULT	Sultanhani-AKS	3.63	69	ePN	Pn	02 46 14.7	+0.6
SULT	Sultanhani-AKS	3.63	69	ePn	Pn	02 46 14.7	+0.7
IDI	Anoyia	3.88	245	eP	Pn	02 46 18.7	+1.3
LPK	Lapseki	3.89	331	ePN	Pn	02 46 17.9	+0.4
LPK	Lapseki	3.89	331	ePn	Pn	02 46 17.9	+0.4

GUC 09 02:49:19.7±0.5, 22°.51S×70°.33W, h35km±1km, ML3.5, 2C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	Mejillones	0.60	191	⇑iP	Pn	02 49 31.1	-0.7
MECH				i S	Sn	02 49 40.2	-0.2
MECH				AML	AML	02 49 43.7	
	comp=N,3μm,0.3s						
PECH	Pedro de Valdi	0.61	99	⇓iP	Pn	02 49 31.9	0.0
PECH				i S	Sn	02 49 40.8	+0.3
PECH				AML	AML	02 49 41.2	
	comp=E,8μm,0.2s						
MACH	Maria Elena	0.61	60	⇓iP	Pn	02 49 32.1	+0.2
MACH				i S	Sn	02 49 41.1	+0.6
PB04	Plate Boundary	0.81	73	⇓iP	Pn	02 49 27.0	-7.7
PB04				i S	Sn	02 49 32.3	-13
PB04				AML	AML	02 49 32.6	
	comp=E,6μm,0.2s						
PB01	Plate Boundary	1.65	28	⇑iP	Pn	02 49 47.9	+1.7
PB01				i S	Sn	02 50 09.7	+3.5
PB01				AML	AML	02 50 12.3	
	comp=E,727nm,0.2s						

*IDC **09** 02:51:30.4±1.3, 56°.08S×25°.94W, h0km, mb4.4/3, mb1 4.5/3, mb1mx4.0/13, mbtmp4.3/3, MS3.5/4, Ms1 3.4/4, ms1mx3.1/18, Error ellipse: s-maj=123.7km s-min=32.8km az=37.0*
*NEIC **09** 02:51:35.4±0.9, 56°.21S×26°.18W, h35km, mb4.6/2, Error ellipse: s-maj=47.2km s-min=18.2km az=58.0*

ISC 09 02:51:32.7±2.5, 56°.35S±0°.4×26°.6W±°, h10km, n13, σ0§45/6, mb4.3/4, MS3.4/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USHA	Ushuaia	23.58	256	LR	LR	03 03 20.0	
	comp=Z,135nm,20.9s,MS3.4,baz=270,slow=30						
PLCA	Paso Flores	32.50	282	LR	LR	03 08 42.7	
	comp=Z,78nm,20.5s,MS3.4,baz=266,slow=32						
QSPA	South Pole Qui	33.97	180	eP	P	02 58 15.5	-0.1
	3.6nm,0.6s,mb4.5						
CPUP	Villa Florida	37.32	310	P	P	02 58 44.5	-0.4
	0.9nm,0.5s,mb3.9,baz=134,slow=6.4,SNR=5.1						
CPUP	Villa Florida	37.32	310	P	P	02 58 44.5	-0.4
BOSA	Boshof	45.58	75	LR	LR	03 15 41.3	
	comp=Z,23nm,20.4s,MS3.1,baz=173,slow=32						
LPAZ	La Paz	50.90	304	P	P	03 00 34.4	+0.6
	4.3nm,0.3s,mb4.8,baz=128,slow=3.1,SNR=33						
LPAZ	La Paz	50.90	304	eP	P	03 00 34.1	+0.3
	5.3nm,0.5s,mb4.7						
ASAR	Alice Springs	98.62	162	P	P	03 05 11.8	0.0
	0.4nm,0.7s,mb4.1,baz=188,slow=5.9,SNR=5.4						
EIL	Elat	100.12	51	LR	LR	03 44 49.0	
	comp=Z,31nm,19.1s,MS3.8,baz=338,slow=32						
YKA	Yellowknife Ar	136.66	317	PKP	PKPdf	03 10 51.5	-2.0
	0.2nm,0.5s,baz=132,slow=2.0,SNR=5.1						
YKA	Yellowknife Ar	136.66	317	PKP	PKPdf	03 10 51.5	-2.0
SONM	Songino Array	150.27	86	PKPbc	PKPbc	03 11 21.6	-1.3
	2.7nm,0.9s,baz=207,slow=0.9,SNR=10						

IDC 09 03:03:50.3±1.2, 31°.55N×104°.47E, h0km, mb3.4/6, mb1 3.6/7, mb1mx3.4/27, mbtmp3.5/7, ML3.5/1, MS2.7/2, Ms1 2.7/2, ms1mx2.2/38, Error ellipse: s-maj=41.6km s-min=22.5km az=56.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	Songino Array	16.34	5	Pn	Pn	03 07 41.2	+0.3
	0.2nm,0.3s,baz=191,slow=13,SNR=4.9						
KSRS	Korea Array	20.18	67	P	P	03 08 26.0	-0.4
	3.6nm,1.0s,baz=258,slow=10,SNR=6.8						
KSRS				LR	LR	03 15 33.1	
	comp=Z,12nm,21.1s,baz=145,slow=35						
MKAR	Makanchi Array	22.86	318	P	P	03 08 54.2	-0.8
	0.4nm,0.4s,baz=119,slow=15,SNR=3.4						
KURK	Kurchatov	27.09	322	P	P	03 09 35.4	+0.9
	0.6nm,0.7s,baz=129,slow=10,SNR=4.0						
WRA	Warramunga Arr	58.66	147	P	P	03 13 50.6	+1.1
	0.5nm,0.6s,baz=340,slow=7.6,SNR=4.2						
ASAR	Alice Springs	61.70	149	P	P	03 14 09.2	-1.1
	0.2nm,0.7s,baz=338,slow=7.3,SNR=3.1						
IDI	Anoyia	64.81	297	LR	LR	03 48 54.8	
	comp=Z,10nm,19.6s,baz=173,slow=42						
YKA	Yellowknife Ar	81.18	17	P	P	03 16 07.3	-0.1
	0.2nm,0.5s,baz=325,slow=4.5,SNR=3.5						

IDC 09 03:14:46.7±2.2, 5°.43S×130°.39E, h0km, mb3.9/1, mb1 4.1/4, mb1mx3.7/17, mbtmp3.9/4, ML3.8/3, Error ellipse: s-maj=94.4km s-min=27.6km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	13.42	200	Pn	Pn	03 17 58.8	+0.3
	0.3nm,0.3s,baz=25,slow=12,SNR=31						
FITZ				Sn	Sn	03 20 12.3	-16
	0.2nm,0.3s,baz=17,slow=13,SNR=3.2						
WRA	Warramunga Arr	14.93	165	Pn	Pn	03 18 19.7	+0.6
	0.3nm,0.3s,baz=348,slow=12,SNR=14						
WRA				Sn	Sn	03 20 51.0	-14
	0.6nm,0.3s,baz=333,slow=22,SNR=8.7						
ASAR	Alice Springs	18.44	170	P	Pn	03 19 03.2	-0.7
	1.0nm,0.3s,baz=348,slow=9.9,SNR=71						
ASAR				S	Sn	03 22 16.4	-14
	0.1nm,0.3s,baz=353,slow=30,SNR=5.0						
MKAR	Makanchi Array	67.14	326	P	P	03 25 42.4	+0.2
	0.3nm,0.3s,baz=126,slow=7.3,SNR=3.5						

IGQ 09 03:23:29.3, 0°.92S×80°.77W, h34km±3km, Mb4.1, Ms3.9, 13C-9D, Error ellipse: s-maj=8.2km s-min=1.6km az=12.5, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIS	Cerro-Chispas-	0.14	161	⇓iP	Pb	03 23 34.9	-0.5
JAMA	Jama	0.86	41	⇑iS	Sn	03 23 56.5	0.0
JAMA	Jama	0.86	41	⇑iP	Pn	03 23 45.7	+0.7
IGUA	Igualata	2.21	105	⇑iP	Pn	03 24 05.7	+2.1
JUA2	San Juan 2	2.28	72	⇑iP	Pn	03 24 06.6	+2.1
TERV	Terraza Guagua	2.29	71	S	Sn	03 24 36.2	+4.4
TERV	Terraza Guagua	2.29	71	P	Pn	03 24 08.2	+3.5
PINO	Pino	2.29	71	P	Pn	03 24 06.8	+2.0
RIOE	Riobamba	2.30	111	S	Sn	03 24 33.4	+1.5
RIOE	Riobamba	2.30	111	P	Pn	03 24 07.0	+2.3
GGP	Refugio Guagua	2.30	71	P	Pn	03 24 06.6	+1.8
BNAS	Cotopaxi Volca	2.31	84	⇑iP	Pn	03 24 07.8	+2.9
BMOR	Cotopaxi Volca	2.32	85	P	Pn	03 24 07.7	+2.6
MOV1	Cotopaxi Vol s	2.34	85	P	Pn	03 24 10.3	+4.9
YANA	Yana	2.34	70	P	Pn	03 24 08.3	+2.9
BREF	Cotopaxi Volca	2.34	84	⇑iS	Sn	03 24 38.8	+5.7
BREF	Cotopaxi Volca	2.34	84	⇑iP	Pn	03 24 08.7	+3.3
JUI6	Juive	2.36	102	P	Pn	03 24 10.1	+4.5
BMAS	Trigal station	2.37	104	⇓iS	Sn	03 24 37.9	+4.3
BMAS	Trigal station	2.37	104	⇓iP	Pn	03 24 08.3	+2.5
PITA	Cotopaxi Volc	2.37	81	⇑iP	Pn	03 24 08.9	+3.2
BVC2	Cotopaxi Volca	2.37	84	P	Pn	03 24 09.1	+3.2
VC1	Cotopaxi 1	2.38	83	⇓iP	Pn	03 24 09.8	+3.8
RETU	Refugio	2.39	103	P	Pn	03 24 10.8	+4.8
BTAM	Cotopaxi Volca	2.39	84	P	Pn	03 24 09.1	+3.1
ARRY	Arrayan	2.39	104	⇑iS	Sn	03 24 38.1	+3.9
ARRY	Arrayan	2.39	104	⇑iP	Pn	03 24 08.3	+2.2
PISA	Pisayambo	2.39	93	P	Pn	03 24 09.4	+3.3
RUN5	Runtun	2.40	102	P	Pn	03 24 08.9	+2.7
BPAT	Tungurahua Vol	2.41	104	⇓iP	Pn	03 24 08.8	+2.4
PATA	Patacocha	2.41	104	⇑iS	Sn	03 24 38.0	+3.3
PATA	Patacocha	2.41	104	⇑iP	Pn	03 24 08.9	+2.6
BRUN	Tungurahua Vol	2.41	102	P	Pn	03 24 10.7	+4.3
TAMB	Tambo	2.41	85	P	Pn	03 24 10.7	+4.3
ULBA	Ulba	2.42	103	P	Pn	03 24 08.8	+2.3
COV1	Cotopaxi Volc	2.44	84	⇓iS	Sn	03 24 42.8	+7.3
COV1	Cotopaxi Volc	2.44	84	⇓iP	Pn	03 24 09.4	+2.6
OTAV	Otavalo	2.59	64	⇓iS	Sn	03 24 42.2	+3.1
OTAV	Otavalo	2.59	64	⇓iP	Pn	03 24 11.6	+2.8
ANTI	Antisana	2.65	80	P	Pn	03 24 13.3	+3.6
ANTI	Antisana	2.65	80	S	Sn	03 24 48.9	+8.

PSI Prapat 25.36 298 P **P** **04 07 54.0 +0.3**
1.7nm,0.3s,mb4.0,baz=151,slow=10,SNR=2.9
STKA Stephens Creek 29.18 143 P **P** **04 08 29.0 +1.1**
1.4nm,0.6s,mb3.9,baz=274,slow=3.6,SNR=3.9
STKA Stephens Creek 29.18 143 *e*P **P** **04 08 28.6 +0.8**
0.6nm,0.6s,mb3.5
CMAR Chiang Mai Arr 35.45 322 LR LR 04 25 54.0
comp=Z,20nm,20.9s,baz=185,slow=40
SONM Songino Array 58.61 348 P **P** **04 12 24.0 +0.7**
0.6nm,0.5s,mb3.9,baz=166,slow=9.5,SNR=3.3
MK31 Makanchi Array 65.94 332 *e*P **P** **04 13 12.2 -0.3**
MKAR Makanchi Array 65.94 332 P **P** **04 13 11.6 -0.8**
1.8nm,0.4s,mb4.4,baz=120,slow=8.5,SNR=20
PETK Petropavlovsk- 69.72 22 P **P** **04 13 36.7 +0.5**
1.3nm,0.6s,mb4.0,baz=222,slow=1.9,SNR=3.9
ZALV Zalesovo Beam 70.33 338 P **P** **04 13 37.7 -2.1**
1.9nm,0.7s,mb4.2,baz=134,slow=4.3,SNR=7.7
BVAR Borovoye Array 75.80 331 P **P** **04 14 13.0 +0.7**
0.9nm,0.5s,mb3.9,baz=95,slow=6.4,SNR=4.5
KMBO Kilima Mbogo 83.84 270 P **P** **04 14 57.9 +1.0**
1.5nm,0.6s,mb4.3,baz=56,slow=10,SNR=4.2
BRTR Keskin Array B 94.15 309 P **P** **04 15 44.8 -0.7**
0.3nm,0.5s,mb4.0,baz=132,slow=2.1,SNR=3.5
CPUP Villa Florida 144.31 182 PKP PKPdf 04 22 04.3 +0.9
0.2nm,0.3s,baz=243,slow=2.3,SNR=3.0

*TRN **09** 04:05:32.3, 19°.32N×64°.61W, h3km*
*NEIC **09** 04:05:33.7, 19°.62N×64°.37W, h46km, MD3.6(RSPR), After RSPR.*
RSPR 09 04:05:33.7, 19°.62N×64°.37W, h46km±22km, MD3.5/5, MD3.5/5, 4C-8D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.88**	**178**	*e*P	Pn	04 05 48.5	-1.3
ABV	**Anegada**	**0.88**	**178**	*e*P	Pn	04 05 48.5	-1.3
STVI	**Saint Thomas**	**1.37**	**204**	*e*P	Pn	04 05 54.9	-1.5
STVI				*e*S	Sn	04 06 12.5	-0.9
STVI	**Saint Thomas**	**1.37**	**204**	*e*P	Pn	04 05 54.9	-1.5
STVI				*e*S	Sn	04 06 12.5	-0.9
MTP	**Monte Pirata**	**1.88**	**217**	*e*P	Pn	04 06 03.0	-0.4
MTP	**Monte Pirata**	**1.88**	**217**	*e*Pn	Pn	04 06 03.3	-0.1
MTP				*e*S	Sn	04 06 24.6	-1.2
MTP	**Monte Pirata**	**1.88**	**217**	*e*P	Pn	04 06 03.0	-0.4
MTP				*e*S	Sn	04 06 25.4	-0.4
CBYP	**Canovanas**	**1.94**	**227**	*e*P	Pn	04 06 03.2	-1.0
CBYP	**Canovanas**	**1.94**	**227**	*e*Pn	Pn	04 06 03.2	-1.0
CBYP				*e*S	Sn	04 06 26.0	-1.3
CBYP	**Canovanas**	**1.94**	**227**	*e*P	Pn	04 06 03.2	-1.0
CBYP				*e*S	Sn	04 06 25.9	-1.5
HUMP	**Col San Antoni**	**2.03**	**224**	*e*P	Pn	04 06 04.7	-0.7
HUMP				*e*S	Sn	04 06 28.2	-1.3
HUMP	**Col San Antoni**	**2.03**	**224**	*e*P	Pn	04 06 04.7	-0.7
HUMP				*e*S	Sn	04 06 28.2	-1.3
CPD	**Cerro la Pandu**	**2.15**	**223**	*e*P	Pn	04 06 06.4	-0.6
CPD				*e*S	Sn	04 06 31.7	-0.7
CPD	**Cerro la Pandu**	**2.15**	**223**	*e*P	Pn	04 06 06.4	-0.6
CPD				*e*S	Sn	04 06 31.7	-0.7

*CRAAG **09** 04:22:39.1, 35°.59N×0°.29W, Ml3.1*
*CSEM **09** 04:22:39.0±0.7, 35°.47N×0°.47W, h30km, ML2.0, Error ellipse: s-maj=22.9km s-min=9.6km az=15.0*
*MDD **09** 04:22:41.2±0.5, 35°.67N×0°.40W, h29km±6km, mb3.6/5, Error ellipse: s-maj=10.9km s-min=6.8km az=41.0, PRIMO*
ISC 09 04:22:41.0±0.8, 35°.79N±0°.08×0°.41W±0°.06, h29km±11km, n46, σ1°34/63, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USTO	**Oran**	**0.12**	**243**	P	**Pb**	**04 22 46.0**	**-0.3**
USTO	**Oran**	**0.12**	**243**	P	**Pb**	**04 22 46.0**	**-0.3**
USTO	**Oran**	**0.12**	**243**	P	**Pb**	**04 22 46.0**	**-0.3**
ODJA	**Bouhanifia**	**0.51**	**155**	P	**Pb**	**04 22 50.0**	**-1.5**
ODJA	**Bouhanifia**	**0.51**	**155**	P	**Pb**	**04 22 50.0**	**-1.5**
ODJA	**Bouhanifia**	**0.51**	**155**	P	**Pb**	**04 22 50.0**	**-1.5**
OKGL	**Djebel Kef Gue**	**0.89**	**74**	P	**Pn**	**04 22 57.0**	**-0.6**
OKGL	**Djebel Kef Gue**	**0.89**	**74**	P	**Pn**	**04 22 57.0**	**-0.6**
OKGL	**Djebel Kef Gue**	**0.89**	**74**	P	**Pn**	**04 22 57.0**	**-0.6**
OKGL	**Djebel Kef Gue**	**0.89**	**74**	P	**Pn**	**04 22 57.0**	**-0.6**
ENIJ	**Nijar**	**1.87**	**310**	P	**Pn**	**04 23 11.1**	**+0.1**
3.6nm,0.1s,SNR=7.9
ENIJ S **Sn** **04 23 31.2 -2.4**
3.5nm,0.2s,SNR=7.9
ENIJ Nijar 1.87 310 P **Pn** **04 23 11.1 +0.1**
3.6nm,0.1s,SNR=7.9
ENIJ S **Sn** **04 23 31.2 -2.4**
3.5nm,0.2s,SNR=7.9
ENIJ Nijar 1.87 310 P **Pn** **04 23 11.1 +0.1**
3.6nm,0.1s,SNR=7.9
EBER Berja 2.28 300 P **Pn** **04 23 16.6 -0.2**
1.4nm,0.1s,SNR=15
EBER S **Sn** **04 23 40.5 -3.4**
0.5nm,0.1s,SNR=6.9
EBER Berja 2.28 300 P **Pn** **04 23 16.6 -0.2**
1.4nm,0.1s,SNR=15
EBER S **Sn** **04 23 40.5 -3.4**
0.5nm,0.1s,SNR=6.9
EBER Berja 2.28 300 P **Pn** **04 23 16.6 -0.1**
1.4nm,0.1s,SNR=15
EHUE Huescar 2.67 320 P **Pn** **04 23 23.3 +1.2**
0.7nm,0.1s,SNR=7.9
EHUE S **Sn** **04 23 53.8 +0.3**
0.5nm,0.1s,SNR=7.9
EHUE Huescar 2.67 320 P **Pn** **04 23 23.3 +1.2**
0.7nm,0.1s,SNR=7.9
EHUE S **Sn** **04 23 53.8 +0.3**
0.5nm,0.1s,SNR=7.9
EHUE Huescar 2.67 320 P **Pn** **04 23 23.3 +1.2**
0.7nm,0.1s,SNR=7.9
EQUE Quentar 2.82 301 P **Pn** **04 23 25.6 +1.5**
SNR=7.9
EQUE Quentar 2.82 301 P **Pn** **04 23 25.6 +1.5**
SNR=7.9
EQUE Quentar 2.82 301 P **Pn** **04 23 25.6 +1.5**
SNR=7.9
EBEN Beniarda 2.91 3 P **Pn** **04 23 29.7 +4.3**
1.5nm,0.2s,SNR=10
EBEN S **Sn** **04 23 58.7 -0.7**
0.7nm,0.2s,SNR=7.9
EBEN Beniarda 2.91 3 P **Pn** **04 23 29.7 +4.3**
1.5nm,0.2s,SNR=10
EBEN S **Sn** **04 23 58.7 -0.7**
0.7nm,0.2s,SNR=7.9
EBEN Beniarda 2.91 3 P **Pn** **04 23 29.7 +4.3**
1.5nm,0.2s,SNR=10
EQES Quesada 2.93 314 P **Pn** **04 23 27.3 +1.7**
1.2nm,0.1s,SNR=34
EQES S **Sn** **04 24 01.1 +1.3**
1.9nm,0.1s,SNR=7.9
EQES Quesada 2.93 314 P **Pn** **04 23 27.3 +1.7**
1.2nm,0.1s,SNR=34
EQES S **Sn** **04 24 01.1 +1.3**
1.9nm,0.1s,SNR=7.9
EQES Quesada 2.93 314 P **Pn** **04 23 27.3 +1.7**
1.2nm,0.1s,SNR=34
EQES S **Sn** **04 24 01.1 +1.3**
1.9nm,0.1s,SNR=7.9
ECOG Cogollos-Vega 2.94 301 P **Pn** **04 23 24.9 -0.9**
0.9nm,0.2s,SNR=7.9
ECOG Cogollos-Vega 2.94 301 P **Pn** **04 23 24.9 -0.9**
0.9nm,0.2s,SNR=7.9
ECOG Cogollos-Vega 2.94 301 P **Pn** **04 23 24.9 -0.9**
0.9nm,0.2s,SNR=7.9
ETOB Tobarra 2.99 343 P **Pn** **04 23 27.7 +1.2**
2.1nm,0.1s,SNR=36
ETOB S **Sn** **04 24 00.3 -1.0**
1.7nm,0.1s,SNR=5.2
ETOB Tobarra 2.99 343 P **Pn** **04 23 27.7 +1.2**
2.1nm,0.1s,SNR=36
ETOB S **Sn** **04 24 00.3 -1.0**
1.7nm,0.1s,SNR=5.2
ETOB Tobarra 2.99 343 P **Pn** **04 23 27.7 +1.3**
2.1nm,0.1s,SNR=36
EVIA Vianos 3.30 330 P **Pn** **04 23 31.3 +0.7**
1.0nm,0.1s,SNR=6.8
EVIA S **Sn** **04 24 07.0 -1.8**
0.9nm,0.2s
EVIA Vianos 3.30 330 P **Pn** **04 23 31.3 +0.7**
1.0nm,0.1s,SNR=6.8
EVIA S **Sn** **04 24 07.0 -1.8**
0.9nm,0.2s
EVIA Vianos 3.30 330 P **Pn** **04 23 31.3 +0.6**
1.0nm,0.1s,SNR=6.8

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EIBI	**Ibiza**	**3.52**	**23**	P	**Pn**	**04 23 35.7**	**+2.0**
1.0nm,0.1s,SNR=7.9
EIBI S **Sn** **04 24 13.4 -1.0**
1.4nm,0.2s,SNR=7.9
EIBI Ibiza 3.52 23 P **Pn** **04 23 35.7 +2.0**
1.0nm,0.1s,SNR=7.9
EIBI S **Sn** **04 24 13.4 -1.0**
1.4nm,0.2s,SNR=7.9
EIBI Ibiza 3.52 23 P **Pn** **04 23 35.7 +2.0**
1.0nm,0.1s,SNR=7.9
EBAN Banos Encina 3.59 312 P **Pn** **04 23 36.9 +2.1**
1.2nm,0.2s,SNR=7.9
EBAN Banos Encina 3.59 312 P **Pn** **04 23 36.9 +2.1**
1.2nm,0.2s,SNR=7.9
EBAN Banos Encina 3.59 312 P **Pn** **04 23 36.9 +2.2**
1.2nm,0.2s,SNR=7.9
EMIJ Mijas 3.61 284 S **Sn** **04 24 13.3 -3.3**
0.9nm,0.2s,SNR=7.9
EMIJ Mijas 3.61 284 S **Sn** **04 24 13.3 -3.3**
0.9nm,0.2s,SNR=7.9
EMIJ Mijas 3.61 284 S **Sn** **04 24 13.3 -3.3**
0.9nm,0.2s,SNR=7.9

*ISCJB **09** 04:24:05.0±0.5, 37°.88N±0°.02×21°.40E±0°.03, h9km±3km, Error ellipse: s-maj=4.0km s-min=3.7km az=155.8*
*CSEM **09** 04:24:05.4±0.2, 37°.89N×21°.42E, h20km, MD3.3, Error ellipse: s-maj=4.0km s-min=3.0km az=91.0*
*ATH **09** 04:24:05.9, 37°.91N×21°.43E, h15km±2km, MD3.3/9*
*THE **09** 04:24:05.5, 37°.88N×21°.42E, h13km±1km, ML3.6/5, Error ellipse: s-maj=1.9km s-min=0.8km az=11.0*
*NEIC **09** 04:24:05.9, 37°.91N×21°.43E, h15km, MD3.3(ATH), After ATH.*
ISC 09 04:24:05.9±0.5, 37°.88N±0°.03×21°.43E±0°.03, h3km±5km, n62, σ1°09/92, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.18**	**10**	*e*Pb	**Pg**	**04 24 09.9**	**+0.5**
RLS *e*Sb **Sg** **04 24 12.7 +0.9**
RLS Riolos of Patr 0.18 10 *e*PB **Pg** **04 24 09.9 +0.5**
RLS *e*SB **Sg** **04 24 12.7 +0.9**
RLS Riolos of Patr 0.18 10 *e*Pb **Pg** **04 24 09.9 +0.5**
RLS *e*Sb **Sg** **04 24 12.7 +0.9**
UPR University Cam 0.49 35 P **Pg** **04 24 15.2 -0.2**
UPR S **Sg** **04 24 23.0 +1.2**
UPR University Cam 0.49 35 *e*PB **Pg** **04 24 15.6 +0.2**
UPR *e*SB **Sg** **04 24 22.7 +0.9**
UPR University Cam 0.49 35 P **Pg** **04 24 15.2 -0.2**
UPR University Cam 0.49 35 *e*Pb **Pg** **04 24 15.6 +0.2**
UPR *e*Sb **Sg** **04 24 22.7 +0.9**
UPR S **Sg** **04 24 23.0 +1.2**
KFL Anninata 0.56 295 P **Pg** **04 24 16.5 0.0**
LAKA Lakka 0.57 50 P **Pg** **04 24 16.0 -0.7**
LAKA S **Sg** **04 24 24.2 +0.1**
LAKA Lakka 0.57 50 P **Pg** **04 24 16.0 -0.7**
LAKA S **Sg** **04 24 24.2 +0.1**
EFP Efpalio 0.67 34 P **Pg** **04 24 17.6 -1.0**
EFP S **Sg** **04 24 28.4 +1.1**
EFP Efpalio 0.67 34 *e*PB **Pg** **04 24 17.6 -1.0**
EFP *e*SN **Sg** **04 24 27.8 +0.5**
EFP Efpalio 0.67 34 P **Pg** **04 24 17.6 -1.0**
EFP S **Sg** **04 24 28.4 +1.1**
TRIZ Trizonia 0.70 46 P **Pg** **04 24 18.4 -1.0**
TRIZ S **Sg** **04 24 29.7 +1.2**
TRIZ Trizonia 0.70 46 P **Pg** **04 24 18.4 -1.0**
TRIZ S **Sg** **04 24 29.7 +1.2**
VLS Valsamata 0.72 295 *e*Pb **Pg** **04 24 19.2 -0.6**
VLS *e*Sn **Sg** **04 24 30.7 +1.5**
VLS Valsamata 0.72 295 P **Pg** **04 24 19.0 -0.8**
VLS Valsamata 0.72 295 *e*PB **Pg** **04 24 19.2 -0.6**
VLS *e*SN **Sg** **04 24 30.7 +1.5**
VLS Valsamata 0.72 295 P **Pg** **04 24 19.0 -0.8**
VLS *e*Sn **Sg** **04 24 30.7 +1.5**
GUR Goura 0.73 85 P **Pg** **04 24 18.8 -1.0**
GUR S **Sg** **04 24 30.3 +1.1**
GUR Goura 0.73 85 *e*PB **Pg** **04 24 18.9 -0.9**
GUR *e*SN **Sg** **04 24 30.4 +1.2**
GUR Goura 0.73 85 P **Pg** **04 24 18.8 -1.0**
GUR *e*Sn **Sg** **04 24 30.4 +1.2**
KALE Kalithea 0.76 47 P **Pg** **04 24 19.3 -1.1**
KALE S **Sg** **04 24 31.3 +1.0**
KALE Kalithea 0.76 47 P **Pg** **04 24 19.3 -1.1**
KALE S **Sg** **04 24 31.3 +1.0**
ITM Ithomi 0.80 150 *e*Pn **Pg** **04 24 21.6 +0.4**
ITM *e*Sn **Sg** **04 24 34.0 +2.4**
ITM Ithomi 0.80 150 P **Pg** **04 24 21.1 -0.1**
ITM Ithomi 0.80 150 *e*PN **Pg** **04 24 21.6 +0.4**
ITM *e*SN **Sg** **04 24 34.0 +2.4**
ITM Ithomi 0.80 150 P **Pg** **04 24 21.1 -0.1**
ITM Ithomi 0.80 150 *e*Pn **Pg** **04 24 21.6 +0.4**
ITM *e*Sn **Sg** **04 24 34.0 +2.4**
VLX Vlachokerasia 0.91 124 P **Pg** **04 24 22.7 -0.6**
VLX S **Sg** **04 24 36.6 +1.5**
VLX Vlachokerasia 0.91 124 *e*PN **Pg** **04 24 23.8 +0.5**
VLX *e*SN **Sg** **04 24 36.7 +1.6**
VLX Vlachokerasia 0.91 124 P **Pg** **04 24 22.7 -0.6**
VLX Vlachokerasia 0.91 124 *e*Pn **Pg** **04 24 23.8 +0.5**
VLX *e*Sn **Sg** **04 24 36.7 +1.6**
PYL PYLOS 1.01 166 P **Pg** **04 24 24.3 -1.0**
PYL PYLOS 1.01 166 *e*PB **Pg** **04 24 25.0 -0.3**
PYL PYLOS 1.01 166 P **Pg** **04 24 24.3 -1.0**
PYL PYLOS 1.01 166 *e*Pb **Pg** **04 24 25.0 -0.3**
DSF Desfina 1.02 58 P **Pg** **04 24 23.6 -1.8**
DSF Desfina 1.02 58 P **Pg** **04 24 23.6 -1.8**
EVR Evrytania 1.08 16 *e*Pn **Pg** **04 24 25.7 -0.9**
EVR Evrytania 1.08 16 *e*PN **Pg** **04 24 25.7 -0.9**
EVR Evrytania 1.08 16 *e*Pn **Pg** **04 24 25.7 -0.9**
LKD2 Lefkada island 1.09 327 P **Pg** **04 24 25.4 -1.4**
LKD2 Lefkada island 1.09 327 P **Pg** **04 24 25.4 -1.4**
LTK Loutraki 1.23 83 P **Pg** **04 24 27.5 -1.9**
LTK Loutraki 1.23 83 *e*PB **Pb** **04 24 28.0 -1.6**
LTK Loutraki 1.23 83 P **Pg** **04 24 27.5 -1.9**
LTK Loutraki 1.23 83 *e*Pb **Pb** **04 24 28.0 -1.6**
AGG Agios Georgios 1.34 32 P **Pn** **04 24 29.4 -2.1**
AGG Agios Georgios 1.34 32 P **Pn** **04 24 29.4 -2.1**
LKR Lokris 1.46 58 *e*Pn **Pn** **04 24 32.7 -0.3**
LKR *e*Sn **Sn** **04 24 52.6 0.0**
LKR Lokris 1.46 58 *e*PN **Pn** **04 24 32.7 -0.3**
LKR *e*SN **Sn** **04 24 52.6 0.0**
LKR Lokris 1.46 58 *e*Pn **Pn** **04 24 32.7 -0.3**
THL Klokotos Trika 1.75 15 *e*PN **Pn** **04 24 38.0 +1.0**
JAN Janina 1.83 346 *e*Pn **Pn** **04 24 38.7 +0.5**
JAN Janina 1.83 346 *e*PN **Pn** **04 24 38.7 +0.5**
NEO Neokhori 2.00 44 *e*Pn **Pn** **04 24 41.1 +0.6**
NEO Neokhori 2.00 44 *e*PN **Pn** **04 24 41.1 +0.6**
KEK Kerkira 2.23 326 *e*Pn **Pn** **04 24 45.2 +1.6**
KEK Kerkira 2.23 326 *e*PN **Pn** **04 24 45.2 +1.6**
TIP Timpagrande 3.88 291 *e*Pn **Pn** **04 25 06.5 +0.1**
TIP Timpagrande 3.88 291 *e*Pn **Pn** **04 25 06.5 +0.1**

*THE **09** 04:32:55.9, 37°.84N×21°.41E, h16km±1km, ML3.0/5, Error ellipse: s-maj=1.4km s-min=0.6km az=174.0*
*CSEM **09** 04:32:56.6±0.2, 37°.87N×21°.41E, h2km, MD3.3, Error ellipse: s-maj=3.8km s-min=3.7km az=48.0*
*ISCJB **09** 04:32:56.6±0.5, 37°.87N±0°.03×21°.40E±0°.03, h11km±4km, Error ellipse: s-maj=4.8km s-min=4.0km az=11.6*
*ATH **09** 04:32:57.4, 37°.88N×21°.40E, h11km±2km, MD3.3/5*
*NEIC **09** 04:32:57.4, 37°.88N×21°.40E, h11km, MD3.3(ATH), After ATH.*
ISC 09 04:32:57.2±0.5, 37°.88N±0°.03×21°.40E±0°.03, h9km±7km, n41, σ0°79/66, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.18**	**16**	*e*Pg	**Pg**	**04 33 00.9**	**-0.1**
RLS *e*Sg **Sg** **04 33 04.6 +1.0**
RLS Riolos of Patr 0.18 16 *e*PG **Pg** **04 33 00.9 -0.1**
RLS *e*SG **Sg** **04 33 04.6 +1.0**
RLS Riolos of Patr 0.18 16 *e*Pg **Pg** **04 33 00.9 -0.1**
RLS *e*Sg **Sg** **04 33 04.6 +1.0**
UPR University Cam 0.50 37 *e*PB **Pg** **04 33 06.7 -0.2**
UPR University Cam 0.50 37 *e*Pb **Pg** **04 33 06.7 -0.2**
KFL Anninata 0.54 295 P **Pg** **04 33 07.4 -0.2**
LAKA Lakka 0.58 52 P **Pg** **04 33 07.2 -1.2**
LAKA S **Sg** **04 33 16.5 +0.5**
LAKA Lakka 0.58 52 P **Pg** **04 33 07.2 -1.2**
LAKA S **Sg** **04 33 16.5 +0.5**
EFP Efpalio 0.67 36 P **Pg** **04 33 09.0 -1.2**
EFP S **Sg** **04 33 20.1 +1.1**
EFP Efpalio 0.67 36 *e*PG **Pg** **04 33 10.0 -0.2**
EFP *e*SB **Sg** **04 33 19.7 +0.7**
EFP Efpalio 0.67 36 P **Pg** **04 33 09.0 -1.2**
EFP Efpalio 0.67 36 *e*Pg **Pg** **04 33 10.0 -0.2**
EFP *e*Sb **Sg** **04 33 19.7 +0.7**
EFP S **Sg** **04 33 20.1 +1.1**
VLS Valsamata 0.71 295 *e*Pg **Pg** **04 33 10.8 0.0**
VLS *e*Sb **Sb** **04 33 21.5 0.0**
VLS Valsamata 0.71 295 P **Pg** **04 33 09.9 -0.9**
VLS S **Sg** **04 33 20.4 +0.4**
VLS Valsamata 0.71 295 *e*PG **Pg** **04 33 10.8 0.0**
VLS *e*SB **Sb** **04 33 21.5 0.0**
VLS Valsamata 0.71 295 P **Pg** **04 33 09.9 -0.9**
VLS Valsamata 0.71 295 *e*Pg **Pg** **04 33 10.8 0.0**
VLS S **Sg** **04 33 20.4 +0.4**
VLS *e*Sb **Sb** **04 33 21.5 0.0**
TRIZ Trizonia 0.71 47 P **Pg** **04 33 10.1 -0.9**
TRIZ S **Sg** **04 33 21.0 +0.7**
TRIZ Trizonia 0.71 47 P **Pg** **04 33 10.1 -0.9**
TRIZ S **Sg** **04 33 21.0 +0.7**
GUR Goura 0.74 86 P **Pg** **04 33 09.9 -1.7**
GUR S **Sg** **04 33 21.2 -0.1**
GUR Goura 0.74 86 *e*PB **Pg** **04 33 12.0 +0.4**
GUR *e*SB **Sb** **04 33 22.1 -0.5**
GUR Goura 0.74 86 P **Pg** **04 33 09.9 -1.7**
GUR Goura 0.74 86 *e*Pb **Pg** **04 33 12.0 +0.4**
GUR S **Sg** **04 33 21.2 -0.1**
GUR *e*Sb **Sb** **04 33 22.1 -0.5**
KALE Kalithea 0.77 49 P **Pg** **04 33 10.8 -1.3**
KALE S **Sg** **04 33 22.9 +0.8**
KALE Kalithea 0.77 49 P **Pg** **04 33 10.8 -1.3**
KALE S **Sg** **04 33 22.9 +0.8**
ITM Ithomi 0.82 149 *e*Pb **Pg** **04 33 12.9 0.0**
ITM *e*Sb **Sg** **04 33 24.5 +0.9**
ITM Ithomi 0.82 149 *e*PB **Pg** **04 33 12.9 0.0**
ITM *e*SB **Sg** **04 33 24.5 +0.9**
ITM Ithomi 0.82 149 *e*Pb **Pg** **04 33 12.9 0.0**
ITM *e*Sb **Sg** **04 33 24.5 +0.9**
VLX Vlachokerasia 0.93 123 *e*PG **Pg** **04 33 14.6 -0.5**
VLX Vlachokerasia 0.93 123 *e*Pg **Pg** **04 33 14.6 -0.5**
PYL PYLOS 1.02 165 *e*PB **Pg** **04 33 16.7 -0.2**
PYL PYLOS 1.02 165 *e*Pb **Pg** **04 33 16.7 -0.2**
EVR Evrytania 1.08 17 *e*Pn **Pg** **04 33 18.4 +0.4**
EVR Evrytania 1.08 17 *e*PN **Pg** **04 33 18.4 +0.4**
EVR Evrytania 1.08 17 *e*Pn **Pg** **04 33 18.4 +0.4**
LKR Lokris 1.47 58 *e*Pg **Pg** **04 33 24.8 -0.6**
LKR Lokris 1.47 58 *e*PG **Pg** **04 33 24.8 -0.6**
LKR Lokris 1.47 58 *e*Pg **Pg** **04 33 24.8 -0.6**
KYTH Kithira 2.07 140 *e*Pn **Pn** **04 33 34.3 +2.3**
KYTH Kithira 2.07 140 *e*PN **Pn** **04 33 34.3 +2.3**
KYTH Kithira 2.07 140 *e*Pn **Pn** **04 33 34.3 +2.3**

*ATH **09** 04:39:42.2, 38°.09N×21°.54E, h18km±1km, MD3.2/6*
*THE **09** 04:39:42.3, 38°.04N×21°.55E, h14km±1km, ML3.5/6, Error ellipse: s-maj=1.6km s-min=0.6km az=355.0*
*NEIC **09** 04:39:42.3, 38°.09N×21°.54E, h18km, MD3.2(ATH), After ATH.*
*CSEM **09** 04:39:42.2±0.2, 38°.08N×21°.52E, h20km, MD3.2, Error ellipse: s-maj=4.2km s-min=3.7km az=132.0*
*ISCJB **09** 04:39:42.3±0.4, 38°.06N±0°.03×21°.55E±0°.02, h12km±3km, Error ellipse: s-maj=4.5km s-min=3.3km az=175.2*
ISC 09 04:39:42.7±0.4, 38°.08N±0°.03×21°.54E±0°.03, h13km±4km, n55, σ0°93/85, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.06**	**253**	*e*Pb	**Pg**	**04 39 45.3**	**+0.1**
RLS *e*Sb **Sg** **04 39 48.3 +1.3**
RLS Riolos of Patr 0.06 253 *e*PB **Pg** **04 39 45.3 +0.1**
RLS *e*SB **Sg** **04 39 48.3 +1.3**
RLS Riolos of Patr 0.06 253 *e*Pb **Pg** **04 39 45.3 +0.1**
RLS *e*Sb **Sg** **04 39 48.3 +1.3**
UPR University Cam 0.29 43 P **Pg** **04 39 48.8 +0.1**
UPR University Cam 0.29 43 P **Pg** **04 39 48.8 +0.1**
LAKA Lakka 0.38 64 P **Pg** **04 39 50.0 -0.4**
LAKA S **Sg** **04 39 56.3 +0.7**
LAKA Lakka 0.38 64 P **Pg** **04 39 50.0 -0.4**
LAKA S **Sg** **04 39 56.3 +0.7**
EFP Efpalio 0.46 39 P **Pg** **04 39 51.5 -0.2**
EFP S **Sg** **04 39 59.2 +1.4**
EFP Efpalio 0.46 39 *e*PB **Pg** **04 39 51.5 -0.2**
EFP *e*SB **Sg** **04 39 58.2 +0.4**
EFP Efpalio 0.46 39 P **Pg** **04 39 51.5 -0.2**
EFP *e*Sb **Sg** **04 39 58.2 +0.4**
EFP S **Sg** **04 39 59.2 +1.4**
TRIZ Trizonia 0.51 55 P **Pg** **04 39 52.2 -0.6**
TRIZ S **Sg** **04 40 00.5 +0.9**
TRIZ Trizonia 0.51 55 P **Pg** **04 39 52.2 -0.6**
TRIZ S **Sg** **04 40 00.5 +0.9**
KALE Kalithea 0.57 56 P **Pg** **04 39 53.2 -0.7**
KALE S **Sg** **04 40 02.1 +0.7**
KALE Kalithea 0.57 56 P **Pg** **04 39 53.2 -0.7**
KALE S **Sg** **04 40 02.1 +0.7**
KFL Anninata 0.59 274 P **Pg** **04 39 53.9 -0.4**
GUR Goura 0.65 102 P **Pg** **04 39 54.0 -1.4**
GUR S **Sg** **04 40 03.6 -0.4**
GUR Goura 0.65 102 *e*PB **Pg** **04 39 54.0 -1.4**
GUR *e*SN **Sg** **04 40 04.0 0.0**
GUR Goura 0.65 102 P **Pg** **04 39 54.0 -1.4**
GUR S **Sg** **04 40 03.6 -0.4**
GUR *e*Sn **Sg** **04 40 04.0 0.0**
VLS Valsamata 0.76 278 *e*Pb **Pg** **04 39 56.2 -1.2**
VLS Valsamata 0.76 278 P **Pg** **04 39 56.1 -1.3**
VLS S **Sg** **04 40 09.0 +1.7**
VLS Valsamata 0.76 278 *e*PB **Pg** **04 39 56.2 -1.2**
VLS *e*SN **Sg** **04 40 08.5 +1.2**
VLS Valsamata 0.76 278 P **Pg** **04 39 56.1 -1.3**
VLS *e*Sn **Sg** **04 40 08.5 +1.2**
VLS S **Sg** **04 40 09.0 +1.7**
DSF Desfina 0.85 66 P **Pg** **04 39 57.8 -1.3**
DSF S **Sg** **04 40 11.1 +0.9**
DSF Desfina 0.85 66 P **Pg** **04 39 57.8 -1.3**
DSF S **Sg** **04 40 11.1 +0.9**
EVR Evrytania 0.87 14 *e*Pn **Pg** **04 39 58.2 -1.3**
EVR Evrytania 0.87 14 *e*PN **Pg** **04 39 58.2 -1.3**
EVR Evrytania 0.87 14 *e*Pn **Pg** **04 39 58.2 -1.3**
ITM Ithomi 0.94 161 *e*Pn **Pg** **04 40 00.4 -0.6**
ITM *e*Sn **Sg** **04 40 14.9 +1.6**
ITM Ithomi 0.94 161 P **Pg** **04 39 59.7 -1.3**
ITM Ithomi 0.94 161 *e*PN **Pg** **04 40 00.4 -0.6**
ITM *e*SN **Sg** **04 40 14.9 +1.6**
ITM Ithomi 0.94 161 P **Pg** **04 39 59.7 -1.3**
ITM Ithomi 0.94 161 *e*Pn **Pg** **04 40 00.4 -0.6**
ITM *e*Sn **Sg** **04 40 14.9 +1.6**
VLX Vlachokerasia 0.97 136 P **Pg** **04 40 00.4 -1.0**
VLX Vlachokerasia 0.97 136 *e*PN **Pg** **04 40 01.1 -0.3**
VLX *e*SN **Sg** **04 40 14.9 +0.8**
VLX Vlachokerasia 0.97 136 P **Pg** **04 40 00.4 -1.0**
VLX Vlachokerasia 0.97 136 *e*Pn **Pg** **04 40 01.1 -0.3**
VLX *e*Sn **Sg** **04 40 14.9 +0.8**
LKD2 Lefkada island 0.99 316 P **Pg** **04 40 00.7 -1.2**
LKD2 Lefkada island 0.99 316 P **Pg** **04 40 00.7 -1.2**
LTK Loutraki 1.13 92 P **Pg** **04 40 02.7 -1.8**
LTK Loutraki 1.13 92 *e*PN **Pg** **04 40 03.1 -1.4**
LTK Loutraki 1.13 92 P **Pg** **04 40 02.7 -1.8**
LTK Loutraki 1.13 92 *e*Pn **Pg** **04 40 03.1 -1.4**
AGG Agios Georgios 1.13 33 P **Pb** **04 40 03.6 -0.6**
AGG Agios Georgios 1.13 33 P **Pb** **04 40 03.6 -0.6**
PYL PYLOS 1.19 172 *e*PN **Pn** **04 40 04.9 -0.2**
PYL PYLOS 1.19 172 *e*Pn **Pn** **04 40 04.9 -0.2**
LKR Lokris 1.28 63 *e*Pn **Pn** **04 40 06.4 0.0**
LKR *e*Sn **Sn** **04 40 24.4 +0.9**
LKR Lokris 1.28 63 *e*PN **Pn** **04 40 06.4 0.0**
LKR *e*SN **Sn** **04 40 24.4 +0.9**
LKR Lokris 1.28 63 *e*Pn **Pn** **04 40 06.4 0.0**
THL Klokotos Trika 1.53 14 *e*PN **Pn** **04 40 11.0 +1.2**
NEO Neokhori 1.80 46 *e*Pn **Pn** **04 40 13.9 +0.3**
NEO Neokhori 1.80 46 *e*PN **Pn** **04 40 13.9 +0.3**
NEO Neokhori 1.80 46 *e*Pn **Pn** **04 40 13.9 +0.3**
KEK Kerkira 2.13 321 *e*Pn **Pn** **04 40 19.1 +1.1**
KEK Kerkira 2.13 321 *e*PN **Pn** **04 40 19.1 +1.1**

*IDC **09** 04:50:58.1±1.5, 7°.98S×120°.48E, h0km, mb3.7/4, mb1 3.9/6, mb1mx3.7/21, mbtmp3.8/6, ML3.5/2, Error*

ellipse: s-maj=165.0km s-min=18.9km az=58.0
*NEIC **09** 04:50:59.6±0.9, 8°.03S×120°.42E, $h10^{km}$, Error ellipse: s-maj=62.0km s-min=11.2km az=56.0*
*DJA **09** 04:51:03, 8°.03S×120°.55E, $h25^{km}$, MLv4.5/3*
*ISCJB **09** 04:51:03.9±0.7, 8°.05S±0°.05×120°.56E±0°.08, $h65^{km}\pm10^{km}$, mb3.6/3, Error ellipse: s-maj=12.8km s-min=7.1km az=164.9*

ISC 09 04:51:05.0±0.7, 8°.05S±0°.05×120°.58E±0°.08, h51km±11km, n13, σ1°.04/18, mb3.7/3, Flores region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.63**	**190**	P	**Pn**		**04 51 29.7**	**-1.6**
WSI				S	**Sn**		**04 51 51.8**	**+0.6**
MMRI	**Maumere**	**1.74**	**110**	P	**Pn**		**04 51 34.2**	**+1.4**
MMRI				S	**Sn**		**04 52 03.4**	**+10**
BKSI	**Bulukumba**	**2.75**	**350**	P	**Pn**		**04 51 45.2**	**-1.4**
BKSI				S	**Sn**		**04 52 18.5**	**-0.1**
BNSI	**Bone**	**3.66**	**353**	P	**Pn**		**04 52 00.0**	**+0.9**
KHKI	**Kahang-Kahang**	**4.93**	**266**	P	**Pn**		**04 52 16.4**	**-0.2**
IGBI	**Denpasar**	**5.43**	**262**	P	**Pn**		**04 52 24.9**	**+1.5**
FITZ	**Fitzroy Crossi**	**11.14**	**154**	Pn	**Pn**		**04 53 40.0**	**-1.6**
	0.2nm,0.3s,baz=328,slow=9.5,SNR=6.0							
FITZ				Sn	**Sn**		**04 55 41.1**	**-3.6**
	0.2nm,0.3s,baz=172,slow=18,SNR=2.7							
WRA	**Warramunga Arr**	**17.81**	**133**	P	**Pn**		**04 55 09.2**	**-0.2**
	0.2nm,0.3s,baz=311,slow=12,SNR=12							
WRA				S	**S**		**04 58 19.3**	**-13**
	0.0nm,0.3s,baz=312,slow=24,SNR=4.1							
WRAB	**Tennant Creek**	**17.82**	**133**	*e*Pn	**Pn**		**04 55 09.6**	**+0.2**
ASAR	**Alice Springs**	**20.11**	**142**	P	**P**		**04 55 35.6**	**+1.0**
	1.4nm,0.4s,baz=314,slow=9.3,SNR=24							
STKA	**Stephens Creek**	**30.73**	**143**	P	**P**		**04 57 15.6**	**+0.2**
	1.4nm,0.7s,mb3.9,baz=304,slow=10,SNR=3.0							
MKAR	**Makanchi Array**	**64.34**	**332**	P	**P**		**05 01 35.8**	**+0.4**
	0.2nm,0.4s,mb3.5,baz=131,slow=7.9,SNR=2.7							
ZALV	**Zalesovo Beam**	**68.73**	**338**	P	**P**		**05 02 02.1**	**-1.1**
	0.5nm,0.4s,mb3.8,baz=152,slow=6.5,SNR=2.9							

*ATH **09** 05:08:32.3, 37°.92N×21°.45E, $h12^{km}\pm2^{km}$, MD3.6/11, ML3.0*
*THE **09** 05:08:32.5, 37°.92N×21°.51E, $h0^{km}\pm2^{km}$, ML3.5/15, Error ellipse: s-maj=2.3km s-min=0.9km az=214.0*
*NEIC **09** 05:08:32.3, 37°.92N×21°.45E, $h12^{km}$, ML3.0(ATH), After ATH.*
*CSEM **09** 05:08:32.1±0.2, 37°.89N×21°.48E, $h6^{km}$, ML3.0, Error ellipse: s-maj=4.5km s-min=3.6km az=73.0*
*ISCJB **09** 05:08:32.3±0.3, 37°.90N±0°.02×21°.46E±0°.02, $h10^{km}$, Error ellipse: s-maj=2.8km s-min=2.5km az=28.5*

ISC 09 05:08:32.5±0.4, 37°.89N±0°.02×21°.49E±0°.02, h3km±3km, n90, σ1°.13/142, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.17**	**353**	*e*Pg	**Pg**		**05 08 36.8**	**+1.0**
RLS				*e*Sg	**Sg**		**05 08 39.0**	**+1.0**
RLS	**Riolos of Patr**	**0.17**	**353**	*e*PG	**Pg**		**05 08 36.8**	**+1.0**
RLS				*e*SG	**Sg**		**05 08 39.0**	**+1.0**
RLS	**Riolos of Patr**	**0.17**	**353**	*e*Pg	**Pg**		**05 08 36.8**	**+1.0**
RLS				*e*Sg	**Sg**		**05 08 39.0**	**+1.0**
UPR	**University Cam**	**0.46**	**30**	P	**Pg**		**05 08 40.9**	**-0.3**
UPR				S	**Sg**		**05 08 48.4**	**+1.3**
UPR	**University Cam**	**0.46**	**30**	*e*PB	**Pg**		**05 08 41.0**	**-0.2**
UPR				*e*SB	**Sg**		**05 08 48.6**	**+1.5**
UPR	**University Cam**	**0.46**	**30**	*e*Pb	**Pg**		**05 08 41.0**	**-0.2**
UPR				S	**Sg**		**05 08 48.4**	**+1.3**
LAKA	**Lakka**	**0.52**	**47**	P	**Pg**		**05 08 42.0**	**-0.4**
LAKA				S	**Sg**		**05 08 49.7**	**+0.6**
LAKA	**Lakka**	**0.52**	**47**	P	**Pg**		**05 08 42.0**	**-0.4**
LAKA				S	**Sg**		**05 08 49.7**	**+0.6**
KFL	**Anninata**	**0.60**	**292**	P	**Pg**		**05 08 43.5**	**-0.5**
KFL				S	**Sg**		**05 08 52.9**	**+1.2**
EFP	**Efpalio**	**0.63**	**31**	P	**Pg**		**05 08 42.8**	**-1.7**
EFP				S	**Sg**		**05 08 53.0**	**+0.4**
EFP	**Efpalio**	**0.63**	**31**	*e*PB	**Pg**		**05 08 43.5**	**-1.0**
EFP				*e*SB	**Sg**		**05 08 52.9**	**+0.3**
EFP	**Efpalio**	**0.63**	**31**	P	**Pg**		**05 08 42.8**	**-1.7**
EFP	**Efpalio**	**0.63**	**31**	*e*Pb	**Pg**		**05 08 43.5**	**-1.0**
EFP				*e*Sb	**Sg**		**05 08 52.9**	**+0.3**
TRIZ	**Trizonia**	**0.66**	**44**	P	**Pg**		**05 08 44.1**	**-1.0**
TRIZ				S	**Sg**		**05 08 52.8**	**-0.9**
TRIZ	**Trizonia**	**0.66**	**44**	P	**Pg**		**05 08 44.1**	**-1.0**
TRIZ				S	**Sg**		**05 08 52.8**	**-0.9**
GUR	**Goura**	**0.67**	**86**	P	**Pg**		**05 08 44.8**	**-0.6**
GUR				S	**Sg**		**05 08 53.9**	**-0.2**
GUR	**Goura**	**0.67**	**86**	*e*PB	**Pg**		**05 08 44.8**	**-0.6**
GUR				*e*SB	**Sg**		**05 08 55.2**	**+1.1**
GUR	**Goura**	**0.67**	**86**	P	**Pg**		**05 08 44.8**	**-0.6**
GUR				S	**Sg**		**05 08 53.9**	**-0.2**
GUR				*e*Sb	**Sg**		**05 08 55.2**	**+1.1**
KALE	**Kalithea**	**0.71**	**45**	P	**Pg**		**05 08 45.0**	**-1.2**
KALE				S	**Sg**		**05 08 55.6**	**+0.2**
KALE	**Kalithea**	**0.71**	**45**	P	**Pg**		**05 08 45.0**	**-1.2**
KALE				S	**Sg**		**05 08 55.6**	**+0.2**
VLS	**Valsamata**	**0.77**	**292**	*e*Pg	**Pg**		**05 08 45.9**	**-1.3**
VLS				*e*Sb	**Sg**		**05 08 57.3**	**+0.1**
VLS	**Valsamata**	**0.77**	**292**	P	**Pg**		**05 08 45.8**	**-1.4**
VLS				S	**Sg**		**05 08 58.3**	**+1.1**
VLS	**Valsamata**	**0.77**	**292**	*e*PG	**Pg**		**05 08 45.9**	**-1.3**
VLS				*e*SB	**Sg**		**05 08 57.3**	**+0.1**
VLS	**Valsamata**	**0.77**	**292**	*e*Pg	**Pg**		**05 08 45.9**	**-1.3**
VLS				*e*Sb	**Sg**		**05 08 57.3**	**+0.1**
VLS				S	**Sg**		**05 08 58.3**	**+1.1**
ITM	**Ithomi**	**0.79**	**154**	*e*Pg	**Pg**		**05 08 47.9**	**+0.3**
ITM	**Ithomi**	**0.79**	**154**	P	**Pg**		**05 08 47.5**	**-0.1**
ITM				S	**Sg**		**05 09 01.3**	**+3.5**
ITM	**Ithomi**	**0.79**	**154**	*e*PG	**Pg**		**05 08 47.9**	**+0.3**
ITM	**Ithomi**	**0.79**	**154**	P	**Pg**		**05 08 47.5**	**-0.1**
ITM	**Ithomi**	**0.79**	**154**	*e*Pg	**Pg**		**05 08 47.9**	**+0.3**
ITM				S	**Sg**		**05 09 01.3**	**+3.5**
VLX	**Vlachokerasia**	**0.87**	**126**	P	**Pg**		**05 08 49.7**	**+0.5**
VLX				S	**Sg**		**05 09 02.7**	**+2.2**
VLX	**Vlachokerasia**	**0.87**	**126**	*e*PN	**Pg**		**05 08 50.4**	**+1.2**
VLX				*e*SB	**Sg**		**05 09 03.1**	**+2.6**
VLX	**Vlachokerasia**	**0.87**	**126**	P	**Pg**		**05 08 49.7**	**+0.5**
VLX	**Vlachokerasia**	**0.87**	**126**	*e*Pn	**Pg**		**05 08 50.4**	**+1.2**
VLX				S	**Sg**		**05 09 02.7**	**+2.2**
DSF	**Desfina**	**0.97**	**57**	P	**Pg**		**05 08 49.5**	**-1.5**
DSF				S	**Sg**		**05 09 04.7**	**+1.2**
DSF	**Desfina**	**0.97**	**57**	P	**Pg**		**05 08 49.5**	**-1.5**
DSF				S	**Sg**		**05 09 04.7**	**+1.2**
PYL	**PYLOS**	**1.01**	**169**	P	**Pg**		**05 08 51.6**	**-0.3**
PYL				S	**Sg**		**05 09 08.1**	**+3.1**
PYL	**PYLOS**	**1.01**	**169**	*e*PG	**Pg**		**05 08 52.0**	**+0.1**
PYL	**PYLOS**	**1.01**	**169**	P	**Pg**		**05 08 51.6**	**-0.3**
PYL	**PYLOS**	**1.01**	**169**	*e*Pg	**Pg**		**05 08 52.0**	**+0.1**
PYL				S	**Sg**		**05 09 08.1**	**+3.1**
EVR	**Evrytania**	**1.05**	**13**	*e*Pn	**Pg**		**05 08 52.4**	**-0.3**
EVR	**Evrytania**	**1.05**	**13**	*e*PN	**Pg**		**05 08 52.4**	**-0.3**
EVR	**Evrytania**	**1.05**	**13**	*e*Pn	**Pg**		**05 08 52.4**	**-0.3**
LKD2	**Lefkada island**	**1.11**	**324**	P	**Pg**		**05 08 51.7**	**-2.1**
LKD2				S	**Sg**		**05 09 10.7**	**+2.5**
LKD2	**Lefkada island**	**1.11**	**324**	P	**Pg**		**05 08 51.7**	**-2.1**
LKD2				S	**Sg**		**05 09 10.7**	**+2.5**
LTK	**Loutraki**	**1.17**	**83**	P	**Pg**		**05 08 53.7**	**-1.2**
LTK				S	**Sg**		**05 09 10.6**	**+0.5**
LTK	**Loutraki**	**1.17**	**83**	*e*PB	**Pb**		**05 08 53.8**	**-1.5**
LTK	**Loutraki**	**1.17**	**83**	*e*Pb	**Pb**		**05 08 53.8**	**-1.5**
LTK				S	**Sg**		**05 09 10.6**	**+0.5**
AGG	**Agios Georgios**	**1.31**	**30**	P	**Pg**		**05 08 56.5**	**-1.0**
AGG				S	**Sg**		**05 09 15.4**	**+0.9**
AGG	**Agios Georgios**	**1.31**	**30**	P	**Pg**		**05 08 56.5**	**-1.0**
AGG				S	**Sg**		**05 09 15.4**	**+0.9**
LKR	**Lokris**	**1.41**	**57**	*e*Pb	**Pb**		**05 08 59.0**	**-0.4**
LKR	**Lokris**	**1.41**	**57**	P	**Pn**		**05 08 57.2**	**-1.8**
LKR				S	**Sb**		**05 09 18.7**	**+1.0**
LKR	**Lokris**	**1.41**	**57**	*e*PB	**Pb**		**05 08 59.0**	**-0.4**
LKR	**Lokris**	**1.41**	**57**	P	**Pn**		**05 08 57.2**	**-1.8**
LKR	**Lokris**	**1.41**	**57**	*e*Pb	**Pb**		**05 08 59.0**	**-0.4**
LKR				S	**Sb**		**05 09 18.7**	**+1.0**
ATAL	**Atalanti**	**1.44**	**56**	P	**Pn**		**05 08 58.0**	**-1.5**
ATAL				S	**Sb**		**05 09 18.9**	**+0.1**
ATAL	**Atalanti**	**1.44**	**56**	P	**Pn**		**05 08 58.0**	**-1.5**
ATAL				S	**Sb**		**05 09 18.9**	**+0.1**
NAIG	**Nisos Aigina**	**1.58**	**94**	*e*Pb	**Pb**		**05 09 03.0**	**+0.6**
NAIG	**Nisos Aigina**	**1.58**	**94**	*e*PB	**Pb**		**05 09 03.0**	**+0.6**
NAIG	**Nisos Aigina**	**1.58**	**94**	*e*Pb	**Pb**		**05 09 03.0**	**+0.6**
VLI	**Veliai**	**1.64**	**135**	P	**Pn**		**05 09 05.7**	**+3.5**
VLI	**Veliai**	**1.64**	**135**	P	**Pn**		**05 09 05.7**	**+3.5**
THL	**Klokotos Trika**	**1.72**	**14**	P	**Pn**		**05 09 03.2**	**-0.1**
THL				S	**Sn**		**05 09 26.3**	**+0.5**
THL	**Klokotos Trika**	**1.72**	**14**	*e*PN	**Pn**		**05 09 03.8**	**+0.5**
THL	**Klokotos Trika**	**1.72**	**14**	P	**Pn**		**05 09 03.2**	**-0.1**
THL	**Klokotos Trika**	**1.72**	**14**	*e*Pn	**Pn**		**05 09 03.8**	**+0.5**
THL				S	**Sn**		**05 09 26.3**	**+0.5**
ATH	**Athens Observa**	**1.76**	**87**	*e*Pn	**Pn**		**05 09 05.1**	**+1.3**
ATH	**Athens Observa**	**1.76**	**87**	*e*PN	**Pn**		**05 09 05.1**	**+1.3**
ATH	**Athens Observa**	**1.76**	**87**	*e*Pn	**Pn**		**05 09 05.1**	**+1.3**
JAN	**Janina**	**1.83**	**344**	*e*Pn	**Pn**		**05 09 05.3**	**+0.4**
JAN	**Janina**	**1.83**	**344**	*e*PN	**Pn**		**05 09 05.2**	**+0.3**
JAN	**Janina**	**1.83**	**344**	*e*Pn	**Pn**		**05 09 05.3**	**+0.4**
MEV	**Metsovon**	**1.90**	**354**	P	**Pn**		**05 09 06.5**	**+0.7**
MEV				S	**Sn**		**05 09 30.9**	**+0.6**
MEV	**Metsovon**	**1.90**	**354**	P	**Pn**		**05 09 06.5**	**+0.7**
MEV				S	**Sn**		**05 09 30.9**	**+0.6**
NEO	**Neokhori**	**1.96**	**43**	P	**Pn**		**05 09 06.3**	**-0.3**
NEO	**Neokhori**	**1.96**	**43**	P	**Pn**		**05 09 06.3**	**-0.3**
XOR	**Xorichti**	**1.98**	**42**	P	**Pn**		**05 09 05.4**	**-1.5**
XOR				S	**Sn**		**05 09 33.9**	**+1.6**
XOR	**Xorichti**	**1.98**	**42**	P	**Pn**		**05 09 05.4**	**-1.5**
XOR				S	**Sn**		**05 09 33.9**	**+1.6**
KYTH	**Kithira**	**2.02**	**142**	*e*Pg	**Pg**		**05 09 10.1**	**-1.2**
KYTH	**Kithira**	**2.02**	**142**	*e*PG	**Pg**		**05 09 10.1**	**-1.2**
KYTH	**Kithira**	**2.02**	**142**	*e*Pg	**Pg**		**05 09 10.1**	**-1.2**
KEK	**Kerkira**	**2.25**	**324**	*e*Pb	**Pb**		**05 09 10.1**	**-3.7**
KEK	**Kerkira**	**2.25**	**324**	*e*PB	**Pb**		**05 09 10.1**	**-3.7**
AOS	**Alonnisos**	**2.27**	**55**	P	**Pn**		**05 09 09.0**	**-1.8**
AOS				S	**Sn**		**05 09 39.3**	**+0.1**
AOS	**Alonnisos**	**2.27**	**55**	P	**Pn**		**05 09 09.0**	**-1.8**
AOS				S	**Sn**		**05 09 39.3**	**+0.1**
KZN	**Kozani**	**2.42**	**5**	*e*Pn	**Pn**		**05 09 13.9**	**+0.9**
KZN	**Kozani**	**2.42**	**5**	*e*PN	**Pn**		**05 09 13.9**	**+0.9**
KZN	**Kozani**	**2.42**	**5**	*e*Pn	**Pn**		**05 09 13.9**	**+0.9**
OHR	**Ohrid**	**3.26**	**351**	*e*Pn	**Pn**		**05 09 30.4**	**+5.9**
KRUS	**Krusevo**	**3.48**	**357**	*e*Pn	**Pn**		**05 09 26.5**	**-1.0**
VAY	**Valandovo**	**3.53**	**13**	*e*Pn	**Pn**		**05 09 33.0**	**+4.9**

IDC 09 05:20:24.6±1.6, 14°.34S×173°.47W, h0km, mb3.7/4, mb1 4.2/4, mb1mx3.9/16, mbtmp3.7/4, MS3.5/4, Ms1 3.5/4, ms1mx3.2/20, Error ellipse: s-maj=101.0km s-min=23.7km az=161.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.69**	**76**	Pn	Pn		05 20 55.0	-0.5
	63nm,0.3s,baz=89,slow=0.8,SNR=44							
AFI				Sn	Sn		05 21 14.2	-3.7
	118nm,0.3s,baz=73,slow=21,SNR=18							
URZ	**Urewera**	**25.25**	**198**	LR	LR		05 34 25.7	
	comp=Z,130nm,19.2s,baz=172,slow=33							
ASAR	**Alice Springs**	**50.38**	**251**	P	P		05 29 24.2	+0.2
	1.0nm,0.7s,baz=89,slow=7.9,SNR=7.9							
MJAR	**Matsushiro Arr**	**68.09**	**320**	LR	LR		05 59 28.2	
	comp=Z,58nm,18.2s,baz=170,slow=34							
NVAR	**Mina Array Bea**	**73.59**	**42**	P	P		05 32 00.6	+0.9
	1.1nm,0.7s,baz=230,slow=11,SNR=6.5							
TXAR	**Lajitas Array**	**80.08**	**56**	P	P		05 32 37.1	+0.5
	0.2nm,0.6s,baz=221,slow=6.6,SNR=3.4							
PDAR	**Pinedale Array**	**81.52**	**42**	P	P		05 32 44.6	+0.6
	0.5nm,0.8s,baz=198,slow=0.9,SNR=4.3							
YKA	**Yellowknife Ar**	**89.16**	**23**	LR	LR		06 06 15.8	
	comp=Z,5.6nm,21.0s,baz=60,slow=31							
ULM	**Lac du Bonnet**	**93.15**	**39**	LR	LR		06 07 59.5	
	comp=Z,58nm,21.7s,baz=341,slow=31							
BRTR	**Keskin Array B**	**145.29**	**322**	PKPbc	PKPbc		05 40 02.7	-1.7
	0.4nm,0.6s,baz=109,slow=3.5,SNR=3.3							

IDC 09 05:21:11.3±2.0, 30°.49S×177°.43W, h0km, mb4.2/3, mb1 4.3/3, mb1mx3.9/16, mbtmp4.2/3, Error ellipse: s-maj=49.5km s-min=34.7km az=121.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.30**	**341**	Pn	Pn		05 21 37.2	+0.5
	100nm,0.3s,baz=342,slow=20,SNR=3.6							
RAO				Sn	Sn		05 21 50.9	-4.0
	456nm,0.3s,baz=70,slow=23,SNR=13							
URZ	**Urewera**	**8.97**	**209**	Pn	Pn		05 23 17.4	-4.7
	0.4nm,0.3s,baz=349,slow=16,SNR=3.9							
URZ				Sn	Sn		05 24 57.1	-6.7
	1.2nm,0.3s,baz=147,slow=22,SNR=7.8							
CTA	**Charters Tower**	**34.30**	**279**	P	P		05 27 59.8	+0.3
	7.1nm,1.1s,baz=90,slow=11,SNR=3.1							
STKA	**Stephens Creek**	**34.94**	**257**	P	P		05 28 05.8	+0.8
	2.9nm,0.7s,baz=83,slow=7.9,SNR=5.7							
WRA	**Warramunga Arr**	**44.59**	**272**	P	P		05 29 24.2	-1.3
	0.7nm,0.4s,baz=110,slow=7.8,SNR=4.7							
BVAR	**Borovoye Array**	**126.81**	**316**	PKP	PKPdf		05 40 16.2	-0.2
	0.5nm,0.4s,baz=101,slow=4.6,SNR=2.8							
FINES	**FINESS Array B**	**145.40**	**340**	PKPbc	PKPbc		05 40 49.8	-0.6
	2.0nm,0.4s,baz=33,slow=4.5,SNR=6.7							
AKASG	**Malin Array Be**	**151.67**	**323**	PKPbc	PKPbc		05 41 06.8	-0.5
	0.5nm,0.4s,baz=57,slow=2.8,SNR=4.0							

*CSEM **09** 05:28:20.8, 64°.02N×21°.16W, $h5^{km}$, ML3.6, After REY*

REY 09 05:28:20.8, 64°.02N×21°.16W, h5km, ML3.6, ML2.8, Iceland

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
IKRO	**Krokur**	**0.08**	**13**	P	Pg		05 28 22.8	+0.2
IKRO				S	Sg		05 28 24.4	+0.6
IBJA	**Bjarnastaoir**	**0.09**	**221**	P	Pg		05 28 23.0	+0.2
IBJA				S	Sg		05 28 24.6	+0.5
ISOL	**Solvholt**	**0.13**	**132**	P	Pg		05 28 23.6	+0.2
ISOL				S	Sg		05 28 25.7	+0.5
ISAN	**Sandskeio**	**0.18**	**283**	P	Pg		05 28 24.6	+0.2
ISAN				S	Sg		05 28 27.6	+0.8
IHEI	**Heioarbar**	**0.19**	**350**	P	Pg		05 28 24.7	+0.2
IHEI				S	Sg		05 28 27.7	+0.7
IVOS	**Vogsosar**	**0.29**	**236**	P	Pg		05 28 26.4	0.0
IVOS				S	Sg		05 28 30.8	+0.6
IASM	**Asmuli**	**0.30**	**127**	P	Pg		05 28 26.6	0.0
IASM				S	Sg		05 28 31.1	+0.5
IKAS	**Kald??rsel**	**0.30**	**271**	P	Pg		05 28 26.8	+0.1
IKAS				S	Sg		05 28 31.4	+0.8
ISAU	**Saurbar**	**0.33**	**94**	P	Pg		05 28 27.0	-0.2
ISAU				S	Sg		05 28 31.8	+0.3
IKRI	**Krysuvik**	**0.43**	**251**	P	Pg		05 28 28.6	-0.4
IKRI				S	Sg		05 28 34.6	+0.1
IKUD	**Kuludalsa**	**0.44**	**315**	P	Pg		05 28 28.6	-0.6
IKUD				S	Sg		05 28 35.1	+0.2
IGYG	**Gygjarholskot**	**0.49**	**57**	P	Pg		05 28 29.8	-0.5
IGYG				S	Sg		05 28 36.7	0.0
IHAU	**Haukadalur**	**0.53**	**95**	P	Pg		05 28 30.5	-0.5
IHAU				S	Sg		05 28 38.0	+0.2
IVOG	**Vogar**	**0.55**	**266**	P	Pg		05 28 30.7	-0.5
IVOG				S	Sg		05 28 38.5	+0.2
IGRV	**Grindav??k**	**0.59**	**255**	P	Pg		05 28 31.4	-0.8
IGRV				S	Sg		05 28 39.8	-0.1
IMID	**Miomork**	**0.67**	**122**	P	Pg		05 28 32.9	-0.7
INYL	**Nylenda**	**0.70**	**267**	P	Pg		05 28 33.0	-1.1
INYL				S	Sg		05 28 42.7	-0.4
IASB	**`sbjarnarst**	**0.74**	**355**	P	Pg		05 28 33.8	-1.1
IASB				S	Sg		05 28 44.0	-0.5

*THE **09** 05:34:05.4, 38°.86N×26°.00E, $h10^{km}\pm1^{km}$, ML2.8/3, Error ellipse: s-maj=2.7km s-min=0.7km az=90.0*
*CSEM **09** 05:34:05.4±0.1, 38°.86N×25°.96E, $h12^{km}$, ML2.8/3, Error ellipse: s-maj=4.0km s-min=2.1km az=78.0*
*ISCJB **09** 05:34:05.4±0.7, 38°.86N±0°.03×25°.98E±0°.06, $h9^{km}\pm7^{km}$, Error ellipse: s-maj=8.7km s-min=4.6km az=164.1*
*DDA **09** 05:34:06.2, 38°.90N×26°.10E, $h8^{km}\pm5^{km}$, Md3.1*

ISC 09 05:34:05.6±0.7, 38°.86N±0°.03×25°.96E±0°.07, h12km±6km, n12, σ0°.39/23, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.36**	**347**	P	**Pg**		**05 34 13.0**	**+0.2**
SIGR				S	**Sg**		**05 34 18.1**	**+0.4**
SIGR	**SIGRI**	**0.36**	**347**	P	**Pg**		**05 34 13.0**	**+0.2**
SIGR				S	**Sg**		**05 34 18.1**	**+0.4**
PRK	**Paraskevi**	**0.46**	**32**	P	**Pg**		**05 34 14.1**	**-0.5**
PRK				S	**Sg**		**05 34 20.4**	**-0.3**
PRK	**Paraskevi**	**0.46**	**32**	P	**Pg**		**05 34 14.1**	**-0.5**
PRK				S	**Sg**		**05 34 20.4**	**-0.3**
CHOS	**Chios island**	**0.48**	**171**	P	**Pg**		**05 34 15.1**	**+0.1**
CHOS				S	**Sg**		**05 34 21.1**	**-0.2**
CHOS	**Chios island**	**0.48**	**171**	P	**Pg**		**05 34 15.1**	**+0.1**
CHOS				S	**Sg**		**05 34 21.1**	**-0.2**
URLA	**Izmir**	**0.71**	**135**	*i* P	**Pg**		**05 34 18.8**	**-0.5**
URLA				*i* S	**Sg**		**05 34 29.2**	**+0.7**
URLA	**Izmir**	**0.71**	**135**	*i* P	**Pg**		**05 34 18.8**	**-0.5**
LIA	**Limnos Island**	**1.20**	**330**	P	**Pn**		**05 34 27.6**	**-0.6**
LIA				S	**Sb**		**05 34 44.0**	**+0.3**
LIA	**Limnos Island**	**1.20**	**330**	P	**Pn**		**05 34 27.6**	**-0.6**
LIA				S	**Sb**		**05 34 44.0**	**+0.3**
BALY	**Balya**	**1.56**	**55**	*i* P	**Pn**		**05 34 33.3**	**+0.1**
BALY				*i* S	**Sn**		**05 34 53.6**	**+0.2**
BALY	**Balya**	**1.56**	**55**	*i* P	**Pn**		**05 34 33.3**	**+0.1**
BALY				*i* S	**Sn**		**05 34 53.6**	**+0.2**

*IDC **09** 05:36:37.6±1.6, 39°.28S×73°.43W, $h0^{km}$, mb3.6/4, mb1 3.9/8, mb1mx3.8/16, mbtmp3.7/8, ML3.8/4, Error ellipse: s-maj=35.8km s-min=15.0km az=50.0*
*NEIC **09** 05:36:40.6, 39°.47S×73°.69W, $h26^{km}$, mb4.0/1, ML4.6(GUC), After GUC.*
NEIC Felt [IV] at Mehuin, [III] at San Jose de la Mariquina and [II] at Los Lagos, Mafil and Valdivia.
*GUC **09** 05:36:40.6±0.9, 39°.47S×73°.69W, $h26^{km}\pm6^{km}$, ML4.6*
*ISCJB **09** 05:36:40.4±0.8, 39°.41S±0°.04×73°.8W±0°.1, $h33^{km}$, mb3.5/4, Error ellipse: s-maj=11.9km s-min=5.2km az=2.3*

ISC 09 05:36:42.0±0.8, 39°.37S±0°.04×73°.7W±0°.1, h35km, n21, σ1°.31/29, mb3.5/4, 1C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TMU	**Temuco**	**1.07**	**54**	*e*P	**Pn**		**05 37 00.1**	**-0.3**
TMU				*i* S	**Sn**		**05 37 15.6**	**+1.6**
OSCH	**Osorno**	**1.28**	**160**	*e*P	**Pn**		**05 36 59.4**	**-3.9**
OSCH				*i* S	**Sn**		**05 37 15.1**	**-4.2**
PMCH	**Puerto Montt**	**2.20**	**164**	*e*P	**Pn**		**05 37 14.9**	**-1.1**
PMCH				*i* S	**Sn**		**05 37 42.1**	**0.0**
HOCH	**HornopirØn**	**2.72**	**159**	*e*P	**Pn**		**05 37 22.9**	**-0.2**
HOCH				*e*S	**Sn**		**05 37 55.4**	**+0.7**
HOCH				AML	AML		05 38 08.8	
	comp=N,4μm,0.5s							
PLCA	**Paso Flores**	**2.77**	**120**	Pn	**Pn**		**05 37 22.4**	**-1.5**
	comp=N,4.5nm,0.3s,baz=294,slow=11,SNR=56							
PLCA				Pg	**Pn**		**05 37 26.0**	**+2.1**
	comp=N,34nm,0.3s,baz=308,slow=13,SNR=268							
PLCA				Lg			05 38 01.6	
	comp=N,82nm,0.3s,baz=18,slow=14,SNR=11							
PLCA	**Paso Flores**	**2.77**	**120**	*e*Pn	**Pn**		**05 37 22.7**	**-1.2**
PLCA				Lg			05 38 01.6	
PLCA				*e*Sg	**Sn**		**05 38 03.4**	**+7.3**
PLCA	**Paso Flores**	**2.77**	**120**	*e*P	**Pn**		**05 37 23.9**	**+0.1**
PLCA				*e*S	**Sn**		**05 37 56.7**	**+0.6**
CCHI	**Chillan**	**3.05**	**25**	P	**Pn**		**05 37 27.8**	**+0.1**
CCHI				*i* S	**Sn**		**05 38 06.8**	**+3.9**
CCHI	**Chillan**	**3.05**	**25**	*e*P	**Pn**		**05 37 27.8**	**+0.1**
CCHI				*i* S	**Sn**		**05 38 06.8**	**+3.9**
CCHI				AML	AML		05 38 23.

66nm,0.5s,718nm0.2nm
NLAI Namlea 5.91 171 P Pn 06 06 10.2 +0.3
0.1nm2μm23nm,0.8s
SWI Sorong 6.16 124 P Px 06 06 01.9
13nm,0.8s,0.3nm
MPSI Mapaga 6.67 250 P Px 06 06 14.3
1μm,0.8s,4.5nm
KBKI Kotabaru 11.60 240 P Px 06 07 21.9
FITZ Fitzroy Crossi 20.61 181 P P 06 09 18.7 +0.4
2.8nm,0.9s,baz=20,slow=13,SNR=5.6
WRA Warramunga Arr 23.82 161 P P 06 09 50.9 -0.4
4.5nm,0.5s,mb4.1,baz=340,slow=10,SNR=70
ASAR Alice Springs 27.20 164 P P 06 10 21.7 -0.1
0.6nm,0.5s,mb3.4,baz=346,slow=12,SNR=18
STKA Stephens Creek 37.32 158 P P 06 11 50.4 +0.3
0.9nm,0.4s,mb4.1,baz=350,slow=9.6,SNR=6.3
STKA LR LR 06 27 50.8
comp=Z,102nm,21.1s,baz=25,slow=38

DJA 09 06:20:03,5.20S×125.68E,h10km,MLv3.7/5,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**2.41**	**36**	P	Pn	06 20 47.6	+5.1
NLAI				S	Sn	06 21 10.8	-1.3
AAI	**Ambon**	**2.92**	**59**	P	Pn	06 20 47.8	-1.8
KDI	**Kendari**	**3.29**	**292**	P	Pn	06 20 54.5	-0.1
MMRI	**Maumere**	**4.83**	**225**	P	Pn	06 21 15.0	-0.8
LUWI	**Luwuk**	**5.05**	**325**	P	Pn	06 21 19.2	+0.4

*ISCJB **09** 06:29:31.2±0.7,22.80N±0.02×121.80E±0.03,h9km±4km, Error ellipse: s-maj=4.8km s-min=3.0km az=25.2*
*TAP **09** 06:29:32.3,22.74N×121.78E,h20km,ML3.5,D*
*NEIC **09** 06:29:32.3±3.1,22.86N×121.75E,h10km,Error ellipse: s-maj=30.2km s-min=12.8km az=141.0*
ISC 09 06:29:30.9±0.6,22.81N±0.02×121.81E±0.03,h4km±3km, n48,σ1§02/90,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTN	**Taitung**	**0.61**	**265**	P	**Pg**	**06 29 43.5**	**+0.8**
TTN				*i* S	**Sg**	**06 29 51.6**	**+1.0**
TWG	**Pinlang**	**0.68**	**271**	*e*Pg	**Pg**	**06 29 44.7**	**+0.7**
TWG				*e*Sg	**Sg**	**06 29 53.4**	**+0.6**
TWG	**Pinlang**	**0.68**	**271**	P	**Pg**	**06 29 44.5**	**+0.5**
TWG				*i* S	**Sg**	**06 29 53.3**	**+0.5**
TWF1	**Yuli**	**0.72**	**319**	*i* P	**Pg**	**06 29 45.8**	**+1.0**
TWF1				S	**Sg**	**06 29 54.8**	**+0.8**
YULB	**Yu-li**	**0.75**	**321**	*e*Pg	**Pg**	**06 29 45.8**	**+0.5**
LAY	**Lan-yu**	**0.80**	**197**	*e*P	**Pg**	**06 29 46.6**	**+0.2**
ECL	**Taimali**	**0.81**	**255**	P	**Pg**	**06 29 46.4**	**-0.1**
ECL				*e*S	**Sg**	**06 29 55.8**	**-1.4**
ELDTW	**Lidau**	**0.82**	**298**	*e*P	**Pg**	**06 29 46.5**	**-0.1**
ELDTW				*e*S	**Sg**	**06 29 57.1**	**-0.2**
EHY	**Hungye**	**0.83**	**327**	*e*P	**Pg**	**06 29 47.6**	**+0.8**
EHY				*e*S	**Sg**	**06 29 58.6**	**+1.1**
EAST	**Anshuo**	**0.98**	**245**	P	**Pg**	**06 29 49.4**	**-0.4**
EAST				S	**Sg**	**06 30 01.0**	**-1.5**
YUS	**Yu-Shan**	**1.04**	**311**	P	**Pg**	**06 29 51.3**	**+0.4**
YUS				S	**Sg**	**06 30 04.4**	**0.0**
ESL	**Shilin**	**1.06**	**341**	*e*P	**Pg**	**06 29 51.6**	**+0.4**
ESL				S	**Sg**	**06 30 04.5**	**-0.6**
SSD	**Sandimen**	**1.09**	**267**	*e*P	**Pg**	**06 29 50.9**	**-0.9**
ALS	**Alishan**	**1.16**	**307**	*e*P	**Pg**	**06 29 53.4**	**+0.3**
ALS				*e*S	**Sg**	**06 30 08.4**	**+0.2**
SGST	**Jiashian**	**1.16**	**284**	*e*P	**Pg**	**06 29 53.4**	**+0.2**
SGST				S	**Sg**	**06 30 08.3**	**0.0**
SCZT	**Fangliau**	**1.18**	**249**	*e*P	**Pg**	**06 29 52.9**	**-0.7**
TPUB	**Ta-pu**	**1.19**	**295**	*e*Pg	**Pg**	**06 29 53.4**	**-0.4**
TPUB				*e*Sg	**Sg**	**06 30 08.0**	**-1.3**
TSEB	**Hengchuen, Pin**	**1.23**	**223**	*e*P	**Pg**	**06 29 54.5**	**-0.1**
TSEB				*e*S	**Sg**	**06 30 09.3**	**-1.3**
CHN1	**Nanshi**	**1.24**	**288**	*e*P	**Pg**	**06 29 55.3**	**+0.7**
CHN1				*e*S	**Sg**	**06 30 11.0**	**+0.3**
SSLB	**Suanglung**	**1.25**	**321**	*e*Pg	**Pg**	**06 29 54.8**	**-0.1**
SSLB				*e*Sg	**Sg**	**06 30 06.9**	**-4.3**
TWK1	**Hengchun**	**1.27**	**227**	*e*P	**Pg**	**06 29 54.3**	**-0.9**
TWK1				*e*S	**Sg**	**06 30 08.7**	**-2.9**
HEN	**Hengchun**	**1.27**	**231**	*e*P	**Pg**	**06 29 54.1**	**-1.2**
HEN				*e*S	**Sg**	**06 30 09.4**	**-2.4**
TWM1	**Shoushan**	**1.28**	**271**	*e*P	**Pg**	**06 29 56.6**	**+1.2**
TWM1				*e*S	**Sg**	**06 30 14.2**	**+2.2**
TWD	**Chiawan**	**1.28**	**351**	*e*P	**Pn**	**06 29 55.9**	**+0.2**
TWD				*e*S	**Sg**	**06 30 11.0**	**-1.1**
TWK	**Hsinying**	**1.30**	**291**	*e*P	**Pn**	**06 29 56.4**	**+0.5**
TWK				*e*S	**Sg**	**06 30 12.7**	**0.0**
CHN5	**Tsauling**	**1.30**	**307**	*e*P	**Pn**	**06 29 56.1**	**+0.2**
CHN5				*e*S	**Sg**	**06 30 13.1**	**+0.3**
CHN3	**Shinhua**	**1.36**	**282**	*e*P	**Pn**	**06 29 57.4**	**+0.7**
CHN3				*e*S	**Sb**	**06 30 16.6**	**+1.9**
SMLT	**Sun Moon Lake**	**1.36**	**322**	*e*P	**Pn**	**06 29 57.0**	**+0.3**
SMLT				*e*S	**Sb**	**06 30 13.6**	**-1.0**
NACB	**Ninganchiao**	**1.37**	**352**	*e*Pn	**Pn**	**06 29 55.9**	**-1.0**
NACB				*e*Sg	**Sg**	**06 30 13.2**	**-2.0**
TYC	**Yuchr**	**1.40**	**322**	*e*P	**Pn**	**06 29 57.2**	**0.0**
TYC				*e*S	**Sb**	**06 30 15.0**	**-0.8**
TWP	**Hsiaoliuchiu**	**1.41**	**251**	*e*P	**Pn**	**06 29 58.5**	**+1.1**
TWP				*e*S	**Sb**	**06 30 18.4**	**+2.2**
WHF	**Hehuan Shan**	**1.42**	**340**	P	**Pn**	**06 29 57.4**	**-0.2**
WHF				*e*S	**Sb**	**06 30 14.2**	**-2.3**
WGK	**Gukeng**	**1.44**	**308**	*e*P	**Pn**	**06 29 58.6**	**+0.8**
WGK				*e*S	**Sb**	**06 30 17.2**	**+0.2**
CHY	**Chiayi**	**1.45**	**299**	*e*P	**Pn**	**06 29 57.9**	**0.0**
CHY				*e*S	**Sb**	**06 30 16.4**	**-0.8**
TWT	**Tachien**	**1.55**	**338**	P	**Pn**	**06 29 59.9**	**+0.6**
TWT				*e*S	**Sn**	**06 30 17.7**	**-2.2**
CHN8	**Yiju**	**1.56**	**290**	*e*P	**Pn**	**06 29 59.8**	**+0.3**
CHN8				*e*S	**Sn**	**06 30 20.0**	**-0.3**
NNS	**Nan Shan**	**1.67**	**346**	*e*P	**Pn**	**06 30 01.0**	**0.0**
NNS				*e*S	**Sn**	**06 30 21.3**	**-1.7**
TCU	**Taichung**	**1.69**	**322**	*e*P	**Pn**	**06 30 01.8**	**+0.6**
TCU				*e*S	**Sn**	**06 30 23.1**	**-0.3**
TWC	**Suao**	**1.79**	**1**	*e*P	**Pn**	**06 30 03.3**	**+0.6**
TWC				*e*S	**Sn**	**06 30 24.1**	**-1.8**
TWQ1	**Liyutan**	**1.80**	**328**	*e*P	**Pn**	**06 30 03.7**	**+0.9**
TWQ1				*e*S	**Sn**	**06 30 27.1**	**+1.0**
ENTT	**Nioudou**	**1.84**	**353**	*e*P	**Pn**	**06 30 03.7**	**+0.4**
ENTT				*e*S	**Sn**	**06 30 26.0**	**-1.0**
NSY	**Sanyi**	**1.87**	**329**	*e*P	**Pn**	**06 30 05.2**	**+1.6**
NSY				*e*S	**Sn**	**06 30 29.4**	**+1.7**
YHNB	**Yeheng**	**1.90**	**348**	*e*Pn	**Pn**	**06 30 04.9**	**+0.8**
YHNB				*e*Sn	**Sn**	**06 30 26.9**	**-1.5**
NSK	**Sanguang**	**1.90**	**348**	*e*P	**Pn**	**06 30 05.8**	**+1.6**
NSK				*e*S	**Sn**	**06 30 27.2**	**-1.4**
NSTT	**Nanjuang**	**1.96**	**338**	*e*P	**Pn**	**06 30 05.7**	**+0.7**
NSTT				*e*S	**Sn**	**06 30 29.7**	**-0.3**
TWB1	**Santiao Chiao**	**2.20**	**4**	*e*P	**Pn**	**06 30 09.5**	**+1.3**
PNG	**Penghu**	**2.21**	**290**	*e*P	**Pn**	**06 30 07.0**	**-1.3**
NWF	**Wu-fen Shan**	**2.25**	**359**	*e*P	**Pn**	**06 30 10.9**	**+1.9**
NWF				*e*S	**Sn**	**06 30 37.1**	**-0.2**

*DJA **09** 06:31:57,0.07N×96.86E,h15km,MLv4.0/5*
*ISCJB **09** 06:32:11.6±4.5,1.78N±0.08×98.05E±0.07,h1km±32km, mb3.5/4, Error ellipse: s-maj=16.1km s-min=9.5km az=140.6*
*IDC **09** 06:32:12.0±3.5,1.70N×97.80E,h0km,mb3.5/4,mb1 3.8/5, mb1mx3.6/23,mbtmp3.7/5,ML4.5/1, Error ellipse: s-maj=133.5km s-min=25.2km az=62.0*
ISC 09 06:32:14.5±2.7,1.8N±0.1×98.0E±0.1,h10km±23km,n10, σ1§07/10,mb3.5/4,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.62**	**223**	P	**Pg**	**06 32 25.2**	**-1.4**
GSI				S	**Sg**	**06 32 35.9**	**+1.1**
MNSI	**Mandailing Nat**	**1.85**	**121**	P	**Pn**	**06 32 43.1**	**-3.1**
MNSI				S	**Sn**	**06 33 18.7**	**+9.1**
SDSI	**Sungai Dareh**	**4.35**	**128**	P	Px	06 33 05.5	
KULM	**Kulim**	**4.39**	**37**	P	Px	06 33 32.6	
MYKOM	**Kota Tinggi**	**5.85**	**90**	P	**Pn**	**06 33 42.0**	**+0.8**
CMAR	**Chiang Mai Arr**	**16.62**	**3**	Pn	**Pn**	**06 36 08.2**	**+0.6**
0.6nm,0.3s,baz=191,slow=9.2,SNR=3.2							
WRA	**Warramunga Arr**	**41.66**	**123**	P	**P**	**06 40 03.8**	**+0.4**
0.6nm,0.7s,mb3.3,baz=303,slow=9.1,SNR=3.2							
ASAR	**Alice Springs**	**43.10**	**128**	P	**P**	**06 40 14.9**	**-0.1**
0.2nm,0.4s,mb3.2,baz=302,slow=7.9,SNR=3.6							
SONM	**Songino Array**	**46.46**	**8**	P	**P**	**06 40 42.0**	**+0.5**
0.4nm,0.4s,mb3.7,baz=184,slow=8.7,SNR=2.9							
MKAR	**Makanchi Array**	**46.90**	**345**	P	**P**	**06 40 43.7**	**-1.2**
0.8nm,0.5s,mb3.9,baz=144,slow=10,SNR=5.6							

*ISCJB **09** 06:33:21.0±0.5,40.04N±0.02×38.86E±0.05,h10km, Error ellipse: s-maj=5.5km s-min=3.5km az=5.7*
*CSEM **09** 06:33:21.5±0.1,40.03N×38.86E,h2km,MD2.7, Error ellipse: s-maj=2.4km s-min=1.5km az=107.0*
*DDA **09** 06:33:21.1,40.03N×38.84E,h17km±6km,Md3.0*
*ISK **09** 06:33:21.4,40.06N×38.90E,h12km,MD2.7*
ISC 09 06:33:21.6±0.6,40.03N±0.03×38.85E±0.05,h5km±10km, n19,σ0§55/30,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZC	**Erzincan**	**0.48**	**125**	*e*PG	**Pg**	**06 33 30.9**	**+0.1**
EZC				*e*SG	**Sg**	**06 33 38.4**	**+1.3**
GUMT	**Gumushane**	**0.65**	**48**	*e*PG	**Pg**	**06 33 34.2**	**+0.2**
GUMT				*e*SG	**Sg**	**06 33 41.7**	**-0.7**
GUMT	**Gumushane**	**0.65**	**48**	*e*Pg	**Pg**	**06 33 34.2**	**+0.2**
GUMT				*e*Sg	**Sg**	**06 33 41.7**	**-0.7**
KEMA	**Kemaliye**	**0.81**	**200**	*i* P	**Pg**	**06 33 37.5**	**+0.4**
KEMA				*i* S	**Sg**	**06 33 47.2**	**-0.4**
KEMA	**Kemaliye**	**0.81**	**200**	*i* P	**Pg**	**06 33 37.5**	**+0.4**
KEMA				*i* S	**Sg**	**06 33 47.2**	**-0.4**
ESPY	**Espiye-Giresun**	**0.89**	**354**	*e*PG	**Pg**	**06 33 38.7**	**+0.1**
ESPY	**Espiye-Giresun**	**0.89**	**354**	*e*Pg	**Pg**	**06 33 38.7**	**+0.1**
GRSN	**GIRESUNGRSN**	**0.99**	**334**	*i* P	**Pg**	**06 33 41.0**	**+0.4**
GRSN				*i* S	**Sg**	**06 33 53.6**	**+0.1**
MACK	**Trabzon**	**1.15**	**37**	*i* P	**Pg**	**06 33 43.6**	**-0.1**
MACK				*i* S	**Sg**	**06 33 58.4**	**-0.1**
MACK	**Trabzon**	**1.15**	**37**	*i* P	**Pg**	**06 33 43.6**	**0.0**
MACK				*i* S	**Sg**	**06 33 58.4**	**-0.1**
PTK	**Pertek**	**1.22**	**159**	*e*PN	**Pn**	**06 33 45.1**	**-0.2**
PTK	**Pertek**	**1.22**	**159**	*e*Pn	**Pn**	**06 33 45.1**	**-0.1**
SVSK	**Karacayir**	**1.42**	**266**	*e*PN	**Pn**	**06 33 48.4**	**+0.3**
SVSK	**Karacayir**	**1.42**	**266**	*e*Pn	**Pn**	**06 33 48.4**	**+0.3**
ELZG	**Elazig**	**1.54**	**176**	*i* P	**Pg**	**06 33 50.3**	**-0.7**
ELZG				*i* S	**Sg**	**06 34 10.4**	**-0.5**
SVRC	**Sivrice-ELAZID**	**1.69**	**168**	*e*PN	**Pn**	**06 33 51.8**	**0.0**
SVRC	**Sivrice-ELAZID**	**1.69**	**168**	*e*Pn	**Pn**	**06 33 51.8**	**0.0**
DDEM	**Demirkent**	**2.38**	**68**	*e*P	**Pg**	**06 34 03.4**	**-3.7**
DDEM				*e*S	**Sg**	**06 34 32.8**	**-5.1**
DDEM	**Demirkent**	**2.38**	**68**	*e*P	**Pg**	**06 34 03.4**	**-3.7**
DDEM				*e*S	**Sg**	**06 34 32.8**	**-5.1**

*IDC **09** 06:35:20.6±1.1,31.70N×104.20E,h0km,mb3.6/6, mb1 3.7/7,mb1mx3.5/27,mbtmp3.6/7,ML3.5/1,MS3.1/1, Ms1 3.1/1,ms1mx2.1/24,Error ellipse: s-maj=42.0km s-min=19.1km az=53.0*
*ISCJB **09** 06:35:20.5±0.5,31.87N±0.04×104.40E±0.05,h10km, mb3.7/6, Error ellipse: s-maj=6.4km s-min=5.6km az=177.2*
*NEIC **09** 06:35:23.4±0.7,31.75N×104.16E,h10km,mb4.0/1, Error ellipse: s-maj=17.6km s-min=11.0km az=59.0*
*BJI **09** 06:35:23.9,31.89N×104.55E,h21km,mb3.7/1,ML3.5/13, Ms3.7/5,Ms7 3.6/4*
ISC 09 06:35:23.0±0.5,31.85N±0.04×104.26E±0.05,h10km,n16, σ1§41/24,mb3.7/6,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.03**	**205**	Pg	**Pg**	**06 35 43.5**	**+0.6**
CD2				Sg	**Sg**	**06 35 58.6**	**+2.3**
CD2				smax			
comp=N,2μm,0.7s							
CD2				smax			
comp=E,2μm,0.7s							
LZH	**Lanzhou**	**4.24**	**355**	*e*Pn	**Pn**	**06 36 32.8**	**+5.2**
LZH				Pg	**Pg**	**06 36 42.8**	**-1.4**
LZH				Sg	**Sg**	**06 37 35.1**	**-4.0**
LZH				smax			
comp=N,120nm,0.9s							
LZH				smax			
comp=E,81nm,0.7s							
LZH				LR	LR		
comp=E,580nm,5.0s							
LZH				LR	LR		
comp=Z,700nm,6.1s							
XAN	**Xi'an**	**4.49**	**60**	Pn	**Pn**	**06 36 29.8**	**-1.2**
XAN				Pg	**Pg**	**06 36 42.2**	**-6.8**
XAN				Sn	**Sn**	**06 37 25.8**	**+2.5**
XAN				Sg	**Sg**	**06 37 40.0**	**-7.1**
XAN				smax			
comp=N,150nm,1.0s							
XAN				smax			
comp=E,52nm,0.8s							
XAN				LR	LR		
comp=N,120nm,5.7s							
XAN				LR	LR		
comp=E,68nm,8.0s							
XAN				LR	LR		
comp=Z,64nm,8.0s							
ENH	**Enshi**	**4.75**	**108**	*e*Pn	**Pn**	**06 36 37.1**	**+2.3**
ENH				*e*Sg	**Sg**	**06 37 56.6**	**+0.9**
GYA	**Guiyang**	**5.77**	**158**	Pn	**Pn**	**06 36 45.5**	**-3.2**
GYA				Pg	**Pg**	**06 37 05.0**	**-8.6**
GYA				Sn	**Sn**	**06 37 53.5**	**-1.5**
GYA				smax			
comp=N,80nm,0.9s							
GYA				smax			
comp=E,50nm,0.6s							
CMAR	**Chiang Mai Arr**	**14.17**	**201**	Pn	**Pn**	**06 38 44.0**	**+0.1**
comp=E,0.4nm,0.3s,baz=8.7,slow=9.4,SNR=2.6							
SONM	**Songino Array**	**16.05**	**5**	Pn	**Pn**	**06 39 11.2**	**+2.6**
comp=E,0.2nm,0.3s,baz=200,slow=12,SNR=3.2							
KSRS	**Korea Array**	**20.23**	**67**	P	**P**	**06 39 57.6**	**-0.7**
comp=E,1.0nm,0.6s,baz=251,slow=9.8,SNR=6.9							
MK31	**Makanchi Array**	**22.51**	**318**	*e*P	**P**	**06 40 23.4**	**+0.7**
MKAR	**Makanchi Array**	**22.51**	**318**	P	**P**	**06 40 23.1**	**+0.5**
comp=E,1.1nm,0.6s,mb3.5,baz=95,slow=15,SNR=6.9							
AAK	**Ala-Archa**	**25.90**	**303**	LR	LR	06 52 56.1	
comp=E,40nm,18.4s,baz=355,slow=41							
KURK	**Kurchatov**	**26.73**	**322**	P	**P**	**06 41 02.2**	**-0.3**
comp=E,0.5nm,0.4s,mb3.4,baz=123,slow=10,SNR=4.4							
BVAR	**Borovoye Array**	**32.29**	**321**	P	**P**	**06 41 50.9**	**-0.9**
comp=E,0.4nm,0.7s,mb3.4,baz=138,slow=6.9,SNR=4.0							
ABKAR	**Akbulak array**	**37.28**	**311**	*e*P	**P**	**06 42 36.0**	**+1.0**
comp=E,0.5nm,0.2s,mb4.0							
WRA	**Warramunga Arr**	**59.02**	**147**	P	**P**	**06 45 22.0**	**-1.1**
comp=E,0.9nm,0.6s,mb4.0,baz=340,slow=7.6,SNR=3.6							
ASAR	**Alice Springs**	**62.06**	**149**	P	**P**	**06 45 42.3**	**-1.6**
comp=E,0.3nm,0.5s,mb3.7,baz=334,slow=6.6,SNR=6.9							

*NOU **09** 06:40:09.1±0.5,19.92S×168.64E,h10km,MD3.5,ML3.9*
*SZGRF **09** 06:40:11.6,20.80S×169.48E,h33km,mb5.4, Vanuatu Islands*
*LDG **09** 06:40:12.8±0.2,19.55S×167.35E,h10km,Mb4.9/2, Error ellipse: s-maj=23.2km s-min=4.2km az=99.0*
*ISCJB **09** 06:40:14.0±0.1,19.89S±0.04×168.02E±0.04,h34km, mb4.9/50,MS4.2/16, Error ellipse: s-maj=7.2km s-min=3.5km az=44.2*
*IDC **09** 06:40:15.4±0.7,19.79S×167.91E,h31km±4km,mb4.4/14, mb1 4.7/14,mb1mx4.6/16,mbtmp4.4/14,MS3.9/10, Ms1 3.9/10,ms1mx3.6/24, Error ellipse: s-maj=18.3km s-min=15.4km az=121.0*
*NEIC **09** 06:40:16.4±0.2,19.83S×167.94E,h35km,mb5.0/29, Error ellipse: s-maj=11.6km s-min=7.0km az=152.0*
*MOS **09** 06:40:20.4±2.4,18.28S×167.62E,h33km,mb5.1/15, Error ellipse: s-maj=14.5km s-min=12.3km az=110.7*
*DJA **09** 06:40:54,20.65S×166.71E,h350km,mb4.9/31*
ISC 09 06:40:15.7±0.1,19.93S±0.04×168.06E±0.04,h36km, h36km±.6km:pP-P,n358,σ0§88/243,mb4.9/50,MS4.2/16, 71C-73D,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.48**	**206**	*e*S	**Sn**	**06 41 20.8**	**-1.8**
DZM	**Mont Dzumac**	**2.62**	**215**	*e*Pn	**Pn**	**06 40 54.4**	**-1.1**
65nm,0.3s							
DZM				*e*Sn	**Sn**	**06 41 25.8**	**-0.2**
396nm,0.2s							
DZM				*e*LR	LR	06 41 28.1	
4μm,23.9s							
DZM	**Mont Dzumac**	**2.62**	**215**	*e*P	**Pn**	**06 40 53.2**	**-2.3**
DZM				*e*S	**Sn**	**06 41 25.6**	**-0.4**
DZM				AMP		06 41 40.7	
comp=Z,4μm,2.8s							
DZM	**Mont Dzumac**	**2.62**	**215**	*e*Pn	**Pn**	**06 40 53.8**	**-1.7**
NOUC	**Port Laguerre**	**2.72**	**217**	*e*P	**Pn**	**06 40 55.2**	**-1.7**
NOUC				*e*S	**Sn**	**06 41 29.7**	**+1.1**
NOUC				AMP		06 41 42.1	
comp=Z,189nm,3.4s							
NORM	**Noumea**	**2.72**	**212**	*e*S	**Sn**	**06 41 27.3**	**-1.4**
MSVF	**Nonsavu**	**9.71**	**79**	*e*P	**Pn**	**06 42 35.2**	**+2.3**
MSVF				pmax	pmax		
comp=Z,293nm,1.5s							
MSVF	**Nonsavu**	**9.71**	**79**	*e*Pn	**Pn**	**06 42 35.2**	**+2.3**
comp=Z,293nm,1.5s							
MSVF	**Nonsavu**	**9.71**	**79**	Pn	**Pn**	**06 42 35.5**	**+2.6**
comp=Z,521nm,1.0s,SNR=12							
HNR	**Honiara**	**13.05**	**322**	LR	LR	06 47 32.6	
comp=Z,289nm,19.0s,baz=144,slow=34							
ARMA	**Armidale**	**18.15**	**232**	*e*P	**Pn**	**06 44 27.4**	**+2.5**
comp=Z,41nm,1.3s							
URZ	**Urewera**	**19.89**	**159**	P	**Pn**	**06 44 46.0**	**+0.3**
comp=Z,14nm,1.0s,baz=350,slow=13,SNR=2.0							
URZ				LR	LR	06 50 28.5	
comp=Z,158nm,20.1s,baz=333,slow=31							
URZ	**Urewera**	**19.89**	**159**	*e*P	**Pn**	**06 44 46.7**	**+0.9**
comp=Z,46nm,1.3s							
AFI	**Afiamalu**	**20.19**	**76**	LR	LR	06 51 26.5	
comp=Z,437nm,19.0s,MS3.8,baz=255,slow=33							
CTA	**Charters Tower**	**20.49**	**266**	↓*i*P	**P**	**06 44 52.1**	**+1.4**
comp=Z,29nm,1.0s							
CTA	**Charters Tower**	**20.49**	**266**	P	**P**	**06 44 52.0**	**+1.3**
comp=Z,24nm,0.8s,baz=87,slow=14,SNR=14							
CTA				LR	LR	06 51 35.7	
comp=Z,553nm,21.0s,MS3.9,baz=84,slow=33							
CTA	**Charters Tower**	**20.49**	**266**	P	**P**	**06 44 52.0**	**+1.3**
CTA				LR	LR	06 51 35.7	
CTAO	**Charters Tower**	**20.49**	**266**	*e*P	**P**	**06 44 51.9**	**+1.2**
CTAO				pmax	pmax		
comp=Z,60nm,1.1s							
CTAO	**Charters Tower**	**20.49**	**266**	*e*P	**P**	**06 44 51.9**	**+1.3**
comp=Z,60nm,1.1s							
CNB	**Canberra Magne**	**22.51**	**223**	*e*P	**P**	**06 45 13.5**	**+1.3**
CAN	**Canberra**	**22.75**	**224**	*e*P	**P**	**06 45 17.4**	**+2.7**
CAN				pmax	pmax		
comp=Z,117nm,1.8s,mb5.0							
CAN	**Canberra**	**22.75**	**224**	*e*P	**P**	**06 45 17.4**	**+2.7**
comp=Z,117nm,1.8s,mb5.0							
RPZ	**Rata Peaks**	**23.85**	**175**	P	**P**	**06 45 27.0**	**+1.4**
comp=Z,15nm,0.9s,mb4.5,baz=350,slow=12,SNR=2.9							
COEN	**Coen**	**24.52**	**280**	*e*P	**P**	**06 45 32.8**	**+0.8**
comp=Z,1μm,1.7s							
TOO	**Toolangi**	**26.36**	**223**	*e*P	**P**	**06 45 49.5**	**+1.0**
STKA	**Stephens Creek**	**26.54**	**238**	↓*i*P	**P**	**06 45 50.5**	**+0.3**
comp=Z,17nm,1.1s,mb4.5							
STKA	**Stephens Creek**	**26.54**	**238**	P	**P**	**06 45 50.5**	**+0.3**
comp=Z,23nm,1.0s,mb4.7,baz=62,slow=7.7,SNR=22							
STKA				PcP	PcP	06 49 14.7	+0.4
comp=Z,5.7nm,0.8s,baz=91,slow=3.2,SNR=4.5							
STKA				LR	LR	06 55 35.9	
comp=Z,405nm,19.2s,MS4.0,baz=36,slow=35							
WRAB	**Tennant Creek**	**31.66**	**264**	*e*P	**P**	**06 46 34.2**	**-1.6**
WRAB				pmax	pmax		
comp=Z,23nm,1.2s,mb4.9							
WRAB	**Tennant Creek**	**31.66**	**264**	*e*P	**P**	**06 46 34.2**	**-1.6**
comp=Z,23nm,1.2s,mb4.9							
WRA	**Warramunga Arr**	**31.67**	**264**	P	**P**	**06 46 34.2**	**-1.7**
comp=Z,12nm,1.0s,mb4.7,baz=92,slow=9.3,SNR=29							
WRA				PcP	PcP	06 49 26.8	-0.6
comp=Z,3.5nm,0.8s,baz=102,slow=2.5,SNR=8.2							
WRA				LR	LR	06 59 52.0	
comp=Z,385nm,18.3s,MS4.1,baz=85,slow=37							
WRA	**Warramunga Arr**	**31.67**	**264**	P	**P**	**06 46 34.3**	**-1.6**
WRA						06 49 26.8	
ASAR	**Alice Springs**	**31.89**	**257**	P	**P**	**06 46 36.7**	**-1.1**
comp=Z,14nm,0.8s,mb4.8,baz=83,slow=8.6,SNR=118							
ASAR				pP	pP	06 46 46.0	-2.1
comp=Z,14nm,0.9s,baz=82,slow=8.2,SNR=13							
ASAR				PcP	PcP	06 49 27.2	-0.7
comp=Z,2.4nm,0.8s,baz=98,slow=3.6,SNR=4.7							
ASAR	**Alice Springs**	**31.89**	**257**	P	**P**	**06 46 36.7**	**-1.1**
ASAR				*PP	pP	06 46 46.0	-2.1
FORT	**Forrest**	**37.55**	**245**	*e*P	**P**	**06 47 25.9**	**-0.7**
comp=Z,18nm,0.7s,mb4.9							
FORT	**Forrest**	**37.55**	**245**	*e*P	**P**	**06 47 26.5**	**-0.1**
comp=Z,32nm,0.9s,mb5.0							
FITZ	**Fitzroy Crossi**	**40.07**	**265**	*e*P	**P**	**06 47 46.9**	**-1.0**
comp=Z,86nm,0.8s,mb5.5							
FITZ	**Fitzroy Crossi**	**40.07**	**265**	*e*P	**P**	**06 47 46.8**	**-1.1**
comp=Z,57nm,0.9s,mb5.3							
FITZ				*e*pP	pP	06 47 58.4	0.0
PPT	**Papeete**	**40.11**	**94**	*e*S	**S**	**06 54 01.8**	**+9.5**
comp=Z,90nm,23.8s							
PPT				*e*LR	LR	06 59 23.1	
comp=Z,525nm,27.0s							
PPT	**Papeete**	**40.11**	**94**	LR	LR	07 00 03.6	

comp=Z,257nm,21.9s,MS4.0,baz=134,slow=30
KAPI Kappang 49.24 281 LR LR 07 09 47.7
comp=Z,71nm,21.3s,MS3.6,baz=281,slow=36
TAOE Nuku Hiva Isla 51.18 85 *e*LR LR 07 04 17.6
comp=Z,236nm,26.3s
KKM Kota Kinabalu 57.14 291 *e*P **P** **06 49 59.3 +0.1**
comp=Z,76nm,1.3s,mb5.6
KSM Kuching 60.45 284 *e*P **P** **06 50 22.0 -0.2**
comp=Z,26nm,0.9s,mb5.3
KSM *ep*P pP 06 50 32.7 -0.5
MJAR Matsushiro Arr 62.85 333 P **P** **06 50 36.5 -1.4**
comp=Z,4.0nm,0.8s,mb4.6,baz=168,slow=7.1,SNR=10.0
MAT Matsushiro 62.85 333 P **P** **06 50 36.2 -1.7**
MIR Mirnyy 65.94 205⇑ *i*P **P** **06 50 58.4 +0.6**
MIR pmax pmax
comp=Z,47nm,1.2s,mb5.4
KSRS Korea Array 68.45 327 P **P** **06 51 13.5 -0.5**
comp=Z,3.2nm,0.8s,mb4.4,baz=143,slow=6.7,SNR=7.1
INCN Inchon 69.15 326 *e*P **P** **06 51 19.0 +0.6**
comp=Z,16nm,0.3s,mb5.4
NJ2 Nanjing 69.94 317 *e*P **P** **06 51 26.2 +2.8**
NJ2 pmax pmax
comp=Z,20nm,0.5s,mb5.3
QSPA South Pole Qui 70.13 180 *e*P **P** **06 51 24.8 +0.9**
comp=Z,11nm,1.1s,mb4.7
YSS Yuzh-Sakhalins 70.37 342 *e*P **P** **06 51 23.0 -2.7**
YSS *e* 06 51 36.9
VLA Vladivostok 71.01 333⇑ *e*P **P** **06 51 28.4 -1.3**
VLA pmax pmax
comp=Z,34nm,0.6s,mb5.5
MDJ Mudanjiang 73.20 332 P **P** **06 51 42.3 -0.5**
MDJ PP PP 06 54 25.2 -1.2
MDJ S S 07 01 01.5 -6.7
MDJ pmax pmax
comp=Z,26nm,1.2s,mb5.0
MDJ pmax pmax
comp=Z,48nm,4.7s
MDJ Mudanjiang 73.20 332 *e*P **P** **06 51 43.1 +0.3**
comp=Z,19nm,1.0s,mb5.0
MDJ *ep*P pP 06 51 54.1 +0.2
MDJ *es*P sP 06 51 59.2 +1.1
PETK Petropavlovsk- 73.28 353 P **P** **06 51 41.9 -1.1**
comp=Z,4.7nm,0.9s,mb4.4,baz=146,slow=10,SNR=3.7
HABR Khabarovsk 74.20 338 P **P** **06 51 44.9 -3.6**
HABR *e**PP pP 06 51 55.0 -4.7
HABR 06 51 59.9
HABR 06 54 30.1
HABR S S 07 01 15.6 -3.7
HABR *SS sS 07 01 32.9 -5.0
HABR *e* 07 01 52.4
HABR MLR MLR
comp=Z,126nm,23.0s,MS4.1
CN2 Changchun 74.47 329 *e*P **P** **06 51 49.9 -0.3**
CN2 *es*P sP 06 52 05.0 -0.6
CN2 *e*S S 07 01 21.0 -1.5
CN2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,18.0s,MS4.7
CN2 LR LR
comp=E,300nm,18.0s,MS4.7
CN2 LR LR
comp=Z,300nm,19.0s,MS4.6
GYA Guiyang 75.31 306 P **P** **06 51 57.8 +2.4**
GYA pP pP 06 52 08.5 +1.9
GYA sP sP 06 52 14.2 +3.4
GYA PP PP 06 54 48.6 +3.9
GYA S S 07 01 32.8 +0.2
GYA SKS 07 01 59.6
GYA SS SS 07 06 26.0 +2.5
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.0
GYA pmax pmax
comp=Z,110nm,5.2s
GYA LR LR
comp=N,420nm,18.9s,MS4.9
GYA LR LR
comp=E,410nm,19.0s,MS4.9
GYA LR LR
comp=Z,470nm,18.0s,MS4.8
KLR Kul'dur 76.04 336 *e*P **P** **06 51 54.2 -4.9**
KLR pmax pmax
comp=Z,34nm,1.6s,mb5.0
BJI Beijing 76.78 322 P **P** **06 52 05.9 +2.4**
BJI S S 07 01 51.7 +3.5
BJI SS SS 07 06 49.0 +3.7
BJI pmax pmax
comp=Z,11nm,0.7s,mb4.9
BJI pmax pmax
comp=Z,110nm,4.8s
BJI LR LR
comp=N,75nm,24.8s,MS4.1
BJI LR LR
comp=E,77nm,24.5s,MS4.1
BJI LR LR
comp=Z,31nm,24.6s,MS3.5
MAW Mawson 77.38 202⇓ *i*P **P** **06 52 07.6 +1.0**
comp=Z,13nm,1.0s,mb4.8
MAW *e* pP 06 52 19.4 +1.6
MAW Mawson 77.38 202 P **P** **06 52 07.6 +1.0**
comp=Z,16nm,1.0s,mb4.9,baz=113,slow=7.2,SNR=20
MAW LR LR 07 22 37.5
comp=Z,86nm,18.9s,MS4.1,baz=250,slow=33
MAW Mawson 77.38 202 *e*P **P** **06 52 07.7 +1.1**
MAW pmax pmax
comp=Z,5.0nm,1.1s
MAW Mawson 77.38 202 *e*P **P** **06 52 07.7 +1.1**
comp=Z,4.9nm,1.1s,mb4.3
KMI Kunming 77.70 303 P **P** **06 52 10.2 +1.2**
KMI S S 07 02 00.0 +1.2
CMAR Chiang Mai Arr 77.78 295 P **P** **06 52 10.4 +0.9**
comp=Z,6.8nm,0.7s,mb4.7,baz=132,slow=4.4,SNR=26
CHTO Chiang Mai 77.93 295 *e*P **P** **06 52 10.8 +0.4**
CHTO pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
CHTO Chiang Mai 77.93 295 *e*P **P** **06 52 10.8 +0.4**
comp=Z,6.1nm,0.8s,mb4.6
CD2 Chengdu 79.78 308 *e*P **P** **06 52 22.2 +1.9**
CD2 pP pP 06 52 32.6 +1.0
CD2 sP sP 06 52 37.1 +1.3
CD2 PP PP 06 55 25.1 +3.0
CD2 S S 07 02 21.4 +0.6
CD2 sS sS 07 02 35.8 -3.7
CD2 SS SS 07 07 33.7 +2.9
CD2 pmax pmax
comp=Z,20nm,0.8s,mb5.1
CD2 pmax pmax
comp=Z,40nm,4.8s
CD2 LR LR
comp=N,180nm,15.2s,MS4.7
CD2 LR LR
comp=E,210nm,14.2s,MS4.7
CD2 LR LR
comp=Z,130nm,15.2s,MS4.4
HHC Hu-ho-hao-te 80.02 320 *e*P **P** **06 52 24.6 +3.2**
HHC PcP PcP 06 52 32.4 +3.6
HHC pP pP 06 52 35.0 +2.3
HHC sP sP 06 52 38.9 +2.0
HHC PP PP 06 55 27.6 +3.6
HHC S S 07 02 25.6 +2.6
HHC SKS 07 02 34.7
HHC sS sS 07 02 42.9 +1.2
HHC ScS ScS 07 02 43.9 +0.3
HHC SS SS 07 07 37.7 +3.6
HHC pmax pmax
comp=Z,15nm,0.8s,mb5.0
HHC pmax pmax
comp=Z,100nm,6.3s
HHC LR LR
comp=N,130nm,20.4s,MS4.7
HHC LR LR
comp=E,360nm,21.6s,MS4.7
HHC LR LR
comp=Z,77nm,21.6s,MS4.0
LZH Lanzhou 82.37 313 *e*P **P** **06 52 34.1 +0.1**
LZH pP pP 06 52 44.5 -0.8
LZH sP sP 06 52 48.4 -1.1
LZH PP PP 06 55 45.0 +1.5
LZH pmax pmax
comp=Z,24nm,1.5s,mb4.9
SEY Seymchan 83.50 353 *ce*P **P** **06 52 38.3 -0.9**
SYO Syowa Base 83.97 196⇑ *e*P **P** **06 52 35.6 -6.2**
SYO Syowa Base 83.97 196⇑ *e*P pP 06 52 52.2 -0.9

ULN Ulaanbaatar 86.75 324 *e*P **P** **06 52 55.9 0.0**
ULN pmax pmax
comp=Z,6.0nm,0.8s,mb4.9
ULN Ulaanbaatar 86.75 324 *e*P **P** **06 52 55.9 0.0**
comp=Z,6.0nm,0.8s,mb4.9
GTA Gaotai 86.79 314 *e*P **P** **06 52 56.6 +0.3**
GTA pP pP 06 53 07.8 +0.1
GTA sP sP 06 53 11.4 -0.4
GTA PP PP 06 56 19.6 +0.1
GTA SKS 07 03 17.1
GTA S S 07 03 29.0 -2.5
GTA pmax pmax
comp=Z,3.0nm,0.9s,mb4.5
GTA pmax pmax
comp=Z,56nm,4.8s
GTA LR LR
comp=N,140nm,22.9s,MS4.5
GTA LR LR
comp=E,180nm,20.2s,MS4.5
GTA LR LR
comp=Z,56nm,15.8s,MS4.1
SONM Songino Array 87.10 324 P **P** **06 52 57.1 -0.5**
comp=Z,3.4nm,0.8s,mb4.6,baz=142,slow=5.9,SNR=14
SONM pP pP 06 53 07.5 -1.4
comp=Z,3.3nm,0.9s,baz=146,slow=4.3,SNR=5.0
KHMM Horse Mountain 87.47 45 *e*P **P** **06 53 02.6 +3.0**
BILL Biiibino 87.72 359 *e*P **P** **06 52 59.2 -0.9**
BILL *e**PP pP 06 53 11.0 -0.5
BILL *e**SP sP 06 53 16.5 +0.9
BILL pmax pmax
comp=Z,6.0nm,0.8s,mb4.9
BILL Biiibino 87.72 359 *e*P **P** **06 52 59.2 -0.9**
comp=Z,5.9nm,0.8s,mb4.9
BILL *ep*P pP 06 53 11.0 -0.5
BILL *es*P sP 06 53 16.5 +0.9
WDC Whiskeytown Da 88.13 46 *e*P **P** **06 53 04.6 +1.9**
WDC pmax pmax
comp=Z,13nm,1.1s,mb5.1
WDC Whiskeytown Da 88.13 46 *e*P **P** **06 53 04.5 +1.9**
comp=Z,13nm,1.1s,mb5.1
CMB Columbia Colle 88.44 49 *e*P **P** **06 53 04.3 +0.1**
CMB *e**PP pP 06 53 15.1 -0.5
CMB pmax pmax
comp=Z,7.0nm,0.9s,mb4.9
CMB Columbia Colle 88.44 49 *e*P **P** **06 53 04.3 +0.1**
comp=Z,6.8nm,0.9s,mb4.9
CMB *ep*P pP 06 53 15.1 -0.5
YBH Yreka Blue Hor 88.56 44 *e*P **P** **06 53 05.3 +0.6**
YBH *e**PP pP 06 53 16.3 +0.2
YBH pmax pmax
comp=Z,6.0nm,1.0s
YBH Yreka Blue Hor 88.56 44 *e*P **P** **06 53 05.2 +0.6**
comp=Z,6.1nm,1.0s,mb4.9
YBH *ep*P pP 06 53 16.3 +0.2
BFSC Mount Baldy Ra 88.77 53⇓ P **P** **06 53 06.3 +0.4**
baz=89
ISA Isabella 88.77 51⇓ P **P** **06 53 06.1 +0.2**
baz=89
ISA Isabella 88.77 51 *e*P **P** **06 53 05.8 0.0**
ISA *e**PP pP 06 53 17.0 -0.3
ISA pmax pmax
comp=Z,7.0nm,0.9s,mb5.0
ISA Isabella 88.77 51 *e*P **P** **06 53 05.8 -0.1**
comp=Z,6.9nm,0.9s,mb5.0
ISA *ep*P pP 06 53 17.0 -0.2
EDW2 Edwards Air Fo 88.79 52⇑ P **P** **06 53 06.2 +0.2**
baz=89
HUMO Hull Mountain 88.82 44 *e*P **P** **06 53 06.5 +0.6**
comp=Z,12nm,0.8s,mb5.3
HUMO *ep*P pP 06 53 17.8 +0.5
MURC Murrieta 88.85 54⇑ P **P** **06 53 06.3 +0.1**
baz=89
MURC ⇑P 06 53 06.3
baz=89
MONP Monument Peak 89.15 55⇑ P **P** **06 53 07.7 0.0**
baz=89
LASM Arnica Sink 89.25 45 P **P** **06 53 08.4 +0.5**
LRMC Laurel Mountai 89.27 52⇓ P **P** **06 53 08.1 -0.1**
baz=89
BEKR Beckworth 89.28 47⇓ P **P** **06 53 07.5 -0.6**
baz=89,SNR=6.7
DVTC Desert V Tower 89.30 55⇓ P **P** **06 53 08.1 -0.3**
baz=89
WAKR Walker 89.32 48 *e*P **P** **06 53 09.0 +0.7**
PFO Pinyon Flat Ob 89.42 54⇑ P **P** **06 53 08.5 -0.5**
baz=90
SWSC Sam W. Stewart 89.65 55⇓ P **P** **06 53 09.5 -0.5**
baz=90
MPMC Manual Prospec 89.66 51⇓ P **P** **06 53 10.0 0.0**
baz=90
GSC Goldstone 89.85 52⇓ P **P** **06 53 10.7 -0.2**
baz=90
GSC Goldstone 89.85 52 *e*P **P** **06 53 12.8 +1.9**
PAHR Pah Rah Range 89.88 47 *e*P **P** **06 53 11.4 +0.5**
BELC Belle Mtn. Jos 89.92 54⇑ P **P** **06 53 10.8 -0.5**
baz=90
IRO Indian Ridge 89.93 43 P **P** **06 53 12.9 +1.8**
PALK Pallekele 89.98 278 LR LR 07 32 47.4
comp=Z,85nm,19.9s,MS4.2,baz=94,slow=35
HEC Hector,Ludlow 90.01 53⇑ P **P** **06 53 11.2 -0.5**
baz=90
NVAR Mina Array Bea 90.08 49 P **P** **06 53 11.7 -0.2**
comp=Z,10nm,1.2s,mb5.0,baz=228,slow=7.3,SNR=13
NVAR pP pP 06 53 22.8 -0.5
comp=Z,4.9nm,0.8s,baz=225,slow=8.3,SNR=13
GRAC Grapevine Rang 90.15 51⇑ P **P** **06 53 12.0 -0.3**
baz=90
BC3 Big Chuckawall 90.20 54⇓ P **P** **06 53 12.4 -0.2**
baz=90
ZAK Zakamensk 90.20 325 *e*P **P** **06 53 11.3 -0.9**
ZAK pmax pmax
comp=Z,3.0nm,1.3s,mb4.5
K05A Summer Lake 90.22 44⇑ P **P** **06 53 12.2 -0.2**
baz=90
MOD Modoc 90.23 45 *e*P **P** **06 53 12.8 +0.2**
comp=Z,12nm,1.1s,mb5.1
MOD *ep*P pP 06 53 24.1 +0.1
MOD *es*P sP 06 53 31.3 +3.2
H04A Detroit Lake 90.29 42⇓ P **P** **06 53 12.3 -0.4**
baz=90
FURC Furnace Creek, 90.30 51⇓ P **P** **06 53 12.9 -0.1**
baz=90
G04A Mulino 90.36 41⇓ P **P** **06 53 12.6 -0.4**
baz=90
112A Yuma 90.42 56⇓ P **P** **06 53 12.9 -0.8**
baz=91
GLA Glamis 90.44 55⇓ P **P** **06 53 13.6 -0.1**
baz=91
SHOC Shoshone 90.49 52⇓ P **P** **06 53 13.8 -0.1**
baz=91
GMRC Granite Mounta 90.50 53⇑ P **P** **06 53 13.4 -0.6**
baz=91
NLWA Neilton Lookou 90.56 39⇑ P **P** **06 53 13.8 -0.1**
baz=91
NLWA Neilton Lookou 90.56 39 *e*P **P** **06 53 16.5 +2.5**
comp=Z,21nm,1.5s,mb5.2
NLWA *ep*P pP 06 53 25.6 +0.3
TUQ Turquoise Moun 90.56 52⇓ P **P** **06 53 14.2 0.0**
baz=91
IRM Iron Mountain 90.63 54⇓ P **P** **06 53 14.6 0.0**
baz=91
U10A Ash Meadows, A 90.67 51⇓ P **P** **06 53 14.6 -0.1**
baz=91,SNR=5.6
F04A Amboy 90.74 41⇑ P **P** **06 53 14.8 +0.1**
baz=91
LVP Lakeview Peak 90.81 41 P **P** **06 53 16.3 +1.2**
VBEM Beaver Butte 90.85 42 P **P** **06 53 17.3 +2.0**
Y12C Blythe 90.95 54⇑ P **P** **06 53 16.1 0.0**
baz=91
LDFC Landfair 91.03 53 *e*P **P** **06 53 17.1 +0.7**
LDFC *ep*P pP 06 53 28.2 +0.3
S10A Tonopah Range, 91.09 50⇓ P **P** **06 53 16.4 -0.2**
baz=91,SNR=9.2
V11A Goodsprings 91.09 52⇑ P **P** **06 53 16.3 -0.4**
baz=91
113A Mohawk Valley, 91.14 56⇑ P **P** **06 53 16.4 -0.6**
baz=91
VIPM Ingram Point 91.20 43 P **P** **06 53 17.3 +0.3**
GNW Green Mountain 91.27 39 *e*P **P** **06 53 17.5 +0.3**
comp=Z,8.1nm,0.8s,mb5.1
GNW *ep*P pP 06 53 28.8 +0.1
U11A Corn Creek 91.36 52⇓ P **P** **06 53 17.7 -0.3**
baz=92
Z13A Yuma Proving G 91.40 55⇑ P **P** **06 53 17.9 -0.2**
baz=92,SNR=13
R10A Warm Springs 91.45 50⇑ P **P** **06 53 18.2 -0.1**
baz=92
PDMCI Parker Dam,Lak 91.45 54⇓ P **P** **06 53 18.3 -0.1**
baz=92
V12A Nelson 91.48 53⇓ P **P** **06 53 18.3 -0.2**
baz=92
LON Longmire 91.49 40 *e*P **P** **06 53 17.9 -0.4**
LON *e**PP pP 06 53 29.3 -0.4
Y13A Salome 91.50 55⇑ P **P** **06 53 18.6 0.0**
baz=92
G06A Carlson Farm, 91.53 42⇑ P **P** **06 53 18.6 +0.2**
baz=92
SHPR Sheep Range 91.56 52 *e*P **P** **06 53 19.6 +0.7**
SHPR *ep*P pP 06 53 30.3 0.0
214A Organ Pipe Nat 91.58 57⇑ P **P** **06 53 18.8 -0.2**
baz=92,SNR=5.9
WVOR Wild Horse Val 91.58 45 *e*P **P** **06 53 19.1 +0.3**
WVOR *e**PP pP 06 53 30.5 +0.3
WVOR pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
WVOR Wild Horse Val 91.58 45 *e*P **P** **06 53 19.1 +0.3**
comp=Z,8.2nm,0.9s,mb5.1
WVOR *ep*P pP 06 53 30.5 +0.3
D05A Enumclaw 91.59 40⇓ P **P** **06 53 18.8 +0.1**
baz=92
S11A Rachel 91.59 50⇑ P **P** **06 53 18.6 -0.3**
baz=92
Q10A Clear Creek Ra 91.60 49⇑ P **P** **06 53 18.4 -0.6**
baz=92
I07A Izee 91.73 43⇓ P **P** **06 53 18.9 -0.5**
baz=92
X13A Yucca 91.81 54⇑ P **P** **06 53 19.7 -0.3**
baz=92
T11A Corn Creek, Al 91.81 51⇓ P **P** **06 53 19.7 -0.3**
baz=92,SNR=11
114A Black Gap (USA 91.83 56⇑ P **P** **06 53 19.9 -0.3**
baz=92,SNR=5.4
P10A Eureka 91.89 48⇑ P **P** **06 53 20.2 -0.1**
baz=92
W13A Hualapai Mount 91.96 53⇓ P **P** **06 53 20.1 -0.6**
baz=92
R11A Troy Canyon, C 91.99 50⇓ P **P** **06 53 20.4 -0.4**
baz=92
U12A Valley of Fire 91.99 52⇓ P **P** **06 53 20.6 -0.2**
baz=92
J08A Circle Bar Ran 92.09 44⇓ P **P** **06 53 20.8 -0.3**
baz=92
JCW Jim Creek 92.09 39 *e*P **P** **06 53 23.0 +2.0**
JCW *ep*P pP 06 53 32.5 0.0
O10A Cortez Mining, 92.14 48⇑ P **P** **06 53 21.3 -0.1**
baz=92
Q11A Duckwater 92.14 49⇑ P **P** **06 53 21.2 -0.3**
baz=92,SNR=6.9
V13A Grand Canyon W 92.18 53⇓ P **P** **06 53 21.8 0.0**
baz=92
Y14A Wickenburg 92.18 55⇑ P **P** **06 53 21.9 +0.1**
baz=92
S12A Delamar Landin 92.23 51⇑ P **P** **06 53 22.2 +0.3**
baz=92,SNR=9.9
U13A Pakoon Wash 92.41 52⇑ P **P** **06 53 23.1 +0.3**
baz=93
RPW Rockport 92.46 39 *e*P **P** **06 53 24.6 +1.9**
RPW *ep*P pP 06 53 33.7 -0.4
H08A Prairie City 92.46 43⇑ P **P** **06 53 22.9 +0.1**
baz=93
X14A Yava 92.47 54⇓ P **P** **06 53 22.9 -0.3**
baz=93
J09A Fry Pan Ranch, 92.56 45⇑ P **P** **06 53 23.1 -0.2**
baz=93
W14A Seligman 92.61 54⇑ P **P** **06 53 22.5 -1.2**
baz=93
M10A I.L. Ranch, Tu 92.61 47⇑ P **P** **06 53 23.3 -0.3**
baz=93
O11A Cowboy Ranch, 92.66 48⇓ P **P** **06 53 23.5 -0.4**
baz=93
216A Three Points, 92.66 57⇑ P **P** **06 53 23.5 -0.6**
baz=93
116A Eloy 92.68 56⇑ P **P** **06 53 23.8 -0.3**
baz=93
R12A Pony Springs, 92.69 50⇓ P **P** **06 53 24.0 0.0**
baz=93
T13A Saint George 92.69 52⇑ P **P** **06 53 24.0 -0.1**
baz=93,SNR=7.4
Y15A Casa Rosa Ranc 92.71 55⇑ P **P** **06 53 24.1 -0.1**
baz=93,SNR=14
HAWA Hanford 92.73 41 *e*P **P** **06 53 25.6 +1.6**
HAWA *ep*P pP 06 53 36.0 +0.6
V14A Boquillas Ranc 92.75 53⇓ P **P** **06 53 23.8 -0.6**
baz=93
L10A Juniper Basin 92.89 46⇓ P **P** **06 53 24.7 -0.2**
baz=93
K10A MacKenzie Ranc 92.91 45⇑ P **P** **06 53 24.5 -0.4**
baz=93
P12A McGill 92.93 49⇑ P **P** **06 53 23.9 -1.1**
baz=93
S13A Holt Ranch, En 92.94 51⇓ P **P** **06 53 24.5 -0.7**
baz=93
X15A Humboldt 92.98 54⇓ P **P** **06 53 25.5 0.0**
baz=93,SNR=13
U14A Mt Trumbull 93.00 52⇑ P **P** **06 53 25.6 +0.1**
baz=93,SNR=6.0
217A Green Valley 93.09 57⇑ P **P** **06 53 25.7 -0.3**
baz=93
M11A Holland Ranch, 93.09 47⇓ P **P** **06 53 24.8 -1.0**
baz=93
DLBC Dease Lake 93.16 28 *e*P **P** **06 53 27.9 +2.2**
DLBC *ep*P pP 06 53 37.4 +0.2
H09A Durkee 93.17 43⇓ P **P** **06 53 25.6 -0.5**
baz=93
Z16A Peralta Trail, 93.18 56⇑ P **P** **06 53 25.7 -0.7**
baz=93
CCUT Cedar City 93.29 51 *e*P **P** **06 53 29.2 +2.3**
TUC Tucson 93.31 57 *e*P **P** **06 53 27.1 +0.1**
TUC *e**PP pP 06 53 39.0 +0.5
TUC pmax pmax
comp=Z,7.0nm,1.1s,mb5.0
TUC Tucson 93.31 57 *e*P **P** **06 53 27.1 0.0**
comp=Z,7.0nm,1.1s,mb5.0
TUC *ep*P pP 06 53 39.0 +0.5
T14A Hurricane 93.31 52⇓ P **P** **06 53 27.2 +0.3**
baz=94,SNR=5.9
Y16A Circle Bar Ran 93.34 55⇓ P **P** **06 53 26.7 -0.4**
baz=94
O12A Currie 93.36 48⇓ P **P** **06 53 26.8 -0.2**
baz=94
Q13A Wheeler Ranch, 93.36 50⇓ P **P** **06 53 26.9 -0.2**
baz=94
117A Oracle 93.44 57⇓ P **P** **06 53 27.6 0.0**
baz=94,SNR=5.2
K11A Parker Ranch, 93.47 46⇑ P **P** **06 53 27.4 -0.1**
baz=94
V15A Kaibab Nationa 93.53 53⇑ P **P** **06 53 27.6 -0.4**
baz=94
P13A Bates Ranch, G 93.55 49⇓ P **P** **06 53 27.7 -0.3**
baz=94
X16A Lo Mia Camp, P 93.56 55⇑ P **P** **06 53 28.0 -0.1**
baz=94,SNR=8.7
318A Bisbee 93.62 58⇓ P **P** **06 53 27.8 -0.7**
baz=94
U15A North Rim 93.66 53⇑ P **P** **06 53 28.5 -0.1**
baz=94,SNR=8.2
218A Dragoon 93.77 57⇑ P **P** **06 53 28.6 -0.6**
baz=94,SNR=5.6
G10A Bishop Farm, J 93.79 43⇑ P **P** **06 53 28.7 -0.2**
baz=94
T15A Red Dirt Ranch 93.82 52⇑ P **P** **06 53 29.3 0.0**
baz=94
Q14A Sevier Lake (B 93.91 50⇑ P **P** **06 53 29.4 -0.2**
baz=94
L12A House Creek Ra 93.91 47⇑ P **P** **06 53 29.4 -0.1**
baz=94
Z17A San Carlos Hig 93.91 56⇓ P **P** **06 53 28.6 -1.2**
baz=94
I11A Placerville 93.98 45⇓ P **P** **06 53 29.0 -0.8**
baz=94
WUAZ Wupatki 94.02 54⇑ P **P** **06 53 29.6 -0.7**
baz=94
WUAZ Wupatki 94.02 54 *e*P **P** **06 53 32.3 +2.1**
X17A Forest Lakes 94.03 55⇓ P **P** **06 53 29.6 -0.7**
baz=94
118A Homack Ranch, 94.07 57⇑ P **P** **06 53 29.5 -1.0**
baz=94
319A Douglas 94.17 58⇑ P **P** **06 53 30.5 -0.5**
baz=94
K12A Draper Farm, C 94.18 46⇓ P **P** **06 53 30.2 -0.6**
baz=94
M13A Montello 94.19 48⇑ P **P** **06 53 30.3 -0.5**
baz=94

H11A Donnelly 94.26 44 ⇓P P 06 53 30.7 -0.4
baz=94
J12A Stokes Ranch, 94.29 46 ⇑P P 06 53 31.7 +0.4
baz=94
G11A Walters Elk Ra 94.38 43 ⇑P P 06 53 31.8 +0.2
baz=94
219A White Tail Can 94.40 58 ⇑P P 06 53 31.9 -0.1
baz=94
V17A Tonalea, Kykot 94.50 54 ⇑P P 06 53 31.9 -0.6
baz=95
X18A Snowflake 94.75 55 ⇓P P 06 53 33.8 +0.2
baz=95
320A Kipp Ranch, An 94.76 59 ⇓P P 06 53 33.7 0.0
baz=95
M14A Sheep Mountain 94.81 48 ⇑P P 06 53 33.8 +0.1
baz=95
HLID Hailey 94.87 45 ⇑P P 06 53 34.0 +0.1
baz=95
HLID Hailey 94.87 45 *e*P **P 06 53 34.4 +0.5**
comp=Z,3.1nm,1.4s,mb4.5
HLID *e*pP pP 06 53 45.6 +0.3
R16A Teasdale 94.95 51 ⇓P P 06 53 34.4 0.0
baz=95
220A Playas Peak, P 94.95 58 ⇓P P 06 53 34.6 0.0
baz=95
H12A Diamond D Ranc 94.96 44 ⇓P P 06 53 34.2 -0.1
baz=95
J13A Cove Ranch, Pi 94.97 46 ⇑P P 06 53 33.9 -0.5
baz=95
T17A Navajo Res., N 94.98 53 ⇓P P 06 53 34.2 -0.4
baz=95
I13A Wildhorse Cree 95.20 45 ⇓P P 06 53 35.4 0.0
baz=95
I14A Mackay 95.65 45 ⇓P P 06 53 36.8 -0.6
baz=96
T18A Mexican Hat 95.73 53 ⇑P P 06 53 37.3 -0.7
baz=96
SRU San Rafael 95.94 51 *e*P **P 06 53 41.8 +2.9**
SRU pmax pmax
comp=Z,6.0nm,0.3s,mb5.5
SRU San Rafael 95.94 51 *e*P **P 06 53 41.8 +2.9**
comp=Z,5.8nm,0.3s,mb5.5
DLMT Dillon 96.75 44 *e*P **P 06 53 44.3 +1.8**
comp=Z,2.9nm,1.0s,mb4.7
WMQ Urumqi 96.88 314 *e*P **P 06 53 44.0 +0.9**
PV04 Paradox Valley 96.88 52 *e*P **P 06 53 47.6 +4.4**
PDAR Pinedale Array 97.89 47 P P 06 53 50.1 +2.4
comp=Z,0.3nm,0.8s,mb3.9,baz=202,slow=3.9,SNR=3.2
TXAR Lajitas Array 98.07 62 P P 06 53 48.3 -0.5
comp=Z,0.6nm,0.8s,mb4.2,baz=235,slow=5.9,SNR=7.8
TXAR pP pP 06 53 59.6 -0.6
comp=Z,1.3nm,0.8s,baz=224,slow=5.3,SNR=9.2
MKAR Makanchi Array 101.45 316 P Pdif 06 54 01.8 -1.7
comp=Z,0.1nm,0.6s,baz=92,slow=7.2,SNR=2.3
YKA Yellowknife Ar 101.78 28 P Pdif 06 54 05.6 +0.6
comp=Z,0.4nm,0.8s,baz=255,slow=4.4,SNR=3.9
BVAR Borovoye Array 110.23 320 PKiKP PKiKP 06 58 42.4 -1.1
comp=Z,0.9nm,0.7s,baz=73,slow=5.0,SNR=4.3
ARCES ARCESS Array B 125.44 345 PKP PKPdf 06 59 13.3 +1.1
comp=Z,1.8nm,0.9s,baz=291,slow=3.4,SNR=3.8
ZEI Tsey 128.19 309 *e*PKIKP PKPdf 06 59 17.8 -0.4
ZEI pmax pmax
comp=Z,3.0nm,0.5s
AKASG Malin Array Be 135.39 323 PKP PKPdf 06 59 31.1 -0.4
comp=Z,0.3nm,0.3s,baz=56,slow=2.7,SNR=3.7
BRTR Keskin Array B 136.35 307 PKP PKPdf 06 59 33.5 -0.2
comp=Z,0.5nm,0.7s,baz=352,slow=2.6,SNR=3.7
CRVS Cervenica-Dubn 140.61 325 *e*PKIKP PKPdf 06 59 48.2 +7.0
CRVS Cervenica-Dubn 140.61 325 *e*PKP PKPdf 06 59 48.2 +7.0
VYHS Vyhne 142.25 326 *e*PKIKP PKPdf 06 59 49.6 +5.4
VYHS Vyhne 142.25 326 *e*PKP PKPdf 06 59 49.6 +5.4
CLL Collm 143.06 334 *e*PKIKP PKPdf 06 59 45.0 -0.5
CLL *e* 06 59 51.0
CLL Collm 143.06 334 *e*PKPdf PKPdf 06 59 45.0 -0.5
CLL *e*PKiKP PKiKP 06 59 51.0 +2.3
CLZ Clausthal 143.68 337 *e*PKPbc PKPdf 06 59 43.9 -2.7
TANN Tannenbergstha 143.95 333 *e*PKPbc PKPdf 06 59 44.8 -2.3
NKC Novy Kostel 144.10 333 *e*PKHKP PKPdf 06 59 45.8 -1.6
NKC Novy Kostel 144.10 333 *e*PKP PKPdf 06 59 45.8 -1.6
MOX Moxa 144.13 334 *e*PKP PKPdf 06 59 45.0 -2.4
comp=Z,20nm,1.3s
MOX Moxa 144.13 334 *e*PKPbc PKPdf 06 59 45.2 -2.2
CONA Conrad Observa 144.14 328⇑ *i*PKPdf PKPdf 06 59 46.3 -1.2
comp=Z,13nm,1.0s
CSNA Conrad Observa 144.14 328⇑ *i*PKPdf PKPdf 06 59 46.3 -1.2
comp=Z,13nm,1.0s
IBBN Ibbenburen 144.22 339 *e*PKPbc PKPdf 06 59 45.6 -1.9
KHC Kasperske Hory 144.41 331 *e*PKHKP PKPdf 06 59 46.8 -1.1
KHC Kasperske Hory 144.41 331 *e*PKP PKPdf 06 59 46.8 -1.1
KHC *e*pPKP pPKPdf 07 00 01.7 +2.0
GEC2 GERESS Array S 144.55 330 *e*PKPbc PKPdf 06 59 46.8 -1.4
GERES GERESS Array B 144.55 330 PKP PKPdf 06 59 46.9 -1.3
comp=Z,1.6nm,0.6s,baz=43,slow=2.4,SNR=11
UBBA Unterbreizbach 144.64 336 *e*PKPbc PKPdf 06 59 46.8 -1.5
WET Wettzell 144.71 332 *e*PKPbc PKPdf 06 59 47.4 -1.1
ARSA Arzberg 144.76 327⇓ *i*PKPbc PKPdf 06 59 47.3 -1.3
comp=Z,15nm,1.2s
WTSB Winterswijk 144.83 340 *e*PKP PKPdf 06 59 47.1 -1.5
comp=Z,19nm,2.2s
KOGS Kog 144.90 325 *i* PKPbc PKPdf 06 59 47.6 -1.3
MOA Molln 144.98 329⇓ *i*PKPbc PKPdf 06 59 48.1 -0.9
comp=Z,36nm,1.1s
GRA1 Grafenberg Arr 145.02 334 *e*PKPbc PKPbc 06 59 48.1 -0.3
GRA1 LR LR
comp=Z,600nm,19.3s,MS5.4
GRF Grafenberg Arr 145.02 334 *e*PKPbc PKPbc 06 59 48.1 -0.3
GRF *e*L 08 11 04.5
comp=Z,568nm,19.3s
BUG Bochum--Univer 145.12 339 *e*PKPbc PKPbc 06 59 48.0 -0.6
PERS Pernice 145.37 327 *e*PKPbc PKPbc 06 59 49.2 -0.4
SOKA Soboth 145.39 327⇓ *i*PKPbc PKPbc 06 59 49.3 -0.4
comp=Z,16nm,0.9s
DOBS Dobrina 145.51 326 *e*PKPbc PKPbc 06 59 49.6 -0.4
TNS Taunus Mts 145.71 337 *e*PKPbc PKPbc 06 59 49.7 -0.8
OBKA Obir 145.75 327⇓ *i*PKPbc PKPbc 06 59 50.2 -0.6
comp=Z,16nm,1.1s
RJOB Jochberg 145.77 330 *e*PKPbc PKPbc 06 59 50.7 -0.1
KBA Koelnbreinsper 145.97 329⇓ *i*PKPdf PKPdf 06 59 50.2 -0.5
comp=Z,17nm,1.3s
LJU Ljubljana 146.07 326 *i* PKPbc PKPbc 06 59 51.5 -0.3
MYKA Terra Mystica 146.13 328⇓ *i*PKPdf PKPdf 06 59 50.9 -0.1
comp=Z,18nm,1.3s
HGN Heimansgroeve 146.14 340 *e*PKP PKPdf 06 59 51.5 +0.7
comp=Z,30nm,1.3s
FUR Furstenfeldbru 146.15 332 *e*PKPbc PKPbc 06 59 52.2 +0.2
MEM Membach 146.25 339 PKP PKPdf 06 59 52.3 +1.2
MEM APKP 07 00 02.8
ABH Alteburg 146.32 337 PKP PKPdf 06 59 52.3 +1.1
VOY Vojsko 146.41 327 *e*PKPbc PKPdf 06 59 52.3 +0.8
STU Stuttgart 146.58 334 *e*PKPbc PKPdf 06 59 53.5 +1.8
UCC Uccle 146.61 341 PKP PKPdf 06 59 53.1 +1.4
ABTA Abfaltersbach 146.61 329⇓ *i*PKPdf PKPdf 06 59 52.3 +0.5
comp=Z,18nm,1.1s
BCLA Clavier 146.64 340 PKP PKPbc 06 59 54.9 +1.6
RUP Ruppelstein 146.64 337 PKIKP PKPdf 06 59 53.7 +1.9
WTTA Wattenberg 146.66 330⇓ *i*PKPdf PKPdf 06 59 50.9 -1.0
comp=Z,20nm,1.1s
SNF Seneffe 146.88 341 PKP PKPbc 06 59 55.3 +1.2
RETA Reutte 146.89 331⇓ *i*PKPdf PKPdf 06 59 53.4 +1.2
comp=Z,12nm,1.1s
LANF Langenberg 146.96 336 PKP PKPbc 06 59 54.4 +0.1
WLF Walferdange 147.00 338 PKP PKPbc 06 59 55.1 +0.7
WLF APKP 07 00 06.2
WLF Walferdange 147.00 338 *e*PKPbc PKPbc 06 59 54.4 0.0
WLF Walferdange 147.00 338 *e*PKPbc PKPbc 06 59 55.1 +0.7
GIVF Givet 147.07 340 *e*PKP1 PKPdf 06 59 54.1 +1.6
DOU Dourbes 147.15 340 PKP PKPbc 06 59 54.6 -0.2
DOU APKP 07 00 05.6
FETA Feichten 147.25 331⇓ *i*PKPdf PKPbc 06 59 54.9 -0.2
comp=Z,12nm,0.9s
BFO Black Forest 147.28 335 *e*PKPbc PKPdf 06 59 54.6 +1.7
BAIF Baives 147.30 341 *e*PKP1 PKPbc 06 59 54.9 -0.3
comp=Z,50nm,1.1s
DAVA Damuels 147.44 332⇓ *i*PKPdf PKPdf 06 59 55.1 +1.9
comp=Z,24nm,1.1s
CDF Champ du Feu 147.63 336 *e*PKP1 PKPbc 06 59 55.7 -0.5
comp=Z,40nm,1.1s
FELD Feldberg im Sc 147.77 334 PKP PKPdf 06 59 55.6 +1.9
BRMO Bormio 147.82 330 PKP PKPbc 06 59 56.7 -0.1
ECH Echery 147.83 336 PKP PKPbc 06 59 57.0 +0.3
ECH Echery 147.83 336 *e*PKIKP PKPbc 06 59 55.9 -0.8
ECH 06 59 57.0
ECH Echery 147.83 336 *e*PKP2 PKPab 07 00 00.7 +1.5
ECH Echery 147.83 336 *e*PKPdf PKPdf 06 59 55.9 +2.1
ECH PKP PKPdf 06 59 57.0 +3.2
ECH *e*PKPbc PKPbc 06 59 58.8 +2.0
ECH *e*PKPab PKPab 07 00 00.7 +1.5
MOF Molkenrain 148.14 335 PKP PKPbc 06 59 57.8 +0.2
THEF They Montfort 148.26 337 PKP PKPbc 06 59 57.0 -0.9
HINF Hinteralfeld 148.28 336 *e*PKP1 PKPbc 06 59 57.2 -0.7
HAU Haudompre 148.31 336 *e*PKP1 PKPbc 06 59 57.4 -0.6
comp=Z,26nm,0.9s
MEZF Maizieres J'vi 148.37 338 *e*PKP1 PKPbc 06 59 58.0 -0.1
comp=Z,69nm,1.1s
LOMF Lomont 148.67 335 PKP PKPbc 06 59 58.7 -0.2
TIP Timpagrande 148.72 314 *e*PKPbc PKPbc 06 59 59.8 +0.4
CABF La Chapelle 149.56 335 *e*PKP1 PKPbc 07 00 01.2 0.0
comp=Z,37nm,1.0s
FLN La Foliniere 149.79 345 *e*PKP1 PKPbc 07 00 00.9 -0.8
comp=Z,60nm,1.1s
LOR Lormes 149.84 338 *e*PKP1 PKPbc 07 00 01.4 -0.5
comp=Z,36nm,1.1s
LDF La Druitiere 149.85 344 *e*PKP1 PKPbc 07 00 01.0 -0.9
comp=Z,46nm,1.3s
SSF Saint Saulge 150.14 339 *e*PKP1 PKPbc 07 00 02.2 -0.4
comp=Z,37nm,1.0s
LPL La Plagne 150.18 333 *e*PKP1 PKPbc 07 00 02.8 0.0
LPG La Plagne 150.19 333 *e*PKP1 PKPbc 07 00 02.9 +0.1
comp=Z,18nm,0.8s
GRR Gorron 150.23 345 *e*PKP1 PKPbc 07 00 02.1 -0.7
comp=Z,33nm,1.0s
SMF Signal de Mont 150.38 338 *e*PKP1 PKPbc 07 00 02.5 -0.7
comp=Z,29nm,1.2s
AVF Avril sur Loir 150.43 338 *e*PKP1 PKPbc 07 00 02.5 -0.8
comp=Z,15nm,1.1s
BNI Bardonecchia 150.57 333 *e*PKHKP PKPbc 07 00 00.3 -3.4
BNI *e* 07 00 04.1
SGMF Saint Gilles 150.74 347 *e*PKP1 PKPbc 07 00 02.9 -1.1
MBDF Montbardon 150.79 332 *e*PKP1 PKPbc 07 00 03.6 -0.6
BGF Bois d'Agland 150.80 339 *e*PKP1 PKPbc 07 00 03.7 -0.5
SAOF Saorge 151.01 330 PKP PKPbc 07 00 04.2 -0.6
ORIF Oris-en-Rattie 151.02 333 *e*PKP1 PKPbc 07 00 04.4 -0.4
comp=Z,21nm,0.8s
TOUF Mont Tournerai 151.13 331 PKP PKPbc 07 00 04.9 -0.2
SBF Sospel 151.16 330 *e*PKP1 PKPbc 07 00 04.3 -0.8
comp=Z,43nm,0.9s
QUIF Quistinic 151.18 348 *e*PKP1 PKPbc 07 00 03.8 -1.3
TCF Toulx Ste Croi 151.25 339 *e*PKP1 PKPbc 07 00 04.7 -0.6
comp=Z,20nm,0.9s
PGF Pioggiola 151.35 327 *e*PKP1 PKPbc 07 00 05.1 -0.5
comp=Z,79nm,1.1s
VIVF Saint-Julien-l 151.57 335 *e*PKP1 PKPbc 07 00 05.5 -0.6
comp=Z,24nm,1.1s
MFF Saint Martin d 151.69 343 *e*PKP1 PKPbc 07 00 05.5 -0.8
comp=Z,24nm,1.0s
FRF La Foret Royal 151.75 331 *e*PKP1 PKPbc 07 00 05.6 -0.9
SMRF Simiane la Rot 151.91 333 *e*PKP1 PKPbc 07 00 06.7 -0.2
comp=Z,19nm,0.9s
LMR La Mourre 151.99 331 *e*PKP1 PKPbc 07 00 06.3 -0.8
comp=Z,32nm,1.0s
RJF Les Rejaudoux 152.35 339 *e*PKP1 PKPbc 07 00 07.1 -0.7
comp=Z,25nm,1.2s
CAF Calviac 152.49 338 *e*PKP1 PKPbc 07 00 07.8 -0.3
LASF Ste Croix 152.54 335 *e*PKP1 PKPbc 07 00 07.8 -0.5
comp=Z,32nm,1.2s
DBIC Dimbokro 165.14 209 PKPab PKPab 07 01 13.8 -0.1
comp=Z,6.2nm,0.9s,baz=136,slow=9.0,SNR=4.3

*IDC **09** 06:51:43.0±68.0, 19°.10S×169°.79E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.8/14, mbtmp3.9/3, Error ellipse: s-maj=1144.0km s-min=126.8km az=75.0*
NOU 09 06:52:01.0±0.3, 19°.56S×167°.92E, h10km, MD3.0, ML3.7, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.76**	**200**	*e*S		Sn	06 53 12.3	-6.4
DZM	**Mont Dzumac**	**2.86**	**209**	*e*P		Pn	06 52 43.5	-3.1
DZM				*e*S		Sn	06 53 15.0	-6.1
DZM				AMP			06 53 18.9	
comp=Z,590nm,0.6s								
NOUC	**Port Laguerre**	**2.95**	**211**	*e*S		Sn	06 53 17.5	-5.9
NOUC				AMP			06 53 33.1	
comp=Z,31nm,6.0s								
STKA	**Stephens Creek**	**26.62**	**237**	P		P	06 57 39.5	-0.3
comp=Z,1.2nm,0.6s,baz=90,slow=12,SNR=3.2								
WRA	**Warramunga Arr**	**31.58**	**264**	P		P	06 58 23.2	-0.8
comp=Z,0.5nm,0.6s,baz=95,slow=8.9,SNR=6.0								
ASAR	**Alice Springs**	**31.84**	**256**	P		P	06 58 25.6	-0.6
comp=Z,1.1nm,0.6s,baz=83,slow=8.7,SNR=15								

IDC 09 07:03:20.7±2.0, 4°.57S×152°.20E, h0km, mb4.0/6, mb1 4.2/6, mb1mx3.9/17, mbtmp4.0/6, Error ellipse: s-maj=77.7km s-min=24.7km az=122.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.16**	**227**	P		P	07 08 29.2	+0.3
2.2nm,0.6s,baz=51,slow=10,SNR=21								
ASAR	**Alice Springs**	**25.92**	**221**	P		P	07 08 54.9	+0.1
0.7nm,0.5s,baz=55,slow=8.8,SNR=15								
FITZ	**Fitzroy Crossi**	**29.25**	**241**	P		P	07 09 24.3	-0.4
2.8nm,0.5s,baz=68,slow=6.6,SNR=20								
ZALV	**Zalesovo Beam**	**80.63**	**326**	P		P	07 15 36.2	+1.0
0.8nm,0.3s,baz=108,slow=9.4,SNR=3.0								
BVAR	**Borovoye Array**	**88.69**	**323**	P		P	07 16 16.4	+0.4
0.3nm,0.5s,baz=96,slow=5.8,SNR=2.7								
YKA	**Yellowknife Ar**	**95.50**	**28**	P		P	07 16 46.0	-1.3
0.4nm,0.6s,baz=270,slow=5.0,SNR=4.7								

*SKO **09** 07:11:18.2, 40°.65N×23°.15E, h15km, M1.7, ML2.1*
*ISCJB **09** 07:11:21.7±0.7, 40°.72N±0°.03×22°.84E±0°.04, h4km±6km, Error ellipse: s-maj=6.7km s-min=4.6km az=43.9*
*CSEM **09** 07:11:22.2, 40°.72N×22°.85E, h8km, ML2.7/4, After THE THE **09** 07:11:22.2, 40°.72N×22°.85E, h8km, ML2.7/4, Error ellipse: s-maj=0.9km s-min=0.6km az=178.0*
ISC 09 07:11:22.2±0.6, 40°.72N±0°.04×22°.84E±0°.05, h8km±6km, n18, σ0s56/30, 1D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
THE	**Thessaloniki**	**0.12**	**132**	P		**Pg**	**07 11 25.1**	**+0.1**
THE				S		**Sg**	**07 11 26.9**	**+0.1**
THE	**Thessaloniki**	**0.12**	**132**	P		**Pg**	**07 11 25.1**	**+0.1**
THE				S		**Sg**	**07 11 26.9**	**+0.1**
PLG	**Polygyros**	**0.57**	**127**	P		**Pg**	**07 11 33.2**	**-0.1**
PLG				S		**Sg**	**07 11 41.3**	**+0.6**
PLG	**Polygyros**	**0.57**	**127**	P		**Pg**	**07 11 33.2**	**-0.1**
PLG				S		**Sg**	**07 11 41.3**	**+0.6**
VAY	**Valandovo**	**0.64**	**341**	⇓ *i*Pg		**Pg**	**07 11 34.0**	**-0.5**
VAY				*e*Sg		**Sg**	**07 11 42.8**	**-0.1**
VAY				*e*Lg			07 11 42.8	
comp=N,71nm,0.4s								
VAY				*e*Lg			07 11 43.0	
comp=E,55nm,0.3s								
VAY	**Valandovo**	**0.64**	**341**	P		**Pg**	**07 11 33.9**	**-0.6**
VAY	**Valandovo**	**0.64**	**341**	P		**Pg**	**07 11 33.9**	**-0.6**
LIT	**Litokhoron**	**0.67**	**204**	P		**Pg**	**07 11 35.0**	**-0.1**
LIT	**Litokhoron**	**0.67**	**204**	P		**Pg**	**07 11 35.0**	**-0.1**
SRS	**Serrai**	**0.69**	**55**	P		**Pg**	**07 11 35.5**	**-0.1**
SRS				S		**Sg**	**07 11 44.8**	**+0.2**
SRS	**Serrai**	**0.69**	**55**	P		**Pg**	**07 11 35.5**	**-0.1**
SRS				S		**Sg**	**07 11 44.8**	**+0.2**
OUR	**Ouranopolis**	**0.95**	**113**	P		**Pg**	**07 11 39.8**	**-0.6**
OUR				S		**Sg**	**07 11 53.6**	**+0.9**
OUR	**Ouranopolis**	**0.95**	**113**	P		**Pg**	**07 11 39.8**	**-0.6**
OUR				S		**Sg**	**07 11 53.6**	**+0.9**
KAVA	**Kavala**	**1.30**	**77**	P		**Pn**	**07 11 45.8**	**-0.8**
KAVA				S		**Sb**	**07 12 03.7**	**+0.1**
KAVA	**Kavala**	**1.30**	**77**	P		**Pn**	**07 11 45.8**	**-0.8**
KAVA				S		**Sb**	**07 12 03.7**	**+0.1**
KRUS	**Krusevo**	**1.37**	**299**	*e*Pn		**Pn**	**07 11 48.1**	**+0.5**
KRUS				*e*Sn		**Sn**	**07 12 07.0**	**+1.1**
XOR	**Xorichti**	**1.38**	**169**	P		**Pn**	**07 11 46.6**	**-1.1**
XOR	**Xorichti**	**1.38**	**169**	P		**Pn**	**07 11 46.6**	**-1.1**

*DJA **09** 07:18:54, 10°.52S×123°.97E, h136km, mb3.9/4*
IDC 09 07:18:36.8±1.4, 9°.65S×123°.86E, h0km, mb3.6/2, mb1 3.7/5, mb1mx3.5/19, mbtmp3.5/5, ML3.4/3, Error ellipse: s-maj=112.2km s-min=24.4km az=63.0, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**8.58**	**169**	Pn		Pn	07 20 42.9	+0.6
0.3nm,0.3s,baz=347,slow=0.8,SNR=20								
FITZ				Sn		Sn	07 22 09.9	-10
2.4nm,0.3s,baz=345,slow=5.3,SNR=15								
WRA	**Warramunga Arr**	**14.39**	**136**	Pn		Pn	07 22 00.7	-1.2
0.2nm,0.3s,baz=316,slow=15,SNR=10								
WRA				Sn		Sn	07 24 29.2	-13
1.3nm,0.3s,baz=305,slow=22,SNR=17								
ASAR	**Alice Springs**	**16.92**	**147**	Pn		Pn	07 22 35.4	+0.2
0.2nm,0.3s,baz=318,slow=12,SNR=13								
ASAR				Sn		Sn	07 25 29.9	-14
0.5nm,0.3s,baz=312,slow=21,SNR=11								
MKAR	**Makanchi Array**	**67.30**	**330**	P		P	07 29 33.7	+0.3
0.3nm,0.2s,baz=141,slow=6.7,SNR=3.7								
KURK	**Kurchatov**	**71.77**	**332**	P		P	07 30 00.6	-0.3
0.2nm,0.4s,baz=142,slow=5.4,SNR=2.5								

*BJI **09** 07:25:57.8, 13°.30N×90°.80W, h61km, mB5.0/1*
*CASC **09** 07:25:57.1±2.1, 13°.29N×90°.84W, h17km±9km, MD4.1, ML3.6, mb4.4(NEIC)*
*ISCJB **09** 07:25:58.5±0.6, 13°.31N±0°.04×90°.78W±0°.04, h65km±5km, mb4.3/51, Error ellipse: s-maj=9.4km s-min=4.3km az=43.0*
*NEIC **09** 07:25:59.9±1.2, 13°.32N×90°.78W, h61km±11km, mb4.4/44, Error ellipse: s-maj=13.4km s-min=6.7km az=46.0*
*IDC **09** 07:26:00.9±2.6, 13°.46N×90°.62W, h68km±21km, mb4.0/11, mb1 4.1/14, mb1mx3.9/26, mbtmp3.9/14, MS3.5/1, Ms1 3.5/1, ms1mx2.7/29, Error ellipse: s-maj=33.8km s-min=12.6km az=48.0*
ISC 09 07:26:00.1±0.6, 13°.39N±0°.04×90°.75W±0°.04, h58km±5km, n322, σ0s81/320, mb4.3/51, 97C-109D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
PCG	**Pacaya**	**1.01**	**8**	*e*P		**Pn**	**07 26 18.4**	**+0.1**
FUG	**Fuego 3**	**1.06**	**355**	*e*P		**Pn**	**07 26 18.0**	**-0.9**
FG6		**1.17**	**354**	*e*P		**Pn**	**07 26 19.4**	**-0.9**
SBLS	**San Blas**	**1.19**	**68**⇑	*e*P		**Pn**	**07 26 20.2**	**-0.3**
SBLS				*e*S		**Sn**	**07 26 37.3**	**+1.5**
RTR	**El Retiro**	**1.19**	**65**	*e*P		**Pn**	**07 26 20.6**	**0.0**
SNJE	**San Jose**	**1.21**	**67**	*e*P		**Pn**	**07 26 20.4**	**-0.5**
NBG	**Las Nubes**	**1.26**	**18**⇓	*e*P		**Pn**	**07 26 22.9**	**+1.4**
JAT	**Jato**	**1.26**	**317**	*e*P		**Pn**	**07 26 18.1**	**-3.5**
RBDL	**Robledal**	**1.26**	**55**	*e*P		**Pn**	**07 26 21.8**	**+0.2**
TP2	**Tecpan 2**	**1.41**	**349**⇑	*e*P		**Pn**	**07 26 23.1**	**-0.5**
BOQS	**Boqueron**	**1.47**	**76**	*e*P		**Pn**	**07 26 24.2**	**-0.2**
BOQS				*e*S		**Sn**	**07 26 54.8**	**+12**
BOQS				AML		AML	07 26 56.1	
comp=Z,959nm,0.5s								
SNET	**Serv Nac Est T**	**1.51**	**78**	*e*P		**Pn**	**07 26 23.8**	**-1.1**
SNET				*e*S		**Sn**	**07 26 42.7**	**-0.8**
APG	**El Apazote**	**1.63**	**10**	P		**Pn**	**07 26 27.2**	**+0.6**
comp=Z,64nm,0.3s,baz=136,slow=6.4,SNR=447								
APG				S		**Sn**	**07 26 53.9**	**+7.4**
comp=Z,51nm,0.3s,baz=98,slow=20,SNR=9.5								
LFRS	**El Faro**	**1.66**	**82**	*e*P		**Pn**	**07 26 26.4**	**-0.5**
MTO2	**Montecristo 2**	**1.68**	**53**	*e*P		**Pn**	**07 26 28.1**	**+0.9**
MTO2				*e*S		**Sn**	**07 26 51.7**	**+3.9**
LBRS	**Las Brisas**	**1.70**	**78**	*e*P		**Pn**	**07 26 27.4**	**-0.1**
SNVI	**San Vicente**	**1.88**	**83**	*e*P		**Pn**	**07 26 30.0**	**+0.2**
MRL	**Marmol**	**1.96**	**32**⇑	*e*P		**Pn**	**07 26 33.5**	**+2.5**
VSM	**San Miguel**	**2.41**	**89**	*e*P		**Pn**	**07 26 37.0**	**-0.2**
BLLM	**Bellamira**	**2.45**	**88**	*e*P		**Pn**	**07 26 36.9**	**-0.8**
CAHU	**Cacacuatique**	**2.50**	**81**	*e*P		**Pn**	**07 26 38.5**	**+0.2**
CNCH	**Conchagua**	**2.84**	**92**⇓	*e*P		**Pn**	**07 26 42.4**	**-0.7**
TGUH	**Tegucigalpa,Un**	**3.45**	**78**	*e*Pn		**Pn**	**07 26 51.6**	**+0.3**
TGUH	**Tegucigalpa,Un**	**3.45**	**78**	*e*P		**Pn**	**07 26 50.9**	**-0.5**
CSAN		**4.39**	**105**	*e*P		**Pn**	**07 27 03.2**	**-1.1**
CMIG	**Matias Romero**	**5.43**	**313**	P		**Pn**	**07 27 13.8**	**-4.7**
comp=Z,1.4nm,0.3s,baz=117,slow=8.9,SNR=18								
CMIG				S		**Sn**	**07 28 14.6**	**-5.0**
comp=Z,1.9nm,0.3s,baz=49,slow=19,SNR=3.1								
VCR	**Vista de Mar**	**5.97**	**122**	*e*P		**Pn**	**07 27 25.1**	**-0.9**
JTS	**JuntasAbangare**	**6.46**	**118**	P		**Pn**	**07 27 31.6**	**-1.0**
comp=Z,1.5nm,0.3s,baz=310,slow=20,SNR=13								
JTS				S		**Sn**	**07 28 37.1**	**-7.9**
comp=Z,0.6nm,0.3s,baz=302,slow=18,SNR=1.4								
JTS	**JuntasAbangare**	**6.46**	**118**	*e*Pn		**Pn**	**07 27 32.5**	**-0.1**
comp=Z,32nm,1.0s								
JTS				*e*Sn		**Sn**	**07 28 45.3**	**+0.3**
PRS1	**Puriscal**	**7.16**	**118**	*e*P		**Pn**	**07 27 43.2**	**+1.0**
TEIG	**Tepich**	**7.20**	**19**	*e*Pn		**Pn**	**07 27 44.9**	**+2.1**
LAJ	**Bijagual**	**7.38**	**118**	*e*P		**Pn**	**07 27 42.5**	**-2.8**
URSC	**Urasca**	**7.69**	**117**	*e*P		**Pn**	**07 27 51.2**	**+1.7**
BUS	**Buena Vista**	**7.84**	**118**	*e*P		**Pn**	**07 27 53.1**	**+1.5**
BAR1		**8.38**	**119**	*e*P		**Pn**	**07 27 59.3**	**+0.4**
ACR	**Cerro Adams**	**8.81**	**122**	*e*P		**Pn**	**07 28 06.1**	**+1.3**
OTAV	**Otavalo**	**17.87**	**136**	*e*P		**Pn**	**07 30 04.4**	**-0.4**
comp=Z,2.5nm,0.9s								
ROSC	**El Rosal**	**18.28**	**116**	P		**Pn**	**07 30 11.2**	**+1.3**
comp=Z,0.2nm,0.3s,baz=172,slow=5.6,SNR=6.2								
ROSC	**El Rosal**	**18.28**	**116**	*e*P		**Pn**	**07 30 11.6**	**+1.7**
JCT	**Junction City**	**18.95**	**335**	*e*P		**Pn**	**07 30 17.3**	**-0.5**
comp=Z,48nm,2.1s								
627A	**Terlingua Ranc**	**19.82**	**326**⇓	P		**Pn**	**07 30 26.3**	**-1.7**
baz=20,SNR=18								
LRAL	**Lakeview Retre**	**19.86**	**9**	*e*P		**Pn**	**07 30 28.3**	**-0.2**
comp=Z,1.5nm,1.5s								
TXAR	**Lajitas Array**	**19.88**	**325**	P		**Pn**	**07 30 26.9**	**-1.9**
comp=Z,0.5nm,0.3s,baz=153,slow=13,SNR=36								
TXAR	**Lajitas Array**	**19.88**	**325**	P		**Pn**	**07 30 26.9**	**-1.9**
528A	**Cox Ranch, San**	**20.06**	**328**⇑	P		**P**	**07 30 29.0**	**+0.3**
baz=20,SNR=8.2								
SDV	**Santo Domingo**	**20.24**	**101**	P		**P**	**07 30 29.6**	**-1.1**
comp=Z,8.3nm,0.8s,baz=299,slow=6.2,SNR=12								
SDV	**Santo Domingo**	**20.24**	**101**	*e*P		**P**	**07 30 30.1**	**-0.6**
comp=Z,8.6nm,0.8s								
626A	**Big Bend Ranch**	**20.31**	**324**⇑	P		**P**	**07 30 31.5**	**+0.1**
baz=20,SNR=20								
428A	**Kincaid Ranch,**	**20.47**	**329**⇓	P

Z26A	Caprock	23.18	331	⇑P	P	07 31 00.4 -1.6
	baz=23,SNR=8.0					
MSTX	Muleshoe	23.22	334	⇓P	P	07 31 00.6 -1.7
	baz=23					
Y27A	Causey	23.32	333	⇓P	P	07 31 01.9 -1.3
	baz=23					
124A	Stringfield Ra	23.45	327	⇑P	P	07 31 04.2 -0.2
	baz=24,SNR=35					
Z25A	Roswell	23.54	330	⇓P	P	07 31 04.5 -0.7
	baz=24,SNR=7.1					
Y26A	Elida	23.64	332	⇑P	P	07 31 05.4 -0.8
	baz=24					
Z24A	Sheeppen Canyo	23.91	329	⇓P	P	07 31 08.5 -0.1
	baz=24,SNR=13					
TZTN	Tazewell	23.95	14	eP	P	07 31 08.6 -0.4
	comp=Z,10nm,1.0s,mb4.2					
Y25A	Mesa, Roswell	24.05	331	⇑P	P	07 31 09.3 -0.6
	baz=24					
320A	Kipp Ranch, An	24.21	320	⇓P	P	07 31 10.6 -0.8
	baz=24					
122A	Conniff Cattle	24.29	325	⇑P	P	07 31 11.6 -0.5
	baz=24					
Z23A	Rita Site, Whi	24.30	327	⇓P	P	07 31 11.9 -0.2
	baz=24					
Y24A	Capitan	24.41	329	⇓P	P	07 31 13.4 +0.2
	baz=24					
220A	Playas Peak, P	24.61	321	⇓P	P	07 31 14.2 -0.8
	baz=25					
121A	Cookes Peak, D	24.61	324	⇓P	P	07 31 15.7 +0.7
	baz=25,SNR=13					
Z22A	Elephant Butte	24.69	326	⇑P	P	07 31 15.7 0.0
	baz=25,SNR=7.8					
319A	Douglas	24.71	319	⇓P	P	07 31 15.6 -0.4
	baz=25					
Y23A	Lovelace Mesa,	24.73	328	⇓P	P	07 31 16.3 +0.1
	baz=25,SNR=14					
WCI	Wyandotte Cave	25.06	8	eP	P	07 31 18.6 -0.3
	comp=Z,11nm,0.9s,mb4.4					
219A	White Tail Can	25.12	321	⇓P	P	07 31 20.1 +0.4
	baz=25,SNR=18					
Z21A	St. Cloud Mine	25.12	325	⇓P	P	07 31 20.2 +0.6
	baz=25,SNR=8.0					
120A	U Bar Ranch, L	25.12	322	⇓P	P	07 31 19.6 -0.1
	baz=25					
BNM	Barren Site	25.20	328	eP	P	07 31 21.3 +0.9
	comp=Z,6.3nm,0.9s,mb4.2					
318A	Bisbee	25.21	319	⇓P	P	07 31 20.4 0.0
	baz=25,SNR=16					
Y22A	Socorro	25.21	327	⇑P	P	07 31 20.8 +0.4
	baz=25,SNR=8.8					
V26A	Tequesquite Ra	25.21	335	⇑P	P	07 31 20.7 +0.2
	baz=25					
W24A	Lazy 6 Ranch,	25.44	331	⇑P	P	07 31 22.1 -0.4
	baz=26					
Z20A	Nine Sixteen R	25.50	323	⇑P	P	07 31 23.3 +0.2
	baz=26					
218A	Dragoon	25.59	319	⇑P	P	07 31 24.0 0.0
	baz=26					
V25A	Rancho No Teng	25.60	333	⇑P	P	07 31 24.0 0.0
	baz=26					
Y21A	Point of Rocks	25.64	326	⇓P	P	07 31 25.3 +0.9
	baz=26,SNR=24					
LAZ	Ladron	25.66	327	eP	P	07 31 25.5 +1.0
	comp=Z,2.6nm,1.2s,mb3.6					
119A	Ashpeak Ranch,	25.68	322	⇓P	P	07 31 25.4 +0.7
	baz=26,SNR=7.2					
U26A	Atchley Ranch,	25.71	335	⇓P	P	07 31 24.3 -0.6
	baz=26,SNR=7.3					
ANMO	Albuquerque	25.74	329	P	P	07 31 25.4 +0.1
	comp=Z,1.5nm,0.6s,mb3.7,baz=144,slow=10,SNR=9.2					
217A	Green Valley	25.96	318	⇑P	P	07 31 27.4 +0.1
	baz=26					
Y20A	Horse Springs,	25.96	325	⇓P	P	07 31 28.3 +1.1
	baz=26,SNR=20					
118A	Homack Ranch,	26.00	321	⇑P	P	07 31 27.9 +0.3
	baz=26					
X21A	Alamocita Cree	26.04	327	⇑P	P	07 31 28.8 +0.9
	baz=26,SNR=21					
TUC	Tucson	26.29	319	eP	P	07 31 31.2 +1.0
	comp=Z,4.2nm,1.0s,mb3.9					
117A	Oracle	26.43	320	⇓P	P	07 31 30.3 -1.2
	baz=26					
Y19A	Nutrioso	26.49	324	⇑P	P	07 31 31.5 -0.6
	baz=27					
X20A	Quemado	26.50	326	⇑P	P	07 31 32.8 +0.7
	baz=27,SNR=6.6					
Y18A	Canyon Day Jun	26.82	322	⇑P	P	07 31 35.6 +0.5
	baz=27,SNR=11					
X19A	St. Johns	26.85	324	⇑P	P	07 31 35.0 -0.3
	baz=27					
W20A	Ramah	26.93	327	⇑P	P	07 31 36.0 0.0
	baz=27					
U21A	Nageezi	27.50	329	⇓P	P	07 31 41.7 +0.6
	baz=28					
SDCO	Great Sand Dun	27.59	334	eP	P	07 31 43.1 +1.3
	comp=Z,0.5nm,0.7s,mb3.2					
ACSO	Alum Creek Sta	27.60	13	eP	P	07 31 41.8 -0.1
	comp=Z,5.0nm,0.5s,mb4.4					
114A	Black Gap (USA	27.93	317	⇓P	P	07 31 44.3 -0.7
	baz=28					
X16A	Lo Mia Camp, P	28.10	322	⇓P	P	07 31 46.3 -0.2
	baz=28					
U19A	Dine' College,	28.19	327	⇓P	P	07 31 47.2 0.0
	baz=28					
MVCO	Mesa Verde	28.54	329	⇑P	P	07 31 50.3 0.0
	baz=29					
MVCO	Mesa Verde	28.54	329	eP	P	07 31 51.3 +1.0
	comp=Z,18nm,1.8s,mb4.5					
V17A	Tonalea, Kykot	28.57	324	⇑P	P	07 31 51.3 +0.7
	baz=29,SNR=12					
X15A	Humboldt	28.64	321	⇑P	P	07 31 50.7 -0.5
	baz=29					
Z13A	Yuma Proving G	28.72	317	⇑P	P	07 31 52.3 +0.3
	baz=29					
NNA	Nana	28.74	151	eP	P	07 31 52.6 +0.4
	comp=Z,94nm,1.6s,mb5.3					
WUAZ	Wupatki	28.82	323	⇓P	P	07 31 53.1 +0.2
	baz=29					
WUAZ	Wupatki	28.82	323	eP	P	07 31 54.8 +1.9
	comp=Z,7.7nm,1.0s,mb4.4					
T18A	Mexican Hat	29.18	328	⇑P	P	07 31 55.8 -0.3
	baz=29					
Y13A	Salome	29.21	318	⇑P	P	07 31 56.3 -0.1
	baz=29					
S19A	Harvey Farm, M	29.27	329	⇓P	P	07 31 56.3 -0.5
	baz=29					
V15A	Kaibab Nationa	29.50	323	⇑P	P	07 31 58.8 -0.1
	baz=30					
T17A	Navajo Res., N	29.57	326	⇑P	P	07 31 59.2 -0.3
	baz=30					
W14A	Seligman	29.64	321	⇑P	P	07 31 59.5 -0.6
	baz=30					
S18A	Hurst Farm, Bl	29.66	328	⇑P	P	07 31 59.7 -0.6
	baz=30					
X13A	Yucca	29.70	319	⇑P	P	07 32 00.1 -0.5
	baz=30					
PDMCI	Parker Dam,Lak	29.71	318	⇓P	P	07 32 00.6 -0.2
	baz=30					
V14A	Boquillas Ranc	29.93	322	⇓P	P	07 32 02.7 0.0
	baz=30					
U15A	North Rim	29.99	324	⇓P	P	07 32 04.6 +1.4
	baz=30,SNR=8.1					
S17A	Black Ridge (B	30.04	327	⇓P	P	07 32 03.6 0.0
	baz=30					
W13A	Hualapai Mount	30.06	320	⇓P	P	07 32 03.3 -0.5
	baz=30					
BC3	Big Chuckawall	30.19	316	⇓P	P	07 32 04.7 -0.4
	baz=30					
T15A	Red Dirt Ranch	30.46	324	⇑P	P	07 32 08.1 +0.8
	baz=31					
U14A	Mt Trumbull	30.50	323	⇓P	P	07 32 07.9 +0.1
	baz=31					
R17A	Hanksville Air	30.58	328	⇓P	P	07 32 08.3 -0.1
	baz=31					
V13A	Grand Canyon W	30.61	321	⇑P	P	07 32 08.4 -0.3
	baz=31					
PHWY	Pilot Hill	30.63	338	eP	P	07 32 02.2 -6.6
	comp=Z,11nm,1.1s,mb4.6					
PFO	Pinyon Flat Ob	30.84	315	LR	LR	07 45 49.4
	comp=Z,85nm,18.7s,baz=47,slow=38					
R16A	Teasdale	30.88	327	⇓P	P	07 32 11.2 +0.1
	baz=31,SNR=9.0					
S15A	Panguitch	30.91	325	⇓P	P	07 32 11.9 +0.6
	baz=31					
U13A	Pakoon Wash	30.97	322	⇑P	P	07 32 12.4 +0.5
	baz=31					
SRU	San Rafael	31.01	329	eP	P	07 32 12.6 +0.4
	comp=Z,2.0nm,0.8s,mb4.0					
V12A	Nelson	31.07	320	⇓P	P	07 32 13.4 +0.7
	baz=31,SNR=9.8					
Q16A	Castle Valley	31.19	328	⇓P	P	07 32 13.9 +0.1
	baz=31					
R15A	Junction	31.25	326	⇑P	P	07 32 14.8 +0.4
	baz=31					
T13A	Saint George	31.34	323	⇓P	P	07 32 16.0 +0.9
	baz=31,SNR=10					
CCUT	Cedar City	31.39	324	eP	P	07 32 18.1 +2.5
	comp=Z,7.6nm,1.1s,mb4.4					
MSU	Marysvale	31.42	327	eP	P	07 32 17.5 +1.7
	comp=Z,8.3nm,1.5s,mb4.3					
S14A	Cedar City	31.43	325	⇑P	P	07 32 16.5 +0.7
	baz=32					
V11A	Goodsprings	31.50	320	⇓P	P	07 32 17.2 +0.7
	baz=32					
TUQ	Turquoise Moun	31.57	318	⇑P	P	07 32 17.4 +0.3
	baz=32					
ARUT	Antelope Range	31.60	324	eP	P	07 32 19.7 +2.4
	comp=Z,8.6nm,1.0s,mb4.5					
S13A	Holt Ranch, En	31.70	324	⇑P	P	07 32 19.7 +1.5
	baz=32,SNR=14					
L21A	Rawlins	31.92	336	⇑P	P	07 32 19.1 -1.0
	baz=32					
O17A	Robinson Place	31.96	330	⇓P	P	07 32 20.9 +0.4
	baz=32					
R13A	O'Grain Ranch,	32.17	324	⇓P	P	07 32 23.5 +1.1
	baz=32,SNR=5.6					
O16A	Springville	32.34	330	⇓P	P	07 32 23.9 +0.1
	baz=32					
Q14A	Sevier Lake (B	32.36	326	⇑P	P	07 32 24.3 +0.3
	baz=32					
DAU	Daniels Canyon	32.38	330	eP	P	07 32 25.6 +1.5
P14A	Drum Mountains	32.68	327	⇑P	P	07 32 27.8 +0.9
	baz=33					
Q13A	Wheeler Ranch,	32.74	325	⇓P	P	07 32 28.4 +1.0
	baz=33,SNR=5.8					
S11A	Rachel	32.85	322	⇑P	P	07 32 29.2 +0.8
	baz=33					
MPMC	Manual Prospec	32.96	318	⇓P	P	07 32 29.3 0.0
	baz=33,SNR=5.1					
DUG	Dugway	32.99	328	eP	P	07 32 33.7 +4.1
	comp=Z,6.6nm,1.4s,mb4.4					
P13A	Bates Ranch, G	33.09	326	⇓P	P	07 32 31.4 +1.0
	baz=33					
R11A	Troy Tranyon, C	33.22	323	⇓P	P	07 32 33.1 +1.6
	baz=33					
Q12A	Willow Creek R	33.25	325	⇑P	P	07 32 33.4 +1.6
	baz=33					
ISA	Isabella	33.38	316	eP	P	07 32 34.5 +1.5
	comp=Z,2.7nm,0.9s,mb4.2					
GRAC	Grapevine Rang	33.45	319	⇑P	P	07 32 33.8 +0.2
	baz=34					
PDAR	Pinedale Array	33.48	335	P	P	07 32 33.5 -0.4
	comp=Z,0.5nm,0.7s,mb3.6,baz=169,slow=3.0,SNR=5.2					
PDAR				PcP	PcP	07 35 14.1 +0.4
	comp=Z,0.3nm,0.7s,baz=133,slow=3.8,SNR=3.2					
L17A	Cokeville	33.52	332	⇓P	P	07 32 33.8 -0.3
	baz=34					
S10A	Tonopah Range,	33.54	321	⇓P	P	07 32 34.3 -0.1
	baz=34					
O13A	Hicks Ranch, I	33.55	327	⇑P	P	07 32 35.2 +0.8
	baz=34					
K18A	Toltan Ranch,	33.58	334	⇓P	P	07 32 35.0 +0.4
	baz=34,SNR=5.1					
Q11A	Duckwater	33.59	324	⇓P	P	07 32 35.4 +0.6
	baz=34					
P12A	McGill	33.59	325	⇓P	P	07 32 35.4 +0.6
	baz=34					
R10A	Warm Springs	33.60	322	⇑P	P	07 32 36.1 +1.2
	baz=34					
L16A	Fish Haven	33.70	332	⇑P	P	07 32 36.0 +0.2
	baz=34,SNR=5.3					
Q10A	Clear Creek Ra	34.01	323	⇑P	P	07 32 39.5 +1.0
	baz=34					
J18A	Kendall Valley	34.04	334	⇑P	P	07 32 38.4 -0.3
	baz=34					
O12A	Currie	34.06	326	⇑P	P	07 32 39.5 +0.6
	baz=34					
L15A	Malad City	34.14	331	⇑P	P	07 32 39.4 -0.2
	baz=34,SNR=6.0					
N13A	Wendover, West	34.20	328	eP	P	07 32 43.8 +3.8
	comp=Z,14nm,1.2s,mb4.8					
M14A	Sheep Mountain	34.23	329	⇑P	P	07 32 40.9 +0.5
	baz=34,SNR=12					
EYMN	Ely	34.46	359	eP	P	07 32 40.0 -2.1
	comp=Z,5.8nm,0.7s,mb4.6					
J17A	Brown Place, J	34.46	334	⇑P	P	07 32 42.0 -0.3
	baz=35					
O11A	Cowboy Ranch,	34.47	325	⇑P	P	07 32 42.6 +0.2
	baz=35					
REDW	Red Top Meadow	34.52	334	eP	P	07 32 43.0 +0.2
	comp=Z,6.1nm,0.8s,mb4.6					
M13A	Montello	34.54	328	⇑P	P	07 32 43.1 +0.1
	baz=35,SNR=7.5					
M13A	Montello	34.54	328	eP	P	07 32 44.0 +1.0
	comp=Z,4.8nm,0.8s,mb4.5					
SNOW	Snow King Moun	34.56	334	eP	P	07 32 43.1 0.0
	comp=Z,27nm,1.1s,mb5.1					
L14A	Malta	34.58	330	⇓P	P	07 32 43.2 -0.1
	baz=35,SNR=6.4					
LOHW	Long Hollow	34.62	334	eP	P	07 32 44.1 +0.5
	comp=Z,2.6nm,0.8s,mb4.2					
N12A	Clover Valley,	34.63	327	⇑P	P	07 32 43.9 +0.1
	baz=35					
N12A	Clover Valley,	34.63	327	eP	P	07 32 45.6 +1.8
	comp=Z,8.2nm,1.3s,mb4.5					
TPAW	Teton Pass	34.66	334	eP	P	07 32 45.1 +1.0
	comp=Z,6.2nm,1.1s,mb4.5					
K15A	Arbon	34.74	331	⇓P	P	07 32 44.7 +0.1
	baz=35					
NVAR	Mina Array Bea	34.91	321	P	P	07 32 47.7 +1.5
	comp=Z,7.9nm,0.8s,mb4.7,baz=136,slow=8.4,SNR=68					
NVAR				PcP	PcP	07 35 20.2 +2.2
	comp=Z,1.3nm,0.8s,baz=126,slow=3.5,SNR=5.9					
NVAR	Mina Array Bea	34.91	321	P	P	07 32 47.7 +1.4
NVAR				PcP	PcP	07 35 20.2 +2.2
K14A	Jones Ranch, D	34.94	331	⇓P	P	07 32 45.9 -0.5
	baz=35,SNR=9.3					
M12A	Wells	34.97	328	⇑P	P	07 32 46.8 +0.1
	baz=35					
AGMN	Agassiz Nation	35.06	354	eP	P	07 32 45.7 -1.7
	comp=Z,3.2nm,0.8s,mb4.3					
J15A	Blackfoot	35.25	332	⇓P	P	07 32 49.5 +0.4
	baz=35					
M11A	Holland Ranch,	35.44	327	⇓P	P	07 32 50.7 -0.1
	baz=36					
K13A	Stover Farm, H	35.45	330	⇓P	P	07 32 51.0 +0.1
	baz=36					
L12A	House Creek Ra	35.55	328	⇑P	P	07 32 51.5 -0.1
	baz=36					
G18A	Lazy EL Ranch,	35.61	337	⇓P	P	07 32 52.1 0.0
	baz=36					
J14A	Carey	35.69	331	⇑P	P	07 32 52.9 0.0
	baz=36					
K12A	Draper Farm, C	35.85	329	⇓P	P	07 32 54.3 +0.1
	baz=36					
M10A	I.L. Ranch, Tu	35.91	326	⇓P	P	07 32 55.6 +0.8
	baz=36					
L11A	Cat Creek Ranc	35.95	328	⇓P	P	07 32 55.4 +0.3
	baz=36					
CMB	Columbia Colle	35.99	318	eP	P	07 32 56.1 +0.6
	comp=Z,5.3nm,1.0s,mb4.4					
J13A	Cove Ranch, Pi	36.06	331	⇑P	P	07 32 55.3 -0.7
	baz=36					
G17A	Pierce Place,	36.07	336	⇓P	P	07 32 56.9 +0.8
	baz=36					
I14A	Mackay	36.12	332	⇑P	P	07 32 57.3 +0.8
	baz=36					
F18A	Big Timber	36.16	337	⇓P	P	07 32 56.5 -0.4
	baz=36					
L10A	Juniper Basin	36.26	327	⇓P	P	07 32 58.1 +0.3
	baz=36					
HLID	Hailey	36.30	330	⇑P	P	07 32 58.4 +0.4
	baz=36					
HLID	Hailey	36.30	330	eP	P	07 32 59.0 +1.0
	comp=Z,10.0nm,1.6s,mb4.5					
H15A	Lima	36.30	333	⇑P	P	07 32 59.0 +0.9
	baz=36					
J12A	Stokes Ranch,	36.40	329	⇑P	P	07 32 59.5 +0.6
	baz=36					
I13A	Wildhorse Cree	36.42	331	⇓P	P	07 32 59.7 +0.6
	baz=36					
F17A	Fitzpatrick Pl	36.52	336	⇓P	P	07 33 00.0 +0.1
	baz=37					
H14A	Leadore	36.62	333	⇑P	P	07 33 01.0 +0.3
	baz=37,SNR=6.1					
G15A	Dillon	36.67	334	⇑P	P	07 33 01.7 +0.5
	baz=37					
I12A	Atlanta	36.82	330	⇓P	P	07 33 02.6 +0.1
	baz=37,SNR=7.9					
DLMT	Dillon	36.87	334	eP	P	07 33 04.0 +1.1
	comp=Z,5.5nm,1.2s,mb4.3					
MFID	Camas Ranch	36.88	329	⇓P	P	07 33 03.2 +0.2
	baz=37					
K10A	MacKenzie Ranc	36.96	327	⇓P	P	07 33 04.3 +0.5
	baz=37					
H13A	Challis	36.98	332	⇑P	P	07 33 03.7 -0.1
	baz=37,SNR=11					
ULM	Lac du Bonnet	37.00	355	P	P	07 33 01.7 -2.2
	comp=Z,9.4nm,0.7s,mb4.7,baz=161,slow=7.5,SNR=7.7					
BEKR	Beckworth	37.05	321	⇑P	P	07 33 04.8 +0.3
	baz=37,SNR=5.6					
LRM	Limekiln Ridge	37.18	335	eP	P	07 33 06.2 +0.7
F15A	Butte	37.21	335	⇓P	P	07 33 05.9 +0.2
	baz=37					
H12A	Diamond D Ranc	37.25	331	⇓P	P	07 33 06.4 +0.2
	baz=37					
D18A	Linhart Farms,	37.29	338	⇑P	P	07 33 06.8 +0.3
	baz=37					
I11A	Placerville	37.31	329	⇓P	P	07 33 07.0 +0.3
	baz=37,SNR=14					
E16A	East Helena	37.44	336	⇓P	P	07 33 07.6 -0.1
	baz=38					
D17A	Six Diamond Ra	37.58	338	⇑P	P	07 33 08.8 -0.1
	baz=38					
WVOR	Wild Horse Val	37.68	325	eP	P	07 33 10.5 +0.7
	comp=Z,5.0nm,1.0s,mb4.2					
E15A	Deer Lodge	37.74	335	⇑P	P	07 33 10.5 +0.3
	baz=38					
J09A	Fry Pan Ranch,	37.82	327	⇓P	P	07 33 11.0 0.0
	baz=38					
I10A	Payette	37.85	329	⇓P	P	07 33 10.6 -0.7
	baz=38					
H11A	Donnelly	37.91	330	⇓P	P	07 33 11.3 -0.4
	baz=38,SNR=7.9					
F13A	Darby	37.96	333	⇓P	P	07 33 11.6 -0.5
	baz=38					
EGMT	Eagleton	37.98	339	⇑P	P	07 33 11.8 -0.4
	baz=38					
C17A	Wharram Farm,	38.01	338	⇑P	P	07 33 12.4 -0.1
	baz=38					
E14A	Clinton	38.09	334	⇑P	P	07 33 13.1 -0.1
	baz=38					
D15A	Lincoln	38.19	336	⇓P	P	07 33 14.1 0.0
	baz=38					
H10A	Noah's Angus R	38.19	330	⇓P	P	07 33 13.8 -0.3
	baz=38					
J08A	Circle Bar Ran	38.21	327	⇑P	P	07 33 14.3 0.0
	baz=38,SNR=16					
I09A	Lost Marbles R	38.25	328	⇓P	P	07 33 14.3 -0.3
	baz=38,SNR=12					
F12A	Elk City	38.35	332	⇓P	P	07 33 15.1 -0.3
	baz=38,SNR=10					
E13A	Victor	38.40	334	⇓P	P	07 33 15.5 -0.4
	baz=38,SNR=6.4					
G11A	Walters Elk Ra	38.55	331	⇓P	P	07 33 16.5 -0.6
	baz=39,SNR=7.0					
D14A	Greenough	38.62	335	⇓P	P	07 33 16.9 -0.7
	baz=39					
A18A	Metzger Ranch,	38.78	340	⇑P	P	07 33 18.4 -0.5
	baz=39					
C15A	Salmond Ranch,	38.82	336	⇓P	P	07 33 19.1 -0.2
	baz=39					
G10A	Bishop Farm, J	38.88	330	⇓P	P	07 33 19.0 -0.8
	baz=39					
E12A	Beaver Dam Sad	38.99	333	⇓P	P	07 33 19.9 -0.9
	baz=39					
D13A	Huson	39.03	334	⇑P	P	07 33 20.4 -0.6
	baz=39					
A17A	Triple J Farms	39.09	339	⇑P	P	07 33 21.0 -0.6
	baz=39					
H08A	Prairie City	39.11	328	⇓P	P	07 33 21.5 -0.2
	baz=39					
I07A	Izee	39.25	327	⇓P	P	07 33 22.6 -0.4
	baz=39					
D12A	Red Ives Fores	39.38	333	⇓P	P	07 33 23.7 -0.3
	baz=40					
F10A	Beach Ranch, E	39.43	331	⇓P	P	07 33 24.1 -0.3
	baz=40,SNR=11					
C13A	Hot Springs	39.54	335	⇑P	P	07 33 24.3 -1.0
	baz=40					
YBH	Yreka Blue Hor	39.59	322	P	P	07 33 24.6 -1.2
	comp=Z,1.4nm,0.7s,mb3.8,baz=99,slow=4.0,SNR=3.5					
A15A	Johnson Ranch,	39.86	337	⇑P	P	07 33 27.7 -0.2
	baz=40					
B13A	Whitefish	40.04	335	⇓P	P	07 33 29.6 +0.1
	baz=40					
A14A	Double T Ranch	40.11	337	⇓P	P	07 33 29.6 -0.5
	baz=40,SNR=6.9					
C09A	Chrisman Ranch	41.26	332	⇑P	P	07 33 39.5 0.0
	baz=41					
A11A	Hall Mountain,	41.28	334	⇓P	P	07 33 39.5 -0.2
	baz=41					
SIV	San Ignacio	41.39	134	P	P	07 33 39.5 -1.5
	comp=Z,3.0nm,0.9s,mb3.9,baz=322,slow=11,SNR=12					
B09A	Rice	41.66	333	⇑P	P	07 33 42.7 -0.1
	baz=42					
FFC	Flin Flon	42.17	350	eP	P	07 33 46.0 -0.9
	comp=Z,57nm,2.4s,mb4.8					
LON	Longmire	42.24	328	eP	P	07 33 47.5 -0.1
	comp=Z,4.5nm,0.8s,mb4.2					
D05A	Enumclaw	42.63	329	⇑P	P	07 33 50.4 -0.3
	baz=43					
A07A	Ashnola River,	43.13	332	⇑P	P	07 33 54.6 -0.2
	baz=43					
RPW	Rockport	43.24	330	eP	P	07 33 55.1 -0.5
B06A	Marblemount	43.28	330	⇓P	P	07 33 55.5 -0.4
	baz=43					
EDM	Edmonton	43.61	340	eP	P	07 33 57.6 -0.9
SCHQ	Schefferville	45.38	19	P	P	07 34 10.8 -1.9
	comp=Z,7.1nm,0.9s,mb4.5,baz=228,slow=5.8,SNR=6.6					
SCHQ	Schefferville	45.38	19	eP	P	07 34 11.1 -1.6
	comp=Z,11nm,1.1s,mb4.6					
YKA	Yellowknife Ar	51.90	346	P	P	07 35 00.9 -1.6
	comp=Z,1.5nm,0.8s,mb4.0,baz=147,slow=7.7,SNR=9.5					
YKA	Yellowknife Ar	51.90	346	P	P	07 35 00.9 -1.6
DLBC	Dease Lake	53.71	336	eP	P	07 35 16.9 +1.0
RES	Resolute Bay	61.33	359	eP	P	07 36 07.3 -2.0
	comp=Z,3.7nm,0.5s,mb4.8					
INK	Inuvik	61.37	343	eP	P	07 36 08.6 -1.0
	comp=Z,2.0nm,0.6s,mb4.4					
PMR	Palmer	63.51	333	eP	P	07 36 23.7 -0.3
	comp=Z,1.0nm,0.5s,mb4.1					
RSO	Redoubt South	64.77	331	eP	P	07 36 32.1 -0.2
SUMG	Summit	66.50	15	eP	P	07 36 42.8 -0.5
	comp=Z,2.3nm,0.6s,mb4.4					
DBIC	Dimbokro	84.51	84	P	P	07 38 27.2 -0.3
	comp=Z,6.7nm,0.7s,mb4.9,baz=268,slow=2.8,SNR=8.4					
KWP	Kalwaria Pacla	94.42	37	eP	P	07 39 11.6 -2.2
	comp=Z,242nm,1.1s					
KURK	Kurchatov	115.50	7	PKP	PKPdf	07 44 35.2 -0.3
	comp=Z,0.2nm,0.6s,baz=346,slow=2.0,SNR=2.3					
BJI	Beijing	121.25	336	PKP	PKPdf	07 44 45.3 -1.7
HHC	Hu-ho-hao-te	122.21	340	ePKP	PKPdf	07 44 48.4 -0.4
HHC				PP	PP	07 46 31.5 +8.2
HHC				PKS		07 48 23.5
HHC				SKS	SKSdf	07 51 49.1 -6.9
HHC				SKKS	SKKSac	07 53 09.6 -9.1
HHC				SS

s-min=3.4km az=16.4
MOS ***09*** *07:28:38.0±0.9, 31°.26N×103°.81E, h33km, mb4.9/47, MS4.2/16, Error ellipse: s-maj=7.9km s-min=5.4km az=103.7*
DJA ***09*** *07:28:39, 31°.17N×103°.90E, h11km, mb4.9/15*
ISC 09 07:28:38.7±0.7, 31°.28N±0°.02×103°.79E±0°.02, h22km±5km, h25km±2.4km: pP-P, n243, σ1§12/247, mb4.7/75, MS4.2/28, 11C-9D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.37**	**185**	⇓*i*Pg	**Pb**	**07 28 46.1**	**-0.5**
CD2				Sg	**Sb**	**07 28 52.2**	**+0.2**
CD2				smax			
	comp=N,315μm,0.8s						
CD2				smax			
	comp=E,333μm,0.6s						
LZH	**Lanzhou**	**4.79**	**1**	*e*Pn	**Pn**	**07 29 52.5**	**+3.0**
LZH				Sg	Sn	07 31 14.4	+30
LZH				smax			
	comp=N,3μm,1.5s						
LZH				smax			
	comp=E,3μm,1.5s						
LZH				LR	LR		
	comp=N,10μm,7.4s						
LZH				LR	LR		
	comp=Z,13μm,8.3s						
ENH	**Enshi**	**5.00**	**100**	*e*Pn	**Pn**	**07 29 52.7**	**+0.3**
	comp=Z,810nm,0.7s						
ENH				*e*Sn	**Sn**	**07 30 52.3**	**+2.8**
XAN	**Xi'an**	**5.13**	**56**	Pn	**Pn**	**07 29 53.0**	**-1.1**
XAN				Sn	**Sn**	**07 30 51.6**	**-0.9**
XAN				Sg	Sn	07 31 14.8	+22
XAN				smax			
	comp=N,970nm,0.8s						
XAN				smax			
	comp=E,940nm,1.0s						
XAN				LR	LR		
	comp=N,4μm,11.8s						
XAN				LR	LR		
	comp=E,880nm,11.8s						
XAN				LR	LR		
	comp=Z,650nm,12.5s						
GYA	**Guiyang**	**5.42**	**152**	Pn	**Pn**	**07 29 58.9**	**+0.7**
GYA				Sn	**Sn**	**07 31 00.4**	**+0.5**
GYA				Sg	Sn	07 31 31.1	+31
GYA				smax			
	comp=N,4μm,0.9s						
GYA				smax			
	comp=E,3μm,0.8s						
GYA				LR	LR		
	comp=N,7μm,3.2s						
GYA				LR	LR		
	comp=E,5μm,2.8s						
GYA				LR	LR		
	comp=Z,6μm,3.9s						
KMI	**Kunming**	**6.20**	**189**	Pn	**Pn**	**07 30 10.4**	**+1.5**
GTA	**Gaotai**	**8.74**	**339**	⇑P	**Pn**	**07 30 44.8**	**+1.2**
GTA				pP		07 30 48.5	
GTA				sP		07 30 51.2	
GTA				S	**Sn**	**07 32 24.9**	**+3.5**
GTA				pmax	pmax		
	comp=Z,12nm,1.3s						
GTA				pmax	pmax		
	comp=Z,150nm,5.1s						
GTA				LR	LR		
	comp=N,4μm,13.7s						
GTA				LR	LR		
	comp=E,3μm,9.6s						
GTA				LR	LR		
	comp=Z,5μm,13.5s						
WHN	**Wuhan**	**9.10**	**92**	⇓P	**Pn**	**07 30 48.5**	**-0.1**
WHN				S	**Sn**	**07 32 25.9**	**-4.5**
WHN				LR	LR		
	comp=N,15μm,13.2s						
WHN				LR	LR		
	comp=E,6μm,8.1s						
WHN				LR	LR		
	comp=Z,6μm,10.2s						
LSA	**Lhasa**	**11.02**	**265**	*e*P	**Pn**	**07 31 15.6**	**+0.7**
LSA				pmax	pmax		
	comp=Z,17nm,0.7s						
LSA	**Lhasa**	**11.02**	**265**	*e*Pn	**Pn**	**07 31 15.6**	**+0.7**
	comp=Z,17nm,0.7s						
HHC	**Hu-ho-hao-te**	**11.43**	**31**	*e*P	**Pn**	**07 31 23.7**	**+3.2**
HHC				pP		07 31 27.0	
HHC				sP		07 31 30.0	
HHC				PP		07 31 33.1	
HHC				S	**Sn**	**07 33 33.5**	**+6.1**
HHC				sS		07 33 36.2	
HHC				SS		07 33 46.4	
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		
	comp=Z,85nm,6.1s						
HHC				LR	LR		
	comp=N,2μm,9.6s						
HHC				LR	LR		
	comp=E,1μm,9.0s						
HHC				LR	LR		
	comp=Z,1μm,10.8s						
GZH	**Guangzhou**	**11.78**	**132**	P	**Pn**	**07 31 21.4**	**-4.0**
GZH				S	**Sn**	**07 33 28.2**	**-8.0**
GZH				LR	LR		
	comp=N,3μm,7.2s						
GZH				LR	LR		
	comp=E,4μm,8.3s						
GZH				LR	LR		
	comp=Z,8μm,10.5s						
SHL	**Shillong**	**11.92**	**244**	*e*PKP	**Pn**	**07 31 26.0**	**-1.3**
TIA	**Tai'an**	**12.13**	**63**	*e*P	**Pn**	**07 31 29.0**	**-1.2**
NJ2	**Nanjing**	**12.86**	**83**	*e*P	**Pn**	**07 31 39.9**	**-0.1**
NJ2				pP		07 31 46.8	
NJ2				PP		07 31 50.2	
NJ2				sP		07 31 51.3	
NJ2				S	**Sn**	**07 34 01.5**	**-0.9**
NJ2				pmax	pmax		
	comp=Z,40nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,100nm,5.0s						
NJ2				LR	LR		
	comp=N,3μm,18.5s						
NJ2				LR	LR		
	comp=E,1μm,15.3s						
NJ2				LR	LR		
	comp=Z,2μm,12.9s						
CHG	**Chiang Mai**	**13.16**	**201**	⇓P	**Pn**	**07 31 45.8**	**+1.5**
	comp=Z,35nm,0.8s						
CHTO	**Chiang Mai**	**13.16**	**201**	*e*P	**Pn**	**07 31 45.6**	**+1.3**
CHTO				pmax	pmax		
	comp=Z,51nm,1.1s						
CHTO	**Chiang Mai**	**13.16**	**201**	*e*Pn	**Pn**	**07 31 45.6**	**+1.3**
	comp=Z,51nm,1.1s						
BJI	**Beijing**	**13.32**	**46**	P	**Pn**	**07 31 45.5**	**-0.8**
BJI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BJI				pmax	pmax		
	comp=Z,56nm,3.6s						
BJI				LR	LR		
	comp=N,2μm,27.2s						
BJI				LR	LR		
	comp=E,1μm,24.8s						
QIZ	**Qiongzhong**	**13.37**	**154**	P	**Pn**	**07 31 46.0**	**-1.1**
QIZ				pP		07 31 49.4	
QIZ				PP		07 31 54.6	
QIZ				S	**Sn**	**07 34 14.9**	**-0.1**
QIZ				SS		07 34 31.3	
QIZ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
QIZ				LR	LR		
	comp=N,3μm,11.3s						
QIZ				LR	LR		
	comp=Z,4μm,12.1s						
CM31	**Chiang Mai Arr**	**13.50**	**200**	*e*Pn	**Pn**	**07 31 50.8**	**+1.9**
	comp=Z,25nm,0.6s						
CMAR	**Chiang Mai Arr**	**13.50**	**200**	Pn	**Pn**	**07 31 50.4**	**+1.5**
	comp=Z,0.8nm,0.3s,baz=12,slow=11,SNR=34						
CMAR				Lg		07 35 50.3	
	comp=Z,0.3nm,0.3s,baz=358,slow=33,SNR=2.9						
CMAR				LR	LR	07 37 38.7	
	comp=Z,1μm,18.9s,baz=179,slow=40						
QZH	**Quanzhou**	**14.50**	**112**	P	**Pn**	**07 32 00.8**	**-1.7**
QZH				S	**Sn**	**07 34 40.5**	**-2.1**
QZH				LR	LR		
	comp=N,4μm,13.0s						
QZH				LR	LR		
	comp=E,6μm,10.6s						
QZH				LR	LR		
	comp=Z,9μm,10.5s						
TAPN	**Taplejung**	**14.56**	**258**	*e*P	**Pn**	**07 32 00.8**	**-2.6**
	comp=Z,99nm,1.1s						
BDT	**Bhumibol Dam**	**14.64**	**198**	P	**Pn**	**07 32 08.0**	**+3.6**
	comp=Z,62nm,0.9s						
ODAN	**Odare**	**15.00**	**257**	*e*P	**Pn**	**07 32 06.7**	**-2.6**
	comp=Z,54nm,0.7s						
JIRN	**Jiri**	**15.75**	**261**	*e*P	**Pn**	**07 32 17.0**	**-2.1**
	comp=Z,63nm,0.8s						
NST	**Nakhon Sawan**	**15.89**	**193**	P	**Pn**	**07 32 22.0**	**+1.0**
	comp=Z,58nm,0.7s						
GUN	**Gumba**	**15.94**	**262**	*e*P	**Pn**	**07 32 19.2**	**-2.3**
	comp=Z,271nm,1.0s						
PKI	**Pulchoki**	**16.44**	**262**	*e*P	**Pn**	**07 32 25.7**	**-2.2**
	comp=Z,151nm,0.8s						
PKI	**Pulchoki**	**16.44**	**262**	*e*P	**Pn**	**07 32 25.7**	**-2.2**
PKI				pmax	pmax		
	comp=Z,151nm,0.8s						
PKIN	**Phulchoki**	**16.45**	**262**	*e*P	**Pn**	**07 32 25.6**	**-2.4**
	comp=Z,93nm,0.7s						
DL2	**Dalian**	**16.45**	**58**	P	**Pn**	**07 32 28.2**	**+0.3**
DL2				S	**Sn**	**07 35 34.5**	**+4.7**
DL2				pmax	pmax		
	comp=Z,20nm,1.0s						
DL2				pmax	pmax		
	comp=Z,170nm,3.7s						
DL2				LR	LR		
	comp=N,360nm,15.7s						
DL2				LR	LR		
	comp=E,310nm,16.1s						
DL2				LR	LR		
	comp=Z,270nm,12.0s						
KKN	**Kakani**	**16.48**	**263**	*e*P	**Pn**	**07 32 26.7**	**-1.8**
	comp=Z,181nm,0.8s						
KKN	**Kakani**	**16.48**	**263**	*e*P	**Pn**	**07 32 26.7**	**-1.8**
KKN				pmax	pmax		
	comp=Z,181nm,0.8s						
SONM	**Songino Array**	**16.65**	**6**	Pn	**Pn**	**07 32 30.4**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=184,slow=12,SNR=20						
SONM				Lg		07 37 25.8	
	comp=Z,0.2nm,0.3s,baz=188,slow=26,SNR=3.5						
SONM				LR	LR	07 39 19.6	
	comp=Z,964nm,19.4s,baz=182,slow=39						
DMN	**Daman**	**16.68**	**262**	*e*P	**Pn**	**07 32 28.6**	**-2.4**
	comp=Z,154nm,0.7s						
ULN	**Ulaanbaatar**	**16.75**	**8**	*e*P	**Pn**	**07 32 30.9**	**-0.8**
YHNB	**Yeheng**	**16.86**	**109**	*e*P	**Pn**	**07 32 34.5**	**+1.1**
	comp=Z,38nm,0.8s						
TPUB	**Ta-pu**	**16.93**	**114**	*e*P	**Pn**	**07 32 36.1**	**+1.9**
	comp=Z,36nm,1.1s						
SSLB	**Suanglung**	**16.94**	**112**	*e*P	**Pn**	**07 32 36.4**	**+2.1**
	comp=Z,78nm,0.9s						
NACB	**Ninganchiao**	**17.27**	**110**	*e*P	**Pn**	**07 32 41.5**	**+3.1**
	comp=Z,71nm,1.1s						
WMQ	**Urumqi**	**17.84**	**319**	P	**Pn**	**07 32 46.0**	**+0.7**
WMQ				sP	sP	07 32 53.0	-2.0
WMQ				PP		07 33 01.0	
WMQ				S	**Sn**	**07 36 03.0**	**-0.5**
WMQ				SS		07 36 28.0	
WMQ				pmax	pmax		
	comp=Z,48nm,0.8s						
WMQ				LR	LR		
	comp=N,1μm,6.0s						
WMQ				LR	LR		
	comp=E,700nm,6.0s						
WMQ				LR	LR		
	comp=Z,1μm,6.0s						
SNY	**Shenyang**	**19.02**	**51**	⇑P	**Pn**	**07 32 59.9**	**+0.1**
SNY				S	**Sn**	**07 36 30.4**	**-1.7**
SNY				pmax	pmax		
	comp=Z,18nm,0.9s						
SNY				pmax	pmax		
	comp=Z,160nm,3.7s						
SNY				LR	LR		
	comp=E,360nm,14.0s						
SNY				LR	LR		
	comp=Z,380nm,14.4s						
ZAK	**Zakamensk**	**19.09**	**359**	*e*P	**Pn**	**07 33 01.7**	**+1.2**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
TLY	**Talaya**	**20.38**	**360**	*e*P	**P**	**07 33 14.1**	**+0.4**
TLY				*e*		07 33 27.5	
TLY				*e*S	**S**	**07 36 59.8**	**-1.1**
TLY				*e*SS		07 37 15.3	
TLY				pmax	pmax		
	comp=Z,23nm,2.3s						
TLY				MLR	MLR		
	comp=Z,845nm,11.0s,MS4.4						
TLY	**Talaya**	**20.38**	**360**	*e*P	**P**	**07 33 14.9**	**+1.2**
	comp=Z,9.6nm,0.9s						
MOY	**Mondy**	**20.47**	**355**	*e*P	**P**	**07 33 15.8**	**+1.1**
MOY				pmax	pmax		
	comp=Z,75nm,2.2s						
JOSI	**Joshimath**	**20.80**	**274**	*e*PKP	**P**	**07 33 18.1**	**-0.3**
KSRS	**Korea Array**	**20.82**	**66**	P	**P**	**07 33 18.6**	**0.0**
	comp=Z,25nm,0.8s,baz=261,slow=10,SNR=133						
KSRS				LR	LR	07 42 10.7	
	comp=Z,162nm,18.9s,MS3.4,baz=270,slow=39						
KSRS	**Korea Array**	**20.82**	**66**	P	**P**	**07 33 18.6**	**0.0**
KSRS				pmax	pmax		
	comp=Z,25nm,0.8s						
KSRS				MLR	MLR		
	comp=Z,162nm,18.9s,MS3.4						
IRK	**Irkutsk**	**20.95**	**1**	*e*P	**P**	**07 33 21.2**	**+1.4**
IRK				pmax	pmax		
	comp=Z,110nm,1.8s						
CN2	**Changchun**	**21.17**	**48**	⇑P	**P**	**07 33 22.8**	**+0.6**
CN2				*e*sP	sP	07 33 29.0	-2.4
CN2				*e*S	**S**	**07 37 13.3**	**-3.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.1						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,700nm,13.0s,MS4.3						
CN2				LR	LR		
	comp=E,400nm,13.0s,MS4.3						
CN2				LR	LR		
	comp=Z,500nm,14.0s,MS4.0						
KLP	**Kalpa**	**21.79**	**277**	*e*PKP	**P**	**07 33 28.7**	**-0.4**
MK31	**Makanchi Array**	**22.67**	**319**	*e*P	**P**	**07 33 38.9**	**+0.6**
MKAR	**Makanchi Array**	**22.67**	**319**	P	**P**	**07 33 38.9**	**+0.6**
	comp=Z,23nm,1.0s,mb4.5,baz=107,slow=17,SNR=66						
MKAR				LR	LR	07 43 20.7	
	comp=Z,1μm,18.9s,MS4.3,baz=129,slow=39						
MKAR	**Makanchi Array**	**22.67**	**319**	P	**P**	**07 33 38.9**	**+0.6**
MKAR				pmax	pmax		
	comp=Z,23nm,1.0s						
MKAR				MLR	MLR		
	comp=Z,1μm,18.9s						
MKAR	**Makanchi Array**	**22.67**	**319**	P	**P**	**07 33 38.9**	**+0.6**
MKAR				LR	LR	07 43 20.7	
AGRA	**Agra**	**22.89**	**266**	*e*PKP	**P**	**07 33 39.1**	**-1.7**
AGRA				AMb	AMB	07 33 48.3	
	comp=Z,59nm,0.8s,mb5.1						
BISR	**Bishrakh**	**22.98**	**270**	*e*PKP	**P**	**07 33 41.1**	**-0.6**
KKR	**Kurukshetra**	**23.23**	**274**	*e*PKP	**P**	**07 33 43.8**	**-0.6**
BHK	**Bhakra**	**23.36**	**278**	*ex*	**P**	**07 33 50.4**	**+4.7**
SONA	**Sohna**	**23.36**	**269**	*e*PKP	**P**	**07 33 45.3**	**-0.5**
SONA				AMb	AMB	07 33 51.1	
	comp=Z,54nm,1.0s,mb4.9						
KSH	**Kashi**	**24.05**	**298**	⇓*i*P	**P**	**07 33 55.5**	**+3.4**
KSH				pP		07 33 59.6	
KSH				sP	sP	07 34 02.4	+0.8
KSH				PP		07 34 30.9	
KSH				PcP	PcP	07 37 35.9	+2.5
KSH				S	**S**	**07 38 11.8**	**+3.6**
KSH				sS	sS	07 38 18.7	-0.4
KSH				SS		07 39 05.8	
KSH				ScP	ScP	07 41 12.5	+2.0
KSH				PcS	PcS	07 41 14.3	+1.3
KSH				ScS	ScS	07 44 58.8	+1.2
KSH				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.2						
KSH				LR	LR		
	comp=N,230nm,7.0s						
KSH				LR	LR		
	comp=E,730nm,10.7s						
KSH				LR	LR		
	comp=Z,710nm,11.1s,MS4.4						
MDJ	**Mudanjiang**	**24.19**	**49**	P	**P**	**07 33 54.4**	**+1.0**
MDJ				sP	sP	07 33 59.7	-3.1
MDJ				pmax	pmax		
	comp=Z,27nm,1.2s,mb4.5						
MDJ				pmax	pmax		
	comp=Z,81nm,6.4s						
MDJ				LR	LR		
	comp=N,200nm,22.9s,MS3.6						
MDJ				LR	LR		
	comp=E,99nm,24.9s,MS3.6						
MDJ	**Mudanjiang**	**24.19**	**49**	*e*P	**P**	**07 33 54.6**	**+1.2**
	comp=E,80nm,1.4s,mb5.0						
NGP	**Nagpur**	**24.33**	**251**	*ex*	**P**	**07 33 49.2**	**-5.6**
NGP				*ex*	x	07 34 02.6	
NGP				*ex*	x	07 34 03.6	
	comp=N,11nm,0.1s						
KHET	**Khetri**	**24.50**	**270**	*e*PKP	**P**	**07 33 55.1**	**-1.2**
ULHL	**Ulahol**	**24.53**	**304**	P	**P**	**07 33 57.6**	**+1.1**
SNR=10.0							
VLA	**Vladivostok**	**25.19**	**54**	⇓*e*P	**P**	**07 34 03.3**	**+0.8**
VLA				pmax	pmax		
	comp=Z,38nm,0.6s,mb5.1						
KZA	**Kyzart**	**25.19**	**303**	P	**P**	**07 34 04.4**	**+2.0**
SNR=29							
TKM2	**Tokmak 2**	**25.19**	**305**	P	**P**	**07 34 03.4**	**+0.9**
SNR=8.0							
TKM2	**Tokmak 2**	**25.19**	**305**	*e*P	**P**	**07 34 03.2**	**+0.7**
TKM2				pmax	pmax		
	comp=Z,21nm,1.1s,mb4.6						
TKM2	**Tokmak 2**	**25.19**	**305**	*e*P	**P**	**07 34 03.2**	**+0.7**
	comp=Z,21nm,1.1s,mb4.6						
KBK	**Karagaybulak**	**25.57**	**304**	P	Px	07 34 16.7	
SNR=5.9							
UCH	**Uchtor**	**25.76**	**303**	P	**P**	**07 34 09.9**	**+2.2**
SNR=15							
UCH	**Uchtor**	**25.76**	**303**	*e*P	**P**	**07 34 09.6**	**+2.0**
	comp=Z,40nm,1.2s,mb4.8						
FRU	**Bishkek**	**25.85**	**305**	*e*P	**P**	**07 34 10.0**	**+1.5**
FRU				pmax	pmax		
	comp=Z,40nm,1.8s,mb4.7						
AAK	**Ala-Archa**	**25.88**	**304**	P	**P**	**07 34 11.0**	**+2.3**
	comp=Z,1.9nm,0.4s,mb4.0,baz=26,slow=1.1,SNR=8.7						
AAK				LR	LR	07 46 03.8	
	comp=Z,1μm,20.2s,MS4.5,baz=92,slow=40						
AAK	**Ala-Archa**	**25.88**	**304**	*de*P	**P**	**07 34 10.1**	**+1.4**
AAK				pmax	pmax		
	comp=Z,6.0nm,1.7s,mb3.9						
AAK	**Ala-Archa**	**25.88**	**304**	*e*P	**P**	**07 34 09.8**	**+1.0**
	comp=Z,16nm,0.9s,mb4.6						
USP	**Ospenovka**	**26.06**	**306**	P	**P**	**07 34 11.0**	**+0.6**
SNR=13							
AKL	**Akola**	**26.21**	**253**	*e*PKP	**P**	**07 34 11.7**	**-0.2**
EKS2	**Erkin-Say**	**26.40**	**304**	*e*P	**P**	**07 34 16.3**	**+2.8**
	comp=Z,23nm,1.1s,mb4.6						
ZAA0	**Zalesovo Array**	**26.45**	**334**	*e*P	**P**	**07 34 13.7**	**0.0**
ZALV	**Zalesovo Beam**	**26.45**	**334**	P	**P**	**07 34 13.4**	**-0.3**
	comp=Z,7.2nm,0.6s,mb4.3,baz=134,slow=8.5,SNR=25						
ZALV				LR	LR	07 45 18.2	
	comp=Z,538nm,20.8s,MS4.1,baz=193,slow=38						
ZALV	**Zalesovo Beam**	**26.45**	**334**	P	**P**	**07 34 13.4**	**-0.3**
ZALV				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.4						
ZALV				MLR	MLR		
	comp=Z,539nm,20.8s,MS4.1						
HYB	**Hyderabad**	**26.74**	**245**	*e*P	**P**	**07 34 22.0**	**+5.3**
HYB	**Hyderabad**	**26.74**	**245**	*i* P	**P**	**07 34 18.5**	**+1.8**
KURK	**Kurchatov**	**26.95**	**323**	P	**P**	**07 34 18.1**	**-0.2**
	comp=Z,7.5nm,0.7s,mb4.3,baz=127,slow=9.3,SNR=62						
KURK				LR	LR	07 45 42.8	
	comp=Z,667nm,18.9s,MS4.2,baz=130,slow=38						
KURK	**Kurchatov**	**26.95**	**323**	*de*P	**P**	**07 34 17.9**	**-0.3**
KURK	**Kurchatov**	**26.95**	**323**	*e*P	**P**	**07 34 18.1**	**-0.2**
	comp=Z,51nm,1.2s,mb4.9						
KLR	**Kul'dur**	**27.63**	**42**	*e*P	**P**	**07 34 19.0**	**-5.4**
KLR				MLR	MLR		
	comp=Z,700nm,11.0s,MS4.5						
NVS	**Novosibirsk**	**27.73**	**334**	*e*P	**P**	**07 34 25.5**	**+0.3**
NVS				*e*PPP		07 35 28.2	
NVS				*e*S	**S**	**07 39 08.6**	**+2.4**
NVS				pmax	pmax		
	comp=Z,38nm,2.5s,mb4.6						
NVS				pmax	pmax		
	comp=N,16nm,1.8s						
NVS				pmax	pmax		
	comp=E,10.0nm,1.7s						
NVS				smax			
	comp=N,25nm,2.0s						
NVS				smax			
	comp=E,18nm,2.0s						
PSI	**Prapat**	**28.70**	**190**	P	**P**	**07 34 34.6**	**+0.5**
	comp=E,5.5nm,0.5s,mb4.6,baz=325,slow=9.7,SNR=6.6						
PSI				LR	LR	07 47 50.0	
	comp=E,483nm,18.3s,MS4.1,baz=186,slow=40						
PSI	**Prapat**	**28.70**	**190**	P	**P**	**07 34 34.7**	**+0.5**
PSI				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.6						
PSI				MLR	MLR		
	comp=Z,483nm,18.3s,MS4.1						
MAT	**Matsushiro**	**28.94**	**70**	P	**P**	**07 34 34.8**	**-1.4**
MJAR	**Matsushiro Arr**	**28.94**	**70**	P	**P**	**07 34 35.3**	**-0.9**
	comp=Z,4.0nm,1.0s,mb4.1,baz=272,slow=11,SNR=9.3						
MJAR				LR	LR	07 46 39.9	
	comp=Z,116nm,18.8s,MS3.5,baz=295,slow=38						
MJAR	**Matsushiro Arr**	**28.94**	**70**	P	**P**	**07 34 35.3**	**-1.0**
MJAR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MJAR				MLR	MLR		
	comp=Z,116nm,18.8s						
KBL	**Kabul**	**29.27**	**286**	*e*P	**P**	**07 34 40.6**	**+1.4**
KBL				pmax	pmax		
	comp=Z,39nm,1.2s,mb5.0						
KBL	**Kabul**	**29.27**	**286**	*e*P	**P**	**07 34 40.6**	**+1.4**
	comp=Z,39nm,1.2s,mb5.0						
JHJ	**Hachijo jima 2**	**30.42**	**77**	LR	LR	07 48 26.9	
	comp=Z,406nm,18.1s,MS4.1,baz=113,slow=39						
BVAR	**Borovoye Array**	**32.49**	**322**	P	**P**	**07 35 07.3**	**-0.1**
	comp=Z,2.0nm,0.5s,mb4.2,baz=124,slow=9.6,SNR=17						
BVAR				PcP	PcP	07 37 53.1	-0.8
	comp=Z,2.2nm,0.7s,baz=131,slow=4.5,SNR=5.5						
BVAR	**Borovoye Array**	**32.49**	**322**	P	**P**	**07 35 07.3**	**0.0**
BVAR						07 37 53.1	
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRVK	**Borovoye**	**32.56**	**322**	*c i*P	**P**	**07 35 08.2**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,13nm,1.7s,mb4.6						
BRVK	**Borovoye**	**32.56**	**322**	*e*P	**P**	**07 35 08.2**	**+0.3**
	comp=Z,10nm,0.8s,mb4.8						
ERM	**Erimo**	**33.09**	**60**	*ce*P	**P**	**07 35 13.6**	**+0.8**
ERM				pmax	pmax		
	comp=Z,53nm,2.5s,mb5.0						
YSS	**Yuzh-Sakhalins**	**33.65**	**51**	*e*P	**P**	**07 35 16.7**	**-0.9**
YSS				*e*	pP	07 35 24.0	-0.3
YSS				MLR	MLR		
	comp=Z,300nm,12.0s,MS4.2						
YAK	**Yakutsk**	**35.04**	**21**	*e*P	**P**	**07 35 38.3**	**+8.9**
YAK				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.1						
YAK				pmax	pmax		
	comp=N,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK				MLR	MLR		
	comp=Z,236nm,14.0s,MS4.1						
YAK				MLR	MLR		
	comp=N,176nm,12.0s,MS4.2						
YAK				MLR	MLR		
	comp=E,256nm,17.0s,MS4.2						
ABKAR	**Akbulak array**	**37.36**	**312**	*e*P	**P**	**07 35 49.5**	**+0.1**
	comp=E,8.5nm,0.8s,mb4.6						
AKTK	**Aktyubinsk**	**38.82**	**313**	P	**P**	**07 36 01.2**	**-0.5**
AKTO	**Aktyubinsk**	**38.82**	**313**	P	**P**	**07 36 01.2**	**-0.5**
	comp=E,1.9nm,0.6s,mb4.0,baz=93,slow=12,SNR=7.3						
AKTO	**Aktyubinsk**	**38.82**	**313**	P	**P**	**07 36 01.2**	**-0.5**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
KAPI	**Kappang**	**39.17**	**154**	P	**P**	**07 36 04.4**	**-0.6**
	comp=Z,18nm,0.9s,mb4.8,baz=324,slow=8.4,SNR=6.0						
SVE	**Sverdlovsk**	**39.20**	**323**	⇑*e*P	**P**	**07 36 06.2**	**+1.4**
SVE				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.0						
SVE				MLR	MLR		
	comp=Z,359nm,12.0s,MS4.4						
ARU	**Arti**	**40.13**	**322**	*d i*P	**P**	**07 36 12.4**	**-0.1**
ARU				S	**S**	**07 42 18.6**	**+1.1**
ARU				SS	SS	07 45 10.5	-4.8
ARU				pmax	pmax		
	comp=Z,25nm,1.7s,mb4.7						

ARU MLR MLR
comp=Z,378nm,18.0s,MS4.3
ARU Arti 40.13 322 *eP* **P 07 36 12.8 +0.3**
comp=Z,23nm,1.0s,mb4.9
SOKR Solikamsk 42.10 326*d iP* **P 07 36 33.0 +4.3**
SOKR pmax pmax
comp=Z,40nm,1.1s,mb5.0
SOKR MLR MLR
comp=Z,470nm,23.0s,MS4.3
TIXI Tiksi 42.63 11 *eP* **P 07 36 31.6 -1.3**
TIXI pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
TIXI Tiksi 42.63 11 *eP* **P 07 36 31.6 -1.3**
comp=Z,7.0nm,0.8s,mb4.4
SEY Seymchan 44.07 30*c eP* **P 07 36 44.1 -0.5**
PETK Petropavlovsk- 44.25 44 P **P 07 36 45.0 -1.2**
comp=Z,3.4nm,0.8s,mb4.1,baz=54,slow=2.6,SNR=4.4
PETK LR LR 07 56 41.2
comp=Z,111nm,18.2s,MS3.8,baz=78,slow=38
PETK Petropavlovsk- 44.25 44 P **P 07 36 45.0 -1.2**
PETK pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
PETK MLR MLR
comp=Z,111nm,18.2s,MS3.8
PETK Petropavlovsk- 44.25 44 P **P 07 36 45.0 -1.2**
PETK LR LR 07 56 41.2
GNI Garni 47.98 298⇑ *eP* **P 07 37 17.3 +1.5**
GNI pmax pmax
comp=Z,16nm,1.7s
ZEI Tsey 48.26 301 *eP* **P 07 37 23.1 +5.3**
ZEI pmax pmax
comp=Z,11nm,1.0s,mb4.8
RDF Al-Radifah 48.27 282 *eP* **P 07 37 18.2 +0.1**
RDF AMb AMB 07 37 28.3
comp=Z,71nm,0.9s,mb5.7
NAY Al-Naaiem 48.43 283 *eP* **P 07 37 18.5 -0.8**
NAY AMb AMB 07 37 28.1
comp=Z,62nm,0.8s,mb5.7
KIV Kislovodsk 48.99 303 *eP* **P 07 37 24.6 +1.1**
KIV pmax pmax
comp=Z,20nm,1.1s,mb5.1
KIV MLR MLR
comp=Z,208nm,18.0s,MS4.2
VRHR Novokhopersk 49.23 313 *eP* **P 07 37 24.9 -0.2**
VRHR pmax pmax
comp=Z,10.0nm,0.4s,mb5.2
VRHR pmax pmax
comp=N,9.0nm,0.3s
VRHR pmax pmax
comp=E,10.0nm,0.8s
VSR Storozhevoye 50.77 313 *eP* **P 07 37 36.3 -0.6**
VSR pmax pmax
comp=N,10.0nm,0.5s
VSR pmax pmax
comp=E,10.0nm,0.5s
VSR pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
BILL Bilibino 51.13 25*c iP* **P 07 37 38.7 -0.6**
BILL *i* pP 07 37 44.8 -1.5
BILL *e* 07 39 33.0
BILL *e*SS SS 07 48 33.9 +3.4
BILL pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
BILL MLR MLR
comp=Z,400nm,17.0s,MS4.5
BILL Bilibino 51.13 25 *eP* **P 07 37 38.8 -0.5**
comp=Z,6.7nm,0.6s,mb4.8
OBN Obninsk 52.17 318⇑ *eP* **P 07 37 47.7 +0.4**
OBN *i* pP 07 37 53.3 -1.0
OBN *e* 07 38 55.2
OBN pmax pmax
comp=Z,6.0nm,0.4s,mb4.9
OBN MLR MLR
comp=Z,700nm,21.0s,MS4.7
KNA Kununurra 52.56 149 *eP* **P 07 37 49.9 -0.6**
comp=Z,42nm,0.7s,mb5.5
ANN Anapa 52.61 305 *eP* **P 07 37 48.6 -2.1**
ANN *e**PP pP 07 37 58.5 +0.8
ANN *e*S **S 07 45 16.3 -0.3**
ANN pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
ANN MLR MLR
comp=Z,264nm,18.0s,MS4.3
APA Apatity 54.03 333⇑ *iP* **P 07 38 01.5 +0.7**
APA *i* 07 40 04.0
APA *i* PPP 07 41 20.0
APA pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
APA MLR MLR
comp=Z,2μm,1.2s
BR131 Keskin Array S 56.42 299 *eP* **P 07 38 17.9 -0.5**
comp=Z,4.2nm,0.8s,mb4.5
BRTR Keskin Array B 56.42 299 P **P 07 38 17.9 -0.6**
comp=Z,0.7nm,0.7s,mb3.8,baz=74,slow=4.4,SNR=4.9
BRTR LR LR 08 08 13.3
comp=Z,87nm,18.3s,MS3.9,baz=260,slow=42
BRTR Keskin Array B 56.42 299 P **P 07 38 17.9 -0.6**
BRTR LR LR 08 08 13.3
MMAI Mount Meron Ar 56.97 291 LR LR 08 07 46.6
comp=Z,114nm,19.8s,MS4.0,baz=115,slow=41
ARCES ARCESS Array B 56.99 336 P **P 07 38 21.4 -0.7**
comp=Z,3.0nm,0.6s,mb4.5,baz=92,slow=7.5,SNR=20
ARCES PcP PcP 07 39 15.7 -1.3
comp=Z,2.5nm,0.5s,baz=76,slow=5.1,SNR=6.6
ARCES ARCESS Array B 56.99 336 P **P 07 38 21.4 -0.6**
ARCES 07 39 15.7
ARCES pmax pmax
comp=Z,3.0nm,0.6s
ARCES pmax pmax
comp=Z,3.0nm,0.5s
AKASG Malin Array Be 57.07 313 P **P 07 38 21.2 -1.7**
comp=Z,1.1nm,0.5s,mb4.2,baz=71,slow=6.6,SNR=6.1
AKASG LR LR 08 06 30.7
comp=Z,138nm,20.1s,MS4.0,baz=75,slow=40
FINES FINESS Array B 57.27 326 P **P 07 38 23.4 -0.8**
comp=Z,1.8nm,0.5s,mb4.4,baz=98,slow=7.9,SNR=5.8
FINES FINESS Array B 57.27 326 P **P 07 38 23.4 -0.8**
FINES pmax pmax
comp=Z,2.0nm,0.5s
WRAB Tennant Creek 58.77 146 P **P 07 38 35.6 +0.5**
comp=Z,475nm,0.6s,SNR=30
WRAB Tennant Creek 58.77 146 *eP* **P 07 38 35.1 0.0**
WRAB pmax pmax
comp=Z,74nm,0.9s,mb5.7
WRAB Tennant Creek 58.77 146 *eP* **P 07 38 35.0 0.0**
comp=Z,74nm,0.9s,mb5.7
WRA Warramunga Arr 58.77 146 P **P 07 38 35.0 -0.1**
comp=Z,14nm,0.6s,mb5.2,baz=339,slow=8.0,SNR=202
WRA Warramunga Arr 58.77 146 P **P 07 38 35.0 -0.1**
WRA pmax pmax
comp=Z,14nm,0.6s
BUR08 Bucovina Ar. S 60.32 310 *eP* **P 07 38 48.7 +3.1**
ASAR Alice Springs 61.78 149 P **P 07 38 55.8 +0.1**
comp=Z,2.8nm,0.6s,mb4.6,baz=337,slow=6.6,SNR=37
ASAR Alice Springs 61.78 149 P **P 07 38 55.8 +0.1**
ASAR pmax pmax
comp=Z,3.0nm,0.6s
KOLS Kolonicke sedl 61.86 312 *eP* **P 07 39 00.9 +4.9**
KOLS Kolonicke sedl 61.86 312 *eP* **P 07 39 00.9 +4.9**
CRVS Cervenica-Dubn 62.38 312 *eP* **P 07 39 02.1 +2.6**
CRVS Cervenica-Dubn 62.38 312 *eP* **P 07 39 02.1 +2.6**
VYHS Vyhne 64.16 313 *eP* **P 07 39 18.1 +6.8**
VYHS pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
VYHS Vyhne 64.16 313 *e* **P 07 39 18.1 +6.8**
OKC Ostrava-Krasne 64.16 314 AMS AMS 08 08 10.0
comp=Z,400nm,17.1s
NB2 NORSAR Subarra 64.37 327 P **P 07 39 11.1 -1.3**
comp=Z,5.1nm,0.8s,mb4.6,baz=73,slow=6.9
NOA NORSAR Array B 64.37 327 P **P 07 39 11.1 -1.3**
comp=Z,2.0nm,0.6s,mb4.3,baz=74,slow=6.7,SNR=9.2
NOA NORSAR Array B 64.37 327 P **P 07 39 11.1 -1.3**
NOA pmax pmax
comp=Z,2.0nm,0.6s
NOA NORSAR Array B 64.37 327 P **P 07 39 11.1 -1.4**
DPC Dobruska-Polom 65.11 315 *eP* **P 07 39 13.3 -4.1**
DPC MLR MLR
comp=Z,600nm,18.8s,MS4.8
DPC Dobruska-Polom 65.11 315 *eP* **P 07 39 17.1 -0.3**
DPC AMS AMS 08 08 40.0
comp=Z,600nm,18.8s
NWAO Narrogin (SRO) 65.11 168 P **P 07 39 17.9 +0.4**
comp=Z,14nm,0.8s,mb5.0,baz=307,slow=5.1,SNR=4.8
NWAO Narrogin (SRO) 65.11 168 P **P 07 39 17.9 +0.4**
NWAO pmax pmax
comp=Z,14nm,0.9s

UPC Upice 65.24 315 *eP* **P 07 39 19.7 +1.4**
UPC Upice 65.24 315 *eP* **P 07 39 19.7 +1.4**
TREC Trest 65.98 314 AMS AMS 08 09 00.0
comp=Z,500nm,15.4s
PVCC Panska Ves 66.10 316 AMS AMS 08 09 00.0
comp=Z,600nm,17.1s
PRU Pruhonice 66.31 315 AMS AMS 08 09 30.0
comp=Z,600nm,19.0s
CLL Collm 66.75 317 *e*(sP) **P 07 39 34.0 +6.0**
CLL *e*PcP PcP 07 39 57.0 +0.2
CLL *e*SS SS 07 52 54.0 +18
CLL *e* 07 53 42.0
CLL *e*SSS 07 57 00.0
TTA Tatalina 67.04 29 *eP* **P 07 39 29.5 -0.1**
TTA pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
TTA Tatalina 67.04 29 *eP* **P 07 39 29.5 -0.1**
comp=Z,6.0nm,0.9s,mb4.6
KHC Kasperske Hory 67.20 315 AMS AMS 08 10 00.0
comp=Z,500nm,17.0s
GERES GERESS Array B 67.23 314 P **P 07 39 31.0 -0.2**
comp=Z,0.3nm,0.2s,mb3.9,baz=65,slow=7.3,SNR=3.6
GERES LR LR 08 10 30.6
comp=Z,429nm,19.2s,MS4.7,baz=356,slow=37
COLD Coldfoot 67.42 24 *eP* **P 07 39 31.9 -0.1**
comp=Z,18nm,1.0s,mb5.0
NKC Novy Kostel 67.47 316 AMS AMS 08 10 20.0
comp=Z,500nm,17.2s
SVW2 Sparrevohn 67.98 31 *eP* **P 07 39 36.4 +0.8**
CHUM Lake Minchumin 68.14 28 *eP* **P 07 39 37.0 +0.4**
comp=Z,7.4nm,0.7s,mb4.8
BPAW Bear Paw Mtn. 68.57 27 *eP* **P 07 39 39.0 -0.2**
comp=Z,7.9nm,0.8s,mb4.7
PPLA Purkeypile 68.64 29 *eP* **P 07 39 40.2 +0.5**
comp=Z,64nm,1.5s,mb5.3
QLP Quilpie 69.30 142 *eP* **P 07 39 43.8 -0.4**
COLA College 69.39 26 *eP* **P 07 39 44.3 0.0**
COLA pmax pmax
comp=Z,15nm,0.7s,mb5.0
COLA College 69.39 26 *eP* **P 07 39 44.3 0.0**
comp=Z,15nm,0.7s,mb5.0
RSO Redoubt South 69.51 31 *eP* **P 07 39 45.4 +0.2**
RC01 Rabbit Creek A 70.51 30 *eP* **P 07 39 51.3 0.0**
comp=Z,10nm,1.0s,mb4.7
PMR Palmer 70.52 29 *eP* **P 07 39 50.5 -0.8**
PMR pmax pmax
comp=Z,27nm,1.3s,mb5.0
PMR Palmer 70.52 29 *eP* **P 07 39 50.5 -0.8**
comp=Z,27nm,1.3s,mb5.0
KMBO Kilima Mbogo 70.69 256 P **P 07 39 54.2 +1.0**
comp=Z,0.7nm,0.4s,mb3.9,baz=52,slow=12,SNR=3.0
KMBO Kilima Mbogo 70.69 256 P **P 07 39 54.2 +1.1**
KMBO pmax pmax
comp=Z,1.0nm,0.4s
KMBO Kilima Mbogo 70.69 256 P **P 07 39 54.2 +1.0**
KDAK Kodiak Island 70.84 33 *i P* **P 07 39 53.0 -0.3**
PAX Paxson 71.27 27 *eP* **P 07 39 55.6 -0.3**
PAX pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
PAX Paxson 71.27 27 *eP* **P 07 39 55.6 -0.3**
comp=Z,4.5nm,0.8s,mb4.5
CDF Champ du Feu 71.30 316 *eP* **P 07 39 55.3 -1.0**
EGAK Eagle 71.85 24 *eP* **P 07 39 59.0 -0.3**
comp=Z,4.5nm,0.8s,mb4.5
MENT Mentasta 71.96 26 *eP* **P 07 39 59.9 -0.1**
INK Inuvik 72.08 19 P **P 07 40 00.2 -0.4**
comp=Z,6.6nm,0.8s,mb4.6,baz=338,slow=5.9
INK Inuvik 72.08 19 P **P 07 40 00.3 -0.3**
INK pmax pmax
comp=Z,7.0nm,0.8s
STKA Stephens Creek 72.30 147 *eP* **P 07 40 02.0 -0.4**
comp=Z,4.7nm,0.6s,mb4.6
STKA Stephens Creek 72.30 147 P **P 07 40 02.2 -0.2**
comp=Z,4.6nm,0.8s,mb4.5,baz=331,slow=7.6,SNR=6.3
STKA Stephens Creek 72.30 147 P **P 07 40 02.2 -0.2**
BMRM Bremner River 72.71 28 *eP* **P 07 40 04.9 +0.4**
comp=Z,27nm,0.9s,mb5.2
DAWY Dawson 72.89 24 *eP* **P 07 40 05.0 -0.5**
LPG La Plagne 72.94 313 *eP* **P 07 40 06.0 -0.2**
comp=Z,31nm,0.8s,mb5.0
LPG La Plagne 72.94 313 *eP* **P 07 40 06.0 -0.2**
LPG pmax pmax
comp=Z,15nm,0.8s,mb5.0
LPG La Plagne 72.94 313 *eP* **P 07 40 06.0 -0.2**
comp=Z,15nm,0.8s,mb5.0
LPL La Plagne 72.94 313 *eP* **P 07 40 05.9 -0.3**
comp=Z,31nm,0.9s,mb4.9
LPL La Plagne 72.94 313 *eP* **P 07 40 05.9 -0.3**
LPL pmax pmax
comp=Z,15nm,0.9s,mb4.9
LPL La Plagne 72.94 313 *eP* **P 07 40 05.9 -0.3**
comp=Z,15nm,0.9s,mb4.9
SUMG Summit 73.22 349 *eP* **P 07 40 07.4 0.0**
comp=Z,33nm,1.5s,mb5.0
SUMG Summit 73.22 349 *i* P **P 07 40 07.2 -0.2**
comp=Z,3.5nm,0.8s,mb4.3
RES Resolute Bay 73.59 5 P **P 07 40 09.6 +0.1**
baz=357,slow=8.0
RES Resolute Bay 73.59 5 P **P 07 40 09.6 +0.1**
CMSA Cobar Meteorol 74.02 144 *eP* **P 07 40 13.1 +0.5**
SMF Signal de Mont 74.18 315 *eP* **P 07 40 12.4 -1.1**
comp=Z,17nm,0.9s,mb4.7
SMF Signal de Mont 74.18 315 *eP* **P 07 40 12.4 -1.1**
SMF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
SMF Signal de Mont 74.18 315 *eP* **P 07 40 12.4 -1.1**
comp=Z,8.6nm,0.9s,mb4.7
AVF Avril sur Loir 74.41 315 *eP* **P 07 40 13.6 -1.2**
comp=Z,17nm,1.0s,mb4.6
AVF Avril sur Loir 74.41 315 *eP* **P 07 40 13.6 -1.2**
AVF pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
AVF Avril sur Loir 74.41 315 *eP* **P 07 40 13.6 -1.2**
comp=Z,8.4nm,1.0s,mb4.6
TCF Toulx Ste Croi 75.34 315 *eP* **P 07 40 19.2 -1.0**
comp=Z,16nm,1.1s,mb4.6
TCF Toulx Ste Croi 75.34 315 *eP* **P 07 40 19.2 -1.0**
TCF pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
TCF Toulx Ste Croi 75.34 315 *eP* **P 07 40 19.2 -1.0**
comp=Z,7.8nm,1.1s,mb4.5
HYT Haines Junctio 75.59 26 *eP* **P 07 40 25.0 +3.7**
SKAG Skagway 77.30 27 *eP* **P 07 40 31.6 +0.6**
comp=Z,13nm,0.9s,mb4.8
SFJD Kangerlussuaq 80.12 350 P **P 07 40 45.7 -0.8**
comp=Z,5.7nm,0.5s,mb4.7,baz=356,slow=7.8,SNR=2.6
SFJD Kangerlussuaq 80.12 350 P **P 07 40 45.7 -0.7**
SFJD pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
SFJD Kangerlussuaq 80.12 350 *i* P **P 07 40 45.9 -0.5**
comp=Z,8.0nm,0.8s,mb4.7
SFJD *i* pP 07 40 52.8 -0.9
YKA Yellowknife Ar 81.60 17 P **P 07 40 54.0 -0.4**
comp=Z,3.4nm,0.6s,mb4.5,baz=330,slow=5.3,SNR=38
YKA Yellowknife Ar 81.60 17 P **P 07 40 54.0 -0.4**
YKA pmax pmax
comp=Z,3.0nm,0.6s
YKA Yellowknife Ar 81.60 17 P **P 07 40 54.0 -0.4**
N12A Clover Valley, 99.75 29 *eP* Pdif 07 42 23.9 +3.0
comp=Z,36nm,0.6s
TXAR Lajitas Array 114.30 26 PKiKP PKiKP 07 47 16.7 -0.2
comp=Z,0.2nm,0.8s,baz=200,slow=4.7,SNR=2.8
TXAR Lajitas Array 114.30 26 *i* PKiKP PKiKP 07 47 16.7 -0.2
SDV Santo Domingo 139.71 351 PKP PKPdf 07 48 05.8 +0.3
comp=Z,2.1nm,0.5s,baz=348,slow=7.1,SNR=3.6
ROSC El Rosal 144.02 357 PKP PKPdf 07 48 11.4 -1.8
comp=Z,6.5nm,0.6s,baz=92,slow=4.3,SNR=8.3
SIV San Ignacio 159.45 314 PKPab PKPab 07 49 13.2 -0.6
comp=Z,0.4nm,0.5s,baz=44,slow=1.3,SNR=2.9
PLCA Paso Flores 169.52 204 PKP PKPdf 07 48 44.3 +0.1
comp=Z,3.4nm,1.2s,baz=207,slow=2.3,SNR=2.2
PLCA PKPab PKPab 07 49 57.7 +0.3
comp=Z,1.4nm,1.1s,baz=45,slow=5.7,SNR=2.0

IGQ ***09*** *07:31:47.1, 1°.39S×77°.49W, h239km±2km, Mb4.6, Ms4.4, Error ellipse: s-maj=3.3km s-min=1.3km az=9.6*
ISCJB ***09*** *07:31:50.0±0.3, 1°.39S±0°.04×77°.43W±0°.08, h216km±4km, mb4.4/14, Error ellipse: s-maj=13.6km s-min=6.1km az=3.1*
IDC ***09*** *07:31:50.1±1.5, 1°.28S×77°.25W, h201km±13km, mb4.0/9, mb1 4.1/11, mb1mx3.8/23, mbtmp4.0/11, Error ellipse: s-maj=19.9km s-min=12.5km az=75.0*
NEIC ***09*** *07:31:51.2±1.0, 1°.33S×77°.40W, h213km±10km, mb4.6/3, MD4.3(IGQ), Error ellipse: s-maj=18.1km s-min=10.6km az=88.0*
NEIC Felt at Manta.
ISC 09 07:31:50.7±0.3, **1°.41S**±0°.04×**77°.38W**±0°.09, **h209**km±5km, **n91**, **g0°80/75**, **mb4.4**/14, **29C-11D**, **Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULBA	**Ulba**	**1.02**	**268**	⇑P	**Pn**	**07 32 21.2**	**-0.3**
BRUN	**Tungurahua Vol**	**1.03**	**269**	⇑P	**Pn**	**07 32 21.3**	**-0.3**
RUN5	**Runtun**	**1.04**	**270**	⇑P	**Pn**	**07 32 21.3**	**-0.3**
BPAT	**Tungurahua Vol**	**1.05**	**265**	⇑P	**Pn**	**07 32 21.5**	**-0.2**
BPAT	**Tungurahua Vol**	**1.05**	**265**	⇑S	**Sn**	**07 32 46.4**	**+0.7**
PATA	**Patacocha**	**1.05**	**265**	⇑P	**Pn**	**07 32 21.5**	**-0.2**
PISA	**Pisayambo**	**1.06**	**289**	⇓S	**Sn**	**07 32 46.4**	**+0.5**
PISA	**Pisayambo**	**1.06**	**289**	⇓P	**Pn**	**07 32 21.9**	**+0.2**
RETU	**Refugio**	**1.06**	**268**	⇑P	**Pn**	**07 32 21.6**	**-0.2**
ARRY	**Arrayan**	**1.08**	**265**	⇑P	**Pn**	**07 32 21.2**	**-0.6**
JUI6	**Juive**	**1.08**	**269**	⇑P	**Pn**	**07 32 21.4**	**-0.6**
BMAS	**Trigal station**	**1.10**	**265**	⇑P	**Pn**	**07 32 21.3**	**-0.7**
BIL2	**Estacion Bilba**	**1.12**	**268**	⇑P	**Pn**	**07 32 21.9**	**-0.3**
MACE	**Macas**	**1.17**	**224**	⇓S	**Sn**	**07 32 47.3**	**0.0**
MACE	**Macas**	**1.17**	**224**	⇓P	**Pn**	**07 32 22.3**	**-0.2**
COV1	**Cotopaxi Volc**	**1.22**	**308**	⇑P	**Pn**	**07 32 23.7**	**+0.8**
TAMB	**Tambo**	**1.22**	**306**	⇑P	**Pn**	**07 32 22.9**	**0.0**
ANT1	**Antisana**	**1.23**	**321**	⇑P	**Pn**	**07 32 23.4**	**+0.3**
BTAM	**Cotopaxi Volca**	**1.25**	**306**	⇑P	**Pn**	**07 32 23.1**	**0.0**
IGUA	**Igualata**	**1.26**	**266**	⇑P	**Pn**	**07 32 22.9**	**-0.4**
MOV1	**Cotopaxi Vol s**	**1.26**	**303**	⇑P	**Pn**	**07 32 23.3**	**0.0**
BMOR	**Cotopaxi Volca**	**1.27**	**302**	⇑S	**Sn**	**07 32 49.0**	**+0.4**
BMOR	**Cotopaxi Volca**	**1.27**	**302**	⇑P	**Pn**	**07 32 23.3**	**0.0**
BVC2	**Cotopaxi Volca**	**1.27**	**306**	⇑P	**Pn**	**07 32 23.4**	**+0.1**
VC1	**Cotopaxi 1**	**1.27**	**307**	⇑P	**Pn**	**07 32 23.4**	**+0.1**
BREF	**Cotopaxi Volca**	**1.29**	**305**	⇑P	**Pn**	**07 32 23.7**	**+0.2**
RIOE	**Riobamba**	**1.29**	**255**	⇓P	**Pn**	**07 32 23.4**	**-0.1**
BNAS	**Cotopaxi Volca**	**1.32**	**304**	⇑P	**Pn**	**07 32 23.9**	**+0.2**
NAS2	**Nasa**	**1.32**	**305**	P	**Pn**	**07 32 23.8**	**+0.1**
LAV3	**Lava3-Reventad**	**1.33**	**349**	⇓P	**Pn**	**07 32 23.5**	**-0.3**
CHAR	**Charly**	**1.35**	**348**	⇓P	**Pn**	**07 32 24.0**	**0.0**
PITA	**Cotopaxi Volc**	**1.35**	**309**	⇑P	**Pn**	**07 32 23.8**	**-0.2**
CONE	**Cono NE Rev Vo**	**1.36**	**349**	⇓P	**Pn**	**07 32 23.9**	**-0.1**
PORT	**Chimborazo Vol**	**1.39**	**268**	P	**Pn**	**07 32 24.9**	**+0.7**
CAYR	**Refugio Cayamb**	**1.55**	**336**	⇓P	**Pn**	**07 32 26.1**	**+0.4**
CAYA	**Cayambe**	**1.59**	**338**	⇓P	**Pn**	**07 32 26.4**	**+0.4**
JUA2	**San Juan 2**	**1.71**	**314**	P	**Pn**	**07 32 26.5**	**-0.5**
GGP	**Refugio Guagua**	**1.73**	**315**	⇑P	**Pn**	**07 32 26.8**	**-0.4**
TERV	**Terraza Guagua**	**1.73**	**315**	P	**Pn**	**07 32 27.0**	**-0.3**
PINO	**Pino**	**1.75**	**315**	⇑P	**Pn**	**07 32 27.1**	**-0.4**
YANA	**Yana**	**1.75**	**317**	P	**Pn**	**07 32 27.0**	**-0.4**
OTAV	**Otavalo**	**1.96**	**327**	⇑P	**Pn**	**07 32 29.1**	**-0.3**
OTAV	**Otavalo**	**1.96**	**327**	⇑S	**Sn**	**07 33 00.7**	**+1.0**
OTAV	**Otavalo**	**1.96**	**327**	*e*Pn	**Pn**	**07 32 28.5**	**-0.9**
OTAV				*e*Sn	**Sn**	**07 33 01.2**	**+1.5**
COTA	**Cotacachi**	**1.98**	**331**	⇓P	**Pn**	**07 32 29.4**	**-0.3**
JAMA	**Jama**	**3.04**	**292**	⇑P	**Pn**	**07 32 38.4**	**-2.9**
ATAH	**Atahualpa**	**5.78**	**190**	P	**Pn**	**07 33 16.1**	**+0.8**
	34nm,0.3s,baz=20,slow=9.8,SNR=162						
ATAH				S	**Sn**	**07 34 21.7**	**-0.6**
	43nm,0.3s,baz=269,slow=23,SNR=18						
ROSC	**El Rosal**	**6.93**	**26**	P	**Pn**	**07 33 31.9**	**+1.7**
	1.2nm,0.3s,baz=262,slow=9.9,SNR=8.7						
NNA	**Nana**	**10.52**	**177**	P	**Pn**	**07 34 17.3**	**+0.7**
	1.7nm,0.3s,baz=334,slow=13,SNR=4.6						
NNA				S	**Sn**	**07 36 05.2**	**-9.2**
	6.0nm,0.3s,baz=106,slow=21,SNR=12						
NNA	**Nana**	**10.52**	**177**	P	**Pn**	**07 34 17.3**	**+0.7**
NNA				S	**Sn**	**07 36 05.2**	**-9.2**
SDV	**Santo Domingo**	**12.24**	**33**	P	**Pn**	**07 34 38.7**	**+0.2**
	3.0nm,0.3s,baz=275,slow=10,SNR=29						
PCRV	**Puerto La Cruz**	**17.13**	**48**	P	**P**	**07 35 38.3**	**+1.6**
	6.6nm,0.3s,baz=251,slow=2.7,SNR=23						
LPAZ	**La Paz**	**17.37**	**149**	P	**P**	**07 35 43.0**	**+3.8**
	0.5nm,0.3s,baz=333,slow=8.5,SNR=17						
LPAZ	**La Paz**	**17.37**	**149**	P	**P**	**07 35 43.0**	**+3.8**
MTDJ	**Mount Denham**	**19.51**	**360**	*eP*	**P**	**07 36 04.8**	**+2.4**
	28nm,0.8s						
GRGR	**Grenville**	**20.62**	**49**	*eP*	**P**	**07 36 11.9**	**-2.4**
	107nm,1.2s						
SIV	**San Ignacio**	**21.64**	**133**	P	**P**	**07 36 25.4**	**+0.4**
	3.9nm,0.3s,mb4.3,baz=313,slow=10,SNR=54						
SJG	**San Juan**	**22.33**	**29**	P	**P**	**07 36 29.8**	**-1.5**
	8.4nm,0.4s,mb4.6,baz=306,slow=16,SNR=4.9						
SJG	**San Juan**	**22.33**	**29**	P	**P**	**07 36 29.8**	**-1.5**
PLCA	**Paso Flores**	**39.63**	**172**	P	**P**	**07 39 03.7**	**+1.6**
	10nm,0.8s,mb4.3,baz=346,slow=9.9,SNR=22						
ANMO	**Albuquerque**	**45.27**	**326**	P	**P**	**07 39 48.5**	**+0.8**
	3.3nm,0.6s,mb3.8,baz=142,slow=11,SNR=5.6						
PDAR	**Pinedale Array**	**52.66**	**330**	P	**P**	**07 40 43.6**	**+0.1**
	0.6nm,0.5s,mb3.3,baz=126,slow=6.1,SNR=2.7						
SCHQ	**Schefferville**	**56.72**	**7**	P	**P**	**07 41 11.4**	**-1.1**
	2.9nm,0.7s,mb4.0,baz=196,slow=7.4,SNR=5.9						
LIC	**Lamto**	**72.62**	**83**	*eP*	**P**	**07 42 55.4**	**-0.7**
	54nm,0.9s,mb5.2						
TIC	**Toumodi**	**72.66**	**83**	*eP*	**P**	**07 42 55.5**	**-0.8**
	30nm,1.0s,mb4.9						
DBIC	**Dimbokro**	**72.82**	**83**	P	**P**	**07 42 56.6**	**-0.7**
	9.5nm,0.6s,mb4.6,baz=258,slow=5.6,SNR=28						
KIC	**Kosan Boka**	**72.92**	**83**	*eP*	**P**	**07 42 57.3**	**-0.5**
	55nm,0.7s,mb5.3						
INK	**Inuvik**	**79.37**	**342**	P	**P**	**07 43 33.0**	**-0.1**
	7.3nm,0.7s,mb4.4,baz=123,slow=5.2,SNR=9.1						
TORD	**Torodi Ar. Bea**	**79.69**	**76**	P	**P**	**07 43 34.6**	**-1.2**
	2.5nm,0.4s,mb4.2,baz=280,slow=6.1,SNR=15						
TAM	**Tamanrasset**	**84.00**	**67**	*eP*	**P**	**07 43 58.9**	**+0.7**
	5.4nm,0.9s,mb4.3						
QSPA	**South Pole Qui**	**88.65**	**180**	*eP*	**P**	**07 44 21.9**	**+2.3**
	12nm,1.2s,mb4.6						
ZALV	**Zalesovo Beam**	**125.62**	**13**	PKP	PKPdf	07 50 26.5	-0.6
	1.8nm,0.3s,baz=298,slow=1.5,SNR=7.4						
ZALV	**Zalesovo Beam**	**125.62**	**13**	PKP	PKPdf	07 50 26.5	-0.6
KURK	**Kurchatov**	**126.83**	**19**	PKP	PKPdf	07 50 29.6	0.0
	1.5nm,0.6s,baz=321,slow=2.3,SNR=9.1						
MKAR	**Makanchi Array**	**131.44**	**19**	PKP	PKPdf	07 50 37.6	-0.9
	0.5nm,0.3s,baz=7.9,slow=3.6,SNR=5.0						
MKAR				SKPbc	SKPbc	07 53 44.9	+0.7
	0.4nm,0.3s,baz=337,slow=3.3,SNR=6.4						
SONM	**Songino Array**	**133.64**	**356**	SKPbc	SKPbc	07 53 52.7	+1.0
	0.8nm,0.8s,baz=347,slow=6.1,SNR=3.8						
KSRS	**Korea Array**	**137.23**	**330**	PKP	PKPdf	07 50 49.8	+0.2
	0.6nm,0.4s,baz=52,slow=1.2,SNR=4.1						
ASAR	**Alice Springs**	**140.67**	**229**	PKhKP		07 50 48.6	
	0.6nm,0.3s,baz=121,slow=3.7,SNR=20						
ASAR				PKP	PKPdf	07 50 56.0	-0.2
	1.0nm,0.5s,baz=126,slow=2.3,SNR=9.9						
WRA	**Warramunga Arr**	**142.34**	**234**	PKhKP		07 50 54.8	
	1.8nm,0.5s,baz=120,slow=3.1,SNR=58						
WRA				PKP	PKPdf	07 50 58.8	-0.6
	1.6nm,0.5s,baz=110,slow=2.5,SNR=15						
WRA				SKPbc	SKPbc	07 54 17.1	-0.4
	2.1nm,0.9s,baz=117,slow=2.5,SNR=5.7						
WRA	**Warramunga Arr**	**142.34**	**234**	PKP		07 50 54.8	
WRA				PKP	PKPdf	07 50 58.8	-0.6
WRA				SKPbc	SKPbc	07 54 17.1	-0.4
KKN	**Kakani**	**148.96**	**31**	*eP*	PKPbc	07 51 13.8	-0.9
	22nm,0.5s						
DMN	**Daman**	**149.02**	**31**	*eP*	PKPbc	07 51 14.1	-0.7
GUN	**Gumba**	**149.16**	**30**	*eP*	PKPbc	07 51 14.0	-1.2
PKIN	**Phulchoki**	**149.19**	**31**	*eP*	PKPbc	07 51 14.4	-0.8
PKIN	**Phulchoki**	**149.19**	**31**	*eP*	PKPbc	07 51 14.6	-0.7
	40nm,0.3s						
PKI	**Pulchoki**	**149.20**	**31**	*eP*	PKPbc	07 51 14.6	-0.7
JIRN	**Jiri**	**149.52**	**30**	*eP*	PKPbc	07 51 15.5	-0.6
	10nm,0.5s						
RAMN	**Ramite**	**150.31**	**30**	*eP*	PKPbc	07 51 17.2	-0.8
TAPN	**Taplejung**	**150.51**	**28**	*eP*	PKPbc	07 51 17.7	-0.7
	24nm,0.5s						
TAPN	**Taplejung**	**150.51**	**28**	*eP*	PKPbc	07 51 17.

ML3.8, mb4.8(NEIC)
*ISCJB **09** 07:33:26.5±0.4, 13°.32N±0°.03×90°.72W±0°.03, h68km±4km, mb4.7/109, Error ellipse: s-maj=7.2km s-min=3.2km az=41.0*
*NEIC **09** 07:33:28.2±1.0, 13°.35N×90°.67W, h65km±8km, mb4.8/99, Error ellipse: s-maj=8.8km s-min=5.2km az=211.0*
*IDC **09** 07:33:30.0±1.8, 13°.61N×90°.51W, h74km±14km, mb4.3/20, mb1 4.5/22, mb1mx4.3/30, mbtmp4.3/22, MS4.4/17, Ms1 4.4/17, ms1mx4.2/31, Error ellipse: s-maj=22.6km s-min=9.9km az=49.0*

ISC 09 07:33:28.4±0.4, 13°.42N±0°.03×90°.67W±0°.03, h62km±4km, n611, σ0°83/589, mb4.8/108, **180C-178D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**0.97**	**3**	*e*P		**Pn**	**07 33 46.1**	**-0.1**
FUG	**Fuego 3**	**1.04**	**351**	⇓*e*P		**Pn**	**07 33 45.9**	**-1.3**
SBLS	**San Blas**	**1.10**	**67**	*e*P		**Pn**	**07 33 47.8**	**-0.1**
SBLS				*e*S		**Sn**	**07 34 03.7**	**+1.4**
RTR	**El Retiro**	**1.10**	**64**	*e*P		**Pn**	**07 33 48.2**	**+0.3**
SNJE	**San Jose**	**1.13**	**66**	*e*P		**Pn**	**07 33 48.5**	**+0.2**
FG6		**1.16**	**350**	⇑*e*P		**Pn**	**07 33 47.0**	**-1.6**
RBDL	**Robledal**	**1.18**	**54**	⇓*e*P		**Pn**	**07 33 49.4**	**+0.4**
NBG	**Las Nubes**	**1.21**	**15**	⇓*e*P		**Pn**	**07 33 50.5**	**+1.3**
JAT	**Jato**	**1.30**	**314**	*e*P		**Pn**	**07 33 45.7**	**-4.8**
BOQS	**Boqueron**	**1.39**	**77**	*e*P		**Pn**	**07 33 52.0**	**+0.3**
TP2	**Tecpan 2**	**1.40**	**346**	⇑*e*P		**Pn**	**07 33 50.7**	**-1.2**
SNET	**Serv Nac Est T**	**1.42**	**79**	*e*P		**Pn**	**07 33 52.0**	**-0.2**
SNET				*e*S		**Sn**	**07 34 11.6**	**+1.6**
LFRS	**El Faro**	**1.58**	**82**	*e*P		**Pn**	**07 33 54.8**	**+0.5**
APG	**El Apazote**	**1.59**	**7**	P		**Pn**	**07 33 54.8**	**+0.4**
	207nm,0.3s,baz=169,slow=5.2,SNR=1001							
APG				S		**Sn**	**07 34 22.1**	**+8.1**
	137nm,0.3s,baz=98,slow=19,SNR=9.1							
MTO2	**Montecristo 2**	**1.60**	**52**	*e*P		**Pn**	**07 33 56.1**	**+1.5**
MTO2				*e*S		**Sn**	**07 34 18.3**	**+4.0**
LBRS	**Las Brisas**	**1.61**	**78**	*e*P		**Pn**	**07 33 54.9**	**+0.2**
SNVI	**San Vicente**	**1.79**	**84**	*e*P		**Pn**	**07 33 57.5**	**+0.4**
MRL	**Marmol**	**1.89**	**30**	⇑*e*P		**Pn**	**07 34 01.1**	**+2.6**
VSM	**San Miguel**	**2.33**	**89**	*e*P		**Pn**	**07 34 05.1**	**+0.7**
BLLM	**Bellamira**	**2.37**	**89**	*e*P		**Pn**	**07 34 05.4**	**+0.5**
CAHU	**Cacacuatique**	**2.42**	**81**	*e*P		**Pn**	**07 34 06.4**	**+0.8**
CNCH	**Conchagua**	**2.76**	**93**	*e*P		**Pn**	**07 34 10.1**	**-0.3**
TGUH	**Tegucigalpa,Un**	**3.36**	**79**	*e*Pn		**Pn**	**07 34 19.4**	**+0.9**
TGUH	**Tegucigalpa,Un**	**3.36**	**79**	*e*P		**Pn**	**07 34 18.4**	**-0.1**
TGUH				AML		AML	07 35 20.1	
	comp=N,2μm,1.1s							
CRIN	**San Cristobal**	**3.60**	**101**	*e*P		**Pn**	**07 34 20.7**	**-1.1**
CNGN	**Cerro Negro**	**3.98**	**103**	*e*P		**Pn**	**07 34 27.7**	**+0.8**
CNGN				AML		AML	07 35 38.0	
	comp=N,288nm,0.5s							
MOMN	**Momotombo**	**4.15**	**104**	*e*P		**Pn**	**07 34 28.7**	**-0.6**
COPN	**Copaltepe**	**4.16**	**107**	*e*P		**Pn**	**07 34 27.7**	**-1.8**
CSAN		**4.32**	**106**	*e*P		**Pn**	**07 34 30.9**	**-0.8**
XAVN	**Gruta Xavier**	**4.42**	**106**	*e*P		**Pn**	**07 34 31.6**	**-1.4**
MGAN	**Managua**	**4.49**	**106**	*e*P		**Pn**	**07 34 33.5**	**-0.6**
HUEN		**4.51**	**103**	*e*P		**Pn**	**07 34 33.6**	**-0.7**
SSN	**San Juan del S**	**5.15**	**114**	*e*P		**Pn**	**07 34 41.8**	**-1.2**
CMIG	**Matias Romero**	**5.47**	**312**	P		**Pn**	**07 34 41.6**	**-5.7**
	comp=N,2.9nm,0.3s,baz=129,slow=11,SNR=28							
CMIG				S		**Sn**	**07 35 49.1**	**+0.2**
	comp=N,13nm,0.3s,baz=58,slow=19,SNR=3.6							
NY14	**Universidad de**	**5.73**	**118**	*i* P		**Pn**	**07 34 50.1**	**-0.8**
GBS3	**Finca Las Im¯¡**	**5.73**	**117**	*i* P		**Pn**	**07 34 49.4**	**-1.6**
LAPC	**Finca la Perla**	**5.76**	**117**	*i* P		**Pn**	**07 34 48.8**	**-2.5**
BUEV	**Buena Vista**	**5.77**	**116**	*i* P		**Pn**	**07 34 51.1**	**-0.3**
BUEV				*i* S		**Sn**	**07 35 54.5**	**-1.8**
VCR	**Vista de Mar**	**5.92**	**123**	*e*P		**Pn**	**07 34 52.5**	**-1.1**
LIM1	**Limonal**	**5.95**	**116**	*i* P		**Pn**	**07 34 54.0**	**0.0**
JTS	**JuntasAbangare**	**6.40**	**118**	P		**Pn**	**07 34 59.6**	**-0.6**
	comp=N,3.8nm,0.3s,baz=315,slow=18,SNR=23							
JTS				S		**Sn**	**07 36 12.7**	**+0.8**
	comp=N,3.6nm,0.3s,baz=308,slow=19,SNR=2.1							
JTS				LR		LR	07 37 45.0	
	comp=N,2μm,21.4s,baz=147,slow=40							
JTS	**JuntasAbangare**	**6.40**	**118**	*e*Pn		**Pn**	**07 34 59.5**	**-0.7**
	comp=N,78nm,0.7s							
JTS				*e*Sn		**Sn**	**07 36 12.2**	**+0.3**
JTS	**JuntasAbangare**	**6.40**	**118**	*e*P		**Pn**	**07 34 59.3**	**-0.8**
JCR	**Jicaral**	**6.50**	**122**	*e*P		**Pn**	**07 35 00.4**	**-1.0**
CGA2	**Cerro Gallo 2**	**6.95**	**118**	*e*P		**Pn**	**07 35 07.8**	**+0.1**
PRS1	**Puriscal**	**7.10**	**118**	*e*P		**Pn**	**07 35 10.1**	**+0.3**
TEIG	**Tepich**	**7.15**	**18**	*e*Pn		**Pn**	**07 35 12.6**	**+2.2**
TEIG	**Tepich**	**7.15**	**18**	*e*P		**Pn**	**07 35 11.7**	**+1.3**
LAJ	**Bijagual**	**7.32**	**118**	*e*P		**Pn**	**07 35 08.3**	**-4.5**
QCR	**Quepos**	**7.51**	**121**	*e*P		**Pn**	**07 35 15.5**	**+0.2**
URSC	**Urasca**	**7.63**	**117**	*e*P		**Pn**	**07 35 18.6**	**+1.6**
BUS	**Buena Vista**	**7.78**	**119**	*e*P		**Pn**	**07 35 20.8**	**+1.7**
BAR1		**8.32**	**119**	*e*P		**Pn**	**07 35 27.8**	**+1.4**
ACR	**Cerro Adams**	**8.75**	**122**	*e*P		**Pn**	**07 35 33.5**	**+1.2**
DWPF	**Disney**	**16.97**	**29**	*e*P		**Pn**	**07 37 24.6**	**+2.9**
	comp=N,68nm,0.9s							
HKT	**Hockley**	**17.13**	**345**	*e*Pn		**Pn**	**07 37 25.6**	**+1.9**
	comp=N,68nm,1.5s							
BRAL	**Brewton**	**17.82**	**10**	*e*P		**Pn**	**07 37 33.1**	**+0.9**
	comp=N,334nm,1.8s							
OTAV	**Otavalo**	**17.83**	**136**	*e*P		**Pn**	**07 37 36.2**	**+3.8**
ROSC	**El Rosal**	**18.22**	**116**	P		**Pn**	**07 37 40.8**	**+3.6**
	comp=N,0.7nm,0.3s,baz=247,slow=2.1,SNR=7.5							
ROSC	**El Rosal**	**18.22**	**116**	*e*P		**Pn**	**07 37 40.0**	**+2.8**
NATX	**Nacogdoches**	**18.62**	**349**	*e*P		**Pn**	**07 37 41.8**	**0.0**
	comp=N,276nm,2.1s							
JCT	**Junction City**	**18.96**	**335**	*e*P		**Pn**	**07 37 44.1**	**-1.8**
	comp=N,19nm,0.9s							
LRAL	**Lakeview Retre**	**19.82**	**9**	*e*P		**Pn**	**07 37 54.4**	**-1.6**
	comp=N,32nm,1.2s							
627A	**Terlingua Ranc**	**19.84**	**326**	⇑P		**Pn**	**07 37 54.1**	**-2.2**
	baz=20,SNR=73							
TXAR	**Lajitas Array**	**19.91**	**325**	P		**Pn**	**07 37 54.8**	**-2.3**
	comp=N,1.8nm,0.3s,baz=152,slow=13,SNR=133							
TXAR				PcP		PcP	07 42 10.9	+0.9
	comp=N,0.1nm,0.3s,baz=137,slow=3.3,SNR=3.9							
528A	**Cox Ranch, San**	**20.08**	**328**	⇑P		**P**	**07 37 56.5**	**-0.4**
	baz=20,SNR=23							
SDV	**Santo Domingo**	**20.16**	**101**	P		**P**	**07 37 57.6**	**-0.3**
	comp=N,22nm,0.7s,baz=310,slow=6.0,SNR=12							
SDV				PcP		PcP	07 42 12.1	+1.4
	comp=N,5.9nm,0.7s,baz=330,slow=6.2,SNR=5.9							
SDV	**Santo Domingo**	**20.16**	**101**	*e*P		**P**	**07 37 57.8**	**-0.1**
	comp=N,21nm,0.8s							
626A	**Big Bend Ranch**	**20.34**	**324**	⇑P		**P**	**07 37 59.4**	**-0.3**
	baz=20,SNR=74							
428A	**Kincaid Ranch,**	**20.48**	**329**	⇑P		**P**	**07 38 00.6**	**-0.7**
	baz=21,SNR=32							
527A	**Woodward Ranch**	**20.50**	**326**	⇓P		**P**	**07 38 01.1**	**-0.3**
	baz=21,SNR=64							
526A	**Mary Lane Ranc**	**20.70**	**325**	⇑P		**P**	**07 38 03.5**	**0.0**
	baz=21,SNR=43							
427A	**Hayter Ranch,**	**20.95**	**328**	⇓P		**P**	**07 38 05.3**	**-0.9**
	baz=21,SNR=33							
GOGA	**Godfrey**	**20.96**	**17**	*e*P		**P**	**07 38 07.5**	**+1.2**
	comp=N,30nm,0.9s							
OXF	**Oxford**	**21.03**	**3**	*e*P		**P**	**07 38 09.0**	**+1.9**
	comp=N,155nm,1.2s,mb5.2							
328A	**Wristen Ranch,**	**21.08**	**330**	⇑P		**P**	**07 38 06.6**	**-1.1**
	baz=21,SNR=116							
426A	**McDonald Obser**	**21.13**	**326**	⇑P		**P**	**07 38 07.6**	**-0.7**
	baz=21,SNR=85							
MIAR	**Mount Ida**	**21.20**	**353**	*e*P		**P**	**07 38 08.0**	**-0.9**
	comp=N,61nm,1.4s,mb4.7							
327A	**Balmorhea Ranc**	**21.41**	**329**	⇑P		**P**	**07 38 10.1**	**-1.1**
	baz=22							
326A	**Caldwell Ranch**	**21.62**	**328**	⇓P		**P**	**07 38 12.3**	**-1.1**
	baz=22,SNR=290							
425A	**Indio Mountain**	**21.75**	**325**	⇑P		**P**	**07 38 13.4**	**-1.5**
	baz=22,SNR=147							
NHSC	**New Hope**	**21.81**	**24**	*e*P		**P**	**07 38 18.4**	**+2.9**
	comp=N,107nm,1.1s,mb5.2							
227A	**Bennet, Jal**	**21.83**	**330**	⇓P		**P**	**07 38 13.8**	**-1.8**
	baz=22,SNR=22							
SWET	**Sewanee**	**22.12**	**10**	*e*P		**P**	**07 38 19.2**	**+0.5**
325A	**Bean Ranch, Si**	**22.19**	**326**	⇑P		**P**	**07 38 17.5**	**-2.0**
	baz=22,SNR=69							
226A	**Malaga, Loving**	**22.27**	**329**	⇑P		**P**	**07 38 18.6**	**-1.7**
	baz=22,SNR=38							
127A	**Arkansas Junct**	**22.41**	**331**	⇓P		**P**	**07 38 18.8**	**-3.0**
	baz=22,SNR=15							
JSC	**Jenkinsville**	**22.46**	**21**	*e*P		**P**	**07 38 22.4**	**+0.1**
324A	**Moseley Ranch,**	**22.52**	**325**	⇑P		**P**	**07 38 21.0**	**-2.0**
	baz=23,SNR=109							
CPCT	**Cooper Cave**	**22.63**	**13**	*e*P		**P**	**07 38 24.7**	**+0.6**
MNTX	**Cornudas Mount**	**22.66**	**326**	*e*P		**P**	**07 38 22.3**	**-2.2**
	comp=N,68nm,1.0s,mb5.0							
225A	**Deer Hill, Car**	**22.68**	**327**	⇓P		**P**	**07 38 22.8**	**-1.9**
	baz=23,SNR=96							
126A	**Clayton Basin,**	**22.70**	**330**	⇓P		**P**	**07 38 22.5**	**-2.4**
	baz=23,SNR=13							
WVT	**Waverly**	**22.76**	**6**	*e*P		**P**	**07 38 25.0**	**-0.5**
	comp=N,15nm,0.8s,mb4.5							
GLAT	**Glass**	**22.79**	**3**	*e*P		**P**	**07 38 26.4**	**+0.6**
Z27A	**Tatum**	**22.87**	**332**	⇓P		**P**	**07 38 23.9**	**-2.8**
	baz=23,SNR=23							
CPRX	**Cap Rock**	**22.94**	**331**	*e*P		**P**	**07 38 26.2**	**-1.2**
	comp=N,19nm,1.0s,mb4.5							
TKL	**Tuckaleechee C**	**23.00**	**14**	P		**P**	**07 38 28.3**	**+0.3**
	comp=N,23nm,0.7s,mb4.8,baz=187,slow=9.4,SNR=58							
TKL				LR		LR	07 48 18.7	
	comp=N,2μm,19.9s,baz=111,slow=39							
224A	**Cornudas Mount**	**23.03**	**326**	⇓P		**P**	**07 38 26.4**	**-1.9**
	baz=23,SNR=96							
125A	**Gardner Draw,**	**23.03**	**329**	⇑P		**P**	**07 38 26.4**	**-1.9**
	baz=23,SNR=31							
PARMO	**Parma**	**23.16**	**2**	*e*P		**P**	**07 38 30.0**	**+0.3**
Z26A	**Caprock**	**23.19**	**331**	⇓P		**P**	**07 38 28.2**	**-1.8**
	baz=23,SNR=30							
MSTX	**Muleshoe**	**23.23**	**334**	⇓P		**P**	**07 38 27.9**	**-2.4**
	baz=23,SNR=13							
Y27A	**Causey**	**23.33**	**333**	⇓P		**P**	**07 38 28.8**	**-2.4**
	baz=24,SNR=18							
124A	**Stringfield Ra**	**23.48**	**327**	⇓P		**P**	**07 38 31.4**	**-1.2**
	baz=24,SNR=196							
223A	**Chaparral, Ant**	**23.48**	**325**	⇓P		**P**	**07 38 31.3**	**-1.3**
	baz=24							
Z25A	**Roswell**	**23.56**	**329**	⇓P		**P**	**07 38 31.5**	**-1.8**
	baz=24,SNR=28							
AMTX	**Amarillo**	**23.58**	**337**	*e*P		**P**	**07 38 31.9**	**-1.6**
	comp=N,54nm,1.2s,mb4.8							
Y26A	**Elida**	**23.66**	**332**	⇑P		**P**	**07 38 31.9**	**-2.3**
	baz=24,SNR=6.1							
ATAH	**Atahualpa**	**23.78**	**148**	P		**P**	**07 38 38.2**	**+2.7**
	comp=N,13nm,1.0s,mb4.3,baz=329,slow=8.5,SNR=3.5							
123A	**Bell Site, Whi**	**23.86**	**326**	⇓P		**P**	**07 38 35.1**	**-1.0**
	baz=24							
Z24A	**Sheeppen Canyo**	**23.92**	**328**	⇓P		**P**	**07 38 36.3**	**-0.3**
	baz=24,SNR=56							
222A	**Williams Famil**	**23.93**	**324**	⇑P		**P**	**07 38 36.0**	**-0.7**
	baz=24,SNR=16							
X27A	**F and S Farms,**	**23.95**	**334**	⇓P		**P**	**07 38 34.4**	**-2.4**
	baz=24							
Y25A	**Mesa, Roswell**	**24.07**	**330**	⇓P		**P**	**07 38 37.3**	**-0.7**
	baz=24,SNR=22							
X26A	**CR and CF Fran**	**24.18**	**333**	⇓P		**P**	**07 38 37.4**	**-1.6**
	baz=24							
320A	**Kipp Ranch, An**	**24.24**	**320**	⇓P		**P**	**07 38 39.5**	**-0.1**
	baz=24,SNR=24							
221A	**Mesquite Ranch**	**24.26**	**323**	⇓P		**P**	**07 38 39.9**	**+0.1**
	baz=24,SNR=7.7							
W27A	**Bowe Ranch, En**	**24.29**	**335**	⇓P		**P**	**07 38 38.3**	**-1.7**
	baz=24,SNR=8.4							
122A	**Conniff Cattle**	**24.31**	**325**	⇑P		**P**	**07 38 40.3**	**0.0**
	baz=24,SNR=23							
Z23A	**Rita Site, Whi**	**24.32**	**327**	⇑P		**P**	**07 38 40.0**	**-0.3**
	baz=24,SNR=39							
Y24A	**Capitan**	**24.43**	**329**	⇑P		**P**	**07 38 40.7**	**-0.6**
	baz=25,SNR=25							
X25A	**Clemmons Ranch**	**24.55**	**331**	⇓P		**P**	**07 38 41.5**	**-0.8**
	baz=25							
W26A	**Owens Ranch, T**	**24.61**	**333**	⇑P		**P**	**07 38 41.2**	**-1.7**
	baz=25							
220A	**Playas Peak, P**	**24.63**	**321**	⇑P		**P**	**07 38 43.4**	**+0.3**
	baz=25,SNR=68							
121A	**Cookes Peak, D**	**24.64**	**323**	⇑P		**P**	**07 38 44.1**	**+0.9**
	baz=25,SNR=40							
Z22A	**Elephant Butte**	**24.71**	**326**	⇓P		**P**	**07 38 43.4**	**-0.5**
	baz=25,SNR=38							
319A	**Douglas**	**24.74**	**319**	⇑P		**P**	**07 38 44.4**	**+0.3**
	baz=25,SNR=25							
Y23A	**Lovelace Mesa,**	**24.75**	**328**	⇓P		**P**	**07 38 44.2**	**0.0**
	baz=25,SNR=56							
X24A	**Lazy VL Ranch,**	**24.95**	**330**	⇑P		**P**	**07 38 45.6**	**-0.3**
	baz=25							
WCI	**Wyandotte Cave**	**25.02**	**8**	*e*P		**P**	**07 38 46.0**	**-0.6**
	comp=N,51nm,1.1s,mb5.0							
W25A	**X Bar L Ranch,**	**25.03**	**333**	⇑P		**P**	**07 38 46.9**	**+0.2**
	baz=25,SNR=13							
Z21A	**St. Cloud Mine**	**25.14**	**325**	⇑P		**P**	**07 38 48.4**	**+0.6**
	baz=25,SNR=42							
120A	**U Bar Ranch, L**	**25.15**	**322**	⇓P		**P**	**07 38 48.6**	**+0.8**
	baz=25,SNR=26							
219A	**White Tail Can**	**25.15**	**320**	⇓P		**P**	**07 38 48.2**	**+0.4**
	baz=25,SNR=31							
BNM	**Barren Site**	**25.22**	**328**	*e*P		**P**	**07 38 49.2**	**+0.8**
	comp=N,20nm,0.8s,mb4.7							
V26A	**Tequesquite Ra**	**25.22**	**334**	⇑P		**P**	**07 38 49.2**	**+0.8**
	baz=25,SNR=10.0							
Y22A	**Socorro**	**25.23**	**327**	⇓P		**P**	**07 38 49.1**	**+0.5**
	baz=25,SNR=57							
318A	**Bisbee**	**25.24**	**318**	⇓P		**P**	**07 38 48.9**	**+0.2**
	baz=25,SNR=45							
Y22D	**IRIS PASSCAL I**	**25.31**	**327**	⇑P		**P**	**07 38 49.6**	**+0.3**
	baz=25							
ELN	**Prospectdale**	**25.32**	**19**	*e*P		**P**	**07 38 51.2**	**+1.9**
X23A	**Hourglass Bar**	**25.33**	**329**	⇓P		**P**	**07 38 49.2**	**-0.2**
	baz=26							
LPM	**Los Pinos Moun**	**25.34**	**328**	*e*P		**P**	**07 38 50.4**	**+0.8**
BLA	**Blacksburg**	**25.41**	**19**	*e*P		**P**	**07 38 50.5**	**+0.4**
	comp=N,9.2nm,0.8s,mb4.4							
LENM	**Lemitar**	**25.41**	**327**	*e*P		**P**	**07 38 51.7**	**+1.5**
W24A	**Lazy 6 Ranch,**	**25.46**	**331**	⇑P		**P**	**07 38 50.3**	**-0.3**
	baz=26,SNR=12							
Z20A	**Nine Sixteen R**	**25.53**	**323**	⇑P		**P**	**07 38 52.0**	**+0.8**
	baz=26							
V25A	**Rancho No Teng**	**25.61**	**333**	⇑P		**P**	**07 38 52.2**	**+0.2**
	baz=26,SNR=8.5							
218A	**Dragoon**	**25.63**	**319**	⇓P		**P**	**07 38 52.5**	**+0.4**
	baz=26,SNR=9.8							
Y21A	**Point of Rocks**	**25.67**	**326**	⇓P		**P**	**07 38 53.2**	**+0.6**
	baz=26,SNR=72							
LAZ	**Ladron**	**25.68**	**327**	*e*P		**P**	**07 38 53.6**	**+0.9**
	comp=N,10nm,1.1s,mb4.3							
X22A	**Bernardo**	**25.69**	**328**	⇓P		**P**	**07 38 53.3**	**+0.5**
	baz=26							
119A	**Ashpeak Ranch,**	**25.70**	**322**	⇑P		**P**	**07 38 53.3**	**+0.4**
	baz=26,SNR=40							
U26A	**Atchley Ranch,**	**25.72**	**335**	⇓P		**P**	**07 38 52.0**	**-0.9**
	baz=26,SNR=20							
ANMO	**Albuquerque**	**25.76**	**329**	P		**P**	**07 38 52.8**	**-0.5**
	comp=N,4.5nm,0.6s,mb4.2,baz=147,slow=12,SNR=33							
ANMO				PcP		PcP	07 42 24.4	+2.5
	comp=N,2.4nm,0.9s,baz=153,slow=3.5,SNR=3.6							
ANMO				LR		LR	07 51 04.4	
	comp=N,526nm,18.6s,baz=356,slow=41							
ANMO	**Albuquerque**	**25.76**	**329**	*e*P		**P**	**07 38 52.9**	**-0.5**
	comp=N,1.6nm,0.9s,mb3.5							
ANMO				*e*PcP		PcP	07 42 25.1	+3.2
W23A	**Werner Place,**	**25.77**	**330**	⇑P		**P**	**07 38 53.5**	**0.0**
	baz=26							
Y20A	**Horse Springs,**	**25.98**	**325**	⇑P		**P**	**07 38 56.0**	**+0.6**
	baz=26,SNR=85							
217A	**Green Valley**	**25.99**	**318**	⇓P		**P**	**07 38 55.3**	**-0.1**
	baz=26,SNR=21							
U25A	**Circle Dot Ran**	**26.00**	**334**	⇑P		**P**	**07 38 55.4**	**-0.1**
	baz=26,SNR=7.8							
118A	**Homack Ranch,**	**26.02**	**321**	⇑P		**P**	**07 38 55.9**	**+0.1**
	baz=26,SNR=33							
Z19A	**T-Link Ranch,**	**26.05**	**323**	⇓P		**P**	**07 38 55.8**	**-0.2**
	baz=26							
X21A	**Alamocita Cree**	**26.06**	**326**	⇓P		**P**	**07 38 56.4**	**+0.4**
	baz=26,SNR=81							
W22A	**Albuquerque**	**26.06**	**329**	⇑P		**P**	**07 38 56.3**	**+0.3**
	baz=26,SNR=8.8							
KSU1	**Kansas State U**	**26.12**	**349**	*e*P		**P**	**07 38 56.2**	**-0.3**
	comp=N,30nm,0.8s,mb4.9							
V23A	**Ortiz Mt. (NFS**	**26.26**	**331**	⇓P		**P**	**07 38 58.0**	**+0.2**
	baz=26							
TUC	**Tucson**	**26.32**	**319**	*e*P		**P**	**07 38 58.8**	**+0.3**
	comp=N,20nm,1.0s,mb4.6							
Z18A	**Geronimo**	**26.37**	**321**	⇓P		**P**	**07 38 59.6**	**+0.7**
	baz=26,SNR=5.4							
U24A	**Moreno Valley**	**26.38**	**333**	⇓P		**P**	**07 38 59.1**	**+0.2**
	baz=26							
117A	**Oracle**	**26.46**	**319**	⇓P		**P**	**07 38 59.9**	**+0.2**
	baz=27,SNR=12							
W21A	**San Fidel**	**26.50**	**328**	⇓P		**P**	**07 39 00.5**	**+0.5**
	baz=27,SNR=10							
Y19A	**Nutrioso**	**26.52**	**324**	⇓P		**P**	**07 39 00.8**	**+0.6**
	baz=27,SNR=32							
X20A	**Quemado**	**26.52**	**326**	⇑P		**P**	**07 39 00.6**	**+0.4**
	baz=27,SNR=37							
216A	**Three Points,**	**26.56**	**318**	⇑P		**P**	**07 39 00.9**	**+0.3**
	baz=27,SNR=7.8							
T25A	**Trinidad**	**26.63**	**335**	⇓P		**P**	**07 39 00.9**	**-0.2**
	baz=27,SNR=8.6							
U23A	**El Rito**	**26.73**	**331**	⇑P		**P**	**07 39 01.9**	**-0.2**
	baz=27,SNR=21							
V22A	**San Miguel Ran**	**26.75**	**330**	⇓P		**P**	**07 39 02.3**	**0.0**
	baz=27							
Z17A	**San Carlos Hig**	**26.78**	**321**	⇓P		**P**	**07 39 03.1**	**+0.5**
	baz=27,SNR=6.6							
Y18A	**Canyon Day Jun**	**26.85**	**322**	⇓P		**P**	**07 39 03.5**	**+0.4**
	baz=27,SNR=30							
X19A	**St. Johns**	**26.88**	**324**	⇑P		**P**	**07 39 03.9**	**+0.5**
	baz=27,SNR=31							
W20A	**Ramah**	**26.95**	**326**	⇑P		**P**	**07 39 04.5**	**+0.4**
	baz=27,SNR=33							
V21A	**Milan**	**27.02**	**329**	⇑P		**P**	**07 39 04.5**	**-0.2**
	baz=27							
116A	**Eloy**	**27.07**	**318**	⇑P		**P**	**07 39 05.1**	**-0.2**
	baz=27,SNR=9.1							
U22A	**Llaves**	**27.09**	**330**	⇓P		**P**	**07 39 05.8**	**+0.5**
	baz=27,SNR=9.0							
Y17A	**Roosevelt**	**27.28**	**321**	⇑P		**P**	**07 39 06.5**	**-0.5**
	baz=27							
X18A	**Snowflake**	**27.33**	**324**	⇑P		**P**	**07 39 08.1**	**+0.6**
	baz=27,SNR=23							
Z16A	**Peralta Trail,**	**27.40**	**320**	⇓P		**P**	**07 39 07.6**	**-0.5**
	baz=28,SNR=13							
214A	**Organ Pipe Nat**	**27.43**	**316**	⇑P		**P**	**07 39 07.9**	**-0.6**
	baz=28,SNR=12							
W19A	**Sanders**	**27.43**	**325**	⇓P		**P**	**07 39 08.4**	**0.0**
	baz=28,SNR=22							
V20A	**Brimhall**	**27.45**	**327**	⇑P		**P**	**07 39 08.8**	**+0.2**
	baz=28,SNR=6.0							
115A	**Sonoran Desert**	**27.50**	**318**	⇓P		**P**	**07 39 09.0**	**-0.1**
	baz=28,SNR=14							
U21A	**Nageezi**	**27.52**	**329**	⇓P		**P**	**07 39 09.7**	**+0.5**
	baz=28,SNR=13							
ACSO	**Alum Creek Sta**	**27.55**	**13**	*e*P		**P**	**07 39 09.4**	**-0.1**
	comp=N,25nm,0.8s,mb4.9							
SDCO	**Great Sand Dun**	**27.60**	**334**	*e*P		**P**	**07 39 10.7**	**+0.8**
	comp=N,4.6nm,0.6s,mb4.3							
V19A	**Window Rock**	**27.69**	**326**	⇓P		**P**	**07 39 11.1**	**+0.4**
	baz=28							
X17A	**Forest Lakes**	**27.70**	**322**	⇓P		**P**	**07 39 11.1**	**+0.3**
	baz=28,SNR=15							
Y16A	**Circle Bar Ran**	**27.79**	**321**	⇑P		**P**	**07 39 11.7**	**+0.1**
	baz=28							
Z15A	**Gila River Ind**	**27.83**	**319**	⇑P		**P**	**07 39 12.0**	**-0.1**
	baz=28							
T21A	**Navajo Lake**	**27.91**	**330**	⇓P		**P**	**07 39 12.6**	**0.0**
	baz=28							
U20A	**Newcomb**	**27.92**

baz=30
IRM Iron Mountain 30.32 317 ⇓P P 07 39 33.6 -0.5
baz=30,SNR=10
BBSR BB Station 30.33 47 eP P 07 39 34.7 +0.4
comp=N,11nm,0.6s,mb4.8
MONP Monument Peak 30.46 314 ⇓P P 07 39 35.1 -0.2
baz=30
T15A Red Dirt Ranch 30.48 324 ⇑P P 07 39 35.9 +0.4
baz=31,SNR=27
O21A Pagoda 30.50 334 ⇓P P 07 39 35.7 +0.1
baz=31
U14A Mt Trumbull 30.53 323 ⇓P P 07 39 36.8 +0.9
baz=31,SNR=17
N22A Wattenberg Ran 30.58 336 ⇓P P 07 39 36.2 -0.1
baz=31
R17A Hanksville Air 30.60 328 ⇓P P 07 39 36.6 +0.1
baz=31,SNR=20
BRNJ Basking Ridge 30.61 24 eP P 07 39 34.5 -2.0
comp=N,18nm,0.5s,mb5.2
V13A Grand Canyon W 30.64 321 ⇓P P 07 39 37.3 +0.4
baz=31,SNR=24
ECSD EROS Data Cent 30.64 352 eP P 07 39 35.5 -1.3
comp=N,21nm,1.7s,mb4.7
O20A White River Ci 30.77 333 ⇓P P 07 39 38.2 +0.2
baz=31
BELC Belle Mtn. Jos 30.80 316 ⇓P P 07 39 38.4 +0.1
baz=31
Q18A Rafter H Ranch 30.83 330 ⇓P P 07 39 38.9 +0.3
baz=31
W12A Cal Nev Ari 30.84 319 ⇑P P 07 39 38.9 +0.3
baz=31,SNR=23
LDFC Landfair 30.86 319 eP P 07 39 40.7 +2.0
comp=N,29nm,0.9s,mb5.1
R16A Teasdale 30.90 327 ⇑P P 07 39 39.9 +0.7
baz=31,SNR=41
T14A Hurricane 30.92 324 ⇑P P 07 39 39.8 +0.6
baz=31
S15A Panguitch 30.94 325 ⇓P P 07 39 40.4 +0.9
baz=31,SNR=32
N21A Black Mountain 30.98 335 ⇓P P 07 39 40.5 +0.7
baz=31
U13A Pakoon Wash 31.00 322 ⇓P P 07 39 40.6 +0.5
baz=31,SNR=18
GMRC Granite Mounta 31.03 318 ⇑P P 07 39 41.0 +0.7
baz=31,SNR=11
SRU San Rafael 31.03 329 ⇑P P 07 39 40.5 +0.2
baz=31,SNR=8.5
SRU San Rafael 31.03 329 eP P 07 39 40.9 +0.6
comp=N,26nm,1.6s,mb4.8
V12A Nelson 31.10 320 ⇑P P 07 39 41.2 +0.3
baz=31,SNR=33
Q16A Castle Valley 31.21 328 ⇑P P 07 39 42.2 +0.3
baz=31,SNR=9.5
R15A Junction 31.27 326 ⇓P P 07 39 42.9 +0.4
baz=31,SNR=13
P18A Preston Nutter 31.29 330 ⇓P P 07 39 42.9 +0.3
baz=31
O19A Miners Draw (B 31.30 332 ⇓P P 07 39 42.8 +0.2
baz=31
N20A Spence Gulch, 31.35 334 ⇓P P 07 39 43.3 +0.2
baz=32,SNR=11
U12A Valley of Fire 31.36 321 ⇑P P 07 39 43.8 +0.6
baz=32,SNR=12
T13A Saint George 31.37 323 ⇑P P 07 39 44.2 +0.9
baz=32,SNR=25
BINY Binghamton 31.38 21 eP P 07 39 43.2 -0.1
comp=N,12nm,1.0s,mb4.7
MURC Murrieta 31.39 314 ⇓P P 07 39 43.5 -0.1
baz=32
CCUT Cedar City 31.41 324 eP P 07 39 45.4 +1.8
comp=N,25nm,1.0s,mb5.0
P17A Butcher Ranch, 31.42 329 ⇑P P 07 39 43.7 +0.1
baz=32,SNR=7.1
MSU Marysvale 31.44 327 eP P 07 39 45.1 +1.2
MSU ePcP PcP 07 42 39.2 +3.2
S14A Cedar City 31.45 324 ⇓P P 07 39 44.9 +0.9
baz=32,SNR=20
TMUT Trail Mountain 31.52 329 eP P 07 39 48.6 +4.1
comp=N,9.8nm,1.0s,mb4.6
V11A Goodsprings 31.53 319 ⇑P P 07 39 45.0 +0.3
baz=32,SNR=6.0
BBRC Big Bear Solar 31.57 316 ⇑P P 07 39 45.7 +0.6
baz=32
TUQ Turquoise Moun 31.60 318 ⇓P P 07 39 45.8 +0.5
baz=32,SNR=8.7
ARUT Antelope Range 31.62 324 eP P 07 39 47.2 +1.6
comp=N,871nm,1.2s
M21A Separation Pea 31.63 336 ⇑P P 07 39 45.8 +0.4
baz=32,SNR=5.5
RWWY Rawlins 31.64 336 eP P 07 39 47.0 +1.4
comp=N,10nm,0.8s,mb4.7
O18A Roosevelt 31.68 331 ⇓P P 07 39 46.8 +0.8
baz=32,SNR=9.3
S13A Holt Ranch, En 31.72 323 ⇓P P 07 39 47.4 +1.0
baz=32,SNR=49
SHPR Sheep Range 31.79 321 eP P 07 39 47.9 +1.0
N19A John Jarvie Ra 31.80 333 ⇑P P 07 39 46.9 -0.2
baz=32
M20A Sweetwater, Wa 31.86 335 ⇓P P 07 39 47.7 +0.1
baz=32
Q15A Fillmore 31.90 327 ⇓P P 07 39 47.9 -0.1
baz=32,SNR=18
L21A Rawlins 31.93 336 ⇓P P 07 39 47.5 -0.6
baz=32,SNR=11
O17A Robinson Place 31.97 330 ⇓P P 07 39 48.6 +0.1
baz=32,SNR=11
P16A Fountain Green 31.98 329 ⇓P P 07 39 49.2 +0.6
baz=32
BFSC Mount Baldy Ra 32.06 315 ⇑P P 07 39 49.6 +0.2
baz=32
N18A Larsen Ranch, 32.09 332 ⇑P P 07 39 49.5 0.0
baz=32,SNR=6.2
GSC Goldstone 32.10 317 ⇓P P 07 39 50.0 +0.3
baz=32
GSC Goldstone 32.10 317 eP P 07 39 51.0 +1.3
comp=N,108nm,2.8s,mb5.2
SHOC Shoshone 32.11 319 ⇑P P 07 39 50.2 +0.3
baz=32
R13A O'Grain Ranch, 32.20 324 ⇑P P 07 39 51.8 +1.3
baz=32,SNR=23
MPU Maple Canyon 32.27 329 eP P 07 39 52.2 +1.0
comp=N,16nm,1.0s,mb4.8
T11A Corn Creek, Al 32.30 322 ⇓P P 07 39 51.9 +0.5
baz=32
S12A Delamar Landin 32.32 323 ⇓P P 07 39 52.4 +0.7
baz=32,SNR=10
O16A Springville 32.35 329 ⇑P P 07 39 51.7 -0.2
baz=32,SNR=17
L20A Wamsutter 32.36 335 ⇑P P 07 39 52.0 +0.1
baz=32
Q14A Sevier Lake (B 32.38 326 ⇑P P 07 39 52.5 +0.4
baz=32,SNR=20
DAU Daniels Canyon 32.39 330 eP P 07 39 53.2 +1.0
U10A Ash Meadows, A 32.46 319 ⇑P P 07 39 53.6 +0.7
baz=33,SNR=9.7
N17A Moffit Pass 32.60 331 ⇑P P 07 39 54.5 +0.4
baz=33
M18A Lyman 32.63 332 ⇑P P 07 39 54.3 +0.1
baz=33
JLU Jordanelle 32.63 330 eP P 07 39 55.0 +0.7
comp=N,8.5nm,1.0s,mb4.6
EDW2 Edwards Air Fo 32.65 316 ⇑P P 07 39 54.6 +0.1
baz=33
R12A Pony Springs, 32.66 324 ⇑P P 07 39 55.5 +0.9
baz=33,SNR=16
RSSD Black Hills 32.67 342 eP P 07 39 54.7 +0.1
comp=N,3.2nm,0.7s,mb4.4
P14A Drum Mountains 32.70 327 ⇓P P 07 39 55.4 +0.5
baz=33,SNR=29
SADO Sadowa 32.76 15 P P 07 39 52.0 -3.4
comp=N,9.5nm,0.5s,mb5.0,baz=216,slow=8.9,SNR=19
SADO LR LR 07 54 18.9
comp=N,2μm,18.9s,baz=188,slow=38
SADO Sadowa 32.76 15 P P 07 39 52.0 -3.4
Q13A Wheeler Ranch, 32.76 325 ⇓P P 07 39 56.4 +0.9
baz=33,SNR=35
LRMC Laurel Mountai 32.78 317 ⇓P P 07 39 55.8 0.0
baz=33,SNR=6.3
FURC Furnace Creek, 32.83 319 ⇑P P 07 39 56.2 +0.1
baz=33,SNR=8.8
N16A Rees Ranch, Co 32.84 330 ⇓P P 07 39 56.3 +0.2
baz=33,SNR=7.6
S11A Rachel 32.88 322 ⇓P P 07 39 57.1 +0.6
baz=33,SNR=9.8
K20A Yellowstone Ra 32.90 336 ⇑P P 07 39 56.5 -0.2
baz=33
M17A Scullys Gap (B 32.94 332 ⇑P P 07 39 57.0 0.0
baz=33,SNR=7.7
MPMC Manual Prospec 32.99 318 ⇓P P 07 39 57.5 -0.1
baz=33,SNR=17
NOQ North Oquirrh 33.00 329 eP P 07 39 58.4 +0.8
comp=N,19nm,0.9s,mb5.0
DUG Dugway 33.01 328 ⇓P P 07 39 57.9 +0.3
baz=33,SNR=7.9
DUG Dugway 33.01 328 eP P 07 39 58.5 +0.9
comp=N,12nm,1.3s,mb4.7
L18A Fontenelle, Gr 33.02 333 ⇓P P 07 39 57.9 +0.3
baz=33,SNR=5.9
P13A Bates Ranch, G 33.11 326 ⇑P P 07 39 59.2 +0.6
baz=33,SNR=34
R11A Troy Canyon, C 33.24 323 ⇓P P 07 40 00.4 +0.7
baz=33,SNR=22
K19A Absolon Red Bu 33.25 335 ⇓P P 07 39 59.7 +0.1
baz=33
M16A Huntsville 33.27 331 ⇓P P 07 40 00.0 +0.1
baz=33
Q12A Willow Creek R 33.28 324 ⇑P P 07 40 00.6 +0.6
baz=33,SNR=18
ISA Isabella 33.41 316 ⇑P P 07 40 01.0 -0.2
baz=34
ISA Isabella 33.41 316 eP P 07 40 02.1 +0.9
comp=N,16nm,1.3s,mb4.8
HWUT Hardware Ranch 33.46 331 eP P 07 40 02.4 +0.9
comp=N,39nm,1.5s,mb5.1
HWUT ePcP PcP 07 42 43.7 +2.2
GRAC Grapevine Rang 33.48 319 ⇑P P 07 40 02.1 +0.4
baz=34,SNR=15
PDAR Pinedale Array 33.49 334 P P 07 40 01.4 -0.4
comp=N,1.9nm,0.8s,mb4.1,baz=130,slow=9.7,SNR=12
PDAR PcP PcP 07 42 42.0 +0.5
comp=N,1.3nm,0.7s,baz=130,slow=5.4,SNR=6.1
BW06 Boulder Array 33.49 334 ⇑P P 07 40 01.7 -0.1
baz=34
BW06 Boulder Array 33.49 334 eP P 07 40 01.4 -0.4
comp=N,3.2nm,0.9s,mb4.2
L17A Cokeville 33.53 332 ⇑P P 07 40 01.3 -0.8
baz=34,SNR=14
S10A Tonopah Range, 33.57 321 ⇑P P 07 40 02.8 +0.2
baz=34,SNR=11
O13A Hicks Ranch, I 33.58 327 ⇓P P 07 40 03.2 +0.6
baz=34,SNR=12
K18A Toltan Ranch, 33.59 334 ⇓P P 07 40 03.1 +0.4
baz=34
Q11A Duckwater 33.62 323 ⇑P P 07 40 03.5 +0.6
baz=34,SNR=21
P12A McGill 33.62 325 ⇑P P 07 40 03.2 +0.2
baz=34,SNR=9.4
R10A Warm Springs 33.63 322 ⇑P P 07 40 03.8 +0.7
baz=34,SNR=8.1
BGU Big Grassy Mou 33.66 329 eP P 07 40 04.2 +0.9
comp=N,11nm,1.0s,mb4.7
N14A Grayback Hills 33.69 328 ⇓P P 07 40 03.7 +0.2
baz=34,SNR=20
L16A Fish Haven 33.72 332 ⇑P P 07 40 03.0 -0.7
baz=34,SNR=16
M15A Larsen Ranch, 33.78 330 ⇓P P 07 40 04.4 +0.1
baz=34
VES Vestal, Richgr 33.93 316 ⇓P P 07 40 05.9 +0.3
baz=34,SNR=8.6
LONY Lake Ozonia 33.99 21 eP P 07 40 05.8 -0.4
comp=N,10nm,1.0s,mb4.7
Q10A Clear Creek Ra 34.04 323 ⇑P P 07 40 07.4 +0.8
baz=34,SNR=21
J18A Kendall Valley 34.05 334 ⇑P P 07 40 06.2 -0.5
baz=34,SNR=9.6
K17A Gardner Place, 34.07 333 ⇓P P 07 40 06.8 0.0
baz=34,SNR=6.1
O12A Currie 34.08 326 ⇓P P 07 40 07.3 +0.3
baz=34,SNR=28
L15A Malad City 34.16 331 ⇑P P 07 40 07.2 -0.4
baz=34,SNR=19
HVU Hansel Valley 34.18 330 eP P 07 40 08.3 +0.6
comp=N,32nm,1.4s,mb5.0
N13A Wendover, West 34.22 327 ⇑P P 07 40 08.4 +0.3
baz=34
N13A Wendover, West 34.22 327 eP P 07 40 09.3 +1.2
comp=N,42nm,1.1s,mb5.3
M14A Sheep Mountain 34.25 329 ⇓P P 07 40 08.5 +0.1
baz=34,SNR=52
RCTC Rector, Farmer 34.29 317 ⇓P P 07 40 08.5 -0.4
baz=34,SNR=11
I18A Diamond G Ranc 34.37 335 ⇓P P 07 40 09.7 +0.3
baz=34
EYMN Ely 34.43 359 eP P 07 40 08.2 -1.7
comp=N,18nm,0.6s,mb5.2
K16A Soda Springs 34.43 332 ⇓P P 07 40 10.1 +0.1
baz=35
J17A Brown Place, J 34.47 334 ⇑P P 07 40 09.8 -0.5
baz=35,SNR=23
O11A Cowboy Ranch, 34.49 325 ⇓P P 07 40 11.0 +0.6
baz=35,SNR=18
REDW Red Top Meadow 34.53 334 eP P 07 40 10.8 0.0
comp=N,25nm,0.8s,mb5.2
M13A Montello 34.56 328 ⇓P P 07 40 11.2 +0.1
baz=35,SNR=32
M13A Montello 34.56 328 eP P 07 40 11.4 +0.3
comp=N,20nm,0.7s,mb5.1
SNOW Snow King Moun 34.57 334 eP P 07 40 11.5 +0.4
comp=N,30nm,0.8s,mb5.3
L14A Malta 34.59 330 ⇑P P 07 40 11.3 0.0
baz=35,SNR=22
P10A Eureka 34.60 324 ⇓P P 07 40 12.5 +1.0
baz=35,SNR=7.6
N12A Clover Valley, 34.66 327 ⇑P P 07 40 12.2 +0.3
baz=35,SNR=12
N12A Clover Valley, 34.66 327 eP P 07 40 13.1 +1.2
comp=N,38nm,1.4s,mb5.1
TPAW Teton Pass 34.67 334 eP P 07 40 12.8 +0.7
comp=N,21nm,1.0s,mb5.0
ELK Elko 34.69 326 P P 07 40 13.1 +0.9
comp=N,4.3nm,0.7s,mb4.5,baz=118,slow=5.3,SNR=17
ELK LR LR 07 55 46.0
comp=N,334nm,21.7s,baz=140,slow=39
RRI2 Red Ridge 34.72 333 eP P 07 40 13.5 +1.1
comp=N,43nm,1.6s,mb5.1
K15A Arbon 34.75 331 ⇑P P 07 40 12.6 -0.1
baz=35,SNR=10
I17A Pilgrim Ck. 34.86 335 ⇓P P 07 40 13.9 +0.2
baz=35
NVAR Mina Array Bea 34.94 320 P P 07 40 16.1 +1.7
comp=N,22nm,0.7s,mb5.2,baz=135,slow=8.5,SNR=116
K14A Jones Ranch, D 34.95 330 ⇓P P 07 40 13.8 -0.7
baz=35,SNR=23
L13A Double Diamond 34.98 329 ⇑P P 07 40 15.2 +0.5
baz=35,SNR=10
M12A Wells 34.99 327 ⇑P P 07 40 15.2 +0.4
baz=35,SNR=28
IMW Indian Meadow 35.00 334 eP P 07 40 15.7 +0.9
comp=N,4.4nm,0.6s,mb4.6
N11A Elko Archery C 35.01 326 ⇓P P 07 40 15.5 +0.5
baz=35,SNR=9.5
AGMN Agassiz Nation 35.04 354 eP P 07 40 13.4 -1.7
comp=N,18nm,0.9s,mb5.0
O10A Cortez Mining, 35.07 325 ⇓P P 07 40 16.2 +0.7
baz=35,SNR=10.0
I16A Newdale 35.22 334 ⇑P P 07 40 16.9 +0.2
baz=35
H17A Grant Village 35.25 335 ⇑P P 07 40 17.7 +0.7
baz=35
J15A Blackfoot 35.26 332 ⇑P P 07 40 17.4 +0.3
baz=35,SNR=12
RLMT Red Lodge 35.34 337 ⇓P P 07 40 18.0 +0.2
baz=36,SNR=7.8
RLMT Red Lodge 35.34 337 eP P 07 40 17.3 -0.4
comp=N,5.9nm,0.8s,mb4.6
M11A Holland Ranch, 35.47 327 ⇓P P 07 40 19.3 +0.4
baz=36,SNR=26
K13A Stover Farm, H 35.47 330 ⇑P P 07 40 18.5 -0.4
baz=36,SNR=6.3
L12A House Creek Ra 35.57 328 ⇑P P 07 40 19.4 -0.3
baz=36,SNR=12
BMN Battle Mountai 35.58 324 eP P 07 40 21.2 +1.4
comp=N,23nm,1.1s,mb5.0
G18A Lazy EL Ranch, 35.62 337 ⇓P P 07 40 19.8 -0.3
baz=36,SNR=12
YMR Madison River 35.64 335 eP P 07 40 21.8 +1.5
comp=N,12nm,0.8s,mb4.9
WAKR Walker 35.69 320 eP P 07 40 22.6 +1.7
J14A Carey 35.70 331 ⇓P P 07 40 21.1 +0.2
baz=36,SNR=11
I15A Monteview 35.75 333 ⇑P P 07 40 21.8 +0.5
baz=36
H16A Russell Place, 35.78 335 ⇑P P 07 40 21.9 +0.3
baz=36
K12A Draper Farm, C 35.87 329 ⇑P P 07 40 22.1 -0.2
baz=36,SNR=14
M10A I.L. Ranch, Tu 35.93 326 ⇑P P 07 40 23.1 +0.3
baz=36,SNR=13
L11A Cat Creek Banc 35.97 328 ⇑P P 07 40 23.2 0.0
baz=36,SNR=21
CMB Columbia Colle 36.02 318 eP P 07 40 24.0 +0.3
comp=N,12nm,0.9s,mb4.8
J13A Cove Ranch, Pi 36.07 330 ⇓P P 07 40 23.6 -0.4
baz=36,SNR=8.5
G17A Pierce Place, 36.08 336 ⇓P P 07 40 23.6 -0.4
baz=36
I14A Mackay 36.14 332 ⇓P P 07 40 24.6 +0.1
baz=36,SNR=15
F18A Big Timber 36.17 337 ⇑P P 07 40 24.4 -0.4
baz=36,SNR=9.5
L10A Juniper Basin 36.28 327 ⇑P P 07 40 26.0 +0.1
baz=36,SNR=16
H15A Lima 36.31 333 ⇓P P 07 40 26.5 +0.4
baz=36,SNR=12
HLID Hailey 36.31 330 ⇓P P 07 40 26.1 0.0
baz=36,SNR=13
HLID Hailey 36.31 330 eP P 07 40 26.3 +0.3
comp=N,24nm,1.5s,mb4.9
HLID ePcP PcP 07 42 50.2 +0.5
PAHR Pah Rah Range 36.39 321 eP P 07 40 28.2 +1.4
comp=N,249nm,0.6s
J12A Stokes Ranch, 36.41 329 ⇑P P 07 40 26.9 -0.1
baz=36,SNR=14
I13A Wildhorse Cree 36.44 331 ⇓P P 07 40 27.6 +0.4
baz=37,SNR=17
G16A Moss Hill, Enn 36.44 335 ⇓P P 07 40 27.8 +0.7
baz=37,SNR=5.7
F17A Fitzpatrick Pl 36.53 336 ⇑P P 07 40 27.8 0.0
baz=37,SNR=10
K11A Parker Ranch, 36.54 328 ⇑P P 07 40 27.9 -0.1
baz=37,SNR=10
MCMT McKenzie Canyo 36.57 333 eP P 07 40 30.2 +2.0
comp=N,7.2nm,0.7s,mb4.6
H14A Leadore 36.63 332 ⇑P P 07 40 29.2 +0.4
baz=37,SNR=15
G15A Dillon 36.68 334 ⇑P P 07 40 29.2 +0.1
baz=37,SNR=14
BOZ Bozeman (W) 36.70 335 ⇑P P 07 40 29.1 -0.3
baz=37,SNR=7.5
BOZ Bozeman (W) 36.70 335 eP P 07 40 29.4 +0.1
comp=N,2.5nm,0.7s,mb4.2
DGMT Dagmar 36.71 345 ⇑P P 07 40 29.0 -0.4
baz=37
E18A Harlowton 36.80 338 ⇓P P 07 40 29.4 -0.8
baz=37
F16A Kennard Place, 36.81 335 ⇑P P 07 40 30.0 -0.3
baz=37,SNR=7.3
I12A Atlanta 36.83 330 ⇓P P 07 40 30.7 +0.2
baz=37,SNR=36
DLMT Dillon 36.88 334 eP P 07 40 31.6 +0.7
comp=N,10nm,1.0s,mb4.6
MFID Camas Ranch 36.90 329 ⇑P P 07 40 31.0 -0.1
baz=37
ULM Lac du Bonnet 36.98 354 P P 07 40 29.6 -2.1
comp=N,26nm,0.7s,mb5.2,baz=174,slow=9.1,SNR=22
ULM LR LR 07 59 15.2
comp=N,792nm,18.6s,baz=187,slow=42
ULM Lac du Bonnet 36.98 354 eP P 07 40 29.6 -2.0
comp=N,24nm,0.8s,mb5.1
ULM ePP PP 07 41 59.2 +2.3
LPAZ La Paz 36.98 142 LR LR 07 57 05.8
comp=N,228nm,18.6s,baz=123,slow=38
K10A MacKenzie Ranc 36.98 327 ⇓P P 07 40 31.5 -0.2
baz=37,SNR=6.2
H13A Challis 36.99 332 ⇑P P 07 40 32.0 +0.2
baz=37,SNR=26
BEKR Beckworth 37.08 321 ⇑P P 07 40 33.1 +0.4
baz=37,SNR=11
LRM Limekiln Ridge 37.19 335 eP P 07 40 33.7 +0.2
F15A Butte 37.22 335 ⇑P P 07 40 33.7 -0.1
baz=37,SNR=11
H12A Diamond D Ranc 37.27 331 ⇓P P 07 40 34.2 0.0
baz=37,SNR=21
D18A Linhart Farms, 37.29 338 ⇑P P 07 40 33.9 -0.4
baz=37,SNR=5.8
I11A Placerville 37.33 329 ⇑P P 07 40 34.7 0.0
baz=38,SNR=49
J10A Berg Farm, Mel 37.39 328 ⇓P P 07 40 35.2 0.0
baz=38
G13A Cobalt 37.39 332 ⇓P P 07 40 34.5 -0.7
baz=38,SNR=7.5
E16A East Helena 37.45 336 ⇓P P 07 40 35.6 -0.1
baz=38,SNR=6.3
OHCM Honcut 37.47 319 eP P 07 40 37.0 +1.0
F14A Wisdom 37.57 334 ⇑P P 07 40 36.4 -0.3
baz=38
D17A Six Diamond Ra 37.58 337 ⇓P P 07 40 36.3 -0.4
baz=38,SNR=6.9
WVOR Wild Horse Val 37.70 325 eP P 07 40 38.3 +0.5
comp=N,14nm,1.0s,mb4.6
WVOR ePP PP 07 42 05.5 +0.6
E15A Deer Lodge 37.75 335 ⇓P P 07 40 37.9 -0.3
baz=38,SNR=8.2
D16A Dana Ranch, Ca 37.81 337 ⇓P P 07 40 38.5 -0.2
baz=38
J09A Fry Pan Ranch, 37.84 327 ⇓P P 07 40 39.0 0.0
baz=38,SNR=32
I10A Payette 37.87 329 ⇑P P 07 40 39.3 0.0
baz=38,SNR=13
H11A Donnelly 37.93 330 ⇓P P 07 40 39.5 -0.3
baz=38,SNR=20
F13A Darby 37.97 333 ⇑P P 07 40 39.5 -0.6
baz=38,SNR=12
EGMT Eagleton 37.98 339 ⇓P P 07 40 39.9 -0.3
baz=38,SNR=7.4
EGMT Eagleton 37.98 339 eP P 07 40 40.1 -0.1
comp=N,46nm,1.6s,mb5.0
C17A Wharram Farm, 38.01 338 ⇓P P 07 40 40.0 -0.4
baz=38
E14A Clinton 38.10 334 ⇑P P 07 40 40.6 -0.6
baz=38,SNR=6.5
D15A Lincoln 38.20 336 ⇑P P 07 40 41.8 -0.2
baz=38,SNR=6.7
H10A Noah's Angus R 38.21 329 ⇓P P 07 40 41.5 -0.6
baz=38,SNR=11
J08A Circle Bar Ran 38.23 327 ⇓P P 07 40 41.9 -0.4
baz=38,SNR=48
I09A Lost Marbles R 38.27 328 ⇑P P 07 40 42.4 -0.3
baz=38,SNR=44
MOD Modoc 38.30 323 eP P 07 40 43.0 +0.1
comp=N,30nm,1.4s,mb4.8
B18A Beardsley Farm 38.31 339 ⇑P P 07 40 42.2 -0.7
baz=38
F12A Elk City 38.36 332 ⇓P P 07 40 42.6 -0.7
baz=38,SNR=50
CHMT Chamberlain Mo 38.39 335 eP P 07 40 44.0 +0.3
E13A Victor 38.41 334 ⇑P P 07 40 43.1 -0.7
baz=38,SNR=25
C16A Fuhringer Ranc 38.52 337 ⇓P P 07 40 44.1 -0.6
baz=39,SNR=8.9
G11A Walters Elk Ra 38.57 331 ⇓P P 07 40 44.1 -1.0
baz=39,SNR=20
B17A L&G Farms, Che 38.58 338 ⇑P P 07 40 44.5 -0.7
baz=39
MSO Missoula 38.61 334 eP P 07 40 45.6 +0.1
comp=N,12nm,1.4s,mb4.5
D14A Greenough 38.63 335 ⇑P P 07 40 44.6 -1.0
baz=39,SNR=6.8
BMO Blue Mountains 38.67 329 eP P 07 40 45.1 -0.9
comp=N,11nm,1.2s,mb4.5
H09A Durkee 38.72 329 ⇓P P 07 40 45.1 -1.3
baz=39,SNR=6.2
SLMT Seeley Lake 38.75 335 eP P 07 40 46.6 -0.1
A18A Metzger Ranch, 38.78 340 ⇑P P 07 40 45.9 -1.0
baz=39,SNR=7.2
C15A Salmond Ranch, 38.83 336 ⇑P P 07 40 46.4 -0.9
baz=39,SNR=5.4
WDC Whiskeytown Da 38.85 320 eP P 07 40 48.4 +0.8
comp=N,106nm,2.8s,mb5.1
WDC eSg Px 07 42 20.4
LASM Arnica Sink 38.86 322 P P 07 40 48.4 +0.7
F11A Grangeville 38.88 331 ⇑P P 07 40 46.4 -1.3
baz=39,SNR=5.6
G10A Bishop Farm, J 38.90 330 ⇑P P 07 40 47.0 -0.9
baz=39,SNR=13
E12A Beaver Dam Sad 39.00 332 ⇓P P 07 40 47.8 -1.0
baz=39
D13A Huson 39.04 334 ⇓P P 07 40 48.4 -0.6
baz=39,SNR=16
A17A Triple J Farms 39.10 339 ⇑P P 07 40 48.6 -0.8
baz=39,SNR=7.5
H08A Prairie City 39.13 328 ⇑P P 07 40 49.2 -0.7
baz=39,SNR=16
K05A Summer Lake 39.16 324 ⇓P P 07 40 49.0 -1.1

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     baz=39
SWMT Swartz Lake        39.17 335 eP        P        07 40 49.9 -0.2
B15A Bradely Ranch,     39.25 337 ⇑P        P        07 40 49.8 -1.0
     baz=39,SNR=5.9
I07A Izee               39.27 327 ⇓P        P        07 40 50.2 -0.8
     baz=39,SNR=17
C14A Swan Lake          39.28 335 ⇑P        P        07 40 50.3 -0.8
     baz=39
D12A Red Ives Fores     39.40 333 ⇓P        P        07 40 51.2 -0.8
     baz=40
F10A Beach Ranch, E     39.45 331 ⇑P        P        07 40 51.5 -0.9
     baz=40,SNR=27
YBMT Yellow Bay         39.46 335 eP        P        07 40 52.9 +0.3
JTMT Jette              39.48 335 eP        P        07 40 53.0 +0.3
JTMT                              ePcP      PcP      07 43 01.1 +1.7
C13A Hot Springs        39.55 335 ⇑P        P        07 40 52.6 -0.6
     baz=40,SNR=6.1
YBH  Yreka Blue Hor     39.62 321 P         P        07 40 52.5 -1.5
     comp=N,3.3nm,0.6s,mb4.2,baz=90,slow=4.2,SNR=13
YBH                               LR        LR       07 57 33.6
     comp=N,542nm,19.4s,baz=142,slow=36
YBH  Yreka Blue Hor     39.62 321 eP        P        07 40 52.9 -1.1
     comp=N,3.3nm,0.7s,mb4.2
KHMM Horse Mountain     39.76 320 eP        P        07 40 56.1 +1.0
     comp=N,28nm,0.9s,mb5.0
BSMT Bassoo Peak        39.77 335 eP        P        07 40 55.1  0.0
A15A Johnson Ranch,     39.86 337 ⇑P        P        07 40 55.4 -0.5
     baz=40,SNR=7.9
LNOR Lincton Mounta     39.88 330 eP        P        07 40 58.9 +2.8
B13A Whitefish          40.05 335 ⇓P        P        07 40 57.2 -0.3
     baz=40,SNR=9.2
A14A Double T Ranch     40.12 337 ⇑P        P        07 40 57.4 -0.6
     baz=40,SNR=24
VIPM Ingram Point       40.15 326 P         P        07 40 58.4  0.0
D10A Wagner Farm, O     40.26 332 ⇓P        P        07 40 58.3 -0.9
     baz=40
E09A Wood Farm, Sta     40.28 330 ⇓P        P        07 40 58.6 -0.7
     baz=40
WALA Waterton Lakes     40.38 336 eP        P        07 41 00.0 -0.1
NEW  Newport            41.09 333 eP        P        07 41 05.5 -0.6
     comp=N,5.2nm,0.8s,mb4.2
VFP  Flag Point         41.14 327 P         P        07 41 07.7 +1.3
OD2  Odessa Site #2     41.18 331 eP        P        07 41 06.6 -0.1
HOOD Mount Hood Mea     41.24 327 eP        P        07 41 08.3 +1.0
     comp=N,196nm,1.0s,mb5.7
KEBM Edson Butte        41.27 322 eP        P        07 41 07.1 -0.4
     comp=N,167nm,1.3s,mb5.5
SIV  San Ignacio        41.35 134 P         P        07 41 07.7 -0.9
     comp=N,7.1nm,1.0s,mb4.3,baz=304,slow=8.9,SNR=9.8
COR  Corvallis          41.68 325 eP        P        07 41 14.5 +3.6
     comp=N,113nm,1.8s,mb5.2
NAC  Naches             41.75 329 P         P        07 41 12.1 +0.7
FFC  Flin Flon          42.16 350 eP        P        07 41 14.2 -0.4
     comp=N,15nm,0.9s,mb4.6
LON  Longmire           42.26 328 eP        P        07 41 15.7 +0.1
     comp=N,14nm,0.9s,mb4.6
HEBO Mount Hebo         42.32 325 eP        P        07 41 17.2 +1.0
     comp=N,82nm,1.3s,mb5.2
RPW  Rockport           43.26 330 eP        P        07 41 23.3 -0.4
JCW  Jim Creek          43.29 330 P         P        07 41 23.1 -0.9
GNW  Green Mountain     43.32 328 eP        P        07 41 23.5 -0.7
     comp=N,6.2nm,1.2s,mb4.2
EDM  Edmonton           43.61 340 eP        P        07 41 25.2 -1.2
EDM                               ePcP      PcP      07 43 13.0 +0.1
NLWA Neilton Lookou     43.75 327 eP        P        07 41 28.3 +0.6
     comp=N,43nm,1.3s,mb5.0
MCW  Mount Constitu     44.06 330 P         P        07 41 30.1  0.0
PGC  Sidney             44.35 329 eP        P        07 41 32.5 +0.1
     comp=N,1.5nm,0.9s,mb3.7
SCHQ Schefferville      45.33 19  P         P        07 41 38.9 -1.2
     comp=N,10nm,0.5s,mb4.9,baz=223,slow=6.3,SNR=20
SCHQ                              LR        LR       08 01 58.7
     comp=N,1μm,18.3s,baz=214,slow=38
SCHQ Schefferville      45.33 19  eP        P        07 41 38.9 -1.2
     comp=N,37nm,1.1s,mb5.1
CPUP Villa Florida      51.11 141 LR        LR       08 05 29.3
     comp=N,244nm,20.2s,baz=313,slow=38
YKA  Yellowknife Ar     51.89 346 P         P        07 42 28.9 -1.5
     comp=N,3.4nm,0.6s,mb4.5,baz=146,slow=7.7,SNR=22
YKA                               LR        LR       08 07 34.1
     comp=N,35nm,20.9s,baz=355,slow=40
DLBC Dease Lake         53.71 336 eP        P        07 42 45.1 +1.3
TAOE Nuku Hiva Isla     53.88 248 eLR       LR       07 58 02.5
     comp=N,417nm,25.6s
RKT  Rikitea            56.56 230 eLR       LR       07 59 34.9
     comp=N,332nm,26.2s
PLCA Paso Flores        57.01 162 LR        LR       08 03 19.8
     comp=N,320nm,19.2s,baz=282,slow=31
RCBR Riachuelo          57.64 106 eP        P        07 43 10.0 -2.7
TRQA Tornquist          57.84 153 eP        P        07 43 15.4 +1.8
RES  Resolute Bay       61.30 359 P         P        07 43 34.9 -2.1
     comp=N,13nm,0.6s,mb5.2,baz=182,slow=10.0,SNR=41
RES  Resolute Bay       61.30 359 eP        P        07 43 35.3 -1.7
     comp=N,13nm,0.8s,mb5.1
EGAK Eagle              61.73 338 eP        P        07 43 38.9 -1.1
     comp=N,9.8nm,1.0s,mb4.9
MENT Mentasta           61.80 335 eP        P        07 43 40.8 +0.3
PAX  Paxson             62.53 335 eP        P        07 43 44.1 -1.2
     comp=N,9.1nm,1.0s,mb4.9
PMR  Palmer             63.52 333 eP        P        07 43 51.8 -0.1
     comp=N,34nm,1.5s,mb5.2
RC01 Rabbit Creek A     63.60 332 eP        P        07 43 51.2 -1.3
     comp=N,14nm,0.7s,mb5.1
KDAK Kodiak Island      63.89 328 P         P        07 43 53.6 -0.9
     comp=N,15nm,0.7s,mb5.2,baz=94,slow=3.8,SNR=15
KDAK Kodiak Island      63.89 328 eP        P        07 43 54.4 -0.1
     comp=N,15nm,0.8s,mb5.1
COLA College            64.30 337 eP        P        07 43 56.8 -0.3
RSO  Redoubt South      64.79 331 eP        P        07 44 00.6 +0.3
BPAW Bear Paw Mtn.      65.24 335 eP        P        07 44 03.1 -0.1
     comp=N,4μm,1.2s
PPLA Purkeypile         65.32 334 eP        P        07 43 59.2 -4.5
PPT  Papeete            65.78 244 eS        S        07 53 01.6 +12
     comp=N,101nm,25.2s
PPT                               eSS       SS       07 57 14.3 +8.8
     comp=N,85nm,23.0s
PPT                               eLR       LR       08 03 35.2
     comp=N,406nm,25.0s
PPT  Papeete            65.78 244 LR        LR       08 05 16.1
     comp=N,284nm,18.0s,baz=312,slow=29
SVW2 Sparrevohn         66.30 331 eP        P        07 44 09.1 -1.0
SUMG Summit             66.46 15  eP        P        07 44 10.2 -0.6
     comp=N,11nm,0.8s,mb4.9
SUMG Summit             66.46 15  ⇑iP       P        07 44 10.3 -0.6
     comp=N,11nm,0.7s,mb5.0
TTA  Tatalina           67.00 333 eP        P        07 44 13.6 -0.9
ESDC Sonseca Array      79.06 52  P         P        07 45 25.1 -1.1
     comp=N,0.5nm,0.4s,mb3.8,baz=295,slow=5.3,SNR=6.4
BILL Bilibino           82.48 338 eP        P        07 45 44.2 +0.3
     comp=N,14nm,0.9s,mb4.9
NOA  NORSAR Array B     84.04 29  P         P        07 45 52.4 +0.4
     comp=N,1.5nm,0.9s,mb4.1,baz=294,slow=4.4,SNR=3.0
NOA                               LR        LR       08 20 46.6
     comp=N,169nm,21.7s,baz=290,slow=34
TIC  Toumodi            84.27 85  eP        P        07 45 54.4 +0.2
     comp=N,24nm,0.7s,mb5.5
LIC  Lamto              84.36 85  eP        P        07 45 55.0 +0.4
     comp=N,69nm,0.8s,mb5.8
DBIC Dimbokro           84.42 84  P         P        07 45 54.7 -0.3
     comp=N,11nm,0.6s,mb5.2,baz=279,slow=4.7,SNR=22
DBIC                              LR        LR       08 20 16.3
     comp=N,168nm,19.5s,baz=338,slow=33
DBIC Dimbokro           84.42 84  eP        P        07 45 55.3 +0.4
     comp=N,8.5nm,0.6s,mb5.0
DBIC                              LR        LR       08 20 16.3
KIC  Kosan Boka         84.60 85  eP        P        07 45 56.2 +0.4
     comp=N,40nm,0.7s,mb5.7
ARCES ARCESS Array B    86.28 18  P         P        07 46 02.7 -0.4
     comp=N,1.2nm,0.6s,mb4.3,baz=292,slow=6.4,SNR=5.2
CLL  Collm              87.99 38  eP        P        07 46 11.0 -0.7
     comp=N,4.0nm,1.0s,mb4.6
CLL                               LR        LR
     comp=Z,200nm,18.1s
CLL  Collm              87.99 38  eP        P        07 46 11.0 -0.7
     comp=Z,4.0nm,1.0s,mb4.6
CLL                               LmV       07 35 00.0
     comp=Z,200nm,18.1s
GERES GERESS Array B    89.22 40  P         P        07 46 17.0 -0.6
     comp=Z,0.2nm,0.2s,mb4.0,baz=284,slow=5.4,SNR=5.4
FINES FINESS Array B    90.47 25  LR        LR       08 27 42.7
     comp=Z,342nm,20.4s,baz=183,slow=36
AKASG Malin Array Be    97.50 34  LR        LR       08 34 28.1
     comp=Z,225nm,18.1s,baz=310,slow=38
ZALV Zalesovo Beam      112.80 3  PP        PP       07 52 43.1 -2.3
     comp=Z,1.0nm,0.6s,baz=340,slow=7.9,SNR=4.3
KURK Kurchatov          115.46 8  PKP       PKPdf    07 52 02.5 -0.8
     comp=Z,0.5nm,0.6s,baz=351,slow=1.9,SNR=4.4
SONM Songino Array      117.15 347 PKP      PKPdf    07 52 04.5 -2.1
     comp=Z,0.5nm,0.6s,baz=86,slow=2.2,SNR=2.7
KSRS Korea Array        117.75 326 PKP      PKPdf    07 52 08.7 +0.6
     comp=Z,1.7nm,0.7s,baz=11,slow=1.4,SNR=7.2
BOSA Boshof             118.94 115 PKP      PKPdf    07 52 13.7 +3.1
     comp=Z,6.2nm,0.8s,baz=260,slow=2.6,SNR=7.8
MKAR Makanchi Array     119.74 6   PKP      PKPdf    07 52 10.7 -0.9
     comp=Z,0.2nm,0.3s,baz=321,slow=2.0,SNR=4.4
BJI  Beijing            121.25 336 PKP      PKPdf    07 52 14.3 -0.5
WMQ  Urumqi             123.02 1   ePKP     PKPdf    07 52 18.0  0.0
NJ2  Nanjing            126.67 329 ePKP     PKPdf    07 52 26.6 +1.2
STKA Stephens Creek     128.89 240 PKP      PKPdf    07 52 29.1 -0.4
     comp=Z,0.8nm,0.3s,baz=177,slow=18,SNR=2.6
LZH  Lanzhou            128.89 345 ePKP     PKPdf    07 52 29.7 +0.2
LZH                               LR        LR
     comp=E,130nm,16.8s
LZH                               LR        LR
     comp=Z,78nm,17.5s
CD2  Chengdu            133.80 343 ePKP     PKPdf    07 52 37.9 -1.0
CD2                               PP        PP       07 55 11.7 +4.4
CD2                               PKS       07 56 12.8
CD2                               SKS       SKSdf    07 59 37.5 -7.6
CD2                               AMB       AMB
     comp=Z,160nm,10.2s
CD2                               LR        LR
     comp=N,150nm,15.8s
CD2                               LR        LR
     comp=Z,120nm,14.8s
WRA  Warramunga Arr     136.50 255 PKP      PKPdf    07 52 43.0 -1.2
     comp=Z,1.6nm,0.8s,baz=93,slow=2.5,SNR=8.0
ASAR Alice Springs      136.68 250 PKP      PKPdf    07 52 43.5 -0.9
     comp=Z,0.8nm,0.9s,baz=122,slow=1.9,SNR=4.8
GYA  Guiyang            136.93 337 Pdif     Pdif     07 49 48.7 -2.2
GYA                               PKPbc     PKPdf    07 52 43.1 -1.8
GYA                               sPKP      07 53 24.7
GYA                               PP        PP       07 55 30.8 +3.6
GYA                               SKS       SKSdf    07 59 41.5 -9.2
GYA                               SKKS      SKKSac   08 02 08.7 -9.3
GYA                               SS        SS       08 13 22.0 -4.6
GYA                               AMB       AMB
     comp=Z,110nm,8.7s
GYA                               LR        LR
     comp=N,140nm,24.0s
GYA                               LR        LR
     comp=E,120nm,25.3s
GYA                               LR        LR
     comp=Z,130nm,23.8s
GYA  Guiyang            136.93 337 PKP      PKPdf    07 52 43.1 -1.8
GYA                               PP        PP       07 55 30.8 +3.6
GYA                               SKS       SKSdf    07 59 41.5 -9.2
GYA                               AMB       AMB
     comp=Z,110nm,8.7s
GYA                               LR        LR
     comp=N,140nm,24.0s
GYA                               LR        LR
     comp=E,120nm,25.3s
GYA                               LR        LR
     comp=Z,130nm,23.8s
KMI  Kunming            139.53 341 PKP      PKPdf    07 52 47.5 -2.2
KMI                               PP        PP       07 55 46.2 +3.0
KMI                               LR        LR
     comp=Z,99nm,26.7s
CHTO Chiang Mai         146.60 343 ePKPbc   PKPbc    07 53 03.3 -0.6
CM31 Chiang Mai Arr     146.94 343 ePKPbc   PKPbc    07 53 05.8 +0.9
CMAR Chiang Mai Arr     146.94 343 PKPbc    PKPbc    07 53 05.2 +0.3
     comp=Z,8.0nm,0.7s,baz=339,slow=3.6,SNR=36
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MEX 09 07:52:23.9±0.5, 16°.63N×94°.78W, h94km±14km, MD4.0, Oaxaca

```
Code Station Name       Δ°   AZ°  Phase ID          Time     Res
                                  Op    ISC         h m s    ISC
HUIG Huatulco           1.54 236  iP    Pn          07 52 48.9 -1.5
HUIG                              iS    Sn          07 53 09.3 -1.1
TGIG                    1.59  84  iP    Pn          07 52 50.3 -0.7
TGIG                              iS    Sn          07 53 09.9 -1.7
PCIG                    1.76 121  iP    Pn          07 52 52.0 -1.2
PCIG                              iS    Sn          07 53 13.4 -1.9
OXX  Oaxaca             1.92 284  ePn   Pn          07 52 53.7 -1.5
OXX                               iS    Sn          07 53 17.1 -2.0
SCX  San Cristobal      2.05  87  iP    Pn          07 52 56.3 -0.6
SCX                               iS    Sn          07 53 20.8 -1.4
THIG                    2.96 125  ePn   Pn          07 53 10.2 +1.2
THIG                              iS    Sn          07 53 42.2 -1.5
UTMO Huajuapan          3.13 293  ePn   Pn          07 53 10.8 -0.4
UTMO                              iS    Sn          07 53 46.2 -1.6
PNIG Pinotepa           3.22 266  iP    Pn          07 53 12.6  0.0
PNIG                              iS    Sn          07 53 48.2 -1.8
TEIG Tepich             7.13  59  iP    Pn          07 54 04.3 -1.3
TEIG                              iS    Sn          07 55 22.7 -2.4
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CSEM 09 08:13:28.9, 36°.14N×21°.24E, h5km, MD3.7, After ATH

ATH 09 08:13:28.9, 36°.14N×21°.24E, h5km±3km, MD3.7/7, Southern Greece

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Code Station Name       Δ°   AZ°  Phase ID          Time     Res
                                  Op    ISC         h m s    ISC
PYL  PYLOS              0.86  28  ePB   Pb          08 13 45.2 -1.0
PYL                               eSB   Sb          08 13 57.3 -0.7
PYL  PYLOS              0.86  28  ePb   Pb          08 13 45.2 -1.0
PYL                               eSb   Sb          08 13 57.3 -0.7
ITM  Ithomi             1.18  28  ePB   Pb          08 13 51.3 -0.4
ITM  Ithomi             1.18  28  ePb   Pb          08 13 51.3 -0.4
KYTH Kithira            1.46  84  ePB   Pb          08 13 56.5  0.0
KYTH Kithira            1.46  84  ePb   Pb          08 13 56.5  0.0
VLI  Veliai             1.48  67  ePB   Pb          08 13 57.4 +0.4
VLI                               eSB   Sb          08 14 17.8 +1.7
VLI  Veliai             1.48  67  ePb   Pb          08 13 57.4 +0.4
VLI                               eSb   Sb          08 14 17.8 +1.7
VLX  Vlachokerasia      1.53  36  ePG   Pg          08 13 57.5 -0.8
VLX  Vlachokerasia      1.53  36  ePg   Pg          08 13 57.5 -0.8
GUR  Goura              2.00  26  ePN   Pn          08 14 05.8 +2.5
GUR  Goura              2.00  26  ePn   Pn          08 14 05.8 +2.5
LTK  Loutraki           2.33  36  ePN   Pn          08 14 09.8 +1.9
LTK  Loutraki           2.33  36  ePn   Pn          08 14 09.8 +1.9
EFP  Efpalio            2.34  13  ePN   Pn          08 14 11.0 +2.9
EFP  Efpalio            2.34  13  ePn   Pn          08 14 11.0 +2.9
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PGC 09 08:16°.41.2±5.0, 58°.72N×140°.95W, h1km, ML2.9/4, 105km Wsw of Yakutat, Ak Off Coast Of Southeastern Alaska

NEIC 09 08:16:40.2, 58°.81N×141°.35W, h6km, ML2.9(AEIC), 18D, After AEIC., Off coast of southeastern Alaska

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Code Station Name       Δ°   AZ°  Phase ID          Time     Res
                                  Op    ISC         h m s    ISC
YKU2 Yakutat            1.11  50  P     Pg          08 17 00.7 -0.8
PNL  Peninsula          1.32  49  P     Pn          08 17 03.1 -2.1
PLBC Pleasant Camp      2.65  74  ⇑Pn   Pn          08 17 21.7 -1.7
PLBC                              ⇑Sn   Sn          08 17 51.7 -4.1
BMRM Bremner River      2.71 324  ePn   Pn          08 17 25.1 +0.8
BMRM                              eSn   Sn          08 17 55.0 -2.5
HYT  Haines Junctio     2.80  42  ⇑Pn   Pn          08 17 27.9 +2.4
HYT                               ⇓Sn   Sn          08 18 00.3 +0.7
SKAG Skagway            3.17  76  ePn   Pn          08 17 28.9 -1.6
SKAG                              eSg   Sg          08 18 22.5 +0.6
WHY  Whitehorse         3.76  58  P     Pn          08 17 37.6 -1.1
WHY  Whitehorse         3.76  58  ⇓Pn   Pn          08 17 37.7 -1.0
WHY                               ⇑Sn   Sn          08 18 19.1 -4.2
BCA3 Beaver Creek A     4.28 357  P     Pn          08 17 44.5 -1.2
MENT Mentasta           4.30 345  ePn   Pn          08 17 46.1 +0.1
MENT                              eSn   Sn          08 18 37.1 +0.7
PAX  Paxson             4.63 336  ePn   Pn          08 17 51.6 +1.0
PAX                               eSg   Sg          08 19 09.6 +0.8
RC01 Rabbit Creek A     4.79 302  P     Pn          08 17 50.7 -2.1
DAWY Dawson             5.36  9   P     Pn          08 17 59.0 -1.6
DAWY Dawson             5.36  9   ⇓Pn   Pn          08 18 00.1 -0.4
DLBC Dease Lake         5.93  89  ⇓Pn   Pn          08 18 07.8 -0.6
EGAK Eagle              5.99  1   ePn   Pn          08 18 09.3  0.0
     3.5nm,0.7s
EGAK                              eSg   Sg          08 19 52.1 -0.1
RSO  Redoubt South      6.02 291  ePn   Pn          08 18 11.1 +1.4
NDB  Naden              6.74 133  ⇑Pn   Pn          08 18 16.8 -2.8
NDB                               ⇓Sn   Sn          08 19 28.2 -8.4
DIB  Dawson Inlet,      7.50 135  ⇓Pn   Pn          08 18 26.9 -3.2
DIB                               ⇑Sn   Sn          08 19 45.6 -10
MOBC Moresby Island     7.74 133  ⇓Pn   Pn          08 18 30.0 -3.2
MOBC                              ⇓Sn   Sn          08 19 53.2 -7.9
BNB  Barry Inlet        8.27 135  ⇑Pn   Pn          08 18 36.5 -4.0
BNB                               ⇓Sn   Sn          08 20 04.3 -10
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IDC 09 08:22:50.7±14.0, 23°.96S×179°.54E, h562km±176km, mb3.2/6, mb1 3.4/6, mb1mx3.1/16, mbtmp3.2/6, Error ellipse: s-maj=90.9km s-min=59.7km az=163.0, South of Fiji Islands

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Code Station Name       Δ°   AZ°  Phase ID          Time     Res
                                  Op    ISC         h m s    ISC
CTA  Charters Tower     31.05 271 P         P        08 28 24.4 +0.8
     5.8nm,0.3s,baz=104,slow=10,SNR=12
STKA Stephens Creek     34.31 248 P         P        08 28 50.5 -0.6
     1.2nm,0.5s,baz=120,slow=8.1,SNR=6.6
ASAR Alice Springs      41.61 261 P         P        08 29 50.0 -0.5
     0.7nm,0.3s,baz=94,slow=6.7,SNR=32
WRA  Warramunga Arr     41.98 266 P         P        08 29 52.7 -0.7
     2.4nm,0.3s,baz=98,slow=8.4,SNR=126
FITZ Fitzroy Crossi     50.40 266 P         P        08 30 57.8 +0.7
     1.8nm,0.6s,baz=102,slow=12,SNR=6.1
TXAR Lajitas Array      90.82 58  P         P        08 34 54.8 +0.1
     0.3nm,0.7s,baz=214,slow=8.8,SNR=4.4
```

BJI 09 08:27:02.7, 27°.82N×93°.44E, h13km, mB4.4/3, mb4.1/4, ML3.7/4, Ms3.3/1, Ms7 3.3/1
ISCJB 09 08:27:09.2±0.4, 28°.19N±0°.05×93°.33E±0°.04, h33km, mb4.2/20, Error ellipse: s-maj=7.4km s-min=5.5km az=171.9
IDC 09 08:27:10.9±0.8, 28°.19N×93°.29E, h34km±6km, mb3.9/16, mb1 4.0/17, mb1mx3.9/30, mbtmp3.9/17, ML4.3/1, Error ellipse: s-maj=23.8km s-min=12.4km az=50.0
NEIC 09 08:27:11.2±0.4, 28°.22N×93°.35E, mb4.3/8, Error ellipse: s-maj=8.1km s-min=6.8km az=211.0
DMN 09 08:27:12.0±1.3, 28°.82N×92°.76E, h10km, Mb5.6/8, Error ellipse: s-maj=47.8km s-min=26.8km az=150.0

ISC 09 08:27:11.7±0.4, 28°.23N±0°.05×93°.34E±0°.04, h35km, (h35km±1.6km:pP-P), n51, σ0s80/52, mb4.2/20, Eastern Xizang-India border region

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Code Station Name       Δ°   AZ°  Phase ID          Time     Res
                                  Op    ISC         h m s    ISC
LSA  Lhasa              2.42 308  Pg    Pn          08 27 52.9 +4.2
LSA                               Sg    Sn          08 28 28.0 +11
LSA                               smax
     comp=N,180nm,0.8s
LSA                               smax
     comp=E,190nm,0.5s
LSA  Lhasa              2.42 308  Pn    Pn          08 27 53.1 +4.5
SHL  Shillong           2.95 206  i x   x           08 28 06.0
SHL                               i x   x           08 28 41.0
SHL                               AML   AML         08 28 43.0
     comp=E,15μm,0.2s
SHL                               AML   AML         08 28 43.1
     comp=N,16μm,0.2s
GTK  Gangtok            4.28 259  ex    Sn          08 29 03.5 +0.6
GTK                               ex    x           08 29 24.5
TAPN Taplejung          5.06 261  eP    Pn          08 28 26.3 +1.2
ODAN Odare              5.45 257  eP    Pn          08 28 31.3 +0.9
     comp=N,42nm,0.3s
RAMN Ramite             6.11 260  eP    Pn          08 28 40.2 +0.7
     comp=N,46nm,0.3s
RAMN                              eS    Sn          08 29 47.3 -0.9
JIRN Jiri               6.35 267  eP    Pn          08 28 42.9 +0.2
     comp=N,90nm,0.3s
GUN  Gumba              6.60 269  eP    Pn          08 28 46.1 -0.1
     comp=N,78nm,0.3s
PKI  Pulchoki           7.05 267  eP    Pn          08 28 51.7 -0.6
     comp=N,86nm,0.3s
PKIN Phulchoki          7.06 267  eP    Pn          08 28 51.7 -0.8
     comp=N,78nm,0.3s
KKN  Kakani             7.14 268  eP    Pn          08 28 52.9 -0.7
     comp=N,53nm,0.3s
DMN  Daman              7.31 267  eP    Pn          08 28 55.1 -0.8
     comp=N,24nm,0.3s
BOK  Bokaro             8.02 238  ePKP  Pn          08 29 09.6 +3.8
BOK                               eS    Sn          08 30 31.4 -3.9
BOK                               AML   AML         08 31 31.1
     comp=E,39nm,0.5s
BOK                               AML   AML         08 31 31.7
     comp=N,36nm,0.2s
CHTO Chiang Mai         10.68 150 ePn   Pn          08 29 43.0 +0.7
     comp=N,3.3nm,0.6s
CMAR Chiang Mai Arr     11.00 151 Pn    Pn          08 29 46.8 +0.2
     comp=N,0.6nm,0.3s,baz=323,slow=13,SNR=15
LZH  Lanzhou            11.86  46 eP    Pn          08 30 09.0 +11
LZH                               pP                08 30 14.2
LZH                               sP                08 30 17.5
LZH                               pmax  pmax
     comp=Z,17nm,1.3s
ULHL Ulahol             19.71 320 P     Pn          08 31 39.5 -0.2
     SNR=7.5
MKAR Makanchi Array     20.46 338 P     P           08 31 45.8 -0.4
     comp=Z,3.7nm,0.6s,baz=136,slow=13,SNR=6.2
TKM2 Tokmak 2           20.51 320 P     P           08 31 48.1 +1.4
     SNR=13
TKM2 Tokmak 2           20.51 320 eP    P           08 31 47.4 +0.7
     comp=Z,10.0nm,0.7s
UCH  Uchtor             20.71 317 P     P           08 31 50.1 +1.3
     SNR=13
UCH  Uchtor             20.71 317 eP    P           08 31 50.2 +1.3
     comp=Z,9.5nm,0.8s
KBK  Karagaybulak       20.72 319 P     P           08 31 50.4 +1.5
     SNR=6.2
AAK  Ala-Archa          20.97 318 P     P           08 31 52.6 +0.9
     comp=Z,1.4nm,0.3s,baz=153,slow=6.5,SNR=7.3
USP  Ospenovka          21.35 320 P     P           08 31 56.3 +0.5
     SNR=6.0
EKS2 Erkin-Say          21.41 317 P     P           08 31 57.4 +1.0
     SNR=10.0
EKS2 Erkin-Say          21.41 317 eP    P           08 31 57.6 +1.2
     comp=Z,8.7nm,0.7s,mb4.2
KBL  Kabul              21.65 293 eP    P           08 31 59.5 +0.4
     comp=Z,24nm,0.9s,mb4.6
SONM Songino Array      22.06  24 P     P           08 32 03.6 +0.3
     comp=Z,7.2nm,0.8s,mb4.2,baz=214,slow=12,SNR=30
ULN  Ulaanbaatar        22.32  25 eP    P           08 32 06.2 +0.1
     comp=Z,5.1nm,0.6s,mb4.1
KURK Kurchatov          25.08 338 P     P           08 32 32.2 -0.5
     comp=Z,49nm,1.1s,mb4.9,baz=159,slow=8.1,SNR=14
ZALV Zalesovo Beam      26.45 349 P     P           08 32 45.4 +0.3
     comp=Z,2.0nm,0.4s,mb4.0,baz=169,slow=7.4,SNR=4.1
BVAR Borovoye Array     30.03 332 P     P           08 33 17.1 +0.1
     comp=Z,2.1nm,0.5s,mb4.1,baz=133,slow=12,SNR=8.5
BRVK Borovoye           30.10 332 eP    P           08 33 17.8 +0.2
     comp=Z,10nm,1.0s,mb4.5
KSRS Korea Array        30.34  63 P     P           08 33 18.6 -1.4
     comp=Z,0.6nm,0.3s,mb3.7,baz=261,slow=9.3,SNR=3.0
ABKAR Akbulak array     33.06 319 eP    P           08 33 43.5 -0.2
     comp=Z,1.5nm,0.4s,mb4.3
AKTK Aktyubinsk         34.70 320 P     P           08 33 57.3 -0.7
AKTO Aktyubinsk         34.70 320 P     P           08 33 57.3 -0.7
     comp=Z,1.0nm,0.5s,mb4.0,baz=100,slow=12,SNR=4.5
BRTR Keskin Array B     49.99 300 P     P           08 36 01.4 -1.2
     comp=Z,0.9nm,0.6s,mb4.0,baz=123,slow=8.6,SNR=6.1
AKASG Malin Array Be    52.55 314 P     P           08 36 19.7 -1.8
     comp=Z,3.6nm,0.5s,mb4.6,baz=82,slow=6.3,SNR=14
AKASG Malin Array Be    52.55 314 P     P           08 36 19.7 -1.8
ARCES ARCESS Array B    56.12 337 P     P           08 36 46.6 -0.5
     comp=Z,1.5nm,0.8s,mb4.1,baz=90,slow=8.5,SNR=5.6
WRA  Warramunga Arr     62.16 136 P     P           08 37 29.4 -0.2
     comp=Z,0.5nm,0.6s,mb3.9,baz=325,slow=7.4,SNR=6.8
WRA                               pP    pP          08 37 38.9 -1.4
     comp=Z,0.6nm,0.5s,baz=325,slow=7.3,SNR=3.6
WRA  Warramunga Arr     62.16 136 P     P           08 37 29.4 -0.2
WRA                               pP    pP          08 37 38.9 -1.4
WRAB Tennant Creek      62.16 136 eP    P           08 37 30.6 +1.0
     comp=Z,3.9nm,1.0s,mb4.5
GERES GERESS Array B    62.74 313 P     P           08 37 32.6 -0.6
     comp=Z,1.7nm,0.5s,mb4.4,baz=79,slow=6.9,SNR=9.6
GERES                             pP    pP          08 37 43.2 -0.6
     comp=Z,1.3nm,0.7s,baz=86,slow=8.6,SNR=2.6
ASAR Alice Springs      64.73 139 P     P           08 37 46.4 -0.2
     comp=Z,0.5nm,0.5s,mb3.9,baz=321,slow=6.3,SNR=15
ASAR                              pP    pP          08 37 56.5 -0.7
     comp=Z,0.6nm,0.5s,baz=322,slow=6.4,SNR=4.3
TORD Torodi Ar. Bea     85.31 282 P     P           08 39 45.1 -0.5
     comp=Z,2.0nm,0.6s,mb4.4,baz=56,slow=3.5,SNR=18
YKA  Yellowknife Ar     86.86  13 P     P           08 39 51.9 -0.4
     comp=Z,0.8nm,0.8s,mb4.0,baz=327,slow=4.0,SNR=6.2
CPUP Villa Florida      153.89 267 PKPbc PKPbc       08 47 05.9 -1.8
     comp=Z,1.1nm,0.7s,baz=86,slow=11,SNR=4.5
```

ISCJB 09 08:29:08.1±1.4, 53°.67N±0°.07×87°.4E±0°.1, h10km, Error ellipse: s-maj=11.9km s-min=7.9km az=138.1

*IDC **09** 08:29:09.3±1.6, 53°.57N×87°.74E, h0km, mb3.7/1, mb1 3.9/4, mb1mx3.5/28, mbtmp3.9/4, ML3.8/3, Error ellipse: s-maj=17.6km s-min=12.4km az=28.0*
*NNC **09** 08:29:10.4±3.9, 53°.36N×87°.41E, h0km, mb4.0, mpv3.9, Error ellipse: s-maj=30.7km s-min=18.7km az=63.0*
ISC 09 08:29:10.8±1.3, 53°.67N±0°.07×87°.5E±0°.1, h10km, n13, σ1§25/20, 11C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.61**	**281**	Pn	**Pn**	**08 29 40.5**	**+1.2**
	20nm,0.3s,baz=101,slow=13,SNR=36						
ZALV				Lg		08 30 04.7	
	20nm,0.3s,baz=109,slow=22,SNR=15						
KURK	**Kurchatov**	**6.21**	**245**	⇑Pn	**Pn**	**08 30 38.3**	**-4.1**
	14nm,0.8s						
KURK				⇓Sn	**Sn**	**08 31 52.4**	**-1.0**
	9.3nm,0.9s						
KURK				⇑Lg		08 32 26.5	
	43nm,1.1s						
KURK	**Kurchatov**	**6.21**	**245**	Pn	**Pn**	**08 30 45.7**	**+3.3**
	1.0nm,0.3s,baz=60,slow=14,SNR=28						
KURK				Sn	**Sn**	**08 31 56.4**	**+3.0**
	0.1nm,0.3s,baz=64,slow=24,SNR=3.0						
KURBB	**Kurchatov Arra**	**6.31**	**245**	⇓Pn	**Pn**	**08 30 44.3**	**+0.5**
	2.3nm,0.5s,baz=63,slow=14						
KURBB				⇑Sn	**Sn**	**08 31 56.1**	**+0.3**
	2.9nm,0.8s						
KURBB				⇑Lg		08 32 31.0	
	7.8nm,0.7s						
MK31	**Makanchi Array**	**7.65**	**208**	⇑Pn	**Pn**	**08 31 02.1**	**-0.1**
	7.1nm,0.8s,baz=31,slow=18,SNR=14						
MK31				⇑Sn	**Sn**	**08 32 28.7**	**-0.1**
	6.4nm,0.8s						
MK31				⇑Lg		08 33 05.9	
	20nm,0.9s,baz=40,slow=32,SNR=6.5						
MKAR	**Makanchi Array**	**7.65**	**208**	Pn	**Pn**	**08 31 02.8**	**+0.6**
	1.3nm,0.3s,baz=31,slow=14,SNR=17						
MKAR				Sn	**Sn**	**08 32 28.5**	**-0.3**
	0.2nm,0.3s,baz=32,slow=31,SNR=5.8						
MKAR				Lg		08 33 05.0	
	baz=31,slow=25,SNR=3.6						
VOSK	**Vostochnaya**	**9.96**	**271**	⇓Pn	**Pn**	**08 31 30.8**	**-3.1**
	2.1nm,0.8s						
VOSK				⇑Sn	**Sn**	**08 33 22.9**	**-2.6**
	7.2nm,0.7s						
BVA0	**Borovoye Array**	**10.25**	**273**	⇑Pn	**Pn**	**08 31 39.6**	**+1.7**
	0.4nm,0.6s,baz=82,slow=14,SNR=9.9						
BVA0				Sn	**Sn**	**08 33 32.3**	**-0.4**
	1.7nm,1.0s,baz=103,slow=14,SNR=9.2						
BVAR	**Borovoye Array**	**10.25**	**273**	Pn	**Pn**	**08 31 38.8**	**+0.9**
	0.5nm,0.3s,baz=72,slow=15,SNR=10						
BVAR				Sn	**Sn**	**08 33 32.2**	**-0.5**
	0.6nm,0.3s,baz=77,slow=19,SNR=9.8						
ZRNK	**Zerenda**	**11.09**	**274**	⇑Pn	**Pn**	**08 31 53.5**	**+4.3**
	3.5nm,1.0s						
ZRNK				⇑Sn	**Sn**	**08 33 52.9**	**-0.3**
	6.1nm,0.8s						
SONM	**Songino Array**	**13.30**	**108**	Lg		08 35 59.8	
	baz=292,slow=25,SNR=6.7						
AAK	**Ala-Archa**	**14.02**	**223**	Lg		08 36 30.9	
	0.0nm,0.3s,baz=315,slow=7.1,SNR=2.5						
KSRS	**Korea Array**	**32.10**	**104**	P	**P**	**08 35 35.5**	**-2.3**
	0.4nm,0.3s,baz=324,slow=7.1,SNR=4.1						

NEIC 09 08:29:30.8, 36°.88S×176°.85E, h252km, MG4.0(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.35**	**121**	P	Pn	08 30 08.1	0.0
MXZ				S	S	08 30 36.6	-0.9
URZ	**Urewera**	**1.39**	**172**	P	Pn	08 30 08.3	-0.1
MWZ	**Matawai**	**1.55**	**160**	P	Pn	08 30 09.8	+0.2
PUZ	**Puketiti**	**1.64**	**137**	P	Pn	08 30 10.3	+0.1
KNZ	**Kokohu**	**2.23**	**163**	P	Pn	08 30 15.3	-0.2
BKZ	**Black Stump Fm**	**2.30**	**187**	P	Pn	08 30 15.7	-0.4
WTVZ	**West Tongariro**	**2.44**	**204**	P	Pn	08 30 18.1	+0.6
NGZ	**Ngauruhoe**	**2.50**	**203**	P	Pn	08 30 19.0	+1.0
TUVZ	**Tukino**	**2.56**	**201**	P	Pn	08 30 19.1	+0.4
FWVZ	**Far West T-bar**	**2.58**	**203**	P	Pn	08 30 19.7	+0.8
WAZ	**Wanganui**	**3.23**	**206**	P	Pn	08 30 25.9	+0.2
TSZ	**Takapari Road**	**3.25**	**192**	P	Pn	08 30 24.9	-1.1
BFZ	**Birch Farm**	**3.83**	**187**	P	Pn	08 30 31.1	-1.4
MRZ	**Mangatainoka R**	**3.91**	**194**	P	Pn	08 30 31.4	-2.0
KIW	**Kapiti Island**	**4.25**	**200**	P	Pn	08 30 35.6	-2.0
MTW	**Mount Morrison**	**4.40**	**193**	P	Pn	08 30 37.2	-2.1
CAW	**Cannon Point**	**4.45**	**198**	P	Pn	08 30 37.5	-2.3
SNZO	**South Karori**	**4.73**	**200**	P	Pn	08 30 40.7	-2.5
TCW	**Tory Channel**	**4.77**	**204**	P	Pn	08 30 41.5	-2.2
NNZ	**Nelson**	**5.11**	**211**	P	Pn	08 30 45.2	-2.6
QRZ	**Quartz Range**	**5.19**	**219**	P	Pn	08 30 46.2	-2.6
BSWZ	**Blackbirch Sta**	**5.35**	**205**	P	Pn	08 30 48.7	-2.1
THZ	**Tophouse**	**5.76**	**211**	P	Pn	08 30 53.2	-2.6
KHZ	**Kahutara**	**6.09**	**204**	P	Pn	08 30 57.7	-2.3
LTZ	**Lake Taylor**	**6.87**	**209**	P	Pn	08 31 06.9	-2.8
WVZ	**Waitaha Valley**	**7.76**	**215**	P	Pn	08 31 17.8	-3.2
ODZ	**Otahua Downs**	**9.41**	**208**	P	Pn	08 31 39.4	-2.3

CASC 09 08:43:20.6±1.6, 13°.62N×90°.77W, h36km±405km, MD3.9, ML3.4, 1C-8D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**0.79**	**12**	⇓*e*P	Pn	08 43 35.6	+0.4
FUG	**Fuego 3**	**0.82**	**355**	⇓*i*P	Pn	08 43 35.8	0.0
FG6		**0.94**	**354**	⇓*i*P	Pn	08 43 37.5	+0.2
NBG	**Las Nubes**	**1.05**	**23**	⇓*e*P	Pn	08 43 40.1	+1.4
NBG				*e*S	Sn	08 43 55.2	+3.0
JAT	**Jato**	**1.09**	**310**	⇑*e*P	Pn	08 43 39.4	+0.1
RTR	**El Retiro**	**1.13**	**76**	*i* P	Pn	08 43 40.2	+0.3
SBLS	**San Blas**	**1.14**	**79**	*e*P	Pn	08 43 39.9	-0.2
SBLS				⇓*e*P		08 43 40.0	
SBLS				*e*S	Sn	08 43 55.5	+1.1
SNJE	**San Jose**	**1.16**	**78**	⇓*i*P	Pn	08 43 40.5	+0.1
RBDL	**Robledal**	**1.16**	**65**	*i* P	Pn	08 43 40.9	+0.5
TP2	**Tecpan 2**	**1.18**	**348**	⇓*e*P	Pn	08 43 41.5	+0.9
TP2				*e*S	Sn	08 43 56.5	+1.0
BOQS	**Boqueron**	**1.46**	**85**	*e*P	Pn	08 43 44.6	+0.2
BOQS				*e*S	Sn	08 44 03.3	+1.0
SNET	**Serv Nac Est T**	**1.50**	**87**	*e*P	Pn	08 43 45.2	+0.1
SNET				*e*S	Sn	08 44 03.9	+0.5
MTO2	**Montecristo 2**	**1.57**	**60**	*e*P	Pn	08 43 46.2	+0.1
LFU	**La Fuente**	**1.62**	**85**	*e*P	Pn	08 43 47.2	+0.6
LFRS	**El Faro**	**1.67**	**90**	*e*P	Pn	08 43 47.7	+0.4
LBRS	**Las Brisas**	**1.69**	**86**	*e*P	Pn	08 43 48.1	+0.5
MRL	**Marmol**	**1.78**	**36**	⇓*e*P	Pn	08 43 50.4	+1.5
SNVI	**San Vicente**	**1.88**	**90**	*e*P	Pn	08 43 51.0	+0.7
BLLM	**Bellamira**	**2.47**	**94**	*e*P	Pn	08 43 59.7	+1.3
CAHU	**Cacauatique**	**2.50**	**86**	*e*P	Pn	08 43 58.9	+0.1
CNCH	**Conchagua**	**2.88**	**96**	*e*P	Pn	08 44 04.7	+0.7
CNCH				*e*S	Sn	08 44 39.6	+2.2
CRIN	**San Cristobal**	**3.74**	**104**	*e*P	Pn	08 44 16.9	+1.0
COPN	**Copaltepe**	**4.32**	**109**	*e*P	Pn	08 44 23.9	+0.1
MGAN	**Managua**	**4.65**	**108**	AML	AML	08 45 34.8	
	comp=N,80nm,0.3s						
TEIG	**Tepich**	**6.99**	**20**	*e*P	Pn	08 45 01.4	+0.8

*ISCJB **09** 09:22:15.6±0.5, 13°.08N±0°.04×124°.26E±0°.05, h89km±4km, mb4.0/7, Error ellipse: s-maj=8.8km s-min=5.7km az=151.9*
*IDC **09** 09:22:17.3±1.1, 12°.94N×124°.16E, h90km±7km, mb3.6/5, mb1 3.9/6, mb1mx3.5/21, mbtmp3.7/6, MS2.9/4, Ms1 2.9/4, ms1mx2.7/25, Error ellipse: s-maj=64.1km s-min=14.0km az=60.0*
*NEIC **09** 09:22:17.5±0.8, 12°.84N×124°.10E, mb4.1/2, Error ellipse: s-maj=37.0km s-min=9.3km az=54.0*
NEIC Felt [II PIVS] at Legaspi, Luzon.
*MAN **09** 09:22:17, 13°.01N×124°.14E, h47km, mb4.9, ML3.8, MS3.9*
ISC 09 09:22:16.7±0.5, 13°.08N±0°.04×124°.25E±0°.05, h82km±4km, h92km±3.1km: pP-P, n36, σ1§13/39, mb4.0/7, 3D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVCP	**Virac**	**0.52**	**349**	*e*P	**Pn**	**09 22 31.3**	**+0.5**
PVCP				*e*S	**Sn**	**09 22 39.8**	**-1.4**
CNP	**Catarman**	**0.70**	**145**	*e*P	**Pn**	**09 22 34.0**	**+1.6**
CNP				*e*S	**Sn**	**09 22 43.1**	**-1.1**
MMPH	**Masbate**	**0.95**	**221**	⇓*i*P	**Pn**	**09 22 35.3**	**+0.1**
MMPH				*i* S	**Sn**	**09 22 48.7**	**-0.4**
AUQP	**San Andres**	**1.56**	**279**	*e*P	**Pn**	**09 22 44.1**	**+1.2**
AUQP				*e*S	**Sn**	**09 23 10.0**	**+7.4**
GQP	**Guinayangan**	**1.94**	**295**	⇓*e*P	**Pn**	**09 22 47.4**	**-0.5**
GQP				*e*S	**Sn**	**09 23 10.1**	**-1.4**
OCLP	**Ormoc**	**2.05**	**170**	*e*P	**Pn**	**09 22 50.5**	**+1.2**
RCP	**Roxas**	**2.11**	**224**	⇓*e*P	**Pn**	**09 22 50.2**	**0.0**
RCP				*e*S	**Sn**	**09 23 13.6**	**-2.1**
OTRP	**Odiongan**	**2.29**	**252**	*e*P	**Pn**	**09 22 52.5**	**-0.1**
OTRP				*e*S	**Sn**	**09 23 03.3**	**-17**
BOAC	**Boac**	**2.38**	**279**	*e*P	**Pn**	**09 22 54.0**	**+0.3**
BOAC				*e*S	**Sn**	**09 23 17.1**	**-4.9**
LLP	**Lapu-Lapu**	**2.76**	**186**	*e*P	**Pn**	**09 22 51.5**	**-7.4**
POLP	**Polilio Island**	**2.78**	**306**	*e*P	**Pn**	**09 22 59.4**	**+0.3**
MSLP	**Maasin**	**2.99**	**168**	*e*P	**Pn**	**09 23 03.8**	**+1.8**
SJMP	**San Jose**	**3.12**	**259**	*e*P	**Pn**	**09 23 05.5**	**+1.8**
TGY	**Tagaytay City**	**3.38**	**288**	P	**Pn**	**09 23 07.4**	**+0.1**
	33nm,0.3s,baz=185,slow=1.2,SNR=11						
TBP	**Tagbilaran**	**3.39**	**187**	*e*P	**Pn**	**09 23 07.5**	**+0.1**
TBP				*e*S	**Sn**	**09 23 46.2**	**-0.4**
BALP	**Baler**	**3.70**	**316**	*e*P	**Pn**	**09 23 09.9**	**-1.8**
CUYO	**Cuyo Island**	**3.87**	**235**	*e*P	**Pn**	**09 23 14.2**	**+0.4**
LUBP	**Lubang**	**3.95**	**280**	*e*P	**Pn**	**09 23 15.4**	**+0.4**
BUSP	**Coron**	**4.10**	**255**	*e*P	**Pn**	**09 23 17.7**	**+0.6**
ENPP	**El Nido**	**5.08**	**249**	*e*P	**Pn**	**09 23 31.0**	**+0.6**
BUKP	**Musuan**	**5.23**	**171**	*e*P	**Pn**	**09 23 35.4**	**+2.9**
KAPI	**Kappang**	**18.53**	**194**	LR	LR	09 34 26.5	
	comp=Z,50nm,19.6s,baz=97,slow=40						
CBIJ	**Chichi jima**	**21.82**	**48**	LR	LR	09 34 53.1	
	comp=Z,13nm,20.2s,baz=277,slow=34						
KSRS	**Korea Array**	**24.49**	**7**	pP	pP	09 27 47.2	+0.3
	2.3nm,0.9s,baz=186,slow=11,SNR=5.9						
KSRS				LR	LR	09 36 13.6	
	comp=Z,28nm,19.9s,baz=200,slow=34						
CMAR	**Chiang Mai Arr**	**24.92**	**286**	pP	pP	09 27 50.7	-0.4
	1.8nm,0.9s,baz=95,slow=7.3,SNR=1.9						
PSI	**Prapat**	**27.05**	**250**	LR	LR	09 37 19.3	
	comp=Z,56nm,19.8s,baz=190,slow=34						
WRAB	**Tennant Creek**	**34.28**	**163**	*e*P	**P**	**09 28 53.2**	**-2.1**
	1.2nm,0.7s,mb3.8						
WRA	**Warramunga Arr**	**34.29**	**163**	P	**P**	**09 28 53.3**	**-2.0**
	1.6nm,0.8s,mb3.9,baz=347,slow=8.2,SNR=35						
WRA				pP	pP	09 29 16.1	+1.7
	0.7nm,0.7s,baz=341,slow=9.4,SNR=2.3						
SONM	**Songino Array**	**37.72**	**340**	pP	pP	09 29 45.1	+1.5
	0.8nm,0.8s,baz=156,slow=7.9,SNR=2.9						
ASAR	**Alice Springs**	**37.72**	**165**	P	**P**	**09 29 23.6**	**-1.1**
	1.5nm,0.5s,mb4.1,baz=342,slow=7.5,SNR=43						
STKA	**Stephens Creek**	**47.69**	**160**	P	**P**	**09 30 44.1**	**-1.1**
	2.7nm,0.7s,mb4.2,baz=338,slow=6.8,SNR=11						
STKA				pP	pP	09 31 06.2	+1.0
	1.3nm,0.8s,baz=355,slow=9.0,SNR=2.5						
MKAR	**Makanchi Array**	**48.61**	**322**	P	**P**	**09 30 52.5**	**+0.4**
	0.3nm,0.2s,mb3.8,baz=109,slow=7.8,SNR=4.3						
MKAR				pP	pP	09 31 13.8	+1.7
	0.2nm,0.2s,baz=106,slow=8.9,SNR=1.6						
MKAR				sP	sP	09 31 24.2	+2.8
	0.6nm,0.5s,baz=106,slow=9.7,SNR=2.5						
MKAR	**Makanchi Array**	**48.61**	**322**	P	**P**	**09 30 52.5**	**+0.4**
MKAR				pP	pP	09 31 13.8	+1.7
MKAR				sP	sP	09 31 24.2	+2.8
UCH	**Uchtor**	**51.81**	**314**	P	**P**	**09 31 17.7**	**+1.4**
	3.0nm,0.9s,mb4.3						
KURK	**Kurchatov**	**52.64**	**325**	P	**P**	**09 31 23.0**	**+0.6**
	0.4nm,0.5s,mb3.7,baz=121,slow=7.7,SNR=4.6						
KURK				pP	pP	09 31 44.1	+1.4
	1.2nm,0.5s,baz=122,slow=8.0,SNR=5.4						
KURK	**Kurchatov**	**52.64**	**325**	P	**P**	**09 31 23.0**	**+0.6**
KURK				pP	pP	09 31 44.1	+1.4

*CSEM **09** 09:26:42.8±0.2, 37°.99N×21°.46E, h10km, MD3.2, Error ellipse: s-maj=5.1km s-min=4.2km az=37.0*
*ISCJB **09** 09:26:43.0±0.8, 37°.99N±0°.05×21°.47E±0°.05, h11km±7km, Error ellipse: s-maj=7.8km s-min=6.5km az=24.9*
*ATH **09** 09:26:43.0, 38°.00N×21°.47E, h14km±6km, MD3.2/4*
*THE **09** 09:26:43.5, 37°.99N×21°.43E, h4km±33km, ML3.1/1, Error ellipse: s-maj=33.7km s-min=1.0km az=6.0*
ISC 09 09:26:43.0±0.6, 37°.99N±0°.05×21°.46E±0°.04, h14km±7km, n27, σ0§76/31, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.07**	**8**	*e*PG	**Pg**	**09 26 45.7**	**-0.1**
RLS	**Riolos of Patr**	**0.07**	**8**	*e*Pg	**Pg**	**09 26 45.7**	**-0.1**
UPR	**University Cam**	**0.39**	**42**	*e*PB	**Pg**	**09 26 50.3**	**-0.6**
UPR	**University Cam**	**0.39**	**42**	*e*Pb	**Pg**	**09 26 50.3**	**-0.6**
EFP	**Efpalio**	**0.56**	**39**	*e*PB	**Pb**	**09 26 53.7**	**-0.8**
EFP	**Efpalio**	**0.56**	**39**	*e*Pb	**Pb**	**09 26 53.7**	**-0.8**
TRIZ	**Trizonia**	**0.61**	**52**	P	**Pg**	**09 26 54.6**	**-0.4**
TRIZ				S	**Sg**	**09 27 04.9**	**+1.8**
TRIZ	**Trizonia**	**0.61**	**52**	P	**Pg**	**09 26 54.6**	**-0.4**
TRIZ				S	**Sg**	**09 27 04.9**	**+1.8**
GUR	**Goura**	**0.70**	**94**	*e*PG	**Pg**	**09 26 56.1**	**-0.6**
GUR	**Goura**	**0.70**	**94**	*e*Pg	**Pg**	**09 26 56.1**	**-0.6**
VLS	**Valsamata**	**0.71**	**285**	P	**Pg**	**09 26 55.9**	**-0.9**
VLS				S	**Sg**	**09 27 06.9**	**+0.8**
VLS	**Valsamata**	**0.71**	**285**	*e*PB	**Pb**	**09 26 57.0**	**-0.1**
VLS	**Valsamata**	**0.71**	**285**	P	**Pg**	**09 26 55.9**	**-0.9**
VLS	**Valsamata**	**0.71**	**285**	*e*Pb	**Pb**	**09 26 57.0**	**-0.1**
VLS				S	**Sg**	**09 27 06.9**	**+0.8**
ITM	**Ithomi**	**0.89**	**155**	P	**Pb**	**09 27 00.6**	**+0.4**
ITM	**Ithomi**	**0.89**	**155**	*e*PB	**Pb**	**09 26 59.0**	**-1.2**
ITM	**Ithomi**	**0.89**	**155**	*e*Pb	**Pb**	**09 26 59.0**	**-1.2**
ITM	**Ithomi**	**0.89**	**155**	P	**Pb**	**09 27 00.6**	**+0.4**
VLX	**Vlachokerasia**	**0.96**	**130**	*e*PB	**Pb**	**09 27 01.1**	**-0.3**
VLX	**Vlachokerasia**	**0.96**	**130**	*e*Pg	**Pb**	**09 27 01.1**	**-0.3**
LKD2	**Lefkada island**	**1.01**	**322**	P	**Pb**	**09 27 02.5**	**+0.2**
LKD2	**Lefkada island**	**1.01**	**322**	P	**Pb**	**09 27 02.5**	**+0.2**
PYL	**PYLOS**	**1.12**	**168**	*e*PB	**Pb**	**09 27 05.4**	**+1.3**
PYL	**PYLOS**	**1.12**	**168**	*e*Pb	**Pb**	**09 27 05.4**	**+1.3**
LTK	**Loutraki**	**1.19**	**88**	*e*PB	**Pb**	**09 27 05.6**	**+0.2**
LTK	**Loutraki**	**1.19**	**88**	*e*Pb	**Pb**	**09 27 05.6**	**+0.2**
KYTH	**Kithira**	**2.13**	**143**	*e*Pg	**Pg**	**09 27 23.8**	**0.0**

NEIC 09 09:52:03.0, 42°.39S×172°.72E, h12km, ML3.8(WEL), After WEL., South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTZ	**Lake Taylor**	**0.52**	**220**	P	Pg	09 52 12.8	-0.3
LTZ				S	Sg	09 52 19.8	-0.1
THZ	**Tophouse**	**0.64**	**12**	P	Pg	09 52 14.1	-1.3
DSZ	**Denniston Nort**	**0.94**	**313**	P	Pg	09 52 20.3	-0.8
NNZ	**Nelson**	**1.27**	**23**	P	Pn	09 52 25.4	-1.1
QRZ	**Quartz Range**	**1.57**	**355**	P	Pn	09 52 31.2	+0.6

*IDC **09** 09:54:37.3±1.0, 32°.07N×104°.46E, h0km, mb3.9/8, mb1 3.9/10, mb1mx3.7/28, mbtmp3.8/10, ML3.4/1, Error ellipse: s-maj=40.2km s-min=17.6km az=54.0*
*ISCJB **09** 09:54:37.1±0.5, 32°.04N±0°.04×104°.66E±0°.05, h10km, mb3.8/9, Error ellipse: s-maj=6.8km s-min=4.8km az=23.0*
*NEIC **09** 09:54:38.8±0.6, 32°.03N×104°.45E, h10km, mb3.6/1, Error ellipse: s-maj=22.9km s-min=9.6km az=46.0*
*BJI **09** 09:54:39.2, 32°.18N×104°.65E, h10km, mB4.4/1, mb3.7/1, ML3.5/12, Ms3.6/3, Ms7 3.6/3*
ISC 09 09:54:38.5±0.4, 32°.10N±0°.03×104°.66E±0°.04, h10km, n18, σ1§32/27, mb3.8/9, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.42**	**213**	⇓*i*Pg	**Pg**	**09 55 04.4**	**-1.3**
CD2				Sg	**Sg**	**09 55 24.2**	**+0.1**
CD2				smax			
	comp=N,3μm,0.7s						
CD2				smax			
	comp=E,2μm,0.7s						
LZH	**Lanzhou**	**4.03**	**351**	*e*Pn	**Pn**	**09 55 42.7**	**+2.5**
LZH				Pg	**Pg**	**09 55 53.0**	**-2.7**
LZH				Sn	**Sn**	**09 56 31.4**	**+3.9**
LZH				Sg	**Sg**	**09 56 45.2**	**-2.7**
LZH				smax			
	comp=N,140nm,0.6s						
LZH				smax			
	comp=E,200nm,0.9s						
LZH				LR	LR		
	comp=E,570nm,6.6s						
LZH				LR	LR		
	comp=Z,880nm,7.7s						
XAN	**Xi'an**	**4.06**	**60**	Pn	**Pn**	**09 55 40.8**	**+0.1**
XAN				Pg	**Pg**	**09 55 52.4**	**-3.9**
XAN				Sn	**Sb**	**09 56 38.7**	**-0.6**
XAN				Sg	**Sg**	**09 56 48.8**	**-0.2**
XAN				smax			
	comp=N,130nm,0.6s						
XAN				smax			
	comp=E,85nm,0.8s						
ENH	**Enshi**	**4.52**	**113**	*e*Pn	**Pn**	**09 55 49.1**	**+2.2**
ENH				*e*Sg	**Sg**	**09 57 02.2**	**-1.5**
GYA	**Guiyang**	**5.89**	**162**	Pn	**Pn**	**09 56 11.7**	**+5.9**
GYA				Sn	**Sn**	**09 57 12.5**	**-0.9**
GYA				smax			
	comp=N,60nm,0.7s						
GYA				smax			
	comp=E,60nm,0.7s						
SONM	**Songino Array**	**15.77**	**4**	Pn	**Pn**	**09 58 23.2**	**+2.7**
	baz=185,slow=13,SNR=5.4						
KSRS	**Korea Array**	**19.82**	**68**	P	**Pn**	**09 59 12.4**	**+1.6**
	comp=E,0.1nm,0.3s,baz=252,slow=11,SNR=5.7						
MK31	**Makanchi Array**	**22.56**	**317**	*e*P	**P**	**09 59 38.8**	**+0.2**
MKAR	**Makanchi Array**	**22.56**	**317**	P	**P**	**09 59 39.0**	**+0.4**
	comp=E,1.7nm,0.8s,mb3.5,baz=100,slow=13,SNR=9.7						
ZALV	**Zalesovo Beam**	**26.04**	**333**	P	**P**	**10 00 11.7**	**+0.1**
	comp=E,3.8nm,0.5s,mb4.2,baz=131,slow=9.7,SNR=14						
KURK	**Kurchatov**	**26.75**	**322**	P	**P**	**10 00 18.3**	**+0.2**
	comp=E,0.4nm,0.5s,mb3.2,baz=127,slow=10,SNR=4.9						
ABKAR	**Akbulak array**	**37.38**	**311**	*e*P	**P**	**10 01 49.7**	**-1.5**
	comp=E,0.7nm,0.6s,mb3.7						
ARCES	**ARCESS Array B**	**56.55**	**336**	P	**P**	**10 04 20.4**	**-0.2**
	comp=E,1.4nm,0.7s,mb4.1,baz=81,slow=7.5,SNR=7.1						
FINES	**FINESS Array B**	**57.01**	**326**	P	**P**	**10 04 23.7**	**-0.4**
	comp=E,1.9nm,0.8s,mb4.2,baz=98,slow=5.8,SNR=2.2						
WRA	**Warramunga Arr**	**59.04**	**147**	P	**P**	**10 04 38.9**	**+0.2**
	comp=E,0.7nm,0.7s,mb3.8,baz=339,slow=7.6,SNR=6.7						
WRA	**Warramunga Arr**	**59.04**	**147**	P	**P**	**10 04 38.9**	**+0.2**
ASAR	**Alice Springs**	**62.10**	**150**	P	**P**	**10 05 01.6**	**+2.1**
	comp=E,0.7nm,0.9s,mb3.8,baz=352,slow=7.6,SNR=4.8						
YKA	**Yellowknife Ar**	**80.60**	**17**	P	**P**	**10 06 50.3**	**-0.5**
	comp=E,0.4nm,0.6s,mb3.5,baz=326,slow=5.1,SNR=4.7						

*DDA **09** 10:05:07.1, 36°.13N×35°.73E, h7km±6km, Md2.9*
*CSEM **09** 10:05:07.1±0.9, 36°.03N×35°.76E, h10km, MD2.9, Error ellipse: s-maj=19.8km s-min=11.1km az=30.0*
ISC 09 10:05:08.1±1.7, 36°.12N±0°.08×35°.72E±0°.08, h11km±10km, n11, σ1§35/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YAYL	**Yayladag**	**0.33**	**104**	*i* P	**Pg**	**10 05 13.0**	**-1.6**
YAYL				*i* S	**Sg**	**10 05 18.9**	**-0.2**
YAYL	**Yayladag**	**0.33**	**104**	*i* P	**Pg**	**10 05 13.0**	**-1.7**
YAYL				*i* S	**Sg**	**10 05 18.9**	**-0.2**
HTY	**Hatay**	**0.34**	**89**	*e*PG	**Pg**	**10 05 17.5**	**+2.5**
HTY				*e*SG	**Sg**	**10 05 22.8**	**+3.2**
HTY	**Hatay**	**0.34**	**89**	*e*Pg	**Pg**	**10 05 17.5**	**+2.5**
COBT	**Iskenderun**	**0.59**	**47**	*i* P	**Pg**	**10 05 19.7**	**0.0**
COBT				*i* S	**Sg**	**10 05 25.9**	**-1.7**
COBT	**Iskenderun**	**0.59**	**47**	*i* P	**Pg**	**10 05 19.7**	**0.0**
COBT				*i* S	**Sg**	**10 05 25.9**	**-1.6**
KARA	**Karaisali**	**1.26**	**335**	*e*PG	**Pg**	**10 05 32.9**	**+0.5**
KARA	**Karaisali**	**1.26**	**335**	*e*Pg	**Pg**	**10 05 32.9**	**+0.5**
KUZU	**Kuzuini**	**1.28**	**59**	*i* P	**Pn**	**10 05 30.5**	**-1.4**
KUZU				*i* S	**Sb**	**10 05 49.8**	**+1.2**
KUZU	**Kuzuini**	**1.28**	**59**	*i* P	**Pn**	**10 05 30.5**	**-1.4**
KUZU				*i* S	**Sb**	**10 05 49.8**	**+1.2**
KOZT	**Kozan**	**1.37**	**4**	*e*PG	**Pg**	**10 05 34.7**	**+0.3**

*IDC **09** 10:07:17.8±1.6, 38°.58N×21°.52E, h0km, mb3.9/4, mb1 3.8/5, mb1mx3.5/26, mbtmp3.8/5, ML3.2/1, MS3.2/1, Ms1 3.2/1, ms1mx2.2/27, Error ellipse: s-maj=106.4km s-min=23.4km az=140.0*
*ATH **09** 10:07:19.9, 37°.95N×22°.05E, h5km, MD3.7/10, ML3.8*
*CSEM **09** 10:07:20.7±0.2, 37°.96N×22°.04E, h8km, ML3.8/3, Error ellipse: s-maj=4.0km s-min=3.1km az=61.0*
*ISCJB **09** 10:07:20.3±0

ATH	Athens Observa	1.31	90	P	Pn	10 07 46.7	+1.3
ATH	Athens Observa	1.31	90	*e*PB	Pb	10 07 45.3	-0.4
ATH				*e*SB	Sb	10 08 03.6	+1.1
ATH	Athens Observa	1.31	90	*e*Pb	Pb	10 07 45.3	-0.4
ATH	Athens Observa	1.31	90	P	Pn	10 07 46.7	+1.3
ATH				*e*Sb	Sb	10 08 03.6	+1.1
LKD2	Lefkada island	1.37	307	P	Pn	10 07 47.4	+1.2
LKD2	Lefkada island	1.37	307	P	Pn	10 07 47.4	+1.2
VLI	Veliai	1.44	151	P	Pn	10 07 47.4	+0.3
THL	Klokotos Trika	1.59	359	P	Pn	10 07 49.9	+0.7
THL				S	Sn	10 08 10.7	+1.0
THL	Klokotos Trika	1.59	359	*e*PG	Pg	10 07 49.8	-1.8
THL	Klokotos Trika	1.59	359	P	Pn	10 07 49.9	+0.7
THL				S	Sn	10 08 10.7	+1.0
NEO	Neokhori	1.61	34	P	Pn	10 07 49.4	-0.1
NEO	Neokhori	1.61	34	*e*PG	Pg	10 07 49.8	-2.2
XOR	Xorichti	1.65	32	P	Pn	10 07 49.2	-0.8
XOR	Xorichti	1.65	32	P	Pn	10 07 49.2	-0.8
AOS	Alonnisos	1.86	50	P	Pn	10 07 51.7	-1.2
AOS	Alonnisos	1.86	50	P	Pn	10 07 51.7	-1.2
KYTH	Kithira	1.86	155	*e*Pn	Pn	10 07 54.6	+1.6
KYTH	Kithira	1.86	155	*e*PN	Pn	10 07 54.6	+1.6
KYTH	Kithira	1.86	155	*e*Pn	Pn	10 07 54.6	+1.6
JAN	Janina	1.93	331	*e*Pg	Pg	10 07 55.4	-2.6
JAN	Janina	1.93	331	*e*PG	Pg	10 07 55.4	-2.6
JAN	Janina	1.93	331	*e*Pg	Pg	10 07 55.4	-2.6
LIT	Litokhoron	2.15	9	P	Pn	10 07 57.2	+0.3
LIT	Litokhoron	2.15	9	P	Pn	10 07 57.2	+0.3
KEK	Kerkira	2.47	315	*e*Pb	Pb	10 08 02.2	-3.4
KEK	Kerkira	2.47	315	*e*PB	Pb	10 08 02.2	-3.4
KEK	Kerkira	2.47	315	*e*Pb	Pb	10 08 02.2	-3.4
APE	Apeiranthos	2.91	107	P	Pn	10 08 06.6	-0.7
APE	Apeiranthos	2.91	107	P	Pn	10 08 06.6	-0.7
KARN	Karanos	2.97	149	P	Pn	10 08 08.5	+0.3
KARN	Karanos	2.97	149	P	Pn	10 08 08.5	+0.3
VAM	Vamos	3.09	145	P	Pn	10 08 11.4	+1.6
VAM	Vamos	3.09	145	P	Pn	10 08 11.4	+1.6
KRUS	Krusevo	3.45	350	*e*Pn	Pn	10 08 23.8	+9.1
SMG	Samos	3.79	93	P	Pn	10 08 19.7	+0.2
LAST	Lasithi	3.93	135	P	Pn	10 08 21.2	-0.2
LAST	Lasithi	3.93	135	P	Pn	10 08 21.2	-0.2
NPS	Neapolis	3.94	132	*e*Pn	Pn	10 08 22.3	+0.8
NPS	Neapolis	3.94	132	*e*PN	Pn	10 08 22.2	+0.7
NPS	Neapolis	3.94	132	*e*PN	Pn	10 08 22.2	+0.7
NPS	Neapolis	3.94	132	*e*Pn	Pn	10 08 22.3	+0.8
SG1	Sgolgore (BA)	5.05	306	*e*Pn	Pn	10 08 37.5	+0.7
SG1				*e*Sn	Sn	10 09 35.9	+0.7
STON	Ston	5.91	327	*e*Pn	Pn	10 08 48.5	-0.1
STON				Sn	Sn	10 09 55.4	-0.9
STON	Ston	5.91	327	*e*Pn	Pn	10 08 48.5	-0.1
STON				Sn	Sn	10 09 55.4	-0.9
NVLJ	Novalja	8.52	323	*e*Pn	Pn	10 09 24.8	+0.5
NVLJ				Sn	Sn	10 10 58.4	-2.0
NVLJ	Novalja	8.52	323	*e*Pn	Pn	10 09 24.8	+0.5
BRTR	Keskin Array B	9.20	75	Pn	Pn	10 09 37.0	+3.2
	0.2nm,0.3s,baz=264,slow=12,SNR=5.1						
BRTR	Keskin Array B	9.20	75	Pn	Pn	10 09 37.0	+3.2
TORD	Torodi Ar. Bea	30.66	222	P	P	10 13 35.8	0.0
	0.6nm,0.6s,mb3.6,baz=34,slow=9.3,SNR=11						
BVAR	Borovoye Array	36.32	50	LR	LR	10 32 09.0	
	comp=Z,32nm,19.6s,baz=30,slow=41						
KURK	Kurchatov	41.42	53	P	P	10 15 04.2	-3.2
	0.6nm,0.4s,mb3.5,baz=278,slow=8.7,SNR=3.3						
MKAR	Makanchi Array	44.37	59	P	P	10 15 28.9	-2.4
	0.3nm,0.3s,mb3.6,baz=266,slow=8.7,SNR=3.1						
ZALV	Zalesovo Beam	44.92	48	P	P	10 15 34.5	-1.2
	0.7nm,0.3s,mb3.9,baz=316,slow=8.1,SNR=2.5						

*IDC **09** 10:16:52.0±3.4,21°.85S×170°.82E,h0km,mb3.9/3, mb1 4.3/3,mb1mx3.9/14,mbtmp3.9/3,Error ellipse: s-maj=208.1km s-min=30.3km az=159.0*
*ISCJB **09** 10:16:56.4±5.7,22°.8S±0°.6×171°.0E±0°.2,h59km±45km, mb4.0/3,Error ellipse: s-maj=106.2km s-min=34.0km az=172.5*
ISC 09 10:16:57.5±5.8,22°.7S±0°.7×171°.1E±0°.3,h54km±46km,n5, σ0s67/5,mb4.0/3,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.34	278	*e*P	Pn	10 18 01.0	-0.1
DZM				*e*S	Sn	10 18 50.5	+0.1
ASAR	Alice Springs	34.12	261	P	P	10 23 37.8	+0.4
	1.0nm,0.7s,mb3.8,baz=95,slow=10,SNR=15						
WRA	Warramunga Arr	34.28	268	P	P	10 23 38.3	-0.5
	0.7nm,0.4s,mb3.9,baz=97,slow=8.4,SNR=23						
NVAR	Mina Array Bea	89.84	48	P	P	10 29 50.5	+0.1
	1.0nm,0.7s,mb4.2,baz=227,slow=8.5,SNR=8.4						
GERES	GERESS Array B	148.37	331	PKPbc	PKPbc	10 36 38.5	+0.8
	0.9nm,0.6s,baz=46,slow=2.8,SNR=8.9						

IDC 09 10:18:03.8±3.4,23°.32S×177°.71W,h211km±33km, mb3.0/4,mb1 3.5/6,mb1mx3.4/17,mbtmp3.3/6,Error ellipse: s-maj=41.6km s-min=18.5km az=146.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	10.92	32	P	Pn	10 20 34.6	-0.1
	2.4nm,0.3s,baz=232,slow=22,SNR=6.7						
AFI				S	S	10 22 27.7	-9.2
	6.0nm,0.3s,baz=44,slow=23,SNR=7.1						
URZ	Urewera	15.54	195	P	Pn	10 21 31.0	-1.0
	3.1nm,0.3s,baz=332,slow=4.9,SNR=20						
URZ				S	S	10 24 10.3	-14
	1.4nm,0.3s,baz=250,slow=22,SNR=13						
ASAR	Alice Springs	44.21	259	P	P	10 25 52.9	+0.7
	0.2nm,0.8s,baz=97,slow=7.6,SNR=3.0						
WRA	Warramunga Arr	44.55	265	P	P	10 25 54.7	-0.2
	0.4nm,0.7s,baz=95,slow=8.3,SNR=14						
TXAR	Lajitas Array	88.35	57	P	P	10 30 32.8	+1.0
	0.4nm,0.8s,baz=230,slow=6.1,SNR=4.0						
PDAR	Pinedale Array	90.82	43	P	P	10 30 43.6	+0.6
	0.7nm,0.8s,baz=211,slow=1.7,SNR=5.4						
AKASG	Malin Array Be	145.59	329	PKPbc	PKPbc	10 37 15.6	-1.5
	0.4nm,0.3s,baz=43,slow=3.4,SNR=5.3						
BRTR	Keskin Array B	148.88	309	PKPbc	PKPbc	10 37 25.5	-1.0
	0.5nm,0.6s,baz=157,slow=3.5,SNR=3.6						

*ATH **09** 10:36:12.6,38°.02N×21°.43E,h9km,3km,MD3.3/3*
*NEIC **09** 10:36:12.6,38°.01N×21°.43E,h6km,MD3.3(ATH),After ATH.*
*CSEM **09** 10:36:12.8±0.3,38°.00N×21°.47E,h5km,MD3.3,Error ellipse: s-maj=8.8km s-min=6.8km az=74.0*
*ISCJB **09** 10:36:12.1±0.5,37°.96N±0°.04×21°.47E±0°.04,h10km,Error ellipse: s-maj=5.4km s-min=4.8km az=18.3*
*THE **09** 10:36:13.4,38°.01N×21°.45E,h0km±6km,ML3.5/1,Error ellipse: s-maj=6.2km s-min=1.3km az=168.0*
ISC 09 10:36:12.9±0.6,37°.98N±0°.04×21°.48E±0°.04,h5km±10km, n38,σ0s71/41,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.08	354	*e*Pg	Pg	10 36 14.9	+0.3
RLS	Riolos of Patr	0.08	354	*e*PG	Pg	10 36 14.9	+0.3
RLS	Riolos of Patr	0.08	354	*e*Pg	Pg	10 36 14.9	+0.3
UPR	University Cam	0.39	39	*e*PB	Pg	10 36 20.2	-0.2
UPR	University Cam	0.39	39	*e*Pb	Pg	10 36 20.2	-0.2
EFP	Efpalio	0.56	37	*e*PG	Pg	10 36 23.1	-0.5
EFP	Efpalio	0.56	37	*e*Pg	Pg	10 36 23.1	-0.5
TRIZ	Trizonia	0.61	51	P	Pg	10 36 24.1	-0.4
TRIZ				S	Sg	10 36 33.5	+1.1
GUR	Goura	0.69	93	*e*PB	Pg	10 36 25.2	-0.8
GUR	Goura	0.69	93	*e*Pb	Pg	10 36 25.2	-0.8
VLS	Valsamata	0.73	286	*e*Pg	Pg	10 36 25.7	-1.1
VLS	Valsamata	0.73	286	P	Pg	10 36 26.3	-0.5
VLS				S	Sg	10 36 37.0	+0.7
VLS	Valsamata	0.73	286	*e*PB	Pg	10 36 25.7	-1.1
VLS	Valsamata	0.73	286	*e*Pg	Pg	10 36 25.7	-1.1
VLS				S	Sg	10 36 37.0	+0.7
ITM	Ithomi	0.88	156	*e*Pb	Pg	10 36 30.3	+0.6
ITM	Ithomi	0.88	156	P	Pg	10 36 30.3	+0.6
ITM	Ithomi	0.88	156	*e*PB	Pg	10 36 30.3	+0.6
ITM	Ithomi	0.88	156	P	Pg	10 36 30.3	+0.6
EVR	Evrytania	0.97	15	*e*Pn	Pg	10 36 31.4	-0.1
EVR	Evrytania	0.97	15	*e*PN	Pg	10 36 31.4	-0.1
EVR	Evrytania	0.97	15	*e*Pn	Pg	10 36 31.4	-0.1
LKD2	Lefkada island	1.03	322	P	Pg	10 36 31.8	-0.9
LKD2	Lefkada island	1.03	322	P	Pg	10 36 31.8	-0.9
PYL	PYLOS	1.10	169	P	Pg	10 36 35.0	+1.0
PYL	PYLOS	1.10	169	*e*PB	Pg	10 36 34.6	+0.6
PYL	PYLOS	1.10	169	*e*Pb	Pg	10 36 34.6	+0.6
PYL	PYLOS	1.10	169	P	Pg	10 36 35.0	+1.0
LTK	Loutraki	1.18	88	*e*PN	Pn	10 36 35.0	-0.9
LTK	Loutraki	1.18	88	*e*Pn	Pn	10 36 35.0	-0.9
AGG	Agios Georgios	1.24	33	P	Pg	10 36 36.9	+0.3
AGG	Agios Georgios	1.24	33	P	Pg	10 36 36.9	+0.3
THL	Klokotos Trika	1.64	15	P	Pn	10 36 43.5	+1.2
THL	Klokotos Trika	1.64	15	P	Pn	10 36 43.5	+1.2
VLI	Veliai	1.71	137	*e*Pn	Pg	10 36 46.0	+0.3
VLI	Veliai	1.71	137	*e*PG	Pg	10 36 46.0	+0.3
VLI	Veliai	1.71	137	*e*Pn	Pg	10 36 46.0	+0.3
KYTH	Kithira	2.11	143	*e*Pg	Pg	10 36 52.6	-0.6
KYTH	Kithira	2.11	143	*e*Pg	Pg	10 36 52.6	-0.6

*ISK **09** 10:38:32.6,38°.59N×37°.54E,h5km,MD2.8*
*CSEM **09** 10:38:32.9±0.6,38°.53N×37°.45E,h2km,MD2.9,Error ellipse: s-maj=11.8km s-min=9.9km az=148.0*
*DDA **09** 10:38:34.5,38°.58N×37°.63E,h3km,Md2.9*
*ISCJB **09** 10:38:35.9±0.8,38°.58N±0°.06×37°.61E±0°.07,h28km±9km, Error ellipse: s-maj=11.1km s-min=8.7km az=18.7*
ISC 09 10:38:35.6±0.9,38°.54N±0°.06×37°.56E±0°.06,h17km±8km, n15,σ1s40/25,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKCD	Akcadag	0.38	131	*i* P	Pg	10 38 41.6	-1.8
AKCD				*i* S	Sg	10 38 49.6	+1.0
AKCD	Akcadag	0.38	131	*i* P	Pg	10 38 41.6	-1.8
AKCD				*i* S	Sg	10 38 49.6	+1.0
SARI	SarD1z-Kayseri	0.69	282	*e*PG	Pg	10 38 50.6	+1.5
SARI				*e*SG	Sg	10 39 05.1	+6.8
MYA	Malataya	0.71	107	*e*PG	Pg	10 38 48.0	-1.6
MYA				*e*SG	Sg	10 39 00.5	+1.4
MYA	Malataya	0.71	107	*e*Pg	Pg	10 38 48.0	-1.6
MYA				*e*Sg	Sg	10 39 00.5	+1.5
KEMA	Kemaliye	1.03	45	*i* P	Pb	10 38 52.9	-2.1
KEMA				*i* S	Sb	10 39 10.3	+2.1
KEMA	Kemaliye	1.03	45	*i* P	Pb	10 38 52.9	-2.1
KEMA				*i* S	Sb	10 39 10.3	+2.1
ELZG	Elazig	1.12	92	*i* P	Pb	10 38 54.9	-1.6
ELZG				*i* S	Sb	10 39 14.5	+3.7
ELZG	Elazig	1.12	92	*i* P	Pb	10 38 54.9	-1.6
ELZG				*i* S	Sb	10 39 14.5	+3.7
GZT	Gaziantep	1.19	180	*i* P	Pn	10 38 57.6	+0.1
GZT				*i* S	Sb	10 39 17.2	+4.4
SVSK	Karacayir	1.44	343	*e*PN	Pn	10 39 00.2	-0.8
SVSK	Karacayir	1.44	343	*e*Pn	Pn	10 39 00.2	-0.8
URFA	Urfa	1.48	137	*e*PN	Pn	10 39 01.6	0.0
URFA	Urfa	1.48	137	*e*Pn	Pn	10 39 01.6	0.0
KOZT	Kozan	1.73	233	*e*PN	Pn	10 39 05.5	+0.5

MEX 09 10:43:21.1±1.1,17°.04N×94°.30W,h120km±18km,MD3.9, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUIG	Tuzandepetl	1.00	353	*e*P	Pn	10 43 41.7	-1.4
TUIG				*i* S	Sn	10 43 58.0	-1.8
TGIG		1.16	103	*i* P	Pn	10 43 43.7	-1.0
TGIG				*i* S	Sn	10 44 00.9	-1.7
SCX	San Cristobal	1.62	100	*e*P	Pn	10 43 48.4	-1.6
SCX				*i* S	Sn	10 44 10.2	-1.8
PCIG		1.68	142	*e*P	Pn	10 43 49.2	-1.5
PCIG				*i* S	Sn	10 44 11.2	-2.1
HUIG	Huatulco	2.14	234	*i* P	Pn	10 43 54.4	-1.9
HUIG				*i* S	Sn	10 44 22.9	-0.4
TPIG	Tehuac#an	3.22	296	*i* P	Pn	10 44 10.2	-0.2
TPIG				*i* S	Sn	10 44 48.1	-0.3
UTMO	Huajuapan	3.43	284	*i* P	Pn	10 44 13.8	+0.7
UTMO				*i* S	Sn	10 44 49.6	-3.7
PNIG	Pinotepa	3.72	261	*i* P	Pn	10 44 15.6	-1.3
PNIG				*i* S	Sn	10 44 58.7	-1.5

*CSEM **09** 10:57:51.0,38°.01N×21°.45E,h0km,ML3.7/1,After THE*
THE 09 10:57:51.0,38°.01N×21°.45E,h0km±4km,ML3.7/1,Error ellipse: s-maj=4.1km s-min=1.0km az=301.0,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRIZ	Trizonia	0.61	54	P	Pg	10 58 01.5	-1.1
TRIZ				S	Sg	10 58 11.8	+1.3
TRIZ	Trizonia	0.61	54	P	Pg	10 58 01.5	-1.1
TRIZ				S	Sg	10 58 11.8	+1.3
VLS	Valsamata	0.70	284	P	Pg	10 58 04.0	-0.4
VLS				S	Sg	10 58 14.9	+1.4
VLS	Valsamata	0.70	284	P	Pg	10 58 04.0	-0.4
VLS				S	Sg	10 58 14.9	+1.4
ITM	Ithomi	0.91	155	P	Pg	10 58 07.9	-0.5
ITM				S	Sg	10 58 21.7	+1.5
ITM	Ithomi	0.91	155	P	Pg	10 58 07.9	-0.5
ITM				S	Sg	10 58 21.7	+1.5
LKD2	Lefkada island	1.00	322	P	Pg	10 58 09.3	-0.8
LKD2	Lefkada island	1.00	322	P	Pg	10 58 09.3	-0.8
PYL	PYLOS	1.14	168	P	Pg	10 58 12.6	-0.1
PYL	PYLOS	1.14	168	P	Pg	10 58 12.6	-0.1
AGG	Agios Georgios	1.23	34	P	Pg	10 58 14.5	0.0
AGG	Agios Georgios	1.23	34	P	Pg	10 58 14.5	0.0
THL	Klokotos Trika	1.62	16	P	Pn	10 58 20.6	-0.1
THL	Klokotos Trika	1.62	16	P	Pn	10 58 20.6	-0.1
KEK	Kerkira	2.14	323	P	Pn	10 58 27.6	-0.3
KEK	Kerkira	2.14	323	P	Pn	10 58 27.6	-0.3

*CSEM **09** 11:00:54.8±0.3,36°.98N×29°.25E,h12km,MD2.9,Error ellipse: s-maj=9.3km s-min=6.8km az=169.0*
*DDA **09** 11:00:56.0,37°.01N×28°.97E,h28km,Md2.9*
ISK 09 11:00:54.0,36°.97N×29°.22E,h8km,MD2.9,ML2.5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.30	50	*e*PG	Pg	11 00 59.5	-0.3
GLHS				*e*SG	Sg	11 01 05.6	+1.8
GLHS	Glhisar (BURDU	0.30	50	*e*Pg	Pg	11 00 59.5	-0.3
GLHS				*e*Sg	Sg	11 01 05.6	+1.8
FETY	Fethiye	0.35	198	*e*PG	Pg	11 01 00.8	0.0
FETY				*e*SG	Sg	11 01 06.6	+1.3
FETY	Fethiye	0.35	198	*e*Pg	Pg	11 01 00.8	0.0
FETY				*e*Sg	Sg	11 01 06.6	+1.3
TURN	Turunc	0.50	260	*i* P	Pg	11 01 08.0	+4.4
TURN				*i* S	Sg	11 01 20.6	+10
TURN	Turunc	0.50	260	*i* P	Pg	11 01 08.0	+4.3
TURN				*i* S	Sg	11 01 20.5	+10
ELL	Elmali	0.60	111	*e*PG	Pg	11 01 06.6	+1.1
ELL				*e*SG	Sg	11 01 15.5	+2.2
ELL	Elmali	0.60	111	*e*Pg	Pg	11 01 06.6	+1.1
ELL				*e*Sg	Sg	11 01 15.5	+2.2
YER	Yerkesik	0.77	283	*e*PG	Pg	11 01 09.0	+0.3
YER				*e*SG	Sg	11 01 21.0	+2.3
YER	Yerkesik	0.77	283	*e*Pg	Pg	11 01 09.0	+0.3
YER				*e*Sg	Sg	11 01 21.0	+2.3
DENT	Denizli	0.80	350	*e*PG	Pg	11 01 10.4	+0.9
DENT	Denizli	0.80	350	*e*Pg	Pg	11 01 10.4	+1.0
MLSB	Milas	1.20	286	*e*PN	Pn	11 01 17.2	+0.2
MLSB	Milas	1.20	286	*e*Pn	Pn	11 01 17.2	+0.2
BCK	Bucak	1.20	65	*e*PN	Pn	11 01 16.5	-0.6
BCK	Bucak	1.20	65	*e*Pn	Pn	11 01 16.5	-0.6
DAT	Datca	1.33	260	*e*PN	Pn	11 01 20.0	+1.1
DAT	Datca	1.33	260	*e*Pn	Pn	11 01 20.0	+1.1
SUTC	Sutluce-Ispart	1.51	70	*e*PN	Pn	11 01 22.4	+1.0
SUTC	Sutluce-Ispart	1.51	70	*e*Pn	Pn	11 01 22.4	+1.0
KULA	Kula-Manisa	1.61	344	*e*PN	Pn	11 01 23.1	+0.4
KULA	Kula-Manisa	1.61	344	*e*Pn	Pn	11 01 23.1	+0.4

*FUNV **09** 11:01:47.6,9°.36N×63°.18W,h17km,MW3.8*
*NEIC **09** 11:01:47.6,9°.36N×63°.20W,h17km,MW4.1(CAR),After CAR.*
*ISCJB **09** 11:01:47.2±0.5,9°.35N±0°.03×63°.25W±0°.02,h28km±5km, Error ellipse: s-maj=5.3km s-min=3.4km az=149.9*
*TRN **09** 11:01:48.2,9°.18N×62°.93W,h156km,MD3.9*
ISC 09 11:01:47.6±0.7,9°.36N±0°.03×63°.24W±0°.02,h21km±6km, n44,σ1s05/77,3C-1D,Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORIV	Oritupano	0.34	210	*e*P	Pb	11 01 54.8	-0.2
ORIV				*e*S	Sb	11 02 00.5	+0.6
ORIV	Oritupano	0.34	210	⇑*i*P	Pb	11 01 54.9	-0.1
ORIV				*e*S	Sb	11 02 00.5	+0.6
GUNV	Guanoco	0.85	20	*e*P	Pb	11 02 02.1	-1.5
GUNV				*e*S	Sb	11 02 14.1	-0.5
GUNV	Guanoco	0.85	20	⇑*i*P	Pb	11 02 02.2	-1.5
GUNV				*e*S	Sb	11 02 14.1	-0.5
CRUV	Carupano	1.30	0	*e*P	Pn	11 02 10.1	-0.6
CRUV				*e*S	Sn	11 02 27.2	-0.2
CRUV	Carupano	1.30	0	*e*P	Pn	11 02 10.1	-0.6
CRUV				*e*S	Sn	11 02 27.2	-0.2
PRGV	PARIAGUAN	1.51	247	*e*P	Pn	11 02 13.6	+0.2
PRGV				*e*S	Sn	11 02 34.3	+1.8
PCRV	Puerto La Cruz	1.59	301	*e*P	Pn	11 02 15.2	+0.6
PCRV				*e*S	Sn	11 02 34.0	-0.5
PCRV	Puerto La Cruz	1.59	301	⇓*e*P	Pn	11 02 15.3	+0.7
PCRV				*e*S	Sn	11 02 34.0	-0.5
GURV	El Guri	1.60	174	*e*P	Pn	11 02 14.4	-0.3
GURV	El Guri	1.60	174	*e*P	Pn	11 02 14.4	-0.3
GUIV	Guiria	1.62	38	*e*P	Pn	11 02 14.8	-0.2
GUIV				*e*S	Sn	11 02 35.3	0.0
RIOV	Rio Grande	1.91	132	*e*P	Pn	11 02 18.6	-0.3
RIOV				*e*S	Sn	11 02 41.1	-1.2
RIOV	Rio Grande	1.91	132	*e*P	Pn	11 02 18.1	-0.9
RIOV				*e*S	Sn	11 02 41.1	-1.2
TCE	Chacachacare	1.98	48	*e*P	Pn	11 02 23.0	+3.2
TCE				*e*S	Sn	11 02 48.1	+4.0
TCE	Chacachacare	1.98	48	*e*P	Pn	11 02 23.0	+3.2
TCE				*e*S	Sn	11 02 48.1	+4.0
ITEV	Isla Los Testi	1.98	3	*e*P	Pn	11 02 20.1	+0.1
ITEV				*e*S	Sn	11 02 43.2	-1.0
ITEV	Isla Los Testi	1.98	3	⇑*e*P	Pn	11 02 20.0	0.0
ITEV				*e*S	Sn	11 02 43.2	-1.0
TPP	Pointe-a-Pierr	2.00	62	*e*P	Pn	11 02 24.9	+4.7
TPP				*e*S	Sn	11 02 46.7	+2.0
TPP	Pointe-a-Pierr	2.00	62	*e*P	Pn	11 02 23.2	+3.0
TPP				*e*S	Sn	11 02 46.7	+2.0
TRN	Trinidad (W)	2.22	55	*e*P	Pn	11 02 24.4	+1.2
TRN				*e*S	Sn	11 02 50.5	+0.6
TRN	Trinidad (W)	2.22	55	*e*P	Pn	11 02 24.4	+1.2
TRN				*e*S	Sn	11 02 50.5	+0.6
TBH	Brigand Hill	2.42	62	*e*P	Pn	11 02 28.1	+2.2
TBH				*e*S	Sn	11 02 57.0	+2.2
TBH	Brigand Hill	2.42	62	*e*P	Pn	11 02 25.6	-0.3
TBH				*e*S	Sn	11 02 54.1	-0.7
CUPV	Cœpira	2.60	286	*e*P	Pn	11 02 28.6	+0.1
CUPV				*e*S	Sn	11 02 59.4	-0.1
CUPV	Cœpira	2.60	286	*e*P	Pn	11 02 28.6	+0.1
CUPV				*e*S	Sn	11 02 59.4	-0.1
MERV	Las Mercedes	3.02	268	*e*P	Pn	11 02 35.2	+1.0
TPR	Prospect	3.03	53	*e*P	Pn	11 02 32.8	-1.5
TPR				*e*S	Sn	11 03 06.5	-3.4
TPR	Prospect	3.03	53	*e*P	Pn	11 02 35.2	+0.9
TPR				*e*S	Sn	11 03 09.4	-0.5
BOT	Bacolet	3.06	54	*e*P	Pn	11 02 35.4	+0.5
BOT				*e*S	Sn	11 03 09.3	-1.5
BOT	Bacolet	3.06	54	*e*P	Pn	11 02 35.4	+0.5
BOT				*e*S	Sn	11 03 09.3	-1.5
GRGR	Grenville	3.16	29	*e*Pn	Pn	11 02 36.0	-0.2
BIRV	Birongo	3.18	291	*e*P	Pn	11 02 37.2	+0.7
GRW	Mount Saint Ca	3.18	29	*e*P	Pn	11 02 37.6	+1.1
GRW				*e*S	Sn	11 03 15.3	+1.5
GRW	Mount Saint Ca	3.18	29	*e*P	Pn	11 02 37.6	+1.1
GRW				*e*S	Sn	11 03 15.3	+1.5
TOSP	Speyside	3.29	54	*e*P	Pn	11 02 37.4	-0.5
TOSP				*e*S	Sn	11 03 13.9	-2.4
CAOV	Caicara del Or	3.66	237	*e*P	Pn	11 02 42.8	-0.2
CAOV				*e*S	Sn	11 03 23.7	-1.8
CAOV	Caicara del Or	3.66	237	*e*P	Pn	11 02 42.8	-0.2
CAOV				*e*S	Sn	11 03 23.7	-1.8
ORCV	Isla La Orchil	3.79	310	*e*P	Pn	11 02 45.5	+0.7
TURV	Turiamo	4.66	284	*e*P	Pn	11 02 56.9	+0.2
BAUV	El Baul	4.76	265	*e*P	Pn	11 02 58.4	+0.3
TEPV	Terepaima	5.90	276	*e*P	Pn	11 03 12.8	-0.9
CURV	Curarigua	6.66	276	*e*P	Pn	11 03 24.1	-0.2
MONV	Montecano	7.10	292	*e*P	Pn	11 03 28.8	-1.5

*NEIC **09** 11:07:00.1±2.3,26°.93S×177°.63W,h96km±21km,mb4.1/1, Error ellipse: s-maj=23.6km s-min=18.5km az=214.0*
*IDC **09** 11:07:00.2±3.4,26°.84S×177°.47W,h98km±32km,mb3.7/7, mb1 4.0/8,mb1mx3.9/15,mbtmp3.8/

VLS	**Valsamata**	**0.73**	**285**	*e*PB	**Pg**	**11 09 53.8**	**-0.6**
VLS	**Valsamata**	**0.73**	**285**	P	**Pg**	**11 09 53.8**	**-0.6**
VLS				S	**Sg**	**11 10 04.7**	**+0.7**
ITM	**Ithomi**	**0.88**	**156**	*e*Pb	**Pg**	**11 09 57.2**	**-0.1**
ITM	**Ithomi**	**0.88**	**156**	P	**Pg**	**11 09 57.2**	**-0.1**
ITM	**Ithomi**	**0.88**	**156**	*e*PB	**Pg**	**11 09 57.2**	**-0.1**
ITM	**Ithomi**	**0.88**	**156**	P	**Pg**	**11 09 57.2**	**-0.1**
VLX	**Vlachokerasia**	**0.94**	**131**	*e*PN	**Pg**	**11 09 59.0**	**+0.5**
VLX	**Vlachokerasia**	**0.94**	**131**	*e*Pn	**Pg**	**11 09 59.0**	**+0.5**
EVR	**Evrytania**	**0.96**	**15**	*e*Pn	**Pg**	**11 09 59.2**	**+0.4**
EVR	**Evrytania**	**0.96**	**15**	*e*PN	**Pg**	**11 09 59.2**	**+0.4**
EVR	**Evrytania**	**0.96**	**15**	*e*Pn	**Pg**	**11 09 59.2**	**+0.4**
LKD2	**Lefkada island**	**1.03**	**321**	P	**Pg**	**11 09 59.5**	**-0.5**
LKD2	**Lefkada island**	**1.03**	**321**	P	**Pg**	**11 09 59.5**	**-0.5**
PYL	**PYLOS**	**1.11**	**169**	P	**Pg**	**11 10 01.8**	**+0.1**
PYL	**PYLOS**	**1.11**	**169**	*e*PB	**Pg**	**11 10 01.4**	**-0.3**
PYL	**PYLOS**	**1.11**	**169**	*e*Pb	**Pg**	**11 10 01.4**	**-0.3**
PYL	**PYLOS**	**1.11**	**169**	P	**Pg**	**11 10 01.8**	**+0.1**
LTK	**Loutraki**	**1.18**	**88**	*e*PN	**Pn**	**11 10 01.7**	**-0.3**
LTK	**Loutraki**	**1.18**	**88**	*e*Pn	**Pn**	**11 10 01.7**	**-0.3**
AGG	**Agios Georgios**	**1.23**	**33**	*e*Pb	**Pb**	**11 10 03.4**	**+0.4**
AGG	**Agios Georgios**	**1.23**	**33**	P	**Pn**	**11 10 02.9**	**+0.2**
AGG	**Agios Georgios**	**1.23**	**33**	*e*PB	**Pb**	**11 10 03.4**	**+0.4**
AGG	**Agios Georgios**	**1.23**	**33**	P	**Pn**	**11 10 02.9**	**+0.2**
AGG	**Agios Georgios**	**1.23**	**33**	*e*Pb	**Pb**	**11 10 03.4**	**+0.4**
VLI	**Veliai**	**1.72**	**137**	*e*Pn	**Pg**	**11 10 13.8**	**+0.6**
VLI	**Veliai**	**1.72**	**137**	*e*PN	**Pg**	**11 10 13.8**	**+0.6**

*ISCJB **09** 11:11:44.5±2.4, 56°.08N±0°.07×153°.1W±0°.2, h14km±16km, mb4.1/8, Error ellipse: s-maj=17.3km s-min=9.4km az=33.0*
*NEIC **09** 11:11:50.8, 56°.23N×153°.34W, h33km, mb4.1/1, ML4.2(PMR), After AEIC.*
*IDC **09** 11:11:50.3±3.8, 56°.77N×154°.05W, h0km, mb3.9/7, mb1 4.0/8, mb1mx3.7/27, mbtmp3.9/8, ML2.9/1, Error ellipse: s-maj=90.3km s-min=22.1km az=158.0*

ISC 09 11:11:47.9±2.8, 56°.20N±0°.08×153°.3W±0°.2, h15km±18km, n28, σ0°79/32, mb4.1/8, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**1.03**	**360**	P	**Pb**	**11 12 07.2**	**0.0**
OHAK				S	**Sb**	**11 12 21.2**	**+0.7**
KDAK	**Kodiak Island**	**1.63**	**13**	P	**Pn**	**11 12 16.1**	**+0.2**
	69nm,0.3s,baz=207,slow=7.7,SNR=397						
KDAK				Sn	**Sn**	**11 12 34.9**	**-1.8**
	32nm,0.3s,baz=77,slow=21,SNR=28						
KDAK	**Kodiak Island**	**1.63**	**13**	P	**Pn**	**11 12 16.0**	**0.0**
KDAK				S	**Sn**	**11 12 36.1**	**-0.6**
CHGN	**Chignik**	**2.86**	**274**	*e*Pn	**Pn**	**11 12 31.6**	**-1.3**
RSO	**Redoubt South**	**4.29**	**4**	*e*Pn	**Pn**	**11 12 47.9**	**-4.5**
RSO				*e*Sn	**Sn**	**11 13 34.4**	**-7.5**
SEW	**Seward**	**4.41**	**26**	P	**Pn**	**11 12 53.3**	**-0.8**
SLKM	**Skilak Lake**	**4.61**	**19**	P	**Pn**	**11 12 56.5**	**-0.3**
SVW2	**Sparrevohn**	**5.06**	**347**	*e*P	**Pn**	**11 13 03.0**	**+0.1**
PMR	**Palmer**	**5.82**	**20**	*e*P	**Pn**	**11 13 12.4**	**-1.0**
SML	**Sawmill**	**6.18**	**22**	P	**Pn**	**11 13 18.7**	**+0.4**
BMRM	**Bremner River**	**6.59**	**40**	*e*Pn	**Pn**	**11 13 24.2**	**+0.2**
	56nm,0.5s						
TTA	**Tatalina**	**6.89**	**350**	*e*P	**Pn**	**11 13 27.9**	**-0.2**
KTH	**Kantishna Hill**	**7.47**	**8**	*e*Pn	**Pn**	**11 13 38.2**	**+2.1**
	16nm,1.0s						
KTH				*e*Sn	**Sn**	**11 14 51.5**	**-8.9**
PAX	**Paxson**	**7.86**	**27**	*e*Pn	**Pn**	**11 13 42.2**	**+0.8**
	4.7nm,0.7s						
BPAW	**Bear Paw Mtn.**	**8.01**	**7**	*e*Pn	**Pn**	**11 13 42.9**	**-0.6**
	4.8nm,0.9s						
DIB	**Dawson Inlet,**	**12.39**	**95**	T		11 27 26.1	
	SNR=6.0						
INK	**Inuvik**	**15.13**	**29**	Pn	**Pn**	**11 15 20.4**	**-0.2**
	0.0nm,0.3s,baz=217,slow=5.1,SNR=2.0						
YKA	**Yellowknife Ar**	**20.45**	**56**	P	**P**	**11 16 29.2**	**+5.0**
	1.4nm,0.7s,baz=269,slow=12,SNR=11						
YKA	**Yellowknife Ar**	**20.45**	**56**	P	**P**	**11 16 29.2**	**+5.0**
MDJ	**Mudanjiang**	**47.98**	**290**	P	**P**	**11 20 24.8**	**-0.8**
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
MDJ				pmax	pmax		
	comp=Z,54nm,6.9s						
MDJ				LR	LR		
	comp=N,24nm,23.8s						
MDJ				LR	LR		
	comp=E,14nm,24.5s						
MDJ				LR	LR		
	comp=Z,15nm,23.8s						
KSRS	**Korea Array**	**53.94**	**285**	P	**P**	**11 21 11.1**	**+0.6**
	comp=Z,0.3nm,0.3s,mb3.6,baz=40,slow=6.4,SNR=4.6						
ARCES	**ARCESS Array B**	**54.57**	**1**	P	**P**	**11 21 13.7**	**-0.9**
	comp=Z,1.9nm,0.9s,mb4.1,baz=8.9,slow=8.6,SNR=6.5						
SONM	**Songino Array**	**56.95**	**308**	P	**P**	**11 21 33.1**	**+1.1**
	comp=Z,3.1nm,0.8s,mb4.4,baz=45,slow=7.4,SNR=12						
ZALV	**Zalesovo Beam**	**60.38**	**325**	P	**P**	**11 21 56.7**	**+1.0**
	comp=Z,1.4nm,0.6s,mb4.2,baz=36,slow=9.0,SNR=4.6						
BVAR	**Borovoye Array**	**65.38**	**333**	P	**P**	**11 22 28.8**	**-0.2**
	comp=Z,2.0nm,0.7s,mb4.3,baz=90,slow=10,SNR=8.7						
BVAR	**Borovoye Array**	**65.38**	**333**	P	**P**	**11 22 28.8**	**-0.2**
MKAR	**Makanchi Array**	**67.33**	**322**	P	**P**	**11 22 42.0**	**+0.4**
	comp=Z,0.7nm,0.8s,mb3.8,baz=46,slow=8.7,SNR=5.9						
ABKAR	**Akbulak array**	**71.33**	**338**	*e*P	**P**	**11 23 06.5**	**+0.2**
	comp=Z,1.4nm,0.8s,mb3.9						

IDC 09 11:39:59.3±1.9, 21°.43S×66°.53W, h220km±21km, mb3.9/1, mb1 3.7/4, mb1mx3.3/18, mbtmp3.6/4, Error ellipse: s-maj=26.7km s-min=19.0km az=118.0, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**5.33**	**343**	P	Pn	11 41 20.0	+1.5
	5.4nm,0.3s,baz=151,slow=8.3,SNR=137						
LPAZ				S	S	11 42 22.0	+0.8
	baz=218,slow=23,SNR=6.6						
SIV	**San Ignacio**	**7.48**	**45**	P	Pn	11 41 46.9	+0.9
	8.0nm,0.3s,baz=249,slow=12,SNR=100						
SIV				S	S	11 43 09.8	-1.3
	0.3nm,0.3s,baz=139,slow=19,SNR=4.0						
PLCA	**Paso Flores**	**19.55**	**189**	P	P	11 44 10.3	-0.1
	0.3nm,0.3s,baz=350,slow=12,SNR=4.1						
TORD	**Torodi Ar. Bea**	**75.25**	**69**	P	P	11 51 18.6	+0.2
	1.5nm,0.3s,baz=257,slow=5.6,SNR=9.9						
ASAR	**Alice Springs**	**130.96**	**205**	PKP	PKPdf	11 58 44.1	-1.2
	0.3nm,0.6s,baz=137,slow=2.0,SNR=7.6						
WRA	**Warramunga Arr**	**134.10**	**208**	PKP	PKPdf	11 58 50.2	-1.1
	0.2nm,0.4s,baz=154,slow=1.8,SNR=7.9						
MKAR	**Makanchi Array**	**144.25**	**38**	PKP	PKPdf	11 59 08.8	-0.1
	1.0nm,0.6s,baz=348,slow=4.9,SNR=8.1						

*IDC **09** 11:44:05.9±1.3, 37°.72N×22°.23E, h0km, mb3.8/13, mb1 3.9/15, mb1mx3.9/29, mbtmp3.9/15, ML3.9/2, MS2.7/1, Ms1 2.7/1, ms1mx2.0/32, Error ellipse: s-maj=27.2km s-min=17.5km az=32.0*
*ATH **09** 11:44:07.9, 37°.84N×22°.13E, h22km±1km, MD3.9/12, ML3.9*
*CSEM **09** 11:44:08.0±0.1, 37°.86N×22°.14E, h2km, ML3.9, Error ellipse: s-maj=3.5km s-min=3.0km az=49.0*
*ISCJB **09** 11:44:08.2±0.4, 37°.86N±0°.02×22°.13E±0°.02, h12km±3km, mb3.8/12, Error ellipse: s-maj=3.6km s-min=2.8km az=144.0*
*NEIC **09** 11:44:10.0, 37°.76N×22°.06E, h10km, ML3.6(ATH), After ATH.*

ISC 09 11:44:08.8±0.3, 37°.86N±0°.02×22°.13E±0°.03, h10km±2km, n157, σ0°99/185, mb3.8/12, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUR	**Goura**	**0.18**	**65**	*e*PB	**Pg**	**11 44 12.3**	**-0.4**
GUR				*e*SB	**Sg**	**11 44 16.0**	**+0.7**
GUR	**Goura**	**0.18**	**65**	*e*Pb	**Pg**	**11 44 12.3**	**-0.4**
GUR				*e*Sb	**Sg**	**11 44 16.0**	**+0.7**
UPR	**University Cam**	**0.50**	**327**	*e*PN	**Pg**	**11 44 18.5**	**-0.1**
UPR				*e*SN	**Sg**	**11 44 26.5**	**+1.3**
UPR	**University Cam**	**0.50**	**327**	*e*Pn	**Pg**	**11 44 18.5**	**-0.1**
TRIZ	**Trizonia**	**0.51**	**355**	P	**Pg**	**11 44 18.2**	**-0.5**
TRIZ	**Trizonia**	**0.51**	**355**	P	**Pg**	**11 44 18.2**	**-0.5**
VLX	**Vlachokerasia**	**0.53**	**158**	*e*PN	**Pg**	**11 44 18.2**	**-0.8**
VLX				*e*SN	**Sg**	**11 44 26.5**	**+0.5**
VLX	**Vlachokerasia**	**0.53**	**158**	*e*Pn	**Pg**	**11 44 18.2**	**-0.8**
RLS	**Riolos of Patr**	**0.56**	**291**	P	**Pg**	**11 44 19.0**	**-0.7**
RLS	**Riolos of Patr**	**0.56**	**291**	*e*Pn	**Pg**	**11 44 18.8**	**-0.9**
RLS				*e*SN	**Sg**	**11 44 27.8**	**+0.7**
RLS	**Riolos of Patr**	**0.56**	**291**	P	**Pg**	**11 44 19.0**	**-0.7**
EFP	**Efpalio**	**0.59**	**342**	*e*PN	**Pg**	**11 44 19.8**	**-0.5**
EFP				*e*SN	**Sg**	**11 44 29.1**	**+1.0**
EFP	**Efpalio**	**0.59**	**342**	*e*Pn	**Pg**	**11 44 19.8**	**-0.5**
LTK	**Loutraki**	**0.68**	**76**	*e*PN	**Pg**	**11 44 21.2**	**-0.7**
LTK				*e*SN	**Sg**	**11 44 31.5**	**+0.7**
LTK	**Loutraki**	**0.68**	**76**	*e*Pn	**Pg**	**11 44 21.2**	**-0.7**
ITM	**Ithomi**	**0.70**	**194**	P	**Pg**	**11 44 21.3**	**-1.0**
ITM	**Ithomi**	**0.70**	**194**	P	**Pg**	**11 44 21.0**	**-1.3**
ITM	**Ithomi**	**0.70**	**194**	*e*PN	**Pg**	**11 44 21.0**	**-1.3**
ITM				*e*SN	**Sg**	**11 44 31.7**	**+0.3**
ITM	**Ithomi**	**0.70**	**194**	*e*Pn	**Pg**	**11 44 21.0**	**-1.3**
ITM	**Ithomi**	**0.70**	**194**	P	**Pg**	**11 44 21.3**	**-1.0**
PYL	**PYLOS**	**1.01**	**198**	*e*PB	**Pg**	**11 44 26.5**	**-1.8**
PYL	**PYLOS**	**1.01**	**198**	*e*Pb	**Pg**	**11 44 26.5**	**-1.8**
LKR	**Lokris**	**1.04**	**41**	*e*Pn	**Pg**	**11 44 27.8**	**-1.0**
LKR	**Lokris**	**1.04**	**41**	P	**Pg**	**11 44 28.1**	**-0.7**
LKR	**Lokris**	**1.04**	**41**	*e*PN	**Pg**	**11 44 27.8**	**-1.0**
LKR	**Lokris**	**1.04**	**41**	*e*Pn	**Pg**	**11 44 27.8**	**-1.0**
LKR	**Lokris**	**1.04**	**41**	P	**Pg**	**11 44 28.1**	**-0.7**
NAIG	**Nisos Aigina**	**1.08**	**95**	*e*Pn	**Pg**	**11 44 28.7**	**-0.8**
NAIG	**Nisos Aigina**	**1.08**	**95**	*e*PN	**Pg**	**11 44 28.7**	**-0.8**
NAIG	**Nisos Aigina**	**1.08**	**95**	*e*Pn	**Pg**	**11 44 28.7**	**-0.8**
EVR	**Evrytania**	**1.08**	**346**	P	**Pg**	**11 44 33.1**	**+3.4**
EVR				*e*Sn	**Sg**	**11 44 45.1**	**+1.3**
EVR	**Evrytania**	**1.08**	**346**	*e*PN	**Pg**	**11 44 28.7**	**-1.0**
EVR				*e*SN	**Sg**	**11 44 45.1**	**+1.3**
EVR	**Evrytania**	**1.08**	**346**	*e*Pn	**Pg**	**11 44 28.7**	**-1.0**
EVR	**Evrytania**	**1.08**	**346**	P	**Pg**	**11 44 33.1**	**+3.4**
EVR				*e*Sn	**Sg**	**11 44 45.1**	**+1.3**
AGG	**Agios Georgios**	**1.17**	**8**	*e*Pn	**Pn**	**11 44 30.2**	**-1.1**
AGG				*e*Sn	**Sn**	**11 44 46.8**	**-0.5**
AGG	**Agios Georgios**	**1.17**	**8**	P	**Pn**	**11 44 30.1**	**-1.0**
AGG	**Agios Georgios**	**1.17**	**8**	*e*PN	**Pn**	**11 44 30.2**	**-1.1**
AGG				*e*SN	**Sn**	**11 44 46.8**	**-0.5**
AGG	**Agios Georgios**	**1.17**	**8**	P	**Pb**	**11 44 30.1**	**-1.0**
AGG				*e*Sn	**Sn**	**11 44 46.8**	**-0.5**
ATH	**Athens Observa**	**1.26**	**84**	P	**Pn**	**11 44 32.7**	**+0.3**
ATH	**Athens Observa**	**1.26**	**84**	*e*PN	**Pn**	**11 44 31.9**	**-0.5**
ATH				*e*SN	**Sn**	**11 44 50.0**	**+0.6**
ATH	**Athens Observa**	**1.26**	**84**	*e*Pn	**Pn**	**11 44 31.9**	**-0.5**
ATH	**Athens Observa**	**1.26**	**84**	P	**Pn**	**11 44 32.7**	**+0.3**
ATH				*e*Sn	**Sn**	**11 44 50.0**	**+0.6**
VLS	**Valsamata**	**1.26**	**285**	P	**Pn**	**11 44 31.8**	**-0.7**
VLS	**Valsamata**	**1.26**	**285**	P	**Pn**	**11 44 31.0**	**-1.5**
VLS	**Valsamata**	**1.26**	**285**	*e*PN	**Pn**	**11 44 31.2**	**-1.3**
VLS	**Valsamata**	**1.26**	**285**	*e*Pn	**Pn**	**11 44 31.3**	**-1.2**
VLS	**Valsamata**	**1.26**	**285**	P	**Pn**	**11 44 31.8**	**-0.7**
VLI	**Veliai**	**1.31**	**150**	P	**Pn**	**11 44 33.4**	**+0.3**
VLI	**Veliai**	**1.31**	**150**	*e*PN	**Pn**	**11 44 32.7**	**-0.4**
VLI				*e*SN	**Sn**	**11 44 51.2**	**+0.5**
VLI	**Veliai**	**1.31**	**150**	*e*Pn	**Pn**	**11 44 32.7**	**-0.4**
VLI	**Veliai**	**1.31**	**150**	P	**Pn**	**11 44 33.4**	**+0.3**
VLI				*e*Sn	**Sn**	**11 44 51.2**	**+0.5**
ATHU	**Athens Univers**	**1.31**	**85**	P	**Pn**	**11 44 33.9**	**+0.7**
ATHU	**Athens Univers**	**1.31**	**85**	P	**Pn**	**11 44 33.9**	**+0.7**
VLY	**Voula,Athens**	**1.31**	**90**	*e*Pn	**Pn**	**11 44 32.8**	**-0.4**
VLY				*e*Sn	**Sn**	**11 44 51.1**	**+0.3**
VLY	**Voula,Athens**	**1.31**	**90**	*e*PN	**Pn**	**11 44 32.8**	**-0.4**
VLY				*e*SN	**Sn**	**11 44 51.1**	**+0.3**
VLY	**Voula,Athens**	**1.31**	**90**	*e*Pn	**Pn**	**11 44 32.8**	**-0.4**
VLY				*e*Sn	**Sn**	**11 44 51.1**	**+0.3**
PTL	**Penteli**	**1.38**	**82**	*e*Pn	**Pn**	**11 44 34.0**	**-0.1**
PTL				*e*Sn	**Sn**	**11 44 53.2**	**+0.7**
PTL	**Penteli**	**1.38**	**82**	*e*PN	**Pn**	**11 44 34.0**	**-0.1**
PTL				*e*SN	**Sn**	**11 44 53.2**	**+0.7**
PTL	**Penteli**	**1.38**	**82**	*e*Pn	**Pn**	**11 44 34.0**	**-0.1**
PTL				*e*Sn	**Sn**	**11 44 53.2**	**+0.7**
LKD2	**Lefkada island**	**1.48**	**309**	P	**Pn**	**11 44 35.5**	**-0.1**
LKD2	**Lefkada island**	**1.48**	**309**	P	**Pn**	**11 44 35.5**	**-0.1**
NEO	**Neokhori**	**1.68**	**30**	P	**Pn**	**11 44 38.5**	**+0.3**
NEO	**Neokhori**	**1.68**	**30**	*e*PN	**Pn**	**11 44 38.1**	**-0.1**
NEO				*e*SN	**Sn**	**11 45 00.4**	**+0.6**
NEO	**Neokhori**	**1.68**	**30**	*e*Pn	**Pn**	**11 44 38.1**	**-0.1**
NEO	**Neokhori**	**1.68**	**30**	P	**Pn**	**11 44 38.5**	**+0.3**
NEO				*e*Sn	**Sn**	**11 45 00.4**	**+0.6**
THL	**Klokotos Trika**	**1.70**	**357**	P	**Pn**	**11 44 39.1**	**+0.5**
THL	**Klokotos Trika**	**1.70**	**357**	*e*PN	**Pn**	**11 44 39.0**	**+0.4**
THL	**Klokotos Trika**	**1.70**	**357**	*e*Pn	**Pn**	**11 44 39.0**	**+0.4**
XOR	**Xorichti**	**1.72**	**29**	P	**Pn**	**11 44 38.2**	**-0.6**
XOR	**Xorichti**	**1.72**	**29**	P	**Pn**	**11 44 38.2**	**-0.6**
KYTH	**Kithira**	**1.73**	**155**	*e*Pn	**Pn**	**11 44 40.9**	**+1.9**
KYTH	**Kithira**	**1.73**	**155**	*e*Pn	**Pn**	**11 44 40.9**	**+1.9**
AOS	**Alonnisos**	**1.89**	**46**	P	**Pn**	**11 44 40.8**	**-0.4**
AOS	**Alonnisos**	**1.89**	**46**	P	**Pn**	**11 44 40.8**	**-0.4**
MEV	**Metsovon**	**2.05**	**340**	P	**Pn**	**11 44 47.6**	**+4.3**
MEV	**Metsovon**	**2.05**	**340**	P	**Pn**	**11 44 47.6**	**+4.3**
JAN	**Janina**	**2.06**	**331**	*e*Pn	**Pn**	**11 44 44.0**	**+0.6**
JAN	**Janina**	**2.06**	**331**	*e*PN	**Pn**	**11 44 44.0**	**+0.6**
JAN	**Janina**	**2.06**	**331**	*e*Pn	**Pn**	**11 44 44.0**	**+0.6**
LIT	**Litokhoron**	**2.25**	**7**	*e*Pb	**Pb**	**11 44 46.7**	**-2.9**
LIT	**Litokhoron**	**2.25**	**7**	P	**Pn**	**11 44 46.1**	**-0.1**
LIT	**Litokhoron**	**2.25**	**7**	*e*PB	**Pb**	**11 44 46.7**	**-2.9**
LIT	**Litokhoron**	**2.25**	**7**	P	**Pn**	**11 44 46.1**	**-0.1**
KEK	**Kerkira**	**2.60**	**316**	*e*Pn	**Pn**	**11 44 51.5**	**+0.6**
KEK	**Kerkira**	**2.60**	**316**	P	**Pn**	**11 44 52.5**	**+1.6**
KEK	**Kerkira**	**2.60**	**316**	*e*PN	**Pn**	**11 44 51.5**	**+0.6**
KEK	**Kerkira**	**2.60**	**316**	*e*Pn	**Pn**	**11 44 51.5**	**+0.6**
KEK	**Kerkira**	**2.60**	**316**	P	**Pn**	**11 44 52.5**	**+1.6**
SRN	**Sarande**	**2.62**	**321**	*e*PN	**Pn**	**11 44 55.0**	**+3.9**
SRN	**Sarande**	**2.62**	**321**	*e*Pn	**Pn**	**11 44 55.0**	**+3.9**
APE	**Apeiranthos**	**2.82**	**105**	*e*Pn	**Pn**	**11 44 53.7**	**-0.2**
APE	**Apeiranthos**	**2.82**	**105**	P	**Pn**	**11 44 53.7**	**-0.2**
APE	**Apeiranthos**	**2.82**	**105**	*e*PN	**Pn**	**11 44 53.7**	**-0.2**
APE	**Apeiranthos**	**2.82**	**105**	P	**Pn**	**11 44 53.7**	**-0.2**
HORT	**Hortiatis**	**2.83**	**15**	P	**Pn**	**11 44 53.6**	**-0.5**
HORT	**Hortiatis**	**2.83**	**15**	P	**Pn**	**11 44 53.6**	**-0.5**
KARN	**Karanos**	**2.84**	**149**	P	**Pn**	**11 44 56.8**	**+2.5**
KARN	**Karanos**	**2.84**	**149**	P	**Pn**	**11 44 56.8**	**+2.5**
OUR	**Ouranopolis**	**2.86**	**30**	P	**Pn**	**11 44 53.8**	**-0.7**
OUR	**Ouranopolis**	**2.86**	**30**	P	**Pn**	**11 44 53.8**	**-0.7**
KBN	**Korca**	**2.95**	**340**	*e*PN	**Pn**	**11 45 02.0**	**+6.3**
VAM	**Vamos**	**2.96**	**145**	*e*Pn	**Pn**	**11 44 55.6**	**-0.3**
VAM	**Vamos**	**2.96**	**145**	*e*PN	**Pn**	**11 44 55.6**	**-0.3**
VAM	**Vamos**	**2.96**	**145**	*e*Pn	**Pn**	**11 44 55.6**	**-0.3**
FNA	**Florina**	**2.98**	**349**	P	**Pn**	**11 44 57.6**	**+1.5**
FNA	**Florina**	**2.98**	**349**	P	**Pn**	**11 44 57.6**	**+1.5**
SOH	**Sokhos**	**3.10**	**17**	*e*Pn	**Pn**	**11 44 58.3**	**+0.5**
SOH	**Sokhos**	**3.10**	**17**	P	**Pn**	**11 44 58.2**	**+0.4**
SOH	**Sokhos**	**3.10**	**17**	*e*PN	**Pn**	**11 44 58.2**	**+0.4**
SOH	**Sokhos**	**3.10**	**17**	P	**Pn**	**11 44 58.2**	**+0.4**
LIA	**Limnos Island**	**3.13**	**49**	P	**Pn**	**11 44 57.8**	**-0.4**
LIA	**Limnos Island**	**3.13**	**49**	P	**Pn**	**11 44 57.8**	**-0.4**
CHOS	**Chios island**	**3.14**	**79**	P	**Pn**	**11 44 58.5**	**+0.2**
CHOS	**Chios island**	**3.14**	**79**	*e*PN	**Pn**	**11 44 58.5**	**+0.2**
CHOS	**Chios island**	**3.14**	**79**	P	**Pn**	**11 44 58.5**	**+0.2**
IDI	**Anoyia**	**3.39**	**138**	Pn	**Pn**	**11 44 57.7**	**-4.1**
	4.5nm,0.3s,baz=334,slow=11,SNR=14						
IDI				Sn	**Sn**	**11 45 38.5**	**-3.6**
	5.4nm,0.3s,baz=278,slow=13,SNR=3.7						
IDI	**Anoyia**	**3.39**	**138**	Pn	**Pn**	**11 44 57.7**	**-4.1**
IDI				Sn	**Sn**	**11 45 38.5**	**-3.6**
KAVA	**Kavala**	**3.63**	**30**	P	**Pn**	**11 45 04.2**	**-0.9**
KAVA	**Kavala**	**3.63**	**30**	P	**Pn**	**11 45 04.2**	**-0.9**
SMG	**Samos**	**3.73**	**91**	P	**Pn**	**11 45 07.2**	**+0.8**
SMG	**Samos**	**3.73**	**91**	*e*PN	**Pn**	**11 45 06.4**	**0.0**
SMG	**Samos**	**3.73**	**91**	*e*Pn	**Pn**	**11 45 06.4**	**0.0**
SMG	**Samos**	**3.73**	**91**	P	**Pn**	**11 45 07.2**	**+0.8**
LAST	**Lasithi**	**3.81**	**134**	P	**Pn**	**11 45 07.5**	**-0.1**
LAST	**Lasithi**	**3.81**	**134**	P	**Pn**	**11 45 07.5**	**-0.1**
TIP	**Timpagrande**	**4.42**	**289**	*e*Pn	**Pn**	**11 45 17.2**	**+1.3**
TIP	**Timpagrande**	**4.42**	**289**	*e*Pn	**Pn**	**11 45 17.2**	**+1.3**
PUK	**Puka**	**4.52**	**338**	*e*PN	**Pn**	**11 45 21.0**	**+3.7**
PUK	**Puka**	**4.52**	**338**	*e*Pn	**Pn**	**11 45 21.0**	**+3.7**
KARP	**Karpathos**	**4.65**	**118**	P	**Pn**	**11 45 21.6**	**+2.5**
KARP	**Karpathos**	**4.65**	**118**	P	**Pn**	**11 45 21.6**	**+2.5**
BCI	**Bajram Curri**	**4.77**	**341**	*e*PN	**Pn**	**11 45 26.3**	**+5.6**
CEL	**Celeste**	**4.94**	**277**	Pn	**Pn**	**11 45 24.5**	**+1.4**
CEL	**Celeste**	**4.94**	**277**	Pn	**Pn**	**11 45 24.5**	**+1.4**
STON	**Ston**	**6.04**	**327**	*e*Pn	**Pn**	**11 45 31.9**	**-6.3**
STON				Sn	**Sn**	**11 46 45.1**	**-2.3**
MLR	**Muntele Rosu**	**8.14**	**19**	Pn	**Pn**	**11 46 07.6**	**+0.6**
	0.8nm,0.3s,baz=170,slow=10,SNR=5.2						
MLR	**Muntele Rosu**	**8.14**	**19**	Pn	**Pn**	**11 46 07.6**	**+0.6**
BR131	**Keskin Array S**	**9.18**	**75**	*e*Pn	**Pn**	**11 46 23.6**	**+2.4**
	1.6nm,0.4s						
BR131	**Keskin Array S**	**9.18**	**75**	*e*Pn	**Pn**	**11 46 23.6**	**+2.4**
	1.6nm,0.4s						
BRTR	**Keskin Array B**	**9.18**	**75**	Pn	**Pn**	**11 46 23.5**	**+2.3**
	0.6nm,0.3s,baz=254,slow=13,SNR=12						
BRTR	**Keskin Array B**	**9.18**	**75**	Pn	**Pn**	**11 46 23.5**	**+2.3**
DAVOX	**Davos/Dischmat**	**12.70**	**318**	LR	LR	11 52 29.1	
	comp=Z,32nm,21.0s,baz=88,slow=39						
ESDC	**Sonseca Array**	**20.41**	**283**	P	**P**	**11 48 46.5**	**+0.6**
	0.8nm,0.5s,baz=78,slow=11,SNR=6.9						
HFS	**Hagfors**	**22.93**	**349**	P	**P**	**11 49 12.5**	**-0.3**
	3.1nm,0.8s,mb3.8,baz=162,slow=15,SNR=5.5						
NB2	**NORSAR Subarra**	**24.20**	**347**	P	**P**	**11 49 25.0**	**-0.2**
	comp=Z,1.1nm,0.8s,mb3.3,baz=153,slow=9.3						
NB2	**NORSAR Subarra**	**24.20**	**347**	P	**P**	**11 49 25.0**	**-0.2**
	comp=Z,1.1nm,0.8s,mb3.3,SNR=3.5						
NOA	**NORSAR Array B**	**24.20**	**347**	P	**P**	**11 49 26.2**	**+1.1**
	comp=Z,0.7nm,0.6s,mb3.3,baz=147,slow=9.7,SNR=3.9						
EKA	**Eskdalemuir Ar**	**24.43**	**324**	P	**P**	**11 49 28.3**	**+0.9**
	comp=Z,3.7nm,0.7s,mb4.0,baz=126,slow=9.0,SNR=11						
AKTO	**Aktyubinsk**	**28.36**	**52**	P	**P**	**11 50 01.9**	**-1.0**
	comp=Z,0.8nm,0.5s,mb3.6,baz=225,slow=7.3,SNR=4.1						
ARCES	**ARCESS Array B**	**31.79**	**2**	P	**P**	**11 50 32.6**	**-0.3**
	comp=Z,4.0nm,1.1s,mb4.2,baz=198,slow=10,SNR=8.4						
BVAR	**Borovoye Array**	**36.35**	**49**	P	**P**	**11 51 13.0**	**+0.3**
	comp=Z,2.4nm,0.7s,mb4.2,baz=258,slow=5.9,SNR=9.9						
SPITS	**Spitsbergen Ar**	**40.50**	**358**	P	**P**	**11 51 47.0**	**-0.3**
	comp=Z,2.7nm,0.9s,mb4.0,baz=167,slow=11,SNR=3.0						
MKAR	**Makanchi Array**	**44.38**	**58**	P	**P**	**11 52 18.8**	**-0.5**
	comp=Z,0.7nm,0.

VLS	**Valsamata**	**0.77**	**276**	*e*PN	**Pg**	**12 05 02.7 -0.7**
VLS	**Valsamata**	**0.77**	**276**	P	**Pg**	**12 05 02.7 -0.7**
DSF	**Desfina**	**0.82**	**68**	P	**Pg**	**12 05 02.9 -1.4**
DSF				S	**Sg**	**12 05 15.8 +0.8**
DSF	**Desfina**	**0.82**	**68**	P	**Pg**	**12 05 02.9 -1.4**
DSF				S	**Sg**	**12 05 15.8 +0.8**
EVR	**Evrytania**	**0.84**	**13**	*e*Pn	**Pg**	**12 05 04.2 -0.4**
EVR	**Evrytania**	**0.84**	**13**	*e*Pn	**Pg**	**12 05 04.2 -0.4**
EVR	**Evrytania**	**0.84**	**13**	*e*Pn	**Pg**	**12 05 04.2 -0.4**
ITM	**Ithomi**	**0.96**	**162**	*e*Pn	**Pg**	**12 05 06.7 -0.3**
ITM	**Ithomi**	**0.96**	**162**	P	**Pg**	**12 05 06.8 -0.2**
ITM	**Ithomi**	**0.96**	**162**	*e*Pn	**Pg**	**12 05 06.7 -0.3**
ITM	**Ithomi**	**0.96**	**162**	P	**Pg**	**12 05 06.8 -0.2**
VLX	**Vlachokerasia**	**0.97**	**138**	P	**Pg**	**12 05 06.2 -1.0**
VLX				S	**Sg**	**12 05 20.8 +0.9**
VLX	**Vlachokerasia**	**0.97**	**138**	*e*PB	**Pg**	**12 05 05.8 -1.4**
VLX	**Vlachokerasia**	**0.97**	**138**	*e*Pb	**Pg**	**12 05 05.8 -1.4**
VLX	**Vlachokerasia**	**0.97**	**138**	P	**Pg**	**12 05 06.2 -1.0**
VLX				S	**Sg**	**12 05 20.8 +0.9**
LKD2	**Lefkada island**	**0.99**	**314**	P	**Pg**	**12 05 06.2 -1.3**
LKD2				S	**Sg**	**12 05 21.6 +1.2**
LKD2	**Lefkada island**	**0.99**	**314**	P	**Pg**	**12 05 06.2 -1.3**
LKD2				S	**Sg**	**12 05 21.6 +1.2**
AGG	**Agios Georgios**	**1.10**	**33**	*e*Pn	**Pg**	**12 05 09.7 +0.1**
AGG	**Agios Georgios**	**1.10**	**33**	*e*PN	**Pg**	**12 05 09.7 +0.1**
AGG	**Agios Georgios**	**1.10**	**33**	*e*Pn	**Pg**	**12 05 09.7 +0.1**
LTK	**Loutraki**	**1.11**	**94**	P	**Pg**	**12 05 08.9 -0.9**
LTK	**Loutraki**	**1.11**	**94**	*e*PN	**Pg**	**12 05 08.8 -1.0**
LTK	**Loutraki**	**1.11**	**94**	P	**Pg**	**12 05 08.9 -0.9**
PYL	**PYLOS**	**1.21**	**173**	P	**Pn**	**12 05 11.1 -0.1**
PYL	**PYLOS**	**1.21**	**173**	*e*PN	**Pn**	**12 05 11.3 +0.1**
PYL	**PYLOS**	**1.21**	**173**	P	**Pn**	**12 05 11.1 -0.1**
LKR	**Lokris**	**1.25**	**64**	*e*Pb	**Pn**	**12 05 10.2 -1.6**
LKR	**Lokris**	**1.25**	**64**	P	**Pn**	**12 05 10.8 -1.0**
LKR	**Lokris**	**1.25**	**64**	*e*PB	**Pn**	**12 05 10.2 -1.6**
LKR	**Lokris**	**1.25**	**64**	*e*Pb	**Pn**	**12 05 10.2 -1.6**
LKR	**Lokris**	**1.25**	**64**	P	**Pn**	**12 05 10.8 -1.0**
THL	**Klokotos Trika**	**1.50**	**13**	P	**Pn**	**12 05 15.9 +0.7**
THL	**Klokotos Trika**	**1.50**	**13**	P	**Pn**	**12 05 15.9 +0.7**
NAIG	**Nisos Aigina**	**1.56**	**102**	*e*Pn	**Pn**	**12 05 17.0 +1.0**
NAIG	**Nisos Aigina**	**1.56**	**102**	*e*PN	**Pn**	**12 05 17.0 +1.0**
NAIG	**Nisos Aigina**	**1.56**	**102**	*e*Pn	**Pn**	**12 05 17.0 +1.0**
JAN	**Janina**	**1.65**	**341**	*e*Pn	**Pn**	**12 05 19.0 +1.8**
JAN	**Janina**	**1.65**	**341**	*e*PN	**Pn**	**12 05 19.0 +1.8**
MEV	**Metsovon**	**1.70**	**351**	P	**Pn**	**12 05 18.8 +0.8**
MEV	**Metsovon**	**1.70**	**351**	P	**Pn**	**12 05 18.8 +0.8**
ATH	**Athens Observa**	**1.71**	**94**	*e*Pb	**Pn**	**12 05 17.8 -0.2**
ATH	**Athens Observa**	**1.71**	**94**	*e*PB	**Pn**	**12 05 17.8 -0.2**
VLI	**Veliai**	**1.76**	**141**	*e*Pn	**Pn**	**12 05 21.3 +2.5**
VLI	**Veliai**	**1.76**	**141**	*e*PN	**Pn**	**12 05 21.3 +2.5**
KEK	**Kerkira**	**2.12**	**320**	*e*Pb	**Pn**	**12 05 24.4 +0.7**
KEK	**Kerkira**	**2.12**	**320**	*e*PB	**Pn**	**12 05 24.4 +0.7**
KYTH	**Kithira**	**2.17**	**147**	*e*Pb	**Pn**	**12 05 23.4 -0.9**
KYTH	**Kithira**	**2.17**	**147**	*e*PB	**Pn**	**12 05 23.4 -0.9**
STON	**Ston**	**5.60**	**330**	*e*Pn	**Pn**	**12 06 09.8 -1.7**
STON				Sn	**Sn**	**12 07 12.2 -3.6**
STON	**Ston**	**5.60**	**330**	*e*Pn	**Pn**	**12 06 09.8 -1.7**
STON				Sn	**Sn**	**12 07 12.2 -3.6**

IDC 09 12:19:59.6±1.0, 17°.94S×45°.91E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.5/24, mbtmp3.6/5, MS2.8/1, Ms1 2.8/1, ms1mx2.4/31, Error ellipse: s-maj=39.1km s-min=29.6km az=24.0, Madagascar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBTB	**Lobatse**	**20.16**	**246**	LR	LR	12 33 26.8	
	comp=Z,30nm,20.0s,baz=112,slow=40						
BOSA	**Boshof**	**21.71**	**237**	P	P	12 24 51.8	-0.6
	3.7nm,1.0s,baz=54,slow=8.7,SNR=2.0						
TORD	**Torodi Ar. Bea**	**53.46**	**302**	P	P	12 29 22.0	+0.2
	0.4nm,1.0s,baz=130,slow=8.4,SNR=2.3						
BRTR	**Keskin Array B**	**58.50**	**349**	P	P	12 29 57.2	-0.3
	0.4nm,0.7s,baz=193,slow=12,SNR=2.7						
ASAR	**Alice Springs**	**81.21**	**112**	P	P	12 32 17.2	-0.6
	0.5nm,0.9s,baz=267,slow=5.3,SNR=2.8						
WRA	**Warramunga Arr**	**82.62**	**109**	P	P	12 32 26.2	+0.9
	0.5nm,0.8s,baz=262,slow=3.8,SNR=2.0						
PDAR	**Pinedale Array**	**147.66**	**325**	PKPbc	PKPbc	12 39 45.1	-1.1
	0.8nm,0.6s,baz=333,slow=3.0,SNR=5.7						
TXAR	**Lajitas Array**	**150.00**	**298**	PKPbc	PKPbc	12 39 53.5	+0.9
	1.0nm,1.0s,baz=90,slow=3.8,SNR=6.3						
TXAR				PKPab	PKPab	12 39 58.3	-0.1
	2.3nm,0.8s,baz=119,slow=3.4,SNR=23						

*ISCJB **09** 12:33:32.7±0.6, 50°.12N±0°.04×18°.36E±0°.03, h0km, Error ellipse: s-maj=5.2km s-min=2.7km az=5.7*
*IPEC **09** 12:33:33.6±0.3, 50°.08N×18°.46E, h0km, ML1.7/4, Error ellipse: s-maj=2.1km s-min=1.7km az=102.0*
*CSEM **09** 12:33:33.3±0.2, 50°.11N×18°.41E, h1km, ML2.8/7*
*WAR **09** 12:33:34.0, 50°.06N×18°.43E*
*PRU **09** 12:33:35.3, 50°.08N×18°.34E, h0km*
ISC 09 12:33:34.3±0.5, 50°.09N±0°.04×18°.36E±0°.03, h0km, n27, σ1°38/44, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.11**	**266**	*e*Pg	**Pg**	**12 33 37.7**	**+1.4**
RAC				*e*Sg	**Sg**	12 33 40.9	+3.2
OKC	**Ostrava-Krasne**	**0.29**	**209**	*e*PG	**Pg**	**12 33 40.1**	**+0.3**
OKC				*e*SG	**Sg**	**12 33 43.9**	**+0.4**
	comp=Z,62nm,0.6s						
OKC	**Ostrava-Krasne**	**0.29**	**209**	Pg	**Pg**	**12 33 40.1**	**+0.3**
OKC				*e*Sg	**Sg**	**12 33 44.1**	**+0.6**
	baz=40						
MORC	**Moravsky Berou**	**0.61**	**240**	*e*Sg	**Sg**	**12 33 54.6**	**+0.6**
	comp=Z,16nm,0.2s,baz=63						
OJC	**Ojcow**	**0.93**	**82**	*e*Pg	**Pg**	**12 33 49.9**	**-2.3**
OJC				*e*Sg	**Sg**	12 34 02.5	-1.8
OJC	**Ojcow**	**0.93**	**82**	*e*Pg	**Pg**	12 33 49.9	-2.3
OJC				*e*Sg	**Sg**	12 34 02.5	-1.8
JAVC	**Velka Javorina**	**1.31**	**200**	*e*Sg	**Sg**	**12 34 17.6**	**+1.2**
	comp=Z,7.1nm,0.2s						
DPC	**Dobruska-Polom**	**1.33**	**282**	*e*PG	**Pg**	**12 33 59.4**	**-0.4**
DPC				*e*SG	**Sg**	**12 34 17.8**	**+0.7**
	comp=Z,22nm,0.5s						
DPC	**Dobruska-Polom**	**1.33**	**282**	Pg	**Pg**	**12 33 59.4**	**-0.4**
DPC				*e*Sg	**Sg**	**12 34 17.7**	**+0.6**
	baz=100						
VRAC	**Vranov**	**1.39**	**236**	*e*Pg	**Pg**	**12 34 00.1**	**-0.8**
	baz=57						
VRAC				*e*Sg	**Sg**	**12 34 18.2**	**-0.7**
	comp=Z,9.9nm,0.2s,baz=57						
NIE	**Niedzica**	**1.43**	**117**	*e*Pg	**Pg**	**12 34 00.8**	**-0.9**
NIE				*e*Sg	**Sg**	12 34 19.7	-0.6
NIE	**Niedzica**	**1.43**	**117**	*e*Pg	**Pg**	**12 34 00.8**	**-0.9**
NIE				*e*Sg	**Sg**	12 34 19.7	-0.6
UPC	**Upice**	**1.56**	**286**	*e*SG	**Sg**	**12 34 24.4**	**-0.1**
UPC	**Upice**	**1.56**	**286**	Sg	**Sg**	**12 34 24.4**	**-0.1**
VYHS	**Vyhne**	**1.63**	**169**	*e*PN	**Pn**	**12 34 03.2**	**-1.0**
VYHS				*e*SN	**Sn**	**12 34 23.7**	**-2.1**
VYHS	**Vyhne**	**1.63**	**169**	*e*Pn	**Pn**	**12 34 03.2**	**-1.0**
VYHS				*e*Sn	**Sn**	**12 34 23.7**	**-2.1**
KRUC	**Moravsky**	**1.64**	**232**	*e*Pn	**Pn**	**12 34 03.9**	**-0.5**
	baz=52						
KRUC				*e*Sg	**Sg**	**12 34 25.4**	**-1.6**
	comp=Z,6.3nm,0.2s,baz=52						
STHS	**Stebnicka Huta**	**1.99**	**109**	*e*PN	**Pn**	**12 34 11.6**	**+2.5**
STHS				*e*SN	**Sn**	**12 34 36.6**	**+1.9**
STHS	**Stebnicka Huta**	**1.99**	**109**	*e*Pn	**Pn**	**12 34 11.6**	**+2.5**
STHS				*e*Sn	**Sn**	**12 34 36.6**	**+1.9**
KECS	**Kecovo**	**2.13**	**138**	*e*PN	**Pn**	**12 34 13.3**	**+2.3**
KECS				*e*SN	**Sn**	**12 34 38.2**	**+0.1**
CRVS	**Cervenica-Dubn**	**2.35**	**119**	*e*PN	**Pn**	**12 34 17.1**	**+3.1**
CRVS				*e*SN	**Sn**	**12 34 45.8**	**+2.3**
PRU	**Pruhonice**	**2.46**	**269**	*e*SG	**Sg**	**12 34 52.7**	**-0.7**
	comp=Z,4.6nm,0.4s						
PRU	**Pruhonice**	**2.46**	**269**	Sg	**Sg**	**12 34 52.7**	**-0.7**
	comp=Z,4.6nm,0.4s						
PVCC	**Panska Ves**	**2.47**	**282**	*e*SG	**Sg**	**12 34 54.5**	**+0.9**
	comp=Z,9.8nm,0.3s						
PVCC	**Panska Ves**	**2.47**	**282**	Sg	**Sg**	**12 34 54.5**	**+0.9**
	comp=Z,9.8nm,0.3s						
KHC	**Kasperske Hory**	**3.25**	**255**	*e*SG	**Sg**	**12 35 16.8**	**-2.0**
	comp=Z,3.6nm,0.3s						
KHC	**Kasperske Hory**	**3.25**	**255**	Sg	**Sg**	**12 35 16.8**	**-2.0**
	comp=Z,3.6nm,0.3s						

CASC 09 12:35:06.4±2.7, 12°.37N×87°.72W, h33km±49km, MD4.0, ML3.6, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.73**	**63**	*e*P	Pn	12 35 21.0	+0.6
CRIN				*e*S	Sn	12 35 32.6	+2.1
CNCH	**Conchagua**	**0.91**	**353**	*e*P	Pn	12 35 23.0	+0.1
CNCH				*e*S	Sn	12 35 36.1	+1.3
CNGN	**Cerro Negro**	**1.00**	**83**	*e*P	Pn	12 35 23.6	-0.6
CNGN				*e*S	Sn	12 35 38.4	+1.2
CNGN				AML	AML	12 35 39.6	
	comp=Z,854nm,0.5s						
COPN	**Copaltepe**	**1.12**	**100**	*e*P	Pn	12 35 24.9	-0.9
COPN				AML	AML	12 35 42.6	
	comp=Z,2μm,0.3s						
MOMN	**Momotombo**	**1.15**	**88**	*e*P	Pn	12 35 26.0	-0.3
BLLM	**Bellamira**	**1.18**	**335**	*e*P	Pn	12 35 26.6	-0.1
BLLM				*e*S	Sn	12 35 42.7	+1.1
VSM	**San Miguel**	**1.18**	**333**	*e*P	Pn	12 35 27.4	+0.8
CSAN		**1.28**	**98**	*e*P	Pn	12 35 27.5	-0.5
XAVN	**Gruta Xavier**	**1.38**	**99**	*e*P	Pn	12 35 28.5	-0.9
MGAN	**Managua**	**1.45**	**99**	*e*P	Pn	12 35 29.5	-0.9
MGAN				AML	AML	12 35 49.3	
	comp=Z,792nm,0.4s						
CAHU	**Cacacuatique**	**1.47**	**341**	*e*P	Pn	12 35 31.1	+0.4
CAHU				*e*S	Sn	12 35 51.7	+2.9
HUEN		**1.51**	**91**	*e*P	Pn	12 35 30.5	-0.6
SNVI	**San Vicente**	**1.65**	**319**	*e*P	Pn	12 35 32.6	-0.4
TGUH	**Tegucigalpa,Un**	**1.73**	**14**	*e*P	Pn	12 35 34.5	+0.3
LFRS	**El Faro**	**1.81**	**314**	*e*P	Pn	12 35 35.0	-0.3
LFRS				*e*S	Sn	12 35 57.7	+0.6
BOQS	**Boqueron**	**2.04**	**312**	*e*P	Pn	12 35 38.8	+0.4
SSN	**San Juan del S**	**2.11**	**120**	*e*P	Pn	12 35 38.1	-1.3
SBLS	**San Blas**	**2.36**	**308**	*e*P	Pn	12 35 43.8	+0.9
VCR	**Vista de Mar**	**3.03**	**137**	*e*P	Pn	12 35 51.6	-0.5
JTS	**JuntasAbangare**	**3.41**	**127**	*e*P	Pn	12 35 56.3	-1.0
PRS1	**Puriscal**	**4.10**	**125**	*e*P	Pn	12 36 10.7	+3.9
LAJ	**Bijagual**	**4.32**	**125**	*e*P	Pn	12 36 08.9	-0.9
URSC	**Urasca**	**4.62**	**123**	*e*P	Pn	12 36 17.4	+3.5
BUS	**Buena Vista**	**4.79**	**125**	*e*P	Pn	12 36 18.3	+2.0
BAR1		**5.33**	**125**	*e*P	Pn	12 36 25.8	+2.0
ACR	**Cerro Adams**	**5.80**	**129**	*e*P	Pn	12 36 31.8	+1.6

*ATH **09** 12:38:41.3, 38°.00N×21°.50E, h23km±1km, MD3.6/11*
*NEIC **09** 12:38:41.3, 38°.00N×21°.50E, h23km, MD3.6(ATH), After ATH.*
*ISCJB **09** 12:38:41.3±0.4, 37°.97N±0°.03×21°.53E±0°.03, h10km±4km, Error ellipse: s-maj=4.4km s-min=4.0km az=31.7*
*CSEM **09** 12:38:42.4±0.2, 38°.00N×21°.55E, h20km, MD3.6, Error ellipse: s-maj=5.5km s-min=5.1km az=58.0*
*THE **09** 12:38:42.0, 38°.00N×21°.55E, h8km±1km, ML3.6/5, Error ellipse: s-maj=1.2km s-min=0.6km az=212.0*
ISC 09 12:38:42.0±0.4, 37°.99N±0°.03×21°.55E±0°.03, h15km±3km, n77, σ1°07/98, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.10**	**319**	*e*Pb	**Pg**	**12 38 46.0**	**+0.8**
RLS				*e*Sb	**Sg**	**12 38 49.4**	**+1.9**
RLS	**Riolos of Patr**	**0.10**	**319**	*e*PB	**Pg**	**12 38 46.0**	**+0.8**
RLS				*e*SB	**Sg**	**12 38 49.4**	**+1.9**
RLS	**Riolos of Patr**	**0.10**	**319**	*e*Pb	**Pg**	**12 38 46.0**	**+0.8**
RLS				*e*Sb	**Sg**	**12 38 49.4**	**+1.9**
UPR	**University Cam**	**0.35**	**32**	P	**Pg**	**12 38 49.2**	**0.0**
UPR	**University Cam**	**0.35**	**32**	*e*PB	**Pg**	**12 38 49.3**	**+0.1**
UPR				*e*SB	**Sg**	**12 38 55.3**	**+1.2**
UPR	**University Cam**	**0.35**	**32**	P	**Pg**	**12 38 49.2**	**0.0**
UPR				*e*Sb	**Sg**	**12 38 55.3**	**+1.2**
LAKA	**Lakka**	**0.42**	**53**	P	**Pg**	**12 38 50.3**	**-0.2**
LAKA	**Lakka**	**0.42**	**53**	P	**Pg**	**12 38 50.3**	**-0.2**
EFP	**Efpalio**	**0.52**	**33**	P	**Pg**	**12 38 51.9**	**-0.4**
EFP				S	**Sg**	**12 38 59.1**	**-0.2**
EFP	**Efpalio**	**0.52**	**33**	*e*PN	**Pg**	**12 38 51.9**	**-0.4**
EFP				*e*SN	**Sg**	**12 39 00.2**	**+0.8**
EFP	**Efpalio**	**0.52**	**33**	P	**Pg**	**12 38 51.9**	**-0.4**
EFP				S	**Sg**	**12 38 59.1**	**-0.2**
TRIZ	**Trizonia**	**0.56**	**47**	P	**Pg**	**12 38 52.5**	**-0.6**
TRIZ				S	**Sg**	**12 39 00.9**	**+0.3**
TRIZ	**Trizonia**	**0.56**	**47**	P	**Pg**	**12 38 52.5**	**-0.6**
TRIZ				S	**Sg**	**12 39 00.9**	**+0.3**
KFL	**Anninata**	**0.61**	**282**	P	**Pg**	**12 38 53.8**	**-0.2**
KALE	**Kalithea**	**0.62**	**49**	P	**Pg**	**12 38 53.4**	**-0.7**
KALE	**Kalithea**	**0.62**	**49**	P	**Pg**	**12 38 53.4**	**-0.7**
GUR	**Goura**	**0.63**	**94**	P	**Pg**	**12 38 53.6**	**-0.7**
GUR	**Goura**	**0.63**	**94**	*e*PB	**Pg**	**12 38 53.6**	**-0.7**
GUR				*e*SN	**Sg**	**12 39 03.6**	**+0.9**
GUR	**Goura**	**0.63**	**94**	P	**Pg**	**12 38 53.6**	**-0.7**
VLS	**Valsamata**	**0.78**	**284**	*e*Pn	**Pg**	**12 38 55.9**	**-1.2**
VLS	**Valsamata**	**0.78**	**284**	P	**Pg**	**12 38 56.0**	**-1.1**
VLS				S	**Sg**	**12 39 08.7**	**+1.3**
VLS	**Valsamata**	**0.78**	**284**	*e*PN	**Pg**	**12 38 55.9**	**-1.2**
VLS	**Valsamata**	**0.78**	**284**	P	**Pg**	**12 38 56.0**	**-1.1**
VLS				S	**Sg**	**12 39 08.7**	**+1.3**
ITM	**Ithomi**	**0.86**	**159**	*e*Pn	**Pg**	**12 38 58.4**	**-0.3**
ITM	**Ithomi**	**0.86**	**159**	P	**Pg**	**12 38 58.3**	**-0.4**
ITM	**Ithomi**	**0.86**	**159**	*e*PN	**Pg**	**12 38 58.4**	**-0.3**
ITM	**Ithomi**	**0.86**	**159**	P	**Pg**	**12 38 58.3**	**-0.4**
DSF	**Desfina**	**0.88**	**61**	P	**Pg**	**12 38 57.9**	**-1.2**
DSF	**Desfina**	**0.88**	**61**	P	**Pg**	**12 38 57.9**	**-1.2**
VLX	**Vlachokerasia**	**0.90**	**133**	P	**Pg**	**12 38 59.3**	**-0.2**
VLX				S	**Sg**	**12 39 12.8**	**+1.5**
VLX	**Vlachokerasia**	**0.90**	**133**	*e*PN	**Pg**	**12 38 59.2**	**-0.3**
VLX				*e*SN	**Sn**	**12 39 13.4**	**+0.5**
VLX	**Vlachokerasia**	**0.90**	**133**	P	**Pg**	**12 38 59.3**	**-0.2**
VLX				S	**Sg**	**12 39 12.8**	**+1.5**
VLX				*e*Sn	**Sn**	**12 39 13.4**	**+0.5**
EVR	**Evrytania**	**0.95**	**12**	*e*Pn	**Pg**	**12 38 59.8**	**-0.6**
EVR	**Evrytania**	**0.95**	**12**	*e*PN	**Pg**	**12 38 59.8**	**-0.6**
EVR	**Evrytania**	**0.95**	**12**	*e*Pn	**Pg**	**12 38 59.8**	**-0.6**
LKD2	**Lefkada island**	**1.06**	**319**	P	**Pg**	**12 39 01.1**	**-1.4**
LKD2	**Lefkada island**	**1.06**	**319**	P	**Pg**	**12 39 01.1**	**-1.4**
PYL	**PYLOS**	**1.10**	**172**	P	**Pg**	**12 39 02.8**	**-0.4**
PYL	**PYLOS**	**1.10**	**172**	*e*PN	**Pg**	**12 39 02.6**	**-0.6**
PYL	**PYLOS**	**1.10**	**172**	P	**Pg**	**12 39 02.8**	**-0.4**
LTK	**Loutraki**	**1.12**	**88**	P	**Pg**	**12 39 02.5**	**-1.2**
LTK	**Loutraki**	**1.12**	**88**	*e*PN	**Pg**	**12 39 02.8**	**-0.9**
LTK	**Loutraki**	**1.12**	**88**	P	**Pg**	**12 39 02.5**	**-1.2**
LTK	**Loutraki**	**1.12**	**88**	*e*Pn	**Pg**	**12 39 02.8**	**-0.9**
AGG	**Agios Georgios**	**1.20**	**30**	*e*Pn	**Pn**	**12 39 05.1**	**+0.8**
AGG	**Agios Georgios**	**1.20**	**30**	P	**Pn**	**12 39 04.4**	**+0.1**
AGG				S	**Sb**	**12 39 21.4**	**+1.5**
AGG	**Agios Georgios**	**1.20**	**30**	*e*PN	**Pn**	**12 39 05.1**	**+0.8**
AGG	**Agios Georgios**	**1.20**	**30**	P	**Pn**	**12 39 04.4**	**+0.1**
AGG	**Agios Georgios**	**1.20**	**30**	*e*Pn	**Pn**	**12 39 05.1**	**+0.8**
AGG				S	**Sb**	**12 39 21.4**	**+1.5**
LKR	**Lokris**	**1.32**	**59**	*e*Pb	**Pb**	**12 39 05.8**	**-0.7**
LKR	**Lokris**	**1.32**	**59**	P	**Pn**	**12 39 05.9**	**0.0**
LKR	**Lokris**	**1.32**	**59**	*e*PB	**Pb**	**12 39 05.8**	**-0.7**
LKR	**Lokris**	**1.32**	**59**	P	**Pn**	**12 39 05.9**	**0.0**
ATAL	**Atalanti**	**1.36**	**58**	P	**Pn**	**12 39 06.2**	**-0.2**
ATAL				S	**Sn**	**12 39 25.2**	**+1.0**
ATAL	**Atalanti**	**1.36**	**58**	P	**Pn**	**12 39 06.2**	**-0.2**
ATAL				S	**Sn**	**12 39 25.2**	**+1.0**
NAIG	**Nisos Aigina**	**1.55**	**98**	*e*Pn	**Pn**	**12 39 10.5**	**+1.4**
NAIG	**Nisos Aigina**	**1.55**	**98**	*e*PN	**Pn**	**12 39 10.5**	**+1.4**
NAIG	**Nisos Aigina**	**1.55**	**98**	*e*Pn	**Pn**	**12 39 10.5**	**+1.4**
THL	**Klokotos Trika**	**1.62**	**13**	*e*PN	**Pn**	**12 39 11.0**	**+1.0**
THL	**Klokotos Trika**	**1.62**	**13**	*e*Pn	**Pn**	**12 39 11.0**	**+1.0**
VLI	**Veliai**	**1.68**	**138**	*e*Pn	**Pn**	**12 39 12.8**	**+1.9**
VLI	**Veliai**	**1.68**	**138**	*e*PN	**Pn**	**12 39 12.8**	**+1.9**
VLI	**Veliai**	**1.68**	**138**	*e*Pn	**Pn**	**12 39 12.8**	**+1.9**
JAN	**Janina**	**1.75**	**342**	*e*Pn	**Pn**	**12 39 12.7**	**+0.8**
JAN	**Janina**	**1.75**	**342**	*e*PN	**Pn**	**12 39 12.7**	**+0.8**
JAN	**Janina**	**1.75**	**342**	*e*Pn	**Pn**	**12 39 12.7**	**+0.8**
VLY	**Voula,Athens**	**1.78**	**94**	*e*Pb	**Pb**	**12 39 12.8**	**-1.6**
VLY	**Voula,Athens**	**1.78**	**94**	*e*PB	**Pb**	**12 39 12.8**	**-1.6**
VLY	**Voula,Athens**	**1.78**	**94**	*e*Pb	**Pb**	**12 39 12.8**	**-1.6**
PTL	**Penteli**	**1.83**	**87**	*e*Pb	**Pb**	**12 39 13.4**	**-1.8**
PTL	**Penteli**	**1.83**	**87**	*e*PB	**Pb**	**12 39 13.4**	**-1.8**
NEO	**Neokhori**	**1.86**	**44**	*e*Pb	**Pb**	**12 39 13.6**	**-2.1**
NEO	**Neokhori**	**1.86**	**44**	*e*PB	**Pb**	**12 39 13.6**	**-2.1**
XOR	**Xorichti**	**1.89**	**43**	P	**Pn**	**12 39 13.9**	**+0.2**
XOR	**Xorichti**	**1.89**	**43**	P	**Pn**	**12 39 13.9**	**+0.2**
KEK	**Kerkira**	**2.20**	**322**	*e*Pb	**Pb**	**12 39 18.6**	**-2.9**
KEK	**Kerkira**	**2.20**	**322**	*e*PB	**Pb**	**12 39 18.6**	**-2.9**

*ISK **09** 12:43:39.8, 39°.72N×26°.66E, h6km, MD2.9*
*DDA **09** 12:43:40.3, 39°.74N×26°.63E, h7km±6km, Md2.9*
*ISCJB **09** 12:43:40.6±0.4, 39°.76N±0°.02×26°.64E±0°.03, h6km±5km, Error ellipse: s-maj=4.2km s-min=3.9km az=3.0*
*CSEM **09** 12:43:41.0±0.2, 39°.75N×26°.60E, h15km, MD2.9, Error ellipse: s-maj=3.6km s-min=2.9km az=68.0*
ISC 09 12:43:41.1±0.4, 39°.76N±0°.02×26°.61E±0°.03, h12km±4km, n42, σ0°83/64, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZN	**Ezine**	**0.23**	**287**	*e*PG	**Pg**	**12 43 46.1**	**+0.1**
EZN				*e*SG	**Sg**	**12 43 50.2**	**+0.8**
EZN	**Ezine**	**0.23**	**287**	*e*Pg	**Pg**	**12 43 46.1**	**0.0**
EZN				*e*Sg	**Sg**	**12 43 50.2**	**+0.8**
BOZC	**Bozcaada**	**0.44**	**281**	*i* P	**Pg**	**12 43 49.9**	**+0.1**
BOZC				*i* S	**Sg**	**12 43 56.1**	**+0.4**
AYVA	**Ayvalik**	**0.45**	**172**	*i* P	**Pg**	**12 43 49.7**	**-0.4**
AYVA				*i* S	**Sg**	**12 43 56.3**	**+0.2**
AYVA	**Ayvalik**	**0.45**	**172**	*i* P	**Pg**	**12 43 49.7**	**-0.4**
AYVA				*i* S	**Sg**	**12 43 56.3**	**+0.2**
LPK	**Lapseki**	**0.62**	**11**	*e*PG	**Pg**	**12 43 53.0**	**-0.3**
LPK				*e*SG	**Sg**	**12 44 02.6**	**+1.0**
LPK	**Lapseki**	**0.62**	**11**	*e*Pg	**Pg**	**12 43 53.0**	**-0.3**
LPK				*e*Sg	**Sg**	**12 44 02.6**	**+1.0**
GADA	**Gvkgeada**	**0.70**	**309**	*e*PG	**Pg**	**12 43 54.8**	**+0.1**
GADA	**Gvkgeada**	**0.70**	**309**	*e*Pg	**Pg**	**12 43 54.8**	**+0.1**
BALY	**Balya**	**0.78**	**91**	*i* P	**Pg**	**12 43 56.5**	**+0.3**
BALY				*i* S	**Sg**	**12 44 07.2**	**+0.8**
BALY	**Balya**	**0.78**	**91**	*i* P	**Pg**	**12 43 56.5**	**+0.3**
BALY				*i* S	**Sg**	**12 44 07.2**	**+0.8**
RKY	**Sarkoy-Tekirda**	**1.02**	**25**	*e*PG	**Pg**	**12 44 00.4**	**-0.6**
RKY				*e*SG	**Sg**	**12 44 15.1**	**+0.8**
RKY	**Sarkoy-Tekirda**	**1.02**	**25**	*e*Pg	**Pg**	**12 44 00.4**	**-0.5**
RKY				*e*Sg	**Sg**	**12 44 15.1**	**+0.8**
SART	**Tekirdag**	**1.03**	**25**	*i* P	**Pg**	**12 44 00.5**	**-0.4**
SART				*i* S	**Sg**	**12 44 13.6**	**-0.8**
SART	**Tekirdag**	**1.03**	**25**	*i* P	**Pg**	**12 44 00.5**	**-0.4**
SART				*i* S	**Sg**	**12 44 13.6**	**-0.7**
ENEZ	**Enez**	**1.04**	**340**	*e*PN	**Pg**	**12 44 01.3**	**+0.1**
ENEZ	**Enez**	**1.04**	**340**	*e*Pn	**Pg**	**12 44 01.3**	**+0.1**
EDC	**Edincik**	**1.13**	**58**	*e*PN	**Pg**	**12 44 01.3**	**-1.6**
EDC	**Edincik**	**

mb3.4/8, Error ellipse: s-maj=17.2km s-min=9.0km az=162.0
*NEIC **09** 12:59:31.4±1.5, 29°.77N×138°.66E, h512km±61km, MG3.6(JMA), Error ellipse: s-maj=150.4km s-min=14.5km az=68.0*
ISC 09 12:59:31.0±0.5, **29°.65N**±0°.07×**138°.6E**±0°.1, **h499**km±8km, **n30**, σ0s**82**/33, **mb3.4**/8, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**3.61**	**16**	P	**P**	**13 00 47.5**	**+1.4**
	5.8nm,0.3s,baz=147,slow=17,SNR=17						
CBIJ	**Chichi jima**	**4.08**	**128**	P	**P**	**13 00 50.2**	**+0.1**
CBIJ	**Chichi jima**	**4.08**	**128**	P	**P**	**13 00 49.8**	**-0.3**
	2.4nm,0.3s,baz=287,slow=19,SNR=5.0						
CBIJ				S	**S**	**13 01 53.2**	**-1.2**
	3.8nm,0.3s,baz=287,slow=20,SNR=4.6						
JIE	**Ise**	**4.98**	**342**	P	**P**	**13 00 58.8**	**+1.2**
HMMJ	**Hamamatsu 2**	**5.24**	**352**	P	**P**	**13 01 01.1**	**+1.2**
BSO1	**Boso 1**	**5.39**	**22**	P	**P**	**13 01 01.7**	**+0.4**
JAI	**Aioi**	**5.41**	**321**	P	**P**	**13 01 02.0**	**+0.4**
JOD2	**Odawara 2**	**5.61**	**4**	P	**P**	**13 01 03.7**	**+0.3**
JNY	**Yasuok**	**5.72**	**354**	P	**P**	**13 01 05.5**	**+1.1**
JTO	**Tosashimizu**	**5.88**	**304**	P	**P**	**13 01 05.7**	**-0.3**
JHU	**Hanno**	**6.21**	**5**	P	**P**	**13 01 09.0**	**-0.1**
JRY	**Ryogami san**	**6.35**	**2**	P	**P**	**13 01 10.8**	**+0.3**
JNA	**Nagahama**	**6.49**	**308**	P	**P**	**13 01 12.0**	**+0.1**
JYT	**Yasato**	**6.70**	**11**	P	**P**	**13 01 13.0**	**-0.9**
JYT				*e*S	**S**	**13 02 34.2**	**-4.1**
JAG	**Ashikaga**	**6.79**	**6**	P	**P**	**13 01 14.0**	**-0.9**
JAG				*e*S	**S**	**13 02 36.9**	**-3.2**
MJAR	**Matsushiro Arr**	**6.88**	**358**	P	**P**	**13 01 15.3**	**-0.5**
	0.3nm,0.3s,baz=168,slow=10,SNR=5.4						
MAJO	**Matsushiro**	**6.88**	**358**	*e*P	**P**	**13 01 15.7**	**0.0**
MAT	**Matsushiro**	**6.88**	**358**	P	**P**	**13 01 15.8**	**+0.1**
JHK	**Hiroka**	**7.58**	**3**	P	**P**	**13 01 22.8**	**-0.1**
JFK	**Kawauchi**	**7.93**	**13**	P	**P**	**13 01 27.3**	**+0.8**
KSRS	**Korea Array**	**11.80**	**314**	P	**P**	**13 02 05.6**	**-1.7**
	0.2nm,0.3s,baz=132,slow=10,SNR=6.8						
SONM	**Songino Array**	**30.66**	**315**	P	**P**	**13 05 03.9**	**0.0**
	0.2nm,0.3s,mb3.0,baz=109,slow=7.9,SNR=2.6						
ZALV	**Zalesovo Beam**	**45.47**	**318**	P	**P**	**13 07 03.7**	**-0.8**
	0.5nm,0.3s,mb3.4,baz=87,slow=3.7,SNR=2.4						
ZALV	**Zalesovo Beam**	**45.47**	**318**	P	**P**	**13 07 03.6**	**-0.9**
MKAR	**Makanchi Array**	**46.39**	**308**	P	**P**	**13 07 10.9**	**-0.8**
	0.3nm,0.3s,mb3.2,baz=121,slow=7.1,SNR=5.6						
WRA	**Warramunga Arr**	**49.47**	**185**	P	**P**	**13 07 35.5**	**+0.4**
	1.3nm,0.4s,mb3.6,baz=0,2,slow=7.7,SNR=14						
ASAR	**Alice Springs**	**53.20**	**185**	P	**P**	**13 08 02.4**	**+0.4**
	0.4nm,0.5s,mb3.0,baz=16,slow=12,SNR=6.6						
BVAR	**Borovoye Array**	**54.00**	**316**	P	**P**	**13 08 06.9**	**-0.5**
	0.9nm,0.4s,mb3.5,baz=74,slow=7.7,SNR=6.3						
ARCES	**ARCESS Array B**	**70.07**	**340**	P	**P**	**13 09 52.8**	**+1.0**
	1.8nm,0.9s,mb3.6,baz=55,slow=6.4,SNR=4.4						
FINES	**FINESS Array B**	**74.23**	**333**	P	**P**	**13 10 16.5**	**+0.4**
	3.7nm,0.8s,mb4.0,baz=315,slow=0.2,SNR=3.9						

*IDC **09** 13:16:18.6±1.6, 2°.85N×97°.32E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.4/23, mbtmp3.6/5, Error ellipse: s-maj=49.9km s-min=18.7km az=39.0*
*NEIC **09** 13:16:23.9±0.8, 2°.91N×97°.43E, h35km, mb3.5/1, Error ellipse: s-maj=18.4km s-min=10.4km az=45.0*
*DJA **09** 13:16:24, 3°.03N×97°.53E, h10km, MLv3.9/5*
*ISCJB **09** 13:16:24.9±1.0, 3°.00N±0°.08×97°.51E±0°.09, h61km±10km, mb3.6/6, Error ellipse: s-maj=17.1km s-min=11.9km az=142.1*
ISC 09 13:16:25.7±1.0, **2°.93N**±0°.09×**97°.47E**±0°.09, **h51**km±11km, **n15**, σ0s**96**/16, **mb3.6**/6, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**1.46**	**95**	Pn	**Pn**	**13 16 48.6**	**-1.1**
	8.4nm,0.3s,baz=300,slow=9.3,SNR=47						
PSI				Sn	**Sn**	**13 17 10.6**	**+2.9**
	34nm,0.3s,baz=153,slow=22,SNR=12						
GSI	**Gunungsitoli**	**1.62**	**176**	P	**Pn**	**13 16 51.2**	**-0.8**
TRSI	**Tarutung**	**1.74**	**121**	P	**Pn**	**13 16 54.0**	**+0.4**
MNSI	**Mandailing Nat**	**2.99**	**135**	P	**Pn**	**13 17 14.8**	**+4.0**
BSI	**Banda Aceh**	**3.34**	**320**	P	**Pn**	**13 17 16.9**	**+1.4**
IPM	**Ipoh**	**3.87**	**67**	P	**Pn**	**13 17 22.0**	**-0.7**
KULM	**Kulim**	**3.94**	**53**	*e*P	**Pn**	**13 17 22.6**	**-1.1**
KULM	**Kulim**	**3.94**	**53**	P	**Pn**	**13 17 21.9**	**-1.9**
WRA	**Warramunga Arr**	**42.74**	**124**	P	**P**	**13 24 18.4**	**+0.1**
	0.5nm,0.4s,mb3.6,baz=302,slow=9.1,SNR=8.9						
WRAB	**Tennant Creek**	**42.75**	**124**	*e*P	**P**	**13 24 18.1**	**-0.2**
	0.4nm,0.5s,mb3.4						
ASAR	**Alice Springs**	**44.24**	**129**	P	**P**	**13 24 30.8**	**+0.5**
	0.6nm,1.1s,mb3.2,baz=297,slow=7.7,SNR=4.7						
KURK	**Kurchatov**	**50.20**	**344**	P	**P**	**13 25 16.3**	**0.0**
	0.3nm,0.4s,mb3.7,baz=160,slow=7.5,SNR=2.1						
KURK	**Kurchatov**	**50.20**	**344**	P	**P**	**13 25 16.3**	**0.0**
ZALV	**Zalesovo Beam**	**51.90**	**351**	P	**P**	**13 25 29.2**	**+0.2**
	0.8nm,0.3s,mb4.1,baz=164,slow=6.4,SNR=4.4						
BVAR	**Borovoye Array**	**54.71**	**340**	P	**P**	**13 25 49.5**	**-0.2**
	0.7nm,0.6s,mb3.9,baz=138,slow=11,SNR=4.1						

*ATH **09** 13:17:09.6, 37°.97N×21°.52E, h27km±1km, MD3.5/9*
*NEIC **09** 13:17:09.6, 37°.97N×21°.52E, h27km, MD3.5(ATH), After ATH.*
*ISCJB **09** 13:17:09.5±0.4, 37°.96N±0°.02×21°.50E±0°.03, h12km±4km, Error ellipse: s-maj=4.2km s-min=3.9km az=151.6*
*CSEM **09** 13:17:10.2±0.2, 37°.97N×21°.53E, h17km±1km, MD3.5, Error ellipse: s-maj=3.8km s-min=3.5km az=49.0*
*THE **09** 13:17:10.2, 37°.96N×21°.52E, h6km±2km, ML3.3/4, Error ellipse: s-maj=2.4km s-min=0.6km az=172.0*
ISC 09 13:17:10.1±0.4, **37°.97N**±0°.02×**21°.51E**±0°.03, **h15**km±4km, **n63**, σ0s**77**/86, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.10**	**342**	*e*Pb	**Pg**	**13 17 14.0**	**+0.7**
RLS	**Riolos of Patr**	**0.10**	**342**	*e*PB	**Pg**	**13 17 14.0**	**+0.7**
RLS	**Riolos of Patr**	**0.10**	**342**	*e*Pb	**Pg**	**13 17 14.0**	**+0.7**
UPR	**University Cam**	**0.39**	**35**	*e*PB	**Pg**	**13 17 18.3**	**+0.3**
UPR	**University Cam**	**0.39**	**35**	*e*Pb	**Pg**	**13 17 18.3**	**+0.3**
LAKA	**Lakka**	**0.46**	**54**	P	**Pg**	**13 17 19.0**	**-0.3**
LAKA				S	**Sg**	**13 17 25.9**	**+0.3**
LAKA	**Lakka**	**0.46**	**54**	P	**Pg**	**13 17 19.0**	**-0.3**
LAKA				S	**Sg**	**13 17 25.9**	**+0.3**
EFP	**Efpalio**	**0.56**	**34**	P	**Pg**	**13 17 20.7**	**-0.4**
EFP	**Efpalio**	**0.56**	**34**	*e*PN	**Pg**	**13 17 20.8**	**-0.3**
EFP				*e*SN	**Sg**	**13 17 29.9**	**+1.4**
EFP	**Efpalio**	**0.56**	**34**	P	**Pg**	**13 17 20.7**	**-0.4**
KFL	**Anninata**	**0.58**	**284**	P	**Pg**	**13 17 21.6**	**0.0**
TRIZ	**Trizonia**	**0.60**	**48**	P	**Pg**	**13 17 21.4**	**-0.5**
TRIZ				S	**Sg**	**13 17 30.5**	**+0.7**
TRIZ	**Trizonia**	**0.60**	**48**	P	**Pg**	**13 17 21.4**	**-0.5**
TRIZ				S	**Sg**	**13 17 30.5**	**+0.7**
KALE	**Kalithea**	**0.66**	**50**	P	**Pg**	**13 17 22.7**	**-0.2**
KALE	**Kalithea**	**0.66**	**50**	P	**Pg**	**13 17 22.7**	**-0.2**
GUR	**Goura**	**0.66**	**92**	P	**Pg**	**13 17 22.1**	**-1.0**
GUR				S	**Sg**	**13 17 32.1**	**+0.2**
GUR	**Goura**	**0.66**	**92**	*e*PB	**Pg**	**13 17 22.1**	**-1.0**
GUR				*e*SN	**Sg**	**13 17 32.9**	**+1.0**
GUR	**Goura**	**0.66**	**92**	P	**Pg**	**13 17 22.1**	**-1.0**
GUR				S	**Sg**	**13 17 32.1**	**+0.2**
VLS	**Valsamata**	**0.75**	**286**	*e*Pn	**Pg**	**13 17 24.0**	**-0.8**
VLS				*e*Sn	**Sn**	**13 17 36.8**	**-0.6**
VLS	**Valsamata**	**0.75**	**286**	P	**Pg**	**13 17 24.0**	**-0.8**
VLS				S	**Sg**	**13 17 36.2**	**+1.5**
VLS	**Valsamata**	**0.75**	**286**	*e*PN	**Pg**	**13 17 24.0**	**-0.8**
VLS				*e*SN	**Sn**	**13 17 36.8**	**-0.6**
VLS	**Valsamata**	**0.75**	**286**	P	**Pg**	**13 17 24.0**	**-0.8**
VLS				S	**Sg**	**13 17 36.2**	**+1.5**
VLS				*e*Sn	**Sn**	**13 17 36.8**	**-0.6**
ITM	**Ithomi**	**0.85**	**157**	*e*Pb	**Pg**	**13 17 25.7**	**-1.0**
ITM				*e*Sn	**Sg**	**13 17 38.4**	**+0.5**
ITM	**Ithomi**	**0.85**	**157**	P	**Pg**	**13 17 25.7**	**-1.0**
ITM				S	**Sg**	**13 17 38.1**	**+0.2**
ITM	**Ithomi**	**0.85**	**157**	*e*PB	**Pg**	**13 17 25.7**	**-1.0**
ITM				*e*SN	**Sg**	**13 17 38.4**	**+0.5**
ITM	**Ithomi**	**0.85**	**157**	P	**Pg**	**13 17 25.7**	**-1.0**
ITM				S	**Sg**	**13 17 38.1**	**+0.2**
ITM				*e*Sn	**Sg**	**13 17 38.4**	**+0.5**
VLX	**Vlachokerasia**	**0.92**	**130**	P	**Pg**	**13 17 27.5**	**-0.4**
VLX	**Vlachokerasia**	**0.92**	**130**	*e*PN	**Pg**	**13 17 27.3**	**-0.6**
VLX				*e*SN	**Sg**	**13 17 40.2**	**+0.4**
VLX	**Vlachokerasia**	**0.92**	**130**	P	**Pg**	**13 17 27.5**	**-0.4**
VLX				*e*Sn	**Sg**	**13 17 40.2**	**+0.4**
DSF	**Desfina**	**0.92**	**61**	P	**Pg**	**13 17 27.0**	**-0.9**
DSF	**Desfina**	**0.92**	**61**	P	**Pg**	**13 17 27.0**	**-0.9**
EVR	**Evrytania**	**0.98**	**14**	*e*Pn	**Pg**	**13 17 28.4**	**-0.6**
EVR	**Evrytania**	**0.98**	**14**	*e*PN	**Pg**	**13 17 28.4**	**-0.6**
EVR	**Evrytania**	**0.98**	**14**	*e*Pn	**Pg**	**13 17 28.4**	**-0.6**
LKD2	**Lefkada island**	**1.06**	**321**	P	**Pg**	**13 17 29.5**	**-1.0**
LKD2	**Lefkada island**	**1.06**	**321**	P	**Pg**	**13 17 29.5**	**-1.0**
PYL	**PYLOS**	**1.09**	**170**	P	**Pg**	**13 17 30.6**	**-0.5**
PYL				S	**Sg**	**13 17 46.5**	**+1.2**
PYL	**PYLOS**	**1.09**	**170**	*e*PN	**Pg**	**13 17 30.6**	**-0.5**
PYL				*e*SN	**Sg**	**13 17 46.7**	**+1.4**
PYL	**PYLOS**	**1.09**	**170**	P	**Pg**	**13 17 30.6**	**-0.5**
PYL				*e*Sn	**Sg**	**13 17 46.7**	**+1.4**
LTK	**Loutraki**	**1.16**	**87**	P	**Pg**	**13 17 31.0**	**-1.4**
LTK	**Loutraki**	**1.16**	**87**	*e*PB	**Pg**	**13 17 30.7**	**-1.7**
LTK	**Loutraki**	**1.16**	**87**	*e*Pb	**Pg**	**13 17 30.7**	**-1.7**
LTK	**Loutraki**	**1.16**	**87**	P	**Pg**	**13 17 31.0**	**-1.4**
AGG	**Agios Georgios**	**1.24**	**31**	*e*Pn	**Pn**	**13 17 32.9**	**0.0**
AGG	**Agios Georgios**	**1.24**	**31**	P	**Pn**	**13 17 33.4**	**+0.5**
AGG	**Agios Georgios**	**1.24**	**31**	*e*PN	**Pn**	**13 17 32.9**	**0.0**
AGG	**Agios Georgios**	**1.24**	**31**	*e*Pn	**Pn**	**13 17 32.9**	**0.0**
AGG	**Agios Georgios**	**1.24**	**31**	P	**Pn**	**13 17 33.4**	**+0.5**
LKR	**Lokris**	**1.36**	**59**	*e*Pn	**Pn**	**13 17 34.4**	**-0.2**
LKR	**Lokris**	**1.36**	**59**	P	**Pn**	**13 17 34.5**	**-0.1**
LKR	**Lokris**	**1.36**	**59**	*e*PN	**Pn**	**13 17 34.4**	**-0.2**
LKR	**Lokris**	**1.36**	**59**	*e*Pn	**Pn**	**13 17 34.4**	**-0.2**
THL	**Klokotos Trika**	**1.64**	**14**	*e*PN	**Pn**	**13 17 39.4**	**+0.9**
THL	**Klokotos Trika**	**1.64**	**14**	*e*Pn	**Pn**	**13 17 39.4**	**+0.9**
VLI	**Veliai**	**1.69**	**137**	*e*Pn	**Pn**	**13 17 40.1**	**+0.9**
VLI	**Veliai**	**1.69**	**137**	*e*PN	**Pn**	**13 17 40.1**	**+0.9**
VLI	**Veliai**	**1.69**	**137**	*e*Pn	**Pn**	**13 17 40.1**	**+0.9**
NEO	**Neokhori**	**1.90**	**45**	*e*Pn	**Pn**	**13 17 42.7**	**+0.7**
NEO	**Neokhori**	**1.90**	**45**	*e*PN	**Pn**	**13 17 42.7**	**+0.7**
NEO	**Neokhori**	**1.90**	**45**	*e*Pn	**Pn**	**13 17 42.7**	**+0.7**
KEK	**Kerkira**	**2.19**	**323**	*e*Pn	**Pn**	**13 17 46.0**	**-0.1**
KEK	**Kerkira**	**2.19**	**323**	*e*PN	**Pn**	**13 17 46.0**	**-0.1**
KEK	**Kerkira**	**2.19**	**323**	*e*Pn	**Pn**	**13 17 46.0**	**-0.1**

*NNC **09** 13:18:19.0±7.4, 37°.24N×70°.31E, h0km, mb3.6, mpv3.6, Error ellipse: s-maj=56.3km s-min=55.7km az=151.0*
ISC 09 13:18:17.9±2.4, **36°.7N**±0°.2×**70°.8E**±0°.2, **h98**km±48km, **n12**, σ0s**75**/16, **4C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.91**	**21**	P	**Pn**	**13 19 43.7**	**+0.8**
	SNR=41						
UCH	**Uchtor**	**6.26**	**26**	P	**Pn**	**13 19 47.2**	**-0.4**
	SNR=15						
KZA	**Kyzart**	**6.42**	**31**	P	**Pn**	**13 19 49.0**	**-0.8**
	SNR=11						
EKS2	**Erkin-Say**	**6.42**	**20**	P	**Pn**	**13 19 50.7**	**+0.9**
	SNR=14						
KK31	**Karatay Array**	**6.45**	**358**	**Pn**	**Pn**	**13 19 50.5**	**+0.3**
	1.3nm,0.3s,baz=169,slow=11,SNR=52						
KK31				⇑Sn	**Sn**	**13 21 01.9**	**-0.3**
	8.6nm,0.4s,baz=189,slow=24,SNR=4.5						
AAK	**Ala-Archa**	**6.62**	**24**	P	**Pn**	**13 19 52.5**	**+0.1**
	SNR=11						
KBK	**Karagaybulak**	**6.79**	**27**	P	**Pn**	**13 19 55.3**	**+0.5**
	SNR=6.2						
CHMS	**Chumysh**	**7.03**	**24**	P	**Pn**	**13 19 57.8**	**-0.2**
	SNR=11						
TKM2	**Tokmak 2**	**7.26**	**29**	⇑Pn	**Pn**	**13 20 00.2**	**-1.1**
	3.6nm,0.6s						
TKM2				⇓Sn	**Sn**	**13 21 22.3**	**+0.2**
	6.5nm,0.8s						
TKM2	**Tokmak 2**	**7.26**	**29**	P	**Pn**	**13 20 00.4**	**-0.8**
	SNR=8.4						
AB31	**Akbulak array**	**14.88**	**331**	⇑Pn	**Pn**	**13 21 41.5**	**-1.5**
	0.2nm,0.3s,baz=135,slow=12,SNR=14						
AB31				Sn	**Sn**	**13 24 17.7**	**-9.2**
	1.3nm,0.5s,baz=149,slow=23,SNR=9.6						
AKTO	**Aktyubinsk**	**16.57**	**330**	⇑Pn	**Pn**	**13 22 05.4**	**+1.3**
	0.3nm,0.7s						
AKTO				⇓Sn	**Sn**	**13 24 57.5**	**-10**
	0.2nm,0.6s						

MAN 09 13:22:14, 12°.90N×124°.57E, h14km, mb5.2, ML4.1, MS4.3, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.39**	**167**	*e*P	Pg	13 22 23.4	+1.5
CNP				*e*S	Sg	13 22 28.8	+1.6
PVCP	**Virac**	**0.81**	**330**	*e*P	Pg	13 22 30.2	+0.5
PVCP				*e*S	Sg	13 22 40.7	+0.4
RCP	**Roxas**	**2.23**	**234**	⇓*e*P	Pn	13 22 51.5	+1.0
RCP				*e*S	Sn	13 23 20.4	+2.6
MSLP	**Maasin**	**2.76**	**174**	*e*P	Pn	13 23 00.3	+2.5
MSLP				*e*S	Sn	13 23 17.2	-14
GUIM	**Jordan**	**2.98**	**221**	*e*P	Pn	13 23 02.2	+1.4
CUYO	**Cuyo Island**	**4.03**	**240**	*e*P	Pn	13 23 16.5	+1.2

IDC 09 13:24:03.9±3.3, **31°.51N**×**104°.57E, h0**km, **mb3.3**/3, **mb1 3.5**/4, **mb1mx3.3**/27, **mbtmp3.3**/4, **ML3.2**/1, **MS3.1**/1, **Ms1 3.1**/1, **ms1mx2.1**/28, **Error ellipse: s-maj=87.9km s-min=36.2km az=100.0, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**16.36**	**4**	Pn	Pn	13 27 54.2	-0.6
	0.1nm,0.3s,baz=157,slow=4.1,SNR=2.2						
KSRS	**Korea Array**	**20.12**	**67**	P	P	13 28 39.6	+0.2
	0.4nm,0.4s,baz=256,slow=10,SNR=4.0						
AKTO	**Aktyubinsk**	**39.15**	**313**	LR	LR	13 49 27.7	
	comp=Z,27nm,20.7s,baz=280,slow=39						
WRA	**Warramunga Arr**	**58.60**	**147**	P	P	13 34 02.5	-0.2
	0.5nm,0.6s,baz=340,slow=7.9,SNR=7.0						
ASAR	**Alice Springs**	**61.64**	**149**	P	P	13 34 23.6	+0.1
	0.3nm,0.6s,baz=333,slow=6.5,SNR=5.7						

*ISK **09** 13:26:56.8, 38°.36N×31°.87E, h4km, MD2.5*
*CSEM **09** 13:26:57.6±0.2, 38°.35N×31°.87E, h10km, MD2.5, Error ellipse: s-maj=5.8km s-min=3.3km az=48.0*
*ISCJB **09** 13:26:57.5±0.6, 38°.34N±0°.04×31°.85E±0°.05, h10km, Error ellipse: s-maj=6.1km s-min=4.1km az=137.1*
ISC 09 13:26:58.1±0.7, **38°.34N**±0°.04×**31°.85E**±0°.05, **h3**km±10km, **n20**, σ0s**76**/29, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDHN	**Kadinhani**	**0.28**	**49**	*i* P	**Pg**	**13 27 03.2**	**-0.2**
KDHN	**Kadinhani**	**0.28**	**49**	*i* P	**Pg**	**13 27 03.2**	**-0.2**
KDHN				*i* S	**Sg**	**13 27 08.0**	**+1.0**
LADK	**Ladik-KONYA**	**0.43**	**109**	*e*PG	**Pg**	**13 27 05.8**	**-0.4**
LADK				*e*SG	**Sg**	**13 27 12.3**	**+0.5**
LADK	**Ladik-KONYA**	**0.43**	**109**	*e*Pg	**Pg**	**13 27 05.9**	**-0.4**
LADK				*e*Sg	**Sg**	**13 27 12.3**	**+0.5**
KIZT	**Kizilcal**	**0.54**	**3**	*e*PG	**Pg**	**13 27 07.5**	**-1.0**
KIZT				*e*SG	**Sg**	**13 27 15.5**	**0.0**
KIZT	**Kizilcal**	**0.54**	**3**	*e*Pg	**Pg**	**13 27 07.5**	**-1.0**
KIZT				*e*Sg	**Sg**	**13 27 15.5**	**0.0**
KONT	**Konya--Tatoy**	**0.56**	**134**	*e*PG	**Pg**	**13 27 08.1**	**-0.8**
KONT				*e*SG	**Sg**	**13 27 17.1**	**+1.0**
KONT	**Konya--Tatoy**	**0.56**	**134**	*e*Pg	**Pg**	**13 27 08.1**	**-0.7**
KONT				*e*Sg	**Sg**	**13 27 17.1**	**+1.0**
BOLV	**Bolvadin**	**0.80**	**299**	*i* P	**Pg**	**13 27 07.3**	**-6.2**
BOLV	**Bolvadin**	**0.80**	**299**	*i* S	**Sg**	**13 27 24.2**	**+0.4**
SUTC	**Sutluce-Ispart**	**1.09**	**218**	*e*PN	**Pg**	**13 27 19.1**	**+0.2**
SUTC	**Sutluce-Ispart**	**1.09**	**218**	*e*Pn	**Pg**	**13 27 19.2**	**+0.2**
SVRH	**Sivrihisar-ESK**	**1.14**	**347**	*e*PN	**Pg**	**13 27 18.9**	**-0.9**
SVRH	**Sivrihisar-ESK**	**1.14**	**347**	*e*Pn	**Pg**	**13 27 18.9**	**-0.9**
SULT	**Sultanhani-AKS**	**1.32**	**96**	*e*PN	**Pn**	**13 27 22.6**	**-0.8**
SULT	**Sultanhani-AKS**	**1.32**	**96**	*e*Pn	**Pn**	**13 27 22.6**	**-0.8**
ESKT	**Eskisehir**	**1.42**	**327**	*e*PN	**Pn**	**13 27 23.9**	**-0.7**
ESKT	**Eskisehir**	**1.42**	**327**	*i* P	**Pn**	**13 27 24.4**	**-0.3**
ESKT				*i* S	**Sb**	**13 27 45.1**	**+1.6**
ESKT	**Eskisehir**	**1.42**	**327**	*e*Pn	**Pn**	**13 27 23.9**	**-0.8**
SEYT	**Eskypehyr**	**1.42**	**327**	*i* P	**Pn**	**13 27 24.4**	**-0.3**
SEYT				*i* S	**Sb**	**13 27 45.1**	**+1.6**

*IDC **09** 13:30:10.5±5.4, 16°.73S×166°.14E, h0km, mb4.1/5, mb1 4.3/5, mb1mx4.0/16, mbtmp4.1/5, MS3.4/7, Ms1 3.4/7, ms1mx3.1/23, Error ellipse: s-maj=140.6km s-min=33.2km az=118.0*
*ISCJB **09** 13:30:12.0±1.7, 16°.92S±0°.09×166°.4E±0°.3, h33km, mb3.9/5, MS3.5/6, Error ellipse: s-maj=38.2km s-min=10.9km az=169.4*
ISC 09 13:30:14.7±1.8, **16°.89S**±0°.09×**166°.3E**±0°.3, **h35**km, **n17**, σ0s**60**/7, **mb3.9**/5, **MS3.5**/6, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.16**	**179**	*e*P	**Pn**	**13 31 25.4**	**-4.1**
DZM				*e*S	**Sn**	**13 32 27.8**	**0.0**
HNR	**Honiara**	**9.65**	**319**	LR	LR	13 34 41.0	
	comp=Z,26nm,19.2s,baz=143,slow=29						
URZ	**Urewera**	**23.31**	**158**	LR	LR	13 41 42.3	
	comp=Z,127nm,21.5s,MS3.3,baz=182,slow=29						
STKA	**Stephens Creek**	**26.91**	**232**	P	**P**	**13 35 53.7**	**+1.0**
	4.0nm,1.1s,mb3.9,baz=66,slow=10.0,SNR=5.0						
STKA				LR	LR	13 47 13.1	
	comp=Z,98nm,19.0s,MS3.4,baz=294,slow=38						
RPZ	**Rata Peaks**	**27.05**	**172**	LR	LR	13 43 30.1	
	comp=Z,219nm,20.2s,MS3.7,baz=232,slow=29						
WRA	**Warramunga Arr**	**30.46**	**259**	P	**P**	**13 36 23.7**	**-0.6**
	1.0nm,0.9s,mb3.6,baz=88,slow=7.7,SNR=5.1						
ASAR	**Alice Springs**	**31.09**	**252**	P	**P**	**13 36 29.6**	**-0.2**
	9.0nm,0.9s,mb4.6,baz=81,slow=8.9,SNR=48						
KSRS	**Korea Array**	**65.01**	**327**	P	**P**	**13 40 51.7**	**+0.3**
	0.6nm,0.8s,mb3.7,baz=138,slow=7.6,SNR=5.0						
PETK	**Petropavlovsk-**	**70.10**	**354**	LR	LR	14 07 21.9	
	comp=Z,30nm,19.9s,MS3.5,baz=270,slow=32						
CMAR	**Chiang Mai Arr**	**74.99**	**295**	LR	LR	14 12 41.3	
	comp=Z,16nm,20.1s,MS3.3,baz=265,slow=34						
SONM	**Songino Array**	**83.68**	**324**	P	**P**	**13 42 39.5**	**-0.3**
	0.7nm,0.9s,mb3.8,baz=134,slow=6.2,SNR=4.4						
SONM				LR	LR	14 15 10.0	
	comp=Z,38nm,20.1s,MS3.8,baz=73,slow=32						
LOR	**Lormes**	**146.41**	**338**	*e*PKP1	PKPbc	13 49 51.7	-0.3
	6.1nm,0.6s						
SSF	**Saint Saulge**	**146.72**	**338**	*e*PKP1	PKPbc	13 49 52.0	-0.9
LPL	**La Plagne**	**146.73**	**333**	*e*PKP1	PKPbc	13 49 51.9	-1.1
LPG	**La Plagne**	**146.74**	**333**	*e*PKP1	PKPbc	13 49 51.5	-1.5
	10nm,0.9s						
ORIF	**Oris-en-Rattie**	**147.57**	**334**	*e*PKP1	PKPbc	13 49 53.5	-1.9
TCF	**Toulx Ste Croi**	**147.84**	**339**	*e*PKP1	PKPbc	13 49 54.6	-1.4
	21nm,1.3s						

*IDC **09** 13:44:45.4±0.9, 24°.64N×97°.76E, h0km, mb3.8/7, mb1 4.0/8, mb1mx3.7/27, mbtmp3.8/8, ML4.4/1, MS2.9/3, Ms1 2.9/3, ms1mx2.5/41, Error ellipse: s-maj=45.6km s-min=14.4km az=67.0*
*NEIC **09** 13:44:46.9±5.7, 24°.57N×97°.57E, h9km±38km, mb4.1/1, Error ellipse: s-maj=22.4km s-min=5.3km az=50.0*
*BJI **09** 13:44:48.0, 24°.69N×97°.73E, h13km, mB4.1/2, mb4.0/2, ML3.9/7, Ms4.0/2, Ms7 3.4/2*
ISC 09 13:44:46.5±0.4, **24°.53N**±0°.03×**97°.64E**±0°.05, **h10**km, **n27**, σ1s**15**/34, **mb3.8**/8, **MS2.8**/3, **Myanmar-China border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**4.67**	**82**	Pg	**Pb**	**13 46 09.9**	**+1.3**
KMI				Sg	**Sb**	**13 47 09.9**	**+4.9**
KMI				smax			
	comp=N,310nm,0.9s						
KMI				smax			
	comp=E,190nm,0.8s						
KMI				LR	LR		
	comp=N,750nm,4.7s						

RLS	**Riolos of Patr**	0.06	295	*e*Pb	**Pg**	13 53 24.9	+0.7
RLS				*e*Sb	**Sg**	13 53 27.7	+2.0
RLS	**Riolos of Patr**	0.06	295	*e*PB	**Pg**	13 53 24.9	+0.7
RLS				*e*SB	**Sg**	13 53 27.7	+2.0
RLS	**Riolos of Patr**	0.06	295	*e*Pb	**Pg**	13 53 24.9	+0.7
UPR	**University Cam**	0.32	38	P	**Pg**	13 53 28.6	0.0
UPR	**University Cam**	0.32	38	*e*PB	**Pg**	13 53 28.6	0.0
UPR				*e*SB	**Sg**	13 53 34.3	+1.5
UPR	**University Cam**	0.32	38	P	**Pg**	13 53 28.6	0.0
UPR				*e*Sb	**Sg**	13 53 34.3	+1.5
LAKA	**Lakka**	0.41	59	P	**Pg**	13 53 29.7	-0.5
LAKA				S	**Sg**	13 53 35.6	+0.1
LAKA	**Lakka**	0.41	59	P	**Pg**	13 53 29.7	-0.5
LAKA				S	**Sg**	13 53 35.6	+0.1
EFP	**Efpalio**	0.49	36	P	**Pg**	13 53 31.3	-0.5
EFP				S	**Sg**	13 53 38.2	0.0
EFP	**Efpalio**	0.49	36	P	**Pg**	13 53 31.3	-0.5
EFP				S	**Sg**	13 53 38.2	0.0
TRIZ	**Trizonia**	0.54	51	P	**Pg**	13 53 32.0	-0.7
TRIZ				S	**Sg**	13 53 40.1	+0.4
TRIZ	**Trizonia**	0.54	51	P	**Pg**	13 53 32.0	-0.7
TRIZ				S	**Sg**	13 53 40.1	+0.4
KALE	**Kalithea**	0.59	53	P	**Pg**	13 53 33.0	-0.8
KALE				S	**Sg**	13 53 41.5	0.0
KALE	**Kalithea**	0.59	53	P	**Pg**	13 53 33.0	-0.8
KALE				S	**Sg**	13 53 41.5	0.0
KFL	**Anninata**	0.60	278	P	**Pg**	13 53 33.7	-0.1
GUR	**Goura**	0.64	98	P	**Pg**	13 53 33.5	-1.1
GUR				S	**Sg**	13 53 43.6	+0.6
GUR	**Goura**	0.64	98	P	**Pg**	13 53 33.5	-1.1
GUR				S	**Sg**	13 53 43.6	+0.6
VLS	**Valsamata**	0.76	281	*e*Pn	**Pg**	13 53 35.9	-1.1
VLS	**Valsamata**	0.76	281	P	**Pg**	13 53 36.0	-1.0
VLS	**Valsamata**	0.76	281	*e*PN	**Pg**	13 53 35.9	-1.1
VLS	**Valsamata**	0.76	281	P	**Pg**	13 53 36.0	-1.0
DSF	**Desfina**	0.87	64	P	**Pg**	13 53 37.4	-1.5
DSF	**Desfina**	0.87	64	P	**Pg**	13 53 37.4	-1.5
ITM	**Ithomi**	0.90	160	*e*Pn	**Pg**	13 53 38.5	-1.1
ITM	**Ithomi**	0.90	160	P	**Pg**	13 53 38.6	-1.0
ITM	**Ithomi**	0.90	160	*e*PN	**Pg**	13 53 38.5	-1.1
ITM	**Ithomi**	0.90	160	P	**Pg**	13 53 38.6	-1.0
EVR	**Evrytania**	0.91	13	*e*Pn	**Pg**	13 53 39.3	-0.5
EVR				*e*Sn	**Sg**	13 53 51.7	+0.1
EVR	**Evrytania**	0.91	13	*e*PN	**Pg**	13 53 39.3	-0.5
EVR				*e*SN	**Sg**	13 53 51.7	+0.1
VLX	**Vlachokerasia**	0.94	134	P	**Pg**	13 53 39.4	-0.9
VLX	**Vlachokerasia**	0.94	134	*e*PN	**Pg**	13 53 39.1	-1.2
VLX				*e*SN	**Sg**	13 53 52.7	+0.3
VLX	**Vlachokerasia**	0.94	134	P	**Pg**	13 53 39.4	-0.9
LKD2	**Lefkada island**	1.03	318	P	**Pg**	13 53 40.6	-1.4
LKD2	**Lefkada island**	1.03	318	P	**Pg**	13 53 40.6	-1.4
LTK	**Loutraki**	1.13	90	P	**Pg**	13 53 42.3	-1.6
LTK	**Loutraki**	1.13	90	*e*PB	**Pg**	13 53 42.3	-1.6
LTK				*e*SN	**Sg**	13 53 58.5	0.0
LTK	**Loutraki**	1.13	90	P	**Pg**	13 53 42.3	-1.6
LTK				*e*Sn	**Sg**	13 53 58.5	0.0
PYL	**PYLOS**	1.15	172	P	**Pg**	13 53 42.8	-1.4
PYL	**PYLOS**	1.15	172	*e*PN	**Pg**	13 53 43.4	-0.8
PYL	**PYLOS**	1.15	172	P	**Pg**	13 53 42.8	-1.4
PYL	**PYLOS**	1.15	172	*e*Pn	**Pg**	13 53 43.4	-0.8
AGG	**Agios Georgios**	1.17	32	P	**Pb**	13 53 43.2	-1.4
AGG				S	**Sb**	13 54 00.1	+0.2
AGG	**Agios Georgios**	1.17	32	P	**Pb**	13 53 43.2	-1.4
AGG				S	**Sb**	13 54 00.1	+0.2
LKR	**Lokris**	1.30	61	*e*Pb	**Pb**	13 53 45.5	-1.4
LKR				*e*Sn	**Sn**	13 54 05.0	+0.8
LKR	**Lokris**	1.30	61	P	**Pn**	13 53 45.1	-1.5
LKR				S	**Sb**	13 54 04.1	+0.3
LKR	**Lokris**	1.30	61	*e*PB	**Pb**	13 53 45.5	-1.4
LKR				*e*SN	**Sn**	13 54 05.0	+0.8
LKR	**Lokris**	1.30	61	P	**Pn**	13 53 45.1	-1.5
LKR	**Lokris**	1.30	61	*e*Pb	**Pb**	13 53 45.5	-1.4
LKR				S	**Sb**	13 54 04.1	+0.3
LKR				*e*Sn	**Sn**	13 54 05.0	+0.8
ATAL	**Atalanti**	1.34	60	P	**Pn**	13 53 45.7	-1.4
ATAL				S	**Sb**	13 54 04.7	-0.1
ATAL	**Atalanti**	1.34	60	P	**Pn**	13 53 45.7	-1.4
ATAL				S	**Sb**	13 54 04.7	-0.1
NAIG	**Nisos Aigina**	1.57	99	*e*Pn	**Pn**	13 53 50.9	+0.7
NAIG	**Nisos Aigina**	1.57	99	*e*PN	**Pn**	13 53 50.9	+0.7
NAIG	**Nisos Aigina**	1.57	99	*e*Pn	**Pn**	13 53 50.9	+0.7
THL	**Klokotos Trika**	1.58	13	*e*PN	**Pn**	13 53 51.5	+1.1
THL	**Klokotos Trika**	1.58	13	*e*Pn	**Pn**	13 53 51.5	+1.1
JAN	**Janina**	1.71	342	*e*Pn	**Pn**	13 53 53.1	+0.9
JAN	**Janina**	1.71	342	*e*PN	**Pn**	13 53 53.1	+0.9
JAN	**Janina**	1.71	342	*e*Pn	**Pn**	13 53 53.1	+0.9
VLI	**Veliai**	1.72	139	P	**Pn**	13 53 55.5	+3.2
VLI	**Veliai**	1.72	139	P	**Pn**	13 53 55.5	+3.2
ATH	**Athens Observa**	1.72	91	*e*Pn	**Pn**	13 53 52.7	+0.3
ATH	**Athens Observa**	1.72	91	*e*PN	**Pn**	13 53 52.7	+0.3
ATH	**Athens Observa**	1.72	91	*e*Pn	**Pn**	13 53 52.7	+0.3
ATHU	**Athens Univers**	1.77	91	P	**Pn**	13 53 52.6	-0.5
ATHU				S	**Sn**	13 54 15.3	-0.5
ATHU	**Athens Univers**	1.77	91	P	**Pn**	13 53 52.6	-0.5
ATHU				S	**Sn**	13 54 15.3	-0.5
NEO	**Neokhori**	1.83	45	P	**Pn**	13 53 54.1	+0.2
NEO	**Neokhori**	1.83	45	P	**Pn**	13 53 54.1	+0.2
XOR	**Xorichti**	1.86	44	P	**Pn**	13 53 53.4	-0.8
XOR	**Xorichti**	1.86	44	P	**Pn**	13 53 53.4	-0.8
AOS	**Alonnisos**	2.16	57	P	**Pn**	13 53 56.5	-1.9
AOS	**Alonnisos**	2.16	57	P	**Pn**	13 53 56.5	-1.9
KEK	**Kerkira**	2.16	322	*e*Pn	**Pn**	13 53 58.7	+0.3
KEK	**Kerkira**	2.16	322	*e*PN	**Pn**	13 53 58.7	+0.3
KEK	**Kerkira**	2.16	322	*e*Pn	**Pn**	13 53 58.7	+0.3
SRN	**Sarande**	2.20	327	*e*PN	**Pn**	13 53 59.7	+0.7
SRN				*i* SN	**Sg**	13 54 33.4	+0.4
SRN	**Sarande**	2.20	327	*e*Pn	**Pn**	13 53 59.7	+0.7
SRN=35							
KBN	**Korca**	2.65	348	*e*PN	**Pn**	13 54 07.3	+2.1
KBN	**Korca**	2.65	348	*e*Pn	**Pn**	13 54 07.3	+2.1
SRN=35							
OHR	**Ohrid**	3.13	350	*e*Pn	**Pn**	13 54 12.3	+0.5
KARN	**Karanos**	3.25	143	*e*PN	**Pn**	13 54 14.6	+1.3
KARN	**Karanos**	3.25	143	*e*Pn	**Pn**	13 54 14.6	+1.3
KRUS	**Krusevo**	3.34	356	*e*Pn	**Pn**	13 54 15.0	+0.3
VAY	**Valandovo**	3.38	13	*e*Pn	**Pn**	13 54 16.9	+1.8
VAY				*e*Sn	**Sb**	13 53 03.6	+0.1
VAY				*e*Lg		13 55 03.9	
comp=N,98nm,1.1s							
VAY				*e*Lg		13 55 05.0	
comp=E,134nm,1.2s							
LIA	**Limnos Island**	3.40	56	*e*Pn	**Pn**	13 54 15.4	0.0
LIA	**Limnos Island**	3.40	56	*e*PN	**Pn**	13 54 15.4	0.0
LIA	**Limnos Island**	3.40	56	*e*Pn	**Pn**	13 54 15.4	0.0
TIR	**Tirane**	3.56	339	*e*Pn	**Pn**	13 54 17.4	-0.2
TIR	**Tirane**	3.56	339	*e*Pn	**Pn**	13 54 17.4	-0.2
PHP	**Peshkopia**	3.75	347	*e*PN	**Pn**	13 54 20.8	+0.6
PHP				*i* SN	**Sb**	13 55 16.3	+2.3
PHP	**Peshkopia**	3.75	347	*e*Pn	**Pn**	13 54 20.8	+0.6
SRN=35							
IDI	**Anoyia**	3.84	134	Pn	**Pn**	13 54 22.1	+0.6
comp=E,2.2nm,0.3s,baz=319,slow=14,SNR=12							
IDI				Sn	**Sn**	13 55 09.7	+2.9
comp=E,8.7nm,0.3s,baz=78,slow=19,SNR=6.8							
IDI	**Anoyia**	3.84	134	Pn	**Pn**	13 54 22.1	+0.6
IDI				Sn	**Sn**	13 55 09.7	+3.0
PRK	**Paraskevi**	3.90	70	*e*Pn	**Pn**	13 54 23.1	+0.8
PRK	**Paraskevi**	3.90	70	*e*PN	**Pn**	13 54 23.1	+0.8
PRK	**Paraskevi**	3.90	70	*e*Pn	**Pn**	13 54 23.1	+0.8
TIP	**Timpagrande**	3.92	288	*e*Pn	**Pn**	13 54 23.4	+0.8
TIP	**Timpagrande**	3.92	288	*e*Pn	**Pn**	13 54 23.4	+0.9
SIVA	**Sivas**	4.00	138	*e*Pn	**Pn**	13 54 24.4	+0.7
SIVA	**Sivas**	4.00	138	*e*PN	**Pn**	13 54 24.4	+0.7
SIVA	**Sivas**	4.00	138	*e*Pn	**Pn**	13 54 24.4	+0.7
PUK	**Puka**	4.20	343	*e*PN	**Pn**	13 54 27.6	+1.1
PUK	**Puka**	4.20	343	*e*Pn	**Pn**	13 54 27.6	+1.1
SRN=35							
SMG	**Samos**	4.21	93	*e*Pn	**Pn**	13 54 27.2	+0.7
SMG	**Samos**	4.21	93	*e*PN	**Pn**	13 54 27.2	+0.7
SMG	**Samos**	4.21	93	*e*Pn	**Pn**	13 54 27.2	+0.7
LAST	**Lasithi**	4.27	131	*e*Pn	**Pn**	13 54 29.0	+1.6
LAST	**Lasithi**	4.27	131	*e*PN	**Pn**	13 54 29.0	+1.6
LAST	**Lasithi**	4.27	131	*e*Pn	**Pn**	13 54 29.0	+1.6
NPS	**Neapolis**	4.29	129	*e*Pn	**Pn**	13 54 27.3	-0.3
NPS	**Neapolis**	4.29	129	*e*PN	**Pn**	13 54 27.3	-0.3
NPS	**Neapolis**	4.29	129	*e*Pn	**Pn**	13 54 27.3	-0.3
RDO	**Rodhopi**	4.38	44	P	**Pn**	13 54 33.5	+4.5
RDO	**Rodhopi**	4.38	44	P	**Pn**	13 54 33.5	+4.5
LTRZ	**Laterza**	4.47	307	Pn	**Pn**	13 54 30.1	-0.1
LTRZ	**Laterza**	4.47	307	Pn	**Pn**	13 54 30.1	-0.1
BCI	**Bajram Curri**	4.47	346	*e*PN	**Pn**	13 54 31.1	+0.9
BCI	**Bajram Curri**	4.47	346	*e*Pn	**Pn**	13 54 31.1	+0.9
SRN=35							
XRY	**Khrisi**	4.60	132	*e*Pn	**Pn**	13 54 32.6	+0.7
XRY	**Khrisi**	4.60	132	*e*PN	**Pn**	13 54 32.6	+0.7
XRY	**Khrisi**	4.60	132	*e*Pn	**Pn**	13 54 32.6	+0.7
SG1	**Sgolgore (BA)**	4.69	308	*e*Pn	**Pn**	13 54 33.1	-0.1
SG1				*e*Sn	**Sn**	13 55 25.2	-2.6
VTS	**Vitosha**	4.73	15	*e*Pn	**Pn**	13 54 35.3	+1.6
VTS				*e*Sn	**Sn**	13 55 30.7	+2.0
VTS	**Vitosha**	4.73	15	*e*Pn	**Pn**	13 54 35.3	+1.6
VTS				*e*Sn	**Sn**	13 55 30.7	+2.0
ZKR	**Zakros**	4.76	126	*e*Pn	**Pn**	13 54 35.5	+1.4
ZKR	**Zakros**	4.76	126	*e*PN	**Pn**	13 54 35.5	+1.4
ZKR	**Zakros**	4.76	126	*e*Pn	**Pn**	13 54 35.5	+1.4
BARS	**Barje**	4.79	2	*e*Pn	**Pn**	13 54 35.0	+0.5
BARS	**Barje**	4.79	2	*e*Pn	**Pn**	13 54 35.0	+0.5
KARP	**Karpathos**	5.15	117	*e*Pn	**Pn**	13 54 41.0	+1.5
KARP	**Karpathos**	5.15	117	*e*PN	**Pn**	13 54 41.0	+1.5
KARP	**Karpathos**	5.15	117	*e*Pn	**Pn**	13 54 41.0	+1.5
ZAPS	**Zavoj**	5.30	9	*e*Pn	**Pn**	13 54 43.7	+2.1
SJES	**Sjenica**	5.36	348	*e*Pn	**Pn**	13 54 43.1	+0.8
NISS		5.38	3	*e*Pn	**Pn**	13 54 43.8	+1.2
NISS		5.38	3	*e*Pn	**Pn**	13 54 43.8	+1.2
STON	**Ston**	5.65	330	*i* Pn	**Pn**	13 54 44.6	-1.8
STON				Sn	**Sn**	13 55 47.1	-4.3
STON	**Ston**	5.65	330	*i* Pn	**Pn**	13 54 44.6	-1.8
VAE	**Valguarnera**	5.67	267	Sn	**Sn**	13 55 52.5	+0.5
comp=E,2.3nm,0.3s,baz=52,slow=4.4,SNR=3.6							
GRUS	**Gruza**	5.88	354	*e*Pn	**Pn**	13 54 50.0	+0.4
GRUS	**Gruza**	5.88	354	*e*Pn	**Pn**	13 54 50.0	+0.4
BBLS	**Lazići**	6.05	345	*e*Pn	**Pn**	13 54 51.2	-0.6
BBLS				*e*Sn	**Sn**	13 55 59.7	-1.4
BBLS	**Lazići**	6.05	345	*e*Pn	**Pn**	13 54 51.2	-0.6
DIVS	**Divibare**	6.17	350	*e*Pn	**Pn**	13 54 52.4	-1.1
DIVS				*e*Sn	**Sn**	13 56 01.4	-2.8
DIVS	**Divibare**	6.17	350	*e*Pn	**Pn**	13 54 52.4	-1.1
CIGN	**Sant´Elia a Pi**	6.26	307	Pn	**Pn**	13 54 54.9	+0.2
comp=E,36nm,0.7s							
CIGN	**Sant´Elia a Pi**	6.26	307	Pn	**Pn**	13 54 54.9	+0.2
comp=E,36nm,0.7s							
SGG	**Gregorio Mates**	6.46	303	Pn	**Pn**	13 54 59.2	+1.8
comp=E,42nm,0.5s							
SGG	**Gregorio Mates**	6.46	303	Pn	**Pn**	13 54 59.2	+1.8
comp=E,42nm,0.5s							
NRCA	**Norcia**	8.02	309	Pn	**Pn**	13 55 19.6	+0.8
comp=E,5.9nm,0.4s							
NRCA	**Norcia**	8.02	309	Pn	**Pn**	13 55 19.6	+0.8
comp=E,5.9nm,0.4s							
MLR	**Muntele Rosu**	8.15	22	Pn	**Pn**	13 55 23.7	+3.1
comp=E,0.5nm,0.3s,baz=196,slow=7.4,SNR=2.3							
MLR	**Muntele Rosu**	8.15	22	Pn	**Pn**	13 55 23.8	+3.2
BRTR	**Keskin Array B**	9.59	76	Pn	**Pn**	13 55 42.6	+2.3
comp=E,0.4nm,0.3s,baz=258,slow=13,SNR=7.4							
BRTR	**Keskin Array B**	9.59	76	Pn	**Pn**	13 55 42.7	+2.3
VOY	**Vojsko**	9.81	327	*e*Pn	**Pn**	13 55 43.5	+0.1
VOY				*e*Sn	**Sn**	13 57 29.2	-4.3
VOY	**Vojsko**	9.81	327	*e*Pn	**Pn**	13 55 43.5	+0.1
GERES	**GERESS Array B**	12.21	335	Pn	**Pn**	13 56 14.0	-2.2
comp=E,0.3nm,0.3s,baz=145,slow=14,SNR=4.2							
GERES				Sn	**Sn**	13 58 26.3	-6.0
comp=E,0.4nm,0.3s,baz=152,slow=21,SNR=3.0							
GERES	**GERESS Array B**	12.21	335	Pn	**Pn**	13 56 14.0	-2.2
GERES				Sn	**Sn**	13 58 26.3	-6.0
DAVOX	**Davos/Dischmat**	12.26	319	LR	LR	14 00 46.4	
comp=E,24nm,19.9s,baz=85,slow=37							
MMAI	**Mount Meron Ar**	12.35	110	Pn	**Pn**	13 56 18.3	+0.1
comp=E,0.7nm,0.3s,baz=297,slow=17,SNR=3.8							
AKASG	**Malin Array Be**	13.80	21	Pn	**Pn**	13 56 38.7	+0.9
comp=E,0.6nm,0.3s,baz=207,slow=10,SNR=3.2							
AKASG	**Malin Array Be**	13.80	21	Pn	**Pn**	13 56 38.8	+0.9
EIL	**Elat**	13.91	123	Pn	**Pn**	13 56 39.5	0.0
comp=E,0.3nm,0.3s,baz=8.7,slow=13,SNR=3.1							
EIL	**Elat**	13.91	123	Pn	**Pn**	13 56 39.5	0.0
ESDC	**Sonseca Array**	19.91	283	P	**Pn**	13 57 54.8	-1.0
comp=E,0.8nm,0.3s,baz=86,slow=11,SNR=2.6							
ESDC	**Sonseca Array**	19.91	283	P	**Pn**	13 57 54.8	-0.9
HFS	**Hagfors**	22.68	350	P	**P**	13 58 21.7	-1.9
comp=E,2.7nm,0.5s,mb3.9,baz=162,slow=10,SNR=8.2							
NOA	**NORSAR Array B**	23.93	348	P	**P**	13 58 33.8	-2.4
comp=E,1.0nm,0.7s,mb3.3,baz=156,slow=8.9,SNR=3.5							
EKA	**Eskdalemuir Ar**	24.02	324	P	**P**	13 58 36.1	-1.1
comp=E,1.3nm,0.6s,mb3.5,baz=128,slow=10,SNR=9.2							
EKA	**Eskdalemuir Ar**	24.02	324	P	**P**	13 58 36.1	-1.0
ARCES	**ARCESS Array B**	31.64	3	P	**P**	13 59 43.9	-1.4
comp=E,0.7nm,0.6s,mb3.6,baz=200,slow=6.4,SNR=4.1							
ARCES	**ARCESS Array B**	31.64	3	P	**P**	13 59 43.9	-1.4
BVAR	**Borovoye Array**	36.60	50	P	**P**	14 00 27.5	-0.9
comp=E,0.6nm,0.5s,mb3.6,baz=262,slow=3.0,SNR=4.5							
BVAR	**Borovoye Array**	36.60	50	P	**P**	14 00 27.5	-0.9
KURK	**Kurchatov**	41.72	53	P	**P**	14 01 09.1	-2.2
comp=E,1.7nm,0.6s,mb3.9,baz=282,slow=8.7,SNR=5.7							
MK31	**Makanchi Array**	44.69	58	*e*P	**P**	14 01 34.8	-0.6
MK31	**Makanchi Array**	44.69	58	*e*P	**P**	14 01 34.8	-0.6
MKAR	**Makanchi Array**	44.69	58	P	**P**	14 01 33.3	-2.0
comp=E,1.0nm,0.5s,mb3.9,baz=292,slow=6.4,SNR=7.6							
ZAA0	**Zalesovo Array**	45.19	48	*e*P	**P**	14 01 37.3	-1.9
ZALV	**Zalesovo Beam**	45.19	48	P	**P**	14 01 37.1	-2.1
comp=E,2.2nm,0.4s,mb4.3,baz=276,slow=8.8,SNR=8.7							

*IDC **09** 14:07:35.6±15.0, 20.°24S×178.°80W, h575km±189km, mb3.1/6, mb1 3.3/6, mb1mx3.0/17, mbtmp3.1/6, Error ellipse: s-maj=111.1km s-min=58.2km az=165.0*
*ISCJB **09** 14:07:38.3±1.5, 20.°4S±0.°3×178.°9W±0.°2, h629km±20km, mb3.6/7, Error ellipse: s-maj=39.0km s-min=25.3km az=173.5*
*NEIC **09** 14:07:39.1±1.0, 20.°38S×178.°86W, h622km±13km, mb3.5/1, Error ellipse: s-maj=26.6km s-min=17.3km az=175.0*

ISC 09 14:07:39.3±1.5, 20.°4S±0.°3×178.°9W±0.°2, h622km±19km, n11, σ0°33/11, mb3.6/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	3.92	312	*e*P	**P**	14 09 05.9	0.0
CTA	**Charters Tower**	32.69	264	P	**P**	14 13 22.7	-0.1
3.9nm,0.9s,mb4.0,baz=82,slow=11,SNR=5.6							
STKA	**Stephens Creek**	37.11	244	P	**P**	14 13 58.8	-0.4
1.7nm,1.1s,mb3.5,baz=76,slow=12,SNR=3.8							
STKA	**Stephens Creek**	37.11	244	*e*P	**P**	14 13 58.6	-0.5
ASAR	**Alice Springs**	43.75	257	P	**P**	14 14 52.0	+0.2
2.2nm,0.5s,mb3.9,baz=90,slow=7.7,SNR=48							
WRAB	**Tennant Creek**	43.80	262	*e*P	**P**	14 14 52.4	+0.1
WRA	**Warramunga Arr**	43.81	262	P	**P**	14 14 52.2	-0.1
0.8nm,0.3s,mb3.7,baz=97,slow=7.7,SNR=13							
FITZ	**Fitzroy Crossi**	52.23	262	P	**P**	14 15 55.0	+0.3
3.6nm,1.1s,mb3.6,baz=73,slow=11,SNR=6.6							
SBA	**Scott Base**	57.95	184	*e*P	**P**	14 16 33.9	+0.7
QSPA	**South Pole Qui**	69.69	180	*e*P	**P**	14 17 47.0	-0.6
0.8nm,0.5s,mb3.4							
TXAR	**Lajitas Array**	87.68	58	P	**P**	14 19 23.4	0.0
0.6nm,0.9s,mb3.3,baz=234,slow=4.3,SNR=4.7							

*JMA **09** 14:13:54.8±0.3, 22.°92N×123.°04E, h68km, M2.4*
*ISCJB **09** 14:13:54.8±0.5, 22.°90N±0.°03×122.°99E±0.°03, h33km, Error ellipse: s-maj=5.1km s-min=2.7km az=151.1*
*TAP **09** 14:13:55.1, 22.°87N×122.°98E, h69km±2km, ML3.5, D*

ISC 09 14:13:55.3±0.5, 22.°89N±0.°03×123.°00E±0.°03, h35km, n36, σ0°90/66, Southeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	1.38	32	P	**Pn**	14 14 17.7	-0.4
HATJ				*e*S	**Sn**	14 14 34.7	-0.4
YOJ	**Yonaguni jima**	1.57	0	P	**Pn**	14 14 20.5	-0.2
YOJ				*e*S	**Sn**	14 14 39.9	+0.2
LAY	**Lan-yu**	1.59	238	P	**Pn**	14 14 19.9	-1.0
baz=237							
LAY				S	**Sn**	14 14 38.8	-1.5
baz=237							
IRIF	**Iriomote-Funau**	1.59	25	P	**Pn**	14 14 20.9	-0.1
IRIF				*e*S	**Sn**	14 14 40.1	-0.2
JKRS	**Kuro-shima**	1.63	34	P	**Pn**	14 14 21.6	0.0
JKRS				S	**Sn**	14 14 41.1	-0.2
TWF1	**Yuli**	1.64	287	P	**Pn**	14 14 20.6	-1.0
baz=287							
TWF1				*e*S	**Sn**	14 14 39.6	-1.9
baz=287							
EHY	**Hungye**	1.66	292	*e*P	**Pn**	14 14 21.6	-0.3
baz=292							
EHY				S	**Sn**	14 14 41.4	-0.8
baz=292							
ESL	**Shilin**	1.71	303	*e*P	**Pn**	14 14 21.4	-1.2
baz=303							
ESL				*e*S	**Sn**	14 14 41.7	-1.6
baz=303							
TWD	**Chiawan**	1.75	313	*e*P	**Pn**	14 14 23.9	+0.7
baz=313							
TWG	**Pinlang**	1.78	268	*i* P	**Pn**	14 14 23.6	0.0
baz=268							
TWG				S	**Sn**	14 14 43.9	-1.1
baz=268							
JIJ	**Ishigaki jima**	1.80	35	P	**Pn**	14 14 23.4	-0.5
JIJ				S	**Sn**	14 14 44.3	-1.3
ELDTW	**Lidau**	1.85	280	*e*P	**Pn**	14 14 24.2	-0.4
baz=287							
ELDTW				*e*S	**Sn**	14 14 44.9	-1.9
baz=287							
ECL	**Taimali**	1.91	262	P	**Pn**	14 14 25.0	-0.4
baz=270							
ECL				*e*S	**Sn**	14 14 47.2	-1.1
baz=270							
ENA	**Nanau**	1.92	323	*e*P	**Pn**	14 14 25.7	+0.2
baz=324							
YUS	**Yu-Shan**	1.98	288	*e*P	**Pn**	14 14 26.7	+0.4
baz=288							
YUS				*e*S	**Sn**	14 14 48.9	-1.0
baz=288							
TWC	**Suao**	2.01	329	*e*P	**Pn**	14 14 26.8	0.0
baz=329							
TWC				S	**Sn**	14 14 50.0	-0.7
baz=329							
EAST	**Anshuo**	2.05	256	*e*P	**Pn**	14 14 27.8	+0.5
baz=263							
ALS	**Alishan**	2.11	287	*e*P	**Pn**	14 14 28.7	+0.5
baz=287							
ALS				*e*S	**Sn**	14 14 53.0	-0.3
baz=287							
NNS	**Nan Shan**	2.15	316	*e*P	**Pn**	14 14 29.6	+0.9
baz=322							
NNS		

FCH			*i* S	Sb	14 24 45.1	+1.7
FCH	**Farellones**	**0.95 341**	⇓*i*P	Pb	14 24 28.7	-2.6
FCH			⇑*i*P		14 24 31.8	
FCH			*i* S	Sb	14 24 42.2	-1.1
FCH			AML	AML	14 24 44.0	
	comp=E,1μm,0.4s					
FCH			*i* S	Sb	14 24 45.1	+1.7
CLCH	**Cerro Calan**	**0.98 328**	*e*P	Pb	14 24 32.7	+1.0
CLCH			*i* S	Sb	14 24 46.9	+2.7
CLCH	**Cerro Calan**	**0.98 328**	*e*P	Pb	14 24 32.7	+1.0
CLCH			*i* S	Sb	14 24 46.9	+2.7
CLCH			AML	AML	14 24 48.4	
	comp=N,2μm,0.6s					
PEL	**Peldehue**	**1.26 329**	⇑*i*P	Pn	14 24 36.7	+0.8
PEL			*i* S	Sn	14 24 53.2	+1.0
PEL			AML	AML	14 24 58.9	
	comp=N,1μm,0.5s					
LNV	**Longovilo**	**1.27 282**	⇓*i*P	Pn	14 24 36.3	+0.2

*IDC **09** 14:24:08.0±2.9, 16°.23S×166°.98E, h0km, mb4.2/4, mb1 4.4/4, mb1mx4.0/16, mbtmp4.2/4, MS3.5/2, Ms1 3.5/2, ms1mx2.8/27, Error ellipse: s-maj=97.6km s-min=35.7km az=130.0*
*NEIC **09** 14:24:09.0±0.8, 16°.32S×167°.08E, h10km, mb4.7/2, Error ellipse: s-maj=28.7km s-min=18.0km az=127.0*
*ISCJB **09** 14:24:11.5±1.2, 16°.4S±0°.2×167°.0E±0°.2, h33km, mb4.3/8, MS3.4/2, Error ellipse: s-maj=36.0km s-min=23.0km az=29.7*

ISC 09 14:24:13.3±1.2, 16°.4S±0°.2×167°.0E±0°.2, h35km, n16, σ0.84/8, mb4.3/8, MS3.4/2, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**20.07 256**		LR	LR	14 34 46.7	
	comp=Z,112nm,18.7s,MS3.2,baz=307,slow=32						
STKA	**Stephens Creek**	**27.77 232**		P	**P**	**14 29 59.1**	**+0.2**
	5.0nm,1.0s,mb4.1,baz=40,slow=9.7,SNR=5.9						
WRA	**Warramunga Arr**	**31.24 258**		P	**P**	**14 30 29.1**	**-0.8**
	1.4nm,1.1s,mb3.7,baz=87,slow=7.7,SNR=4.5						
ASAR	**Alice Springs**	**31.90 251**		P	**P**	**14 30 35.8**	**+0.1**
	11nm,0.8s,mb4.7,baz=80,slow=8.9,SNR=27						
FITZ	**Fitzroy Crossi**	**39.51 261**		LR	LR	14 47 48.0	
	comp=Z,79nm,20.9s,MS3.5,baz=281,slow=36						
QSPA	**South Pole Qui**	**73.64 180**		*e*P	**P**	**14 35 42.8**	**+0.1**
	10nm,1.1s,mb4.7						
LZH	**Lanzhou**	**79.27 313**		*e*P	**P**	**14 36 23.0**	**+7.7**
LZH				pP	pP	14 36 28.3	+2.0
LZH				sP	sP	14 36 30.7	+0.4
LZH				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.9						
LZH				pmax	pmax		
	comp=Z,87nm,4.3s						
GTA	**Gaotai**	**83.65 314**		*e*P	**P**	**14 36 40.4**	**+2.0**
GTA				pP	pP	14 36 45.2	-4.3
GTA				sP	sP	14 36 48.1	-5.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb4.2						
SONM	**Songino Array**	**83.69 324**		P	**P**	**14 36 37.9**	**-0.5**
	comp=Z,0.3nm,0.4s,mb3.7,baz=126,slow=2.5,SNR=3.2						
BILL	**Bilibino**	**84.19 360**		*e*P	**P**	**14 36 39.7**	**-0.8**
	comp=Z,4.4nm,1.0s,mb4.5						
ARCES	**ARCESS Array B**	**121.79 345**		PKP	PKPdf	14 43 03.0	0.0
	comp=Z,2.1nm,0.8s,baz=60,slow=2.2,SNR=4.1						
SSF	**Saint Saulge**	**146.51 339**		*e*PKP1	PKPbc	14 43 51.6	+0.7
GRR	**Gorron**	**146.58 345**		*e*PKP1	PKPbc	14 43 52.1	+1.0
	comp=Z,10nm,0.8s						
MBDF	**Montbardon**	**147.22 334**		*e*PKP1	PKPbc	14 43 54.8	+1.8
	comp=Z,3.1nm,0.3s						
ORIF	**Oris-en-Rattie**	**147.44 335**		*e*PKP1	PKPbc	14 43 54.9	+1.3
MFF	**Saint Martin d**	**148.05 343**		*e*PKP1	PKPbc	14 43 55.4	+0.2
	comp=Z,7.0nm,0.6s						

*IDC **09** 14:35:49.7±1.0, 0°.03S×124°.64E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.6/21, mbtmp3.7/7, Error ellipse: s-maj=95.7km s-min=16.7km az=62.0*
*NEIC **09** 14:35:53.4±0.7, 0°.05S×124°.66E, h25km, mb3.7/1, Error ellipse: s-maj=61.5km s-min=9.8km az=61.0*
*ISCJB **09** 14:35:57.3±0.7, 0°.10S±0°.07×124°.69E±0°.06, h78km±9km, mb3.6/8, Error ellipse: s-maj=11.1km s-min=9.5km az=24.0*
*DJA **09** 14:35:58, 0°.01S×124°.67E, h77km, MLv4.1/6*

ISC 09 14:35:58.6±0.7, 0°.10S±0°.07×124°.70E±0°.06, h72km±9km, n20, σ0.72/20, mb3.6/8, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	**Manado**	**1.54**	**5**	P	**Pn**	**14 36 24.2**	**+0.1**
LUWI	**Luwuk**	**2.14**	**244**	P	**Pn**	**14 36 31.9**	**-0.3**
MRSI	**Marisa**	**2.82**	**282**	P	**Pn**	**14 36 37.1**	**-4.2**
LBMI	**Labuha**	**2.85**	**101**	P	**Pn**	**14 36 41.6**	**-0.2**
APSI	**Ampana**	**3.16**	**255**	P	**Pn**	**14 36 46.3**	**+0.4**
NLAI	**Namlea**	**3.94**	**142**	P	**Pn**	**14 36 57.0**	**+0.4**
KDI	**Kendari**	**4.36**	**208**	P	**Pn**	**14 37 00.9**	**-1.5**
AAI	**Ambon**	**4.99**	**136**	P	**Pn**	**14 37 11.2**	**+0.2**
	45nm,0.8s						
TTSI	**Tana Toraja**	**5.69**	**239**	P	**Pn**	**14 37 20.9**	**+0.3**
SPSI	**Sidrap Palu**	**6.25**	**232**	P	**Pn**	**14 37 29.5**	**+1.3**
	376nm117nm,1.4s						
BNSI	**Bone**	**6.27**	**227**	P	**Pn**	**14 37 28.3**	**-0.2**
WRAB	**Tennant Creek**	**21.86**	**155**	*e*P	**P**	**14 40 44.9**	**-0.6**
	2.8nm,0.8s,mb3.6						
WRA	**Warramunga Arr**	**21.87**	**155**	P	**P**	**14 40 44.2**	**-1.3**
	1.0nm,0.5s,mb3.4,baz=330,slow=11,SNR=16						
ASAR	**Alice Springs**	**25.08**	**160**	P	**P**	**14 41 17.4**	**+0.9**
	1.8nm,0.8s,mb3.5,baz=332,slow=7.1,SNR=22						
ASAR				PcP	PcP	14 44 50.9	+1.3
	0.2nm,0.4s,baz=350,slow=2.2,SNR=9.1						
CMAR	**Chiang Mai Arr**	**31.31**	**307**	P	**P**	**14 42 11.5**	**-0.7**
	0.2nm,0.4s,mb3.2,baz=134,slow=6.8,SNR=4.5						
STKA	**Stephens Creek**	**35.42**	**155**	P	**P**	**14 42 48.8**	**+1.1**
	0.7nm,0.5s,mb3.8,baz=327,slow=12,SNR=5.1						
SONM	**Songino Array**	**50.32**	**344**	P	**P**	**14 44 48.1**	**+0.1**
	0.4nm,0.6s,mb3.5,baz=168,slow=7.4,SNR=2.9						
MKAR	**Makanchi Array**	**59.60**	**328**	P	**P**	**14 45 54.3**	**-0.6**
	0.5nm,0.5s,mb3.9,baz=115,slow=9.8,SNR=6.1						
AKTK	**Aktyubinsk**	**75.41**	**323**	P	**P**	**14 47 34.8**	**+0.3**
AKTO	**Aktyubinsk**	**75.41**	**323**	P	**P**	**14 47 34.8**	**+0.3**
	0.9nm,0.5s,mb3.7,baz=90,slow=5.1,SNR=3.5						

*IDC **09** 14:38:42.2±0.9, 33°.12N×92°.02E, h0km, mb3.9/8, mb1 4.1/11, mb1mx3.8/28, mbtmp3.9/11, ML3.6/3, MS3.3/2, Ms1 3.3/2, ms1mx2.5/31, Error ellipse: s-maj=42.7km s-min=16.2km az=58.0*
*ISCJB **09** 14:38:45.4±1.1, 33°.25N±0°.05×92°.21E±0°.08, h33km±14km, mb3.9/8, Error ellipse: s-maj=11.6km s-min=7.9km az=28.0*
*NEIC **09** 14:38:47.3±3.5, 33°.25N×92°.18E, h34km±28km, mb3.9/3, Error ellipse: s-maj=14.5km s-min=8.2km az=88.0*
*BJI **09** 14:38:48.5, 33°.35N×92°.20E, h26km, mB4.4/2, mb4.0/4, ML3.7/4, Ms3.9/4, Ms7 3.3/3*

ISC 09 14:38:46.6±1.9, 33°.24N±0°.05×92°.17E±0°.08, h27km±16km, n28, σ1.18/27, mb3.9/8, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.63**	**194**	Pn	**Pb**	**14 39 49.4**	**-0.7**
LSA				smax			
	comp=N,160nm,1.0s						
LSA				smax			
	comp=E,100nm,1.0s						
JIRN	**Jiri**	**7.58**	**224**	*e*P	**Pn**	**14 40 37.8**	**+2.4**
	comp=E,21nm,0.8s						
ODAN	**Odare**	**7.58**	**214**	*e*P	**Pn**	**14 40 33.6**	**-1.8**
	comp=E,6.8nm,0.5s						
GUN	**Gumba**	**7.59**	**227**	*e*P	**Pn**	**14 40 38.6**	**+3.1**
	comp=E,34nm,0.9s						
RAMN	**Ramite**	**7.91**	**219**	*e*P	**Pn**	**14 40 38.3**	**-1.5**
	comp=E,18nm,0.6s						
KKN	**Kakani**	**8.05**	**229**	*e*P	**Pn**	**14 40 43.2**	**+1.4**
	comp=E,14nm,0.4s						
PKI	**Pulchoki**	**8.12**	**228**	*e*P	**Pn**	**14 40 43.8**	**+1.0**
	comp=E,26nm,0.6s						
GTA	**Gaotai**	**8.71**	**43**	*e*P	**Pn**	**14 40 53.5**	**+2.6**
GTA				pP		14 40 56.8	
GTA				S	**Sn**	**14 42 27.8**	**-0.4**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,34nm,3.5s						
GTA				LR	LR		
	comp=N,350nm,11.0s						
GTA				LR	LR		
	comp=E,210nm,10.1s						
GTA				LR	LR		
	comp=Z,130nm,9.5s						
MK31	**Makanchi Array**	**15.49**	**334**	*e*P	**Pn**	**14 42 22.4**	**-0.8**
MKAR	**Makanchi Array**	**15.49**	**334**	Pn	**Pn**	**14 42 21.8**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=135,slow=14,SNR=9.4						
CMAR	**Chiang Mai Arr**	**15.92**	**156**	Pn	**Pn**	**14 42 27.7**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=329,slow=12,SNR=9.4						
UCH	**Uchtor**	**16.58**	**308**	P	**Pn**	**14 42 37.8**	**+0.7**
	comp=Z,7.9nm,0.9s						
AAK	**Ala-Archa**	**16.78**	**309**	LR	LR	14 50 11.1	
	comp=Z,100nm,21.3s,baz=159,slow=41						
SONM	**Songino Array**	**18.11**	**32**	Pn	**Pn**	**14 42 58.1**	**+2.0**
	comp=Z,0.3nm,0.3s,baz=213,slow=12,SNR=14						
KURK	**Kurchatov**	**20.11**	**334**	P	**P**	**14 43 17.2**	**-0.9**
	comp=Z,1.6nm,0.4s,baz=143,slow=11,SNR=4.1						
KURK	**Kurchatov**	**20.11**	**334**	P	**P**	**14 43 18.4**	**+0.3**
ZAA0	**Zalesovo Array**	**21.36**	**348**	*e*P	**P**	**14 43 30.2**	**-1.3**
ZALV	**Zalesovo Beam**	**21.36**	**348**	P	**P**	**14 43 31.6**	**0.0**
	comp=Z,2.0nm,0.7s,mb3.6,baz=163,slow=11,SNR=8.2						
BVAR	**Borovoye Array**	**25.20**	**328**	P	**P**	**14 44 10.1**	**+0.4**
	comp=Z,1.1nm,0.6s,mb3.6,baz=128,slow=9.6,SNR=6.9						
BRVK	**Borovoye**	**25.27**	**328**	P	**P**	**14 44 10.5**	**+0.1**
	comp=Z,2.4nm,0.6s,mb3.9						
BR131	**Keskin Array S**	**46.79**	**296**	*e*P	**P**	**14 47 13.4**	**-0.4**
	comp=Z,0.7nm,0.5s,mb3.9						
BRTR	**Keskin Array B**	**46.79**	**296**	P	**P**	**14 47 13.0**	**-0.8**
	comp=Z,1.4nm,0.9s,mb3.9,baz=82,slow=8.9,SNR=8.0						
ARCES	**ARCESS Array B**	**51.14**	**335**	P	**P**	**14 47 46.4**	**-0.3**
	comp=Z,1.4nm,0.7s,mb4.0,baz=93,slow=6.6,SNR=4.9						
GERES	**GERESS Array B**	**58.66**	**311**	LR	LR	15 17 49.1	
	comp=Z,31nm,21.3s,baz=282,slow=40						
WRA	**Warramunga Arr**	**66.46**	**136**	P	**P**	**14 49 33.6**	**-0.1**
	comp=Z,4.2nm,1.1s,mb4.4,baz=321,slow=7.7,SNR=10						
ASAR	**Alice Springs**	**69.16**	**139**	P	**P**	**14 49 50.8**	**0.0**
	comp=Z,3.5nm,0.8s,mb4.3,baz=329,slow=6.6,SNR=31						
YKA	**Yellowknife Ar**	**82.20**	**12**	P	**P**	**14 51 05.1**	**+0.3**
	comp=Z,0.2nm,0.4s,mb3.4,baz=344,slow=4.1,SNR=4.3						
YKA	**Yellowknife Ar**	**82.20**	**12**	P	**P**	**14 51 05.1**	**+0.3**

*IDC **09** 14:45:02.4±1.8, 34°.12N×73°.64E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.4/25, mbtmp3.5/5, ML3.5/1, Error ellipse: s-maj=72.9km s-min=25.2km az=61.0*
*ISCJB **09** 14:45:08.9±0.9, 34°.77N±0°.07×74°.3E±0°.1, h50km±13km, mb3.4/3, Error ellipse: s-maj=17.3km s-min=7.5km az=148.3*
*NEIC **09** 14:45:09.3±1.0, 34°.32N×74°.16E, h35km, Error ellipse: s-maj=19.5km s-min=18.9km az=64.0*
*NDI **09** 14:45:17.2±9.4, 34°.32N×74°.17E, h33km, ML4.0*

ISC 09 14:45:09.9±0.8, 34°.81N±0°.06×74°.2E±0°.1, h45km±12km, n14, σ1.15/18, mb3.4/3, 2C, Southwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMU	**Jammu**	**2.16**	**165**	*e*S	**Sn**	**14 46 08.0**	**-1.0**
THN	**Thein Dam**	**2.68**	**152**	*e*PKP	**Pn**	**14 45 52.0**	**+1.5**
THN				*e*S	**Sn**	**14 46 24.0**	**+2.3**
SDNR	**Sundarnagar**	**4.02**	**144**	*e*PKP	**Pn**	**14 46 06.5**	**-2.5**
SDNR				*ex*	x	14 47 17.5	
KBL	**Kabul**	**4.28**	**268**	P	**Pn**	**14 46 12.3**	**-0.2**
KLP	**Kalpa**	**4.70**	**133**	*e*PKP	**Pn**	**14 46 18.0**	**-0.3**
KLP				*e*S	**Sn**	**14 47 11.2**	**-0.3**
KLP				AML	AML	14 47 38.5	
	comp=N,86nm,0.6s						
KLP				AML	AML	14 47 39.1	
	comp=E,96nm,0.3s						
KSH	**Kashi**	**4.90**	**16**	*e*Pn	**Pn**	**14 46 21.6**	**+0.5**
KSH				Sn	**Sn**	**14 47 12.1**	**-4.4**
KSH				smax			
	comp=N,7.0nm,0.2s						
KSH				smax			
	comp=E,9.0nm,0.2s						
UCH	**Uchtor**	**7.41**	**2**	*e*P	**Pn**	**14 47 02.1**	**+6.7**
KK31	**Karatay Array**	**8.77**	**342**	⇑Pn	**Pn**	**14 47 18.4**	**+4.3**
	comp=E,0.3nm,0.3s,baz=160,slow=12,SNR=5.2						
KK31				⇑Sn	**Sn**	**14 48 50.7**	**-0.8**
	comp=E,1.0nm,0.6s,baz=168,slow=26,SNR=4.9						
AKTK	**Aktyubinsk**	**19.58**	**328**	P	**Pn**	**14 49 35.7**	**+0.1**
AKTO	**Aktyubinsk**	**19.58**	**328**	P	**Pn**	**14 49 35.7**	**+0.1**
	comp=E,0.1nm,0.3s,baz=126,slow=12,SNR=5.3						
ZALV	**Zalesovo Beam**	**20.54**	**18**	P	**P**	**14 49 51.0**	**+6.7**
	comp=E,0.5nm,0.3s,baz=200,slow=12,SNR=2.9						
ARCES	**ARCESS Array B**	**43.71**	**338**	P	**P**	**14 53 12.1**	**+1.9**
	comp=E,1.5nm,0.7s,mb3.8,baz=108,slow=10,SNR=3.9						
WRA	**Warramunga Arr**	**78.87**	**124**	P	**P**	**14 57 07.5**	**-1.0**
	comp=E,0.2nm,0.6s,mb3.2,baz=322,slow=5.0,SNR=4.2						
ASAR	**Alice Springs**	**81.14**	**127**	P	**P**	**14 57 20.4**	**-0.4**
	comp=E,0.2nm,0.8s,mb3.1,baz=312,slow=5.0,SNR=4.1						

MEX 09 14:51:10.1±0.8, 15°.93N×97°.64W, h16km±14km, MD3.7, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.65**	**314**	*i* P	Pg	14 51 20.9	-2.0
PNIG				*i* S	Sg	14 51 28.3	-3.3
OXX	**Oaxaca**	**1.44**	**38**	*i* P	Pn	14 51 31.5	-4.1
OXX				*i* S	Sn	14 51 49.1	-5.1
HUIG	**Huatulco**	**1.48**	**96**	*e*P	Pn	14 51 31.9	-4.2
HUIG				*i* S	Sn	14 51 50.0	-5.2
UTMO	**Huajuapan**	**1.89**	**355**	*i* P	Pn	14 51 39.5	-2.3
UTMO				*i* S	Sn	14 52 00.5	-4.8
ACX	**Acapulco**	**2.37**	**293**	*i* P	Pn	14 51 45.6	-2.8
ACX				*i* S	Sn	14 52 12.7	-4.5
TPIG	**Tehuac#an**	**2.49**	**6**	*i* P	Pn	14 51 47.3	-2.7
TPIG				*i* S	Sn	14 52 16.4	-3.6
CAIG	**El Cayaco**	**2.75**	**294**	*e*P	Pn	14 51 50.6	-2.9
CAIG				*i* S	Sn	14 52 22.9	-3.7
SCX	**San Cristobal**	**4.87**	**80**	*e*P	Pn	14 52 20.1	-2.7
SCX				*i* S	Sn	14 53 06.8	-12

*ISCJB **09** 15:00:29.9±0.5, 14°.06N±0°.05×91°.40W±0°.04, h73km±4km, mb4.0/11, Error ellipse: s-maj=9.9km s-min=3.2km az=34.4*
*MEX **09** 15:00:31.4±0.7, 13°.97N×91°.77W, h100km±7km, MD4.2*
*NEIC **09** 15:00:32.2±1.3, 14°.15N×91°.17W, h90km±11km, mb3.9/5, Error ellipse: s-maj=20.9km s-min=9.0km az=222.0*
NEIC Felt at Antigua Guatemala.
*CASC **09** 15:00:32.1±1.7, 14°.09N×91°.29W, h51km±21km, MD4.0, ML4.1, mb3.9(NEIC)*
*IDC **09** 15:00:33.5±1.9, 14°.28N×90°.89W, h96km±13km, mb3.8/7, mb1 4.0/8, mb1mx3.7/23, mbtmp3.7/8, MS3.4/13, Ms1 3.4/13, ms1mx3.2/28, Error ellipse: s-maj=40.0km s-min=16.5km az=49.0*

ISC 09 15:00:30.8±0.5, 14°.05N±0°.05×91°.41W±0°.04, h63km±4km, n121, σ0.91/125, mb4.0/11, 29C-28D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.34**	**321**	*e*P	**Pn**	**15 00 42.0**	**+0.4**
FUG	**Fuego 3**	**0.68**	**54**	⇓*i*P	**Pn**	**15 00 45.0**	**-0.1**
FG6		**0.72**	**45**	⇓*e*P	**Pn**	**15 00 45.5**	**0.0**
TP2	**Tecpan 2**	**0.82**	**27**	⇓*i*P	**Pn**	**15 00 47.4**	**+0.7**
PCG	**Pacaya**	**0.85**	**66**	⇓*e*P	**Pn**	**15 00 47.3**	**+0.2**
NBG	**Las Nubes**	**1.16**	**63**	⇓*e*P	**Pn**	**15 00 52.0**	**+0.9**
NBG				*e*S	**Sn**	**15 01 09.5**	**+3.2**
THIG		**1.19**	**316**	*i* P	**Pn**	**15 00 51.0**	**-0.4**
THIG				*i* S	**Sn**	**15 01 06.5**	**-0.3**
APG	**El Apazote**	**1.32**	**44**	P	**Pn**	**15 00 52.2**	**-0.9**
	86nm,0.3s,baz=207,slow=3.8,SNR=199						
APG				S	**Sn**	**15 01 10.1**	**+0.2**
	165nm,0.3s,baz=285,slow=20,SNR=43						
RBDL	**Robledal**	**1.68**	**88**	*e*P	**Pn**	**15 00 57.2**	**-0.7**
RTR	**El Retiro**	**1.72**	**95**	*e*P	**Pn**	**15 00 58.4**	**-0.1**
RTR				*e*S	**Sn**	**15 01 19.0**	**-0.6**
SBLS	**San Blas**	**1.75**	**97**	*e*P	**Pn**	**15 00 58.9**	**0.0**
SBLS				*e*S	**Sn**	**15 01 20.4**	**+0.1**
SNJE	**San Jose**	**1.76**	**96**	*e*P	**Pn**	**15 00 59.1**	**0.0**
MRL	**Marmol**	**1.95**	**59**	⇓*e*P	**Pn**	**15 01 02.1**	**+0.5**
BOQS	**Boqueron**	**2.10**	**98**	*e*P	**Pn**	**15 01 03.7**	**+0.1**
BOQS				*e*S	**Sn**	**15 01 28.3**	**-0.3**
SNET	**Serv Nac Est T**	**2.15**	**99**	*e*P	**Pn**	**15 01 05.6**	**+1.3**
LFRS	**El Faro**	**2.32**	**100**	*e*P	**Pn**	**15 01 06.8**	**+0.1**
LFRS				*e*S	**Sn**	**15 01 32.5**	**-1.6**
PCIG		**2.40**	**313**	*i* P	**Pn**	**15 01 06.1**	**-1.6**
PCIG				*i* S	**Sn**	**15 01 32.2**	**-3.8**
SNVI	**San Vicente**	**2.54**	**100**	*e*P	**Pn**	**15 01 08.9**	**-0.7**
SNVI				*e*S	**Sn**	**15 01 39.0**	**-0.4**
SCX	**San Cristobal**	**2.92**	**336**	*i* P	**Pn**	**15 01 15.6**	**+0.8**
SCX				*i* S	**Sn**	**15 01 48.8**	**+0.1**
VSM	**San Miguel**	**3.11**	**101**	*e*P	**Pn**	**15 01 18.9**	**+1.5**
CAHU	**Cacacuatique**	**3.12**	**95**	*e*P	**Pn**	**15 01 17.1**	**-0.5**
TGIG		**3.17**	**329**	*i* P	**Pn**	**15 01 18.1**	**-0.2**
TGIG				*i* S	**Sn**	**15 01 54.0**	**-0.9**
CNCH	**Conchagua**	**3.56**	**102**	*e*P	**Pn**	**15 01 23.4**	**-0.2**
CNCH				*e*S	**Sn**	**15 02 03.9**	**-0.6**
TGUH	**Tegucigalpa,Un**	**4.02**	**89**	*e*P	**Pn**	**15 01 28.6**	**-1.3**
CMIG	**Matias Romero**	**4.51**	**313**	P	**Pn**	**15 01 37.4**	**+0.9**
	6.0nm,0.3s,baz=104,slow=8.9,SNR=50						
CMIG				S	**Sn**	**15 02 27.9**	**+0.2**
	25nm,0.3s,baz=72,slow=20,SNR=8.1						
CMIG				LR	LR	15 03 39.8	
	comp=Z,478nm,19.1s,baz=93,slow=39						
CMIG	**Matias Romero**	**4.51**	**313**	P	**Pn**	**15 01 37.4**	**+0.9**
CMIG				S	**Sn**	**15 02 27.9**	**+0.2**
CMIG				LR	LR	15 03 39.8	
HUIG	**Huatulco**	**4.85**	**291**	*i* P	**Pn**	**15 01 36.5**	**-4.7**
HUIG				*i* S	**Sn**	**15 02 28.1**	**-8.0**
SCIG	**Sabancuy**	**4.89**	**3**	*i* P	**Pn**	**15 01 40.6**	**-1.2**
SCIG				*i* S	**Sn**	**15 02 39.4**	**+2.3**
MOMN	**Momotombo**	**5.02**	**108**	*e*P	**Pn**	**15 01 45.0**	**+1.4**
COPN	**Copaltepe**	**5.05**	**111**	*e*P	**Pn**	**15 01 44.2**	**+0.2**
COPN				AML	AML	15 02 57.1	
	comp=Z,455nm,0.5s						
CSAN		**5.20**	**110**	*e*P	**Pn**	**15 01 47.2**	**+1.1**
HUEN		**5.38**	**108**	*e*P	**Pn**	**15 01 49.9**	**+1.4**
TEIG	**Tepich**	**6.83**	**26**	*e*P	**Pn**	**15 02 07.3**	**-1.1**
	comp=Z,245nm,0.5s						
TEIG	**Tepich**	**6.83**	**26**	*e*P	**Pn**	**15 02 07.9**	**-0.5**
PNIG	**Pinotepa**	**6.89**	**291**	*i* P	**Pn**	**15 02 06.1**	**-3.0**
PNIG				*i* S	**Sn**	**15 03 16.9**	**-9.2**
UTMO	**Huajuapan**	**7.20**	**302**	*i* P	**Pn**	**15 02 09.0**	**-4.5**
UTMO				*i* S	**Sn**	**15 03 26.7**	**-7.1**
JTS	**JuntasAbangare**	**7.34**	**120**	P	**Pn**	**15 02 16.4**	**+1.1**
	comp=Z,2.2nm,0.3s,baz=318,slow=20,SNR=7.9						
JTS				S	**Sn**	**15 03 36.4**	**-0.8**
	comp=Z,1.2nm,0.3s,baz=331,slow=19,SNR=2.2						
JTS	**JuntasAbangare**	**7.34**	**120**	*e*P	**Pn**	**15 02 16.4**	**+1.1**
JTS				S	**Sn**	**15 03 36.4**	**-0.8**
JTS	**JuntasAbangare**	**7.34**	**120**	*e*P	**Pn**	**15 02 17.5**	**+2.1**
627A	**Terlingua Ranc**	**18.91**	**326**	⇑P	**Pn**	**15 04 48.8**	**+1.2**
	baz=19						
TXAR	**Lajitas Array**	**18.97**	**325**	P	**Pn**	**15 04 47.4**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=150,slow=12,SNR=10						
ROSC	**El Rosal**	**19.15**	**117**	LR	LR	15 12 28.4	
	comp=Z,31nm,20.9s,baz=4.2,slow=38						
528A	**Cox Ranch, San**	**19.16**	**329**	⇑P	**Pn**	**15 04 50.1**	**-0.5**
	baz=19						
626A	**Big Bend Ranch**	**19.40**	**325**	⇓P	**Pn**	**15 04 54.1**	**+0.6**
	baz=20						
526A	**Mary Lane Ranc**	**19.77**	**326**	⇓P	**Pn**	**15 04 57.4**	**-0.3**
	baz=20						
328A	**Wristen Ranch,**	**20.17**	**331**	⇓P	**P**	**15 04 60.0**	**-0.1**
	baz=20,SNR=6.4						
MIAR	**Mount Ida**	**20.50**	**355**	*e*P	**P**	**15 05 02.1**	**-1.5**
326A	**Caldwell Ranch**	**20.70**	**328**	⇑P	**P**	**15 05 05.8**	**0.0**
	baz=21,SNR=6.8						
425A	**Indio Mountain**	**20.82**	**325**	⇓P	**P**	**15 05 07.2**	**+0.1**
	baz=21						
SDV	**Santo Domingo**	**21.00**	**102**	P	**P**	**15 05 04.3**	**-4.9**
	comp=Z,1.7nm,0.5s,baz=19,slow=21,SNR=3.2						
WMOK	**Wichita Mounta**	**21.65**	**343**	*e*P	**P**	**15 05 14.6**	**-1.3**
	comp=Z,1.3nm,0.7s,mb3.5						
MNTX	**Cornudas Mount**	**21.73**	**326**	*e*P	**P**	**15 05 17.0**	**+0.1**
	comp=Z,3.5nm,0.9s,mb3.8						
225A	**Deer Hill, Car**	**21.76**	**328**	⇑P	**P**	**15 05 17.1**	**-0.1**
	baz=22,SNR=7.0						
Z27A	**Tatum**	**21.98**	**333**	⇑P	**P**	**15 05 17.8**	**-1.6**
	baz=22						
224A	**Cornudas Mount**	**22.10**	**327**	⇑P	**P**	**15 05 20.7**	**-0.1**
	baz=22,SNR=6.1						
Z26A	**Caprock**	**22.29**	**331**	⇓P	**P**	**15 05 22.2**	**-0.6**
	baz=22						
Y27A	**Causey**	**22.44**	**334**	⇓P	**P**	**15 05 23.4**	**-1.0**
	baz=22						
124A	**Stringfield Ra**	**22.55**	**328**	⇑P	**P**	**15 05 26.8**	**+1.2**
	baz=23,SNR=8.4						
TKL	**Tuckaleechee C**	**22.59**	**16**	P	**P**	**15 05 23.6**	**-2.2**
	comp=Z,4.4nm,0

H11A	Donnelly	37.02	330	⇓P		P	15 07 34.0	-0.3
	baz=37						
J08A	Circle Bar Ran	37.31	327	⇓P		P	15 07 36.8	0.0
	baz=37						
I09A	Lost Marbles R	37.35	328	⇓P		P	15 07 37.3	+0.2
	baz=38						
F12A	Elk City	37.47	332	⇓P		P	15 07 37.6	-0.5
	baz=38						
G11A	Walters Elk Ra	37.66	331	⇓P		P	15 07 38.7	-1.0
	baz=38						
F10A	Beach Ranch, E	38.54	331	⇑P		P	15 07 46.2	-0.9
	baz=39						
H04A	Detroit Lake	40.19	326	⇑P		P	15 08 00.7	-0.2
	baz=40						
SIV	San Ignacio	42.31	134	P		P	15 08 17.1	-1.5
	comp=Z,1.4nm,0.5s,mb3.8,baz=319,slow=9.5,SNR=11						
SIV				pP		pP	15 08 36.1	+1.5
	comp=Z,1.3nm,0.7s,baz=295,slow=8.2,SNR=5.7						
SCHQ	Schefferville	44.98	20	LR		LR	15 27 48.8	
	comp=Z,134nm,19.9s,baz=274,slow=37						
YKA	Yellowknife Ar	51.11	346	P		P	15 09 24.2	-2.5
	comp=Z,0.9nm,0.6s,mb3.9,baz=150,slow=7.9,SNR=12						
YKA				PcP		PcP	15 10 39.5	-2.1
	comp=Z,0.5nm,0.6s,baz=160,slow=3.6,SNR=6.0						
YKA				LR		LR	15 32 06.8	
	comp=Z,7.7nm,19.8s,baz=340,slow=37						
YKA	Yellowknife Ar	51.11	346	P		P	15 09 24.2	-2.5
YKA				PcP		PcP	15 10 39.5	-2.1
YKA				LR		LR	15 32 06.8	
CPUP	Villa Florida	52.06	140	LR		LR	15 30 26.9	
	comp=Z,47nm,20.8s,baz=343,slow=34						
FRB	Frobisher Bay	52.14	13	LR		LR	15 31 30.0	
	comp=Z,65nm,18.7s,baz=204,slow=36						
INK	Inuvik	60.55	343	LR		LR	15 36 19.8	
	comp=Z,37nm,21.4s,baz=353,slow=36						
NOA	NORSAR Array B	83.83	29	LR		LR	15 50 10.6	
	comp=Z,17nm,19.9s,baz=240,slow=36						
ARCES	ARCESS Array B	85.91	18	P		P	15 12 59.6	-3.8
	comp=Z,4.6nm,0.9s,mb4.7,baz=304,slow=8.6,SNR=4.2						
PETK	Petropavlovsk-	90.92	326	LR		LR	15 55 22.4	
	comp=Z,22nm,20.1s,baz=97,slow=36						
MKAR	Makanchi Array	119.17	5	PKP		PKPdf	15 19 09.7	-3.0
	comp=Z,0.2nm,0.6s,baz=36,slow=4.6,SNR=3.6						
WRA	Warramunga Arr	135.96	256	PKP		PKPdf	15 19 43.5	-1.9
	comp=Z,0.4nm,0.7s,baz=80,slow=2.0,SNR=3.9						
WRA	Warramunga Arr	135.96	256	PKP		PKPdf	15 19 43.5	-1.9
ASAR	Alice Springs	136.22	250	PKhKP			15 19 37.4	
	comp=Z,0.3nm,0.9s,baz=90,slow=4.1,SNR=3.4						
ASAR				PKP		PKPdf	15 19 44.6	-1.2
	comp=Z,0.6nm,1.0s,baz=107,slow=2.0,SNR=5.4						
ASAR	Alice Springs	136.22	250	PKP			15 19 37.4	
ASAR				PKP		PKPdf	15 19 44.6	-1.2
CM31	Chiang Mai Arr	146.12	342	ePKP		PKPdf	15 20 02.0	-1.7
CMAR	Chiang Mai Arr	146.12	342	PKPbc		PKPbc	15 20 02.5	-2.1
	comp=Z,3.8nm,0.6s,baz=342,slow=3.3,SNR=52						

NIED ***09*** *15:07:00, 22.°90N×123.°10E, h5km, Mw4.1 Best double couple: M₀1.50000×10¹⁵ NP1:φ₀109.00000°, δ56.00000°, λ-71.00000°. NP2:φ₀257.00000°, δ38.00000°, λ-116.00000°.*

IDC ***09*** *15:07:27.8±0.8, 22.°92N×123.°11E, h0km, mb3.9/11, mb1 4.1/13, mb1mx4.0/26, mbtmp4.0/13, ML3.7/2, MS3.1/4, Ms1 3.1/4, ms1mx2.8/34, Error ellipse: s-maj=22.2km s-min=17.1km az=88.0*

NEIC ***09*** *15:07:28.9±4.9, 22.°90N×123.°02E, h6km±31km, mb4.1/4, Error ellipse: s-maj=13.1km s-min=10.6km az=131.0*

BJI ***09*** *15:07:28.9, 22.°90N×123.°00E, h15km, mB4.5/2, mb4.1/4, ML4.0/1, Ms3.7/1, Ms7 3.4/1*

ISCJB ***09*** *15:07:30.1±1.4, 22.°87N±0.°05×123.°08E±0.°04, h27km±10km, mb4.0/20, MS2.9/3, Error ellipse: s-maj=9.3km s-min=4.4km az=146.1*

MOS ***09*** *15:07:31.2±1.1, 22.°91N×123.°13E, h33km, mb4.5/8, Error ellipse: s-maj=14.4km s-min=10.5km az=93.7*

JMA ***09*** *15:07:31.1±0.2, 22.°89N×123.°07E, h69km, M3.6*

ISC 09 15:07:30.3±1.8, 22.°93N±0.°05×123.°07E±0.°04, h14km±12km, n49, σ0°92/60, mb4.0/20, MS2.9/3, 3C, Southeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	Hateruma jima	1.31	31	P	Pn	15 07 54.3	+0.1
HATJ				S	Sb	15 08 11.3	-0.1
IRIF	Iriomote-Funau	1.52	23	P	Pn	15 07 57.4	+0.2
IRIF				eS	Sn	15 08 16.9	+0.1
YOJ	Yonaguni jima	1.52	358	P	Pn	15 07 57.3	+0.1
YOJ				S	Sn	15 08 17.7	+0.9
JKRS	Kuro-shima	1.56	33	P	Pn	15 07 58.0	+0.3
JKRS				S	Sn	15 08 17.6	-0.1
YULB	Yu-li	1.69	286	ePn	Pn	15 07 57.1	-2.3
JIJ	Ishigaki jima	1.73	34	P	Pn	15 07 59.8	-0.2
JIJ				S	Sn	15 08 21.0	-1.0
NACB	Ninganchiao	1.83	313	ePn	Pn	15 07 59.8	-1.6
TWG	Pinlang	1.84	267	ePn	Pn	15 07 59.6	-1.9
SSLB	Suanglung	2.12	294	ePn	Pn	15 08 04.3	-1.0
JTJ	Tarama	2.27	41	P	Pn	15 08 07.6	+0.2
JTJ				S	Sn	15 08 34.8	-0.4
TPUB	Ta-pu	2.27	280	eP	Pn	15 08 07.5	+0.1
YHNB	Yeheng	2.32	319	eP	Pn	15 08 08.0	-0.1
TATO	Taipei	2.50	325	eP	Pn	15 08 11.6	+1.1
JMJ	Miyako jima 2	2.77	47	P	Pn	15 08 14.6	+0.3
JMJ				S	Sn	15 08 47.3	-0.3
JOGS	Gusukube	2.81	49	P	Pn	15 08 14.8	-0.1
JOGS				S	Sn	15 08 49.3	+0.7
QZH	Quanzhou	4.56	297	Pn	Pn	15 08 39.7	+0.8
QZH				Sn	Sn	15 09 28.0	-3.7
QZH				smax			
	comp=N,180nm,0.8s						
QZH				smax			
	comp=E,300nm,1.4s						
QZH				LR	LR		
	comp=N,540nm,4.3s						
QZH				LR	LR		
	comp=E,650nm,10.8s						
QZH				LR	LR		
	comp=Z,540nm,12.9s						
JKE	Kume jima 2	4.78	44	P	Pn	15 08 41.0	-1.0
JKE				eS	Sn	15 09 35.8	-1.4
KSRS	Korea Array	15.07	15	Pn	Pn	15 11 03.8	+1.0
	comp=Z,0.3nm,0.3s,baz=189,slow=12,SNR=28						
KSRS				LR	LR	15 17 44.2	
	comp=Z,96nm,18.1s,baz=174,slow=41						
MAJO	Matsushiro	18.86	41	eP	Pn	15 11 51.5	+0.9
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MAJO	Matsushiro	18.86	41	eP	Pn	15 11 51.5	+0.9
	comp=Z,9.8nm,0.9s						
MJAR	Matsushiro Arr	18.86	41	P	Pn	15 11 51.0	+0.4
	comp=Z,0.3nm,0.3s,baz=231,slow=10,SNR=39						
LZH	Lanzhou	21.20	312	eP	P	15 12 19.5	+3.9
LZH				pP		15 12 28.5	
LZH				pmax	pmax		
	comp=Z,17nm,1.4s,mb4.2						
CMAR	Chiang Mai Arr	22.99	263	P	P	15 12 36.4	+1.6
	comp=Z,0.6nm,0.8s,mb3.0,baz=63,slow=8.4,SNR=5.9						
CMAR				LR	LR	15 23 00.4	
	comp=Z,18nm,19.6s,MS2.5,baz=195,slow=40						
SONM	Songino Array	28.20	336	P	P	15 13 23.0	+0.6
	comp=Z,3.7nm,0.9s,mb4.0,baz=148,slow=6.9,SNR=15						
SONM				LR	LR	15 25 35.8	
	comp=Z,49nm,20.2s,MS3.1,baz=348,slow=38						
YSS	Yuzh-Sakhalins	28.74	29	eP	P	15 13 27.0	-0.2
PSI	Prapat	30.79	233	P	P	15 13 46.0	+0.3
	comp=Z,2.0nm,0.4s,mb4.3,baz=196,slow=8.6,SNR=3.9						
PETK	Petropavlovsk-	39.97	32	P	P	15 15 02.9	-1.4
	comp=Z,1.2nm,0.8s,mb3.7,baz=234,slow=6.9,SNR=2.5						
MKAR	Makanchi Array	40.44	316	P	P	15 15 09.3	+1.1
	comp=Z,1.6nm,0.9s,mb3.8,baz=91,slow=11,SNR=14						
MKAR	Makanchi Array	40.44	316	P	P	15 15 09.3	+1.1
ZAA0	Zalesovo Array	42.23	327	eP	P	15 15 22.7	-0.1
ZALV	Zalesovo Beam	42.23	327	P	P	15 15 22.5	-0.3
	comp=Z,4.4nm,0.8s,mb4.2,baz=114,slow=7.3,SNR=18						
ZALV				LR	LR	15 34 03.7	
	comp=Z,21nm,18.4s,MS3.0,baz=96,slow=38						
ZALV	Zalesovo Beam	42.23	327	P	P	15 15 22.5	-0.3
ZALV				LR	LR	15 34 03.7	
TKM2	Tokmak 2	43.89	309	eP	P	15 15 36.6	+0.1
TKM2				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
TKM2	Tokmak 2	43.89	309	eP	P	15 15 36.6	+0.1
	comp=Z,3.8nm,1.0s,mb4.1						
WRA	Warramunga Arr	44.01	165	P	P	15 15 37.0	-0.5
	comp=Z,2.0nm,1.0s,mb3.8,baz=345,slow=9.0,SNR=5.4						
WRA	Warramunga Arr	44.01	165	P	P	15 15 37.0	-0.5
KURK	Kurchatov	44.16	320	ceP	P	15 15 39.4	+1.0
KURK				pmax	pmax		
	comp=Z,8.0nm,2.5s,mb4.0						
UCH	Uchtor	44.55	307	eP	P	15 15 44.4	+2.7
UCH				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
UCH	Uchtor	44.55	307	eP	P	15 15 44.4	+2.6
	comp=Z,2.3nm,0.7s,mb4.1						
ASAR	Alice Springs	47.50	166	P	P	15 16 04.9	-0.2
	comp=Z,1.1nm,1.0s,mb3.7,baz=350,slow=6.7,SNR=5.9						
TIXI	Tiksi	48.85	2	eP	P	15 16 14.7	-0.3
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
TIXI	Tiksi	48.85	2	eP	P	15 16 14.7	-0.3
	comp=Z,1.0nm,0.6s,mb4.0						
BVAR	Borovoye Array	49.73	321	P	P	15 16 20.1	-1.9
	comp=Z,0.2nm,0.3s,mb3.6,baz=73,slow=9.8,SNR=2.5						
BVAR				PcP	PcP	15 17 41.7	-1.2
	comp=Z,0.7nm,0.8s,baz=90,slow=4.3,SNR=4.1						
BILL	Bilibino	52.29	19	ceP	P	15 16 42.1	+1.1
BILL				e		15 17 52.7	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
ARU	Arti	57.14	323	c iP	P	15 17 15.8	-0.6
ARU				S	S	15 25 07.0	-4.1
ARU				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
KIV	Kislovodsk	67.72	310	eP	P	15 18 28.5	+1.1
KIV				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
OBN	Obninsk	69.55	322	eP	P	15 18 39.3	+0.7
OBN				e		15 21 09.9	
OBN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
YKA	Yellowknife Ar	83.44	23	P	P	15 19 57.5	+0.3
	comp=Z,2.0nm,0.8s,mb4.2,baz=311,slow=4.6,SNR=14						
GERES	GERESS Array B	84.90	321	P	P	15 20 04.1	-0.7
	comp=Z,0.4nm,0.7s,mb3.7,baz=54,slow=2.3,SNR=5.6						

ISCJB ***09*** *15:13:48.1±1.1, 34.°86N±0.°06×73.°4E±0.°1, h10km, Error ellipse: s-maj=17.4km s-min=6.6km az=18.6*

NNC ***09*** *15:13:59.0±7.9, 36.°11N×75.°38E, h0km, mb3.7, mpv3.7, Error ellipse: s-maj=84.7km s-min=61.2km az=64.0*

ISC 09 15:13:49.2±1.2, 34.°76N±0.°06×73.°5E±0.°1, h10km, n6, σ1°18/9, 3C-2D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHCP	Chirah Chowk	1.11	189	P	Pb	15 14 11.3	+0.8
CEP	Cherat	1.59	235	P	Pn	15 14 16.9	-0.5
CEP				S	Sn	15 14 37.0	-1.0
KSH	Kashi	5.16	22	Pn	Pn	15 15 10.8	+4.4
KSH				Sn	Sn	15 16 04.0	-1.9
KSH				smax			
	comp=N,17nm,0.3s						
KSH				smax			
	comp=E,13nm,0.4s						
TKM2	Tokmak 2	8.32	11	⇑Pn	Pn	15 15 38.1	-12
	comp=E,2.7nm,0.7s						
TKM2				⇓Sn	Sx	15 16 60.0	
	comp=E,1.2nm,0.6s						
KK31	Karatay Array	8.65	345	⇓Pn	Pn	15 15 59.4	+5.1
	comp=E,1.7nm,0.3s,baz=153,slow=11,SNR=29						
KK31				⇑Sn	Sn	15 17 32.2	+0.4
	comp=E,0.8nm,0.5s,baz=152,slow=23,SNR=4.7						
AB31	Akbulak array	17.59	330	⇑Pn	Pn	15 17 55.9	+1.6
	comp=E,0.2nm,0.4s,baz=117,slow=11,SNR=6.8						

ATH ***09*** *15:15:56.6, 37.°86N×21.°41E, h21km±3km, MD3.0/3*

ISCJB ***09*** *15:15:56.5±0.7, 37.°86N±0.°04×21.°44E±0.°04, h9km±5km, Error ellipse: s-maj=6.6km s-min=4.9km az=2.4*

THE ***09*** *15:15:57.6, 37.°90N×21.°45E, h0km±2km, ML3.1/6, Error ellipse: s-maj=2.4km s-min=0.5km az=208.0*

CSEM ***09*** *15:15:57.8±0.3, 37.°89N×21.°45E, h19km, MD3.0, Error ellipse: s-maj=7.7km s-min=6.0km az=3.0*

ISC 09 15:15:57.3±0.8, 37.°86N±0.°05×21.°44E±0.°04, h13km±6km, n28, σ0°71/46, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.20	7	ePB	Pg	15 16 02.0	+0.3
RLS				eSB	Sg	15 16 05.8	+1.1
RLS	Riolos of Patr	0.20	7	ePb	Pg	15 16 02.0	+0.3
RLS				eSb	Sg	15 16 05.8	+1.1
KFL	Anninata	0.57	296	P	Pg	15 16 08.7	+0.2
LAKA	Lakka	0.57	48	P	Pg	15 16 08.1	-0.4
LAKA				S	Sg	15 16 15.8	-0.3
LAKA	Lakka	0.57	48	P	Pg	15 16 08.1	-0.4
LAKA				S	Sg	15 16 15.8	-0.3
EFP	Efpalio	0.68	33	P	Pg	15 16 09.7	-0.8
EFP				S	Sg	15 16 19.0	-0.4
EFP	Efpalio	0.68	33	ePB	Pg	15 16 09.6	-0.9
EFP				eSN	Sg	15 16 20.2	+0.8
EFP	Efpalio	0.68	33	P	Pg	15 16 09.7	-0.8
EFP				S	Sg	15 16 19.0	-0.4
EFP				eSn	Sg	15 16 20.2	+0.8
GUR	Goura	0.72	84	P	Pg	15 16 10.8	-0.5
GUR				S	Sg	15 16 21.3	+0.5
GUR	Goura	0.72	84	ePN	Pg	15 16 10.7	-0.6
GUR				eSN	Sg	15 16 22.0	+1.2
GUR	Goura	0.72	84	P	Pg	15 16 10.8	-0.5
GUR				S	Sg	15 16 21.3	+0.5
GUR				eSn	Sg	15 16 22.0	+1.2
VLS	Valsamata	0.74	296	P	Pg	15 16 11.1	-0.6
VLS	Valsamata	0.74	296	ePN	Pg	15 16 11.0	-0.7
VLS	Valsamata	0.74	296	P	Pg	15 16 11.1	-0.6
KALE	Kalithea	0.77	46	P	Pg	15 16 11.2	-1.0
KALE				S	Sg	15 16 22.4	+0.1
KALE	Kalithea	0.77	46	P	Pg	15 16 11.2	-1.0
KALE				S	Sg	15 16 22.4	+0.1
PYL	PYLOS	0.99	166	P	Pg	15 16 17.3	+0.8
PYL	PYLOS	0.99	166	P	Pg	15 16 17.3	+0.8
DSF	Desfina	1.02	57	P	Pg	15 16 15.7	-1.3
DSF				S	Sg	15 16 30.8	+0.5
DSF	Desfina	1.02	57	P	Pg	15 16 15.7	-1.3
DSF				S	Sg	15 16 30.8	+0.5
LKD2	Lefkada island	1.11	327	P	Pg	15 16 17.6	-1.1
LKD2				S	Sg	15 16 34.0	+0.8
LKD2	Lefkada island	1.11	327	P	Pg	15 16 17.6	-1.1
LKD2				S	Sg	15 16 34.0	+0.8
AGG	Agios Georgios	1.35	31	P	Pn	15 16 22.3	+0.3
AGG	Agios Georgios	1.35	31	P	Pn	15 16 22.3	+0.3
LKR	Lokris	1.46	57	P	Pn	15 16 24.0	+0.6
LKR	Lokris	1.46	57	P	Pn	15 16 24.0	+0.6
THL	Klokotos Trika	1.76	15	P	Pn	15 16 28.0	+0.4
THL	Klokotos Trika	1.76	15	P	Pn	15 16 28.0	+0.4

JMA ***09*** *15:16:30.9±0.3, 22.°90N×123.°07E, h66km, M2.4*

ISCJB ***09*** *15:16:30.6±0.6, 22.°87N±0.°04×123.°02E±0.°03, h33km, Error ellipse: s-maj=6.3km s-min=2.9km az=151.8*

TAP ***09*** *15:16:31.5, 22.°85N×122.°98E, h64km±2km, ML3.4, D*

ISC 09 15:16:31.2±0.6, 22.°85N±0.°04×123.°04E±0.°03, h35km, n30, σ0°86/52, Southeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	Hateruma jima	1.39	30	P	Pn	15 16 53.9	-0.2
HATJ				S	Sn	15 17 10.6	-0.6
LAY	Lan-yu	1.60	240	eP	Pn	15 16 56.3	-0.7
LAY				eS	Sn	15 17 14.7	-1.6
YOJ	Yonaguni jima	1.60	359	P	Pn	15 16 56.9	-0.1
YOJ				S	Sn	15 17 16.5	0.0
IRIF	Iriomote-Funau	1.61	23	P	Pn	15 16 56.9	-0.2
IRIF				S	Sn	15 17 16.3	-0.3
JKRS	Kuro-shima	1.64	33	P	Pn	15 16 57.6	+0.1
JKRS				S	Sn	15 17 17.9	+0.5
TWF1	Yuli	1.68	288	eP	Pn	15 16 57.1	-1.0
TWF1				eS	Sn	15 17 16.7	-1.7
EHY	Hungye	1.71	293	eP	Pn	15 16 58.2	-0.2
EHY				eS	Sn	15 17 17.5	-1.6
ESL	Shilin	1.76	303	eP	Pn	15 16 59.7	+0.5
ESL				eS	Sn	15 17 18.2	-2.2
JIJ	Ishigaki jima	1.81	34	P	Pn	15 16 59.5	-0.4
JIJ				S	Sn	15 17 20.6	-1.1
TWG	Pinlang	1.81	269	eP	Pn	15 16 59.7	-0.2
TWG				eS	Sn	15 17 20.6	-1.2
ELDTW	Lidau	1.89	281	eP	Pn	15 17 00.2	-0.8
ECL	Taimali	1.94	263	P	Pn	15 17 01.1	-0.5
ECL				eS	Sn	15 17 23.2	-1.7
ENA	Nanau	1.97	323	eP	Pn	15 17 01.9	-0.2
YUS	Yu-Shan	2.02	289	eP	Pn	15 17 03.6	+0.8
EAST	Anshuo	2.08	257	P	Pn	15 17 03.7	+0.1
EAST				S	Sn	15 17 28.4	+0.2
ALS	Alishan	2.16	288	eP	Pn	15 17 05.5	+0.9
ALS				eS	Sn	15 17 30.3	+0.2
NNS	Nan Shan	2.20	316	eP	Pn	15 17 05.5	+0.3
NNS				eS	Sn	15 17 30.3	-0.9
TWT	Tachien	2.21	310	eP	Pn	15 17 06.6	+1.3
TWT				eS	Sn	15 17 30.8	-0.6
SMLT	Sun Moon Lake	2.22	298	eP	Pn	15 17 06.7	+1.3
SSD	Sandimen	2.22	268	eP	Pn	15 17 05.8	+0.3
ENTT	Nioudou	2.23	323	eP	Pn	15 17 06.4	+0.8
ENTT				eS	Sn	15 17 31.8	-0.2
TYC	Yuchr	2.26	298	eP	Pn	15 17 06.7	+0.7
TYC				eS	Sn	15 17 33.0	+0.3
SGST	Jiashian	2.27	276	eP	Pn	15 17 06.5	+0.2
CHN5	Tsauling	2.29	289	eP	Pn	15 17 07.3	+0.8
CHN5				S	Sn	15 17 34.1	+0.5
CHN1	Nanshi	2.34	279	eP	Pn	15 17 08.0	+0.9
CHN1				eS	Sn	15 17 36.2	+1.6
JTJ	Tarama	2.34	40	P	Pn	15 17 07.1	-0.1
JTJ				S	Sn	15 17 34.3	-0.5
NSK	Sanguang	2.38	320	eP	Pn	15 17 08.5	+0.8
TWK	Hsinying	2.38	280	eP	Pn	15 17 08.6	+0.8
TWK				eS	Sn	15 17 36.7	+0.9
TWQ1	Liyutan	2.56	306	eP	Pn	15 17 11.7	+1.6
NSTT	Nanjuang	2.57	314	eP	Pn	15 17 11.5	+1.2
NSTT				eS	Sn	15 17 41.1	+0.7

IDC ***09*** *15:18:47.7±41.0, 22.°03N×123.°67E, h0km, mb3.7/3, mb1 3.7/4, mb1mx3.4/25, mbtmp3.7/4, ML3.3/1, Error ellipse: s-maj=724.8km s-min=80.5km az=141.0*

JMA ***09*** *15:18:58.9±0.2, 22.°86N×123.°06E, h61km, M2.9*

ISCJB ***09*** *15:18:59.6±0.4, 22.°90N±0.°02×123.°00E±0.°02, h33km, mb3.4/3, Error ellipse: s-maj=3.9km s-min=2.2km az=148.0*

TAP ***09*** *15:19:00.1, 22.°85N×122.°97E, h64km±2km, ML4.0, D*

NEIC ***09*** *15:19:02.9±3.0, 22.°96N×122.°78E, h35km, Error ellipse: s-maj=39.5km s-min=22.1km az=144.0*

ISC 09 15:19:00.5±0.4, 22.°89N±0.°03×123.°01E±0.°02, h35km, n63, σ1°02/108, mb3.4/3, Southeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	Hateruma jima	1.37	32	P	Pn	15 19 22.3	-0.8
HATJ				S	Sn	15 19 39.6	-0.5
YOJ	Yonaguni jima	1.56	0	P	Pn	15 19 25.4	-0.4
YOJ				S	Sn	15 19 45.7	+0.9
IRIF	Iriomote-Funau	1.58	25	P	Pn	15 19 25.5	-0.5
IRIF				S	Sn	15 19 44.8	-0.5
LAY	Lan-yu	1.59	238	i P	Pn	15 19 24.7	-1.5
LAY				S	Sn	15 19 43.2	-2.3
JKRS	Kuro-shima	1.63	34	P	Pn	15 19 26.1	-0.5
JKRS				S	Sn	15 19 46.4	+0.1
TWF1	Yuli	1.64	287	eP	Pn	15 19 25.7	-1.1
TWF1				eS	Sn	15 19 45.2	-1.5
YULB	Yu-li	1.65	288	ePg	Pn	15 19 25.7	-1.3
EHY	Hungye	1.67	292	P	Pn	15 19 26.4	-0.8
EHY				eS	Sn	15 19 46.1	-1.3
ESL	Shilin	1.72	303	eP	Pn	15 19 26.1	-1.7
ESL				eS	Sn	15 19 45.5	-3.0
TTN	Taitung	1.72	266	eP	Pn	15 19 27.4	-0.6
TTN				eS	Sn	15 19 47.4	-1.3
TWD	Chiawan	1.76	313	eP	Pn	15 19 26.9	-1.5
TWD				eS	Sn	15 19 47.0	-2.6
TWG	Pinlang	1.79	268	eP	Pn	15 19 28.0	-0.8
TWG				eS	Sn	15 19 49.2	-1.2
JIJ	Ishigaki jima	1.80	35	P	Pn	15 19 27.9	-1.1
JIJ				S	Sn	15 19 49.5	-1.1
NACB	Ninganchiao	1.82	315	ePg	Pn	15 19 27.9	-1.3
ELDTW	Lidau	1.86	280	eP	Pn	15 19 28.9	-0.9
ELDTW				eS	Sn	15 19 50.2	-1.9
ECL	Taimali	1.92	262	eP	Pn	15 19 29.6	-1.0
ECL				eS	Sn	15 19 51.6	-2.0
ENA	Nanau	1.92	323	P	Pn	15 19 30.7	0.0
ENA				eS	Sn	15 19 53.3	-0.3
YUS	Yu-Shan	1.98	288	P	Pn	15 19 31.7	+0.2
YUS				eS	Sn	15 19 54.5	-0.6
TWC	Suao	2.02	328	eP	Pn	15 19 32.6	+0.6
TWC				eS	Sn	15 19 54.1	-1.8
TAW	Tawu	2.02	255	eP	Pn	15 19 31.6	-0.4
EAST	Anshuo	2.06	256	P	Pn	15 19 32.4	-0.2
EAST				eS	Sn	15 19 56.3	-0.7
SSLB	Suanglung	2.09	296	eP	Pn	15 19 32.2	-0.8
ALS	Alishan	2.12	287	P	Pn	15 19 34.1	+0.7
ALS				eS	Sn	15 19 59.4	+0.9
NNS	Nan Shan	2.15	316	P	Pn	15 19 34.0	+0.2
NNS				eS	Sn	15 19 59.0	-0.3
TWT	Tachien	2.16	309	P	Pn	15 19 34.6	+0.7
TWT				eS	Sn	15 19 58.9	-0.7

SMLT	Sun Moon Lake	2.17 297	*e*P		Pn	15 19 34.4 +0.2
	baz=305					
SMLT			*e*S		Sn	15 19 59.2 -0.7
	baz=305					
TSEB	Hengchuen, Pin	2.19 244	*e*P		Pn	15 19 35.1 +0.8
	baz=244					
TSEB			*e*S		Sn	15 20 00.8 +0.6
	baz=244					
ENTT	Nioudou	2.19 323	P		Pn	15 19 35.1 +0.8
	baz=318					
ENTT			S		Sn	15 19 59.9 -0.3
	baz=318					
SSD	Sandimen	2.20 267	*e*P		Pn	15 19 34.4 0.0
	baz=262					
TWE	Neicheng	2.20 326	*e*P		Pn	15 19 35.0 +0.5
	baz=327					
TWE			*e*S		Sn	15 19 60.0 -0.5
	baz=327					
TYC	Yuchr	2.22 297	P		Pn	15 19 35.0 +0.3
	baz=305					
TYC			S		Sn	15 20 01.1 +0.1
	baz=305					
TPUB	Ta-pu	2.23 281	*e*Pn		Pn	15 19 35.6 +0.7
SGST	Jiashian	2.24 275	*e*P		Pn	15 19 35.8 +0.7
	baz=276					
SGST			*e*S		Sn	15 20 01.7 +0.1
	baz=276					
TWK1	Hengchun	2.25 246	*e*P		Pn	15 19 34.9 -0.2
	baz=245					
TWK1			*e*S		Sn	15 20 00.6 -1.0
	baz=245					
CHN5	Tsauling	2.26 289	*e*P		Pn	15 19 35.8 +0.5
	baz=290					
CHN5			*e*S		Sn	15 20 02.9 +1.0
	baz=290					
SCZT	Fangliau	2.27 257	*e*P		Pn	15 19 36.0 +0.6
	baz=264					
SCZT			*e*S		Sn	15 20 02.4 +0.2
	baz=264					
HEN	Hengchun	2.28 248	*e*P		Pn	15 19 35.7 +0.2
	baz=248					
HEN			*e*S		Sn	15 20 01.9 -0.6
	baz=248					
CHN1	Nanshi	2.30 278	*e*P		Pn	15 19 37.0 +1.1
	baz=287					
CHN1			*e*S		Sn	15 20 05.1 +2.0
	baz=287					
YHNB	Yeheng	2.32 320	*e*P		Pn	15 19 36.2 +0.1
SGLT	Jiouru	2.33 266	*e*P		Pn	15 19 40.0 +3.7
	baz=264					
JTJ	Tarama	2.33 41	P		Pn	15 19 35.6 -0.7
JTJ			S		Sn	15 20 03.6 -0.2
NSK	Sanguang	2.33 320	*e*P		Pn	15 19 36.9 +0.5
	baz=321					
NSK			*e*S		Sn	15 20 02.6 -1.2
	baz=321					
TWK	Hsinying	2.35 280	*e*P		Pn	15 19 37.6 +1.1
	baz=287					
TWK			*e*S		Sn	15 20 04.7 +0.5
	baz=287					
WNT	Mingjian	2.35 295	*e*P		Pn	15 19 36.9 +0.3
	baz=305					
WNT			*e*S		Sn	15 20 05.4 +1.1
	baz=305					
WGK	Gukeng	2.38 290	*e*P		Pn	15 19 37.9 +0.8
	baz=291					
WGK			*e*S		Sn	15 20 05.8 +0.7
	baz=291					
TWM1	Shoushan	2.39 269	*e*P		Pn	15 19 39.4 +2.3
	baz=269					
CHN3	Shinhua	2.44 275	*e*P		Pn	15 19 39.7 +1.9
	baz=276					
CHN3			*e*S		Sn	15 20 11.0 +4.5
	baz=276					
NWF	Wu-fen Shan	2.44 333	*e*P		Pn	15 19 37.6 -0.3
	baz=346					
NWF			*e*S		Sn	15 20 05.3 -1.2
	baz=346					
TWA	Mucha	2.46 328	*e*P		Pn	15 19 40.0 +2.0
	baz=329					
TCU	Taichung	2.48 301	*e*P		Pn	15 19 39.0 +0.7
	baz=306					
TCU			*e*S		Sn	15 20 09.4 +2.0
	baz=306					
TATO	Taipei	2.50 326	*e*P		Pn	15 19 40.4 +1.8
TWP	Hsiaoliuchiu	2.50 258	*e*P		Pn	15 19 40.5 +1.8
	baz=249					
TWQ1	Liyutan	2.51 306	*e*P		Pn	15 19 40.5 +1.7
	baz=313					
TWQ1			*e*S		Sn	15 20 09.5 +1.3
	baz=313					
NSTT	Nanjuang	2.53 314	*e*P		Pn	15 19 40.1 +1.1
	baz=314					
NSTT			*e*S		Sn	15 20 09.3 +0.7
	baz=314					
NSY	Sanyi	2.56 307	*e*P		Pn	15 19 40.8 +1.4
	baz=308					
TWS1	Kuangyinshan	2.64 327	*e*P		Pn	15 19 41.0 +0.5
	baz=328					
TWS1			*e*S		Sn	15 20 12.2 +0.8
	baz=328					
WTCT	Ta-ch'eng	2.69 292	*e*P		Pn	15 19 42.3 +1.1
	baz=283					
JOGS	Gusukube	2.88 49	P		Pn	15 19 43.5 -0.3
JOGS			*e*S		Sn	15 20 17.2 -0.1
PNG	Penghu	3.25 283	*e*P		Pn	15 19 49.3 +0.4
	baz=283					
PNG			*e*S		Sn	15 20 26.4 0.0
	baz=283					
KSRS	Korea Array	15.12 15	Pn		Pn	15 22 32.1 +0.8
	0.1nm,0.3s,baz=191,slow=12,SNR=7.9					
SONM	Songino Array	28.22 336	P		P	15 24 51.0 +1.1
	0.3nm,0.4s,mb3.2,baz=144,slow=7.4,SNR=3.5					
MKAR	Makanchi Array	40.43 316	P		P	15 26 36.6 +1.3
	0.4nm,0.8s,mb3.2,baz=102,slow=11,SNR=5.1					
ZALV	Zalesovo Beam	42.24 327	P		P	15 26 50.7 +0.7
	0.8nm,0.5s,mb3.6,baz=109,slow=8.0,SNR=5.1					

*IDC **09** 15:36:41.2±1.2,31°.20N×103°.73E,h0^km^,mb3.2/5,*
mb1 3.4/5,mb1mx3.3/24,mbtmp3.3/5,Error ellipse:
s-maj=47.7km s-min=21.5km az=51.0
*ISCJB **09** 15:36:41.3±0.7,31°.33N±0°.06×103°.92E±0°.08,h10^km^,*
mb3.3/4,Error ellipse: s-maj=12.7km s-min=5.0km
az=39.1

ISC 09 15:36:43.1±0.7,31°.28N±0°.04×103°.88E±0°.07,h10^km^,n8,
σ1§22/15,mb3.3/4,1C,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.38	196	*i*Pg	Pg	15 36 50.2	-0.4
CD2				Sg	Sg	15 36 56.7	+1.0
CD2				smax			
	comp=N,4μm,0.7s						
CD2				smax			
	comp=E,4μm,0.8s						
XAN	Xi'an	5.07	56	Pn	Pn	15 38 01.1	+2.0
XAN				Pg	Pg	15 38 16.0	-4.1
XAN				Sn	Sb	15 39 10.3	-2.5
XAN				Sg	Sg	15 39 26.6	+0.8
XAN				smax			
	comp=N,65nm,0.8s						
XAN				smax			
	comp=E,30nm,0.9s						
GYA	Guiyang	5.39	152	Pn	Pn	15 38 07.2	+3.6
GYA				Pg	Pg	15 38 25.4	-0.9
GYA				Sn	Sn	15 39 12.1	+6.4
GYA				Sg	Sg	15 39 35.7	-0.5
GYA				smax			
	comp=N,40nm,0.9s						
GYA				smax			
	comp=E,40nm,0.8s						
KSRS	Korea Array	20.75	66	P	P	15 41 25.2	+1.2
	comp=E,0.7nm,0.7s,baz=265,slow=8.0,SNR=4.1						
MKAR	Makanchi Array	22.72	319	P	P	15 41 45.0	-0.1
	comp=E,0.3nm,0.8s,mb2.8,baz=115,slow=10,SNR=3.1						
KURK	Kurchatov	26.99	323	P	P	15 42 23.7	-1.3
	comp=E,0.4nm,0.3s,mb3.4,baz=127,slow=9.2,SNR=5.3						
WRA	Warramunga Arr	58.73	146	P	P	15 46 40.1	-1.1
	comp=E,0.4nm,0.5s,mb3.7,baz=339,slow=7.9,SNR=9.4						
ASAR	Alice Springs	61.74	149	P	P	15 47 02.5	+0.8
	comp=E,0.1nm,0.5s,mb3.2,baz=336,slow=7.1,SNR=5.4						

IDC 09 16:00:25.4±3.0,2°.12S×140°.99E,h0^km^,mb3.6/4,
mb1 3.7/5,mb1mx3.5/15,mbtmp3.6/5,ML3.6/1,MS3.3/2,
Ms1 3.2/2,ms1mx2.4/23,Error ellipse: s-maj=98.9km
s-min=24.7km az=86.0,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	18.59	164	LR	LR	16 12 33.0	
	comp=Z,63nm,19.8s,baz=230,slow=39						
WRA	Warramunga Arr	18.87	200	P	Pn	16 04 46.9	-0.9
	0.2nm,0.3s,baz=25,slow=12,SNR=27						
ASAR	Alice Springs	22.49	197	P	P	16 05 27.1	+0.5
	0.6nm,0.3s,baz=28,slow=10,SNR=27						
STKA	Stephens Creek	29.61	179	LR	LR	16 19 13.0	
	comp=Z,73nm,21.6s,baz=205,slow=38						
CMAR	Chiang Mai Arr	46.15	298	P	P	16 08 51.3	-0.8
	0.2nm,0.4s,baz=108,slow=5.8,SNR=3.6						
MKAR	Makanchi Array	70.73	322	P	P	16 11 43.7	+0.3
	0.7nm,0.8s,baz=120,slow=6.5,SNR=7.2						
BVAR	Borovoye Array	80.14	325	P	P	16 12 37.7	+0.4
	1.0nm,0.8s,baz=134,slow=8.3,SNR=3.7						

*ISK **09** 16:01:09.1,37°.62N×34°.98E,h19^km^,MD2.4*
*DDA **09** 16:01:11.9,37°.51N×35°.08E,h7^km^±3^km^,Md2.9*
*CSEM **09** 16:01:11.9±0.4,37°.52N×35°.04E,h10^km^,MD2.4,Error*
ellipse: s-maj=8.7km s-min=7.8km az=103.0
*ISCJB **09** 16:01:12.5±0.7,37°.50N±0°.04×35°.09E±0°.05,h10^km^,Error*
ellipse: s-maj=6.1km s-min=5.0km az=37.8

ISC 09 16:01:12.7±0.7,37°.52N±0°.04×35°.07E±0°.05,h10^km^,n14,
σ1§13/22,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARA	Karaisali	0.25	183	PG	Pg	16 01 17.2	-0.7
KARA				*e*SG	Sg	16 01 23.1	+1.8
KARA	Karaisali	0.25	183	*i* Pg	Pg	16 01 17.2	-0.6
KARA				*e*Sg	Sg	16 01 23.1	+1.8
GULE	Gulek	0.33	225	*i* P	Pg	16 01 18.7	-0.5
GULE				*i* S	Sg	16 01 24.6	+1.0
GULE	Gulek	0.33	225	*i* P	Pg	16 01 18.7	-0.5
GULE				*i* S	Sg	16 01 24.6	+1.0
KOZT	Kozan	0.60	93	*e*PG	Pg	16 01 23.0	-1.3
KOZT				*e*SG	Sg	16 01 33.2	+1.0
KOZT	Kozan	0.60	93	*e*Pg	Pg	16 01 23.0	-1.4
KOZT				*e*Sg	Sg	16 01 33.2	+0.9
CEYT	Ceyhan	0.74	133	*e*PG	Pg	16 01 26.3	-0.7
CEYT	Ceyhan	0.74	133	*e*Pg	Pg	16 01 26.3	-0.7
MERS	Mersin	0.78	214	*e*PG	Pg	16 01 25.9	-1.8
MERS	Mersin	0.78	214	*e*Pg	Pg	16 01 25.9	-1.8
YURE	YUREGIR	0.82	147	*i* P	Pg	16 01 29.2	+0.7
YURE	YUREGIR	0.82	147	*i* P	Pg	16 01 29.2	+0.7
AVNT	Avonos	1.27	352	*i* P	Pn	16 01 35.8	-0.7
AVNT				*i* S	Sb	16 01 54.6	+1.4
AVNT	Avonos	1.27	352	*i* P	Pn	16 01 35.8	-0.7
AVNT				*i* S	Sb	16 01 54.6	+1.4

*IDC **09** 16:12:55.5±1.0,5°.45S×131°.36E,h0^km^,mb4.0/7,*
mb1 4.3/10,mb1mx4.1/17,mbtmp4.1/10,ML4.6/3,MS3.0/1,
Ms1 3.0/1,ms1mx2.2/30,Error ellipse: s-maj=50.6km
s-min=18.0km az=75.0
*ISCJB **09** 16:13:01.6±1.2,5°.67S±0°.06×131°.3E±0°.1,h70^km^±11^km^,*
mb4.3/14,Error ellipse: s-maj=19.4km s-min=7.1km
az=158.4
*NEIC **09** 16:13:02.4±2.2,5°.49S×131°.31E,h53^km^±25^km^,mb5.0/7,*
Error ellipse: s-maj=16.8km s-min=13.8km az=74.0
*DJA **09** 16:13:04,5°.53S×131°.41E,h66^km^,MLv4.7/5*

ISC 09 16:13:02.9±1.1,5°.69S±0°.07×131°.3E±0°.1,h64^km^±11^km^,
n32,σ1§08/35,mb4.3/14,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	Ambon	3.66	303	P	Pn	16 13 57.5	+0.4
NLAI	Namlea	4.83	300	P	Pn	16 14 17.4	+4.4
LBMI	Labuha	6.28	323	P	Pn	16 14 32.5	-0.4
	0.2nm23nm,0.9s						
KAKA	Kakadu	7.07	171	*e*P	Pn	16 14 46.6	+2.8
	121nm,0.5s						
KAKA	Kakadu	7.07	171	P	Pn	16 14 47.1	+3.3
	0.7nm2μm76nm,0.6s						
KNA	Kununurra	10.30	194	P	Pn	16 15 29.7	+1.8
FITZ	Fitzroy Crossi	13.51	204	Pn	Pn	16 16 10.5	-1.3
	3.4nm,0.3s,baz=42,slow=12,SNR=84						
FITZ				Sn	Sn	16 18 30.6	-10
	1.0nm,0.3s,baz=111,slow=16,SNR=4.0						
FITZ	Fitzroy Crossi	13.51	204	*e*P	Pn	16 16 09.4	-2.4
FITZ				Sn	Sn	16 18 30.6	-10
COEN	Coen	14.31	126	*e*P	Pn	16 16 23.0	+0.7
WRAB	Tennant Creek	14.47	168	*e*P	Pn	16 16 22.2	-2.1
	15nm,0.9s						
WRA	Warramunga Arr	14.48	168	Pn	Pn	16 16 23.0	-1.4
	2.1nm,0.3s,baz=352,slow=13,SNR=67						
WRA				Sn	Sn	16 18 54.8	-9.0
	1.4nm,0.3s,baz=354,slow=24,SNR=5.3						
ASAR	Alice Springs	18.05	172	P	Pn	16 17 09.9	+0.6
	1.3nm,0.3s,baz=348,slow=9.4,SNR=91						
ASAR				S	S	16 20 24.9	-6.5
	0.5nm,0.3s,baz=356,slow=30,SNR=5.3						
MBWA	Marble Bar	19.02	215	*e*P	Pn	16 17 22.3	+1.2
STKA	Stephens Creek	27.79	161	P	P	16 18 49.1	+3.2
	1.1nm,0.7s,mb3.6,baz=318,slow=18,SNR=7.6						
CBIJ	Chichi jima	34.26	17	LR	LR	16 32 02.8	
	comp=Z,29nm,21.5s,baz=105,slow=34						
CMAR	Chiang Mai Arr	39.90	308	P	P	16 20 30.9	0.0
	0.8nm,0.7s,mb3.6,baz=138,slow=8.1,SNR=9.6						
CHTO	Chiang Mai	40.10	308	*e*P	P	16 20 32.5	-0.1
	1.6nm,0.6s,mb3.9						
MJAR	Matsushiro Arr	42.51	8	P	P	16 20 49.6	-2.4
	0.5nm,0.6s,mb3.4,baz=151,slow=15,SNR=3.5						
TAPN	Taplejung	53.39	310	*e*P	P	16 22 15.9	-0.4
	17nm,0.4s,mb5.3						
RAMN	Ramite	54.04	309	*e*P	P	16 22 20.7	-0.3
	23nm,0.5s,mb5.4						
JIRN	Jiri	54.71	310	*e*P	P	16 22 25.5	-0.4
	8.1nm,0.5s,mb5.0						
GUN	Gumba	55.07	310	*e*P	P	16 22 27.8	-0.7
	13nm,0.4s,mb5.3						
KKN	Kakani	55.47	309	*e*P	P	16 22 30.8	-0.6
	5.8nm,0.4s,mb5.0						
ULN	Ulaanbaatar	57.43	341	*e*P	P	16 22 46.2	+1.3
	1.1nm,0.7s,mb4.0						
SONM	Songino Array	57.62	340	P	P	16 22 46.7	+0.4
	0.8nm,0.7s,mb3.9,baz=157,slow=6.6,SNR=4.6						
MK31	Makanchi Array	67.84	326	*e*P	P	16 23 55.0	+0.7
MK31				*e*		16 24 17.7	
MKAR	Makanchi Array	67.84	326	P	P	16 23 55.2	+0.9
	2.4nm,0.4s,mb4.6,baz=103,slow=9.1,SNR=77						
MKAR	Makanchi Array	67.84	326	P	P	16 23 55.2	+0.9
ZALV	Zalesovo Beam	70.99	333	P	P	16 24 13.5	0.0
	1.6nm,0.6s,mb4.1,baz=117,slow=5.2,SNR=7.4						
KURK	Kurchatov	72.08	328	*e*P	P	16 24 20.3	+0.1
BVAR	Borovoye Array	77.64	327	P	P	16 24 52.5	+0.2
	1.0nm,0.7s,mb3.9,baz=132,slow=6.2,SNR=5.8						
BRVK	Borovoye	77.72	327	*e*P	P	16 24 52.6	0.0

*IDC **09** 16:18:38.2±0.9,38°.21N×21°.56E,h0^km^,mb3.8/10,*
mb1 3.8/13,mb1mx3.7/29,mbtmp3.8/13,ML3.7/3,MS2.5/1,
Ms1 2.5/1,ms1mx1.9/39,Error ellipse: s-maj=20.0km
s-min=16.0km az=75.0
*BEO **09** 16:18:39.0±1.2,37°.90N×21°.06E,h0^km^,ML3.2/2*
*THE **09** 16:18:40.9,38°.04N×21°.58E,h7^km^±1^km^,ML4.3/8,Error*
ellipse: s-maj=1.2km s-min=0.6km az=124.0
*NEIC **09** 16:18:40.6,38°.07N×21°.54E,h20^km^,ML3.4(ATH),After*
ATH.
*ISCJB **09** 16:18:40.1±0.5,38°.06N±0°.02×21°.51E±0°.03,h13^km^±3^km^,*
mb3.7/10,Error ellipse: s-maj=3.4km s-min=3.3km
az=23.7
*ATH **09** 16:18:40.6,38°.07N×21°.54E,h20^km^,MD3.7/14,ML3.4*
*CSEM **09** 16:18:41.1±0.2,38°.04N×21°.56E,h15^km^,ML3.4,Error*
ellipse: s-maj=4.3km s-min=4.0km az=48.0

ISC 09 16:18:41.2±0.3,38°.07N±0°.02×21°.55E±0°.02,h13^km^±2^km^,
n164,σ1§14/206,mb3.7/10,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.07	263	*e*Pb	Pg	16 18 44.5	+0.7
RLS				*e*Sb	Sg	16 18 47.3	+1.6
RLS	Riolos of Patr	0.07	263	*e*PB	Pg	16 18 44.5	+0.7
RLS				*e*SB	Sg	16 18 47.3	+1.6
RLS	Riolos of Patr	0.07	263	*e*Pb	Pg	16 18 44.5	+0.7
RLS				*e*Sb	Sg	16 18 47.3	+1.6
UPR	University Cam	0.28	40	P	Pg	16 18 46.9	-0.2
UPR	University Cam	0.28	40	*e*PB	Pg	16 18 47.0	-0.1
UPR				*e*SB	Sg	16 18 52.0	+0.9
UPR	University Cam	0.28	40	P	Pg	16 18 46.9	-0.2
UPR				*e*Sb	Sg	16 18 52.0	+0.9
LAKA	Lakka	0.38	63	P	Pg	16 18 48.2	-0.6
LAKA				S	Sg	16 18 53.6	-0.3
LAKA	Lakka	0.38	63	P	Pg	16 18 48.2	-0.6
LAKA				S	Sg	16 18 53.6	-0.3
EFP	Efpalio	0.46	38	P	Pg	16 18 49.6	-0.6
EFP				S	Sg	16 18 56.5	+0.2
EFP	Efpalio	0.46	38	*e*PB	Pg	16 18 49.7	-0.5
EFP				*e*SB	Sg	16 18 57.0	+0.7
EFP	Efpalio	0.46	38	*e*Pb	Pg	16 18 49.7	-0.5
EFP				S	Sg	16 18 56.5	+0.2
EFP				*e*Sb	Sg	16 18 57.0	+0.7
TRIZ	Trizonia	0.51	54	P	Pg	16 18 50.4	-0.8
TRIZ				S	Sg	16 18 58.2	+0.2
TRIZ	Trizonia	0.51	54	P	Pg	16 18 50.4	-0.8
TRIZ				S	Sg	16 18 58.2	+0.2
KALE	Kalithea	0.56	55	P	Pg	16 18 51.4	-0.9
KALE				S	Sg	16 18 59.5	-0.3
KALE	Kalithea	0.56	55	P	Pg	16 18 51.4	-0.9
KALE				S	Sg	16 18 59.5	-0.3
KFL	Anninata	0.60	274	P	Pg	16 18 53.0	0.0
GUR	Goura	0.64	102	P	Pg	16 18 52.5	-1.2
GUR				S	Sg	16 19 01.9	-0.2
GUR	Goura	0.64	102	*e*PB	Pg	16 18 52.7	-1.0
GUR				*e*SN	Sg	16 19 02.3	+0.2
GUR	Goura	0.64	102	P	Pg	16 18 52.5	-1.2
GUR				S	Sg	16 19 01.9	-0.2
VLS	Valsamata	0.77	279	*e*Pn	Pg	16 18 55.3	-0.8
VLS	Valsamata	0.77	279	P	Pg	16 18 55.3	-0.8
VLS	Valsamata	0.77	279	*e*PN	Pg	16 18 55.3	-0.8
VLS	Valsamata	0.77	279	P	Pg	16 18 55.3	-0.8
DSF	Desfina	0.84	66	P	Pg	16 18 55.9	-1.6
DSF				S	Sg	16 19 08.9	+0.4
DSF	Desfina	0.84	66	P	Pg	16 18 55.9	-1.6
DSF				S	Sg	16 19 08.9	+0.4
EVR	Evrytania	0.87	13	*e*Pn	Pg	16 18 57.7	-0.4
EVR	Evrytania	0.87	13	*e*PN	Pg	16 18 57.7	-0.4
EVR	Evrytania	0.87	13	*e*Pn	Pg	16 18 57.7	-0.4
ITM	Ithomi	0.93	161	*e*Pn	Pg	16 18 58.5	-0.8
ITM				*e*Sn	Sg	16 19 12.6	+1.1
ITM	Ithomi	0.93	161	P	Pg	16 18 58.2	-1.1
ITM	Ithomi	0.93	161	*e*PN	Pg	16 18 58.5	-0.8
ITM				*e*SN	Sg	16 19 12.6	+1.1
ITM	Ithomi	0.93	161	P	Pg	16 18 58.2	-1.1
ITM	Ithomi	0.93	161	*e*Pn	Pg	16 18 58.5	-0.8
ITM				*e*Sn	Sg	16 19 12.6	+1.1
VLX	Vlachokerasia	0.96	136	P	Pg	16 18 58.6	-1.1
VLX	Vlachokerasia	0.96	136	*e*PN	Pg	16 18 58.6	-1.1
VLX	Vlachokerasia	0.96	136	P	Pg	16 18 58.6	-1.1
LKD2	Lefkada island	1.01	316	P	Pg	16 18 59.4	-1.3
LKD2	Lefkada island	1.01	316	P	Pg	16 18 59.4	-1.3
LTK	Loutraki	1.12	92	P	Pg	16 19 01.7	-1.1
LTK	Loutraki	1.12	92	*e*PN	Pg	16 19 01.6	-1.2
LTK	Loutraki	1.12	92	P	Pg	16 19 01.7	-1.1
AGG	Agios Georgios	1.13	32	*e*Pn	Pg	16 19 02.5	-0.6
AGG				*e*Sn	Sg	16 19 18.5	+0.7
AGG	Agios Georgios	1.13	32	P	Pg	16 19 02.4	-0.7
AGG				S	Sg	16 19 19.1	+1.3
AGG	Agios Georgios	1.13	32	*e*PN	Pg	16 19 02.5	-0.6
AGG				*e*SN	Sg	16 19 18.5	+0.7
AGG	Agios Georgios	1.13	32	P	Pg	16 19 02.4	-0.7
AGG				*e*Sn	Sg	16 19 18.5	+0.7
AGG				S	Sg	16 19 19.1	+1.3
PYL	PYLOS	1.18	173	P	Pn	16 19 02.0	-1.4
PYL	PYLOS	1.18	173	*e*PN	Pn	16 19 02.8	-0.6
PYL	PYLOS	1.18	173	P	Pn	16 19 02.0	-1.4
PYL	PYLOS	1.18	173	*e*Pn	Pn	16 19 02.8	-0.6
LKR	Lokris	1.28	62	*e*Pn	Pn	16 19 04.3	-0.5
LKR	Lokris	1.28	62	P	Pn	16 19 03.7	-1.1
LKR	Lokris	1.28	62	*e*PN	Pn	16 19 04.3	-0.5
LKR	Lokris	1.28	62	P	Pn	16 19 03.7	-1.1
LKR	Lokris	1.28	62	*e*Pn	Pn	16 19 04.3	-0.5
ATAL	Atalanti	1.31	61	P	Pn	16 19 04.4	-0.9
ATAL				S	Sb	16 19 22.7	+0.2
ATAL	Atalanti	1.31	61	P	Pn	16 19 04.4	-0.9
ATAL				S	Sb	16 19 22.7	+0.2
THL	Klokotos Trika	1.54	13	P	Pn	16 19 09.1	+0.7
THL	Klokotos Trika	1.54	13	*e*PN	Pn	16 19 09.1	+0.7
THL	Klokotos Trika	1.54	13	P	Pn	16 19 09.1	+0.7
NAIG	Nisos Aigina	1.56	101	*e*Pn	Pn	16 19 09.8	+1.1
NAIG	Nisos Aigina	1.56	101	*e*PN	Pn	16 19 09.8	+1.1
NAIG	Nisos Aigina	1.56	101	*e*Pn	Pn	16 19 09.8	+1.1
JAN	Janina	1.68	341	*e*Pn	Pn	16 19 10.9	+0.6
JAN	Janina	1.68	341	*e*PN	Pn	16 19 10.9	+0.6
JAN	Janina	1.68	341	*e*Pn	Pn	16 19 10.9	+0.6
ATH	Athens Observa	1.71	92	*e*Pn	Pn	16 19 11.6	+0.9
ATH	Athens Observa	1.71	92	*e*PN	Pn	16 19 11.6	+0.9
ATH	Athens Observa	1.71	92	*e*Pn	Pn	16 19 11.6	+0.9
VLI	Veliai	1.74	140	*e*Pn	Pn	16 19 12.9	+1.8
VLI	Veliai	1.74	140	*e*PN	Pn	16 19 12.9	+1.8
NEO	Neokhori	1.80	46	*e*Pb	Pn	16 19 11.8	-0.2
NEO	Neokhori	1.80	46	*e*PB	Pn	16 19 11.8	-0.2
XOR	Xorichti	1.82	44	P	Pn	16 19 12.0	-0.3
XOR	Xorichti	1.82	44	P	Pn	16 19 12.0	-0.3
PTL	Penteli	1.82	90	*e*Pb	Pn	16 19 12.3	0.0
PTL	Penteli	1.82	90	*e*PB	Pn	16 19 12.2	-0.1
AOS	Alonnisos	2.13	58	P	Pn	16 19 15.9	-0.6
AOS	Alonnisos	2.13	58	P	Pn	16 19 15.9	-0.6
KEK	Kerkira	2.14	321	*e*Pn	Pn	16 19 17.4	+0.8
KEK	Kerkira	2.14	321	P	Pn	16 19 17.5	+0.9
KEK	Kerkira	2.14	321	*e*PN	Pn	16 19 17.4	+0.8
KEK	Kerkira	2.14	321	*e*Pn	Pn	16 19 17.4	+0.8
LIT	Litokhoron	2.16	19	*e*Pn	Pn	16 19 18.4	+1.5
LIT	Litokhoron	2.16	19	P	Pn	16 19 17.5	+0.6
LIT	Litokhoron	2.16	19	*e*PN	Pn	16 19 18.4	+1.5
LIT	Litokhoron	2.16	19	P	Pn	16 19 17.5	+0.6
LIT	Litokhoron	2.16	19	*e*Pn	Pn	16 19 18.4	+1.5
KZN	Kozani	2.24	4	*e*Pn	Pn	16 19 19.9	+1.8
KZN	Kozani	2.24	4	P	Pn	16 19 18.3	+0.2
KZN

STON				Sn	Sn	16 21 05.0	-4.0
STON	Ston	5.63	330	*e*Pn	Pn	16 20 03.0	-1.5
VAE	Valguarnera	5.69	266	Pn	Pn	16 20 11.5	+6.1
	baz=127,slow=8.5,SNR=2.2						
GRUS	Gruza	5.85	354	*e*Pn	Pn	16 20 08.9	+1.3
GRUS	Gruza	5.85	354	*e*Pn	Pn	16 20 08.9	+1.3
BBLS	Lazići	6.02	345	*e*Pn	Pn	16 20 10.5	+0.6
BBLS				*e*Sn	Sn	16 21 17.9	-0.7
BBLS	Lazići	6.02	345	*e*Pn	Pn	16 20 10.5	+0.6
BBLS				*e*Sn	Sn	16 21 17.9	-0.7
DIVS	Divibare	6.14	349	*e*Pn	Pn	16 20 10.9	-0.7
DIVS				*e*Sn	Sn	16 21 20.9	-0.7
DIVS	Divibare	6.14	349	*e*Pn	Pn	16 20 10.9	-0.7
DIVS				*e*Sn	Sn	16 21 20.9	-0.7
NRCA	Norcia	8.00	309	Pn	Pn	16 20 38.0	+0.9
	1.9nm,0.4s						
NRCA	Norcia	8.00	309	Pn	Pn	16 20 38.0	+0.9
	1.9nm,0.4s						
MLR	Muntele Rosu	8.11	22	Pn	Pn	16 20 45.9	+7.3
	0.5nm,0.3s,baz=294,slow=4.0,SNR=5.6						
NVLJ	Novalja	8.21	324	*e*Pn	Pn	16 20 39.2	-0.8
NVLJ				Sn	Sn	16 22 08.3	-4.2
NVLJ	Novalja	8.21	324	*e*Pn	Pn	16 20 39.2	-0.8
BRTR	Keskin Array B	9.57	76	Pn	Pn	16 21 03.2	+4.6
	0.3nm,0.3s,baz=297,slow=16,SNR=5.6						
GERES	GERESS Array B	12.18	335	Pn	Pn	16 21 33.2	-1.2
	0.2nm,0.3s,baz=164,slow=14,SNR=4.9						
GERES				Sn	Sn	16 23 40.4	-10
	0.2nm,0.3s,baz=280,slow=24,SNR=3.5						
GERES	GERESS Array B	12.18	335	Pn	Pn	16 21 33.2	-1.1
MMAI	Mount Meron Ar	12.35	110	Pn	Pn	16 21 36.1	-0.7
	0.5nm,0.3s,baz=319,slow=20,SNR=2.9						
HFS	Hagfors	22.65	350	P	P	16 23 40.2	-1.6
	1.9nm,0.7s,mb3.6,baz=141,slow=9.3,SNR=4.0						
HFS				LR	LR	16 31 39.9	
	comp=Z,11nm,19.7s,baz=39,slow=35						
HFS	Hagfors	22.65	350	P	P	16 23 40.2	-1.5
FINES	FINESS Array B	23.57	5	P	P	16 23 47.6	-3.8
	2.5nm,0.8s,mb3.7,baz=163,slow=14,SNR=5.3						
NOA	NORSAR Array B	23.89	348	P	P	16 23 51.5	-2.8
	1.3nm,0.8s,mb3.4,baz=152,slow=11,SNR=4.0						
EKA	Eskdalemuir Ar	23.99	324	P	P	16 23 54.2	-1.1
	1.2nm,0.6s,mb3.5,baz=138,slow=11,SNR=4.8						
EKA	Eskdalemuir Ar	23.99	324	P	P	16 23 54.2	-1.1
TOA0	Torodi Ar. Sit	30.46	221	*e*P	P	16 24 53.9	+0.1
TOA0	Torodi Ar. Sit	30.46	221	*e*P	P	16 24 53.9	+0.1
TORD	Torodi Ar. Bea	30.46	221	P	P	16 24 54.0	+0.2
	1.1nm,0.7s,mb3.7,baz=32,slow=9.0,SNR=10						
ARCES	ARCESS Array B	31.60	3	P	P	16 25 01.1	-2.2
	2.3nm,0.8s,mb4.0,baz=207,slow=12,SNR=5.1						
DBIC	Dimbokro	39.37	224	P	P	16 26 09.5	-1.1
	1.7nm,0.6s,mb3.9,baz=6.6,slow=5.1,SNR=3.1						
DBIC	Dimbokro	39.37	224	P	P	16 26 09.5	-1.1
MK31	Makanchi Array	44.67	59	P	P	16 26 52.0	-1.5
MK31	Makanchi Array	44.67	59	P	P	16 26 52.0	-1.5
MKAR	Makanchi Array	44.67	59	P	P	16 26 51.9	-1.6
	0.6nm,0.5s,mb3.7,baz=307,slow=6.2,SNR=10						
ZALV	Zalesovo Beam	45.16	48	P	P	16 26 55.6	-1.7
	2.1nm,0.5s,mb4.2,baz=268,slow=8.7,SNR=10						
ZALV	Zalesovo Beam	45.16	48	P	P	16 26 55.7	-1.6
KSRS	Korea Array	78.77	51	P	P	16 30 41.7	-1.9
	0.4nm,0.5s,mb3.6,baz=318,slow=5.2,SNR=3.9						

DJA 09 16:24:20.0 57S×122 35E, h18km, MLv3.8/11, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	Luwuk	0.63	138	P	Pg	16 24 32.7	+0.2
LUWI				S	Sg	16 24 41.8	+0.9
APSI	Ampana	0.78	244	P	Pb	16 24 35.1	+0.1
APSI				S	Sb	16 24 46.7	+1.4
MRSI	Marisa	1.12	339	P	Pn	16 24 38.4	-2.4
PCI	Palu	2.54	262	P	Pn	16 25 01.2	+0.9
PCI				S	Sn	16 25 33.3	+2.6
MPSI	Mapaga	2.61	290	S	Sn	16 25 34.9	+2.3
MNI	Manado	3.19	51	P	Pn	16 25 11.0	+1.7
KDI	Kendari	3.38	175	P	Pn	16 25 13.0	+1.1
KDI				S	Sn	16 25 52.9	+1.4
TTSI	Tana Toraja	3.53	226	P	Pn	16 25 15.4	+1.5
SPSI	Sidrap Palu	4.25	217	P	Pn	16 25 25.0	+1.2
BNSI	Bone	4.42	210	P	Pn	16 25 27.2	+1.0
KAPI	Kappang	5.12	210	P	Pn	16 25 35.5	-0.4
	0.1nm24nm,0.6s						
NLAI	Namlea	5.44	119	P	Pn	16 25 41.1	+0.9

*IDC **09** 16:26:39.9±0.8, 33.66S×178.57W, h38km±4km, mb4.0/6, mb1 4.2/7, mb1mx3.9/18, mbtmp4.0/7, ML4.3/1, Error ellipse: s-maj=27.5km s-min=20.6km az=161.0*
*NEIC **09** 16:26:39.2±0.7, 33.84S×178.43W, mb4.5/1, Error ellipse: s-maj=19.1km s-min=12.8km az=124.0*

ISC 09 16:26:36.0±4.6, 33.76S±0.09×178.4W±0.2, h15km±29km, h40km±1.2km: pP-P, n28, σ1.9 09/18, mb4.2/7, 1C, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	5.77	218	Pn	Pn	16 28 01.3	+0.2
	8.3nm,0.3s,baz=48,slow=4.0,SNR=48						
URZ				Sn	Sn	16 29 06.7	-0.3
	21nm,0.3s,baz=156,slow=20,SNR=10						
URZ	Urewera	5.77	218	*e*P	Pn	16 28 01.6	+0.6
URZ				Sn	Sn	16 29 06.7	-0.3
URZ				*e*S	Sn	16 29 07.6	+0.6
OUZ	Omahuta	6.75	255	*e*P	Pn	16 28 17.6	+3.0
RPZ	Rata Peaks	12.88	216	Pn	Pn	16 29 35.5	-3.1
	0.8nm,0.3s,baz=228,slow=18,SNR=4.2						
RPZ	Rata Peaks	12.88	216	P	Pn	16 29 37.1	-1.4
ODZ	Otahua Downs	14.07	214	*e*P	Pn	16 29 54.1	-0.6
STKA	Stephens Creek	33.51	262	P	P	16 33 14.3	-0.6
	0.9nm,0.6s,mb3.9,baz=32,slow=17,SNR=2.3						
CTA	Charters Tower	34.13	284	P	P	16 33 20.6	+0.1
	2.1nm,0.4s,mb4.4,baz=110,slow=12,SNR=2.5						
CTA				pP	pP	16 33 31.5	+6.4
	5.1nm,0.6s,baz=102,slow=12,SNR=2.6						
COEN	Coen	39.96	290	P	P	16 34 11.2	+1.2
ASAR	Alice Springs	42.68	271	P	P	16 34 31.9	-0.4
	3.5nm,0.7s,mb4.2,baz=108,slow=7.0,SNR=55						
ASAR				pP	pP	16 34 42.8	+5.7
	6.3nm,0.8s,baz=111,slow=7.5,SNR=15						
ASAR				PcP	PcP	16 36 23.7	-0.4
	0.8nm,0.5s,baz=118,slow=3.8,SNR=8.4						
WRAB	Tennant Creek	43.96	276	*e*P	P	16 34 42.2	-0.6
	5.8nm,0.7s,mb4.4						
WRA	Warramunga Arr	43.97	276	P	P	16 34 41.9	-0.9
	6.9nm,0.9s,mb4.4,baz=116,slow=8.0,SNR=76						
WRA				pP	pP	16 34 53.6	+6.1
	7.8nm,0.8s,baz=118,slow=7.6,SNR=15						
QSPA	South Pole Qui	56.36	180	P	P	16 36 18.0	+2.1
	3.3nm,1.0s,mb4.3,baz=52,slow=2.7,SNR=6.1						
QSPA	South Pole Qui	56.36	180	P	P	16 36 18.0	+2.1
SYO	Syowa Base	73.78	193⇑	*e*P	pP	16 38 20.4	+6.3
NVAR	Mina Array Bea	90.94	43	P	P	16 39 38.6	-0.5
	0.3nm,0.6s,mb3.8,baz=249,slow=7.6,SNR=2.5						
MKAR	Makanchi Array	119.62	309	PKP	PKPdf	16 45 22.9	-1.9
	0.2nm,0.3s,baz=198,slow=1.4,SNR=3.0						
ZALV	Zalesovo Beam	120.27	317	PKP	PKPdf	16 45 27.0	+1.1
	0.3nm,0.3s,baz=85,slow=3.6,SNR=2.3						
BVAR	Borovoye Array	128.51	314	PKP	PKPdf	16 45 41.1	-0.6
	0.3nm,0.3s,baz=96,slow=4.5,SNR=4.8						
JOF	Joensuu	145.37	336	*e*p	PKPbc	16 46 12.9	+0.6
	5.9nm,0.7s						
JOF	Joensuu	145.37	336	*e*p	PKPbc	16 46 12.9	+0.6
	5.9nm,0.7s						
KAF	Kangasniemi	147.56	338	*e*p	PKPdf	16 46 17.3	+1.2
	6.2nm,0.8s						
KAF	Kangasniemi	147.56	338	*e*p	PKPdf	16 46 17.3	+1.2
	6.2nm,0.8s						
FINES	FINESS Array B	148.14	338	PKPbc	PKPbc	16 46 19.6	-0.8
	4.1nm,0.6s,baz=33,slow=3.8,SNR=18						
FINES				pPKPbc	pPKPbc	16 46 31.4	+5.9
	10nm,0.8s,baz=72,slow=6.2,SNR=7.1						
MMAI	Mount Meron Ar	151.81	278	PKP	PKPdf	16 46 24.2	+0.4
	1.4nm,0.7s,baz=72,slow=4.7,SNR=2.3						
MMAI				PKPbc	PKPbc	16 46 31.9	+1.6
	3.4nm,0.6s,baz=85,slow=6.3,SNR=6.8						
MMAI				pPKPbc	pPKPbc	16 46 42.9	+7.5
	7.4nm,0.8s,baz=62,slow=3.9,SNR=6.8						
DBIC	Dimbokro	152.40	166	pPKPbc	pPKPbc	16 46 42.7	+5.4
	4.8nm,0.8s,baz=171,slow=3.0,SNR=4.1						
AKASG	Malin Array Be	153.65	318	PKPbc	PKPbc	16 46 33.3	-0.4
	0.3nm,0.4s,baz=153,slow=29,SNR=3.0						
AKASG				pPKPbc	pPKPbc	16 46 45.5	+6.6
	0.4nm,0.3s,baz=76,slow=2.4,SNR=2.5						
BRTR	Keskin Array B	153.71	292	PKPbc	PKPbc	16 46 34.7	+0.5
	1.3nm,0.9s,baz=101,slow=3.9,SNR=6.2						
BRTR				pPKPbc	pPKPbc	16 46 46.9	+7.5
	1.8nm,0.8s,baz=128,slow=2.8,SNR=8.3						

GUC 09 16:41:10.4±0.5, 33.26S×72.95W, h29km±5km, MD3.5, ML2.9, 1C-3D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNV	Longovilo	1.46	119	⇑*i*P	Pn	16 41 35.7	+1.0
LNV				*i* S	Sn	16 41 54.4	+1.5
PEL	Peldehue	1.90	87	⇓*i*P	Pn	16 41 42.1	+1.3
PEL				*i* S	Sn	16 42 06.7	+2.9
PEL				AML	AML	16 42 08.0	
	comp=N,245nm,0.4s						
CACH	El Canelo	2.14	114	⇓*i*P	Pn	16 41 46.7	+2.6
CACH				*i* S	Sn	16 42 13.5	+3.8
FCH	Farellones	2.23	93	⇓*i*P	Pn	16 41 47.4	+2.0
FCH				*i* S	Sn	16 42 15.8	+4.0
FCH				AML	AML	16 42 20.1	
	comp=N,52nm,0.3s						

*ISCJB **09** 16:48:34.6±0.6, 37.98N±0.03×21.54E±0.03, h6km±5km, Error ellipse: s-maj=5.3km s-min=4.4km az=177.1*
*CSEM **09** 16:48:35.6±0.2, 37.99N×21.56E, h20km, MD3.2, Error ellipse: s-maj=5.2km s-min=4.9km az=112.0*
*ATH **09** 16:48:35.3, 38.00N×21.57E, h19km±1km, MD3.2/9*
*THE **09** 16:48:35.5, 38.01N×21.54E, h6km±1km, ML3.5/6, Error ellipse: s-maj=1.5km s-min=0.7km az=290.0*

ISC 09 16:48:35.4±0.5, 37.98N±0.03×21.54E±0.03, h14km±4km, n51, σ0.79/69, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.10	323	*e*PB	Pg	16 48 39.2	+0.7
RLS				*e*SB	Sg	16 48 42.0	+1.3
RLS	Riolos of Patr	0.10	323	*e*Pb	Pg	16 48 39.2	+0.7
RLS				*e*Sb	Sg	16 48 42.0	+1.3
UPR	University Cam	0.36	32	*e*PB	Pg	16 48 42.5	-0.2
UPR				*e*SB	Sg	16 48 48.3	+0.7
UPR	University Cam	0.36	32	*e*Pb	Pg	16 48 42.5	-0.2
UPR				*e*Sb	Sg	16 48 48.3	+0.7
LAKA	Lakka	0.43	52	P	Pg	16 48 43.5	-0.5
LAKA				S	Sg	16 48 49.6	-0.2
LAKA	Lakka	0.43	52	P	Pg	16 48 43.5	-0.5
LAKA				S	Sg	16 48 49.6	-0.2
EFP	Efpalio	0.53	32	P	Pg	16 48 45.0	-0.8
EFP				S	Sg	16 48 53.0	+0.1
EFP	Efpalio	0.53	32	*e*PN	Pg	16 48 45.1	-0.7
EFP				*e*SN	Sg	16 48 52.9	0.0
EFP	Efpalio	0.53	32	*e*Pn	Pg	16 48 45.1	-0.7
EFP				S	Sg	16 48 53.0	+0.1
TRIZ	Trizonia	0.57	47	P	Pg	16 48 45.8	-0.7
TRIZ				S	Sg	16 48 53.9	-0.2
TRIZ	Trizonia	0.57	47	P	Pg	16 48 45.8	-0.7
TRIZ				S	Sg	16 48 53.9	-0.2
KFL	Anninata	0.61	283	P	Pg	16 48 47.6	+0.3
KALE	Kalithea	0.62	48	P	Pg	16 48 46.7	-0.9
KALE				S	Sg	16 48 56.0	+0.1
KALE	Kalithea	0.62	48	P	Pg	16 48 46.7	-0.9
KALE				S	Sg	16 48 56.0	+0.1
GUR	Goura	0.63	93	P	Pg	16 48 47.2	-0.5
GUR	Goura	0.63	93	*e*PB	Pg	16 48 47.1	-0.6
GUR				*e*SN	Sg	16 48 57.4	+1.3
GUR	Goura	0.63	93	*e*Pb	Pg	16 48 47.1	-0.6
VLS	Valsamata	0.78	285	P	Pg	16 48 49.7	-0.8
VLS	Valsamata	0.78	285	P	Pg	16 48 49.7	-0.8
ITM	Ithomi	0.85	159	P	Pg	16 48 52.4	+0.5
ITM	Ithomi	0.85	159	*e*PN	Pg	16 48 52.3	+0.4
ITM	Ithomi	0.85	159	*e*Pn	Pg	16 48 52.3	+0.4
DSF	Desfina	0.89	60	P	Pg	16 48 51.2	-1.3
DSF	Desfina	0.89	60	P	Pg	16 48 51.2	-1.3
VLX	Vlachokerasia	0.90	132	P	Pg	16 48 53.7	+1.0
VLX	Vlachokerasia	0.90	132	*e*PN	Pg	16 48 52.6	-0.1
VLX	Vlachokerasia	0.90	132	*e*Pn	Pg	16 48 52.6	-0.1
VLX	Vlachokerasia	0.90	132	P	Pg	16 48 53.7	+1.0
LKD2	Lefkada island	1.07	320	P	Pg	16 48 54.5	-1.5
LKD2				S	Sg	16 49 10.5	+0.6
LKD2	Lefkada island	1.07	320	P	Pg	16 48 54.5	-1.5
LKD2				S	Sg	16 49 10.5	+0.6
PYL	PYLOS	1.09	172	P	Pg	16 48 56.4	0.0
PYL	PYLOS	1.09	172	*e*PN	Pg	16 48 56.4	0.0
PYL	PYLOS	1.09	172	P	Pg	16 48 56.4	0.0
LTK	Loutraki	1.12	87	P	Pg	16 48 56.1	-0.9
LTK	Loutraki	1.12	87	*e*PN	Pg	16 48 56.1	-0.9
LTK	Loutraki	1.12	87	*e*PN	Pg	16 48 56.1	-0.9
LTK	Loutraki	1.12	87	P	Pg	16 48 56.1	-0.9
AGG	Agios Georgios	1.21	30	P	Pn	16 48 57.1	-0.8
AGG	Agios Georgios	1.21	30	*e*PN	Pn	16 48 58.2	+0.3
AGG	Agios Georgios	1.21	30	P	Pn	16 48 57.1	-0.8
AGG	Agios Georgios	1.21	30	*e*Pn	Pn	16 48 58.2	+0.3
LKR	Lokris	1.33	59	P	Pn	16 48 59.1	-0.4
LKR				S	Sb	16 49 18.6	+1.7
LKR	Lokris	1.33	59	P	Pn	16 48 59.1	-0.4
LKR				S	Sb	16 49 18.6	+1.7
ATAL	Atalanti	1.36	58	P	Pn	16 48 59.9	-0.1
ATAL	Atalanti	1.36	58	P	Pn	16 48 59.9	-0.1
THL	Klokotos Trika	1.63	13	*e*PN	Pn	16 49 05.0	+1.4
THL	Klokotos Trika	1.63	13	*e*Pn	Pn	16 49 05.0	+1.4
XOR	Xorichti	1.89	42	P	Pn	16 49 07.6	+0.3
XOR	Xorichti	1.89	42	P	Pn	16 49 07.6	+0.3
AOS	Alonnisos	2.18	56	P	Pn	16 49 11.2	0.0
AOS	Alonnisos	2.18	56	P	Pn	16 49 11.2	0.0

*ISCJB **09** 16:56:56.8±0.5, 51.43N±0.03×16.12E±0.03, h0km, Error ellipse: s-maj=3.8km s-min=2.3km az=12.2*
*CSEM **09** 16:56:58.0±0.2, 51.50N×16.08E, h2km, ML3.5/10, Error ellipse: s-maj=4.7km s-min=2.7km az=14.0*
*PRU **09** 16:56:58.8, 51.48N×16.11E, h0km*
*IPEC **09** 16:56:58.1±0.3, 51.52N×16.37E, h0km, ML2.2/3, Error ellipse: s-maj=3.6km s-min=1.9km az=89.0*
*WAR **09** 16:56:58.7, 51.53N×16.10E, ML2.7, Mining Induced*
*NEIC **09** 16:56:58.5±1.1, 51.50N×16.05E, h5km, ML3.7(SZGRF), Error ellipse: s-maj=17.8km s-min=6.1km az=193.0*

ISC 09 16:56:57.5±0.5, 51.52N±0.03×16.11E±0.03, h0km, n76, σ0.92/130, 4C-4D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.69	170	*e*Pg	Pg	16 57 11.5	+0.8
KSP				*e*Sg	Sg	16 57 20.9	+1.3
KSP	Ksiaz	0.69	170	*i* Pg	Pg	16 57 11.5	+0.8
KSP				*e*Sg	Sg	16 57 20.7	+1.1
KSP	Ksiaz	0.69	170	*e*Pg	Pg	16 57 11.4	+0.7
	baz=3.8						
KSP				*e*Sg	Sg	16 57 19.5	-0.1
	baz=3.8						
UPC	Upice	1.02	184	*e*PG	Pg	16 57 17.5	+0.5
UPC	Upice	1.02	184	Pg	Pg	16 57 17.5	+0.5
DPC	Dobruska-Polom	1.18	173	*e*PG	Pg	16 57 20.3	+0.2
DPC				*e*SG	Sg	16 57 35.0	-0.4
	comp=Z,33nm,0.2s						
DPC	Dobruska-Polom	1.18	173	Pg	Pg	16 57 20.3	+0.2
DPC				Sg	Sg	16 57 35.0	-0.4
	comp=Z,33nm,0.2s						
PVCC	Panska Ves	1.39	225	*e*PG	Pg	16 57 23.9	-0.3
PVCC				*e*SG	Sg	16 57 43.1	+0.9
	comp=Z,271nm,0.6s						
PVCC	Panska Ves	1.39	225	Pg	Pg	16 57 23.9	-0.3
PVCC				Sg	Sg	16 57 43.1	+0.9
	comp=Z,271nm,0.6s						
BRG	Berggiesshubel	1.51	245	PN	Pn	16 57 25.6	-0.2
BRG				PG	Pg	16 57 26.3	-0.2
BRG				SG	Sg	16 57 46.7	+0.7
	comp=Z,195nm,0.5s						
PRU	Pruhonice	1.83	214	*e*PN	Pn	16 57 30.4	+0.2
PRU				*e*PG	Pg	16 57 32.1	-0.5
PRU				*e*SG	Sg	16 57 56.1	-0.2
	comp=Z,80nm,0.6s						
PRU	Pruhonice	1.83	214	Pn	Pn	16 57 30.4	+0.2
PRU	Pruhonice	1.83	214	Pg	Pg	16 57 32.1	-0.5
PRU				Sg	Sg	16 57 56.1	-0.2
	comp=Z,80nm,0.6s						
CLL	Collm	1.96	265	*e*Pn	Pn	16 57 31.0	-1.0
CLL				*e*Pg	Pg	16 57 34.0	-1.1
CLL				*i* Sg	Sg	16 58 00.1	-0.3
CLL				*e*		16 57 37.0	
	comp=Z,45nm,0.7s						
CLL	Collm	1.96	265	*e*Pn	Pn	16 57 31.0	-1.0
MORC	Moravsky Berou	1.97	152	*e*Pn	Pn	16 57 31.4	-0.7
MORC	Moravsky Berou	1.97	152	*e*Pn	Pn	16 57 31.7	-0.4
	baz=337						
OKC	Ostrava-Krasne	2.12	142	*e*PG	Pg	16 57 38.0	-0.2
OKC				*e*SG	Sg	16 58 06.2	+0.4
OKC	Ostrava-Krasne	2.12	142	Pg	Pg	16 57 38.0	-0.2
OKC				Sg	Sg	16 58 06.2	+0.4
VRAC	Vranov	2.24	172	*e*Pn	Pn	16 57 36.4	+0.6
	baz=356						
VRAC				*e*Sg	Sg	16 58 07.5	-1.8
	comp=Z,11nm,0.2s,baz=356						
TREC	Trest	2.26	190	*e*PN	Pn	16 57 37.1	+0.9
TREC				*e*PG	Pg	16 57 40.1	-0.8
TREC	Trest	2.26	190	Pn	Pn	16 57 37.1	+0.9
TREC	Trest	2.26	190	Pg	Pg	16 57 40.1	-0.8
KRUC	Moravsky	2.47	176	*e*Pn	Pn	16 57 39.7	+0.7
	baz=360						
KRUC				*e*Sg	Sg	16 58 15.5	-1.3
	comp=Z,10nm,0.2s,baz=360						
NKC	Novy Kostel	2.66	242	*e*PN	Pn	16 57 42.0	+0.5
NKC				*e*PG	Pg	16 57 47.8	-0.6
NKC				*e*SG	Sg	16 58 24.8	+2.0
	comp=Z,148nm,0.3s						
NKC	Novy Kostel	2.66	242	Pn	Pn	16 57 42.0	+0.5
NKC	Novy Kostel	2.66	242	Pg	Pg	16 57 47.8	-0.6
NKC				Sg	Sg	16 58 24.8	+2.0
	comp=Z,148nm,0.3s						
OJC	Ojcow	2.67	118	*e*Pg	Pg	16 57 47.3	-1.5
OJC				*e*SG	Sg	16 58 23.3	-0.1
OJC	Ojcow	2.67	118	*e*Pg	Pg	16 57 47.3	-1.5
OJC				*e*SG	Sg	16 58 23.3	-0.1
KHC	Kasperske Hory	2.89	215	*e*Pn	Pn	16 57 44.4	-0.4
KHC	Kasperske Hory	2.89	215	*e*PN	Pn	16 57 45.3	+0.5
KHC				*e*PG	Pg	16 57 51.1	-1.8
KHC				*e*SG	Sg	16 58 30.0	-0.4
	comp=Z,18nm,0.7s						
KHC	Kasperske Hory	2.89	215	Pn	Pn	16 57 45.3	+0.5
MOX	Moxa	2.97	255	*e*PN	Pn	16 57 45.5	-0.3
MOX				*e*PG	Pg	16 57 53.7	-0.7
MOX				*i* SG	Sg	16 58 33.5	+0.7
MOX	Moxa	2.97	255	*e*Pn	Pn	16 57 45.5	-0.3
GEC2	GERESS Array S	3.10	211	*e*Pn	Pn	16 57 47.9	+0.3
GEC2				*e*Sg	Sg	16 58 35.6	-1.3
GEC2	GERESS Array S	3.10	211	*e*Pn	Pn	16 57 47.9	+0.3
GEC2				*e*Sg	Sg	16 58 35.6	-1.3
SMOL	Smolenice	3.13	164	*e*P	Pg	16 58 00.3	+2.9
SMOL				*e*Sg	Sg	16 58 36.0	-2.0
SMOL	Smolenice	3.13	164	*e*	Pg	16 58 00.3	+2.9
SMOL	Smolenice	3.13	164	*e*SG	Sg	16 58 36.0	-2.0
WET	Wettzell	3.15	222	*e*Pn	Pn	16 57 48.4	0.0
WET				*e*Sg	Sg	16 58 38.1	-0.7
WET	Wettzell	3.15	222	*e*Pn	Pn	16 57 48.4	0.0
WET				*e*Sg	Sg	16 58 38.1	-0.7
NIE	Niedzica	3.41	126	*e*P	Pg	16 58 02.2	-0.7
NIE				*e*S	Sg	16 58 46.6	-0.4
VYHS	Vyhne	3.50	149	*e*Pn	Pn	16 57 53.4	+0.2
VYHS				*e*		16 58 05.3	
VYHS				*e*Sg	Sg	16 58 49.7	-0.3
VYHS	Vyhne	3.50	149	*e*PN	Pn	16 57 53.4	+0.2
VYHS				*e*		16 58 05.3	
VYHS	Vyhne	3.50	149	*e*SG	Sg	16 58 49.7	-0.3
VYHS	Vyhne	3.50	149	*e*Pn	Pn	16 57 53.4	+0.2
VYHS				*e*Sg	Sg	16 58 49.7	-0.3
CLZ	Clausthal	3.59	277	*e*Pn	Pn	16 57 54.0	-0.3
CLZ	Clausthal	3.59	277	*e*Pn	Pn	16 57 54.0	-0.3
CONA	Conrad Observa	3.60	183	⇑*i*Pn	Pn	16 57 55.6	+1.0
	comp=Z,1.3nm,0.1s						
CONA				⇑*i*Sg	Sg	16 58 52.8	-0.4
	comp=Z,19nm,0.4s						
CONA	Conrad Observa	3.60	183	Pn	Pn	16 57 55.6	+1.1
	comp=Z,1.3nm,0.1s						
CONA				Sg	Sg	16 58 52.8	-0.3
	comp=Z,19nm,0.4s						
CSNA	Conrad Observa	3.60	183	⇑*i*Pn	Pn	16 57 55.6	+1.0
	comp=Z,1.2nm,0.1s						
CSNA				⇓*i*Sg	Sg	16 58 53.2	+0.1
	comp=Z,26nm,0.6s						
CSNA	Conrad Observa	3.60	183	Pn	Pn	16 57 55.6	+1.1
	comp=Z,1.2nm,0.1s						
CSNA				Sg	Sg	16 58 53.2	+0.1
	comp=Z,26nm,0.6s						
GRA1	Grafen

ASAR	**Alice Springs**	**43.73 267**	P		**P**	**17 12 53.5**	**+0.2**
	0.5nm,0.4s,mb3.6,baz=104,slow=7.4,SNR=18						
WRAB	**Tennant Creek**	**44.71 272**	*e*P		**P**	**17 13 01.2**	**-0.1**
	1.3nm,0.3s,mb4.2						
WRA	**Warramunga Arr**	**44.72 272**	P		**P**	**17 13 01.5**	**+0.2**
	1.2nm,0.3s,mb4.2,baz=110,slow=8.1,SNR=27						
FINES	**FINESS Array B**	**145.39 340**	PKPbc		PKPbc	17 24 25.8	+1.1
	1.7nm,0.7s,baz=48,slow=2.8,SNR=8.3						

*IDC **09** 17:10:38.4±0.6,33°.06N×92°.05E,h0km,mb4.1/17,*
mb1 4.3/21,mb1mx4.1/33,mbtmp4.1/21,ML3.5/4,MS3.4/10,
Ms1 3.4/10,ms1mx3.1/36,Error ellipse: s-maj=24.9km
s-min=13.1km az=46.0
*BJI **09** 17:10:40.1,33°.05N×92°.07E,h21km,mB4.4/10,mb4.3/15,*
ML4.1/4,Ms4.2/14,Ms7 3.8/13
*ISCJB **09** 17:10:40.3±1.3,33°.10N±0°.03×92°.17E±0°.04,h25km±11km,*
mb4.1/21,MS3.4/9,Error ellipse: s-maj=6.1km
s-min=5.1km az=169.6
*MOS **09** 17:10:41.4±0.9,33°.08N×92°.16E,h33km,mb4.1/4,Error*
ellipse: s-maj=11.4km s-min=7.1km az=107.8
*NEIC **09** 17:10:43.6±1.0,33°.10N×92°.22E,h37km±11km,mb3.8/12,*
Error ellipse: s-maj=10.3km s-min=6.5km az=68.0

ISC 09 17:10:41.6±1.6,33°.14N±0°.03×92°.20E±0°.04,h18km±11km,
n74,σ1°.20/74,mb4.1/21,MS3.4/9,Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.54**	**195**	Pg	**Pb**	**17 11 40.1**	**-3.7**
LSA				Sg	**Sg**	**17 12 33.5**	**-2.0**
LSA				smax			
	comp=E,400nm,1.0s						
TAPN	**Taplejung**	**6.96**	**215**	*e*P	**Pn**	**17 12 24.0**	**+1.4**
	comp=E,49nm,0.8s						
ODAN	**Odare**	**7.52**	**215**	*e*P	**Pn**	**17 12 30.5**	**+0.1**
	comp=E,24nm,0.6s						
JIRN	**Jiri**	**7.53**	**225**	*e*P	**Pn**	**17 12 32.2**	**+1.6**
	comp=E,24nm,0.4s						
GUN	**Gumba**	**7.54**	**228**	*e*P	**Pn**	**17 12 32.7**	**+2.0**
	comp=E,72nm,0.8s						
SHL	**Shillong**	**7.55**	**182**	*i* P	**Pn**	**17 12 31.0**	**+0.2**
SHL				*i* S	**Sn**	**17 13 57.0**	**+1.0**
	comp=E,5.0nm,0.6s						
RAMN	**Ramite**	**7.85**	**220**	*e*P	**Pn**	**17 12 34.6**	**-0.3**
	comp=E,44nm,0.4s						
KKN	**Kakani**	**8.01**	**230**	*e*P	**Pn**	**17 12 37.7**	**+0.7**
	comp=E,34nm,0.5s						
KKN	**Kakani**	**8.01**	**230**	*e*P	**Pn**	**17 12 37.7**	**+0.7**
KKN				pmax	pmax		
	comp=Z,34nm,0.5s						
PKI	**Pulchoki**	**8.08**	**228**	*e*P	**Pn**	**17 12 38.7**	**+0.7**
	comp=Z,27nm,0.5s						
PKI	**Pulchoki**	**8.08**	**228**	*e*P	**Pn**	**17 12 38.7**	**+0.7**
PKI				pmax	pmax		
	comp=Z,27nm,0.5s						
PKIN	**Phulchoki**	**8.08**	**228**	*e*P	**Pn**	**17 12 38.5**	**+0.5**
	comp=Z,57nm,0.7s						
DMN	**Daman**	**8.24**	**230**	*e*P	**Pn**	**17 12 40.0**	**-0.3**
	comp=Z,37nm,0.7s						
GTA	**Gaotai**	**8.77**	**42**	*e*P	**Pn**	**17 12 49.7**	**+2.2**
GTA				pP		17 12 55.9	
GTA				sP		17 12 58.7	
GTA				S	**Sn**	**17 14 22.8**	**-3.0**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,24nm,3.6s						
GTA				LR	LR		
	comp=N,1μm,10.4s						
GTA				LR	LR		
	comp=E,760nm,11.0s						
GTA				LR	LR		
	comp=Z,420nm,12.5s						
LZH	**Lanzhou**	**10.04**	**70**	*e*P	Px	17 13 22.0	
LZH				pP		17 13 25.2	
LZH				sP		17 13 28.0	
LZH				*e*S	**Sn**	**17 15 07.0**	**+10**
LZH				sS		17 15 17.0	
LZH				pmax	pmax		
	comp=Z,49nm,1.5s						
LZH				pmax	pmax		
	comp=Z,190nm,4.6s						
LZH				LR	LR		
	comp=N,2μm,10.6s						
LZH				LR	LR		
	comp=Z,3μm,12.0s						
KMI	**Kunming**	**12.19**	**128**	P	**Pn**	**17 13 35.3**	**+1.0**
KMI				pP		17 13 37.5	
KMI				PP		17 13 44.6	
KMI				S	**Sn**	**17 15 51.6**	**+1.8**
KMI				SS		17 16 05.9	
KMI				pmax	pmax		
	comp=Z,11nm,0.7s						
KMI				pmax	pmax		
	comp=Z,56nm,3.7s						
KMI				LR	LR		
	comp=N,580nm,8.5s						
KMI				LR	LR		
	comp=E,410nm,8.5s						
KMI				LR	LR		
	comp=Z,340nm,11.3s						
CHTO	**Chiang Mai**	**15.49**	**155**	*e*P	**Pn**	**17 14 17.9**	**-1.3**
CHTO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CHTO	**Chiang Mai**	**15.49**	**155**	*e*P	**Pn**	**17 14 17.9**	**-1.3**
	comp=Z,5.8nm,1.0s						
MK31	**Makanchi Array**	**15.59**	**334**	*e*P	**Pn**	**17 14 19.6**	**-0.7**
MKAR	**Makanchi Array**	**15.59**	**334**	Pn	**Pn**	**17 14 18.6**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=128,slow=13,SNR=17						
CM31	**Chiang Mai Arr**	**15.82**	**156**	*e*P	**Pn**	**17 14 21.0**	**-2.5**
	comp=Z,6.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**15.82**	**156**	Pn	**Pn**	**17 14 22.2**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=333,slow=12,SNR=23						
TKM2	**Tokmak 2**	**16.30**	**312**	*e*P	**Pn**	**17 14 29.6**	**+0.1**
TKM2				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TKM2	**Tokmak 2**	**16.30**	**312**	*e*P	**Pn**	**17 14 29.6**	**+0.1**
	comp=Z,8.3nm,1.0s						
UCH	**Uchtor**	**16.66**	**308**	*e*P	**Pn**	**17 14 37.5**	**+3.4**
UCH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
UCH	**Uchtor**	**16.66**	**308**	*e*P	**Pn**	**17 14 37.5**	**+3.4**
	comp=Z,10nm,0.9s						
AAK	**Ala-Archa**	**16.86**	**309**	Pn	**Pn**	**17 14 37.1**	**+0.5**
	comp=Z,0.0nm,0.3s,baz=152,slow=6.1,SNR=6.8						
AAK				LR	LR	17 22 23.7	
	comp=Z,213nm,19.6s,baz=102,slow=42						
AAK	**Ala-Archa**	**16.86**	**309**	*e*P	**Pn**	**17 14 39.4**	**+2.8**
	comp=Z,9.2nm,1.0s						
HHC	**Hu-ho-hao-te**	**17.25**	**58**	*e*P	**Pn**	**17 14 42.0**	**+0.4**
HHC				pP	pP	17 14 45.5	-2.4
HHC				sP	sP	17 14 49.0	-1.2
HHC				PP		17 14 56.5	
HHC				S	**Sn**	**17 17 52.5**	**-0.6**
HHC				SS		17 18 13.2	
HHC				PcP	PcP	17 19 26.1	+1.9
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,46nm,4.9s						
HHC				LR	LR		
	comp=N,320nm,11.0s						
HHC				LR	LR		
	comp=E,280nm,14.5s						
HHC				LR	LR		
	comp=Z,420nm,14.2s						
EKS2	**Erkin-Say**	**17.34**	**309**	*e*P	**Pn**	**17 14 44.8**	**+2.2**
EKS2				pmax	pmax		
	comp=Z,6.0nm,0.8s						
EKS2	**Erkin-Say**	**17.34**	**309**	*e*P	**Pn**	**17 14 44.8**	**+2.2**
	comp=Z,6.4nm,0.8s						
SONM	**Songino Array**	**18.18**	**32**	P	**Pn**	**17 14 54.4**	**+1.6**
	comp=Z,0.5nm,0.3s,baz=214,slow=12,SNR=21						
SONM				LR	LR	17 22 44.0	
	comp=Z,121nm,19.8s,baz=244,slow=40						
ULN	**Ulaanbaatar**	**18.50**	**33**	*e*P	**Pn**	**17 14 57.6**	**+0.8**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ULN	**Ulaanbaatar**	**18.50**	**33**	*e*P	**Pn**	**17 14 57.6**	**+0.8**
	comp=Z,2.1nm,0.6s						
ZAK	**Zakamensk**	**19.07**	**22**	*e*P	**Pn**	**17 15 04.4**	**+0.7**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
KBL	**Kabul**	**19.28**	**281**	*e*P	**Pn**	**17 15 06.0**	**-0.4**
KBL				pmax	pmax		
	comp=Z,18nm,0.8s						
KBL	**Kabul**	**19.28**	**281**	*e*P	**Pn**	**17 15 06.0**	**-0.4**
	comp=Z,18nm,0.8s						
KURK	**Kurchatov**	**20.20**	**334**	*e*P	**P**	**17 15 15.4**	**+0.1**
	comp=Z,4.1nm,0.7s,baz=142,slow=12,SNR=12						
KURK	**Kurchatov**	**20.20**	**334**	P	**P**	**17 15 15.4**	**+0.1**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KURK	**Kurchatov**	**20.20**	**334**	*e*P	**P**	**17 15 15.7**	**+0.4**
	comp=Z,3.0nm,0.6s						
ZAA0	**Zalesovo Array**	**21.45**	**348**	*e*P	**P**	**17 15 29.8**	**+1.1**
ZALV	**Zalesovo Beam**	**21.45**	**348**	P	**P**	**17 15 30.0**	**+1.2**
	comp=Z,2.8nm,0.7s,mb3.7,baz=160,slow=10,SNR=13						
ZALV				LR	LR	17 24 28.8	
	comp=Z,76nm,19.5s,MS3.1,baz=168,slow=39						
NVS	**Novosibirsk**	**22.60**	**346**	*e*P	**P**	**17 15 42.0**	**+1.1**
NVS				*e*		17 19 44.0	
NVS				pmax	pmax		
	comp=N,19nm,1.8s						
NVS				pmax	pmax		
	comp=E,6.0nm,1.8s						
NVS				pmax	pmax		
	comp=Z,14nm,1.8s,mb4.1						
BVAR	**Borovoye Array**	**25.29**	**328**	P	**P**	**17 16 06.4**	**-0.4**
	comp=Z,1.6nm,0.6s,mb3.8,baz=135,slow=9.8,SNR=12						
ABKAR	**Akbulak array**	**28.84**	**314**	*e*P	**P**	**17 16 38.5**	**-0.2**
	comp=Z,1.6nm,0.7s,mb3.9						
KSRS	**Korea Array**	**29.36**	**71**	P	**P**	**17 16 43.4**	**-0.2**
	comp=Z,0.3nm,0.3s,mb3.5,baz=273,slow=10.0,SNR=3.0						
KSRS				LR	LR	17 29 34.2	
	comp=Z,65nm,18.9s,MS3.3,baz=277,slow=38						
AKTK	**Aktyubinsk**	**30.44**	**315**	P	**P**	**17 16 51.9**	**-1.1**
AKTK				LR	LR	17 30 27.4	
AKTO	**Aktyubinsk**	**30.44**	**315**	P	**P**	**17 16 51.9**	**-1.1**
	comp=Z,1.3nm,0.7s,mb3.8,baz=103,slow=12,SNR=4.8						
AKTO				LR	LR	17 30 27.4	
	comp=Z,71nm,19.2s,MS3.3,baz=117,slow=39						
MDJ	**Mudanjiang**	**31.03**	**57**	P	**P**	**17 16 56.5**	**-1.7**
MDJ				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
MDJ				pmax	pmax		
	comp=Z,53nm,5.7s						
MDJ				LR	LR		
	comp=N,450nm,20.7s,MS4.1						
MDJ				LR	LR		
	comp=E,62nm,18.6s,MS4.1						
MDJ				LR	LR		
	comp=Z,64nm,18.6s,MS3.3						
MJAR	**Matsushiro Arr**	**37.64**	**72**	LR	LR	17 34 43.7	
	comp=Z,62nm,18.9s,MS3.4,baz=110,slow=38						
TIXI	**Tiksi**	**43.17**	**16**	*e*P	**P**	**17 18 40.1**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
TIXI	**Tiksi**	**43.17**	**16**	*e*P	**P**	**17 18 40.1**	**-0.8**
	comp=Z,1.1nm,0.6s,mb3.8						
BR131	**Keskin Array S**	**46.85**	**296**	*e*P	**P**	**17 19 09.9**	**-0.7**
	comp=Z,1.6nm,0.7s,mb4.1						
BRTR	**Keskin Array B**	**46.85**	**296**	P	**P**	**17 19 09.6**	**-1.0**
	comp=Z,2.6nm,0.9s,mb4.2,baz=98,slow=6.5,SNR=11						
MMAI	**Mount Meron Ar**	**47.07**	**286**	LR	LR	17 42 48.8	
	comp=Z,35nm,18.6s,MS3.4,baz=230,slow=41						
EIL	**Elat**	**48.47**	**282**	P	**P**	**17 19 20.5**	**-2.8**
	comp=Z,5.3nm,0.6s,mb4.7,baz=93,slow=11,SNR=2.0						
AKASG	**Malin Array Be**	**48.52**	**311**	P	**P**	**17 19 20.6**	**-2.7**
	comp=Z,0.4nm,0.4s,mb3.8,baz=90,slow=5.4,SNR=4.1						
FINES	**FINESS Array B**	**50.18**	**325**	P	**P**	**17 19 34.6**	**-1.3**
	comp=Z,2.1nm,0.9s,mb4.2,baz=116,slow=8.7,SNR=3.1						
MLR	**Muntele Rosu**	**51.36**	**304**	P	**P**	**17 19 44.5**	**-0.5**
	comp=Z,0.9nm,0.4s,mb4.1,baz=167,slow=11,SNR=3.6						
GUMO	**Guam**	**51.55**	**99**	LR	LR	17 42 43.2	
	comp=Z,21nm,21.1s,MS3.1,baz=304,slow=37						
IDI	**Anoyia**	**54.71**	**292**	P	**P**	**17 20 09.9**	**+0.1**
	comp=Z,4.8nm,0.7s,mb4.6,baz=183,slow=20,SNR=4.1						
NOA	**NORSAR Array B**	**57.37**	**325**	P	**P**	**17 20 29.1**	**+0.7**
	comp=Z,0.4nm,0.6s,mb3.6,baz=126,slow=22,SNR=2.6						
NOA				LR	LR	17 44 40.1	
	comp=Z,39nm,18.1s,MS3.5,baz=90,slow=36						
NOA	**NORSAR Array B**	**57.37**	**325**	P	**P**	**17 20 29.1**	**+0.7**
NOA				LR	LR	17 44 40.1	
GERES	**GERESS Array B**	**58.74**	**311**	LR	LR	17 50 37.3	
	comp=Z,58nm,18.0s,MS3.7,baz=268,slow=41						
WRAB	**Tennant Creek**	**66.37**	**136**	*e*P	**P**	**17 21 29.8**	**+0.3**
WRAB				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.1						
WRAB	**Tennant Creek**	**66.37**	**136**	*e*P	**P**	**17 21 29.8**	**+0.3**
	comp=Z,18nm,1.0s,mb5.0						
WRA	**Warramunga Arr**	**66.37**	**136**	P	**P**	**17 21 29.9**	**+0.4**
	comp=Z,12nm,0.9s,mb4.9,baz=311,slow=7.3,SNR=22						
ASAR	**Alice Springs**	**69.07**	**139**	P	**P**	**17 21 47.0**	**+0.6**
	comp=Z,12nm,0.8s,mb4.9,baz=326,slow=6.6,SNR=34						
STKA	**Stephens Creek**	**79.71**	**139**	P	**P**	**17 22 47.0**	**-1.3**
	comp=Z,1.3nm,0.6s,mb4.1,baz=337,slow=18,SNR=3.7						
YKA	**Yellowknife Ar**	**82.29**	**12**	P	**P**	**17 23 00.7**	**-1.0**
	comp=Z,0.5nm,0.7s,mb3.6,baz=354,slow=4.7,SNR=5.2						
YKA	**Yellowknife Ar**	**82.29**	**12**	P	**P**	**17 23 00.7**	**-0.9**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**83.35**	**281**	P	**P**	**17 23 07.7**	**-0.3**
	comp=Z,1.2nm,0.6s,mb4.1,baz=46,slow=4.2,SNR=16						
TORD	**Torodi Ar. Bea**	**83.35**	**281**	P	**P**	**17 23 07.7**	**-0.3**
PLCA	**Paso Flores**	**164.28**	**236**	PKP	PKPdf	17 30 44.9	+1.0
	comp=Z,1.3nm,0.8s,baz=323,slow=5.1,SNR=2.8						

*NEIC **09** 17:14:14.8±0.9,2°.50N×128°.71E,h200km,mb4.4/1,Error*
ellipse: s-maj=28.5km s-min=10.6km az=60.0
*IDC **09** 17:14:18.6±3.6,2°.34N×128°.52E,h236km±31km,mb3.3/7,*
mb1 3.5/7,mb1mx3.2/21,mbtmp3.3/7,Error ellipse:
s-maj=53.0km s-min=12.7km az=63.0
*ISCJB **09** 17:14:18.4±5.1,2°.4N±0°.2×128°.6E±0°.2,h255km±51km,*
mb3.7/7,Error ellipse: s-maj=45.4km s-min=16.0km
az=142.5

ISC 09 17:14:19.7±5.0,2°.4N±0°.2×128°.6E±0°.2,h249km±51km,n14,
σ0°.60/14,mb3.7/7,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**15.46**	**166**	*e*P	**Pn**	**17 17 45.4**	**0.0**
KSM	**Kuching**	**18.29**	**268**	*e*P	**P**	**17 18 15.8**	**+0.1**
FITZ	**Fitzroy Crossi**	**20.54**	**188**	P	**P**	**17 18 38.6**	**-1.0**
	2.7nm,0.7s,baz=26,slow=2.1,SNR=13						
FITZ	**Fitzroy Crossi**	**20.54**	**188**	*e*P	**P**	**17 18 38.9**	**-0.7**
WRAB	**Tennant Creek**	**22.87**	**166**	*e*P	**P**	**17 19 02.5**	**+0.7**
	4.4nm,0.5s,mb4.2						
WRA	**Warramunga Arr**	**22.87**	**166**	P	**P**	**17 19 01.5**	**-0.3**
	4.1nm,0.4s,mb4.3,baz=344,slow=10.0,SNR=81						
MBWA	**Marble Bar**	**24.93**	**200**	*e*P	**P**	**17 19 20.3**	**-0.2**
ASAR	**Alice Springs**	**26.38**	**169**	P	**P**	**17 19 33.5**	**0.0**
	2.4nm,0.5s,mb4.1,baz=353,slow=7.6,SNR=139						
ASAR				PcP	PcP	17 22 52.9	+0.6
	0.7nm,0.4s,baz=351,slow=1.9,SNR=9.0						
ASAR				ScP	ScP	17 26 09.5	+1.1
	0.2nm,0.5s,baz=345,slow=2.8,SNR=4.4						
CMAR	**Chiang Mai Arr**	**33.16**	**301**	P	**P**	**17 20 34.0**	**+0.9**
	0.6nm,0.7s,mb3.2,baz=114,slow=7.9,SNR=5.5						
STKA	**Stephens Creek**	**36.22**	**161**	P	**P**	**17 20 59.7**	**+0.6**
	2.3nm,0.3s,mb4.1,baz=354,slow=11,SNR=16						
STKA	**Stephens Creek**	**36.22**	**161**	P	**P**	**17 20 59.7**	**+0.6**
MKAR	**Makanchi Array**	**59.73**	**325**	P	**P**	**17 23 58.5**	**+0.1**
	0.2nm,0.5s,mb3.0,baz=96,slow=10.0,SNR=6.2						
KURK	**Kurchatov**	**63.88**	**327**	P	**P**	**17 24 24.7**	**-1.2**
	0.1nm,0.2s,mb3.0,baz=127,slow=5.8,SNR=4.6						
KURK				pP	pP	17 25 17.2	-5.2
	0.5nm,0.6s,baz=128,slow=6.2,SNR=3.7						
KURK	**Kurchatov**	**63.88**	**327**	P	**P**	**17 24 24.7**	**-1.2**
KURK				pP	pP	17 25 17.2	-5.2

*MOS **09** 17:20:31.3±0.4,55°.16N×164°.88E,h31km,mb4.1/1,Error*
ellipse: s-maj=31.6km s-min=25.7km az=145.6

KRSC 09 17:20:34.5±0.7,55°.16N×164°.46E,h38km±37km,ML4.0,
Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.87**	**86**	*e*P	Pn	17 20 49.4	-0.8
BKI				*i* S	Sn	17 21 00.0	-1.6
KBTR	**Krutoberegovo**	**1.40**	**319**	*e*P	Pn	17 20 57.0	-0.5
KBTR				*i* S	Sn	17 21 13.6	-1.2
MKZ	**Mys Kozlova**	**1.69**	**250**	*e*P	Pn	17 21 02.0	+0.5
MKZ				*i* S	Sn	17 21 21.8	0.0
SMKR	**Semkarok**	**2.21**	**311**	*e*P	Pn	17 21 10.0	+1.4
SMKR				*i* S	Sn	17 21 36.1	+1.5
ZLN	**Zelenaya**	**2.25**	**294**	*e*P	Pn	17 21 11.1	+2.0
CIRR	**Tsirk**	**2.31**	**296**	*e*P	Pn	17 21 11.8	+1.8
BDR	**Baidarnaya**	**2.31**	**309**	*e*P	Pn	17 21 11.9	+1.9
BDR				*i* S	Sn	17 21 39.3	+2.1
SRKR	**Sorokina**	**2.38**	**310**	*e*P	Pn	17 21 12.9	+1.9
SRKR				*i* S	Sn	17 21 41.3	+2.4
BZMR	**Bezymyannaya**	**2.39**	**291**	*e*P	Pn	17 21 13.3	+2.3
KLY	**Klyuchi**	**2.44**	**300**	*e*P	Pn	17 21 11.7	-0.1
KLY				*i* S	Sn	17 21 38.6	-1.8
KRSR	**Krestovskiy**	**2.45**	**297**	*e*P	Pn	17 21 13.3	+1.5
KRSR				*i* S	Sn	17 21 41.9	+1.4
KIRR	**Kirishev**	**2.47**	**290**	*e*P	Pn	17 21 14.9	+2.7
KIRR				*i* S	Sn	17 21 44.5	+3.4
KMNR	**Kamenistaya**	**2.48**	**286**	*e*P	Pn	17 21 14.8	+2.5
KMNR				*i* S	Sn	17 21 44.7	+3.5
KPT	**Kopyto**	**2.54**	**290**	*e*P	Pn	17 21 15.8	+2.7
KPT				*i* S	Sn	17 21 45.7	+2.9
SRDR	**Sredinnyy**	**2.92**	**295**	*e*P	Pn	17 21 20.8	+2.4
SRDR				*i* S	Sn	17 21 55.5	+3.3
KII	**Karymskiy**	**3.12**	**251**	*e*P	Pn	17 21 22.7	+1.5
KII				*e*S	Sn	17 21 58.4	+1.2
NLC	**Nalytchevo**	**3.61**	**239**	*e*P	Pn	17 21 29.3	+1.5
NLC				*i* S	Sn	17 22 09.0	-0.1
PET	**Petropavlovsk**	**4.03**	**240**	*e*PN	Pn	17 21 35.5	+1.9
PET				*e*		17 22 19.4	
PET				pmax	pmax		
	comp=Z,7.0nm,0.3s						
PET				smax			
	comp=N,900nm,0.5s						
PET				smax			
	comp=E,860nm,0.3s						
PET	**Petropavlovsk**	**4.03**	**240**	*e*P	Pn	17 21 35.7	+2.1
PET				*i* S	Sn	17 22 19.6	0.0

*ISCJB **09** 17:27:24.7±0.8,31°.73N±0°.03×104°.37E±0°.06,h1km±6km,*
mb3.5/6,Error ellipse: s-maj=8.7km s-min=5.1km az=20.2
*IDC **09** 17:27:26.3±1.0,31°.64N×104°.18E,h0km,mb3.4/6,*
mb1 3.6/7,mb1mx3.4/27,mbtmp3.4/7,ML3.4/1,Error
ellipse: s-maj=38.0km s-min=19.2km az=57.0
*NEIC **09** 17:27:27.7±0.6,31°.72N×104°.32E,h10km,mb4.1/1,Error*
ellipse: s-maj=23.0km s-min=9.9km az=68.0
*BJI **09** 17:27:29.4,31°.54N×104°.31E,h14km,ML3.3/14,Ms3.1/4,*
Ms7 3.4/5

ISC 09 17:27:27.3±0.8,31°.67N±0°.03×104°.28E±0°.05,h3km±6km,
n14,σ1°.19/23,mb3.4/6,1D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.88**	**211**	||*i* Pg	**Pg**	**17 27 44.0**	**-0.1**
CD2				Sg	**Sg**	**17 27 56.7**	**+1.2**
CD2				smax			
	comp=N,2μm,0.7s						
CD2				smax			
	comp=E,2μm,0.5s						
LZH	**Lanzhou**	**4.42**	**355**	*e*Pg	**Pg**	**17 28 51.9**	**-0.1**
LZH				Sg	**Sg**	**17 29 50.4**	**+1.1**
LZH				smax			
	comp=N,39nm,0.5s						
LZH				smax			
	comp=E,40nm,0.6s						
LZH				LR	LR		
	comp=N,170nm,7.0s						
LZH				LR	LR		
	comp=Z,380nm,9.1s						
XAN	**Xi'an**	**4.56**	**58**	Pn	**Pn**	**17 28 39.6**	**+2.3**
XAN				Pg	**Pg**	**17 28 53.3**	**-1.5**
XAN				Sn	**Sn**	**17 29 33.0**	**+2.1**
XAN				Sg	**Sg**	**17 29 53.0**	**-1.0**
XAN				LR	LR		
	comp=N,78nm,7.9s						
XAN				LR	LR		
	comp=E,69nm,7.4s						
XAN				LR	LR		
	comp=Z,66nm,8.6s						
GYA	**Guiyang**	**5.60**	**158**	Pn	**Pb**	**17 29 04.6**	**-1.1**
GYA				Pg	**Pg**	**17 29 23.1**	**+8.6**
GYA				Sn	**Sn**	**17 29 55.3**	**-1.0**
GYA				Sg	**Sb**	**17 30 16.4**	**+3.2**
GYA				smax			
	comp=N,50nm,1.0s						
GYA				smax			
	comp=E,50nm,0.8s						
KMI	**Kunming**	**6.66**	**192**	Pn	**Pn**	**17 29 09.8**	**+3.7**
KMI				smax			
	comp=N,14nm,0.7s						
KMI				smax			
	comp=E,18nm,0.7s						
WHN	**Wuhan**	**8.71**	**95**	*e*P	**Pn**	**17 29 38.0**	**+3.8**
WHN				S	**Sn**	**17 31 08.1**	**-4.8**
WHN				LR	LR		
	comp=Z,280nm,10.6s						
CMAR	**Chiang Mai Arr**	**14.01**	**201**	Pn	**Pn**	**17 30 47.1**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=14,slow=12,SNR=5.7						
KSRS	**Korea Array**	**20.29**	**67**	P	**P**	**17 32 04.9**	**+0.7**
	comp=Z,1.3nm,0.7s,baz=259,slow=10.0,SNR=8.3						
MKAR	**Makanchi Array**	**22.66**	**318**	P	**P**	**17 32 29.1**	**-0.5**
	comp=Z,0.2nm,0.5s,mb2.8,baz=109,slow=10,SNR=4.6						
ZALV	**Zalesovo Beam**	**26.28**	**334**	P	**P**	**17 33 02.5**	**-1.2**
	comp=Z,0.4nm,0.3s,mb3.4,baz=123,slow=5.5,SNR=3.9						
KURK	**Kurchatov**	**26.89**	**323**	P	**P**	**17 33 08.4**	**-0.9**
	comp=Z,0.2nm,0.5s,mb2.9,baz=134,slow=8.3,SNR=4.7						
WRAB	**Tennant Creek**	**58.86**	**147**	P	**P**	**17 37 27.2**	**-0.3**
	comp=Z,1.0nm,0.7s,mb4.0						
WRA	**Warramunga Arr**	**58.86**	**147**	P	**P**	**17 37 26.8**	**-0.7**
	comp=Z,0.4nm,0.5s,mb3.7,baz=340,slow=7.9,SNR=11						
ASAR	**Alice Springs**	**61.90**	**149**	P	**P**	**17 37 47.5**	**-0.6**
	comp=Z,0.4nm,0.8s,mb3.6,baz=331,slow=6.6,SNR=6.8						

*ATH **09** 17:40:45.8,37°.93N×21°.46E,h19km±1km,MD3.5/12*
*NEIC **09** 17:40:45.8,37°.93N×21°.46E,h19km,MD3.5(ATH),After*
ATH.
*ISCJB **09** 17:40:45.5±0.5,37°.90N±0°.03×21°.47E±0°.03,h4km±4km,

VLS	Valsamata	0.75	292	P	Pg	17 40 59.9	-0.7
VLS				eSn	Sg	17 41 10.8	+0.4
ITM	Ithomi	0.81	153	ePn	Pg	17 41 02.2	+0.5
ITM	Ithomi	0.81	153	P	Pg	17 41 01.8	+0.1
ITM	Ithomi	0.81	153	ePN	Pg	17 41 02.2	+0.5
ITM	Ithomi	0.81	153	P	Pg	17 41 01.8	+0.1
ITM	Ithomi	0.81	153	ePn	Pg	17 41 02.2	+0.5
VLX	Vlachokerasia	0.90	126	P	Pg	17 41 03.0	-0.4
VLX				S	Sg	17 41 16.3	+1.3
VLX	Vlachokerasia	0.90	126	ePN	Pg	17 41 03.0	-0.4
VLX	Vlachokerasia	0.90	126	P	Pg	17 41 03.0	-0.4
VLX				S	Sg	17 41 16.3	+1.3
DSF	Desfina	0.97	58	P	Pg	17 41 03.7	-1.2
DSF				S	Sg	17 41 17.8	+0.2
DSF	Desfina	0.97	58	P	Pg	17 41 03.7	-1.2
DSF				S	Sg	17 41 17.8	+0.2
PYL	PYLOS	1.03	168	P	Pg	17 41 05.8	-0.1
PYL	PYLOS	1.03	168	ePN	Pg	17 41 06.0	+0.1
PYL	PYLOS	1.03	168	ePn	Pg	17 41 06.0	+0.1
EVR	Evrytania	1.05	15	ePn	Pg	17 41 06.2	-0.1
EVR	Evrytania	1.05	15	ePN	Pg	17 41 06.2	-0.1
EVR	Evrytania	1.05	15	ePn	Pg	17 41 06.2	-0.1
LKD2	Lefkada island	1.09	324	P	Pg	17 41 05.9	-1.3
LKD2				S	Sg	17 41 22.7	+1.3
LKD2	Lefkada island	1.09	324	P	Pg	17 41 05.9	-1.3
LKD2				S	Sg	17 41 22.7	+1.3
LTK	Loutraki	1.19	84	P	Pb	17 41 07.9	-1.0
LTK				S	Sb	17 41 25.0	+0.6
LTK	Loutraki	1.19	84	P	Pb	17 41 07.9	-1.0
LTK				S	Sb	17 41 25.0	+0.6
AGG	Agios Georgios	1.31	31	ePn	Pn	17 41 10.9	+0.2
AGG	Agios Georgios	1.31	31	P	Pn	17 41 09.9	-0.8
AGG				S	Sb	17 41 27.9	+0.1
AGG	Agios Georgios	1.31	31	ePN	Pn	17 41 10.9	+0.2
AGG	Agios Georgios	1.31	31	P	Pn	17 41 09.9	-0.8
AGG	Agios Georgios	1.31	31	ePn	Pn	17 41 10.9	+0.2
AGG				S	Sb	17 41 27.9	+0.1
LKR	Lokris	1.42	58	ePn	Pn	17 41 11.7	-0.5
LKR	Lokris	1.42	58	P	Pn	17 41 11.7	-0.5
LKR	Lokris	1.42	58	ePN	Pn	17 41 11.7	-0.5
LKR	Lokris	1.42	58	P	Pn	17 41 11.7	-0.5
NAIG	Nisos Aigina	1.60	95	ePn	Pn	17 41 15.7	+1.0
NAIG	Nisos Aigina	1.60	95	ePN	Pn	17 41 15.7	+1.0
NAIG	Nisos Aigina	1.60	95	ePn	Pn	17 41 15.7	+1.0
THL	Klokotos Trika	1.71	14	ePN	Pn	17 41 17.2	+0.9
JAN	Janina	1.82	345	ePn	Pn	17 41 17.8	+0.1
JAN	Janina	1.82	345	ePN	Pn	17 41 17.8	+0.1
JAN	Janina	1.82	345	ePn	Pn	17 41 17.8	+0.1
PTL	Penteli	1.90	85	ePn	Pn	17 41 19.3	+0.5
PTL	Penteli	1.90	85	ePN	Pn	17 41 19.3	+0.5
PTL	Penteli	1.90	85	ePn	Pn	17 41 19.3	+0.5
NEO	Neokhori	1.96	44	ePn	Pn	17 41 20.0	+0.3
NEO	Neokhori	1.96	44	ePN	Pn	17 41 20.0	+0.3
NEO	Neokhori	1.96	44	ePn	Pn	17 41 20.0	+0.3
XOR	Xorichti	1.99	42	P	Pn	17 41 19.7	-0.3
XOR				S	Sn	17 41 46.0	+0.9
XOR	Xorichti	1.99	42	P	Pn	17 41 19.7	-0.3
XOR				S	Sn	17 41 46.0	+0.9
KEK	Kerkira	2.23	325	ePn	Pn	17 41 23.7	+0.3
KEK	Kerkira	2.23	325	ePN	Pn	17 41 23.7	+0.3
KEK	Kerkira	2.23	325	ePn	Pn	17 41 23.7	+0.3
STON	Ston	5.74	331	ePn	Pn	17 42 09.8	-1.7
STON				Sn	Sn	17 43 10.6	-6.9
STON	Ston	5.74	331	ePn	Pn	17 42 09.8	-1.8

*IDC **09** 17:47:33.9±0.9, 33°.15N×92°.31E, h0km, mb3.6/6, mb1 3.7/9, mb1mx3.5/28, mbtmp3.6/9, ML3.3/3, MS3.1/3, Ms1 3.1/3, ms1mx2.6/30, Error ellipse: s-maj=39.9km s-min=18.9km az=56.0*
*ISCJB **09** 17:47:34.2±6.9, 33°.2N±0°.1×92°.3E±0°.2, h14km±47km, mb3.7/5, MS3.2/2, Error ellipse: s-maj=29.8km s-min=13.5km az=150.8*
*NEIC **09** 17:47:38.7±0.6, 33°.22N×92°.26E, h35km, Error ellipse: s-maj=18.6km s-min=8.5km az=65.0*
*BJI **09** 17:47:41.6, 33°.20N×92°.30E, h35km, mB4.4/1, mb4.4/2, ML3.5/3, Ms3.3/2, Ms7 3.0/2*
ISC 09 17:47:34.5±7.0, 33°.2N±0°.1×92°.2E±0°.2, h3km±47km, n13, σ0$54/10, mb3.7/5, MS3.2/2, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	Makanchi Array	15.56	334	P	Pn	17 51 14.7	+0.1
MKAR	Makanchi Array	15.56	334	Pn	Pn	17 51 14.2	-0.5
	0.0nm,0.3s,baz=136,slow=15,SNR=3.7						
CMAR	Chiang Mai Arr	15.85	156	Pn	Pn	17 51 18.8	+0.2
	0.1nm,0.3s,baz=331,slow=12,SNR=5.8						
AAK	Ala-Archa	16.85	309	LR	LR	17 59 18.8	
	comp=Z,47nm,19.4s,baz=190,slow=42						
SONM	Songino Array	18.13	32	P	Pn	17 51 47.8	+0.8
	0.2nm,0.3s,baz=211,slow=12,SNR=4.6						
KURK	Kurchatov	20.17	334	P	P	17 52 09.5	-0.4
	0.5nm,0.4s,baz=146,slow=11,SNR=4.3						
ZALV	Zalesovo Beam	21.42	348	P	P	17 52 23.0	-0.3
	0.4nm,0.3s,mb3.2,baz=155,slow=10,SNR=3.1						
KSRS	Korea Array	29.32	71	LR	LR	18 05 51.2	
	comp=Z,20nm,18.1s,MS2.8,baz=100,slow=38						
BRTR	Keskin Array B	46.86	296	P	P	17 56 06.5	+0.7
	0.2nm,0.3s,mb3.5,baz=120,slow=7.3,SNR=4.0						
DAVOX	Davos/Dischmat	61.81	309	LR	LR	18 27 44.9	
	comp=Z,41nm,18.8s,MS3.6,baz=269,slow=39						
WRA	Warramunga Arr	66.39	136	P	P	17 58 24.9	+0.1
	1.4nm,1.0s,mb3.9,baz=333,slow=6.2,SNR=6.3						
ASAR	Alice Springs	69.09	139	P	P	17 58 40.8	-1.0
	1.6nm,0.7s,mb4.0,baz=320,slow=6.0,SNR=17						
TORD	Torodi Ar. Bea	83.37	281	P	P	18 00 03.9	+0.5
	0.4nm,0.6s,mb3.6,baz=62,slow=3.5,SNR=5.8						

*CSEM **09** 17:48:05.7±0.3, 37°.84N×21°.45E, h19km, ML3.5, Error ellipse: s-maj=5.9km s-min=4.7km az=67.0*
*ATH **09** 17:48:05.7, 37°.87N×21°.50E, h16km±2km, MD3.6/14, ML3.5*
*THE **09** 17:48:05.1, 37°.86N×21°.50E, h0km±1km, ML3.8/9, Error ellipse: s-maj=1.2km s-min=0.4km az=241.0*
*NEIC **09** 17:48:05.7, 37°.87N×21°.50E, h16km, ML3.5(ATH), After ATH.*
*ISCJB **09** 17:48:05.1±0.5, 37°.85N±0°.02×21°.50E±0°.03, h3km±4km, Error ellipse: s-maj=4.2km s-min=3.4km az=156.4*
ISC 09 17:48:05.7±0.5, 37°.85N±0°.02×21°.49E±0°.03, h5km±3km, n82, σ1$03/127, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.21	354	ePb	Pg	17 48 09.7	-0.1
RLS				eSb	Sg	17 48 13.7	+1.1
RLS	Riolos of Patr	0.21	354	ePB	Pg	17 48 09.7	-0.1
RLS				eSB	Sg	17 48 13.7	+1.1
RLS	Riolos of Patr	0.21	354	ePb	Pg	17 48 09.7	-0.1
RLS				eSb	Sg	17 48 13.7	+1.1
UPR	University Cam	0.49	28	P	Pg	17 48 14.4	-0.7
UPR				S	Sg	17 48 21.8	+0.3
UPR	University Cam	0.49	28	ePB	Pg	17 48 15.1	0.0
UPR				eSB	Sg	17 48 23.3	+1.8
UPR	University Cam	0.49	28	P	Pg	17 48 14.4	-0.7
UPR	University Cam	0.49	28	ePb	Pg	17 48 15.1	0.0
UPR				S	Sg	17 48 21.8	+0.3
UPR				eSb	Sg	17 48 23.3	+1.8
KFL	Anninata	0.61	295	P	Pg	17 48 17.2	-0.3
EFP	Efpalio	0.66	29	P	Pg	17 48 17.6	-0.8
EFP				S	Sg	17 48 26.9	-0.1
EFP	Efpalio	0.66	29	ePB	Pg	17 48 17.7	-0.7
EFP				eSN	Sg	17 48 28.8	+1.8
EFP	Efpalio	0.66	29	P	Pg	17 48 17.6	-0.8
EFP				S	Sg	17 48 26.9	-0.1
EFP				eSn	Sg	17 48 28.8	+1.8
TRIZ	Trizonia	0.69	41	P	Pg	17 48 17.7	-1.2
TRIZ				S	Sg	17 48 28.1	+0.2
TRIZ	Trizonia	0.69	41	P	Pg	17 48 17.7	-1.2
TRIZ				S	Sg	17 48 28.1	+0.2
KALE	Kalithea	0.74	43	P	Pg	17 48 18.8	-1.1
KALE				S	Sg	17 48 30.3	+0.7
KALE	Kalithea	0.74	43	P	Pg	17 48 18.8	-1.1
KALE				S	Sg	17 48 30.3	+0.7
ITM	Ithomi	0.75	153	ePb	Pg	17 48 19.8	-0.3
ITM				eSn	Sg	17 48 32.0	+2.1
ITM	Ithomi	0.75	153	P	Pg	17 48 19.6	-0.5
ITM				S	Sg	17 48 30.8	+0.9
ITM	Ithomi	0.75	153	ePB	Pg	17 48 19.8	-0.3
ITM				eSN	Sg	17 48 32.0	+2.1
ITM	Ithomi	0.75	153	P	Pg	17 48 19.6	-0.5
ITM				S	Sg	17 48 30.8	+0.9
ITM				eSn	Sg	17 48 32.0	+2.1
VLS	Valsamata	0.79	295	ePn	Pg	17 48 20.1	-0.6
VLS				eSn	Sg	17 48 32.8	+1.9
VLS	Valsamata	0.79	295	P	Pg	17 48 19.9	-0.8
VLS	Valsamata	0.79	295	ePN	Pg	17 48 20.1	-0.6
VLS				eSN	Sg	17 48 32.8	+1.9
VLS	Valsamata	0.79	295	P	Pg	17 48 19.9	-0.8
VLS				eSn	Sg	17 48 32.8	+1.9
VLX	Vlachokerasia	0.85	124	P	Pg	17 48 21.2	-0.8
VLX				S	Sg	17 48 33.4	+0.4
VLX	Vlachokerasia	0.85	124	ePB	Pg	17 48 21.4	-0.6
VLX				eSN	Sg	17 48 34.3	+1.3
VLX	Vlachokerasia	0.85	124	P	Pg	17 48 21.2	-0.8
VLX				S	Sg	17 48 33.4	+0.4
VLX				eSn	Sg	17 48 34.3	+1.3
PYL	PYLOS	0.97	168	P	Pg	17 48 23.1	-1.2
PYL	PYLOS	0.97	168	ePB	Pg	17 48 23.5	-0.8
PYL				eSN	Sg	17 48 40.3	+3.4
PYL	PYLOS	0.97	168	P	Pg	17 48 23.1	-1.2
PYL	PYLOS	0.97	168	ePb	Pg	17 48 23.5	-0.8
EVR	Evrytania	1.09	13	ePn	Pg	17 48 26.1	-0.6
EVR				P		17 48 29.6	
EVR	Evrytania	1.09	13	ePN	Pg	17 48 26.1	-0.6
EVR	Evrytania	1.09	13	ePn	Pg	17 48 26.1	-0.6
LKD2	Lefkada island	1.15	325	P	Pg	17 48 26.5	-1.1
LKD2				S	Sg	17 48 43.5	+1.0
LKD2	Lefkada island	1.15	325	P	Pg	17 48 26.5	-1.1
LKD2				S	Sg	17 48 43.5	+1.0
LTK	Loutraki	1.18	81	P	Pg	17 48 26.5	-1.8
LTK	Loutraki	1.18	81	ePB	Pg	17 48 26.4	-1.8
LTK	Loutraki	1.18	81	P	Pg	17 48 26.5	-1.8
AGG	Agios Georgios	1.34	29	P	Pn	17 48 30.0	-1.1
AGG				S	Sb	17 48 48.9	+0.1
AGG	Agios Georgios	1.34	29	P	Pn	17 48 30.0	-1.1
AGG				S	Sb	17 48 48.9	+0.1
LKR	Lokris	1.43	56	ePn	Pn	17 48 31.8	-0.5
LKR				eSn	Sn	17 48 51.9	+0.5
LKR	Lokris	1.43	56	P	Pn	17 48 31.1	-1.2
LKR				S	Sb	17 48 51.5	+0.2
LKR	Lokris	1.43	56	ePN	Pn	17 48 31.8	-0.5
LKR				eSN	Sn	17 48 51.9	+0.5
LKR	Lokris	1.43	56	P	Pn	17 48 31.1	-1.2
LKR	Lokris	1.43	56	ePn	Pn	17 48 31.8	-0.5
LKR				S	Sb	17 48 51.5	+0.2
LKR				eSn	Sn	17 48 51.9	+0.5
ATAL	Atalanti	1.47	55	P	Pn	17 48 31.8	-1.0
ATAL				S	Sn	17 48 52.4	0.0
ATAL	Atalanti	1.47	55	P	Pn	17 48 31.8	-1.0
ATAL				S	Sn	17 48 52.4	0.0
NAIG	Nisos Aigina	1.58	93	ePn	Pn	17 48 34.5	+0.1
NAIG	Nisos Aigina	1.58	93	ePN	Pn	17 48 34.5	+0.1
NAIG	Nisos Aigina	1.58	93	ePn	Pn	17 48 34.5	+0.1
VLI	Veliai	1.61	134	ePn	Pn	17 48 36.2	+1.4
VLI	Veliai	1.61	134	ePN	Pn	17 48 36.2	+1.4
THL	Klokotos Trika	1.76	13	ePN	Pn	17 48 38.2	+1.4
ATH	Athens Observa	1.76	85	ePn	Pn	17 48 37.4	+0.6
ATH	Athens Observa	1.76	85	ePN	Pn	17 48 37.4	+0.6
ATH	Athens Observa	1.76	85	ePn	Pn	17 48 37.4	+0.6
ATHU	Athens Univers	1.82	86	P	Pn	17 48 36.8	-0.8
ATHU	Athens Univers	1.82	86	P	Pn	17 48 36.8	-0.8
JAN	Janina	1.87	345	ePn	Pn	17 48 39.6	+1.3
JAN	Janina	1.87	345	ePN	Pn	17 48 39.6	+1.3
NEO	Neokhori	1.99	42	ePn	Pn	17 48 40.8	+0.9
NEO	Neokhori	1.99	42	ePN	Pn	17 48 40.8	+0.9
NEO	Neokhori	1.99	42	ePn	Pn	17 48 40.8	+0.9
XOR	Xorichti	2.02	41	P	Pn	17 48 39.7	-0.6
XOR	Xorichti	2.02	41	P	Pn	17 48 39.7	-0.6
KEK	Kerkira	2.28	325	ePn	Pn	17 48 45.6	+1.6
KEK	Kerkira	2.28	325	P	Pn	17 48 43.4	-0.6
KEK	Kerkira	2.28	325	ePN	Pn	17 48 45.6	+1.6
KEK	Kerkira	2.28	325	P	Pn	17 48 43.4	-0.6
AOS	Alonnisos	2.29	54	P	Pn	17 48 43.4	-0.7
AOS				S	Sn	17 49 13.3	+0.7
AOS	Alonnisos	2.29	54	P	Pn	17 48 43.4	-0.7
AOS				S	Sn	17 49 13.3	+0.7
KZN	Kozani	2.46	5	ePn	Pn	17 48 47.6	+1.1
KZN	Kozani	2.46	5	ePN	Pn	17 48 47.6	+1.1
KRUS	Krusevo	3.52	357	ePn	Pn	17 48 58.9	-2.0
LIA	Limnos Island	3.53	53	P	Pn	17 49 02.0	+0.8
LIA	Limnos Island	3.53	53	P	Pn	17 49 02.0	+0.8
CHOS	Chios island	3.64	80	P	Pn	17 49 02.6	0.0
CHOS	Chios island	3.64	80	P	Pn	17 49 02.6	0.0
STON	Ston	5.79	331	*i* Pn	Pn	17 49 30.4	-1.7
STON				Sn	Sn	17 50 35.3	-3.7
STON	Ston	5.79	331	*i* Pn	Pn	17 49 30.4	-1.8
STON				Sn	Sn	17 50 35.3	-3.7
NVLJ	Novalja	8.36	325	ePn	Pn	17 50 07.4	0.0
NVLJ				Sn	Sn	17 51 37.2	-4.9
NVLJ	Novalja	8.36	325	ePn	Pn	17 50 07.3	-0.1
NVLJ				Sn	Sn	17 51 37.2	-4.9

*CRAAG **09** 18:06:52.2, 36°.58N×5°.24E, Ml3.5*
*ISCJB **09** 18:06:53.0±1.0, 36°.87N±0°.06×5°.27E±0°.06, h15km±15km, Error ellipse: s-maj=9.6km s-min=7.5km az=15.0*
*CSEM **09** 18:06:53.0±0.2, 36°.63N×5°.21E, h10km, ML3.5, Error ellipse: s-maj=6.6km s-min=4.8km az=49.0*
*LDG **09** 18:06:56.7±0.5, 36°.68N×5°.51E, h10km, Ml3.0/8, Error ellipse: s-maj=9.4km s-min=7.3km az=28.0*
ISC 09 18:06:53.1±1.0, 36°.75N±0°.06×5°.27E±0°.05, h11km±11km, n38, σ1$53/45, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DFRA	Djebel Bou Aff	0.53	112	P	Pg	18 07 03.0	-0.3
DFRA	Djebel Bou Aff	0.53	112	P	Pg	18 07 03.0	-0.3
SET	Setif	0.56	169	P	Pg	18 07 02.0	-1.9
SET	Setif	0.56	169	P	Pg	18 07 02.0	-1.9
AKF	Akfadou	0.58	259	P	Pg	18 07 03.5	-0.9
AKF	Akfadou	0.58	259	P	Pg	18 07 03.5	-0.9
CKHR	Kef el Ahmar	0.75	165	P	Pg	18 07 05.4	-2.3
CKHR	Kef el Ahmar	0.75	165	P	Pg	18 07 05.4	-2.3
CASM	Ain Smara	1.09	116	P	Pg	18 07 14.0	-0.1
CASM	Ain Smara	1.09	116	P	Pg	18 07 14.0	-0.1
CTEI	Djebel Teioual	1.14	126	P	Pg	18 07 16.4	+1.4
CTEI	Djebel Teioual	1.14	126	P	Pg	18 07 16.4	+1.4
CKFL	Kef-Lekhel	1.21	106	P	Pb	18 07 16.6	+0.5
CKFL	Kef-Lekhel	1.21	106	P	Pb	18 07 16.6	+0.5
AKET	Djebel Ketaf	1.32	239	P	Pn	18 07 16.4	-1.1
AKET	Djebel Ketaf	1.32	239	P	Pn	18 07 16.4	-1.1
ADJB	Djebel Djouab	1.59	249	P	Pn	18 07 23.5	+2.3
ADJB	Djebel Djouab	1.59	249	P	Pn	18 07 23.5	+2.3
CMAH	Djebel Manchou	1.73	93	P	Pn	18 07 23.0	-0.1
CMAH	Djebel Manchou	1.73	93	P	Pn	18 07 23.0	-0.1
ABSA	Djebel Ababsia	1.84	104	P	Pn	18 07 25.0	+0.4
ABSA	Djebel Ababsia	1.84	104	P	Pn	18 07 25.0	+0.4
PGF	Pioggiola	6.47	25	ePn	Pn	18 08 29.9	+1.7
PGF	Pioggiola	6.47	25	eP	Pn	18 08 34.1	+5.9
PGF				eSn	Sn	18 09 39.6	-2.4
	0.9nm,0.2s						
PGF	Pioggiola	6.47	25	ePn	Pn	18 08 29.9	+1.7
LMR	La Mourre	6.65	8	ePn	Pn	18 08 32.0	+1.3
LMR				eSn	Sn	18 09 44.2	-2.2
	2.5nm,0.2s						
LMR	La Mourre	6.65	8	ePn	Pn	18 08 32.0	+1.3
FRF	La Foret Royal	6.89	8	ePn	Pn	18 08 35.7	+1.7
FRF				eSn	Sn	18 09 50.8	-1.5
	2.7nm,0.2s						
FRF	La Foret Royal	6.89	8	ePn	Pn	18 08 35.7	+1.7
MTLF	Montolieu	6.99	341	ePn	Pn	18 08 37.4	+2.0
MTLF				eSn	Sn	18 09 54.7	-0.1
	0.6nm,0.3s						
MTLF	Montolieu	6.99	341	ePn	Pn	18 08 37.4	+2.0
MTLF				eSn	Sn	18 09 54.7	-0.1
	0.3nm,0.3s						
SMRF	Simiane la Rot	7.22	2	ePn	Pn	18 08 41.5	+2.9
SMRF				eSn	Sn	18 09 59.4	-1.2
	0.7nm,0.2s						
SMRF	Simiane la Rot	7.22	2	ePn	Pn	18 08 41.5	+2.9
EPF	Esparros	7.33	330	ePn	Pn	18 08 43.9	+3.8
EPF				eSn	Sn	18 10 03.3	+1.0
	0.7nm,0.3s						
LASF	Ste Croix	7.40	352	eSn	Sn	18 10 03.9	-1.0
	2.3nm,0.3s						
VIVF	Saint-Julien-l	8.11	357	eSn	Sn	18 10 19.9	-2.6
	2.4nm,0.3s						
LPG	La Plagne	8.81	7	ePn	Pn	18 09 03.1	+2.7
LPG	La Plagne	8.81	7	ePn	Pn	18 09 03.1	+2.7

*ATH **09** 18:08:06.2, 38°.04N×21°.50E, h28km±1km, MD3.5/9*
*NEIC **09** 18:08:06.2, 38°.04N×21°.50E, h28km, MD3.5(ATH), After ATH.*
*CSEM **09** 18:08:07.1±0.2, 38°.04N×21°.52E, h24km±2km, MD3.5, Error ellipse: s-maj=4.6km s-min=4.3km az=63.0*
*THE **09** 18:08:07.2, 38°.01N×21°.54E, h12km±1km, ML2.9/4, Error ellipse: s-maj=2.0km s-min=0.6km az=42.0*
*ISCJB **09** 18:08:07.1±0.6, 38°.02N±0°.04×21°.51E±0°.05, h24km±5km, Error ellipse: s-maj=7.8km s-min=6.2km az=144.7*
ISC 09 18:08:07.2±0.6, 38°.03N±0°.04×21°.51E±0°.05, h23km±5km, n42, σ0$50/57, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.05	314	ePb	Pb	18 08 11.1	-0.1
RLS				eSb	Sb	18 08 13.9	0.0
RLS	Riolos of Patr	0.05	314	ePB	Pb	18 08 11.1	-0.1
RLS				eSB	Sb	18 08 13.9	0.0
UPR	University Cam	0.34	40	ePB	Pb	18 08 14.1	-0.5
UPR				eSB	Sb	18 08 20.0	+0.3
UPR	University Cam	0.34	40	ePb	Pb	18 08 14.1	-0.5
UPR				eSb	Sb	18 08 20.0	+0.3
EFP	Efpalio	0.51	38	P	Pb	18 08 16.9	-0.6
EFP				S	Sb	18 08 24.7	+0.2
EFP	Efpalio	0.51	38	ePN	Pb	18 08 16.8	-0.7
EFP				eSN	Sb	18 08 24.7	+0.2
EFP	Efpalio	0.51	38	P	Pb	18 08 16.9	-0.6
EFP				S	Sb	18 08 24.7	+0.2
TRIZ	Trizonia	0.56	52	P	Pb	18 08 17.6	-0.7
TRIZ				S	Sb	18 08 26.0	+0.1
TRIZ	Trizonia	0.56	52	P	Pb	18 08 17.6	-0.7
TRIZ				S	Sb	18 08 26.0	+0.1
KALE	Kalithea	0.62	53	P	Pb	18 08 18.6	-0.7
KALE				S	Sb	18 08 28.5	+1.0
KALE	Kalithea	0.62	53	P	Pb	18 08 18.6	-0.7
KALE				S	Sb	18 08 28.5	+1.0
GUR	Goura	0.66	97	P	Pb	18 08 19.7	-0.4
GUR				S	Sb	18 08 28.8	-0.1
GUR	Goura	0.66	97	ePN	Pb	18 08 19.7	-0.4
GUR				eSN	Sb	18 08 29.4	+0.5
GUR	Goura	0.66	97	P	Pb	18 08 19.7	-0.4
GUR				S	Sb	18 08 28.8	-0.1
GUR				eSn	Sb	18 08 29.4	+0.5
VLS	Valsamata	0.74	282	ePn	Pb	18 08 21.3	-0.1
VLS	Valsamata	0.74	282	P	Pb	18 08 22.1	+0.7
VLS	Valsamata	0.74	282	ePN	Pb	18 08 21.3	-0.1
VLS	Valsamata	0.74	282	ePn	Pb	18 08 21.3	-0.1
VLS	Valsamata	0.74	282	P	Pb	18 08 22.1	+0.7
ITM	Ithomi	0.91	158	ePn	Pb	18 08 25.0	+0.8
ITM	Ithomi	0.91	158	P	Pb	18 08 23.9	-0.3
ITM	Ithomi	0.91	158	ePN	Pb	18 08 25.0	+0.8
ITM	Ithomi	0.91	158	P	Pb	18 08 23.9	-0.3
ITM	Ithomi	0.91	158	ePn	Pb	18 08 25.0	+0.8
EVR	Evrytania	0.92	15	ePn	Pb	18 08 25.1	+0.6
EVR	Evrytania	0.92	15	ePN	Pb	18 08 25.1	+0.6
EVR	Evrytania	0.92	15	ePn	Pb	18 08 25.1	+0.6
LKD2	Lefkada island	1.01	319	P	Pn	18 08 26.4	+0.4
LKD2	Lefkada island	1.01	319	P	Pn	18 08 26.4	+0.4
PYL	PYLOS	1.14	171	P	Pn	18 08 27.4	-0.4
PYL	PYLOS	1.14	171	ePN	Pn	18 08 27.9	+0.1
PYL	PYLOS	1.14	171	P	Pn	18 08 27.4	-0.4
PYL	PYLOS	1.14	171	ePn	Pn	18 08 27.9	+0.1
LTK	Loutraki	1.15	90	P	Pn	18 08 28.4	+0.5
LTK	Loutraki	1.15	90	ePN	Pn	18 08 27.7	-0.2
LTK	Loutraki	1.15	90	ePn	Pn	18 08 27.7	-0.2
LTK	Loutraki	1.15	90	P	Pn	18 08 28.4	+0.5
AGG	Agios Georgios	1.19	33	ePb	Pn	18 08 27.7	-0.7
AGG	Agios Georgios	1.19	33	ePB	Pn	18 08 27.7	-0.7
AGG	Agios Georgios	1.19	33	ePb	Pn	18 08 27.7	-0.7
VLI	Veliai	1.73	138	ePb	Pn	18 08 36.3	+0.4
VLI	Veliai	1.73	138	ePB	Pn	18 08 36.3	+0.4

GUC 09 18:12:57.5±0.8, 21°.72S×68°.86W, h100km±12km, ML3.8, 4C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	Plate Boundary	0.89	319	⇑ *i* P	Pn	18 13 17.4	+0.6
PB01				*i* S	Sn	18 13 31.8	+0.5
PB01				AML	AML	18 13 33.9	
	comp=E,3μm,0.3s						
PECH	Pedro de Valdi	1.15	221	⇓ *i* P	Pn	18 13 20.6	+1.0
PECH				*i* S	Sn	18 13 37.6	+1.2
PECH				AML	AML	18 13 38.4	
	comp=E,3μm,0.5s						
TO

EFP	**Efpalio**	**0.48**	**34**	P	**Pg**	**18 31 56.2**	**-0.5**
EFP				S	**Sg**	**18 32 03.3**	**+0.2**
EFP	**Efpalio**	**0.48**	**34**	*e*PB	**Pg**	**18 31 56.2**	**-0.5**
EFP				*e*SB	**Sb**	**18 32 03.9**	**-0.3**
EFP	**Efpalio**	**0.48**	**34**	P	**Pg**	**18 31 56.2**	**-0.5**
EFP				S	**Sg**	**18 32 03.3**	**+0.2**
EFP				*e*Sb	**Sb**	**18 32 03.9**	**-0.3**
TRIZ	**Trizonia**	**0.52**	**50**	P	**Pg**	**18 31 57.1**	**-0.4**
TRIZ				S	**Sg**	**18 32 05.0**	**+0.5**
TRIZ	**Trizonia**	**0.52**	**50**	P	**Pg**	**18 31 57.1**	**-0.4**
TRIZ				S	**Sg**	**18 32 05.0**	**+0.5**
KALE	**Kalithea**	**0.58**	**51**	P	**Pg**	**18 31 58.1**	**-0.4**
KALE				S	**Sg**	**18 32 07.2**	**+0.9**
KALE	**Kalithea**	**0.58**	**51**	P	**Pg**	**18 31 58.1**	**-0.4**
KALE				S	**Sg**	**18 32 07.2**	**+0.9**
KFL	**Anninata**	**0.62**	**278**	P	**Pg**	**18 31 59.1**	**-0.1**
GUR	**Goura**	**0.62**	**98**	P	**Pg**	**18 31 58.4**	**-0.9**
GUR	**Goura**	**0.62**	**98**	*e*PB	**Pg**	**18 31 58.3**	**-1.0**
GUR				*e*SN	**Sg**	**18 32 08.1**	**+0.5**
GUR	**Goura**	**0.62**	**98**	P	**Pg**	**18 31 58.4**	**-0.9**
VLS	**Valsamata**	**0.78**	**281**	*e*Pn	**Pg**	**18 32 01.3**	**-1.0**
VLS				*e*Sn	**Sg**	**18 32 14.1**	**+1.5**
VLS	**Valsamata**	**0.78**	**281**	P	**Pg**	**18 32 01.4**	**-0.9**
VLS	**Valsamata**	**0.78**	**281**	*e*PN	**Pg**	**18 32 01.3**	**-1.0**
VLS				*e*SN	**Sg**	**18 32 14.1**	**+1.5**
VLS	**Valsamata**	**0.78**	**281**	P	**Pg**	**18 32 01.4**	**-0.9**
VLS				*e*Sn	**Sg**	**18 32 14.1**	**+1.5**
DSF	**Desfina**	**0.85**	**63**	P	**Pg**	**18 32 02.4**	**-1.2**
DSF				S	**Sg**	**18 32 15.1**	**+0.3**
DSF	**Desfina**	**0.85**	**63**	P	**Pg**	**18 32 02.4**	**-1.2**
DSF				S	**Sg**	**18 32 15.1**	**+0.3**
ITM	**Ithomi**	**0.90**	**161**	*e*Pn	**Pg**	**18 32 03.9**	**-0.6**
ITM				*e*Sn	**Sg**	**18 32 17.8**	**+1.6**
ITM	**Ithomi**	**0.90**	**161**	P	**Pg**	**18 32 03.7**	**-0.8**
ITM	**Ithomi**	**0.90**	**161**	*e*PN	**Pg**	**18 32 03.9**	**-0.6**
ITM				*e*SN	**Sg**	**18 32 17.8**	**+1.6**
ITM	**Ithomi**	**0.90**	**161**	P	**Pg**	**18 32 03.7**	**-0.8**
ITM				*e*Sn	**Sg**	**18 32 17.8**	**+1.6**
EVR	**Evrytania**	**0.91**	**12**	*e*Pn	**Pg**	**18 32 03.8**	**-0.9**
EVR	**Evrytania**	**0.91**	**12**	*e*PN	**Pg**	**18 32 03.8**	**-0.9**
EVR	**Evrytania**	**0.91**	**12**	*e*Pn	**Pg**	**18 32 03.8**	**-0.9**
VLX	**Vlachokerasia**	**0.92**	**135**	P	**Pg**	**18 32 04.4**	**-0.6**
VLX				S	**Sg**	**18 32 17.3**	**+0.2**
VLX	**Vlachokerasia**	**0.92**	**135**	*e*PN	**Sg**	**18 32 04.8**	**-0.2**
VLX				*e*SN	**Sn**	**18 32 18.5**	**0.0**
VLX	**Vlachokerasia**	**0.92**	**135**	P	**Pg**	**18 32 04.4**	**-0.6**
VLX	**Vlachokerasia**	**0.92**	**135**	*e*Pn	**Pg**	**18 32 04.8**	**-0.2**
VLX				S	**Sg**	**18 32 17.3**	**+0.2**
VLX				*e*Sn	**Sn**	**18 32 18.5**	**0.0**
LKD2	**Lefkada island**	**1.04**	**317**	P	**Pg**	**18 32 06.1**	**-1.1**
LKD2				S	**Sg**	**18 32 22.0**	**+1.2**
LKD2	**Lefkada island**	**1.04**	**317**	P	**Pg**	**18 32 06.1**	**-1.1**
LKD2				S	**Sg**	**18 32 22.0**	**+1.2**
LTK	**Loutraki**	**1.11**	**90**	P	**Pg**	**18 32 07.3**	**-1.2**
LTK	**Loutraki**	**1.11**	**90**	*e*PN	**Pg**	**18 32 07.3**	**-1.2**
LTK	**Loutraki**	**1.11**	**90**	P	**Pg**	**18 32 07.3**	**-1.2**
PYL	**PYLOS**	**1.14**	**173**	P	**Pg**	**18 32 07.0**	**-2.1**
PYL	**PYLOS**	**1.14**	**173**	*e*PN	**Pg**	**18 32 08.6**	**-0.5**
PYL	**PYLOS**	**1.14**	**173**	P	**Pg**	**18 32 07.0**	**-2.1**
PYL	**PYLOS**	**1.14**	**173**	*e*Pn	**Pg**	**18 32 08.6**	**-0.5**
AGG	**Agios Georgios**	**1.16**	**31**	P	**Pn**	**18 32 08.0**	**-0.8**
AGG	**Agios Georgios**	**1.16**	**31**	P	**Pn**	**18 32 08.0**	**-0.8**
LKR	**Lokris**	**1.29**	**61**	*e*Pn	**Pn**	**18 32 10.4**	**-0.2**
LKR	**Lokris**	**1.29**	**61**	P	**Pn**	**18 32 10.5**	**-0.1**
LKR	**Lokris**	**1.29**	**61**	*e*PN	**Pn**	**18 32 10.4**	**-0.2**
LKR	**Lokris**	**1.29**	**61**	*e*Pn	**Pn**	**18 32 10.4**	**-0.2**
ATAL	**Atalanti**	**1.32**	**60**	P	**Pn**	**18 32 10.8**	**-0.2**
ATAL				S	**Sn**	**18 32 29.2**	**+0.8**
ATAL	**Atalanti**	**1.32**	**60**	P	**Pn**	**18 32 10.8**	**-0.2**
ATAL				S	**Sn**	**18 32 29.2**	**+0.8**
NAIG	**Nisos Aigina**	**1.55**	**99**	*e*Pn	**Pn**	**18 32 15.0**	**+0.9**
NAIG	**Nisos Aigina**	**1.55**	**99**	*e*PN	**Pn**	**18 32 15.0**	**+0.9**
NAIG	**Nisos Aigina**	**1.55**	**99**	*e*Pn	**Pn**	**18 32 15.0**	**+0.9**
THL	**Klokotos Trika**	**1.57**	**13**	*e*PN	**Pn**	**18 32 15.9**	**+1.4**
THL	**Klokotos Trika**	**1.57**	**13**	*e*Pn	**Pn**	**18 32 15.9**	**+1.4**
ATH	**Athens Observa**	**1.70**	**91**	*e*Pn	**Pn**	**18 32 17.4**	**+1.2**
ATH	**Athens Observa**	**1.70**	**91**	*e*PN	**Pn**	**18 32 17.4**	**+1.2**
ATH	**Athens Observa**	**1.70**	**91**	*e*Pn	**Pn**	**18 32 17.4**	**+1.2**
VLI	**Veliai**	**1.71**	**140**	*e*Pn	**Pn**	**18 32 17.5**	**+1.2**
VLI	**Veliai**	**1.71**	**140**	*e*PN	**Pn**	**18 32 17.5**	**+1.2**
VLI	**Veliai**	**1.71**	**140**	*e*Pn	**Pn**	**18 32 17.5**	**+1.2**
PTL	**Penteli**	**1.82**	**89**	*e*Pb	**Pb**	**18 32 17.5**	**-2.6**
PTL	**Penteli**	**1.82**	**89**	*e*PB	**Pb**	**18 32 17.5**	**-2.6**
NEO	**Neokhori**	**1.82**	**45**	*e*Pn	**Pn**	**18 32 18.1**	**+0.2**
NEO	**Neokhori**	**1.82**	**45**	*e*PN	**Pn**	**18 32 18.1**	**+0.2**
NEO	**Neokhori**	**1.82**	**45**	*e*Pn	**Pn**	**18 32 18.1**	**+0.2**
XOR	**Xorichti**	**1.85**	**43**	P	**Pn**	**18 32 18.7**	**+0.5**
XOR	**Xorichti**	**1.85**	**43**	P	**Pn**	**18 32 18.7**	**+0.5**
AOS	**Alonnisos**	**2.14**	**57**	P	**Pn**	**18 32 22.4**	**+0.1**
AOS	**Alonnisos**	**2.14**	**57**	P	**Pn**	**18 32 22.4**	**+0.1**
STON	**Ston**	**5.66**	**330**	*e*Pn	**Pn**	**18 33 09.5**	**-1.1**
STON				Sn	**Sn**	**18 34 11.7**	**-3.7**
STON	**Ston**	**5.66**	**330**	*e*Pn	**Pn**	**18 33 09.5**	**-1.2**
STON				Sn	**Sn**	**18 34 11.6**	**-3.8**

CASC 09 18:33:50.6±2.2, 15′.47N×88°.98W, h4km±12km, MD3.9, ML4.5, Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRL	**Marmol**	**0.79**	**240**	*e*P	Pg	18 34 05.0	-0.8
MRL				*e*S	Sg	18 34 18.2	+2.1
MTO2	**Montecristo 2**	**1.12**	**199**	*e*P	Pg	18 34 11.0	-1.1
MTO2				*e*S	Sg	18 34 29.0	+2.3
RBDL	**Robledal**	**1.51**	**207**	*e*P	Pn	18 34 17.7	-0.7
RBDL				*e*S	Sn	18 34 38.9	+0.3
NBG	**Las Nubes**	**1.58**	**237**	*e*P	Pn	18 34 19.0	-0.5
RTR	**El Retiro**	**1.69**	**203**	*e*P	Pn	18 34 21.1	+0.1
SNJE	**San Jose**	**1.70**	**201**	*e*P	Pn	18 34 21.0	-0.1
SNJE				*e*S	Sn	18 34 44.2	+0.9
SBLS	**San Blas**	**1.73**	**201**	*e*P	Pn	18 34 21.5	-0.1
SBLS				*e*S	Sn	18 34 46.5	+2.3
BOQS	**Boqueron**	**1.75**	**190**	*e*P	Pn	18 34 21.7	0.0
BOQS				*e*S	Sn	18 34 46.1	+1.7
SNET	**Serv Nac Est T**	**1.79**	**188**	*e*P	Pn	18 34 23.8	+1.5
LFRS	**El Faro**	**1.83**	**182**	*e*P	Pn	18 34 23.2	+0.3
LFRS				*e*S	Sn	18 34 47.7	+1.1
CAHU	**Cacacuatique**	**1.84**	**156**	*e*P	Pn	18 34 22.8	-0.3
CAHU				*e*S	Sn	18 34 49.5	+2.6
SNVI	**San Vicente**	**1.85**	**176**	*e*P	Pn	18 34 23.1	0.0
SNVI				*e*S	Sn	18 34 48.0	+1.1
IXG	**Ixpaco**	**1.92**	**228**	*e*P	Pn	18 34 25.7	+1.6
IXG				*e*S	Sn	18 34 57.8	+9.1
FG6		**2.05**	**244**	*e*P	Pn	18 34 27.6	+1.7
FG6				*e*S	Sn	18 34 57.6	+5.8
FUG	**Fuego 3**	**2.06**	**241**	*e*P	Pn	18 34 26.1	0.0
TP2	**Tecpan 2**	**2.08**	**251**	*e*P	Pn	18 34 25.9	-0.5
TP2				*e*S	Sn	18 35 01.8	+9.0
BLLM	**Bellamira**	**2.14**	**160**	*e*P	Pn	18 34 27.0	-0.1
BLLM				*e*S	Sn	18 34 56.1	+2.0
VSM	**San Miguel**	**2.14**	**161**	*e*P	Pn	18 34 26.7	-0.4
VSM				*e*S	Sn	18 34 54.3	+0.2
TGUH	**Tegucigalpa,Un**	**2.17**	**130**	*e*P	Pn	18 34 25.8	-1.7
TGUH				*e*S	Sn	18 34 55.6	+0.8
TGUH				AML	AML	18 35 02.2	
	comp=N,5μm,0.5s						
CNCH	**Conchagua**	**2.44**	**153**	*e*P	Pn	18 34 31.5	+0.2
TEIG	**Tepich**	**4.78**	**8**	*e*P	Pn	18 34 56.1	-7.4

*ISK **09** 19:10:31.6, 37′.86N×30′.85E, h20km, MD2.9*
*DDA **09** 19:10:32.7, 38′.03N×31′.01E, h6km±6km, Md3.0*
*CSEM **09** 19:10:33.0±0.5, 38′.02N×30′.94E, h10km, MD3.0, Error ellipse: s-maj=13.4km s-min=7.9km az=21.0*
ISC 09 19:10:33.4±0.9, **37′.97N**±0′.06×**30′.97E**±0′.04, **h7**km±7km, **n20**, σ1.9**33**/34, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHUT	**Suhut-Afyon**	**0.67**	**331**	*e*PG	**Pg**	**19 10 46.6**	**+0.4**
SHUT				*e*SG	**Sg**	**19 10 57.0**	**+2.0**
SHUT	**Suhut-Afyon**	**0.67**	**331**	*e*Pg	**Pg**	**19 10 46.7**	**+0.4**
SHUT				*e*Sg	**Sg**	**19 10 57.0**	**+2.0**
BOLV	**Bolvadin**	**0.75**	**359**	*i* P	**Pg**	**19 10 45.8**	**-2.0**
BOLV	**Bolvadin**	**0.75**	**359**	*i* P	**Pg**	**19 10 45.8**	**-2.0**
KDHN	**Kadinhani**	**1.06**	**58**	*i* P	**Pg**	**19 10 52.5**	**-1.2**
KDHN				*i* S	**Sg**	**19 11 08.0**	**+0.5**
KDHN	**Kadinhani**	**1.06**	**58**	*i* P	**Pg**	**19 10 52.5**	**-1.3**
KDHN				*i* S	**Sg**	**19 11 08.0**	**+0.4**
KONT	**Konya--Tatoy**	**1.10**	**91**	*e*PN	**Pg**	**19 10 53.9**	**-0.6**
KONT				*e*SN	**Sg**	**19 11 09.2**	**+0.3**
KONT	**Konya--Tatoy**	**1.10**	**91**	*e*Pn	**Pg**	**19 10 53.9**	**-0.7**
KONT				*e*Sn	**Sg**	**19 11 09.2**	**+0.3**
LADK	**Ladik-KONYA**	**1.13**	**78**	*e*PN	**Pg**	**19 10 54.5**	**-0.5**
LADK				*e*SN	**Sg**	**19 11 10.9**	**+1.2**
LADK	**Ladik-KONYA**	**1.13**	**78**	*e*Pn	**Pg**	**19 10 54.5**	**-0.5**
LADK				*e*Sn	**Sg**	**19 11 10.9**	**+1.2**
KIZT	**Kizilcal**	**1.16**	**38**	*e*PN	**Pn**	**19 10 55.6**	**-0.5**
KIZT				*e*SN	**Sn**	**19 11 13.0**	**+0.8**
KIZT	**Kizilcal**	**1.16**	**38**	*e*Pn	**Pn**	**19 10 55.6**	**-0.4**
KIZT				*e*Sn	**Sn**	**19 11 13.0**	**+0.9**
KHAL	**Karahalli**	**1.23**	**290**	*i* P	**Pg**	**19 10 55.2**	**-1.8**
KHAL				*i* S	**Sg**	**19 11 15.3**	**+2.3**
KHAL	**Karahalli**	**1.23**	**290**	*i* P	**Pg**	**19 10 55.2**	**-1.8**
KHAL				*i* S	**Sg**	**19 11 15.3**	**+2.4**
ALT	**Altintas**	**1.28**	**329**	*e*PN	**Pn**	**19 10 55.3**	**-2.3**
ALT	**Altintas**	**1.28**	**329**	*e*Pn	**Pn**	**19 10 55.3**	**-2.3**
SVRH	**Sivrihisar-ESK**	**1.54**	**16**	*e*PN	**Pn**	**19 11 00.7**	**-0.6**
SVRH	**Sivrihisar-ESK**	**1.54**	**16**	*e*Pn	**Pn**	**19 11 00.7**	**-0.6**
ERMK	**Ermenek**	**2.04**	**130**	*i* P	**Pn**	**19 11 10.0**	**+1.9**
ERMK				*i* S	**Sn**	**19 11 38.5**	**+4.7**
ERMK	**Ermenek**	**2.04**	**130**	*i* P	**Pn**	**19 11 10.0**	**+1.9**
ERMK				*i* S	**Sn**	**19 11 38.5**	**+4.7**

*IDC **09** 19:19:20.0±6.4, 36′.29N×70′.45E, h199km±61km, mb3.1/4, mb1 3.1/9, mb1mx2.9/30, mbtmp3.0/9, Error ellipse: s-maj=46.8km s-min=26.1km az=14.0*
*ISCJB **09** 19:19:20.6±0.5, 36′.49N±0′.05×70′.4E±0′.1, h212km±7km, mb3.1/3, Error ellipse: s-maj=13.8km s-min=7.0km az=16.5*
*NEIC **09** 19:19:21.3±0.8, 36′.36N×70′.57E, h209km±8km, mb3.6/2, Error ellipse: s-maj=17.1km s-min=9.3km az=116.0*
ISC 09 19:19:21.7±0.5, **36′.49N**±0′.05×**70′.5E**±0′.1, **h203**km±7km, **n21**, σ1.**31**/27, **mb3.1**/3, **1C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.28**	**212**	*e*P	**Pn**	**19 20 03.6**	**+0.2**
KBL				*e*S	**Sn**	**19 20 34.3**	**-1.6**
CEP	**Cherat**	**2.89**	**156**	⇑P	**Pn**	**19 20 11.9**	**+1.6**
CEP				S	**Sn**	**19 20 49.0**	**+0.8**
UCH	**Uchtor**	**6.52**	**27**	*e*P	**Pn**	**19 20 56.3**	**+0.7**
	2.7nm,0.6s						
UCH				*e*S	**Sn**	**19 22 08.3**	**-1.8**
KK31	**Karatay Array**	**6.61**	**360**	⇓Pn	**Pn**	**19 20 56.0**	**-0.7**
	0.7nm,0.3s,baz=210,slow=14,SNR=12						
KK31				⇓Pg	**Pn**	**19 21 07.2**	**+10**
	0.4nm,0.2s,baz=175,slow=13,SNR=3.8						
KK31				⇓Lg		19 22 07.7	
	1.7nm,0.3s,baz=192,slow=28,SNR=5.7						
EKS2	**Erkin-Say**	**6.66**	**21**	*e*P	**Pn**	**19 20 57.0**	**-0.5**
	1.8nm,0.4s						
AAK	**Ala-Archa**	**6.87**	**25**	P	**Pn**	**19 21 01.6**	**+1.5**
	0.0nm,0.3s,baz=135,slow=4.0,SNR=3.9						
AAK				S	**Sn**	**19 22 16.4**	**-1.9**
	0.0nm,0.3s,baz=2.6,slow=19,SNR=25						
AAK	**Ala-Archa**	**6.87**	**25**	*e*P	**Pn**	**19 21 01.2**	**+1.1**
AAK				*e*S	**Sn**	**19 22 16.4**	**-1.9**
MK31	**Makanchi Array**	**13.53**	**37**	*e*P	**Pn**	**19 22 26.4**	**+0.8**
MKAR	**Makanchi Array**	**13.53**	**37**	P	**Pn**	**19 22 26.2**	**+0.7**
	0.2nm,0.3s,baz=218,slow=14,SNR=8.6						
KURK	**Kurchatov**	**15.37**	**20**	P	**Pn**	**19 22 45.6**	**-2.5**
	0.1nm,0.3s,baz=221,slow=8.8,SNR=7.8						
KURK	**Kurchatov**	**15.37**	**20**	P	**Pn**	**19 22 45.6**	**-2.5**
BVAR	**Borovoye Array**	**16.54**	**360**	P	**P**	**19 23 02.3**	**+1.2**
	0.5nm,0.3s,baz=162,slow=9.5,SNR=12						
BRVK	**Borovoye**	**16.57**	**360**	*e*P	**P**	**19 23 03.6**	**+2.2**
AKTK	**Aktyubinsk**	**16.60**	**331**	P	**P**	**19 23 02.8**	**+1.0**
AKTO	**Aktyubinsk**	**16.60**	**331**	P	**P**	**19 23 02.8**	**+1.0**
	0.4nm,0.3s,baz=140,slow=10,SNR=12						
ZAA0	**Zalesovo Array**	**20.09**	**25**	P	**P**	**19 23 39.9**	**+0.4**
ZALV	**Zalesovo Beam**	**20.09**	**25**	P	**P**	**19 23 40.2**	**+0.7**
	1.1nm,0.3s,baz=219,slow=12,SNR=8.0						
ZALV	**Zalesovo Beam**	**20.09**	**25**	P	**P**	**19 23 40.2**	**+0.6**
TORD	**Torodi Ar. Bea**	**65.32**	**268**	P	**P**	**19 29 40.5**	**-1.9**
	0.1nm,0.4s,mb2.8,baz=44,slow=6.2,SNR=4.1						
WRA	**Warramunga Arr**	**82.32**	**122**	P	**P**	**19 31 19.6**	**-1.1**
	1.3nm,1.2s,mb3.4,baz=316,slow=5.7,SNR=2.7						
ASAR	**Alice Springs**	**84.57**	**125**	P	**P**	**19 31 30.2**	**-1.9**
	0.2nm,0.6s,mb3.0,baz=321,slow=6.4,SNR=4.1						

GUC 09 19:37:26.3±0.8, **22°.58S**×**66°.85W**, **h260**km, **ML4.3, 3C, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**2.46**	**277**	⇑*i*P	Pn	19 38 22.6	+8.7
PB04				*i* S	S	19 39 05.5	+14
PB04				AML	AML	19 39 07.7	
	comp=N,339nm,0.6s						
PECH	**Pedro de Valdi**	**2.61**	**269**	*i* S	S	19 38 57.2	+3.0
PECH				AML	AML	19 38 58.1	
	comp=N,458nm,0.3s						
PB01	**Plate Boundary**	**2.89**	**301**	⇑*i*P	Pn	19 38 20.4	+2.2
PB01				*i* S	S	19 39 02.1	+2.7
PB01				AML	AML	19 39 02.9	
	comp=E,238nm,0.3s						
MNMC	**Miæe Miæ**	**4.29**	**323**	⇑*i*P	Pn	19 38 35.9	+1.9
MNMC				*i* S	S	19 39 29.5	+1.7

IDC 09 19:43:14.6±14.0, **2°.09S**×**125°.95E**, **h0**km, **mb4.1**/2, **mb1 4.4**/3, **mb1mx3.6**/20, **mbtmp4.2**/3, **ML4.4**/1, **Error ellipse: s-maj=218.6km s-min=163.0km az=140.0, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.55**	**156**	P	Pn	19 47 43.9	-1.3
	1.2nm,0.3s,baz=334,slow=11,SNR=97						
ASAR	**Alice Springs**	**22.80**	**161**	P	P	19 48 18.7	-0.3
	4.3nm,0.3s,baz=343,slow=12,SNR=115						
STKA	**Stephens Creek**	**33.10**	**155**	P	P	19 49 52.8	+0.4
	0.8nm,0.5s,baz=334,slow=15,SNR=5.4						

CASC 09 19:43:36.1±2.0, **8′.44N**×**83′.04W**, **h3**km±8km, **MD3.6, 2C-2D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.25**	**329**	⇑*i*P	Pg	19 43 41.9	+1.0
ACR				*e*S	Sg	19 43 46.0	+1.8
BRU2	**Volcan**	**0.49**	**44**	⇓*i*P	Pg	19 43 46.5	+0.9
BRU2				*e*S	Sg	19 43 55.1	+3.1
CTCR	**Cotoan**	**0.53**	**31**	⇓*i*P	Pg	19 43 47.2	+0.9
CTCR				*e*S	Sg	19 43 54.7	+1.5
BAR1		**0.84**	**341**	⇑*i*P	Pg	19 43 52.4	+0.2
BUS	**Buena Vista**	**1.32**	**327**	*e*P	Pn	19 43 59.6	-1.7
BUS				*e*S	Sg	19 44 19.1	+0.6
PRS1	**Puriscal**	**1.98**	**321**	*e*P	Pn	19 44 11.4	+0.9

*IDC **09** 19:48:57.1±0.8, 33′.27S×179′.00W, h0km, mb4.5/7, mb1 4.6/8, mb1mx4.3/18, mbtmp4.5/8, ML4.9/1, MS3.7/4, Ms1 3.7/4, ms1mx3.4/17, Error ellipse: s-maj=24.4km s-min=21.6km az=174.0*
*ISCJB **09** 19:49:00.6±1.0, 33′.56S±0′.07×178′.8W±0′.2, h33km, mb4.5/9, MS3.7/4, Error ellipse: s-maj=18.7km s-min=9.9km az=12.7*
*NEIC **09** 19:49:04.2±3.2, 33′.31S×178′.70W, h56km±25km, mb4.7/2, Error ellipse: s-maj=25.9km s-min=17.5km az=50.0*
ISC 09 19:49:01.0±3.7, **33′.49S**±0′.08×**178′.8W**±0′.2, **h22**km±26km, **n45**, σ1.**14**/29, **mb4.5**/9, **MS3.7**/4, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.79**	**214**	Pn	**Pn**	**19 50 25.0**	**-0.5**
	33nm,0.3s,baz=20,slow=3.0,SNR=84						
URZ				Sn	**Sn**	**19 51 31.8**	**+0.5**
	23nm,0.3s,baz=104,slow=23,SNR=7.2						
URZ	**Urewera**	**5.79**	**214**	*e*P	**Pn**	**19 50 24.4**	**-1.1**
URZ				Sn	**Sn**	**19 51 31.8**	**+0.5**
OUZ	**Omahuta**	**6.50**	**252**	*e*P	**Pn**	**19 50 39.2**	**+3.8**
	38nm,0.7s						
KHZ	**Kahutara**	**10.75**	**212**	*e*P	**Pn**	**19 51 30.9**	**-2.8**
RPZ	**Rata Peaks**	**12.91**	**215**	Pn	**Pn**	**19 51 57.9**	**-5.2**
	2.2nm,0.3s,baz=72,slow=6.4,SNR=9.6						
RPZ				Sn	**Sn**	**19 54 12.5**	**-13**
	1.5nm,0.3s,baz=26,slow=17,SNR=11						
RPZ	**Rata Peaks**	**12.91**	**215**	*e*Pn	**Pn**	**19 51 55.9**	**-7.2**
RPZ				Sn	**Sn**	**19 54 12.5**	**-13**
EIDS	**Eidsvold**	**27.36**	**279**	*e*P	**P**	**19 54 46.2**	**+1.6**
CMSA	**Cobar Meteorol**	**29.90**	**264**	*e*P	**P**	**19 55 08.5**	**+1.3**
STKA	**Stephens Creek**	**33.22**	**262**	LR	LR	20 08 52.2	
	comp=Z,268nm,18.5s,MS4.0,baz=23,slow=36						
STKA	**Stephens Creek**	**33.22**	**262**	P	**P**	**19 55 36.7**	**+0.3**
CTA	**Charters Tower**	**33.74**	**284**	*e*P	**P**	**19 55 42.5**	**+1.5**
	6.1nm,0.5s,mb4.8						
CTA	**Charters Tower**	**33.74**	**284**	P	**P**	**19 55 41.7**	**+0.6**
	7.2nm,0.5s,mb4.8,baz=116,slow=10,SNR=17						
CTA				LR	LR	20 07 33.6	
	comp=Z,84nm,18.6s,MS3.5,baz=304,slow=33						
CTA	**Charters Tower**	**33.74**	**284**	P	**P**	**19 55 41.7**	**+0.6**
CTA				LR	LR	20 07 33.6	
CTAO	**Charters Tower**	**33.74**	**284**	*e*P	**P**	**19 55 42.7**	**+1.7**
	6.7nm,0.5s,mb4.8						
ASAR	**Alice Springs**	**42.34**	**271**	P	**P**	**19 56 53.4**	**-0.1**
	6.5nm,0.7s,mb4.4,baz=112,slow=7.2,SNR=125						
ASAR				PcP	PcP	19 58 45.2	-1.6
	1.3nm,0.6s,baz=117,slow=4.0,SNR=5.7						
ASAR				S	**S**	**20 03 11.1**	**-2.5**
	1.2nm,0.9s,baz=112,slow=16,SNR=6.0						
WRAB	**Tennant Creek**	**43.60**	**276**	*e*P	**P**	**19 57 02.9**	**-0.9**
	10nm,0.8s,mb4.6						
WRA	**Warramunga Arr**	**43.61**	**276**	P	**P**	**19 57 03.5**	**-0.3**
	7.0nm,0.4s,mb4.8,baz=117,slow=8.1,SNR=183						
FITZ	**Fitzroy Crossi**	**51.73**	**273**	*e*P	**P**	**19 58 06.2**	**-0.7**
	7.2nm,0.7s,mb4.7						
FITZ	**Fitzroy Crossi**	**51.73**	**273**	P	**P**	**19 58 06.4**	**-0.5**
	3.7nm,0.7s,mb4.5,baz=174,slow=6.6,SNR=10						
CASY	**Casey**	**52.09**	**209**	*e*P	**P**	**19 58 09.0**	**0.0**
QSPA	**South Pole Qui**	**56.63**	**180**	P	**P**	**19 58 42.3**	**+0.6**
	5.3nm,1.0s,mb4.5,baz=47,slow=3.4,SNR=7.2						
QSPA	**South Pole Qui**	**56.63**	**180**	*e*P	**P**	**19 58 42.1**	**+0.3**
MAW	**Mawson**	**69.18**	**201**	P	**P**	**20 00 07.3**	**+1.9**
	1.3nm,0.4s,mb4.2,baz=122,slow=5.6,SNR=7.0						
KSRS	**Korea Array**	**86.25**	**320**	P	**P**	**20 01 40.5**	**-0.3**
	0.7nm,0.7s,mb4.0,baz=135,slow=5.6,SNR=5.6						
KSRS				LR	LR	20 35 02.7	
	comp=Z,17nm,18.1s,MS3.5,baz=51,slow=32						
PETK	**Petropavlovsk-**	**88.63**	**346**	P	**P**	**20 01 50.4**	**-1.4**
	2.9nm,0.6s,mb4.8,baz=134,slow=6.4,SNR=3.7						
CPUP	**Villa Florida**	**98.60**	**129**	LR	LR	20 44 12.7	
	comp=Z,44nm,18.8s,MS4.0,baz=8.4,slow=34						
MKAR	**Makanchi Array**	**119.19**	**309**	PKP	PKPdf	20 07 46.0	-1.8
	0.5nm,0.6s,baz=68,slow=1.1,SNR=7.1						
ZALV	**Zalesovo Beam**	**119.84**	**317**	PKP	PKPdf	20 07 46.5	-2.5
	0.7nm,0.5s,baz=134,slow=3.3,SNR=4.0						
BVAR	**Borovoye Array**	**128.08**	**314**	PKP	PKPdf	20 08 03.8	-1.0
	1.6nm,0.6s,baz=115,slow=3.0,SNR=11						
ARCES	**ARCESS Array B**	**141.44**	**347**	PKhKP		20 08 22.9	
	0.9nm,0.6s,baz=46,slow=3.5,SNR=4.9						
JOF	**Joensuu**	**144.99**	**336**	*ep*	PKPdf	20 08 33.1	-2.5
	2.7nm,0.5s						
JOF	**Joens

IZM	Izmir	2.05 313	*e*PN	Pn	19 50 36.7	-0.4
IZM	Izmir	2.05 313	*e*Pn	Pn	19 50 36.7	-0.4
KDAG	Bornova	2.05 313	*i* P	Pn	19 50 36.8	-0.3
KDAG	Bornova	2.05 313	*i* P	Pn	19 50 36.8	-0.3
GDZ	Gediz	2.09 7	*i* P	Pn	19 50 37.3	-0.3
GDZ	Gediz	2.09 7	*i* P	Pn	19 50 37.3	-0.3
AKHS	Akhisar	2.15 331	*i* P	Pn	19 50 37.7	-0.7
AKHS	Akhisar	2.15 331	*i* P	Pn	19 50 37.7	-0.8
ALT	Altintas	2.17 20	*e*PN	Pn	19 50 38.1	-0.6
ALT	Altintas	2.17 20	*e*Pn	Pn	19 50 38.1	-0.6
BLCB	Balcova	2.18 310	*e*PN	Pn	19 50 38.5	-0.3
BLCB	Balcova	2.18 310	*e*Pn	Pn	19 50 38.5	-0.3
KARP	Karpathos	2.18 229	P	Pn	19 50 41.1	+2.2
KARP	Karpathos	2.18 229	P	Pn	19 50 41.1	+2.2
DURS	Dursunbey	2.65 348	*i* P	Pn	19 50 45.0	-0.2
DURS	Dursunbey	2.65 348	*i* P	Pn	19 50 45.0	-0.2
HDMB	Hadim	2.65 90	*e*PN	Pn	19 50 45.5	+0.1
HDMB	Hadim	2.65 90	*e*Pn	Pn	19 50 45.5	+0.1
KONT	Konya--Tatoy	2.70 69	*e*PN	Pn	19 50 46.3	+0.3
KONT	Konya--Tatoy	2.70 69	*e*Pn	Pn	19 50 46.3	+0.3
KDHN	Kadinhani	2.78 56	*i* P	Pn	19 50 49.7	+2.6
KDHN	Kadinhani	2.78 56	*i* P	Pn	19 50 49.7	+2.6
LADK	Ladik-KONYA	2.80 64	*e*PN	Pn	19 50 47.6	+0.2
LADK	Ladik-KONYA	2.80 64	*e*Pn	Pn	19 50 47.6	+0.2
KIZT	Kizilcal	2.84 48	*e*PN	Pn	19 50 48.6	+0.6
KIZT	Kizilcal	2.84 48	*e*Pn	Pn	19 50 48.6	+0.7
BALY	Balya	2.99 336	*i* P	Pn	19 50 49.4	-0.6
BALY	Balya	2.99 336	*i* P	Pn	19 50 49.4	-0.5
PRK	Paraskevi	3.20 315	P	Pn	19 50 53.9	+1.1
PRK	Paraskevi	3.20 315	P	Pn	19 50 53.9	+1.1
NPS	Neapolis	3.37 240	P	Pn	19 50 57.1	+1.9
NPS	Neapolis	3.37 240	P	Pn	19 50 57.1	+1.9
LIA	Limnos Island	4.26 314	P	Pn	19 51 08.5	+1.1
LIA	Limnos Island	4.26 314	P	Pn	19 51 08.5	+1.1

*NIC **09** 19:51:51.4±0.3, 36°.72N×31°.46E, h45km, mb4.0, ML3.6, MW3.4*
*NEIC **09** 19:51:51.0, 36°.11N×31°.05E, h15km, MD3.5(ISK), After ISK.*
*CSEM **09** 19:51:53.2±0.2, 36°.10N×31°.09E, h10km, Mw3.4, Error ellipse: s-maj=5.4km s-min=2.6km az=26.0*
*ISK **09** 19:51:53.4, 36°.13N×31°.09E, h21km, MD3.5, ML3.5*
*DDA **09** 19:51:53.1, 36°.15N×31°.13E, h27km±1km, Md3.4*
*ISCJB **09** 19:51:53.1±0.8, 36°.13N±0°.04×31°.11E±0°.03, h12km±6km, Error ellipse: s-maj=6.6km s-min=3.4km az=30.8*

ISC 09 19:51:53.1±0.8, 36°.13N±0°.04×31°.11E±0°.03, h7km±5km, n103, σ0°96/121, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANTB	**Antalya**	**0.85**	**335**	*e*PG	**Pg**	**19 52 10.2**	**+0.7**
ANTB				*e*SG	**Sg**	19 52 22.7	+2.0
ANTB	**Antalya**	**0.85**	**335**	*e*Pg	**Pg**	**19 52 10.3**	**+0.8**
ANTB				*e*Sg	**Sg**	19 52 22.7	+2.1
GAZI	**Gazipasa**	**0.98**	**83**	*i* P	**Pg**	**19 52 11.6**	**-0.4**
GAZI				*i* S	**Sg**	19 52 21.6	-3.1
GAZI	**Gazipasa**	**0.98**	**83**	*i* P	**Pg**	**19 52 11.6**	**-0.4**
GAZI				*i* S	**Sg**	19 52 21.6	-3.1
KORT	**Korkueli**	**1.06**	**325**	*i* P	**Pg**	**19 52 13.1**	**-0.4**
KORT	**Korkueli**	**1.06**	**325**	*i* P	**Pg**	**19 52 13.1**	**-0.5**
ELL	**Elmali**	**1.15**	**303**	*e*PN	**Pg**	**19 52 14.6**	**-0.6**
ELL	**Elmali**	**1.15**	**303**	*e*Pn	**Pg**	**19 52 14.6**	**-0.6**
AKAS	**Kas**	**1.22**	**275**	*i* P	**Pg**	**19 52 16.4**	**-0.2**
AKAS	**Kas**	**1.22**	**275**	*i* P	**Pg**	**19 52 16.4**	**-0.2**
SUTC	**Sutluce-Ispart**	**1.35**	**356**	*e*PN	**Pn**	**19 52 17.8**	**-0.6**
SUTC				*e*SN	**Sn**	19 52 35.1	-1.5
SUTC	**Sutluce-Ispart**	**1.35**	**356**	*e*Pn	**Pn**	**19 52 17.8**	**-0.6**
SUTC				*e*Sn	**Sn**	19 52 35.1	-1.5
HDMB	**Hadim**	**1.39**	**53**	*e*PN	**Pn**	**19 52 18.4**	**-0.5**
HDMB	**Hadim**	**1.39**	**53**	*e*Pn	**Pn**	**19 52 18.5**	**-0.4**
BCK	**Bucak**	**1.39**	**343**	*e*PN	**Pn**	**19 52 18.2**	**-0.8**
BCK	**Bucak**	**1.39**	**343**	*e*Pn	**Pn**	**19 52 18.2**	**-0.8**
ERMK	**Ermenek**	**1.54**	**70**	*i* P	**Pn**	**19 52 21.3**	**+0.2**
ERMK	**Ermenek**	**1.54**	**70**	*i* P	**Pn**	**19 52 21.3**	**+0.2**
ALFC	**Alevga** 17nm,0.3s	**1.55**	**128**	P	**Pn**	**19 52 20.1**	**-1.1**
ALFC				S	**Sn**	19 52 42.9	+1.3
ALFC	**Alevga** 17nm,0.3s	**1.55**	**128**	P	**Pn**	**19 52 20.1**	**-1.1**
ALFC				S	**Sn**	19 52 42.9	+1.3
PPCY	**Paphos**	**1.60**	**141**	P	**Pn**	**19 52 22.8**	**+1.0**
PPCY				S	**Sn**	19 52 46.6	+3.9
PPCY	**Paphos**	**1.60**	**141**	P	**Pn**	**19 52 22.8**	**+1.0**
PPCY				S	**Sn**	19 52 46.6	+3.9
GLHS	**Glhisar (BURDU**	**1.65**	**309**	*e*PN	**Pn**	**19 52 22.1**	**-0.5**
GLHS	**Glhisar (BURDU**	**1.65**	**309**	*e*Pn	**Pn**	**19 52 22.1**	**-0.5**
FETY	**Fethiye**	**1.71**	**288**	*e*PN	**Pn**	**19 52 22.6**	**-0.8**
FETY	**Fethiye**	**1.71**	**288**	*e*Pn	**Pn**	**19 52 22.6**	**-0.8**
LEF	**Lefka**	**1.77**	**124**	*e*PN	**Pn**	**19 52 23.0**	**-1.2**
LEF	**Lefka**	**1.77**	**124**	*e*Pn	**Pn**	**19 52 23.0**	**-1.1**
MAMC	**Mammari**	**1.96**	**118**	P	**Pn**	**19 52 24.5**	**-2.4**
MAMC	**Mammari**	**1.96**	**118**	P	**Pn**	**19 52 24.5**	**-2.4**
KONT	**Konya--Tatoy**	**2.07**	**29**	*e*PN	**Pn**	**19 52 28.2**	**-0.1**
KONT	**Konya--Tatoy**	**2.07**	**29**	*e*Pn	**Pn**	**19 52 28.3**	**-0.1**
IKL	**Isikli**	**2.09**	**86**	*e*PN	**Pn**	**19 52 28.4**	**-0.1**
IKL				*e*SN	**Sn**	19 52 53.6	-1.2
IKL	**Isikli**	**2.09**	**86**	*e*Pn	**Pn**	**19 52 28.4**	**-0.2**
IKL				*e*Sn	**Sn**	19 52 53.6	-1.2
LFK	**Lefkose**	**2.15**	**113**	*e*PN	**Pn**	**19 52 29.3**	**-0.1**
LFK	**Lefkose**	**2.15**	**113**	*e*Pn	**Pn**	**19 52 29.3**	**-0.1**
TURN	**Turunc**	**2.15**	**291**	*i* P	**Pn**	**19 52 33.2**	**+3.8**
CSS	**Prodhromos** 3.3nm,0.3s	**2.15**	**122**	P	**Pn**	**19 52 27.1**	**-2.4**
CSS				S	**Sn**	19 52 56.1	-0.3
CSS	**Prodhromos** 3.3nm,0.3s	**2.15**	**122**	P	**Pn**	**19 52 27.1**	**-2.4**
CSS				S	**Sn**	19 52 56.1	-0.3
DNZL	**Cakiroluk**	**2.27**	**314**	*i* P	**Pn**	**19 52 34.4**	**+3.3**
DNZL	**Cakiroluk**	**2.27**	**314**	*i* P	**Pn**	**19 52 34.4**	**+3.3**
LADK	**Ladik-KONYA**	**2.30**	**25**	*e*PN	**Pn**	**19 52 31.9**	**+0.4**
LADK	**Ladik-KONYA**	**2.30**	**25**	*e*Pn	**Pn**	**19 52 31.9**	**+0.4**
DENT	**Denizli**	**2.32**	**315**	*e*PN	**Pn**	**19 52 31.5**	**-0.3**
DENT	**Denizli**	**2.32**	**315**	*e*Pn	**Pn**	**19 52 31.5**	**-0.3**
SHUT	**Suhut-Afyon**	**2.46**	**350**	*e*PN	**Pn**	**19 52 33.6**	**-0.1**
SHUT	**Suhut-Afyon**	**2.46**	**350**	*e*Pn	**Pn**	**19 52 33.6**	**-0.1**
YER	**Yerkesik**	**2.48**	**295**	*e*PN	**Pn**	**19 52 34.4**	**+0.4**
YER	**Yerkesik**	**2.48**	**295**	*e*Pn	**Pn**	**19 52 34.4**	**+0.4**
KHL	**Karahalli**	**2.53**	**330**	*e*PN	**Pn**	**19 52 34.4**	**-0.3**
KHL	**Karahalli**	**2.53**	**330**	*e*Pn	**Pn**	**19 52 34.4**	**-0.3**
EREN	**Erenkoy**	**2.56**	**103**	*e*PN	**Pn**	**19 52 35.7**	**+0.7**
EREN	**Erenkoy**	**2.56**	**103**	*e*Pn	**Pn**	**19 52 35.7**	**+0.7**
KHAL	**Karahalli**	**2.58**	**331**	*i* P	**Pn**	**19 52 35.5**	**+0.1**
KHAL				*i* S	**Sn**	19 53 07.5	+0.4
KHAL	**Karahalli**	**2.58**	**331**	*i* P	**Pn**	**19 52 35.5**	**+0.1**
KHAL				*i* S	**Sn**	19 53 07.5	+0.4
PHNC	**Paralimni** 5.7nm,0.6s	**2.63**	**114**	P	**Pn**	**19 52 39.4**	**+3.3**
PHNC				S	**Sn**	19 53 12.8	+4.5
PHNC	**Paralimni** 5.7nm,0.6s	**2.63**	**114**	P	**Pn**	**19 52 39.4**	**+3.3**
PHNC				S	**Sn**	19 53 12.8	+4.5
KIZT	**Kizilcal**	**2.81**	**12**	*e*PN	**Pn**	**19 52 37.9**	**-0.6**
KIZT	**Kizilcal**	**2.81**	**12**	*e*PN	**Pn**	**19 52 37.9**	**-0.7**
SULT	**Sultanhani-AKS**	**2.82**	**42**	*e*PN	**Pn**	**19 52 39.2**	**+0.6**
SULT	**Sultanhani-AKS**	**2.82**	**42**	*e*PN	**Pn**	**19 52 39.2**	**+0.5**
MERS	**Mersin**	**2.85**	**74**	*e*PN	**Pn**	**19 52 39.3**	**+0.3**
MERS	**Mersin**	**2.85**	**74**	*e*Pn	**Pn**	**19 52 39.3**	**+0.3**
DAT	**Datca**	**2.91**	**283**	*e*PN	**Pn**	**19 52 39.7**	**-0.2**
DAT	**Datca**	**2.91**	**283**	*e*Pn	**Pn**	**19 52 39.7**	**-0.2**
MLSB	**Milas**	**2.92**	**294**	*e*PN	**Pn**	**19 52 39.5**	**-0.5**
MLSB	**Milas**	**2.92**	**294**	*e*Pn	**Pn**	**19 52 39.5**	**-0.5**
ALT	**Altintas**	**3.03**	**345**	*e*PN	**Pn**	**19 52 41.4**	**-0.1**
ALT	**Altintas**	**3.03**	**345**	*e*Pn	**Pn**	**19 52 41.4**	**-0.1**
KULA	**Kula-Manisa**	**3.08**	**321**	*e*PN	**Pn**	**19 52 42.3**	**+0.1**
KULA	**Kula-Manisa**	**3.08**	**321**	*e*Pn	**Pn**	**19 52 42.3**	**+0.1**
BDRM	**Kayabasi**	**3.09**	**289**	*i* P	**Pn**	**19 52 42.5**	**+0.1**
BDRM	**Kayabasi**	**3.09**	**289**	*i* P	**Pn**	**19 52 42.5**	**+0.1**
GULE	**Gulek**	**3.17**	**68**	*i* P	**Pn**	**19 52 46.9**	**+3.5**
GULE	**Gulek**	**3.17**	**68**	*i* P	**Pn**	**19 52 46.9**	**+3.5**
GDZ	**Gediz**	**3.23**	**337**	*i* P	**Pn**	**19 52 43.0**	**-1.2**
SVRH	**Sivrihisar-ESK**	**3.33**	**6**	*e*PN	**Pn**	**19 52 45.6**	**-0.1**
SVRH	**Sivrihisar-ESK**	**3.33**	**6**	*e*Pn	**Pn**	**19 52 45.6**	**0.0**
KARA	**Karaisali**	**3.37**	**69**	*e*PN	**Pn**	**19 52 46.6**	**+0.5**
KARA	**Karaisali**	**3.37**	**69**	*e*Pn	**Pn**	**19 52 46.6**	**+0.4**
ESKT	**Eskisehir**	**3.39**	**357**	*e*PN	**Pn**	**19 52 46.6**	**+0.1**
ESKT	**Eskisehir**	**3.39**	**357**	*e*Pn	**Pn**	**19 52 46.6**	**+0.1**
KRTS	**Karatas**	**3.47**	**81**	*e*PN	**Pn**	**19 52 48.2**	**+0.6**
KRTS	**Karatas**	**3.47**	**81**	*e*Pn	**Pn**	**19 52 48.2**	**+0.6**
DEMI	**Demirci**	**3.48**	**328**	*i* P	**Pn**	**19 52 48.1**	**+0.4**
DEMI	**Demirci**	**3.48**	**328**	*i* P	**Pn**	**19 52 48.1**	**+0.5**
YURE	**YUREGIR**	**3.71**	**78**	*i* P	**Pn**	**19 52 52.0**	**+1.1**
YURE	**YUREGIR**	**3.71**	**78**	*i* P	**Pn**	**19 52 52.0**	**+1.1**
IZM	**Izmir**	**3.81**	**308**	*e*PN	**Pn**	**19 52 52.7**	**+0.4**
CEYT	**Ceyhan**	**3.84**	**75**	*e*PN	**Pn**	**19 52 53.4**	**+0.8**
CEYT	**Ceyhan**	**3.84**	**75**	*e*Pn	**Pn**	**19 52 53.4**	**+0.8**
BLCB	**Balcova**	**3.95**	**306**	*e*PN	**Pn**	**19 52 54.4**	**+0.2**
BLCB	**Balcova**	**3.95**	**306**	*e*Pn	**Pn**	**19 52 54.4**	**+0.2**
KOZT	**Kozan**	**4.02**	**69**	*e*PN	**Pn**	**19 52 56.0**	**+0.9**
DURS	**Dursunbey**	**4.05**	**330**	*i* P	**Pn**	**19 52 55.8**	**+0.4**
DURS	**Dursunbey**	**4.05**	**330**	*i* P	**Pn**	**19 52 55.8**	**+0.3**
YAYL	**Yayladag**	**4.05**	**90**	*i* P	**Pn**	**19 52 56.0**	**+0.5**
YAYL	**Yayladag**	**4.05**	**90**	*i* P	**Pn**	**19 52 56.0**	**+0.5**
KUZU	**Kuzuini**	**4.85**	**81**	*i* P	**Pn**	**19 53 07.8**	**+1.2**
KUZU	**Kuzuini**	**4.85**	**81**	*i* P	**Pn**	**19 53 07.8**	**+1.2**
GAZ	**Gaziantep**	**5.02**	**76**	*e*PN	**Pn**	**19 53 09.9**	**+1.1**
GAZ	**Gaziantep**	**5.02**	**76**	*e*Pn	**Pn**	**19 53 09.9**	**+1.1**
SARI	**SarD1z-Kayseri**	**5.12**	**59**	*e*PN	**Pn**	**19 53 07.2**	**-3.1**

*IDC **09** 20:18:55.4±2.4, 42°.96N×104°.98W, h0km, mb3.7/3, mb1 4.0/5, mb1mx3.6/26, mbtmp3.8/5, ML3.7/2, Error ellipse: s-maj=48.9km s-min=9.3km az=159.0*
*ISCJB **09** 20:18:58.8±0.4, 43°.73N±0°.04×105°.18W±0°.04, h0km, mb4.2/2, Error ellipse: s-maj=6.3km s-min=4.3km az=159.5*
*NEIC **09** 20:19:00.6±0.3, 43°.70N×105°.23W, h0km, ML3.1, Error ellipse: s-maj=4.4km s-min=3.7km az=172.0, Suspected Mining explosion.*
NEIC 65 km [40 miles] SSE of Gillette.

ISC 09 20:19:00.4±0.4, 43°.71N±0°.04×105°.17W±0°.04, h0km, n35, σ0°99/36, mb4.2/2, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.92**	**63**	*e*Pg	**Pg**	**20 19 19.1**	**+1.1**
RSSD				*e*Sg	**Sg**	20 19 28.2	-1.7
PHWY	**Pilot Hill**	**2.42**	**185**	*e*Pn	**Pn**	**20 19 41.4**	**+0.3**
RWWY	**Rawlins**	**2.52**	**217**	*e*Pn	**Pn**	**20 19 42.7**	**+0.1**
LAO	**LASA Array**	**3.07**	**346**	Pn	**Pn**	**20 19 50.1**	**0.0**
RLMT	**Red Lodge**	**3.26**	**297**	*e*Pn	**Pn**	**20 19 52.4**	**-0.3**
BW06	**Boulder Array**	**3.34**	**255**	*e*Pn	**Pn**	**20 19 52.8**	**-1.1**
PDAR	**Pinedale Array** 5.6nm,0.3s,baz=85,slow=16,SNR=48	**3.34**	**255**	Pn	**Pn**	**20 19 52.9**	**-1.0**
PDAR	22nm,0.3s,baz=69,slow=29,SNR=20			Lg		20 20 40.1	
OGNE	**Ogallala**	**3.61**	**139**	*e*Pn	**Pn**	**20 19 58.4**	**+0.8**
GCMT	**Greycliff**	**3.82**	**305**	*e*Pn	**Pn**	**20 20 01.2**	**+0.8**
ISCO	**Idaho Springs**	**3.92**	**185**	*e*Pn	**Pn**	**20 20 02.2**	**+0.4**
LOHW	**Long Hollow**	**3.94**	**270**	*e*Pn	**Pn**	**20 20 04.6**	**+2.4**
REDW	**Red Top Meadow**	**4.15**	**267**	Pn	**Pn**	**20 20 05.0**	**+0.1**
IMW	**Indian Meadow**	**4.18**	**275**	*e*Pn	**Pn**	**20 20 04.8**	**-0.6**
TPAW	**Teton Pass**	**4.21**	**269**	*e*Pn	**Pn**	**20 20 05.7**	**-0.1**
RRI2	**Red Ridge**	**4.49**	**267**	*e*Pn	**Pn**	**20 20 10.7**	**+1.1**
QLMT	**Earthquake Lak**	**4.63**	**286**	Pg	**Pg**	**20 20 22.4**	**-6.8**
DGMT	**Dagmar**	**4.81**	**8**	*e*Pn	**Pn**	**20 20 15.7**	**+1.7**
BOZ	**Bozeman (W)**	**5.00**	**295**	*e*Pn	**Pn**	**20 20 14.5**	**-2.1**
HWUT	**Hardware Ranch** 5.5nm,0.4s	**5.16**	**248**	*e*Pn	**Pn**	**20 20 17.6**	**-1.3**
EGMT	**Eagleton** 14nm,0.3s	**5.37**	**325**	*e*Pn	**Pn**	**20 20 21.6**	**-0.1**
DLMT	**Dillon** 2.7nm,0.5s	**5.56**	**290**	*e*Pn	**Pn**	**20 20 25.1**	**+0.8**
HRY	**Holter Researc** 7.6nm,0.3s	**5.58**	**305**	*e*Pn	**Pn**	**20 20 24.9**	**+0.2**
LRM	**Limekiln Ridge** 15nm,0.3s	**5.60**	**295**	*e*Pn	**Pn**	**20 20 25.2**	**+0.3**
DAU	**Daniels Canyon** 5.9nm,0.4s	**5.60**	**236**	*e*Pn	**Pn**	**20 20 25.2**	**+0.3**
MCMT	**McKenzie Canyo** 1.4nm,0.3s	**5.63**	**284**	Pn	**Pn**	**20 20 26.0**	**+0.7**
SRU	**San Rafael** 8.7nm,0.4s	**6.11**	**223**	*e*Pn	**Pn**	**20 20 30.5**	**-1.4**
ECSD	**EROS Data Cent** 4.3nm,0.3s	**6.20**	**87**	*e*Pn	**Pn**	**20 20 34.2**	**+1.1**
TMUT	**Trail Mountain** 4.6nm,0.4s	**6.32**	**228**	*e*Pn	**Pn**	**20 20 34.9**	**0.0**
CHMT	**Chamberlain Mo** 1.3nm,0.3s	**6.54**	**302**	*e*Pn	**Pn**	**20 20 37.5**	**-0.2**
AGMN	**Agassiz Nation** 8.0nm,0.5s	**7.94**	**51**	*e*Pn	**Pn**	**20 20 57.2**	**+0.2**
ULM	**Lac du Bonnet**	**9.11**	**41**	Pn	**Pn**	**20 21 11.9**	**-1.2**
ULM				Lg		20 23 51.2	
ULM	**Lac du Bonnet** 1.8nm,0.3s,baz=232,slow=13,SNR=8.3	**9.11**	**41**	Pn	**Pn**	**20 21 11.9**	**-1.2**
ULM	0.4nm,0.3s,baz=120,slow=21,SNR=3.4			Lg		20 23 51.2	
YKA	**Yellowknife Ar** 0.4nm,0.4s,baz=155,slow=8.4,SNR=4.1	**19.61**	**347**	P	**Pn**	**20 23 34.6**	**+3.4**
ARCES	**ARCESS Array B** 1.4nm,0.8s,mb4.1,baz=330,slow=7.0,SNR=5.2	**61.42**	**18**	P	**P**	**20 29 16.5**	**-1.4**
FINES	**FINESS Array B** 2.3nm,1.0s,mb4.4,baz=304,slow=9.9,SNR=3.2	**68.03**	**23**	P	**P**	**20 30 00.5**	**-0.5**

MEX 09 20:19:38.1±0.8, 16°.05N×98°.58W, h14km±17km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.55**	**51**	*i* P	Pg	20 19 47.2	-1.8
PNIG				*i* S	Sg	20 19 54.6	-1.7
ACX	**Acapulco**	**1.52**	**303**	*e*P	Pn	20 20 01.6	-3.3
ACX				*i* S	Sn	20 20 18.5	-5.9
UTMO	**Huajuapan**	**1.92**	**23**	*i* P	Pn	20 20 07.8	-2.6
UTMO				*i* S	Sn	20 20 30.9	-3.4
VHO	**Vista Hermosa**	**2.04**	**60**	*i* P	Pn	20 20 09.6	-2.4
VHO				*i* S	Sn	20 20 34.5	-2.7
OXX	**Oaxaca**	**2.05**	**60**	*e*P	Pn	20 20 11.3	-0.9
OXX				*i* S	Sn	20 20 34.5	-3.1
HUIG	**Huatulco**	**2.39**	**96**	*e*P	Pn	20 20 14.3	-2.5
HUIG				*i* S	Sn	20 20 42.2	-3.6
TPIG	**Tehuac#an**	**2.63**	**26**	*e*P	Pn	20 20 17.8	-2.3
TPIG				*i* S	Sn	20 20 48.8	-3.0
YAIG	**Yautepec**	**2.84**	**351**	*e*P	Pn	20 20 20.6	-2.4
YAIG				*i* S	Sn	20 20 54.2	-2.8
PPM	**Popocatepetl**	**3.00**	**359**	*e*P	Pn	20 20 26.4	+1.2
PPM				*i* S	Sn	20 21 00.4	-0.6

GUC 09 20:46:53.5±0.6, 22°.10S×67°.89W, h218km±31km, ML4.2, 2C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PECH	**Pedro de Valdi**	**1.72**	**253**	*e*P	Pn	20 47 32.5	+1.8
PECH				*i* S	S	20 48 01.4	+1.6
PECH	comp=E,793nm,0.3s			AML	AML	20 48 02.9	
HMBC	**Humberston**	**2.60**	**314⇑**	*i* P	Pn	20 47 41.5	+1.8
HMBC				*i* S	S	20 48 18.1	+2.3
HMBC	comp=N,473nm,0.2s			AML	AML	20 48 20.5	
PSGC	**Pisagua**	**3.25**	**320⇓**	*i* P	Pn	20 47 48.6	+1.6
PSGC	comp=E,151nm,0.5s			AML	AML	20 48 33.0	
MNMC	**Miæe Miæ**	**3.36**	**331⇑**	*i* P	Pn	20 47 50.8	+2.4
MNMC				*i* S	S	20 48 34.3	+2.8
MNMC	comp=N,291nm,0.2s			AML	AML	20 48 37.4	

IDC 09 20:51:10.6±1.7, 10°.00S×123°.25E, h0km, mb3.2/1, mb1 3.6/4, mb1mx3.3/18, mbtmp3.4/4, ML3.3/3, Error ellipse: s-maj=128.2km s-min=26.5km az=61.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi** 0.2nm,0.3s,baz=319,slow=15,SNR=11	**8.38**	**164**	Pn	Pn	20 53 13.5	+0.1
FITZ	0.8nm,0.3s,baz=96,slow=17,SNR=6.1			Sn	Sn	20 54 39.0	-10
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=309,slow=15,SNR=19	**14.57**	**134**	Pn	Pn	20 54 37.8	-0.4
ASAR	**Alice Springs** 0.1nm,0.3s,baz=323,slow=13,SNR=6.5	**16.98**	**144**	Pn	Pn	20 55 09.9	+0.3
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=136,slow=6.8,SNR=2.6	**67.31**	**331**	P	P	21 02 07.4	+0.1

*DJA **09** 20:53:44, 10°.42S×122°.80E, h20km, mb4.7/11*

*BJI **09** 20:53:48.5, 10°.80S×123°.10E, h153km, mB4.8/4, mb4.5/4*
*ISCJB **09** 20:53:51.8±1.1, 10°.81S±0°.08×123°.1E±0°.1, h169km±14km, mb4.0/6, Error ellipse: s-maj=18.8km s-min=9.1km az=144.4*
*NEIC **09** 20:53:52.5±1.0, 10°.78S×123°.06E, h154km±12km, mb4.3/2, Error ellipse: s-maj=17.0km s-min=9.0km az=57.0*
*IDC **09** 20:53:52.6±2.2, 10°.70S×123°.07E, h151km±21km, mb3.7/5, mb1 3.8/9, mb1mx3.6/19, mbtmp3.7/9, MS2.8/2, Ms1 2.9/2, ms1mx2.2/27, Error ellipse: s-maj=43.8km s-min=14.9km az=63.0*

ISC 09 20:53:52.4±1.1, 10°.81S±0°.08×123°.1E±0°.1, h155km±13km, n20, σ0°86/22, mb4.0/6, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang** 2.3nm,0.3s,baz=107,slow=6.0,SNR=12	**6.64**	**330**	P	**Pn**	**20 55 27.3**	**-0.4**
KAPI	**Kappang**	**6.64**	**330**	*e*P	**Pn**	**20 55 28.0**	**+0.2**
FITZ	**Fitzroy Crossi** 2.1nm,0.3s,baz=358,slow=10,SNR=8.2	**7.65**	**161**	P	**Pn**	**20 55 42.8**	**+1.6**
FITZ	1.5nm,0.3s,baz=283,slow=15,SNR=1.9			S	**Sn**	20 57 06.1	-0.6
FITZ	comp=Z,82nm,19.5s,baz=81,slow=44			LR	LR	20 59 36.6	
FITZ	**Fitzroy Crossi**	**7.65**	**161**	*e*P	**Pn**	**20 55 42.5**	**+1.4**
FITZ				S	**Sn**	20 57 06.1	-0.6
FITZ				LR	LR	20 59 36.6	
KAKA	**Kakadu**	**9.35**	**103**	P	**Pn**	**20 56 03.3**	**-0.4**
MBWA	**Marble Bar**	**10.78**	**197**	*e*P	**Pn**	**20 56 22.2**	**-0.4**
WRA	**Warramunga Arr** 1.6nm,0.3s,baz=302,slow=14,SNR=36	**14.13**	**131**	P	**Pn**	**20 57 05.7**	**-0.1**
WRA	1.2nm,0.3s,baz=304,slow=24,SNR=6.4			S	**Sn**	20 59 36.4	-6.3
WRAB	**Tennant Creek** 15nm,0.6s	**14.14**	**131**	*e*P	**Pn**	**20 57 06.3**	**+0.5**
ASAR	**Alice Springs** 1.4nm,0.3s,baz=326,slow=14,SNR=32	**16.42**	**143**	P	**Pn**	**20 57 37.2**	**+3.2**
ASAR	0.6nm,0.3s,baz=313,slow=21,SNR=6.9			S	**S**	21 00 35.9	-0.8
CMAR	**Chiang Mai Arr** 0.7nm,0.8s,mb3.3,baz=136,slow=6.9,SNR=6.4	**37.60**	**320**	P	**P**	**21 00 50.4**	**-1.8**
CMAR	comp=Z,12nm,20.9s,baz=240,slow=38			LR	LR	21 17 46.4	
MJAR	**Matsushiro Arr** 1.8nm,0.6s,mb3.9,baz=191,slow=9.3,SNR=8.5	**49.21**	**16**	P	**P**	**21 02 24.2**	**-0.7**
LSA	**Lhasa** 1.0nm,0.3s,mb4.1	**50.69**	**323**	P	**P**	**21 02 35.7**	**-0.6**
ULN	**Ulaanbaatar** 1.0nm,0.3s,mb4.1	**60.13**	**348**	*e*P	**P**	**21 03 43.8**	**+0.4**
SONM	**Songino Array** 1.4nm,0.6s,mb4.0,baz=164,slow=7.8,SNR=9.8	**60.24**	**347**	P	**P**	**21 03 44.8**	**+0.7**
MK31	**Makanchi Array**	**67.94**	**331**	*e*P	**P**	**21 04 35.2**	**+0.9**
MKAR	**Makanchi Array** 4.9nm,0.5s,mb4.5,baz=115,slow=8.2,SNR=72	**67.94**	**331**	P	**P**	**21 04 35.1**	**+0.7**
ZAA0	**Zalesovo Array**	**72.21**	**337**	*e*P	**P**	**21 05 00.1**	**-0.1**
ZALV	**Zalesovo Beam** 2.1nm,0.6s,mb4.0,baz=136,slow=4.2,SNR=13	**72.21**	**337**	P	**P**	**21 05 00.3**	**+0.1**
LPAZ	**La Paz** 0.8nm,0.9s,baz=202,slow=2.6,SNR=2.1	**150.87**	**157**	PKPbc	PKPbc	21 13 28.1	+0.5
LPAZ	1.0nm,0.7s,baz=153,slow=4.6,SNR=4.6			PKPab	PKPab	21 13 38.0	+2.8
LPAZ	**La Paz**	**150.87**	**157**	PKPbc	PKPbc	21 13 28.1	+0.5
LPAZ				PKPab	PKPab

KALE S Sg 21 30 42.9 +1.2
ITM Ithomi 0.81 148 *e*Pn Pg 21 30 32.5 +0.9
ITM Ithomi 0.81 148 P Pg 21 30 32.3 +0.7
ITM Ithomi 0.81 148 *e*PN Pg 21 30 32.5 +0.9
ITM Ithomi 0.81 148 P Pg 21 30 32.3 +0.7
VLX Vlachokerasia 0.93 122 *e*PN Pg 21 30 34.2 +0.2
VLX Vlachokerasia 0.93 122 *e*Pn Pg 21 30 34.2 +0.2
PYL PYLOS 1.01 164 P Pg 21 30 35.3 -0.2
PYL PYLOS 1.01 164 *e*PN Pg 21 30 36.0 +0.5
PYL PYLOS 1.01 164 P Pg 21 30 35.3 -0.2
PYL PYLOS 1.01 164 *e*Pn Pg 21 30 36.0 +0.5
DSF Desfina 1.05 59 P Pg 21 30 35.2 -1.1
DSF Desfina 1.05 59 P Pg 21 30 35.2 -1.1
LKD2 Lefkada island 1.08 328 P Pg 21 30 36.1 -0.8
LKD2 S Sg 21 30 52.1 +1.1
LKD2 Lefkada island 1.08 328 P Pg 21 30 36.1 -0.8
LKD2 S Sg 21 30 52.1 +1.1
EVR Evrytania 1.10 17 *e*Pn Pg 21 30 36.4 -0.8
EVR Evrytania 1.10 17 *e*PN Pg 21 30 36.4 -0.8
EVR Evrytania 1.10 17 *e*Pn Pg 21 30 36.4 -0.8
LTK Loutraki 1.26 82 *e*PN Pn 21 30 39.0 -1.2
LTK Loutraki 1.26 82 *e*Pn Pn 21 30 39.0 -1.2
AGG Agios Georgios 1.37 32 *e*Pn Pn 21 30 40.4 -1.4
AGG Agios Georgios 1.37 32 P Pn 21 30 41.5 -0.3
AGG Agios Georgios 1.37 32 *e*PN Pn 21 30 40.4 -1.4
AGG Agios Georgios 1.37 32 *e*Pn Pn 21 30 40.4 -1.4
AGG Agios Georgios 1.37 32 P Pn 21 30 41.5 -0.3
LKR Lokris 1.49 58 *e*Pn Pn 21 30 42.9 -0.5
LKR Lokris 1.49 58 P Pn 21 30 43.0 -0.4
LKR Lokris 1.49 58 *e*PN Pn 21 30 42.9 -0.5
LKR Lokris 1.49 58 *e*Pn Pn 21 30 42.9 -0.5
NAIG Nisos Aigina 1.67 93 *e*Pn Pn 21 30 47.5 +1.7
NAIG Nisos Aigina 1.67 93 *e*PN Pn 21 30 47.5 +1.7
THL Klokotos Trika 1.77 16 *e*PN Pn 21 30 47.3 +0.1
THL Klokotos Trika 1.77 16 *e*Pn Pn 21 30 47.3 +0.1
NEO Neokhori 2.04 44 *e*Pn Pn 21 30 52.3 +1.4
NEO Neokhori 2.04 44 *e*PN Pn 21 30 52.3 +1.4

*ISCJB **09** 21:52:54.0±1.1, 13°.41N±0°.06×125°.57E±0°.07, h37km±11km, mb4.0/18, MS2.7/3, Error ellipse: s-maj=12.4km s-min=8.4km az=148.2*
*MAN **09** 21:52:55, 13°.50N×125°.44E, h43km, mb4.6, ML3.5, MS3.4*
*IDC **09** 21:52:57.9±10.0, 13°.39N×125°.63E, h59km±98km, mb3.6/11, mb1 3.7/11, mb1mx3.6/22, mbtmp3.6/11, MS2.9/3, Ms1 2.9/3, ms1mx2.6/29, Error ellipse: s-maj=39.9km s-min=14.7km az=69.0*
*NEIC **09** 21:52:57.6±0.9, 13°.39N×125°.63E, h57km±9km, mb4.3/8, Error ellipse: s-maj=9.0km s-min=5.3km az=67.0*
ISC 09 21:52:55.8±1.0, 13°.41N±0°.06×125°.55E±0°.07, h35km±10km, n37, σ0§99/38, mb4.0/18, MS2.7/3, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVCP	**Virac**	**1.37**	**278**	*e*P	**Pn**	**21 53 16.6**	**-1.8**
PVCP				*e*S	**Sn**	**21 53 25.0**	**-10**
GQP	**Guinayangan**	**3.06**	**280**	⇑*e*P	**Pn**	**21 53 40.4**	**-1.3**
GQP				*e*S	**Sn**	**21 54 15.6**	**-1.5**
RCP	**Roxas**	**3.30**	**236**	⇓*i*P	**Pn**	**21 53 45.5**	**+0.5**
GUIM	**Jordan**	**4.01**	**227**	*e*P	**Pn**	**21 53 56.6**	**+1.9**
BALP	**Baler**	**4.49**	**302**	*e*P	**Pn**	**21 53 57.9**	**-3.5**
BALP				*e*S	**Sn**	**21 54 32.8**	**-20**
CAUP	**Cauayan**	**5.03**	**315**	*e*P	**Pn**	**21 54 09.0**	**+0.2**
DAV	**Davao City (W)**	**6.30**	**180**	Pn	**Pn**	**21 54 27.9**	**+1.7**
TATO	**Taipei**	**12.13**	**342**	*e*Pn	**Pn**	**21 55 48.1**	**+2.0**
GUMO	**Guam**	**18.79**	**87**	P	**Pn**	**21 57 11.3**	**-1.6**
CBIJ	**Chichi jima**	**20.68**	**46**	LR	LR	22 04 21.4	
	comp=Z,29nm,21.1s,MS2.6,baz=258,slow=33						
KSRS	**Korea Array**	**24.04**	**5**	P	**P**	**21 58 07.5**	**0.0**
	2.7nm,0.8s,mb3.7,baz=185,slow=10,SNR=15						
KSRS				LR	LR	22 06 33.0	
	comp=Z,16nm,19.4s,MS2.5,baz=200,slow=34						
MJAR	**Matsushiro Arr**	**25.68**	**24**	LR	LR	22 06 36.9	
	comp=Z,48nm,18.4s,MS3.1,baz=215,slow=32						
CM31	**Chiang Mai Arr**	**26.06**	**285**	*e*P	**P**	**21 58 25.8**	**-0.3**
CMAR	**Chiang Mai Arr**	**26.06**	**285**	P	**P**	**21 58 26.3**	**+0.2**
	0.6nm,0.7s,mb3.3,baz=94,slow=7.9,SNR=7.3						
CHTO	**Chiang Mai**	**26.11**	**285**	*e*P	**P**	**21 58 26.9**	**+0.4**
FITZ	**Fitzroy Crossi**	**31.31**	**180**	*e*P	**P**	**21 59 12.2**	**-0.6**
WRA	**Warramunga Arr**	**34.25**	**165**	P	**P**	**21 59 37.1**	**-1.4**
	1.1nm,1.1s,mb3.7,baz=344,slow=9.6,SNR=3.5						
ULN	**Ulaanbaatar**	**37.65**	**340**	*e*P	**P**	**22 00 07.8**	**+0.4**
	1.0nm,0.6s,mb3.7						
ASAR	**Alice Springs**	**37.74**	**167**	P	**P**	**22 00 08.4**	**+0.1**
	0.6nm,0.6s,mb3.5,baz=342,slow=6.3,SNR=6.5						
SONM	**Songino Array**	**37.85**	**339**	P	**P**	**22 00 09.2**	**+0.1**
	1.3nm,0.8s,mb3.7,baz=153,slow=10.0,SNR=7.6						
TLY	**Talaya**	**42.06**	**340**	*e*P	**P**	**22 00 44.7**	**+0.7**
	1.5nm,0.3s,mb4.1						
PET	**Petropavlovsk**	**47.46**	**27**	P	**P**	**22 01 26.4**	**-0.6**
STKA	**Stephens Creek**	**47.58**	**161**	P	**P**	**22 01 28.2**	**+0.1**
	4.4nm,0.9s,mb4.5,baz=302,slow=3.7,SNR=4.4						
STKA	**Stephens Creek**	**47.58**	**161**	*e*P	**P**	**22 01 28.0**	**-0.2**
	2.0nm,1.2s,mb4.0						
MKAR	**Makanchi Array**	**49.13**	**321**	P	**P**	**22 01 40.8**	**+0.8**
	1.3nm,0.8s,mb4.0,baz=96,slow=10,SNR=13						
ZALV	**Zalesovo Beam**	**51.56**	**330**	P	**P**	**22 01 57.9**	**-0.2**
	0.4nm,0.4s,mb3.7,baz=113,slow=11,SNR=2.9						
TKM2	**Tokmak 2**	**51.96**	**314**	P	**P**	**22 02 02.2**	**+0.8**
UCH	**Uchtor**	**52.50**	**313**	*e*P	**P**	**22 02 06.3**	**+0.9**
	1.4nm,0.8s,mb3.9						
AML	**Almayashu**	**53.05**	**313**	*e*P	**P**	**22 02 10.9**	**+1.4**
	4.1nm,0.4s,mb4.7						
KURK	**Kurchatov**	**53.11**	**324**	*e*P	**P**	**22 02 09.6**	**-0.1**
	5.7nm,0.9s,mb4.5						
KBL	**Kabul**	**55.02**	**303**	P	**P**	**22 02 23.7**	**-0.2**
BVAR	**Borovoye Array**	**58.71**	**325**	P	**P**	**22 02 50.7**	**+1.0**
	0.9nm,0.6s,mb4.0,baz=120,slow=8.8,SNR=6.9						
BRVK	**Borovoye**	**58.78**	**325**	*e*P	**P**	**22 02 50.6**	**+0.4**
	3.2nm,0.8s,mb4.4						
KIV	**Kislovodsk**	**75.72**	**312**	*e*P	**P**	**22 04 37.9**	**+0.1**
	2.3nm,0.6s,mb4.3						
MCK	**McKinley**	**76.10**	**27**	P	**P**	**22 04 38.8**	**-0.8**
ARCES	**ARCESS Array B**	**81.03**	**339**	P	**P**	**22 05 05.0**	**-1.6**
	1.7nm,0.9s,mb4.0,baz=66,slow=4.4,SNR=4.0						
FINES	**FINESS Array B**	**82.81**	**331**	P	**P**	**22 05 15.6**	**-0.6**
	2.7nm,1.0s,mb4.2,baz=57,slow=5.1,SNR=3.9						

*ISCJB **09** 22:06:51.5±0.4, 49°.88N±0°.03×18°.45E±0°.03, h0km, Error ellipse: s-maj=4.3km s-min=2.4km az=11.1*
*IPEC **09** 22:06:52.7±0.1, 49°.80N×18°.54E, h0km, ML1.9/4, Error ellipse: s-maj=2.0km s-min=0.7km az=164.0*
*CSEM **09** 22:06:52.2±0.2, 49°.87N×18°.48E, h1km, ML2.9/7, Error ellipse: s-maj=5.3km s-min=2.7km az=6.0*
*PRU **09** 22:06:53.9, 49°.86N×18°.42E, h0km*
ISC 09 22:06:52.8±0.4, 49°.83N±0°.03×18°.47E±0°.03, h0km, n36, σ1§31/61, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.21**	**272**	*e*PG	**Pg**	**22 06 58.2**	**+1.4**
OKC				*e*SG	**Sg**	**22 07 00.9**	**+1.5**
	comp=Z,85nm,0.6s						
OKC	**Ostrava-Krasne**	**0.21**	**272**	*e*Pg	**Pg**	**22 06 57.9**	**+1.1**
	baz=98						
OKC				Sg	**Sg**	**22 07 00.9**	**+1.5**
	comp=Z,85nm,0.6s						
RAC	**Raciborz**	**0.31**	**325**	*e*Pg	**Pg**	**22 07 01.7**	**+3.0**
RAC				*e*Sg	**Sg**	**22 07 06.1**	**+3.4**
MORC	**Moravsky Berou**	**0.60**	**265**	*e*Pg	**Pg**	**22 07 05.4**	**+1.1**
	baz=87						
MORC				*e*Sg	**Sg**	**22 07 12.3**	**+0.2**
	comp=Z,31nm,0.3s,baz=87						
OJC	**Ojcow**	**0.94**	**65**	*e*Pg	**Pg**	**22 07 09.4**	**-1.5**
OJC				*e*Sg	**Sg**	**22 07 22.1**	**-1.0**
OJC	**Ojcow**	**0.94**	**65**	*e*Pg	**Pg**	**22 07 09.4**	**-1.5**
OJC				*e*Sg	**Sg**	**22 07 22.0**	**-1.1**
	baz=243						
JAVC	**Velka Javorina**	**1.10**	**208**	*e*Sg	**Sg**	**22 07 30.5**	**+2.3**
	comp=Z,16nm,0.4s						
NIE	**Niedzica**	**1.27**	**108**	*e*Pg	**Pg**	**22 07 16.9**	**-0.2**
NIE				*e*Sg	**Sg**	**22 07 35.3**	**+1.7**
NIE	**Niedzica**	**1.27**	**108**	*e*Pg	**Pg**	**22 07 16.9**	**-0.2**
NIE				*e*Sg	**Sg**	**22 07 35.3**	**+1.7**
VRAC	**Vranov**	**1.33**	**247**	*e*Pg	**Pg**	**22 07 18.1**	**-0.1**
	baz=68						
VRAC				*e*Sg	**Sg**	**22 07 35.9**	**+0.5**
	comp=Z,13nm,0.2s,baz=68						
VYHS	**Vyhne**	**1.36**	**170**	*e*PN	**Pn**	**22 07 18.2**	**-0.8**
VYHS				*e*SN	**Sn**	**22 07 36.3**	**-1.4**
VYHS	**Vyhne**	**1.36**	**170**	*e*Pn	**Pn**	**22 07 18.2**	**-0.8**
VYHS				*e*Sn	**Sn**	**22 07 36.3**	**-1.4**
DPC	**Dobruska-Polom**	**1.48**	**291**	*e*PG	**Pg**	**22 07 20.7**	**-0.4**
DPC				*e*SG	**Sg**	**22 07 40.6**	**+0.4**
	comp=Z,22nm,0.4s						
DPC	**Dobruska-Polom**	**1.48**	**291**	Pg	**Pg**	**22 07 20.7**	**-0.4**
DPC				*e*Sg	**Sg**	**22 07 40.4**	**+0.2**
	baz=110						
SMOL	**Smolenice**	**1.48**	**208**	*e*PN	**Pn**	**22 07 20.6**	**-0.1**
SMOL				*e*SN	**Sn**	**22 07 40.9**	**+0.1**
SMOL	**Smolenice**	**1.48**	**208**	*e*Pn	**Pn**	**22 07 20.6**	**-0.1**
SMOL				*e*Sn	**Sn**	**22 07 40.9**	**+0.1**
KRUC	**Moravsky**	**1.56**	**241**	*e*Pn	**Pn**	**22 07 21.6**	**-0.1**
	baz=61						
KRUC				*e*Sg	**Sg**	**22 07 42.5**	**-0.3**
	comp=Z,9.1nm,0.2s,baz=61						
UPC	**Upice**	**1.72**	**294**	*e*PG	**Pg**	**22 07 24.8**	**-0.9**
UPC				*e*SG	**Sg**	**22 07 47.2**	**-0.8**
UPC	**Upice**	**1.72**	**294**	Pg	**Pg**	**22 07 24.8**	**-0.9**
UPC				Sg	**Sg**	**22 07 47.2**	**-0.8**
KSP	**Ksiaz**	**1.72**	**307**	*e*Pg	**Pg**	**22 07 28.3**	**+2.5**
KSP				*e*Sg	**Sg**	**22 07 47.6**	**-0.5**
STHS	**Stebnicka Huta**	**1.85**	**102**	*e*PN	**Pn**	**22 07 27.5**	**+1.7**
STHS				*e*SN	**Sn**	**22 07 55.2**	**+5.3**
STHS	**Stebnicka Huta**	**1.85**	**102**	*e*Pn	**Pn**	**22 07 27.5**	**+1.7**
KECS	**Kecovo**	**1.89**	**135**	*e*PN	**Pn**	**22 07 25.8**	**-0.5**
KECS				*e*SN	**Sn**	**22 07 49.4**	**-1.4**
CRVS	**Cervenica-Dubn**	**2.17**	**114**	*e*PN	**Pn**	**22 07 33.3**	**+3.2**
CRVS				*e*SN	**Sn**	**22 08 01.1**	**+3.5**
CRVS	**Cervenica-Dubn**	**2.17**	**114**	*e*Pn	**Pn**	**22 07 33.3**	**+3.2**
CRVS				*e*Sn	**Sn**	**22 08 01.1**	**+3.5**
PRU	**Pruhonice**	**2.54**	**275**	*e*SG	**Sg**	**22 08 13.4**	**-1.0**
	comp=Z,4.5nm,0.4s						
PRU	**Pruhonice**	**2.54**	**275**	Sg	**Sg**	**22 08 13.4**	**-1.0**
	comp=Z,4.5nm,0.4s						
PVCC	**Panska Ves**	**2.60**	**287**	*e*SG	**Sg**	**22 08 15.1**	**-1.2**
	comp=Z,15nm,0.5s						
PVCC	**Panska Ves**	**2.60**	**287**	Sg	**Sg**	**22 08 15.1**	**-1.2**
	comp=Z,15nm,0.5s						
KOLS	**Kolonicke sedl**	**2.65**	**108**	*e*	**Pg**	**22 07 44.3**	**+0.8**
KOLS	**Kolonicke sedl**	**2.65**	**108**	*e*SG	**Sg**	**22 08 16.8**	**-0.9**
KOLS	**Kolonicke sedl**	**2.65**	**108**	*e*Sg	**Sg**	**22 08 16.9**	**-0.8**
KHC	**Kasperske Hory**	**3.26**	**259**	*e*PG	**Pg**	**22 07 53.0**	**-2.3**
KHC				*e*SG	**Sg**	**22 08 35.6**	**-2.0**
	comp=Z,5.8nm,0.4s						
KHC	**Kasperske Hory**	**3.26**	**259**	Pg	**Pg**	**22 07 53.0**	**-2.3**
KHC				Sg	**Sg**	**22 08 35.6**	**-2.0**
	comp=Z,5.8nm,0.4s						
CLL	**Collm**	**3.78**	**295**	*e*Sg	**Sg**	**22 08 53.0**	**-1.3**
	comp=Z,4.0nm,0.6s						
MOX	**Moxa**	**4.47**	**283**	*e*SG	**Sg**	**22 09 18.7**	**+2.3**

*CSEM **09** 22:09:21.6±0.1, 40°.30N×26°.98E, h5km, MD3.0, Error ellipse: s-maj=2.3km s-min=2.1km az=152.0*
*DDA **09** 22:09:21.1, 40°.28N×27°.04E, h7km±5km, Md3.0*
*ISK **09** 22:09:21.5, 40°.32N×26°.98E, h8km, MD3.0*
*ISCJB **09** 22:09:21.4±0.4, 40°.30N±0°.02×26°.99E±0°.03, h7km±4km, Error ellipse: s-maj=3.6km s-min=3.1km az=147.6*
*THE **09** 22:09:22.4, 40°.28N×26°.85E, h0km±2km, ML3.1/4, Error ellipse: s-maj=3.3km s-min=0.7km az=82.0*
ISC 09 22:09:21.7±0.3, 40°.30N±0°.02×26°.98E±0°.03, h8km±3km, n72, σ0§66/96, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPK	**Lapseki**	**0.19**	**294**	PG	**Pg**	**22 09 26.1**	**+0.6**
LPK				*e*SG	**Sg**	**22 09 28.9**	**+0.9**
LPK	**Lapseki**	**0.19**	**294**	*i* Pg	**Pg**	**22 09 26.1**	**+0.6**
LPK				*e*Sg	**Sg**	**22 09 29.0**	**+1.0**
RKY	**Sarkoy-Tekirda**	**0.42**	**21**	PG	**Pg**	**22 09 29.9**	**+0.1**
RKY				*e*SG	**Sg**	**22 09 35.1**	**-0.2**
RKY	**Sarkoy-Tekirda**	**0.42**	**21**	*i* Pg	**Pg**	**22 09 29.9**	**+0.1**
RKY				*e*Sg	**Sg**	**22 09 35.1**	**-0.2**
SART	**Tekirdag**	**0.42**	**21**	*i* P	**Pg**	**22 09 29.8**	**0.0**
SART				*i* S	**Sg**	**22 09 35.3**	**-0.1**
MFT	**Murefte**	**0.54**	**25**	PG	**Pg**	**22 09 32.1**	**0.0**
MFT				*e*SG	**Sg**	**22 09 39.8**	**+0.6**
MFT	**Murefte**	**0.54**	**25**	*i* Pg	**Pg**	**22 09 32.1**	**0.0**
MFT				*e*Sg	**Sg**	**22 09 39.8**	**+0.6**
EDC	**Edincik**	**0.68**	**85**	*e*PG	**Pg**	**22 09 35.9**	**+1.3**
EDC	**Edincik**	**0.68**	**85**	*e*Pg	**Pg**	**22 09 35.9**	**+1.2**
EZN	**Ezine**	**0.69**	**227**	*e*PG	**Pg**	**22 09 35.0**	**+0.1**
EZN	**Ezine**	**0.69**	**227**	*e*Pg	**Pg**	**22 09 35.0**	**+0.1**
BNT	**Bandirma**	**0.72**	**85**	*e*PG	**Pg**	**22 09 35.2**	**-0.3**
BALY	**Balya**	**0.74**	**138**	*i* P	**Pg**	**22 09 35.6**	**-0.3**
BALY				*i* S	**Sg**	**22 09 45.3**	**-0.2**
BALY	**Balya**	**0.74**	**138**	*i* P	**Pg**	**22 09 35.6**	**-0.3**
BALY				*i* S	**Sg**	**22 09 45.3**	**-0.2**
ENEZ	**Enez**	**0.77**	**305**	*e*PG	**Pg**	**22 09 36.3**	**-0.2**
ENEZ	**Enez**	**0.77**	**305**	*e*Pg	**Pg**	**22 09 36.3**	**-0.2**
TKR	**Tekirdag**	**0.81**	**31**	*e*PG	**Pg**	**22 09 37.2**	**-0.1**
TKR	**Tekirdag**	**0.81**	**31**	*e*Pg	**Pg**	**22 09 37.2**	**-0.1**
GADA	**Gvkgeada**	**0.84**	**263**	*e*PG	**Pg**	**22 09 37.8**	**+0.1**
GADA	**Gvkgeada**	**0.84**	**263**	*e*Pg	**Pg**	**22 09 37.8**	**+0.1**
BOZC	**Bozcaada**	**0.84**	**238**	*i* P	**Pg**	**22 09 37.5**	**-0.4**
ALN	**Alexandroupoli**	**0.93**	**310**	P	**Pg**	**22 09 38.8**	**-0.8**
ALN				S	**Sg**	**22 09 51.6**	**-0.1**
ALN	**Alexandroupoli**	**0.93**	**310**	P	**Pg**	**22 09 38.8**	**-0.8**
ALN				S	**Sg**	**22 09 51.6**	**-0.1**
CRLT	**Corlu**	**1.01**	**34**	*e*PG	**Pg**	**22 09 40.6**	**-0.5**
CRLT	**Corlu**	**1.01**	**34**	*e*Pg	**Pg**	**22 09 40.6**	**-0.5**
AYVA	**Ayvalik**	**1.01**	**193**	*i* P	**Pg**	**22 09 40.8**	**-0.3**
AYVA				*i* S	**Sg**	**22 09 53.6**	**-0.6**
AYVA	**Ayvalik**	**1.01**	**193**	*i* P	**Pg**	**22 09 40.8**	**-0.3**
AYVA				*i* S	**Sg**	**22 09 53.6**	**-0.6**
PRK	**Paraskevi**	**1.18**	**208**	P	**Pg**	**22 09 43.6**	**-0.8**
PRK				S	**Sg**	**22 10 00.1**	**+0.4**
DURS	**Dursunbey**	**1.34**	**121**	*i* P	**Pn**	**22 09 46.3**	**-0.4**
DURS				*i* S	**Sb**	**22 10 04.2**	**-0.2**
DURS	**Dursunbey**	**1.34**	**121**	*i* P	**Pn**	**22 09 46.3**	**-0.4**
DURS				*i* S	**Sb**	**22 10 04.2**	**-0.2**
RDO	**Rodhopi**	**1.39**	**308**	P	**Pn**	**22 09 46.7**	**-0.7**
RDO	**Rodhopi**	**1.39**	**308**	P	**Pn**	**22 09 46.7**	**-0.7**
SIGR	**SIGRI**	**1.39**	**219**	P	**Pn**	**22 09 47.2**	**-0.2**
SIGR				S	**Sb**	**22 10 05.9**	**+0.2**
SIGR	**SIGRI**	**1.39**	**219**	P	**Pn**	**22 09 47.2**	**-0.2**
SIGR				S	**Sb**	**22 10 05.9**	**+0.2**
ELBA	**Catalca**	**1.39**	**52**	*i* P	**Pn**	**22 09 46.0**	**-1.4**
ELBA				*i* S	**Sb**	**22 10 03.7**	**-2.1**
ELBA	**Catalca**	**1.39**	**52**	*i* P	**Pn**	**22 09 46.0**	**-1.4**
ELBA				*i* S	**Sb**	**22 10 03.7**	**-2.1**
DST	**Dursunbey**	**1.44**	**118**	*e*PN	**Pn**	**22 09 49.0**	**+1.0**
DST	**Dursunbey**	**1.44**	**118**	*e*Pn	**Pn**	**22 09 49.0**	**+1.0**
LIA	**Limnos Island**	**1.44**	**255**	P	**Pn**	**22 09 47.6**	**-0.4**
LIA				S	**Sn**	**22 10 07.2**	**+0.1**
LIA	**Limnos Island**	**1.44**	**255**	P	**Pn**	**22 09 47.6**	**-0.4**
LIA				S	**Sn**	**22 10 07.2**	**+0.1**
ARMT	**Armutlu**	**1.46**	**79**	*e*PN	**Pn**	**22 09 47.9**	**-0.4**
ARMT	**Armutlu**	**1.46**	**79**	*e*Pn	**Pn**	**22 09 47.9**	**-0.4**
AKHS	**Akhisar**	**1.55**	**155**	*i* P	**Pn**	**22 09 48.9**	**-0.7**
AKHS				*i* S	**Sn**	**22 10 10.1**	**+0.1**
AKHS	**Akhisar**	**1.55**	**155**	*i* P	**Pn**	**22 09 48.9**	**-0.7**
AKHS				*i* S	**Sn**	**22 10 10.1**	**+0.1**
EDRB	**Edirne**	**1.56**	**353**	*e*PN	**Pn**	**22 09 49.8**	**+0.1**
EDRB	**Edirne**	**1.56**	**353**	*e*Pn	**Pn**	**22 09 49.8**	**+0.1**
BGKT	**Bogazkoy**	**1.62**	**56**	*e*PN	**Pn**	**22 09 50.9**	**+0.3**
BGKT	**Bogazkoy**	**1.62**	**56**	*e*Pn	**Pn**	**22 09 50.9**	**+0.3**
ULDT	**Uludag**	**1.66**	**95**	*i* P	**Pn**	**22 09 50.0**	**-1.0**
GEMT	**Gemlik**	**1.69**	**85**	*e*PN	**Pn**	**22 09 52.0**	**+0.4**
GEMT	**Gemlik**	**1.69**	**85**	*e*Pn	**Pn**	**22 09 52.0**	**+0.5**
ISK	**Istanbul-Kandi**	**1.76**	**63**	*e*PN	**Pn**	**22 09 52.8**	**+0.4**
ISK	**Istanbul-Kandi**	**1.76**	**63**	*e*Pn	**Pn**	**22 09 52.8**	**+0.4**
DEMI	**Demirci**	**1.83**	**133**	*i* P	**Pn**	**22 09 53.1**	**-0.3**
DEMI	**Demirci**	**1.83**	**133**	*i* P	**Pn**	**22 09 53.1**	**-0.4**
KLYT	**Kilyos**	**1.83**	**58**	*e*PN	**Pn**	**22 09 53.9**	**+0.4**
KLYT	**Kilyos**	**1.83**	**58**	*e*Pn	**Pn**	**22 09 53.9**	**+0.4**
YLV	**Yalova**	**1.84**	**81**	*e*PN	**Pn**	**22 09 54.4**	**+0.8**
YLV	**Yalova**	**1.84**	**81**	*e*Pn	**Pn**	**22 09 54.4**	**+0.8**
IZM	**Izmir**	**1.91**	**173**	*e*PN	**Pn**	**22 09 55.5**	**+1.0**
IZM	**Izmir**	**1.91**	**173**	*e*Pn	**Pn**	**22 09 55.5**	**+1.0**
BLCB	**Balcova**	**1.91**	**179**	*e*PN	**Pn**	**22 09 55.5**	**+1.0**
BLCB	**Balcova**	**1.91**	**179**	*e*Pn	**Pn**	**22 09 55.5**	**+1.0**
KAVA	**Kavala**	**2.00**	**291**	P	**Pn**	**22 09 55.1**	**-0.7**
KAVA	**Kavala**	**2.00**	**291**	P	**Pn**	**22 09 55.1**	**-0.7**
CHOS	**Chios island**	**2.04**	**201**	P	**Pn**	**22 09 56.2**	**-0.1**
ADVT	**Abdulvahap**	**2.11**	**85**	*e*PN	**Pn**	**22 09 58.3**	**+1.0**
ADVT	**Abdulvahap**	**2.11**	**85**	*e*Pn	**Pn**	**22 09 58.3**	**+1.0**
JMB	**Yambol**	**2.19**	**352**	P	**Pn**	**22 09 59.6**	**+1.2**
JMB	**Yambol**	**2.19**	**352**	P	**Pn**	**22 09 59.6**	**+1.2**
GULT	**Gulveren**	**2.70**	**86**	*e*PN	**Pn**	**22 10 06.6**	**+1.1**
GULT	**Gulveren**	**2.70**	**86**	*e*Pn	**Pn**	**22 10 06.6**	**+1.2**

*IDC **09** 22:21:53.8±0.7, 42°.37N×44°.96E, h0km, mb3.7/11, mb1 3.9/13, mb1mx3.8/27, mbtmp3.8/13, ML4.3/1, MS3.0/8, Ms1 3.0/8, ms1mx2.6/41, Error ellipse: s-maj=16.5km s-min=10.3km az=101.0*
*ISK **09** 22:21:54.0, 42°.45N×44°.98E, h5km, ML3.8*
*TIF **09** 22:21:55.9, 42°.36N×44°.89E, h26km±1km*
*MOS **09** 22:21:55.0±1.4, 42°.35N×44°.94E, h11km, mb4.6/14, Error ellipse: s-maj=6.2km s-min=3.9km az=108.7*
*ISCJB **09** 22:21:55.7±0.4, 42°.47N±0°.02×45°.01E±0°.02, h15km±2km, mb3.8/20, MS2.9/9, Error ellipse: s-maj=2.7km s-min=2.4km az=163.1*
*CSEM **09** 22:21:55.9±0.1, 42°.44N×45°.03E, h10km, mb4.0/9, mb4.6, Error ellipse: s-maj=2.8km s-min=2.6km az=27.0*
*NEIC **09** 22:21:57.8±2.5, 42°.45N×45°.04E, h21km±21km, mb3.9/11, Error ellipse: s-maj=6.8km s-min=4.9km az=190.0*
*NNC **09** 22:22:00.5±1.8, 42°.78N×45°.76E, h0km, mb3.7, Error ellipse: s-maj=22.0km s-min=14.5km az=139.0*
*TEH **09** 22:22:10.9, 41°.88N×46°.59E, h18km*
ISC 09 22:21:55.7±0.3, 42°.42N±0°.01×45°.02E±0°.02, h3km±2km, n229, σ1§35/300, mb3.8/20, MS2.9/9, 19C-19D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNJR	**Sundja**	**0.67**	**347**	⇑*i*PG	**Pg**	**22 22 10.0**	**+1.5**
SNJR				*e*S	**Sg**	**22 22 21.3**	**+4.1**
SNJR	**Sundja**	**0.67**	**347**	*i* Pg	**Pg**	**22 22 10.0**	**+1.5**
LACR	**Lac**	**0.67**	**308**	⇑*i*PG	**Pg**	**22 22 07.9**	**-0.6**
LACR				*i* S	**Sg**	**22 22 17.7**	**+0.5**
LACR	**Lac**	**0.67**	**308**	*i* Pg	**Pg**	**22 22 07.9**	**-0.6**
LACR				*i* Sg	**Sg**	**22 22 17.7**	**+0.5**
VLKR	**Vladikavkaz**	**0.68**	**338**	⇑*i*PG	**Pg**	**22 22 09.9**	**+1.2**
VLKR				*i* S	**Sg**	**22 22 21.0**	**+3.6**
VLKR	**Vladikavkaz**	**0.68**	**338**	*i* Pg	**Pg**	**22 22 09.9**	**+1.2**
TBLG	**Delisi**	**0.72**	**197**	*i* PG	**Pg**	**22 22 08.7**	**-0.7**
TBLG				*i* S	**Sg**	**22 22 18.9**	**+0.2**
TBLG	**Delisi**	**0.72**	**197**	P	**Pg**	**22 22 08.7**	**-0.7**
TBLG				S	**Sg**	**22 22 18.9**	**+0.2**
TBLG	**Delisi**	**0.72**	**197**	P	**Pg**	**22 22 08.7**	**-0.7**
TBLG				S	**Sg**	**22 22 18.9**	**+0.2**
GOR	**Gori**	**0.80**	**238**	*e*PG	**Pg**	**22 22 09.7**	**-1.3**
GOR	**Gori**	**0.80**	**238**	P	**Pg**	**22 22 09.8**	**-1.2**
GOR				S	**Sg**	**22 22 20.8**	**-0.6**
GOR	**Gori**	**0.80**	**238**	P	**Pg**	**22 22 09.8**	**-1.2**
GOR				S	**Sg**	**22 22 20.8**	**-0.6**
KEH	**Kehvi**	**0.81**	**263**	P	**Pg**	**22 22 08.7**	**-2.5**
KEH				S	**Sg**	**22 22 19.5**	**-2.2**
KEH	**Kehvi**	**0.81**	**263**	P	**Pg**	**22 22 08

KIV *i* S **Sn** **22 23 06.4 +3.4**
KIV Kislovodsk 2.29 313 *e*Pn **Pn** **22 22 34.0 -0.3**
KIV *e*Sg **Sg** **22 23 07.3 -2.0**
KIV Kislovodsk 2.29 313 *e*Pn **Pn** **22 22 34.2 -0.1**
KIV *e*Sg **Sg** **22 23 07.3 -2.1**
KARS Kars 2.31 220 *e*PN **Pn** **22 22 34.6 +0.1**
KARS *e*SN **Sn** **22 23 04.3 +1.0**
KARS Kars 2.31 220 Pn **Pn** **22 22 33.9 -0.6**
KARS Kars 2.31 220 Pn **Pn** **22 22 33.9 -0.6**
KARS *e*Sn **Sn** **22 23 04.3 +1.0**
DIGO Kars 2.35 212 *i* P **Pn** **22 22 35.2 +0.1**
DIGO Kars 2.35 212 *i* P **Pn** **22 22 35.2 +0.1**
DIGO *i* S **Sn** **22 23 02.7 -1.7**
ARTV Artvin 2.62 243 *i* P **Pn** **22 22 38.7 0.0**
ARTV Artvin 2.62 243 *i* P **Pn** **22 22 38.7 0.0**
ARTV *i* S **Sn** **22 23 11.8 +0.8**
DOMR Dombai 2.64 290 *e*PN **Pn** **22 22 39.3 +0.2**
DOMR *e*S **Sn** **22 23 15.7 +4.1**
DOMR Dombai 2.64 290 *e*Pn **Pn** **22 22 39.3 +0.2**
BRDA Brd 2.70 142 P **Pn** **22 22 40.8 +0.9**
SNR=31
BCA Borcka 2.71 250 *e*PN **Pn** **22 22 40.4 +0.3**
BCA *e*SN **Sn** **22 23 13.9 +0.5**
BCA Borcka 2.71 250 *e*Pn **Pn** **22 22 40.4 +0.3**
BCA *e*Sn **Sn** **22 23 13.9 +0.6**
DBAD Bademkaya 2.85 242 *i* P **Pn** **22 22 42.2 +0.2**
DBAD Bademkaya 2.85 242 *i* P **Pn** **22 22 42.2 +0.2**
DDEM Demirkent 2.88 239 *i* P **Pn** **22 22 42.6 +0.2**
DDEM Demirkent 2.88 239 *i* P **Pn** **22 22 42.6 +0.2**
GOF Gofitskoye 3.00 332 *e*PN **Pn** **22 22 43.8 -0.3**
GOF Gofitskoye 3.00 332 *e*Pn **Pn** **22 22 43.8 -0.3**
PQL Pirkuli 3.14 120 P **Pn** **22 22 48.3 +2.4**
SNR=15
AGRB Hanur-Agry 3.23 209 *e*PN **Pn** **22 22 47.8 +0.7**
AGRB Hanur-Agry 3.23 209 *e*Pn **Pn** **22 22 47.8 +0.7**
PZAR Pazar-Rize 3.32 249 *e*PN **Pn** **22 22 49.1 +0.8**
PZAR Pazar-Rize 3.32 249 *e*Pn **Pn** **22 22 49.2 +0.8**
HOMI Horasan 3.33 226 *i* P **Pn** **22 22 48.7 0.0**
CLDR Caldiran 3.38 195 *e*PN **Pn** **22 22 50.1 +0.9**
CLDR Caldiran 3.38 195 *e*Pn **Pn** **22 22 50.1 +0.9**
ERZM Erzurum 3.73 229 *i* P **Pn** **22 22 54.7 +0.7**
ERZM Erzurum 3.73 229 *i* P **Pn** **22 22 54.7 +0.7**
EZM Erzurum 3.73 229 *e*PN **Pn** **22 22 54.4 +0.3**
EZM Erzurum 3.73 229 Pn **Pn** **22 22 54.6 +0.6**
IMRD Marand 3.74 172 *e*Pn **Pn** **22 23 00.5 +6.3**
IMRD *e* 22 23 04.0
comp=Z,3μm,0.2s
IMRD Marand 3.74 172 *e*Pn **Pn** **22 23 00.5 +6.3**
ALIB Äli-Bayra 3.89 128 P **Pn** **22 22 59.4 +3.2**
SNR=4.5
VANB Van 4.01 199 *e*PN **Pn** **22 22 58.9 +0.9**
VANB Van 4.01 199 *e*Pn **Pn** **22 22 58.9 +0.9**
SOC Sochi 4.06 288 *e*PN **Pb** **22 23 09.6 +1.9**
SOC *e* 22 24 10.0
SOC pmax pmax
comp=Z,19nm,0.6s
GLBA Clilabad 4.08 140 P **Pn** **22 22 59.0 +0.2**
SNR=41
ISHB Shabestar 4.16 173 *e* **Pg** **22 23 13.8 -1.4**
comp=Z,959nm,0.2s
ISHB *e*Pn **Pb** **22 23 07.2 -2.2**
KOPT Kop Dagi 4.17 236 *i* P **Pn** **22 23 00.4 +0.4**
KOPT Kop Dagi 4.17 236 *i* P **Pn** **22 23 00.4 +0.3**
MACK Trabzon 4.20 251 *i* P **Pn** **22 22 60.0 -0.5**
MACK Trabzon 4.20 251 *i* P **Pn** **22 23 00.0 -0.5**
ITBZ Tabriz 4.27 168 *e* **Pg** **22 23 16.0 -1.4**
comp=Z,363nm,0.2s
ITBZ *e*Pn **Pn** **22 23 05.6 +4.1**
IHRS Heris 4.38 159 *e* **Pg** **22 23 18.2 -1.3**
comp=Z,958nm,0.3s
IHRS *e*Pn **Pn** **22 23 05.5 +2.5**
IHRS *e*Sg **Sb** **22 24 02.5 -3.8**
GUMT Gumushane 4.60 247 *e*PN **Pn** **22 23 06.9 +0.9**
GUMT Gumushane 4.60 247 Pn **Pn** **22 23 06.3 +0.3**
GUMT Gumushane 4.60 247 Pn **Pn** **22 23 06.3 +0.3**
IAZR Azarshahr 4.79 171 *e*Pn **Pn** **22 23 14.9 +6.3**
IAZR Azarshahr 4.79 171 *e*Pn **Pn** **22 23 14.9 +6.3**
HAKT HAKKARI 4.96 192 *i* P **Pn** **22 23 13.8 +2.9**
HAKT HAKKARI 4.96 192 *i* P **Pn** **22 23 13.8 +2.9**
ISRB Sarab 5.02 155 *e*Pn **Pn** **22 23 13.1 +1.4**
ISRB *e* 22 23 27.7
comp=Z,448nm,0.2s
CUKT Cukurca 5.28 192 *e*PN **Pn** **22 23 17.4 +2.1**
CUKT Cukurca 5.28 192 *e*Pn **Pn** **22 23 17.4 +2.1**
PTK Pertek 5.54 232 *e*PN **Pn** **22 23 20.2 +1.3**
PTK Pertek 5.54 232 Pn **Pn** **22 23 19.6 +0.7**
SVRC Sivrice-ELAZID 5.94 229 *e*PN **Pn** **22 23 25.9 +1.5**
ANN Anapa 6.00 296 *e*P **Pn** **22 23 23.5 -1.7**
ANN *e*S **Sn** **22 24 34.5 +0.2**
ANN pmax pmax
comp=Z,14nm,1.0s
ANN MLR MLR
comp=Z,216nm,13.0s
ANN Anapa 6.00 296 *e*P **Pn** **22 23 23.5 -1.7**
comp=Z,14nm,1.0s
ANN *e*S **Sn** **22 24 34.5 +0.2**
comp=Z,216nm,13.0s
VRHR Novokhopersk 8.99 346 *e*P **Pn** **22 24 11.4 +5.2**
VRHR pmax pmax
comp=E,40nm,0.5s
VRHR pmax pmax
comp=Z,20nm,0.5s
VRHR pmax pmax
comp=N,40nm,0.7s
BRTR Keskin Array B 9.00 256 Pn **Pn** **22 24 09.3 +2.9**
comp=N,0.1nm,0.3s,baz=66,slow=11,SNR=4.9
VSR Storozhevoye 9.67 338 *e*P **Pn** **22 24 19.5 +4.0**
VSR pmax pmax
comp=E,3.0nm,0.5s
VSR pmax pmax
comp=Z,3.0nm,0.5s
VSR pmax pmax
comp=N,3.0nm,0.4s
AKTK Aktyubinsk 12.02 44 Pn **Pn** **22 24 44.8 -2.9**
AKTK Sn **Sn** **22 26 52.8 -9.4**
AKTO Aktyubinsk 12.02 44 ⇑Pn **Pn** **22 24 45.6 -2.1**
comp=N,0.6nm,0.5s
AKTO ⇑Sn **Sn** **22 26 55.6 -6.5**
comp=N,1.1nm,0.6s
AKTO Aktyubinsk 12.02 44 Pn **Pn** **22 24 44.8 -2.9**
comp=N,1.7nm,0.3s,baz=220,slow=8.5,SNR=25
AKTO Sn **Sn** **22 26 52.8 -9.4**
comp=N,0.2nm,0.3s,baz=220,slow=22,SNR=4.4
AKTO Aktyubinsk 12.02 44 Pn **Pn** **22 24 45.6 -2.1**
comp=N,0.6nm,0.5s
AB31 Akbulak array 12.44 52 Pn **Pn** **22 24 51.9 -1.6**
comp=N,2.3nm,0.5s,baz=235,slow=10,SNR=41
AB31 ⇓Sn **Sn** **22 27 03.7 -8.9**
comp=N,2.7nm,0.6s,baz=246,slow=21,SNR=4.8
AB31 Akbulak array 12.44 52 Pn **Pn** **22 24 51.9 -1.6**
comp=N,2.3nm,0.5s,baz=235,SNR=41
ABKAR Akbulak array 12.44 52 *e*Pn **Pn** **22 24 51.8 -1.7**
comp=N,2.7nm,0.4s
ABKAR *e*Sn **Sn** **22 27 04.9 -7.6**
ABKAR Akbulak array 12.44 52 *e*Pn **Pn** **22 24 51.8 -1.7**
comp=N,2.7nm,0.4s
OBN Obninsk 13.86 339⇑*e*P **Pn** **22 25 13.9 +1.1**
OBN pmax pmax
comp=Z,4.0nm,0.9s
OBN MLR MLR
comp=Z,100nm,15.0s
OBN Obninsk 13.86 339 *e*P **Pn** **22 25 13.9 +1.1**
comp=Z,100nm,15.0s
ARU Arti 16.52 27*c i*P **Pn** **22 25 49.5 +1.4**
ARU S **Sn** **22 28 58.1 +6.5**
ARU pmax pmax
comp=Z,16nm,1.7s
ARU Arti 16.52 27 *e*Pn **Pn** **22 25 42.5 -5.6**
comp=Z,5.4nm,0.5s
ARU *e*Sn **Sn** **22 28 44.9 -6.8**
ARU Arti 16.52 27 *i* P **Pn** **22 25 49.5 +1.4**
comp=Z,16nm,1.7s
KWP Kalwaria Pacla 17.05 303 *e*P **Pn** **22 25 56.7 +1.8**
KWP pmax pmax
comp=Z,14nm,1.0s
KWP Kalwaria Pacla 17.05 303 *e*P **Pn** **22 25 56.7 +1.9**
comp=Z,14nm,1.0s
KWP Kalwaria Pacla 17.05 303 *e*P **Pn** **22 25 56.7 +1.8**
comp=Z,14nm,1.0s
SVE Sverdlovsk 17.55 29 *e*P **Pn** **22 25 56.2 -4.9**
SVE pmax pmax
comp=Z,14nm,0.8s
KK31 Karatay Array 18.72 79 ⇑Pn **Pn** **22 26 14.2 -1.3**
comp=Z,11nm,1.0s,baz=290,slow=12,SNR=39
KK31 ⇓Sn **Sn** **22 29 42.1 -3.0**
comp=Z,2.9nm,0.9s,baz=266,slow=42,SNR=3.1
KK31 Karatay Array 18.72 79 Pn **Pn** **22 26 14.2 -1.3**
comp=Z,11nm,1.0s,SNR=39
KK31 Sn **Sn** **22 29 42.1 -3.0**
comp=Z,2.9nm,0.9s,SNR=3.1
ZRNK Zerenda 19.19 48 ⇓Pn **Pn** **22 26 18.5 -2.6**
comp=Z,3.5nm,0.6s
ZRNK ⇓Sn **Sn** **22 29 49.1 -7.3**
comp=Z,2.2nm,0.8s
BRVK Borovoye 19.95 49 *e*P **Pn** **22 26 27.7 -2.4**
BRVK *e*S **Sn** **22 30 06.3 -8.3**
BRVK pmax pmax
comp=Z,4.0nm,0.5s
BRVK Borovoye 19.95 49 *e*P **Pn** **22 26 27.7 -2.4**
comp=Z,3.8nm,0.5s
BRVK *e*S **Sn** **22 30 06.3 -8.3**
BRVK Borovoye 19.95 49 *e*P **Pn** **22 26 27.7 -2.4**
comp=Z,4.0nm,0.5s
BVA0 Borovoye Array 19.99 49 Pn **Pn** **22 26 29.5 -1.2**
comp=Z,0.5nm,0.6s,baz=253,slow=7.9,SNR=31
BVA0 ⇑Sn **Sn** **22 30 04.0 -12**
comp=Z,0.5nm,1.1s,baz=232,slow=27,SNR=4.8
BVAR Borovoye Array 19.99 49 P **Pn** **22 26 28.3 -2.4**
comp=Z,1.0nm,0.4s,baz=267,slow=9.8,SNR=14
BVAR S **Sn** **22 30 06.1 -10**
comp=Z,0.9nm,0.7s,baz=219,slow=28,SNR=4.3
BVAR Borovoye Array 19.99 49 P **Pn** **22 26 28.3 -2.4**
BVAR S **Sn** **22 30 06.1 -10**
BVAR pmax pmax
comp=Z,1.0nm,0.4s
BVAR smax
comp=N,1.0nm,0.7s
BVAR Borovoye Array 19.99 49 P **Pn** **22 26 28.3 -2.4**
comp=N,1.0nm,0.4s
VOSK Vostochnaya 20.22 50 ⇓Pn **P** **22 26 30.7 -0.8**
comp=N,2.4nm,0.6s
VOSK ⇑Sn **S** **22 30 11.3 -7.4**
comp=N,1.7nm,0.8s
VOSK Vostochnaya 20.22 50 Pn **P** **22 26 30.7 -0.8**
comp=N,2.4nm,0.6s
KBL Kabul 20.34 105 *e*P **P** **22 26 33.6 +0.6**
KBL pmax pmax
comp=Z,10.0nm,1.1s
KBL Kabul 20.34 105 *e*P **P** **22 26 33.6 +0.6**
comp=Z,10.0nm,1.1s
KBL Kabul 20.34 105 *e*P **P** **22 26 33.6 +0.6**
comp=Z,9.9nm,1.1s
MORC Moravsky Berou 20.34 301 *e*P **P** **22 26 32.5 -0.4**
MORC pmax pmax
comp=Z,5.0nm,1.2s
MORC Moravsky Berou 20.34 301 *e*P **P** **22 26 32.5 -0.4**
comp=Z,5.3nm,1.2s
MORC Moravsky Berou 20.34 301 *e*P **P** **22 26 32.5 -0.4**
comp=Z,5.3nm,1.2s
VRAC Vranov 20.88 299 LR LR 22 35 30.1
comp=Z,29nm,19.5s,MS2.7,baz=202,slow=39
EKS2 Erkin-Say 21.16 80 *e*P **P** **22 26 41.9 +0.2**
comp=Z,1.8nm,0.6s,mb3.6
EKS2 Erkin-Say 21.16 80 *e*P **P** **22 26 41.9 +0.2**
comp=Z,1.8nm,0.6s,mb3.6
TIP Timpagrande 21.59 271 *e*P **P** **22 26 45.4 -1.1**
TIP Timpagrande 21.59 271 *e*P **P** **22 26 45.3 -1.2**
AAK Ala-Archa 21.68 79 P **P** **22 26 47.0 -0.4**
comp=Z,1.3nm,0.3s,mb3.9,baz=229,slow=10.0,SNR=3.1
AAK LR LR 22 35 05.5
comp=Z,19nm,18.4s,MS2.5,baz=193,slow=36
AAK Ala-Archa 21.68 79⇓*e*P **P** **22 26 47.8 +0.4**
AAK pmax pmax
comp=Z,1.0nm,1.2s,mb3.1
AAK Ala-Archa 21.68 79 *e*P **P** **22 26 47.4 0.0**
comp=Z,4.3nm,0.8s,mb3.9
AAK Ala-Archa 21.68 79 *e*P **P** **22 26 47.4 0.0**
comp=Z,4.3nm,0.8s,mb3.9
UCH Uchtor 21.77 80 *e*P **P** **22 26 48.4 +0.1**
comp=Z,2.5nm,0.8s,mb3.7
UCH Uchtor 21.77 80 *e*P **P** **22 26 48.4 +0.1**
comp=Z,2.5nm,0.8s,mb3.7
JOF Joensuu 22.06 343 *e*P **P** **22 26 51.8 +0.6**
JOF pmax pmax
comp=Z,11nm,0.6s,mb4.5
JOF Joensuu 22.06 343 *e*p **P** **22 26 51.8 +0.6**
comp=Z,11nm,0.6s,mb4.5
JOF Joensuu 22.06 343 *e*p **P** **22 26 51.8 +0.6**
comp=Z,11nm,0.6s,mb4.5
JOF Joensuu 22.06 343 *e*P **P** **22 26 51.8 +0.6**
comp=Z,11nm,0.6s,mb4.5
FINES FINESS Array B 22.19 336 P **P** **22 26 51.3 -1.4**
comp=Z,4.8nm,0.7s,mb4.1,baz=149,slow=12,SNR=19
FINES LR LR 22 36 10.0
comp=Z,62nm,18.2s,MS3.1,baz=101,slow=38
FINES FINESS Array B 22.19 336 P **P** **22 26 51.3 -1.3**
FINES pmax pmax
comp=Z,5.0nm,0.7s
FINES MLR MLR
comp=Z,62nm,18.2s
FINES FINESS Array B 22.19 336 P **P** **22 26 51.3 -1.3**
comp=Z,62nm,18.2s
TKM2 Tokmak 2 22.44 78 *e*P **P** **22 26 55.1 -0.3**
TKM2 pmax pmax
comp=Z,10.0nm,1.3s,mb4.1
TKM2 Tokmak 2 22.44 78 *e*P **P** **22 26 55.1 -0.4**
comp=Z,9.7nm,1.3s,mb4.1
TKM2 Tokmak 2 22.44 78 *e*P **P** **22 26 55.1 -0.3**
comp=Z,9.6nm,1.3s,mb4.1
KAF Kangasniemi 22.64 337 *e*P **P** **22 26 56.0 -1.5**
KAF pmax pmax
comp=Z,8.0nm,0.7s,mb4.3
KAF Kangasniemi 22.64 337 *e*p **P** **22 26 56.0 -1.5**
comp=Z,8.2nm,0.7s,mb4.3
KAF Kangasniemi 22.64 337 *e*p **P** **22 26 56.0 -1.5**
comp=Z,8.2nm,0.7s,mb4.3
KAF Kangasniemi 22.64 337 *e*P **P** **22 26 56.0 -1.5**
comp=Z,8.2nm,0.7s,mb4.3
GERES GERESS Array B 22.71 297 P **P** **22 26 57.9 -0.4**
comp=Z,0.4nm,0.5s,mb3.1,baz=101,slow=9.6,SNR=6.3
GERES GERESS Array B 22.71 297 P **P** **22 26 57.9 -0.4**
CLL Collm 23.47 303 *e*P **P** **22 27 07.0 +0.7**
CLL *e* 22 27 12.0
CLL Collm 23.47 303 *e*P **P** **22 27 07.0 +0.7**
CLL *e*pP 22 27 12.0
CLL Collm 23.47 303 *e*P **P** **22 27 07.0 +0.7**
VAE Valguarnera 23.90 268 LR LR 22 38 38.0
comp=Z,81nm,19.0s,MS3.2,baz=307,slow=42
KURBB Kurchatov Arra 24.31 59 ⇓P **P** **22 27 13.3 -0.8**
comp=Z,0.5nm,1.1s,mb2.9
KURK Kurchatov 24.38 58 ⇓P **P** **22 27 13.3 -1.4**
comp=Z,3.6nm,1.1s,mb3.7
KURK Kurchatov 24.38 58 P **P** **22 27 13.4 -1.3**
comp=Z,1.1nm,0.6s,mb3.5,baz=270,slow=11,SNR=17
KURK Kurchatov 24.38 58 P **P** **22 27 13.4 -1.3**
KURK pmax pmax
comp=Z,1.0nm,0.6s,mb3.4
KURK Kurchatov 24.38 58 *e*P **P** **22 27 13.6 -1.1**
comp=Z,2.2nm,0.8s,mb3.6
KURK Kurchatov 24.38 58 *e*P **P** **22 27 13.6 -1.1**
comp=Z,2.2nm,0.8s,mb3.6
DAVOX Davos/Dischmat 25.26 292 LR LR 22 38 05.2
comp=Z,50nm,18.3s,MS3.1,baz=84,slow=38
HFS Hagfors 26.05 324 P **P** **22 27 29.0 -0.8**
comp=Z,3.5nm,0.8s,mb4.0,baz=123,slow=13,SNR=4.7
HFS LR LR 22 39 23.9
comp=Z,72nm,18.2s,MS3.2,baz=151,slow=40
HFS Hagfors 26.05 324 P **P** **22 27 29.0 -0.8**
HFS pmax pmax
comp=Z,4.0nm,0.8s
HFS MLR MLR
comp=Z,72nm,18.2s
HFS Hagfors 26.05 324 P **P** **22 27 29.0 -0.8**
MK31 Makanchi Array 26.73 68 ⇓P **P** **22 27 36.2 +0.1**
comp=Z,0.6nm,0.5s,mb3.4,baz=270,slow=8.8,SNR=9.5
MK31 Makanchi Array 26.73 68 *e*P **P** **22 27 35.0 -1.1**
MK31 Makanchi Array 26.73 68 *e*P **P** **22 27 35.0 -1.1**
MKAR Makanchi Array 26.73 68 P **P** **22 27 36.4 +0.3**
comp=Z,0.6nm,0.5s,mb3.4,baz=273,slow=7.6,SNR=9.1
MKAR Makanchi Array 26.73 68*ce*P **P** **22 27 37.2 +1.1**
MKAR pmax pmax
comp=Z,1.0nm,0.5s
MKAR Makanchi Array 26.73 68 P **P** **22 27 36.4 +0.3**
NB2 NORSAR Subarra 27.55 324 P **P** **22 27 41.8 -1.6**
comp=Z,4.3nm,1.1s,mb4.0,baz=120,slow=8.6
NB2 NORSAR Subarra 27.55 324 P **P** **22 27 41.8 -1.6**
comp=Z,4.3nm,1.1s,mb4.0,SNR=3.2
NOA NORSAR Array B 27.55 324 P **P** **22 27 42.3 -1.1**
comp=Z,1.4nm,0.8s,mb3.7,baz=122,slow=8.8,SNR=3.2
NOA LR LR 22 38 30.0
comp=Z,5.0nm,20.8s,MS2.1,baz=255,slow=36
NOA NORSAR Array B 27.55 324 P **P** **22 27 42.3 -1.1**
ZALV Zalesovo Beam 28.56 52 P **P** **22 27 51.6 -0.8**
comp=Z,0.5nm,0.5s,mb3.5,baz=274,slow=8.5,SNR=2.8
ZALV Zalesovo Beam 28.56 52 P **P** **22 27 51.6 -0.8**
ZALV pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
ARCES ARCESS Array B 29.00 346 P **P** **22 27 55.0 -1.2**
comp=Z,1.3nm,0.8s,mb3.7,baz=118,slow=9.9,SNR=5.3
ARCES ARCESS Array B 29.00 346 P **P** **22 27 55.0 -1.2**
ARCES pmax pmax
comp=Z,1.0nm,0.8s
ARCES ARCESS Array B 29.00 346 P **P** **22 27 55.0 -1.2**
ULN Ulaanbaatar 43.06 61 P **P** **22 29 55.8 -0.6**
ULN Ulaanbaatar 43.06 61 P **P** **22 29 55.8 -0.6**
KMBO Kilima Mbogo 43.91 191*ce*P **P** **22 30 01.0 -2.6**
HHC Hu-ho-hao-te 48.59 68 *e*P **P** **22 30 40.0 -0.2**
HHC pP pP 22 30 44.5 +3.2
HHC sP sP 22 30 47.0 +5.3
HHC PcP PcP 22 32 05.0 -0.9
HHC PP PP 22 32 33.1 +0.2
HHC ScP ScP 22 35 58.3 -3.1
HHC PcS PcS 22 36 00.7 -1.1
HHC S **S** **22 37 42.8 +0.3**
HHC sS sS 22 37 49.3 +5.0
HHC ScS ScS 22 40 29.0 -4.7
HHC SS SS 22 41 07.5 -4.7
HHC pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
HHC pmax pmax
comp=Z,51nm,6.7s
HHC LR LR
comp=N,110nm,22.8s,MS3.8
HHC LR LR
comp=E,44nm,21.6s,MS3.8
HHC LR LR
comp=Z,75nm,24.0s,MS3.6
KMI Kunming 50.04 91 P **P** **22 30 52.7 +1.1**
KMI pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
CHTO Chiang Mai 51.07 100 P **P** **22 30 58.8 -0.5**
CHTO Chiang Mai 51.07 100 P **P** **22 30 58.8 -0.5**
SEY Seymchan 60.23 30*de*P **P** **22 32 07.4 +2.8**
BILL Bilibino 61.43 21 *e*P **P** **22 32 14.7 +2.0**
BILL *e* 22 34 26.0
BILL *e*SS SS 22 44 36.7 +3.0
BILL pmax pmax
comp=Z,1.0nm,0.8s,mb4.0
TGY Tagaytay City 70.28 89 LR LR 23 06 41.7
comp=Z,6.1nm,21.9s,MS2.8,baz=250,slow=38
YKA Yellowknife Ar 74.16 350 P **P** **22 33 31.5 -1.5**
comp=Z,0.4nm,0.7s,mb3.4,baz=9.9,slow=7.5,SNR=4.0
YKA Yellowknife Ar 74.16 350 P **P** **22 33 31.5 -1.5**

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*ATH **09** 22:24:51.6, 38.01N×21.26E, h17km±4km, MD3.0/8*
*THE **09** 22:24:51.9, 38.09N×21.37E, h8km±2km, ML2.8/2, Error ellipse: s-maj=3.1km s-min=1.6km az=312.0*
*NEIC **09** 22:24:51.6, 38.01N×21.26E, h17km, MD3.0(ATH), After ATH.*
*CSEM **09** 22:24:52.0±0.3, 38.06N×21.29E, h20km, MD3.0, Error ellipse: s-maj=7.9km s-min=7.0km az=171.0*
*ISCJB **09** 22:24:52.3±0.7, 38.06N±0.05×21.33E±0.06, h20km±6km, Error ellipse: s-maj=8.5km s-min=6.8km az=41.7*
ISC 09 22:24:51.8±0.7, 38.04N±0.05×21.31E±0.05, h17km±4km, n34, σ0 99/42, Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.12**	**81**	*e*Pb	**Pg**		**Pg**	**22 24 56.6**	**+1.0**
RLS				*e*Sb	**Sg**		**Sg**	**22 24 59.5**	**+1.3**
RLS	**Riolos of Patr**	**0.12**	**81**	*e*PB	**Pg**		**Pg**	**22 24 56.6**	**+1.0**
RLS				*e*SB	**Sg**		**Sg**	**22 24 59.5**	**+1.3**
RLS	**Riolos of Patr**	**0.12**	**81**	*e*Pb	**Pg**		**Pg**	**22 24 56.6**	**+1.0**
UPR	**University Cam**	**0.45**	**57**	*e*PB	**Pg**		**Pg**	**22 25 00.8**	**-0.1**
UPR				*e*SB	**Sg**		**Sg**	**22 25 07.7**	**+0.7**
UPR	**University Cam**	**0.45**	**57**	*e*Pb	**Pg**		**Pg**	**22 25 00.8**	**-0.1**
UPR				*e*Sb	**Sg**		**Sg**	**22 25 07.7**	**+0.7**
VLS	**Valsamata**	**0.59**	**284**	*e*Pn	**Pg**		**Pg**	**22 25 02.6**	**-0.8**
VLS	**Valsamata**	**0.59**	**284**	P	**Pg**		**Pg**	**22 25 02.9**	**-0.5**
VLS	**Valsamata**	**0.59**	**284**	*e*PN	**Pg**		**Pg**	**22 25 02.6**	**-0.8**
VLS	**Valsamata**	**0.59**	**284**	*e*Pn	**Pg**		**Pg**	**22 25 02.6**	**-0.8**
VLS	**Valsamata**	**0.59**	**284**	P	**Pg**		**Pg**	**22 25 02.9**	**-0.5**
EFP	**Efpalio**	**0.61**	**50**	*e*PB	**Pg**		**Pg**	**22 25 03.5**	**-0.3**
EFP	**Efpalio**	**0.61**	**50**	*e*Pb	**Pg**		**Pg**	**22 25 03.5**	**-0.3**
TRIZ	**Trizonia**	**0.68**	**61**	P	**Pg**		**Pg**	**22 25 04.2**	**-1.0**
TRIZ				S	**Sg**		**Sg**	**22 25 12.6**	**-1.7**
TRIZ	**Trizonia**	**0.68**	**61**	P	**Pg**		**Pg**	**22 25 04.2**	**-1.0**
TRIZ				S	**Sg**		**Sg**	**22 25 12.6**	**-1.7**
LKD2	**Lefkada island**	**0.91**	**326**	P	**Pg**		**Pg**	**22 25 08.9**	**-0.6**
LKD2	**Lefkada island**	**0.91**	**326**	P	**Pg**		**Pg**	**22 25 08.9**	**-0.6**
EVR	**Evrytania**	**0.96**	**24**	*e*Pn	**Pg**		**Pg**	**22 25 10.9**	**+0.4**
EVR	**Evrytania**	**0.96**	**24**	*e*PN	**Pg**		**Pg**	**22 25 10.9**	**+0.4**
EVR	**Evrytania**	**0.96**	**24**	*e*Pn	**Pg**		**Pg**	**22 25 10.9**	**+0.4**
ITM	**Ithomi**	**0.99**	**150**	*e*Pn	**Pg**		**Pg**	**22 25 10.0**	**-0.9**
ITM	**Ithomi**	**0.99**	**150**	P	**Pg**		**Pg**	**22 25 10.1**	**-0.8**
ITM	**Ithomi**	**0.99**	**150**	*e*PN	**Pg**		**Pg**	**22 25 10.0**	**-0.9**
ITM	**Ithomi**	**0.99**	**150**	P	**Pg**		**Pg**	**22 25 10.1**	**-0.8**
VLX	**Vlachokerasia**	**1.08**	**128**	*e*PB	**Pg**		**Pg**	**22 25 11.7**	**-1.0**
VLX	**Vlachokerasia**	**1.08**	**128**	*e*Pb	**Pg**		**Pg**	**22 25 11.7**	**-1.0**
PYL	**PYLOS**	**1.19**	**163**	P	**Pn**		**Pn**	**22 25 15.1**	**+1.5**
PYL	**PYLOS**	**1.19**	**163**	*e*PN	**Pn**		**Pn**	**22 25 14.6**	**+1.0**
PYL	**PYLOS**	**1.19**	**163**	*e*Pn	**Pn**		**Pn**	**22 25 14.6**	**+1.0**
PYL	**PYLOS**	**1.19**	**163**	P	**Pn**		**Pn**	**22 25 15.1**	**+1.5**
AGG	**Agios Georgios**	**1.27**	**39**	*e*Pn	**Pn**		**Pn**	**22 25 16.8**	**+2.1**
AGG	**Agios Georgios**	**1.27**	**39**	*e*PN	**Pn**		**Pn**	**22 25 16.8**	**+2.1**
AGG	**Agios Georgios**	**1.27**	**39**	*e*Pn	**Pn**		**Pn**	**22 25 16.8**	**+2.1**
LKR	**Lokris**	**1.46**	**65**	P	**Pn**		**Pn**	**22 25 17.6**	**+0.3**
LKR				S	**Sn**		**Sn**	**22 25 35.5**	**-0.6**
LKR	**Lokris**	**1.46**	**65**	P	**Pn**		**Pn**	**22 25 17.6**	**+0.3**
LKR				S	**Sn**		**Sn**	**22 25 35.5**	**-0.6**

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*MOS **09** 22:39:58.4±1.1, 42.30N×45.06E, h11km, mb3.8/1, Error ellipse: s-maj=19.0km s-min=16.3km az=73.1*
*CSEM **09** 22:39:58.6±0.3, 42.35N×44.96E, h2km, ML2.3, Error ellipse: s-maj=8.0km s-min=5.9km az=172.0*
*ISCJB **09** 22:39:58.5±0.5, 42.34N±0.04×45.00E±0.03, h10km, Error ellipse: s-maj=5.5km s-min=3.3km az=165.8*
*TIF **09** 22:39:58.5, 42.34N×44.91E, h37km±4km*
ISC 09 22:39:58.8±0.5, 42.38N±0.04×44.95E±0.03, h10km, n23, σ1 9/44/44, 2C, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TBLG	**Delisi**	**0.66**	**194**	*i* Pg	**Pg**		**Pg**	**22 40 11.2**	**-0.5**
TBLG				*i* S	**Sg**		**Sg**	**22 40 21.4**	**+1.1**
TBLG	**Delisi**	**0.66**	**194**	P	**Pg**		**Pg**	**22 40 11.2**	**-0.4**
TBLG				S	**Sg**		**Sg**	**22 40 21.4**	**+1.0**
TBLG	**Delisi**	**0.66**	**194**	P	**Pg**		**Pg**	**22 40 11.2**	**-0.5**
TBLG				S	**Sg**		**Sg**	**22 40 21.4**	**+1.1**
GOR	**Gori**	**0.74**	**238**	P	**Pg**		**Pg**	**22 40 12.4**	**-0.7**
GOR				S	**Sg**		**Sg**	**22 40 23.6**	**+0.9**
GOR	**Gori**	**0.74**	**238**	P	**Pg**		**Pg**	**22 40 12.4**	**-0.7**
GOR				S	**Sg**		**Sg**	**22 40 23.6**	**+0.9**
KEH	**Kehvi**	**0.76**	**265**	P	**Pg**		**Pg**	**22 40 11.4**	**-2.1**
KEH				S	**Sg**		**Sg**	**22 40 22.0**	**-1.3**
KEH	**Kehvi**	**0.76**	**265**	P	**Pg**		**Pg**	**22 40 11.4**	**-2.1**
KEH				S	**Sg**		**Sg**	**22 40 22.0**	**-1.4**
DGRG	**David-gareji**	**0.98**	**161**	P	**Pg**		**Pg**	**22 40 17.8**	**+0.2**
DGRG				S	**Sg**		**Sg**	**22 40 33.9**	**+3.6**
DGRG	**David-gareji**	**0.98**	**161**	P	**Pg**		**Pg**	**22 40 17.8**	**+0.2**
DGRG				S	**Sg**		**Sg**	**22 40 33.9**	**+3.6**
BTLR	**Botlikh**	**0.98**	**73**	*i* PG	**Pg**		**Pg**	**22 40 16.5**	**-1.2**
BTLR				*i* S	**Sg**		**Sg**	**22 40 31.0**	**+0.5**
BTLR	**Botlikh**	**0.98**	**73**	*i* Pg	**Pg**		**Pg**	**22 40 16.5**	**-1.2**
BTLR				*i* Sg	**Sg**		**Sg**	**22 40 31.0**	**+0.5**
ONI	**Oni**	**1.13**	**281**	P	**Pb**		**Pb**	**22 40 19.3**	**-1.2**
ONI				S	**Sb**		**Sb**	**22 40 34.4**	**-0.8**
ONI	**Oni**	**1.13**	**281**	P	**Pb**		**Pb**	**22 40 19.3**	**-1.2**
ONI				S	**Sb**		**Sb**	**22 40 34.4**	**-0.8**
KRNR	**Karanay**	**1.51**	**72**	*e*PG	**Pn**		**Pn**	**22 40 26.5**	**+0.6**
KRNR				*e*S	**Sg**		**Sg**	**22 40 48.2**	**+0.8**
KRNR	**Karanay**	**1.51**

SHAR	**Shatzhatmas**	**2.16 310**	⇑*e*PN	**Pn**	**22 40 37.1**	**+2.2**
SHAR			*i* S	**Sn**	**22 41 05.7**	**+4.0**
SHAR	**Shatzhatmas**	**2.16 310**	*e*Pn	**Pn**	**22 40 37.1**	**+2.2**
SHAR			*i* Sn	**Sn**	**22 41 05.7**	**+4.0**
KIV	**Kislovodsk**	**2.29 314**	⇑*e*PN	**Pn**	**22 40 39.0**	**+2.4**
KIV			*e*S	**Sn**	**22 41 08.9**	**+4.0**
KIV	**Kislovodsk**	**2.29 314**	*e*Pn	**Pn**	**22 40 39.0**	**+2.4**
KIV			*e*Sn	**Sn**	**22 41 08.9**	**+4.0**

IDC 09 22:44:02.1±3.8, 30°27'S×178°06'W, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.7/13, mbtmp3.6/2, Error ellipse: s-maj=192.0km s-min=46.5km az=161.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.07 267**		P	P	22 52 03.5	-0.4
	0.1nm,0.3s,baz=102,slow=6.9,SNR=4.9						
WRA	**Warramunga Arr**	**44.04 272**		P	P	22 52 11.9	+0.1
	0.5nm,0.4s,baz=112,slow=7.3,SNR=15						
BVAR	**Borovoye Array**	**126.27 316**		PKP	PKPdf	23 03 05.6	-0.5
	0.2nm,0.5s,baz=101,slow=1.5,SNR=2.7						
KAF	**Kangasniemi**	**144.41 341**		*e*p	PKPdf	23 03 37.4	-2.1
	7.1nm,1.0s						
KAF	**Kangasniemi**	**144.41 341**		*e*p	PKPdf	23 03 37.4	-2.1
	7.1nm,1.0s						
FINES	**FINESS Array B**	**145.00 340**		PKPbc	PKPbc	23 03 39.5	-0.3
	1.1nm,0.3s,baz=51,slow=4.6,SNR=27						

NEIC 09 22:45:30.9, 36°96S×176°67E, h262km, MG4.3(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**1.34 165**		P	Pn	22 46 09.0	-0.2
MXZ	**Matakaoa Point**	**1.44 115**		P	Pn	22 46 09.8	0.0
MWZ	**Matawai**	**1.53 154**		P	Pn	22 46 10.6	+0.1
MWZ				S	S	22 46 41.1	-0.7
KNZ	**Kokohu**	**2.21 159**		P	Pn	22 46 16.1	0.0
BKZ	**Black Stump Fm**	**2.21 184**		P	Pn	22 46 15.9	-0.2
NGZ	**Ngauruhoe**	**2.37 201**		P	Pn	22 46 18.6	+1.0
TUVZ	**Tukino**	**2.44 199**		P	Pn	22 46 19.0	+0.7
WNVZ	**Wahianoa**	**2.51 199**		P	Pn	22 46 19.5	+0.5
MOVZ	**Moawhango**	**2.55 196**		P	Pn	22 46 19.3	-0.1
WAZ	**Wanganui**	**3.09 205**		P	Pn	22 46 25.4	+0.4
TSZ	**Takapari Road**	**3.15 190**		P	Pn	22 46 24.8	-0.7
BFZ	**Birch Farm**	**3.73 185**		P	Pn	22 46 30.7	-1.3
MRZ	**Mangatainoka R**	**3.79 193**		P	Pn	22 46 31.1	-1.6
KIW	**Kapiti Island**	**4.13 199**		P	Pn	22 46 34.8	-1.8
MTW	**Mount Morrison**	**4.29 192**		P	Pn	22 46 36.3	-2.2
CAW	**Cannon Point**	**4.33 196**		P	Pn	22 46 37.1	-1.8
TCW	**Tory Channel**	**4.64 203**		P	Pn	22 46 40.7	-1.9
QRZ	**Quartz Range**	**5.03 219**		P	Pn	22 46 45.7	-1.6
KHZ	**Kahutara**	**5.96 203**		P	Pn	22 46 56.6	-2.0
LTZ	**Lake Taylor**	**6.73 209**		P	Pn	22 47 05.3	-2.9

*IDC **09** 22:45:47.8±13.0, 18°45S×178°14W, h583km±132km, mb3.4/4, mb1 3.7/4, mb1mx3.2/15, mbtmp3.4/4, Error ellipse: s-maj=100.7km s-min=74.3km az=110.0*
*NEIC **09** 22:45:49.8±2.3, 18°60S×178°12W, h615km±28km, mb3.8/4, Error ellipse: s-maj=27.4km s-min=11.3km az=179.0*
*ISCJB **09** 22:45:49.2±2.7, 18°6S±0°3×178°1W±0°1, h629km±42km, mb3.9/7, Error ellipse: s-maj=39.8km s-min=17.3km az=0.9*
ISC 09 22:45:50.0±3.6, 18°6S±0°3×178°1W±0°1, h618km±52km, n18, σ0°73/13, mb3.9/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAR	**Rarotonga**	**17.45 102**		*e*P	**P**	**22 49 20.6**	**+0.8**
CTAO	**Charters Tower**	**33.62 261**		*e*P	**P**	**22 51 41.4**	**-0.1**
	3.4nm,0.6s,mb4.2						
TAU	**Tasmania Unive**	**37.95 223**		*e*P	**P**	**22 52 16.1**	**-0.6**
STKA	**Stephens Creek**	**38.57 242**		P	**P**	**22 52 22.4**	**+0.6**
	2.5nm,0.5s,mb4.0,baz=82,slow=11,SNR=12						
STKA	**Stephens Creek**	**38.57 242**		*e*P	**P**	**22 52 22.1**	**+0.2**
	0.5nm,0.4s,mb3.4						
WRAB	**Tennant Creek**	**44.79 260**		*e*P	**P**	**22 53 10.4**	**-0.4**
	2.0nm,0.4s,mb4.0						
WRA	**Warramunga Arr**	**44.80 260**		P	**P**	**22 53 10.4**	**-0.4**
	1.8nm,0.4s,mb3.9,baz=98,slow=6.9,SNR=48						
WRA				PcP	PcP	22 54 40.2	+1.1
	0.6nm,0.8s,baz=100,slow=3.1,SNR=3.7						
ASAR	**Alice Springs**	**44.89 255**		P	**P**	**22 53 11.6**	**+0.1**
	6.3nm,0.6s,mb4.3,baz=90,slow=8.5,SNR=56						
ASAR				PcP	PcP	22 54 39.9	+0.5
	0.7nm,0.6s,baz=101,slow=3.7,SNR=4.5						
FITZ	**Fitzroy Crossi**	**53.20 261**		*e*P	**P**	**22 54 12.7**	**+0.1**
	1.6nm,0.6s,mb3.5						
DAV	**Davao City (W)**	**61.08 289**		*e*P	**P**	**22 55 05.6**	**-0.5**
RPN	**Rapa Nui**	**63.28 112**		P	**P**	**22 55 18.5**	**-1.6**
CASY	**Casey**	**65.66 205**		P	**P**	**22 55 35.3**	**+1.0**
CMAR	**Chiang Mai Arr**	**89.37 290**		P	**P**	**22 57 43.7**	**+1.1**
	0.6nm,0.4s,mb3.8,baz=122,slow=1.9,SNR=5.0						
MKAR	**Makanchi Array**	**109.80 314**		PKiKP	PKiKP	23 03 11.8	-0.1
	0.2nm,0.5s,baz=72,slow=4.5,SNR=2.4						
ARCES	**ARCESS Array B**	**127.01 350**		PKP	PKPdf	23 03 44.4	+0.2
	3.1nm,1.0s,baz=42,slow=1.5,SNR=3.3						
BRTR	**Keskin Array B**	**145.44 314**		PKPbc	PKPbc	23 04 21.1	+0.7
	0.9nm,0.9s,baz=132,slow=5.3,SNR=4.8						
MMAI	**Mount Meron Ar**	**146.74 302**		PKPbc	PKPbc	23 04 25.8	+1.5
	2.1nm,0.7s,baz=56,slow=3.6,SNR=3.1						
GERES	**GERESS Array B**	**148.32 345**		PKPbc	PKPbc	23 04 28.7	+0.9
	0.3nm,0.5s,baz=0.0,slow=2.7,SNR=5.4						

IDC 09 22:56:47.0±49.0, 12°58S×172°59E, h0km, mb4.3/3, mb1 4.5/3, mb1mx3.9/15, mbtmp4.3/3, Error ellipse: s-maj=847.0km s-min=118.4km az=66.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**34.34 231**		P	P	23 03 35.2	-0.3
	4.0nm,0.4s,baz=58,slow=9.5,SNR=18						
WRA	**Warramunga Arr**	**37.38 254**		P	P	23 04 02.4	+0.6
	0.9nm,0.6s,baz=85,slow=8.3,SNR=12						
ASAR	**Alice Springs**	**38.27 248**		P	P	23 04 08.9	-0.4
	2.1nm,0.4s,baz=76,slow=9.6,SNR=30						

*CSEM **09** 22:56:58.6±0.2, 37°91N×21°44E, h20km, MD3.4, Error ellipse: s-maj=4.8km s-min=4.3km az=18.0*
*THE **09** 22:56:58.6, 37°92N×21°42E, h14km±2km, ML3.1/1, Error ellipse: s-maj=2.6km s-min=1.1km az=116.0*
*ISCJB **09** 22:56:59.0±0.7, 37°92N±0°04×21°44E±0°06, h21km±8km, Error ellipse: s-maj=7.8km s-min=7.3km az=4.6*
*ATH **09** 22:56:59.0, 37°92N×21°49E, h19km±2km, MD3.4/10*
*NEIC **09** 22:56:59.0, 37°92N×21°49E, h19km, MD3.4(ATH), After ATH.*
ISC 09 22:56:58.4±0.7, 37°91N±0°04×21°44E±0°05, h20km±6km, n33, σ0°65/42, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.15**	**9**	*e*Pb	**Pg**	**22 57 03.2**	**+0.3**
RLS				*e*Sb	**Sg**	**22 57 06.4**	**+0.5**
RLS	**Riolos of Patr**	**0.15**	**9**	*e*PB	**Pg**	**22 57 03.2**	**+0.3**
RLS				*e*SB	**Sg**	**22 57 06.4**	**+0.5**
RLS	**Riolos of Patr**	**0.15**	**9**	*e*Pb	**Pg**	**22 57 03.2**	**+0.3**
RLS				*e*Sb	**Sg**	**22 57 06.4**	**+0.5**
UPR	**University Cam**	**0.46**	**36**	*e*PB	**Pg**	**22 57 08.3**	**+0.3**
UPR	**University Cam**	**0.46**	**36**	*e*Pb	**Pg**	**22 57 08.3**	**+0.3**
EFP	**Efpalio**	**0.64**	**35**	*e*PB	**Pg**	**22 57 10.4**	**-0.7**
EFP				*e*SB	**Sg**	**22 57 19.7**	**+0.1**
EFP	**Efpalio**	**0.64**	**35**	*e*Pb	**Pg**	**22 57 10.4**	**-0.7**
EFP				*e*Sb	**Sg**	**22 57 19.7**	**+0.1**
TRIZ	**Trizonia**	**0.68**	**48**	P	**Pg**	**22 57 11.0**	**-0.8**
TRIZ				S	**Sg**	**22 57 22.1**	**+1.2**
TRIZ	**Trizonia**	**0.68**	**48**	P	**Pg**	**22 57 11.0**	**-0.8**
TRIZ				S	**Sg**	**22 57 22.1**	**+1.2**
GUR	**Goura**	**0.72**	**88**	*e*PB	**Pg**	**22 57 11.6**	**-1.0**
GUR				*e*SB	**Sg**	**22 57 22.0**	**-0.2**
GUR	**Goura**	**0.72**	**88**	*e*Pb	**Pg**	**22 57 11.6**	**-1.0**
GUR				*e*Sb	**Sg**	**22 57 22.0**	**-0.2**
VLS	**Valsamata**	**0.72 292**		*e*Pn	**Pg**	**22 57 13.9**	**+1.3**
VLS	**Valsamata**	**0.72 292**		P	**Pg**	**22 57 12.0**	**-0.6**
VLS	**Valsamata**	**0.72 292**		*e*PN	**Pg**	**22 57 13.9**	**+1.3**
VLS	**Valsamata**	**0.72 292**		P	**Pg**	**22 57 12.0**	**-0.6**
VLS	**Valsamata**	**0.72 292**		*e*Pn	**Pg**	**22 57 13.9**	**+1.3**
ITM	**Ithomi**	**0.83 152**		*e*Pn	**Pg**	**22 57 14.5**	**-0.1**
ITM	**Ithomi**	**0.83 152**		P	**Pg**	**22 57 14.6**	**0.0**
ITM	**Ithomi**	**0.83 152**		*e*PN	**Pg**	**22 57 14.5**	**-0.1**
ITM	**Ithomi**	**0.83 152**		*e*Pn	**Pg**	**22 57 14.5**	**-0.1**
VLX	**Vlachokerasia**	**0.92 125**		*e*PN	**Pg**	**22 57 16.1**	**-0.3**
VLX	**Vlachokerasia**	**0.92 125**		*e*Pn	**Pg**	**22 57 16.1**	**-0.3**
PYL	**PYLOS**	**1.04 166**		*e*PN	**Pg**	**22 57 19.3**	**+0.6**
PYL	**PYLOS**	**1.04 166**		*e*Pn	**Pg**	**22 57 19.3**	**+0.6**
EVR	**Evrytania**	**1.05 16**		*e*Pn	**Pg**	**22 57 18.3**	**-0.5**
EVR	**Evrytania**	**1.05 16**		*e*PN	**Pg**	**22 57 18.3**	**-0.5**
EVR	**Evrytania**	**1.05 16**		*e*Pn	**Pg**	**22 57 18.3**	**-0.5**
LKD2	**Lefkada island**	**1.07 325**		P	**Pg**	**22 57 18.4**	**-0.8**
LKD2	**Lefkada island**	**1.07 325**		P	**Pg**	**22 57 18.4**	**-0.8**
LTK	**Loutraki**	**1.22 84**		*e*PN	**Pn**	**22 57 21.2**	**+0.9**
LTK	**Loutraki**	**1.22 84**		*e*Pn	**Pn**	**22 57 21.2**	**+0.9**
LKR	**Lokris**	**1.44 58**		P	**Pn**	**22 57 23.4**	**+0.1**
LKR	**Lokris**	**1.44 58**		P	**Pn**	**22 57 23.4**	**+0.1**

*IDC **09** 22:57:43.4±2.0, 13°14N×125°18E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/21, mbtmp3.4/4, Error ellipse: s-maj=196.5km s-min=24.2km az=69.0*
*ISCJB **09** 22:57:45.9±1.2, 13°2N±0°1×125°5E±0°2, h33km, mb3.4/4, Error ellipse: s-maj=22.9km s-min=16.8km az=146.1*
ISC 09 22:57:48.2±1.2, 13°2N±0°1×125°4E±0°2, h35km, n6, σ0°68/6, mb3.4/4, 2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GQP	**Guinayangan**	**2.99 283**	⇓*e*P	**Pn**	**22 58 33.1**	**+0.1**
RCP	**Roxas**	**3.10 238**	⇓*e*P	**Pn**	**22 58 34.6**	**-0.1**
WRA	**Warramunga Arr**	**34.10 165**		**P**	**23 04 28.9**	**-0.8**
	0.4nm,0.7s,mb3.5,baz=343,slow=9.4,SNR=3.1						
ASAR	**Alice Springs**	**37.59 167**		**P**	**23 05 00.3**	**+0.9**
	0.4nm,0.6s,mb3.3,baz=351,slow=7.5,SNR=3.8						
SONM	**Songino Array**	**37.99 339**		**P**	**23 05 02.5**	**-0.2**
	0.6nm,0.9s,mb3.3,baz=124,slow=4.4,SNR=2.4						
MKAR	**Makanchi Array**	**49.21 322**		**P**	**23 06 33.1**	**+0.1**
	0.4nm,0.8s,mb3.5,baz=132,slow=6.0,SNR=3.4						

*ISCJB **09** 23:05:08.1±0.9, 23°92N±0°02×122°67E±0°02, h14km±6km, Error ellipse: s-maj=3.8km s-min=2.7km az=166.2*
*TAP **09** 23:05:09.1, 24°00N×122°68E, h35km±1km, ML3.6, D*
*JMA **09** 23:05:09.2±0.3, 24°08N×122°61E, h38km, M3.0*
ISC 09 23:05:08.1±0.5, 23°95N±0°02×122°67E±0°02, h12km±3km, n44, σ0°97/79, 3C-1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.59**	**31**	P	**Pg**	**23 05 20.1**	**+0.4**
YOJ				S	**Sg**	**23 05 27.6**	**0.0**
ENA	**Nanau**	**0.97 299**		P	**Pg**	**23 05 26.6**	**-0.3**
	baz=297						
ENA				S	**Sg**	**23 05 40.2**	**+0.7**
	baz=297						
TWD	**Chiawan**	**0.99 278**		*e*P	**Pg**	**23 05 25.9**	**-1.3**
	baz=275						
TWD				*e*S	**Sg**	**23 05 39.2**	**-0.9**
	baz=275						
TWC	**Suao**	**0.99 311**		*i* P	**Pg**	**23 05 26.8**	**-0.5**
	baz=309						
TWC				S	**Sg**	**23 05 39.4**	**-0.9**
	baz=309						
IRIF	**Iriomote-Funau**	**1.04**	**68**	P	**Pb**	**23 05 27.9**	**-0.1**
IRIF				S	**Sg**	**23 05 42.6**	**+0.9**
HATJ	**Hateruma jima**	**1.04**	**84**	P	**Pb**	**23 05 28.1**	**+0.1**
HATJ				S	**Sg**	**23 05 42.9**	**+1.1**
ESL	**Shilin**	**1.14 263**		*e*P	**Pb**	**23 05 28.0**	**-1.7**
	baz=251						
ESL				*e*S	**Sb**	**23 05 43.3**	**-1.2**
	baz=251						
ILA	**Ilan**	**1.17 314**		*e*P	**Pb**	**23 05 30.7**	**+0.6**
	baz=313						
ILA				*e*S	**Sb**	**23 05 47.0**	**+1.7**
	baz=313						
TWE	**Neicheng**	**1.19 310**		P	**Pn**	**23 05 30.1**	**-0.4**
	baz=309						
TWE				*e*S	**Sb**	**23 05 46.2**	**+0.2**
	baz=309						
ENTT	**Nioudou**	**1.22 304**		P	**Pn**	**23 05 30.5**	**-0.4**
	baz=303						
ENTT				*e*S	**Sb**	**23 05 47.4**	**+0.7**
	baz=303						
TWB1	**Santiao Chiao**	**1.22 330**		P	**Pn**	**23 05 30.1**	**-0.9**
	baz=329						
TWB1				S	**Sb**	**23 05 45.4**	**-1.4**
	baz=329						
JKRS	**Kuro-shima**	**1.26**	**77**	P	**Pn**	**23 05 31.4**	**0.0**
JKRS				S	**Sb**	**23 05 48.4**	**+0.6**
NNS	**Nan Shan**	**1.28 293**		*i* P	**Pn**	**23 05 31.3**	**-0.4**
	baz=280						
EHY	**Hungye**	**1.31 250**	⇑*e*P		**Pn**	**23 05 31.5**	**-0.7**
	baz=248						
NWF	**Wu-fen Shan**	**1.38 324**		*i* P	**Pn**	**23 05 32.6**	**-0.5**
	baz=323						
NWF				S	**Sn**	**23 05 50.0**	**-1.2**
	baz=323						
TWF1	**Yuli**	**1.39 245**		*e*P	**Pn**	**23 05 32.4**	**-0.9**
	baz=234						
TWF1				*e*S	**Sn**	**23 05 49.7**	**-1.9**
	baz=234						
NSK	**Sanguang**	**1.40 301**	⇓*i* P		**Pn**	**23 05 33.1**	**-0.3**
	baz=286						
NSK				*e*S	**Sn**	**23 05 52.1**	**+0.4**
	baz=286						
JIJ	**Ishigaki jima**	**1.41**	**73**	P	**Pn**	**23 05 32.8**	**-0.7**
JIJ				S	**Sn**	**23 05 50.5**	**-1.4**
TWA	**Mucha**	**1.42 316**		P	**Pn**	**23 05 33.8**	**+0.1**
	baz=331						
TWA				*e*S	**Sn**	**23 05 52.7**	**+0.3**
	baz=331						
TAP1	**Taipei**	**1.50 316**		*e*P	**Pn**	**23 05 35.5**	**+0.6**
	baz=330						
TAP1				*e*S	**Sn**	**23 05 53.9**	**-0.4**
	baz=330						
TWS1	**Kuangyinshan**	**1.61 315**		*e*P	**Pn**	**23 05 36.1**	**-0.2**
	baz=314						
SMLT	**Sun Moon Lake**	**1.62 268**		P	**Pn**	**23 05 36.4**	**-0.1**
	baz=266						
SMLT				*e*S	**Sn**	**23 05 56.1**	**-1.2**
	baz=266						
TWY	**Chenhua**	**1.64 324**		*e*P	**Pn**	**23 05 37.1**	**+0.4**
	baz=323						
YUS	**Yu-Shan**	**1.64 254**		*e*P	**Pn**	**23 05 36.9**	**+0.2**
	baz=252						
YUS				*e*S	**Sn**	**23 05 56.5**	**-1.2**
	baz=252						
TYC	**Yuchr**	**1.66 269**	⇑*e*P		**Pn**	**23 05 36.8**	**-0.2**
	baz=267						
TYC				*e*S	**Sn**	**23 05 56.6**	**-1.6**
	baz=267						
NSTT	**Nanjuang**	**1.67 294**		P	**Pn**	**23 05 37.7**	**+0.7**
	baz=293						
ELDTW	**Lidau**	**1.70 244**		*e*P	**Pn**	**23 05 37.4**	**0.0**
	baz=232						
PCYT	**Pengchaiyu**	**1.75 342**		P	**Pn**	**23 05 37.0**	**-1.2**
	baz=341						
ALS	**Alishan**	**1.77 256**		⇑P	**Pn**	**23 05 39.1**	**+0.6**
	baz=254						
ALS				*e*S	**Sn**	**23 06 00.6**	**-0.2**
	baz=254						
TWQ1	**Liyutan**	**1.78 283**		P	**Pn**	**23 05 39.6**	**+1.0**
	baz=282						
TWQ1				*e*S	**Sn**	**23 06 02.2**	**+1.1**
	baz=282						
NSY	**Sanyi**	**1.80 285**		*e*P	**Pn**	**23 05 39.0**	**0.0**
	baz=284						
TCU	**Taichung**	**1.83 276**		*e*P	**Pn**	**23 05 40.1**	**+0.7**
	baz=275						
TCU				*e*S	**Sn**	**23 06 03.7**	**+1.2**
	baz=275						
TWG	**Pinlang**	**1.85 233**		*e*P	**Pn**	**23 05 38.5**	**-1.1**
	baz=242						
TWG				*e*S	**Sn**	**23 06 00.3**	**-2.6**
	baz=242						
CHN5	**Tsauling**	**1.86 259**		*e*P	**Pn**	**23 05 40.9**	**+1.2**
	baz=258						
CHN5				*e*S	**Sn**	**23 06 04.5**	**+1.4**
	baz=258						
WGK	**Gukeng**	**1.95 263**		*e*P	**Pn**	**23 05 41.6**	**+0.7**
	baz=261						
WGK				*e*S	**Sn**	**23 06 07.2**	**+1.9**
	baz=261						
JTJ	**Tarama**	**1.98**	**69**	P	**Pn**	**23 05 41.2**	**-0.1**
JTJ				*e*S	**Sn**	**23 06 05.1**	**-0.9**
CHY	**Chiayi**	**2.11 258**		*e*P	**Pn**	**23 05 45.1**	**+2.0**
	baz=257						
CHY				*e*S	**Sn**	**23 06 10.7**	**+1.5**
	baz=257						
CHN1	**Nanshi**	**2.11 249**		P	**Pn**	**23 05 45.1**	**+2.0**
	baz=248						
CHN1				S	**Sn**	**23 06 11.4**	**+2.1**
	baz=248						
TWK	**Hsinying**	**2.12 252**		*e*P	**Pn**	**23 05 45.1**	**+1.9**
	baz=250						
TWK				S	**Sn**	**23 06 10.8**	**+1.4**
	baz=250						
SSD	**Sandimen**	**2.23 238**		*e*P	**Pn**	**23 05 46.0**	**+1.3**
	baz=231						
SSD				*e*S	**Sn**	**23 06 11.9**	**-0.3**
	baz=231						
EAST	**Anshuo**	**2.29 227**		*e*P	**Pn**	**23 05 44.6**	**-1.0**
	baz=226						
SCZT	**Fangliau**	**2.46 231**		*e*P	**Pn**	**23 05 48.3**	**+0.3**
	baz=223						
SCZT				*e*S	**Sn**	**23 06 17.7**	**-0.2**
	baz=223						
TWK1	**Hengchun**	**2.64 221**		*e*P	**Pn**	**23 05 49.8**	**-0.6**
	baz=211						
TWK1				*e*S	**Sn**	**23 06 21.6**	**-0.7**
	baz=211						
PNG	**Penghu**	**2.88 263**		*e*P	**Pn**	**23 05 53.8**	**0.0**
	baz=262						
PNG				*e*S	**Sn**	**23 06 27.7**	**-0.6**
	baz=262						

IDC 09 23:09:28.5±2.0, 2°86N×128°69E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/19, mbtmp3.7/4, Error ellipse: s-maj=151.7km s-min=22.7km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.33 166**		P	P	23 14 38.8	+0.2
	0.7nm,0.4s,baz=345,slow=10.0,SNR=11						
ASAR	**Alice Springs**	**26.85 169**		P	P	23 15 10.3	-0.6
	0.6nm,0.5s,baz=354,slow=8.0,SNR=12						
STKA	**Stephens Creek**	**36.66 161**		P	P	23 16 36.3	-0.7
	2.2nm,0.9s,baz=354,slow=10,SNR=4.6						
MKAR	**Makanchi Array**	**59.38 325**		P	P	23 19 33.5	+0.8
	0.2nm,0.4s,baz=101,slow=8.5,SNR=3.6						

*ISCJB **09** 23:20:11.9±1.0, 32°08N±0°03×104°69E±0°04, h7km±6km, mb4.1/33, Error ellipse: s-maj=6.2km s-min=4.5km az=27.5*
*IDC **09** 23:20:12.9±0.7, 32°03N×104°55E, h0km, mb4.0/16, mb1 4.1/18, mb1mx4.0/29, mbtmp3.9/18, ML3.7/2, MS3.2/1, Ms1 3.2/1, ms1mx2.0/41, Error ellipse: s-maj=27.9km s-min=14.3km az=54.0*
*NEIC **09** 23:20:14.5±0.2, 32°06N×104°56E, h10km, mb4.3/13, Error ellipse: s-maj=7.3km s-min=4.7km az=69.0*
*MOS **09** 23:20:15.7±0.7, 32°06N×104°59E, h33km, mb4.5/9, Error ellipse: s-maj=13.5km s-min=7.3km az=111.4*
*BJI **09** 23:20:15.1, 32°05N×104°48E, h14km, mB4.5/2, mb4.2/5, ML3.7/14, Ms3.6/9, Ms7 3.4/9*
ISC 09 23:20:14.4±0.9, 32°11N±0°03×104°66E±0°04, h9km±6km, n70, σ0°85/78, mb4.1/33, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.42 213**	⇓*i* Pg		**Sb**	**23 20 54.6**	**-4.6**
CD2				Sg	**Sg**	**23 20 59.6**	**-0.4**
CD2				smax			
	comp=N,7μm,0.5s						
CD2				smax			
	comp=E,6μm,0.6s						
LZH	**Lanzhou**	**4.03 351**	*e*Pn		**Pn**	**23 21 19.6**	**+3.3**
LZH				Sn	**Sn**	**23 22 09.0**	**+5.4**
LZH				Sg	**Sg**	**23 22 22.5**	**-1.2**
LZH				smax			
	comp=N,230nm,0.6s						
LZH				smax			
	comp=E,270nm,0.7s						
LZH				LR	LR		
	comp=N,790nm,6.4s						
LZH				LR	LR		
	comp=Z,950nm,7.5s						
XAN	**Xi'an**	**4.06**	**61**	Pg	**Pg**	**23 21 31.8**	**-0.4**
XAN				Sn	**Sb**	**23 22 13.2**	**-2.2**
XAN				Sg	**Sg**	**23 22 25.5**	**+0.6**
XAN				smax			
	comp=N,250nm,0.9s						
XAN				smax			
	comp=E,110nm,0.8s						
XAN				LR	LR		
	comp=N,130nm,8.6s						
XAN				LR	LR		
	comp=E,130nm,8.6s						
XAN				LR	LR		
	comp=Z,120nm,9.0s						
GYA	**Guiyang**	**5.89 162**		Pn	**Pn**	**23 21 42.5**	**+0.6**
GYA				Sn	**Sn**	**23 22 49.6**	**0.0**
GYA				Sg	**Sb**	**23 23 10.6**	**+2.6**
GYA				smax			
	comp=N,90nm,0.8s						
GYA				smax			
	comp=E,110nm,0.8s						
GTA	**Gaotai**	**8.28 333**	*e*P		**Pn**	**23 22 16.2**	**+1.5**
GTA				pP		23 22 19.1	
GTA				sP		23 22 22.0	
GTA				S	**Sn**	**23 23 50.2**	**+1.8**
GTA				sS		23 23 55.6	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GTA				LR	LR		
	comp=N,160nm,8.6s						
GTA				LR	LR		
	comp=E,92nm,8.9s						
GTA				LR	LR		
	comp=Z,160nm,10.1s						
WHN	**Wuhan**	**8.43**	**98**	S	**Sn**	**23 23 46.6**	**-5.5**
WHN				LR	LR		
	comp=N,740nm,5.3s						
WHN				LR	LR		
	comp=E,690nm,3.2s						
WHN				LR	LR		
	comp=Z,380nm,7.2s						
CHTO	**Chiang Mai**	**14.20 203**	*e*P		**Pn**	**23 23 39.8**	**+4.0**
CHTO				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CHTO	**Chiang Mai**	**14.20 203**	*e*Pn		**Pn**	**23 23 39.8**	**+4.0**
	comp=Z,2.0nm,0.6s						
CM31	**Chiang Mai Arr**	**14.54 202**	*e*Pn		**Pn**	**23 23 50.8**	**+10**
CMAR	**Chiang Mai Arr**	**14.54 202**	Pn		**Pn**	**23 23 41.0**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=11,slow=10,

comp=Z,1.3nm,0.6s,mb3.6,baz=129,slow=8.2,SNR=5.7
KBL Kabul 29.77 284 *eP* **P 23 26 19.8 -1.6**
KBL pmax pmax
comp=Z,2.0nm,0.4s,mb4.2
KBL Kabul 29.77 284 *eP* **P 23 26 19.8 -1.6**
comp=Z,2.2nm,0.4s,mb4.2
BVAR Borovoye Array 32.31 320 P **P 23 26 44.0 +0.5**
comp=Z,0.3nm,0.3s,mb3.6,baz=132,slow=12,SNR=4.5
BVAR PcP PcP 23 29 31.0 -0.3
comp=Z,0.4nm,0.7s,baz=147,slow=2.9,SNR=2.8
BVAR Borovoye Array 32.31 320 P **P 23 26 44.0 +0.5**
BVAR PcP PcP 23 29 31.0 -0.3
BRVK Borovoye 32.38 320 *eP* **P 23 26 43.7 -0.5**
BRVK pmax pmax
comp=Z,1.0nm,0.4s,mb4.0
BRVK Borovoye 32.38 320 *eP* **P 23 26 43.6 -0.5**
comp=Z,0.9nm,0.4s,mb4.0
YSS Yuzh-Sakhalins 32.56 52 P **P 23 26 46.7 +0.9**
AKTK Aktyubinsk 38.81 312 P **P 23 27 39.7 +0.3**
AKTO Aktyubinsk 38.81 312 P **P 23 27 39.7 +0.3**
comp=Z,0.6nm,0.4s,mb3.6,baz=113,slow=13,SNR=5.1
ARU Arti 39.94 321 *eP* **P 23 27 48.9 +0.2**
ARU pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
ARU Arti 39.94 321 *eP* **P 23 27 48.9 +0.1**
comp=Z,4.0nm,0.7s,mb4.3
BILL Bilibino 50.07 26 *eP* **P 23 29 07.0 -2.1**
BILL pmax pmax
comp=Z,1.0nm,0.8s,mb3.9
FITZ Fitzroy Crossi 53.82 155 P **P 23 29 36.8 -0.8**
comp=Z,3.1nm,0.9s,mb4.2,baz=328,slow=9.5,SNR=3.5
FITZ Fitzroy Crossi 53.82 155 *eP* **P 23 29 36.9 -0.7**
comp=Z,0.5nm,0.4s,mb3.8
MBWA Marble Bar 54.89 163 P **P 23 29 44.8 -0.6**
KEV Kevo 56.01 336 *eP* **P 23 29 53.0 +0.1**
KEV pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
KEV Kevo 56.01 336 *eP* **P 23 29 53.0 +0.1**
comp=Z,6.2nm,0.8s,mb4.7
ARCES ARCESS Array B 56.55 336 P **P 23 29 56.6 -0.2**
comp=Z,1.6nm,0.5s,mb4.3,baz=81,slow=7.6,SNR=16
BRTR Keskin Array B 56.66 299 P **P 23 29 56.9 -1.2**
comp=Z,0.4nm,0.6s,mb3.6,baz=100,slow=6.9,SNR=3.8
FINES FINESS Array B 57.01 326 P **P 23 29 59.9 -0.3**
comp=Z,1.3nm,0.6s,mb4.1,baz=90,slow=5.7,SNR=5.3
AKASG Malin Array Be 57.05 313 P **P 23 29 59.9 -0.8**
comp=Z,0.9nm,0.4s,mb4.2,baz=66,slow=7.7,SNR=3.7
WRAB Tennant Creek 59.04 147 *eP* **P 23 30 14.7 -0.2**
WRAB pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
WRAB Tennant Creek 59.04 147 *eP* **P 23 30 14.7 -0.2**
comp=Z,4.4nm,0.7s,mb4.6
WRA Warramunga Arr 59.05 147 P **P 23 30 14.9 0.0**
comp=Z,2.8nm,0.7s,mb4.4,baz=340,slow=7.5,SNR=7.0
KWP Kalwaria Pacla 61.38 313 *eP* **P 23 30 29.8 -0.8**
KWP pmax pmax
comp=Z,8.0nm,1.0s,mb4.8
KWP Kalwaria Pacla 61.38 313 *eP* **P 23 30 29.8 -0.8**
comp=Z,7.8nm,1.0s,mb4.8
ASAR Alice Springs 62.10 150 P **P 23 30 35.8 +0.1**
comp=Z,0.9nm,0.7s,mb4.0,baz=324,slow=5.7,SNR=5.9
MORC Moravsky Berou 64.51 314 P **P 23 30 50.8 -0.6**
GERES GERESS Array B 67.19 314 P **P 23 31 08.8 +0.1**
comp=Z,0.3nm,0.5s,mb3.5,baz=74,slow=5.7,SNR=6.1
TIP Timpagrande 69.09 304 *eP* **P 23 31 20.5 -0.3**
comp=Z,0.9nm,0.6s,mb3.9
STU Stuttgart 69.93 315 *eP* **P 23 31 25.5 -0.4**
STU pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
STU Stuttgart 69.93 315 *eP* **P 23 31 25.5 -0.4**
comp=Z,7.5nm,0.6s,mb4.8
AQU L'Aquila 70.05 308 P **P 23 31 26.2 -0.5**
INK Inuvik 71.06 20 P **P 23 31 32.4 0.0**
comp=Z,2.3nm,0.8s,mb4.1,baz=329,slow=6.3,SNR=5.2
WLF Walferdange 71.31 317 *eP* **P 23 31 34.4 +0.2**
WLF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
WLF Walferdange 71.31 317 *eP* **P 23 31 34.4 +0.1**
comp=Z,6.1nm,0.9s,mb4.5
KMBO Kilima Mbogo 71.60 257 *eP* **P 23 31 36.3 -0.3**
LPG La Plagne 72.91 313 *eP* **P 23 31 44.3 +0.4**
comp=Z,8.4nm,0.5s,mb4.6
LPL La Plagne 72.92 313 *eP* **P 23 31 44.3 +0.4**
comp=Z,10nm,0.5s,mb4.7
ORIF Oris-en-Rattie 73.73 313 *eP* **P 23 31 48.5 -0.3**
comp=Z,5.4nm,0.7s,mb4.3
SMF Signal de Mont 74.12 315 *eP* **P 23 31 50.4 -0.6**
comp=Z,2.7nm,0.5s,mb4.1
AVF Avril sur Loir 74.34 316 *eP* **P 23 31 51.7 -0.6**
comp=Z,2.9nm,0.7s,mb4.0
YKA Yellowknife Ar 80.60 17 P **P 23 32 27.2 +0.2**
comp=Z,1.0nm,0.7s,mb3.9,baz=329,slow=5.7,SNR=7.1
YKA Yellowknife Ar 80.60 17 P **P 23 32 27.2 +0.2**
ESDC Sonseca Array 82.70 312 P **P 23 32 38.6 0.0**
comp=Z,0.8nm,0.7s,mb3.9,baz=47,slow=5.8,SNR=3.8
ESDC Sonseca Array 82.70 312 P **P 23 32 38.6 0.0**
ESLA Sonseca Array 82.70 312 P **P 23 32 39.0 +0.5**

*ISCJB **09** 23:30:36.2±0.8, 37°.88N±0°.04×21°.32E±0°.05, h14km±6km, Error ellipse: s-maj=7.1km s-min=6.2km az=37.9*
*CSEM **09** 23:30:37.3±0.4, 37°.89N×21°.35E, h24km±3km, MD3.2, Error ellipse: s-maj=7.7km s-min=7.1km az=17.0*
*ATH **09** 23:30:37.6, 37°.87N×21°.44E, h31km±2km, MD3.2/7*
*THE **09** 23:30:37.1, 37°.96N×21°.37E, h1km±4km, ML2.9/3, Error ellipse: s-maj=4.2km s-min=0.8km az=198.0*
*NEIC **09** 23:30:37.6, 37°.87N×21°.44E, h31km, MD3.2(ATH), After ATH.*

ISC 09 23:30:36.9±0.7, 37°.88N±0°.04×21°.34E±0°.05, h17km±5km, n34, σ0°99/47, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.20**	**31**	*e*Pb	**Pg**	**23 30 43.2**	**+1.3**
RLS	**Riolos of Patr**	**0.20**	**31**	*e*PB	**Pg**	**23 30 43.2**	**+1.3**
RLS	**Riolos of Patr**	**0.20**	**31**	*e*Pb	**Pg**	**23 30 43.2**	**+1.3**
UPR	**University Cam**	**0.54**	**42**	*e*PB	**Pg**	**23 30 48.7**	**+1.1**
UPR	**University Cam**	**0.54**	**42**	*e*PB	**Pg**	**23 30 48.3**	**+0.7**
UPR				*e*SB	**Sg**	**23 30 56.7**	**+1.8**
UPR	**University Cam**	**0.54**	**42**	*e*Pb	**Pg**	**23 30 48.7**	**+1.1**
UPR				*e*Sb	**Sg**	**23 30 56.7**	**+1.8**
VLS	**Valsamata**	**0.66**	**297**	*e*Pn	**Pg**	**23 30 52.1**	**+2.2**
VLS				*e*Sn	**Sg**	**23 31 04.3**	**+5.6**
VLS	**Valsamata**	**0.66**	**297**	P	**Pg**	**23 30 49.5**	**-0.4**
VLS	**Valsamata**	**0.66**	**297**	*e*PN	**Pg**	**23 30 52.1**	**+2.2**
VLS				*e*SN	**Sg**	**23 31 04.3**	**+5.6**
VLS	**Valsamata**	**0.66**	**297**	P	**Pg**	**23 30 49.5**	**-0.4**
VLS	**Valsamata**	**0.66**	**297**	*e*Pn	**Pg**	**23 30 52.1**	**+2.2**
VLS				*e*Sn	**Sg**	**23 31 04.3**	**+5.6**
EFP	**Efpalio**	**0.71**	**39**	*e*PN	**Pg**	**23 30 50.9**	**+0.1**
EFP	**Efpalio**	**0.71**	**39**	*e*Pn	**Pg**	**23 30 50.9**	**+0.1**
TRIZ	**Trizonia**	**0.76**	**50**	P	**Pg**	**23 30 54.4**	**-1.3**
TRIZ				S	**Sg**	**23 31 00.3**	**-1.5**
TRIZ	**Trizonia**	**0.76**	**50**	P	**Pg**	**23 30 54.4**	**-1.3**
TRIZ				S	**Sg**	**23 31 00.3**	**-1.5**
GUR	**Goura**	**0.80**	**86**	*e*PN	**Pg**	**23 30 51.5**	**-1.0**
GUR				*e*SN	**Sg**	**23 31 02.9**	**-0.2**
GUR	**Goura**	**0.80**	**86**	*e*Pn	**Pg**	**23 30 51.5**	**-1.0**
GUR				*e*Sn	**Sg**	**23 31 02.9**	**-0.2**
ITM	**Ithomi**	**0.84**	**146**	*e*Pn	**Pg**	**23 30 53.7**	**+0.3**
ITM	**Ithomi**	**0.84**	**146**	P	**Pg**	**23 30 53.8**	**+0.4**
ITM	**Ithomi**	**0.84**	**146**	*e*PN	**Pg**	**23 30 53.7**	**+0.3**
ITM	**Ithomi**	**0.84**	**146**	P	**Pg**	**23 30 53.8**	**+0.4**
PYL	**PYLOS**	**1.04**	**162**	*e*PN	**Pg**	**23 30 56.9**	**-0.1**
PYL	**PYLOS**	**1.04**	**162**	*e*Pn	**Pg**	**23 30 56.9**	**-0.1**
LKD2	**Lefkada island**	**1.05**	**330**	P	**Pg**	**23 30 55.4**	**-1.9**
LKD2				S	**Sg**	**23 31 10.6**	**-0.5**
LKD2	**Lefkada island**	**1.05**	**330**	P	**Pg**	**23 30 55.4**	**-1.9**
LKD2				S	**Sg**	**23 31 10.6**	**-0.5**
EVR	**Evrytania**	**1.10**	**20**	*e*Pn	**Pg**	**23 30 58.3**	**+0.1**
EVR	**Evrytania**	**1.10**	**20**	*e*PN	**Pg**	**23 30 58.3**	**+0.1**
EVR	**Evrytania**	**1.10**	**20**	*e*Pn	**Pg**	**23 30 58.3**	**+0.1**
AGG	**Agios Georgios**	**1.38**	**34**	P	**Pn**	**23 31 01.3**	**-0.1**
AGG				S	**Sn**	**23 31 19.6**	**+0.4**
AGG	**Agios Georgios**	**1.38**	**34**	P	**Pn**	**23 31 01.3**	**-0.1**
AGG				S	**Sn**	**23 31 19.6**	**+0.4**
LKR	**Lokris**	**1.52**	**59**	P	**Pn**	**23 31 03.9**	**+0.7**
LKR	**Lokris**	**1.52**	**59**	P	**Pn**	**23 31 03.9**	**+0.7**
THL	**Klokotos Trika**	**1.76**	**17**	P	**Pn**	**23 31 06.4**	**-0.2**
THL	**Klokotos Trika**	**1.76**	**17**	P	**Pn**	**23 31 06.4**	**-0.2**

*NNC **09** 23:37:30.5±8.4, 38°.20N×71°.77E, h0km, mb3.7, mpv3.6, Error ellipse: s-maj=112.2km s-min=63.7km az=83.0*

ISC 09 23:37:24.9±1.2, 37°.40N±0°.08×72°.0E±0°.3, h133km±42km, n11, σ1°09/15, 4C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**3.80**	**55**	⇑*i*Pn	**Pn**	**23 38 17.2**	**-4.9**
KSH				Sn	**Sn**	**23 38 55.0**	**-11**
KSH				smax			
comp=N,49nm,0.3s
KSH smax
comp=E,40nm,0.3s
AML Almayashu 4.92 15 P **Pn 23 38 38.0 +1.2**
SNR=7.5
UCH Uchtor 5.21 21 P **Pn 23 38 41.3 +0.5**
SNR=6.8
KZA Kyzart 5.32 28 P **Pn 23 38 41.8 -0.5**
SNR=5.9
EKS2 Erkin-Say 5.44 14 P **Pn 23 38 45.3 +1.4**
SNR=15
KK31 Karatay Array 5.80 350 ⇑Pn **Pn 23 38 50.3 +1.6**
comp=E,4.2nm,0.5s,baz=158,slow=11,SNR=41
KK31 ⇑Sn **Sn 23 39 51.8 -2.3**
comp=E,7.4nm,0.4s,baz=164,slow=20,SNR=19
THN Thein Dam 5.84 147 *e*PKP **Pn 23 38 50.0 +0.7**
THN *e*S **Sn 23 39 54.0 -1.1**
ULHL Ulahol 5.86 33 P **Pn 23 38 48.6 -0.9**
SNR=5.6
TKM2 Tokmak 2 6.18 26 P **Pn 23 38 53.7 -0.2**
SNR=7.1
AB31 Akbulak array 14.70 328 ⇓Pn **Pn 23 40 45.3 -0.8**
comp=E,0.8nm,0.5s,baz=134,slow=13,SNR=24
AB31 ⇓Sn **Sn 23 43 23.9 -4.9**
comp=E,0.4nm,0.5s
AKTO Aktyubinsk 16.41 327 ⇑Pn **Pn 23 41 07.7 +0.4**
comp=E,0.5nm,0.7s

*TRN **09** 23:44:34.9, 19°.44N×64°.22W, h71km*
*RSPR **09** 23:44:36.4, 19°.45N×64°.19W, h78km±8km, MD3.5/5, MD3.5/5*
*NEIC **09** 23:44:36.4, 19°.45N×64°.19W, h78km, MD3.5(RSPR), After RSPR.*

ISC 09 23:44:35.7±2.2, 19°.5N±0°.4×64°.2W±0°.2, h76km±60km, n12, σ0°35/22, 6C-6D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.74**	**191**	⇓*e*P	**Pn**	**23 44 51.7**	**+0.2**
ABV				*e*S	**Sn**	**23 45 03.2**	**0.0**
ABV	**Anegada**	**0.74**	**191**	⇓*e*P	**Pn**	**23 44 51.7**	**+0.2**
ABV				*e*S	**Sn**	**23 45 03.2**	**0.0**
TBVI	**Tortola**	**1.12**	**201**	⇑*e*P	**Pn**	**23 44 56.2**	**+0.2**
TBVI	**Tortola**	**1.12**	**201**	⇑*e*P	**Pn**	**23 44 56.2**	**+0.2**
STVI	**Saint Thomas**	**1.33**	**213**	⇓*e*P	**Pn**	**23 44 58.4**	**-0.2**
STVI				*e*S	**Sn**	**23 45 15.4**	**-0.4**
STVI	**Saint Thomas**	**1.33**	**213**	⇓*e*P	**Pn**	**23 44 58.4**	**-0.2**
STVI				*e*S	**Sn**	**23 45 15.4**	**-0.4**
MTP	**Monte Pirata**	**1.88**	**224**	⇑*e*P	**Pn**	**23 45 06.1**	**+0.2**
MTP				*e*S	**Sn**	**23 45 29.2**	**+0.4**
MTP	**Monte Pirata**	**1.88**	**224**	⇑*e*P	**Pn**	**23 45 06.6**	**+0.7**
MTP				*e*S	**Sn**	**23 45 29.2**	**+0.4**
CBYP	**Canovanas**	**1.98**	**233**	⇓*e*P	**Pn**	**23 45 07.0**	**-0.2**
CBYP				*e*S	**Sn**	**23 45 31.6**	**+0.5**
CBYP	**Canovanas**	**1.98**	**233**	⇓*e*P	**Pn**	**23 45 07.0**	**-0.2**
CBYP				*e*S	**Sn**	**23 45 31.6**	**+0.5**
HUMP	**Col San Antoni**	**2.05**	**230**	⇑*e*P	**Pn**	**23 45 07.7**	**-0.5**
HUMP				*e*S	**Sn**	**23 45 32.6**	**-0.4**
HUMP	**Col San Antoni**	**2.05**	**230**	⇑*e*P	**Pn**	**23 45 07.7**	**-0.5**
HUMP				*e*S	**Sn**	**23 45 32.6**	**-0.4**

*NEIC **09** 23:53:12.9±2.1, 8°.96S×120°.52E, h10km, mb3.4/2, Error ellipse: s-maj=80.2km s-min=13.0km az=65.0*
*IDC **09** 23:53:21.5±2.2, 8°.15S×121°.00E, h175km±51km, mb3.8/1, mb1 3.2/5, mb1mx3.0/21, mbtmp3.0/5, Error ellipse: s-maj=168.4km s-min=35.0km az=68.0*

ISC 09 23:53:21.9±1.2, 8°.0S±0°.2×121°.3E±0°.4, h176km±35km, n9, σ1°01/12, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**3.35**	**333**	P	**Pn**	**23 54 14.3**	**-0.5**
0.5nm,0.3s,baz=210,slow=16,SNR=2.4
FITZ Fitzroy Crossi 10.88 157 P **Pn 23 55 52.3 -0.7**
0.1nm,0.3s,baz=329,slow=13,SNR=7.8
FITZ S **Sn 23 57 45.6 -8.2**
0.3nm,0.3s,baz=268,slow=21,SNR=3.0
FITZ Fitzroy Crossi 10.88 157 *e*Pn Px 23 55 42.2
FITZ *e*Sn **Sn 23 57 44.7 -9.1**
WRA Warramunga Arr 17.33 134 P **Pn 23 57 13.3 -0.1**
0.2nm,0.3s,baz=307,slow=12,SNR=9.4
WRA S **S 00 00 22.1 -1.3**
0.2nm,0.3s,baz=299,slow=24,SNR=7.7
WRA Warramunga Arr 17.33 134 P **Pn 23 57 13.3 -0.1**
WRA S **S 00 00 22.1 -1.3**
WRAB Tennant Creek 17.33 134 *e*P **Pn 23 57 15.6 +2.1**
1.9nm,0.5s
ASAR Alice Springs 19.71 144 P **P 23 57 38.8 +0.9**
0.2nm,0.3s,baz=330,slow=14,SNR=8.1
STKA Stephens Creek 30.34 144 P **P 23 59 17.2 +0.1**
1.4nm,0.3s,baz=328,slow=7.1,SNR=6.5
STKA Stephens Creek 30.34 144 *e*P **P 23 59 17.1 0.0**
0.3nm,0.5s

*IDC **10** 00:01:54.8±1.4, 32°.89N×106°.21E, h0km, mb3.3/4, mb1 3.6/5, mb1mx3.4/25, mbtmp3.3/5, ML4.1/1, Error ellipse: s-maj=77.5km s-min=21.9km az=55.0*
*ISCJB **10** 00:01:56.3±0.7, 32°.27N±0°.05×105°.18E±0°.08, h10km, mb3.3/4, Error ellipse: s-maj=9.6km s-min=7.0km az=169.0*

ISC 10 00:01:58.5±0.7, 32°.32N±0°.05×105°.23E±0°.06, h10km, n8, σ1°42/15, mb3.3/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.54**	**60**	Pn	**Pn**	**00 02 55.3**	**+1.8**
XAN Pg **Pg 00 03 06.2 -0.1**
XAN Sn **Sn 00 03 36.8 +1.4**
XAN Sg **Sg 00 03 50.1 -2.1**
XAN smax
comp=N,140nm,0.5s
XAN smax
comp=E,70nm,0.5s
XAN LR LR
comp=N,68nm,5.7s
XAN LR LR
comp=E,66nm,7.9s
XAN LR LR
comp=Z,62nm,8.5s
LZH Lanzhou 3.93 343 *e*Pn **Pn 00 03 01.2 +2.3**
LZH Pg **Pg 00 03 09.5 -4.3**
LZH Sn **Sn 00 03 45.4 +0.4**
LZH Sg **Sg 00 03 58.8 -5.9**
LZH smax
comp=N,240nm,0.7s
LZH smax
comp=E,310nm,0.5s
LZH LR LR
comp=E,610nm,6.4s
LZH LR LR
comp=Z,910nm,7.3s
GYA Guiyang 5.97 168 Pg **Pn 00 03 35.6 +8.6**
GYA Sg **Sn 00 04 36.5 +1.1**
GYA smax
comp=N,30nm,0.8s
GYA smax
comp=E,30nm,0.8s
CMAR Chiang Mai Arr 14.92 204 Pn **Pn 00 05 38.4 +8.8**
comp=E,0.3nm,0.3s,baz=6.3,slow=9.2,SNR=6.7
MKAR Makanchi Array 22.73 316 P **P 00 06 59.5 -1.0**
comp=E,0.2nm,0.5s,mb2.8,baz=106,slow=11,SNR=4.1
KURK Kurchatov 26.88 321 P **P 00 07 38.6 -0.7**
comp=E,0.3nm,0.6s,mb3.0,baz=125,slow=10.0,SNR=4.2
WRA Warramunga Arr 58.97 148 P **P 00 11 55.8 -2.5**
comp=E,0.8nm,0.8s,mb3.8,baz=343,slow=7.9,SNR=5.1
ASAR Alice Springs 62.05 150 P **P 00 12 18.5 -0.8**
comp=E,0.3nm,0.7s,mb3.5,baz=330,slow=6.6,SNR=2.7

*NIED **10** 00:03:00, 36°.40N×141°.90E, h17km, Mw4.4 Best double couple: M0=4.06000×10^15 NP1:φs=18.00000°, δ68.00000°, λ87.00000°. NP2:φs=206.00000°, δ22.00000°, λ98.00000°.*
*IDC **10** 00:03:09.8±0.6, 36°.30N×141°.88E, h0km, mb4.3/21, mb1 4.4/25, mb1mx4.4/32, mbtmp4.3/25, ML4.4/4, MS3.7/11, Ms1 3.7/11, ms1mx3.4/33, Error ellipse: s-maj=17.1km s-min=13.5km az=88.0*
*ISCJB **10** 00:03:11.2±0.9, 36°.31N±0°.03×141°.98E±0°.05, h22km±6km, mb4.5/70, MS3.9/20, Error ellipse: s-maj=6.4km s-min=4.9km az=14.3*
*JMA **10** 00:03:12.6±0.2, 36°.36N×141°.90E, h67km, M4.5*
JMA Felt I J1.
*MOS **10** 00:03:13.4±1.1, 36°.39N×141°.88E, h33km, mb4.9/28, Error ellipse: s-maj=10.5km s-min=5.9km az=118.7*
*BJI **10** 00:03:13.1, 36°.32N×141°.55E, h15km, mB4.6/20, mb4.8/33, Ms4.1/20, Ms7 4.0/21*
*NEIC **10** 00:03:15.9±2.4, 36°.32N×141°.74E, h35km±16km, mb4.8/34, MW4.3(NIED), Error ellipse: s-maj=8.0km s-min=5.8km az=134.0*
NEIC Recorded [1 JMA] in Fukushima, Gumma, Ibaraki and Tochigi.
*SZGRF **10** 00:03:28.8, 38°.66N×141°.14E, h33km, mb4.6, Near east coast of eastern Honshu, Japan*

ISC 10 00:03:11.6±1.2, 36°.31N±0°.03×141°.91E±0°.04, h11km±7km, h39km±3.0km: pP-P, n173, σ0°96/188, mb4.5/70, MS3.9/20, 8C-9D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.05**	**235**	⇑P	**Pb**	**00 03 32.2**	**+0.4**
CHOJ S **Sb 00 03 47.7 +2.2**
JHO Hitachi 1.12 286 ⇓P **Pb 00 03 32.0 -1.0**
ONAJ Iwakimizuishiy 1.19 312 ⇓P **Pn 00 03 32.9 -1.3**
ONAJ S **Sb 00 03 49.3 -0.3**
JFK Kawauchi 1.34 322 P **Pn 00 03 35.5 -0.8**
JFT Otama 1.74 314 ⇓P **Pn 00 03 41.8 0.0**
JFT *e*S **Sn 00 04 04.3 +0.3**
JMM Marumori 1.79 330 ⇑P **Pn 00 03 41.6 -0.8**
BSO1 Boso 1 1.82 205 P **Pn 00 03 42.6 -0.3**
BSO1 S **Sn 00 04 06.1 +0.1**
BSO3 Boso 3 1.89 217 ⇑P **Pn 00 03 43.9 0.0**
JAG Ashikaga 1.98 274 ⇓P **Pn 00 03 44.6 -0.5**
JFY Yanaizu 2.08 302 ⇑P **Pn 00 03 46.8 +0.4**
MJAR Matsushiro Arr 2.99 275 Pn **Pn 00 03 59.2 +0.2**
64nm,0.3s,baz=114,slow=8.7,SNR=310
MJAR Sn **Sn 00 04 37.5 +2.7**
24nm,0.3s,baz=118,slow=28,SNR=5.0
MJAR LR LR 00 05 14.9
comp=Z,1μm,21.6s,baz=95,slow=43
MJAR Matsushiro Arr 2.99 275 P **Pn 00 03 59.2 +0.2**
MJAR 00 04 37.6
MAJO Matsushiro 2.99 275 *e*P **Pn 00 04 00.2 +1.2**
MAT Matsushiro 2.99 275 P **Pn 00 03 59.6 +0.6**
MAT S **Sn 00 04 37.3 +2.4**
JHJ Hachijo jima 2 3.64 209 Pn **Pn 00 04 07.4 -0.4**
140nm,0.3s,baz=88,slow=22,SNR=24
JHJ Sn **Sn 00 04 48.7 -2.1**
142nm,0.3s,baz=76,slow=23,SNR=11
ASAJ Asahikawa 7.81 4 Pn **Pn 00 05 04.2 -0.9**
3.5nm,0.3s,baz=200,slow=13,SNR=7.2
ASAJ Sn **Sn 00 06 28.9 -4.7**
1.3nm,0.3s,baz=252,slow=20,SNR=2.8
ASAJ LR LR 00 09 08.6
comp=Z,453nm,18.3s,baz=156,slow=46
ASAJ Asahikawa 7.81 4 P **Pn 00 05 04.3 -0.9**
ASAJ 00 06 28.9
ASAJ pmax pmax
comp=Z,4.0nm,0.3s
ASAJ smax
comp=N,1.0nm,0.3s
ASAJ MLR MLR
comp=Z,453nm,18.3s
CBIJ Chichi jima 9.19 178 Pn **Pn 00 05 21.3 -2.9**
comp=Z,15nm,0.3s,baz=277,slow=15,SNR=15
CBIJ Sn **Sn 00 06 57.6 -10**
comp=Z,23nm,0.3s,baz=294,slow=21,SNR=6.6
VLA Vladivostok 10.28 314 P **Pn 00 05 35.0 -4.0**
VLA MLR MLR
comp=Z,500nm,17.7s
YSS Yuzh-Sakhalins 10.65 3 *e*P **Pn 00 05 44.0 -0.1**
YSS Yuzh-Sakhalins 10.65 3 *e*Pn **Pn 00 05 45.7 +1.6**
KSRS Korea Array 11.26 280 Pn **Pn 00 05 55.5 +3.0**
comp=Z,0.6nm,0.3s,baz=96,slow=13,SNR=19
KSRS LR LR 00 10 16.6
comp=Z,417nm,18.1s,baz=344,slow=38
KSRS Korea Array 11.26 280 P **Pn 00 05 55.5 +3.0**
KSRS pmax pmax
comp=Z,1.0nm,0.3s
KSRS MLR MLR
comp=Z,417nm,18.1s
MDJ Mudanjiang 12.51 315 P **Pn 00 06 09.3 -0.2**
MDJ pP 00 06 16.8
MDJ S **Sn 00 08 25.4 -3.3**
MDJ ScP ScP 00 15 18.7 -3.0
MDJ PcS PcS 00 15 23.3 +0.5
MDJ pmax pmax
comp=Z,2.0nm,0.7s
MDJ pmax pmax
comp=Z,40nm,3.8s
MDJ LR LR
comp=N,260nm,17.3s
MDJ LR LR
comp=E,260nm,16.6s
MDJ LR LR
comp=Z,480nm,17.5s
HABR Khabarovsk 13.16 340 *e*P **Pn 00 06 16.7 -1.6**
HABR 00 08 42.2
HABR MLR MLR
comp=Z,304nm,16.0s
KLR Kul'dur 14.89 333 *e*P **Pn 00 06 48.2 +6.3**
KLR MLR MLR
comp=E,500nm,13.0s
KLR MLR MLR
comp=Z,800nm,13.0s
TPUB Ta-pu 22.50 241 P **P 00 08 07.7 -3.5**
HHC Hu-ho-hao-te 24.08 290 *e*P **P 00 08 26.7 -0.3**
HHC pP 00 08 38.2
HHC PP 00 09 01.1
HHC PcP PcP 00 12 11.7 +3.5
HHC S **S 00 12 36.5 -7.9**
HHC sS sS 00 12 54.9 +5.1
HHC ScP ScP 00 15 43.7 -2.9
HHC PcS PcS 00 15 49.0 +1.2
HHC pmax pmax
comp=Z,15nm,0.9s,mb4.4
HHC pmax pmax
comp=Z,89nm,6.2s
HHC LR LR
comp=N,110nm,15.2s,MS3.8
HHC LR LR
comp=E,230nm,14.5s,MS3.8
HHC LR LR
comp=Z,230nm,15.4s,MS3.8
YAK Yakutsk 26.86 347 *e*P **P 00 08 51.0 -1.0**
YAK pmax pmax
comp=Z,30nm,1.0s,mb4.8
YAK pmax pmax
comp=E,6.0nm,1.1s
YAK pmax pmax
comp=N,25nm,1.2s
YAK MLR MLR
comp=Z,244nm,14.0s,MS3.9
YAK MLR MLR
comp=N,188nm,13.0s,MS3.9
YAK MLR MLR
comp=E,78nm,13.0s,MS3.9
YAK Yakutsk 26.86 347 P **P 00 08 51.7 -0.2**
XAN Xi'an 26.99 275 P **P 00 08 52.4 -1.1**
XAN pP pP 00 08 59.3 +2.6
XAN pmax pmax
comp=Z,3.0nm,0.7s,mb3.9
XAN pmax pmax
comp=Z,19nm,5.1s
XAN LR LR
comp=N,74nm,13.4s,MS3.5
XAN LR LR
comp=E,45nm,16.0s,MS3.5
XAN LR LR
comp=Z,59nm,13.4s,MS3.3
SEY Seymchan 27.42 10 *c*e**P P 00 08 53.2 -3.8**
FX1 Attu Island--F 27.45 43 LR LR 00 17 04.7
comp=Z,42nm,21.3s,MS3.0,baz=180,slow=30
ULN Ulaanbaatar 28.09 305 *eP* **P 00 09 03.4 +0.2**

ULN pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
ULN Ulaanbaatar 28.09 305 *eP* **P 00 09 03.4 +0.2**
comp=Z,8.9nm,0.8s,mb4.5
SONM Songino Array 28.52 305 P **P 00 09 07.0 0.0**
comp=Z,11nm,0.5s,mb4.8,baz=108,slow=8.6,SNR=37
SONM LR LR 00 20 49.5
comp=Z,135nm,18.7s,MS3.6,baz=262,slow=37
LZH Lanzhou 30.59 281 *eP* **P 00 09 26.0 +0.5**
LZH pP pP 00 09 38.0 +9.2
LZH PP PP 00 10 26.0 -8.4
LZH pmax pmax
comp=Z,18nm,1.3s,mb4.7
ZAK Zakamensk 31.03 309 *eP* **P 00 09 29.3 +0.1**
ZAK pmax pmax
comp=Z,4.0nm,1.1s,mb4.2
TLY Talaya 31.10 312 *eP* **P 00 09 30.4 +0.6**
TLY *eS* PcP 00 12 27.9 +2.9
GYA Guiyang 31.50 262 P **P 00 09 35.0 +1.4**
GYA pP pP 00 09 46.9 +10
GYA PP PP 00 10 39.7 -5.0
GYA S **S 00 14 37.3 -4.5**
GYA ScP ScP 00 16 05.3 -4.3
GYA SS SS 00 16 25.8 -31
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
GYA pmax pmax
comp=Z,120nm,4.8s
GYA LR LR
comp=N,430nm,16.9s,MS4.4
GYA LR LR
comp=E,470nm,17.4s,MS4.4
GYA LR LR
comp=Z,420nm,16.3s,MS4.2
CD2 Chengdu 32.08 272 ⇓ *iP* **P 00 09 37.7 -1.0**
CD2 pP pP 00 09 49.6 +7.6
CD2 sP sP 00 09 55.0 +12
CD2 PP PP 00 10 44.1 -7.0
CD2 S **S 00 14 43.0 -7.7**
CD2 sS sS 00 15 03.9 +7.7
CD2 SS SS 00 16 36.3 -32
CD2 pmax pmax
comp=Z,20nm,0.9s,mb5.0
CD2 pmax pmax
comp=Z,30nm,5.8s
CD2 LR LR
comp=N,200nm,16.6s,MS4.1
CD2 LR LR
comp=E,240nm,16.6s,MS4.1
CD2 LR LR
comp=Z,240nm,16.2s,MS4.0
QIZ Qiongzhong 33.01 247 P **P 00 09 45.0 -1.9**
QIZ S **S 00 15 02.8 -2.5**
QIZ LR LR
comp=N,130nm,17.1s
QIZ LR LR
comp=Z,190nm,15.0s,MS3.9
GTA Gaotai 33.16 288 *eP* **P 00 09 48.1 +0.1**
GTA pP pP 00 09 55.2 +3.8
GTA sP sP 00 09 58.9 +6.2
GTA S **S 00 15 11.2 +3.8**
GTA sS sS 00 15 22.5 +10
GTA pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
GTA pmax pmax
comp=Z,84nm,3.6s
GTA LR LR
comp=N,100nm,14.0s,MS4.0
GTA LR LR
comp=E,170nm,14.0s,MS4.0
GTA LR LR
comp=Z,170nm,16.4s,MS3.8
BILL Bilibino 34.61 16 ⇓ *eP* **P 00 09 59.6 -0.7**
BILL pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
BILL MLR MLR
comp=Z,100nm,14.0s,MS3.7
KMI Kunming 35.25 263 P **P 00 10 06.0 -0.4**
KMI pmax pmax
comp=Z,19nm,0.9s,mb5.0
TIXI Tiksi 36.05 353 *eP* **P 00 10 12.3 -0.3**
TIXI pmax pmax
comp=Z,40nm,2.6s,mb4.9
TIXI Tiksi 36.05 353 *eP* **P 00 10 12.3 -0.3**
comp=Z,40nm,2.6s,mb4.9
CHTO Chiang Mai 41.51 257 *eP* **P 00 10 59.1 +0.1**
CHTO pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
CHTO Chiang Mai 41.51 257 *eP* **P 00 10 59.0 0.0**
comp=Z,5.5nm,0.8s,mb4.2
WMQ Urumqi 41.52 298 P **P 00 11 00.0 +1.1**
WMQ pP pP 00 11 12.0 +10
WMQ PP PP 00 12 40.0 +5.3
WMQ S **S 00 17 11.0 -3.3**
WMQ SS SS 00 20 11.0 -7.7
WMQ pmax pmax
comp=Z,17nm,1.0s,mb4.6
WMQ pmax pmax
comp=Z,68nm,4.0s
WMQ LR LR
comp=N,920nm,16.0s,MS4.9
WMQ LR LR
comp=E,880nm,16.0s,MS4.9
WMQ LR LR
comp=Z,950nm,16.0s,MS4.8
CM31 Chiang Mai Arr 41.71 256 *eP* **P 00 11 00.6 0.0**
CMAR Chiang Mai Arr 41.71 256 P **P 00 11 00.1 -0.5**
comp=Z,3.5nm,0.8s,mb4.0,baz=48,slow=6.1,SNR=20
CMAR LR LR 00 29 01.7
comp=Z,51nm,18.2s,MS3.4,baz=55,slow=37
LSA Lhasa 42.68 276 P **P 00 11 09.6 +1.1**
ZALV Zalesovo Beam 42.69 313 P **P 00 11 08.2 -0.1**
comp=Z,4.2nm,0.5s,mb4.5,baz=90,slow=7.4,SNR=31
ZALV PcP PcP 00 12 58.4 -1.5
comp=Z,1.3nm,0.6s,baz=72,slow=1.8,SNR=3.4
ZALV LR LR 00 29 32.7
comp=Z,105nm,19.3s,MS3.7,baz=47,slow=37
ZALV Zalesovo Beam 42.69 313 P **P 00 11 08.2 -0.1**
ZALV 00 12 58.4
MK31 Makanchi Array 44.84 303 *eP* **P 00 11 25.6 0.0**
MKAR Makanchi Array 44.84 303 P **P 00 11 25.5 -0.1**
comp=Z,4.3nm,0.6s,mb4.5,baz=80,slow=13,SNR=38
MKAR LR LR 00 30 27.7
comp=Z,94nm,21.3s,MS3.7,baz=359,slow=36
TAPN Taplejung 46.39 275 *ePn* **P 00 11 38.2 0.0**
comp=Z,37nm,1.0s,mb5.3
KURK Kurchatov 46.69 309 P **P 00 11 40.2 0.0**
comp=Z,6.4nm,0.5s,mb4.8,baz=84,slow=7.9,SNR=37
KURK Kurchatov 46.69 309 *ceP* **P 00 11 39.6 -0.6**
KURK pmax pmax
comp=Z,15nm,0.8s,mb5.0
KURK Kurchatov 46.69 309 *eP* **P 00 11 39.7 -0.5**
comp=Z,22nm,1.1s,mb5.0
ODAN Odare 46.86 274 *ePn* **P 00 11 41.7 -0.2**
comp=Z,18nm,0.5s,mb5.2
RAMN Ramite 47.46 275 *ePn* **P 00 11 46.6 +0.1**
comp=Z,43nm,0.7s,mb5.5
JIRN Jiri 47.48 276 *ePn* **P 00 11 47.3 +0.6**
comp=Z,13nm,0.4s,mb5.2
CHUM Lake Minchumin 47.52 33 P **P 00 11 49.7 +3.2**
comp=Z,27μm,1.2s
GUN Gumba 47.63 277 *ePn* **P 00 11 48.0 +0.2**
comp=Z,9.8nm,0.4s,mb5.2
PKI Pulchoki 48.15 276 *ePn* **P 00 11 52.0 +0.1**
comp=Z,7.9nm,0.5s,mb5.0
PKI Pulchoki 48.15 276 *eP* **P 00 11 52.0 +0.1**
PKI pmax pmax
comp=Z,8.0nm,0.5s,mb5.0
KKN Kakani 48.16 277 *ePn* **P 00 11 52.0 0.0**
comp=Z,10nm,0.5s,mb5.1
KKN Kakani 48.16 277 *eP* **P 00 11 52.0 0.0**
KKN pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
DMN Daman 48.38 277 *ePn* **P 00 11 53.5 -0.1**
comp=Z,7.0nm,0.5s,mb5.0
TKM2 Tokmak 2 50.32 299 *eP* **P 00 12 08.8 +0.5**
TKM2 pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
TKM2 Tokmak 2 50.32 299 *eP* **P 00 12 08.8 +0.5**
comp=Z,8.5nm,0.6s,mb5.0
KSH Kashi 51.06 295 *eP* **P 00 12 18.1 +4.1**
KSH pP pP 00 12 30.5 +13
KSH PcP PcP 00 13 33.1 +3.3
KSH PP PP 00 14 16.0 +5.6
KSH ScP ScP 00 17 24.2 -1.9
KSH PcS PcS 00 17 29.3 +2.0
KSH S **S 00 19 31.4 +0.1**
KSH sS sS 00 19 52.9 +16
KSH ScS ScS 00 22 01.3 -3.3
KSH SS SS 00 23 05.2 -0.9
KSH pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
KSH pmax pmax
comp=Z,84nm,7.8s
KSH LR LR
comp=N,80nm,5.6s
KSH LR LR
comp=E,120nm,7.8s
KSH LR LR
comp=Z,120nm,5.1s
AAK Ala-Archa 51.18 299 P **P 00 12 14.6 -0.2**
comp=Z,3.0nm,0.5s,mb4.5,baz=190,slow=6.1,SNR=3.7
AAK Ala-Archa 51.18 299 ⇓ *eP* **P 00 12 15.3 +0.5**
AAK pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
AAK Ala-Archa 51.18 299 *eP* **P 00 12 14.3 -0.5**
comp=Z,3.5nm,0.5s,mb4.5
BVAR Borovoye Array 51.35 313 P **P 00 12 15.3 -0.6**
comp=Z,1.7nm,0.6s,mb4.1,baz=86,slow=8.8,SNR=11
BVAR PcP PcP 00 13 30.1 -0.4
comp=Z,1.4nm,0.6s,baz=47,slow=2.6,SNR=3.7
BRVK Borovoye 51.41 313 *deP* **P 00 12 16.3 0.0**
BRVK pmax pmax
comp=Z,7.0nm,1.7s,mb4.3
BRVK Borovoye 51.41 313 *eP* **P 00 12 16.1 -0.3**
comp=Z,2.9nm,0.4s,mb4.6
AML Almayashu 51.90 299 *eP* **P 00 12 20.5 +0.3**
comp=Z,10nm,0.6s,mb4.9
INK Inuvik 54.85 27 P **P 00 12 42.4 +1.0**
comp=Z,0.9nm,0.7s,mb3.9,baz=306,slow=2.7,SNR=3.1
INK Inuvik 54.85 27 *eP* **P 00 12 42.3 +0.9**
SVE Sverdlovsk 55.95 319 ⇓ *eP* **P 00 12 50.0 +0.5**
SVE *e* 00 14 51.1
SVE *eS* **S 00 20 36.0 -1.1**
SVE pmax pmax
comp=Z,12nm,1.1s,mb4.8
SVE MLR MLR
comp=Z,288nm,16.0s,MS4.5
FITZ Fitzroy Crossi 56.27 199 P **P 00 12 52.3 +0.2**
comp=Z,3.0nm,0.9s,mb4.3,baz=40,slow=16,SNR=3.9
FITZ Fitzroy Crossi 56.27 199 P **P 00 12 52.9 +0.7**
WRAB Tennant Creek 56.40 189 *eP* **P 00 12 52.4 -0.6**
WRAB pmax pmax
comp=Z,12nm,1.2s,mb4.8
WRAB Tennant Creek 56.40 189 *eP* **P 00 12 52.4 -0.7**
comp=Z,12nm,1.2s,mb4.8
WRA Warramunga Arr 56.41 189 P **P 00 12 52.3 -0.8**
comp=Z,1.1nm,0.5s,mb4.2,baz=6.8,slow=7.4,SNR=10
ARU Arti 57.16 319 *dP* **P 00 12 57.6 -0.6**
ARU *e* 00 15 03.4
ARU S **S 00 20 52.2 -1.0**
ARU SS SS 00 24 34.9 -6.6
ARU pmax pmax
comp=Z,20nm,1.7s,mb4.9
ARU Arti 57.16 319 *eP* **P 00 12 57.4 -0.8**
comp=Z,9.9nm,0.9s,mb4.8
KBL Kabul 58.05 292 P **P 00 13 04.6 -0.2**
ABKAR Akbulak array 58.71 311 *eP* **P 00 13 08.3 -0.9**
comp=Z,1.9nm,0.4s,mb4.5
ASAR Alice Springs 60.13 188 P **P 00 13 19.1 0.0**
comp=Z,0.9nm,0.7s,mb3.9,baz=16,slow=8.8,SNR=6.9
RES Resolute Bay 63.20 14 *eP* **P 00 13 38.9 -0.4**
YKA Yellowknife Ar 64.23 30 P **P 00 13 45.8 -0.4**
comp=Z,0.8nm,0.7s,mb3.9,baz=303,slow=6.5,SNR=5.6
ARCES ARCESS Array B 64.81 340 P **P 00 13 50.3 +0.4**
comp=Z,2.6nm,0.8s,mb4.3,baz=51,slow=7.9,SNR=7.8
JOF Joensuu 66.78 332 *ep* **P 00 14 02.0 -0.7**
comp=Z,3.5nm,0.5s,mb4.7
JOF Joensuu 66.78 332 *ep* **P 00 14 02.0 -0.7**
comp=Z,3.5nm,0.5s,mb4.7
OBN Obninsk 68.91 324 ⇑ *eP* **P 00 14 16.7 +0.4**
OBN pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
OBN MLR MLR
comp=Z,100nm,14.0s,MS4.2
KAF Kangasniemi 69.13 333 *eP* **P 00 14 16.7 -0.8**
KAF pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
KAF Kangasniemi 69.13 333 *ep* **P 00 14 16.7 -0.8**
comp=Z,3.8nm,0.5s,mb4.6
KAF Kangasniemi 69.13 333 *ep* **P 00 14 16.7 -0.8**
comp=Z,3.8nm,0.5s,mb4.6
FINES FINESS Array B 69.64 333 P **P 00 14 20.5 -0.2**
comp=Z,6.3nm,0.8s,mb4.6,baz=53,slow=6.7,SNR=14
FINES LR LR 00 47 31.2
comp=Z,82nm,18.8s,MS4.0,baz=104,slow=38
FINES FINESS Array B 69.64 333 P **P 00 14 20.5 -0.2**
FINES LR LR 00 47 31.2
VSR Storozhevoye 69.73 319 *eP* **P 00 14 20.8 -0.6**
VSR pmax pmax
comp=Z,7.0nm,0.5s,mb4.8
VSR pmax pmax
comp=N,2.0nm,0.3s
VSR pmax pmax
comp=E,2.0nm,0.3s
SUMG Summit 71.40 0 *eP* **P 00 14 32.5 +1.3**
ZEI Tsey 71.58 310 *eP* **P 00 14 31.2 -1.6**
ZEI pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
KIV Kislovodsk 71.68 311 *eP* **P 00 14 34.1 +0.7**
KIV pmax pmax
comp=Z,13nm,1.2s,mb4.7
KIV MLR MLR
comp=Z,57nm,18.0s,MS3.9
KIV Kislovodsk 71.68 311 *eP* **P 00 14 34.0 +0.5**
comp=Z,9.5nm,0.9s,mb4.7
FFC Flin Flon 74.09 33 P **P 00 14 49.9 +2.4**
ANN Anapa 74.32 314 *eP* **P 00 14 46.9 -2.1**
ANN pmax pmax
comp=Z,22nm,1.0s,mb5.0
LRM Limekiln Ridge 74.38 44 *eP* **P 00 14 50.8 +1.4**
comp=Z,13nm,0.8s,mb4.9
NB2 NORSAR Subarra 75.00 338 P **P 00 14 52.3 -0.4**
comp=Z,2.4nm,0.6s,mb4.3,baz=38,slow=5.9
NOA NORSAR Array B 75.00 338 P **P 00 14 52.7 0.0**
comp=Z,4.7nm,0.8s,mb4.5,baz=39,slow=5.8,SNR=11
NOA LR LR 00 49 53.3
comp=Z,79nm,20.1s,MS4.0,baz=170,slow=37
NOA NORSAR Array B 75.00 338 P **P 00 14 52.7 0.0**
NOA LR LR 00 49 53.3
NVAR Mina Array Bea 75.10 53 P **P 00 14 54.4 +0.6**
comp=Z,0.8nm,0.6s,mb3.9,baz=270,slow=8.1,SNR=3.4
AKASG Malin Array Be 75.11 323 P **P 00 14 53.0 -0.5**
comp=Z,6.8nm,0.7s,mb4.7,baz=46,slow=5.8,SNR=30
KIEV Kiev 75.12 323 *eP* **P 00 14 52.9 -0.7**
KIEV pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
KIEV Kiev 75.12 323 *eP* **P 00 14 52.9 -0.7**
comp=Z,8.3nm,0.9s,mb4.7
HWUT Hardware Ranch 77.42 47 *eP* **P 00 15 09.9 +3.0**
KWP Kalwaria Pacla 78.95 325 *eP* **P 00 15 14.9 -0.2**
KWP pmax pmax
comp=Z,12nm,0.9s,mb4.8
KWP Kalwaria Pacla 78.95 325 *eP* **P 00 15 14.9 -0.2**
comp=Z,12nm,0.9s,mb4.8
BUR08 Bucovina Ar. S 79.11 322 *eP* **P 00 15 16.6 +0.5**
BR131 Keskin Array S 79.63 312 *eP* **P 00 15 20.0 +1.0**
BRTR Keskin Array B 79.63 312 P **P 00 15 19.3 +0.3**
comp=Z,2.6nm,0.8s,mb4.2,baz=94,slow=4.3,SNR=14
KOLS Kolonicke sedl 79.64 324 *eP* **P 00 15 19.8 +0.9**
KOLS Kolonicke sedl 79.64 324 *eP* **P 00 15 19.8 +0.9**
STHS Stebnicka Huta 79.78 325 *eP* **P 00 15 21.1 +1.4**
STHS pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
STHS Stebnicka Huta 79.78 325 *eP* **P 00 15 21.1 +1.4**
comp=Z,1.8nm,0.9s,mb4.0
STHS Stebnicka Huta 79.78 325 *eP* **P 00 15 21.1 +1.4**
OJC Ojcow 79.86 326 *eP* **P 00 15 19.3 -0.8**
OJC Ojcow 79.86 326 *eP* **P 00 15 19.2 -0.9**
CRVS Cervenica-Dubn 80.04 325 *eP* **P 00 15 22.1 +1.0**
CRVS pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
CRVS Cervenica-Dubn 80.04 325 *eP* **P 00 15 22.1 +1.0**
comp=Z,4.2nm,1.2s,mb4.2
CRVS Cervenica-Dubn 80.04 325 *eP* **P 00 15 22.1 +1.0**
NIE Niedzica 80.20 326 *eP* **P 00 15 22.8 +0.8**
KECS Kecovo 80.79 325 *eP* **P 00 15 26.8 +1.7**
KECS pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
KECS Kecovo 80.79 325 *eP* **P 00 15 26.8 +1.7**
comp=Z,1.8nm,0.9s,mb4.0
KECS Kecovo 80.79 325 *eP* **P 00 15 26.8 +1.7**
OKC Ostrava-Krasne 80.87 327 *eP* **P 00 15 23.2 -2.3**
OKC Ostrava-Krasne 80.87 327 *eP* **P 00 15 23.2 -2.3**
MORC Moravsky Berou 81.18 327 *eP* **P 00 15 27.8 +0.6**
MORC pmax pmax
comp=Z,13nm,1.7s,mb4.6
MORC Moravsky Berou 81.18 327 *eP* **P 00 15 27.8 +0.6**
comp=Z,13nm,1.7s,mb4.6
DPC Dobruska-Polom 81.28 328 *eP* **P 00 15 28.3 +0.6**
DPC Dobruska-Polom 81.28 328 *eP* **P 00 15 28.3 +0.6**
PSZ Piszkesteto 81.47 325 *eP* **P 00 15 28.6 -0.2**
PSZ pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
PSZ Piszkesteto 81.47 325 *eP* **P 00 15 28.6 -0.2**
comp=Z,3.8nm,0.8s,mb4.4
VYHS Vyhne 81.54 326 *eP* **P 00 15 29.8 +0.7**
VYHS pmax pmax
comp=Z,4.0nm,1.4s,mb4.2
VYHS Vyhne 81.54 326 *eP* **P 00 15 29.8 +0.7**
comp=Z,3.9nm,1.4s,mb4.1
VYHS Vyhne 81.54 326 *eP* **P 00 15 29.8 +0.7**
PVCC Panska Ves 81.88 329 *eP* **P 00 15 31.3 +0.4**
PVCC Panska Ves 81.88 329 *eP* **P 00 15 31.3 +0.4**
CLL Collm 81.92 330 *iP* **P 00 15 30.7 -0.4**
CLL *e* 00 15 37.0
CLL pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
CLL Collm 81.92 330 *iP* **P 00 15 30.7 -0.4**
comp=Z,5.0nm,1.1s,mb4.4
CLL *e* 00 15 37.0
CLL Collm 81.92 330 *iP* **P 00 15 30.7 -0.4**
comp=Z,5.0nm,1.1s,mb4.4
CLL *e*PcP PcP 00 15 37.0 +0.3
PRU Pruhonice 82.30 329 *eP* **P 00 15 33.4 +0.3**
PRU Pruhonice 82.30 329 *eP* **P 00 15 33.4 +0.3**
TREC Trest 82.43 328 *eP* **P 00 15 33.7 -0.1**
TREC Trest 82.43 328 *eP* **P 00 15 33.7 -0.1**
MMAI Mount Meron Ar 82.71 306 P **P 00 15 36.2 +0.7**
comp=Z,1.0nm,0.6s,mb4.0,baz=31,slow=3.4,SNR=3.6
KHC Kasperske Hory 83.36 329 *eP* **P 00 15 38.2 -0.4**
comp=Z,3.1nm,1.0s,mb4.3
KHC Kasperske Hory 83.36 329 *eP* **P 00 15 38.4 -0.2**
GERES GERESS Array B 83.53 329 P **P 00 15 39.0 -0.5**
comp=Z,1.1nm,0.6s,mb4.2,baz=35,slow=5.6,SNR=14
GERES LR LR 00 57 52.7
comp=Z,64nm,19.3s,MS4.0,baz=281,slow=39
GRA1 Grafenberg Arr 83.89 330 *eP* **P 00 15 41.9 +0.6**
comp=Z,5.0nm,0.9s,mb4.6
GRF Grafenberg Arr 83.89 330 *eP* **P 00 15 41.9 +0.6**
comp=Z,5.0nm,0.9s,mb4.6
GRF Grafenberg Arr 83.89 330 *eP* **P 00 15 41.9 +0.6**
GRF pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
GRF Grafenberg Arr 83.89 330 *eP* **P 00 15 41.9 +0.6**
GRF pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
GRF Grafenberg Arr 83.89 330 *eP* **P 00 15 41.9 +0.6**
comp=Z,5.0nm,0.9s,mb4.6
TXAR Lajitas Array 90.24 53 P **P 00 16 13.7 +1.1**
comp=Z,0.6nm,0.8s,mb4.0,baz=325,slow=2.0,SNR=3.8
LPAZ La Paz 146.70 61 PKPbc PKPbc 00 22 54.4 +0.4
comp=Z,1.7nm,0.6s,baz=254,slow=1.6,SNR=9.3
LPAZ La Paz 146.70 61 *e*PKPdf PKPbc 00 22 54.5 +0.5
PMSA Palmer Station 147.56 160 PKPdf PKPbc 00 22 55.1 +0.2

ISK ***10*** *00:16:17.5, 36°.96N×29°.24E, h5km, MD3.2*
DDA ***10*** *00:16:18.7, 37°.00N×29°.22E, h23km±2km, Md3.3*
CSEM ***10*** *00:16:18.8±0.1, 36°.96N×29°.22E, h2km, MD3.2, Error ellipse: s-maj=2.3km s-min=1.6km az=167.0*
ISCJB ***10*** *00:16:18.7±0.6, 36°.98N±0°.03×29°.22E±0°.03, h2km±5km, Error ellipse: s-maj=4.9km s-min=3.8km az=150.2*
ISC 10 00:16:19.0±0.5, 36°.98N±0°.03×29°.21E±0°.03, h2km±4km, n82, σ0°77/94, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.29**	**53**	PG	**Pg**	**00 16 24.0**	**-0.6**
GLHS				*e*SG	**Sg**	**00 16 29.6**	**+1.1**
GLHS	**Glhisar (BURDU**	**0.29**	**53**	*i* Pg	**Pg**	**00 16 24.0**	**-0.7**
GLHS				*e*Sg	**Sg**	**00 16 29.6**	**+1.1**
FETY	**Fethiye**	**0.36**	**196**	*e*PG	**Pg**	**00 16 25.4**	**-0.5**
FETY				*e*SG	**Sg**	**00 16 31.4**	**+0.9**
FETY	**Fethiye**	**0.36**	**196**	*e*Pg	**Pg**	**00 16 25.4**	**-0.5**
FETY				*e*Sg	**Sg**	**00 16 31.4**	**+0.9**
GOLH	**Golhisar**	**0.38**	**48**	*i* P	**Pg**	**00 16 26.2**	**-0.2**
GOLH	**Golhisar**	**0.38**	**48**	*i* P	**Pg**	**00 16 26.2**	**-0.2**
TURN	**Turunc**	**0.49**	**258**	*i* P	**Pg**	**00 16 33.4**	**+4.9**
TURN	**Turunc**	**0.49**	**258**	*i* P	**Pg**	**00 16 33.4**	**+4.9**
ELL	**Elmali**	**0.61**	**112**	*e*PG	**Pg**	**00 16 30.0**	**-0.7**
ELL	**Elmali**	**0.61**	**112**	*e*Pg	**Pg**	**00 16 30.0**	**-0.7**
DNZL	**Cakiroluk**	**0.72**	**350**	*i* P	**Pg**	**00 16 32.1**	**-0.7**
DNZL	**Cakiroluk**	**0.72**	**350**	*i* P	**Pg**	**00 16 32.1**	**-0.8**
YER	**Yerkesik**	**0.76**	**282**	*e*PG	**Pg**	**00 16 34.0**	**+0.5**
YER	**Yerkesik**	**0.76**	**282**	*e*Pg	**Pg**	**00 16 34.0**	**+0.5**
DENT	**Denizli**	**0.79**	**350**	*e*PG	**Pg**	**00 16 34.0**	**-0.1**
DENT	**Denizli**	**0.79**	**350**	*e*Pg	**Pg**	**00 16 34.0**	**-0.1**
AKAS	**Kas**	**0.81**	**157**	*i* P	**Pg**	**00 16 35.4**	**+0.9**
AKAS	**Kas**	**0.81**	**157**	*i* P	**Pg**	**00 16 35.4**	**+0.8**
KORT	**Korkueli**	**0.92**	**88**	*i* P	**Pg**	**00 16 35.3**	**-1.3**
KORT	**Korkueli**	**0.92**	**88**	*i* P	**Pg**	**00 16 35.3**	**-1.3**
ARG	**Arkhangelos**	**1.16**	**229**	*e*P	**Pg**	**00 16 40.8**	**-0.4**
ANTB	**Antalya**	**1.16**	**93**	*e*PN	**Pn**	**00 16 40.5**	**-1.8**
ANTB	**Antalya**	**1.16**	**93**	*e*Pn	**Pn**	**00 16 40.5**	**-1.8**
MLSB	**Milas**	**1.19**	**286**	*e*PN	**Pn**	**00 16 42.3**	**-0.3**
MLSB	**Milas**	**1.19**	**286**	*e*Pn	**Pn**	**00 16 42.3**	**-0.3**
BCK	**Bucak**	**1.20**	**66**	*e*PN	**Pn**	**00 16 41.5**	**-1.4**
BCK	**Bucak**	**1.20**	**66**	*e*Pn	**Pn**	**00 16 41.5**	**-1.4**
AYDN	**Tasoluk**	**1.26**	**303**	*i* P	**Pg**	**00 16 43.4**	**+0.3**
AYDN				*i* S	**Sg**	**00 17 01.3**	**+1.8**
AYDN	**Tasoluk**	**1.26**	**303**	*i* P	**Pg**	**00 16 43.4**	**+0.2**
AYDN				*i* S	**Sg**	**00 17 01.3**	**+1.8**
DAT	**Datca**	**1.33**	**260**	*e*PN	**Pn**	**00 16 44.7**	**0.0**
DAT	**Datca**	**1.33**	**260**	*e*Pn	**Pn**	**00 16 44.7**	**+0.1**
KHL	**Karahalli**	**1.36**	**11**	*e*PN	**Pn**	**00 16 44.7**	**-0.4**
KHL	**Karahalli**	**1.36**	**11**	*e*Pn	**Pn**	**00 16 44.7**	**-0.4**
KHAL	**Karahalli**	**1.41**	**9**	*i* P	**Pn**	**00 16 44.8**	**-0.9**
KHAL				*i* S	**Sg**	**00 17 04.6**	**+0.4**
KHAL	**Karahalli**	**1.41**	**9**	*i* P	**Pn**	**00 16 44.8**	**-0.9**
KHAL				*i* S	**Sg**	**00 17 04.6**	**+0.3**
BDRM	**Kayabasi**	**1.41**	**274**	*i* P	**Pn**	**00 16 45.8**	**0.0**
BDRM				*i* S	**Sg**	**00 17 02.7**	**-1.7**
BDRM	**Kayabasi**	**1.41**	**274**	*i* P	**Pn**	**00 16 45.8**	**0.0**
BDRM				*i* S	**Sg**	**00 17 02.7**	**-1.7**
SUTC	**Sutluce-Ispart**	**1.52**	**70**	*e*PN	**Pn**	**00 16 46.9**	**-0.3**
SUTC	**Sutluce-Ispart**	**1.52**	**70**	*e*Pn	**Pn**	**00 16 46.9**	**-0.3**
KULA	**Kula-Manisa**	**1.59**	**344**	*e*PN	**Pn**	**00 16 47.7**	**-0.6**
KULA	**Kula-Manisa**	**1.59**	**344**	*e*Pn	**Pn**	**00 16 47.7**	**-0.5**
GCAM	**G?zelcaml?**	**1.73**	**295**	*i* P	**Pn**	**00 16 49.8**	**-0.3**
GCAM	**G?zelcaml?**	**1.73**	**295**	*i* P	**Pn**	**00 16 49.8**	**-0.3**
SHUT	**Suhut-Afyon**	**1.90**	**34**	*e*PN	**Pn**	**00 16 52.6**	**+0.2**
SHUT	**Suhut-Afyon**	**1.90**	**34**	*e*Pn	**Pn**	**00 16 52.6**	**+0.2**
SMG	**Samos**	**2.02**	**292**	*e*P	**Pn**	**00 16 54.1**	**-0.1**
IZM	**Izmir**	**2.09**	**313**	*e*PN	**Pn**	**00 16 55.8**	**+0.7**
IZM	**Izmir**	**2.09**	**313**	*e*Pn	**Pn**	**00 16 55.8**	**+0.7**
DEMI	**Demirci**	**2.10**	**350**	*i* P	**Pn**	**00 16 54.9**	**-0.3**
DEMI				*i* S	**Sn**	**00 17 21.0**	**-0.9**
DEMI	**Demirci**	**2.10**	**350**	*i* P	**Pn**	**00 16 54.9**	**-0.3**
DEMI				*i* S	**Sn**	**00 17 21.0**	**-0.8**
GDZ	**Gediz**	**2.12**	**6**	*i* P	**Pn**	**00 16 55.8**	**+0.3**
GDZ	**Gediz**	**2.12**	**6**	*i* P	**Pn**	**00 16 55.8**	**+0.3**
KARP	**Karpathos**	**2.19**	**230**	*e*P	**Pn**	**00 16 57.0**	**+0.6**
ALT	**Altintas**	**2.19**	**19**	*e*PN	**Pn**	**00 16 56.8**	**+0.3**
ALT	**Altintas**	**2.19**	**19**	*e*Pn	**Pn**	**00 16 56.8**	**+0.3**
BLCB	**Balcova**	**2.22**	**310**	*e*PN	**Pn**	**00 16 56.7**	**-0.2**
BLCB	**Balcova**	**2.22**	**310**	*e*Pn	**Pn**	**00 16 56.7**	**-0.1**
BOLV	**Bolvadin**	**2.22**	**38**	*i* P	**Pn**	**00 16 57.0**	**+0.1**
BOLV	**Bolvadin**	**2.22**	**38**	*i* P	**Pn**	**00 16 57.0**	**+0.2**
GAZI	**Gazipasa**	**2.61**	**106**	*i* P	**Pn**	**00 17 03.1**	**+0.9**
GAZI	**Gazipasa**	**2.61**	**106**	*i* P	**Pn**	**00 17 03.1**	**+0.9**
DST	**Dursunbey**	**2.66**	**350**	*e*PN	**Pn**	**00 17 03.6**	**+0.6**
DST	**Dursunbey**	**2.66**	**350**	*e*Pn	**Pn**	**00 17 03.6**	**+0.7**
KONT	**Konya--Tatoy**	**2.69**	**68**	*e*PN	**Pn**	**00 17 03.4**	**+0.1**
KONT	**Konya--Tatoy**	**2.69**	**68**	*e*Pn	**Pn**	**00 17 03.4**	**+0.1**
KDHN	**Kadinhani**	**2.77**	**55**	*i* P	**Pn**	**00 17 05.1**	**+0.6**
KDHN	**Kadinhani**	**2.77**	**55**	*i* P	**Pn**	**00 17 05.1**	**+0.6**
LADK	**Ladik-KONYA**	**2.79**	**63**	*e*PN	**Pn**	**00 17 04.9**	**+0.2**
LADK	**Ladik-KONYA**	**2.79**	**63**	*e*Pn	**Pn**	**00 17 04.9**	**+0.2**
KIZT	**Kizilcal**	**2.84**	**47**	*e*PN	**Pn**	**00 17 06.3**	**+0.9**
KIZT	**Kizilcal**	**2.84**	**47**	*e*Pn	**Pn**	**00 17 06.3**	**+0.9**
ESKT	**Eskisehir**	**2.85**	**27**	*e*PN	**Pn**	**00 17 06.0**	**+0.5**
ESKT	**Eskisehir**	**2.85**	**27**	*e*Pn	**Pn**	**00 17 06.0**	**+0.5**

ERMK	Ermenek	2.99	95	*i* P	Pn	00 17 11.1	+3.6
ERMK	Ermenek	2.99	95	*i* P	Pn	00 17 11.1	+3.6
BALY	Balya	3.03	336	*i* P	Pn	00 17 07.1	-0.9
BALY	Balya	3.03	336	*i* P	Pn	00 17 07.1	-0.8
SVRH	Sivrihisar-ESK	3.07	36	*e*PN	Pn	00 17 09.4	+0.9
SVRH	Sivrihisar-ESK	3.07	36	*e*Pn	Pn	00 17 09.4	+0.9
ULDT	Uludag	3.16	359	*i* P	Pn	00 17 18.0	+8.2
GULT	Gulveren	3.60	16	*e*PN	Pn	00 17 16.6	+0.8
GULT	Gulveren	3.60	16	*e*Pn	Pn	00 17 16.6	+0.8

*IDC **10** 00:34:07.4±1.9,24°.46N×122°.45E, h0km, mb3.5/6, mb1 3.6/6, mb1mx3.5/23, mbtmp3.5/6, Error ellipse: s-maj=140.8km s-min=19.6km az=64.0*
*TAP **10** 00:34:13.4, 24°.33N×121°.70E, h32km, ML4.1, B*
*NEIC **10** 00:34:13.8, 24°.32N×121°.69E, h28km, ML4.3(TAP), After TAP.*
NEIC Recorded [3 TAP] in I-lan and [2 TAP] in Hua-lien.
*ISCJB **10** 00:34:13.4±0.4, 24°.30N±0°.02×121°.79E±0°.03, h26km±2km, mb3.5/6, Error ellipse: s-maj=4.4km s-min=2.5km az=21.7*
ISC 10 00:34:13.7±0.3, 24°.32N±0°.02×121°.77E±0°.03, h26km±2km, n62, σ1°.00/100, mb3.5/6, 10C-11D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.03**	**258**	*e*P	**Pb**	**00 34 18.4**	**+0.2**
	baz=117						
EHP				*e*S	**Sb**	**00 34 23.4**	**+2.2**
	baz=117						
ENA	**Nanau**	**0.12**	**346**	⇓*i*P	**Pb**	**00 34 19.2**	**+0.4**
	baz=19						
NACB	**Ninganchiao**	**0.21**	**229**	*e*P	**Pb**	**00 34 19.4**	**-0.3**
NACB				*e*S	**Sb**	**00 34 24.1**	**+0.3**
TWD	**Chiawan**	**0.28**	**214**	⇑*i*P	**Pb**	**00 34 20.6**	**0.0**
	baz=207						
TWD				*i* S	**Sb**	**00 34 25.9**	**+0.6**
	baz=207						
TWC	**Suao**	**0.30**	**14**	⇓*i*P	**Pb**	**00 34 21.4**	**+0.5**
	baz=25						
TWC				*e*S	**Sb**	**00 34 27.3**	**+1.5**
	baz=25						
HWA	**Hwalien**	**0.37**	**204**	*e*P	**Pb**	**00 34 21.6**	**-0.3**
	baz=202						
ENTT	**Nioudou**	**0.37**	**330**	⇑*i*P	**Pb**	**00 34 21.7**	**-0.3**
	baz=337						
ENTT				*e*S	**Sb**	**00 34 26.6**	**-1.0**
	baz=337						
NNS	**Nan Shan**	**0.38**	**289**	⇑*i*P	**Pb**	**00 34 21.6**	**-0.5**
	baz=290						
NNS				S	**Sb**	**00 34 27.3**	**-0.5**
	baz=290						
TWE	**Neicheng**	**0.41**	**347**	⇑*i*P	**Pb**	**00 34 22.6**	**0.0**
	baz=351						
TWE				*i* S	**Sb**	**00 34 29.0**	**+0.3**
	baz=351						
ILA	**Ilan**	**0.45**	**357**	*i* P	**Pb**	**00 34 23.2**	**+0.1**
	baz=2.0						
ILA				S	**Sb**	**00 34 30.7**	**+1.1**
	baz=2.0						
YHNB	**Yeheng**	**0.50**	**314**	⇓*i*P	**Pb**	**00 34 23.2**	**-0.9**
NSK	**Sanguang**	**0.52**	**314**	⇑*i*P	**Pb**	**00 34 23.7**	**-0.6**
	baz=309						
NSK				*i* S	**Sb**	**00 34 30.6**	**-1.0**
	baz=309						
TWT	**Tachien**	**0.55**	**264**	*e*P	**Pb**	**00 34 23.5**	**-1.2**
	baz=261						
TWT				S	**Sb**	**00 34 31.8**	**-0.5**
	baz=261						
ESL	**Shilin**	**0.59**	**212**	*e*P	**Pb**	**00 34 24.1**	**-1.3**
	baz=206						
TWA	**Mucha**	**0.68**	**346**	⇑*i*P	**Pb**	**00 34 26.9**	**-0.2**
	baz=343						
TWA				S	**Sb**	**00 34 36.5**	**+0.3**
	baz=343						
TATO	**Taipei**	**0.71**	**339**	⇓*i*P	**Pb**	**00 34 26.8**	**-0.7**
TATO				*e*S	**Sb**	**00 34 35.5**	**-1.3**
TWB1	**Santiao Chiao**	**0.72**	**16**	⇓*i*P	**Pb**	**00 34 27.8**	**+0.2**
	baz=21						
TWB1				S	**Sb**	**00 34 38.1**	**+1.0**
	baz=21						
NWF	**Wu-fen Shan**	**0.75**	**1**	⇑P	**Pb**	**00 34 28.4**	**+0.1**
	baz=1.0						
NWF				S	**Sb**	**00 34 39.6**	**+1.5**
	baz=1.0						
TAP1	**Taipei**	**0.76**	**343**	P	**Pb**	**00 34 28.1**	**-0.2**
	baz=346						
TAP1				S	**Sb**	**00 34 38.1**	**-0.1**
	baz=346						
NSTT	**Nanjuang**	**0.77**	**294**	⇑*i*P	**Pb**	**00 34 28.1**	**-0.4**
	baz=294						
NSTT				*i* S	**Sb**	**00 34 37.6**	**-0.9**
	baz=294						
NCU	**National Centr**	**0.84**	**321**	P	**Pb**	**00 34 29.3**	**-0.4**
	baz=322						
NCU				S	**Sb**	**00 34 41.5**	**+0.8**
	baz=322						
TWS1	**Kuangyinshan**	**0.84**	**338**	*e*P	**Pb**	**00 34 29.1**	**-0.7**
	baz=340						
TWS1				*e*S	**Sb**	**00 34 41.4**	**+0.7**
	baz=340						
HSN	**Hsinchu**	**0.88**	**304**	P	**Pb**	**00 34 29.8**	**-0.5**
	baz=307						
HSN				*e*S	**Sb**	**00 34 42.2**	**+0.5**
	baz=307						
EHY	**Hungye**	**0.91**	**207**	*e*P	**Pn**	**00 34 28.1**	**-2.6**
	baz=204						
SMLT	**Sun Moon Lake**	**0.91**	**242**	⇓P	**Pn**	**00 34 30.0**	**-0.7**
	baz=239						
SMLT				*e*S	**Sb**	**00 34 41.5**	**-1.0**
	baz=239						
TWQ1	**Liyutan**	**0.91**	**272**	⇑P	**Pn**	**00 34 31.1**	**+0.3**
	baz=271						
TWQ1				S	**Sb**	**00 34 42.5**	**-0.1**
	baz=271						
SSLB	**Suanglung**	**0.91**	**235**	⇑*e*P	**Pn**	**00 34 29.5**	**-1.4**
SSLB				*e*S	**Sb**	**00 34 40.4**	**-2.3**
NSY	**Sanyi**	**0.93**	**276**	⇓*i*P	**Pn**	**00 34 31.4**	**+0.3**
	baz=275						
NSY				S	**Sb**	**00 34 43.7**	**+0.6**
	baz=275						
TYC	**Yuchr**	**0.93**	**244**	⇓*i*P	**Pn**	**00 34 30.4**	**-0.6**
	baz=241						
TYC				*e*S	**Sb**	**00 34 42.8**	**-0.4**
	baz=241						
TWY	**Chenhua**	**0.97**	**351**	*e*P	**Pn**	**00 34 32.1**	**+0.5**
	baz=341						
TCU	**Taichung**	**1.01**	**261**	*e*P	**Pn**	**00 34 32.3**	**+0.1**
	baz=258						
TCU				*e*S	**Sb**	**00 34 46.8**	**+1.2**
	baz=258						
YULB	**Yu-li**	**1.02**	**205**	*e*P	**Pn**	**00 34 31.4**	**-0.9**
YULB				*e*S	**Sb**	**00 34 44.9**	**-0.8**
TWF1	**Yuli**	**1.05**	**204**	*e*P	**Pn**	**00 34 30.0**	**-2.7**
	baz=202						
WNT	**Mingjian**	**1.08**	**247**	*e*P	**Pn**	**00 34 32.8**	**-0.4**
	baz=231						
WNT				*e*S	**Sn**	**00 34 48.8**	**+1.5**
	baz=231						
YUS	**Yu-Shan**	**1.11**	**223**	⇓*i*P	**Pn**	**00 34 33.4**	**-0.2**
	baz=210						
YUS				S	**Sn**	**00 34 47.9**	**-0.2**
	baz=210						
YOJ	**Yonaguni jima**	**1.14**	**82**	*e*P	**Pn**	**00 34 33.5**	**-0.5**
	baz=83						
ALS	**Alishan**	**1.19**	**228**	⇓*i*P	**Pn**	**00 34 34.8**	**+0.1**
	baz=215						
ALS				*e*S	**Sn**	**00 34 51.3**	**+1.3**
	baz=215						
CHN5	**Tsauling**	**1.23**	**235**	⇓*i*P	**Pn**	**00 34 35.8**	**+0.6**
	baz=232						
CHN5				*e*S	**Sn**	**00 34 51.6**	**+0.7**
	baz=232						
WGK	**Gukeng**	**1.27**	**241**	*e*P	**Pn**	**00 34 36.0**	**+0.2**
	baz=238						
WGK				*e*S	**Sn**	**00 34 53.3**	**+1.4**
	baz=238						
ELDTW	**Lidau**	**1.32**	**212**	*e*P	**Pn**	**00 34 35.0**	**-1.4**
	baz=203						
PCYT	**Pengchaiyu**	**1.34**	**12**	*e*P	**Pn**	**00 34 36.1**	**-0.5**
	baz=13						
TPUB	**Ta-pu**	**1.45**	**226**	*e*Pn	**Pn**	**00 34 38.6**	**+0.3**
TPUB				*e*Sn	**Sn**	**00 34 56.4**	**-0.1**
CHY	**Chiayi**	**1.48**	**237**	*e*P	**Pn**	**00 34 39.3**	**+0.7**
	baz=234						
CHY				*e*S	**Sn**	**00 34 59.2**	**+2.2**
	baz=234						
TWK	**Hsinying**	**1.57**	**229**	P	**Pn**	**00 34 40.9**	**+0.9**
	baz=226						
TWK				*e*S	**Sn**	**00 35 01.4**	**+2.0**
	baz=226						
CHN1	**Nanshi**	**1.60**	**226**	P	**Pn**	**00 34 41.3**	**+1.0**
	baz=214						
CHN1				*e*S	**Sn**	**00 35 02.6**	**+2.4**
	baz=214						
TWG	**Pinlang**	**1.62**	**203**	*e*Pn	**Pn**	**00 34 41.1**	**+0.6**
TWG				Sn	**Sn**	**00 35 00.2**	**-0.4**
TWG	**Pinlang**	**1.62**	**203**	*e*P	**Pn**	**00 34 39.6**	**-1.0**
	baz=195						
SGST	**Jiashian**	**1.64**	**222**	*e*P	**Pn**	**00 34 41.6**	**+0.7**
	baz=211						
SGST				*e*S	**Sn**	**00 35 02.6**	**+1.5**
	baz=211						
ECL	**Taimali**	**1.87**	**204**	*e*P	**Pn**	**00 34 44.4**	**+0.4**
	baz=195						
SSD	**Sandimen**	**1.88**	**214**	*e*P	**Pn**	**00 34 45.3**	**+1.1**
	baz=214						
TWM1	**Shoushan**	**1.93**	**220**	*e*P	**Pn**	**00 34 46.0**	**+1.2**
	baz=220						
EAST	**Anshuo**	**2.10**	**204**	*e*P	**Pn**	**00 34 48.1**	**+0.9**
	baz=197						
PNG	**Penghu**	**2.16**	**250**	*e*P	**Pn**	**00 34 46.3**	**-1.7**
	baz=247						
PNG				*e*S	**Sn**	**00 35 12.3**	**-1.7**
	baz=247						
SCZT	**Fangliau**	**2.21**	**209**	*e*P	**Pn**	**00 34 48.7**	**+0.1**
	baz=198						
TWK1	**Hengchun**	**2.52**	**201**	*e*P	**Pn**	**00 34 54.3**	**+1.3**
	baz=193						
KNM	**Kinmen**	**3.05**	**273**	*e*P	**Pn**	**00 35 00.5**	**+0.3**
	baz=270						
SONM	**Songino Array**	**26.46**	**336**	P	**P**	**00 39 47.3**	**-1.2**
	0.3nm,0.5s,mb3.1,baz=163,slow=10,SNR=2.9						
MKAR	**Makanchi Array**	**38.62**	**316**	P	**P**	**00 41 36.9**	**+2.2**
	0.9nm,0.7s,mb3.6,baz=90,slow=12,SNR=7.8						
ZALV	**Zalesovo Beam**	**40.43**	**327**	P	**P**	**00 41 48.8**	**-0.8**
	0.3nm,0.3s,mb3.5,baz=125,slow=9.1,SNR=2.8						
WRA	**Warramunga Arr**	**45.66**	**163**	P	**P**	**00 42 29.4**	**-2.9**
	0.5nm,0.8s,mb3.5,baz=345,slow=8.9,SNR=4.5						
ASAR	**Alice Springs**	**49.13**	**165**	P	**P**	**00 42 57.4**	**-1.8**
	0.2nm,0.7s,mb3.3,baz=345,slow=6.7,SNR=4.6						
BRTR	**Keskin Array B**	**73.53**	**307**	P	**P**	**00 45 43.1**	**-1.2**
	1.0nm,0.9s,mb3.7,baz=98,slow=4.0,SNR=5.3						

*DDA **10** 00:36:48.0, 37°.02N×29°.17E, h7km±4km, Md2.9*
*ISK **10** 00:36:47.0, 36°.99N×29°.20E, h8km, MD2.8*
*CSEM **10** 00:36:47.3±0.2, 37°.01N×29°.18E, h2km, MD2.8, Error ellipse: s-maj=4.3km s-min=3.4km az=138.0*
*ISCJB **10** 00:36:47.1±0.5, 37°.04N±0°.04×29°.19E±0°.04, h10km, Error ellipse: s-maj=5.5km s-min=4.8km az=44.8*
ISC 10 00:36:47.6±0.5, 37°.02N±0°.03×29°.19E±0°.04, h10km, n25, σ1°.16/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.28**	**61**	*e*PG	**Pg**	**00 36 53.2**	**-0.1**
GLHS				*e*SG	**Sg**	**00 36 58.0**	**+0.8**
GLHS	**Glhisar (BURDU**	**0.28**	**61**	*e*Pg	**Pg**	**00 36 53.2**	**-0.1**
GLHS				*e*Sg	**Sg**	**00 36 58.0**	**+0.8**
GOLH	**Golhisar**	**0.37**	**54**	*i* P	**Pg**	**00 36 55.0**	**0.0**
GOLH	**Golhisar**	**0.37**	**54**	*i* P	**Pg**	**00 36 55.0**	**+0.1**
FETY	**Fethiye**	**0.39**	**192**	*e*PG	**Pg**	**00 36 54.2**	**-1.1**
FETY				*e*SG	**Sg**	**00 37 00.5**	**0.0**
FETY	**Fethiye**	**0.39**	**192**	*e*Pg	**Pg**	**00 36 54.2**	**-1.1**
FETY				*e*Sg	**Sg**	**00 37 00.5**	**0.0**
ELL	**Elmali**	**0.64**	**115**	*e*PG	**Pg**	**00 36 59.4**	**-0.6**
ELL	**Elmali**	**0.64**	**115**	*e*Pg	**Pg**	**00 36 59.4**	**-0.6**
DNZL	**Cakiroluk**	**0.68**	**350**	*i* P	**Pg**	**00 36 58.8**	**-2.0**
DNZL	**Cakiroluk**	**0.68**	**350**	*i* P	**Pg**	**00 36 58.8**	**-2.0**
YER	**Yerkesik**	**0.73**	**279**	*e*PG	**Pg**	**00 37 01.9**	**+0.2**
YER	**Yerkesik**	**0.73**	**279**	*e*Pg	**Pg**	**00 37 02.0**	**+0.2**
AKAS	**Kas**	**0.85**	**157**	*i* P	**Pg**	**00 37 04.2**	**+0.2**
AKAS				*i* S	**Sg**	**00 37 17.9**	**+2.7**
AKAS	**Kas**	**0.85**	**157**	*i* P	**Pg**	**00 37 04.2**	**+0.2**
AKAS				*i* S	**Sg**	**00 37 17.9**	**+2.8**
KORT	**Korkueli**	**0.93**	**91**	*i* S	**Pg**	**00 37 04.0**	**-1.5**
MLSB	**Milas**	**1.16**	**284**	*e*PN	**Pg**	**00 37 09.8**	**-0.2**
MLSB	**Milas**	**1.16**	**284**	*e*Pn	**Pg**	**00 37 09.8**	**-0.1**
DAT	**Datca**	**1.32**	**258**	*e*PN	**Pn**	**00 37 12.5**	**+0.4**
DAT	**Datca**	**1.32**	**258**	*e*Pn	**Pn**	**00 37 12.5**	**+0.4**
KHAL	**Karahalli**	**1.37**	**10**	*i* P	**Pn**	**00 37 09.6**	**-3.2**
KHAL				*i* S	**Sb**	**00 37 33.8**	**+2.9**
KHAL	**Karahalli**	**1.37**	**10**	*i* P	**Pn**	**00 37 09.6**	**-3.2**
KHAL				*i* S	**Sb**	**00 37 33.8**	**+2.9**
BDRM	**Kayabasi**	**1.40**	**272**	*i* P	**Pn**	**00 37 13.9**	**+0.8**
BDRM	**Kayabasi**	**1.40**	**272**	*i* P	**Pn**	**00 37 13.9**	**+0.8**
KULA	**Kula-Manisa**	**1.55**	**345**	*e*PN	**Pn**	**00 37 15.9**	**+0.6**
KULA	**Kula-Manisa**	**1.55**	**345**	*e*Pn	**Pn**	**00 37 15.9**	**+0.6**

*ATH **10** 01:54:34.4, 37°.89N×21°.41E, h31km±2km, MD3.1/8*
*NEIC **10** 01:54:34.4, 37°.89N×21°.41E, h31km, MD3.1(ATH), After ATH.*
*ISCJB **10** 01:54:34.5±0.5, 37°.85N±0°.02×21°.43E±0°.03, h5km±4km, Error ellipse: s-maj=3.9km s-min=3.5km az=32.7*
*CSEM **10** 01:54:35.0±0.3, 37°.87N×21°.42E, h19km±1km, MD3.1, Error ellipse: s-maj=5.0km s-min=4.4km az=56.0*
*THE **10** 01:54:35.1, 37°.87N×21°.45E, h0km±2km, ML3.2/12, Error ellipse: s-maj=2.1km s-min=0.7km az=205.0*
ISC 10 01:54:35.2±0.5, 37°.85N±0°.03×21°.44E±0°.03, h8km±4km, n53, σ1°.07/93, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.21**	**6**	*e*Pb	**Pg**	**01 54 39.8**	**+0.4**
RLS	**Riolos of Patr**	**0.21**	**6**	*e*PB	**Pg**	**01 54 39.8**	**+0.4**
RLS	**Riolos of Patr**	**0.21**	**6**	*e*Pb	**Pg**	**01 54 39.8**	**+0.4**
UPR	**University Cam**	**0.52**	**32**	P	**Pg**	**01 54 45.4**	**+0.3**
UPR				S	**Sg**	**01 54 52.7**	**+0.8**
UPR	**University Cam**	**0.52**	**32**	*e*PB	**Pg**	**01 54 45.3**	**+0.2**
UPR				*e*SB	**Sg**	**01 54 53.5**	**+1.6**
UPR	**University Cam**	**0.52**	**32**	P	**Pg**	**01 54 45.4**	**+0.3**
UPR				S	**Sg**	**01 54 52.7**	**+0.8**
UPR				*e*Sb	**Sg**	**01 54 53.5**	**+1.6**
KFL	**Anninata**	**0.57**	**297**	P	**Pg**	**01 54 46.0**	**-0.3**
KFL				S	**Sg**	**01 54 55.4**	**+1.6**
LAKA	**Lakka**	**0.58**	**47**	P	**Pg**	**01 54 45.7**	**-0.7**
LAKA				S	**Sg**	**01 54 54.1**	**+0.1**
LAKA	**Lakka**	**0.58**	**47**	P	**Pg**	**01 54 45.7**	**-0.7**
LAKA				S	**Sg**	**01 54 54.1**	**+0.1**
EFP	**Efpalio**	**0.69**	**32**	P	**Pg**	**01 54 47.3**	**-1.1**
EFP				S	**Sg**	**01 54 57.7**	**+0.3**
EFP	**Efpalio**	**0.69**	**32**	*e*PN	**Pg**	**01 54 47.4**	**-1.0**
EFP				*e*SN	**Sg**	**01 54 57.8**	**+0.5**
EFP	**Efpalio**	**0.69**	**32**	P	**Pg**	**01 54 47.3**	**-1.1**
EFP				S	**Sg**	**01 54 57.7**	**+0.3**
TRIZ	**Trizonia**	**0.72**	**44**	P	**Pg**	**01 54 48.0**	**-1.0**
TRIZ				S	**Sg**	**01 54 58.8**	**+0.4**
TRIZ	**Trizonia**	**0.72**	**44**	P	**Pg**	**01 54 48.0**	**-1.0**
TRIZ				S	**Sg**	**01 54 58.8**	**+0.4**
GUR	**Goura**	**0.72**	**83**	P	**Pg**	**01 54 48.0**	**-1.1**
GUR				S	**Sg**	**01 54 58.2**	**-0.3**
GUR	**Goura**	**0.72**	**83**	*e*PB	**Pg**	**01 54 48.0**	**-1.1**
GUR				*e*SN	**Sg**	**01 55 00.2**	**+1.7**
GUR	**Goura**	**0.72**	**83**	P	**Pg**	**01 54 48.0**	**-1.1**
GUR				S	**Sg**	**01 54 58.2**	**-0.3**
GUR				*e*Sn	**Sg**	**01 55 00.2**	**+1.7**
VLS	**Valsamata**	**0.75**	**296**	*e*Pn	**Pg**	**01 54 48.6**	**-0.9**
VLS				*e*Sn	**Sg**	**01 55 00.2**	**+1.0**
VLS	**Valsamata**	**0.75**	**296**	P	**Pg**	**01 54 48.3**	**-1.2**
VLS				S	**Sg**	**01 55 00.2**	**+1.0**
VLS	**Valsamata**	**0.75**	**296**	*e*PN	**Pg**	**01 54 48.6**	**-0.9**
VLS				*e*SN	**Sg**	**01 55 00.2**	**+1.0**
VLS	**Valsamata**	**0.75**	**296**	P	**Pg**	**01 54 48.3**	**-1.2**
VLS	**Valsamata**	**0.75**	**296**	*e*Pn	**Pg**	**01 54 48.6**	**-0.9**
VLS				S	**Sg**	**01 55 00.2**	**+1.0**
ITM	**Ithomi**	**0.77**	**150**	*e*Pn	**Pg**	**01 54 50.5**	**+0.5**
ITM				*e*Sn	**Sg**	**01 55 03.1**	**+3.1**
ITM	**Ithomi**	**0.77**	**150**	P	**Pg**	**01 54 50.3**	**+0.3**
ITM				S	**Sg**	**01 55 02.3**	**+2.3**
ITM	**Ithomi**	**0.77**	**150**	*e*PN	**Pg**	**01 54 50.5**	**+0.5**
ITM				*e*SN	**Sg**	**01 55 03.1**	**+3.1**
ITM	**Ithomi**	**0.77**	**150**	P	**Pg**	**01 54 50.3**	**+0.3**
ITM				S	**Sg**	**01 55 02.3**	**+2.3**
ITM				*e*Sn	**Sg**	**01 55 03.1**	**+3.1**
KALE	**Kalithea**	**0.78**	**45**	P	**Pg**	**01 54 48.9**	**-1.2**
KALE				S	**Sg**	**01 55 00.8**	**+0.6**
KALE	**Kalithea**	**0.78**	**45**	P	**Pg**	**01 54 48.9**	**-1.2**
KALE				S	**Sg**	**01 55 00.8**	**+0.6**
VLX	**Vlachokerasia**	**0.89**	**122**	P	**Pg**	**01 54 52.4**	**+0.2**
VLX				S	**Sg**	**01 55 05.8**	**+2.1**
VLX	**Vlachokerasia**	**0.89**	**122**	*e*PN	**Pg**	**01 54 52.7**	**+0.5**
VLX	**Vlachokerasia**	**0.89**	**122**	P	**Pg**	**01 54 52.4**	**+0.2**
VLX	**Vlachokerasia**	**0.89**	**122**	*e*Pn	**Pg**	**01 54 52.7**	**+0.5**
VLX				S	**Sg**	**01 55 05.8**	**+2.1**
PYL	**PYLOS**	**0.98**	**166**	P	**Pg**	**01 54 53.8**	**-0.2**
PYL	**PYLOS**	**0.98**	**166**	*e*PN	**Pg**	**01 54 53.8**	**-0.2**
PYL	**PYLOS**	**0.98**	**166**	P	**Pg**	**01 54 53.8**	**-0.2**
DSF	**Desfina**	**1.03**	**56**	P	**Pg**	**01 54 53.1**	**-1.8**
DSF				S	**Sg**	**01 55 08.5**	**+0.3**
DSF	**Desfina**	**1.03**	**56**	P	**Pg**	**01 54 53.1**	**-1.8**
DSF				S	**Sg**	**01 55 08.5**	**+0.3**
EVR	**Evrytania**	**1.11**	**15**	*e*Pn	**Pg**	**01 54 55.2**	**-1.2**
EVR	**Evrytania**	**1.11**	**15**	*e*PN	**Pg**	**01 54 55.2**	**-1.2**
EVR	**Evrytania**	**1.11**	**15**	*e*Pn	**Pg**	**01 54 55.2**	**-1.2**
LKD2	**Lefkada island**	**1.12**	**327**	P	**Pg**	**01 54 54.9**	**-1.8**
LKD2				S	**Sg**	**01 55 12.3**	**+1.0**
LKD2	**Lefkada island**	**1.12**	**327**	P	**Pg**	**01 54 54.9**	**-1.8**
LKD2				S	**Sg**	**01 55 12.3**	**+1.0**
LTK	**Loutraki**	**1.22**	**81**	P	**Pb**	**01 54 57.1**	**-1.4**
LTK	**Loutraki**	**1.22**	**81**	*e*PN	**Pn**	**01 54 57.0**	**-1.5**
LTK	**Loutraki**	**1.22**	**81**	P	**Pb**	**01 54 57.1**	**-1.4**
AGG	**Agios Georgios**	**1.37**	**31**	P	**Pn**	**01 54 59.7**	**-0.8**
AGG				S	**Sb**	**01 55 20.2**	**+1.6**
AGG	**Agios Georgios**	**1.37**	**31**	P	**Pn**	**01 54 59.7**	**-0.8**
AGG				S	**Sb**	**01 55 20.2**	**+1.6**
LKR	**Lokris**	**1.47**	**56**	P	**Pn**	**01 55 01.0**	**-0.9**
LKR				S	**Sn**	**01 55 22.6**	**+1.3**
LKR	**Lokris**	**1.47**	**56**	P	**Pn**	**01 55 01.0**	**-0.9**
LKR				S	**Sn**	**01 55 22.6**	**+1.3**
THL	**Klokotos Trika**	**1.77**	**15**	P	**Pn**	**01 55 06.3**	**+0.2**
THL				S	**Sn**	**01 55 29.6**	**+0.8**
THL	**Klokotos Trika**	**1.77**	**15**	P	**Pn**	**01 55 06.3**	**+0.2**
THL				S	**Sn**	**01 55 29.6**	**+0.8**
IGT	**Igoumenitsa**	**1.89**	**333**	P	**Pn**	**01 55 08.0**	**+0.3**
IGT				S	**Sn**	**01 55 38.3**	**+6.5**
IGT	**Igoumenitsa**	**1.89**	**333**	P	**Pn**	**01 55 08.0**	**+0.3**

*DDA **10** 01:57:00.6, 36°.94N×29°.18E, h7km±2km, Md2.8*
*ISK **10** 01:57:00.4, 36°.98N×29°.20E, h4km, MD2.7*
*ISCJB **10** 01:57:01.0±0.6, 36°.97N±0°.03×29°.18E±0°.05, h1km±12km, Error ellipse: s-maj=6.7km s-min=4.9km az=20.1*
*CSEM **10** 01:57:01.1±0.2, 36°.96N×29°.20E, h5km, MD2.7, Error ellipse: s-maj=4.0km s-min=3.4km az=127.0*
ISC 10 01:57:01.5±0.6, 36°.97N±0°.03×29°.18E±0°.05, h5km±9km, n20, σ0°.80/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.31**	**53**	*e*PG	**Pg**	**01 57 06.8**	**-0.8**
GLHS				*e*SG	**Sg**	**01 57 11.7**	**0.0**
GLHS	**Glhisar (BURDU**	**0.31**	**53**	*e*Pg	**Pg**	**01 57 06.8**	**-0.8**
GLHS				*e*Sg	**Sg**	**01 57 11.7**	**0.0**
FETY	**Fethiye**	**0.34**	**194**	*e*PG	**Pg**	**01 57 08.1**	**0.0**
FETY				*e*SG	**Sg**	**01 57 13.6**	**+1.0**
FETY	**Fethiye**	**0.34**	**194**	*e*Pg	**Pg**	**01 57 08.1**	**0.0**
FETY				*e*Sg	**Sg**	**01 57 13.6**	**+1.1**
GOLH	**Golhisar**	**0.40**	**48**	*i* P	**Pg**	**01 57 08.6**	**-0.7**
GOLH				*i* S	**Sg**	**01 57 15.5**	**+1.0**
GOLH	**Golhisar**	**0.40**	**48**	*i* P	**Pg**	**01 57 08.6**	**-0.7**
GOLH				*i* S	**Sg**	**01 57 15.5**	**+0.9**
ELL	**Elmali**	**0.62**	**110**	*e*PG	**Pg**	**01 57 12.9**	**-0.5**
ELL				*e*SG	**Sg**	**01 57 22.3**	**+0.8**
ELL	**Elmali**	**0.62**	**110**	*e*Pg	**Pg**	**01 57 12.9**	**-0.5**
ELL				*e*Sg	**Sg**	**01 57 22.3**	**+0.8**
DNZL	**Cakiroluk**	**0.73**	**351**	*i* P	**Pg**	**01 57 13.9**	**-1.6**
DNZL				*i* S	**Sg**	**01 57 26.2**	**+1.3**
DNZL	**Cakiroluk**	**0.73**	**351**	*i* P	**Pg**	**01 57 13.9**	**-1.6**
DNZL				*i* S	**Sg**	**01 57 26.2**	**+1.2**
YER	**Yerkesik**	**0.74**	**283**	*e*PG	**Pg**	**01 57 15.8**	**+0.1**
YER	**Yerkesik**	**0.74**	**283**	*e*Pg	**Pg**	**01 57 15.8**	**+0.1**
AKAS	**Kas**	**0.81**	**155**	*i* P	**Pg**	**01 57 15.9**	**-1.1**
AKAS	**Kas**	**0.81**	**155**	*i* P	**Pg**	**01 57 15.9**	**-1.1**
DAT	**Datca**	**1.31**	**260**	*e*PN	**Pn**	**01 57 26.3**	**-0.1**
DAT	**Datca**	**1.31**	**260**	*e*Pn	**Pn**	**01 57 26.3**	**-0.1**
KHAL	**Karahalli**	**1.42**	**10**	*i* P	**Pn**	**01 57 28.6**	**+0.7**
KHAL	**Karahalli**	**1.42**	**10**	*i* P	**Pn**	**01 57 28.6**	**+0.7**
KULA	**Kula-Manisa**	**1.60**	**345**	*e*PN	**Pn**	**01 57 30.2**	**-0.2**
KULA	**Kula-Manisa**	**1.60**	**345**	*e*Pn	**Pn**	**01 57 30.2**	**-0.2**

*IDC **10** 02:07:15.1±1.3, 7°.73S×125°.87E, h0km, mb4.0/4, mb1 4.1/8, mb1mx3

mb4.0/18, Error ellipse: s-maj=8.0km s-min=5.8km az=1.3
*NEIC **10** 02:15:04.2±0.5, 32°.20N×104°.98E, h10km, mb4.0/5, Error ellipse: s-maj=16.9km s-min=9.1km az=71.0*
*BJI **10** 02:15:04.1, 32°.32N×104°.92E, h14km, mB4.5/2, mb4.2/1, ML3.9/15, Ms3.8/10, Ms7.3/6.8*

ISC 10 02:15:03.8±0.9, 32°.31N±0°.03×105°.08E±0°.04, h4km±6km, n37, σ1s33/47, mb4.0/18, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.79**	**219↑**	*i* Pn	**Pn**	**02 15 36.6**	**+1.1**
CD2				Pg	**Pg**	02 15 38.5	+0.3
CD2				Sn	**Sn**	02 16 00.9	+2.2
CD2				Sg	**Sg**	02 16 02.4	+0.9
CD2				smax			
	comp=N,12μm,0.7s						
CD2				smax			
	comp=E,6μm,0.7s						
XAN	**Xi'an**	**3.65**	**61**	Pn	**Pn**	**02 16 04.5**	**+3.4**
XAN				Pg	**Pg**	02 16 14.1	+0.3
XAN				Sn	**Sn**	02 16 47.0	+2.4
XAN				Sg	**Sg**	02 16 59.7	-1.5
XAN				smax			
	comp=N,350nm,0.7s						
XAN				smax			
	comp=E,180nm,0.6s						
XAN				LR	LR		
	comp=N,450nm,6.8s						
XAN				LR	LR		
	comp=E,180nm,10.0s						
XAN				LR	LR		
	comp=Z,200nm,7.3s						
LZH	**Lanzhou**	**3.91**	**345**	Pn	**Pn**	**02 16 06.7**	**+2.1**
LZH				Sn	**Sn**	02 16 52.8	+1.9
LZH				Sg	**Sg**	02 17 05.8	-3.5
LZH				smax			
	comp=N,480nm,0.6s						
LZH				smax			
	comp=E,1μm,0.6s						
LZH				LR	LR		
	comp=N,2μm,6.2s						
LZH				LR	LR		
	comp=Z,2μm,7.5s						
GYA	**Guiyang**	**5.99**	**166**	Pn	**Pn**	**02 16 34.3**	**+1.1**
GYA				Sn	**Sn**	02 17 41.8	-0.5
GYA				Sg	**Sg**	02 18 11.4	-4.8
GYA				smax			
	comp=N,230nm,0.9s						
GYA				smax			
	comp=E,330nm,0.7s						
GYA				LR	LR		
	comp=N,3μm,4.2s						
GYA				LR	LR		
	comp=E,1μm,3.9s						
KMI	**Kunming**	**7.45**	**197**	Pn	**Pn**	**02 16 52.3**	**-1.0**
KMI				LR	LR		
	comp=N,170nm,8.6s						
KMI				LR	LR		
	comp=E,290nm,10.0s						
KMI				LR	LR		
	comp=Z,180nm,14.3s						
WHN	**Wuhan**	**8.11**	**100**	P	**Pn**	**02 17 10.5**	**+8.1**
WHN				LR	LR		
	comp=N,1μm,6.8s						
WHN				LR	LR		
	comp=E,810nm,9.7s						
WHN				LR	LR		
	comp=Z,460nm,5.0s						
GTA	**Gaotai**	**8.28**	**330**	*e*P	**Pn**	**02 17 00.9**	**-3.7**
GTA				S	**Sn**	02 18 34.1	-4.4
GTA				pmax	pmax		
	comp=Z,5.0nm,0.4s						
GTA				pmax	pmax		
	comp=Z,64nm,4.2s						
GTA				LR	LR		
	comp=N,470nm,10.4s						
GTA				LR	LR		
	comp=E,300nm,10.4s						
GTA				LR	LR		
	comp=Z,400nm,10.1s						
CMAR	**Chiang Mai Arr**	**14.86**	**203**	Pn	**Pn**	**02 18 32.4**	**-2.3**
	comp=Z,1.0nm,0.3s,baz=15,slow=12,SNR=4.5						
SONM	**Songino Array**	**15.54**	**3**	Pn	**Pn**	**02 18 47.2**	**+3.6**
	comp=Z,0.1nm,0.3s,baz=179,slow=13,SNR=3.0						
SONM				LR	LR	02 25 25.5	
	comp=Z,74nm,21.2s,baz=247,slow=40						
ULN	**Ulaanbaatar**	**15.61**	**5**	Pn	**Pn**	**02 18 44.9**	**+0.3**
	comp=Z,2.0nm,0.7s						
KSRS	**Korea Array**	**19.41**	**68**	P	**Pn**	**02 19 34.4**	**+2.3**
	comp=Z,0.3nm,0.3s,baz=254,slow=10,SNR=8.8						
MK31	**Makanchi Array**	**22.65**	**316**	*e*P	**P**	**02 20 07.5**	**+1.6**
MKAR	**Makanchi Array**	**22.65**	**316**	P	**P**	**02 20 05.8**	**0.0**
	comp=Z,1.3nm,0.6s,mb3.6,baz=101,slow=12,SNR=7.6						
TKM2	**Tokmak 2**	**25.53**	**303**	P	**P**	**02 20 33.9**	**+0.6**
	comp=Z,1.8nm,0.6s,mb3.8						
ZALV	**Zalesovo Beam**	**26.02**	**332**	P	**P**	**02 20 39.1**	**+1.4**
	comp=Z,1.2nm,0.5s,mb3.7,baz=142,slow=8.9,SNR=4.7						
UCH	**Uchtor**	**26.14**	**301**	P	**P**	**02 20 41.0**	**+2.0**
	comp=Z,3.4nm,1.0s,mb3.8						
KURK	**Kurchatov**	**26.81**	**321**	P	**P**	**02 20 45.1**	**+0.2**
	comp=Z,0.9nm,0.3s,mb3.8,baz=127,slow=8.4,SNR=3.8						
BVAR	**Borovoye Array**	**32.38**	**320**	P	**P**	**02 21 32.2**	**-2.1**
	comp=Z,0.7nm,0.4s,mb3.8,baz=116,slow=10,SNR=3.7						
ABKAR	**Akbulak array**	**37.52**	**310**	*e*P	**P**	**02 22 18.7**	**+0.1**
	comp=Z,1.1nm,0.4s,mb3.9						
AKTK	**Aktyubinsk**	**38.94**	**312**	P	**P**	**02 22 29.9**	**-0.7**
AKTO	**Aktyubinsk**	**38.94**	**312**	P	**P**	**02 22 29.9**	**-0.7**
	comp=Z,0.9nm,0.5s,mb3.8,baz=104,slow=13,SNR=6.3						
FITZ	**Fitzroy Crossi**	**53.85**	**156**	P	**P**	**02 24 27.4**	**-0.6**
	comp=Z,1.8nm,0.7s,mb4.1,baz=324,slow=8.7,SNR=3.9						
ARCES	**ARCESS Array B**	**56.51**	**335**	P	**P**	**02 24 45.6**	**-1.1**
	comp=Z,1.2nm,0.6s,mb4.1,baz=94,slow=8.9,SNR=6.0						
FINES	**FINESS Array B**	**57.04**	**326**	P	**P**	**02 24 49.1**	**-1.4**
	comp=Z,4.2nm,0.9s,mb4.5,baz=57,slow=7.0,SNR=5.4						
AKASG	**Malin Array Be**	**57.18**	**313**	P	**P**	**02 24 49.7**	**-2.0**
	comp=Z,0.6nm,0.4s,mb4.0,baz=66,slow=7.4,SNR=3.7						
WRA	**Warramunga Arr**	**59.02**	**148**	P	**P**	**02 25 04.6**	**-0.3**
	comp=Z,2.9nm,0.7s,mb4.4,baz=340,slow=7.4,SNR=11						
ASAR	**Alice Springs**	**62.10**	**150**	P	**P**	**02 25 25.9**	**0.0**
	comp=Z,1.1nm,0.4s,mb4.3,baz=330,slow=6.6,SNR=6.9						
NB2	**NORSAR Subarra**	**64.10**	**327**	P	**P**	**02 25 36.4**	**-2.3**
	comp=Z,5.7nm,1.1s,mb4.5,baz=71,slow=6.5						
NOA	**NORSAR Array B**	**64.10**	**327**	P	**P**	**02 25 37.0**	**-1.7**
	comp=Z,1.1nm,0.9s,mb3.9,baz=63,slow=6.1,SNR=3.4						
GERES	**GERESS Array B**	**67.31**	**314**	LR	LR	03 00 42.3	
	comp=Z,43nm,18.4s,baz=103,slow=41						
STKA	**Stephens Creek**	**72.57**	**148**	P	**P**	**02 26 31.5**	**-0.6**
	comp=Z,1.6nm,0.7s,mb4.1,baz=340,slow=12,SNR=4.1						
LPG	**La Plagne**	**73.03**	**313**	*e*P	**P**	**02 26 34.4**	**-0.4**
	comp=Z,2.7nm,0.5s,mb4.2						
LPG	**La Plagne**	**73.03**	**313**	*e*P	**P**	**02 26 34.4**	**-0.4**
	comp=Z,1.4nm,0.5s,mb4.2						
LPL	**La Plagne**	**73.04**	**313**	*e*P	**P**	**02 26 34.6**	**-0.2**
SMF	**Signal de Mont**	**74.23**	**315**	*e*P	**P**	**02 26 41.2**	**-0.6**
TCF	**Toulx Ste Croi**	**75.38**	**316**	*e*P	**P**	**02 26 47.1**	**-1.4**
YKA	**Yellowknife Ar**	**80.30**	**18**	P	**P**	**02 27 15.0**	**-0.5**
	comp=Z,0.6nm,0.5s,mb3.8,baz=327,slow=5.0,SNR=8.3						

*DDA **10** 02:20:26.4, 39°.52N×28°.09E, h7km±2km, Md2.8*
*ISK **10** 02:20:26.1, 39°.47N×28°.09E, h5km, MD2.7*
*CSEM **10** 02:20:26.7±0.1, 39°.51N×28°.10E, h5km, MD2.8, Error ellipse: s-maj=3.0km s-min=2.5km az=27.0*
*ISCJB **10** 02:20:26.7±0.5, 39°.49N±0°.03×28°.09E±0°.03, h7km±6km, Error ellipse: s-maj=5.2km s-min=4.1km az=32.5*

ISC 10 02:20:27.0±0.5, 39°.51N±0°.03×28°.09E±0°.03, h7km±8km, n24, σ0s58/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.21**	**310**	*e*PG	**Pg**	**02 20 31.2**	**0.0**
BALB				*e*SG	**Sg**	02 20 35.0	+0.9
BALB	**Balikesir**	**0.21**	**310**	*e*Pg	**Pg**	02 20 31.3	+0.1
BALB				*e*Sg	**Sg**	02 20 35.0	+0.9
DURS	**Dursunbey**	**0.31**	**72**	*i* P	**Pg**	02 20 33.3	+0.2
DURS				*i* S	**Sg**	02 20 37.2	-0.1
DURS	**Dursunbey**	**0.31**	**72**	*i* P	**Pg**	02 20 33.3	+0.2
DURS				*i* S	**Sg**	02 20 37.2	0.0
BALY	**Balya**	**0.43**	**303**	*i* P	**Pg**	02 20 35.0	-0.4
BALY				*i* S	**Sg**	02 20 41.2	+0.1
BALY	**Balya**	**0.43**	**303**	*i* P	**Pg**	02 20 35.0	-0.4
BALY				*i* S	**Sg**	02 20 41.2	+0.1
AKHS	**Akhisar**	**0.66**	**199**	*i* P	**Pg**	02 20 39.5	-0.2
AKHS				*i* S	**Sg**	02 20 49.5	+1.2
AKHS	**Akhisar**	**0.66**	**199**	*i* P	**Pg**	02 20 39.5	-0.2
AKHS				*i* S	**Sg**	02 20 49.5	+1.2
DEMI	**Demirci**	**0.67**	**133**	*i* P	**Pg**	02 20 39.9	0.0
DEMI				*i* S	**Sg**	02 20 49.3	+0.7
DEMI	**Demirci**	**0.67**	**133**	*i* P	**Pg**	02 20 39.9	0.0
DEMI				*i* S	**Sg**	02 20 49.3	+0.7
ULDT	**Uludag**	**1.03**	**51**	*i* P	**Pg**	02 20 45.7	-0.9
ULDT	**Uludag**	**1.03**	**51**	*i* P	**Pg**	02 20 45.7	-1.0
KULA	**Kula-Manisa**	**1.08**	**156**	*e*PG	**Pg**	02 20 47.3	-0.5
KULA				*e*SG	**Sg**	02 21 01.2	-0.7
KULA	**Kula-Manisa**	**1.08**	**156**	*e*Pg	**Pg**	02 20 47.3	-0.5
KULA				*e*Sg	**Sg**	02 21 01.2	-0.7
AYVA	**Ayvalik**	**1.10**	**260**	*i* P	**Pg**	02 20 47.6	-0.5
AYVA				*i* S	**Sg**	02 21 01.8	-0.6
AYVA	**Ayvalik**	**1.10**	**260**	*i* P	**Pg**	02 20 47.6	-0.5
AYVA				*i* S	**Sg**	02 21 01.8	-0.6
GDZ	**Gediz**	**1.16**	**111**	*i* P	**Pg**	02 20 49.2	0.0
GDZ	**Gediz**	**1.16**	**111**	*i* P	**Pg**	02 20 49.2	0.0
ARMT	**Armutlu**	**1.21**	**29**	*e*PN	**Pn**	02 20 49.8	-0.5
ARMT	**Armutlu**	**1.21**	**29**	*e*Pn	**Pn**	02 20 49.8	-0.5
GEMT	**Gemlik**	**1.25**	**42**	*e*PN	**Pn**	02 20 51.3	+0.5
GEMT	**Gemlik**	**1.25**	**42**	*e*Pn	**Pn**	02 20 51.3	+0.4
YLV	**Yalova**	**1.45**	**42**	*e*PN	**Pn**	02 20 54.3	+0.8
YLV	**Yalova**	**1.45**	**42**	*e*Pn	**Pn**	02 20 54.3	+0.8

*CSEM **10** 02:32:40.1±0.2, 37°.88N×21°.35E, h12km, MD2.9, Error ellipse: s-maj=4.3km s-min=3.3km az=17.0*
*ATH **10** 02:32:41.4, 37°.89N×21°.41E, h21km±1km, MD2.9/7*
*NEIC **10** 02:32:41.4, 37°.89N×21°.41E, h21km, MD2.9(ATH), After ATH.*
*THE **10** 02:32:42.1, 37°.87N×21°.46E, h15km±1km, ML2.6/6, Error ellipse: s-maj=1.0km s-min=0.5km az=356.0*

ISC 10 02:32:41.8±0.4, 37°.89N±0°.03×21°.41E±0°.03, h27km±3km, n95, σ0s77/122, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.18**	**15**	*e*Pb	**Pb**	**02 32 46.6**	**-0.8**
RLS				*e*Sb	**Sb**	02 32 50.0	-1.3
RLS	**Riolos of Patr**	**0.18**	**15**	*e*PB	**Pb**	02 32 46.6	-0.8
RLS				*e*SB	**Sb**	02 32 50.0	-1.3
RLS	**Riolos of Patr**	**0.18**	**15**	*e*Pb	**Pb**	02 32 46.6	-0.8
RLS				*e*Sb	**Sb**	02 32 50.0	-1.3
KFL	**Anninata**	**0.54**	**295**	P	**Pb**	02 32 53.4	+0.7
KFL				S	**Sb**	02 33 02.4	+2.3
LAKA	**Lakka**	**0.57**	**52**	P	**Pb**	02 32 52.8	-0.5
LAKA				S	**Sb**	02 33 01.3	+0.2
LAKA	**Lakka**	**0.57**	**52**	P	**Pb**	02 32 52.8	-0.5
LAKA				S	**Sb**	02 33 01.3	+0.2
EFP	**Efpalio**	**0.67**	**36**	P	**Pb**	02 32 54.4	-0.5
EFP				S	**Sb**	02 33 04.7	+0.9
EFP	**Efpalio**	**0.67**	**36**	*e*PN	**Pb**	02 32 54.0	-0.9
EFP				*e*SN	**Sb**	02 33 03.9	+0.1
EFP	**Efpalio**	**0.67**	**36**	*e*Pn	**Pb**	02 32 54.0	-0.9
EFP	**Efpalio**	**0.67**	**36**	P	**Pb**	02 32 54.4	-0.5
EFP				S	**Sb**	02 33 04.7	+0.9
VLS	**Valsamata**	**0.71**	**295**	*e*Pn	**Pb**	02 32 55.5	0.0
VLS	**Valsamata**	**0.71**	**295**	P	**Pb**	02 32 55.5	0.0
VLS				S	**Sb**	02 33 07.5	+2.6
VLS	**Valsamata**	**0.71**	**295**	*e*PN	**Pb**	02 32 55.5	0.0
VLS	**Valsamata**	**0.71**	**295**	*e*Pn	**Pb**	02 32 55.5	0.0
TRIZ	**Trizonia**	**0.71**	**47**	P	**Pb**	02 32 55.0	-0.6
TRIZ				S	**Sb**	02 33 05.6	+0.6
TRIZ	**Trizonia**	**0.71**	**47**	P	**Pb**	02 32 55.0	-0.6
TRIZ				S	**Sb**	02 33 05.6	+0.6
GUR	**Goura**	**0.74**	**86**	P	**Pb**	02 32 55.2	-0.9
GUR				S	**Sb**	02 33 06.0	+0.2
GUR	**Goura**	**0.74**	**86**	*e*PN	**Pb**	02 32 55.3	-0.8
GUR				*e*SN	**Sb**	02 33 06.2	+0.4
GUR	**Goura**	**0.74**	**86**	P	**Pb**	02 32 55.2	-0.9
GUR				S	**Sb**	02 33 06.0	+0.2
KALE	**Kalithea**	**0.77**	**49**	P	**Pb**	02 32 55.9	-0.6
KALE				S	**Sb**	02 33 07.7	+1.1
KALE	**Kalithea**	**0.77**	**49**	P	**Pb**	02 32 55.9	-0.6
KALE				S	**Sb**	02 33 07.7	+1.1
ITM	**Ithomi**	**0.82**	**149**	*e*Pn	**Pb**	02 32 57.2	-0.1
ITM	**Ithomi**	**0.82**	**149**	P	**Pb**	02 32 57.2	-0.1
ITM				S	**Sb**	02 33 08.8	+0.9
ITM	**Ithomi**	**0.82**	**149**	*e*PN	**Pb**	02 32 57.2	-0.1
ITM	**Ithomi**	**0.82**	**149**	P	**Pb**	02 32 57.2	-0.1
ITM				S	**Sb**	02 33 08.8	+0.9
VLX	**Vlachokerasia**	**0.93**	**123**	P	**Pn**	02 32 58.3	-0.7
VLX				S	**Sb**	02 33 11.2	+0.1
VLX	**Vlachokerasia**	**0.93**	**123**	P	**Pn**	02 32 58.3	-0.7
VLX				S	**Sb**	02 33 11.2	+0.1
PYL	**PYLOS**	**1.02**	**165**	P	**Pn**	02 33 00.7	+0.4
PYL	**PYLOS**	**1.02**	**165**	P	**Pn**	02 33 00.7	+0.4
DSF	**Desfina**	**1.03**	**59**	P	**Pn**	02 33 00.2	-0.2
DSF				S	**Sn**	02 33 15.1	+1.3
DSF	**Desfina**	**1.03**	**59**	P	**Pn**	02 33 00.2	-0.2
DSF				S	**Sn**	02 33 15.1	+1.3
EVR	**Evrytania**	**1.08**	**17**	*e*Pn	**Pn**	02 33 01.7	+0.7
EVR	**Evrytania**	**1.08**	**17**	*e*PN	**Pn**	02 33 01.7	+0.7
EVR	**Evrytania**	**1.08**	**17**	*e*Pn	**Pn**	02 33 01.7	+0.7
LKD2	**Lefkada island**	**1.08**	**327**	P	**Pn**	02 33 02.1	+1.0
LKD2				S	**Sn**	02 33 18.0	+2.9
LKD2	**Lefkada island**	**1.08**	**327**	P	**Pn**	02 33 02.1	+1.0
LKD2				S	**Sn**	02 33 18.0	+2.9
LTK	**Loutraki**	**1.24**	**83**	P	**Pn**	02 33 04.2	+0.9
LTK				S	**Sn**	02 33 20.8	+1.7
LTK	**Loutraki**	**1.24**	**83**	P	**Pn**	02 33 04.2	+0.9
LTK				S	**Sn**	02 33 20.8	+1.7
LKR	**Lokris**	**1.47**	**58**	*e*Pn	**Pb**	02 33 08.9	+0.5
LKR	**Lokris**	**1.47**	**58**	*e*PN	**Pb**	02 33 08.9	+0.5
LKR	**Lokris**	**1.47**	**58**	*e*Pn	**Pb**	02 33 08.9	+0.5
TIR	**Tirane**	**3.66**	**341**	*e*P	**Pn**	02 33 36.0	-0.5
TIR	**Tirane**	**3.66**	**341**	*e*P	**Pn**	02 33 36.0	-0.5
GVD	**Gavdhos**	**3.73**	**144**	*e*P	**Pn**	02 33 37.0	-0.5
GVD	**Gavdhos**	**3.73**	**144**	*e*P	**Pn**	02 33 37.0	-0.5
IDI	**Anoyia**	**3.82**	**132**	*e*P	**Pn**	02 33 39.0	+0.3
IDI	**Anoyia**	**3.82**	**132**	*e*P	**Pn**	02 33 39.0	+0.3
TIP	**Timpagrande**	**3.87**	**291**	*e*P	**Pn**	02 33 39.0	-0.4
TIP	**Timpagrande**	**3.87**	**291**	*e*P	**Pn**	02 33 39.0	-0.4
CEL	**Celeste**	**4.37**	**277**	*e*P	**Pn**	02 33 46.0	-0.3
CEL	**Celeste**	**4.37**	**277**	*e*P	**Pn**	02 33 46.0	-0.3
WDD	**Wield Dalam**	**5.87**	**252**	*e*P	**Pn**	02 34 07.0	0.0
WDD	**Wield Dalam**	**5.87**	**252**	*e*P	**Pn**	02 34 07.0	0.0
ISP	**Isparta**	**7.21**	**88**	*e*P	**Pn**	02 34 25.0	-0.3
AQU	**L'Aquila**	**7.58**	**309**	*e*P	**Pn**	02 34 30.0	-0.4
AQU	**L'Aquila**	**7.58**	**309**	*e*P	**Pn**	02 34 30.0	-0.4
TIRR	**Tirgusor**	**8.43**	**37**	*e*P	**Pn**	02 34 42.0	+0.1
TIRR	**Tirgusor**	**8.43**	**37**	*e*P	**Pn**	02 34 42.0	+0.1
VSL	**Villasalto**	**9.54**	**283**	*e*P	**Pn**	02 34 57.0	-0.3
VSL	**Villasalto**	**9.54**	**283**	*e*P	**Pn**	02 34 57.0	-0.3
TRI	**Trieste**	**9.67**	**326**	*e*P	**Pn**	02 34 59.0	-0.1
TRI	**Trieste**	**9.67**	**326**	*e*P	**Pn**	02 34 59.0	-0.1
BR131	**Keskin Array S**	**9.72**	**75**	*e*P	**Pn**	02 35 00.0	+0.2
BR131	**Keskin Array S**	**9.72**	**75**	*e*P	**Pn**	02 35 00.0	+0.2
CSS	**Prodhromos**	**10.04**	**103**	*e*P	**Pn**	02 35 04.0	-0.1
CSS	**Prodhromos**	**10.04**	**103**	*e*P	**Pn**	02 35 04.0	-0.1
PSZ	**Piszkesteto**	**10.09**	**354**	*e*P	**Pn**	02 35 04.0	-0.7
PSZ	**Piszkesteto**	**10.09**	**354**	*e*P	**Pn**	02 35 04.0	-0.7
BUR08	**Bucovina Ar. S**	**10.14**	**15**	*e*P	**Pn**	02 35 05.0	-0.5
BUR08	**Bucovina Ar. S**	**10.14**	**15**	*e*P	**Pn**	02 35 05.0	-0.5
VLC	**Villacollemand**	**10.42**	**310**	*e*P	**Pn**	02 35 09.0	-0.2
VLC	**Villacollemand**	**10.42**	**310**	*e*P	**Pn**	02 35 09.0	-0.2
KWP	**Kalwaria Pacla**	**11.78**	**4**	*e*P	**Pn**	02 35 28.0	+0.1
KWP	**Kalwaria Pacla**	**11.78**	**4**	*e*P	**Pn**	02 35 28.0	+0.1
MORC	**Moravsky Berou**	**12.21**	**348**	*e*P	**Pn**	02 35 33.0	-0.7
MORC	**Moravsky Berou**	**12.21**	**348**	*e*P	**Pn**	02 35 33.0	-0.7
OJC	**Ojcow**	**12.39**	**355**	*e*P	**Pn**	02 35 36.0	-0.1
OJC	**Ojcow**	**12.39**	**355**	*e*P	**Pn**	02 35 36.0	-0.1
BNI	**Bardonecchia**	**13.15**	**308**	*e*P	**Pn**	02 35 46.0	-0.6
BNI	**Bardonecchia**	**13.15**	**308**	*e*P	**Pn**	02 35 46.0	-0.6
GRFO	**Grafenberg**	**13.89**	**331**	*e*P	**Pn**	02 35 56.0	-0.7
GRFO	**Grafenberg**	**13.89**	**331**	*e*P	**Pn**	02 35 56.0	-0.7
KIEV	**Kiev**	**13.96**	**21**	*e*P	**Pn**	02 35 57.0	-0.6
KIEV	**Kiev**	**13.96**	**21**	*e*P	**Pn**	02 35 57.0	-0.6
AKBB	**Malin Array Si**	**13.97**	**21**	*e*P	**Pn**	02 35 57.0	-0.8
AKBB	**Malin Array Si**	**13.97**	**21**	*e*P	**Pn**	02 35 57.0	-0.8
STU	**Stuttgart**	**14.03**	**325**	*e*P	**Pn**	02 35 58.0	-0.6
STU	**Stuttgart**	**14.03**	**325**	*e*P	**Pn**	02 35 58.0	-0.6
BFO	**Black Forest**	**14.13**	**322**	*e*P	**Pn**	02 36 00.0	+0.1
BFO	**Black Forest**	**14.13**	**322**	*e*P	**Pn**	02 36 00.0	+0.1
ECH	**Echery**	**14.64**	**319**	*e*P	**Pn**	02 36 07.0	+0.1
RUE	**Ruedersdorf**	**15.54**	**342**	*e*P	**Pn**	02 36 18.0	-0.8
KIV	**Kislovodsk**	**17.17**	**63**	*e*P	**Pn**	02 36 39.0	-0.6
GNI	**Garni**	**18.27**	**76**	*e*P	**Pn**	02 36 53.0	-0.1
GNI	**Garni**	**18.27**	**76**	*e*P	**Pn**	02 36 53.0	-0.1

*ISCJB **10** 02:36:37.7±1.0, 51°.8N±0°.2×179°.57W±0°.07, h94km±9km, mb3.6/11, Error ellipse: s-maj=25.3km s-min=7.5km az=0.3*
*NEIC **10** 02:36:39.0±0.7, 51°.76N×179°.60W, h92km±5km, MG3.7(AEIC), Error ellipse: s-maj=15.5km s-min=5.6km az=177.0*
*IDC **10** 02:36:38.7±2.7, 51°.74N×179°.56W, h88km±23km, mb3.5/11, mb1 3.7/13, mb1mx3.5/30, mbtmp3.5/13, Error ellipse: s-maj=24.7km s-min=13.1km az=171.0*

ISC 10 02:36:39.1±1.0, 51°.7N±0°.2×179°.56W±0°.07, h93km±8km, n22, σ0s75/21, mb3.6/11, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**2.20**	**79**	*e*Pn	**Pn**	**02 37 13.4**	**-0.6**
SMY	**Shemya**	**4.02**	**287**	*e*Pn	**Pn**	02 37 38.0	-0.4
FX1	**Attu Island--F**	**4.61**	**287**	P	**Pn**	02 37 44.0	-2.3
	7.3nm,0.3s,baz=177,slow=8.3,SNR=15						
FX1				S	**Sn**	02 38 39.8	+1.3
	4.1nm,0.3s,baz=276,slow=19,SNR=2.5						
FX1	**Attu Island--F**	**4.61**	**287**	P	**Pn**	02 37 45.4	-0.9
NIKO	**Nikolski**	**6.68**	**75**	*e*Pn	**Pn**	02 38 15.0	+0.6
UNV	**Unalaska Valle**	**8.20**	**70**	*e*Pn	**Pn**	02 38 36.2	+1.1
AKGG	**Akutan Green G**	**8.56**	**68**	P	**Pn**	02 38 39.9	-0.1
KDAK	**Kodiak Island**	**16.63**	**58**	P	**Pn**	02 40 25.2	-1.0
	1.0nm,0.3s,baz=262,slow=7.1,SNR=5.3						
INK	**Inuvik**	**27.44**	**36**	P	**P**	**02 42 15.7**	**0.0**
	0.8nm,0.4s,mb3.6,baz=160,slow=15,SNR=4.5						
YKA	**Yellowknife Ar**	**35.33**	**47**	P	**P**	**02 43 24.6**	**-0.2**
	0.6nm,0.5s,mb3.7,baz=281,slow=7.4,SNR=9.9						
YKA				PcP	PcP	02 45 53.8	+0.9
	0.5nm,0.8s,baz=286,slow=2.5,SNR=3.9						
NVAR	**Mina Array Bea**	**43.98**	**83**	P	**P**	**02 44 37.5**	**+0.6**
	0.3nm,0.3s,mb3.5,baz=289,slow=6.4,SNR=3.3						
SONM	**Songino Array**	**46.06**	**296**	P	**P**	**02 44 54.3**	**+1.1**
	0.7nm,0.6s,mb3.6,baz=51,slow=7.6,SNR=3.2						
PDAR	**Pinedale Array**	**46.65**	**72**	P	**P**	**02 44 57.7**	**-0.2**
	0.9nm,0.6s,mb3.7,baz=306,slow=5.0,SNR=7.2						
SMCO	**Snowmass**	**50.41**	**74**	*e*P	pP	02 45 49.7	+0.5
ARCES	**ARCESS Array B**	**57.65**	**350**	P	**P**	**02 46 18.1**	**-0.8**
	3.3nm,0.9s,mb4.3,baz=28,slow=7.3,SNR=5.3						
TXAR	**Lajitas Array**	**59.07**	**81**	P	**P**	**02 46 30.3**	**+0.9**
	0.4nm,0.5s,mb3.7,baz=308,slow=5.1,SNR=13						
TXAR	**Lajitas Array**	**59.07**	**81**	P	**P**	**02 46 30.3**	**+0.9**
AKASG	**Malin Array Be**	**75.06**	**342**	P	**P**	**02 48 09.8**	**-0.4**
	0.8nm,0.3s,mb3.9,baz=22,slow=6.8,SNR=3.3						
GERES	**GERESS Array B**	**79.16**	**351**	P	**P**	**02 48 33.4**	**+0.2**
	0.2nm,0.4s,mb3.3,baz=32,slow=7.8,SNR=4.5						
WRA	**Warramunga Arr**	**81.94**	**223**	P	**P**	**02 48 47.9**	**-0.4**
	0.4nm,0.8s,mb3.3,baz=33,slow=6.1,SNR=4.5						
ASAR	**Alice Springs**	**85.43**	**222**	P	**P**	**02 49 05.8**	**-0.3**
	0.3nm,0.5s,mb3.4,baz=5.5,slow=4.8,SNR=3.3						
BOSA	**Boshof**	**150.38**	**312**	PKPbc	PKPbc	02 56 19.5	+0.2
	2.3nm,0.7s,baz=90,slow=5.1,SNR=4.0						

CASC 10 02:50:28.1±1.7, 14°.01N×91°.38W, h52km±25km, MD3.6, 1C-1D, Guatemala

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

STKA	Stephens Creek	27.13	235	P	P	03 06 38.5	+2.2
	comp=Z,6.6nm,1.0s,mb4.1,baz=94,slow=10,SNR=4.4						
STKA				LR	LR	03 17 26.8	
	comp=Z,239nm,18.9s,MS3.8,baz=32,slow=36						
STKA	Stephens Creek	27.13	235	eP	P	03 06 38.9	+2.5
STKA				LR	LR	03 17 26.8	
WRAB	Tennant Creek	31.59	262	eP	P	03 07 15.5	-0.5
	comp=Z,7.3nm,1.2s,mb4.4						
WRA	Warramunga Arr	31.60	262	P	P	03 07 15.0	-1.1
	comp=Z,0.4nm,0.5s,mb3.5,baz=81,slow=5.9,SNR=10						
WRA	Warramunga Arr	31.60	262	P	P	03 07 15.0	-1.1
ASAR	Alice Springs	32.00	255	P	P	03 07 19.6	0.0
	comp=Z,2.1nm,0.4s,mb4.3,baz=85,slow=8.8,SNR=32						
FITZ	Fitzroy Crossi	39.96	264	eP	P	03 08 27.1	-0.7
	comp=Z,22nm,0.8s,mb4.9						
FITZ	Fitzroy Crossi	39.96	264	eP	P	03 08 28.2	+0.5
	comp=Z,11nm,0.8s,mb4.6						
PPT	Papeete	40.49	96	eLR	LR	03 19 52.5	
	comp=Z,324nm,26.8s						
KSRS	Korea Array	67.08	326	LR	LR	03 39 57.3	
	comp=Z,60nm,19.5s,MS3.8,baz=21,slow=35						
QSPA	South Pole Qui	71.61	180	eP	P	03 12 14.7	+1.2
	comp=Z,16nm,1.0s,mb4.9						
PETK	Petropavlovsk-	71.78	354	P	P	03 12 12.6	-2.2
	comp=Z,7.1nm,1.0s,mb4.5,baz=151,slow=6.8,SNR=6.3						
CMAR	Chiang Mai Arr	76.92	295	P	P	03 12 46.9	+1.4
	comp=Z,0.9nm,0.3s,mb4.2,baz=122,slow=4.1,SNR=5.7						
MAW	Mawson	78.65	202	LR	LR	03 42 05.8	
	comp=Z,75nm,18.8s,MS4.0,baz=262,slow=31						
KDAK	Kodiak Island	82.75	20	LR	LR	03 50 31.8	
	comp=Z,110nm,18.6s,MS4.3,baz=221,slow=36						
GTA	Gaotai	85.58	314	eP	P	03 13 40.7	+10
GTA				pP	pP	03 13 45.6	+0.5
GTA				sP	sP	03 13 49.3	-1.1
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.4						
SONM	Songino Array	85.76	324	P	P	03 13 31.8	+0.2
	comp=Z,0.7nm,0.3s,mb4.3,baz=134,slow=4.3,SNR=4.2						
SONM				LR	LR	03 48 35.3	
	comp=Z,53nm,18.9s,MS4.0,baz=259,slow=33						
BILL	Bilibino	86.24	359	eP	P	03 13 31.5	-2.0
	comp=Z,17nm,1.2s,mb5.2						
NVAR	Mina Array Bea	89.31	49	P	P	03 13 47.5	-1.5
	comp=Z,0.5nm,0.4s,mb4.2,baz=242,slow=6.4,SNR=5.4						
ARCES	ARCESS Array B	123.95	345	PKP	PKPdf	03 19 48.5	-1.4
	comp=Z,1.3nm,0.8s,baz=90,slow=1.8,SNR=4.6						
GERES	GERESS Array B	143.14	331	PKhKP		03 20 22.3	
	comp=Z,0.2nm,0.5s,baz=43,slow=2.5,SNR=4.2						
GRF	Grafenberg Arr	143.59	334	eL		04 33 18.5	
	comp=Z,909nm,18.4s						
BUG	Bochum--Univer	143.65	339	ePKPbc	PKPdf	03 20 23.7	-3.4
TNS	Taunus Mts	144.25	337	ePKPbc	PKPdf	03 20 26.0	-2.2
TNS				epPKPbc		03 20 36.1	
KBA	Koelnbreinsper	144.57	329	⇑iPKPbc	PKPdf	03 20 27.5	-1.4
	comp=Z,6.4nm,1.2s						
FUR	Furstenfeldbru	144.73	332	ePKPbc	PKPdf	03 20 27.5	-1.6
FUR				epPKPbc		03 20 38.9	
STU	Stuttgart	145.13	335	ePKPbc	PKPbc	03 20 28.9	-0.5
STU				epPKPbc	pPKPbc	03 20 40.0	-3.8
ABTA	Abfaltersbach	145.21	330	⇑iPKPbc	PKPbc	03 20 28.2	-1.5
WTTA	Wattenberg	145.24	331	⇑iPKPbc	PKPbc	03 20 28.8	-1.0
MOTA	Moosalm	145.42	332	⇑iPKPbc	PKPbc	03 20 29.6	-0.8
	comp=Z,14nm,1.1s						
RETA	Reutte	145.47	332	⇑iPKPbc	PKPbc	03 20 29.9	-0.7
	comp=Z,9.6nm,1.2s						
WLF	Walferdange	145.53	339	ePKPbc	PKPbc	03 20 30.3	-0.3
WLF				epPKPbc	pPKPbc	03 20 41.5	-3.6
WLF	Walferdange	145.53	339	ePKPdf	PKPdf	03 20 29.6	-0.8
GIVF	Givet	145.59	340	ePKP1	PKPbc	03 20 29.5	-1.3
BAIF	Baives	145.82	341	ePKP1	PKPbc	03 20 30.4	-1.1
BFO	Black Forest	145.83	335	ePKPbc	PKPbc	03 20 30.6	-1.0
BFO				epPKPbc	pPKPbc	03 20 42.0	-4.1
BFO	Black Forest	145.83	335	ePKPbc	PKPbc	03 20 30.8	-0.8
FETA	Feichten	145.84	332	⇑iPKPdf	PKPdf	03 20 30.9	-0.2
	comp=Z,15nm,1.0s						
DAVA	Damuels	146.01	333	⇑iPKPdf	PKPdf	03 20 31.6	+0.2
	comp=Z,11nm,0.9s						
CDF	Champ du Feu	146.17	336	ePKP1	PKPbc	03 20 31.6	-1.0
	comp=Z,7.3nm,0.6s						
HINF	Hinteralfeld	146.82	336	ePKP1	PKPbc	03 20 33.2	-1.4
	comp=Z,4.9nm,0.7s						
HAU	Haudompre	146.86	337	ePKP1	PKPbc	03 20 33.5	-1.2
	comp=Z,10.0nm,0.7s						
MEZF	Maizieres J'vi	146.90	339	ePKP1	PKPbc	03 20 34.2	-0.6
CABF	La Chapelle	148.12	336	ePKP1	PKPbc	03 20 37.5	-0.6
	comp=Z,8.8nm,0.7s						
FLN	La Foliniere	148.30	345	ePKP1	PKPbc	03 20 37.0	-1.5
LDF	La Druitiere	148.36	345	ePKP1	PKPbc	03 20 37.1	-1.6
LOR	Lormes	148.37	339	ePKP1	PKPbc	03 20 37.7	-1.1
	comp=Z,9.0nm,0.8s						
SSF	Saint Saulge	148.67	339	ePKP1	PKPbc	03 20 38.5	-1.1
	comp=Z,12nm,0.8s						
GRR	Gorron	148.74	345	ePKP1	PKPbc	03 20 38.4	-1.3
LPL	La Plagne	148.75	334	ePKP1	PKPbc	03 20 39.3	-0.5
LPG	La Plagne	148.75	334	ePKP1	PKPbc	03 20 39.4	-0.4
	comp=Z,9.4nm,0.9s						
HYF	Humbligny	148.78	340	ePKP1	PKPbc	03 20 39.1	-0.7
SMF	Signal de Mont	148.92	338	ePKP1	PKPbc	03 20 39.1	-1.1
AVF	Avril sur Loir	148.96	339	ePKP1	PKPbc	03 20 39.7	-0.6
BGF	Bois d'Agland	149.33	339	ePKP1	PKPbc	03 20 40.1	-1.2
	comp=Z,13nm,0.8s						
ORIF	Oris-en-Rattie	149.59	334	ePKP1	PKPbc	03 20 41.0	-0.9
	comp=Z,10nm,0.9s						
SBF	Sospel	149.74	331	ePKP1	PKPbc	03 20 41.2	-1.2
TCF	Toulx Ste Croi	149.78	340	ePKP1	PKPbc	03 20 41.3	-1.1
	comp=Z,18nm,1.1s						
VIVF	Saint-Julien-l	150.12	335	ePKP1	PKPbc	03 20 42.4	-0.9
MFF	Saint Martin d	150.21	343	ePKP1	PKPbc	03 20 42.1	-1.3
	comp=Z,6.0nm,0.7s						
FRF	La Foret Royal	150.34	332	ePKP1	PKPbc	03 20 42.6	-1.2
	comp=Z,7.1nm,0.9s						
SMRF	Simiane la Rot	150.48	333	ePKP1	PKPbc	03 20 43.5	-0.6
	comp=Z,10nm,1.0s						
LMR	La Mourre	150.58	332	ePKP1	PKPbc	03 20 43.2	-1.2
LASF	Ste Croix	151.10	336	ePKP1	PKPbc	03 20 44.8	-0.8

*ATH **10** 03:17:52.1, 37.°91N×21.°43E, h27km±2km, MD3.0/6*
*THE **10** 03:17:52.6, 37.°95N×21.°53E, h6km±23km, ML2.6/2, Error ellipse: s-maj=23.3km s-min=0.8km az=45.0*
*NEIC **10** 03:17:52.1, 37.°91N×21.°43E, h27km, MD3.0(ATH), After ATH.*
*CSEM **10** 03:17:53.0±0.3, 37.°96N×21.°53E, h30km, MD3.0, Error ellipse: s-maj=9.9km s-min=8.5km az=50.0*
*ISCJB **10** 03:17:53.2±0.6, 37.°96N±0.°04×21.°50E±0.°05, h27km±6km, Error ellipse: s-maj=7.3km s-min=6.0km az=42.7*

ISC 10 03:17:53.4±0.6, 37.°95N±0.°04×21.°50E±0.°05, h24km±6km, n24, σ0.95/35, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.11	345	ePb	Pb	03 17 57.8	-0.1
RLS				eSb	Sb	03 18 01.5	+0.5
RLS	Riolos of Patr	0.11	345	ePB	Pb	03 17 57.8	-0.1
RLS				eSB	Sb	03 18 01.5	+0.5
RLS	Riolos of Patr	0.11	345	ePb	Pb	03 17 57.8	-0.1
RLS				eSb	Sb	03 18 01.5	+0.5
EFP	Efpalio	0.57	34	ePN	Pb	03 18 04.5	-0.2
EFP	Efpalio	0.57	34	ePn	Pb	03 18 04.5	-0.2
TRIZ	Trizonia	0.61	47	P	Pb	03 18 03.3	-2.1
TRIZ				S	Sb	03 18 13.1	-0.4
TRIZ	Trizonia	0.61	47	P	Pb	03 18 03.3	-2.1
TRIZ				S	Sb	03 18 13.1	-0.4
GUR	Goura	0.66	91	ePN	Pb	03 18 06.2	-0.1
GUR				eSN	Sb	03 18 17.3	+2.3
GUR	Goura	0.66	91	ePn	Pb	03 18 06.2	-0.1
GUR				eSn	Sb	03 18 17.3	+2.3
VLS	Valsamata	0.76	288	ePn	Pb	03 18 06.7	-1.1
VLS	Valsamata	0.76	288	P	Pb	03 18 06.6	-1.2
VLS				S	Sb	03 18 18.7	+1.0
VLS	Valsamata	0.76	288	ePN	Pb	03 18 06.7	-1.1
VLS	Valsamata	0.76	288	ePn	Pb	03 18 06.7	-1.1
VLS				S	Sb	03 18 18.7	+1.0
ITM	Ithomi	0.84	156	ePn	Pb	03 18 08.3	-1.0
ITM	Ithomi	0.84	156	P	Pb	03 18 08.1	-1.2
ITM				S	Sb	03 18 20.4	+0.3
ITM	Ithomi	0.84	156	ePN	Pb	03 18 08.3	-1.0
ITM	Ithomi	0.84	156	ePn	Pb	03 18 08.3	-1.0
ITM				S	Sb	03 18 20.4	+0.3
EVR	Evrytania	0.99	14	ePn	Pn	03 18 12.6	+0.8
EVR	Evrytania	0.99	14	ePN	Pn	03 18 12.6	+0.8
EVR	Evrytania	0.99	14	ePn	Pn	03 18 12.6	+0.8
LKD2	Lefkada island	1.07	322	P	Pn	03 18 13.2	+0.4
LKD2	Lefkada island	1.07	322	P	Pn	03 18 13.2	+0.4
PYL	PYLOS	1.07	170	P	Pn	03 18 12.9	0.0
PYL	PYLOS	1.07	170	P	Pn	03 18 12.9	0.0

NEIC 10 03:19:09.8, 36.°75S×177.°68E, h284km, MG3.8(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	1.57	197	ePn	Pn	03 19 49.4	-2.4
TUVZ	Tukino	2.98	212	P	Pn	03 20 04.7	+0.6
WNVZ	Wahianoa	3.05	212	P	Pn	03 20 05.4	+0.5
TSZ	Takapari Road	3.57	202	P	Pn	03 20 10.7	+0.4
BFZ	Birch Farm	4.08	196	P	Pn	03 20 16.3	+0.3
MRZ	Mangatainoka R	4.24	202	P	Pn	03 20 17.6	-0.1
KIW	Kapiti Island	4.64	207	P	Pn	03 20 22.0	-0.4
MTW	Mount Morrison	4.72	200	P	Pn	03 20 23.4	+0.1
CAW	Cannon Point	4.80	204	P	Pn	03 20 24.2	-0.1
TCW	Tory Channel	5.19	210	P	Pn	03 20 28.5	-0.3
KHZ	Kahutara	6.50	208	P	Pn	03 20 44.5	-0.1

*ROM **10** 03:38:20.3±0.1, 43.°16N×11.°06E, h2km, Md2.3/14, Ml1.6/12, Error ellipse: s-maj=1.7km s-min=1.1km az=94.0*
*CSEM **10** 03:38:20.8±0.2, 43.°18N×10.°99E, h5km, ML2.5/6, Error ellipse: s-maj=3.9km s-min=3.4km az=147.0*
*LDG **10** 03:38:21.6±0.2, 43.°16N×11.°11E, h10km, Ml2.1/4, Error ellipse: s-maj=7.5km s-min=2.9km az=152.0*
*ISCJB **10** 03:38:21.3±0.4, 43.°17N±0.°03×11.°04E±0.°05, h26km±6km, Error ellipse: s-maj=5.6km s-min=4.6km az=13.9*

ISC 10 03:38:21.5±0.5, 43.°17N±0.°03×11.°06E±0.°05, h22km±9km, n35, σ0.57/51, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSNT	Castellina Chi	0.34	29	Pg	Pb	03 38 28.3	-0.7
CSNT				Sg	Sb	03 38 33.5	-0.6
CSNT	Castellina Chi	0.34	29	Pg	Pb	03 38 28.3	-0.7
CSNT				Sg	Sb	03 38 33.5	-0.6
CASP	Castiglione de	0.41	201	Pg	Pb	03 38 29.9	-0.1
CASP				Sg	Sb	03 38 35.1	-0.7
	452nm,0.2s						
CASP	Castiglione de	0.41	201	Pg	Pb	03 38 29.9	-0.1
CASP				Sg	Sb	03 38 35.1	-0.7
	452nm,0.2s						
ARCI	Arcidosso	0.44	136	Pg	Pb	03 38 30.0	-0.6
ARCI				Sg	Sb	03 38 36.2	-0.5
	98nm,0.2s						
ARCI	Arcidosso	0.44	136	Pg	Pb	03 38 30.0	-0.6
ARCI				Sg	Sb	03 38 36.2	-0.5
	98nm,0.2s						
PII	Pisa	0.68	325	Pg	Pb	03 38 34.1	-0.5
PII				Sg	Sb	03 38 44.7	+1.2
	12nm,0.2s						
PII	Pisa	0.68	325	Pg	Pb	03 38 34.1	-0.5
PII				Sg	Sb	03 38 44.7	+1.2
	12nm,0.2s						
CAFI	Castiglion Fio	0.68	76	Pg	Pb	03 38 34.2	-0.5
	16nm,0.6s						
CAFI	Castiglion Fio	0.68	76	Pg	Pb	03 38 34.2	-0.5
	16nm,0.6s						
MAON	Monte Argentar	0.74	176	Pg	Pb	03 38 36.0	+0.3
MAON				Sg	Sb	03 38 46.6	+1.2
	76nm,0.2s						
MAON	Monte Argentar	0.74	176	Pg	Pb	03 38 36.0	+0.3
MAON				Sg	Sb	03 38 46.6	+1.2
	76nm,0.2s						
CRE	Caprese Michel	0.79	55	Pg	Pb	03 38 36.8	+0.3
	9.0nm,0.4s						
CRE	Caprese Michel	0.79	55	Pg	Pb	03 38 36.8	+0.3
	9.0nm,0.4s						
ASQU	Asqua	0.82	40	Pg	Pb	03 38 37.1	0.0
	12nm,0.5s						
ASQU	Asqua	0.82	40	Pg	Pb	03 38 37.1	0.0
	12nm,0.5s						
MAIM	Mastiano	0.85	331	Pg	Pb	03 38 37.7	+0.1
	13nm,0.7s						
MAIM	Mastiano	0.85	331	Pg	Pb	03 38 37.7	+0.1
	13nm,0.7s						
BADI	Badiali	0.93	68	Pg	Pb	03 38 39.4	+0.5
	64nm,2.1s						
BADI	Badiali	0.93	68	Pg	Pb	03 38 39.4	+0.5
	64nm,2.1s						
SFI	Santa Sofia	0.93	38	Pg	Pb	03 38 39.1	+0.2
	22um,27.0s						
BDI	Bagni Di Lucca	0.95	339	Pg	Pb	03 38 39.7	+0.4
	17nm,0.8s						
BDI	Bagni Di Lucca	0.95	339	Pg	Pb	03 38 39.7	+0.4
	17nm,0.8s						
PARC	Parchiule	0.98	60	Pg	Pb	03 38 39.9	+0.1
	11nm,0.6s						
PARC	Parchiule	0.98	60	Pg	Pb	03 38 39.9	+0.1
	11nm,0.6s						
PIEI	Pieia	1.14	71	Pg	Pn	03 38 42.8	+0.7
	5.0nm,0.3s						
PIEI	Pieia	1.14	71	Pg	Pn	03 38 42.8	+0.7
	5.0nm,0.3s						
PGF	Pioggiola	1.64	248	ePn	Pn	03 38 49.3	+0.3
PGF				eSn	Sn	03 39 10.2	+0.8
	4.8nm,0.4s						
PGF	Pioggiola	1.64	248	ePn	Pn	03 38 49.3	+0.3
PGF				eSn	Sn	03 39 10.2	+0.8
	2.4nm,0.4s						
SBF	Sospel	2.73	286	ePn	Pn	03 39 03.9	0.0
SBF	Sospel	2.73	286	ePn	Pn	03 39 03.9	0.0
FRF	La Foret Royal	3.24	278	ePn	Pn	03 39 10.9	-0.1
FRF				eSn	Sn	03 39 48.1	-0.8
	0.7nm,0.3s						
FRF	La Foret Royal	3.24	278	ePn	Pn	03 39 10.9	-0.1
FRF				eSn	Sn	03 39 48.1	-0.8
	0.3nm,0.3s						
LMR	La Mourre	3.33	274	ePn	Pn	03 39 12.1	-0.1
LMR				eSn	Sn	03 39 50.3	-0.8
	0.3nm,0.2s						
LMR	La Mourre	3.33	274	ePn	Pn	03 39 12.1	-0.1
LMR				eSn	Sn	03 39 50.3	-0.8
	0.2nm,0.2s						

GUC 10 03:39:42.1±0.9, 20.°57S×67.°03W, h240km, ML4.3, 3C, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	Plate Boundary	2.35	258	eP	Pn	03 40 28.5	+1.4
PB01				iS	S	03 41 04.5	+2.0
PB01				AML	AML	03 41 06.2	
	comp=N,342nm,0.3s						
HMBC	Humberston	2.70	276	⇑iP	Pn	03 40 31.8	+1.1
HMBC				iS	S	03 41 10.2	+1.2
HMBC				AML	AML	03 41 12.8	
	comp=N,603nm,0.5s						
MNMC	Miæe Miæ	2.81	300	⇑iP	Pn	03 40 34.0	+2.1
MNMC				iS	S	03 41 14.5	+3.2
MNMC				AML	AML	03 41 22.3	
	comp=E,238nm,0.2s						
PSGC	Pisagua	3.07	288	⇑iP	Pn	03 40 35.8	+1.1
PSGC				iS	S	03 41 16.6	+0.4
PSGC				AML	AML	03 41 18.0	
	comp=N,180nm,0.4s						
PECH	Pedro de Valdi	3.18	230	eP	Pn	03 40 38.4	+2.4
PECH				AML	AML	03 41 22.1	
	comp=E,621nm,0.1s						

IDC 10 03:53:43.1±5.9, 15.°53S×173.°58W, h0km, mb4.1/2, mb1 4.2/3, mb1mx3.8/18, mbtmp4.0/3, ML1.0/1, MS4.0/1, Ms1 4.0/1, ms1mx3.3/26, Error ellipse: s-maj=329.7km s-min=27.5km az=146.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.37	48	Pn	Pn	03 54 22.1	-1.1
	2.2nm,0.3s,baz=217,slow=20,SNR=2.7						
AFI				T		03 56 56.8	
	13nm,0.3s,baz=149,slow=8.4,SNR=4.2						
PPT	Papeete	23.09	98	LR	LR	04 06 11.1	
	comp=Z,327nm,18.8s,baz=131,slow=32						
WRA	Warramunga Arr	49.65	257	P	P	04 02 36.3	-0.6
	1.4nm,0.9s,baz=93,slow=7.8,SNR=5.5						
ASAR	Alice Springs	49.91	252	P	P	04 02 38.5	-0.3
	3.5nm,0.7s,baz=82,slow=8.7,SNR=16						
BRTR	Keskin Array B	146.15	321	PKPbc	PKPbc	04 13 26.4	+0.8
	0.4nm,0.7s,baz=48,slow=2.1,SNR=3.1						

*ISCJB **10** 04:05:32.0±0.2, 21.°01S±0.°05×175.°11W±0.°06, h33km, mb4.6/34, MS5.5/3, Error ellipse: s-maj=9.4km s-min=5.1km az=44.9*
*NEIC **10** 04:05:33.2±3.0, 20.°89S×175.°23W, h35km±20km, mb4.8/13, Error ellipse: s-maj=12.8km s-min=7.7km az=144.0*
NEIC Felt at Nuku'alofa.
*IDC **10** 04:05:36.8±0.6, 20.°89S×175.°28W, h67km±4km, mb4.1/16, mb1 4.3/17, mb1mx4.3/22, mbtmp4.1/17, Error ellipse: s-maj=23.1km s-min=13.1km az=145.0*
*SZGRF **10** 04:05:37.3, 21.°98S×169.°48W, h92km, Tonga Islands region*

ISC 10 04:05:30.8±3.9, 20.°95S±0.°05×175.°12W±0.°06, h14km±23km, h64km±3.0km: pP-P, n313, σ0.56/243, mb4.6/34, MS5.5/3, 104C-101D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	7.20	295	⇓iPn	Pn	04 07 26.9	+11
AFI	Afiamalu	7.69	25	P	Pn	04 07 23.9	+1.5
	5.6nm,0.3s,baz=195,slow=20,SNR=3.6						
AFI				S	Sn	04 08 38.4	-11
	3.7nm,0.3s,baz=210,slow=20,SNR=2.2						
RAO	Raoul Island	8.65	197	S	Sn	04 09 13.4	+0.6
	70nm,0.3s,baz=37,slow=20,SNR=3.8						
RAR	Rarotonga	14.32	94	ePn	Pn	04 08 53.0	-0.3
URZ	Urewera	18.51	200	P	Pn	04 09 47.2	+0.4
	1.8nm,0.3s,baz=45,slow=19,SNR=9.5						
URZ				S	Sn	04 12 55.7	-18
	1.0nm,0.3s,baz=55,slow=18,SNR=3.8						
RPZ	Rata Peaks	25.46	204	P	P	04 10 58.2	0.0
	5.3nm,0.3s,mb4.5,baz=25,slow=12,SNR=3.0						
CTA	Charters Tower	36.13	264	eP	P	04 12 32.1	-0.6
	10nm,0.9s,mb4.8						
CTA	Charters Tower	36.13	264	P	P	04 12 31.7	-1.0
	6.5nm,0.4s,mb4.9,baz=98,slow=11						
CTA	Charters Tower	36.13	264	P	P	04 12 31.7	-1.0
CTAO	Charters Tower	36.13	264	eP	P	04 12 32.3	-0.4
	7.2nm,0.5s,mb4.9						
CMSA	Cobar Meteorol	36.53	245	eP	P	04 12 36.5	+0.5
MTSU	Mount Surprise	38.26	267	eP	P	04 12 50.8	0.0
	16nm,0.6s,mb4.9						
STKA	Stephens Creek	40.04	245	eP	P	04 13 05.5	0.0
	3.3nm,0.6s,mb4.2						
STKA	Stephens Creek	40.04	245	P	P	04 13 04.1	-1.4
	2.9nm,0.5s,mb4.3,baz=120,slow=14,SNR=11						
STKA	Stephens Creek	40.04	245	eP	P	04 13 04.7	-0.8
	0.3nm,0.5s						
COEN	Coen	40.30	273	eP	P	04 13 07.5	-0.4
COEN	Coen	40.30	273	eP	P	04 13 07.4	-0.5
	84nm,0.9s						
ASAR	Alice Springs	47.04	257	P	P	04 14 01.0	-1.1
	5.8nm,0.8s,mb4.5,baz=100,slow=8.3,SNR=23						
ASAR				PcP	PcP	04 15 34.0	-0.2
	1.7nm,0.8s,baz=108,slow=4.0,SNR=4.1						
ASAR				ScP	ScP	04 19 23.2	-4.6
	1.1nm,1.0s,baz=188,slow=33,SNR=3.0						
WRAB	Tennant Creek	47.20	262	eP	P	04 14 01.1	-2.3
	5.6nm,1.0s,mb4.5						
WRA	Warramunga Arr	47.21	262	P	P	04 14 01.3	-2.2
	3.9nm,0.8s,mb4.4,baz=97,slow=7.6,SNR=29						
SBA	Scott Base	57.62	184	eP	P	04 15 20.7	+0.8
	8.3nm,0.8s,mb4.8						
QSPA	South Pole Qui	69.12	180	eP	P	04 16 37.4	+1.4
	21nm,1.0s,mb5.0						
QSPA				ePcP	PcP	04 16 56.1	-3.8
MJAR	Matsushiro Arr	72.19	322	P	P	04 16 53.4	-1.9
	2.6nm,0.5s,mb4.4,baz=152,slow=5.8,SNR=8.1						
PETK	Petropavlovsk-	77.43	344	P	P	04 17 23.7	-1.5
	4.1nm,0.9s,mb4.3,baz=130,slow=6.4,SNR=4.1						
PETK				pP	pP	04 17 42.1	+12
	4.1nm,0.8s,baz=118,slow=8.6,SNR=4.3						
VES	Vestal, Richgr	77.46	44	⇑P	P	04 17 25.9	+0.1
	baz=78						
MONP	Monument Peak	77.50	47	⇓P	P	04 17 25.6	-0.4
	baz=78						
ISA	Isabella	77.75	44	⇑P	P	04 17 27.5	+0.1
	baz=78						
BELC	Belle Mtn. Jos	78.42	47	⇓P	P	04 17 30.6	-0.6
	baz=79						
BC3	Big Chuckawall	78.60	47	⇑P	P	04 17 32.2	0.0
	baz=79						
MPMC	Manual Prospec	78.62	44	⇑P	P	04 17 32.2	-0.1
	baz=79,SNR=5.2						
GSC	Goldstone	78.63	45	⇓P	P	04 17 32.1	-0.2
	baz=79						
HEC	Hector,Ludlow	78.67	46	⇑P	P	04 17 32.3	-0.2
	baz=79						
YBH	Yreka Blue Hor	78.98	37	P	P	04 17 33.5	-0.5
	2.2nm,0.8s,mb4.2,baz=111,slow=15,SNR=5.4						
IRM	Iron Mountain	79.09	47	⇓P	P	04 17 34.4	-0.4
	baz=79						
GMRC	Granite Mounta	79.09	46	⇑P	P	04 17 34.7	-0.2
	baz=79						
113A	Mohawk Valley,	79.27	49	⇑P	P	04 17 35.7	-0.2
	baz=80						
FURC	Furnace Creek,	79.28	44	⇓P	P	04 17 35.5	-0.4
	baz=80						
Y12C	Blythe	79.29	48	⇑P	P	04 17 35.6	-0.3
	baz=80						
214A	Organ Pipe Nat	79.51	50	⇓P	P	04 17 36.7	-0.5
	baz=80						
NVAR	Mina Array Bea	79.52	42	P	P	04 17 37.1	0.0
	3.3nm,0.7s,mb4.4,baz=226,slow=9.1,SNR=10.0						
NVAR				pP	pP	04 17 56.3	+15
	3.5nm,0.7s,baz=225,slow=9.4,SNR=5.8			

P11A	Circle Ranch,	81.79	42	⇑P		P	04 17 49.8	+0.5
	baz=82							
X16A	Lo Mia Camp, P	81.80	48	⇑P		P	04 17 50.0	+0.6
	baz=82							
R12A	Pony Springs,	81.81	44	⇓P		P	04 17 49.8	+0.4
	baz=82							
Y17A	Roosevelt	81.83	49	⇓P		P	04 17 49.9	+0.3
	baz=82							
118A	Homack Ranch,	81.91	51	⇑P		P	04 17 50.6	+0.5
	baz=82							
V15A	Kaibab Nationa	82.04	47	⇑P		P	04 17 50.8	+0.2
	baz=82,SNR=5.5							
MAW	Mawson	82.04	199	P		P	04 17 50.3	+0.1
	2.9nm,0.7s,mb4.3,baz=160,slow=8.0,SNR=5.2							
Q12A	Willow Creek R	82.08	43	⇑P		P	04 17 51.4	+0.7
	baz=82							
W16A	Flagstaff	82.09	48	⇑P		P	04 17 51.6	+0.6
	baz=82							
219A	White Tail Can	82.10	52	⇑P		P	04 17 51.2	+0.2
	baz=82							
O11A	Cowboy Ranch,	82.19	42	⇑P		P	04 17 51.5	+0.2
	baz=82							
CCUT	Cedar City	82.19	45	*e*P		P	04 17 52.0	+0.6
X17A	Forest Lakes	82.20	49	⇑P		P	04 17 52.1	+0.6
	baz=82							
NJ2	Nanjing	82.26	308	*e*P		P	04 17 53.4	+1.5
NJ2				pmax	pmax			
	comp=Z,30nm,1.0s,mb5.2							
P12A	McGill	82.28	43	⇑P		P	04 17 52.2	+0.4
	baz=82							
U15A	North Rim	82.29	46	⇓P		P	04 17 52.4	+0.5
	baz=82,SNR=9.3							
I07A	Izee	82.30	37	⇓P		P	04 17 52.1	+0.3
	baz=82							
WUAZ	Wupatki	82.43	48	⇓P		P	04 17 53.0	+0.3
	baz=83							
WUAZ	Wupatki	82.43	48	*e*P		P	04 17 53.5	+0.8
J08A	Circle Bar Ran	82.43	38	⇑P		P	04 17 52.3	-0.2
	baz=83							
Y18A	Canyon Day Jun	82.45	50	⇓P		P	04 17 53.3	+0.5
	baz=83							
MDJ	Mudanjiang	82.45	324	P		P	04 17 54.4	+1.8
MDJ				pmax	pmax			
	comp=Z,5.0nm,1.3s,mb4.3							
MDJ				pmax	pmax			
	comp=Z,56nm,7.3s							
119A	Ashpeak Ranch,	82.46	51	⇓P		P	04 17 52.5	-0.5
	baz=83							
Q13A	Wheeler Ranch,	82.55	44	⇑P		P	04 17 53.5	+0.3
	baz=83							
T15A	Red Dirt Ranch	82.55	46	⇓P		P	04 17 53.6	+0.3
	baz=83							
220A	Playas Peak, P	82.59	52	⇑P		P	04 17 53.8	+0.2
	baz=83							
L10A	Juniper Basin	82.83	40	⇑P		P	04 17 54.7	+0.1
	baz=83							
P13A	Bates Ranch, G	82.83	43	⇓P		P	04 17 54.4	-0.3
	baz=83							
O12A	Currie	82.83	42	⇑P		P	04 17 54.7	0.0
	baz=83							
V17A	Tonalea, Kykot	82.88	48	⇑P		P	04 17 54.1	-0.9
	baz=83,SNR=6.6							
K10A	MacKenzie Ranc	83.01	39	⇑P		P	04 17 55.3	-0.2
	baz=83							
Q14A	Sevier Lake (B	83.05	44	⇓P		P	04 17 55.8	0.0
	baz=83,SNR=8.0							
Y19A	Nutrioso	83.10	50	⇓P		P	04 17 56.6	+0.4
	baz=83							
T16A	Glen Canyon Da	83.12	46	⇑P		P	04 17 56.9	+0.6
	baz=83							
Z20A	Nine Sixteen R	83.15	51	⇓P		P	04 17 56.9	+0.4
	baz=83							
L11A	Cat Creek Ranc	83.31	40	⇓P		P	04 17 57.4	+0.2
	baz=84							
X19A	St. Johns	83.32	49	⇓P		P	04 17 57.9	+0.5
	baz=84							
G08A	Pilot Rock	83.36	36	⇑P		P	04 17 57.2	0.0
	baz=84							
U17A	Shonto	83.49	47	⇑P		P	04 17 58.1	0.0
	baz=84							
MSU	Marysvale	83.50	45	*e*P		P	04 17 58.6	+0.4
K11A	Parker Ranch,	83.50	39	⇓P		P	04 17 58.1	0.0
	baz=84							
N13A	Wendover, West	83.51	42	⇑P		P	04 17 58.0	-0.2
	baz=84							
P14A	Drum Mountains	83.52	43	⇓P		P	04 17 58.2	0.0
	baz=84							
V18A	Ganado	83.53	48	⇓P		P	04 17 58.7	+0.3
	baz=84							
W19A	Sanders	83.60	49	⇓P		P	04 17 59.0	+0.2
	baz=84							
T17A	Navajo Res., N	83.60	47	⇑P		P	04 17 59.2	+0.5
	baz=84,SNR=6.4							
Q15A	Fillmore	83.64	44	⇑P		P	04 17 59.1	+0.2
	baz=84							
Y20A	Horse Springs,	83.71	50	⇑P		P	04 17 59.8	+0.4
	baz=84							
L12A	House Creek Ra	83.75	40	⇓P		P	04 17 59.2	-0.1
	baz=84							
R16A	Teasdale	83.84	45	⇑P		P	04 18 00.3	+0.4
	baz=84,SNR=6.0							
Z21A	St. Cloud Mine	83.92	51	⇑P		P	04 18 01.0	+0.6
	baz=84							
X20A	Quemado	83.94	50	⇓P		P	04 18 00.8	+0.2
	baz=84,SNR=5.5							
U18A	Rough Rock, Ch	83.94	47	⇑P		P	04 18 00.7	+0.3
	baz=84							
S17A	Black Ridge (B	83.94	46	⇑P		P	04 18 00.3	-0.2
	baz=84							
MFID	Camas Ranch	84.00	39	⇑P		P	04 18 00.6	0.0
	baz=84							
DUG	Dugway	84.01	43	⇑P		P	04 18 00.6	-0.2
	baz=84							
E08A	Dider Farm, El	84.05	35	⇓P		P	04 18 01.3	+0.5
	baz=84							
K12A	Draper Farm, C	84.10	40	⇓P		P	04 18 00.9	-0.2
	baz=84							
H10A	Noah's Angus R	84.17	38	⇓P		P	04 18 01.2	-0.2
	baz=84							
I11A	Placerville	84.22	39	⇑P		P	04 18 01.4	-0.4
	baz=84							
W20A	Ramah	84.23	49	⇓P		P	04 18 02.4	+0.4
	baz=84,SNR=6.4							
Y21A	Point of Rocks	84.26	50	⇓P		P	04 18 02.7	+0.5
	baz=84							
T18A	Mexican Hat	84.31	47	⇑P		P	04 18 03.0	+0.7
	baz=84,SNR=13							
U19A	Dine' College,	84.33	48	⇓P		P	04 18 02.8	+0.3
	baz=85							
J12A	Stokes Ranch,	84.34	39	⇓P		P	04 18 01.9	-0.4
	baz=85							
L13A	Double Diamond	84.37	41	⇑P		P	04 18 03.2	+0.7
	baz=85							
G10A	Bishop Farm, J	84.38	37	⇓P		P	04 18 03.0	+0.5
	baz=85							
Q16A	Castle Valley	84.38	45	⇑P		P	04 18 03.3	+0.6
	baz=85							
X21A	Alamocita Cree	84.40	50	⇓P		P	04 18 03.2	+0.4
	baz=85							
M14A	Sheep Mountain	84.41	42	⇑P		P	04 18 02.8	0.0
	baz=85							
Z22A	Elephant Butte	84.41	51	⇓P		P	04 18 03.2	+0.2
	baz=85							
R17A	Hanksville Air	84.42	45	⇓P		P	04 18 02.7	-0.2
	baz=85,SNR=7.0							
D08A	Wollman Farm,	84.48	35	⇓P		P	04 18 03.3	+0.4
	baz=85							
TMUT	Trail Mountain	84.56	44	*e*P		P	04 18 03.0	-0.6
	comp=Z,7.3nm,0.9s,mb4.8							
V20A	Brimhall	84.60	49	⇑P		P	04 18 03.3	-0.6
	baz=85							
K13A	Stover Farm, H	84.60	40	⇓P		P	04 18 04.0	+0.3
	baz=85							
324A	Moseley Ranch,	84.63	54	⇓P		P	04 18 03.6	-0.5
	baz=85,SNR=7.2							
I12A	Atlanta	84.64	39	⇑P		P	04 18 04.0	+0.2
	baz=85							
H11A	Donnelly	84.66	38	⇓P		P	04 18 03.5	-0.4
	baz=85							
425A	Indio Mountain	84.70	54	⇑P		P	04 18 04.3	-0.2
	baz=85							
T19A	Beclabito	84.73	47	⇓P		P	04 18 04.7	+0.2
	baz=85							
F10A	Beach Ranch, E	84.73	36	⇑P		P	04 18 03.8	-0.5
	baz=85							
Y22A	Socorro	84.74	51	⇓P		P	04 18 04.6	0.0
	baz=85,SNR=5.3							
626A	Big Bend Ranch	84.78	56	⇑P		P	04 18 04.5	-0.4
	baz=85							
MNTX	Cornudas Mount	84.83	53	*e*P		P	04 18 04.8	-0.3
	comp=Z,6.1nm,1.1s,mb4.6							
O16A	Springville	84.86	44	⇑P		P	04 18 05.4	+0.3
	baz=85							
224A	Cornudas Mount	84.90	53	⇓P		P	04 18 05.3	-0.1
	baz=85							
SRU	San Rafael	84.91	45	⇓P		P	04 18 05.3	-0.1
	baz=85							
SRU	San Rafael	84.91	45	*e*P		P	04 18 05.2	-0.1
	comp=Z,7.1nm,1.0s,mb4.8							
G11A	Walters Elk Ra	84.93	37	⇑P		P	04 18 05.0	-0.2
	baz=85							
HLID	Hailey	84.93	40	⇓P		P	04 18 05.4	+0.1
	baz=85							
HLID	Hailey	84.93	40	*e*P		P	04 18 05.2	-0.1
	comp=Z,3.8nm,0.9s,mb4.5							
Z23A	Rita Site, Whi	84.95	52	⇑P		P	04 18 06.0	+0.4
	baz=85							
R18A	Canyonlands Na	84.95	46	⇓P		P	04 18 05.5	0.0
	baz=85							
P17A	Butcher Ranch,	84.96	44	⇓P		P	04 18 06.0	+0.4
	baz=85							
J13A	Cove Ranch, Pi	84.98	40	⇑P		P	04 18 05.7	+0.1
	baz=85							
325A	Bean Ranch, Si	84.98	54	⇓P		P	04 18 05.1	-0.8
	baz=85,SNR=5.6							
X22A	Bernardo	84.98	50	⇑P		P	04 18 06.1	+0.3
	baz=85							
TXAR	Lajitas Array	85.04	56	P		P	04 18 06.1	-0.1
	comp=Z,2.1nm,0.9s,mb4.3,baz=210,slow=7.2,SNR=18							
TXAR				pP		pP	04 18 25.3	+14
	comp=Z,1.7nm,1.0s,baz=214,slow=8.4,SNR=3.7							
526A	Mary Lane Ranc	85.05	55	⇓P		P	04 18 05.9	-0.3
	baz=85							
BNM	Barren Site	85.09	51	*e*P		P	04 18 06.2	-0.1
	comp=Z,14nm,1.7s,mb4.8							
K14A	Jones Ranch, D	85.10	41	⇑P		P	04 18 06.7	+0.5
	baz=85							
LPM	Los Pinos Moun	85.16	51	*e*P		P	04 18 07.3	+0.5
Q18A	Rafter H Ranch	85.17	45	⇑P		P	04 18 06.0	-0.6
	baz=85							
H12A	Diamond D Ranc	85.24	39	⇑P		P	04 18 06.7	-0.2
	baz=86							
124A	Stringfield Ra	85.25	52	⇑P		P	04 18 07.1	-0.1
	baz=86,SNR=6.9							
L15A	Malad City	85.28	42	⇑P		P	04 18 06.6	-0.5
	baz=86							
G12A	Big Creek, Yel	85.30	38	⇓P		P	04 18 07.1	0.0
	baz=86							
I13A	Wildhorse Cree	85.31	39	⇓P		P	04 18 07.6	+0.4
	baz=86							
627A	Terlingua Ranc	85.31	56	⇓P		P	04 18 06.6	-1.0
	baz=86,SNR=6.6							
J14A	Carey	85.33	40	⇓P		P	04 18 07.7	+0.4
	baz=86							
O17A	Robinson Place	85.35	44	⇑P		P	04 18 07.8	+0.3
	baz=86							
P18A	Preston Nutter	85.37	45	⇓P		P	04 18 07.5	-0.1
	baz=86							
426A	McDonald Obser	85.37	55	⇓P		P	04 18 07.0	-0.8
	baz=86,SNR=5.9							
M16A	Huntsville	85.38	43	⇓P		P	04 18 07.2	-0.5
	baz=86							
Y23A	Lovelace Mesa,	85.40	51	⇑P		P	04 18 07.8	-0.1
	baz=86,SNR=5.4							
225A	Deer Hill, Car	85.44	53	⇑P		P	04 18 08.2	0.0
	baz=86							
527A	Woodward Ranch	85.45	55	⇑P		P	04 18 07.9	-0.4
	baz=86							
U21A	Nageezi	85.48	48	⇓P		P	04 18 08.0	-0.2
	baz=86,SNR=6.4							
ANMO	Albuquerque	85.60	50	P		P	04 18 08.6	-0.3
	comp=Z,3.3nm,0.9s,mb4.5,baz=206,slow=6.5,SNR=12							
ANMO				pP		pP	04 18 29.9	+16
	comp=Z,1.5nm,0.7s,baz=230,slow=6.2,SNR=3.6							
ANMO	Albuquerque	85.60	50	*e*P		P	04 18 08.9	0.0
	comp=Z,0.7nm,0.9s,mb3.9							
H13A	Challis	85.60	39	⇓P		P	04 18 09.0	+0.3
	baz=86							
Z24A	Sheeppen Canyo	85.61	52	⇑P		P	04 18 09.2	+0.2
	baz=86							
I14A	Mackay	85.71	40	⇑P		P	04 18 09.3	+0.1
	baz=86							
F12A	Elk City	85.71	37	⇑P		P	04 18 09.0	-0.2
	baz=86							
628A	Black Gap, Mar	85.72	56	⇓P		P	04 18 08.6	-1.0
	baz=86,SNR=5.8							
125A	Gardner Draw,	85.82	53	⇑P		P	04 18 09.9	-0.2
	baz=86							
GDL2	Guadalupe Moun	85.83	53	*e*P		P	04 18 09.8	-0.3
Y24A	Capitan	85.85	51	⇓P		P	04 18 10.4	+0.3
	baz=86,SNR=15							
L16A	Fish Haven	85.88	42	⇑P		P	04 18 10.0	-0.2
	baz=86							
W23A	Werner Place,	85.92	50	⇑P		P	04 18 11.0	+0.5
	baz=86							
427A	Hayter Ranch,	85.94	55	⇓P		P	04 18 10.4	-0.3
	baz=86,SNR=15							
226A	Malaga, Loving	85.96	54	⇑P		P	04 18 10.5	-0.2
	baz=86,SNR=5.4							
Z25A	Roswell	86.07	52	⇓P		P	04 18 11.2	0.0
	baz=86,SNR=5.6							
528A	Cox Ranch, San	86.10	56	⇑P		P	04 18 11.4	-0.1
	baz=86							
H14A	Leadore	86.15	39	⇓P		P	04 18 11.8	+0.5
	baz=86							
X24A	Lazy VL Ranch,	86.15	51	⇑P		P	04 18 11.7	+0.1
	baz=86							
126A	Clayton Basin,	86.29	53	⇓P		P	04 18 12.1	-0.3
	baz=86							
TRF	Thorofare Moun	86.35	11	*e*P		P	04 18 10.7	-1.2
	comp=Z,7.0nm,0.7s,mb5.0							
Y25A	Mesa, Roswell	86.39	52	⇑P		P	04 18 12.5	-0.4
	baz=87,SNR=6.3							
428A	Kincaid Ranch,	86.43	55	⇑P		P	04 18 13.1	-0.1
	baz=87							
W24A	Lazy 6 Ranch,	86.48	50	⇑P		P	04 18 13.0	-0.2
	baz=87							
Z26A	Caprock	86.61	53	⇓P		P	04 18 13.4	-0.5
	baz=87,SNR=11							
328A	Wristen Ranch,	86.63	55	⇓P		P	04 18 13.7	-0.4
	baz=87							
MCK	McKinley	86.85	11	*e*P		P	04 18 15.1	+0.7
PLCA	Paso Flores	87.00	133	P		P	04 18 15.1	-0.7
	comp=Z,1.6nm,0.7s,mb4.3,baz=245,slow=1.6,SNR=4.0							
K18A	Toltan Ranch,	87.09	42	⇓P		P	04 18 15.6	-0.4
	baz=87							
W25A	X Bar L Ranch,	87.17	51	⇓P		P	04 18 15.9	-0.7
	baz=87							
Z27A	Tatum	87.20	53	⇑P		P	04 18 16.0	-0.8
	baz=87							
L19A	Farson	87.24	43	⇓P		P	04 18 16.5	-0.2
	baz=88							
N20A	Spence Gulch,	87.29	44	⇓P		P	04 18 16.8	-0.3
	baz=88							
V25A	Rancho No Teng	87.34	50	⇓P		P	04 18 17.1	-0.3
	baz=88							
J18A	Kendall Valley	87.41	42	⇓P		P	04 18 17.0	-0.6
	baz=88							
BW06	Boulder Array	87.46	42	⇓P		P	04 18 17.0	-0.8
	baz=88							
PDAR	Pinedale Array	87.46	42	P		P	04 18 17.1	-0.7
	comp=Z,0.7nm,0.9s,mb3.9,baz=172,slow=3.0,SNR=5.8							
PDAR				pP		pP	04 18 36.4	+14
	comp=Z,0.5nm,0.6s,baz=206,slow=5.8,SNR=3.0							
Y27A	Causey	87.50	52	⇓P		P	04 18 17.8	-0.4
	baz=88							
N21A	Black Mountain	87.74	45	⇑P		P	04 18 18.8	-0.4
	baz=88							
MSTX	Muleshoe	87.83	52	⇓P		P	04 18 19.4	-0.4
	baz=88							
L20A	Wamsutter	87.84	43	⇑P		P	04 18 19.5	-0.1
	baz=88							
BJI	Beijing	88.12	314	P		P	04 18 22.4	+1.4
BJI				S		S	04 29 00.0	-4.8
BJI				SS		SS	04 34 53.8	-0.2
BJI				pmax	pmax			
	comp=Z,10.0nm,0.6s,mb5.2							
BJI				pmax	pmax			
	comp=Z,64nm,5.5s							
BJI				LR	LR			
	comp=N,780nm,21.7s,MS5.3							
BJI				LR	LR			
	comp=E,940nm,19.2s,MS5.3							
BJI				LR	LR			
	comp=Z,870nm,26.2s							
U26A	Atchley Ranch,	88.23	50	⇑P		P	04 18 21.0	-0.6
	baz=88							
C15A	Salmond Ranch,	88.36	37	⇑P		P	04 18 21.8	-0.2
	baz=89							
A14A	Double T Ranch	88.58	35	⇑P		P	04 18 23.0	0.0
	baz=89							
L22A	Ellis Ranch, M	89.08	44	⇓P		P	04 18 25.6	+0.1
	baz=89							
GYA	Guiyang	89.22	299	P		P	04 18 27.4	+0.8
GYA				pmax	pmax			
	comp=Z,10.0nm,1.0s,mb5.1							
B18A	Beardsley Farm	90.29	37	⇑P		P	04 18 31.5	+0.5
	baz=90							
HHC	Hu-ho-hao-te	91.61	313	*e*P		P	04 18 39.5	+2.2
HHC				PP	PP		04 22 22.4	+6.4
HHC				SKS			04 29 01.7	
HHC				S	S		04 29 30.5	-6.7
HHC				SS	SS		04 35 45.0	+0.5
HHC				pmax	pmax			
	comp=Z,14nm,0.8s,mb5.3							
HHC				pmax	pmax			
	comp=Z,74nm,5.6s							
HHC				LR	LR			
	comp=N,690nm,18.0s,MS5.3							
HHC				LR	LR			
	comp=E,750nm,21.6s,MS5.3							
HHC				LR	LR			
	comp=Z,1μm,19.2s,MS5.3							
KMI	Kunming	91.96	296	P		P	04 18 41.0	+1.6
KMI				pmax	pmax			
	comp=Z,7.0nm,0.6s,mb5.2							
CMAR	Chiang Mai Arr	92.81	289	P		P	04 18 43.2	-0.3
	comp=Z,0.8nm,0.3s,mb4.6,baz=110,slow=2.2,SNR=4.6							
LZH	Lanzhou	95.19	307	*e*P		P	04 18 56.0	+2.0
LZH				PP	PP		04 22 50.3	+6.0
LZH				pmax	pmax			
	comp=Z,19nm,1.3s,mb5.4							
YKA	Yellowknife Ar	95.81	24	P		P	04 18 55.3	-0.8
	comp=Z,0.7nm,0.8s,mb4.1,baz=245,slow=4.9,SNR=6.0							
YKA				pP		pP	04 19 13.0	+12
	comp=Z,0.8nm,0.8s,baz=233,slow=4.3,SNR=4.4							
MKAR	Makanchi Array	113.47	313	PKiKP		PKiKP	04 24 05.3	-3.0
	comp=Z,0.5nm,0.6s,baz=49,slow=3.7,SNR=4.4							
KURK	Kurchatov	116.15	317	PKP		PKPdf	04 24 10.4	-2.9
	comp=Z,0.6nm,0.6s,baz=90,slow=1.8,SNR=5.1							
KURK				pPKP		pPKPdf	04 24 31.2	+13
	comp=Z,0.8nm,0.7s,baz=87,slow=1.9,SNR=3.5							
BVAR	Borovoye Array	121.16	320	PKP		PKPdf	04 24 20.7	-2.2
	comp=Z,0.7nm,0.4s,baz=220,slow=1.2,SNR=5.6							
AKTK	Aktyubinsk	129.19	319	PKP		PKPdf	04 24 37.0	-1.3
AKTO	Aktyubinsk	129.19	319	PKP		PKPdf	04 24 37.0	-1.3
	comp=Z,0.6nm,0.5s,baz=104,slow=4.2,SNR=2.4							
ARCES	ARCESS Array B	129.82	351	PKP		PKPdf	04 24 37.3	-1.7
	comp=Z,1.6nm,0.7s,baz=29,slow=2.1,SNR=14							
ARCES				pPKP		pPKPdf	04 24 56.2	+12
	comp=Z,2.9nm,0.9s,baz=22,slow=1.3,SNR=1.5							
FINES	FINESS Array B	136.93	345	PKP		PKPdf	04 24 49.7	-2.8
	comp=Z,0.7nm,0.6s,baz=18,slow=6.6,SNR=4.1							
FINES	FINESS Array B	136.93	345	PKP		PKPdf	04 24 49.7	-2.8
AKASG	Malin Array Be	144.67	333	PKP		PKPdf	04 25 03.4	-3.4
	comp=Z,2.2nm,0.5s,baz=43,slow=4.4,SNR=18							
AKASG	Malin Array Be	144.67	333	PKP		PKPdf	04 25 03.4	-3.4
AKBB	Malin Array Si	144.67	333	*e*PKPdf		PKPdf	04 25 04.0	-2.9
KIEV	Kiev	144.69	333	PKPdf		PKPdf	04 25 03.5	-3.4
BSEG	Bad Segeberg	146.81	354	*e*PKPbc		PKPbc	04 25 12.3	+0.1
BSEG	Bad Segeberg	146.81	354	*e*PKPbc		PKPbc	04 25 12.3	+0.1
KWP	Kalwaria Pacla	148.06	338	⇓P		PKPbc	04 25 14.6	-1.2
KWP	Kalwaria Pacla	148.06	338	⇓*i*P		PKPbc	04 25 14.6	-1.2
BURAR	Bucovina Array	148.73	333	⇓*i*P		PKPbc	04 25 18.2	+0.6
STHS	Stebnicka Huta	148.75	339	*e*P		PKPab	04 25 22.9	+1.6
STHS	Stebnicka Huta	148.75	339	*e*PKP		PKPab	04 25 22.9	+1.6
KOLS	Kolonicke sedl	148.81	338	*e*P		PKPab	04 25 21.1	-0.4
KOLS	Kolonicke sedl	148.81	338	*e*PKP		PKPab	04 25 21.1	-0.4
CLL	Collm	149.04	350	*e*PKPbc		PKPbc	04 25 17.8	-0.4
CLL	Collm	149.04	350	*i* P		PKPbc	04 25 18.6	+0.4
CLL				*e*			04 25 36.0	
CLL	Collm	149.04	350	⇓*i*PKPbc		PKPbc	04 25 17.6	-0.6
	comp=Z,7.0nm,0.6s							
CLL				*i* PKiKP		PKiKP	04 25 18.6	-0.9
	comp=Z,9.0nm,0.7s							
CLL				*e*(pPKPab)			04 25 36.0	
CRVS	Cervenica-Dubn	149.12	338	*e*P		PKPab	04 25 21.4	-1.4
CRVS	Cervenica-Dubn	149.12	338	*e*PKP		PKPab	04 25 21.4	-1.4
BR131	Keskin Array S	149.12	314	*e*PKPbc		PKPbc	04 25 16.2	-2.6
BRTR	Keskin Array B	149.12	314	PKPbc		PKPbc	04 25 17.6	-1.2
	comp=Z,2.7nm,0.6s,baz=131,slow=4.0,SNR=18							
UPC	Upice	149.22	346	⇑*e*PKP		PKPbc	04 25 17.5	-1.2
DPC	Dobruska-Polom	149.30	346	⇑*e*PKP		PKPbc	04 25 18.5	-0.4
VRI	Vrincioaia	149.37	329	⇑*i*P		PKPbc	04 25 19.8	+0.5
PVCC	Panska Ves	149.51	348	⇑*e*PKP		PKPbc	04 25 19.1	-0.3
TIRR	Tirgusor	149.52	326	⇑*i*P		PKPbc	04 25 21.5	+1.8
MORC	Moravsky Berou	149.53	344	⇓*i*P		PKPbc	04 25 20.0	+0.5
HARR	Harsova	149.61	326	⇓*i*P		PKPbc	04 25 21.5	+1.6
KECS	Kecovo	149.81	339	*e*P		PKPbc	04 25 20.2	0.0
KECS	Kecovo	149.81	339	*e*PKP		PKPbc	04 25 20.2	0.0
MOX	Moxa	149.89	351	*e*PKPbc		PKPbc	04 25 19.3	-1.1
WERD	Werda	149.98	350	*e*PKPbc		PKPbc	04 25 20.1	-0.5
TANN	Tannenbergstha	149.99	350	*e*PKPbc		PKPbc	04 25 21.3	+0.7
MLR	Muntele Rosu	150.02	330	⇓*i*P		PKPbc	04 25 19.9	-1.0
PRU	Pruhonice	150.03	347	⇑*e*PKP		PKPbc	04 25 20.5	-0.2
GUNZ	Gunzen	150.06	350	*e*PKPbc		PKPbc	04 25 21.6	+0.8
WERN	Wernitzgruen	150.13	350	*e*PKPbc		PKPbc	04 25 22.5	+1.5
VYHS	Vyhne	150.32	341

DIYA			*i* S		**Sg**	**04 12 43.5**	**-0.1**
DIYA	**Diyarbakir**	**0.93 209**	*i* P		**Pg**	**04 12 30.7**	**-0.8**
DIYA			*i* S		**Sg**	**04 12 43.5**	**-0.1**
BEST	**Besiri**	**0.96 151**	*i* P		**Pg**	**04 12 31.4**	**-0.7**
BEST			*i* S		**Sg**	**04 12 45.1**	**+0.5**
PTK	**Pertek**	**1.02 279**	*e*PG		**Pg**	**04 12 32.6**	**-0.7**
PTK	**Pertek**	**1.02 279**	*e*Pg		**Pg**	**04 12 32.6**	**-0.7**
SVRC	**Sivrice-ELAZID**	**1.14 252**	*e*PN		**Pg**	**04 12 34.2**	**-1.3**
SVRC			*e*SN		**Sg**	**04 12 49.6**	**-0.8**
SVRC	**Sivrice-ELAZID**	**1.14 252**	*e*Pn		**Pg**	**04 12 34.2**	**-1.3**
SVRC			*e*Sn		**Sg**	**04 12 49.6**	**-0.8**
TATV	**Tatvan**	**1.26 100**	*i* P		**Pn**	**04 12 37.2**	**0.0**
TATV			*i* S		**Sb**	**04 12 54.5**	**+0.8**
TATV	**Tatvan**	**1.26 100**	*i* P		**Pn**	**04 12 37.2**	**0.0**
EZM	**Erzurum**	**1.27 24**	*e*PN		**Pn**	**04 12 37.3**	**-0.2**
ERZM	**Erzurum**	**1.28 24**	*i* P		**Pn**	**04 12 37.4**	**-0.1**
ERZM			*i* S		**Sb**	**04 12 52.7**	**-1.5**
ERZM	**Erzurum**	**1.28 24**	*i* P		**Pn**	**04 12 37.4**	**-0.1**
ERZM			*i* S		**Sb**	**04 12 52.7**	**-1.5**
ELZG	**Elazig**	**1.36 260**	*i* P		**Pn**	**04 12 38.9**	**+0.3**
ELZG			*i* S		**Sb**	**04 12 56.8**	**+0.3**
ELZG	**Elazig**	**1.36 260**	*i* P		**Pn**	**04 12 38.8**	**+0.2**
ELZG			*i* S		**Sb**	**04 12 56.8**	**+0.3**
EZC	**Erzincan**	**1.45 315**	*e*PN		**Pn**	**04 12 38.9**	**-0.9**
KEMA	**Kemaliye**	**1.79 288**	*i* P		**Pn**	**04 12 44.9**	**+0.3**
KEMA			*i* S		**Sn**	**04 13 09.9**	**+2.6**
KEMA	**Kemaliye**	**1.79 288**	*i* P		**Pn**	**04 12 44.9**	**+0.3**
KEMA			*i* S		**Sn**	**04 13 09.9**	**+2.6**
MYA	**Malataya**	**1.82 258**	*e*PN		**Pn**	**04 12 44.2**	**-0.8**
MYA	**Malataya**	**1.82 258**	*e*Pn		**Pn**	**04 12 44.2**	**-0.8**
GUMT	**Gumushane**	**1.96 332**	*e*PN		**Pn**	**04 12 46.7**	**-0.2**
GUMT	**Gumushane**	**1.96 332**	*e*Pn		**Pn**	**04 12 46.7**	**-0.1**
URFA	**Urfa**	**1.96 229**	*e*PN		**Pn**	**04 12 46.0**	**-1.0**
URFA	**Urfa**	**1.96 229**	*e*Pn		**Pn**	**04 12 46.0**	**-0.9**
AKCD	**Akcadag**	**2.21 259**	*i* P		**Pn**	**04 12 53.3**	**+2.9**
AKCD			*i* S		**Sn**	**04 13 22.2**	**+4.4**
AKCD	**Akcadag**	**2.21 259**	*i* P		**Pn**	**04 12 53.3**	**+2.9**
ATAB	**Bozova**	**2.27 237**	*e*P		**Pn**	**04 12 50.3**	**-0.9**
ATAB			*i* S		**Sn**	**04 13 20.4**	**+1.1**
ATAB	**Bozova**	**2.27 237**	*e*P		**Pn**	**04 12 50.3**	**-0.9**
ATAB			*i* S		**Sn**	**04 13 20.4**	**+1.1**

IDC ***10*** *04:13:32.7±0.4, 18°.17S×167°.85E, h0km, mb4.9/19, mb1 5.0/20, mb1mx5.0/21, mbtmp4.9/20, ML5.2/1, MS5.5/16, Ms1 5.4/16, ms1mx5.3/20, Error ellipse: s-maj=10.7km s-min=9.8km az=78.0*

ISCJB ***10*** *04:13:33.7±0.1, 18°.14S±0°.03×167°.89E±0°.03, h16km, mb5.2/94, MS5.6/245, Error ellipse: s-maj=5.2km s-min=3.8km az=156.1*

LDG ***10*** *04:13:34.8±0.1, 18°.17S×167°.56E, h10km, Mb5.3/4, Ms5.6/9, Error ellipse: s-maj=14.5km s-min=3.8km az=97.0*

SZGRF ***10*** *04:13:34.8, 20°.19S×169°.96E, h36km, mb5.8, Vanuatu Islands*

NOU ***10*** *04:13:36.3±0.5, 18°.10S×167°.22E, h30km, MD4.1, ML3.5*

BJI ***10*** *04:13:36.2, 17°.49S×167°.97E, h10km, mB5.7/39, mb5.0/42, Ms5.6/53, Ms7 5.3/45*

BGS ***10*** *04:13:37.4±2.1, 18°.10S×167°.88E, h33km, mb5.9(NEIC)*

NEIC ***10*** *04:13:37.8±0.2, 18°.10S×167°.88E, h35km, mb5.3/62, MS5.7/201, MW5.8, Error ellipse: s-maj=7.4km s-min=5.8km az=141.0*

NEIC Felt [III] at Port-Vila.

MOS ***10*** *04:13:38.6±2.8, 17°.81S×167°.62E, h33km, mb5.5/38, MS5.6/51, Error ellipse: s-maj=9.0km s-min=7.7km az=109.8*

GCMT ***10*** *04:13:39.7±0.1, 18°.19S×167°.79E, h21km, MW5.9, Moment Tensor Solution. s109,c236; s80,c101; Moment tensor: Scale 10^17^Nm; Mrr6.86±.06; Mθθ0.23±.05; Mφφ-7.09±.06; Mrθ2.32±.11; Mrφ1.54±.04; Mθφ-4.74±.12; Best double couple: M0 8.90000×10^17^ NP1:φ=358.00000°, δ28.00000°, λ107.00000°. NP2:φ=160.00000°, δ63.00000°, λ81.00000°. Principal axes: T 8.7000, Plg70.0000°, Azm51.0000°; N 0.3600, Plg8.0000°, Azm163.0000°; P -9.0600, Plg18.0000°, Azm256.0000°; Data Used: II IU IC G CN. Surface waves: sta=117, comp=253, per= 50.*

DJA ***10*** *04:14:05, 20°.55S×165°.99E, h97km, Mw5.7/25*

ISC 10 04:13:34.5±1.3, 18°.14S±0°.03×167°.93E±0°.03, h12km±8km, h16km±2.3km; pP-P, n852, σ0.84/380, mb5.2/94, MS5.6/245, 101C-103D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**4.11**	**194**	*e*S	**Sn**	**04 15 18.5**	**-6.7**
DZM	**Mont Dzumac**	**4.15**	**199**	*e*Pn	**Pn**	**04 14 34.6**	**-3.2**
	64nm,0.2s						
DZM				*e*Sn	**Sn**	**04 15 18.8**	**-7.5**
	425nm,0.3s						
DZM				*e*LR	LR	04 15 28.1	
	83μm,24.4s						
DZM	**Mont Dzumac**	**4.15**	**199**	*e*P	**Pn**	**04 14 34.6**	**-3.2**
DZM				*e*S	**Sn**	**04 15 18.0**	**-8.2**
DZM	**Mont Dzumac**	**4.15**	**199**	*e*Pn	**Pn**	**04 14 34.9**	**-2.9**
DZM				*e*S	**Sn**	**04 15 19.4**	**-6.8**
NOUC	**Port Laguerre**	**4.22**	**201**	*e*P	**Pn**	**04 14 35.5**	**-3.3**
NOUC				AMP		04 15 40.1	
	comp=Z,209nm,3.4s						
MSVF	**Nonsavu**	**9.64**	**89**	Pn	**Pn**	**04 16 01.0**	**+7.8**
	comp=Z,3μm,0.9s,SNR=22						
MSVF	**Nonsavu**	**9.64**	**89**	*e*Pn	**Pn**	**04 15 59.2**	**+6.0**
	comp=Z,476nm,1.0s						
MSVF				*e*S	**Sn**	**04 18 00.8**	**+19**
MSVF	**Nonsavu**	**9.64**	**89**	Pn	**Pn**	**04 16 00.3**	**+7.1**
	comp=Z,991nm,1.5s,SNR=22						
HNR	**Honiara**	**11.62**	**317**	Pn	**Pn**	**04 16 19.5**	**-0.7**
	comp=Z,15nm,0.3s,baz=186,slow=18,SNR=3.0						
HNR				Sn	**Sn**	**04 18 34.4**	**+4.4**
	comp=Z,13nm,0.3s,baz=153,slow=14,SNR=2.3						
HNR				LR	LR	04 20 05.5	
	comp=Z,20μm,20.5s,baz=142,slow=34						
HNR	**Honiara**	**11.62**	**317**	*e*P	**Pn**	**04 16 18.9**	**-1.4**
HNR				pmax	pmax		
	comp=Z,465nm,0.8s						
HNR	**Honiara**	**11.62**	**317**	*e*Pn	**Pn**	**04 16 18.9**	**-1.4**
	comp=Z,465nm,0.8s						
RAO	**Raoul Island**	**17.02**	**133**	S	**Sn**	**04 20 50.8**	**+9.1**
	comp=Z,44nm,0.3s,baz=270,slow=20,SNR=2.2						
RAO				LR	LR	04 22 49.9	
	comp=Z,16μm,19.8s,baz=303,slow=33						
EIDS	**Eidsvold**	**17.21**	**242**	*e*Pn	**Pn**	**04 17 35.3**	**+0.3**
	comp=Z,301nm,1.8s						
OUZ	**Omahuta**	**17.74**	**165**	*e*Pn	**Pn**	**04 17 42.8**	**+1.4**
	comp=Z,330nm,1.5s						
ARMA	**Armidale**	**19.21**	**227**	*e*P	**Pn**	**04 17 59.5**	**+0.1**
ARMA				*e*S	**Sn**	**04 21 49.8**	**+15**
ARMA	**Armidale**	**19.21**	**227**	*e*P	**Pn**	**04 18 00.3**	**+0.9**
	comp=Z,83nm,1.1s						
AFI	**Afiamalu**	**19.95**	**81**	P	**Pn**	**04 18 08.0**	**-0.4**
	comp=Z,95nm,0.9s,baz=256,slow=3.7,SNR=4.5						
AFI				LR	LR	04 24 10.7	
	comp=Z,20μm,19.7s,baz=248,slow=32						
AFI	**Afiamalu**	**19.95**	**81**	*e*P	**Pn**	**04 18 09.1**	**+0.7**
AFI				pmax	pmax		
	comp=Z,177nm,1.0s						
AFI	**Afiamalu**	**19.95**	**81**	*e*P	**Pn**	**04 18 09.1**	**+0.7**
	comp=Z,177nm,1.0s						
CTA	**Charters Tower**	**20.57**	**261**	*e*P	**P**	**04 18 14.0**	**+0.6**
	comp=Z,97nm,1.4s						
CTA				*e*S	**S**	**04 22 03.0**	**-0.4**
CTA	**Charters Tower**	**20.57**	**261**	P	**P**	**04 18 14.1**	**+0.7**
	comp=Z,42nm,0.9s,baz=90,slow=11,SNR=14						
CTA				S	**S**	**04 22 03.4**	**-0.1**
	comp=Z,6.3nm,0.9s,baz=84,slow=18,SNR=2.3						
CTA				LR	LR	04 25 04.5	
	comp=Z,22μm,20.1s,MS5.5,baz=85,slow=34						
CTA	**Charters Tower**	**20.57**	**261**	P	**P**	**04 18 14.1**	**+0.7**
CTA				S	**S**	**04 22 03.4**	**0.0**
CTA	**Charters Tower**	**20.57**	**261**	P	**P**	**04 18 14.1**	**+0.7**
CTA				S	**S**	**04 22 03.4**	**-0.1**
CTA				LR	LR	04 25 04.5	
CTAO	**Charters Tower**	**20.57**	**261**	*e*P	**P**	**04 18 14.9**	**+1.5**
CTAO				pmax	pmax		
	comp=Z,328nm,1.4s						
CTAO				MLR	MLR		
	comp=Z,24μm,19.0s,MS5.6						
CTAO	**Charters Tower**	**20.57**	**261**	*e*P	**P**	**04 18 14.9**	**+1.6**
	comp=Z,328nm,1.4s						
CTAO				LR	LR		
	comp=Z,24μm,19.0s,MS5.6						
URZ	**Urewera**	**21.59**	**160**	P	**P**	**04 18 24.5**	**+0.3**
	comp=Z,39nm,0.9s,mb4.8,baz=330,slow=5.7,SNR=12						
URZ				S	**S**	**04 22 25.3**	**+2.0**
	comp=Z,9.8nm,1.0s,baz=306,slow=14,SNR=1.9						
URZ				LR	LR	04 25 55.3	
	comp=Z,23μm,18.8s,MS5.6,baz=349,slow=34						
URZ	**Urewera**	**21.59**	**160**	*e*P	**P**	**04 18 24.8**	**+0.5**
	comp=Z,92nm,0.9s,mb5.2						
RIV	**Riverview**	**21.66**	**221**	*e*P	**P**	**04 18 26.6**	**+1.6**
CNB	**Canberra Magne**	**23.75**	**220**	*e*P	**P**	**04 18 46.5**	**-0.4**
CNB				*e*S	**S**	**04 23 01.1**	**-0.8**
SNZO	**South Karori**	**23.81**	**167**	*e*P	**P**	**04 18 48.0**	**+0.6**
	comp=Z,174nm,1.6s,mb5.2						
SNZO				LR	LR		
	comp=Z,7μm,19.0s,MS5.2						
CAN	**Canberra**	**23.98**	**221**	*e*P	**P**	**04 18 49.2**	**+0.2**
CAN				pmax	pmax		
	comp=Z,286nm,1.4s,mb5.5						
CAN				MLR	MLR		
	comp=Z,17μm,22.0s,MS5.5						
CAN	**Canberra**	**23.98**	**221**	*e*P	**P**	**04 18 49.2**	**+0.2**
	comp=Z,286nm,1.4s,mb5.5						
CAN				LR	LR		
	comp=Z,17μm,22.0s,MS5.5						
COEN	**Coen**	**24.14**	**276**	*e*P	**P**	**04 18 52.2**	**+1.5**
	comp=Z,1μm,1.6s,mb6.0						
KHZ	**Kahutara**	**24.67**	**170**	*e*P	**P**	**04 18 56.0**	**+0.8**
	comp=Z,126nm,1.2s,mb5.3						
RPZ	**Rata Peaks**	**25.63**	**175**	P	**P**	**04 19 03.3**	**-0.6**
	comp=Z,37nm,1.2s,mb4.8,baz=0.0,slow=12,SNR=2.7						
RPZ				S	**S**	**04 23 34.5**	**+2.5**
	comp=Z,11nm,0.9s,baz=342,slow=19,SNR=1.8						
STKA	**Stephens Creek**	**27.41**	**235**	*e*P	**P**	**04 19 20.6**	**+0.4**
	comp=Z,49nm,1.0s,mb5.0						
STKA				*e*S	**S**	**04 23 59.3**	**-1.1**
STKA	**Stephens Creek**	**27.41**	**235**	P	**P**	**04 19 20.7**	**+0.5**
	comp=Z,36nm,1.0s,mb4.9,baz=61,slow=7.4,SNR=21						
STKA				LR	LR	04 28 54.1	
	comp=Z,12μm,20.9s,MS5.4,baz=66,slow=34						
STKA	**Stephens Creek**	**27.41**	**235**	*e*P	**P**	**04 19 21.0**	**+0.8**
	comp=Z,19nm,1.0s,mb4.6						
TOO	**Toolangi**	**27.59**	**221**	*e*P	**P**	**04 19 22.4**	**+0.7**
TOO				*e*S	**S**	**04 24 01.2**	**-1.8**
TAU	**Tasmania Unive**	**30.25**	**211**	PFAKE		04 20 00.0	+15
TAU				LR	LR		
	comp=Z,8μm,22.0s,MS5.3						
RAR	**Rarotonga**	**30.54**	**101**	PFAKE		04 20 00.0	+12
RAR				LR	LR		
	comp=Z,10μm,19.0s,MS5.5						
WRAB	**Tennant Creek**	**31.76**	**261**	*e*P	**P**	**04 19 56.9**	**-2.0**
WRAB				pmax	pmax		
	comp=Z,45nm,1.3s,mb5.1						
WRAB				MLR	MLR		
	comp=Z,11μm,19.0s,MS5.5						
WRAB	**Tennant Creek**	**31.76**	**261**	*e*P	**P**	**04 19 56.9**	**-2.0**
	comp=Z,45nm,1.3s,mb5.1						
WRAB				LR	LR		
	comp=Z,11μm,19.0s,MS5.5						
WRA	**Warramunga Arr**	**31.77**	**261**	P	**P**	**04 19 56.7**	**-2.3**
	comp=Z,3.0nm,0.5s,mb4.4,baz=82,slow=5.9,SNR=19						
WRA				S	**S**	**04 25 09.4**	**+0.4**
	comp=Z,2.3nm,1.3s,baz=105,slow=13,SNR=2.7						
WRA				ScP	ScP	04 26 35.3	+1.6
	comp=Z,1.8nm,1.1s,baz=83,slow=1.9,SNR=5.6						
WRA				LR	LR	04 31 54.2	
	comp=Z,10μm,20.0s,MS5.5,baz=90,slow=35						
WRA	**Warramunga Arr**	**31.77**	**261**	P	**P**	**04 19 56.7**	**-2.3**
WRA				S	**S**	**04 25 09.5**	**+0.4**
WRA	**Warramunga Arr**	**31.77**	**261**	P	**P**	**04 19 56.7**	**-2.3**
WRA				S	**S**	**04 25 09.4**	**+0.4**
WRA				ScP	ScP	04 26 35.3	+1.6
WRA				LR	LR	04 31 54.2	
ASAR	**Alice Springs**	**32.20**	**254**	P	**P**	**04 20 00.6**	**-2.2**
	comp=Z,20nm,0.6s,mb5.2,baz=83,slow=8.8,SNR=93						
ASAR				PcP	PcP	04 22 52.8	+1.3
	comp=Z,3.6nm,1.0s,baz=104,slow=3.9,SNR=3.2						
ASAR				S	**S**	**04 25 17.0**	**+1.2**
	comp=Z,1.4nm,1.1s,baz=71,slow=18,SNR=3.2						
ASAR				ScP	ScP	04 26 36.0	+0.9
	comp=Z,2.2nm,1.0s,baz=94,slow=5.6,SNR=4.6						
ASAR	**Alice Springs**	**32.20**	**254**	P	**P**	**04 20 00.6**	**-2.1**
ASAR						04 22 52.8	
ASAR				S	**S**	**04 25 17.0**	**+1.2**
ASAR	**Alice Springs**	**32.20**	**254**	P	**P**	**04 20 00.6**	**-2.2**
ASAR				PcP	PcP	04 22 52.8	+1.3
ASAR				S	**S**	**04 25 17.0**	**+1.2**
ASAR				ScP	ScP	04 26 36.0	+0.9
WAKE	**Wake Island**	**37.21**	**358**	PFAKE		04 21 00.0	+14
WAKE				LR	LR		
	comp=Z,3μm,19.0s,MS5.1						
FORT	**Forrest**	**38.21**	**243**	*e*P	**P**	**04 20 52.7**	**-1.7**
	comp=Z,76nm,1.4s,mb5.2						
FORT	**Forrest**	**38.21**	**243**	*e*P	**P**	**04 20 59.0**	**+4.5**
	comp=Z,255nm,1.6s,mb5.7						
GUMO	**Guam**	**38.88**	**323**	PFAKE		04 21 10.0	+10
GUMO				LR	LR		
	comp=Z,6μm,19.0s,MS5.4						
XMAS	**Kiritimati**	**39.56**	**63**	PFAKE		04 21 20.0	+14
XMAS				LR	LR		
	comp=Z,14μm,20.0s,MS5.8						
FITZ	**Fitzroy Crossi**	**40.12**	**263**	*e*P	**P**	**04 21 09.0**	**-1.6**
	comp=Z,96nm,1.3s,mb5.4						
FITZ				*e*PP	PP	04 22 46.2	+3.3
FITZ				*e*S	**S**	**04 27 05.7**	**-11**
FITZ	**Fitzroy Crossi**	**40.12**	**263**	*e*P	**P**	**04 21 09.2**	**-1.4**
	comp=Z,68nm,1.0s,mb5.3						
PPT	**Papeete**	**40.39**	**96**	*e*S	**S**	**04 27 20.1**	**-0.9**
	comp=Z,5μm,25.2s						
PPT				*e*LQ		04 30 36.1	
	comp=Z,16μm,28.2s						
PPT				*e*LR	LR	04 32 15.9	
	comp=Z,18μm,25.2s,baz=261						
PPT	**Papeete**	**40.39**	**96**	LR	LR	04 33 55.7	
	comp=Z,6μm,21.2s,MS5.4,baz=264,slow=30						
JOHN	**Johnston Islan**	**41.15**	**34**	PFAKE		04 21 30.0	+11
JOHN				LR	LR		
	comp=Z,8μm,20.0s,MS5.6						
MBWA	**Marble Bar**	**45.36**	**258**	*e*P	**P**	**04 21 50.9**	**-2.2**
MBWA				LR	LR		
	comp=Z,9μm,20.0s,MS5.7						
KLBR	**Kellerberrin**	**47.07**	**244**	*e*P	**P**	**04 22 03.0**	**-3.4**
	comp=Z,43nm,0.9s,mb5.4						
NWAO	**Narrogin (SRO)**	**47.62**	**242**	*e*P	**P**	**04 22 10.0**	**-0.7**
NWAO				pmax	pmax		
	comp=Z,91nm,1.1s						
NWAO				MLR	MLR		
	comp=Z,5μm,21.0s						
NWAO	**Narrogin (SRO)**	**47.62**	**242**	*e*P	**P**	**04 22 10.0**	**-0.7**
	comp=Z,91nm,1.1s,mb5.7						
NWAO				LR	LR		
	comp=Z,5μm,21.0s,MS5.4						
MIDW	**Midway**	**48.23**	**17**	PFAKE		04 22 30.0	+15
MIDW				LR	LR		
	comp=Z,4μm,22.0s,MS5.3						
DAV	**Davao City (W)**	**48.73**	**297**	PFAKE		04 22 30.0	+11
DAV				LR	LR		
	comp=Z,3μm,20.0s,MS5.3						
KAPI	**Kappang**	**48.81**	**279**	*e*P	**P**	**04 22 19.2**	**-0.9**
	comp=Z,102nm,1.5s,mb5.6						
KAPI				LR	LR		
	comp=Z,2μm,20.0s,MS5.1						
TAOE	**Nuku Hiva Isla**	**51.18**	**87**	*e*S	**S**	**04 29 51.4**	**-5.2**
	comp=Z,6μm,25.4s						
TAOE				*e*SS	SS	04 33 26.0	-6.2
	comp=Z,2μm,27.2s						
TAOE				*e*LR	LR	04 37 17.0	
	comp=Z,16μm,22.4s,baz=261						
CBIJ	**Chichi jima**	**51.44**	**330**	P	**P**	**04 22 39.5**	**-0.2**
	comp=Z,45nm,0.8s,mb5.4,baz=174,slow=9.2,SNR=3.8						
KIP	**Kipapa**	**51.56**	**42**	PFAKE		04 22 50.0	+9.2
KIP				LR	LR		
	comp=Z,6μm,20.0s,MS5.6						
DRV	**Dumont d'Urvil**	**51.79**	**194**	P	**P**	**04 22 46.0**	**+4.1**
DRV				S	**S**	**04 29 56.0**	**-7.5**
DRV				R		04 38 00.0	
POHA	**Pohakuloa**	**52.01**	**45**	PFAKE		04 23 00.0	+16
POHA				LR	LR		
	comp=Z,9μm,19.0s,MS5.8						
RKT	**Rikitea**	**53.39**	**106**	*e*S	**S**	**04 30 24.7**	**-2.0**
	comp=Z,5μm,28.8s						
RKT				*e*SS	SS	04 34 05.4	-1.4
	comp=Z,2μm,29.2s						
RKT				*e*LQ		04 36 03.6	
	comp=Z,3μm,33.8s						
RKT				*e*LR	LR	04 38 19.5	
	comp=Z,6μm,27.0s,baz=266						
KKM	**Kota Kinabalu**	**56.39**	**290**	*e*P	**P**	**04 23 16.9**	**+0.6**
	comp=Z,224nm,1.7s,mb5.9						
KKM				LR	LR		
	comp=Z,306nm,22.0s,MS4.3						
SBA	**Scott Base**	**59.75**	**180**	*e*P	**P**	**04 23 39.6**	**+0.8**
SBA				pmax	pmax		
	comp=Z,242nm,2.3s,mb5.8						
SBA				MLR	MLR		
	comp=Z,2μm,19.0s,MS5.4						
SBA	**Scott Base**	**59.75**	**180**	*e*P	**P**	**04 23 39.6**	**+0.8**
	comp=Z,242nm,2.3s,mb5.8						
SBA				LR	LR		
	comp=Z,2μm,19.0s,MS5.4						
KSM	**Kuching**	**59.92**	**283**	*e*P	**P**	**04 23 41.6**	**+0.6**
	comp=Z,56nm,1.3s,mb5.4						
KSM				LR	LR		
	comp=Z,1μm,19.0s,MS5.1						
CASY	**Casey**	**60.64**	**203**	*e*P	**P**	**04 23 42.2**	**-2.9**
CASY				*e*S	**S**	**04 31 55.3**	**-5.7**
CASY	**Casey**	**60.64**	**203**	*e*P	**P**	**04 23 44.2**	**-0.9**
	comp=Z,38nm,1.2s,mb5.4						
CASY				LR	LR		
	comp=Z,4μm,19.0s,MS5.5						
MJAR	**Matsushiro Arr**	**61.21**	**333**	P	**P**	**04 23 48.5**	**-0.8**
	comp=Z,8.3nm,1.0s,mb4.8,baz=168,slow=7.1,SNR=20						
MJAR				LR	LR	04 48 49.8	
	comp=Z,992nm,19.4s,MS5.0,baz=165,slow=35						
MAJO	**Matsushiro**	**61.21**	**333**	*e*P	**P**	**04 23 48.1**	**-1.2**
MAJO				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.2						
MAJO				MLR	MLR		
	comp=Z,1μm,19.0s,MS5.2						
MAJO	**Matsushiro**	**61.21**	**333**	*e*P	**P**	**04 23 48.1**	**-1.2**
	comp=Z,22nm,1.1s,mb5.2						
MAJO				LR	LR		
	comp=Z,1μm,19.0s,MS5.2						
MAT	**Matsushiro**	**61.21**	**333**	P	**P**	**04 23 49.1**	**-0.2**
MAT				S	**S**	**04 32 09.0**	**0.0**
YHNB	**Yeheng**	**62.19**	**312**	PFAKE		04 24 10.0	+14
YHNB				LR	LR		
	comp=Z,2μm,19.0s,MS5.4						
TATO	**Taipei**	**62.30**	**312**	PFAKE		04 24 10.0	+13
TATO				LR	LR		
	comp=Z,3μm,19.0s,MS5.5						
ERM	**Erimo**	**64.08**	**340**	PFAKE		04 24 20.0	+12
ERM				LR	LR		
	comp=Z,3μm,19.0s,MS5.5						
QZH	**Quanzhou**	**64.36**	**310⇑**	*i*P	**P**	**04 24 13.0**	**+2.4**
QZH				S	**S**	**04 32 50.0**	**+1.0**
QZH				pmax	pmax		
	comp=Z,960nm,8.7s						
QZH				LR	LR		
	comp=N,1μm,18.0s,MS5.4						
QZH				LR	LR		
	comp=E,2μm,14.1s,MS5.4						
QZH				LR	LR		
	comp=Z,3μm,18.6s,MS5.5						
YUK	**Yuzh-Kuril'sk**	**65.09**	**343⇑**	*i*P	**P**	**04 24 12.7**	**-2.2**
YUK				*i* S	S	04 32 59.1	+1.9
YUK				*i* SS	SS	04 37 05.4	-4.6
YUK				pmax	pmax		
	comp=Z,40nm,0.2s,mb6.1						
YUK				pmax	pmax		
	comp=N,430nm,17.9s						
YUK				pmax	pmax		
	comp=E,360nm,17.9s						
ASAJ	**Asahikawa**	**66.15**	**340**	P	**P**	**04 24 23.2**	**+1.4**
	comp=E,14nm,0.7s,mb5.1,baz=211,slow=16,SNR=4.5						
ASAJ	**Asahikawa**	**66.15**	**340**	P	**P**	**04 24 23.2**	**+1.4**
ASAJ				pmax	pmax		
	comp=Z,15nm,0.7s						
SSE	**Sheshan**	**66.42**	**317⇑**	P	**P**	**04 24 23.1**	**-0.7**
SSE				pP	pP	04 24 33.3	+5.7
SSE				sP	sP	04 24 36.6	+7.6
SSE				S	S	04 33 08.1	-6.0
SSE				sS	sS	04 33 26.8	+6.6
SSE				ScS	ScS	04 34 15.6	-5.1
SSE				pmax	pmax		
	comp=Z,27nm,0.6s,mb5.5						
SSE				pmax	pmax		
	comp=Z,340nm,7.7s						
SSE				LR	LR		
	comp=N,650nm,17.7s,MS5.2						
SSE				LR	LR		
	comp=E,1μm,17.8s,MS5.2						
SSE				LR	LR		
	comp=Z,2μm,21.1s,MS5.2						
KSRS	**Korea Array**	**66.90**	**326**	P	**P**	**04 24 28.7**	**+2.0**
	comp=Z,2.3nm,0.9s,mb4.2,baz=146,slow=6.3,SNR=11						
KSRS				S	S	04 33 22.3	+2.7
	comp=Z,0.3nm,0.3s,baz=71,slow=16,SNR=2.6						
KSRS				LR	LR	04 52 40.3	
	comp=Z,2μm,20.0s,MS5.4,baz=36,slow=35						
GZH	**Guangzhou**	**67.24**	**306**	P	**P**	**04 24 30.1**	**+0.9**
GZH				S	S	04 33 27.7	+3.4
GZH				LR	LR		
	comp=N,880nm,18.3s,MS5.2						
GZH				LR	LR		
	comp=E,1μm,19.9s,MS5.2						
MIR	**Mirnyy**	**67.50**	**205⇓**	*i*P	**P**	**04 24 31.0**	**+0.8**
MIR				*i*		04 24 55.0	
MIR				*e*S	S	04 33 20.0	-6.1
MIR				pmax	pmax		
	comp=Z,41nm,1.0s,mb5.4						
MIR				pmax	pmax		
	comp=Z,700nm,6.0s						
MIR				smax			
	comp=N,2μm,14.0s						
INCN	**Inchon**	**67.61**	**325**	PFAKE		04 24 40.0	+8.7
INCN				LR	LR		
	comp=Z,1μm,19.0s,MS5.1						
QIZ	**Qiongzhong**	**67.96**	**300**	P	**P**	**04 24 33.6**	**-0.2**
QIZ				PP	PP	04 27 02.1	-1.8
QIZ				S	S	04 33 33.4	+0.4
QIZ				sS	sS	04 33 38.6	-0.6
QIZ				SS	SS	04

comp=Z,1µm,18.0s
SKR smax
comp=N,1µm,14.0s
SKR smax
comp=E,2µm,14.0s
SKR MLR MLR
comp=N,1µm,18.0s,MS5.3
SKR MLR MLR
comp=E,1µm,18.0s,MS5.3
SKR MLR MLR
comp=Z,2µm,18.0s,MS5.4
VLA Vladivostok 69.37 333 *i* P **P 04 24 40.0 -2.1**
VLA Vladivostok 69.37 333 *i* P **P 04 24 40.0 -2.1**
KULM Kulim 70.28 283 PFAKE 04 25 00.0 +12
KULM LR LR
comp=Z,2µm,20.0s,MS5.3
WHN Wuhan 70.69 313 P **P 04 24 51.7 +1.2**
WHN S S 04 34 02.5 -2.4
WHN SS SS 04 38 34.9 -2.4
WHN pmax pmax
comp=Z,910nm,8.3s
WHN LR LR
comp=N,2µm,15.3s,MS5.6
WHN LR LR
comp=E,2µm,14.2s,MS5.6
WHN LR LR
comp=Z,3µm,16.9s,MS5.6
PET Petropavlovsk 71.32 354 *c*e P **P 04 24 52.5 -1.3**
PET *e*S S 04 34 07.5 -3.7
PET pmax pmax
comp=Z,1µm,5.1s
PET pmax pmax
comp=Z,47nm,1.2s,mb5.3
PET pmax pmax
comp=Z,1µm,12.2s
PET Petropavlovsk 71.32 354 *e*P **P 04 24 52.9 -0.9**
comp=Z,55nm,1.2s,mb5.4
PET LR LR
comp=Z,2µm,22.0s,MS5.3
DL2 Dalian 71.40 323 ⇑*i*P **P 04 24 55.0 +0.4**
DL2 S S 04 34 13.9 +1.2
DL2 pmax pmax
comp=Z,20nm,1.1s,mb5.0
DL2 LR LR
comp=N,830nm,18.2s,MS5.1
DL2 LR LR
comp=E,570nm,20.5s,MS5.1
DL2 LR LR
comp=Z,940nm,20.6s,MS5.0
PEA0B Petropavlovsk- 71.50 354 *e*P **P 04 24 54.8 -0.1**
PETK Petropavlovsk- 71.50 354 P **P 04 24 55.2 +0.3**
comp=Z,50nm,1.0s,mb5.4,baz=121,slow=5.7,SNR=32
PETK S S 04 34 15.3 +2.0
comp=Z,0.7nm,0.4s,baz=174,slow=16,SNR=5.5
PETK LR LR 04 52 19.9
comp=Z,1µm,20.3s,MS5.2,baz=171,slow=32
PETK Petropavlovsk- 71.50 354 P **P 04 24 55.2 +0.3**
PETK S S 04 34 15.3 +2.0
PETK Petropavlovsk- 71.50 354 P **P 04 24 55.2 +0.3**
PETK S S 04 34 15.3 +2.0
PETK LR LR 04 52 19.9
MDJ Mudanjiang 71.57 332 P **P 04 24 56.9 +1.4**
MDJ pP pP 04 25 00.2 +0.9
MDJ sP sP 04 25 01.4 +0.7
MDJ PP PP 04 27 35.4 +0.7
MDJ S S 04 34 18.0 +3.5
MDJ sS sS 04 34 23.7 +3.0
MDJ pmax pmax
comp=Z,51nm,1.3s,mb5.3
MDJ pmax pmax
comp=Z,820nm,7.2s
MDJ LR LR
comp=N,2µm,29.8s,MS5.3
MDJ LR LR
comp=E,1µm,27.4s,MS5.3
MDJ LR LR
comp=Z,880nm,29.8s,MS4.8
ATKA Atka Island 71.76 11 *e*P **P 04 24 57.3 +0.9**
comp=Z,82nm,1.7s,mb5.4
QSPA South Pole Qui 71.91 180 *e*P **P 04 24 56.7 -0.5**
comp=Z,119nm,1.3s,mb5.7
QSPA LR LR
comp=Z,3µm,19.0s,MS5.6
SNY Shenyang 72.39 327 ⇑P **P 04 25 00.3 -0.2**
SNY S S 04 34 26.2 +2.2
SNY SS SS 04 38 57.2 -5.7
SNY pmax pmax
comp=Z,20nm,2.9s,mb4.5
SNY pmax pmax
comp=Z,860nm,7.4s
SNY LR LR
comp=N,1µm,16.2s,MS5.4
SNY LR LR
comp=E,1µm,19.6s,MS5.4
SNY LR LR
comp=Z,2µm,19.0s,MS5.3
HABR Khabarovsk 72.51 338 *e*P **P 04 25 00.5 -0.6**
HABR *e**PP pP 04 25 08.6 +3.7
HABR *e**SP sP 04 25 12.6 +6.3
HABR 04 25 16.6
HABR PPP 04 29 22.3
HABR *e* 04 35 01.3
HABR *e*SS SS 04 38 56.2 -8.4
HABR pmax pmax
comp=E,48nm,1.1s
HABR pmax pmax
comp=Z,87nm,1.1s,mb5.6
HABR pmax pmax
comp=N,30nm,1.0s
HABR MLR MLR
comp=Z,649nm,20.0s,MS4.9
CN2 Changchun 72.88 329 *e*P **P 04 25 04.0 +0.6**
CN2 *e*pP pP 04 25 08.7 +1.5
CN2 *e*sP sP 04 25 11.0 +2.4
CN2 *e*S S 04 34 29.3 -0.2
CN2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
CN2 pmax pmax
comp=Z,200nm,7.0s
CN2 LR LR
comp=N,1µm,18.0s,MS5.3
CN2 LR LR
comp=E,1µm,18.0s,MS5.3
CN2 LR LR
comp=Z,2µm,17.0s,MS5.4
NIKO Nikolski 73.62 14 *e*P **P 04 25 05.1 -2.4**
comp=Z,60nm,1.1s,mb5.4
GYA Guiyang 74.17 305 ⇑*i*P **P 04 25 13.8 +2.4**
GYA PP PP 04 28 00.8 +3.5
GYA S S 04 34 45.5 +0.6
GYA SKS 04 35 16.0
GYA SS SS 04 39 32.1 +1.3
GYA pmax pmax
comp=Z,40nm,1.0s,mb5.3
GYA pmax pmax
comp=Z,320nm,5.4s
GYA LR LR
comp=N,13µm,17.9s,MS6.3
GYA LR LR
comp=E,10µm,19.4s,MS6.3
GYA LR LR
comp=Z,12µm,18.3s,MS6.2
KLR Kul'dur 74.37 336 *e*P **P 04 25 08.0 -4.0**
KLR *e*S S 04 34 44.0 -2.1
KLR pmax pmax
comp=E,67nm,1.4s
KLR pmax pmax
comp=Z,80nm,1.4s,mb5.5
KLR pmax pmax
comp=Z,2µm,9.0s
KLR smax
comp=N,1µm,13.5s
KLR smax
comp=E,1µm,13.5s
BJI Beijing 75.31 321 P **P 04 25 18.2 +0.5**
BJI S S 04 34 58.6 +1.6
BJI SS SS 04 39 49.2 +1.7
BJI pmax pmax
comp=Z,17nm,0.9s,mb5.0
BJI pmax pmax
comp=Z,810nm,7.4s
BJI LR LR
comp=N,2µm,19.0s,MS5.4
BJI LR LR
comp=E,1µm,22.8s,MS5.4
BJI LR LR
comp=Z,1µm,23.2s,MS5.2
TIY Taiyuan 76.19 318 *e*P **P 04 25 22.7 -0.1**
TIY S S 04 35 09.1 +2.2
TIY pmax pmax
comp=Z,710nm,8.4s
TIY LR LR
comp=N,2µm,17.9s,MS5.4
TIY LR LR
comp=E,860nm,17.7s,MS5.4
XAN Xi'an 76.46 313 P **P 04 25 25.8 +1.4**
XAN pP pP 04 25 29.1 +0.9
XAN sP sP 04 25 30.4 +0.8
XAN S S 04 35 12.8 +2.8
XAN sS sS 04 35 18.4 +2.2
XAN pmax pmax
comp=Z,2.0nm,1.0s
XAN pmax pmax
comp=Z,170nm,7.1s
XAN LR LR
comp=N,1µm,20.7s,MS5.2
XAN LR LR
comp=E,360nm,18.4s,MS5.2
XAN LR LR
comp=Z,370nm,22.5s,MS4.6
KMI Kunming 76.64 302 P **P 04 25 27.7 +2.1**
KMI pP pP 04 25 30.9 +1.5
KMI sP sP 04 25 32.0 +1.2
KMI PcP PcP 04 25 39.4 +2.3
KMI PP PP 04 28 21.8 +3.6
KMI S S 04 35 13.1 +0.8
KMI ScS ScS 04 35 40.2 -1.8
KMI SS SS 04 40 11.2 +3.0
KMI pmax pmax
comp=Z,34nm,1.3s,mb5.1
KMI pmax pmax
comp=Z,830nm,11.4s
KMI LR LR
comp=N,620nm,18.2s,MS5.3
KMI LR LR
comp=E,1µm,18.2s,MS5.3
KMI LR LR
comp=Z,2µm,19.0s,MS5.4
CM31 Chiang Mai Arr 76.92 295 *e*P **P 04 25 25.9 -1.5**
comp=Z,12nm,0.8s,mb4.9
CM31 LR LR
comp=Z,891nm,20.0s,MS5.1
CMAR Chiang Mai Arr 76.92 295 P **P 04 25 27.9 +0.6**
comp=Z,6.3nm,0.9s,mb4.6,baz=131,slow=4.2,SNR=22
CMAR S S 04 35 16.7 +1.1
comp=Z,0.9nm,0.3s,baz=129,slow=19,SNR=2.9
CHTO Chiang Mai 77.06 295 *e*P **P 04 25 29.6 +1.5**
CHTO pmax pmax
comp=Z,44nm,1.2s,mb5.3
CHTO MLR MLR
comp=Z,938nm,19.0s,MS5.1
CHTO Chiang Mai 77.06 295 *e*P **P 04 25 29.6 +1.5**
comp=Z,44nm,1.2s,mb5.3
CHTO LR LR
comp=Z,938nm,19.0s,MS5.1
HHC Hu-ho-hao-te 78.58 320 *e*P **P 04 25 36.0 -0.1**
HHC S S 04 35 36.8 +4.1
HHC pmax pmax
comp=Z,16nm,0.8s,mb5.0
HHC pmax pmax
comp=Z,680nm,7.6s
HHC LR LR
comp=N,930nm,19.2s,MS5.2
HHC LR LR
comp=E,780nm,20.4s,MS5.2
HHC LR LR
comp=Z,2µm,19.9s,MS5.4
CD2 Chengdu 78.58 308 *e*P **P 04 25 38.9 +2.5**
CD2 pP pP 04 25 43.6 +3.4
CD2 sP sP 04 25 46.0 +4.4
CD2 PP PP 04 28 39.2 +4.8
CD2 S S 04 35 34.9 +1.7
CD2 sS sS 04 35 42.9 +3.4
CD2 pmax pmax
comp=Z,20nm,1.2s,mb4.9
CD2 pmax pmax
comp=Z,60nm,5.8s
CD2 LR LR
comp=N,2µm,19.0s,MS5.5
CD2 LR LR
comp=E,2µm,23.8s,MS5.5
CD2 LR LR
comp=Z,2µm,23.8s,MS5.3
MAW Mawson 78.98 202 *e*P **P 04 25 38.4 +0.5**
comp=Z,38nm,1.2s,mb5.2
MAW *e*S S 04 35 36.3 0.0
MAW Mawson 78.98 202 P **P 04 25 38.5 +0.6**
comp=Z,12nm,1.1s,mb4.8,baz=108,slow=7.0,SNR=9.2
MAW LR LR 04 54 49.6
comp=Z,3µm,21.8s,MS5.6,baz=98,slow=31
MAW Mawson 78.98 202 *e*P **P 04 25 38.7 +0.8**
MAW pmax pmax
comp=Z,15nm,1.1s
MAW MLR MLR
comp=Z,5µm,22.0s
MAW Mawson 78.98 202 *e*P **P 04 25 38.6 +0.7**
comp=Z,16nm,1.1s,mb4.8
MAW LR LR
comp=Z,5µm,22.0s,MS5.8
BTO Baotou 79.40 319 *e*P **P 04 25 38.1 -2.5**
LZH Lanzhou 81.07 312 *e*P **P 04 25 51.5 +1.8**
LZH pP pP 04 25 56.8 +3.2
LZH sP sP 04 25 58.6 +3.7
LZH PP PP 04 28 56.0 +1.0
LZH S S 04 36 01.0 +1.7
LZH sS sS 04 36 09.2 +3.6
LZH pmax pmax
comp=Z,17nm,1.2s,mb4.8
LZH pmax pmax
comp=Z,96nm,7.0s
LZH LR LR
comp=E,750nm,16.3s
LZH LR LR
comp=Z,2µm,19.8s,MS5.4
SEY Seymchan 81.73 353 *c i*P **P 04 25 51.6 -0.9**
SEY Seymchan 81.73 353 ⇑*i*P **P 04 25 51.7 -0.8**
OHAK Old Harbor 81.75 20 *e*P **P 04 25 51.4 -1.4**
comp=Z,25nm,1.2s,mb5.0
KDAK Kodiak Island 82.43 20 PFAKE 04 26 10.0 +14
KDAK LR LR
comp=Z,3µm,20.0s,MS5.6
CLNS Chul'man 82.91 338 *e*P **P 04 25 53.9 -5.0**
CLNS pmax pmax
comp=Z,16nm,1.0s,mb5.0
CLNS pmax pmax
comp=N,5.0nm,1.2s
SVW2 Sparrevohn 84.21 17 *e*P **P 04 26 04.5 -1.0**
RSO Redoubt South 84.51 18 *e*P **P 04 26 06.3 -0.7**
ULN Ulaanbaatar 85.25 324 *e*P **P 04 26 11.5 +0.5**
ULN pmax pmax
comp=Z,35nm,1.1s,mb5.4
ULN MLR MLR
comp=Z,2µm,20.0s,MS5.4
ULN Ulaanbaatar 85.25 324 *e*P **P 04 26 11.5 +0.5**
comp=Z,35nm,1.1s,mb5.4
ULN LR LR
comp=Z,2µm,20.0s,MS5.4
YAK Yakutsk 85.46 343 *e*P **P 04 26 10.6 -1.1**
YAK *e* 04 26 17.3
YAK *e* 04 29 31.7
YAK *e*PPP 04 31 24.3
YAK *e*S SKSac 04 36 32.9 -3.5
YAK pmax pmax
comp=Z,30nm,1.0s,mb5.4
YAK pmax pmax
comp=N,5.0nm,1.0s
YAK pmax pmax
comp=E,6.0nm,1.3s
YAK pmax pmax
comp=Z,5.0nm,0.5s,mb4.9
YAK smax
comp=E,341nm,4.4s
YAK smax
comp=N,367nm,5.2s
YAK MLR MLR
comp=Z,2µm,18.0s,MS5.6
YAK MLR MLR
comp=N,2µm,18.0s,MS5.6
YAK MLR MLR
comp=E,1µm,18.0s,MS5.6
YAK Yakutsk 85.46 343 *e*P **P 04 26 12.4 +0.7**
comp=E,109nm,1.2s,mb5.9
YAK LR LR
comp=Z,3µm,19.0s,MS5.7
GTA Gaotai 85.47 314 *e*P **P 04 26 13.9 +1.5**
GTA pP pP 04 26 18.1 +1.9
GTA sP sP 04 26 20.6 +3.0
GTA SKS 04 36 36.5
GTA S S 04 36 46.4 +2.7
GTA pmax pmax
comp=Z,11nm,1.0s,mb4.9
GTA pmax pmax
comp=Z,650nm,8.0s
GTA LR LR
comp=N,830nm,18.4s,MS5.3
GTA LR LR
comp=E,880nm,18.7s,MS5.3
GTA LR LR
comp=Z,920nm,23.2s,MS5.1
SONM Songino Array 85.60 324 P **P 04 26 13.8 +1.0**
comp=Z,15nm,1.0s,mb5.2,baz=143,slow=3.8,SNR=20
SONM LR LR 05 05 24.1
comp=Z,1µm,18.3s,MS5.3,baz=285,slow=36
TTA Tatalina 85.61 16 *e*P **P 04 26 13.2 +0.7**
SYO Syowa Base 85.63 196 ||*e*P **P 04 26 10.2 -2.5**
SYO Syowa Base 85.63 196 ⇑*i*P **P 04 26 18.6 +5.9**
MCCM Marconi Confer 85.64 48 PFAKE 04 26 20.0 +6.8
MCCM LR LR
comp=Z,3µm,22.0s,MS5.7
SHL Shillong 85.74 298 *e*PKP **P 04 26 16.5 +2.5**
SHL *ex* x 04 36 40.5
HOPS Hopland 85.89 47 PFAKE 04 26 30.0 +16
HOPS LR LR
comp=Z,7µm,19.0s,MS6.1
RC01 Rabbit Creek A 85.92 19 *e*P **P 04 26 13.7 -0.3**
comp=Z,4.4nm,0.8s,mb4.7
BILL Bilibino 85.94 359 *c i*P **P 04 26 13.0 -1.0**
BILL *i* 04 26 24.5
BILL *i* S S 04 36 49.2 +2.1
BILL *i* SS SS 04 42 19.8 -5.5
BILL pmax pmax
comp=Z,84nm,1.2s,mb5.8
BILL MLR MLR
comp=Z,2µm,20.0s,MS5.4
BILL Bilibino 85.94 359 *e*P **P 04 26 12.7 -1.4**
comp=Z,74nm,1.1s,mb5.8
BILL LR LR
comp=Z,2µm,21.0s,MS5.5
KHMM Horse Mountain 86.31 45 *e*P **P 04 26 17.8 +1.3**
comp=Z,31nm,1.2s,mb5.4
PKM Peak Mountain 86.44 52 ⇓P **P 04 26 17.6 +0.3**
baz=86
PMR Palmer 86.50 19 *e*P **P 04 26 15.6 -1.3**
PMR pmax pmax
comp=Z,3.0nm,0.4s,mb4.9
PMR Palmer 86.50 19 *e*P **P 04 26 15.6 -1.3**
comp=Z,2.5nm,0.4s,mb4.8
WDC Whiskeytown Da 86.98 46 *e*P **P 04 26 19.6 -0.1**
WDC pmax pmax
comp=Z,22nm,1.3s,mb5.2
WDC MLR MLR
comp=Z,7µm,20.0s,MS6.1
WDC Whiskeytown Da 86.98 46 *e*P **P 04 26 19.6 -0.1**
comp=Z,22nm,1.3s,mb5.2
WDC LR LR
comp=Z,7µm,20.0s,MS6.1
OHCM Honcut 87.15 47 *e*P **P 04 26 20.7 0.0**
ARVC Arvin 87.28 52 ⇓P **P 04 26 21.2 -0.2**
baz=87
CMB Columbia Colle 87.36 49 *e*P **P 04 26 21.2 -0.5**
CMB pmax pmax
comp=Z,25nm,0.9s,mb5.4
CMB MLR MLR
comp=Z,5µm,19.0s,MS5.9
CMB Columbia Colle 87.36 49 *e*P **P 04 26 21.2 -0.4**
comp=Z,25nm,0.9s,mb5.5
CMB LR LR
comp=Z,5µm,19.0s,MS5.9
CHUM Lake Minchumin 87.36 16 *e*P **P 04 26 20.5 -0.6**
comp=Z,6.0nm,1.0s,mb4.8
VES Vestal, Richgr 87.38 51 ⇑P **P 04 26 21.4 -0.4**
baz=88
YBH Yreka Blue Hor 87.38 45 P **P 04 26 21.9 +0.2**
comp=Z,5.9nm,1.0s,mb4.8,baz=207,slow=4.2,SNR=8.6
YBH Yreka Blue Hor 87.38 45 P **P 04 26 21.9 +0.2**
YBH pmax pmax
comp=Z,6.0nm,1.0s
YBH Yreka Blue Hor 87.38 45 *e*P **P 04 26 21.8 +0.1**
comp=Z,30nm,1.6s,mb5.3
YBH LR LR
comp=Z,4µm,20.0s,MS5.8
RCTC Rector, Farmer 87.46 51 ⇓P **P 04 26 22.6 +0.4**
baz=88
KTH Kantishna Hill 87.48 17 *e*P **P 04 26 19.3 -2.3**
comp=Z,6.6nm,1.0s,mb4.8
MWC Mount Wilson 87.49 53 *e*P **P 04 26 22.2 -0.2**
MWC pmax pmax
comp=Z,11nm,0.9s,mb5.1
MWC Mount Wilson 87.49 53 *e*P **P 04 26 22.2 -0.2**
comp=Z,12nm,0.9s,mb5.1
HUMO Hull Mountain 87.62 44 PFAKE 04 26 30.0 +7.2
HUMO LR LR
comp=Z,4µm,20.0s,MS5.9
ISA Isabella 87.76 51 ⇓P **P 04 26 23.2 -0.5**
baz=88
ISA Isabella 87.76 51 *e*P **P 04 26 22.9 -0.8**
ISA pmax pmax
comp=Z,7.0nm,0.9s,mb4.9
ISA Isabella 87.76 51 *e*P **P 04 26 22.9 -0.8**
comp=Z,7.4nm,0.9s,mb4.9
BFSC Mount Baldy Ra 87.80 53 ⇓P **P 04 26 23.1 -0.8**
baz=88
EDW2 Edwards Air Fo 87.81 52 ⇑P **P 04 26 23.7 -0.2**
baz=88
LSA Lhasa 87.90 302 P **P 04 26 25.4 +0.9**
LSA sP sP 04 26 39.4 +10
LSA pmax pmax
comp=Z,60nm,0.9s,mb5.8
LSA LR LR
comp=E,690nm,28.1s
LSA LR LR
comp=Z,780nm,25.7s,MS5.0
MURC Murrieta 87.90 54 ⇓P **P 04 26 24.0 -0.4**
baz=88
BAR Barrett 87.95 55 *e*P **P 04 26 24.9 +0.3**
comp=Z,11nm,1.1s,mb5.0
BEKR Beckworth 88.16 47 ⇑P **P 04 26 25.2 -0.3**
baz=88
MCK McKinley 88.19 18 *e*P **P 04 26 24.7 -0.3**
MCK pmax pmax
comp=Z,6.0nm,0.8s,mb4.9
MCK McKinley 88.19 18 *e*P **P 04 26 24.7 -0.3**
comp=Z,5.7nm,0.8s,mb4.8
MONP Monument Peak 88.22 55 ⇑P **P 04 26 25.8 -0.2**
baz=88
WAKR Walker 88.23 49 *e*P **P 04 26 26.1 +0.3**
COR Corvallis 88.31 42 PFAKE 04 26 40.0 +14
COR LR LR
comp=Z,3µm,22.0s,MS5.6
WCN Washoe City 88.34 48 ⇓P **P 04 26 26.8 +0.5**
baz=88
PMSA Palmer Station 88.36 160 PFAKE 04 26 40.0 +14
PMSA LR LR
comp=Z,2µm,19.0s,MS5.6
BBRC Big Bear Solar 88.37 53 ⇑P **P 04 26 26.4 -0.2**
baz=88
MTUM Tungsten Hills 88.39 50 *e*P **P 04 26 27.2 +0.6**
PFO Pinyon Flat Ob 88.47 54 ⇑P **P 04 26 27.2 +0.1**
baz=89
PFO Pinyon Flat Ob 88.47 54 *e*P **P 04 26 27.2 +0.1**
PFO pmax pmax
comp=Z,9.0nm,1.1s,mb4.9
PFO MLR MLR
comp=Z,4µm,20.0s,MS5.8
PFO Pinyon Flat Ob 88.47 54 *e*P **P 04 26 27.2 +0.1**
comp=Z,9.3nm,1.1s,mb4.9
PFO LR LR
comp=Z,4µm,20.0s,MS5.8
TIN Tinemaha 88.51 50 ⇑P **P 04 26 27.2 0.0**
baz=89
MPMC Manual Prospec 88.66 51 ⇓P **P 04 26 28.1 +0.2**
baz=89
DAC Darwin (Calif) 88.67 51 PFAKE 04 26 40.0 +12
DAC LR LR
comp=Z,6µm,20.0s,MS6.0
ZAK Zakamensk 88.69 325 *e*P **P 04 26 27.8 +0.1**
ZAK pmax pmax
comp=Z,8.0nm,1.2s,mb4.9

SWSC **Sam W. Stewart** 88.73 55 ⇓P P 04 26 28.1 -0.2
baz=89
PAHR **Pah Rah Range** 88.78 47 *e*P P 04 26 28.7 +0.4
comp=Z,31nm,1.2s,mb5.5
NVAR **Mina Array Bea** 89.02 49 P P 04 26 29.2 -0.3
comp=Z,7.8nm,1.0s,mb5.0,baz=229,slow=7.2,SNR=15
K05A **Summer Lake** 89.03 44 ⇑P P 04 26 30.1 +0.6
baz=89
MOD **Modoc** 89.07 45 *e*P P 04 26 29.7 0.0
comp=Z,23nm,1.4s,mb5.3
MOD LR LR 04 26 32.1 +0.1
comp=Z,6μm,19.0s,MS6.0
GRAC **Grapevine Rang** 89.12 51 ⇓P P 04 26 30.3 +0.2
baz=89
TLY **Talaya** 89.16 326 P P 04 26 30.6 +0.8
comp=Z,43nm,1.3s,mb5.6,SNR=5.4
TLY **Talaya** 89.16 326 *c i*P P 04 26 28.3 -1.5
TLY *e* 04 36 57.1
TLY *e*S S 04 37 15.2 -3.4
TLY *e*PPS 04 38 23.5
TLY pmax pmax
comp=Z,11nm,1.2s,mb5.1
TLY MLR MLR 04 26 29.4 -0.5
comp=Z,1μm,20.0s,MS5.3
TLY **Talaya** 89.16 326 *e*P P 04 26 29.4 -0.5
comp=Z,24nm,1.5s,mb5.3
TLY LR LR 04 26 30.9 +0.1
comp=Z,1μm,20.0s,MS5.3
BC3 **Big Chuckawall** 89.26 54 ⇑P P 04 26 30.9 +0.1
baz=89
NLWA **Neilton Lookou** 89.27 39 PFAKE 04 26 40.0 +10
NLWA LR LR 04 26 40.0 +10
comp=Z,2μm,19.0s,MS5.6
FURC **Furnace Creek,** 89.28 51 ⇓P P 04 26 31.0 +0.2
baz=89
COLA **College** 89.36 17 *e*P P 04 26 29.0 -1.5
COLA pmax pmax
comp=Z,15nm,1.1s,mb5.2
COLA MLR MLR 04 26 29.0 -1.5
comp=Z,2μm,19.0s,MS5.6
COLA **College** 89.36 17 *e*P P 04 26 29.0 -1.5
comp=Z,15nm,1.1s,mb5.2
COLA LR LR 04 26 32.2 +0.3
comp=Z,2μm,19.0s,MS5.6
SHOC **Shoshone** 89.50 52 ⇓P P 04 26 32.2 +0.3
baz=90
GLA **Glamis** 89.52 55 ⇓P P 04 26 32.1 +0.1
baz=90
GLA **Glamis** 89.52 55 *e*P P 04 26 32.2 +0.2
GLA pmax pmax
comp=Z,61nm,1.8s,mb5.6
GLA **Glamis** 89.52 55 *e*P P 04 26 32.2 +0.2
comp=Z,61nm,1.8s,mb5.6
112A **Yuma** 89.52 56 ⇑P P 04 26 32.0 -0.1
baz=90
GMRC **Granite Mounta** 89.53 53 ⇑P P 04 26 32.2 +0.2
baz=90
TUQ **Turquoise Moun** 89.58 52 ⇑P P 04 26 31.9 -0.4
baz=90
PALK **Pallekele** 89.61 278 LR LR 05 07 07.2
comp=Z,2μm,19.9s,MS5.5,baz=155,slow=36
TPH **Tonopah** 89.65 50 PFAKE 04 26 40.0 +7.5
TPH LR LR 04 26 40.0 +7.5
comp=Z,6μm,19.0s,MS6.0
U10A **Ash Meadows, A** 89.66 51 ⇓P P 04 26 32.5 -0.1
baz=90
NVL **N'lazarevskaya** 89.78 188 *c i*P P 04 26 30.4 -2.2
NVL *e**PP pP 04 26 42.2 +5.7
NVL *e**SP sP 04 26 49.2 +11
NVL *e* 04 30 09.9
NVL pmax pmax
comp=Z,97nm,1.1s,mb6.0
MAIT **Maitri** 89.78 188 *e*P P 04 26 31.3 -1.3
MAIT *e*E 04 26 41.1
Y12C **Blythe** 90.02 54 ⇑P P 04 26 34.4 +0.1
baz=90
S10A **Tonopah Range,** 90.05 50 ⇑P P 04 26 34.1 -0.3
baz=90
LDFC **Landfair** 90.06 53 *e*P P 04 26 35.0 +0.5
V11A **Goodsprings** 90.11 52 ⇓P P 04 26 34.2 -0.5
baz=90
113A **Mohawk Valley,** 90.25 56 ⇑P P 04 26 35.0 -0.5
baz=90
W12A **Cal Nev Ari** 90.33 53 ⇑P P 04 26 36.2 +0.4
baz=90
R10A **Warm Springs** 90.40 50 ⇓P P 04 26 36.0 0.0
baz=90
WVOR **Wild Horse Val** 90.42 45 PFAKE 04 26 50.0 +14
WVOR LR LR
comp=Z,4μm,20.0s,MS5.8
Z13A **Yuma Proving G** 90.49 55 ⇓P P 04 26 36.2 -0.3
baz=91,SNR=10.0
V12A **Nelson** 90.50 53 ⇑P P 04 26 36.4 -0.1
baz=91
PDMCI **Parker Dam,Lak** 90.52 54 ⇑P P 04 26 36.8 +0.1
baz=91
I07A **Izee** 90.53 43 ⇓P P 04 26 36.3 -0.2
baz=91,SNR=9.3
COLD **Coldfoot** 90.54 15 *e*P P 04 26 36.4 +0.5
comp=Z,8.9nm,1.0s,mb5.0
Q10A **Clear Creek Ra** 90.54 49 ⇓P P 04 26 36.9 +0.3
baz=91
S11A **Rachel** 90.56 50 ⇓P P 04 26 36.9 +0.1
baz=91
SHPR **Sheep Range** 90.56 52 *e*P P 04 26 37.0 +0.2
BMN **Battle Mountai** 90.59 47 *e*P P 04 26 35.3 -1.5
BMN pmax pmax
comp=Z,11nm,1.1s,mb5.1
BMN MLR MLR 04 26 35.3 -1.5
comp=Z,3μm,20.0s,MS5.7
BMN **Battle Mountai** 90.59 47 *e*P P 04 26 35.3 -1.5
comp=Z,11nm,1.1s,mb5.1
BMN LR LR 04 26 37.6 0.0
comp=Z,3μm,20.0s,MS5.7
214A **Organ Pipe Nat** 90.71 57 ⇓P P 04 26 37.6 0.0
baz=91
T11A **Corn Creek, Al** 90.80 51 ⇑P P 04 26 37.7 -0.2
baz=91,SNR=9.8
X13A **Yucca** 90.86 54 ⇑P P 04 26 37.8 -0.4
baz=91,SNR=9.6
J08A **Circle Bar Ran** 90.91 44 ⇓P P 04 26 37.8 -0.4
baz=91,SNR=14
R11A **Troy Canyon, C** 90.95 50 ⇑P P 04 26 38.9 +0.4
baz=91
U12A **Valley of Fire** 91.00 52 ⇑P P 04 26 39.0 +0.2
baz=91
W13A **Hualapai Mount** 91.00 53 ⇓P P 04 26 38.7 -0.2
baz=91,SNR=10
F07A **Phinny Hill Vi** 91.02 42 ⇑P P 04 26 39.5 +0.8
baz=91
O10A **Cortez Mining,** 91.04 48 ⇑P P 04 26 39.5 +0.6
baz=91
Q11A **Duckwater** 91.08 49 ⇓P P 04 26 38.7 -0.4
baz=91,SNR=11
Z14A **Wintersburg** 91.10 55 ⇑P P 04 26 39.6 +0.2
baz=91
V13A **Grand Canyon W** 91.20 53 ⇑P P 04 26 39.6 -0.2
baz=91,SNR=9.0
S12A **Delamar Landin** 91.21 51 ⇓P P 04 26 39.6 -0.1
baz=91,SNR=6.8
H08A **Prairie City** 91.26 43 ⇑P P 04 26 40.0 +0.2
baz=91
Y14A **Wickenburg** 91.26 55 ⇓P P 04 26 39.9 -0.2
baz=91
P11A **Circle Ranch,** 91.28 49 ⇑P P 04 26 40.6 +0.5
baz=91
EGAK **Eagle** 91.30 19 *e*P P 04 26 38.4 -1.2
comp=Z,11nm,1.3s,mb5.0
EGAK LR LR 04 26 40.3 -0.2
comp=Z,2μm,19.0s,MS5.5
J09A **Fry Pan Ranch,** 91.39 45 ⇑P P 04 26 40.3 -0.2
baz=92,SNR=13
G08A **Pilot Rock** 91.39 43 ⇓P P 04 26 39.8 -0.6
baz=92
DAWY **Dawson** 91.40 20 *e*P P 04 26 39.4 -0.6
U13A **Pakoon Wash** 91.42 52 ⇓P P 04 26 40.6 -0.3
baz=92,SNR=9.1
115A **Sonoran Desert** 91.43 56 ⇓P P 04 26 41.1 +0.2
baz=92
HAWA **Hanford** 91.48 41 PFAKE 04 26 50.0 +9.2
HAWA LR LR
comp=Z,2μm,19.0s,MS5.5
M10A **I.L. Ranch, Tu** 91.49 47 ⇑P P 04 26 40.5 -0.5
baz=92,SNR=5.7
X14A **Yava** 91.54 54 ⇑P P 04 26 41.4 0.0
baz=92
O11A **Cowboy Ranch,** 91.57 48 ⇑P P 04 26 40.9 -0.5
baz=92,SNR=6.4
I09A **Lost Marbles R** 91.64 44 ⇑P P 04 26 41.5 -0.1
baz=92
R12A **Pony Springs,** 91.65 50 ⇓P P 04 26 41.6 -0.2
baz=92
W14A **Seligman** 91.66 54 ⇑P P 04 26 42.1 +0.1
baz=92,SNR=9.3
T13A **Saint George** 91.69 52 ⇓P P 04 26 41.9 -0.1
baz=92,SNR=9.4
L10A **Juniper Basin** 91.75 46 ⇑P P 04 26 41.6 -0.6
baz=92,SNR=11
K10A **MacKenzie Ranc** 91.75 45 ⇑P P 04 26 42.7 +0.5
baz=92
Q12A **Willow Creek R** 91.75 49 ⇑P P 04 26 42.1 -0.2
baz=92
V14A **Boquillas Ranc** 91.79 53 ⇓P P 04 26 42.0 -0.6
baz=92,SNR=6.9
Y15A **Casa Rosa Ranc** 91.79 55 ⇑P P 04 26 41.7 -0.9
baz=92,SNR=13
116A **Eloy** 91.80 56 ⇓P P 04 26 42.8 +0.2
baz=92
216A **Three Points,** 91.80 57 ⇓P P 04 26 42.6 -0.1
baz=92
E08A **Dider Farm, El** 91.82 41 ⇓P P 04 26 42.9 +0.5
baz=92
P12A **McGill** 91.86 49 ⇓P P 04 26 43.2 +0.4
baz=92
S13A **Holt Ranch, En** 91.93 51 ⇑P P 04 26 42.5 -0.6
baz=92
H09A **Durkee** 91.97 43 ⇓P P 04 26 43.3 +0.1
baz=92
M11A **Holland Ranch,** 91.97 47 ⇓P P 04 26 43.4 +0.2
baz=92
U14A **Mt Trumbull** 92.02 52 ⇓P P 04 26 43.3 -0.3
baz=92,SNR=14
X15A **Humboldt** 92.05 54 ⇑P P 04 26 43.6 -0.2
baz=92,SNR=11
R13A **O'Grain Ranch,** 92.06 51 ⇑P P 04 26 43.8 +0.1
baz=92
ELK **Elko** 92.10 48 PFAKE 04 27 00.0 +16
ELK LR LR
comp=Z,4μm,19.0s,MS5.9
217A **Green Valley** 92.24 57 ⇑P P 04 26 45.1 +0.4
baz=92
O12A **Currie** 92.27 48 ⇓P P 04 26 44.0 -0.7
baz=92,SNR=5.8
W15A **Williams** 92.27 54 ⇑P P 04 26 45.3 +0.5
baz=92
L11A **Cat Creek Ranc** 92.28 46 ⇑P P 04 26 44.7 +0.1
baz=92,SNR=7.0
BMO **Blue Mountains** 92.28 43 *e*P P 04 26 43.9 -0.7
BMO pmax pmax
comp=Z,8.0nm,1.5s,mb4.8
BMO MLR MLR 04 26 43.9 -0.7
comp=Z,3μm,19.0s,MS5.8
BMO **Blue Mountains** 92.28 43 *e*P P 04 26 43.9 -0.7
comp=Z,8.3nm,1.5s,mb4.8
BMO LR LR 04 26 45.0 +0.3
comp=Z,3μm,19.0s,MS5.8
N12A **Clover Valley,** 92.28 48 ⇓P P 04 26 45.0 +0.3
baz=92
N12A **Clover Valley,** 92.28 48 *e*P P 04 26 45.0 +0.3
comp=Z,4.9nm,0.8s,mb4.9
CCUT **Cedar City** 92.28 51 *e*P P 04 26 45.5 +0.7
comp=Z,11nm,1.1s,mb5.1
Q13A **Wheeler Ranch,** 92.31 50 ⇓P P 04 26 45.4 +0.5
baz=92
K11A **Parker Ranch,** 92.32 46 ⇑P P 04 26 45.0 +0.2
baz=92
B08A **Colville Reser** 92.43 40 ⇓P P 04 26 45.7 +0.5
baz=92
Y16A **Circle Bar Ran** 92.43 55 ⇓P P 04 26 45.1 -0.5
baz=92,SNR=11
TUC **Tucson** 92.44 57 *e*P P 04 26 44.8 -0.9
TUC pmax pmax
comp=Z,11nm,1.1s,mb5.1
TUC MLR MLR 04 26 44.8 -0.9
comp=Z,2μm,19.0s,MS5.5
TUC **Tucson** 92.44 57 *e*P P 04 26 44.8 -0.9
comp=Z,11nm,1.1s,mb5.1
TUC LR LR 04 26 46.2 +0.5
comp=Z,2μm,19.0s,MS5.5
P13A **Bates Ranch, G** 92.49 49 ⇓P P 04 26 46.2 +0.5
baz=93
H10A **Noah's Angus R** 92.54 44 ⇑P P 04 26 45.6 -0.1
baz=93
V15A **Kaibab Nationa** 92.57 53 ⇓P P 04 26 46.5 +0.4
baz=93
117A **Oracle** 92.57 57 ⇑P P 04 26 46.4 +0.1
baz=93,SNR=7.4
G10A **Bishop Farm, J** 92.58 43 ⇓P P 04 26 45.9 0.0
baz=93
X16A **Lo Mia Camp, P** 92.64 55 ⇓P P 04 26 46.3 -0.2
baz=93,SNR=11
U15A **North Rim** 92.69 53 ⇓P P 04 26 46.8 +0.1
baz=93,SNR=9.9
MFID **Camas Ranch** 92.70 45 ⇑P P 04 26 46.9 +0.4
baz=93
F10A **Beach Ranch, E** 92.78 42 ⇑P P 04 26 47.3 +0.4
baz=93
318A **Bisbee** 92.79 58 ⇑P P 04 26 47.2 0.0
baz=93
I11A **Placerville** 92.81 45 ⇓P P 04 26 47.7 +0.6
baz=93
W16A **Flagstaff** 92.81 54 ⇑P P 04 26 47.7 +0.5
baz=93
T15A **Red Dirt Ranch** 92.83 52 ⇓P P 04 26 47.9 +0.6
baz=93
Q14A **Sevier Lake (B** 92.86 50 ⇑P P 04 26 47.1 -0.3
baz=93,SNR=6.9
Y17A **Roosevelt** 92.86 56 ⇓P P 04 26 48.0 +0.4
baz=93
N13A **Wendover, West** 92.87 48 ⇑P P 04 26 47.7 +0.3
baz=93
DGAR **Diego Garcia** 92.88 261 PFAKE 04 27 00.0 +12
DGAR LR LR
comp=Z,6μm,19.0s,MS6.1
K12A **Draper Farm, C** 93.04 46 ⇓P P 04 26 48.7 +0.6
baz=93
H11A **Donnelly** 93.07 44 ⇓P P 04 26 48.1 -0.2
baz=93
WUAZ **Wupatki** 93.07 54 ⇓P P 04 26 48.1 -0.3
baz=93
WUAZ **Wupatki** 93.07 54 *e*P P 04 26 48.1 -0.4
comp=Z,12nm,1.0s,mb5.3
WUAZ LR LR
comp=Z,4μm,20.0s,MS5.8
X17A **Forest Lakes** 93.11 55 ⇓P P 04 26 48.5 -0.2
baz=93,SNR=15
J12A **Stokes Ranch,** 93.14 45 ⇓P P 04 26 48.2 -0.3
baz=93,SNR=6.0
118A **Homack Ranch,** 93.20 57 ⇓P P 04 26 49.0 -0.2
baz=93
P14A **Drum Mountains** 93.23 49 ⇓P P 04 26 49.2 +0.1
baz=93
I12A **Atlanta** 93.31 45 ⇑P P 04 26 49.9 +0.5
baz=93
319A **Douglas** 93.34 58 ⇓P P 04 26 50.2 +0.3
baz=93
TIXI **Tiksi** 93.42 348 *e*P P 04 26 48.5 -0.7
TIXI pmax pmax
comp=Z,2μm,20.0s,MS5.5
MVU **Marysvale** 93.47 51 PFAKE 04 27 00.0 +10
MVU LR LR
comp=Z,7μm,20.0s,MS6.1
MSU **Marysvale** 93.50 51 *e*P P 04 26 51.0 +0.6
MSU pmax pmax
comp=Z,2.0nm,1.1s,mb4.5
MSU **Marysvale** 93.50 51 *e*P P 04 26 51.0 +0.6
comp=Z,1.7nm,1.1s,mb4.4
TRD **Trivandrum** 93.52 278 ⇓ *i*x x 04 27 05.0
Y18A **Canyon Day Jun** 93.53 56 ⇓P P 04 26 50.9 +0.3
baz=94
V17A **Tonalea, Kykot** 93.55 54 ⇓P P 04 26 50.8 +0.1
baz=94
219A **White Tail Can** 93.56 58 ⇓P P 04 26 51.0 +0.2
baz=94
K13A **Stover Farm, H** 93.61 46 ⇓P P 04 26 50.9 +0.2
baz=94
DUG **Dugway** 93.62 49 ⇓P P 04 26 51.9 +1.0
baz=94
DUG **Dugway** 93.62 49 PFAKE 04 27 00.0 +9.1
DUG LR LR
comp=Z,5μm,19.0s,MS6.0
M14A **Sheep Mountain** 93.71 48 ⇓P P 04 26 51.8 +0.5
baz=94
HLID **Hailey** 93.71 45 ⇑P P 04 26 51.5 +0.3
baz=94
HLID **Hailey** 93.71 45 *e*P P 04 26 51.1 -0.1
comp=Z,1.7nm,1.0s,mb4.4
HLID LR LR
comp=Z,6μm,19.0s,MS6.1
NEW **Newport** 93.74 40 PFAKE 04 27 00.0 +8.8
NEW LR LR
comp=Z,1μm,20.0s,MS5.3
H12A **Diamond D Ranc** 93.78 44 ⇓P P 04 26 52.1 +0.6
baz=94
J13A **Cove Ranch, Pi** 93.82 46 ⇓P P 04 26 52.1 +0.5
baz=94
X18A **Snowflake** 93.84 55 ⇓P P 04 26 52.6 +0.6
baz=94
R16A **Teasdale** 93.93 51 ⇑P P 04 26 52.5 +0.1
baz=94
F12A **Elk City** 93.97 43 ⇑P P 04 26 52.2 -0.2
baz=94
T17A **Navajo Res., N** 94.01 52 ⇓P P 04 26 52.8 +0.1
baz=94,SNR=10
I13A **Wildhorse Cree** 94.04 45 ⇓P P 04 26 53.0 +0.3
baz=94
N15A **Stansbury Isla** 94.08 48 ⇑P P 04 26 53.5 +0.5
baz=94
K14A **Jones Ranch, D** 94.20 47 ⇓P P 04 26 53.2 -0.3
baz=94
S17A **Black Ridge (B** 94.22 52 ⇑P P 04 26 53.8 +0.1
baz=94
Q16A **Castle Valley** 94.38 51 ⇓P P 04 26 54.4 0.0
baz=94
I14A **Mackay** 94.50 45 ⇑P P 04 26 55.0 +0.2
baz=95
U18A **Rough Rock, Ch** 94.52 53 ⇓P P 04 26 55.1 -0.1
baz=95
R17A **Hanksville Air** 94.55 51 ⇓P P 04 26 55.2 0.0
baz=95
L15A **Malad City** 94.56 47 ⇑P P 04 26 55.2 +0.1
baz=95
F13A **Darby** 94.58 43 ⇓P P 04 26 55.8 +0.6
baz=95
HYB **Hyderabad** 94.71 287 *e*P P 04 26 55.0 -1.4
HYB **Hyderabad** 94.71 287 *i*P P 04 26 54.0 -2.4
T18A **Mexican Hat** 94.75 53 ⇓P P 04 26 56.0 -0.2
baz=95
S18A **Hurst Farm, Bl** 94.84 52 ⇓P P 04 26 57.2 +0.6
baz=95
HWUT **Hardware Ranch** 95.00 48 PFAKE 04 27 10.0 +13
HWUT LR LR
comp=Z,2μm,22.0s,MS5.6
J15A **Blackfoot** 95.00 46 ⇑P P 04 26 57.4 +0.3
baz=95
R18A **Canyonlands Na** 95.14 51 ⇓P P 04 26 58.3 +0.4
baz=95
MSO **Missoula** 95.20 42 PFAKE 04 27 10.0 +12
MSO LR LR
comp=Z,1μm,20.0s,MS5.3
L16A **Fish Haven** 95.23 48 ⇓P P 04 26 58.0 -0.2
baz=95
H15A **Lima** 95.28 45 ⇓P P 04 26 58.7 +0.3
baz=95
Y21A **Point of Rocks** 95.46 56 ⇑P P 04 26 59.6 +0.1
baz=96
S19A **Harvey Farm, M** 95.51 52 ⇓P P 04 26 59.2 -0.4
baz=96
WMQ **Urumqi** 95.55 314 *e*P P 04 27 01.0 +1.4
WMQ sP sP 04 27 08.0 +3.1
WMQ PP PP 04 30 54.0 +3.0
WMQ SKS 04 37 35.0
WMQ S S 04 38 14.0 -2.4
WMQ SS SS 04 44 44.0 -1.2
WMQ pmax pmax
comp=Z,19nm,1.2s,mb5.4
WMQ pmax pmax
comp=Z,84nm,9.0s
WMQ LR LR
comp=N,1μm,20.0s,MS5.5
WMQ LR LR
comp=E,870nm,20.0s,MS5.5
WMQ LR LR
comp=Z,1μm,20.0s,MS5.3
DLMT **Dillon** 95.57 44 *e*P P 04 26 57.3 -2.4
comp=Z,1.1nm,0.8s,mb4.3
AHID **Auburn Hatcher** 95.71 47 PFAKE 04 27 10.0 +10
AHID LR LR
comp=Z,3μm,19.0s,MS5.8
PV10 **Paradox Valley** 95.78 52 *e*P P 04 27 01.0 +0.2
comp=Z,89nm,0.8s,mb6.2
MVCO **Mesa Verde** 95.82 53 PFAKE 04 27 10.0 +9.0
MVCO LR LR
comp=Z,3μm,20.0s,MS5.8
H16A **Russell Place,** 96.25 45 ⇑P P 04 27 03.0 +0.2
baz=96
BOZ **Bozeman (W)** 96.30 44 PFAKE 04 27 10.0 +7.0
BOZ LR LR
comp=Z,3μm,19.0s,MS5.8
F16A **Kennard Place,** 96.35 44 ⇓P P 04 27 03.4 +0.1
baz=96
E16A **East Helena** 96.57 43 ⇓P P 04 27 04.6 +0.4
baz=97
MNTX **Cornudas Mount** 96.61 59 PFAKE 04 27 20.0 +15
MNTX LR LR
comp=Z,2μm,19.0s,MS5.6
ANMO **Albuquerque** 96.70 56 PFAKE 04 27 20.0 +15
ANMO LR LR
comp=Z,2μm,19.0s,MS5.5
LKWY **Lake** 96.78 45 PFAKE 04 27 20.0 +15
LKWY LR LR
comp=Z,10μm,19.0s,MS6.3
BW06 **Boulder Array** 96.78 47 PFAKE 04 27 20.0 +15
BW06 LR LR
comp=Z,2μm,20.0s,MS5.5
PDAR **Pinedale Array** 96.78 47 P P 04 27 05.3 0.0
comp=Z,0.3nm,0.7s,baz=251,slow=2.8,SNR=2.7
PDAR PP PP 04 31 10.1 +10
comp=Z,0.2nm,0.3s,baz=234,slow=4.6,SNR=3.7
PDAR PKKPbc PKKPbc 04 43 52.1 +3.2
comp=Z,0.3nm,0.8s,baz=111,slow=4.9,SNR=2.5
PDAR LR LR 05 05 28.9
comp=Z,2μm,19.4s,baz=275,slow=32
D16A **Dana Ranch, Ca** 96.81 43 ⇓P P 04 27 06.1 +0.8
baz=97
TXAR **Lajitas Array** 97.34 62 P P 04 27 07.5 -0.6
comp=Z,1.0nm,0.9s,mb4.3,baz=233,slow=4.4,SNR=5.7
TXAR LR LR 05 05 18.7
comp=Z,4μm,18.4s,MS5.9,baz=300,slow=32
TXAR **Lajitas Array** 97.34 62 P P 04 27 07.5 -0.6
TXAR LR LR 05 05 18.7
627A **Terlingua Ranc** 97.61 62 ⇓P P 04 27 09.3 0.0
baz=98
N21A **Black Mountain** 97.63 50 ⇓P P 04 27 09.5 +0.3
baz=98
RLMT **Red Lodge** 97.72 45 PFAKE 04 27 20.0 +11
RLMT LR LR
comp=Z,7μm,20.0s,MS6.2
E18A **Harlowton** 97.73 44 ⇓P P 04 27 09.5 +0.1
baz=98
SDCO **Great Sand Dun** 98.25 53 PFAKE 04 27 20.0 +8.0
SDCO LR LR
comp=Z,2μm,20.0s,MS5.7
EGMT **Eagleton** 98.28 42 PFAKE 04 27 20.0 +8.1
EGMT LR LR
comp=Z,1μm,22.0s,MS5.4
ISCO **Idaho Springs** 98.75 51 PFAKE 04 27 30.0 +16
ISCO LR LR
comp=Z,4μm,22.0s,MS5.9
MKAR **Makanchi Array** 100.09 316 P Pdif 04 27 21.0 +1.1
comp=Z,1.0nm,1.0s,baz=102,slow=6.6,SNR=4.4
MKAR PP PP 04 31 29.9 +4.1
comp=Z,0.6nm,0.9s,baz=87,slow=7.4,SNR=3.2
MKAR PKKPbc PKKPbc 04 43 35.4 -4.4
comp=Z,0.4nm,0.5s,baz=330,slow=3.7,SNR=4.2
MKAR PKKP PKKPbc 04 43 46.4 +6.6
comp=Z,0.9nm,0.8s,baz=318,slow=1.9,SNR=3.4
MKAR **Makanchi Array** 100.09 316 P Pdif 04 27 21.1 +1.1
MKAR 04 31 29.9
PLCA **Paso Flores** 100.17 139 PFAKE 04 27 30.0 +10
PLCA LR LR
comp=Z,1μm,20.0s,MS5.4
LAO **LASA Array** 100.20 44 PFAKE 04 27 30.0 +10
LAO LR LR
comp=Z,4μm,19.0s,MS5.9
YKA **Yellowknife Ar** 100.27 27 P Pdif 04 27 20.0 -0.8
comp=Z,1.1nm,0.9s,baz=249,slow=4.8,SNR=8.1
AMTX **Amarillo** 100.46 57 PFAKE 04 27 30.0 +8.4
AMTX LR LR
comp=Z,1μm,20.0s,MS5.5
ZALV **Zalesovo Beam** 100.50 323 P Pdif 04 27 20.9 -0.9
comp=Z,0.7nm,0.3s,baz=134,slow=4.3,SNR=4.8

JCT	**Junction City**	**100.88**	**61**	PFAKE		04 27 40.0	+16
JCT				LR	LR			
	comp=Z,3μm,20.0s,MS5.8							
PAYG	**Puerto Ayora**	**100.99**	**94**	PFAKE		04 27 40.0	+16
PAYG				LR	LR			
	comp=Z,2μm,20.0s,MS5.6							
RSSD	**Black Hills**	**101.03**	**47**	PFAKE		04 27 40.0	+16
RSSD				LR	LR			
	comp=Z,3μm,19.0s,MS5.8							
OGNE	**Ogallala**	**101.69**	**51**	PFAKE		04 27 40.0	+13
OGNE				LR	LR			
	comp=Z,3μm,20.0s,MS5.8							
KVTX	**Kingsville**	**101.77**	**65**	PFAKE		04 27 40.0	+13
KVTX				LR	LR			
	comp=Z,3μm,19.0s,MS5.8							
DGMT	**Dagmar**	**101.98**	**43**	PFAKE		04 27 40.0	+12
DGMT				LR	LR			
	comp=Z,1μm,22.0s,MS5.4							
WMOK	**Wichita Mounta**	**102.74**	**57**	PFAKE		04 27 40.0	+8.2
WMOK				LR	LR			
	comp=Z,2μm,19.0s,MS5.5							
CBKS	**Cedar Bluff**	**102.91**	**53**	PFAKE		04 27 40.0	+7.5
CBKS				LR	LR			
	comp=Z,3μm,21.0s,MS5.7							
RER	**Riviere de l'E**	**102.95**	**242**	PFAKE		04 27 40.0	+7.3
RER				LR	LR			
	comp=Z,2μm,19.0s,MS5.7							
KURK	**Kurchatov**	**103.39**	**319**	Pdiff	Pdif	04 27 35.2	+0.6
	comp=Z,1.1nm,1.1s,baz=103,slow=2.9,SNR=3.7							
KURK				PP	PP	04 31 40.8	-10
	comp=Z,1.3nm,1.1s,baz=96,slow=7.0,SNR=5.4							
KURK	**Kurchatov**	**103.39**	**319**	Pdif	Pdif	04 27 35.2	+0.5
KURK				PP	PP	04 31 40.8	-10
KURK				LR	LR			
	comp=Z,1μm,20.0s,MS5.5							
TKM2	**Tokmak 2**	**103.79**	**311**	PFAKE		04 27 50.0	+14
TKM2				LR	LR			
	comp=Z,1μm,20.0s,MS5.4							
HKT	**Hockley**	**104.09**	**63**	PFAKE		04 27 50.0	+12
HKT				LR	LR			
	comp=Z,5μm,19.0s,MS6.1							
UCH	**Uchtor**	**104.44**	**310**	PFAKE		04 27 50.0	+11
UCH				LR	LR			
	comp=Z,1μm,21.0s,MS5.4							
AAK	**Ala-Archa**	**104.53**	**310**	PFAKE		04 27 50.0	+10
AAK				LR	LR			
	comp=Z,887nm,20.0s,MS5.3							
FFC	**Flin Flon**	**104.66**	**37**	PFAKE		04 27 50.0	+10
FFC				LR	LR			
	comp=Z,4μm,19.0s,MS5.9							
AML	**Almayashu**	**105.01**	**310**	PFAKE		04 27 50.0	+8.1
AML				LR	LR			
	comp=Z,1μm,21.0s,MS5.4							
EKS2	**Erkin-Say**	**105.05**	**310**	PFAKE		04 27 50.0	+7.9
EKS2				LR	LR			
	comp=Z,821nm,21.0s,MS5.2							
KSU1	**Kansas State U**	**105.36**	**53**	PFAKE		04 32 10.0	+12
KSU1				LR	LR			
	comp=Z,3μm,20.0s,MS5.9							
NATX	**Nacogdoches**	**105.46**	**61**	PFAKE		04 32 10.0	+12
NATX				LR	LR			
	comp=Z,2μm,19.0s,MS5.6							
ECSD	**EROS Data Cent**	**106.19**	**49**	PFAKE		04 32 10.0	+11
ECSD				LR	LR			
	comp=Z,5μm,20.0s,MS6.1							
LCO	**Las Campanas**	**106.52**	**129**	PFAKE		04 32 10.0	+10
LCO				LR	LR			
	comp=Z,2μm,19.0s,MS5.7							
MIAR	**Mount Ida**	**106.90**	**59**	PFAKE		04 32 10.0	+9.4
MIAR				LR	LR			
	comp=Z,2μm,20.0s,MS5.7							
TRQA	**Tornquist**	**107.07**	**141**	PFAKE		04 32 10.0	+9.1
TRQA				LR	LR			
	comp=Z,1μm,20.0s,MS5.4							
AGMN	**Agassiz Nation**	**107.40**	**44**	PFAKE		04 32 10.0	+9.0
AGMN				LR	LR			
	comp=Z,3μm,19.0s,MS5.8							
ULM	**Lac du Bonnet**	**107.65**	**42**	PFAKE		04 32 10.0	+8.6
ULM				LR	LR			
	comp=Z,2μm,19.0s,MS5.6							
TGUH	**Tegucigalpa,Un**	**108.08**	**81**	PFAKE		04 32 10.0	+6.7
TGUH				LR	LR			
	comp=Z,2μm,19.0s,MS5.7							
SCIA	**State Center**	**108.38**	**51**	PFAKE		04 32 10.0	+6.9
SCIA				LR	LR			
	comp=Z,3μm,21.0s,MS5.9							
TEIG	**Tepich**	**108.62**	**74**	PFAKE		04 32 20.0	+16
TEIG				LR	LR			
	comp=Z,1μm,19.0s,MS5.5							
BRVK	**Borovoye**	**108.85**	**321**	PFAKE		04 32 10.0	+6.4
BRVK				LR	LR			
	comp=Z,2μm,20.0s,MS5.6							
JTS	**JuntasAbangare**	**109.29**	**85**	PFAKE		04 32 20.0	+14
JTS				LR	LR			
	comp=Z,3μm,21.0s,MS5.8							
NNA	**Nana**	**109.44**	**110**	PFAKE		04 32 20.0	+14
NNA				LR	LR			
	comp=Z,2μm,19.0s,MS5.6							
MSEY	**Mahe Island**	**109.69**	**258**	PFAKE		04 32 20.0	+14
MSEY				LR	LR			
	comp=Z,1μm,20.0s,MS5.5							
EYMN	**Ely**	**110.27**	**45**	PFAKE		04 32 20.0	+14
EYMN				LR	LR			
	comp=Z,4μm,20.0s,MS5.9							
OXF	**Oxford**	**110.28**	**59**	PFAKE		04 32 20.0	+13
OXF				LR	LR			
	comp=Z,3μm,19.0s,MS5.8							
JFWS	**Jewell Farm**	**110.68**	**50**	PFAKE		04 32 20.0	+13
JFWS				LR	LR			
	comp=Z,5μm,22.0s,MS6.1							
ABPO	**Ambohimpanom**	**111.04**	**241**	PFAKE		04 32 20.0	+11
ABPO				LR	LR			
	comp=Z,3μm,19.0s,MS5.9							
HDIL	**Hopedale**	**111.14**	**53**	PFAKE		04 32 20.0	+12
HDIL				LR	LR			
	comp=Z,3μm,20.0s,MS5.9							
BRAL	**Brewton**	**111.73**	**63**	PFAKE		04 32 20.0	+10
BRAL				LR	LR			
	comp=Z,3μm,20.0s,MS5.8							
COWI	**Conover**	**111.74**	**47**	PFAKE		04 32 20.0	+11
COWI				LR	LR			
	comp=Z,3μm,22.0s,MS5.9							
WVT	**Waverly**	**111.78**	**58**	PFAKE		04 32 20.0	+10
WVT				LR	LR			
	comp=Z,2μm,21.0s,MS5.6							
LRAL	**Lakeview Retre**	**112.06**	**61**	PFAKE		04 32 20.0	+10
LRAL				LR	LR			
	comp=Z,2μm,19.0s,MS5.8							
OTAV	**Otavalo**	**112.48**	**97**	PFAKE		04 32 20.0	+8.3
OTAV				LR	LR			
	comp=Z,3μm,22.0s,MS5.9							
WCI	**Wyandotte Cave**	**113.23**	**56**	PFAKE		04 32 20.0	+7.6
WCI				LR	LR			
	comp=Z,2μm,19.0s,MS5.7							
BCIP	**Isla Barro Col**	**113.85**	**88**	PFAKE		04 32 30.0	+16
BCIP				LR	LR			
	comp=Z,2μm,22.0s,MS5.5							
GLMI	**Grayling**	**114.86**	**48**	PFAKE		04 32 30.0	+15
GLMI				LR	LR			
	comp=Z,5μm,20.0s,MS6.1							
GOGA	**Godfrey**	**115.05**	**61**	PFAKE		04 32 30.0	+14
GOGA				LR	LR			
	comp=Z,2μm,21.0s,MS5.8							
LPAZ	**La Paz**	**115.06**	**118**	PKP	PKiKP	04 32 16.1	-0.4
	comp=Z,2.0nm,1.1s,baz=32,slow=10,SNR=4.1							
LPAZ	**La Paz**	**115.06**	**118**	PKP	PKiKP	04 32 16.1	-0.4
LPAZ				LR	LR			
	comp=Z,955nm,19.0s,MS5.4							
AAM	**Ann Arbor**	**115.49**	**51**	PFAKE		04 32 30.0	+13
AAM				LR	LR			
	comp=Z,2μm,19.0s,MS5.8							
ARU	**Arti**	**115.62**	**324**	*i* PKIKP	PKPdf	04 32 16.4	0.0
ARU						04 33 15.1	
ARU						04 39 01.7	
ARU				SP	SP	04 42 50.7	-6.7
ARU				SS	SS	04 49 09.8	-8.7
ARU	**Arti**	**115.62**	**324**	⇑*i* PKP	PKPdf	04 32 16.6	+0.2
ARU				LR	LR			
	comp=Z,1μm,19.0s,MS5.5							
ACSO	**Alum Creek Sta**	**115.92**	**54**	PFAKE		04 32 30.0	+13
ACSO				LR	LR			
	comp=Z,2μm,20.0s,MS5.8							
DWPF	**Disney**	**116.18**	**67**	PFAKE		04 32 30.0	+12
DWPF				LR	LR			
	comp=Z,1μm,21.0s,MS5.4							
AKTK	**Aktyubinsk**	**116.42**	**318**	PKP	PKPdf	04 32 18.2	+0.1
AKTO	**Aktyubinsk**	**116.42**	**318**	PKP	PKPdf	04 32 18.2	+0.1
	comp=Z,2.6nm,0.9s,baz=125,slow=5.9,SNR=5.0							
NHSC	**New Hope**	**117.77**	**62**	PFAKE		04 32 30.0	+8.8
NHSC				LR	LR			
	comp=Z,2μm,21.0s,MS5.7							
BLA	**Blacksburg**	**117.81**	**57**	PFAKE		04 32 30.0	+8.8
BLA				LR	LR			
	comp=Z,1μm,19.0s,MS5.5							
MTDJ	**Mount Denham**	**118.14**	**79**	PFAKE		04 32 30.0	+7.7
MTDJ				LR	LR			
	comp=Z,757nm,19.0s,MS5.3							
KBS	**Kingsbay**	**118.14**	**355**	*e*	PP	04 33 30.9	-4.9
KBS	**Kingsbay**	**118.14**	**355**	PFAKE		04 32 30.0	+9.3
KBS				LR	LR			
	comp=Z,1μm,20.0s,MS5.5							
ERPA	**Erie**	**118.21**	**51**	PFAKE		04 32 30.0	+8.2
ERPA				LR	LR			
	comp=Z,3μm,19.0s,MS5.9							
MCWV	**Mont Chateau**	**118.32**	**54**	PFAKE		04 32 30.0	+7.9
MCWV				LR	LR			
	comp=Z,3μm,20.0s,MS5.9							
SSPA	**Standing Stone**	**119.82**	**53**	PFAKE		04 32 40.0	+15
SSPA				LR	LR			
	comp=Z,3μm,20.0s,MS5.9							
CBN	**Corbin**	**120.24**	**56**	PFAKE		04 32 40.0	+14
CBN				LR	LR			
	comp=Z,3μm,19.0s,MS6.0							
GTBY	**Guantanamo Bay**	**120.70**	**77**	PFAKE		04 32 40.0	+13
GTBY				LR	LR			
	comp=Z,861nm,20.0s,MS5.4							
SUR	**Sutherland**	**120.71**	**212**	PFAKE		04 32 40.0	+13
SUR				LR	LR			
	comp=Z,2μm,19.0s,MS5.7							
BOSA	**Boshof**	**121.16**	**219**	PKP	PKPdf	04 32 27.7	-0.3
	comp=Z,9.0nm,1.0s,baz=146,slow=4.3,SNR=5.5							
BOSA	**Boshof**	**121.16**	**219**	PKP	PKPdf	04 32 27.7	-0.3
BOSA				LR	LR			
	comp=Z,2μm,20.0s,MS5.7							
BINY	**Binghamton**	**121.19**	**51**	PFAKE		04 32 40.0	+12
BINY				LR	LR			
	comp=Z,5μm,19.0s,MS6.2							
LONY	**Lake Ozonia**	**122.01**	**48**	PFAKE		04 32 40.0	+11
LONY				LR	LR			
	comp=Z,5μm,20.0s,MS6.2							
LVZ	**Lovozero**	**122.22**	**341**	PFAKE		04 32 40.0	+11
LVZ				LR	LR			
	comp=Z,2μm,21.0s,MS5.7							
NCB	**Newcomb**	**122.33**	**49**	PFAKE		04 32 40.0	+10
NCB				LR	LR			
	comp=Z,4μm,20.0s,MS6.1							
SDV	**Santo Domingo**	**122.52**	**91**	PFAKE		04 32 40.0	+9.1
SDV				LR	LR			
	comp=Z,500nm,21.0s,MS5.1							
APA	**Apatity**	**122.80**	**341**	⇑*e*PKIKP	PKPdf	04 32 15.0	-15
APA				pmax	pmax			
	comp=Z,92nm,1.9s							
KEV	**Kevo**	**123.17**	**345**	PFAKE		04 32 40.0	+9.5
KEV				LR	LR			
	comp=Z,2μm,21.0s,MS5.7							
SUMG	**Summit**	**123.49**	**9**	*e*PKPdf	PKPdf	04 32 31.2	+0.1
SUMG	**Summit**	**123.49**	**9**	*i* P	PKPdf	04 32 31.1	0.0
	comp=Z,8.8nm,1.1s							
LBTB	**Lobatse**	**123.56**	**222**	PFAKE		04 32 40.0	+7.3
LBTB				LR	LR			
	comp=Z,3μm,20.0s,MS6.0							
ARCES	**ARCESS Array B**	**123.69**	**345**	PKP	PKPdf	04 32 31.2	-0.3
	comp=Z,2.5nm,0.8s,baz=102,slow=2.1,SNR=10							
LBNH	**Lisbon**	**123.95**	**49**	PFAKE		04 32 40.0	+7.2
LBNH				LR	LR			
	comp=Z,6μm,20.0s,MS6.2							
SDDR	**Presa de Saban**	**124.10**	**79**	PFAKE		04 32 50.0	+16
SDDR				LR	LR			
	comp=Z,2μm,19.0s,MS5.7							
MAK	**Makhachkala**	**124.31**	**310**	*e*PKIKP	PKPdf	04 32 29.9	-3.6
MAK				*e*PPP		04 36 56.2	
MAK				*i*		04 39 30.8	
MAK				*e*SP	SP	04 44 04.0	-12
MAK				pmax	pmax		
	comp=Z,34nm,2.1s							
GRTK	**Grand Turk**	**124.62**	**76**	PFAKE		04 32 50.0	+15
GRTK				LR	LR			
	comp=Z,1μm,19.0s,MS5.6							
SCHQ	**Schefferville**	**124.74**	**35**	PFAKE		04 32 50.0	+16
SCHQ				LR	LR			
	comp=Z,4μm,19.0s,MS6.1							
SFJD	**Kangerlussuaq**	**125.23**	**17**	PFAKE		04 32 50.0	+15
SFJD				LR	LR			
	comp=Z,2μm,19.0s,MS5.8							
SPB	**Sao Paulo**	**126.04**	**139**	PFAKE		04 32 50.0	+13
SPB				LR	LR			
	comp=Z,967nm,21.0s,MS5.5							
GNI	**Garni**	**126.71**	**307**	*d i* PKIKP	PKPdf	04 32 40.0	+1.8
GNI				pmax	pmax			
	comp=Z,9.0nm,1.2s							
GNI	**Garni**	**126.71**	**307**	*e*PKPdf	PKPdf	04 32 39.9	+1.7
GNI				LR	LR			
	comp=Z,567nm,19.0s,MS5.3							
ZEI	**Tsey**	**126.96**	**310**	*e*PKIKP	PKPdf	04 32 39.0	+0.4
ZEI				pmax	pmax			
	comp=Z,15nm,1.1s							
SCO	**Scoresbysund**	**127.32**	**4**	*i* P	PKPdf	04 32 37.7	-0.8
	comp=Z,4.7nm,1.1s							
SCO								
	comp=Z,810nm,21.0s							
KIV	**Kislovodsk**	**127.61**	**312**	*e*P	Pdif	04 29 20.0	-2.4
KIV				*i*		04 32 40.0	
KIV				*e*		04 34 35.7	
KIV				*e*		04 39 41.6	
KIV				*e*PS	PS	04 44 48.9	+1.8
KIV				pmax	pmax		
	comp=Z,16nm,1.1s							
KIV				MLR	MLR			
	comp=Z,748nm,20.0s,MS5.4							
KIV	**Kislovodsk**	**127.61**	**312**	*i* PKP	PKPdf	04 32 40.0	+0.2
KIV				LR	LR			
	comp=Z,879nm,20.0s,MS5.4							
KMBO	**Kilima Mbogo**	**127.85**	**254**	PKP	PKPdf	04 32 42.8	+1.6
	comp=Z,6.5nm,1.1s,baz=47,slow=3.4,SNR=5.8							
KMBO	**Kilima Mbogo**	**127.85**	**254**	PKP	PKPdf	04 32 42.8	+1.6
KMBO				LR	LR			
	comp=Z,3μm,19.0s,MS6.0							
OBN	**Obninsk**	**127.90**	**327**	⇓*i*PKIKP	PKPdf	04 32 39.7	-0.3
OBN				*i*		04 32 52.1	
OBN				*i*		04 34 49.3	
OBN				*i* SS	SS	04 51 52.3	-2.5
OBN				pmax	pmax		
	comp=Z,17nm,1.4s							
OBN	**Obninsk**	**127.90**	**327**	*e*PKP	PKPdf	04 32 39.8	-0.2
OBN				LR	LR			
	comp=Z,1μm,19.0s,MS5.5							
VORD	**Divnogorie**	**127.96**	**321**	*e*PKIKP	PKPdf	04 32 39.7	-0.5
VORD				pmax	pmax			
	comp=Z,20nm,1.6s							
VORD				pmax	pmax			
	comp=N,10.0nm,0.6s							
VORD				pmax	pmax			
	comp=E,8.0nm,0.5s							
LSZ	**Lusaka**	**128.26**	**233**	PFAKE		04 32 50.0	+8.1
LSZ				LR	LR			
	comp=Z,2μm,20.0s,MS5.8							
SJG	**San Juan**	**128.77**	**81**	PFAKE		04 32 50.0	+7.2
SJG				LR	LR			
	comp=Z,1μm,19.0s,MS5.5							
FINES	**FINESS Array B**	**129.10**	**338**	PKP	PKPdf	04 32 41.0	-1.1
	comp=Z,5.9nm,1.0s,baz=29,slow=4.4,SNR=5.2							
BBSR	**BB Station**	**130.80**	**63**	PFAKE		04 33 00.0	+14
BBSR				LR	LR			
	comp=Z,870nm,19.0s,MS5.5							
ANN	**Anapa**	**131.07**	**314**	*i* PKIKP	PKPdf	04 32 45.9	-0.4
ANN				*e*		04 34 59.7	
ANN				*e*SS	SS	04 52 30.1	-4.6
ANN				pmax	pmax		
	comp=Z,28nm,1.3s							
ANN				MLR	MLR			
	comp=N,677nm,20.0s,MS5.5							
ANN				MLR	MLR			
	comp=E,664nm,20.0s,MS5.5							
ANN				MLR	MLR			
	comp=Z,857nm,20.0s,MS5.5							
GRGR	**Grenville**	**131.88**	**90**	PFAKE		04 33 00.0	+11
GRGR				LR	LR			
	comp=Z,759nm,20.0s,MS5.4							
ANWB	**Willy Bob**	**132.81**	**82**	PFAKE		04 33 00.0	+10
ANWB				LR	LR			
	comp=Z,653nm,21.0s,MS5.3							
TSUM	**Tsumeb**	**132.82**	**220**	PFAKE		04 33 00.0	+10
TSUM				LR	LR			
	comp=Z,2μm,19.0s,MS5.9							
FDF	**Fort de France**	**132.91**	**87**	PFAKE		04 33 00.0	+9.3
FDF				LR	LR			
	comp=Z,1μm,19.0s,MS5.6							
BORG	**Borgarnes**	**133.01**	**5**	PFAKE		04 33 00.0	+11
BORG				LR	LR			
	comp=Z,2μm,19.0s,MS5.8							
AKASG	**Malin Array Be**	**133.88**	**324**	PKP	PKPdf	04 32 50.8	-0.7
	comp=Z,2.5nm,0.8s,baz=68,slow=2.2,SNR=7.4							
AKASG				PP	PP	04 35 21.3	+0.2
	comp=Z,1.5nm,0.8s,baz=46,slow=7.0,SNR=4.5							
AKASG				SKPbc	SKPbc	04 36 21.6	+1.2
	comp=Z,0.2nm,0.3s,baz=49,slow=4.2,SNR=5.2							
AKASG	**Malin Array Be**	**133.88**	**324**	PKIKP	PKPdf	04 32 50.8	-0.7
AKASG						04 35 21.3	
KIEV	**Kiev**	**133.89**	**324**	PFAKE		04 33 00.0	+8.5
KIEV				LR	LR			
	comp=Z,1μm,20.0s,MS5.7							
NB2	**NORSAR Subarra**	**134.06**	**344**	PKPdf	PKPdf	04 32 49.0	-2.5
	comp=Z,36nm,2.0s,baz=31,slow=1.9							
NOA	**NORSAR Array B**	**134.06**	**344**	PKP	PKPdf	04 32 51.8	+0.3
	comp=Z,1.5nm,0.8s,baz=26,slow=1.8,SNR=3.1							
NOA	**NORSAR Array B**	**134.06**	**344**	PKP	PKPdf	04 32 51.8	+0.3
BBGH	**Gun Hill**	**134.10**	**89**	PFAKE		04 33 00.0	+7.1
BBGH				LR	LR			
	comp=Z,2μm,20.0s,MS5.9							
MMAI	**Mount Meron Ar**	**135.06**	**299**	PKP	PKPdf	04 32 54.5	+0.3
	comp=Z,3.0nm,0.5s,baz=64,slow=8.2,SNR=3.8							
BR131	**Keskin Array S**	**135.16**	**308**	*e*PKPdf	PKPdf	04 32 54.2	0.0
BR131				LR	LR			
	comp=Z,692nm,19.0s,MS5.4							
BRTR	**Keskin Array B**	**135.16**	**308**	PKP	PKPdf	04 32 55.5	+1.3
	comp=Z,4.1nm,1.1s,baz=132,slow=2.3,SNR=14							
KONO	**Kongsberg**	**135.67**	**344**	*e*PKIKP	PKPdf	04 32 58.3	+3.8
KONO				MLR	MLR			
	comp=Z,2μm,19.0s,MS5.8							
KIS	**Kishinev**	**135.86**	**320**	*e*PKP	PKPdf	04 32 56.0	+0.7
KIS	**Kishinev**	**135.86**	**320**	*e*PP	PP	04 35 28.0	-5.8
KIS				*e*SKP		04 36 22.0	
KIS				*e*SKS	SKSdf	04 39 25.0	-41
KIS				LRM		05 05 20.0	
	comp=Z,600nm,19.0s							
KIS	**Kishinev**	**135.86**	**320**	*e*PKIKP	PKPdf	04 32 56.0	+0.7
KIS				*e*		04 33 07.0	
LVV	**L'vov**	**137.17**	**326**	*e*PKIKP	PKPdf	04 33 08.2	+11
TIRR	**Tirgusor**	**137.22**	**317**	⇓PKIKP	PKPdf	04 33 00.9	+3.0
TIRR	**Tirgusor**	**137.22**	**317**	⇓*i*P	PKPdf	04 33 00.9	+3.0
VRI	**Vrincioaia**	**137.66**	**319**	⇑PKIKP	PKPdf	04 33 09.2	+11
VRI	**Vrincioaia**	**137.66**	**319**	⇑*i*P	PKPdf	04 33 09.2	+11
BURAR	**Bucovina Array**	**137.71**	**322**	⇓PKIKP	PKPdf	04 33 01.1	+2.4
BURAR	**Bucovina Array**	**137.71**	**322**	⇓*i*P	PKPdf	04 33 01.1	+2.4
BSD	**Bornholm Skovb**	**137.74**	**337**	*i* P	PKPdf	04 32 42.6	-16
	comp=Z,13nm,0.9s							
BSD	**Bornholm Skovb**	**137.74**	**337**	*i* P	PP	04 35 50.7	+5.7
BSD								
	comp=Z,1μm,20.0s							
KWP	**Kalwaria Pacla**	**137.99**	**326**	⇓PKIKP	PKPdf	04 33 00.4	+1.3
KWP				MLR	MLR			
	comp=Z,2μm,19.0s,MS5.8							
KWP	**Kalwaria Pacla**	**137.99**	**326**	⇓*i*P	PKPdf	04 33 00.4	+1.3
ISP	**Isparta**	**138.02**	**307**	PFAKE		04 33 10.0	+10
ISP				LR	LR			
	comp=Z,663nm,21.0s,MS5.3							
COP	**Copenhagen**	**138.17**	**339**	*i* P	PKPpre	04 32 51.3		
	comp=Z,26nm,0.8s							
MLR	**Muntele Rosu**	**138.32**	**319**	⇓*i*P	PKPdf	04 32 58.3	-1.6
MUD	**Monsted U'grnd**	**138.54**	**342**	*i* P	PKPdf	04 33 00.5	+0.6
KOLS	**Kolonicke sedl**	**138.62**	**326**	*e*PKIKP	PKPdf	04 32 59.5	-0.8
KOLS	**Kolonicke sedl**	**138.62**	**326**	*e*PKP	PKPdf	04 32 59.5	-0.8
UZH	**Uzhgorod**	**138.79**	**325**	*e*PKIKP	PKPdf	04 33 00.0	-0.6
UZH				*e*		04 33 12.0	
STHS	**Stebnicka Huta**	**138.88**	**327**	*e*PKHKP	PKPpre	04 32 52.8	
STHS	**Stebnicka Huta**	**138.88**	**327**	*e*PKP	PKPdf	04 32 52.8	-8.0
CRVS	**Cervenica-Dubn**	**139.07**	**326**	*e*PKIKP	PKPpre	04 32 57.2	
CRVS				*e*		04 33 04.2	
CRVS	**Cervenica-Dubn**	**139.07**	**326**	*e*PKP	PKPdf	04 32 57.2	-4.0
CRVS				*e*		04 33 04.2	
OJC	**Ojcow**	**139.11**	**329**	*e*PKP	PKPdf	04 33 06.2	+5.0
NIE	**Niedzica**	**139.36**	**328**	*e*PKP	PKPdf	04 33 05.4	+3.7
KECS	**Kecovo**	**139.84**	**326**	*e*PKIKP	PKPdf	04 33 02.7	+0.1
KECS				*e*		04 33 11.8	
KECS	**Kecovo**	**139.84**	**326**	*e*PKP	PKPdf	04 33 02.7	+0.1
KECS				*e*		04 33 11.8	
OKC	**Ostrava-Krasne**	**140.16**	**329**	*e*PKHKP	PKPpre	04 32 56.2	
OKC				MLR	MLR			
	comp=Z,1μm,22.5s,MS5.7							
OKC	**Ostrava-Krasne**	**140.16**	**329**	*e*PKP	PKPpre	04 32 56.2	
OKC				*e*SS	SS	04 54 30.1	+7.5
OKC				AMS	AMS	05 33 20.0	
	comp=Z,1μm,22.5s							
MORC	**Moravsky Berou**	**140.50**	**330**	⇑*i*P	PKPdf	04 32 59.5	-4.2
PSZ	**Piszkesteto**	**140.50**	**326**	*e*PKIKP	PKPdf	04 33 01.1	-2.7
PSZ				MLR	MLR			
	comp=Z,1μm,21.0s,MS5.7							
PSZ	**Piszkesteto**	**140.50**	**326**	⇑*e*PKP	PKPdf	04 33 01.2	-2.6
DPC	**Dobruska-Polom**	**140.67**	**331**	*e*PKIKP	PKPdf	04 32 59.8	-4.2
DPC				*e*		04 33 08.6	
DPC				*e*		04 36 10.2	
DPC				MLR	MLR			
	comp=Z,2μm,20.4s,MS5.8							
DPC	**Dobruska-Polom**	**140.67**	**331**	*e*PKP	PKPdf	04 32 59.8	-4.2
DPC				*ex*	x	04 33 08.6	
DPC				*ep*PKP	pPKPdf	04 33 18.3	+10
DPC				*e*PP	PP	04 36 10.2	+7.0
DPC				*ex*	x	04 54 37.3	
DPC				AMS	AMS	05 35 40.0	
	comp=Z,2μm,20.4s							
VYHS	**Vyhne**	**140.69**	**327**	*e*PKIKP	PKPdf	04 33 05.6	+1.5
VYHS				*e*		04 33 13.1	
VYHS	**Vyhne**	**140.69**	**327**	*e*PKP	PKPdf	04 33 05.6	+1.5
VYHS				*e*		04 33 13.1	
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CLL *e*PP PP 04 36 16.0 +8.4
CLL *e*PSKS 04 46 24.0
CLL *e*PPPrev 04 48 06.0
CLL *e*SS SS 04 54 30.0 -6.7
CLL *e*SKSSKSac 04 56 12.0
CLL *e*SSS 04 59 48.0
CLL *e*SSSS 05 03 30.0
CLL Lm 05 38 00.0
comp=N,1µm,19.6s
CLL Lm 05 38 00.0
comp=E,500nm,20.2s
CLL Lm 05 38 00.0
comp=Z,2µm,19.8s
VTS Vitosha 141.44 317 PKHKP PKPpre 04 33 00.2
VTS Vitosha 141.44 317 P PKPpre 04 33 00.2
PRA Prague 141.72 332 PKP PKPdf 04 33 05.0 -0.9
PRA PP PP 04 36 11.0 +1.4
PRU Pruhonice 141.73 332 *e*PKHKP PKPpre 04 32 59.7
PRU *e* 04 36 11.9
PRU MLR MLR
comp=Z,1µm,20.4s,MS5.6
PRU Pruhonice 141.73 332 *e*PKP PKPpre 04 32 59.7
PRU *e*PP PP 04 36 11.9 +2.2
PRU *e*x x 04 43 45.2
PRU *e*x x 04 54 53.3
PRU AMS AMS 05 39 50.0
comp=Z,1µm,20.4s
TREC Trest 141.80 331 *e*PKIKP PKPdf 04 33 02.5 -3.6
TREC MLR MLR
comp=Z,2µm,23.6s,MS5.8
TREC Trest 141.80 331 *e*PKP PKPdf 04 33 02.5 -3.6
TREC AMS AMS 05 36 20.0
comp=Z,2µm,23.6s
PKSM Moragy 142.22 325 ⇑PKIKP PKPdf 04 33 04.7 -2.2
PKSM Moragy 142.22 325 ⇑*i*P PKPdf 04 33 04.7 -2.2
ESK Eskdalemuir 142.28 352 PFAKE 04 33 20.0 +13
ESK LR LR
comp=Z,1µm,21.0s,MS5.6
TANN Tannenbergstha 142.31 334 *e*PKPbc PKPdf 04 33 03.8 -3.1
TANN *ep*PKPbc 04 33 14.4
NKC Novy Kostel 142.45 334 *e*PKHKP PKPpre 04 33 03.4
NKC *e* 04 33 08.3
NKC MLR MLR
comp=Z,1µm,19.1s,MS5.7
NKC Novy Kostel 142.45 334 *e*PKP PKPpre 04 33 03.4
NKC *ex* x 04 33 08.3
NKC AMS AMS 05 39 20.0
comp=Z,1µm,19.1s
MOX Moxa 142.47 335 *e*PKP PKPdf 04 33 04.6 -2.6
MOX *e*PP PP 04 36 19.0 +5.0
MOX
comp=Z,1µm,22.0s
CONA Conrad Observa 142.56 329 ⇑*i*PKPdf PKPdf 04 33 04.0 -3.5
comp=Z,20nm,1.4s
CSNA Conrad Observa 142.57 329 ⇑*i*PKPdf PKPdf 04 33 04.1 -3.4
comp=Z,20nm,1.3s
DIVS Divibare 142.68 321 P PKPdf 04 33 02.4 -5.4
KHC Kasperske Hory 142.79 332 *e*PKIKP PKPdf 04 33 04.6 -3.2
KHC *e* 04 33 10.8
KHC *e* 04 33 17.9
KHC MLR MLR
comp=Z,2µm,17.5s,MS6.0
KHC Kasperske Hory 142.79 332 *e*PKPdf PKPdf 04 33 04.9 -3.0
KHC Kasperske Hory 142.79 332 *e*PKP PKPdf 04 33 04.6 -3.2
KHC *ex* x 04 33 10.8
KHC *ep*PKP pPKPdf 04 33 17.9 +6.1
KHC *e*SS SS 04 54 58.2 +5.2
KHC AMS AMS 05 40 20.0
comp=Z,2µm,17.5s
ROTZ Rotzenmuhle 142.91 334 *e*PKPbc PKPdf 04 33 04.7 -3.3
GEC2 GERESS Array S 142.94 332 *e*PKIKP PKPpre 04 33 05.1
GERES GERESS Array B 142.94 332 PKhKP PKPpre 04 33 05.5
comp=Z,3.3nm,1.1s,baz=50,slow=2.1,SNR=13
LIT Litokhoron 143.06 314 PKHKP PKPpre 04 33 01.7
LIT Litokhoron 143.06 314 P PKPpre 04 33 01.7
WET Wettzell 143.09 333 *e*PKPbc PKPdf 04 33 06.4 -2.0
WET Wettzell 143.09 333 *e*PKIKP PKPdf 04 33 06.4 -2.0
KRUS Krusevo 143.30 316 *e*Pn PKPdf 04 33 07.8 -1.2
LKR Lokris 143.31 311 P PKPpre 04 33 02.5
LKR Lokris 143.31 311 P PKPpre 04 33 02.5
GRF Grafenberg Arr 143.37 335 *e*PKPbc PKPdf 04 33 05.4 -3.5
GRF *e*PKPab PKPdf 04 33 11.0 +2.1
GRF *e*PP PP 04 36 30.6 +11
GRF *e*L 05 39 39.2
comp=Z,2µm,20.8s
GRF Grafenberg Arr 143.37 335 *e*PKIKP PKPdf 04 33 11.0 +2.1
GRF Grafenberg Arr 143.37 335 *e*PKHKP PKPpre 04 33 05.4
GRF *e* 04 33 11.0
GRF MLR MLR
comp=Z,2µm,20.8s,MS5.8
GRF Grafenberg Arr 143.37 335 *e*PKP PKPpre 04 33 05.4
GRF *e*PKP PKPdf 04 33 11.0 +2.1
GRF *e*PP PP 04 36 30.6 +11
GRF LR LR
comp=Z,2µm,20.8s,MS5.8
MOA Molln 143.39 330 ⇑*i*PKPdf PKPdf 04 33 06.6 -2.4
comp=Z,17nm,0.9s
BUG Bochum--Univer 143.41 340 *e*PKPbc PKPdf 04 33 09.7 +0.8
BCI Bajram Curri 143.56 318 *e*PN PKPdf 04 33 06.6 -2.8
AGG Agios Georgios 143.63 312 PKHKP PKPpre 04 33 03.9
AGG Agios Georgios 143.63 312 P PKPpre 04 33 03.9
OHR Ohrid 143.72 316 PKHKP PKPpre 04 33 05.0
OHR Ohrid 143.72 316 *e*Pn PKPpre 04 33 06.8
OHR Ohrid 143.72 316 P PKPpre 04 33 05.0
DSF Desfina 143.75 311 P PKPpre 04 33 04.6
KARN Karanos 143.81 306 P PKPpre 04 33 06.0
PERS Pernice 143.81 328 *e*PKPdf PKPpre 04 33 04.8
SOKA Soboth 143.83 328 ⇑*i*PKPdf PKPdf 04 33 07.4 -2.3
comp=Z,32nm,1.3s
PUK Puka 143.84 318 *e*PN PKPpre 04 33 06.0
KBN Korca 143.97 315 *e*PN PKPdf 04 33 08.3 -1.9
TNS Taunus Mts 144.02 337 *e*PKPbc PKPdf 04 33 08.3 -1.7
TNS *e*PKPab PKPdf 04 33 14.6 +4.6
TNS Taunus Mts 144.02 337 *e*PKIKP PKPdf 04 33 08.3 -1.7
TNS *e* 04 33 14.6
TNS Taunus Mts 144.02 337 *e*PKPbc PKPdf 04 33 08.3 -1.7
TNS *e*PKPab PKPdf 04 33 14.6 +4.6
KALE Kalithea 144.03 311 P PKPdf 04 33 06.4 -4.0
GUR Goura 144.07 310 P PKPdf 04 33 07.8 -2.7
TRIZ Trizonia 144.09 311 P PKPdf 04 33 05.7 -4.8
RJOB Jochberg 144.16 331 *e*PKPbc PKPdf 04 33 08.1 -2.2
EFP Efpalio 144.18 311 P PKPdf 04 33 08.8 -1.8
OBKA Obir 144.19 328 ⇑*i*PKPdf PKPdf 04 33 07.8 -2.6
comp=Z,26nm,1.3s
LAKA Lakka 144.21 311 P PKPdf 04 33 06.5 -4.2
TIR Tirane 144.22 317 PKHKP PKPpre 04 33 07.2
TIR Tirane 144.22 317 P PKPdf 04 33 07.2 -3.4
VLX Vlachokerasia 144.27 309 P PKPdf 04 33 07.9 -2.9
KBA Koelnbreinsper 144.38 330 ⇑*i*PKPdf PKPdf 04 33 08.5 -2.2
comp=Z,46nm,1.2s,SNR=14
CWF Charnwood Fore 144.46 349 *e*P PKPdf 04 33 09.2 -1.5
CWF Charnwood Fore 144.46 349 P PKPdf 04 33 09.2 -1.5
BEBN Eben Emael 144.48 341 PKP PKPdf 04 33 09.7 -1.1
BOJS Bojanci 144.50 326 *e*PKPdf PKPdf 04 33 07.5 -3.5
LJU Ljubljana 144.52 328 *i* PKPdf PKPdf 04 33 08.2 -2.7
FUR Furstenfeldbru 144.52 333 *e*PKPbc PKPdf 04 33 10.5 -0.4
FUR *e*PKPab PKPdf 04 33 16.6 +5.7
FUR *ep*PKPbc 04 33 20.7
FUR Furstenfeldbru 144.52 333 *e*PKIKP PKPdf 04 33 10.5 -0.4
MEM Membach 144.54 340 PKP PKPdf 04 33 09.4 -1.5
MYKA Terra Mystica 144.56 329 ⇑*i*PKPdf PKPdf 04 33 09.1 -1.9
comp=Z,45nm,1.0s
ITM Ithomi 144.67 309 P PKPdf 04 33 09.7 -1.8
ITM Ithomi 144.67 309 P PKPdf 04 33 09.7 -1.8
IGT Igoumenitsa 144.79 314 PKHKP PKPpre 04 33 08.2
IGT Igoumenitsa 144.79 314 P PKPdf 04 33 08.2 -3.5
VOY Vojsko 144.85 328 *e*PKPdf PKPdf 04 33 09.2 -2.3
VOY *e* 04 33 10.6
VOY *e* 04 33 25.9
PTCC Patocco-Chiusa 144.85 329 PKP PKPdf 04 33 10.4 -1.1
SRN Sarande 144.85 315 *e*PN PKPdf 04 33 09.9 -1.9
JAVS Javornik 144.85 328 *e*PKPdf PKPdf 04 33 09.0 -2.6
UCC Uccle 144.88 342 PKP PKPdf 04 33 09.7 -1.8
KTD Kalmit 144.90 337 PKP PKPdf 04 33 11.1 -0.4
LKD2 Lefkada island 144.91 313 P PKPdf 04 33 09.4 -2.5
STU Stuttgart 144.92 335 *e*PKPbc PKPdf 04 33 11.5 -0.1
STU *e*PKPab PKPdf 04 33 17.9 +6.3
STU *ep*PKPbc 04 33 22.1
STU Stuttgart 144.92 335 *e*PKIKP PKPdf 04 33 11.6 0.0
STU Stuttgart 144.92 335 *e*PKPdf PKPdf 04 33 11.6 +0.1
PYL PYLOS 144.92 309 P PKPdf 04 33 09.3 -2.7
PYL PYLOS 144.92 309 P PKPdf 04 33 10.0 -2.0
PYL PYLOS 144.92 309 P PKPdf 04 33 10.0 -2.0
PYL PYLOS 144.92 309 P PKPdf 04 33 10.2 -1.3
HLM1 Long Mynd 144.94 350 *e*P PKPdf 04 33 09.4 -2.1
HLM1 Long Mynd 144.94 350 P PKPdf 04 33 09.4 -2.1
RUP Ruppelstein 144.95 338 PKIKP PKPdf 04 33 11.1 -0.5
ABTA Abfaltersbach 145.02 330 ⇑*i*PKPbc PKPbc 04 33 10.2 -1.0
comp=Z,102nm,1.1s,SNR=54
WATA Walderalm 145.02 332 ⇑*i*PKPbc PKPbc 04 33 10.7 -0.5
comp=Z,21nm,0.7s
WTTA Wattenberg 145.04 331 ⇑*i*PKPbc PKPbc 04 33 11.0 -0.2
comp=Z,97nm,1.2s,SNR=17
KEK Kerkira 145.07 315 P PKPbc 04 33 09.2 -2.4
KEK Kerkira 145.07 315 P PKPdf 04 33 09.2 -2.9
TRI Trieste 145.13 328 *e*PKIKP PKPdf 04 33 10.5 -1.6
TRI MLR MLR
comp=Z,1µm,22.0s,MS5.6
SNF Seneffe 145.16 342 PKP PKPdf 04 33 10.2 -1.8
MOTA Moosalm 145.22 332 ⇑*i*PKPbc PKPbc 04 33 11.4 -0.4
comp=Z,90nm,1.0s,SNR=41
VLS Valsamata 145.23 312 PKHKP PKPdf 04 33 10.1 -2.4
VLS Valsamata 145.23 312 P PKPdf 04 33 10.1 -2.4
RETA Reutte 145.27 332 ⇑*i*PKPbc PKPbc 04 33 11.8 -0.1
comp=Z,97nm,1.2s,SNR=19
LANF Langenberg 145.28 337 PKP PKPdf 04 33 12.3 +0.1
WLF Walferdange 145.30 339 PKP PKPdf 04 33 11.7 -0.5
WLF Walferdange 145.30 339 *e*PKPbc PKPbc 04 33 13.0 +1.0
WLF *e*PKPab PKPab 04 33 19.3 +7.2
WLF *ep*PKPbc pPKPbc 04 33 24.1 +8.2
WLF Walferdange 145.30 339 *e*PKIKP PKPdf 04 33 12.0 -0.2
WLF MLR MLR
comp=Z,2µm,20.0s,MS5.9
WLF Walferdange 145.30 339 *e*PKPbc PKPbc 04 33 12.0 0.0
WLF LR LR
comp=Z,2µm,20.0s,MS5.9
GIVF Givet 145.35 341 *e*PKP1 PKPbc 04 33 12.0 -0.1
comp=Z,93nm,1.2s
DOU Dourbes 145.43 341 PKP PKPdf 04 33 11.1 -1.3
TFO1 Folkestone 145.47 345 *e*P PKPdf 04 33 11.2 -1.2
TFO1 Folkestone 145.47 345 P PKPdf 04 33 11.2 -1.2
SHEL Horse Pasture 145.55 191 PFAKE 04 33 20.0 +6.3
SHEL LR LR
comp=Z,1µm,20.0s,MS5.7
BAIF Baives 145.58 341 *e*PKP1 PKPbc 04 33 13.0 +0.2
comp=Z,116nm,1.1s
BFO Black Forest 145.61 336 *e*PKPbc PKPbc 04 33 13.0 0.0
BFO *ep*PKPbc pPKPbc 04 33 24.5 +7.6
BFO Black Forest 145.61 336 *e*PKIKP PKPdf 04 33 13.0 +0.2
BFO *e* 04 33 24.5
BFO Black Forest 145.61 336 *e*PKPbc PKPbc 04 33 13.0 0.0
BFO *ep*PKPbc pPKPbc 04 33 24.5 +7.6
SPAK Spaichingen-Ko 145.62 335 PKP PKPdf 04 33 13.0 +0.2
FETA Feichten 145.63 332 ⇑*i*PKPbc PKPbc 04 33 12.6 -0.6
comp=Z,99nm,1.0s,SNR=61
MENF Mencas 145.72 344 PKP PKPdf 04 33 13.4 +0.5
SWN1 Swindon 145.72 349 *e*P PKPdf 04 33 11.3 -1.6
SWN1 Swindon 145.72 349 P PKPdf 04 33 11.3 -1.6
WOL Wolverton 145.80 348 *e*P PKPdf 04 33 12.0 -1.0
WOL Wolverton 145.80 348 P PKPdf 04 33 12.0 -1.0
DAVA Damuels 145.80 333 ⇑*i*PKPdf PKPdf 04 33 13.7 +0.5
comp=Z,97nm,1.1s,SNR=19
APPI Appiano 145.81 331 PKP PKPdf 04 33 13.3 +0.1
CDF Champ du Feu 145.95 337 *e*PKP1 PKPbc 04 33 14.2 +0.2
comp=Z,33nm,0.9s
LIBD Limburg 146.04 336 PKP2 PKPab 04 33 14.9 0.0
FELD Feldberg im Sc 146.11 336 PKP PKPdf 04 33 14.4 +0.7
ECH Echery 146.16 337 PKP PKPdf 04 33 14.4 +0.7
ECH Echery 146.16 337 *e*PKP2 PKPab 04 33 14.6 -0.7
ECH MLR MLR
comp=Z,832nm,20.0s,MS5.5
ECH Echery 146.16 337 *e*PKPbc PKPbc 04 33 14.6 -0.1
ECH LR LR
comp=Z,832nm,20.0s,MS5.5
DAVOX Davos/Dischmat 146.19 332 PKPbc PKPbc 04 33 14.1 -0.7
comp=Z,16nm,0.8s,baz=34,slow=4.6,SNR=2.6
BRMO Bormio 146.21 332 PKP PKPdf 04 33 15.3 +1.4
VAL Valentia 146.25 358 ⇓*i*P PKPdf 04 33 15.2 +1.4
MABI Malga Bissina 146.46 331 PKP PKPdf 04 33 15.1 +0.8
MOF Molkenrain 146.47 336 PKP PKPdf 04 33 15.1 +0.8
RCBR Riachuelo 146.53 133 *e*PKPbc PKPdf 04 33 14.6 -0.9
RCBR LR LR
comp=Z,1µm,19.0s,MS5.8
LTRZ Laterza 146.57 318 PKP PKPdf 04 33 15.6 +0.9
THEF They Montfort 146.58 338 PKP PKPdf 04 33 14.2 -0.2
HINF Hinteralfeld 146.60 337 *e*PKP1 PKPbc 04 33 15.8 -0.2
comp=Z,51nm,1.1s
HAU Haudompre 146.63 337 *e*PKP1 PKPbc 04 33 16.1 0.0
comp=Z,102nm,1.0s
HAU *e*MLR MLR
comp=Z,2µm,22.2s,MS5.6
HAU Haudompre 146.63 337 *e*PKP PKPdf 04 33 16.1 +1.6
HAU LR LR
comp=Z,2µm,22.3s,MS5.9
BBS Basel-Blauen 146.64 336 PKP PKPdf 04 33 15.1 +0.5
HTL Hartland 146.67 351 *e*P PKPdf 04 33 13.4 -1.1
HTL Hartland 146.67 351 P PKPdf 04 33 13.4 -1.1
MEZF Maizieres J'vi 146.67 339 *e*PKP1 PKPbc 04 33 16.6 +0.4
comp=Z,170nm,1.1s
LOMF Lomont 147.00 336 PKP PKPbc 04 33 17.2 0.0
CING Cingoli 147.01 325 PKP PKPdf 04 33 14.7 -0.6
DYA Yadsworthy 147.13 350 *e*P PKPdf 04 33 14.4 -0.9
DYA Yadsworthy 147.13 350 P PKPdf 04 33 14.4 -0.9
TIP Timpagrande 147.37 316 PKP PKPdf 04 33 14.9 -1.2
TIP *e*PKPbc PKPbc 04 33 18.1 -0.4
TIP LR LR
comp=Z,1µm,21.0s,MS5.7
MURB Monte Urbino 147.45 326 PKP PKPdf 04 33 16.2 +0.1
CRE Caprese Michel 147.51 327 PKHKP PKPpre 04 33 13.7
MIDA Miranda 147.53 322 PKP PKPdf 04 33 15.2 -1.1
FNVD Fontana Vidola 147.55 328 PKP PKPdf 04 33 17.2 +1.0
CCA1 Carnmenellis 147.56 352 *e*P PKPdf 04 33 15.4 -0.6
CCA1 Carnmenellis 147.56 352 P PKPdf 04 33 15.4 -0.6
AQU L'Aquila 147.57 324 ⇑PKP2 PKPab 04 33 20.2 -0.8
AQU L'Aquila 147.57 324 PKP PKPdf 04 33 15.8 -0.5
AQU *e*PKPbc PKPbc 04 33 20.1 +1.1
AQU LR LR
comp=Z,2µm,20.0s,MS5.8
AQU L'Aquila 147.57 324 ⇑*i*P PKPbc 04 33 20.1 +1.2
CABF La Chapelle 147.90 336 *e*PKP1 PKPbc 04 33 20.1 +0.4
comp=Z,112nm,1.0s
BOB Bobbio (Coli) 147.93 331 PKIKP PKPdf 04 33 18.6 +1.8
VLC Villacollemand 147.93 329 PKP PKPdf 04 33 14.8 -2.0
VLC *e*PKPbc PKPbc 04 33 20.6 +0.7
VLC LR LR
comp=Z,1µm,22.0s,MS5.6
JSA Saint Aubin 148.01 348 *e*P PKPdf 04 33 15.5 -1.3
JSA Saint Aubin 148.01 348 P PKPdf 04 33 15.5 -1.3
FLN La Foliniere 148.04 345 *e*PKP1 PKPbc 04 33 19.5 -0.5
comp=Z,84nm,1.2s
FLN *e*MLR MLR
comp=Z,1µm,22.0s,MS5.4
FLN La Foliniere 148.04 345 *e*PKP PKPbc 04 33 19.5 -0.5
FLN LR LR
comp=Z,1µm,22.0s,MS5.7
LDF La Druitiere 148.11 345 *e*PKP1 PKPbc 04 33 19.6 -0.6
comp=Z,43nm,1.1s
LOR Lormes 148.14 339 *e*PKP1 PKPbc 04 33 20.2 -0.1
comp=Z,85nm,1.1s
LOR *e*MLR MLR
comp=Z,2µm,21.0s,MS5.5
LOR Lormes 148.14 339 *e*PKP PKPbc 04 33 20.2 -0.1
LOR LR LR
comp=Z,2µm,21.0s,MS5.9
MTCE Montecelio 148.16 324 PKP PKPdf 04 33 17.5 +0.2
CEL Celeste 148.43 315 PKP PKPdf 04 33 17.4 -0.4
CEL *e*PKPbc PKPbc 04 33 20.8 -0.5
CEL LR LR
comp=Z,831nm,20.0s,MS5.5
SSF Saint Saulge 148.44 339 *e*PKP1 PKPbc 04 33 21.2 +0.1
comp=Z,95nm,1.0s
GRR Gorron 148.48 346 *e*PKP1 PKPbc 04 33 20.9 -0.2
comp=Z,41nm,0.9s
LPL La Plagne 148.53 334 *e*PKP1 PKPbc 04 33 21.8 +0.4
comp=Z,45nm,1.1s
HYF Humbligny 148.54 341 *e*PKP1 PKPbc 04 33 21.6 +0.3
LPG La Plagne 148.54 334 *e*PKP1 PKPbc 04 33 22.0 +0.6
comp=Z,58nm,1.1s
TOLF Tolfa 148.55 324 PKP PKPbc 04 33 21.3 -0.2
SMF Signal de Mont 148.69 339 *e*PKP1 PKPbc 04 33 21.5 -0.2
comp=Z,85nm,1.3s
AVF Avril sur Loir 148.73 339 *e*PKP1 PKPbc 04 33 21.4 -0.4
comp=Z,39nm,1.2s
MAON Monte Argentar 148.77 326 PKP PKPdf 04 33 17.2 -1.1
BNI Bardonecchia 148.93 334 *e*PKP2 PKPbc 04 33 22.1 -0.3
BNI MLR MLR
comp=Z,2µm,21.0s,MS5.9
SGMF Saint Gilles 148.98 348 *e*PKP1 PKPbc 04 33 22.0 -0.4
comp=Z,41nm,0.9s
ROSF Rostrenen 149.04 349 *e*PKP1 PKPbc 04 33 22.1 -0.5
comp=Z,18nm,0.9s
GDM Grand'Maison 149.04 335 PKP PKPbc 04 33 23.5 +0.8
BGF Bois d'Agland 149.10 340 *e*PKP1 PKPbc 04 33 22.6 -0.2
comp=Z,58nm,1.1s
MBDF Montbardon 149.15 333 *e*PKP1 PKPbc 04 33 22.9 -0.1
GRN Grenoble 149.16 335 PKP PKPbc 04 33 23.7 +0.7
BST Brest 149.22 350 PKP PKPbc 04 33 24.4 +1.4
IMI Imperia 149.30 331 PKP PKPdf 04 33 17.5 -1.6
SURF Saint Ours 149.33 333 PKP PKPbc 04 33 24.0 +0.6
PLDF La Plantade 149.35 338 PKP PKPbc 04 33 23.5 +0.1
ORIF Oris-en-Rattie 149.37 335 *e*PKP1 PKPbc 04 33 23.7 +0.2
comp=Z,31nm,0.9s
ORIF *e*MLR MLR
comp=Z,2µm,21.2s,MS5.5
SAOF Saorge 149.39 332 PKP PKPbc 04 33 23.4 -0.2
QUIF Quistinic 149.42 348 *e*PKP1 PKPbc 04 33 23.0 -0.5
comp=Z,22nm,0.9s
AGO Saint Agoulin 149.44 339 PKP PKPbc 04 33 23.7 0.0
AUTN L'Aution 149.44 332 PKP PKPbc 04 33 23.7 0.0
TOUF Mont Tournerai 149.51 332 PKP PKPbc 04 33 23.3 -0.6
TCF Toulx Ste Croi 149.54 340 *e*PKP1 PKPbc 04 33 23.8 -0.1
comp=Z,76nm,1.1s
SBF Sospel 149.54 332 *e*PKP1 PKPbc 04 33 23.6 -0.4
comp=Z,92nm,1.1s
LUCF Luceram 149.56 332 PKP PKPbc 04 33 23.8 -0.2
SSB Saint Sauveur 149.60 336 PKP PKPbc 04 33 24.7 +0.6
SSB Saint Sauveur 149.60 336 *e*PKP2 PKPbc 04 33 24.3 +0.2
SSB MLR MLR
comp=Z,1µm,19.0s,MS5.7
SSB Saint Sauveur 149.60 336 *e*PKPbc PKPbc 04 33 24.3 +0.2
SSB LR LR
comp=Z,1µm,19.0s,MS5.7
MVIF Mont Vial 149.65 332 PKP PKPbc 04 33 24.1 -0.1
REVF Revere 149.67 331 PKP PKPbc 04 33 24.1 -0.2
PYM Petit Puy Mans 149.75 339 PKP PKPbc 04 33 24.4 0.0
PGF Pioggiola 149.79 328 *e*PKP1 PKPbc 04 33 24.5 -0.1
comp=Z,158nm,1.1s
CALN Calern 149.88 332 PKP PKPbc 04 33 24.6 -0.2
OCF Saint Nazaire 149.89 335 PKP PKPbc 04 33 25.4 +0.6
OG26 St.-Nazaire-De 149.89 335 PKP PKPbc 04 33 25.4 +0.6
VIVF Saint-Julien-l 149.91 336 *e*PKP1 PKPbc 04 33 24.9 +0.1
comp=Z,52nm,1.1s
MFF Saint Martin d 149.96 343 *e*PKP1 PKPbc 04 33 24.6 -0.3
comp=Z,82nm,1.1s
LBL Lubilhac 150.12 338 PKP PKPbc 04 33 25.6 +0.3
FRF La Foret Royal 150.14 332 *e*PKP1 PKPbc 04 33 25.0 -0.4
comp=Z,78nm,1.1s
SMRF Simiane la Rot 150.27 334 *e*PKP1 PKPbc 04 33 26.0 +0.3
comp=Z,72nm,1.1s
LMR La Mourre 150.38 332 *e*PKP1 PKPbc 04 33 25.7 -0.3
comp=Z,83nm,1.1s
WDD Wield Dalam 150.59 312 PFAKE 04 33 30.0 +8.6
WDD LR LR
comp=Z,1µm,19.0s,MS5.7
RJF Les Rejaudoux 150.64 340 *e*PKP1 PKPbc 04 33 26.4 -0.2
comp=Z,62nm,1.1s
RJF *e*MLR MLR
comp=Z,2µm,21.8s,MS5.5
RJF Les Rejaudoux 150.64 340 *e*PKP PKPbc 04 33 26.4 -0.2
RJF LR LR
comp=Z,2µm,21.8s,MS5.8
CAF Calviac 150.79 339 *e*PKP1 PKPbc 04 33 27.0 0.0
comp=Z,21nm,1.0s
LASF Ste Croix 150.88 336 *e*PKP1 PKPbc 04 33 27.3 +0.1
comp=Z,82nm,1.1s
DGI Dorgali Grotta 151.06 324 PKP PKPdf 04 33 20.7 -1.2
LFF La Frestale 151.21 341 *e*PKP1 PKPbc 04 33 27.7 -0.2
comp=Z,39nm,1.0s
VSL Villasalto 151.75 323 *e*PKPbc PKPbc 04 33 29.1 -0.2
VSL LR LR
comp=Z,968nm,19.0s,MS5.6
MTLF Montolieu 152.12 337 *e*PKP1 PKPbc 04 33 29.8 -0.3
comp=Z,21nm,1.1s
EPF Esparros 153.05 340 *e*PKP1 PKPbc 04 33 30.9 -1.3
comp=Z,16nm,1.0s
ETSF Etsaut 153.46 341 *e*PKP1 PKPbc 04 33 33.4 +0.3
SJPF Ste Jean 153.46 342 *e*PKP1 PKPbc 04 33 33.1 0.0
ASCN Ascension 153.99 175 PFAKE 04 33 40.0 +13
ASCN LR LR
comp=Z,634nm,21.0s,MS5.4
KEST Kesra 154.18 317 PKPbc PKPbc 04 33 35.0 +0.1
comp=Z,3.9nm,1.0s,baz=97,slow=1.6,SNR=6.0
PBRG Braganca 155.98 350 *e*PKPab PKPab 04 33 57.4 +1.5
PVRL Vila Real 156.64 352 *e*PKPab PKPab 04 33 59.5 +0.7
MVO Moncorvo 156.65 350 *e*PKPdf PKPdf 04 33 28.7 -1.1
MVO Moncorvo 156.65 350 *e*PKPab PKPab 04 33 59.3 +0.5
MVO Moncorvo 156.65 350 *e*SS SS 04 57 38.5 +12
MVO Moncorvo 156.65 350 *e*LR LR 05 40 11.6
comp=Z,2µm,18.4s
CMLA Cha da Macela 157.17 28 PFAKE 04 33 40.0 +9.4
CMLA LR LR
comp=Z,2µm,21.0s,MS5.9
ESDC Sonseca Array 157.42 344 PKPab PKPab 04 34 01.4 -0.8
comp=Z,2.2nm,0.8s,baz=21,slow=4.5,SNR=6.3
ESDC PP PP 04 37 37.4 -2.8
comp=Z,0.6nm,0.7s,baz=355,slow=8.0,SNR=2.7
ESLA Sonseca Array 157.42 344 PFAKE 04 33 40.0 +9.1
ESLA LR LR
comp=Z,8µm,20.0s,MS6.5
MTE Manteigas 157.48 351 PFAKE 04 33 40.0 +9.1
MTE LR LR
comp=Z,1µm,21.0s,MS5.8
MTE Manteigas 157.48 351 *e*PKPab Px 04 34 14.1
MTE Manteigas 157.48 351 *e*LR LR 05 42 10.5
comp=Z,1µm,20.0s
PAB San Pablo 157.64 344 PFAKE 04 33 40.0 +8.8
PAB LR LR
comp=Z,2µm,19.0s,MS5.9
PMRV Marv??o 158.40 350 *e*PKPdf PKPdf 04 33 30.8 -1.3
PMRV Marv??o 158.40 350 *e*LR LR 05 37 45.9
comp=Z,1µm,20.6s
PESTR Estremoz 158.98 350 *e*PKPdf PKPdf 04 33 32.0 -0.8
PESTR Estremoz 158.98 350 *e*PKPab PKPab 04 34 10.5 +1.5
PESTR Estremoz 158.98 350 *e*LR LR 05 40 04.3
comp=Z,2µm,17.4s
PMAFR Mafra 159.12 354 *e*LR LR 05 36 42.7
comp=Z,2µm,18.0s
EVO Evora 159.38 351 *e*PKP2 PKPab 04 34 11.5 +0.8
comp=Z,58nm,1.4s
EVO *e*MLR MLR
comp=Z,3µm,19.5s,MS5.8
EVO Evora 159.38 351 *e*PKPdf PKPdf 04 33 31.7 -1.6
EVO Evora 159.38 351 *e*PKPab PKPab 04 34 11.3 +0.6
PBAR Barrancos 159.56 349 *e*PKPdf PKPdf 04 33 32.7 -0.8
PBAR Barrancos 159.56 349 *e*PKPab PKPab 04 34 11.6 +0.1
PBAR Barrancos 159.56 349 *e*LR LR 05 43 09.2
comp=Z,2µm,20.8s
PBEJ Beja 159.85 350 *e*PKPab PKPab 04 34 14.1 +1.4
PCVE Castro Verde 160.26 350 *e*PKPdf PKPdf 04 33 33.7 -0.6
PCVE Castro Verde 160.26 350 *e*PKPab PKPab 04 34 15.8 +1.3
PCVE Castro Verde 160.26 350 *e*SS SS 04 58 04.8 -0.4
PCVE Castro Verde 160.26 350 *e*LR LR 05 36 25.4
comp=Z,2µm,20.3s
PVAQ Vaqueiros 160.43 350 *e*PKPdf PKPdf 04 33 35.2 +0.7
PVAQ Vaqueiros 160.43 350 *e*PKPab PKPab 04 34 15.2 -0.1
PVAQ Vaqueiros 160.43 350 *e*LR LR 05 36 45.4
comp=Z,2µm,18.4s
PBDV Barranco-do-Ve 160.62 350 *e*PKPdf PKPdf 04 33 33.6 -1.1
PBDV Barranco-do-Ve 160.62 350 *e*LR LR 05 36 40.7
comp=Z,2µm,20.3s
MORF Marmelete 160.67 352 *e*PKPab PKPab 04 34 17.0 +0.7
MORF Marmelete 160.67 352 *e*LR LR 05 43 03.5
comp=Z,2µm,20.2s
SFS San Fernando 161.03 345 PFAKE 04 33 50.0 +15
SFS LR LR
comp=Z,5µm,20.0s
TAM Tamanrasset 162.88 289 PFAKE 04 33 50.0 +13
TAM LR LR
comp=Z,2µm,20.0s
MDT Midelt 163.92 337 PKP PKPdf 04 33 38.7 +0.5
comp=Z,2.1nm,1.0s,baz=312,slow=6.7,SNR=3.9
MDT PKPab PKPab 04 34 31.0 +0.3
comp=Z,3.3nm,1.1s,baz=23,slow=8.8,SNR=2.5
DBIC Dimbokro 166.60 213 PFAKE 04 33 50.0 +9.0
DBIC LR LR
comp=Z,2µm,19.0s
SACV Santiago Islan 168.50 104 PFAKE 04 33 50.0 +7.8
SACV LR LR
comp=Z,2µm,20.0s

*DDA **10** 04:18:25.9, 38°.92N×31°.45E, h7km±2km, Md2.5*
*ISK **10** 04:18:25.6, 38°.91N×31°.43E, h13km, MD2.5*
*CSEM **10** 04:18:25.9±0.1, 38°.91N×31°.44E, h15km, MD2.5, Error ellipse: s-maj=2.8km s-min=2.4km az=33.0*
*ISCJB **10** 04:18:26.0±0.6, 38°.91N±0°.03×31°.45E±0°.04, h9km±8km, Error ellipse: s-maj=5.7km s-min=5.2km az=36.8*
ISC 10 04:18:26.2±0.7, 38°.91N±0°.04×31°.45E±0°.04, h17km±10km, n14, σ0°.43/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIZT	**Kizilcal**	**0.34**	**95**	*e*PG	**Pg**	**04 18 33.2**	**-0.1**
KIZT	**Kizilcal**	**0.34**	**95**	*e*Pg	**Pg**	**04 18 33.2**	**-0.1**
BOLV	**Bolvadin**	**0.43**	**244**	*i* P	**Pg**	**04 18 34.9**	**-0.1**
BOLV				*i* S	**Sg**	**04 18 41.3**	**+0.4**
BOLV	**Bolvadin**	**0.43**	**244**	*i* P	**Pg**	**04 18 34.9**	**-0.1**
BOLV				*i* S	**Sg**	**04 18 41.3**	**+0.4**
SVRH	**Sivrihisar-ESK**	**0.54**	**6**	*e*PG	**Pg**	**04 18 36.5**	**-0.4**
SVRH				*e*SG	**Sg**	**04 18 44.6**	**+0.4**
SVRH	**Sivrihisar-ESK**	**0.54**	**6**	*e*Pg	**Pg**	**04 18 36.5**	**-0.5**
SVRH				*e*Sg	**Sg**	**04 18 44.6**	**+0.4**
KDHN	**Kadinhani**	**0.65**	**126**	*i* P	**Pg**	**04 18 39.0**	**0.0**
KDHN				*i* S	**Sg**	**04 18 48.1**	**+0.5**
KDHN	**Kadinhani**	**0.65**	**126**	*i* P	**Pg**	**04 18 39.0**	**0.0**
KDHN				*i* S	**Sg**	**04 18 48.1**	**+0.4**
ESKT	**Eskisehir**	**0.77**	**323**	*e*PG	**Pg**	**04 18 40.7**	**-0.5**
ESKT				*e*SG	**Sg**	**04 18 51.6**	**+0.3**
ESKT	**Eskisehir**	**0.77**	**323**	*e*P	**Pb**	**04 18 40.4**	**-0.6**
ESKT				*i* S	**Sb**	**04 18 51.9**	**+0.8**
ESKT	**Eskisehir**	**0.77**	**323**	*e*Pg	**Pg**	**04 18 40.7**	**-0.5**
ESKT				*e*Sg	**Sg**	**04 18 51.6**	**+0.2**
SEYT	**Eskypehyr**	**0.77**	**323**	*e*P	**Pb**	**04 18 40.4**	**-0.6**
SEYT				*i* S	**Sb**	**04 18 51.9**	**+0.7**
SHUT	**Suhut-Afyon**	**0.79**	**243**	*e*PG	**Pg**	**04 18 40.9**	**-0.6**
SHUT				*e*SG	**Sg**	**04 18 52.2**	**+0.2**
SHUT	**Suhut-Afyon**	**0.79**	**243**	*e*Pg	**Pg**	**04 18 40.9**	**-0.7**
SHUT				*e*Sg	**Sg**	**04 18 52.2**	**+0.2**

*NEIC **10** 04:25:10.9, 37°.94N×21°.48E, h28km, MD3.1(ATH), After ATH.*
*ATH **10** 04:25:10.9, 37°.94N×21°.48E, h28km±2km, MD3.1/11*
*CSEM **10** 04:25:11.0±0.2, 37°.93N×21°.47E, h15km, MD3.1, Error ellipse: s-maj=4.1km s-min=3.8km az=81.0*
*THE **10** 04:25:11.5, 37°.92N×21°.48E, h13km±1km, ML2.7/6, Error ellipse: s-maj=1.9km s-min=0.8km az=352.0*
*ISCJB **10** 04:25:11.7±0.5, 37°.93N±0°.03×21°.46E±0°.04, h23km±6km, Error ellipse: s-maj=5.7km s-min=4.9km az=3.0*
ISC 10 04:25:11.3±0.5, 37°.91N±0°.03×21°.46E±0°.03, h18km±4km, n45, σ0°.91/72, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.15**	**1**	*e*Pb	**Pb**	**04 25 15.8**	**+0.3**
RLS				*e*Sb	**Sg**	**04 25 19.5**	**+1.2**
RLS	**Riolos of Patr**	**0.15**	**1**	*e*PB	**Pg**	**04 25 15.8**	**+0.3**
RLS				*e*SB	**Sg**	**04 25 19.5**	**+1.2**
RLS	**Riolos of Patr**	**0.15**	**1**	*e*Pb	**Pg**	**04 25 15.8**	**+0.3**
RLS				*e*Sb	**Sg**	**04 25 19.5**	**+1.2**
UPR	**University Cam**	**0.45**	**34**	*e*PB	**Pg**	**04 25 19.7**	**-0.8**
UPR				*e*SB	**Sg**	**04 25 27.9**	**+1.2**
UPR	**University Cam**	**0.45**	**34**	*e*Pb	**Pg**	**04 25 19.7**	**-0.8**
UPR				*e*Sb	**Sg**	**04 25 27.9**	**+1.2**
LAKA	**Lakka**	**0.52**	**51**	P	**Pg**	**04 25 20.5**	**-1.3**
LAKA				S	**Sg**	**04 25 28.9**	**0.0**
LAKA	**Lakka**	**0.52**	**51**	P	**Pg**	**04 25 20.5**	**-1.3**
LAKA				S	**Sg**	**04 25 28.9**	**0.0**
KFL	**Anninata**	**0.57**	**291**	P	**Pg**	**04 25 22.9**	**+0.3**
EFP	**Efpalio**	**0.62**	**34**	P	**Pg**	**04 25 22.7**	**-0.9**
EFP				S	**Sg**	**04 25 32.6**	**+0.6**
EFP	**Efpalio**	**0.62**	**34**	*e*PN	**Pg**	**04 25 22.7**	**-0.9**
EFP				*e*SN	**Sg**	**04 25 32.5**	**+0.5**
EFP	**Efpalio**	**0.62**	**34**	P	**Pg**	**04 25 22.7**	**-0.9**
EFP				S	**Sg**	**04 25 32.6**	**+0.6**
TRIZ	**Trizonia**	**0.66**	**46**	P	**Pg**	**04 25 23.3**	**-1.1**
TRIZ				S	**Sg**	**04 25 34.0**	**+0.8**
TRIZ	**Trizonia**	**0.66**	**46**	P	**Pg**	**04 25 23.3**	**-1.1**
TRIZ				S	**Sg**	**04 25 34.0**	**+0.8**
GUR	**Goura**	**0.70**	**88**	P	**Pg**	**04 25 24.0**	**-1.0**
GUR				S	**Sg**	**04 25 34.4**	**+0.1**
GUR	**Goura**	**0.70**	**88**	*e*PB	**Pg**	**04 25 23.8**	**-1.2**
GUR				*e*SN	**Sg**	**04 25 34.4**	**+0.1**
GUR	**Goura**	**0.70**	**88**	P	**Pg**	**04 25 24.0**	**-1.0**
GUR				S	**Sg**	**04 25 34.4**	**+0.1**
KALE	**Kalithea**	**0.72**	**48**	P	**Pg**	**04 25 24.2**	**-1.2**
KALE				S	**Sg**	**04 25 35.5**	**+0.5**
KALE	**Kalithea**	**0.72**	**48**	P	**Pg**	**04 25 24.2**	**-1.2**
KALE				S	**Sg**	**04 25 35.5**	**+0.5**
VLS	**Valsamata**	**0.74**	**291**	*e*Pn	**Pg**	**04 25 25.0**	**-0.8**
VLS				*e*Sn	**Sg**	**04 25 37.6**	**+2.0**
VLS	**Valsamata**	**0.74**	**291**	P	**Pg**	**04 25 25.2**	**-0.6**
VLS				S	**Sg**	**04 25 37.5**	**+1.9**
VLS	**Valsamata**	**0.74**	**291**	*e*PN	**Pg**	**04 25 25.0**	**-0.8**
VLS				*e*SN	**Sg**	**04 25 37.6**	**+2.0**
VLS	**Valsamata**	**0.74**	**291**	P	**Pg**	**04 25 25.2**	**-0.6**
VLS				*e*Sn	**Sg**	**04 25 37.6**	**+2.0**
ITM	**Ithomi**	**0.82**	**153**	*e*Pn	**Pg**	**04 25 27.2**	**-0.1**
ITM	**Ithomi**	**0.82**	**153**	P	**Pg**	**04 25 27.4**	**+0.1**
ITM	**Ithomi**	**0.82**	**153**	*e*PN	**Pg**	**04 25 27.2**	**-0.1**
ITM	**Ithomi**	**0.82**	**153**	P	**Pg**	**04 25 27.4**	**+0.1**
VLX	**Vlachokerasia**	**0.91**	**126**	P	**Pg**	**04 25 28.6**	**-0.3**
VLX				S	**Sg**	**04 25 41.9**	**+1.0**
VLX	**Vlachokerasia**	**0.91**	**126**	*e*PN	**Pg**	**04 25 29.3**	**+0.3**
VLX				*e*SN	**Sn**	**04 25 42.3**	**+0.6**
VLX	**Vlachokerasia**	**0.91**	**126**	P	**Pg**	**04 25 28.6**	**-0.3**
VLX	**Vlachokerasia**	**0.91**	**126**	*e*Pn	**Pg**	**04 25 29.3**	**+0.3**
VLX				S	**Sg**	**04 25 41.9**	**+1.0**
VLX				*e*Sn	**Sn**	**04 25 42.3**	**+0.6**
DSF	**Desfina**	**0.98**	**59**	P	**Pg**	**04 25 28.7**	**-1.6**
DSF	**Desfina**	**0.98**	**59**	P	**Pg**	**04 25 28.7**	**-1.6**
PYL	**PYLOS**	**1.04**	**168**	*e*PN	**Pg**	**04 25 31.4**	**0.0**
PYL	**PYLOS**	**1.04**	**168**	*e*Pn	**Pg**	**04 25 31.4**	**0.0**
LKD2	**Lefkada island**	**1.08**	**324**	P	**Pg**	**04 25 31.1**	**-1.2**
LKD2	**Lefkada island**	**1.08**	**324**	P	**Pg**	**04 25 31.1**	**-1.2**
LTK	**Loutraki**	**1.19**	**84**	P	**Pn**	**04 25 32.7**	**-0.4**
LTK				S	**Sb**	**04 25 49.9**	**+1.4**
LTK	**Loutraki**	**1.19**	**84**	*e*PN	**Pn**	**04 25 32.9**	**-0.2**
LTK	**Loutraki**	**1.19**	**84**	P	**Pn**	**04 25 32.7**	**-0.4**
LTK				S	**Sb**	**04 25 49.9**	**+1.4**
AGG	**Agios Georgios**	**1.30**	**31**	*e*Pn	**Pn**	**04 25 35.5**	**+0.9**
AGG	**Agios Georgios**	**1.30**	**31**	*e*PN	**Pn**	**04 25 35.5**	**+0.9**
AGG	**Agios Georgios**	**1.30**	**31**	*e*Pn	**Pn**	**04 25 35.5**	**+0.9**
LKR	**Lokris**	**1.42**	**58**	*e*Pn	**Pn**	**04 25 35.9**	**-0.3**
LKR	**Lokris**	**1.42**	**58**	*e*PN	**Pn**	**04 25 35.9**	**-0.3**
LKR	**Lokris**	**1.42**	**58**	*e*Pn	**Pn**	**04 25 35.9**	**-0.3**

*CSEM **10** 04:32:14.6, 38°.17N×24°.65E, h13km, After THE*
THE 10 04:32:14.6, 38°.17N×24°.65E, h13km±72km, Error ellipse: s-maj=99.0km s-min=31.7km az=22.0, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRIZ	**Trizonia**	**2.03**	**276**	P	Pn	04 32 54.0	+5.4
TRIZ				S	Sn	04 33 04.5	-9.3
TRIZ	**Trizonia**	**2.03**	**276**	P	Pn	04 32 54.0	+5.4
TRIZ				S	Sn	04 33 04.5	-9.3
TRIZ	**Trizonia**	**2.03**	**276**	P	Pn	04 32 54.0	+5.4
TRIZ				S	Sn	04 33 04.5	-9.3
OUR	**Ouranopolis**	**2.23**	**347**	P	Pn	04 32 50.6	-0.6
ITM	**Ithomi**	**2.37**	**246**	P	Pn	04 32 58.2	+5.0
ITM				S	Sn	04 33 11.5	-11
ITM	**Ithomi**	**2.37**	**246**	P	Pn	04 32 58.2	+5.0
ITM				S	Sn	04 33 11.5	-11
ITM	**Ithomi**	**2.37**	**246**	P	Pn	04 32 58.2	+5.0
ITM				S	Sn	04 33 11.5	-11
LKD2	**Lefkada island**	**3.19**	**282**	P	Pn	04 33 04.3	-0.2
LKD2				S	Sn	04 33 22.7	-20
LKD2	**Lefkada island**	**3.19**	**282**	P	Pn	04 33 04.3	-0.2
LKD2				S	Sn	04 33 22.7	-20
LKD2	**Lefkada island**	**3.19**	**282**	P	Pn	04 33 04.3	-0.2
LKD2				S	Sn	04 33 22.7	-20
ARG	**Arkhangelos**	**3.39**	**124**	P	Pn	04 33 19.0	+12
ARG				S	Sn	04 33 22.9	-24
ARG	**Arkhangelos**	**3.39**	**124**	P	Pn	04 33 19.0	+12
ARG				S	Sn	04 33 22.9	-24

*ATH **10** 04:49:33.4, 37°.85N×21°.41E, h18km±4km, MD3.0/8*
*THE **10** 04:49:33.3, 37°.86N×21°.42E, h16km±1km, ML2.8/5, Error ellipse: s-maj=1.8km s-min=0.8km az=173.0*
*NEIC **10** 04:49:33.4, 37°.85N×21°.41E, h18km, MD3.0(ATH), After ATH.*
*CSEM **10** 04:49:33.2±0.2, 37°.87N×21°.42E, h25km±2km, MD3.0, Error ellipse: s-maj=5.1km s-min=4.2km az=1.0*
*ISCJB **10** 04:49:33.5±0.5, 37°.87N±0°.04×21°.41E±0°.04, h27km±5km, Error ellipse: s-maj=6.3km s-min=4.7km az=179.1*
ISC 10 04:49:33.5±0.6, 37°.87N±0°.04×21°.41E±0°.04, h25km±5km, n38, σ0°.80/60, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.20**	**14**	*e*Pb	**Pb**	**04 49 38.3**	**-0.8**
RLS				*e*Sb	**Sb**	**04 49 42.4**	**-0.5**
RLS	**Riolos of Patr**	**0.20**	**14**	*e*PB	**Pb**	**04 49 38.3**	**-0.8**
RLS				*e*SB	**Sb**	**04 49 42.4**	**-0.5**
RLS	**Riolos of Patr**	**0.20**	**14**	*e*Pb	**Pb**	**04 49 38.3**	**-0.8**
RLS				*e*Sb	**Sb**	**04 49 42.4**	**-0.5**
KFL	**Anninata**	**0.55**	**297**	P	**Pb**	**04 49 44.2**	**-0.2**
LAKA	**Lakka**	**0.59**	**50**	P	**Pb**	**04 49 44.1**	**-1.0**
LAKA				S	**Sb**	**04 49 53.6**	**+0.5**
LAKA	**Lakka**	**0.59**	**50**	P	**Pb**	**04 49 44.1**	**-1.0**
LAKA				S	**Sb**	**04 49 53.6**	**+0.5**
EFP	**Efpalio**	**0.69**	**35**	P	**Pb**	**04 49 46.0**	**-0.8**
EFP				S	**Sb**	**04 49 56.7**	**+0.8**
EFP	**Efpalio**	**0.69**	**35**	*e*PB	**Pb**	**04 49 45.9**	**-0.9**
EFP				*e*SN	**Sn**	**04 49 57.2**	**-0.2**
EFP	**Efpalio**	**0.69**	**35**	P	**Pb**	**04 49 46.0**	**-0.8**
EFP				S	**Sb**	**04 49 56.7**	**+0.8**
EFP				*e*Sn	**Sn**	**04 49 57.2**	**-0.2**
VLS	**Valsamata**	**0.71**	**296**	*e*Pn	**Pb**	**04 49 47.1**	**-0.2**
VLS				*e*Sn	**Sn**	**04 49 58.8**	**+0.7**
VLS	**Valsamata**	**0.71**	**296**	P	**Pb**	**04 49 47.1**	**-0.2**
VLS				S	**Sb**	**04 49 58.1**	**+1.4**
VLS	**Valsamata**	**0.71**	**296**	*e*PN	**Pb**	**04 49 47.1**	**-0.2**
VLS				*e*SN	**Sn**	**04 49 58.8**	**+0.7**
VLS	**Valsamata**	**0.71**	**296**	P	**Pb**	**04 49 47.1**	**-0.2**
VLS				S	**Sb**	**04 49 58.1**	**+1.4**
VLS				*e*Sn	**Sn**	**04 49 58.8**	**+0.7**
TRIZ	**Trizonia**	**0.73**	**46**	P	**Pb**	**04 49 46.4**	**-1.0**
TRIZ				S	**Sb**	**04 49 57.6**	**+0.6**
TRIZ	**Trizonia**	**0.73**	**46**	P	**Pb**	**04 49 46.4**	**-1.0**
TRIZ				S	**Sb**	**04 49 57.6**	**+0.6**
GUR	**Goura**	**0.74**	**84**	P	**Pb**	**04 49 46.6**	**-1.2**
GUR	**Goura**	**0.74**	**84**	*e*PB	**Pb**	**04 49 46.6**	**-1.2**
GUR				*e*SN	**Sb**	**04 49 58.8**	**+1.3**
GUR	**Goura**	**0.74**	**84**	P	**Pb**	**04 49 46.6**	**-1.2**
GUR				*e*Sn	**Sb**	**04 49 58.8**	**+1.3**
KALE	**Kalithea**	**0.78**	**48**	P	**Pb**	**04 49 47.4**	**-1.0**
KALE				S	**Sb**	**04 49 59.5**	**+0.9**
KALE	**Kalithea**	**0.78**	**48**	P	**Pb**	**04 49 47.4**	**-1.0**
KALE				S	**Sb**	**04 49 59.5**	**+0.9**
ITM	**Ithomi**	**0.80**	**149**	*e*Pn	**Pb**	**04 49 49.0**	**+0.3**
ITM	**Ithomi**	**0.80**	**149**	P	**Pb**	**04 49 49.0**	**+0.3**
ITM	**Ithomi**	**0.80**	**149**	*e*PN	**Pb**	**04 49 49.0**	**+0.3**
ITM	**Ithomi**	**0.80**	**149**	P	**Pb**	**04 49 49.0**	**+0.3**
VLX	**Vlachokerasia**	**0.92**	**122**	*e*PN	**Pn**	**04 49 51.2**	**+0.5**
VLX	**Vlachokerasia**	**0.92**	**122**	*e*Pn	**Pn**	**04 49 51.2**	**+0.5**
PYL	**PYLOS**	**1.00**	**164**	*e*PN	**Pn**	**04 49 51.8**	**-0.1**
PYL	**PYLOS**	**1.00**	**164**	*e*Pn	**Pn**	**04 49 51.8**	**-0.1**
DSF	**Desfina**	**1.04**	**58**	P	**Pn**	**04 49 51.8**	**-0.6**
DSF				S	**Sb**	**04 50 07.2**	**+1.2**
DSF	**Desfina**	**1.04**	**58**	P	**Pn**	**04 49 51.8**	**-0.6**
DSF				S	**Sb**	**04 50 07.2**	**+1.2**
LKD2	**Lefkada island**	**1.09**	**328**	P	**Pn**	**04 49 53.3**	**+0.2**
LKD2	**Lefkada island**	**1.09**	**328**	P	**Pn**	**04 49 53.3**	**+0.2**
LTK	**Loutraki**	**1.25**	**82**	P	**Pn**	**04 49 54.6**	**-0.6**
LTK	**Loutraki**	**1.25**	**82**	P	**Pn**	**04 49 54.6**	**-0.6**
AGG	**Agios Georgios**	**1.36**	**32**	P	**Pn**	**04 49 55.9**	**-1.0**
AGG	**Agios Georgios**	**1.36**	**32**	P	**Pn**	**04 49 55.9**	**-1.0**
VLI	**Veliai**	**1.67**	**133**	*e*Pn	**Pb**	**04 50 04.4**	**+0.8**
VLI	**Veliai**	**1.67**	**133**	*e*PN	**Pb**	**04 50 04.4**	**+0.8**

*ISCJB **10** 04:58:26.7±0.9, 31°.64N±0°.04×104°.29E±0°.08, h4km±8km, mb3.6/4, Error ellipse: s-maj=12.9km s-min=5.8km az=22.0*
*IDC **10** 04:58:27.9±1.3, 31°.68N×104°.22E, h0km, mb3.5/5, mb1 3.8/6, mb1mx3.5/26, mbtmp3.5/6, ML4.1/1, Error ellipse: s-maj=41.4km s-min=27.6km az=79.0*
ISC 10 04:58:28.7±0.9, 31°.55N±0°.04×104°.36E±0°.07, h3km±7km, n10, σ1°.18/16, mb3.6/4, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.82**	**219**	⇑*i*Pg	**Pg**	**04 58 43.9**	**-0.5**
CD2				Sg	**Sg**	**04 58 54.7**	**-0.4**
CD2				smax			
	comp=N,1μm,0.6s						
CD2				smax			
	comp=E,2μm,0.4s						
LZH	**Lanzhou**	**4.55**	**355**	*e*Pg	**Pg**	**05 00 00.1**	**+4.3**
LZH				Sg	**Sg**	**05 00 54.9**	**+0.2**
LZH				smax			
	comp=N,40nm,0.5s						
LZH				smax			
	comp=E,37nm,0.5s						
XAN	**Xi'an**	**4.57**	**56**	Pn	**Pn**	**04 59 39.4**	**+0.7**
XAN				Pg	**Pg**	**04 59 57.8**	**+1.5**
XAN				Sn	**Sn**	**05 00 32.0**	**-0.3**
XAN				Sg	**Sg**	**05 00 53.6**	**-1.9**
XAN				smax			
	comp=N,82nm,0.8s						
XAN				smax			
	comp=E,58nm,0.8s						
GYA	**Guiyang**	**5.46**	**158**	Pg	**Pb**	**05 00 04.3**	**-0.4**
GYA				Sg	**Sb**	**05 01 06.3**	**-4.2**
GYA				smax			
	comp=N,40nm,0.8s						
GYA				smax			
	comp=E,60nm,0.8s						
CMAR	**Chiang Mai Arr**	**13.93**	**202**	Pn	**Pn**	**05 01 48.8**	**+1.7**
	comp=E,0.3nm,0.3s,baz=197,slow=24,SNR=2.2						
KSRS	**Korea Array**	**20.27**	**67**	P	**P**	**05 03 06.2**	**+1.0**
	comp=E,0.6nm,0.3s,baz=258,slow=11,SNR=5.2						
WRA	**Warramunga Arr**	**58.72**	**147**	P	**P**	**05 08 27.1**	**-0.7**
	comp=E,0.4nm,0.6s,mb3.6,baz=340,slow=7.9,SNR=5.4						
ASAR	**Alice Springs**	**61.76**	**149**	P	**P**	**05 08 51.3**	**+2.7**
	comp=E,0.1nm,0.3s,mb3.4,baz=337,slow=6.1,SNR=2.9						
NOA	**NORSAR Array B**	**64.40**	**327**	P	**P**	**05 09 04.7**	**-1.1**
	comp=E,0.7nm,0.8s,mb3.8,baz=95,slow=9.3,SNR=3.3						
YKA	**Yellowknife Ar**	**81.20**	**17**	P	**P**	**05 10 44.2**	**-1.3**
	comp=E,0.6nm,0.9s,mb3.5,baz=332,slow=4.9,SNR=3.5						

*IDC **10** 05:00:47.7±1.2, 22°.82N×123°.00E, h0km, mb3.9/6, mb1 4.1/8, mb1mx3.8/26, mbtmp3.9/8, ML3.7/2, Error ellipse: s-maj=36.9km s-min=23.5km az=67.0*
*ISCJB **10** 05:00:49.1±1.4, 22°.93N±0°.05×123°.01E±0°.04, h19km±11km, mb3.8/6, Error ellipse: s-maj=8.8km s-min=4.6km az=157.3*
*JMA **10** 05:00:50.3±0.3, 22°.92N×123°.05E, h71km, M3.3*
*NEIC **10** 05:00:52.7±1.0, 22°.89N×122°.85E, h35km, MG3.3(JMA), Error ellipse: s-maj=15.5km s-min=12.9km az=191.0*
ISC 10 05:00:50.0±1.8, 22°.97N±0°.06×122°.99E±0°.04, h16km±13km, n24, σ1°.04/37, mb3.8/6, 1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**1.31**	**34**	P	**Pn**	**05 01 13.4**	**-0.3**
HATJ				*e*S	**Sb**	**05 01 30.4**	**-0.5**
YOJ	**Yonaguni jima**	**1.48**	**1**	P	**Pn**	**05 01 16.2**	**+0.2**
YOJ				S	**Sn**	**05 01 35.9**	**+0.8**
IRIF	**Iriomote-Funau**	**1.52**	**26**	P	**Pn**	**05 01 16.4**	**-0.1**
IRIF				*e*S	**Sn**	**05 01 35.7**	**-0.2**
JKRS	**Kuro-shima**	**1.57**	**36**	P	**Pn**	**05 01 17.1**	**-0.1**
JKRS				S	**Sn**	**05 01 37.3**	**+0.1**
YULB	**Yu-li**	**1.61**	**285**	*e*Pn	**Pn**	**05 01 16.4**	**-1.5**
JIJ	**Ishigaki jima**	**1.74**	**37**	P	**Pn**	**05 01 18.9**	**-0.7**
JIJ				*e*S	**Sn**	**05 01 39.9**	**-1.6**
NACB	**Ninganchiao**	**1.75**	**313**	*e*Pn	**Pn**	**05 01 18.6**	**-1.1**
NACB				*e*Sn	**Sn**	**05 01 39.7**	**-2.1**
TWG	**Pinlang**	**1.78**	**266**	*e*Pn	**Pn**	**05 01 18.8**	**-1.2**
TWG				*e*Sn	**Sn**	**05 01 41.4**	**-1.0**
SSLB	**Suanglung**	**2.04**	**294**	*e*Pn	**Pn**	**05 01 23.1**	**-0.6**
SSLB				*e*Sn	**Sn**	**05 01 43.5**	**-5.4**
TPUB	**Ta-pu**	**2.20**	**279**	*e*Pn	**Pn**	**05 01 26.3**	**+0.4**
TPUB				*e*Sn	**Sn**	**05 01 54.9**	**+2.2**
YHNB	**Yeheng**	**2.25**	**319**	*e*Pn	**Pn**	**05 01 26.8**	**+0.2**
YHNB				*e*Sn	**Sn**	**05 01 53.8**	**-0.1**
JTJ	**Tarama**	**2.28**	**43**	P	**Pn**	**05 01 26.6**	**-0.4**
JTJ				*e*S	**Sn**	**05 01 54.0**	**-0.8**
TATO	**Taipei**	**2.42**	**326**	*e*Pn	**Pn**	**05 01 29.3**	**+0.4**
TATO				*e*Sn	**Sn**	**05 01 59.6**	**+1.3**
QZH	**Quanzhou**	**4.48**	**297**	⇓*i*P	**Pn**	**05 01 58.1**	**+0.9**
QZH				S	**Sn**	**05 02 46.7**	**-2.3**
QZH				smax			
	comp=N,100nm,0.6s						
QZH				smax			
	comp=E,100nm,0.7s						
QZH				LR	LR		
	comp=N,590nm,8.2s						
QZH				LR	LR		
	comp=E,1μm,14.2s						
QZH				LR	LR		
	comp=Z,1μm,14.0s						
KSRS	**Korea Array**	**15.05**	**15**	Pn	**Pn**	**05 04 23.1**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=188,slow=12,SNR=13						
MAT	**Matsushiro**	**18.87**	**41**	P	**Pn**	**05 05 10.7**	**+0.6**
MJAR	**Matsushiro Arr**	**18.87**	**41**	P	**Pn**	**05 05 11.2**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=230,slow=10.0,SNR=19						
SONM	**Songino Array**	**28.14**	**336**	P	**P**	**05 06 42.2**	**+1.0**
	comp=Z,1.4nm,0.3s,mb4.1,baz=140,slow=11,SNR=3.7						
MKAR	**Makanchi Array**	**40.36**	**316**	P	**P**	**05 08 28.5**	**+1.6**
	comp=Z,1.2nm,0.9s,mb3.6,baz=104,slow=8.9,SNR=5.0						
ZALV	**Zalesovo Beam**	**42.16**	**327**	P	**P**	**05 08 42.0**	**+0.4**
	comp=Z,2.5nm,0.7s,mb3.9,baz=108,slow=9.5,SNR=9.0						
WRA	**Warramunga Arr**	**44.07**	**165**	P	**P**	**05 08 56.2**	**-1.1**
	comp=Z,2.0nm,1.1s,mb3.8,baz=343,slow=8.7,SNR=4.3						
WRA	**Warramunga Arr**	**44.07**	**165**	P	**P**	**05 08 56.2**	**-1.1**
KURK	**Kurchatov**	**44.08**	**320**	P	**P**	**05 08 59.1**	**+1.9**
	comp=Z,0.3nm,0.3s,mb3.5,baz=114,slow=6.2,SNR=4.1						
YKA	**Yellowknife Ar**	**83.43**	**23**	P	**P**	**05 13 17.4**	**+1.0**
	comp=Z,1.2nm,0.9s,mb3.9,baz=308,slow=4.3,SNR=5.9						

IDC 10 05:16:28.3±6.2, 19°.39S×175°.31W, h136km±55km, mb4.1/5, mb1 4.1/6, mb1mx3.7/19, mbtmp4.0/6, Error ellipse: s-maj=117.4km s-min=36.3km az=150.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.41**	**32**	P	Pn	05 18 00.6	+0.1
	1.4nm,0.3s,baz=204,slow=20,SNR=3.1						
AFI				S	Sn	05 19 01.9	-11
	11nm,0.3s,baz=221,slow=9.3,SNR=8.9						
CTA	**Charters Tower**	**36.13**	**262**	P	P	05 23 16.9	-0.7
	3.7nm,0.4s,baz=95,slow=10,SNR=5.6						
STKA	**Stephens Creek**	**40.55**	**243**	P	P	05 23 54.2	-0.2
	1.4nm,0.5s,baz=80,slow=12,SNR=3.0						
ASAR	**Alice Springs**	**47.24**	**255**	P	P	05 24 48.5	+0.6
	4.0nm,0.5s,baz=89,slow=8.1,SNR=42						
ASAR				PcP	PcP	05 26 16.8	-0.4
	1.0nm,0.5s,baz=107,slow=3.9,SNR=4.8						
WRA	**Warramunga Arr**	**47.27**	**260**	P	P	05 24 48.1	-0.1
	4.9nm,0.4s,baz=97,slow=8.6,SNR=143						
WRA				PcP	PcP	05 26 17.0	-0.4
	0.3nm,0.4s,baz=106,slow=2.9,SNR=5.9						
FITZ	**Fitzroy Crossi**	**55.69**	**261**	P	P	05 25 51.1	+0.2
	2.9nm,0.8s,baz=97,slow=8.1,SNR=9.0						

MAN 10 05:18:56, 6°.18N×124°.22E, h58km, mb4.5, ML3.4, MS3.3, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.73**	**97**	⇓*e*P	Pn	05 19 15.5	+5.0
GSPH				*i* S	Sn	05 19 29.5	+8.4
CTBH	**Cotabato--PC H**	**1.04**	**1**	*i* P	Pn	05 19 16.0	+1.5
CTBH				*i* S	Sn	05 19 30.9	+2.7
DMPH	**Davao City--Mi**	**1.56**	**55**	⇑*i*P	Pn	05 19 23.4	+1.9
PAGZ	**Pagadian**	**1.86**	**333**	*e*P	Pn	05 19 27.3	+1.7
PAGZ				*e*S	Sn	05 19 40.1	-7.9
BUKP	**Musuan**	**1.89**	**26**	*e*P	Pn	05 19 27.4	+1.5
BUKP				*e*S	Sn	05 19 38.0	-11
ZMPH	**Zamboanga City**	**2

RUSC	**La Rusia**	**1.38**	**236**	⇑*iP*	**Pn**	**05 25 52.9**	**-0.7**
RUSC				*e*S	**Sn**	**05 26 09.3**	**-1.4**
SOCV	**Socops**	**1.90**	**34**	*e*P	**Pn**	**05 26 01.9**	**+1.1**
SOCV				*e*S	**Sn**	**05 26 28.5**	**+4.9**
OCAC	**Ocana**	**2.07**	**318**	*e*P	**Pn**	**05 26 03.6**	**+0.5**
OCAC				*e*S	**Sn**	**05 26 31.5**	**+3.8**
VIGV	**El Vigia**	**2.20**	**14**	*e*P	**Pn**	**05 26 05.9**	**+1.0**
VIGV				*e*S	**Sn**	**05 26 35.9**	**+4.9**
SDV	**Santo Domingo**	**2.52**	**30**	P	**Pn**	**05 26 10.1**	**+0.7**
	95nm,0.3s,baz=167,slow=3.8,SNR=758						
SDV				S	**Sn**	**05 26 44.1**	**+5.2**
	640nm,0.3s,baz=304,slow=12,SNR=13						
SDV				LR	LR	05 27 05.7	
	comp=Z,303nm,19.6s,baz=4.2,slow=38						
SDV	**Santo Domingo**	**2.52**	**30**	*e*Pn	**Pn**	**05 26 10.2**	**+0.8**
SDV				*e*S	**Sn**	**05 26 48.1**	**+9.1**
CHIC	**Chingaza**	**2.73**	**221**	*e*P	**Pn**	**05 26 12.0**	**-0.2**
CHIC				*e*S	**Sn**	**05 26 44.6**	**+0.7**
ROSC	**El Rosal**	**3.01**	**233**	P	**Pn**	**05 26 17.5**	**+1.4**
	44nm,0.3s,baz=99,slow=19,SNR=155						
ROSC				S	**Sn**	**05 26 58.4**	**+7.5**
	53nm,0.3s,baz=296,slow=22,SNR=4.2						
ROSC				LR	LR	05 27 46.6	
	comp=Z,722nm,19.1s,baz=124,slow=44						
ROSC	**El Rosal**	**3.01**	**233**	*e*Pn	**Pn**	**05 26 17.3**	**+1.3**
HELC	**Santa Helena**	**3.63**	**263**	*e*P	**Pn**	**05 26 23.4**	**-1.2**
HELC				*e*S	**Sn**	**05 27 06.2**	**0.0**
SANV	**Sanarito**	**3.66**	**40**	*e*P	**Pn**	**05 26 25.9**	**+1.0**
QARV	**Quebrada Arrib**	**3.75**	**22**	*e*P	**Pn**	**05 26 26.9**	**+0.6**
VIRV	**Villa del Rosa**	**3.81**	**353**	*e*P	**Pn**	**05 26 25.5**	**-1.6**
CURV	**Curarigua**	**3.83**	**30**	*e*P	**Pn**	**05 26 28.0**	**+0.8**
DABV	**Dabajuro**	**4.39**	**17**	*e*P	**Pn**	**05 26 35.4**	**+0.4**
BAUV	**El Baul**	**4.45**	**60**	*e*P	**Pn**	**05 26 35.7**	**-0.1**
SIQV	**Siquisique**	**4.45**	**28**	*e*P	**Pn**	**05 26 36.8**	**+1.0**
TURV	**Turiamo**	**5.50**	**47**	*e*P	**Pn**	**05 26 50.5**	**+0.3**
MONV	**Montecano**	**5.57**	**20**	*e*P	**Pn**	**05 26 50.3**	**-0.9**
CAOV	**Caicara del Or**	**5.59**	**83**	*e*P	**Pn**	**05 26 51.9**	**+0.4**
PCRV	**Puerto La Cruz**	**7.99**	**64**	P	**Pn**	**05 27 24.8**	**+0.3**
	7.4nm,0.3s,baz=217,slow=7.6,SNR=57						
PCRV				S	**Sn**	**05 28 51.8**	**-1.9**
	4.0nm,0.3s,baz=266,slow=13,SNR=2.8						
BCIP	**Isla Barro Col**	**8.22**	**288**	*e*Pn	**Pn**	**05 27 25.7**	**-1.8**
	20nm,0.8s						
OTAV	**Otavalo**	**9.14**	**226**	*e*Pn	**Pn**	**05 27 40.9**	**+0.6**
	7.8nm,1.0s						
SDDR	**Presa de Saban**	**12.23**	**3**	*e*Pn	**Pn**	**05 28 22.3**	**-0.2**
	11nm,0.6s						
SDDR				*e*Sn	**Sn**	**05 30 31.9**	**-5.5**
SJG	**San Juan**	**12.67**	**26**	P	**Pn**	**05 28 26.4**	**-2.1**
	2.7nm,0.3s,baz=325,slow=22,SNR=11						
SJG	**San Juan**	**12.67**	**26**	*e*Pn	**Pn**	**05 28 26.5**	**-1.9**
	18nm,0.3s						
MTP	**Monte Pirata**	**12.93**	**28**	*e*Pn	**Pn**	**05 28 30.2**	**-1.8**
FDF	**Fort de France**	**13.26**	**52**	*e*Pn	**Pn**	**05 28 34.8**	**-1.7**
LPAZ	**La Paz**	**23.14**	**171**	P	**P**	**05 30 34.6**	**+1.3**
	7.8nm,0.5s,mb4.4,baz=349,slow=7.5,SNR=88						
LPAZ	**La Paz**	**23.14**	**171**	*e*P	**P**	**05 30 34.4**	**+1.2**
	7.3nm,0.5s,mb4.4						
SIV	**San Ignacio**	**24.97**	**155**	P	**P**	**05 30 50.6**	**+0.4**
	1.7nm,0.7s,mb3.7,baz=347,slow=11,SNR=6.6						
TXAR	**Lajitas Array**	**37.44**	**311**	P	**P**	**05 32 40.0**	**+0.2**
	0.2nm,0.5s,mb3.2,baz=126,slow=9.8,SNR=5.5						
TXAR	**Lajitas Array**	**37.44**	**311**	P	**P**	**05 32 40.0**	**+0.2**
MNTX	**Cornudos Mount**	**39.92**	**313**	*e*P	**P**	**05 33 01.4**	**+0.8**
	1.0nm,0.6s,mb3.7						
SDCO	**Great Sand Dun**	**43.40**	**320**	*e*P	**P**	**05 33 36.0**	**+7.0**
	0.6nm,0.6s,mb3.5						
PDAR	**Pinedale Array**	**48.88**	**323**	P	**P**	**05 34 10.8**	**-1.3**
	0.2nm,0.5s,mb3.4,baz=125,slow=8.9,SNR=2.4						
YKA	**Yellowknife Ar**	**63.80**	**339**	P	**P**	**05 35 58.1**	**+0.3**
	0.9nm,0.7s,mb3.9,baz=128,slow=7.0,SNR=12						
ASAR	**Alice Springs**	**149.99**	**233**	PKPbc	PKPbc	05 45 16.4	-0.7
	0.7nm,0.8s,baz=124,slow=2.9,SNR=6.5						
WRA	**Warramunga Arr**	**151.31**	**240**	PKPbc	PKPbc	05 45 20.7	+0.5
	0.7nm,0.6s,baz=109,slow=2.3,SNR=7.3						

*IDC **10** 05:27:03.6±3.2, 1°.79S×99°.37E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.6/22, mbtmp3.6/5, Error ellipse: s-maj=145.0km s-min=21.4km az=57.0*
*ISCJB **10** 05:27:05.7±2.0, 1°.7S±0°.1×99°.44E±0°.06, h24km±13km, mb3.6/4, Error ellipse: s-maj=21.7km s-min=9.4km az=1.2*
*DJA **10** 05:27:08, 1°.31S×99°.41E, h15km, MLv3.8/3*
ISC 10 05:27:04.8±2.6, 1°.8S±0°.1×99°.40E±0°.09, h7km±16km, n12, σ1.9 03/14, mb3.6/4, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**0.55**	**326**	P	**Pg**	**05 27 15.3**	**-0.2**
SISI				S	**Sg**	**05 27 23.0**	**+0.3**
PDSI	**Padang**	**1.37**	**51**	P	**Pn**	**05 27 26.9**	**-3.5**
PDSI				S	**Sb**	**05 27 43.9**	**-4.7**
PPI	**Padang Panjang**	**1.66**	**37**	P	**Pn**	**05 27 31.1**	**-3.2**
SDSI	**Sungai Dareh**	**2.20**	**67**	P	**Pn**	**05 27 42.5**	**+0.7**
SDSI				S	**Sn**	**05 28 09.8**	**+0.5**
MNSI	**Mandailing Nat**	**2.57**	**4**	P	**Pn**	**05 27 50.4**	**+3.5**
BKNI	**Bangkinang**	**2.67**	**38**	P	**Pn**	**05 27 55.3**	**+7.1**
CMAR	**Chiang Mai Arr**	**20.12**	**359**	P	**P**	**05 31 39.5**	**0.0**
	0.8nm,0.5s,baz=175,slow=12,SNR=4.4						
WRA	**Warramunga Arr**	**38.62**	**120**	P	**P**	**05 34 28.4**	**-0.6**
	0.4nm,0.5s,mb3.4,baz=302,slow=9.2,SNR=6.3						
ASAR	**Alice Springs**	**39.86**	**126**	P	**P**	**05 34 40.1**	**+0.8**
	0.5nm,0.8s,mb3.3,baz=305,slow=7.4,SNR=3.7						
MKAR	**Makanchi Array**	**50.67**	**345**	P	**P**	**05 36 05.3**	**+0.6**
	0.3nm,0.3s,mb3.7,baz=141,slow=8.5,SNR=3.3						
ZALV	**Zalesovo Beam**	**56.85**	**350**	P	**P**	**05 36 49.1**	**-0.8**
	0.5nm,0.4s,mb3.9,baz=150,slow=6.7,SNR=3.5						
TXAR	**Lajitas Array**	**144.90**	**37**	PKP	PKPdf	05 46 42.4	-1.1
	0.3nm,0.4s,baz=206,slow=0.9,SNR=12						

*ATH **10** 05:32:00.9, 37°.89N×21°.43E, h23km, MD3.0/8*
*NEIC **10** 05:32:00.9, 37°.89N×21°.43E, h23km, MD3.0(ATH), After ATH.*
*THE **10** 05:32:01.7, 37°.88N×21°.44E, h5km±1km, ML2.9/10, Error ellipse: s-maj=1.4km s-min=0.5km az=237.0*
*CSEM **10** 05:32:01.4±0.3, 37°.89N×21°.40E, h20km, MD3.0, Error ellipse: s-maj=5.9km s-min=4.4km az=90.0*
*ISCJB **10** 05:32:01.1±0.4, 37°.88N±0°.02×21°.43E±0°.03, h3km±6km, Error ellipse: s-maj=4.0km s-min=3.4km az=36.8*
ISC 10 05:32:01.8±0.5, 37°.88N±0°.02×21°.43E±0°.03, h13km±5km, n45, σ0.90/76, 1D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.18**	**9**	*e*Pb	**Pg**	**05 32 06.0**	**+0.1**
RLS				*e*Sb	**Sg**	**05 32 09.7**	**+1.0**
RLS	**Riolos of Patr**	**0.18**	**9**	*e*PB	**Pg**	**05 32 06.0**	**+0.1**
RLS				*e*SB	**Sg**	**05 32 09.7**	**+1.0**
RLS	**Riolos of Patr**	**0.18**	**9**	*e*Pb	**Pg**	**05 32 06.0**	**+0.1**
RLS				*e*Sb	**Sg**	**05 32 09.7**	**+1.0**
KFL	**Anninata**	**0.56**	**295**	P	**Pg**	**05 32 12.2**	**-0.5**
KFL				S	**Sg**	**05 32 21.1**	**+1.0**
LAKA	**Lakka**	**0.56**	**50**	P	**Pg**	**05 32 12.0**	**-0.8**
LAKA				S	**Sg**	**05 32 20.6**	**+0.3**
LAKA	**Lakka**	**0.56**	**50**	P	**Pg**	**05 32 12.0**	**-0.8**
LAKA				S	**Sg**	**05 32 20.6**	**+0.3**
EFP	**Efpalio**	**0.66**	**34**	P	**Pg**	**05 32 13.7**	**-1.0**
EFP				S	**Sg**	**05 32 24.1**	**+0.7**
EFP	**Efpalio**	**0.66**	**34**	⇓*iP*N	**Pg**	**05 32 13.8**	**-0.9**
EFP	**Efpalio**	**0.66**	**34**	P	**Pg**	**05 32 13.7**	**-1.0**
EFP				S	**Sg**	**05 32 24.1**	**+0.7**
TRIZ	**Trizonia**	**0.70**	**46**	P	**Pg**	**05 32 14.3**	**-1.1**
TRIZ				S	**Sg**	**05 32 25.0**	**+0.4**
TRIZ	**Trizonia**	**0.70**	**46**	P	**Pg**	**05 32 14.3**	**-1.1**
TRIZ				S	**Sg**	**05 32 25.0**	**+0.4**
GUR	**Goura**	**0.72**	**85**	P	**Pg**	**05 32 14.8**	**-1.0**
GUR				S	**Sg**	**05 32 25.6**	**+0.3**
GUR	**Goura**	**0.72**	**85**	*e*PN	**Pg**	**05 32 14.8**	**-1.0**
GUR				*e*SN	**Sg**	**05 32 25.6**	**+0.3**
GUR	**Goura**	**0.72**	**85**	P	**Pg**	**05 32 14.8**	**-1.0**
GUR				S	**Sg**	**05 32 25.6**	**+0.3**
VLS	**Valsamata**	**0.73**	**294**	*e*Pn	**Pg**	**05 32 15.3**	**-0.6**
VLS	**Valsamata**	**0.73**	**294**	P	**Pg**	**05 32 15.1**	**-0.8**
VLS				S	**Sg**	**05 32 26.5**	**+1.0**
VLS	**Valsamata**	**0.73**	**294**	*e*PN	**Pg**	**05 32 15.3**	**-0.6**
VLS	**Valsamata**	**0.73**	**294**	*e*Pn	**Pg**	**05 32 15.3**	**-0.6**
VLS				S	**Sg**	**05 32 26.5**	**+1.0**
KALE	**Kalithea**	**0.76**	**47**	P	**Pg**	**05 32 15.3**	**-1.2**
KALE				S	**Sg**	**05 32 26.8**	**+0.4**
KALE	**Kalithea**	**0.76**	**47**	P	**Pg**	**05 32 15.3**	**-1.2**
KALE				S	**Sg**	**05 32 26.8**	**+0.4**
ITM	**Ithomi**	**0.80**	**150**	*e*Pn	**Pg**	**05 32 16.8**	**-0.5**
ITM	**Ithomi**	**0.80**	**150**	P	**Pg**	**05 32 16.8**	**-0.5**
ITM				S	**Sg**	**05 32 28.7**	**+0.9**
ITM	**Ithomi**	**0.80**	**150**	*e*PN	**Pg**	**05 32 16.8**	**-0.5**
ITM	**Ithomi**	**0.80**	**150**	P	**Pg**	**05 32 16.8**	**-0.5**
ITM				S	**Sg**	**05 32 28.7**	**+0.9**
VLX	**Vlachokerasia**	**0.91**	**124**	P	**Pg**	**05 32 18.7**	**-0.6**
VLX				S	**Sg**	**05 32 32.6**	**+1.4**
VLX	**Vlachokerasia**	**0.91**	**124**	P	**Pg**	**05 32 18.7**	**-0.6**
VLX				S	**Sg**	**05 32 32.6**	**+1.4**
PYL	**PYLOS**	**1.01**	**166**	P	**Pg**	**05 32 20.2**	**-1.1**
PYL				S	**Sg**	**05 32 35.5**	**+1.0**
PYL	**PYLOS**	**1.01**	**166**	*e*PN	**Pg**	**05 32 20.6**	**-0.7**
PYL	**PYLOS**	**1.01**	**166**	P	**Pg**	**05 32 20.2**	**-1.1**
PYL	**PYLOS**	**1.01**	**166**	*e*Pn	**Pg**	**05 32 20.6**	**-0.7**
PYL				S	**Sg**	**05 32 35.5**	**+1.0**
DSF	**Desfina**	**1.01**	**58**	P	**Pg**	**05 32 19.8**	**-1.5**
DSF				S	**Sg**	**05 32 35.2**	**+0.6**
DSF	**Desfina**	**1.01**	**58**	P	**Pg**	**05 32 19.8**	**-1.5**
DSF				S	**Sg**	**05 32 35.2**	**+0.6**
EVR	**Evrytania**	**1.08**	**16**	*e*Pb	**Pg**	**05 32 20.5**	**-2.1**
EVR	**Evrytania**	**1.08**	**16**	*e*PB	**Pg**	**05 32 20.5**	**-2.1**
EVR	**Evrytania**	**1.08**	**16**	*e*Pb	**Pg**	**05 32 20.5**	**-2.1**
LKD2	**Lefkada island**	**1.09**	**326**	P	**Pg**	**05 32 22.9**	**0.0**
LKD2				S	**Sg**	**05 32 37.7**	**+0.6**
LKD2	**Lefkada island**	**1.09**	**326**	P	**Pg**	**05 32 22.9**	**0.0**
LKD2				S	**Sg**	**05 32 37.7**	**+0.6**
LTK	**Loutraki**	**1.22**	**83**	P	**Pn**	**05 32 24.1**	**-0.5**
LTK				S	**Sb**	**05 32 41.5**	**+1.0**
LTK	**Loutraki**	**1.22**	**83**	*e*PN	**Pn**	**05 32 24.1**	**-0.5**
LTK	**Loutraki**	**1.22**	**83**	P	**Pn**	**05 32 24.1**	**-0.5**
LTK				S	**Sb**	**05 32 41.5**	**+1.0**
AGG	**Agios Georgios**	**1.34**	**31**	*e*Pn	**Pn**	**05 32 26.1**	**-0.1**
AGG	**Agios Georgios**	**1.34**	**31**	P	**Pn**	**05 32 26.4**	**+0.2**
AGG				S	**Sb**	**05 32 45.4**	**+1.5**
AGG	**Agios Georgios**	**1.34**	**31**	*e*PN	**Pn**	**05 32 26.1**	**-0.1**
AGG	**Agios Georgios**	**1.34**	**31**	*e*Pn	**Pn**	**05 32 26.1**	**-0.1**
AGG	**Agios Georgios**	**1.34**	**31**	P	**Pn**	**05 32 26.4**	**+0.2**
AGG				S	**Sb**	**05 32 45.4**	**+1.5**

MEX 10 05:33:38.0±0.8, 15°.89N×97°.38W, h16km±10km, MD3.6, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.87**	**305**	*i* P	Pb	05 33 51.3	-3.5
PNIG				*i* S	Sb	05 34 02.7	-3.5
HUIG	**Huatulco**	**1.23**	**96**	*i* P	Pn	05 33 57.3	-3.3
HUIG				*i* S	Sb	05 34 10.8	-5.7
VHO	**Vista Hermosa**	**1.32**	**28**	*i* P	Pn	05 33 58.2	-3.6
VHO				*i* S	Sn	05 34 14.0	-5.2
OXX	**Oaxaca**	**1.34**	**28**	*e*P	Pn	05 33 58.8	-3.2
OXX				*i* S	Sn	05 34 13.9	-5.6
UTMO	**Huajuapan**	**1.97**	**348**	*e*P	Pn	05 34 07.7	-3.0
UTMO				*i* S	Sn	05 34 31.7	-3.4

*NOU **10** 05:48:36.2±0.6, 15°.46S×167°.83E, h30km, MD3.6, ML4.5*
*IDC **10** 05:49:08.9±0.8, 18°.06S×167°.93E, h0km, mb4.2/14, mb1 4.4/14, mb1mx4.4/16, mbtmp4.2/14, MS4.8/1, Ms1 4.8/1, ms1mx3.7/13, Error ellipse: s-maj=23.2km s-min=18.5km az=137.0*
*LDG **10** 05:49:10.7±0.1, 18°.11S×167°.65E, h10km, Mb4.6/2, Error ellipse: s-maj=16.0km s-min=3.5km az=97.0*
*BJI **10** 05:49:12.4, 18°.20S×167°.80E, h35km, mB5.2/4, mb4.8/7*
*ISCJB **10** 05:49:12.4±0.4, 18°.19S±0°.06×167°.81E±0°.07, h33km, mb4.4/24, Error ellipse: s-maj=10.3km s-min=8.6km az=31.8*
*NEIC **10** 05:49:14.4±0.3, 18°.16S×167°.85E, h35km, mb4.6/12, Error ellipse: s-maj=11.0km s-min=8.5km az=146.0*
ISC 10 05:49:15.8±2.6, 18°.17S±0°.08×167°.92E±0°.08, h49km±23km, n83, σ1.9 08/43, mb4.4/24, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.12**	**199**	*e*P	**Pn**	**05 50 11.7**	**-4.7**
DZM	**Mont Dzumac**	**4.12**	**199**	*e*Pn	**Pn**	**05 50 12.6**	**-3.8**
MSVF	**Nonsavu**	**9.65**	**89**	*e*Pn	**Pn**	**05 51 35.1**	**+3.0**
	321nm,1.4s						
ARMA	**Armidale**	**19.19**	**228**	*e*P	pP	05 53 50.2	+3.3
CTA	**Charters Tower**	**20.56**	**261**	*e*P	**P**	**05 53 51.7**	**+1.2**
	9.7nm,1.2s						
CTA	**Charters Tower**	**20.56**	**261**	P	**P**	**05 53 50.5**	**0.0**
	14nm,1.0s,baz=85,slow=10.0,SNR=4.9						
CTA				S	Sx	05 57 34.3	
	1.7nm,0.3s,baz=86,slow=15,SNR=1.9						
CTAO	**Charters Tower**	**20.56**	**261**	*e*P	**P**	**05 53 50.5**	**-0.1**
	8.1nm,0.8s						
URZ	**Urewera**	**21.57**	**160**	P	**P**	**05 54 00.9**	**-0.4**
	7.5nm,0.6s,mb4.3,baz=275,slow=3.3,SNR=7.3						
URZ				S	**S**	**05 57 56.0**	**-1.5**
	2.7nm,0.5s,baz=328,slow=19,SNR=2.5						
URZ	**Urewera**	**21.57**	**160**	*e*P	**P**	**05 54 00.9**	**-0.3**
CNB	**Canberra Magne**	**23.73**	**220**	*e*P	**P**	**05 54 25.2**	**+1.7**
CAN	**Canberra**	**23.96**	**221**	*e*P	**P**	**05 54 26.7**	**+1.1**
	15nm,0.8s,mb4.5						
RPZ	**Rata Peaks**	**25.61**	**175**	S	Sx	05 59 27.1	
	18nm,1.1s,baz=65,slow=12,SNR=3.8						
RPZ	**Rata Peaks**	**25.61**	**175**	*e*P	**P**	**05 54 36.5**	**-4.0**
STKA	**Stephens Creek**	**27.39**	**235**	*e*P	**P**	**05 54 56.5**	**-0.2**
	10nm,0.9s,mb4.4						
STKA	**Stephens Creek**	**27.39**	**235**	P	**P**	**05 54 56.9**	**+0.1**
	6.7nm,1.0s,mb4.1,baz=20,slow=5.0,SNR=4.5						
STKA				S	Sx	05 59 23.2	
	2.7nm,0.7s,baz=90,slow=13,SNR=1.7						
STKA	**Stephens Creek**	**27.39**	**235**	*e*P	**P**	**05 54 57.6**	**+0.8**
	15nm,1.4s,mb4.3						
STKA				*e*	pP	05 55 09.0	-0.5
STKA				S	Sx	05 59 23.2	
WRAB	**Tennant Creek**	**31.75**	**261**	*e*P	**P**	**05 55 34.2**	**-1.3**
	3.1nm,0.9s,mb4.1						
WRA	**Warramunga Arr**	**31.76**	**261**	P	**P**	**05 55 33.5**	**-2.1**
	1.3nm,0.9s,mb3.8,baz=92,slow=9.5,SNR=5.8						
WRA	**Warramunga Arr**	**31.76**	**261**	P	**P**	**05 55 33.5**	**-2.1**
ASAR	**Alice Springs**	**32.19**	**254**	P	**P**	**05 55 38.6**	**-0.7**
	2.3nm,0.6s,mb4.2,baz=82,slow=8.7,SNR=22						
FORT	**Forrest**	**38.20**	**243**	*e*P	**P**	**05 56 22.9**	**-8.0**
	41nm,1.6s,mb4.9						
FITZ	**Fitzroy Crossi**	**40.12**	**263**	*e*P	**P**	**05 56 46.9**	**-0.2**
	12nm,0.8s,mb4.7						
FITZ	**Fitzroy Crossi**	**40.12**	**263**	P	**P**	**05 56 47.1**	**0.0**
	4.7nm,0.7s,mb4.3,baz=112,slow=8.7,SNR=8.5						
FITZ	**Fitzroy Crossi**	**40.12**	**263**	*e*P	**P**	**05 56 46.6**	**-0.5**
FITZ				*e*	pP	05 56 59.0	-1.2
SBA	**Scott Base**	**59.72**	**180**	*e*P	**P**	**05 59 15.4**	**+0.4**
	4.2nm,1.0s,mb4.4						
MJAR	**Matsushiro Ar**	**61.23**	**333**	P	**P**	**05 59 25.2**	**-0.5**
	0.9nm,0.6s,mb4.0,baz=164,slow=6.8,SNR=3.4						
KSRS	**Korea Array**	**66.92**	**326**	P	**P**	**06 00 01.0**	**-2.1**
	0.3nm,0.3s,mb3.9,baz=148,slow=5.3,SNR=2.8						
PETK	**Petropavlovsk-**	**71.53**	**354**	P	**P**	**06 00 31.3**	**0.0**
	7.1nm,0.9s,mb4.6,baz=142,slow=7.5,SNR=6.5						
QSPA	**South Pole Qui**	**71.88**	**180**	*e*P	**P**	**06 00 33.1**	**-0.1**
	7.9nm,0.9s,mb4.6						
CMAR	**Chiang Mai Arr**	**76.92**	**295**	P	**P**	**06 01 04.5**	**+1.1**
	1.4nm,0.5s,mb4.2,baz=132,slow=4.6,SNR=10						
MAW	**Mawson**	**78.95**	**202**	*e*P	**P**	**06 01 15.5**	**+1.6**
	2.9nm,1.0s,mb4.2						
MAW	**Mawson**	**78.95**	**202**	P	**P**	**06 01 15.3**	**+1.4**
	2.4nm,0.9s,mb4.1,baz=55,slow=3.8,SNR=3.8						
MAW	**Mawson**	**78.95**	**202**	*e*P	**P**	**06 01 15.5**	**+1.6**
	1.2nm,1.0s,mb3.8						
ULN	**Ulaanbaatar**	**85.26**	**324**	*e*P	**P**	**06 01 48.0**	**+0.9**
	5.4nm,0.9s,mb4.7						
GTA	**Gaotai**	**85.48**	**314**	P	**P**	**06 01 51.0**	**+2.5**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.5						
SONM	**Songino Array**	**85.62**	**324**	P	**P**	**06 01 49.6**	**+0.7**
	comp=Z,2.3nm,0.8s,mb4.5,baz=101,slow=1.5,SNR=5.1						
TTA	**Tatalina**	**85.64**	**16**	*e*P	**P**	**06 01 48.8**	**+0.1**
BILL	**Bilibino**	**85.97**	**359**	*e*P	**P**	**06 01 50.2**	**0.0**
	comp=Z,10nm,0.9s,mb5.0						
CMB	**Columbia Colle**	**87.38**	**49**	*e*P	**P**	**06 01 57.3**	**-0.5**
	comp=Z,3.4nm,0.8s,mb4.6						
ISA	**Isabella**	**87.78**	**51**	*e*P	**P**	**06 01 59.2**	**-0.6**
	comp=Z,4.4nm,1.1s,mb4.6						
PMSA	**Palmer Station**	**88.34**	**160**	LR	LR	06 36 19.7	
	comp=Z,440nm,18.9s,baz=53,slow=32						
NVAR	**Mina Array Bea**	**89.04**	**49**	P	**P**	**06 02 05.3**	**-0.3**
	comp=Z,1.2nm,0.8s,mb4.3,baz=223,slow=6.7,SNR=7.8						
NVAR	**Mina Array Bea**	**89.04**	**49**	P	**P**	**06 02 05.3**	**-0.3**
WVOR	**Wild Horse Val**	**90.44**	**45**	*e*P	**P**	**06 02 11.8**	**-0.4**
	comp=Z,3.8nm,0.9s,mb4.7						
TXAR	**Lajitas Array**	**97.36**	**62**	P	**P**	**06 02 43.9**	**-0.3**
	comp=Z,0.1nm,0.7s,mb3.4,baz=226,slow=7.2,SNR=2.3						
MKAR	**Makanchi Array**	**100.10**	**316**	P	Pdif	06 02 57.6	+1.5
	comp=Z,0.4nm,0.8s,baz=112,slow=6.7,SNR=2.4						
YKA	**Yellowknife Ar**	**100.30**	**27**	P	Pdif	06 02 56.4	-0.5
	comp=Z,0.2nm,0.6s,baz=257,slow=4.7,SNR=3.5						
ZALV	**Zalesovo Beam**	**100.51**	**323**	P	Pdif	06 02 57.5	-0.4
	comp=Z,0.3nm,0.3s,baz=108,slow=4.7,SNR=2.4						
ARCES	**ARCESS Array B**	**123.72**	**345**	PKP	PKPdf	06 08 07.0	-0.4
	comp=Z,1.8nm,0.9s,baz=35,slow=3.3,SNR=4.0						
BRTR	**Keskin Array B**	**135.17**	**308**	PKP	PKPdf	06 08 31.4	+1.3
	comp=Z,0.6nm,0.9s,baz=35,slow=5.3,SNR=2.9						
GERES	**GERESS Array B**	**142.96**	**332**	PKP	PKPdf	06 08 44.6	+0.7
	comp=Z,0.5nm,0.2s,baz=64,slow=4.5,SNR=2.6						
GIVF	**Givet**	**145.38**	**341**	*e*PKP1	PKPbc	06 08 47.7	-0.4
BAIF	**Baives**	**145.60**	**341**	*e*PKP1	PKPbc	06 08 48.7	-0.1
	comp=Z,27nm,1.0s						
BFO	**Black Forest**	**145.63**	**336**	*e*PKPdf	PKPdf	06 08 48.9	+0.3
CDF	**Champ du Feu**	**145.97**	**337**	*e*PKP1	PKPbc	06 08 49.9	-0.1
	comp=Z,11nm,0.8s						
HAU	**Haudompre**	**146.65**	**337**	*e*PKP1	PKPbc	06 08 51.8	-0.2
	comp=Z,22nm,1.0s						
MEZF	**Maizieres J'vi**	**146.69**	**339**	*e*PKP1	PKPbc	06 08 52.4	+0.3
TIP	**Timpagrande**	**147.39**	**316**	*e*PKPbc	PKPbc	06 08 54.1	-0.3
CABF	**La Chapelle**	**147.91**	**336**	*e*PKP1	PKPbc	06 08 55.8	+0.2
	comp=Z,20nm,1.0s						
LDF	**La Druitiere**	**148.13**	**345**	*e*PKP1	PKPbc	06 08 55.4	-0.7
LOR	**Lormes**	**148.16**	**339**	*e*PKP1	PKPbc	06 08 56.0	-0.2
	comp=Z,13nm,0.9s						
SSF	**Saint Saulge**	**148.46**	**339**	*e*PKP1	PKPbc	06 08 56.9	-0.1
	comp=Z,18nm,1.0s						
GRR	**Gorron**	**148.50**	**346**	*e*PKP1	PKPbc	06 08 56.6	-0.5
	comp=Z,12nm,0.9s						
LPL	**La Plagne**	**148.55**	**334**	*e*PKP1	PKPbc	06 08 57.6	+0.3
LPG	**La Plagne**	**148.56**	**334**	*e*PKP1	PKPbc	06 08 57.7	+0.4
SMF	**Signal de Mont**	**148.71**	**339**	*e*PKP1	PKPbc	06 08 57.3	-0.3
AVF	**Avril sur Loir**	**148.75**	**339**	*e*PKP1	PKPbc	06 08 57.2	-0.5
SGMF	**Saint Gilles**	**149.00**	**348**	*e*PKP1	PKPbc	06 08 57.6	-0.7
ROSF	**Rostrenen**	**149.06**	**349**	*e*PKP1	PKPbc	06 08 57.9	-0.6
	comp=Z,29nm,1.2s						
BGF	**Bois d'Agland**	**149.12**	**340**	*e*PKP1	PKPbc	06 08 58.4	-0.3
ORIF	**Oris-en-Rattie**	**149.39**	**335**	*e*PKP1	PKPbc	06 08 59.3	-0.1
TCF	**Toulx Ste Croi**	**149.56**	**340**	*e*PKP1	PKPbc	06 08 59.6	-0.2
	comp=

TAOE	**Nuku Hiva Isla**	**51.10**	**87**	*e*S	**S**	**06 05 55.3**	**-3.4**
	comp=Z,2μm,25.3s						
TAOE				*e*SS	SS	06 09 31.8	-2.2
	comp=Z,651nm,27.4s						
TAOE				*e*LR	LR	06 13 18.8	
	comp=Z,5μm,22.5s,baz=256						
RKT	**Rikitea**	**53.33**	**106**	*e*S	**S**	**06 06 29.6**	**+0.5**
	comp=Z,1μm,30.2s						
RKT				*e*SS	SS	06 10 09.2	+0.2
	comp=Z,595nm,28.5s						
RKT				*e*LR	LR	06 14 20.0	
	comp=Z,2μm,27.2s,baz=267						
MJAR	**Matsushiro Arr**	**61.20**	**333**	P	**P**	**05 59 51.0**	**-0.6**
	comp=Z,1.6nm,0.7s,mb4.3,baz=166,slow=6.3,SNR=4.9						
KSRS	**Korea Array**	**66.91**	**326**	P	**P**	**06 00 30.2**	**+1.1**
	comp=Z,0.4nm,0.3s,mb3.9,baz=152,slow=4.7,SNR=4.2						
KSRS				LR	LR	06 28 51.7	
	comp=Z,750nm,19.1s,MS4.9,baz=37,slow=35						
PEA0B	**Petropavlovsk-**	**71.46**	**353**	*e*P	**P**	**06 00 57.3**	**+0.3**
PETK	**Petropavlovsk-**	**71.46**	**353**	P	**P**	**06 00 56.9**	**-0.1**
	comp=Z,22nm,1.0s,mb5.0,baz=111,slow=6.5,SNR=13						
QSPA	**South Pole Qui**	**71.95**	**180**	*e*P	**P**	**06 00 59.1**	**-0.6**
	comp=Z,61nm,1.3s,mb5.4						
CN2	**Changchun**	**72.88**	**329**	*e*P	**P**	**06 01 07.0**	**+1.3**
CN2				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
KMI	**Kunming**	**76.68**	**302**	P	**P**	**06 01 34.0**	**+5.8**
KMI				S	S	06 11 17.2	+1.2
KMI				pmax	pmax		
	comp=Z,22nm,1.3s,mb4.9						
CMAR	**Chiang Mai Arr**	**76.97**	**295**	P	**P**	**06 01 29.9**	**-0.1**
	comp=Z,1.9nm,0.3s,mb4.5,baz=135,slow=4.2,SNR=9.7						
CHG	**Chiang Mai**	**77.11**	**295**	‖P	PcP	06 01 41.9	+0.3
	comp=Z,18nm,0.8s						
MAW	**Mawson**	**79.05**	**202**	P	**P**	**06 01 41.3**	**+0.6**
	comp=Z,4.5nm,1.0s,mb4.4,baz=100,slow=14,SNR=2.4						
MAW	**Mawson**	**79.05**	**202**	*e*P	**P**	**06 01 41.2**	**+0.5**
	comp=Z,5.9nm,1.2s,mb4.4						
LZH	**Lanzhou**	**81.10**	**312**	*e*P	**P**	**06 01 53.5**	**+1.3**
LZH				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.9						
ULN	**Ulaanbaatar**	**85.25**	**324**	*e*P	**P**	**06 02 13.7**	**+0.3**
	comp=Z,14nm,1.2s,mb5.0						
TTA	**Tatalina**	**85.55**	**16**	*e*P	**P**	**06 02 14.3**	**-0.3**
	comp=Z,19nm,1.3s,mb5.2						
SONM	**Songino Array**	**85.61**	**324**	P	**P**	**06 02 16.2**	**+1.0**
	comp=Z,4.1nm,1.0s,mb4.6,baz=132,slow=6.4,SNR=5.7						
SHL	**Shillong**	**85.78**	**298**	*e*PKP	**P**	**06 02 19.0**	**+2.4**
SHL				*e*S	S	06 12 12.0	-39
BILL	**Bilibino**	**85.89**	**359**	*e*P	**P**	**06 02 16.2**	**0.0**
	comp=Z,58nm,1.3s,mb5.7						
CMB	**Columbia Colle**	**87.27**	**49**	*e*P	**P**	**06 02 23.4**	**-0.3**
	comp=Z,7.4nm,0.9s,mb4.9						
YBH	**Yreka Blue Hor**	**87.30**	**44**	*e*P	**P**	**06 02 21.5**	**-2.2**
	comp=Z,16nm,1.5s,mb5.0						
ISA	**Isabella**	**87.68**	**51**	*e*P	**P**	**06 02 25.0**	**-0.7**
	comp=Z,15nm,1.4s,mb5.0						
LSA	**Lhasa**	**87.94**	**302**	P	**P**	**06 02 31.3**	**+4.3**
LSA				LR	LR		
	comp=N,570nm,10.8s,MS5.4						
LSA				LR	LR		
	comp=E,580nm,11.2s,MS5.4						
LSA				LR	LR		
	comp=Z,690nm,10.8s,MS5.3						
NVAR	**Mina Array Bea**	**88.93**	**49**	P	**P**	**06 02 31.8**	**+0.2**
	comp=Z,4.0nm,1.0s,mb4.7,baz=232,slow=6.9,SNR=8.6						
COLA	**College**	**89.30**	**17**	*e*P	**P**	**06 02 31.7**	**-0.9**
	comp=Z,6.1nm,1.1s,mb4.8						
WVOR	**Wild Horse Val**	**90.33**	**45**	*e*P	**P**	**06 02 38.5**	**+0.6**
	comp=Z,16nm,1.3s,mb5.2						
TXAR	**Lajitas Array**	**97.25**	**62**	P	**P**	**06 03 10.5**	**+0.4**
	comp=Z,0.7nm,1.1s,mb4.0,baz=212,slow=8.3,SNR=3.6						
TXAR	**Lajitas Array**	**97.25**	**62**	P	**P**	**06 03 10.5**	**+0.4**
MKAR	**Makanchi Array**	**100.11**	**316**	P	Pdif	06 03 22.4	-0.1
	comp=Z,0.4nm,0.8s,baz=96,slow=8.1,SNR=3.1						
YKA	**Yellowknife Ar**	**100.19**	**27**	P	Pdif	06 03 22.1	-0.8
	comp=Z,0.3nm,0.5s,baz=256,slow=4.6,SNR=5.2						
YKA	**Yellowknife Ar**	**100.19**	**27**	P	Pdif	06 03 22.1	-0.8
ZALV	**Zalesovo Beam**	**100.50**	**323**	P	Pdif	06 03 23.0	-1.2
	comp=Z,0.4nm,0.4s,baz=126,slow=4.1,SNR=2.2						
ARCES	**ARCESS Array B**	**123.67**	**345**	PKP	PKPdf	06 08 32.6	-1.3
	comp=Z,2.9nm,0.8s,baz=45,slow=3.6,SNR=3.9						
BRTR	**Keskin Array B**	**135.19**	**309**	PKP	PKPdf	06 08 56.6	-0.1
	comp=Z,2.2nm,1.1s,baz=76,slow=1.8,SNR=5.0						
BRG	**Berggiesshubel**	**141.33**	**334**	*e*P	PKPdf	06 09 10.6	+3.0
	comp=Z,7.7nm,1.0s						
CLL	**Collm**	**141.39**	**335**	‖*e*PKPdf	PKPdf	06 09 09.4	+1.7
GERES	**GERESS Array B**	**142.94**	**332**	PKP	PKPdf	06 09 11.1	+0.5
	comp=Z,1.2nm,0.7s,baz=39,slow=2.6,SNR=3.7						
KTD	**Kalmit**	**144.88**	**337**	PKP	PKPdf	06 09 13.2	-0.7
LANF	**Langenberg**	**145.27**	**337**	PKP	PKPdf	06 09 14.4	-0.2
GIVF	**Givet**	**145.33**	**341**	*e*PKP1	PKPbc	06 09 14.2	-0.3
BAIF	**Baives**	**145.56**	**341**	*e*PKP1	PKPbc	06 09 15.2	0.0
	comp=Z,54nm,1.0s						
MENF	**Mencas**	**145.69**	**344**	PKP	PKPdf	06 09 15.9	+0.6
CDF	**Champ du Feu**	**145.94**	**337**	*e*PKP1	PKPbc	06 09 16.3	-0.1
	comp=Z,26nm,0.8s						
FELD	**Feldberg im Sc**	**146.10**	**336**	PKP	PKPdf	06 09 16.8	+0.7
ECH	**Echery**	**146.14**	**337**	PKP	PKPdf	06 09 16.8	+0.7
MOF	**Molkenrain**	**146.45**	**336**	PKP	PKPdf	06 09 16.8	+0.1
THEF	**They Montfort**	**146.56**	**338**	PKP	PKPdf	06 09 18.4	+1.6
HINF	**Hinteralfeld**	**146.59**	**337**	*e*PKP1	PKPbc	06 09 17.9	-0.5
HAU	**Haudompre**	**146.62**	**337**	*e*PKP1	PKPbc	06 09 18.2	-0.3
	comp=Z,37nm,0.9s						
HAU				*e*MLR	MLR		
	comp=Z,586nm,22.5s,MS5.0						
HAU	**Haudompre**	**146.62**	**337**	*e*PKP	PKPdf	06 09 18.2	+1.3
HAU				LR	LR		
	comp=Z,590nm,22.5s,MS5.3						
MEZF	**Maizieres J'vi**	**146.65**	**339**	*e*PKP1	PKPbc	06 09 18.8	+0.3
LOMF	**Lomont**	**146.99**	**336**	PKP	PKPdf	06 09 19.4	+1.8
SNTG	**Esanatoglia**	**147.24**	**325**	P	PKPab	06 09 21.2	-0.9
PIEI	**Pieia**	**147.26**	**326**	P	PKPab	06 09 22.3	+0.1
SFI	**Santa Sofia**	**147.37**	**327**	P	PKPab	06 09 21.3	-1.3
TIP	**Timpagrande**	**147.39**	**316**	*e*PKPdf	PKPab	06 09 19.7	-3.1
NRCA	**Norcia**	**147.42**	**325**	P	PKPab	06 09 21.2	-1.6
ZCCA	**Zocca**	**147.49**	**329**	P	PKPab	06 09 22.1	-1.0
FNVD	**Fontana Vidola**	**147.55**	**328**	P	PKPab	06 09 21.7	-1.6
CABF	**La Chapelle**	**147.88**	**336**	*e*PKP1	PKPbc	06 09 22.3	+0.3
	comp=Z,37nm,0.9s						
FLN	**La Foliniere**	**148.01**	**346**	*e*PKP1	PKPbc	06 09 21.7	-0.6
	comp=Z,16nm,0.7s						
FLN				*e*MLR	MLR		
	comp=Z,405nm,20.0s,MS4.9						
FLN	**La Foliniere**	**148.01**	**346**	*e*PKP	PKPbc	06 09 21.7	-0.6
FLN				LR	LR		
	comp=Z,410nm,20.0s,MS5.2						
LDF	**La Druitiere**	**148.08**	**345**	*e*PKP1	PKPbc	06 09 21.9	-0.6
	comp=Z,15nm,0.7s						
LOR	**Lormes**	**148.12**	**339**	*e*PKP1	PKPbc	06 09 22.4	-0.3
	comp=Z,41nm,1.1s						
LOR				*e*MLR	MLR		
	comp=Z,449nm,21.8s,MS4.9						
LOR	**Lormes**	**148.12**	**339**	*e*PKP	PKPbc	06 09 22.4	-0.3
LOR				LR	LR		
	comp=Z,450nm,21.8s,MS5.2						
SSF	**Saint Saulge**	**148.42**	**340**	*e*PKP1	PKPbc	06 09 23.3	-0.2
	comp=Z,58nm,1.1s						
CEL	**Celeste**	**148.45**	**315**	*e*PKPbc	PKPbc	06 09 24.2	+0.4
GRR	**Gorron**	**148.45**	**346**	*e*PKP1	PKPbc	06 09 23.1	-0.4
	comp=Z,31nm,1.0s						
LPL	**La Plagne**	**148.53**	**334**	*e*PKP1	PKPbc	06 09 24.1	+0.3
LPG	**La Plagne**	**148.53**	**334**	*e*PKP1	PKPbc	06 09 24.2	+0.4
SMF	**Signal de Mont**	**148.67**	**339**	*e*PKP1	PKPbc	06 09 23.7	-0.4
	comp=Z,44nm,1.1s						
AVF	**Avril sur Loir**	**148.71**	**340**	*e*PKP1	PKPbc	06 09 23.6	-0.6
SGMF	**Saint Gilles**	**148.95**	**348**	*e*PKP1	PKPbc	06 09 24.2	-0.6
	comp=Z,26nm,0.9s						
BGF	**Bois d'Agland**	**149.08**	**340**	*e*PKP1	PKPbc	06 09 24.8	-0.4
	comp=Z,30nm,0.8s						
ORIF	**Oris-en-Rattie**	**149.36**	**335**	*e*PKP1	PKPbc	06 09 25.8	-0.1
	comp=Z,14nm,0.8s						
ORIF				*e*MLR	MLR		
	comp=Z,544nm,22.0s,MS5.0						
SAOF	**Saorge**	**149.39**	**332**	PKP	PKPbc	06 09 25.5	-0.5
AGO	**Saint Agoulin**	**149.43**	**339**	PKP	PKPbc	06 09 26.8	+0.8
AUTN	**L'Aution**	**149.44**	**332**	PKP	PKPbc	06 09 24.4	-1.7
TOUF	**Mont Tournerai**	**149.50**	**332**	PKP	PKPbc	06 09 26.2	-0.1
TCF	**Toulx Ste Croi**	**149.52**	**340**	*e*PKP1	PKPbc	06 09 26.0	-0.3
	comp=Z,62nm,1.3s						
LUCF	**Luceram**	**149.56**	**332**	PKP	PKPbc	06 09 25.7	-0.7
PYM	**Petit Puy Mans**	**149.73**	**339**	PKP	PKPbc	06 09 28.0	+1.2
PGF	**Pioggiola**	**149.79**	**328**	*e*PKP1	PKPbc	06 09 26.6	-0.5
	comp=Z,84nm,1.1s						
CALN	**Calern**	**149.87**	**332**	PKP	PKPbc	06 09 27.1	-0.1
VIVF	**Saint-Julien-l**	**149.89**	**336**	*e*PKP1	PKPbc	06 09 27.1	-0.1
	comp=Z,23nm,1.0s						
MFF	**Saint Martin d**	**149.93**	**344**	*e*PKP1	PKPbc	06 09 26.8	-0.5
	comp=Z,55nm,1.2s						
FRF	**La Foret Royal**	**150.13**	**332**	*e*PKP1	PKPbc	06 09 27.3	-0.6
	comp=Z,36nm,1.1s						
SMRF	**Simiane la Rot**	**150.26**	**334**	*e*PKP1	PKPbc	06 09 28.2	+0.1
	comp=Z,42nm,1.1s						
LMR	**La Mourre**	**150.37**	**332**	*e*PKP1	PKPbc	06 09 27.9	-0.5
	comp=Z,58nm,1.3s						
RJF	**Les Rejaudoux**	**150.62**	**340**	*e*PKP1	PKPbc	06 09 28.7	-0.3
	comp=Z,21nm,0.9s						
RJF				*e*MLR	MLR		
	comp=Z,606nm,21.8s,MS5.1						
LASF	**Ste Croix**	**150.86**	**336**	*e*PKP1	PKPbc	06 09 29.4	-0.2
	comp=Z,39nm,1.1s						
LFF	**La Frestale**	**151.19**	**341**	*e*PKP1	PKPbc	06 09 30.0	-0.3
	comp=Z,12nm,0.7s						
MTLF	**Montolieu**	**152.11**	**337**	*e*PKP1	PKPbc	06 09 32.1	-0.4
ESDC	**Sonseca Array**	**157.40**	**344**	PKP	PKPdf	06 09 30.1	-3.2
	comp=Z,0.5nm,0.6s,baz=0.9,slow=3.7,SNR=3.2						
ESDC				PKPab	PKPab	06 10 04.7	+0.2
	comp=Z,0.3nm,0.4s,baz=3.8,slow=4.1,SNR=2.8						
DBIC	**Dimbokro**	**166.68**	**212**	PKP	PKPdf	06 09 42.3	-1.2
	comp=Z,2.6nm,0.7s,baz=131,slow=6.4,SNR=2.6						

MEX 10 05:53:25.6±1.0, 16°.07N×97°.57W, h17km±789km, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.62**	**301**	*i* P	Pg	05 53 35.7	-2.2
PNIG				*i* S	Sg	05 53 43.7	-2.6
VHO	**Vista Hermosa**	**1.28**	**39**	*i* P	Pn	05 53 45.0	-3.7
VHO				*i* S	Sb	05 54 00.2	-5.2
OXX	**Oaxaca**	**1.29**	**39**	*i* P	Pn	05 53 45.3	-3.5
OXX				*i* S	Sb	05 54 01.8	-4.0
HUIG	**Huatulco**	**1.44**	**102**	*i* P	Pn	05 53 48.1	-2.8
HUIG				*i* S	Sn	05 54 04.1	-5.3
UTMO	**Huajuapan**	**1.76**	**353**	*i* P	Pn	05 53 53.1	-2.3
UTMO				*i* S	Sn	05 54 13.6	-3.8

IDC 10 05:55:27.6±1.6, 27°.37N×100°.51E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.4/24, mbtmp3.8/3, Error ellipse: s-maj=491.5km s-min=27.0km az=55.0, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**57.32**	**142**	P	P	06 05 17.4	-0.2
	0.6nm,0.6s,baz=327,slow=9.1,SNR=9.3						
FINES	**FINESS Array B**	**58.95**	**327**	P	P	06 05 28.3	-0.1
	1.2nm,0.4s,baz=107,slow=4.8,SNR=8.2						
FINES	**FINESS Array B**	**58.95**	**327**	P	P	06 05 28.3	-0.1
ASAR	**Alice Springs**	**60.12**	**144**	P	P	06 05 37.3	+0.4
	0.8nm,0.9s,baz=327,slow=6.6,SNR=3.7						

*ATH **10** 06:03:14.9, 37°.88N×21°.37E, h24km±4km, MD2.8/5*
*CSEM **10** 06:03:15.8±0.2, 37°.91N×21°.41E, h30km, MD2.8, Error ellipse: s-maj=4.9km s-min=4.3km az=11.0*
*THE **10** 06:03:15.7, 37°.89N×21°.43E, h12km±1km, ML3.0/7, Error ellipse: s-maj=1.5km s-min=0.5km az=328.0*
*ISCJB **10** 06:03:16.0±0.5, 37°.90N±0°.03×21°.41E±0°.03, h24km±5km, Error ellipse: s-maj=5.1km s-min=4.3km az=9.2*

ISC 10 06:03:15.9±0.5, 37°.90N±0°.03×21°.41E±0°.03, h23km±5km, n32, σ0°.64/57, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.17**	**16**	*e*PB	**Pb**	**06 03 20.8**	**-0.2**
RLS				*e*SB	**Sb**	**06 03 24.4**	**-0.1**
RLS	**Riolos of Patr**	**0.17**	**16**	*e*Pb	**Pb**	**06 03 20.8**	**-0.2**
RLS				*e*Sb	**Sb**	**06 03 24.4**	**-0.1**
KFL	**Anninata**	**0.53**	**294**	P	**Pb**	**06 03 25.5**	**-1.2**
KFL				S	**Sb**	**06 03 34.3**	**+0.4**
LAKA	**Lakka**	**0.57**	**53**	P	**Pb**	**06 03 26.8**	**-0.4**
LAKA				S	**Sb**	**06 03 34.9**	**0.0**
LAKA	**Lakka**	**0.57**	**53**	P	**Pb**	**06 03 26.8**	**-0.4**
LAKA				S	**Sb**	**06 03 34.9**	**0.0**
EFP	**Efpalio**	**0.66**	**36**	P	**Pb**	**06 03 28.4**	**-0.4**
EFP				S	**Sb**	**06 03 38.2**	**+0.7**
EFP	**Efpalio**	**0.66**	**36**	*e*PN	**Pb**	**06 03 28.5**	**-0.3**
EFP				*e*SN	**Sn**	**06 03 39.3**	**-0.2**
EFP	**Efpalio**	**0.66**	**36**	*e*Pn	**Pb**	**06 03 28.5**	**-0.3**
EFP				S	**Sb**	**06 03 38.2**	**+0.7**
EFP				*e*Sn	**Sn**	**06 03 39.3**	**-0.2**
TRIZ	**Trizonia**	**0.70**	**48**	P	**Pb**	**06 03 28.6**	**-0.9**
TRIZ				S	**Sb**	**06 03 38.9**	**+0.1**
TRIZ	**Trizonia**	**0.70**	**48**	P	**Pb**	**06 03 28.6**	**-0.9**
TRIZ				S	**Sb**	**06 03 38.9**	**+0.1**
VLS	**Valsamata**	**0.70**	**294**	P	**Pb**	**06 03 29.8**	**+0.3**
VLS				S	**Sb**	**06 03 39.9**	**+1.1**
VLS	**Valsamata**	**0.70**	**294**	*e*PN	**Pb**	**06 03 28.7**	**-0.8**
VLS	**Valsamata**	**0.70**	**294**	*e*Pn	**Pb**	**06 03 28.7**	**-0.8**
VLS	**Valsamata**	**0.70**	**294**	P	**Pb**	**06 03 29.8**	**+0.3**
VLS				S	**Sb**	**06 03 39.9**	**+1.1**
GUR	**Goura**	**0.74**	**87**	P	**Pb**	**06 03 29.2**	**-0.9**
GUR				S	**Sb**	**06 03 39.5**	**-0.3**
GUR	**Goura**	**0.74**	**87**	*e*PN	**Pb**	**06 03 29.4**	**-0.7**
GUR				*e*SN	**Sn**	**06 03 41.3**	**-0.1**
GUR	**Goura**	**0.74**	**87**	*e*Pn	**Pb**	**06 03 29.4**	**-0.7**
GUR				S	**Sb**	**06 03 39.5**	**-0.3**
GUR				*e*Sn	**Sn**	**06 03 41.3**	**-0.1**
KALE	**Kalithea**	**0.76**	**49**	P	**Pb**	**06 03 29.9**	**-0.6**
KALE				S	**Sb**	**06 03 41.3**	**+0.9**
KALE	**Kalithea**	**0.76**	**49**	P	**Pb**	**06 03 29.9**	**-0.6**
KALE				S	**Sb**	**06 03 41.3**	**+0.9**
ITM	**Ithomi**	**0.83**	**150**	P	**Pb**	**06 03 31.2**	**-0.4**
ITM				S	**Sb**	**06 03 43.0**	**+0.7**
ITM	**Ithomi**	**0.83**	**150**	*e*PN	**Pb**	**06 03 31.2**	**-0.4**
ITM	**Ithomi**	**0.83**	**150**	P	**Pb**	**06 03 31.2**	**-0.4**
ITM				S	**Sb**	**06 03 43.0**	**+0.7**
VLX	**Vlachokerasia**	**0.93**	**124**	P	**Pb**	**06 03 33.1**	**-0.3**
VLX				S	**Sb**	**06 03 46.3**	**+0.9**
VLX	**Vlachokerasia**	**0.93**	**124**	P	**Pb**	**06 03 33.1**	**-0.3**
VLX				S	**Sb**	**06 03 46.3**	**+0.9**
DSF	**Desfina**	**1.02**	**59**	P	**Pn**	**06 03 33.8**	**-1.0**
DSF				S	**Sb**	**06 03 48.9**	**+1.0**
DSF	**Desfina**	**1.02**	**59**	P	**Pn**	**06 03 33.8**	**-1.0**
DSF				S	**Sb**	**06 03 48.9**	**+1.0**
PYL	**PYLOS**	**1.03**	**165**	P	**Pn**	**06 03 35.0**	**0.0**
PYL	**PYLOS**	**1.03**	**165**	P	**Pn**	**06 03 35.0**	**0.0**
LKD2	**Lefkada island**	**1.07**	**327**	P	**Pn**	**06 03 36.2**	**+0.7**
LKD2	**Lefkada island**	**1.07**	**327**	P	**Pn**	**06 03 36.2**	**+0.7**
LTK	**Loutraki**	**1.24**	**84**	P	**Pn**	**06 03 38.2**	**+0.4**
LTK	**Loutraki**	**1.24**	**84**	P	**Pn**	**06 03 38.2**	**+0.4**

*ISCJB **10** 06:05:00.9±0.2, 49°.14N±0°.02×122°.40E±0°.04, h10km, mb4.7/94, MS4.6/28, Error ellipse: s-maj=3.4km s-min=3.2km az=5.2*
*IDC **10** 06:05:00.3±0.5, 49°.05N×122°.53E, h0km, mb4.4/25, mb1 4.5/28, mb1mx4.5/34, mbtmp4.4/28, ML3.7/3, MS4.3/14, Ms1 4.3/14, ms1mx3.9/46, Error ellipse: s-maj=13.6km s-min=12.0km az=14.0*
*BJI **10** 06:05:01.8, 49°.03N×122°.72E, h16km, mB4.8/15, mb4.8/35, ML5.5/14, Ms5.1/43, Ms7 4.7/36*
*GCMT **10** 06:05:02.9±0.4, 49°.07N×122°.47E, h24km±2km, MW4.9, Moment Tensor Solution. s10,c14; s63,c90; Moment tensor: Scale 10^16Nm; M_{rr}0.34±.28; $M_{\theta\theta}$2.42±.20; $M_{\phi\phi}$-2.75±.20; $M_{r\theta}$0.96±.32; $M_{r\phi}$1.53±.15; $M_{\theta r}$-0.71±.27; Best double couple: $M_0$3.20000×10^16 NP1:φs30.00000°, δ68.00000°, λ179.00000°. NP2:φs120.00000°, δ89.00000°, λ22.00000°. Principal axes: T 3.0500, Plg16.0000°, Azm347.0000°; N 0.3600, Plg68.0000°, Azm123.0000°; P -3.4100, Plg14.0000°, Azm253.0000°; Data Used: II IU IC G CN.*
*MOS **10** 06:05:02.4±0.9, 49°.07N×122°.37E, h22km, mb4.9/44, MS4.5/17 Error ellipse: s-maj=8.1km s-min=4.6km az=120.8*
*NEIC **10** 06:05:04.7±1.6, 49°.12N×122°.42E, h24km±11km, mb4.7/56, Error ellipse: s-maj=5.2km s-min=3.6km az=187.0*
*SZGRF **10** 06:05:15.2, 50°.69N×121°.74E, h33km, mb4.8, Northeastern China*

ISC 10 06:05:02.8±0.2, 49°.14N±0°.02×122°.42E±0°.03, h10km, (h22km±1.2km:pP-P), n285, σ0°.94/293, mb4.7/94, MS4.6/28, 19C-10D, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUP	**Tupik**	**5.51**	**345**	*e*P	**Pg**	**06 06 43.6**	**-4.7**
TUP				pmax	pmax		
	comp=Z,3μm,0.8s						
CN2	**Changchun**	**5.73**	**157**	*e*Pg	**Pg**	**06 06 49.0**	**-3.5**
CN2	**Changchun**	**5.73**	**157**	*e*Pn	**Pn**	**06 06 25.0**	**-2.8**
KLR	**Kul'dur**	**6.12**	**86**	*e*P	**Pn**	**06 06 27.0**	**-6.2**
KLR				*e*		06 07 50.0	
KLR				pmax	pmax		
	comp=E,350nm,1.4s						
KLR				pmax	pmax		
	comp=Z,220nm,1.4s						
KLR				MLR	MLR		
	comp=E,6μm,6.0s						
KLR				MLR	MLR		
	comp=Z,8μm,6.0s						
KPC	**Khapcheranga**	**6.58**	**279**	*e*P	**Pn**	**06 06 39.8**	**+0.4**
KPC				*e*S	**Sn**	**06 07 54.7**	**+0.3**
KPC				pmax	pmax		
	comp=Z,240nm,0.8s						
KPC				smax			
	comp=N,7μm,1.8s						
MDJ	**Mudanjiang**	**6.68**	**130**	Pn	**Pn**	**06 06 37.5**	**-3.3**
MDJ				LR	LR		
	comp=N,10μm,11.6s						
MDJ				LR	LR		
	comp=E,10μm,9.9s						
MDJ				LR	LR		
	comp=Z,4μm,10.6s						
SNY	**Shenyang**	**7.35**	**173**	Pn	**Pn**	**06 06 46.7**	**-3.4**
SNY				Sg	**Sg**	**06 08 50.3**	**-8.4**
SNY				smax			
	comp=N,1μm,0.9s						
SNY				smax			
	comp=E,2μm,1.4s						
CLNS	**Chul'man**	**7.86**	**10**	*e*P	**Pn**	**06 06 58.9**	**+1.9**
CLNS				*e*		06 08 22.2	
CLNS				pmax	pmax		
	comp=E,21nm,0.8s						
CLNS				pmax	pmax		
	comp=N,21nm,0.7s						
CLNS				pmax	pmax		
	comp=Z,31nm,0.7s						
CLNS				MLR	MLR		
	comp=E,646nm,14.0s						
CLNS				MLR	MLR		
	comp=N,2μm,13.0s						
CLNS				MLR	MLR		
	comp=Z,2μm,14.0s						
UKT	**Uakit**	**8.33**	**323**	*e*P	**Pn**	**06 07 03.6**	**+0.1**
UKT				*e*S	**Sn**	**06 08 36.0**	**-1.5**
HABR	**Khabarovsk**	**8.37**	**90**	*ce*P	**Pn**	**06 07 04.4**	**+0.4**
HABR				*e*		06 08 39.9	
HABR				pmax	pmax		
	comp=N,72nm,0.3s						
HABR				pmax	pmax		
	comp=Z,83nm,0.3s						
HABR				pmax	pmax		
	comp=E,79nm,0.3s						
HABR				smax			
	comp=E,100nm,0.3s						
HABR				MLR	MLR		
	comp=Z,3μm,8.0s						
VLA	**Vladivostok**	**8.91**	**129**	P	**Pn**	**06 07 12.0**	**+0.5**
VLA				*e*		06 08 53.5	
VLA				pmax	pmax		
	comp=Z,45nm,1.0s						
VLA				MLR	MLR		
	comp=Z,2μm,9.0s						
BJI	**Beijing**	**10.12**	**208**	P	**Pn**	**06 07 28.6**	**+0.5**
BJI				LR	LR		
	comp=N,16μm,15.1s						
BJI				LR	LR		
	comp=E,23μm,15.2s						
BJI				LR	LR		
	comp=Z,21μm,18.1s						
DL2	**Dalian**	**10.24**	**183**	*e*P	**Pn**	**06 07 32.9**	**+3.2**
DL2				*e*S	**Sn**	**06 09 30.9**	**+6.3**
DL2				LR	LR		
	comp=E,3μm,10.3s						
DL2				LR	LR		
	comp=Z,2μm,13.0s						
ULN	**Ulaanbaatar**	**10.28**	**269**	*e*Pn	**Pn**	**06 07 29.2**	**-1.0**
ULN				*e*Sn	**Sn**	**06 09 24.6**	**-0.8**
SONM	**Songino Array**	**10.72**	**269**	Pn	**Pn**	**06 07 35.3**	**-1.0**
	comp=Z,4.2nm,0.3s,baz=82,slow=13,SNR=39						
SONM				Sn	**Sn**	**06 09 32.5**	**-3.7**
	comp=Z,11nm,0.3s,baz=84,slow=23,SNR=6.9						
SONM				Lg		06 10 37.7	
	comp=Z,26nm,0.3s,baz=75,slow=29,SNR=7.1						
SONM				LR	LR	06 12 12.5	
	comp=Z,842nm,22.0s,baz=78,slow=40						
SONM	**Songino Array**	**10.72**	**269**	P	**Pn**	**06 07 35.3**	**-0.9**
SONM						06 09 32.5	
HHC	**Hu-ho-hao-te**	**11.29**	**227**	*e*P	**

NJ2	**Nanjing**	**17.27 190**	*e*P	**Pn**	**06 09 04.2**	**+0.2**
NJ2			pP	pP	06 09 07.4	-0.9
NJ2			sP	sP	06 09 11.5	+1.9
NJ2			PP		06 09 19.6	
NJ2			S	**Sn**	**06 12 14.1**	**-2.0**
NJ2			sS	sS	06 12 21.6	-8.0
NJ2			pmax	pmax		
	comp=Z,10.0nm,0.9s					
NJ2			pmax	pmax		
	comp=Z,210nm,4.2s					
NJ2			LR	LR		
	comp=N,1μm,11.4s					
NJ2			LR	LR		
	comp=E,1μm,10.3s					
SSE	**Sheshan**	**18.04 183**	*e*P	**Pn**	**06 09 10.9**	**-2.6**
SSE			pP	pP	06 09 17.9	+1.2
SSE			S	**Sn**	**06 12 29.3**	**-5.4**
SSE			pmax	pmax		
	comp=Z,33nm,0.7s					
SSE			pmax	pmax		
	comp=Z,160nm,9.5s					
SSE			LR	LR		
	comp=N,380nm,17.6s					
SSE			LR	LR		
	comp=E,1μm,17.6s					
SSE			LR	LR		
	comp=Z,1μm,12.9s					
XAN	**Xi'an**	**18.11 219**	P	**Pn**	**06 09 13.2**	**-1.1**
XAN			pP	pP	06 09 17.4	0.0
XAN			LR	LR		
	comp=N,3μm,17.1s					
XAN			LR	LR		
	comp=E,2μm,14.6s					
XAN			LR	LR		
	comp=Z,1μm,12.1s					
GTA	**Gaotai**	**18.82 247**	⇑P	**Pn**	**06 09 24.6**	**+1.7**
GTA			pP	pP	06 09 28.0	+2.8
GTA			sP	sP	06 09 30.8	+4.3
GTA			S	**Sn**	**06 12 44.6**	**-8.8**
GTA			pmax	pmax		
	comp=Z,13nm,1.0s					
GTA			pmax	pmax		
	comp=Z,240nm,3.9s					
GTA			LR	LR		
	comp=N,2μm,10.1s					
GTA			LR	LR		
	comp=E,1μm,8.6s					
GTA			LR	LR		
	comp=Z,2μm,9.8s					
LZH	**Lanzhou**	**18.83 233**	*e*P	**Pn**	**06 09 24.2**	**+1.1**
LZH			pP	pP	06 09 27.6	+2.2
LZH			sP	sP	06 09 31.1	+4.4
LZH			PP		06 09 36.5	
LZH			pmax	pmax		
	comp=Z,48nm,1.5s					
LZH			pmax	pmax		
	comp=Z,280nm,6.0s					
LZH			LR	LR		
	comp=N,3μm,10.2s					
LZH			LR	LR		
	comp=Z,3μm,11.2s					
WHN	**Wuhan**	**19.55 201**	P	**Pn**	**06 09 32.7**	**+0.9**
WHN			S	**Sn**	**06 13 04.2**	**-7.0**
WHN			LR	LR		
	comp=N,2μm,7.8s					
WHN			LR	LR		
	comp=E,2μm,8.9s					
WHN			LR	LR		
	comp=Z,3μm,10.1s					
SEY	**Seymchan**	**21.43 39**	*ce*P	**P**	**06 09 51.4**	**+0.7**
SKR	**Severo-Kuril's**	**21.65 73**	*e*P	**P**	**06 09 54.0**	**+0.9**
SKR			*e*		06 10 16.0	
SKR			*e*S	**S**	**06 13 58.0**	**+5.4**
SKR			pmax	pmax		
	comp=Z,1μm,3.0s					
SKR			pmax	pmax		
	comp=Z,640nm,1.5s,mb5.8					
SKR			MLR	MLR		
	comp=N,1μm,16.0s,MS4.6					
SKR			MLR	MLR		
	comp=E,1μm,16.0s,MS4.6					
SKR			MLR	MLR		
	comp=Z,1μm,16.0s,MS4.4					
PEA0B	**Petropavlovsk-**	**22.35 66**	*e*P	**P**	**06 10 01.1**	**+0.5**
PETK	**Petropavlovsk-**	**22.35 66**	P	**P**	**06 10 01.1**	**+0.5**
	comp=Z,129nm,0.8s,mb5.4,baz=258,slow=5.9,SNR=45					
TIXI	**Tiksi**	**22.79 5**	*e*P	**P**	**06 10 04.4**	**-0.6**
TIXI			pmax	pmax		
	comp=Z,107nm,1.2s,mb5.2					
TIXI	**Tiksi**	**22.79 5**	*e*P	**P**	**06 10 04.4**	**-0.6**
	comp=Z,107nm,1.2s,mb5.2					
PET	**Petropavlovsk**	**22.93 66**	*e*P	**P**	**06 10 08.4**	**+1.7**
PET			*e*S	**S**	**06 14 14.5**	**-2.1**
PET			pmax	pmax		
	comp=Z,69nm,2.3s,mb4.7					
PET			pmax	pmax		
	comp=Z,400nm,2.8s,mb5.3					
PET			MLR	MLR		
	comp=Z,700nm,17.0s,MS4.2					
PET	**Petropavlovsk**	**22.93 66**	*e*P	**P**	**06 10 08.2**	**+1.5**
	comp=Z,506nm,2.3s,mb5.5					
CD2	**Chengdu**	**23.03 225**	⇑*i*P	**P**	**06 10 08.5**	**+0.5**
CD2			pP		06 10 12.7	
CD2			sP	sP	06 10 15.5	+3.4
CD2			PP		06 10 38.4	
CD2			S	**S**	**06 14 14.1**	**-4.5**
CD2			sS	sS	06 14 21.0	-2.6
CD2			SS		06 14 58.5	
CD2			pmax	pmax		
	comp=Z,70nm,1.0s,mb5.0					
CD2			pmax	pmax		
	comp=Z,160nm,3.8s					
CD2			LR	LR		
	comp=N,3μm,11.9s,MS5.2					
CD2			LR	LR		
	comp=E,4μm,13.0s,MS5.2					
CD2			LR	LR		
	comp=Z,2μm,10.7s,MS4.9					
ZAA0	**Zalesovo Array**	**23.68 296**	*e*P	**P**	**06 10 14.4**	**0.0**
ZALV	**Zalesovo Beam**	**23.68 296**	P	**P**	**06 10 14.8**	**+0.4**
	comp=Z,4.1nm,0.8s,mb3.9,baz=86,slow=7.4,SNR=16					
ZALV			PcP	PcP	06 13 57.2	-0.9
	comp=Z,3.5nm,0.5s,baz=104,slow=0.8,SNR=7.4					
ZALV			LR	LR	06 20 08.0	
	comp=Z,214nm,21.0s,MS3.6,baz=86,slow=38					
ZALV	**Zalesovo Beam**	**23.68 296**	P	**P**	**06 10 14.8**	**+0.4**
ZALV			PcP	PcP	06 13 57.2	-0.9
ZALV	**Zalesovo Beam**	**23.68 296**	P	**P**	**06 10 14.8**	**+0.4**
ZALV			PcP	PcP	06 13 57.2	-0.9
ZALV			LR	LR	06 20 08.0	
QZH	**Quanzhou**	**24.33 188**	*e*P	**P**	**06 10 17.0**	**-3.6**
QZH			S	**S**	**06 14 30.0**	**-10**
QZH			LR	LR		
	comp=N,1μm,8.8s					
QZH			LR	LR		
	comp=E,2μm,11.9s					
QZH			LR	LR		
	comp=Z,3μm,14.6s,MS4.9					
WMQ	**Urumqi**	**24.35 271**	*e*P	**P**	**06 10 26.0**	**+5.4**
WMQ			pmax	pmax		
	comp=Z,18nm,1.0s,mb4.5					
WMQ	**Urumqi**	**24.35 271**	P	**P**	**06 10 21.0**	**+0.4**
WMQ			sP	sP	06 10 28.0	+3.1
WMQ			PP		06 10 56.0	
WMQ			S	**S**	**06 14 37.0**	**-2.8**
WMQ			SS		06 15 31.0	
WMQ			pmax	pmax		
	comp=Z,32nm,1.0s,mb4.7					
WMQ			LR	LR		
	comp=N,2μm,6.0s					
WMQ			LR	LR		
	comp=E,610nm,6.0s					
WMQ			LR	LR		
	comp=Z,400nm,6.0s					
YHNB	**Yeheng**	**24.43 182**	*e*P	**P**	**06 10 22.1**	**+0.6**
	comp=Z,81nm,0.8s,mb5.2					
NVS	**Novosibirsk**	**24.55 298**	*e*P	**P**	**06 10 22.4**	**+0.1**
NVS			pmax	pmax		
	comp=N,9.0nm,1.4s					
NVS			pmax	pmax		
	comp=Z,27nm,1.4s,mb4.6					
NVS			pmax	pmax		
	comp=E,34nm,1.9s					
GYA	**Guiyang**	**25.73 214**	⇑*i*P	**P**	**06 10 33.1**	**-0.2**
GYA			PP		06 11 16.0	
GYA			S	**S**	**06 15 00.8**	**-1.3**
GYA			SS		06 16 06.2	
GYA			ScP	ScP	06 17 44.3	+1.9
GYA			pmax	pmax		
	comp=Z,70nm,1.0s,mb5.2					
GYA			pmax	pmax		
	comp=Z,120nm,4.8s					
GYA			LR	LR		
	comp=N,3μm,10.2s,MS5.2					
GYA			LR	LR		
	comp=E,830nm,10.3s,MS5.2					
GYA			LR	LR		
	comp=Z,3μm,10.8s,MS5.1					
MK31	**Makanchi Array**	**26.76 280**	*e*P	**P**	**06 10 46.1**	**+3.7**
MKAR	**Makanchi Array**	**26.76 280**	P	**P**	**06 10 42.6**	**+0.2**
	comp=Z,0.9nm,0.8s,baz=68,slow=9.8,SNR=3.1					
MKAR			PcP	PcP	06 14 03.7	-1.5
	comp=Z,0.7nm,0.6s,baz=56,slow=2.9,SNR=4.1					
KURK	**Kurchatov**	**27.94 290**	P	**P**	**06 10 53.6**	**+0.6**
	comp=Z,2.5nm,0.6s,mb4.0,baz=79,slow=9.8,SNR=10					
KURK			PcP	PcP	06 14 07.3	-0.7
	comp=Z,2.5nm,0.6s,baz=78,slow=2.1,SNR=5.2					
KURK	**Kurchatov**	**27.94 290**	*e*P	**P**	**06 10 53.2**	**+0.2**
KURK	**Kurchatov**	**27.94 290**	*e*P	**P**	**06 10 51.9**	**-1.1**
	comp=Z,5.4nm,1.0s,mb4.1					
KMI	**Kunming**	**28.48 220**	P	**P**	**06 11 00.9**	**+2.9**
KMI			S	**S**	**06 15 47.5**	**+2.1**
KMI			SS		06 17 11.6	
KMI			LR	LR		
	comp=N,4μm,14.2s,MS5.4					
KMI			LR	LR		
	comp=E,5μm,13.7s,MS5.4					
KMI			LR	LR		
	comp=Z,1μm,12.4s,MS4.6					
BILL	**Bilibino**	**28.73 33**	*e*P	**P**	**06 11 00.0**	**+0.1**
BILL			pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.4					
BILL	**Bilibino**	**28.73 33**	*e*P	**P**	**06 11 00.0**	**+0.1**
	comp=Z,3.8nm,0.5s,mb4.4					
QIZ	**Qiongzhong**	**31.70 203**	P	**P**	**06 11 26.5**	**0.0**
QIZ			S	**S**	**06 16 35.9**	**0.0**
QIZ			pmax	pmax		
	comp=Z,26nm,1.4s,mb4.9					
QIZ			pmax	pmax		
	comp=Z,210nm,2.7s,mb5.5					
QIZ			LR	LR		
	comp=N,530nm,18.0s,MS4.5					
QIZ			LR	LR		
	comp=E,840nm,18.8s,MS4.5					
QIZ			LR	LR		
	comp=Z,970nm,15.3s,MS4.6					
SMY	**Shemya**	**32.19 64**	*e*P	**P**	**06 11 32.0**	**+1.4**
SMY			pmax	pmax		
	comp=Z,25nm,0.9s,mb5.0					
SMY	**Shemya**	**32.19 64**	*e*P	**P**	**06 11 32.0**	**+1.4**
	comp=Z,24nm,0.9s,mb5.0					
BVAR	**Borovoye Array**	**32.32 297**	P	**P**	**06 11 32.5**	**+0.8**
	comp=Z,2.1nm,0.7s,mb4.1,baz=69,slow=8.1,SNR=7.9					
BVAR			PcP	PcP	06 14 18.4	-0.9
	comp=Z,3.2nm,0.5s,baz=90,slow=2.3,SNR=9.2					
BRVK	**Borovoye**	**32.38 297**	*ce*P	**P**	**06 11 33.1**	**+0.9**
BRVK			pmax	pmax		
	comp=Z,22nm,2.5s,mb4.5					
BRVK	**Borovoye**	**32.38 297**	*e*P	**P**	**06 11 32.5**	**+0.3**
	comp=Z,7.3nm,1.0s,mb4.5					
SHL	**Shillong**	**33.43 236**	*e*PKP	**P**	**06 11 47.0**	**+5.4**
SHL			*ex*	x	07 21 21.0	
SHL			*ex*	x	07 21 35.0	
AAK	**Ala-Archa**	**33.52 277**	P	**P**	**06 11 44.0**	**+1.7**
	comp=Z,1.1nm,0.4s,mb4.2,baz=53,slow=6.0,SNR=5.6					
AAK			LR	LR	06 25 08.8	
	comp=Z,522nm,19.4s,MS4.3,baz=330,slow=36					
AAK	**Ala-Archa**	**33.52 277**	*ce*P	**P**	**06 11 44.5**	**+2.2**
AAK			pmax	pmax		
	comp=Z,6.0nm,1.7s,mb4.2					
CHTO	**Chiang Mai**	**35.67 220**	*e*P	**P**	**06 12 00.4**	**-0.7**
CHTO			pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8					
CHTO	**Chiang Mai**	**35.67 220**	*e*P	**P**	**06 12 00.4**	**-0.7**
	comp=Z,9.5nm,0.8s,mb4.8					
CMAR	**Chiang Mai Arr**	**35.99 220**	P	**P**	**06 12 03.0**	**-0.8**
	comp=Z,1.9nm,0.3s,mb4.5,baz=19,slow=8.1,SNR=10					
CMAR			LR	LR	06 28 23.1	
	comp=Z,546nm,18.6s,MS4.3,baz=105,slow=39					
SVE	**Sverdlovsk**	**36.81 306**	⇑*e*P	**P**	**06 12 12.0**	**+1.6**
SVE			pmax	pmax		
	comp=Z,26nm,1.2s,mb4.9					
SVE			MLR	MLR		
	comp=Z,795nm,15.0s,MS4.6					
ARU	**Arti**	**38.02 306**	*c i*P	**P**	**06 12 21.0**	**+0.3**
ARU			*e*		06 13 48.0	
ARU			*e*		06 14 31.1	
ARU			S	**S**	**06 18 13.0**	**+0.3**
ARU			SS	SS	06 20 54.9	-4.4
ARU			pmax	pmax		
	comp=Z,13nm,1.0s,mb4.6					
ARU			MLR	MLR		
	comp=Z,678nm,17.0s,MS4.5					
ARU	**Arti**	**38.02 306**	*e*P	**P**	**06 12 21.2**	**+0.5**
	comp=Z,33nm,1.5s,mb4.8					
ABKAR	**Akbulak array**	**39.78 295**	*e*P	**P**	**06 12 35.5**	**0.0**
	comp=Z,12nm,1.0s,mb4.6					
AKTK	**Aktyubinsk**	**40.43 297**	P	**P**	**06 12 40.2**	**-0.7**
AKTK			LR	LR	06 29 43.6	
AKTO	**Aktyubinsk**	**40.43 297**	P	**P**	**06 12 40.2**	**-0.7**
	comp=Z,2.2nm,0.7s,mb4.0,baz=68,slow=13,SNR=6.2					
AKTO			LR	LR	06 29 43.6	
	comp=Z,345nm,19.3s,MS4.2,baz=53,slow=37					
KKM	**Kota Kinabalu**	**43.26 189**	*e*P	**P**	**06 13 06.5**	**+2.1**
	comp=Z,12nm,0.7s,mb4.7					
COLD	**Coldfoot**	**45.07 33**	*e*P	**P**	**06 13 17.8**	**-0.5**
	comp=Z,8.4nm,1.1s,mb4.5					
SPITS	**Spitsbergen Ar**	**45.54 344**	P	**P**	**06 13 22.6**	**+0.7**
	comp=Z,8.3nm,0.6s,mb4.8,baz=76,slow=10,SNR=27					
KTH	**Kantishna Hill**	**46.26 38**	*e*P	**P**	**06 13 27.1**	**-0.7**
	comp=Z,6μm,1.2s					
TRF	**Thorofare Moun**	**46.56 38**	*e*P	**P**	**06 13 32.4**	**+2.3**
	comp=Z,5.0nm,0.8s,mb4.5					
KEV	**Kevo**	**46.74 332**	*e*P	**P**	**06 13 31.0**	**-0.4**
KEV			pmax	pmax		
	comp=Z,14nm,0.7s,mb5.0					
KEV	**Kevo**	**46.74 332**	*e*p	**P**	**06 13 31.0**	**-0.4**
	comp=Z,14nm,0.7s,mb5.0					
KEV	**Kevo**	**46.74 332**	*e*p	**P**	**06 13 31.0**	**-0.4**
	comp=Z,14nm,0.7s,mb5.0					
ARCES	**ARCESS Array B**	**47.31 332**	P	**P**	**06 13 35.8**	**-0.1**
	comp=Z,11nm,0.8s,mb4.8,baz=65,slow=9.9,SNR=27					
PMR	**Palmer**	**47.88 40**	*e*P	**P**	**06 13 39.2**	**-1.2**
PMR			pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8					
PMR	**Palmer**	**47.88 40**	*e*P	**P**	**06 13 39.2**	**-1.2**
	comp=Z,8.1nm,0.8s,mb4.8					
KDAK	**Kodiak Island**	**48.13 46**	P	**P**	**06 13 42.0**	**-0.5**
	comp=Z,8.7nm,0.7s,mb4.9,baz=236,slow=3.9,SNR=4.2					
KDAK	**Kodiak Island**	**48.13 46**	P	**P**	**06 13 42.0**	**-0.5**
JOF	**Joensuu**	**48.34 322**	*e*p	**P**	**06 13 43.6**	**-0.4**
	comp=Z,31nm,0.7s,mb5.5					
JOF	**Joensuu**	**48.34 322**	*e*p	**P**	**06 13 43.6**	**-0.4**
	comp=Z,31nm,0.7s,mb5.5					
MENT	**Mentasta**	**49.43 37**	*e*P	**P**	**06 13 52.0**	**-0.3**
EGAK	**Eagle**	**49.47 34**	*e*P	**P**	**06 13 52.0**	**-0.7**
	comp=Z,4.0nm,0.8s,mb4.5					
OBN	**Obninsk**	**49.87 311**	⇓*i*P	**P**	**06 13 55.9**	**+0.1**
OBN			pmax	pmax		
	comp=Z,19nm,0.9s,mb5.1					
OBN			MLR	MLR		
	comp=Z,500nm,17.0s,MS4.6					
INK	**Inuvik**	**50.16 28**	P	**P**	**06 13 58.0**	**+0.2**
	comp=Z,3.5nm,0.8s,mb4.5,baz=355,slow=7.3,SNR=5.8					
INK	**Inuvik**	**50.16 28**	P	**P**	**06 13 58.0**	**+0.2**
INK			pmax	pmax		
	comp=Z,4.0nm,0.8s					
INK	**Inuvik**	**50.16 28**	*e*P	**P**	**06 13 58.1**	**+0.3**
	comp=Z,5.6nm,0.9s,mb4.6					
VSR	**Storozhevoye**	**50.60 306**	*e*P	**P**	**06 14 01.0**	**-0.4**
VSR			pmax	pmax		
	comp=Z,60nm,1.2s,mb5.4					
VSR			pmax	pmax		
	comp=N,20nm,0.6s					
VSR			pmax	pmax		
	comp=E,20nm,0.6s					
VSR			MLR	MLR		
	comp=N,650nm,14.0s,MS4.8					
VSR			MLR	MLR		
	comp=E,80nm,14.0s,MS4.8					
VSR			MLR	MLR		
	comp=Z,810nm,14.0s,MS4.9					
KAF	**Kangasniemi**	**50.76 323**	*e*P	**P**	**06 14 01.7**	**-0.7**
KAF			pmax	pmax		
	comp=Z,21nm,0.6s,mb5.2					
KAF	**Kangasniemi**	**50.76 323**	*ep*	**P**	**06 14 01.7**	**-0.7**
	comp=Z,21nm,0.6s,mb5.2,baz=56,slow=7.1					
KAF	**Kangasniemi**	**50.76 323**	*ep*	**P**	**06 14 01.7**	**-0.7**
	comp=Z,21nm,0.6s,mb5.2,baz=56,slow=7.1					
FINES	**FINESS Array B**	**51.21 322**	P	**P**	**06 14 05.8**	**0.0**
	comp=Z,41nm,0.7s,mb5.5,baz=75,slow=8.1,SNR=83					
DAG	**Danmarks Havn**	**51.97 349**	⇓*i*P	**P**	**06 14 11.2**	**-0.1**
	comp=Z,6.3nm,0.5s,mb4.8					
ZEI	**Tsey**	**52.67 295**	*e*P	**P**	**06 14 15.9**	**-1.1**
ZEI			pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.5					
KIV	**Kislovodsk**	**52.69 297**	*e*P	**P**	**06 14 18.0**	**+0.9**
KIV			pmax	pmax		
	comp=Z,24nm,1.0s,mb5.1					
KIV	**Kislovodsk**	**52.69 297**	*e*P	**P**	**06 14 18.6**	**+1.5**
	comp=Z,23nm,0.9s,mb5.1					
GNI	**Garni**	**53.72 292**	P	**P**	**06 14 24.2**	**-0.5**
	comp=Z,2.5nm,0.3s,mb4.6,baz=353,slow=17,SNR=2.4					
GNI	**Garni**	**53.72 292**	*ce*P	**P**	**06 14 27.5**	**+2.8**
GNI			pmax	pmax		
	comp=Z,10.0nm,1.2s					
KAPI	**Kappang**	**53.98 183**	P	**P**	**06 14 26.5**	**-0.3**
	comp=Z,6.2nm,0.6s,mb4.7,baz=39,slow=20,SNR=2.8					
KAPI	**Kappang**	**53.98 183**	P	**P**	**06 14 26.5**	**-0.3**
RES	**Resolute Bay**	**53.98 11**	*e*P	**P**	**06 14 25.4**	**-0.7**
RES			pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8					
RES	**Resolute Bay**	**53.98 11**	*e*P	**P**	**06 14 25.4**	**-0.8**
	comp=Z,13nm,1.1s,mb4.8					
SOC	**Sochi**	**54.65 298**	*e*P	**P**	**06 14 30.9**	**-0.5**
SOC			*e*S	**S**	**06 22 05.5**	**-5.6**
SOC			MLR	MLR		
	comp=Z,319nm,16.0s,MS4.5					
JMIC	**Jan Mayen**	**55.15 342**	LR	LR	06 38 59.1	
	comp=Z,191nm,18.3s,MS4.2,baz=272,slow=37					
ANN	**Anapa**	**55.22 300**	*e*P	**P**	**06 14 31.5**	**-4.1**
ANN			*e*S	**S**	**06 22 12.3**	**-6.5**
ANN			pmax	pmax		
	comp=Z,19nm,0.9s,mb5.1					
ANN			MLR	MLR		
	comp=N,392nm,16.0s,MS4.6					
ANN			MLR	MLR		
	comp=E,128nm,16.0s,MS4.6					
ANN			MLR	MLR		
	comp=Z,283nm,16.0s,MS4.4					
AKASG	**Malin Array Be**	**56.04 310**	P	**P**	**06 14 41.0**	**-0.3**
	comp=Z,25nm,0.6s,mb5.4,baz=45,slow=8.2,SNR=97					
AKBB	**Malin Array Si**	**56.04 310**	*e*P	**P**	**06 14 40.8**	**-0.5**
KIEV	**Kiev**	**56.05 310**	*e*P	**P**	**06 14 40.8**	**-0.6**
KIEV			pmax	pmax		
	comp=Z,22nm,0.8s,mb5.2					
KIEV	**Kiev**	**56.05 310**	*e*P	**P**	**06 14 40.8**	**-0.7**
	comp=Z,22nm,0.8s,mb5.2					
HFS	**Hagfors**	**56.82 326**	LR	LR	06 41 00.8	
	comp=Z,310nm,18.2s,MS4.4,baz=148,slow=38					
NB2	**NORSAR Subarra**	**57.10 327**	P	**P**	**06 14 48.2**	**-0.6**
	comp=Z,11nm,0.5s,mb5.1,baz=44,slow=6.9					
NB2	**NORSAR Subarra**	**57.10 327**	P	**P**	**06 14 48.2**	**-0.6**
NB2	**NORSAR Subarra**	**57.10 327**	P	**P**	**06 14 48.2**	**-0.6**
NOA	**NORSAR Array B**	**57.10 327**	P	**P**	**06 14 48.1**	**-0.7**
	comp=Z,9.1nm,0.5s,mb5.1,baz=44,slow=6.7,SNR=56					
NAO01	**NORSAR Array S**	**57.36 327**	*e*P	**P**	**06 14 49.8**	**-0.7**
	comp=Z,5.6nm,0.6s,mb4.8					
SUMG	**Summit**	**57.85 353**	*e*P	**P**	**06 14 54.5**	**+0.6**
	comp=Z,16nm,1.0s,mb5.0					
SUMG	**Summit**	**57.85 353**	*i* P	**P**	**06 14 54.3**	**+0.4**
	comp=Z,11nm,0.9s,mb4.9					
SCO	**Scoresbysund**	**57.94 347**	*i* P	**P**	**06 14 54.3**	**-0.3**
	comp=Z,7.4nm,0.9s,mb4.7					
LVV	**L'vov**	**59.17 312**	*e*P	**P**	**06 15 03.0**	**-0.5**
YKA	**Yellowknife Ar**	**59.88 27**	P	**P**	**06 15 06.5**	**-1.6**
	comp=Z,1.7nm,0.8s,mb4.2,baz=322,slow=6.9,SNR=13					
YKA			LR	LR	06 39 51.0	
	comp=Z,75nm,21.3s,MS3.8,baz=0.0,slow=35					
BUR08	**Bucovina Ar. S**	**60.02 309**	*e*P	**P**	**06 15 09.8**	**+0.5**
BURAR	**Bucovina Array**	**60.03 309**	⇓P	**P**	**06 15 10.0**	**+0.6**
BURAR	**Bucovina Array**	**60.03 309**	⇓*i*P	**P**	**06 15 10.0**	**+0.6**
CFR	**Carcaliu**	**60.11 306**	⇓P	**P**	**06 15 10.8**	**+0.8**
CFR	**Carcaliu**	**60.11 306**	⇓*i*P	**P**	**06 15 10.8**	**+0.8**
VRI	**Vrincioaia**	**60.40 307**	⇑P	**P**	**06 15 12.5**	**+0.5**
VRI	**Vrincioaia**	**60.40 307**	⇑*i*P	**P**	**06 15 12.5**	**+0.5**
TIRR	**Tirgusor**	**60.43 305**	⇓P	**P**	**06 15 12.3**	**+0.1**
TIRR	**Tirgusor**	**60.43 305**	⇓*i*P	**P**	**06 15 12.3**	**+0.1**
PLOR	**Plostina**	**60.45 307**	⇑P	**P**	**06 15 13.2**	**+0.9**
PLOR	**Plostina**	**60.45 307**	⇑*i*P	**P**	**06 15 13.2**	**+0.9**
BR131	**Keskin Array S**	**60.61 298**	*e*P	**P**	**06 15 13.9**	**+0.4**
	comp=Z,1.4nm,0.6s,mb4.3					
BRTR	**Keskin Array B**	**60.61 298**	P	**P**	**06 15 13.9**	**+0.5**
	comp=Z,3.4nm,0.7s,mb4.6,baz=66,slow=4.5,SNR=18					
KOLS	**Kolonicke sedl**	**60.62 312**	*e*P	**P**	**06 15 13.8**	**+0.4**
KOLS			pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.7					
KOLS	**Kolonicke sedl**	**60.62 312**	*e*P	**P**	**06 15 13.8**	**+0.4**
	comp=Z,5.8nm,0.9s,mb4.7					
KOLS	**Kolonicke sedl**	**60.62 312**	*e*P	**P**	**06 15 13.8**	**+0.4**
STHS	**Stebnicka Huta**	**60.80 313**	*e*P	**P**	**06 15 15.9**	**+1.3**
STHS			pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.5					
STHS	**Stebnicka Huta**	**60.80 313**	*e*P	**P**	**06 15 15.9**	**+1.3**
	comp=Z,4.6nm,1.3s,mb4.5					
STHS	**Stebnicka Huta**	**60.80 313**	*e*P	**P**	**06 15 15.9**	**+1.3**
OJC	**Ojcow**	**60.94 314**	*e*P	**P**	**06 15 14.8**	**-0.8**
CRVS	**Cervenica-Dubn**	**61.04 312**	*e*P	**P**	**06 15 16.5**	**+0.2**
CRVS			pmax	pmax		
	comp=Z,35nm,2.4s,mb5.1					
CRVS	**Cervenica-Dubn**	**61.04 312**	*e*P	**P**	**06 15 16.5**	**+0.2**
	comp=Z,35nm,2.4s,mb5.1					
CRVS	**Cervenica-Dubn**	**61.04 312**	*e*P	**P**	**06 15 16.5**	**+0.2**
MLR	**Muntele Rosu**	**61.06 307**	LR	LR	06 41 29.8	
	comp=Z,370nm,20.3s,MS4.5,baz=229,slow=36					
MLR	**Muntele Rosu**	**61.06 307**	⇑P	**P**	**06 15 17.9**	**+1.4**
MLR	**Muntele Rosu**	**61.06 307**	⇑*i*P	**P**	**06 15 17.9**	**+1.4**
KECS	**Kecovo**	**61.80 312**	*e*P	**P**	**06 15 22.4**	**+1.0**
KECS			pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.3					
KECS	**Kecovo**	**61.80 312**	*e*P	**P**	**06 15 22.4**	**+1.0**
	comp=Z,3.0nm,1.1s,mb4.3					
KECS	**Kecovo**	**61.80 312**	*e*P	**P**	**06 15 22.4**	**+1.0**
DRGR		**61.85 310**	⇑P	**P**	**06 15 22.9**	**+1.1**
DRGR		**61.85 310**	⇑*i*P	**P**	**06 15 22.9**	**+1.1**
OKC	**Ostrava-Krasne**	**61.98 315**	AMS	AMS	06 44 50.0	
	comp=Z,500nm,13.5s					
MORC	**Moravsky Berou**	**62.30 315**	*e*P	**P**	**06 15 24.8**	**+0.1**
MORC			pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9					
MORC	**Moravsky Berou**	**62.30 315**	*e*P	**P**	**06 15 24.8**	**+0.1**
	comp=Z,10nm,1.0s,mb4.9					
MORC	**Moravsky Berou**	**62.30 315**	⇑*i*P	**P**	**06 15 25.3**	**+0.6**
DPC	**Dobruska-Polom**	**62.46 316**	*e*P	**P

comp=Z,5.0nm,0.8s,mb4.7
CLL Collm 63.26 318 *i* P **P 06 15 30.7 -0.4**
CLL *e* 06 15 38.0
CLL pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
CLL Collm 63.26 318 *i* P **P 06 15 30.7 -0.4**
comp=Z,5.0nm,0.8s,mb4.7
CLL *e* 06 15 38.0
CLL Collm 63.26 318 *i* P **P 06 15 30.7 -0.4**
comp=Z,5.0nm,0.8s,mb4.7
CLL *e*pP pP 06 15 38.0 +3.7
CLL *e*SSS 06 30 59.0
PRU Pruhonice 63.53 317 *e*P **P 06 15 33.8 +0.9**
PRU MLR MLR
comp=Z,500nm,12.0s,MS4.9
PRU Pruhonice 63.53 317 *e*P **P 06 15 33.8 +0.9**
PRU AMS AMS 06 45 20.0
comp=Z,500nm,12.0s
TREC Trest 63.59 316 AMS AMS 06 45 30.0
comp=Z,400nm,15.0s
NRDL Niedersach Rie 63.63 321 *e*P **P 06 15 33.3 -0.2**
comp=Z,12nm,1.3s,mb4.8
NRDL *e*PP PP 06 17 50.9 -2.0
CLZ Clausthal 64.00 320 *e*P **P 06 15 36.0 0.0**
comp=Z,8.0nm,0.9s,mb4.8
CLZ Clausthal 64.00 320 *e*P **P 06 15 36.0 0.0**
CLZ pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
TANN Tannenbergstha 64.14 318 *e*P **P 06 15 37.2 +0.3**
comp=Z,5.0nm,1.1s,mb4.5
WERD Werda 64.19 318 *e*P **P 06 15 37.8 +0.6**
GUNZ Gunzen 64.24 318 *e*P **P 06 15 38.0 +0.4**
WERN Wernitzgruen 64.27 318 *e*P **P 06 15 38.1 +0.3**
NKC Novy Kostel 64.28 318 *e*P **P 06 15 38.6 +0.7**
NKC MLR MLR
comp=Z,500nm,13.1s,MS4.9
NKC Novy Kostel 64.28 318 *e*P **P 06 15 38.6 +0.7**
NKC AMS AMS 06 46 00.0
comp=Z,500nm,13.1s
MOX Moxa 64.34 319 *e*P **P 06 15 38.7 +0.4**
comp=Z,13nm,1.3s,mb4.8
MOX Moxa 64.34 319 *e*P **P 06 15 38.5 +0.2**
comp=Z,7.0nm,1.2s,mb4.6
MOX Moxa 64.34 319 *e*P **P 06 15 38.7 +0.4**
MOX pmax pmax
comp=Z,13nm,1.3s,mb4.8
KHC Kasperske Hory 64.58 317 *e*P **P 06 15 40.2 +0.4**
KHC pmax pmax
comp=Z,11nm,1.2s,mb4.8
KHC Kasperske Hory 64.58 317 *e*P **P 06 15 40.2 +0.4**
comp=Z,11nm,1.2s,mb4.8
KHC Kasperske Hory 64.58 317 *e*P **P 06 15 40.5 +0.7**
KHC *e*pP pP 06 15 46.4 +3.3
KHC AMS AMS 06 45 50.0
comp=Z,600nm,15.0s
GEC2 GERESS Array S 64.73 316 *e*P **P 06 15 41.2 +0.4**
comp=Z,7.0nm,1.2s,mb4.6
GEC2 GERESS Array S 64.73 316 *e*P **P 06 15 41.2 +0.4**
GEC2 pmax pmax
comp=Z,7.0nm,1.2s,mb4.6
GERES GERESS Array B 64.73 316 P **P 06 15 41.0 +0.1**
comp=Z,2.0nm,0.8s,mb4.2,baz=45,slow=6.4,SNR=11
WET Wettzell 64.89 317 *e*P **P 06 15 42.4 +0.6**
comp=Z,9.0nm,1.2s,mb4.7
WET Wettzell 64.89 317 *e*P **P 06 15 42.4 +0.6**
WET pmax pmax
comp=Z,9.0nm,1.2s,mb4.7
GRA1 Grafenberg Arr 65.22 318 *e*P **P 06 15 44.5 +0.5**
comp=Z,17nm,1.3s,mb4.9
GRF Grafenberg Arr 65.22 318 *e*P **P 06 15 44.5 +0.5**
comp=Z,17nm,1.3s,mb4.9
GRF Grafenberg Arr 65.22 318 *e*P **P 06 15 44.5 +0.5**
GRF pmax pmax
comp=Z,17nm,1.3s,mb4.9
GRF Grafenberg Arr 65.22 318 *e*P **P 06 15 44.5 +0.5**
GRF pmax pmax
comp=Z,17nm,1.3s,mb4.9
GRFO Grafenberg 65.22 318 *e*P **P 06 15 43.7 -0.3**
RJOB Jochberg 65.95 316 *e*P **P 06 15 49.7 +0.9**
comp=Z,5.0nm,0.7s,mb4.7
TNS Taunus Mts 66.01 320 *e*P **P 06 15 49.3 +0.2**
comp=Z,10.0nm,1.2s,mb4.7
TNS Taunus Mts 66.01 320 *e*P **P 06 15 49.3 +0.2**
TNS pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
FUR Furstenfeldbru 66.33 317 *e*PP PP 06 18 14.1 -2.5
ESK Eskdalemuir 66.42 330 *i* P **P 06 15 51.8 +0.2**
WLF Walferdange 67.40 321 *e*PP PP 06 18 23.2 -2.7
BFO Black Forest 67.50 319 *e*P **P 06 15 58.4 -0.2**
comp=Z,6.0nm,1.2s,mb4.5
BFO *e*PP PP 06 18 22.8 -4.0
BFO Black Forest 67.50 319 *e*P **P 06 15 58.4 -0.2**
BFO *e* 06 18 22.8
BFO pmax pmax
comp=Z,6.0nm,1.2s,mb4.5
EDM Edmonton 67.64 33 *e*P **P 06 15 58.7 -0.7**
CDF Champ du Feu 67.89 319 *e*P **P 06 16 01.2 +0.1**
DAVOX Davos/Dischmat 67.99 317 LR LR 06 45 56.7
comp=Z,287nm,18.9s,MS4.5,baz=297,slow=36
HINF Hinteralfeld 68.53 319 *e*P **P 06 16 04.7 -0.4**
HAU Haudompre 68.60 320 *e*P **P 06 16 05.4 -0.1**
WRAB Tennant Creek 69.57 168 *e*P **P 06 16 10.8 -0.9**
WRAB pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
WRAB Tennant Creek 69.57 168 *e*P **P 06 16 10.8 -0.9**
comp=Z,3.9nm,0.7s,mb4.5
WRA Warramunga Arr 69.58 168 P **P 06 16 09.1 -2.7**
comp=Z,2.9nm,0.7s,mb4.3,baz=352,slow=6.9,SNR=42
CABF La Chapelle 69.79 319 *e*P **P 06 16 11.8 -1.2**
LOR Lormes 70.22 321 *e*P **P 06 16 14.8 -0.8**
LPL La Plagne 70.36 318 *e*P **P 06 16 17.0 +0.5**
comp=Z,6.2nm,0.6s,mb4.4
LPL La Plagne 70.36 318 *e*P **P 06 16 17.0 +0.5**
LPL pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
LPL La Plagne 70.36 318 *e*P **P 06 16 17.0 +0.5**
comp=Z,3.1nm,0.6s,mb4.4
LPG La Plagne 70.37 318 *e*P **P 06 16 17.0 +0.5**
comp=Z,14nm,1.0s,mb4.5
LPG La Plagne 70.37 318 *e*P **P 06 16 17.0 +0.5**
LPG pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
LPG La Plagne 70.37 318 *e*P **P 06 16 17.0 +0.5**
comp=Z,7.2nm,1.0s,mb4.6
SMF Signal de Mont 70.73 320 *e*P **P 06 16 18.5 -0.2**
LDF La Druitiere 70.77 324 *e*P **P 06 16 18.2 -0.7**
FLN La Foliniere 70.77 324 *e*P **P 06 16 18.2 -0.7**
AVF Avril sur Loir 70.81 321 *e*P **P 06 16 18.7 -0.5**
MBDF Montbardon 70.96 317 *e*P **P 06 16 19.7 -0.4**
GRR Gorron 71.22 324 *e*P **P 06 16 21.4 -0.2**
TCF Toulx Ste Croi 71.69 321 *e*P **P 06 16 24.3 -0.2**
comp=Z,8.8nm,0.9s,mb4.4
TCF Toulx Ste Croi 71.69 321 *e*P **P 06 16 24.3 -0.2**
TCF pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
TCF Toulx Ste Croi 71.69 321 *e*P **P 06 16 24.3 -0.2**
comp=Z,4.4nm,0.9s,mb4.4
SGMF Saint Gilles 71.98 325 *e*P **P 06 16 25.7 -0.5**
ROSF Rostrenen 72.18 325 *e*P **P 06 16 26.8 -0.6**
MFF Saint Martin d 72.40 322 *e*P **P 06 16 28.5 -0.2**
QUIF Quistinic 72.49 325 *e*P **P 06 16 28.6 -0.7**
MSO Missoula 72.64 37 *e*P **P 06 16 29.2 -1.0**
comp=Z,2.3nm,0.7s,mb4.2
LASF Ste Croix 72.76 318 *e*P **P 06 16 30.9 0.0**
CHMT Chamberlain Mo 72.84 36 *e*P **P 06 16 31.1 -0.3**
comp=Z,5.9nm,1.3s,mb4.4
ASAR Alice Springs 73.19 169 P **P 06 16 32.0 -1.5**
comp=Z,1.5nm,0.7s,mb4.0,baz=355,slow=6.3,SNR=12
DLMT Dillon 74.38 37 *e*P **P 06 16 39.6 -0.8**
comp=Z,4.8nm,0.9s,mb4.4
MCMT McKenzie Canyo 74.72 37 *e*P **P 06 16 42.1 -0.3**
comp=Z,3.0nm,0.7s,mb4.3
SCHQ Schefferville 76.11 5 P **P 06 16 49.6 -0.6**
comp=Z,3.6nm,0.6s,mb4.5,baz=15,slow=6.1,SNR=11
SCHQ Schefferville 76.11 5 *e*P **P 06 16 49.2 -1.0**
comp=Z,4.8nm,0.7s,mb4.5
CMB Columbia Colle 76.96 46 *e*P **P 06 16 55.5 +0.2**
CMB pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
CMB Columbia Colle 76.96 46 *e*P **P 06 16 55.5 +0.2**
comp=Z,3.0nm,0.8s,mb4.3
NVAR Mina Array Bea 77.61 45 P **P 06 16 59.4 +0.4**
comp=Z,1.8nm,0.7s,mb4.1,baz=302,slow=3.6,SNR=15
PDAR Pinedale Array 77.75 36 P **P 06 16 58.4 -1.3**
comp=Z,0.6nm,0.6s,mb3.7,baz=352,slow=3.8,SNR=5.9
HWUT Hardware Ranch 77.92 38 *e*P **P 06 17 00.0 -0.7**
comp=Z,3.6nm,0.6s,mb4.5
ISCO Idaho Springs 81.81 35 *e*P **P 06 17 21.0 -0.8**
ISCO pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
ISCO Idaho Springs 81.81 35 *e*P **P 06 17 21.0 -0.7**
comp=Z,2.8nm,1.1s,mb4.1
SDCO Great Sand Dun 83.64 36 *e*P **P 06 17 30.8 -0.5**
comp=Z,0.8nm,0.8s,mb3.9
ANMO Albuquerque 85.69 38 *e*P **P 06 17 41.8 +0.1**
comp=Z,0.6nm,1.4s,mb3.6
KMBO Kilima Mbogo 87.67 266 LR LR 07 02 54.2
comp=Z,885nm,18.3s,MS5.2,baz=98,slow=40
WMOK Wichita Mounta 88.81 33 *e*P **P 06 17 55.3 -1.5**
WMOK pmax pmax
comp=Z,3.0nm,0.9s,mb4.6
WMOK Wichita Mounta 88.81 33 *e*P **P 06 17 55.2 -1.6**
comp=Z,3.3nm,0.9s,mb4.7
WVT Waverly 90.95 24 *e*P **P 06 18 05.7 -1.1**
WVT pmax pmax
comp=Z,2.0nm,0.6s,mb4.6
WVT Waverly 90.95 24 *e*P **P 06 18 05.7 -1.1**
comp=Z,2.0nm,0.6s,mb4.6
TXAR Lajitas Array 91.73 39 P **P 06 18 10.4 -0.1**
comp=Z,0.8nm,1.0s,mb4.0,baz=316,slow=3.5,SNR=4.9
LIC Lamto 108.41 304 *e*P Pdif 06 19 25.0 -0.5
comp=Z,11nm,0.9s
LIC Lamto 108.41 304 *e*P Pdif 06 19 25.0 -0.5
comp=Z,5.6nm,0.9s
LPAZ La Paz 146.13 18 PKPbc PKPbc 06 24 42.0 -1.1
comp=Z,7.2nm,0.9s,baz=337,slow=3.5,SNR=25
LPAZ La Paz 146.13 18 *e*PKPdf PKPdf 06 24 41.4 -0.9
SIV San Ignacio 146.82 6 PKPbc PKPbc 06 24 42.3 -2.9
comp=Z,2.6nm,0.7s,baz=49,slow=1.3,SNR=13

CASC 10 06:38:58.0±2.0, 8°.41N×82°.96W, h3km, MD3.6, 3C-1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.32**	**320⇑**	*e*P	Pg	06 39 04.7	+0.5
ACR				*e*S	Sg	06 39 09.9	+1.5
BRU2	**Volcan**	**0.47**	**34⇑**	*i*P	Pg	06 39 09.1	+2.1
BRU2				*e*S	Sg	06 39 16.9	+3.7
CTCR	**Cotoan**	**0.53**	**22**	*e*P	Pg	06 39 09.7	+1.5
CTCR				*e*S	Sg	06 39 16.2	+1.2
BAR1		**0.90**	**337⇓**	*e*P	Pg	06 39 15.0	-0.3
BAR1				*e*S	Sg	06 39 28.5	+1.4
CNI	**Changuinola**	**1.10**	**23⇑**	*e*P	Pg	06 39 19.0	0.0
BUS	**Buena Vista**	**1.39**	**325**	*e*P	Pn	06 39 23.5	-0.8
URSC	**Urasca**	**1.64**	**330**	*e*P	Pn	06 39 27.5	-0.2
PRS1	**Puriscal**	**2.06**	**320**	*e*P	Pn	06 39 33.6	+0.1
CGA2	**Cerro Gallo 2**	**2.19**	**317**	*e*P	Pn	06 39 37.1	+1.9

INMG ***10*** *06:52:25.6±1.9, 36°.61N×11°.83W, h10km, MD3.3, ML3.5, Error ellipse: s-maj=5.5km s-min=3.9km az=121.0*
ISCJB ***10*** *06:52:26.4±0.5, 36°.66N±0°.02×11°.44W±0°.04, h10km, Error ellipse: s-maj=4.1km s-min=3.5km az=174.7*
MDD ***10*** *06:52:26.2±1.1, 36°.66N×11°.73W, h0km, mb4.9/24, Error ellipse: s-maj=11.1km s-min=6.9km az=92.0, PRIMO*
SFS ***10*** *06:52:27.0, 36°.60N×11°.90W, h27km, ML4.8*
NEIC ***10*** *06:52:27.7, 36°.76N×11°.68W, h0km, MN3.5(MDD), After MDD.*
LDG ***10*** *06:52:28.6±0.2, 36°.73N×11°.80W, h10km, Ml3.9/4, Error ellipse: s-maj=4.3km s-min=3.0km az=48.0*
IGIL ***10*** *06:52:28.9, 36°.72N×11°.61W, h0km, ML3.3*
CSEM ***10*** *06:52:29.7±0.3, 36°.84N×11°.49W, h10km, ML4.3/19, Error ellipse: s-maj=7.0km s-min=4.5km az=66.0*
CNRM ***10*** *06:52:31.3, 36°.36N×11°.62W, h30km, MD4.0*
ISC 10 06:52:29.1±0.5, 36°.74N±0°.02×11°.44W±0°.03, h10km, n238, σ1§23/430, 5C-5D, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MORF	**Marmelete**	**2.31**	**75**	P	**Pn**	**06 53 08.1**	**+1.0**
MORF				S	**Sn**	**06 53 36.5**	**+1.0**
MORF	**Marmelete**	**2.31**	**75**	P	**Pn**	**06 53 08.1**	**+1.0**
MORF				S	**Sn**	**06 53 36.5**	**+1.0**
MORF	**Marmelete**	**2.31**	**75**	*e*Pn	**Pn**	**06 53 08.1**	**+1.0**
MORF				*e*Sn	**Sn**	**06 53 36.7**	**+1.2**
MORF				A		06 53 39.4	
	211nm,0.3s						
MORF	**Marmelete**	**2.31**	**75**	*e*Pn	**Pn**	**06 53 08.1**	**+1.0**
MORF				*e*Sn	**Sn**	**06 53 36.7**	**+1.2**
	211nm,0.3s						
PTEO	**Sao Teotonio**	**2.32**	**69**	*e*Pn	**Pn**	**06 53 08.4**	**+1.1**
PTEO				*e*Sn	**Sn**	**06 53 37.2**	**+1.4**
PTEO				A		06 53 40.5	
	158nm,0.4s						
LIS	**Lisbon**	**2.69**	**42**	*e*P	**Pn**	**06 53 12.9**	**+0.6**
LIS				*e*S	**Sn**	**06 53 45.2**	**+0.4**
LIS				AML	AML	06 53 46.1	
	comp=E,128nm,0.3s						
LIS	**Lisbon**	**2.69**	**42**	P	**Pn**	**06 53 12.9**	**+0.6**
LIS				S	**Sn**	**06 53 45.2**	**+0.4**
LIS	**Lisbon**	**2.69**	**42**	P	**Pn**	**06 53 12.9**	**+0.6**
LIS				S	**Sn**	**06 53 45.2**	**+0.4**
PLML	**Palmela**	**2.71**	**47**	*e*Pn	**Pn**	**06 53 13.8**	**+1.1**
PLML				*e*Sn	**Sn**	**06 53 46.9**	**+1.4**
PLML	**Palmela**	**2.71**	**47**	*e*Pn	**Pn**	**06 53 13.8**	**+1.1**
PLML				*e*Sn	**Sn**	**06 53 46.9**	**+1.4**
INMG	**Instituto de M**	**2.74**	**41**	*e*Pn	**Pn**	**06 53 14.0**	**+0.9**
INMG				*e*Sn	**Sn**	**06 53 47.4**	**+1.2**
INMG	**Instituto de M**	**2.74**	**41**	*e*Pn	**Pn**	**06 53 14.0**	**+0.9**
INMG				*e*Sn	**Sn**	**06 53 47.4**	**+1.2**
PMAFR	**Mafra**	**2.80**	**37**	⇑P	**Pn**	**06 53 14.3**	**+0.5**
	comp=E,74nm,0.1s,SNR=18						
PMAFR				S	**Sn**	**06 53 48.0**	**+0.4**
	comp=E,317nm,0.1s,SNR=7.9						
PMAFR	**Mafra**	**2.80**	**37**	⇑P	**Pn**	**06 53 14.3**	**+0.5**
	comp=E,74nm,0.1s,SNR=18						
PMAFR				S	**Sn**	**06 53 48.0**	**+0.4**
	comp=E,317nm,0.1s,SNR=7.9						
PMAFR	**Mafra**	**2.80**	**37**	*i* Pn	**Pn**	**06 53 14.3**	**+0.4**
PMAFR				*e*Sn	**Sn**	**06 53 47.7**	**0.0**
PMAFR				A		06 53 49.6	
	comp=E,331nm,0.2s						
PMAFR	**Mafra**	**2.80**	**37**	P	**Pn**	**06 53 14.3**	**+0.4**
	comp=E,74nm,0.1s,SNR=18						
PMAFR				*e*Sn	**Sn**	**06 53 47.7**	**0.0**
	comp=E,331nm,0.2s						
PMAFR				S	**Sn**	**06 53 48.0**	**+0.3**
	comp=E,317nm,0.1s,SNR=7.9						
PBDV	**Barranco-do-Ve**	**2.86**	**79**	*e*Pn	**Pn**	**06 53 15.8**	**+1.1**
PBDV				*e*Sn	**Sn**	**06 53 49.9**	**+0.8**
PBDV				A		06 53 54.4	
	comp=E,62nm,0.3s						
PBDV	**Barranco-do-Ve**	**2.86**	**79**	*e*Pn	**Pn**	**06 53 15.8**	**+1.1**
PBDV				*e*Sn	**Sn**	**06 53 49.9**	**+0.8**
	comp=E,62nm,0.3s						
PCVE	**Castro Verde**	**2.86**	**71**	*e*Pn	**Pn**	**06 53 17.4**	**+2.7**
PCVE				*e*Sn	**Sn**	**06 53 51.3**	**+2.1**
PCVE				A		06 53 56.6	
	comp=E,57nm,0.3s						
MOE	**Montemor**	**3.03**	**53**	*e*Pn	**Pn**	**06 53 17.9**	**+0.8**
MOE				*e*Sn	**Sn**	**06 53 54.2**	**+0.7**
MOE	**Montemor**	**3.03**	**53**	*e*Pn	**Pn**	**06 53 17.9**	**+0.8**
MOE				*e*Sn	**Sn**	**06 53 54.2**	**+0.7**
PVAQ	**Vaqueiros**	**3.05**	**76**	*e*Pn	**Pn**	**06 53 18.6**	**+1.2**
PVAQ				*e*Sn	**Sn**	**06 53 54.4**	**+0.5**
PVAQ				A		06 54 00.0	
	comp=E,107nm,0.4s						
PVAQ	**Vaqueiros**	**3.05**	**76**	*e*Pn	**Pn**	**06 53 18.6**	**+1.2**
PVAQ				*e*Sn	**Sn**	**06 53 54.4**	**+0.5**
	comp=E,107nm,0.4s						
PBEJ	**Beja**	**3.12**	**65**	*e*Pn	**Pn**	**06 53 19.3**	**+0.9**
PBEJ				*e*Sn	**Sn**	**06 53 56.0**	**+0.3**
PBEJ				A		06 53 57.1	
	comp=E,54nm,0.3s						
PBEJ	**Beja**	**3.12**	**65**	*e*Pn	**Pn**	**06 53 19.3**	**+0.9**
PBEJ				*e*Sn	**Sn**	**06 53 56.0**	**+0.3**
	comp=E,54nm,0.3s						
EVOP	**Sao Brissos**	**3.18**	**55**	*e*Pn	**Pn**	**06 53 20.3**	**+1.1**
EVOP				*e*Sn	**Sn**	**06 53 57.0**	**-0.2**
	comp=E,44nm,0.2s						
EVO	**Evora**	**3.26**	**56**	*e*Pn	**Pn**	**06 53 20.3**	**+0.1**
EVO				*e*Sn	**Sn**	**06 53 57.0**	**-2.0**
	comp=E,88nm,0.2s						
EVO	**Evora**	**3.26**	**56**	*e*Pn	**Pn**	**06 53 20.8**	**+0.6**
EVO				*e*Sn	**Sn**	**06 53 58.8**	**-0.2**
EVO				A		06 54 02.0	
	comp=E,173nm,0.1s						
EVO	**Evora**	**3.26**	**56**	*e*Pn	**Pn**	**06 53 20.8**	**+0.6**
EVO				*e*Sn	**Sn**	**06 53 58.8**	**-0.2**
	comp=E,173nm,0.1s						
EGRO	**El Granado**	**3.26**	**75**	P	**Pn**	**06 53 21.5**	**+1.2**
EGRO				S	**Sn**	**06 53 59.6**	**+0.5**
EGRO	**El Granado**	**3.26**	**75**	P	**Pn**	**06 53 21.5**	**+1.2**
	comp=E,13nm,0.1s,SNR=49						
EGRO				S	**Sn**	**06 53 59.6**	**+0.5**
	comp=E,53nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**3.26**	**75**	P	**Pn**	**06 53 21.5**	**+1.2**
	comp=E,13nm,0.1s,SNR=49						
EGRO				S	**Sn**	**06 53 59.6**	**+0.5**
	comp=E,53nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**3.26**	**75**	P	**Pn**	**06 53 21.5**	**+1.2**
	comp=E,13nm,0.1s,SNR=49						
EGRO				S	**Sn**	**06 53 59.7**	**+0.6**
ALMR	**Almeirim**	**3.31**	**42**	*e*P	**Pn**	**06 53 21.4**	**+0.5**
ALMR				*e*S	**Sn**	**06 54 00.1**	**-0.2**
ALMR				*e*S	**Sn**	**06 54 00.1**	**-0.2**
ALMR				AML	AML	06 54 00.9	
	comp=N,60nm,0.1s						
PESTR	**Estremoz**	**3.72**	**54**	*e*Pn	**Pn**	**06 53 27.1**	**+0.6**
PESTR				*e*Sn	**Sn**	**06 54 10.1**	**-0.3**
PESTR				A		06 54 15.4	
	comp=N,18nm,0.2s						
PESTR	**Estremoz**	**3.72**	**54**	*e*Pn	**Pn**	**06 53 27.1**	**+0.6**
PESTR				*e*Sn	**Sn**	**06 54 10.1**	**-0.3**
	comp=N,18nm,0.2s						
PTOM	**Tomar**	**3.74**	**39**	*e*Pn	**Pn**	**06 53 27.1**	**+0.3**
PTOM				*e*Sn	**Sn**	**06 54 11.0**	**+0.1**
PTOM				A		06 54 16.9	
	comp=N,74nm,0.3s						
PTOM	**Tomar**	**3.74**	**39**	*e*Pn	**Pn**	**06 53 27.1**	**+0.3**
PTOM				*e*Sn	**Sn**	**06 54 11.0**	**+0.1**
	comp=N,74nm,0.3s						
PBAR	**Barrancos**	**3.79**	**66**	*e*Pn	**Pn**	**06 53 28.5**	**+1.0**
PBAR				*e*Sn	**Sn**	**06 54 12.1**	**+0.1**
PBAR				A		06 54 14.3	
	comp=N,58nm,0.3s						
PBAR	**Barrancos**	**3.79**	**66**	*e*Pn	**Pn**	**06 53 28.5**	**+1.0**
PBAR				*e*Sn	**Sn**	**06 54 12.1**	**+0.1**
	comp=N,58nm,0.3s						
EMIN	**Mina Concepcio**	**3.94**	**73**	P	**Pn**	**06 53 30.6**	**+1.0**
EMIN				S	**Sn**	**06 54 16.4**	**+0.5**
EMIN	**Mina Concepcio**	**3.94**	**73**	P	**Pn**	**06 53 30.6**	**+1.0**
	comp=N,10.0nm,0.2s,SNR=84						
EMIN				S	**Sn**	**06 54 16.4**	**+0.5**
	comp=N,62nm,0.4s,SNR=7.9					

JHA				S	Sn	06 54 36.0	-12
EMIJ	**Mijas**	**5.37**	**90**	P	Pn	06 53 49.4	+0.2
EMIJ				S	Sn	06 54 49.3	-1.7
EMIJ	**Mijas**	**5.37**	**90**	P	Pn	06 53 49.4	+0.2
	comp=N,30nm,1.0s,SNR=7.9						
EMIJ				S	Sn	06 54 49.3	-1.7
	comp=N,18nm,0.4s,SNR=7.9						
EMIJ	**Mijas**	**5.37**	**90**	P	Pn	06 53 49.4	+0.2
	comp=N,30nm,1.0s,SNR=7.9						
EMIJ				S	Sn	06 54 49.3	-1.7
	comp=N,18nm,0.4s,SNR=7.9						
EMIJ	**Mijas**	**5.37**	**90**	P	Pn	06 53 49.4	+0.2
	comp=N,30nm,1.0s,SNR=7.9						
PVRL	**Vila Real**	**5.38**	**31**	*e*Pn	Pn	06 53 49.4	0.0
PVRL				*e*Sn	Sn	06 54 48.4	-2.9
PVRL				A		06 54 52.5	
	comp=N,34nm,0.1s						
PMPS	**Porto Santo**	**5.44**	**229**	*e*Pn	Pn	06 53 40.4	-10
PMPS				*e*Sn	Sn	06 54 31.6	-21
PMPS				A		06 54 35.3	
	comp=N,72nm,0.2s						
MVO	**Moncorvo**	**5.60**	**37**	⇓P	Pn	06 53 52.4	0.0
MVO				S	Sn	06 54 54.6	-2.1
MVO	**Moncorvo**	**5.60**	**37**	⇓P	Pn	06 53 52.4	0.0
	comp=N,9.1nm,0.1s,SNR=18						
MVO				S	Sn	06 54 54.6	-2.1
	comp=N,16nm,0.1s,SNR=8.7						
MVO	**Moncorvo**	**5.60**	**37**	⇓P	Pn	06 53 52.4	0.0
	comp=N,9.1nm,0.1s,SNR=18						
MVO				S	Sn	06 54 54.6	-2.1
	comp=N,16nm,0.1s,SNR=8.7						
MVO	**Moncorvo**	**5.60**	**37**	*e*Pn	Pn	06 53 52.3	-0.1
MVO				*e*Sn	Sn	06 54 54.3	-2.5
MVO				A		06 54 56.5	
	comp=N,29nm,0.3s						
MVO	**Moncorvo**	**5.60**	**37**	*e*Pn	Pn	06 53 52.3	-0.1
MVO				*e*Sn	Sn	06 54 54.3	-2.5
	comp=N,29nm,0.3s						
CIA	**Chichaoua**	**5.62**	**156**	P	Pn	06 53 49.0	-3.6
CIA				S	Sn	06 54 45.0	-12
CIA	**Chichaoua**	**5.62**	**156**	P	Pn	06 53 49.0	-3.6
CIA				S	Sn	06 54 45.0	-12
PCAB	**Cabril**	**5.63**	**27**	*e*Pn	Pn	06 53 52.4	-0.4
PCAB				*e*Sn	Sn	06 54 54.2	-3.3
PCAB				A		06 54 57.4	
	comp=N,18nm,0.3s						
PCAB	**Cabril**	**5.63**	**27**	*e*Pn	Pn	06 53 52.4	-0.4
PCAB				*e*Sn	Sn	06 54 54.2	-3.3
	comp=N,18nm,0.3s						
EADA	**Adamuz**	**5.64**	**73**	P	Pn	06 53 54.3	+1.3
EADA				S	Sn	06 54 56.7	-1.2
EADA	**Adamuz**	**5.64**	**73**	P	Pn	06 53 54.3	+1.3
	comp=N,8.7nm,0.1s,SNR=46						
EADA				S	Sn	06 54 56.7	-1.2
	comp=N,33nm,0.3s,SNR=17						
EADA	**Adamuz**	**5.64**	**73**	P	Pn	06 53 54.3	+1.3
	comp=N,8.7nm,0.1s,SNR=46						
EADA				S	Sn	06 54 56.7	-1.2
	comp=N,33nm,0.3s,SNR=17						
EADA	**Adamuz**	**5.64**	**73**	P	Pn	06 53 54.3	+1.3
	comp=N,8.7nm,0.1s,SNR=46						
ELOB	**Lobios**	**5.75**	**26**	⇑P	Pn	06 53 53.9	-0.6
ELOB				S	Sn	06 54 57.1	-3.4
ELOB	**Lobios**	**5.75**	**26**	⇑P	Pn	06 53 53.9	-0.6
	comp=N,14nm,0.1s,SNR=18						
ELOB				S	Sn	06 54 57.1	-3.4
	comp=N,9.8nm,0.2s,SNR=7.9						
ELOB	**Lobios**	**5.75**	**26**	⇑P	Pn	06 53 53.9	-0.6
	comp=N,14nm,0.1s,SNR=18						
ELOB				S	Sn	06 54 57.1	-3.4
	comp=N,9.8nm,0.2s,SNR=7.9						
ELOB	**Lobios**	**5.75**	**26**	P	Pn	06 53 53.9	-0.6
	comp=N,14nm,0.1s,SNR=18						
ELUQ	**Luque**	**5.79**	**80**	P	Pn	06 53 55.8	+0.8
ELUQ				S	Sn	06 55 01.7	+0.3
ELUQ	**Luque**	**5.79**	**80**	P	Pn	06 53 55.8	+0.8
	comp=N,11nm,0.2s,SNR=7.9						
ELUQ				S	Sn	06 55 01.7	+0.3
	comp=N,20nm,0.3s,SNR=7.9						
ELUQ	**Luque**	**5.79**	**80**	P	Pn	06 53 55.8	+0.8
	comp=N,11nm,0.2s,SNR=7.9						
ELUQ				S	Sn	06 55 01.7	+0.3
	comp=N,20nm,0.3s,SNR=7.9						
ELUQ	**Luque**	**5.79**	**80**	P	Pn	06 53 55.8	+0.8
	comp=N,11nm,0.2s,SNR=7.9						
EZAM	**Zamans**	**5.81**	**21**	P	Pn	06 53 53.7	-1.5
EZAM				S	Sn	06 54 57.3	-4.6
EZAM	**Zamans**	**5.81**	**21**	P	Pn	06 53 53.7	-1.5
	comp=N,23nm,0.3s,SNR=7.9						
EZAM				S	Sn	06 54 58.1	-3.8
	comp=N,20nm,0.2s,SNR=7.9						
EZAM	**Zamans**	**5.81**	**21**	P	Pn	06 53 53.7	-1.5
	comp=N,23nm,0.3s,SNR=7.9						
EZAM				S	Sn	06 54 58.1	-3.8
	comp=N,20nm,0.2s,SNR=7.9						
EZAM	**Zamans**	**5.81**	**21**	P	Pn	06 53 53.7	-1.5
	comp=N,23nm,0.3s,SNR=7.9						
PMAR	**Madeira**	**6.03**	**230**	*e*Pn	Pn	06 53 48.8	-9.5
PMAR				*e*Sn	Sn	06 54 45.7	-22
PMAR				A		06 54 50.6	
	comp=N,93nm,0.2s						
MIF	**Mishlifen**	**6.08**	**121**	P	Pn	06 53 58.0	-1.0
MIF				S	Sn	06 55 03.0	-5.6
MIF	**Mishlifen**	**6.08**	**121**	P	Pn	06 53 58.0	-1.0
MIF				S	Sn	06 55 03.0	-5.6
KIB	**El Ksiba**	**6.09**	**131**	P	Pn	06 53 56.5	-2.6
KIB				S	Sn	06 55 00.0	-8.8
KIB	**El Ksiba**	**6.09**	**131**	P	Pn	06 53 56.5	-2.6
KIB				S	Sn	06 55 00.0	-8.8
ERON	**Agron**	**6.13**	**85**	P	Pn	06 54 01.7	+2.1
ERON	**Agron**	**6.13**	**85**	P	Pn	06 54 01.7	+2.1
	comp=N,11nm,0.2s,SNR=7.9						
ERON	**Agron**	**6.13**	**85**	P	Pn	06 54 01.7	+2.1
	comp=N,11nm,0.2s,SNR=7.9						
ERON	**Agron**	**6.13**	**85**	P	Pn	06 54 01.7	+2.1
	comp=N,11nm,0.2s,SNR=7.9						
TZC	**Tazercounte**	**6.14**	**137**	P	Pn	06 53 57.0	-2.8
TZC				S	Sn	06 55 01.0	-9.1
TZC	**Tazercounte**	**6.14**	**137**	P	Pn	06 53 57.0	-2.8
TZC				S	Sn	06 55 01.0	-9.1
PBRG	**Braganca**	**6.24**	**34**	*e*Pn	Pn	06 54 01.0	-0.1
PBRG				*e*Sn	Sn	06 55 09.7	-2.7
PBRG				A		06 55 12.6	
	comp=N,14nm,0.1s						
PBRG	**Braganca**	**6.24**	**34**	*e*Pn	Pn	06 54 01.0	-0.1
PBRG				*e*Sn	Sn	06 55 09.7	-2.7
	comp=N,14nm,0.1s						
EBAN	**Banos Encina**	**6.26**	**75**	P	Pn	06 54 02.6	+1.2
EBAN				S	Sn	06 55 12.0	-0.9
EBAN	**Banos Encina**	**6.26**	**75**	P	Pn	06 54 02.6	+1.2
	comp=N,8.7nm,0.1s,SNR=13						
EBAN				S	Sn	06 55 12.0	-0.9
	comp=N,20nm,0.4s,SNR=7.4						
EBAN	**Banos Encina**	**6.26**	**75**	P	Pn	06 54 02.6	+1.2
	comp=N,8.7nm,0.1s,SNR=13						
EBAN				S	Sn	06 55 12.0	-0.9
	comp=N,20nm,0.4s,SNR=7.4						
EBAN	**Banos Encina**	**6.26**	**75**	P	Pn	06 54 02.6	+1.2
	comp=N,8.7nm,0.1s,SNR=13						
OUK	**Oukaimeden**	**6.26**	**151**	P	Pn	06 53 58.0	-3.5
OUK				S	Sn	06 55 02.0	-11
OUK	**Oukaimeden**	**6.26**	**151**	P	Pn	06 53 58.0	-3.5
OUK				S	Sn	06 55 02.0	-11
EGUA	**Guajares**	**6.32**	**87**	P	Pn	06 54 03.7	+1.4
EGUA				S	Sn	06 55 13.9	-0.7
EGUA	**Guajares**	**6.32**	**87**	P	Pn	06 54 03.7	+1.4
	comp=N,24nm,0.2s,SNR=7.9						
EGUA				S	Sn	06 55 13.9	-0.7
	comp=N,103nm,0.7s,SNR=7.9						
EGUA	**Guajares**	**6.32**	**87**	P	Pn	06 54 03.7	+1.4
	comp=N,24nm,0.2s,SNR=7.9						
EGUA				S	Sn	06 55 13.9	-0.7
	comp=N,103nm,0.7s,SNR=7.9						
EGUA	**Guajares**	**6.32**	**87**	P	Pn	06 54 03.7	+1.4
	comp=N,24nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**6.35**	**34**	P	Pn	06 54 02.6	0.0
ECAL				S	Sn	06 55 12.8	-2.3
ECAL	**Calabor**	**6.35**	**34**	P	Pn	06 54 02.6	0.0
	comp=N,9.1nm,0.1s,SNR=24						
ECAL				S	Sn	06 55 12.8	-2.3
	comp=N,39nm,0.3s,SNR=4.7						
ECAL	**Calabor**	**6.35**	**34**	P	Pn	06 54 02.6	0.0
	comp=N,9.1nm,0.1s,SNR=24						
ECAL				S	Sn	06 55 12.8	-2.3
	comp=N,39nm,0.3s,SNR=4.7						
ECAL	**Calabor**	**6.35**	**34**	P	Pn	06 54 02.6	0.0
	comp=N,9.1nm,0.1s,SNR=24						
EQUE	**Quentar**	**6.42**	**83**	P	Pn	06 54 05.2	+1.5
	comp=N,4.6nm,0.1s,SNR=12						
EQUE				S	Sn	06 55 16.4	-0.6
	comp=N,9.4nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**6.42**	**83**	P	Pn	06 54 05.2	+1.5
	comp=N,4.6nm,0.1s,SNR=12						
EQUE				S	Sn	06 55 16.4	-0.6
	comp=N,9.4nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**6.42**	**83**	P	Pn	06 54 05.2	+1.5
	comp=N,4.6nm,0.1s,SNR=12						
CZD	**Col de Zad**	**6.43**	**123**	P	Pn	06 54 03.0	-0.7
CZD				S	Sn	06 55 10.0	-7.1
CZD	**Col de Zad**	**6.43**	**123**	P	Pn	06 54 03.0	-0.7
CZD				S	Sn	06 55 10.0	-7.1
EMAZ	**Mazaricos**	**6.49**	**16**	P	Pn	06 54 02.2	-2.3
EMAZ				S	Sn	06 55 12.3	-6.3
EMAZ	**Mazaricos**	**6.49**	**16**	P	Pn	06 54 02.3	-2.3
	comp=N,8.4nm,0.1s,SNR=7.9						
EMAZ				S	Sn	06 55 12.3	-6.3
	comp=N,19nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**6.49**	**16**	P	Pn	06 54 02.3	-2.3
	comp=N,8.4nm,0.1s,SNR=7.9						
EMAZ				S	Sn	06 55 12.3	-6.3
	comp=N,19nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**6.49**	**16**	P	Pn	06 54 02.3	-2.3
	comp=N,8.4nm,0.1s,SNR=7.9						
TZK	**Tazeka**	**6.49**	**112**	P	Pn	06 54 04.0	-0.6
TZK				S	Sn	06 55 13.0	-5.7
TZK	**Tazeka**	**6.49**	**112**	P	Pn	06 54 04.0	-0.6
TZK				S	Sn	06 55 13.0	-5.7
TZK	**Tazeka**	**6.49**	**112**	*i* P	Pn	06 54 04.0	-0.6
STS	**Santiago**	**6.53**	**19**	P	Pn	06 54 04.1	-1.1
STS	**Santiago**	**6.53**	**19**	P	Pn	06 54 04.1	-1.1
	comp=N,5.3nm,0.1s,SNR=7.9						
STS	**Santiago**	**6.53**	**19**	P	Pn	06 54 04.1	-1.1
	comp=N,5.3nm,0.1s,SNR=7.9						
EQES	**Quesada**	**6.76**	**78**	P	Pn	06 54 09.2	+0.9
EQES				S	Sn	06 55 24.4	-0.9
EQES	**Quesada**	**6.76**	**78**	P	Pn	06 54 09.2	+0.9
	comp=N,2.5nm,0.1s,SNR=7.9						
EQES				S	Sn	06 55 24.4	-0.9
	comp=N,19nm,0.3s,SNR=7.9						
EQES	**Quesada**	**6.76**	**78**	P	Pn	06 54 09.2	+0.9
	comp=N,2.5nm,0.1s,SNR=7.9						
EQES				S	Sn	06 55 24.4	-0.9
	comp=N,19nm,0.3s,SNR=7.9						
EQES	**Quesada**	**6.76**	**78**	P	Pn	06 54 09.2	+0.9
	comp=N,2.5nm,0.1s,SNR=7.9						
EBER	**Berja**	**6.86**	**86**	P	Pn	06 54 11.4	+1.7
EBER				S	Sn	06 55 28.9	+1.0
EBER	**Berja**	**6.86**	**86**	P	Pn	06 54 11.4	+1.7
	comp=N,5.0nm,0.2s,SNR=7.9						
EBER				S	Sn	06 55 27.1	-0.8
	comp=N,15nm,0.6s,SNR=7.9						
EBER	**Berja**	**6.86**	**86**	P	Pn	06 54 11.4	+1.7
	comp=N,5.0nm,0.2s,SNR=7.9						
EBER				S	Sn	06 55 27.1	-0.8
	comp=N,15nm,0.6s,SNR=7.9						
EBER	**Berja**	**6.86**	**86**	P	Pn	06 54 11.4	+1.7
	comp=N,5.0nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	**6.91**	**53**	P	Pn	06 54 11.3	+1.0
GUD				S	Sn	06 55 27.6	-1.4
GUD	**Guadarrama**	**6.91**	**53**	P	Pn	06 54 11.3	+1.0
	comp=N,3.6nm,0.3s,SNR=7.9						
GUD				S	Sn	06 55 27.6	-1.4
	comp=N,8.5nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	**6.91**	**53**	P	Pn	06 54 11.3	+1.0
	comp=N,3.6nm,0.3s,SNR=7.9						
GUD				S	Sn	06 55 27.6	-1.4
	comp=N,8.5nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	**6.91**	**53**	P	Pn	06 54 11.3	+1.0
	comp=N,3.6nm,0.3s,SNR=7.9						
EHUE	**Huescar**	**7.14**	**79**	P	Pn	06 54 14.3	+0.8
EHUE				S	Sn	06 55 33.6	-1.0
EHUE	**Huescar**	**7.14**	**79**	P	Pn	06 54 14.3	+0.8
	comp=N,3.9nm,0.2s,SNR=7.9						
EHUE				S	Sn	06 55 33.6	-1.0
	comp=N,6.6nm,0.2s,SNR=7.9						
EHUE	**Huescar**	**7.14**	**79**	P	Pn	06 54 14.3	+0.8
	comp=N,3.9nm,0.2s,SNR=7.9						
EHUE				S	Sn	06 55 33.6	-1.0
	comp=N,6.6nm,0.2s,SNR=7.9						
EHUE	**Huescar**	**7.14**	**79**	P	Pn	06 54 14.3	+0.8
	comp=N,3.9nm,0.2s,SNR=7.9						
EVIA	**Vianos**	**7.34**	**72**	P	Pn	06 54 16.9	+0.7
EVIA				S	Sn	06 55 38.0	-1.6
EVIA	**Vianos**	**7.34**	**72**	P	Pn	06 54 16.9	+0.7
	comp=N,3.9nm,0.1s,SNR=11						
EVIA				S	Sn	06 55 38.0	-1.6
	comp=N,7.7nm,0.3s						
EVIA	**Vianos**	**7.34**	**72**	P	Pn	06 54 16.9	+0.7
	comp=N,3.9nm,0.1s,SNR=11						
EVIA				S	Sn	06 55 38.0	-1.6
	comp=N,7.7nm,0.3s						
EVIA	**Vianos**	**7.34**	**72**	P	Pn	06 54 16.9	+0.7
	comp=N,3.9nm,0.1s,SNR=11						
EPON	**Pontenova**	**7.36**	**25**	P	Pn	06 54 15.3	-1.2
EPON				S	Sn	06 55 36.0	-4.0
EPON	**Pontenova**	**7.36**	**25**	P	Pn	06 54 15.3	-1.2
	comp=N,5.6nm,0.1s,SNR=7.9						
EPON				S	Sn	06 55 36.0	-4.0
	comp=N,7.7nm,0.3s,SNR=7.9						
EPON	**Pontenova**	**7.36**	**25**	P	Pn	06 54 15.3	-1.2
	comp=N,5.6nm,0.1s,SNR=7.9						
EPON				S	Sn	06 55 36.0	-4.0
	comp=N,7.7nm,0.3s,SNR=7.9						
EPON	**Pontenova**	**7.36**	**25**	P	Pn	06 54 15.3	-1.2
	comp=N,5.6nm,0.1s,SNR=7.9						
ZFT	**Errachidia**	**7.50**	**127**	P	Pn	06 54 17.0	-1.6
ZFT				S	Sn	06 55 36.5	-7.2
ZFT	**Errachidia**	**7.50**	**127**	P	Pn	06 54 17.0	-1.6
ZFT				S	Sn	06 55 36.5	-7.2
ETOB	**Tobarra**	**8.07**	**73**	P	Pn	06 54 26.6	+0.3
ETOB				S	Sn	06 55 56.8	-0.8
ETOB	**Tobarra**	**8.07**	**73**	P	Pn	06 54 26.6	+0.3
	comp=N,3.3nm,0.2s,SNR=15						
ETOB				S	Sn	06 55 56.8	-0.8
	comp=N,6.1nm,0.4s,SNR=7.9						
ETOB	**Tobarra**	**8.07**	**73**	P	Pn	06 54 26.6	+0.3
	comp=N,3.3nm,0.2s,SNR=15						
ETOB				S	Sn	06 55 56.8	-0.8
	comp=N,6.1nm,0.4s,SNR=7.9						
ETOB	**Tobarra**	**8.07**	**73**	P	Pn	06 54 26.6	+0.3
	comp=N,3.3nm,0.2s,SNR=15						
EARI	**Arriondas**	**8.11**	**34**	P	Pn	06 54 27.5	+0.6
EARI				S	Sn	06 55 54.2	-4.3
EARI	**Arriondas**	**8.11**	**34**	P	Pn	06 54 27.5	+0.6
	comp=N,1.2nm,0.1s,SNR=15						
EARI				S	Sn	06 55 54.2	-4.3
	comp=N,1.5nm,0.1s,SNR=7.9						
EARI	**Arriondas**	**8.11**	**34**	P	Pn	06 54 27.5	+0.6
	comp=N,1.2nm,0.1s,SNR=15						
EARI				S	Sn	06 55 54.2	-4.3
	comp=N,1.5nm,0.1s,SNR=7.9						
EARI	**Arriondas**	**8.11**	**34**	P	Pn	06 54 27.5	+0.7
	comp=N,1.2nm,0.1s,SNR=15						
ETOR	**Torete**	**8.39**	**58**	P	Pn	06 54 31.3	+0.6
ETOR				S	Sn	06 56 01.3	-4.0
ETOR	**Torete**	**8.39**	**58**	P	Pn	06 54 31.3	+0.6
	comp=N,25nm,0.1s,SNR=7.9						
ETOR				S	Sn	06 56 01.3	-4.0
	comp=N,28nm,0.2s,SNR=7.9						
ETOR	**Torete**	**8.39**	**58**	P	Pn	06 54 31.3	+0.6
	comp=N,25nm,0.1s,SNR=7.9						
ETOR				S	Sn	06 56 01.3	-4.0
	comp=N,28nm,0.2s,SNR=7.9						
ETOR	**Torete**	**8.39**	**58**	P	Pn	06 54 31.3	+0.7
	comp=N,25nm,0.1s,SNR=7.9						
ELAN	**Lanestosa**	**8.93**	**41**	P	Pn	06 54 37.7	-0.4
ELAN				S	Sn	06 56 14.0	-4.7
ELAN	**Lanestosa**	**8.93**	**41**	P	Pn	06 54 37.7	-0.4
	comp=N,2.4nm,0.3s,SNR=7.9						
ELAN				S	Sn	06 56 14.0	-4.7
	comp=N,3.0nm,0.3s,SNR=7.9						
ELAN	**Lanestosa**	**8.93**	**41**	P	Pn	06 54 37.7	-0.4
	comp=N,2.4nm,0.3s,SNR=7.9						
ELAN				S	Sn	06 56 14.0	-4.7
	comp=N,3.0nm,0.3s,SNR=7.9						
ELAN	**Lanestosa**	**8.93**	**41**	P	Pn	06 54 37.7	-0.4
	comp=N,2.4nm,0.3s,SNR=7.9						
ECRI	**Cripan**	**9.04**	**47**	P	Pn	06 54 40.1	+0.5
ECRI	**Cripan**	**9.04**	**47**	P	Pn	06 54 40.1	+0.5
	comp=N,2.6nm,0.2s,SNR=7.9						
ECRI	**Cripan**	**9.04**	**47**	P	Pn	06 54 40.1	+0.5
	comp=N,2.6nm,0.2s,SNR=7.9						
ECRI	**Cripan**	**9.04**	**47**	P	Pn	06 54 40.1	+0.5
	comp=N,2.6nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**9.10**	**74**	P	Pn	06 54 42.0	+1.6
EBEN				S	Sn	06 56 22.2	-0.7
EBEN	**Beniarda**	**9.10**	**74**	P	Pn	06 54 42.0	+1.6
	comp=N,0.6nm,0.2s,SNR=7.9						
EBEN				S	Sn	06 56 18.7	-4.3
	comp=N,1.8nm,0.4s,SNR=7.9						
EBEN	**Beniarda**	**9.10**	**74**	P	Pn	06 54 42.0	+1.6
	comp=N,0.6nm,0.2s,SNR=7.9						
EBEN				S	Sn	06 56 18.7	-4.3
	comp=N,1.8nm,0.4s,SNR=7.9						
EBEN	**Beniarda**	**9.10**	**74**	P	Pn	06 54 42.0	+1.5
	comp=N,0.6nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**9.32**	**64**	P	Pn	06 54 45.9	+2.4
EMOS				S	Sn	06 56 26.1	-2.3
EMOS	**Mosqueruela**	**9.32**	**64**	P	Pn	06 54 45.9	+2.4
	comp=N,2.6nm,0.4s,SNR=7.9						
EMOS				S	Sn	06 56 23.9	-4.4
	comp=N,2.6nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**9.32**	**64**	P	Pn	06 54 45.9	+2.4
	comp=N,2.6nm,0.4s,SNR=7.9						
EMOS				S	Sn	06 56 23.9	-4.4
	comp=N,2.6nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**9.32**	**64**	P	Pn	06 54 45.9	+2.4
	comp=N,2.6nm,0.4s,SNR=7.9						
ESAC	**San Caprasio**	**9.86**	**56**	P	Pn	06 54 53.2	+2.4
	comp=N,1.9nm,0.2s						
ESAC				S	Sn	06 56 39.9	-1.6
ESAC	**San Caprasio**	**9.86**	**56**	S	Sn	06 56 37.4	-4.0
	comp=N,24nm,0.3s,SNR=7.9						
ESAC	**San Caprasio**	**9.86**	**56**	S	Sn	06 56 37.4	-4.0
	comp=N,24nm,0.3s,SNR=7.9						
EORO	**Oroz-Betelu**	**9.92**	**49**	P	Pn	06 54 52.3	+0.7
	comp=N,1.0nm,0.1s,SNR=7.9						
EORO	**Oroz-Betelu**	**9.92**	**49**	P	Pn	06 54 52.3	+0.7
	comp=N,1.0nm,0.1s,SNR=7.9						
ELIZ	**Elizondo**	**9.95**	**47**	P	Pn	06 54 52.9	+0.8
	comp=N,3.4nm,0.2s						
ELIZ				S	Sn	06 56 39.0	-4.7
ELIZ	**Elizondo**	**9.95**	**47**	P	Pn	06 54 52.9	+0.8
	comp=N,3.4nm,0.2s,SNR=7.9						
ELIZ				S	Sn	06 56 39.0	-4.7
	comp=N,2.7nm,0.4s,SNR=7.9						
ELIZ	**Elizondo**	**9.95**	**47**	P	Pn	06 54 52.9	+0.8
	comp=N,3.4nm,0.2s,SNR=7.9						
ELIZ				S	Sn	06 56 39.0	-4.7
	comp=N,2.7nm,0.4s,SNR=7.9						
EALK	**Alkurruntz**	**10.00**	**47**	P	Pn	06 54 53.9	+1.2
	comp=N,1.2nm,0.2s						
EALK				S	Sn	06 56 40.4	-4.5
EALK	**Alkurruntz**	**10.00**	**47**	P	Pn	06 54 53.9	+1.2
	comp=N,1.2nm,0.2s,SNR=7.9						
EALK				S	Sn	06 56 40.4	-4.5
	comp=N,3.9nm,0.3s,SNR=7.9						
EALK	**Alkurruntz**	**10.00**	**47**	P	Pn	06 54 53.9	+1.2
	comp=N,1.2nm,0.2s,SNR=7.9						
EALK				S	Sn	06 56 40.4	-4.5
	comp=N,3.9nm,0.3s,SNR=7.9						
SJPF	**Ste Jean**	**10.10**	**48**	*e*Pn	Pn	06 54 54.1	0.0
SJPF				*e*Sn	Sn	06 56 43.1	-4.3
	comp=N,9.5nm,0.6s						
SJPF	**Ste Jean**	**10.10**	**48**	P	Pn	06 54 54.1	0.0
SJPF				S	Sn	06 56 43.1	-4.3
	comp=N,4.8nm,0.6s						
SJPF	**Ste Jean**	**10.10**	**48**	P	Pn	06 54 54.1	0.0
SJPF				S	Sn	06 56 43.1	-4.3
	comp=N,4.8nm,0.6s						
ETSF	**Etsaut**	**10.38**	**50**	*e*Pn	Pn	06 54 58.3	+0.3
ETSF				*e*Sn	Sn	06 56 50.1	-4.3
	comp=N,2.5nm,0.4s						
ETSF	**Etsaut**	**10.38**	**50**	P	Pn	06 54 58.3	+0.3
ETSF				S	Sn	06 56 50.1	-4.3
	comp=N,1.2nm,0.4s						
ETSF	**Etsaut**	**10.38**	**50**	P	Pn	06 54 58.3	+0.3
ETSF				S	Sn	06 56 50.1	-4.3
	comp=N,1.2nm,0.4s						
EBIE	**Bielsa**	**10.72**	**53**	P	Pn	06 55 03.4	+0.8
	comp=N,2.5nm,0.3s						
EBIE				S	Sn	06 56 59.2	-3.3
EBIE	**Bielsa**	**10.72**	**53**	P	Pn	06 55 03.4	+0.8
	comp=N,2.5nm,0.3s,SNR=7.9						
EBIE				S	Sn	06 56 59.2	-3.3
	comp=N,1.3nm,0.2s,SNR=7.9						
EBIE	**Bielsa**	**10.72**	**53**	P	Pn	06 55 03.4	+0.8
	comp=N,2.5nm,0.3s,SNR=7.9						
EBIE				S	Sn	06 56 59.2	-3.3
	comp=N,1.3nm,0.2s,SNR=7.9						
EPF	**Esparros**	**11.02**	**52**	*e*Pn	Pn	06 55 07.

JWT				S	Sg	06 58 53.6	-0.2
MAT	**Matsushiro**	**2.34**	**51**	P	Pn	06 59 16.8	+0.7
MAT				S	Sn	06 59 50.1	+5.4

MOS ***10*** *07:10:15.7±0.9,5.˚08S×154.˚51E, h3km, mb5.4/22, Error ellipse: s-maj=12.1km s-min=8.9km az=112.4*
ISCJB ***10*** *07:10:21.6±0.2,5.˚22S±0.˚04×154.˚61E±0.˚05, h46km, mb5.1/78, MS3.9/12, Error ellipse: s-maj=6.6km s-min=4.9km az=164.9*
IDC ***10*** *07:10:23.7±0.7,5.˚17S×154.˚64E, h55km±5km, mb4.7/21, mb1 4.8/22, mb1mx4.7/24, mbtmp4.7/22, MS4.0/6, Ms1 4.0/6, ms1mx3.6/22, Error ellipse: s-maj=15.6km s-min=12.0km az=84.0*
NEIC ***10*** *07:10:23.2±0.2,5.˚17S×154.˚58E, mb5.2/43, Error ellipse: s-maj=7.5km s-min=6.0km az=100.0*
GCMT ***10*** *07:10:26.6±0.3,5.˚11S×154.˚79E, h58km±2km, MW5.0, Moment Tensor Solution. s28,c34; s54,c70; Moment tensor: Scale 10^16^Nm; Mrr3.01±.24; Mθθ-1.09±.17; Mφφ-1.92±.18; Mrθ-0.58±.10; Mθφ2.05±.12; Mφr1.36±.12; Best double couple: M0 3.60000×10^16^ NP1:φs132.00000°, δ34.00000°, λ76.00000°. NP2:φs329.00000°, δ57.00000°, λ99.00000°. Principal axes: T 3.3600, Plg76.0000°, Azm266.0000°; N 0.5300, Plg8.0000°, Azm143.0000°; P -3.8900, Plg12.0000°, Azm52.0000°; Data Used: IU II G IC CN.*
BJI ***10*** *07:10:31.0,5.˚00S×154.˚98E, h144km, mB5.1/25, mb5.0/37*
DJA ***10*** *07:10:41,5.˚30S×154.˚28E, h205km, Mw5.4/16*
ISC 10 07:10:23.6±0.2,5.˚21S±0.˚03×154.˚62E±0.˚04, h48km, h48km±1.2km:pP-P,n175,σ1s08/172, mb5.1/78, MS3.9/12, 12C-2D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.75**	**129**	P	**Pn**	**07 12 00.7**	**+0.6**
	71nm,0.3s,baz=206,slow=5.5,SNR=9.6						
HNR				S	**Sn**	**07 13 14.3**	**-1.4**
	86nm,0.3s,baz=48,slow=20,SNR=7.7						
HNR	**Honiara**	**6.75**	**129**	*e*Pn	**Pn**	**07 12 00.6**	**+0.5**
HNR				*e*Sn	**Sn**	**07 13 13.9**	**-1.7**
COEN	**Coen**	**14.24**	**232**	*e*Pn	**Pn**	**07 13 45.0**	**+2.4**
COEN				*e*P		07 13 52.1	
CTA	**Charters Tower**	**16.88**	**208**	*e*P	**Pn**	**07 14 21.2**	**+4.6**
	20nm,0.9s						
CTA	**Charters Tower**	**16.88**	**208**	P	**Pn**	**07 14 21.8**	**+5.2**
	1.5nm,0.3s,baz=40,slow=12,SNR=14						
CTA				LR	LR	07 19 56.0	
	comp=Z,551nm,21.3s,baz=354,slow=34						
CTA	**Charters Tower**	**16.88**	**208**	P	**Pn**	**07 14 21.8**	**+5.2**
CTA				LR	LR	07 19 56.0	
NOUC	**Port Laguerre**	**20.25**	**147**	*e*P	**P**	**07 14 54.6**	**-0.4**
DZM	**Mont Dzumac**	**20.30**	**147**	*e*P	**P**	**07 14 54.8**	**-0.7**
DZM	**Mont Dzumac**	**20.30**	**147**	*e*P	**P**	**07 14 55.9**	**+0.4**
	74nm,1.0s						
EIDS	**Eidsvold**	**20.33**	**189**	*e*P	**P**	**07 14 58.2**	**+2.4**
	26nm,0.6s						
KAKA	**Kakadu**	**23.13**	**250**	*e*P	**P**	**07 15 27.2**	**+1.3**
	122nm,0.8s,mb5.4						
KAKA	**Kakadu**	**23.13**	**250**	*e*P	**P**	**07 15 27.1**	**+1.2**
	506nm,0.9s,mb6.0						
WRAB	**Tennant Creek**	**24.56**	**232**	*e*P	**P**	**07 15 39.2**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,81nm,0.9s,mb5.2						
WRAB	**Tennant Creek**	**24.56**	**232**	*e*P	**P**	**07 15 39.2**	**+0.1**
	comp=Z,81nm,0.9s,mb5.3						
WRA	**Warramunga Arr**	**24.58**	**232**	P	**P**	**07 15 40.0**	**+0.8**
	comp=Z,42nm,0.5s,mb5.3,baz=56,slow=9.7,SNR=394						
ARMA	**Armidale**	**25.24**	**186**	⇑*i*P	**P**	**07 15 45.7**	**+0.6**
ARMA	**Armidale**	**25.24**	**186**	*e*P	**P**	**07 15 46.4**	**+1.3**
	comp=Z,54nm,0.7s,mb5.2						
ASAR	**Alice Springs**	**27.12**	**225**	P	**P**	**07 16 02.4**	**+0.2**
	comp=Z,8.9nm,0.4s,mb4.7,baz=57,slow=9.2,SNR=26						
STKA	**Stephens Creek**	**29.20**	**203**	*e*P	**P**	**07 16 19.9**	**-0.8**
	comp=Z,14nm,0.6s,mb4.9						
STKA	**Stephens Creek**	**29.20**	**203**	P	**P**	**07 16 20.1**	**-0.6**
	comp=Z,17nm,0.7s,mb4.9,baz=24,slow=13,SNR=24						
STKA				LR	LR	07 28 30.8	
	comp=Z,325nm,18.2s,MS4.0,baz=113,slow=37						
STKA	**Stephens Creek**	**29.20**	**203**	*e*P	**P**	**07 16 20.4**	**-0.3**
	comp=Z,3.6nm,0.8s,mb4.2						
CNB	**Canberra Magne**	**30.35**	**189**	*e*P	**P**	**07 16 31.6**	**+0.8**
CAN	**Canberra**	**30.41**	**189**	*e*P	**P**	**07 16 31.5**	**+0.1**
CAN				pmax	pmax		
	comp=Z,36nm,1.4s,mb4.9						
CAN	**Canberra**	**30.41**	**189**	*e*P	**P**	**07 16 31.5**	**+0.1**
	comp=Z,36nm,1.4s,mb4.9						
CAN				*e*pP	pP	07 16 45.9	+1.9
FITZ	**Fitzroy Crossi**	**31.08**	**243**	⇑*i*P	**P**	**07 16 37.1**	**-0.4**
	comp=Z,90nm,0.9s,mb5.6						
FITZ	**Fitzroy Crossi**	**31.08**	**243**	P	**P**	**07 16 37.0**	**-0.4**
	comp=Z,25nm,0.4s,mb5.4,baz=74,slow=7.0,SNR=157						
FITZ				LR	LR	07 28 56.5	
	comp=Z,245nm,19.6s,MS3.9,baz=31,slow=36						
FITZ	**Fitzroy Crossi**	**31.08**	**243**	*e*P	**P**	**07 16 37.2**	**-0.3**
	comp=Z,94nm,1.0s,mb5.6						
TOO	**Toolangi**	**33.27**	**193**	*e*P	**P**	**07 16 57.1**	**+0.6**
KAPI	**Kappang**	**34.73**	**269**	P	**P**	**07 17 08.5**	**-0.9**
	comp=Z,26nm,0.8s,mb5.2,baz=108,slow=4.3,SNR=12						
KAPI	**Kappang**	**34.73**	**269**	*e*P	**P**	**07 17 08.8**	**-0.6**
	comp=Z,54nm,1.0s,mb5.4						
FORT	**Forrest**	**35.65**	**221**	*e*P	**P**	**07 17 16.7**	**-0.4**
	comp=Z,49nm,0.7s,mb5.5						
FORT	**Forrest**	**35.65**	**221**	*e*P	**P**	**07 17 16.7**	**-0.5**
	comp=Z,54nm,0.7s,mb5.6						
MBWA	**Marble Bar**	**37.36**	**242**	*e*P	**P**	**07 17 31.1**	**-0.7**
	comp=Z,21nm,0.5s,mb5.2						
MBWA				*e*pP	pP	07 17 43.6	-1.0
MYLDM	**Lahad Datu**	**37.52**	**285**	P	**P**	**07 17 33.6**	**+0.3**
MOO	**Moorlands**	**37.66**	**189**	*e*P	**P**	**07 17 35.4**	**+1.3**
TSM	**Tawau**	**37.90**	**284**	P	**P**	**07 17 36.8**	**+0.3**
TAU	**Tasmania Unive**	**38.10**	**189**	*e*P	**P**	**07 17 38.5**	**+0.8**
TAU				pmax	pmax		
	comp=Z,21nm,0.6s,mb5.0						
TAU	**Tasmania Unive**	**38.10**	**189**	*e*P	**P**	**07 17 38.5**	**+0.7**
	comp=Z,22nm,0.6s,mb5.0						
URZ	**Urewera**	**38.74**	**151**	P	**P**	**07 17 42.3**	**-1.0**
	comp=Z,13nm,0.9s,mb4.6,baz=330,slow=8.2,SNR=5.3						
URZ				LR	LR	07 30 10.4	
	comp=Z,340nm,21.6s,MS4.1,baz=82,slow=31						
SDKM	**Sandakan**	**38.89**	**286**	P	**P**	**07 17 45.3**	**+0.4**
KKM	**Kota Kinabalu**	**39.94**	**286**	P	**P**	**07 17 54.0**	**+0.5**
KKM	**Kota Kinabalu**	**39.94**	**286**	*e*P	**P**	**07 17 53.9**	**+0.3**
	comp=Z,63nm,0.9s,mb5.3						
RPZ	**Rata Peaks**	**41.00**	**162**	P	**P**	**07 18 01.7**	**-0.2**
	comp=Z,26nm,1.1s,mb4.8,baz=22,slow=11,SNR=8.3						
RPZ				LR	LR	07 32 13.5	
	comp=Z,318nm,21.7s,MS4.1,baz=190,slow=32						
BTM	**Bintulu**	**42.33**	**280**	P	**P**	**07 18 13.9**	**+0.7**
SBUM	**Sibu**	**43.03**	**279**	P	**P**	**07 18 19.6**	**+0.6**
KLBR	**Kellerberrin**	**43.37**	**228**	*e*P	**P**	**07 18 19.9**	**-1.5**
	comp=Z,35nm,0.8s,mb5.1						
NACB	**Ninganchiao**	**43.45**	**314**	*e*P	**P**	**07 18 22.2**	**0.0**
	comp=Z,35nm,0.8s,mb5.2						
MJAR	**Matsushiro Arr**	**44.28**	**341**	P	**P**	**07 18 26.8**	**-1.8**
	comp=Z,1.2nm,0.5s,mb3.9,baz=168,slow=9.1,SNR=10						
MJAR				PcP	PcP	07 20 11.0	-1.3
	comp=Z,4.7nm,0.9s,baz=156,slow=3.5,SNR=8.8						
MJAR	**Matsushiro Arr**	**44.28**	**341**	P	**P**	**07 18 26.8**	**-1.8**
MJAR				PcP	PcP	07 20 11.0	-1.3
NWAO	**Narrogin (SRO)**	**44.42**	**227**	P	**P**	**07 18 28.9**	**-0.9**
	comp=Z,13nm,0.7s,mb4.8,baz=99,slow=3.3,SNR=5.6						
NWAO				LR	LR	07 36 22.5	
	comp=Z,4.8nm,21.0s,MS2.4,baz=232,slow=35						
KSM	**Kuching**	**44.76**	**277**	P	**P**	**07 18 33.2**	**+0.4**
KSM	**Kuching**	**44.76**	**277**	*e*P	**P**	**07 18 32.9**	**+0.1**
	comp=Z,48nm,1.0s,mb5.3						
KSM				*e*pP	pP	07 18 47.1	+1.2
KSRS	**Korea Array**	**49.20**	**332**	P	**P**	**07 19 06.5**	**-0.5**
	comp=Z,13nm,1.1s,mb4.9,baz=149,slow=9.0,SNR=42						
KSRS				pP	pP	07 19 20.9	+0.7
	comp=Z,6.3nm,0.9s,baz=148,slow=9.4,SNR=7.4						
KSRS				PcP	PcP	07 20 29.7	0.0
	comp=Z,2.1nm,0.8s,baz=162,slow=3.8,SNR=5.6						
KSRS				LR	LR	07 37 01.9	
	comp=Z,72nm,18.6s,MS3.7,baz=7.2,slow=32						
INCN	**Inchon**	**49.84**	**331**	*e*P	**P**	**07 19 12.3**	**+0.4**
	comp=Z,53nm,0.9s,mb5.6						
INCN	**Inchon**	**49.84**	**331**	P	**P**	**07 19 12.5**	**+0.6**
	SNR=6.1						
INCN				P		07 19 12.5	
	SNR=6.1						
INCN	**Inchon**	**49.84**	**331**	P	**P**	**07 19 12.5**	**+0.6**
	SNR=6.1						
NJ2	**Nanjing**	**50.31**	**320**	*e*P	**P**	**07 19 15.6**	**0.0**
NJ2				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.2						
MYKOM	**Kota Tinggi**	**51.19**	**276**	P	**P**	**07 19 23.1**	**+0.5**
WHN	**Wuhan**	**52.41**	**315**	P	**P**	**07 19 31.7**	**+0.3**
MDJ	**Mudanjiang**	**54.45**	**338**	P	**P**	**07 19 48.6**	**+2.5**
MDJ				pP	pP	07 20 22.1	+23
MDJ				sP	sP	07 20 37.7	+33
MDJ				PP	PP	07 21 53.4	+4.7
MDJ				ScP	ScP	07 24 35.3	-8.4
MDJ				PcS	PcS	07 24 50.2	+1.6
MDJ				S	**S**	**07 27 19.3**	**-2.0**
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
MDJ				pmax	pmax		
	comp=Z,29nm,3.2s						
MDJ				LR	LR		
	comp=N,64nm,16.5s,MS3.9						
MDJ				LR	LR		
	comp=E,53nm,17.5s,MS3.9						
MDJ				LR	LR		
	comp=Z,98nm,16.1s,MS4.0						
CN2	**Changchun**	**55.43**	**335**	*e*P	**P**	**07 19 52.6**	**-0.5**
CN2				*e*pP	pP	07 20 25.2	+19
CN2				PcP	PcP	07 20 52.1	-0.8
CN2				*e*S	**S**	**07 27 25.3**	**-9.1**
CN2				SS	SS	07 31 13.6	-6.3
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
CN2				pmax	pmax		
	comp=Z,300nm,6.0s						
CN2				LR	LR		
	comp=N,300nm,18.0s,MS4.6						
CN2				LR	LR		
	comp=E,300nm,18.0s,MS4.6						
CN2				LR	LR		
	comp=Z,200nm,19.0s,MS4.2						
GYA	**Guiyang**	**56.09**	**307**	P	**P**	**07 20 01.5**	**+3.3**
GYA				pP	pP	07 20 35.3	+24
GYA				sP	sP	07 20 52.8	+36
GYA				PP	PP	07 22 08.4	+4.7
GYA				ScP	ScP	07 24 40.6	-11
GYA				S	**S**	**07 27 35.8**	**-8.0**
GYA				sS	sS	07 28 37.0	+31
GYA				SS	SS	07 31 24.3	-6.6
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
GYA				pmax	pmax		
	comp=Z,120nm,5.2s						
HABR	**Khabarovsk**	**56.14**	**344**	*e*P	**P**	**07 19 56.1**	**-2.0**
HABR				*e*		07 20 52.8	
HABR				*e*		07 22 01.4	
HABR				S	**S**	**07 27 37.3**	**-6.4**
HABR				*e*SS	SS	07 31 24.6	-6.3
HABR				pmax	pmax		
	comp=E,76nm,2.5s						
HABR				pmax	pmax		
	comp=Z,125nm,1.8s,mb5.6						
HABR				pmax	pmax		
	comp=N,46nm,2.3s						
HABR				MLR	MLR		
	comp=Z,77nm,16.0s,MS3.9						
BJI	**Beijing**	**57.24**	**325**	P	**P**	**07 20 08.6**	**+2.4**
BJI				pP	pP	07 20 41.5	+22
BJI				sP	sP	07 20 57.1	+32
BJI				S	**S**	**07 27 54.7**	**-4.0**
BJI				sS	sS	07 28 52.4	+31
BJI				pmax	pmax		
	comp=Z,11nm,0.5s,mb5.1						
BJI				pmax	pmax		
	comp=Z,82nm,5.9s						
BJI				LR	LR		
	comp=N,120nm,16.1s,MS4.2						
BJI				LR	LR		
	comp=E,87nm,18.1s,MS4.2						
BJI				LR	LR		
	comp=Z,67nm,20.8s,MS3.7						
KLR	**Kul'dur**	**57.76**	**342**	*e*P	**P**	**07 20 05.6**	**-4.0**
KLR				pmax	pmax		
	comp=E,43nm,1.4s						
KLR				pmax	pmax		
	comp=Z,67nm,1.4s,mb5.5						
NST	**Nakhon Sawan**	**57.79**	**292**	P	**P**	**07 20 08.5**	**-1.9**
PET	**Petropavlovsk**	**58.11**	**3**	*e*P	pP	07 20 25.4	-0.1
PET				*e*S	**S**	**07 28 27.6**	**+18**
PET				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.1						
PET				pmax	pmax		
	comp=Z,300nm,4.5s						
KMI	**Kunming**	**58.72**	**303**	P	**P**	**07 20 18.0**	**+1.2**
KMI				pmax	pmax		
	comp=Z,35nm,1.0s,mb5.3						
CM31	**Chiang Mai Arr**	**59.69**	**295**	*e*P	**P**	**07 20 24.9**	**+1.3**
	comp=Z,22nm,0.6s,mb5.4						
CMAR	**Chiang Mai Arr**	**59.69**	**295**	P	**P**	**07 20 24.4**	**+0.8**
	comp=Z,28nm,0.8s,mb5.3,baz=113,slow=5.1,SNR=62						
CMAR				pP	pP	07 20 38.6	+1.4
	comp=Z,15nm,0.9s,baz=104,slow=5.0,SNR=4.7						
CHG	**Chiang Mai**	**59.80**	**295**	⇑P	**P**	**07 20 24.7**	**+0.3**
	comp=Z,22nm,0.7s,mb5.3						
CHTO	**Chiang Mai**	**59.80**	**295**	*e*P	**P**	**07 20 24.8**	**+0.4**
CHTO				pmax	pmax		
	comp=Z,31nm,1.1s,mb5.2						
CHTO	**Chiang Mai**	**59.80**	**295**	*e*P	**P**	**07 20 24.8**	**+0.4**
	comp=Z,31nm,1.1s,mb5.2						
CHTO				*e*pP	pP	07 20 38.9	+1.0
CHTO	**Chiang Mai**	**59.80**	**295**	P	**P**	**07 20 25.1**	**+0.7**
	SNR=5.4						
CHTO				P		07 20 25.1	
	SNR=5.4						
CHTO	**Chiang Mai**	**59.80**	**295**	P	**P**	**07 20 25.1**	**+0.7**
	SNR=5.4						
CHTO				P		07 20 25.1	
	SNR=5.4						
CD2	**Chengdu**	**60.38**	**310**	⇑*i*P	**P**	**07 20 28.2**	**0.0**
CD2				pP	pP	07 21 03.2	+21
CD2				sP	sP	07 21 19.2	+32
CD2				PP	PP	07 22 44.9	+3.1
CD2				S	**S**	**07 28 30.1**	**-10**
CD2				sS	sS	07 29 29.8	+27
CD2				SS	SS	07 32 29.4	-8.9
CD2				pmax	pmax		
	comp=Z,60nm,0.8s,mb5.7						
CD2				pmax	pmax		
	comp=Z,180nm,5.2s						
HHC	**Hu-ho-hao-te**	**60.44**	**323**	*e*P	**P**	**07 20 31.5**	**+3.1**
HHC				pP	pP	07 21 04.9	+23
HHC				PcP	PcP	07 21 14.1	+1.3
HHC				sP	sP	07 21 20.5	+33
HHC				PP	PP	07 22 49.1	+7.0
HHC				ScP	ScP	07 25 00.6	-10
HHC				PcS	PcS	07 25 15.0	-0.2
HHC				S	**S**	**07 28 35.2**	**-4.9**
HHC				sS	sS	07 29 32.5	+30
HHC				ScS	ScS	07 30 04.6	-11
HHC				SS	SS	07 32 36.7	-2.2
HHC				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.2						
HHC				pmax	pmax		
	comp=Z,190nm,5.5s						
HHC				LR	LR		
	comp=N,77nm,20.2s,MS4.0						
HHC				LR	LR		
	comp=E,100nm,22.6s,MS4.0						
HHC				LR	LR		
	comp=Z,94nm,21.4s,MS3.9						
LZH	**Lanzhou**	**62.79**	**315**	P	**P**	**07 20 45.1**	**+0.8**
LZH				pP	pP	07 21 20.4	+22
LZH				sP	sP	07 21 38.3	+35
LZH				PP	PP	07 23 07.1	+4.1
LZH				*e*S	**S**	**07 29 03.2**	**-6.9**
LZH				sS	sS	07 30 04.3	+31
LZH				SS	SS	07 33 12.0	-3.9
LZH				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.5						
LZH				pmax	pmax		
	comp=Z,160nm,4.0s						
GTA	**Gaotai**	**67.19**	**317**	⇑P	**P**	**07 21 13.5**	**+0.7**
GTA				PcP	PcP	07 21 40.5	0.0
GTA				pP	pP	07 21 49.8	+23
GTA				sP	sP	07 22 05.3	+33
GTA				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.3						
GTA				pmax	pmax		
	comp=Z,140nm,3.9s						
UNV	**Unalaska Valle**	**67.24**	**24**	*e*P	**P**	**07 21 13.9**	**+1.1**
	comp=Z,11nm,0.7s,mb5.0						
UNV				*e*pP	pP	07 21 26.1	-0.5
ULN	**Ulaanbaatar**	**67.31**	**327**	*e*P	**P**	**07 21 13.8**	**+0.5**
ULN				pmax	pmax		
	comp=Z,18nm,1.2s,mb5.0						
ULN	**Ulaanbaatar**	**67.31**	**327**	*e*P	**P**	**07 21 13.8**	**+0.5**
	comp=Z,18nm,1.2s,mb5.0						
ULN	**Ulaanbaatar**	**67.31**	**327**	P	**P**	**07 21 14.6**	**+1.2**
	SNR=8.6						
ULN				P		07 21 14.6	
	SNR=8.6						
ULN	**Ulaanbaatar**	**67.31**	**327**	P	**P**	**07 21 14.6**	**+1.2**
	SNR=8.6						
ULN				P		07 21 14.6	
	SNR=8.6						
SONM	**Songino Array**	**67.64**	**327**	P	**P**	**07 21 15.0**	**-0.5**
	comp=Z,5.4nm,0.7s,mb4.7,baz=134,slow=4.3,SNR=12						
SEY	**Seymchan**	**67.97**	**359**	*c*eP	**P**	**07 21 19.1**	**+1.9**
CASY	**Casey**	**68.17**	**198**	*e*P	**P**	**07 21 17.3**	**-1.2**
CASY	**Casey**	**68.17**	**198**	*e*P	**P**	**07 21 17.4**	**-1.1**
	comp=Z,7.0nm,0.9s,mb4.7						
YAK	**Yakutsk**	**69.74**	**348**	*e*P	**P**	**07 21 26.7**	**-1.5**
YAK				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.0						
LSA	**Lhasa**	**69.97**	**304**	P	**P**	**07 21 30.8**	**+0.5**
ZAK	**Zakamensk**	**70.79**	**328**	⇑*e*P	**P**	**07 21 34.9**	**0.0**
ZAK				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
TLY	**Talaya**	**71.34**	**329**	*e*P	**P**	**07 21 38.0**	**-0.2**
TLY				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
TLY	**Talaya**	**71.34**	**329**	*e*P	**P**	**07 21 38.0**	**-0.3**
	comp=Z,7.7nm,0.9s,mb4.6						
TLY	**Talaya**	**71.34**	**329**	P	**P**	**07 21 38.5**	**+0.3**
	SNR=5.9						
TLY				P		07 21 38.5	
	SNR=5.9						
TLY	**Talaya**	**71.34**	**329**	P	**P**	**07 21 38.5**	**+0.3**
	SNR=5.9						
TLY				P		07 21 38.5	
	SNR=5.9						
TAPN	**Taplejung**	**72.17**	**301**	*e*P	**P**	**07 21 43.0**	**-0.7**
	comp=Z,50nm,1.0s,mb5.4						
ODAN	**Odare**	**72.31**	**300**	*e*P	**P**	**07 21 43.6**	**-1.0**
	comp=Z,53nm,0.8s,mb5.5						
MOY	**Mondy**	**72.70**	**328**	*e*P	**P**	**07 21 46.6**	**+0.2**
MOY				pmax	pmax		
	comp=Z,21nm,1.2s,mb4.9						
RAMN	**Ramite**	**73.02**	**300**	*e*P	**P**	**07 21 46.3**	**-2.5**
BILL	**Bilibino**	**73.54**	**5**	⇑*e*P	**P**	**07 21 51.0**	**0.0**
BILL				*e*	pP	07 22 04.2	-0.7
BILL				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
BILL	**Bilibino**	**73.54**	**5**	*e*P	**P**	**07 21 50.7**	**-0.3**
	comp=Z,5.7nm,0.8s,mb4.5						
BILL				*e*pP	pP	07 22 04.3	-0.6
JIRN	**Jiri**	**73.55**	**301**	*e*P	**P**	**07 21 51.4**	**-0.5**
	comp=Z,8.0nm,0.3s,mb5.2						
GUN	**Gumba**	**73.89**	**301**	*e*P	**P**	**07 21 53.5**	**-0.4**
	comp=Z,52nm,0.8s,mb5.5						
PKI	**Pulchoki**	**74.20**	**300**	*e*P	**P**	**07 21 54.8**	**-0.9**
	comp=Z,69nm,1.2s,mb5.5						
PKI	**Pulchoki**	**74.20**	**300**	*e*P	**P**	**07 21 54.8**	**-0.9**
PKI				pmax	pmax		
	comp=Z,69nm,1.2s,mb5.5						
MIR	**Mirnyy**	**74.21**	**201**	⇓*i*P	**P**	**07 21 55.2**	**+0.2**
MIR				pmax	pmax		
	comp=Z,49nm,1.0s,mb5.4						
KKN	**Kakani**	**74.37**	**301**	*e*P	**P**	**07 21 55.8**	**-0.9**
	comp=Z,17nm,0.5s,mb5.2						
KKN	**Kakani**	**74.37**	**301**	*e*P	**P**	**07 21 55.8**	**-0.9**
KKN				pmax	pmax		
	comp=Z,17nm,0.5s,mb5.2						
DMN	**Daman**	**74.47**	**300**	*e*P	**P**	**07 21 56.5**	**-0.8**
	comp=Z,88nm,1.1s,mb5.6						
PALK	**Pallekele**	**74.79**	**279**	P	**P**	**07 21 58.8**	**-0.6**
	comp=Z,20nm,1.0s,mb5.0,baz=80,slow=5.5,SNR=6.2						
PALK	**Pallekele**	**74.79**	**279**	*e*P	**P**	**07 21 58.3**	**-1.1**
PALK				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.1						
PALK	**Pallekele**	**74.79**	**279**	*e*P	**P**	**07 21 58.3**	**-1.1**
	comp=Z,21nm,0.9s,mb5.1						
SVW2	**Sparrevohn**	**76.50**	**22**	*e*P	**P**	**07 22 09.3**	**+1.2**
WMQ	**Urumqi**	**77.27**	**317**	P	**P**	**07 22 13.0**	**+0.1**
WMQ				pP	pP	07 22 48.0	+21
WMQ				sP	sP	07 23 03.0	+31
WMQ				PP	PP	07 25 10.0	+2.4
WMQ				S	S	07 31 49.0	-10
WMQ				ScS	ScS	07 32 15.0	-12
WMQ				SS	SS	07 36 53.0	-5.4
WMQ				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.1						
WMQ				pmax	pmax		
	comp=Z,880nm,7.0s						
WMQ				LR	LR		
	comp=N,60nm,18.0s,MS4.5						
WMQ				LR	LR		
	comp=E,210nm,18.0s,MS4.5						
WMQ				LR	LR		
	comp=Z,130nm,18.0s,MS4.3						
TTA	**Tatalina**	**77.49**	**21**	*e*P	**P**	**07 22 15.9**	**+2.2**
TTA				*e**PP	pP	07 22 27.1	-0.6
HYB	**Hyderabad**	**78.34**	**289**	*e*P	**P**	**07 22 19.0**	**-0.4**
HYB	**Hyderabad**	**78.34**	**289**	*i* P	**P**	**07 22 18.0**	**-1.4**
CHUM	**Lake Minchumin**	**79.39**	**21**	*e*P	**P**	**07 22 25.0**	**+0.8**
	comp=Z,17nm,1.0s,mb4.9						
CHUM				*e*pP	pP	07 22 37.5	-0.8
KTH	**Kantishna Hill**	**79.71**	**22**	*e*P	**P**	**07 22 24.9**	**-1.0**
	comp=Z,9.8nm,1.0s,mb4.7						
BPAW	**Bear Paw Mtn.**	**80.00**	**21**	*e*P	**P**	**07 22 27.5**	**0.0**
COLA	**College**	**81.56**	**21**	*e*P	**P**	**07 22 36.3**	**+0.5**
COLA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
COLA	**College**	**81.56**	**21**	*e*P	**P**	**07 22 36.3**	**+0.5**
	comp=Z,9.9nm,0.8s,mb4.8						
COLA				*e*pP	pP	07 22 47.8	-2.1
MK31	**Makanchi Array**	**81.83**	**319**	*e*P	**P**	**07 22 37.1**	**-0.5**
MKAR	**Makanchi Array**	**81.83**	**319**	P	**P**	**07 22 37.2**	**-0.4**
	com

KURK	**Kurchatov**	**85.21 322**	P	**P**		**07 22 53.4**	**-1.4**
	comp=Z,15nm,0.9s,mb5.2,baz=112,slow=3.6,SNR=30						
KURK	**Kurchatov**	**85.21 322**	*ce*P	**P**		**07 22 54.1**	**-0.8**
KURK			pmax	pmax			
	comp=Z,36nm,1.2s,mb5.4						
KURK	**Kurchatov**	**85.21 322**	*e*P	**P**		**07 22 53.2**	**-1.6**
	comp=Z,34nm,1.1s,mb5.4						
KURK			*ep*P	pP		07 23 08.2	-0.9
KURK	**Kurchatov**	**85.21 322**	P	**P**		**07 22 53.0**	**-1.9**
	SNR=8.8						
KURK			P			07 22 53.0	
	SNR=8.8						
KURK	**Kurchatov**	**85.21 322**	P	**P**		**07 22 53.0**	**-1.9**
	SNR=8.8						
KURK			P			07 22 53.0	
	SNR=8.8						
TKM2	**Tokmak 2**	**85.52 314**	*e*P	**P**		**07 22 56.7**	**+0.1**
TKM2			pmax	pmax			
	comp=Z,15nm,1.1s,mb5.1						
TKM2	**Tokmak 2**	**85.52 314**	*e*P	**P**		**07 22 56.6**	**0.0**
	comp=Z,15nm,1.1s,mb5.1						
TKM2			*ep*P	pP		07 23 10.9	+0.1
MAW	**Mawson**	**85.89 203**	*e*P	**P**		**07 22 56.2**	**-1.8**
	comp=Z,7.8nm,0.8s,mb5.0						
MAW	**Mawson**	**85.89 203**	P	**P**		**07 22 57.0**	**-1.0**
	comp=Z,2.7nm,0.5s,mb4.7,baz=102,slow=5.2,SNR=13						
MAW	**Mawson**	**85.89 203**	*e*P	**P**		**07 22 56.9**	**-1.1**
MAW			pmax	pmax			
	comp=Z,5.0nm,1.0s						
MAW	**Mawson**	**85.89 203**	*e*P	**P**		**07 22 56.9**	**-1.1**
	comp=Z,4.5nm,1.0s,mb4.7						
MAW			*ep*P	pP		07 23 10.0	-2.2
UCH	**Uchtor**	**86.17 313**	*e*P	**P**		**07 22 59.6**	**-0.3**
	comp=Z,18nm,1.3s,mb5.2						
AAK	**Ala-Archa**	**86.26 313**	P	**P**		**07 22 59.7**	**-0.6**
	comp=Z,1.1nm,0.3s,mb4.6,baz=209,slow=2.0,SNR=6.9						
AAK	**Ala-Archa**	**86.26 313**	*ce*P	**P**		**07 23 00.3**	**0.0**
AAK			pmax	pmax			
	comp=Z,4.0nm,1.2s,mb4.5						
AAK	**Ala-Archa**	**86.26 313**	*e*P	**P**		**07 23 00.0**	**-0.3**
	comp=Z,4.4nm,0.9s,mb4.7						
DLBC	**Dease Lake**	**86.80 31**	*e*P	**P**		**07 23 03.7**	**+1.2**
DLBC			*ep*P	pP		07 23 17.3	+0.6
DLBC			*es*P	sP		07 23 21.2	-0.9
INK	**Inuvik**	**88.19 21**	*e*P	**P**		**07 23 08.6**	**-0.4**
INK			pmax	pmax			
	comp=Z,11nm,1.1s						
INK	**Inuvik**	**88.19 21**	*e*P	**P**		**07 23 08.6**	**-0.4**
	comp=Z,11nm,1.1s,mb5.0						
INK			*ep*P	pP		07 23 20.2	-3.0
BVAR	**Borovoye Array**	**90.65 323**	P	**P**		**07 23 18.9**	**-2.0**
	comp=Z,14nm,0.9s,mb5.3,baz=103,slow=5.3,SNR=50						
BRVK	**Borovoye**	**90.72 323**	*ce*P	**P**		**07 23 19.3**	**-1.9**
BRVK			pmax	pmax			
	comp=Z,16nm,1.0s,mb5.3						
BRVK	**Borovoye**	**90.72 323**	*e*P	**P**		**07 23 19.4**	**-1.8**
	comp=Z,14nm,1.0s,mb5.3						
BRVK	**Borovoye**	**90.72 323**	P	**P**		**07 23 19.7**	**-1.6**
	SNR=5.0						
BRVK			P			07 23 19.7	
	SNR=5.0						
BRVK	**Borovoye**	**90.72 323**	P	**P**		**07 23 19.7**	**-1.6**
	SNR=5.0						
BRVK			P			07 23 19.7	
	SNR=5.0						
NVAR	**Mina Array Bea**	**90.91 52**	P	**P**		**07 23 22.9**	**+0.4**
	comp=Z,0.9nm,0.8s,mb4.1,baz=262,slow=5.8,SNR=5.8						
NVAR			*p*P	pP		07 23 37.5	+0.8
	comp=Z,2.6nm,1.0s,baz=252,slow=4.8,SNR=6.8						
SYO	**Syowa Base**	**93.89 199**	‖ *ep*P	pP		07 23 47.2	-2.7
YKA	**Yellowknife Ar**	**94.94 28**	P	**P**		**07 23 40.2**	**-0.3**
	comp=Z,3.1nm,0.9s,mb4.8,baz=268,slow=4.7,SNR=21						
YKA			*p*P	pP		07 23 54.8	0.0
	comp=Z,5.3nm,0.9s,baz=269,slow=4.8,SNR=9.4						
YKA	**Yellowknife Ar**	**94.94 28**	P	**P**		**07 23 40.2**	**-0.3**
YKA			*p*P	pP		07 23 54.8	0.0
ARU	**Arti**	**97.66 326**	P	**P**		**07 23 50.5**	**-2.5**
ARU						07 27 48.5	
TXAR	**Lajitas Array**	**102.73 61**	PP	PP		07 28 31.2	+0.7
	comp=Z,0.2nm,0.7s,baz=236,slow=6.4,SNR=2.7						
GERES	**GERESS Array B**	**125.34 329**	PKP	PKPdf		07 29 18.2	-1.0
	comp=Z,1.0nm,0.5s,baz=64,slow=3.1,SNR=11						
MEM	**Membach**	**127.68 335**	PKP	PKPdf		07 29 19.9	-3.7
DOU	**Dourbes**	**128.65 336**	PKP	PKPdf		07 29 22.8	-2.8
ROSC	**El Rosal**	**131.25 88**	PKP	PKPdf		07 29 31.2	-0.3
	comp=Z,1.6nm,0.4s,baz=284,slow=19,SNR=4.5						
LPAZ	**La Paz**	**132.62 118**	PKP	PKPdf		07 29 33.9	-0.1
	comp=Z,2.0nm,0.5s,baz=274,slow=4.5,SNR=14						
SDV	**Santo Domingo**	**134.96 83**	*e*PKPdf	PKPdf		07 29 38.2	-0.3
CPUP	**Villa Florida**	**135.94 137**	PKP	PKPdf		07 29 39.8	-0.2
	comp=Z,1.1nm,0.6s,baz=265,slow=4.8,SNR=4.5						
TAM	**Tamanrasset**	**145.42 303**	*e*PKIKP	PKPdf		07 29 56.9	-0.2
MDT	**Midelt**	**146.39 327**	PKPbc	PKPbc		07 29 59.4	-0.4
	comp=Z,8.1nm,0.9s,baz=52,slow=5.3,SNR=8.1						
TORD	**Torodi Ar. Bea**	**152.16 288**	PKPbc	PKPbc		07 30 12.2	-2.7
	comp=Z,5.2nm,0.8s,baz=58,slow=2.5,SNR=6.9						
TORD			PKPab	PKPab		07 30 22.9	-1.7
	comp=Z,4.3nm,1.0s,baz=82,slow=4.4,SNR=5.7						
TORD	**Torodi Ar. Bea**	**152.16 288**	PKPbc	PKPbc		07 30 12.2	-2.7
TORD			PKPab	PKPab		07 30 22.9	-1.7

IDC 10 07:14:44.5±2.2, 54°.17N×85°.96E, h0km, mb1 3.2/3, mb1mx3.1/27, mbtmp3.2/3, ML3.1/3, Error ellipse: s-maj=16.5km s-min=11.7km az=53.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**0.71**	**252**	Pg	Pg	07 14 56.2	-1.9
	1.4nm,0.3s,baz=71,slow=17,SNR=16						
ZALV				Lg		07 15 08.7	
	9.6nm,0.3s,baz=72,slow=34,SNR=34						
KURK	**Kurchatov**	**5.67**	**235**	Pn	Pn	07 16 11.7	+1.8
	0.2nm,0.3s,baz=51,slow=14,SNR=8.2						
KURK				Sn	Sn	07 17 20.0	+4.4
	0.0nm,0.3s,baz=63,slow=17,SNR=2.1						
KURK				Lg		07 17 48.8	
	0.1nm,0.3s,baz=49,slow=28,SNR=3.2						
MKAR	**Makanchi Array**	**7.75**	**199**	Pn	Pn	07 16 38.8	+0.4
	0.3nm,0.3s,baz=17,slow=10.0,SNR=4.1						
MKAR				Sn	Sn	07 18 06.7	-0.1
	0.1nm,0.3s,baz=25,slow=27,SNR=3.4						
MKAR				Lg		07 18 48.8	
	baz=31,slow=34,SNR=2.6						
BVAR	**Borovoye Array**	**9.33**	**269**	Pn	Pn	07 17 00.9	+0.8
	0.1nm,0.3s,baz=70,slow=12,SNR=3.2						
BVAR				Sn	Sn	07 18 39.9	-5.8
	0.2nm,0.3s,baz=70,slow=25,SNR=3.2						

*IDC **10** 07:21:58.4±0.6, 22°.59S×175°.11W, h0km, mb4.4/14, mb1 4.6/16, mb1mx4.5/21, mbtmp4.4/16, ML4.7/2, MS3.7/2, Ms1 3.7/2, ms1mx3.2/28, Error ellipse: s-maj=23.4km s-min=16.3km az=138.0*
*ISCJB **10** 07:22:02.0±0.4, 22°.70S±0°.07×175°.2W±0°.1, h33km, mb4.4/25, MS3.7/2, Error ellipse: s-maj=14.9km s-min=8.0km az=29.9*
*NEIC **10** 07:22:03.8±0.3, 22°.62S×175°.18W, mb4.5/13, Error ellipse: s-maj=11.8km s-min=6.7km az=124.0*
ISC 10 07:22:03.9±0.4, 22°.69S±0°.06×175°.2W±0°.1, h35km, (h39km±1.7km:pP-P), n43, σ0s85/38, mb4.4/25, MS3.7/2, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**6.99**	**200**	Pn	**Pn**	**07 23 44.2**	**+0.4**
	65nm,0.3s,baz=49,slow=20,SNR=2.0						
RAO				Sn	**Sn**	**07 25 00.5**	**-1.6**
	124nm,0.3s,baz=253,slow=19,SNR=4.7						
MSVF	**Nonsavu**	**8.05**	**307**	*e*Pn	**Pn**	**07 24 05.5**	**+7.2**
	76nm,1.1s						
AFI	**Afiamalu**	**9.30**	**21**	Pn	**Pn**	**07 24 06.4**	**-9.2**
	3.2nm,0.3s,baz=243,slow=2.3,SNR=4.5						
AFI				Sn	**Sn**	**07 25 42.9**	**-16**
	3.6nm,0.3s,baz=18,slow=20,SNR=2.9						
AFI	**Afiamalu**	**9.30**	**21**	*e*Pn	**Pn**	**07 24 10.9**	**-4.7**
AFI				Sn	**Sn**	**07 25 42.9**	**-16**
URZ	**Urewera**	**16.88**	**201**	Pn	**Pn**	**07 25 57.4**	**+0.1**
	0.5nm,0.3s,baz=54,slow=19,SNR=4.1						
URZ				Sn	**Sn**	**07 28 48.3**	**-15**
	0.6nm,0.3s,baz=324,slow=19,SNR=15						
RPZ	**Rata Peaks**	**23.87**	**205**	P	**P**	**07 27 14.6**	**+0.6**
	9.2nm,0.8s,mb4.2,baz=25,slow=14,SNR=3.2						
PPT	**Papeete**	**24.55**	**83**	LR	LR	07 35 10.5	

	comp=Z,362nm,18.6s,MS3.9,baz=142,slow=32						
CTA	**Charters Tower**	**35.95**	**267**	P	**P**	**07 29 01.9**	**+0.5**
	4.2nm,0.8s,mb4.4,baz=84,slow=12,SNR=3.9						
STKA	**Stephens Creek**	**39.29**	**247**	P	**P**	**07 29 30.1**	**+0.5**
	2.9nm,0.5s,mb4.2,baz=101,slow=11,SNR=9.9						
STKA	**Stephens Creek**	**39.29**	**247**	*e*P	**P**	**07 29 29.6**	**0.0**
	1.9nm,1.1s,mb3.7						
ASAR	**Alice Springs**	**46.62**	**258**	P	**P**	**07 30 28.2**	**-0.8**
	8.8nm,0.9s,mb4.7,baz=90,slow=8.3,SNR=46						
WRAB	**Tennant Creek**	**46.93**	**263**	*e*P	**P**	**07 30 30.5**	**-0.9**
	6.9nm,0.9s,mb4.6						
WRA	**Warramunga Arr**	**46.94**	**263**	P	**P**	**07 30 30.0**	**-1.5**
	4.5nm,0.9s,mb4.4,baz=96,slow=8.5,SNR=25						
FITZ	**Fitzroy Crossi**	**55.36**	**263**	P	**P**	**07 31 34.9**	**+0.1**
	1.1nm,0.6s,mb4.1,baz=112,slow=16,SNR=4.2						
SBA	**Scott Base**	**55.89**	**185**	*e*P	**P**	**07 31 39.1**	**+1.4**
	3.5nm,1.0s,mb4.3						
SBA				*ep*P	pP	07 31 50.5	+2.2
CASY	**Casey**	**63.14**	**206**	*e*P	**P**	**07 32 28.7**	**+0.9**
	4.6nm,0.9s,mb4.6						
CASY				*ep*P	pP	07 32 42.8	+4.2
QSPA	**South Pole Qui**	**67.40**	**180**	*e*P	**P**	**07 32 55.6**	**+0.4**
	11nm,1.3s,mb4.7						
QSPA				*ep*P	pP	07 33 07.1	+1.1
MJAR	**Matsushiro Arr**	**73.53**	**322**	P	**P**	**07 33 33.8**	**+0.7**
	0.8nm,0.6s,mb3.9,baz=156,slow=7.3,SNR=3.6						
CMB	**Columbia Colle**	**79.32**	**41**	*e*P	**P**	**07 34 06.0**	**0.0**
	6.5nm,1.0s,mb4.5						
CMB				*ep*P	pP	07 34 16.3	-0.7
KSRS	**Korea Array**	**80.26**	**317**	P	**P**	**07 34 12.4**	**+1.3**
	0.7nm,0.4s,mb4.0,baz=138,slow=5.5,SNR=7.9						
MAW	**Mawson**	**80.39**	**199**	P	**P**	**07 34 12.9**	**+1.5**
	4.9nm,0.7s,mb4.6,baz=136,slow=7.7,SNR=14						
MAW	**Mawson**	**80.39**	**199**	*e*P	**P**	**07 34 12.2**	**+0.7**
	1.4nm,0.8s,mb3.9						
MAW				*ep*P	pP	07 34 23.7	+1.3
NVAR	**Mina Array Bea**	**80.84**	**42**	P	**P**	**07 34 13.8**	**-0.4**
	3.0nm,0.8s,mb4.3,baz=223,slow=9.1,SNR=20						
MSU	**Marysvale**	**84.77**	**45**	*e*P	**P**	**07 34 34.6**	**0.0**
	3.7nm,1.0s,mb4.5						
TXAR	**Lajitas Array**	**86.05**	**56**	P	**P**	**07 34 39.9**	**-1.3**
	2.0nm,0.9s,mb4.3,baz=216,slow=6.2,SNR=17						
TTA	**Tatalina**	**86.67**	**9**	*e*P	**P**	**07 34 42.9**	**-0.5**
	13nm,1.5s,mb4.9						
TTA				*ep*P	pP	07 34 54.5	0.0
ANMO	**Albuquerque**	**86.75**	**50**	*e*P	**P**	**07 34 44.6**	**+0.1**
	0.7nm,1.2s,mb3.8						
ANMO				*ep*P	pP	07 34 55.4	-0.2
GDL2	**Guadalupe Moun**	**86.90**	**53**	*e*P	**P**	**07 34 44.7**	**-0.6**
	2.0nm,0.8s,mb4.4						
PSI	**Prapat**	**87.29**	**274**	P	**P**	**07 34 46.7**	**-0.9**
	8.2nm,0.8s,mb5.0,baz=162,slow=6.6,SNR=4.3						
PSI	**Prapat**	**87.29**	**274**	P	**P**	**07 34 46.7**	**-0.9**
TRF	**Thorofare Moun**	**88.06**	**11**	*e*P	**P**	**07 34 49.0**	**-1.0**
	6.7nm,0.9s,mb4.9						
TRF				*ep*P	pP	07 35 00.6	-0.6
PDAR	**Pinedale Array**	**88.78**	**42**	P	**P**	**07 34 53.6**	**-0.4**
	0.8nm,0.9s,mb4.1,baz=235,slow=5.2,SNR=5.2						
SDCO	**Great Sand Dun**	**88.82**	**48**	*e*P	**P**	**07 34 54.3**	**-0.1**
	1.1nm,0.9s,mb4.2						
DAWY	**Dawson**	**90.86**	**15**	*e*P	**P**	**07 35 03.7**	**+0.5**
DAWY				*ep*P	pP	07 35 13.8	-0.5
CFAA	**Coronel Fontan**	**91.69**	**125**	LR	LR	08 08 56.7	
	comp=Z,18nm,18.3s,MS3.5,baz=305,slow=31						
CMAR	**Chiang Mai Arr**	**93.31**	**288**	P	**P**	**07 35 17.4**	**+1.8**
	1.0nm,0.3s,mb4.7,baz=129,slow=3.0,SNR=11						
KURK	**Kurchatov**	**117.38**	**317**	PKP	PKPdf	07 40 45.6	+0.1
	0.4nm,0.5s,baz=104,slow=2.0,SNR=2.3						
AKASG	**Malin Array Be**	**146.18**	**332**	PKPbc	PKPbc	07 41 39.4	-0.8
	6.2nm,1.0s,baz=42,slow=3.8,SNR=8.1						
AKASG	**Malin Array Be**	**146.18**	**332**	PKPbc	PKPbc	07 41 39.4	-0.8
KIEV	**Kiev**	**146.19**	**332**	*e*PKPdf	PKPdf	07 41 39.1	-0.1
BRTR	**Keskin Array B**	**150.25**	**311**	PKPbc	PKPbc	07 41 50.6	-0.8
	1.4nm,0.8s,baz=106,slow=3.1,SNR=5.9						
DBIC	**Dimbokro**	**161.54**	**148**	PKP	PKPdf	07 42 02.0	+0.1
	5.6nm,0.9s,baz=194,slow=8.2,SNR=3.5						
TORD	**Torodi Ar. Bea**	**170.06**	**162**	PKPab	PKPab	07 43 24.2	+0.4
	baz=180,slow=0.4						

*JMA **10** 07:22:33.9±0.2, 22°.92N×123°.04E, h63km, M3.2*
*TAP **10** 07:22:34.3, 22°.88N×122°.97E, h65km±1km, ML3.9, C*
*ISCJB **10** 07:22:34.1±0.5, 22°.92N±0°.03×122°.97E±0°.02, h33km, Error ellipse: s-maj=4.2km s-min=2.5km az=142.5*
ISC 10 07:22:34.7±0.5, 22°.91N±0°.03×122°.99E±0°.02, h35km, n42, σ0s98/81, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**1.36**	**33**	P	**Pn**	**07 22 56.7**	**-0.6**
HATJ				S	**Sn**	**07 23 13.7**	**-0.5**
YOJ	**Yonaguni jima**	**1.54**	**1**	P	**Pn**	**07 22 59.6**	**-0.1**
YOJ				S	**Sn**	**07 23 18.6**	**+0.1**
IRIF	**Iriomote-Funau**	**1.57**	**26**	P	**Pn**	**07 22 59.7**	**-0.4**
IRIF				S	**Sn**	**07 23 19.0**	**-0.3**
LAY	**Lan-yu**	**1.59**	**237**	*e*P	**Pn**	**07 22 59.0**	**-1.3**
	baz=237						
LAY				*e*S	**Sn**	**07 23 17.6**	**-2.1**
	baz=237						
TWF1	**Yuli**	**1.62**	**286**	P	**Pn**	**07 22 59.9**	**-0.8**
	baz=287						
TWF1				*e*S	**Sn**	**07 23 18.0**	**-2.4**
	baz=287						
JKRS	**Kuro-shima**	**1.62**	**35**	P	**Pn**	**07 23 00.6**	**-0.2**
JKRS				S	**Sn**	**07 23 20.2**	**-0.2**
EHY	**Hungye**	**1.64**	**291**	P	**Pn**	**07 23 00.7**	**-0.4**
	baz=292						
EHY				S	**Sn**	**07 23 20.1**	**-0.8**
	baz=292						
ESL	**Shilin**	**1.69**	**302**	P	**Pn**	**07 23 00.7**	**-1.0**
	baz=303						
ESL				S	**Sn**	**07 23 20.3**	**-1.8**
	baz=303						
TTN	**Taitung**	**1.70**	**265**	*e*P	**Pn**	**07 23 04.4**	**+2.4**
	baz=266						
TTN				*e*S	**Sn**	**07 23 21.8**	**-0.8**
	baz=266						
TWD	**Chiawan**	**1.73**	**313**	*e*P	**Pn**	**07 23 02.0**	**-0.3**
	baz=313						
TWD				*e*S	**Sn**	**07 23 21.5**	**-1.6**
	baz=313						
TWG	**Pinlang**	**1.77**	**267**	P	**Pn**	**07 23 02.3**	**-0.5**
	baz=268						
TWG				S	**Sn**	**07 23 23.1**	**-1.1**
	baz=268						
JIJ	**Ishigaki jima**	**1.79**	**36**	P	**Pn**	**07 23 02.4**	**-0.8**
JIJ				S	**Sn**	**07 23 23.3**	**-1.4**
ELDTW	**Lidau**	**1.83**	**279**	*e*P	**Pn**	**07 23 03.3**	**-0.5**
	baz=287						
ELDTW				*e*S	**Sn**	**07 23 24.1**	**-1.6**
	baz=287						
ENA	**Nanau**	**1.89**	**323**	*e*P	**Pn**	**07 23 04.6**	**+0.1**
	baz=316						
ENA				*e*S	**Sn**	**07 23 27.4**	**+0.2**
	baz=316						
ECL	**Taimali**	**1.90**	**261**	P	**Pn**	**07 23 04.0**	**-0.7**
	baz=271						
ECL				*e*S	**Sn**	**07 23 25.9**	**-1.5**
	baz=271						
YUS	**Yu-Shan**	**1.96**	**287**	*e*P	**Pn**	**07 23 05.7**	**+0.2**
	baz=288						
YUS				*e*S	**Sn**	**07 23 27.5**	**-1.3**
	baz=288						
TWC	**Suao**	**1.98**	**329**	*e*P	**Pn**	**07 23 06.0**	**+0.1**
	baz=329						
TWC				*e*S	**Sn**	**07 23 29.0**	**-0.5**
	baz=329						
WHF	**Hehuan Shan**	**2.00**	**308**	*e*P	**Pn**	**07 23 06.0**	**0.0**
	baz=301						
WHF				*e*S	**Sn**	**07 23 29.4**	**-0.5**
	baz=301						
EAST	**Anshuo**	**2.04**	**255**	P	**Pn**	**07 23 06.4**	**-0.2**
	baz=265						
EAST				*e*S	**Sn**	**07 23 30.2**	**-0.7**
	baz=265						
ALS	**Alishan**	**2.09**	**287**	*e*P	**Pn**	**07 23 08.1**	**+0.8**
	baz=287						
ALS				*e*S	**Sn**	**07 23 31.9**	**-0.2**
	baz=287						
NNS	**Nan Shan**	**2.12**	**316**	P	**Pn**	**07 23 08.2**	**+0.5**
	baz=323						
NNS				*e*S	**Sn**	**07 23 32.8**	**0.0**
	baz=323						
TWT	**Tachien**	**2.13**	**309**	*e*P	**Pn**	**07 23 08.1**	**+0.3**
	baz=304						
TWT				*e*S	**Sn**	**07 23 33.1**	**0.0**
	baz=304						

SMLT	**Sun Moon Lake**	**2.15**	**297**	*e*P	**Pn**	**07 23 08.6**	**+0.6**
	baz=304						
SMLT				*e*S	**Sn**	**07 23 32.6**	**-0.9**
	baz=304						
ENTT	**Nioudou**	**2.16**	**323**	*e*P	**Pn**	**07 23 08.5**	**+0.3**
	baz=324						
ENTT				*e*S	**Sn**	**07 23 34.3**	**+0.6**
	baz=324						
TWE	**Neicheng**	**2.17**	**326**	*e*P	**Pn**	**07 23 08.9**	**+0.5**
	baz=327						
TWE				*e*S	**Sn**	**07 23 34.1**	**+0.1**
	baz=327						
TSEB	**Hengchuen, Pin**	**2.18**	**243**	*e*P	**Pn**	**07 23 09.5**	**+1.1**
	baz=243						
TSEB				*e*S	**Sn**	**07 23 36.0**	**+1.8**
	baz=243						
SSD	**Sandimen**	**2.18**	**266**	*e*P	**Pn**	**07 23 08.5**	**+0.1**
	baz=261						
TYC	**Yuchr**	**2.19**	**297**	*e*P	**Pn**	**07 23 08.9**	**+0.2**
	baz=304						
TYC				*e*S	**Sn**	**07 23 33.7**	**-0.9**
	baz=304						
CHN5	**Tsauling**	**2.23**	**288**	*e*P	**Pn**	**07 23 09.6**	**+0.4**
	baz=289						
CHN5				*e*S	**Sn**	**07 23 36.6**	**+1.1**
	baz=289						
TWK1	**Hengchun**	**2.24**	**245**	*e*P	**Pn**	**07 23 09.3**	**0.0**
	baz=245						
TWK1				*e*S	**Sn**	**07 23 35.1**	**-0.6**
	baz=245						
SCZT	**Fangliau**	**2.25**	**257**	*e*P	**Pn**	**07 23 09.6**	**+0.1**
	baz=262						
SCZT				*e*S	**Sn**	**07 23 36.0**	**0.0**
	baz=262						
HEN	**Hengchun**	**2.27**	**247**	*e*P	**Pn**	**07 23 10.1**	**+0.4**
	baz=247						
HEN				*e*S	**Sn**	**07 23 36.2**	**-0.2**
	baz=247						
CHN1	**Nanshi**	**2.28**	**277**	*e*P	**Pn**	**07 23 11.6**	**+1.7**
	baz=285						
CHN1				*e*S	**Sn**	**07 23 39.4**	**+2.6**
	baz=285						
NSK	**Sanguang**	**2.30**	**320**	*e*P	**Pn**	**07 23 10.8**	**+0.6**
	baz=321						
NSK				*e*S	**Sn**	**07 23 36.5**	**-0.9**
	baz=321						
TWK	**Hsinying**	**2.33**	**279**	*e*P	**Pn**	**07 23 11.8**	**+1.2**
	baz=279						
TWK				*e*S	**Sn**	**07 23 39.4**	**+1.4**
	baz=279						
JTJ	**Tarama**	**2.33**	**42**	P	**Pn**	**07 23 10.1**	**-0.5**
JTJ				S	**Sn**	**07 23 37.5**	**-0.5**
TWM1	**Shoushan**	**2.37**	**268**	*e*P	**Pn**	**07 23 13.5**	**+2.5**
	baz=268						
NWF	**Wu-fen Shan**	**2.42**	**333**	*e*P	**Pn**	**07 23 12.9**	**+1.2**
	baz=345						
NWF				*e*S	**Sn**	**07 23 41.6**	**+1.5**
	baz=345						
TWA	**Mucha**	**2.43**	**328**	*e*P	**Pn**	**07 23 13.8**	**+1.9**
	baz=329						
TWA				*e*S	**Sn**	**07 23 41.0**	**+0.7**
	baz=329						
TWQ1	**Liyutan**	**2.48**	**306**	*e*P	**Pn**	**07 23 14.7**	**+2.0**
	baz=312						
TWQ1				*e*S	**Sn**	**07 23 42.9**	**+1.1**
	baz=312						
TWP	**Hsiaoliuchiu**	**2.49**	**257**	*e*P	**Pn**	**07 23 13.6**	**+0.8**
	baz=247						
NSTT	**Nanjuang**	**2.50**	**314**	*e*P	**Pn**	**07 23 14.3**	**+1.5**
	baz=314						
NSTT				*e*S	**Sn**	**07 23 42.6**	**+0.5**
	baz=314						

*IDC **10** 07:34:40.8±2.5, 55°.44N×86°.25E, h0km, mb1 3.4/3, mb1mx3.2/28, mbtmp3.4/3, ML3.2/3, Error ellipse: s-maj=21.7km s-min=14.7km az=65.0*
ISC 10 07:34:42.2±2.5, 55°.5N±0°.1×86°.1E±0°.2, h10km, n6, σ0s86/11, 4C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.72**	**205**	Pg	**Pg**	**07 35 10.4**	**-4.8**
	4.6nm,0.3s,baz=32,slow=17,SNR=70						
ZALV				Lg		07 35 34.7	
	5.4nm,0.3s,baz=26,slow=27,SNR=13						
KURK	**Kurchatov**	**6.56**	**226**	⇑Pn	**Pn**	**07 36 17.5**	**-1.2**
	2.3nm,1.3s						
KURK				⇓Sn	**Sn**	**07 37 31.5**	**-2.0**
	1.0nm,0.6s						
KURK				⇓Lg		07 38 07.5	
	3.4nm,0.7s						
KURK	**Kurchatov**	**6.56**	**226**	Pn	**Pn**	**07 36 19.4**	**+0.8**
	0.1nm,0.3s,baz=44,slow=14,SNR=6.7						
KURK				Sn	**Sn**	**07 37 36.5**	**+3.0**
	0.1nm,0.3s,baz=39,slow=21,SNR=3.0						
KURK				Lg		07 38 11.6	
	0.1nm,0.3s,baz=41,slow=32,SNR=4.0						
KURBB	**Kurchatov Arra**	**6.67**	**226**	⇑Pn	**Pn**	**07 36 20.2**	**+0.1**
	0.5nm,0.8s,baz=44,slow=14						
KURBB				⇑Sn	**Sn**	**07 37 36.7**	**+0.5**
	0.6nm,0.8s						
KURBB				⇑Lg		07 38 10.1	
	1.2nm,0.6s,baz=45,slow=30						
MKAR	**Makanchi Array**	**9.04**	**197**	Pn	**Pn**	**07 36 52.2**	**-0.4**
	0.

VLS	**Valsamata**	**0.77**	**285**	*e*Pb	**Pg**	**07 41 41.7**	**-1.3**
VLS				*e*Sb	**Sg**	**07 41 54.1**	**+0.9**
VLS	**Valsamata**	**0.77**	**285**	P	**Pg**	**07 41 41.7**	**-1.3**
VLS				S	**Sg**	**07 41 54.3**	**+1.1**
VLS	**Valsamata**	**0.77**	**285**	*e*PB	**Pg**	**07 41 41.7**	**-1.3**
VLS				*e*SB	**Sg**	**07 41 54.1**	**+0.9**
VLS	**Valsamata**	**0.77**	**285**	P	**Pg**	**07 41 41.7**	**-1.3**
VLS				*e*Sb	**Sg**	**07 41 54.1**	**+0.9**
ITM	**Ithomi**	**0.86**	**159**	*e*Pb	**Pg**	**07 41 44.1**	**-0.6**
ITM				*e*Sb	**Sg**	**07 41 57.8**	**+1.7**
ITM	**Ithomi**	**0.86**	**159**	P	**Pg**	**07 41 44.1**	**-0.6**
ITM				S	**Sg**	**07 41 57.8**	**+1.7**
ITM	**Ithomi**	**0.86**	**159**	*e*PB	**Pg**	**07 41 44.1**	**-0.6**
ITM				*e*SB	**Sg**	**07 41 57.8**	**+1.7**
ITM	**Ithomi**	**0.86**	**159**	P	**Pg**	**07 41 44.1**	**-0.6**
ITM				S	**Sg**	**07 41 57.8**	**+1.7**
DSF	**Desfina**	**0.89**	**61**	P	**Pg**	**07 41 43.8**	**-1.5**
DSF				S	**Sg**	**07 41 57.5**	**+0.5**
DSF	**Desfina**	**0.89**	**61**	P	**Pg**	**07 41 43.8**	**-1.5**
DSF				S	**Sg**	**07 41 57.5**	**+0.5**
VLX	**Vlachokerasia**	**0.91**	**132**	P	**Pg**	**07 41 45.7**	**+0.1**
VLX	**Vlachokerasia**	**0.91**	**132**	*e*PN	**Pg**	**07 41 46.3**	**+0.7**
VLX	**Vlachokerasia**	**0.91**	**132**	P	**Pg**	**07 41 45.7**	**+0.1**
VLX	**Vlachokerasia**	**0.91**	**132**	*e*Pn	**Pg**	**07 41 46.3**	**+0.7**
EVR	**Evrytania**	**0.95**	**13**	*e*Pn	**Pg**	**07 41 47.3**	**+0.8**
EVR	**Evrytania**	**0.95**	**13**	*e*PN	**Pg**	**07 41 47.3**	**+0.8**
EVR	**Evrytania**	**0.95**	**13**	*e*Pn	**Pg**	**07 41 47.3**	**+0.8**
PYL	**PYLOS**	**1.10**	**171**	P	**Pg**	**07 41 48.5**	**-0.7**
PYL	**PYLOS**	**1.10**	**171**	*e*PG	**Pg**	**07 41 48.8**	**-0.4**
PYL	**PYLOS**	**1.10**	**171**	P	**Pg**	**07 41 48.5**	**-0.7**
PYL	**PYLOS**	**1.10**	**171**	*e*Pg	**Pg**	**07 41 48.8**	**-0.4**
LTK	**Loutraki**	**1.13**	**88**	P	**Pn**	**07 41 48.7**	**-0.4**
LTK				S	**Sb**	**07 42 06.3**	**+2.7**
LTK	**Loutraki**	**1.13**	**88**	*e*PG	**Pg**	**07 41 48.8**	**-1.1**
LTK	**Loutraki**	**1.13**	**88**	P	**Pn**	**07 41 48.7**	**-0.4**
LTK				S	**Sb**	**07 42 06.3**	**+2.7**
AGG	**Agios Georgios**	**1.21**	**31**	P	**Pn**	**07 41 50.1**	**-0.1**
AGG	**Agios Georgios**	**1.21**	**31**	P	**Pn**	**07 41 50.1**	**-0.1**
LKR	**Lokris**	**1.33**	**60**	*e*Pg	**Pg**	**07 41 53.0**	**-0.6**
LKR	**Lokris**	**1.33**	**60**	P	**Pn**	**07 41 51.5**	**-0.4**
LKR	**Lokris**	**1.33**	**60**	*e*PG	**Pg**	**07 41 53.0**	**-0.6**
LKR	**Lokris**	**1.33**	**60**	P	**Pn**	**07 41 51.5**	**-0.4**
LKR	**Lokris**	**1.33**	**60**	*e*Pg	**Pg**	**07 41 53.0**	**-0.6**
ATAL	**Atalanti**	**1.37**	**58**	P	**Pn**	**07 41 53.0**	**+0.6**
ATAL	**Atalanti**	**1.37**	**58**	P	**Pn**	**07 41 53.0**	**+0.6**
NAIG	**Nisos Aigina**	**1.56**	**98**	*e*Pg	**Pg**	**07 41 57.5**	**-0.5**
NAIG	**Nisos Aigina**	**1.56**	**98**	*e*PG	**Pg**	**07 41 57.5**	**-0.5**
NAIG	**Nisos Aigina**	**1.56**	**98**	*e*Pg	**Pg**	**07 41 57.5**	**-0.5**
THL	**Klokotos Trika**	**1.62**	**13**	*e*PB	**Pb**	**07 41 58.1**	**+0.6**
THL	**Klokotos Trika**	**1.62**	**13**	*e*Pb	**Pb**	**07 41 58.1**	**+0.6**
VLI	**Veliai**	**1.69**	**138**	*e*Pg	**Pg**	**07 42 01.0**	**+0.6**
VLI	**Veliai**	**1.69**	**138**	*e*PG	**Pg**	**07 42 01.0**	**+0.6**
VLI	**Veliai**	**1.69**	**138**	*e*Pg	**Pg**	**07 42 01.0**	**+0.6**
VLY	**Voula,Athens**	**1.79**	**94**	*e*Pg	**Pg**	**07 42 01.5**	**-0.9**
VLY	**Voula,Athens**	**1.79**	**94**	*e*PG	**Pg**	**07 42 01.5**	**-0.9**
VLY	**Voula,Athens**	**1.79**	**94**	*e*Pg	**Pg**	**07 42 01.5**	**-0.9**

ISCJB ***10*** *07:42:58.0±0.4, 38°.12N±0°.02×21°.61E±0°.02, h12km±4km, Error ellipse: s-maj=4.2km s-min=3.0km az=165.2*
ATH ***10*** *07:42:58.3, 38°.12N×21°.60E, h18km±1km, MD2.9/10*
THE ***10*** *07:42:58.8, 38°.15N×21°.62E, h18km±1km, ML3.2/9, Error ellipse: s-maj=1.3km s-min=0.6km az=21.0*
NEIC ***10*** *07:42:58.3, 38°.12N×21°.60E, h18km, MD2.9(ATH), After ATH.*
CSEM ***10*** *07:42:58.1±0.1, 38°.15N×21°.59E, h18km±1km, MD2.9, Error ellipse: s-maj=3.4km s-min=2.7km az=160.0*
ISC 10 07:42:58.4±0.4, 38°.13N±0°.03×21°.61E±0°.02, h20km±4km, n54, σ0°75/87, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.14**	**237**	*e*Pb	**Pg**	**07 43 02.4**	**-0.3**
RLS				*e*Sb	**Sg**	**07 43 05.5**	**-0.1**
RLS	**Riolos of Patr**	**0.14**	**237**	*e*PB	**Pg**	**07 43 02.4**	**-0.3**
RLS				*e*SB	**Sg**	**07 43 05.5**	**-0.1**
RLS	**Riolos of Patr**	**0.14**	**237**	*e*Pb	**Pg**	**07 43 02.4**	**-0.3**
RLS				*e*Sb	**Sg**	**07 43 05.5**	**-0.1**
UPR	**University Cam**	**0.20**	**42**	P	**Pg**	**07 43 03.6**	**0.0**
UPR				S	**Sg**	**07 43 08.3**	**+1.2**
UPR	**University Cam**	**0.20**	**42**	*e*PB	**Pg**	**07 43 03.5**	**-0.1**
UPR				*e*SB	**Sg**	**07 43 08.1**	**+1.0**
UPR	**University Cam**	**0.20**	**42**	*e*Pb	**Pg**	**07 43 03.5**	**-0.1**
UPR				S	**Sg**	**07 43 08.3**	**+1.2**
LAKA	**Lakka**	**0.31**	**70**	P	**Pg**	**07 43 05.0**	**-0.2**
LAKA				S	**Sg**	**07 43 10.2**	**+0.4**
LAKA	**Lakka**	**0.31**	**70**	P	**Pg**	**07 43 05.0**	**-0.2**
LAKA				S	**Sg**	**07 43 10.2**	**+0.4**
EFP	**Efpalio**	**0.37**	**38**	P	**Pg**	**07 43 06.0**	**-0.3**
EFP				S	**Sg**	**07 43 12.4**	**+0.7**
EFP	**Efpalio**	**0.37**	**38**	*e*PB	**Pg**	**07 43 06.1**	**-0.2**
EFP				*e*SB	**Sg**	**07 43 12.2**	**+0.5**
EFP	**Efpalio**	**0.37**	**38**	*e*Pb	**Pg**	**07 43 06.1**	**-0.2**
EFP				*e*Sb	**Sg**	**07 43 12.2**	**+0.5**
TRIZ	**Trizonia**	**0.43**	**57**	P	**Pg**	**07 43 06.9**	**-0.4**
TRIZ				S	**Sg**	**07 43 13.9**	**+0.6**
TRIZ	**Trizonia**	**0.43**	**57**	P	**Pg**	**07 43 06.9**	**-0.4**
TRIZ				S	**Sg**	**07 43 13.9**	**+0.6**
KALE	**Kalithea**	**0.49**	**58**	P	**Pg**	**07 43 07.9**	**-0.4**
KALE				S	**Sg**	**07 43 15.9**	**+0.9**
KALE	**Kalithea**	**0.49**	**58**	P	**Pg**	**07 43 07.9**	**-0.4**
KALE				S	**Sg**	**07 43 15.9**	**+0.9**
GUR	**Goura**	**0.61**	**109**	P	**Pg**	**07 43 09.9**	**-0.6**
GUR				S	**Sg**	**07 43 19.5**	**+0.8**
GUR	**Goura**	**0.61**	**109**	*e*PB	**Pg**	**07 43 10.0**	**-0.5**
GUR				*e*SN	**Sg**	**07 43 19.6**	**+0.9**
GUR	**Goura**	**0.61**	**109**	P	**Pg**	**07 43 09.9**	**-0.6**
GUR				S	**Sg**	**07 43 19.5**	**+0.8**
KFL	**Anninata**	**0.65**	**268**	P	**Pg**	**07 43 10.7**	**-0.6**
KFL				S	**Sg**	**07 43 21.4**	**+1.4**
DSF	**Desfina**	**0.77**	**69**	P	**Pg**	**07 43 12.4**	**-1.1**
DSF				S	**Sg**	**07 43 23.5**	**-0.3**
DSF	**Desfina**	**0.77**	**69**	P	**Pg**	**07 43 12.4**	**-1.1**
DSF				S	**Sg**	**07 43 23.5**	**-0.3**
EVR	**Evrytania**	**0.80**	**11**	*e*Pn	**Pg**	**07 43 13.8**	**-0.2**
EVR	**Evrytania**	**0.80**	**11**	*e*PN	**Pg**	**07 43 13.8**	**-0.2**
EVR	**Evrytania**	**0.80**	**11**	*e*Pn	**Pg**	**07 43 13.8**	**-0.2**
VLS	**Valsamata**	**0.81**	**273**	*e*Pn	**Pg**	**07 43 12.8**	**-1.4**
VLS				*e*Sb	**Sg**	**07 43 25.8**	**+0.9**
VLS	**Valsamata**	**0.81**	**273**	P	**Pg**	**07 43 12.7**	**-1.5**
VLS				S	**Sg**	**07 43 25.9**	**+1.0**
VLS	**Valsamata**	**0.81**	**273**	*e*PN	**Pg**	**07 43 12.8**	**-1.4**
VLS				*e*SB	**Sg**	**07 43 25.8**	**+0.9**
VLS	**Valsamata**	**0.81**	**273**	P	**Pg**	**07 43 12.7**	**-1.5**
VLS				*e*Sb	**Sg**	**07 43 25.8**	**+0.9**
VLX	**Vlachokerasia**	**0.97**	**141**	P	**Pg**	**07 43 16.5**	**-0.8**
VLX				S	**Sg**	**07 43 31.3**	**+1.1**
VLX	**Vlachokerasia**	**0.97**	**141**	*e*PN	**Pg**	**07 43 16.5**	**-0.8**
VLX	**Vlachokerasia**	**0.97**	**141**	P	**Pg**	**07 43 16.5**	**-0.8**
VLX				S	**Sg**	**07 43 31.3**	**+1.1**
ITM	**Ithomi**	**0.98**	**165**	*e*Pn	**Pg**	**07 43 17.1**	**-0.4**
ITM	**Ithomi**	**0.98**	**165**	*e*PN	**Pg**	**07 43 17.1**	**-0.4**
ITM	**Ithomi**	**0.98**	**165**	*e*Pn	**Pg**	**07 43 17.1**	**-0.4**
LKD2	**Lefkada island**	**0.99**	**311**	P	**Pg**	**07 43 16.3**	**-1.4**
LKD2				S	**Sg**	**07 43 32.0**	**+1.1**
LKD2	**Lefkada island**	**0.99**	**311**	P	**Pg**	**07 43 16.3**	**-1.4**
LKD2				S	**Sg**	**07 43 32.0**	**+1.1**
AGG	**Agios Georgios**	**1.05**	**32**	P	**Pg**	**07 43 17.9**	**-0.9**
AGG				S	**Sg**	**07 43 31.6**	**-1.1**
AGG	**Agios Georgios**	**1.05**	**32**	P	**Pg**	**07 43 17.9**	**-0.9**
AGG				S	**Sg**	**07 43 31.6**	**-1.1**
LTK	**Loutraki**	**1.07**	**95**	P	**Pg**	**07 43 18.6**	**-0.7**
LTK	**Loutraki**	**1.07**	**95**	*e*PN	**Pg**	**07 43 18.4**	**-0.8**
LTK	**Loutraki**	**1.07**	**95**	P	**Pg**	**07 43 18.6**	**-0.7**
LKR	**Lokris**	**1.21**	**64**	*e*Pb	**Pb**	**07 43 20.6**	**+0.1**
LKR	**Lokris**	**1.21**	**64**	P	**Pn**	**07 43 20.5**	**+0.4**
LKR	**Lokris**	**1.21**	**64**	*e*PB	**Pb**	**07 43 20.6**	**+0.1**
LKR	**Lokris**	**1.21**	**64**	P	**Pn**	**07 43 20.5**	**+0.4**
ATAL	**Atalanti**	**1.24**	**63**	P	**Pn**	**07 43 20.8**	**+0.2**
ATAL				S	**Sb**	**07 43 37.6**	**+1.0**
ATAL	**Atalanti**	**1.24**	**63**	P	**Pn**	**07 43 20.8**	**+0.2**
ATAL				S	**Sb**	**07 43 37.6**	**+1.0**
PYL	**PYLOS**	**1.24**	**175**	*e*PN	**Pn**	**07 43 21.5**	**+1.0**
PYL	**PYLOS**	**1.24**	**175**	*e*Pn	**Pn**	**07 43 21.5**	**+1.0**
THL	**Klokotos Trika**	**1.46**	**12**	*e*PN	**Pg**	**07 43 26.8**	**+0.2**
VLY	**Voula,Athens**	**1.75**	**99**	*e*Pn	**Pg**	**07 43 31.8**	**-0.2**
VLY	**Voula,Athens**	**1.75**	**99**	*e*PN	**Pg**	**07 43 31.8**	**-0.2**
VLI	**Veliai**	**1.76**	**143**	*e*Pn	**Pg**	**07 43 32.0**	**-0.3**
VLI	**Veliai**	**1.76**	**143**	*e*PN	**Pg**	**07 43 32.0**	**-0.3**

BJI ***10*** *07:44:27.8, 4°.44N×126°.76E, h57km, mB5.2/39, mb5.0/55, Ms4.7/50, Ms7 4.6/48*
MAN ***10*** *07:44:31, 5°.03N×126°.60E, h96km, mb5.7, ML4.8, MS5.2*
MAN INTENSITY I - GENERAL SANTOS CITY.
IDC ***10*** *07:44:33.4±1.8, 5°.38N×126°.46E, h30km±11km, mb4.7/27, mb1 4.8/28, mb1mx4.7/30, mbtmp4.7/28, ML4.4/1, MS4.5/20, Ms1 4.5/20, ms1mx4.4/24, Error ellipse: s-maj=18.6km s-min=8.9km az=71.0*
ISCJB ***10*** *07:44:35.0±0.5, 5°.20N±0°.02×126°.42E±0°.04, h60km±3km, mb5.1/130, MS4.5/47, Error ellipse: s-maj=6.1km s-min=3.7km az=168.3*
MOS ***10*** *07:44:35.9±1.3, 5°.29N×126°.38E, h63km, mb5.4/49, MS4.6/7, Error ellipse: s-maj=11.1km s-min=5.3km az=112.3*
NEIC ***10*** *07:44:36.6±0.8, 5°.25N×126°.39E, h58km±7km, mb5.2/71, Error ellipse: s-maj=6.3km s-min=3.7km az=68.0*
NEIC Felt [II PIVS] at General Santos.
DJA ***10*** *07:44:36, 5°.32N×126°.71E, h49km, Mw5.4/33*
GCMT ***10*** *07:44:36.4±0.1, 5°.27N×126°.68E, h32km, MW5.4, Moment Tensor Solution. s82,c147; s87,c168; Moment tensor: Scale 10^17Nm; Mrr0.97±.03; Mθθ0.24±.02; Mφφ-1.21±.02; Mrθ0.28±.03; Mrφ-0.03±.02; Mθφ0.96±.04; Best double couple: M0 1.50000×10^17 NP1.φs166.00000°, δ26.00000°, λ65.00000°. NP2.φs13.00000°, δ67.00000°, λ101.00000°. Principal axes: T 1.3800, Plg66.0000°, Azm303.0000°; N 0.2000, Plg10.0000°, Azm188.0000°; P -1.5800, Plg21.0000°, Azm94.0000°; Data Used: II IU IC G CN.*
ISC 10 07:44:36.8±0.5, 5°.23N±0°.02×126°.45E±0°.04, h60km±3km, h61km±2.2km: pP-P, n336, σ1s16/326, mb5.1/130, MS4.5/47, 20C-20D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.72**	**354**	*e*P	**Pn**	**07 45 05.1**	**+0.6**
GSPH	**General Santos**	**1.72**	**300**	*e*P	**Pn**	**07 45 00.2**	**-4.3**
GSPH				*e*S	**Sn**	**07 45 23.8**	**-1.7**
DAV	**Davao City (W)**	**2.03**	**335**	Pn	**Pn**	**07 45 06.5**	**-2.2**
198nm,0.3s,baz=95,slow=5.4,SNR=17							
DAV				Sn	**Sn**	**07 45 43.7**	**+11**
740nm,0.3s,baz=240,slow=23,SNR=13							
DAV				LR	LR	07 46 07.5	
comp=Z,28μm,18.0s,baz=158,slow=50							
DAV	**Davao City (W)**	**2.03**	**335**	*e*Pn	**Pn**	**07 45 07.8**	**-0.9**
DAV	**Davao City (W)**	**2.03**	**335**	Pn	**Pn**	**07 45 07.4**	**-1.3**
SNR=41							
DAV				Pn	**Pn**	**07 45 07.4**	**-1.3**
SNR=41							
DMPH	**Davao City--Mi**	**2.07**	**333**	⇑*e*P	**Pn**	**07 45 07.7**	**-1.5**
DMPH				*i* S	**Sn**	**07 45 48.2**	**+14**
KCP	**Kidapawan**	**2.23**	**323**	⇑*i*P	**Pn**	**07 45 16.2**	**+4.8**
KCP				*i* S	**Sn**	**07 45 46.7**	**+8.9**
BIPH	**Bislig**	**2.94**	**358**	⇓*e*P	**Pn**	**07 45 19.9**	**-1.2**
BIPH				*i* S	**Sn**	**07 45 57.6**	**+2.3**
CTBH	**Cotabato--PC H**	**2.96**	**312**	⇑*i*P	**Pn**	**07 45 19.7**	**-1.6**
BUKP	**Musuan**	**2.98**	**332**	*e*P	**Pn**	**07 45 21.1**	**-0.5**
CGP	**Cagayan de Oro**	**3.65**	**332**	⇓*e*P	**Pn**	**07 45 30.0**	**-0.9**
CGP				*e*S	**Sn**	**07 46 14.7**	**+2.0**
IPIL	**Ipil**	**4.62**	**304**	*e*P	**Pn**	**07 45 44.8**	**+0.6**
ZMPH	**Zamboanga City**	**4.69**	**292**	⇑*i*P	**Pn**	**07 45 43.1**	**-2.0**
ZMPH				*i* S	**Sn**	**07 46 33.9**	**-4.3**
MSLP	**Maasin**	**5.13**	**342**	*e*P	**Pn**	**07 45 54.0**	**+2.9**
TBP	**Tagbilaran**	**5.13**	**330**	*e*P	**Pn**	**07 45 51.3**	**+0.2**
SNPH	**Sibulan**	**5.19**	**322**	⇑*e*P	**Pn**	**07 45 56.4**	**+4.5**
LLP	**Lapu-Lapu**	**5.63**	**334**	*e*P	**Pn**	**07 45 58.0**	**+0.1**
RCP	**Roxas**	**7.28**	**330**	⇑*e*P	**Pn**	**07 46 20.8**	**+0.1**
CNP	**Catarman**	**7.45**	**346**	*e*P	**Pn**	**07 46 26.0**	**+3.0**
CUYO	**Cuyo Island**	**7.76**	**316**	*e*P	**Pn**	**07 46 29.5**	**+2.4**
MYLDM	**Lahad Datu**	**7.92**	**270**	P	**Pn**	**07 46 37.6**	**+8.2**
TSM	**Tawau**	**8.60**	**264**	P	**Pn**	**07 46 43.4**	**+4.7**
PVCP	**Virac**	**8.62**	**345**	*e*P	**Pn**	**07 46 43.0**	**+4.1**
SDKM	**Sandakan**	**9.22**	**273**	P	**Pn**	**07 46 54.0**	**+6.7**
KDM	**Kudat**	**9.71**	**280**	P	**Pn**	**07 46 59.8**	**+5.9**
KKM	**Kota Kinabalu**	**10.22**	**275**	P	**Pn**	**07 47 06.2**	**+5.3**
KKM	**Kota Kinabalu**	**10.22**	**275**	*e*Pn	**Pn**	**07 47 01.7**	**+0.9**
KAPI	**Kappang**	**12.17**	**213**	Pn	**Pn**	**07 47 27.6**	**+0.1**
2.1nm,0.3s,baz=125,slow=18,SNR=5.9							
KAPI				Sn	**Sn**	**07 49 42.1**	**+0.3**
baz=114,slow=20,SNR=1.3							
KAPI				LR	LR	07 52 54.8	
comp=Z,3μm,18.3s,baz=257,slow=41							
KAPI	**Kappang**	**12.17**	**213**	*e*Pn	**Pn**	**07 47 27.9**	**+0.3**
BTM	**Bintulu**	**13.48**	**262**	P	**Pn**	**07 47 50.3**	**+4.9**
SBUM	**Sibu**	**14.46**	**260**	P	**Pn**	**07 48 03.6**	**+5.2**
KSM	**Kuching**	**16.54**	**258**	P	**Pn**	**07 48 31.0**	**+6.0**
KSM	**Kuching**	**16.54**	**258**	*e*P	**Pn**	**07 48 27.8**	**+2.8**
58nm,0.8s							
YULB	**Yu-li**	**18.73**	**345**	*e*P	**Pn**	**07 48 49.5**	**-2.3**
29nm,0.8s							
KAKA	**Kakadu**	**18.79**	**162**	*e*P	**Pn**	**07 48 50.0**	**-2.5**
54nm,0.8s							
KAKA	**Kakadu**	**18.79**	**162**	*e*P	**Pn**	**07 48 51.2**	**-1.3**
209nm,0.9s							
TPUB	**Ta-pu**	**18.83**	**343**	*e*P	**Pn**	**07 48 51.4**	**-1.5**
44nm,0.6s							
SSLB	**Suanglung**	**19.20**	**345**	*e*P	**Pn**	**07 48 56.0**	**-1.3**
52nm,0.7s							
YHNB	**Yeheng**	**19.94**	**346**	*e*P	**Pn**	**07 49 05.5**	**-0.6**
73nm,1.1s							
QZH	**Quanzhou**	**21.01**	**340**	⇓*i*P	**P**	**07 49 17.4**	**+1.9**
QZH				pmax	pmax		
comp=Z,80nm,0.6s,mb5.2							
QZH				pmax	pmax		
comp=Z,910nm,3.4s							
QZH				LR	LR		
comp=Z,4μm,22.6s,MS4.8							
QIZ	**Qiongzhong**	**21.23**	**312**	P	**P**	**07 49 19.1**	**+1.2**
QIZ				pP		07 49 30.5	
QIZ				sP	sP	07 49 37.1	-1.5
QIZ				S	**S**	**07 53 13.2**	**+2.6**
QIZ				pmax	pmax		
comp=Z,37nm,1.4s,mb4.5							
QIZ				pmax	pmax		
comp=Z,430nm,3.1s							
QIZ				LR	LR		
comp=N,920nm,19.7s,MS4.3							
QIZ				LR	LR		
comp=E,760nm,19.7s,MS4.3							
QIZ				LR	LR		
comp=Z,3μm,22.7s,MS4.6							
GZH	**Guangzhou**	**21.80**	**326**	P	**P**	**07 49 25.1**	**+1.1**
GZH				S	**S**	**07 53 27.9**	**+6.1**
GZH				LR	LR		
comp=N,1μm,17.1s,MS4.5							
GZH				LR	LR		
comp=E,1μm,15.6s,MS4.5							
GZH				LR	LR		
comp=Z,3μm,19.3s,MS4.6							
MYKOM	**Kota Tinggi**	**22.81**	**262**	P	**P**	**07 49 37.3**	**+2.4**
FITZ	**Fitzroy Crossi**	**23.19**	**182**	*e*P	**P**	**07 49 37.1**	**-1.6**
comp=Z,106nm,0.9s,mb5.3							
FITZ				*e*S	**S**	**07 53 38.0**	**-7.9**
FITZ	**Fitzroy Crossi**	**23.19**	**182**	P	**P**	**07 49 37.8**	**-0.9**
comp=Z,19nm,0.5s,mb4.8,baz=12,slow=6.4,SNR=38							
FITZ				S	**S**	**07 53 46.7**	**+0.8**
comp=Z,6.0nm,0.9s,baz=171,slow=19,SNR=2.6							
FITZ	**Fitzroy Crossi**	**23.19**	**182**	*e*P	**P**	**07 49 37.7**	**-1.0**
comp=Z,141nm,1.2s,mb5.3							
KTGM	**Kuala Trenggan**	**23.22**	**271**	P	**P**	**07 49 41.3**	**+2.2**
KGM	**Kluang**	**23.30**	**263**	P	**P**	**07 49 42.6**	**+2.8**
FRIM	**Kepong**	**24.84**	**266**	P	**P**	**07 49 55.8**	**+1.9**
COEN	**Coen**	**25.27**	**139**	*e*P	**P**	**07 49 56.8**	**-0.9**
comp=Z,276nm,1.0s,mb5.7							
IPM	**Ipoh**	**25.34**	**269**	P	**P**	**07 49 59.6**	**+1.1**
KULM	**Kulim**	**25.69**	**271**	P	**P**	**07 50 04.6**	**+3.0**
KULM	**Kulim**	**25.69**	**271**	*e*P	**P**	**07 50 01.6**	**0.0**
comp=Z,75nm,1.2s,mb5.1							
WRAB	**Tennant Creek**	**26.18**	**163**	P	**P**	**07 50 06.6**	**+0.7**
comp=Z,803nm,1.2s,mb6.1,SNR=14							
WRAB	**Tennant Creek**	**26.18**	**163**	*e*P	**P**	**07 50 05.7**	**-0.2**
WRAB				pmax	pmax		
comp=Z,152nm,1.0s,mb5.5							
WRAB	**Tennant Creek**	**26.18**	**163**	*e*P	**P**	**07 50 05.7**	**-0.1**
comp=Z,152nm,1.0s,mb5.5							
WRA	**Warramunga Arr**	**26.18**	**163**	P	**P**	**07 50 05.7**	**-0.2**
comp=Z,71nm,1.1s,mb5.1,baz=343,slow=10,SNR=110							
WRA				S	**S**	**07 54 34.4**	**+0.6**
comp=Z,2.5nm,0.9s,baz=355,slow=15,SNR=5.2							
WRA				ScP	ScP	07 57 08.1	+1.4
comp=Z,1.7nm,0.7s,baz=343,slow=3.0,SNR=4.6							
WRA	**Warramunga Arr**	**26.18**	**163**	P	**P**	**07 50 05.7**	**-0.2**
WRA				S	**S**	**07 54 34.4**	**+0.6**
SSE	**Sheshan**	**26.21**	**350**	*e*P	**P**	**07 50 06.9**	**+0.9**
SSE				pP	pP	07 50 25.4	+4.7
SSE				S	**S**	**07 54 35.2**	**+1.2**
SSE				pmax	pmax		
comp=Z,74nm,0.8s,mb5.3							
SSE				pmax	pmax		
comp=Z,260nm,5.0s							
SSE				LR	LR		
comp=N,540nm,20.5s,MS4.2							
SSE				LR	LR		
comp=E,610nm,20.4s,MS4.2							
SSE				LR	LR		
comp=Z,710nm,19.9s,MS4.2							
CBIJ	**Chichi jima**	**26.42**	**33**	P	**P**	**07 50 05.5**	**-2.5**
comp=Z,51nm,0.4s,mb5.4,baz=256,slow=3.5,SNR=14							
CBIJ				LR	LR	07 58 36.8	
comp=Z,980nm,21.8s,MS4.3,baz=217,slow=32							
MBWA	**Marble Bar**	**27.04**	**194**	*e*P	**P**	**07 50 12.8**	**-0.8**
comp=Z,46nm,0.9s,mb5.0							
PSI	**Prapat**	**27.56**	**266**	P	**P**	**07 50 19.4**	**+0.9**
comp=Z,14nm,0.6s,mb4.8,baz=90,slow=5.7,SNR=9.6							
PSI				LR	LR	08 02 58.7	
comp=Z,528nm,20.2s,MS4.1,baz=255,slow=40							
NJ2	**Nanjing**	**27.62**	**346**	*e*P	**P**	**07 50 20.2**	**+1.5**
NJ2				pP	pP	07 50 34.7	+1.2
NJ2				sP	sP	07 50 41.6	+1.0
NJ2				PP	PP	07 51 09.2	-13
NJ2				S	**S**	**07 54 55.1**	**-1.1**
NJ2				sS	sS	07 55 20.3	-1.1
NJ2				pmax	pmax		
comp=Z,60nm,1.3s,mb5.1							
NJ2				pmax	pmax		
comp=Z,290nm,5.4s							
NJ2				LR	LR		
comp=N,400nm,13.4s,MS4.4							
NJ2				LR	LR		
comp=E,610nm,14.0s,MS4.4							
NJ2				LR	LR		
comp=Z,5μm,18.2s,MS5.2							
WHN	**Wuhan**	**27.64**	**337**	P	**P**	**07 50 19.0**	**0.0**
WHN				S	**S**	**07 54 54.5**	**-2.2**
WHN				pmax	pmax		
comp=Z,34nm,1.0s,mb4.9							
WHN				pmax	pmax		
comp=Z,370nm,6.6s							
WHN				LR	LR		
comp=N,1μm,14.7s							
WHN				LR	LR		
comp=E,4μm,20.0s							
WHN				LR	LR		
comp=Z,4μm,21.7s							
GYA	**Guiyang**	**28.34**	**320**	P	**P**	**07 50 28.3**	**+3.1**
GYA				pP	pP	07 50 41.8	+1.8
GYA				sP	sP	07 50 51.3	+4.2
GYA				PP	PP	07 51 21.5	-8.7
GYA				sS	sS	07 55 34.2	+1.3
GYA				pmax	pmax		
comp=Z,30nm,1.0s,mb4.9							
GYA				pmax	pmax		
comp=Z,180nm,5.2s							
GYA				LR	LR		
comp=N,520nm,16.8s,MS4.3							
GYA				LR	LR		
comp=E,530nm,18.4s,MS4.3							
GYA				LR	LR		
comp=Z,630nm,19.2s,MS4.2							
ASAR	**Alice Springs**	**29.62**	**166**	P	**P**	**07 50 36.4**	**-0.2**
comp=Z,3.9nm,0.5s,mb4.4,baz=341,slow=6.7,SNR=45							
ASAR				PcP	PcP	07 53 40.8	+0.6
comp=Z,5.3nm,0.8s,baz=350,slow=2.4,SNR=4.5							
ASAR				S	**S**	**07 55 33.7**	**+5.8**
comp=Z,2.5nm,0.9s,baz=356,slow=21,SNR=4.0							
ASAR

comp=Z,40nm,1.3s,mb5.2
CD2 pmax pmax
comp=Z,130nm,5.2s
CD2 LR LR
comp=N,2μm,20.2s,MS4.9
CD2 LR LR
comp=E,1μm,19.0s,MS4.9
CD2 LR LR
comp=Z,2μm,17.8s,MS4.8
DL2 Dalian 33.81 353 P **P** **07 51 14.7 +1.5**
DL2 S **S** **07 56 35.4 +2.5**
DL2 pmax pmax
comp=Z,130nm,0.7s,mb6.0
DL2 LR LR
comp=E,430nm,17.7s
DL2 LR LR
comp=Z,400nm,18.0s,MS4.2
FORT Forrest 35.83 178 *e*P **P** **07 51 30.3 -0.4**
comp=Z,48nm,0.6s,mb5.6
FORT Forrest 35.83 178 *e*P **P** **07 51 29.6 -1.1**
comp=Z,73nm,0.9s,mb5.6
BJI Beijing 35.88 346 P **P** **07 51 30.8 -0.2**
BJI pP pP 07 51 46.0 0.0
BJI sP sP 07 51 52.2 -0.9
BJI S **S** **07 57 07.3 +2.6**
BJI sS sS 07 57 29.6 -0.6
BJI pmax pmax
comp=Z,140nm,0.7s,mb6.0
BJI pmax pmax
comp=Z,230nm,3.6s
BJI LR LR
comp=N,610nm,21.9s,MS4.5
BJI LR LR
comp=E,660nm,24.4s,MS4.5
BJI LR LR
comp=Z,470nm,26.2s,MS4.1
HNR Honiara 36.42 113 LR LR 08 05 15.2
comp=Z,927nm,21.9s,MS4.5,baz=305,slow=34
SNY Shenyang 36.54 356 ⇓P **P** **07 51 37.9 +1.3**
SNY S **S** **07 57 18.5 +3.8**
SNY pmax pmax
comp=Z,86nm,0.6s,mb5.8
SNY pmax pmax
comp=Z,300nm,6.5s
SNY LR LR
comp=N,370nm,17.1s
SNY LR LR
comp=E,540nm,27.5s
SNY LR LR
comp=Z,430nm,19.6s,MS4.2
LZH Lanzhou 37.08 329 ⇓P **P** **07 51 42.1 +0.7**
LZH pP pP 07 51 57.5 +1.1
LZH sP sP 07 52 03.1 -0.4
LZH PP PP 07 53 08.5 +1.6
LZH *e*S **S** **07 57 24.3 +1.1**
LZH sS sS 07 57 48.0 -0.8
LZH pmax pmax
comp=Z,47nm,1.0s,mb5.3
LZH pmax pmax
comp=Z,160nm,4.0s
LZH LR LR
comp=E,1μm,17.4s
LZH LR LR
comp=Z,2μm,18.3s,MS4.9
KLBR Kellerberrin 37.54 192 *e*P **P** **07 51 44.6 -0.6**
comp=Z,20nm,0.7s,mb5.0
HHC Hu-ho-hao-te 37.90 342 *e*P **P** **07 51 48.4 +0.2**
HHC pP pP 07 52 03.6 +0.3
HHC sP sP 07 52 10.8 +0.5
HHC PP PP 07 53 20.6 +4.8
HHC PcP PcP 07 54 02.4 -0.9
HHC S **S** **07 57 36.5 +1.0**
HHC ScP ScP 07 57 44.4 -1.6
HHC PcS PcS 07 57 51.7 -0.4
HHC sS sS 07 58 01.7 +0.6
HHC ScS ScS 08 01 52.8 -2.2
HHC pmax pmax
comp=Z,17nm,0.9s,mb4.8
HHC pmax pmax
comp=Z,250nm,6.0s
HHC LR LR
comp=N,430nm,21.1s,MS4.4
HHC LR LR
comp=E,470nm,19.9s,MS4.4
HHC LR LR
comp=Z,460nm,21.6s,MS4.2
VLA Vladivostok 38.04 6 *e*P **P** **07 51 48.0 -1.4**
VLA pmax pmax
comp=Z,39nm,1.2s,mb5.0
CN2 Changchun 38.43 359 *e*P **P** **07 51 53.9 +1.3**
CN2 *ep*P pP 07 52 09.2 +1.5
CN2 *es*P sP 07 52 16.5 +1.8
CN2 *e*S **S** **07 57 45.6 +2.2**
CN2 SS SS 08 00 39.3 +4.7
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,18.0s,MS4.3
CN2 LR LR
comp=E,400nm,18.0s,MS4.3
CN2 LR LR
comp=Z,400nm,21.0s,MS4.2
EIDS Eidsvold 38.70 143 *e*P **P** **07 51 54.5 -0.6**
comp=Z,27nm,0.8s,mb5.0
SHL Shillong 38.78 305 ⇓*i*P **P** **07 51 58.0 +2.1**
SHL *e*PCP PcP 07 54 10.0 +3.6
SHL *e*S **S** **07 57 56.0 +6.7**
NWAO Narrogin (SRO) 38.94 192 *e*P **P** **07 51 57.0 0.0**
NWAO pmax pmax
comp=Z,19nm,0.6s
NWAO Narrogin (SRO) 38.94 192 *e*P **P** **07 51 57.0 0.0**
comp=Z,19nm,0.6s,mb5.0
MDJ Mudanjiang 39.33 4 P **P** **07 52 00.5 +0.4**
MDJ pP pP 07 52 13.6 -1.7
MDJ sP sP 07 52 19.8 -2.5
MDJ PP PP 07 53 31.3 -0.1
MDJ S **S** **07 57 58.2 +1.3**
MDJ sS sS 07 58 20.8 -1.8
MDJ pmax pmax
comp=Z,41nm,1.4s,mb5.0
MDJ pmax pmax
comp=Z,130nm,6.1s
MDJ LR LR
comp=N,410nm,24.1s,MS4.3
MDJ LR LR
comp=E,390nm,25.2s,MS4.3
MDJ LR LR
comp=Z,410nm,26.3s,MS4.1
STKA Stephens Creek 39.62 160 *e*P **P** **07 52 03.3 +0.6**
comp=Z,46nm,0.9s,mb5.2
STKA Stephens Creek 39.62 160 P **P** **07 52 03.5 +0.8**
comp=Z,18nm,0.5s,mb5.1,baz=339,slow=8.1,SNR=36
STKA LR LR 08 09 35.8
comp=Z,501nm,21.3s,MS4.3,baz=332,slow=38
STKA Stephens Creek 39.62 160 *e*P **P** **07 52 03.8 +1.1**
comp=Z,13nm,1.0s,mb4.6
ASAJ Asahikawa 41.26 18 LR LR 08 07 35.8
comp=Z,564nm,20.6s,MS4.4,baz=359,slow=34
LSA Lhasa 41.26 310 P **P** **07 52 16.7 +0.4**
GTA Gaotai 41.68 329 *e*P **P** **07 52 19.2 -0.4**
GTA pP pP 07 52 34.0 -0.9
GTA sP sP 07 52 40.6 -1.3
GTA PP PP 07 53 58.9 +1.9
GTA S **S** **07 58 30.0 -2.1**
GTA pmax pmax
comp=Z,17nm,0.6s,mb4.8
GTA pmax pmax
comp=Z,150nm,6.5s
GTA LR LR
comp=N,870nm,21.4s,MS4.8
GTA LR LR
comp=E,770nm,17.2s,MS4.8
GTA LR LR
comp=Z,1μm,17.0s,MS4.8
ARMA Armidale 42.86 147 *e*P **P** **07 52 30.2 +0.9**
ARMA Armidale 42.86 147 *e*P **P** **07 52 28.6 -0.7**
comp=Z,43nm,1.0s,mb5.1
TAPN Taplejung 42.92 305 *e*P **P** **07 52 29.2 -0.7**
comp=Z,44nm,0.5s,mb5.4
ODAN Odare 42.99 304 *e*P **P** **07 52 29.6 -0.9**
comp=Z,81nm,0.6s,mb5.6
RAMN Ramite 43.68 304 *e*P **P** **07 52 34.8 -1.2**
comp=Z,66nm,0.7s,mb5.5
HABR Khabarovsk 43.71 8 *e*P **P** **07 52 34.1 -1.8**
HABR *e*PPP 07 54 18.9
HABR *e*S **S** **07 54 55.0**
HABR *e*SSS **07 58 59.7 -2.0**
HABR pmax pmax 08 03 04.1
comp=N,15nm,1.1s
HABR pmax pmax
comp=Z,93nm,1.5s,mb5.3
HABR pmax pmax
comp=E,50nm,1.7s
HABR MLR MLR
comp=Z,383nm,17.0s,MS4.4
YSS Yuzh-Sakhalins 43.89 16 *e*P **P** **07 52 37.1 -0.3**
YSS *e**PP pP 07 52 54.0 +1.3
YSS *e*S **S** **07 59 06.0 +1.7**
YSS *e*SS SS 08 02 21.0 -1.6
YSS pmax pmax
comp=Z,40nm,1.1s,mb5.1
YSS MLR MLR
comp=Z,400nm,20.0s,MS4.3
YSS MLR MLR
comp=E,200nm,18.0s
KLR Kul'dur 44.08 5 *e*P **P** **07 52 34.8 -4.0**
KLR pmax pmax
comp=Z,43nm,1.4s,mb5.0
JIRN Jiri 44.28 305 *e*P **P** **07 52 39.9 -1.0**
comp=Z,24nm,0.5s,mb5.2
GUN Gumba 44.64 305 *e*P **P** **07 52 42.6 -1.1**
comp=Z,164nm,0.6s,mb6.0
PKI Pulchoki 44.89 304 *e*P **P** **07 52 44.3 -1.4**
comp=Z,36nm,0.7s,mb5.3
PKI Pulchoki 44.89 304 *e*P **P** **07 52 44.3 -1.4**
PKI pmax pmax
comp=Z,82nm,0.6s,mb5.7
PKIN Phulchoki 44.90 304 *e*P **P** **07 52 44.3 -1.5**
comp=Z,82nm,0.6s,mb5.7
KKN Kakani 45.08 305 *e*P **P** **07 52 45.8 -1.4**
comp=Z,42nm,0.7s,mb5.4
KKN Kakani 45.08 305 *e*P **P** **07 52 45.8 -1.4**
KKN pmax pmax
comp=Z,42nm,0.7s,mb5.4
DMN Daman 45.16 304 *e*P **P** **07 52 46.4 -1.4**
comp=Z,39nm,0.7s,mb5.3
PALK Pallekele 45.51 275 LR LR 08 15 33.4
comp=Z,389nm,18.2s,MS4.4,baz=108,slow=41
CAN Canberra 45.57 154 *e*P **P** **07 52 51.8 +0.9**
CAN pmax pmax
comp=Z,42nm,1.1s,mb5.3
CAN Canberra 45.57 154 *e*P **P** **07 52 51.8 +0.9**
comp=Z,42nm,1.1s,mb5.3
ULN Ulaanbaatar 45.62 342 *e*P **P** **07 52 51.3 +0.2**
ULN pmax pmax
comp=Z,33nm,0.9s,mb5.3
ULN Ulaanbaatar 45.62 342 *e*P **P** **07 52 51.3 +0.1**
comp=Z,33nm,0.9s,mb5.3
ULN Ulaanbaatar 45.62 342 P **P** **07 52 51.7 +0.6**
SNR=26
ULN P 07 52 51.7
SNR=26
CNB Canberra Magne 45.72 154 *e*P **P** **07 52 53.3 +1.2**
SONM Songino Array 45.80 341 P **P** **07 52 52.7 +0.1**
comp=Z,12nm,0.6s,mb5.0,baz=160,slow=10,SNR=11
TOO Toolangi 46.12 159 *e*P **P** **07 52 57.4 +2.2**
DZM Mont Dzumac 47.63 126 *e*S **S** **08 00 03.2 +4.4**
comp=Z,1μm,29.9s
DZM *e*SS SS 08 03 26.8 -1.0
comp=Z,522nm,34.0s
DZM *e*LR LR 08 06 39.4
comp=Z,2μm,28.2s
CIT Chita 47.85 349 *e*P **P** **07 53 10.4 +1.9**
CIT pmax pmax
comp=Z,142nm,1.6s,mb5.8
ZAK Zakamensk 49.03 341 *e*P **P** **07 53 17.2 -0.4**
ZAK pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
TLY Talaya 50.03 342 P **P** **07 53 26.3 +1.1**
comp=Z,217nm,0.8s,mb6.2,SNR=6.7
TLY Talaya 50.03 342 *e*P **P** **07 53 26.3 +1.1**
TLY *e*S **S** **08 00 40.0 +8.3**
TLY *e*SS ScS 08 03 12.0 +1.1
TLY pmax pmax
comp=Z,42nm,1.0s,mb5.4
TLY MLR MLR
comp=Z,353nm,21.0s,MS4.3
TLY Talaya 50.03 342 *e*P **P** **07 53 26.4 +1.2**
comp=Z,34nm,0.9s,mb5.4
TLY Talaya 50.03 342 P **P** **07 53 26.2 +1.0**
SNR=16
TLY P 07 53 26.2
SNR=16
MOY Mondy 50.89 340 *e*P **P** **07 53 32.3 +0.6**
MOY pmax pmax
comp=Z,50nm,3.1s
WMQ Urumqi 51.35 325 P **P** **07 53 35.0 -0.3**
WMQ pP pP 07 53 51.0 0.0
WMQ sP sP 07 53 58.0 +0.2
WMQ PP PP 07 55 33.0 +0.1
WMQ S **S** **08 00 48.0 -2.3**
WMQ ScS ScS 08 03 16.0 -4.4
WMQ pmax pmax
comp=Z,17nm,1.0s,mb4.9
WMQ pmax pmax
comp=Z,85nm,5.0s
WMQ LR LR
comp=N,2μm,17.0s,MS5.2
WMQ LR LR
comp=E,1μm,17.0s,MS5.2
WMQ LR LR
comp=Z,1μm,17.0s,MS5.0
CLNS Chul'man 51.48 359 *e*P **P** **07 53 36.7 +0.7**
CLNS *e* 07 54 49.2
CLNS pmax pmax
comp=Z,27nm,0.8s,mb5.2
CLNS pmax pmax
comp=N,20nm,0.7s
CLNS pmax pmax
comp=E,11nm,0.9s
CLNS MLR MLR
comp=N,177nm,17.0s,MS4.3
CLNS MLR MLR
comp=Z,177nm,19.0s,MS4.1
CLNS MLR MLR
comp=E,131nm,15.0s,MS4.3
DDI Dehra Dun 51.89 305 *e*PKP **P** **07 53 39.0 -0.5**
BOD Bodaibo 53.35 352 *e*P **P** **07 53 50.8 +0.9**
BOD pmax pmax
comp=Z,76nm,1.0s,mb5.6
PET Petropavlovsk 54.47 23 *e*P **P** **07 53 58.1 0.0**
PET *e*S **S** **08 01 32.2 -0.2**
PET *e*SS SS 08 05 19.3 +3.7
PET pmax pmax
comp=Z,200nm,3.7s
PET pmax pmax
comp=Z,48nm,1.3s,mb5.3
PET Petropavlovsk 54.47 23 *e*P **P** **07 53 58.5 +0.4**
comp=Z,71nm,1.3s,mb5.4
MSVF Nonsavu 55.79 115 *e*P **P** **07 54 08.1 -0.1**
comp=Z,30nm,1.0s,mb5.3
MK31 Makanchi Array 56.18 325 *e*P **P** **07 54 09.9 -0.6**
MKAR Makanchi Array 56.18 325 P **P** **07 54 09.7 -0.9**
comp=Z,12nm,0.6s,mb5.1,baz=101,slow=9.8,SNR=85
MKAR PcP PcP 07 55 07.6 -0.1
comp=Z,9.4nm,0.8s,baz=95,slow=3.5,SNR=4.9
MKAR ScP ScP 07 59 03.2 +1.2
comp=Z,1.4nm,0.7s,baz=75,slow=6.1,SNR=3.0
MKAR LR LR 08 18 56.9
comp=Z,1μm,21.4s,MS4.9,baz=128,slow=37
MKAR Makanchi Array 56.18 325 *i*P **P** **07 54 09.6 -0.9**
MKAR pmax pmax
comp=Z,12nm,0.6s
MKAR Makanchi Array 56.18 325 P **P** **07 54 09.7 -0.9**
MKAR PcP PcP 07 55 07.6 -0.1
MKAR ScP ScP 07 59 03.2 +1.2
MKAR LR LR 08 18 56.9
YAK Yakutsk 56.73 2 *e*P **P** **07 54 13.6 -0.5**
YAK *e**PP pP 07 54 25.3 -4.8
YAK *e* 07 55 08.3
YAK *e* 07 56 19.9
YAK *e*PPP 07 57 42.4
YAK *e*S **S** **08 02 02.5 +0.2**
YAK *e**SS sS 08 02 20.7 -8.4
YAK *e* 08 03 56.5
YAK *e*SS SS 08 05 49.9 -1.0
YAK pmax pmax
comp=Z,56nm,0.9s,mb5.6
YAK pmax pmax
comp=N,23nm,1.1s
YAK pmax pmax
comp=E,14nm,1.1s
YAK pmax pmax
comp=Z,5.0nm,0.4s,mb4.9
YAK smax
comp=E,113nm,2.8s
YAK smax
comp=N,108nm,2.2s
YAK Yakutsk 56.73 2 *e*P **P** **07 54 14.7 +0.5**
comp=N,71nm,0.7s,mb5.8
KSH Kashi 56.80 315 *e*P **P** **07 54 15.5 +0.4**
KSH pP pP 07 54 31.4 +0.4
KSH sP sP 07 54 38.4 +0.6
KSH PcP PcP 07 55 11.2 +0.9
KSH PP PP 07 56 23.5 +1.6
KSH ScP ScP 07 59 03.8 -1.1
KSH PcS PcS 07 59 10.5 -0.6
KSH S **S** **08 01 59.7 -4.3**
KSH ScS ScS 08 03 55.5 -3.7
KSH pmax pmax
comp=Z,34nm,1.4s,mb5.2
KSH pmax pmax
comp=Z,160nm,3.8s
KSH LR LR
comp=N,250nm,7.4s
KSH LR LR
comp=E,920nm,18.6s
KSH LR LR
comp=Z,200nm,11.0s
KZA Kyzart 58.33 317 P **P** **07 54 27.3 +1.5**
SNR=11
TKM2 Tokmak 2 58.45 318 P **P** **07 54 26.4 -0.2**
SNR=11
TKM2 Tokmak 2 58.45 318 *e*P **P** **07 54 26.5 -0.1**
TKM2 pmax pmax
comp=Z,30nm,1.2s,mb5.2
TKM2 Tokmak 2 58.45 318 *e*P **P** **07 54 26.5 -0.1**
comp=Z,30nm,1.2s,mb5.2
KBK Karagaybulak 58.78 318 P **P** **07 54 28.7 -0.2**
SNR=12
UCH Uchtor 58.90 317 P **P** **07 54 30.1 +0.4**
SNR=34
UCH Uchtor 58.90 317 *e*P **P** **07 54 29.9 +0.2**
comp=Z,34nm,0.9s,mb5.4
AAK Ala-Archa 59.07 317 P **P** **07 54 31.0 0.0**
comp=Z,3.1nm,0.5s,mb4.6,baz=129,slow=5.6,SNR=8.4
AAK Ala-Archa 59.07 317 *ce*P **P** **07 54 31.6 +0.7**
AAK pmax pmax
comp=Z,14nm,1.7s,mb4.7
AAK Ala-Archa 59.07 317 *e*P **P** **07 54 30.6 -0.3**
comp=Z,16nm,1.1s,mb5.0
AAK Ala-Archa 59.07 317 P **P** **07 54 31.5 +0.6**
SNR=9.0
AAK P 07 54 31.5
SNR=9.0
ZALV Zalesovo Beam 59.14 333 P **P** **07 54 29.4 -1.7**
comp=Z,7.1nm,0.6s,mb4.9,baz=128,slow=6.6,SNR=23
ZALV LR LR 08 21 38.3
comp=Z,371nm,20.8s,MS4.5,baz=132,slow=38
USP Ospenovka 59.33 318 P **P** **07 54 31.7 -0.9**
SNR=20
AML Almayashu 59.42 317 *e*P **P** **07 54 34.5 +1.2**
comp=Z,20nm,0.8s,mb5.2
EKS2 Erkin-Say 59.57 317 P **P** **07 54 33.5 -0.9**
SNR=17
EKS2 Erkin-Say 59.57 317 *e*P **P** **07 54 34.2 -0.2**
comp=Z,20nm,0.8s,mb5.2
KURK Kurchatov 60.34 327 P **P** **07 54 38.2 -1.3**
comp=Z,267nm,0.5s,SNR=16
KURK Kurchatov 60.34 327 P **P** **07 54 38.1 -1.4**
comp=Z,16nm,0.6s,mb5.2,baz=123,slow=7.0,SNR=94
KURK Kurchatov 60.34 327 *ce*P **P** **07 54 38.4 -1.1**
KURK pmax pmax
comp=Z,28nm,1.2s,mb5.2
KURK Kurchatov 60.34 327 *e*P **P** **07 54 38.3 -1.2**
KURK Kurchatov 60.34 327 P **P** **07 54 38.6 -0.8**
SNR=19
KURK P 07 54 38.6
SNR=19
KBL Kabul 60.40 307 *e*P **P** **07 54 40.5 +0.3**
KBL pmax pmax
comp=Z,12nm,0.8s,mb5.0
KBL Kabul 60.40 307 *e*P **P** **07 54 40.5 +0.2**
comp=Z,12nm,0.8s,mb5.0
NVS Novosibirsk 60.42 333 *e*P **P** **07 54 37.8 -2.1**
NVS *e*S S 08 03 11.9 +21
NVS pmax pmax
comp=Z,27nm,1.1s,mb5.2
NVS pmax pmax
comp=N,30nm,1.4s
NVS pmax pmax
comp=E,18nm,1.4s
SEY Seymchan 60.65 13 *ce*P **P** **07 54 42.9 +1.6**
SMY Shemya 61.33 31 *e*P **P** **07 54 46.6 +0.4**
comp=E,32nm,0.9s,mb5.5
RPZ Rata Peaks 63.14 145 P **P** **07 54 59.1 +0.7**
comp=E,16nm,1.0s,mb5.1,baz=311,slow=19,SNR=3.3
BVAR Borovoye Array 65.92 327 P **P** **07 55 15.2 -1.2**
comp=E,9.3nm,0.8s,mb4.9,baz=124,slow=9.2,SNR=44
BRVK Borovoye 66.00 327 P **P** **07 55 15.2 -1.7**
comp=E,201nm,1.4s,mb6.0,SNR=5.7
BRVK Borovoye 66.00 327 *ce*P **P** **07 55 16.0 -0.9**
BRVK pmax pmax
comp=Z,28nm,1.3s,mb5.1
BRVK Borovoye 66.00 327 *e*P **P** **07 55 15.8 -1.1**
BRVK Borovoye 66.00 327 P **P** **07 55 16.1 -0.8**
SNR=13
BRVK P 07 55 16.1
SNR=13
TIXI Tiksi 66.36 1 *e*P **P** **07 55 18.9 0.0**
TIXI pmax pmax
comp=Z,16nm,0.8s,mb5.1
TIXI Tiksi 66.36 1 *e*P **P** **07 55 18.9 0.0**
comp=Z,16nm,0.8s,mb5.1
ATKA Atka Island 67.44 35 *e*P **P** **07 55 25.5 -0.6**
comp=Z,21nm,0.8s,mb5.2
BILL Bilibino 68.19 15 ⇑*e*P **P** **07 55 31.2 +0.7**
BILL *e* 07 58 01.4
BILL pmax pmax
comp=Z,15nm,1.6s,mb4.8
ABKAR Akbulak array 70.83 320 *e*P **P** **07 55 45.3 -1.8**
comp=Z,11nm,0.6s,mb5.0
CASY Casey 72.26 187 *e*P **P** **07 55 55.6 +0.3**
comp=Z,32nm,0.4s,mb5.6
AKTK Aktyubinsk 72.32 321 P **P** **07 55 55.1 -1.1**
AKTO Aktyubinsk 72.32 321 P **P** **07 55 55.1 -1.1**
comp=Z,14nm,0.6s,mb5.0,baz=100,slow=8.7,SNR=42
UNV Unalaska Valle 72.36 35 *e*P **P** **07 55 56.1 -0.2**
comp=Z,14nm,0.8s,mb4.9
SVE Sverdlovsk 72.55 328 ⇓*e*P **P** **07 55 57.4 +0.1**
SVE pmax pmax
comp=Z,35nm,1.0s,mb5.2
SVE MLR MLR
comp=Z,728nm,22.0s,MS4.9
ARU Arti 73.53 328 *d i*P **P** **07 56 01.7 -1.5**
ARU *e* pP 07 56 16.0 -3.7
ARU S S 08 05 27.0 -1.4
ARU SS SS 08 10 07.2 -4.9
ARU pmax pmax
comp=Z,17nm,0.6s,mb5.2
ARU Arti 73.53 328 *e*P **P** **07 56 01.5 -1.7**
comp=Z,21nm,0.7s,mb5.2
SOKR Solikamsk 75.28 330 *e*P **P** **07 56 12.2 -1.1**
SOKR pmax pmax
comp=Z,20nm,1.4s,mb4.8
SOKR MLR MLR
comp=Z,740nm,24.0s,MS4.9
SDPT Sand Point 76.12 34 *e*P **P** **07 56 17.6 -0.6**
comp=Z,26nm,0.7s,mb5.3
TTA Tatalina 79.70 27 *e*P **P** **07 56 38.4 +0.5**
DGRG David-gareji 79.88 311 P **P** **07 56 40.2 +1.0**
GNI Garni 80.32 310 *e*P **P** **07 56 41.6 -0.1**
GNI pmax pmax
comp=Z,10.0nm,1.7s
TBLG Delisi 80.36 311 *e*P **P** **07 56 37.8 -4.1**
TBLG Delisi 80.36 311 P **P** **07 56 37.8 -4.0**
KEH Kehvi 80.97 312 P **P** **07 56 43.2 -1.9**
ZEI Tsey 81.01 312 *e*P **P** **07 56 44.8 -0.5**
ZEI pmax pmax
comp=Z,18nm,1.0s,mb5.0
ONI Oni 81.34 312 P **P** **07 56 47.4 +0.3**
CHUM Lake Minchumin 81.47 26 *e*P **P** **07 56 47.9 +0.5**
comp=Z,7.8nm,0.6s,mb4.8
KIV Kislovodsk 81.91 314 *e*P **P** **07 56 46.6 -3.5**
KIV pmax pmax

comp=Z,7.0nm,0.8s,mb4.6
KIV MLR MLR
KTH Kantishna Hill 82.06 27 *e*P **P 07 56 51.8 +1.4**
comp=Z,22nm,0.5s,mb5.3
BPAW Bear Paw Mtn. 82.08 26 *e*P **P 07 56 50.8 +0.3**
comp=Z,43nm,1.1s,mb5.3
TRF Thorofare Moun 82.34 27 *e*P **P 07 56 51.9 0.0**
comp=Z,18nm,0.7s,mb5.1
COLD Coldfoot 82.63 23 *e*P **P 07 56 54.9 +1.5**
comp=Z,11nm,0.6s,mb5.1
VRHR Novokhopersk 82.71 321 *e*P **P 07 56 53.6 -0.5**
VRHR pmax pmax
comp=Z,40nm,0.5s,mb5.7
VRHR pmax pmax
comp=N,10.0nm,0.4s
VRHR pmax pmax
comp=E,10.0nm,0.7s
PMR Palmer 82.77 29 *e*P **P 07 56 54.0 -0.2**
PMR pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
PMR Palmer 82.77 29 *e*P **P 07 56 54.0 -0.2**
comp=Z,10nm,0.7s,mb5.0
MCK McKinley 82.96 27 *e*P **P 07 56 55.3 +0.2**
MCK pmax pmax
comp=Z,43nm,1.1s,mb5.4
MCK McKinley 82.96 27 *e*P **P 07 56 55.3 +0.2**
comp=Z,44nm,1.1s,mb5.4
COLA College 83.47 25 *e*P **P 07 56 57.7 0.0**
COLA pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
COLA College 83.47 25 *e*P **P 07 56 57.7 0.0**
comp=Z,8.3nm,0.9s,mb4.8
VSR Storozhevoye 84.26 321 *e*P **P 07 57 01.2 -0.8**
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb5.2
VSR pmax pmax
comp=N,4.0nm,0.4s
VSR pmax pmax
comp=E,7.0nm,0.4s
DIV Divide 84.39 29 *e*P **P 07 57 03.5 +1.1**
comp=E,62nm,1.1s,mb5.7
BMRM Bremner River 84.96 29 *e*P **P 07 57 05.8 +0.5**
comp=E,28nm,1.0s,mb5.3
MAW Mawson 85.05 200 *e*P **P 07 57 05.7 +0.1**
comp=E,4.9nm,0.8s,mb4.7
MAW Mawson 85.05 200 P **P 07 57 06.0 +0.4**
comp=E,2.5nm,0.5s,mb4.6,baz=61,slow=8.6,SNR=5.8
MAW LR LR 08 32 30.6
comp=E,226nm,20.5s,MS4.5,baz=68,slow=34
MAW Mawson 85.05 200 *e*P **P 07 57 06.7 +1.1**
MAW pmax pmax
comp=Z,3.0nm,1.0s
MAW Mawson 85.05 200 *e*P **P 07 57 06.7 +1.1**
comp=Z,2.7nm,1.0s,mb4.3
MOS Moscow 85.06 325 *e*P **P 07 57 04.1 -1.9**
MOS *e* 07 57 28.1
ANN Anapa 85.66 314 *e*P **P 07 57 09.6 +0.4**
ANN *e**PP pP 07 57 32.3 +6.2
ANN pmax pmax
comp=Z,54nm,1.0s,mb5.7
OBN Obninsk 85.69 325⇑*e*P **P 07 57 08.8 -0.3**
OBN *i* pP 07 57 29.5 +3.5
OBN pmax pmax
comp=Z,38nm,1.1s,mb5.5
OBN MLR MLR
comp=Z,400nm,19.0s,MS4.8
OBN Obninsk 85.69 325 *e*P **P 07 57 08.8 -0.3**
comp=Z,28nm,0.8s,mb5.5
PPT Papeete 85.84 108 *e*S S 08 07 41.0 +1.4
comp=Z,201nm,23.8s
PPT *e*SS SS 08 13 22.2 +4.1
comp=Z,284nm,27.0s
PPT *e*LR LR 08 24 15.9
comp=Z,1μm,25.5s
PPT Papeete 85.84 108 LR LR 08 28 30.1
comp=Z,506nm,21.7s,MS4.9,baz=145,slow=31
SBA Scott Base 85.84 172 *e*P **P 07 57 11.6 +2.2**
SBA pmax pmax
comp=Z,21nm,1.4s,mb5.2
SBA Scott Base 85.84 172 *e*P **P 07 57 11.6 +2.2**
comp=Z,21nm,1.4s,mb5.2
EGAK Eagle 86.33 25 *e*P **P 07 57 12.9 +0.8**
comp=Z,3.7nm,0.7s,mb4.7
APA Apatity 86.38 337⇑*i*P **P 07 57 11.5 -0.7**
APA *i* PPP 08 02 30.0
APA *e*S S 08 07 34.0 -9.0
APA pmax pmax
comp=Z,37nm,1.4s,mb5.4
APA MLR MLR
comp=Z,1μm,17.0s,MS5.3
DAWY Dawson 87.16 26 *e*P **P 07 57 16.9 +0.7**
JOF Joensuu 87.73 333 *e*p **P 07 57 17.9 -1.0**
comp=Z,17nm,0.7s,mb5.4
JOF Joensuu 87.73 333 *e*p **P 07 57 17.9 -1.0**
comp=Z,17nm,0.7s,mb5.4
MMAI Mount Meron Ar 88.07 303 LR LR 08 41 15.7
comp=Z,187nm,21.0s,MS4.5,baz=50,slow=39
KEV Kevo 88.40 340 *e*P **P 07 57 21.3 -0.6**
KEV pmax pmax
comp=Z,17nm,1.4s,mb5.1
KEV Kevo 88.40 340 *e*p **P 07 57 21.3 -0.6**
comp=Z,17nm,1.4s,mb5.1
KEV Kevo 88.40 340 *e*p **P 07 57 21.3 -0.6**
comp=Z,17nm,1.4s,mb5.1
BR131 Keskin Array S 88.86 310 *e*P **P 07 57 24.5 -0.2**
comp=Z,4.6nm,0.9s,mb4.8
BRTR Keskin Array B 88.86 310 P **P 07 57 24.1 -0.7**
comp=Z,2.7nm,0.8s,mb4.6,baz=108,slow=4.0,SNR=4.4
BRTR LR LR 08 46 11.2
comp=Z,94nm,20.0s,MS4.2,baz=82,slow=42
INK Inuvik 88.88 21 *e*P **P 07 57 23.8 -0.4**
INK pmax pmax
comp=Z,12nm,1.2s
INK Inuvik 88.88 21 *e*P **P 07 57 23.8 -0.5**
comp=Z,12nm,1.2s,mb5.1
ARCES ARCESS Array B 88.96 340 P **P 07 57 23.8 -0.8**
comp=Z,13nm,0.8s,mb5.3,baz=84,slow=5.7,SNR=36
KMBO Kilima Mbogo 89.30 269 P **P 07 57 26.8 -0.6**
comp=Z,1.9nm,0.9s,mb4.4,baz=104,slow=4.2,SNR=3.4
KMBO LR LR 08 38 26.8
comp=Z,147nm,19.5s,MS4.4,baz=100,slow=36
KBS Kingsbay 89.49 350*ce*P **P 07 57 27.9 +0.9**
KBS pmax pmax
comp=Z,20nm,1.7s,mb5.2
KAF Kangasniemi 90.15 332 *e*P **P 07 57 29.5 -0.8**
KAF pmax pmax
comp=Z,17nm,0.9s,mb5.4
KAF Kangasniemi 90.15 332 *e*p **P 07 57 29.5 -0.8**
comp=Z,17nm,0.9s,mb5.4,baz=74,slow=4.3
KAF Kangasniemi 90.15 332 *e*p **P 07 57 29.5 -0.8**
comp=Z,17nm,0.9s,mb5.4,baz=74,slow=4.3
FINES FINESS Array B 90.39 332 P **P 07 57 30.5 -0.9**
comp=Z,8.1nm,0.8s,mb5.1,baz=52,slow=5.2,SNR=13
FINES LR LR 08 41 40.8
comp=Z,533nm,19.3s,MS5.0,baz=60,slow=38
AKASG Malin Array Be 90.56 321 P **P 07 57 31.3 -1.2**
comp=Z,0.8nm,0.4s,mb4.4,baz=69,slow=4.5,SNR=6.6
AKASG Malin Array Be 90.56 321 *i* P **P 07 57 30.5 -2.0**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
TIRR Tirgusor 92.10 315 ⇓P **P 07 57 38.3 -1.4**
TIRR Tirgusor 92.10 315 ⇓*i*P **P 07 57 38.3 -1.4**
DIB Dawson Inlet, 92.45 36 T 09 40 28.2
SNR=4.0
VRI Vrincioaia 93.03 316 ⇑P **P 07 57 45.0 +1.0**
VRI Vrincioaia 93.03 316 ⇑*i*P **P 07 57 45.0 +1.0**
PLOR Plostina 93.08 316 ⇓P **P 07 57 48.9 +4.6**
PLOR Plostina 93.08 316 ⇓*i*P **P 07 57 48.9 +4.6**
MLR Muntele Rosu 93.64 316 P **P 07 57 46.4 -0.4**
comp=Z,3.1nm,0.6s,mb4.9,baz=284,slow=2.9,SNR=5.0
MLR Muntele Rosu 93.64 316 ⇓P **P 07 57 46.7 -0.1**
MLR Muntele Rosu 93.64 316 ⇓*i*P **P 07 57 46.7 -0.1**
BURAR Bucovina Array 93.71 318 ⇓P **P 07 57 47.8 +0.7**
BURAR Bucovina Array 93.71 318 ⇓*i*P **P 07 57 47.8 +0.7**
SYO Syowa Base 93.71 201⇑*e*P **P 07 57 45.0 -1.6**
SYO Syowa Base 93.71 201 ⇓*i*PcP PcP 07 57 50.0 +3.0
BUR08 Bucovina Ar. S 93.71 318 *e*P **P 07 57 48.2 +1.1**
TAOE Nuku Hiva Isla 94.14 98 *e*LR LR 08 28 18.4
comp=Z,1μm,25.3s
KWP Kalwaria Pacla 94.88 321 ⇑P **P 07 57 54.2 +1.8**
KWP Kalwaria Pacla 94.88 321 ⇑*i*P **P 07 57 54.2 +1.8**
QSPA South Pole Qui 95.12 180 *e*P **P 07 57 54.2 +1.3**
comp=Z,7.8nm,1.1s,mb5.0
DRGR 95.56 318 ⇓P **P 07 57 53.3 -2.3**
DRGR 95.56 318 ⇓*i*P **P 07 57 53.3 -2.3**

DAG Danmarks Havn 95.74 352⇑*i*P **P 07 57 55.9 +0.1**
comp=Z,8.7nm,0.6s,mb5.4
CRVS Cervenica-Dubn 95.85 320 *e*P **P 07 57 57.2 +0.3**
CRVS pmax pmax
comp=Z,12nm,1.5s,mb5.1
CRVS Cervenica-Dubn 95.85 320 *e*P **P 07 57 57.2 +0.3**
comp=Z,12nm,1.5s,mb5.1
CRVS Cervenica-Dubn 95.85 320 *e*P **P 07 57 57.2 +0.3**
STHS Stebnicka Huta 95.86 321 *e*P **P 07 57 58.4 +1.5**
STHS pmax pmax
comp=Z,3.0nm,1.2s,mb4.6
STHS Stebnicka Huta 95.86 321 *e*P **P 07 57 58.4 +1.5**
comp=Z,3.0nm,1.2s,mb4.6
STHS Stebnicka Huta 95.86 321 *e*P **P 07 57 58.4 +1.5**
HFS Hagfors 96.58 332 P **P 07 57 58.7 -1.2**
comp=Z,2.3nm,0.5s,mb4.9,baz=113,slow=3.4,SNR=7.8
KECS Kecovo 96.59 320 *e*P **P 07 58 01.5 +1.3**
KECS pmax pmax
comp=Z,2.0nm,0.9s,mb4.5
KECS Kecovo 96.59 320 *e*P **P 07 58 01.5 +1.3**
comp=Z,2.4nm,0.9s,mb4.6
KECS Kecovo 96.59 320 *e*P **P 07 58 01.5 +1.3**
NB2 NORSAR Subarra 97.33 334 P **P 07 58 01.4 -1.9**
comp=Z,10nm,1.0s,mb5.2,baz=67,slow=4.6
NOA NORSAR Array B 97.33 334 P **P 07 58 01.6 -1.7**
comp=Z,4.8nm,0.8s,mb5.0,baz=66,slow=4.6,SNR=8.8
NOA LR LR 08 45 59.7
comp=Z,589nm,21.3s,MS5.0,baz=65,slow=38
VYHS Vyhne 97.64 320 *e*P **P 07 58 09.9 +4.9**
VYHS pmax pmax
comp=Z,19nm,2.6s,mb5.2
VYHS Vyhne 97.64 320 *e*P **P 07 58 09.9 +4.9**
comp=Z,19nm,2.6s,mb5.2
VYHS Vyhne 97.64 320 *e*P **P 07 58 09.9 +4.9**
YKA Yellowknife Ar 98.26 24 P **P 07 58 07.2 -0.2**
comp=Z,1.0nm,0.6s,mb4.5,baz=300,slow=4.4,SNR=14
YKA PKiKP PKiKP 08 02 39.7 0.0
comp=Z,0.2nm,0.6s,baz=315,slow=2.4,SNR=4.0
YKA PKKPbc PKKPbc 08 14 38.0 -3.3
comp=Z,0.4nm,0.6s,baz=121,slow=3.0,SNR=6.8
BRG Berggiesshubel 99.88 324 *e*P Pdif 07 58 21.7 +6.9
comp=Z,11nm,1.3s
BRG Berggiesshubel 99.88 324 *e*P Pdif 07 58 21.7 +6.9
BRG pmax pmax
comp=Z,7.0nm,1.3s,mb4.9
RKT Rikitea 99.91 112 *e*LR LR 08 30 57.8
comp=Z,472nm,28.2s
CLL Collm 100.27 324 *e*P Pdif 07 58 22.0 +5.4
CLL *e*S Sdif 08 09 49.0 +1.6
CLL MLR MLR
comp=Z,400nm,21.4s,MS4.9
CLL Collm 100.27 324 *e*Pdif Pdif 07 58 17.0 +0.4
CLL *e* 07 58 22.0
CLL *e*Sdif Sdif 08 09 49.0 +1.6
CLL *e*PPS 08 12 12.0
CLL *e*(SS) 08 17 24.0
CLL *e* 08 18 30.0
CLL *e*(SSS) 08 21 12.0
CLL Lm 08 47 00.0
comp=Z,400nm,21.4s
GERES GERESS Array B 100.75 322 P Pdif 07 58 17.3 -1.4
comp=Z,0.3nm,0.2s,baz=72,slow=9.4,SNR=3.7
LNOR Lincton Mounta 103.43 41 *e*P Pdif 07 58 32.5 +1.9
LNOR pmax pmax
comp=Z,20nm,0.6s
LNOR Lincton Mounta 103.43 41 *e*Pdif Pdif 07 58 32.5 +1.9
comp=Z,20nm,0.6s
NVAR Mina Array Bea 106.12 48 Pdiff Pdif 07 58 43.4 +0.9
comp=Z,0.5nm,0.7s,baz=282,slow=4.4,SNR=3.9
NVAR PKKPab PKKPab 08 14 32.8 -1.1
comp=Z,1.1nm,0.7s,baz=118,slow=4.6,SNR=5.7
NVAR Mina Array Bea 106.12 48 Pdif Pdif 07 58 43.4 +0.9
NVAR PKKPab PKKPab 08 14 32.8 -1.1
PDAR Pinedale Array 110.41 41 PKKPab PKKPab 08 14 12.9 -1.8
comp=Z,0.9nm,0.6s,baz=111,slow=5.6,SNR=7.7
SCHQ Schefferville 119.14 9 PKP PKPdf 08 03 19.2 +0.3
comp=Z,1.9nm,0.5s,baz=225,slow=2.4,SNR=9.4
SCHQ Schefferville 119.14 9 *e*PKPdf PKPdf 08 03 19.3 +0.3
TXAR Lajitas Array 120.90 51 PKP PKPdf 08 03 24.0 +0.9
comp=Z,0.4nm,0.7s,baz=356,slow=1.5,SNR=7.1
TXAR PKKPbc PKKPbc 08 13 26.6 -0.8
comp=Z,0.5nm,0.6s,baz=127,slow=6.3,SNR=9.3
WMOK Wichita Mounta 121.75 43 *e*PKiKP PKPdf 08 03 24.9 +0.3
TORD Torodi Ar. Bea 122.18 289 PKP PKPdf 08 03 25.4 -0.5
comp=Z,3.9nm,0.6s,baz=31,slow=2.5,SNR=32
JCT Junction City 123.29 48 *e*PKIKP PKPdf 08 03 28.5 +0.8
MIAR Mount Ida 125.34 41 *e*PKIKP PKPdf 08 03 32.6 +1.1
ACSO Alum Creek Sta 127.29 28 *e*PKPdf PKPdf 08 03 35.6 +0.6
WVT Waverly 127.81 35 *e*PKIKP PKPdf 08 03 36.8 +0.6
BINY Binghamton 128.57 21 *e*PKPdf PKPdf 08 03 38.6 +1.1
USHA Ushuaia 129.10 169 PKP PKPdf 08 03 38.7 +0.7
comp=Z,4.5nm,0.6s,baz=302,slow=4.3,SNR=7.3
SSPA Standing Stone 129.19 24 *e*PKPdf PKPdf 08 03 38.7 0.0
DBIC Dimbokro 129.98 283 PKP PKPdf 08 03 41.5 +0.6
comp=Z,3.4nm,0.6s,baz=244,slow=2.9,SNR=7.2
TKL Tuckaleechee C 130.41 33 *e*PKPdf PKPdf 08 03 42.0 +0.8
TKL *e*SKPbc SKPbc 08 07 02.9 +3.4
LRAL Lakeview Retre 130.46 37 *e*PKPdf PKPdf 08 03 41.6 +0.2
PLCA Paso Flores 141.49 159 PKP PKPdf 08 04 03.0 +1.5
comp=Z,4.5nm,0.6s,baz=271,slow=1.3,SNR=11
JTS JuntasAbangare 145.13 64 *e*PKIKP PKPdf 08 04 09.0 +0.3
TRQA Tornquist 146.43 168 *e*PKPdf PKPdf 08 04 11.8 +1.6
MTDJ Mount Denham 146.79 45 *e*PKPbc PKPbc 08 04 13.8 +0.6
BCIP Isla Barro Col 150.15 61 *e*PKPbc PKPbc 08 04 22.7 +0.6
SDDR Presa de Saban 150.27 36 *e*PKPbc PKPbc 08 04 22.4 +0.2
CFAA Coronel Fontan 150.36 154 PKPbc PKPbc 08 04 23.0 +0.9
comp=Z,2.0nm,0.7s,baz=213,slow=2.7,SNR=6.7
LCO Las Campanas 151.30 147 *e*PKPbc PKPbc 08 04 25.7 +1.3
MTP Monte Pirata 153.97 27 *e*PKPbc PKPbc 08 04 30.7 +0.1
CPUP Villa Florida 158.70 171 PKP PKPdf 08 04 28.0 -0.5
comp=Z,1.4nm,0.7s,baz=212,slow=11,SNR=4.9
CPUP PKPab PKPab 08 05 05.3 +1.4
comp=Z,3.1nm,0.8s,baz=196,slow=8.3,SNR=3.8
CPUP Villa Florida 158.70 171 PKP PKPdf 08 04 28.0 -0.5
CPUP PKPab PKPab 08 05 05.3 +1.4
LPAZ La Paz 161.96 129 PKP PKPdf 08 04 34.3 +1.9
comp=Z,2.8nm,1.0s,baz=3.8,slow=5.0,SNR=5.7
LPAZ La Paz 161.96 129 *e*PKPdf PKPdf 08 04 34.0 +1.6
SIV San Ignacio 167.00 146 PKP PKPdf 08 04 37.1 +0.3
comp=Z,1.9nm,0.9s,baz=158,slow=1.7,SNR=8.5
SIV PKPab PKPab 08 05 42.2 +1.6
comp=Z,1.3nm,0.8s,baz=230,slow=7.9,SNR=2.4

IDC 10 07:54:08.4±10.0, 24°.05S×179°.71W, h249km±97km, mb3.7/7, mb1 3.8/8, mb1mx3.6/17, mbtmp3.7/8, Error ellipse: s-maj=54.5km s-min=23.9km az=25.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.43**	**190**	P	Pn	07 57 20.3	-1.4
	0.4nm,0.3s,baz=42,slow=14,SNR=3.6						
URZ				S	S	07 59 57.0	-4.2
	0.3nm,0.3s,baz=198,slow=20,SNR=3.3						
CTA	**Charters Tower**	**31.75**	**270**	P	P	08 00 11.4	+1.8
	5.4nm,0.4s,baz=92,slow=11,SNR=8.8						
STKA	**Stephens Creek**	**34.92**	**248**	P	P	08 00 37.4	+0.5
	2.0nm,0.5s,baz=96,slow=10,SNR=5.7						
ASAR	**Alice Springs**	**42.28**	**261**	P	P	08 01 37.5	-0.4
	0.9nm,0.5s,baz=96,slow=7.4,SNR=15						
WRA	**Warramunga Arr**	**42.66**	**266**	P	P	08 01 40.4	-0.6
	2.9nm,0.4s,baz=98,slow=8.3,SNR=66						
FITZ	**Fitzroy Crossi**	**51.09**	**266**	P	P	08 02 45.1	-0.9
	1.8nm,0.6s,baz=101,slow=10,SNR=6.2						
PMSA	**Palmer Station**	**78.67**	**157**	P	P	08 05 42.7	+0.1
	13nm,0.8s,baz=256,slow=4.2,SNR=4.1						
TXAR	**Lajitas Array**	**90.28**	**58**	P	P	08 06 41.8	+0.6
	0.2nm,0.6s,baz=224,slow=7.6,SNR=3.5						

CASC 10 08:01:42.1±1.4, 8°.36N×82°.98W, h3km, MD3.6, 3C, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.34**	**328**⇑*e*P	Pg		08 01 49.5	+0.8
ACR				*e*S	Sg	08 01 55.2	+2.0
BRU2	**Volcan**	**0.52**	**34**⇑*e*P	Pg		08 01 53.6	+1.5
BRU2				*e*S	Sg	08 02 02.2	+3.4
BAR1		**0.93**	**340** *e*P	Pg		08 01 59.8	-0.2
BAR1			⇑*i*P			08 01 59.9	
BAR1				*e*S	Sg	08 02 13.4	+1.2
CNI	**Changuinola**	**1.15**	**24** *e*P	Pg		08 02 03.6	-0.5
BUS	**Buena Vista**	**1.41**	**327** *e*P	Pn		08 02 08.2	-0.5
BUS			*e*S	Sb		08 02 28.8	+1.3
PRS1	**Puriscal**	**2.08**	**321** *e*P	Pn		08 02 18.9	+1.0

*TAP **10** 08:05:23.3, 24°.72N×122°.39E, h105km, ML3.3, C*
*ISCJB **10** 08:05:23.7±0.9, 24°.71N±0°.06×122°.43E±0°.03, h99km±7km, Error ellipse: s-maj=9.9km s-min=4.2km az=173.3*
*JMA **10** 08:05:24.2±0.2, 24°.78N×122°.49E, h101km±3km, M1.8*
ISC 10 08:05:24.2±0.9, 24°.71N±0°.06×122°.43E±0°.03, h98km±7km, n23, σ0°59/43, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.50**	**307**	P	**Pn**	**08 05 39.7**	**0.0**
	baz=301						
TWB1				*e*S	**Sn**	**08 05 51.3**	**-0.2**
	baz=301						
TWC	**Suao**	**0.54**	**260**	*i* P	**Pn**	**08 05 39.7**	**-0.3**
	baz=255						
TWC				S	**Sn**	**08 05 51.5**	**-0.4**
	baz=255						
YOJ	**Yonaguni jima**	**0.58**	**115**	P	**Pn**	**08 05 40.7**	**+0.3**
YOJ				S	**Sn**	**08 05 53.0**	**+0.5**
ENA	**Nanau**	**0.69**	**246**	P	**Pn**	**08 05 41.2**	**-0.1**
	baz=242						
ENA				*e*S	**Sn**	**08 05 54.5**	**+0.4**
	baz=242						
TWE	**Neicheng**	**0.69**	**271**	P	**Pn**	**08 05 41.2**	**-0.2**
	baz=277						
TWE				S	**Sn**	**08 05 54.2**	**-0.1**
	baz=277						
ENTT	**Nioudou**	**0.79**	**265**	*e*P	**Pn**	**08 05 42.4**	**+0.2**
	baz=268						
ENTT				*e*S	**Sn**	**08 05 56.5**	**+0.6**
	baz=268						
NSK	**Sanguang**	**0.97**	**268**	*e*P	**Pn**	**08 05 44.0**	**-0.2**
	baz=277						
NSK				*e*S	**Sn**	**08 05 59.0**	**-0.3**
	baz=277						
TWD	**Chiawan**	**0.98**	**231**	*e*P	**Pn**	**08 05 43.7**	**-0.6**
	baz=226						
TWD				*e*S	**Sn**	**08 05 58.6**	**-0.8**
	baz=226						
NNS	**Nan Shan**	**1.00**	**255**	P	**Pn**	**08 05 44.6**	**+0.2**
	baz=249						
NNS				S	**Sn**	**08 06 00.0**	**+0.3**
	baz=249						
WHF	**Hehuan Shan**	**1.20**	**243**	P	**Pn**	**08 05 47.0**	**+0.2**
	baz=241						
WHF				*e*S	**Sn**	**08 06 03.8**	**0.0**
	baz=241						
ESL	**Shilin**	**1.27**	**226**	*e*P	**Pn**	**08 05 46.8**	**-0.8**
	baz=233						
NSTT	**Nanjuang**	**1.30**	**267**	*e*P	**Pn**	**08 05 47.6**	**-0.3**
	baz=267						
NSTT				*e*S	**Sn**	**08 06 05.3**	**-0.6**
	baz=267						
HATJ	**Hateruma jima**	**1.41**	**117**	*e*S	**Sn**	**08 06 08.3**	**+0.1**
JKRS	**Kuro-shima**	**1.51**	**108**	P	**Pn**	**08 05 50.7**	**+0.2**
JKRS				S	**Sn**	**08 06 11.1**	**+0.7**
JIJ	**Ishigaki jima**	**1.60**	**102**	P	**Pn**	**08 05 51.3**	**-0.2**
JIJ				S	**Sn**	**08 06 11.7**	**-0.6**
SMLT	**Sun Moon Lake**	**1.62**	**240**	*e*P	**Pn**	**08 05 52.0**	**+0.2**
	baz=236						
SMLT				*e*S	**Sn**	**08 06 13.2**	**+0.4**
	baz=236						
TYC	**Yuchr**	**1.64**	**241**	*e*P	**Pn**	**08 05 52.7**	**+0.6**
	baz=238						
TYC				*e*S	**Sn**	**08 06 13.8**	**+0.5**
	baz=238						
TWF1	**Yuli**	**1.70**	**218**	*e*P	**Pn**	**08 05 51.7**	**-1.1**
	baz=224						
TWF1				*e*S	**Sn**	**08 06 12.4**	**-2.2**
	baz=224						
YUS	**Yu-Shan**	**1.81**	**228**	*e*P	**Pn**	**08 05 54.8**	**+0.5**
	baz=221						
YUS				*e*S	**Sn**	**08 06 17.6**	**+0.3**
	baz=221						
ALS	**Alishan**	**1.90**	**232**	*e*P	**Pn**	**08 05 56.0**	**+0.6**
	baz=225						
ALS				*e*S	**Sn**	**08 06 20.6**	**+1.4**
	baz=225						
CHN5	**Tsauling**	**1.94**	**236**	*e*P	**Pn**	**08 05 56.6**	**+0.7**
	baz=244						
CHN5				*e*S	**Sn**	**08 06 20.9**	**+0.8**
	baz=244						
JTJ	**Tarama**	**2.07**	**91**	P	**Pn**	**08 05 57.6**	**0.0**
CHN1	**Nanshi**	**2.31**	**229**	*e*P	**Pn**	**08 05 59.9**	**-0.8**
	baz=229						
CHN1				*e*S	**Sn**	**08 06 28.2**	**-0.4**
	baz=229						

*IDC **10** 08:30:10.7±0.8, 43°.88N×87°.19E, h0km, mb3.7/7, mb1 3.9/10, mb1mx3.7/28, mbtmp3.7/10, ML3.8/3, Error ellipse: s-maj=34.4km s-min=12.6km az=49.0*
*ISCJB **10** 08:30:12.1±0.4, 44°.13N±0°.04×87°.11E±0°.07, h10km, mb3.7/7, Error ellipse: s-maj=8.8km s-min=4.1km az=144.9*
*NEIC **10** 08:30:13.2±0.7, 44°.04N×87°.32E, h10km, mb4.3/5, Error ellipse: s-maj=16.4km s-min=8.2km az=68.0*
*BJI **10** 08:30:13.4, 43°.89N×87°.10E, h14km, mB4.5/1, mb4.0/1, ML3.8/10, Ms3.7/1*
*NNC **10** 08:30:15.9±2.1, 44°.18N×86°.66E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=17.5km s-min=13.3km az=82.0*
ISC 10 08:30:14.2±0.4, 44°.08N±0°.04×87°.18E±0°.07, h10km, n34, σ1°29/44, mb3.7/7, 5C-7D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**0.46**	**124**⇓*i*Pg		**Pg**	**08 30 22.8**	**-0.3**
WMQ				Sg	**Sg**	**08 30 31.1**	**+2.0**
WMQ				smax			
	comp=N,5μm,0.4s						
WMQ				smax			
	comp=E,5μm,0.5s						
MK31	**Makanchi Array**	**4.38**	**310**	Pn	**Pn**	**08 31 21.6**	**+0.9**
	comp=E,1.8nm,0.3s,baz=132,slow=14,SNR=38						
MK31				⇓Sn	**Sn**	**08 32 13.1**	**+1.3**
	comp=E,11nm,0.4s,baz=125,slow=20,SNR=3.5						
MK31				⇓Lg		08 32 26.4	
	comp=E,89nm,0.8s,baz=123,slow=32,SNR=3.5						
MK31	**Makanchi Array**	**4.38**	**310**	*e*Pn	**Pn**	**08 31 21.9**	**+1.1**
MKAR	**Makanchi Array**	**4.38**	**310**	Pn	**Pn**	**08 31 21.9**	**+1.2**
	comp=E,2.6nm,0.3s,baz=116,slow=15,SNR=26						
MKAR				Pg	**Pg**	**08 31 39.1**	**+1.0**
	comp=E,5.0nm,0.3s,baz=112,slow=17,SNR=11						
MKAR				Sn	**Sn**	**08 32 14.6**	**+2.9**
	comp=E,6.8nm,0.3s,baz=135,slow=18,SNR=6.2						
MKAR				Lg		08 32 32.5	
	comp=E,23nm,0.3s,baz=127,slow=32,SNR=11						
MKAR	**Makanchi Array**	**4.38**	**310**	Pn	**Pn**	**08 31 21.9**	**+1.2**
MKAR				Pg	**Pg**	**08 31 39.1**	**+1.0**
MKAR				Sn	**Sn**	**08 32 14.6**	**+2.9**
MKAR				Lg		08 32 32.5	
TKM2	**Tokmak 2**	**8.50**	**266**	⇑Pn	**Pn**	**08 32 16.5**	**-0.7**
	comp=E,3.0nm,0.6s						
TKM2				⇓Sn	**Sn**	**08 33 48.7**	**-4.4**
	comp=E,7.9nm,0.8s						
TKM2				⇓Lg		08 34 38.0	
	comp=E,25nm,1.1s						
TKM2	**Tokmak 2**	**8.50**	**266**	*e*Pn	**Pn**	**08 32 16.8**	**-0.4**
	comp=E,9.8nm,0.8s						
KURBB	**Kurchatov Arra**	**8.79**	**321**	⇑Pn	**Pn**	**08 32 19.8**	**-1.4**
	comp=E,0.9nm,0.7s						
KURBB				⇑Sn	**Sn**	**08 33 56.6**	**-3.6**
	comp=E,2.3nm,0.5s						
KURBB				⇑Lg		08 34 48.9	
	comp=E,14nm,0.7s						
KURK	**Kurchatov**	**8.81**	**322**	⇑Pn	**Pn**	**08 32 20.4**	**-1.1**
	comp=E,8.0nm,1.4s						
KURK				⇓Sn	**Sn**	**08 33 58.8**	**-2.0**
	comp=E,4.1nm,0.4s						
KURK				⇓Lg		08 34 47.2	
	comp=E,50nm,0.9s						
KURK	**Kurchatov**	**8.81**	**322**	Pn	**Pn**	**08 32 20.6**	**-0.9**
	comp=E,0.5nm,0.3s,baz=135,slow=12,SNR=18						
KURK				Sn	**Sn**	**08 33 59.3**	**-1.5**
	comp=E,0.5nm,0.3s,baz=112,slow=26,SNR=4.5						
KURK				Lg		08 34 58.7	
	comp=E,0.6nm,0.3s,baz=148,slow=30,SNR=6.1						
KURK	**Kurchatov**	**8.81**	**322**	*e*Pn	**Pn**	**08 32 21.0**	**-0.5**
	comp=E,5.8nm,0.6s						
KURK				Sn	**Sn**	**08 33 59.3**	**-1.5**
KURK				Lg		08 34 58.6	

AAK	Ala-Archa	9.35 266	Pg	Px		08 33 06.7	
	comp=E,0.0nm,0.3s,baz=63,slow=4.5,SNR=3.5						
AAK			Lg			08 35 13.7	
	comp=E,0.0nm,0.3s,baz=270,slow=20,SNR=2.7						
UCH	Uchtor	9.44 263	*e*Pn	Pn		08 32 29.1	-1.0
	comp=E,6.0nm,0.8s						
ZALV	Zalesovo Beam	10.00 352	Pn	Pn		08 32 37.8	+0.1
	comp=E,0.9nm,0.3s,baz=171,slow=14,SNR=20						
ZALV			Sn	Sn		08 34 29.6	-0.3
	comp=E,1.9nm,0.3s,baz=166,slow=25,SNR=9.3						
ZALV			Lg			08 35 33.3	
	baz=170,slow=31,SNR=2.4						
SONM	Songino Array	13.88 68	Lg			08 37 39.6	
	comp=E,0.3nm,0.3s,baz=261,slow=26,SNR=2.5						
BVAR	Borovoye Array	14.24 315	Pn	Pn		08 33 37.2	+1.5
	baz=120,slow=13,SNR=3.7						
BVAR			Sn	Sn		08 36 08.5	-5.2
	comp=E,0.4nm,0.3s,baz=122,slow=22,SNR=3.0						
BVAR			Lg			08 37 54.7	
	comp=E,0.4nm,0.3s,baz=121,slow=29,SNR=3.9						
GUN	Gumba	16.17 184	*e*P	Pn		08 34 03.3	+1.9
	comp=E,30nm,0.8s						
KKN	Kakani	16.32 186	*e*P	Pn		08 34 04.2	+0.7
	comp=E,19nm,0.4s						
PKIN	Phulchoki	16.53 186	*e*P	Pn		08 34 06.1	+0.1
	comp=E,13nm,0.6s						
PKIN	Phulchoki	16.53 186	*e*P	Pn		08 34 06.2	+0.2
	comp=E,22nm,0.6s						
PKI	Pulchoki	16.53 186	*e*P	Pn		08 34 06.4	+0.3
	comp=E,16nm,0.6s						
TAPN	Taplejung	16.70 178	*e*P	Pn		08 34 07.7	-0.5
	comp=E,10nm,0.6s						
RAMN	Ramite	17.10 182	*e*P	Pn		08 34 11.3	-1.9
	comp=E,6.4nm,0.5s						
AKTK	Aktyubinsk	20.70 298	P	P		08 34 54.5	+0.2
AKTO	Aktyubinsk	20.70 298	P	P		08 34 54.5	+0.2
	comp=E,0.5nm,0.5s,baz=102,slow=9.3,SNR=2.1						
ARU	Arti	21.89 314	*e*P	P		08 35 09.3	+2.2
	comp=E,8.3nm,0.6s,mb4.3						
ARCES	ARCESS Array B	39.72 331	P	P		08 37 46.5	+0.3
	comp=E,0.7nm,0.3s,mb3.8,baz=90,slow=6.3,SNR=12						
ARCES			PcP	PcP		08 39 51.1	-1.4
	comp=E,3.1nm,1.0s,baz=91,slow=4.5,SNR=3.4						
ARCES	ARCESS Array B	39.72 331	P	P		08 37 46.5	+0.3
ARCES			PcP	PcP		08 39 51.1	-1.4
NOA	NORSAR Array B	46.32 319	P	P		08 38 39.3	-0.4
	comp=E,0.7nm,0.4s,mb3.9,baz=74,slow=7.9,SNR=2.7						
YKA	Yellowknife Ar	72.35 10	P	P		08 41 39.1	-0.5
	comp=E,0.3nm,0.8s,mb3.3,baz=344,slow=6.5,SNR=3.7						
WRA	Warramunga Arr	76.94 135	P	P		08 42 04.4	-2.4
	comp=E,0.9nm,0.9s,mb3.7,baz=338,slow=6.4,SNR=8.0						
TORD	Torodi Ar. Bea	77.76 276	P	P		08 42 09.6	-2.0
	comp=E,0.8nm,0.7s,mb3.8,baz=49,slow=6.2,SNR=4.1						
ASAR	Alice Springs	79.85 137	P	P		08 42 19.6	-3.1
	comp=E,0.2nm,0.7s,mb3.2,baz=337,slow=5.0,SNR=4.4						
LPAZ	La Paz	145.29 315	PKPbc	PKPbc		08 49 50.4	-1.8
	comp=E,0.5nm,0.6s,baz=60,slow=8.1,SNR=3.1						

BJI 10 08:43:54.8, 35°.96N×81°.81E, h6km, ML3.9/5, Ms3.9/1, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	5.83	309	Pn	Pn	08 45 23.0	+1.2
KSH				Sn	Sn	08 46 30.8	+1.9
KSH				smax			
	comp=N,190nm,1.2s						
KSH				smax			
	comp=E,100nm,1.0s						

*IDC **10** 08:52:42.4±1.6, 17°.07S×167°.60E, h0km, mb4.0/5, mb1 4.2/5, mb1mx4.0/16, mbtmp4.0/5, MS3.7/2, Ms1 3.6/2, ms1mx3.1/19, Error ellipse: s-maj=43.0km s-min=30.5km az=176.0*
*NOU **10** 08:52:44.8±0.3, 18°.07S×167°.86E, h30km, MD3.1, ML2.8*
*ISCJB **10** 08:52:46.5±4.4, 18°.4S±0°.2×168°.0E±0°.2, h54km±42km, mb3.9/4, MS3.5/2, Error ellipse: s-maj=40.1km s-min=27.8km az=36.7*

ISC 10 08:52:47.4±4.7, 18°.4S±0°.2×168°.0E±0°.2, h47km±47km, n9, σ0°51/8, mb3.9/4, MS3.5/2, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	Yate Dam	3.90	196	*e*S	Sn	08 54 29.6	+0.3
DZM	Mont Dzumac	3.96	202	*e*P	Pn	08 53 45.7	+0.1
DZM				*e*S	Sn	08 54 30.9	+0.1
DZM				AMP		08 54 34.3	
	comp=Z,759nm,7.2s						
NOUC	Port Laguerre	4.04	203	*e*S	Sn	08 54 32.2	-0.6
NOUC				AMP		08 54 50.3	
	comp=Z,39nm,0.8s						
CTA	Charters Tower	20.63	262	LR	LR	09 04 05.3	
	comp=Z,194nm,20.1s,MS3.5,baz=282,slow=33						
URZ	Urewera	21.33	160	P	pP	08 57 45.3	+3.8
	comp=Z,10nm,0.8s,baz=337,slow=7.7,SNR=3.6						
STKA	Stephens Creek	27.36	236	P	P	08 58 33.9	+5.6
	comp=Z,2.3nm,0.7s,mb3.8,baz=75,slow=12,SNR=2.8						
STKA				LR	LR	09 08 14.9	
	comp=Z,137nm,18.4s,MS3.6,baz=27,slow=34						
WRA	Warramunga Arr	31.84 262	P	P		08 59 07.7	-0.4
	comp=Z,0.3nm,0.4s,mb3.5,baz=88,slow=9.5,SNR=14						
ASAR	Alice Springs	32.24 255	P	P		08 59 12.1	+0.6
	comp=Z,2.8nm,0.6s,mb4.3,baz=84,slow=9.0,SNR=73						
NVAR	Mina Array Bea	89.10 49	P	P		09 05 37.7	-0.1
	comp=Z,0.2nm,0.4s,mb3.8,baz=236,slow=6.4,SNR=3.6						

*CSEM **10** 08:55:37.9±0.3, 40°.13N×33°.25E, h10km, MD2.8, Error ellipse: s-maj=7.6km s-min=5.7km az=176.0*
*ISCJB **10** 08:55:37.6±0.7, 40°.11N±0°.04×33°.25E±0°.04, h3km±8km, Error ellipse: s-maj=6.1km s-min=5.0km az=7.3*
*DDA **10** 08:55:38.2, 40°.13N×33°.29E, h8km±2km, Md2.8*

ISC 10 08:55:38.1±0.6, 40°.12N±0°.04×33°.24E±0°.04, h12km±9km, n14, σ0°60/25, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDT	Eldivan	0.39	22	*i* P	Pg	08 55 45.5	-0.4
ELDT				*i* S	Sg	08 55 51.9	+0.6
ELDT	Eldivan	0.39	22	*i* P	Pg	08 55 45.5	-0.4
ELDT				*i* S	Sg	08 55 51.9	+0.7
LOD	Lodumlu	0.43	237	*e*PG	Pg	08 55 46.2	-0.4
LOD				*e*SG	Sg	08 55 53.0	+0.6
LOD	Lodumlu	0.43	237	*e*Pg	Pg	08 55 46.2	-0.4
LOD				*e*Sg	Sg	08 55 53.0	+0.6
CDAG	Cicekdag	1.01	119	*i* P	Pb	08 55 57.0	-0.5
CDAG				*i* S	Sg	08 56 11.0	+0.4
CDAG	Cicekdag	1.01	119	*i* P	Pb	08 55 57.0	-0.5
CDAG				*i* S	Sg	08 56 11.0	+0.4
SGKT	Sivrigoynuk	1.01	297	*i* P	Pb	08 55 58.0	+0.5
SGKT				*i* S	Sg	08 56 10.3	-0.3
SGKT	Sivrigoynuk	1.01	297	*i* P	Pb	08 55 58.0	+0.5
SGKT				*i* S	Sg	08 56 10.3	-0.3
CORM	Corum	1.07	87	*e*PN	Pg	08 55 57.4	-1.3
CORM	Corum	1.07	87	*e*Pn	Pg	08 55 57.4	-1.3
CTKT	Corum	1.29	67	*i* P	Pb	08 56 02.4	+0.2
CTKT				*i* S	Sb	08 56 19.3	+0.5
CTKT	Corum	1.29	67	*i* P	Pb	08 56 02.4	+0.1
CTKT				*i* S	Sb	08 56 19.3	+0.5
AVNT	Avonos	1.84	136	*i* P	Pb	08 56 11.1	-0.6
AVNT				*i* S	Sg	08 56 37.9	+0.7
AVNT	Avonos	1.84	136	*i* P	Pb	08 56 11.1	-0.5

*TRN **10** 09:04:03.9, 19°.33N×64°.54W, h17km*
*RSPR **10** 09:04:05.6, 19°.52N×64°.43W, h25km±16km, MD3.7/10, MD3.7/10*
*NEIC **10** 09:04:05.6, 19°.52N×64°.43W, h25km, MD3.7(RSPR), After RSPR.*

ISC 10 09:04:04.2±2.9, 19°.5N±0°.1×64°.5W±0°.2, h18km±32km, n20, σ0°32/26, 14C-6D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	Anegada	0.74	168	⇓*e*P	Pb	09 04 18.8	+0.2
ABV				*e*S	Sb	09 04 28.8	+0.3
ABV	Anegada	0.74	168	⇓*e*P	Pb	09 04 18.8	+0.2
ABV				*e*S	Sb	09 04 28.8	+0.3
TBVI	Tortola	1.04	186	⇑*e*P	Pb	09 04 23.3	-0.5
TBVI	Tortola	1.04	186	⇑*e*P	Pb	09 04 23.3	-0.5
STVI	Saint Thomas	1.18	201	⇑*e*P	Pn	09 04 25.6	-0.3
STVI				*e*S	Sb	09 04 41.3	+0.2
STVI	Saint Thomas	1.18	201	⇑*e*P	Pn	09 04 25.6	-0.3
STVI				*e*S	Sb	09 04 41.3	+0.2
MTP	Monte Pirata	1.68	217	⇑*e*P	Pn	09 04 33.0	+0.2
MTP				*e*S	Sn	09 04 53.7	-0.3
MTP	Monte Pirata	1.68	217	⇑*e*P	Pn	09 04 33.1	+0.3
MTP				*e*S	Sn	09 04 53.7	-0.3
CDVI	St. Croix	1.72	189	⇑*e*P	Pn	09 04 33.0	-0.3
CDVI	St. Croix	1.72	189	⇑*e*P	Pn	09 04 33.0	-0.3
CBYP	Canovanas	1.75	228	⇑*e*P	Pn	09 04 33.4	-0.3
CBYP	Canovanas	1.75	228	⇑*e*P	Pn	09 04 33.4	-0.3
HUMP	Col San Antoni	1.83	224	⇓*e*P	Pn	09 04 34.8	-0.1
HUMP	Col San Antoni	1.83	224	⇓*e*P	Pn	09 04 34.8	-0.1
AOPR	Arecibo Observ	2.41	243	⇑*e*P	Pn	09 04 42.9	+0.1
AOPR	Arecibo Observ	2.41	243	⇑*e*P	Pn	09 04 42.9	+0.1
CELP	Cerrillos	2.41	235	⇓*e*P	Pn	09 04 42.6	-0.1
CELP	Cerrillos	2.41	235	⇓*e*P	Pn	09 04 42.6	-0.1
CRPR	Cabo Rojo, PR	2.87	240	⇑*e*P	Pn	09 04 49.7	+0.7
CRPR	Cabo Rojo, PR	2.87	240	⇑*e*P	Pn	09 04 49.7	+0.7

*ATH **10** 09:06:30.4, 37°.95N×21°.37E, h30km, MD2.9/10*
*NEIC **10** 09:06:30.4, 37°.95N×21°.37E, h30km, MD2.9(ATH), After ATH.*
*CSEM **10** 09:06:31.4±0.2, 37°.89N×21°.46E, h15km, MD2.9, Error ellipse: s-maj=4.4km s-min=4.0km az=68.0*
*THE **10** 09:06:32.0, 37°.90N×21°.46E, h9km±2km, ML3.5/6, Error ellipse: s-maj=2.3km s-min=0.7km az=22.0*
*ISCJB **10** 09:06:32.2±0.5, 37°.91N±0°.04×21°.45E±0°.03, h23km±7km, Error ellipse: s-maj=6.1km s-min=4.5km az=2.7*

ISC 10 09:06:31.7±0.5, 37°.89N±0°.03×21°.45E±0°.03, h20km±5km, n49, σ0°86/67, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.17	5	*e*Pb	Pg	09 06 36.4	0.0
RLS				*e*Sb	Sg	09 06 40.4	+0.8
RLS	Riolos of Patr	0.17	5	*e*PB	Pg	09 06 36.4	0.0
RLS				*e*SB	Sg	09 06 40.4	+0.8
RLS	Riolos of Patr	0.17	5	*e*Pb	Pg	09 06 36.4	0.0
RLS				*e*Sb	Sg	09 06 40.4	+0.8
UPR	University Cam	0.47	34	*e*PB	Pg	09 06 41.4	0.0
UPR	University Cam	0.47	34	*e*Pb	Pg	09 06 41.4	0.0
LAKA	Lakka	0.55	50	P	Pg	09 06 42.0	-0.7
LAKA				S	Sg	09 06 50.3	+0.2
LAKA	Lakka	0.55	50	P	Pg	09 06 42.0	-0.7
LAKA				S	Sg	09 06 50.3	+0.2
KFL	Anninata	0.57	293	P	Pg	09 06 43.2	+0.1
KFL				S	Sg	09 06 51.2	+0.5
EFP	Efpalio	0.65	34	P	Pg	09 06 44.0	-0.5
EFP				S	Sg	09 06 53.5	+0.3
EFP	Efpalio	0.65	34	*e*PN	Pg	09 06 43.6	-0.9
EFP	Efpalio	0.65	34	*e*Pn	Pg	09 06 43.6	-0.9
EFP	Efpalio	0.65	34	P	Pg	09 06 44.0	-0.5
EFP				S	Sg	09 06 53.5	+0.3
TRIZ	Trizonia	0.68	46	P	Pg	09 06 44.3	-0.9
TRIZ				S	Sg	09 06 55.1	+0.7
TRIZ	Trizonia	0.68	46	P	Pg	09 06 44.3	-0.9
TRIZ				S	Sg	09 06 55.1	+0.7
GUR	Goura	0.71	86	P	Pg	09 06 44.6	-1.1
GUR				S	Sg	09 06 55.3	+0.2
GUR	Goura	0.71	86	*e*PN	Pg	09 06 45.7	0.0
GUR	Goura	0.71	86	P	Pg	09 06 44.6	-1.1
GUR	Goura	0.71	86	*e*Pn	Pg	09 06 45.7	0.0
GUR				S	Sg	09 06 55.3	+0.2
VLS	Valsamata	0.74	293	*e*Pn	Pg	09 06 44.0	-2.2
VLS	Valsamata	0.74	293	P	Pg	09 06 45.3	-0.9
VLS				S	Sg	09 06 57.6	+1.6
VLS	Valsamata	0.74	293	*e*PN	Pg	09 06 44.0	-2.2
VLS	Valsamata	0.74	293	P	Pg	09 06 45.3	-0.9
VLS				S	Sg	09 06 57.6	+1.6
KALE	Kalithea	0.74	47	P	Pg	09 06 45.3	-1.0
KALE				S	Sg	09 06 56.8	+0.7
KALE	Kalithea	0.74	47	P	Pg	09 06 45.3	-1.0
KALE				S	Sg	09 06 56.8	+0.7
ITM	Ithomi	0.81	152	*e*Pn	Pg	09 06 47.6	+0.1
ITM	Ithomi	0.81	152	P	Pg	09 06 47.7	+0.2
ITM	Ithomi	0.81	152	*e*PN	Pg	09 06 47.6	+0.1
ITM	Ithomi	0.81	152	P	Pg	09 06 47.7	+0.2
VLX	Vlachokerasia	0.90	125	P	Pg	09 06 47.9	-1.4
VLX				S	Sg	09 07 02.9	+1.6
VLX	Vlachokerasia	0.90	125	*e*PN	Pg	09 06 49.7	+0.4
VLX	Vlachokerasia	0.90	125	P	Pg	09 06 47.9	-1.4
VLX	Vlachokerasia	0.90	125	*e*Pn	Pg	09 06 49.7	+0.4
VLX				S	Sg	09 07 02.9	+1.6
DSF	Desfina	1.00	58	P	Pg	09 06 49.6	-1.5
DSF	Desfina	1.00	58	P	Pg	09 06 49.6	-1.5
PYL	PYLOS	1.02	167	P	Pg	09 06 51.1	-0.4
PYL	PYLOS	1.02	167	*e*PN	Pg	09 06 51.2	-0.3
PYL	PYLOS	1.02	167	P	Pg	09 06 51.1	-0.4
LKD2	Lefkada island	1.09	326	P	Pg	09 06 51.7	-1.2
LKD2	Lefkada island	1.09	326	P	Pg	09 06 51.7	-1.2
LTK	Loutraki	1.21	83	P	Pn	09 06 53.7	+0.3
LTK	Loutraki	1.21	83	*e*PN	Pn	09 06 53.7	+0.3
LTK	Loutraki	1.21	83	P	Pn	09 06 53.7	+0.3
AGG	Agios Georgios	1.32	31	P	Pn	09 06 56.1	+1.0
AGG	Agios Georgios	1.32	31	P	Pn	09 06 56.1	+1.0
LKR	Lokris	1.44	58	*e*Pn	Pn	09 06 56.6	0.0
LKR	Lokris	1.44	58	P	Pn	09 06 57.7	+1.1
LKR	Lokris	1.44	58	*e*PN	Pn	09 06 56.6	0.0
LKR	Lokris	1.44	58	*e*Pn	Pn	09 06 56.6	0.0
LKR	Lokris	1.44	58	P	Pn	09 06 57.7	+1.1

*IDC **10** 09:07:56.2±0.9, 51°.66N×75°.48E, h0km, mb1 2.9/4, mb1mx2.8/29, mbtmp2.9/4, ML2.9/4, Error ellipse: s-maj=20.0km s-min=7.7km az=29.0*
*ISCJB **10** 09:07:56.8±0.6, 51°.65N±0°.08×75°.43E±0°.07, h10km, Error ellipse: s-maj=12.7km s-min=4.0km az=20.8*
*NNC **10** 09:07:58.0±4.5, 52°.13N×75°.95E, h0km, mb3.1, mpv2.7, Error ellipse: s-maj=136.1km s-min=9.9km az=27.0*

ISC 10 09:07:57.7±0.6, 51°.56N±0°.08×75°.37E±0°.07, h10km, n11, σ0°93/18, 10C-1D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	2.21	114	⇑Pn	Pn	09 08 35.2	+0.9
	1.7nm,0.5s						
KURBB				⇑Sn	Sb	09 09 05.0	+0.1
	13nm,0.6s						
KURK	Kurchatov	2.22	111	⇑Pn	Pn	09 08 34.8	+0.3
	5.2nm,0.4s						
KURK				⇑Sn	Sb	09 09 05.1	-0.2
	26nm,0.7s						
KURK	Kurchatov	2.22	111	Pn	Pn	09 08 33.4	-1.1
	0.9nm,0.3s,baz=304,slow=19,SNR=26						
KURK				Pg	Pg	09 08 35.6	-4.5
	0.9nm,0.3s,baz=304,slow=18,SNR=47						
KURK				Lg		09 09 03.9	
	1.2nm,0.3s,baz=300,slow=29,SNR=15						
VOSK	Vostochnaya	2.94	295	⇑Pn	Pn	09 08 47.0	+2.6
	2.1nm,0.5s						
VOSK				⇑Sn	Sn	09 09 24.0	+4.3
	31nm,0.7s						
BVA0	Borovoye Array	3.39	298	⇑Pn	Pn	09 08 51.1	+0.6
	0.3nm,0.5s,baz=114,slow=13,SNR=7.8						
BVA0				⇓Sn	Sn	09 09 38.3	+7.5
	1.4nm,0.5s,baz=117,slow=26,SNR=7.4						
BVAR	Borovoye Array	3.39	298	Pn	Pn	09 08 50.7	+0.2
	0.3nm,0.3s,baz=110,slow=13,SNR=4.5						
BVAR				Sn	Sn	09 09 29.8	-0.9
	0.9nm,0.3s,baz=108,slow=23,SNR=5.2						
ZRNK	Zerenda	4.15	292	⇑Pn	Pb	09 09 08.7	-2.0
	2.0nm,0.8s						
ZRNK				⇑Sn	Sb	09 10 01.1	+0.3
	8.8nm,0.6s						
ZALV	Zalesovo Beam	6.22	64	Pn	Pn	09 09 28.6	-0.7
	0.7nm,0.3s,baz=258,slow=13,SNR=8.9						
ZALV				Sn	Sn	09 10 40.7	+0.3
	0.2nm,0.3s,baz=256,slow=23,SNR=3.5						
ZALV				Lg		09 11 10.9	
	0.2nm,0.3s,baz=249,slow=26,SNR=3.2						
MK31	Makanchi Array	6.58	134	⇑Lg		09 11 25.7	
	4.3nm,0.6s,baz=337,slow=23,SNR=4.7						
MKAR	Makanchi Array	6.58	134	Pn	Pn	09 09 34.0	-0.4
	0.3nm,0.3s,baz=316,slow=8.1,SNR=3.5						
MKAR				Sn	Sn	09 10 49.5	0.0
	0.2nm,0.3s,baz=321,slow=23,SNR=5.2						
MKAR				Lg		09 11 23.6	
	0.5nm,0.3s,baz=317,slow=22,SNR=6.5						
AAK	Ala-Archa	8.95	184	Lg		09 12 39.2	
	0.0nm,0.3s,baz=250,slow=15,SNR=3.2						

*ATH **10** 09:17:57.9, 38°.06N×21°.55E, h24km, MD2.9/3*
*CSEM **10** 09:17:58.9±0.2, 38°.12N×21°.57E, h20km, ML2.1/4, Error ellipse: s-maj=7.7km s-min=4.3km az=157.0*
*THE **10** 09:17:59.3, 38°.10N×21°.58E, h14km±3km, ML2.1/4, Error ellipse: s-maj=3.3km s-min=0.6km az=357.0*
*ISCJB **10** 09:17:59.2±0.5, 38°.11N±0°.06×21°.56E±0°.03, h3km±11km, Error ellipse: s-maj=9.4km s-min=3.7km az=171.4*

ISC 10 09:17:59.7±0.6, 38°.13N±0°.04×21°.57E±0°.03, h13km±7km, n21, σ0°86/37, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.11	229	*e*PB	Pg	09 18 02.3	-0.4
RLS				*e*SB	Sg	09 18 05.5	+0.6
RLS	Riolos of Patr	0.11	229	*e*Pb	Pg	09 18 02.3	-0.4
RLS				*e*Sb	Sg	09 18 05.5	+0.6
LAKA	Lakka	0.34	71	P	Pg	09 18 06.0	-0.6
LAKA				S	Sg	09 18 11.4	+0.2
LAKA	Lakka	0.34	71	P	Pg	09 18 06.0	-0.6
LAKA				S	Sg	09 18 11.4	+0.2
EFP	Efpalio	0.40	42	P	Pg	09 18 07.5	-0.1
EFP				S	Sg	09 18 13.9	+0.9
EFP	Efpalio	0.40	42	*e*PB	Pg	09 18 07.5	-0.1
EFP	Efpalio	0.40	42	P	Pg	09 18 07.5	-0.1
EFP				S	Sg	09 18 13.9	+0.9
TRIZ	Trizonia	0.46	59	P	Pg	09 18 08.0	-0.8
TRIZ				S	Sg	09 18 15.9	+0.9
TRIZ	Trizonia	0.46	59	P	Pg	09 18 08.0	-0.8
TRIZ				S	Sg	09 18 15.9	+0.9
KALE	Kalithea	0.52	60	P	Pg	09 18 09.5	-0.4
KALE				S	Sg	09 18 17.5	+0.7
KALE	Kalithea	0.52	60	P	Pg	09 18 09.5	-0.4
KALE				S	Sg	09 18 17.5	+0.7
KFL	Anninata	0.62	268	P	Pg	09 18 10.9	-0.8
KFL				S	Sg	09 18 20.6	+0.8
GUR	Goura	0.64	107	P	Pg	09 18 10.6	-1.5
GUR				S	Sg	09 18 20.8	+0.2
GUR	Goura	0.64	107	*e*PN	Pg	09 18 10.6	-1.5
GUR	Goura	0.64	107	P	Pg	09 18 10.6	-1.5
GUR				S	Sg	09 18 20.8	+0.2
VLS	Valsamata	0.77	274	P	Pg	09 18 13.1	-1.6
VLS				S	Sg	09 18 26.0	+1.2
VLS	Valsamata	0.77	274	P	Pg	09 18 13.1	-1.6
VLS				S	Sg	09 18 26.0	+1.2
DSF	Desfina	0.81	69	P	Pg	09 18 15.0	-0.3
DSF	Desfina	0.81	69	P	Pg	09 18 15.0	-0.3
ITM	Ithomi	0.99	163	P	Pb	09 18 18.1	-0.6
ITM				S	Sb	09 18 33.2	+1.6
ITM	Ithomi	0.99	163	P	Pb	09 18 18.1	-0.6

*CSEM **10** 09:18:36.0, 36°.49N×21°.36E, h4km, MD3.0, After ATH*

ATH 10 09:18:36.0, 36°.49N×21°.36E, h4km, MD3.0/3, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.51	37	*e*PG	Pg	09 18 45.7	-0.1
PYL				*e*SG	Sg	09 18 52.8	+0.4
PYL	PYLOS	0.51	37	*e*Pg	Pg	09 18 45.7	-0.1
PYL				*e*Sg	Sg	09 18 52.8	+0.4
ITM	Ithomi	0.82	33	*e*PB	Pb	09 18 52.0	-0.9
ITM	Ithomi	0.82	33	*e*Pb	Pb	09 18 52.0	-0.9
VLX	Vlachokerasia	1.20	43	*e*PG	Pg	09 18 58.3	-0.7
VLX	Vlachokerasia	1.20	43	*e*Pg	Pg	09 18 58.3	-0.7
VLI	Veliai	1.29	79	*e*PN	Pn	09 19 01.2	+0.4
VLI	Veliai	1.29	79	*e*Pn	Pn	09 19 01.2	+0.4
KYTH	Kithira	1.37	98	*e*PG	Pg	09 19 01.3	-0.9
KYTH	Kithira	1.37	98	*e*Pg	Pg	09 19 01.3	-0.9

KRSC 10 09:37:34.3±1.4, 50°.91N×156°.41E, h87km±86km, ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	Alaid	0.55	266	*i* P	Pn	09 37 51.7	+2.6
ALID				*e*S	Sn	09 38 04.7	+4.6
MIPR	Malaya Ipel'ka	1.39	9	P	Pn	09 38 00.3	+1.9
MIPR				S	Sn	09 38 19.3	+2.7
PET	Petropavlovsk	2.53	32	S	Sn	09 38 45.6	+2.2
AVH	Avacha	2.76	30	P	Pn	09 38 19.7	+3.2
GNL	Ganaly	2.94	18	P	Pn	09 38 21.6	+2.7

MEX 10 09:43:22.7±1.0, 17°.18N×100°.43W, h15km±15km, MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	Acapulco	0.58	123	*i* P	Pg	09 43 32.6	-1.7
ACX				*i* S	Sg	09 43 39.9	-2.2
MEIG	Mezcala	1.07	46	*e*P	Pb	09 43 38.9	-4.1
MEIG				*i* S	Sb	09 43 51.8	-4.9
ZIIG	Zihuatanejo	1.07	293	*e*P	Pb	09 43 39.3	-3.6
ZIIG				*i* S	Sb	09 43 52.2	-4.6
PLIG	Platanillo	1.49	36	*e*P	Pn	09 43 46.9	-2.0
PLIG				*i* S	Sn	09 44 05.0	-3.1
MZVM		2.30	30	*e*P	Pn	09 43 58.3	-1.7
MZVM				*i* S	Sn	09 44 25.4	-2.6
PNIG	Pinotepa	2.34	109	*e*P	Pn	09 43 58.0	-2.7
PNIG				*i* S	Sn	09 44 24.6	-4.5
UTMO	Huajuapan	2.59	75	*i* P	Pn	09 44 02.2	-1.9
UTMO				*i* S	Sn	09 44 32.8	-2.

s-min=16.4km az=76.0
ISCJB ***10*** *09:44:16.0±0.8,29°.53N±0°.03×130°.19E±0°.06,h21km±6km, mb4.0/11, Error ellipse: s-maj=10.1km s-min=4.1km az=24.9*
NEIC ***10*** *09:44:17.3,29°.61N×130°.09E,h28km, MG4.3(JMA), After JMA.*
NEIC Recorded [1 JMA] on Nakano-shima.
JMA ***10*** *09:44:17.3±0.1,29°.60N×130°.09E,h28km±2km, M4.0*
JMA Felt I J1.

ISC 10 09:44:15.8±1.1,29°.53N±0°.03×130°.20E±0°.06,h9km±7km, n25,σ0s91/33,mb4.0/11,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNN	**Nakanoshima**	**0.42**	**318**	P	**Pg**	**09 44 24.4**	**+0.3**
JNN				*e*S	**Sg**	**09 44 29.6**	**+0.1**
JKC	**Kuchinoerabu**	**0.93**	**360**	P	**Pg**	**09 44 33.4**	**-0.4**
JKC				*e*S	**Sg**	**09 44 44.7**	**-1.2**
JZK	**Kikaishima**	**1.22**	**189**	P	**Pb**	**09 44 41.0**	**+1.9**
JAM	**Amami Oshima**	**1.23**	**205**	P	**Pb**	**09 44 38.4**	**-0.7**
JAM				*e*S	**Sb**	**09 44 54.5**	**-0.6**
JTN	**Tanegashima 3**	**1.31**	**31**	P	**Pn**	**09 44 39.8**	**-0.5**
JTN				*e*S	**Sb**	**09 44 57.6**	**+0.1**
JTSR	**Tashiro 2**	**1.75**	**21**	P	**Pn**	**09 44 45.7**	**-0.6**
JTSR				*e*S	**Sn**	**09 45 07.5**	**-1.2**
JTK	**Tokunoshima**	**2.05**	**213**	P	**Pn**	**09 44 50.1**	**-0.4**
JTK				*e*S	**Sn**	**09 45 15.3**	**-0.9**
JIH	**Iheya**	**3.17**	**219**	P	**Pn**	**09 45 06.3**	**+0.5**
JIH				*e*S	**Sn**	**09 45 41.5**	**-2.2**
JOW	**Kunigami**	**3.18**	**213**	P	**Pn**	**09 45 06.7**	**+0.8**
JOW				*e*S	**Sn**	**09 45 43.0**	**-0.9**
KSRS	**Korea Array**	**8.13**	**347**	Pn	**Pn**	**09 46 15.3**	**+1.3**
	0.1nm,0.3s,baz=158,slow=13,SNR=4.0						
JHJ	**Hachijo jima 2**	**8.95**	**64**	Pn	**Pn**	**09 46 26.4**	**+1.2**
	4.5nm,0.3s,baz=260,slow=12,SNR=3.0						
JHJ				LR	LR	09 49 46.5	
	comp=Z,127nm,19.7s,baz=301,slow=38						
MAJO	**Matsushiro**	**9.70**	**42**	*e*Pn	**Pn**	**09 46 35.2**	**-0.3**
MJAR	**Matsushiro Arr**	**9.70**	**42**	Pn	**Pn**	**09 46 34.4**	**-1.1**
	0.1nm,0.3s,baz=239,slow=14,SNR=2.8						
CN2	**Changchun**	**14.74**	**346**	*e*P	**Pn**	**09 47 52.2**	**+7.8**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
SONM	**Songino Array**	**25.90**	**321**	P	**P**	**09 49 48.8**	**+0.8**
	comp=Z,0.6nm,0.2s,mb3.7,baz=121,slow=7.2,SNR=3.3						
GTA	**Gaotai**	**26.81**	**300**	*e*P	**P**	**09 49 57.9**	**+1.6**
GTA				pP	pP	09 50 00.8	+1.7
GTA				sP	sP	09 50 03.3	+3.1
GTA				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.1						
KURK	**Kurchatov**	**43.72**	**314**	P	**P**	**09 52 21.5**	**+0.4**
	comp=Z,0.4nm,0.3s,mb3.6,baz=102,slow=8.9,SNR=3.9						
BVAR	**Borovoye Array**	**49.04**	**316**	P	**P**	**09 53 04.2**	**+1.3**
	comp=Z,1.1nm,0.8s,mb4.0,baz=92,slow=7.2,SNR=5.1						
WRA	**Warramunga Arr**	**49.34**	**175**	P	**P**	**09 53 05.9**	**+0.4**
	comp=Z,5.9nm,0.7s,mb4.7,baz=354,slow=8.3,SNR=46						
ASAR	**Alice Springs**	**53.01**	**176**	P	**P**	**09 53 33.8**	**+0.8**
	comp=Z,1.6nm,0.6s,mb4.2,baz=6.4,slow=14,SNR=21						
STKA	**Stephens Creek**	**62.02**	**169**	P	**P**	**09 54 36.4**	**0.0**
	comp=Z,3.2nm,0.9s,mb4.5,baz=323,slow=15,SNR=3.4						
FINES	**FINESS Array B**	**70.86**	**330**	P	**P**	**09 55 33.6**	**+0.9**
	comp=Z,2.5nm,0.9s,mb4.1,baz=116,slow=4.4,SNR=3.7						
YKA	**Yellowknife Ar**	**74.81**	**26**	P	**P**	**09 55 56.1**	**0.0**
	comp=Z,1.0nm,0.7s,mb3.8,baz=296,slow=6.2,SNR=5.0						
NVAR	**Mina Array Bea**	**86.98**	**47**	P	**P**	**09 57 01.1**	**-0.5**
	comp=Z,0.1nm,0.3s,mb3.5,baz=285,slow=4.3,SNR=2.1						
PDAR	**Pinedale Array**	**89.52**	**40**	P	**P**	**09 57 12.6**	**-0.9**
	comp=Z,0.3nm,0.7s,mb3.7,baz=339,slow=4.8,SNR=3.4						

MEX 10 09:46:18.8±0.5,16°.17N×97°.54W,h16km±6km,MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.61**	**292**	*i* P	Pg	09 46 28.6	-2.2
PNIG				*i* S	Sg	09 46 36.6	-2.3
VHO	**Vista Hermosa**	**1.19**	**40**	*i* P	Pn	09 46 37.3	-3.4
VHO				*i* S	Sb	09 46 51.3	-4.7
HUIG	**Huatulco**	**1.43**	**106**	*i* P	Pn	09 46 40.6	-3.4
HUIG				*i* S	Sn	09 46 56.9	-5.7
UTMO	**Huajuapan**	**1.67**	**351**	*e*P	Pn	09 46 44.2	-3.2
UTMO				*i* S	Sn	09 47 03.2	-5.4

CSEM ***10*** *09:57:23.9±0.5,37°.36N×28°.07E,h10km, MD2.7, Error ellipse: s-maj=12.1km s-min=8.4km az=32.0*
ISCJB ***10*** *09:57:24.0±0.7,37°.35N±0°.04×28°.06E±0°.05,h10km, Error ellipse: s-maj=6.7km s-min=4.5km az=40.7*
DDA ***10*** *09:57:24.5,37°.36N×28°.02E,h7km±4km,Md2.7*

ISC 10 09:57:24.4±0.7,37°.35N±0°.04×28°.06E±0°.05,h10km,n13, σ0s98/22,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSB	**Milas**	**0.23**	**257**	*e*PG	**Pg**	**09 57 28.0**	**-1.2**
MLSB				*e*SG	**Sg**	**09 57 31.7**	**-0.7**
MLSB	**Milas**	**0.23**	**257**	*e*Pg	**Pg**	**09 57 28.0**	**-1.2**
MLSB				*e*Sg	**Sg**	**09 57 31.7**	**-0.7**
YER	**Yerkesik**	**0.28**	**140**	*e*PG	**Pg**	**09 57 30.5**	**+0.6**
YER	**Yerkesik**	**0.28**	**140**	*e*Pg	**Pg**	**09 57 30.5**	**+0.5**
AYDN	**Tasoluk**	**0.34**	**335**	*i* P	**Pg**	**09 57 31.4**	**+0.2**
AYDN				*i* S	**Sg**	**09 57 36.3**	**+0.4**
AYDN	**Tasoluk**	**0.34**	**335**	*i* P	**Pg**	**09 57 31.4**	**+0.2**
AYDN				*i* S	**Sg**	**09 57 36.3**	**+0.5**
BDRM	**Kayabasi**	**0.57**	**240**	*i* P	**Pg**	**09 57 34.1**	**-1.3**
BDRM				*i* P		09 57 34.9	
BDRM				*i* S	**Sg**	**09 57 43.9**	**+1.0**
BDRM	**Kayabasi**	**0.57**	**240**	*i* P	**Pg**	**09 57 34.8**	**-0.6**
BDRM				*i* S	**Sg**	**09 57 43.9**	**+1.0**
TURN	**Turunc**	**0.64**	**138**	*i* P	**Pg**	**09 57 34.9**	**-1.9**
TURN				*i* S	**Sg**	**09 57 45.9**	**+0.7**
TURN	**Turunc**	**0.64**	**138**	*i* P	**Pg**	**09 57 34.9**	**-1.9**
TURN				*i* S	**Sg**	**09 57 45.9**	**+0.7**
DAT	**Datca**	**0.73**	**212**	*e*PG	**Pg**	**09 57 40.0**	**+1.5**
DAT	**Datca**	**0.73**	**212**	*e*Pg	**Pg**	**09 57 40.0**	**+1.5**
GCAM	**G?zelcaml?**	**0.75**	**298**	*i* P	**Pg**	**09 57 32.4**	**-6.5**
GCAM				*i* S	**Sg**	**09 57 48.9**	**+0.3**

IDC ***10*** *10:01:20.5±7.2,35°.84N×71°.41E,h60km±52km,mb3.3/5, mb1 3.6/7,mb1mx3.3/27,mbtmp3.5/7,ML3.6/2, Error ellipse: s-maj=69.2km s-min=37.7km az=148.0*
NEIC ***10*** *10:01:24.4±4.0,36°.17N×71°.19E,h80km±25km,mb3.4/2, Error ellipse: s-maj=43.3km s-min=22.5km az=173.0*
ISCJB ***10*** *10:01:31.2±2.1,36°.8N±0°.1×71°.1E±0°.1,h113km±17km, mb3.5/4, Error ellipse: s-maj=21.3km s-min=15.2km az=158.6*
NNC ***10*** *10:01:33.5±2.9,37°.38N×70°.66E,h0km,mb3.9,mpv3.9, Error ellipse: s-maj=23.7km s-min=22.6km az=107.0*

ISC 10 10:01:31.7±2.0,36°.8N±0°.1×71°.0E±0°.1,h106km±16km,n28, σ1s01/34,mb3.5/4,3C-4D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**4.77**	**53**	Pn	**Pn**	**10 02 35.1**	**-6.2**
KSH				Sn	**Sn**	**10 03 23.2**	**-12**
KSH				smax			
	comp=N,100nm,0.5s						
KSH				smax			
	comp=E,64nm,0.2s						
AML	**Almayashu**	**5.76**	**20**	P	**Pn**	**10 02 54.6**	**+0.1**
	SNR=80						
AML	**Almayashu**	**5.76**	**20**	*e*Pn	**Pn**	**10 02 54.7**	**+0.1**
	comp=E,25nm,0.4s						
AML				*e*Sn	**Sn**	**10 04 00.3**	**+1.1**
UCH	**Uchtor**	**6.10**	**25**	P	**Pn**	**10 02 59.2**	**0.0**
	SNR=8.3						
UCH	**Uchtor**	**6.10**	**25**	*e*Pn	**Pn**	**10 02 59.1**	**-0.1**
UCH				*e*Sn	**Sn**	**10 04 08.0**	**+0.5**
EKS2	**Erkin-Say**	**6.27**	**19**	P	**Pn**	**10 03 02.1**	**+0.5**
	SNR=6.2						
EKS2	**Erkin-Say**	**6.27**	**19**	*e*Pn	**Pn**	**10 03 01.9**	**+0.4**
	comp=E,6.0nm,0.6s						
KK31	**Karatay Array**	**6.36**	**356**	⇓Pn	**Pn**	**10 03 02.9**	**0.0**
	comp=E,6.4nm,0.2s,baz=176,slow=12,SNR=375						
KK31				⇓Sn	**Sn**	**10 04 12.5**	**-1.4**
	comp=E,2.0nm,0.3s,baz=177,slow=18,SNR=7.5						
AAK	**Ala-Archa**	**6.45**	**23**	P	**Pn**	**10 03 04.4**	**+0.3**
	SNR=8.2						
AAK	**Ala-Archa**	**6.45**	**23**	P	**Pn**	**10 03 04.3**	**+0.2**
	comp=E,0.1nm,0.3s,baz=164,slow=4.9,SNR=14						
CHMS	**Chumysh**	**6.86**	**23**	P	**Pn**	**10 03 09.8**	**+0.1**
	SNR=6.7						
USP	**Ospenovka**	**7.03**	**21**	P	**Pn**	**10 03 11.8**	**-0.1**
	SNR=6.3						
TKM2	**Tokmak 2**	**7.09**	**28**	⇓Pn	**Pn**	**10 03 11.6**	**-1.1**
	comp=E,2.3nm,0.5s						
TKM2				⇓Sn	**Sn**	**10 04 32.0**	**+0.3**
	comp=E,5.0nm,1.0s						
TKM2	**Tokmak 2**	**7.09**	**28**	P	**Pn**	**10 03 12.5**	**-0.2**
	SNR=6.9						
TKM2	**Tokmak 2**	**7.09**	**28**	*e*Pn	**Pn**	**10 03 12.3**	**-0.4**
	comp=E,4.0nm,0.4s						
AB31	**Akbulak array**	**14.89**	**331**	⇑Pn	**Pn**	**10 04 54.5**	**-2.0**
	comp=E,0.6nm,0.3s,baz=143,slow=12,SNR=34						
AB31				⇑Sn	**Sn**	**10 07 31.7**	**-9.0**
	comp=E,0.4nm,0.4s						
ABKAR	**Akbulak array**	**14.89**	**331**	*e*Pn	**Pn**	**10 04 55.5**	**-1.0**
	comp=E,1.4nm,0.3s						
KURK	**Kurchatov**	**14.99**	**19**	*e*Pn	**Pn**	**10 04 56.7**	**-1.0**
	comp=E,1.2nm,0.6s						
AKTK	**Aktyubinsk**	**16.59**	**330**	P	**Pn**	**10 05 19.7**	**+2.1**
AKTO	**Aktyubinsk**	**16.59**	**330**	⇑Pn	**Pn**	**10 05 19.3**	**+1.7**
	comp=E,0.2nm,0.6s						
AKTO	**Aktyubinsk**	**16.59**	**330**	P	**Pn**	**10 05 19.7**	**+2.1**
	comp=E,0.2nm,0.3s,baz=143,slow=15,SNR=5.1						
ZALV	**Zalesovo Beam**	**19.68**	**25**	P	**P**	**10 05 50.8**	**-1.3**
	comp=E,1.1nm,0.4s,baz=212,slow=11,SNR=4.1						
ARCES	**ARCESS Array B**	**40.93**	**337**	P	**P**	**10 09 04.5**	**+1.3**
	comp=E,0.8nm,0.6s,mb3.7,baz=114,slow=10,SNR=3.6						
ARCES	**ARCESS Array B**	**40.93**	**337**	P	**P**	**10 09 04.5**	**+1.3**
NOA	**NORSAR Array B**	**44.21**	**323**	P	**P**	**10 09 30.5**	**+0.8**
	comp=E,1.2nm,0.8s,mb3.7,baz=101,slow=7.2,SNR=2.6						
TORD	**Torodi Ar. Bea**	**65.76**	**269**	P	**P**	**10 12 01.1**	**-4.4**
	comp=E,0.2nm,0.5s,mb3.2,baz=56,slow=5.6,SNR=5.6						
YKA	**Yellowknife Ar**	**81.00**	**3**	P	**P**	**10 13 33.5**	**-0.6**
	comp=E,0.2nm,0.4s,mb3.3,baz=351,slow=5.2,SNR=8.7						
YKA	**Yellowknife Ar**	**81.00**	**3**	P	**P**	**10 13 33.5**	**-0.6**

ATH ***10*** *10:01:37.6,38°.00N×21°.55E,h15km±1km,MD3.0/11*
THE ***10*** *10:01:37.9,38°.02N×21°.55E,h12km±1km,ML3.5/8, Error ellipse: s-maj=1.1km s-min=0.6km az=337.0*
NEIC ***10*** *10:01:37.6,38°.00N×21°.55E,h15km,MD3.0(ATH), After ATH.*
CSEM ***10*** *10:01:37.7±0.2,38°.05N×21°.51E,h20km,MD3.0, Error ellipse: s-maj=5.1km s-min=4.4km az=113.0*
ISCJB ***10*** *10:01:37.5±0.4,38°.01N±0°.02×21°.55E±0°.03,h9km±4km, Error ellipse: s-maj=4.0km s-min=3.3km az=168.9*

ISC 10 10:01:38.0±0.4,38°.03N±0°.02×21°.54E±0°.03,h13km±4km, n63,σ0s96/98,3C,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.07**	**300**	*i*Pb	**Pg**	**10 01 40.8**	**+0.2**
RLS				*e*Sb	**Sg**	**10 01 43.5**	**+1.1**
RLS	**Riolos of Patr**	**0.07**	**300**	*i*PB	**Pg**	**10 01 40.8**	**+0.2**
RLS				*e*SB	**Sg**	**10 01 43.5**	**+1.1**
RLS	**Riolos of Patr**	**0.07**	**300**	*i*Pb	**Pg**	**10 01 40.8**	**+0.2**
RLS				*e*Sb	**Sg**	**10 01 43.5**	**+1.1**
UPR	**University Cam**	**0.32**	**37**	P	**Pg**	**10 01 44.6**	**0.0**
UPR				S	**Sg**	**10 01 50.3**	**+1.2**
UPR	**University Cam**	**0.32**	**37**	*e*PB	**Pg**	**10 01 44.3**	**-0.3**
UPR	**University Cam**	**0.32**	**37**	*e*Pb	**Pg**	**10 01 44.3**	**-0.3**
UPR	**University Cam**	**0.32**	**37**	P	**Pg**	**10 01 44.6**	**0.0**
UPR				S	**Sg**	**10 01 50.3**	**+1.2**
LAKA	**Lakka**	**0.41**	**58**	P	**Pg**	**10 01 45.7**	**-0.5**
LAKA				S	**Sg**	**10 01 52.2**	**+0.6**
LAKA	**Lakka**	**0.41**	**58**	P	**Pg**	**10 01 45.7**	**-0.5**
LAKA				S	**Sg**	**10 01 52.2**	**+0.6**
EFP	**Efpalio**	**0.49**	**36**	P	**Pg**	**10 01 47.1**	**-0.7**
EFP				S	**Sg**	**10 01 55.5**	**+1.1**
EFP	**Efpalio**	**0.49**	**36**	*e*PN	**Pg**	**10 01 47.1**	**-0.7**
EFP				*e*SN	**Sg**	**10 01 55.3**	**+0.9**
EFP	**Efpalio**	**0.49**	**36**	P	**Pg**	**10 01 47.1**	**-0.7**
EFP				S	**Sg**	**10 01 55.5**	**+1.1**
TRIZ	**Trizonia**	**0.54**	**51**	P	**Pg**	**10 01 47.9**	**-0.7**
TRIZ				S	**Sg**	**10 01 56.1**	**+0.3**
TRIZ	**Trizonia**	**0.54**	**51**	P	**Pg**	**10 01 47.9**	**-0.7**
TRIZ				S	**Sg**	**10 01 56.1**	**+0.3**
KALE	**Kalithea**	**0.60**	**52**	P	**Pg**	**10 01 48.8**	**-0.9**
KALE				S	**Sg**	**10 01 58.3**	**+0.7**
KALE	**Kalithea**	**0.60**	**52**	P	**Pg**	**10 01 48.8**	**-0.9**
KALE				S	**Sg**	**10 01 58.3**	**+0.7**
KFL	**Anninata**	**0.60**	**278**	P	**Pg**	**10 01 49.7**	**0.0**
KFL				S	**Sg**	**10 01 58.0**	**+0.3**
GUR	**Goura**	**0.64**	**98**	P	**Pg**	**10 01 49.4**	**-1.1**
GUR				S	**Sg**	**10 01 59.2**	**+0.2**
GUR	**Goura**	**0.64**	**98**	*e*PB	**Pg**	**10 01 49.3**	**-1.2**
GUR				*e*SN	**Sg**	**10 01 59.2**	**+0.2**
GUR	**Goura**	**0.64**	**98**	P	**Pg**	**10 01 49.4**	**-1.1**
GUR				S	**Sg**	**10 01 59.2**	**+0.2**
VLS	**Valsamata**	**0.77**	**282**	*e*Pb	**Pg**	**10 01 51.8**	**-1.1**
VLS				*e*Sn	**Sg**	**10 02 04.1**	**+1.2**
VLS	**Valsamata**	**0.77**	**282**	P	**Pg**	**10 01 51.8**	**-1.0**
VLS				S	**Sg**	**10 02 04.6**	**+1.7**
VLS	**Valsamata**	**0.77**	**282**	*e*PB	**Pg**	**10 01 51.8**	**-1.1**
VLS				*e*SN	**Sg**	**10 02 04.1**	**+1.2**
VLS	**Valsamata**	**0.77**	**282**	*e*Pb	**Pg**	**10 01 51.8**	**-1.1**
VLS				*e*Sn	**Sg**	**10 02 04.1**	**+1.2**
VLS				S	**Sg**	**10 02 04.6**	**+1.7**
DSF	**Desfina**	**0.87**	**63**	P	**Pg**	**10 01 53.4**	**-1.4**
DSF				S	**Sg**	**10 02 06.6**	**+0.4**
DSF	**Desfina**	**0.87**	**63**	P	**Pg**	**10 01 53.4**	**-1.4**
DSF				S	**Sg**	**10 02 06.6**	**+0.4**
ITM	**Ithomi**	**0.90**	**160**	*e*Pn	**Pg**	**10 01 54.3**	**-1.1**
ITM	**Ithomi**	**0.90**	**160**	P	**Pg**	**10 01 54.4**	**-1.0**
ITM				S	**Sg**	**10 02 08.3**	**+1.2**
ITM	**Ithomi**	**0.90**	**160**	*e*PN	**Pg**	**10 01 54.2**	**-1.2**
ITM	**Ithomi**	**0.90**	**160**	P	**Pg**	**10 01 54.4**	**-1.0**
ITM				S	**Sg**	**10 02 08.3**	**+1.2**
EVR	**Evrytania**	**0.92**	**13**	*e*Pn	**Pg**	**10 01 55.2**	**-0.5**
EVR	**Evrytania**	**0.92**	**13**	*e*PN	**Pg**	**10 01 55.2**	**-0.5**
EVR	**Evrytania**	**0.92**	**13**	*e*Pn	**Pg**	**10 01 55.2**	**-0.5**
VLX	**Vlachokerasia**	**0.93**	**134**	P	**Pg**	**10 01 55.7**	**-0.3**
VLX				S	**Sg**	**10 02 09.3**	**+1.1**
VLX	**Vlachokerasia**	**0.93**	**134**	*e*PN	**Pg**	**10 01 54.8**	**-1.2**
VLX	**Vlachokerasia**	**0.93**	**134**	*e*Pn	**Pg**	**10 01 54.8**	**-1.2**
VLX	**Vlachokerasia**	**0.93**	**134**	P	**Pg**	**10 01 55.7**	**-0.3**
VLX				S	**Sg**	**10 02 09.3**	**+1.1**
LKD2	**Lefkada island**	**1.03**	**318**	P	**Pg**	**10 01 56.4**	**-1.5**
LKD2	**Lefkada island**	**1.03**	**318**	P	**Pg**	**10 01 56.4**	**-1.5**
LTK	**Loutraki**	**1.13**	**90**	P	**Pg**	**10 01 58.3**	**-1.5**
LTK				S	**Sg**	**10 02 14.2**	**-0.2**
LTK	**Loutraki**	**1.13**	**90**	*e*PB	**Pg**	**10 01 58.2**	**-1.6**
LTK	**Loutraki**	**1.13**	**90**	P	**Pg**	**10 01 58.3**	**-1.5**
LTK				S	**Sg**	**10 02 14.2**	**-0.2**
PYL	**PYLOS**	**1.14**	**172**	P	**Pg**	**10 01 59.0**	**-1.0**
PYL	**PYLOS**	**1.14**	**172**	*e*PN	**Pg**	**10 01 58.7**	**-1.3**
PYL	**PYLOS**	**1.14**	**172**	*e*Pn	**Pg**	**10 01 58.7**	**-1.3**
PYL	**PYLOS**	**1.14**	**172**	P	**Pg**	**10 01 59.0**	**-1.0**
AGG	**Agios Georgios**	**1.17**	**32**	*e*Pn	**Pn**	**10 02 00.4**	**+0.2**
AGG	**Agios Georgios**	**1.17**	**32**	P	**Pn**	**10 01 59.3**	**-0.9**
AGG				S	**Sb**	**10 02 16.1**	**+0.8**
AGG	**Agios Georgios**	**1.17**	**32**	*e*PN	**Pn**	**10 02 00.4**	**+0.2**
AGG	**Agios Georgios**	**1.17**	**32**	P	**Pn**	**10 01 59.3**	**-0.9**
AGG	**Agios Georgios**	**1.17**	**32**	*e*Pn	**Pn**	**10 02 00.4**	**+0.2**
AGG				S	**Sb**	**10 02 16.1**	**+0.8**
LKR	**Lokris**	**1.31**	**61**	P	**Pn**	**10 02 01.4**	**-0.6**
LKR	**Lokris**	**1.31**	**61**	P	**Pn**	**10 02 01.4**	**-0.6**
ATAL	**Atalanti**	**1.34**	**60**	P	**Pn**	**10 02 02.1**	**-0.4**
ATAL				S	**Sb**	**10 02 19.6**	**-0.6**
ATAL	**Atalanti**	**1.34**	**60**	P	**Pn**	**10 02 02.1**	**-0.4**
ATAL				S	**Sb**	**10 02 19.6**	**-0.6**
NAIG	**Nisos Aigina**	**1.56**	**99**	*e*Pn	**Pn**	**10 02 07.0**	**+1.4**
NAIG	**Nisos Aigina**	**1.56**	**99**	*e*PN	**Pn**	**10 02 07.0**	**+1.4**
NAIG	**Nisos Aigina**	**1.56**	**99**	*e*Pn	**Pn**	**10 02 07.0**	**+1.4**
VLI	**Veliai**	**1.71**	**139**	*e*Pn	**Pn**	**10 02 09.3**	**+1.7**
VLI	**Veliai**	**1.71**	**139**	*e*PN	**Pn**	**10 02 09.2**	**+1.6**
VLI	**Veliai**	**1.71**	**139**	*e*Pn	**Pn**	**10 02 09.3**	**+1.7**
VLY	**Voula,Athens**	**1.79**	**95**	*e*Pn	**Pn**	**10 02 10.9**	**+2.2**
VLY	**Voula,Athens**	**1.79**	**95**	*e*PN	**Pn**	**10 02 10.9**	**+2.2**

BJI ***10*** *10:04:55.0,33°.10N×92°.07E,h8km,mB5.2/37,mb5.0/53, ML6.1/2,Ms5.5/72,Ms7 5.4/59*
LDG ***10*** *10:04:56.8±0.4,33°.32N×91°.72E,h10km,Mb5.6/38, Ms4.8/10, Error ellipse: s-maj=16.7km s-min=5.7km az=135.0*
IDC ***10*** *10:04:56.0±0.4,33°.16N×92°.11E,h0km,mb5.1/33, mb1 5.2/37,mb1mx5.2/37,mbtmp5.1/37,ML4.3/4,MS4.8/28, Ms1 4.8/28,ms1mx4.7/35, Error ellipse: s-maj=13.4km s-min=9.7km az=28.0*
ISCJB ***10*** *10:04:57.1±0.7,33°.18N±0°.02×92°.02E±0°.02,h16km±5km, mb5.3/263,MS5.0/231, Error ellipse: s-maj=3.6km s-min=2.4km az=9.7*
NEIC ***10*** *10:04:58.1±0.1,33°.18N×91°.96E,h10km,mb5.5/151, MS5.0/170, Error ellipse: s-maj=3.8km s-min=3.0km az=211.0*
TEH ***10*** *10:04:58.0,33°.15N×92°.02E,h10km*
MOS ***10*** *10:04:59.2±0.9,33°.15N×92°.05E,h33km,mb5.5/99, MS4.9/68, Error ellipse: s-maj=5.6km s-min=3.2km az=124.8*
DJA ***10*** *10:05:01,32°.96N×92°.12E,h22km,Mw5.6/13*
GCMT ***10*** *10:05:03.8±0.2,33°.13N×92°.25E,h16km,MW5.4, Moment Tensor Solution. s56,c90; s87,c180; Moment tensor: Scale* 10^{17}*Nm; M_{rr}-0.95±.04; $M_{\theta\theta}$-0.73±.03; $M_{\phi\phi}$1.68±.03; $M_{r\theta}$-0.69±.09; $M_{\theta\phi}$0.68±.03; $M_{\phi r}$0.03±.08; Best double couple: $M_0$1.70000×*10^{17} *NP1:ϕ_s160.00000°,δ57.00000°, λ-146.00000°. NP2:ϕ_s49.00000°,δ62.00000°, λ-38.00000°. Principal axes: T 1.8700, Plg3.0000°, Azm105.0000°; N -0.2600, Plg44.0000°, Azm198.0000°; P -1.6000, Plg46.0000°, Azm12.0000°; Data Used: II IU IC G CN.*
SZGRF ***10*** *10:05:04.5,33°.60N×91°.28E,h16km,mb5.5,MS4.9, Qinghai, China*

ISC 10 10:05:00.1±0.7,33°.17N±0°.02×92°.03E±0°.02,h23km±5km, h16km±.7km:pP-P,n868,σ1s05/792,mb5.3/263,MS5.0/231, 47C-37D,Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.54**	**193**	Pg	**Pb**	**10 05 58.4**	**-3.6**
LSA				Sg	**Sb**	**10 06 47.1**	**+2.6**
LSA				smax			
	comp=E,4μm,1.3s						
TAPN	**Taplejung**	**6.90**	**214**	*e*P	**Pn**	**10 06 42.6**	**+2.8**
	comp=E,50nm,0.4s						
JIRN	**Jiri**	**7.45**	**224**	*e*P	**Pn**	**10 06 50.9**	**+3.5**
	comp=E,127nm,0.5s						
GUN	**Gumba**	**7.45**	**227**	*e*P	**Pn**	**10 06 50.8**	**+3.4**
	comp=E,261nm,0.5s						
ODAN	**Odare**	**7.46**	**214**	*e*P	**Pn**	**10 06 49.5**	**+2.0**
	comp=E,107nm,0.4s						
SHL	**Shillong**	**7.57**	**181**	⇑*i*P	**Pn**	**10 06 48.0**	**-1.1**
SHL				*i* S	**Sn**	**10 08 21.0**	**+6.8**
RAMN	**Ramite**	**7.78**	**219**	*e*P	**Pn**	**10 06 52.4**	**+0.5**
	comp=E,284nm,0.5s						
KKN	**Kakani**	**7.91**	**229**	*e*P	**Pn**	**10 06 56.4**	**+2.7**
	comp=E,245nm,0.6s						
KKN	**Kakani**	**7.91**	**229**	*e*P	**Pn**	**10 06 56.4**	**+2.7**
KKN				pmax	pmax		
	comp=Z,245nm,0.6s						
PKI	**Pulchoki**	**7.99**	**227**	*e*P	**Pn**	**10 06 57.3**	**+2.6**
	comp=Z,267nm,0.6s						
PKI	**Pulchoki**	**7.99**	**227**	*e*P	**Pn**	**10 06 57.7**	**+3.0**
PKI				pmax	pmax		
	comp=Z,187nm,0.6s						
PKI	**Pulchoki**	**7.99**	**227**	*e*P	**Pn**	**10 06 57.7**	**+3.0**
	comp=Z,187nm,0.6s						
PKIN	**Phulchoki**	**7.99**	**228**	*e*P	**Pn**	**10 06 57.4**	**+2.6**
	comp=Z,315nm,0.6s						
PKIN	**Phulchoki**	**7.99**	**228**	*e*P	**Pn**	**10 06 57.7**	**+2.9**
	comp=Z,187nm,0.6s						
DMN	**Daman**	**8.15**	**229**	*e*P	**Pn**	**10 06 59.1**	**+2.1**
	comp=Z,182nm,0.6s						
GTA	**Gaotai**	**8.85**	**43**	⇓P	**Pn**	**10 07 06.9**	**+0.4**
GTA				pP		10 07 09.9	
GTA				sP		10 07 12.9	
GTA				S	**Sn**	**10 08 44.8**	**-0.6**
GTA				sS		10 08 50.8	
GTA				pmax	pmax		
	comp=Z,65nm,0.9s						
GTA				pmax	pmax		
	comp=Z,800nm,4.8s						
GTA				LR	LR		
	comp=N,24μm,10.4s						
GTA				LR	LR		
	comp=E,17μm,11.3s						
GTA				LR	LR		
	comp=E,14μm,9.8s						
**A

comp=Z,31nm,2.9s
XAN LR LR
comp=N,9μm,9.5s
XAN LR LR
comp=E,5μm,9.0s
XAN LR LR
comp=Z,4μm,8.4s
GYA Guiyang 14.35 114⇑ *i*P **Pn 10 08 18.1 -3.7**
GYA PP 10 08 33.8
GYA S **Sn 10 10 56.2 -4.0**
GYA SS 10 11 20.4
GYA pmax pmax
comp=Z,370nm,5.9s
GYA LR LR
comp=N,9μm,8.9s
GYA LR LR
comp=E,8μm,9.2s
GYA LR LR
comp=Z,10μm,9.5s
KSH Kashi 14.40 301⇓ *i*P **Pn 10 08 23.8 +1.4**
KSH pP pP 10 08 27.2 -8.3
KSH sP sP 10 08 30.7 -7.8
KSH PP 10 08 35.4
KSH S **Sn 10 11 04.5 +3.1**
KSH SS 10 11 21.0
KSH PcP PcP 10 13 40.1 +2.5
KSH pmax pmax
comp=Z,41nm,1.9s
KSH LR LR
comp=N,8μm,7.5s
KSH LR LR
comp=E,6μm,8.7s
KSH LR LR
comp=Z,7μm,7.7s
MK31 Makanchi Array 15.51 334 *e*P **Pn 10 08 35.3 -1.8**
MKAR Makanchi Array 15.51 334 Pn **Pn 10 08 35.7 -1.4**
comp=Z,0.8nm,0.3s,baz=132,slow=14,SNR=44
MKAR LR LR 10 14 40.3
comp=Z,2μm,20.2s,baz=149,slow=38
MKAR Makanchi Array 15.51 334 Pn **Pn 10 08 35.7 -1.4**
MKAR LR LR 10 14 40.3
AAA Alma-Ata 15.54 315 *i* P **Pn 10 08 37.9 +0.3**
AAA *i* S **Sn 10 11 27.1 -2.0**
AAA pmax pmax
comp=Z,3μm,3.2s
AAA smax
comp=N,2μm,6.3s
AAA MLR MLR
comp=Z,8μm,13.0s
CHTO Chiang Mai 15.58 155 *e*P **Pn 10 08 35.8 -2.4**
CHTO pmax pmax
comp=Z,28nm,0.8s
CHTO Chiang Mai 15.58 155 *e*Pn **Pn 10 08 35.8 -2.5**
comp=Z,28nm,0.8s
CHTO Chiang Mai 15.58 155 Pn **Pn 10 08 35.8 -2.5**
SNR=16
CHTO Pn **Pn 10 08 35.8 -2.5**
SNR=16
CHCP Chirah Chowk 15.68 277 P **Pn 10 08 39.5 0.0**
CM31 Chiang Mai Arr 15.91 155 *e*Pn **Pn 10 08 40.8 -1.6**
CMAR Chiang Mai Arr 15.91 155 Pn **Pn 10 08 40.4 -2.1**
comp=Z,0.9nm,0.3s,baz=333,slow=12,SNR=110
CMAR LR LR 10 15 57.0
comp=Z,3μm,21.8s,baz=337,slow=42
KZA Kyzart 15.98 309 P **Pn 10 08 49.8 +6.5**
SNR=46
TKM2 Tokmak 2 16.18 312 P **Pn 10 08 46.5 +0.7**
SNR=9.5
TKM2 Tokmak 2 16.18 312 *e*P **Pn 10 08 45.9 +0.1**
TKM2 pmax pmax
comp=Z,130nm,0.8s
TKM2 Tokmak 2 16.18 312 *e*P **Pn 10 08 45.9 +0.1**
comp=Z,130nm,0.8s
BTO Baotou 16.18 58 *e*P **Pn 10 08 44.8 -1.1**
BHPL Bhopal 16.22 236 *e*PKP **Pn 10 08 43.4 -3.1**
BHPL AMb AMB 10 08 48.8
comp=Z,143nm,1.2s
KBK Karagaybulak 16.45 310 P **Pn 10 08 56.1 +6.7**
SNR=42
AJM Ajmer 16.49 251 *e*PKP **Pn 10 08 49.5 -0.4**
AJM AMb AMB 10 08 54.5
comp=Z,156nm,1.3s
UCH Uchtor 16.53 308 P **Pn 10 08 55.9 +5.5**
SNR=101
UCH Uchtor 16.53 308 *e*P **Pn 10 08 51.6 +1.3**
comp=Z,134nm,0.8s
AAK Ala-Archa 16.73 309 P **Pn 10 08 58.5 +5.6**
comp=Z,806nm,1.2s,SNR=26
AAK Ala-Archa 16.73 309 P **Pn 10 08 59.1 +6.3**
SNR=32
AAK Ala-Archa 16.73 309 Pn **Pn 10 08 54.4 +1.5**
comp=Z,0.0nm,0.3s,baz=146,slow=10,SNR=27
AAK LR LR 10 16 26.6
comp=Z,6μm,21.4s,baz=103,slow=41
AAK Ala-Archa 16.73 309 *ce*P **Pn 10 08 54.3 +1.4**
AAK pmax pmax
comp=Z,95nm,1.7s
AAK Ala-Archa 16.73 309 *e*P **Pn 10 08 54.1 +1.3**
comp=Z,228nm,1.2s
AAK Ala-Archa 16.73 309 Pn **Pn 10 08 59.5 +6.7**
SNR=91
AAK Pn **Pn 10 08 59.5 +6.7**
SNR=91
CHMS Chumysh 16.75 311 P **Pn 10 08 56.2 +3.2**
SNR=23
FRU Bishkek 16.75 310 *i* P **Pn 10 08 56.0 +2.9**
FRU pmax pmax
comp=Z,550nm,2.0s
FRU MLR MLR
comp=Z,5μm,12.0s
CEP Cherat 16.80 278 P **Pn 10 08 50.8 -3.0**
AML Almayashu 17.03 307 P **Pn 10 08 60.0 +3.3**
SNR=18
AML Almayashu 17.03 307 *e*P **Pn 10 08 59.7 +3.1**
comp=Z,130nm,1.1s
USP Ospenovka 17.04 311 P **Pn 10 08 59.8 +3.0**
SNR=29
EKS2 Erkin-Say 17.21 309 P **Pn 10 09 03.3 +4.4**
SNR=74
EKS2 Erkin-Say 17.21 309 *e*P **Pn 10 09 01.6 +2.7**
comp=Z,109nm,0.7s
TIY Taiyuan 17.23 69 *e*P **Pn 10 08 58.8 -0.3**
TIY S **Sn 10 12 07.8 -2.3**
TIY LR LR
comp=N,10μm,7.0s
TIY LR LR
comp=E,7μm,9.5s
TIY LR LR
comp=Z,10μm,7.3s
VIS Vishakhapatnam 17.26 209 *i* P **Pn 10 08 57.7 -1.9**
VIS *i* x x 10 12 22.7
HHC Hu-ho-hao-te 17.36 58 *e*P **Pn 10 09 01.3 +0.5**
HHC pP pP 10 09 05.0 -3.4
HHC sP sP 10 09 08.4 -3.0
HHC PP 10 09 15.9
HHC S **Sn 10 12 14.8 +1.5**
HHC sS sS 10 12 16.8 -15
HHC SS 10 12 31.5
HHC PcP PcP 10 13 45.1 +3.1
HHC ScS ScS 10 20 57.5 +2.1
HHC pmax pmax
comp=Z,29nm,0.9s
HHC pmax pmax
comp=Z,490nm,5.4s
HHC LR LR
comp=N,7μm,14.6s
HHC LR LR
comp=E,7μm,13.1s
HHC LR LR
comp=Z,8μm,14.3s
AKL Akola 18.23 231 *i* P **Pn 10 09 11.0 -0.7**
AKL *i* x x 10 14 47.2
SONM Songino Array 18.23 32 P **Pn 10 09 11.2 -0.2**
comp=Z,3.1nm,0.3s,baz=216,slow=12,SNR=101
ULN Ulaanbaatar 18.55 33 *e*P **Pn 10 09 14.6 -0.7**
ULN pmax pmax
comp=Z,131nm,1.2s
ULN Ulaanbaatar 18.55 33 *e*P **Pn 10 09 14.6 -0.8**
comp=Z,131nm,1.2s
ULN Ulaanbaatar 18.55 33 P **Pn 10 09 16.0 +0.7**
SNR=75
ULN P 10 09 16.0
SNR=75
NST Nakhon Sawan 18.90 155 P **Pn 10 09 16.0 -3.8**
comp=Z,83nm,0.7s
ZAK Zakamensk 19.10 22⇑ *e*P **Pn 10 09 22.0 +0.1**
ZAK pmax pmax
comp=Z,59nm,1.0s
WHN Wuhan 19.14 92 P **Pn 10 09 26.0 +3.5**
WHN S **Sn 10 12 51.5 -4.8**
WHN LR LR
comp=N,15μm,6.8s
WHN LR LR
comp=E,19μm,7.9s
WHN LR LR
comp=Z,22μm,7.9s
KBL Kabul 19.14 280 *e*P **Pn 10 09 21.5 -1.1**
KBL pmax pmax
comp=Z,209nm,0.9s
KBL Kabul 19.14 280 *e*P **Pn 10 09 21.5 -1.1**
comp=Z,209nm,0.9s
MOY Mondy 19.61 17 *e*P **Pn 10 09 27.9 -0.1**
MOY pmax pmax
comp=Z,191nm,1.7s
HYB Hyderabad 19.83 221 *e*P **Pn 10 09 28.0 -2.9**
HYB *e*S **Sn 10 13 18.0 +4.9**
HYB Hyderabad 19.83 221 *i* P **Pn 10 09 28.0 -2.9**
HYB *e*S **Sn 10 13 14.0 +0.9**
HYB LR LR 10 16 20.0
comp=Z,7.4nm,14.0s
KURK Kurchatov 20.12 335 P **P 10 09 32.8 +0.7**
comp=Z,696nm,0.9s,SNR=58
KURK Kurchatov 20.12 335 P **P 10 09 30.3 -1.8**
comp=Z,66nm,0.8s,baz=144,slow=11,SNR=38
KURK LR LR 10 17 18.8
comp=Z,2μm,19.8s,MS4.5,baz=140,slow=37
KURK Kurchatov 20.12 335 *ce*P **P 10 09 32.0 -0.1**
KURK pmax pmax
comp=Z,187nm,1.7s
KURK Kurchatov 20.12 335 *e*P **P 10 09 30.8 -1.3**
comp=Z,95nm,0.8s
KURK LR LR
comp=Z,3μm,19.0s,MS4.7
KURK Kurchatov 20.12 335 P **P 10 09 31.7 -0.5**
SNR=70
KURK P 10 09 31.7
SNR=70
TLY Talaya 20.34 21 Pn **P 10 09 36.7 +2.1**
comp=Z,296nm,1.2s,SNR=26
TLY Talaya 20.34 21 *d i*P **P 10 09 35.2 +0.6**
TLY *e* 10 09 54.1
TLY *e*SS 10 13 53.7
TLY pmax pmax
comp=Z,132nm,1.7s
TLY MLR MLR
comp=Z,3μm,22.0s,MS4.7
TLY Talaya 20.34 21 *e*P **P 10 09 36.0 +1.4**
comp=Z,208nm,1.7s
TLY LR LR
comp=Z,3μm,19.0s,MS4.7
TLY Talaya 20.34 21 P **P 10 09 36.2 +1.6**
SNR=89
TLY P 10 09 36.2
SNR=89
BJT Baijiatuau 20.52 64 PFAKE 10 09 50.0 +13
BJT LR LR
comp=Z,4μm,21.0s,MS4.8
BJI Beijing 20.53 64 P **P 10 09 36.2 -0.5**
BJI S **S 10 13 26.3 +1.1**
BJI pmax pmax
comp=Z,22nm,1.2s
BJI pmax pmax
comp=Z,670nm,3.9s
BJI LR LR
comp=N,20μm,12.4s,MS5.8
BJI LR LR
comp=E,18μm,15.9s,MS5.8
BJI LR LR
comp=Z,22μm,17.6s,MS5.6
TIA Tai'an 20.84 75 *e*P **P 10 09 39.0 -1.1**
TIA S **S 10 13 30.9 -0.6**
TIA LR LR
comp=N,4μm,9.6s
TIA LR LR
comp=E,3μm,9.7s
IRK Irkutsk 21.03 21 *e*P **P 10 09 43.1 +1.1**
IRK pmax pmax
comp=Z,750nm,2.0s,mb5.7
QIZ Qiongzhong 21.26 127 P **P 10 09 44.1 -0.7**
QIZ pP 10 09 49.1
QIZ sP sP 10 09 50.9 -3.3
QIZ PP 10 10 11.4
QIZ S **S 10 13 40.8 +0.8**
QIZ pmax pmax
comp=Z,32nm,1.2s,mb4.5
QIZ pmax pmax
comp=Z,600nm,2.9s,mb5.4
QIZ LR LR
comp=N,7μm,14.0s
QIZ LR LR
comp=Z,7μm,10.4s,MS5.3
QIZ Qiongzhong 21.26 127 PFAKE 10 10 00.0 +15
QIZ LR LR
comp=Z,2μm,20.0s,MS4.5
GZH Guangzhou 21.27 113 P **P 10 09 41.6 -3.3**
GZH S **S 10 13 32.2 -8.0**
GZH LR LR
comp=N,5μm,9.2s
GZH LR LR
comp=E,8μm,10.0s
GZH LR LR
comp=Z,13μm,9.5s
UBT Ubonrachathani 21.38 143⇓ P **P 10 09 46.0 0.0**
ZALV Zalesovo Beam 21.40 348 P **P 10 09 45.1 -0.9**
comp=Z,73nm,0.7s,mb5.1,baz=160,slow=9.5,SNR=153
ZALV LR LR 10 19 18.3
comp=Z,761nm,18.6s,MS4.1,baz=166,slow=40
QUE Quetta 21.54 269 *e*P **P 10 09 47.0 -0.7**
QUE *e*S **S 10 13 58.0 +13**
NNT Nongplab 21.66 159 P **P 10 09 50.3 +1.3**
POO Poona 21.86 233 *e*PKP **P 10 09 51.4 +0.1**
HKC Hong Kong Obse 22.34 113 P **P 10 10 00.0 +3.7**
HKC S **S 10 14 01.0 -0.1**
NVS Novosibirsk 22.54 347 *e*P **P 10 09 57.2 -0.9**
NVS *e*S **S 10 13 47.0 -17**
NVS pmax pmax
comp=Z,107nm,0.5s,mb5.5
NVS pmax pmax
comp=N,132nm,0.4s
NVS pmax pmax
comp=E,60nm,0.6s
NJ2 Nanjing 22.61 85 *e*P **P 10 09 59.6 +0.5**
NJ2 pP 10 10 03.1
NJ2 sP sP 10 10 06.0 -2.5
NJ2 PP 10 10 28.6
NJ2 S **S 10 14 00.8 -5.2**
NJ2 sS sS 10 14 07.7 -8.8
NJ2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.3
NJ2 pmax pmax
comp=Z,380nm,3.7s
NJ2 LR LR
comp=N,6μm,9.5s
NJ2 LR LR
comp=E,6μm,11.8s
NJ2 LR LR
comp=Z,15μm,10.6s,MS5.7
CIT Chita 24.46 33 *e*P **P 10 10 17.3 +0.3**
DL2 Dalian 24.55 68⇑ P **P 10 10 18.5 +0.5**
DL2 S **S 10 14 40.4 +3.0**
DL2 pmax pmax
comp=Z,30nm,1.0s,mb4.8
DL2 pmax pmax
comp=Z,230nm,4.7s
DL2 LR LR
comp=N,5μm,17.6s,MS5.1
DL2 LR LR
comp=E,2μm,17.4s,MS5.1
DL2 LR LR
comp=Z,2μm,15.0s,MS4.8
QZH Quanzhou 24.57 103 P **P 10 10 17.0 -1.3**
QZH S **S 10 14 35.3 -2.8**
QZH LR LR
comp=N,9μm,9.6s
QZH LR LR
comp=E,4μm,9.5s
QZH LR LR
comp=Z,11μm,10.7s,MS5.6
SSE Sheshan 24.74 87 ⇓P **P 10 10 20.2 +0.4**
SSE pP 10 10 28.5
SSE S **S 10 14 39.3 -1.4**
SSE pmax pmax
comp=Z,34nm,0.7s,mb5.0
SSE pmax pmax
comp=Z,240nm,3.6s
SSE LR LR
comp=N,3μm,11.1s,MS5.3
SSE LR LR
comp=E,5μm,11.1s,MS5.3
SSE LR LR
comp=Z,7μm,11.9s,MS5.4
BVAR Borovoye Array 25.20 328 P **P 10 10 23.5 -0.2**
comp=Z,27nm,0.6s,mb4.9,baz=129,slow=12,SNR=120
BVAR PcP PcP 10 13 56.7 -0.2
comp=Z,1.8nm,0.6s,baz=88,slow=4.0,SNR=3.3
BRVK Borovoye 25.26 328 P **P 10 10 24.9 +0.6**
comp=Z,522nm,1.0s,mb6.0,SNR=35
BRVK Borovoye 25.26 328 *ce*P **P 10 10 24.9 +0.6**
BRVK pmax pmax
comp=Z,148nm,1.2s,mb5.4
BRVK Borovoye 25.26 328 *e*P **P 10 10 24.6 +0.3**
comp=Z,128nm,1.1s,mb5.4
BRVK LR LR
comp=Z,6μm,21.0s,MS5.0
BRVK Borovoye 25.26 328 P **P 10 10 24.7 +0.4**
SNR=48
BRVK P 10 10 24.7
SNR=48
HIA Hailar 26.13 44 PFAKE 10 10 40.0 +7.8
HIA LR LR
comp=Z,936nm,22.0s,MS4.3
IMYA Miami 26.36 286 *e*P **P 10 10 34.9 +0.4**
SNY Shenyang 26.36 62 ⇓P **P 10 10 33.8 -0.6**
SNY S **S 10 15 08.6 +2.4**
SNY pmax pmax
comp=Z,9.0nm,0.3s,mb4.8
SNY pmax pmax
comp=Z,540nm,6.1s
SNY LR LR
comp=N,3μm,10.2s,MS5.4
SNY LR LR
comp=E,5μm,12.7s,MS5.4
SNY LR LR
comp=Z,4μm,10.5s,MS5.2
ISRO Mashad 26.87 286 *e*P **P 10 10 39.2 +0.1**
IDAH Dahanechah 26.94 278 *e*P **P 10 10 38.0 -1.7**
TATO Taipei 26.94 100 PFAKE 10 10 50.0 +10
TATO LR LR
comp=Z,5μm,19.0s,MS5.1
YHNB Yeheng 26.98 101 P **P 10 10 42.2 +2.1**
comp=Z,80nm,1.2s,mb5.1
YHNB LR LR
comp=Z,5μm,20.0s,MS5.0
SSLB Suanglung 27.01 103 *e*P **P 10 10 42.6 +2.2**
comp=Z,59nm,1.2s,mb5.0
NACB Ninganchiao 27.37 101 *e*P **P 10 10 44.4 +0.7**
comp=Z,153nm,1.1s,mb5.4
IKRD Kardeh 27.62 287 *e*P **P 10 10 37.0 -8.8**
PALK Pallekele 27.83 205 P **P 10 10 48.9 +1.2**
comp=Z,16nm,0.8s,mb4.7,baz=27,slow=5.1,SNR=6.0
PALK PcP PcP 10 14 04.3 +0.6
comp=Z,9.1nm,0.9s,baz=153,slow=4.5,SNR=3.4
PALK LR LR 10 22 18.7
comp=Z,974nm,18.7s,MS4.4,baz=220,slow=37
PALK Pallekele 27.83 205 *e*P **P 10 10 48.9 +1.2**
PALK 10 14 04.3
PALK pmax pmax
comp=Z,34nm,1.0s,mb4.9
PALK Pallekele 27.83 205 *e*P **P 10 10 48.9 +1.1**
comp=Z,34nm,1.0s,mb4.9
PALK PcP PcP 10 14 04.3 +0.6
PALK LR LR 10 22 18.7
ABKT Ailbek 27.90 289 P **P 10 10 50.7 +2.4**
comp=Z,511nm,0.9s,mb6.2,SNR=21
VAN Vannovskaya 27.91 290 P **P 10 10 47.0 -1.4**
ISFR Sfrayin 28.02 288 *e*P **P 10 10 51.3 +2.0**
CN2 Changchun 28.06 58 *e*P **P 10 10 49.0 -0.6**
CN2 *es*P sP 10 10 56.1 -3.3
CN2 *e*S **S 10 15 30.6 -2.3**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.6
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,2μm,14.0s,MS5.2
CN2 LR LR
comp=E,4μm,14.0s,MS5.2
CN2 LR LR
comp=Z,6μm,12.0s,MS5.4
TRD Trivandrum 28.22 213⇓ *ex* PP 10 11 55.0 -0.2
INCN Inchon 28.46 71 *e*P **P 10 10 55.3 +2.1**
comp=Z,54nm,1.2s,mb5.0
INCN LR LR
comp=Z,1μm,21.0s,MS4.5
INCN Inchon 28.46 71 P **P 10 10 55.5 +2.3**
SNR=5.2
INCN P 10 10 55.5
SNR=5.2
ABKAR Akbulak array 28.72 314 *e*P **P 10 10 54.9 -0.6**
comp=Z,44nm,0.8s,mb5.2
BOD Bodaibo 28.81 25 *e*P **P 10 10 57.2 +1.1**
BOD pmax pmax
comp=Z,39nm,1.4s,mb4.9
KULM Kulim 28.87 162 P **P 10 10 57.7 +0.6**
KULM Kulim 28.87 162 *e*P **P 10 10 57.4 +0.3**
comp=Z,26nm,1.0s,mb4.9
KULM LR LR
comp=Z,3μm,20.0s,MS4.9
KS15 Wonju Array Si 29.46 71 *e*P **P 10 11 04.8 +2.7**
KSRS Korea Array 29.49 71 P **P 10 11 00.2 -2.2**
comp=Z,14nm,1.1s,mb4.6,baz=264,slow=8.2,SNR=31
KSRS PcP PcP 10 14 06.8 -0.6
comp=Z,1.8nm,0.7s,baz=277,slow=2.0,SNR=5.3
KSRS ScP ScP 10 17 49.1 +1.2
comp=Z,0.8nm,0.7s,baz=281,slow=3.7,SNR=8.1
KSRS Korea Array 29.49 71 P **P 10 11 00.2 -2.2**
KSRS 10 14 06.9
KSRS 10 17 49.1
KSRS pmax pmax
comp=Z,14nm,1.1s,mb4.6
AKTK Aktyubinsk 30.32 315 P **P 10 11 09.7 0.0**
AKTK LR LR 10 25 00.7
AKTO Aktyubinsk 30.32 315 P **P 10 11 09.7 0.0**
comp=Z,37nm,0.8s,mb5.2,baz=108,slow=8.3,SNR=99
AKTO LR LR 10 25 00.7
comp=Z,3μm,18.0s,MS4.9,baz=286,slow=40
IBAF Bafgh 30.74 277 *e*P **P 10 11 12.6 -0.9**
FRIM Kepong 31.10 161 P **P 10 11 17.3 +0.5**
MDJ Mudanjiang 31.13 57 P **P 10 11 15.7 -1.1**
MDJ pP pP 10 11 19.0 -4.8
MDJ sP sP 10 11 20.0 -6.7
MDJ S **S 10 16 21.4 +0.3**
MDJ sS sS 10 16 26.7 -5.9
MDJ ScP ScP 10 17 54.1 +1.0
MDJ PcS PcS 10 17 55.5 -0.1
MDJ pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
MDJ pmax pmax
comp=Z,140nm,6.1s
MDJ LR LR
comp=N,13μm,19.7s,MS5.6
MDJ LR LR
comp=E,2μm,16.0s,MS5.6
MDJ LR LR
comp=Z,3μm,13.1s,MS5.2
MDJ Mudanjiang 31.13 57 PFAKE 10 11 30.0 +13
MDJ LR LR
comp=Z,1μm,21.0s,MS4.5
IGLO Ghaloghah 31.40 287 *e*P **P 10 11 20.5 +1.2**
IKIA Kiasar 31.54 286 *e*P **P 10 11 20.4 -0.2**
ICHK Chekchek 31.56 279 *e*P **P 10 11 21.9 +1.1**
IMEH Mehriz 31.58 277 *e*P **P 10 11 20.6 -0.3**
SVE Sverdlovsk 31.96 327⇓ *e*P **P 10 11 24.9 +1.0**
SVE pmax pmax
comp=Z,157nm,0.9s,mb5.8
SVE MLR MLR
comp=Z,4μm,14.0s,MS5.2
IFIR Firoozkooh 32.36 286 *e*P **P 10 11 25.1 -2.6**
TGY Tagaytay City 32.41 119 LR LR 10 24 18.6
comp=Z,9.2nm,20.6s,baz=292,slow=36
IPRN Peran 32.62 287 *e*P **P 10 11 27.7 -2.3**
VLA Vladivostok 32.62 61 P **P 10 11 30.0 +0.1**
VLA *e*S **S 10 16 47.0 +2.6**
VLA MLR MLR
comp=Z,2μm,14.5s,MS4.9
CLNS Chul'man 32.64 34 *e*P **P 10 11 28.3 -1.6**
CLNS *e**PP pP 10 11 38.6 +1.7
CLNS *e*PPP 10 12 42.9

CLNS eS S 10 16 38.6 -5.7
CLNS e 10 18 38.0
CLNS pmax pmax
comp=Z,44nm,2.0s,mb5.0
CLNS pmax pmax
comp=N,24nm,1.7s
CLNS pmax pmax
comp=E,41nm,1.5s
CLNS smax
comp=N,250nm,16.3s
CLNS smax
comp=E,159nm,20.8s
CLNS MLR MLR
comp=Z,3µm,11.0s,MS5.2
CLNS MLR MLR
comp=N,883nm,12.0s
CLNS MLR MLR
comp=E,1µm,8.0s
ARU Arti 32.71 325 *d* iP P **10 11 31.1 +0.6**
ARU e 10 12 39.1
ARU e 10 14 11.1
ARU S S **10 16 47.7 +2.3**
ARU SS SS 10 18 40.9 -25
ARU pmax pmax
comp=Z,146nm,1.7s,mb5.6
ARU MLR MLR
comp=Z,3µm,17.0s,MS5.0
ARU Arti 32.71 325 eP P **10 11 30.8 +0.3**
comp=Z,246nm,1.7s,mb5.9
ARU LR LR
comp=Z,3µm,21.0s,MS4.9
IDMV Damavand 32.95 286 eP P **10 11 34.0 +1.1**
MYKOM **Kota Tinggi 33.12 158** P P **10 11 35.1 +0.5**
IZEF Zefreh 33.15 281 eP P **10 11 34.5 -0.2**
IPAR Pars 33.27 275 eP P **10 11 34.5 -1.3**
IVRN Varamin 33.28 285 eP P **10 11 35.1 -0.7**
IVRN eP 10 11 35.8
ISRV Sarvestan 33.35 274 eP P **10 11 33.7 -2.8**
KLR Kul'dur 33.48 49 eP P **10 11 32.9 -4.4**
KLR eS S **10 16 57.0 -0.6**
KLR pmax pmax
comp=E,86nm,1.2s
KLR pmax pmax
comp=Z,60nm,1.2s,mb5.4
KLR MLR MLR
comp=E,6µm,11.0s
KLR MLR MLR
comp=Z,10µm,11.0s,MS5.8
IR3 Iran Long-Peri 33.78 286 eP P **10 11 39.2 -0.9**
IPIR Pirpir 34.38 281 eP P **10 11 46.9 +1.5**
KDM Kudat 34.81 133 P P **10 11 49.9 +0.7**
KKM Kota Kinabalu 35.12 135 P P **10 11 52.7 +0.8**
KKM Kota Kinabalu 35.12 135 eP P **10 11 52.5 +0.5**
comp=Z,154nm,1.1s,mb5.8
KKM LR LR
comp=Z,1µm,21.0s,MS4.7
SOKR Solikamsk 35.18 329 *c* iP P **10 11 53.2 +1.3**
SOKR pmax pmax
comp=Z,190nm,1.8s,mb5.7
SOKR MLR MLR
comp=Z,2µm,17.0s,MS5.0
HABR Khabarovsk 35.46 51 *c* eP P **10 11 52.5 -2.0**
HABR e*SP sP 10 12 06.4 +2.0
HABR 10 13 12.0
HABR e 10 14 21.0
HABR eS S **10 17 26.4 -1.8**
HABR e*SS sS 10 17 43.0 +3.3
HABR eSS SS 10 19 49.1 -14
HABR e 10 22 08.9
HABR pmax pmax
comp=E,62nm,1.7s
HABR pmax pmax
comp=Z,76nm,1.2s,mb5.5
HABR pmax pmax
comp=N,18nm,1.5s
HABR MLR MLR
comp=Z,2µm,16.0s,MS4.9
KSM Kuching 35.89 148 P P **10 11 59.3 +0.7**
KSM Kuching 35.89 148 eP P **10 11 58.6 +0.1**
comp=Z,39nm,0.8s,mb5.4
KSM LR LR
comp=Z,2µm,19.0s,MS4.9
SBUM Sibu 35.94 144 P P **10 11 59.7 +0.8**
MAK Makhachkala 36.03 299 eP P **10 11 58.4 -1.1**
MAK i 10 13 22.7
MAK e 10 14 26.9
MAK eS S **10 17 35.8 -1.3**
MAK eSS SS 10 19 54.0 -20
MAK eSSS 10 20 24.3
MAK e 10 22 11.8
MAK pmax pmax
comp=Z,284nm,1.8s,mb5.9
MAK MLR MLR
comp=Z,2µm,14.0s,MS5.1
MYLDM **Lahad Datu 37.19 133** P P **10 12 10.6 +1.0**
TSM Tawau 37.51 134 P P **10 12 13.0 +0.7**
YAK Yakutsk 37.51 28 eP P **10 12 11.5 -0.3**
YAK e*PP pP 10 12 21.2 +2.4
YAK e 10 13 41.3
YAK ePPP 10 13 56.2
YAK e 10 14 31.9
YAK eS S **10 17 58.4 -0.7**
YAK eSSS 10 20 58.1
YAK pmax pmax
comp=Z,13nm,0.9s,mb4.7
YAK pmax pmax
comp=N,5.0nm,1.2s
YAK pmax pmax
comp=E,14nm,1.3s
YAK pmax pmax
comp=Z,10.0nm,0.5s,mb4.8
YAK pmax pmax
comp=N,31nm,1.4s
YAK pmax pmax
comp=E,56nm,1.7s
YAK smax
comp=N,264nm,10.9s
YAK smax
comp=E,125nm,11.2s
YAK MLR MLR
comp=N,503nm,10.0s,MS4.8
YAK MLR MLR
comp=Z,1µm,13.0s,MS4.8
YAK MLR MLR
comp=E,568nm,12.0s,MS4.8
YAK Yakutsk 37.51 28⇑ eP P **10 12 11.9 +0.1**
YAK LR LR
comp=Z,2µm,19.0s,MS4.8
DGRG David-gareji 37.64 296 P P **10 12 15.3 +2.1**
MAJO Matsushiro 37.77 72 eP P **10 12 15.2 +0.9**
MAJO pmax pmax
comp=Z,20nm,1.4s,mb4.7
MAJO MLR MLR
comp=Z,1µm,19.0s,MS4.7
MAJO Matsushiro 37.77 72 eP P **10 12 15.2 +0.9**
comp=Z,20nm,1.4s,mb4.7
MAJO LR LR
comp=Z,1µm,19.0s,MS4.7
MAT Matsushiro 37.77 72 P P **10 12 13.6 -0.7**
MAT S S **10 18 03.0 -0.6**
MJAR Matsushiro Arr 37.77 72 P P **10 12 14.7 +0.3**
comp=Z,13nm,1.2s,mb4.5,baz=280,slow=9.7,SNR=22
MJAR PcP PcP 10 14 30.4 -0.5
comp=Z,2.9nm,1.0s,baz=281,slow=3.4,SNR=3.1
MJAR LR LR 10 28 54.7
comp=Z,1µm,18.4s,MS4.7,baz=295,slow=38
MJAR Matsushiro Arr 37.77 72 P P **10 12 14.7 +0.4**
MJAR 10 14 30.4
UMR Umm Al-Rimmam 37.80 277 eP P **10 12 14.3 -0.4**
UMR AMb AMB 10 12 15.9
comp=Z,87nm,0.6s,mb5.7
KBD Kabd 37.94 276 eP P **10 12 15.7 -0.1**
MIB Mutribah 38.05 277 eP P **10 12 16.8 0.0**
MIB AMb AMB 10 12 18.1
comp=Z,199nm,1.1s,mb5.8
TBLG Delisi 38.10 297 eP P **10 12 18.4 +1.3**
TBLG Delisi 38.10 297 P P **10 12 18.4 +1.3**
RDF Al-Radifah 38.13 276 eP P **10 12 17.4 0.0**
RDF AMb AMB 10 12 19.0
comp=Z,111nm,0.8s,mb5.7
GNI Garni 38.21 294 P P **10 12 19.8 +1.8**
comp=Z,46nm,0.9s,mb5.2,baz=279,slow=1.2,SNR=20
GNI LR LR 10 30 42.4
comp=Z,846nm,20.9s,MS4.5,baz=282,slow=40
GNI Garni 38.21 294 *de* P P **10 12 19.7 +1.7**

GNI pmax pmax
comp=Z,132nm,1.2s
GNI Garni 38.21 294 P P **10 12 21.0 +3.0**
SNR=20
GNI P 10 12 21.0
SNR=20
NAY Al-Naaiem 38.29 276 eP P **10 12 18.3 -0.5**
NAY AMb AMB 10 12 19.9
comp=Z,73nm,1.2s,mb5.3
GOR Gori 38.56 297 P P **10 12 22.9 +2.0**
ZEI Tsey 38.68 299 eP P **10 12 22.5 +0.5**
ZEI pmax pmax
comp=Z,21nm,0.7s,mb5.0
ONI Oni 39.02 298 P P **10 12 26.6 +1.8**
KIV Kislovodsk 39.53 301 P P **10 12 30.8 +1.8**
comp=Z,246nm,0.6s,mb6.1,SNR=6.5
KIV Kislovodsk 39.53 301 eP P **10 12 30.1 +1.1**
KIV e 10 14 01.4
KIV eS S **10 18 31.3 +1.2**
KIV pmax pmax
comp=Z,34nm,1.0s,mb5.0
KIV MLR MLR
comp=Z,609nm,16.0s,MS4.5
KIV Kislovodsk 39.53 301 eP P **10 12 29.4 +0.3**
comp=Z,136nm,1.7s,mb5.4
KIV LR LR
comp=Z,726nm,20.0s,MS4.5
KIV Kislovodsk 39.53 301 P P **10 12 30.0 +0.9**
KIV P 10 12 30.0
SNR=11
BHD Baghdad 39.59 284 eP P **10 12 25.0 -4.6**
BHD eS S **10 18 15.0 -16**
ASAJ Asahikawa 40.41 59 P P **10 12 35.2 -1.1**
comp=Z,36nm,1.0s,mb5.0,baz=249,slow=8.6,SNR=4.0
ASAJ Asahikawa 40.41 59 P P **10 12 35.3 -1.0**
ASAJ pmax pmax
comp=Z,36nm,1.0s
YSS Yuzh-Sakhalins 40.50 55 eP P **10 12 37.0 0.0**
YSS e 10 14 18.0
YSS eS S **10 18 42.0 -2.5**
YSS pmax pmax
comp=Z,40nm,1.1s,mb5.1
YSS MLR MLR
comp=Z,2µm,13.0s,MS5.1
YSS MLR MLR
comp=N,1µm,11.0s,MS5.0
YSS MLR MLR
comp=E,900nm,12.0s,MS5.0
YSS Yuzh-Sakhalins 40.50 55 eP P **10 12 38.9 +1.9**
YSS LR LR
comp=Z,800nm,20.0s,MS4.6
DAV Davao City (W) 40.50 122 PFAKE 10 12 50.0 +13
DAV LR LR
comp=Z,2µm,19.0s,MS5.1
VRHR Novokhopersk 40.56 312 eP P **10 12 37.7 +0.2**
VRHR pmax pmax
comp=Z,170nm,0.9s,mb5.7
VRHR pmax pmax
comp=N,100nm,0.7s
VRHR pmax pmax
comp=E,30nm,0.4s
VRHR MLR MLR
comp=Z,2µm,20.0s,MS5.0
VRHR MLR MLR
comp=N,3µm,23.0s
VRHR MLR MLR
comp=E,1µm,13.0s
ERM Erimo 40.94 62 eP P **10 12 43.1 +2.3**
ERM MLR MLR
comp=Z,1µm,19.0s,MS4.7
SOC Sochi 41.70 300 *i* P P **10 12 46.8 -0.1**
SOC e 10 14 19.4
SOC eS S **10 18 57.5 -4.9**
SOC pmax pmax
comp=Z,60nm,0.9s,mb5.2
SOC MLR MLR
comp=Z,700nm,10.0s,MS4.8
VORD Divnogorie 42.02 311 eP P **10 12 49.3 -0.1**
VORD pmax pmax
comp=Z,30nm,0.6s,mb5.1
VORD pmax pmax
comp=N,10.0nm,0.4s
VORD pmax pmax
comp=E,40nm,1.0s
VORD MLR MLR
comp=Z,1µm,13.0s,MS5.0
VORD MLR MLR
comp=N,1µm,16.0s,MS5.0
VORD MLR MLR
comp=E,550nm,15.0s,MS5.0
VSR Storozhevoye 42.12 312 eP P **10 12 50.2 0.0**
VSR *i* *SP sP 10 13 00.5 +0.3
VSR e 10 14 27.4
VSR pmax pmax
comp=Z,70nm,0.9s,mb5.3
VSR pmax pmax
comp=N,6.0nm,0.7s
VSR pmax pmax
comp=E,30nm,0.8s
VSR pmax pmax
comp=Z,570nm,5.1s
VSR pmax pmax
comp=N,520nm,5.4s
VSR pmax pmax
comp=E,520nm,4.4s
VSR MLR MLR
comp=Z,2µm,18.0s,MS5.0
VSR MLR MLR
comp=N,700nm,10.0s
VSR MLR MLR
comp=E,740nm,13.0s
TIXI Tiksi 43.19 16 eP P **10 12 57.6 -1.1**
TIXI pmax pmax
comp=Z,38nm,0.9s,mb5.1
TIXI MLR MLR
comp=Z,827nm,21.0s,MS4.6
TIXI Tiksi 43.19 16 eP P **10 12 57.6 -1.1**
comp=Z,38nm,0.9s,mb5.1
TIXI LR LR
comp=Z,827nm,21.0s,MS4.6
ANN Anapa 43.26 302⇓ *i* P P **10 12 58.9 -0.7**
ANN eS S **10 19 26.7 +1.4**
ANN pmax pmax
comp=Z,108nm,1.3s,mb5.4
ANN MLR MLR
comp=N,511nm,20.0s,MS4.7
ANN MLR MLR
comp=E,873nm,20.0s,MS4.7
ANN MLR MLR
comp=Z,1µm,20.0s,MS4.8
ANN Anapa 43.26 302 eP P **10 12 59.0 -0.6**
MOS Moscow 43.52 318 eP P **10 12 59.3 -2.3**
MOS e 10 14 40.5
MOS pmax pmax
comp=Z,265nm,1.4s,mb5.8
MOS MLR MLR
comp=Z,2µm,13.0s,MS5.1
OBN Obninsk 44.04 317⇑ *i* P P **10 13 06.0 +0.3**
OBN e 10 14 49.8
OBN eS S **10 19 37.9 +1.4**
OBN pmax pmax
comp=Z,115nm,1.4s,mb5.4
OBN MLR MLR
comp=Z,900nm,13.0s,MS4.9
OBN Obninsk 44.04 317 eP P **10 13 05.8 +0.1**
comp=Z,22nm,0.4s,mb5.2
OBN LR LR
comp=Z,2µm,20.0s,MS5.1
COCO West Island 45.33 173 PFAKE 10 13 30.0 +14
COCO LR LR
comp=Z,1µm,22.0s,MS4.8
SIM Simferopol' 45.59 303 eP P **10 13 21.0 +2.7**
SIM e 10 15 09.0
SIM eS S **10 20 04.0 +4.7**
SIM pmax pmax
comp=Z,21nm,1.3s,mb4.9
SIM MLR MLR
comp=Z,1µm,21.8s,MS4.8
ASF Jabal al Asfar 45.96 285 P P **10 13 21.1 -0.3**
comp=Z,34nm,1.0s,mb5.2,baz=332,slow=2.2,SNR=24
BR131 Keskin Array S 46.72 296 PFAKE 10 13 40.0 +13
BR131 LR LR
comp=Z,562nm,20.0s,MS4.5
BRTR Keskin Array B 46.72 296 P P **10 13 28.1 +0.9**
comp=Z,46nm,0.8s,mb5.4,baz=99,slow=6.9,SNR=16

MMAI Mount Meron Ar 46.93 286 P P **10 13 29.9 +0.9**
comp=Z,11nm,0.6s,mb5.0,baz=55,slow=13,SNR=9.3
MMAI PcP PcP 10 15 01.5 +0.1
comp=Z,5.5nm,0.7s,baz=61,slow=3.6,SNR=3.0
MMAI LR LR 10 36 57.3
comp=Z,717nm,20.5s,MS4.6,baz=75,slow=41
LVZ Lovozero 47.54 334⇑ eP P **10 13 33.3 +0.1**
LVZ MLR MLR
comp=Z,2µm,21.0s,MS5.1
SEY Seymchan 47.62 33⇑ eP P **10 13 34.9 +1.0**
JOF Joensuu 47.79 327 ep P **10 13 35.4 +0.2**
comp=Z,35nm,0.9s,mb5.4
JOF Joensuu 47.79 327 ep P **10 13 35.4 +0.2**
comp=Z,35nm,0.9s,mb5.4
APA Apatity 47.90 334⇑ *i* P P **10 13 35.6 -0.4**
APA *i* 10 15 00.0
APA *i* 10 15 30.0
APA pmax pmax
comp=Z,18nm,1.0s,mb5.1
APA MLR MLR
comp=Z,4µm,12.0s,MS5.6
EIL Elat 48.33 282 P P **10 13 39.9 +0.1**
comp=Z,88nm,0.8s,mb5.8,baz=36,slow=3.9,SNR=73
EIL Elat 48.33 282 P P **10 13 39.9 +0.1**
AKASG **Malin Array Be 48.40 311** P P **10 13 39.4 -0.7**
comp=Z,23nm,0.7s,mb5.3,baz=80,slow=6.6,SNR=71
AKASG PcP PcP 10 15 05.2 -1.0
comp=Z,3.2nm,0.7s,baz=76,slow=4.3,SNR=5.4
AKASG PP PP 10 15 34.3 +1.7
comp=Z,1.3nm,0.5s,baz=77,slow=8.6,SNR=5.5
AKASG LR LR 10 38 10.9
comp=Z,2µm,18.4s,MS5.1,baz=85,slow=41
AKASG **Malin Array Be 48.40 311** P P **10 13 39.4 -0.7**
AKASG 10 15 05.2
AKASG 10 15 34.3
AKASG **Malin Array Be 48.40 311** P P **10 13 39.4 -0.7**
AKASG PcP PcP 10 15 05.2 -1.0
AKASG PP PP 10 15 34.3 +1.7
AKASG LR LR 10 38 10.9
AKBB Malin Array Si 48.40 311 eP P **10 13 39.9 -0.2**
KIEV Kiev 48.41 311 eP P **10 13 39.9 -0.3**
KIEV pmax pmax
comp=Z,69nm,1.3s,mb5.5
KIEV MLR MLR
comp=Z,2µm,21.0s,MS5.1
KIEV Kiev 48.41 311 eP P **10 13 39.9 -0.2**
comp=Z,69nm,1.3s,mb5.5
KIEV LR LR
comp=Z,2µm,21.0s,MS5.1
KIS Kishinev 49.03 306 eP P **10 13 32.0 -13**
KIS eLR LR 10 33 40.0
comp=Z,1µm,13.0s
MICGM **Minsk 49.04 316** eP P **10 13 42.0 -2.9**
MNK Minsk 49.06 316 eP P **10 13 42.0 -3.1**
MNK pmax pmax
comp=Z,170nm,1.8s,mb5.8
TLCR 49.29 304⇓ P P **10 13 46.8 -0.2**
TLCR 49.29 304⇓ *i* P P **10 13 46.8 -0.2**
ISP Isparta 49.51 294 eP P **10 13 49.0 +0.2**
ISP MLR MLR
comp=Z,782nm,19.0s,MS4.7
ISP Isparta 49.51 294⇑ *i* P P **10 13 49.0 +0.2**
VSU Vasula 49.65 321 *d* iP P **10 13 49.8 +0.2**
VSU pmax pmax
comp=Z,65nm,1.0s,mb5.6
IDID Didziasalis 49.67 317 eP P **10 13 50.9 +1.1**
IDID AMB AMB 10 13 51.5
comp=Z,17nm,1.1s,mb5.0
TIRR Tirgusor 49.69 303⇑ P P **10 13 49.7 -0.4**
TIRR Tirgusor 49.69 303⇑ *i* P P **10 13 49.7 -0.4**
CFR Carcaliu 49.76 304⇑ P P **10 13 51.1 +0.5**
CFR Carcaliu 49.76 304⇑ *i* P P **10 13 51.1 +0.5**
ATD Arta Tunnel 49.80 256 P P **10 13 51.0 -0.3**
comp=Z,10nm,0.8s,mb4.9,baz=107,slow=24,SNR=5.1
IZAR Zarasai 49.94 318 eP P **10 13 52.8 +1.0**
IZAR AMB AMB 10 13 53.5
comp=Z,21nm,1.0s,mb5.1
HARR Harsova 49.99 303⇑ P P **10 13 52.9 +0.5**
HARR Harsova 49.99 303⇑ *i* P P **10 13 52.9 +0.5**
PETK Petropavlovsk- 50.00 46 P P **10 13 51.5 -0.8**
comp=Z,10nm,0.9s,mb4.8,baz=243,slow=6.0,SNR=7.4
PETK LR LR 10 37 06.7
comp=Z,668nm,18.9s,MS4.7,baz=91,slow=39
KAF Kangasniemi 50.01 326 eP P **10 13 52.9 +0.7**
KAF pmax pmax
comp=Z,25nm,1.0s,mb5.2
KAF Kangasniemi 50.01 326 ep P **10 13 52.9 +0.7**
comp=Z,25nm,1.0s,mb5.2,baz=93,slow=7.5
KAF Kangasniemi 50.01 326 ep P **10 13 52.9 +0.7**
comp=Z,25nm,1.0s,mb5.2,baz=93,slow=7.5
ISAL Salakas 50.01 317 eP P **10 13 53.5 +1.2**
ISAL AMB AMB 10 13 54.1
comp=Z,18nm,1.2s,mb5.0
FINES FINESS Array B 50.08 325 P P **10 13 52.5 -0.2**
comp=Z,8.7nm,0.6s,mb5.0,baz=91,slow=6.9,SNR=21
FINES LR LR 10 36 20.6
comp=Z,2µm,18.6s,MS5.1,baz=91,slow=38
PET Petropavlovsk 50.58 46 eP P **10 13 55.3 -1.4**
PET e 10 15 51.9
PET eS S **10 21 06.0 -3.7**
PET eSS SS 10 24 38.1 -5.5
PET pmax pmax
comp=Z,200nm,5.8s
PET pmax pmax
comp=Z,36nm,1.2s,mb5.2
PET pmax pmax
comp=Z,100nm,11.4s
PET pmax pmax
comp=Z,300nm,9.6s
PET pmax pmax
comp=Z,500nm,4.8s
PET Petropavlovsk 50.58 46⇑ eP P **10 13 56.9 +0.2**
PET LR LR
comp=Z,912nm,20.0s,MS4.8
VRI Vrincioaia 50.63 305⇑ P P **10 13 58.3 +1.1**
VRI Vrincioaia 50.63 305⇑ *i* P P **10 13 58.3 +1.1**
KEV Kevo 50.68 336 eP P **10 13 57.2 0.0**
KEV pmax pmax
comp=Z,24nm,0.7s,mb5.2
KEV MLR MLR
comp=Z,623nm,20.0s,MS4.6
KEV Kevo 50.68 336 eP P **10 13 57.2 0.0**
comp=Z,24nm,0.7s,mb5.2
KEV LR LR
comp=Z,623nm,20.0s,MS4.6
KEV Kevo 50.68 336 ep P **10 13 57.2 0.0**
comp=Z,24nm,0.7s,mb5.2
KEV Kevo 50.68 336 ep P **10 13 57.2 0.0**
comp=Z,24nm,0.7s,mb5.2
PLOR Plostina 50.68 305⇑ P P **10 13 58.8 +1.2**
PLOR Plostina 50.68 305⇑ *i* P P **10 13 58.8 +1.2**
MSEY Mahe Island 51.13 230 PFAKE 10 14 10.0 +8.7
MSEY LR LR
comp=Z,1µm,19.0s,MS4.9
ARCES **ARCESS Array B 51.16 336** P P **10 14 01.2 +0.4**
comp=Z,18nm,0.7s,mb5.1,baz=90,slow=7.7,SNR=64
ARCES PcP PcP 10 15 15.8 -0.2
comp=Z,8.6nm,0.8s,baz=113,slow=5.7,SNR=6.1
ARCES **ARCESS Array B 51.16 336** P P **10 14 01.2 +0.4**
ARCES PcP PcP 10 15 15.8 -0.2
MLR Muntele Rosu 51.23 304 LR LR 10 39 24.1
comp=Z,1µm,18.1s,MS5.0,baz=305,slow=40
MLR Muntele Rosu 51.23 304⇓ P P **10 14 02.8 +1.1**
MLR Muntele Rosu 51.23 304⇓ *i* P P **10 14 02.8 +1.1**
BURAR **Bucovina Array 51.36 307**⇑ P P **10 14 02.8 +0.1**
BURAR **Bucovina Array 51.36 307**⇑ *i* P P **10 14 02.8 +0.1**
BUR08 **Bucovina Ar. S 51.37 307** eP P **10 14 03.1 +0.4**
GUMO **Guam 51.70 99** PFAKE 10 14 20.0 +14
GUMO LR LR
comp=Z,564nm,19.0s,MS4.6
LVV L'vov 51.80 310 eP P **10 14 05.4 -0.5**
LVV MLR MLR
comp=E,1µm,19.0s,MS5.0
LVV MLR MLR
comp=Z,1µm,19.0s,MS5.0
LVV MLR MLR
comp=N,400nm,18.0s,MS5.0
SUW Suwalki 51.82 316 eP P **10 13 57.6 -8.4**
KWP Kalwaria Pacla 52.68 310 eP P **10 14 13.3 +0.8**
KWP LMZ 10 40 24.7
comp=N,2µm,18.4s
KWP Kalwaria Pacla 52.68 310⇑ P P **10 14 13.2 +0.7**
KWP LR LR
comp=Z,2µm,20.0s,MS5.2
KWP Kalwaria Pacla 52.68 310⇑ *i* P P **10 14 13.1 +0.6**

KOLS Kolonicke sedl 53.08 309 *e*P **P 10 14 15.8 +0.4**
KOLS *e*S **S 10 21 50.0 +5.9**
KOLS *e*SS SS 10 25 23.8 +0.6
KOLS pmax pmax
comp=Z,13nm,1.2s,mb4.7
KOLS MLR MLR
comp=Z,2µm,20.3s,MS5.0
KOLS Kolonicke sedl 53.08 309 *e*P **P 10 14 15.8 +0.4**
comp=Z,12nm,1.2s,mb4.7
KOLS *e*S **S 10 21 50.0 +5.9**
KOLS *e*SS SS 10 25 23.8 +0.6
KOLS LR LR
comp=Z,2µm,20.3s,MS5.0
KOLS Kolonicke sedl 53.08 309 *e*P **P 10 14 15.8 +0.4**
KOLS *e*S **S 10 21 50.0 +5.9**
KOLS *e*SS SS 10 25 23.8 +0.6
UZH Uzhgorod 53.12 309 ⇑*i*P **P 10 14 15.3 -0.4**
UZH *e* 10 14 26.5
UZH *e*S **S 10 21 40.7 -4.0**
UZH MLR MLR
comp=N,800nm,18.0s,MS5.2
UZH MLR MLR
comp=E,2µm,18.0s,MS5.2
UZH MLR MLR
comp=Z,900nm,18.0s,MS4.9
DRGR 53.19 307 ⇑P **P 10 14 16.7 +0.4**
DRGR 53.19 307 ⇑*i*P **P 10 14 16.7 +0.4**
TRO Tromso 53.46 335 *e*P **P 10 14 17.7 -0.2**
TRO AMS AMS 10 39 33.7
comp=Z,3µm,15.3s,MS5.5
APE Apeiranthos 53.54 294 ⇑P **P 10 14 18.2 -0.8**
APE Apeiranthos 53.54 294 ⇑*i*P **P 10 14 18.2 -0.8**
CRVS Cervenica-Dubn 53.61 309 *e*P **P 10 14 19.6 +0.3**
CRVS *e*S **S 10 21 44.4 -7.0**
CRVS pmax pmax
comp=Z,19nm,1.6s,mb4.8
CRVS MLR MLR
comp=Z,1µm,19.1s,MS5.0
CRVS Cervenica-Dubn 53.61 309 *e*P **P 10 14 19.6 +0.3**
comp=Z,19nm,1.6s,mb4.8
CRVS *e*S **S 10 21 44.4 -7.0**
CRVS LR LR
comp=Z,1µm,19.1s,MS5.0
CRVS Cervenica-Dubn 53.61 309 *e*P **P 10 14 19.6 +0.3**
CRVS *e*S **S 10 21 44.4 -7.0**
STHS Stebnicka Huta 53.66 310 *e*P **P 10 14 19.9 +0.2**
STHS *e* pP 10 14 25.0 -1.9
STHS pmax pmax
comp=Z,13nm,0.9s,mb4.9
STHS Stebnicka Huta 53.66 310 *e*P **P 10 14 19.9 +0.2**
comp=Z,12nm,0.9s,mb4.8
STHS *e*PP pP 10 14 25.0 -1.9
STHS Stebnicka Huta 53.66 310 *e*P **P 10 14 19.9 +0.2**
STHS *e*pP pP 10 14 25.0 -1.9
BJO Bjornoya 53.77 341 AMS AMS 10 42 15.2
comp=Z,2µm,14.0s,MS5.3
BILL Bilibino 53.83 27 *e*P **P 10 14 21.1 +0.5**
BILL *e*S **S 10 21 49.4 -4.4**
BILL pmax pmax
comp=Z,51nm,1.1s,mb5.4
BILL MLR MLR
comp=Z,1µm,16.0s,MS5.1
BILL Bilibino 53.83 27 *e*P **P 10 14 21.1 +0.5**
BILL LR LR
comp=Z,2µm,22.0s,MS5.1
BZS Buzias 54.18 305 ⇓*i*P **P 10 14 24.3 +0.7**
NIE Niedzica 54.26 310 *e*P **P 10 14 25.2 +1.2**
KECS Kecovo 54.33 309 *e*P **P 10 14 25.2 +0.6**
KECS pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
KECS Kecovo 54.33 309 *e*P **P 10 14 25.2 +0.6**
comp=Z,10nm,0.9s,mb4.8
KECS *e*PP pP 10 14 30.0 -1.8
KECS Kecovo 54.33 309 *e*P **P 10 14 25.2 +0.6**
KECS *e*pP pP 10 14 30.0 -1.8
OJC Ojcow 54.43 311 *e*P **P 10 14 24.1 -1.2**
OJC *e*S **S 10 22 04.9 +2.5**
OJC L 10 38 55.1
comp=Z,1.1nm,17.4s
PSZ Piszkesteto 54.83 308 ⇑P **P 10 14 28.8 +0.6**
PSZ MLR MLR
comp=Z,1µm,19.0s,MS5.0
PSZ Piszkesteto 54.83 308 ⇑*e*P **P 10 14 28.9 +0.7**
PSZ Piszkesteto 54.83 308 ⇑*i*P **P 10 14 28.8 +0.6**
GVD Gavdhos 55.34 292 *e*P **P 10 14 31.9 -0.2**
comp=Z,94nm,0.6s,mb6.0
VYHS Vyhne 55.40 309 *e*P **P 10 14 33.0 +0.7**
VYHS *e*SP 10 14 43.3
VYHS *e*S **S 10 22 21.1 +5.7**
VYHS pmax pmax
comp=Z,29nm,1.5s,mb5.1
VYHS MLR MLR
comp=Z,900nm,19.5s,MS4.9
VYHS Vyhne 55.40 309 *e*P **P 10 14 33.0 +0.7**
comp=Z,29nm,1.5s,mb5.1
VYHS *e*PP pP 10 14 38.2 -1.4
VYHS *e*SP 10 14 43.3
VYHS *e*S **S 10 22 21.1 +5.7**
VYHS *e*SS SS 10 26 36.8 +37
VYHS LR LR
comp=Z,900nm,19.5s,MS4.9
VYHS Vyhne 55.40 309 *e*P **P 10 14 33.0 +0.7**
VYHS *e*pP pP 10 14 38.2 -1.4
VYHS *e*sP sP 10 14 43.2 +0.8
VYHS *e*S **S 10 22 21.1 +5.7**
VYHS *e*SS SS 10 26 36.8 +37
BUD Budapest 55.50 308 ⇑*e*P **P 10 14 33.7 +0.6**
OKC Ostrava-Krasne 55.55 311 *e*P **P 10 14 33.9 +0.5**
OKC MLR MLR
comp=Z,900nm,9.9s
OKC Ostrava-Krasne 55.55 311 *e*P **P 10 14 33.9 +0.5**
OKC *e*pP pP 10 14 38.7 -1.9
OKC AMS AMS 10 39 40.0
comp=Z,900nm,9.9s
KBS Kingsbay 55.80 347 *e*P **P 10 14 35.1 +0.3**
KBS AMS AMS 10 43 32.3
comp=Z,1µm,14.5s,MS5.0
MORC Moravsky Berou 55.95 311 ⇓P **P 10 14 36.7 +0.5**
MORC Moravsky Berou 55.95 311 ⇓*i*P **P 10 14 36.7 +0.5**
PKSM Moragy 56.06 307 ⇓P **P 10 14 37.6 +0.5**
PKSM Moragy 56.06 307 ⇓*i*P **P 10 14 37.6 +0.5**
HFS Hagfors 56.20 324 LR LR 10 39 20.4
comp=Z,1µm,19.1s,MS5.1,baz=77,slow=37
SMOL Smolenice 56.31 310 *e*P **P 10 14 40.6 +1.8**
SMOL Smolenice 56.31 310 *e*P **P 10 14 40.6 +1.8**
BSD Bornholm Skovb 56.42 318 *i*P **P 10 14 40.9 +1.4**
comp=Z,28nm,0.8s,mb5.3
BSD
comp=Z,1µm,18.0s
KSP Ksiaz 56.49 313 *e*P **P 10 14 40.1 0.0**
TIR Tirane 56.51 301 PFAKE 10 14 50.0 +10
TIR LR LR
comp=Z,557nm,21.0s,MS4.6
DPC Dobruska-Polom 56.58 312 *e*P **P 10 14 41.8 +1.0**
DPC MLR MLR
comp=Z,1µm,14.7s,MS5.0
DPC Dobruska-Polom 56.58 312 *e*P **P 10 14 41.8 +1.0**
DPC *e*pP pP 10 14 46.3 -1.7
DPC AMS AMS 10 41 30.0
comp=Z,1µm,14.7s
VRAC Vranov 56.65 311 LR LR 10 43 25.5
comp=Z,1µm,18.6s,MS5.1,baz=69,slow=41
VRAC Vranov 56.65 311 ⇑P **P 10 14 42.2 +0.9**
VRAC Vranov 56.65 311 ⇑*i*P **P 10 14 42.2 +0.9**
UPC Upice 56.74 312 *e*P **P 10 14 42.6 +0.7**
UPC Upice 56.74 312 *e*P **P 10 14 42.6 +0.7**
UPC *e*pP pP 10 14 47.4 -1.7
SOP Sopron 57.08 309 ⇑*e*P **P 10 14 44.9 +0.6**
NB2 NORSAR Subarra 57.26 325 P **P 10 14 44.4 -1.0**
comp=Z,37nm,0.9s,mb5.4,baz=80,slow=7.4
NOA NORSAR Array B 57.26 325 P **P 10 14 45.1 -0.3**
comp=Z,18nm,0.8s,mb5.2,baz=80,slow=7.1,SNR=36
NOA LR LR 10 41 19.9
comp=Z,2µm,21.1s,MS5.1,baz=85,slow=38
NOA NORSAR Array B 57.26 325 P **P 10 14 45.1 -0.3**
NOA LR LR 10 41 19.9
TREC Trest 57.36 311 *e*P **P 10 14 47.0 +0.7**
TREC MLR MLR
comp=Z,2µm,15.2s,MS5.2
TREC Trest 57.36 311 *e*P **P 10 14 47.0 +0.7**
TREC *e*pP pP 10 14 51.2 -2.4
TREC AMS AMS 10 43 20.0
comp=Z,2µm,15.2s
NAO01 NORSAR Array S 57.45 325 *e*P **P 10 14 46.5 -0.3**
comp=Z,19nm,0.8s,mb5.2
CONA Conrad Observa 57.47 309 ⇓*i*P **P 10 14 47.4 +0.3**
comp=Z,54nm,1.0s,mb5.5,SNR=19
CSNA Conrad Observa 57.47 309 ⇓*i*P **P 10 14 47.4 +0.4**
comp=Z,53nm,1.0s,mb5.5
PVCC Panska Ves 57.63 312 *e*P **P 10 14 49.0 +0.8**
PVCC MLR MLR
comp=Z,1µm,13.2s,MS5.2
PVCC Panska Ves 57.63 312 *e*P **P 10 14 49.0 +0.8**
PVCC AMS AMS 10 40 50.0
comp=Z,1µm,13.2s
COP Copenhagen 57.69 319 *i*P **P 10 14 51.9 +3.4**
COP
comp=Z,640nm,18.0s
PRU Pruhonice 57.78 312 *e*P **P 10 14 50.5 +1.3**
PRU *e*S **S 10 22 48.2 +1.3**
PRU MLR MLR
comp=Z,1µm,16.9s,MS5.0
PRU Pruhonice 57.78 312 *e*P **P 10 14 50.5 +1.3**
PRU *e*pP pP 10 14 54.9 -1.6
PRU *e*S **S 10 22 48.2 +1.3**
PRU AMS AMS 10 44 40.0
comp=Z,1µm,16.9s
PRA Prague 57.83 312 P **P 10 14 50.0 +0.4**
ARSA Arzberg 57.87 309 ⇓*i*P **P 10 14 49.6 -0.3**
comp=Z,17nm,1.1s,mb5.0,SNR=7.7
BRG Berggiesshubel 57.93 313 ⇑*i*P **P 10 14 50.8 +0.6**
comp=Z,33nm,1.1s,mb5.3
BRG *i* 10 14 55.5
comp=Z,22nm,1.0s
BRG S **S 10 22 55.0 +6.2**
BRG
comp=Z,2µm,14.0s
BRG
comp=N,3µm,21.4s
BRG
comp=E,885nm,21.4s
PERS Pernice 58.30 308 *i*P **P 10 14 52.6 -0.3**
KONO Kongsberg 58.32 324 AMS AMS 10 41 37.5
comp=Z,3µm,17.7s,MS5.4
SOKA Soboth 58.35 308 ⇓*i*P **P 10 14 52.6 -0.7**
comp=Z,38nm,1.0s,mb5.4
CLL Collm 58.40 314 *e*P **P 10 14 53.7 +0.2**
comp=Z,27nm,1.1s,mb5.2
CLL Collm 58.40 314 ⇑*i*P **P 10 14 53.6 +0.1**
CLL *e*S **S 10 22 53.0 -1.9**
CLL pmax pmax
comp=Z,26nm,1.1s,mb5.2
CLL MLR MLR
comp=Z,800nm,21.3s,MS4.8
CLL Collm 58.40 314 ⇑*i*P **P 10 14 53.6 +0.1**
comp=Z,26nm,1.1s,mb5.2
CLL *e* 10 14 58.0
CLL *e*S **S 10 22 53.0 -1.9**
CLL LR LR
comp=Z,800nm,21.3s,MS4.8
CLL Collm 58.40 314 ⇑*i*P **P 10 14 53.6 +0.1**
comp=Z,26nm,1.1s,mb5.2
CLL *e*sP sP 10 14 58.0 -5.6
CLL *e*(PP) 10 17 12.0
CLL *e*S **S 10 22 53.0 -1.9**
CLL *e*SS SS 10 26 52.0 +5.3
CLL LV 10 43 00.0
comp=Z,800nm,21.3s
MOA Molln 58.52 309 ⇓*i*P **P 10 14 54.5 +0.1**
comp=Z,24nm,1.0s,mb5.2,SNR=10
BOJS Bojanci 58.53 307 *i*P **P 10 14 54.3 -0.3**
GEC2 GERESS Array S 58.61 311 *e*P **P 10 14 55.9 +0.8**
comp=Z,71nm,1.5s,mb5.5
GEC2 *e*pP pP 10 15 00.3 -2.1
GEC2 GERESS Array S 58.61 311 *e*P **P 10 14 55.9 +0.8**
GEC2 pmax pmax
comp=Z,71nm,1.5s,mb5.5
GERES GERESS Array B 58.61 311 P **P 10 14 55.8 +0.7**
comp=Z,9.5nm,0.9s,mb4.8,baz=74,slow=6.1,SNR=65
GERES PP PP 10 17 06.5 +2.0
comp=Z,1.5nm,0.8s,baz=102,slow=8.1,SNR=4.1
GERES LR LR 10 44 43.8
comp=Z,2µm,18.3s,MS5.2,baz=77,slow=41
GERES GERESS Array B 58.61 311 P **P 10 14 55.8 +0.7**
GERES 10 17 06.5
KHC Kasperske Hory 58.61 311 *e*P **P 10 14 55.5 +0.5**
KHC *e*S **S 10 23 02.9 +5.1**
KHC MLR MLR
comp=Z,2µm,14.5s,MS5.2
KHC Kasperske Hory 58.61 311 *e*P **P 10 14 55.5 +0.5**
KHC *e*pP pP 10 15 00.2 -2.2
KHC *e*S **S 10 23 02.9 +5.1**
KHC AMS AMS 10 42 30.0
comp=Z,2µm,14.5s
OBKA Obir 58.71 308 ⇓*i*P **P 10 14 55.9 0.0**
comp=Z,22nm,1.3s,mb5.0
VISS Visnje 58.72 307 *i*P **P 10 14 55.8 -0.1**
TANN Tannenbergstha 58.96 313 *e*P **P 10 14 58.1 +0.6**
comp=Z,27nm,1.1s,mb5.2
NKC Novy Kostel 59.02 313 *e*P **P 10 14 58.0 +0.1**
NKC MLR MLR
comp=Z,2µm,12.7s,MS5.3
NKC Novy Kostel 59.02 313 *e*P **P 10 14 58.0 +0.1**
NKC *e*pP pP 10 15 02.8 -2.4
NKC AMS AMS 10 41 50.0
comp=Z,2µm,12.7s
WET Wettzell 59.05 311 *e*P **P 10 14 58.9 +0.8**
comp=Z,39nm,1.3s,mb5.3
WET *e*pP pP 10 15 03.2 -2.2
WET Wettzell 59.05 311 *e*P **P 10 14 58.9 +0.8**
WET pmax pmax
comp=Z,39nm,1.3s,mb5.3
JAVS Javornik 59.22 307 *i*P **P 10 14 58.6 -0.7**
MYKA Terra Mystica 59.28 308 ⇓*i*P **P 10 14 59.1 -0.6**
comp=Z,8.8nm,0.9s,mb4.8
ROTZ Rotzenmuhle 59.30 312 *e*P **P 10 15 00.9 +1.1**
comp=Z,77nm,1.3s,mb5.6
BSEG Bad Segeberg 59.30 317 *e*P **P 10 15 00.8 +1.1**
comp=Z,41nm,0.8s,mb5.5
BSEG *e*pP pP 10 15 05.1 -1.9
KBA Koelnbreinsper 59.34 309 ⇓*i*P **P 10 14 59.9 -0.3**
comp=Z,13nm,1.0s,mb4.9,SNR=6.1
MOX Moxa 59.42 313 *e*P **P 10 15 00.9 +0.3**
comp=Z,54nm,1.6s,mb5.3
MOX
comp=Z,500nm,19.0s
MOX Moxa 59.42 313 *e*P **P 10 15 01.1 +0.5**
comp=Z,62nm,1.7s,mb5.4
MOX *e*pP pP 10 15 05.5 -2.4
MOX Moxa 59.42 313 *e*P **P 10 15 00.9 +0.3**
MOX pmax pmax
comp=Z,54nm,1.6s,mb5.3
MOX MLR MLR
comp=Z,500nm,19.0s,MS4.7
TIP Timpagrande 59.45 299 *e*P **P 10 15 00.6 -0.5**
comp=Z,5.6nm,0.6s,mb4.8
TIP LR LR
comp=Z,572nm,22.0s,MS4.7
TRI Trieste 59.47 307 *e*P **P 10 15 00.7 -0.4**
TRI pmax pmax
comp=Z,27nm,0.8s,mb5.3
TRI MLR MLR
comp=Z,1µm,20.0s,MS5.0
TRI Trieste 59.47 307 *e*P **P 10 15 00.7 -0.4**
comp=Z,27nm,0.8s,mb5.3
TRI LR LR
comp=Z,1µm,20.0s,MS5.0
RJOB Jochberg 59.51 310 *e*P **P 10 15 01.7 +0.4**
comp=Z,126nm,2.1s,mb5.6
RJOB *e*pP pP 10 15 06.0 -2.6
KAKA Kakadu 59.72 133 *e*P **P 10 15 02.9 -0.2**
comp=Z,13nm,0.6s,mb5.1
KAKA Kakadu 59.72 133 *e*P **P 10 15 03.3 +0.2**
comp=Z,69nm,0.9s,mb5.7
NRDL Niedersach Rie 59.81 316 *e*P **P 10 15 04.2 +0.9**
comp=Z,102nm,1.4s,mb5.7
NRDL *e*pP pP 10 15 08.6 -2.0
SMY Shemya 59.83 44 *e*P **P 10 15 02.7 -0.7**
GRA1 Grafenberg Arr 59.93 312 *e*P **P 10 15 05.3 +1.1**
comp=Z,102nm,1.4s,mb5.7
GRA1 *e*pP pP 10 15 09.5 -2.0
GRA1 *e*PP PP 10 17 16.1 -0.1
GRA1 *e*S **S 10 23 25.4 +11**
GRA1 LR LR
comp=Z,1µm,19.7s,MS5.0
GRF Grafenberg Arr 59.93 312 *e*P **P 10 15 05.3 +1.1**
comp=Z,102nm,1.4s,mb5.7
GRF *e*pP pP 10 15 09.5 -2.0
GRF *e*PP PP 10 17 16.1 -0.1
GRF *e*S **S 10 23 25.4 +11**
GRF *e*L 10 45 22.8
comp=Z,967nm,19.7s
GRF Grafenberg Arr 59.93 312 *e*P **P 10 15 05.3 +1.1**
GRF *e* 10 17 16.1
GRF *e*S **S 10 23 25.4 +11**
GRF pmax pmax
comp=Z,102nm,1.4s,mb5.7
GRF MLR MLR
comp=Z,1µm,19.7s,MS5.0
GRF Grafenberg Arr 59.93 312 *e*P **P 10 15 05.3 +1.1**
GRF *e* 10 17 16.1
GRF *e*S **S 10 23 25.4 +11**
GRF pmax pmax
comp=Z,102nm,1.4s,mb5.7
GRF MLR MLR
comp=Z,1µm,19.7s,MS5.0
CIGN Sant'Elia a Pi 59.96 302 P **P 10 15 04.0 -0.5**
ABTA Abfaltersbach 59.98 309 ⇓*i*P **P 10 15 03.2 -1.4**
comp=Z,11nm,1.0s,mb4.8,SNR=5.6
MBWA Marble Bar 60.15 150 *e*P **P 10 15 05.8 -0.1**
comp=Z,113nm,0.9s,mb5.9
MBWA LR LR
comp=Z,555nm,19.0s,MS4.7
FITZ Fitzroy Crossi 60.25 143 *e*P **P 10 15 06.0 -0.6**
comp=Z,14nm,0.6s,mb5.2
FITZ Fitzroy Crossi 60.25 143 *e*P **P 10 15 06.5 -0.1**
comp=Z,16nm,1.0s,mb5.0
SOI Samo 60.34 298 P **P 10 15 06.2 -1.0**
FUR Furstenfeldbru 60.35 311 *e*P **P 10 15 08.1 +1.0**
comp=Z,125nm,1.3s,mb5.8
FUR Furstenfeldbru 60.35 311 *e*P **P 10 15 08.1 +1.0**
FUR pmax pmax
comp=Z,125nm,1.3s,mb5.8
WTTA Wattenberg 60.40 309 ⇓*i*P **P 10 15 06.8 -0.6**
comp=Z,45nm,1.5s,mb5.3,SNR=12
CEL Celeste 60.40 298 *e*P **P 10 15 07.3 -0.3**
comp=Z,62nm,1.1s,mb5.5
CEL LR LR
comp=Z,455nm,21.0s,MS4.6
WATA Walderalm 60.41 310 ⇓*i*P **P 10 15 07.7 +0.2**
comp=Z,6.1nm,0.6s,mb4.8
MIDA Miranda 60.43 303 P **P 10 15 06.5 -1.2**
MTTG Motta San Giov 60.64 298 P **P 10 15 08.7 -0.5**
MOTA Moosalm 60.72 310 ⇓*i*P **P 10 15 09.1 -0.5**
comp=Z,16nm,0.9s,mb5.1,SNR=9.7
SDI San Donato 60.72 303 P **P 10 15 09.2 -0.5**
SDI pmax pmax
comp=Z,6.0nm,0.2s,mb5.4
SDI San Donato 60.72 303 P **P 10 15 09.2 -0.5**
comp=Z,5.5nm,0.2s,mb5.3
AQU L'Aquila 60.79 304 *e*P **P 10 15 10.3 +0.1**
AQU pmax pmax
comp=Z,8.0nm,0.4s,mb5.2
AQU MLR MLR
comp=Z,1µm,19.0s,MS5.1
AQU L'Aquila 60.79 304 *e*P **P 10 15 10.3 +0.2**
comp=Z,8.4nm,0.4s,mb5.2
AQU LR LR
comp=Z,1µm,19.0s,MS5.1
VVLD Villa Vallelon 60.80 303 P **P 10 15 09.2 -1.0**
SNTG Esanatoglia 60.81 305 P **P 10 15 10.5 +0.2**
comp=Z,49nm,1.3s,mb5.5
NRCA Norcia 60.83 304 P **P 10 15 10.6 +0.2**
RETA Reutte 60.89 310 ⇓*i*P **P 10 15 10.5 -0.2**
comp=Z,32nm,1.2s,mb5.3,SNR=9.1
PIEI Pieia 60.99 305 P **P 10 15 10.8 -0.7**
FETA Feichten 61.06 309 ⇓*i*P **P 10 15 11.2 -0.7**
comp=Z,27nm,1.1s,mb5.3,SNR=9.6
BADI Badiali 61.20 305 P **P 10 15 13.3 +0.4**
IBBN Ibbenburen 61.24 316 *e*P **P 10 15 13.7 +0.7**
comp=Z,55nm,1.4s,mb5.5
SFI Santa Sofia 61.34 306 P **P 10 15 12.7 -1.2**
TOD Tromm 61.45 313 *e*P **P 10 15 14.6 +0.1**
TNS Taunus Mts 61.48 313 *e*P **P 10 15 15.2 +0.5**
comp=Z,43nm,1.1s,mb5.5
TNS *e*pP pP 10 15 19.4 -2.6
TNS Taunus Mts 61.48 313 *e*P **P 10 15 15.2 +0.5**
TNS pmax pmax
comp=Z,43nm,1.1s,mb5.5
STU Stuttgart 61.48 312 *e*P **P 10 15 15.1 +0.4**
comp=Z,100nm,1.6s,mb5.7
DAVA Damuels 61.52 310 ⇓*i*P **P 10 15 14.6 -0.4**
comp=Z,28nm,1.2s,mb5.2,SNR=8.1
DAVOX Davos/Dischmat 61.69 309 LR LR 10 47 03.8
comp=Z,1µm,18.8s,MS5.0,baz=74,slow=41
FNVD Fontana Vidola 61.74 306 P **P 10 15 17.2 +0.6**
KMBO Kilima Mbogo 61.77 248 P **P 10 15 16.9 -0.3**
comp=Z,4.0nm,0.9s,mb4.5,baz=27,slow=9.1,SNR=7.7
KMBO Kilima Mbogo 61.77 248 P **P 10 15 16.9 -0.3**
KMBO LR LR
comp=Z,540nm,22.0s,MS4.7
KMBO Kilima Mbogo 61.77 248 P **P 10 15 17.6 +0.5**
SNR=5.4
KMBO P 10 15 17.6
SNR=5.4
BUG Bochum--Univer 61.80 315 *e*P **P 10 15 17.3 +0.5**
comp=Z,41nm,1.2s,mb5.4
BUG *e*pP pP 10 15 21.9 -2.3
SPAK Spaichingen-Ko 61.95 311 *e*P **P 10 15 18.0 +0.1**
ABH Alteburg 62.14 313 *e*P **P 10 15 19.4 +0.3**
BFO Black Forest 62.17 311 P **P 10 15 19.7 +0.3**
comp=Z,113nm,1.3s,mb5.8,SNR=6.3
BFO Black Forest 62.17 311 *e*P **P 10 15 19.4 0.0**
BFO pmax pmax
comp=Z,48nm,1.3s,mb5.5
BFO MLR MLR
comp=Z,1µm,19.0s,MS5.1
BFO Black Forest 62.17 311 *e*P **P 10 15 19.4 0.0**
comp=Z,48nm,1.3s,mb5.5
BFO LR LR
comp=Z,1µm,19.0s,MS5.1
VLC Villacollemand 62.24 306 PFAKE 10 15 30.0 +10
VLC LR LR
comp=Z,1µm,20.0s,MS5.0
LANF Langenberg 62.28 312 *e*P **P 10 15 20.1 0.0**
WDD Wield Dalam 62.29 296 PFAKE 10 15 30.0 +10
WDD LR LR
comp=Z,406nm,21.0s,MS4.6
RUP Ruppelstein 62.49 313 *e*P **P 10 15 21.7 +0.2**
DAG Danmarks Havn 62.51 346 ⇑*i*P **P 10 15 19.9 -1.3**
comp=Z,6.7nm,0.8s,mb4.8
FELD Feldberg im Sc 62.52 311 *e*P **P 10 15 21.5 -0.3**
VAI Varese 62.73 309 P **P 10 15 22.3 -0.8**
VAI pmax pmax
comp=Z,51nm,1.1s,mb5.6
VAI Varese 62.73 309 P **P 10 15 22.3 -0.8**
comp=Z,51nm,1.1s,mb5.6
CDF Champ du Feu 62.80 312 *e*P **P 10 15 22.8 -0.8**
comp=Z,90nm,1.2s,mb5.5
CDF Champ du Feu 62.80 312 *e*P **P 10 15 22.8 -0.8**
CDF pmax pmax
comp=Z,45nm,1.2s,mb5.5
CDF Champ du Feu 62.80 312 *e*P **P 10 15 22.8 -0.8**
comp=Z,45nm,1.2s,mb5.5
MEM Membach 62.83 314 P **P 10 15 24.1 +0.4**
comp=Z,18nm,1.6s,mb5.0
ECH Echery 62.94 312 *e*P **P 10 15 24.3 -0.2**
ECH MLR MLR
comp=Z,1µm,21.0s,MS5.1
BEBN Eben Emael 62.96 315 P **P 10 15 24.8 +0.2**
BBS Basel-Blauen 62.98 311 *e*P **P 10 15 23.2 -1.6**
WLF Walferdange 63.06 313 P **P 10 15 26.4 +1.1**
comp=Z,52nm,1.6s,mb5.4
WLF Walferdange 63.06 313 *e*P **P 10 15 26.3 +1.0**
comp=Z,96nm,1.3s,mb5.8
WLF Walferdange 63.06 313 *e*P **P 10 15 26.4 +1.1**
WLF pmax pmax
comp=Z,48nm,1.1s,mb5.5
WLF MLR MLR
comp=Z,843nm,20.0s,MS4.9
WLF Walferdange 63.06 313 *e*P **P 10 15 26.4 +1.1**
comp=Z,48nm,1.1s,mb5.5
WLF LR LR
comp=Z,843nm,20.0s,MS4.9
MOF Molkenrain 63.08 311 *e*P **P 10 15 25.0 -0.5**
HINF Hinteralfeld 63.27 311 *e*P **P 10 15 25.8 -0.9**
comp=Z,193nm,1.8s,mb5.6
HINF Hinteralfeld 63.27 311 *e*P **P 10 15 25.8 -0.9**
HINF pmax pmax
comp=Z,96nm,1.8s,mb5.6
HINF Hinteralfeld 63.27 311 *e*P **P 10 15 25.8 -0.9**
comp=Z,96nm,1.8s,mb5.6
BCLA Clavier 63.31 314 P **P 10 15 27.2 +0.2**
comp=Z,22nm,1.6s,mb5.0
LOMF Lomont 63.45 311 *e*P **P 10 15 27.4 -0.5**
HAU Haudompre 63.52 312 *e*P **P 10 15 27.5 -0.9**

HAU eMLR MLR
comp=Z,1µm,20.0s,MS4.7
HAU Haudompre 63.52 312 eP **P 10 15 27.5 -0.9**
HAU LR LR
comp=Z,1µm,20.0s,MS5.0
THEF They Montfort 63.67 312 eP **P 10 15 28.8 -0.6**
GIVF Givet 63.71 314 eP **P 10 15 29.0 -0.6**
comp=Z,60nm,1.1s,mb5.2
GIVF Givet 63.71 314 eP **P 10 15 29.0 -0.6**
GIVF pmax pmax
comp=Z,30nm,1.1s,mb5.2
GIVF Givet 63.71 314 eP **P 10 15 29.0 -0.6**
comp=Z,30nm,1.1s,mb5.2
UCC Uccle 63.74 315 P **P 10 15 29.6 -0.2**
PGF Pioggiola 63.77 305 eP **P 10 15 29.2 -0.9**
comp=Z,49nm,1.1s,mb5.1
PGF Pioggiola 63.77 305 eP **P 10 15 29.2 -0.9**
PGF pmax pmax
comp=Z,25nm,1.1s,mb5.2
PGF Pioggiola 63.77 305 eP **P 10 15 29.2 -0.9**
comp=Z,24nm,1.1s,mb5.2
DOU Dourbes 63.85 314 P **P 10 15 30.6 +0.1**
comp=Z,9.8nm,1.4s,mb4.7
DOU XP sP 10 15 35.2 -5.5
ALE Alert 63.87 356 P **P 10 15 29.0 -1.2**
comp=Z,77nm,1.4s,mb5.5,SNR=7.1
SNF Seneffe 63.89 315 P **P 10 15 30.9 +0.2**
comp=Z,15nm,1.6s,mb4.8
SNF XP sP 10 15 35.7 -5.2
IMI Imperia 64.01 307 P **P 10 15 31.4 -0.3**
BAIF Baives 64.10 314 eP **P 10 15 31.6 -0.5**
comp=Z,73nm,1.3s,mb5.2
BAIF Baives 64.10 314 eP **P 10 15 31.6 -0.5**
BAIF pmax pmax
comp=Z,36nm,1.3s,mb5.2
BAIF Baives 64.10 314 eP **P 10 15 31.6 -0.5**
comp=Z,36nm,1.3s,mb5.2
MEZF Maizieres J'vi 64.15 312 eP **P 10 15 32.1 -0.4**
comp=Z,158nm,1.4s,mb5.5
MEZF Maizieres J'vi 64.15 312 eP **P 10 15 32.1 -0.4**
comp=Z,158nm,1.4s,mb5.8
LPG La Plagne 64.18 309 eP **P 10 15 32.8 +0.1**
comp=Z,186nm,1.3s,mb5.7
LPG La Plagne 64.18 309 eP **P 10 15 32.8 +0.1**
LPG pmax pmax
comp=Z,93nm,1.3s,mb5.7
LPG La Plagne 64.18 309 eP **P 10 15 32.8 +0.1**
comp=Z,93nm,1.3s,mb5.7
LPL La Plagne 64.18 309 eP **P 10 15 32.7 -0.1**
comp=Z,112nm,1.1s,mb5.5
LPL La Plagne 64.18 309 eP **P 10 15 32.7 -0.1**
LPL pmax pmax
comp=Z,56nm,1.1s,mb5.5
LPL La Plagne 64.18 309 eP **P 10 15 32.7 -0.1**
comp=Z,56nm,1.1s,mb5.5
CABF La Chapelle 64.19 310 eP **P 10 15 32.0 -0.8**
SAOF Saorge 64.21 307 eP **P 10 15 33.0 0.0**
AUTN L'Aution 64.29 307 eP **P 10 15 34.7 +1.2**
SBF Sospel 64.33 307 eP **P 10 15 32.9 -0.9**
comp=Z,192nm,1.3s,mb5.7
SBF Sospel 64.33 307 eP **P 10 15 32.9 -0.9**
SBF pmax pmax
comp=Z,96nm,1.3s,mb5.7
SBF Sospel 64.33 307 eP **P 10 15 32.9 -0.9**
comp=Z,96nm,1.3s,mb5.7
LUCF Luceram 64.38 307 eP **P 10 15 34.0 -0.1**
BNI Bardonecchia 64.39 308 eP **P 10 15 34.1 -0.1**
BNI pmax pmax
comp=Z,84nm,1.6s,mb5.5
BNI MLR MLR
comp=Z,807nm,20.0s,MS4.9
BNI Bardonecchia 64.39 308 eP **P 10 15 34.1 -0.1**
comp=Z,84nm,1.6s,mb5.5
BNI LR LR
comp=Z,807nm,20.0s,MS4.9
TOUF Mont Tournerai 64.40 307 eP **P 10 15 34.0 -0.3**
MBDF Montbardon 64.45 308 eP **P 10 15 34.7 +0.1**
MVIF Mont Vial 64.51 307 eP **P 10 15 34.5 -0.5**
VSL Villasalto 64.67 302 PFAKE 10 15 50.0 +14
VSL LR LR
comp=Z,396nm,20.0s,MS4.6
CALN Calern 64.74 307 eP **P 10 15 36.0 -0.5**
ORIF Oris-en-Rattie 64.97 309 eP **P 10 15 36.8 -1.1**
ORIF eMLR MLR
comp=Z,1µm,21.2s,MS4.8
FRF La Foret Royal 64.98 307 eP **P 10 15 36.9 -1.1**
comp=Z,140nm,1.6s,mb5.4
FRF La Foret Royal 64.98 307 eP **P 10 15 36.9 -1.1**
FRF pmax pmax
comp=Z,70nm,1.6s,mb5.4
FRF La Foret Royal 64.98 307 eP **P 10 15 36.9 -1.1**
comp=Z,70nm,1.6s,mb5.4
MENF Mencas 65.13 315 eP **P 10 15 38.6 -0.3**
LMR La Mourre 65.16 307 eP **P 10 15 38.2 -1.0**
comp=Z,150nm,1.5s,mb5.5
LMR La Mourre 65.16 307 eP **P 10 15 38.2 -1.0**
LMR pmax pmax
comp=Z,75nm,1.5s,mb5.5
LMR La Mourre 65.16 307 eP **P 10 15 38.2 -1.0**
comp=Z,75nm,1.5s,mb5.5
LOR Lormes 65.36 312 eP **P 10 15 39.1 -1.3**
comp=Z,65nm,1.4s,mb5.2
LOR eMLR MLR
comp=Z,846nm,20.2s,MS4.6
LOR Lormes 65.36 312 eP **P 10 15 39.1 -1.3**
LOR pmax pmax
comp=Z,33nm,1.4s,mb5.2
LOR MLR MLR
comp=Z,850nm,20.3s,MS4.9
LOR Lormes 65.36 312 eP **P 10 15 39.1 -1.3**
comp=Z,32nm,1.4s,mb5.2
LOR LR LR
comp=Z,850nm,20.3s,MS4.9
OCF Saint Nazaire 65.48 308 eP **P 10 15 41.9 +0.7**
OG26 St.-Nazaire-De 65.48 308 eP **P 10 15 41.9 +0.7**
SMRF Simiane la Rot 65.53 308 eP **P 10 15 41.1 -0.5**
comp=Z,103nm,1.5s,mb5.3
SMRF Simiane la Rot 65.53 308 eP **P 10 15 41.1 -0.5**
comp=Z,103nm,1.5s,mb5.6
SMF Signal de Mont 65.61 311 eP **P 10 15 41.0 -1.1**
comp=Z,156nm,1.4s,mb5.5
SMF Signal de Mont 65.61 311 eP **P 10 15 41.0 -1.1**
SMF pmax pmax
comp=Z,78nm,1.4s,mb5.5
SMF Signal de Mont 65.61 311 eP **P 10 15 41.0 -1.1**
comp=Z,78nm,1.4s,mb5.5
SSF Saint Saulge 65.66 311 eP **P 10 15 41.2 -1.2**
comp=Z,86nm,1.3s,mb5.3
SSF Saint Saulge 65.66 311 eP **P 10 15 41.2 -1.2**
SSF pmax pmax
comp=Z,43nm,1.3s,mb5.3
SSF Saint Saulge 65.66 311 eP **P 10 15 41.2 -1.2**
comp=Z,43nm,1.3s,mb5.3
SSB Saint Sauveur 65.70 309 eP **P 10 15 42.3 -0.4**
SSB MLR MLR
comp=Z,741nm,20.0s,MS4.9
VIVF Saint-Julien-l 65.78 309 eP **P 10 15 42.4 -0.8**
comp=Z,175nm,1.5s,mb5.6
VIVF Saint-Julien-l 65.78 309 eP **P 10 15 42.4 -0.8**
VIVF pmax pmax
comp=Z,88nm,1.5s,mb5.6
VIVF Saint-Julien-l 65.78 309 eP **P 10 15 42.4 -0.8**
comp=Z,88nm,1.5s,mb5.6
AVF Avril sur Loir 65.86 311 eP **P 10 15 42.7 -1.0**
comp=Z,170nm,1.4s,mb5.6
AVF Avril sur Loir 65.86 311 eP **P 10 15 42.7 -1.0**
AVF pmax pmax
comp=Z,85nm,1.4s,mb5.6
AVF Avril sur Loir 65.86 311 eP **P 10 15 42.7 -1.0**
comp=Z,85nm,1.4s,mb5.6
PLDF La Plantade 66.02 310 eP **P 10 15 45.0 +0.3**
HYF Humbligny 66.12 312 eP **P 10 15 44.7 -0.7**
KEST Kesra 66.21 298 P **P 10 15 46.2 +0.1**
comp=Z,8.3nm,1.0s,mb4.7,baz=326,slow=2.4,SNR=16
KEST LR LR 10 50 05.2
comp=Z,150nm,19.6s,MS4.2,baz=178,slow=41
ESK Eskdalemuir 66.23 322 P **P 10 15 46.1 +0.2**
comp=Z,227nm,0.9s,mb6.2,SNR=5.7
ESK Eskdalemuir 66.23 322 i P **P 10 15 46.5 +0.6**
ESK Eskdalemuir 66.23 322 PFAKE 10 16 00.0 +14
ESK LR LR
comp=Z,1µm,19.0s,MS5.2
BGF Bois d'Agland 66.28 311 eP **P 10 15 45.3 -1.1**
comp=Z,80nm,1.3s,mb5.3
BGF Bois d'Agland 66.28 311 eP **P 10 15 45.3 -1.1**
BGF pmax pmax
comp=Z,40nm,1.3s,mb5.3
BGF Bois d'Agland 66.28 311 eP **P 10 15 45.3 -1.1**
comp=Z,40nm,1.3s,mb5.3
AGO Saint Agoulin 66.30 310 eP **P 10 15 47.3 +0.8**
WRAB Tennant Creek 66.49 136 P **P 10 15 48.3 +0.4**
comp=Z,702nm,1.0s,mb6.7,SNR=23
WRAB Tennant Creek 66.49 136 eP **P 10 15 47.5 -0.4**
WRAB pmax pmax
comp=Z,180nm,1.2s,mb6.0
WRAB MLR MLR
comp=Z,478nm,19.0s,MS4.7
WRAB Tennant Creek 66.49 136 eP **P 10 15 47.5 -0.5**
comp=Z,180nm,1.2s,mb6.0
WRAB LR LR
comp=Z,478nm,19.0s,MS4.7
WRA Warramunga Arr 66.49 136 P **P 10 15 47.6 -0.3**
comp=Z,62nm,0.9s,mb5.6,baz=334,slow=5.8,SNR=66
WRA PKPPKP 10 44 16.5
comp=Z,0.9nm,0.5s,baz=134,slow=2.6,SNR=3.3
PYM Petit Puy Mans 66.50 310 eP **P 10 15 48.6 +0.8**
SCO Scoresbysund 66.53 340 i P **P 10 15 46.7 -0.9**
comp=Z,19nm,0.9s,mb5.1
SCO
comp=Z,590nm,21.0s
LBL Lubilhac 66.56 310 eP **P 10 15 49.1 +0.9**
LASF Ste Croix 66.63 308 eP **P 10 15 48.1 -0.5**
comp=Z,189nm,1.4s,mb5.6
TCF Toulx Ste Croi 66.79 311 eP **P 10 15 49.0 -0.6**
comp=Z,199nm,1.4s,mb5.7
TCF Toulx Ste Croi 66.79 311 eP **P 10 15 49.0 -0.6**
TCF pmax pmax
comp=Z,100nm,1.4s,mb5.7
TCF Toulx Ste Croi 66.79 311 eP **P 10 15 49.0 -0.6**
comp=Z,100nm,1.4s,mb5.7
ABPO Ambohimpanom 67.25 226 PFAKE
ABPO LR LR
comp=Z,771nm,20.0s,MS4.9
LDF La Druitiere 67.28 314 eP **P 10 15 51.5 -1.2**
comp=Z,69nm,1.0s,mb5.3
LDF La Druitiere 67.28 314 eP **P 10 15 51.5 -1.2**
LDF pmax pmax
comp=Z,34nm,1.0s,mb5.3
LDF La Druitiere 67.28 314 eP **P 10 15 51.5 -1.2**
comp=Z,34nm,1.0s,mb5.3
FLN La Foliniere 67.42 314 eP **P 10 15 52.4 -1.2**
comp=Z,60nm,1.3s,mb5.2
FLN eMLR MLR
comp=Z,1µm,22.8s,MS4.8
FLN La Foliniere 67.42 314 eP **P 10 15 52.4 -1.2**
FLN pmax pmax
comp=Z,30nm,1.3s,mb5.2
FLN MLR MLR
comp=Z,1µm,22.8s,MS5.1
FLN La Foliniere 67.42 314 eP **P 10 15 52.4 -1.2**
comp=Z,30nm,1.3s,mb5.2
FLN LR LR
comp=Z,1µm,22.8s,MS5.1
CAF Calviac 67.45 310 eP **P 10 15 53.4 -0.4**
comp=Z,112nm,1.4s,mb5.4
CAF Calviac 67.45 310 eP **P 10 15 53.4 -0.4**
CAF pmax pmax
comp=Z,56nm,1.4s,mb5.4
CAF Calviac 67.45 310 eP **P 10 15 53.4 -0.4**
comp=Z,56nm,1.4s,mb5.4
RJF Les Rejaudoux 67.64 310 eP **P 10 15 54.8 -0.2**
comp=Z,229nm,1.5s,mb5.7
RJF eMLR MLR
comp=Z,748nm,19.7s,MS4.6
RJF Les Rejaudoux 67.64 310 eP **P 10 15 54.8 -0.2**
RJF pmax pmax
comp=Z,115nm,1.5s,mb5.7
RJF MLR MLR
comp=Z,750nm,19.7s,MS4.9
RJF Les Rejaudoux 67.64 310 eP **P 10 15 54.8 -0.2**
comp=Z,115nm,1.5s,mb5.7
RJF LR LR
comp=Z,750nm,19.7s,MS4.9
COEN Coen 67.64 125 eP **P 10 15 58.1 +2.7**
comp=Z,467nm,1.3s,mb6.4
GRR Gorron 67.81 314 eP **P 10 15 54.9 -1.2**
comp=Z,60nm,0.9s,mb5.3
GRR Gorron 67.81 314 eP **P 10 15 54.9 -1.2**
GRR pmax pmax
comp=Z,30nm,0.9s,mb5.3
GRR Gorron 67.81 314 eP **P 10 15 54.9 -1.2**
comp=Z,30nm,0.9s,mb5.3
MTLF Montolieu 68.02 308 eP **P 10 15 56.8 -0.6**
comp=Z,123nm,1.5s,mb5.4
MTLF Montolieu 68.02 308 eP **P 10 15 56.8 -0.6**
MTLF pmax pmax
comp=Z,61nm,1.5s,mb5.4
MTLF Montolieu 68.02 308 eP **P 10 15 56.8 -0.6**
comp=Z,61nm,1.5s,mb5.4
FILF Fillols 68.12 307 eP **P 10 15 58.1 0.0**
MFF Saint Martin d 68.14 312 eP **P 10 15 57.1 -1.0**
comp=Z,123nm,1.4s,mb5.4
MFF Saint Martin d 68.14 312 eP **P 10 15 57.1 -1.0**
MFF pmax pmax
comp=Z,61nm,1.4s,mb5.4
MFF Saint Martin d 68.14 312 eP **P 10 15 57.1 -1.0**
comp=Z,61nm,1.4s,mb5.4
LFF La Frestale 68.29 310 eP **P 10 15 58.8 -0.3**
comp=Z,128nm,1.3s,mb5.5
LFF La Frestale 68.29 310 eP **P 10 15 58.8 -0.3**
LFF pmax pmax
comp=Z,64nm,1.3s,mb5.5
LFF La Frestale 68.29 310 eP **P 10 15 58.8 -0.3**
comp=Z,64nm,1.3s,mb5.5
KLBR Kellerberrin 68.84 157 eP **P 10 16 03.9 +1.4**
comp=Z,35nm,0.7s,mb5.4
SGMF Saint Gilles 68.89 314 eP **P 10 16 02.1 -0.7**
ASAR Alice Springs 69.19 139 P **P 10 16 04.3 -0.5**
comp=Z,73nm,0.8s,mb5.7,baz=325,slow=6.5,SNR=109
ASAR PKPPKP 10 44 13.1
comp=Z,2.5nm,0.9s,baz=134,slow=4.0,SNR=6.6
SUMG Summit 69.20 346 eP **P 10 16 04.1 -0.2**
comp=Z,47nm,1.2s,mb5.3
SUMG Summit 69.20 346 i P **P 10 16 01.3 -3.0**
comp=Z,18nm,1.0s,mb5.0
ROSF Rostrenen 69.28 315 eP **P 10 16 04.6 -0.6**
comp=Z,130nm,1.3s,mb5.4
ROSF Rostrenen 69.28 315 eP **P 10 16 04.6 -0.6**
ROSF pmax pmax
comp=Z,65nm,1.3s,mb5.4
ROSF Rostrenen 69.28 315 eP **P 10 16 04.6 -0.6**
comp=Z,65nm,1.3s,mb5.4
QUIF Quistinic 69.41 314 eP **P 10 16 05.1 -0.9**
comp=Z,100nm,1.4s,mb5.2
QUIF Quistinic 69.41 314 eP **P 10 16 05.1 -0.9**
QUIF pmax pmax
comp=Z,50nm,1.4s,mb5.2
QUIF Quistinic 69.41 314 eP **P 10 16 05.1 -0.9**
comp=Z,50nm,1.4s,mb5.2
RESF Ens 69.49 308 eP **P 10 16 07.0 +0.4**
COLD Coldfoot 69.55 22 eP **P 10 16 07.0 +0.4**
comp=Z,63nm,1.0s,mb5.5
VIEF Viey 69.66 308 eP **P 10 16 08.0 +0.3**
EBIE Bielsa 69.67 308 P **P 10 16 06.7 -1.1**
comp=Z,42nm,1.7s,mb5.1
BST Brest 69.77 315 eP **P 10 16 07.3 -0.9**
NWAO Narrogin (SRO) 69.90 158 eP **P 10 16 10.8 +1.8**
NWAO pmax pmax
comp=Z,64nm,1.1s
NWAO Narrogin (SRO) 69.90 158 eP **P 10 16 10.8 +1.7**
comp=Z,64nm,1.1s,mb5.5
ETSF Etsaut 70.04 309 eP **P 10 16 09.8 -0.2**
comp=Z,37nm,0.7s,mb5.1
ETSF Etsaut 70.04 309 eP **P 10 16 09.8 -0.2**
ETSF pmax pmax
comp=Z,19nm,0.7s,mb5.1
ETSF Etsaut 70.04 309 eP **P 10 16 09.8 -0.2**
comp=Z,19nm,0.7s,mb5.1
TTA Tatalina 70.08 27 eP **P 10 16 10.2 +0.3**
TTA pmax pmax
comp=Z,60nm,1.5s,mb5.3
TTA Tatalina 70.08 27 eP **P 10 16 10.2 +0.3**
comp=Z,60nm,1.5s,mb5.3
SJPF Ste Jean 70.37 309 eP **P 10 16 11.3 -0.8**
ESAC San Caprasio 70.51 308 P **P 10 16 12.8 -0.2**
comp=Z,126nm,1.2s,mb5.7
CHUM Lake Minchumin 70.88 25 eP **P 10 16 15.6 +0.8**
comp=Z,14µm,0.6s
EMOS Mosqueruela 71.14 306 P **P 10 16 16.5 -0.3**
comp=Z,95nm,1.1s,mb5.6
BPAW Bear Paw Mtn. 71.22 24 eP **P 10 16 16.8 0.0**
comp=Z,41nm,1.1s,mb5.3
SVW2 Sparrevohn 71.30 28 eP **P 10 16 18.1 +0.7**
ECRI Cripan 71.44 309 P **P 10 16 18.0 -0.6**
ECRI pmax pmax
comp=Z,30nm,0.8s,mb5.3
ECRI Cripan 71.44 309 P **P 10 16 18.0 -0.6**
comp=Z,30nm,0.8s,mb5.3
PPLA Purkeypile 71.52 26 eP **P 10 16 19.4 +0.7**
comp=Z,100nm,1.0s,mb5.7
KTH Kantishna Hill 71.58 25 eP **P 10 16 20.1 +1.1**
comp=Z,3µm,1.0s
ELAN Lanestosa 71.75 310 P **P 10 16 21.1 +0.7**
comp=Z,69nm,1.2s,mb5.5
COLA College 71.78 23 eP **P 10 16 20.0 -0.2**
COLA pmax pmax
comp=Z,82nm,1.1s,mb5.6
COLA MLR MLR
comp=Z,583nm,20.0s,MS4.8
COLA College 71.78 23 eP **P 10 16 20.0 -0.2**
comp=Z,82nm,1.1s,mb5.6
COLA LR LR
comp=Z,583nm,20.0s,MS4.8
TRF Thorofare Moun 71.86 25 eP **P 10 16 21.4 +0.7**
comp=Z,9.9nm,0.8s,mb4.8
ETOR Torete 71.99 307 P **P 10 16 20.6 -1.3**
ETOR pmax pmax
comp=Z,15nm,0.8s,mb5.0
ETOR Torete 71.99 307 P **P 10 16 20.6 -1.3**
comp=Z,15nm,0.8s,mb5.0
FORT Forrest 72.15 148 eP **P 10 16 24.7 +1.9**
comp=Z,66nm,0.9s,mb5.6
FORT Forrest 72.15 148 eP **P 10 16 25.8 +3.0**
comp=Z,71nm,0.9s,mb5.6
MCK McKinley 72.15 24 eP **P 10 16 23.1 +0.7**
MCK pmax pmax
comp=Z,22nm,1.2s,mb5.0
MCK McKinley 72.15 24 eP **P 10 16 23.1 +0.6**
comp=Z,22nm,1.2s,mb5.0
RES Resolute Bay 72.33 2 eP **P 10 16 24.0 +0.7**
RES pmax pmax
comp=Z,55nm,1.5s,mb5.3
RES Resolute Bay 72.33 2 eP **P 10 16 23.9 +0.6**
comp=Z,54nm,1.5s,mb5.3
RSO Redoubt South 72.79 28 eP **P 10 16 27.1 +0.8**
CHGN Chignik 72.81 33 eP **P 10 16 25.2 -1.3**
EARI Arriondas 72.85 311 P **P 10 16 27.6 +0.6**
comp=Z,48nm,1.2s,mb5.3
INK Inuvik 73.32 16 eP **P 10 16 27.7 -1.6**
INK pmax pmax
comp=Z,35nm,1.0s
INK Inuvik 73.32 16 eP **P 10 16 27.7 -1.6**
comp=Z,35nm,1.0s,mb5.2
PMR Palmer 73.46 26 eP **P 10 16 30.0 -0.2**
PMR pmax pmax
comp=Z,49nm,0.9s,mb5.4
PMR Palmer 73.46 26 eP **P 10 16 30.0 -0.2**
comp=Z,49nm,0.9s,mb5.4
GUD Guadarrama 73.47 308 P **P 10 16 29.3 -1.4**
GUD pmax pmax
comp=Z,65nm,0.9s,mb5.6
GUD Guadarrama 73.47 308 P **P 10 16 29.3 -1.4**
comp=Z,65nm,0.9s,mb5.6
EHUE Huescar 73.81 305 P **P 10 16 31.4 -1.3**
EHUE pmax pmax
comp=Z,13nm,0.9s,mb4.9
EHUE Huescar 73.81 305 P **P 10 16 31.4 -1.3**
comp=Z,13nm,0.9s,mb4.8
ESDC Sonseca Array 73.82 307 P **P 10 16 33.1 +0.3**
comp=Z,11nm,0.8s,mb4.9,baz=54,slow=6.3,SNR=26
ESDC LR LR 10 54 21.8
comp=Z,457nm,19.2s,MS4.8,baz=25,slow=40
ESDC Sonseca Array 73.82 307 P **P 10 16 30.7 -2.1**
comp=Z,30nm,0.9s,mb5.2
ESLA Sonseca Array 73.82 307 eP **P 10 16 33.1 +0.3**
comp=Z,62nm,1.8s,mb5.2
ESLA LR LR
comp=Z,4µm,21.0s,MS5.6
PAX Paxson 73.83 24 eP **P 10 16 31.9 -0.5**
PAX pmax pmax
comp=Z,28nm,1.1s,mb5.1
PAX Paxson 73.83 24 eP **P 10 16 31.9 -0.5**
comp=Z,28nm,1.1s,mb5.1
EGAK Eagle 73.94 21 eP **P 10 16 32.8 -0.2**
comp=Z,36nm,0.9s,mb5.3
EGAK LR LR
comp=Z,592nm,20.0s,MS4.9
CTA Charters Tower 74.04 128 eP **P 10 16 33.5 -0.7**
comp=Z,22nm,1.1s,mb5.0
CTA Charters Tower 74.04 128 P **P 10 16 33.8 -0.4**
comp=Z,43nm,1.1s,mb5.3,baz=320,slow=6.5,SNR=8.4
CTAO Charters Tower 74.04 128 eP **P 10 16 33.9 -0.3**
CTAO pmax pmax
comp=Z,55nm,1.2s,mb5.4
CTAO MLR MLR
comp=Z,588nm,22.0s,MS4.8
CTAO Charters Tower 74.04 128 eP **P 10 16 33.9 -0.3**
comp=Z,55nm,1.2s,mb5.4
CTAO LR LR
comp=Z,588nm,22.0s,MS4.8
EQES Quesada 74.14 305 P **P 10 16 32.2 -2.5**
comp=Z,42nm,1.0s,mb5.3
PAB San Pablo 74.14 307 eP **P 10 16 35.4 +0.7**
PAB pmax pmax
comp=Z,49nm,1.6s,mb5.2
PAB MLR MLR
comp=Z,529nm,22.0s,MS4.8
PAB San Pablo 74.14 307 eP **P 10 16 35.4 +0.7**
comp=Z,49nm,1.6s,mb5.2
PAB LR LR
comp=Z,529nm,22.0s,MS4.8
SEW Seward 74.30 27 eP **P 10 16 35.1 -0.1**
comp=Z,73nm,1.3s,mb5.5
MENT Mentasta 74.44 23 eP **P 10 16 36.4 +0.5**
EBAN Banos Encina 74.45 306 P **P 10 16 35.2 -1.3**
EBAN pmax pmax
comp=Z,28nm,0.8s,mb5.2
EBAN Banos Encina 74.45 306 P **P 10 16 35.2 -1.3**
comp=Z,28nm,0.8s,mb5.2
EBER Berja 74.47 304 P **P 10 16 35.0 -1.6**
comp=Z,50nm,1.6s,mb5.2
ECAL Calabor 74.50 310 P **P 10 16 33.9 -2.8**
comp=Z,81nm,1.0s,mb5.6
KDAK Kodiak Island 74.51 30 P **P 10 16 36.0 -0.4**
comp=Z,462nm,0.9s,mb6.4,SNR=7.9
KDAK Kodiak Island 74.51 30 i P **P 10 16 36.9 +0.5**
KDAK Kodiak Island 74.51 30 eP **P 10 16 37.0 +0.5**
comp=Z,66nm,0.9s,mb5.6
KDAK LR LR
comp=Z,1µm,22.0s,MS5.1
OHAK Old Harbor 74.55 31 eP **P 10 16 36.6 -0.1**
comp=Z,107nm,1.2s,mb5.7
PBRG Braganca 74.58 310 eP **P 10 16 37.4 +0.3**
comp=Z,45nm,1.7s,mb5.1
ECOG Cogollos-Vega 74.75 305 P **P 10 16 36.8 -1.4**
ECOG pmax pmax
comp=Z,15nm,0.8s,mb5.0
ECOG Cogollos-Vega 74.75 305 P **P 10 16 36.8 -1.4**
comp=Z,15nm,0.8s,mb5.0
DIV Divide 74.98 25 eP **P 10 16 40.3 +1.2**
comp=Z,58nm,1.1s,mb5.4
DAWY Dawson 74.99 21 eP **P 10 16 39.0 -0.1**
ERON Agron 75.04 304 P **P 10 16 38.5 -1.5**
comp=Z,12nm,0.6s,mb5.0
ELUQ Luque 75.08 305 P **P 10 16 38.7 -1.5**
ELUQ pmax pmax
comp=Z,42nm,0.6s,mb5.5
ELUQ Luque 75.08 305 P **P 10 16 38.7 -1.5**
comp=Z,42nm,0.6s,mb5.5
MVO Moncorvo 75.09 310 P **P 10 16 39.0 -1.1**
MVO Moncorvo 75.09 310 eP **P 10 16 40.4 +0.3**
comp=Z,74nm,0.9s,mb5.6
MVO Moncorvo 75.09 310 eLR LR 10 47 04.6
comp=Z,507nm,18.0s
TAM Tamanrasset 75.12 288 eP **P 10 16 41.0 +0.4**
TAM pmax pmax
comp=Z,44nm,1.8s,mb5.1
TAM MLR MLR
comp=Z,727nm,20.0s,MS5.0
TAM Tamanrasset 75.12 288 eP **P 10 16 41.0 +0.4**
comp=Z,44nm,1.8s,mb5.1
TAM LR LR
comp=Z,727nm,20.0s,MS5.0
ELOJ Sierra Loja 75.22 305 P **P 10 16 40.5 -0.4**
ELOJ pmax pmax
comp=Z,4.0nm,0.3s,mb4.8
ELOJ Sierra Loja 75.22 305 P **P 10 16 40.5 -0.4**
comp=Z,3.8nm,0.3s,mb4.8
ELOB Lobios 75.39 311 P **P 10 16 40.9 -1.0**
comp=Z,66nm,1.1s,mb5.5

PCAB Cabril 75.45 310 *e*P **P 10 16 42.8 +0.6**
comp=Z,71nm,1.6s,mb5.3
PVRL Vila Real 75.48 310 *e*P **P 10 16 42.7 +0.4**
comp=Z,27nm,1.3s,mb5.0
BMRM Bremner River 75.51 25 *e*P **P 10 16 42.9 +0.8**
comp=Z,76nm,1.0s,mb5.6
MIDW Midway 75.62 66 PFAKE 10 17 00.0 +17
MIDW LR LR
comp=Z,914nm,21.0s,MS5.1
MTE Manteigas 75.82 309 PFAKE 10 17 00.0 +16
MTE LR LR
comp=Z,502nm,19.0s,MS4.8
MTE Manteigas 75.82 309 *e*P pP 10 16 56.1 +4.3
comp=Z,76nm,1.5s
MTE Manteigas 75.82 309 *e*SS SS 10 31 25.9 +9.3
MTE Manteigas 75.82 309 *e*LR LR 10 47 59.6
comp=Z,320nm,20.0s
PVIS Viseu 75.88 309 *e*P **P 10 16 45.4 +0.7**
comp=Z,54nm,1.6s,mb5.2
PCBR Castelo Branco 76.07 309 *e*P **P 10 16 46.4 +0.6**
comp=Z,42nm,1.8s,mb5.1
PTO Porto 76.12 310 *e*P **P 10 16 46.5 +0.5**
comp=Z,71nm,1.3s,mb5.4
SFJD Kangerlussuaq 76.20 346 *e*P **P 10 16 45.8 -0.2**
SFJD pmax pmax
comp=Z,129nm,1.4s,mb5.7
SFJD MLR MLR
comp=Z,1µm,20.0s,MS5.1
SFJD Kangerlussuaq 76.20 346 *e*P **P 10 16 45.8 -0.2**
comp=Z,129nm,1.4s,mb5.7
SFJD LR LR
comp=Z,1µm,20.0s,MS5.1
SFJD Kangerlussuaq 76.20 346 *i* P **P 10 16 42.6 -3.4**
comp=Z,33nm,0.8s,mb5.3
SFJD
comp=Z,850nm,18.0s
PMRV Marv??o 76.23 308 *e*P **P 10 16 46.6 -0.1**
comp=Z,55nm,1.7s,mb5.2
PMRV Marv??o 76.23 308 *e*PP PP 10 19 42.8 +5.2
PMRV Marv??o 76.23 308 *e*LR LR 10 46 23.4
comp=Z,341nm,16.0s
EBAD Badajoz 76.33 307 P **P 10 16 45.9 -1.4**
comp=Z,62nm,1.3s,mb5.4
EJIF Jimena Fronter 76.48 305 P **P 10 16 47.4 -0.8**
EJIF pmax pmax
comp=Z,31nm,0.9s,mb5.2
EJIF Jimena Fronter 76.48 305 P **P 10 16 47.4 -0.8**
comp=Z,31nm,0.9s,mb5.2
ESPR Espera 76.53 305 P **P 10 16 48.2 -0.2**
comp=Z,23nm,0.8s,mb5.2
EMIN Mina Concepcio 76.62 306 P **P 10 16 46.2 -2.7**
comp=Z,120nm,1.6s,mb5.6
PBAR Barrancos 76.65 307 *e*P **P 10 16 48.6 -0.5**
comp=Z,82nm,1.7s,mb5.4
PBAR *e*S S 10 26 43.5 +9.1
PBAR Barrancos 76.65 307 *e*LR LR 10 47 12.8
comp=Z,505nm,18.0s
PESTR Estremoz 76.65 308 *e*P **P 10 16 48.9 -0.2**
comp=Z,37nm,1.7s,mb5.0
PESTR Estremoz 76.65 308 *e*LR LR 10 46 28.8
comp=Z,384nm,16.0s
PTOM Tomar 76.80 309 *e*P **P 10 16 50.6 +0.7**
comp=Z,80nm,1.3s,mb5.5
SFS San Fernando 76.98 305 PFAKE 10 17 00.0 +9.0
SFS LR LR
comp=Z,1µm,20.0s,MS5.2
EVO Evora 77.11 308 *e*P **P 10 16 51.8 +0.1**
comp=Z,117nm,1.1s,mb5.4
EVO *e*MLR MLR
comp=Z,661nm,19.0s,MS4.7
EVO Evora 77.11 308 *e*P **P 10 16 51.7 0.0**
comp=Z,74nm,1.3s,mb5.5
HNR Honiara 77.14 110 LR LR 10 48 40.3
comp=Z,242nm,20.1s,MS4.5,baz=127,slow=34
HNR Honiara 77.14 110 PFAKE 10 17 00.0 +7.8
HNR LR LR
comp=Z,543nm,22.0s,MS4.8
PBEJ Beja 77.28 307 *e*P **P 10 16 53.2 +0.5**
comp=Z,50nm,1.6s,mb5.2
EGRO El Granado 77.29 307 P **P 10 16 50.6 -2.1**
comp=Z,97nm,1.5s,mb5.5
PVAQ Vaqueiros 77.51 306 *e*P **P 10 16 54.1 +0.1**
comp=Z,68nm,1.6s,mb5.3
PVAQ Vaqueiros 77.51 306 *e*PP PP 10 19 56.3 +7.9
PVAQ Vaqueiros 77.51 306 *e*LR LR 10 47 37.4
comp=Z,277nm,18.0s
PCVE Castro Verde 77.61 307 *e*P **P 10 16 55.8 +1.3**
comp=Z,39nm,1.5s,mb5.1
PCVE Castro Verde 77.61 307 *e*LR LR 10 47 27.0
comp=Z,384nm,16.0s
LSZ Lusaka 77.63 242 *e*P **P 10 16 54.4 -0.4**
LSZ pmax pmax
comp=Z,27nm,0.8s,mb5.2
LSZ MLR MLR
comp=Z,351nm,20.0s,MS4.7
LSZ Lusaka 77.63 242 *e*P **P 10 16 54.4 -0.4**
comp=Z,27nm,0.8s,mb5.2
LSZ LR LR
comp=Z,351nm,20.0s,MS4.7
PMAFR Mafra 77.72 309 *e*P **P 10 16 55.8 +0.7**
comp=Z,132nm,1.4s,mb5.7
PMAFR Mafra 77.72 309 *e*PP PP 10 19 55.0 +4.9
PMAFR Mafra 77.72 309 *e*LR LR 10 48 42.4
comp=Z,404nm,20.0s
PBDV Barranco-do-Ve 77.74 306 *e*P **P 10 16 56.0 +0.8**
comp=Z,91nm,1.4s,mb5.5
PBDV Barranco-do-Ve 77.74 306 *e*PP PP 10 19 58.5 +8.2
PBDV Barranco-do-Ve 77.74 306 *e*LR LR 10 47 36.4
comp=Z,306nm,18.0s
PTEO Sao Teotonio 78.11 307 *e*P **P 10 16 57.9 +0.6**
comp=Z,84nm,2.0s,mb5.3
MORF Marmelete 78.19 307 *e*P **P 10 16 59.0 +1.3**
comp=Z,85nm,1.8s,mb5.4
MORF Marmelete 78.19 307 *e*PP PP 10 20 00.8 +6.7
MORF *e*S S 10 26 55.2 +4.1
MORF Marmelete 78.19 307 *e*LR LR 10 51 18.4
comp=Z,418nm,18.0s
PNL Peninsula 78.25 24 *e*P **P 10 16 58.9 +1.3**
comp=Z,52nm,0.9s,mb5.5
SKAG Skagway 79.75 22 *e*P **P 10 17 07.0 +1.1**
comp=Z,90nm,1.0s,mb5.7
STKA Stephens Creek 79.82 139 *e*P **P 10 17 05.3 -1.2**
comp=Z,17nm,0.9s,mb5.0
STKA Stephens Creek 79.82 139 P **P 10 17 06.2 -0.4**
comp=Z,22nm,0.9s,mb5.1,baz=328,slow=7.3,SNR=10
STKA LR LR 10 58 04.9
comp=Z,392nm,20.3s,MS4.7,baz=309,slow=40
EIDS Eidsvold 80.89 128 *e*P **P 10 17 14.7 +2.2**
comp=Z,40nm,1.0s,mb5.3
DLBC Dease Lake 82.21 21 *e*P **P 10 17 20.1 +1.1**
YKA Yellowknife Ar 82.29 12 P **P 10 17 18.8 -0.5**
comp=Z,17nm,0.8s,mb5.0,baz=333,slow=5.1,SNR=124
YKA PP PP 10 20 25.9 -1.3
comp=Z,1.4nm,0.9s,baz=336,slow=8.2,SNR=4.0
YKA PKKPbc PKKPbc 10 35 43.0 -4.0
comp=Z,0.4nm,0.6s,baz=153,slow=2.5,SNR=6.1
YKA LR LR 10 55 22.6
comp=Z,44nm,20.1s,MS3.8,baz=305,slow=37
YKA Yellowknife Ar 82.29 12 P **P 10 17 18.8 -0.5**
YKA 10 20 25.9
YKA Yellowknife Ar 82.29 12 P **P 10 17 18.8 -0.5**
YKA PP PP 10 20 25.9 -1.3
YKA PKKPbc PKKPbc 10 35 43.0 -4.0
YKA LR LR 10 55 22.6
TOA0 Torodi Ar. Sit 83.21 281 *e*P **P 10 17 24.2 -0.8**
TORD Torodi Ar. Bea 83.21 281 P **P 10 17 24.0 -0.9**
comp=Z,19nm,0.7s,mb5.2,baz=47,slow=4.9,SNR=94
TORD PP PP 10 20 34.4 -1.9
comp=Z,3.7nm,0.9s,baz=54,slow=6.8,SNR=8.0
TORD LR LR 10 59 03.7
comp=Z,460nm,19.3s,MS4.9,baz=50,slow=39
TORD Torodi Ar. Bea 83.21 281 P **P 10 17 24.0 -0.9**
TORD PP PP 10 20 34.4 -1.9
TORD LR LR 10 59 03.7
ARMA Armidale 84.70 132 *e*P **P 10 17 31.9 -0.2**
ARMA Armidale 84.70 132 *e*P **P 10 17 33.7 +1.6**
comp=Z,22nm,0.8s,mb5.3
LBTB Lobatse 85.68 237 *e*P **P 10 17 37.0 -0.1**
LBTB pmax pmax
comp=Z,53nm,0.9s,mb5.8
LBTB Lobatse 85.68 237 *e*P **P 10 17 37.0 -0.2**
comp=Z,53nm,0.9s,mb5.8
TOO Toolangi 86.20 140 *e*P **P 10 17 42.5 +3.1**
CAN Canberra 86.53 137 PFAKE 10 17 50.0 +8.9
CAN LR LR
comp=Z,677nm,19.0s,MS5.1
CNB Canberra Magne 86.74 136 *e*P **P 10 17 41.3 -0.8**

TSUM Tsumeb 88.02 246 PFAKE 10 18 00.0 +11
TSUM LR LR
comp=Z,276nm,19.0s,MS4.7
BOSA Boshof 88.20 234 P **P 10 17 47.8 -1.6**
comp=Z,10nm,1.0s,mb5.0,baz=87,slow=6.2,SNR=5.9
BOSA LR LR 10 55 27.9
comp=Z,565nm,18.6s,MS5.0,baz=56,slow=34
BOSA Boshof 88.20 234 P **P 10 17 47.8 -1.6**
BOSA LR LR 10 55 27.9
CMLA Cha da Macela 88.59 315 PFAKE 10 18 00.0 +8.8
CMLA LR LR
comp=Z,901nm,21.0s,MS5.2
DZM Mont Dzumac 89.68 117 *e*LR LR 10 46 30.6
comp=Z,533nm,23.8s
SCHQ Schefferville 90.49 348 P **P 10 17 58.8 -1.0**
comp=Z,10.0nm,0.9s,mb5.2,baz=27,slow=5.2,SNR=11
SCHQ LR LR 11 01 46.8
comp=Z,742nm,19.3s,MS5.1,baz=20,slow=38
EDM Edmonton 91.18 15 *e*P **P 10 18 03.0 0.0**
FFC Flin Flon 91.64 8 P **P 10 18 04.2 -0.9**
comp=Z,226nm,0.9s,mb6.5,SNR=25
FFC Flin Flon 91.64 8 *i* P **P 10 18 04.5 -0.6**
FFC Flin Flon 91.64 8 *e*P **P 10 18 04.3 -0.8**
comp=Z,36nm,0.9s,mb5.7
FFC LR LR
comp=Z,653nm,20.0s,MS5.1
DBIC Dimbokro 92.13 279 P **P 10 18 07.5 -0.6**
comp=Z,9.6nm,0.9s,mb5.1,baz=24,slow=8.2,SNR=5.5
DBIC PP PP 10 21 46.8 -1.3
comp=Z,6.6nm,1.0s,baz=91,slow=5.6,SNR=3.8
DBIC LR LR 11 00 07.0
comp=Z,425nm,21.5s,MS4.9,baz=41,slow=36
DBIC Dimbokro 92.13 279 P **P 10 18 07.5 -0.6**
DBIC 10 21 46.8
LIC Lamto 92.51 279 *e*P **P 10 18 09.0 -0.9**
comp=Z,13nm,0.8s,mb5.2
LIC *e*MLR MLR
comp=Z,723nm,23.0s,MS4.8
LIC Lamto 92.51 279 *e*P **P 10 18 09.0 -0.9**
comp=Z,6.7nm,0.8s,mb5.1
LIC LR LR
comp=Z,360nm,23.0s,MS4.8
JCW Jim Creek 93.49 22 *e*P **P 10 18 14.8 +1.0**
comp=Z,11nm,0.7s,mb5.4
NEW Newport 94.84 19 PFAKE 10 18 30.0 +10
NEW LR LR
comp=Z,625nm,19.0s,MS5.1
BSMT Bassoo Peak 95.84 18 *e*P **P 10 18 26.4 +1.9**
comp=Z,16nm,1.5s,mb5.2
YBMT Yellow Bay 96.02 17 *e*P **P 10 18 26.6 +1.3**
comp=Z,8.1nm,1.1s,mb5.1
JTMT Jette 96.06 18 *e*P **P 10 18 27.0 +1.4**
comp=Z,11nm,1.2s,mb5.2
SWMT Swartz Lake 96.36 17 *e*P **P 10 18 28.1 +1.3**
comp=Z,6.3nm,1.0s,mb5.0
ULM Lac du Bonnet 96.66 5 P **P 10 18 27.5 -0.7**
comp=Z,3.7nm,0.8s,mb4.8,baz=359,slow=10,SNR=3.4
ULM LR LR 11 06 27.7
comp=Z,378nm,18.1s,MS4.9,baz=234,slow=38
SLMT Seeley Lake 96.73 17 *e*P **P 10 18 29.5 +0.9**
comp=Z,16nm,1.6s,mb5.2
EGMT Eagleton 96.85 15 PFAKE 10 18 40.0 +11
EGMT LR LR
comp=Z,359nm,20.0s,MS4.8
MSO Missoula 97.00 18 PFAKE 10 18 40.0 +10
MSO LR LR
comp=Z,352nm,19.0s,MS4.9
DGMT Dagmar 97.44 11 *e*P **P 10 18 33.0 +1.2**
comp=Z,8.9nm,0.6s,mb5.4
DGMT LR LR
comp=Z,591nm,19.0s,MS5.1
BMO Blue Mountains 97.90 21 PFAKE 10 18 50.0 +16
BMO LR LR
comp=Z,369nm,20.0s,MS4.9
HUMO Hull Mountain 98.05 25 PFAKE 10 18 50.0 +15
HUMO LR LR
comp=Z,361nm,20.0s,MS4.9
AGMN Agassiz Nation 98.60 5 PFAKE 10 18 50.0 +13
AGMN LR LR
comp=Z,437nm,19.0s,MS5.0
BOZ Bozeman (W) 98.68 17 PFAKE 10 18 50.0 +13
BOZ LR LR
comp=Z,542nm,19.0s,MS5.1
LAO LASA Array 98.83 13 PFAKE 10 18 50.0 +12
LAO LR LR
comp=Z,361nm,20.0s,MS4.9
YBH Yreka Blue Hor 98.91 26 PFAKE 10 18 50.0 +12
YBH LR LR
comp=Z,350nm,21.0s,MS4.8
EYMN Ely 99.19 2 PFAKE 10 18 50.0 +10
EYMN LR LR
comp=Z,688nm,20.0s,MS5.2
MOD Modoc 99.60 24 PFAKE 10 18 50.0 +8.5
MOD LR LR
comp=Z,256nm,19.0s,MS4.8
WVOR Wild Horse Val 99.68 23 PFAKE 10 18 50.0 +8.1
WVOR LR LR
comp=Z,329nm,20.0s,MS4.8
RLMT Red Lodge 99.72 15 PFAKE 10 18 50.0 +8.0
RLMT LR LR
comp=Z,436nm,21.0s,MS4.9
HLID Hailey 99.91 19 PFAKE 10 18 50.0 +7.1
HLID LR LR
comp=Z,455nm,20.0s,MS5.0
WDC Whiskeytown Da 99.98 26 PFAKE 10 18 50.0 +6.8
WDC LR LR
comp=Z,361nm,20.0s,MS4.9
CASY Casey 100.15 173 PFAKE 10 18 50.0 +6.0
CASY LR LR
comp=Z,518nm,19.0s,MS5.1
COWI Conover 101.10 1 PFAKE 10 19 00.0 +12
COWI LR LR
comp=Z,815nm,20.0s,MS5.2
HOPS Hopland 101.16 27 PFAKE 10 19 00.0 +12
HOPS LR LR
comp=Z,556nm,20.0s,MS5.1
AHID Auburn Hatcher 101.52 17 PFAKE 10 19 00.0 +10
AHID LR LR
comp=Z,328nm,20.0s,MS4.8
LBNH Lisbon 101.59 348 PFAKE 10 19 00.0 +10
LBNH LR LR
comp=Z,493nm,19.0s,MS5.0
LONY Lake Ozonia 101.63 350 PFAKE 10 19 00.0 +9.4
LONY LR LR
comp=Z,410nm,20.0s,MS4.9
RSSD Black Hills 101.70 12 PFAKE 10 19 00.0 +9.1
RSSD LR LR
comp=Z,420nm,19.0s,MS5.0
BW06 Boulder Array 101.89 16 PFAKE 10 19 00.0 +8.3
BW06 LR LR
comp=Z,355nm,20.0s,MS4.9
PDAR Pinedale Array 101.89 16 PP PP 10 22 54.0 -7.6
comp=Z,1.3nm,1.1s,baz=318,slow=3.6,SNR=3.7
BMN Battle Mountai 101.94 22 PFAKE 10 19 00.0 +8.1
BMN LR LR
comp=Z,357nm,21.0s,MS4.9
SACV Santiago Islan 102.18 297 PFAKE 10 19 00.0 +7.0
SACV LR LR
comp=Z,368nm,20.0s,MS4.9
NCB Newcomb 102.21 350 PFAKE 10 19 00.0 +6.8
NCB LR LR
comp=Z,298nm,20.0s,MS4.8
ELK Elko 102.27 21 PFAKE 10 19 10.0 +17
ELK LR LR
comp=Z,394nm,19.0s,MS5.0
GLMI Grayling 102.32 358 PFAKE 10 19 00.0 +6.4
GLMI LR LR
comp=Z,598nm,20.0s,MS5.1
HWUT Hardware Ranch 102.49 18 PFAKE 10 19 10.0 +16
HWUT LR LR
comp=Z,356nm,20.0s,MS4.9
CMB Columbia Colle 103.01 26 PFAKE 10 19 10.0 +13
CMB LR LR
comp=Z,298nm,20.0s,MS4.8
ECSD EROS Data Cent 103.06 6 PFAKE 10 19 10.0 +13
ECSD LR LR
comp=Z,495nm,19.0s,MS5.1
NVAR Mina Array Bea 103.39 24 Pdiff Pdif 10 18 59.9 +1.5
comp=Z,0.9nm,1.0s,baz=315,slow=5.4,SNR=4.6
NVAR PKiKP PKiKP 10 23 18.4 +1.0
comp=Z,0.6nm,0.8s,baz=337,slow=2.1,SNR=3.7
DUG Dugway 103.47 19 PFAKE 10 19 10.0 +11
DUG LR LR
comp=Z,385nm,20.0s,MS4.9
TPH Tonopah 104.07 23 PFAKE 10 19 10.0 +8.6
TPH LR LR

comp=Z,291nm,19.0s,MS4.8
BINY Binghamton 104.20 351 PFAKE 10 19 10.0 +8.0
BINY LR LR
comp=Z,522nm,22.0s,MS5.0
JFWS Jewell Farm 104.26 2 PFAKE 10 19 10.0 +7.8
JFWS LR LR
comp=Z,622nm,20.0s,MS5.1
ERPA Erie 104.73 354 PFAKE 10 19 20.0 +16
ERPA LR LR
comp=Z,333nm,19.0s,MS4.9
AAM Ann Arbor 104.80 357 PFAKE 10 19 20.0 +15
AAM LR LR
comp=Z,481nm,19.0s,MS5.1
OGNE Ogallala 105.12 11 PFAKE 10 23 30.0 +9.5
OGNE LR LR
comp=Z,635nm,22.0s,MS5.1
SCIA State Center 105.14 4 PFAKE 10 23 30.0 +9.5
SCIA LR LR
comp=Z,673nm,19.0s,MS5.2
MVU Marysvale 105.22 20 PFAKE 10 23 30.0 +9.2
MVU LR LR
comp=Z,317nm,19.0s,MS4.9
DAC Darwin (Calif) 105.57 24 PFAKE 10 23 30.0 +8.5
DAC LR LR
comp=Z,422nm,21.0s,MS5.0
ISCO Idaho Springs 105.58 14 PFAKE 10 23 30.0 +8.6
ISCO LR LR
comp=Z,395nm,20.0s,MS5.0
SSPA Standing Stone 105.98 352 PFAKE 10 23 30.0 +7.9
SSPA LR LR
comp=Z,442nm,21.0s,MS5.0
HDIL Hopedale 106.64 1 PFAKE 10 23 30.0 +6.7
HDIL LR LR
comp=Z,503nm,22.0s,MS5.0
ACSO Alum Creek Sta 106.82 356 PFAKE 10 23 40.0 +16
ACSO LR LR
comp=Z,506nm,20.0s,MS5.1
MCWV Mont Chateau 107.15 353 PFAKE 10 23 40.0 +16
MCWV LR LR
comp=Z,624nm,19.0s,MS5.2
MVCO Mesa Verde 107.41 17 PFAKE 10 23 40.0 +15
MVCO LR LR
comp=Z,428nm,19.0s,MS5.0
CBKS Cedar Bluff 107.56 10 PFAKE 10 23 40.0 +15
CBKS LR LR
comp=Z,505nm,20.0s,MS5.1
SDCO Great Sand Dun 107.59 15 PFAKE 10 23 40.0 +15
SDCO LR LR
comp=Z,338nm,22.0s,MS4.9
KSU1 Kansas State U 107.65 7 PFAKE 10 23 40.0 +15
KSU1 LR LR
comp=Z,550nm,19.0s,MS5.1
WUAZ Wupatki 108.24 20 PFAKE 10 23 40.0 +14
WUAZ LR LR
comp=Z,339nm,20.0s,MS4.9
CBN Corbin 108.31 351 PFAKE 10 23 40.0 +13
CBN LR LR
comp=Z,653nm,21.0s,MS5.2
PFO Pinyon Flat Ob 108.38 25 PFAKE 10 23 40.0 +13
PFO LR LR
comp=Z,396nm,21.0s,MS5.0
WCI Wyandotte Cave 108.95 359 PFAKE 10 23 40.0 +12
WCI LR LR
comp=Z,325nm,20.0s,MS4.9
BLA Blacksburg 109.63 354 PFAKE 10 23 40.0 +11
BLA LR LR
comp=Z,442nm,19.0s,MS5.0
ANMO Albuquerque 110.06 16 PFAKE 10 23 40.0 +10
ANMO LR LR
comp=Z,408nm,19.0s,MS5.0
WVT Waverly 111.06 360 PFAKE 10 23 40.0 +8.2
WVT LR LR
comp=Z,312nm,19.0s,MS4.9
AMTX Amarillo 111.10 12 PFAKE 10 23 40.0 +8.1
AMTX LR LR
comp=Z,748nm,21.0s,MS5.2
BBSR BB Station 111.22 339 PFAKE 10 23 40.0 +7.8
BBSR LR LR
comp=Z,316nm,19.0s,MS4.9
TUC Tucson 111.41 21 PFAKE 10 23 40.0 +7.5
TUC LR LR
comp=Z,319nm,20.0s,MS4.9
WMOK Wichita Mounta 111.69 10 PFAKE 10 23 40.0 +7.0
WMOK LR LR
comp=Z,340nm,21.0s,MS4.9
MIAR Mount Ida 112.44 5 PFAKE 10 23 50.0 +16
MIAR LR LR
comp=Z,546nm,22.0s,MS5.1
OXF Oxford 112.67 1 PFAKE 10 23 50.0 +15
OXF LR LR
comp=Z,436nm,19.0s,MS5.1
MNTX Cornudas Mount 113.42 16 PFAKE 10 23 50.0 +14
MNTX LR LR
comp=Z,268nm,21.0s,MS4.8
GOGA Godfrey 113.64 356 PFAKE 10 23 50.0 +13
GOGA LR LR
comp=Z,479nm,22.0s,MS5.0
NHSC New Hope 113.67 353 PFAKE 10 23 50.0 +13
NHSC LR LR
comp=Z,510nm,21.0s,MS5.1
LRAL Lakeview Retre 114.15 359 PFAKE 10 23 50.0 +12
LRAL LR LR
comp=Z,404nm,19.0s,MS5.0
NATX Nacogdoches 115.11 6 PFAKE 10 23 50.0 +10
NATX LR LR
comp=Z,464nm,21.0s,MS5.1
JCT Junction City 115.72 11 PFAKE 10 23 50.0 +9.2
JCT LR LR
comp=Z,496nm,20.0s,MS5.1
TXAR Lajitas Array 116.08 15 PKP PKPdf 10 23 40.9 -0.7
comp=Z,0.5nm,0.5s,baz=97,slow=0.7,SNR=10
TXAR PKKPbc PKKPbc 10 34 14.5 +3.1
comp=Z,0.4nm,0.8s,baz=154,slow=2.9,SNR=3.4
BRAL Brewton 116.16 359 PFAKE 10 23 50.0 +8.3
BRAL LR LR
comp=Z,466nm,19.0s,MS5.1
HKT Hockley 116.79 8 PFAKE 10 23 50.0 +7.1
HKT LR LR
comp=Z,571nm,19.0s,MS5.2
DWPF Disney 118.75 353 PFAKE 10 24 00.0 +13
DWPF LR LR
comp=Z,316nm,22.0s,MS4.9
SBA Scott Base 119.03 166 PFAKE 10 24 00.0 +14
SBA LR LR
comp=Z,331nm,19.0s,MS5.0
PPT Papeete 122.94 90 *e*LR LR 11 02 00.0
comp=Z,1µm,34.0s
QSPA South Pole Qui 122.95 180 *e*PKPdf PKPdf 10 23 52.2 -0.9
GRTK Grand Turk 123.30 341 PFAKE 10 24 10.0 +14
GRTK LR LR
comp=Z,427nm,22.0s,MS5.1
ANWB Willy Bob 123.60 330 PFAKE 10 24 10.0 +14
ANWB LR LR
comp=Z,286nm,21.0s,MS4.9
RCBR Riachuelo 124.61 288 PFAKE 10 24 10.0 +12
RCBR LR LR
comp=Z,274nm,19.0s,MS4.9
SJG San Juan 124.91 334 PFAKE 10 24 10.0 +11
SJG LR LR
comp=Z,193nm,19.0s,MS4.8
SDDR Presa de Saban 125.75 340 PFAKE 10 24 10.0 +10
SDDR LR LR
comp=Z,434nm,22.0s,MS5.1
GTBY Guantanamo Bay 125.80 345 PFAKE 10 24 10.0 +10
GTBY LR LR
comp=Z,343nm,20.0s,MS5.0
FDF Fort de France 125.92 327 PFAKE 10 24 10.0 +9.3
FDF LR LR
comp=Z,297nm,20.0s,MS5.0
TAOE Nuku Hiva Isla 126.27 76 *e*LR LR 11 03 32.3
comp=Z,474nm,23.9s
TEIG Tepich 126.91 0 PFAKE 10 24 10.0 +7.5
TEIG LR LR
comp=Z,416nm,19.0s,MS5.1
MTDJ Mount Denham 127.94 347 *e*PKPdf PKPdf 10 24 03.1 -1.4
MTDJ LR LR
comp=Z,323nm,22.0s,MS5.0
GRGR Grenville 128.43 326 PFAKE 10 24 20.0 +14
GRGR LR LR
comp=Z,257nm,19.0s,MS4.9
TGUH Tegucigalpa,Un 133.04 359 PFAKE 10 24 30.0 +16
TGUH LR LR
comp=Z,330nm,22.0s,MS5.0
SDV Santo Domingo 135.04 335 PFAKE 10 24 30.0 +12
SDV LR LR

comp=Z,190nm,22.0s,MS4.8
JTS JuntasAbangare 136.69 356 PFAKE 10 24 30.0 +8.9
JTS LR LR
comp=Z,404nm,22.0s,MS5.1
BCIP Isla Barro Col 137.20 348 PFAKE 10 24 30.0 +7.9
BCIP LR LR
comp=Z,312nm,21.0s,MS5.0
ROSC El Rosal 140.04 339 PKP PKPdf 10 24 28.4 +1.1
comp=Z,4.0nm,0.4s,baz=79,slow=19,SNR=4.6
SPB Sao Paulo 143.27 274 PFAKE 10 24 40.0 +7.3
SPB LR LR
comp=Z,361nm,19.0s,MS5.2
OTAV Otavalo 145.59 343 *e*PKPdf PKPdf 10 24 37.4 +0.3
OTAV LR LR
comp=Z,255nm,22.0s,MS5.0
CPUP Villa Florida 152.60 276 PKPbc PKPbc 10 24 53.3 -1.7
comp=Z,2.8nm,0.5s,baz=31,slow=2.5,SNR=11
LPAZ La Paz 155.44 308 PKP PKPdf 10 24 52.4 +0.2
comp=Z,2.0nm,1.0s,baz=353,slow=3.0,SNR=3.6
LPAZ PKPab PKPab 10 25 17.2 -0.5
comp=Z,3.4nm,0.7s,baz=27,slow=7.0,SNR=3.8
LPAZ La Paz 155.44 308 PKP PKPdf 10 24 52.4 +0.2
LPAZ PKPab PKPab 10 25 17.2 -0.5
LPAZ LR LR
comp=Z,414nm,21.0s,MS5.2
PLCA Paso Flores 164.18 237 PKP PKPdf 10 25 01.6 +0.2
comp=Z,9.9nm,1.1s,baz=103,slow=5.2,SNR=3.8

*IDC **10** 10:05:18.4±11.0, 13.°14S×179.°71E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/16, mbtmp3.8/3, Error ellipse: s-maj=364.6km s-min=57.2km az=126.0*
*NOU **10** 10:07:06.2±0.5, 20.°07S×168.°20E, h10km, MD2.9, ML3.0*
ISC 10 10:07:07.5±3.1, 20.°3S±0.°4×168.°3E±0.°5, h35km±42km, n7, σ0°25/9, mb3.6/2, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.25**	**215**	*e*S	**Sn**	**10 08 09.1**	**+0.2**
DZM	**Mont Dzumac**	**2.46**	**224**	AMP		10 07 30.2	
	comp=Z,533nm,0.5s						
NORM	**Noumea**	**2.54**	**221**	*e*P	**Pn**	**10 07 46.0**	**-0.3**
NORM				*e*S	**Sn**	**10 08 15.9**	**-0.2**
NOUC	**Port Laguerre**	**2.57**	**225**	*e*P	**Pn**	**10 07 46.8**	**+0.2**
NOUC				*e*S	**Sn**	**10 08 16.9**	**+0.2**
NOUC				AMP		10 08 30.6	
	comp=Z,42nm,0.8s						
MVNO	**Noumea**	**2.60**	**221**	*e*P	**Pn**	**10 07 47.2**	**+0.1**
MVNO				*e*S	**Sn**	**10 08 17.2**	**-0.2**
WRA	**Warramunga Arr**	**31.84**	**265**	P	**P**	**10 13 28.9**	**-0.4**
	comp=Z,0.4nm,0.6s,mb3.4,baz=88,slow=8.4,SNR=5.4						
ASAR	**Alice Springs**	**32.00**	**258**	P	**P**	**10 13 31.1**	**+0.4**
	comp=Z,1.2nm,0.7s,mb3.9,baz=86,slow=9.1,SNR=17						

*BJI **10** 10:09:38.4, 32.°62N×91.°50E, h15km, mb5.0/3*
*ISCJB **10** 10:09:45.9±0.4, 33.°08N±0.°06×92.°00E±0.°08, h10km, mb4.4/23, Error ellipse: s-maj=10.0km s-min=7.7km az=142.1*
*IDC **10** 10:09:46.0±0.7, 33.°13N×92.°02E, h0km, mb4.3/14, mb1 4.4/17, mb1mx4.3/28, mbtmp4.3/17, ML4.0/3, Error ellipse: s-maj=24.2km s-min=13.9km az=45.0*
*NEIC **10** 10:09:47.7±0.3, 33.°12N×91.°95E, h10km, mb4.7/7, Error ellipse: s-maj=9.1km s-min=6.6km az=54.0*
*MOS **10** 10:09:48.8±0.8, 33.°08N×91.°95E, h33km, mb4.8/6, Error ellipse: s-maj=16.3km s-min=9.7km az=93.9*
ISC 10 10:09:47.7±0.4, 33.°09N±0.°06×91.°99E±0.°08, h10km, n50, σ0°89/51, mb4.4/23, 6C, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**15.56**	**334**	Pn	**Pn**	**10 13 24.3**	**-2.7**
	0.2nm,0.3s,baz=153,slow=13,SNR=2.1						
CMAR	**Chiang Mai Arr**	**15.85**	**155**	Pn	**Pn**	**10 13 30.1**	**-0.9**
	0.4nm,0.3s,baz=347,slow=12,SNR=4.6						
AAK	**Ala-Archa**	**16.75**	**310**	*ce*P	**Pn**	**10 13 51.3**	**+8.9**
AAK				pmax	pmax		
	comp=Z,22nm,2.5s						
SONM	**Songino Array**	**18.31**	**32**	P	**Pn**	**10 14 02.2**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=216,slow=12,SNR=12						
ULN	**Ulaanbaatar**	**18.63**	**33**	*e*P	**Pn**	**10 14 06.2**	**+0.6**
KBL	**Kabul**	**19.12**	**281**	P	**Pn**	**10 14 11.5**	**-0.1**
KBL				pmax	pmax		
	comp=Z,31nm,0.9s						
KBL	**Kabul**	**19.12**	**281**	P	**Pn**	**10 14 11.5**	**-0.1**
	comp=Z,31nm,0.9s						
WHN	**Wuhan**	**19.17**	**92**	P	**Pn**	**10 14 10.0**	**-2.2**
KURK	**Kurchatov**	**20.17**	**335**	P	**P**	**10 14 22.1**	**0.0**
	comp=Z,7.2nm,0.6s,baz=143,slow=11,SNR=2.9						
ZALV	**Zalesovo Beam**	**21.47**	**348**	P	**P**	**10 14 35.4**	**-0.7**
	comp=Z,12nm,1.0s,mb4.2,baz=158,slow=11,SNR=7.4						
SSE	**Sheshan**	**24.78**	**87**	*e*P	**P**	**10 15 04.3**	**-5.4**
SSE				pmax	pmax		
	comp=Z,31nm,0.7s,mb5.0						
BVAR	**Borovoye Array**	**25.24**	**329**	P	**P**	**10 15 13.8**	**+0.1**
	comp=Z,2.3nm,0.7s,mb3.8,baz=99,slow=8.9,SNR=3.5						
BRVK	**Borovoye**	**25.31**	**329**	*ce*P	**P**	**10 15 18.9**	**+4.6**
BRVK				pmax	pmax		
	comp=Z,29nm,2.5s,mb4.4						
ABKAR	**Akbulak array**	**28.75**	**314**	P	**P**	**10 15 46.1**	**+0.9**
	comp=Z,1.9nm,0.6s,mb4.0						
KSRS	**Korea Array**	**29.54**	**71**	P	**P**	**10 15 51.4**	**-1.0**
	comp=Z,0.7nm,0.6s,mb3.6,baz=283,slow=10.0,SNR=3.8						
KSRS	**Korea Array**	**29.54**	**71**	P	**P**	**10 15 51.4**	**-1.0**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
ARU	**Arti**	**32.75**	**326**	*c i*P	**P**	**10 16 24.1**	**+3.7**
ARU				*e*		10 17 29.9	
ARU				S	**S**	**10 21 42.1**	**+5.2**
ARU				SS	SS	10 23 35.8	-22
ARU				pmax	pmax		
	comp=Z,16nm,1.7s,mb4.7						
KLR	**Kul'dur**	**33.55**	**49**	*e*P	**P**	**10 16 23.0**	**-4.5**
KKM	**Kota Kinabalu**	**35.09**	**135**	*e*P	**P**	**10 16 42.5**	**+1.3**
	comp=Z,46nm,1.4s,mb5.2						
GNI	**Garni**	**38.21**	**294**	*ce*P	**P**	**10 17 13.6**	**+6.0**
GNI				pmax	pmax		
	comp=Z,22nm,1.2s						
TIXI	**Tiksi**	**43.27**	**16**	*e*P	**P**	**10 17 47.9**	**-1.0**
COCO	**West Island**	**45.26**	**173**	*i*P	**P**	**10 18 04.7**	**-0.7**
BR131	**Keskin Array S**	**46.72**	**296**	*e*P	**P**	**10 18 16.7**	**-0.1**
BRTR	**Keskin Array B**	**46.72**	**296**	P	**P**	**10 18 17.1**	**+0.3**
	comp=Z,4.7nm,0.9s,mb4.4,baz=99,slow=7.6,SNR=9.9						
SEY	**Seymchan**	**47.71**	**33**	*e*P	**P**	**10 18 24.1**	**-0.1**
EIL	**Elat**	**48.31**	**282**	P	**P**	**10 18 30.1**	**+0.8**
	comp=Z,14nm,0.7s,mb5.1,baz=58,slow=4.4,SNR=9.8						
AKASG	**Malin Array Be**	**48.42**	**311**	P	**P**	**10 18 27.9**	**-2.0**
	comp=Z,1.8nm,0.6s,mb4.3,baz=72,slow=7.7,SNR=2.5						
ARCES	**ARCESS Array B**	**51.21**	**336**	P	**P**	**10 18 49.9**	**-1.0**
	comp=Z,1.3nm,0.5s,mb4.1,baz=93,slow=6.4,SNR=4.0						
BILL	**Bilibino**	**53.91**	**27**	⇑*e*P	**P**	**10 19 11.8**	**+1.0**
BILL				pmax	pmax		
	comp=Z,9.0nm,1.6s,mb4.5						
WRAB	**Tennant Creek**	**66.45**	**136**	*e*P	**P**	**10 20 38.0**	**+0.6**
WRA	**Warramunga Arr**	**66.46**	**136**	P	**P**	**10 20 37.5**	**+0.1**
	comp=Z,11nm,1.0s,mb4.8,baz=331,slow=7.0,SNR=12						
ASAR	**Alice Springs**	**69.15**	**139**	P	**P**	**10 20 55.1**	**+0.8**
	comp=Z,9.3nm,0.9s,mb4.7,baz=323,slow=6.5,SNR=18						
COLD	**Coldfoot**	**69.63**	**22**	*e*P	**P**	**10 20 57.3**	**+0.6**
BPAW	**Bear Paw Mtn.**	**71.30**	**24**	*e*P	**P**	**10 21 07.3**	**+0.3**
PPLA	**Purkeypile**	**71.61**	**26**	*e*P	**P**	**10 21 09.7**	**+0.9**
COLA	**College**	**71.86**	**23**	*e*P	**P**	**10 21 10.4**	**0.0**
COLA				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
COLA	**College**	**71.86**	**23**	*e*P	**P**	**10 21 10.4**	**+0.1**
	comp=Z,5.8nm,0.9s,mb4.5						
PMR	**Palmer**	**73.54**	**26**	*e*P	**P**	**10 21 20.1**	**-0.3**
PMR				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
PMR	**Palmer**	**73.54**	**26**	*e*P	**P**	**10 21 20.1**	**-0.3**
	comp=Z,12nm,1.1s,mb4.8						
ESDC	**Sonseca Array**	**73.84**	**307**	P	**P**	**10 21 23.2**	**+0.6**
	comp=Z,0.2nm,0.3s,mb3.6,baz=58,slow=7.7,SNR=3.3						
EGAK	**Eagle**	**74.02**	**21**	*e*P	**P**	**10 21 23.2**	**0.0**
BMRM	**Bremner River**	**75.59**	**25**	*e*P	**P**	**10 21 33.3**	**+1.0**
	comp=Z,7.6nm,1.0s,mb4.6						
STKA	**Stephens Creek**	**79.79**	**139**	P	**P**	**10 21 55.8**	**-0.2**
	comp=Z,4.3nm,0.9s,mb4.4,baz=143,slow=19,SNR=3.8						
SKAG	**Skagway**	**79.83**	**22**	*e*P	**P**	**10 21 57.3**	**+1.4**
	comp=Z,9.0nm,0.7s,mb4.8						
YKA	**Yellowknife Ar**	**82.37**	**12**	P	**P**	**10 22 08.9**	**-0.5**
	comp=Z,2.3nm,0.9s,mb4.1,baz=331,slow=5.2,SNR=9.8						
YKA	**Yellowknife Ar**	**82.37**	**12**	P	**P**	**10 22 08.9**	**-0.5**
TORD	**Torodi Ar. Bea**	**83.19**	**281**	P	**P**	**10 22 14.3**	**-0.2**
	comp=Z,3.5nm,1.0s,mb4.4,baz=55,slow=4.5,SNR=10						
EDM	**Edmonton**	**91.26**	**15**	*e*P	**P**	**10 22 53.1**	**0.0**
FFC	**Flin Flon**	**91.72**	**8**	*ce*P	**P**	**10 22 55.1**	**-0.1**
FFC	**Flin Flon**	**91.72**	**8**	*e*P	**P**	**10 22 54.5**	**-0.6**

*IDC **10** 10:19:05.7±2.2, 31.°62N×87.°81E, h0km, mb3.6/3, mb1 4.0/5, mb1mx3.6/27, mbtmp3.8/5, ML3.5/1, Error ellipse: s-maj=122.3km s-min=24.6km az=63.0*
*ISCJB **10** 10:19:05.0±1.0, 31.°5N±0.°2×87.°4E±0.°2, h10km, mb3.6/3, Error ellipse: s-maj=33.4km s-min=8.0km az=37.8*
ISC 10 10:19:06.7±1.1, 31.°4N±0.°2×87.°3E±0.°2, h10km, n6, σ0°76/8, mb3.6/3, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.72**	**117**	P	**Pg**	**10 20 17.9**	**-0.1**
LSA				Pg	**Pg**	**10 20 17.9**	**-0.1**
LSA				Sg	**Sg**	**10 21 06.8**	**+0.6**
LSA				smax			
	comp=E,110nm,0.8s						
AAK	**Ala-Archa**	**15.15**	**321**	Pn	**Pn**	**10 22 42.2**	**+1.5**
	comp=E,0.0nm,0.3s,baz=62,slow=2.6,SNR=5.0						
CMAR	**Chiang Mai Arr**	**16.65**	**138**	Pn	**Pn**	**10 23 00.1**	**-0.1**
	comp=E,0.7nm,0.3s,baz=334,slow=11,SNR=6.6						
ZALV	**Zalesovo Beam**	**22.59**	**356**	P	**P**	**10 24 06.0**	**-1.1**
	comp=E,0.3nm,0.3s,mb3.2,baz=158,slow=12,SNR=2.6						
WRA	**Warramunga Arr**	**68.13**	**132**	P	**P**	**10 30 06.7**	**-0.4**
	comp=E,0.8nm,0.9s,mb3.7,baz=326,slow=6.1,SNR=3.8						
ASAR	**Alice Springs**	**70.63**	**135**	P	**P**	**10 30 22.1**	**-0.4**
	comp=E,1.0nm,0.8s,mb3.8,baz=321,slow=6.3,SNR=12						

*ISCJB **10** 10:21:41.3±0.6, 38.°61N±0.°02×25.°28E±0.°03, h4km±5km, Error ellipse: s-maj=3.9km s-min=3.3km az=146.2*
*DDA **10** 10:21:41.2, 38.°63N×25.°26E, h28km±3km, Md3.0*
*NEIC **10** 10:21:41.8, 38.°62N×25.°30E, h30km, MD3.3(ATH), After ATH.*
*ISK **10** 10:21:41.7, 38.°56N×25.°05E, h32km, MD3.3*
*ATH **10** 10:21:41.8, 38.°62N×25.°30E, h30km±1km, MD3.3/5*
*THE **10** 10:21:42.9, 38.°63N×25.°32E, h12km±1km, ML3.3/6, Error ellipse: s-maj=1.4km s-min=0.5km az=79.0*
*CSEM **10** 10:21:42.0±0.1, 38.°60N×25.°27E, h10km, ML3.3/6, Error ellipse: s-maj=2.8km s-min=2.4km az=161.0*
ISC 10 10:21:42.2±0.6, 38.°61N±0.°02×25.°28E±0.°03, h10km±4km, n65, σ0°73/97, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOS	**Chios island**	**0.65**	**110**	P	**Pg**	**10 21 55.0**	**+0.2**
CHOS				S	**Sg**	**10 22 04.1**	**+0.8**
CHOS	**Chios island**	**0.65**	**110**	*e*PN	**Pg**	**10 21 55.0**	**+0.2**
CHOS				*e*SN	**Sg**	**10 22 04.3**	**+1.0**
CHOS	**Chios island**	**0.65**	**110**	*e*Pn	**Pg**	**10 21 55.0**	**+0.2**
CHOS				S	**Sg**	**10 22 04.1**	**+0.8**
SIGR	**SIGRI**	**0.75**	**37**	P	**Pg**	**10 21 56.6**	**0.0**
SIGR				S	**Sg**	**10 22 06.7**	**+0.3**
SIGR	**SIGRI**	**0.75**	**37**	P	**Pg**	**10 21 56.6**	**0.0**
SIGR				S	**Sg**	**10 22 06.7**	**+0.3**
PRK	**Paraskevi**	**1.00**	**51**	*e*Pn	**Pg**	**10 22 00.9**	**-0.5**
PRK	**Paraskevi**	**1.00**	**51**	P	**Pg**	**10 22 01.0**	**-0.4**
PRK				S	**Sg**	**10 22 14.4**	**0.0**
PRK	**Paraskevi**	**1.00**	**51**	*e*PN	**Pg**	**10 22 00.9**	**-0.5**
PRK	**Paraskevi**	**1.00**	**51**	P	**Pg**	**10 22 01.0**	**-0.4**
PRK				S	**Sg**	**10 22 14.4**	**0.0**
URLA	**Izmir**	**1.06**	**103**	*i* P	**Pg**	**10 22 02.4**	**-0.3**
URLA				*i* S	**Sg**	**10 22 17.2**	**+0.7**
AOS	**Alonnisos**	**1.22**	**297**	P	**Pn**	**10 22 05.5**	**+0.1**
AOS				S	**Sb**	**10 22 22.0**	**+0.7**
AOS	**Alonnisos**	**1.22**	**297**	P	**Pn**	**10 22 05.5**	**+0.1**
AOS				S	**Sb**	**10 22 22.0**	**+0.7**
PTL	**Penteli**	**1.25**	**244**	*e*Pn	**Pn**	**10 22 05.2**	**-0.5**
PTL	**Penteli**	**1.25**	**244**	*e*PN	**Pn**	**10 22 05.2**	**-0.5**
LIA	**Limnos Island**	**1.28**	**357**	*e*Pn	**Pn**	**10 22 05.5**	**-0.7**
LIA	**Limnos Island**	**1.28**	**357**	P	**Pn**	**10 22 05.9**	**-0.3**
LIA				S	**Sb**	**10 22 23.4**	**+0.4**
LIA	**Limnos Island**	**1.28**	**357**	*e*PN	**Pn**	**10 22 05.5**	**-0.7**
LIA	**Limnos Island**	**1.28**	**357**	*e*Pn	**Pn**	**10 22 05.5**	**-0.7**
LIA	**Limnos Island**	**1.28**	**357**	P	**Pn**	**10 22 05.9**	**-0.3**
LIA				S	**Sb**	**10 22 23.4**	**+0.4**
AYVA	**Ayvalik**	**1.30**	**57**	*i* P	**Pn**	**10 22 06.5**	**0.0**
AYVA				*i* S	**Sb**	**10 22 24.4**	**+0.9**
AYVA	**Ayvalik**	**1.30**	**57**	*i* P	**Pn**	**10 22 06.5**	**+0.1**
AYVA				*i* S	**Sb**	**10 22 24.4**	**+0.9**
ATHU	**Athens Univers**	**1.34**	**242**	P	**Pn**	**10 22 06.3**	**-0.7**
ATHU				S	**Sb**	**10 22 26.2**	**+1.6**
ATHU	**Athens Univers**	**1.34**	**242**	P	**Pn**	**10 22 06.3**	**-0.7**
BOZC	**Bozcaada**	**1.37**	**26**	*i* P	**Pn**	**10 22 06.9**	**-0.4**
BOZC				*i* S	**Sb**	**10 22 24.2**	**-1.2**
VLY	**Voula,Athens**	**1.39**	**237**	*e*Pn	**Pn**	**10 22 07.4**	**-0.3**
VLY	**Voula,Athens**	**1.39**	**237**	*e*PN	**Pn**	**10 22 07.4**	**-0.3**
BLCB	**Balcova**	**1.40**	**99**	*e*PN	**Pn**	**10 22 08.0**	**+0.2**
BLCB				*e*SN	**Sn**	**10 22 27.0**	**+0.6**
BLCB	**Balcova**	**1.40**	**99**	P	**Pn**	**10 22 06.6**	**-1.2**
BLCB				S	**Sn**	**10 22 25.6**	**-0.8**
BLCB	**Balcova**	**1.40**	**99**	*e*Pn	**Pn**	**10 22 08.0**	**+0.2**
BLCB				S	**Sn**	**10 22 25.6**	**-0.8**
BLCB				*e*Sn	**Sn**	**10 22 27.0**	**+0.6**
EZN	**Ezine**	**1.46**	**34**	*e*PN	**Pn**	**10 22 08.5**	**-0.1**
EZN				*e*SN	**Sn**	**10 22 28.0**	**+0.3**
EZN	**Ezine**	**1.46**	**34**	*e*Pn	**Pn**	**10 22 08.5**	**-0.1**
EZN				*e*Sn	**Sn**	**10 22 28.0**	**+0.2**
SMG	**Samos**	**1.53**	**126**	*e*Pn	**Pn**	**10 22 08.8**	**-0.7**
SMG	**Samos**	**1.53**	**126**	*e*PN	**Pn**	**10 22 08.8**	**-0.7**
APE	**Apeiranthos**	**1.56**	**173**	P	**Pn**	**10 22 09.5**	**-0.4**
APE				S	**Sn**	**10 22 30.2**	**+0.1**
APE	**Apeiranthos**	**1.56**	**173**	P	**Pn**	**10 22 09.5**	**-0.4**
APE				S	**Sn**	**10 22 30.2**	**+0.1**
IZM	**Izmir**	**1.57**	**97**	*e*PN	**Pn**	**10 22 10.6**	**+0.4**
KDAG	**Bornova**	**1.57**	**97**	*i* P	**Pn**	**10 22 10.0**	**-0.2**
KDAG				*i* S	**Sg**	**10 22 34.4**	**+1.6**
KDAG	**Bornova**	**1.57**	**97**	*i* P	**Pn**	**10 22 10.0**	**-0.2**
KDAG				*i* S	**Sg**	**10 22 34.4**	**+1.6**
GADA	**Gvkgeada**	**1.65**	**17**	*e*PN	**Pn**	**10 22 10.6**	**-0.6**
GADA				*e*SN	**Sn**	**10 22 31.7**	**-0.7**
GADA	**Gvkgeada**	**1.65**	**17**	*e*Pn	**Pn**	**10 22 10.6**	**-0.6**
GADA				*e*Sn	**Sn**	**10 22 31.7**	**-0.7**
NAIG	**Nisos Aigina**	**1.65**	**239**	*e*Pb	**Pn**	**10 22 10.2**	**-1.0**
NAIG	**Nisos Aigina**	**1.65**	**239**	*e*PB	**Pn**	**10 22 10.2**	**-1.0**
NAIG	**Nisos Aigina**	**1.65**	**239**	*e*Pb	**Pn**	**10 22 10.2**	**-1.0**
LTK	**Loutraki**	**1.91**	**253**	P	**Pn**	**10 22 14.8**	**0.0**
LTK				S	**Sn**	**10 22 39.9**	**+1.0**
LTK	**Loutraki**	**1.91**	**253**	P	**Pn**	**10 22 14.8**	**0.0**
LTK				S	**Sn**	**10 22 39.9**	**+1.0**
AKHS	**Akhisar**	**2.00**	**82**	*i* P	**Pg**	**10 22 20.2**	**-0.3**
AKHS				*i* S	**Sg**	**10 22 46.9**	**+0.4**
AKHS	**Akhisar**	**2.00**	**82**	*i* P	**Pg**	**10 22 20.2**	**-0.3**
AKS	**Akhisar**	**2.00**	**82**	*e*PN	**Pn**	**10 22 16.5**	**+0.5**
AKS	**Akhisar**	**2.00**	**82**	*e*Pn	**Pn**	**10 22 16.5**	**+0.5**
LPK	**Lapseki**	**2.10**	**33**	*e*PN	**Pn**	**10 22 17.5**	**+0.1**
LPK	**Lapseki**	**2.10**	**33**	*e*Pn	**Pn**	**10 22 17.5**	**+0.1**
AYDN	**Tasoluk**	**2.26**	**114**	*i* P	**Pg**	**10 22 24.2**	**-1.3**
AYDN				*i* S	**Sg**	**10 22 52.1**	**-2.7**
AYDN	**Tasoluk**	**2.26**	**114**	*i* P	**Pg**	**10 22 24.2**	**-1.3**
BALB	**Balikesir**	**2.27**	**62**	*e*PN	**Pn**	**10 22 20.7**	**+0.9**
BALB	**Balikesir**	**2.27**	**62**	*e*Pn	**Pn**	**10 22 20.7**	**+0.9**
RKY	**Sarkoy-Tekirda**	**2.54**	**35**	*e*PN	**Pn**	**10 22 23.9**	**+0.5**
RKY	**Sarkoy-Tekirda**	**2.54**	**35**	*e*Pn	**Pn**	**10 22 23.9**	**+0.5**
DAT	**Datca**	**2.62**	**135**	*e*PN	**Pn**	**10 22 24.4**	**-0.2**
DAT	**Datca**	**2.62**	**135**	*e*Pn	**Pn**	**10 22 24.4**	**-0.2**
VLI	**Veliai**	**2.65**	**225**	*e*Pn	**Pn**	**10 22 24.6**	**-0.4**
VLI	**Veliai**	**2.65**	**225**	*e*PN	**Pn**	**10 22 24.6**	**-0.4**
VLI	**Veliai**	**2.65**	**225**	*e*Pn	**Pn**	**10 22 24.6**	**-0.4**
KULA	**Kula-Manisa**	**2.65**	**91**	*e*PN	**Pn**	**10 22 26.2**	**+1.2**
KULA	**Kula-Manisa**	**2.65**	**91**	*e*Pn	**Pn**	**10 22 26.2**	**+1.2**

*JSN **10** 10:22:50.3±0.7, 18.°14N×80.°65W, h0km±157km, MD4.4*
*SSNC **10** 10:23:06.4±7.9, 18.°07N×79.°65W, h21km±822km, MD3.3, ML3.0*
ISC 10 10:23:06.2±2.2, 18.°3N±0.°1×79.°49W±0.°07, h13km±15km, n8, σ0°74/12, 5C-1D, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEJ	**Negril**	**1.10**	**94**	⇓*e*P	**Pb**	**10 23 26.8**	**-0.3**
NEJ				⇑*i*P		10 23 26.9	
STH	**Stony Hill**	**2.56**	**95**	⇑*e*P	**Pn**	**10 23 47.4**	**-0.1**
STH				*e*S	**Sg**	**10 24 29.4**	**+0.9**
HOJ	**Hope**	**2.62**	**97**	⇑*i*P	**Pn**	**10 23 47.5**	**-0.8**
GWJ	**Greenwich**	**2.64**	**95**	⇑*i*P	**Pn**	**10 23 48.5**	**+0.1**
LMGC	**Las Mercedes**	**2.92**	**53**	*e*PN	**Pn**	**10 23 52.9**	**+0.6**
	baz=210						
LMGC				*e*SN	**Sn**	**10 24 26.9**	**-0.4**
	comp=N,23nm,0.1s						
LMGC				*e*			
	comp=E,43nm,0.1s						
CMJ	**Castle Mountai**	**2.97**	**93**	⇑*e*P	**Pn**	**10 23 53.5**	**+0.5**
CMJ				*e*S	**Sg**	**10 24 40.5**	**-1.1**
RCC	**Rio Carpintero**	**3.95**	**65**	*e*P	**Pn**	**10 24 08.2**	**+1.6**
	baz=229						
RCC				*e*S	**Sn**	**10 24 52.6**	**-0.2**
	comp=N,6.6nm,0.2s						
RCC				*e*			
	comp=E,6.4nm,0.1s						
SOR	**Soroa**	**5.53**	**324**	*e*P	**Pn**	**10 24 27.7**	**-0.6**

IDC 10 10:27:02.3±5.0, 54.°72S×25.°81W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.9/13, mbtmp4.0/3, Error ellipse: s-maj=152.7km s-min=42.2km az=177.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPUP	**Villa Florida**	**36.57**	**308**	P	P	10 34 09.2	-0.4
	0.7nm,0.4s,baz=156,slow=4.9,SNR=3.4						
LPAZ	**La Paz**	**50.28**	**303**	P	P	10 36 01.3	+0.9
	2.6nm,0.4s,baz=130,slow=6.4,SNR=29						
TORD	**Torodi Ar. Bea**	**71.51**	**28**	P	P	10 38 24.8	+0.1
	0.4nm,0.6s,baz=200,slow=7.2,SNR=5.4						
YKA	**Yellowknife Ar**	**135.70**	**318**	PKP	PKPdf	10 46 22.4	-0.7
	0.2nm,0.7s,baz=134,slow=2.2,SNR=4.4						

*IDC **10** 10:36:21.1±2.9, 54.°23N×87.°27E, h0km, mb1 3.4/3, mb1mx3.2/29, mbtmp3.4/3, ML3.3/3, Error ellipse: s-maj=26.4km s-min=18.2km az=63.0*
*NNC **10** 10:36:23.1±5.5, 54.°01N×87.°10E, h0km, mb3.8, mpv3.3, Error ellipse: s-maj=49.4km s-min=38.0km az=137.0*
ISC 10 10:36:23.5±2.2, 54.°32N±0.°10×87.°0E±0.°2, h10km, n7, σ0°96/12, 7C-1D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.36**	**255**	Pg	**Pg**	**10 36 46.8**	**-2.7**
	6.5nm,0.3s,baz=79,slow=15,SNR=49						
ZALV				Lg		10 37 07.8	
	1.5nm,0.3s,baz=87,slow=25,SNR=7.4						
KURK	**Kurchatov**	**6.28**	**238**	⇑Pn	**Pn**	**10 37 56.0**	**0.0**
	5.0nm,0.9s						
KURK				⇑Sn	**Sn**	**10 39 08.3**	**+0.6**
	4.3nm,0.9s						
KURK				⇑Lg		10 39 39.3	
	15nm,0.8s						
KURK	**Kurchatov**	**6.28**	**238**	Pn	**Pn**	**10 37 56.6**	**+0.6**
	0.3nm,0.3s,baz=55,slow=14,SNR=24						
KURK				Lg		10 39 44.4	
	0.2nm,0.3s,baz=150,slow=30,SNR=6.7						
KURBB	**Kurchatov Arra**	**6.38**	**238**	⇑Pn	**Pn**	**10 37 57.1**	**-0.3**
	0.8nm,0.6s,baz=55,slow=13						
KURBB				⇑Sn	**Sn**	**10 39 09.4**	**-0.8**
	1.6nm,0.6s						
KURBB				⇓Lg		10 39 41.2	
	12nm,1.1s,baz=58,slow=34						
MKAR	**Makanchi Array**	**8.12**	**204**	Pn	**Pn**	**10 38 20.6**	**-0.7**
	0.2nm,0.3s,baz=33,slow=16,SNR=3.5						
MKAR				Sn	**Sn**	**10 39 53.9**	**+0.9**
	0.3nm,0.3s,baz=23,slow=30,SNR=3.9						
MKAR				Lg		10 40 36.0	
	0.0nm,0.3s,baz=20,slow=31,SNR=3.3						
VOSK	**Vostochnaya**	**9.70**	**267**	⇑Pn	**Pn**	**10 38 42.8**	**-0.1**
	2.1nm,0.7s						
VOSK				⇑Sn	**Sn**	**10 40 32.3**	**+0.6**
	20nm,1.2s						
BVAR	**Borovoye Array**	**9.97**	**269**	Pn	**Pn**	**10 38 47.8**	**+1.3**
	0.2nm,0.3s,baz=67,slow=15,SNR=5.9						
BVAR				Sn	**Sn**	**10 40 32.2**	**-6.1**
	0.1nm,0.3s,baz=89,slow=20,SNR=2.8						

*MOS **10** 10:36:52.2±1.8, 53.°

HRMR			⇑*i*Pg	Pg	10 37 28.5	-2.6
	comp=N,119nm,0.4s					
HRMR			⇑*i*Pg	Pg	10 37 28.5	-2.6
	comp=N,69nm,0.4s					
HRMR			⇓*i*Pg	Pg	10 37 28.5	-2.6
	comp=N,160nm,0.4s					
HRMR			*e*		10 37 30.1	
HRMR			*i* Sg	Sg	10 37 55.0	-1.2
HRMR			Pmax			
	comp=N,296nm,0.2s					
HRMR			Smax			
	comp=N,4μm,0.4s					
YLYR	**Ulyunkhan**	**2.21 43**	*e*PN	Pn	10 37 31.4	+0.8
YLYR			*e*		10 37 33.3	
YLYR			*e*		10 38 03.0	
YLYR			pmax	pmax		
	comp=Z,35nm,0.5s					
YLYR			smax			
	comp=N,215nm,0.4s					
YLYR	**Ulyunkhan**	**2.21 43**	⇑*i*Pn	Pn	10 37 31.4	+0.8
YLYR			⇑*i*Pg	Pg	10 37 33.3	-3.2
YLYR			*e*		10 37 37.5	
YLYR			*e*Sg	Sg	10 38 03.5	-1.7
YLYR			Pmax			
	comp=N,35nm,0.5s					
YLYR			Smax			
	comp=N,213nm,0.4s					
NIZ	**Nizh Angarsk**	**2.55 13**	*e*Pn	Pn	10 37 37.2	+2.0
NIZ			*e*Pg	Pg	10 37 38.5	-4.4
NIZ			*e*Sg	Sg	10 38 12.9	-3.0
NIZ			Pmax			
	comp=N,19nm,0.3s					
NIZ			Smax			
	comp=N,105nm,0.4s					
LSTR	**Listvyanka**	**2.67 239**	⇓*i*Pn	Pn	10 37 36.8	-0.1
LSTR			*e*Pg	Pg	10 37 41.0	-4.3
LSTR			*e*Sg	Sg	10 38 15.0	-4.9
LSTR			Pmax			
	comp=N,45nm,0.5s					
LSTR			Smax			
	comp=N,223nm,1.7s					
IRK	**Irkutsk**	**2.79 249**	*e*PN	Pn	10 37 43.9	+5.3
IRK			*e*		10 38 17.7	
IRK			pmax	pmax		
	comp=Z,111nm,0.2s					
IRK			smax			
	comp=N,632nm,0.5s					
IRK	**Irkutsk**	**2.79 249**	*i* Sg	Sg	10 38 18.8	-5.0
IRK			Smax			
	comp=N,627nm,0.4s					
KMO	**Kumora**	**3.02 30**	*e*PN	Pn	10 37 47.8	+6.1
KMO			*e*S	Sn	10 38 18.2	+0.4
KMO			*e*		10 38 27.0	
KMO			pmax	pmax		
	comp=Z,70nm,0.3s					
KMO			smax			
	comp=N,184nm,1.1s					
KMO	**Kumora**	**3.02 30**	*e*Pn	Pn	10 37 41.3	-0.4
KMO			*e*Pg	Pg	10 37 48.2	-3.8
KMO			*e*Sg	Sg	10 38 27.9	-3.2
KMO			Pmax			
	comp=N,70nm,0.3s					
KMO			Smax			
	comp=N,183nm,1.1s					
CIT	**Chita**	**3.31 111**	*e*Pn	Pn	10 37 45.6	-0.1
CIT			*e*		10 37 50.7	
CIT			*e*Sg	Sg	10 38 36.5	-4.0
CIT			max			
	comp=N,80nm,0.1s					
CIT			Smax			
	comp=N,403nm,0.2s					
YOA	**Uoyan**	**3.39 32**	*e*	Pg	10 38 00.4	+1.4
YOA			Sg	Sg	10 38 39.9	-3.0
YOA			Smax			
	comp=N,450nm,1.5s					
TLY	**Talaya**	**3.40 243**	*e*PN	Pn	10 37 46.1	-0.8
TLY			*e*		10 37 53.7	
TLY			*e*		10 38 37.0	
TLY			pmax	pmax		
	comp=Z,22nm,0.6s					
TLY			smax			
	comp=E,117nm,0.4s					
TLY	**Talaya**	**3.40 243**	*e*Pn	Pn	10 37 46.5	-0.4
TLY			*e*Pg	Pg	10 37 53.8	-5.4
TLY			*e*PgPg		10 37 56.7	
TLY			*e*		10 38 21.6	
TLY			*e*Sg	Sg	10 38 38.0	-5.2
TLY			max			
	comp=E,16nm,0.4s					
TLY			Smax			
	comp=E,119nm,0.5s					
UKT	**Uakit**	**3.70 52**	*e*PN	Pn	10 37 52.3	+1.3
UKT			*e*S	Sg	10 38 47.9	-4.9
UKT			smax			
	comp=N,96nm,0.3s					
UKT	**Uakit**	**3.70 52**	*e*Pn	Pn	10 37 51.4	+0.4
UKT			*e*Pg	Pg	10 38 00.2	-4.7
UKT			*e*Sg	Sg	10 38 48.3	-4.5
UKT			Pmax			
	comp=N,21nm,1.1s					
UKT			Smax			
	comp=N,100nm,1.1s					
ARS	**Arshan**	**3.97 252**	*e*PN	Pg	10 38 05.3	-4.8
ARS			*e*		10 38 53.9	
ARS			pmax	pmax		
	comp=Z,54nm,0.3s					
ARS			smax			
	comp=E,663nm,0.6s					
ARS	**Arshan**	**3.97 252**	*e*Pn	Pn	10 37 55.2	+0.5
ARS			Pg	Pg	10 38 04.0	-6.1
ARS			*e*		10 38 29.6	
ARS			*e*Sg	Sg	10 38 55.5	-6.0
ARS			Pmax			
	comp=E,56nm,0.6s					
ARS			Smax			
	comp=E,661nm,0.8s					
SVKR	**Severomuysk**	**4.06 44**	*e*Sg	Sg	10 39 01.3	-3.0
SVKR			*e*		10 39 13.7	
SVKR			Smax			
	comp=E,247nm,0.9s					
KPC	**Khapcheranga**	**4.33 145**	⇑*i*Pn	Pn	10 37 59.0	-0.7
KPC			Pg	Pg	10 38 10.9	-6.1
KPC			*e*		10 38 49.2	
KPC			*e*Sg	Sg	10 39 06.3	-6.7
KPC			Pmax			
	comp=E,14nm,0.3s					
KPC			Smax			
	comp=E,78nm,0.6s					
MOY	**Mondy**	**4.89 253**	*e*PN	Pn	10 38 09.3	+2.0
MOY			*e*		10 38 21.4	
MOY	**Mondy**	**4.89 253**	⇓*i*Pn	Pn	10 38 09.6	+2.3
MOY			*e*		10 38 14.0	
MOY			*e*		10 39 09.2	
MOY			*e*Sg	Sg	10 39 24.3	-6.6
MOY			max			
	comp=E,23nm,0.8s					
MOY			Smax			
	comp=E,109nm,1.3s					
NLYR	**Nelyaty**	**5.23 49**	*e*PN	Pg	10 38 29.9	-4.3
NLYR			*e*		10 39 35.8	
NLYR			pmax	pmax		
	comp=Z,21nm,1.0s					
NLYR			smax			
	comp=N,127nm,1.4s					
NLYR	**Nelyaty**	**5.23 49**	*e*	Pn	10 38 16.8	+4.8
NLYR			*e*Pg	Pg	10 38 28.0	-6.2
NLYR			*e*		10 38 29.7	
NLYR			*e*		10 39 22.3	
NLYR			*i* Sg	Sg	10 39 36.7	-5.1
NLYR			max			
	comp=N,9.0nm,0.7s					
NLYR			Smax			
	comp=N,128nm,1.3s					
ORL	**Orlik**	**5.33 265**	*e*PN	Pn	10 38 15.3	+1.9
ORL			*e*		10 38 30.8	
ORL			*e*		10 39 38.0	
ORL			pmax	pmax		
	comp=Z,11nm,0.6s					
ORL			smax			
	comp=N,128nm,1.0s					
ORL	**Orlik**	**5.33 265**	⇑*i*Pn	Pn	10 38 15.5	+2.1
ORL			*e*		10 38 28.5	
ORL			*e*Sn	Sn	10 39 16.5	+1.8
ORL			*e*		10 39 31.6	
ORL			*i* Sg	Sg	10 39 39.8	-5.3
ORL			max			
	comp=N,11nm,0.5s					
ORL			Smax			
	comp=N,127nm,1.1s					
BOD	**Bodaibo**	**5.49 32**	*e*Sg	Sg	10 39 44.5	-5.7
ULN	**Ulaanbaatar**	**5.52 190**	*e*	Pn	10 38 25.4	+9.4
ULN			*e*Pg	Pg	10 38 34.0	-5.8
ULN			*e*Sg	Sg	10 39 46.0	-5.2
CRS	**Chara**	**6.65 53**	*e*Pn	Pn	10 38 33.2	+1.7
CRS			Pg	Pg	10 38 53.2	-8.1
CRS			*e*Sg	Sg	10 40 21.0	-6.3
CRS			Smax			
	comp=N,142nm,1.6s					
TUP	**Tupik**	**6.85 76**	*e*PN	Pn	10 38 34.6	+0.3
TUP			*e*		10 38 57.3	
TUP			*e*S	Sn	10 39 51.3	-0.8
TUP			*e*		10 40 25.4	
TUP			pmax	pmax		
	comp=Z,4.0nm,0.6s					
TUP			smax			
	comp=N,188nm,1.2s					
TUP	**Tupik**	**6.85 76**	⇓*i*Pn	Pn	10 38 34.6	+0.3
TUP			*e*		10 38 36.8	
TUP			*e*Pg	Pg	10 38 57.2	-8.0
TUP			*e*		10 40 07.1	
TUP			*e*Sg	Sg	10 40 25.5	-8.3
TUP			Smax			
	comp=N,188nm,1.2s					

ISCJB ***10*** *10:40:21.1±1.0,23.°98N±0.°03×122.°52E±0.°02,h8km±7km, Error ellipse: s-maj=5.5km s-min=3.3km az=176.3*
TAP ***10*** *10:40:22.0,24.°06N×122.°51E,h26km,ML2.9,C*
JMA ***10*** *10:40:22.3±0.4,24.°02N×122.°51E,h20km,M1.7*
ISC 10 10:40:21.6±0.6,**24.°00N**±0.°03×**122.°51E**±0.°02,**h14**km±4km, **n24,**σ0.°**73/44,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.65**	**44**	P	**Pg**	**10 40 34.5**	**+0.2**
YOJ				*e*S	**Sg**	**10 40 42.9**	**0.0**
ENA	**Nanau**	**0.82**	**301**	P	**Pg**	**10 40 37.2**	**-0.4**
	baz=298						
ENA				*e*S	**Sg**	**10 40 48.7**	**+0.3**
	baz=298						
HWA	**Hwalien**	**0.83**	**269**	P	**Pg**	**10 40 37.6**	**-0.1**
	baz=249						
HWA				S	**Sg**	**10 40 49.4**	**+0.8**
	baz=249						
TWD	**Chiawan**	**0.84**	**276**	*e*P	**Pg**	**10 40 38.0**	**0.0**
	baz=271						
TWD				S	**Sg**	**10 40 49.5**	**+0.5**
	baz=271						
TWC	**Suao**	**0.86**	**315**	P	**Pg**	**10 40 37.6**	**-0.7**
	baz=309						
TWC				S	**Sg**	**10 40 49.0**	**-0.5**
	baz=309						
TWE	**Neicheng**	**1.05**	**313**	*e*P	**Pb**	**10 40 41.7**	**0.0**
	baz=311						
TWE				*e*S	**Sb**	**10 40 55.8**	**+0.4**
	baz=311						
ENTT	**Nioudou**	**1.07**	**307**	P	**Pb**	**10 40 42.0**	**-0.1**
	baz=304						
ENTT				S	**Sb**	**10 40 56.2**	**+0.2**
	baz=304						
NNS	**Nan Shan**	**1.13**	**293**	*e*P	**Pb**	**10 40 42.2**	**-0.8**
	baz=290						
NNS				*e*S	**Sb**	**10 40 57.5**	**0.0**
	baz=290						
WHF	**Hehuan Shan**	**1.15**	**278**	*e*P	**Pb**	**10 40 42.3**	**-1.0**
	baz=261						
WHF				*e*S	**Sb**	**10 40 57.0**	**-1.1**
	baz=261						
IRIF	**Iriomote-Funau**	**1.16**	**73**	P	**Pn**	**10 40 43.4**	**-0.1**
IRIF				*e*S	**Sb**	**10 40 59.4**	**+0.9**
HATJ	**Hateruma jima**	**1.18**	**87**	P	**Pn**	**10 40 43.3**	**-0.5**
HATJ				*e*S	**Sb**	**10 40 59.2**	**+0.1**
EHY	**Hungye**	**1.20**	**246**	*e*P	**Pn**	**10 40 43.6**	**-0.3**
	baz=242						
EHY				*e*S	**Sb**	**10 40 58.3**	**-1.1**
	baz=242						
TWT	**Tachien**	**1.25**	**282**	*e*P	**Pn**	**10 40 45.9**	**+1.2**
	baz=265						
NSK	**Sanguang**	**1.25**	**303**	*e*P	**Pn**	**10 40 44.4**	**-0.4**
	baz=285						
NSK				*e*S	**Sb**	**10 41 01.1**	**0.0**
	baz=285						
NWF	**Wu-fen Shan**	**1.26**	**328**	*e*P	**Pn**	**10 40 45.0**	**+0.2**
	baz=339						
NWF				*e*S	**Sb**	**10 41 01.5**	**+0.2**
	baz=339						
TWF1	**Yuli**	**1.29**	**240**	*e*P	**Pn**	**10 40 44.7**	**-0.6**
	baz=236						
TWF1				*e*S	**Sb**	**10 41 00.9**	**-1.1**
	baz=236						
TWA	**Mucha**	**1.29**	**319**	*e*P	**Pn**	**10 40 44.8**	**-0.5**
	baz=317						
JKRS	**Kuro-shima**	**1.39**	**80**	P	**Pn**	**10 40 47.2**	**+0.6**
SMLT	**Sun Moon Lake**	**1.48**	**266**	*e*P	**Pn**	**10 40 49.2**	**+1.3**
	baz=262						
TYC	**Yuchr**	**1.52**	**267**	*e*P	**Pn**	**10 40 48.7**	**+0.3**
	baz=263						
TYC				*e*S	**Sn**	**10 41 07.8**	**-0.2**
	baz=263						
JIJ	**Ishigaki jima**	**1.53**	**76**	P	**Pn**	**10 40 48.3**	**-0.3**
JIJ				*e*S	**Sn**	**10 41 07.0**	**-1.4**
ELDTW	**Lidau**	**1.59**	**240**	*e*P	**Pn**	**10 40 49.5**	**+0.1**
	baz=236						
ELDTW				*e*S	**Sn**	**10 41 06.3**	**-3.4**
	baz=236						
CHN5	**Tsauling**	**1.73**	**257**	*e*P	**Pn**	**10 40 52.6**	**+1.3**
	baz=243						
CHN5				*e*S	**Sn**	**10 41 13.5**	**+0.4**
	baz=243						
CHN1	**Nanshi**	**1.99**	**246**	*e*P	**Pn**	**10 40 56.1**	**+1.2**
	baz=243						
CHN1				*e*S	**Sn**	**10 41 21.6**	**+1.9**
	baz=243						

IDC ***10*** *10:54:29.6±0.8,32.°79N×92.°26E,h0km,mb3.9/12, mb1 4.0/15,mb1mx3.9/29,mbtmp3.9/15,ML3.9/2,Error ellipse: s-maj=28.8km s-min=15.6km az=55.0*
ISCJB ***10*** *10:54:29.5±0.5,32.°77N±0.°06×92.°28E±0.°09,h10km, mb4.0/15,Error ellipse: s-maj=10.7km s-min=8.0km az=170.8*
NEIC ***10*** *10:54:31.3±0.5,32.°80N×92.°35E,h10km,mb3.9/10,Error ellipse: s-maj=13.1km s-min=8.4km az=74.0*
BJI ***10*** *10:54:35.3,33.°11N×92.°19E,h17km,mB4.5/1,mb3.9/2, ML4.0/2,Ms3.6/2,Ms7 3.4/2*
ISC 10 10:54:31.5±0.5,**32.°80N**±0.°06×**92.°29E**±0.°09,**h10**km,**n32,** σ1.°**24/34,mb4.0**/15,**Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.24**	**198**	Pg	**Pg**	**10 55 35.7**	**+2.0**
LSA				Sg	**Sg**	**10 56 25.0**	**+9.3**
LSA				smax			
	comp=E,130nm,1.3s						
LSA	**Lhasa**	**3.24**	**198**	*e*Pg	**Pg**	**10 55 34.4**	**+0.8**
LSA				*e*Sg	**Sg**	**10 56 25.5**	**+10**
GTA	**Gaotai**	**8.97**	**41**	*e*P	**Pn**	**10 56 44.1**	**+3.0**
GTA				pP		10 56 46.7	
GTA				sP		10 56 50.0	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**15.48**	**156**	Pn	**Pn**	**10 58 07.8**	**-2.2**
	baz=335,slow=13,SNR=2.5						
MK31	**Makanchi Array**	**15.93**	**334**	*e*Pn	**Pn**	**10 58 16.7**	**+1.1**
MKAR	**Makanchi Array**	**15.93**	**334**	Pn	**Pn**	**10 58 12.8**	**-2.8**
	comp=Z,0.3nm,0.3s,baz=130,slow=14,SNR=5.0						
MKAR				Lg		11 02 56.5	
	comp=Z,0.3nm,0.3s,baz=224,slow=25,SNR=6.0						
MKAR	**Makanchi Array**	**15.93**	**334**	Pn	**Pn**	**10 58 12.8**	**-2.8**
MKAR				Lg		11 02 56.5	
TKM2	**Tokmak 2**	**16.58**	**312**	P	**Pn**	**10 58 23.8**	**-0.2**
	comp=Z,5.8nm,1.1s						
TKM2				*e*		10 58 27.9	
UCH	**Uchtor**	**16.93**	**309**	*e*P	**Pn**	**10 58 31.6**	**+3.2**
	comp=Z,3.7nm,0.7s						
AAK	**Ala-Archa**	**17.13**	**310**	Pn	**Pn**	**10 58 35.7**	**+4.7**
	comp=Z,0.0nm,0.3s,baz=203,slow=5.2,SNR=5.8						
EKS2	**Erkin-Say**	**17.61**	**309**	*e*P	**Pn**	**10 58 39.3**	**+2.3**
	comp=Z,5.2nm,0.9s						
SONM	**Songino Array**	**18.42**	**31**	P	**Pn**	**10 58 47.2**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=219,slow=12,SNR=6.6						
ULN	**Ulaanbaatar**	**18.74**	**32**	*e*P	**Pn**	**10 58 51.7**	**+1.0**
	comp=Z,3.2nm,0.7s						
KURK	**Kurchatov**	**20.54**	**335**	P	**P**	**10 59 08.4**	**-1.5**
	comp=Z,4.4nm,0.7s,baz=143,slow=11,SNR=21						
KURK	**Kurchatov**	**20.54**	**335**	*e*P	**P**	**10 59 09.1**	**-0.9**
	comp=Z,5.1nm,0.9s						
ZALV	**Zalesovo Beam**	**21.80**	**348**	P	**P**	**10 59 21.8**	**-1.8**
	comp=Z,2.7nm,0.7s,mb3.8,baz=160,slow=11,SNR=8.2						
BVAR	**Borovoye Array**	**25.62**	**329**	P	**P**	**11 00 00.4**	**-0.5**
	comp=Z,2.0nm,0.6s,mb3.8,baz=138,slow=12,SNR=12						
BRVK	**Borovoye**	**25.69**	**329**	*e*P	**P**	**11 00 01.4**	**-0.2**
	comp=Z,3.6nm,0.6s,mb4.1						
ABKAR	**Akbulak array**	**29.13**	**314**	*e*P	**P**	**11 00 32.4**	**-0.1**
	comp=Z,2.3nm,0.7s,mb4.0						
BR131	**Keskin Array S**	**47.07**	**296**	*e*P	**P**	**11 03 02.1**	**-1.3**
	comp=Z,1.9nm,0.8s,mb4.1						
BRTR	**Keskin Array B**	**47.07**	**296**	P	**P**	**11 03 03.5**	**+0.1**
	comp=Z,2.5nm,0.8s,mb4.2,baz=86,slow=7.9,SNR=12						
EIL	**Elat**	**48.62**	**282**	P	**P**	**11 03 16.5**	**+1.0**
	comp=Z,2.3nm,0.4s,mb4.6,baz=98,slow=10,SNR=3.6						
EIL	**Elat**	**48.62**	**282**	P	**P**	**11 03 16.5**	**+1.0**
ARCES	**ARCESS Array B**	**51.58**	**336**	P	**P**	**11 03 37.2**	**-0.2**
	comp=Z,1.6nm,0.7s,mb4.0,baz=99,slow=7.6,SNR=6.7						
NOA	**NORSAR Array B**	**57.69**	**325**	P	**P**	**11 04 21.3**	**-0.5**
	comp=Z,1.8nm,0.8s,mb4.2,baz=79,slow=7.3,SNR=4.1						
WRAB	**Tennant Creek**	**66.07**	**136**	P	**P**	**11 05 25.6**	**+6.8**
	comp=Z,3.3nm,0.7s,mb4.5						
WRA	**Warramunga Arr**	**66.07**	**136**	P	**P**	**11 05 19.0**	**+0.2**
	comp=Z,0.3nm,0.4s,mb3.6,baz=324,slow=7.3,SNR=6.5						
KEST	**Kesra**	**66.57**	**298**	P	**P**	**11 05 19.8**	**-2.2**
	comp=Z,0.6nm,0.5s,mb3.9,baz=329,slow=5.9,SNR=3.0						
ASAR	**Alice Springs**	**68.77**	**139**	P	**P**	**11 05 35.2**	**-0.5**
	comp=Z,0.3nm,0.4s,mb3.5,baz=317,slow=6.7,SNR=3.7						
COLD	**Coldfoot**	**69.81**	**22**	*e*P	**P**	**11 05 42.1**	**+0.4**
	comp=Z,2.3nm,0.8s,mb4.2						
YKA	**Yellowknife Ar**	**82.60**	**12**	P	**P**	**11 06 55.1**	**+0.6**
	comp=Z,1.2nm,0.8s,mb4.0,baz=330,slow=5.3,SNR=13						
TORD	**Torodi Ar. Bea**	**83.49**	**281**	P	**P**	**11 07 00.3**	**+0.4**
	comp=Z,1.1nm,0.7s,mb4.0,baz=43,slow=4.6,SNR=6.0						

IDC 10 11:00:16.5±2.1,**6.°42S**×**82.°22W,h0**km,**mb3.7**/3, **mb1 3.8**/5,**mb1mx3.6**/18,**mbtmp3.6**/5,**ML3.5**/2,**Error ellipse: s-maj=86.9km s-min=26.1km az=38.0,Off coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**3.86**	**101**	Pn	Pn	11 01 16.4	-0.7
	6.9nm,0.3s,baz=350,slow=8.4,SNR=28						
ATAH				Sn	Sn	11 02 00.8	-2.5
	20nm,0.3s,baz=163,slow=16,SNR=12						
LPAZ	**La Paz**	**16.93**	**127**	Pn	Pn	11 04 16.4	+1.5
	0.0nm,0.3s,baz=262,slow=7.1,SNR=2.2						
CMIG	**Matias Romero**	**26.50**	**332**	P	P	11 05 55.8	0.0
	1.5nm,0.4s,baz=162,slow=9.6,SNR=2.8						
NVAR	**Mina Array Bea**	**55.80**	**326**	P	P	11 09 54.8	-0.7
	0.2nm,0.5s,baz=123,slow=9.8,SNR=3.4						
YKA	**Yellowknife Ar**	**73.06**	**345**	P	P	11 11 49.3	+1.2
	0.3nm,0.6s,baz=145,slow=5.0,SNR=5.9						
WRA	**Warramunga Arr**	**135.51**	**233**	PKP	PKPdf	11 19 39.4	-0.3
	1.3nm,1.2s,baz=111,slow=2.4,SNR=5.4						

IDC ***10*** *11:04:12.9±0.4,33.°14N×92.°18E,h0km,mb5.0/35, mb1 5.0/38,mb1mx5.0/39,mbtmp5.0/38,ML4.2/3,MS4.2/29, Ms1 4.2/29,ms1mx4.1/40,Error ellipse: s-maj=13.6km s-min=9.9km az=39.0*
ISCJB ***10*** *11:04:13.5±0.1,33.°12N±0.°02×92.°06E±0.°02,h14km, mb5.2/248,MS4.5/66,Error ellipse: s-maj=2.8km s-min=2.2km az=179.7*
NEIC ***10*** *11:04:14.9±0.1,33.°18N×92.°08E,h10km,mb5.3/146,Error ellipse: s-maj=3.5km s-min=3.3km az=54.0*
BJI ***10*** *11:04:15.1,33.°04N×92.°10E,h27km,mB5.0/35,mb4.9/53, ML5.1/3,Ms5.1/71,Ms7 4.9/58*
LDG ***10*** *11:04:16.3±0.8,33.°46N×91.°36E,h10km,Mb5.4/35, Ms4.2/10,Error ellipse: s-maj=36.6km s-min=6.5km az=122.0*
MOS ***10*** *11:04:16.6±0.9,33.°22N×92.°06E,h33km,mb5.5/93, MS4.4/33,Error ellipse: s-maj=5.9km s-min=3.4km az=122.8*
GCMT ***10*** *11:04:18.4±0.2,33.°04N×92.°22E,h14km,MW5.1,Moment Tensor Solution. s42,c59; s74,c137; Moment tensor: Scale 10*^{16}*Nm; M_{rr}-3.39±.19; $M_{\theta\theta}$-1.33±.13; $M_{\phi\phi}$4.73±.15; $M_{r\theta}$-2.66±.36; $M_{r\phi}$2.53±.11; $M_{\theta\phi}$-0.37±.28; Best double couple: $M_0$5.60000×10*^{16} *NP1:*ϕ_s*168.00000°,*δ*49.00000°,* λ*-142.00000°. NP2:*ϕ_s*51.00000°,*δ*63.00000°,* λ*-48.00000°. Principal axes: T 5.8300, Plg8.0000°, Azm112.0000°; N -0.4700, Plg36.0000°, Azm209.0000°; P -5.3500, Plg52.0000°, Azm11.0000°; Data Used: II G IU CN IC.*
SZGRF ***10*** *11:04:21.3,33.°73N×91.°22E,h15km,mb5.3,MS4.4, Qinghai, China*
DJA ***10*** *11:04:34,33.°39N×92.°00E,h200km,Mw5.2/9*
ISC 10 11:04:15.6±0.1,**33.°13N**±0.°02×**92.°08E**±0.°02,**h14**km, **h14**km±.5km**:pP-P,n662,**σ1.°**04/681,mb5.2/248,MS4.5/66, 33C-25D,Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.51**	**193**	Pg	**Pb**	**11 05 14.5**	**-2.9**
LSA				Sg	**Sg**	**11 06 04.3**	**-4.0**
LSA				smax			
	comp=E,2μm,1.8s						
LSA	**Lhasa**	**3.51**	**193**	*e*Pn	**Pb**	**11 05 14.8**	**-2.7**
LSA				*e*Sg	**Sg**	**11 06 09.1**	**+0.8**
TAPN	**Taplejung**	**6.89**	**214**	*e*P	**Pn**	**11 05 57.7**	**+1.6**
	comp=E,35nm,0.5s						
JIRN	**Jiri**	**7.45**	**225**	*e*P	**Pn**	**11 06 06.5**	**+2.7**
	comp=E,167nm,0.6s						
ODAN	**Odare**	**7.45**	**214**	*e*P	**Pn**	**11 06 05.2**	**+1.4**
	comp=E,58nm,0.4s						
GUN	**Gumba**	**7.46**	**227**	*e*P	**Pn**	**11 06 06.6**	**+2.7**
	comp=E,152nm,0.6s						
SHL	**Shillong**	**7.54**	**181**	*e*PKP	**Pn**	**11 06 05.5**	**+0.5**
SHL				*ex*	x	11 07 32.5	
RAMN	**Ramite**	**7.77**	**219**	*e*P	**Pn**	**11 06 09.1**	**+0.9**
	comp=E,621nm,1.1s						
KKN	**Kakani**	**7.92**	**230**	*e*P	**Pn**	**11 06 12.3**	**+2.1**
	comp=E,164nm,0.6s						
KKN	**Kakani**	**7.92**	**230**	*e*P	**Pn**	**11 06 12.3**	**+2.1**
KKN				pmax	pmax		
	comp=Z,164nm,0.6s						
PKI	**Pulchoki**	**7.99**	**228**	*e*P	**Pn**	**11 06 13.6**	**+2.4**
	comp=Z,158nm,0.7s						
PKI	**Pulchoki**	**7.99**	**228**	*e*P	**Pn**	**11 06 13.7**	**+2.5**
PKI				pmax	pmax		
	comp=Z,221nm,0.6s						
PKI	**Pulchoki**	**7.99**	**228**	*e*P	**Pn**	**11 06 13.7**	**+2.5**
	comp=Z,221nm,0.6s						
PKIN	**Phulchoki**	**7.99**	**228**	*e*P	**Pn**	**11 06 13.7**	**+2.4**
	comp=Z,221nm,0.6s						
DMN	**Daman**	**8.15**	**229**	*e*P	**Pn**	**11 06 15.5**	**+2.0**
	comp=Z,190nm,0.6s						
GTA	**Gaotai**	**8.85**	**43**	⇓P	**Pn**	**11 06 24.3**	**+1.4**
GTA				pP		11 06 27.0	
GTA				S	**Sn**	**11 08 03.2**	**+0.8**
GTA				pmax	pmax		
	comp=Z,26nm,1.1s						
GTA				pmax	pmax		
	comp=Z,230nm,4.5s						
GTA				LR	LR		
	comp=N,7μm,10.4s						
GTA				LR	LR		
	comp=E,5μm,11.0s						
GTA				LR	LR		
	comp=Z,4μm,10.4s						
AGT	**Agartala**	**9.24**	**185**	*i* x	x	11 06 23.0	
AGT				*i* x	x	11 07 18.0	
LZH	**Lanzhou**	**10.14**	**70**	*e*P	**Pn**	**11 06 45.1**	**+4.5**
LZH				pP		11 06 47.5	
LZH				sP		11 06 50.1	
LZH				*e*S	**Sn**	**11 08 39.5**	**+5.4**
LZH				sS		11 08 43.0	
LZH				SS		11 08 53.1	
LZH				pmax	pmax		
	comp=Z,57nm,1.0s						
LZH				pmax	pmax		
	comp=Z,300nm,4.0s						

LZH				LR	LR	
	comp=E,8μm,6.4s					
LZH				LR	LR	
	comp=Z,9μm,7.8s					
CD2	**Chengdu**	**10.16 99**		P	**Pn**	**11 06 42.1 +1.1**
CD2				pP		11 06 45.3
CD2				sP		11 06 48.1
CD2				PP		11 06 50.5
CD2				S	**Sn**	**11 08 35.7 +1.0**
CD2				SS		11 08 48.5
CD2				pmax	pmax	
	comp=Z,90nm,1.2s					
CD2				pmax	pmax	
	comp=Z,180nm,4.2s					
CD2				LR	LR	
	comp=N,11μm,6.8s					
CD2				LR	LR	
	comp=E,22μm,9.0s					
CD2				LR	LR	
	comp=Z,19μm,8.2s					
JOSI	**Joshimath**	**10.95 260**	*e*PKP		**Pn**	**11 06 50.9 -0.9**
CAL	**Calcutta**	**11.06 198**	*e*PKP		**Pn**	**11 06 51.6 -1.6**
CAL			*ex*		x	11 10 00.4
WMQ	**Urumqi**	**11.21 343**	P		**Pn**	**11 06 55.0 -0.3**
WMQ			PP			11 07 04.0
WMQ			S		**Sn**	**11 09 00.0 -0.3**
WMQ			SS			11 09 14.0
WMQ			pmax	pmax		
	comp=Z,45nm,0.6s					
WMQ			LR	LR		
	comp=N,2μm,6.0s					
WMQ			LR	LR		
	comp=E,6μm,6.0s					
WMQ			LR	LR		
	comp=Z,3μm,6.0s					
KLP	**Kalpa**	**11.80 266**	*e*PKP		**Pn**	**11 07 01.5 -1.9**
KLP			AMb		AMB	11 07 10.6
	comp=Z,33nm,0.9s					
DDI	**Dehra Dun**	**12.26 261**	*e*PKP		**Pn**	**11 07 08.6 -1.1**
DDI			*ex*		x	11 09 29.0
KMI	**Kunming**	**12.26 128**	P		**Pn**	**11 07 09.2 -0.6**
KMI			pP			11 07 11.5
KMI			PP			11 07 18.6
KMI			S		**Sn**	**11 09 26.6 +0.4**
KMI			SS			11 09 41.1
KMI			pmax	pmax		
	comp=Z,53nm,1.0s					
KMI			pmax	pmax		
	comp=Z,120nm,3.1s					
KMI			LR	LR		
	comp=N,5μm,8.7s					
KMI			LR	LR		
	comp=E,3μm,7.6s					
KMI			LR	LR		
	comp=Z,4μm,9.1s					
BHK	**Bhakra**	**13.36 267**	*e*PKP		**Pn**	**11 07 21.6 -3.1**
KKR	**Kurukshetra**	**13.39 260**	*ex*		x	11 07 27.9
AGRA	**Agra**	**13.56 248**	*e*PKP		**Pn**	**11 07 25.2 -2.3**
AGRA			AMb		AMB	11 07 38.2
	comp=Z,50nm,0.2s					
AYAN	**Aya Nagar**	**13.66 254**	*e*PKP		**Pn**	**11 07 27.3 -1.5**
SONA	**Sohna**	**13.78 253**	*e*PKP		**Pn**	**11 07 29.0 -1.5**
XAN	**Xi'an**	**14.08 82**	P		**Pn**	**11 07 33.6 -0.9**
XAN			pP			11 07 40.5
XAN			S		**Sn**	**11 10 08.7 -1.8**
XAN			sS			11 10 19.9
XAN			pmax	pmax		
	comp=Z,8.0nm,1.1s					
XAN			pmax	pmax		
	comp=Z,36nm,4.8s					
XAN			LR	LR		
	comp=N,3μm,9.8s					
XAN			LR	LR		
	comp=E,2μm,9.0s					
XAN			LR	LR		
	comp=Z,4μm,8.4s					
GYA	**Guiyang**	**14.30 114⇑**	*i*P		**Pn**	**11 07 35.1 -2.4**
GYA			PP			11 07 51.8
GYA			S		**Sn**	**11 10 11.7 -4.2**
GYA			SS			11 10 36.2
GYA			pmax	pmax		
	comp=Z,90nm,0.9s					
GYA			pmax	pmax		
	comp=Z,110nm,3.4s					
GYA			LR	LR		
	comp=N,4μm,9.0s					
GYA			LR	LR		
	comp=E,3μm,10.3s					
GYA			LR	LR		
	comp=Z,5μm,10.8s					
KSH	**Kashi**	**14.45 301⇑**	*i*P		**Pn**	**11 07 43.5 +3.9**
KSH			pP		pP	11 07 46.9 -3.5
KSH			sP		sP	11 07 50.4 -1.9
KSH			PP			11 07 55.3
KSH			S		**Sn**	**11 10 26.2 +6.6**
KSH			SS			11 10 43.1
KSH			PcP		PcP	11 12 57.4 +2.8
KSH			ScP		ScP	11 16 29.4 +1.5
KSH			PcS		PcS	11 16 31.1 +1.6
KSH			pmax	pmax		
	comp=Z,7.0nm,1.1s					
KSH			pmax	pmax		
	comp=Z,240nm,3.9s					
KSH			LR	LR		
	comp=N,3μm,7.7s					
KSH			LR	LR		
	comp=E,2μm,9.5s					
KSH			LR	LR		
	comp=Z,2μm,8.2s					
KHET	**Khetri**	**14.88 255**	*e*PKP		**Pn**	**11 07 43.1 -2.4**
ENH	**Enshi**	**15.09 96**	*e*Pn		**Pn**	**11 07 46.0 -2.3**
	comp=Z,101nm,0.7s					
ULHL	**Ulahol**	**15.47 311**	P		**Pn**	**11 08 00.7 +7.5**
	SNR=12					
CHTO	**Chiang Mai**	**15.53 155**	*e*P		**Pn**	**11 07 53.2 -0.9**
CHTO			pmax	pmax		
	comp=Z,23nm,0.9s					
CHTO	**Chiang Mai**	**15.53 155**	*e*Pn		**Pn**	**11 07 53.2 -0.9**
	comp=Z,23nm,0.9s					
CHTO	**Chiang Mai**	**15.53 155**	Pn		**Pn**	**11 07 55.5 +1.4**
	SNR=8.6					
CHTO			Pn		**Pn**	**11 07 55.5 +1.4**
	SNR=8.6					
MK31	**Makanchi Array**	**15.55 334**	*e*P		**Pn**	**11 07 53.4 -0.9**
MKAR	**Makanchi Array**	**15.55 334**	Pn		**Pn**	**11 07 53.2 -1.0**
	comp=Z,0.3nm,0.3s,baz=134,slow=14,SNR=26					
MKAR			LR		LR	11 13 58.0
	comp=Z,635nm,20.1s,baz=150,slow=38					
CM31	**Chiang Mai Arr**	**15.86 155**	*e*Pn		**Pn**	**11 07 57.4 -1.0**
CMAR	**Chiang Mai Arr**	**15.86 155**	Pn		**Pn**	**11 07 56.5 -1.9**
	comp=Z,0.5nm,0.3s,baz=331,slow=12,SNR=36					
CMAR			LR		LR	11 14 31.3
	comp=Z,916nm,20.7s,baz=338,slow=39					
KZA	**Kyzart**	**16.03 309**	P		**Pn**	**11 08 06.8 +6.4**
	SNR=60					
TKM2	**Tokmak 2**	**16.23 312**	P		**Pn**	**11 08 03.7 +0.7**
	SNR=18					
TKM2	**Tokmak 2**	**16.23 312**	*e*P		**Pn**	**11 08 03.6 +0.6**
TKM2			pmax	pmax		
	comp=Z,154nm,1.3s					
TKM2	**Tokmak 2**	**16.23 312**	*e*Pn		**Pn**	**11 08 03.6 +0.6**
	comp=Z,154nm,1.3s					
BHPL	**Bhopal**	**16.23 236**	*e*PKP		**Pn**	**11 08 00.3 -2.8**
BHPL			AMb		AMB	11 08 03.5
	comp=Z,147nm,1.4s					
KBK	**Karagaybulak**	**16.50 310**	P		**Pn**	**11 08 11.2 +4.7**
	SNR=45					
AJM	**Ajmer**	**16.51 251**	*e*PKP		**Pn**	**11 08 04.4 -2.3**
AJM			AMb		AMB	11 08 10.7
	comp=Z,131nm,1.7s					
UCH	**Uchtor**	**16.58 308**	P		**Pn**	**11 08 13.0 +5.5**
	SNR=59					
UCH	**Uchtor**	**16.58 308**	*e*Pn		**Pn**	**11 08 09.5 +2.0**
	comp=Z,179nm,1.1s					
AAK	**Ala-Archa**	**16.79 309**	P		**Pn**	**11 08 15.2 +5.1**
	comp=Z,581nm,1.1s,SNR=17					
AAK	**Ala-Archa**	**16.79 309**	P		**Pn**	**11 08 15.9 +5.9**
	SNR=37					
AAK	**Ala-Archa**	**16.79 309**	Pn		**Pn**	**11 08 15.4 +5.4**
	comp=Z,0.0nm,0.3s,baz=133,slow=9.2,SNR=36					
AAK			LR		LR	11 15 18.2
	comp=Z,2μm,18.4s,baz=101,slow=40					
AAK	**Ala-Archa**	**16.79 309***c*	*i*P		**Pn**	**11 08 12.7 +2.6**
AAK			pmax	pmax		
	comp=Z,35nm,1.2s					
AAK	**Ala-Archa**	**16.79 309**	*e*P		**Pn**	**11 08 12.5 +2.4**
	comp=Z,163nm,1.2s					
AAK	**Ala-Archa**	**16.79 309**	Pn		**Pn**	**11 08 16.2 +6.2**
	SNR=66					
AAK			Pn		**Pn**	**11 08 16.2 +6.2**
	SNR=66					
CHMS	**Chumysh**	**16.80 311**	P		**Pn**	**11 08 15.6 +5.3**
	SNR=17					
FRU	**Bishkek**	**16.80 310**	*i* P		**Pn**	**11 08 14.0 +3.7**
FRU			pmax	pmax		
	comp=Z,330nm,2.0s					
FRU			MLR	MLR		
	comp=Z,2μm,12.0s					
AML	**Almayashu**	**17.08 307**	P		**Pn**	**11 08 16.4 +2.6**
	SNR=33					
AML	**Almayashu**	**17.08 307**	*e*P		**Pn**	**11 08 16.2 +2.4**
	comp=Z,80nm,1.0s					
USP	**Ospenovka**	**17.09 311**	P		**Pn**	**11 08 16.9 +2.9**
	SNR=16					
TIY	**Taiyuan**	**17.21 69**	*e*P		**Pn**	**11 08 18.5 +3.1**
TIY			S		**Sn**	**11 11 24.6 -1.9**
TIY			LR	LR		
	comp=N,3μm,7.4s					
TIY			LR	LR		
	comp=E,3μm,8.2s					
TIY			LR	LR		
	comp=Z,4μm,8.3s					
EKS2	**Erkin-Say**	**17.27 309**	P		**Pn**	**11 08 18.8 +2.7**
	SNR=33					
EKS2	**Erkin-Say**	**17.27 309**	*e*P		**Pn**	**11 08 17.6 +1.5**
	comp=Z,196nm,1.3s					
HHC	**Hu-ho-hao-te**	**17.35 58**	*e*P		**Pn**	**11 08 18.4 +1.2**
HHC			pP		pP	11 08 21.9 -0.7
HHC			sP		sP	11 08 25.4 +1.0
HHC			PP			11 08 33.1
HHC			S		**Sn**	**11 11 31.3 +1.3**
HHC			sS		sS	11 11 35.1 -10
HHC			SS			11 11 51.4
HHC			PcP		PcP	11 13 01.7 +2.8
HHC			ScS		ScS	11 20 12.6 -0.7
HHC			pmax	pmax		
	comp=Z,20nm,0.9s					
HHC			pmax	pmax		
	comp=Z,110nm,7.0s					
HHC			LR	LR		
	comp=N,2μm,11.4s					
HHC			LR	LR		
	comp=E,2μm,14.3s					
HHC			LR	LR		
	comp=Z,2μm,15.7s					
AKL	**Akola**	**18.24 231**	*e*PKP		**Pn**	**11 08 28.6 +0.4**
AKL			AMb		AMB	11 08 34.5
	comp=Z,143nm,1.5s					
SONM	**Songino Array**	**18.24 32**	P		**Pn**	**11 08 27.9 -0.2**
	comp=Z,1.2nm,0.3s,baz=216,slow=12,SNR=75					
ULN	**Ulaanbaatar**	**18.56 33**	*e*P		**Pn**	**11 08 32.1 +0.1**
ULN			pmax	pmax		
	comp=Z,39nm,0.8s					
ULN	**Ulaanbaatar**	**18.56 33**	*e*P		**Pn**	**11 08 32.0 0.0**
	comp=Z,39nm,0.8s					
ULN	**Ulaanbaatar**	**18.56 33**	P		**Pn**	**11 08 32.4 +0.4**
	SNR=37					
ULN			P			11 08 32.4
	SNR=37					
WHN	**Wuhan**	**19.10 92**	P		**Pn**	**11 08 36.4 -2.3**
WHN			S		**Sn**	**11 12 05.6 -6.8**
WHN			LR	LR		
	comp=N,5μm,7.0s					
WHN			LR	LR		
	comp=E,7μm,7.4s					
WHN			LR	LR		
	comp=Z,8μm,7.8s					
ZAK	**Zakamensk**	**19.12 22**	*e*P		**Pn**	**11 08 39.3 +0.5**
ZAK			pmax	pmax		
	comp=Z,35nm,1.4s					
KBL	**Kabul**	**19.18 281**	*e*P		**Pn**	**11 08 39.2 -0.5**
KBL			pmax	pmax		
	comp=Z,227nm,1.1s					
KBL	**Kabul**	**19.18 281**	*e*P		**Pn**	**11 08 39.2 -0.5**
	comp=Z,227nm,1.1s					
JASL	**Jaisalmer**	**19.33 257**	*e*PKP		**Pn**	**11 08 39.8 -1.8**
MOY	**Mondy**	**19.63 17**	*e*P		**Pn**	**11 08 45.1 +0.2**
MOY			pmax	pmax		
	comp=Z,85nm,1.7s					
HYB	**Hyderabad**	**19.82 221**	*e*P		**Pn**	**11 08 50.0 +2.6**
HYB	**Hyderabad**	**19.82 221**	*i* P		**Pn**	**11 08 47.0 -0.4**
HYB			*e*S		**Sn**	**11 12 40.0 +10**
KURK	**Kurchatov**	**20.17 335**	P		**P**	**11 08 49.3 0.0**
	comp=Z,480nm,1.0s,SNR=20					
KURK	**Kurchatov**	**20.17 335**	P		**P**	**11 08 48.2 -1.1**
	comp=Z,44nm,0.9s,baz=146,slow=11,SNR=94					
KURK			LR		LR	11 16 36.8
	comp=Z,680nm,19.8s,MS4.0,baz=140,slow=37					
KURK	**Kurchatov**	**20.17 335***c*	*e*P		**P**	**11 08 49.1 -0.2**
KURK			pmax	pmax		
	comp=Z,100nm,1.7s					
KURK	**Kurchatov**	**20.17 335**	*e*P		**P**	**11 08 48.8 -0.5**
	comp=Z,89nm,1.0s					
KURK	**Kurchatov**	**20.17 335**	P		**P**	**11 08 49.3 0.0**
	SNR=45					
KURK			P			11 08 49.3
	SNR=45					
TLY	**Talaya**	**20.36 21**	Pn		**P**	**11 08 53.9 +2.4**
	comp=Z,166nm,1.6s,SNR=12					
TLY	**Talaya**	**20.36 21***d*	*i* P		**P**	**11 08 53.1 +1.6**
TLY			*e*			11 09 14.6
TLY			*e*SS			11 13 11.0
TLY			pmax	pmax		
	comp=Z,55nm,1.4s					
TLY			MLR	MLR		
	comp=Z,546nm,14.0s,MS4.1					
TLY	**Talaya**	**20.36 21**	*e*P		**P**	**11 08 53.5 +2.0**
	comp=Z,65nm,1.4s					
TLY	**Talaya**	**20.36 21**	P		**P**	**11 08 53.7 +2.2**
	SNR=32					
TLY			P			11 08 53.7
	SNR=32					
BJT	**Baijiatuau**	**20.50 64**	*e*P		**P**	**11 08 57.0 +4.0**
BJT			pmax	pmax		
	comp=Z,35nm,0.8s					
BJT	**Baijiatuau**	**20.50 64**	*e*P		**P**	**11 08 57.0 +3.9**
	comp=Z,35nm,0.8s					
BJI	**Beijing**	**20.51 63**	P		**P**	**11 08 52.5 -0.7**
BJI			S		**S**	**11 12 41.8 -0.4**
BJI			pmax	pmax		
	comp=Z,10.0nm,0.6s					
BJI			pmax	pmax		
	comp=Z,200nm,3.6s					
BJI			LR	LR		
	comp=N,9μm,13.2s,MS5.3					
BJI			LR	LR		
	comp=E,2μm,14.1s,MS5.3					
TIA	**Tai'an**	**20.81 74**	*e*P		**P**	**11 08 59.3 +2.8**
TIA			S		**S**	**11 12 47.1 -1.2**
TIA			LR	LR		
	comp=N,2μm,8.9s					
TIA			LR	LR		
	comp=E,1μm,8.7s					
IRK	**Irkutsk**	**21.05 21**	*e*P		**P**	**11 09 00.5 +1.7**
IRK			pmax	pmax		
	comp=Z,439nm,1.7s,mb5.5					
QIZ	**Qiongzhong**	**21.21 127**	P		**P**	**11 09 00.3 -0.6**
QIZ			pP			11 09 04.4
QIZ			PP			11 09 27.7
QIZ			S		**S**	**11 12 56.9 +0.6**
QIZ			pmax	pmax		
	comp=Z,41nm,1.8s,mb4.5					
QIZ			pmax	pmax		
	comp=Z,220nm,2.6s,mb5.0					
QIZ			LR	LR		
	comp=N,2μm,9.5s					
QIZ			LR	LR		
	comp=Z,3μm,10.3s,MS4.9					
QIZ	**Qiongzhong**	**21.21 127**	*e*P		**P**	**11 09 00.8 -0.1**
	comp=Z,24nm,1.1s,mb4.5					
GZH	**Guangzhou**	**21.23 113**	P		**P**	**11 08 59.9 -1.1**
GZH			S		**S**	**11 12 53.7 -2.9**
GZH			LR	LR		
	comp=N,2μm,9.0s					
GZH			LR	LR		
	comp=E,3μm,10.2s					
GZH			LR	LR		
	comp=Z,5μm,9.8s					
ZAA0	**Zalesovo Array**	**21.44 348**	*e*P		**P**	**11 09 02.6 -0.5**
ZALV	**Zalesovo Beam**	**21.44 348**	P		**P**	**11 09 02.6 -0.5**
	comp=Z,78nm,0.9s,mb5.0,baz=159,slow=10,SNR=121					
ZALV			LR	LR		11 19 16.5
	comp=Z,97nm,19.0s,baz=172,slow=42					
QUE	**Quetta**	**21.57 269**	*e*P		**P**	**11 09 05.0 +0.3**
QUE			*e*S		**S**	**11 13 15.0 +12**
POO	**Poona**	**21.87 233**	*e*PKP		**P**	**11 09 06.7 -1.3**
POO			AMb		AMB	11 09 18.6
	comp=Z,102nm,1.0s,mb5.2					
NJ2	**Nanjing**	**22.57 85**	*e*P		**P**	**11 09 16.9 +1.5**
NJ2			pP			11 09 20.6
NJ2			sP		sP	11 09 23.9 +2.5
NJ2			PP			11 09 44.2
NJ2			S		**S**	**11 13 19.2 -3.5**
NJ2			sS		sS	11 13 27.0 -2.4
NJ2			pmax	pmax		
	comp=Z,30nm,1.1s,mb4.6					
NJ2			pmax	pmax		
	comp=Z,200nm,6.1s					
NJ2			LR	LR		
	comp=N,2μm,9.4s					
NJ2			LR	LR		
	comp=E,2μm,10.7s					
NJ2			LR	LR		
	comp=Z,18μm,10.9s					
NVS	**Novosibirsk**	**22.58 347**	*i* P		**P**	**11 09 14.0 -1.2**
NVS			*e*S		**S**	**11 13 05.0 -18**
NVS			pmax	pmax		
	comp=E,91nm,1.5s					
NVS			pmax	pmax		
	comp=Z,343nm,1.5s,mb5.6					
NVS			pmax	pmax		
	comp=N,432nm,1.6s					
NVS			smax			
	comp=N,85nm,2.2s					
NVS			smax			
	comp=E,77nm,1.8s					
DL2	**Dalian**	**24.53 68**	⇑P		**P**	**11 09 36.7 +2.2**
DL2			S		**S**	**11 13 56.5 +1.9**
DL2			pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.2					
DL2			pmax	pmax		
	comp=Z,120nm,4.8s					
DL2			LR	LR		
	comp=N,1μm,17.4s,MS4.5					
DL2			LR	LR		
	comp=E,630nm,17.1s,MS4.5					
DL2			LR	LR		
	comp=Z,1μm,13.2s,MS4.6					
QZH	**Quanzhou**	**24.53 103**	P		**P**	**11 09 37.9 +3.2**
QZH			S		**S**	**11 13 54.3 -0.6**
QZH			LR	LR		
	comp=N,2μm,7.6s					
QZH			LR	LR		
	comp=E,2μm,8.7s					
QZH			LR	LR		
	comp=Z,5μm,11.1s,MS5.3					
SSE	**Sheshan**	**24.71 87**	*e*P		**P**	**11 09 34.0 -2.2**
SSE			pP			11 09 42.6
SSE			sP		sP	11 09 46.2 +3.8
SSE			S		**S**	**11 13 56.1 -1.6**
SSE			pmax	pmax		
	comp=Z,33nm,0.7s,mb5.0					
SSE			pmax	pmax		
	comp=Z,180nm,6.9s					
SSE			LR	LR		
	comp=N,1μm,10.9s,MS4.9					
SSE			LR	LR		
	comp=E,2μm,11.0s,MS4.9					
SSE			LR	LR		
	comp=Z,3μm,11.7s,MS5.0					
BVAR	**Borovoye Array**	**25.25 328**	P		**P**	**11 09 41.4 +0.5**
	comp=Z,24nm,0.9s,mb4.7,baz=133,slow=11,SNR=76					
BVAR			PcP		PcP	11 13 13.4 -0.5
	comp=Z,1.5nm,0.7s,baz=155,slow=4.8,SNR=2.5					
BVAR	**Borovoye Array**	**25.25 328**	P		**P**	**11 09 41.4 +0.5**
BVAR			PcP		PcP	11 13 13.4 -0.5
BRVK	**Borovoye**	**25.31 328**	P		**P**	**11 09 42.0 +0.5**
	comp=Z,375nm,1.0s,mb5.9,SNR=18					
BRVK	**Borovoye**	**25.31 328***d*	*i* P		**P**	**11 09 41.4 -0.1**
BRVK	**Borovoye**	**25.31 328**	*e*P		**P**	**11 09 42.2 +0.7**
	comp=Z,73nm,1.0s,mb5.2					
BRVK	**Borovoye**	**25.31 328**	P		**P**	**11 09 42.3 +0.8**
	SNR=34					
BRVK			P			11 09 42.3
	SNR=34					
HIA	**Hailar**	**26.13 44**	*e*P		**P**	**11 09 50.3 +1.4**
HIA			pmax	pmax		
	comp=Z,34nm,0.9s					
HIA	**Hailar**	**26.13 44**	*e*P		**P**	**11 09 50.3 +1.4**
	comp=Z,34nm,0.9s,mb4.9					
SNY	**Shenyang**	**26.35 62**	⇑P		**P**	**11 09 49.2 -1.8**
SNY			S		**S**	**11 14 23.3 -0.3**
SNY			pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2					
SNY			pmax	pmax		
	comp=Z,120nm,3.6s					
SNY			LR	LR		
	comp=N,750nm,10.8s					
SNY			LR	LR		
	comp=E,950nm,16.3s					
SNY			LR	LR		
	comp=Z,1μm,12.5s,MS4.7					
SSLB	**Suanglung**	**26.97 103**	*e*P		**P**	**11 10 02.0 +5.2**
	comp=Z,80nm,1.6s,mb5.0					
PALK	**Pallekele**	**27.81 205**	P		**P**	**11 10 04.8 +0.5**
	comp=Z,17nm,0.8s,mb4.7,baz=357,slow=7.0,SNR=7.1					
ABKT	**Ailbek**	**27.95 290**	P		**P**	**11 10 07.8 +2.3**
	comp=Z,375nm,0.9s,mb6.0,SNR=18					
CN2	**Changchun**	**28.05 58**	*e*P		**P**	**11 10 06.2 0.0**
CN2			*e*pP		pP	11 10 10.5 -0.1
CN2			*e*S		**S**	**11 14 48.4 -1.9**
CN2			pmax	pmax		
	comp=Z,20nm,1.1s,mb4.7					
CN2			pmax	pmax		
	comp=Z,200nm,4.0s					
CN2			LR	LR		
	comp=N,600nm,12.0s,MS4.8					
CN2			LR	LR		
	comp=E,1μm,12.0s,MS4.8					
CN2			LR	LR		
	comp=Z,2μm,13.0s,MS4.8					
ABKAR	**Akbulak array**	**28.78 314**	*e*P		**P**	**11 10 13.4 +0.7**
	comp=Z,31nm,0.8s,mb5.1					
KSRS	**Korea Array**	**29.46 71**	P		**P**	**11 10 17.4 -1.6**
	comp=Z,5.4nm,0.8s,mb4.3,baz=265,slow=8.8,SNR=17					
KSRS			PcP		PcP	11 13 23.9 -0.4
	comp=Z,0.9nm,0.3s,baz=264,slow=2.0,SNR=6.5					
KSRS			ScP		ScP	11 17 05.8 +0.1
	comp=Z,0.4nm,0.4s,baz=272,slow=3.3,SNR=6.3					
KSRS			LR		LR	11 22 03.1
	comp=Z,378nm,18.6s,MS4.0,baz=260,slow=36					
KSRS	**Korea Array**	**29.46 71**	P		**P**	**11 10 17.4 -1.5**
KSRS						11 13 23.9
KSRS						11 17 05.9
KSRS			pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.2					
KSRS			MLR	MLR		
	comp=Z,378nm,18.6s,MS4.0					
AKTO	**Aktyubinsk**	**30.37 315**	LR		LR	11 24 17.9
	comp=Z,894nm,18.2s,MS4.5,baz=120,slow=40					
PSI	**Prapat**	**30.85 167**	P		**P**	**11 10 31.9 +0.6**
	comp=Z,18nm,0.8s,mb5.0,baz=301,slow=4.6,SNR=8.7					
MDJ	**Mudanjiang**	**31.12 57**	P		**P**	**11 10 31.8 -1.7**
MDJ			PP		PP	11 11 41.5 -2.2
MDJ			S		**S**	**11 15 37.0 -1.5**
MDJ			ScP		ScP	11 17 10.7 -0.3
MDJ			PcS		PcS	11 17 11.9 -0.6
MDJ			pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4					
MDJ			pmax	pmax		
	comp=Z,49nm,4.7s					
MDJ			LR	LR		
	comp=N,4μm,19.8s,MS5.1					
MDJ			LR	LR		
	comp=E,560nm,15.9s,MS5.1					
MDJ			LR	LR		
	comp=Z,670nm,12.3s,MS4.5					
SVE	**Sverdlovsk**	**32.01 327**	⇑*e*P		**P**	**11 10 42.1 +1.0**
SVE			*e*S		**S**	**11 15 57.5 +5.4**
SVE			pmax	pmax		
	comp=Z,109nm,1.0s,mb5.6					
SVE			MLR	MLR		
	comp=Z,1μm,13.0s,MS4.8					
VLA	**Vladivostok**	**32.61 60**	P		**P**	**11 10 46.0 -0.6**
VLA			pmax	pmax		
	comp=Z,35nm,1.4s,mb5.1					
VLA			MLR	MLR		

comp=Z,600nm,12.8s,MS4.5
CLNS Chul'man 32.65 34 *e*P P 11 10 47.6 +0.9
CLNS *e**PP pP 11 10 53.2 +2.0
CLNS *e*PPP 11 12 08.9
CLNS *e*S **S 11 15 55.3 -6.8**
CLNS *e*SSS 11 17 59.4
CLNS pmax pmax
comp=Z,34nm,1.8s,mb5.0
CLNS pmax pmax
comp=N,16nm,1.8s
CLNS pmax pmax
comp=E,25nm,1.5s
CLNS smax
comp=N,138nm,12.8s
CLNS smax
comp=E,48nm,11.9s
CLNS MLR MLR
comp=Z,814nm,11.0s,MS4.7
CLNS MLR MLR
comp=E,595nm,10.0s,MS4.6
CLNS MLR MLR
comp=N,240nm,11.0s,MS4.6
ARU Arti 32.76 325*d i*P P 11 10 48.0 +0.3
ARU *e* 11 11 54.4
ARU *e*PPP 11 12 07.8
ARU *e* 11 13 27.4
ARU S **S 11 16 04.9 +1.1**
ARU SS SS 11 18 00.1 -25
ARU pmax pmax
comp=Z,76nm,1.7s,mb5.3
ARU MLR MLR
comp=Z,821nm,17.0s,MS4.5
ARU Arti 32.76 325 *e*P P 11 10 48.2 +0.5
comp=Z,70nm,1.3s,mb5.4
KLR Kul'dur 33.47 49 *e*P P 11 10 50.5 -3.5
KLR *e*S **S 11 16 14.0 -1.1**
KLR MLR MLR
comp=E,2μm,10.0s
KLR MLR MLR
comp=Z,3μm,10.0s,MS5.2
KDM Kudat 34.76 133 P **P 11 11 08.4 +2.9**
KKM Kota Kinabalu 35.07 135 P **P 11 11 11.5 +3.3**
KKM Kota Kinabalu 35.07 135 *e*P P 11 11 09.8 +1.5
comp=Z,128nm,1.1s,mb5.8
SOKR Solikamsk 35.23 329*c i*P P 11 11 10.4 +1.3
SOKR pmax pmax
comp=Z,110nm,1.6s,mb5.5
SOKR MLR MLR
comp=Z,810nm,17.0s,MS4.5
HABR Khabarovsk 35.45 51 *e*P P 11 11 09.4 -1.8
HABR *e**PP pP 11 11 19.1 +3.4
HABR *e* 11 12 28.7
HABR *e* 11 13 38.3
HABR *e*S **S 11 16 42.8 -2.9**
HABR *e**SS sS 11 16 59.3 +6.3
HABR *e*SS SS 11 19 05.0 -15
HABR *e* 11 21 26.1
HABR pmax pmax
comp=N,17nm,2.0s
HABR pmax pmax
comp=Z,45nm,1.2s,mb5.3
HABR pmax pmax
comp=E,37nm,2.0s
HABR MLR MLR
comp=Z,499nm,15.0s,MS4.4
BTM Bintulu 35.68 142 P **P 11 11 16.5 +3.1**
KSM Kuching 35.84 148 P **P 11 11 18.1 +3.2**
KSM Kuching 35.84 148 *e*P P 11 11 16.1 +1.3
comp=Z,18nm,0.8s,mb5.1
SBUM Sibu 35.89 144 P **P 11 11 18.3 +3.1**
SDKM Sandakan 35.98 134 P **P 11 11 19.3 +3.3**
MAK Makhachkala 36.08 299 *e*P P 11 11 18.9 +2.2
MAK MLR MLR
comp=Z,830nm,12.0s,MS4.7
MYLDM Lahad Datu 37.14 133 P **P 11 11 29.2 +3.3**
TSM Tawau 37.45 134 P **P 11 11 31.6 +3.0**
YAK Yakutsk 37.52 28 *e*P P 11 11 27.1 -1.6
YAK *e**PP pP 11 11 37.0 +3.9
YAK *e* 11 12 51.2
YAK *e* 11 13 49.1
YAK *e*S **S 11 17 06.5 -10**
YAK *e* 11 21 42.9
YAK pmax pmax
comp=Z,12nm,1.3s,mb4.5
YAK pmax pmax
comp=N,4.0nm,1.3s
YAK pmax pmax
comp=E,11nm,1.5s
YAK smax
comp=N,145nm,11.2s
YAK smax
comp=E,97nm,13.3s
YAK MLR MLR
comp=Z,302nm,12.0s,MS4.3
YAK MLR MLR
comp=E,154nm,12.0s,MS4.2
YAK MLR MLR
comp=N,149nm,10.0s,MS4.2
DGRG David-gareji 37.69 297 P **P 11 11 32.4 +2.0**
MJAR Matsushiro Arr 37.74 72 P **P 11 11 29.5 -1.4**
comp=N,4.8nm,1.1s,mb4.2,baz=281,slow=9.6,SNR=13
MJAR PcP PcP 11 13 47.3 -0.4
comp=N,1.8nm,0.9s,baz=302,slow=2.6,SNR=4.1
MJAR LR LR 11 28 12.6
comp=N,462nm,18.9s,MS4.3,baz=285,slow=38
MJAR Matsushiro Arr 37.74 72 P **P 11 11 29.5 -1.4**
MJAR 11 13 47.3
UMR Umm Al-Rimmam 37.85 277 *e*P P 11 11 31.6 -0.2
UMR AMb AMB 11 11 32.8
comp=Z,71nm,1.5s,mb5.2
MIB Mutribah 38.09 277 *e*P P 11 11 33.7 -0.2
MIB AMb AMB 11 11 35.0
comp=Z,148nm,1.1s,mb5.6
TBLG Delisi 38.15 297 *e*P P 11 11 35.4 +1.1
TBLG Delisi 38.15 297 P **P 11 11 35.4 +1.1**
RDF Al-Radifah 38.17 276 *e*P P 11 11 34.5 -0.1
RDF AMb AMB 11 11 36.0
comp=Z,86nm,1.0s,mb5.4
GNI Garni 38.26 294 *e*P P 11 11 37.3 +2.1
GNI Garni 38.26 294 P **P 11 11 37.3 +2.1**
comp=Z,21nm,0.7s,mb5.0,baz=75,slow=0.9,SNR=15
GNI LR LR 11 29 59.2
comp=Z,298nm,20.6s,MS4.1,baz=279,slow=40
GNI Garni 38.26 294*ce*P P 11 11 37.7 +2.5
GNI pmax pmax
comp=Z,93nm,1.2s
GNI Garni 38.26 294 P **P 11 11 38.1 +2.9**
SNR=15
GNI P 11 11 38.1
SNR=15
NAY Al-Naaiem 38.33 277 *e*P P 11 11 35.4 -0.5
NAY AMb AMB 11 11 37.0
comp=Z,63nm,1.2s,mb5.2
KEH Kehvi 38.73 298 P **P 11 11 39.5 +0.4**
ZEI Tsey 38.73 299 *e*P P 11 11 41.1 +1.9
ZEI pmax pmax
comp=Z,54nm,1.7s,mb5.0
CLDR Caldiran 38.99 293 *e*P P 11 11 43.3 +2.0
CUKT Cukurca 39.48 290 *e*P P 11 11 51.3 +5.8
KIV Kislovodsk 39.58 301 *e*P P 11 11 46.0 -0.2
KIV pmax pmax
comp=Z,26nm,1.0s,mb4.9
KIV MLR MLR
comp=Z,213nm,16.0s,MS4.1
KIV Kislovodsk 39.58 301 *e*P P 11 11 48.5 +2.3
comp=Z,26nm,1.0s,mb4.9
KIV Kislovodsk 39.58 301 P **P 11 11 47.4 +1.1**
SNR=7.2
KIV P 11 11 47.4
SNR=7.2
AGRB Hanur-Agry 39.65 294 *e*P P 11 11 48.9 +2.0
DAV Davao City (W) 40.45 122 LR LR 11 31 02.6
comp=Z,858nm,19.0s,MS4.6,baz=1.8,slow=40
YSS Yuzh-Sakhalins 40.49 55 *e*P P 11 11 58.8 +5.1
YSS *e*S **S 11 18 04.0 +2.0**
YSS MLR MLR
comp=E,400nm,14.0s
YSS MLR MLR
comp=Z,500nm,14.0s,MS4.5
YSS Yuzh-Sakhalins 40.49 55 *e*P P 11 11 59.2 +5.5
comp=Z,62nm,1.5s,mb5.1
BCA Borcka 40.51 297 *e*P P 11 11 55.0 +1.1
VRHR Novokhopersk 40.62 312 *e*P P 11 11 54.5 -0.2
VRHR pmax pmax
comp=Z,70nm,0.8s,mb5.3
VRHR pmax pmax
comp=N,40nm,0.9s
VRHR pmax pmax
comp=E,60nm,1.1s
EZM Erzurum 40.86 294 *e*P P 11 11 59.6 +2.7
BTMT Batman 41.00 292 *e*P P 11 11 58.8 +0.7
SOC Sochi 41.75 300 *e*P P 11 12 04.0 -0.1
SOC *e* 11 13 42.9
SOC *e*S **S 11 18 19.9 -0.9**
SOC *e*SSS 11 21 54.6
SOC pmax pmax
comp=Z,58nm,1.2s,mb5.1
VORD Divnogorie 42.07 311 *e*P P 11 12 06.5 -0.2
VORD pmax pmax
comp=Z,50nm,1.0s,mb5.1
VORD pmax pmax
comp=N,20nm,1.5s
VORD pmax pmax
comp=E,70nm,0.9s
VSR Storozhevoye 42.17 312 *e*P P 11 12 07.3 -0.1
VSR pmax pmax
comp=Z,50nm,1.1s,mb5.1
VSR pmax pmax
comp=N,10.0nm,1.3s
VSR pmax pmax
comp=E,30nm,0.9s
GUMT Gumushane 42.23 296 *e*P P 11 12 09.4 +1.3
TIXI Tiksi 43.21 16 *e*P P 11 12 15.0 -0.7
TIXI pmax pmax
comp=Z,23nm,1.0s,mb4.9
TIXI Tiksi 43.21 16 *e*P P 11 12 15.0 -0.7
comp=Z,23nm,1.0s,mb4.9
ANN Anapa 43.31 302 *e*P P 11 12 15.7 -1.1
ANN *e* 11 13 53.8
ANN pmax pmax
comp=Z,57nm,1.3s,mb5.1
ANN MLR MLR
comp=Z,580nm,18.0s,MS4.5
MOS Moscow 43.57 318 *e*P P 11 12 17.9 -0.9
MOS *e* 11 14 00.8
MOS pmax pmax
comp=Z,300nm,1.2s,mb5.9
MOS pmax pmax
comp=Z,190nm,1.1s,mb5.7
MOS MLR MLR
comp=Z,600nm,16.0s,MS4.6
OBN Obninsk 44.09 317⇑*i*P P 11 12 23.6 +0.7
OBN *e* 11 14 06.0
OBN *e*S **S 11 19 03.9 +9.0**
OBN *e*SS SS 11 22 09.9 -2.1
OBN pmax pmax
comp=Z,107nm,1.6s,mb5.3
OBN MLR MLR
comp=Z,500nm,17.0s,MS4.5
SVSK Karacayir 44.18 295 *e*P P 11 12 25.6 +1.7
KOZT Kozan 45.54 292 *e*P P 11 12 35.0 +0.3
SIM Simferopol' 45.65 303 P **P 11 12 38.0 +2.5**
SIM pmax pmax
comp=Z,11nm,0.8s,mb4.8
SIM MLR MLR
comp=Z,280nm,19.2s,MS4.2
ASF Jabal al Asfar 46.01 285 P **P 11 12 40.0 +1.5**
comp=Z,27nm,1.0s,mb5.1,baz=346,slow=3.0,SNR=18
ASF LR LR 11 35 30.5
comp=Z,313nm,19.9s,MS4.3,baz=134,slow=41
TOS Tosya 46.24 297 *e*P P 11 12 41.1 +0.9
BR131 Keskin Array S 46.76 296 *e*P P 11 12 44.8 +0.5
comp=Z,27nm,0.8s,mb5.2
BRTR Keskin Array B 46.76 296 P **P 11 12 44.5 +0.1**
comp=Z,30nm,0.8s,mb5.2,baz=98,slow=7.6,SNR=119
MMAI Mount Meron Ar 46.97 286 P **P 11 12 47.1 +1.0**
comp=Z,13nm,0.9s,mb4.9,baz=73,slow=11,SNR=6.1
MMAI LR LR 11 36 14.4
comp=Z,202nm,19.9s,MS4.1,baz=80,slow=41
SULT Sultanhani-AKS 47.17 294 *e*P P 11 12 47.4 -0.2
SAFT Safranbolu 47.20 298 *e*P P 11 12 46.9 -0.9
LOD Lodumlu 47.39 296 *e*P P 11 12 49.7 +0.5
LVZ Lovozero 47.59 334*ce*P P 11 12 50.9 +0.5
LVZ pmax pmax
comp=Z,62nm,1.2s,mb5.5
SEY Seymchan 47.63 33*ce*P P 11 12 51.5 +0.7
JOF Joensuu 47.84 327 *e*p P 11 12 52.8 +0.4
comp=Z,41nm,1.2s,mb5.3
JOF Joensuu 47.84 327 *e*p P 11 12 52.8 +0.4
comp=Z,41nm,1.2s,mb5.3
APA Apatity 47.95 334⇑*i*P P 11 12 44.6 -8.6
APA pmax pmax
comp=Z,18nm,1.0s,mb5.1
APA MLR MLR
comp=Z,1μm,14.0s,MS5.1
EIL Elat 48.37 282 P **P 11 12 57.3 +0.3**
comp=Z,72nm,0.9s,mb5.7,baz=44,slow=3.0,SNR=41
EIL LR LR 11 36 54.1
comp=Z,448nm,19.6s,MS4.5,baz=94,slow=40
MDU Mudurnu 48.44 297 *e*P P 11 12 57.5 +0.1
AKASG Malin Array Be 48.45 311 P **P 11 12 56.6 -0.6**
comp=Z,24nm,1.0s,mb5.2,baz=80,slow=6.4,SNR=51
AKASG PcP PcP 11 14 22.9 -0.4
comp=Z,4.3nm,0.9s,baz=74,slow=3.6,SNR=4.5
AKASG PP PP 11 14 51.1 +1.3
comp=Z,2.9nm,0.7s,baz=76,slow=8.2,SNR=4.3
AKASG LR LR 11 37 28.4
comp=Z,573nm,19.0s,MS4.6,baz=105,slow=41
AKASG Malin Array Be 48.45 311 P **P 11 12 56.7 -0.6**
AKASG 11 14 22.9
AKASG 11 14 51.1
AKBB Malin Array Si 48.45 311 *e*P P 11 12 56.6 -0.7
KIEV Kiev 48.46 311 *e*P P 11 12 56.2 -1.2
KIEV pmax pmax
comp=Z,55nm,1.3s,mb5.4
KIEV Kiev 48.46 311 *e*P P 11 12 56.2 -1.1
comp=Z,55nm,1.3s,mb5.4
KIS Kishinev 49.08 306 *e*P P 11 13 03.0 +0.8
MICGM Minsk 49.09 316 *e*P P 11 13 00.0 -2.1
MNK Minsk 49.12 316 *e*P P 11 13 00.0 -2.3
MNK pmax pmax
comp=Z,80nm,1.5s,mb5.5
SUTC Sutluce-Ispart 49.27 293 *e*P P 11 13 02.4 -1.4
ISP Isparta 49.56 294⇑P **P 11 13 06.2 +0.2**
ISP Isparta 49.56 294 P **P 11 13 06.4 +0.4**
ISP Isparta 49.56 294⇑*i*P **P 11 13 06.2 +0.2**
VSU Vasula 49.70 321 *e*P P 11 13 07.4 +0.6
IDID Didziasalis 49.72 317 *e*P P 11 13 07.8 +0.9
IDID AMB AMB 11 13 08.5
comp=Z,12nm,1.1s,mb4.8
TIRR Tirgusor 49.74 303⇓P **P 11 13 07.3 0.0**
TIRR Tirgusor 49.74 303⇓*i*P **P 11 13 07.3 0.0**
ATD Arta Tunnel 49.83 256 P **P 11 13 07.7 -0.6**
comp=Z,5.0nm,0.3s,mb5.0,baz=68,slow=23,SNR=4.1
IZAR Zarasai 49.99 318 *e*P P 11 13 09.7 +0.7
IZAR AMB AMB 11 13 10.5
comp=Z,17nm,1.2s,mb5.0
PETK Petropavlovsk- 50.00 46 P **P 11 13 08.4 -0.7**
comp=Z,8.6nm,0.8s,mb4.8,baz=159,slow=2.5,SNR=4.7
KAF Kangasniemi 50.06 326 *e*P P 11 13 03.3 -6.1
KAF pmax pmax
comp=Z,23nm,1.1s,mb5.1
KAF Kangasniemi 50.06 326 *e*p P 11 13 03.3 -6.1
comp=Z,23nm,1.1s,mb5.1
KAF Kangasniemi 50.06 326 *e*p P 11 13 03.3 -6.1
comp=Z,23nm,1.1s,mb5.1
ISAL Salakas 50.06 317 *e*P P 11 13 10.3 +0.7
ISAL AMB AMB 11 13 11.1
comp=Z,20nm,1.0s,mb5.1
FINES FINESS Array B 50.13 325 P **P 11 13 10.2 +0.2**
comp=Z,4.9nm,0.6s,mb4.8,baz=95,slow=10,SNR=10
FINES LR LR 11 35 29.5
comp=Z,549nm,18.4s,MS4.6,baz=70,slow=37
PET Petropavlovsk 50.58 46 *e*P P 11 13 11.9 -1.6
PET pmax pmax
comp=Z,30nm,1.1s,mb5.1
PET MLR MLR
comp=Z,300nm,18.0s,MS4.3
PET Petropavlovsk 50.58 46 *e*P P 11 13 15.4 +1.9
comp=Z,31nm,1.1s,mb5.2
VRI Vrincioaia 50.68 305 P **P 11 13 15.0 +0.7**
VRI Vrincioaia 50.68 305⇑*i*P **P 11 13 15.0 +0.7**
KEV Kevo 50.72 336 *e*P P 11 13 14.2 -0.1
KEV pmax pmax
comp=Z,27nm,0.8s,mb5.2
KEV Kevo 50.72 336 *e*p P 11 13 14.2 -0.1
comp=Z,26nm,0.8s,mb5.2
KEV Kevo 50.72 336 *e*p P 11 13 14.2 -0.1
comp=Z,26nm,0.8s,mb5.2
PLOR Plostina 50.73 305 P **P 11 13 16.0 +1.2**
ARCES ARCESS Array B 51.20 336 P **P 11 13 18.2 +0.3**
comp=Z,14nm,0.8s,mb5.0,baz=98,slow=7.1,SNR=36
ARCES PcP PcP 11 14 32.9 -0.2
comp=Z,7.1nm,0.9s,baz=72,slow=5.2,SNR=5.1
ARCES ARCESS Array B 51.20 336 P **P 11 13 18.2 +0.3**
ARCES PcP PcP 11 14 32.9 -0.2
MLR Muntele Rosu 51.28 304 P **P 11 13 19.7 +0.8**
MLR Muntele Rosu 51.28 304⇓*i*P **P 11 13 19.8 +0.9**
BURAR Bucovina Array 51.42 307⇑P **P 11 13 20.1 +0.2**
BURAR Bucovina Array 51.42 307 P **P 11 13 20.2 +0.4**
BURAR Bucovina Array 51.42 307⇑*i*P **P 11 13 20.1 +0.2**
BUR08 Bucovina Ar. S 51.42 307 *e*P P 11 13 20.0 +0.1
LVV L'vov 51.86 310⇓*i*P **P 11 13 22.2 -0.9**
LVV MLR MLR
comp=Z,500nm,20.0s,MS4.5
SUW Suwalki 51.87 316 *e*P P 11 13 23.6 +0.4
KWP Kalwaria Pacla 52.73 310 *e*P P 11 13 30.5 +0.9
KWP Kalwaria Pacla 52.73 310⇑P **P 11 13 30.3 +0.6**
KWP Kalwaria Pacla 52.73 310⇑*i*P **P 11 13 30.3 +0.6**
KOLS Kolonicke sedl 53.13 309 *e*P P 11 13 33.0 +0.4
KOLS pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
KOLS Kolonicke sedl 53.13 309 *e*P P 11 13 33.0 +0.4
comp=Z,8.2nm,1.1s,mb4.6
KOLS *e* pP 11 13 37.6 +0.4
KOLS Kolonicke sedl 53.13 309 *e*P P 11 13 33.0 +0.4
KOLS *e*pP pP 11 13 37.6 +0.4
UZH Uzhgorod 53.17 309⇓*i*P **P 11 13 33.0 +0.1**
UZH *e*S **S 11 21 00.0 -3.1**
UZH MLR MLR
comp=N,400nm,16.0s,MS4.9
UZH MLR MLR
comp=E,700nm,16.0s,MS4.9
UZH MLR MLR
comp=Z,400nm,16.0s,MS4.6
DRGR 53.24 307 P **P 11 13 34.0 +0.5**
DRGR 53.24 307⇑*i*P **P 11 13 34.2 +0.7**
CRVS Cervenica-Dubn 53.66 309 *e*P P 11 13 36.6 +0.1
CRVS pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
CRVS Cervenica-Dubn 53.66 309 *e*P P 11 13 36.6 +0.1
comp=Z,8.6nm,1.2s,mb4.6
CRVS Cervenica-Dubn 53.66 309 *e*P P 11 13 36.6 +0.1
STHS Stebnicka Huta 53.71 310 *e*P P 11 13 37.0 +0.2
STHS pmax pmax
comp=Z,13nm,1.1s,mb4.8
STHS Stebnicka Huta 53.71 310 *e*P P 11 13 37.0 +0.2
comp=Z,13nm,1.1s,mb4.8
STHS Stebnicka Huta 53.71 310 *e*P P 11 13 37.0 +0.2
BILL Bilibino 53.84 27⇑*i*P **P 11 13 37.3 -0.2**
BILL *e* 11 14 43.2
BILL pmax pmax
comp=Z,40nm,1.2s,mb5.2
BILL MLR MLR
comp=Z,300nm,15.0s,MS4.5
BILL Bilibino 53.84 27 *e*P P 11 13 38.0 +0.4
comp=Z,32nm,1.1s,mb5.2
BZS Buzias 54.24 305⇑P **P 11 13 40.1 -0.6**
BZS Buzias 54.24 305⇑*i*P **P 11 13 40.1 -0.6**
NIE Niedzica 54.31 310 *e*P P 11 13 42.4 +1.2
KECS Kecovo 54.38 309 *e*P P 11 13 42.2 +0.5
KECS pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
KECS Kecovo 54.38 309 *e*P P 11 13 42.2 +0.5
comp=Z,8.3nm,1.0s,mb4.6
KECS Kecovo 54.38 309 *e*P P 11 13 42.2 +0.5
OJC Ojcow 54.48 311 *e*P P 11 13 41.7 -0.8
PSZ Piszkesteto 54.88 308⇑P **P 11 13 46.0 +0.6**
PSZ Piszkesteto 54.88 308⇑*e*P **P 11 13 49.6 +4.2**
PSZ Piszkesteto 54.88 308⇑*i*P **P 11 13 46.0 +0.6**
SPITS Spitsbergen Ar 54.90 346 LR LR 11 40 59.5
comp=Z,316nm,19.1s,MS4.4,baz=130,slow=40
VYHS Vyhne 55.45 309 *e*P P 11 13 50.2 +0.7
VYHS pmax pmax
comp=Z,20nm,1.5s,mb4.9
VYHS Vyhne 55.45 309 *e*P P 11 13 50.2 +0.7
comp=Z,20nm,1.5s,mb4.9
VYHS *e* pP 11 13 55.0 +0.9
VYHS Vyhne 55.45 309 *e*P P 11 13 50.2 +0.7
VYHS *e*pP pP 11 13 55.0 +0.9
OKC Ostrava-Krasne 55.60 311 *e*P P 11 13 50.7 +0.1
OKC MLR MLR
comp=Z,300nm,12.5s,MS4.6
OKC Ostrava-Krasne 55.60 311 *e*P P 11 13 50.7 +0.1
OKC *e*pP pP 11 13 55.2 0.0
OKC AMS AMS 11 39 40.0
comp=Z,300nm,12.5s
MORC Moravsky Berou 56.00 311⇓P **P 11 13 53.6 +0.2**
MORC Moravsky Berou 56.00 311 *e*P P 11 13 53.6 +0.3
MORC Moravsky Berou 56.00 311⇓*i*P **P 11 13 53.5 +0.1**
PKSM Moragy 56.11 307⇑P **P 11 13 54.2 -0.1**
PKSM Moragy 56.11 307⇑*i*P **P 11 13 54.2 -0.1**
HFS Hagfors 56.26 324 P **P 11 13 54.9 -0.2**
comp=Z,27nm,0.9s,mb5.3,baz=99,slow=9.5,SNR=8.4
HFS Hagfors 56.26 324 P **P 11 13 54.9 -0.2**
DPC Dobruska-Polom 56.64 312 *e*P P 11 13 58.4 +0.5
DPC MLR MLR
comp=Z,400nm,15.1s,MS4.6
DPC Dobruska-Polom 56.64 312 *e*P P 11 13 58.4 +0.5
DPC *e*pP pP 11 14 02.4 -0.2
DPC AMS AMS 11 40 40.0
comp=Z,400nm,15.1s
VRAC Vranov 56.71 311 P **P 11 13 58.8 +0.3**
comp=Z,6.4nm,0.5s,mb4.9,baz=95,slow=4.1,SNR=15
VRAC Vranov 56.71 311 P **P 11 13 58.8 +0.3**
VRAC pmax pmax
comp=Z,6.0nm,0.5s
VRAC Vranov 56.71 311⇑P **P 11 13 59.3 +0.8**
VRAC Vranov 56.71 311⇑*i*P **P 11 13 59.3 +0.8**
UPC Upice 56.79 312 *e*P P 11 13 59.6 +0.5
UPC Upice 56.79 312 *e*P P 11 13 59.6 +0.5
UPC *e*pP pP 11 14 03.9 +0.2
SOP Sopron 57.13 309⇑*e*P **P 11 14 02.2 +0.7**
NB2 NORSAR Subarra 57.31 325 P **P 11 14 01.7 -0.9**
comp=Z,30nm,0.9s,mb5.3,baz=80,slow=7.4
NOA NORSAR Array B 57.31 325 P **P 11 14 01.9 -0.6**
comp=Z,20nm,0.8s,mb5.2,baz=80,slow=7.1,SNR=33
NOA LR LR 11 40 46.6
comp=Z,612nm,18.1s,MS4.8,baz=85,slow=38
TREC Trest 57.41 311 AMS AMS 11 42 50.0
comp=Z,500nm,14.9s
NAO01 NORSAR Array S 57.51 325 *e*P P 11 14 03.5 -0.4
comp=Z,18nm,0.8s,mb5.2
CONA Conrad Observa 57.52 309⇓*i*P **P 11 14 04.4 +0.2**
comp=Z,37nm,1.0s,mb5.4,SNR=21
CSNA Conrad Observa 57.52 309⇓*i*P **P 11 14 04.4 +0.2**
comp=Z,34nm,1.0s,mb5.3
PVCC Panska Ves 57.68 312 *e*P P 11 14 05.8 +0.5
PVCC Panska Ves 57.68 312 *e*P P 11 14 05.8 +0.5
PVCC *e*pP pP 11 14 09.8 -0.2
PRU Pruhonice 57.83 312 *e*P P 11 14 07.5 +1.1
PRU MLR MLR
comp=Z,500nm,15.8s,MS4.7
PRU Pruhonice 57.83 312 *e*P P 11 14 07.5 +1.1
PRU *e*pP pP 11 14 11.5 +0.5
PRU AMS AMS 11 43 50.0
comp=Z,500nm,15.8s
ARSA Arzberg 57.92 309⇓*i*P **P 11 14 06.8 -0.2**
comp=Z,16nm,1.3s,mb4.9
BRG Berggiesshubel 57.98 313 *i* P **P 11 14 07.5 0.0**
comp=Z,29nm,1.1s,mb5.2
BRG *e* pP 11 14 11.6 -0.4
comp=Z,18nm,1.0s
BRG comp=Z,623nm,16.1s
BRG comp=N,762nm,18.6s
BRG comp=E,242nm,18.6s
PERS Pernice 58.35 308 *i* P **P 11 14 09.6 -0.5**
SOKA Soboth 58.40 308⇓*i*P **P 11 14 10.1 -0.3**
comp=E,28nm,1.1s,mb5.2
CLL Collm 58.45 314 *e*P P 11 14 10.7 0.0
comp=Z,17nm,1.1s,mb5.0
CLL *e*pP pP 11 14 14.4 -0.9
CLL Collm 58.45 314⇓*i*P **P 11 14 10.2 -0.5**
CLL pmax pmax
comp=Z,18nm,1.1s,mb5.0
CLL MLR MLR
comp=Z,300nm,19.2s,MS4.4
CLL Collm 58.45 314⇓*i*P **P 11 14 10.2 -0.5**
comp=Z,18nm,1.1s,mb5.0
CLL *i* pP 11 14 14.1 -1.2
CLL LR LR

comp=Z,300nm,19.2s,MS4.4
CLL Collm 58.45 314 ⇓ *i* P **P 11 14 10.2 -0.5**
comp=Z,18nm,1.1s,mb5.0
CLL *i* sP sP 11 14 14.1 -3.0
CLL *e*(PcP) PcP 11 15 04.0 +2.8
CLL *e*SS SS 11 26 12.0 +6.9
CLL *e* 11 27 12.0
CLL LV 11 43 00.0
comp=Z,300nm,19.2s
MOA Molln 58.57 310 ⇓ *i* P **P 11 14 11.4 -0.2**
comp=Z,17nm,1.0s,mb5.0,SNR=5.9
BOJS Bojanci 58.59 307 *i* P **P 11 14 11.3 -0.5**
GEC2 GERESS Array S 58.66 311 *e*P **P 11 14 12.4 +0.2**
comp=Z,48nm,1.5s,mb5.3
GEC2 *e*pP pP 11 14 16.6 -0.3
GEC2 GERESS Array S 58.66 311 *e*P **P 11 14 12.4 +0.2**
GEC2 pmax pmax
comp=Z,48nm,1.5s,mb5.3
GERES GERESS Array B 58.66 311 P **P 11 14 12.7 +0.5**
comp=Z,9.5nm,1.0s,mb4.8,baz=77,slow=7.0,SNR=43
GERES LR LR 11 44 19.9
comp=Z,468nm,18.4s,MS4.6,baz=79,slow=41
KHC Kasperske Hory 58.66 311 *e*P **P 11 14 12.3 +0.1**
KHC MLR MLR
comp=Z,600nm,10.5s,MS5.0
KHC Kasperske Hory 58.66 311 *e*P **P 11 14 12.7 +0.5**
comp=Z,29nm,1.7s,mb5.0
KHC Kasperske Hory 58.66 311 *e*P **P 11 14 12.3 +0.1**
KHC *e*pP pP 11 14 16.1 -0.8
KHC AMS AMS 11 43 20.0
comp=Z,600nm,10.5s
OBKA Obir 58.77 308 ⇓ *i* P **P 11 14 12.8 -0.2**
comp=Z,14nm,1.3s,mb4.8
VISS Visnje 58.78 307 *i* P **P 11 14 12.8 -0.3**
TANN Tannenbergstha 59.01 313 *e*P **P 11 14 14.6 0.0**
comp=Z,20nm,1.2s,mb5.0
NKC Novy Kostel 59.07 313 *e*P **P 11 14 15.5 +0.5**
NKC MLR MLR
comp=Z,600nm,13.9s,MS4.9
NKC Novy Kostel 59.07 313 *e*P **P 11 14 15.5 +0.5**
NKC *e*pP pP 11 14 19.4 -0.3
NKC AMS AMS 11 41 20.0
comp=Z,600nm,13.9s
WET Wettzell 59.10 311 *e*P **P 11 14 15.5 +0.2**
comp=Z,25nm,1.3s,mb5.1
WET *e*pP pP 11 14 19.5 -0.4
WET Wettzell 59.10 311 *e*P **P 11 14 15.5 +0.2**
WET pmax pmax
comp=Z,25nm,1.3s,mb5.1
JAVS Javornik 59.27 307 *i* P **P 11 14 16.3 -0.1**
VOY Vojsko 59.34 308 *e*P **P 11 14 16.5 -0.5**
VOY *e* pP 11 14 19.7 -1.9
ROTZ Rotzenmuhle 59.35 312 *e*P **P 11 14 17.4 +0.4**
comp=Z,46nm,1.3s,mb5.3
ROTZ *e*pP pP 11 14 21.9 +0.3
BSEG Bad Segeberg 59.35 317 *e*P **P 11 14 17.6 +0.7**
comp=Z,32nm,1.1s,mb5.3
BSEG *e*pP pP 11 14 21.6 +0.1
KBA Koelnbreinsper 59.39 309 ⇓ *i* P **P 11 14 16.9 -0.4**
comp=Z,14nm,1.1s,mb4.9,SNR=8.8
MOX Moxa 59.47 313 *e*P **P 11 14 18.1 +0.3**
comp=Z,29nm,1.4s,mb5.1
MOX Moxa 59.47 313 *e*P **P 11 14 17.8 0.0**
comp=Z,28nm,1.4s,mb5.1
MOX *e*pP pP 11 14 22.5 +0.1
MOX Moxa 59.47 313 *e*P **P 11 14 18.1 +0.3**
MOX pmax pmax
comp=Z,29nm,1.4s,mb5.1
TIP Timpagrande 59.50 299 *e*P **P 11 14 17.3 -0.9**
comp=Z,14nm,1.1s,mb4.9
TRI Trieste 59.52 307 *e*P **P 11 14 17.9 -0.3**
TRI pmax pmax
comp=Z,34nm,1.0s,mb5.3
TRI Trieste 59.52 307 *e*P **P 11 14 17.9 -0.4**
comp=Z,34nm,1.0s,mb5.3
RJOB Jochberg 59.56 310 *e*P **P 11 14 18.5 +0.1**
comp=Z,79nm,2.2s,mb5.4
KAKA Kakadu 59.67 133 *e*P **P 11 14 20.7 +1.1**
comp=Z,14nm,0.8s,mb5.0
SMY Shemya 59.83 44 *e*P **P 11 14 19.9 -0.3**
SMY pmax pmax
comp=Z,109nm,0.9s,mb5.9
SMY Shemya 59.83 44 *e*P **P 11 14 19.9 -0.3**
comp=Z,109nm,0.9s,mb5.9
NRDL Niedersach Rie 59.86 316 *e*P **P 11 14 21.0 +0.6**
comp=Z,56nm,1.2s,mb5.5
NRDL *e*pP pP 11 14 25.0 -0.1
CLZ Clausthal 59.89 315 *e*P **P 11 14 21.0 +0.4**
comp=Z,54nm,1.1s,mb5.5
CLZ *e*pP pP 11 14 24.6 -0.7
CLZ Clausthal 59.89 315 *e*P **P 11 14 21.0 +0.4**
CLZ pmax pmax
comp=Z,54nm,1.1s,mb5.5
GRA1 Grafenberg Arr 59.98 312 *e*P **P 11 14 22.0 +0.7**
comp=Z,62nm,1.3s,mb5.5
GRA1 *e*pP pP 11 14 26.1 +0.1
GRA1 *e*PP PP 11 16 32.6 -0.8
GRA1 LR LR
comp=Z,300nm,20.1s,MS4.4
GRF Grafenberg Arr 59.98 312 *e*P **P 11 14 22.0 +0.7**
comp=Z,62nm,1.3s,mb5.5
GRF *e*pP pP 11 14 26.1 +0.1
GRF *e*PP PP 11 16 32.6 -0.8
GRF *e*L 11 42 28.9
comp=Z,317nm,20.1s
GRF Grafenberg Arr 59.98 312 *e*P **P 11 14 22.0 +0.7**
GRF *e* 11 16 32.6
GRF pmax pmax
comp=Z,62nm,1.3s,mb5.5
GRF MLR MLR
comp=Z,300nm,20.1s,MS4.4
GRF Grafenberg Arr 59.98 312 *e*P **P 11 14 22.0 +0.7**
GRF *e* 11 16 32.6
GRF pmax pmax
comp=Z,62nm,1.3s,mb5.5
GRF MLR MLR
comp=Z,300nm,20.1s,MS4.4
FITZ Fitzroy Crossi 60.20 143 *e*P **P 11 14 25.0 +1.9**
comp=Z,20nm,0.9s,mb5.2
FITZ Fitzroy Crossi 60.20 143 LR LR 11 44 32.0
comp=Z,129nm,19.8s,MS4.1,baz=324,slow=40
FUR Furstenfeldbru 60.40 311 *e*P **P 11 14 24.9 +0.6**
comp=Z,132nm,1.6s,mb5.7
FUR *e*pP pP 11 14 28.8 -0.1
FUR Furstenfeldbru 60.40 311 *e*P **P 11 14 24.9 +0.6**
FUR pmax pmax
comp=Z,132nm,1.6s,mb5.7
CEL Celeste 60.45 299 *e*P **P 11 14 23.8 -0.9**
comp=Z,51nm,1.1s,mb5.5
WTTA Wattenberg 60.45 309 ⇓ *i* P **P 11 14 24.1 -0.5**
comp=Z,25nm,1.3s,mb5.1,SNR=7.8
WATA Walderalm 60.47 310 ⇑ *i* P **P 11 14 24.4 -0.3**
comp=Z,8.3nm,0.8s,mb4.8
RETA Reutte 60.94 310 ⇓ *i* P **P 11 14 27.3 -0.6**
comp=Z,34nm,1.3s,mb5.3,SNR=13
PIEI Pieia 61.04 305 P **P 11 14 28.2 -0.5**
FETA Feichten 61.11 309 ⇓ *i* P **P 11 14 28.4 -0.7**
comp=Z,20nm,1.2s,mb5.1,SNR=9.1
IBBN Ibbenburen 61.29 316 *e*P **P 11 14 30.5 +0.3**
comp=Z,20nm,0.6s,mb5.4
IBBN *e*pP pP 11 14 35.0 +0.1
TOD Tromm 61.51 313 *e*P **P 11 14 31.4 -0.3**
STU Stuttgart 61.53 312 *e*P **P 11 14 32.2 +0.3**
comp=Z,72nm,1.6s,mb5.5
STU *e*pP pP 11 14 37.2 +0.7
TNS Taunus Mts 61.53 313 *e*P **P 11 14 31.2 -0.7**
comp=Z,23nm,1.0s,mb5.3
TNS *e*pP pP 11 14 35.9 -0.6
TNS Taunus Mts 61.53 313 *e*P **P 11 14 31.2 -0.7**
TNS pmax pmax
comp=Z,23nm,1.0s,mb5.3
DAVA Damuels 61.58 310 ⇓ *i* P **P 11 14 31.6 -0.6**
comp=Z,25nm,1.4s,mb5.2,SNR=6.7
DAVOX Davos/Dischmat 61.74 309 P **P 11 14 33.0 -0.4**
comp=Z,19nm,1.1s,mb5.2,baz=118,slow=4.1,SNR=19
KMBO Kilima Mbogo 61.79 248 P **P 11 14 34.4 +0.3**
comp=Z,3.3nm,0.8s,mb4.5,baz=31,slow=8.3,SNR=7.9
KMBO Kilima Mbogo 61.79 248 P **P 11 14 34.7 +0.6**
SNR=5.6
KMBO P 11 14 34.7
SNR=5.6
BUG Bochum--Univer 61.85 315 *e*P **P 11 14 34.1 +0.1**
comp=Z,36nm,1.3s,mb5.3
BUG *e*pP pP 11 14 38.6 -0.1
BFO Black Forest 62.22 311 P **P 11 14 36.7 +0.2**
comp=Z,91nm,1.3s,mb5.8,SNR=5.7
BFO Black Forest 62.22 311 *e*P **P 11 14 35.8 -0.7**
comp=Z,32nm,1.4s,mb5.3
BFO *e*pP pP 11 14 40.2 -1.0
BFO Black Forest 62.22 311 *e*P **P 11 14 35.8 -0.7**
BFO pmax pmax
comp=Z,32nm,1.4s,mb5.3
LANF Langenberg 62.33 312 *e*P **P 11 14 37.4 +0.1**
RUP Ruppelstein 62.55 313 *e*P **P 11 14 38.8 +0.1**
VAI Varese 62.78 309 P **P 11 14 38.9 -1.4**
VAI pmax pmax
comp=Z,47nm,1.1s,mb5.5
VAI Varese 62.78 309 P **P 11 14 38.9 -1.4**
comp=Z,47nm,1.1s,mb5.5
CDF Champ du Feu 62.85 312 *e*P **P 11 14 40.3 -0.5**
comp=Z,72nm,1.3s,mb5.3
CDF Champ du Feu 62.85 312 *e*P **P 11 14 40.3 -0.5**
CDF pmax pmax
comp=Z,36nm,1.3s,mb5.3
CDF Champ du Feu 62.85 312 *e*P **P 11 14 40.3 -0.5**
comp=Z,36nm,1.3s,mb5.3
MEM Membach 62.88 314 P **P 11 14 41.5 +0.6**
comp=Z,11nm,1.6s,mb4.7
MEM XP sP 11 14 45.2 -2.2
ECH Echery 62.99 312 *e*P **P 11 14 41.2 -0.5**
WLF Walferdange 63.11 313 P **P 11 14 43.3 +0.8**
comp=Z,40nm,1.5s,mb5.3
WLF XP sP 11 14 47.7 -1.2
WLF Walferdange 63.11 313 *e*P **P 11 14 43.5 +1.0**
comp=Z,81nm,1.3s,mb5.7
WLF *e*pP pP 11 14 47.1 0.0
WLF Walferdange 63.11 313 *e*P **P 11 14 43.6 +1.1**
WLF pmax pmax
comp=Z,83nm,1.3s,mb5.7
WLF Walferdange 63.11 313 *e*P **P 11 14 43.6 +1.1**
comp=Z,83nm,1.3s,mb5.7
MOF Molkenrain 63.13 311 *e*P **P 11 14 42.5 -0.2**
HINF Hinteralfeld 63.32 311 *e*P **P 11 14 43.2 -0.7**
BCLA Clavier 63.37 314 P **P 11 14 44.8 +0.7**
BCLA AP pP 11 14 48.0 -0.8
LOMF Lomont 63.51 311 *e*P **P 11 14 44.4 -0.7**
HAU Haudompre 63.58 312 *e*P **P 11 14 44.9 -0.7**
HAU *e*MLR MLR
comp=Z,398nm,19.8s,MS4.3
HAU Haudompre 63.58 312 *e*P **P 11 14 44.9 -0.7**
HAU LR LR
comp=Z,400nm,19.8s,MS4.6
THEF They Montfort 63.72 312 *e*P **P 11 14 46.2 -0.3**
GIVF Givet 63.77 314 *e*P **P 11 14 46.4 -0.4**
UCC Uccle 63.79 315 P **P 11 14 47.0 0.0**
PGF Pioggiola 63.82 305 *e*P **P 11 14 46.6 -0.7**
comp=Z,74nm,1.3s,mb5.3
PGF Pioggiola 63.82 305 *e*P **P 11 14 46.6 -0.7**
PGF pmax pmax
comp=Z,37nm,1.3s,mb5.2
PGF Pioggiola 63.82 305 *e*P **P 11 14 46.6 -0.7**
comp=Z,37nm,1.3s,mb5.3
DOU Dourbes 63.90 314 P **P 11 14 47.8 +0.1**
comp=Z,7.7nm,1.5s,mb4.5
DOU AP pP 11 14 51.0 -1.3
ALE Alert 63.91 356 P **P 11 14 46.8 -0.5**
comp=Z,55nm,1.2s,mb5.5,SNR=5.8
SNF Seneffe 63.94 315 P **P 11 14 48.0 +0.1**
comp=Z,11nm,1.5s,mb4.7
SNF XP sP 11 14 52.9 -1.4
LSD Lago del Serru 63.99 309 P **P 11 14 48.4 0.0**
LSD pmax pmax
comp=Z,71nm,1.3s,mb5.5
LSD Lago del Serru 63.99 309 P **P 11 14 48.4 0.0**
comp=Z,71nm,1.3s,mb5.5
BAIF Baives 64.15 314 *e*P **P 11 14 49.1 -0.2**
comp=Z,54nm,1.3s,mb5.1
BAIF Baives 64.15 314 *e*P **P 11 14 49.1 -0.2**
BAIF pmax pmax
comp=Z,27nm,1.3s,mb5.1
BAIF Baives 64.15 314 *e*P **P 11 14 49.1 -0.2**
comp=Z,27nm,1.3s,mb5.1
MEZF Maizieres J'vi 64.20 312 *e*P **P 11 14 49.5 -0.2**
LPG La Plagne 64.23 309 *e*P **P 11 14 50.2 +0.3**
comp=Z,212nm,1.4s,mb5.7
LPG La Plagne 64.23 309 *e*P **P 11 14 50.2 +0.3**
LPG pmax pmax
comp=Z,106nm,1.4s,mb5.7
LPG La Plagne 64.23 309 *e*P **P 11 14 50.2 +0.3**
comp=Z,106nm,1.4s,mb5.7
LPL La Plagne 64.23 309 *e*P **P 11 14 50.1 +0.1**
comp=Z,136nm,1.3s,mb5.5
LPL La Plagne 64.23 309 *e*P **P 11 14 50.1 +0.1**
LPL pmax pmax
comp=Z,68nm,1.3s,mb5.5
LPL La Plagne 64.23 309 *e*P **P 11 14 50.1 +0.1**
comp=Z,68nm,1.3s,mb5.5
CABF La Chapelle 64.25 310 *e*P **P 11 14 49.2 -0.8**
SAOF Saorge 64.26 307 *e*P **P 11 14 49.6 -0.6**
AUTN L'Aution 64.34 307 *e*P **P 11 14 50.9 +0.2**
SBF Sospel 64.39 307 *e*P **P 11 14 50.4 -0.6**
LUCF Luceram 64.44 307 *e*P **P 11 14 51.0 -0.3**
BNI Bardonecchia 64.44 308 *e*P **P 11 14 51.2 -0.1**
TOUF Mont Tournerai 64.45 307 *e*P **P 11 14 51.1 -0.3**
MBDF Montbardon 64.50 308 *e*P **P 11 14 52.1 +0.4**
comp=Z,33nm,1.0s,mb5.0
MBDF Montbardon 64.50 308 *e*P **P 11 14 52.1 +0.4**
MBDF pmax pmax
comp=Z,16nm,1.0s,mb5.0
MBDF Montbardon 64.50 308 *e*P **P 11 14 52.1 +0.4**
comp=Z,16nm,1.0s,mb5.0
MVIF Mont Vial 64.56 307 *e*P **P 11 14 51.7 -0.4**
SURF Saint Ours 64.57 308 *e*P **P 11 14 52.3 +0.1**
GDM Grand'Maison 64.75 309 *e*P **P 11 14 53.4 0.0**
GRN Grenoble 64.98 309 *e*P **P 11 14 55.1 +0.3**
ORIF Oris-en-Rattie 65.02 309 *e*P **P 11 14 54.3 -0.8**
comp=Z,59nm,1.2s,mb5.2
ORIF *e*MLR MLR
comp=Z,520nm,22.8s,MS4.4
ORIF Oris-en-Rattie 65.02 309 *e*P **P 11 14 54.3 -0.8**
ORIF pmax pmax
comp=Z,29nm,1.2s,mb5.2
ORIF Oris-en-Rattie 65.02 309 *e*P **P 11 14 54.3 -0.8**
comp=Z,29nm,1.2s,mb5.2
FRF La Foret Royal 65.03 307 *e*P **P 11 14 54.3 -0.9**
LMR La Mourre 65.21 307 *e*P **P 11 14 55.6 -0.8**
comp=Z,95nm,1.4s,mb5.3
LMR La Mourre 65.21 307 *e*P **P 11 14 55.6 -0.8**
LMR pmax pmax
comp=Z,47nm,1.4s,mb5.3
LMR La Mourre 65.21 307 *e*P **P 11 14 55.6 -0.8**
comp=Z,47nm,1.4s,mb5.3
LOR Lormes 65.41 312 *e*P **P 11 14 56.5 -1.1**
comp=Z,47nm,1.3s,mb5.1
LOR *e*MLR MLR
comp=Z,305nm,20.2s,MS4.2
LOR Lormes 65.41 312 *e*P **P 11 14 56.5 -1.1**
LOR pmax pmax
comp=Z,24nm,1.3s,mb5.1
LOR MLR MLR
comp=Z,310nm,20.3s,MS4.5
LOR Lormes 65.41 312 *e*P **P 11 14 56.5 -1.1**
comp=Z,24nm,1.3s,mb5.1
LOR LR LR
comp=Z,310nm,20.3s,MS4.5
OCF Saint Nazaire 65.53 308 *e*P **P 11 14 58.3 -0.1**
OG26 St.-Nazaire-De 65.53 308 *e*P **P 11 14 58.3 -0.1**
SMRF Simiane la Rot 65.58 308 *e*P **P 11 14 58.5 -0.3**
comp=Z,89nm,1.5s,mb5.3
SMRF Simiane la Rot 65.58 308 *e*P **P 11 14 58.5 -0.3**
comp=Z,89nm,1.5s,mb5.6
SMF Signal de Mont 65.67 311 *e*P **P 11 14 58.4 -0.8**
comp=Z,107nm,1.3s,mb5.4
SMF Signal de Mont 65.67 311 *e*P **P 11 14 58.4 -0.8**
SMF pmax pmax
comp=Z,53nm,1.3s,mb5.4
SMF Signal de Mont 65.67 311 *e*P **P 11 14 58.4 -0.8**
comp=Z,53nm,1.3s,mb5.4
SSF Saint Saulge 65.71 311 *e*P **P 11 14 58.7 -0.9**
comp=Z,50nm,1.1s,mb5.1
SSF Saint Saulge 65.71 311 *e*P **P 11 14 58.7 -0.9**
SSF pmax pmax
comp=Z,25nm,1.1s,mb5.2
SSF Saint Saulge 65.71 311 *e*P **P 11 14 58.7 -0.9**
comp=Z,25nm,1.1s,mb5.2
SSB Saint Sauveur 65.75 309 *e*P **P 11 14 58.9 -0.9**
SSB pmax pmax
comp=Z,44nm,1.6s,mb5.2
SSB Saint Sauveur 65.75 309 *e*P **P 11 14 58.9 -0.9**
comp=Z,44nm,1.6s,mb5.2
VIVF Saint-Julien-l 65.83 309 *e*P **P 11 14 59.8 -0.6**
comp=Z,91nm,1.3s,mb5.3
VIVF Saint-Julien-l 65.83 309 *e*P **P 11 14 59.8 -0.6**
VIVF pmax pmax
comp=Z,45nm,1.3s,mb5.3
VIVF Saint-Julien-l 65.83 309 *e*P **P 11 14 59.8 -0.6**
comp=Z,45nm,1.3s,mb5.3
AVF Avril sur Loir 65.92 311 *e*P **P 11 15 00.1 -0.8**
comp=Z,111nm,1.3s,mb5.4
AVF Avril sur Loir 65.92 311 *e*P **P 11 15 00.1 -0.8**
AVF pmax pmax
comp=Z,55nm,1.3s,mb5.4
AVF Avril sur Loir 65.92 311 *e*P **P 11 15 00.1 -0.8**
comp=Z,56nm,1.3s,mb5.4
PLDF La Plantade 66.07 310 *e*P **P 11 15 01.6 -0.3**
HYF Humbligny 66.18 312 *e*P **P 11 15 02.2 -0.3**
EKA Eskdalemuir Ar 66.26 322 P **P 11 15 03.0 +0.1**
comp=Z,22nm,1.0s,mb5.1,baz=73,slow=6.3,SNR=20
KEST Kesra 66.26 298 P **P 11 15 03.2 0.0**
comp=Z,6.4nm,1.0s,mb4.6,baz=308,slow=2.6,SNR=11
KEST LR LR 11 47 42.8
comp=Z,54nm,19.5s,MS3.8,baz=2.8,slow=39
ESK Eskdalemuir 66.29 322 *i* P **P 11 15 03.6 +0.5**
BGF Bois d'Agland 66.33 311 *e*P **P 11 15 02.7 -0.8**
comp=Z,62nm,1.2s,mb5.2
BGF Bois d'Agland 66.33 311 *e*P **P 11 15 02.7 -0.8**
BGF pmax pmax
comp=Z,31nm,1.2s,mb5.2
BGF Bois d'Agland 66.33 311 *e*P **P 11 15 02.7 -0.8**
comp=Z,31nm,1.2s,mb5.2
AGO Saint Agoulin 66.35 311 *e*P **P 11 15 03.6 -0.1**
WRAB Tennant Creek 66.43 136 P **P 11 15 04.0 -0.4**
comp=Z,550nm,1.1s,mb6.5,SNR=19
WRAB Tennant Creek 66.43 136 *e*P **P 11 15 06.5 +2.1**
WRAB pmax pmax
comp=Z,107nm,1.0s,mb5.8
WRAB Tennant Creek 66.43 136 *e*P **P 11 15 06.5 +2.0**
comp=Z,107nm,1.0s,mb5.8
WRA Warramunga Arr 66.44 136 P **P 11 15 04.6 +0.2**
comp=Z,66nm,1.0s,mb5.6,baz=329,slow=7.3,SNR=61
PYM Petit Puy Mans 66.55 310 *e*P **P 11 15 04.9 -0.1**
SCO Scoresbysund 66.58 340 *i* P **P 11 15 04.9 +0.2**
comp=Z,15nm,0.9s,mb5.0
LBL Lubilhac 66.61 310 *e*P **P 11 15 05.3 0.0**
LASF Ste Croix 66.68 308 *e*P **P 11 15 05.6 -0.2**
comp=Z,110nm,1.3s,mb5.4
ATKA Atka Island 66.72 42 *e*P **P 11 15 07.7 +1.7**
TCF Toulx Ste Croi 66.84 311 *e*P **P 11 15 06.5 -0.3**
comp=Z,131nm,1.3s,mb5.5
TCF Toulx Ste Croi 66.84 311 *e*P **P 11 15 06.5 -0.3**
TCF pmax pmax
comp=Z,66nm,1.3s,mb5.5
TCF Toulx Ste Croi 66.84 311 *e*P **P 11 15 06.5 -0.3**
comp=Z,66nm,1.3s,mb5.5
LDF La Druitiere 67.33 314 *e*P **P 11 15 08.9 -1.0**
comp=Z,62nm,1.1s,mb5.2
LDF La Druitiere 67.33 314 *e*P **P 11 15 08.9 -1.0**
LDF pmax pmax
comp=Z,31nm,1.1s,mb5.2
LDF La Druitiere 67.33 314 *e*P **P 11 15 08.9 -1.0**
comp=Z,31nm,1.1s,mb5.2
FLN La Foliniere 67.48 314 *e*P **P 11 15 09.8 -1.0**
comp=Z,32nm,1.2s,mb4.9
FLN *e*MLR MLR
comp=Z,428nm,19.0s,MS4.4
FLN La Foliniere 67.48 314 *e*P **P 11 15 09.8 -1.0**
FLN pmax pmax
comp=Z,16nm,1.2s,mb4.9
FLN MLR MLR
comp=Z,430nm,19.0s,MS4.7
FLN La Foliniere 67.48 314 *e*P **P 11 15 09.8 -1.0**
comp=Z,16nm,1.2s,mb4.9
FLN LR LR
comp=Z,430nm,19.0s,MS4.7
CAF Calviac 67.50 310 *e*P **P 11 15 10.8 -0.2**
comp=Z,71nm,1.3s,mb5.2
CAF Calviac 67.50 310 *e*P **P 11 15 10.8 -0.2**
CAF pmax pmax
comp=Z,35nm,1.3s,mb5.2
CAF Calviac 67.50 310 *e*P **P 11 15 10.8 -0.2**
comp=Z,35nm,1.3s,mb5.2
RJF Les Rejaudoux 67.69 310 *e*P **P 11 15 12.2 0.0**
comp=Z,121nm,1.3s,mb5.5
RJF *e*MLR MLR
comp=Z,156nm,22.2s,MS3.9
RJF Les Rejaudoux 67.69 310 *e*P **P 11 15 12.2 0.0**
RJF pmax pmax
comp=Z,61nm,1.3s,mb5.5
RJF MLR MLR
comp=Z,160nm,22.3s,MS4.2
RJF Les Rejaudoux 67.69 310 *e*P **P 11 15 12.2 0.0**
comp=Z,61nm,1.3s,mb5.5
RJF LR LR
comp=Z,160nm,22.3s,MS4.2
GRR Gorron 67.86 314 *e*P **P 11 15 12.3 -0.9**
comp=Z,54nm,1.0s,mb5.2
GRR Gorron 67.86 314 *e*P **P 11 15 12.3 -0.9**
GRR pmax pmax
comp=Z,27nm,1.0s,mb5.2
GRR Gorron 67.86 314 *e*P **P 11 15 12.3 -0.9**
comp=Z,27nm,1.0s,mb5.2
EJON La Jonquera 68.00 307 P **P 11 15 12.5 -1.7**
comp=Z,20nm,1.4s,mb5.0
MTLF Montolieu 68.07 308 *e*P **P 11 15 14.2 -0.4**
comp=Z,79nm,1.4s,mb5.2
MTLF Montolieu 68.07 308 *e*P **P 11 15 14.2 -0.4**
MTLF pmax pmax
comp=Z,40nm,1.4s,mb5.3
MTLF Montolieu 68.07 308 *e*P **P 11 15 14.2 -0.4**
comp=Z,40nm,1.4s,mb5.2
MFF Saint Martin d 68.19 312 *e*P **P 11 15 14.6 -0.7**
comp=Z,91nm,1.5s,mb5.3
MFF Saint Martin d 68.19 312 *e*P **P 11 15 14.6 -0.7**
MFF pmax pmax
comp=Z,46nm,1.5s,mb5.3
MFF Saint Martin d 68.19 312 *e*P **P 11 15 14.6 -0.7**
comp=Z,46nm,1.5s,mb5.3
LFF La Frestale 68.34 310 *e*P **P 11 15 16.2 -0.1**
comp=Z,148nm,1.5s,mb5.5
LFF La Frestale 68.34 310 *e*P **P 11 15 16.2 -0.1**
LFF pmax pmax
comp=Z,74nm,1.5s,mb5.5
LFF La Frestale 68.34 310 *e*P **P 11 15 16.2 -0.1**
comp=Z,74nm,1.5s,mb5.5
CLLI Llivia 68.60 307 P **P 11 15 16.2 -1.7**
KLBR Kellerberrin 68.79 157 *e*P **P 11 15 18.2 -0.9**
comp=Z,47nm,0.9s,mb5.4
SGMF Saint Gilles 68.94 314 *e*P **P 11 15 19.6 -0.4**
comp=Z,50nm,1.1s,mb5.0
SGMF Saint Gilles 68.94 314 *e*P **P 11 15 19.6 -0.4**
SGMF pmax pmax
comp=Z,25nm,1.1s,mb5.1
SGMF Saint Gilles 68.94 314 *e*P **P 11 15 19.6 -0.4**
comp=Z,25nm,1.1s,mb5.0
ASAR Alice Springs 69.13 139 P **P 11 15 21.4 +0.1**
comp=Z,92nm,1.0s,mb5.7,baz=324,slow=5.9,SNR=96
CSOR Sort 69.20 308 P **P 11 15 21.6 -0.2**
comp=Z,56nm,1.3s,mb5.3
SUMG Summit 69.24 346 *e*P **P 11 15 21.5 0.0**
comp=Z,26nm,1.1s,mb5.1
SUMG Summit 69.24 346 *i* P **P 11 15 20.8 -0.7**
comp=Z,16nm,1.1s,mb4.9
ROSF Rostrenen 69.33 315 *e*P **P 11 15 22.0 -0.4**
comp=Z,72nm,1.1s,mb5.2
ROSF Rostrenen 69.33 315 *e*P **P 11 15 22.0 -0.4**
ROSF pmax pmax
comp=Z,36nm,1.1s,mb5.2
ROSF Rostrenen 69.33 315 *e*P **P 11 15 22.0 -0.4**
comp=Z,36nm,1.1s,mb5.2
EPF Esparros 69.44 308 *e*P **P 11 15 22.0 -1.2**
comp=Z,28nm,1.1s,mb4.8
EPF Esparros 69.44 308 *e*P **P 11 15 22.0 -1.2**
EPF pmax pmax
comp=Z,14nm,1.1s,mb4.8
EPF Esparros 69.44 308 *e*P **P 11 15 22.0 -1.2**
comp=Z,14nm,1.1s,mb4.8
COLD Coldfoot 69.57 22 *e*P **P 11 15 24.4 +0.8**
comp=Z,49nm,1.0s,mb5.4
EPOB Poblet 69.69 307 P **P 11 15 24.5 -0.3**
comp=Z,45nm,1.3s,mb5.2
VIEF Viey 69.71 308 *e*P **P 11 15 25.0 +0.1**
EBIE Bielsa 69.72 308 P **P 11 15 24.7 -0.2**
comp=Z,50nm,1.4s,mb5.2
BST Brest 69.82 315 *e*P **P 11 15 24.1 -1.3**
ETSF Etsaut 70.09 309 *e*P **P 11 15 27.1 -0.1**
comp=Z,48nm,1.0s,mb5.1
ETSF Etsaut 70.09 309 *e*P **P 11 15 27.1 -0.1**
ETSF pmax pmax
comp=Z,24nm,1.0s,mb5.1

ETSF	Etsaut	70.09	309	eP		P	11 15 27.1	-0.1
	comp=Z,24nm,1.0s,mb5.1							
TTA	Tatalina	70.10	27	eP		P	11 15 27.6	+0.7
UNV	Unalaska Valle	70.14	38	eP		P	11 15 25.5	-1.8
	comp=Z,35nm,1.4s,mb5.1							
AKUT	Akutan	70.38	38	eP		P	11 15 27.4	-1.3
SJPF	Ste Jean	70.42	309	eP		P	11 15 29.2	0.0
	comp=Z,47nm,1.2s,mb5.0							
SJPF	Ste Jean	70.42	309	eP		P	11 15 29.2	0.0
SJPF					pmax	pmax		
	comp=Z,23nm,1.2s,mb5.0							
SJPF	Ste Jean	70.42	309	eP		P	11 15 29.2	0.0
	comp=Z,23nm,1.2s,mb5.0							
EALK	Alkurruntz	70.56	309	P		P	11 15 29.3	-0.7
	comp=Z,56nm,1.3s,mb5.3							
CHUM	Lake Minchumin	70.90	25	eP		P	11 15 32.8	+1.0
	comp=Z,18nm,0.8s,mb5.0							
BPAW	Bear Paw Mtn.	71.23	24	eP		P	11 15 34.3	+0.6
	comp=Z,29nm,1.1s,mb5.1							
SVW2	Sparrevohn	71.31	28	eP		P	11 15 35.2	+0.9
ECRI	Cripan	71.50	309	P		P	11 15 34.8	-0.9
ECRI					pmax	pmax		
	comp=Z,36nm,1.0s,mb5.3							
ECRI	Cripan	71.50	309	P		P	11 15 34.8	-1.0
	comp=Z,36nm,1.0s,mb5.3							
PPLA	Purkeypile	71.54	26	eP		P	11 15 36.8	+1.1
	comp=Z,87nm,1.0s,mb5.6							
KTH	Kantishna Hill	71.59	25	eP		P	11 15 36.9	+1.0
	comp=Z,65nm,1.3s,mb5.4							
COLA	College	71.80	23	eP		P	11 15 37.5	+0.3
COLA					pmax	pmax		
	comp=Z,55nm,1.0s,mb5.4							
COLA	College	71.80	23	eP		P	11 15 37.5	+0.3
	comp=Z,55nm,1.0s,mb5.4							
TRF	Thorofare Moun	71.88	25	eP		P	11 15 38.2	+0.5
	comp=Z,12nm,1.0s,mb4.8							
FORT	Forrest	72.10	148	eP		P	11 15 37.8	-1.5
	comp=Z,75nm,1.0s,mb5.6							
FORT	Forrest	72.10	148	eP		P	11 15 38.5	-0.7
	comp=Z,124nm,1.0s,mb5.8							
MCK	McKinley	72.17	24	eP		P	11 15 39.6	+0.2
MCK					pmax	pmax		
	comp=Z,18nm,1.2s,mb4.9							
MCK	McKinley	72.17	24	eP		P	11 15 39.5	+0.1
	comp=Z,18nm,1.2s,mb4.9							
RES	Resolute Bay	72.36	2	eP		P	11 15 40.8	+0.4
RES					pmax	pmax		
	comp=Z,20nm,1.2s,mb4.9							
RES	Resolute Bay	72.36	2	eP		P	11 15 40.8	+0.4
	comp=Z,20nm,1.2s,mb4.9							
RSO	Redoubt South	72.81	28	eP		P	11 15 44.3	+1.1
CHGN	Chignik	72.82	33	eP		P	11 15 42.5	-0.9
INK	Inuvik	73.34	16	eP		P	11 15 46.4	+0.1
INK					pmax	pmax		
	comp=Z,29nm,1.0s							
INK	Inuvik	73.34	16	eP		P	11 15 46.4	+0.1
	comp=Z,29nm,1.0s,mb5.2							
EVIA	Vianos	73.39	305	P		P	11 15 45.7	-1.4
EVIA					pmax	pmax		
	comp=Z,14nm,0.8s,mb4.9							
EVIA	Vianos	73.39	305	P		P	11 15 45.7	-1.4
	comp=Z,14nm,0.8s,mb5.0							
PMR	Palmer	73.47	26	eP		P	11 15 47.3	+0.1
PMR					pmax	pmax		
	comp=Z,57nm,1.0s,mb5.5							
PMR	Palmer	73.47	26	eP		P	11 15 47.3	+0.1
	comp=Z,57nm,1.0s,mb5.5							
GUD	Guadarrama	73.52	308	P		P	11 15 47.2	-0.7
GUD					pmax	pmax		
	comp=Z,48nm,0.9s,mb5.4							
GUD	Guadarrama	73.52	308	P		P	11 15 47.2	-0.6
	comp=Z,48nm,0.9s,mb5.4							
PAX	Paxson	73.85	24	eP		P	11 15 49.9	+0.5
PAX					pmax	pmax		
	comp=Z,19nm,1.0s,mb5.0							
PAX	Paxson	73.85	24	eP		P	11 15 49.9	+0.6
	comp=Z,19nm,1.0s,mb5.0							
EHUE	Huescar	73.86	305	P		P	11 15 47.8	-2.1
EHUE					pmax	pmax		
	comp=Z,25nm,1.2s,mb5.0							
EHUE	Huescar	73.86	305	P		P	11 15 47.8	-2.1
	comp=Z,25nm,1.2s,mb5.0							
ESDC	Sonseca Array	73.87	307	P		P	11 15 49.9	0.0
	comp=Z,6.8nm,0.8s,mb4.6,baz=54,slow=6.2,SNR=19							
ESDC					LR	LR	11 52 41.2	
	comp=Z,100nm,19.1s,MS4.1,baz=25,slow=39							
ESDC	Sonseca Array	73.87	307	P		P	11 15 48.4	-1.5
	comp=Z,23nm,1.1s,mb5.0							
ESLA	Sonseca Array	73.87	307	eP		P	11 15 50.2	+0.2
	comp=Z,13nm,1.5s,mb4.7							
EGAK	Eagle	73.96	21	eP		P	11 15 50.4	+0.4
	comp=Z,34nm,1.0s,mb5.2							
CTA	Charters Tower	73.99	128	eP		P	11 15 50.3	-0.4
	comp=Z,16nm,0.9s,mb5.0							
CTAO	Charters Tower	73.99	128	eP		P	11 15 51.0	+0.3
CTAO					pmax	pmax		
	comp=Z,35nm,1.1s,mb5.2							
CTAO	Charters Tower	73.99	128	eP		P	11 15 51.0	+0.2
	comp=Z,35nm,1.1s,mb5.2							
EQES	Quesada	74.19	305	P		P	11 15 52.0	+0.1
	comp=Z,46nm,1.2s,mb5.3							
PAB	San Pablo	74.20	307	eP		P	11 15 52.0	+0.2
PAB					pmax	pmax		
	comp=Z,41nm,1.5s,mb5.1							
PAB	San Pablo	74.20	307	eP		P	11 15 52.0	+0.1
	comp=Z,41nm,1.5s,mb5.1							
SEW	Seward	74.31	27	eP		P	11 15 52.2	0.0
	comp=Z,45nm,1.1s,mb5.3							
MENT	Mentasta	74.46	23	eP		P	11 15 53.4	+0.5
EBAN	Banos Encina	74.50	306	P		P	11 15 52.4	-1.2
EBAN					pmax	pmax		
	comp=Z,15nm,0.7s,mb5.0							
EBAN	Banos Encina	74.50	306	P		P	11 15 52.4	-1.2
	comp=Z,15nm,0.7s,mb5.0							
KDAK	Kodiak Island	74.52	30	P		P	11 15 53.3	0.0
	comp=Z,360nm,1.0s,mb6.3,SNR=7.6							
KDAK	Kodiak Island	74.52	30	LR		LR	11 51 09.2	
	comp=Z,237nm,18.8s,MS4.5,baz=308,slow=38							
KDAK	Kodiak Island	74.52	30	*i* P		P	11 15 54.2	+0.9
KDAK	Kodiak Island	74.52	30	eP		P	11 15 54.7	+1.4
	comp=Z,68nm,1.1s,mb5.5							
ECAL	Calabor	74.56	310	P		P	11 15 52.4	-1.5
	comp=Z,45nm,1.8s,mb5.1							
OHAK	Old Harbor	74.56	31	eP		P	11 15 53.4	-0.2
	comp=Z,70nm,1.3s,mb5.4							
DIV	Divide	75.00	25	eP		P	11 15 56.8	+0.8
	comp=Z,45nm,1.1s,mb5.3							
DAWY	Dawson	75.01	21	eP		P	11 15 56.1	0.0
EGUA	Guajares	75.02	304	P		P	11 15 54.8	-1.9
	comp=Z,144nm,1.0s,mb5.9							
EADA	Adamuz	75.04	306	P		P	11 15 54.9	-1.9
	comp=Z,20nm,1.1s,mb5.0							
ERON	Agron	75.09	305	P		P	11 15 56.2	-0.9
	comp=Z,8.8nm,0.6s,mb4.9							
ELUQ	Luque	75.14	305	P		P	11 15 54.9	-2.4
ELUQ					pmax	pmax		
	comp=Z,34nm,0.7s,mb5.4							
ELUQ	Luque	75.14	305	P		P	11 15 54.9	-2.4
	comp=Z,34nm,0.7s,mb5.4							
MVO	Moncorvo	75.14	310	P		P	11 15 56.4	-0.9
MVO	Moncorvo	75.14	310	eP		P	11 15 57.7	+0.4
	comp=Z,58nm,1.5s,mb5.3							
TAM	Tamanrasset	75.16	288	eP		P	11 15 57.9	+0.2
TAM					pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6							
TAM	Tamanrasset	75.16	288	eP		P	11 15 57.9	+0.2
	comp=Z,8.0nm,1.0s,mb4.6							
ELOB	Lobios	75.44	311	P		P	11 15 58.4	-0.6
	comp=Z,41nm,1.0s,mb5.3							
PCAB	Cabril	75.50	310	eP		P	11 15 59.7	+0.4
	comp=Z,59nm,1.2s,mb5.4							
BMRM	Bremner River	75.52	25	eP		P	11 16 00.2	+1.1
	comp=Z,73nm,0.9s,mb5.6							
PVRL	Vila Real	75.53	310	eP		P	11 15 59.7	+0.2
	comp=Z,26nm,1.3s,mb5.0							
EZAM	Zamans	75.70	311	P		P	11 16 00.5	+0.1
EZAM					pmax	pmax		
	comp=Z,84nm,1.1s,mb5.6							
EZAM	Zamans	75.70	311	P		P	11 16 00.5	+0.1
	comp=Z,84nm,1.1s,mb5.6							
MTE	Manteigas	75.87	309	eP		Px	11 16 13.6	
	comp=Z,79nm,1.4s							
PVIS	Viseu	75.94	309	eP		P	11 16 02.4	+0.6
	comp=Z,60nm,1.4s,mb5.3							
EMIJ	Mijas	75.99	305	P		P	11 16 02.5	+0.3
	comp=Z,20nm,1.0s,mb5.0							
PCBR	Castelo Branco	76.12	309	eP		P	11 16 03.6	+0.7
	comp=Z,33nm,1.2s,mb5.1							
PTO	Porto	76.17	310	eP		P	11 16 04.0	+0.8
	comp=Z,55nm,1.1s,mb5.4							
SFJD	Kangerlussuaq	76.24	346	eP		P	11 16 02.7	-0.4
SFJD					pmax	pmax		
	comp=Z,85nm,1.3s,mb5.5							
SFJD	Kangerlussuaq	76.24	346	eP		P	11 16 02.7	-0.4
	comp=Z,85nm,1.3s,mb5.5							
SFJD	Kangerlussuaq	76.24	346	*i* P		P	11 16 02.4	-0.7
	comp=Z,31nm,1.1s,mb5.2							
PMRV	Marv??o	76.28	308	eP		P	11 16 03.9	+0.1
	comp=Z,34nm,1.6s,mb5.0							
EBAD	Badajoz	76.38	307	P		P	11 16 04.6	+0.1
	comp=Z,35nm,1.2s,mb5.2							
EJIF	Jimena Fronter	76.53	305	P		P	11 16 05.9	+0.6
EJIF					pmax	pmax		
	comp=Z,39nm,1.1s,mb5.2							
EJIF	Jimena Fronter	76.53	305	P		P	11 16 05.9	+0.6
	comp=Z,39nm,1.1s,mb5.2							
ESPR	Espera	76.58	305	P		P	11 16 04.7	-0.9
	comp=Z,47nm,1.4s,mb5.2							
EMIN	Mina Concepcio	76.67	306	P		P	11 16 03.3	-2.8
	comp=Z,63nm,1.5s,mb5.3							
PBAR	Barrancos	76.70	307	eP		P	11 16 06.2	0.0
	comp=Z,50nm,1.6s,mb5.2							
PESTR	Estremoz	76.71	308	eP		P	11 16 06.1	-0.1
	comp=Z,30nm,1.4s,mb5.0							
PTOM	Tomar	76.85	309	eP		P	11 16 07.2	+0.1
	comp=Z,76nm,1.2s,mb5.5							
EVO	Evora	77.16	308	eP		P	11 16 09.2	+0.4
	comp=Z,73nm,1.0s,mb5.2							
EVO					*e*MLR	MLR		
	comp=Z,215nm,19.5s,MS4.2							
EVO	Evora	77.16	308	eP		P	11 16 09.0	+0.2
	comp=Z,56nm,1.2s,mb5.4							
PBEJ	Beja	77.33	307	eP		P	11 16 09.2	-0.6
	comp=Z,36nm,1.4s,mb5.1							
EGRO	El Granado	77.34	307	P		P	11 16 09.6	-0.3
	comp=Z,55nm,1.6s,mb5.2							
PVAQ	Vaqueiros	77.56	307	eP		P	11 16 10.9	-0.2
	comp=Z,52nm,1.4s,mb5.3							
LSZ	Lusaka	77.64	243	eP		P	11 16 11.2	-0.5
LSZ					pmax	pmax		
	comp=Z,29nm,1.0s,mb5.2							
LSZ	Lusaka	77.64	243	eP		P	11 16 11.2	-0.6
	comp=Z,29nm,1.0s,mb5.2							
PCVE	Castro Verde	77.66	307	eP		P	11 16 13.2	+1.6
	comp=Z,35nm,1.7s,mb5.0							
PMAFR	Mafra	77.78	309	eP		P	11 16 12.2	-0.1
	comp=Z,111nm,1.4s,mb5.6							
PBDV	Barranco-do-Ve	77.79	306	eP		P	11 16 12.9	+0.5
	comp=Z,74nm,1.7s,mb5.3							
MDT	Midelt	77.81	301	P		P	11 16 12.5	-0.1
	comp=Z,3.7nm,0.9s,mb4.3,baz=81,slow=9.7							
PTEO	Sao Teotonio	78.17	307	eP		P	11 16 14.7	+0.3
	comp=Z,58nm,1.7s,mb5.2							
MORF	Marmelete	78.24	307	eP		P	11 16 15.9	+1.0
	comp=Z,52nm,1.6s,mb5.2							
PNL	Peninsula	78.26	24	eP		P	11 16 16.2	+1.6
	comp=Z,27nm,0.9s,mb5.2							
SKAG	Skagway	79.77	22	eP		P	11 16 23.8	+1.0
	comp=Z,98nm,1.1s,mb5.7							
STKA	Stephens Creek	79.77	139	eP		P	11 16 22.3	-0.8
	comp=Z,18nm,1.0s,mb5.0							
STKA	Stephens Creek	79.77	139	P		P	11 16 22.8	-0.3
	comp=Z,26nm,1.1s,mb5.1,baz=326,slow=7.7,SNR=10							
STKA					LR	LR	11 57 42.9	
	comp=Z,154nm,19.8s,MS4.3,baz=315,slow=40							
STKA	Stephens Creek	79.77	139	eP		P	11 16 22.9	-0.2
EIDS	Eidsvold	80.84	128	eP		P	11 16 29.5	+0.4
	comp=Z,28nm,0.9s,mb5.2							
DLBC	Dease Lake	82.23	21	eP		P	11 16 37.8	+1.8
YKA	Yellowknife Ar	82.32	12	P		P	11 16 35.2	-1.1
	comp=Z,17nm,0.9s,mb5.0,baz=334,slow=5.1,SNR=117							
YKA					PKKPbc	PKKPbc	11 35 01.0	-2.8
	comp=Z,0.7nm,0.9s,baz=168,slow=1.7,SNR=5.0							
YKA					LR	LR	12 01 04.2	
	comp=Z,17nm,18.3s,baz=195,slow=42							
YKA	Yellowknife Ar	82.32	12	P		P	11 16 35.2	-1.2
YKA					PKKPbc	PKKPbc	11 35 01.0	-2.8
YKA					LR	LR	12 01 04.2	
TORD	Torodi Ar. Bea	83.25	281	P		P	11 16 41.1	-0.9
	comp=Z,17nm,0.9s,mb5.1,baz=46,slow=4.7,SNR=73							
TORD					PP	PP	11 19 52.1	-1.4
	comp=Z,2.6nm,1.0s,baz=54,slow=8.2,SNR=7.7							
TORD					LR	LR	11 56 51.7	
	comp=Z,116nm,21.0s,MS4.2,baz=75,slow=38							
ARMA	Armidale	84.65	132	eP		P	11 16 49.6	+0.9
ARMA	Armidale	84.65	132	eP		P	11 16 49.8	+1.1
	comp=Z,26nm,0.9s,mb5.3							
LBTB	Lobatse	85.69	237	eP		P	11 16 53.8	-0.3
LBTB					pmax	pmax		
	comp=Z,46nm,0.9s,mb5.7							
LBTB	Lobatse	85.69	237	eP		P	11 16 53.8	-0.3
	comp=Z,46nm,0.9s,mb5.7							
CNB	Canberra Magne	86.68	136	eP		P	11 16 55.8	-2.9
TSUM	Tsumeb	88.04	246	eP		P	11 17 06.4	+0.8
	comp=Z,23nm,1.5s,mb5.2							
BOSA	Boshof	88.21	234	P		P	11 17 05.4	-0.8
	comp=Z,15nm,1.1s,mb5.1,baz=75,slow=6.0,SNR=7.8							
BOSA					LR	LR	11 54 47.6	
	comp=Z,148nm,18.7s,MS4.4,baz=323,slow=34							
SCHQ	Schefferville	90.53	348	P		P	11 17 15.9	-0.9
	comp=Z,8.7nm,0.8s,mb5.1,baz=51,slow=3.4,SNR=12							
SCHQ					LR	LR	12 01 14.6	
	comp=Z,219nm,18.5s,MS4.6,baz=25,slow=38							
SCHQ	Schefferville	90.53	348	P		P	11 17 15.9	-0.9
SCHQ					LR	LR	12 01 14.6	
EDM	Edmonton	91.21	15	eP		P	11 17 20.1	+0.1
FFC	Flin Flon	91.67	8	P		P	11 17 21.1	-1.0
	comp=Z,178nm,0.9s,mb6.4,SNR=24							
FFC	Flin Flon	91.67	8	*i* P		P	11 17 21.6	-0.5
FFC	Flin Flon	91.67	8	eP		P	11 17 21.4	-0.7
	comp=Z,30nm,1.0s,mb5.6							
DBIC	Dimbokro	92.17	279	P		P	11 17 23.6	-1.5
	comp=Z,8.6nm,0.9s,mb5.1,baz=51,slow=1.7,SNR=5.0							
DBIC					LR	LR	11 59 23.8	
	comp=Z,141nm,20.6s,MS4.4,baz=42,slow=36							
BSMT	Bassoo Peak	95.86	18	eP		P	11 17 42.8	+1.3
	comp=Z,11nm,1.4s,mb5.1							
YBMT	Yellow Bay	96.05	17	eP		P	11 17 43.6	+1.3
	comp=Z,5.8nm,1.1s,mb4.9							
SWMT	Swartz Lake	96.38	17	eP		P	11 17 44.3	+0.4
	comp=Z,6.3nm,1.4s,mb4.8							
ULM	Lac du Bonnet	96.69	5	LR		LR	12 09 40.3	
	comp=Z,84nm,18.6s,MS4.2,baz=29,slow=41							
TXAR	Lajitas Array	116.11	15	PKP		PKPdf	11 22 58.0	-0.5
	comp=Z,0.9nm,0.9s,baz=76,slow=0.3,SNR=6.9							
TXAR					PP	PP	11 23 59.2	-2.7
	comp=Z,0.4nm,0.9s,baz=294,slow=2.9,SNR=3.9							
TXAR					PKKPab	PKKPab	11 33 27.9	-8.3
	comp=Z,0.3nm,0.8s,baz=235,slow=3.2,SNR=3.5							
TXAR	Lajitas Array	116.11	15	PKIKP		PKPdf	11 22 58.1	-0.4
TXAR							11 23 59.2	
TXAR	Lajitas Array	116.11	15	PKP		PKPdf	11 22 58.0	-0.5
TXAR				PP		PP	11 23 59.2	-2.7
TXAR				PKKPab		PKKPab	11 33 27.9	-8.3
OTAV	Otavalo	145.63	343	*e*PKPdf		PKPdf	11 23 55.0	+0.8
SIV	San Ignacio	150.34	299	PKP		PKPdf	11 24 01.8	+0.1
	comp=Z,12nm,1.0s,baz=87,slow=2.1,SNR=25							
SIV					PKPbc	PKPbc	11 24 06.6	-0.3
	comp=Z,22nm,1.2s,baz=98,slow=3.3,SNR=24							
CPUP	Villa Florida	152.65	276	PKP		PKPdf	11 24 04.5	-0.5
	comp=Z,2.1nm,0.8s,baz=248,slow=1.8,SNR=3.7							
CPUP					PKPbc	PKPbc	11 24 10.9	-1.0
	comp=Z,5.2nm,0.9s,baz=300,slow=2.2,SNR=5.5							
CPUP	Villa Florida	152.65	276	PKP		PKPdf	11 24 04.5	-0.5
CPUP					PKPbc	PKPbc	11 24 10.9	-1.0
LPAZ	La Paz	155.49	308	PKP		PKPdf	11 24 09.7	+0.5
	comp=Z,2.0nm,0.6s,baz=43,slow=7.4,SNR=6.1							
LPAZ					PKPab	PKPab	11 24 34.6	-0.2
	comp=Z,4.1nm,0.9s,baz=38,slow=12,SNR=6.6							
LPAZ	La Paz	155.49	308	PKP		PKPdf	11 24 09.7	+0.5
LPAZ				*e*PKPdf		PKPdf	11 24 12.9	+3.7
LPAZ					PKPab	PKPab	11 24 34.6	-0.2
PLCA	Paso Flores	164.19	236	PKP		PKPdf	11 24 18.9	+0.6
	comp=Z,6.9nm,1.0s,baz=323,slow=2.6,SNR=5.8							

IDC 10 11:25:33.9±15.0, 24°.30S×70°.64E, h0^{km}, mb4.0/3, mb1 4.2/3, mb1mx3.6/24, mbtmp4.0/3, Error ellipse: s-maj=483.9km s-min=42.8km az=51.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	57.34	103	P	P	11 35 24.2	+0.2
	1.6nm,0.8s,baz=263,slow=6.6,SNR=12						
WRA	Warramunga Arr	58.73	99	P	P	11 35 33.8	-0.1
	1.9nm,0.9s,baz=254,slow=7.3,SNR=8.6						
MKAR	Makanchi Array	71.54	8	P	P	11 36 56.5	+0.1
	0.7nm,0.4s,baz=177,slow=5.1,SNR=3.7						

ISCJB ***10*** *11:36:42.9±0.1, 33°.18N±0°.02×92°.13E±0°.02, h10^{km}, mb4.8/112, MS4.2/44, Error ellipse: s-maj=3.1km s-min=2.8km az=15.3*

IDC ***10*** *11:36:42.6±0.4, 33°.10N×92°.08E, h0^{km}, mb4.7/32, mb1 4.7/35, mb1mx4.7/39, mbtmp4.7/35, ML4.1/3, MS4.0/22, Ms1 4.0/22, ms1mx3.7/49, Error ellipse: s-maj=14.6km s-min=10.2km az=47.0*

BJI ***10*** *11:36:42.9, 33°.14N×92°.12E, h10^{km}, mB4.7/27, mb4.7/38, ML4.6/4, Ms4.7/48, Ms7 4.4/41*

LDG ***10*** *11:36:44.2±0.5, 33°.40N×91°.65E, h10^{km}, Mb5.1/22, Ms3.9/9, Error ellipse: s-maj=25.1km s-min=6.9km az=140.0*

NEIC ***10*** *11:36:44.9±0.2, 33°.24N×92°.09E, h10^{km}, mb5.0/59, Error ellipse: s-maj=5.6km s-min=4.8km az=101.0*

MOS ***10*** *11:36:46.1±0.9, 33°.17N×92°.06E, h33^{km}, mb5.1/38, MS4.1/12, Error ellipse: s-maj=7.7km s-min=4.8km az=114.7*

GCMT ***10*** *11:36:47.3±0.3, 33°.18N×92°.23E, h16^{km}±1^{km}, MW4.9, Moment Tensor Solution. s8,c9; s60,c100; Moment tensor: Scale 10^{16}Nm; M_{rr}-1.21±.20; $M_{\theta\theta}$-0.65±.11; $M_{\phi\phi}$1.86±.13; $M_{r\theta}$1.22±.45; $M_{\theta\phi}$1.63±.08; $M_{\phi r}$-1.24±.37; Best double couple: $M_0$2.90000×10^{16} NP1:ϕ_s242.00000°, δ53.00000°, λ-27.00000°. NP2:ϕ_s349.00000°, δ69.00000°, λ-140.00000°. Principal axes: T 2.7600, Plg10.0000°, Azm112.0000°; N 0.2400, Plg45.0000°, Azm12.0000°; P -3.0100, Plg43.0000°, Azm212.0000°; Data Used: II IU IC G.*

SZGRF ***10*** *11:36:51.2, 34°.30N×92°.91E, h33^{km}, mb4.8, MS4.2, Qinghai, China*

ISC 10 11:36:44.9±0.1, 33°.18N±0°.02×92°.11E±0°.02, h10^{km}, (h13^{km}±3.6km: pP-P), n328, σ1§14/338, mb4.8/112, MS4.2/44, 11C-7D, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	Lhasa	3.57	194	Pg	Pb	11 37 45.4	-2.7
LSA				Sg	Sg	11 38 36.5	-3.0
LSA				smax			
	comp=E,870nm,1.2s						
LSA	Lhasa	3.57	194	*e*Pn	Pb	11 37 45.9	-2.2
LSA				*e*Sg	Sg	11 38 40.8	+1.3
TAPN	Taplejung	6.95	214	eP	Pn	11 38 28.6	+1.9
	comp=E,33nm,0.8s						
JIRN	Jiri	7.51	224	eP	Pn	11 38 37.3	+2.8
	comp=E,72nm,0.8s						
ODAN	Odare	7.51	214	eP	Pn	11 38 36.1	+1.6
	comp=E,58nm,0.9s						
GUN	Gumba	7.51	227	eP	Pn	11 38 37.3	+2.8
	comp=E,64nm,0.7s						
RAMN	Ramite	7.83	219	eP	Pn	11 38 39.4	+0.5
	comp=E,119nm,0.8s						
KKN	Kakani	7.97	229	eP	Pn	11 38 43.1	+2.3
	comp=E,42nm,0.5s						
KKN	Kakani	7.97	229	eP	Pn	11 38 43.1	+2.3
KKN				pmax	pmax		
	comp=E,42nm,0.5s						
PKI	Pulchoki	8.05	228	eP	Pn	11 38 44.3	+2.5
	comp=Z,75nm,0.8s						
PKI	Pulchoki	8.05	228	eP	Pn	11 38 45.0	+3.2
PKI				pmax	pmax		
	comp=Z,37nm,0.5s						
PKI	Pulchoki	8.05	228	eP	Pn	11 38 45.0	+3.2
	comp=Z,37nm,0.5s						
PKIN	Phulchoki	8.05	228	eP	Pn	11 38 44.3	+2.4
	comp=Z,76nm,0.8s						
PKIN	Phulchoki	8.05	228	eP	Pn	11 38 45.0	+3.1
	comp=Z,37nm,0.5s						
DMN	Daman	8.21	229	eP	Pn	11 38 46.7	+2.6
	comp=Z,39nm,0.6s						
GTA	Gaotai	8.79	43	⇓P	Pn	11 38 53.9	+1.9
GTA				pP		11 38 56.7	
GTA				sP		11 38 59.3	
GTA				S	Sn	11 40 31.3	+0.2
GTA				pmax	pmax		
	comp=Z,34nm,1.1s						
GTA				pmax	pmax		
	comp=Z,120nm,4.5s						
GTA				LR	LR		
	comp=N,3μm,10.1s						
GTA				LR	LR		
	comp=E,2μm,10.4s						
GTA				LR	LR		
	comp=Z,1μm,10.4s						
LZH	Lanzhou	10.09	70	eP	Pn	11 39 19.2	+9.3
LZH				pP		11 39 22.8	
LZH				sP		11 39 26.1	
LZH				PP		11 39 27.5	
LZH				*e*S	Sn	11 41 13.1	+10
LZH				sS		11 41 18.0	
LZH				SS		11 41 27.4	
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
LZH				pmax	pmax		
	comp=Z,100nm,4.0s				

XAN LR LR
comp=E,780nm,8.7s
XAN LR LR
comp=Z,640nm,8.0s
GYA Guiyang 14.29 114⇑ *i*P **Pn 11 40 04.9 -2.5**
GYA PP 11 40 19.2
GYA S **Sn 11 42 43.8 -2.2**
GYA SS 11 43 01.5
GYA pmax pmax
comp=Z,60nm,0.9s
GYA pmax pmax
comp=Z,90nm,3.4s
GYA LR LR
comp=N,1μm,9.6s
GYA LR LR
comp=E,1μm,9.3s
GYA LR LR
comp=Z,1μm,9.3s
KSH Kashi 14.45 301 *e*P **Pn 11 40 14.3 +4.9**
KSH pP pP 11 40 17.7 -1.4
KSH sP sP 11 40 21.2 +0.8
KSH PP 11 40 26.2
KSH S **Sn 11 42 57.6 +7.9**
KSH sS sS 11 43 02.3 -12
KSH SS 11 43 13.8
KSH PcP PcP 11 45 28.2 +3.5
KSH ScP ScP 11 49 00.2 +1.7
KSH PcS PcS 11 49 01.9 +2.3
KSH pmax pmax
comp=Z,7.0nm,1.2s
KSH pmax pmax
comp=Z,150nm,4.0s
KSH LR LR
comp=N,1μm,8.2s
KSH LR LR
comp=E,730nm,8.1s
KSH LR LR
comp=Z,830nm,7.1s
ENH Enshi 15.07 96 Pn **Pn 11 40 18.4 +0.4**
MK31 Makanchi Array 15.52 334 *e*P **Pn 11 40 23.2 -0.5**
MKAR Makanchi Array 15.52 334 Pn **Pn 11 40 22.4 -1.3**
comp=Z,0.4nm,0.3s,baz=128,slow=14,SNR=15
MKAR LR LR 11 46 16.3
comp=Z,302nm,19.4s,baz=152,slow=37
MKAR Makanchi Array 15.52 334 *e*P **Pn 11 40 22.7 -1.0**
MKAR pmax pmax
comp=Z,13nm,0.9s
MKAR Makanchi Array 15.52 334 Pn **Pn 11 40 22.4 -1.3**
MKAR LR LR 11 46 16.3
CHG Chiang Mai 15.56 155 ⇑P **Pn 11 40 25.6 +1.1**
comp=Z,15nm,1.0s
CHTO Chiang Mai 15.56 155 *e*P **Pn 11 40 23.1 -1.4**
CHTO pmax pmax
comp=Z,14nm,1.0s
CHTO Chiang Mai 15.56 155 *e*Pn **Pn 11 40 23.1 -1.4**
comp=Z,14nm,1.0s
CHTO Chiang Mai 15.56 155 Pn **Pn 11 40 23.5 -1.0**
SNR=5.9
CHTO Pn **Pn 11 40 23.5 -1.0**
SNR=5.9
CM31 Chiang Mai Arr 15.89 156 *e*Pn **Pn 11 40 27.7 -1.0**
CMAR Chiang Mai Arr 15.89 156 Pn **Pn 11 40 25.9 -2.8**
comp=Z,0.1nm,0.3s,baz=332,slow=12,SNR=30
CMAR LR LR 11 47 43.9
comp=Z,428nm,21.5s,baz=336,slow=42
KZA Kyzart 16.02 309 P **Pn 11 40 36.8 +6.6**
SNR=31
TKM2 Tokmak 2 16.21 312 P **Pn 11 40 36.6 +3.9**
SNR=10
TKM2 Tokmak 2 16.21 312 *e*P **Pn 11 40 36.4 +3.7**
TKM2 pmax pmax
comp=Z,27nm,1.1s
TKM2 Tokmak 2 16.21 312 *e*P **Pn 11 40 36.4 +3.7**
comp=Z,27nm,1.1s
KBK Karagaybulak 16.49 310 P **Pn 11 40 42.6 +6.3**
SNR=23
UCH Uchtor 16.57 308 P **Pn 11 40 42.4 +5.1**
SNR=20
UCH Uchtor 16.57 308 *e*P **Pn 11 40 42.5 +5.2**
comp=Z,15nm,0.7s
AAK Ala-Archa 16.77 309 P **Pn 11 40 42.9 +3.1**
comp=Z,150nm,1.1s,SNR=6.7
AAK Ala-Archa 16.77 309 P **Pn 11 40 45.9 +6.0**
SNR=8.2
AAK Ala-Archa 16.77 309 Pn **Pn 11 40 41.7 +1.9**
comp=Z,0.0nm,0.3s,baz=153,slow=14,SNR=14
AAK LR LR 11 47 47.9
comp=Z,681nm,20.4s,baz=95,slow=40
AAK Ala-Archa 16.77 309 *ce*P **Pn 11 40 43.8 +4.0**
AAK pmax pmax
comp=Z,13nm,1.2s
AAK Ala-Archa 16.77 309 *e*P **Pn 11 40 42.7 +2.9**
comp=Z,41nm,1.2s
AAK Ala-Archa 16.77 309 Pn **Pn 11 40 44.9 +5.1**
SNR=18
AAK Pn **Pn 11 40 44.9 +5.1**
SNR=18
FRU Bishkek 16.79 310 *e*P **Pn 11 40 44.0 +3.9**
FRU pmax pmax
comp=Z,120nm,2.0s
BDT Bhumibol Dam 17.04 157 P **Pn 11 40 45.5 +2.1**
AML Almayashu 17.07 307 P **Pn 11 40 46.2 +2.6**
SNR=14
AML Almayashu 17.07 307 *e*P **Pn 11 40 46.3 +2.6**
comp=Z,35nm,1.1s
EKS2 Erkin-Say 17.25 309 P **Pn 11 40 49.9 +4.0**
SNR=12
EKS2 Erkin-Say 17.25 309 *e*P **Pn 11 40 49.8 +4.0**
comp=Z,14nm,0.8s
HHC Hu-ho-hao-te 17.30 58 *e*P **Pn 11 40 46.9 +0.4**
HHC pP pP 11 40 50.4 -0.3
HHC sP sP 11 40 54.0 +2.0
HHC PP 11 41 01.4
HHC S **Sn 11 43 57.0 -1.9**
HHC sS sS 11 44 02.2 -10
HHC SS 11 44 18.3
HHC PcP PcP 11 45 31.3 +2.4
HHC pmax pmax
comp=Z,10.0nm,0.8s
HHC pmax pmax
comp=Z,130nm,6.5s
HHC LR LR
comp=N,1μm,11.6s
HHC LR LR
comp=E,1μm,14.4s
HHC LR LR
comp=Z,1μm,15.0s
SONM Songino Array 18.18 32 P **Pn 11 40 57.9 +0.5**
comp=Z,2.4nm,0.3s,baz=215,slow=12,SNR=70
ULN Ulaanbaatar 18.50 33 *e*P **Pn 11 41 01.5 +0.3**
ULN pmax pmax
comp=Z,61nm,1.3s
ULN Ulaanbaatar 18.50 33 *e*P **Pn 11 41 01.5 +0.3**
comp=Z,61nm,1.3s
ULN Ulaanbaatar 18.50 33 P **Pn 11 41 01.9 +0.7**
SNR=23
ULN P 11 41 01.9
SNR=23
ZAK Zakamensk 19.06 22⇓ *e*P **Pn 11 41 09.0 +1.0**
ZAK pmax pmax
comp=Z,19nm,1.1s
WHN Wuhan 19.07 92 P **Pn 11 41 06.5 -1.8**
WHN S **Sn 11 44 43.5 +1.5**
WHN LR LR
comp=N,3μm,8.7s
WHN LR LR
comp=E,8μm,7.8s
KBL Kabul 19.20 280 *e*P **Pn 11 41 11.3 +1.5**
KBL pmax pmax
comp=Z,72nm,0.9s
KBL Kabul 19.20 280 *e*P **Pn 11 41 11.3 +1.5**
comp=Z,72nm,0.9s
MOY Mondy 19.57 17 *e*P **Pn 11 41 14.8 +0.7**
MOY pmax pmax
comp=Z,30nm,1.5s
KURK Kurchatov 20.13 334 P **P 11 41 18.4 -0.5**
comp=Z,193nm,0.8s,SNR=24
KURK Kurchatov 20.13 334 P **P 11 41 17.8 -1.1**
comp=Z,29nm,0.9s,baz=146,slow=11,SNR=68
KURK LR LR 11 49 05.2
comp=Z,343nm,20.8s,MS3.7,baz=150,slow=37
KURK Kurchatov 20.13 334 *ce*P **P 11 41 18.7 -0.2**
KURK pmax pmax
comp=Z,42nm,1.2s
KURK Kurchatov 20.13 334 *e*P **P 11 41 18.8 -0.1**
comp=Z,24nm,0.8s
KURK Kurchatov 20.13 334 P **P 11 41 19.2 +0.3**
SNR=15
KURK P 11 41 19.2
SNR=15
TLY Talaya 20.31 21 Pn **P 11 41 23.8 +3.0**
comp=Z,95nm,0.9s,SNR=5.5
TLY Talaya 20.31 21 *e*P **P 11 41 22.9 +2.1**
TLY pmax pmax
comp=Z,22nm,1.1s
TLY MLR MLR
comp=Z,304nm,18.0s,MS3.7
TLY Talaya 20.31 21 *e*P **P 11 41 22.9 +2.2**
comp=Z,18nm,1.0s
TLY Talaya 20.31 21 P **P 11 41 23.2 +2.4**
SNR=13
TLY P 11 41 23.2
SNR=13
BJI Beijing 20.46 64 P **P 11 41 21.8 -0.8**
BJI S **S 11 45 11.0 -0.6**
BJI pmax pmax
comp=Z,9.0nm,0.5s
BJI pmax pmax
comp=Z,93nm,3.6s
BJI LR LR
comp=N,5μm,12.9s,MS5.0
BJI LR LR
comp=E,1μm,16.0s,MS5.0
BJI LR LR
comp=Z,340nm,16.3s,MS3.8
IRK Irkutsk 20.99 21 *e*P **P 11 41 30.0 +1.8**
IRK pmax pmax
comp=Z,163nm,1.2s
GZH Guangzhou 21.22 113 P **P 11 41 30.0 -0.9**
GZH S **S 11 45 23.7 -3.2**
GZH LR LR
comp=N,730nm,10.4s
GZH LR LR
comp=E,1μm,9.6s
GZH LR LR
comp=Z,2μm,9.3s
QIZ Qiongzhong 21.22 127 P **P 11 41 30.3 -0.7**
QIZ pP 11 41 34.1
QIZ S **S 11 45 25.5 -1.4**
QIZ pmax pmax
comp=Z,22nm,2.0s,mb4.1
QIZ LR LR
comp=N,950nm,13.7s
QIZ LR LR
comp=Z,920nm,10.1s,MS4.5
ZAA0 Zalesovo Array 21.40 348 *e*P **P 11 41 32.0 -0.6**
ZALV Zalesovo Beam 21.40 348 P **P 11 41 32.0 -0.5**
comp=Z,20nm,0.8s,mb4.5,baz=159,slow=10,SNR=44
NVS Novosibirsk 22.54 347 *e*P **P 11 41 44.2 -0.5**
NVS *e*S **S 11 45 49.4 -2.6**
NVS pmax pmax
comp=Z,70nm,1.4s,mb4.9
NVS pmax pmax
comp=N,112nm,1.8s
NVS pmax pmax
comp=E,34nm,1.6s
NVS smax
comp=N,32nm,2.2s
NVS smax
comp=E,32nm,2.4s
NJ2 Nanjing 22.54 86 *e*P **P 11 41 48.5 +3.5**
NJ2 pP 11 41 52.5
NJ2 sP sP 11 41 55.9 +6.7
NJ2 PP 11 42 15.8
NJ2 S **S 11 45 51.4 -1.1**
NJ2 sS sS 11 45 59.7 +2.6
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.4
NJ2 pmax pmax
comp=Z,190nm,4.7s
NJ2 LR LR
comp=N,870nm,10.0s,MS4.7
NJ2 LR LR
comp=E,1μm,12.2s,MS4.7
DL2 Dalian 24.48 68 P **P 11 42 07.0 +2.9**
DL2 S **S 11 46 19.6 -4.8**
DL2 LR LR
comp=N,800nm,18.0s,MS4.3
DL2 LR LR
comp=E,200nm,17.1s,MS4.3
DL2 LR LR
comp=Z,400nm,14.2s,MS4.1
QZH Quanzhou 24.51 103 *e*P **P 11 42 11.1 +6.6**
QZH S **S 11 46 29.7 +4.6**
QZH LR LR
comp=N,2μm,8.4s
QZH LR LR
comp=E,800nm,8.6s
QZH LR LR
comp=Z,2μm,19.9s,MS4.5
SSE Sheshan 24.68 87 *e*P **P 11 42 02.9 -3.1**
SSE pmax pmax
comp=Z,33nm,0.6s,mb5.0
SSE pmax pmax
comp=Z,22nm,3.5s
SSE LR LR
comp=N,430nm,11.3s,MS4.5
SSE LR LR
comp=E,780nm,11.3s,MS4.5
SSE LR LR
comp=Z,1μm,12.1s,MS4.5
BVAR Borovoye Array 25.21 328 P **P 11 42 11.1 +0.5**
comp=Z,10nm,0.7s,mb4.5,baz=136,slow=11,SNR=43
BVAR PcP PcP 11 45 43.5 -0.4
comp=Z,1.0nm,0.5s,baz=78,slow=3.5,SNR=3.5
BRVK Borovoye 25.28 328 P **P 11 42 11.6 +0.4**
comp=Z,175nm,1.2s,mb5.5,SNR=8.8
BRVK Borovoye 25.28 328 *ce*P **P 11 42 11.9 +0.7**
BRVK pmax pmax
comp=Z,39nm,1.2s,mb4.8
BRVK Borovoye 25.28 328 *e*P **P 11 42 11.7 +0.4**
comp=Z,23nm,0.8s,mb4.8
BRVK Borovoye 25.28 328 P **P 11 42 11.9 +0.7**
SNR=14
BRVK P 11 42 11.9
SNR=14
ABKT Aibek 27.96 289 P **P 11 42 37.5 +1.9**
comp=Z,131nm,1.0s,mb5.5,SNR=5.2
CN2 Changchun 27.99 58 *e*P **P 11 42 35.7 -0.1**
CN2 *es*P sP 11 42 42.7 +2.6
CN2 *e*S **S 11 47 18.0 -1.9**
CN2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,300nm,15.0s,MS4.2
CN2 LR LR
comp=E,400nm,15.0s,MS4.2
CN2 LR LR
comp=Z,800nm,13.0s,MS4.5
ABKAR Akbulak array 28.76 314 *e*P **P 11 42 43.0 +0.4**
comp=Z,10nm,0.8s,mb4.6
KSRS Korea Array 29.42 71 P **P 11 42 48.4 -0.2**
comp=Z,1.8nm,0.6s,mb4.0,baz=272,slow=9.3,SNR=9.1
KSRS LR LR 11 54 14.8
comp=Z,84nm,19.9s,MS3.4,baz=93,slow=36
KSRS Korea Array 29.42 71 P **P 11 42 48.4 -0.2**
KSRS pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
KSRS MLR MLR
comp=Z,84nm,19.9s,MS3.4
AKTK Aktyubinsk 30.36 315 P **P 11 42 57.3 +0.6**
AKTO Aktyubinsk 30.36 315 P **P 11 42 57.3 +0.6**
comp=Z,9.0nm,0.9s,mb4.5,baz=106,slow=8.2,SNR=26
PSI Prapat 30.89 167 LR LR 11 55 32.3
comp=Z,241nm,22.0s,MS3.8,baz=159,slow=36
MDJ Mudanjiang 31.07 57 P **P 11 43 01.9 -1.2**
MDJ pP pP 11 43 05.0 -1.1
MDJ S **S 11 48 07.0 -1.2**
MDJ ScP ScP 11 49 40.7 -0.7
MDJ PcS PcS 11 49 41.9 -0.5
MDJ pmax pmax
comp=Z,5.0nm,1.1s,mb4.3
MDJ pmax pmax
comp=Z,140nm,11.1s
MDJ LR LR
comp=N,2μm,19.6s,MS4.8
MDJ LR LR
comp=E,320nm,17.9s,MS4.8
MDJ LR LR
comp=Z,480nm,14.0s,MS4.3
SVE Sverdlovsk 31.98 327⇑ *e*P **P 11 43 11.6 +0.7**
SVE *e*S **S 11 48 16.5 -5.6**
SVE pmax pmax
comp=Z,46nm,0.9s,mb5.3
SVE MLR MLR
comp=Z,414nm,14.0s,MS4.3
ARU Arti 32.73 325 *d i*P **P 11 43 17.6 +0.1**
ARU *e* 11 44 23.3
ARU S **S 11 48 33.9 +0.1**
ARU SS SS 11 50 28.7 -26
ARU pmax pmax
comp=Z,22nm,1.2s,mb5.0
ARU Arti 32.73 325 *e*P **P 11 43 17.8 +0.3**
comp=Z,13nm,0.7s,mb5.0
KLR Kul'dur 33.42 49 *e*P **P 11 43 18.2 -5.4**
KLR MLR MLR
comp=E,700nm,10.0s
KLR MLR MLR
comp=Z,1μm,10.0s,MS4.9
KKM Kota Kinabalu 35.09 135 *e*P **P 11 43 40.0 +1.5**
comp=Z,36nm,1.1s,mb5.2
SOKR Solikamsk 35.19 329 *c i*P **P 11 43 39.1 +0.2**
SOKR pmax pmax
comp=Z,130nm,4.5s
SOKR MLR MLR
comp=Z,290nm,17.0s,MS4.1
HABR Khabarovsk 35.40 52 *e*P **P 11 43 39.9 -0.9**
HABR *e**PP pP 11 43 49.1 +5.2
HABR 11 44 59.2
HABR 11 46 08.8
HABR *e*S **S 11 49 13.2 -2.1**
HABR *SS sS 11 49 29.5 +9.1
HABR *e*SS SS 11 51 34.9 -14
HABR *e*SSS 11 51 52.4
HABR *e* 11 53 56.6
HABR pmax pmax
comp=Z,17nm,1.5s,mb4.8
HABR pmax pmax
comp=E,17nm,1.5s
HABR pmax pmax
comp=N,13nm,1.3s
HABR MLR MLR
comp=Z,245nm,15.0s,MS4.1
KSM Kuching 35.87 148 *e*P **P 11 43 45.8 +0.7**
comp=Z,42nm,1.7s,mb5.1
DGRG David-gareji 37.69 296 P **P 11 44 02.4 +2.0**
MJAR Matsushiro Arr 37.70 72 P **P 11 43 59.8 -0.8**
comp=Z,1.8nm,1.0s,mb3.8,baz=273,slow=8.0,SNR=4.5
MJAR LR LR 12 00 41.0
comp=Z,168nm,18.0s,MS3.9,baz=305,slow=38
MIB Mutribah 38.11 277 *e*P **P 11 44 03.7 -0.4**
MIB AMb AMB 11 44 04.9
comp=Z,61nm,1.0s,mb5.3
RDF Al-Radifah 38.19 276 *e*P **P 11 44 04.3 -0.5**
RDF AMb AMB 11 44 11.4
comp=Z,60nm,1.5s,mb5.1
GNI Garni 38.26 294 P **P 11 44 04.5 -0.7**
comp=Z,4.9nm,0.3s,mb4.7,baz=80,slow=6.1,SNR=4.0
GNI Garni 38.26 294 *d i*P **P 11 44 07.1 +1.9**
GNI pmax pmax
comp=Z,26nm,1.2s
GNI Garni 38.26 294 *e*P **P 11 44 04.5 -0.7**
comp=Z,31nm,1.0s,mb5.0
NAY Al-Naaiem 38.35 277 *e*P **P 11 44 05.6 -0.5**
NAY AMb AMB 11 44 06.3
comp=Z,25nm,0.9s,mb5.0
ZEI Tsey 38.73 299 *e*P **P 11 44 07.4 -1.8**
ZEI pmax pmax
comp=Z,7.0nm,0.7s,mb4.5
ONI Oni 39.07 298 P **P 11 44 14.0 +2.0**
KIV Kislovodsk 39.58 301 *e*P **P 11 44 17.3 +1.1**
KIV pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
KIV MLR MLR
comp=Z,89nm,15.0s,MS3.7
JHJ Hachijo jima 2 39.64 77 LR LR 12 01 34.2
comp=Z,250nm,18.0s,MS4.1,baz=340,slow=38
TIXI Tiksi 43.16 16 *e*P **P 11 44 44.9 -0.3**
TIXI pmax pmax
comp=Z,12nm,0.8s,mb4.7
TIXI Tiksi 43.16 16 *e*P **P 11 44 44.9 -0.3**
comp=Z,12nm,0.8s,mb4.7
ANN Anapa 43.30 302 *e*P **P 11 44 46.7 -0.1**
ANN pmax pmax
comp=Z,19nm,0.7s,mb4.9
ANN MLR MLR
comp=Z,379nm,16.0s,MS4.4
CBIJ Chichi jima 43.40 84 LR LR 12 04 36.9
comp=Z,155nm,18.8s,MS3.9,baz=288,slow=39
MOS Moscow 43.55 318 *e*P **P 11 44 47.9 -0.7**
MOS *e* 11 44 53.7
MOS pmax pmax
comp=Z,57nm,1.0s,mb5.3
OBN Obninsk 44.07 317⇑ *e*P **P 11 44 53.3 +0.5**
OBN *e* 11 45 07.2
OBN pmax pmax
comp=Z,37nm,1.6s,mb4.9
OBN MLR MLR
comp=Z,100nm,14.0s,MS3.9
ASF Jabal al Asfar 46.02 285 P **P 11 45 09.8 +1.2**
comp=Z,11nm,0.9s,mb4.8,baz=2.1,slow=2.7,SNR=7.7
BR131 Keskin Array S 46.77 296 *e*P **P 11 45 14.5 0.0**
BRTR Keskin Array B 46.77 296 P **P 11 45 14.2 -0.3**
comp=Z,12nm,0.8s,mb4.9,baz=98,slow=7.6,SNR=47
MMAI Mount Meron Ar 46.98 286 LR LR 12 08 44.4
comp=Z,116nm,20.3s,MS3.8,baz=145,slow=41
SEY Seymchan 47.58 33 *ce*P **P 11 45 21.6 +1.2**
APA Apatity 47.92 334⇓ *e*P **P 11 45 23.9 +0.9**
APA MLR MLR
comp=Z,900nm,15.0s,MS4.9
EIL Elat 48.39 282 P **P 11 45 27.1 0.0**
comp=Z,31nm,0.8s,mb5.4,baz=41,slow=3.7,SNR=20
AKASG Malin Array Be 48.44 311 P **P 11 45 26.4 -0.8**
comp=Z,7.0nm,0.8s,mb4.8,baz=81,slow=6.4,SNR=19
AKASG LR LR 12 09 57.2
comp=Z,266nm,18.6s,MS4.2,baz=55,slow=41
FINES FINESS Array B 50.10 325 P **P 11 45 39.7 -0.1**
comp=Z,2.0nm,0.5s,mb4.4,baz=96,slow=8.4,SNR=6.6
FINES LR LR 12 07 58.7
comp=Z,202nm,20.2s,MS4.1,baz=46,slow=37
FINES FINESS Array B 50.10 325 P **P 11 45 39.7 -0.1**
FINES LR LR 12 07 58.7
VRI Vrincioaia 50.67 305⇓ *i*P **P 11 45 44.8 +0.5**
ARCES ARCESS Array B 51.17 336 P **P 11 45 48.1 +0.4**
comp=Z,7.3nm,0.7s,mb4.7,baz=89,slow=7.2,SNR=26
MLR Muntele Rosu 51.27 304⇓ *i*P **P 11 45 49.3 +0.4**
BUR08 Bucovina Ar. S 51.41 307 *e*P **P 11 45 49.7 -0.2**
LVV L'vov 51.84 310 *e*P **P 11 45 51.8 -1.3**
LVV *e* 11 45 59.0
LVV MLR MLR
comp=Z,300nm,20.0s,MS4.3
STHS Stebnicka Huta 53.70 310 *e*P **P 11 46 07.4 +0.6**
STHS pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
STHS Stebnicka Huta 53.70 310 *e*P **P 11 46 07.4 +0.6**
comp=Z,3.0nm,0.8s,mb4.3
STHS Stebnicka Huta 53.70 310 *e*P **P 11 46 07.4 +0.6**
BILL Bilibino 53.79 27⇑ *e*P **P 11 46 08.2 +1.0**
BILL pmax pmax
comp=Z,11nm,0.7s,mb4.9
BILL Bilibino 53.79 27 *e*P **P 11 46 08.1 +1.0**
comp=Z,8.1nm,0.8s,mb4.7
KECS Kecovo 54.37 309 *e*P **P 11 46 10.0 -1.7**
KECS pmax pmax
comp=Z,3.0nm,1.3s,mb4.1
KECS Kecovo 54.37 309 *e*P **P 11 46 10.0 -1.7**
comp=Z,3.0nm,1.3s,mb4.1
KECS Kecovo 54.37 309 *e*P **P 11 46 10.0 -1.7**
OJC Ojcow 54.47 311 *e*P **P 11 46 12.4 0.0**
SPITS Spitsbergen Ar 54.86 346 P **P 11 46 14.9 +0.1**
comp=Z,5.3nm,0.7s,mb4.7,baz=125,slow=13,SNR=6.0
VYHS Vyhne 55.44 309 *e*P **P 11 46 19.6 +0.1**
VYHS *e* 11 46 31.7
VYHS pmax pmax
comp=Z,6.0nm,1.4s,mb4.4
VYHS Vyhne 55.44 309 *e*P **P 11 46 19.6 +0.1**
comp=Z,5.6nm,1.4s,mb4.4
VYHS *e* 11 46 31.7
VYHS Vyhne 55.44 309 *e*P **P 11 46 19.6 +0.1**
VYHS *e* 11 46 31.7
OKC Ostrava-Krasne 55.59 311 *e*P **P 11 46 20.4 -0.1**
OKC Ostrava-Krasne 55.59 311 *e*P **P 11 46 20.4 -0.1**
MORC Moravsky Berou 55.98 311 *e*P **P 11 46 23.2 -0.1**
MORC pmax pmax
comp=Z,5.0nm,0.8s,mb4.6

MORC Moravsky Berou 55.98 311 *eP* **P 11 46 23.2 -0.1**
comp=Z,4.8nm,0.8s,mb4.6
DPC Dobruska-Polom 56.62 312 *eP* **P 11 46 28.0 +0.1**
DPC Dobruska-Polom 56.62 312 *eP* **P 11 46 28.0 +0.1**
DPC *ep*P pP 11 46 31.8 +0.7
VRAC Vranov 56.69 311 LR LR 12 15 12.6
comp=Z,179nm,18.7s,MS4.2,baz=249,slow=41
UPC Upice 56.78 312 *eP* **P 11 46 29.3 +0.3**
UPC Upice 56.78 312 *eP* **P 11 46 29.3 +0.3**
NB2 NORSAR Subarra 57.28 325 P **P 11 46 31.6 -0.8**
comp=Z,3.1nm,0.7s,mb4.5,baz=80,slow=7.4
NOA NORSAR Array B 57.28 325 P **P 11 46 31.8 -0.6**
comp=Z,6.5nm,0.8s,mb4.7,baz=80,slow=7.1,SNR=12
NOA LR LR 12 13 06.6
comp=Z,253nm,19.6s,MS4.3,baz=90,slow=38
NOA NORSAR Array B 57.28 325 P **P 11 46 31.8 -0.6**
NOA LR LR 12 13 06.6
PRU Pruhonice 57.82 312 *eP* **P 11 46 37.1 +0.7**
PRU MLR MLR
comp=Z,200nm,15.1s,MS4.3
PRU Pruhonice 57.82 312 *eP* **P 11 46 37.1 +0.7**
PRU AMS AMS 12 13 40.0
comp=Z,200nm,15.1s
BRG Berggiesshubel 57.97 313 *i* P **P 11 46 37.4 0.0**
comp=Z,7.7nm,0.8s,mb4.8
CLL Collm 58.43 314 *eP* **P 11 46 40.0 -0.6**
CLL MLR MLR
comp=Z,100nm,20.2s,MS3.9
CLL Collm 58.43 314 *eP* **P 11 46 40.0 -0.6**
GERES GERESS Array B 58.65 311 P **P 11 46 42.1 -0.1**
comp=Z,0.9nm,0.3s,mb4.3,baz=77,slow=5.9,SNR=16
GERES LR LR 12 16 21.3
comp=Z,191nm,19.0s,MS4.2,baz=75,slow=40
KHC Kasperske Hory 58.65 311 *eP* **P 11 46 42.0 -0.2**
KHC MLR MLR
comp=Z,200nm,14.8s,MS4.4
KHC Kasperske Hory 58.65 311 *eP* **P 11 46 42.0 -0.2**
KHC AMS AMS 12 14 00.0
comp=Z,200nm,14.8s
NKC Novy Kostel 59.05 313 *eP* **P 11 46 45.0 0.0**
NKC Novy Kostel 59.05 313 *eP* **P 11 46 45.0 0.0**
SMY Shemya 59.77 44 *eP* **P 11 46 49.8 -0.1**
SMY pmax pmax
comp=Z,46nm,1.1s,mb5.4
SMY Shemya 59.77 44 *eP* **P 11 46 49.8 -0.1**
comp=Z,46nm,1.1s,mb5.4
GRA1 Grafenberg Arr 59.97 312 *eP* **P 11 46 51.7 +0.4**
comp=Z,12nm,1.2s,mb4.8
GRA1 LR LR
comp=Z,200nm,19.4s,MS4.3
GRF Grafenberg Arr 59.97 312 *eP* **P 11 46 51.7 +0.4**
comp=Z,12nm,1.2s,mb4.8
GRF *e*L 12 14 50.3
comp=Z,172nm,19.4s
GRF Grafenberg Arr 59.97 312 *eP* **P 11 46 51.7 +0.4**
GRF pmax pmax
comp=Z,12nm,1.2s,mb4.8
GRF MLR MLR
comp=Z,200nm,19.4s,MS4.3
GRF Grafenberg Arr 59.97 312 *eP* **P 11 46 51.7 +0.4**
GRF pmax pmax
comp=Z,12nm,1.2s,mb4.8
GRF MLR MLR
comp=Z,200nm,19.4s,MS4.3
FITZ Fitzroy Crossi 60.22 143 *eP* **P 11 46 53.3 0.0**
comp=Z,5.4nm,0.9s,mb4.6
FITZ Fitzroy Crossi 60.22 143 P **P 11 46 53.2 -0.2**
comp=Z,1.7nm,0.6s,mb4.2,baz=4.6,slow=7.9,SNR=4.9
DAVOX Davos/Dischmat 61.73 309 LR LR 12 18 30.9
comp=Z,160nm,18.4s,MS4.2,baz=75,slow=41
VAE Valguarnera 61.82 298 LR LR 12 16 34.7
comp=Z,111nm,18.9s,MS4.0,baz=300,slow=39
CDF Champ du Feu 62.84 312 *eP* **P 11 47 09.6 -1.1**
comp=Z,26nm,1.3s,mb4.9
CDF Champ du Feu 62.84 312 *eP* **P 11 47 09.6 -1.1**
CDF pmax pmax
comp=Z,13nm,1.3s,mb4.9
CDF Champ du Feu 62.84 312 *eP* **P 11 47 09.6 -1.1**
comp=Z,13nm,1.3s,mb4.9
WLF Walferdange 63.10 313 P **P 11 47 13.5 +1.1**
comp=Z,12nm,1.4s,mb4.8
WLF AP pP 11 47 16.6 +0.9
HINF Hinteralfeld 63.31 311 *eP* **P 11 47 12.5 -1.4**
BCLA Clavier 63.35 314 P **P 11 47 14.3 +0.2**
HAU Haudompre 63.56 312 *eP* **P 11 47 14.2 -1.3**
HAU *e*MLR MLR
comp=Z,146nm,20.0s,MS3.9
HAU Haudompre 63.56 312 *eP* **P 11 47 14.2 -1.3**
HAU LR LR
comp=Z,150nm,20.0s,MS4.2
GIVF Givet 63.75 314 *eP* **P 11 47 15.6 -1.1**
LPG La Plagne 64.22 309 *eP* **P 11 47 19.5 -0.4**
comp=Z,55nm,1.4s,mb5.1
LPG La Plagne 64.22 309 *eP* **P 11 47 19.5 -0.4**
LPG pmax pmax
comp=Z,27nm,1.4s,mb5.1
LPG La Plagne 64.22 309 *eP* **P 11 47 19.5 -0.4**
comp=Z,27nm,1.4s,mb5.1
LPL La Plagne 64.22 309 *eP* **P 11 47 19.4 -0.5**
comp=Z,50nm,1.3s,mb5.1
LPL La Plagne 64.22 309 *eP* **P 11 47 19.4 -0.5**
LPL pmax pmax
comp=Z,25nm,1.3s,mb5.1
LPL La Plagne 64.22 309 *eP* **P 11 47 19.4 -0.5**
comp=Z,25nm,1.3s,mb5.1
CABF La Chapelle 64.23 310 *eP* **P 11 47 18.8 -1.2**
SBF Sospel 64.38 307 *eP* **P 11 47 19.7 -1.3**
comp=Z,43nm,1.1s,mb5.1
SBF Sospel 64.38 307 *eP* **P 11 47 19.7 -1.3**
SBF pmax pmax
comp=Z,22nm,1.1s,mb5.1
SBF Sospel 64.38 307 *eP* **P 11 47 19.7 -1.3**
comp=Z,22nm,1.1s,mb5.1
MBDF Montbardon 64.49 308 *eP* **P 11 47 21.4 -0.3**
ORIF Oris-en-Rattie 65.01 309 *eP* **P 11 47 23.6 -1.5**
ORIF *e*MLR MLR
comp=Z,228nm,21.2s,MS4.0
FRF La Foret Royal 65.02 307 *eP* **P 11 47 23.5 -1.7**
LMR La Mourre 65.20 307 *eP* **P 11 47 25.1 -1.3**
SMRF Simiane la Rot 65.57 308 *eP* **P 11 47 27.8 -1.0**
SMF Signal de Mont 65.65 311 *eP* **P 11 47 27.8 -1.4**
comp=Z,31nm,1.2s,mb4.9
SMF Signal de Mont 65.65 311 *eP* **P 11 47 27.8 -1.4**
SMF pmax pmax
comp=Z,16nm,1.2s,mb4.9
SMF Signal de Mont 65.65 311 *eP* **P 11 47 27.8 -1.4**
comp=Z,16nm,1.2s,mb4.9
SSF Saint Saulge 65.70 311 *eP* **P 11 47 27.9 -1.6**
comp=Z,24nm,1.2s,mb4.8
SSF Saint Saulge 65.70 311 *eP* **P 11 47 27.9 -1.6**
SSF pmax pmax
comp=Z,12nm,1.2s,mb4.8
SSF Saint Saulge 65.70 311 *eP* **P 11 47 27.9 -1.6**
comp=Z,12nm,1.2s,mb4.8
VIVF Saint-Julien-l 65.82 309 *eP* **P 11 47 29.2 -1.1**
comp=Z,42nm,1.3s,mb5.2
VIVF Saint-Julien-l 65.82 309 *eP* **P 11 47 29.2 -1.1**
VIVF pmax pmax
comp=Z,21nm,1.3s,mb5.0
VIVF Saint-Julien-l 65.82 309 *eP* **P 11 47 29.2 -1.1**
comp=Z,21nm,1.3s,mb5.0
AVF Avril sur Loir 65.90 311 *eP* **P 11 47 29.4 -1.4**
comp=Z,32nm,1.4s,mb4.9
AVF Avril sur Loir 65.90 311 *eP* **P 11 47 29.4 -1.4**
AVF pmax pmax
comp=Z,16nm,1.4s,mb4.9
AVF Avril sur Loir 65.90 311 *eP* **P 11 47 29.4 -1.4**
comp=Z,16nm,1.4s,mb4.9
KEST Kesra 66.25 298 P **P 11 47 33.0 -0.3**
comp=Z,2.5nm,1.0s,mb4.2,baz=354,slow=8.0,SNR=5.0
WRAB Tennant Creek 66.45 136 P **P 11 47 35.0 +0.4**
comp=Z,188nm,1.0s,mb6.1,SNR=9.0
WRAB Tennant Creek 66.45 136 *eP* **P 11 47 34.4 -0.2**
WRAB pmax pmax
comp=Z,34nm,1.0s,mb5.3
WRAB Tennant Creek 66.45 136 *eP* **P 11 47 34.4 -0.2**
comp=Z,34nm,1.0s,mb5.3
WRA Warramunga Arr 66.45 136 P **P 11 47 34.5 -0.1**
comp=Z,21nm,1.0s,mb5.1,baz=331,slow=6.8,SNR=46
SCO Scoresbysund 66.54 340 *i* P **P 11 47 35.1 +0.6**
comp=Z,6.9nm,0.9s,mb4.7
LASF Ste Croix 66.67 308 *eP* **P 11 47 34.9 -0.9**
comp=Z,36nm,1.3s,mb5.0
TCF Toulx Ste Croi 66.83 311 *eP* **P 11 47 35.7 -1.1**
comp=Z,47nm,1.3s,mb5.0
TCF Toulx Ste Croi 66.83 311 *eP* **P 11 47 35.7 -1.1**
TCF pmax pmax
comp=Z,23nm,1.3s,mb5.0
TCF Toulx Ste Croi 66.83 311 *eP* **P 11 47 35.7 -1.1**
comp=Z,23nm,1.3s,mb5.0
OPO Ambohidratompo 66.99 227 P **P 11 47 36.6 -1.5**
comp=Z,1.5nm,0.3s,mb4.4,baz=68,slow=11,SNR=6.8
LDF La Druitiere 67.31 314 *eP* **P 11 47 38.1 -1.7**
comp=Z,19nm,0.9s,mb4.8
LDF La Druitiere 67.31 314 *eP* **P 11 47 38.1 -1.7**
LDF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
LDF La Druitiere 67.31 314 *eP* **P 11 47 38.1 -1.7**
comp=Z,9.6nm,0.9s,mb4.8
CAF Calviac 67.48 310 *eP* **P 11 47 40.2 -0.8**
comp=Z,12nm,0.8s,mb4.7
CAF Calviac 67.48 310 *eP* **P 11 47 40.2 -0.8**
CAF pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
CAF Calviac 67.48 310 *eP* **P 11 47 40.2 -0.8**
comp=Z,6.2nm,0.8s,mb4.7
GRR Gorron 67.84 314 *eP* **P 11 47 41.6 -1.6**
comp=Z,26nm,1.1s,mb4.9
GRR Gorron 67.84 314 *eP* **P 11 47 41.6 -1.6**
GRR pmax pmax
comp=Z,13nm,1.1s,mb4.9
GRR Gorron 67.84 314 *eP* **P 11 47 41.6 -1.6**
comp=Z,13nm,1.1s,mb4.9
MTLF Montolieu 68.06 308 *eP* **P 11 47 43.5 -1.1**
comp=Z,20nm,1.1s,mb4.8
MTLF Montolieu 68.06 308 *eP* **P 11 47 43.5 -1.1**
MTLF pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
MTLF Montolieu 68.06 308 *eP* **P 11 47 43.5 -1.1**
comp=Z,10nm,1.1s,mb4.8
MFF Saint Martin d 68.17 312 *eP* **P 11 47 43.8 -1.5**
LFF La Frestale 68.33 310 *eP* **P 11 47 45.6 -0.7**
comp=Z,31nm,1.0s,mb5.0
LFF La Frestale 68.33 310 *eP* **P 11 47 45.6 -0.7**
LFF pmax pmax
comp=Z,16nm,1.0s,mb5.0
LFF La Frestale 68.33 310 *eP* **P 11 47 45.6 -0.7**
comp=Z,16nm,1.0s,mb5.0
SGMF Saint Gilles 68.92 314 *eP* **P 11 47 48.9 -1.0**
ASAR Alice Springs 69.16 139 P **P 11 47 51.6 +0.1**
comp=Z,19nm,0.8s,mb5.0,baz=328,slow=6.2,SNR=95
SUMG Summit 69.20 346 *eP* **P 11 47 51.5 +0.2**
comp=Z,14nm,1.1s,mb4.8
SUMG Summit 69.20 346 *i* P **P 11 47 50.8 -0.4**
comp=Z,6.3nm,1.0s,mb4.5
ROSF Rostrenen 69.31 315 *eP* **P 11 47 51.2 -1.2**
comp=Z,32nm,1.0s,mb4.9
ROSF Rostrenen 69.31 315 *eP* **P 11 47 51.2 -1.2**
ROSF pmax pmax
comp=Z,16nm,1.0s,mb4.9
ROSF Rostrenen 69.31 315 *eP* **P 11 47 51.2 -1.2**
comp=Z,16nm,1.0s,mb4.9
QUIF Quistinic 69.44 314 *eP* **P 11 47 51.6 -1.5**
COLD Coldfoot 69.51 22 *eP* **P 11 47 54.2 +1.0**
comp=Z,19nm,1.0s,mb5.0
NWAO Narrogin (SRO) 69.89 158 P **P 11 47 55.2 -0.7**
comp=Z,8.8nm,0.7s,mb4.8,baz=314,slow=12,SNR=5.1
TTA Tatalina 70.04 27 *eP* **P 11 47 57.6 +1.0**
ETSF Etsaut 70.08 309 *eP* **P 11 47 56.6 -0.6**
comp=Z,11nm,0.7s,mb4.6
ETSF Etsaut 70.08 309 *eP* **P 11 47 56.6 -0.6**
ETSF pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
ETSF Etsaut 70.08 309 *eP* **P 11 47 56.6 -0.6**
comp=Z,5.7nm,0.7s,mb4.6
CHUM Lake Minchumin 70.84 25 *eP* **P 11 48 02.9 +1.5**
comp=Z,12nm,1.0s,mb4.8
BPAW Bear Paw Mtn. 71.17 24 *eP* **P 11 48 04.3 +0.8**
comp=Z,13nm,1.1s,mb4.8
SVW2 Sparrevohn 71.25 28 *eP* **P 11 48 05.5 +1.5**
PPLA Purkeypile 71.48 26 *eP* **P 11 48 06.7 +1.3**
comp=Z,80nm,1.4s,mb5.5
KTH Kantishna Hill 71.53 25 *eP* **P 11 48 06.6 +1.0**
comp=Z,32nm,1.3s,mb5.1
COLA College 71.74 23 *eP* **P 11 48 07.2 +0.3**
COLA pmax pmax
comp=Z,22nm,1.0s,mb5.0
COLA College 71.74 23 *eP* **P 11 48 07.2 +0.3**
comp=Z,22nm,1.0s,mb5.0
TRF Thorofare Moun 71.82 25 *eP* **P 11 48 07.7 +0.3**
comp=Z,4μm,1.2s
FORT Forrest 72.13 148 *eP* **P 11 48 10.0 +0.5**
comp=Z,16nm,0.8s,mb5.0
INK Inuvik 73.28 16 *eP* **P 11 48 16.4 +0.4**
INK pmax pmax
comp=Z,12nm,1.0s
INK Inuvik 73.28 16 *eP* **P 11 48 16.4 +0.3**
comp=Z,12nm,1.0s,mb4.8
PMR Palmer 73.42 26 *eP* **P 11 48 17.2 +0.3**
PMR pmax pmax
comp=Z,22nm,0.9s,mb5.1
PMR Palmer 73.42 26 *eP* **P 11 48 17.2 +0.3**
comp=Z,22nm,0.9s,mb5.1
ESDC Sonseca Array 73.86 307 P **P 11 48 19.4 -0.6**
comp=Z,3.1nm,0.7s,mb4.4,baz=50,slow=6.6,SNR=9.5
ESDC LR LR 12 25 58.8
comp=Z,78nm,18.1s,MS4.0,baz=20,slow=40
EGAK Eagle 73.90 21 *eP* **P 11 48 19.9 +0.2**
comp=Z,15nm,0.9s,mb4.9
KDAK Kodiak Island 74.46 30 P **P 11 48 23.1 0.0**
comp=Z,24nm,0.7s,mb5.2,baz=310,slow=3.9,SNR=15
KDAK Kodiak Island 74.46 30 *i* P **P 11 48 23.9 +0.8**
OHAK Old Harbor 74.50 31 *eP* **P 11 48 23.4 0.0**
comp=Z,47nm,1.3s,mb5.3
MVO Moncorvo 75.13 310 *eP* **P 11 48 27.3 0.0**
comp=Z,32nm,1.1s,mb5.2
TAM Tamanrasset 75.17 288 *eP* **P 11 48 27.6 -0.2**
TAM pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
TAM Tamanrasset 75.17 288 *eP* **P 11 48 27.6 -0.2**
comp=Z,3.6nm,0.9s,mb4.3
BMRM Bremner River 75.46 25 *eP* **P 11 48 29.6 +0.8**
comp=Z,29nm,1.0s,mb5.2
MTE Manteigas 75.86 309 *eP* Px 11 48 43.5
comp=Z,26nm,1.0s
PVIS Viseu 75.92 309 *eP* **P 11 48 32.4 +0.6**
comp=Z,18nm,1.1s,mb4.9
PCBR Castelo Branco 76.11 309 *eP* **P 11 48 33.4 +0.5**
SFJD Kangerlussuaq 76.20 346 *i* P **P 11 48 32.3 -0.6**
comp=Z,9.8nm,0.9s,mb4.7
PBAR Barrancos 76.69 307 *eP* **P 11 48 35.3 -1.0**
comp=Z,24nm,1.5s,mb4.9
PESTR Estremoz 76.69 308 *eP* **P 11 48 33.8 -2.5**
comp=Z,11nm,0.3s,mb5.3
PTOM Tomar 76.84 309 *eP* **P 11 48 37.9 +0.8**
comp=Z,35nm,1.3s,mb5.1
EVO Evora 77.15 308 *eP* **P 11 48 38.9 +0.1**
comp=Z,42nm,1.1s,mb5.0
EVO *e*MLR MLR
comp=Z,104nm,19.0s,MS3.9
EVO Evora 77.15 308 *eP* **P 11 48 38.7 -0.1**
comp=Z,28nm,1.3s,mb5.0
PBEJ Beja 77.32 307 *eP* **P 11 48 39.6 -0.2**
comp=Z,24nm,2.2s,mb4.7
PVAQ Vaqueiros 77.55 307 *eP* **P 11 48 40.7 -0.4**
comp=Z,24nm,1.4s,mb4.9
PCVE Castro Verde 77.65 307 *eP* **P 11 48 43.1 +1.5**
comp=Z,24nm,1.7s,mb4.8
LSZ Lusaka 77.69 243 P **P 11 48 41.1 -1.0**
comp=Z,10.0nm,0.7s,mb4.9,baz=78,slow=5.4,SNR=15
PBDV Barranco-do-Ve 77.78 306 *eP* **P 11 48 42.7 +0.3**
comp=Z,40nm,2.0s,mb5.0
HYT Haines Junctio 77.96 22 *eP* **P 11 48 44.0 +1.0**
PNL Peninsula 78.20 24 *eP* **P 11 48 45.8 +1.5**
comp=Z,24nm,0.9s,mb5.1
MORF Marmelete 78.23 307 *eP* **P 11 48 45.8 +0.9**
comp=Z,28nm,2.0s,mb4.8
SKAG Skagway 79.71 22 *eP* **P 11 48 54.3 +1.7**
comp=Z,26nm,0.9s,mb5.2
STKA Stephens Creek 79.79 139 *eP* **P 11 48 52.3 -1.0**
comp=Z,6.3nm,1.0s,mb4.5
STKA Stephens Creek 79.79 139 P **P 11 48 52.0 -1.3**
comp=Z,7.4nm,0.9s,mb4.6,baz=324,slow=11,SNR=8.0
STKA LR LR 12 26 27.4
comp=Z,103nm,19.5s,MS4.2,baz=215,slow=37
RMQ Roma 80.12 131 *eP* **P 11 48 56.0 +0.8**
comp=Z,13nm,0.8s,mb4.9
CMSA Cobar Meteorol 81.86 136 *eP* **P 11 49 04.3 -0.1**
DLBC Dease Lake 82.17 21 *eP* **P 11 49 07.1 +1.4**
YKA Yellowknife Ar 82.26 12 P **P 11 49 05.2 -0.9**
comp=Z,6.9nm,0.8s,mb4.6,baz=330,slow=5.1,SNR=68
YKA PKKPbc PKKPbc 12 07 31.2 -2.9
comp=Z,0.3nm,0.8s,baz=153,slow=3.2,SNR=3.8
YKA Yellowknife Ar 82.26 12 P **P 11 49 05.2 -0.9**
YKA PKKPbc PKKPbc 12 07 31.2 -2.9
TORD Torodi Ar. Bea 83.27 281 P **P 11 49 11.2 -1.0**
comp=Z,12nm,1.1s,mb4.8,baz=47,slow=4.3,SNR=32
TORD LR LR 12 30 50.4
comp=Z,104nm,18.9s,MS4.2,baz=310,slow=39
ARMA Armidale 84.66 132 *eP* **P 11 49 19.6 +0.7**
LBTB Lobatse 85.75 237 P **P 11 49 23.6 -0.8**
comp=Z,18nm,0.7s,mb5.4,baz=87,slow=5.3,SNR=16
LBTB Lobatse 85.75 237 P **P 11 49 23.7 -0.7**
LBTB pmax pmax
comp=Z,18nm,0.7s,mb5.4
LBTB Lobatse 85.75 237 *eP* **P 11 49 24.0 -0.4**
comp=Z,17nm,0.9s,mb5.3
BOSA Boshof 88.26 234 P **P 11 49 35.1 -1.4**
comp=Z,5.6nm,1.1s,mb4.7,baz=76,slow=4.2,SNR=3.2
SCHQ Schefferville 90.49 348 P **P 11 49 45.7 -1.0**
comp=Z,5.5nm,0.8s,mb4.9,baz=359,slow=4.8,SNR=7.9
SCHQ Schefferville 90.49 348 *eP* **P 11 49 46.0 -0.7**
EDM Edmonton 91.15 15 *eP* **P 11 49 50.2 +0.4**
FFC Flin Flon 91.61 8 P **P 11 49 51.8 -0.1**
comp=Z,106nm,0.8s,mb6.2,SNR=9.1
FFC Flin Flon 91.61 8 *eP* **P 11 49 51.2 -0.7**
FFC pmax pmax
comp=Z,12nm,0.8s,mb5.3
FFC Flin Flon 91.61 8 *eP* **P 11 49 51.2 -0.7**
comp=Z,12nm,0.8s,mb5.3
DBIC Dimbokro 92.19 279 P **P 11 49 53.6 -1.7**
comp=Z,4.0nm,0.8s,mb4.8,baz=130,slow=7.9,SNR=3.8
DBIC LR LR 12 33 36.3
comp=Z,78nm,20.4s,MS4.1,baz=42,slow=37
BBTS Babate 97.03 292 LR LR 12 41 43.0
comp=Z,88nm,18.6s,MS4.3,baz=299,slow=40
TXAR Lajitas Array 116.05 15 PKP PKPdf 11 55 27.8 -0.7
comp=Z,0.2nm,0.6s,baz=38,slow=1.7,SNR=4.6
TXAR Lajitas Array 116.05 15 PKP PKPdf 11 55 27.8 -0.7
SDV Santo Domingo 135.05 335 PKP PKPdf 11 56 04.1 -1.0
comp=Z,2.7nm,0.8s,baz=346,slow=4.2,SNR=4.3
PMSA Palmer Station 145.17 198 *e*PKPbc PKPbc 11 56 17.4 -4.0
OTAV Otavalo 145.59 343 *e*PKPbc PKPbc 11 56 24.6 +0.4
CPUP Villa Florida 152.67 276 PKPbc PKPbc 11 56 39.6 -2.5
comp=Z,0.7nm,0.5s,baz=90,slow=4.0,SNR=3.2
LPAZ La Paz 155.47 309 PKPab PKPab 11 57 02.5 -2.3
comp=Z,1.9nm,0.8s,baz=29,slow=4.5,SNR=6.8

IDC ***10*** *11:39:00.9±2.4, 22°.28S×68°.41W, h0km, mb3.7/3, mb1 3.9/5, mb1mx3.7/16, mbtmp3.6/5, ML3.5/2, Error ellipse: s-maj=57.3km s-min=40.0km az=9.0*
ISCJB ***10*** *11:39:21.8±0.9, 20°.62S±0°.06×68°.1W±0°.1, h128km±10km, mb3.4/3, Error ellipse: s-maj=16.7km s-min=10.2km az=177.9*
GUC ***10*** *11:39:23.9±0.9, 20°.60S×68°.38W, h140km, ML3.3*
ISC 10 11:39:22.7±0.8, 20°.61S±0°.06×68°.1W±0°.1, h124km±11km, n11, σ1°00/16, mb3.5/3, 1C-3D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**1.37**	**251**	⇓*i* P	**Pn**	**11 39 49.3**	**+0.4**
PB01				*i* S	**Sn**	**11 40 09.1**	**+0.2**
PB01				AML	AML	11 40 10.1	
comp=N,725nm,0.2s							
HMBC	**Humberston**	**1.71**	**281**	⇓*i* P	**Pn**	**11 39 52.4**	**-0.5**
HMBC				*i* S	**Sn**	**11 40 14.9**	**-0.9**
HMBC				AML	AML	11 40 18.8	
comp=E,273nm,0.4s							
MNMC	**Miæe Miæ**	**2.04**	**316**	⇑*i* P	**Pn**	**11 39 58.1**	**+1.2**
MNMC				*i* S	**Sn**	**11 40 24.3**	**+1.3**
MNMC				AML	AML	11 40 29.1	
comp=E,502nm,0.3s							
PB04	**Plate Boundary**	**2.09**	**218**	*eP*	**Pn**	**11 40 03.8**	**+6.3**
PB04				AML	AML	11 40 43.3	
comp=E,127nm,0.5s							
PSGC	**Pisagua**	**2.15**	**298**	⇓*i* P	**Pn**	**11 39 57.8**	**-0.5**
PSGC				*i* S	**Sn**	**11 40 23.9**	**-1.6**
PSGC				AML	AML	11 40 27.9	
comp=E,91nm,0.2s							
PECH	**Pedro de Valdi**	**2.46**	**216**	*eP*	**Pn**	**11 40 02.7**	**+0.5**
PECH				*i* S	**Sn**	**11 40 32.7**	**+0.1**
LPAZ	**La Paz**	**4.30**	**360**	Pn	**Pn**	**11 40 30.6**	**+4.2**
comp=E,0.5nm,0.3s,baz=171,slow=5.9,SNR=12							
SIV	**San Ignacio**	**8.10**	**57**	Pn	**Pn**	**11 41 17.3**	**-0.4**
comp=E,0.3nm,0.3s,baz=237,slow=13,SNR=9.2							
TXAR	**Lajitas Array**	**60.34**	**324**	P	**P**	**11 49 21.1**	**+2.4**
comp=E,0.7nm,1.1s,mb3.6,baz=152,slow=4.1,SNR=4.4							
TORD	**Torodi Ar. Bea**	**76.34**	**70**	P	**P**	**11 50 57.4**	**-1.2**
comp=E,0.2nm,0.3s,mb3.3,baz=257,slow=4.4,SNR=4.3							
YKA	**Yellowknife Ar**	**90.61**	**340**	P	**P**	**11 52 10.0**	**-0.5**
comp=E,0.2nm,0.4s,mb3.6,baz=136,slow=4.9,SNR=7.8							

DDA ***10*** *11:47:30.2, 36°.98N×29°.21E, h23km±1km, Md3.4*
THE ***10*** *11:47:30.7, 36°.70N×29°.50E, h1km±1km, ML4.8/1, Error ellipse: s-maj=7.5km s-min=1.1km az=145.0*
ISK ***10*** *11:47:30.5, 37°.00N×29°.22E, h8km, MD3.0*
CSEM ***10*** *11:47:30.9±0.1, 37°.00N×29°.22E, h5km, MD3.0, Error ellipse: s-maj=3.0km s-min=2.5km az=170.0*
ISCJB ***10*** *11:47:31.0±0.5, 37°.01N±0°.02×29°.22E±0°.02, h5km±4km, Error ellipse: s-maj=3.6km s-min=3.1km az=152.6*
ISC 10 11:47:31.4±0.4, 37°.00N±0°.02×29°.21E±0°.02, h8km±4km, n74, σ0°92/110, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.27**	**56**	*e*PG	**Pg**	**11 47 36.1**	**-0.8**
GLHS				*e*SG	**Sg**	**11 47 40.7**	**+0.2**
GLHS	**Glhisar (BURDU**	**0.27**	**56**	*e*Pg	**Pg**	**11 47 36.1**	**-0.7**
GLHS				*e*Sg	**Sg**	**11 47 40.7**	**+0.2**
GOLH	**Golhisar**	**0.36**	**50**	*i* P	**Pg**	**11 47 38.0**	**-0.5**
GOLH				*i* S	**Sg**	**11 47 44.6**	**+1.3**
GOLH	**Golhisar**	**0.36**	**50**	*i* P	**Pg**	**11 47 38.0**	**-0.5**
GOLH				*i* S	**Sg**	**11 47 44.6**	**+1.3**
FETY	**Fethiye**	**0.38**	**196**	*e*PG	**Pg**	**11 47 37.9**	**-0.9**
FETY				*e*SG	**Sg**	**11 47 43.9**	**0.0**
FETY	**Fethiye**	**0.38**	**196**	*e*Pg	**Pg**	**11 47 37.9**	**-0.9**
FETY				*e*Sg	**Sg**	**11 47 43.9**	**0.0**
TURN	**Turunc**	**0.51**	**255**	*i* P	**Pg**	**11 47 45.5**	**+4.3**
TURN				*i* S	**Sg**	**11 47 56.7**	**+8.9**
TURN	**Turunc**	**0.51**	**255**	*i* P	**Pg**	**11 47 45.5**	**+4.3**
ELL	**Elmali**	**0.61**	**114**	*e*PG	**Pg**	**11 47 42.5**	**-0.7**
ELL				*e*SG	**Sg**	**11 47 51.7**	**+0.5**
ELL	**Elmali**	**0.61**	**114**	*e*Pg	**Pg**	**11 47 42.5**	**-0.7**
ELL				*e*Sg	**Sg**	**11 47 51.7**	**+0.5**
DNZL	**Cakiroluk**	**0.70**	**349**	*i* P	**Pg**	**11 47 43.9**	**-1.0**
DNZL				*i* S	**Sg**	**11 47 54.9**	**+0.8**
DNZL	**Cakiroluk**	**0.70**	**349**	*i* P	**Pg**	**11 47 43.9**	**-1.0**
DNZL				*i* S	**Sg**	**11 47 54.8**	**+0.8**
YER	**Yerkesik**	**0.76**	**280**	*e*PG	**Pg**	**11 47 45.9**	**-0.1**
YER	**Yerkesik**	**0.76**	**280**	*e*Pg	**Pg**	**11 47 45.9**	**-0.1**
DENT	**Denizli**	**0.76**	**349**	*e*PG	**Pg**	**11 47 45.1**	**-1.0**
DENT	**Denizli**	**0.76**	**349**	*e*Pg	**Pg**	**11 47 45.1**	**-1.0**
AKAS	**Kas**	**0.83**	**158**	*i* P	**Pg**	**11 47 46.4**	**-0.9**
AKAS				*i* S	**Sg**	**11 48 01.2**	**+3.0**
AKAS	**Kas**	**0.83**	**158**	*i* P	**Pg**	**11 47 46.4**	**-1.0**
AKAS				*i* S	**Sg**	**11 48 01.2**	**+3.1**
KORT	**Korkueli**	**0.91**	**90**	*i* P	**Pg**	**11 47 47.1**	**-1.8**
KORT				*i* S	**Sg**	**11 48 02.5**	**+1.7**
KORT	**Korkueli**	**0.91**	**90**	*i* P	**Pg**	**11 47 47.1**	**-1.8**
KORT				*i* S	**Sg**	**11 48 02.5**	**+1.8**
ANTB	**Antalya**	**1.16**	**95**	*e*PN	**Pn**	**11 47 53.6**	**-0.4**
ANTB	**Antalya**	**1.16**	**95**	*e*Pn	**Pn**	**11 47 53.6**	**-0.3**
ARG	**Arkhangelos**	**1.18**	**228**	P	**Pn**	**11 47 52.4**	**-1.8**
ARG				S	**Sg**	**11 48 11.0**	**+1.8**
ARG	**Arkhangelos**	**1.18**	**228**	P	**Pn**	**11 47 52.4**	**-1.8**
ARG				S	**Sg**	**11 48 11.0**	**+1.8**
MLSB	**Milas**	**1.19**	**285**	*e*PN	**Pn**	**11 47 53.7**	**-0.6**
MLSB	**Milas**	**1.19**	**285**	*e*Pn	**Pn**	**11 47 53.7**	**-0.6**
BCK	**Bucak**	**1.19**	**67**	*e*PN	**Pn**	**11 47 53.6**	**-0.8**
BCK	**Bucak**	**1.19**	**67**	*e*Pn	**Pn**	**11 47 53.6**	**-0.8**
AYDN	**Tasoluk**	**1.25**	**302**	*i* P	**Pn**	**11 47 54.9**	**-0.3**
AYDN				*i* S	**Sb**	**11 48 13.2**	**+1.7**
AYDN	**Tasoluk**	**1.25**	**302**	*i* P	**Pn**	**11 47 54.9**	**-0.3**
AYDN				*i* S	**Sb**	**11 48 13.2**	**+1.6**
ISP	**Isparta**	**1.32**	**51**	*e*PN	**Pn**	**11 47 56.3**	**0.0**
ISP	**Isparta**	**1.32**	**51**	P	**Pn**	**11 47 56.3**	**+0.1**
ISP				S	**Sb**	**11 48 15.1**	**+1.4**
ISP	**Isparta**	**1.32**	**51**	P	**Pn**	**11 47 56.3**	**+0.1**
ISP				S	**Sb**	**11 48 15.1**	**+1.4**
DAT	**Datca**	**1.34**	**259**	*e*PN	**Pn**	**11 47 56.8**	**+0.3**
DAT	**Datca**	**1.34**	**259**	*e*Pn	**Pn**	**11 47 56.8**	**+0.3**

KHL	**Karahalli**	**1.34**	**10**	*e*PN	**Pn**	**11 47 55.9**	**-0.6**
KHL	**Karahalli**	**1.34**	**10**	*e*Pn	**Pn**	**11 47 55.9**	**-0.6**
KHAL	**Karahalli**	**1.38**	**9**	*i* P	**Pn**	**11 47 57.2**	**+0.2**
KHAL				*i* S	**Sb**	**11 48 15.6**	**+0.2**
KHAL	**Karahalli**	**1.38**	**9**	*i* P	**Pn**	**11 47 57.2**	**+0.1**
KHAL				*i* S	**Sb**	**11 48 15.6**	**+0.2**
BDRM	**Kayabasi**	**1.42**	**273**	*i* P	**Pn**	**11 47 57.1**	**-0.4**
BDRM				*i* S	**Sb**	**11 48 16.6**	**+0.2**
BDRM	**Kayabasi**	**1.42**	**273**	*i* P	**Pn**	**11 47 57.1**	**-0.4**
BDRM				*i* S	**Sb**	**11 48 16.6**	**+0.2**
SUTC	**Sutluce-Ispart**	**1.50**	**71**	*e*PN	**Pn**	**11 47 58.2**	**-0.4**
SUTC	**Sutluce-Ispart**	**1.50**	**71**	*e*Pn	**Pn**	**11 47 58.2**	**-0.5**
KULA	**Kula-Manisa**	**1.57**	**344**	*e*PN	**Pn**	**11 47 59.5**	**-0.1**
KULA	**Kula-Manisa**	**1.57**	**344**	*e*Pn	**Pn**	**11 47 59.5**	**-0.1**
NIS1	**Nisyros Isl.**	**1.68**	**257**	P	**Pn**	**11 48 02.5**	**+1.3**
NIS1				S	**Sn**	**11 48 26.8**	**+3.9**
NIS1	**Nisyros Isl.**	**1.68**	**257**	P	**Pn**	**11 48 02.5**	**+1.3**
NIS1				S	**Sn**	**11 48 26.8**	**+3.9**
SHUT	**Suhut-Afyon**	**1.88**	**34**	*e*PN	**Pn**	**11 48 04.6**	**+0.8**
SHUT	**Suhut-Afyon**	**1.88**	**34**	*e*Pn	**Pn**	**11 48 04.6**	**+0.8**
DEMI	**Demirci**	**2.08**	**349**	*i* P	**Pn**	**11 48 06.2**	**-0.4**
DEMI				*i* S	**Sn**	**11 48 33.4**	**+0.8**
DEMI	**Demirci**	**2.08**	**349**	*i* P	**Pn**	**11 48 06.2**	**-0.4**
DEMI				*i* S	**Sn**	**11 48 33.4**	**+0.8**
IZM	**Izmir**	**2.08**	**313**	*e*PN	**Pn**	**11 48 06.9**	**+0.2**
IZM	**Izmir**	**2.08**	**313**	*e*Pn	**Pn**	**11 48 06.9**	**+0.2**
GDZ	**Gediz**	**2.09**	**6**	*e*P	**Pn**	**11 48 06.6**	**-0.2**
GDZ				*i* S	**Sn**	**11 48 34.2**	**+1.2**
GDZ	**Gediz**	**2.09**	**6**	*e*P	**Pn**	**11 48 06.6**	**-0.2**
GDZ				*i* S	**Sn**	**11 48 34.2**	**+1.1**
ALT	**Altintas**	**2.17**	**19**	*e*PN	**Pn**	**11 48 06.9**	**-0.9**
ALT	**Altintas**	**2.17**	**19**	*e*Pn	**Pn**	**11 48 06.9**	**-0.9**
AKHS	**Akhisar**	**2.18**	**330**	*e*P	**Pn**	**11 48 06.8**	**-1.2**
AKHS				*e*S	**Sn**	**11 48 34.2**	**-0.9**
AKHS	**Akhisar**	**2.18**	**330**	*e*P	**Pn**	**11 48 06.8**	**-1.1**
AKHS				*e*S	**Sn**	**11 48 34.2**	**-0.9**
AKS	**Akhisar**	**2.18**	**330**	*e*PN	**Pn**	**11 48 07.4**	**-0.6**
AKS	**Akhisar**	**2.18**	**330**	*e*Pn	**Pn**	**11 48 07.4**	**-0.6**
BLCB	**Balcova**	**2.21**	**309**	*e*PN	**Pn**	**11 48 09.0**	**+0.6**
BLCB	**Balcova**	**2.21**	**309**	*e*Pn	**Pn**	**11 48 09.0**	**+0.6**
HDMB	**Hadim**	**2.62**	**90**	*e*PN	**Pn**	**11 48 14.7**	**+0.7**
HDMB	**Hadim**	**2.62**	**90**	*e*Pn	**Pn**	**11 48 14.7**	**+0.7**
KONT	**Konya--Tatoy**	**2.67**	**68**	*e*PN	**Pn**	**11 48 14.7**	**-0.1**
KONT	**Konya--Tatoy**	**2.67**	**68**	*e*Pn	**Pn**	**11 48 14.7**	**-0.1**
KDHN	**Kadinhani**	**2.75**	**56**	*i* P	**Pn**	**11 48 17.2**	**+1.3**
KDHN				*i* S	**Sn**	**11 48 48.3**	**-1.1**
KDHN	**Kadinhani**	**2.75**	**56**	*i* P	**Pn**	**11 48 17.2**	**+1.3**
KDHN				*i* S	**Sn**	**11 48 48.3**	**-1.1**
LADK	**Ladik-KONYA**	**2.77**	**64**	*e*PN	**Pn**	**11 48 16.1**	**-0.1**
LADK	**Ladik-KONYA**	**2.77**	**64**	*e*Pn	**Pn**	**11 48 16.1**	**-0.1**
KIZT	**Kizilcal**	**2.82**	**48**	*e*PN	**Pn**	**11 48 16.6**	**-0.2**
KIZT	**Kizilcal**	**2.82**	**48**	*e*Pn	**Pn**	**11 48 16.6**	**-0.2**
ERMK	**Ermenek**	**2.99**	**96**	*i* P	**Pn**	**11 48 25.8**	**+6.7**
ERMK				*i* S	**Sn**	**11 49 02.6**	**+7.4**

NEIC ***10*** *11:55:26.8±0.5, 3°.77N×126°.65E, h35km, mb4.6/4, Error ellipse: s-maj=32.2km s-min=6.8km az=68.0*
ISCJB ***10*** *11:55:26.1±1.2, 3°.88N±0°.06×126°.90E±0°.08, h46km±11km, mb4.3/18, Error ellipse: s-maj=15.3km s-min=7.5km az=150.6*
DJA ***10*** *11:55:27, 3°.93N×126°.96E, h30km, MLv4.6/9*
IDC ***10*** *11:55:28.6±5.5, 3°.68N×126°.46E, h48km±55km, mb4.0/14, mb1 4.1/14, mb1mx4.0/21, mbtmp4.0/14, MS3.2/1, Ms1 3.2/1, ms1mx2.3/36, Error ellipse: s-maj=46.2km s-min=14.4km az=69.0*

ISC 10 11:55:27.5±1.2, 3°.87N±0°.07×126°.87E±0°.08, h42km±11km, n38, σ1º11/37, mb4.3/18, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.35**	**262**	P	**Pn**	**11 55 49.2**	**-0.7**
SGSI				S	**Sn**	**11 56 05.4**	**-1.2**
TNTI	**Ternate**	**3.12**	**171**	P	**Pn**	**11 56 14.8**	**+0.6**
MNI	**Manado**	**3.15**	**220**	P	**Pn**	**11 56 19.2**	**+4.6**
DAV	**Davao City (W)**	**3.43**	**338**	LR	LR	11 57 53.2	
	comp=Z,337nm,18.7s,baz=203,slow=42						
DAV	**Davao City (W)**	**3.43**	**338**	P	**Pn**	**11 56 17.5**	**-1.0**
LBMI	**Labuha**	**4.52**	**172**	P	**Pn**	**11 56 34.6**	**+1.1**
MRSI	**Marisa**	**5.97**	**236**	P	**Pn**	**11 56 56.2**	**+2.8**
	0.3nm842nm61nm,0.6s						
LUWI	**Luwuk**	**6.37**	**220**	P	**Pn**	**11 57 00.9**	**+2.0**
	0.4nm790nm71nm,1.0s						
APSI	**Ampana**	**7.05**	**228**	P	**Pn**	**11 57 13.5**	**+5.2**
	0.3nm669nm73nm,1.0s						
AAI	**Ambon**	**7.62**	**170**	P	**Pn**	**11 57 14.0**	**-2.1**
	0.3nm66nm,1.3s						
MYLDM	**Lahad Datu**	**8.44**	**279**	P	**Pn**	**11 57 31.8**	**+4.4**
	28nm,1.0s						
KDI	**Kendari**	**8.86**	**209**	P	**Pn**	**11 57 32.8**	**-0.3**
	11nm,1.4s						
TTSI	**Tana Toraja**	**9.84**	**226**	P	**Pn**	**11 57 50.0**	**+3.5**
KAKA	**Kakadu**	**17.38**	**162**	*e*P	**Pn**	**11 59 25.5**	**-1.5**
	10nm,0.8s						
KNA	**Kununurra**	**19.58**	**175**	*e*P	**Pn**	**11 59 52.8**	**-1.0**
	13nm,0.7s						
FITZ	**Fitzroy Crossi**	**21.87**	**183**	*e*P	**P**	**12 00 16.6**	**-0.2**
	17nm,1.9s,mb4.1						
FITZ	**Fitzroy Crossi**	**21.87**	**183**	P	**P**	**12 00 15.2**	**-1.6**
	2.0nm,0.4s,mb3.9,baz=1.9,slow=12,SNR=11						
WRAB	**Tennant Creek**	**24.77**	**163**	*e*P	**P**	**12 00 45.0**	**-0.4**
	20nm,0.8s,mb4.7						
WRA	**Warramunga Arr**	**24.78**	**163**	P	**P**	**12 00 44.6**	**-0.9**
	13nm,0.6s,mb4.7,baz=341,slow=11,SNR=117						
ASAR	**Alice Springs**	**28.22**	**166**	P	**P**	**12 01 16.4**	**0.0**
	0.7nm,0.3s,mb3.7,baz=352,slow=14,SNR=30						
CMAR	**Chiang Mai Arr**	**30.92**	**300**	P	**P**	**12 01 39.8**	**-0.8**
	1.5nm,0.7s,mb4.0,baz=118,slow=7.2,SNR=8.5						
KSRS	**Korea Array**	**33.44**	**2**	P	**P**	**12 02 05.3**	**+2.9**
	0.7nm,0.5s,mb3.8,baz=181,slow=9.8,SNR=5.1						
STKA	**Stephens Creek**	**38.21**	**160**	*e*P	**P**	**12 02 43.9**	**+0.6**
	7.8nm,0.7s,mb4.5						
STKA	**Stephens Creek**	**38.21**	**160**	P	**P**	**12 02 44.3**	**+1.0**
	8.1nm,0.6s,mb4.6,baz=332,slow=8.3,SNR=24						
ARMA	**Armidale**	**41.51**	**147**	*e*P	**P**	**12 03 12.3**	**+1.5**
SONM	**Songino Array**	**47.21**	**341**	P	**P**	**12 03 57.3**	**+1.2**
	0.9nm,0.3s,mb4.2,baz=163,slow=5.4,SNR=2.7						
SONM				PcP	PcP	12 05 27.9	+0.9
	1.2nm,0.6s,baz=160,slow=4.6,SNR=2.9						
MKAR	**Makanchi Array**	**57.52**	**325**	P	**P**	**12 05 12.2**	**-0.4**
	2.4nm,0.5s,mb4.5,baz=101,slow=9.9,SNR=19						
MKAR				PcP	PcP	12 06 06.7	+1.0
	0.5nm,0.4s,baz=145,slow=5.3,SNR=2.8						
UCH	**Uchtor**	**60.16**	**317**	P	**P**	**12 05 32.0**	**+1.0**
	3.0nm,0.9s,mb4.3						
ZALV	**Zalesovo Beam**	**60.53**	**333**	P	**P**	**12 05 32.3**	**-1.0**
	1.0nm,0.3s,mb4.4,baz=111,slow=7.9,SNR=3.4						
KURK	**Kurchatov**	**61.70**	**327**	*e*P	**P**	**12 05 40.9**	**-0.4**
	4.6nm,0.7s,mb4.7						
BVAR	**Borovoye Array**	**67.28**	**327**	P	**P**	**12 06 18.4**	**+0.7**
	2.3nm,0.8s,mb4.3,baz=116,slow=6.8,SNR=11						
ABKAR	**Akbulak array**	**72.13**	**321**	*e*P	**P**	**12 06 48.0**	**+0.4**
	1.6nm,0.5s,mb4.2						
BRTR	**Keskin Array B**	**90.04**	**310**	P	**P**	**12 08 22.2**	**-0.8**
	1.4nm,0.8s,mb4.3,baz=95,slow=5.0,SNR=6.3						
ARCES	**ARCESS Array B**	**90.36**	**340**	P	**P**	**12 08 24.1**	**+0.2**
	2.4nm,0.8s,mb4.6,baz=69,slow=6.8,SNR=6.2						
FINES	**FINESS Array B**	**91.77**	**332**	P	**P**	**12 08 30.6**	**0.0**
	0.6nm,0.4s,mb4.3,baz=35,slow=7.0,SNR=4.1						
AKASG	**Malin Array Be**	**91.87**	**321**	P	**P**	**12 08 30.4**	**-0.9**
	1.7nm,0.6s,mb4.6,baz=70,slow=4.6,SNR=7.3						
BUR08	**Bucovina Ar. S**	**94.99**	**318**	*e*P	**P**	**12 08 46.1**	**+0.4**
TORD	**Torodi Ar. Bea**	**123.01**	**288**	PKP	PKPdf	12 14 20.3	-0.1
	0.4nm,0.7s,baz=58,slow=3.6,SNR=2.7						

IDC ***10*** *12:02:40.8±36.0, 19°.37S×169°.24E, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.9/14, mbtmp4.0/4, Error ellipse: s-maj=630.5km s-min=105.7km az=79.0*
NOU ***10*** *12:02:53.3±1.1, 20°.00S×168°.05E, h10km, MD3.1*

ISC 10 12:02:56.3±3.5, 20°.3S±0°.1×168°.1E±0°.5, h35km, n8, σ1º02/9, mb3.8/4, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.16**	**211**	*e*S	**Sn**	**12 03 56.6**	**+1.1**
PLUM	**Mont Dore**	**2.39**	**214**	*e*P	**Pn**	**12 03 31.6**	**-1.4**
NOUC	**Port Laguerre**	**2.45**	**223**	*e*P	**Pn**	**12 03 33.8**	**0.0**
NOUC				AMP		12 04 20.8	
	comp=Z,24nm,6.0s						
MVNO	**Noumea**	**2.49**	**218**	*e*P	**Pn**	**12 03 34.0**	**-0.4**
MVNO				*e*S	**Sn**	**12 04 03.0**	**-0.6**
STKA	**Stephens Creek**	**26.37**	**239**	P	**P**	**12 08 31.4**	**+2.1**
	comp=Z,3.3nm,1.0s,mb3.8,baz=82,slow=14,SNR=4.5						
WRA	**Warramunga Arr**	**31.66**	**265**	P	**P**	**12 09 15.2**	**-1.3**
	comp=Z,0.5nm,0.7s,mb3.5,baz=91,slow=8.5,SNR=5.1						
ASAR	**Alice Springs**	**31.83**	**258**	P	**P**	**12 09 18.4**	**+0.3**
	comp=Z,2.5nm,0.7s,mb4.2,baz=88,slow=9.1,SNR=33						
FITZ	**Fitzroy Crossi**	**40.07**	**266**	P	**P**	**12 10 29.0**	**+0.4**
	comp=Z,1.8nm,0.7s,mb3.9,baz=154,slow=11,SNR=4.1						

CRAAG ***10*** *12:13:40.4, 35°.96N×0°.53W, Ml4.1*
ISCJB ***10*** *12:13:41.1±0.3, 36°.01N±0°.02×0°.68W±0°.02, h10km, Error ellipse: s-maj=2.7km s-min=2.3km az=149.6*
SFS ***10*** *12:13:41.9, 35°.93N×0°.56W, h0km, ML4.1*
CSEM ***10*** *12:13:42.9±0.2, 35°.89N×0°.57W, h20km, ML4.1, Error ellipse: s-maj=4.0km s-min=3.2km az=171.0*
MDD ***10*** *12:13:42.3±0.3, 35°.97N×0°.56W, h0km, mb4.2/24, Error ellipse: s-maj=3.7km s-min=3.2km az=49.0, PRIMO*
NEIC ***10*** *12:13:42.0, 35°.94N×0°.55W, h0km, MG4.2(MDD), After MDD.*
LDG ***10*** *12:13:43.6±0.3, 35°.75N×0°.55W, h20km, Ml3.3/5, Error ellipse: s-maj=6.2km s-min=3.0km az=153.0*
INMG ***10*** *12:13:44.3±1.5, 35°.85N×0°.52W, h41km±9km, ML2.8, Error ellipse: s-maj=6.6km s-min=3.8km az=142.0*
CNRM ***10*** *12:13:45.7, 35°.88N×0°.58W, h30km, MD4.1*

ISC 10 12:13:42.3±0.3, 35°.98N±0°.02×0°.67W±0°.02, h10km, n283, σ1º53/472, 13D, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USTO	**Oran**	**0.26**	**158**	P	**Pg**	**12 13 47.0**	**-0.6**
USTO	**Oran**	**0.26**	**158**	P	**Pg**	**12 13 47.0**	**-0.6**
USTO	**Oran**	**0.26**	**158**	P	**Pg**	**12 13 47.0**	**-0.6**
OTSS	**Djebel Tessala**	**0.70**	**188**	P	**Pg**	**12 13 55.7**	**-0.2**
OTSS	**Djebel Tessala**	**0.70**	**188**	P	**Pg**	**12 13 55.7**	**-0.2**
OTSS	**Djebel Tessala**	**0.70**	**188**	P	**Pg**	**12 13 55.7**	**-0.2**
OTSS	**Djebel Tessala**	**0.70**	**188**	P	**Pg**	**12 13 55.7**	**-0.2**
ODJA	**Bouhanifia**	**0.77**	**147**	P	**Pg**	**12 13 51.0**	**-6.2**
ODJA	**Bouhanifia**	**0.77**	**147**	P	**Pg**	**12 13 51.0**	**-6.2**
ODJA	**Bouhanifia**	**0.77**	**147**	P	**Pg**	**12 13 51.0**	**-6.2**
ODZI	**Dzioula**	**0.82**	**214**	P	**Pg**	**12 13 59.0**	**+0.8**
ODZI	**Dzioula**	**0.82**	**214**	P	**Pg**	**12 13 59.0**	**+0.8**
ODZI	**Dzioula**	**0.82**	**214**	P	**Pg**	**12 13 59.0**	**+0.8**
OJBR	**Djebel Berber**	**0.92**	**115**	P	**Pg**	**12 13 58.0**	**-1.9**
OJBR	**Djebel Berber**	**0.92**	**115**	P	**Pg**	**12 13 58.0**	**-1.9**
OJBR	**Djebel Berber**	**0.92**	**115**	P	**Pg**	**12 13 58.0**	**-1.9**
OJBR	**Djebel Berber**	**0.92**	**115**	P	**Pg**	**12 13 58.0**	**-1.9**
OLHC	**Oulhaca**	**0.95**	**220**	P	**Pg**	**12 14 00.0**	**-0.6**
OLHC	**Oulhaca**	**0.95**	**220**	P	**Pg**	**12 14 00.0**	**-0.6**
OLHC	**Oulhaca**	**0.95**	**220**	P	**Pg**	**12 14 00.0**	**-0.6**
OKGL	**Djebel Kef Gue**	**1.07**	**86**	P	**Pg**	**12 13 59.0**	**-3.8**
OKGL	**Djebel Kef Gue**	**1.07**	**86**	P	**Pg**	**12 13 59.0**	**-3.8**
OKGL	**Djebel Kef Gue**	**1.07**	**86**	P	**Pg**	**12 13 59.0**	**-3.8**
OKGL	**Djebel Kef Gue**	**1.07**	**86**	P	**Pg**	**12 13 59.0**	**-3.8**
OJGS	**Djebel Guires**	**1.25**	**112**	P	**Pn**	**12 14 00.0**	**-5.8**
OJGS	**Djebel Guires**	**1.25**	**112**	P	**Pn**	**12 14 00.0**	**-5.8**
OJGS	**Djebel Guires**	**1.25**	**112**	P	**Pn**	**12 14 00.0**	**-5.8**
OJGS	**Djebel Guires**	**1.25**	**112**	P	**Pn**	**12 14 00.0**	**-5.8**
EANR	**'Ain N'Sour**	**1.44**	**91**	P	**Pn**	**12 14 06.2**	**-2.2**
EANR	**'Ain N'Sour**	**1.44**	**91**	P	**Pn**	**12 14 06.2**	**-2.2**
EANR	**'Ain N'Sour**	**1.44**	**91**	P	**Pn**	**12 14 06.2**	**-2.2**
EANR	**'Ain N'Sour**	**1.44**	**91**	P	**Pn**	**12 14 06.2**	**-2.2**
ENIJ	**Nijar**	**1.59**	**309**	P	**Pn**	**12 14 10.0**	**-0.4**
ENIJ				S	**Sn**	**12 14 29.2**	**-1.8**
ENIJ	**Nijar**	**1.59**	**309**	P	**Pn**	**12 14 10.0**	**-0.4**
	35nm,0.2s,SNR=27						
ENIJ				S	**Sn**	**12 14 29.2**	**-1.7**
	311nm,0.3s,SNR=7.9						
ENIJ	**Nijar**	**1.59**	**309**	P	**Pn**	**12 14 10.0**	**-0.4**
	35nm,0.2s,SNR=27						
ENIJ				S	**Sn**	**12 14 29.2**	**-1.7**
	311nm,0.3s,SNR=7.9						
ENIJ	**Nijar**	**1.59**	**309**	P	**Pn**	**12 14 10.0**	**-0.4**
	35nm,0.2s,SNR=27						
ENIJ				S	**Sn**	**12 14 29.2**	**-1.8**
	311nm,0.3s,SNR=7.9						
CART	**Cartagena**	**1.63**	**351**	*e*Pn	**Pn**	**12 14 10.1**	**-0.9**
CART				*e*Sn	**Sn**	**12 14 29.8**	**-2.2**
CART	**Cartagena**	**1.63**	**351**	⇓P	**Pn**	**12 14 09.7**	**-1.3**
CART				S	**Sn**	**12 14 28.8**	**-3.2**
CART	**Cartagena**	**1.63**	**351**	⇓P	**Pn**	**12 14 09.7**	**-1.3**
CART				S	**Sn**	**12 14 28.8**	**-3.2**
CART	**Cartagena**	**1.63**	**351**	*i* P	**Pn**	**12 14 09.7**	**-1.3**
CART	**Cartagena**	**1.63**	**351**	*e*Pn	**Pn**	**12 14 10.1**	**-0.9**
CART				*e*S	**Sn**	**12 14 28.8**	**-3.2**
CART				*e*Sn	**Sn**	**12 14 29.8**	**-2.2**
ECHF	**Ech Chlef**	**1.64**	**83**	P	**Pn**	**12 14 11.2**	**0.0**
ECHF	**Ech Chlef**	**1.64**	**83**	P	**Pn**	**12 14 11.2**	**0.0**
ECHA	**Ech Chlef**	**1.66**	**83**	P	**Pn**	**12 14 11.2**	**-0.2**
ECHA	**Ech Chlef**	**1.66**	**83**	P	**Pn**	**12 14 11.2**	**-0.2**
ETRT	**Tiaret**	**1.71**	**110**	P	**Pn**	**12 14 10.2**	**-1.9**
ETRT	**Tiaret**	**1.71**	**110**	P	**Pn**	**12 14 10.2**	**-1.9**
ETRT	**Tiaret**	**1.71**	**110**	P	**Pn**	**12 14 10.2**	**-1.9**
ETRT	**Tiaret**	**1.71**	**110**	P	**Pn**	**12 14 10.2**	**-1.9**
EBNR	**Beni Rached**	**1.81**	**79**	P	**Pn**	**12 14 11.8**	**-1.7**
EBNR	**Beni Rached**	**1.81**	**79**	P	**Pn**	**12 14 11.8**	**-1.7**
EALB	**Alboran**	**1.92**	**270**	P	**Pn**	**12 14 14.4**	**-0.6**
EALB				S	**Sn**	**12 14 37.9**	**-1.2**
EALB	**Alboran**	**1.92**	**270**	P	**Pn**	**12 14 14.4**	**-0.6**
	3.4nm,0.3s,SNR=7.9						
EALB				S	**Sn**	**12 14 37.9**	**-1.2**
	179nm,0.2s,SNR=7.9						
EALB	**Alboran**	**1.92**	**270**	P	**Pn**	**12 14 14.4**	**-0.6**
	3.4nm,0.3s,SNR=7.9						
EALB				S	**Sn**	**12 14 37.9**	**-1.2**
	179nm,0.2s,SNR=7.9						
EALB	**Alboran**	**1.92**	**270**	P	**Pn**	**12 14 14.4**	**-0.6**
	3.4nm,0.3s,SNR=7.9						
EALB				S	**Sn**	**12 14 37.9**	**-1.3**
	179nm,0.2s,SNR=7.9						
MELI	**Melilla**	**1.97**	**250**	S	**Sn**	**12 14 38.3**	**-2.0**
MELI	**Melilla**	**1.97**	**250**	S	**Sn**	**12 14 38.3**	**-2.0**
MELI	**Melilla**	**1.97**	**250**	*e*S	**Sn**	**12 14 38.3**	**-2.1**
ZAI	**Zaio**	**1.97**	**240**	P	**Pn**	**12 14 16.0**	**+0.3**
ZAI				S	**Sn**	**12 14 38.0**	**-2.5**
ZAI	**Zaio**	**1.97**	**240**	P	**Pn**	**12 14 16.0**	**+0.3**
ZAI				S	**Sn**	**12 14 38.0**	**-2.5**
ZAI	**Zaio**	**1.97**	**240**	*i* P	**Pn**	**12 14 16.0**	**+0.3**
ZAI				*i* S	**Sn**	**12 14 38.0**	**-2.5**
EBER	**Berja**	**2.01**	**298**	⇓P	**Pn**	**12 14 16.1**	**-0.1**
EBER				S	**Sn**	**12 14 43.2**	**+1.8**
EBER	**Berja**	**2.01**	**298**	⇓P	**Pn**	**12 14 16.1**	**-0.1**
	9.0nm,0.1s,SNR=18						
EBER				S	**Sn**	**12 14 43.2**	**+1.8**
	106nm,0.4s,SNR=7.9						
EBER	**Berja**	**2.01**	**298**	⇓P	**Pn**	**12 14 16.1**	**-0.1**
	9.0nm,0.1s,SNR=18						
EBER				S	**Sn**	**12 14 43.2**	**+1.8**
	106nm,0.4s,SNR=7.9						
EBER	**Berja**	**2.01**	**298**	P	**Pn**	**12 14 16.1**	**-0.2**
	9.0nm,0.1s,SNR=18						
EBER				S	**Sn**	**12 14 43.2**	**+1.7**
	106nm,0.4s,SNR=7.9						
EHUE	**Huescar**	**2.39**	**321**	P	**Pn**	**12 14 22.9**	**+1.4**
EHUE				S	**Sn**	**12 14 50.5**	**-0.4**
EHUE	**Huescar**	**2.39**	**321**	P	**Pn**	**12 14 22.9**	**+1.4**
	6.5nm,0.2s,SNR=7.9						
EHUE				S	**Sn**	**12 14 50.5**	**-0.4**
	0.1nm,0.4s,SNR=7.9					

EADA				S	Sn	12 15 26.3	+0.4
	3.5nm,0.3s,SNR=7.9						
EADA	**Adamuz**	**3.81**	**306**	P	Pn	12 14 42.2	+1.2
	0.9nm,0.2s,SNR=7.9						
EADA				S	Sn	12 15 26.3	+0.4
	3.5nm,0.3s,SNR=7.9						
EJIF	**Jimena Fronter**	**3.91**	**278**	P	Pn	12 14 43.2	+0.9
EJIF				S	Sn	12 15 29.1	+0.8
EJIF	**Jimena Fronter**	**3.91**	**278**	P	Pn	12 14 43.3	+0.9
	2.5nm,0.2s,SNR=7.9						
EJIF				S	Sn	12 15 29.1	+0.8
	8.0nm,0.3s,SNR=7.9						
EJIF	**Jimena Fronter**	**3.91**	**278**	P	Pn	12 14 43.3	+0.9
	2.5nm,0.2s,SNR=7.9						
EJIF				S	Sn	12 15 29.1	+0.8
	8.0nm,0.3s,SNR=7.9						
EJIF	**Jimena Fronter**	**3.91**	**278**	P	Pn	12 14 43.2	+0.8
EJIF				S	Sn	12 15 29.1	+0.8
	8.0nm,0.3s,SNR=7.9						
LIJA	**Lijar**	**3.93**	**285**	P	Pn	12 14 50.0	+7.4
LIJA				S	Sn	12 15 25.0	-3.7
LIJA	**Lijar**	**3.93**	**285**	P	Pn	12 14 50.0	+7.4
LIJA				S	Sn	12 15 25.0	-3.7
ESPR	**Espera**	**4.28**	**284**	S	Sn	12 15 39.2	+1.9
	7.9nm,0.3s,SNR=7.9						
ESPR	**Espera**	**4.28**	**284**	S	Sn	12 15 39.2	+1.9
	7.9nm,0.3s,SNR=7.9						
ESPR	**Espera**	**4.28**	**284**	S	Sn	12 15 39.2	+1.9
	7.9nm,0.3s,SNR=7.9						
ECAB	**El Cabril**	**4.34**	**300**	P	Pn	12 14 48.4	+0.1
ECAB				S	Sn	12 15 38.1	-0.8
ECAB	**El Cabril**	**4.34**	**300**	P	Pn	12 14 48.4	+0.1
	5.1nm,0.3s,SNR=7.9						
ECAB				S	Sn	12 15 38.1	-0.8
	4.9nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**4.34**	**300**	P	Pn	12 14 48.4	+0.1
	5.1nm,0.3s,SNR=7.9						
ECAB				S	Sn	12 15 38.1	-0.8
	4.9nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**4.34**	**300**	P	Pn	12 14 48.4	+0.2
	5.1nm,0.3s,SNR=7.9						
ECAB				S	Sn	12 15 38.1	-0.7
	4.9nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**4.38**	**2**	P	Pn	12 14 50.9	+2.1
EMOS				S	Sn	12 15 39.6	-0.3
EMOS	**Mosqueruela**	**4.38**	**2**	P	Pn	12 14 50.9	+2.1
	9.6nm,0.2s,SNR=29						
EMOS				S	Sn	12 15 39.6	-0.3
	36nm,0.4s,SNR=7.9					

Error ellipse: s-maj=9.1km s-min=6.8km az=217.0

ISC 10 12:23:56.5±3.0, 59°47S±0°.10×28°.3W±0°.2, h243km±31km, n41, σ0°68/23, mb4.4/19, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.94**	**152**	*e*	**Pn**	**12 27 03.0**	**-0.8**
USHA	**Ushuaia**	**22.00**	**264**	P	**P**	**12 28 31.5**	**+0.8**
	12nm,0.7s,mb4.5,baz=95,slow=10.0,SNR=9.6						
QSPA	**South Pole Qui**	**30.77**	**180**	P	**P**	**12 29 49.8**	**+1.0**
	4.7nm,0.4s,mb4.4,baz=217,slow=1.5,SNR=185						
QSPA				PcP	PcP	12 32 39.3	0.0
	1.1nm,0.5s,baz=216,slow=3.6,SNR=6.5						
QSPA				ScP	ScP	12 35 56.7	-1.6
	3.2nm,1.0s,baz=181,slow=2.7,SNR=15						
QSPA	**South Pole Qui**	**30.77**	**180**	P	**P**	**12 29 49.8**	**+1.0**
QSPA				PcP	PcP	12 32 39.3	0.0
QSPA				ScP	ScP	12 35 56.7	-1.6
PLCA	**Paso Flores**	**32.20**	**287**	P	**P**	**12 30 01.4**	**-0.3**
	3.6nm,0.7s,mb4.0,baz=128,slow=7.0,SNR=8.0						
PLCA	**Paso Flores**	**32.20**	**287**	P	**P**	**12 30 01.4**	**-0.3**
MAW	**Mawson**	**37.80**	**141**	P	**P**	**12 30 48.9**	**0.0**
	2.5nm,0.5s,mb4.0,baz=244,slow=9.1,SNR=9.9						
CFAA	**Coronel Fontan**	**38.51**	**298**	P	**P**	**12 30 54.6**	**-0.8**
	0.9nm,0.6s,mb3.5,baz=157,slow=7.5,SNR=14						
CPUP	**Villa Florida**	**38.74**	**316**	P	**P**	**12 30 57.4**	**+0.1**
	1.3nm,0.3s,mb4.0,baz=145,slow=6.5,SNR=9.4						
CPUP				ScP	ScP	12 36 25.3	-2.5
	0.4nm,0.4s,baz=164,slow=7.4,SNR=3.1						
CPUP	**Villa Florida**	**38.74**	**316**	P	**P**	**12 30 57.4**	**+0.1**
CPUP				ScP	ScP	12 36 25.3	-2.5
SUR	**Sutherland**	**42.19**	**72**	P	**P**	**12 31 26.9**	**+1.6**
	13nm,0.9s,mb4.3,baz=186,slow=7.4,SNR=5.4						
BOSA	**Boshof**	**47.45**	**74**	P	**P**	**12 32 06.9**	**+0.1**
	7.2nm,0.8s,mb4.1,baz=196,slow=8.3,SNR=14						
SIV	**San Ignacio**	**49.58**	**317**	P	**P**	**12 32 22.5**	**-0.5**
	2.9nm,0.5s,mb3.9,baz=172,slow=8.6,SNR=18						
CASY	**Casey**	**50.89**	**160**	P	**P**	**12 32 32.4**	**+0.2**
	11nm,0.8s,mb4.3						
LPAZ	**La Paz**	**51.96**	**309**	P	**P**	**12 32 41.8**	**+1.1**
	2.7nm,0.4s,mb4.0,baz=106,slow=5.9,SNR=25						
LSZ	**Lusaka**	**60.20**	**68**	P	**P**	**12 33 38.9**	**0.0**
	11nm,0.7s,mb4.6						
LIC	**Lamto**	**68.06**	**25**	*e*P	**P**	**12 34 29.8**	**0.0**
	26nm,0.4s,mb5.2						
KIC	**Kosan Boka**	**68.26**	**25**	*e*P	**P**	**12 34 30.2**	**-0.8**
	89nm,1.8s,mb5.1						
TIC	**Toumodi**	**68.47**	**25**	*e*P	**P**	**12 34 32.3**	**-0.1**
	6.8nm,0.2s,mb4.9						
DBIC	**Dimbokro**	**68.53**	**25**	P	**P**	**12 34 32.2**	**-0.5**
	4.3nm,0.4s,mb4.5,baz=167,slow=5.7,SNR=25						
TORD	**Torodi Ar. Bea**	**76.33**	**30**	P	**P**	**12 35 19.1**	**+0.5**
	10nm,0.3s,mb4.9,baz=196,slow=6.3,SNR=298						
STKA	**Stephens Creek**	**88.61**	**171**	P	**P**	**12 36 21.5**	**-0.3**
	3.0nm,0.7s,mb4.2,baz=152,slow=8.9,SNR=4.6						
ASAR	**Alice Springs**	**95.88**	**164**	P	**P**	**12 36 54.2**	**-1.1**
	1.4nm,0.5s,mb4.4,baz=180,slow=3.9,SNR=22						
WRA	**Warramunga Arr**	**99.61**	**163**	P	Pdif	12 37 10.5	-1.7
	0.4nm,0.8s,baz=192,slow=4.4,SNR=5.1						
CMAR	**Chiang Mai Arr**	**124.33**	**114**	PKP	PKPdf	12 42 25.5	-0.6
	0.3nm,0.4s,baz=232,slow=3.9,SNR=4.7						
FINES	**FINESS Array B**	**127.68**	**30**	PKP	PKPdf	12 42 30.1	-1.1
	2.9nm,0.7s,baz=207,slow=6.4,SNR=5.3						
AKTK	**Aktyubinsk**	**129.81**	**56**	PKP	PKPdf	12 42 34.4	-1.1
AKTO	**Aktyubinsk**	**129.81**	**56**	PKP	PKPdf	12 42 34.4	-1.1
	0.9nm,0.6s,baz=219,slow=1.3,SNR=4.0						
ARCES	**ARCESS Array B**	**134.34**	**23**	PKP	PKPdf	12 42 42.8	-0.8
	2.9nm,0.7s,baz=205,slow=3.5,SNR=8.8						
ARCES				SKPbc	SKPbc	12 45 45.7	-4.1
	1.9nm,0.8s,baz=128,slow=2.0,SNR=5.5						
BVAR	**Borovoye Array**	**137.05**	**61**	PKP	PKPdf	12 42 48.9	-0.2
	0.6nm,0.4s,baz=220,slow=6.7,SNR=4.8						
BVAR				SKPbc	SKPbc	12 45 56.3	-2.3
	1.5nm,0.6s,baz=228,slow=1.8,SNR=6.9						
YKA	**Yellowknife Ar**	**138.26**	**316**	PKP	PKPdf	12 42 49.5	-1.5
	0.5nm,0.3s,baz=135,slow=2.1,SNR=13						
YKA				SKPbc	SKPbc	12 45 58.6	-3.2
	0.8nm,0.9s,baz=124,slow=1.9,SNR=6.9						
YKA				SKPab		12 46 06.2	
	0.6nm,0.5s,baz=121,slow=4.8,SNR=8.0						
YKA	**Yellowknife Ar**	**138.26**	**316**	PKP	PKPdf	12 42 49.5	-1.5
YKA				SKPbc	SKPbc	12 45 58.6	-3.2
YKA				SKPab		12 46 06.2	
MKAR	**Makanchi Array**	**138.44**	**76**	SKPbc	SKPbc	12 45 59.7	-3.1
	0.3nm,0.5s,baz=45,slow=1.9,SNR=3.8						
KURK	**Kurchatov**	**139.31**	**69**	PKhKP		12 42 48.5	
	0.5nm,0.6s,baz=236,slow=4.2,SNR=2.6						
KURK				SKPbc	SKPbc	12 46 02.3	-2.8
	0.8nm,0.6s,baz=230,slow=3.1,SNR=4.7						
ZALV	**Zalesovo Beam**	**144.31**	**69**	PKP	PKPdf	12 42 60.0	-2.1
	3.8nm,0.5s,baz=253,slow=3.9,SNR=19						
ZALV				SKPbc	SKPbc	12 46 13.1	-4.4
	0.9nm,0.5s,baz=241,slow=3.1,SNR=4.8						
ZALV	**Zalesovo Beam**	**144.31**	**69**	PKP	PKPdf	12 42 60.0	-2.1
ZALV				SKPbc	SKPbc	12 46 13.1	-4.4
INK	**Inuvik**	**148.00**	**317**	PKPbc	PKPbc	12 43 10.1	-1.3
	5.3nm,0.7s,baz=94,slow=3.9,SNR=13						
DAWY	**Dawson**	**148.54**	**308**	*e*PKPbc	PKPbc	12 43 11.5	-1.4
DAWY				*e*PKPab	PKPab	12 43 17.2	-0.1
SONM	**Songino Array**	**151.33**	**94**	PKPbc	PKPbc	12 43 19.6	-0.5
	3.7nm,0.8s,baz=191,slow=1.5,SNR=5.0						
KSRS	**Korea Array**	**153.19**	**135**	PKPab	PKPab	12 43 37.4	0.0
	0.7nm,0.9s,baz=223,slow=4.3,SNR=5.6						
CHGN	**Chignik**	**153.79**	**285**	*e*PKPdf	PKPdf	12 43 15.7	-1.4

IDC 10 12:30:15.0±1.3, 0°.02S×125°.77E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.5/21, mbtmp3.6/5, Error ellipse: s-maj=158.0km s-min=21.1km az=66.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.51**	**158**	P	P	12 35 05.0	-0.6
	0.7nm,0.7s,baz=336,slow=11,SNR=5.5						
ASAR	**Alice Springs**	**24.80**	**162**	P	P	12 35 39.4	+0.6
	0.4nm,0.5s,baz=344,slow=7.4,SNR=7.6						
MKAR	**Makanchi Array**	**60.11**	**327**	P	P	12 40 23.7	-0.5
	0.4nm,0.5s,baz=114,slow=8.6,SNR=4.3						
ZALV	**Zalesovo Beam**	**63.50**	**334**	P	P	12 40 47.7	+0.8
	0.4nm,0.3s,baz=108,slow=9.3,SNR=2.7						
KURK	**Kurchatov**	**64.40**	**329**	P	P	12 40 52.2	-0.6
	0.4nm,0.5s,baz=132,slow=6.2,SNR=4.0						

*BJI **10** 12:32:44.0, 51°.36N×160°.29E, h30km, mB4.3/5, mb4.5/8, Ms3.7/1, Ms7 3.6/1*
*MOS **10** 12:32:46.7±1.5, 51°.47N×159°.55E, h14km, mb4.3/10, Error ellipse: s-maj=11.1km s-min=6.0km az=89.3*
*IDC **10** 12:32:47.3±0.6, 51°.66N×159°.39E, h0km, mb4.2/20, mb1 4.3/22, mb1mx4.2/32, mbtmp4.2/22, ML4.0/2, MS4.5/1, Ms1 4.5/1, ms1mx2.9/25, Error ellipse: s-maj=17.4km s-min=11.7km az=162.0*
*NEIC **10** 12:32:48.0±0.6, 51°.46N×159°.47E, h10km, mb4.5/4, Error ellipse: s-maj=13.2km s-min=9.6km az=188.0*
*KRSC **10** 12:32:49.1±0.8, 51°.54N×159°.76E, h11km±11km, ML4.8*
*ISCJB **10** 12:32:49.6±0.7, 51°.41N±0°.03×159°.79E±0°.06, h39km±5km, mb4.2/28, Error ellipse: s-maj=6.7km s-min=4.8km az=44.4*

ISC 10 12:32:51.4±1.2, 51°.45N±0°.03×159°.72E±0°.05, h35km±9km, n79, σ1°24/94, mb4.2/28, 4C-1D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	**Gorelyy**	**1.50**	**318**	*i* P	**Pn**	**12 33 15.8**	**-0.1**
GRL				*i* S	**Sn**	**12 33 35.0**	**+0.8**
PET	**Petropavlovsk**	**1.71**	**338**	⇑*i*PN	**Pn**	**12 33 17.8**	**-0.9**
PET				*e*S	**Sn**	**12 33 40.7**	**+1.4**
PET				pmax	pmax		
	comp=Z,673nm,0.5s						
PET				smax			
	comp=E,2μm,0.8s						
PET				smax			
	comp=N,5μm,0.5s						
PET	**Petropavlovsk**	**1.71**	**338**	*i* P	**Pn**	**12 33 17.8**	**-0.9**
PET				*i* S	**Sn**	**12 33 38.9**	**-0.4**
PET	**Petropavlovsk**	**1.71**	**338**	*e*Pn	**Pn**	**12 33 17.8**	**-0.9**
NLC	**Nalytchevo**	**1.74**	**353**	*e*P	**Pn**	**12 33 18.5**	**-0.6**
NLC				*i* S	**Sn**	**12 33 40.3**	**+0.2**
INSR	**Institute**	**1.76**	**337**	P	**Pn**	**12 33 18.1**	**-1.3**
INSR				*i* S	**Sn**	**12 33 39.3**	**-1.2**
AVH	**Avacha**	**1.92**	**342**	*e*P	**Pn**	**12 33 21.6**	**+0.1**
AVH				*i* S	**Sn**	**12 33 44.9**	**+0.5**
MIPR	**Malaya Ipel'ka**	**2.02**	**295**	*i* P	**Pn**	**12 33 23.2**	**+0.3**
MIPR				*i* S	**Sn**	**12 33 48.4**	**+1.6**
PETK	**Petropavlovsk-**	**2.07**	**324**	Pn	**Pn**	**12 33 23.7**	**0.0**
	comp=N,263nm,0.3s,baz=128,slow=16,SNR=575						
PETK				Sn	**Sn**	**12 33 51.2**	**+2.9**
	comp=N,81nm,0.3s,baz=327,slow=42,SNR=6.7						
SKR	**Severo-Kuril's**	**2.40**	**253**	*e*PN	**Pn**	**12 33 26.0**	**-2.2**
SKR				*e*S	**Sn**	**12 33 58.5**	**+2.2**
SKR				pmax	pmax		
	comp=E,90nm,0.5s						
SKR				pmax	pmax		
	comp=Z,140nm,0.5s						
SKR				smax			
	comp=N,3μm,0.9s						
SKR				smax			
	comp=E,3μm,0.9s						
SKR				smax			
	comp=N,3μm,2.0s						
SKR				smax			
	comp=E,2μm,2.0s						
SKR				MLR	MLR		
	comp=N,2μm,12.0s						
SKR				MLR	MLR		
	comp=E,3μm,12.0s						
SKR				MLR	MLR		
	comp=Z,2μm,12.0s						
GNL	**Ganaly**	**2.50**	**335**	*e*P	**Pn**	**12 33 29.7**	**+0.2**
GNL				*i* S	**Sn**	**12 33 59.4**	**+0.7**
KII	**Karymskiy**	**2.60**	**356**	*e*P	**Pn**	**12 33 31.2**	**+0.3**
KII				*e*S	**Sn**	**12 34 01.7**	**+0.5**
ALID	**Alaid**	**2.69**	**259**	*i* P	**Pn**	**12 33 32.2**	**0.0**
ALID				*i* S	**Sn**	**12 34 03.3**	**-0.2**
MKZ	**Mys Kozlova**	**3.34**	**21**	*i* P	**Pn**	**12 33 40.3**	**-0.8**
MKZ				*i* S	**Sn**	**12 34 16.9**	**-2.6**
KMNR	**Kamenistaya**	**4.33**	**4**	*e*P	**Pn**	**12 33 56.7**	**+2.1**
KPT	**Kopyto**	**4.54**	**4**	P	**Pn**	**12 33 59.2**	**+1.7**
BZGR	**Bezymyannyi-Gr**	**4.54**	**7**	P	**Pn**	**12 33 58.2**	**+0.7**
ZLN	**Zelenaya**	**4.62**	**8**	P	**Pn**	**12 34 00.4**	**+1.7**
KRSR	**Krestovskiy**	**4.80**	**6**	P	**Pn**	**12 34 03.4**	**+2.2**
SRDR	**Sredinnyy**	**4.88**	**360**	P	**Pn**	**12 34 01.7**	**-0.5**
KBTR	**Krutoberegovo**	**5.11**	**20**	*e*P	**Pn**	**12 34 05.2**	**-0.2**
KBTR				*i* S	**Sn**	**12 35 01.0**	**-2.0**
SRKR	**Sorokina**	**5.28**	**9**	P	**Pn**	**12 34 07.6**	**-0.2**
FX1	**Attu Island--F**	**8.39**	**75**	Pn	**Pn**	**12 34 50.4**	**-0.1**
	comp=Z,14nm,0.3s,baz=294,slow=4.1,SNR=68						
FX1				Sn	**Sn**	**12 36 18.0**	**-5.8**
	comp=Z,8.9nm,0.3s,baz=76,slow=22,SNR=14						
SMY	**Shemya**	**8.95**	**76**	*e*PN	**Pn**	**12 34 58.3**	**+0.3**
SMY				pmax	pmax		
	comp=Z,22nm,0.6s						
SMY	**Shemya**	**8.95**	**76**	*e*Pn	**Pn**	**12 34 58.3**	**+0.3**
	comp=Z,22nm,0.6s						
ASAJ	**Asahikawa**	**13.63**	**244**	Pn	**Pn**	**12 36 02.2**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=49,slow=23,SNR=5.5						
ASAJ	**Asahikawa**	**13.63**	**244**	P	**Pn**	**12 36 02.3**	**+0.2**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ERM	**Erimo**	**14.73**	**237**	*e*P	**Pn**	**12 36 14.7**	**-2.5**
BILL	**Bilibino**	**16.95**	**8**	*e*P	**Pn**	**12 36 45.9**	**+0.5**
BILL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BILL	**Bilibino**	**16.95**	**8**	*e*P	**Pn**	**12 36 45.9**	**+0.5**
	comp=Z,7.5nm,0.9s						
KLR	**Kul'dur**	**17.95**	**274**	*e*P	**Pn**	**12 36 56.2**	**-1.8**
YAK	**Yakutsk**	**19.39**	**315**	*e*P	**Pn**	**12 37 10.4**	**-4.9**
YAK				pmax	pmax		
	comp=Z,25nm,0.9s						
YAK				pmax	pmax		
	comp=E,6.0nm,0.8s						
YAK	**Yakutsk**	**19.39**	**315**	*e*P	**Pn**	**12 37 11.5**	**-3.8**
	comp=E,25nm,0.8s						
MAT	**Matsushiro**	**21.37**	**234**	P	**P**	**12 37 36.2**	**+0.6**
MJAR	**Matsushiro Arr**	**21.37**	**234**	P	**P**	**12 37 36.7**	**+1.0**
	comp=E,3.2nm,0.8s,mb3.7,baz=29,slow=9.7,SNR=12						
MJAR	**Matsushiro Arr**	**21.37**	**234**	P	**P**	**12 37 36.7**	**+1.1**
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TIXI	**Tiksi**	**24.49**	**337**	*e*P	**P**	**12 38 05.0**	**-1.9**
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.3						
TIXI	**Tiksi**	**24.49**	**337**	*e*P	**P**	**12 38 05.0**	**-1.8**
	comp=Z,7.4nm,0.6s,mb4.3						
HIA	**Hailar**	**25.38**	**281**	*e*P	**P**	**12 38 13.7**	**-1.4**
HIA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HIA	**Hailar**	**25.38**	**281**	*e*P	**P**	**12 38 13.7**	**-1.5**
	comp=Z,8.5nm,0.6s,mb4.5						
KSRS	**Korea Array**	**26.42**	**250**	P	**P**	**12 38 25.4**	**+0.9**
	comp=Z,1.6nm,0.7s,mb3.7,baz=41,slow=9.5,SNR=8.9						
KSRS	**Korea Array**	**26.42**	**250**	P	**P**	**12 38 25.5**	**+0.9**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.8						
ZAK	**Zakamensk**	**34.85**	**291**	*e*P	**P**	**12 39 38.1**	**-0.7**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
INK	**Inuvik**	**35.32**	**36**	P	**P**	**12 39 44.4**	**+1.7**
	comp=Z,2.2nm,0.8s,mb4.1,baz=265,slow=8.8,SNR=4.0						
YKA	**Yellowknife Ar**	**44.54**	**41**	P	**P**	**12 40 59.9**	**+0.7**
	comp=Z,0.1nm,0.3s,mb3.1,baz=294,slow=7.6,SNR=4.6						
KURK	**Kurchatov**	**48.42**	**303**	P	**P**	**12 41 28.1**	**-1.7**
	comp=Z,3.2nm,0.6s,mb4.5,baz=62,slow=7.8,SNR=28						
KURK	**Kurchatov**	**48.42**	**303**	*de*P	**P**	**12 41 27.3**	**-2.5**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
MKAR	**Makanchi Array**	**48.68**	**297**	P	**P**	**12 41 29.6**	**-2.2**
	comp=Z,0.8nm,0.5s,mb4.0,baz=55,slow=7.9,SNR=12						
SPITS	**Spitsbergen Ar**	**48.72**	**351**	P	**P**	**12 41 32.2**	**+0.4**
	comp=Z,5.0nm,0.4s,mb4.9,baz=59,slow=8.2,SNR=28						
BVAR	**Borovoye Array**	**51.24**	**309**	P	**P**	**12 41 48.8**	**-2.4**
	comp=Z,3.2nm,0.4s,mb4.6,baz=59,slow=8.0,SNR=20						
BRVK	**Borovoye**	**51.27**	**309**	*e*P	**P**	**12 41 49.3**	**-2.1**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
ARU	**Arti**	**54.46**	**318**	*c i*P	**P**	**12 42 12.3**	**-2.6**
ARU				*e*		12 44 13.0	
ARU				S	**S**	**12 49 50.3**	**-0.5**
ARU				SS	SS	12 53 27.3	-5.4
ARU				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
ARCES	**ARCESS Array B**	**54.78**	**342**	P	**P**	**12 42 16.1**	**-0.9**
	comp=Z,3.1nm,0.7s,mb4.4,baz=44,slow=8.9,SNR=7.2						
CMAR	**Chiang Mai Arr**	**57.63**	**259**	P	**P**	**12 42 39.5**	**+1.5**
	comp=Z,0.7nm,0.3s,mb4.1,baz=31,slow=6.6,SNR=9.1						
CMAR	**Chiang Mai Arr**	**57.63**	**259**	P	**P**	**12 42 39.5**	**+1.5**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
PDAR	**Pinedale Array**	**58.54**	**60**	LR	LR	13 07 54.4	
	comp=Z,370nm,18.8s,baz=42,slow=36						
AKTO	**Aktyubinsk**	**58.77**	**313**	P	**P**	**12 42 43.9**	**-1.7**
	comp=Z,0.6nm,0.3s,mb4.1,baz=54,slow=11,SNR=5.3						
AKTO	**Aktyubinsk**	**58.77**	**313**	P	**P**	**12 42 43.9**	**-1.7**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
FINES	**FINESS Array B**	**61.54**	**337**	P	**P**	**12 43 03.9**	**-0.4**
	comp=Z,3.8nm,0.6s,mb4.7,baz=22,slow=7.0,SNR=8.8						
FINES	**FINESS Array B**	**61.54**	**337**	P	**P**	**12 43 03.9**	**-0.4**
NB2	**NORSAR Subarra**	**65.06**	**344**	P	**P**	**12 43 27.3**	**-0.3**
	comp=Z,3.4nm,0.8s,mb4.4,baz=22,slow=6.9						
NOA	**NORSAR Array B**	**65.06**	**344**	P	**P**	**12 43 27.7**	**0.0**
	comp=Z,4.1nm,0.7s,mb4.6,baz=22,slow=6.6,SNR=10						
NOA	**NORSAR Array B**	**65.06**	**344**	P	**P**	**12 43 27.7**	**0.0**
HFS	**Hagfors**	**65.45**	**342**	P	**P**	**12 43 29.7**	**-0.4**
	comp=Z,3.1nm,0.6s,mb4.5,baz=25,slow=3.9,SNR=9.1						
AKASG	**Malin Array Be**	**69.91**	**329**	P	**P**	**12 43 57.4**	**-1.0**
	comp=Z,4.4nm,0.4s,mb4.8,baz=30,slow=7.1,SNR=9.0						
AKASG	**Malin Array Be**	**69.91**	**329**	P	**P**	**12 43 57.4**	**-1.0**
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.4s						
TXAR	**Lajitas Array**	**71.50**	**66**	P	**P**	**12 44 11.8**	**+3.2**
	comp=Z,0.2nm,0.6s,mb3.2,baz=304,slow=2.9,SNR=4.0						
CLL	**Collm**	**73.81**	**339**	*e*P	**P**	**12 44 22.0**	**+0.2**
DPC	**Dobruska-Polom**	**73.91**	**337**	*e*P	**P**	**12 44 23.7**	**+1.2**
DPC	**Dobruska-Polom**	**73.91**	**337**	*e*P	**P**	**12 44 23.7**	**+1.2**
WRA	**Warramunga Arr**	**74.49**	**205**	P	**P**	**12 44 27.2**	**+1.2**
	comp=Z,1.0nm,0.8s,mb3.8,baz=22,slow=6.2,SNR=7.0						
KHC	**Kasperske Hory**	**75.71**	**338**	*e*P	**P**	**12 44 33.8**	**+0.9**
KHC	**Kasperske Hory**	**75.71**	**338**	*e*P	**P**	**12 44 33.8**	**+0.9**
GERES	**GERESS Array B**	**75.95**	**338**	P	**P**	**12 44 34.9**	**+0.6**
	comp=Z,0.4nm,0.2s,mb3.9,baz=23,slow=7.2,SNR=5.2						
KBA	**Koelnbreinsper**	**77.69**	**337**	⇑*i*P	**P**	**12 44 43.8**	**-0.2**
	comp=Z,6.5nm,0.7s,mb4.7						
BRTR	**Keskin Array B**	**77.74**	**320**	P	**P**	**12 44 44.5**	**0.0**
	comp=Z,2.3nm,0.6s,mb4.3,baz=53,slow=2.6,SNR=11						
ASAR	**Alice Springs**	**78.16**	**204**	P	**P**	**12 44 48.3**	**+1.5**
	comp=Z,0.5nm,0.6s,mb3.6,baz=18,slow=5.7,SNR=6.5						
FETA	**Feichten**	**78.35**	**339**	⇑*i*P	**P**	**12 44 48.1**	**+0.4**
	comp=Z,3.6nm,0.9s,mb4.3						
KEST	**Kesra**	**89.38**	**336**	P	**P**	**12 45 46.5**	**+2.4**
	comp=Z,1.2nm,0.5s,mb4.5,baz=354,slow=5.2,SNR=7.2						

*CASC **10** 12:42:15.6±1.5, 12°.93N×90°.39W, h3km±9km, MD4.4, mb4.7(NEIC)*
*IDC **10** 12:42:21.2±2.0, 13°.20N×89°.92W, h59km±17km, mb4.1/17, mb1 4.3/19, mb1mx4.2/27, mbtmp4.2/19, MS3.9/17, Ms1 3.9/17, ms1mx3.8/26, Error ellipse: s-maj=24.0km s-min=9.5km az=51.0*
*NEIC **10** 12:42:22.6±0.9, 13°.14N×90°.04W, h71km±7km, mb4.7/72, Error ellipse: s-maj=8.7km s-min=4.8km az=220.0*
*ISCJB **10** 12:42:22.1±0.5, 13°.18N±0°.04×89°.98W±0°.04, h80km±4km, mb4.5/89, Error ellipse: s-maj=9.0km s-min=4.0km az=40.9*

ISC 10 12:42:23.9±0.4, 13°.26N±0°.04×89°.92W±0°.04, h76km±4km, n474, σ0°78/453, mb4.5/88, 153C-144D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.64**	**27**	⇑*i*P	**Pn**	**12 42 38.1**	**-0.6**
SNJE	**San Jose**	**0.67**	**27**	⇑*i*P	**Pn**	**12 42 38.6**	**-0.5**
RTR	**El Retiro**	**0.68**	**23**	⇑*i*P	**Pn**	**12 42 38.7**	**-0.5**
BOQS	**Boqueron**	**0.78**	**53**	*i* P	**Pn**	**12 42 40.7**	**+0.5**
BOQS				*e*S	**Sn**	**12 42 59.7**	**+7.4**
LFRS	**El Faro**	**0.91**	**67**	⇑*i*P	**Pn**	**12 42 41.6**	**0.0**
LBRS	**Las Brisas**	**0.97**	**61**	*e*P	**Pn**	**12 42 43.3**	**+0.9**
PCG	**Pacaya**	**1.31**	**329**	⇓*e*P	**Pn**	**12 42 42.6**	**-4.1**
NBG	**Las Nubes**	**1.38**	**342**	⇓*e*P	**Pn**	**12 42 46.6**	**-1.0**
GCG	**Guatemala City**	**1.44**	**336**	*e*P	**Pn**	**12 42 44.8**	**-3.6**
GCG				*e*S	**Sn**	**12 43 09.6**	**+2.7**
FUG	**Fuego 3**	**1.48**	**323**	*e*P	**Pn**	**12 42 43.8**	**-5.0**
FG6		**1.59**	**324**	⇓*e*P	**Pn**	**12 42 45.3**	**-5.1**
VSM	**San Miguel**	**1.61**	**84**	*e*P	**Pn**	**12 42 51.8**	**+1.3**
BLLM	**Bellamira**	**1.65**	**84**	*e*P	**Pn**	**12 42 52.0**	**+1.0**
CAHU	**Cacacuatique**	**1.73**	**73**	*e*P	**Pn**	**12 42 53.7**	**+1.5**
APG	**El Apazote**	**1.81**	**343**	P	**Pn**	**12 42 51.3**	**-1.9**
	324nm,0.3s,baz=157,slow=8.1,SNR=2200						
APG				S	**Sn**	**12 43 19.6**	**+4.1**
	113nm,0.3s,baz=66,slow=17,SNR=7.7						
TP2	**Tecpan 2**	**1.85**	**325**	⇑*e*P	**Pn**	**12 42 49.7**	**-4.0**
JAT	**Jato**	**1.97**	**302**	*e*P	**Pn**	**12 42 47.6**	**-7.8**
CNCH	**Conchagua**	**2.03**	**89**	*e*P	**Pn**	**12 42 56.4**	**+0.3**
TGUH	**Tegucigalpa,Un**	**2.69**	**73**	*e*Pn	**Pn**	**12 43 06.2**	**+1.2**
VCR	**Vista de Mar**	**5.23**	**126**	*e*P	**Pn**	**12 43 37.1**	**-2.5**
JTS	**JuntasAbangare**	**5.69**	**121**	P	**Pn**	**12 43 44.7**	**-1.2**
	5.6nm,0.3s,baz=306,slow=21,SNR=18						
JTS				S	**Sn**	**12 44 45.8**	**-4.1**
	3.6nm,0.3s,baz=301,slow=18,SNR=1.6						
JTS				LR	LR	12 46 20.4	
	comp=Z,1μm,19.7s,baz=304,slow=42						
JTS	**JuntasAbangare**	**5.69**	**121**	*e*Pn	**Pn**	**12 43 45.0**	**-0.9**
JCR	**Jicaral**	**5.80**	**125**	*e*P	**Pn**	**12 43 45.6**	**-1.9**
CMIG	**Matias Romero**	**6.12**	**309**	P	**Pn**	**12 43 46.1**	**-5.7**
	4.2nm,0.3s,baz=131,slow=8.2,SNR=16						
CMIG				S	**Sn**	**12 44 55.9**	**-4.6**
	4.8nm,0.3s,baz=348,slow=23,SNR=5.8						
CGA2	**Cerro Gallo

Z25A	Roswell baz=24,SNR=9.7	24.07	328	⇑P	P	12 47 31.0	-1.2
Y26A	Elida baz=24	24.14	331	⇓P	P	12 47 32.1	-0.8
SIUC	Southern Illin 49nm,0.8s,mb4.9	24.36	1	eP	P	12 47 35.8	+1.0
X27A	F and S Farms, baz=24	24.41	333	⇑P	P	12 47 34.1	-1.2
Z24A	Sheeppen Canyo baz=24,SNR=23	24.44	327	⇓P	P	12 47 35.1	-0.5
222A	Williams Famil baz=25,SNR=11	24.49	323	⇓P	P	12 47 35.3	-0.8
Y25A	Mesa, Roswell baz=25,SNR=24	24.57	329	⇓P	P	12 47 36.1	-0.6
X26A	CR and CF Fran baz=25,SNR=5.4	24.65	332	⇑P	P	12 47 36.8	-0.7
USIN	University of 102nm,1.4s,mb5.1	24.68	4	eP	P	12 47 38.6	+0.9
W27A	Bowe Ranch, En baz=25,SNR=6.9	24.75	334	⇓P	P	12 47 37.4	-1.0
221A	Mesquite Ranch baz=25,SNR=12	24.83	322	⇓P	P	12 47 39.2	+0.1
Z23A	Rita Site, Whi baz=25,SNR=6.6	24.85	326	⇑P	P	12 47 38.8	-0.6
122A	Conniff Cattle baz=25	24.86	324	⇓P	P	12 47 39.3	-0.2
Y24A	Capitan baz=25	24.94	328	⇑P	P	12 47 40.2	0.0
X25A	Clemmons Ranch baz=25,SNR=8.0	25.04	330	⇓P	P	12 47 39.9	-1.1
WCI	Wyandotte Cave 64nm,0.8s,mb5.1	25.07	7	eP	P	12 47 42.0	+0.7
W26A	Owens Ranch, T baz=25	25.08	332	⇑P	P	12 47 41.8	+0.4
121A	Cookes Peak, D baz=25	25.20	323	⇑P	P	12 47 42.9	+0.3
220A	Playas Peak, P baz=25,SNR=42	25.21	320	⇑P	P	12 47 42.3	-0.4
ELN	Prospectdale	25.23	17	eP	P	12 47 44.1	+1.3
Z22A	Elephant Butte baz=25,SNR=20	25.25	325	⇓P	P	12 47 42.2	-0.8
Y23A	Lovelace Mesa, baz=25,SNR=21	25.27	327	⇑P	P	12 47 42.5	-0.6
319A	Douglas baz=25	25.34	318	⇑P	P	12 47 43.4	-0.3
X24A	Lazy VL Ranch, baz=26	25.45	329	⇓P	P	12 47 44.6	-0.1
W25A	X Bar L Ranch, baz=26,SNR=6.6	25.50	331	⇓P	P	12 47 44.4	-0.9
V26A	Tequesquite Ra baz=26	25.68	333	⇑P	P	12 47 47.2	+0.4
Z21A	St. Cloud Mine baz=26	25.69	324	⇓P	P	12 47 47.0	+0.1
120A	U Bar Ranch, L baz=26,SNR=29	25.72	321	⇑P	P	12 47 46.9	-0.3
219A	White Tail Can baz=26,SNR=24	25.74	320	⇑P	P	12 47 47.3	-0.1
BNM	Barren Site 9.5nm,0.9s,mb4.2	25.74	327	eP	P	12 47 47.8	+0.4
Y22A	Socorro baz=26,SNR=7.0	25.76	326	⇑P	P	12 47 47.6	+0.1
318A	Bisbee baz=26,SNR=22	25.84	318	⇓P	P	12 47 48.8	+0.5
LPM	Los Pinos Moun	25.87	327	eP	P	12 47 48.6	+0.1
LENM	Lemitar	25.94	326	eP	P	12 47 49.7	+0.5
W24A	Lazy 6 Ranch, baz=26,SNR=14	25.95	330	⇓P	P	12 47 49.6	+0.4
V25A	Rancho No Teng baz=26,SNR=12	26.09	332	⇑P	P	12 47 50.9	+0.4
Z20A	Nine Sixteen R baz=26,SNR=33	26.09	322	⇑P	P	12 47 50.8	+0.3
U26A	Atchley Ranch, baz=26	26.17	334	⇓P	P	12 47 51.6	+0.4
LAZ	Ladron 5.1nm,1.1s,mb3.9	26.21	326	eP	P	12 47 52.1	+0.5
Y21A	Point of Rocks baz=26,SNR=16	26.21	325	⇑P	P	12 47 52.2	+0.6
218A	Dragoon baz=26	26.22	319	⇓P	P	12 47 52.2	+0.4
ANMO	Albuquerque 2.2nm,0.8s,mb3.6,baz=142,slow=11,SNR=6.1	26.27	328	P	P	12 47 52.3	+0.2
ANMO	comp=Z,132nm,18.2s,baz=152,slow=42			LR	LR	13 00 48.5	
119A	Ashpeak Ranch, baz=26,SNR=14	26.28	321	⇑P	P	12 47 52.9	+0.7
U25A	Circle Dot Ran baz=27	26.46	333	⇓P	P	12 47 54.0	+0.2
Y20A	Horse Springs, baz=27,SNR=21	26.53	324	⇓P	P	12 47 54.9	+0.4
X21A	Alamocita Cree baz=27,SNR=22	26.59	325	⇓P	P	12 47 55.7	+0.6
217A	Green Valley baz=27,SNR=6.4	26.60	317	⇓P	P	12 47 55.4	+0.2
Z19A	T-Link Ranch, baz=27	26.62	322	⇓P	P	12 47 56.1	+0.7
V23A	Ortiz Mt. (NFS baz=27	26.75	330	⇑P	P	12 47 57.7	+1.2
TUC	Tucson 6.3nm,0.9s,mb4.2	26.91	318	eP	P	12 47 58.3	+0.3
117A	Oracle baz=27	27.05	319	⇑P	P	12 47 59.4	+0.1
X20A	Quemado baz=27,SNR=8.3	27.06	325	⇓P	P	12 47 59.9	+0.6
Y19A	Nutrioso baz=27,SNR=21	27.08	323	⇑P	P	12 48 00.2	+0.8
T25A	Trinidad baz=27	27.08	334	⇓P	P	12 47 59.6	+0.2
216A	Three Points, baz=27	27.16	317	⇓P	P	12 48 00.6	+0.3
U23A	El Rito baz=27,SNR=19	27.22	330	⇓P	P	12 48 01.0	+0.3
V22A	San Miguel Ran baz=27	27.25	329	⇑P	P	12 48 01.2	+0.3
Y18A	Canyon Day Jun baz=28,SNR=11	27.42	322	⇑P	P	12 48 03.3	+0.8
X19A	St. Johns baz=28,SNR=11	27.43	323	⇓P	P	12 48 03.1	+0.6
W20A	Ramah baz=28,SNR=7.6	27.49	326	⇑P	P	12 48 03.7	+0.6
V21A	Milan baz=28	27.54	328	⇓P	P	12 48 04.0	+0.5
ACSO	Alum Creek Sta 27nm,1.0s,mb4.7	27.55	12	eP	P	12 48 03.9	+0.3
U22A	Llaves baz=28	27.59	329	⇑P	P	12 48 04.6	+0.7
116A	Eloy baz=28	27.68	318	⇑P	P	12 48 04.7	-0.1
Y17A	Roosevelt baz=28	27.86	320	⇑P	P	12 48 07.1	+0.7
X18A	Snowflake baz=28	27.89	323	⇓P	P	12 48 07.3	+0.6
V20A	Brimhall baz=28	27.97	327	⇓P	P	12 48 07.8	+0.4
U21A	Nageezi baz=28,SNR=7.8	28.03	328	⇓P	P	12 48 08.7	+0.8
214A	Organ Pipe Nat baz=28	28.05	315	⇓P	P	12 48 07.8	-0.3
SDCO	Great Sand Dun 1.5nm,0.8s,mb3.6	28.06	333	eP	P	12 48 08.1	0.0
115A	Sonoran Desert baz=28	28.11	317	⇑P	P	12 48 09.1	+0.5
T22A	Edith baz=28	28.11	330	⇑P	P	12 48 09.1	+0.4
X17A	Forest Lakes baz=28	28.27	321	⇑P	P	12 48 10.4	+0.3
Y16A	Circle Bar Ran baz=28	28.38	320	⇓P	P	12 48 11.4	+0.4
U20A	Newcomb baz=28	28.44	327	⇑P	P	12 48 11.8	+0.2
114A	Black Gap (USA baz=29	28.57	317	⇑P	P	12 48 13.5	+0.7
SCIA	State Center 16nm,0.8s,mb4.7	28.68	355	eP	P	12 48 13.4	-0.3
X16A	Lo Mia Camp, P baz=29,SNR=16	28.71	321	⇓P	P	12 48 14.8	+0.8
W17A	Winslow baz=29	28.72	323	⇑P	P	12 48 14.8	+0.7
U19A	Dine' College, baz=29	28.74	326	⇑P	P	12 48 14.2	0.0
Y15A	Casa Rosa Ranc baz=29	28.96	319	⇑P	P	12 48 16.6	+0.4
Z14A	Wintersburg baz=29	28.99	318	⇓P	P	12 48 16.8	+0.3
R22A	Saguache, Gunn baz=29	29.02	332	⇓P	P	12 48 16.7	0.0
T19A	Beclabito baz=29	29.04	327	⇑P	P	12 48 17.2	+0.2
S21A	Coal Bank Pass baz=29	29.06	330	⇓P	P	12 48 17.0	-0.1
MVCO	Mesa Verde baz=29,SNR=8.3	29.06	328	⇑P	P	12 48 17.5	+0.5
MVCO	Mesa Verde 11nm,0.8s,mb4.5	29.06	328	eP	P	12 48 17.3	+0.3
V17A	Tonalea, Kykot baz=29,SNR=16	29.15	323	⇑P	P	12 48 18.1	+0.3
U18A	Rough Rock, Ch baz=29	29.19	326	⇓P	P	12 48 18.7	+0.4
W16A	Flagstaff baz=29,SNR=6.6	29.22	322	⇑P	P	12 48 19.4	+0.9
X15A	Humboldt baz=29	29.25	320	⇓P	P	12 48 19.3	+0.5
Z13A	Yuma Proving G baz=29	29.36	316	⇑P	P	12 48 20.2	+0.4
Y14A	Wickenburg baz=29	29.39	318	⇑P	P	12 48 20.3	+0.4
WUAZ	Wupatki baz=30,SNR=12	29.41	323	⇓P	P	12 48 20.9	+0.7
WUAZ	Wupatki 15nm,1.0s,mb4.6	29.41	323	eP	P	12 48 20.8	+0.6
JFWS	Jewell Farm 4.0nm,0.6s,mb4.2	29.55	360	eP	P	12 48 20.7	-0.6
Q22A	Crested Butte, baz=30	29.61	332	⇑P	P	12 48 22.5	+0.6
X14A	Yava baz=30	29.65	319	⇑P	P	12 48 22.8	+0.5
W15A	Williams baz=30	29.72	321	⇑P	P	12 48 24.1	+1.2
T18A	Mexican Hat baz=30,SNR=6.1	29.72	327	⇑P	P	12 48 23.0	+0.1
R20A	Redvale baz=30	29.76	330	⇓P	P	12 48 23.7	+0.4
S19A	Harvey Farm, M baz=30,SNR=10	29.80	328	⇓P	P	12 48 23.7	+0.1
PV01	Paradox Valley 315nm,0.8s	29.81	330	eP	P	12 48 24.1	+0.4
ISCO	Idaho Springs 2.8nm,0.8s,mb3.9	29.83	335	eP	P	12 48 24.5	+0.6
SMCO	Snowmass 7.6nm,1.3s,mb4.2	29.89	333	eP	P	12 48 25.0	+0.6
V15A	Kaibab Nationa baz=30,SNR=12	30.09	322	⇓P	P	12 48 26.9	+0.7
T17A	Navajo Res., N baz=30,SNR=13	30.13	325	⇓P	P	12 48 27.1	+0.6
PV04	Paradox Valley	30.18	329	eP	P	12 48 27.4	+0.5
S18A	Hurst Farm, Bl baz=30,SNR=11	30.20	327	⇓P	P	12 48 27.2	+0.1
W14A	Seligman baz=30,SNR=7.9	30.25	320	⇓P	P	12 48 28.3	+0.7
R19A	Curley Farm, L baz=30	30.28	329	⇓P	P	12 48 28.2	+0.4
X13A	Yucca baz=30,SNR=5.1	30.33	319	⇑P	P	12 48 28.6	+0.3
PDMCI	Parker Dam,Lak baz=30	30.35	318	⇑P	P	12 48 29.2	+0.7
T16A	Glen Canyon Da baz=31	30.51	325	⇓P	P	12 48 30.6	+0.6
V14A	Boquillas Ranc baz=31,SNR=15	30.54	321	⇓P	P	12 48 31.0	+0.9
U15A	North Rim baz=31,SNR=12	30.58	323	⇑P	P	12 48 30.9	+0.4
S17A	Black Ridge (B baz=31,SNR=8.3	30.59	326	⇓P	P	12 48 30.5	-0.1
R18A	Canyonlands Na baz=31	30.67	328	⇑P	P	12 48 31.4	+0.1
SWSC	Sam W. Stewart baz=31	30.68	314	⇑P	P	12 48 31.6	+0.2
W13A	Hualapai Mount baz=31,SNR=7.7	30.68	319	⇑P	P	12 48 32.0	+0.6
Q19A	Hogan Spring (baz=31,SNR=8.6	30.79	330	⇓P	P	12 48 32.1	-0.3
BC3	Big Chuckawall baz=31,SNR=11	30.84	315	⇑P	P	12 48 32.8	-0.1
ECSD	EROS Data Cent 20nm,0.8s,mb4.9	30.91	351	eP	P	12 48 31.9	-1.4
IRM	Iron Mountain baz=31	30.93	317	⇑P	P	12 48 33.9	+0.2
N22A	Wattenberg Ran baz=31	31.02	335	⇑P	P	12 48 34.6	+0.3
T15A	Red Dirt Ranch baz=31,SNR=9.4	31.04	324	⇑P	P	12 48 35.1	+0.5
PHWY	Pilot Hill 5.0nm,1.0s,mb4.2	31.05	337	eP	P	12 48 34.9	+0.2
MONP	Monument Peak baz=31,SNR=6.7	31.09	313	⇑P	P	12 48 35.0	0.0
U14A	Mt Trumbull baz=31,SNR=17	31.10	322	⇑P	P	12 48 36.2	+1.1
R17A	Hanksville Air baz=31,SNR=9.7	31.12	327	⇓P	P	12 48 34.9	-0.4
V13A	Grand Canyon W baz=31,SNR=9.6	31.22	320	⇓P	P	12 48 37.1	+1.0
O20A	White River Ci baz=31,SNR=5.8	31.24	332	⇑P	P	12 48 37.0	+0.7
Q18A	Rafter H Ranch baz=31	31.34	329	⇓P	P	12 48 37.3	+0.1
BELC	Belle Mtn. Jos baz=32	31.41	316	⇓P	P	12 48 38.5	+0.6
R16A	Teasdale baz=32,SNR=16	31.43	326	⇓P	P	12 48 38.6	+0.6
N21A	Black Mountain baz=32	31.43	334	⇑P	P	12 48 38.6	+0.6
S15A	Panguitch baz=32	31.48	325	⇑P	P	12 48 39.2	+0.7
PFO	Pinyon Flat Ob baz=32	31.51	314	⇓P	P	12 48 38.8	+0.1
SRU	San Rafael baz=32,SNR=5.3	31.54	328	⇑P	P	12 48 39.4	+0.5
SRU	San Rafael 7.0nm,1.0s,mb4.3	31.54	328	eP	P	12 48 39.3	+0.3
U13A	Pakoon Wash baz=32,SNR=18	31.57	321	⇑P	P	12 48 40.2	+1.0
GMRC	Granite Mounta baz=32,SNR=5.3	31.64	317	⇑P	P	12 48 40.4	+0.5
V12A	Nelson baz=32,SNR=6.1	31.69	319	⇓P	P	12 48 40.9	+0.6
Q16A	Castle Valley baz=32	31.73	327	⇓P	P	12 48 41.3	+0.7
O19A	Mirers Draw (B baz=32	31.78	331	⇓P	P	12 48 41.2	+0.2
R15A	Junction baz=32	31.81	325	⇓P	P	12 48 41.9	+0.5
N20A	Spence Gulch, baz=32,SNR=10.0	31.82	333	⇓P	P	12 48 41.7	+0.3
P17A	Butcher Ranch, baz=32,SNR=7.3	31.92	329	⇓P	P	12 48 42.6	+0.3
T13A	Saint George baz=32,SNR=6.8	31.93	322	⇑P	P	12 48 44.0	+1.6
U12A	Valley of Fire baz=32	31.94	321	⇑P	P	12 48 43.7	+1.2
CCUT	Cedar City 9.3nm,0.9s,mb4.5	31.97	323	eP	P	12 48 43.9	+1.2
MSU	Marysvale	31.97	326	eP	P	12 48 43.5	+0.8
S14A	Cedar City baz=32	32.00	324	⇓P	P	12 48 43.5	+0.5
M21A	Separation Pea baz=32	32.07	335	⇓P	P	12 48 44.4	+0.9
O18A	Roosevelt baz=32,SNR=6.0	32.17	330	⇑P	P	12 48 44.9	+0.4
ARUT	Antelope Range 13nm,0.7s,mb4.8	32.18	324	eP	P	12 48 45.6	+1.1
N19A	John Jarvie Ra baz=32	32.27	332	⇑P	P	12 48 45.3	-0.1
S13A	Holt Ranch, En baz=32,SNR=19	32.28	323	⇑P	P	12 48 46.6	+1.2
M20A	Sweetwater, Wa baz=32	32.32	334	⇑P	P	12 48 45.8	+0.1
SHPR	Sheep Range	32.37	320	eP	P	12 48 47.3	+1.0
L21A	Rawlins baz=32,SNR=6.7	32.37	335	⇓P	P	12 48 46.3	+0.1
Q15A	Fillmore baz=32	32.43	326	⇑P	P	12 48 47.0	+0.3
O17A	Robinson Place baz=33,SNR=10	32.47	330	⇓P	P	12 48 47.6	+0.5
BFSC	Mount Baldy Ra baz=33,SNR=5.5	32.69	314	⇓P	P	12 48 49.0	-0.1
GSC	Goldstone baz=33	32.70	317	⇓P	P	12 48 49.2	0.0
GSC	Goldstone 7.3nm,1.1s,mb4.4	32.70	317	eP	P	12 48 48.9	-0.3
COWI	Conover 19nm,0.7s,mb5.0	32.74	1	eP	P	12 48 48.3	-1.0
R13A	O'Grain Ranch, baz=33,SNR=9.0	32.75	324	⇑P	P	12 48 50.7	+1.1
CIS	Catalina Islan baz=33	32.78	313	⇑P	P	12 48 50.1	+0.3
MPU	Maple Canyon 11nm,0.7s,mb4.8	32.78	328	eP	P	12 48 50.1	+0.3
L20A	Wamsutter baz=33	32.81	334	⇑P	P	12 48 50.0	0.0
O16A	Springville baz=33,SNR=11	32.86	329	⇓P	P	12 48 50.7	+0.2
S12A	Delamar Landin baz=33,SNR=7.0	32.89	322	⇓P	P	12 48 51.7	+1.0
Q14A	Sevier Lake (B baz=33,SNR=9.4	32.92	325	⇑P	P	12 48 51.5	+0.5
RSSD	Black Hills 4.1nm,0.6s,mb4.4	33.05	341	eP	P	12 48 52.5	+0.4
JLU	Jordanelle 5.2nm,0.9s,mb4.4	33.13	329	eP	P	12 48 53.2	+0.4
R12A	Pony Springs, baz=33,SNR=15	33.22	323	⇑P	P	12 48 54.6	+1.0
P14A	Drum Mountains baz=33,SNR=9.5	33.23	326	⇓P	P	12 48 54.4	+0.6
EDW2	Edwards Air Fo baz=33	33.27	315	⇓P	P	12 48 53.7	-0.4
Q13A	Wheeler Ranch, baz=33,SNR=13	33.31	325	⇑P	P	12 48 55.0	+0.6
L19A	Farson baz=34	33.33	333	⇓P	P	12 48 54.6	+0.1
N16A	Rees Ranch, Co baz=34	33.34	330	⇑P	P	12 48 55.4	+0.7
LRMC	Laurel Mountai baz=33	33.40	316	⇓P	P	12 48 55.6	+0.4
M17A	Scullys Gap (B baz=34	33.42	331	⇑P	P	12 48 55.4	0.0
S11A	Rachel baz=34	33.45	321	⇑P	P	12 48 57.0	+1.3
MPMC	Manual Prospec baz=34,SNR=6.6	33.60	317	⇑P	P	12 48 56.8	-0.1
P13A	Bates Ranch, G baz=34,SNR=11	33.65	325	⇓P	P	12 48 58.3	+0.9
M16A	Huntsville baz=34	33.76	330	⇓P	P	12 48 58.9	+0.6
MIV	Mineville/With	33.77	21	eP	P	12 49 03.1	+4.8
R11A	Troy Canyon, C baz=34,SNR=14	33.81	322	⇓P	P	12 48 59.6	+0.8
Q12A	Willow Creek R baz=34	33.83	324	⇑P	P	12 48 59.6	+0.7
LONY	Lake Ozonia 7.3nm,0.9s,mb4.5	33.88	20	eP	P	12 48 59.2	-0.1
BW06	Boulder Array baz=34	33.95	334	⇓P	P	12 48 59.2	-0.7
BW06	Boulder Array 4.4nm,1.3s,mb4.1	33.95	334	eP	P	12 48 59.1	-0.8
PDAR	Pinedale Array 1.6nm,0.7s,mb4.0,baz=129,slow=9.4,SNR=12	33.95	334	P	P	12 48 58.9	-1.0
PDAR	0.6nm,0.7s,baz=128,slow=3.5,SNR=4.1			PcP	PcP	12 51 36.0	-0.7
HWUT	Hardware Ranch 20nm,1.3s,mb4.8	33.95	330	eP	P	12 48 59.8	-0.2
ARVC	Arvin baz=34	33.98	315	⇓P	P	12 49 00.6	+0.2
L17A	Cokeville baz=34	34.01	332	⇑P	P	12 49 00.4	0.0
ISA	Isabella baz=34	34.03	316	⇑P	P	12 49 00.9	+0.1
ISA	Isabella 7.0nm,1.0s,mb4.5	34.03	316	eP	P	12 49 00.7	-0.1
K18A	Toltan Ranch, baz=34,SNR=7.2	34.06	333	⇓P	P	12 49 01.1	+0.3
GRAC	Grapevine Rang baz=34,SNR=7.6	34.07	319	⇓P	P	12 49 02.2	+1.1
S10A	Tonopah Range, baz=34,SNR=14	34.15	321	⇓P	P	12 49 02.5	+0.8
P12A	McGill baz=34,SNR=9.3	34.16	324	⇑P	P	12 49 02.7	+0.9
BGU	Big Grassy Mou 8.6nm,1.0s,mb4.5	34.17	328	eP	P	12 49 02.2	+0.4
Q11A	Duckwater baz=34,SNR=20	34.18	323	⇑P	P	12 49 02.7	+0.7
N14A	Grayback Hills baz=34,SNR=5.4	34.20	328	⇑P	P	12 49 02.6	+0.4
L16A	Fish Haven baz=34	34.20	331	⇑P	P	12 49 02.0	-0.1
M15A	Larsen Ranch, baz=34	34.28	329	⇑P	P	12 49 03.0	+0.2
J18A	Kendall Valley baz=35,SNR=7.7	34.51	334	⇑P	P	12 49 04.2	-0.5
K17A	Gardner Place, baz=35	34.54	332	⇓P	P	12 49 05.3	+0.2
VES	Vestal, Richgr baz=35,SNR=5.7	34.54	316	⇓P	P	12 49 05.3	+0.2
EYMN	Ely 10nm,0.8s,mb4.7	34.60	358	eP	P	12 49 04.2	-1.3
Q10A	Clear Creek Ra baz=35,SNR=16	34.60	322	⇓P	P	12 49 07.4	+1.8
O12A	Currie baz=35,SNR=6.2	34.62	326	⇑P	P	12 49 06.1	+0.4
L15A	Malad City baz=35,SNR=18	34.65	330	⇓P	P	12 49 05.6	-0.5
HVU	Hansel Valley	34.68	329	eP	P	12 49 06.0	-0.2
N13A	Wendover, West baz=35,SNR=7.6	34.74	327	⇑P	P	12 49 07.1	+0.3
M14A	Sheep Mountain baz=35,SNR=27	34.76	328	⇑P	P	12 49 07.1	+0.2
I18A	Diamond G Ranc baz=35	34.82	334	⇓P	P	12 49 07.2	-0.2
J17A	Brown Place, J baz=35,SNR=15	34.93	333	⇑P	P	12 49 08.4	0.0
REDW	Red Top Meadow 26nm,0.9s,mb5.1	34.99	333	eP	P	12 49 09.0	0.0
SNOW	Snow King Moun 31nm,0.9s,mb5.1	35.03	333	eP	P	12 49 09.3	+0.1
O11A	Cowboy Ranch, baz=35	35.03	325	⇑P	P	12 49 10.0	+0.6
M13A	Montello baz=35,SNR=16	35.08	327	⇑P	P	12 49 10.1	+0.4
LOHW	Long Hollow 9.3nm,0.9s,mb4.6	35.08	333	eP	P	12 49 09.6	-0.2
L14A	Malta baz=35,SNR=6.9	35.10	329	⇑P	P	12 49 09.7	-0.2
P10A	Eureka baz=35,SNR=5.5	35.16	323	⇓P	P	12 49 11.2	+0.8
N12A	Clover Valley, baz=35,SNR=5.6	35.19	326	⇓P	P	12 49 10.9	+0.3
ELK	Elko 9.1nm,0.8s,mb4.7	35.22	326	eP	P	12 49 10.9	0.0
K15A	Arbon baz=35,SNR=5.2	35.24	331	⇓P	P	12 49 10.6	-0.4
AGMN	Agassiz Nation 32nm,0.8s,mb5.2	35.28	353	eP	P	12 49 10.0	-1.2
K14A	Jones Ranch, D baz=36,SNR=16	35.45	330	⇓P	P	12 49 12.5	-0.4
IMW	Indian Meadow 3.2nm,0.7s,mb4.3	35.46	333	eP	P	12 49 12.8	-0.1
M12A	Wells baz=36,SNR=10	35.52	327	⇓P	P	12 49 13.8	+0.3
NVAR	Mina Array Bea 13nm,0.7s,mb5.0,baz=134,slow=7.7,SNR=91	35.52	320	P	P	12 49 14.3	+0.8
NVAR	2.3nm,0.8s,baz=137,slow=3.9,SNR=4.5			PcP	PcP	12 51 42.3	+1.0
NVAR	Mina Array Bea	35.52	320	P	P	12 49 14.3	+0.8
NVAR				PcP	PcP	12 51 42.3	+1.0
N11A	Elko Archery C baz=36	35.55	325	⇓P	P	12 49 14.1	+0.4
RLMT	Red Lodge baz=36	35.77	336	⇑P	P	12 49 15.2	-0.3
RLMT	Red Lodge 21nm,1.6s,mb4.8	35.77	336	eP	P	12 49 15.1	-0.4
M11A	Holland Ranch, baz=36,SNR=7.1	36.00	326	⇓P	P	12 49 17.8	+0.2
G18A	Lazy EL Ranch, baz=36,SNR=8.8	36.05	336	⇑P	P	12 49 17.2	-0.7
L12A	House Creek Ra baz=36	36.09	328	⇓P	P	12 49 18.4	+0.1
BMN	Battle Mountai 9.7nm,0.8s,mb4.8	36.13	324	eP	P	12 49 19.4	+0.7
H16A	Russell Place, baz=36	36.24	334	⇓P	P	12 49 19.8	+0.2
WAKR	Walker	36.28	319	eP	P	12 49 22.1	+2.1
K12A	Draper Farm, C baz=36,SNR=6.5	36.38	328	⇓P	P	12 49 20.5	-0.3
LPAZ	La Paz 1.0nm,0.8s,mb3.8,baz=27,slow=4.5,SNR=3.5	36.41	143	P	P	12 49 18.8	-2.6
LPAZ	comp=Z,129nm,21.8s,baz=5.3,slow=34			LR	LR	13 02 41.0	
M10A	I.L. Ranch, Tu baz=37,SNR=12	36.47	326	⇑P	P	12 49 22.1	+0.5
L11A	Cat Creek Ranc baz=37,SNR=7.9	36.49	327	⇓P	P	12 49 21.7	0.0
G17A	Pierce Place, baz=37	36.52	335	⇑P	P	12 49 22.9	+0.9
J13A	Cove Ranch, Pi baz=37	36.57	330	⇑P	P	12 49 22.1	-0.4
F18A	Big Timber	36.59	337	⇑P	P	12 49 22.0	-0.6

baz=37,SNR=11
I14A Mackay 36.62 331 ⇑P **P 12 49 23.2 +0.3**
baz=37,SNR=9.7
CMB Columbia Colle 36.63 318 *e*P **P 12 49 24.0 +1.0**
9.6nm,1.1s,mb4.6
H15A Lima 36.78 333 ⇑P **P 12 49 24.9 +0.8**
baz=37,SNR=7.7
HLID Hailey 36.81 330 ⇑P **P 12 49 24.4 0.0**
baz=37
HLID Hailey 36.81 330 *e*P **P 12 49 24.4 0.0**
39nm,2.4s,mb4.9
L10A Juniper Basin 36.81 326 ⇓P **P 12 49 24.5 0.0**
baz=37
G16A Moss Hill, Enn 36.89 334 ⇑P **P 12 49 25.4 +0.2**
baz=37
J12A Stokes Ranch, 36.92 329 ⇑P **P 12 49 25.5 +0.1**
baz=37,SNR=5.7
I13A Wildhorse Cree 36.93 330 ⇑P **P 12 49 25.7 +0.3**
baz=37,SNR=14
PAHR Pah Rah Range 36.96 321 *e*P **P 12 49 26.7 +0.9**
8.5nm,0.9s,mb4.7
F17A Fitzpatrick Pl 36.97 336 ⇓P **P 12 49 25.8 +0.1**
baz=37,SNR=8.0
MCMT McKenzie Canyo 37.03 333 *e*P **P 12 49 26.5 +0.2**
11nm,0.9s,mb4.8
DGMT Dagmar 37.05 344 ⇓P **P 12 49 26.5 +0.1**
baz=37
DGMT Dagmar 37.05 344 *e*P **P 12 49 26.4 0.0**
35nm,0.8s,mb5.3
H14A Leadore 37.11 332 ⇑P **P 12 49 27.4 +0.5**
baz=37,SNR=11
G15A Dillon 37.14 333 ⇑P **P 12 49 27.4 +0.1**
baz=37
BOZ Bozeman (W) 37.15 335 ⇑P **P 12 49 26.9 -0.5**
baz=37,SNR=10
BOZ Bozeman (W) 37.15 335 *e*P **P 12 49 27.1 -0.3**
29nm,2.0s,mb4.9
ULM Lac du Bonnet 37.20 354 P **P 12 49 25.9 -1.8**
21nm,0.9s,mb5.1,baz=171,slow=9.2,SNR=12
ULM LR LR 13 08 01.3
comp=Z,234nm,19.0s,baz=217,slow=41
ULM Lac du Bonnet 37.20 354 P **P 12 49 25.9 -1.8**
ULM LR LR 13 08 01.3
E18A Harlowton 37.22 337 ⇓P **P 12 49 27.4 -0.5**
baz=37,SNR=6.1
F16A Kennard Place, 37.26 335 ⇓P **P 12 49 28.6 +0.4**
baz=37
I12A Atlanta 37.33 329 ⇑P **P 12 49 28.9 0.0**
baz=37,SNR=15
DLMT Dillon 37.34 333 *e*P **P 12 49 29.3 +0.4**
13nm,1.1s,mb4.8
MFID Camas Ranch 37.41 328 ⇓P **P 12 49 29.7 +0.2**
baz=38
H13A Challis 37.48 331 ⇑P **P 12 49 30.5 +0.3**
baz=38,SNR=24
E17A Martinsdale 37.50 336 ⇓P **P 12 49 30.4 +0.1**
baz=38
K10A MacKenzie Ranc 37.51 327 ⇑P **P 12 49 30.6 +0.3**
baz=38
LRM Limekiln Ridge 37.64 334 *e*P **P 12 49 31.5 +0.1**
BEKR Beckworth 37.66 320 ⇑P **P 12 49 32.6 +0.9**
baz=38,SNR=13
F15A Butte 37.67 334 ⇓P **P 12 49 31.4 -0.3**
baz=38,SNR=9.4
H12A Diamond D Ranc 37.75 331 ⇑P **P 12 49 32.4 0.0**
baz=38,SNR=14
I11A Placerville 37.83 329 ⇑P **P 12 49 33.3 +0.2**
baz=38,SNR=7.3
G13A Cobalt 37.87 332 ⇑P **P 12 49 32.9 -0.5**
baz=38
E16A East Helena 37.89 335 ⇑P **P 12 49 33.5 0.0**
baz=38
D17A Six Diamond Ra 38.00 337 ⇑P **P 12 49 34.0 -0.5**
baz=38,SNR=7.2
E15A Deer Lodge 38.20 334 ⇑P **P 12 49 35.7 -0.4**
baz=38
D16A Dana Ranch, Ca 38.24 336 ⇓P **P 12 49 36.1 -0.4**
baz=38,SNR=5.9
WVOR Wild Horse Val 38.24 325 *e*P **P 12 49 36.5 -0.1**
12nm,0.9s,mb4.7
J09A Fry Pan Ranch, 38.37 327 ⇓P **P 12 49 37.8 +0.1**
baz=38,SNR=13
I10A Payette 38.38 328 ⇑P **P 12 49 38.0 +0.3**
baz=38
EGMT Eagleton 38.39 338 ⇑P **P 12 49 37.5 -0.2**
baz=38,SNR=8.0
EGMT Eagleton 38.39 338 *e*P **P 12 49 37.5 -0.2**
7.4nm,0.7s,mb4.6
H11A Donnelly 38.43 330 ⇑P **P 12 49 38.0 -0.1**
baz=38,SNR=5.7
C17A Wharram Farm, 38.43 337 ⇓P **P 12 49 38.0 -0.1**
baz=39
F13A Darby 38.44 332 ⇑P **P 12 49 38.0 -0.2**
baz=39
E14A Clinton 38.55 334 ⇑P **P 12 49 38.6 -0.6**
baz=39
D15A Lincoln 38.64 335 ⇑P **P 12 49 39.4 -0.4**
baz=39,SNR=7.1
B18A Beardsley Farm 38.71 339 ⇓P **P 12 49 39.8 -0.6**
baz=39
H10A Noah's Angus R 38.71 329 ⇓P **P 12 49 39.8 -0.7**
baz=39
J08A Circle Bar Ran 38.76 326 ⇓P **P 12 49 40.8 -0.1**
baz=39,SNR=18
I09A Lost Marbles R 38.79 327 ⇓P **P 12 49 40.6 -0.5**
baz=39,SNR=16
F12A Elk City 38.84 331 ⇑P **P 12 49 41.1 -0.5**
baz=39,SNR=22
CHMT Chamberlain Mo 38.84 334 *e*P **P 12 49 41.0 -0.5**
MOD Modoc 38.86 323 *e*P **P 12 49 41.4 -0.3**
19nm,1.2s,mb4.8
E13A Victor 38.88 333 ⇑P **P 12 49 41.1 -0.7**
baz=39
C16A Fuhringer Ranc 38.95 336 ⇓P **P 12 49 41.8 -0.6**
baz=39,SNR=9.0
B17A L&G Farms, Che 38.99 338 ⇓P **P 12 49 41.9 -0.9**
baz=39
G11A Walters Elk Ra 39.06 330 ⇓P **P 12 49 42.3 -1.0**
baz=39,SNR=17
D14A Greenough 39.08 334 ⇓P **P 12 49 42.7 -0.8**
baz=39
BMO Blue Mountains 39.18 329 *e*P **P 12 49 43.0 -1.3**
4.2nm,0.9s,mb4.3
A18A Metzger Ranch, 39.18 339 ⇓P **P 12 49 43.8 -0.6**
baz=39,SNR=7.2
H09A Durkee 39.23 328 ⇓P **P 12 49 44.2 -0.6**
baz=39
C15A Salmond Ranch, 39.27 336 ⇑P **P 12 49 44.6 -0.4**
baz=39,SNR=5.4
F11A Grangeville 39.36 331 ⇓P **P 12 49 45.0 -0.9**
baz=40
G10A Bishop Farm, J 39.40 329 ⇓P **P 12 49 45.1 -1.1**
baz=40,SNR=5.7
B16A M & M Farms, S 39.43 337 ⇑P **P 12 49 45.3 -1.2**
baz=40,SNR=5.9
D13A Huson 39.50 334 ⇑P **P 12 49 46.2 -0.8**
baz=40,SNR=7.7
H08A Prairie City 39.65 327 ⇑P **P 12 49 48.2 -0.1**
baz=40
B15A Bradely Ranch, 39.68 336 ⇓P **P 12 49 47.7 -0.8**
baz=40
I07A Izee 39.80 326 ⇓P **P 12 49 48.8 -0.8**
baz=40,SNR=5.6
D12A Red Ives Fores 39.86 333 ⇑P **P 12 49 48.9 -1.1**
baz=40,SNR=6.6
F10A Beach Ranch, E 39.94 330 ⇓P **P 12 49 50.2 -0.5**
baz=40,SNR=17
C13A Hot Springs 40.00 334 ⇓P **P 12 49 50.5 -0.7**
baz=40
YBH Yreka Blue Hor 40.20 321 P **P 12 49 51.4 -1.5**
3.1nm,0.9s,mb4.2,baz=74,slow=13,SNR=6.6
A15A Johnson Ranch, 40.29 337 ⇓P **P 12 49 52.8 -0.7**
baz=40,SNR=13
B13A Whitefish 40.50 335 ⇓P **P 12 49 54.8 -0.5**
baz=41
A14A Double T Ranch 40.55 336 ⇓P **P 12 49 55.3 -0.4**
baz=41,SNR=15
SIV San Ignacio 40.72 135 P **P 12 49 56.7 -0.8**
5.5nm,0.7s,mb4.5,baz=306,slow=9.0,SNR=34
WALA Waterton Lakes 40.81 336 *e*P **P 12 49 57.9 0.0**
2.4nm,2.3s,mb3.6
H04A Detroit Lake 41.66 325 ⇑P **P 12 50 04.5 -0.4**
baz=42
OD2 Odessa Site #2 41.67 331 *e*P **P 12 50 04.2 -0.6**
A11A Hall Mountain, 41.75 334 ⇑P **P 12 50 05.2 -0.3**
baz=42,SNR=5.7
B09A Rice 42.14 332 ⇑P **P 12 50 08.2 -0.6**
baz=42

FFC Flin Flon 42.44 350 *e*P **P 12 50 09.8 -1.1**
11nm,0.6s,mb4.8
A07A Ashnola River, 43.63 331 ⇑P **P 12 50 20.9 +0.2**
baz=44
EDM Edmonton 44.00 340 *e*P **P 12 50 22.5 -1.1**
SCHQ Schefferville 45.24 19 P **P 12 50 33.0 -0.5**
19nm,0.7s,mb5.0,baz=208,slow=5.7,SNR=31
SCHQ LR LR 13 11 14.5
comp=Z,344nm,18.2s,baz=108,slow=38
SCHQ Schefferville 45.24 19 P **P 12 50 33.0 -0.5**
SCHQ LR LR 13 11 14.5
CPUP Villa Florida 50.53 141 LR LR 13 12 09.3
comp=Z,91nm,19.0s,baz=51,slow=35
YKA Yellowknife Ar 52.22 346 P **P 12 51 25.5 -1.3**
7.2nm,0.7s,mb4.8,baz=149,slow=7.9,SNR=84
YKA PcP PcP 12 52 37.1 -0.3
0.7nm,0.6s,baz=147,slow=4.0,SNR=4.6
YKA LR LR 13 19 40.9
comp=Z,21nm,18.3s,baz=20,slow=43
DLBC Dease Lake 54.16 335 *e*P **P 12 51 41.4 +0.3**
PLCA Paso Flores 56.64 162 LR LR 13 10 41.8
comp=Z,177nm,19.6s,baz=27,slow=30
RKT Rikitea 57.03 231 *e*T 13 52 37.3
2.6nm,0.3s
RES Resolute Bay 61.48 358 P **P 12 52 30.9 -1.3**
baz=190,slow=9.1
RES Resolute Bay 61.48 358 *e*P **P 12 52 30.8 -1.4**
8.9nm,0.8s,mb4.8
INK Inuvik 61.72 343 *e*P **P 12 52 32.8 -1.1**
6.4nm,0.8s,mb4.7
BMRM Bremner River 61.73 333 *e*P **P 12 52 34.2 +0.1**
EGAK Eagle 62.15 338 *e*P **P 12 52 35.5 -1.3**
3.5nm,1.0s,mb4.3
MCK McKinley 64.71 335 *e*P **P 12 52 53.1 -0.6**
16nm,1.5s,mb4.6
TRF Thorofare Moun 65.17 335 *e*P **P 12 52 56.0 -0.7**
11nm,1.3s,mb4.5
BPAW Bear Paw Mtn. 65.69 335 *e*P **P 12 52 59.0 -1.0**
10.0nm,1.2s,mb4.5
PPLA Purkeypile 65.78 334 *e*P **P 12 52 59.6 -1.0**
5.1nm,1.1s,mb4.3
PPT Papeete 66.37 244 *e*LR LR 13 12 44.7
217nm,24.8s
PPT Papeete 66.37 244 LR LR 13 15 13.7
comp=Z,150nm,19.4s,baz=91,slow=30
SUMG Summit 66.41 15 *e*P **P 12 53 04.8 +0.2**
9.6nm,0.8s,mb4.7
SUMG Summit 66.41 15 *i*P **P 12 53 03.7 -0.9**
8.8nm,0.8s,mb4.6
COLD Coldfoot 66.56 338 *e*P **P 12 53 05.9 +0.4**
5.0nm,1.0s,mb4.3
FALS False Pass 69.76 324 *e*P **P 12 53 24.9 -0.9**
56nm,0.6s,mb5.6
UNV Unalaska Valle 71.49 323 *e*P **P 12 53 36.1 -0.3**
ESDC Sonseca Array 78.58 52 P **P 12 54 17.1 -0.4**
0.3nm,0.4s,mb3.5,baz=280,slow=4.8,SNR=6.3
PMSA Palmer Station 80.24 169 P **P 12 54 24.5 -1.3**
11nm,0.4s,mb5.0,baz=297,slow=11,SNR=9.3
BILL Bilibino 82.89 338 *e*P **P 12 54 39.3 -0.6**
11nm,1.1s,mb4.6
DBIC Dimbokro 83.71 85 P **P 12 54 45.6 +0.4**
3.1nm,0.6s,mb4.3,baz=144,slow=7.3,SNR=6.2
DBIC LR LR 13 29 17.7
comp=Z,93nm,19.7s,baz=277,slow=34
NOA NORSAR Array B 83.82 29 P **P 12 54 44.9 +0.1**
1.4nm,0.7s,mb3.9,baz=289,slow=5.0,SNR=3.9
NOA LR LR 13 29 03.9
comp=Z,85nm,20.1s,baz=270,slow=33
CLL Collm 87.66 38 *e*P **P 12 55 04.0 0.0**
CLL *e* 12 55 09.0
CLL Collm 87.66 38 *e*P **P 12 55 04.0 0.0**
TORD Torodi Ar. Bea 88.58 77 P **P 12 55 08.7 -0.4**
0.8nm,0.7s,mb3.8,baz=290,slow=5.5,SNR=4.1
GERES GERESS Array B 88.87 40 P **P 12 55 07.9 -1.9**
0.3nm,0.3s,mb3.8,baz=243,slow=4.4,SNR=4.3
GERES LR LR 13 29 44.1
comp=Z,82nm,20.8s,baz=178,slow=32
KEST Kesra 89.71 53 LR LR 13 32 03.0
comp=Z,24nm,18.1s,baz=82,slow=33
FINES FINESS Array B 90.29 26 LR LR 13 35 34.6
comp=Z,81nm,18.4s,baz=347,slow=35
AKASG Malin Array Be 97.22 34 LR LR 13 40 46.4
comp=Z,91nm,18.4s,baz=285,slow=36
CN2 Changchun 114.69 333 *e*PKP PKiKP 13 00 53.5 -2.3
BOSA Boshof 118.21 115 PKP PKPdf 13 01 05.6 +2.6
3.6nm,0.7s,baz=43,slow=1.3,SNR=5.6
BOSA Boshof 118.21 115 PKP PKPdf 13 01 05.6 +2.6
KSRS Korea Array 118.29 326 PKP PKPdf 13 01 02.8 -0.1
0.9nm,0.6s,baz=9.5,slow=1.9,SNR=8.3
MKAR Makanchi Array 119.81 6 PKP PKPdf 13 01 05.2 -0.4
0.3nm,0.4s,baz=15,slow=6.0,SNR=3.3
BJI Beijing 121.69 337 PKP PKPdf 13 01 07.7 -1.7
BJI SS SS 13 19 10.2 -1.2
BJI LR LR
comp=N,72nm,28.6s
BJI LR LR
comp=E,88nm,27.8s
BJI LR LR
comp=Z,46nm,29.1s
HHC Hu-ho-hao-te 122.60 341 *e*PKP PKPdf 13 01 09.6 -1.5
HHC PP PP 13 02 52.4 +4.6
HHC PKS 13 04 44.8
HHC SKS SKSdf 13 08 10.3 -6.2
HHC SKKS SKKSac 13 09 32.0 -9.1
HHC LR LR
comp=N,170nm,21.4s
HHC LR LR
comp=E,520nm,21.4s
HHC LR LR
comp=Z,98nm,25.0s
WMQ Urumqi 123.15 2 *e*PKP PKPdf 13 01 09.0 -3.1
CASY Casey 125.28 190 *e*PKPdf PKPdf 13 01 07.3 -8.1
GTA Gaotai 126.82 351 *e*PKP PKPdf 13 01 19.3 +0.1
LZH Lanzhou 129.22 346 *e*PKP PKPdf 13 01 20.7 -3.2
LZH sPKP 13 01 54.9
CD2 Chengdu 134.16 344 *e*PKP PKPdf 13 01 29.8 -3.6
WRA Warramunga Arr 137.17 255 PKP PKPdf 13 01 38.6 -0.6
comp=Z,1.4nm,0.8s,baz=90,slow=2.9,SNR=4.5
ASAR Alice Springs 137.32 249 PKP PKPdf 13 01 36.5 -2.8
comp=Z,0.5nm,0.8s,baz=102,slow=3.5,SNR=5.3
GYA Guiyang 137.35 338 *e*Pdif Pdif 12 58 43.2 -3.4
GYA PKP PKPdf 13 01 37.4 -2.1
GYA sPKP 13 02 12.0
GYA PP PP 13 04 25.3 +1.6
GYA AMB AMB
comp=Z,90nm,7.6s
CHTO Chiang Mai 146.95 344 *e*PKPbc PKPbc 13 01 58.3 -0.3
CM31 Chiang Mai Arr 147.29 344 *e*PKPbc PKPbc 13 02 00.1 +0.5
CMAR Chiang Mai Arr 147.29 344 PKPbc PKPbc 13 01 59.5 -0.1
comp=Z,9.8nm,0.8s,baz=342,slow=3.4,SNR=15

*ISK **10** 12:42:33.5, 37°.68N×26°.80E, h7km, MD2.8*
*ISCJB **10** 12:42:33.7±0.6, 37°.66N±0°.03×26°.72E±0°.04, h7km±4km,*
Error ellipse: s-maj=6.0km s-min=4.0km az=142.1
*ATH **10** 12:42:34.6, 37°.66N×26°.72E, h7km±4km, MD2.8/4*
*CSEM **10** 12:42:34.0±0.2, 37°.67N×26°.74E, h10km, MD2.8, Error*
ellipse: s-maj=4.1km s-min=2.8km az=57.0
*DDA **10** 12:42:35.3, 37°.74N×26°.82E, h8km±3km, Md3.0*
ISC 10 12:42:34.3±0.6, 37°.67N±0°.03×26°.74E±0°.04, h11km±4km,
n35, σ0°.71/56, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.09**	**63**	*e*PG	**Pg**	**12 42 36.9**	**+0.1**
SMG				*e*SG	**Sg**	**12 42 38.7**	**0.0**
SMG	**Samos**	**0.09**	**63**	*e*Pg	**Pg**	**12 42 36.9**	**+0.1**
SMG				*e*Sg	**Sg**	**12 42 38.7**	**0.0**
GCAM	**G?zelcaml?**	**0.40**	**85**	*i*P	**Pg**	**12 42 41.9**	**-0.2**
GCAM				*i*S	**Sg**	**12 42 48.6**	**+1.3**
GCAM	**G?zelcaml?**	**0.40**	**85**	*i*P	**Pg**	**12 42 41.9**	**-0.2**
GCAM				*i*S	**Sg**	**12 42 48.7**	**+1.3**
URLA	**Izmir**	**0.70**	**351**	*i*P	**Pg**	**12 42 47.5**	**-0.4**
URLA				*i*S	**Sg**	**12 42 57.5**	**+0.5**
URLA	**Izmir**	**0.70**	**351**	*i*P	**Pg**	**12 42 47.5**	**-0.3**
URLA				*i*S	**Sg**	**12 42 57.5**	**+0.5**
BLCB	**Balcova**	**0.76**	**18**	*e*PG	**Pg**	**12 42 48.0**	**-0.9**
BLCB				*e*SG	**Sg**	**12 42 58.6**	**-0.2**
BLCB	**Balcova**	**0.76**	**18**	*e*Pg	**Pg**	**12 42 48.0**	**-0.9**
BLCB				*e*Sg	**Sg**	**12 42 58.6**	**-0.2**
BDRM	**Kayabasi**	**0.82**	**137**	*i*P	**Pg**	**12 42 51.0**	**+0.8**
BDRM				*i*S	**Sg**	**12 43 02.3**	**+1.4**
BDRM	**Kayabasi**	**0.82**	**137**	*i*P	**Pg**	**12 42 51.0**	**+0.8**
BDRM				*i*S	**Sg**	**12 43 02.3**	**+1.4**
IZM	**Izmir**	**0.84**	**30**	*e*PG	**Pg**	**12 42 49.8**	**-0.6**
KDAG	**Bornova**	**0.84**	**30**	*i*P	**Pg**	**12 42 49.8**	**-0.8**
KDAG				*i*S	**Sg**	**12 43 01.3**	**-0.3**
KDAG	**Bornova**	**0.84**	**30**	*i*P	**Pg**	**12 42 49.8**	**-0.8**
KDAG				*i*S	**Sg**	**12 43 01.3**	**-0.3**
CHOS	**Chios island**	**0.90**	**323**	*e*PB	**Pg**	**12 42 51.9**	**+0.3**
CHOS				*e*SB	**Sg**	**12 43 03.7**	**+0.4**
CHOS	**Chios island**	**0.90**	**323**	*e*Pb	**Pg**	**12 42 51.9**	**+0.3**
CHOS				*e*Sb	**Sg**	**12 43 03.7**	**+0.4**
AYDN	**Tasoluk**	**0.91**	**90**	*i*P	**Pg**	**12 42 51.2**	**-0.5**
AYDN				*i*S	**Sg**	**12 43 04.0**	**+0.5**
AYDN	**Tasoluk**	**0.91**	**90**	*i*P	**Pg**	**12 42 51.2**	**-0.5**
AYDN				*i*S	**Sg**	**12 43 04.0**	**+0.4**
MLSB	**Milas**	**0.91**	**114**	*e*PG	**Pg**	**12 42 50.6**	**-1.2**
MLSB				*e*SG	**Sg**	**12 43 02.9**	**-0.6**
MLSB	**Milas**	**0.91**	**114**	*e*Pg	**Pg**	**12 42 50.6**	**-1.2**
MLSB				*e*Sg	**Sg**	**12 43 02.9**	**-0.7**
APE	**Apeiranthos**	**1.13**	**238**	*e*PB	**Pg**	**12 42 55.8**	**-0.3**
APE	**Apeiranthos**	**1.13**	**238**	*e*Pb	**Pg**	**12 42 55.8**	**-0.3**
DAT	**Datca**	**1.15**	**144**	*e*PN	**Pn**	**12 42 55.3**	**-1.0**
DAT	**Datca**	**1.15**	**144**	*e*Pn	**Pn**	**12 42 55.3**	**-1.0**
YER	**Yerkesik**	**1.34**	**113**	*e*PN	**Pn**	**12 42 58.6**	**-0.3**
YER	**Yerkesik**	**1.34**	**113**	*e*Pn	**Pn**	**12 42 58.6**	**-0.3**
AKS	**Akhisar**	**1.48**	**35**	*e*PN	**Pn**	**12 43 00.7**	**-0.1**
AKS	**Akhisar**	**1.48**	**35**	*e*Pn	**Pn**	**12 43 00.7**	**-0.1**
AKHS	**Akhisar**	**1.48**	**35**	*i*P	**Pn**	**12 43 01.3**	**+0.5**
AKHS				*i*S	**Sn**	**12 43 20.4**	**+0.3**
AKHS	**Akhisar**	**1.48**	**35**	*i*P	**Pn**	**12 43 01.3**	**+0.5**
AKHS				*i*S	**Sn**	**12 43 20.4**	**+0.3**
PRK	**Paraskevi**	**1.62**	**347**	*e*PB	**Pb**	**12 43 05.0**	**+0.9**
PRK	**Paraskevi**	**1.62**	**347**	*e*Pb	**Pb**	**12 43 05.0**	**+0.9**
KULA	**Kula-Manisa**	**1.74**	**60**	*e*PN	**Pn**	**12 43 04.0**	**-0.3**
KULA	**Kula-Manisa**	**1.74**	**60**	*e*Pn	**Pn**	**12 43 04.0**	**-0.4**
BALY	**Balya**	**2.18**	**18**	*i*P	**Pn**	**12 43 13.8**	**+3.4**
BALY				*i*S	**Sn**	**12 43 42.8**	**+5.3**
BALY	**Balya**	**2.18**	**18**	*i*P	**Pn**	**12 43 13.9**	**+3.4**

DJA 10 12:47:55, 2°.90S×101°.02E, h26km, MLv3.7/7, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.74**	**115**	P	Pn	12 48 23.5	0.0
SDSI	**Sungai Dareh**	**2.00**	**12**	P	Pn	12 48 27.6	+0.5
PDSI	**Padang**	**2.05**	**344**	P	Pn	12 48 28.0	+0.1
MNAI	**Manna**	**2.42**	**127**	P	Pn	12 48 33.5	+0.6
MNAI				S	Sn	12 49 04.2	+2.6
SISI	**Saibi**	**2.48**	**309**	P	Pn	12 48 34.3	+0.5
PPI	**Padang Panjang**	**2.50**	**346**	P	Pn	12 48 34.5	+0.4
MDSI	**Maura Dua**	**3.52**	**117**	P	Pn	12 48 49.1	+1.0
MNSI	**Mandailing Nat**	**3.94**	**339**	P	Pn	12 48 54.6	+0.7

IDC 10 13:09:18.1±6.2, 39°.42N×110°.80E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.3/27, mbtmp3.4/4, ML3.3/1, Error ellipse: s-maj=132.7km s-min=29.7km az=84.0, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**9.00**	**341**	Pn	Pn	13 11 30.0	+0.8
0.3nm,0.3s,baz=159,slow=13,SNR=4.5							
MKAR	**Makanchi Array**	**22.00**	**299**	P	P	13 14 14.0	+0.4
0.2nm,0.5s,baz=112,slow=10,SNR=5.3							
CMAR	**Chiang Mai Arr**	**23.28**	**210**	P	P	13 14 27.4	+0.1
0.9nm,0.7s,baz=15,slow=9.3,SNR=7.6							
KURK	**Kurchatov**	**25.18**	**307**	P	P	13 14 44.9	-0.1
0.6nm,0.7s,baz=105,slow=10,SNR=3.7							

*ATH **10** 13:12:49.1, 38°.04N×21°.54E, h19km±3km, MD2.9/3*
*THE **10** 13:12:49.6, 38°.07N×21°.57E, h18km, ML3.0/6, Error*
ellipse: s-maj=0.8km s-min=0.4km az=20.0
*CSEM **10** 13:12:49.2±0.1, 38°.06N×21°.56E, h18km±1km, MD2.9,*
Error ellipse: s-maj=2.9km s-min=2.5km az=167.0
*ISCJB **10** 13:12:49.5±0.5, 38°.07N±0°.04×21°.57E±0°.04, h26km±5km,*
Error ellipse: s-maj=6.0km s-min=5.1km az=163.0
ISC 10 13:12:49.4±0.6, 38°.06N±0°.04×21°.55E±0°.04, h18km±4km,
n36, σ0°.56/58, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.07**	**269**	*e*PB	**Pg**	**13 12 52.6**	**-0.2**
RLS	**Riolos of Patr**	**0.07**	**269**	*e*Pb	**Pg**	**13 12 52.6**	**-0.2**
UPR	**University Cam**	**0.29**	**39**	P	**Pg**	**13 12 55.6**	**-0.2**
UPR				S	**Sg**	**13 13 00.6**	**+0.4**
UPR	**University Cam**	**0.29**	**39**	*e*PB	**Pg**	**13 12 56.0**	**+0.2**
UPR				*e*SB	**Sg**	**13 13 01.5**	**+1.3**
UPR	**University Cam**	**0.29**	**39**	P	**Pg**	**13 12 55.6**	**-0.2**
UPR	**University Cam**	**0.29**	**39**	*e*Pb	**Pg**	**13 12 56.0**	**+0.2**
UPR				S	**Sg**	**13 13 00.6**	**+0.4**
UPR				*e*Sb	**Sg**	**13 13 01.5**	**+1.3**
LAKA	**Lakka**	**0.38**	**62**	P	**Pg**	**13 12 57.1**	**-0.3**
LAKA				S	**Sg**	**13 13 02.8**	**+0.1**
LAKA	**Lakka**	**0.38**	**62**	P	**Pg**	**13 12 57.1**	**-0.3**
LAKA				S	**Sg**	**13 13 02.8**	**+0.1**
EFP	**Efpalio**	**0.46**	**37**	P	**Pg**	**13 12 58.6**	**-0.2**
EFP				S	**Sg**	**13 13 05.7**	**+0.6**
EFP	**Efpalio**	**0.46**	**37**	*e*PB	**Pb**	**13 12 58.4**	**-0.6**
EFP				*e*SB	**Sb**	**13 13 06.3**	**+0.8**
EFP	**Efpalio**	**0.46**	**37**	P	**Pg**	**13 12 58.6**	**-0.2**
EFP				S	**Sg**	**13 13 05.7**	**+0.6**
EFP				*e*Sb	**Sb**	**13 13 06.3**	**+0.8**
TRIZ	**Trizonia**	**0.51**	**53**	P	**Pg**	**13 12 59.2**	**-0.5**
TRIZ				S	**Sg**	**13 13 07.0**	**+0.4**
TRIZ	**Trizonia**	**0.51**	**53**	P	**Pg**	**13 12 59.2**	**-0.5**
TRIZ				S	**Sg**	**13 13 07.0**	**+0.4**
KALE	**Kalithea**	**0.57**	**54**	P	**Pg**	**13 13 00.3**	**-0.5**
KALE				S	**Sg**	**13 13 08.6**	**+0.2**
KALE	**Kalithea**	**0.57**	**54**	P	**Pg**	**13 13 00.3**	**-0.5**
KALE				S	**Sg**	**13 13 08.6**	**+0.2**
GUR	**Goura**	**0.64**	**101**	P	**Pb**	**13 13 01.3**	**-0.7**
GUR				S	**Sb**	**13 13 10.3**	**-0.2**
GUR	**Goura**	**0.64**	**101**	*e*PB	**Pb**	**13 13 01.3**	**-0.7**
GUR				*e*SN	**Sb**	**13 13 10.9**	**+0.4**
GUR	**Goura**	**0.64**	**101**	P	**Pb**	**13 13 01.3**	**-0.7**
GUR				S	**Sb**	**13 13 10.3**	**-0.2**
GUR				*e*Sn	**Sb**	**13 13 10.9**	**+0.4**
VLS	**Valsamata**	**0.77**	**279**	P	**Pb**	**13 13 03.8**	**-0.4**
VLS				S	**Sb**	**13 13 15.3**	**+1.0**
VLS	**Valsamata**	**0.77**	**279**	P	**Pb**	**13 13 03.8**	**-0.4**
VLS				S	**Sb**	**13 13 15.3**	**+1.0**
DSF	**Desfina**	**0.84**	**65**	P	**Pb**	**13 13 04.8**	**-0.7**
DSF	**Desfina**	**0.84**	**65**	P	**Pb**	**13 13 04.8**	**-0.7**
ITM	**Ithomi**	**0.93**	**161**	P	**Pb**	**13 13 06.5**	**-0.4**
ITM				S	**Sb**	**13 13 20.2**	**+1.4**
ITM	**Ithomi**	**0.93**	**161**	*e*PN	**Pb**	**13 13 06.5**	**-0.4**
ITM	**Ithomi**	**0.93**	**161**	P	**Pb**	**13 13 06.5**	**-0.4**
ITM				S	**Sb**	**13 13 20.2**	**+1.4**
VLX	**Vlachokerasia**	**0.95**	**136**	P	**Pb**	**13 13 07.5**	**+0.2**
VLX	**Vlachokerasia**	**0.95**	**136**	*e*PN	**Pn**	**13 13 07.3**	**-0.5**
VLX	**Vlachokerasia**	**0.95**	**136**	*e*Pn	**Pn**	**13 13 07.3**	**-0.5**
LKD2	**Lefkada island**	**1.01**	**316**	P	**Pb**	**13 13 08.0**	**-0.4**
LKD2	**Lefkada island**	**1.01**	**316**	P	**Pb**	**13 13 08.0**	**-0.4**
AGG	**Agios Georgios**	**1.14**	**32**	P	**Pn**	**13 13 10.2**	**-0.2**
AGG	**Agios Georgios**	**1.14**	**32**	P	**Pn**	**13 13 10.2**	**-0.2**
PYL	**PYLOS**	**1.17**	**173**	P	**Pn**	**13 13 10.8**	**0.0**
PYL	**PYLOS**	**1.17**	**173**	*e*PN	**Pn**	**13 13 11.4**	**+0.6**
PYL	**PYLOS**	**1.17**	**173**	P	**Pn**	**13 13 10.8**	**0.0**
PYL	**PYLOS**	**1.17**	**173**	*e*Pn	**Pn**	**13 13 11.4**	**+0.6**

*ISCJB **10** 13:28:50.7±0.4, 37°.97N±0°.03×4°.12W±0°.02, h10km, Error*
ellipse: s-maj=4.6km s-min=2.5km az=10.5
*CSEM **10** 13:28:52.4±0.1, 37°.90N×4°.06W, h27km±2km, ML2.6/12,*
Error ellipse: s-maj=3.1km s-min=2.2km az=11.0
*MDD **10** 13:28:54.4±0.3, 37°.89N×4°.04W, h22km±1km, mbLg2.1/20,*
Error ellipse: s-maj=2.6km s-min=2.5km az=111.0, PRIMO
ISC 10 13:28:52.2±0.4, 37°.94N±0°.03×4°.08W±0°.02, h10km, n84,
σ1°.29/103, 2D, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EBAN	**Banos Encina**	**0.32**	**46**	Pg	**Pg**	**13 29 01.5**	**+3.0**
73nm,0.1s,SNR=104							
EBAN				Lg		13 29 06.7	
57nm,0.2s,SNR=38							
EBAN	**Banos Encina**	**0.32**	**46**	Pg	**Pg**	**13 29 01.5**	**+3.0**
73nm,0.1s,SNR=104							

EBAN				Lg				13 29 06.7
	57nm,0.2s,SNR=38							
EBAN	**Banos Encina**	**0.32**	**46**	Pg		**Pg**	**13 29 01.5**	**+2.9**
	73nm,0.1s,SNR=104							
EBAN				Lg				13 29 06.7
	57nm,0.2s,SNR=38							
ELUQ	**Luque**	**0.41**	**202**	Pg		**Pg**	**13 29 02.2**	**+2.0**
	9.6nm,0.2s,SNR=7.9							
ELUQ				Lg				13 29 07.7
	33nm,0.3s,SNR=7.9

KFL	**Anninata**	**0.59**	**292**	P	**Pb**	**13 51 07.5**	**-0.5**
EFP	**Efpalio**	**0.63**	**32**	P	**Pb**	**13 51 07.9**	**-0.8**
EFP				S	**Sb**	**13 51 17.0**	**-0.1**
EFP	**Efpalio**	**0.63**	**32**	*e*PN	**Pb**	**13 51 07.9**	**-0.8**
EFP				*e*SN	**Sb**	**13 51 16.8**	**-0.3**
EFP	**Efpalio**	**0.63**	**32**	*e*Pn	**Pb**	**13 51 07.9**	**-0.8**
EFP				S	**Sb**	**13 51 17.0**	**-0.1**
TRIZ	**Trizonia**	**0.67**	**44**	P	**Pb**	**13 51 08.7**	**-0.6**
TRIZ				S	**Sb**	**13 51 17.6**	**-0.5**
GUR	**Goura**	**0.68**	**86**	P	**Pb**	**13 51 09.4**	**-0.2**
GUR				S	**Sb**	**13 51 19.4**	**+0.8**
GUR	**Goura**	**0.68**	**86**	P	**Pb**	**13 51 09.4**	**-0.2**
GUR				S	**Sb**	**13 51 19.4**	**+0.8**
KALE	**Kalithea**	**0.72**	**46**	P	**Pb**	**13 51 09.6**	**-0.6**
KALE				S	**Sb**	**13 51 20.3**	**+0.6**
VLS	**Valsamata**	**0.76**	**293**	P	**Pb**	**13 51 10.6**	**-0.3**
VLS				S	**Sb**	**13 51 21.5**	**+0.7**
VLS	**Valsamata**	**0.76**	**293**	*e*PN	**Pn**	**13 51 10.5**	**-1.3**
VLS				*e*SN	**Sn**	**13 51 22.8**	**+0.1**
VLS	**Valsamata**	**0.76**	**293**	P	**Pb**	**13 51 10.6**	**-0.3**
VLS				S	**Sb**	**13 51 21.5**	**+0.7**
VLS				*e*Sn	**Sn**	**13 51 22.8**	**+0.1**
ITM	**Ithomi**	**0.79**	**153**	*e*PN	**Pn**	**13 51 13.2**	**+0.9**
ITM	**Ithomi**	**0.79**	**153**	*e*Pn	**Pn**	**13 51 13.2**	**+0.9**
DSF	**Desfina**	**0.98**	**57**	P	**Pb**	**13 51 14.7**	**+0.1**
DSF				S	**Sb**	**13 51 28.0**	**+1.0**
LKD2	**Lefkada island**	**1.11**	**325**	P	**Pn**	**13 51 16.4**	**-0.2**
LKD2				S	**Sb**	**13 51 32.7**	**+1.9**
LKD2	**Lefkada island**	**1.11**	**325**	P	**Pn**	**13 51 16.4**	**-0.2**
LKD2				S	**Sb**	**13 51 32.7**	**+1.9**

IDC 10 13:53:17.0±1.1, 32°.21N×105°.18E, h0km, mb3.4/5, mb1 3.6/6, mb1mx3.4/27, mbtmp3.4/6, ML3.7/1, Error ellipse: s-maj=72.6km s-min=18.7km az=58.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.80**	**204**	Pn	Pn	13 56 47.5	-0.1
	0.1nm,0.3s,baz=10,slow=8.6,SNR=6.6						
MKAR	**Makanchi Array**	**22.78**	**316**	P	P	13 58 20.6	-0.4
	0.5nm,0.8s,baz=112,slow=11,SNR=2.7						
ZALV	**Zalesovo Beam**	**26.15**	**332**	P	P	13 58 53.1	+0.3
	0.5nm,0.4s,baz=117,slow=5.0,SNR=3.0						
KURK	**Kurchatov**	**26.94**	**321**	P	P	13 58 59.9	+0.1
	0.6nm,0.6s,baz=127,slow=8.7,SNR=4.1						
WRA	**Warramunga Arr**	**58.89**	**148**	P	P	14 03 17.6	-0.3
	0.2nm,0.5s,baz=340,slow=7.8,SNR=7.4						
ASAR	**Alice Springs**	**61.97**	**150**	P	P	14 03 39.2	+0.4
	0.2nm,0.5s,baz=332,slow=6.4,SNR=11						

*IDC **10** 13:59:40.8±0.6, 56°.72S×25°.32W, h0km, mb4.7/11, mb1 4.8/11, mb1mx4.5/20, mbtmp4.8/11, MS4.2/12, Ms1 4.2/12, ms1mx3.9/27, Error ellipse: s-maj=24.6km s-min=16.3km az=45.0*

*ISCJB **10** 13:59:40.7±0.6, 56°.71S±0°.10×25°.4W±0°.2, h10km, mb4.7/12, MS4.2/12, Error ellipse: s-maj=17.4km s-min=10.5km az=44.9*

*NEIC **10** 13:59:46.2±0.3, 56°.72S×25°.41W, h35km, mb5.0/2, Error ellipse: s-maj=13.1km s-min=9.3km az=221.0*

ISC 10 13:59:42.6±0.6, 56°.69S±0°.10×25°.4W±0°.2, h10km, n47, σ0.98/22, mb4.7/12, MS4.2/12, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**20.25**	**231**	P	**P**	**14 04 18.2**	**+0.6**
	60nm,1.1s,baz=153,slow=2.3,SNR=2.7						
PMSA				LR	LR	14 09 25.8	
	comp=Z,290nm,18.9s,MS3.7,baz=247,slow=29						
MAIT	**Maitri**	**21.15**	**146**	*e*P	**P**	**14 04 27.7**	**+0.5**
USHA	**Ushuaia**	**24.00**	**256**	P	**P**	**14 04 56.5**	**-0.6**
	8.2nm,0.8s,mb4.2,baz=129,slow=8.3,SNR=4.0						
USHA				LR	LR	14 12 16.9	
	comp=Z,636nm,18.3s,MS4.1,baz=77,slow=32						
USHA	**Ushuaia**	**24.00**	**256**	P	**P**	**14 04 56.5**	**-0.6**
USHA				LR	LR	14 12 16.9	
TRQA	**Tornquist**	**30.50**	**292**	*e*P	**P**	**14 05 54.7**	**-0.8**
PLCA	**Paso Flores**	**33.10**	**279**	LR	LR	14 20 16.9	
	comp=Z,360nm,18.7s,MS4.1,baz=127,slow=37						
QSPA	**South Pole Qui**	**33.56**	**180**	P	**P**	**14 06 22.8**	**+0.9**
	12nm,0.5s,mb5.1,baz=17,slow=1.4,SNR=217						
CPUP	**Villa Florida**	**37.99**	**310**	P	**P**	**14 06 59.9**	**-0.6**
	5.4nm,0.6s,mb4.5,baz=137,slow=6.5,SNR=15						
CPUP				LR	LR	14 21 31.0	
	comp=Z,241nm,19.0s,MS4.0,baz=140,slow=34						
CPUP	**Villa Florida**	**37.99**	**310**	*e*P	**P**	**14 07 00.3**	**-0.2**
CPUP				LR	LR	14 21 31.0	
CFAA	**Coronel Fontan**	**38.73**	**292**	P	**P**	**14 07 05.0**	**-1.6**
	0.4nm,0.5s,baz=132,slow=7.6,SNR=7.9						
MAW	**Mawson**	**39.03**	**143**	P	**P**	**14 07 07.0**	**-1.8**
	2.1nm,1.0s,mb3.8,baz=285,slow=6.0,SNR=2.6						
MAW				LR	LR	14 21 51.7	
	comp=Z,233nm,21.8s,MS4.0,baz=260,slow=34						
SUR	**Sutherland**	**39.86**	**72**	LR	LR	14 20 33.9	
	comp=Z,778nm,18.4s,MS4.6,baz=170,slow=32						
LCO	**Las Campanas**	**42.08**	**292**	P	**P**	**14 07 33.6**	**-0.8**
BOSA	**Boshof**	**45.17**	**73**	LR	LR	14 24 49.6	
	comp=Z,864nm,18.0s,MS4.7,baz=216,slow=33						
TSUM	**Tsumeb**	**49.14**	**58**	P	**P**	**14 08 30.2**	**-0.1**
	1.0nm,0.7s,mb4.0,baz=127,slow=5.1,SNR=3.7						
TSUM				LR	LR	14 27 17.2	
	comp=Z,226nm,19.0s,MS4.2,baz=138,slow=34						
LPAZ	**La Paz**	**51.57**	**304**	P	**P**	**14 08 50.0**	**+1.3**
	21nm,0.5s,mb5.3,baz=134,slow=5.2,SNR=95						
LPAZ	**La Paz**	**51.57**	**304**	*e*P	**P**	**14 08 49.7**	**+1.0**
CASY	**Casey**	**52.96**	**159**	*e*P	**P**	**14 08 59.2**	**+0.8**
	10nm,1.2s,mb4.6						
LSZ	**Lusaka**	**57.69**	**67**	LR	LR	14 30 44.2	
	comp=Z,162nm,20.3s,MS4.1,baz=338,slow=32						
DBIC	**Dimbokro**	**65.36**	**23**	LR	LR	14 32 53.4	
	comp=Z,146nm,18.0s,MS4.2,baz=127,slow=30						
OTAV	**Otavalo**	**70.85**	**302**	*e*P	**P**	**14 11 01.0**	**+1.6**
	35nm,1.4s,mb5.1						
BBTS	**Babate**	**71.47**	**9**	LR	LR	14 37 40.6	
	comp=Z,115nm,18.3s,MS4.2,baz=258,slow=32						
ROSC	**El Rosal**	**73.09**	**308**	LR	LR	14 46 14.5	
	comp=Z,120nm,19.7s,MS4.2,baz=96,slow=38						
PCRV	**Puerto La Cruz**	**74.08**	**320**	P	**P**	**14 11 20.1**	**+1.4**
	28nm,0.9s,mb5.2,baz=119,slow=3.6,SNR=9.0						
SDV	**Santo Domingo**	**75.18**	**313**	P	**P**	**14 11 25.4**	**+0.4**
	8.4nm,0.8s,mb4.7,baz=314,slow=2.3,SNR=12						
SDV	**Santo Domingo**	**75.18**	**313**	P	**P**	**14 11 25.4**	**+0.4**
SJG	**San Juan**	**81.97**	**321**	P	**P**	**14 12 02.1**	**-0.2**
	14nm,0.3s,mb5.4,baz=299,slow=19,SNR=4.3						
SJG	**San Juan**	**81.97**	**321**	P	**P**	**14 12 02.1**	**-0.2**
ASAR	**Alice Springs**	**98.06**	**161**	P	**P**	**14 13 18.0**	**-1.2**
	0.5nm,0.9s,mb4.1,baz=209,slow=3.9,SNR=4.2						
LONY	**Lake Ozonia**	**109.05**	**325**	*e*PKiKP	PKiKP	14 18 11.5	+0.1
NVAR	**Mina Array Bea**	**122.57**	**291**	PKP	PKPdf	14 18 39.1	+1.7
	0.2nm,0.5s,baz=188,slow=5.5,SNR=4.0						
CMAR	**Chiang Mai Arr**	**123.90**	**109**	PKP	PKPdf	14 18 40.4	-0.2
	0.9nm,0.9s,baz=244,slow=3.2,SNR=5.5						
YKA	**Yellowknife Ar**	**137.32**	**317**	PKP	PKPdf	14 19 04.5	-0.1
	2.4nm,0.9s,baz=122,slow=2.3,SNR=19						
YKA	**Yellowknife Ar**	**137.32**	**317**	PKP	PKPdf	14 19 04.5	-0.1
INK	**Inuvik**	**146.94**	**320**	PKPbc	PKPbc	14 19 22.9	-0.7
	6.5nm,0.8s,baz=106,slow=2.7,SNR=9.5						
DAWY	**Dawson**	**147.97**	**311**	*e*PKPbc	PKPbc	14 19 25.3	-1.2
EGAK	**Eagle**	**148.91**	**312**	*e*PKPbc	PKPbc	14 19 28.3	-0.6
CBIJ	**Chichi jima**	**149.11**	**158**	PKPbc	PKPbc	14 19 29.2	-1.4
	20nm,0.8s,baz=287,slow=19,SNR=3.8						
BMRM	**Bremner River**	**149.25**	**304**	*e*PKPbc	PKPbc	14 19 30.1	+0.2
MENT	**Mentasta**	**149.48**	**308**	*e*PKPbc	PKPbc	14 19 30.4	+0.1
SONM	**Songino Array**	**149.77**	**86**	PKPbc	PKPbc	14 19 30.8	-0.8
	2.1nm,0.6s,baz=222,slow=3.4,SNR=12						
MCK	**McKinley**	**151.96**	**308**	*e*PKPbc	PKPbc	14 19 36.5	+0.4
TRF	**Thorofare Moun**	**152.49**	**307**	*e*PKPbc	PKPbc	14 19 37.8	+0.4
BPAW	**Bear Paw Mtn.**	**152.92**	**308**	*e*PKPbc	PKPbc	14 19 37.9	-0.5
COLD	**Coldfoot**	**152.98**	**315**	*e*PKPbc	PKPbc	14 19 37.3	-1.1
PPLA	**Purkeypile**	**153.22**	**305**	*e*PKPbc	PKPbc	14 19 38.4	-0.7
TTA	**Tatalina**	**154.96**	**305**	*e*PKPbc	PKPbc	14 19 43.2	+0.5

CASC 10 14:14:46.2±0.8, 12°.57N×88°.97W, h14km±2km, MD3.6, ML3.2, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFRS	**El Faro**	**1.05**	**355**	*e*P	Pb	14 15 04.8	-1.4
VSM	**San Miguel**	**1.09**	**38**	*e*P	Pb	14 15 06.2	-0.6
BLLM	**Bellamira**	**1.12**	**39**	*e*P	Pb	14 15 06.5	-0.9
LBRS	**Las Brisas**	**1.16**	**356**	*e*P	Pn	14 15 07.1	-0.9
BOQS	**Boqueron**	**1.20**	**345**	*e*P	Pn	14 15 07.7	-0.8
BOQS				*e*S	Sb	14 15 24.8	+0.8
CNCH	**Conchagua**	**1.31**	**57**	*e*P	Pn	14 15 09.7	-0.4
CNCH				*e*S	Sb	14 15 27.5	+0.2
CAHU	**Cacacuatique**	**1.40**	**32**	*e*P	Pn	14 15 11.3	-0.1
CAHU				*e*S	Sn	14 15 30.9	+1.2
SBLS	**San Blas**	**1.41**	**333**	*e*P	Pn	14 15 11.2	-0.3
SBLS				*e*S	Sn	14 15 30.8	+0.9
SNJE	**San Jose**	**1.43**	**334**	*e*P	Pn	14 15 11.5	-0.2
RTR	**El Retiro**	**1.48**	**334**	*e*P	Pn	14 15 12.3	0.0
RTR				*e*S	Sn	14 15 32.9	+1.5
RBDL	**Robledal**	**1.69**	**336**	*e*P	Pn	14 15 15.5	+0.3
RBDL				*e*S	Sn	14 15 38.0	+1.4
MTO2	**Montecristo 2**	**1.86**	**348**	*e*P	Pn	14 15 17.5	-0.1
MTO2				*e*S	Sn	14 15 41.7	+0.8
TGUH	**Tegucigalpa,Un**	**2.22**	**48**	*e*P	Pn	14 15 22.2	-0.3
TGUH				*e*S	Sn	14 15 50.1	+0.4
CNGN	**Cerro Negro**	**2.22**	**92**	*e*P	Pn	14 15 22.2	-0.3
CNGN				AML	AML	14 15 58.5	
	comp=N,175nm,0.4s						
COPN	**Copaltepe**	**2.35**	**99**	*e*P	Pn	14 15 23.9	-0.5

*LDG **10** 14:15:36.4±0.2, 33°.15N×91°.84E, h10km, Mb5.5/34, Ms4.5/8, Error ellipse: s-maj=10.3km s-min=3.8km az=129.0*

*IDC **10** 14:15:36.4±0.3, 33°.08N×92°.04E, h0km, mb4.9/37, mb1 5.0/41, mb1mx5.0/42, mbtmp4.9/41, ML4.0/4, MS4.6/26, Ms1 4.6/26, ms1mx4.4/42, Error ellipse: s-maj=11.8km s-min=9.3km az=44.0*

*BJI **10** 14:15:37.5, 33°.07N×92°.08E, h19km, mB5.1/35, mb4.9/56, ML5.7/3, Ms5.4/72, Ms7 5.2/56*

*ISCJB **10** 14:15:38.3±0.7, 33°.13N±0°.02×92°.05E±0°.02, h23km±5km, mb5.2/236, MS4.8/72, Error ellipse: s-maj=3.6km s-min=2.6km az=5.7*

*NEIC **10** 14:15:38.0±0.1, 33°.16N×92°.09E, h10km, mb5.3/142, MS4.7/9, Error ellipse: s-maj=3.2km s-min=2.9km az=68.0*

*MOS **10** 14:15:39.6±0.8, 33°.09N×92°.03E, h33km, mb5.4/96, MS4.7/42, Error ellipse: s-maj=5.8km s-min=3.4km az=123.5*

*GCMT **10** 14:15:44.0±0.2, 33°.07N×92°.22E, h13km, MW5.3, Moment Tensor Solution. s56,c84; s83,c177; Moment tensor: Scale 10^{16}Nm; M_{rr}-6.93±.25; $M_{\theta\theta}$-2.42±.19; $M_{\phi\phi}$9.35±.21; $M_{r\theta}$-3.08±.50; $M_{\theta\phi}$3.94±.16; $M_{\phi r}$-0.75±.44; Best double couple: $M_0$9.60000×10^{16} NP1:ϕ_s170.00000°, δ47.00000°, λ-131.00000°. NP2:ϕ_s42.00000°, δ57.00000°, λ-55.00000°. Principal axes: T 10.7000, Plg5.0000°, Azm108.0000°; N -2.1000, Plg29.0000°, Azm201.0000°; P -8.6000, Plg61.0000°, Azm8.0000°; Data Used: II IU G CN IC.*

*SZGRF **10** 14:15:44.4, 33°.68N×91°.99E, h33km, mb5.3, MS4.7, Qinghai, China*

*DJA **10** 14:15:49, 32°.94N×91°.74E, h78km, mb5.2/38*

ISC 10 14:15:41.0±0.7, 33°.11N±0°.02×92°.04E±0°.02, h27km±5km, h15km±2.9km: pP-P, n635, σ0.96/669, mb5.2/236, MS4.8/72, 26C-45D, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.48**	**193**	Pg	**Pb**	**14 16 38.2**	**-3.8**
LSA				Sg	**Sn**	**14 17 29.1**	**+15**
LSA				smax			
	comp=E,4μm,1.3s						
LSA	**Lhasa**	**3.48**	**193**	⇓*e*Pn	**Pb**	**14 16 37.9**	**-4.1**
LSA				*e*Sg	**Sn**	**14 17 25.4**	**+12**
TAPN	**Taplejung**	**6.86**	**214**	*e*P	**Pn**	**14 17 21.2**	**+1.5**
	comp=E,2μm,1.6s						
JIRN	**Jiri**	**7.42**	**224**	*e*P	**Pn**	**14 17 30.2**	**+2.7**
	comp=E,478nm,0.9s						
ODAN	**Odare**	**7.42**	**214**	*e*P	**Pn**	**14 17 28.1**	**+0.6**
	comp=E,157nm,0.5s						
GUN	**Gumba**	**7.42**	**227**	*e*P	**Pn**	**14 17 30.3**	**+2.8**
	comp=E,492nm,0.8s						
SHL	**Shillong**	**7.52**	**181**	⇑*i*P	**Pn**	**14 17 31.5**	**+2.6**
	comp=Z,27nm,0.8s						
SHL				*ex*	x	14 18 57.0	
RAMN	**Ramite**	**7.74**	**219**	*e*P	**Pn**	**14 17 31.9**	**0.0**
	comp=Z,933nm,1.0s						
KKN	**Kakani**	**7.88**	**229**	*e*P	**Pn**	**14 17 35.6**	**+1.8**
	comp=Z,251nm,0.6s						
KKN	**Kakani**	**7.88**	**229**	*e*P	**Pn**	**14 17 35.6**	**+1.8**
KKN				pmax	pmax		
	comp=Z,251nm,0.6s						
PKI	**Pulchoki**	**7.96**	**228**	*e*P	**Pn**	**14 17 37.0**	**+2.2**
	comp=Z,348nm,0.7s						
PKI	**Pulchoki**	**7.96**	**228**	*e*P	**Pn**	**14 17 37.0**	**+2.2**
PKI				pmax	pmax		
	comp=Z,348nm,0.7s						
PKIN	**Phulchoki**	**7.96**	**228**	*e*P	**Pn**	**14 17 36.8**	**+1.9**
	comp=Z,494nm,0.7s						
DMN	**Daman**	**8.12**	**229**	*e*P	**Pn**	**14 17 38.8**	**+1.7**
	comp=Z,404nm,0.8s						
GTA	**Gaotai**	**8.88**	**43**	⇓P	**Pn**	**14 17 48.2**	**+0.7**
GTA				pP		14 17 51.0	
GTA				sP		14 17 53.8	
GTA				S	**Sn**	**14 19 27.6**	**+1.0**
GTA				pmax	pmax		
	comp=Z,35nm,1.1s						
GTA				pmax	pmax		
	comp=Z,490nm,5.9s						
GTA				LR	LR		
	comp=N,13μm,10.7s						
GTA				LR	LR		
	comp=E,9μm,10.4s						
GTA				LR	LR		
	comp=Z,9μm,10.1s						
AGT	**Agartala**	**9.22**	**184**	*i* x	**Pn**	**14 17 47.0**	**-5.2**
AGT				*i* x	x	14 18 19.0	
LZH	**Lanzhou**	**10.17**	**70**	*e*P	**Pn**	**14 18 06.0**	**+0.8**
LZH				pP		14 18 09.7	
LZH				sP		14 18 13.4	
LZH				PP		14 18 14.5	
LZH				*e*S	**Sn**	**14 20 00.0**	**+1.6**
LZH				SS		14 20 15.4	
LZH				pmax	pmax		
	comp=Z,42nm,1.1s						
LZH				pmax	pmax		
	comp=Z,180nm,4.3s						
LZH				LR	LR		
	comp=E,17μm,6.4s						
LZH				LR	LR		
	comp=Z,19μm,6.8s						
CD2	**Chengdu**	**10.19**	**99**	⇓*i*P	**Pn**	**14 18 06.8**	**+1.3**
CD2				pP		14 18 10.0	
CD2				sP		14 18 12.8	
CD2				PP		14 18 15.2	
CD2				S	**Sn**	**14 20 02.2**	**+3.4**
CD2				sS		14 20 07.5	
CD2				SS		14 20 15.8	
CD2				pmax	pmax		
	comp=Z,60nm,1.0s						
CD2				pmax	pmax		
	comp=Z,130nm,4.2s						
CD2				LR	LR		
	comp=N,17μm,5.9s						
CD2				LR	LR		
	comp=E,38μm,7.7s						
CD2				LR	LR		
	comp=Z,40μm,8.9s						
PTH	**Pithoragarh**	**10.71**	**254**	*ex*	**Pn**	**14 18 15.0**	**+2.4**
PTH				*ex*	x	14 20 21.0	
WMQ	**Urumqi**	**11.22**	**344**	P	**Pn**	**14 18 19.0**	**-0.5**
WMQ				sP		14 18 25.0	
WMQ				PP		14 18 28.0	
WMQ				S	**Sn**	**14 20 25.0**	**+1.1**
WMQ				SS		14 20 39.0	
WMQ				pmax	pmax		
	comp=Z,45nm,0.6s						
WMQ				LR	LR		
	comp=N,5μm,6.0s						
WMQ				LR	LR		
	comp=E,7μm,6.0s						
WMQ				LR	LR		
	comp=Z,5μm,6.0s						
DDI	**Dehra Dun**	**12.22**	**261**	*e*PKP	**Pn**	**14 18 31.7**	**-1.6**
KMI	**Kunming**	**12.28**	**128**	P	**Pn**	**14 18 33.0**	**-1.1**
KMI				pP		14 18 35.4	
KMI				PP		14 18 42.5	
KMI				S	**Sn**	**14 20 50.8**	**+0.8**
KMI				SS		14 21 05.6	
KMI				pmax	pmax		
	comp=Z,45nm,1.0s						
KMI				LR	LR		
	comp=N,10μm,8.5s						
KMI				LR	LR		
	comp=E,5μm,8.8s						
KMI				LR	LR		
	comp=Z,9μm,7.3s						
BHK	**Bhakra**	**13.33**	**267**	*e*PKP	**Pn**	**14 18 48.3**	**-0.1**
NDI	**New Delhi**	**13.47**	**255**	*ex*	**Pn**	**14 18 47.0**	**-3.3**
DLH	**Dalhousie**	**13.53**	**272**	*e*PKP	**Pn**	**14 18 52.0**	**+0.9**
THN	**Thein Dam**	**13.75**	**272**	*e*PKP	**Pn**	**14 18 54.0**	**-0.2**
XAN	**Xi'an**	**14.11**	**82**	P	**Pn**	**14 18 58.0**	**-1.0**
XAN				pP		14 19 06.1	
XAN				S	**Sn**	**14 21 35.2**	**+0.5**
XAN				sS		14 21 47.3	
XAN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,69nm,4.5s						
XAN				LR	LR		
	comp=N,7μm,9.5s						
XAN				LR	LR		
	comp=E,4μm,9.3s						
XAN				LR	LR		
	comp=Z,3μm,8.3s						
GYA	**Guiyang**	**14.32**	**114**	⇑*i*P	**Pn**	**14 18 58.8**	**-3.2**
GYA				PP		14 19 11.6	
GYA				S	**Sn**	**14 21 34.8**	**-5.1**
GYA				SS		14 21 54.2	
GYA				pmax	pmax		
	comp=Z,90nm,0.9s						
GYA				pmax	pmax		
	comp=Z,260nm,6.2s						
GYA				LR	LR		
	comp=N,8μm,8.7s						
GYA				LR	LR		
	comp=E,5μm,9.6s						
GYA				LR	LR		
	comp=Z,9μm,9.6s						
KSH	**Kashi**	**14.43**	**301**	⇑*i*P	**Pn**	**14 19 08.2**	**+4.8**
KSH				pP	pP	14 19 11.7	-5.6
KSH				sP	sP	14 19 15.3	-5.4
KSH				PP		14 19 20.3	
KSH				S	**Sn**	**14 21 52.4**	**+10**
KSH				sS		14 21 58.5	
KSH				SS		14 22 10.2	
KSH				PcP	PcP	14 24 19.8	+1.8
KSH				ScP	ScP	14 27 51.9	+2.0
KSH				PcS	PcS	14 27 53.8	+0.9
KSH				pmax	pmax		
	comp=Z,97nm,2.1s						
KSH				pmax	pmax		
	comp=Z,550nm,3.3s						
KSH				LR	LR		
	comp=N,5μm,7.1s						
KSH				LR	LR		
	comp=E,4μm,9.6s						
KSH				LR	LR		
	comp=Z,4μm,8.6s						
JBP	**Jabalpur**	**14.52**	**230**	⇓*i*P	**Pn**	**14 19 04.5**	**-0.2**
JBP				*i* x	x	14 21 39.1	
ENH	**Enshi**	**15.12**	**96**	*e*Pn	**Pn**	**14 19 09.0**	**-3.8**
	comp=Z,130nm,0.8s						
ULHL	**Ulahol**	**15.46**	**311**	P	**Pn**	**14 19 23.6**	**+6.5**
	SNR=10						
CHG	**Chiang Mai**	**15.53**	**155**	⇑P	**Pn**	**14 19 18.1**	**0.0**
	comp=Z,32nm,1.2s						
CHTO	**Chiang Mai**	**15.53**	**155**	Pn	**Pn**	**14 19 18.9**	**+0.8**
	SNR=11						
CHTO				Pn	**Pn**	**14 19 18.9**	**+0.8**
	SNR=11						
MK31	**Makanchi Array**	**15.56**	**334**	*e*P	**Pn**	**14 19 16.5**	**-1.8**
MKAR	**Makanchi Array**	**15.56**	**334**	Pn	**Pn**	**14 19 16.6**	**-1.6**
	comp=Z,0.5nm,0.3s,baz=134,slow=14,SNR=46						
MKAR				LR	LR	14 25 22.2	
	comp=Z,1μm,20.2s,baz=149,slow=38						
MKAR	**Makanchi Array**	**15.56**	**334**	*i* P	**Pn**	**14 19 16.8**	**-1.5**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
AAA	**Alma-Ata**	**15.59**	**315**	*i* P	**Pn**	**14 19 20.1**	**+1.4**
AAA				*i* S	**Sn**	**14 22 15.6**	**+5.1**
AAA				pmax	pmax		
	comp=Z,2μm,3.1s						
AAA				smax			
	comp=E,1μm,5.9s						
AAA				MLR	MLR		
	comp=Z,6μm,14.0s						
CHCP	**Chirah Chowk**	**15.70**	**277**	⇑P	**Pn**	**14 19 18.1**	**-2.1**
CM31	**Chiang Mai Arr**	**15.86**	**155**	*e*P	**Pn**	**14 19 22.3**	**0.0**
	comp=Z,54nm,1.0s						
CMAR	**Chiang Mai Arr**	**15.86**	**155**	Pn	**Pn**	**14 19 20.2**	**-2.1**
	comp=Z,0.3nm,0.3s,baz=333,slow=13,SNR=46						
CMAR				PcP	PcP	14 24 20.9	+0.5
	comp=Z,0.4nm,0.3s,baz=305,slow=2.5,SNR=5.2						
CMAR				LR	LR	14 25 54.6	
	comp=Z,2μm,20.1s,baz=337,slow=39						
CMAR				ScP	ScP	14 27 56.5	+3.7
	comp=Z,0.0nm,0.3s,baz=328,slow=2.2,SNR=5.2						
KZA	**Kyzart**	**16.01**	**309**	P	**Pn**	**14 19 30.5**	**+6.2**
	SNR=59						
BHPL	**Bhopal**	**16.19**	**236**	*ex*	**Pn**	**14 19 23.9**	**-2.7**
BHPL				AMb	AMB	14 19 28.9	
	comp=Z,416nm,1.6s						
BTO	**Baotou**	**16.20**	**57**	*e*P	**Pn**	**14 19 24.8**	**-1.9**
BTO				S	**Sn**	**14 22 19.2**	**-6.3**
BTO				LR	LR		
	comp=N,2μm,15.9s						
BTO				LR	LR		
	comp=E,1μm,8.4s						
TKM2	**Tokmak 2**	**16.21**	**312**	P	**Pn**	**14 19 27.3**	**+0.5**
	SNR=19						
AJM	**Ajmer**	**16.47**	**251**	*e*PKP	**Pn**	**14 19 30.3**	**+0.1**
AJM				AMb	AMB	14 19 39.7	
	comp=Z,257nm,1.5s						
KBK	**Karagaybulak**	**16.49**	**310**	P	**Pn**	**14 19 34.8**	**+4.5**
	SNR=51						
UCH	**Uchtor**	**16.57**	**308**	P	**Pn**	**14 19 36.7**	**+5.4**
	SNR=39						
AAK	**Ala-Archa**	**16.77**	**310**	P	**Pn**	**14 19 38.9**	**+5.0**
	comp=Z,357nm,1.5s,SNR=25						
AAK	**Ala-Archa**	**16.77**	**310**	P	**Pn**	**14 19 39.5**	**+5.6**
	SNR=22						
AAK	**Ala-Archa**	**16.77**	**310**	Pn	**Pn**	**14 19

HHC			sP	sP	14 19 48.5	-5.0
HHC			PP		14 19 56.2	
HHC			S	**Sn**	**14 22 58.3**	**+4.1**
HHC			SS		14 23 14.8	
HHC			PcP	PcP	14 24 23.9	+1.6
HHC			ScS	ScS	14 31 35.6	+0.3
HHC			pmax	pmax		
	comp=Z,16nm,1.0s					
HHC			pmax	pmax		
	comp=Z,250nm,6.0s					
HHC			LR	LR		
	comp=N,4μm,14.2s					
HHC			LR	LR		
	comp=E,5μm,14.1s					
HHC			LR	LR		
	comp=Z,4μm,15.2s					
SONM	**Songino Array**	**18.27 32**	P	**Pn**	**14 19 51.8**	**-0.7**
	comp=Z,0.8nm,0.3s,baz=219,slow=9.4,SNR=52					
SONM			LR	LR	14 28 10.5	
	comp=Z,512nm,18.5s,baz=220,slow=41					
ULN	**Ulaanbaatar**	**18.59 33**	P	**Pn**	**14 19 56.9**	**+0.6**
	SNR=21					
ULN			P		14 19 56.9	
	SNR=21					
NST	**Nakhon Sawan**	**18.85 155**	P	**Pn**	**14 20 00.0**	**+0.4**
	comp=Z,62nm,0.9s					
WHN	**Wuhan**	**19.13 92**	P	**Pn**	**14 20 01.2**	**-1.7**
WHN			LR	LR		
	comp=N,10μm,7.8s					
WHN			LR	LR		
	comp=E,13μm,7.3s					
WHN			LR	LR		
	comp=Z,16μm,7.7s					
ZAK	**Zakamensk**	**19.15 22**	*e*P	**Pn**	**14 20 03.4**	**+0.4**
KBL	**Kabul**	**19.15 281**	*e*P	**Pn**	**14 20 03.0**	**-0.2**
KBL			pmax	pmax		
	comp=Z,1μm,1.9s					
KBL	**Kabul**	**19.15 281**	*e*P	**Pn**	**14 20 03.0**	**-0.2**
	comp=Z,1μm,1.9s					
MOY	**Mondy**	**19.66 17**	*e*P	**Pn**	**14 20 08.9**	**-0.2**
MOY			pmax	pmax		
	comp=Z,110nm,1.2s					
HYB	**Hyderabad**	**19.79 221**	*e*P	**Pn**	**14 20 08.0**	**-2.9**
HYB	**Hyderabad**	**19.79 221**	*i*P	**Pn**	**14 20 10.0**	**-0.9**
KURK	**Kurchatov**	**20.17 335**	P	**P**	**14 20 12.3**	**-0.8**
	comp=Z,440nm,0.9s,SNR=27					
KURK	**Kurchatov**	**20.17 335**	P	**P**	**14 20 11.9**	**-1.2**
	comp=Z,28nm,0.7s,baz=144,slow=11,SNR=49					
KURK			LR	LR	14 28 30.3	
	comp=Z,2μm,19.6s,MS4.4,baz=140,slow=38					
KURK	**Kurchatov**	**20.17 335**	*ce*P	**P**	**14 20 13.0**	**-0.1**
KURK			pmax	pmax		
	comp=Z,94nm,1.2s					
KURK	**Kurchatov**	**20.17 335**	*e*P	**P**	**14 20 12.2**	**-0.9**
	comp=Z,70nm,0.9s					
KURK	**Kurchatov**	**20.17 335**	P	**P**	**14 20 12.8**	**-0.3**
	SNR=26					
KURK			P		14 20 12.8	
	SNR=26					
TLY	**Talaya**	**20.39 21**	Pn	**P**	**14 20 17.9**	**+2.4**
	comp=Z,236nm,1.1s,SNR=11					
TLY	**Talaya**	**20.39 21**	*e*P	**P**	**14 20 16.7**	**+1.1**
TLY			*e*S	**S**	**14 23 59.9**	**-2.6**
TLY			pmax	pmax		
	comp=Z,66nm,1.3s					
TLY			MLR	MLR		
	comp=Z,1μm,14.0s,MS4.4					
TLY	**Talaya**	**20.39 21**	*e*P	**P**	**14 20 17.2**	**+1.7**
	comp=Z,50nm,1.1s					
TLY	**Talaya**	**20.39 21**	P	**P**	**14 20 17.5**	**+2.0**
	SNR=15					
TLY			P		14 20 17.5	
	SNR=15					
BJT	**Baijiatuau**	**20.54 64**	*e*P	**P**	**14 20 16.1**	**-1.1**
BJT			pmax	pmax		
	comp=Z,46nm,0.8s					
BJT	**Baijiatuau**	**20.54 64**	*e*P	**P**	**14 20 16.1**	**-1.1**
	comp=Z,46nm,0.8s					
BJI	**Beijing**	**20.55 63**	P	**P**	**14 20 16.2**	**-1.1**
BJI			S	**S**	**14 24 06.4**	**+0.6**
BJI			pmax	pmax		
	comp=Z,55nm,0.9s					
BJI			pmax	pmax		
	comp=Z,520nm,4.3s					
BJI			LR	LR		
	comp=N,17μm,12.6s,MS5.6					
BJI			LR	LR		
	comp=E,4μm,12.9s,MS5.6					
TIA	**Tai'an**	**20.85 74**	⇓P	**P**	**14 20 19.8**	**-0.9**
TIA			S	**S**	**14 24 12.1**	**+0.3**
TIA			pmax	pmax		
	comp=Z,150nm,1.0s					
TIA			LR	LR		
	comp=N,2μm,9.1s					
TIA			LR	LR		
	comp=E,2μm,8.3s					
IRK	**Irkutsk**	**21.07 21**	*e*P	**P**	**14 20 24.1**	**+1.2**
IRK			pmax	pmax		
	comp=Z,512nm,1.5s,mb5.6					
QIZ	**Qiongzhong**	**21.23 127**	P	**P**	**14 20 24.6**	**-0.2**
QIZ			pP		14 20 27.9	
QIZ			sP	sP	14 20 31.4	-4.3
QIZ			PP		14 20 47.7	
QIZ			S	**S**	**14 24 21.1**	**+1.6**
QIZ			pmax	pmax		
	comp=Z,28nm,2.2s,mb4.2					
QIZ			pmax	pmax		
	comp=Z,580nm,3.4s					
QIZ			LR	LR		
	comp=N,4μm,15.1s,MS5.0					
QIZ			LR	LR		
	comp=E,2μm,14.1s,MS5.0					
QIZ			LR	LR		
	comp=Z,6μm,9.5s					
GZH	**Guangzhou**	**21.25 113**	P	**P**	**14 20 24.7**	**-0.4**
GZH			S	**S**	**14 24 19.4**	**-0.5**
GZH			LR	LR		
	comp=N,4μm,8.3s					
GZH			LR	LR		
	comp=E,7μm,9.8s					
GZH			LR	LR		
	comp=Z,11μm,9.5s					
UBT	**Ubonrachathani**	**21.33 143**	⇓P	**P**	**14 20 28.5**	**+2.5**
ZAA0	**Zalesovo Array**	**21.45 348**	*e*P	**P**	**14 20 26.2**	**-0.7**
ZALV	**Zalesovo Beam**	**21.45 348**	P	**P**	**14 20 26.3**	**-0.6**
	comp=Z,38nm,0.8s,mb4.8,baz=161,slow=11,SNR=113					
ZALV			LR	LR	14 30 40.7	
	comp=Z,136nm,19.2s,baz=342,slow=42					
POO	**Poona**	**21.83 233**	*e*PKP	**P**	**14 20 30.9**	**-0.5**
POO			AMb	AMB	14 20 42.8	
	comp=Z,155nm,1.5s,mb5.2					
HKC	**Hong Kong Obse**	**22.32 113**	P	**P**	**14 20 40.0**	**+3.5**
HKC			S	**S**	**14 24 42.0**	**+1.3**
NVS	**Novosibirsk**	**22.59 347**	⇑*i*P	**P**	**14 20 37.9**	**-1.2**
NVS			*e*S	**S**	**14 24 47.6**	**+2.2**
NVS			pmax	pmax		
	comp=N,360nm,1.6s					
NVS			pmax	pmax		
	comp=E,68nm,1.6s					
NVS			pmax	pmax		
	comp=Z,223nm,1.6s,mb5.3					
NVS			smax			
	comp=N,148nm,2.6s					
NVS			smax			
	comp=E,56nm,1.5s					
NJ2	**Nanjing**	**22.60 85**	*e*P	**P**	**14 20 40.3**	**+0.8**
NJ2			pP		14 20 45.1	
NJ2			sP	sP	14 20 47.5	-2.9
NJ2			PP		14 21 07.5	
NJ2			S	**S**	**14 24 41.8**	**-4.2**
NJ2			sS	sS	14 24 51.7	-6.4
NJ2			pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.5					
NJ2			pmax	pmax		
	comp=Z,280nm,3.6s					
NJ2			LR	LR		
	comp=N,3μm,9.0s					
NJ2			LR	LR		
	comp=E,5μm,11.6s					
NJ2			LR	LR		
	comp=Z,7μm,10.7s,MS5.4					
CIT	**Chita**	**24.50 33**	*e*P	**P**	**14 20 58.2**	**+0.4**
QZH	**Quanzhou**	**24.56 102**	P	**P**	**14 20 58.9**	**+0.3**
QZH			S	**S**	**14 25 16.5**	**-1.3**
QZH			LR	LR		
	comp=N,5μm,8.4s					
QZH			LR	LR		
	comp=E,3μm,10.1s					
QZH			LR	LR		
	comp=Z,10μm,11.6s,MS5.6					
DL2	**Dalian**	**24.56 68**	P	**P**	**14 21 00.9**	**+2.4**
DL2			S	**S**	**14 25 23.3**	**+5.6**
DL2			pmax	pmax		
	comp=Z,20nm,1.0s,mb4.6					
DL2			pmax	pmax		
	comp=Z,200nm,3.6s					
DL2			LR	LR		
	comp=N,2μm,18.1s,MS4.8					
DL2			LR	LR		
	comp=E,700nm,15.6s,MS4.8					
DL2			LR	LR		
	comp=Z,3μm,13.6s,MS4.9					
SSE	**Sheshan**	**24.74 87**	*e*P	**P**	**14 20 55.9**	**-4.3**
SSE			pP		14 21 04.4	
SSE			sP	sP	14 21 09.5	-2.0
SSE			S	**S**	**14 25 16.8**	**-3.9**
SSE			sS	sS	14 25 32.9	-0.9
SSE			pmax	pmax		
	comp=Z,29nm,0.7s,mb4.9					
SSE			pmax	pmax		
	comp=Z,29nm,4.6s					
SSE			LR	LR		
	comp=N,6μm,11.0s,MS5.4					
SSE			LR	LR		
	comp=E,4μm,11.0s,MS5.4					
SSE			LR	LR		
	comp=Z,5μm,11.6s,MS5.3					
BVAR	**Borovoye Array**	**25.24 328**	P	**P**	**14 21 04.6**	**+0.1**
	comp=Z,23nm,0.7s,mb4.8,baz=135,slow=11,SNR=57					
BVAR			PcP	PcP	14 24 37.5	+0.2
	comp=Z,1.4nm,0.6s,baz=228,slow=1.2,SNR=4.3					
BRVK	**Borovoye**	**25.31 328**	P	**P**	**14 21 05.5**	**+0.4**
	comp=Z,314nm,0.6s,mb6.0,SNR=17					
BRVK	**Borovoye**	**25.31 328**	*ce*P	**P**	**14 21 05.6**	**+0.5**
BRVK			pmax	pmax		
	comp=Z,97nm,1.7s,mb5.1					
BRVK	**Borovoye**	**25.31 328**	*e*Pn	**P**	**14 21 05.0**	**-0.1**
	comp=Z,75nm,1.1s,mb5.1					
BRVK	**Borovoye**	**25.31 328**	P	**P**	**14 21 06.0**	**+0.9**
	SNR=33					
BRVK			P		14 21 06.0	
	SNR=33					
HIA	**Hailar**	**26.16 44**	*e*P	**P**	**14 21 13.0**	**+0.1**
HIA			pmax	pmax		
	comp=Z,74nm,1.3s					
HIA	**Hailar**	**26.16 44**	*e*P	**P**	**14 21 13.0**	**+0.1**
	comp=Z,74nm,1.3s,mb5.1					
SNY	**Shenyang**	**26.39 62**	⇓P	**P**	**14 21 14.6**	**-0.4**
SNY			S	**S**	**14 25 48.0**	**+1.4**
SNY			pmax	pmax		
	comp=Z,22nm,0.9s,mb4.7					
SNY			pmax	pmax		
	comp=Z,380nm,5.1s					
SNY			LR	LR		
	comp=N,2μm,12.0s,MS4.9					
SNY			LR	LR		
	comp=E,2μm,15.5s,MS4.9					
SNY			LR	LR		
	comp=Z,3μm,10.6s,MS5.1					
PALK	**Pallekele**	**27.78 205**	P	**P**	**14 21 27.7**	**-0.1**
	comp=Z,17nm,0.6s,mb4.8,baz=16,slow=9.3,SNR=11					
PALK	**Pallekele**	**27.78 205**	*e*P	**P**	**14 21 27.7**	**0.0**
PALK			pmax	pmax		
	comp=Z,89nm,1.4s,mb5.2					
PALK	**Pallekele**	**27.78 205**	*e*P	**P**	**14 21 27.7**	**0.0**
	comp=Z,89nm,1.4s,mb5.2					
ABKT	**Ailbek**	**27.93 290**	P	**P**	**14 21 30.5**	**+1.6**
	comp=Z,313nm,1.2s,mb5.8,SNR=14					
VAN	**Vannovskaya**	**27.93 290**	⇓*i*P	**P**	**14 21 30.9**	**+1.9**
CN2	**Changchun**	**28.08 58**	*e*P	**P**	**14 21 29.1**	**-1.1**
CN2			*es*P	sP	14 21 36.1	-5.4
CN2			*e*S	**S**	**14 26 11.4**	**-1.9**
CN2			pmax	pmax		
	comp=Z,30nm,1.0s,mb4.9					
CN2			pmax	pmax		
	comp=Z,200nm,5.0s					
CN2			LR	LR		
	comp=N,2μm,13.0s,MS5.1					
CN2			LR	LR		
	comp=E,2μm,13.0s,MS5.1					
CN2			LR	LR		
	comp=Z,4μm,13.0s,MS5.2					
ABKAR	**Akbulak array**	**28.77 314**	*e*P	**P**	**14 21 36.6**	**+0.4**
	comp=Z,22nm,0.7s,mb5.0					
KULM	**Kulim**	**28.82 162**	*e*P	**P**	**14 21 38.0**	**+1.0**
	comp=Z,45nm,1.2s,mb5.1					
BOD	**Bodaibo**	**28.86 25**	*e*P	**P**	**14 21 37.4**	**+0.5**
BOD			pmax	pmax		
	comp=Z,23nm,1.1s,mb4.8					
KSRS	**Korea Array**	**29.50 71**	P	**P**	**14 21 41.2**	**-1.7**
	comp=Z,6.6nm,0.9s,mb4.4,baz=272,slow=8.7,SNR=17					
KSRS			ScP	ScP	14 28 29.6	+1.9
	comp=Z,1.5nm,1.0s,baz=323,slow=1.9,SNR=4.2					
KSRS			LR	LR	14 36 13.1	
	comp=Z,88nm,19.3s,baz=274,slow=42					
KSRS	**Korea Array**	**29.50 71**	P	**P**	**14 21 41.2**	**-1.7**
KSRS					14 28 29.7	
KSRS			pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.4					
KSRS			pmax	pmax		
	comp=N,2.0nm,1.0s					
KSRS			MLR	MLR		
	comp=Z,88nm,19.3s					
AKTO	**Aktyubinsk**	**30.36 315**	LR	LR	14 35 42.0	
	comp=Z,2μm,18.1s,MS4.7,baz=122,slow=40					
PSI	**Prapat**	**30.84 166**	P	**P**	**14 21 55.9**	**+1.0**
	comp=Z,12nm,0.8s,mb4.7,baz=316,slow=6.8,SNR=7.3					
PSI			LR	LR	14 36 21.9	
	comp=Z,1μm,18.4s,MS4.5,baz=339,slow=40					
PSI	**Prapat**	**30.84 166**	P	**P**	**14 21 55.9**	**+1.0**
PSI			LR	LR	14 36 21.9	
MDJ	**Mudanjiang**	**31.16 57**	P	**P**	**14 21 56.4**	**-1.0**
MDJ			S	**S**	**14 27 02.6**	**+1.0**
MDJ			ScP	ScP	14 28 34.4	+1.3
MDJ			PcS	PcS	14 28 35.6	-0.4
MDJ			pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.5					
MDJ			pmax	pmax		
	comp=Z,14nm,3.4s					
MDJ			LR	LR		
	comp=N,7μm,17.3s,MS5.3					
MDJ			LR	LR		
	comp=E,1μm,19.2s,MS5.3					
MDJ			LR	LR		
	comp=Z,2μm,20.2s,MS4.8					
MDJ	**Mudanjiang**	**31.16 57**	*e*P	**P**	**14 21 57.0**	**-0.5**
	comp=Z,21nm,0.9s,mb5.0					
SVE	**Sverdlovsk**	**32.01 327**	⇑*e*P	**P**	**14 22 05.6**	**+0.9**
SVE			*es*S	**S**	**14 27 18.6**	**+4.1**
SVE			pmax	pmax		
	comp=Z,68nm,0.9s,mb5.5					
SVE			MLR	MLR		
	comp=Z,3μm,14.0s,MS5.1					
ASHO	**Ashiyiah**	**32.47 264**	P	**P**	**14 22 11.0**	**+1.7**
	SNR=5.8					
VLA	**Vladivostok**	**32.64 60**	P	**P**	**14 22 12.0**	**+1.5**
VLA			*es*S	**S**	**14 27 26.5**	**+1.7**
VLA			pmax	pmax		
	comp=Z,26nm,1.4s,mb5.0					
VLA			MLR	MLR		
	comp=Z,1μm,13.1s,MS4.7					
CLNS	**Chul'man**	**32.68 34**	*e*P	**P**	**14 22 11.1**	**+0.5**
CLNS			*e*PPP		14 23 26.7	
CLNS			*es*S	**S**	**14 27 21.3**	**-3.7**
CLNS			*e*		14 32 38.6	
CLNS			pmax	pmax		
	comp=Z,30nm,1.4s,mb5.0					
CLNS			pmax	pmax		
	comp=N,12nm,0.9s					
CLNS			pmax	pmax		
	comp=E,21nm,1.3s					
CLNS			smax			
	comp=N,167nm,12.3s					
CLNS			smax			
	comp=E,159nm,13.2s					
CLNS			MLR	MLR		
	comp=Z,1μm,10.0s,MS5.0					
CLNS			MLR	MLR		
	comp=N,290nm,9.0s					
CLNS			MLR	MLR		
	comp=E,485nm,9.0s					
ARU	**Arti**	**32.75 326**	P	**P**	**14 22 11.6**	**+0.3**
	comp=E,205nm,0.8s,mb6.1,SNR=9.4					
ARU	**Arti**	**32.75 326**	*d i*P	**P**	**14 22 11.6**	**+0.3**
ARU			*e*		14 23 19.7	
ARU			*e*PPP		14 23 31.4	
ARU			*e*		14 24 51.6	
ARU			S	**S**	**14 27 28.9**	**+2.7**
ARU			pmax	pmax		
	comp=Z,94nm,1.7s,mb5.4					
ARU			MLR	MLR		
	comp=Z,1μm,17.0s,MS4.8					
ARU	**Arti**	**32.75 326**	*e*P	**P**	**14 22 10.9**	**-0.4**
	comp=Z,135nm,1.5s,mb5.7					
KLR	**Kul'dur**	**33.51 49**	*e*P	**P**	**14 22 13.8**	**-4.2**
KLR			*e*S	**S**	**14 27 38.0**	**-0.1**
KLR			pmax	pmax		
	comp=Z,67nm,1.4s,mb5.4					
KLR			MLR	MLR		
	comp=E,3μm,10.0s					
KLR			MLR	MLR		
	comp=Z,5μm,10.0s,MS5.5					
KKM	**Kota Kinabalu**	**35.08 135**	P	**P**	**14 22 35.6**	**+3.7**
KKM	**Kota Kinabalu**	**35.08 135**	*e*P	**P**	**14 22 32.7**	**+0.7**
	comp=Z,143nm,1.2s,mb5.8					
SOKR	**Solikamsk**	**35.22 329**	*c i*P	**P**	**14 22 33.0**	**+0.3**
SOKR			pmax	pmax		
	comp=Z,240nm,4.5s					
SOKR			MLR	MLR		
	comp=Z,1μm,17.0s,MS4.8					
HABR	**Khabarovsk**	**35.49 51**	*d i*P	**P**	**14 22 33.6**	**-1.5**
HABR			*e**PP	pP	14 22 42.5	-0.7
HABR			*e**SP	sP	14 22 46.8	+0.3
HABR			*e*		14 23 52.6	
HABR			*e*		14 25 01.7	
HABR			*e*S	**S**	**14 28 06.9**	**-1.8**
HABR			*e**SS	sS	14 28 23.2	+1.2
HABR			*e*SS	SS	14 30 29.2	-14
HABR			*e*		14 32 49.9	
HABR			pmax	pmax		
	comp=E,61nm,2.4s					
HABR			pmax	pmax		
	comp=N,25nm,2.7s					
HABR			pmax	pmax		
	comp=Z,50nm,1.2s,mb5.3					
HABR			MLR	MLR		
	comp=Z,2μm,14.0s,MS5.0					
KSM	**Kuching**	**35.85 148**	*e*P	**P**	**14 22 38.1**	**-0.4**
	comp=Z,22nm,0.8s,mb5.2					
MAK	**Makhachkala**	**36.06 299**	*e*P	**P**	**14 22 39.6**	**-0.5**
MAK			*e*		14 24 02.2	
MAK			*e*		14 25 08.1	
MAK			*e*S	**S**	**14 28 16.6**	**-0.9**
MAK			pmax	pmax		
	comp=Z,304nm,1.5s,mb6.0					
MYLDM	**Lahad Datu**	**37.15 133**	P	**P**	**14 22 54.2**	**+4.5**
YAK	**Yakutsk**	**37.55 28**	*d i*P	**P**	**14 22 52.5**	**0.0**
YAK			*e**PP	pP	14 22 58.1	-2.5
YAK			*e*		14 24 21.6	
YAK			*e*S	**S**	**14 28 45.0**	**+5.2**
YAK			*e*		14 33 05.0	
YAK			pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.5					
YAK			pmax	pmax		
	comp=E,10.0nm,1.3s					
YAK			pmax	pmax		
	comp=N,4.0nm,1.4s					
YAK			pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.3					
YAK			pmax	pmax		
	comp=N,34nm,1.7s					
YAK			pmax	pmax		
	comp=E,26nm,1.6s					
YAK			smax			
	comp=N,93nm,3.0s					
YAK			smax			
	comp=E,69nm,2.9s					
YAK			MLR	MLR		
	comp=N,245nm,9.0s					
YAK			MLR	MLR		
	comp=Z,506nm,12.0s,MS4.5					
YAK			MLR	MLR		
	comp=E,343nm,13.0s					
YAK	**Yakutsk**	**37.55 28**	*e*P	**P**	**14 22 52.3**	**-0.3**
	comp=E,9.6nm,0.4s,mb4.9					
DGRG	**David-gareji**	**37.67 297**	P	**P**	**14 22 56.0**	**+2.2**
MAT	**Matsushiro**	**37.78 72**	P	**P**	**14 22 52.3**	**-2.5**
MAT			S	**S**	**14 28 43.0**	**-0.9**
MJAR	**Matsushiro Arr**	**37.78 72**	P	**P**	**14 22 53.2**	**-1.6**
	comp=E,5.7nm,1.1s,mb4.2,baz=279,slow=9.8,SNR=11					
MJAR			LR	LR	14 39 37.3	
	comp=E,918nm,19.0s,MS4.6,baz=295,slow=38					
KBD	**Kabd**	**37.95 276**	*e*P	**P**	**14 22 55.8**	**-0.5**
KBD			AMb	AMB	14 22 57.6	
	comp=Z,56nm,1.0s,mb5.2					
MIB	**Mutribah**	**38.06 277**	*e*P	**P**	**14 22 56.5**	**-0.7**
MIB			AMb	AMB	14 22 58.7	
	comp=Z,140nm,1.1s,mb5.6					
TBLG	**Delisi**	**38.13 297**	*e*P	**P**	**14 22 57.5**	**-0.2**
TBLG	**Delisi**	**38.13 297**	P	**P**	**14 22 57.5**	**-0.3**
RDF	**Al-Radifah**	**38.14 276**	*e*P	**P**	**14 22 57.8**	**-0.1**
RDF			AMb	AMB	14 23 02.2	
	comp=Z,81nm,1.2s,mb5.3					
GNI	**Garni**	**38.23 294**	*e*P	**P**	**14 23 00.1**	**+1.5**
GNI	**Garni**	**38.23 294**	*de*P	**P**	**14 23 00.9**	**+2.3**
GNI			pmax	pmax		
	comp=Z,97nm,1.2s					
GNI	**Garni**	**38.23 294**	P	**P**	**14 22 58.2**	**-0.3**
	comp=Z,129nm,1.4s,mb5.5					
NAY	**Al-Naaiem**	**38.30 277**	*e*P	**P**	**14 22 59.0**	**-0.3**
NAY			AMb	AMB	14 23 00.6	
	comp=Z,70nm,1.2s,mb5.3					
GOR	**Gori**	**38.59 297**	P	**P**	**14 22 54.7**	**-6.9**
KEH	**Kehvi**	**38.71 298**	P	**P**	**14 23 02.9**	**+0.3**
ZEI	**Tsey**	**38.71 299**	*e*P	**P**	**14 23 03.0**	**+0.4**
ZEI			pmax	pmax		
	comp=Z,38nm,1.6s,mb4.9					
CLDR	**Caldiran**	**38.97 293**	*e*P	**P**	**14 23 06.6**	**+1.8**
ONI	**Oni**	**39.05 298**	P	**P**	**14 23 07.5**	**+2.1**
VANB	**Van**	**39.44 292**	*e*P	**P**	**14 23 11.1**	**+2.4**
CUKT	**Cukurca**	**39.46 290**	*e*P	**P**	**14 23 09.1**	**+0.2**
KIV	**Kislovodsk**	**39.56 301**	P	**P**	**14 23 11.4**	**+1.7**
	comp=Z,135nm,0.9s,mb5.7,SNR=5.2					
KIV	**Kislovodsk**	**39.56 301**	*e*P	**P**	**14 23 10.3**	**+0.6**
KIV			*e*		14 24 42.4	
KIV			*e*S	**S**	**14 29 10.8**	**+0.2**
KIV			pmax	pmax		
	comp=Z,23nm,1.1s,mb4.8					
KIV			MLR	MLR		
	comp=Z,371nm,16.0s,MS4.3					
KIV	**Kislovodsk**	**39.56 301**	*e*P	**P**	**14 23 07.8**	**-1.9**
	comp=Z,16nm,0.8s,mb4.8					
KIV	**Kislovodsk**	**39.56 301**	P	**P**	**14 23 11.3**	**+1.6**
	SNR=7.8					
KIV			P		14 23 11.3	
	SNR=7.8					
AGRB	**Hanur-Agry**	**39.63 294**	*e*P	**P**	**14 23 13.2**	**+2.9**
JHJ	**Hachijo jima 2**	**39.71 76**	LR	LR	14 40 20.6	
	comp=Z,968nm,18.9s,MS4.7,baz=286,slow=37					
ASAJ	**Asahikawa**	**40.43 59**	P	**P**	**14 23 17.5**	**+0.6**
	comp=Z,26nm,1.0s,mb4.9,baz=281,slow=17,SNR=7.5					
ASAJ			LR	LR	14 40 52.3	
	comp=Z,672nm,19.3s,MS4.5,baz=281,slow=38					
ASAJ	**Asahikawa**	**40.43 59**	P	**P**	**14 23 17.5**	**+0.6**
ASAJ			pmax	pmax		
	comp=Z,26nm,1.0s					
ASAJ			MLR	MLR		
	comp=Z,672nm,19.3s					
DAV	**Davao City (W)**	**40.47 122**	LR	LR	14 42 26.6	
	comp=Z,2μm,19.0s,MS4.9,baz=14,slow=40					
YSS	**Yuzh-Sakhalins**	**40.53 55**	*e*P	**P**	**14 23 22.1**	**+4.5**
YSS			*es*S	**S**	**14 29 28.0**	**+3.1**
YSS			pmax	pmax		
	comp=Z,30nm,1.0s,mb4.9					
YSS			MLR	MLR		
	comp=Z,1μm,13.0s,MS4.8					
YSS			MLR	MLR		
	comp=E,700nm,14.0s					
VRHR	**Novokhopersk**	**40.60 312**	*e*P	**P**	**14 23 18.0**	**-0.2**
VRHR			pmax	pmax		
	comp=Z,70nm,1.1s,mb5.2					
VRHR			pmax	pmax		
	comp=N,20nm,1.0s					
VRHR			pmax	pmax		
	comp=E,30nm,0.8s					
VRHR			MLR	MLR		
	comp=Z,780nm,15.0s,MS4.7					
VRHR			MLR	MLR		

comp=N,950nm,20.0s
VRHR MLR MLR
comp=E,1µm,14.0s
EZM Erzurum 40.84 295 *e*P **P 14 23 23.1 +2.8**
ERM Erimo 40.96 62*d i*P **P 14 23 22.5 +1.2**
SOC Sochi 41.73 300 *e*P **P 14 23 25.9 -1.7**
SOC *e* 14 23 31.3
SOC *e*S **S 14 29 45.8 +2.9**
SOC *e*SSS 14 33 24.7
SOC pmax pmax
comp=Z,55nm,1.5s,mb5.0
VORD Divnogorie 42.06 311 *e*P **P 14 23 29.6 -0.5**
VORD pmax pmax
comp=Z,40nm,1.1s,mb5.0
VORD pmax pmax
comp=N,10.0nm,0.7s
VORD pmax pmax
comp=E,60nm,1.5s
VORD MLR MLR
comp=N,520nm,14.0s
VORD MLR MLR
comp=Z,1µm,14.0s,MS4.9
VORD MLR MLR
comp=E,430nm,7.0s
VSR Storozhevoye 42.16 312 *e*P **P 14 23 30.7 -0.2**
VSR pmax pmax
comp=N,6.0nm,0.5s
VSR pmax pmax
comp=Z,20nm,0.5s,mb5.0
VSR pmax pmax
comp=E,30nm,0.9s
VSR MLR MLR
comp=Z,890nm,14.0s,MS4.8
VSR MLR MLR
comp=N,450nm,10.0s,MS4.9
VSR MLR MLR
comp=E,720nm,13.0s,MS4.9
PTK Pertek 42.49 293 *e*P **P 14 23 35.2 +1.3**
TIXI Tiksi 43.24 16 *e*P **P 14 23 38.6 -0.9**
TIXI pmax pmax
comp=Z,21nm,0.9s,mb4.9
TIXI Tiksi 43.24 16 *e*P **P 14 23 38.6 -0.9**
comp=Z,21nm,0.9s,mb4.9
ANN Anapa 43.29 302 *e*P **P 14 23 36.0 -4.2**
ANN *e* 14 25 22.0
ANN pmax pmax
comp=Z,29nm,1.0s,mb5.0
CBIJ Chichi jima 43.47 84 LR LR 14 43 32.4
comp=Z,600nm,18.2s,MS4.5,baz=285,slow=39
MOS Moscow 43.56 318 *e*P **P 14 23 40.4 -1.9**
MOS *e* 14 23 46.0
MOS *e* 14 25 22.3
MOS pmax pmax
comp=Z,170nm,1.3s,mb5.6
MOS MLR MLR
comp=Z,1µm,16.0s,MS4.9
OBN Obninsk 44.08 317⇑*i*P **P 14 23 46.7 +0.3**
OBN *e* 14 25 27.9
OBN *i*S **S 14 30 26.6 +9.5**
OBN *e*SS SS 14 33 40.5 +5.9
OBN pmax pmax
comp=Z,68nm,1.3s,mb5.2
OBN MLR MLR
comp=Z,800nm,17.0s,MS4.7
OBN Obninsk 44.08 317 *e*P **P 14 23 45.3 -1.1**
comp=Z,93nm,1.4s,mb5.3
SVSK Karacayir 44.16 295 *e*P **P 14 23 49.1 +1.8**
SARI SarD1z-Kayseri 44.60 294 *e*P **P 14 23 54.9 +4.0**
KVT Kavak 44.70 297 *e*P **P 14 23 52.9 +1.2**
SIM Simferopol' 45.63 303 P **P 14 24 01.0 +2.1**
SIM *e*S **S 14 30 44.0 +4.2**
SIM pmax pmax
comp=Z,11nm,0.6s,mb5.0
SIM MLR MLR
comp=Z,730nm,21.6s,MS4.6
ASF Jabal al Asfar 45.98 285 P **P 14 24 01.3 -0.5**
comp=Z,35nm,1.1s,mb5.2,baz=315,slow=1.9,SNR=16
MERS Mersin 46.66 292 *e*P **P 14 24 06.8 -0.4**
BR131 Keskin Array S 46.74 296 *e*P **P 14 24 07.6 -0.2**
comp=Z,22nm,0.8s,mb5.1
BRTR Keskin Array B 46.74 296 P **P 14 24 08.0 +0.2**
comp=Z,32nm,0.9s,mb5.2,baz=99,slow=6.9,SNR=77
MMAI Mount Meron Ar 46.95 286 P **P 14 24 10.5 +1.0**
comp=Z,33nm,1.2s,mb5.2,baz=94,slow=15,SNR=6.9
MMAI LR LR 14 47 37.2
comp=Z,406nm,19.5s,MS4.4,baz=105,slow=41
SULT Sultanhani-AKS 47.15 294 *e*P **P 14 24 11.6 +0.6**
LVZ Lovozero 47.59 334*ce*P **P 14 24 14.2 +0.3**
LVZ pmax pmax
comp=Z,113nm,2.5s,mb5.5
SEY Seymchan 47.67 33*ce*P **P 14 24 15.3 +0.7**
JOF Joensuu 47.84 327 *ep* **P 14 24 14.9 -1.0**
comp=Z,27nm,1.0s,mb5.2
JOF Joensuu 47.84 327 *ep* **P 14 24 14.9 -1.0**
comp=Z,27nm,1.0s,mb5.2
APA Apatity 47.95 334⇓*e*P **P 14 24 17.0 +0.2**
APA pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
APA MLR MLR
comp=Z,3µm,14.0s,MS5.4
EIL Elat 48.34 282 P **P 14 24 19.9 -0.5**
comp=Z,57nm,0.8s,mb5.6,baz=68,slow=3.3,SNR=25
AKASG Malin Array Be 48.44 311 P **P 14 24 20.0 -0.7**
comp=Z,6.9nm,0.6s,mb4.8,baz=80,slow=6.3,SNR=30
AKASG LR LR 14 48 52.6
comp=Z,1µm,18.5s,MS4.9,baz=85,slow=41
AKASG Malin Array Be 48.44 311 P **P 14 24 20.0 -0.7**
AKASG LR LR 14 48 52.6
AKBB Malin Array Si 48.44 311 *e*P **P 14 24 19.9 -0.8**
KIEV Kiev 48.45 311 *e*P **P 14 24 18.9 -1.9**
KIEV pmax pmax
comp=Z,33nm,1.1s,mb5.3
KIEV Kiev 48.45 311 *e*P **P 14 24 18.9 -1.9**
comp=Z,33nm,1.1s,mb5.3
KIS Kishinev 49.06 306 *e*P **P 14 24 23.0 -2.6**
KIS LRM 14 48 00.0
comp=Z,600nm,15.0s
MNK Minsk 49.11 316 *e*P **P 14 24 23.0 -2.8**
SUTC Sutluce-Ispart 49.25 293 *e*P **P 14 24 26.7 -0.5**
TIRR Tirgusor 49.72 303⇑P **P 14 24 31.0 +0.3**
TIRR Tirgusor 49.72 303⇑*i*P **P 14 24 31.0 +0.3**
ATD Arta Tunnel 49.79 256 P **P 14 24 30.2 -1.4**
comp=Z,3.9nm,0.3s,mb4.9,baz=70,slow=12,SNR=3.5
HARR Harsova 50.02 303⇑P **P 14 24 33.1 +0.1**
HARR Harsova 50.02 303⇑*i*P **P 14 24 33.1 +0.1**
PETK Petropavlovsk- 50.04 46 P **P 14 24 33.1 +0.2**
comp=Z,8.9nm,0.9s,mb4.8,baz=258,slow=7.4,SNR=5.5
KAF Kangasniemi 50.05 326 *e*P **P 14 24 32.1 -0.8**
KAF pmax pmax
comp=Z,19nm,1.1s,mb5.0
KAF Kangasniemi 50.05 326 *ep* **P 14 24 32.1 -0.8**
comp=Z,18nm,1.1s,mb5.0,baz=94,slow=7.7
KAF Kangasniemi 50.05 326 *ep* **P 14 24 32.1 -0.8**
comp=Z,18nm,1.1s,mb5.0,baz=94,slow=7.7
FINES FINESS Array B 50.13 325 P **P 14 24 33.2 -0.3**
comp=Z,12nm,0.7s,mb5.0,baz=116,slow=8.7,SNR=16
FINES LR LR 14 47 02.5
comp=Z,1µm,18.8s,MS4.9,baz=258,slow=38
PET Petropavlovsk 50.62 46 *e*P **P 14 24 35.6 -1.7**
PET *e* 14 26 31.9
PET *e*S **S 14 31 44.7 -5.4**
PET *e*SS SS 14 35 14.8 -9.3
PET pmax pmax
comp=Z,24nm,1.3s,mb5.0
PET pmax pmax
comp=Z,100nm,11.7s
PET pmax pmax
comp=Z,100nm,10.2s
PET MLR MLR
comp=Z,600nm,17.0s,MS4.7
PET MLR MLR
comp=Z,900nm,18.0s
PET Petropavlovsk 50.62 46 *e*P **P 14 24 35.0 -2.3**
comp=Z,18nm,1.0s,mb5.0
VRI Vrincioaia 50.66 305⇓P **P 14 24 38.4 +0.6**
VRI Vrincioaia 50.66 305⇓*i*P **P 14 24 38.4 +0.6**
PLOR Plostina 50.72 305⇓P **P 14 24 39.1 +0.9**
PLOR Plostina 50.72 305⇓*i*P **P 14 24 39.0 +0.8**
KEV Kevo 50.73 336 *e*P **P 14 24 38.1 +0.2**
KEV pmax pmax
comp=Z,24nm,0.9s,mb5.1
KEV Kevo 50.73 336 *ep* **P 14 24 38.1 +0.2**
comp=Z,24nm,0.9s,mb5.1
KEV Kevo 50.73 336 *ep* **P 14 24 38.1 +0.2**
comp=Z,24nm,0.9s,mb5.1
ARCES ARCESS Array B 51.21 336 P **P 14 24 41.2 -0.3**
comp=Z,10nm,0.7s,mb4.9,baz=91,slow=6.9,SNR=43
MLR Muntele Rosu 51.27 304⇑P **P 14 24 43.1 +0.8**
MLR Muntele Rosu 51.27 304⇑*i*P **P 14 24 43.1 +0.8**
BURAR Bucovina Array 51.40 307⇓P **P 14 24 43.6 +0.3**
BURAR Bucovina Array 51.40 307⇓*i*P **P 14 24 43.6 +0.3**
BUR08 Bucovina Ar. S 51.41 307 *e*P **P 14 24 43.0 -0.4**
LVV L'vov 51.84 310 *i*P **P 14 24 45.6 -1.0**
LVV MLR MLR
comp=Z,900nm,19.0s,MS4.8
KWP Kalwaria Pacla 52.72 310 *e*P **P 14 24 53.5 +0.4**
KWP Kalwaria Pacla 52.72 310 *e*P **P 14 24 53.3 +0.2**
KWP pmax pmax
comp=Z,37nm,1.0s,mb5.3
KWP Kalwaria Pacla 52.72 310 *e*P **P 14 24 53.3 +0.2**
comp=Z,37nm,1.0s,mb5.3
KWP Kalwaria Pacla 52.72 310⇓*i*P **P 14 24 53.4 +0.3**
KOLS Kolonicke sedl 53.12 309 *e*P **P 14 24 56.4 +0.4**
KOLS pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
KOLS MLR MLR
comp=Z,700nm,21.9s,MS4.7
KOLS Kolonicke sedl 53.12 309 *e*P **P 14 24 56.4 +0.4**
comp=Z,8.8nm,1.2s,mb4.6
KOLS *e* 14 36 50.6
KOLS LR LR
comp=Z,700nm,21.9s,MS4.7
KOLS Kolonicke sedl 53.12 309 *e*P **P 14 24 56.4 +0.4**
KOLS *e* 14 36 50.6
UZH Uzhgorod 53.16 309⇑*i*P **P 14 24 56.0 -0.3**
UZH *e*S **S 14 32 21.0 -4.2**
UZH MLR MLR
comp=N,500nm,16.0s,MS4.9
UZH MLR MLR
comp=E,700nm,16.0s,MS4.9
UZH MLR MLR
comp=Z,400nm,16.0s,MS4.6
DRGR 53.23 307⇓P **P 14 24 57.8 +0.9**
DRGR 53.23 307⇓*i*P **P 14 24 57.8 +0.9**
TRO Tromso 53.51 335 *e*P **P 14 24 59.4 +0.7**
TRO AMS AMS 14 50 16.3
comp=Z,2µm,15.5s,MS5.2
CRVS Cervenica-Dubn 53.65 309 *e*P **P 14 25 00.2 +0.2**
CRVS pmax pmax
comp=Z,7.0nm,1.3s,mb4.4
CRVS MLR MLR
comp=Z,700nm,19.2s,MS4.7
CRVS Cervenica-Dubn 53.65 309 *e*P **P 14 25 00.2 +0.2**
comp=Z,7.2nm,1.3s,mb4.4
CRVS *e* 14 37 04.7
CRVS LR LR
comp=Z,700nm,19.2s,MS4.7
CRVS Cervenica-Dubn 53.65 309 *e*P **P 14 25 00.2 +0.2**
CRVS *e* 14 37 04.7
STHS Stebnicka Huta 53.70 310 *e*P **P 14 25 00.6 +0.3**
STHS pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
STHS Stebnicka Huta 53.70 310 *e*P **P 14 25 00.6 +0.3**
comp=Z,6.6nm,0.9s,mb4.6
STHS Stebnicka Huta 53.70 310 *e*P **P 14 25 00.6 +0.3**
BILL Bilibino 53.88 27⇓*i*P **P 14 25 02.0 +0.7**
BILL pmax pmax
comp=Z,43nm,1.2s,mb5.2
BILL MLR MLR
comp=Z,400nm,13.0s,MS4.7
BILL Bilibino 53.88 27 *e*P **P 14 25 01.6 +0.3**
comp=Z,25nm,0.9s,mb5.2
NIE Niedzica 54.29 310 *e*P **P 14 25 05.8 +1.2**
KECS Kecovo 54.37 309 *e*P **P 14 25 05.7 +0.5**
KECS pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
KECS Kecovo 54.37 309 *e*P **P 14 25 05.7 +0.5**
comp=Z,7.5nm,1.2s,mb4.5
KECS *e*PP pP 14 25 09.7 -3.9
KECS Kecovo 54.37 309 *e*P **P 14 25 05.7 +0.5**
KECS *e*pP pP 14 25 09.7 -3.9
OJC Ojcow 54.47 311 *e*P **P 14 25 05.4 -0.5**
OJC *e*S **S 14 32 38.4 -4.5**
OJC L 14 49 23.9
comp=Z,0.7nm,18.7s
PSZ Piszkesteto 54.87 308⇓*e*P **P 14 25 08.9 0.0**
GVD Gavdhos 55.36 292 *e*P **P 14 25 11.2 -1.5**
comp=Z,122nm,0.9s,mb5.9
VYHS Vyhne 55.44 309 *e*P **P 14 25 13.7 +0.8**
VYHS *e*S **S 14 32 59.5 +3.6**
VYHS pmax pmax
comp=Z,22nm,1.6s,mb4.9
VYHS MLR MLR
comp=Z,500nm,19.4s,MS4.6
VYHS Vyhne 55.44 309 *e*P **P 14 25 13.7 +0.8**
comp=Z,22nm,1.6s,mb4.9
VYHS *e*PP pP 14 25 18.1 -3.2
VYHS *e*S **S 14 32 59.5 +3.6**
VYHS *e* 14 37 36.0
VYHS LR LR
comp=Z,500nm,19.4s,MS4.6
VYHS Vyhne 55.44 309 *e*P **P 14 25 13.7 +0.8**
VYHS *e*pP pP 14 25 18.1 -3.2
VYHS *e*S **S 14 32 59.5 +3.6**
VYHS *e* 14 37 36.0
BUD Budapest 55.54 308⇓*e*P **P 14 25 13.9 +0.2**
OKC Ostrava-Krasne 55.59 311 *e*P **P 14 25 14.5 +0.5**
OKC MLR MLR
comp=Z,600nm,13.4s,MS4.8
OKC Ostrava-Krasne 55.59 311 *e*P **P 14 25 14.5 +0.5**
OKC AMS AMS 14 50 50.0
comp=Z,600nm,13.4s
KBS Kingsbay 55.85 347 *e*P **P 14 25 16.3 +0.8**
KBS AMb AMB 14 25 26.4
comp=Z,26nm,1.6s,mb5.0
KBS AMS AMS 14 52 58.1
comp=Z,528nm,17.7s,MS4.7
KBS Kingsbay 55.85 347 *e*P **P 14 25 16.3 +0.8**
comp=Z,26nm,1.6s,mb5.0
KBS LR LR
comp=Z,530nm,17.7s,MS4.7
MORC Moravsky Berou 55.98 311 *e*P **P 14 25 16.7 -0.1**
MORC pmax pmax
comp=Z,31nm,1.4s,mb5.2
MORC Moravsky Berou 55.98 311 *e*P **P 14 25 16.7 -0.1**
comp=Z,31nm,1.4s,mb5.2
MORC Moravsky Berou 55.98 311⇑*i*P **P 14 25 17.0 +0.2**
PKSM Moragy 56.10 307⇑P **P 14 25 17.3 -0.4**
PKSM Moragy 56.10 307⇑*i*P **P 14 25 17.3 -0.4**
BSD Bornholm Skovb 56.46 318 *i*P **P 14 25 24.4 +4.2**
BSD
comp=Z,680nm,18.0s
KSP Ksiaz 56.53 313 *e*P **P 14 25 21.5 +0.8**
DPC Dobruska-Polom 56.62 312 *e*P **P 14 25 21.9 +0.5**
DPC MLR MLR
comp=Z,600nm,15.8s,MS4.8
DPC Dobruska-Polom 56.62 312 *e*P **P 14 25 21.9 +0.5**
DPC AMS AMS 14 51 00.0
comp=Z,600nm,15.8s
VRAC Vranov 56.69 311⇓P **P 14 25 22.6 +0.7**
VRAC Vranov 56.69 311⇓*i*P **P 14 25 22.6 +0.7**
UPC Upice 56.78 312 *e*P **P 14 25 22.9 +0.4**
UPC Upice 56.78 312 *e*P **P 14 25 22.9 +0.4**
SOP Sopron 57.11 309⇓*e*P **P 14 25 24.9 0.0**
NB2 NORSAR Subarra 57.31 325 P **P 14 25 25.4 -0.7**
comp=Z,25nm,1.0s,mb5.2,baz=80,slow=7.4
NOA NORSAR Array B 57.31 325 P **P 14 25 25.7 -0.4**
comp=Z,10.0nm,0.7s,mb5.0,baz=80,slow=7.1,SNR=24
NOA LR LR 14 52 10.7
comp=Z,1µm,18.3s,MS5.0,baz=80,slow=38
NOA NORSAR Array B 57.31 325 P **P 14 25 25.7 -0.4**
NOA LR LR 14 52 10.7
TREC Trest 57.40 311 *e*P **P 14 25 27.3 +0.4**
TREC MLR MLR
comp=Z,800nm,13.7s,MS5.0
TREC Trest 57.40 311 *e*P **P 14 25 27.3 +0.4**
TREC AMS AMS 14 54 00.0
comp=Z,800nm,13.7s
CONA Conrad Observa 57.50 309⇓*i*P **P 14 25 28.1 +0.4**
comp=Z,31nm,1.2s,mb5.2,SNR=14
CSNA Conrad Observa 57.51 309⇓*i*P **P 14 25 28.0 +0.4**
comp=Z,28nm,1.2s,mb5.2
PVCC Panska Ves 57.67 312 *e*P **P 14 25 29.1 +0.3**
PVCC Panska Ves 57.67 312 *e*P **P 14 25 29.1 +0.3**
COP Copenhagen 57.73 319 *i*P **P 14 25 30.5 +1.4**
COP
comp=Z,400nm,18.0s
PRU Pruhonice 57.82 312 *e*P **P 14 25 30.5 +0.6**
PRU MLR MLR
comp=Z,600nm,17.3s,MS4.8
PRU Pruhonice 57.82 312 *e*P **P 14 25 30.5 +0.6**
PRU AMS AMS 14 55 10.0
comp=Z,600nm,17.3s
ARSA Arzberg 57.90 309⇓*i*P **P 14 25 30.2 -0.3**
comp=Z,17nm,1.4s,mb4.9
BRG Berggiesshubel 57.97 313 *e*P **P 14 25 31.4 +0.5**
comp=Z,29nm,1.3s,mb5.1
BRG
comp=Z,1µm,14.7s
BRG
comp=N,2µm,20.6s
BRG
comp=E,568nm,20.6s
KONO Kongsberg 58.37 324 AMS AMS 14 52 17.0
comp=Z,2µm,16.7s,MS5.3
SOKA Soboth 58.38 308⇓*i*P **P 14 25 33.9 +0.1**
comp=Z,36nm,1.6s,mb5.2
CLL Collm 58.44 314 *e*P **P 14 25 34.0 -0.1**
comp=Z,24nm,1.4s,mb5.0
CLL Collm 58.44 314⇓*i*P **P 14 25 34.0 -0.1**
CLL pmax pmax
comp=Z,24nm,1.4s,mb5.0
CLL MLR MLR
comp=Z,400nm,20.0s,MS4.5
CLL Collm 58.44 314⇓*i*P **P 14 25 34.0 -0.1**
comp=Z,24nm,1.4s,mb5.0
CLL *i* 14 25 38.0
CLL LR LR
comp=Z,400nm,20.0s,MS4.5
CLL Collm 58.44 314⇓*i*P **P 14 25 34.0 -0.1**
comp=Z,24nm,1.4s,mb5.0
CLL *i*sP sP 14 25 38.0 -7.8
CLL *e*PP PP 14 27 48.0 +4.7
CLL *e*S **S 14 33 42.0 +6.6**
CLL *e*SS SS 14 37 30.0 +2.6
CLL *e* 14 38 24.0
CLL LV 14 54 00.0
comp=Z,400nm,20.0s
MOA Molln 58.56 310⇓*i*P **P 14 25 34.9 -0.2**
comp=Z,13nm,1.1s,mb4.9
GEC2 GERESS Array S 58.65 311 *e*P **P 14 25 36.0 +0.3**
comp=Z,59nm,1.6s,mb5.4
GEC2 GERESS Array S 58.65 311 *e*P **P 14 25 36.0 +0.3**
GEC2 pmax pmax
comp=Z,59nm,1.6s,mb5.4
GERES GERESS Array B 58.65 311 P **P 14 25 36.0 +0.3**
comp=Z,6.0nm,0.9s,mb4.6,baz=75,slow=5.8,SNR=39
GERES LR LR 14 55 34.3
comp=Z,923nm,18.6s,MS4.9,baz=76,slow=41
KHC Kasperske Hory 58.65 311 *e*P **P 14 25 35.7 0.0**
KHC pmax pmax
comp=Z,58nm,2.0s,mb5.3
KHC Kasperske Hory 58.65 311 *e*P **P 14 25 35.7 0.0**
comp=Z,58nm,2.0s,mb5.3
KHC Kasperske Hory 58.65 311 *e*P **P 14 25 35.8 +0.1**
KHC AMS AMS 14 54 50.0
comp=Z,900nm,13.0s
OBKA Obir 58.75 308⇓*i*P **P 14 25 36.3 -0.1**
comp=Z,11nm,1.1s,mb4.8,SNR=6.3
TANN Tannenbergstha 59.00 313 *e*P **P 14 25 38.3 +0.2**
comp=Z,40nm,1.7s,mb5.2
NKC Novy Kostel 59.06 313 *e*P **P 14 25 38.7 +0.2**
NKC MLR MLR
comp=Z,1µm,13.9s,MS5.1
NKC Novy Kostel 59.06 313 *e*P **P 14 25 38.7 +0.2**
NKC AMS AMS 14 52 40.0
comp=Z,1µm,13.9s
WET Wettzell 59.09 311 *e*P **P 14 25 39.1 +0.4**
comp=Z,42nm,1.6s,mb5.2
WET Wettzell 59.09 311 *e*P **P 14 25 39.1 +0.4**
WET pmax pmax
comp=Z,42nm,1.6s,mb5.2
NVLJ Novalja 59.10 306 *e*Pg **P 14 25 30.4 -8.5**
NVLJ Sg 14 25 36.1
MYKA Terra Mystica 59.31 308⇓*i*P **P 14 25 39.7 -0.7**
comp=Z,5.8nm,0.9s,mb4.6
ROTZ Rotzenmuhle 59.34 312 *e*P **P 14 25 41.5 +1.1**
comp=Z,53nm,1.4s,mb5.4
BSEG Bad Segeberg 59.34 317 *e*P **P 14 25 41.0 +0.6**
comp=Z,39nm,1.1s,mb5.3
KBA Koelnbreinsper 59.38 309⇓*i*P **P 14 25 40.5 -0.3**
comp=Z,13nm,0.9s,mb4.9
MOX Moxa 59.46 313 *e*P **P 14 25 41.6 +0.4**
comp=Z,28nm,1.6s,mb5.0
MOX
comp=Z,500nm,15.0s
MOX Moxa 59.46 313 *e*P **P 14 25 41.5 +0.3**
comp=Z,27nm,1.5s,mb5.1
MOX Moxa 59.46 313 *e*P **P 14 25 41.6 +0.4**
MOX pmax pmax
comp=Z,28nm,1.6s,mb5.0
MOX MLR MLR
comp=Z,500nm,15.0s,MS4.8
TIP Timpagrande 59.48 299 *e*P **P 14 25 40.6 -1.0**
comp=Z,24nm,1.4s,mb5.0
TRI Trieste 59.51 307 *e*P **P 14 25 40.9 -0.8**
TRI pmax pmax
comp=Z,36nm,0.9s,mb5.4
TRI Trieste 59.51 307 *e*P **P 14 25 40.9 -0.8**
comp=Z,36nm,0.9s,mb5.4
RJOB Jochberg 59.54 310 *e*P **P 14 25 42.4 +0.5**
comp=Z,83nm,2.1s,mb5.4
KAKA Kakadu 59.68 133 *e*P **P 14 25 43.3 +0.1**
comp=Z,20nm,0.9s,mb5.1
NRDL Niedersach Rie 59.85 316 *e*P **P 14 25 44.1 +0.2**
comp=Z,77nm,1.5s,mb5.5
SMY Shemya 59.86 44 *e*P **P 14 25 43.3 -0.7**
SMY pmax pmax
comp=Z,122nm,1.1s,mb5.8
SMY Shemya 59.86 44 *e*P **P 14 25 43.3 -0.7**
comp=Z,122nm,1.1s,mb5.8
CLZ Clausthal 59.87 315 *e*P **P 14 25 44.2 +0.1**
comp=Z,55nm,1.4s,mb5.4
CLZ Clausthal 59.87 315 *e*P **P 14 25 44.2 +0.1**
CLZ pmax pmax
comp=Z,55nm,1.4s,mb5.4
GRA1 Grafenberg Arr 59.97 312 *e*P **P 14 25 45.2 +0.4**
comp=Z,87nm,1.6s,mb5.5
GRA1 *e*PP PP 14 27 56.9 0.0
GRA1 LR LR
comp=Z,600nm,20.8s,MS4.7
GRF Grafenberg Arr 59.97 312 *e*P **P 14 25 45.2 +0.4**
comp=Z,87nm,1.6s,mb5.5
GRF *e*PP PP 14 27 56.9 0.0
GRF *e*L 14 53 52.5
comp=Z,565nm,20.8s
GRF Grafenberg Arr 59.97 312 *e*P **P 14 25 45.2 +0.4**
GRF *e* 14 27 56.9
GRF pmax pmax
comp=Z,87nm,1.6s,mb5.5
GRF MLR MLR
comp=Z,600nm,20.8s,MS4.7
GRF Grafenberg Arr 59.97 312 *e*P **P 14 25 45.2 +0.4**
GRF *e* 14 27 56.9
GRF pmax pmax
comp=Z,87nm,1.6s,mb5.5
GRF MLR MLR
comp=Z,600nm,20.8s,MS4.7
MBWA Marble Bar 60.10 150 *e*P **P 14 25 45.5 -0.4**
comp=Z,97nm,1.1s,mb5.8
FITZ Fitzroy Crossi 60.20 143 *e*P **P 14 25 45.4 -1.3**
comp=Z,12nm,0.8s,mb5.0
FITZ Fitzroy Crossi 60.20 143 P **P 14 25 45.9 -0.8**
comp=Z,7.8nm,0.8s,mb4.8,baz=333,slow=5.7,SNR=13
FITZ LR LR 14 55 06.3
comp=Z,226nm,19.1s,MS4.3,baz=323,slow=39
FITZ Fitzroy Crossi 60.20 143 *e*P **P 14 25 44.9 -1.8**
comp=Z,20nm,1.2s,mb5.0
FUR Furstenfeldbru 60.39 311 *e*P **P 14 25 48.4 +0.7**
comp=Z,122nm,1.6s,mb5.7
FUR Furstenfeldbru 60.39 311 *e*P **P 14 25 48.4 +0.7**
FUR pmax pmax
comp=Z,122nm,1.6s,mb5.7
WTTA Wattenberg 60.43 309⇓*i*P **P 14 25 47.4 -0.6**
comp=Z,30nm,1.5s,mb5.1
NRCA Norcia 60.86 304 P **P 14 25 50.9 -0.1**
comp=Z,13nm,1.1s,mb5.0
RETA Reutte 60.93 310⇓*i*P **P 14 25 51.0 -0.3**
comp=Z,22nm,1.1s,mb5.2,SNR=8.5
FETA Feichten 61.10 309⇓*i*P **P 14 25 52.1 -0.4**
comp=Z,20nm,1.4s,mb5.1,SNR=7.2
MURB Monte Urbino 61.13 305 P **P 14 25 53.3 +0.5**
BADI Badiali 61.24 305 P **P 14 25 53.8 +0.3**
IBBN Ibbenburen 61.28 316 *e*P **P 14 25 54.1 +0.4**
comp=Z,37nm,1.4s,mb5.3
SFI Santa Sofia 61.38 306 P **P 14 25 55.0 +0.5**
TOD Tromm 61.49 313 *e*P **P 14 25 55.0 -0.2**
STU Stuttgart 61.52 312 *e*P **P 14 25 55.9 +0.6**

comp=Z,32nm,1.0s,mb5.4
TNS Taunus Mts 61.52 313 *e*P **P 14 25 55.5 +0.2**
comp=Z,38nm,1.4s,mb5.3
TNS Taunus Mts 61.52 313 *e*P **P 14 25 55.5 +0.2**
TNS pmax pmax
comp=Z,38nm,1.4s,mb5.3
DAVA Damuels 61.56 310 ||*i*P **P 14 25 55.1 -0.5**
comp=Z,16nm,1.2s,mb5.0,SNR=5.6
KMBO Kilima Mbogo 61.75 248 P **P 14 25 56.8 -0.6**
comp=Z,6.3nm,1.1s,mb4.7,baz=32,slow=10,SNR=8.6
KMBO Kilima Mbogo 61.75 248 P **P 14 25 56.8 -0.6**
KMBO pmax pmax
comp=Z,6.0nm,1.1s
KMBO Kilima Mbogo 61.75 248 *e*P **P 14 25 57.1 -0.3**
comp=Z,62nm,1.8s,mb5.4
BUG Bochum--Univer 61.84 315 *e*P **P 14 25 57.5 +0.1**
comp=Z,35nm,1.3s,mb5.3
BFO Black Forest 62.20 311 P **P 14 26 00.6 +0.6**
comp=Z,82nm,1.4s,mb5.7,SNR=5.9
BFO Black Forest 62.20 311 *e*P **P 14 26 00.1 +0.1**
comp=Z,43nm,1.5s,mb5.4
BFO Black Forest 62.20 311 *e*P **P 14 26 00.1 +0.1**
BFO pmax pmax
comp=Z,43nm,1.5s,mb5.4
LANF Langenberg 62.32 312 *e*P **P 14 26 00.8 +0.1**
DAG Danmarks Havn 62.56 346 ||*i*P **P 14 26 01.0 -0.9**
comp=Z,4.2nm,0.5s,mb4.8
FELD Feldberg im Sc 62.56 311 *e*P **P 14 26 02.3 -0.1**
VAI Varese 62.76 309 P **P 14 26 02.1 -1.6**
VAI pmax pmax
comp=Z,105nm,1.7s,mb5.7
VAI Varese 62.76 309 P **P 14 26 02.1 -1.6**
comp=Z,105nm,1.7s,mb5.7
CDF Champ du Feu 62.84 312 *e*P **P 14 26 03.7 -0.5**
comp=Z,117nm,1.6s,mb5.5
CDF Champ du Feu 62.84 312 *e*P **P 14 26 03.7 -0.5**
CDF pmax pmax
comp=Z,58nm,1.6s,mb5.5
CDF Champ du Feu 62.84 312 *e*P **P 14 26 03.7 -0.5**
comp=Z,58nm,1.6s,mb5.5
MEM Membach 62.87 314 P **P 14 26 04.9 +0.5**
comp=Z,13nm,1.9s,mb4.7
ECH Echery 62.98 312 *e*P **P 14 26 04.8 -0.3**
BEBN Eben Émael 63.00 315 P **P 14 26 04.7 -0.5**
WLF Walferdange 63.10 313 P **P 14 26 06.6 +0.7**
comp=Z,43nm,1.7s,mb5.3
WLF AP pP 14 26 09.1 -5.3
WLF Walferdange 63.10 313 *e*P **P 14 26 07.1 +1.2**
comp=Z,100nm,1.5s,mb5.7
WLF Walferdange 63.10 313 *e*P **P 14 26 06.5 +0.6**
WLF pmax pmax
comp=Z,39nm,1.1s,mb5.5
WLF Walferdange 63.10 313 *e*P **P 14 26 06.5 +0.6**
comp=Z,39nm,1.1s,mb5.5
MOF Molkenrain 63.12 311 *e*P **P 14 26 05.7 -0.4**
HINF Hinteralfeld 63.31 311 *e*P **P 14 26 06.8 -0.5**
comp=Z,140nm,1.8s,mb5.5
HINF Hinteralfeld 63.31 311 *e*P **P 14 26 06.8 -0.5**
HINF pmax pmax
comp=Z,70nm,1.8s,mb5.5
HINF Hinteralfeld 63.31 311 *e*P **P 14 26 06.8 -0.5**
comp=Z,70nm,1.8s,mb5.5
BCLA Clavier 63.35 314 P **P 14 26 07.5 -0.1**
BCLA AP pP 14 26 10.4 -5.6
LOMF Lomont 63.49 311 *e*P **P 14 26 08.2 -0.3**
HAU Haudompre 63.56 312 *e*P **P 14 26 08.4 -0.6**
comp=Z,66nm,1.6s,mb5.1
HAU *e*MLR MLR
comp=Z,726nm,19.8s,MS4.6
HAU Haudompre 63.56 312 *e*P **P 14 26 08.4 -0.6**
HAU pmax pmax
comp=Z,33nm,1.6s,mb5.1
HAU MLR MLR
comp=Z,730nm,19.8s,MS4.9
HAU Haudompre 63.56 312 *e*P **P 14 26 08.4 -0.6**
comp=Z,33nm,1.6s,mb5.1
HAU LR LR
comp=Z,730nm,19.8s,MS4.9
THEF They Montfort 63.71 312 *e*P **P 14 26 09.5 -0.5**
GIVF Givet 63.75 314 *e*P **P 14 26 10.0 -0.2**
comp=Z,37nm,1.1s,mb5.0
GIVF Givet 63.75 314 *e*P **P 14 26 10.0 -0.2**
GIVF pmax pmax
comp=Z,19nm,1.1s,mb5.0
GIVF Givet 63.75 314 *e*P **P 14 26 10.0 -0.2**
comp=Z,18nm,1.1s,mb5.0
PGF Pioggiola 63.80 305 *e*P **P 14 26 10.1 -0.6**
comp=Z,45nm,1.2s,mb5.1
PGF Pioggiola 63.80 305 *e*P **P 14 26 10.1 -0.6**
PGF pmax pmax
comp=Z,23nm,1.2s,mb5.1
PGF Pioggiola 63.80 305 *e*P **P 14 26 10.1 -0.6**
comp=Z,23nm,1.2s,mb5.1
DOU Dourbes 63.89 314 P **P 14 26 11.1 -0.1**
comp=Z,12nm,1.8s,mb4.6
SNF Seneffe 63.93 315 P **P 14 26 11.3 0.0**
SNF XP sP 14 26 15.3 -7.8
LSD Lago del Serru 63.98 309 P **P 14 26 11.9 +0.1**
BAIF Baives 64.14 314 *e*P **P 14 26 12.6 -0.2**
MEZF Maizieres J'vi 64.19 312 *e*P **P 14 26 13.1 0.0**
LPG La Plagne 64.21 309 *e*P **P 14 26 13.7 +0.4**
comp=Z,184nm,1.5s,mb5.6
LPG La Plagne 64.21 309 *e*P **P 14 26 13.7 +0.4**
LPG pmax pmax
comp=Z,92nm,1.5s,mb5.6
LPG La Plagne 64.21 309 *e*P **P 14 26 13.7 +0.4**
comp=Z,92nm,1.5s,mb5.6
LPL La Plagne 64.22 309 *e*P **P 14 26 13.6 +0.2**
comp=Z,138nm,1.4s,mb5.5
LPL La Plagne 64.22 309 *e*P **P 14 26 13.6 +0.2**
LPL pmax pmax
comp=Z,69nm,1.4s,mb5.5
LPL La Plagne 64.22 309 *e*P **P 14 26 13.6 +0.2**
comp=Z,69nm,1.4s,mb5.5
CABF La Chapelle 64.23 310 *e*P **P 14 26 12.9 -0.5**
SAOF Saorge 64.24 307 *e*P **P 14 26 13.0 -0.6**
AUTN L'Aution 64.33 307 *e*P **P 14 26 13.9 -0.2**
SBF Sospel 64.37 307 *e*P **P 14 26 13.9 -0.5**
comp=Z,116nm,1.3s,mb5.5
SBF Sospel 64.37 307 *e*P **P 14 26 13.9 -0.5**
SBF pmax pmax
comp=Z,58nm,1.3s,mb5.5
SBF Sospel 64.37 307 *e*P **P 14 26 13.9 -0.5**
comp=Z,58nm,1.3s,mb5.5
LUCF Luceram 64.42 307 *e*P **P 14 26 13.7 -1.0**
BNI Bardonecchia 64.43 308 *e*P **P 14 26 14.4 -0.3**
BNI pmax pmax
comp=Z,36nm,1.4s,mb5.2
BNI Bardonecchia 64.43 308 *e*P **P 14 26 14.4 -0.4**
comp=Z,36nm,1.4s,mb5.2
TOUF Mont Tournerai 64.44 307 *e*P **P 14 26 14.5 -0.3**
MBDF Montbardon 64.49 308 *e*P **P 14 26 15.5 +0.4**
ORIF Oris-en-Rattie 65.00 309 *e*P **P 14 26 17.8 -0.7**
ORIF *e*MLR MLR
comp=Z,1µm,22.2s,MS4.7
FRF La Foret Royal 65.02 307 *e*P **P 14 26 17.9 -0.7**
comp=Z,130nm,1.7s,mb5.4
FRF La Foret Royal 65.02 307 *e*P **P 14 26 17.9 -0.7**
FRF pmax pmax
comp=Z,65nm,1.7s,mb5.4
FRF La Foret Royal 65.02 307 *e*P **P 14 26 17.9 -0.7**
comp=Z,65nm,1.7s,mb5.4
LMR La Mourre 65.19 307 *e*P **P 14 26 19.1 -0.7**
comp=Z,129nm,1.5s,mb5.4
LMR La Mourre 65.19 307 *e*P **P 14 26 19.1 -0.7**
LMR pmax pmax
comp=Z,64nm,1.5s,mb5.4
LMR La Mourre 65.19 307 *e*P **P 14 26 19.1 -0.7**
comp=Z,64nm,1.5s,mb5.4
LOR Lormes 65.40 312 *e*P **P 14 26 20.0 -1.0**
comp=Z,49nm,1.4s,mb5.0
LOR *e*MLR MLR
comp=Z,645nm,20.5s,MS4.5
LOR Lormes 65.40 312 *e*P **P 14 26 20.0 -1.0**
LOR pmax pmax
comp=Z,25nm,1.4s,mb5.0
LOR MLR MLR
comp=Z,650nm,20.5s,MS4.8
LOR Lormes 65.40 312 *e*P **P 14 26 20.0 -1.0**
comp=Z,25nm,1.4s,mb5.0
LOR LR LR
comp=Z,650nm,20.5s,MS4.8
OCF Saint Nazaire 65.51 308 *e*P **P 14 26 22.2 +0.4**
OG26 St.-Nazaire-De 65.51 308 *e*P **P 14 26 22.2 +0.4**
SMRF Simiane la Rot 65.57 308 *e*P **P 14 26 22.1 -0.1**
comp=Z,112nm,1.6s,mb5.3
SMRF Simiane la Rot 65.57 308 *e*P **P 14 26 22.1 -0.1**
comp=Z,112nm,1.6s,mb5.6
SMF Signal de Mont 65.65 311 *e*P **P 14 26 21.9 -0.8**
comp=Z,148nm,1.5s,mb5.5
SMF Signal de Mont 65.65 311 *e*P **P 14 26 21.9 -0.8**
SMF pmax pmax
comp=Z,74nm,1.5s,mb5.5
SMF Signal de Mont 65.65 311 *e*P **P 14 26 21.9 -0.8**
comp=Z,74nm,1.5s,mb5.5
SSF Saint Saulge 65.70 311 *e*P **P 14 26 22.2 -0.8**
comp=Z,63nm,1.4s,mb5.2
SSF Saint Saulge 65.70 311 *e*P **P 14 26 22.2 -0.8**
SSF pmax pmax
comp=Z,31nm,1.4s,mb5.2
SSF Saint Saulge 65.70 311 *e*P **P 14 26 22.2 -0.8**
comp=Z,31nm,1.4s,mb5.2
VIVF Saint-Julien-l 65.82 309 *e*P **P 14 26 23.3 -0.5**
comp=Z,134nm,1.5s,mb5.4
VIVF Saint-Julien-l 65.82 309 *e*P **P 14 26 23.3 -0.5**
VIVF pmax pmax
comp=Z,67nm,1.5s,mb5.5
VIVF Saint-Julien-l 65.82 309 *e*P **P 14 26 23.3 -0.5**
comp=Z,67nm,1.5s,mb5.5
AVF Avril sur Loir 65.90 311 *e*P **P 14 26 23.6 -0.7**
comp=Z,154nm,1.6s,mb5.5
AVF Avril sur Loir 65.90 311 *e*P **P 14 26 23.6 -0.7**
AVF pmax pmax
comp=Z,77nm,1.6s,mb5.5
AVF Avril sur Loir 65.90 311 *e*P **P 14 26 23.6 -0.7**
comp=Z,77nm,1.6s,mb5.5
PLDF La Plantade 66.06 310 *e*P **P 14 26 25.2 -0.1**
KEST Kesra 66.23 298 P **P 14 26 26.3 -0.3**
comp=Z,7.8nm,1.1s,mb4.7,baz=66,slow=2.4,SNR=8.1
KEST LR LR 15 02 15.0
comp=Z,95nm,18.3s,MS4.0,baz=337,slow=42
ESK Eskdalemuir 66.28 322 *i* P **P 14 26 27.3 +0.8**
BGF Bois d'Agland 66.32 311 *e*P **P 14 26 26.3 -0.6**
AGO Saint Agoulin 66.34 311 *e*P **P 14 26 27.1 0.0**
WRAB Tennant Creek 66.44 136 P **P 14 26 27.9 -0.1**
comp=Z,458nm,1.1s,mb6.4,SNR=20
WRAB Tennant Creek 66.44 136 *e*P **P 14 26 27.7 -0.3**
WRAB pmax pmax
comp=Z,105nm,1.1s,mb5.8
WRAB Tennant Creek 66.44 136 *e*P **P 14 26 27.7 -0.3**
comp=Z,105nm,1.1s,mb5.8
WRA Warramunga Arr 66.44 136 P **P 14 26 27.6 -0.4**
comp=Z,55nm,1.0s,mb5.5,baz=330,slow=7.2,SNR=45
PYM Petit Puy Mans 66.54 310 *e*P **P 14 26 28.7 +0.3**
SCO Scoresbysund 66.58 340 *i* P **P 14 26 29.0 +0.8**
SCO
comp=Z,290nm,21.0s
LBL Lubilhac 66.59 310 *e*P **P 14 26 28.6 -0.1**
LASF Ste Croix 66.67 308 *e*P **P 14 26 29.1 -0.1**
comp=Z,140nm,1.5s,mb5.5
TCF Toulx Ste Croi 66.83 311 *e*P **P 14 26 30.0 -0.2**
comp=Z,171nm,1.5s,mb5.6
TCF Toulx Ste Croi 66.83 311 *e*P **P 14 26 30.0 -0.2**
TCF pmax pmax
comp=Z,86nm,1.5s,mb5.6
TCF Toulx Ste Croi 66.83 311 *e*P **P 14 26 30.0 -0.2**
comp=Z,86nm,1.5s,mb5.6
OPO Ambohidratompo 66.90 227 P **P 14 26 30.8 -0.2**
comp=Z,7.7nm,0.9s,mb4.7,baz=40,slow=6.8,SNR=4.5
LDF La Druitiere 67.32 314 *e*P **P 14 26 32.4 -0.9**
comp=Z,79nm,1.3s,mb5.3
LDF La Druitiere 67.32 314 *e*P **P 14 26 32.4 -0.9**
LDF pmax pmax
comp=Z,40nm,1.3s,mb5.3
LDF La Druitiere 67.32 314 *e*P **P 14 26 32.4 -0.9**
comp=Z,40nm,1.3s,mb5.3
FLN La Foliniere 67.47 314 *e*P **P 14 26 33.3 -0.9**
FLN *e*MLR MLR
comp=Z,875nm,20.2s,MS4.7
FLN La Foliniere 67.47 314 *e*P **P 14 26 33.3 -0.9**
FLN LR LR
comp=Z,880nm,20.3s,MS5.0
CAF Calviac 67.48 310 *e*P **P 14 26 34.4 0.0**
comp=Z,77nm,1.4s,mb5.2
CAF Calviac 67.48 310 *e*P **P 14 26 34.4 0.0**
CAF pmax pmax
comp=Z,38nm,1.4s,mb5.2
CAF Calviac 67.48 310 *e*P **P 14 26 34.4 0.0**
comp=Z,38nm,1.4s,mb5.2
RJF Les Rejaudoux 67.68 310 *e*P **P 14 26 35.8 +0.2**
comp=Z,186nm,1.6s,mb5.6
RJF *e*MLR MLR
comp=Z,497nm,17.2s,MS4.5
RJF Les Rejaudoux 67.68 310 *e*P **P 14 26 35.8 +0.2**
RJF pmax pmax
comp=Z,93nm,1.6s,mb5.6
RJF MLR MLR
comp=Z,500nm,17.3s,MS4.8
RJF Les Rejaudoux 67.68 310 *e*P **P 14 26 35.8 +0.2**
comp=Z,93nm,1.6s,mb5.6
RJF LR LR
comp=Z,500nm,17.3s,MS4.8
GRR Gorron 67.85 314 *e*P **P 14 26 35.9 -0.7**
comp=Z,44nm,1.0s,mb5.1
GRR Gorron 67.85 314 *e*P **P 14 26 35.9 -0.7**
GRR pmax pmax
comp=Z,22nm,1.0s,mb5.1
GRR Gorron 67.85 314 *e*P **P 14 26 35.9 -0.7**
comp=Z,22nm,1.0s,mb5.2
EJON La Jonquera 67.98 307 P **P 14 26 38.0 +0.4**
comp=Z,18nm,1.7s,mb4.8
MTLF Montolieu 68.05 308 *e*P **P 14 26 37.6 -0.4**
comp=Z,75nm,1.5s,mb5.2
MTLF Montolieu 68.05 308 *e*P **P 14 26 37.6 -0.4**
MTLF pmax pmax
comp=Z,37nm,1.5s,mb5.2
MTLF Montolieu 68.05 308 *e*P **P 14 26 37.6 -0.4**
comp=Z,37nm,1.5s,mb5.2
MFF Saint Martin d 68.18 312 *e*P **P 14 26 38.1 -0.6**
comp=Z,63nm,1.4s,mb5.1
MFF Saint Martin d 68.18 312 *e*P **P 14 26 38.1 -0.6**
MFF pmax pmax
comp=Z,31nm,1.4s,mb5.2
MFF Saint Martin d 68.18 312 *e*P **P 14 26 38.1 -0.6**
comp=Z,31nm,1.4s,mb5.2
LFF La Frestale 68.33 310 *e*P **P 14 26 39.8 +0.1**
comp=Z,141nm,1.5s,mb5.5
LFF La Frestale 68.33 310 *e*P **P 14 26 39.8 +0.1**
LFF pmax pmax
comp=Z,71nm,1.5s,mb5.5
LFF La Frestale 68.33 310 *e*P **P 14 26 39.8 +0.1**
comp=Z,71nm,1.5s,mb5.5
CFON Fontmartina 68.58 307 P **P 14 26 41.1 -0.3**
comp=Z,73nm,1.7s,mb5.3
CLLI Lilvia 68.58 307 P **P 14 26 41.9 +0.5**
KLBR Kellerberrin 68.79 157 *e*P **P 14 26 41.9 -0.6**
comp=Z,62nm,1.1s,mb5.5
SGMF Saint Gilles 68.93 314 *e*P **P 14 26 43.0 -0.4**
comp=Z,94nm,1.4s,mb5.2
SGMF Saint Gilles 68.93 314 *e*P **P 14 26 43.0 -0.4**
SGMF pmax pmax
comp=Z,47nm,1.4s,mb5.2
SGMF Saint Gilles 68.93 314 *e*P **P 14 26 43.0 -0.4**
comp=Z,47nm,1.4s,mb5.2
ASAR Alice Springs 69.14 139 P **P 14 26 44.9 -0.1**
comp=Z,43nm,0.8s,mb5.4,baz=320,slow=6.0,SNR=142
CSOR Sort 69.19 308 P **P 14 26 44.2 -0.9**
comp=Z,60nm,1.5s,mb5.3
ETOS Mallorca 69.19 304 P **P 14 26 45.5 +0.3**
comp=Z,202nm,1.9s,mb5.7
SUMG Summit 69.25 346 *e*P **P 14 26 44.9 -0.1**
comp=Z,90nm,1.8s,mb5.4
SUMG Summit 69.25 346 ||*i*P **P 14 26 44.7 -0.3**
ROSF Rostrenen 69.32 315 *e*P **P 14 26 45.5 -0.3**
comp=Z,74nm,1.2s,mb5.2
ROSF Rostrenen 69.32 315 *e*P **P 14 26 45.5 -0.3**
ROSF pmax pmax
comp=Z,37nm,1.2s,mb5.2
ROSF Rostrenen 69.32 315 *e*P **P 14 26 45.5 -0.3**
comp=Z,37nm,1.2s,mb5.2
EPF Esparros 69.42 308 *e*P **P 14 26 45.7 -0.9**
comp=Z,71nm,1.8s,mb5.0
EPF Esparros 69.42 308 *e*P **P 14 26 45.7 -0.9**
EPF pmax pmax
comp=Z,36nm,1.8s,mb5.0
EPF Esparros 69.42 308 *e*P **P 14 26 45.7 -0.9**
comp=Z,36nm,1.8s,mb5.0
QUIF Quistinic 69.44 314 *e*P **P 14 26 46.1 -0.5**
EPOB Poblet 69.68 307 P **P 14 26 47.6 -0.6**
comp=Z,59nm,1.8s,mb5.2
EBIE Bielsa 69.71 308 P **P 14 26 48.5 +0.2**
comp=Z,7.1nm,1.1s,mb4.5
NWAO Narrogin (SRO) 69.84 158 P **P 14 26 49.1 +0.1**
comp=Z,24nm,0.8s,mb5.2,baz=350,slow=7.7,SNR=7.1
ETSF Etsaut 70.07 309 *e*P **P 14 26 50.6 0.0**
comp=Z,45nm,1.0s,mb5.1
ETSF Etsaut 70.07 309 *e*P **P 14 26 50.6 0.0**
ETSF pmax pmax
comp=Z,22nm,1.0s,mb5.0
ETSF Etsaut 70.07 309 *e*P **P 14 26 50.6 0.0**
comp=Z,22nm,1.0s,mb5.0
TTA Tatalina 70.13 27 *e*P **P 14 26 51.3 +0.8**
ERTA Horta de San J 70.36 307 P **P 14 26 51.6 -0.7**
comp=Z,59nm,1.3s,mb5.3
AKUT Akutan 70.41 38 *e*P **P 14 26 50.6 -1.8**
comp=Z,28nm,0.8s,mb5.2
SJPF Ste Jean 70.41 309 *e*P **P 14 26 52.6 0.0**
ESAC San Caprasio 70.55 308 P **P 14 26 52.8 -0.7**
comp=Z,56nm,1.1s,mb5.4
ELIZ Elizondo 70.58 309 P **P 14 26 52.7 -1.0**
ELIZ pmax pmax
comp=Z,54nm,1.6s,mb5.2
ELIZ Elizondo 70.58 309 P **P 14 26 52.7 -1.0**
comp=Z,54nm,1.6s,mb5.2
EMOS Mosqueruela 71.18 306 P **P 14 26 57.7 +0.4**
comp=Z,24nm,1.0s,mb5.1
SVW2 Sparrevohn 71.34 28 *e*P **P 14 26 58.9 +1.0**
EBEN Beniarda 71.78 305 P **P 14 27 02.0 +1.0**
comp=Z,42nm,1.4s,mb5.2
ELAN Lanestosa 71.78 310 P **P 14 27 00.2 -0.8**
comp=Z,53nm,1.3s,mb5.3
COLA College 71.83 23 *e*P **P 14 27 01.0 +0.2**
COLA pmax pmax
comp=Z,50nm,0.9s,mb5.4
COLA College 71.83 23 *e*P **P 14 27 01.0 +0.2**
comp=Z,50nm,0.9s,mb5.4
ETOR Torete 72.03 307 P **P 14 27 01.7 -0.8**
ETOR pmax pmax
comp=Z,10.0nm,1.8s,mb4.4
ETOR Torete 72.03 307 P **P 14 27 01.7 -0.8**
comp=Z,10nm,1.8s,mb4.5
FORT Forrest 72.10 148 *e*P **P 14 27 05.6 +2.8**
comp=Z,58nm,1.0s,mb5.5
RES Resolute Bay 72.38 2 *e*P **P 14 27 03.6 -0.4**
RES pmax pmax
comp=Z,11nm,1.0s,mb4.7
RES Resolute Bay 72.38 2 *e*P **P 14 27 03.6 -0.4**
comp=Z,11nm,1.0s,mb4.8
ETOB Tobarra 72.72 305 P **P 14 27 05.9 -0.7**
comp=Z,47nm,1.7s,mb5.1
RSO Redoubt South 72.83 28 *e*P **P 14 27 06.2 -0.7**
EARI Arriondas 72.89 311 P **P 14 27 05.5 -2.0**
comp=Z,39nm,1.5s,mb5.1
INK Inuvik 73.37 16 P **P 14 27 10.0 +0.1**
comp=Z,18nm,0.8s,mb5.0,baz=339,slow=6.8,SNR=35
INK Inuvik 73.37 16 *e*P **P 14 27 09.7 -0.2**
INK pmax pmax
comp=Z,29nm,0.9s
INK Inuvik 73.37 16 *e*P **P 14 27 09.7 -0.2**
comp=Z,29nm,0.9s,mb5.2
EVIA Vianos 73.38 305 P **P 14 27 10.6 +0.1**
EVIA pmax pmax
comp=Z,18nm,0.9s,mb5.0
EVIA Vianos 73.38 305 P **P 14 27 10.6 +0.1**
comp=Z,18nm,0.9s,mb5.0
PMR Palmer 73.50 26 *e*P **P 14 27 10.8 0.0**
PMR pmax pmax
comp=Z,46nm,0.8s,mb5.5
PMR Palmer 73.50 26 *e*P **P 14 27 10.8 0.0**
comp=Z,46nm,0.8s,mb5.5
GUD Guadarrama 73.51 308 P **P 14 27 10.7 -0.5**
GUD pmax pmax
comp=Z,30nm,1.0s,mb5.2
GUD Guadarrama 73.51 308 P **P 14 27 10.7 -0.6**
comp=Z,30nm,1.0s,mb5.2
EHUE Huescar 73.84 305 P **P 14 27 12.8 -0.5**
EHUE pmax pmax
comp=Z,46nm,1.7s,mb5.1
EHUE Huescar 73.84 305 P **P 14 27 12.8 -0.5**
comp=Z,46nm,1.7s,mb5.1
ESDC Sonseca Array 73.86 307 P **P 14 27 13.7 +0.3**
comp=Z,4.8nm,0.8s,mb4.5,baz=53,slow=6.5,SNR=16
ESDC LR LR 15 05 03.7
comp=Z,259nm,18.9s,MS4.5,baz=25,slow=40
ESDC Sonseca Array 73.86 307 P **P 14 27 12.9 -0.4**
comp=Z,26nm,1.6s,mb4.9
ESLA Sonseca Array 73.86 307 *e*P **P 14 27 11.9 -1.5**
comp=Z,50nm,2.1s,mb5.1
ENIJ Nijar 73.99 304 P **P 14 27 14.1 0.0**
ENIJ pmax pmax
comp=Z,37nm,1.3s,mb5.2
ENIJ Nijar 73.99 304 P **P 14 27 14.1 0.0**
comp=Z,37nm,1.3s,mb5.2
EGAK Eagle 73.99 21 *e*P **P 14 27 13.9 +0.3**
comp=Z,30nm,0.9s,mb5.2
CTA Charters Tower 74.00 128 *e*P **P 14 27 13.1 -1.2**
comp=Z,22nm,1.2s,mb5.0
CTA Charters Tower 74.00 128 P **P 14 27 14.1 -0.2**
comp=Z,34nm,1.1s,mb5.2,baz=328,slow=7.9,SNR=6.5
CTA LR LR 15 01 55.6
comp=Z,269nm,20.1s,MS4.5,baz=129,slow=38
CTAO Charters Tower 74.00 128 *e*P **P 14 27 13.5 -0.8**
CTAO pmax pmax
comp=Z,64nm,1.4s,mb5.4
CTAO Charters Tower 74.00 128 *e*P **P 14 27 13.5 -0.8**
comp=Z,64nm,1.4s,mb5.4
EPON Pontenova 74.10 311 P **P 14 27 13.2 -1.5**
comp=Z,34nm,1.1s,mb5.2
EQES Quesada 74.18 305 P **P 14 27 15.4 +0.2**
comp=Z,18nm,1.0s,mb5.0
SEW Seward 74.34 27 *e*P **P 14 27 14.3 -1.5**
comp=Z,39nm,1.1s,mb5.2
MENT Mentasta 74.49 23 *e*P **P 14 27 16.6 +0.1**
EBAN Banos Encina 74.49 306 P **P 14 27 16.9 -0.1**
EBAN pmax pmax
comp=Z,5.0nm,0.4s,mb4.8
EBAN Banos Encina 74.49 306 P **P 14 27 16.9 -0.1**
comp=Z,5.1nm,0.4s,mb4.8
EBER Berja 74.50 304 P **P 14 27 17.2 0.0**
comp=Z,26nm,1.7s,mb4.9
ECAL Calabor 74.54 310 P **P 14 27 16.2 -1.1**
comp=Z,71nm,1.9s,mb5.3
KDAK Kodiak Island 74.55 30 P **P 14 27 16.2 -0.8**
comp=Z,389nm,0.8s,mb6.4,SNR=8.4
KDAK Kodiak Island 74.55 30 *ce*P **P 14 27 17.9 +0.9**
KDAK Kodiak Island 74.55 30 *e*P **P 14 27 17.8 +0.8**
comp=Z,43nm,0.8s,mb5.4
OHAK Old Harbor 74.60 31 *e*P **P 14 27 17.1 -0.2**
comp=Z,109nm,1.4s,mb5.6
ECOG Cogollos-Vega 74.78 305 P **P 14 27 18.9 +0.2**
ECOG pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
ECOG Cogollos-Vega 74.78 305 P **P 14 27 18.9 +0.2**
comp=Z,5.3nm,0.6s,mb4.7
EGUA Guajares 75.00 304 P **P 14 27 19.3 -0.7**
EGUA pmax pmax
comp=Z,145nm,1.2s,mb5.8
EGUA Guajares 75.00 304 P **P 14 27 19.3 -0.7**
comp=Z,145nm,1.2s,mb5.8
EADA Adamuz 75.03 306 P **P 14 27 20.4 +0.3**
comp=Z,3.9nm,0.8s,mb4.4
DAWY Dawson 75.04 21 *e*P **P 14 27 19.6 -0.1**
ERON Agron 75.08 305 P **P 14 27 20.2 -0.3**
comp=Z,9.8nm,0.8s,mb4.8
EALB Alboran 75.08 303 P **P 14 27 20.1 -0.4**
comp=Z,87nm,1.1s,mb5.6
ELUQ Luque 75.12 305 P **P 14 27 19.7 -1.0**
ELUQ pmax pmax
comp=Z,50nm,1.1s,mb5.4
ELUQ Luque 75.12 305 P **P 14 27 19.7 -1.0**
comp=Z,50nm,1.1s,mb5.4
MVO Moncorvo 75.13 310 P **P 14 27 19.5 -1.2**
MVO Moncorvo 75.13 310 *e*P **P 14 27 20.9 +0.2**
comp=Z,41nm,1.0s,mb5.3
STS Santiago 75.21 312 P **P 14 27 19.0 -2.1**
STS pmax pmax
comp=Z,35nm,1.4s,mb5.1
STS Santiago 75.21 312 P **P 14 27 19.0 -2.1**
comp=Z,35nm,1.4s,mb5.1
ELOB Lobios 75.43 311 P **P 14 27 20.6 -1.8**
comp=Z,58nm,1.6s,mb5.3
PCAB Cabril 75.49 310 *e*P **P 14 27 23.3 +0.6**
comp=Z,57nm,1.6s,mb5.2
PVRL Vila Real 75.51 310 *e*P **P 14 27 23.2 +0.3**
comp=Z,22nm,1.4s,mb4.9
MTE Manteigas 75.86 309 *e*P Px 14 27 37.4
comp=Z,54nm,1.6s
PVIS Viseu 75.92 309 *e*P **P 14 27 26.0 +0.8**
comp=Z,45nm,1.7s,mb5.1
PCBR Castelo Branco 76.11 309 *e*P **P 14 27 27.2 +0.9**

comp=Z,24nm,1.4s,mb4.9
PMRV Marv??o 76.27 308 *e*P **P 14 27 27.4 +0.2**
comp=Z,44nm,1.7s,mb5.1
EBAD Badajoz 76.36 307 P **P 14 27 26.9 -0.9**
comp=Z,9.6nm,1.0s,mb4.7
EJIF Jimena Fronter 76.51 305 P **P 14 27 28.8 +0.1**
EJIF pmax pmax
comp=Z,45nm,1.3s,mb5.2
EJIF Jimena Fronter 76.51 305 P **P 14 27 28.8 +0.1**
comp=Z,45nm,1.3s,mb5.2
ESPR Espera 76.56 305 P **P 14 27 28.8 -0.2**
comp=Z,63nm,1.9s,mb5.2
EMIN Mina Concepcio 76.65 306 P **P 14 27 28.8 -0.6**
comp=Z,63nm,1.5s,mb5.3
PBAR Barrancos 76.69 307 *e*P **P 14 27 29.8 +0.2**
comp=Z,62nm,1.7s,mb5.3
PESTR Estremoz 76.69 308 *e*P **P 14 27 29.9 +0.3**
comp=Z,28nm,1.4s,mb5.0
PTOM Tomar 76.83 309 *e*P **P 14 27 31.4 +1.0**
comp=Z,71nm,1.3s,mb5.4
HNR Honiara 77.12 110 LR LR 14 58 14.1
comp=Z,250nm,20.5s,MS4.5,baz=194,slow=33
EVO Evora 77.15 308 *e*P **P 14 27 32.4 +0.2**
comp=Z,44nm,1.4s,mb5.2
PBEJ Beja 77.32 307 *e*P **P 14 27 33.4 +0.2**
comp=Z,33nm,1.7s,mb5.0
EGRO El Granado 77.32 307 P **P 14 27 33.1 -0.1**
comp=Z,50nm,1.4s,mb5.3
PVAQ Vaqueiros 77.55 307 *e*P **P 14 27 34.6 +0.1**
comp=Z,58nm,1.6s,mb5.3
LSZ Lusaka 77.61 242 P **P 14 27 34.5 -0.4**
comp=Z,20nm,0.9s,mb5.0,baz=52,slow=6.2,SNR=17
LSZ Lusaka 77.61 242 *e*P **P 14 27 34.3 -0.7**
LSZ pmax pmax
comp=Z,45nm,1.3s,mb5.2
LSZ Lusaka 77.61 242 *e*P **P 14 27 34.3 -0.7**
comp=Z,45nm,1.3s,mb5.2
PCVE Castro Verde 77.64 307 *e*P **P 14 27 36.8 +1.8**
comp=Z,28nm,1.8s,mb4.9
PBDV Barranco-do-Ve 77.78 306 *e*P **P 14 27 36.1 +0.3**
comp=Z,64nm,1.5s,mb5.3
MORF Marmelete 78.23 307 *e*P **P 14 27 38.5 +0.2**
comp=Z,39nm,1.5s,mb5.1
STKA Stephens Creek 79.78 139 *e*P **P 14 27 46.2 -0.4**
comp=Z,18nm,0.9s,mb5.0
STKA Stephens Creek 79.78 139 P **P 14 27 46.6 0.0**
comp=Z,29nm,1.1s,mb5.1,baz=317,slow=5.6,SNR=15
STKA Stephens Creek 79.78 139 *e*P **P 14 27 46.1 -0.5**
comp=Z,8.7nm,1.1s,mb4.6
SKAG Skagway 79.80 22 *e*P **P 14 27 47.5 +1.1**
comp=Z,75nm,1.1s,mb5.5
EIDS Eidsvold 80.86 128 *e*P **P 14 27 52.5 -0.1**
comp=Z,185nm,2.1s,mb5.7
DLBC Dease Lake 82.26 21 *e*P **P 14 28 00.7 +1.1**
YKA Yellowknife Ar 82.34 12 P **P 14 27 59.5 -0.4**
comp=Z,12nm,0.8s,mb4.9,baz=330,slow=5.0,SNR=90
YKA LR LR 15 12 29.5
comp=Z,20nm,18.5s,baz=180,slow=41
YKA Yellowknife Ar 82.34 12 P **P 14 27 59.5 -0.4**
YKA LR LR 15 12 29.5
TORD Torodi Ar. Bea 83.22 281 P **P 14 28 04.6 -0.7**
comp=Z,17nm,1.0s,mb5.0,baz=52,slow=3.8
ARMA Armidale 84.66 132 *e*P **P 14 28 13.2 +1.0**
LBTB Lobatse 85.66 237 *e*P **P 14 28 16.6 -0.7**
LBTB pmax pmax
comp=Z,56nm,1.1s,mb5.7
LBTB Lobatse 85.66 237 *e*P **P 14 28 16.6 -0.7**
comp=Z,56nm,1.1s,mb5.7
CNB Canberra Magne 86.69 136 *e*P **P 14 28 24.7 +2.5**
TSUM Tsumeb 88.00 246 P **P 14 28 28.4 -0.5**
comp=Z,4.1nm,1.1s,mb4.6,baz=63,slow=5.3,SNR=3.8
BOSA Boshof 88.17 234 P **P 14 28 28.5 -1.0**
comp=Z,12nm,1.1s,mb5.0,baz=82,slow=5.7,SNR=5.7
BOSA LR LR 15 07 04.5
comp=Z,250nm,18.7s,MS4.7,baz=165,slow=35
BOSA Boshof 88.17 234 P **P 14 28 28.5 -1.0**
BOSA LR LR 15 07 04.5
PSMA Santa Maria 88.91 315 *e*P **P 14 28 28.2 -4.9**
PSMA A 14 28 32.8
comp=Z,12nm,0.1s
PSMA *e*S 14 28 34.3
SCHQ Schefferville 90.54 348 P **P 14 28 39.9 -0.4**
comp=Z,4.9nm,0.8s,mb4.9,baz=20,slow=5.2,SNR=6.4
SCHQ LR LR 15 12 38.6
comp=Z,439nm,18.2s,MS4.9,baz=40,slow=38
EDM Edmonton 91.23 15 *e*P **P 14 28 44.1 +0.6**
FFC Flin Flon 91.69 8 P **P 14 28 45.7 +0.1**
comp=Z,131nm,0.9s,mb6.3,SNR=13
FFC Flin Flon 91.69 8 *e*P **P 14 28 45.1 -0.5**
FFC pmax pmax
comp=Z,21nm,0.9s,mb5.5
FFC Flin Flon 91.69 8 *e*P **P 14 28 45.1 -0.5**
comp=Z,21nm,0.9s,mb5.5
DBIC Dimbokro 92.14 279 P **P 14 28 47.5 -1.0**
comp=Z,9.4nm,1.1s,mb5.0,baz=172,slow=1.4,SNR=3.9
DBIC LR LR 15 12 39.5
comp=Z,293nm,21.3s,MS4.7,baz=41,slow=37
ULM Lac du Bonnet 96.71 5 LR LR 15 15 56.4
comp=Z,246nm,18.4s,MS4.7,baz=40,slow=37
TXAR Lajitas Array 116.14 15 PKP PKPdf 14 34 22.1 +0.1
comp=Z,1.0nm,1.0s,baz=264,slow=1.3,SNR=5.0
QSPA South Pole Qui 122.89 180 PKP PKPdf 14 34 32.6 -0.6
comp=Z,7.5nm,0.9s,baz=262,slow=2.6,SNR=16
QSPA South Pole Qui 122.89 180 PKP PKPdf 14 34 32.6 -0.6
PPT Papeete 122.94 90 *e*LR LR 15 12 27.7
comp=Z,552nm,31.8s
TAOE Nuku Hiva Isla 126.28 76 *e*LR LR 15 14 05.7
comp=Z,468nm,25.3s
ROSC El Rosal 140.09 339 PKhKP PKPpre 14 35 04.0
comp=Z,4.4nm,0.5s,baz=105,slow=20,SNR=3.6
CPUP Villa Florida 152.62 276 PKPbc PKPbc 14 35 34.6 -0.7
comp=Z,1.0nm,0.3s,baz=42,slow=1.2,SNR=6.5
LPAZ La Paz 155.47 308 PKP PKPdf 14 35 31.6 -0.9
comp=Z,2.1nm,1.1s,baz=34,slow=10,SNR=4.5
PLCA Paso Flores 164.15 236 PKP PKPdf 14 35 41.6 0.0
comp=Z,9.9nm,1.1s,baz=187,slow=0.5,SNR=5.1

CASC 10 14:17:58.2±0.9, 12°.51N×88°.99W, h13km±6km, MD3.9, ML3.8, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSM	**San Miguel**	**1.15**	**37**	*e*P	Pb	14 18 19.0	-0.9
BLLM	**Bellamira**	**1.18**	**38**	*e*P	Pn	14 18 19.3	-1.1
SNET	**Serv Nac Est T**	**1.19**	**349**	*e*P	Pn	14 18 19.9	-0.6
SNET				*e*S	Sb	14 18 36.1	+0.2
LBRS	**Las Brisas**	**1.22**	**358**	*e*P	Pn	14 18 20.0	-1.0
LFU	**La Fuente**	**1.23**	**354**	*e*P	Pn	14 18 20.3	-0.9
BOQS	**Boqueron**	**1.25**	**347**	*e*P	Pn	14 18 20.6	-0.7
BOQS				*e*S	Sb	14 18 37.6	0.0
BOQS				AML	AML	14 18 40.1	
	comp=Z,2μm,0.2s						
CNCH	**Conchagua**	**1.36**	**56**	*e*P	Pn	14 18 21.7	-1.2
CNCH				*e*S	Sn	14 18 40.9	+0.1
SBLS	**San Blas**	**1.45**	**335**	*e*P	Pn	14 18 24.1	-0.1
CAHU	**Cacacuatique**	**1.46**	**31**	*e*P	Pn	14 18 24.0	-0.3
CAHU				*e*S	Sn	14 18 44.5	+1.2
SNJE	**San Jose**	**1.47**	**336**	*e*P	Pn	14 18 24.2	-0.3
RTR	**El Retiro**	**1.52**	**335**	*e*P	Pn	14 18 24.9	-0.1
RTR				*e*S	Sn	14 18 45.6	+0.9
RBDL	**Robledal**	**1.73**	**337**	*e*P	Pn	14 18 28.5	+0.5
CRIN	**San Cristobal**	**1.90**	**84**	*e*P	Pn	14 18 30.0	-0.4
MTO2	**Montecristo 2**	**1.91**	**349**	*e*P	Pn	14 18 30.8	+0.3
CNGN	**Cerro Negro**	**2.24**	**90**	*e*P	Pn	14 18 34.4	-0.6
TGUH	**Tegucigalpa,Un**	**2.27**	**47**	*e*P	Pn	14 18 35.0	-0.5
TGUH				AML	AML	14 19 12.2	
	comp=E,859nm,0.4s						
COPN	**Copaltepe**	**2.37**	**98**	*e*P	Pn	14 18 36.4	-0.4
CSAN		**2.53**	**97**	*e*P	Pn	14 18 38.8	-0.2

NIED ***10*** *14:23:00, 22°.90N×123°.10E, h5km, Mw4.1 Best double couple: M₀1.70000×10¹⁵ NP1:φ=104.00000°, δ64.00000°, λ-77.00000°. NP2:φ=256.00000°, δ29.00000°, λ-114.00000°.*
IDC ***10*** *14:23:40.9±0.8, 22°.93N×122°.93E, h0km, mb4.0/11, mb1 4.2/13, mb1mx4.0/26, mbtmp4.0/13, ML3.8/2, MS4.3/1, Ms1 4.3/1, ms1mx2.8/46, Error ellipse: s-maj=23.6km s-min=18.3km az=74.0*
NEIC ***10*** *14:23:42.7±4.2, 22°.93N×122°.91E, h12km±26km, MG3.6(JMA), Error ellipse: s-maj=11.5km s-min=9.5km az=109.0*
TAP ***10*** *14:23:43.7, 22°.88N×122°.98E, h65km±1km, ML4.6, D*

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JMA ***10*** *14:23:43.6±0.2, 22°.92N×123°.06E, h67km, M3.6*
ISCJB ***10*** *14:23:43.6±0.3, 22°.91N±0°.02×123°.02E±0°.02, h33km, mb4.2/14, MS3.5/2, Error ellipse: s-maj=3.4km s-min=2.1km az=154.6*

ISC 10 14:23:44.0±0.9, 22°.93N±0°.02×123°.01E±0°.02, h27km±8km, n95, σ1°.13/141, mb4.2/14, MS3.5/2, 17C, Southeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**1.34**	**33**	P	**Pn**	**14 24 06.4**	**-0.6**
HATJ				S	**Sn**	**14 24 23.5**	**-0.5**
YOJ	**Yonaguni jima**	**1.52**	**0**	P	**Pn**	**14 24 09.3**	**-0.2**
YOJ				S	**Sn**	**14 24 28.9**	**+0.4**
IRIF	**Iriomote-Funau**	**1.55**	**25**	P	**Pn**	**14 24 09.5**	**-0.4**
IRIF				*e*S	**Sn**	**14 24 28.1**	**-1.0**
JKRS	**Kuro-shima**	**1.59**	**35**	P	**Pn**	**14 24 10.1**	**-0.4**
JKRS				*e*S	**Sn**	**14 24 29.9**	**-0.3**
LAY	**Lan-yu**	**1.61**	**237**	*i* P	**Pn**	**14 24 08.7**	**-2.0**
	baz=237						
LAY				*i* S	**Sn**	**14 24 27.2**	**-3.4**
	baz=237						
TWF1	**Yuli**	**1.63**	**285**	⇑*i*P	**Pn**	**14 24 09.5**	**-1.4**
	baz=287						
TWF1				*e*S	**Sn**	**14 24 27.9**	**-3.2**
	baz=287						
YULB	**Yu-li**	**1.64**	**287**	*e*P	**Pn**	**14 24 09.3**	**-1.7**
EHY	**Hungye**	**1.65**	**291**	*e*P	**Pn**	**14 24 09.8**	**-1.5**
	baz=292						
EHY				*e*S	**Sn**	**14 24 29.6**	**-2.0**
	baz=292						
ESL	**Shilin**	**1.69**	**302**	P	**Pn**	**14 24 10.1**	**-1.7**
	baz=303						
ESL				*e*S	**Sn**	**14 24 29.2**	**-3.4**
	baz=303						
TTN	**Taitung**	**1.72**	**265**	*e*P	**Pn**	**14 24 10.9**	**-1.3**
	baz=261						
TWD	**Chiawan**	**1.73**	**312**	⇑*i*P	**Pn**	**14 24 11.2**	**-1.2**
	baz=313						
TWD				*e*S	**Sn**	**14 24 30.9**	**-2.6**
	baz=313						
JIJ	**Ishigaki jima**	**1.77**	**36**	P	**Pn**	**14 24 12.0**	**-0.9**
JIJ				S	**Sn**	**14 24 33.1**	**-1.4**
TWG	**Pinlang**	**1.79**	**267**	*e*P	**Pn**	**14 24 11.6**	**-1.5**
TWG	**Pinlang**	**1.79**	**267**	*e*P	**Pn**	**14 24 11.8**	**-1.3**
	baz=268						
TWG				S	**Sn**	**14 24 32.7**	**-2.3**
	baz=268						
NACB	**Ninganchiao**	**1.79**	**314**	*e*P	**Pn**	**14 24 11.7**	**-1.5**
ELDTW	**Lidau**	**1.85**	**278**	⇑*i*P	**Pn**	**14 24 12.6**	**-1.4**
	baz=279						
ENA	**Nanau**	**1.89**	**322**	*e*P	**Pn**	**14 24 14.2**	**-0.4**
	baz=316						
ENA				*e*S	**Sn**	**14 24 37.2**	**-0.3**
	baz=316						
ECL	**Taimali**	**1.92**	**260**	⇑*i*P	**Pn**	**14 24 13.6**	**-1.4**
	baz=271						
ECL				*e*S	**Sn**	**14 24 35.9**	**-2.4**
	baz=271						
YUS	**Yu-Shan**	**1.97**	**287**	⇑P	**Pn**	**14 24 15.5**	**-0.2**
	baz=288						
TWC	**Suao**	**1.98**	**328**	P	**Pn**	**14 24 15.2**	**-0.6**
	baz=329						
TWC				*e*S	**Sn**	**14 24 37.9**	**-1.9**
	baz=329						
WHF	**Hehuan Shan**	**2.00**	**307**	⇑*i*P	**Pn**	**14 24 15.5**	**-0.6**
	baz=301						
WHF				*e*S	**Sn**	**14 24 39.3**	**-1.1**
	baz=301						
TAW	**Tawu**	**2.03**	**254**	*e*P	**Pn**	**14 24 15.4**	**-1.0**
	baz=243						
TAW				*e*S	**Sn**	**14 24 38.8**	**-2.1**
	baz=243						
EAST	**Anshuo**	**2.07**	**255**	⇑*i*P	**Pn**	**14 24 16.1**	**-0.9**
	baz=265						
EAST				*e*S	**Sn**	**14 24 39.9**	**-2.0**
	baz=265						
SSLB	**Suanglung**	**2.07**	**295**	*e*P	**Pn**	**14 24 16.2**	**-0.8**
ALS	**Alishan**	**2.10**	**286**	⇑P	**Pn**	**14 24 17.9**	**+0.4**
	baz=287						
ALS				*e*S	**Sn**	**14 24 42.5**	**-0.3**
	baz=287						
NNS	**Nan Shan**	**2.12**	**315**	⇑P	**Pn**	**14 24 17.3**	**-0.4**
	baz=322						
NNS				*e*S	**Sn**	**14 24 42.2**	**-1.0**
	baz=322						
TWT	**Tachien**	**2.13**	**308**	⇑P	**Pn**	**14 24 18.0**	**+0.1**
	baz=304						
TWT				S	**Sn**	**14 24 42.5**	**-1.1**
	baz=304						
ENTT	**Nioudou**	**2.15**	**323**	*e*P	**Pn**	**14 24 18.1**	**-0.1**
	baz=323						
ENTT				*e*S	**Sn**	**14 24 43.5**	**-0.5**
	baz=323						
SMLT	**Sun Moon Lake**	**2.15**	**297**	⇑*i*P	**Pn**	**14 24 18.2**	**0.0**
	baz=304						
ILA	**Ilan**	**2.16**	**328**	*e*P	**Pn**	**14 24 18.8**	**+0.6**
	baz=329						
ILA				*e*S	**Sn**	**14 24 44.1**	**-0.1**
	baz=329						
TWE	**Neicheng**	**2.16**	**326**	⇑*i*P	**Pn**	**14 24 18.6**	**+0.3**
	baz=327						
TWE				S	**Sn**	**14 24 44.2**	**-0.1**
	baz=327						
SSD	**Sandimen**	**2.20**	**266**	⇑P	**Pn**	**14 24 18.0**	**-0.8**
	baz=261						
TYC	**Yuchr**	**2.20**	**297**	⇑P	**Pn**	**14 24 18.8**	**0.0**
	baz=304						
TYC				*e*S	**Sn**	**14 24 45.2**	**0.0**
	baz=304						
TSEB	**Hengchuen, Pin**	**2.20**	**243**	*e*P	**Pn**	**14 24 18.7**	**-0.1**
	baz=243						
TSEB				*e*S	**Sn**	**14 24 44.6**	**-0.6**
	baz=243						
TPUB	**Ta-pu**	**2.22**	**280**	*e*P	**Pn**	**14 24 19.5**	**+0.4**
CHN5	**Tsauling**	**2.24**	**288**	*e*P	**Pn**	**14 24 18.8**	**-0.6**
	baz=289						
CHN5				*e*S	**Sn**	**14 24 46.8**	**+0.6**
	baz=289						
TWK1	**Hengchun**	**2.26**	**245**	P	**Pn**	**14 24 18.7**	**-0.9**
	baz=245						
TWK1				*e*S	**Sn**	**14 24 44.5**	**-2.1**
	baz=245						
TWB1	**Santiao Chiao**	**2.27**	**336**	*e*P	**Pn**	**14 24 18.8**	**-1.0**
	baz=336						
SCZT	**Fangliau**	**2.27**	**256**	*e*P	**Pn**	**14 24 19.4**	**-0.5**
	baz=261						
YHNB	**Yeheng**	**2.29**	**320**	*e*P	**Pn**	**14 24 20.0**	**0.0**
HEN	**Hengchun**	**2.29**	**247**	⇑P	**Pn**	**14 24 20.1**	**0.0**
	baz=247						
HEN				*e*S	**Sn**	**14 24 46.0**	**-1.4**
	baz=247						
CHN1	**Nanshi**	**2.30**	**277**	*e*P	**Pn**	**14 24 21.2**	**+1.1**
	baz=285						
CHN1				*e*S	**Sn**	**14 24 49.6**	**+2.1**
	baz=285						
NSK	**Sanguang**	**2.30**	**319**	⇑P	**Pn**	**14 24 20.3**	**+0.1**
	baz=320						
NSK				*e*S	**Sn**	**14 24 46.1**	**-1.6**
	baz=320						
JTJ	**Tarama**	**2.31**	**42**	P	**Pn**	**14 24 19.7**	**-0.6**
JTJ				*e*S	**Sn**	**14 24 47.3**	**-0.5**
SGLT	**Jiouru**	**2.33**	**265**	*e*P	**Pn**	**14 24 22.3**	**+1.7**
	baz=263						
WNT	**Mingjian**	**2.33**	**294**	*e*P	**Pn**	**14 24 20.7**	**0.0**
	baz=303						
WNT				*e*S	**Sn**	**14 24 50.3**	**+1.9**
	baz=303						
TWK	**Hsinying**	**2.34**	**279**	*e*P	**Pn**	**14 24 21.6**	**+0.9**
	baz=279						
TWK				*e*S	**Sn**	**14 24 50.4**	**+1.8**
	baz=279						
WGK	**Gukeng**	**2.37**	**289**	*e*P	**Pn**	**14 24 21.8**	**+0.7**
	baz=290						
WGK				*e*S	**Sn**	**14 24 50.4**	**+1.1**
	baz=290						
TWM1	**Shoushan**	**2.38**	**268**	*e*P	**Pn**	**14 24 23.0**	**+1.7**
	baz=268						
NWF	**Wu-fen Shan**	**2.41**	**333**	*e*P	**Pn**	**14 24 21.6**	**-0.1**
	baz=343						
TWA	**Mucha**	**2.42**	**328**	*e*P	**Pn**	**14 24 22.6**	**+0.7**
	baz=328						
TWA				*e*S	**Sn**	**14 24 50.5**	**-0.2**
	baz=328						
CHN3	**Shinhua**	**2.44**	**274**	*e*P	**Pn**	**14 24 24.5**	**+2.4**
	baz=274						
CHY	**Chiayi**	**2.44**	**284**	*e*P	**Pn**	**14 24 23.1**	**+0.9**
	baz=275						
CHY				*e*S	**Sn**	**14 24 52.4**	**+1.2**
	baz=275						
TCU	**Taichung**	**2.46**	**300**	*e*P	**Pn**	**14 24 23.8**	**+1.4**
	baz=305						
TCU				*e*S	**Sn**	**14 24 52.9**	**+1.3**
	baz=305						
TATO	**Taipei**	**2.46**	**326**	*e*P	**Pn**	**14 24 22.8**	**+0.3**
TWQ1	**Liyutan**	**2.49**	**305**	*e*P	**Pn**	**14 24 24.2**	**+1.4**
	baz=312						
TWQ1				*e*S	**Sn**	**14 24 53.9**	**+1.7**
	baz=312						
NSTT	**Nanjuang**	**2.50**	**313**	⇑P	**Pn**	**14 24 24.1**	**+1.2**
	baz=321						
NSTT				*e*S	**Sn**	**14 24 53.0**	**+0.5**
	baz=321						
TWP	**Hsiaoliuchiu**	**2.51**	**257**	*e*P	**Pn**	**14 24 25.3**	**+2.2**
	baz=257						
NSY	**Sanyi**	**2.54**	**306**	*e*P	**Pn**	**14 24 24.0**	**+0.6**
	baz=307						
NSY				*e*S	**Sn**	**14 24 54.7**	**+1.3**
	baz=307						
TAI1	**Yung-k'ang**	**2.56**	**273**	*e*P	**Pn**	**14 24 25.5**	**+1.7**
	baz=273						
SCLT	**Jiali**	**2.60**	**276**	*e*P	**Pn**	**14 24 25.1**	**+0.8**
	baz=276						
SCLT				*e*S	**Sn**	**14 24 57.6**	**+2.5**
	baz=276						
TWS1	**Kuangyinshan**	**2.60**	**326**	*e*P	**Pn**	**14 24 25.6**	**+1.2**
	baz=327						
CHN8	**Yiju**	**2.61**	**280**	*e*P	**Pn**	**14 24 24.8**	**+0.4**
	baz=280						
CHN8				*e*S	**Sn**	**14 24 56.5**	**+1.3**
	baz=280						
NCU	**National Centr**	**2.63**	**321**	*e*P	**Pn**	**14 24 26.3**	**+1.6**
	baz=322						
HSN	**Hsinchu**	**2.64**	**315**	*e*P	**Pn**	**14 24 26.9**	**+2.0**
	baz=317						
WSF	**Szhu**	**2.66**	**286**	*e*P	**Pn**	**14 24 25.4**	**+0.3**
	baz=295						
WSF				*e*S	**Sn**	**14 24 57.3**	**+0.9**
	baz=295						
TWY	**Chenhua**	**2.67**	**331**	*e*P	**Pn**	**14 24 26.8**	**+1.5**
	baz=341						
WTCT	**Ta-ch'eng**	**2.67**	**291**	*e*P	**Pn**	**14 24 25.9**	**+0.6**
	baz=283						
WTCT				*e*S	**Sn**	**14 24 58.3**	**+1.5**
	baz=283						
JMJ	**Miyako jima 2**	**2.81**	**48**	P	**Pn**	**14 24 26.8**	**-0.4**
JMJ				*e*S	**Sn**	**14 24 59.6**	**-0.7**
JOGS	**Gusukube**	**2.85**	**50**	P	**Pn**	**14 24 27.4**	**-0.4**
JOGS				*e*S	**Sn**	**14 25 00.7**	**-0.6**
PNG	**Penghu**	**3.24**	**282**	*e*P	**Pn**	**14 24 33.1**	**0.0**
	baz=282						
PNG				*e*S	**Sn**	**14 25 09.9**	**-0.8**
	baz=282						
KNM	**Kinmen**	**4.45**	**290**	*e*P	**Pn**	**14 24 50.6**	**+0.9**
	baz=301						
QZH	**Quanzhou**	**4.51**	**297**	Pn	**Pn**	**14 24 50.6**	**0.0**
QZH				Sn	**Sn**	**14 25 40.1**	**-2.0**
QZH				smax			
	comp=N,180nm,0.7s						
QZH				smax			
	comp=E,230nm,1.0s						
KSRS	**Korea Array**	**15.08**	**15**	Pn	**Pn**	**14 27 16.6**	**+1.4**
	comp=E,0.3nm,0.3s,baz=191,slow=12,SNR=17						
MAT	**Matsushiro**	**18.89**	**41**	P	**Pn**	**14 28 03.3**	**+0.1**
MJAR	**Matsushiro Arr**	**18.89**	**41**	P	**Pn**	**14 28 04.3**	**+1.1**
	comp=E,0.4nm,0.3s,baz=230,slow=10,SNR=24						
CMAR	**Chiang Mai Arr**	**22.94**	**263**	P	**P**	**14 28 47.5**	**+1.3**
	comp=E,0.9nm,0.8s,mb3.2,baz=58,slow=8.4,SNR=5.9						
SONM	**Songino Array**	**28.18**	**336**	P	**P**	**14 29 34.3**	**+0.2**
	comp=E,5.4nm,1.1s,mb4.1,baz=153,slow=9.3,SNR=13						
PETK	**Petropavlovsk-**	**40.00**	**32**	P	**P**	**14 31 17.8**	**+1.5**
	comp=E,2.0nm,0.7s,mb4.0,baz=223,slow=14,SNR=3.4						
MKAR	**Makanchi Array**	**40.40**	**316**	P	**P**	**14 31 19.5**	**-0.2**
	comp=E,2.4nm,0.9s,mb3.9,baz=90,slow=9.6,SNR=12						
ZALV	**Zalesovo Beam**	**42.20**	**327**	P	**P**	**14 31 34.4**	**0.0**
	comp=E,7.1nm,0.7s,mb4.4,baz=108,slow=8.0,SNR=26						
WRA	**Warramunga Arr**	**44.02**	**165**	P	**P**	**14 31 50.4**	**+0.9**
	comp=E,2.4nm,1.0s,mb3.9,baz=348,slow=9.3,SNR=5.4						
KURK	**Kurchatov**	**44.12**	**320**	P	**P**	**14 31 51.0**	**+1.0**
	comp=E,1.7nm,0.7s,mb3.9,baz=112,slow=9.0,SNR=9.7						
KURK	**Kurchatov**	**44.12**	**320**	P	**P**	**14 31 51.0**	**+1.0**
ASAR	**Alice Springs**	**47.51**	**166**	P	**P**	**14 32 17.8**	**+0.8**
	comp=E,0.5nm,0.8s,mb3.6,baz=354,slow=13,SNR=6.2						
NWAO	**Narrogin (SRO)**	**55.81**	**186**	LR	LR	14 57 41.0	
	comp=E,4.0nm,21.5s,MS2.5,baz=240,slow=37						
MIB	**Mutribah**	**67.05**	**294**	*e*P	**P**	**14 34 35.8**	**+0.6**
MIB				AMb	AMB	14 34 36.6	
	comp=Z,22nm,0.7s,mb5.3						
RDF	**Al-Radifah**	**67.09**	**293**	*e*P	**P**	**14 34 36.2**	**+0.9**
RDF				AMb	AMB	14 34 38.6	
	comp=Z,30nm,1.1s,mb5.2						
NAY	**Al-Naaiem**	**67.27**	**293**	*e*P	**P**	**14 34 37.2**	**+0.7**
NAY				AMb	AMB	14 34 38.3	
	comp=Z,13nm,0.6s,mb5.1						
FINES	**FINESS Array B**	**73.36**	**330**	P	**P**	**14 35 14.3**	**+1.1**
	comp=Z,1.9nm,0.8s,mb4.0,baz=46,slow=8.2,SNR=5.4						
FINES	**FINESS Array B**	**73.36**	**330**	P	**P**	**14 35 14.3**	**+1.1**
YKA	**Yellowknife Ar**	**83.47**	**23**	P	**P**	**14 36 10.2**	**+1.3**
	comp=Z,2.0nm,0.8s,mb4.2,baz=308,slow=5.0,SNR=17						
YKA	**Yellowknife Ar**	**83.47**	**23**	P	**P**	**14 36 10.2**	**+1.3**
GERES	**GERESS Array B**	**84.87**	**321**	P	**P**	**14 36 17.7**	**+1.3**
	comp=Z,0.4nm,0.5s,mb3.8,baz=53,slow=5.2,SNR=6.4						
PDAR	**Pinedale Array**	**98.66**	**36**	LR	LR	15 24 20.1	
	comp=Z,138nm,19.7s,MS4.5,baz=224,slow=37						

MAN 10 14:26:52, 13°.00N×124°.31E, h111km, mb4.9, ML3.9, MS4.0, 2C-1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Cataman**	**0.60**	**144**	*e*P	Pn	14 27 11.5	+1.8
PVCP	**Virac**	**0.61**	**346**	*e*P	Pn	14 27 11.9	+2.1
AUQP	**San Andres**	**1.62**	**282**	*e*P	Pn	14 27 23.1	+2.7
BESP	**Borongan**	**1.77**	**141**	*e*P	Pn	14 27 23.8	+1.5
PLP	**Palo**	**1.94**	**160**	⇑*e*P	Pn	14 27 25.1	+0.9
GQP	**Guinayangan**	**2.02**	**297**	⇑*i*P	Pn	14 27 26.5	+1.2
GQP				*i* S	Sn	14 27 51.6	+0.8
RCP	**Roxas**	**2.09**	**227**	⇓*e*P	Pn	14 27 27.0	+0.8
OTRP	**Odiongan**	**2.32**	**254**	*e*P	Pn	14 27 30.2	+1.1
BOAC	**Boac**	**2.44**	**281**	*e*P	Pn	14 27 32.7	+2.0
POLP	**Polilio Island**	**2.87**	**307**	*e*P	Pn	14 27 38.0	+1.7
GUIM	**Jordan**	**2.90**	**216**	*e*P	Pn	14 27 38.0	+1.4
SJMP	**San Jose**	**3.16**	**261**	*e*P	Pn	14 27 42.3	+2.2
BALP	**Baler**	**3.80**	**316**	*e*P	Pn	14 27 48.8	+0.2
PALP	**Palanan**	**4.43**	**336**	*e*P	Pn	14 27 58.6	+1.4
APYP	**Conner**	**5.67**	**329**	*e*P	Pn	14 28 16.0	+2.1

ISCJB ***10*** *14:40:20.7±2.3, 35°.81N±0°.08×21°.5E±0°.1, h16km±14km, Error ellipse: s-maj=16.6km s-min=11.5km az=141.5*
THE ***10*** *14:40:

VLX	Vlachokerasia	1.64	22	*e*P	Pn	14 40 50.6	+0.4
VLX				S	Sn	14 41 11.9	+0.6
KARN	Karanos	1.94	103	P	Pn	14 40 54.5	+0.2
KARN	Karanos	1.94	103	P	Pn	14 40 54.5	+0.2
GUR	Goura	2.16	16	P	Pn	14 40 59.7	+2.3
GUR	Goura	2.16	16	*e*P	Pn	14 40 57.1	-0.3
GUR	Goura	2.16	16	*e*P	Pn	14 40 57.1	-0.3
LTK	Loutraki	2.42	26	*e*P	Pn	14 41 00.8	-0.2
LTK	Loutraki	2.42	26	*e*P	Pn	14 41 00.8	-0.2
VLS	Valsamata	2.46	341	P	Pn	14 41 01.2	-0.3
VLS	Valsamata	2.46	341	P	Pn	14 41 01.2	-0.3
KALE	Kalithea	2.57	9	P	Pn	14 41 02.2	-0.8
KALE	Kalithea	2.57	9	P	Pn	14 41 02.2	-0.8
AGG	Agios Georgios	3.21	10	P	Pn	14 41 12.9	+1.0
AGG	Agios Georgios	3.21	10	P	Pn	14 41 12.9	+1.0
AOS	Alonnisos	3.77	28	P	Pn	14 41 19.4	-0.1
AOS	Alonnisos	3.77	28	P	Pn	14 41 19.4	-0.1

DJA ***10*** *14:45:04, 1.°90S×99.°56E, h19km, MLv4.0/5*
NEIC ***10*** *14:45:07.2±0.8, 1.°84S×99.°50E, Error ellipse: s-maj=33.6km s-min=9.1km az=62.0*
NEIC Felt [II] on Pulau Sipura.
IDC ***10*** *14:45:07.8±1.6, 1.°70S×99.°71E, h40km±7km, mb3.3/6, mb1 3.5/7, mb1mx3.3/24, mbtmp3.4/7, ML3.1/1, Error ellipse: s-maj=59.4km s-min=14.8km az=59.0*
ISC 10 14:45:05.3±2.0, 1.°82S±0.°08×99.°53E±0.°08, h24km±15km**, h40**km±1.6km**:pP-P,n20,**σ**0**§**75/18, mb3.7/5, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**0.66**	**318**	P	**Pb**	**14 45 18.4**	**+0.2**
PDSI	**Padang**	**1.30**	**46**	P	**Pn**	**14 45 26.6**	**-1.3**
PDSI				S	**Sn**	**14 45 45.4**	**+0.9**
PPI	**Padang Panjang**	**1.61**	**33**	P	**Pn**	**14 45 31.2**	**-1.0**
SDSI	**Sungai Dareh**	**2.09**	**65**	P	**Pn**	**14 45 39.3**	**+0.5**
MNSI	**Mandailing Nat**	**2.60**	**1**	P	**Pn**	**14 45 46.7**	**+0.9**
BKNI	**Bangkinang**	**2.61**	**35**	P	**Pn**	**14 45 46.2**	**+0.2**
PSI	**Prapat**	**4.63**	**352**	Pn	**Pn**	**14 46 13.6**	**-0.2**
	1.0nm,0.3s,baz=173,slow=16,SNR=2.4						
PSI	**Prapat**	**4.63**	**352**	Pn	**Pn**	**14 46 13.6**	**-0.2**
CMAR	**Chiang Mai Arr**	**20.16**	**358**	P	**P**	**14 49 38.1**	**+0.1**
	0.3nm,0.4s,baz=188,slow=8.5,SNR=3.3						
WRA	**Warramunga Arr**	**38.49**	**120**	P	**P**	**14 52 25.6**	**-0.2**
	0.4nm,0.4s,mb3.5,baz=303,slow=9.1,SNR=8.3						
WRA				pP	pP	14 52 36.5	+3.3
	0.7nm,0.5s,baz=303,slow=9.0,SNR=3.9						
WRAB	**Tennant Creek**	**38.49**	**120**	P	**P**	**14 52 26.5**	**+0.7**
ASAR	**Alice Springs**	**39.73**	**126**	P	**P**	**14 52 36.5**	**+0.3**
	0.3nm,0.4s,mb3.4,baz=303,slow=8.4,SNR=17						
ASAR				pP	pP	14 52 47.5	+4.0
	0.9nm,0.5s,baz=302,slow=7.8,SNR=6.3						
KSRS	**Korea Array**	**47.11**	**31**	P	**P**	**14 53 33.7**	**-1.8**
	0.5nm,0.5s,mb3.7,baz=224,slow=8.5,SNR=4.4						
MK31	**Makanchi Array**	**50.73**	**345**	*e*P	**P**	**14 54 04.0**	**+1.0**
MKAR	**Makanchi Array**	**50.73**	**345**	P	**P**	**14 54 03.0**	**-0.1**
	0.4nm,0.3s,mb3.9,baz=136,slow=8.1,SNR=5.4						
MKAR				pP	pP	14 54 15.7	+5.1
	0.5nm,0.3s,baz=134,slow=8.0,SNR=3.2						
ZALV	**Zalesovo Beam**	**56.91**	**350**	P	**P**	**14 54 47.7**	**-0.4**
	0.9nm,0.3s,mb4.2,baz=173,slow=10,SNR=5.3						
ZALV				pP	pP	14 54 58.7	+3.0
	1.0nm,0.4s,baz=181,slow=6.8,SNR=3.4						
ZALV	**Zalesovo Beam**	**56.91**	**350**	P	**P**	**14 54 47.7**	**-0.4**
ZALV				pP	pP	14 54 58.7	+3.0
CPUP	**Villa Florida**	**144.18**	**217**	PKP	PKPdf	15 04 39.2	-0.7
	0.7nm,0.4s,baz=244,slow=1.7,SNR=3.7						
CPUP	**Villa Florida**	**144.18**	**217**	PKP	PKPdf	15 04 39.2	-0.7
TXAR	**Lajitas Array**	**144.84**	**37**	PKP	PKPdf	15 04 40.9	-0.1
	0.2nm,0.6s,baz=136,slow=0.6,SNR=4.9						

IDC ***10*** *14:49:45.2±1.1, 22.°95S×176.°51W, h0km, mb4.5/9, mb1 4.6/9, mb1mx4.3/18, mbtmp4.5/9, Error ellipse: s-maj=40.5km s-min=24.0km az=153.0*
ISCJB ***10*** *14:49:56.7±1.1, 23.°05S±0.°2×176.°8W±0.°2, h100km, mb4.4/11, Error ellipse: s-maj=33.9km s-min=23.2km az=171.4*
NEIC ***10*** *14:50:38.4±3.0, 24.°19S×177.°62W, h465km±27km, mb4.2/2, Error ellipse: s-maj=43.4km s-min=23.2km az=154.0*
ISC 10 14:49:58.0±1.1, 23.°1S±0.°2×176.7W±0.°2, h100km**, n28,** σ**1**§**03/18, mb4.4/11, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.21**	**316**	*e*P	Px	14 52 30.1	
	122nm,0.4s						
EIDS	**Eidsvold**	**29.41**	**259**	*e*P	**P**	**14 55 56.7**	**+4.6**
CTA	**Charters Tower**	**34.49**	**268**	*e*P	**P**	**14 56 38.1**	**+1.5**
	4.5nm,0.4s,mb4.7						
CTA	**Charters Tower**	**34.49**	**268**	P	**P**	**14 56 38.2**	**+1.5**
	6.3nm,0.4s,mb4.8,baz=93,slow=11,SNR=11						
CTA	**Charters Tower**	**34.49**	**268**	P	**P**	**14 56 38.2**	**+1.5**
CTAO	**Charters Tower**	**34.49**	**268**	*e*P	**P**	**14 56 38.2**	**+1.5**
	6.5nm,0.5s,mb4.7						
STKA	**Stephens Creek**	**37.82**	**247**	*e*P	**P**	**14 57 10.7**	**+5.8**
	3.3nm,0.6s,mb4.3						
STKA	**Stephens Creek**	**37.82**	**247**	P	**P**	**14 57 07.0**	**+2.2**
	4.5nm,0.6s,mb4.5,baz=74,slow=9.7,SNR=16						
STKA	**Stephens Creek**	**37.82**	**247**	*e*P	**P**	**14 57 10.4**	**+5.6**
ASAR	**Alice Springs**	**45.14**	**259**	P	**P**	**14 58 05.9**	**+1.1**
	8.2nm,0.8s,mb4.5,baz=97,slow=8.0,SNR=58						
WRAB	**Tennant Creek**	**45.46**	**264**	*e*P	**P**	**14 58 06.6**	**-0.8**
	2.5nm,0.3s,mb4.4						
WRA	**Warramunga Arr**	**45.47**	**264**	P	**P**	**14 58 06.9**	**-0.6**
	2.6nm,0.3s,mb4.4,baz=95,slow=7.9,SNR=68						
KAKA	**Kakadu**	**49.24**	**273**	*e*P	**P**	**14 58 35.7**	**-1.1**
	7.3nm,0.8s,mb4.7						
FITZ	**Fitzroy Crossi**	**53.89**	**264**	*e*P	**P**	**14 59 10.7**	**-0.7**
	5.4nm,0.6s,mb4.8						
FITZ	**Fitzroy Crossi**	**53.89**	**264**	P	**P**	**14 59 11.0**	**-0.4**
	1.9nm,0.5s,mb4.4,baz=83,slow=6.9,SNR=14						
MJAR	**Matsushiro Arr**	**72.96**	**323**	P	**P**	**15 01 15.8**	**-0.8**
	1.2nm,0.7s,mb3.9,baz=157,slow=5.1,SNR=3.9						
PETK	**Petropavlovsk-**	**79.04**	**345**	P	**P**	**15 01 52.3**	**+1.6**
	2.0nm,0.6s,mb4.2,baz=234,slow=7.1,SNR=8.8						
PLCA	**Paso Flores**	**87.67**	**33**	P	**P**	**15 02 30.6**	**-0.1**
	4.9nm,1.2s,mb4.3,baz=298,slow=1.7,SNR=3.5						
CMAR	**Chiang Mai Arr**	**92.07**	**289**	P	**P**	**15 02 55.5**	**-0.8**
	1.8nm,0.8s,mb4.3,baz=131,slow=3.2,SNR=14						
BVAR	**Borovoye Array**	**121.78**	**319**	PKP	PKPdf	15 08 40.8	+0.8
	0.5nm,0.4s,baz=117,slow=3.0,SNR=5.1						
ARCES	**ARCESS Array B**	**131.64**	**350**	PKP	PKPdf	15 08 58.6	+0.3
	3.3nm,0.9s,baz=25,slow=4.0,SNR=3.6						
HFS	**Hagfors**	**142.24**	**351**	PKhKP		15 09 15.8	
	0.8nm,0.3s,baz=49,slow=2.9,SNR=6.5						
AKASG	**Malin Array Be**	**145.81**	**330**	PKPbc	PKPbc	15 09 24.9	-0.5
	1.5nm,0.3s,baz=41,slow=4.1,SNR=4.4						
BR131	**Keskin Array S**	**149.40**	**310**	PKPbc	PKPbc	15 09 35.1	-0.4
BRTR	**Keskin Array B**	**149.40**	**310**	PKPbc	PKPbc	15 09 34.8	-0.8
	0.7nm,0.6s,baz=141,slow=5.3,SNR=4.7						
CLL	**Collm**	**150.81**	**347**	*e*PKPbc	PKPbc	15 09 42.0	+3.5
GERES	**GERESS Array B**	**152.97**	**345**	PKPbc	PKPbc	15 09 46.0	+2.5
	0.4nm,0.4s,baz=17,slow=3.6,SNR=3.1						
GERES	**GERESS Array B**	**152.97**	**345**	PKPbc	PKPbc	15 09 46.0	+2.5

NEIC ***10*** *14:54:27.8±2.1, 39.°32N×48.°98E, h26km±19km, mb4.1/6, MN4.5(TEH), Error ellipse: s-maj=7.1km s-min=3.7km az=192.0*
ISCJB ***10*** *14:54:27.5±0.3, 39.°27N±0.°03×49.°04E±0.°04, h48km±6km, mb3.9/15, Error ellipse: s-maj=6.5km s-min=2.8km az=44.5*
CSEM ***10*** *14:54:28.1±0.5, 39.°22N×48.°98E, h24km±5km, mb4.1/6, Error ellipse: s-maj=6.9km s-min=3.8km az=53.0*
TEH ***10*** *14:54:29.1, 39.°35N×48.°98E, h35km*
THR ***10*** *14:54:29.6±1.1, 38.°85N×48.°89E, h15km±9km, ML4.3*
MOS ***10*** *14:54:29.2±1.6, 39.°75N×49.°14E, h24km, mb4.2/5, Error ellipse: s-maj=9.4km s-min=6.2km az=117.0*
IDC ***10*** *14:54:30.9±1.3, 39.°61N×48.°96E, h37km±6km, mb3.8/12, mb1 4.0/17, mb1mx3.8/31, mbtmp3.9/17, ML4.4/3, Error ellipse: s-maj=25.3km s-min=10.8km az=172.0*
NNC ***10*** *14:54:37.7±10.0, 39.°29N×51.°91E, h0km, mb3.9, Error ellipse: s-maj=138.2km s-min=59.3km az=80.0*
ISC 10 14:54:28.7±0.7, 39.°27N±0.°03×49.°02E±0.°03, h32km±6km**, h39**km±1.1km**:pP-P,n166,**σ**1**§**14/190, mb3.9/15, 7C-5D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLBA	**Clilabad**	**0.49**	**267**	P	**Pb**	**14 54 37.8**	**-1.2**
	SNR=488						
GLBA				S	**Sb**	**14 54 45.4**	**-0.7**
ALIB	**Äli-Bayra**	**0.69**	**359**	P	**Pn**	**14 54 44.8**	**+2.6**
	SNR=117						
ALIB				S	**Sn**	**14 54 55.2**	**+3.4**
GRMI	**Germi**	**0.99**	**243**	*e*Pg	**Pn**	**14 54 44.8**	**-1.5**
GRMI	**Germi**	**0.99**	**243**	*e*Pg	**Pn**	**14 54 44.8**	**-1.6**
GOBA	**Gobu**	**1.26**	**26**	P	**Pn**	**14 54 53.4**	**+3.4**
	SNR=8.6						
NDR	**Nardaran**	**1.51**	**29**	P	**Pn**	**14 54 55.9**	**+2.4**
	SNR=4.8						
PQL	**Pirkuli**	**1.56**	**348**	P	**Pn**	**14 54 55.5**	**+1.4**
	SNR=136						
PQL				S	**Sn**	**14 55 16.0**	**+2.8**
IML	**Ismayilli**	**1.65**	**337**	P	**Pn**	**14 54 55.9**	**+0.4**
	SNR=118						
BRDA	**Brd**	**1.73**	**306**	P	**Pn**	**14 54 57.1**	**+0.5**
	SNR=28						
IHRS	**Heris**	**1.81**	**239**	Pn	**Pn**	**14 54 57.4**	**-0.3**
IHRS	**Heris**	**1.81**	**239**	*e*Pn	**Pn**	**14 54 57.5**	**-0.2**
IHRS				*e*		14 55 22.2	
	comp=Z,86μm,0.1s						
SEKA	**Sheki**	**2.39**	**325**	P	**Pn**	**14 55 05.6**	**0.0**
	SNR=192						
SEKA				S	**Sn**	**14 55 34.0**	**+0.2**
IFTB	**Fath-abad**	**2.41**	**240**	*e*Pn	**Pn**	**14 55 06.2**	**+0.4**
ITBZ	**Tabriz**	**2.47**	**246**	Pn	**Pn**	**14 55 06.8**	**0.0**
ITBZ	**Tabriz**	**2.47**	**246**	*e*Pn	**Pn**	**14 55 06.8**	**0.0**
ITBZ	**Tabriz**	**2.47**	**246**	*e*Pn	**Pn**	**14 55 06.8**	**0.0**
GANJ	**Ganja**	**2.49**	**304**	P	**Pn**	**14 55 06.1**	**-0.9**
	SNR=29						
GANJ				S	**Sn**	**14 55 35.3**	**-1.0**
ZNJK	**Zanjan**	**2.61**	**186**	*e*Pg	**Pn**	**14 55 08.8**	**+0.2**
ZNJK				AML	AML	14 55 48.7	
	comp=N,1μm,0.5s						
ZNJK				AML	AML	14 55 49.8	
	comp=E,983nm,0.2s						
ZNJK	**Zanjan**	**2.61**	**186**	*e*Pg	**Pn**	**14 55 08.8**	**+0.2**
IMRD	**Marand**	**2.65**	**259**	Pn	**Pn**	**14 55 09.2**	**+0.1**
IMRD	**Marand**	**2.65**	**259**	*e*	**Sb**	**14 55 51.8**	**+4.4**
	comp=Z,36μm,0.2s						
IMRD				*e*Pn	**Pn**	**14 55 09.2**	**+0.1**
NAX	**Nakhchivan**	**2.74**	**269**	P	**Pn**	**14 55 11.0**	**+0.6**
	SNR=30						
ISHB	**Shabestar**	**2.84**	**251**	Pn	**Pn**	**14 55 11.7**	**-0.1**
ISHB	**Shabestar**	**2.84**	**251**	*e*Pn	**Pn**	**14 55 11.7**	**-0.1**
ISHB				*e*		14 55 53.3	
	comp=Z,9μm,0.2s						
GNI	**Garni**	**3.42**	**286**	*e*PN	**Pn**	**14 55 23.4**	**+3.7**
GNI	**Garni**	**3.42**	**286**	Pn	**Pn**	**14 55 23.7**	**+4.0**
	comp=Z,6.9nm,0.3s,baz=22,slow=4.3,SNR=9.1						
GNI	**Garni**	**3.42**	**286**	*e*PN	**Pn**	**14 55 23.3**	**+3.6**
GNI	**Garni**	**3.42**	**286**	*e*Pn	**Pn**	**14 55 20.3**	**+0.5**
GNI	**Garni**	**3.42**	**286**	*e*Pn	**Pn**	**14 55 20.3**	**+0.6**
DGRG	**David-gareji**	**3.54**	**309**	P	**Pn**	**14 55 22.0**	**+0.6**
DGRG				S	**Sn**	**14 56 04.6**	**+2.5**
THKV	**Tehran--Karaj**	**3.66**	**156**	*e*Pn	**Pn**	**14 55 23.4**	**+0.3**
THKV				Sn	**Sn**	**14 56 03.3**	**-1.8**
THKV	**Tehran--Karaj**	**3.66**	**156**	*e*Pn	**Pn**	**14 55 23.4**	**+0.4**
CHTH	**Charan**	**3.75**	**153**	*e*Pn	**Pn**	**14 55 24.6**	**+0.4**
CHTH	**Charan**	**3.75**	**153**	*e*Pn	**Pn**	**14 55 24.6**	**+0.3**
IMHD	**Mahdasht**	**3.81**	**159**	Pn	**Pn**	**14 55 26.2**	**+1.1**
IMHD	**Mahdasht**	**3.81**	**159**	*e*Pn	**Pn**	**14 55 26.2**	**+1.1**
IMHD	**Mahdasht**	**3.81**	**159**	*e*Pn	**Pn**	**14 55 26.2**	**+1.1**
MAK	**Makhachkala**	**3.86**	**343**	PN	**Pn**	**14 55 28.2**	**+2.3**
MAK				*e*		14 56 14.4	
MAK				pmax	pmax		
	comp=Z,181nm,0.3s						
MAK				smax			
	comp=E,902nm,0.5s						
MAK				smax			
	comp=N,815nm,0.5s						
MAK	**Makhachkala**	**3.86**	**343**	Pn	**Pn**	**14 55 28.2**	**+2.3**
	comp=N,181nm,0.3s						
IRAZ	**Razeghan**	**3.92**	**169**	Pn	**Pn**	**14 55 26.4**	**-0.3**
IRAZ	**Razeghan**	**3.92**	**169**	*e*Pn	**Pn**	**14 55 26.5**	**-0.2**
IRAZ	**Razeghan**	**3.92**	**169**	Pn	**Pn**	**14 55 26.4**	**-0.3**
CLDR	**Caldiran**	**3.97**	**270**	*e*PN	**Pn**	**14 55 36.1**	**+8.8**
IPRN	**Peran**	**4.00**	**138**	Pn	**Pn**	**14 55 27.3**	**-0.5**
IPRN	**Peran**	**4.00**	**138**	*e*Pn	**Pn**	**14 55 27.4**	**-0.4**
IPRN				*e*		14 55 29.2	
	comp=Z,22μm,0.1s						
IPRN	**Peran**	**4.00**	**138**	Pn	**Pn**	**14 55 27.3**	**-0.5**
IAFJ	**Afjeh**	**4.02**	**147**	Pn	**Pn**	**14 55 28.9**	**+0.9**
IAFJ	**Afjeh**	**4.02**	**147**	*e*Pn	**Pn**	**14 55 28.9**	**+0.9**
IAFJ				*e*		14 55 33.0	
	comp=N,8μm,0.1s						
IAFJ	**Afjeh**	**4.02**	**147**	*e*Pn	**Pn**	**14 55 28.9**	**+0.9**
TBLG	**Delisi**	**4.09**	**308**	*e*PN	**Pn**	**14 55 28.7**	**-0.3**
TBLG	**Delisi**	**4.09**	**308**	P	**Pn**	**14 55 28.7**	**-0.3**
TBLG	**Delisi**	**4.09**	**308**	*e*Pn	**Pn**	**14 55 28.7**	**-0.3**
IR3	**Iran Long-Peri**	**4.11**	**157**	*e*Pn	**Pn**	**14 55 30.5**	**+1.3**
IR3				*e*		14 55 33.5	
	comp=Z,99nm,0.2s						
DAMV	**Damavand**	**4.32**	**146**	*e*Pn	**Pn**	**14 55 33.3**	**+1.1**
DAMV				AML	AML	14 56 24.3	
	comp=N,135nm,0.3s						
DAMV	**Damavand**	**4.32**	**146**	*e*Pn	**Pn**	**14 55 33.3**	**+1.1**
IALA	**Alasht**	**4.37**	**135**	*e*	**Pn**	**14 55 32.8**	**-0.1**
	comp=Z,12μm,0.1s						
SNGE	**Sanandaj**	**4.38**	**198**	*e*Pn	**Pn**	**14 55 31.8**	**-1.1**
IDMV	**Damavand**	**4.39**	**146**	Pn	**Pn**	**14 55 34.2**	**+1.0**
IDMV	**Damavand**	**4.39**	**146**	*e*Pn	**Pn**	**14 55 34.2**	**+1.0**
IDMV				*e*		14 55 36.8	
	comp=Z,3μm,0.2s						
VANB	**Van**	**4.44**	**263**	*e*PN	**Pb**	**14 55 45.0**	**-1.0**
GOR	**Gori**	**4.62**	**308**	P	**Pn**	**14 55 37.3**	**+1.0**
AGRB	**Hanur-Agry**	**4.68**	**276**	*e*PN	**Pn**	**14 55 44.4**	**+7.4**
IFIR	**Firoozkooh**	**4.68**	**139**	Pn	**Pn**	**14 55 38.0**	**+0.9**
IFIR	**Firoozkooh**	**4.68**	**139**	*e*Pn	**Pn**	**14 55 38.1**	**+1.0**
IFIR				*e*		14 55 40.6	
	comp=Z,7μm,0.1s						
IFIR	**Firoozkooh**	**4.68**	**139**	*e*Pn	**Pn**	**14 55 38.1**	**+1.0**
IGLO	**Ghaloghah**	**4.70**	**124**	Pn	**Pn**	**14 55 37.2**	**-0.2**
IGLO	**Ghaloghah**	**4.70**	**124**	*e*Pn	**Pn**	**14 55 37.2**	**-0.2**
IGLO				*e*		14 55 39.5	
	comp=Z,13μm,0.1s						
IGLO	**Ghaloghah**	**4.70**	**124**	*e*Pn	**Pn**	**14 55 37.2**	**-0.2**
ASAO	**Ashtian**	**4.78**	**170**	*e*Pn	**Pn**	**14 55 38.3**	**-0.2**
ASAO	**Ashtian**	**4.78**	**170**	*e*Pn	**Pn**	**14 55 37.9**	**-0.6**
IVRN	**Varamin**	**4.78**	**152**	Pn	**Pn**	**14 55 39.2**	**+0.7**
IVRN	**Varamin**	**4.78**	**152**	*e*Pn	**Pn**	**14 55 39.2**	**+0.7**
IVRN				*e*		14 55 47.1	
	comp=Z,1μm,0.1s						
IVRN	**Varamin**	**4.78**	**152**	*e*Pn	**Pn**	**14 55 39.2**	**+0.7**
KEH	**Kehvi**	**4.91**	**310**	P	**Pn**	**14 55 39.4**	**-0.8**
KEH				S	**Sn**	**14 56 34.9**	**-1.1**
GHVR	**GHOM**	**5.11**	**158**	*e*Pn	**Pn**	**14 55 43.4**	**+0.3**
ZEI	**Tsey**	**5.22**	**314**	*e*PN	**Pn**	**14 55 45.9**	**+1.4**
ZEI				*e*S	**Sn**	**14 56 45.9**	**+2.3**
ZEI				pmax	pmax		
	comp=Z,139nm,0.5s						
ZEI				smax			
	comp=N,188nm,0.8s						
ZEI				smax			
	comp=E,234nm,0.7s						
ZEI	**Tsey**	**5.22**	**314**	*e*Pn	**Pn**	**14 55 45.9**	**+1.4**
	comp=E,139nm,0.5s						
ZEI				*e*Sn	**Sn**	**14 56 45.9**	**+2.3**
	comp=E,188nm,0.8s						
KORR	**Kora**	**5.34**	**317**	*e*PN	**Pn**	**14 55 46.4**	**+0.3**
KORR	**Kora**	**5.34**	**317**	*e*Pn	**Pn**	**14 55 46.4**	**+0.3**
ONI	**Oni**	**5.37**	**310**	P	**Pn**	**14 55 47.3**	**+0.8**
ONI				S	**Sn**	**14 56 49.4**	**+2.2**
ISFB	**Sefidab**	**5.54**	**151**	Pn	**Pn**	**14 55 49.9**	**+0.9**
ISFB	**Sefidab**	**5.54**	**151**	*e*Pn	**Pn**	**14 55 50.0**	**+1.0**
ISFB				*e*		14 56 02.3	
	comp=Z,505nm,0.1s						
KUBR	**Kubataba**	**6.18**	**319**	*e*P	**Pn**	**14 55 58.0**	**+0.3**
IKLH	**Kolahrood**	**6.29**	**160**	Pn	**Pn**	**14 55 59.9**	**+0.7**
IKLH	**Kolahrood**	**6.29**	**160**	*e*Pn	**Pn**	**14 56 00.0**	**+0.8**
IKLH				*e*		14 56 00.8	
	comp=Z,584nm,0.1s						
SHAR	**Shatzhatmas**	**6.54**	**315**	*i* P	**Pn**	**14 56 03.7**	**+1.1**
KIV	**Kislovodsk**	**6.67**	**317**	*e*P	**Pn**	**14 56 03.8**	**-0.6**
KIV	**Kislovodsk**	**6.67**	**317**	*e*Pn	**Pn**	**14 56 03.8**	**-0.6**
IPIR	**Pirpir**	**6.74**	**166**	Pn	**Pn**	**14 56 07.0**	**+1.6**
IPIR	**Pirpir**	**6.74**	**166**	*e*	**Pn**	**14 56 09.0**	**+3.6**
	comp=Z,286nm,0.2s						
IPIR				*e*Pn	**Pn**	**14 56 07.0**	**+1.6**
BJRD	**Bojnurd**	**6.76**	**101**	*e*Pn	**Pn**	**14 56 10.9**	**+5.3**
BJRD				AML	AML	14 57 28.6	
	comp=N,136nm,0.6s						
BJRD				AML	AML	14 57 31.2	
	comp=E,173nm,0.5s						
BJRD	**Bojnurd**	**6.76**	**101**	*e*Pn	**Pn**	**14 56 10.9**	**+5.2**
ISHV	**Shirvan**	**7.03**	**102**	Pn	**Pn**	**14 56 09.3**	**-0.1**
ISHV				Sn	**Sn**	**14 57 23.6**	**-4.6**
ISHV	**Shirvan**	**7.03**	**102**	*e*Pn	**Pn**	**14 56 09.3**	**-0.1**
ISHV				*e*Sn	**Sn**	**14 57 23.7**	**-4.5**
ISHV				*e*		14 57 31.2	
	comp=Z,3μm,0.2s						
ISFR	**Sfrayin**	**7.41**	**105**	Pn	**Pn**	**14 56 14.3**	**-0.3**
ISFR	**Sfrayin**	**7.41**	**105**	*e*Pn	**Pn**	**14 56 14.3**	**-0.3**
ISFR				*e*		14 57 40.3	
	comp=Z,3μm,0.2s						
IKRD	**Kardeh**	**7.89**	**105**	Pn	**Pn**	**14 56 31.1**	**+10**
IKRD	**Kardeh**	**7.89**	**105**	*e*Pn	**Pn**	**14 56 31.1**	**+10**
IKRD				*e*		14 58 16.9	
	comp=Z,694nm,0.1s						
IAKL	**Akhelmad**	**8.14**	**106**	Pn	**Pn**	**14 56 24.0**	**-0.6**
IAKL	**Akhelmad**	**8.14**	**106**	*e*Pn	**Pn**	**14 56 24.0**	**-0.6**
IAKL				*e*		14 58 03.8	
	comp=Z,614nm,0.2s						
IPAY	**Payeh**	**8.38**	**107**	Pn	**Pn**	**14 56 27.5**	**-0.3**
IPAY	**Payeh**	**8.38**	**107**	*e*Pn	**Pn**	**14 56 27.5**	**-0.3**
IPAY				*e*		14 56 30.1	
	comp=Z,879nm,0.1s						
IMOG	**Moghan**	**8.77**	**108**	Pn	**Pn**	**14 56 34.0**	**+0.8**
IMOG	**Moghan**	**8.77**	**108**	*e*Pn	**Pn**	**14 56 34.0**	**+0.8**
IMOG				*e*		14 56 35.7	
	comp=Z,929nm,0.1s						
ISRO	**Mashad**	**8.78**	**106**	*e*Pn	**Pn**	**14 56 32.4**	**-1.0**
ISRO				*e*Sn	**Sn**	**14 58 05.1**	**-6.2**
ISRO				*e*		14 58 14.6	
	comp=E,363nm,0.3s						
IMYA	**Miami**	**9.24**	**105**	Pn	**Pn**	**14 56 39.1**	**-0.6**
IMYA	**Miami**	**9.24**	**105**	*e*Pn	**Pn**	**14 56 39.2**	**-0.5**
IMYA				*e*		14 58 41.9	
	comp=Z,279nm,0.2s						
ANN	**Anapa**	**10.24**	**306**	*e*P	**Pn**	**14 56 53.9**	**+0.6**
ANN				*e*S	**Sn**	**14 58 40.8**	**-6.1**
ANN				pmax	pmax		
	comp=Z,12nm,0.6s						
BRTR	**Keskin Array B**	**11.90**	**277**	Pn	**Pn**	**14 57 21.9**	**+5.9**
	comp=Z,0.1nm,0.3s,baz=134,slow=12,SNR=2.1						
AB31	**Akbulak array**	**12.67**	**34**	Pn	**Pn**	**14 57 23.7**	**-2.9**
	comp=Z,1.9nm,0.4s,baz=205,slow=13,SNR=126						
AB31				⇓Sn	**Sn**	**14 59 38.2**	**-8.2**
	comp=Z,1.8nm,0.3s,baz=212,slow=25,SNR=7.1						
AB31	**Akbulak array**	**12.67**	**34**	Pn	**Pn**	**14 57 23.7**	**-2.9**
	comp=Z,1.9nm,0.4s,SNR=126						
AB31				Sn	**Sn**	**14 59 38.2**	**-8.2**
	comp=Z,1.8nm,0.3s,SNR=7.1						
AKTK	**Aktyubinsk**	**12.85**	**27**	Pn	**Pn**	**14 57 25.1**	**-3.9**
AKTK				Sn	**Sn**	**14 59 40.0**	**-11**
AKTO	**Aktyubinsk**	**12.85**	**27**	⇑Pn	**Pn**	**14 57 25.3**	**-3.6**
	comp=Z,0.5nm,0.3s						
AKTO				⇓Sn	**Sn**	**14 59 39.9**	**-11**
	comp=Z,1.4nm,0.6s						
AKTO	**Aktyubinsk**	**12.85**	**27**	Pn	**Pn**	**14 57 25.1**	**-3.9**
	comp=Z,3.2nm,0.3s,baz=196,slow=12,SNR=17						
AKTO				Sn	**Sn**	**14 59 40.0**	**-11**
	comp=Z,1.6nm,0.3s,baz=317,slow=22,SNR=7.0						
AKTO	**Aktyubinsk**	**12.85**	**27**	Pn	**Pn**	**14 57 25.3**	**-3.6**

EKA	**Eskdalemuir Ar**	37.88	313	P	P	15 01 41.0	-1.4
	comp=Z,1.2nm,0.6s,mb3.8,baz=98,slow=8.6,SNR=4.6						
SPITS	**Spitsbergen Ar**	41.27	350	P	P	15 02 10.6	+0.2
	comp=Z,3.2nm,0.8s,mb4.0,baz=146,slow=21,SNR=2.8						
KMBO	**Kilima Mbogo**	41.63	198	*i* P	P	15 02 22.2	+8.2
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KSRS	**Korea Array**	59.96	64	P	P	15 04 31.6	-0.3
	comp=Z,0.5nm,0.4s,mb3.9,baz=291,slow=6.4,SNR=4.4						
KSRS	**Korea Array**	59.96	64	P	P	15 04 31.6	-0.3
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
YKA	**Yellowknife Ar**	77.73	352	P	P	15 06 22.8	+0.9
	comp=Z,0.2nm,0.4s,mb3.4,baz=7.1,slow=5.6,SNR=3.3						

*THE **10** 14:58:25.7, 37.°86N×21.°46E, h17km, ML3.3/6, Error ellipse: s-maj=0.8km s-min=0.4km az=344.0*
*CSEM **10** 14:58:25.7±0.2, 37.°86N×21.°44E, h20km, MD3.0, Error ellipse: s-maj=3.6km s-min=2.7km az=85.0*
*ATH **10** 14:58:25.1, 37.°90N×21.°44E, h30km±1km, MD3.0/9*
*ISCJB **10** 14:58:25.9±0.4, 37.°87N±0.°03×21.°43E±0.°03, h26km±4km, Error ellipse: s-maj=4.6km s-min=3.9km az=28.3*

ISC 10 14:58:25.7±0.6, 37.°86N±0.°02×21.°43E±0.°03, h20km±4km, n43, σ0.89/77, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	0.20	7	*e*PB	Pg	14 58 30.7	-0.1
RLS				*e*SB	Sg	14 58 34.6	+0.3
RLS	**Riolos of Patr**	0.20	7	*e*Pb	Pg	14 58 30.7	-0.1
RLS				*e*Sb	Sg	14 58 34.6	+0.3
UPR	**University Cam**	0.51	33	P	Pb	14 58 35.6	-0.3
UPR				S	Sb	14 58 43.1	+0.3
UPR	**University Cam**	0.51	33	*e*PB	Pb	14 58 36.1	+0.2
UPR				*e*SB	Sb	14 58 43.8	+1.0
UPR	**University Cam**	0.51	33	P	Pb	14 58 35.6	-0.3
UPR	**University Cam**	0.51	33	*e*Pb	Pb	14 58 36.1	+0.2
UPR				S	Sb	14 58 43.1	+0.3
UPR				*e*Sb	Sb	14 58 43.8	+1.0
KFL	**Anninata**	0.57	296	P	Pb	14 58 37.0	+0.1
KFL				S	Sb	14 58 46.0	+1.4
LAKA	**Lakka**	0.57	48	P	Pb	14 58 36.4	-0.6
LAKA				S	Sb	14 58 45.2	+0.5
LAKA	**Lakka**	0.57	48	P	Pb	14 58 36.4	-0.6
LAKA				S	Sb	14 58 45.2	+0.5
EFP	**Efpalio**	0.68	33	P	Pb	14 58 38.2	-0.6
EFP				S	Sb	14 58 48.5	+0.8
EFP	**Efpalio**	0.68	33	*e*PN	Pn	14 58 38.3	-1.8
EFP				*e*SN	Sn	14 58 48.0	-2.1
EFP	**Efpalio**	0.68	33	P	Pb	14 58 38.2	-0.6
EFP				*e*Sn	Sn	14 58 48.0	-2.1
EFP				S	Sb	14 58 48.5	+0.8
TRIZ	**Trizonia**	0.71	45	P	Pb	14 58 38.7	-0.7
TRIZ				S	Sb	14 58 49.3	+0.5
TRIZ	**Trizonia**	0.71	45	P	Pb	14 58 38.7	-0.7
TRIZ				S	Sb	14 58 49.3	+0.5
GUR	**Goura**	0.72	84	P	Pb	14 58 38.9	-0.7
GUR				S	Sb	14 58 49.7	+0.7
GUR	**Goura**	0.72	84	*e*PN	Pn	14 58 39.0	-1.7
GUR				*e*SN	Sn	14 58 50.1	-1.1
GUR	**Goura**	0.72	84	P	Pb	14 58 38.9	-0.7
GUR				S	Sb	14 58 49.7	+0.7
GUR				*e*Sn	Sn	14 58 50.1	-1.1
VLS	**Valsamata**	0.74	296	P	Pb	14 58 39.6	-0.2
VLS				S	Sn	14 58 51.2	-0.4
VLS	**Valsamata**	0.74	296	*e*PN	Pn	14 58 39.4	-1.6
VLS				*e*SN	Sn	14 58 51.2	-0.4
VLS	**Valsamata**	0.74	296	P	Pb	14 58 39.6	-0.2
VLS				S	Sn	14 58 51.2	-0.4
KALE	**Kalithea**	0.77	46	P	Pb	14 58 39.6	-0.8
KALE				S	Sb	14 58 51.3	+0.9
KALE	**Kalithea**	0.77	46	P	Pb	14 58 39.6	-0.8
KALE				S	Sb	14 58 51.3	+0.9
ITM	**Ithomi**	0.79	150	P	Pb	14 58 40.8	+0.2
ITM				S	Sb	14 58 51.4	+0.6
ITM	**Ithomi**	0.79	150	*e*PN	Pn	14 58 41.1	-0.5
ITM				*e*SN	Sn	14 58 53.7	+0.9
ITM	**Ithomi**	0.79	150	P	Pb	14 58 40.8	+0.2
ITM	**Ithomi**	0.79	150	*e*Pn	Pn	14 58 41.1	-0.5
ITM				S	Sb	14 58 51.4	+0.6
ITM				*e*Sn	Sn	14 58 53.7	+0.9
VLX	**Vlachokerasia**	0.90	123	P	Pb	14 58 43.1	+0.6
VLX	**Vlachokerasia**	0.90	123	*e*PN	Pn	14 58 43.5	+0.4
VLX				*e*SN	Sn	14 58 55.8	+0.3
VLX	**Vlachokerasia**	0.90	123	P	Pb	14 58 43.1	+0.6
VLX	**Vlachokerasia**	0.90	123	*e*Pn	Pn	14 58 43.5	+0.4
VLX				*e*Sn	Sn	14 58 55.8	+0.3
PYL	**PYLOS**	0.99	166	P	Pb	14 58 44.3	+0.1
PYL	**PYLOS**	0.99	166	*e*PN	Pn	14 58 44.7	+0.2
PYL	**PYLOS**	0.99	166	P	Pb	14 58 44.3	+0.1
PYL	**PYLOS**	0.99	166	*e*Pn	Pn	14 58 44.7	+0.2
DSF	**Desfina**	1.02	57	P	Pb	14 58 43.9	-0.8
DSF				S	Sb	14 58 58.8	+1.1
DSF	**Desfina**	1.02	57	P	Pb	14 58 43.9	-0.8
DSF				S	Sb	14 58 58.8	+1.1
LKD2	**Lefkada island**	1.11	327	P	Pb	14 58 45.6	-0.5
LKD2				S	Sb	14 59 01.7	+1.5
LKD2	**Lefkada island**	1.11	327	P	Pb	14 58 45.6	-0.5
LKD2				S	Sb	14 59 01.7	+1.5
LTK	**Loutraki**	1.22	82	P	Pn	14 58 48.0	+0.4
LTK	**Loutraki**	1.22	82	*e*PN	Pn	14 58 47.9	+0.3
LTK	**Loutraki**	1.22	82	P	Pn	14 58 48.0	+0.4
AGG	**Agios Georgios**	1.36	31	P	Pn	14 58 51.2	+1.7
AGG	**Agios Georgios**	1.36	31	P	Pn	14 58 51.2	+1.7

*IDC **10** 15:06:20.6±0.7, 33.°09N×92.°10E, h0km, mb4.1/13, mb1 4.2/15, mb1mx4.0/29, mbtmp4.0/15, ML3.6/2, MS3.6/1, Ms1 3.6/1, ms1mx2.7/36, Error ellipse: s-maj=39.5km s-min=14.6km az=53.0*
*ISCJB **10** 15:06:20.6±0.4, 33.°17N±0.°05×92.°24E±0.°06, h10km, mb4.2/17, Error ellipse: s-maj=8.5km s-min=5.6km az=32.2*
*BJI **10** 15:06:22.9, 33.°01N×92.°16E, h11km, mb3.8/4, ML3.9/3, Ms3.6/3, Ms7 3.2/2*
*NEIC **10** 15:06:22.5±0.4, 33.°22N×92.°31E, h10km, mb4.0/8, Error ellipse: s-maj=9.9km s-min=6.8km az=98.0*

ISC 10 15:06:22.7±0.4, 33.°23N±0.°04×92.°29E±0.°08, h10km, n42, σ0.99/44, mb4.2/17, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	3.65	196	Pg	Pn	15 07 22.7	+3.4
LSA				Sg	Sb	15 08 12.3	+0.6
LSA				smax			
	comp=E,270nm,1.0s						
LSA	**Lhasa**	3.65	196	*e*Pn	Pn	15 07 22.4	+3.1
SHL	**Shillong**	7.64	183	*e*PKP	Pn	15 08 19.0	+4.9
SHL				*e*S	Sn	15 09 36.0	-4.8
JIRN	**Jiri**	7.65	225	*e*P	Pn	15 08 13.3	-0.9
	comp=E,33nm,0.7s						
GUN	**Gumba**	7.66	228	*e*P	Pn	15 08 14.3	0.0
	comp=E,27nm,0.5s						
KKN	**Kakani**	8.12	230	*e*P	Pn	15 08 21.5	+0.8
	comp=E,23nm,0.6s						
PKI	**Pulchoki**	8.19	228	*e*P	Pn	15 08 21.4	-0.2
	comp=E,20nm,0.5s						
PKI	**Pulchoki**	8.19	228	*e*P	Pn	15 08 21.6	0.0
	comp=E,34nm,0.6s						
PKIN	**Phulchoki**	8.20	228	*e*P	Pn	15 08 21.6	-0.1
	comp=E,34nm,0.6s						
PKIN	**Phulchoki**	8.20	228	*e*P	Pn	15 08 21.8	+0.1
	comp=E,20nm,0.5s						
DMN	**Daman**	8.36	230	*e*P	Pn	15 08 24.3	+0.4
	comp=E,21nm,0.6s						
GTA	**Gaotai**	8.65	42	*e*P	Pn	15 08 32.5	+4.6
GTA				pP		15 08 35.3	
GTA				sP		15 08 38.2	
GTA				S	Sn	15 10 09.7	+4.2
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				LR	LR		
	comp=N,230nm,10.1s						
GTA				LR	LR		
	comp=E,160nm,9.2s						
GTA				LR	LR		
	comp=Z,190nm,9.8s						
MK31	**Makanchi Array**	15.54	334	*e*P	Pn	15 09 57.0	-4.9
MKAR	**Makanchi Array**	15.54	334	Pn	Pn	15 10 00.7	-1.1
	comp=Z,0.3nm,0.3s,baz=136,slow=13,SNR=6.4						
CMAR	**Chiang Mai Arr**	15.87	156	Pn	Pn	15 10 04.0	-2.2
	comp=Z,0.1nm,0.3s,baz=330,slow=12,SNR=17						
TKM2	**Tokmak 2**	16.30	311	*e*P	Pn	15 10 11.3	-0.3
	comp=Z,5.7nm,1.1s						
AAK	**Ala-Archa**	16.86	309	LR	LR	15 17 51.4	
	comp=Z,215nm,19.4s,baz=17,slow=41						
AAK	**Ala-Archa**	16.86	309	*e*P	Pn	15 10 22.9	+4.2
	comp=Z,2.4nm,0.5s						
EKS2	**Erkin-Say**	17.35	308	P	Pn	15 10 26.8	+2.0
	comp=Z,3.7nm,0.7s						
SONM	**Songino Array**	18.06	32	P	Pn	15 10 31.7	-1.9
	comp=Z,0.6nm,0.3s,baz=320,slow=25,SNR=4.6						
KBL	**Kabul**	19.34	280	*e*P	Pn	15 10 48.5	-0.8
	comp=Z,7.1nm,0.9s						
KURK	**Kurchatov**	20.16	334	P	P	15 10 56.1	-0.9
	comp=Z,3.9nm,0.7s,baz=146,slow=10,SNR=20						
KURK	**Kurchatov**	20.16	334	*e*P	P	15 10 57.8	+0.9
ZAA0	**Zalesovo Array**	21.38	348	*e*P	P	15 11 10.6	+0.4
ZALV	**Zalesovo Beam**	21.38	348	P	P	15 11 10.7	+0.5
	comp=Z,6.0nm,0.9s,mb3.9,baz=129,slow=10,SNR=12						
BVAR	**Borovoye Array**	25.26	328	P	P	15 11 49.4	+0.6
	comp=Z,1.8nm,0.6s,mb3.8,baz=129,slow=11,SNR=14						
BRVK	**Borovoye**	25.33	328	*e*P	P	15 11 49.5	+0.1
	comp=Z,2.5nm,0.6s,mb3.9						
AKTK	**Aktyubinsk**	30.43	315	P	P	15 12 35.4	+0.3
AKTO	**Aktyubinsk**	30.43	315	P	P	15 12 35.4	+0.3
	comp=Z,3.4nm,0.7s,mb4.2,baz=114,slow=8.7,SNR=16						
BRTR	**Keskin Array B**	46.88	296	P	P	15 14 52.4	-0.8
	comp=Z,2.5nm,0.8s,mb4.2,baz=91,slow=7.4,SNR=13						
ARCES	**ARCESS Array B**	51.19	335	P	P	15 15 25.7	0.0
	comp=Z,1.5nm,0.8s,mb4.0,baz=81,slow=7.7,SNR=6.6						
HFS	**Hagfors**	56.28	324	P	P	15 16 02.5	-0.6
	comp=Z,2.5nm,0.7s,mb4.3,baz=96,slow=9.3,SNR=4.4						
NOA	**NORSAR Array B**	57.34	325	P	P	15 16 10.3	-0.3
	comp=Z,1.6nm,0.8s,mb4.1,baz=46,slow=24,SNR=3.6						
GERES	**GERESS Array B**	58.74	311	P	P	15 16 20.2	-0.4
	comp=Z,0.4nm,0.5s,mb3.7,baz=49,slow=11,SNR=4.3						
WRAB	**Tennant Creek**	66.38	137	*e*P	P	15 17 11.7	-0.3
	comp=Z,6.0nm,1.0s,mb4.6						
WRA	**Warramunga Arr**	66.38	137	P	P	15 17 12.0	+0.1
	comp=Z,2.9nm,0.9s,mb4.3,baz=331,slow=6.9,SNR=14						
ASAR	**Alice Springs**	69.09	139	P	P	15 17 29.2	+0.2
	comp=Z,3.9nm,0.8s,mb4.4,baz=327,slow=6.7,SNR=39						
COLD	**Coldfoot**	69.41	22	*e*P	P	15 17 31.4	+1.0
	comp=Z,2.8nm,0.8s,mb4.2						
PPLA	**Purkeypile**	71.37	26	*e*P	P	15 17 44.4	+1.9
	comp=Z,25nm,0.8s,mb5.2						
EGAK	**Eagle**	73.81	21	*e*P	P	15 17 58.0	+1.1
	comp=Z,1.9nm,0.8s,mb4.1						
YKA	**Yellowknife Ar**	82.19	12	P	P	15 18 42.7	-0.8
	comp=Z,1.0nm,0.7s,mb3.8,baz=335,slow=5.2,SNR=10.0						
TORD	**Torodi Ar. Bea**	83.41	281	P	P	15 18 48.0	-2.7
	comp=Z,1.1nm,0.6s,mb4.0,baz=44,slow=4.7,SNR=8.6						

*DDA **10** 15:16:06.4, 38.°66N×39.°67E, h7km±5km, Md3.5*
*ISK **10** 15:16:07.4, 38.°62N×39.°66E, h8km, MD3.2*
*CSEM **10** 15:16:07.7±0.1, 38.°62N×39.°63E, h8km, MD3.2, Error ellipse: s-maj=3.7km s-min=2.7km az=54.0*
*ISCJB **10** 15:16:07.3±0.6, 38.°63N±0.°03×39.°65E±0.°03, h1km±6km, Error ellipse: s-maj=5.7km s-min=3.8km az=33.5*

ISC 10 15:16:07.8±0.6, 38.°64N±0.°03×39.°66E±0.°04, h4km±5km, n32, σ1.14/47, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTK	**Pertek**	0.33	321	PG	Pg	15 16 14.5	+0.4
PTK				SG	Sg	15 16 20.0	+1.6
PTK	**Pertek**	0.33	321	*i* Pg	Pg	15 16 14.5	+0.4
PTK				*i* Sg	Sg	15 16 20.0	+1.6
SVRC	**Sivrice-ELAZID**	0.38	227	PG	Pg	15 16 14.8	-0.2
SVRC				SG	Sg	15 16 21.2	+1.3
SVRC	**Sivrice-ELAZID**	0.38	227	*i* Pg	Pg	15 16 14.8	-0.2
SVRC				*i* Sg	Sg	15 16 21.2	+1.3
ELZG	**Elazig**	0.54	256	*i* P	Pg	15 16 16.9	-1.4
ELZG				*i* S	Sg	15 16 23.1	-2.2
ELZG	**Elazig**	0.54	256	*i* P	Pg	15 16 16.9	-1.3
ELZG				*i* S	Sg	15 16 23.1	-2.2
BINT	**Bingol**	0.69	70	*e*PG	Pg	15 16 21.3	+0.2
BINT	**Bingol**	0.69	70	*e*Pg	Pg	15 16 21.3	+0.2
DIYA	**Diyarbakir**	0.80	153	*i* P	Pg	15 16 22.6	-0.5
DIYA				*i* S	Sg	15 16 34.6	+1.1
DIYA	**Diyarbakir**	0.80	153	*i* P	Pg	15 16 22.6	-0.5
DIYA				*i* S	Sg	15 16 34.6	+1.1
DIY	**Diyarbakir**	0.86	148	*e*PG	Pg	15 16 24.2	-0.2
DIY				*e*SG	Sg	15 16 36.6	+1.1
DIY	**Diyarbakir**	0.86	148	*e*Pg	Pg	15 16 24.2	-0.2
DIY				*e*Sg	Sg	15 16 36.6	+1.0
MYA	**Malataya**	1.01	253	*e*PG	Pg	15 16 26.6	-0.6
MYA	**Malataya**	1.01	253	*e*Pg	Pg	15 16 26.6	-0.6
KEMA	**Kemaliye**	1.10	305	*i* P	Pg	15 16 27.4	-1.6
KEMA				*i* S	Sg	15 16 43.7	+0.4
KEMA	**Kemaliye**	1.10	305	*i* P	Pg	15 16 27.4	-1.6
KEMA				*i* S	Sg	15 16 43.7	+0.4
EZC	**Erzincan**	1.12	6	*e*PN	Pn	15 16 29.9	-0.4
URFA	**Urfa**	1.36	209	*e*PN	Pn	15 16 33.1	-0.4
URFA	**Urfa**	1.36	209	*e*Pn	Pn	15 16 33.2	-0.4
AKCD	**Akcadag**	1.40	257	*i* P	Pn	15 16 31.7	-2.4
AKCD				*i* S	Sb	15 16 54.7	+2.0
AKCD	**Akcadag**	1.40	257	*i* P	Pn	15 16 31.7	-2.4
AKCD				*i* S	Sb	15 16 54.7	+2.0
BEST	**Besiri**	1.47	120	*i* P	Pn	15 16 34.1	-1.0
BEST				*i* S	Sn	15 16 55.2	+0.4
DARE	**Darende-Malaty**	1.48	283	*e*PN	Pn	15 16 38.2	+3.0
BTMT	**Batman**	1.51	106	*e*PN	Pn	15 16 34.1	-1.4
GUMT	**Gumushane**	1.83	356	*e*PN	Pn	15 16 40.5	+0.6
GUMT	**Gumushane**	1.83	356	*e*Pn	Pn	15 16 40.5	+0.5
EZM	**Erzurum**	1.83	46	*e*PN	Pn	15 16 40.2	+0.1
SARI	**SarD1z-Kayseri**	2.32	272	*e*PN	Pn	15 16 50.4	+3.7
GAZ	**Gaziantep**	2.42	234	*e*PN	Pn	15 16 48.3	+0.2
GAZ	**Gaziantep**	2.42	234	*e*Pn	Pn	15 16 48.3	+0.2
SVSK	**Karacayir**	2.43	303	*e*PN	Pn	15 16 48.7	+0.5
SVSK	**Karacayir**	2.43	303	*e*Pn	Pn	15 16 48.7	+0.5

*IDC **10** 15:34:23.7±1.5, 0.°18N×126.°24E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.4/20, mbtmp3.5/4, MS3.6/1, Ms1 3.6/1, ms1mx2.4/18, Error ellipse: s-maj=166.6km s-min=21.9km az=67.0*
*DJA **10** 15:34:25, 0.°99N×126.°05E, h140km, MLv3.3/6*
*ISCJB **10** 15:34:26.7±0.8, 0.°26N±0.°10×126.°17E±0.°07, h33km, mb3.5/4, Error ellipse: s-maj=14.0km s-min=9.4km az=167.8*

ISC 10 15:34:29.0±0.8, 0.°2N±0.°1×126.°24E±0.°07, h35km, n11, σ0.93/10, mb3.4/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	1.27	62	P	Pn	15 34 50.7	+0.4
LBMI	**Labuha**	1.49	122	P	Px	15 35 00.5	
LBMI				S	Sx	15 35 33.9	
MNI	**Manado**	1.90	312	P	Pn	15 34 53.9	-4.9
LUWI	**Luwuk**	3.67	251	P	Pn	15 35 24.7	+1.4
LUWI				S	Sn	15 36 06.0	+0.6
MRSI	**Marisa**	4.32	274	P	Pn	15 35 27.6	-4.5
APSI	**Ampana**	4.72	257	P	Pn	15 35 35.5	-2.2
WRA	**Warramunga Arr**	21.50	159	P	P	15 39 14.8	0.0
	1.1nm,0.9s,mb3.2,baz=338,slow=11,SNR=6.4						
ASAR	**Alice Springs**	24.83	163	P	P	15 39 47.8	-0.3
	0.4nm,0.7s,mb3.0,baz=345,slow=10,SNR=12						
ASAJ	**Asahikawa**	46.13	16	LR	LR	15 59 31.3	
	comp=Z,76nm,21.8s,slow=33						
MKAR	**Makanchi Array**	60.22	327	P	P	15 44 33.2	-0.4
	0.3nm,0.3s,mb3.9,baz=108,slow=9.5,SNR=4.2						
ZALV	**Zalesovo Beam**	63.55	334	P	P	15 44 56.1	+0.3
	0.3nm,0.4s,mb3.7,baz=148,slow=8.5,SNR=2.2						

*IDC **10** 15:41:13.2±1.5, 22.°27S×67.°31W, h148km±14km, mb4.2/6, mb1 4.1/10, mb1mx3.9/17, mbtmp3.9/10, Error ellipse: s-maj=17.7km s-min=12.0km az=81.0*
*ISCJB **10** 15:41:13.6±0.6, 22.°26S±0.°05×67.°36W±0.°07, h168km±7km, mb4.0/7, Error ellipse: s-maj=10.8km s-min=7.5km az=2.7*
*NEIC **10** 15:41:14.2±0.8, 22.°32S×67.°35W, h158km±8km, mb4.7/2, Error ellipse: s-maj=13.9km s-min=8.9km az=99.0*
*GUC **10** 15:41:16.0±0.8, 22.°09S×67.°77W, h194km±18km, ML4.7*

ISC 10 15:41:14.5±0.6, 22.°25S±0.°05×67.°33W±0.°07, h159km±7km, n31, σ1.02/37, mb4.0/7, 5C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	2.00	269⇑	*i* P	Pn	15 41 58.0	+7.9
PB04				*i* S	Sn	15 42 29.2	+12
PB04				AML	AML	15 42 32.0	
	comp=N,2μm,0.2s						
PECH	**Pedro de Valdi**	2.20	260⇑	*i* P	Pn	15 41 53.6	+1.2
PECH				*i* S	Sn	15 42 22.0	+0.4
PECH				AML	AML	15 42 23.5	
	comp=E,5μm,0.3s						
MACH	**Maria Elena**	2.25	271⇓	*i* P	Pn	15 41 54.3	+1.3
MACH				*i* S	Sn	15 42 22.9	+0.2
PB01	**Plate Boundary**	2.34	300⇑	*i* P	Pn	15 41 55.3	+1.2
PB01				*i* S	Sn	15 42 24.6	0.0
PB01				AML	AML	15 42 26.8	
	comp=N,1μm,0.2s						
MECH	**Mejillones**	3.00	253⇓	*i* P	Pn	15 42 03.0	+0.9
MECH				*i* S	Sn	15 42 38.4	-0.8
MECH				AML	AML	15 42 40.4	
	comp=N,2μm,0.4s						
HMBC	**Humberston**	3.09	309⇑	*i* P	Pn	15 42 03.4	+0.1
HMBC				*i* S	Sn	15 42 39.4	-1.7
HMBC				AML	AML	15 42 43.1	
	comp=N,2μm,0.5s						
PSGC	**Pisagua**	3.71	315⇑	*i* P	Pn	15 42 10.5	-0.8
PSGC				*i* S	Sn	15 42 52.5	-2.8
PSGC				AML	AML	15 42 54.9	
	comp=E,588nm,0.4s						
LPAZ	**La Paz**	5.98	353	P	Pn	15 42 41.8	+0.8
	comp=E,6.6nm,0.3s,baz=167,slow=7.1,SNR=103						
LPAZ				S	Sn	15 43 49.4	+0.6
	comp=E,1.2nm,0.3s,baz=357,slow=20,SNR=3.8						
LPAZ	**La Paz**	5.98	353	*e*Pn	Pn	15 42 43.7	+2.8
LPAZ				S	Sn	15 43 49.4	+0.6
LCO	**Las Campanas**	7.39	204	*e*Pn	Pn	15 42 57.1	-2.5
	comp=E,21nm,0.6s						
SIV	**San Ignacio**	8.59	45	P	Pn	15 43 15.0	-0.6
	comp=E,81nm,0.3s,baz=244,slow=13,SNR=13						
SIV				S	Sn	15 44 47.2	-4.0
	comp=E,4.0nm,0.3s,baz=131,slow=20,SNR=3.9						
CFAA	**Coronel Fontan**	9.36	185	P	Pn	15 43 25.0	-0.7
	comp=E,0.9nm,0.3s,baz=357,slow=12,SNR=80						
CFAA				S	Sn	15 45 04.2	-5.3
	comp=E,0.4nm,0.3s,baz=267,slow=22,SNR=8.8						
CFAA	**Coronel Fontan**	9.36	185	P	Pn	15 43 25.0	-0.7
CFAA				S	Sn	15 45 04.2	-5.4
CPUP	**Villa Florida**	9.99	116	P	Pn	15 43 34.5	+0.4
	comp=E,0.2nm,0.3s,baz=282,slow=12,SNR=6.1						
CPUP	**Villa Florida**	9.99	116	*e*Pn	Pn	15 43 34.1	0.0
PLCA	**Paso Flores**	18.63	188	P	P	15 45 20.2	+0.4
	comp=E,0.2nm,0.3s,baz=346,slow=13,SNR=4.1						
TXAR	**Lajitas Array**	62.08	324	P	P	15 51 17.4	-1.0
	comp=E,0.2nm,0.7s,mb3.1,baz=173,slow=8.2,SNR=2.8						
DBIC	**Dimbokro**	67.55	72	P	P	15 51 53.1	-1.0
	comp=E,5.8nm,0.7s,mb4.4,baz=223,slow=5.4,SNR=9.6						
DBIC	**Dimbokro**	67.55	72	*e*P	P	15 51 53.9	-0.3
	comp=E,5.6nm,0.7s,mb4.4						
PDAR	**Pinedale Array**	75.49	329	P	P	15 52 42.4	+1.4
	comp=E,0.5nm,0.5s,mb3.4,baz=134,slow=6.4,SNR=3.2						
PDAR	**Pinedale Array**	75.49	329	P	P	15 52 42.4	+1.4
TORD	**Torodi Ar. Bea**	76.23	69	P	P	15 52 45.9	0.0
	comp=E,22nm,0.7s,mb4.9,baz=259,slow=5.7,SNR=180						
ULM	**Lac du Bonnet**	76.48	342	P	P	15 52 46.2	-0.1
	comp=E,3.0nm,0.5s,mb4.2,baz=163,slow=5.4,SNR=3.3						
BOSA	**Boshof**	81.80	117	P	P	15 53 16.4	+0.4
	comp=E,2.5nm,0.4s,mb4.2,baz=261,slow=2.3,SNR=17						
YKA	**Yellowknife Ar**	92.38	340	P	P	15 54 06.5	+0.2
	comp=E,1.3nm,0.6s,mb4.1,baz=133,slow=4.6,SNR=16						
ASAR	**Alice Springs**	129.91	206	PKP	PKPdf	16 00 04.4	-1.4
	comp=E,0.7nm,0.8s,baz=132,slow=1.7,SNR=9.4						
WRA	**Warramunga Arr**	133.03	208	PKP	PKPdf	16 00 12.3	+0.5
	comp=E,0.5nm,0.5s,baz=162,slow=1.9,SNR=13						
WRA	**Warramunga Arr**	133.03	208	PKP	PKPdf	16 00 12.3	+0.5
ZALV	**Zalesovo Beam**	141.98	27	PKhKP		16 00 21.9	
	comp=E,1.0nm,0.5s,baz=343,slow=3.7,SNR=4.4						
ZALV				PKP	PKPdf	16 00 27.1	0.0
	comp=E,0.9nm,0.4s,baz=302,slow=3.2,SNR=4.8						
MK31	**Makanchi Array**	145.35	38	*e*PKP	PKPdf	16 00 33.9	+0.7
MKAR	**Makanchi Array**	145.35	38	PKPbc	PKPbc	16 00 34.1	+0.7
	comp=E,2.5nm,0.6s,baz=353,slow=5.5,SNR=19						

*MAN **10** 15:48:30, 5.°27N×126.°41E, h19km, mb5.3, ML4.2, MS4.5*
*ISCJB **10** 15:48:32.0±0.9, 5.°31N±0.°04×126.

h34km±10km, mb4.0/17, MS3.5/5, Error ellipse: s-maj=6.5km s-min=6.2km az=3.3

ISC 10 16:27:28.8±1.0, 32°.73N±0°.03×105°.83E±0°.03, h16km±7km, n39, σ1§22/51, mb4.0/17, MS3.5/5, 1C-2D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.53**	**225**	⇑*i*Pn	**Pn**	**16 28 10.4**	**+1.1**
CD2				Pg	**Pg**	**16 28 15.7**	**-1.7**
CD2				Sg	**Sg**	**16 28 49.5**	**-0.8**
CD2				smax			
	comp=N,7μm,0.6s						
CD2				smax			
	comp=E,5μm,0.8s						
XAN	**Xi'an**	**2.90**	**62**	Pn	**Pn**	**16 28 15.2**	**+0.9**
XAN				Pg	**Pb**	**16 28 19.8**	**-0.3**
XAN				Sg	**Sb**	**16 28 56.0**	**+0.7**
XAN				smax			
	comp=N,2μm,0.6s						
XAN				smax			
	comp=E,990nm,0.9s						
XAN				LR	LR		
	comp=N,2μm,10.2s						
XAN				LR	LR		
	comp=E,530nm,9.9s						
LZH	**Lanzhou**	**3.73**	**334**	⇓Pn	**Pn**	**16 28 26.8**	**+1.0**
LZH				Pg	**Pb**	**16 28 35.3**	**+1.0**
LZH				Sg	**Sb**	**16 29 21.4**	**+2.1**
LZH				smax			
	comp=N,4μm,0.7s						
LZH				smax			
	comp=E,5μm,0.6s						
ENH	**Enshi**	**3.97**	**127**	*e*Pn	**Pn**	**16 28 31.3**	**+2.2**
ENH				*e*Pg	**Pb**	**16 28 39.1**	**+0.7**
GYA	**Guiyang**	**6.29**	**173**	Pn	**Pn**	**16 29 02.9**	**+1.9**
GYA				Sn	**Sn**	**16 30 12.6**	**0.0**
GYA				Sg	**Sg**	**16 30 46.4**	**-4.4**
GYA				smax			
	comp=N,450nm,0.8s						
GYA				smax			
	comp=E,390nm,0.7s						
GYA				LR	LR		
	comp=N,730nm,5.3s						
GYA				LR	LR		
	comp=E,290nm,3.1s						
GYA				LR	LR		
	comp=Z,290nm,3.4s						
WHN	**Wuhan**	**7.58**	**104**	Pn	**Pn**	**16 29 15.0**	**-3.7**
WHN				Sn	**Sn**	**16 30 43.7**	**-0.6**
WHN				LR	LR		
	comp=N,1μm,6.6s						
WHN				LR	LR		
	comp=E,2μm,7.2s						
WHN				LR	LR		
	comp=Z,700nm,6.4s						
KMI	**Kunming**	**8.05**	**200**	P	**Pn**	**16 29 26.8**	**+1.7**
KMI				S	**Sn**	**16 30 54.8**	**-1.0**
KMI				LR	LR		
	comp=N,260nm,4.8s						
KMI				LR	LR		
	comp=E,540nm,7.1s						
KMI				LR	LR		
	comp=Z,250nm,10.4s						
GTA	**Gaotai**	**8.26**	**326**	⇓P	**Pn**	**16 29 27.3**	**-0.6**
GTA				pP		16 29 30.7	
GTA				S	**Sn**	**16 30 59.8**	**-1.0**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GTA				LR	LR		
	comp=N,920nm,7.1s						
GTA				LR	LR		
	comp=E,890nm,9.2s						
GTA				LR	LR		
	comp=Z,460nm,7.4s						
TIA	**Tai'an**	**9.95**	**66**	*e*P	**Pn**	**16 29 51.5**	**+0.4**
TIA				LR	LR		
	comp=N,1μm,2.5s						
TIA				LR	LR		
	comp=E,530nm,2.1s						
NJ2	**Nanjing**	**11.03**	**90**	*e*P	**Pn**	**16 30 04.8**	**-1.2**
NJ2				pP		16 30 14.5	
NJ2				sP		16 30 16.9	
NJ2				S	**Sn**	**16 32 08.6**	**-0.4**
NJ2				sS		16 32 20.6	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,100nm,3.7s						
NJ2				LR	LR		
	comp=N,200nm,8.0s						
NJ2				LR	LR		
	comp=E,110nm,8.8s						
NJ2				LR	LR		
	comp=Z,2μm,10.8s						
QIZ	**Qiongzhong**	**14.11**	**164**	P	**Pn**	**16 30 46.9**	**-1.2**
QIZ				S	**Sn**	**16 33 25.5**	**+1.1**
QIZ				LR	LR		
	comp=E,290nm,14.3s						
QIZ				LR	LR		
	comp=Z,260nm,6.6s						
DL2	**Dalian**	**14.21**	**60**	*e*P	**Pn**	**16 30 52.4**	**+3.0**
DL2				S	**Sn**	**16 33 31.8**	**+5.0**
DL2				LR	LR		
	comp=N,170nm,17.4s						
DL2				LR	LR		
	comp=E,130nm,19.1s						
DL2				LR	LR		
	comp=Z,110nm,16.1s						
SONM	**Songino Array**	**15.09**	**1**	Pn	**Pn**	**16 30 59.9**	**-1.4**
	baz=180,slow=16,SNR=1.8						
SONM				LR	LR	16 37 06.9	
	comp=Z,85nm,18.1s,baz=31,slow=39						
CMAR	**Chiang Mai Arr**	**15.50**	**205**	Pn	**Pn**	**16 31 07.1**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=15,slow=11,SNR=24						
KSRS	**Korea Array**	**18.67**	**69**	P	**Pn**	**16 31 44.6**	**-1.9**
	comp=Z,0.6nm,0.3s,baz=256,slow=11,SNR=18						
CN2	**Changchun**	**18.91**	**49**	*e*P	**Pn**	**16 31 47.6**	**-1.8**
CN2				*ep*P	pP	16 31 55.5	+2.3
CN2				*e*S	**Sn**	**16 35 12.6**	**-8.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,16.0s						
CN2				LR	LR		
	comp=E,200nm,16.0s						
CN2				LR	LR		
	comp=Z,200nm,18.0s						
MKAR	**Makanchi Array**	**22.80**	**315**	P	**P**	**16 32 31.4**	**+0.7**
	comp=Z,5.4nm,1.0s,mb4.0,baz=105,slow=14,SNR=8.3						
TKM2	**Tokmak 2**	**25.84**	**302**	*e*P	**P**	**16 32 59.8**	**+0.4**
	comp=Z,2.8nm,0.7s,mb3.9						
ZALV	**Zalesovo Beam**	**25.96**	**331**	P	**P**	**16 33 00.7**	**+0.3**
	comp=Z,1.0nm,0.5s,mb3.6,baz=140,slow=9.9,SNR=5.3						
UCH	**Uchtor**	**26.48**	**300**	P	**P**	**16 33 09.0**	**+3.8**
	comp=Z,8.1nm,1.0s,mb4.2						
AAK	**Ala-Archa**	**26.57**	**301**	LR	LR	16 44 24.0	
	comp=Z,98nm,20.0s,MS3.4,baz=84,slow=38						
AAK	**Ala-Archa**	**26.57**	**301**	P	**P**	**16 33 09.5**	**+3.4**
	comp=Z,4.0nm,0.8s,mb4.0						
KURK	**Kurchatov**	**26.89**	**320**	P	**P**	**16 33 08.8**	**-0.1**
	comp=Z,1.5nm,0.3s,mb4.1,baz=123,slow=10,SNR=2.4						
KURK				LR	LR	16 43 43.5	
	comp=Z,74nm,18.1s,MS3.3,baz=120,slow=36						
KURK	**Kurchatov**	**26.89**	**320**	*e*P	**P**	**16 33 11.6**	**+2.7**
	comp=Z,5.2nm,0.8s,mb4.1						
KURK				LR	LR	16 43 43.5	
BVAR	**Borovoye Array**	**32.48**	**319**	P	**P**	**16 33 59.9**	**+1.6**
	comp=Z,0.9nm,0.7s,mb3.7,baz=108,slow=9.7,SNR=5.7						
ABKAR	**Akbulak array**	**37.73**	**310**	*e*P	**P**	**16 34 43.2**	**-0.5**
	comp=Z,0.7nm,0.5s,mb3.6						
TIXI	**Tiksi**	**40.88**	**11**	*e*P	**P**	**16 35 08.2**	**-1.4**
	comp=Z,3.2nm,0.8s,mb4.0						
PETK	**Petropavlovsk-**	**42.00**	**45**	LR	LR	16 55 58.1	
	comp=Z,39nm,18.1s,MS3.3,baz=64,slow=41						
FINES	**FINESS Array B**	**57.05**	**326**	P	**P**	**16 37 12.6**	**-1.1**
	comp=Z,3.6nm,1.0s,mb4.4,baz=104,slow=8.0,SNR=4.5						
AKASG	**Malin Array Be**	**57.36**	**313**	P	**P**	**16 37 14.3**	**-1.8**
	comp=Z,0.4nm,0.3s,mb3.9,baz=71,slow=7.3,SNR=3.5						
WRAB	**Tennant Creek**	**59.04**	**148**	*e*P	**P**	**16 37 28.4**	**+0.3**
	comp=Z,3.2nm,0.7s,mb4.5						
WRA	**Warramunga Arr**	**59.04**	**148**	P	**P**	**16 37 27.9**	**-0.3**
	comp=Z,1.3nm,0.7s,mb4.1,baz=341,slow=7.6,SNR=19						
ASAR	**Alice Springs**	**62.15**	**151**	P	**P**	**16 37 50.0**	**+0.7**
	comp=Z,0.5nm,0.4s,mb4.0,baz=331,slow=6.4,SNR=13						
NOA	**NORSAR Array B**	**64.09**	**327**	P	**P**	**16 38 00.3**	**-1.5**
	comp=Z,0.5nm,0.6s,mb3.7,baz=122,slow=9.6,SNR=2.5						
BPAW	**Bear Paw Mtn.**	**66.48**	**28**	*e*P	**P**	**16 38 17.7**	**+0.4**
	comp=Z,2.5nm,0.9s,mb4.2						
GERES	**GERESS Array B**	**67.47**	**314**	LR	LR	17 09 01.3	
	comp=Z,44nm,18.2s,MS3.7,baz=174,slow=37						
YKA	**Yellowknife Ar**	**79.70**	**18**	P	**P**	**16 39 34.2**	**-1.3**
	comp=Z,0.9nm,0.7s,mb3.8,baz=320,slow=4.3,SNR=4.0						
YKA	**Yellowknife Ar**	**79.70**	**18**	P	**P**	**16 39 34.2**	**-1.3**
LSZ	**Lusaka**	**88.10**	**251**	LR	LR	17 16 46.2	
	comp=Z,61nm,19.0s,MS4.0,baz=142,slow=34						

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*ATH **10** 16:31:24.7, 38°.40N×25°.35E, h21km±9km, MD3.0/4*
*CSEM **10** 16:31:25.8±0.3, 38°.43N×25°.39E, h8km, ML3.0/3, Error ellipse: s-maj=6.5km s-min=4.7km az=26.0*
*ISCJB **10** 16:31:25.5±1.2, 38°.44N±0°.05×25°.39E±0°.05, h4km±8km, Error ellipse: s-maj=9.3km s-min=6.9km az=17.7*
*THE **10** 16:31:26.0, 38°.46N×25°.38E, h1km±1km, ML3.0/3, Error ellipse: s-maj=1.5km s-min=0.6km az=161.0*

ISC 10 16:31:26.0±1.4, 38°.43N±0°.06×25°.38E±0°.07, h9km±8km, n15, σ0§61/26, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOS	**Chios island**	**0.53**	**94**	P	**Pg**	**16 31 36.1**	**-0.2**
CHOS				S	**Sg**	**16 31 44.2**	**+1.0**
CHOS	**Chios island**	**0.53**	**94**	*e*PN	**Pg**	**16 31 36.1**	**-0.2**
CHOS				*e*SN	**Sg**	**16 31 43.7**	**+0.5**
CHOS	**Chios island**	**0.53**	**94**	P	**Pg**	**16 31 36.1**	**-0.2**
CHOS				S	**Sg**	**16 31 44.2**	**+1.0**
SIGR	**SIGRI**	**0.87**	**25**	P	**Pg**	**16 31 41.8**	**-0.9**
SIGR				S	**Sg**	**16 31 54.4**	**+0.4**
SIGR	**SIGRI**	**0.87**	**25**	P	**Pg**	**16 31 41.8**	**-0.9**
SIGR				S	**Sg**	**16 31 54.4**	**+0.4**
PRK	**Paraskevi**	**1.08**	**40**	P	**Pg**	**16 31 45.6**	**-1.0**
PRK				S	**Sg**	**16 32 01.4**	**+0.8**
PRK	**Paraskevi**	**1.08**	**40**	*e*PN	**Pg**	**16 31 45.5**	**-1.1**
PRK				*e*SN	**Sn**	**16 32 01.8**	**-0.4**
PRK	**Paraskevi**	**1.08**	**40**	P	**Pg**	**16 31 45.6**	**-1.0**
PRK				S	**Sg**	**16 32 01.4**	**+0.8**
PRK				*e*Sn	**Sn**	**16 32 01.8**	**-0.4**
BLCB	**Balcova**	**1.31**	**91**	P	**Pn**	**16 31 50.5**	**+0.2**
BLCB	**Balcova**	**1.31**	**91**	P	**Pn**	**16 31 50.5**	**+0.2**
SMG	**Samos**	**1.35**	**121**	*e*PN	**Pn**	**16 31 50.8**	**-0.2**
SMG	**Samos**	**1.35**	**121**	*e*Pn	**Pn**	**16 31 50.8**	**-0.2**
AOS	**Alonnisos**	**1.39**	**303**	P	**Pn**	**16 31 51.5**	**0.0**
AOS				S	**Sn**	**16 32 10.8**	**+0.9**
AOS	**Alonnisos**	**1.39**	**303**	P	**Pn**	**16 31 51.5**	**0.0**
AOS				S	**Sn**	**16 32 10.8**	**+0.9**
LIA	**Limnos Island**	**1.48**	**354**	*e*PN	**Pn**	**16 31 52.4**	**-0.3**

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*BJI **10** 16:54:34.4, 4°.38N×126°.76E, h57km, mB4.8/18, mb4.7/27, Ms4.1/15, Ms7 3.8/15*
*MOS **10** 16:54:37.5±1.2, 5°.26N×126°.35E, h33km, mb4.9/9, Error ellipse: s-maj=26.1km s-min=9.4km az=111.8*
*IDC **10** 16:54:41.3±2.4, 5°.26N×126°.51E, h45km±23km, mb4.2/17, mb1 4.3/18, mb1mx4.2/25, mbtmp4.2/18, ML3.8/1, MS3.6/12, Ms1 3.7/12, ms1mx3.3/37, Error ellipse: s-maj=23.3km s-min=11.2km az=76.0*
*ISCJB **10** 16:54:41.3±0.6, 5°.11N±0°.04×126°.34E±0°.06, h64km±5km, mb4.6/52, Error ellipse: s-maj=10.6km s-min=5.9km az=158.5*
*NEIC **10** 16:54:42.1±1.0, 5°.21N×126°.37E, h58km±9km, mb4.7/20, Error ellipse: s-maj=10.1km s-min=4.4km az=65.0*
*DJA **10** 16:54:43, 5°.14N×126°.70E, h43km, mb4.8/31*

ISC 10 16:54:42.5±0.6, 5°.15N±0°.04×126°.43E±0°.06, h59km±4km, h61km±1.9km: pP-P, n102, σ1§25/112, mb4.6/52, MS3.6/15, 6C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**1.74**	**302**	⇑*i*P	**Pn**	**16 55 07.1**	**-3.3**
GSPH				*i* S	**Sn**	**16 55 27.7**	**-3.9**
MATI	**Mati**	**1.79**	**355**	*e*P	**Pn**	**16 55 10.7**	**-0.4**
MATI				*e*S	**Sn**	**16 55 32.1**	**-0.8**
DAV	**Davao City (W)**	**2.09**	**336**	P	**Pn**	**16 55 14.1**	**-1.1**
	34nm,0.3s,baz=58,slow=4.1,SNR=10						
DAV				S	**Sn**	**16 55 39.3**	**-0.7**
	118nm,0.3s,baz=249,slow=23,SNR=13						
DAV				LR	LR	16 56 15.2	
	comp=Z,2μm,18.0s,baz=188,slow=46						
DAV	**Davao City (W)**	**2.09**	**336**	*e*Pn	**Pn**	**16 55 14.1**	**-1.1**
DMPH	**Davao City--Mi**	**2.13**	**335**	⇓*i*P	**Pn**	**16 55 15.5**	**-0.2**
DMPH				*i* S	**Sn**	**16 55 57.8**	**+17**
KCP	**Kidapawan**	**2.28**	**324**	⇓*e*P	**Pn**	**16 55 23.9**	**+6.2**
KCP				*i* S	**Sn**	**16 55 54.6**	**+10**
CTBH	**Cotabato--PC H**	**2.99**	**314**	⇑*i*P	**Pn**	**16 55 26.4**	**-1.0**
BIPH	**Bislig**	**3.02**	**359**	⇓*e*P	**Pn**	**16 55 26.9**	**-0.9**
BIPH				*e*S	**Sn**	**16 56 05.8**	**+2.9**
BUKP	**Musuan**	**3.03**	**334**	*e*P	**Pn**	**16 55 27.9**	**-0.2**
BUKP				*e*S	**Sn**	**16 56 01.2**	**-2.0**
CGP	**Cagayan de Oro**	**3.71**	**332**	*e*P	**Pn**	**16 55 36.0**	**-1.3**
CGP				*e*S	**Sn**	**16 56 24.0**	**+4.3**
BUTP	**Butuan**	**3.88**	**348**	*e*P	**Pn**	**16 55 42.5**	**+2.9**
PAGZ	**Pagadian**	**4.04**	**312**	*e*P	**Pn**	**16 55 43.0**	**+1.1**
MSLP	**Maasin**	**5.19**	**343**	*e*P	**Pn**	**16 55 60.0**	**+2.3**
SNPH	**Sibulan**	**5.23**	**323**	*e*P	**Pn**	**16 56 05.4**	**+7.2**
GUIM	**Jordan**	**6.64**	**325**	*e*P	**Pn**	**16 56 18.8**	**+1.3**
RCP	**Roxas**	**7.34**	**330**	⇑*e*P	**Pn**	**16 56 27.8**	**+0.7**
CNP	**Cataman**	**7.52**	**347**	*e*P	**Pn**	**16 56 34.2**	**+4.7**
PVCP	**Virac**	**8.69**	**345**	*e*P	**Pn**	**16 56 49.5**	**+3.9**
ENPP	**El Nido**	**9.18**	**311**	*e*P	**Pn**	**16 56 54.8**	**+2.6**
KAPI	**Kappang**	**12.10**	**214**	LR	LR	17 02 38.2	
	comp=Z,222nm,20.2s,baz=54,slow=39						
KSM	**Kuching**	**16.50**	**258**	*e*P	**Pn**	**16 58 34.8**	**+4.7**
	17nm,0.6s						
KAKA	**Kakadu**	**18.72**	**161**	*e*P	**Pn**	**16 58 57.5**	**+0.1**
	17nm,0.6s						
KAKA	**Kakadu**	**18.72**	**161**	*e*P	**Pn**	**16 58 56.1**	**-1.3**
	61nm,0.7s						
QIZ	**Qiongzhong**	**21.26**	**312**	P	**P**	**16 59 25.6**	**+1.7**
QIZ				S	**S**	**17 03 18.4**	**+1.4**
QIZ				pmax	pmax		
	comp=Z,13nm,1.5s,mb4.0						
QIZ				pmax	pmax		
	comp=Z,37nm,3.0s						
QIZ				LR	LR		
	comp=N,130nm,13.5s						
QIZ				LR	LR		
	comp=Z,220nm,22.6s						
FITZ	**Fitzroy Crossi**	**23.11**	**182**	*e*P	**P**	**16 59 43.9**	**+0.3**
	comp=Z,51nm,0.9s,mb5.0						
FITZ	**Fitzroy Crossi**	**23.11**	**182**	P	**P**	**16 59 43.9**	**+0.3**
	comp=Z,5.1nm,0.4s,mb4.3,baz=29,slow=7.8,SNR=50						
FITZ	**Fitzroy Crossi**	**23.11**	**182**	*e*P	**P**	**16 59 44.3**	**+0.7**
	comp=Z,35nm,0.9s,mb4.8						
FITZ				*ep*P		16 59 58.2	
COEN	**Coen**	**25.23**	**139**	*e*P	**P**	**17 00 03.2**	**+0.1**
WRAB	**Tennant Creek**	**26.11**	**163**	*e*P	**P**	**17 00 11.5**	**+0.5**
WRAB				pmax	pmax		
	comp=Z,63nm,1.2s,mb5.0						
WRAB	**Tennant Creek**	**26.11**	**163**	*e*P	**P**	**17 00 11.5**	**+0.6**
	comp=Z,63nm,1.2s,mb5.0						
WRA	**Warramunga Arr**	**26.12**	**163**	P	**P**	**17 00 11.0**	**0.0**
	comp=Z,15nm,0.8s,mb4.6,baz=343,slow=10,SNR=57						
CBIJ	**Chichi jima**	**26.50**	**33**	P	**P**	**17 00 11.5**	**-2.9**
	comp=Z,20nm,0.4s,mb5.0,baz=295,slow=21,SNR=7.8						
CBIJ				LR	LR	17 08 15.9	
	comp=Z,113nm,21.9s,MS3.4,baz=234,slow=31						
NJ2	**Nanjing**	**27.69**	**346**	*e*P	**P**	**17 00 29.2**	**+4.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
GYA	**Guiyang**	**28.38**	**320**	P	**P**	**17 00 33.2**	**+1.9**
GYA				pP	pP	17 00 49.5	+3.5
GYA				sP	sP	17 00 54.7	+1.7
GYA				PP	PP	17 01 26.4	-10
GYA				S	**S**	**17 05 16.0**	**+1.8**
GYA				sS	sS	17 05 41.0	+1.8
GYA				PcS	PcS	17 07 24.8	-0.4
GYA				ScS	ScS	17 11 10.7	-1.4
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.5						
ASAR	**Alice Springs**	**29.55**	**166**	P	**P**	**17 00 42.2**	**+0.6**
	comp=Z,1.9nm,0.5s,mb4.1,baz=342,slow=6.9,SNR=48						
ASAR				PcP	PcP	17 03 46.8	+1.1
	comp=Z,1.4nm,0.7s,baz=2.3,slow=2.5,SNR=5.1						
CMAR	**Chiang Mai Arr**	**29.91**	**299**	P	**P**	**17 00 45.7**	**+0.7**
	comp=Z,1.1nm,0.8s,mb3.6,baz=110,slow=7.2,SNR=11						
CMAR				PcP	PcP	17 03 48.8	+2.0
	comp=Z,0.7nm,0.8s,baz=124,slow=1.9,SNR=5.1						
CMAR				LR	LR	17 12 57.5	
	comp=Z,88nm,19.5s,MS3.4,baz=134,slow=37						
CMAR	**Chiang Mai Arr**	**29.91**	**299**	P	**P**	**17 00 45.7**	**+0.7**
CMAR						17 03 48.8	
KMI	**Kunming**	**30.18**	**314**	P	**P**	**17 00 50.8**	**+3.5**
KMI				pP	pP	17 01 05.6	+3.6
KMI				sP	sP	17 01 12.2	+3.2
KMI				PP	PP	17 01 51.0	-5.3
KMI				S	**S**	**17 05 44.6**	**+2.2**
KMI				sS	sS	17 06 09.8	+2.3
KMI				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.3						
KMI				LR	LR		
	comp=N,110nm,17.7s,MS3.7						
KMI				LR	LR		
	comp=E,120nm,17.3s,MS3.7						
KMI				LR	LR		
	comp=Z,180nm,17.0s,MS3.8						
KSRS	**Korea Array**	**32.18**	**2**	P	**P**	**17 01 05.2**	**+0.5**
	comp=Z,1.4nm,0.7s,mb3.9,baz=188,slow=10,SNR=7.8						
MJAR	**Matsushiro Arr**	**33.06**	**18**	LR	LR	17 13 44.3	
	comp=Z,61nm,18.6s,MS3.3,baz=200,slow=35						
CD2	**Chengdu**	**33.33**	**323**	*e*P	**P**	**17 01 16.3**	**+1.4**
CD2				pP	pP	17 01 31.3	+1.6
CD2				sP	sP	17 01 38.5	+1.8
CD2				PP	PP	17 02 29.7	-1.6
CD2				S	**S**	**17 06 32.1**	**+0.6**
CD2				sS	sS	17 06 57.7	+1.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
CD2				pmax	pmax		
	comp=Z,40nm,5.2s						
CD2				LR	LR		
	comp=N,140nm,14.2s						
CD2				LR	LR		
	comp=Z,180nm,16.6s,MS3.9						
BJI	**Beijing**	**35.95**	**347**	P	**P**	**17 01 39.0**	**+1.7**
BJI				S	**S**	**17 07 14.4**	**+2.9**
BJI				SS	SS	17 09 44.3	-6.0
BJI				pmax	pmax		
	comp=Z,16nm,0.6s,mb5.1						
BJI				pmax	pmax		
	comp=Z,70nm,3.6s						
BJI				LR	LR		
	comp=N,120nm,26.6s,MS3.6						
BJI				LR	LR		
	comp=E,80nm,25.7s,MS3.6						
BJI				LR	LR		
	comp=Z,36nm,25.0s,MS3.0						
HNR	**Honiara**	**36.41**	**113**	LR	LR	17 14 34.4	
	comp=Z,123nm,20.7s,MS3.7,baz=68,slow=33						
LZH	**Lanzhou**	**37.14**	**329**	*e*P	**P**	**17 01 45.6**	**-1.9**
LZH				pP	pP	17 02 01.7	-0.8
LZH				sP	sP	17 02 07.5	-2.0
LZH				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
LZH				pmax	pmax		
	comp=Z,53nm,4.0s						
HHC	**Hu-ho-hao-te**	**37.97**	**342**	*e*P	**P**	**17 01 56.4**	**+2.0**
HHC				pP	pP	17 02 11.6	+2.1
HHC				sP	sP	17 02 18.8	+2.4
HHC				PP	PP	17 03 27.9	+5.7
HHC				S	**S**	**17 07 43.9**	**+1.7**
HHC				ScP	ScP	17 07 52.7	+0.7
HHC				sS	sS	17 08 09.6	+1.9
HHC				ScS	ScS	17 12 00.5	-0.6
HHC				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.8						
HHC				pmax	pmax		
	comp=Z,84nm,5.8s						
HHC				LR	LR		
	comp=N,100nm,19.2s,MS3.8						
HHC				LR	LR		
	comp=E,77nm,18.0s,MS3.8						
HHC				LR	LR		
	comp=Z,62nm,18.0s,MS3.5						
CN2	**Changchun**	**38.51**	**359**	*e*P	**P**	**17 02 01.2**	**+2.3**
MDJ	**Mudanjiang**	**39.41**	**4**	P	**P**	**17 02 07.3**	**+0.8**
MDJ				pP	pP	17 02 20.4	-1.2
MDJ				sP	sP	17 02 26.6	-1.9
MDJ				PcS	PcS	17 08 04.6	+1.2
MDJ				S	**S**	**17 08 05.5**	**+1.7**
MDJ				sS	sS	17 08 28.8	-0.6
MDJ				SS	SS	17 11 01.8	+1.8
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.5						
MDJ				pmax	pmax		
	comp=Z,16nm,4.5s						
MDJ				LR	LR		
	comp=N,36nm,9.0s						
MDJ				LR	LR		
	comp=E,44nm,13.6s						
MDJ				LR	LR		
	comp=Z,53nm,5.6s						
STKA	**Stephens Creek**	**39.55**	**160**	*e*P	**P**	**17 02 08.7**	**+0.9**
	comp=Z,12nm,0.4s,mb5.0						
STKA	**Stephens Creek**	**39.55**	**160**	P	**P**	**17 02 09.5**	**+1.7**
	comp=Z,12nm,0.4s,mb5.0,baz=342,slow=7.9,SNR=40						
STKA				LR	LR	17 17 41.3	
	comp=Z,122nm,21.9s,MS3.7,baz=217,slow=35						
STKA	**Stephens Creek**	**39.55**	**160**	*e*P	**P**	**17 02 08.6**	**+0.8**
STKA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
STKA	**Stephens Creek**	**39.55**	**160**	*e*P	**P**	**17 02 08.6**	**+0.8**
	comp=Z,2.6nm,0.5s,mb4.2						
GTA	**Gaotai**	**41.73**	**329**	*e*P	**P**	**17 02 26.1**	**+0.3**
GTA				pP	pP	17 02 40.6	-0.4
GTA				sP	sP	17 02 48.1	+0.2
GTA				PP	PP	17 04 09.6	+6.3
GTA				S	**S**	**17 08 36.6**	**-2.1**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.1						
GTA				pmax	pmax		
	comp=Z,94nm,5.1s						
GTA				LR	LR		
	comp=N,85nm,15.5s,MS3.9						
GTA				LR	LR		
	comp=E,95nm,14.3s,MS3.9						
GTA				LR	LR		
	comp=Z,85nm,14.0s,MS3.8						
ARMA	**Armidale**	**42.81**	**147**	*e*P	**P**	**17 02 36.0**	**+1.4**
ARMA	**Armidale**	**42.81**	**147**	*e*P	**P**	**17 02 35.8**	**+1.2**
	comp=Z,13nm,0.9s,mb4.7						
TAPN	**Taplejung**	**42.95**	**305**	*e*P	**P**	**17 02 34.9**	**-0.9**
	comp=Z,10nm,0.5s,mb4.8						
ODAN	**Odare**	**43.01**	**304**	*e*P	**P**	**17 02 36.3**	**-0.1**
	comp=Z,14nm,0.6s,mb4.9						
JIRN	**Jiri**	**44.31**	**305**	*e*P	**P**	**17 02 46.2**	**-0.6**
	comp=Z,12nm,0.5s,mb4.9						
GUN	**Gumba**	**44.66**	**305**	*e*P	**P**	**17 02 48.4**	**-1.2**
	comp=Z,22nm,0.6s,mb5.2						
DMN	**Daman**	**45.18**	**304**	*e*P	**P**	**17 02 53.0**	**-0.7**
	comp=Z,14

comp=N,55nm,5.7s
KSH LR LR
comp=E,56nm,3.3s
KSH LR LR
comp=Z,91nm,4.4s
AAK Ala-Archa 59.11 317 *eP* **P 17 04 35.0 -1.9**
AAK pmax pmax
comp=Z,1.0nm,1.0s,mb3.8
ZAA0 Zalesovo Array 59.20 333 *eP* **P 17 04 35.9 -1.4**
ZALV Zalesovo Beam 59.20 333 P **P 17 04 36.0 -1.3**
comp=Z,2.3nm,0.6s,mb4.4,baz=123,slow=7.0,SNR=8.5
ZALV LR LR 17 30 11.8
comp=Z,37nm,21.0s,MS3.5,baz=132,slow=36
ZALV Zalesovo Beam 59.20 333 P **P 17 04 36.0 -1.3**
ZALV LR LR 17 30 11.8
KURK Kurchatov 60.39 327 *ceP* **P 17 04 45.2 -0.3**
KURK pmax pmax
comp=Z,11nm,1.2s,mb4.8
KURK Kurchatov 60.39 327 *eP* **P 17 04 44.5 -1.0**
comp=Z,6.7nm,0.6s,mb4.8
NVS Novosibirsk 60.48 333 *eP* **P 17 04 43.3 -2.7**
FX1 Attu Island--F 61.02 30 P **P 17 04 50.1 +0.4**
comp=Z,9.3nm,0.7s,mb5.0,baz=14,slow=8.3,SNR=17
BVAR Borovoye Array 65.97 327 P **P 17 05 21.8 -0.6**
comp=Z,3.9nm,0.8s,mb4.5,baz=124,slow=9.2,SNR=20
BRVK Borovoye 66.05 327 *ceP* **P 17 05 22.8 -0.1**
BRVK pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
BRVK Borovoye 66.05 327 *eP* **P 17 05 21.6 -1.4**
comp=Z,7.1nm,0.8s,mb4.8
TIXI Tiksi 66.44 1 *eP* **P 17 05 25.1 0.0**
TIXI pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
TIXI Tiksi 66.44 1 *eP* **P 17 05 25.1 0.0**
comp=Z,3.9nm,0.7s,mb4.5
BILL Bilibino 68.27 15 *eP* **P 17 05 37.9 +1.2**
BILL pmax pmax
comp=Z,1.0nm,1.0s,mb3.8
ABKAR Akbulak array 70.87 321 *eP* **P 17 05 52.2 -0.9**
comp=Z,3.6nm,0.6s,mb4.5
ARU Arti 73.58 328 *dP* **P 17 06 08.1 -1.1**
ARU *e* 17 08 51.1
ARU S S 17 15 36.9 +2.2
ARU pmax pmax
comp=Z,11nm,1.7s,mb4.5
ZEI Tsey 81.04 312 *eP* **P 17 06 50.6 -0.6**
ZEI pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
PPLA Purkeypile 81.52 27 *eP* **P 17 06 53.8 +0.5**
comp=Z,4.4nm,0.9s,mb4.4
BPAW Bear Paw Mtn. 82.16 26 *eP* **P 17 06 57.0 +0.4**
comp=Z,3.9nm,0.6s,mb4.5
TRF Thorofare Moun 82.42 27 *eP* **P 17 06 58.0 0.0**
comp=Z,18nm,1.8s,mb4.7
COLD Coldfoot 82.71 23 *eP* **P 17 06 59.0 -0.5**
comp=Z,3.1nm,0.6s,mb4.5
OBN Obninsk 85.73 325⇑ *eP* **P 17 07 13.5 -1.5**
OBN pmax pmax
comp=Z,19nm,1.0s,mb5.3
APA Apatity 86.44 337 *eP* **P 17 07 14.4 -3.9**
JOF Joensuu 87.79 333 *ep* **P 17 07 24.4 -0.5**
comp=Z,4.7nm,0.8s,mb4.8
JOF Joensuu 87.79 333 *ep* **P 17 07 24.4 -0.5**
comp=Z,4.7nm,0.8s,mb4.8
ARCES ARCESS Array B 89.02 340 P **P 17 07 31.0 +0.4**
comp=Z,3.0nm,0.6s,mb4.8,baz=82,slow=6.6,SNR=14
FINES FINESS Array B 90.45 332 P **P 17 07 37.2 -0.2**
comp=Z,1.9nm,0.7s,mb4.5,baz=153,slow=2.1,SNR=6.8
FINES LR LR 17 56 52.7
comp=Z,42nm,19.4s,MS3.9,baz=343,slow=41
MLR Muntele Rosu 93.67 316 LR LR 17 52 36.0
comp=Z,50nm,19.7s,MS4.0,baz=122,slow=37
NOA NORSAR Array B 97.39 334 P **P 17 08 08.9 -0.3**
comp=Z,1.1nm,0.7s,mb4.4,baz=66,slow=4.4,SNR=2.9
NOA LR LR 17 56 29.9
comp=Z,35nm,20.4s,MS3.8,baz=300,slow=38
YKA Yellowknife Ar 98.34 24 P **P 17 08 11.7 -1.8**
comp=Z,0.5nm,0.6s,mb4.2,baz=301,slow=4.4,SNR=4.6
JTS JuntasAbangare 145.19 64 PKPbc PKPbc 17 14 14.6 +0.5
comp=Z,19nm,0.8s,baz=279,slow=3.5,SNR=12
JTS JuntasAbangare 145.19 64 *e*PKP PKPdf 17 14 15.1 +0.6
CFAA Coronel Fontan 150.30 154 PKPbc PKPbc 17 14 28.5 +0.8
comp=Z,0.6nm,0.5s,baz=236,slow=3.8,SNR=9.7

*ATH **10** 17:05:53.5, 37.97N×21.45E, h30km±2km, MD2.2/3*
*THE **10** 17:05:54.4, 37.89N×21.44E, h28km, ML2.5/5, Error ellipse: s-maj=1.4km s-min=0.4km az=348.0*
*CSEM **10** 17:05:54.2±0.2, 37.91N×21.43E, h22km±3km, MD2.2, Error ellipse: s-maj=6.1km s-min=4.9km az=50.0*
*ISCJB **10** 17:05:54.5±0.6, 37.90N±0.05×21.43E±0.04, h24km±7km, Error ellipse: s-maj=8.7km s-min=5.3km az=0.2*
ISC 10 17:05:54.5±0.6, 37.90N±0.05×21.43E±0.04, h22km±7km, n25, σ0.58/36, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.16**	**10**	*e*PB	**Pb**	**17 05 59.1**	**-0.3**
RLS				*e*SB	**Sb**	**17 06 02.8**	**0.0**
RLS	**Riolos of Patr**	**0.16**	**10**	*e*Pb	**Pb**	**17 05 59.1**	**-0.3**
RLS				*e*Sb	**Sb**	**17 06 02.8**	**0.0**
KFL	**Anninata**	**0.55**	**293**	P	**Pb**	**17 06 05.5**	**+0.1**
KFL				S	**Sb**	**17 06 14.0**	**+1.1**
LAKA	**Lakka**	**0.55**	**51**	P	**Pb**	**17 06 05.3**	**-0.2**
LAKA				S	**Sb**	**17 06 13.4**	**+0.4**
LAKA	**Lakka**	**0.55**	**51**	P	**Pb**	**17 06 05.3**	**-0.2**
LAKA				S	**Sb**	**17 06 13.4**	**+0.4**
EFP	**Efpalio**	**0.65**	**35**	P	**Pb**	**17 06 06.5**	**-0.6**
EFP	**Efpalio**	**0.65**	**35**	P	**Pb**	**17 06 06.5**	**-0.6**
TRIZ	**Trizonia**	**0.69**	**47**	P	**Pb**	**17 06 07.4**	**-0.4**
TRIZ				S	**Sb**	**17 06 17.7**	**+0.8**
TRIZ	**Trizonia**	**0.69**	**47**	P	**Pb**	**17 06 07.4**	**-0.4**
TRIZ				S	**Sb**	**17 06 17.7**	**+0.8**
VLS	**Valsamata**	**0.72**	**293**	P	**Pb**	**17 06 08.0**	**-0.3**
VLS	**Valsamata**	**0.72**	**293**	*e*PN	**Pn**	**17 06 08.1**	**-1.2**
VLS	**Valsamata**	**0.72**	**293**	*e*Pn	**Pn**	**17 06 08.1**	**-1.2**
GUR	**Goura**	**0.72**	**87**	P	**Pb**	**17 06 07.6**	**-0.8**
GUR				S	**Sb**	**17 06 18.3**	**+0.5**
GUR	**Goura**	**0.72**	**87**	*e*PN	**Pb**	**17 06 07.6**	**-0.8**
GUR	**Goura**	**0.72**	**87**	P	**Pb**	**17 06 07.6**	**-0.8**
GUR				S	**Sb**	**17 06 18.3**	**+0.5**
KALE	**Kalithea**	**0.75**	**48**	P	**Pb**	**17 06 07.9**	**-0.9**
KALE				S	**Sb**	**17 06 18.9**	**+0.4**
KALE	**Kalithea**	**0.75**	**48**	P	**Pb**	**17 06 07.9**	**-0.9**
KALE				S	**Sb**	**17 06 18.9**	**+0.4**
ITM	**Ithomi**	**0.82**	**151**	P	**Pb**	**17 06 10.0**	**+0.1**
ITM	**Ithomi**	**0.82**	**151**	*e*PN	**Pn**	**17 06 10.9**	**+0.3**
ITM	**Ithomi**	**0.82**	**151**	P	**Pb**	**17 06 10.0**	**+0.1**
ITM	**Ithomi**	**0.82**	**151**	*e*Pn	**Pn**	**17 06 10.9**	**+0.3**
PYL	**PYLOS**	**1.03**	**166**	*e*PN	**Pn**	**17 06 14.0**	**+0.5**
PYL	**PYLOS**	**1.03**	**166**	*e*Pn	**Pn**	**17 06 14.0**	**+0.5**
LKD2	**Lefkada island**	**1.08**	**326**	P	**Pn**	**17 06 14.6**	**+0.4**
LKD2	**Lefkada island**	**1.08**	**326**	P	**Pn**	**17 06 14.6**	**+0.4**

DJA 10 17:07:07, 2.11S×120.43E, h30km, MLv3.0/9, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTSI	**Tana Toraja**	**1.11**	**213**	P	Pn	17 07 26.1	-0.4
TTSI				S	Sn	17 07 41.7	+0.8
PCI	**Palu**	**1.33**	**334**	P	Pn	17 07 30.4	+0.8
APSI	**Ampana**	**1.70**	**46**	P	Pn	17 07 35.5	+0.8
APSI				S	Sn	17 07 59.2	+3.7
SPSI	**Sidrap Palu**	**1.96**	**200**	P	Pn	17 07 38.7	+0.5
BNSI	**Bone**	**2.30**	**188**	P	Pn	17 07 44.1	+1.2
BNSI				S	Sn	17 08 14.4	+4.2
MPSI	**Mapaga**	**2.49**	**348**	P	Pn	17 07 48.2	+2.7
LUWI	**Luwuk**	**2.57**	**66**	P	Pn	17 07 46.7	+0.1
KDI	**Kendari**	**2.85**	**130**	P	Pn	17 07 51.4	+0.9
MRSI	**Marisa**	**2.98**	**30**	P	Pn	17 07 51.6	-0.7
MMRI	**Maumere**	**6.73**	**165**	P	Pn	17 08 45.2	+1.4

*NEIC **10** 17:07:58.6±4.5, 19.00S×174.50W, h9km±28km, mb4.6/8, Error ellipse: s-maj=13.7km s-min=9.1km az=140.0*
*IDC **10** 17:07:58.4±0.8, 18.79S×174.67W, h0km, mb4.2/12, mb1 4.4/13, mb1mx4.3/23, mbtmp4.2/13, ML2.4/1, Error ellipse: s-maj=30.8km s-min=16.6km az=130.0*
*ISCJB **10** 17:08:01.4±0.6, 18.86S±0.09×174.7W±0.1, h33km, mb4.3/18, Error ellipse: s-maj=18.1km s-min=10.6km az=32.6*

ISC 10 17:08:01.0±6.8, 18.84S±0.09×174.7W±0.1, h16km±43km, n30, σ0.86/27, mb4.3/18, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.66**	**30**	Pn	**Pn**	**17 09 24.4**	**-0.1**
AFI	6.3nm,0.3s,baz=330,slow=21,SNR=8.4			Sn	**Sn**	**17 10 22.9**	**-6.2**
AFI	**Afiamalu**	**5.66**	**30**	Pn	**Pn**	**17 09 24.4**	**-0.1**
AFI	23nm,0.3s,baz=8.4,slow=22,SNR=6.9			Sn	**Sn**	**17 10 22.9**	**-6.2**
RAR	**Rarotonga**	**14.24**	**102**	*e*Pn	**Pn**	**17 11 15.7**	**-6.4**
URZ	29nm,0.7s **Urewera**	**20.62**	**199**	P	**P**	**17 12 39.2**	**-0.4**
RPZ	4.6nm,0.3s,baz=324,slow=1.7,SNR=27 **Rata Peaks**	**27.54**	**203**	P	**P**	**17 13 49.2**	**+2.3**
CTA	7.4nm,0.8s,mb4.4,baz=88,slow=11,SNR=6.6 **Charters Tower**	**36.77**	**261**	P	**P**	**17 15 09.2**	**+1.1**
CTAO	7.4nm,0.5s,mb4.7,baz=93,slow=12,SNR=14 **Charters Tower**	**36.77**	**261**	*e*P	**P**	**17 15 08.9**	**+0.8**
TAU	11nm,0.8s,mb4.8 **Tasmania Unive**	**39.97**	**225**	P	**P**	**17 15 38.2**	**+3.4**
STKA	7.9nm,0.8s,mb4.5 **Stephens Creek**	**41.30**	**243**	P	**P**	**17 15 43.9**	**-2.0**
WRAB	**Tennant Creek**	**47.91**	**260**	*e*P	**P**	**17 16 38.6**	**-0.3**
WRA	4.4nm,0.6s,mb4.7 **Warramunga Arr**	**47.92**	**260**	P	**P**	**17 16 38.5**	**-0.4**
ASAR	2.5nm,0.3s,mb4.7,baz=97,slow=7.6,SNR=52 **Alice Springs**	**47.93**	**255**	P	**P**	**17 16 39.2**	**+0.2**
ASAR	6.5nm,0.6s,mb4.8,baz=92,slow=8.2,SNR=51			PcP	PcP	17 18 07.0	-0.4
FITZ	0.9nm,0.6s,baz=107,slow=3.8,SNR=4.1 **Fitzroy Crossi**	**56.34**	**260**	P	**P**	**17 17 41.7**	**+0.1**
SBA	1.5nm,0.5s,mb4.2,baz=117,slow=7.4,SNR=6.0 **Scott Base**	**59.74**	**184**	*e*P	**P**	**17 18 04.7**	**+0.2**
MBWA	3.8nm,0.8s,mb4.5 **Marble Bar**	**61.25**	**256**	*e*P	**P**	**17 18 14.9**	**-0.9**
MJAR	6.6nm,0.7s,mb4.9 **Matsushiro Arr**	**70.78**	**321**	P	**P**	**17 19 17.2**	**+0.5**
MAJO	0.9nm,0.5s,mb4.0,baz=150,slow=4.9,SNR=4.2 **Matsushiro**	**70.79**	**321**	P	**P**	**17 19 16.2**	**-0.5**
QSPA	2.4nm,0.5s,mb4.4 **South Pole Qui**	**71.22**	**180**	*e*P	**P**	**17 19 17.6**	**-1.2**
FX1	3.0nm,0.8s,mb4.3 **Attu Island--F**	**72.19**	**352**	P	**P**	**17 19 24.9**	**0.0**
PETK	0.9nm,0.6s,mb3.9,baz=160,slow=9.0,SNR=3.7 **Petropavlovsk-**	**75.52**	**343**	P	**P**	**17 19 44.4**	**0.0**
KSM	1.6nm,0.7s,mb4.1,baz=136,slow=8.4,SNR=3.9 **Kuching**	**76.28**	**276**	*e*P	**P**	**17 19 49.8**	**+0.2**
TXAR	6.4nm,0.9s,mb4.5 **Lajitas Array**	**83.56**	**56**	P	**P**	**17 20 28.4**	**-0.2**
TXAR	0.3nm,0.7s,mb3.6,baz=213,slow=9.0,SNR=4.6 **Lajitas Array**	**83.56**	**56**	P	**P**	**17 20 28.4**	**-0.2**
PDAR	**Pinedale Array**	**85.65**	**42**	P	**P**	**17 20 39.3**	**+0.4**
CMAR	0.3nm,0.4s,mb3.9,baz=224,slow=2.5,SNR=2.3 **Chiang Mai Arr**	**92.50**	**289**	P	**P**	**17 21 12.7**	**+0.7**
BVAR	0.9nm,0.9s,mb4.2,baz=121,slow=2.5,SNR=4.1 **Borovoye Array**	**119.78**	**321**	PKP	PKPdf	17 26 48.8	-1.4
BR131	0.9nm,0.4s,baz=110,slow=3.1,SNR=4.8 **Keskin Array S**	**147.90**	**316**	*e*PKPbc	PKPbc	17 27 45.0	-0.6
BRTR	**Keskin Array B**	**147.90**	**316**	PKPbc	PKPbc	17 27 44.8	-0.8
GERES	2.4nm,0.8s,baz=144,slow=3.1,SNR=7.2 **GERESS Array B**	**149.31**	**349**	PKPbc	PKPbc	17 27 48.2	-0.7
MMAI	0.7nm,0.6s,baz=17,slow=1.4,SNR=5.3 **Mount Meron Ar**	**149.59**	**304**	PKPbc	PKPbc	17 27 49.7	-0.5
	4.1nm,0.7s,baz=72,slow=11,SNR=4.4						

*NEIC **10** 17:13:32.3, 45.65N×26.65E, h131km, MG3.0(BUC), After BUC.*
*CSEM **10** 17:13:38.8±0.4, 45.60N×26.57E, h141km±3km, MD3.9/3, Error ellipse: s-maj=7.2km s-min=4.8km az=42.0*
*BUC **10** 17:13:38.8±1.7, 45.64N×26.61E, h144km±14km, MD3.9/3, Error ellipse: s-maj=14.8km s-min=11.2km az=36.0*
*ISCJB **10** 17:13:39.2±1.0, 45.63N±0.05×26.61E±0.07, h135km±7km, Error ellipse: s-maj=10.0km s-min=6.8km az=44.0*
ISC 10 17:13:39.5±1.0, 45.63N±0.06×26.62E±0.07, h139km±7km, n60, σ0.61/84, 35C-11D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLOR	**Plostina**	**0.22**	**5⇑**	*i*P	**Pn**	**17 13 58.3**	**-0.1**
PLOR				*i*S	**Sn**	**17 14 13.2**	**+0.4**
PLOR	**Plostina**	**0.22**	**5⇑**	*i*P	**Pn**	**17 13 58.3**	**-0.1**
PLOR	**Plostina**	**0.22**	**5**	S	**Sn**	**17 14 13.2**	**+0.4**
PLOR	**Plostina**	**0.22**	**5⇑**	*i*P	**Pn**	**17 13 58.3**	**-0.1**
PLOR				*i*S	**Sn**	**17 14 13.2**	**+0.4**
VRI	**Vrincioaia**	**0.24**	**18⇓**	P	**Pn**	**17 13 58.4**	**0.0**
VRI				S	**Sn**	**17 14 12.8**	**-0.1**
VRI	**Vrincioaia**	**0.24**	**18⇑**	*i*P	**Pn**	**17 13 58.4**	**0.0**
VRI				*i*S	**Sn**	**17 14 12.8**	**-0.1**
VRI	**Vrincioaia**	**0.24**	**18⇑**	*i*P	**Pn**	**17 13 58.4**	**0.0**
VRI	**Vrincioaia**	**0.24**	**18**	S	**Sn**	**17 14 12.8**	**-0.1**
VRI	**Vrincioaia**	**0.24**	**18⇑**	*i*P	**Pn**	**17 13 58.4**	**0.0**
VRI				*i*S	**Sn**	**17 14 12.8**	**-0.1**
ODB	**Odobesti**	**0.34**	**65⇓**	P	**Pn**	**17 13 59.8**	**+1.1**
ODB				S	**Sn**	**17 14 12.0**	**-1.4**
ODB	**Odobesti**	**0.34**	**65⇓**	*i*P	**Pn**	**17 13 59.8**	**+1.1**
ODB	**Odobesti**	**0.34**	**65⇓**	*i*P	**Pn**	**17 13 59.8**	**+1.1**
ODB	**Odobesti**	**0.34**	**65⇓**	*i*P	**Pn**	**17 13 59.8**	**+1.1**
MLR	**Muntele Rosu**	**0.49**	**253⇑**	P	**Pn**	**17 13 59.5**	**+0.1**
MLR				S	**Sn**	**17 14 14.9**	**+0.3**
MLR	**Muntele Rosu**	**0.49**	**253⇑**	*i*P	**Pn**	**17 13 59.5**	**+0.1**
MLR				*i*S	**Sn**	**17 14 14.9**	**+0.3**
MLR	**Muntele Rosu**	**0.49**	**253⇑**	*i*P	**Pn**	**17 13 59.5**	**+0.1**
MLR	**Muntele Rosu**	**0.49**	**253**	S	**Sn**	**17 14 14.9**	**+0.3**
MLR	**Muntele Rosu**	**0.49**	**253⇑**	*i*P	**Pn**	**17 13 59.5**	**+0.1**
MLR				*i*S	**Sn**	**17 14 14.9**	**+0.3**
AMRR	**Amara**	**1.14**	**153⇑**	*i*P	**Pn**	**17 14 04.9**	**+0.4**
AMRR				*i*S	**Sn**	**17 14 24.4**	**+1.0**
AMRR	**Amara**	**1.14**	**153⇑**	*i*P	**Pn**	**17 14 04.9**	**+0.4**
AMRR	**Amara**	**1.14**	**153**	S	**Sn**	**17 14 24.4**	**+1.0**
AMRR	**Amara**	**1.14**	**153⇑**	*i*P	**Pn**	**17 14 04.9**	**+0.4**
AMRR				*i*S	**Sn**	**17 14 24.4**	**+1.0**
CFR	**Carcaliu**	**1.16**	**113⇑**	P	**Pn**	**17 14 05.0**	**+0.4**
CFR				S	**Sn**	**17 14 23.6**	**-0.1**
CFR	**Carcaliu**	**1.16**	**113⇑**	*i*P	**Pn**	**17 14 05.0**	**+0.4**
CFR				*i*S	**Sn**	**17 14 23.6**	**-0.2**
CFR	**Carcaliu**	**1.16**	**113⇑**	*i*P	**Pn**	**17 14 05.0**	**+0.4**
CFR	**Carcaliu**	**1.16**	**113**	S	**Sn**	**17 14 23.6**	**-0.2**
CFR	**Carcaliu**	**1.16**	**113⇑**	*i*P	**Pn**	**17 14 05.0**	**+0.4**
CFR				*i*S	**Sn**	**17 14 23.6**	**-0.2**
HARR	**Harsova**	**1.32**	**135⇓**	P	**Pn**	**17 14 06.5**	**+0.2**
HARR	**Harsova**	**1.32**	**135⇑**	*i*P	**Pn**	**17 14 06.5**	**+0.2**
HARR				*i*S	**Sn**	**17 14 26.3**	**-0.4**
HARR	**Harsova**	**1.32**	**135⇑**	*i*P	**Pn**	**17 14 06.5**	**+0.2**
HARR	**Harsova**	**1.32**	**135**	S	**Sn**	**17 14 26.3**	**-0.4**
HARR	**Harsova**	**1.32**	**135⇑**	*i*P	**Pn**	**17 14 06.5**	**+0.2**
HARR				*i*S	**Sn**	**17 14 26.3**	**-0.4**
BUC1	**Bucharest**	**1.35**	**198⇑**	*i*P	**Pn**	**17 14 06.7**	**+0.1**
BUC1				*i*S	**Sn**	**17 14 27.3**	**+0.1**
BUC1	**Bucharest**	**1.35**	**198⇑**	*i*P	**Pn**	**17 14 06.7**	**+0.1**
BUC1	**Bucharest**	**1.35**	**198**	S	**Sn**	**17 14 27.3**	**+0.1**
BUC1	**Bucharest**	**1.35**	**198⇑**	*i*P	**Pn**	**17 14 06.7**	**+0.1**
BUC1				*i*S	**Sn**	**17 14 27.3**	**+0.1**
TLCR		**1.61**	**105⇓**	P	**Pn**	**17 14 09.7**	**+0.4**
TLCR				S	**Sn**	**17 14 32.1**	**-0.1**
TLCR		**1.61**	**105⇑**	*i*P	**Pn**	**17 14 09.7**	**+0.4**
TLCR				*i*S	**Sn**	**17 14 32.1**	**0.0**
TLCR		**1.61**	**105⇑**	*i*P	**Pn**	**17 14 09.7**	**+0.4**
TLCR		**1.61**	**105**	S	**Sn**	**17 14 32.1**	**0.0**
TLCR		**1.61**	**105⇑**	*i*P	**Pn**	**17 14 09.7**	**+0.4**
TLCR				*i*S	**Sn**	**17 14 32.1**	**0.0**
CVD	**Cernavoda**	**1.66**	**142**	*i*S	**Sn**	**17 14 32.5**	**-0.6**
CVD	**Cernavoda**	**1.66**	**142**	S	**Sn**	**17 14 32.5**	**-0.6**
CVD	**Cernavoda**	**1.66**	**142**	*i*S	**Sn**	**17 14 32.5**	**-0.6**
TIRR	**Tirgusor**	**1.73**	**132⇓**	P	**Pn**	**17 14 10.9**	**+0.1**
TIRR				S	**Sn**	**17 14 34.0**	**-0.6**
TIRR	**Tirgusor**	**1.73**	**132⇑**	*i*P	**Pn**	**17 14 10.9**	**+0.2**
TIRR				*i*S	**Sn**	**17 14 34.0**	**-0.6**
TIRR	**Tirgusor**	**1.73**	**132⇑**	*i*P	**Pn**	**17 14 10.9**	**+0.2**
TIRR	**Tirgusor**	**1.73**	**132**	S	**Sn**	**17 14 34.0**	**-0.6**
TIRR	**Tirgusor**	**1.73**	**132⇑**	*i*P	**Pn**	**17 14 10.9**	**+0.2**
TIRR				*i*S	**Sn**	**17 14 34.0**	**-0.6**
KIS	**Kishinev**	**2.04**	**47**	*e*S	**Sn**	**17 14 37.0**	**-4.2**
KIS	200nm,0.8s **Kishinev**	**2.04**	**47**	*e*S	**Sn**	**17 14 37.0**	**-4.2**
	200nm,0.8s						
ZIMR		**2.17**	**205⇑**	*i*P	**Pn**	**17 14 15.4**	**-0.5**
ZIMR		**2.17**	**205⇑**	*i*P	**Pn**	**17 14 15.4**	**-0.5**
BURAR	**Bucovina Array**	**2.21**	**334⇑**	P	**Pn**	**17 14 16.9**	**+0.6**
BURAR	**Bucovina Array**	**2.21**	**334⇑**	*i*P	**Pn**	**17 14 17.0**	**+0.7**
BURAR	**Bucovina Array**	**2.21**	**334⇑**	*i*P	**Pn**	**17 14 17.0**	**+0.7**
BURAR	**Bucovina Array**	**2.21**	**334⇑**	*i*P	**Pn**	**17 14 17.0**	**+0.7**
DRGR		**2.95**	**295⇓**	*i*P	**Pn**	**17 14 24.2**	**-1.5**
DRGR		**2.95**	**295⇓**	*i*P	**Pn**	**17 14 24.2**	**-1.5**
DRGR		**2.95**	**295⇓**	*i*P	**Pn**	**17 14 24.2**	**-1.5**
DRGR		**2.95**	**295⇓**	*i*P	**Pn**	**17 14 24.2**	**-1.5**

MAN 10 17:16:19, 13.37N×125.25E, h31km, mb5.1, ML4.0, MS4.2, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**1.02**	**214**	*e*P	Pn	17 16 37.3	+0.1
CNP				*e*S	Sn	17 16 49.3	-1.2
PVCP	**Virac**	**1.09**	**282**	*e*P	Pn	17 16 39.0	+0.9
PVCP				*e*S	Sn	17 16 51.8	-0.3
AUQP	**San Andres**	**2.50**	**269**	*e*P	Pn	17 17 00.9	+3.3
GQP	**Guinayangan**	**2.77**	**281⇓**	*e*P	Pn	17 17 03.0	+1.6
POLP	**Polilio Island**	**3.48**	**293**	*e*P	Pn	17 17 16.4	+5.3
GUIM	**Jordan**	**3.77**	**224**	*e*P	Pn	17 17 16.5	+1.6
BALP	**Baler**	**4.27**	**304**	*e*P	Pn	17 17 24.4	+2.5
PALP	**Palanan**	**4.58**	**324**	*e*P	Pn	17 17 27.5	+1.4

MAN 10 17:27:44, 19.03N×121.19E, h26km, mb5.4, ML4.3, MS4.6, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**0.88**	**218⇑**	*i*P	Pb	17 27 58.7	-2.0
PIP				*e*S	Sb	17 28 11.2	-0.8
SGCP	**Mt. Cagua**	**1.13**	**134**	*e*P	Pn	17 28 04.2	0.0
SGCP				*e*S	Sn	17 28 09.2	-10
APYP	**Conner**	**1.16**	**177**	*e*P	Pn	17 28 04.7	+0.2
APYP				*e*S	Sn	17 28 20.3	+0.7
ABRA	**Dolores**	**1.44**	**198**	*e*P	Pn	17 28 09.0	+0.6
ABRA				*e*S	Sn	17 28 27.6	+1.0
BBP	**Basco**	**1.59**	**27**	*e*P	Pn	17 28 11.1	+0.6
BBP				*e*S	Sn	17 28 26.0	-4.1
PALP	**Palanan**	**2.28**	**149**	*e*P	Pn	17 28 21.7	+1.7
BCPH	**Baguio City Da**	**2.69**	**192⇓**	*e*P	Pn	17 28 21.4	-4.3
BCPH				*e*S	Sn	17 29 00.4	+3.0
BOLP	**Bolinao**	**2.90**	**205**	*e*P	Pn	17 28 29.4	+0.9
BALP	**Baler**	**3.29**	**173**	*e*P	Pn	17 28 36.8	+2.9

*ISCJB **10** 18:07:29.0±0.5, 13.73N±0.05×120.7E±0.1, h147km±4km, mb3.7/12, Error ellipse: s-maj=16.1km s-min=8.0km az=4.9*
*IDC **10** 18:07:29.5±0.6, 13.84N×121.11E, h142km±3km, mb3.3/8, mb1 3.4/8, mb1mx3.2/23, mbtmp3.3/8, Error ellipse: s-maj=36.4km s-min=12.2km az=58.0*
*NEIC **10** 18:07:30.2±0.9, 13.80N×121.13E, h150km±9km, mb4.2/6, Error ellipse: s-maj=24.3km s-min=11.8km az=49.0*
*MAN **10** 18:07:31, 13.78N×120.45E, h102km, mb4.7, ML3.6, MS3.5*
ISC 10 18:07:30.1±0.4, 13.72N±0.05×120.74E±0.09, h142km±4km, n32, σ1.10/36, mb3.7/12, 1C-2D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.43**	**27**	P	**Pn**	**18 07 50.4**	**+0.3**
TGY	289nm,0.3s,baz=237,slow=0.7,SNR=30			S	**Sn**	**18 08 05.4**	**0.0**
TGY	**Tagaytay City**	**0.43**	**27⇑**	*e*P	**Pn**	**18 07 50.4**	**+0.2**
TGY	361nm,0.3s,baz=352,slow=21,SNR=35			*e*S	**Sn**	**18 08 05.7**	**+0.3**
LUBP	**Lubang**	**0.48**	**272**	*e*P	**Pn**	**18 07 49.3**	**-1.1**
LUBP				*e*S	**Sn**	**18 07 51.8**	**-14**
SJMP	**San Jose**	**1.30**	**163**	*e*P	**Pn**	**18 07 57.2**	**+0.2**
POLP	**Polilio Island**	**1.54**	**49**	*e*P	**Pn**	**18 08 01.4**	**+1.9**
GQP	**Guinayangan**	**1.67**	**83⇓**	*e*P	Px	18 08 11.2	
BUSP	**Coron**	**1.78**	**197**	*e*P	**Pn**	**18 08 01.6**	**-0.7**
PCPH	**Palayan**	**1.86**	**11⇓**	*e*P	**Pn**	**18 08 02.6**	**-0.6**
PCPH				*e*S	**Sn**	**18 08 26.6**	**-1.9**
AUQP	**San Andres**	**1.93**	**102**	*e*P	**Pn**	**18 08 07.6**	**+3.7**
BALP	**Baler**	**2.17**	**22**	*e*P	**Pn**	**18 08 08.1**	**+1.3**
BALP				*e*S	**Sn**	**18 08 29.9**	**-5.1**
BOLP	**Bolinao**	**2.76**	**343**	*e*P	**Pn**	**18 08 14.1**	**-0.1**
ENPP	**El Nido**	**2.81**	**207**	*e*P	**Pn**	**18 08 14.9**	**+0.2**
PVCP	**Virac**	**3.33**	**92**	*e*P	**Pn**	**18 08 24.4**	**+3.0**
PALP	**Palanan**	**3.70**	**26**	*e*P	**Pn**	**18 08 24.3**	**-2.0**
ABRA	**Dolores**	**3.91**	**360**	*e*P	**Pn**	**18 08 29.0**	**0.0**
APYP	**Conner**	**4.15**	**7**	*e*P	**Pn**	**18 08 33.3**	**+1.1**
QIZ	**Qiongzhong**	**11.71**	**298**	P	**Pn**	**18 10 19.0**	**+6.1**
KSM	37nm,1.2s **Kuching**	**15.95**	**221**	*e*P	**Pn**	**18 11 15.6**	**+8.7**
CMAR	10nm,0.8s **Chiang Mai Arr**	**21.46**	**286**	P	**P**	**18 12 09.5**	**+2.1**

GUR	**Goura**	**0.67**	**87**	*e*PB	**Pb**	**18 24 19.9**	**-0.5**
GUR				*e*SN	**Sn**	**18 24 30.1**	**-1.5**
GUR	**Goura**	**0.67**	**87**	P	**Pb**	**18 24 19.9**	**-0.5**
GUR				S	**Sb**	**18 24 29.8**	**+0.5**
GUR				*e*Sn	**Sn**	**18 24 30.1**	**-1.5**
KALE	**Kalithea**	**0.70**	**46**	P	**Pb**	**18 24 20.2**	**-0.7**
KALE				S	**Sb**	**18 24 30.9**	**+0.8**
KALE	**Kalithea**	**0.70**	**46**	P	**Pb**	**18 24 20.2**	**-0.7**
KALE				S	**Sb**	**18 24 30.9**	**+0.8**
VLS	**Valsamata**	**0.76**	**291**	*e*Pn	**Pb**	**18 24 21.0**	**-0.8**
VLS	**Valsamata**	**0.76**	**291**	P	**Pb**	**18 24 21.0**	**-0.8**
VLS				S	**Sb**	**18 24 32.4**	**+0.6**
VLS	**Valsamata**	**0.76**	**291**	*e*PN	**Pb**	**18 24 21.0**	**-0.8**
VLS	**Valsamata**	**0.76**	**291**	P	**Pb**	**18 24 21.0**	**-0.8**
VLS				S	**Sb**	**18 24 32.4**	**+0.6**
ITM	**Ithomi**	**0.81**	**154**	*e*Pn	**Pn**	**18 24 23.3**	**-0.2**
ITM	**Ithomi**	**0.81**	**154**	P	**Pb**	**18 24 23.4**	**+0.8**
ITM	**Ithomi**	**0.81**	**154**	*e*PN	**Pn**	**18 24 23.3**	**-0.2**
ITM	**Ithomi**	**0.81**	**154**	*e*Pn	**Pn**	**18 24 23.3**	**-0.2**
VLX	**Vlachokerasia**	**0.89**	**127**	P	**Pb**	**18 24 24.7**	**+0.7**
VLX				S	**Sb**	**18 24 38.4**	**+3.1**
VLX	**Vlachokerasia**	**0.89**	**127**	*e*PN	**Pn**	**18 24 24.5**	**-0.1**
VLX				*e*SN	**Sn**	**18 24 38.0**	**+1.2**
VLX	**Vlachokerasia**	**0.89**	**127**	*e*Pn	**Pn**	**18 24 24.5**	**-0.1**
VLX				*e*Sn	**Sn**	**18 24 38.0**	**+1.2**
VLX				S	**Sb**	**18 24 38.4**	**+3.1**
DSF	**Desfina**	**0.96**	**58**	P	**Pb**	**18 24 24.6**	**-0.6**
DSF				S	**Sb**	**18 24 38.5**	**+1.0**
DSF	**Desfina**	**0.96**	**58**	P	**Pb**	**18 24 24.6**	**-0.6**
DSF				S	**Sb**	**18 24 38.5**	**+1.0**
PYL	**PYLOS**	**1.03**	**169**	P	**Pb**	**18 24 26.8**	**+0.4**
PYL	**PYLOS**	**1.03**	**169**	*e*PN	**Pn**	**18 24 27.0**	**+0.4**
PYL	**PYLOS**	**1.03**	**169**	*e*Pn	**Pn**	**18 24 27.0**	**+0.4**
EVR	**Evrytania**	**1.04**	**14**	*e*Pn	**Pn**	**18 24 26.5**	**-0.2**
EVR	**Evrytania**	**1.04**	**14**	*e*PN	**Pn**	**18 24 26.5**	**-0.2**
EVR	**Evrytania**	**1.04**	**14**	*e*Pn	**Pn**	**18 24 26.5**	**-0.2**
LKD2	**Lefkada island**	**1.10**	**324**	P	**Pn**	**18 24 26.9**	**-0.6**
LKD2				S	**Sb**	**18 24 42.3**	**+0.8**
LKD2	**Lefkada island**	**1.10**	**324**	P	**Pn**	**18 24 26.9**	**-0.6**
LKD2				S	**Sb**	**18 24 42.3**	**+0.8**
LTK	**Loutraki**	**1.17**	**84**	P	**Pn**	**18 24 28.4**	**-0.1**
LTK	**Loutraki**	**1.17**	**84**	*e*PN	**Pn**	**18 24 28.9**	**+0.4**
LTK	**Loutraki**	**1.17**	**84**	P	**Pn**	**18 24 28.4**	**-0.1**
LTK	**Loutraki**	**1.17**	**84**	*e*Pn	**Pn**	**18 24 28.9**	**+0.4**
AGG	**Agios Georgios**	**1.29**	**30**	P	**Pn**	**18 24 30.4**	**+0.2**
AGG				S	**Sn**	**18 24 47.3**	**+0.4**
AGG	**Agios Georgios**	**1.29**	**30**	P	**Pn**	**18 24 30.4**	**+0.2**
AGG				S	**Sn**	**18 24 47.3**	**+0.4**
LKR	**Lokris**	**1.40**	**58**	*e*Pn	**Pn**	**18 24 33.2**	**+1.5**
LKR	**Lokris**	**1.40**	**58**	P	**Pn**	**18 24 30.7**	**-1.0**
LKR	**Lokris**	**1.40**	**58**	*e*PN	**Pn**	**18 24 33.2**	**+1.5**
LKR	**Lokris**	**1.40**	**58**	P	**Pn**	**18 24 30.7**	**-1.0**
LKR	**Lokris**	**1.40**	**58**	*e*Pn	**Pn**	**18 24 33.2**	**+1.5**
ATAL	**Atalanti**	**1.44**	**56**	P	**Pn**	**18 24 32.4**	**+0.2**
ATAL	**Atalanti**	**1.44**	**56**	P	**Pn**	**18 24 32.4**	**+0.2**
NAIG	**Nisos Aigina**	**1.59**	**95**	*e*Pb	**Pb**	**18 24 35.0**	**-1.0**
NAIG	**Nisos Aigina**	**1.59**	**95**	*e*PB	**Pb**	**18 24 35.0**	**-1.0**
THL	**Klokotos Trika**	**1.71**	**14**	P	**Pn**	**18 24 38.0**	**+2.1**
THL	**Klokotos Trika**	**1.71**	**14**	*e*PN	**Pn**	**18 24 36.1**	**+0.2**
THL	**Klokotos Trika**	**1.71**	**14**	*e*Pn	**Pn**	**18 24 36.1**	**+0.2**
THL	**Klokotos Trika**	**1.71**	**14**	P	**Pn**	**18 24 38.0**	**+2.1**
ATH	**Athens Observa**	**1.76**	**87**	*e*Pb	**Pb**	**18 24 37.3**	**-1.6**
ATH	**Athens Observa**	**1.76**	**87**	*e*PB	**Pb**	**18 24 37.3**	**-1.6**
VLY	**Voula,Athens**	**1.82**	**91**	*e*Pb	**Pb**	**18 24 38.5**	**-1.5**
VLY	**Voula,Athens**	**1.82**	**91**	*e*PB	**Pb**	**18 24 38.5**	**-1.5**
NEO	**Neokhori**	**1.95**	**44**	*e*Pb	**Pb**	**18 24 40.2**	**-1.9**
NEO	**Neokhori**	**1.95**	**44**	*e*PB	**Pb**	**18 24 40.2**	**-1.9**
XOR	**Xorichti**	**1.97**	**42**	P	**Pn**	**18 24 39.3**	**-0.3**
XOR				S	**Sn**	**18 25 04.9**	**+1.2**
XOR	**Xorichti**	**1.97**	**42**	P	**Pn**	**18 24 39.3**	**-0.3**
XOR				S	**Sn**	**18 25 04.9**	**+1.2**
KEK	**Kerkira**	**2.24**	**324**	*e*Pb	**Pb**	**18 24 44.3**	**-2.7**
KEK	**Kerkira**	**2.24**	**324**	P	**Pn**	**18 24 44.9**	**+1.7**
KEK	**Kerkira**	**2.24**	**324**	*e*PB	**Pb**	**18 24 44.3**	**-2.7**
KEK	**Kerkira**	**2.24**	**324**	P	**Pn**	**18 24 44.9**	**+1.7**
AOS	**Alonnisos**	**2.26**	**55**	P	**Pn**	**18 24 43.0**	**-0.5**
AOS	**Alonnisos**	**2.26**	**55**	P	**Pn**	**18 24 43.0**	**-0.5**

*ISCJB **10** 18:29:15.7±0.5,36°.34N±0°.03×21°.94E±0°.04, h10km, Error ellipse: s-maj=5.5km s-min=3.4km az=139.8*
*ATH **10** 18:29:17.4,36°.43N×22°.05E, h24km±1km, ML2.9*
*NEIC **10** 18:29:17.4,36°.43N×22°.05E, h24km, ML2.9(ATH), After ATH.*
*CSEM **10** 18:29:17.5±0.2,36°.46N×21°.83E, h2km, ML3.9/7, Error ellipse: s-maj=5.6km s-min=4.4km az=52.0*
*THE **10** 18:29:19.9,36°.55N×22°.01E, h0km±1km, ML3.9/7, Error ellipse: s-maj=1.9km s-min=0.6km az=223.0*
ISC 10 18:29:15.7±0.8,36°.35N±0°.03×21°.96E±0°.04, h0km±5km, n91,σ0°82/113, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.57**	**343**	P	**Pg**	**18 29 27.5**	**+0.8**
PYL				S	**Sg**	**18 29 34.2**	**+0.1**
PYL	**PYLOS**	**0.57**	**343**	*e*PN	**Pg**	**18 29 27.4**	**+0.7**
PYL				*e*SN	**Sg**	**18 29 36.7**	**+2.6**
PYL	**PYLOS**	**0.57**	**343**	*e*Pn	**Pg**	**18 29 27.4**	**+0.7**
PYL				S	**Sg**	**18 29 34.2**	**+0.1**
ITM	**Ithomi**	**0.83**	**358**	*e*Pn	**Pg**	**18 29 31.6**	**0.0**
ITM				*e*Sn	**Sg**	**18 29 43.6**	**+1.2**
ITM	**Ithomi**	**0.83**	**358**	P	**Pg**	**18 29 31.9**	**+0.3**
ITM				S	**Sg**	**18 29 41.3**	**-1.1**
ITM	**Ithomi**	**0.83**	**358**	*e*PN	**Pg**	**18 29 31.6**	**0.0**
ITM				*e*SN	**Sg**	**18 29 43.6**	**+1.2**
ITM	**Ithomi**	**0.83**	**358**	*e*Pn	**Pg**	**18 29 31.6**	**0.0**
ITM	**Ithomi**	**0.83**	**358**	P	**Pg**	**18 29 31.9**	**+0.3**
ITM				S	**Sg**	**18 29 41.3**	**-1.1**
VLI	**Veliai**	**0.87**	**65**	*e*Pn	**Pg**	**18 29 32.5**	**0.0**
VLI				*e*Sn	**Sg**	**18 29 43.7**	**-0.1**
VLI	**Veliai**	**0.87**	**65**	*e*PN	**Pg**	**18 29 32.5**	**0.0**
VLI				*e*SN	**Sg**	**18 29 43.7**	**-0.1**
KYTH	**Kithira**	**0.88**	**94**	*e*Pn	**Pg**	**18 29 33.2**	**+0.7**
KYTH	**Kithira**	**0.88**	**94**	*e*PN	**Pg**	**18 29 33.2**	**+0.7**
VLX	**Vlachokerasia**	**1.07**	**18**	P	**Pg**	**18 29 35.8**	**-0.5**
VLX				S	**Sg**	**18 29 49.2**	**-1.0**
VLX	**Vlachokerasia**	**1.07**	**18**	*e*PN	**Pg**	**18 29 35.6**	**-0.7**
VLX				*e*SN	**Sg**	**18 29 49.2**	**-1.0**
VLX	**Vlachokerasia**	**1.07**	**18**	P	**Pg**	**18 29 35.8**	**-0.5**
VLX				S	**Sg**	**18 29 49.2**	**-1.0**
GUR	**Goura**	**1.61**	**11**	P	**Pn**	**18 29 45.9**	**+0.5**
GUR	**Goura**	**1.61**	**11**	*e*PN	**Pn**	**18 29 45.1**	**-0.3**
GUR	**Goura**	**1.61**	**11**	*e*Pn	**Pn**	**18 29 45.1**	**-0.3**
GUR	**Goura**	**1.61**	**11**	P	**Pn**	**18 29 45.9**	**+0.5**
RLS	**Riolos of Patr**	**1.75**	**347**	P	**Pn**	**18 29 44.4**	**-2.9**
RLS	**Riolos of Patr**	**1.75**	**347**	P	**Pn**	**18 29 44.4**	**-2.9**
KARN	**Karanos**	**1.85**	**120**	P	**Pn**	**18 29 49.5**	**+0.8**
KARN				S	**Sg**	**18 30 14.8**	**-0.5**
LTK	**Loutraki**	**1.85**	**26**	P	**Pn**	**18 29 49.4**	**+0.7**
LTK	**Loutraki**	**1.85**	**26**	*e*PN	**Pn**	**18 29 48.6**	**-0.1**
LTK	**Loutraki**	**1.85**	**26**	*e*Pn	**Pn**	**18 29 48.6**	**-0.1**
LTK	**Loutraki**	**1.85**	**26**	P	**Pn**	**18 29 49.4**	**+0.7**
NAIG	**Nisos Aigina**	**1.86**	**41**	*e*Pn	**Pn**	**18 29 49.3**	**+0.4**
NAIG	**Nisos Aigina**	**1.86**	**41**	*e*PN	**Pn**	**18 29 49.3**	**+0.4**
NAIG	**Nisos Aigina**	**1.86**	**41**	*e*Pn	**Pn**	**18 29 49.3**	**+0.4**
LAKA	**Lakka**	**1.89**	**1**	P	**Pn**	**18 29 50.0**	**+0.8**
LAKA				S	**Sn**	**18 30 12.9**	**-0.8**
LAKA	**Lakka**	**1.89**	**1**	P	**Pn**	**18 29 50.0**	**+0.8**
LAKA				S	**Sn**	**18 30 12.9**	**-0.8**
UPR	**University Cam**	**1.93**	**356**	P	**Pn**	**18 29 50.9**	**+1.1**
UPR	**University Cam**	**1.93**	**356**	P	**Pn**	**18 29 50.9**	**+1.1**
TRIZ	**Trizonia**	**2.01**	**3**	P	**Pn**	**18 29 51.6**	**+0.7**
TRIZ				S	**Sn**	**18 30 17.1**	**+0.3**
TRIZ	**Trizonia**	**2.01**	**3**	P	**Pn**	**18 29 51.6**	**+0.7**
TRIZ				S	**Sn**	**18 30 17.1**	**+0.3**
KALE	**Kalithea**	**2.04**	**4**	P	**Pn**	**18 29 52.1**	**+0.8**
KALE				S	**Sn**	**18 30 17.1**	**-0.4**
KALE	**Kalithea**	**2.04**	**4**	P	**Pn**	**18 29 52.1**	**+0.8**
KALE				S	**Sn**	**18 30 17.1**	**-0.4**
VAM	**Vamos**	**2.05**	**117**	*e*Pn	**Pn**	**18 29 52.6**	**+1.1**
VAM	**Vamos**	**2.05**	**117**	*e*PN	**Pn**	**18 29 52.6**	**+1.1**
VAM	**Vamos**	**2.05**	**117**	*e*Pn	**Pn**	**18 29 52.6**	**+1.1**
EFP	**Efpalio**	**2.07**	**359**	P	**Pn**	**18 29 51.7**	**-0.1**
EFP				S	**Sn**	**18 30 18.0**	**-0.3**
EFP	**Efpalio**	**2.07**	**359**	*e*PB	**Pn**	**18 29 51.5**	**-0.3**
EFP	**Efpalio**	**2.07**	**359**	P	**Pn**	**18 29 51.7**	**-0.1**
EFP				S	**Sn**	**18 30 18.0**	**-0.3**
VLY	**Voula,Athens**	**2.10**	**44**	*e*Pb	**Pn**	**18 29 51.1**	**-1.0**
VLY	**Voula,Athens**	**2.10**	**44**	*e*PB	**Pn**	**18 29 51.1**	**-1.0**
DSF	**Desfina**	**2.11**	**12**	P	**Pn**	**18 29 52.9**	**+0.7**
DSF	**Desfina**	**2.11**	**12**	P	**Pn**	**18 29 52.9**	**+0.7**
VLS	**Valsamata**	**2.12**	**330**	*e*Pb	**Pn**	**18 29 52.7**	**+0.2**
VLS	**Valsamata**	**2.12**	**330**	P	**Pn**	**18 29 52.2**	**-0.3**
VLS	**Valsamata**	**2.12**	**330**	*e*PB	**Pn**	**18 29 52.7**	**+0.2**
VLS	**Valsamata**	**2.12**	**330**	P	**Pn**	**18 29 52.2**	**-0.3**
VLS	**Valsamata**	**2.12**	**330**	*e*Pb	**Pn**	**18 29 52.7**	**+0.2**
ATH	**Athens Observa**	**2.14**	**40**	*e*Pn	**Pn**	**18 29 53.0**	**+0.3**
ATH	**Athens Observa**	**2.14**	**40**	*e*PN	**Pn**	**18 29 53.0**	**+0.3**
ATH	**Athens Observa**	**2.14**	**40**	*e*Pn	**Pn**	**18 29 53.0**	**+0.3**
GVD	**Gavdhos**	**2.30**	**130**	*e*Pn	**Pb**	**18 29 58.6**	**+0.5**
GVD	**Gavdhos**	**2.30**	**130**	P	**Pg**	**18 29 59.9**	**+0.1**
GVD	**Gavdhos**	**2.30**	**130**	*e*Pn	**Pb**	**18 29 58.6**	**+0.5**
GVD	**Gavdhos**	**2.30**	**130**	P	**Pg**	**18 29 59.9**	**+0.1**
LKR	**Lokris**	**2.44**	**20**	*e*Pb	**Pn**	**18 29 57.2**	**+0.4**
LKR	**Lokris**	**2.44**	**20**	P	**Pn**	**18 29 57.4**	**+0.6**
LKR	**Lokris**	**2.44**	**20**	*e*PB	**Pn**	**18 29 57.2**	**+0.4**
LKR	**Lokris**	**2.44**	**20**	P	**Pn**	**18 29 57.4**	**+0.6**
IDI	**Anoyia**	**2.61**	**113**	P	**Pb**	**18 30 03.1**	**-0.3**
IDI	**Anoyia**	**2.61**	**113**	P	**Pb**	**18 30 03.1**	**-0.3**
AGG	**Agios Georgios**	**2.68**	**6**	P	**Pn**	**18 30 01.6**	**+1.5**
AGG	**Agios Georgios**	**2.68**	**6**	P	**Pn**	**18 30 01.6**	**+1.5**
THR5	**Thira Island,**	**2.74**	**88**	P	**Pb**	**18 30 04.1**	**-1.5**
THR5	**Thira Island,**	**2.74**	**88**	P	**Pb**	**18 30 04.1**	**-1.5**
THR6	**Thira Island,**	**2.78**	**89**	P	**Pb**	**18 30 05.0**	**-1.2**
THR6	**Thira Island,**	**2.78**	**89**	P	**Pb**	**18 30 05.0**	**-1.2**
XOR	**Xorichti**	**3.17**	**18**	P	**Pn**	**18 30 07.6**	**+0.8**
XOR	**Xorichti**	**3.17**	**18**	P	**Pn**	**18 30 07.6**	**+0.8**
AOS	**Alonnisos**	**3.20**	**28**	P	**Pn**	**18 30 06.3**	**-1.0**
AOS	**Alonnisos**	**3.20**	**28**	P	**Pn**	**18 30 06.3**	**-1.0**
THL	**Klokotos Trika**	**3.21**	**1**	P	**Pn**	**18 30 08.4**	**+1.0**
THL	**Klokotos Trika**	**3.21**	**1**	*e*PN	**Pn**	**18 30 08.2**	**+0.8**
THL	**Klokotos Trika**	**3.21**	**1**	*e*Pn	**Pn**	**18 30 08.3**	**+0.9**
KEK	**Kerkira**	**3.76**	**334**	P	**Pn**	**18 30 15.5**	**+0.5**
KEK	**Kerkira**	**3.76**	**334**	P	**Pn**	**18 30 14.3**	**-0.7**
KEK	**Kerkira**	**3.76**	**334**	P	**Pn**	**18 30 14.3**	**-0.7**
TIP	**Timpagrande**	**4.99**	**306**	*e*Pn	**Pn**	**18 30 30.9**	**-1.0**
	3.6nm,0.3s						
TIP				*e*Sn	**Sn**	**18 31 22.1**	**-8.1**
TIP	**Timpagrande**	**4.99**	**306**	*e*Pn	**Pn**	**18 30 30.9**	**-1.0**
	3.6nm,0.3s						
SOI	**Samo**	**5.01**	**292**	Pn	**Pn**	**18 30 31.7**	**-0.5**
	17nm,0.3s						
SOI	**Samo**	**5.01**	**292**	Pn	**Pn**	**18 30 31.7**	**-0.5**
	17nm,0.3s						
CEL	**Celeste**	**5.19**	**293**	P	**Pn**	**18 30 34.6**	**-0.1**
CEL	**Celeste**	**5.19**	**293**	P	**Pn**	**18 30 34.6**	**-0.1**
MTTG	**Motta San Giov**	**5.26**	**290**	Pn	**Pn**	**18 30 35.0**	**-0.6**
	26nm,0.4s						
MTTG	**Motta San Giov**	**5.26**	**290**	Pn	**Pn**	**18 30 35.0**	**-0.6**
	26nm,0.4s						
LTRZ	**Laterza**	**5.85**	**318**	Pn	**Pn**	**18 30 42.3**	**-1.4**
	23nm,0.4s						
LTRZ	**Laterza**	**5.85**	**318**	Pn	**Pn**	**18 30 42.3**	**-1.4**
	23nm,0.4s						

*BJI **10** 18:35:24.4,4°.80N×126°.51E, h52km, mB4.8/23, mb4.8/39, Ms4.5/21, Ms7 3.8/20*
*MOS **10** 18:35:25.9±1.0,5°.30N×126°.25E, h33km, mb5.1/33, Error ellipse: s-maj=13.6km s-min=6.0km az=112.6*
*DJA **10** 18:35:29,5°.36N×126°.72E, h45km, mb4.8/26*
*NEIC **10** 18:35:30.6±1.0,5°.29N×126°.27E, h62km±9km, mb4.8/46, Error ellipse: s-maj=8.6km s-min=5.0km az=72.0*
*ISCJB **10** 18:35:30.4±0.6,5°.26N±0°.03×126°.37E±0°.05, h75km±4km, mb4.7/86, Error ellipse: s-maj=7.7km s-min=5.1km az=174.5*
*IDC **10** 18:35:31.8±1.4,5°.21N×126°.20E, h72km±11km, mb4.2/24, mb1 4.3/25, mb1mx4.3/28, mbtmp4.2/25, MS3.7/9, Ms1 3.7/9, ms1mx3.4/32, Error ellipse: s-maj=20.8km s-min=9.0km az=76.0*
*MAN **10** 18:35:33,5°.40N×126°.28E, h63km, mb5.5, ML4.6, MS4.9*
ISC 10 18:35:31.5±0.5,5°.27N±0°.03×126°.46E±0°.04, h70km±4km, h48km±1.8km:pP-P, n201,σ1§25/210, mb4.7/86, 9C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.67**	**353**	*e*P	**Pn**	**18 35 58.2**	**-0.6**
MATI				*e*S	**Sn**	**18 36 19.6**	**+0.1**
GSPH	**General Santos**	**1.70**	**298**	⇑*e*P	**Pn**	**18 35 54.3**	**-4.9**
DAV	**Davao City (W)**	**1.99**	**334**	P	**Pn**	**18 36 01.2**	**-1.8**
	66nm,0.3s,baz=212,slow=1.7,SNR=14						
DAV				S	**Sn**	**18 36 27.3**	**+0.4**
	276nm,0.3s,baz=257,slow=16,SNR=7.9						
DAV	**Davao City (W)**	**1.99**	**334**	*e*P	**Pn**	**18 35 59.5**	**-3.5**
DMPH	**Davao City--Mi**	**2.03**	**332**	*e*P	**Pn**	**18 36 00.9**	**-2.7**
DMPH				*i* S	Sn	18 36 51.7	+24
KCP	**Kidapawan**	**2.19**	**322**	⇓*e*P	**Pn**	**18 36 11.4**	**+5.6**
KCP				*i* S	**Sn**	**18 36 40.5**	**+8.4**
CTBH	**Cotabato--PC H**	**2.93**	**311**	⇓*i*P	**Pn**	**18 36 13.4**	**-2.4**
BUKP	**Musuan**	**2.94**	**332**	*e*P	**Pn**	**18 36 15.1**	**-0.8**
BUKP				*e*S	**Sn**	**18 36 47.7**	**-2.3**
CGP	**Cagayan de Oro**	**3.61**	**331**	*e*P	**Pn**	**18 36 23.3**	**-1.8**
CGP				*i* S	**Sn**	**18 37 12.7**	**+6.1**
PAGZ	**Pagadian**	**3.98**	**310**	*e*P	**Pn**	**18 36 30.2**	**0.0**
PAGZ				*e*S	Sn	18 36 45.9	-30
IPIL	**Ipil**	**4.60**	**303**	*e*P	**Pn**	**18 36 38.8**	**+0.2**
MSLP	**Maasin**	**5.08**	**342**	*e*P	**Pn**	**18 36 46.9**	**+1.7**
TBP	**Tagbilaran**	**5.09**	**330**	*e*P	**Pn**	**18 36 45.9**	**+0.7**
SNPH	**Sibulan**	**5.15**	**322**	*e*P	**Pn**	**18 36 51.8**	**+5.6**
OCLP	**Ormoc**	**6.03**	**342**	*e*P	**Pn**	**18 36 59.9**	**+1.8**
GUIM	**Jordan**	**6.55**	**324**	*e*P	**Pn**	**18 37 05.8**	**+0.4**
RCP	**Roxas**	**7.25**	**330**	⇑*i*P	**Pn**	**18 37 14.9**	**+0.2**
MYLDM	**Lahad Datu**	**7.92**	**270**	P	**Pn**	**18 37 25.0**	**+0.9**
PVCP	**Virac**	**8.58**	**345**	*e*P	**Pn**	**18 37 34.6**	**+1.7**
TSM	**Tawau**	**8.61**	**264**	P	**Pn**	**18 37 32.3**	**-1.2**
SJMP	**San Jose**	**8.88**	**324**	*e*P	**Pn**	**18 37 38.7**	**+1.6**
BUSP	**Coron**	**9.11**	**318**	*e*P	**Pn**	**18 37 40.5**	**+0.2**
SDKM	**Sandakan**	**9.23**	**273**	P	**Pn**	**18 37 43.3**	**+1.4**
KDM	**Kudat**	**9.71**	**280**	P	**Pn**	**18 37 50.5**	**+2.1**
KAPI	**Kappang**	**12.22**	**213**	P	**Pn**	**18 38 21.1**	**-1.7**
	0.4nm,0.3s,baz=50,slow=17,SNR=2.5						
KAPI				LR	LR	18 43 23.7	
	comp=Z,300nm,18.1s,baz=268,slow=39						
BTM	**Bintulu**	**13.49**	**262**	P	**Pn**	**18 38 42.6**	**+2.5**
SBUM	**Sibu**	**14.48**	**259**	P	**Pn**	**18 38 56.1**	**+3.2**
KSM	**Kuching**	**16.55**	**257**	P	**Pn**	**18 39 23.3**	**+3.9**
KSM	**Kuching**	**16.55**	**257**	*e*P	**Pn**	**18 39 20.9**	**+1.6**
	46nm,1.1s						
TPUB	**Ta-pu**	**18.78**	**343**	*e*P	**Pn**	**18 39 43.6**	**-2.9**
	28nm,0.8s						
KAKA	**Kakadu**	**18.83**	**162**	*e*P	**Pn**	**18 39 47.4**	**+0.3**
	17nm,0.8s						
KAKA	**Kakadu**	**18.83**	**162**	*e*P	**Pn**	**18 39 47.4**	**+0.3**
	87nm,0.8s						
SSLB	**Suanglung**	**19.16**	**344**	*e*P	**Pn**	**18 39 48.6**	**-2.3**
	13nm,0.6s						
YHNB	**Yeheng**	**19.89**	**346**	*e*P	**Pn**	**18 39 57.8**	**-1.8**
	19nm,0.8s						
GUMO	**Guam**	**19.94**	**64**	LR	LR	18 46 18.0	
	comp=Z,263nm,20.8s,baz=260,slow=32						
QIZ	**Qiongzhong**	**21.20**	**312**	P	**P**	**18 40 11.2**	**-0.3**
QIZ				sP	sP	18 40 26.5	-8.4
QIZ				S	**S**	**18 44 05.7**	**+2.2**
QIZ				sS	sS	18 44 20.3	-7.3
QIZ				pmax	pmax		
	comp=Z,13nm,1.5s,mb4.0						
QIZ				LR	LR		
	comp=N,150nm,17.6s						
QIZ				LR	LR		
	comp=E,73nm,20.9s						
QIZ				LR	LR		
	comp=Z,300nm,23.9s						
QIZ	**Qiongzhong**	**21.20**	**312**	P	**P**	**18 40 08.6**	**-2.9**
MYKOM	**Kota Tinggi**	**22.82**	**262**	P	**P**	**18 40 30.8**	**+1.9**
KTGM	**Kuala Trenggan**	**23.22**	**271**	P	**P**	**18 40 33.9**	**+1.0**
FITZ	**Fitzroy Crossi**	**23.24**	**182**	*e*P	**P**	**18 40 31.9**	**-1.0**
	comp=Z,63nm,0.9s,mb4.9						
FITZ	**Fitzroy Crossi**	**23.24**	**182**	P	**P**	**18 40 31.6**	**-1.4**
	comp=Z,111nm,0.9s,mb4.2,baz=35,slow=7.9,SNR=16						
FITZ	**Fitzroy Crossi**	**23.24**	**182**	*e*P	**P**	**18 40 30.9**	**-2.0**
	comp=Z,37nm,0.9s,mb4.7						
FITZ				*e*		18 40 45.6	
KGM	**Kluang**	**23.31**	**263**	P	**P**	**18 40 35.8**	**+2.1**
FRIM	**Kepong**	**24.84**	**266**	P	**P**	**18 40 50.7**	**+3.0**
COEN	**Coen**	**25.30**	**139**	P	**P**	**18 40 52.2**	**+0.4**
	comp=Z,99nm,1.1s,mb5.2						
IPM	**Ipoh**	**25.35**	**269**	P	**P**	**18 40 52.8**	**+0.5**
KULM	**Kulim**	**25.70**	**271**	P	**P**	**18 40 56.7**	**+1.3**
KULM	**Kulim**	**25.70**	**271**	*e*P	**P**	**18 40 55.2**	**-0.2**
	comp=Z,66nm,1.6s,mb4.8						
WRAB	**Tennant Creek**	**26.22**	**163**	*e*P	**P**	**18 41 00.8**	**+0.8**
WRAB				pmax	pmax		
	comp=Z,31nm,0.9s,mb4.7						
WRAB	**Tennant Creek**	**26.22**	**163**	*e*P	**P**	**18 41 00.8**	**+0.8**
	comp=Z,31nm,0.9s,mb4.7						
WRA	**Warramunga Arr**	**26.23**	**163**	P	**P**	**18 41 00.1**	**0.0**
	comp=Z,12nm,0.9s,mb4.3,baz=339,slow=10,SNR=33						
WRA				ScP	ScP	18 48 02.9	+3.6
	comp=Z,0.9nm,0.8s,baz=340,slow=3.2,SNR=6.5						
CBIJ	**Chichi jima**	**26.38**	**33**	LR	LR	18 49 29.2	
	comp=Z,104nm,21.0s,baz=351,slow=32						
MBWA	**Marble Bar**	**27.08**	**194**	*e*P	**P**	**18 41 06.7**	**-1.1**
PSI	**Prapat**	**27.57**	**266**	P	**P**	**18 41 10.8**	**-1.5**
	comp=Z,3.4nm,0.5s,mb4.1,baz=74,slow=7.4,SNR=3.7						
NJ2	**Nanjing**	**27.57**	**346**	*e*P	**P**	**18 41 13.2**	**+1.1**
NJ2				pP	pP	18 41 26.2	-2.5
NJ2				sP	sP	18 41 31.5	-5.4
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.5						
GYA	**Guiyang**	**28.31**	**320**	P	**P**	**18 41 20.0**	**+1.3**
GYA				pP	pP	18 41 31.8	-3.5
GYA				sP	sP	18 41 39.9	-3.6
GYA				PP	PP	18 42 12.4	-11
GYA				S	**S**	**18 46 01.8**	**+1.6**
GYA				sS	sS	18 46 24.3	-4.5
GYA				ScP	ScP	18 48 08.5	+3.0
GYA				PcS	PcS	18 48 12.8	0.0
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.4						
ENH	**Enshi**	**29.57**	**329**	*e*P	**P**	**18 41 29.5**	**-0.3**
	comp=Z,9.5nm,0.8s,mb4.5						
ASAR	**Alice Springs**	**29.67**	**166**	P	**P**	**18 41 30.3**	**-0.4**
	comp=Z,1.9nm,0.8s,mb3.8,baz=333,slow=7.4,SNR=30						
ASAR				PcP	PcP	18 44 34.3	+0.5
	comp=Z,1.4nm,0.8s,baz=338,slow=2.4,SNR=4.1						
ASAR				ScP	ScP	18 48 13.6	+3.7
	comp=Z,1.4nm,0.9s,baz=352,slow=3.3,SNR=7.0						
CM31	**Chiang Mai Arr**	**29.88**	**298**	*e*P	**P**	**18 41 33.2**	**+0.4**
CMAR	**Chiang Mai Arr**	**29.88**	**298**	P	**P**	**18 41 31.9**	**-0.9**
	comp=Z

HHC				sS	sS	18 48 51.7	-5.2
HHC				SS	SS	18 51 10.2	-6.5
HHC				ScS	ScS	18 52 49.5	+2.2
HHC				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.8						
HHC				pmax	pmax		
	comp=Z,76nm,6.0s						
HHC				LR	LR		
	comp=N,65nm,18.0s						
HHC				LR	LR		
	comp=E,87nm,16.8s						
HHC				LR	LR		
	comp=Z,150nm,20.4s						
CN2	**Changchun**	**38.38**	**359**	*e*P	**P**	**18 42 47.0**	**+1.1**
CN2				*e*pP	pP	18 43 02.2	-0.8
CN2				*e*S	**S**	**18 48 38.2**	**+2.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.7						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
NWAO	**Narrogin (SRO)**	**38.98**	**192**	P	**P**	**18 42 51.4**	**+0.3**
NWAO				pmax	pmax		
	comp=Z,48nm,1.3s						
NWAO	**Narrogin (SRO)**	**38.98**	**192**	P	**P**	**18 42 51.4**	**+0.3**
	comp=Z,48nm,1.3s,mb5.2						
MDJ	**Mudanjiang**	**39.28**	**4**	P	**P**	**18 42 54.9**	**+1.5**
MDJ				pP	pP	18 43 06.1	-4.5
MDJ				sP	sP	18 43 11.1	-7.5
MDJ				PP	PP	18 44 25.6	+0.8
MDJ				S	**S**	**18 48 53.5**	**+4.4**
MDJ				sS	sS	18 49 13.0	-5.3
MDJ				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.8						
MDJ				pmax	pmax		
	comp=Z,33nm,4.9s						
MDJ	**Mudanjiang**	**39.28**	**4**	*e*P	**P**	**18 42 55.2**	**+1.7**
	comp=Z,22nm,1.0s,mb4.9						
STKA	**Stephens Creek**	**39.66**	**160**	*e*P	**P**	**18 42 58.3**	**+1.6**
	comp=Z,13nm,1.0s,mb4.7						
STKA	**Stephens Creek**	**39.66**	**160**	P	**P**	**18 42 57.3**	**+0.5**
	comp=Z,4.2nm,0.5s,mb4.5,baz=337,slow=7.8,SNR=17						
STKA				LR	LR	19 00 16.3	
	comp=Z,93nm,21.1s,baz=224,slow=37						
STKA	**Stephens Creek**	**39.66**	**160**	*e*P	**P**	**18 42 57.4**	**+0.7**
	comp=Z,2.3nm,0.8s,mb4.1						
LSA	**Lhasa**	**41.23**	**310**	*e*P	**P**	**18 43 11.1**	**+1.3**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
LSA	**Lhasa**	**41.23**	**310**	*e*P	**P**	**18 43 11.1**	**+1.3**
	comp=Z,6.5nm,0.8s,mb4.5						
GTA	**Gaotai**	**41.64**	**328**	*e*P	**P**	**18 43 13.3**	**+0.3**
GTA				pP	pP	18 43 26.8	-3.5
GTA				sP	sP	18 43 32.2	-6.1
GTA				S	**S**	**18 49 26.1**	**+1.6**
GTA				sS	sS	18 49 47.8	-6.1
GTA				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.7						
GTA				pmax	pmax		
	comp=Z,100nm,5.3s						
GTA				LR	LR		
	comp=N,74nm,13.7s						
GTA				LR	LR		
	comp=E,100nm,14.0s						
GTA				LR	LR		
	comp=Z,100nm,15.2s						
TAPN	**Taplejung**	**42.90**	**305**	*e*P	**P**	**18 43 21.7**	**-1.8**
	comp=Z,24nm,0.7s,mb5.0						
ODAN	**Odare**	**42.97**	**304**	*e*P	**P**	**18 43 21.6**	**-2.4**
	comp=Z,30nm,0.7s,mb5.1						
RAMN	**Ramite**	**43.65**	**304**	*e*P	**P**	**18 43 27.6**	**-1.9**
	comp=Z,43nm,0.7s,mb5.3						
HABR	**Khabarovsk**	**43.66**	**8**	*ce*P	**P**	**18 43 28.2**	**-1.0**
HABR				*e**PP	pP	18 43 38.8	-7.8
HABR				*e**SP	sP	18 43 42.7	-12
HABR				*e*		18 45 10.3	
HABR						18 45 13.4	
HABR				*e*PPP		18 45 51.4	
HABR				S	**S**	**18 50 03.1**	**+9.2**
HABR				*e**SS	sS	18 50 20.8	-2.6
HABR				*e*		18 53 23.4	
HABR				pmax	pmax		
	comp=E,35nm,2.1s						
HABR				pmax	pmax		
	comp=N,37nm,1.8s						
HABR				pmax	pmax		
	comp=Z,48nm,2.3s,mb4.8						
HABR				MLR	MLR		
	comp=Z,77nm,19.0s						
KLR	**Kul'dur**	**44.03**	**5**	*e*P	**P**	**18 43 28.2**	**-4.0**
HIA	**Hailar**	**44.21**	**354**	*e*P	**P**	**18 43 34.3**	**+0.7**
HIA				pmax	pmax		
	comp=Z,11nm,0.8s						
HIA	**Hailar**	**44.21**	**354**	*e*P	**P**	**18 43 34.3**	**+0.8**
	comp=Z,10nm,0.8s,mb4.6						
JIRN	**Jiri**	**44.26**	**305**	*e*P	**P**	**18 43 33.4**	**-1.0**
	comp=Z,47nm,0.7s,mb5.3						
GUN	**Gumba**	**44.61**	**305**	*e*P	**P**	**18 43 36.5**	**-0.7**
	comp=Z,58nm,0.7s,mb5.5						
KKN	**Kakani**	**45.06**	**305**	*e*P	**P**	**18 43 39.5**	**-1.2**
	comp=Z,27nm,0.9s,mb5.0						
KKN	**Kakani**	**45.06**	**305**	*e*P	**P**	**18 43 39.5**	**-1.2**
KKN				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.0						
DMN	**Daman**	**45.13**	**304**	*e*P	**P**	**18 43 40.0**	**-1.3**
	comp=Z,18nm,0.7s,mb4.9						
ULN	**Ulaanbaatar**	**45.58**	**342**	*e*P	**P**	**18 43 44.3**	**-0.2**
ULN				*e*		18 45 24.5	
ULN				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.7						
ULN	**Ulaanbaatar**	**45.58**	**342**	*e*P	**P**	**18 43 44.3**	**-0.2**
	comp=Z,10nm,0.7s,mb4.7						
ULN				*e*PP	PP	18 45 24.5	-7.9
SONM	**Songino Array**	**45.76**	**341**	P	**P**	**18 43 46.2**	**+0.2**
	comp=Z,3.1nm,0.6s,mb4.2,baz=158,slow=8.6,SNR=12						
SONM				PcP	PcP	18 45 23.5	+0.9
	comp=Z,1.7nm,0.8s,baz=122,slow=1.9,SNR=3.8						
CIT	**Chita**	**47.81**	**349**	*e*P	**P**	**18 44 04.1**	**+2.2**
CIT				pmax	pmax		
	comp=Z,56nm,1.2s,mb5.3						
ZAK	**Zakamensk**	**48.99**	**340**	*e*P	**P**	**18 44 10.9**	**0.0**
ZAK				*e*		18 45 34.3	
TLY	**Talaya**	**49.99**	**342**	*e*P	**P**	**18 44 20.1**	**+1.6**
TLY				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
TLY				MLR	MLR		
	comp=Z,405nm,14.0s						
TLY	**Talaya**	**49.99**	**342**	*e*P	**P**	**18 44 20.3**	**+1.7**
	comp=Z,12nm,0.8s,mb4.9						
MOY	**Mondy**	**50.85**	**340**	*e*P	**P**	**18 44 25.9**	**+0.9**
WMQ	**Urumqi**	**51.31**	**325**	*e*P	**P**	**18 44 29.0**	**+0.3**
WMQ				pmax	pmax		
	comp=Z,17nm,1.0s,mb5.0						
CLNS	**Chul'man**	**51.44**	**359**	*e*P	**P**	**18 44 28.6**	**-0.7**
CLNS				pmax	pmax		
	comp=Z,11nm,0.7s,mb5.0						
CLNS				pmax	pmax		
	comp=N,11nm,0.9s						
BOD	**Bodaibo**	**53.31**	**352**	*e*P	**P**	**18 44 43.8**	**+0.6**
PETK	**Petropavlovsk-**	**54.12**	**23**	P	**P**	**18 44 50.6**	**+1.4**
	comp=N,4.0nm,0.8s,mb4.5,baz=201,slow=7.9,SNR=4.7						
MK31	**Makanchi Array**	**56.14**	**325**	*e*P	**P**	**18 45 02.7**	**-1.2**
MKAR	**Makanchi Array**	**56.14**	**325**	P	**P**	**18 45 03.2**	**-0.7**
	comp=N,5.9nm,0.5s,mb4.9,baz=99,slow=9.4,SNR=77						
MKAR				LR	LR	19 09 49.4	
	comp=N,114nm,20.6s,baz=272,slow=37						
MKAR	**Makanchi Array**	**56.14**	**325**	P	**P**	**18 45 03.2**	**-0.7**
MKAR				LR	LR	19 09 49.4	
YAK	**Yakutsk**	**56.68**	**2**	*e*P	**P**	**18 45 07.5**	**0.0**
YAK				pmax	pmax		
	comp=Z,32nm,0.8s,mb5.4						
YAK				pmax	pmax		
	comp=N,10.0nm,1.0s						
YAK	**Yakutsk**	**56.68**	**2**	*e*P	**P**	**18 45 08.2**	**+0.7**
	comp=N,49nm,0.8s,mb5.6						
KSH	**Kashi**	**56.77**	**314**	*e*P	**P**	**18 45 09.3**	**+0.8**
KSH				pP	pP	18 45 22.1	-4.4
KSH				sP	sP	18 45 27.4	-7.0
KSH				PcP	PcP	18 46 06.0	+2.3
KSH				PP	PP	18 47 16.7	+1.3
KSH				ScP	ScP	18 50 00.0	+2.7
KSH				PcS	PcS	18 50 05.0	+0.5
KSH				S	**S**	**18 52 54.3**	**-2.1**
KSH				ScS	ScS	18 54 51.0	-0.6
KSH				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
KSH				pmax	pmax		
	comp=Z,120nm,5.1s						
KSH				LR	LR		
	comp=N,68nm,4.8s						
KSH				LR	LR		
	comp=E,97nm,4.0s						
KSH				LR	LR		
	comp=Z,130nm,4.6s						
KZA	**Kyzart**	**58.30**	**317**	P	**P**	**18 45 20.2**	**+1.0**
	SNR=9.7						
TKM2	**Tokmak 2**	**58.42**	**318**	P	**P**	**18 45 19.9**	**-0.2**
	SNR=5.8						
TKM2	**Tokmak 2**	**58.42**	**318**	*e*P	**P**	**18 45 19.2**	**-0.8**
TKM2				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
TKM2	**Tokmak 2**	**58.42**	**318**	*e*P	**P**	**18 45 19.2**	**-0.8**
	comp=Z,8.3nm,1.1s,mb4.7						
UCH	**Uchtor**	**58.86**	**317**	P	**P**	**18 45 24.1**	**+1.0**
	SNR=18						
UCH	**Uchtor**	**58.86**	**317**	*e*P	**P**	**18 45 23.1**	**0.0**
UCH				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
UCH	**Uchtor**	**58.86**	**317**	*e*P	**P**	**18 45 23.1**	**0.0**
	comp=Z,16nm,0.9s,mb5.0						
AAK	**Ala-Archa**	**59.04**	**317**	P	**P**	**18 45 23.5**	**-0.9**
	comp=Z,1.4nm,0.3s,mb4.5,baz=177,slow=6.5,SNR=6.1						
AAK	**Ala-Archa**	**59.04**	**317**	*ce*P	**P**	**18 45 25.5**	**+1.2**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.3						
AAK	**Ala-Archa**	**59.04**	**317**	*e*P	**P**	**18 45 23.9**	**-0.4**
	comp=Z,7.4nm,1.1s,mb4.6						
ZAA0	**Zalesovo Array**	**59.10**	**333**	*e*P	**P**	**18 45 23.0**	**-1.5**
ZALV	**Zalesovo Beam**	**59.10**	**333**	P	**P**	**18 45 23.2**	**-1.3**
	comp=Z,4.2nm,0.8s,mb4.5,baz=120,slow=6.5,SNR=15						
ZALV	**Zalesovo Beam**	**59.10**	**333**	P	**P**	**18 45 23.2**	**-1.3**
USP	**Ospenovka**	**59.29**	**318**	P	**P**	**18 45 25.6**	**-0.5**
	SNR=10.0						
AML	**Almayashu**	**59.38**	**317**	P	**P**	**18 45 27.5**	**+0.7**
	SNR=5.7						
AML	**Almayashu**	**59.38**	**317**	*e*P	**P**	**18 45 26.5**	**-0.2**
AML				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
AML	**Almayashu**	**59.38**	**317**	*e*P	**P**	**18 45 26.5**	**-0.3**
	comp=Z,12nm,0.8s,mb5.0						
EKS2	**Erkin-Say**	**59.54**	**317**	P	**P**	**18 45 27.6**	**-0.2**
	SNR=11						
EKS2	**Erkin-Say**	**59.54**	**317**	*e*P	**P**	**18 45 27.2**	**-0.6**
EKS2				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
EKS2	**Erkin-Say**	**59.54**	**317**	*e*P	**P**	**18 45 27.2**	**-0.6**
	comp=Z,10nm,0.9s,mb4.9						
KURK	**Kurchatov**	**60.30**	**327**	P	**P**	**18 45 32.0**	**-0.8**
	comp=Z,12nm,0.7s,mb5.0,baz=128,slow=4.8,SNR=42						
KURK	**Kurchatov**	**60.30**	**327**	*ce*P	**P**	**18 45 32.2**	**-0.7**
KURK				pmax	pmax		
	comp=Z,24nm,1.2s,mb5.1						
KURK	**Kurchatov**	**60.30**	**327**	*e*P	**P**	**18 45 31.9**	**-1.0**
	comp=Z,10.0nm,0.6s,mb5.0						
KURK	**Kurchatov**	**60.30**	**327**	P	**P**	**18 45 32.4**	**-0.5**
	SNR=6.4						
KURK				P		18 45 32.4	
	SNR=6.4						
KBL	**Kabul**	**60.38**	**307**	*e*P	**P**	**18 45 33.3**	**-0.4**
KBL				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
KBL	**Kabul**	**60.38**	**307**	*e*P	**P**	**18 45 33.3**	**-0.5**
	comp=Z,2.9nm,0.6s,mb4.5						
NVS	**Novosibirsk**	**60.38**	**333**	*i* P	**P**	**18 45 31.7**	**-1.6**
BVAR	**Borovoye Array**	**65.89**	**327**	P	**P**	**18 46 09.2**	**-0.6**
	comp=Z,7.6nm,0.8s,mb4.5,baz=120,slow=8.8,SNR=32						
BRVK	**Borovoye**	**65.96**	**327**	*ce*P	**P**	**18 46 09.7**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.8						
BRVK	**Borovoye**	**65.96**	**327**	*e*P	**P**	**18 46 09.2**	**-1.0**
	comp=Z,14nm,0.9s,mb4.8						
BRVK	**Borovoye**	**65.96**	**327**	P	**P**	**18 46 09.9**	**-0.3**
	SNR=6.5						
BRVK				P		18 46 09.9	
	SNR=6.5						
TIXI	**Tiksi**	**66.31**	**1**	*e*P	**P**	**18 46 12.9**	**+0.7**
TIXI				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.7						
TIXI	**Tiksi**	**66.31**	**1**	*e*P	**P**	**18 46 12.9**	**+0.7**
	comp=Z,11nm,0.9s,mb4.7						
BILL	**Bilibino**	**68.14**	**15**	*e*P	**P**	**18 46 24.0**	**+0.2**
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.6						
ABKAR	**Akbulak array**	**70.79**	**320**	*e*P	**P**	**18 46 38.7**	**-1.8**
	comp=Z,5.2nm,0.7s,mb4.5						
AKTK	**Aktyubinsk**	**72.29**	**321**	P	**P**	**18 46 48.9**	**-0.6**
AKTO	**Aktyubinsk**	**72.29**	**321**	P	**P**	**18 46 48.9**	**-0.6**
	comp=Z,7.5nm,0.7s,mb4.6,baz=95,slow=7.7,SNR=37						
SVE	**Sverdlovsk**	**72.51**	**328**	*i* e*P	**P**	**18 46 50.0**	**-0.7**
SVE				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.8						
ARU	**Arti**	**73.50**	**328**	*d i* P	**P**	**18 46 55.4**	**-1.1**
ARU				*e*		18 49 38.2	
ARU				S	S	18 56 30.1	+9.4
ARU				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
ARU	**Arti**	**73.50**	**328**	*e*P	**P**	**18 46 54.9**	**-1.7**
	comp=Z,9.9nm,0.8s,mb4.7						
KDAK	**Kodiak Island**	**80.74**	**32**	P	**P**	**18 47 38.1**	**+1.0**
	comp=Z,5.1nm,0.7s,mb4.4,baz=86,slow=15,SNR=5.3						
ZEI	**Tsey**	**80.98**	**312**	*e*P	**P**	**18 47 37.7**	**-1.1**
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.5						
KIV	**Kislovodsk**	**81.88**	**314**	P	**P**	**18 47 39.5**	**-4.0**
KIV	**Kislovodsk**	**81.88**	**314**	P	**P**	**18 47 39.5**	**-4.0**
BPAW	**Bear Paw Mtn.**	**82.03**	**26**	*e*P	**P**	**18 47 44.4**	**+0.5**
	comp=Z,8.5nm,1.0s,mb4.5						
TRF	**Thorofare Moun**	**82.29**	**27**	*e*P	**P**	**18 47 45.7**	**+0.5**
	comp=Z,5.7nm,1.0s,mb4.4						
COLD	**Coldfoot**	**82.59**	**23**	*e*P	**P**	**18 47 48.3**	**+1.6**
	comp=Z,10nm,1.2s,mb4.5						
VRHR	**Novokhopersk**	**82.68**	**321**	*e*P	**P**	**18 47 48.2**	**+0.7**
VRHR				pmax	pmax		
	comp=Z,20nm,0.5s,mb5.2						
VRHR				pmax	pmax		
	comp=N,20nm,0.7s						
VRHR				pmax	pmax		
	comp=E,40nm,0.6s						
PMR	**Palmer**	**82.73**	**29**	P	**P**	**18 47 47.2**	**-0.3**
MCK	**McKinley**	**82.91**	**27**	*e*P	**P**	**18 47 49.2**	**+0.8**
MCK				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.5						
MCK	**McKinley**	**82.91**	**27**	*e*P	**P**	**18 47 49.2**	**+0.8**
	comp=Z,7.7nm,1.1s,mb4.5						
VORD	**Divnogorie**	**84.15**	**321**	*e*P	**P**	**18 47 54.2**	**-0.8**
VORD				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.7						
VORD				pmax	pmax		
	comp=N,7.0nm,0.6s						
VORD				pmax	pmax		
	comp=E,6.0nm,0.5s						
VSR	**Storozhevoye**	**84.23**	**321**	*e*P	**P**	**18 47 54.6**	**-0.8**
VSR				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.7						
VSR				pmax	pmax		
	comp=N,6.0nm,0.5s						
VSR				pmax	pmax		
	comp=E,9.0nm,0.6s						
BMRM	**Bremner River**	**84.91**	**29**	*e*P	**P**	**18 47 59.0**	**+0.3**
	comp=E,865nm,1.2s						
MAW	**Mawson**	**85.10**	**200**	P	**P**	**18 47 59.9**	**+0.5**
	comp=E,2.0nm,0.8s,mb4.1,baz=18,slow=3.2,SNR=3.3						
MAW	**Mawson**	**85.10**	**200**	*e*P	**P**	**18 48 00.8**	**+1.4**
OBN	**Obninsk**	**85.65**	**325**	⇓*i* P	**P**	**18 48 01.9**	**-0.6**
OBN				*e*		18 48 14.4	
OBN				pmax	pmax		
	comp=Z,24nm,1.2s,mb5.0						
OBN	**Obninsk**	**85.65**	**325**	P	**P**	**18 48 00.6**	**-1.9**
	comp=Z,16nm,0.8s,mb5.0						
PPT	**Papeete**	**85.85**	**108**	LR	LR	19 20 40.8	
	comp=Z,235nm,21.6s,baz=76,slow=32						
SBA	**Scott Base**	**85.89**	**172**	P	**P**	**18 48 04.0**	**+0.8**
APA	**Apatity**	**86.33**	**337**	*e*P	**P**	**18 48 07.0**	**+1.4**
JOF	**Joensuu**	**87.69**	**333**	*ep*	**P**	**18 48 10.1**	**-2.2**
	comp=Z,12nm,0.8s,mb5.0						
BRTR	**Keskin Array B**	**88.83**	**310**	P	**P**	**18 48 15.9**	**-2.3**
	comp=Z,1.2nm,0.8s,mb4.0,baz=126,slow=5.9,SNR=5.8						
INK	**Inuvik**	**88.84**	**21**	*e*P	**P**	**18 48 16.8**	**-0.8**
INK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
INK	**Inuvik**	**88.84**	**21**	*e*P	**P**	**18 48 16.8**	**-0.8**
	comp=Z,2.7nm,0.9s,mb4.3						
ARCES	**ARCESS Array B**	**88.92**	**340**	P	**P**	**18 48 17.3**	**-0.6**
	comp=Z,7.6nm,0.8s,mb4.8,baz=76,slow=6.7,SNR=15						
KAF	**Kangasniemi**	**90.11**	**332**	*ep*	**P**	**18 48 22.6**	**-1.1**
FINES	**FINESS Array B**	**90.35**	**332**	P	**P**	**18 48 23.9**	**-0.9**
	comp=Z,3.2nm,0.7s,mb4.6,baz=63,slow=8.8,SNR=12						
AKASG	**Malin Array Be**	**90.53**	**321**	P	**P**	**18 48 24.4**	**-1.5**
	comp=Z,3.7nm,1.0s,mb4.5,baz=74,slow=3.5,SNR=5.2						
AKASG	**Malin Array Be**	**90.53**	**321**	*ce*P	**P**	**18 48 26.2**	**+0.3**
AKASG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MLR	**Muntele Rosu**	**93.61**	**316**	P	**P**	**18 48 39.3**	**-0.9**
	comp=Z,1.3nm,0.8s,mb4.3,baz=122,slow=12,SNR=3.8						
CRVS	**Cervenica-Dubn**	**95.82**	**320**	*e*P	**P**	**18 48 52.7**	**+2.4**
CRVS				*e*		18 54 20.1	
NB2	**NORSAR Subarra**	**97.29**	**334**	P	**P**	**18 48 55.5**	**-1.2**
	comp=Z,1.8nm,0.8s,mb4.5,baz=66,slow=4.8						
NOA	**NORSAR Array B**	**97.29**	**334**	P	**P**	**18 48 55.2**	**-1.5**
	comp=Z,3.0nm,0.8s,mb4.8,baz=64,slow=4.6,SNR=5.7						
NOA	**NORSAR Array B**	**97.29**	**334**	P	**P**	**18 48 55.2**	**-1.5**
YKA	**Yellowknife Ar**	**98.21**	**24**	P	**P**	**18 49 00.8**	**+0.1**
	comp=Z,0.4nm,0.6s,mb4.1,baz=295,slow=4.9,SNR=4.1						
TXAR	**Lajitas Array**	**120.86**	**51**	PKP	PKPdf	18 54 17.3	+0.7
	comp=Z,0.3nm,0.8s,baz=75,slow=1.0,SNR=3.0						
TORD	**Torodi Ar. Bea**	**122.17**	**289**	PKP	PKPdf	18 54 19.1	-0.3
	comp=Z,2.0nm,0.7s,baz=45,slow=2.0,SNR=12						
PLCA	**Paso Flores**	**141.54**	**159**	PKP	PKPdf	18 54 57.0	+1.9
	comp=Z,3.1nm,1.0s,baz=333,slow=4.5,SNR=3.7						
JTS	**JuntasAbangare**	**145.11**	**64**	*e*PKIKP	PKPdf	18 55 03.3	+1.2
SDDR	**Presa de Saban**	**150.23**	**36**	*e*PKPbc	PKPbc	18 55 16.4	+0.8

JMA 10 18:40:55.9±0.2, 43°.46N×147°.38E, h59km±5km, M3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.20**	**266**	P	Pn	18 41 16.9	+0.4
NEM2				*e*S	Sn	18 41 32.5	+0.7
JRA	**Rausu**	**1.71**	**287**	P	Pn	18 41 23.8	+0.5
JRA				*e*S	Sn	18 41 44.8	+0.8
JNK	**Nakash**	**1.94**	**275**	P	Pn	18 41 26.8	+0.3
JNK				*e*S	Sn	18 41 49.6	-0.1
JAK	**Akkeshi**	**2.02**	**258**	P	Pn	18 41 28.2	+0.7
JAK				*e*S	Sn	18 41 51.8	+0.2
JTKR	**Abashiri--Toko**	**2.57**	**283**	P	Pn	18 41 36.0	+1.0
JAR	**Ashorobuto**	**2.64**	**268**	P	Pn	18 41 37.2	+1.2
JAR				*e*S	Sn	18 42 08.3	+1.5
JOB	**Onbets**	**2.65**	**259**	P	Pn	18 41 37.2	+1.0
JOB				*e*S	Sn	18 42 07.8	+0.7
JMP	**Maruseppu**	**2.96**	**282**	P	Pn	18 41 41.7	+1.2
JCH	**Churui**	**3.06**	**255**	P	Pn	18 41 42.6	+0.8
JCH				*e*S	Sn	18 42 17.0	-0.2
JKK2	**Kamakawa 2**	**3.39**	**279**	P	Pn	18 41 47.8	+1.6
JEM	**Erimo**	**3.43**	**247**	P	Pn	18 41 49.2	+2.4
JFR	**Furan**	**3.51**	**267**	P	Pn	18 41 49.9	+2.0
JFR				*e*S	Sn	18 42 29.4	+1.3
JNBK	**Urakawa-nobuka**	**3.60**	**252**	P	Pn	18 41 50.0	+0.9

ISCJB ***10*** *18:46:50.5±0.2, 37°.11N±0°.02×71°.76E±0°.02, h116km, mb4.2/55, Error ellipse: s-maj=3.1km s-min=2.7km az=4.4*
MOS ***10*** *18:46:51.9±1.4, 37°.28N×71°.69E, h121km, mb4.3/13, Error ellipse: s-maj=7.6km s-min=5.4km az=103.6*
NEIC ***10*** *18:46:51.2±0.3, 37°.08N×71°.86E, mb4.4/19, Error ellipse: s-maj=7.3km s-min=5.3km az=205.0*
IDC ***10*** *18:46:52.3±0.6, 37°.18N×71°.75E, h117km±4km, mb3.7/20, mb1 3.9/24, mb1mx3.8/32, mbtmp3.8/24, MS3.5/5, Ms1 3.5/5, ms1mx2.8/40, Error ellipse: s-maj=12.4km s-min=9.4km az=6.0*
TEH ***10*** *18:46:53.0, 37°.32N×71°.64E, h108km*
BJI ***10*** *18:46:53.6, 37°.46N×71°.73E, h124km, mB4.5/15, mb4.6/26*
SZGRF ***10*** *18:47:32.8, 38°.52N×68°.70E, h33km, mb4.6, Tajikistan*

ISC 10 18:46:51.9±0.2, 37°.08N±0°.02×71°.79E±0°.02, h118km, h118km±1.5km:pP-P, n261, σ1°.33/256, mb4.2/55, 27C-14D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.25**	**178**	⇑P	Pn	**18 47 45.0**	**+3.6**
CEP				S	Sn	**18 48 25.0**	**+5.4**
KBL	**Kabul**	**3.38**	**222**	*e*PN	Pn	**18 47 44.7**	**+1.7**
CHCP	**Chirah Chowk**	**3.62**	**160**	⇓P	Pn	**18 47 50.9**	**+4.6**
SRNI	**Srinagar**	**3.88**	**139**	*ex*	x	18 48 25.0	
SRNI				*e*S	Sn	**18 48 34.0**	**-0.5**
KSH	**Kashi**	**4.09**	**52**	P	Pn	**18 47 49.3**	**-3.2**
KSH				S	Sn	**18 48 32.7**	**-6.9**
JMU	**Jammu**	**5.04**	**149**	*ex*	x	18 48 14.5	
JMU				*ex*	x	18 49 02.5	
AML	**Almayashu**	**5.26**	**16**	P	Pn	**18 48 07.6**	**-0.6**
	SNR=501						
UCH	**Uchtor**	**5.56**	**21**	P	Pn	**18 48 12.0**	**-0.2**
	SNR=121						
THN	**Thein Dam**	**5.65**	**144**	*e*PKP	Pn	**18 48 15.4**	**+1.9**
THN				*e*S	Sn	**18 49 14.5**	**-2.6**
KZA	**Kyzart**	**5.66**	**27**	P	Pn	**18 48 13.3**	**-0.3**
	SNR=115						
DLH	**Dalhousie**	**5.68**	**142**	*ex*	Pn	**18 48 12.0**	**-1.9**
DLH				*ex*	x	18 49 24.0	
EKS2	**Erkin-Say**	**5.78**	**15**	P	Pn	**18 48 14.7**	**-0.6**
	SNR=103						
AAK	**Ala-Archa**	**5.93**	**20**	P	Pn	**18 48 17.2**	**0.0**
	SNR=178						
AAK	**Ala-Archa**	**5.93**	**20**	P	Pn	**18 48 17.1**	**-0.1**
	1.2nm,0.3s,baz=180,slow=6.3,SNR=284						
AAK				S	Sn	**18 49 21.2**	**-2.5**

IMOG Moghan 10.06 268 *eP* **Pn 18 49 08.0 -5.2**
IPAY Payeh 10.29 270 *eP* **Pn 18 49 10.5 -5.7**
PTH Pithoragarh 10.29 134 *ex* **Pn 18 49 12.0 -4.3**
PTH *ex* x 18 51 13.0
IAKL Akhelmad 10.46 271 *eP* **Pn 18 49 13.3 -5.2**
IDAH Dahanechah 10.70 250 *eP* **Pn 18 49 21.3 -0.5**
AJM Ajmer 10.84 166 *e*PKP **Pn 18 49 24.3 +0.6**
AJM *eS* **Sn 18 51 13.4 -10**
AJM AML AML 18 51 37.2
comp=N,119nm,0.3s
VAN Vannovskaya 10.91 279 *eP* **Pn 18 49 18.2 -6.2**
ISFR Sfrayin 11.02 274 *eP* **Pn 18 49 20.7 -5.3**
AGRA Agra 11.11 150 *e*PKP **Pn 18 49 27.7 +0.4**
AGRA *ex* x 18 51 16.0
ISHV Shirvan 11.23 277 *eP* **Pn 18 49 24.2 -4.6**
ITEG Tejag 11.48 253 *eP* **Pn 18 49 30.8 -1.3**
MK31 Makanchi Array 12.45 35 *eP* **Pn 18 49 43.4 -1.4**
MKAR Makanchi Array 12.45 35 P **Pn 18 49 44.0 -0.8**
comp=N,2.2nm,0.3s,baz=223,slow=13,SNR=71
MKAR Makanchi Array 12.45 35 *i* P **Pn 18 49 44.7 -0.1**
MKAR pmax pmax
comp=Z,10.0nm,0.5s
WMQ Urumqi 13.85 56 *eP* **Pn 18 50 04.0 +1.1**
WMQ sP 18 50 35.0
WMQ S **Sn 18 52 35.0 -0.5**
WMQ pmax pmax
comp=Z,18nm,0.6s
BHJ Bhuj 13.90 188 *ex* x 18 50 26.7
BHJ *ex* x 18 52 30.0
IBAF Bafgh 14.47 253 *eP* **Pn 18 50 10.5 -0.6**
KURK Kurchatov 14.49 18 P **Pn 18 50 05.6 -5.4**
comp=Z,0.2nm,0.3s,baz=212,slow=12,SNR=17
KURK Kurchatov 14.49 18 *eP* **Pn 18 50 07.5 -3.5**
KURK Kurchatov 14.49 18 *eP* **Pn 18 50 06.5 -4.5**
BHPL Bhopal 14.62 159 *ex* x 18 50 19.9
KKN Kakani 14.66 125 *eP* **Pn 18 50 11.3 -2.2**
comp=Z,156nm,0.5s
KKN Kakani 14.66 125 *eP* **Pn 18 50 11.3 -2.2**
KKN pmax pmax
comp=Z,156nm,0.5s
DMN Daman 14.67 126 *eP* **Pn 18 50 11.9 -1.7**
comp=Z,127nm,0.4s
PKIN Phulchoki 14.88 126 *eP* **Pn 18 50 14.6 -1.7**
comp=Z,208nm,0.4s
PKIN Phulchoki 14.88 126 *eP* **Pn 18 50 15.1 -1.2**
comp=Z,161nm,0.4s
PKI Pulchoki 14.90 126 *eP* **Pn 18 50 14.5 -1.9**
comp=Z,181nm,0.6s
PKI Pulchoki 14.90 126 *eP* **Pn 18 50 15.1 -1.3**
ABKAR Akbulak array 14.91 328 *eP* **Pn 18 50 11.1 -5.3**
ISHM Shahmirzad 14.95 271 *eP* **Pn 18 50 14.7 -2.3**
GUN Gumba 14.98 124 *eP* **Pn 18 50 15.3 -2.2**
comp=Z,222nm,0.5s
IMEH Mehriz 15.29 253 *eP* **Pn 18 50 19.5 -1.9**
JIRN Jiri 15.35 124 *eP* **Pn 18 50 20.5 -1.6**
comp=Z,309nm,0.4s
IFIR Firoozkooh 15.41 270 *eP* **Pn 18 50 21.2 -1.6**
ISAD Sadrabad 15.79 256 *eP* **Pn 18 50 25.5 -2.0**
BVAR Borovoye Array 15.98 357 P **Pn 18 50 27.2 -2.4**
comp=Z,1.1nm,0.3s,baz=160,slow=12,SNR=25
IDMV Damavand 16.00 271 *eP* **Pn 18 50 29.1 -1.0**
BRVK Borovoye 16.02 357 *ce*P **Pn 18 50 29.1 -1.0**
BRVK pmax pmax
comp=Z,3.0nm,0.6s
BRVK Borovoye 16.02 357 *eP* **Pn 18 50 27.6 -2.5**
comp=Z,7.9nm,0.8s
IBND Bandar-abas 16.06 238 *eP* **Pn 18 50 30.8 -0.1**
IBND *eP* 18 50 31.9
RAMN Ramite 16.09 125 *eP* **Pn 18 50 29.6 -1.7**
comp=Z,269nm,0.5s
ISFB Sefidab 16.11 266 *eP* **Pn 18 50 29.8 -1.7**
IZEF Zefreh 16.48 261 *eP* **Pn 18 50 34.7 -1.4**
TAPN Taplejung 16.58 121 *eP* **Pn 18 50 35.7 -1.6**
comp=Z,126nm,0.5s
AKTK Aktyubinsk 16.61 328 P **Pn 18 50 33.9 -3.6**
AKTK S **S 18 53 23.2 -19**
AKTO Aktyubinsk 16.61 328 P **Pn 18 50 33.9 -3.6**
comp=Z,2.4nm,0.3s,baz=138,slow=13,SNR=35
AKTO S **S 18 53 23.2 -19**
comp=Z,0.8nm,0.3s,baz=189,slow=13,SNR=3.2
ODAN Odare 16.68 123 *eP* **Pn 18 50 37.1 -1.4**
comp=Z,135nm,0.4s
IPAR Pars 17.21 251 *eP* **Pn 18 50 45.2 +0.3**
ISRV Sarvestan 17.39 249 *eP* **Pn 18 50 47.6 +0.4**
IPIR Pirpir 17.69 262 *eP* **Pn 18 50 50.9 +0.2**
IRAZ Razeghan 17.71 271 *eP* **Pn 18 50 54.4 -0.6**
LSA Lhasa 17.74 109 P **Pn 18 50 54.9 +3.5**
LSA Lhasa 17.74 109 *eP* **Pn 18 50 55.1 +3.7**
LSA pmax pmax
comp=Z,13nm,0.6s
LSA Lhasa 17.74 109 *eP* **Pn 18 50 55.1 +3.7**
comp=Z,12nm,0.6s
IMOK Mouk 17.86 249 *eP* **Pn 18 50 51.1 -1.7**
HATD Hatta, Dubai 18.12 232 ⇓P **P 18 50 56.4 +1.7**
SNR=8.1
ASHO Ashiyiah 18.27 232 P **P 18 50 58.2 +1.9**
SNR=30
NAZ Nazwa, Dubai 18.31 233 ⇓P **P 18 50 58.0 +1.3**
SNR=7.8
JMDO Jabal Madar 18.84 223 ⇓P **P 18 51 06.2 +3.6**
SNR=10
ARQ Araqi 18.98 228 P **P 18 51 06.1 +2.0**
SNR=9.8
BSY Bisya 19.04 225 P **P 18 51 07.2 +2.5**
SNR=8.3
ZAA0 Zalesovo Array 19.13 24 *eP* **P 18 51 05.0 -0.4**
ZALV Zalesovo Beam 19.13 24 P **P 18 51 05.2 -0.2**
comp=Z,1.1nm,0.3s,baz=222,slow=11,SNR=22
ISRB Sarab 19.16 280 *eP* **P 18 51 07.4 +1.4**
NVS Novosibirsk 19.42 20 *eP* **P 18 51 07.9 -0.7**
NVS *eS* **S 18 54 31.8 -10**
NVS pmax pmax
comp=N,5.0nm,0.6s
NVS pmax pmax
comp=Z,7.0nm,0.6s
NVS pmax pmax
comp=E,3.0nm,0.7s
NVS smax
comp=N,25nm,1.8s
NVS smax
comp=E,5.0nm,1.2s
MAK Makhachkala 19.48 295 *eP* **P 18 51 16.3 +7.0**
MAK MLR MLR
comp=Z,126nm,11.0s
HYB Hyderabad 20.47 161 *eP* **P 18 51 26.0 +5.8**
HYB Hyderabad 20.47 161 *i* P **P 18 51 23.0 +2.8**
SHL Shillong 20.60 118 *ex* x 18 51 28.0
SHL *ex* x 18 55 05.0
IMRD Marand 20.64 283 *eP* **P 18 51 22.5 +0.6**
ISHB Shabestar 20.73 281 *eP* **P 18 51 24.0 +1.1**
DGRG David-gareji 20.88 290 P **P 18 51 25.4 +0.9**
SVE Sverdlovsk 21.12 343 *eP* **P 18 51 26.2 -0.7**
SVE pmax pmax
comp=Z,15nm,0.9s,mb4.3
ARU Arti 21.31 340 *d i*P **P 18 51 30.0 +1.2**
ARU *e* 18 52 02.3
ARU S **S 18 55 24.8 +6.3**
ARU SS 18 56 00.6
ARU pmax pmax
comp=Z,10.0nm,1.2s,mb4.0
ARU Arti 21.31 340 *eP* **P 18 51 27.6 -1.2**
comp=Z,15nm,0.8s,mb4.4
GNI Garni 21.33 287 P **P 18 51 30.4 +1.2**
comp=Z,41nm,0.8s,mb4.8,baz=348,slow=0.9,SNR=19
GNI Garni 21.33 287 *ce*P **P 18 51 30.8 +1.5**
GNI pmax pmax
comp=Z,36nm,0.9s
GNI Garni 21.33 287 *eP* **P 18 51 29.9 +0.7**
comp=Z,66nm,1.1s,mb4.9
TBLG Delisi 21.38 291 *eP* **P 18 51 29.4 -0.3**
TBLG Delisi 21.38 291 P **P 18 51 29.4 -0.4**
UMR Umm Al-Rimmam 21.44 257 *eP* **P 18 51 30.8 +0.2**
UMR AMb AMB 18 51 35.7
comp=Z,246nm,0.6s
MIB Mutribah 21.62 258 *eP* **P 18 51 32.1 -0.3**
MIB AMb AMB 18 51 38.1
comp=Z,262nm,0.8s
KBD Kabd 21.63 256 *eP* **P 18 51 31.9 -0.7**
KBD AMb AMB 18 51 35.4
comp=Z,37nm,0.7s,mb4.8
RDF Al-Radifah 21.86 255 *eP* **P 18 51 34.5 -0.4**
RDF AMb AMB 18 51 40.9
comp=Z,92nm,0.9s,mb5.1
GOR Gori 21.86 292 P **P 18 51 35.4 +0.5**

KEH Kehvi 22.02 292 P **P 18 51 35.0 -1.5**
ZEI Tsey 22.08 294 *eP* **P 18 51 37.1 -0.1**
ZEI pmax pmax
comp=Z,32nm,1.7s,mb4.4
GTA Gaotai 22.10 75 ⇓P **P 18 51 41.1 +3.7**
GTA pP 18 52 04.6
GTA sP sP 18 52 17.5 +3.1
GTA S **S 18 55 37.0 +4.0**
GTA sS sS 18 56 15.4 +3.9
GTA pmax pmax
comp=Z,23nm,1.1s,mb4.4
GTA pmax pmax
comp=Z,62nm,4.5s
GTA LR LR
comp=N,95nm,14.6s
GTA LR LR
comp=E,160nm,16.9s
GTA LR LR
comp=Z,130nm,16.3s
ONI Oni 22.39 293 P **P 18 51 38.0 -2.5**
GOF Gofitskoye 23.01 299 *eP* **P 18 51 55.4 +9.0**
GOF pmax pmax
comp=Z,20nm,1.0s,mb4.4
KIV Kislovodsk 23.09 296 *eP* **P 18 51 47.1 0.0**
KIV *eS* **S 18 55 52.6 +3.6**
KIV pmax pmax
comp=Z,8.0nm,0.7s,mb4.2
KIV MLR MLR
comp=Z,44nm,14.0s
KIV Kislovodsk 23.09 296 *eP* **P 18 51 47.2 0.0**
comp=Z,25nm,0.6s,mb4.7
MOY Mondy 25.25 45 *eP* **P 18 52 09.7 +3.0**
LZH Lanzhou 25.70 82 *eP* **P 18 52 15.5 +4.6**
LZH pP pP 18 52 41.5 +5.2
LZH sP sP 18 52 51.1 +1.0
LZH PP 18 53 01.0
LZH *e*S **S 18 56 35.0 +4.2**
LZH sS sS 18 57 22.0 +6.4
LZH *e*SS 18 57 49.0
LZH pmax pmax
comp=Z,40nm,1.4s,mb4.7
LZH pmax pmax
comp=Z,180nm,4.3s
ZAK Zakamensk 26.13 49 *eP* **P 18 52 17.1 +2.5**
ZAK *e* pP 18 52 44.0 +3.9
ZAK pmax pmax
comp=Z,1.0nm,1.3s
CD2 Chengdu 27.13 94 *eP* **P 18 52 27.0 +3.2**
CD2 pP pP 18 52 51.0 +1.6
CD2 sP sP 18 53 04.3 +1.2
CD2 PP PP 18 53 18.2 -9.0
CD2 S **S 18 56 55.9 +2.5**
CD2 sS sS 18 57 38.0 -0.4
CD2 SS 18 58 20.4
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.5
CD2 pmax pmax
comp=Z,20nm,3.8s
SONM Songino Array 27.49 56 P **P 18 52 29.1 +2.3**
comp=Z,0.8nm,0.4s,mb3.6,baz=269,slow=9.9,SNR=3.8
SONM pP pP 18 52 54.0 +1.6
comp=Z,1.2nm,0.8s,baz=263,slow=9.9,SNR=2.7
ULN Ulaanbaatar 27.93 56 *eP* **P 18 52 32.9 +2.2**
ULN pmax pmax
comp=Z,2.0nm,0.6s,mb3.8
ULN Ulaanbaatar 27.93 56 *eP* **P 18 52 32.9 +2.2**
comp=Z,1.8nm,0.6s,mb3.8
KMI Kunming 28.93 105 P **P 18 52 45.5 +5.7**
KMI pmax pmax
comp=Z,5.0nm,0.5s,mb4.4
BRTR Keskin Array B 29.87 287 P **P 18 52 48.8 +0.8**
comp=Z,1.5nm,0.6s,mb3.8,baz=102,slow=9.4,SNR=9.4
BRTR pP pP 18 53 14.1 +0.2
comp=Z,2.6nm,0.9s,baz=106,slow=9.1,SNR=4.6
OBN Obninsk 29.92 318 *eP* **P 18 52 51.3 +3.0**
OBN *i* *PP pP 18 53 13.9 -0.2
OBN pmax pmax
comp=Z,7.0nm,1.2s,mb4.2
MMAI Mount Meron Ar 29.95 273 LR LR 19 05 40.8
comp=Z,35nm,21.4s,baz=50,slow=38
CM31 Chiang Mai Arr 30.19 121 *eP* **P 18 52 54.8 +3.8**
comp=Z,1.1nm,0.5s,mb3.7
CMAR Chiang Mai Arr 30.19 121 P **P 18 52 53.6 +2.6**
comp=Z,1.5nm,0.6s,mb3.8,baz=311,slow=8.4,SNR=20
HHC Hu-ho-hao-te 30.97 71 *eP* **P 18 53 01.1 +3.4**
HHC pP pP 18 53 25.7 +2.1
HHC sP sP 18 53 38.9 +1.7
HHC PP PP 18 54 07.4 -2.3
HHC PcP PcP 18 55 54.3 +3.3
HHC S **S 18 57 56.1 +2.6**
HHC sS sS 18 58 39.2 +0.5
HHC ScP ScP 18 59 26.2 +3.3
HHC PcS PcS 18 59 37.7 +2.6
HHC SS SS 18 59 49.4 -21
HHC ScS ScS 19 03 21.7 +1.8
HHC pmax pmax
comp=Z,18nm,0.9s,mb4.8
HHC pmax pmax
comp=Z,52nm,6.3s
HHC LR LR
comp=N,69nm,15.6s
HHC LR LR
comp=E,56nm,15.6s
HHC LR LR
comp=Z,88nm,16.8s
GYA Guiyang 31.32 100 P **P 18 53 05.8 +4.8**
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
ENH Enshi 31.94 91 *eP* **P 18 53 09.6 +3.2**
comp=Z,6.0nm,1.0s,mb4.3
AKASG Malin Array Be 33.09 308 P **P 18 53 15.4 -0.7**
comp=Z,2.3nm,0.6s,mb4.2,baz=83,slow=7.2,SNR=6.5
AKASG pP pP 18 53 41.0 -1.1
comp=Z,3.2nm,0.6s,baz=82,slow=7.9,SNR=6.1
AKASG sP sP 18 53 53.8 -1.9
comp=Z,6.5nm,0.7s,baz=80,slow=7.3,SNR=5.9
TIRR Tirgusor 33.36 297 ⇑P **P 18 53 21.6 +3.1**
TIRR Tirgusor 33.36 297 ⇑*i*P **P 18 53 21.6 +3.1**
VRI Vrincioaia 34.50 299 ⇑P **P 18 53 29.8 +1.4**
VRI Vrincioaia 34.50 299 ⇑*i*P **P 18 53 29.8 +1.4**
BJI Beijing 34.57 71 P **P 18 53 31.4 +2.4**
BJI S **S 18 58 53.1 +3.8**
BJI pmax pmax
comp=Z,11nm,0.6s,mb4.9
BJI pmax pmax
comp=Z,84nm,3.8s
BJI LR LR
comp=N,110nm,15.6s
BJI LR LR
comp=E,90nm,14.1s
BJI LR LR
comp=Z,26nm,19.9s
MLR Muntele Rosu 35.06 299 ⇓P **P 18 53 35.1 +1.9**
MLR Muntele Rosu 35.06 299 ⇓*i*P **P 18 53 35.1 +1.9**
BURAR Bucovina Array 35.51 302 ⇓P **P 18 53 37.4 +0.3**
BURAR Bucovina Array 35.51 302 ⇓*i*P **P 18 53 37.4 +0.3**
JOF Joensuu 35.69 329 *eP* **P 18 53 37.9 -0.5**
JOF pmax pmax
comp=Z,2.0nm,0.3s,mb4.5
JOF Joensuu 35.69 329 *ep* **P 18 53 37.9 -0.5**
comp=Z,2.2nm,0.3s,mb4.6
JOF Joensuu 35.69 329 *ep* **P 18 53 37.8 -0.6**
comp=Z,2.5nm,0.4s,mb4.5
JOF Joensuu 35.69 329 *ep* **P 18 53 37.9 -0.5**
comp=Z,2.2nm,0.3s,mb4.6
JOF Joensuu 35.69 329 *ep* **P 18 53 37.8 -0.6**
comp=Z,2.5nm,0.4s,mb4.5
ATD Arta Tunnel 36.38 233 P **P 18 53 46.1 +1.4**
comp=Z,4.1nm,0.6s,mb4.6,baz=74,slow=15,SNR=2.9
KWP Kalwaria Pacla 37.19 306 ⇓P **P 18 53 44.3 -7.0**
KWP Kalwaria Pacla 37.19 306 ⇓*i*P **P 18 53 44.3 -7.0**
DRGR 37.24 301 ⇑P **P 18 53 52.7 +0.9**
DRGR 37.24 301 ⇑*i*P **P 18 53 52.7 +0.9**
FINES FINESS Array B 37.37 325 P **P 18 53 52.5 -0.1**
comp=Z,1.8nm,0.5s,mb4.2,baz=118,slow=7.3,SNR=8.9
FINES LR LR 19 09 21.5
comp=Z,54nm,18.2s,baz=211,slow=36
FINES FINESS Array B 37.37 325 P **P 18 53 52.5 -0.1**
FINES LR LR 19 09 21.5
BZS Buzias 38.09 299 ⇑P **P 18 54 00.3 +1.4**
BZS Buzias 38.09 299 ⇑*i*P **P 18 54 00.3 +1.4**
NIE Niedzica 38.75 305 *eP* pP 18 54 32.0 +1.1
OJC Ojcow 39.07 307 *eP* pP 18 54 32.5 -1.1
MORC Moravsky Berou 40.54 306 ⇑P **P 18 54 20.2 +1.0**
MORC Moravsky Berou 40.54 306 ⇑*i*P **P 18 54 20.2 +1.0**

CN2 Changchun 40.78 63 *eP* **P 18 54 23.3 +2.0**
ARCES ARCESS Array B 40.86 337 P **P 18 54 21.8 +0.3**
comp=Z,1.6nm,0.6s,mb4.0,baz=116,slow=9.0,SNR=25
ARCES pP pP 18 54 49.0 +0.7
comp=Z,4.5nm,0.8s,baz=116,slow=8.2,SNR=4.4
ARCES LR LR 19 12 25.5
comp=Z,70nm,18.9s,baz=159,slow=38
ARCES ARCESS Array B 40.86 337 P **P 18 54 21.8 +0.2**
ARCES *PP pP 18 54 49.0 +0.7
DPC Dobruska-Polom 41.29 307 *eP* **P 18 54 29.1 +3.7**
DPC Dobruska-Polom 41.29 307 *eP* **P 18 54 29.1 +3.7**
DPC *e*pP pP 18 54 51.1 -1.1
UPC Upice 41.48 307 *eP* **P 18 54 23.4 -3.5**
UPC *e* pP 18 54 54.1 +0.4
UPC *e* 18 55 08.4
UPC Upice 41.48 307 *eP* **P 18 54 23.4 -3.5**
UPC *e*pP pP 18 54 54.1 +0.4
UPC *e*sP sP 18 55 08.4 +1.2
CONA Conrad Observa 41.79 303 ⇑*eP* **P 18 54 30.5 +1.0**
comp=Z,4.9nm,0.9s,mb4.2
CONA ⇑*i*pP pP 18 54 57.0 +0.7
comp=Z,20nm,1.1s
CSNA Conrad Observa 41.79 303 ⇑*eP* **P 18 54 30.5 +1.0**
comp=Z,5.1nm,1.0s,mb4.2
CSNA ⇑*i*pP pP 18 54 57.0 +0.6
comp=Z,18nm,1.2s
TREC Trest 41.91 305 *ep*P pP 18 54 57.4 +0.2
PVCC Panska Ves 42.40 307 *ep*P pP 18 55 01.2 -0.1
PRU Pruhonice 42.46 306 *eP* **P 18 54 36.4 +1.5**
PRU *e* pP 18 55 02.0 +0.2
PRU *e* 18 55 17.7
PRU Pruhonice 42.46 306 *eP* **P 18 54 36.4 +1.5**
PRU *e*pP pP 18 55 02.0 +0.2
PRU *e*sP sP 18 55 17.7 +2.5
SOKA Soboth 42.51 302 ⇑*eP* **P 18 54 36.3 +1.0**
comp=Z,5.3nm,1.0s,mb4.2
SOKA ⇑*i*pP pP 18 55 02.8 +0.6
comp=Z,13nm,1.2s
BRG Berggiesshubel 42.77 308 *i* P pP 18 55 04.6 +0.3
comp=Z,15nm,1.0s
MOA Molin 42.87 303 ⇑*eP* **P 18 54 38.9 +0.7**
comp=Z,1.1nm,0.3s,mb4.0
MOA ⇑*i*pP pP 18 55 05.3 +0.2
comp=Z,3.5nm,0.5s
GEC2 GERESS Array S 43.12 305 *eP* pP 18 55 07.6 +0.4
comp=Z,8.0nm,1.4s
GERES GERESS Array B 43.12 305 P **P 18 54 39.4 -0.8**
comp=Z,0.4nm,0.6s,mb3.3,baz=76,slow=8.2,SNR=3.3
GERES pP pP 18 55 07.2 0.0
comp=Z,2.8nm,1.0s,baz=78,slow=6.2,SNR=7.2
GERES PP PP 18 56 41.3 +19
comp=Z,1.6nm,0.9s,baz=68,slow=12,SNR=4.4
GERES GERESS Array B 43.12 305 P **P 18 54 39.4 -0.8**
GERES *PP pP 18 55 07.2 0.0
KHC Kasperske Hory 43.17 305 *eP* **P 18 54 41.3 +0.7**
KHC *e* pP 18 55 06.3 -1.3
KHC *e* 18 55 19.5
KHC Kasperske Hory 43.17 305 *eP* **P 18 54 41.3 +0.7**
KHC *e*pP pP 18 55 06.3 -1.3
KHC *e*sP sP 18 55 19.5 -1.5
CLL Collm 43.33 309 *eP* pP 18 55 08.4 -0.4
comp=Z,9.0nm,0.9s
CLL Collm 43.33 309 *eP* **P 18 54 42.0 +0.2**
CLL *i* *PP pP 18 55 08.0 -0.8
CLL Collm 43.33 309 *eP* **P 18 54 42.0 +0.2**
CLL *i* pP pP 18 55 08.0 -0.8
comp=Z,21nm,1.6s
CLL *e*(sP) sP 18 55 24.0 +1.8
CLL *e*PP PP 18 56 27.0 +2.4
MDJ Mudanjiang 43.57 61 P **P 18 54 45.2 +1.3**
MDJ PP PP 18 56 28.1 +0.8
MDJ ScP ScP 19 00 13.8 +3.9
MDJ PcS PcS 19 00 24.8 +2.6
MDJ S **S 19 01 06.3 +2.3**
MDJ pmax pmax
comp=Z,4.0nm,1.1s,mb4.1
MDJ pmax pmax
comp=Z,38nm,3.2s
MDJ LR LR
comp=N,72nm,11.2s
MDJ LR LR
comp=E,97nm,11.0s
MDJ LR LR
comp=Z,170nm,11.9s
WET Wettzell 43.62 305 *eP* pP 18 55 11.6 +0.3
comp=Z,11nm,1.7s
TANN Tannenbergstha 43.75 307 *eP* pP 18 55 12.6 +0.3
comp=Z,15nm,1.4s
NKC Novy Kostel 43.78 307 *ep*P pP 18 55 12.7 +0.2
WERD Werda 43.85 307 *eP* pP 18 55 13.1 +0.1
comp=Z,10.0nm,1.4s
RJOB Jochberg 43.87 303 *eP* pP 18 55 13.2 0.0
comp=Z,4.0nm,0.9s
ROTZ Rotzenmuhle 43.98 306 *eP* pP 18 55 15.0 +0.8
comp=Z,13nm,1.5s
KSRS Korea Array 44.09 72 P **P 18 54 47.5 -0.7**
comp=Z,0.7nm,0.5s,mb3.6,baz=272,slow=7.4,SNR=5.3
KSRS LR LR 19 15 30.9
comp=Z,260nm,18.8s,baz=165,slow=39
KSRS Korea Array 44.09 72 P **P 18 54 47.5 -0.7**
KSRS pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
KSRS MLR MLR
comp=Z,260nm,18.8s
MOX Moxa 44.26 308 *eP* pP 18 55 16.7 +0.3
comp=Z,18nm,1.5s
MOX
comp=Z,300nm,17.0s
NB2 NORSAR Subarra 44.31 323 P **P 18 54 49.1 -0.4**
comp=Z,1.5nm,0.6s,mb3.9,baz=92,slow=7.9
NOA NORSAR Array B 44.31 323 P **P 18 54 49.0 -0.6**
comp=Z,1.8nm,0.6s,mb4.0,baz=94,slow=7.9,SNR=6.1
NOA pP pP 18 55 17.2 +0.6
comp=Z,2.5nm,0.6s,baz=96,slow=8.1,SNR=4.1
NOA LR LR 19 14 12.0
comp=Z,30nm,18.6s,baz=295,slow=37
NOA NORSAR Array B 44.31 323 P **P 18 54 49.0 -0.5**
NOA *PP pP 18 55 17.2 +0.6
GRF Grafenberg Arr 44.63 306 *eP* pP 18 55 20.4 +1.0
comp=Z,56nm,1.6s
WTTA Wattenberg 44.72 303 ⇑*eP* **P 18 54 53.1 +0.1**
comp=Z,6.4nm,1.2s,mb4.2
WTTA ⇑*i*pP pP 18 55 19.9 -0.2
comp=Z,5.6nm,0.7s
BSEG Bad Segeberg 44.77 312 *eP* pP 18 55 21.0 +0.6
comp=Z,26nm,1.1s
FUR Furstenfeldbru 44.81 304 *eP* pP 18 55 21.1 +0.2
comp=Z,10.0nm,0.8s
TIXI Tiksi 45.00 22 *eP* **P 18 54 55.1 +0.2**
TIXI *e*PP pP 18 55 22.2 +0.1
TIXI pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
TIXI Tiksi 45.00 22 *eP* **P 18 54 55.1 +0.2**
comp=Z,4.4nm,0.6s,mb4.4
TIXI *e*pP pP 18 55 22.2 +0.1
NRDL Niedersach Rie 45.01 310 *eP* pP 18 55 22.7 +0.3
comp=Z,15nm,1.0s
DAVA Damuels 45.89 303 ⇑*eP* **P 18 55 02.5 +0.3**
comp=Z,4.7nm,0.5s,mb4.5
DAVA ⇑*i*pP pP 18 55 29.2 -0.3
comp=Z,7.4nm,0.7s
DAVOX Davos/Dischmat 45.98 303 P **P 18 55 02.8 -0.2**
comp=Z,3.7nm,0.6s,mb4.3,baz=88,slow=6.9,SNR=3.5
DAVOX pP pP 18 55 29.8 -0.5
comp=Z,4.9nm,0.7s,baz=91,slow=7.6,SNR=4.5
IBBN Ibbenburen 46.46 310 *eP* pP 18 55 34.1 +0.1
comp=Z,47nm,1.4s
BFO Black Forest 46.72 305 *eP* pP 18 55 35.9 -0.2
comp=Z,10.0nm,1.4s
BUG Bochum--Univer 46.88 309 *eP* pP 18 55 38.9 +1.6
comp=Z,13nm,0.8s
WLF Walferdange 47.88 307 *eP* pP 18 55 46.0 +0.9
comp=Z,13nm,0.9s
CABF La Chapelle 48.57 303 *eP* **P 18 55 21.8 -1.2**
comp=Z,5.6nm,0.6s,mb4.3
CABF La Chapelle 48.57 303 *eP* **P 18 55 21.8 -1.2**
CABF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
CABF La Chapelle 48.57 303 *eP* **P 18 55 21.8 -1.2**
comp=Z,2.8nm,0.6s,mb4.4
FRF La Foret Royal 48.96 299 *eP* **P 18 55 25.8 -0.2**
FRF La Foret Royal 48.96 299 *eP* **P 18 55 25.8 -0.2**
FRF *e*PP pP 18 55 53.0 -0.6
BAIF Baives 49.04 308 *eP* **P 18 55 26.2 -0.3**
BAIF *ep*P pP 18 55 54.8 +0.7

ORIF Oris-en-Rattie 49.13 301 *eP* **P** **18 55 25.5 -1.8**
KEST Kesra 49.46 288 P **P** **18 55 31.1 +1.2**
comp=Z,0.8nm,0.6s,mb3.8,baz=100,slow=15,SNR=4.3
SMRF Simiane la Rot 49.59 300 *eP* **P** **18 55 29.6 -1.2**
SMF Signal de Mont 50.06 304 *eP* **P** **18 55 33.3 -1.1**
comp=Z,10nm,0.9s,mb4.4
SMF Signal de Mont 50.06 304 *eP* **P** **18 55 33.3 -1.1**
SMF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
SMF Signal de Mont 50.06 304 *eP* **P** **18 55 33.3 -1.1**
comp=Z,5.1nm,0.9s,mb4.5
AVF Avril sur Loir 50.35 304 *eP* **P** **18 55 35.5 -1.0**
comp=Z,4.1nm,0.6s,mb4.3
AVF Avril sur Loir 50.35 304 *eP* **P** **18 55 35.5 -1.0**
AVF *e**PP pP 18 56 04.0 -0.2
AVF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
AVF Avril sur Loir 50.35 304 *eP* **P** **18 55 35.5 -1.0**
comp=Z,2.0nm,0.6s,mb4.2
AVF *ep*P pP 18 56 04.0 -0.2
LASF Ste Croix 50.75 300 *eP* **P** **18 55 39.2 -0.4**
comp=Z,11nm,0.9s,mb4.6
TCF Toulx Ste Croi 51.24 304 *eP* **P** **18 55 42.7 -0.5**
TCF Toulx Ste Croi 51.24 304 *eP* **P** **18 55 42.7 -0.5**
TCF *e**PP pP 18 56 11.2 +0.2
RJF Les Rejaudoux 51.99 303 *eP* **P** **18 55 48.0 -0.8**
MTLF Montolieu 52.11 300 *eP* **P** **18 55 49.0 -0.7**
MJAR Matsushiro Arr 52.15 69 P **P** **18 55 52.0 +1.8**
comp=Z,1.5nm,0.9s,mb4.0,baz=286,slow=9.5,SNR=5.1
EPF Esparros 53.51 300 *eP* **P** **18 55 58.4 -1.6**
DAG Danmarks Havn 54.36 344 *i P* **P** **18 56 18.0 +12**
ESDC Sonseca Array 57.75 298 P **P** **18 56 30.2 -0.1**
comp=Z,0.6nm,0.4s,mb4.0,baz=61,slow=7.4,SNR=7.2
ESDC *p*P pP 18 56 58.0 -0.7
comp=Z,2.5nm,0.7s,baz=59,slow=8.0,SNR=5.6
ESDC Sonseca Array 57.75 298 P **P** **18 56 30.2 -0.1**
ESDC *p*P pP 18 56 58.0 -0.8
BILL Bilibino 57.81 26⇑ *eP* **P** **18 56 31.2 +0.9**
BILL *e* pP 18 57 01.8 +3.1
BILL pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
KAPI Kappang 61.22 122 P **P** **18 56 54.3 -0.2**
comp=Z,4.7nm,0.8s,mb4.6,baz=329,slow=12,SNR=2.3
KAPI Kappang 61.22 122 P **P** **18 56 54.3 -0.2**
TORD Torodi Ar. Bea 66.37 269 P **P** **18 57 27.5 -0.7**
comp=Z,1.6nm,0.6s,mb4.0,baz=40,slow=5.7
TORD Torodi Ar. Bea 66.37 269 P **P** **18 57 27.5 -0.7**
INK Inuvik 73.23 10 *eP* **P** **18 58 09.9 +0.4**
INK pmax pmax
comp=Z,7.0nm,1.0s
INK Inuvik 73.23 10 *eP* **P** **18 58 09.9 +0.5**
comp=Z,7.3nm,1.0s,mb4.5
PPLA Purkeypile 74.33 19 *eP* **P** **18 58 16.6 +0.7**
comp=Z,5.2nm,0.5s,mb4.5
EGAK Eagle 75.24 14 *eP* **P** **18 58 21.6 +0.5**
comp=Z,1.0nm,0.7s,mb3.6
YKA Yellowknife Ar 80.64 3 P **P** **18 58 51.6 +0.6**
comp=Z,1.5nm,0.5s,mb4.0,baz=349,slow=5.5,SNR=21
YKA *p*P pP 18 59 20.8 -0.2
comp=Z,2.2nm,0.5s,baz=351,slow=5.5,SNR=6.3
YKA Yellowknife Ar 80.64 3 P **P** **18 58 51.6 +0.6**
YKA *p*P pP 18 59 20.8 -0.2
WRA Warramunga Arr 81.76 122 P **P** **18 58 57.8 +0.2**
comp=Z,0.6nm,0.5s,mb3.7,baz=323,slow=4.9,SNR=9.3
ASAR Alice Springs 84.06 125 P **P** **18 59 10.3 +0.9**
comp=Z,0.4nm,0.5s,mb3.5,baz=308,slow=5.1,SNR=9.1
FFC Flin Flon 88.41 356 *i P* **P** **18 59 31.8 +1.6**

*ISK **10** 19:00:55.2,36.°99N×29.°17E,h7km,MD2.9*
*DDA **10** 19:00:55.8,37.°00N×29.°14E,h7km±7km,Md2.8*
*ISCJB **10** 19:00:55.8±0.6,36.°99N±0.°03×29.°16E±0.°05,h4km±8km,*
Error ellipse: s-maj=6.4km s-min=5.1km az=20.7
*CSEM **10** 19:00:56.0±0.1,36.°99N×29.°17E,h10km,MD2.9,Error*
ellipse: s-maj=2.7km s-min=2.3km az=16.0
ISC 10 19:00:56.1±0.6,36.°99N±0.°03×29.°16E±0.°05,h9km±8km,
n20,σ0°87/31,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.32**	**58**	*eP*G	**Pg**	**19 01 01.7**	**-0.7**
GLHS				*eS*G	**Sg**	**19 01 06.1**	**-0.6**
GLHS	**Glhisar (BURDU**	**0.32**	**58**	*eP*g	**Pg**	**19 01 01.7**	**-0.7**
GLHS				*eS*g	**Sg**	**19 01 06.1**	**-0.5**
FETY	**Fethiye**	**0.36**	**190**	*eP*G	**Pg**	**19 01 02.8**	**-0.3**
FETY				*eS*G	**Sg**	**19 01 08.1**	**+0.2**
FETY	**Fethiye**	**0.36**	**190**	*eP*g	**Pg**	**19 01 02.8**	**-0.3**
FETY				*eS*g	**Sg**	**19 01 08.1**	**+0.2**
GOLH	**Golhisar**	**0.40**	**52**	*i P*	**Pg**	**19 01 03.1**	**-0.9**
GOLH				*i S*	**Sg**	**19 01 10.8**	**+1.4**
GOLH	**Golhisar**	**0.40**	**52**	*i P*	**Pg**	**19 01 03.1**	**-0.9**
GOLH				*i S*	**Sg**	**19 01 10.8**	**+1.4**
ELL	**Elmali**	**0.64**	**111**	*eP*G	**Pg**	**19 01 08.8**	**+0.2**
ELL	**Elmali**	**0.64**	**111**	*eP*g	**Pg**	**19 01 08.8**	**+0.3**
DNZL	**Cakiroluk**	**0.71**	**352**	*i P*	**Pg**	**19 01 08.0**	**-1.8**
DNZL				*i S*	**Sg**	**19 01 21.0**	**+1.9**
DNZL	**Cakiroluk**	**0.71**	**352**	*i P*	**Pg**	**19 01 08.0**	**-1.8**
DNZL				*i S*	**Sg**	**19 01 21.0**	**+1.9**
YER	**Yerkesik**	**0.72**	**282**	*eP*G	**Pg**	**19 01 09.7**	**-0.3**
YER	**Yerkesik**	**0.72**	**282**	*eP*g	**Pg**	**19 01 09.7**	**-0.3**
AKAS	**Kas**	**0.83**	**155**	*i P*	**Pg**	**19 01 13.1**	**+1.0**
AKAS				*i S*	**Sg**	**19 01 29.8**	**+6.9**
AKAS	**Kas**	**0.83**	**155**	*i P*	**Pg**	**19 01 13.1**	**+1.0**
AYDN	**Tasoluk**	**1.23**	**304**	*i P*	**Pn**	**19 01 19.6**	**+0.2**
AYDN				*i S*	**Sb**	**19 01 35.6**	**+0.2**
AYDN	**Tasoluk**	**1.23**	**304**	*i P*	**Pn**	**19 01 19.6**	**+0.2**
AYDN				*i S*	**Sb**	**19 01 35.6**	**+0.2**
KHL	**Karahalli**	**1.36**	**12**	*eP*N	**Pn**	**19 01 21.1**	**-0.3**
KHL	**Karahalli**	**1.36**	**12**	*eP*n	**Pn**	**19 01 21.1**	**-0.2**
SUTC	**Sutluce-Ispart**	**1.54**	**71**	*eP*N	**Pn**	**19 01 23.8**	**0.0**
SUTC	**Sutluce-Ispart**	**1.54**	**71**	*eP*n	**Pn**	**19 01 23.8**	**0.0**

IDC 10 19:01:09.8±1.9,0.°08S×125.°63E,h0km,mb3.4/3,
mb1 3.7/4,mb1mx3.5/21,mbtmp3.5/4,ML3.4/1,Error
ellipse: s-maj=117.9km s-min=26.0km az=67.0,
Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**17.91**	**180**	P	Pn	19 05 20.6	+0.1
	0.1nm,0.3s,baz=14,slow=8.3,SNR=4.2						
WRA	**Warramunga Arr**	**21.50**	**157**	P	P	19 05 59.3	-1.1
	0.8nm,0.8s,baz=334,slow=11,SNR=7.0						
ASAR	**Alice Springs**	**24.78**	**162**	P	P	19 06 34.5	+1.0
	0.5nm,0.6s,baz=344,slow=7.5,SNR=6.5						
MKAR	**Makanchi Array**	**60.09**	**327**	P	P	19 11 18.9	0.0
	0.5nm,0.4s,baz=109,slow=8.5,SNR=4.2						

*IDC **10** 19:01:58.7±0.7,36.°67N×143.°13E,h0km,mb3.8/12,*
mb1 4.0/16,mb1mx3.9/30,mbtmp3.9/16,ML3.7/4,MS3.2/2,
Ms1 3.2/2,ms1mx2.7/42,Error ellipse: s-maj=18.9km
s-min=15.8km az=118.0
*NIED **10** 19:02:00,36.°80N×143.°10E,h5km,Mw4.2 Best double*
couple: M0 2.36000×10^15 NP1:φs37.00000°,δ54.00000°,
λ110.00000°. NP2:φs186.00000°,δ41.00000°,λ65.00000°.
*JMA **10** 19:02:00.8±0.1,36.°79N×143.°08E,h55km,M4.0*
*BJI **10** 19:02:00.9,37.°15N×143.°23E,h27km,mB4.7/13,mb4.5/23,*
Ms4.6/13,Ms7 4.4/13
*ISCJB **10** 19:02:02.1±0.4,36.°73N±0.°03×142.°98E±0.°04,h33km,*
mb4.2/27,MS4.5/4,Error ellipse: s-maj=5.4km
s-min=4.0km az=44.4
*MOS **10** 19:02:02.2±1.3,36.°82N×143.°04E,h33km,mb4.6/8,Error*
ellipse: s-maj=10.5km s-min=7.1km az=111.0
*NEIC **10** 19:02:04.0±0.7,36.°84N×143.°05E,h35km,mb4.5/7,*
MW4.2(NIED),Error ellipse: s-maj=14.0km s-min=10.2km
az=139.0
ISC 10 19:02:04.4±0.4,36.°74N±0.°03×142.°93E±0.°04,h35km,
(h37km±3.0km:pP-P),n74,σ1°18/89,mb4.2/27,MS4.5/4,4C,
Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**1.74**	**282**	P	**Pn**	**19 02 30.9**	**-1.2**
ONAJ				*eS*	**Sn**	**19 02 53.4**	**+0.3**
JFK	**Kawauchi**	**1.76**	**291**	P	**Pn**	**19 02 31.0**	**-1.3**
JFK				*eS*	**Sn**	**19 02 53.0**	**-0.4**
JHO	**Hitachi**	**1.90**	**267**	P	**Pn**	**19 02 33.3**	**-1.0**
JMM	**Marumori**	**2.04**	**304**	P	**Pn**	**19 02 34.8**	**-1.4**
JMM				*eS*	**Sn**	**19 03 00.3**	**-0.1**
JMK	**Ichinoseki**	**2.59**	**329**	P	**Pn**	**19 02 41.7**	**-2.0**
JMK				*eS*	**Sn**	**19 03 11.5**	**-2.4**
BSO1	**Boso 1**	**2.62**	**218**	P	**Pn**	**19 02 43.4**	**-0.8**
BSO1				*eS*	**Sn**	**19 03 14.7**	**-0.1**
JAG	**Ashikaga**	**2.81**	**265**	P	**Pn**	**19 02 46.5**	**-0.3**
JAG				*eS*	**Sn**	**19 03 19.6**	**+0.1**
JYK	**Kaneyama**	**2.97**	**318**	P	**Pn**	**19 02 47.7**	**-1.3**
JOM	**Ohasama**	**3.02**	**335**	P	**Pn**	**19 02 47.2**	**-2.4**
JRY	**Ryogami san**	**3.33**	**259**	P	**Pn**	**19 02 53.5**	**-0.4**
JRY				*eS*	**Sn**	**19 03 32.1**	**-0.1**
JAW	**Awa shima**	**3.38**	**301**	P	**Pn**	**19 02 55.5**	**+0.8**
JOD2	**Odawara 2**	**3.44**	**246**	P	**Pn**	**19 02 55.2**	**-0.3**
JOD2				*eS*	**Sn**	**19 03 35.9**	**+0.8**
MJAR	**Matsushiro Arr**	**3.80**	**268**	Pn	**Pn**	**19 03 00.8**	**+0.5**
	9.1nm,0.3s,baz=88,slow=8.9,SNR=94						
MAJO	**Matsushiro**	**3.80**	**268**	*eP*	**Pn**	**19 03 01.3**	**+0.9**
MAT	**Matsushiro**	**3.80**	**268**	P	**Pn**	**19 03 01.4**	**+1.0**
MAT				*eS*	**Sn**	**19 03 45.7**	**+1.8**
MAT	**Matsushiro**	**3.80**	**268**	P	**Pn**	**19 03 01.5**	**+1.1**
JHJ2	**Mitsune**	**4.43**	**216**	*eS*	**Sn**	**19 03 58.4**	**-1.1**
JHJ	**Hachijo jima 2**	**4.44**	**216**	Pn	**Pn**	**19 03 09.0**	**-0.3**
	20nm,0.3s,baz=240,slow=10,SNR=14						
JHJ				Sn	**Sn**	**19 03 57.8**	**-1.9**
	76nm,0.3s,baz=255,slow=23,SNR=9.5						
JHJ				LR	LR	19 04 58.6	
	comp=Z,242nm,18.9s,baz=69,slow=40						
ERM	**Erimo**	**5.27**	**2**	*eP*	**Pn**	**19 03 16.0**	**-4.5**
ERM				*e*		19 04 12.4	
ERM				pmax	pmax		
	comp=Z,44nm,0.8s						
ERM	**Erimo**	**5.27**	**2**	*e*Pn	**Pn**	**19 03 16.0**	**-4.5**
	comp=Z,44nm,0.8s						
ERM				*e*Sn	**Sn**	**19 04 12.4**	**-7.6**
ASAJ	**Asahikawa**	**7.37**	**358**	Pn	**Pn**	**19 03 46.0**	**-3.4**
	comp=Z,3.9nm,0.3s,baz=204,slow=4.4,SNR=26						
ASAJ				Sn	**Sn**	**19 05 05.2**	**-6.6**
	comp=Z,0.2nm,0.3s,baz=77,slow=17,SNR=3.3						
ASAJ				LR	LR	19 07 06.7	
	comp=Z,168nm,18.4s,baz=22,slow=41						
ASAJ	**Asahikawa**	**7.37**	**358**	P	**Pn**	**19 03 46.0**	**-3.4**
ASAJ						19 05 05.2	
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,168nm,18.4s						
KUR	**Kuril'sk**	**9.27**	**22**	P	**Pn**	**19 04 17.0**	**+1.6**
CBIJ	**Chichi jima**	**9.64**	**184**	Pn	**Pn**	**19 04 15.9**	**-4.7**
	comp=Z,3.1nm,0.3s,baz=253,slow=20,SNR=5.1						
CBIJ				Sn	**Sn**	**19 05 57.5**	**-10**
	comp=Z,12nm,0.3s,baz=314,slow=21,SNR=7.0						
YSS	**Yuzh-Sakhalins**	**10.20**	**359**	*eP*	**Pn**	**19 04 26.5**	**-1.7**
YSS				*eS*	**Sn**	**19 06 15.0**	**-6.3**
YSS				MLR	MLR		
	comp=E,600nm,14.0s						
YSS				MLR	MLR		
	comp=Z,500nm,14.0s						
YSS				MLR	MLR		
	comp=N,800nm,12.0s						
YSS	**Yuzh-Sakhalins**	**10.20**	**359**	*e*Pn	**Pn**	**19 04 25.0**	**-3.2**
VLA	**Vladivostok**	**10.59**	**310**	P	**Pn**	**19 04 34.0**	**+0.4**
VLA				pmax	pmax		
	comp=Z,32nm,2.2s						
VLA				MLR	MLR		
	comp=Z,300nm,16.5s						
KSRS	**Korea Array**	**12.01**	**278**	Pn	**Pn**	**19 04 55.9**	**+2.9**
	comp=Z,0.1nm,0.3s,baz=90,slow=13,SNR=17						
HABR	**Khabarovsk**	**13.07**	**336**	*eP*	**Pn**	**19 05 03.0**	**-4.4**
HABR				pmax	pmax		
	comp=N,34nm,2.3s						
HABR				pmax	pmax		
	comp=Z,27nm,1.4s						
HABR				pmax	pmax		
	comp=E,34nm,2.5s						
HABR				MLR	MLR		
	comp=Z,232nm,15.0s						
KLR	**Kul'dur**	**14.90**	**330**	*eP*	**Pn**	**19 05 32.7**	**+0.4**
KLR				MLR	MLR		
	comp=E,1μm,13.0s						
KLR				MLR	MLR		
	comp=Z,2μm,13.0s						
CLNS	**Chul'man**	**23.45**	**335**	*eP*	**P**	**19 07 03.7**	**-6.8**
CLNS				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.2						
CLNS				pmax	pmax		
	comp=N,10.0nm,0.9s						
WHN	**Wuhan**	**24.53**	**264**	P	**P**	**19 07 20.5**	**-0.1**
WHN				S	**S**	**19 11 45.8**	**+6.9**
WHN				LR	LR		
	comp=N,620nm,8.9s						
WHN				LR	LR		
	comp=E,2μm,11.9s						
WHN				LR	LR		
	comp=Z,3μm,13.2s,MS4.9						
CIT	**Chita**	**25.73**	**316**	*eP*	**P**	**19 07 32.8**	**+1.5**
CIT				*e*	pP	19 07 43.2	+1.9
CIT				pmax	pmax		
	comp=Z,86nm,1.7s,mb5.0						
FX1	**Attu Island--F**	**26.57**	**43**	P	**P**	**19 07 38.9**	**0.0**
	comp=Z,1.2nm,0.7s,mb3.6,baz=248,slow=19,SNR=2.8						
YAK	**Yakutsk**	**26.63**	**346**	*eP*	**P**	**19 07 37.4**	**-1.9**
YAK				*e**PP	pP	19 07 45.7	-3.6
YAK				*e*		19 08 18.1	
YAK				*eS*	**S**	**19 12 09.2**	**-2.5**
YAK				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.2						
YAK				pmax	pmax		
	comp=N,7.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.4						
YAK				smax			
	comp=N,118nm,11.8s						
YAK				MLR	MLR		
	comp=E,125nm,10.0s,MS4.2						
YAK				MLR	MLR		
	comp=N,377nm,15.0s,MS4.2						
YAK				MLR	MLR		
	comp=Z,378nm,13.0s,MS4.1						
YAK	**Yakutsk**	**26.63**	**346**	*eP*	**P**	**19 07 37.7**	**-1.6**
	comp=Z,22nm,0.8s,mb4.7						
SEY	**Seymchan**	**26.86**	**10**	*ce*P	**P**	**19 07 42.2**	**+0.9**
XAN	**Xi'an**	**27.77**	**275**	P	**P**	**19 07 49.3**	**-0.6**
XAN				pmax	pmax		
	comp=Z,4.0nm,1.4s,mb3.9						
XAN				pmax	pmax		
	comp=Z,15nm,8.3s						
XAN				LR	LR		
	comp=N,670nm,14.9s,MS4.3						
XAN				LR	LR		
	comp=E,170nm,17.8s,MS4.3						
XAN				LR	LR		
	comp=Z,240nm,13.9s,MS3.9						
ULN	**Ulaanbaatar**	**28.52**	**304**	*eP*	**P**	**19 07 57.4**	**+1.0**
ULN				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
ULN	**Ulaanbaatar**	**28.52**	**304**	*eP*	**P**	**19 07 57.4**	**+1.0**
	comp=Z,9.5nm,0.9s,mb4.5						
SONM	**Songino Array**	**28.95**	**304**	P	**P**	**19 08 02.3**	**+2.1**
	comp=Z,6.4nm,1.1s,mb4.2,baz=103,slow=8.7,SNR=14						
LZH	**Lanzhou**	**31.31**	**281**	⇑P	**P**	**19 08 23.0**	**+1.8**
LZH				pP	pP	19 08 33.5	+2.2
LZH				sP	sP	19 08 38.5	+3.0
LZH				pmax	pmax		
	comp=Z,28nm,1.5s,mb4.9						
LZH				pmax	pmax		
	comp=Z,66nm,4.4s						
ZAK	**Zakamensk**	**31.40**	**308**	*eP*	**P**	**19 08 22.7**	**+0.9**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.6s,mb4.0						
TLY	**Talaya**	**31.44**	**311**	*eP*	**P**	**19 08 24.0**	**+1.9**
TLY				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
TLY	**Talaya**	**31.44**	**311**	*eP*	**P**	**19 08 24.0**	**+1.8**
	comp=Z,3.9nm,0.9s,mb4.2						
MOY	**Mondy**	**33.05**	**310**	*eP*	pP	19 08 48.9	+2.5
GTA	**Gaotai**	**33.81**	**288**	*eP*	**P**	**19 08 44.7**	**+1.7**
GTA				pP	pP	19 08 53.2	+0.1
GTA				sP	sP	19 08 55.5	-1.9
GTA				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
GTA				pmax	pmax		
	comp=Z,87nm,4.2s						
GTA				LR	LR		
	comp=N,370nm,17.3s,MS4.5						
GTA				LR	LR		
	comp=E,710nm,13.7s,MS4.5						
GTA				LR	LR		
	comp=Z,850nm,13.1s,MS4.7						
BILL	**Bilibino**	**33.97**	**15**	*eP*	**P**	**19 08 46.1**	**+2.0**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.9						
CMAR	**Chiang Mai Arr**	**42.60**	**257**	P	**P**	**19 09 58.3**	**+1.0**
	comp=Z,0.5nm,0.9s,mb3.2,baz=37,slow=5.1,SNR=4.8						
ZAA0	**Zalesovo Array**	**43.01**	**313**	*eP*	**P**	**19 09 59.9**	**-0.2**
ZALV	**Zalesovo Beam**	**43.01**	**313**	P	**P**	**19 10 00.6**	**+0.5**
	comp=Z,1.9nm,0.6s,mb4.0,baz=93,slow=8.0,SNR=6.9						
ZALV	**Zalesovo Beam**	**43.01**	**313**	P	**P**	**19 10 00.6**	**+0.5**
LSA	**Lhasa**	**43.45**	**276**	P	**P**	**19 10 03.4**	**-0.6**
LSA				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.2						
LSA	**Lhasa**	**43.45**	**276**	P	**P**	**19 10 03.4**	**-0.6**
	comp=Z,4.6nm,1.0s,mb4.2						
MK31	**Makanchi Array**	**45.30**	**303**	*eP*	**P**	**19 10 18.7**	**+0.1**
MK31				*e*	pP	19 10 30.6	+1.7
MKAR	**Makanchi Array**	**45.30**	**303**	P	**P**	**19 10 18.7**	**+0.2**
	comp=Z,3.1nm,0.9s,mb4.1,baz=78,slow=12,SNR=15						
KSM	**Kuching**	**46.25**	**228**	P	**P**	**19 10 22.9**	**-3.5**
	comp=Z,5.2nm,1.1s,mb4.4						
KURK	**Kurchatov**	**47.06**	**309**	*ce*P	**P**	**19 10 32.8**	**+0.4**
KURK				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
KURK	**Kurchatov**	**47.06**	**309**	*eP*	**P**	**19 10 32.0**	**-0.4**
	comp=Z,13nm,0.9s,mb4.9						
TKM2	**Tokmak 2**	**50.83**	**299**	*eP*	**P**	**19 11 01.6**	**+0.2**
TKM2				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
TKM2	**Tokmak 2**	**50.83**	**299**	*eP*	**P**	**19 11 01.6**	**+0.2**
	comp=Z,11nm,1.1s,mb4.7						
BVAR	**Borovoye Array**	**51.66**	**313**	P	**P**	**19 11 07.6**	**+0.2**
	comp=Z,0.8nm,0.7s,mb3.8,baz=58,slow=5.6,SNR=5.1						
EKS2	**Erkin-Say**	**52.19**	**299**	P	**P**	**19 11 17.9**	**+6.4**
AML	**Almayashu**	**52.41**	**299**	P	**P**	**19 11 14.7**	**+1.5**
INK	**Inuvik**	**54.09**	**27**	P	**P**	**19 11 24.6**	**-0.5**
	comp=Z,0.7nm,0.6s,mb3.8,baz=288,slow=9.6,SNR=2.2						
WRA	**Warramunga Arr**	**56.96**	**190**	P	**P**	**19 11 45.4**	**-0.9**
	comp=Z,1.2nm,0.7s,mb4.0,baz=7,3,slow=7.4,SNR=11						
ARU	**Arti**	**57.38**	**319**	P	**P**	**19 11 49.1**	**+0.2**
ASAR	**Alice Springs**	**60.68**	**189**	P	**P**	**19 12 11.7**	**-0.4**
	comp=Z,0.7nm,0.7s,mb3.9,baz=3.2,slow=7.0,SNR=14						
YKA	**Yellowknife Ar**	**63.45**	**30**	P	**P**	**19 12 29.8**	**-0.4**
	comp=Z,0.3nm,0.7s,mb3.5,baz=297,slow=6.4,SNR=5.5						
YKA	**Yellowknife Ar**	**63.45**	**30**	P	**P**	**19 12 29.8**	**-0.4**
KIV	**Kislovodsk**	**72.01**	**312**	*eP*	**P**	**19 13 26.2**	**+1.7**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
FFC	**Flin Flon**	**73.29**	**33**	*ce*P	**P**	**19 13 35.0**	**+3.1**
AKASG	**Malin Array Be**	**75.27**	**323**	P	**P**	**19 13 42.3**	**-1.2**
	comp=Z,0.2nm,0.4s,mb3.4,baz=44,slow=6.6,SNR=4.1						
TXAR	**Lajitas Array**	**89.33**	**53**	P	**P**	**19 14 56.8**	**-0.5**
	comp=Z,0.3nm,0.9s,mb3.6,baz=316,slow=3.8,SNR=3.0						

*NIED **10** 19:09:00,30.°00N×131.°30E,h23km,Mw4.8 Best double*
couple: M0 1.51000×10^16 NP1:φs19.00000°,δ64.00000°,
λ83.00000°. NP2:φs214.00000°,δ27.00000°,λ104.00000°.
*IDC **10** 19:09:44.3±0.6,30.°09N×131.°00E,h0km,mb4.1/17,*
mb1 4.2/19,mb1mx4.1/30,mbtmp4.1/19,ML4.1/2,MS4.2/20,
Ms1 4.2/20,ms1mx3.9/41,Error ellipse: s-maj=18.3km
s-min=15.1km az=70.0
*MOS **10** 19:09:47.0±0.9,30.°09N×131.°12E,h33km,mb4.8/10,Error*
ellipse: s-maj=11.9km s-min=8.0km az=113.2
*JMA **10** 19:09:47.3±0.2,30.°04N×131.°27E,h27km±2km,M4.7*
JMA Felt I J1.
*ISCJB **10** 19:09:48.7±0.5,30.°11N±0.°03×131.°22E±0.°04,h49km±4km,*
mb4.3/41,MS4.2/23,Error ellipse: s-maj=6.1km
s-min=5.0km az=142.2
*BJI **10** 19:09:49.3,30.°13N×131.°32E,h63km,mB4.5/15,mb4.4/23,*
Ms4.5/14,Ms7 4.3/13
*NEIC **10** 19:09:51.9±1.0,30.°19N×131.°13E,h57km±9km,mb4.5/13,*
MW4.7(NIED),Error ellipse: s-maj=9.9km s-min=7.1km
az=142.0
NEIC Recorded [1 JMA] on Tanega-shima and Yaku-shima.
Also recorded [1 JMA] in Kagoshima.
ISC 10 19:09:50.1±0.6,30.°11N±0.°04×131.°17E±0.°04,h42km±5km,
n100,σ0°94/102,mb4.3/41,MS4.2/23,5C-2D,Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTN	**Tanegashima 3**	**0.57**	**343**	⇓P	**Pn**	**19 10 00.0**	**-1.8**
JTN				*eS*	**Sn**	**19 10 09.0**	**-1.2**
JKC	**Kuchinoerabu**	**0.92**	**293**	⇓P	**Pn**	**19 10 05.7**	**-0.8**
JKC				*eS*	**Sn**	**19 10 19.2**	**+0.7**
JTSR	**Tashiro 2**	**1.08**	**349**	⇑P	**Pn**	**19 10 08.0**	**-0.7**
JTSR				*eS*	**Sn**	**19 10 23.4**	**+0.9**
JNN	**Nakanoshima**	**1.16**	**257**	P	**Pn**	**19 10 09.4**	**-0.4**
JNAR	**Kushima--Naru**	**1.42**	**3**	P	**Pn**	**19 10 13.0**	**-0.4**
JSU	**Suzuyama**	**1.52**	**336**	⇑P	**Pn**	**19 10 14.3**	**-0.5**
JSU				*eS*	**Sn**	**19 10 34.7**	**+1.2**
JTZ	**Takazaki**	**1.79**	**358**	P	**Pn**	**19 10 18.2**	**-0.3**
JTZ				S	**Sn**	**19 10 41.0**	**+1.0**
JSJ	**Shimokoshiki**	**2.00**	**322**	P	**Pn**	**19 10 20.4**	**-1.0**
JZK	**Kikaishima**	**2.07**	**211**	P	**Pn**	**19 10 21.9**	**-0.4**
JAM	**Amami Oshima**	**2.17**	**219**	P	**Pn**	**19 10 23.1**	**-0.7**
KSRS	**Korea Array**	**7.81**	**341**	Pn	**Pn**	**19 11 42.2**	**+1.1**
	0.6nm,0.3s,baz=160,slow=15,SNR=21						
KSRS	**Korea Array**	**7.81**	**341**	P	**Pn**	**19 11 42.2**	**+1.1**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
JHJ	**Hachijo jima 2**	**7.93**	**66**	Pn	**Pn**	**19 11 43.2**	**+0.4**
	comp=Z,12nm,0.3s,baz=231,slow=20,SNR=9.6						
MAJO	**Matsushiro**	**8.71**	**41**	*eP*	**Pn**	**19 11 53.8**	**+0.4**
MAT	**Matsushiro**	**8.71**	**41**	P	**Pn**	**19 11 53.4**	**0.0**
MAT				*eS*	**Sn**	**19 13 31.2**	**+1.0**

BJI S **S** **19 16 21.9 -14**
BJI pmax pmax
comp=Z,12nm,0.6s
BJI pmax pmax
comp=Z,99nm,4.1s
BJI LR LR
comp=N,1μm,12.9s
BJI LR LR
comp=E,2μm,16.8s
BJI LR LR
comp=Z,1μm,15.1s
ENH Enshi 18.75 276 P **Pn** **19 14 06.0 -0.2**
comp=Z,20nm,1.1s
YSS Yuzh-Sakhalins 19.07 25 *e*P Px 19 14 22.2
YSS MLR MLR
comp=Z,200nm,13.0s
KLR Kul'dur 19.11 1 *e*P **Pn** **19 14 04.8 -5.5**
HHC Hu-ho-hao-te 19.19 309 *e*P **Pn** **19 14 12.7 +1.3**
HHC pP pP 19 14 24.8 +4.4
HHC PP 19 14 31.8
HHC sP sP 19 14 33.0 +7.2
HHC S **S** **19 17 39.7 -5.7**
HHC sS sS 19 17 59.9 -1.9
HHC SS 19 18 08.9
HHC PcP PcP 19 18 35.1 +2.7
HHC ScP ScP 19 22 02.9 -2.0
HHC PcS PcS 19 22 09.9 +0.5
HHC pmax pmax
comp=Z,9.0nm,0.7s
HHC pmax pmax
comp=Z,180nm,7.3s
HHC LR LR
comp=N,870nm,16.1s
HHC LR LR
comp=E,1μm,14.5s
HHC LR LR
comp=Z,1μm,14.1s
GUMO Guam 20.75 139 LR LR 19 20 59.5
comp=Z,188nm,18.4s,MS3.5,baz=134,slow=32
GYA Guiyang 21.88 266 P **P** **19 14 41.5 +2.1**
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.3
QIZ Qiongzhong 22.27 245 P **P** **19 14 43.8 +0.1**
QIZ S **S** **19 18 47.1 +0.5**
QIZ LR LR
comp=N,570nm,17.4s
QIZ LR LR
comp=Z,670nm,20.0s,MS4.1
CD2 Chengdu 23.61 279 *e*P **P** **19 14 57.8 +0.5**
CD2 pP 19 15 12.1
CD2 sP sP 19 15 19.5 +6.0
CD2 PP 19 15 32.4
CD2 S **S** **19 19 04.5 -4.3**
CD2 sS sS 19 19 28.6 +1.1
CD2 SS 19 19 56.5
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.5
CD2 pmax pmax
comp=Z,30nm,4.2s
CD2 LR LR
comp=N,960nm,14.2s,MS4.6
CD2 LR LR
comp=E,910nm,11.8s,MS4.6
CD2 LR LR
comp=Z,1μm,13.0s,MS4.6
LZH Lanzhou 23.62 292 *e*P **P** **19 15 02.7 +5.4**
LZH pP 19 15 18.5
LZH sP sP 19 15 24.9 +11
LZH *e*S **S** **19 19 05.0 -3.7**
LZH sS sS 19 19 33.0 +5.5
LZH *e*SS 19 20 00.0
LZH pmax pmax
comp=Z,21nm,1.1s,mb4.5
LZH pmax pmax
comp=Z,130nm,4.2s
LZH LR LR
comp=E,960nm,11.3s
LZH LR LR
comp=Z,2μm,14.7s,MS4.6
ULN Ulaanbaatar 25.64 321 *e*P **P** **19 15 14.2 -1.4**
ULN pmax pmax
comp=Z,13nm,1.4s,mb4.3
ULN Ulaanbaatar 25.64 321 *e*P **P** **19 15 14.2 -1.4**
comp=Z,13nm,1.4s,mb4.3
KMI Kunming 25.64 266 P **P** **19 15 16.9 +1.0**
KMI pmax pmax
comp=Z,7.0nm,1.1s,mb4.1
SONM Songino Array 25.99 320 P **P** **19 15 17.9 -0.8**
comp=Z,1.6nm,0.4s,mb3.9,baz=129,slow=9.4,SNR=12
SONM LR LR 19 27 11.5
comp=Z,593nm,18.4s,MS4.2,baz=303,slow=40
ZAK Zakamensk 29.11 322 *e*P **P** **19 15 46.0 -0.6**
ZAK pmax pmax
comp=Z,2.0nm,1.4s,mb3.6
PETK Petropavlovsk- 30.05 33 LR LR 19 27 29.3
comp=Z,155nm,19.8s,MS3.6,baz=54,slow=35
CHTO Chiang Mai 31.31 256 *e*P **P** **19 16 06.1 -0.4**
CHTO pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
CHTO Chiang Mai 31.31 256 *e*P **P** **19 16 06.1 -0.4**
comp=Z,2.8nm,0.8s,mb4.1
CMAR Chiang Mai Arr 31.48 256 P **P** **19 16 07.1 -0.8**
comp=Z,0.6nm,0.5s,mb3.6,baz=52,slow=7.8,SNR=7.0
CMAR PcP PcP 19 19 01.6 +1.2
comp=Z,0.5nm,0.9s,baz=138,slow=1.2,SNR=4.5
CMAR LR LR 19 30 41.1
comp=Z,380nm,18.8s,MS4.1,baz=68,slow=40
CMAR Chiang Mai Arr 31.48 256 P **P** **19 16 07.1 -0.8**
CMAR 19 19 01.6
LSA Lhasa 34.57 280 *e*P **P** **19 16 36.8 +1.9**
WMQ Urumqi 36.92 304 *e*P **P** **19 16 56.0 +1.2**
WMQ pmax pmax
comp=Z,18nm,1.0s,mb4.9
FX1 Attu Island--F 38.06 41 P **P** **19 17 05.7 +1.3**
comp=Z,2.9nm,0.9s,mb4.0,baz=264,slow=5.2,SNR=4.8
ODAN Odare 38.45 276 *e*P **P** **19 17 07.6 -0.3**
comp=Z,12nm,0.6s,mb4.8
JIRN Jiri 39.27 278 *e*P **P** **19 17 15.0 +0.2**
comp=Z,11nm,0.4s,mb5.0
GUN Gumba 39.48 278 *e*P **P** **19 17 16.7 +0.2**
comp=Z,24nm,0.4s,mb5.3
PKI Pulchoki 39.97 278 *e*P **P** **19 17 20.2 -0.4**
comp=Z,12nm,0.8s,mb4.7
PKI Pulchoki 39.97 278 *e*P **P** **19 17 20.2 -0.4**
PKI pmax pmax
comp=Z,13nm,0.8s,mb4.7
PKIN Phulchoki 39.98 278 *e*P **P** **19 17 20.0 -0.7**
comp=Z,9.2nm,0.5s,mb4.8
KKN Kakani 40.02 278 *e*P **P** **19 17 20.6 -0.5**
comp=Z,7.5nm,0.4s,mb4.8
ZAA0 Zalesovo Array 40.88 319 *e*P **P** **19 17 27.1 -0.7**
ZALV Zalesovo Beam 40.88 319 P **P** **19 17 26.8 -1.0**
comp=Z,0.5nm,0.3s,mb3.5,baz=104,slow=6.3,SNR=9.2
ZALV PcP PcP 19 19 28.1 +0.4
comp=Z,0.7nm,0.6s,baz=90,slow=2.9,SNR=2.9
ZALV LR LR 19 35 41.9
comp=Z,272nm,18.1s,MS4.2,baz=80,slow=38
ZALV Zalesovo Beam 40.88 319 P **P** **19 17 26.8 -1.0**
ZALV 19 19 28.1
MK31 Makanchi Array 41.05 308 *e*P **P** **19 17 29.1 -0.2**
MKAR Makanchi Array 41.05 308 P **P** **19 17 28.7 -0.5**
comp=Z,1.5nm,0.8s,mb3.7,baz=73,slow=15,SNR=11
MKAR LR LR 19 35 04.7
comp=Z,182nm,19.8s,MS3.9,baz=301,slow=37
TIXI Tiksi 41.61 359 *e*P **P** **19 17 33.0 -0.6**
TIXI pmax pmax
comp=Z,1.0nm,0.5s,mb3.7
TIXI Tiksi 41.61 359 *e*P **P** **19 17 33.0 -0.6**
comp=Z,1.2nm,0.5s,mb3.8
BILL Bilibino 43.19 18 *e*P **P** **19 17 40.6 -5.8**
BILL *e* 19 17 57.4
BILL pmax pmax
comp=Z,1.0nm,1.2s,mb3.4
BILL MLR MLR
comp=Z,200nm,18.0s,MS4.1
KURK Kurchatov 43.93 313 P **P** **19 17 52.4 -0.2**
comp=Z,0.8nm,0.3s,mb3.9,baz=110,slow=6.8,SNR=14
KURK LR LR 19 38 00.5
comp=Z,509nm,18.9s,MS4.5,baz=120,slow=39
KURK Kurchatov 43.93 313 *ce*P **P** **19 17 52.9 +0.3**
KURK pmax pmax
comp=Z,12nm,2.5s,mb4.2
KURK Kurchatov 43.93 313 *e*P **P** **19 17 52.3 -0.3**
comp=Z,1.7nm,0.4s,mb4.1
TKM2 Tokmak 2 45.69 302 *e*P **P** **19 18 07.4 +0.6**
TKM2 pmax pmax
comp=Z,20nm,1.3s,mb4.9
TKM2 Tokmak 2 45.69 302 *e*P **P** **19 18 07.3 +0.6**
comp=Z,20nm,1.3s,mb4.9
AAK Ala-Archa 46.52 302 LR LR 19 40 57.6
comp=Z,294nm,18.1s,MS4.3,baz=78,slow=40
AAK Ala-Archa 46.52 302 *ce*P **P** **19 18 13.6 +0.3**
AAK pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
UCH Uchtor 46.53 301 *e*P **P** **19 18 14.5 +1.1**
UCH pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
UCH Uchtor 46.53 301 *e*P **P** **19 18 14.4 +1.0**
comp=Z,10nm,0.9s,mb4.8
BVAR Borovoye Array 49.21 316 P **P** **19 18 33.6 -0.4**
comp=Z,1.2nm,0.3s,mb4.5,baz=90,slow=8.9,SNR=23
BRVK Borovoye 49.28 316 *ce*P **P** **19 18 34.4 -0.1**
BRVK pmax pmax
comp=Z,14nm,1.2s,mb4.9
BRVK Borovoye 49.28 316 *e*P **P** **19 18 33.7 -0.8**
comp=Z,11nm,0.9s,mb4.9
WRA Warramunga Arr 49.85 176 P **P** **19 18 38.5 -0.6**
comp=Z,5.2nm,1.2s,mb4.4,baz=355,slow=8.5,SNR=9.4
ASAR Alice Springs 53.53 177 P **P** **19 19 07.2 +0.7**
comp=Z,1.1nm,0.7s,mb3.9,baz=0.4,slow=6.7,SNR=15
ABKAR Akbulak array 55.96 312 *e*P **P** **19 19 23.5 -0.4**
comp=Z,0.8nm,0.4s,mb4.1
ARU Arti 56.02 320 P **P** **19 19 23.8 -0.5**
AKTO Aktyubinsk 57.03 313 LR LR 19 45 47.1
comp=Z,611nm,19.3s,MS4.7,baz=265,slow=38
STKA Stephens Creek 62.43 170 P **P** **19 20 08.3 -0.4**
comp=Z,1.9nm,0.8s,mb4.3,baz=224,slow=4.2,SNR=3.7
STKA Stephens Creek 62.43 170 *e*P **P** **19 20 08.8 +0.1**
INK Inuvik 64.31 24 *e*P **P** **19 20 22.1 +1.3**
SPITS Spitsbergen Ar 65.58 348 LR LR 19 50 55.1
comp=Z,130nm,18.5s,MS4.2,baz=30,slow=38
KEV Kevo 66.79 338 *e*P **P** **19 20 35.0 -1.8**
KEV pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
KEV Kevo 66.79 338 *ep* **P** **19 20 35.0 -1.8**
comp=Z,9.4nm,1.0s,mb4.8
KEV Kevo 66.79 338 *ep* **P** **19 20 35.0 -1.8**
comp=Z,9.4nm,1.0s,mb4.8
ARCES ARCESS Array B 67.36 338 P **P** **19 20 40.6 +0.2**
comp=Z,2.3nm,0.9s,mb4.2,baz=59,slow=6.9,SNR=8.4
ARCES LR LR 19 55 27.0
comp=Z,313nm,18.0s,MS4.6,baz=258,slow=41
JOF Joensuu 67.92 331 *ep* **P** **19 20 42.8 -1.3**
comp=Z,6.1nm,0.8s,mb4.7
JOF Joensuu 67.92 331 *ep* **P** **19 20 42.8 -1.3**
comp=Z,6.1nm,0.8s,mb4.7
ZEI Tsey 68.41 308 *e*P **P** **19 20 46.4 -1.1**
ZEI pmax pmax
comp=Z,11nm,1.2s,mb4.8
FINES FINESS Array B 70.78 331 P **P** **19 21 01.4 -0.3**
comp=Z,1.8nm,0.3s,mb4.5,baz=64,slow=5.7,SNR=32
FINES LR LR 19 55 23.0
comp=Z,276nm,19.0s,MS4.5,baz=334,slow=39
RES Resolute Bay 71.25 12 P **P** **19 21 04.8 +0.3**
comp=Z,2.6nm,1.0s,mb4.1,baz=300,slow=8.0,SNR=3.5
RES LR LR 19 57 24.2
comp=Z,75nm,18.8s,MS4.0,baz=94,slow=40
YKA Yellowknife Ar 73.92 26 P **P** **19 21 21.2 +0.8**
comp=Z,0.7nm,0.9s,mb3.6,baz=301,slow=5.3,SNR=5.5
YKA LR LR 19 57 56.3
comp=Z,5.7nm,19.6s,baz=70,slow=39
AKASG Malin Array Be 74.27 320 P **P** **19 21 21.6 -1.1**
comp=Z,0.9nm,0.6s,mb3.9,baz=47,slow=4.6,SNR=5.9
BR131 Keskin Array S 76.70 308 *e*P **P** **19 21 37.5 +0.7**
comp=Z,3.2nm,1.0s,mb4.2
BRTR Keskin Array B 76.70 308 P **P** **19 21 37.2 +0.4**
comp=Z,2.6nm,1.0s,mb4.1,baz=92,slow=3.7,SNR=11
BRTR LR LR 20 00 24.0
comp=Z,78nm,19.2s,MS4.0,baz=221,slow=40
BRTR Keskin Array B 76.70 308 P **P** **19 21 37.2 +0.4**
BRTR LR LR 20 00 24.0
NOA NORSAR Array B 76.97 334 LR LR 20 00 31.0
comp=Z,176nm,19.1s,MS4.4,baz=35,slow=40
GERES GERESS Array B 83.65 324 LR LR 20 05 41.5
comp=Z,254nm,19.0s,MS4.6,baz=50,slow=40
NVAR Mina Array Bea 85.97 48 P **P** **19 22 27.8 +1.8**
comp=Z,0.4nm,0.3s,mb4.1,baz=270,slow=4.5,SNR=2.9
KMBO Kilima Mbogo 93.95 271 LR LR 20 10 48.9
comp=Z,98nm,19.3s,MS4.3,baz=104,slow=39
KEST Kesra 94.68 316 LR LR 20 13 05.5
comp=Z,71nm,18.1s,MS4.2,baz=208,slow=40
ESDC Sonseca Array 99.02 327 LR LR 20 10 15.4
comp=Z,99nm,18.5s,MS4.3,baz=80,slow=37

IDC 10 19:14:53.0±3.5, 7°.11S×155°.66E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.4/16, mbtmp3.4/3, Error ellipse: s-maj=92.8km s-min=44.0km az=108.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.30**	**236**	P	P	19 20 12.5	+0.2
	0.3nm,0.4s,baz=59,slow=9.2,SNR=3.5						
ASAR	**Alice Springs**	**26.60**	**229**	P	P	19 20 33.0	-0.2
	0.5nm,0.9s,baz=58,slow=9.8,SNR=4.1						
CMAR	**Chiang Mai Arr**	**61.43**	**295**	P	P	19 25 12.1	+0.5
	0.8nm,0.7s,baz=124,slow=5.5,SNR=8.9						
TORD	**Torodi Ar. Bea**	**153.69**	**285**	PKPbc	PKPbc	19 34 54.4	-0.6
	0.3nm,0.7s,baz=84,slow=1.9,SNR=5.7						

IDC 10 19:28:07.1±27.0, 21°.12S×172°.74W, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.9/19, mbtmp4.1/4, Error ellipse: s-maj=496.3km s-min=163.0km az=75.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**38.33**	**264**	P	P	19 35 30.5	+0.6
	3.2nm,0.3s,baz=93,slow=13,SNR=8.7						
STKA	**Stephens Creek**	**41.99**	**245**	P	P	19 35 58.8	-1.3
	1.8nm,0.8s,baz=50,slow=6.4,SNR=3.6						
ASAR	**Alice Springs**	**49.17**	**256**	P	P	19 36 57.0	-0.1
	0.9nm,0.7s,baz=97,slow=6.9,SNR=10						
WRA	**Warramunga Arr**	**49.39**	**261**	P	P	19 36 59.1	+0.3
	0.6nm,0.3s,baz=95,slow=8.3,SNR=72						

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*ISCJB **10** 19:37:53.6±1.3, 40°.0N±0°.1×77°.18E±0°.08, h10km, mb3.6/2, Error ellipse: s-maj=15.2km s-min=8.4km az=12.7*
*IDC **10** 19:37:54.8±3.4, 40°.07N×76°.97E, h0km, mb3.7/2, mb1 3.8/8, mb1mx3.5/30, mbtmp3.7/8, ML3.3/6, Error ellipse: s-maj=42.3km s-min=25.8km az=165.0*
*NNC **10** 19:37:56.3±4.6, 40°.21N×76°.92E, h0km, mb4.0, mpv3.5, Error ellipse: s-maj=50.7km s-min=26.6km az=160.0*
*BJI **10** 19:37:57.0, 40°.39N×76°.89E, h21km, ML3.5/6*
*NEIC **10** 19:38:00.6±3.8, 40°.25N×77°.02E, h35km, Error ellipse: s-maj=49.1km s-min=15.7km az=165.0*
ISC 10 19:37:55.1±1.3, 40°.0N±0°.1×77°.21E±0°.08, h10km, n34, σ1°.34/40, mb3.6/2, 7C-3D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.07**	**243**	Pg	**Pg**	**19 38 25.4**	**+10**
KSH				Sg	**Sg**	**19 38 47.2**	**+18**
KSH				smax			
	comp=N,880nm,0.6s						
KSH				smax			
	comp=E,740nm,0.4s						
ULHL	**Ulahol**	**2.35**	**342**	P	**Pn**	**19 38 33.6**	**-0.3**
	SNR=43						
KZA	**Kyzart**	**2.54**	**325**	P	**Pn**	**19 38 36.6**	**+0.1**
	SNR=100						
UCH	**Uchtor**	**3.01**	**318**	P	**Pn**	**19 38 43.3**	**+0.4**
	SNR=39						
UCH	**Uchtor**	**3.01**	**318**	*e*Pn	**Pn**	**19 38 42.7**	**-0.1**
UCH				*e*		19 38 47.6	
UCH				*e*Sn	**Sn**	**19 39 18.2**	**-0.8**
KBK	**Karagaybulak**	**3.15**	**328**	P	**Pn**	**19 38 46.0**	**+1.3**
	SNR=92						
TKM2	**Tokmak 2**	**3.15**	**338**	P	**Pn**	**19 38 45.8**	**+0.9**
	SNR=65						
TKM2	**Tokmak 2**	**3.15**	**338**	*e*Pn	**Pn**	**19 38 45.6**	**+0.8**
TKM2				*e*Sn	**Sn**	**19 39 23.3**	**+0.8**
KNDC	**Almaty**	**3.21**	**357**	⇑Pn	**Pn**	**19 38 50.1**	**+4.5**
	comp=E,69nm,0.6s						
KNDC				⇓Lg		19 39 29.4	
	comp=E,448nm,0.5s						
AAK	**Ala-Archa**	**3.33**	**323**	P	**Pn**	**19 38 48.8**	**+1.6**
	SNR=38						
AAK	**Ala-Archa**	**3.33**	**323**	Pn	**Pn**	**19 38 48.7**	**+1.5**
	comp=E,0.3nm,0.3s,baz=125,slow=9.6,SNR=34						
AAK				Pg	**Pg**	**19 38 52.4**	**-6.4**
	comp=E,0.3nm,0.3s,baz=125,slow=10,SNR=51						
AAK				Lg		19 39 29.4	
	comp=E,0.4nm,0.3s,baz=358,slow=22,SNR=16						
AML	**Almayashu**	**3.40**	**310**	P	**Pn**	**19 38 49.2**	**+1.0**
	SNR=40						
AML	**Almayashu**	**3.40**	**310**	*e*Pn	**Pn**	**19 38 47.1**	**-1.1**
AML				*e*Sn	**Sn**	**19 39 28.9**	**+0.4**
CHMS	**Chumysh**	**3.51**	**329**	P	**Pn**	**19 38 50.4**	**+0.7**
	SNR=44						
EKS2	**Erkin-Say**	**3.70**	**317**	P	**Pn**	**19 38 53.7**	**+1.4**
	SNR=27						
EKS2	**Erkin-Say**	**3.70**	**317**	*e*Pn	**Pn**	**19 38 53.4**	**+1.0**
EKS2				*e*Sn	**Sn**	**19 39 35.5**	**-0.5**
USP	**Ospenovka**	**3.84**	**329**	P	**Pn**	**19 38 54.8**	**+0.5**
	SNR=12						
KK31	**Karatay Array**	**5.90**	**304**	Pn	**Pn**	**19 39 22.9**	**+0.4**
	comp=E,0.3nm,0.3s,baz=136,slow=12,SNR=6.2						
KK31				⇑Pg	**Pg**	**19 39 40.4**	**-7.7**
	comp=E,3.7nm,0.5s,baz=128,slow=16,SNR=15						
KK31				⇑Lg		19 40 48.4	
	comp=E,11nm,0.6s,baz=119,slow=28,SNR=6.9						
MK31	**Makanchi Array**	**7.73**	**27**	Pn	**Pn**	**19 39 50.1**	**+2.5**
	comp=E,1.7nm,0.8s,baz=195,slow=25,SNR=11						
MK31				Lg		19 41 54.2	
	comp=E,4.1nm,0.9s,baz=217,slow=21,SNR=5.1						
MK31	**Makanchi Array**	**7.73**	**27**	*e*Pn	**Pn**	**19 39 50.3**	**+2.7**
MKAR	**Makanchi Array**	**7.73**	**27**	Pn	**Pn**	**19 39 50.2**	**+2.6**
	comp=E,0.2nm,0.3s,baz=170,slow=15,SNR=10						
MKAR				Sn	**Sn**	**19 41 22.1**	**+7.0**
	comp=E,0.1nm,0.3s,baz=198,slow=22,SNR=2.6						
MKAR				Lg		19 41 54.3	
	comp=E,0.5nm,0.3s,baz=214,slow=24,SNR=7.4						
KURBB	**Kurchatov Arra**	**10.66**	**5**	⇓Lg		19 43 25.6	
	comp=E,3.6nm,1.1s						
KURK	**Kurchatov**	**10.76**	**5**	⇑Lg		19 43 30.4	
	comp=E,9.6nm,1.0s						
KURK	**Kurchatov**	**10.76**	**5**	Pn	**Pn**	**19 40 26.9**	**-2.2**
	comp=E,0.1nm,0.3s,baz=194,slow=12,SNR=6.6						
KURK				Lg		19 43 21.2	
	comp=E,0.1nm,0.3s,baz=192,slow=30,SNR=6.2						
VOSK	**Vostochnaya**	**13.42**	**343**	⇓Pn	**Pn**	**19 41 02.0**	**-3.5**
	comp=E,5.4nm,1.2s						
VOSK				⇑Lg		19 44 53.3	
	comp=E,13nm,1.6s						
BVAR	**Borovoye Array**	**13.83**	**343**	Pn	**Pn**	**19 41 08.4**	**-2.8**
	comp=E,0.2nm,0.3s,baz=148,slow=11,SNR=15						
BVAR				Lg		19 45 01.5	
	comp=E,0.2nm,0.3s,baz=139,slow=23,SNR=5.8						
ZRNK	**Zerenda**	**14.11**	**339**	⇑Pn	**Pn**	**19 41 11.8**	**-3.1**
	comp=E,3.2nm,0.9s						
ZRNK				⇑Lg		19 45 15.0	
	comp=E,5.5nm,1.1s						
ZAA0	**Zalesovo Array**	**14.87**	**18**	P	**Pn**	**19 41 24.3**	**-1.0**
ZALV	**Zalesovo Beam**	**14.87**	**18**	Pn	**Pn**	**19 41 24.3**	**-1.0**
	comp=E,0.2nm,0.3s,baz=218,slow=15,SNR=5.5						
ZALV	**Zalesovo Beam**	**14.87**	**18**	Pn	**Pn**	**19 41 24.3**	**-1.0**
AKTK	**Aktyubinsk**	**17.02**	**314**	Pn	**Pn**	**19 41 49.9**	**-3.2**
AKTO	**Aktyubinsk**	**17.02**	**314**	Pn	**Pn**	**19 41 49.9**	**-3.2**
	comp=E,0.1nm,0.3s,baz=118,slow=6.7,SNR=3.9						
ARCES	**ARCESS Array B**	**39.93**	**335**	P	**P**	**19 45 28.4**	**-0.6**
	comp=E,2.7nm,1.0s,mb3.9,baz=95,slow=10,SNR=3.7						
GERES	**GERESS Array B**	**45.00**	**303**	P	**P**	**19 46 10.1**	**-0.4**
	comp=E,0.3nm,0.5s,mb3.4,baz=64,slow=6.7,SNR=3.2						

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*IDC **10** 19:40:31.9±0.9, 32°.00N×104°.57E, h0km, mb3.9/9, mb1 3.9/12, mb1mx3.8/30, mbtmp3.8/12, ML3.4/2, MS2.5/1, Ms1 2.5/1, ms1mx2.0/39, Error ellipse: s-maj=34.3km s-min=16.5km az=54.0*
*ISCJB **10** 19:40:32.1±0.9, 32°.04N±0°.03×104°.63E±0°.04, h13km±6km, mb4.0/15, Error ellipse: s-maj=6.3km s-min=5.5km az=157.8*
*NEIC **10** 19:40:34.0±2.9, 31°.97N×104°.54E, h14km±19km, mb4.2/14, Error ellipse: s-maj=7.7km s-min=6.5km az=70.0*
*BJI **10** 19:40:34.1, 32°.07N×104°.73E, h15km, mB4.5/3, mb3.8/5, ML3.9/18, Ms3.7/7, Ms7 3.6/7*
ISC 10 19:40:32.3±0.8, 32°.04N±0°.03×104°.66E±0°.04, h1km±5km, n45, σ1°.31/59, mb4.0/15, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.36**	**214**	Pg	**Pg**	**19 40 59.8**	**+1.3**
CD2				Sg	**Sg**	**19 41 19.9**	**+3.7**
CD2				smax			
	comp=N,10μm,0.6s						
CD2				smax			
	comp=E,14μm,0.7s						
LZH	**Lanzhou**	**4.09**	**351**	⇑Pn	**Pn**	**19 41 38.8**	**+2.9**
LZH				Pg	**Pg**	**19 41 50.9**	**+0.1**
LZH				Sn	**Sn**	**19 42 28.9**	**+4.5**
LZH				Sg	**Sg**	**19 42 41.2**	**-2.6**
LZH				smax			
	comp=N,290nm,0.9s						
LZH				smax			
	comp=E,370nm,0.8s						
LZH				LR	LR		
	comp=E,1μm,5.7s						
LZH				LR	LR		
	comp=Z,2μm,9.3s						
XAN	**Xi'an**	**4.10**	**60**	Pn	**Pn**	**19 41 36.6**	**+0.5**
XAN				Pg	**Pg**	**19 41 48.1**	**-2.8**
XAN				Sn	**Sn**	**19 42 27.6**	**+3.0**
XAN				Sg	**Sg**	**19 42 39.7**	**-4.3**
XAN				smax			
	comp=N,360nm,0.7s						
XAN				smax			
	comp=E,120nm,0.9s						
ENH	**Enshi**	**4.50**	**112**	*e*Pn	**Pn**	**19 41 43.1**	**+1.5**
ENH				*e*Pb	**Pb**	**19 41 53.5**	**+1.4**
ENH				*e*Pg	**Pg**	**19 42 00.8**	**+2.2**
GYA	**Guiyang**	**5.83**	**162**	Pn	**Pn**	**19 42 01.1**	**+1.2**
GYA				Pg	**Pg**	**19 42 22.5**	**-1.6**
GYA				Sn	**Sn**	**19 43 07.2**	**-0.2**
GYA				Sg	**Sg**	**19 43 38.3**	**-1.4**
GYA				smax			
	comp=N,160nm,0.9s						
GYA				smax			
	comp=E,160nm,0.9s						
GTA	**Gaotai**	**8.34**	**333**	*e*P	**Pn**	**19 42 35.2**	**+0.9**
GTA				pP		19 42 38.5	
GTA				sP		19 42 41.4	
GTA				S	**Sn**	**19 44 10.1**	**+1.1**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GTA				LR	LR		
	comp=N,350nm,9.8s						
GTA				LR	LR		
	comp=E,150nm,13.1s						
GTA				LR	LR		
	comp=Z,230nm,9.8s						
WHN	**Wuhan**	**8.43**	**98**	*e*P	**Pn**	**19 42 39.5**	**+4.0**
WHN				S	**Sn**	**19 44 03.8**	**-7.5**
WHN				LR	LR		
	comp=N,530nm,10.7s						
WHN				LR	LR		
	comp=E,590nm,10.8s						
WHN				LR	LR		
	comp=Z,710nm,7.4s						
LSA	**Lhasa**	**11.84**	**262**	*e*Pn	**Pn**	**19 43 24.1**	**+1.9**
	comp=Z,2.4nm,0.6s						
CHTO	**Chiang Mai**	**14.14**	**203**	Pn	**Pn**	**19 43 51.2**	**-2.6**
CM31	**Chiang Mai Arr**	**14.47**	**202**	P	**Pn**	**19 43 52.9**	**-5.4**
CMAR	**Chiang Mai Arr**	**14.47**	**202**	Pn	**Pn**	**19 43 57.7**	**-0.6**
	comp=Z,0.0nm,0.3s,baz=8,2,slow=10,SNR=3.8						
TAPN	**Taplejung**	**15.45**	**257**	*e*P	**Pn**	**19 44 15.1**	**+3.7**
	comp=Z,13nm,0.7s						
SONM	**Songino Array**	**15.83**	**4**	Pn	**Pn**	**19 44 17.4**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=186,slow=12,SNR=2.1						
ODAN	**Odare**	**15.90**	**255**	*e*P	**Pn**	**19 44 16.2**	**-1.1**
	comp=Z,13nm,0.8s						
ULN	**Ulaanbaatar**	**15.91**	**6**	*e*P	**Pn**	**19 44 18.9**	**+1.6**
	comp=Z,1.7nm,0.7s						
GUN	**Gumba**	**16.78**	**261**	*e*P	**Pn**	**19 44 31.1**	**+2.5**
	comp=Z,44nm,1.2s						
PKI	**Pulchoki**	**17.29**	**260**	*e*P	**Pn**	**19 44 33.9**	**-1.0**
	comp=Z,12nm,0.7s						
PKIN	**Phulchoki**	**17.29**	**260**	*e*P	**Pn**	**19 44 33.9**	**-1.1**
	comp=Z,20nm,0.7s						
KKN	**Kakani**	**17.32**	**261**	*e*P	**Pn**	**19 44 35.8**	**+0.4**
	comp=Z,13nm,0.8s						
DMN	**Daman**	**17.53**	**260**	*e*P	**Pn**	**19 44 36.7**	**-1.2**

comp=Z,16nm,0.9s
KSRS **Korea Array** 19.85 68 P Pn 19 45 04.7 -1.4
comp=Z,0.1nm,0.3s,baz=257,slow=10,SNR=11
KSRS LR LR 19 53 37.9
comp=Z,13nm,18.0s,baz=200,slow=40
MK31 **Makanchi Array** 22.60 317 *eP* P 19 45 32.2 -1.9
MKAR **Makanchi Array** 22.60 317 P P 19 45 34.1 0.0
comp=Z,1.9nm,0.9s,mb3.5,baz=96,slow=12,SNR=9.8
UCH **Uchtor** 25.97 302 *eP* P 19 46 07.8 +1.4
comp=Z,4.3nm,1.2s,mb3.9
ZAA0 **Zalesovo Array** 26.09 333 *eP* P 19 46 07.3 0.0
ZALV **Zalesovo Beam** 26.09 333 P P 19 46 07.7 +0.4
comp=Z,4.2nm,0.7s,mb4.1,baz=134,slow=10.0,SNR=18
KURK **Kurchatov** 26.79 322 P P 19 46 14.1 +0.5
comp=Z,1.7nm,1.0s,mb3.5,baz=131,slow=8.7,SNR=4.4
KURK **Kurchatov** 26.79 322 *eP* P 19 46 12.0 -1.7
comp=Z,1.8nm,0.7s,mb3.7
KBL **Kabul** 29.78 285 P P 19 46 40.0 -0.6
comp=Z,3.6nm,0.9s,mb4.1
AKTK **Aktyubinsk** 38.85 312 P P 19 47 58.3 -0.5
AKTO **Aktyubinsk** 38.85 312 P P 19 47 58.3 -0.5
comp=Z,1.0nm,0.7s,mb3.7,baz=90,slow=12,SNR=3.2
ARU **Arti** 39.99 321 *eP* P 19 48 08.1 -0.2
comp=Z,4.0nm,0.9s,mb4.2
GNI **Garni** 48.29 297 P P 19 49 13.3 -1.7
ARCES **ARCESS Array B** 56.60 336 P P 19 50 15.8 -0.5
comp=Z,2.9nm,0.9s,mb4.3,baz=81,slow=7.7,SNR=5.6
AKASG **Malin Array Be** 57.09 313 P P 19 50 18.5 -1.5
comp=Z,0.4nm,0.3s,mb3.9,baz=68,slow=7.0,SNR=3.5
AKASG **Malin Array Be** 57.09 313 P P 19 50 18.5 -1.5
WRAB **Tennant Creek** 58.99 147 *eP* P 19 50 32.5 -1.1
comp=Z,3.9nm,0.8s,mb4.5
WRA **Warramunga Arr** 58.99 147 P P 19 50 33.6 0.0
comp=Z,1.3nm,0.6s,mb4.1,baz=339,slow=7.8,SNR=11
ASAR **Alice Springs** 62.05 150 P P 19 50 54.7 +0.2
comp=Z,0.5nm,0.5s,mb3.9,baz=335,slow=6.8,SNR=4.5
GERES **GERESS Array B** 67.23 314 P P 19 51 27.5 -0.6
comp=Z,0.3nm,0.5s,mb3.5,baz=74,slow=5.7,SNR=4.1
LPG **La Plagne** 72.95 313 *eP* P 19 52 03.9 +0.6
comp=Z,6.2nm,0.5s,mb4.5
LPG **La Plagne** 72.95 313 *eP* P 19 52 03.9 +0.6
comp=Z,3.1nm,0.5s,mb4.5
LPL **La Plagne** 72.96 313 *eP* P 19 52 03.8 +0.5
comp=Z,8.3nm,0.6s,mb4.6
LPL **La Plagne** 72.96 313 *eP* P 19 52 03.8 +0.5
comp=Z,4.2nm,0.6s,mb4.5
AVF **Avril sur Loir** 74.38 316 *eP* P 19 52 12.1 +0.4

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*IDC **10** 19:42:04.1±1.4, 5.°24N×126.°32E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.7/23, mbtmp3.9/7, MS3.2/1, Ms1 3.2/1, ms1mx2.4/27, Error ellipse: s-maj=126.2km s-min=17.7km az=71.0*
*NEIC **10** 19:42:05.4±0.6, 5.°22N×126.°30E, h10km, mb4.0/2, Error ellipse: s-maj=28.3km s-min=8.1km az=69.0*
*MAN **10** 19:42:10, 5.°39N×126.°42E, h6km, mb4.8, ML3.7, MS3.7*
*ISCJB **10** 19:42:10.9±0.8, 5.°19N±0.°04×126.°31E±0.°09, h70km±9km, mb3.7/9, Error ellipse: s-maj=14.8km s-min=7.3km az=178.2*

ISC 10 19:42:12.0±0.8, 5.°20N±0.°04×126.°34E±0.°09, h64km±9km, n23, σ1§14/25, mb3.8/9, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	1.64	302⇑	*eP*	Pn	19 42 36.2	-2.5
MATI	**Mati**	1.73	357	*eP*	Pn	19 42 40.1	+0.2
MATI				*eS*	Sn	19 42 59.4	-1.8
DAV	**Davao City (W)**	2.00	338	Pn	Pn	19 42 42.6	-1.1
	38nm,0.3s,baz=47,slow=15,SNR=4.1						
DAV	**Davao City (W)**	2.00	338	*ePn*	Pn	19 42 38.7	-4.9
KCP	**Kidapawan**	2.18	325⇓	*eP*	Pn	19 42 52.0	+5.9
KCP				*i* S	Sn	19 42 56.7	-15
BUKP	**Musuan**	2.95	335	*eP*	Pn	19 42 56.6	+0.1
BUKP				*eS*	Sn	19 43 32.4	+1.8
PAGZ	**Pagadian**	3.94	312	*eP*	Pn	19 43 11.7	+1.7
TNTI	**Ternate**	4.52	167	P	Pn	19 43 18.7	+0.7
MRSI	**Marisa**	6.43	223	P	Pn	19 43 46.2	+2.1
	548nm44nm,0.6s						
MRSI				S	Sn	19 44 55.1	-1.1
	548nm44nm,0.6s						
LUWI	**Luwuk**	7.16	210	P	Pn	19 43 58.4	+4.3
APSI	**Ampana**	7.67	218	P	Pn	19 44 07.7	+6.6
	55nm,1.4s						
GUMO	**Guam**	20.07	64	LR	LR	19 52 44.7	
	comp=Z,66nm,19.2s,baz=167,slow=32						
FITZ	**Fitzroy Crossi**	23.17	182	P	P	19 47 12.7	-0.5
	5.8nm,1.2s,mb3.9,baz=12,slow=9.3,SNR=6.3						
KULM	**Kulim**	25.58	271	P	P	19 47 34.4	-1.1
WRAB	**Tennant Creek**	26.19	163	*eP*	P	19 47 41.4	+0.6
	12nm,1.0s,mb4.4						
WRA	**Warramunga Arr**	26.20	163	P	P	19 47 40.9	+0.1
	3.9nm,0.9s,mb3.9,baz=338,slow=10,SNR=14						
ASAR	**Alice Springs**	29.63	166	P	P	19 48 11.8	+0.3
	0.4nm,0.5s,mb3.4,baz=346,slow=7.2,SNR=5.2						
STKA	**Stephens Creek**	39.63	159	*eP*	P	19 49 35.9	-1.8
	0.9nm,0.8s,mb3.5						
MKAR	**Makanchi Array**	56.13	325	P	P	19 51 45.2	+0.3
	0.5nm,0.6s,mb3.7,baz=108,slow=8.6,SNR=4.7						
KURK	**Kurchatov**	60.30	327	P	P	19 52 13.8	-0.2
	0.3nm,0.5s,mb3.6,baz=127,slow=5.8,SNR=3.5						
BVAR	**Borovoye Array**	65.88	327	P	P	19 52 51.2	+0.2
	0.4nm,0.3s,mb3.9,baz=117,slow=8.6,SNR=3.0						
ARCES	**ARCESS Array B**	88.94	340	P	P	19 55 00.2	+0.9
	0.9nm,0.7s,mb4.2,baz=82,slow=6.8,SNR=3.5						
TORD	**Torodi Ar. Bea**	122.09	289	PKP	PKPdf	20 01 02.2	+1.8
	0.3nm,0.7s,baz=62,slow=2.8,SNR=2.9						

MAN 10 19:46:41, 5.°06N×126.°47E, h61km, mb5.0, ML3.9, MS4.0, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	1.82	304⇑	*eP*	Pn	19 47 09.2	-0.9
MATI	**Mati**	1.88	354	*eP*	Pn	19 47 12.7	+1.8
MATI				*eS*	Sn	19 47 35.5	+1.9
KCP	**Kidapawan**	2.37	325⇓	*eP*	Pn	19 47 26.4	+8.9
KCP				*i* S	Sn	19 47 55.6	+10
BUKP	**Musuan**	3.13	334	*eP*	Pn	19 47 29.4	+1.5
PAGZ	**Pagadian**	4.13	312	*eP*	Pn	19 47 44.1	+2.5

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*IDC **10** 19:46:51.5±1.9, 0.°34N×126.°47E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.5/19, mbtmp3.7/3, Error ellipse: s-maj=169.7km s-min=25.4km az=65.0*
*ISCJB **10** 19:46:55.0±0.8, 0.°09S±0.°08×126.°09E±0.°09, h33km, mb3.6/3, Error ellipse: s-maj=14.3km s-min=9.0km az=146.6*
*DJA **10** 19:46:56, 0.°20S×126.°06E, h142km, MLv3.9/9*

ISC 10 19:46:57.0±0.8, 0.°10S±0.°07×126.°08E±0.°09, h35km, n12, σ1§36/12, mb3.6/3, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	1.54	56	P	Pn	19 47 29.4	+7.4
MNI	**Manado**	1.97	321	P	Pn	19 47 28.6	+0.7
NLAI	**Namlea**	3.28	162	P	Pn	19 47 44.8	-1.2
LUWI	**Luwuk**	3.44	254	P	Pn	19 47 50.3	+2.1
AAI	**Ambon**	4.14	149	P	Pn	19 47 56.5	-1.3
MRSI	**Marisa**	4.18	278	P	Pn	19 47 57.2	-1.1
APSI	**Ampana**	4.51	260	P	Pn	19 48 02.9	+0.1
KDI	**Kendari**	5.17	222	P	Pn	19 48 10.6	-1.3
	0.1nm16nm,1.4s						
DAV	**Davao City (W)**	7.14	356	P	Pn	19 48 38.8	-0.2
WRA	**Warramunga Arr**	21.32	158	P	P	19 51 43.0	+2.0
	1.5nm,0.7s,mb3.4,baz=338,slow=11,SNR=3.4						
ASAR	**Alice Springs**	24.63	163	P	P	19 52 16.8	+2.5
	0.8nm,0.6s,mb3.5,baz=343,slow=7.6,SNR=6.2						
MKAR	**Makanchi Array**	60.35	327	P	P	19 57 01.4	-1.1
	0.5nm,0.4s,mb3.9,baz=110,slow=8.5,SNR=8.0						

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*KRSC **10** 19:47:05.6±1.0, 51.°59N×159.°72E, h10km±10km, ML4.2*
*MOS **10** 19:47:05.9±3.3, 51.°55N×159.°77E, h14km, mb4.4/1, Error ellipse: s-maj=20.4km s-min=9.5km az=96.1*
*ISCJB **10** 19:47:05.9±1.0, 51.°42N±0.°06×159.°82E±0.°08, h64km±8km, mb3.8/8, Error ellipse: s-maj=10.8km s-min=6.9km az=152.0*
*IDC **10** 19:47:09.3±3.0, 51.°66N×160.°08E, h76km±21km, mb3.4/7, mb1 3.6/9, mb1mx3.3/29, mbtmp3.5/9, Error ellipse: s-maj=38.7km s-min=14.0km az=14.0*
*NEIC **10** 19:47:10.6±1.4, 51.°94N×159.°94E, h77km±9km, mb4.1/2, Error ellipse: s-maj=27.7km s-min=9.3km az=187.0*

ISC 10 19:47:07.2±0.9, 51.°43N±0.°06×159.°82E±0.°07, h57km±8km, n32, σ1§32/43, mb3.8/8, 1C, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	**Gorelyy**	1.56	317	*eP*	Pn	19 47 31.4	-1.1
GRL				*eS*	Sn	19 47 50.2	-1.5
SPN	**Mys Shipunski**	1.68	4	S	Sn	19 47 53.6	-1.0
PET	**Petropavlovsk**	1.75	336⇑	*i*PN	Pn	19 47 33.9	-1.3
PET				*eS*	Sn	19 47 55.1	-1.3
PET				pmax	pmax		
	comp=Z,139nm,0.5s						
PET				smax			
	comp=E,510nm,0.6s						
PET				smax			
	comp=N,1μm,0.7s						
PET	**Petropavlovsk**	1.75	336	P	Pn	19 47 34.4	-0.8
PET				*eS*	Sn	19 47 55.5	-0.9
PET	**Petropavlovsk**	1.75	336	*ePn*	Pn	19 47 33.4	-1.8
AVH	**Avacha**	1.96	341	*eP*	Pn	19 47 38.0	+0.1
AVH				S	Sn	19 48 01.8	+0.5
MIPR	**Malaya Ipel'ka**	2.08	295	*eP*	Pn	19 47 39.0	-0.6
MIPR				*eS*	Sn	19 48 03.1	-1.3
PEA0B	**Petropavlovsk-**	2.13	323	*ePn*	Pn	19 47 39.7	-0.6
PEA0B				*eSn*	Sn	19 48 09.0	+3.5
PETK	**Petropavlovsk-**	2.13	323	P	Pn	19 47 40.1	-0.1
	comp=N,27nm,0.3s,baz=98,slow=31,SNR=76						
PETK				S	Sn	19 48 07.7	+2.1
	comp=N,24nm,0.3s,baz=56,slow=18,SNR=7.3						
SKR	**Severo-Kuril's**	2.45	254	*ePn*	Pn	19 47 45.4	+0.7
SKR				pmax	pmax		
	comp=Z,130nm,1.0s						
GNL	**Ganaly**	2.55	334	*eP*	Pn	19 47 46.2	+0.3
GNL				*eS*	Sn	19 48 16.2	+0.5
ALID	**Alaid**	2.75	260	S	Sn	19 48 19.7	-0.9
MKZ	**Mys Kozlova**	3.34	19	*eP*	Pn	19 47 56.4	-0.4
MKZ				*eS*	Sn	19 48 33.1	-2.1
KMNR	**Kamenistaya**	4.35	3	P	Pn	19 48 12.7	+2.2
BZGR	**Bezymyannyi-Gr**	4.55	6	P	Pn	19 48 13.9	+0.5
KPT	**Kopyto**	4.56	3	P	Pn	19 48 15.5	+2.1
ZLN	**Zelenaya**	4.64	7	P	Pn	19 48 16.4	+1.9
SRDR	**Sredinnyy**	4.90	359	P	Pn	19 48 19.8	+1.6
SRKR	**Sorokina**	5.30	8	P	Pn	19 48 25.6	+2.0
FX1	**Attu Island--F**	8.34	75	P	Pn	19 49 06.1	+1.0
	comp=Z,4.5nm,0.3s,baz=235,slow=4.7,SNR=36						
FX1				S	Sn	19 50 33.9	-3.8
	comp=Z,2.1nm,0.3s,baz=183,slow=22,SNR=13						
FX1	**Attu Island--F**	8.34	75	P	Pn	19 49 06.1	+1.0
FX1				S	Sn	19 50 33.9	-3.8
YAK	**Yakutsk**	19.45	315	*eP*	Pn	19 51 27.0	-3.4
YAK				pmax	pmax		
	comp=Z,11nm,0.8s						
YAK	**Yakutsk**	19.45	315	*eP*	Pn	19 51 27.0	-3.4
	comp=Z,11nm,0.8s						
TRF	**Thorofare Moun**	28.62	46	*eP*	P	19 52 55.4	-2.2
	comp=Z,4.0nm,1.1s,mb4.1						
KURK	**Kurchatov**	48.49	303	P	P	19 55 43.7	0.0
	comp=Z,0.6nm,0.7s,mb3.8,baz=64,slow=7.9,SNR=4.6						
MKAR	**Makanchi Array**	48.74	297	P	P	19 55 45.4	-0.3
	comp=Z,0.1nm,0.5s,mb3.1,baz=48,slow=8.6,SNR=3.7						
BVAR	**Borovoye Array**	51.31	309	P	P	19 56 04.5	-0.6
	comp=Z,0.9nm,0.5s,mb4.0,baz=75,slow=8.0,SNR=5.4						
CMAR	**Chiang Mai Arr**	57.68	259	P	P	19 56 54.0	+2.3
	comp=Z,0.7nm,0.5s,mb3.9,baz=42,slow=6.7,SNR=4.9						
NOA	**NORSAR Array B**	65.10	344	P	P	19 57 39.4	-1.8
	comp=Z,0.7nm,0.8s,mb3.7,baz=22,slow=6.7,SNR=2.2						
AKASG	**Malin Array Be**	69.96	329	P	P	19 58 13.2	+1.2
	comp=Z,0.9nm,0.4s,mb4.0,baz=33,slow=6.9,SNR=5.0						
AKASG	**Malin Array Be**	69.96	329	*eP*	P	19 58 12.8	+0.8
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BRTR	**Keskin Array B**	77.80	320	P	P	19 58 59.0	+1.0
	comp=Z,0.5nm,0.7s,mb3.6,baz=60,slow=6.8,SNR=3.7						

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*JMA **10** 19:57:36.3±0.2, 22.°90N×123.°05E, h63km, M2.4*

TAP 10 19:57:35.6, 22.°91N×122.°96E, h100km±2km, ML3.3, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	1.38	34	P	Pn	19 57 59.3	-1.1
HATJ				S	Sn	19 58 16.0	-3.1
YOJ	**Yonaguni jima**	1.54	2	P	Pn	19 58 02.2	-0.2
YOJ				*eS*	Sn	19 58 21.5	-1.2
LAY	**Lan-yu**	1.56	236	*eP*	Pn	19 58 01.6	-1.0
	baz=236						
LAY				*eS*	Sn	19 58 20.1	-3.0
	baz=236						
IRIF	**Iriomote-Funau**	1.58	27	P	Pn	19 58 02.3	-0.6
IRIF				S	Sn	19 58 21.6	-2.0
TWF1	**Yuli**	1.59	286	P	Pn	19 58 02.3	-0.6
	baz=283						
TWF1				*eS*	Sn	19 58 21.5	-2.2
	baz=283						
EHY	**Hungye**	1.61	292	*eP*	Pn	19 58 03.1	-0.2
	baz=292						
JKRS	**Kuro-shima**	1.64	36	P	Pn	19 58 03.0	-0.5
JKRS				S	Sn	19 58 22.8	-1.9
TWD	**Chiawan**	1.71	313	*eP*	Pn	19 58 04.8	+0.3
	baz=308						
TWG	**Pinlang**	1.74	267	P	Pn	19 58 05.0	+0.2
	baz=264						
TWG				S	Sn	19 58 26.2	-0.8
	baz=264						
ELDTW	**Lidau**	1.81	279	*eP*	Pn	19 58 05.2	-0.5
	baz=284						
ELDTW				*eS*	Sn	19 58 27.4	-1.2
	baz=284						
JIJ	**Ishigaki jima**	1.81	37	P	Pn	19 58 04.8	-0.9
JIJ				S	Sn	19 58 26.0	-2.6
ECL	**Taimali**	1.87	261	P	Pn	19 58 06.2	-0.3
	baz=266						
ECL				*eS*	Sn	19 58 28.5	-1.7
	baz=266						
ENA	**Nanau**	1.87	324	*eP*	Pn	19 58 07.8	+1.2
	baz=319						
ENA				*eS*	Sn	19 58 30.6	+0.4
	baz=319						
YUS	**Yu-Shan**	1.93	288	*eP*	Pn	19 58 08.2	+0.9
	baz=287						
WHF	**Hehuan Shan**	1.98	309	*eP*	Pn	19 58 08.9	+1.0
	baz=308						
EAST	**Anshuo**	2.02	255	P	Pn	19 58 09.1	+0.7
	baz=259						
EAST				*eS*	Sn	19 58 32.2	-1.2
	baz=259						
ALS	**Alishan**	2.06	287	*eP*	Pn	19 58 10.1	+1.1
	baz=287						
ALS				*eS*	Sn	19 58 35.2	+0.7
	baz=287						
SMLT	**Sun Moon Lake**	2.12	297	*eP*	Pn	19 58 11.4	+1.7
	baz=299						
ENTT	**Nioudou**	2.14	324	*eP*	Pn	19 58 11.7	+1.7
	baz=323						
SSD	**Sandimen**	2.15	266	*eP*	Pn	19 58 11.2	+1.0
	baz=264						
TWE	**Neicheng**	2.15	327	*eP*	Pn	19 58 10.3	+0.1
	baz=327						
TYC	**Yuchr**	2.17	298	*eP*	Pn	19 58 12.1	+1.8
	baz=301						
TYC				*eS*	Sn	19 58 37.7	+0.8
	baz=301						
CHN5	**Tsauling**	2.20	288	P	Pn	19 58 12.7	+1.9
	baz=287						
CHN5				*eS*	Sn	19 58 40.4	+2.7
	baz=287						
TWK1	**Hengchun**	2.21	245	*eP*	Pn	19 58 10.9	0.0
	baz=244						
SCZT	**Fangliau**	2.22	256	*eP*	Pn	19 58 12.8	+1.7
	baz=257						
HEN	**Hengchun**	2.24	247	*eP*	Pn	19 58 12.0	+0.7
	baz=242						
HEN				*eS*	Sn	19 58 38.2	-0.5
	baz=242						
CHN1	**Nanshi**	2.25	277	*eP*	Pn	19 58 14.3	+2.9
	baz=277						
CHN1				*eS*	Sn	19 58 42.3	+3.4
	baz=277						
NSK	**Sanguang**	2.29	321	*eP*	Pn	19 58 13.5	+1.6
	baz=326						
TWK	**Hsinying**	2.30	279	*eP*	Pn	19 58 14.4	+2.3
	baz=279						
TWK				*eS*	Sn	19 58 42.8	+2.8
	baz=279						
JTJ	**Tarama**	2.35	43	P	Pn	19 58 12.5	-0.2
JTJ				S	Sn	19 58 41.2	0.0
TWQ1	**Liyutan**	2.46	306	*eP*	Pn	19 58 16.5	+2.3
	baz=305						
NSTT	**Nanjuang**	2.48	314	*eP*	Pn	19 58 16.6	+2.2
	baz=323						

ISC 10 19:58:23.2±1.6, 36.°4N±0.°1×71.°1E±0.°2, h150km, n9, σ0§37/12, 1C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	5.47	134	*ePKP*	Pn	19 59 43.0	+0.2
THN				*eS*	Sn	20 00 41.0	-3.9
AML	**Almayashu**	6.11	18	P	Pn	19 59 51.1	-0.1
	SNR=10						
UCH	**Uchtor**	6.43	23	P	Pn	19 59 55.1	-0.4
	SNR=7.6						
EKS2	**Erkin-Say**	6.62	17	P	Pn	19 59 58.2	+0.1
	SNR=7.5						
KK31	**Karatay Array**	6.75	356	Pn	Pn	19 59 59.6	-0.1
	2.5nm,0.5s,baz=178,slow=13,SNR=24						
KK31				⇑Sn	Sn	20 01 10.8	-4.7
	2.9nm,0.6s,baz=176,slow=23,SNR=7.0						
AAK	**Ala-Archa**	6.79	22	P	Pn	20 00 00.6	+0.2
	SNR=7.7						
USP	**Ospenovka**	7.38	20	P	Pn	20 00 08.3	+0.1
	SNR=5.5						
TKM2	**Tokmak 2**	7.41	27	P	Pn	20 00 08.7	+0.1
	SNR=7.2						
AB31	**Akbulak array**	15.25	331	Pn	Pn	20 01 50.4	0.0
	0.4nm,0.6s						
AB31				⇓Sn	Sn	20 04 30.7	-9.1
	0.2nm,0.3s,baz=151,slow=23,SNR=3.3						

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*NEIC **10** 20:02:12.9±7.3, 10.°37S×115.°70E, h9km±47km, mb4.2/6, Error ellipse: s-maj=24.4km s-min=10.1km az=67.0*
*IDC **10** 20:02:12.2±1.2, 10.°22S×115.°74E, h0km, mb3.9/8, mb1 4.2/10, mb1mx4.0/22, mbtmp4.0/10, ML4.1/2, Error ellipse: s-maj=51.7km s-min=16.1km az=51.0*
*ISCJB **10** 20:02:16.6±0.6, 10.°38S±0.°06×116.°02E±0.°05, h60km±7km, mb4.0/10, Error ellipse: s-maj=11.3km s-min=6.2km az=40.8*
*DJA **10** 20:02:18, 10.°30S×116.°03E, h50km, MLv4.5/9*

ISC 10 20:02:18.0±0.5, 10.°36S±0.°05×116.°04E±0.°05, h54km±6km, n44, σ1§05/56, mb4.0/10, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGBI	**Denpasar**	1.77	330	P	Pn	20 02 45.2	-1.1
IGBI				S	Sn	20 03 05.3	-2.3
DNP	**Denpasar**	1.86	334	P	Pn	20 02 47.0	-0.6
SRBI	**Singaraja**	2.40	340	P	Pn	20 02 55.3	+0.3
NBBI	**Negara**	2.42	325	P	Pn	20 02 55.5	+0.3
BYJI	**Banyuwangi**	2.70	322	P	Pn	20 03 00.3	+1.2
ABJI	**Asem Bagus**	3.11	325	P	Pn	20 03 06.4	+1.8
GMJI	**Gumukmas**	3.30	309	P	Pn	20 03 06.5	-0.7
KMMI	**Kalianget**	3.88	328	P	Pn	20 03 16.0	+0.9
WSI	**Waingapu**	4.25	81	P	Pn	20 03 19.5	-0.8
PWJI	**Pagerwojo**	4.78	299	P	Pn	20 03 27.9	+0.3
PCJI	**Pacitan**	5.26	294	P	Pn	20 03 33.7	-0.4
MMRI	**Maumere**	6.35	75	P	Pn	20 03 49.5	+0.4
	0.3nm1μm83nm,1.2s						
KAPI	**Kappang**	6.46	35	Pn	Pn	20 03 50.0	-0.6
	6.3nm,0.3s,baz=215,slow=6.5,SNR=37						
KAPI				Sn	Sn	20 04 58.5	-4.5
	4.7nm,0.3s,baz=62,slow=23,SNR=15						
KAPI	**Kappang**	6.46	35	P	Pn	20 03 50.7	+0.1
	0.1nm10.0nm,1.5s						
BNSI	**Bone**	7.16	35	P	Pn	20 04 03.1	+2.9
CGJI	**Cibinong**	10.89	289	P	Pn	20 04 50.3	-1.0
MBWA	**Marble Bar**	11.31	162	*eP*	Pn	20 04 55.6	-1.4
MBWA				*eS*	Sn	20 06 51.9	-10
MBWA	**Marble Bar**	11.31	162	*ePn*	Pn	20 04 55.6	-1.3
	20nm,0.3s						
MBWA				*eSn*	Sn	20 06 50.9	-11
MBWA	**Marble Bar**	11.31	162	P	Pn	20 04 56.3	-0.7
	26nm,1.5s						
FITZ	**Fitzroy Crossi**	12.07	131	*eP*	Pn	20 05 08.0	+0.6
	9.1nm,0.7s						
FITZ				*eS*	Sn	20 07 13.0	-7.5
FITZ	**Fitzroy Crossi**	12.07	131	Pn	Pn	20 05 07.8	+0.4
	0.5nm,0.3s,baz=318,slow=9.7,SNR=19						
FITZ				Sn	Sn	20 07 15.8	-4.7
	1.0nm,0.3s,baz=190,slow=19,SNR=6.4						
FITZ	**Fitzroy Crossi**	12.07	131	*ePn*	Pn	20 05 07.5	+0.1
FITZ				*eSn*	Sn	20 07 10.9	-10
FITZ				Sn	Sn	20 07 15.8	-4.7
FITZ	**Fitzroy Crossi**	12.07	131	P	Pn	20 05 08.6	+1.2
KNA	**Kununurra**	13.50	115	*eP*	Pn	20 05 26.1	-0.9
	1.6nm,0.2s						
KNA				*eS*	Sn	20 07 49.9	-5.6
MEEK	**Meekatharra**	16.37	172	*eP*	Pn	20 06 04.6	+0.3
MEEK				*eS*	S	20 08 52.4	-23
MORW	**Morawa**	18.61	180	*eP*	Pn	20 06 33.9	+2.1
MORW				*eS*	S	20 09 46.3	-14
WRA	**Warramunga Arr**	20.05	121	P	P	20 06 50.7	+3.9
	3.4nm,0.5s,baz=297,slow=12,SNR=39						
WRA				S	S	20 10 26.5	-2.9
	0.4nm,0.6s,baz=292,slow=25,SNR=4.6						
WRA	**Warramunga Arr**	20.05	121	P	P	20 06 50.7	+3.9
WRA				S	S	20 10 26.5	-2.9
WRAB	**Tennant Creek**	20.05	120	*eP*	P	20 06 50.3	+3.4
	6.0nm,0.9s						
ASAR	**Alice Springs**	21.57	130	P	P	20 07 07.3	+4.0
	3.3nm,0.5s,mb4.0,baz=304,slow=8.6,SNR=80						
STKA	**Stephens Creek**	31.89	136	P	P	20 08 42.9	+4.6
	1.3nm,0.5s,mb4.0,baz=316,slow=9.2,SNR=4.7						
STKA	**Stephens Creek**	31.89	136	*eP*	P	20 08 42.0	+3.7
	1.1nm,0.9s,mb3.7						
CM31	**Chiang Mai Arr**	33.23	329	P	P	20 08 50.8	+0.6
CMAR	**Chiang Mai Arr**	33.23	329	P	P	20 08 50.3	+0.1
	1.0nm,0.6s,mb4.0,baz=164,slow=7.3,SNR=13						
CHTO	**Chiang Mai**	33.54	330	*eP*	P	20 08 52.8	0.0
	1.1nm,0.7s,mb3.9						
LSA	**Lhasa**	46.49	330	*eP*	P	20 10 40.9	+0.9
SONM	**Songino Array**	58.56	352	P	P	20 12 09.5	+0.5

TORD	Torodi Ar. Bea	73.13	30	P		P	20 19 01.8	+0.6
	1.7nm,0.4s,mb4.2,baz=199,slow=6.4,SNR=28							
ASAR	Alice Springs	99.12	163	P		P	20 21 10.2	-1.3
	0.8nm,0.9s,mb4.3,baz=175,slow=4.3,SNR=7.8							
FINES	FINESS Array B	124.45	28	PKP	PKPdf		20 26 26.3	-1.0
	1.5nm,0.6s,baz=198,slow=1.8,SNR=10							
CMAR	Chiang Mai Arr	125.33	111	PKP	PKPdf		20 26 29.3	-1.1
	0.8nm,0.9s,baz=260,slow=3.3,SNR=5.5							
ARCES	ARCESS Array B	130.98	22	PKP	PKPdf		20 26 37.8	-1.8
	2.3nm,0.9s,baz=211,slow=2.9,SNR=8.2							
YKA	Yellowknife Ar	135.95	318	PKP	PKPdf		20 26 47.8	-1.3
	0.5nm,0.7s,baz=126,slow=2.4,SNR=4.2							
YKA	Yellowknife Ar	135.95	318	PKP	PKPdf		20 26 47.8	-1.3
ZALV	Zalesovo Beam	142.57	64	PKhKP			20 26 55.7	
	0.4nm,0.4s,baz=277,slow=3.9,SNR=2.9							
INK	Inuvik	145.59	321	PKPbc	PKPbc		20 27 05.8	-0.9
	3.0nm,0.6s,baz=90,slow=4.9,SNR=6.6							
KDAK	Kodiak Island	150.56	297	PKPbc	PKPbc		20 27 18.9	-1.3
	3.2nm,0.3s,baz=207,slow=2.0,SNR=6.8							
KDAK	Kodiak Island	150.56	297	PKPbc	PKPbc		20 27 18.9	-1.3
SONM	Songino Array	150.98	87	PKPbc	PKPbc		20 27 20.0	-1.6
	3.4nm,0.4s,baz=218,slow=3.4,SNR=11							
PETK	Petropavlovsk-	175.75	229	PKPab	PKPab		20 29 17.7	0.0
	5.6nm,1.0s,baz=278,slow=11,SNR=3.7							

JMA 10 20:20:04.5±0.4, 25°.81N×140°.62E, h174km, M3.5, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	Haha-jima-NKT	1.62	59	eS	Sn	20 21 01.9	-0.4
CBIJ	Chichi jima	1.90	47	P	Pn	20 20 40.2	+0.2
CBIJ				eS	Sn	20 21 08.3	+0.8
BSO1	Boso 1	8.82	2	P	Pn	20 22 08.6	+0.1
BSO3	Boso 3	8.96	359	P	Pn	20 22 09.9	-0.5
JAG	Ashikaga	10.63	355	P	Pn	20 22 31.1	-1.1
JAG				eS	Sn	20 24 27.2	-3.0
JHO	Hitachi	10.77	360	P	Pn	20 22 33.3	-0.7
JHO				eS	Sn	20 24 29.8	-3.7

*ISCJB **10** 20:39:13.6±0.4, 41°.54N±0°.04×142°.06E±0°.06, h72km±4km, mb3.8/8, Error ellipse: s-maj=8.5km s-min=4.8km az=30.9*
*JMA **10** 20:39:14.0±0.2, 41°.55N×142°.06E, h66km±3km, M3.1*
*NEIC **10** 20:39:15.6±0.8, 41°.68N×142°.31E, h82km±10km, mb4.2/2, Error ellipse: s-maj=19.3km s-min=10.8km az=109.0*
*IDC **10** 20:39:16.7±1.7, 41°.66N×142°.31E, h92km±17km, mb3.5/7, mb1 3.5/10, mb1mx3.3/28, mbtmp3.4/10, MS2.6/1, Ms1 2.6/1, ms1mx1.8/33, Error ellipse: s-maj=30.2km s-min=14.1km az=93.0*

ISC 10 20:39:14.5±0.4, 41°.53N±0°.04×142°.06E±0°.06, h63km±5km, n28, σ0°82/35, mb3.9/8, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOT	Ohata	0.77	259	P	Pn	20 39 29.7	0.0
JKB	Kayabe	0.84	295	P	Pn	20 39 30.1	-0.5
JNBK	Urakawa-nobuka	0.91	35	P	Pn	20 39 30.4	-1.1
ERM	Erimo	0.95	59	ePn	Pn	20 39 31.5	-0.5
ERM				eSn	Sn	20 39 43.0	-2.0
JEM	Erimo	0.95	59	P	Pn	20 39 31.3	-0.7
JEM				eS	Sn	20 39 46.7	+1.7
JTM	Tenmabayashi	1.05	225	P	Pn	20 39 33.7	+0.4
JTM				eS	Sn	20 39 48.0	+0.7
JNB	Noboribetsu	1.21	321	P	Pn	20 39 34.5	-0.8
JANG	Nango	1.23	200	P	Pn	20 39 35.7	+0.1
JANG				eS	Sn	20 39 51.4	+0.1
JSR	Shiriuchi	1.23	270	P	Pn	20 39 35.2	-0.4
JBT2	Biratori 2	1.27	10	P	Pn	20 39 36.2	+0.1
JBT2				eS	Sn	20 39 52.7	+0.4
JEW	Eniwo	1.38	341	P	Pn	20 39 37.5	-0.1
JEW				eS	Sn	20 39 54.8	-0.2
JCH	Churui	1.46	42	P	Pn	20 39 38.8	+0.2
JFR	Furan	1.68	14	P	Pn	20 39 41.8	+0.2
JFR				eS	Sn	20 40 03.3	+1.2
JOSM	Okushiri--Mats	2.01	287	P	Pn	20 39 45.6	-0.4
ASAJ	Asahikawa	2.61	9	P	Pn	20 39 56.2	+1.9
	3.0nm,0.3s,baz=218,slow=8.1,SNR=19						
ASAJ				S	Sn	20 40 24.9	0.0
	3.3nm,0.3s,baz=341,slow=26,SNR=5.9						
MAJO	Matsushiro	5.81	212	Pn	Pn	20 40 42.3	+4.3
MJAR	Matsushiro Arr	5.81	212	P	Pn	20 40 42.6	+4.5
	0.4nm,0.3s,baz=322,slow=15,SNR=6.7						
KSRS	Korea Array	11.65	254	P	Pn	20 42 04.7	+6.8
	0.4nm,0.3s,baz=65,slow=14,SNR=5.5						
PETK	Petropavlovsk-	15.66	37	LR	LR	20 48 25.4	
	comp=Z,19nm,19.0s,baz=12,slow=36						
ZALV	Zalesovo Beam	39.38	308	P	P	20 46 36.1	-1.5
	0.6nm,0.4s,mb3.6,baz=93,slow=7.6,SNR=4.3						
MKAR	Makanchi Array	42.30	298	P	P	20 47 01.1	-0.6
	0.2nm,0.3s,mb3.2,baz=79,slow=14,SNR=3.2						
KURK	Kurchatov	43.67	305	P	P	20 47 13.5	+0.7
	1.8nm,0.7s,mb3.9,baz=78,slow=8.9,SNR=11						
KURK	Kurchatov	43.67	305	eP	P	20 47 12.6	-0.2
	3.4nm,1.0s,mb4.0						
BVAR	Borovoye Array	48.01	310	P	P	20 47 47.6	+0.7
	0.6nm,0.4s,mb4.0,baz=70,slow=9.6,SNR=7.6						
TKM2	Tokmak 2	48.05	295	eP	P	20 47 48.4	+1.0
	2.0nm,0.5s,mb4.4						
WRA	Warramunga Arr	61.58	188	P	P	20 49 24.8	-0.3
	0.4nm,0.6s,mb3.7,baz=6.5,slow=6.7,SNR=7.8						
FINES	FINESS Array B	65.09	332	P	P	20 49 47.5	-0.4
	6.2nm,1.1s,mb4.6,baz=90,slow=1.9,SNR=3.4						
ASAR	Alice Springs	65.30	188	P	P	20 49 50.3	+0.6
	0.5nm,0.9s,mb3.5,baz=16,slow=16,SNR=4.6						

*ATH **10** 20:41:15.1, 38°.07N×21°.57E, h22km±1km, MD3.2/5*
*THE **10** 20:41:15.2, 38°.05N×21°.56E, h20km±1km, ML3.9/11, Error ellipse: s-maj=1.3km s-min=0.6km az=349.0*
*NEIC **10** 20:41:15.1, 38°.07N×21°.57E, h22km, ML3.0(ATH), After ATH.*
*ISCJB **10** 20:41:15.6±0.3, 38°.07N±0°.02×21°.57E±0°.02, h21km±3km, Error ellipse: s-maj=4.0km s-min=3.2km az=0.3*
*CSEM **10** 20:41:16.0±0.2, 38°.05N×21°.62E, h20km, MD3.2, Error ellipse: s-maj=5.3km s-min=4.5km az=12.0*

ISC 10 20:41:15.7±0.4, 38°.06N±0°.02×21°.58E±0°.02, h18km±2km, n95, σ1°07/130, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.09	268	P	Pg	20 41 19.3	0.0
RLS	Riolos of Patr	0.09	268	ePB	Pg	20 41 19.5	+0.2
RLS				eSB	Sg	20 41 22.2	+0.5
RLS	Riolos of Patr	0.09	268	P	Pg	20 41 19.3	0.0
RLS				eSb	Sg	20 41 22.2	+0.5
UPR	University Cam	0.28	36	P	Pg	20 41 21.8	0.0
UPR				S	Sg	20 41 27.0	+1.0
UPR	University Cam	0.28	36	ePB	Pg	20 41 21.9	+0.1
UPR				eSB	Sg	20 41 26.5	+0.5
UPR	University Cam	0.28	36	P	Pg	20 41 21.8	0.0
UPR				eSb	Sg	20 41 26.5	+0.5
UPR				S	Sg	20 41 27.0	+1.0
LAKA	Lakka	0.36	60	P	Pg	20 41 23.1	-0.2
LAKA				S	Sg	20 41 28.9	+0.5
LAKA	Lakka	0.36	60	P	Pg	20 41 23.1	-0.2
LAKA				S	Sg	20 41 28.9	+0.5
EFP	Efpalio	0.45	35	P	Pg	20 41 24.2	-0.6
EFP				S	Sg	20 41 31.6	+0.7
EFP	Efpalio	0.45	35	ePB	Pg	20 41 24.2	-0.6
EFP				eSB	Sb	20 41 31.5	+0.2
EFP	Efpalio	0.45	35	P	Pg	20 41 24.2	-0.6
EFP				S	Sg	20 41 31.6	+0.7
TRIZ	Trizonia	0.49	52	P	Pg	20 41 25.0	-0.7
TRIZ				S	Sg	20 41 32.7	+0.4
TRIZ	Trizonia	0.49	52	P	Pg	20 41 25.0	-0.7
TRIZ				S	Sg	20 41 32.7	+0.4
KALE	Kalithea	0.55	53	P	Pg	20 41 26.0	-0.7
KALE				S	Sg	20 41 34.7	+0.6
KALE	Kalithea	0.55	53	P	Pg	20 41 26.0	-0.7
KALE				S	Sg	20 41 34.7	+0.6
GUR	Goura	0.61	101	P	Pb	20 41 27.2	-0.7
GUR				S	Sg	20 41 36.3	+0.2
GUR	Goura	0.61	101	ePB	Pb	20 41 26.9	-0.9
GUR				eSN	Sg	20 41 36.9	+0.8
GUR	Goura	0.61	101	ePb	Pb	20 41 26.9	-0.9
GUR	Goura	0.61	101	P	Pb	20 41 27.2	-0.7
GUR				S	Sg	20 41 36.3	+0.2
KFL	Anninata	0.63	275	P	Pb	20 41 27.0	-1.1
VLS	Valsamata	0.79	279	P	Pb	20 41 29.4	-1.5
VLS	Valsamata	0.79	279	P	Pb	20 41 29.2	-1.7
VLS				S	Sb	20 41 40.9	-0.3
VLS	Valsamata	0.79	279	ePB	Pb	20 41 29.3	-1.6
VLS				eSN	Sn	20 41 42.1	-1.1
VLS	Valsamata	0.79	279	P	Pb	20 41 29.4	-1.5
VLS				S	Sb	20 41 40.9	-0.3
DSF	Desfina	0.82	65	P	Pb	20 41 30.3	-1.1
DSF				S	Sb	20 41 42.5	+0.3
DSF	Desfina	0.82	65	P	Pb	20 41 30.3	-1.1
DSF				S	Sb	20 41 42.5	+0.3
EVR	Evrytania	0.87	12	P	Pb	20 41 32.7	+0.4
EVR	Evrytania	0.87	12	ePN	Pb	20 41 31.9	-0.4
EVR	Evrytania	0.87	12	ePn	Pb	20 41 31.9	-0.4
EVR	Evrytania	0.87	12	P	Pb	20 41 32.7	+0.4
ITM	Ithomi	0.92	163	P	Pb	20 41 33.3	+0.2
ITM	Ithomi	0.92	163	P	Pb	20 41 32.9	-0.2
ITM				S	Sb	20 41 46.0	+1.0
ITM	Ithomi	0.92	163	ePN	Pb	20 41 33.0	-0.1
ITM	Ithomi	0.92	163	ePn	Pb	20 41 33.0	-0.1
ITM				S	Sb	20 41 46.0	+1.0
VLX	Vlachokerasia	0.94	137	P	Pb	20 41 32.6	-0.7
VLX				S	Sb	20 41 47.0	+1.6
VLX	Vlachokerasia	0.94	137	P	Pb	20 41 32.6	-0.7
VLX				S	Sb	20 41 47.0	+1.6
LKD2	Lefkada island	1.03	315	P	Pb	20 41 33.4	-1.5
LKD2				S	Sb	20 41 50.2	+2.2
LKD2	Lefkada island	1.03	315	P	Pb	20 41 33.4	-1.5
LKD2				S	Sb	20 41 50.2	+2.2
LTK	Loutraki	1.09	92	P	Pb	20 41 36.0	-0.1
LTK	Loutraki	1.09	92	P	Pb	20 41 36.0	-0.1
AGG	Agios Georgios	1.13	31	P	Pb	20 41 35.0	-1.6
AGG				S	Sb	20 41 50.7	-0.2
AGG	Agios Georgios	1.13	31	P	Pb	20 41 35.0	-1.6
AGG				S	Sb	20 41 50.7	-0.2
PYL	PYLOS	1.17	174	P	Pn	20 41 36.8	-0.3
PYL	PYLOS	1.17	174	P	Pn	20 41 36.8	-0.3
LKR	Lokris	1.26	62	P	Pn	20 41 38.7	+0.4
LKR	Lokris	1.26	62	P	Pn	20 41 38.0	-0.3
LKR				S	Sb	20 41 53.9	-0.9
LKR	Lokris	1.26	62	ePB	Pn	20 41 38.0	-0.3
LKR	Lokris	1.26	62	ePb	Pn	20 41 38.0	-0.3
LKR	Lokris	1.26	62	P	Pn	20 41 38.7	+0.4
LKR				S	Sb	20 41 53.9	-0.9
ATAL	Atalanti	1.30	60	P	Pn	20 41 38.4	-0.4
ATAL				S	Sn	20 41 55.0	-0.7
ATAL	Atalanti	1.30	60	P	Pn	20 41 38.4	-0.4
ATAL				S	Sn	20 41 55.0	-0.7
THL	Klokotos Trika	1.54	13	P	Pn	20 41 43.3	+1.1
THL	Klokotos Trika	1.54	13	ePN	Pn	20 41 43.7	+1.5
THL	Klokotos Trika	1.54	13	P	Pn	20 41 43.3	+1.1
THL	Klokotos Trika	1.54	13	ePn	Pn	20 41 43.7	+1.5
JAN	Janina	1.69	341	P	Pn	20 41 49.3	+5.0
JAN	Janina	1.69	341	P	Pn	20 41 49.3	+5.0
VLI	Veliai	1.72	141	P	Pn	20 41 48.1	+3.4
VLI	Veliai	1.72	141	ePN	Pn	20 41 46.7	+2.0
VLI	Veliai	1.72	141	ePn	Pn	20 41 46.7	+2.0
VLI	Veliai	1.72	141	P	Pn	20 41 48.1	+3.4
ATHU	Athens Univers	1.74	92	P	Pn	20 41 44.7	-0.3
ATHU	Athens Univers	1.74	92	P	Pn	20 41 44.7	-0.3
MEV	Metsovon	1.74	351	P	Pn	20 41 48.1	+3.1
MEV	Metsovon	1.74	351	P	Pn	20 41 48.1	+3.1
VLY	Voula,Athens	1.76	96	ePb	Pb	20 41 45.8	-1.6
VLY	Voula,Athens	1.76	96	ePB	Pb	20 41 45.8	-1.6
IGT	Igoumenitsa	1.76	327	P	Pn	20 41 46.4	+1.1
IGT	Igoumenitsa	1.76	327	P	Pn	20 41 46.4	+1.1
NEO	Neokhori	1.79	45	P	Pn	20 41 46.6	+1.0
NEO	Neokhori	1.79	45	ePB	Pb	20 41 46.2	-1.7
NEO	Neokhori	1.79	45	P	Pn	20 41 46.6	+1.0
PTL	Penteli	1.80	90	ePb	Pb	20 41 46.5	-1.6
PTL	Penteli	1.80	90	ePB	Pb	20 41 46.5	-1.6
XOR	Xorichti	1.81	44	P	Pn	20 41 46.0	+0.1
XOR	Xorichti	1.81	44	P	Pn	20 41 46.0	+0.1
AOS	Alonnisos	2.11	58	P	Pn	20 41 49.8	-0.3
AOS	Alonnisos	2.11	58	P	Pn	20 41 49.8	-0.3
KEK	Kerkira	2.16	320	P	Pn	20 41 52.5	+1.8
KEK	Kerkira	2.16	320	P	Pn	20 41 51.6	+0.9
KEK	Kerkira	2.16	320	ePB	Pb	20 41 51.8	-2.4
KEK	Kerkira	2.16	320	P	Pn	20 41 51.6	+0.9
FNA	Florina	2.72	357	P	Pn	20 41 59.0	+0.5
FNA	Florina	2.72	357	P	Pn	20 41 59.0	+0.5
OHR	Ohrid	3.11	349	ePn	Pn	20 42 05.2	+1.5
KRUS	Krusevo	3.31	356	ePn	Pn	20 42 07.2	+0.7
VAM	Vamos	3.38	141	P	Pn	20 42 12.0	+4.5
VAM	Vamos	3.38	141	P	Pn	20 42 12.0	+4.5
TIP	Timpagrande	3.94	288	ePn	Pn	20 42 16.4	+1.2
TIP				P		20 42 17.9	
TIP	Timpagrande	3.94	288	ePn	Pn	20 42 16.4	+1.2
SMG	Samos	4.17	93	P	Pn	20 42 20.2	+1.8
SMG	Samos	4.17	93	P	Pn	20 42 20.2	+1.8
BARS	Barje	4.75	2	ePn	Pn	20 42 29.1	+2.8
TREB	Trebinje	5.26	333	ePn	Pn	20 42 31.9	-1.5
DIVS	Divibare	6.15	349	ePn	Pn	20 42 45.3	-0.2

*ATH **10** 20:45:17.5, 38°.04N×21°.52E, h18km±1km, ML3.5*
*THE **10** 20:45:17.8, 38°.04N×21°.56E, h14km, ML3.9/12, Error ellipse: s-maj=0.8km s-min=0.4km az=342.0*
*CSEM **10** 20:45:17.8±0.2, 38°.06N×21°.53E, h15km, ML3.5, Error ellipse: s-maj=4.9km s-min=4.0km az=37.0*
*NEIC **10** 20:45:17.5, 38°.04N×21°.52E, h18km, ML3.5(ATH), After ATH.*
*ISCJB **10** 20:45:17.5±0.5, 38°.05N±0°.02×21°.54E±0°.02, h9km±3km, Error ellipse: s-maj=3.7km s-min=3.0km az=176.8*

ISC 10 20:45:18.0±0.4, 38°.05N±0°.02×21°.55E±0°.02, h13km±2km, n99, σ1°15/140, 1C, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.06	275	ePb	Pg	20 45 21.2	+0.6
RLS	Riolos of Patr	0.06	275	ePB	Pg	20 45 21.2	+0.6
UPR	University Cam	0.30	39	P	Pg	20 45 24.3	+0.1
UPR				S	Sg	20 45 29.3	+1.0
UPR	University Cam	0.30	39	ePB	Pg	20 45 24.2	0.0
UPR	University Cam	0.30	39	P	Pg	20 45 24.3	+0.1
UPR				S	Sg	20 45 29.3	+1.0
LAKA	Lakka	0.39	61	P	Pg	20 45 25.4	-0.4
LAKA				S	Sg	20 45 31.4	+0.4
LAKA	Lakka	0.39	61	P	Pg	20 45 25.4	-0.4
LAKA				S	Sg	20 45 31.4	+0.4
EFP	Efpalio	0.47	37	P	Pg	20 45 26.9	-0.4
EFP				S	Sg	20 45 34.5	+0.9
EFP	Efpalio	0.47	37	ePB	Pg	20 45 26.8	-0.5
EFP				eSB	Sg	20 45 34.8	+1.2
EFP	Efpalio	0.47	37	ePb	Pg	20 45 26.8	-0.5
EFP				S	Sg	20 45 34.5	+0.9
EFP				eSb	Sg	20 45 34.8	+1.2
TRIZ	Trizonia	0.52	53	P	Pg	20 45 27.7	-0.5
TRIZ				S	Sg	20 45 35.6	+0.5
TRIZ	Trizonia	0.52	53	P	Pg	20 45 27.7	-0.5
TRIZ				S	Sg	20 45 35.6	+0.5
KALE	Kalithea	0.58	54	P	Pg	20 45 28.7	-0.6
KALE				S	Sg	20 45 37.4	+0.5
KALE	Kalithea	0.58	54	P	Pg	20 45 28.7	-0.6
KALE				S	Sg	20 45 37.4	+0.5
KFL	Anninata	0.60	276	P	Pg	20 45 29.5	-0.2
KFL				S	Sg	20 45 38.8	+1.1
GUR	Goura	0.64	100	P	Pg	20 45 29.4	-1.1
GUR				S	Sg	20 45 38.9	0.0
GUR	Goura	0.64	100	ePB	Pg	20 45 29.6	-0.9
GUR				eSN	Sg	20 45 39.3	+0.4
GUR	Goura	0.64	100	ePb	Pg	20 45 29.6	-0.9
GUR				S	Sg	20 45 38.9	0.0
VLS	Valsamata	0.76	280	ePn	Pg	20 45 31.9	-0.9
VLS	Valsamata	0.76	280	P	Pg	20 45 31.9	-0.9
VLS				S	Sg	20 45 44.1	+1.3
VLS	Valsamata	0.76	280	ePN	Pg	20 45 31.9	-0.9
VLS	Valsamata	0.76	280	P	Pg	20 45 31.9	-0.9
VLS				S	Sg	20 45 44.1	+1.3
DSF	Desfina	0.85	65	P	Pg	20 45 33.1	-1.4
DSF				S	Sg	20 45 46.0	+0.4
DSF	Desfina	0.85	65	P	Pg	20 45 33.1	-1.4
DSF				S	Sg	20 45 46.0	+0.4
EVR	Evrytania	0.89	13	ePn	Pb	20 45 35.0	-0.2
EVR	Evrytania	0.89	13	ePN	Pb	20 45 35.1	-0.1
EVR	Evrytania	0.89	13	ePN	Pb	20 45 35.0	-0.2
EVR	Evrytania	0.89	13	ePn	Pb	20 45 35.1	-0.1
ITM	Ithomi	0.92	161	ePn	Pb	20 45 34.9	-0.9
ITM	Ithomi	0.92	161	P	Pb	20 45 34.9	-0.9
ITM				S	Sg	20 45 47.6	-0.2
ITM	Ithomi	0.92	161	ePN	Pb	20 45 34.9	-0.9
ITM	Ithomi	0.92	161	ePN	Pb	20 45 35.0	-0.8
ITM	Ithomi	0.92	161	P	Pb	20 45 34.9	-0.9
ITM				S	Sg	20 45 47.6	-0.2
VLX	Vlachokerasia	0.95	136	P	Pb	20 45 35.0	-1.2
VLX				S	Sb	20 45 48.2	-0.5
VLX	Vlachokerasia	0.95	136	P	Pb	20 45 35.0	-1.2
VLX				S	Sb	20 45 48.2	-0.5
LKD2	Lefkada island	1.01	317	P	Pb	20 45 36.4	-0.9
LKD2	Lefkada island	1.01	317	P	Pb	20 45 36.4	-0.9
LTK	Loutraki	1.12	91	P	Pb	20 45 38.1	-1.1
LTK	Loutraki	1.12	91	P	Pb	20 45 38.1	-1.1
AGG	Agios Georgios	1.15	32	ePn	Pb	20 45 39.1	-0.5
AGG	Agios Georgios	1.15	32	P	Pb	20 45 38.8	-0.8
AGG				S	Sb	20 45 54.6	+0.2
AGG	Agios Georgios	1.15	32	ePN	Pb	20 45 39.1	-0.5
AGG	Agios Georgios	1.15	32	P	Pb	20 45 38.8	-0.8
AGG	Agios Georgios	1.15	32	ePn	Pb	20 45 39.1	-0.5
AGG				S	Sb	20 45 54.6	+0.2
PYL	PYLOS	1.17	172	P	Pn	20 45 38.9	-1.0
PYL				S	Sb	20 45 55.4	+0.5
PYL	PYLOS	1.17	172	P	Pn	20 45 38.9	-1.0
PYL				S	Sb	20 45 55.4	+0.5
LKR	Lokris	1.29	62	ePb	Pb	20 45 40.9	-1.1
LKR	Lokris	1.29	62	P	Pn	20 45 40.8	-0.8
LKR				S	Sb	20 45 57.8	-0.7
LKR	Lokris	1.29	62	ePB	Pb	20 45 40.9	-1.1
LKR	Lokris	1.29	62	P	Pn	20 45 40.8	-0.8
LKR				S	Sb	20 45 57.8	-0.7
ATAL	Atalanti	1.32	61	P	Pn	20 45 41.2	-0.9
ATAL				S	Sb	20 45 59.2	-0.3
ATAL	Atalanti	1.32	61	P	Pn	20 45 41.2	-0.9
ATAL				S	Sb	20 45 59.2	-0.3
THL	Klokotos Trika	1.55	13	P	Pn	20 45 46.9	+1.6
THL	Klokotos Trika	1.55	13	ePN	Pn	20 45 46.9	+1.6
THL	Klokotos Trika	1.55	13	P	Pn	20 45 46.9	+1.6
NAIG	Nisos Aigina	1.56	100	ePn	Pn	20 45 47.0	+1.6
NAIG	Nisos Aigina	1.56	100	ePN	Pn	20 45 47.0	+1.6
NAIG	Nisos Aigina	1.56	100	ePn	Pn	20 45 47.0	+1.6
ATH	Athens Observa	1.72	92	ePn	Pn	20 45 49.6	+2.1
ATH				eSn	Sn	20 46 12.0	+2.7
ATH	Athens Observa	1.72	92	ePN	Pn	20 45 49.6	+2.1
ATH				eSN	Sn	20 46 12.0	+2.7
ATH	Athens Observa	1.72	92	ePn	Pn	20 45 49.6	+2.1
VLI	Veliai	1.73	140	ePn	Pn	20 45 49.4	+1.7
VLI	Veliai	1.73	140	ePN	Pn	20 45 49.4	+1.7
VLI	Veliai	1.73	140	ePn	Pn	20 45 49.4	+1.7
MEV	Metsovon	1.75	352	P	Pn	20 45 51.6	+3.7
MEV	Metsovon	1.75	352	P	Pn	20 45 51.6	+3.7
IGT	Igoumenitsa	1.76	328	P	Pn	20 45 49.3	+1.3
IGT	Igoumenitsa	1.76	328	P	Pn	20 45 49.3	+1.3
ATHU	Athens Univers	1.77	92	P	Pn	20 45 49.2	+1.0
ATHU				S	Sn	20 46 12.4	+1.8
ATHU	Athens Univers	1.77	92	P	Pn	20 45 49.2	+1.0
ATHU				S	Sn	20 46 12.4	+1.8
VLY	Voula,Athens	1.79	96	ePb	Pb	20 45 48.8	-1.8
VLY	Voula,Athens	1.79	96	ePB	Pb	20 45 48.8	-1.8
NEO	Neokhori	1.81	46	ePb	Pb	20 45 49.0	-2.0
NEO	Neokhori	1.81	46	ePB	Pb	20 45 49.0	-2.0
PTL	Penteli	1.83	89	P	Pn	20 45 50.2	+1.1
PTL	Penteli	1.83	89	P	Pn	20 45 50.2	+1.1
XOR	Xorichti	1.84	44	P	Pn	20 45 49.2	0.0
XOR	Xorichti	1.84	44	P	Pn	20 45 49.2	0.0
AOS	Alonnisos	2.14	58	P	Pn	20 45 52.7	-0.7
AOS	Alonnisos	2.14	58	P	Pn	20 45 52.7	-0.7
KEK	Kerkira	2.15	321	ePb	Pb	20 45 54.2	-2.5
KEK				ePn	Pn	20 45 54.7	+1.3
KEK	Kerkira	2.15	321	P	Pn	20 45 54.5	+1.1
KEK	Kerkira	2.15	321	ePN	Pn	20 45 54.7	+1.3
KEK	Kerkira	2.15	321	ePB	Pb	20 45 54.2	-2.5
KEK	Kerkira	2.15	321	P	Pn	20 45 54.5	+1.1
FNA	Florina	2.73	357	P	Pn	20 46 03.9	+2.5
FNA	Florina	2.73	357	P	Pn	20 46 03.9	+2.5
OHR	Ohrid	3.11	350	ePn	Pn	20 46 13.2	+6.6
KRUS	Krusevo	3.32	356	ePn	Pn	20 46 11.5	+2.0
TIP	Timpagrande	3.92	288	ePn	Pn	20 46 19.2	+1.5
TIP	Timpagrande	3.92	288	ePn	Pn	20 46 19.2	+1.5
TREB	Trebinje	5.26	333	ePn	Pn	20 46 36.7	+0.5
STON	Ston	5.64	330	ePn	P

comp=Z,4.4nm,1.0s
SONM Songino Array 18.14 32 P **Pn 21 02 49.2 +0.4**
comp=Z,0.7nm,0.3s,baz=212,slow=12,SNR=24
ULN Ulaanbaatar 18.46 33 *e*P **Pn 21 02 53.6 +0.9**
comp=Z,4.7nm,0.8s
KBL Kabul 19.25 280 *e*P **Pn 21 03 00.7 -1.7**
comp=Z,9.4nm,0.9s
KURK Kurchatov 20.14 334 P **P 21 03 11.0 -0.1**
comp=Z,2.1nm,0.7s,baz=144,slow=12,SNR=16
KURK LR LR 21 10 46.7
comp=Z,40nm,21.6s,MS2.7,baz=150,slow=36
TLY Talaya 20.28 21 *e*P **P 21 03 14.2 +1.7**
comp=Z,3.2nm,0.6s
ZAA0 Zalesovo Array 21.39 348 *e*P **P 21 03 24.1 -0.5**
ZALV Zalesovo Beam 21.39 348 P **P 21 03 24.0 -0.6**
comp=Z,2.8nm,0.8s,mb3.6,baz=169,slow=10,SNR=8.5
BVAR Borovoye Array 25.23 328 P **P 21 04 03.8 +1.0**
comp=Z,1.2nm,0.7s,mb3.5,baz=133,slow=10,SNR=7.8
BRVK Borovoye 25.30 328 P **P 21 04 03.5 +0.1**
comp=Z,2.7nm,0.8s,mb3.8
ABKAR Akbulak array 28.79 313 *e*P **P 21 04 36.8 +2.0**
comp=Z,0.9nm,0.8s,mb3.5
KSRS Korea Array 29.37 71 LR LR 21 17 30.4
comp=Z,40nm,19.6s,MS3.0,baz=300,slow=39
BRTR Keskin Array B 46.81 296 P **P 21 07 06.0 -0.8**
comp=Z,0.7nm,0.8s,mb3.6,baz=99,slow=7.6,SNR=3.8
EIL Elat 48.44 282 P **P 21 07 18.5 -1.0**
comp=Z,3.5nm,0.6s,mb4.5,baz=54,slow=15,SNR=3.1
FINES FINESS Array B 50.12 325 P **P 21 07 30.1 -1.9**
comp=Z,4.4nm,0.9s,mb4.5,baz=166,slow=25,SNR=2.7
FINES LR LR 21 31 00.2
comp=Z,54nm,19.2s,MS3.6,baz=47,slow=39
ARCES ARCESS Array B 51.18 336 P **P 21 07 37.2 -2.6**
comp=Z,1.5nm,0.7s,mb4.0,baz=87,slow=10,SNR=4.7
ARCES ARCESS Array B 51.18 336 P **P 21 07 37.2 -2.6**
WRA Warramunga Arr 66.43 136 P **P 21 09 25.2 -1.2**
comp=Z,2.1nm,1.0s,mb4.1,baz=324,slow=6.3,SNR=7.1
ASAR Alice Springs 69.13 139 P **P 21 09 43.6 +0.2**
comp=Z,1.5nm,0.7s,mb4.0,baz=322,slow=6.3,SNR=14
YKA Yellowknife Ar 82.24 12 P **P 21 10 56.7 -1.3**
comp=Z,0.5nm,0.8s,mb3.5,baz=332,slow=5.0,SNR=5.6
YKA Yellowknife Ar 82.24 12 P **P 21 10 56.7 -1.3**

NIED ***10*** *21:27:00,24.°20N×124.°40E,h32km,Mw4.1 Best double couple: M0=1.61000×10^15 NP1:φ=28.00000°,δ=52.00000°, λ=52.00000°. NP2:φ=0.00000°,δ=52.00000°,λ=128.00000°.*
BJI ***10*** *21:27:20.7,23.°91N×124.°62E,h56km,mB4.8/1,mb4.3/4*
ISCJB ***10*** *21:27:24.8±0.5,24.°20N±0.°06×124.°40E±0.°03,h55km±2km, mb4.1/29,Error ellipse: s-maj=9.7km s-min=4.1km az=164.3*
JMA ***10*** *21:27:25.6±0.2,24.°17N×124.°41E,h45km±3km,M4.1*
JMA Felt I J1.
NEIC ***10*** *21:27:26.8±0.8,24.°22N×124.°38E,h56km±7km,mb4.3/8, Error ellipse: s-maj=6.1km s-min=6.0km az=148.0*
NEIC Recorded [1 JMA] on Ishigaki-jima.
IDC ***10*** *21:27:28.8±4.3,24.°21N×124.°33E,h75km±40km,mb3.8/20, mb1 3.9/22,mb1mx3.9/29,mbtmp3.8/22,ML3.9/2,MS3.1/4, Ms1 3.1/4,ms1mx2.7/31,Error ellipse: s-maj=20.1km s-min=13.1km az=71.0*

ISC 10 21:27:25.8±0.5,24.°20N±0.°06×124.°40E±0.°03,h47km±3km, n68,σ0=74/76,mb4.1/29,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIJ	**Ishigaki jima**	**0.28**	**305**	P	**Pn**	**21 27 34.1**	**-0.4**
JIJ				S	**Sn**	**21 27 40.3**	**-0.3**
JKRS	**Kuro-shima**	**0.36**	**276**	P	**Pn**	**21 27 35.2**	**0.0**
JKRS				S	**Sn**	**21 27 42.7**	**+0.8**
JTJ	**Tarama**	**0.52**	**32**	P	**Pn**	**21 27 37.2**	**+0.1**
JTJ				S	**Sn**	**21 27 46.1**	**+1.0**
HATJ	**Hateruma jima**	**0.56**	**255**	P	**Pn**	**21 27 37.3**	**-0.3**
HATJ				S	**Sn**	**21 27 46.2**	**+0.1**
IRIF	**Iriomote-Funau**	**0.62**	**282**	P	**Pn**	**21 27 38.4**	**0.0**
IRIF				S	**Sn**	**21 27 47.7**	**+0.2**
JMJ	**Miyako jima 2**	**1.02**	**53**	P	**Pn**	**21 27 43.8**	**+0.1**
JMJ				S	**Sn**	**21 27 57.9**	**+1.0**
JOGS	**Gusukube**	**1.07**	**59**	P	**Pn**	**21 27 44.7**	**+0.3**
JOGS				S	**Sn**	**21 27 59.1**	**+0.9**
YOJ	**Yonaguni jima**	**1.29**	**282**	P	**Pn**	**21 27 47.4**	**0.0**
YOJ				S	**Sn**	**21 28 03.8**	**+0.2**
TATO	**Taipei**	**2.76**	**287**	*e*Pn	**Pn**	**21 28 08.0**	**+0.4**
TATO				*e*Sn	**Sn**	**21 28 38.1**	**-1.5**
JKE	**Kume jima 2**	**3.02**	**45**	P	**Pn**	**21 28 09.8**	**-1.4**
JAGN	**Aguni-jima**	**3.50**	**47**	P	**Pn**	**21 28 16.6**	**-1.1**
JJT2	**Tamagusuku 2**	**3.60**	**57**	P	**Pn**	**21 28 18.4**	**-0.6**
JIH	**Iheya**	**4.28**	**48**	P	**Pn**	**21 28 26.8**	**-1.6**
JOW	**Kunigami**	**4.37**	**52**	P	**Pn**	**21 28 28.0**	**-1.7**
QZH	**Quanzhou**	**5.34**	**279**	P	**Pn**	**21 28 42.5**	**-0.4**
QZH				S	**Sn**	**21 29 39.2**	**-3.9**
JMZ	**Minamidaito 2**	**6.39**	**74**	P	**Pn**	**21 28 53.1**	**-4.3**
INCN	**Inchon**	**13.38**	**8**	Pn	**Pn**	**21 30 33.4**	**+0.4**
KSRS	**Korea Array**	**13.55**	**12**	P	**Pn**	**21 30 39.0**	**+3.7**
	0.3nm,0.3s,baz=196,slow=11,SNR=5.7						
KSRS				LR	LR	21 36 04.1	
	comp=Z,59nm,21.8s,baz=200,slow=38						
ENH	**Enshi**	**14.57**	**298**	Pn	**Pn**	**21 30 49.3**	**+0.2**
CBIJ	**Chichi jima**	**16.30**	**76**	LR	LR	21 36 24.1	
	comp=Z,45nm,20.6s,baz=158,slow=33						
MJAR	**Matsushiro Arr**	**17.10**	**41**	P	**Pn**	**21 31 23.1**	**+1.7**
	0.7nm,0.3s,baz=227,slow=9.3,SNR=7.9						
MJAR				LR	LR	21 38 14.3	
	comp=Z,50nm,20.0s,baz=240,slow=38						
LZH	**Lanzhou**	**21.31**	**309**	*e*P	**P**	**21 32 09.3**	**+0.7**
LZH				pmax	pmax		
	comp=Z,17nm,1.4s,mb4.2						
CHTO	**Chiang Mai**	**24.26**	**262**	Pn	**P**	**21 32 39.0**	**+0.3**
CMAR	**Chiang Mai Arr**	**24.37**	**261**	P	**P**	**21 32 41.1**	**+1.4**
	comp=Z,0.6nm,0.7s,mb3.1,baz=63,slow=8.2,SNR=5.7						
HIA	**Hailar**	**25.28**	**353**	*e*P	**P**	**21 32 47.3**	**-0.3**
	comp=Z,6.1nm,0.8s,mb4.2						
GTA	**Gaotai**	**25.70**	**312**	*e*P	**P**	**21 32 52.8**	**+1.3**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.1						
SONM	**Songino Array**	**27.58**	**333**	P	**P**	**21 33 07.5**	**-0.9**
	comp=Z,1.0nm,0.6s,mb3.6,baz=153,slow=10,SNR=5.2						
LSA	**Lhasa**	**30.07**	**288**	P	**P**	**21 33 31.2**	**+0.4**
PETK	**Petropavlovsk-**	**38.24**	**32**	P	**P**	**21 34 41.8**	**+0.7**
	comp=Z,2.2nm,0.7s,mb4.0,baz=199,slow=4.1,SNR=3.0						
PET	**Petropavlovsk**	**38.67**	**33**	*e*P	**P**	**21 34 44.2**	**-0.5**
MK31	**Makanchi Array**	**40.39**	**315**	*e*P	**P**	**21 34 58.6**	**-0.5**
MKAR	**Makanchi Array**	**40.39**	**315**	P	**P**	**21 34 58.8**	**-0.4**
	comp=Z,1.3nm,0.5s,mb3.9,baz=85,slow=14,SNR=14						
ZAA0	**Zalesovo Array**	**41.85**	**326**	*e*P	**P**	**21 35 10.1**	**-0.9**
ZALV	**Zalesovo Beam**	**41.85**	**326**	P	**P**	**21 35 10.1**	**-1.0**
	comp=Z,5.9nm,0.6s,mb4.4,baz=112,slow=8.7,SNR=36						
ZALV	**Zalesovo Beam**	**41.85**	**326**	P	**P**	**21 35 10.1**	**-1.0**
KURK	**Kurchatov**	**43.98**	**319**	P	**P**	**21 35 27.7**	**-0.6**
	comp=Z,1.4nm,0.8s,mb3.8,baz=115,slow=8.5,SNR=9.3						
KURK	**Kurchatov**	**43.98**	**319**	*e*P	**P**	**21 35 27.5**	**-0.8**
	comp=Z,3.3nm,1.0s,mb4.0						
TKM2	**Tokmak 2**	**44.08**	**307**	*e*P	**P**	**21 35 30.2**	**+1.0**
TKM2				*e*	pP	21 35 42.4	+0.4
AAK	**Ala-Archa**	**44.84**	**307**	*e*P	**P**	**21 35 35.7**	**+0.4**
	comp=Z,1.5nm,0.4s,mb4.2						
WRAB	**Tennant Creek**	**44.93**	**167**	*e*P	**P**	**21 35 35.8**	**-0.3**
	comp=Z,5.6nm,1.3s,mb4.2						
WRA	**Warramunga Arr**	**44.93**	**167**	P	**P**	**21 35 36.2**	**0.0**
	comp=Z,1.9nm,0.7s,mb4.0,baz=349,slow=8.7,SNR=12						
AML	**Almayashu**	**45.36**	**306**	*e*P	**P**	**21 35 41.0**	**+1.5**
EKS2	**Erkin-Say**	**45.37**	**307**	P	**P**	**21 35 39.8**	**+0.4**
ASAR	**Alice Springs**	**48.47**	**168**	P	**P**	**21 36 04.0**	**+0.2**
	comp=Z,0.9nm,0.6s,mb4.0,baz=356,slow=6.9,SNR=13						
KBL	**Kabul**	**48.81**	**296**	*e*P	**P**	**21 36 07.1**	**+0.7**
	comp=Z,2.1nm,0.6s,mb4.3						
BVAR	**Borovoye Array**	**49.53**	**320**	P	**P**	**21 36 11.5**	**-0.1**
	comp=Z,1.5nm,0.5s,mb4.3,baz=105,slow=7.3,SNR=16						
BRVK	**Borovoye**	**49.60**	**320**	*e*P	**P**	**21 36 11.8**	**-0.4**
	comp=Z,2.5nm,0.5s,mb4.5						
ARU	**Arti**	**56.86**	**323**	*e*P	**P**	**21 37 05.1**	**-0.4**
	comp=Z,2.6nm,0.5s,mb4.5						
STKA	**Stephens Creek**	**58.14**	**163**	P	**P**	**21 37 14.5**	**-0.2**
	comp=Z,2.1nm,0.7s,mb4.3,baz=338,slow=15,SNR=5.0						
KIV	**Kislovodsk**	**67.85**	**310**	*e*P	**P**	**21 38 20.1**	**+0.9**
	comp=Z,4.9nm,0.6s,mb4.7						
OBN	**Obninsk**	**69.30**	**322**	*e*P	**P**	**21 38 27.4**	**-0.6**
SPITS	**Spitsbergen Arr**	**70.08**	**348**	P	**P**	**21 38 32.0**	**-0.5**
	comp=Z,0.6nm,0.3s,mb4.0,baz=74,slow=7.1,SNR=4.3						
ARCES	**ARCESS Array B**	**70.61**	**338**	P	**P**	**21 38 36.0**	**+0.2**
	comp=Z,0.8nm,0.4s,mb4.0,baz=75,slow=7.3,SNR=12						
ARCES	**ARCESS Array B**	**70.61**	**338**	P	**P**	**21 38 36.0**	**+0.1**
INK	**Inuvik**	**72.10**	**22**	P	**P**	**21 38 45.5**	**+0.7**
	comp=Z,1.8nm,0.6s,mb4.2,baz=278,slow=2.7,SNR=4.5						
FINES	**FINESS Array B**	**72.90**	**330**	P	**P**	**21 38 49.8**	**0.0**
	comp=Z,4.0nm,0.5s,mb4.7,baz=56,slow=5.7,SNR=40						
AKASG	**Malin Array Be**	**74.80**	**319**	P	**P**	**21 39 00.5**	**-0.5**
	comp=Z,6.0nm,0.7s,mb4.7,baz=60,slow=6.1,SNR=16						
AKASG	**Malin Array Be**	**74.80**	**319**	P	**P**	**21 39 00.5**	**-0.5**
BRTR	**Keskin Array B**	**75.51**	**307**	P	**P**	**21 39 05.3**	**-0.1**
	comp=Z,1.8nm,1.1s,mb3.9,baz=98,slow=4.8,SNR=4.9						
RES	**Resolute Bay**	**78.16**	**10**	P	**P**	**21 39 19.1**	**-0.5**
	comp=Z,3.4nm,0.8s,mb4.3,baz=298,slow=3.8,SNR=4.7						
NB2	**NORSAR Subarra**	**79.56**	**333**	P	**P**	**21 39 27.6**	**+0.1**
	comp=Z,1.9nm,0.5s,mb4.3,baz=52,slow=5.9						
NOA	**NORSAR Array B**	**79.56**	**333**	P	**P**	**21 39 26.9**	**-0.6**
	comp=Z,2.6nm,0.6s,mb4.3,baz=55,slow=5.5,SNR=9.4						
NOA	**NORSAR Array B**	**79.56**	**333**	P	**P**	**21 39 26.9**	**-0.6**
YKA	**Yellowknife Ar**	**81.80**	**24**	P	**P**	**21 39 39.8**	**+0.4**
	comp=Z,0.6nm,0.5s,mb3.8,baz=301,slow=5.2,SNR=6.9						
YKA	**Yellowknife Ar**	**81.80**	**24**	P	**P**	**21 39 39.8**	**+0.4**
MORC	**Moravsky Berou**	**82.03**	**321**	P	**P**	**21 39 40.9**	**0.0**
IDI	**Anoyia**	**83.62**	**306**	LR	LR	22 18 15.4	
	comp=Z,39nm,19.0s,baz=271,slow=36						
GERES	**GERESS Array B**	**84.67**	**322**	P	**P**	**21 39 54.2**	**-0.3**
	comp=Z,0.3nm,0.3s,mb3.8,baz=54,slow=5.3,SNR=5.7						

TRN ***10*** *21:31:10.0,19.°58N×63.°64W,h29km*
NEIC ***10*** *21:31:11.9,19.°58N×63.°63W,h58km,MD3.8(RSPR), After RSPR.*

RSPR 10 21:31:11.9,19.°58N×63.°63W,h58km±3km,MD3.8/7, MD3.8/7,10C-8D,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**1.07**	**218**	↓*i*P	Pn	21 31 30.0	-0.8
ABV				*e*S	Sn	21 31 44.2	-0.6
ABV	**Anegada**	**1.07**	**218**	↓*i*P	Pn	21 31 30.0	-0.8
ABV				*e*S	Sn	21 31 44.2	-0.6
TBVI	**Tortola**	**1.48**	**219**	↑*i*P	Pn	21 31 35.4	-0.9
TBVI	**Tortola**	**1.48**	**219**	↑*i*P	Pn	21 31 35.4	-0.9
SMRT	**St. Maarten**	**1.60**	**161**	↓*e*P	Pn	21 31 37.2	-0.7
SMRT	**St. Maarten**	**1.60**	**161**	↓*e*P	Pn	21 31 37.2	-0.7
SMRT				*e*S	Sn	21 31 56.8	-0.8
STVI	**Saint Thomas**	**1.75**	**226**	↑*e*P	Pn	21 31 39.0	-0.9
STVI				*e*S	Sn	21 32 00.1	-1.0
STVI	**Saint Thomas**	**1.75**	**226**	↑*e*P	Pn	21 31 39.0	-0.9
STVI				*e*S	Sn	21 32 00.6	-0.4
MTP	**Monte Pirata**	**2.34**	**231**	↓*e*P	Pn	21 31 47.4	-0.6
MTP				*e*S	Sn	21 32 15.2	-0.3
MTP	**Monte Pirata**	**2.34**	**231**	↓*e*P	Pn	21 31 47.4	-0.6
MTP				*e*S	Sn	21 32 15.2	-0.3
CBYP	**Canovanas**	**2.47**	**239**	↑*e*P	Pn	21 31 49.8	0.0
CBYP				*e*S	Sn	21 32 18.1	-0.8
CBYP	**Canovanas**	**2.47**	**239**	↑*e*P	Pn	21 31 49.8	0.0
CBYP				*e*S	Sn	21 32 18.5	-0.3
HUMP	**Col San Antoni**	**2.54**	**236**	↑*e*P	Pn	21 31 50.2	-0.4
HUMP				*e*S	Sn	21 32 19.8	-0.6
HUMP	**Col San Antoni**	**2.54**	**236**	↑*e*P	Pn	21 31 50.2	-0.4
HUMP				*e*S	Sn	21 32 19.8	-0.6
CPD	**Cerro la Pandu**	**2.65**	**235**	↑*e*P	Pn	21 31 52.0	-0.2
CPD				*e*S	Sn	21 32 23.1	0.0
CPD	**Cerro la Pandu**	**2.65**	**235**	↑*e*P	Pn	21 31 52.0	-0.2
CPD				*e*S	Sn	21 32 23.1	0.0
ICM	**Isla Caja Muer**	**3.21**	**239**	↓*e*P	Pn	21 32 00.1	+0.2
ICM	**Isla Caja Muer**	**3.21**	**239**	↓*e*P	Pn	21 32 00.8	+1.0
CRPR	**Cabo Rojo, PR**	**3.65**	**245**	↑*i*P	Pn	21 32 05.5	-0.3
CRPR	**Cabo Rojo, PR**	**3.65**	**245**	↑*i*P	Pn	21 32 05.5	-0.3
LZCT	**Guadaloupe-1**	**3.84**	**152**	*e*P	Pn	21 32 09.2	+0.6
BCG	**Bois Riant Cap**	**3.96**	**151**	*e*P	Pn	21 32 09.4	-0.8
SDDR	**Presa de Saban**	**7.26**	**267**	*e*Pn	Pn	21 32 54.1	-1.2
	9.3nm,0.3s						
SDDR				*e*Sn	Sn	21 34 14.8	-1.5

ISCJB ***10*** *21:37:41.0±1.1,20.°58N±0.°03×100.°88E±0.°03,h5km±7km, mb4.3/46,MS3.7/9,Error ellipse: s-maj=5.4km s-min=4.9km az=44.2*
IDC ***10*** *21:37:42.3±0.6,20.°58N×100.°75E,h0km,mb4.2/19, mb1 4.3/20,mb1mx4.2/26,mbtmp4.2/20,ML4.4/1,MS3.7/8, Ms1 3.7/8,ms1mx3.3/31,Error ellipse: s-maj=14.9km s-min=11.5km az=106.0*
BJI ***10*** *21:37:44.9,20.°49N×101.°01E,h28km,mB4.4/11,mb4.4/22, ML4.6/2,Ms4.6/22,Ms7 4.2/18*
NEIC ***10*** *21:37:47.0±0.3,20.°56N×100.°82E,h35km,mb4.4/27,Error ellipse: s-maj=6.5km s-min=5.2km az=49.0*

ISC 10 21:37:43.4±0.8,20.°52N±0.°03×100.°84E±0.°03,h10km±5km, n114,σ1=08/127,mb4.3/46,MS3.7/9,1C-1D,Laos

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHG	**Chiang Mai**	**2.46**	**227**	PG	**Pg**	**21 38 29.2**	**-1.5**
CHG				SG	**Sg**	**21 39 02.2**	**-0.5**
CHTO	**Chiang Mai**	**2.46**	**227**	*e*Pn	**Pn**	**21 38 22.6**	**-1.1**
CHTO				*e*Sn	**Sn**	**21 38 59.4**	**+5.5**
CM31	**Chiang Mai Arr**	**2.72**	**221**	*e*Pn	**Pn**	**21 38 26.5**	**-0.8**
CM31				*e*Sn	**Sn**	**21 39 04.6**	**+4.3**
CMAR	**Chiang Mai Arr**	**2.72**	**221**	Pn	**Pn**	**21 38 26.2**	**-1.0**
	17nm,0.3s,baz=29,slow=13,SNR=266						
CMAR				Pg	**Pg**	**21 38 32.4**	**-3.2**
	136nm,0.3s,baz=38,slow=17,SNR=340						
CMAR				Lg		21 39 07.1	
	160nm,0.3s,baz=52,slow=33,SNR=33						
BDT	**Bhumibol Dam**	**3.69**	**208**	PN	**Pn**	**21 38 40.5**	**-0.1**
BDT	**Bhumibol Dam**	**3.69**	**208**	PG	**Pg**	**21 38 58.0**	**+3.8**
BDT				SG	**Sg**	**21 39 41.5**	**-0.6**
NST	**Nakhon Sawan**	**4.87**	**188**	PN	**Pn**	**21 38 52.0**	**-4.8**
NST				PG	**Pg**	**21 39 10.2**	**-6.5**
NST				SG	**Sg**	**21 40 14.7**	**-5.1**
KMI	**Kunming**	**4.90**	**21**	Pg	**Pg**	**21 39 18.3**	**+0.9**
KMI				Sg	**Sg**	**21 40 21.0**	**0.0**
KMI				smax			
	comp=N,350nm,1.1s						
KMI				smax			
	comp=E,280nm,1.0s						
KMI				LR	LR		
	comp=N,2μm,8.5s						
KMI				LR	LR		
	comp=E,3μm,7.4s						
KMI				LR	LR		
	comp=Z,2μm,8.0s						
UBT	**Ubonrachathani**	**6.58**	**142**	P	**Pn**	**21 39 22.0**	**+1.6**
NNT	**Nongplab**	**7.96**	**188**	P	**Pn**	**21 39 46.5**	**+7.3**
GYA	**Guiyang**	**7.97**	**41**	P	**Pn**	**21 39 39.2**	**-0.1**
GYA				S	**Sn**	**21 41 01.8**	**-7.8**
GYA				LR	LR		
	comp=N,2μm,5.5s						
GYA				LR	LR		
	comp=E,3μm,6.8s						
GYA				LR	LR		
	comp=Z,2μm,7.2s						
QIZ	**Qiongzhong**	**8.61**	**98**	*e*Pn	**Pn**	**21 39 47.6**	**-0.6**
QIZ				*e*Sn	**Sn**	**21 41 22.5**	**-2.9**
SHL	**Shillong**	**9.65**	**303**	*e*PKP	**Pn**	**21 40 02.5**	**0.0**
SHL				*ex*	x	21 42 35.0	
CD2	**Chengdu**	**10.67**	**14**	↑*i*P	**Pn**	**21 40 18.5**	**+2.1**
CD2				pP		21 40 21.7	
CD2				sP		21 40 24.9	
CD2				PP		21 40 27.1	
CD2				S	**Sn**	**21 42 20.4**	**+4.4**
CD2				sS		21 42 25.6	
CD2				SS		21 42 33.9	
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
CD2				pmax	pmax		
	comp=Z,40nm,4.8s						
CD2				LR	LR		
	comp=N,2μm,8.4s						
CD2				LR	LR		
	comp=E,1μm,10.6s						
CD2				LR	LR		
	comp=Z,2μm,10.6s						
ENH	**Enshi**	**12.46**	**37**	*e*Pn	**Pn**	**21 40 40.5**	**-0.3**
	comp=Z,13nm,0.8s						
ENH				Sn	**Sn**	**21 42 56.8**	**-3.0**
LSA	**Lhasa**	**12.66**	**318**	P	**Pn**	**21 40 46.5**	**+2.8**
LSA				LR	LR		
	comp=E,910nm,16.2s						
LSA	**Lhasa**	**12.66**	**318**	*e*Pn	**Pn**	**21 40 46.6**	**+2.9**
	comp=E,26nm,1.3s						
TAPN	**Taplejung**	**13.79**	**302**	*e*P	**Pn**	**21 40 58.7**	**-0.4**
	comp=E,30nm,0.8s						
ODAN	**Odare**	**13.84**	**300**	*e*P	**Pn**	**21 40 58.7**	**-1.0**
	comp=E,31nm,0.9s						
RAMN	**Ramite**	**14.52**	**299**	*e*P	**Pn**	**21 41 08.7**	**-0.3**
	comp=E,78nm,1.1s						
JIRN	**Jiri**	**15.14**	**301**	*e*P	**Pn**	**21 41 17.1**	**-0.4**
	comp=E,58nm,1.1s						
KULM	**Kulim**	**15.14**	**181**	*e*Pn	**Pn**	**21 41 18.5**	**+1.0**
XAN	**Xi'an**	**15.25**	**26**	P	**Pn**	**21 41 16.6**	**-2.3**
XAN				pP	pP	21 41 23.0	-3.5
XAN				pmax	pmax		
	comp=Z,4.0nm,1.2s						
XAN				LR	LR		
	comp=N,900nm,13.8s						
XAN				LR	LR		
	comp=E,640nm,12.6s						
XAN				LR	LR		
	comp=Z,280nm,11.3s						
GUN	**Gumba**	**15.49**	**301**	*e*P	**Pn**	**21 41 21.4**	**-0.7**
	comp=Z,143nm,0.9s						
LZH	**Lanzhou**	**15.73**	**9**	P	**Pn**	**21 41 26.7**	**+1.6**
LZH				pmax	pmax		
	comp=Z,28nm,1.0s						
LZH				pmax	pmax		
	comp=Z,81nm,4.7s						
LZH				LR	LR		
	comp=E,880nm,10.4s						
LZH				LR	LR		
	comp=Z,930nm,12.4s						
WHN	**Wuhan**	**15.74**	**48**	P	**Pn**	**21 41 29.5**	**+4.2**
WHN				LR	LR		
	comp=N,9μm,15.2s						
WHN				LR	LR		
	comp=E,3μm,11.6s						
WHN				LR	LR		
	comp=Z,1μm,13.5s						
KKN	**Kakani**	**15.93**	**300**	*e*P	**Pn**	**21 41 27.0**	**-0.8**
	comp=Z,51nm,1.0s						
DMN	**Daman**	**16.00**	**299**	*e*P	**Pn**	**21 41 27.9**	**-0.8**
	comp=Z,41nm,1.0s						
PSI	**Prapat**	**17.71**	**186**	P	**Pn**	**21 41 55.5**	**+5.2**
	comp=Z,0.9nm,0.3s,baz=342,slow=17,SNR=7.0						
PSI				LR	LR	21 49 47.6	
	comp=Z,254nm,18.1s,baz=176,slow=41						
GTA	**Gaotai**	**18.85**	**358**	↓P	**Pn**	**21 42 05.3**	**+1.2**
GTA				pP	pP	21 42 08.8	+2.5
GTA				S	**Sn**	**21 45 31.5**	**-3.5**
GTA				SS		21 45 55.9	
GTA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,110nm,5.7s						
GTA				LR	LR		
	comp=N,640nm,9.5s						
GTA				LR	LR		
	comp=E,1μm,14.3s						
GTA				LR	LR		
	comp=Z,630nm,9.8s						
SSLB	**Suanglung**	**18.91**	**76**	*e*P	**Pn**	**21 42 03.0**	**-2.0**
YHNB	**Yeheng**	**19.40**	**74**	P	**Pn**	**21 42 08.8**	**-2.1**
NJ2	**Nanjing**	**19.79**	**51**	*e*P	**Pn**	**21 42 15.4**	**0.0**
NJ2				pP	pP	21 42 24.6	+7.9
NJ2				sP	sP	21 42 29.2	+11
NJ2				S	**Sn**	**21 45 50.0**	**-7.8**
NJ2				sS	sS	21 46 04.0	+2.7
NJ2				pmax	pmax		
	comp=Z,20nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,110nm,5.4s						
NJ2				LR	LR		
	comp=N,2μm,13.8s						
NJ2				LR	LR		
	comp=E,2μm,10.7s						
KSM	**Kuching**	**21.07**	**153**	*e*P	**P**	**21 42 28.0**	**+0.1**
BTO	**Baotou**	**21.50**	**19**	*e*P	**P**	**21 42 32.7**	**+0.3**
BHPL	**Bhopal**	**21.89**	**281**	*e*PKP	**P**	**21 42 37.4**	**+0.6**
BHPL				AMb	AMB	21 42 42.9	
	comp=Z,19nm,1.2s,mb4.4						
HHC	**Hu-ho-hao-te**	**22.23**	**22**	*e*P	**P**	**21 42 41.5**	**+1.3**
HHC				pP		21 42 50.7	
HHC				sP	sP	21 42 54.8	+11
HHC				PP		21 43 08.4	
HHC				S	**S**	**21 46 38.4**	**-6.6**
HHC				sS	sS	21 46 53.5	+4.1
HHC				SS		21 47 18.7	
HHC				ScP	ScP	21 50 11.5	-2.7
HHC				PcS	PcS	21 50 15.5	+0.4
HHC				pmax	pmax		
	comp=Z,21nm,1.1s,mb4.5						
HHC				pmax	pmax		
	comp=Z,90nm,5.2s						
HHC				LR	LR		
	comp=N,590nm,10.9s						
HHC				LR	LR		
	comp=E,340nm,8.9s						
HHC				LR	LR		
	comp=Z,550nm,12.4s,MS4.2						
NDI	**New Delhi**	**22.93**	**295**	*e*PKP	**P**	**21 42 48.0**	**+0.1**
PALK	**Pallekele**	**23.53**	**239**	LR	LR	21 52 45.7	
	comp=Z,146nm,19.7s,MS3.5,baz=202,slow=38						
PALK	**Pallekele**	**23.53**	**239**	*e*P	**P**	**21 42 57.4**	**+3.2**
	comp=Z,9.2nm,0.8s,mb4.3						
KAD	**Karad**	**25.41**	**267**	*e*PKP	**P**	**21 43 12.3**	**+0.9**
POO	**Poona**	**25.51**	**270**	*e*PKP	**P**	**21 43 11.5**	**-0.8**

comp=Z,6.5nm,0.9s,mb4.3,baz=243,slow=23,SNR=3.1
ABKAR **Akbulak array** 43.32 321 *e*P P 21 45 45.5 0.0
comp=Z,2.5nm,0.5s,mb4.2
MBWA **Marble Bar** 45.35 155 *e*P P 21 46 03.1 +1.0
comp=Z,7.1nm,0.7s,mb4.6
FITZ **Fitzroy Crossi** 45.44 146 *e*P P 21 46 03.4 +0.6
comp=Z,2.5nm,0.9s,mb4.0
ARU **Arti** 47.54 330 P P 21 46 18.3 -0.6
WRA **Warramunga Arr** 51.89 139 P P 21 46 54.0 +1.6
comp=Z,3.3nm,0.7s,mb4.4,baz=328,slow=7.8,SNR=26
WRAB **Tennant Creek** 51.89 139 *e*P P 21 46 53.8 +1.4
comp=Z,3.4nm,0.7s,mb4.4
KIV **Kislovodsk** 53.26 310 *e*P P 21 47 03.9 +1.5
comp=Z,7.2nm,0.9s,mb4.6
TIXI **Tiksi** 53.66 11 *e*P P 21 47 03.0 -1.8
comp=Z,1.7nm,0.6s,mb4.2
ASAR **Alice Springs** 54.47 142 P P 21 47 13.4 +2.1
comp=Z,1.7nm,0.7s,mb4.1,baz=320,slow=7.4,SNR=19
AKASG **Malin Array Be** 62.81 317 P P 21 48 08.6 -0.6
comp=Z,2.3nm,0.6s,mb4.5,baz=81,slow=5.9,SNR=5.8
FINES **FINESS Array B** 64.91 329 P P 21 48 21.6 -1.2
comp=Z,3.2nm,0.8s,mb4.4,baz=101,slow=6.0,SNR=5.3
STKA **Stephens Creek** 65.11 142 P P 21 48 24.7 +0.2
comp=Z,4.5nm,0.8s,mb4.5,baz=311,slow=8.5,SNR=4.8
STKA **Stephens Creek** 65.11 142 *e*P P 21 48 25.1 +0.6
comp=Z,1.1nm,0.8s,mb3.9
KMBO **Kilima Mbogo** 65.79 259 P P 21 48 31.2 +1.9
comp=Z,1.4nm,0.7s,mb4.1,baz=73,slow=11,SNR=3.6
ARCES **ARCESS Array B** 65.81 338 P P 21 48 27.6 -1.0
comp=Z,2.1nm,0.9s,mb4.2,baz=116,slow=5.6,SNR=4.5
NB2 **NORSAR Subarra** 72.10 329 P P 21 49 06.8 -1.0
comp=Z,3.1nm,0.8s,mb4.3,baz=82,slow=5.9
NOA **NORSAR Array B** 72.10 329 P P 21 49 06.8 -0.9
comp=Z,1.3nm,0.6s,mb4.0,baz=81,slow=6.1,SNR=4.6
NOA LR LR 22 21 07.7
comp=Z,54nm,19.1s,MS3.8,baz=70,slow=36
NOA **NORSAR Array B** 72.10 329 P P 21 49 06.8 -0.9
NOA LR LR 22 21 07.7
GERES **GERESS Array B** 72.99 316 P P 21 49 13.2 -0.1
comp=Z,0.8nm,0.6s,mb3.8,baz=52,slow=7.5,SNR=5.5
GERES LR LR 22 23 05.7
comp=Z,34nm,19.9s,MS3.6,baz=254,slow=37
GERES **GERESS Array B** 72.99 316 P P 21 49 13.2 -0.1
GERES LR LR 22 23 05.7
STU **Stuttgart** 75.91 317 P P 21 49 30.4 +0.1
CDF **Champ du Feu** 77.23 317 *e*P P 21 49 37.1 -0.7
LPG **La Plagne** 78.42 314 *e*P P 21 49 44.4 -0.1
comp=Z,6.7nm,0.6s,mb4.5
LPG **La Plagne** 78.42 314 *e*P P 21 49 44.4 -0.1
comp=Z,3.3nm,0.6s,mb4.4
LPL **La Plagne** 78.43 314 *e*P P 21 49 44.4 -0.1
comp=Z,8.6nm,0.7s,mb4.5
LPL **La Plagne** 78.43 314 *e*P P 21 49 44.4 -0.1
comp=Z,4.3nm,0.7s,mb4.5
MBDF **Montbardon** 78.64 314 *e*P P 21 49 45.5 -0.2
FRF **La Foret Royal** 79.08 312 *e*P P 21 49 47.2 -1.0
comp=Z,5.5nm,0.8s,mb4.3
FRF **La Foret Royal** 79.08 312 *e*P P 21 49 47.2 -1.0
comp=Z,2.8nm,0.8s,mb4.2
ORIF **Oris-en-Rattie** 79.18 314 *e*P P 21 49 47.9 -0.8
LMR **La Mourre** 79.24 312 *e*P P 21 49 48.2 -0.9
BPAW **Bear Paw Mtn.** 79.36 25 *e*P P 21 49 48.6 -0.6
comp=Z,5.5nm,0.9s,mb4.5
SMRF **Simiane la Rot** 79.69 313 *e*P P 21 49 51.1 -0.4
SMF **Signal de Mont** 79.99 316 *e*P P 21 49 52.2 -0.8
comp=Z,7.1nm,0.8s,mb4.3
SMF **Signal de Mont** 79.99 316 *e*P P 21 49 52.2 -0.8
comp=Z,3.5nm,0.8s,mb4.3
VIVF **Saint-Julien-l** 80.02 314 *e*P P 21 49 52.6 -0.6
SSF **Saint Saulge** 80.07 316 *e*P P 21 49 52.7 -0.8
comp=Z,4.8nm,0.7s,mb4.3
SSF **Saint Saulge** 80.07 316 *e*P P 21 49 52.7 -0.8
comp=Z,2.4nm,0.6s,mb4.3
AVF **Avril sur Loir** 80.25 316 *e*P P 21 49 53.7 -0.8
comp=Z,4.4nm,0.7s,mb4.2
AVF **Avril sur Loir** 80.25 316 *e*P P 21 49 53.7 -0.8
comp=Z,2.2nm,0.6s,mb4.3
LASF **Ste Croix** 80.83 314 *e*P P 21 49 57.1 -0.5
comp=Z,3.9nm,0.8s,mb4.1
TCF **Toulx Ste Croi** 81.17 316 *e*P P 21 49 58.9 -0.5
RJF **Les Rejaudoux** 81.97 315 *e*P P 21 50 02.7 -0.9
MTLF **Montolieu** 82.19 313 *e*P P 21 50 04.3 -0.6
ETSF **Etsaut** 84.25 314 *e*P P 21 50 14.6 -0.9
BOSA **Boshof** 87.76 238 P P 21 50 34.6 +1.6
comp=Z,3.4nm,0.9s,mb4.6,baz=359,slow=6.0,SNR=3.5
YKA **Yellowknife Ar** 92.63 16 P P 21 50 54.7 -0.4
comp=Z,0.6nm,0.8s,mb4.1,baz=327,slow=4.6,SNR=5.2
YKA **Yellowknife Ar** 92.63 16 P P 21 50 54.7 -0.5
TXAR **Lajitas Array** 125.09 26 PKP PKPdf 21 56 44.0 -0.8
comp=Z,0.1nm,0.4s,baz=136,slow=22,SNR=3.3
TXAR **Lajitas Array** 125.09 26 PKP PKPdf 21 56 44.0 -0.8

CASC 10 21:39:40.4±0.8, 12°.80N×88°.75W, h31km±3km, MD3.6, ML3.3, 1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VSM	**San Miguel**	**0.78**	**36**	*e*P	Pn	21 39 55.4	+0.1
BLLM	**Bellamira**	**0.82**	**38**	⇓*i*P	Pn	21 39 55.6	-0.2
LFRS	**El Faro**	**0.88**	**340**	*e*P	Pn	21 39 56.4	-0.2
LBRS	**Las Brisas**	**0.98**	**343**	*e*P	Pn	21 39 58.2	+0.1
LBRS				*e*S	Sn	21 40 12.0	+1.1
CNCH	**Conchagua**	**1.02**	**62**	*e*P	Pn	21 39 58.2	-0.4
CNCH				*e*S	Sn	21 40 12.6	+0.8
BOQS	**Boqueron**	**1.07**	**331**	*e*P	Pn	21 39 59.6	+0.4
BOQS				*e*S	Sn	21 40 13.8	+0.8
CAHU	**Cacacuatique**	**1.10**	**28**	*e*P	Pn	21 39 59.9	+0.2
CAHU				*e*S	Sn	21 40 15.9	+1.9
SBLS	**San Blas**	**1.34**	**321**	*e*P	Pn	21 40 03.4	+0.3
SNJE	**San Jose**	**1.35**	**322**	*e*P	Pn	21 40 03.6	+0.4
RTR	**El Retiro**	**1.40**	**322**	*e*P	Pn	21 40 03.9	+0.1
RBDL	**Robledal**	**1.59**	**325**	*e*P	Pn	21 40 07.1	+0.6
CRIN	**San Cristobal**	**1.66**	**93**	*e*P	Pn	21 40 07.7	+0.2
TGUH	**Tegucigalpa,Un**	**1.91**	**49**	*e*P	Pn	21 40 10.9	+0.1
TGUH				AML	AML	21 40 40.5	
	comp=N,379nm,0.5s						
CNGN	**Cerro Negro**	**2.03**	**98**	*e*P	Pn	21 40 12.1	-0.4
COPN	**Copaltepe**	**2.20**	**106**	*e*P	Pn	21 40 15.1	+0.3
CSAN		**2.36**	**105**	*e*P	Pn	21 40 17.8	+0.8
APYN	**Apoyeque**	**2.41**	**103**	*e*P	Pn	21 40 17.5	-0.2
APYN				AML	AML	21 40 51.2	
	comp=Z,179nm,0.3s						

*ISCJB **10** 22:12:03.7±0.3, 37°.70N±0°.02×72°.48E±0°.06, h173km±6km, mb3.9/5, Error ellipse: s-maj=7.2km s-min=4.1km az=176.6*
*MOS **10** 22:12:03.0±1.3, 37°.66N×72°.40E, h169km, mb4.5/1, Error ellipse: s-maj=15.7km s-min=7.7km az=87.2*
*NEIC **10** 22:12:03.7±0.7, 37°.63N×72°.40E, h160km±9km, mb4.5/14, Error ellipse: s-maj=9.8km s-min=5.9km az=64.0*
*BJI **10** 22:12:05.0, 37°.85N×72°.30E, h164km, mB4.5/2, mb4.4/4*
*IDC **10** 22:12:08.9±7.7, 38°.07N×72°.34E, h171km±48km, mb3.4/4, mb1 3.5/9, mb1mx3.2/29, mbtmp3.5/9, Error ellipse: s-maj=71.2km s-min=35.9km az=179.0*
*NNC **10** 22:12:13.8±7.1, 38°.35N×72°.00E, h204km±48km, mb3.0, mpv3.9, Error ellipse: s-maj=73.8km s-min=36.1km az=27.0*

ISC 10 22:12:04.6±0.3, 37°.69N±0°.02×72°.47E±0°.05, h165km±5km, n80, σ1°.05/96, mb3.9/5, 4C-4D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**3.29**	**55**	P	Pn	22 12 53.2	-3.0
KSH				S	Sn	22 13 28.9	-7.4
CEP	**Cherat**	**3.89**	**187**	P	Pn	22 13 04.2	+0.3
CEP				S	Sn	22 13 50.0	0.0
CHCP	**Chirah Chowk**	**4.08**	**171**	P	Pn	22 13 07.6	+1.3
KBL	**Kabul**	**4.19**	**222**	*e*PN	Pn	22 13 06.5	-1.3
KBL				*e*S	Sn	22 13 58.3	+1.3
AML	**Almayashu**	**4.53**	**12**	P	Pn	22 13 12.8	+0.8
	SNR=140						
AML	**Almayashu**	**4.53**	**12**	*e*Pn	Pn	22 13 13.0	+0.9
AML				*e*S	Sn	22 14 03.6	-1.2
UCH	**Uchtor**	**4.79**	**18**	P	Pn	22 13 16.8	+1.4
	SNR=77						
UCH	**Uchtor**	**4.79**	**18**	*e*Pn	Pn	22 13 16.5	+1.0
UCH				*e*S	Sn	22 14 09.8	-1.2
KZA	**Kyzart**	**4.87**	**25**	P	Pn	22 13 17.2	+0.7
	SNR=21						
EKS2	**Erkin-Say**	**5.06**	**11**	P	Pn	22 13 20.1	+1.1
	SNR=66						
EKS2	**Erkin-Say**	**5.06**	**11**	*e*Pn	Pn	22 13 20.0	+1.0
	136nm,0.9s						
EKS2				*e*Sn	Sn	22 14 10.9	-6.3
AAK	**Ala-Archa**	**5.17**	**17**	P	Pn	22 13 22.0	+1.6
	SNR=85						
AAK	**Ala-Archa**	**5.17**	**17**	P	Pn	22 13 21.6	+1.2
	0.4nm,0.3s,baz=182,slow=6.3,SNR=166						
AAK				S	Sn	22 14 17.7	-2.2
	0.1nm,0.3s,baz=318,slow=22,SNR=13						
AAK	**Ala-Archa**	**5.17**	**17**	*e*PN	Pn	22 13 21.8	+1.4
AAK				pmax	pmax		
	comp=Z,103nm,0.6s						
AAK	**Ala-Archa**	**5.17**	**17**	*e*Pn	Pn	22 13 21.8	+1.3
	comp=Z,103nm,0.6s						
AAK				Sn	Sn	22 14 13.2	-6.6
KBK	**Karagaybulak**	**5.31**	**20**	P	Pn	22 13 23.8	+1.6
	SNR=38						
ULHL	**Ulahol**	**5.39**	**31**	P	Pn	22 13 24.2	+0.9
	SNR=13						
CHMS	**Chumysh**	**5.58**	**17**	P	Pn	22 13 26.7	+0.9
	SNR=94						
KK31	**Karatay Array**	**5.61**	**345**	P	Pn	22 13 26.1	-0.1
	comp=Z,5.4nm,0.3s,baz=164,slow=12,SNR=154						
KK31				⇓S	Sn	22 14 25.4	-4.7
	comp=Z,86nm,0.5s,baz=167,slow=23,SNR=29						
TKM2	**Tokmak 2**	**5.74**	**24**	P	Pn	22 13 29.1	+1.1
	SNR=31						
TKM2	**Tokmak 2**	**5.74**	**24**	*e*PN	Pn	22 13 28.6	+0.7
TKM2				pmax	pmax		
	comp=Z,19nm,0.5s						
TKM2	**Tokmak 2**	**5.74**	**24**	*e*Pn	Pn	22 13 28.6	+0.7
	comp=Z,19nm,0.5s						
TKM2				*e*Sn	Sn	22 14 26.3	-7.0
USP	**Ospenovka**	**5.78**	**15**	P	Pn	22 13 29.1	+0.7
	SNR=12						
THN	**Thein Dam**	**5.88**	**152**	*e*x	x	22 13 50.0	
THN				*e*x	x	22 14 33.5	
SDNR	**Sundarnagar**	**7.21**	**148**	*e*PKP	Pn	22 13 47.6	+0.2
SDNR				*e*S	Sn	22 15 01.5	-6.8
SMLA	**Simla**	**7.61**	**148**	*i* P	Pn	22 13 52.2	-0.6
SMLA				*i* S	Sn	22 15 11.6	-6.5
SMLA				*i* S	Sn	22 15 11.8	-6.2
SMLA				E		22 15 16.4	
	comp=E,2μm,0.3s						
SMLA				⇓E		22 15 16.9	
	comp=N,2μm,0.6s						
KLP	**Kalpa**	**7.77**	**141**	*e*PKP	Pn	22 13 55.4	+0.4
KLP				*e*S	Sn	22 15 12.8	-9.1
KLP				AML	AML	22 15 26.6	
	comp=N,209nm,0.9s						
KLP				AML	AML	22 15 29.7	
	comp=E,173nm,0.6s						
DDI	**Dehra Dun**	**8.69**	**146**	*e*x	x	22 15 40.0	
NDI	**New Delhi**	**9.82**	**155**	*e*S	Sn	22 16 03.0	-8.2
AYAN	**Aya Nagar**	**9.98**	**156**	*e*S	Sn	22 16 04.2	-11
KHET	**Khetri**	**9.99**	**163**	*e*S	Sn	22 16 05.3	-10
BISR	**Bishrakh**	**10.00**	**154**	*e*x	x	22 14 17.2	
SONA	**Sohna**	**10.18**	**156**	*e*S	Sn	22 16 08.8	-11
AJM	**Ajmer**	**11.33**	**170**	*e*x	x	22 14 40.8	
AJM				*e*S	Sn	22 16 35.2	-12
AGRA	**Agra**	**11.41**	**155**	*e*S	Sn	22 16 38.0	-11
AGRA				AML	AML	22 16 47.5	
	comp=E,61nm,0.6s						
AGRA				AML	AML	22 16 48.3	
	comp=N,73nm,0.4s						
MK31	**Makanchi Array**	**11.64**	**36**	P	Pn	22 14 45.5	-0.1
	comp=N,1.4nm,0.5s,baz=210,slow=7.9,SNR=14						
MK31	**Makanchi Array**	**11.64**	**36**	*e*Pn	Pn	22 14 45.9	+0.3
MKAR	**Makanchi Array**	**11.64**	**36**	P	Pn	22 14 45.3	-0.3
	comp=N,0.2nm,0.3s,baz=208,slow=9.4,SNR=12						
KURBB	**Kurchatov Arra**	**13.63**	**17**	⇓P	Pn	22 15 15.5	+4.4
	comp=N,3.0nm,0.6s						
KURK	**Kurchatov**	**13.74**	**17**	⇑P	Pn	22 15 16.5	+4.2
	comp=N,14nm,0.7s						
KURK	**Kurchatov**	**13.74**	**17**	P	Pn	22 15 08.4	-4.0
	comp=N,0.0nm,0.3s,baz=209,slow=13,SNR=14						
KURK	**Kurchatov**	**13.74**	**17**	*e*P	Pn	22 15 10.1	-2.3
KURK				pmax	pmax		
	comp=Z,17nm,0.8s						
KURK	**Kurchatov**	**13.74**	**17**	*e*Pn	Pn	22 15 10.1	-2.3
	comp=Z,17nm,0.8s						
KKN	**Kakani**	**14.61**	**129**	*e*P	Pn	22 15 21.8	-1.6
	comp=Z,14nm,0.5s						
KKN	**Kakani**	**14.61**	**129**	*e*P	Pn	22 15 21.8	-1.6
KKN				pmax	pmax		
	comp=Z,14nm,0.5s						
DMN	**Daman**	**14.63**	**130**	*e*P	Pn	22 15 23.0	-0.7
	comp=Z,9.7nm,0.5s						
AB31	**Akbulak array**	**14.68**	**326**	P	Pn	22 15 24.2	0.0
	comp=Z,0.9nm,0.3s,baz=139,slow=12,SNR=61						
AB31				S	Sn	22 17 54.0	-13
	comp=Z,3.9nm,0.5s,baz=158,slow=22,SNR=11						
ABKAR	**Akbulak array**	**14.68**	**326**	*e*Pn	Pn	22 15 23.5	-0.6
	comp=Z,2.5nm,0.4s						
ABKAR				*e*S	Sn	22 17 53.0	-14
PKIN	**Phulchoki**	**14.83**	**129**	*e*P	Pn	22 15 25.1	-1.1
	comp=Z,15nm,0.5s						
PKI	**Pulchoki**	**14.84**	**129**	*e*P	Pn	22 15 25.9	-0.5
	comp=Z,21nm,0.6s						
PKI	**Pulchoki**	**14.84**	**129**	*e*P	Pn	22 15 25.9	-0.5
PKI				pmax	pmax		
	comp=Z,21nm,0.6s						
GUN	**Gumba**	**14.89**	**127**	*e*P	Pn	22 15 25.9	-1.1
	comp=Z,21nm,0.6s						
BHPL	**Bhopal**	**15.02**	**162**	*e*x	x	22 18 04.2	
VOSK	**Vostochnaya**	**15.07**	**357**	⇓P	Pn	22 15 28.0	-0.9
	comp=Z,7.0nm,1.6s						
JIRN	**Jiri**	**15.27**	**127**	*e*P	Pn	22 15 30.9	-0.7
	comp=Z,28nm,0.4s						
BVA0	**Borovoye Array**	**15.40**	**355**	P	Pn	22 15 32.7	-0.3
	comp=Z,0.6nm,0.7s,baz=248,slow=39,SNR=33						
BVAR	**Borovoye Array**	**15.40**	**355**	P	Pn	22 15 32.0	-1.0
	comp=Z,0.8nm,0.3s,baz=161,slow=12,SNR=17						
BRVK	**Borovoye**	**15.44**	**355**	*e*P	Pn	22 15 31.9	-1.6
BRVK				S	S	22 18 14.2	-11
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BRVK	**Borovoye**	**15.44**	**355**	*e*Pn	Pn	22 15 31.9	-1.6
	comp=Z,6.9nm,0.8s						
BRVK				S	S	22 18 14.2	-11
ZRNK	**Zerenda**	**15.45**	**352**	⇑P	Pn	22 15 34.5	+1.0
	comp=Z,6.1nm,0.7s						
AKTK	**Aktyubinsk**	**16.40**	**326**	P	Pn	22 15 45.0	-0.1
AKTO	**Aktyubinsk**	**16.40**	**326**	⇑P	Pn	22 15 44.3	-0.8
	comp=Z,0.3nm,0.8s						
AKTO				⇑S	S	22 18 34.6	-13
	comp=Z,1.6nm,0.8s						
AKTO	**Aktyubinsk**	**16.40**	**326**	P	Pn	22 15 45.0	-0.1
	comp=Z,0.4nm,0.3s,baz=107,slow=12,SNR=7.1						
TAPN	**Taplejung**	**16.46**	**124**	*e*P	Pn	22 15 46.7	+0.6
ODAN	**Odare**	**16.59**	**126**	*e*P	Pn	22 15 48.6	+0.9
	comp=Z,28nm,0.6s						
LSA	**Lhasa**	**17.45**	**112**	*e*P	Pn	22 16 02.6	+4.6
LSA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
LSA	**Lhasa**	**17.45**	**112**	*e*P	Pn	22 16 02.6	+4.6
	comp=Z,2.0nm,0.6s						
ZAA0	**Zalesovo Array**	**18.35**	**24**	*e*P	P	22 16 06.3	0.0
ZALV	**Zalesovo Beam**	**18.35**	**24**	P	P	22 16 07.3	+1.0
	comp=Z,1.1nm,0.3s,baz=219,slow=10,SNR=28						
NVS	**Novosibirsk**	**18.66**	**20**	*e*P	P	22 16 09.2	-0.4
ARU	**Arti**	**20.93**	**338**	*e*P	P	22 16 33.2	-0.8
ARU				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARU	**Arti**	**20.93**	**338**	*e*P	P	22 16 33.2	-0.8
	comp=Z,2.8nm,0.9s						
GNI	**Garni**	**21.68**	**285**	*e*P	P	22 16 39.6	-2.6
MOY	**Mondy**	**24.43**	**46**	*e*P	P	22 17 17.7	+10
HHC	**Hu-ho-hao-te**	**30.26**	**72**	*e*P	P	22 18 03.9	+4.0
HHC				pP	pP	22 18 37.5	+3.1
HHC				sP	sP	22 18 56.2	+2.8
HHC				PP	PP	22 19 10.2	-1.2
HHC				PcP	PcP	22 21 00.2	+4.0
HHC				S	S	22 22 50.0	+2.8
HHC				sS	sS	22 23 51.5	+3.4
HHC				ScP	ScP	22 24 26.1	+3.2
HHC				PcS	PcS	22 24 42.5	+2.6
HHC				SS	SS	22 24 43.8	-19
HHC				ScS	ScS	22 28 21.6	+2.6
HHC				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.6						
HHC				pmax	pmax		
	comp=Z,53nm,6.3s						
HHC				LR	LR		
	comp=N,2μm,11.1s						
HHC				LR	LR		
	comp=E,2μm,9.4s						
HHC				LR	LR		
	comp=Z,1μm,14.1s						
FINES	**FINESS Array B**	**37.17**	**325**	P	P	22 19 00.4	+1.2
	comp=Z,13nm,1.2s,mb4.4,baz=124,slow=10,SNR=5.1						
ARCES	**ARCESS Array B**	**40.50**	**337**	P	P	22 19 27.2	+0.4
	comp=Z,1.2nm,0.7s,mb3.6,baz=112,slow=8.4,SNR=10						
QZH	**Quanzhou**	**41.02**	**94**	P	P	22 19 36.1	+4.5
NOA	**NORSAR Array B**	**44.15**	**322**	P	P	22 19 56.3	-0.1
	comp=Z,0.6nm,0.6s,mb3.4,baz=95,slow=7.6,SNR=2.9						
YKA	**Yellowknife Ar**	**80.00**	**3**	P	P	22 23 57.1	+2.1
	comp=Z,0.4nm,0.4s,mb3.4,baz=350,slow=5.6,SNR=4.5						

IDC 10 22:14:04.8±7.1, 30°.02N×104°.23E, h0km, mb3.3/2, mb1 3.8/3, mb1mx3.4/24, mbtmp3.5/3, ML3.9/1, MS3.5/1, Ms1 3.5/1, ms1mx2.5/23, Error ellipse: s-maj=174.2km s-min=34.8km az=127.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**12.47**	**204**	Pn	Pn	22 17 03.6	0.0
	0.2nm,0.3s,baz=10,slow=11,SNR=7.5						
KSRS	**Korea Array**	**21.02**	**63**	P	P	22 18 49.4	-0.7
	0.7nm,0.6s,baz=239,slow=10.0,SNR=3.5						
GNI	**Garni**	**48.91**	**299**	LR	LR	22 43 46.5	
	comp=Z,59nm,21.3s,baz=123,slow=36						
WRA	**Warramunga Arr**	**57.52**	**146**	P	P	22 23 56.3	+0.2
	0.5nm,0.8s,baz=326,slow=8.9,SNR=3.4						

*NEIC **10** 22:18:48.8±2.1, 23°.76N×121°.69E, h20km±13km, Error ellipse: s-maj=24.9km s-min=8.4km az=110.0*
*TAP **10** 22:18:50.1, 23°.81N±0°.02×121°.64E±0°.02, h24km±2km, Error ellipse: s-maj=3.3km s-min=2.2km az=38.8*
*JMA **10** 22:18:51.2±0.4, 23°.82N×121°.64E, h65km, M2.5*

ISC 10 22:18:50.5±0.3, 23°.82N±0°.02×121°.62E±0°.02, h22km±2km, n60, σ0°.82/101, 7C-5D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ESF	**Shoufeng Towns**	**0.12**	**296**	*e*P	Pb	22 18 54.9	0.0
	baz=287						
ESF				*e*S	Sb	22 18 58.4	+0.6
	baz=287						
TEGC	**Jichi Village**	**0.13**	**214**	*e*P	Pb	22 18 55.6	+0.6
	baz=188						
TEGC				*e*S	Sb	22 18 59.4	+1.3
	baz=188						
HWA	**Hwalien**	**0.16**	**354**	⇓*i*P	Pb	22 18 55.5	+0.2
	baz=19						
HWA				*i* S	Sb	22 19 00.3	+1.7
	baz=19						
ESL	**Shilin**	**0.17**	**268**	⇑*i*P	Pb	22 18 55.4	-0.1
	baz=269						
ESL				S	Sb	22 18 58.7	-0.1
	baz=269						
TWD	**Chiawan**	**0.26**	**355**	⇓*i*P	Pb	22 18 56.6	-0.1
	baz=354						
TWD				*i* S	Sb	22 19 01.5	+0.6
	baz=354						
NACB	**Ninganchiao**	**0.35**	**356**	*e*P	Pb	22 18 57.5	-0.7
NACB				*e*S	Sb	22 19 03.0	-0.4
EHY	**Hungye**	**0.42**	**221**	*e*P	Pb	22 18 58.5	-0.8
	baz=222						
WHF	**Hehuan Shan**	**0.46**	**315**	⇑*i*P	Pb	22 18 59.3	-0.7
	baz=309						
WHF				*e*S	Sb	22 19 05.8	-0.6
	baz=309						
YULB	**Yu-li**	**0.52**	**215**	*e*P	Pb	22 18 59.8	-1.2
YULB				*e*S	Sb	22 19 08.7	+0.6
TWF1	**Yuli**	**0.55**	**213**	⇓*i*P	Pb	22 19 00.6	-0.9
	baz=218						
TWT	**Tachien**	**0.59**	**317**	*i* P	Pb	22 19 01.9	-0.3
	baz=311						
TWT				*e*S	Sb	22 19 09.6	-0.6
	baz=311						
SSLB	**Suanglung**	**0.61**	**267**	*e*P	Pb	22 19 01.6	-1.0
SSLB				*e*S	Sb	22 19 08.7	-2.0
ENA	**Nanau**	**0.61**	**10**	⇑*i*P	Pb	22 19 02.1	-0.5
	baz=2.0						
ENA				*e*S	Sb	22 19 10.5	-0.3
	baz=2.0						
NNS	**Nan Shan**	**0.66**	**340**	P	Pb	22 19 02.6	-0.7
	baz=342						
NNS				*e*S	Sb	22 19 10.9	-1.1
	baz=342						
SMLT	**Sun Moon Lake**	**0.67**	**276**	⇑*i*P	Pb	22 19 02.9	-0.5
	baz=274						
SMLT				S	Sb	22 19 11.6	-0.7
	baz=274						
YUS	**Yu-Shan**	**0.70**	**242**	⇓*i*P	Pb	22 19 04.0	+0.1
	baz=239						
YUS				S	Sb	22 19 12.8	-0.3
	baz=239						
TYC	**Yuchr**	**0.71**	**277**	⇑*i*P	Pb	22 19 03.5	-0.7
	baz=282						
TYC				S	Sb	22 19 12.0	-1.5
	baz=282						
CHKT	**Chengkung**	**0.76**	**198**	*e*P	Pb	22 19 04.5	-0.5
	baz=196						
CHKT				*e*S	Sb	22 19 16.8	+2.0
	baz=196						
ALS	**Alishan**	**0.81**	**248**	*e*P	Pb	22 19 06.0	+0.1
	baz=245						
ALS				*e*S	Sb	22 19 16.4	0.0
	baz=245						
TWC	**Suao**	**0.81**	**15**	*e*P	Pb	22 19 05.3	-0.7
	baz=3.0						
TWC				*e*S	Sb	22 19 17.0	+0.5
	baz=3.0						
ENTT	**Nioudou**	**0.82**	**356**	P	Pb	22 19 05.2	-0.9
	baz=359						
ELDTW	**Lidau**	**0.84**	**222**	*e*P	Pb	22 19 04.9	-1.4
	baz=212						
WNT	**Mingjian**	**0.86**	**274**	*e*P	Pb	22 19 06.9	+0.2
	baz=272						
WNT				*e*S	Sb	22 19 18.7	+0.8
	baz=272						
YHNB	**Yeheng**	**0.88**	**345**	*e*P	Pb	22 19 06.1	-0.9
YHNB				*e*S	Sb	22 19 19.6	+1.3
NSK	**Sanguang**	**0.89**	**344**	⇑P	Pb	22 19 06.4	-0.8
	baz=345						
NSK				*e*S	Sb	22 19 17.4	-1.2
	baz=345						
CHN5	**Tsauling**	**0.89**	**256**	⇓*i*P	Pb	22 19 07.5	+0.2
	baz=254						
CHN5				*e*S	Sb	22 19 19.2

TWK				*e*S	**Sb**	**22 19 28.0**	**+1.0**
	baz=241						
CHN1	**Nanshi**	**1.19**	**238**	⇑P	**Pn**	**22 19 12.4**	**+0.6**
	baz=237						
CHN1				*e*S	**Sn**	**22 19 28.7**	**+1.4**
	baz=237						
NCU	**National Centr**	**1.21**	**341**	*e*P	**Pn**	**22 19 12.9**	**+0.8**
	baz=324						
NCU				*e*S	**Sn**	**22 19 28.4**	**+0.5**
	baz=324						
TWB1	**Santiao Chiao**	**1.23**	**16**	*e*P	**Pn**	**22 19 14.2**	**+1.8**
	baz=7.0						
WTCT	**Ta-ch'eng**	**1.23**	**272**	*e*P	**Pn**	**22 19 12.9**	**+0.5**
	baz=271						
NWF	**Wu-fen Shan**	**1.25**	**7**	*e*P	**Pn**	**22 19 14.6**	**+1.9**
	baz=9.0						
TWS1	**Kuangyinshan**	**1.29**	**352**	*e*P	**Pn**	**22 19 13.7**	**+0.5**
	baz=11						
WSF	**Szhu**	**1.30**	**262**	*e*P	**Pn**	**22 19 13.7**	**+0.4**
	baz=247						
ECL	**Taimali**	**1.36**	**207**	*e*P	**Pn**	**22 19 11.8**	**-2.4**
	baz=194						
CHN8	**Yiju**	**1.38**	**250**	*e*P	**Pn**	**22 19 14.7**	**+0.3**
	baz=249						
CHN8				*e*S	**Sn**	**22 19 33.5**	**+1.4**
	baz=249						
SSD	**Sandimen**	**1.41**	**221**	*e*P	**Pn**	**22 19 14.4**	**-0.4**
	baz=219						
YOJ	**Yonaguni jima**	**1.42**	**63**	P	**Pn**	**22 19 15.2**	**+0.2**
YOJ				*e*S	**Sn**	**22 19 32.9**	**-0.1**
TWY	**Chenhua**	**1.45**	**359**	*e*P	**Pn**	**22 19 16.1**	**+0.6**
	baz=360						
EAST	**Anshuo**	**1.60**	**207**	*e*P	**Pn**	**22 19 17.1**	**-0.3**
	baz=197						
SCZT	**Fangliau**	**1.71**	**213**	*e*P	**Pn**	**22 19 19.6**	**+0.6**
	baz=196						
PNG	**Penghu**	**1.91**	**263**	P	**Pn**	**22 19 21.3**	**-0.5**
	baz=261						
PNG				*e*S	**Sn**	**22 19 45.2**	**0.0**
	baz=261						
IRIF	**Iriomote-Funau**	**1.99**	**75**	P	**Pn**	**22 19 23.6**	**+0.7**
IRIF				*e*S	**Sn**	**22 19 47.6**	**+0.4**
HATJ	**Hateruma jima**	**2.01**	**83**	P	**Pn**	**22 19 23.0**	**-0.1**
HATJ				*e*S	**Sn**	**22 19 47.7**	**+0.1**
TWK1	**Hengchun**	**2.01**	**202**	*e*P	**Pn**	**22 19 22.7**	**-0.5**
	baz=194						
JKRS	**Kuro-shima**	**2.22**	**79**	P	**Pn**	**22 19 26.7**	**+0.7**
JKRS				*e*S	**Sn**	**22 19 52.7**	**-0.1**
JIJ	**Ishigaki jima**	**2.37**	**76**	P	**Pn**	**22 19 27.8**	**-0.2**
JIJ				*e*S	**Sn**	**22 19 55.3**	**-1.1**
JTJ	**Tarama**	**2.93**	**73**	P	**Pn**	**22 19 35.9**	**+0.1**
JTJ				*e*S	**Sn**	**22 20 10.0**	**-0.3**

TAP 10 22:21:42.4, 21°.19N×121°.73E, h198km±1km, ML3.6, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.86**	**349**	*e*P	Pn	22 22 10.8	-0.1
	baz=349						
LAY				*e*S	Sn	22 22 31.9	-1.5
	baz=349						
TSEB	**Hengchuen, Pin**	**1.05**	**313**	*e*P	Pn	22 22 11.6	-0.6
	baz=310						
TSEB				*e*S	Sn	22 22 35.0	-0.4
	baz=310						
TWK1	**Hengchun**	**1.14**	**311**	*e*P	Pn	22 22 13.1	+0.2
	baz=311						
TWK1				*i* S	Sn	22 22 35.1	-1.5
	baz=311						
HEN	**Hengchun**	**1.23**	**311**	*e*P	Pn	22 22 13.2	-0.3
	baz=311						
HEN				S	Sn	22 22 36.7	-1.1
	baz=311						
TAW	**Tawu**	**1.40**	**326**	*e*P	Pn	22 22 15.3	+0.4
	baz=326						
EAST	**Anshuo**	**1.44**	**325**	*e*P	Pn	22 22 15.3	0.0
	baz=325						
EAST				S	Sn	22 22 39.2	-1.8
	baz=325						
SCZT	**Fangliau**	**1.56**	**319**	*e*P	Pn	22 22 16.9	+0.4
	baz=318						
SCZT				*e*S	Sn	22 22 41.3	-1.7
	baz=318						
ECL	**Taimali**	**1.57**	**333**	*e*P	Pn	22 22 17.3	+0.8
	baz=332						
ECL				*e*S	Sn	22 22 39.6	-3.6
	baz=332						
TWP	**Hsiaoliuchiu**	**1.71**	**312**	*e*P	Pn	22 22 18.4	+0.6
	baz=312						
TWP				*e*S	Sn	22 22 46.7	+1.2
	baz=312						
SSD	**Sandimen**	**1.85**	**327**	*e*P	Pn	22 22 20.2	+1.0
	baz=326						
SSD				*e*S	Sn	22 22 46.0	-2.0
	baz=326						
ELDTW	**Lidau**	**2.10**	**342**	*e*P	Pn	22 22 21.0	-0.7
	baz=341						
ELDTW				*e*S	Sn	22 22 50.0	-2.5
	baz=341						
TWF1	**Yuli**	**2.19**	**349**	*e*P	Pn	22 22 22.6	0.0
	baz=349						
CHN1	**Nanshi**	**2.28**	**331**	*e*P	Pn	22 22 23.9	+0.3
	baz=330						
CHN1				*e*S	Sn	22 22 54.5	-1.3
	baz=330						
TWK	**Hsinying**	**2.37**	**331**	*e*P	Pn	22 22 23.1	-1.4
	baz=331						
TWK				*e*S	Sn	22 22 56.4	-1.2
	baz=331						
YUS	**Yu-Shan**	**2.40**	**343**	*e*P	Pn	22 22 23.8	-1.1
	baz=342						
YUS				*e*S	Sn	22 22 56.9	-1.4
	baz=342						
CHN5	**Tsauling**	**2.58**	**338**	*e*P	Pn	22 22 26.4	-0.7
	baz=337						
CHN5				*e*S	Sn	22 23 00.8	-1.3
	baz=337						
SMLT	**Sun Moon Lake**	**2.79**	**344**	*e*P	Pn	22 22 29.6	+0.3
	baz=344						
SMLT				*e*S	Sn	22 23 04.9	-1.3
	baz=344						
TYC	**Yuchr**	**2.82**	**344**	*e*P	Pn	22 22 27.5	-2.2
	baz=343						
TYC				*e*S	Sn	22 23 04.4	-2.5
	baz=343						
PNG	**Penghu**	**3.11**	**320**	*e*P	Pn	22 22 34.6	+1.5
	baz=319						

IDC ***10*** *22:23:18.6±0.5, 30°.82N×103°.28E, h0km, mb4.5/24, mb1 4.6/26, mb1mx4.6/31, mbtmp4.5/26, ML4.3/2, MS4.0/24, Ms1 3.9/24, ms1mx3.8/34, Error ellipse: s-maj=16.8km s-min=10.8km az=47.0*

BJI ***10*** *22:23:19.8, 30°.87N×103°.46E, h15km, mB4.8/24, mb4.6/34, ML4.7/19, Ms4.8/48, Ms7 4.6/39*

NEIC ***10*** *22:23:20.6±0.2, 30°.90N×103°.29E, h10km, mb4.8/67, MS4.5/3, Error ellipse: s-maj=4.0km s-min=3.2km az=189.0*

ISCJB ***10*** *22:23:20.7±0.6, 30°.84N±0°.02×103°.32E±0°.02, h25km±4km, mb4.7/116, MS4.2/39, Error ellipse: s-maj=4.0km s-min=3.0km az=177.7*

MOS ***10*** *22:23:21.8±0.9, 30°.81N×103°.35E, h33km, mb4.9/49, MS4.3/14, Error ellipse: s-maj=6.9km s-min=4.4km az=116.9*

SZGRF ***10*** *22:23:30.5, 31°.31N×102°.04E, h33km, mb5.0, MS4.5, Sichuan, China*

ISC 10 22:23:22.1±0.6, 30°.88N±0°.02×103°.33E±0°.02, h19km±4km, h33km±1.7km: pP-P, n331, σ0.99/347, mb4.7/116, MS4.2/39, 52C-13D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.37**	**85**	⇓*i*Pg	**Pg**	**22 23 28.6**	**-1.4**
CD2				Sg	**Sg**	**22 23 35.8**	**+0.5**
CD2				smax			
	comp=N,188μm,0.8s						
CD2				smax			
	comp=E,207μm,0.8s						
LZH	**Lanzhou**	**5.21**	**5**	Pn	**Pn**	**22 24 44.2**	**+5.2**
LZH				Pg	**Pg**	**22 25 01.1**	**-0.8**
LZH				Sg	**Sg**	**22 26 11.3**	**+1.9**
LZH				smax			
	comp=N,2μm,1.3s						
LZH				smax			
	comp=E,1μm,1.1s						
LZH				LR	LR		
	comp=E,7μm,5.5s						
LZH				LR	LR		
	comp=Z,10μm,6.5s						
GYA	**Guiyang**	**5.29**	**146**	Pn	**Pn**	**22 24 39.9**	**-0.3**
GYA				Sn	**Sn**	**22 25 45.3**	**+4.7**
GYA				Sg	**Sg**	**22 26 07.9**	**-4.1**
GYA				smax			
	comp=N,1μm,1.0s						
GYA				smax			
	comp=E,1μm,1.2s						
GYA				LR	LR		
	comp=N,2μm,3.8s						
GYA				LR	LR		
	comp=E,1μm,2.6s						
GYA				LR	LR		
	comp=Z,2μm,3.5s						
ENH	**Enshi**	**5.35**	**95**	*e*Pn	**Pn**	**22 24 40.2**	**-0.8**
	comp=Z,637nm,0.8s						
ENH				*e*Sn	**Sn**	**22 25 44.5**	**+2.6**
XAN	**Xi'an**	**5.68**	**55**	Pn	**Pn**	**22 24 44.1**	**-1.4**
XAN				Sn	**Sn**	**22 25 48.0**	**-2.2**
XAN				Sg		22 26 18.1	
XAN				smax			
	comp=N,3μm,0.8s						
XAN				smax			
	comp=E,1μm,0.9s						
XAN				LR	LR		
	comp=N,2μm,7.7s						
XAN				LR	LR		
	comp=E,1μm,8.6s						
XAN				LR	LR		
	comp=Z,1μm,8.6s						
KMI	**Kunming**	**5.76**	**185**	Pn	**Pn**	**22 24 47.7**	**+1.1**
KMI				Sn	**Sn**	**22 25 53.2**	**+1.1**
KMI				smax			
	comp=N,210nm,1.3s						
KMI				smax			
	comp=E,250nm,0.9s						
KMI				LR	LR		
	comp=N,4μm,8.7s						
KMI				LR	LR		
	comp=E,7μm,7.4s						
KMI				LR	LR		
	comp=Z,3μm,11.5s						
GTA	**Gaotai**	**8.98**	**342**	⇓P	**Pn**	**22 25 33.6**	**+2.8**
GTA				pP		22 25 36.4	
GTA				sP		22 25 39.1	
GTA				S	**Sn**	**22 27 06.4**	**-5.0**
GTA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,240nm,4.5s						
GTA				LR	LR		
	comp=N,4μm,8.9s						
GTA				LR	LR		
	comp=E,3μm,10.7s						
GTA				LR	LR		
	comp=Z,4μm,11.0s						
WHN	**Wuhan**	**9.50**	**89**	P	**Pn**	**22 25 37.0**	**-0.9**
WHN				S	**Sn**	**22 27 15.4**	**-8.7**
WHN				LR	LR		
	comp=N,21μm,5.9s						
WHN				LR	LR		
	comp=E,22μm,6.6s						
LSA	**Lhasa**	**10.59**	**267**	P	**Pn**	**22 25 55.1**	**+2.2**
LSA				LR	LR		
	comp=E,5μm,10.1s						
LSA				LR	LR		
	comp=Z,7μm,9.5s						
LSA	**Lhasa**	**10.59**	**267**	*e*P	**Pn**	**22 25 53.6**	**+0.7**
LSA				*e*		22 27 50.5	
LSA				pmax	pmax		
	comp=Z,24nm,0.6s						
LSA	**Lhasa**	**10.59**	**267**	*e*Pn	**Pn**	**22 25 53.6**	**+0.7**
	comp=Z,24nm,0.6s						
LSA				*e*Sn	**Sn**	**22 27 50.5**	**-0.4**
SHL	**Shillong**	**11.39**	**245**	*e*PKP	**Pn**	**22 26 07.5**	**+3.7**
HHC	**Hu-ho-hao-te**	**11.98**	**32**	*e*P	**Pn**	**22 26 13.5**	**+1.7**
HHC				pP		22 26 16.9	
HHC				sP		22 26 19.9	
HHC				PP		22 26 23.4	
HHC				S	**Sn**	**22 28 29.2**	**+4.4**
HHC				sS		22 28 34.0	
HHC				SS		22 28 42.7	
HHC				PcS	PcS	22 35 31.6	+0.3
HHC				ScS	ScS	22 39 05.2	+0.3
HHC				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC				pmax	pmax		
	comp=Z,75nm,7.6s						
HHC				LR	LR		
	comp=N,2μm,7.5s						
HHC				LR	LR		
	comp=E,2μm,5.9s						
HHC				LR	LR		
	comp=Z,1μm,8.7s						
CHG	**Chiang Mai**	**12.65**	**199**	⇑P	**Pn**	**22 26 22.5**	**+1.4**
	comp=Z,15nm,1.0s						
CHTO	**Chiang Mai**	**12.65**	**199**	*e*P	**Pn**	**22 26 22.5**	**+1.4**
TIA	**Tai'an**	**12.68**	**62**	*e*P	**Pn**	**22 26 22.5**	**+1.2**
TIA				S	**Sn**	**22 28 41.7**	**-0.2**
CM31	**Chiang Mai Arr**	**12.99**	**199**	*e*Pn	**Pn**	**22 26 26.6**	**+0.9**
	comp=Z,13nm,0.6s						
CMAR	**Chiang Mai Arr**	**12.99**	**199**	Pn	**Pn**	**22 26 24.1**	**-1.7**
	comp=Z,0.8nm,0.3s,baz=12,slow=11,SNR=47						
CMAR				Lg		22 30 15.3	
	comp=Z,0.2nm,0.3s,baz=20,slow=29,SNR=3.1						
CMAR				LR	LR	22 31 27.3	
	comp=Z,59nm,18.0s,baz=5.0,slow=38						
QIZ	**Qiongzhong**	**13.19**	**152**	P	**Pn**	**22 26 30.0**	**+1.5**
QIZ				pP		22 26 33.6	
QIZ				sP		22 26 37.8	
QIZ				S	**Sn**	**22 28 54.6**	**-0.1**
QIZ				pmax	pmax		
	comp=Z,93nm,3.5s						
QIZ				LR	LR		
	comp=N,3μm,10.6s						
QIZ				LR	LR		
	comp=Z,4μm,11.1s						
NJ2	**Nanjing**	**13.31**	**81**	*e*P	**Pn**	**22 26 29.6**	**-0.4**
NJ2				pP		22 26 34.6	
NJ2				sP		22 26 37.6	
NJ2				PP		22 26 40.2	
NJ2				S	**Sn**	**22 28 57.0**	**-0.5**
NJ2				sS		22 29 03.3	
NJ2				pmax	pmax		
	comp=Z,30nm,1.2s						
NJ2				pmax	pmax		
	comp=Z,170nm,3.5s						
NJ2				LR	LR		
	comp=N,3μm,8.5s						
NJ2				LR	LR		
	comp=E,5μm,7.8s						
NJ2				LR	LR		
	comp=Z,17μm,8.2s						
BJT	**Baijiatuau**	**13.87**	**45**	*e*Pn	**Pn**	**22 26 36.3**	**-1.3**
BJT				*e*Sn	**Sn**	**22 29 16.6**	**+5.6**
BJI	**Beijing**	**13.89**	**45**	P	**Pn**	**22 26 36.8**	**-1.1**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BJI				pmax	pmax		
	comp=Z,79nm,4.5s						
BJI				LR	LR		
	comp=N,2μm,15.2s						
BJI				LR	LR		
	comp=E,2μm,15.2s						
TAPN	**Taplejung**	**14.10**	**259**	*e*P	**Pn**	**22 26 39.8**	**-1.0**
	comp=E,112nm,1.0s						
BDT	**Bhumibol Dam**	**14.13**	**197**	P	**Pn**	**22 26 45.0**	**+3.7**
ODAN	**Odare**	**14.52**	**258**	*e*P	**Pn**	**22 26 45.3**	**-1.3**
	comp=E,45nm,0.8s						
QZH	**Quanzhou**	**14.73**	**110**	P	**Pn**	**22 26 48.3**	**-1.2**
QZH				S	**Sn**	**22 29 30.7**	**-1.5**
QZH				LR	LR		
	comp=N,5μm,11.0s						
QZH				LR	LR		
	comp=E,11μm,7.8s						
QZH				LR	LR		
	comp=Z,14μm,9.1s						
RAMN	**Ramite**	**15.16**	**259**	*e*P	**Pn**	**22 26 54.2**	**-1.0**
	comp=Z,127nm,1.1s						
JIRN	**Jiri**	**15.29**	**262**	*e*P	**Pn**	**22 26 55.6**	**-1.4**
	comp=Z,78nm,0.9s						
SSE	**Sheshan**	**15.32**	**85**	*e*P	**Pn**	**22 26 53.7**	**-3.6**
SSE				S	**Sn**	**22 29 42.8**	**-3.8**
SSE				pmax	pmax		
	comp=Z,34nm,0.7s						
SSE				pmax	pmax		
	comp=Z,70nm,3.5s						
SSE				LR	LR		
	comp=N,1μm,9.6s						
SSE				LR	LR		
	comp=E,4μm,9.7s						
SSE				LR	LR		
	comp=Z,6μm,9.7s						
GUN	**Gumba**	**15.49**	**263**	*e*P	**Pn**	**22 26 57.3**	**-2.3**
	comp=Z,193nm,1.1s						
PKI	**Pulchoki**	**15.98**	**263**	*e*P	**Pn**	**22 27 03.9**	**-2.0**
	comp=Z,134nm,0.8s						
PKI	**Pulchoki**	**15.98**	**263**	*e*P	**Pn**	**22 27 04.3**	**-1.6**
PKI				pmax	pmax		
	comp=Z,61nm,0.5s						
PKI	**Pulchoki**	**15.98**	**263**	*e*P	**Pn**	**22 27 04.3**	**-1.6**
	comp=Z,61nm,0.5s						
PKIN	**Phulchoki**	**15.99**	**263**	*e*P	**Pn**	**22 27 04.3**	**-1.8**
	comp=Z,61nm,0.5s						
KKN	**Kakani**	**16.04**	**263**	*e*P	**Pn**	**22 27 04.2**	**-2.4**
	comp=Z,94nm,0.7s						
KKN	**Kakani**	**16.04**	**263**	*e*P	**Pn**	**22 27 04.2**	**-2.4**
KKN				pmax	pmax		
	comp=Z,94nm,0.7s						
DMN	**Daman**	**16.23**	**263**	*e*P	**Pn**	**22 27 06.9**	**-2.2**
	comp=Z,109nm,0.9s						
DL2	**Dalian**	**17.00**	**57**	P	**Pn**	**22 27 21.9**	**+3.1**
DL2				S	**Sn**	**22 30 33.2**	**+6.0**
DL2				pmax	pmax		
	comp=Z,20nm,1.2s						
DL2				pmax	pmax		
	comp=Z,100nm,2.7s						
DL2				LR	LR		
	comp=N,500nm,16.5s						
DL2				LR	LR		
	comp=E,400nm,14.4s						
DL2				LR	LR		
	comp=Z,500nm,11.7s						
SONM	**Songino Array**	**17.09**	**7**	P	**Pn**	**22 27 20.6**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=197,slow=11,SNR=17						
SONM				Lg		22 32 23.5	
	baz=162,slow=28,SNR=2.2						
SONM				LR	LR	22 34 28.3	
	comp=Z,443nm,18.4s,baz=198,slow=39						
YHNB	**Yeheng**	**17.12**	**107**	*e*Pn	**Pn**	**22 27 20.8**	**+0.4**
TPUB	**Ta-pu**	**17.15**	**112**	*e*Pn	**Pn**	**22 27 21.2**	**+0.5**
	comp=Z,30nm,0.9s						
SSLB	**Suanglung**	**17.17**	**110**	*e*Pn	**Pn**	**22 27 21.7**	**+0.7**
	comp=Z,76nm,1.0s						
ULN	**Ulaanbaatar**	**17.20**	**9**	*e*P	**Pn**	**22 27 21.7**	**+0.5**
ULN				pmax	pmax		
	comp=Z,15nm,1.1s						
ULN	**Ulaanbaatar**	**17.20**	**9**	*e*Pn	**Pn**	**22 27 21.7**	**+0.5**
	comp=Z,15nm,1.1s						
NACB	**Ninganchiao**	**17.52**	**108**	*e*Pn	**Pn**	**22 27 26.3**	**+0.9**
YULB	**Yu-li**	**17.64**	**111**	Pn	**Pn**	**22 27 28.2**	**+1.4**
WMQ	**Urumqi**	**17.88**	**321**	P	**Pn**	**22 27 29.0**	**-0.7**
WMQ				sP	sP	22 27 36.0	-2.2
WMQ				PP		22 27 44.0	
WMQ				S	**Sn**	**22 30 46.0**	**-2.5**
WMQ				SS		22 31 11.0	
WMQ				pmax	pmax		
	comp=Z,34nm,0.7s						
WMQ				LR	LR		
	comp=N,810nm,6.0s						
WMQ				LR	LR		
	comp=E,500nm,6.0s						
WMQ				LR	LR		
	comp=Z,630nm,6.0s						
ZAK	**Zakamensk**	**19.48**	**360**	*e*P	**Pn**	**22 27 49.1**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
SNY	**Shenyang**	**19.59**	**51**	⇓P	**Pn**	**22 27 49.8**	**-0.6**
SNY				S	**Sn**	**22 31 26.0**	**-3.7**
SNY				pmax	pmax		
	comp=Z,10.0nm,0.4s						
SNY				pmax	pmax		
	comp=Z,130nm,3.2s						
SNY				LR	LR		
	comp=N,550nm,8.8s						
SNY				LR	LR		
	comp=E,810nm,7.5s						
SNY				LR	LR		
	comp=Z,520nm,17.1s						
TLY	**Talaya**	**20.78**	**1**	*e*P	**P**	**22 28 03.5**	**+1.6**
TLY				*e*S	**S**	**22 31 58.1**	**+5.2**
TLY				pmax	pmax		
	comp=Z,20nm,1.4s						
TLY				MLR	MLR		
	comp=Z,854nm,11.0s,MS4.4						
TLY	**Talaya**	**20.78**	**1**	*e*P	**P**	**22 28 01.3**	**-0.6**
	comp=Z,16nm,0.9s						
MOY	**Mondy**	**20.84**	**356**	*e*P	**P**	**22 28 04.9**	**+2.4**
MOY				pmax	pmax		
	comp=Z,65nm,2.3s						
KSRS	**Korea Array**	**21.35**	**65**	P	**P**	**22 28 08.4**	**+0.2**
	comp=Z,22nm,0.7s,mb4.6,baz=247,slow=9.5,SNR=109						
KSRS				LR	LR	22 36 12.7	
	comp=Z,308nm,21.2s,MS3.7,baz=259,slow=36						
KSRS	**Korea Array**	**21.35**	**65**	P	**P**	**22 28 08.4**	**+0.2**
KSRS				pmax	pmax		
	comp=Z,23nm,0.7s,mb4.6						
KSRS				MLR	MLR		
	comp=Z,308nm,21.2s,MS3.7						
IRK	**Irkutsk**	**21.36**	**2**	*e*P	**P**	**22 28 09.5**	**+1.4**
IRK				pmax	pmax		
	comp=Z,74nm,1.5s,mb4.8						
CN2	**Changchun**	**21.73**	**47**	⇑P	**P**	**22 28 12.4**	**+0.2**
CN2				*e*pP		22 28 16.5	
CN2				*e*sP	sP	22 28 19.4	-0.8
CN2				*e*S	**S**	**22 32 06.3**	**-5.4**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.5						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,500nm,12.0s,MS4.2						
CN2				LR	LR		
	comp=E,400nm,12.0s,MS4.2						
CN2				LR	LR		
	comp=Z,600nm,14.0s,MS4.2						
DDI	**Dehra Dun**	**21.75**	**275**	*ex*	**P**	**22 28 11.8**	**-0.7**
HIA	**Hailar**	**22.16**	**29**	*e*P	**P**	**22 28 16.0**	**-0.8**
HIA				pmax	pmax		
	comp=Z,26nm,0.8s						
HIA	**Hailar**	**22.16**	**29**	*e*P	**P**	**22 28 16.0**	**-0.8**
	comp=Z,26nm,0.8s,mb4.7						
MK31	**Makanchi Array**	**22.72**	**320**	*e*P	**P**	**22 28 23.5**	**+0.8**
MKAR	**Makanchi Array**	**22.72**	**320**	P	**P**	**22 28 23.0**	**+0.3**
	comp=Z,7.3nm,0.7s,mb4.2,baz=99,slow=14,SNR=30						
MKAR				PcP	PcP	22 32 14.2	-0.2
	comp=Z,2.9nm,0.8s,baz=76,slow=6.5,SNR=4.4						
MKAR				ScP	ScP	22 35 51.0	-0.1
	comp=Z,2.1nm,0.9s,baz=133,slow=2.0,SNR=7.5						
MKAR				LR	LR	22 37 50.0	
	comp=Z,630nm,20.0s,MS4.0,baz=125,slow=38						
MKAR	**Makanchi Array**	**22.72**	**320**	P	**P**	**22 28 23.0**	**+0.3**
MKAR						22 32 14.2	
TGY	**Tagaytay City**	**23.26**	**132**	P	**P**	**22 28 30.9**	**+2.3**
	comp=Z,112nm,0.3s,mb5.8,baz=213,slow=17,SNR=2.5						
THN	**Thein Dam**	**23.53**	**281**	*ex*	**P**	**22 28 30.0**	**-1.3**
KSH	**Kashi**	**23.89**	**299**	⇑*i*P	**P**	**22 28 38.2**	**+3.7**
KSH				pP		22 28 42.2	
KSH				sP	sP	22 28 45.1	+2.4
KSH				PP		22 29 12.8	
KSH				PcP	PcP	22 32 19.9	+2.9
KSH				S	**S**	**22 32 52.7**	**+3.0**
KSH				sS	sS	22 32 59.7	+0.5
KSH				SS		22 33 45.3	
KSH				ScP	ScP	22 35 56.4	+2.0
KSH				PcS	PcS	22 35 58.4	+1.9
KSH				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.4						
KSH				pmax	pmax		
	comp=Z,150nm,3.9s						
KSH				LR	LR		
	comp=N,510nm,9.6s						
KSH				LR	LR		
	comp=E,840nm,9.7s						
KSH				LR	LR		
	comp=Z,1μm,10.1s,MS4.6						
ULHL	**Ulahol**	**24.43**	**305**	P	**P**	**22 28 41.9**	**+2.5**

SNR=8.0
MDJ Mudanjiang 24.76 49 P **P** **22 28 42.2 -0.2**
MDJ pP 22 28 45.1
MDJ sP sP 22 28 46.3 -4.3
MDJ S **S** **22 33 04.7 +1.1**
MDJ sS sS 22 33 10.2 -3.0
MDJ ScP ScP 22 35 57.7 +1.0
MDJ PcS PcS 22 35 58.9 +0.2
MDJ pmax pmax
comp=Z,13nm,1.4s,mb4.3
MDJ pmax pmax
comp=Z,71nm,4.2s
MDJ LR LR
comp=N,310nm,10.1s
MDJ LR LR
comp=E,250nm,9.0s
MDJ LR LR
comp=Z,560nm,9.6s
MDJ Mudanjiang 24.76 49 *eP* **P** **22 28 42.8 +0.3**
comp=Z,11nm,0.8s,mb4.5
KZA Kyzart 25.08 304 P **P** **22 28 48.1 +2.7**
SNR=32
TKM2 Tokmak 2 25.10 306 P **P** **22 28 47.4 +1.8**
SNR=11
TKM2 Tokmak 2 25.10 306 *eP* **P** **22 28 46.1 +0.5**
TKM2 *e* 22 32 19.5
TKM2 pmax pmax
comp=Z,9.0nm,0.8s,mb4.3
TKM2 Tokmak 2 25.10 306 *eP* **P** **22 28 46.1 +0.5**
comp=Z,8.6nm,0.8s,mb4.3
TKM2 *e*PcP PcP 22 32 19.5 0.0
KBK Karagaybulak 25.47 305 P **P** **22 28 51.0 +2.2**
SNR=35
UCH Uchtor 25.65 304 P **P** **22 28 52.9 +2.3**
SNR=16
UCH Uchtor 25.65 304 *eP* **P** **22 28 51.3 +0.8**
comp=Z,15nm,0.9s,mb4.5
UCH *e*PcP PcP 22 32 21.9 +1.1
FRU Bishkek 25.76 306 *eP* **P** **22 28 53.0 +1.5**
AAK Ala-Archa 25.78 305 P **P** **22 28 54.8 +3.1**
SNR=7.5
AAK Ala-Archa 25.78 305 P **P** **22 28 52.8 +1.1**
comp=Z,4.2nm,0.5s,mb4.3,baz=62,slow=5.5,SNR=18
AAK PcP PcP 22 32 20.4 -0.7
comp=Z,1.7nm,0.4s,baz=228,slow=2.0,SNR=3.7
AAK LR LR 22 39 51.0
comp=Z,337nm,18.1s,MS3.9,baz=198,slow=38
AAK Ala-Archa 25.78 305 *ceP* **P** **22 28 53.9 +2.2**
AAK pmax pmax
comp=Z,9.0nm,1.0s,mb4.2
AAK Ala-Archa 25.78 305 *eP* **P** **22 28 53.2 +1.5**
comp=Z,24nm,0.9s,mb4.7
USP Ospenovka 25.97 306 P **P** **22 28 54.5 +1.1**
SNR=11
HYB Hyderabad 26.20 245 *eP* **P** **22 28 57.0 +1.2**
HYB Hyderabad 26.20 245 *i P* **P** **22 28 57.0 +1.2**
AML Almayashu 26.20 304 P **P** **22 28 58.0 +2.4**
SNR=12
AML Almayashu 26.20 304 *eP* **P** **22 28 56.8 +1.2**
comp=Z,20nm,1.0s,mb4.6
AML *e*PcP PcP 22 32 22.5 +0.4
EKS2 Erkin-Say 26.29 305 P **P** **22 28 58.0 +1.6**
SNR=12
EKS2 Erkin-Say 26.29 305 *eP* **P** **22 28 57.1 +0.8**
comp=Z,18nm,1.0s,mb4.6
EKS2 *e*PcP PcP 22 32 22.6 +0.3
ZAA0 Zalesovo Array 26.64 335 *eP* **P** **22 28 59.0 -0.3**
ZALV Zalesovo Beam 26.64 335 P **P** **22 28 59.3 0.0**
comp=Z,11nm,0.7s,mb4.5,baz=138,slow=9.4,SNR=58
ZALV LR LR 22 39 49.5
comp=Z,397nm,20.4s,MS4.0,baz=300,slow=37
KURK Kurchatov 27.03 324 P **P** **22 29 03.1 +0.2**
comp=Z,16nm,0.6s,mb4.7,baz=128,slow=10,SNR=43
KURK PcP PcP 22 32 23.1 -0.7
comp=Z,4.0nm,0.7s,baz=121,slow=2.1,SNR=5.6
KURK LR LR 22 40 19.3
comp=Z,721nm,18.1s,MS4.3,baz=125,slow=38
KURK Kurchatov 27.03 324 P **P** **22 29 03.1 +0.2**
KURK 22 32 23.1
KURK pmax pmax
comp=Z,16nm,0.6s,mb4.7
KURK MLR MLR
comp=Z,721nm,18.1s,MS4.3
KURK Kurchatov 27.03 324 *eP* **P** **22 29 03.4 +0.5**
comp=Z,16nm,0.8s,mb4.6
NVS Novosibirsk 27.91 335 *eP* **P** **22 29 16.5 +5.7**
NVS pmax pmax
comp=N,19nm,1.7s
NVS pmax pmax
comp=E,13nm,1.7s
NVS pmax pmax
comp=Z,20nm,1.7s,mb4.5
KLR Kul'dur 28.20 41 *eP* **P** **22 29 08.0 -5.4**
KLR MLR MLR
comp=N,900nm,14.0s,MS4.6
KLR MLR MLR
comp=E,500nm,14.0s,MS4.6
KLR MLR MLR
comp=Z,1μm,11.0s,MS4.7
KBL Kabul 28.99 286 *eP* **P** **22 29 22.0 +1.4**
KBL pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
KBL Kabul 28.99 286 *eP* **P** **22 29 22.0 +1.3**
comp=Z,9.8nm,0.8s,mb4.6
MJAR Matsushiro Arr 29.46 69 P **P** **22 29 25.3 +0.5**
comp=Z,1.2nm,0.5s,mb3.9,baz=276,slow=10,SNR=6.4
MJAR LR LR 22 41 12.8
comp=Z,174nm,18.3s,MS3.7,baz=260,slow=36
HABR Khabarovsk 29.79 45 *eP* **P** **22 29 34.4 +6.9**
HABR 22 30 21.1
HABR *e* 22 32 27.8
HABR *eS* **S** **22 34 20.4 -2.6**
HABR *e*SS sS 22 34 36.2 +3.5
HABR *e*SS SS 22 35 52.7 -37
HABR *e* 22 40 02.4
HABR MLR MLR
comp=Z,341nm,17.0s,MS4.0
JHJ Hachijo jima 2 30.90 76 LR LR 22 41 57.4
comp=Z,324nm,20.1s,MS4.0,baz=118,slow=36
DAV Davao City (W) 31.55 134 LR LR 22 44 47.3
comp=Z,438nm,18.4s,MS4.2,baz=327,slow=41
BVAR Borovoye Array 32.56 322 P **P** **22 29 52.0 +0.2**
comp=Z,4.0nm,0.5s,mb4.6,baz=120,slow=9.6,SNR=29
BVAR PcP PcP 22 32 37.5 -0.6
comp=Z,8.9nm,0.7s,baz=147,slow=3.5,SNR=22
BVAR ScP ScP 22 36 20.8 -0.1
comp=Z,1.6nm,0.8s,baz=108,slow=4.8,SNR=4.8
BVAR Borovoye Array 32.56 322 P **P** **22 29 52.0 +0.2**
BVAR 22 32 37.5
BRVK Borovoye 32.63 322 *ceP* **P** **22 29 53.6 +1.1**
BRVK pmax pmax
comp=Z,12nm,1.2s,mb4.7
BRVK Borovoye 32.63 322 *eP* **P** **22 29 52.8 +0.3**
comp=Z,5.7nm,0.5s,mb4.8
ASAJ Asahikawa 33.52 56 P **P** **22 30 01.1 +0.7**
comp=Z,5.3nm,0.7s,mb4.6,baz=97,slow=11,SNR=3.9
ASAJ LR LR 22 43 22.4
comp=Z,143nm,18.6s,MS3.7,baz=220,slow=36
ASAJ Asahikawa 33.52 56 P **P** **22 30 01.1 +0.7**
ASAJ pmax pmax
comp=Z,5.0nm,0.7s
ASAJ MLR MLR
comp=Z,143nm,18.6s
CBIJ Chichi jima 34.09 86 LR LR 22 44 10.4
comp=Z,236nm,18.7s,MS3.9,baz=297,slow=37
YAK Yakutsk 35.55 21 *eP* **P** **22 30 16.5 -1.2**
YAK *e**PP pP 22 30 24.6 +1.0
YAK *e* 22 32 46.1
YAK *eS* **S** **22 35 49.0 -3.2**
YAK *e*SS SS 22 38 15.7 -11
YAK *e*SSS 22 38 40.1
YAK *e* 22 40 36.1
YAK pmax pmax
comp=Z,18nm,1.0s,mb5.0
YAK pmax pmax
comp=E,5.0nm,0.9s
YAK pmax pmax
comp=N,7.0nm,1.1s
YAK smax
comp=N,48nm,10.3s
YAK smax
comp=E,30nm,11.6s
YAK MLR MLR
comp=Z,195nm,15.0s,MS4.0
YAK MLR MLR
comp=N,149nm,13.0s,MS4.0
YAK MLR MLR
comp=E,83nm,15.0s,MS4.0
YAK Yakutsk 35.55 21 P **P** **22 30 16.8 -0.9**
ABKAR Akbulak array 37.32 312 *eP* **P** **22 30 33.5 +0.5**
comp=E,5.9nm,0.8s,mb4.5
ABKAR *e*PcP PcP 22 32 51.3 -0.7
AKTK Aktyubinsk 38.80 313 P **P** **22 30 45.0 -0.4**
AKTK PcP PcP 22 32 56.1 -0.4
AKTO Aktyubinsk 38.80 313 P **P** **22 30 45.0 -0.4**
comp=E,2.7nm,0.6s,mb4.2,baz=84,slow=17,SNR=10
AKTO PcP PcP 22 32 56.1 -0.4
comp=E,1.4nm,0.5s,baz=138,slow=5.7,SNR=3.4
KAPI Kappang 38.99 153 P **P** **22 30 47.4 -0.1**
comp=E,13nm,0.9s,mb4.6,baz=354,slow=12,SNR=4.4
SVE Sverdlovsk 39.28 324⇓ *eP* **P** **22 30 50.4 +1.0**
SVE pmax pmax
comp=Z,15nm,0.8s,mb4.8
SVE MLR MLR
comp=Z,241nm,12.0s,MS4.2
ARU Arti 40.20 323 *c iP* **P** **22 30 57.3 +0.2**
ARU *e* 22 32 28.3
ARU S **S** **22 37 03.0 +0.2**
ARU SS SS 22 39 54.3 -6.5
ARU pmax pmax
comp=Z,28nm,1.0s,mb5.0
ARU Arti 40.20 323 *eP* **P** **22 30 56.8 -0.2**
comp=Z,22nm,0.8s,mb4.9
SOKR Solikamsk 42.21 327⇑ *iP* **P** **22 31 14.2 +0.7**
SOKR pmax pmax
comp=Z,30nm,1.0s,mb4.9
SOKR MLR MLR
comp=Z,240nm,19.0s,MS4.1
TIXI Tiksi 43.10 12 *eP* **P** **22 31 18.8 -1.8**
TIXI pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
TIXI Tiksi 43.10 12 *eP* **P** **22 31 18.8 -1.8**
comp=Z,5.9nm,0.6s,mb4.5
PETK Petropavlovsk- 44.82 44 P **P** **22 31 34.2 -0.4**
comp=Z,5.1nm,0.8s,mb4.4,baz=207,slow=3.0,SNR=4.4
PETK LR LR 22 52 35.3
comp=Z,133nm,18.5s,MS3.9,baz=62,slow=39
UMR Umm Al-Rimmam 47.64 283 *eP* **P** **22 31 55.8 -1.4**
UMR AMb AMB 22 31 57.3
comp=Z,22nm,1.0s,mb5.2
GNI Garni 47.82 298 P **P** **22 31 59.1 +0.7**
MIB Mutribah 47.89 284 *eP* **P** **22 31 57.1 -2.1**
MIB AMb AMB 22 31 59.3
comp=Z,42nm,0.8s,mb5.5
RDF Al-Radifah 47.96 283 *eP* **P** **22 31 58.5 -1.1**
RDF AMb AMB 22 31 59.9
comp=Z,33nm,0.8s,mb5.4
ZEI Tsey 48.12 302 *eP* **P** **22 32 02.6 +1.9**
ZEI pmax pmax
comp=Z,11nm,1.0s,mb4.8
NAY Al-Naaiem 48.13 283 *eP* **P** **22 31 59.5 -1.5**
NAY AMb AMB 22 32 01.0
comp=Z,33nm,0.7s,mb5.5
GOF Gofitskoye 48.53 305 *eP* pP 22 32 13.4 +3.5
KIV Kislovodsk 48.88 303 *eP* **P** **22 32 07.5 +1.0**
KIV pmax pmax
comp=Z,20nm,1.1s,mb5.1
KIV MLR MLR
comp=Z,117nm,16.0s,MS4.0
KIV Kislovodsk 48.88 303 *eP* **P** **22 32 07.6 +1.1**
comp=Z,18nm,1.0s,mb5.1
VSR Storozhevoye 50.75 313 *eP* **P** **22 32 20.4 -0.2**
VSR pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
VSR pmax pmax
comp=N,6.0nm,1.0s
VSR pmax pmax
comp=E,7.0nm,0.5s
MOS Moscow 51.59 319 *eP* **P** **22 32 25.6 -1.3**
MOS pmax pmax
comp=Z,37nm,1.1s,mb5.2
BILL Bilibino 51.66 25⇓ *iP* **P** **22 32 26.9 -0.3**
BILL pmax pmax
comp=Z,18nm,1.6s,mb4.8
BILL MLR MLR
comp=Z,200nm,17.0s,MS4.2
BILL Bilibino 51.66 25 *eP* **P** **22 32 25.9 -1.4**
comp=Z,5.7nm,0.8s,mb4.5
OBN Obninsk 52.20 318⇓ *iP* **P** **22 32 31.4 0.0**
OBN pmax pmax
comp=Z,17nm,1.0s,mb4.9
OBN MLR MLR
comp=Z,400nm,19.0s,MS4.5
OBN Obninsk 52.20 318 *eP* **P** **22 32 30.4 -1.1**
comp=Z,13nm,0.7s,mb5.0
ANN Anapa 52.51 305 *eP* **P** **22 32 33.3 -0.6**
ANN pmax pmax
comp=Z,14nm,1.0s,mb4.8
FITZ Fitzroy Crossi 53.22 153 *eP* **P** **22 32 40.2 +0.9**
comp=Z,2.9nm,0.7s,mb4.3
MBWA Marble Bar 54.09 161 *eP* **P** **22 32 46.7 +1.1**
comp=Z,15nm,0.9s,mb4.9
SMY Shemya 54.72 45 *eP* **P** **22 32 49.8 -0.2**
comp=Z,31nm,0.9s,mb5.3
JOF Joensuu 54.86 328 *ep* **P** **22 32 50.1 -0.7**
comp=Z,12nm,0.6s,mb5.1
JOF Joensuu 54.86 328 *ep* **P** **22 32 50.1 -0.7**
comp=Z,12nm,0.6s,mb5.1
ASF Jabal al Asfar 55.79 290 P **P** **22 32 58.0 -0.1**
comp=Z,3.1nm,0.6s,mb4.5,baz=330,slow=5.7,SNR=5.7
BR131 Keskin Array S 56.27 300 *eP* **P** **22 33 01.3 -0.1**
BRTR Keskin Array B 56.27 300 P **P** **22 33 00.8 -0.5**
comp=Z,4.4nm,1.0s,mb4.5,baz=106,slow=5.1,SNR=15
BRTR LR LR 23 00 31.7
comp=Z,57nm,18.4s,MS3.7,baz=221,slow=40
KEV Kevo 56.66 336 *eP* **P** **22 33 03.3 -0.4**
KEV pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
KEV Kevo 56.66 336 *ep* **P** **22 33 03.3 -0.4**
comp=Z,5.9nm,0.9s,mb4.6
KEV Kevo 56.66 336 *ep* **P** **22 33 03.3 -0.4**
comp=Z,5.9nm,0.9s,mb4.6
MMAI Mount Meron Ar 56.74 291 LR LR 23 00 50.4
comp=Z,104nm,18.3s,MS4.0,baz=45,slow=40
AKASG Malin Array Be 57.05 313 P **P** **22 33 05.8 -0.9**
comp=Z,3.0nm,0.4s,mb4.7,baz=68,slow=7.5,SNR=11
AKASG LR LR 22 59 03.9
comp=Z,166nm,18.3s,MS4.2,baz=65,slow=38
AKASG Malin Array Be 57.05 313 P **P** **22 33 05.8 -0.9**
AKASG LR LR 22 59 03.9
ARCES ARCESS Array B 57.19 336 P **P** **22 33 07.3 -0.1**
comp=Z,4.5nm,0.8s,mb4.5,baz=94,slow=6.8,SNR=10
ARCES LR LR 23 01 04.8
comp=Z,91nm,18.2s,MS3.9,baz=128,slow=40
ARE0 ARCESS Array S 57.19 336 P **P** **22 33 07.8 +0.4**
KAF Kangasniemi 57.21 327 *eP* **P** **22 33 06.9 -0.8**
KAF pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
KAF Kangasniemi 57.21 327 *ep* **P** **22 33 06.9 -0.8**
comp=Z,5.5nm,0.6s,mb4.8,baz=84,slow=6.7
KAF Kangasniemi 57.21 327 *ep* **P** **22 33 06.9 -0.8**
comp=Z,5.5nm,0.6s,mb4.8,baz=84,slow=6.7
FINES FINESS Array B 57.38 326 P **P** **22 33 08.3 -0.5**
comp=Z,9.4nm,0.7s,mb4.9,baz=79,slow=7.8,SNR=35
WRAB Tennant Creek 58.66 145 *eP* **P** **22 33 18.1 -0.2**
WRA Warramunga Arr 58.66 145 P **P** **22 33 17.8 -0.5**
comp=Z,14nm,0.7s,mb5.1,baz=337,slow=7.6,SNR=37
TIRR Tirgusor 58.89 306⇑ *iP* **P** **22 33 19.0 -0.7**
TIRR Tirgusor 58.89 306 *eP* **P** **22 33 19.3 -0.4**
comp=Z,4.1nm,0.7s,mb4.6
TIRR Tirgusor 58.89 306⇑ *iP* **P** **22 33 19.0 -0.7**
HARR Harsova 59.16 306⇑ *iP* **P** **22 33 22.2 +0.6**
HARR Harsova 59.16 306⇑ *iP* **P** **22 33 22.2 +0.6**
VRI Vrincioaia 59.70 308⇑ *iP* **P** **22 33 25.3 0.0**
VRI Vrincioaia 59.70 308⇑ *iP* **P** **22 33 25.3 0.0**
PLOR Plostina 59.75 308⇓ *iP* **P** **22 33 26.1 +0.4**
PLOR Plostina 59.75 308⇓ *iP* **P** **22 33 26.1 +0.4**
SUW Suwalki 60.06 318 *eP* **P** **22 33 27.3 -0.3**
SUW Suwalki 60.06 318 *eP* **P** **22 33 27.2 -0.4**
SUW pmax pmax
comp=Z,27nm,0.6s,mb5.5
SUW Suwalki 60.06 318 *eP* **P** **22 33 27.2 -0.4**
comp=Z,27nm,0.6s,mb5.5
BURAR Bucovina Array 60.27 310⇑ *iP* **P** **22 33 29.1 -0.1**
BURAR Bucovina Array 60.27 310⇑ *iP* **P** **22 33 29.0 -0.2**
MLR Muntele Rosu 60.32 308⇓ *iP* **P** **22 33 30.2 +0.6**
MLR Muntele Rosu 60.32 308⇓ *iP* **P** **22 33 30.2 +0.6**
KWP Kalwaria Pacla 61.37 313 *eP* **P** **22 33 37.1 +0.5**
KWP Kalwaria Pacla 61.37 313 *eP* **P** **22 33 36.9 +0.3**
KWP pmax pmax
comp=Z,25nm,1.1s,mb5.3
KWP Kalwaria Pacla 61.37 313 *eP* **P** **22 33 36.9 +0.3**
comp=Z,25nm,1.1s,mb5.2
ASAR Alice Springs 61.65 148 P **P** **22 33 38.2 -0.5**
comp=Z,4.2nm,0.8s,mb4.6,baz=337,slow=6.7,SNR=22
KOLS Kolonicke sedl 61.83 312 *eP* **P** **22 33 42.0 +2.3**
KOLS pmax pmax
comp=Z,24nm,2.9s,mb4.8
KOLS Kolonicke sedl 61.83 312 *eP* **P** **22 33 42.0 +2.3**
comp=Z,24nm,2.9s,mb4.8
KOLS Kolonicke sedl 61.83 312 *eP* **P** **22 33 42.0 +2.3**
UZH Uzhgorod 61.90 312 *eP* **P** **22 33 39.8 -0.4**
UZH *e* 22 34 18.0
STHS Stebnicka Huta 62.35 313 *eP* **P** **22 33 43.2 0.0**
STHS pmax pmax
comp=Z,4.0nm,1.0s,mb4.5
STHS Stebnicka Huta 62.35 313 *eP* **P** **22 33 43.2 0.0**
comp=Z,4.0nm,1.0s,mb4.5
STHS Stebnicka Huta 62.35 313 *eP* **P** **22 33 43.2 0.0**
NIE Niedzica 62.93 313 *eP* **P** **22 33 47.9 +0.8**
OJC Ojcow 63.02 314 *eP* **P** **22 33 46.5 -1.2**
KECS Kecovo 63.09 312 *eP* **P** **22 33 48.5 +0.3**
KECS pmax pmax
comp=Z,2.0nm,0.6s,mb4.4
KECS Kecovo 63.09 312 *eP* **P** **22 33 48.5 +0.3**
comp=Z,1.7nm,0.6s,mb4.3
KECS Kecovo 63.09 312 *eP* **P** **22 33 48.5 +0.3**
BZS Buzias 63.20 309⇓ *iP* **P** **22 33 48.7 -0.3**
BZS Buzias 63.20 309⇓ *iP* **P** **22 33 48.7 -0.3**
PSZ Piszkesteto 63.64 312 *eP* **P** **22 33 52.2 +0.4**
VYHS Vyhne 64.14 313 *i P* **P** **22 33 55.4 +0.3**
VYHS pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
VYHS Vyhne 64.14 313 *i P* **P** **22 33 55.4 +0.3**
comp=Z,2.7nm,0.9s,mb4.3
VYHS Vyhne 64.14 313 *i P* **P** **22 33 55.4 +0.3**
OKC Ostrava-Krasne 64.15 314 *eP* **P** **22 33 55.0 -0.2**
OKC Ostrava-Krasne 64.15 314 *eP* **P** **22 33 55.0 -0.2**
NB2 NORSAR Subarra 64.49 327 P **P** **22 33 56.2 -1.0**
comp=Z,73nm,2.0s,mb5.4,baz=72,slow=6.9
NB2 NORSAR Subarra 64.49 327 P **P** **22 33 56.2 -1.0**
NB2 NORSAR Subarra 64.49 327 P **P** **22 33 56.2 -1.0**
NOA NORSAR Array B 64.49 327 P **P** **22 33 56.0 -1.2**
comp=Z,4.4nm,0.6s,mb4.7,baz=73,slow=6.6,SNR=18
NOA LR LR 23 04 34.9
comp=Z,110nm,19.5s,MS4.1,baz=90,slow=38
MORC Moravsky Berou 64.54 314 *eP* **P** **22 33 57.7 0.0**
MORC pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
MORC Moravsky Berou 64.54 314 *eP* **P** **22 33 57.7 -0.1**
comp=Z,3.7nm,0.8s,mb4.5
MORC Moravsky Berou 64.54 314⇓ *iP* **P** **22 33 57.6 -0.1**
NAO01 NORSAR Array S 64.70 327 *eP* **P** **22 33 57.7 -0.9**
PKSM Moragy 64.99 310⇑ *iP* **P** **22 34 00.4 -0.3**
PKSM Moragy 64.99 310⇑ *iP* **P** **22 34 00.4 -0.3**
DPC Dobruska-Polom 65.11 315 *eP* **P** **22 34 01.8 +0.4**
DPC *e**PP pP 22 34 11.3 +3.7
DPC MLR MLR
comp=Z,500nm,16.4s,MS4.8
DPC Dobruska-Polom 65.11 315 *eP* **P** **22 34 01.8 +0.4**
DPC *ex* x 22 34 11.3
DPC AMS AMS 23 03 20.0
comp=Z,500nm,16.4s
UPC Upice 65.24 315 *eP* **P** **22 34 01.9 -0.4**
UPC *e**PP pP 22 34 12.6 +4.1
UPC Upice 65.24 315 *eP* **P** **22 34 01.9 -0.4**
UPC *ex* x 22 34 12.6
VRAC Vranov 65.28 314⇑ *iP* **P** **22 34 03.0 +0.5**
VRAC Vranov 65.28 314⇑ *iP* **P** **22 34 03.0 +0.5**
TREC Trest 65.97 314 *eP* **P** **22 34 07.5 +0.5**
TREC MLR MLR
comp=Z,300nm,14.3s,MS4.6
TREC Trest 65.97 314 *eP* **P** **22 34 07.5 +0.5**
TREC AMS AMS 23 04 00.0
comp=Z,300nm,14.3s
CONA Conrad Observa 66.20 313⇑ *iP* **P** **22 34 09.0 +0.5**
comp=Z,6.0nm,0.9s,mb4.6
CSNA Conrad Observa 66.20 313⇑ *iP* **P** **22 34 09.0 +0.5**
comp=Z,6.5nm,1.1s,mb4.6
PRU Pruhonice 66.31 315 *eP* **P** **22 34 10.0 +0.9**
PRU *e**PP pP 22 34 20.4 +5.0
PRU MLR MLR
comp=Z,400nm,16.9s,MS4.7
PRU Pruhonice 66.31 315 *eP* **P** **22 34 10.0 +0.9**
PRU *ex* x 22 34 20.4
PRU AMS AMS 23 04 10.0
comp=Z,400nm,16.9s
BRG Berggiesshubel 66.36 316 *i P* **P** **22 34 09.5 0.0**
comp=Z,6.2nm,0.7s,mb4.8
ARSA Arzberg 66.65 312⇑ *iP* **P** **22 34 11.2 -0.2**
comp=Z,3.6nm,0.8s,mb4.4
CLL Collm 66.76 317 *eP* **P** **22 34 11.8 -0.2**
comp=Z,8.0nm,1.0s,mb4.7
CLL Collm 66.76 317⇑ *iP* **P** **22 34 11.8 -0.2**
CLL pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
CLL MLR MLR
comp=Z,300nm,18.6s,MS4.5
CLL Collm 66.76 317⇑ *iP* **P** **22 34 11.8 -0.2**
comp=Z,8.0nm,1.0s,mb4.7
CLL *e* 22 34 15.0
CLL LR LR
comp=Z,300nm,18.6s,MS4.5
CLL Collm 66.76 317⇑ *iP* **P** **22 34 11.8 -0.2**
comp=Z,8.0nm,1.0s,mb4.7
CLL *e*pP pP 22 34 15.0 -3.3
CLL *e*(PP) 22 36 32.0
SOKA Soboth 67.17 312⇑ *iP* **P** **22 34 14.7 0.0**
comp=Z,7.2nm,0.9s,mb4.7
KHC Kasperske Hory 67.20 315 *eP* **P** **22 34 14.7 -0.1**
KHC *e**PP pP 22 34 24.9 +3.8
KHC MLR MLR
comp=Z,400nm,14.8s,MS4.8
KHC Kasperske Hory 67.20 315 *eP* **P** **22 34 14.7 -0.1**
KHC *ex* x 22 34 24.9
KHC AMS AMS 23 04 40.0
comp=Z,400nm,14.8s
GEC2 GERESS Array S 67.22 314 *eP* **P** **22 34 15.1 +0.1**
comp=Z,6.0nm,1.3s,mb4.5
GEC2 GERESS Array S 67.22 314 *eP* **P** **22 34 15.1 +0.1**
GEC2 pmax pmax
comp=Z,6.0nm,1.3s,mb4.5
GERES GERESS Array B 67.22 314 P **P** **22 34 15.0 0.0**
comp=Z,2.3nm,0.7s,mb4.3,baz=76,slow=5.6,SNR=20
GERES LR LR 23 05 09.6
comp=Z,313nm,18.1s,MS4.6,baz=199,slow=37
MOA Molln 67.23 313⇑ *iP* **P** **22 34 15.5 +0.4**
comp=Z,7.0nm,1.2s,mb4.5
BSEG Bad Segeberg 67.34 320 *eP* **P** **22 34 16.4 +0.7**
comp=Z,18nm,1.0s,mb5.1
TANN Tannenbergstha 67.41 316 *eP* **P** **22 34 15.9 -0.2**
comp=Z,4.0nm,0.9s,mb4.5
WERD Werda 67.49 316 *eP* **P** **22 34 16.7 +0.1**
GUNZ Gunzen 67.50 316 *eP* **P** **22 34 16.9 +0.2**
WERN Wernitzgruen 67.50 316 *eP* **P** **22 34 17.0 +0.3**
NEUB Neuenburg 67.52 317 *eP* **P** **22 34 16.8 0.0**
TTA Tatalina 67.58 29 *eP* **P** **22 34 16.7 -0.3**
WET Wettzell 67.62 315 *eP* **P** **22 34 17.7 +0.2**
comp=Z,10.0nm,1.4s,mb4.7
WET Wettzell 67.62 315 *eP* **P** **22 34 17.7 +0.2**
WET pmax pmax
comp=Z,10.0nm,1.4s,mb4.7
ROTZ Rotzenmuhle 67.80 316 *eP* **P** **22 34 19.0 +0.4**
comp=Z,7.0nm,0.8s,mb4.7
COLD Coldfoot 67.94 24 *eP* **P** **22 34 18.8 -0.4**
comp=Z,12nm,0.9s,mb4.9
NRDL Niedersach Rie 68.00 319 *eP* **P** **22 34 20.0 +0.2**
comp=Z,13nm,1.0s,mb4.9
CLZ Clausthal 68.10 318 *eP* **P** **22 34 20.9 +0.4**
comp=Z,11nm,0.8s,mb4.9
CLZ Clausthal 68.10 318 *eP* **P** **22 34 20.9 +0.4**
CLZ pmax pmax
comp=Z,11nm,0.8s,mb4.9
KBA Koelnbreinsper 68.10 313⇑ *iP* **P** **22 34 20.4 -0.1**
comp=Z,3.1nm,0.6s,mb4.5
GRA1 Grafenberg Arr 68.42 316 *eP* **P** **22 34 22.8 +0.3**
comp=Z,15nm,1.1s,mb4.9
GRA1 LR LR
comp=Z,300nm,20.7s,MS4.5
GRF Grafenberg Arr 68.42 316 *eP* **P** **22 34 22.8 +0.3**
comp=Z,15nm,1.1s,mb4.9
GRF *eL* 23 05 42.4
comp=Z,314nm,20.7s
GRF Grafenberg Arr 68.42 316 *eP* **P** **22 34 22.8 +0.3**
GRF pmax pmax
comp=Z,15nm,1.1s,mb4.9
GRF MLR MLR

comp=Z,300nm,20.7s,MS4.5
GRF Grafenberg Arr 68.42 316 *eP* **P 22 34 22.8 +0.3**
GRF pmax pmax
comp=Z,15nm,1.1s,mb4.9
GRF MLR MLR
comp=Z,300nm,20.7s,MS4.5
SVW2 Sparrevohn 68.53 31 *eP* **P 22 34 21.3 -1.7**
CHUM Lake Minchumin 68.68 27 *eP* **P 22 34 24.2 +0.4**
comp=Z,4.9nm,0.7s,mb4.5
ABTA Abfaltersbach 68.75 312⇑*iP* **P 22 34 23.7 -1.0**
comp=Z,3.2nm,0.9s,mb4.2
TIP Timpagrande 68.82 304 *eP* **P 22 34 24.2 -1.0**
comp=Z,12nm,1.3s,mb4.7
FUR Furstenfeldbru 68.97 314 *eP* **P 22 34 26.5 +0.5**
comp=Z,20nm,0.8s,mb5.1
FUR Furstenfeldbru 68.97 314 *eP* **P 22 34 26.5 +0.5**
FUR pmax pmax
comp=Z,20nm,0.8s,mb5.1
BPAW Bear Paw Mtn. 69.10 27 *eP* **P 22 34 26.2 -0.3**
comp=Z,11nm,0.9s,mb4.8
WTTA Wattenberg 69.10 313⇑*iP* **P 22 34 26.4 -0.4**
comp=Z,3.6nm,0.6s,mb4.5
WATA Walderalm 69.11 313⇑*iP* **P 22 34 26.6 -0.3**
comp=Z,2.0nm,0.4s,mb4.4
PPLA Purkeypile 69.18 28 *eP* **P 22 34 27.1 0.0**
comp=Z,9.8nm,0.8s,mb4.8
MOTA Moosalm 69.41 313⇑*iP* **P 22 34 28.9 +0.2**
comp=Z,8.9nm,1.1s,mb4.6
FETA Feichten 69.77 313⇑*iP* **P 22 34 30.7 -0.2**
comp=Z,7.7nm,1.1s,mb4.6
CEL Celeste 69.80 303 P **P 22 34 29.4 -1.9**
comp=Z,17nm,0.8s,mb5.0
AQU L'Aquila 69.90 308 *eP* **P 22 34 31.9 0.0**
AQU pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
AQU L'Aquila 69.90 308 *eP* **P 22 34 31.9 +0.1**
comp=Z,7.1nm,0.9s,mb4.6
COLA College 69.92 25 P **P 22 34 31.6 +0.1**
COLA pmax pmax
comp=Z,19nm,0.8s,mb5.1
COLA College 69.92 25 P **P 22 34 31.6 +0.1**
comp=Z,20nm,0.8s,mb5.1
KMBO Kilima Mbogo 70.20 256 P **P 22 34 33.6 -0.5**
comp=Z,4.7nm,0.9s,mb4.4,baz=50,slow=7.6,SNR=7.2
KMBO Kilima Mbogo 70.20 256*ceP* **P 22 34 33.7 -0.4**
KMBO pmax pmax
comp=Z,5.0nm,0.9s
KMBO Kilima Mbogo 70.20 256 *eP* **P 22 34 32.7 -1.5**
comp=Z,2.8nm,0.8s,mb4.2
BFO Black Forest 70.71 315 *eP* **P 22 34 36.3 -0.4**
comp=Z,9.0nm,1.2s,mb4.6
BFO Black Forest 70.71 315 *eP* **P 22 34 36.3 -0.4**
BFO pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
PMR Palmer 71.06 29 *eP* **P 22 34 36.9 -1.7**
CDF Champ du Feu 71.31 316⇑*iP* **P 22 34 39.8 -0.5**
comp=Z,18nm,1.1s,mb4.6
CDF Champ du Feu 71.31 316⇑*iP* **P 22 34 39.8 -0.5**
CDF pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
CDF Champ du Feu 71.31 316⇑*iP* **P 22 34 39.8 -0.5**
comp=Z,9.2nm,1.1s,mb4.6
KDAK Kodiak Island 71.39 33*ceP* **P 22 34 40.2 -0.4**
WLF Walferdange 71.43 317 P **P 22 34 41.3 +0.3**
comp=Z,12nm,1.4s,mb4.6
WLF Walferdange 71.43 317 *eP* **P 22 34 41.7 +0.7**
comp=Z,16nm,1.0s,mb4.9
WLF Walferdange 71.43 317 *eP* **P 22 34 41.4 +0.4**
WLF pmax pmax
comp=Z,18nm,1.1s,mb4.9
WLF Walferdange 71.43 317 *eP* **P 22 34 41.4 +0.3**
comp=Z,18nm,1.1s,mb4.9
ECH Echery 71.47 315 *eP* **P 22 34 39.4 -1.9**
ECH pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
ECH Echery 71.47 315 *eP* **P 22 34 39.4 -1.8**
comp=Z,3.2nm,0.9s,mb4.2
BCLA Clavier 71.59 318 P **P 22 34 42.2 +0.2**
DOU Dourbes 72.14 318 P **P 22 34 45.5 +0.2**
STKA Stephens Creek 72.19 146 P **P 22 34 45.1 -0.5**
comp=Z,4.4nm,0.6s,mb4.6,baz=336,slow=3.8,SNR=18
STKA LR LR 23 06 59.8
comp=Z,83nm,18.2s,MS4.0,baz=25,slow=36
STKA Stephens Creek 72.19 146 *eP* **P 22 34 44.7 -1.0**
comp=Z,0.9nm,0.7s,mb3.8
EGAK Eagle 72.38 24 *eP* **P 22 34 46.0 -0.4**
INK Inuvik 72.59 19 *eP* **P 22 34 47.5 -0.1**
LPG La Plagne 72.91 313⇑*iP* **P 22 34 50.5 +0.5**
comp=Z,22nm,0.7s,mb4.9
LPG La Plagne 72.91 313⇑*iP* **P 22 34 50.5 +0.5**
LPG pmax pmax
comp=Z,11nm,0.7s,mb4.9
LPG La Plagne 72.91 313⇑*iP* **P 22 34 50.5 +0.5**
comp=Z,11nm,0.7s,mb4.9
LPL La Plagne 72.92 313⇑*iP* **P 22 34 50.3 +0.3**
comp=Z,26nm,0.8s,mb4.9
LPL La Plagne 72.92 313⇑*iP* **P 22 34 50.3 +0.3**
LPL pmax pmax
comp=Z,13nm,0.8s,mb4.9
LPL La Plagne 72.92 313⇑*iP* **P 22 34 50.3 +0.3**
comp=Z,13nm,0.8s,mb4.9
BNI Bardonecchia 73.16 313 *eP* **P 22 34 51.7 +0.2**
BNI pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
BNI Bardonecchia 73.16 313 *eP* **P 22 34 51.7 +0.2**
comp=Z,6.7nm,0.9s,mb4.6
BMRM Bremner River 73.25 28 *eP* **P 22 34 51.8 +0.2**
comp=Z,29nm,1.1s,mb5.1
DAWY Dawson 73.42 24 *eP* **P 22 34 52.2 -0.4**
RES Resolute Bay 74.02 5 *eP* **P 22 34 56.4 +0.4**
SMF Signal de Mont 74.18 315⇑*iP* **P 22 34 56.9 -0.5**
comp=Z,17nm,0.8s,mb4.7
SMF Signal de Mont 74.18 315⇑*iP* **P 22 34 56.9 -0.5**
SMF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
SMF Signal de Mont 74.18 315⇑*iP* **P 22 34 56.9 -0.5**
comp=Z,8.7nm,0.8s,mb4.7
TCF Toulx Ste Croi 75.34 315⇑*iP* **P 22 35 03.9 -0.3**
comp=Z,12nm,0.8s,mb4.6
TCF Toulx Ste Croi 75.34 315⇑*iP* **P 22 35 03.9 -0.3**
TCF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
TCF Toulx Ste Croi 75.34 315⇑*iP* **P 22 35 03.9 -0.3**
comp=Z,6.0nm,0.8s,mb4.6
CAF Calviac 76.10 314⇑*iP* **P 22 35 08.8 +0.3**
HYT Haines Junctio 76.12 26 *eP* **P 22 35 08.9 +0.6**
YKA Yellowknife Ar 82.10 17 P **P 22 35 40.8 -0.2**
comp=Z,8.0nm,0.8s,mb4.7,baz=328,slow=4.9,SNR=49
YKA LR LR 23 17 24.6
comp=Z,8.1nm,18.1s,MS3.1,baz=145,slow=40
YKA Yellowknife Ar 82.10 17 P **P 22 35 40.8 -0.2**
YKA LR LR 23 17 24.6
ESDC Sonseca Array 82.67 312 P **P 22 35 43.9 -0.6**
comp=Z,1.1nm,0.7s,mb4.0,baz=30,slow=6.1,SNR=5.1
ESDC LR LR 23 16 27.9
comp=Z,56nm,18.3s,MS4.0,baz=300,slow=39
MVO Moncorvo 83.74 315 *eP* **P 22 35 50.8 +0.9**
comp=Z,16nm,1.5s,mb4.9
PVRL Vila Real 84.09 315 *eP* **P 22 35 51.9 +0.2**
comp=Z,12nm,2.3s,mb4.6
PMRV Marv??o 84.98 313 *eP* **P 22 35 56.9 +0.6**
comp=Z,13nm,2.3s,mb4.6
PBAR Barrancos 85.50 312 *eP* **P 22 35 59.3 +0.4**
comp=Z,13nm,2.2s,mb4.7
PTOM Tomar 85.50 314 *eP* **P 22 35 59.8 +0.9**
comp=Z,19nm,1.4s,mb5.1
EVO Evora 85.90 313 *eP* **P 22 36 01.4 +0.5**
comp=Z,25nm,1.8s,mb5.2
PBEJ Beja 86.11 312 *eP* **P 22 36 02.8 +0.9**
comp=Z,10nm,2.1s,mb4.7
PVAQ Vaqueiros 86.39 312 *eP* **P 22 36 03.1 -0.2**
comp=Z,26nm,1.9s,mb5.1
EDM Edmonton 90.38 21 *eP* **P 22 36 22.1 +0.2**
FFC Flin Flon 92.00 14*ceP* **P 22 36 29.6 +0.2**
FFC Flin Flon 92.00 14 *eP* **P 22 36 28.1 -1.3**
comp=Z,5.5nm,0.9s,mb4.9
SCHQ Schefferville 94.22 354 LR LR 23 26 01.4
comp=Z,86nm,18.3s,MS4.2,baz=325,slow=40
BOSA Boshof 94.99 240 LR LR 23 16 04.6
comp=Z,153nm,18.8s,MS4.5,baz=340,slow=33
TXAR Lajitas Array 114.84 26 PKiKP PKiKP 22 42 01.4 -0.5
comp=Z,0.3nm,0.6s,baz=198,slow=0.4,SNR=5.2
TXAR PKKPbc PKKPbc 22 52 37.8 -0.7
comp=Z,0.3nm,0.6s,baz=159,slow=5.7,SNR=5.8
TXAR PKKPab PKKPab 22 52 46.5 -0.9
comp=Z,0.4nm,0.8s,baz=147,slow=7.0,SNR=3.9
TXAR Lajitas Array 114.84 26 PKiKP PKiKP 22 42 01.4 -0.5
TXAR 22 52 37.8
ROSC El Rosal 144.40 356 PKP PKPdf 22 42 56.9 -0.9
comp=Z,9.2nm,0.5s,baz=261,slow=21,SNR=7.3
ROSC El Rosal 144.40 356 *e*PKPdf PKPdf 22 42 57.0 -0.8
LPAZ La Paz 163.51 330 PKP PKPdf 22 43 23.9 -0.3
comp=Z,1.0nm,0.7s,baz=347,slow=1.8,SNR=7.1

IDC 10 22:29:38.9±2.0, 8°.84S×127°.81E, h0km, mb3.8/1, mb1 3.8/3, mb1mx3.5/17, mbtmp3.6/3, ML3.1/1, Error ellipse: s-maj=134.7km s-min=29.4km az=64.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**12.72**	**151**	Pn	Pn	22 32 40.8	-0.4
	0.1nm,0.3s,baz=324,slow=14,SNR=10.0						
WRA				Sn	Sn	22 35 05.5	+2.0
	0.2nm,0.3s,baz=330,slow=23,SNR=4.0						
ASAR	**Alice Springs**	**15.86**	**159**	Pn	Pn	22 33 23.9	+0.4
	0.2nm,0.3s,baz=340,slow=10,SNR=16						
ZALV	**Zalesovo Beam**	**72.29**	**335**	P	P	22 41 06.2	+0.1
	0.6nm,0.7s,baz=140,slow=7.5,SNR=3.5						

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*ISCJB **10** 22:33:40.6±0.6, 24°.91N±0°.04×121°.78E±0°.03, h95km±4km, Error ellipse: s-maj=6.8km s-min=3.4km az=162.8*
*TAP **10** 22:33:41.2, 24°.86N×121°.77E, h90km, ML4.0, B*
*JMA **10** 22:33:41.7±0.3, 24°.95N×121°.86E, h89km, M2.9*
ISC 10 22:33:41.1±0.6, 24°.92N±0°.04×121°.78E±0°.03, h94km±4km, n50, σ0s75/82, 9C-7D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILA	**Ilan**	**0.15**	**192⇑***iP*		**Pn**	**22 33 54.9**	**+0.5**
	baz=191						
ILA				S	**Sn**	**22 34 05.2**	**+1.0**
	baz=191						
NWF	**Wu-fen Shan**	**0.15**	**359⇑***iP*		**Pn**	**22 33 54.6**	**+0.3**
	baz=9.0						
NWF				S	**Sn**	**22 34 04.4**	**+0.2**
	baz=9.0						
TWA	**Mucha**	**0.19**	**289⇓***iP*		**Pn**	**22 33 54.7**	**+0.2**
	baz=298						
TWA				*e*S	**Sn**	**22 34 04.2**	**-0.2**
	baz=298						
TWB1	**Santiao Chiao**	**0.21**	**64⇑***iP*		**Pn**	**22 33 54.7**	**+0.2**
	baz=49						
TWB1				S	**Sn**	**22 34 04.1**	**-0.4**
	baz=49						
TWE	**Neicheng**	**0.22**	**208⇓***iP*		**Pn**	**22 33 54.8**	**+0.2**
	baz=220						
TWE				S	**Sn**	**22 34 04.7**	**+0.1**
	baz=220						
TAP1	**Taipei**	**0.27**	**297**	P	**Pn**	**22 33 54.7**	**0.0**
	baz=307						
TAP1				*e*S	**Sn**	**22 34 04.5**	**-0.4**
	baz=307						
TWC	**Suao**	**0.31**	**169⇑***iP*		**Pn**	**22 33 55.3**	**+0.3**
	baz=155						
TWC				*e*S	**Sn**	**22 34 06.7**	**+1.3**
	baz=155						
ENTT	**Nioudou**	**0.34**	**216**	P	**Pn**	**22 33 55.2**	**+0.1**
	baz=230						
ENTT				*e*S	**Sn**	**22 34 05.5**	**-0.1**
	baz=230						
TWS1	**Kuangyinshan**	**0.38**	**299⇓***iP*		**Pn**	**22 33 55.7**	**+0.4**
	baz=296						
TWS1				*e*S	**Sn**	**22 34 06.1**	**+0.1**
	baz=296						
TWY	**Chenhua**	**0.39**	**335⇓***iP*		**Pn**	**22 33 55.9**	**+0.4**
	baz=333						
TWY				*e*S	**Sn**	**22 34 06.3**	**+0.1**
	baz=333						
NSK	**Sanguang**	**0.45**	**238⇓***iP*		**Pn**	**22 33 55.6**	**-0.3**
	baz=235						
NSK				*e*S	**Sn**	**22 34 05.4**	**-1.5**
	baz=235						
ENA	**Nanau**	**0.49**	**184**	*e*P	**Pn**	**22 33 55.9**	**-0.2**
	baz=195						
ENA				*e*S	**Sn**	**22 34 09.4**	**+2.1**
	baz=195						
NCU	**National Centr**	**0.54**	**276⇓***iP*		**Pn**	**22 33 56.8**	**+0.2**
	baz=281						
NCU				*e*S	**Sn**	**22 34 08.1**	**0.0**
	baz=281						
NNS	**Nan Shan**	**0.60**	**218**	P	**Pn**	**22 33 57.1**	**+0.1**
	baz=228						
HSN	**Hsinchu**	**0.75**	**261**	*e*P	**Pn**	**22 33 57.7**	**-0.7**
	baz=260						
HSN				*e*S	**Sn**	**22 34 09.9**	**-1.4**
	baz=260						
PCYT	**Pengchaiyu**	**0.76**	**20**	P	**Pn**	**22 33 58.8**	**+0.4**
	baz=14						
NSTT	**Nanjuang**	**0.77**	**248⇓***iP*		**Pn**	**22 33 58.5**	**0.0**
	baz=246						
NSTT				*e*S	**Sn**	**22 34 10.5**	**-1.1**
	baz=246						
TWD	**Chiawan**	**0.85**	**192**	⇑P	**Pn**	**22 33 58.1**	**-1.4**
	baz=200						
TWT	**Tachien**	**0.86**	**220**	⇑P	**Pn**	**22 34 00.3**	**+0.8**
	baz=223						
TWT				*e*S	**Sn**	**22 34 13.4**	**0.0**
	baz=223						
WHF	**Hehuan Shan**	**0.90**	**212⇑***iP*		**Pn**	**22 34 00.4**	**+0.4**
	baz=207						
WHF				*e*S	**Sn**	**22 34 14.2**	**+0.1**
	baz=207						
HWA	**Hwalien**	**0.95**	**190**	*e*P	**Pn**	**22 33 57.8**	**-2.7**
	baz=199						
NSY	**Sanyi**	**1.05**	**242**	P	**Pn**	**22 34 01.9**	**+0.3**
	baz=244						
NSY				*e*S	**Sn**	**22 34 16.9**	**-0.2**
	baz=244						
TWQ1	**Liyutan**	**1.08**	**239**	*e*P	**Pn**	**22 34 01.9**	**0.0**
	baz=241						
TWQ1				*e*S	**Sn**	**22 34 16.6**	**-1.0**
	baz=241						
ESL	**Shilin**	**1.14**	**196**	*e*P	**Pn**	**22 34 00.7**	**-2.0**
	baz=198						
YOJ	**Yonaguni jima**	**1.21**	**112**	P	**Pn**	**22 34 03.3**	**-0.1**
YOJ				*e*S	**Sn**	**22 34 19.5**	**-0.7**
TCU	**Taichung**	**1.27**	**233**	*e*P	**Pn**	**22 34 04.3**	**+0.2**
	baz=235						
SMLT	**Sun Moon Lake**	**1.31**	**218⇑***iP*		**Pn**	**22 34 05.1**	**+0.4**
	baz=228						
SMLT				*e*S	**Sn**	**22 34 22.2**	**-0.2**
	baz=228						
TYC	**Yuchr**	**1.31**	**220**	P	**Pn**	**22 34 05.1**	**+0.3**
	baz=230						
TYC				*e*S	**Sn**	**22 34 22.3**	**-0.3**
	baz=230						
WNT	**Mingjian**	**1.44**	**224**	P	**Pn**	**22 34 06.6**	**+0.3**
	baz=233						
WNT				*e*S	**Sn**	**22 34 25.6**	**+0.3**
	baz=233						
EHY	**Hungye**	**1.47**	**197**	*e*P	**Pn**	**22 34 05.3**	**-1.3**
	baz=193						
YUS	**Yu-Shan**	**1.61**	**208**	*e*P	**Pn**	**22 34 09.7**	**+1.3**
	baz=219						
YUS				*e*S	**Sn**	**22 34 31.2**	**+2.1**
	baz=219						
TWF1	**Yuli**	**1.62**	**196**	*e*P	**Pn**	**22 34 07.5**	**-1.0**
	baz=195						
CHN5	**Tsauling**	**1.66**	**218**	⇑P	**Pn**	**22 34 09.4**	**+0.4**
	baz=219						
CHN5				*e*S	**Sn**	**22 34 30.3**	**+0.2**
	baz=219						
WGK	**Gukeng**	**1.66**	**223**	*e*P	**Pn**	**22 34 09.3**	**+0.3**
	baz=224						
WGK				*e*S	**Sn**	**22 34 30.9**	**+0.8**
	baz=224						
ALS	**Alishan**	**1.66**	**213**	*e*P	**Pn**	**22 34 09.9**	**+0.9**
	baz=223						
ELDTW	**Lidau**	**1.86**	**202**	*e*P	**Pn**	**22 34 11.5**	**-0.1**
	baz=199						
IRIF	**Iriomote-Funau**	**1.86**	**108**	P	**Pn**	**22 34 11.4**	**-0.2**
IRIF				S	**Sn**	**22 34 33.9**	**-1.0**
CHY	**Chiayi**	**1.88**	**222**	*e*P	**Pn**	**22 34 11.7**	**-0.1**
	baz=232						
TWK	**Hsinying**	**2.02**	**216**	*e*P	**Pn**	**22 34 14.0**	**+0.3**
	baz=218						
HATJ	**Hateruma jima**	**2.03**	**115**	P	**Pn**	**22 34 14.2**	**+0.4**
HATJ				*e*S	**Sn**	**22 34 38.3**	**-0.5**
CHN1	**Nanshi**	**2.07**	**214**	*e*P	**Pn**	**22 34 14.6**	**+0.2**
	baz=215						
CHN1				*e*S	**Sn**	**22 34 39.2**	**-0.5**
	baz=215						
JKRS	**Kuro-shima**	**2.14**	**108**	P	**Pn**	**22 34 15.8**	**+0.6**
JKRS				*e*S	**Sn**	**22 34 40.9**	**-0.4**
TWG	**Pinlang**	**2.19**	**197**	*e*P	**Pn**	**22 34 16.1**	**+0.3**
	baz=192						
JIJ	**Ishigaki jima**	**2.22**	**104**	P	**Pn**	**22 34 16.2**	**0.0**
JIJ				S	**Sn**	**22 34 42.3**	**-0.9**
SSD	**Sandimen**	**2.40**	**206**	*e*P	**Pn**	**22 34 18.7**	**-0.1**
	baz=216						
ECL	**Taimali**	**2.43**	**198**	*e*P	**Pn**	**22 34 17.7**	**-1.4**
	baz=192						
PNG	**Penghu**	**2.44**	**237**	*e*P	**Pn**	**22 34 18.2**	**-0.9**
	baz=237						
EAST	**Anshuo**	**2.66**	**199**	*e*P	**Pn**	**22 34 23.7**	**+1.5**
	baz=193						
JTJ	**Tarama**	**2.67**	**95**	P	**Pn**	**22 34 23.1**	**+0.9**
JTJ				*e*S	**Sn**	**22 34 54.6**	**+0.7**
SCZT	**Fangliau**	**2.75**	**203**	*e*P	**Pn**	**22 34 23.7**	**+0.4**
	baz=206						

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*ATH **10** 23:04:51.5, 35°.78N×21°.19E, h16km±5km, MD3.2/5*
*NEIC **10** 23:04:51.5, 35°.78N×21°.19E, h16km, MD3.2(ATH), After ATH.*
*CSEM **10** 23:04:54.1±0.7, 35°.81N×21°.34E, h5km, ML3.0/1, Error ellipse: s-maj=17.6km s-min=8.7km az=54.0*
*THE **10** 23:04:55.9, 35°.86N×21°.52E, h0km±1km, ML3.0/1, Error ellipse: s-maj=3.5km s-min=0.6km az=252.0*
ISC 10 23:04:52.6±2.5, 35°.77N±0°.08×21°.2E±0°.2, h3km±12km, n29, σ0s47/35, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**1.20**	**21**	P	**Pg**	**23 05 15.8**	**+0.1**
PYL				S	**Sg**	**23 05 31.2**	**-0.1**
PYL	**PYLOS**	**1.20**	**21**	P	**Pg**	**23 05 15.8**	**+0.1**
PYL				S	**Sg**	**23 05 31.2**	**-0.1**
ITM	**Ithomi**	**1.52**	**22**	*e*Pn	**Pn**	**23 05 20.0**	**-0.7**
ITM				*e*Sn	**Sn**	**23 05 41.2**	**+0.1**
ITM	**Ithomi**	**1.52**	**22**	P	**Pn**	**23 05 21.3**	**+0.6**
ITM				S	**Sn**	**23 05 41.1**	**0.0**
ITM	**Ithomi**	**1.52**	**22**	*e*PN	**Pn**	**23 05 20.0**	**-0.7**
ITM				*e*SN	**Sn**	**23 05 41.2**	**+0.1**
ITM	**Ithomi**	**1.52**	**22**	*e*Pn	**Pn**	**23 05 20.0**	**-0.7**
ITM	**Ithomi**	**1.52**	**22**	P	**Pn**	**23 05 21.3**	**+0.6**
ITM				*e*Sn	**Sn**	**23 05 41.2**	**+0.1**
KYTH	**Kithira**	**1.56**	**70**	*e*Pn	**Pn**	**23 05 20.3**	**-1.0**
KYTH	**Kithira**	**1.56**	**70**	*e*PN	**Pn**	**23 05 20.3**	**-1.0**
KYTH	**Kithira**	**1.56**	**70**	*e*Pn	**Pn**	**23 05 20.3**	**-1.0**
VLI	**Veliai**	**1.69**	**55**	*e*Pn	**Pn**	**23 05 22.8**	**-0.2**
VLI	**Veliai**	**1.69**	**55**	*e*PN	**Pn**	**23 05 22.8**	**-0.2**
VLI	**Veliai**	**1.69**	**55**	*e*Pn	**Pn**	**23 05 22.8**	**-0.2**
VLX	**Vlachokerasia**	**1.85**	**30**	P	**Pn**	**23 05 25.6**	**+0.3**
VLX	**Vlachokerasia**	**1.85**	**30**	P	**Pn**	**23 05 25.6**	**+0.3**
KARN	**Karanos**	**2.23**	**99**	P	**Pn**	**23 05 30.5**	**0.0**
KARN	**Karanos**	**2.23**	**99**	*e*PN	**Pn**	**23 05 30.5**	**0.0**
KARN	**Karanos**	**2.23**	**99**	P	**Pn**	**23 05 30.5**	**0.0**
RLS	**Riolos of Patr**	**2.29**	**5**	*e*Pn	**Pn**	**23 05 31.3**	**-0.1**
RLS	**Riolos of Patr**	**2.29**	**5**	*e*PN	**Pn**	**23 05 31.3**	**-0.1**
RLS	**Riolos of Patr**	**2.29**	**5**	*e*Pn	**Pn**	**23 05 31.3**	**-0.1**
VLS	**Valsamata**	**2.46**	**348**	*e*Pn	**Pn**	**23 05 33.3**	**-0.3**
VLS	**Valsamata**	**2.46**	**348**	*e*PN	**Pn**	**23 05 33.3**	**-0.3**
VLS	**Valsamata**	**2.46**	**348**	*e*Pn	**Pn**	**23 05 33.3**	**-0.3**
VAM	**Vamos**	**2.46**	**98**	*e*Pn	**Pn**	**23 05 34.3**	**+0.6**
VAM	**Vamos**	**2.46**	**98**	*e*PN	**Pn**	**23 05 34.3**	**+0.6**
VAM	**Vamos**	**2.46**	**98**	*e*Pn	**Pn**	**23 05 34.3**	**+0.6**
LKR	**Lokris**	**3.21**	**26**	P	**Pn**	**23 05 44.7**	**+0.7**
LKR	**Lokris**	**3.21**	**26**	P	**Pn**	**23 05 44.7**	**+0.7**

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*ATH **10** 23:05:57.2, 38°.09N×21°.21E, h5km±3km, MD3.2/6*
*NEIC **10** 23:05:57.2, 38°.09N×21°.21E, h5km, MD3.2(ATH), After ATH.*
*ISCJB **10** 23:05:58.9±0.6, 38°.07N±0°.04×21°.57E±0°.05, h8km±7km, Error ellipse: s-maj=7.0km s-min=5.4km az=36.2*
*THE **10** 23:05:59.7, 38°.12N×21°.58E, h12km±1km, ML3.3/4, Error ellipse: s-maj=1.7km s-min=0.5km az=22.0*
*CSEM **10** 23:05:59.2±0.2, 38°.09N×21°.55E, h5km, MD3.2, Error ellipse: s-maj=4.2km s-min=3.7km az=121.0*
ISC 10 23:05:59.4±0.6, 38°.07N±0°.04×21°.56E±0°.04, h9km±8km, n45, σ0s71/55, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.08**	**261**	*e*Pg	**Pg**	**23 06 01.3**	**-0.2**
RLS	**Riolos of Patr**	**0.08**	**261**	*e*PG	**Pg**	**23 06 01.3**	**-0.2**
RLS	**Riolos of Patr**	**0.08**	**261**	*e*Pg	**Pg**	**23 06 01.3**	**-0.2**
LAKA	**Lakka**	**0.37**	**63**	P	**Pg**	**23 06 06.7**	**+0.1**
LAKA				S	**Sg**	**23 06 11.7**	**+0.2**
LAKA	**Lakka**	**0.37**	**63**	P	**Pg**	**23 06 06.7**	**+0.1**
LAKA				S	**Sg**	**23 06 11.7**	**+0.2**
EFP	**Efpalio**	**0.45**	**37**	P	**Pg**	**23 06 07.7**	**-0.4**
EFP				S	**Sg**	**23 06 13.9**	**-0.1**
EFP	**Efpalio**	**0.45**	**37**	P	**Pg**	**23 06 07.7**	**-0.4**
EFP				S	**Sg**	**23 06 13.9**	**-0.1**
TRIZ	**Trizonia**	**0.50**	**54**	P	**Pg**	**23 06 08.7**	**-0.4**
TRIZ				S	**Sg**	**23 06 15.6**	**0.0**
TRIZ	**Trizonia**	**0.50**	**54**	P	**Pg**	**23 06 08.7**	**-0.4**
TRIZ				S	**Sg**	**23 06 15.6**	**0.0**
KALE	**Kalithea**	**0.56**	**55**	P	**Pg**	**23 06 09.7**	**-0.5**
KALE				S	**Sg**	**23 06 17.1**	**-0.3**
KALE	**Kalithea**	**0.56**	**55**	P	**Pg**	**23 06 09.7**	**-0.5**
KALE				S	**Sg**	**23 06 17.1**	**-0.3**
GUR	**Goura**	**0.63**	**102**	P	**Pg**	**23 06 11.3**	**-0.3**
GUR	**Goura**	**0.63**	**102**	P	**Pg**	**23 06 11.3**	**-0.3**
VLS	**Valsamata**	**0.78**	**278**	*e*Pb	**Pb**	**23 06 07.3**	**-7.8**
VLS	**Valsamata**	**0.78**	**278**	P	**Pg**	**23 06 14.4**	**+0.1**
VLS	**Valsamata**	**0.78**	**278**	*e*PB	**Pb**	**23 06 07.3**	**-7.8**
VLS	**Valsamata**	**0.78**	**278**	P	**Pg**	**23 06 14.4**	**+0.1**
DSF	**Desfina**	**0.83**	**66**	P	**Pg**	**23 06 14.8**	**-0.6**
DSF	**Desfina**	**0.83**	**66**	P	**Pg**	**23 06 14.8**	**-0.6**
EVR	**Evrytania**	**0.87**	**13**	*e*Pb	**Pg**	**23 06 15.7**	**-0.4**
EVR				*e*Sb	**Sg**	**23 06 29.7**	**+2.3**
EVR	**Evrytania**	**0.87**	**13**	*e*PB	**Pg**	**23 06 15.7**	**-0.4**
EVR				*e*SB	**Sg**	**23 06 29.7**	**+2.3**
EVR	**Evrytania**	**0.87**	**13**	*e*Pb	**Pg**	**23 06 15.7**	**-0.4**
ITM	**Ithomi**	**0.94**	**162**	*e*Pb	**Pg**	**23 06 18.1**	**+0.8**
ITM	**Ithomi**	**0.94**	**162**	P	**Pg**	**23 06 18.2**	**+0.9**
ITM	**Ithomi**	**0.94**	**162**	*e*PB	**Pg**	**23 06 18.1**	**+0.8**
ITM	**Ithomi**	**0.94**	**162**	*e*Pb	**Pg**	**23 06 18.1**	**+0.8**
VLX	**Vlachokerasia**	**0.95**	**137**	P	**Pg**	**23 06 18.3**	**+0.6**
VLX	**Vlachokerasia**	**0.95**	**137**	*e*PB	**Pg**	**23 06 19.6**	**+1.9**
VLX	**Vlachokerasia**	**0.95**	**137**	P	**Pg**	**23 06 18.3**	**+0.6**
VLX	**Vlachokerasia**	**0.95**	**137**	*e*Pb	**Pg**	**23 06 19.6**	**+1.9**
LKD2	**Lefkada island**	**1.01**	**316**	P	**Pg**	**23 06 18.0**	**-0.8**
LKD2	**Lefkada island**	**1.01**	**316**	P	**Pg**	**23 06 18.0**	**-0.8**
LTK	**Loutraki**	**1.11**	**92**	P	**Pg**	**23 06 20.1**	**-0.6**
LTK	**Loutraki**	**1.11**	**92**	P	**Pg**	**23 06 20.1**	**-0.6**
AGG	**Agios Georgios**	**1.12**	**32**	*e*Pg	**Pg**	**23 06 21.0**	**0.0**
AGG	**Agios Georgios**	**1.12**	**32**	P	**Pg**	**23 06 22.6**	**+1.6**
AGG	**Agios Georgios**	**1.12**	**32**	*e*PG	**Pg**	**23 06 21.0**	**0.0**
AGG	**Agios Georgios**	**1.12**	**32**	*e*Pg	**Pg**	**23 06 21.0**	**0.0**
AGG	**Agios Geor

IDC 10 23:19:15.2±2.9, 19°.19S×177°.83W, h0km, mb3.7/4, mb1 4.0/4, mb1mx3.8/16, mbtmp3.7/4, Error ellipse: s-maj=258.8km s-min=27.0km az=158.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.95**	**261**	P	P	23 27 32.1	-0.3
	0.5nm,0.3s,baz=95,slow=7.4,SNR=9.7						
ASAR	**Alice Springs**	**44.99**	**255**	P	P	23 27 32.8	+0.2
	0.4nm,0.6s,baz=93,slow=8.0,SNR=3.7						
TXAR	**Lajitas Array**	**86.22**	**57**	P	P	23 31 59.2	+0.3
	0.4nm,0.7s,baz=214,slow=7.4,SNR=5.4						
PDAR	**Pinedale Array**	**87.90**	**43**	P	P	23 32 07.0	+0.2
	0.4nm,0.7s,baz=232,slow=4.4,SNR=3.2						

*ISCJB **10** 23:27:52.8±0.5, 30°.98S±0°.03×69°.80W±0°.1, h117km±9km, Error ellipse: s-maj=13.8km s-min=4.5km az=174.6*
*NEIC **10** 23:27:53.5, 30°.99S×70°.45W, h135km, mb3.4/1, MD3.3(GUC), After GUC.*
*IDC **10** 23:27:53.2±3.2, 30°.97S×69°.79W, h100km±31km, mb3.2/1, mb1 3.5/4, mb1mx3.4/16, mbtmp3.2/4, Error ellipse: s-maj=41.5km s-min=24.6km az=104.0*
*GUC **10** 23:27:53.5±0.8, 30°.99S×70°.45W, h135km±9km, MD3.3, ML3.9*

ISC 10 23:27:54.0±0.5, 30°.97S±0°.03×69°.78W±0°.09, h107km±9km, n28, σ0s98/42, 5C-8D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLL	**Tololo Astrono**	**1.19**	**312**	⇓*iP*	**Pn**	**23 28 17.2**	**+0.1**
TLL				*i* S	**Sn**	**23 28 34.1**	**-0.4**
TLL	**Tololo Astrono**	**1.19**	**312**	⇓*iP*	**Pn**	**23 28 17.2**	**+0.1**
TLL				*i* S	**Sn**	**23 28 34.1**	**-0.4**
TLL				AML	AML	23 28 36.7	
	comp=N,1μm,0.5s						
LCO	**Las Campanas**	**2.11**	**338**	*eP*Pn	**Pn**	**23 28 28.5**	**+0.2**
LCO				*e*Sn	**Sn**	**23 28 54.0**	**-0.4**
LCO	**Las Campanas**	**2.11**	**338**	⇓*iP*	**Pn**	**23 28 28.6**	**+0.3**
LCO				*i* S	**Sn**	**23 28 54.6**	**+0.1**
LCO				AML	AML	23 28 56.1	
	comp=E,751nm,0.2s						
PEL	**Peldehue**	**2.30**	**199**	⇑*iP*	**Pn**	**23 28 30.4**	**-0.3**
PEL				*i* S	**Sn**	**23 28 58.1**	**-0.7**
PEL				AML	AML	23 29 02.5	
	comp=N,880nm,0.3s						
FCH	**Farellones**	**2.39**	**190**	⇓*iP*	**Pn**	**23 28 32.7**	**+0.8**
FCH				*i* S	**Sn**	**23 29 03.4**	**+2.5**
FCH				AML	AML	23 29 08.2	
	comp=E,749nm,0.1s						
CLCH	**Cerro Calan**	**2.50**	**195**	*eP*	**Pn**	**23 28 34.3**	**+1.0**
CLCH				*i* S	**Sn**	**23 29 04.8**	**+1.3**
CLCH	**Cerro Calan**	**2.50**	**195**	*eP*	**Pn**	**23 28 34.3**	**+1.0**
CLCH				*i* S	**Sn**	**23 29 04.8**	**+1.3**
CLCH				AML	AML	23 29 08.3	
	comp=E,1μm,0.6s						
FSR	**Penalolen**	**2.58**	**194**	⇑*iP*	**Pn**	**23 28 34.9**	**+0.6**
FSR				*i* S	**Sn**	**23 29 06.2**	**+0.8**
FSR	**Penalolen**	**2.58**	**194**	⇑*iP*	**Pn**	**23 28 34.9**	**+0.6**
FSR				*i* S	**Sn**	**23 29 06.2**	**+0.8**
FSR				AML	AML	23 29 07.3	
	comp=N,160nm,0.5s						
SAN	**Santiago**	**2.58**	**197**	⇓*iP*	**Pn**	**23 28 34.3**	**-0.1**
SAN				*i* S	**Sn**	**23 29 05.0**	**-0.5**
SAN	**Santiago**	**2.58**	**197**	⇓*iP*	**Pn**	**23 28 34.3**	**-0.1**
SAN				*i* S	**Sn**	**23 29 05.0**	**-0.5**
SAN				AML	AML	23 29 13.7	
	comp=E,1μm,0.2s						
ANTU	**Antumapu**	**2.69**	**195**	⇑*iP*	**Pn**	**23 28 35.5**	**-0.2**
ANTU				*i* S	**Sn**	**23 29 07.0**	**-0.9**
ANTU	**Antumapu**	**2.69**	**195**	⇑*iP*	**Pn**	**23 28 35.5**	**-0.2**
ANTU				*i* S	**Sn**	**23 29 07.0**	**-0.9**
ANTU				AML	AML	23 29 08.8	
	comp=E,682nm,0.4s						
PCH	**Pirque**	**2.71**	**193**	⇓*iP*	**Pn**	**23 28 36.5**	**+0.4**
PCH				*i* S	**Sn**	**23 29 07.9**	**-0.6**
TACH	**Talagante**	**2.85**	**200**	*iP*	**Pn**	**23 28 36.8**	**-1.1**
TACH				*i* S	**Sn**	**23 29 09.6**	**-2.1**
CHCH	**Chadas Angostu**	**3.04**	**194**	⇓*iP*	**Pn**	**23 28 40.0**	**-0.5**
TRQA	**Tornquist**	**9.55**	**140**	*e*Pn	**Pn**	**23 30 09.9**	**+1.4**
TRQA				Sn	**Sn**	**23 31 52.9**	**-1.0**
PLCA	**Paso Flores**	**9.76**	**183**	P	**Sn**	**23 30 10.3**	**-0.9**
	comp=E,0.2nm,0.3s,baz=353,slow=14,SNR=3.1						
PLCA				S	**Sn**	**23 31 59.9**	**+1.0**
	comp=E,0.1nm,0.3s,baz=222,slow=18,SNR=2.0						
CPUP	**Villa Florida**	**11.87**	**70**	P	**Pn**	**23 30 38.4**	**-1.4**
	comp=E,0.3nm,0.3s,baz=239,slow=19,SNR=3.9						
LPAZ	**La Paz**	**14.70**	**6**	P	**Pn**	**23 31 18.6**	**+2.0**
	comp=E,0.2nm,0.3s,baz=192,slow=8.5,SNR=5.3						
LPAZ	**La Paz**	**14.70**	**6**	*e*Pn	**Pn**	**23 31 18.9**	**+2.3**
	comp=E,1.0nm,0.4s						
NNA	**Nana**	**19.99**	**339**	*eP*	**P**	**23 32 17.6**	**-0.5**
TXAR	**Lajitas Array**	**68.10**	**328**	P	**P**	**23 38 42.1**	**-0.2**
	comp=E,0.3nm,0.6s,baz=157,slow=7.8,SNR=6.6						
ZALV	**Zalesovo Beam**	**150.65**	**31**	PKPbc	PKPbc	23 47 33.0	0.0
	comp=E,2.5nm,0.5s,baz=312,slow=4.0,SNR=14						
ZALV				pPKPbc	pPKPbc	23 48 06.2	+4.2
	comp=E,0.6nm,0.3s,baz=303,slow=4.0,SNR=3.3						
ZALV	**Zalesovo Beam**	**150.65**	**31**	PKPbc	PKPbc	23 47 33.0	0.0
ZALV				pPKPbc	pPKPbc	23 48 06.2	+4.2
MKAR	**Makanchi Array**	**153.31**	**46**	PKPbc	PKPbc	23 47 38.9	-0.3
	comp=E,0.3nm,0.7s,baz=270,slow=2.9,SNR=3.7						
MKAR				PKPab	PKPab	23 47 52.0	+0.4
	comp=E,0.3nm,0.5s,baz=277,slow=2.2,SNR=3.5						
MKAR	**Makanchi Array**	**153.31**	**46**	PKPbc	PKPbc	23 47 38.9	-0.3
MKAR				PKPab	PKPab	23 47 52.0	+0.4

*ATH **10** 23:42:48.2, 38°.08N×21°.58E, h30km, MD3.0/5*
*THE **10** 23:42:49.4, 38°.09N×21°.61E, h23km±2km, ML2.0/5, Error ellipse: s-maj=2.3km s-min=0.5km az=13.0*
*CSEM **10** 23:42:49.2±0.2, 38°.13N×21°.60E, h27km±1km, MD3.0, Error ellipse: s-maj=5.7km s-min=3.7km az=144.0*
*ISCJB **10** 23:42:49.3±0.5, 38°.08N±0°.05×21°.62E±0°.04, h26km±6km, Error ellipse: s-maj=9.2km s-min=4.6km az=159.5*

ISC 10 23:42:49.4±0.5, 38°.09N±0°.06×21°.62E±0°.04, h25km±6km, n25, σ0s60/43, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.12**	**256**	*e*PB	**Pb**	**23 42 53.8**	**-0.5**
RLS				*e*SB	**Sb**	**23 42 57.4**	**-0.1**
RLS	**Riolos of Patr**	**0.12**	**256**	*e*Pb	**Pb**	**23 42 53.8**	**-0.5**
RLS				*e*Sb	**Sb**	**23 42 57.4**	**-0.1**
LAKA	**Lakka**	**0.32**	**62**	P	**Pb**	**23 42 56.5**	**-0.3**
LAKA				S	**Sb**	**23 43 02.0**	**+0.1**
LAKA	**Lakka**	**0.32**	**62**	P	**Pb**	**23 42 56.5**	**-0.3**
LAKA				S	**Sb**	**23 43 02.0**	**+0.1**
EFP	**Efpalio**	**0.41**	**34**	P	**Pb**	**23 42 57.7**	**-0.4**
EFP				S	**Sb**	**23 43 04.3**	**+0.2**
EFP	**Efpalio**	**0.41**	**34**	*e*PB	**Pb**	**23 42 57.7**	**-0.4**
EFP				*e*SB	**Sb**	**23 43 04.8**	**+0.7**
EFP	**Efpalio**	**0.41**	**34**	P	**Pb**	**23 42 57.7**	**-0.4**
EFP				S	**Sb**	**23 43 04.3**	**+0.2**
EFP				*e*Sb	**Sb**	**23 43 04.8**	**+0.7**
TRIZ	**Trizonia**	**0.45**	**52**	P	**Pb**	**23 42 58.6**	**-0.3**
TRIZ				S	**Sb**	**23 43 05.5**	**+0.2**
TRIZ	**Trizonia**	**0.45**	**52**	P	**Pb**	**23 42 58.6**	**-0.3**
TRIZ				S	**Sb**	**23 43 05.5**	**+0.2**
KALE	**Kalithea**	**0.51**	**53**	P	**Pb**	**23 42 59.6**	**-0.2**
KALE				S	**Sb**	**23 43 07.2**	**+0.3**
KALE	**Kalithea**	**0.51**	**53**	P	**Pb**	**23 42 59.6**	**-0.2**
KALE				S	**Sb**	**23 43 07.2**	**+0.3**
GUR	**Goura**	**0.59**	**104**	P	**Pb**	**23 43 00.8**	**-0.4**
GUR	**Goura**	**0.59**	**104**	*e*PN	**Pb**	**23 43 00.8**	**-0.4**
GUR				*e*SN	**Sn**	**23 43 10.2**	**-0.8**
GUR	**Goura**	**0.59**	**104**	P	**Pb**	**23 43 00.8**	**-0.4**
GUR				*e*Sn	**Sn**	**23 43 10.2**	**-0.8**
DSF	**Desfina**	**0.79**	**65**	P	**Pb**	**23 43 04.1**	**-0.3**
DSF				S	**Sb**	**23 43 15.6**	**+0.9**
DSF	**Desfina**	**0.79**	**65**	P	**Pb**	**23 43 04.1**	**-0.3**
DSF				S	**Sb**	**23 43 15.6**	**+0.9**
VLS	**Valsamata**	**0.81**	**277**	P	**Pb**	**23 43 04.4**	**-0.5**
VLS				S	**Sb**	**23 43 16.7**	**+1.2**
VLS	**Valsamata**	**0.81**	**277**	*e*PN	**Pn**	**23 43 04.2**	**-1.0**
VLS	**Valsamata**	**0.81**	**277**	*e*Pn	**Pn**	**23 43 04.2**	**-1.0**
VLS				S	**Sb**	**23 43 16.7**	**+1.2**
ITM	**Ithomi**	**0.94**	**165**	P	**Pn**	**23 43 07.1**	**+0.2**
ITM	**Ithomi**	**0.94**	**165**	P	**Pn**	**23 43 07.1**	**+0.2**
PYL	**PYLOS**	**1.19**	**175**	P	**Pn**	**23 43 11.6**	**+1.1**
PYL	**PYLOS**	**1.19**	**175**	P	**Pn**	**23 43 11.6**	**+1.1**
KYTH	**Kithira**	**2.13**	**147**	*e*PN	**Pn**	**23 43 23.9**	**+0.6**
KYTH	**Kithira**	**2.13**	**147**	*e*Pn	**Pn**	**23 43 23.9**	**+0.6**

*NEIC **10** 23:52:32.6±1.0, 23°.11S×66°.83W, h227km±13km, mb4.3/3, Error ellipse: s-maj=19.2km s-min=13.5km az=59.0*
*GUC **10** 23:52:32.4±0.7, 22°.74S×66°.98W, h259km±19km, ML4.5*
*ISCJB **10** 23:52:33.2±0.9, 22°.90S±0°.07×66°.74W±0°.09, h235km±8km, mb3.6/4, Error ellipse: s-maj=13.8km s-min=10.6km az=166.3*
*IDC **10** 23:52:36.2±9.5, 22°.65S×66°.56W, h247km±65km, mb3.2/3, mb1 3.4/4, mb1mx3.2/15, mbtmp3.2/4, Error ellipse: s-maj=109.3km s-min=47.9km az=27.0*

ISC 10 23:52:34.0±0.9, 22°.86S±0°.07×66°.71W±0°.09, h225km±8km, n18, σ0s70/28, mb3.6/4, 6C-2D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**2.64**	**282**	⇑*iP*	**Pn**	**23 53 27.7**	**+6.7**
PB04				*i* S	**S**	**23 54 09.5**	**+12**
PB04				AML	AML	23 54 13.9	
	comp=N,416nm,0.2s						
PECH	**Pedro de Valdi**	**2.75**	**275**	⇑*iP*	**Pn**	**23 53 22.8**	**+0.5**
PECH				*i* S	**S**	**23 54 00.5**	**+0.4**
PECH				AML	AML	23 54 03.0	
	comp=E,614nm,0.3s						
MACH	**Maria Elena**	**2.90**	**283**	⇑*iP*	**Pn**	**23 53 24.2**	**+0.4**
MACH				*i* S	**S**	**23 54 03.4**	**+0.4**
PB01	**Plate Boundary**	**3.15**	**304**	⇑*iP*	**Pn**	**23 53 27.1**	**+0.3**
PB01				*e*S	**S**	**23 54 08.6**	**+0.3**
PB01				AML	AML	23 54 11.0	
	comp=N,374nm,0.3s						
MECH	**Mejillones**	**3.46**	**265**	⇓*iP*	**Pn**	**23 53 30.4**	**+0.1**
MECH				*i* S	**S**	**23 54 14.2**	**-0.4**
MECH				AML	AML	23 54 18.5	
	comp=N,407nm,0.3s						
HMBC	**Humberston**	**3.92**	**310**	⇑*iP*	**Pn**	**23 53 35.3**	**-0.6**
HMBC				*i* S	**S**	**23 54 24.0**	**-0.6**
PSGC	**Pisagua**	**4.55**	**315**	⇓*iP*	**Pn**	**23 53 42.5**	**-1.0**
PSGC				*i* S	**S**	**23 54 35.8**	**-2.7**
MNMC	**Miæe Miæ**	**4.59**	**323**	⇑*iP*	**Pn**	**23 53 44.3**	**+0.3**
MNMC				*i* S	**S**	**23 54 39.4**	**0.0**
LPAZ	**La Paz**	**6.67**	**348**	P	**Pn**	**23 54 11.3**	**+1.0**
	comp=N,0.4nm,0.3s,baz=175,slow=7.9,SNR=12						
LPAZ				S	**S**	**23 55 27.5**	**+0.3**
	comp=N,0.1nm,0.3s,baz=296,slow=14,SNR=8.4						
LPAZ	**La Paz**	**6.67**	**348**	P	**Pn**	**23 54 11.3**	**+1.0**
LPAZ				S	**S**	**23 55 27.5**	**+0.3**
LCO	**Las Campanas**	**7.10**	**210**	Pn	**Pn**	**23 54 10.6**	**-5.2**
LCO				*e*S	**S**	**23 55 22.1**	**-15**
CPUP	**Villa Florida**	**9.21**	**114**	*e*P	**Pn**	**23 54 42.2**	**-0.6**
	comp=N,6.0nm,0.6s						
NNA	**Nana**	**14.49**	**317**	*e*Pn	**Pn**	**23 55 50.2**	**+1.0**
	comp=N,11nm,0.8s						
JTS	**JuntasAbangare**	**37.48**	**330**	*e*P	**P**	**23 59 26.9**	**+0.6**
	comp=N,7.1nm,0.7s,mb4.3						
APG	**El Apazote**	**44.24**	**326**	P	**P**	**00 00 21.2**	**-0.1**
	comp=N,2.2nm,0.5s,mb3.7,baz=160,slow=22,SNR=3.9						
TXAR	**Lajitas Array**	**62.91**	**324**	P	**P**	**00 02 35.8**	**-0.7**
	comp=N,0.2nm,0.4s,mb3.1,baz=150,slow=6.7,SNR=9.3						
PDAR	**Pinedale Array**	**76.31**	**329**	P	**P**	**00 03 57.8**	**-0.2**
	comp=N,0.4nm,0.5s,mb3.3,baz=124,slow=7.9,SNR=4.1						
MKAR	**Makanchi Array**	**145.47**	**39**	PKPbc	PKPbc	00 11 43.7	-1.9
	comp=N,0.4nm,0.4s,baz=328,slow=3.8,SNR=6.4						

IDC 11 00:20:50.6±3.4, 19°.27N×145°.70E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.5/24, mbtmp3.9/4, Error ellipse: s-maj=178.9km s-min=34.0km az=93.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.53**	**197**	P	P	00 28 31.1	-0.4
	0.4nm,0.4s,baz=18,slow=8.5,SNR=3.8						
FITZ	**Fitzroy Crossi**	**42.04**	**209**	P	P	00 28 43.8	-0.2
	1.1nm,0.3s,baz=39,slow=11,SNR=11						
ASAR	**Alice Springs**	**44.20**	**196**	P	P	00 29 01.9	+0.5
	0.3nm,0.5s,baz=18,slow=9.9,SNR=5.7						
FINES	**FINESS Array B**	**86.37**	**335**	P	P	00 33 34.5	+0.1
	3.9nm,1.1s,baz=58,slow=5.2,SNR=4.3						

*IDC **11** 00:24:16.8±0.8, 43°.80S×36°.42E, h0km, mb4.0/6, mb1 4.0/7, mb1mx3.8/20, mbtmp4.0/7, ML3.6/1, MS2.8/1, Ms1 2.7/1, ms1mx2.6/24, Error ellipse: s-maj=40.7km s-min=22.5km az=56.0*
*ISCJB **11** 00:24:16.7±0.5, 43°.7S±0°.1×36°.4E±0°.2, h10km, mb3.9/10, Error ellipse: s-maj=23.8km s-min=9.8km az=144.7*
*NEIC **11** 00:24:18.8±0.4, 43°.72S×36°.45E, h10km, mb3.9/10, Error ellipse: s-maj=18.4km s-min=8.1km az=55.0*

ISC 11 00:24:18.5±0.5, 43°.7S±0°.1×36°.4E±0°.2, h10km, n23, σ0s80/19, mb3.9/10, Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**16.70**	**308**	Pn	**Pn**	**00 28 10.6**	**-1.9**
	0.3nm,0.3s,baz=145,slow=18,SNR=3.0						
SUR	**Sutherland**	**16.70**	**308**	*e*Pn	**Pn**	**00 28 11.7**	**-0.8**
	4.9nm,0.8s						
BOSA	**Boshof**	**17.55**	**326**	LR	LR	00 33 12.8	
	comp=Z,34nm,20.4s,baz=29,slow=30						
BOSA	**Boshof**	**17.55**	**326**	*e*Pn	**Pn**	**00 28 23.1**	**-0.1**
	2.4nm,0.8s						
LBTB	**Lobatse**	**20.67**	**331**	*e*P	**P**	**00 28 59.5**	**+1.0**
	3.7nm,0.9s						
TSUM	**Tsumeb**	**29.13**	**321**	P	**P**	**00 30 19.6**	**0.0**
LSZ	**Lusaka**	**29.22**	**344**	P	**P**	**00 30 20.6**	**+0.2**
	2.5nm,0.6s,mb4.1,baz=168,slow=9.0,SNR=6.4						
LSZ	**Lusaka**	**29.22**	**344**	*e*P	**P**	**00 30 20.6**	**+0.2**
	3.2nm,0.7s,mb4.2						
MSEY	**Mahe Island**	**42.37**	**29**	P	**P**	**00 32 12.5**	**-0.5**
CASY	**Casey**	**44.74**	**146**	*e*P	**P**	**00 32 31.5**	**-0.1**
	1.4nm,0.8s,mb3.8						
QSPA	**South Pole Qui**	**46.49**	**180**	P	**P**	**00 32 44.4**	**-0.8**
	1.8nm,0.8s,mb4.0,baz=355,slow=1.4,SNR=5.4						
QSPA	**South Pole Qui**	**46.49**	**180**	*e*P	**P**	**00 32 44.7**	**-0.5**
	1.4nm,0.7s,mb4.0						
SBA	**Scott Base**	**54.98**	**169**	*e*P	**P**	**00 33 51.1**	**+1.8**
	0.5nm,0.8s,mb3.6						
DBIC	**Dimbokro**	**62.51**	**312**	P	**P**	**00 34 42.2**	**-0.1**
	2.3nm,0.8s,mb4.4,baz=180,slow=7.1,SNR=4.5						
DBIC	**Dimbokro**	**62.51**	**312**	*e*P	**P**	**00 34 42.6**	**+0.2**
	2.1nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**78.42**	**123**	*e*P	**P**	**00 36 19.2**	**-0.3**
	0.2nm,0.5s,mb3.3						
ASAR	**Alice Springs**	**79.13**	**112**	P	**P**	**00 36 23.3**	**-0.2**
	0.9nm,0.7s,mb3.8,baz=226,slow=5.8,SNR=6.3						
WRA	**Warramunga Arr**	**81.96**	**110**	P	**P**	**00 36 38.4**	**-0.4**
	0.7nm,0.7s,mb3.7,baz=217,slow=3.9,SNR=4.6						
WRAB	**Tennant Creek**	**81.98**	**110**	*e*P	**P**	**00 36 38.0**	**-0.8**
	3.5nm,0.9s,mb4.3						
BRTR	**Keskin Array B**	**83.11**	**358**	P	**P**	**00 36 45.5**	**+1.4**
	0.4nm,0.7s,mb3.6,baz=181,slow=10,SNR=4.0						
TXAR	**Lajitas Array**	**145.22**	**259**	PKPbc	PKPbc	00 43 56.3	+0.3
	0.9nm,0.8s,baz=135,slow=4.9,SNR=12						
ANMO	**Albuquerque**	**150.20**	**266**	PKPbc	PKPbc	00 44 09.3	-0.1
	1.6nm,0.9s,baz=139,slow=4.8,SNR=5.7						
ANMO	**Albuquerque**	**150.20**	**266**	PKPbc	PKPbc	00 44 09.3	-0.1

*IDC **11** 00:34:36.6±0.9, 22°.51S×175°.09W, h0km, mb4.2/8, mb1 4.4/8, mb1mx4.2/17, mbtmp4.2/8, MS3.3/2, Ms1 3.3/2, ms1mx2.8/22, Error ellipse: s-maj=51.2km s-min=20.4km az=155.0*
*ISCJB **11** 00:34:38.8±6.9, 22°.8S±0°.2×175°.1W±0°.1, h24km±49km, mb4.2/11, MS3.3/2, Error ellipse: s-maj=30.8km s-min=15.8km az=143.9*
*NEIC **11** 00:34:44.8±2.1, 22°.65S×175°.09W, h63km±19km, mb3.9/5, Error ellipse: s-maj=21.0km s-min=11.6km az=142.0*

ISC 11 00:34:44.0±2.8, 22°.7S±0°.2×175°.1W±0°.1, h52km±26km, n23, σ0s93/18, mb4.2/11, MS3.3/2, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.29**	**20**	*e*Pn	**Pn**	**00 36 55.5**	**+0.1**
HNR	**Honiara**	**27.32**	**295**	LR	LR	00 47 37.2	
	comp=Z,34nm,21.2s,MS2.9,baz=148,slow=29						
CTA	**Charters Tower**	**36.02**	**267**	P	**P**	**00 41 40.6**	**+0.2**
	4.2nm,0.7s,mb4.5,baz=100,slow=13,SNR=3.4						
TAU	**Tasmania Unive**	**37.07**	**228**	P	**P**	**00 41 50.2**	**+1.1**
STKA	**Stephens Creek**	**39.35**	**247**	P	**P**	**00 42 09.0**	**+0.5**
	1.1nm,0.4s,mb4.0,baz=117,slow=11,SNR=4.1						
STKA	**Stephens Creek**	**39.35**	**247**	*e*P	**P**	**00 42 09.0**	**+0.5**
	0.2nm,0.5s,mb3.1						
ASAR	**Alice Springs**	**46.70**	**258**	P	**P**	**00 43 07.3**	**-0.6**
	7.0nm,0.9s,mb4.6,baz=93,slow=8.2,SNR=31						
WRAB	**Tennant Creek**	**47.01**	**263**	*e*P	**P**	**00 43 09.3**	**-1.0**
	4.2nm,0.8s,mb4.4						
WRA	**Warramunga Arr**	**47.02**	**263**	P	**P**	**00 43 09.2**	**-1.2**
	3.0nm,0.9s,mb4.2,baz=92,slow=7.6,SNR=11						
SBA	**Scott Base**	**55.88**	**185**	*e*P	**P**	**00 44 15.3**	**-0.6**
	2.2nm,0.9s,mb4.2						
QSPA	**South Pole Qui**	**67.38**	**180**	*e*P	**P**	**00 45 33.1**	**-0.2**
KSRS	**Korea Array**	**80.33**	**317**	LR	LR	01 17 25.6	
	comp=Z,32nm,18.1s,MS3.7,baz=360,slow=32						
MAW	**Mawson**	**80.41**	**199**	P	**P**	**00 46 50.8**	**+1.2**
	2.5nm,0.8s,mb4.2,baz=153,slow=8.4,SNR=3.8						
MAW	**Mawson**	**80.41**	**199**	*e*P	**P**	**00 46 49.7**	**+0.1**
	0.5nm,0.7s,mb3.5						
TXAR	**Lajitas Array**	**85.99**	**56**	P	**P**	**00 47 17.9**	**-1.1**
	1.6nm,1.1s,mb4.2,baz=208,slow=5.1,SNR=8.3						
TXAR	**Lajitas Array**	**85.99**	**56**	P	**P**	**00 47 17.9**	**-1.1**
ANMO	**Albuquerque**	**86.69**	**50**	P	**P**	**00 47 22.1**	**-0.2**
	0.8nm,0.9s,mb4.0,baz=213,slow=7.1,SNR=3.4						
ANMO	**Albuquerque**	**86.69**	**50**	*e*P	**P**	**00 47 21.9**	**-0.4**
	0.3nm,0.7s,mb3.6						
PDAR	**Pinedale Array**	**88.73**	**42**	P	**P**	**00 47 32.7**	**+0.9**
	0.2nm,0.4s,mb3.8,baz=262,slow=1.8,SNR=2.5						
CMAR	**Chiang Mai Arr**	**93.39**	**288**	P	**P**	**00 47 56.9**	**+2.8**
	1.7nm,0.6s,mb4.7,baz=132,slow=3.3,SNR=11						
AKASG	**Malin Array Be**	**146.23**	**332**	PKPbc	PKPbc	00 54 19.0	+0.6
	0.4nm,0.3s,baz=39,slow=3.9,SNR=7.7						
AKASG	**Malin Array Be**	**146.23**	**332**	PKPbc	PKPbc	00 54 19.0	+0.6
BRTR	**Keskin Array B**	**150.32**	**312**	PKPbc	PKPbc	00 54 27.8	-1.8
	0.4nm,0.7s,baz=15,slow=6.1,SNR=3.1						

IDC 11 01:04:14.9±2.7, 33°.33S×179°.31E, h0km, mb4.1/3, mb1 4.3/4, mb1mx4.0/17, mbtmp4.1/4, ML3.5/1, MS3.9/4, Ms1 3.8/4, ms1mx3.3/20, Error ellipse: s-maj=58.3km s-min=34.4km az=97.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.24**	**199**	Pn	Pn	01 05 34.8	+0.3
	1.7nm,0.3s,baz=14,slow=7.8,SNR=13						
URZ				Sn	Sn	01 06 35.4	-0.1
	baz=131,slow=20,SNR=1.4						
STKA	**Stephens Creek**	**31.69**	**262**	LR	LR	01 22 20.8	
	comp=Z,196nm,19.8s,baz=184,slow=34						
PPT	**Papeete**	**32.02**	**68**	LR	LR	01 21 23.5	
	comp=Z,37nm,19.4s,baz=175,slow=32						
ASAR	**Alice Springs**	**40.78**	**272**	P	P	01 11 57.4	-0.6
	1.9nm,0.9s,baz=112,slow=7.8,SNR=8.7						
WRA	**Warramunga Arr**	**42.04**	**277**	P	P	01 12 09.4	+1.0
	2.4nm,1.1s,baz=116,slow=7.8,SNR=6.1						
FITZ	**Fitzroy Crossi**	**50.16**	**274**	P	P	01 13 11.8	-0.6
	2.1nm,0.9s,baz=100,slow=6.1,SNR=2.2						
MAW	**Mawson**	**68.76**	**202**	LR	LR	01 43 02.4	
	comp=Z,293nm,21.0s,baz=292,slow=34						
TXAR	**Lajitas Array**	**95.88**	**59**	LR	LR	01 55 38.4	
	comp=Z,62nm,19.1s,baz=95,slow=32						
FINES	**FINESS Array B**	**147.01**	**337**	PKPbc	PKPbc	01 23 58.0	-0.8
	1.8nm,0.9s,baz=138,slow=2.8,SNR=3.2						

*THE **11** 01:05:03.7, 37°.91N×21°.49E, h9km±1km, ML3.7/4, Error ellipse: s-maj=1.9km s-min=0.8km az=3.0*
*CSEM **11** 01:05:03.7, 37°.91N×21°.49E, h9km, ML3.7/4, After THE*
*ISCJB **11** 01:05:03.3±0.6, 37°.92N±0°.04×21°.42E±0°.05, h24km±7km, Error ellipse: s-maj=7.3km s-min=6.2km az=176.0*

ISC 11 01:05:03.2±0.7, 37°.92N±0°.04×21°.44E±0°.04, h16km±5km, n37, σ0s81/51, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.46**	**36**	P	**Pg**	**01 05 12.4**	**0.0**
UPR	**University Cam**	**0.46**	**36**	P	**Pg**	**01 05 12.4**	**0.0**
LAKA	**Lakka**	**0.53**	**52**	P	**Pg**	**01 05 13.5**	**-0.3**
LAKA				S	**Sg**	**01 05 21.0**	**0.0**
LAKA	**Lakka**	**0.53**	**52**	P	**Pg**	**01 05 13.5**	**-0.3**
LAKA

AKAS	**Kas**	**0.86**	**156**	*i* P		**Pg**	**01 14 40.2**	**-0.7**
AKAS				*i* S		**Sg**	**01 14 55.9**	**+3.7**
BCK	**Bucak**	**1.22**	**69**	*e*PN		**Pn**	**01 14 47.0**	**-0.2**
BCK	**Bucak**	**1.22**	**69**	*e*Pn		**Pn**	**01 14 47.0**	**-0.1**
DAT	**Datca**	**1.31**	**257**	*e*PN		**Pn**	**01 14 48.9**	**+0.6**
DAT	**Datca**	**1.31**	**257**	*e*Pn		**Pn**	**01 14 48.9**	**+0.6**
SUTC	**Sutluce-Ispart**	**1.53**	**72**	*e*PN		**Pn**	**01 14 51.4**	**-0.1**
SUTC	**Sutluce-Ispart**	**1.53**	**72**	*e*Pn		**Pn**	**01 14 51.4**	**0.0**
KULA	**Kula-Manisa**	**1.54**	**345**	*e*PN		**Pn**	**01 14 51.5**	**-0.1**
KULA	**Kula-Manisa**	**1.54**	**345**	*e*Pn		**Pn**	**01 14 51.5**	**-0.1**

CSEM ***11*** *01:17:58.8, 37.99N×21.59E, h18km, ML3.0/3, After THE*
THE 11 01:17:58.8, 37.99N×21.59E, h18km±2km, ML3.0/3, Error ellipse: s-maj=2.2km s-min=1.0km az=228.0, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAKA	**Lakka**	**0.40**	**51**	P	Pg	01 18 06.8	-0.2
LAKA	**Lakka**	**0.40**	**51**	P	Pg	01 18 06.8	-0.2
EFP	**Efpalio**	**0.50**	**30**	P	Pg	01 18 08.4	-0.5
EFP				S	Sg	01 18 16.4	+0.6
EFP	**Efpalio**	**0.50**	**30**	P	Pg	01 18 08.4	-0.5
EFP				S	Sg	01 18 16.4	+0.6
TRIZ	**Trizonia**	**0.54**	**45**	P	Pg	01 18 09.1	-0.4
TRIZ	**Trizonia**	**0.54**	**45**	P	Pg	01 18 09.1	-0.4
KALE	**Kalithea**	**0.59**	**47**	P	Pg	01 18 10.1	-0.4
KALE				S	Sg	01 18 19.3	+0.8
KALE	**Kalithea**	**0.59**	**47**	P	Pg	01 18 10.1	-0.4
KALE				S	Sg	01 18 19.3	+0.8
GUR	**Goura**	**0.60**	**95**	P	Pg	01 18 10.9	+0.2
GUR				S	Sg	01 18 18.8	+0.1
GUR	**Goura**	**0.60**	**95**	P	Pg	01 18 10.9	+0.2
GUR				S	Sg	01 18 18.8	+0.1
KFL	**Anninata**	**0.64**	**281**	P	Pb	01 18 11.0	-0.5

NNC ***11*** *01:20:15.8±7.1, 36.81N×69.98E, h0km, mb4.0, mpv3.8, Error ellipse: s-maj=61.1km s-min=59.4km az=36.0*
ISC 11 01:20:16.2±2.4, 36.5N±0.2×70.1E±0.2, h35km, n12, σ0 76/13, 3C-1D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**6.24**	**25**	P	Pn	**01 21 46.4**	**+0.7**
SNR=65							
KK31	**Karatay Array**	**6.58**	**2**	⇑P	Pn	**01 21 52.6**	**+2.3**
4.1nm,0.5s,baz=184,slow=13,SNR=85							
KK31				⇑S	Sn	**01 23 03.6**	**-0.4**
20nm,0.5s,baz=187,slow=22							
UCH	**Uchtor**	**6.62**	**29**	P	Pn	**01 21 50.7**	**-0.3**
SNR=21							
EKS2	**Erkin-Say**	**6.74**	**23**	P	Pn	**01 21 53.4**	**+0.9**
SNR=13							
KZA	**Kyzart**	**6.81**	**34**	P	Pn	**01 21 53.1**	**-0.4**
SNR=11							
AAK	**Ala-Archa**	**6.96**	**28**	P	Pn	**01 21 55.7**	**+0.1**
SNR=8.3							
CHMS	**Chumysh**	**7.37**	**27**	P	Pn	**01 22 00.8**	**-0.5**
SNR=8.0							
USP	**Ospenovka**	**7.52**	**25**	P	Pn	**01 22 03.0**	**-0.2**
SNR=14							
TKM2	**Tokmak 2**	**7.64**	**32**	⇓P	Pn	**01 22 04.1**	**-0.8**
3.2nm,0.5s							
TKM2	**Tokmak 2**	**7.64**	**32**	P	Pn	**01 22 04.4**	**-0.6**
SNR=6.5							
AB31	**Akbulak array**	**14.73**	**333**	P	Pn	**01 23 41.5**	**-0.4**
0.6nm,0.3s,baz=144,slow=12,SNR=48							
AKTO	**Aktyubinsk**	**16.42**	**332**	⇑P	Pn	**01 24 03.3**	**-0.4**
0.9nm,0.8s							

IDC ***11*** *01:31:22.9±0.7, 51.10N×179.19W, h0km, mb4.3/20, mb1 4.5/21, mb1mx4.4/29, mbtmp4.3/21, ML4.6/1, MS3.5/10, Ms1 3.5/10, ms1mx3.3/44, Error ellipse: s-maj=21.3km s-min=13.5km az=161.0*
MOS ***11*** *01:31:26.7±0.9, 51.08N×179.21W, h33km, mb4.8/71, Error ellipse: s-maj=10.0km s-min=5.3km az=96.5*
NEIC ***11*** *01:31:27.0, 50.97N×179.18W, h18km, mb4.6/83, ML4.3(AEIC), ML4.3(PMR), After AEIC.*
ISCJB ***11*** *01:31:28.9±0.7, 51.17N±0.06×179.23W±0.03, h47km±5km, mb4.6/128, MS3.7/13, Error ellipse: s-maj=9.5km s-min=3.3km az=2.2*
BJI ***11*** *01:31:31.3, 51.63N×179.90W, h46km, mB4.8/13, mb4.9/25, Ms4.5/10, Ms7 4.0/10*
SZGRF ***11*** *01:31:35.0, 52.06N×179.47W, h33km, mb4.6, Andreanof Islands, Aleutian Islands, United States*
ISC 11 01:31:31.1±0.6, 51.25N±0.06×179.23W±0.03, h50km±4km, h48km±1.7km: pP-P, n400, σ0 76/402, mb4.6/128, MS3.7/13, 61C-47D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.93**	**278**	*e*P	Pn	**01 31 47.9**	**+0.1**
GSTR	**Great Sitkin T**	**2.15**	**66**	*e*Pn	Pn	**01 32 04.6**	**+0.2**
ATKA	**Atka Island**	**3.27**	**71**	P	Pn	**01 32 18.6**	**-1.2**
ATKA				S	Sn	**01 32 58.0**	**+0.5**
SMY	**Shemya**	**4.38**	**292**	P	Pn	**01 32 36.1**	**+1.2**
SMY				*e*P		01 32 37.4	
FX1	**Attu Island--F**	**4.97**	**292**	Pn	Pn	**01 32 42.4**	**-0.6**
38nm,0.3s,baz=220,slow=4.4,SNR=35							
FX1				Sn	Sn	**01 33 45.3**	**+6.3**
9.8nm,0.3s,baz=53,slow=20,SNR=1.7							
FX1	**Attu Island--F**	**4.97**	**292**	P	Pn	**01 32 42.4**	**-0.6**
FX1						01 33 45.3	
FX1				pmax	pmax		
comp=Z,38nm,0.3s							
FX1				smax			
comp=N,10.0nm,0.3s							
FX1	**Attu Island--F**	**4.97**	**292**	P	Pn	**01 32 42.5**	**-0.5**
NIKO	**Nikolski**	**6.62**	**71**	P	Pn	**01 33 04.8**	**-0.8**
UNV	**Unalaska Valle**	**8.18**	**67**	P	Pn	**01 33 25.9**	**-1.1**
AKUT	**Akutan**	**8.67**	**65**	*e*Pn	Pn	**01 33 34.0**	**+0.2**
SDPT	**Sand Point**	**11.94**	**63**	*e*Pn	Pn	**01 34 16.3**	**-2.1**
CHGN	**Chignik**	**13.29**	**60**	*e*Pn	Pn	**01 34 34.0**	**-2.7**
PEA0B	**Petropavlovsk-**	**14.26**	**286**	*e*Pn	Pn	**01 34 50.0**	**0.0**
PETK	**Petropavlovsk-**	**14.26**	**286**	Pn	Pn	**01 34 50.3**	**+0.3**
comp=N,0.3nm,0.3s,baz=250,slow=2.9,SNR=3.9							
PETK				LR	LR	01 40 09.0	
comp=N,174nm,20.8s,baz=281,slow=37							
OHAK	**Old Harbor**	**16.24**	**58**	*e*Pn	Pn	**01 35 10.5**	**-5.0**
SVW2	**Sparrevohn**	**16.35**	**44**	*e*P	Pn	**01 35 18.1**	**+1.2**
KDAK	**Kodiak Island**	**16.72**	**57**	Pn	Pn	**01 35 17.2**	**-4.3**
comp=N,2.1nm,0.3s,baz=248,slow=5.8,SNR=11							
KDAK				Sn	Sn	**01 38 27.4**	**+1.3**
comp=N,0.8nm,0.3s,baz=141,slow=23,SNR=6.0							
KDAK	**Kodiak Island**	**16.72**	**57**	*e*P	Pn	**01 35 17.1**	**-4.4**
KDAK	**Kodiak Island**	**16.72**	**57**	*e*Pn	Pn	**01 35 17.1**	**-4.4**
TTA	**Tatalina**	**17.08**	**38**	*e*P	Pn	**01 35 27.5**	**+1.5**
RSO	**Redoubt South**	**17.37**	**48**	*e*Pn	Pn	**01 35 32.0**	**+2.4**
BILL	**Bilibino**	**18.27**	**343**	⇑*e*P	Pn	**01 35 42.2**	**+1.7**
BILL				pmax	pmax		
comp=Z,9.0nm,0.9s							
BILL				MLR	MLR		
comp=Z,100nm,15.0s							
BILL	**Bilibino**	**18.27**	**343**	*e*P	Pn	**01 35 40.0**	**-0.6**
comp=Z,9.2nm,0.4s							
PPLA	**Purkeypile**	**18.59**	**41**	*e*P	Pn	**01 35 45.0**	**+0.6**
comp=Z,19nm,0.6s							
SEW	**Seward**	**18.84**	**50**	*e*P	Pn	**01 35 45.5**	**-1.9**
comp=Z,16nm,0.7s							
RC01	**Rabbit Creek A**	**18.98**	**47**	*e*P	Pn	**01 35 46.7**	**-2.4**
comp=Z,11nm,1.0s							
SEY	**Seymchan**	**19.16**	**318**	*e*P	Pn	**01 35 54.2**	**+2.9**
KTH	**Kantishna Hill**	**19.39**	**40**	*e*P	Pn	**01 35 52.7**	**-1.3**
comp=Z,38nm,0.8s							
TRF	**Thorofare Moun**	**19.61**	**40**	*e*P	Pn	**01 35 55.1**	**-1.5**
comp=Z,37nm,1.0s							
BPAW	**Bear Paw Mtn.**	**19.62**	**38**	*e*P	Pn	**01 35 55.5**	**-1.1**
comp=Z,15nm,0.6s							
MCK	**McKinley**	**20.27**	**40**	*e*P	**P**	**01 36 04.1**	**+2.0**
MCK				pmax	pmax		
comp=Z,9.0nm,0.6s							
MCK	**McKinley**	**20.27**	**40**	*e*P	**P**	**01 36 04.1**	**+2.0**
comp=Z,9.2nm,0.6s							
COLA	**College**	**21.18**	**38**	*e*P	**P**	**01 36 11.7**	**-0.1**
COLA				pmax	pmax		
comp=Z,11nm,0.8s,mb4.2							
COLA	**College**	**21.18**	**38**	*e*P	**P**	**01 36 11.7**	**-0.2**
comp=Z,11nm,0.8s,mb4.2							
BMRM	**Bremner River**	**21.37**	**50**	*e*P	**P**	**01 36 14.4**	**+0.6**
comp=Z,10nm,0.7s,mb4.3							
COLD	**Coldfoot**	**21.50**	**31**	*e*P	**P**	**01 36 15.7**	**+0.4**
comp=Z,9.6nm,0.8s,mb4.3							
MENT	**Mentasta**	**22.23**	**45**	*e*P	**P**	**01 36 23.5**	**+0.5**
EGAK	**Eagle**	**23.82**	**41**	*e*P	**P**	**01 36 38.4**	**-0.7**
comp=Z,20nm,1.0s,mb4.5							
DAWY	**Dawson**	**24.39**	**43**	*e*P	**P**	**01 36 42.2**	**-2.0**
HYT	**Haines Junctio**	**24.79**	**51**	*e*P	**P**	**01 36 46.9**	**-1.0**
YSS	**Yuzh-Sakhalins**	**25.06**	**275**	⇑*i*P	**P**	**01 36 51.0**	**+0.5**
YSS				pmax	pmax		
comp=Z,30nm,1.0s,mb4.8							
YSS	**Yuzh-Sakhalins**	**25.06**	**275**	*e*P	**P**	**01 36 50.4**	**-0.1**
INK	**Inuvik**	**27.72**	**35**	P	**P**	**01 37 12.8**	**-1.4**
comp=Z,2.1nm,0.8s,mb3.8,baz=164,slow=3.0,SNR=4.0							
INK	**Inuvik**	**27.72**	**35**	*e*P	**P**	**01 37 14.5**	**+0.3**
INK				pmax	pmax		
comp=Z,3.0nm,0.8s							
INK	**Inuvik**	**27.72**	**35**	*e*P	**P**	**01 37 14.5**	**+0.3**
comp=Z,2.8nm,0.8s,mb3.9							
KLR	**Kul'dur**	**30.95**	**286**	*e*P	**P**	**01 37 38.4**	**-4.7**
MJAR	**Matsushiro Arr**	**33.50**	**261**	LR	LR	01 50 26.0	
comp=Z,68nm,18.6s,MS3.4,baz=65,slow=34							
YKA	**Yellowknife Ar**	**35.52**	**46**	P	**P**	**01 38 21.8**	**-0.8**
comp=Z,4.3nm,0.6s,mb4.5,baz=281,slow=8.0,SNR=22							
YKA				PcP	PcP	01 40 52.5	+1.8
comp=Z,0.5nm,0.7s,baz=295,slow=3.3,SNR=3.8							
YKA				LR	LR	01 54 44.5	
comp=Z,9.4nm,20.3s,MS2.5,baz=235,slow=39							
YKA	**Yellowknife Ar**	**35.52**	**46**	P	**P**	**01 38 21.8**	**-0.8**
YKA						01 40 52.5	
YKA				pmax	pmax		
comp=Z,4.0nm,0.6s							
YKA				MLR	MLR		
comp=Z,9.0nm,20.3s							
YKA	**Yellowknife Ar**	**35.52**	**46**	P	**P**	**01 38 21.8**	**-0.8**
YKA				PcP	PcP	01 40 52.5	+1.8
YKA				LR	LR	01 54 44.5	
A07A	**Ashnola River,**	**36.90**	**70**	⇑P	**P**	**01 38 35.1**	**+0.4**
baz=37							
B08A	**Colville Reser**	**37.84**	**70**	⇑P	**P**	**01 38 42.3**	**-0.2**
baz=38							
BOD	**Bodaibo**	**37.84**	**307**	⇓*i*P	**P**	**01 38 41.4**	**-1.0**
BOD				pmax	pmax		
comp=Z,15nm,0.8s,mb4.8							
HIA	**Hailar**	**38.08**	**292**	*e*P	**P**	**01 38 43.7**	**-0.9**
HIA				pmax	pmax		
comp=Z,5.0nm,0.4s							
HIA	**Hailar**	**38.08**	**292**	*e*P	**P**	**01 38 43.7**	**-0.9**
comp=Z,5.1nm,0.4s,mb4.6							
B09A	**Rice**	**38.51**	**69**	⇑P	**P**	**01 38 48.4**	**+0.3**
baz=38							
D08A	**Wollman Farm,**	**38.70**	**72**	⇓P	**P**	**01 38 49.3**	**-0.5**
baz=39							
EDM	**Edmonton**	**39.11**	**60**	*e*P	**P**	**01 38 52.0**	**-1.2**
YBH	**Yreka Blue Hor**	**39.17**	**81**	P	**P**	**01 38 57.1**	**+3.3**
comp=Z,2.7nm,0.8s,mb4.0,baz=326,slow=5.1,SNR=3.9							
YBH	**Yreka Blue Hor**	**39.17**	**81**	P	**P**	**01 38 57.1**	**+3.3**
YBH				pmax	pmax		
comp=Z,3.0nm,0.8s							
NEW	**Newport**	**39.18**	**69**	*e*P	**P**	**01 38 53.4**	**-0.4**
NEW				pmax	pmax		
comp=Z,4.0nm,0.7s							
NEW	**Newport**	**39.18**	**69**	*e*P	**P**	**01 38 53.4**	**-0.4**
comp=Z,4.1nm,0.7s,mb4.3							
A11A	**Hall Mountain,**	**39.30**	**68**	⇑P	**P**	**01 38 55.0**	**+0.2**
baz=39							
KSRS	**Korea Array**	**39.37**	**271**	P	**P**	**01 38 55.5**	**0.0**
comp=Z,4.5nm,0.8s,mb4.2,baz=61,slow=8.4,SNR=16							
KSRS				LR	LR	01 52 56.2	
comp=Z,49nm,19.3s,MS3.4,baz=168,slow=33							
D10A	**Wagner Farm, O**	**39.68**	**71**	⇑P	**P**	**01 38 57.7**	**-0.3**
baz=40							
RES	**Resolute Bay**	**39.97**	**24**	P	**P**	**01 38 59.5**	**-0.6**
comp=Z,1.4nm,0.8s,mb3.7,baz=306,slow=2.8,SNR=6.4							
RES				PcP	PcP	01 41 04.2	-0.1
comp=Z,1.8nm,0.6s,baz=338,slow=3.4,SNR=6.1							
RES	**Resolute Bay**	**39.97**	**24**	P	**P**	**01 38 59.5**	**-0.6**
RES						01 41 04.2	
RES				pmax	pmax		
comp=Z,1.0nm,0.8s,mb3.6							
RES	**Resolute Bay**	**39.97**	**24**	P	**P**	**01 38 59.5**	**-0.6**
RES				PcP	PcP	01 41 04.2	-0.1
E10A	**Myers Farm, Un**	**40.06**	**72**	⇓P	**P**	**01 39 01.1**	**0.0**
baz=40							
C12B	**Naegeli Ranch,**	**40.42**	**69**	⇓P	**P**	**01 39 04.1**	**0.0**
baz=40							
G10A	**Bishop Farm, J**	**40.67**	**73**	⇑P	**P**	**01 39 06.2**	**0.0**
baz=40							
B13A	**Whitefish**	**40.68**	**68**	⇓P	**P**	**01 39 06.3**	**+0.1**
baz=40							
BSMT	**Bassoo Peak**	**40.75**	**69**	*e*P	**P**	**01 39 06.6**	**-0.2**
comp=Z,3.7nm,0.7s,mb4.1							
J08A	**Circle Bar Ran**	**40.88**	**76**	⇑P	**P**	**01 39 08.0**	**+0.1**
baz=41							
F11A	**Grangeville**	**40.94**	**72**	⇓P	**P**	**01 39 08.8**	**+0.4**
baz=41							
C13A	**Hot Springs**	**40.96**	**69**	⇑P	**P**	**01 39 09.0**	**+0.4**
baz=41							
A14A	**Double T Ranch**	**40.99**	**66**	⇓P	**P**	**01 39 08.4**	**-0.4**
baz=41,SNR=9.1							
G11A	**Walters Elk Ra**	**41.13**	**73**	⇓P	**P**	**01 39 10.1**	**+0.2**
baz=41							
H10A	**Noah's Angus R**	**41.27**	**74**	⇓P	**P**	**01 39 11.1**	**0.0**
baz=41							
F12A	**Elk City**	**41.55**	**72**	⇓P	**P**	**01 39 13.0**	**-0.4**
baz=41,SNR=8.2							
H11A	**Donnelly**	**41.65**	**73**	⇓P	**P**	**01 39 14.1**	**-0.1**
baz=42							
MSO	**Missoula**	**41.77**	**69**	*e*P	**P**	**01 39 14.6**	**-0.6**
comp=Z,3.0nm,0.9s,mb3.9							
B15A	**Bradely Ranch,**	**41.82**	**67**	⇑P	**P**	**01 39 14.8**	**-0.7**
baz=42,SNR=8.3							
G12A	**Big Creek, Yel**	**41.84**	**72**	⇑P	**P**	**01 39 15.7**	**-0.1**
baz=42							
D14A	**Greenough**	**41.89**	**69**	⇑P	**P**	**01 39 15.7**	**-0.5**
baz=42							
C15A	**Salmond Ranch,**	**42.06**	**68**	⇓P	**P**	**01 39 17.5**	**-0.1**
baz=42,SNR=9.5							
F13A	**Darby**	**42.08**	**71**	⇓P	**P**	**01 39 17.6**	**-0.2**
baz=42							
I11A	**Placerville**	**42.11**	**74**	⇓P	**P**	**01 39 17.8**	**-0.2**
baz=42							
E14A	**Clinton**	**42.24**	**70**	⇑P	**P**	**01 39 19.2**	**+0.1**
baz=42							
D15A	**Lincoln**	**42.49**	**68**	⇓P	**P**	**01 39 20.8**	**-0.2**
baz=42							
G13A	**Cobalt**	**42.51**	**72**	⇑P	**P**	**01 39 21.3**	**+0.1**
baz=42							
C16A	**Fuhringer Ranc**	**42.55**	**67**	⇓P	**P**	**01 39 20.9**	**-0.6**
baz=42,SNR=6.8							
I12A	**Atlanta**	**42.67**	**74**	⇓P	**P**	**01 39 22.7**	**+0.1**
baz=42,SNR=8.3							
E15A	**Deer Lodge**	**42.74**	**69**	⇑P	**P**	**01 39 22.7**	**-0.4**
baz=43							
B17A	**L&G Farms, Che**	**42.84**	**66**	⇑P	**P**	**01 39 23.6**	**-0.3**
baz=43							
J12A	**Stokes Ranch,**	**43.00**	**75**	⇓P	**P**	**01 39 25.1**	**-0.1**
baz=43							
D16A	**Dana Ranch, Ca**	**43.06**	**68**	⇑P	**P**	**01 39 25.5**	**-0.2**
baz=43							
C17A	**Wharram Farm,**	**43.20**	**67**	⇓P	**P**	**01 39 26.5**	**-0.3**
baz=43							
L11A	**Cat Creek Ranc**	**43.21**	**76**	⇓P	**P**	**01 39 26.8**	**-0.2**
baz=43							
I13A	**Wildhorse Cree**	**43.22**	**73**	⇓P	**P**	**01 39 26.9**	**-0.1**
baz=43							
HLID	**Hailey**	**43.24**	**74**	⇑P	**P**	**01 39 27.7**	**+0.5**
baz=43							
HLID	**Hailey**	**43.24**	**74**	*e*P	**P**	**01 39 27.7**	**+0.5**
comp=Z,4.2nm,0.9s,mb4.2							
H14A	**Leadore**	**43.28**	**72**	⇓P	**P**	**01 39 27.6**	**+0.1**
baz=43							
B18A	**Beardsley Farm**	**43.38**	**65**	⇓P	**P**	**01 39 28.1**	**-0.1**
baz=43							
K12A	**Draper Farm, C**	**43.46**	**75**	⇓P	**P**	**01 39 29.3**	**+0.3**
baz=43							
J13A	**Cove Ranch, Pi**	**43.47**	**74**	⇑P	**P**	**01 39 29.5**	**+0.4**
baz=43,SNR=5.1							
MCMT	**McKenzie Canyo**	**43.48**	**71**	*e*P	**P**	**01 39 28.7**	**-0.4**
comp=Z,2.3nm,0.6s,mb4.1							
G15A	**Dillon**	**43.51**	**71**	⇑P	**P**	**01 39 29.1**	**-0.2**
baz=43							
L12A	**House Creek Ra**	**43.67**	**76**	⇓P	**P**	**01 39 30.9**	**+0.2**
baz=44							
F16A	**Kennard Place,**	**43.68**	**70**	⇑P	**P**	**01 39 30.4**	**-0.2**
baz=44							
H15A	**Lima**	**43.72**	**72**	⇑P	**P**	**01 39 31.0**	**+0.1**
baz=44							
BOZ	**Bozeman (W)**	**43.75**	**70**	⇓P	**P**	**01 39 31.1**	**-0.2**
baz=44,SNR=7.4							
BOZ	**Bozeman (W)**	**43.75**	**70**	*e*P	**P**	**01 39 31.0**	**-0.3**
BOZ				pmax	pmax		
comp=Z,4.0nm,0.6s,mb4.3							
BOZ	**Bozeman (W)**	**43.75**	**70**	*e*P	**P**	**01 39 30.9**	**-0.3**
comp=Z,3.5nm,0.6s,mb4.3							
E17A	**Martinsdale**	**43.77**	**68**	⇑P	**P**	**01 39 31.3**	**-0.1**
baz=44							
G16A	**Moss Hill, Enn**	**43.88**	**70**	⇓P	**P**	**01 39 31.8**	**-0.4**
baz=44,SNR=6.2							
D18A	**Linhart Farms,**	**43.99**	**67**	⇓P	**P**	**01 39 33.7**	**+0.6**
baz=44							
M12A	**Wells**	**44.16**	**77**	⇑P	**P**	**01 39 34.7**	**+0.2**
baz=44							
F17A	**Fitzpatrick Pl**	**44.18**	**69**	⇓P	**P**	**01 39 34.7**	**0.0**
baz=44							
E18A	**Harlowton**	**44.26**	**68**	⇑P	**P**	**01 39 35.6**	**+0.3**
baz=44,SNR=6.3							
H16A	**Russell Place,**	**44.50**	**71**	⇑P	**P**	**01 39 37.4**	**+0.2**
baz=44,SNR=5.6							
RLMT	**Red Lodge**	**45.43**	**69**	*e*P	**P**	**01 39 45.4**	**+0.7**
comp=Z,7.4nm,0.7s,mb4.6							
LOHW	**Long Hollow**	**45.49**	**72**	*e*P	**P**	**01 39 45.8**	**+0.6**
comp=Z,1.8nm,0.7s,mb4.0							
J18A	**Kendall Valley**	**46.07**	**72**	⇓P	**P**	**01 39 50.2**	**+0.4**
baz=46							
ULN	**Ulaanbaatar**	**46.07**	**296**	*e*P	**P**	**01 39 50.0**	**+0.3**
ULN				pmax	pmax		
comp=Z,11nm,1.2s,mb4.7							
ULN	**Ulaanbaatar**	**46.07**	**296**	*e*P	**P**	**01 39 50.0**	**+0.3**
comp=Z,11nm,1.2s,mb4.7							
DUG	**Dugway**	**46.16**	**77**	⇑P	**P**	**01 39 52.5**	**+2.0**
baz=46,SNR=5.4							
DUG	**Dugway**	**46.16**	**77**	*e*P	**P**	**01 39 52.3**	**+1.8**
DUG				pmax	pmax		
comp=Z,6.0nm,0.8s,mb4.6							
DUG	**Dugway**	**46.16**	**77**	*e*P	**P**	**01 39 52.3**	**+1.9**
comp=Z,5.9nm,0.8s,mb4.6							
L17A	**Cokeville**	**46.21**	**73**	⇑P	**P**	**01 39 51.5**	**+0.7**
baz=46							
M16A	**Huntsville**	**46.22**	**75**	⇑P	**P**	**01 39 53.0**	**+2.1**
baz=46,SNR=5.1							
K18A	**Toltan Ranch,**	**46.39**	**72**	⇓P	**P**	**01 39 52.9**	**+0.7**
baz=46							
SONM	**Songino Array**	**46.46**	**296**	P	**P**	**01 39 53.3**	**+0.5**
comp=Z,3.7nm,0.6s,mb4.5,baz=56,slow=9.6,SNR=22							
SONM				PcP	PcP	01 41 26.1	-0.5
comp=Z,1.3nm,0.6s,baz=66,slow=2.7,SNR=4.0							
SONM				LR	LR	02 00 19.6	
comp=Z,154nm,19.8s,MS4.0,baz=263,slow=37							
SONM	**Songino Array**	**46.46**	**296**	P	**P**	**01 39 53.3**	**+0.6**
SONM						01 41 26.1	
SONM				pmax	pmax		
comp=Z,4.0nm,0.6s							
SONM				MLR	MLR		
comp=Z,154nm,19.8s							
T11A	**Corn Creek, Al**	**46.49**	**82**	⇑P	**P**	**01 39 53.2**	**+0.1**
baz=46							
S12A	**Delamar Landin**	**46.49**	**81**	⇑P	**P**	**01 39 53.3**	**+0.2**
baz=46							
BW06	**Boulder Array**	**46.61**	**72**	⇑P	**P**	**01 39 53.9**	**0.0**
baz=46,SNR=12							
BW06	**Boulder Array**	**46.61**	**72**	*e*P	**P**	**01 39 53.9**	**-0.1**
comp=Z,10nm,0.8s,mb4.8							
PDAR	**Pinedale Array**	**46.61**	**72**	P	**P**	**01 39 53.9**	**0.0**
comp=Z,6.9nm,0.8s,mb4.6,baz=311,slow=4.9,SNR=39							
ZAK	**Zakamensk**	**46.79**	**301**	*e*P	**P**	**01 39 51.0**	**-4.2**
ZAK				pmax	pmax		
comp=Z,6.0nm,1.2s,mb4.4							
K19A	**Absolon Red Bu**	**47.00**	**71**	⇓P	**P**	**01 39 56.7**	**-0.3**
baz=47,SNR=7.7							
MOY	**Mondy**	**47.31**	**304**	*e*P	**P**	**01 39 59.8**	**+0.5**
HHC	**Hu-ho-hao-te**	**47.46**	**286**	*e*P	**P**	**01 40 00.8**	**+0.2**
HHC				pP	pP	01 40 13.2	-0.8
HHC				sP	sP	01 40 18.5	-1.3
HHC				PcP	PcP	01 41 31.9	+1.7
HHC				PP	PP	01 41 50.9	-1.1
HHC				ScP	ScP	01 45 21.2	+1.3
HHC				PcS	PcS	01 45 26.0	+0.5
HHC				S	**S**	**01 46 50.0**	**-1.4**
HHC				sS	sS	01 47 10.9	-2.9
HHC				ScS	ScS	01 49 48.1	-1.6
HHC				pmax	pmax		
comp=Z,24nm,1.0s,mb5.1							
HHC				pmax	pmax		
comp=Z,84nm,5.7s							
HHC				LR	LR		
comp=N,82nm,20.2s,MS4.0							
HHC				LR	LR		
comp=E,140nm,20.2s,MS4.0							
HHC				LR	LR		
comp=Z,76nm,20.2s,MS3.7							
L21A	**Rawlins**	**48.39**	**71**	⇑P	**P**	**01 40 07.6**	**-0.2**
baz=48							
NJ2	**Nanjing**	**48.54**	**272**	*e*P	**P**	**01 40 11.1**	**+2.0**
NJ2				pmax	pmax		
comp=Z,20nm,0.8s,mb5.2							
O20A	**White River Ci**	**48.98**

GTA LR LR
comp=N,86nm,16.1s,MS4.2
GTA LR LR
comp=E,120nm,13.4s,MS4.2
GTA LR LR
comp=Z,110nm,14.6s,MS4.1
MNTX Cornudas Mount 56.24 80 *eP* **P 01 41 05.8 -0.3**
comp=Z,1.1nm,0.9s,mb3.9
325A Bean Ranch, Si 56.72 80 ⇓P **P 01 41 09.5 0.0**
baz=57
ARCES ARCESS Array B 58.17 350 P **P 01 41 18.6 -0.5**
comp=Z,5.8nm,0.8s,mb4.7,baz=22,slow=8.5,SNR=20
ARCES ARCESS Array B 58.17 350 P **P 01 41 18.7 -0.5**
ARCES pmax pmax
comp=Z,6.0nm,0.8s
WMOK Wichita Mounta 58.19 73 *eP* **P 01 41 20.8 +1.0**
WMOK pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
WMOK Wichita Mounta 58.19 73 *eP* **P 01 41 20.8 +0.9**
comp=Z,1.7nm,0.6s,mb4.2
428A Kincaid Ranch, 58.58 79 ⇓P **P 01 41 22.3 -0.2**
baz=58
CD2 Chengdu 58.73 282 *eP* **P 01 41 24.4 +0.7**
CD2 pP pP 01 41 37.2 -0.2
CD2 sP sP 01 41 42.4 -0.7
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
CD2 pmax pmax
comp=Z,30nm,4.2s
KURK Kurchatov 58.91 313 *ceP* **P 01 41 24.8 +0.2**
KURK pmax pmax
comp=Z,11nm,0.8s,mb4.9
KURK Kurchatov 58.91 313 *eP* **P 01 41 23.9 -0.7**
comp=Z,9.5nm,0.7s,mb4.9
TXAR Lajitas Array 58.94 81 P **P 01 41 24.1 -1.1**
comp=Z,0.5nm,0.5s,mb3.8,baz=307,slow=6.1,SNR=11
TXAR Lajitas Array 58.94 81 P **P 01 41 24.1 -1.0**
TXAR pmax pmax
comp=Z,1.0nm,0.5s
WMQ Urumqi 59.18 303 *eP* **P 01 41 27.0 +0.4**
WMQ pP pP 01 41 40.0 -0.3
WMQ sP sP 01 41 45.0 -1.0
WMQ PP PP 01 43 40.0 +2.7
WMQ S **S 01 49 29.0 -1.3**
WMQ ScS ScS 01 51 09.0 -3.0
WMQ pmax pmax
comp=Z,18nm,1.0s,mb5.1
WMQ LR LR
comp=N,110nm,16.0s,MS4.5
WMQ LR LR
comp=E,260nm,16.0s,MS4.5
WMQ LR LR
comp=Z,87nm,15.0s,MS4.0
MK31 Makanchi Array 59.90 308 *eP* **P 01 41 30.6 -0.9**
MKAR Makanchi Array 59.90 308 P **P 01 41 30.9 -0.6**
comp=Z,3.5nm,0.5s,mb4.6,baz=53,slow=11,SNR=30
MKAR LR LR 02 07 50.7
comp=Z,56nm,18.0s,MS3.7,baz=6.7,slow=36
MKAR Makanchi Array 59.90 308 *i P* **P 01 41 30.8 -0.7**
MKAR pmax pmax
comp=Z,4.0nm,0.5s
GYA Guiyang 60.07 276 P **P 01 41 32.8 -0.1**
GYA pP pP 01 41 48.0 +1.3
GYA sP sP 01 41 52.6 +0.3
GYA PcP PcP 01 42 18.5 +0.1
GYA PP PP 01 43 48.3 +2.8
GYA ScP ScP 01 46 14.0 -1.0
GYA PcS PcS 01 46 19.4 -1.5
GYA S **S 01 49 40.0 -2.1**
GYA sS sS 01 50 03.2 -2.0
GYA ScS ScS 01 51 15.8 -3.3
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
GYA pmax pmax
comp=Z,70nm,5.0s
SCHQ Schefferville 60.27 38 P **P 01 41 33.3 -0.6**
comp=Z,2.4nm,0.7s,mb4.3,baz=278,slow=5.6,SNR=5.3
BVAR Borovoye Array 60.81 320 P **P 01 41 37.4 -0.2**
comp=Z,1.8nm,0.4s,mb4.6,baz=59,slow=7.5,SNR=11
BVAR Borovoye Array 60.81 320 P **P 01 41 37.4 -0.2**
BVAR pmax pmax
comp=Z,2.0nm,0.4s
BRVK Borovoye 60.83 320 *ceP* **P 01 41 39.9 +2.2**
BRVK pmax pmax
comp=Z,3.0nm,0.6s,mb4.6
BRVK Borovoye 60.83 320 *eP* **P 01 41 38.0 +0.3**
comp=Z,7.5nm,0.9s,mb4.8
MIAR Mount Ida 61.42 70 *eP* **P 01 41 41.6 -0.4**
MIAR pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
MIAR Mount Ida 61.42 70 *eP* **P 01 41 41.6 -0.4**
comp=Z,5.3nm,1.0s,mb4.6
ARU Arti 62.57 328 *eP* **P 01 41 48.7 -0.7**
ARU pmax pmax
comp=Z,3.0nm,0.6s,mb4.6
ARU Arti 62.57 328 *eP* **P 01 41 48.7 -0.6**
comp=Z,2.7nm,0.6s,mb4.5
WCI Wyandotte Cave 63.00 62 *eP* **P 01 41 51.8 -0.7**
WCI pmax pmax
comp=Z,5.0nm,0.6s,mb4.8
WCI Wyandotte Cave 63.00 62 *eP* **P 01 41 51.8 -0.8**
comp=Z,5.1nm,0.6s,mb4.8
KMI Kunming 63.47 278 P **P 01 41 56.1 +0.3**
KMI pP pP 01 42 10.0 +0.3
KMI sP sP 01 42 15.3 -0.1
KMI PP PP 01 44 18.1 +2.5
KMI S **S 01 50 23.5 -1.7**
KMI sS sS 01 50 46.4 -2.1
KMI SS SS 01 54 32.1 -0.4
KMI pmax pmax
comp=Z,8.0nm,0.6s,mb5.0
KMI pmax pmax
comp=Z,63nm,3.3s
KMI LR LR
comp=N,79nm,14.5s,MS4.1
KMI LR LR
comp=E,78nm,16.9s,MS4.1
KMI LR LR
comp=Z,100nm,16.1s,MS4.1
WVT Waverly 63.63 65 *eP* **P 01 41 56.0 -0.7**
WVT pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
WVT Waverly 63.63 65 *eP* **P 01 41 56.0 -0.7**
comp=Z,2.0nm,0.5s,mb4.4
JOF Joensuu 63.65 345 *eP* **P 01 41 55.1 -1.3**
JOF pmax pmax
comp=Z,8.0nm,0.5s,mb5.0
JOF Joensuu 63.65 345 *ep* **P 01 41 55.1 -1.3**
comp=Z,8.3nm,0.5s,mb5.0
OXF Oxford 63.88 67 *eP* **P 01 41 58.6 +0.2**
OXF pmax pmax
comp=Z,21nm,1.0s,mb5.1
OXF Oxford 63.88 67 *eP* **P 01 41 58.6 +0.3**
comp=Z,21nm,1.0s,mb5.1
KAF Kangasniemi 65.17 347 *eP* **P 01 42 05.0 -1.4**
KAF pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
KAF Kangasniemi 65.17 347 *ep* **P 01 42 05.0 -1.4**
comp=Z,9.8nm,0.7s,mb5.0
SWET Sewanee 65.36 64 *eP* **P 01 42 06.7 -1.4**
FINES FINESS Array B 65.85 347 P **P 01 42 10.0 -0.8**
comp=Z,9.2nm,0.8s,mb4.9,baz=21,slow=8.6,SNR=23
FINES FINESS Array B 65.85 347 P **P 01 42 10.0 -0.7**
FINES pmax pmax
comp=Z,9.0nm,0.8s
TKM2 Tokmak 2 65.99 309 P **P 01 42 13.7 +1.7**
SNR=6.3
TKL Tuckaleechee C 66.25 62 *eP* **P 01 42 12.8 -1.0**
USP Ossenovka 66.26 310 P **P 01 42 14.8 +1.1**
SNR=12
AAK Ala-Archa 66.74 310 *ceP* **P 01 42 15.1 -1.7**
AAK pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
AAK Ala-Archa 66.74 310 *eP* **P 01 42 16.9 +0.2**
comp=Z,7.3nm,0.6s,mb4.9
KZA Kyzart 66.79 309 P **P 01 42 19.0 +1.9**
SNR=5.8
UCH Uchtor 67.03 309 *eP* **P 01 42 19.4 +0.8**
comp=Z,3.6nm,1.0s,mb4.4
EKS2 Erkin-Say 67.06 310 P **P 01 42 19.7 +0.9**
SNR=10
EKS2 Erkin-Say 67.06 310 *eP* **P 01 42 19.7 +0.9**
comp=Z,12nm,0.9s,mb4.9
LSA Lhasa 67.23 289 P **P 01 42 20.7 +0.6**
AML Almayashu 67.50 310 P **P 01 42 22.8 +1.2**
SNR=9.7
AML Almayashu 67.50 310 *eP* **P 01 42 22.8 +1.2**
comp=Z,8.5nm,0.8s,mb4.8
NB2 NORSAR Subarra 67.75 355 P **P 01 42 22.4 -0.4**
comp=Z,2.0nm,0.6s,mb4.3,baz=6.8,slow=6.5
NOA NORSAR Array B 67.75 355 P **P 01 42 22.7 -0.1**
comp=Z,1.5nm,0.6s,mb4.2,baz=8.2,slow=6.4,SNR=12
NOA LR LR 02 13 50.6
comp=Z,30nm,18.0s,MS3.6,baz=350,slow=38
NOA NORSAR Array B 67.75 355 P **P 01 42 22.7 -0.1**
NOA pmax pmax
comp=Z,2.0nm,0.6s
NOA MLR MLR
comp=Z,30nm,18.0s
ABKAR Akbulak array 67.88 323 *eP* **P 01 42 23.2 -0.6**
comp=Z,1.4nm,0.4s,mb4.3
KSH Kashi 68.36 306 ⇑ *iP* **P 01 42 31.1 +4.1**
KSH pP pP 01 42 44.0 +3.0
KSH sP sP 01 42 49.3 +2.7
KSH PcP PcP 01 42 55.5 +3.2
KSH PP PP 01 45 05.6 +7.8
KSH ScP 01 46 54.1
KSH PcS 01 46 59.2
KSH S S 01 51 28.2 +3.9
KSH sS sS 01 51 51.9 +4.1
KSH ScS ScS 01 52 23.7 +1.5
KSH pmax pmax
comp=Z,15nm,0.8s,mb5.1
KSH pmax pmax
comp=Z,92nm,7.1s
KSH LR LR
comp=N,38nm,4.5s
KSH LR LR
comp=E,43nm,4.4s
KSH LR LR
comp=Z,60nm,5.3s
OBN Obninsk 69.89 339 ⇓ *eP* **P 01 42 36.0 -0.3**
OBN pmax pmax
comp=Z,64nm,2.5s,mb5.1
CMAR Chiang Mai Arr 70.75 276 P **P 01 42 41.4 -0.7**
comp=Z,1.2nm,0.3s,mb4.3,baz=16,slow=6.9,SNR=4.8
CMAR Chiang Mai Arr 70.75 276 P **P 01 42 41.4 -0.7**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
TAPN Taplejung 71.00 290 *ePn* **P 01 42 42.8 -0.6**
comp=Z,48nm,1.1s,mb5.3
ODAN Odare 71.55 290 *ePn* **P 01 42 45.7 -1.1**
comp=Z,10nm,0.6s,mb5.0
GUN Gumba 71.65 292 *ePn* **P 01 42 47.4 0.0**
comp=Z,56nm,0.4s,mb5.9
JIRN Jiri 71.66 291 *ePn* **P 01 42 47.2 -0.2**
comp=Z,27nm,0.4s,mb5.5
RAMN Ramite 71.95 291 *ePn* **P 01 42 48.3 -0.9**
comp=Z,38nm,0.5s,mb5.6
KKN Kakani 72.09 292 *ePn* **P 01 42 49.9 -0.1**
comp=Z,29nm,0.5s,mb5.5
KKN Kakani 72.09 292 *eP* **P 01 42 49.9 -0.1**
KKN pmax pmax
comp=Z,29nm,0.5s,mb5.5
PKI Pulchoki 72.18 292 *ePn* **P 01 42 50.3 -0.3**
comp=Z,13nm,0.4s,mb5.2
PKI Pulchoki 72.18 292 *eP* **P 01 42 50.3 -0.3**
PKI pmax pmax
comp=Z,24nm,0.6s,mb5.3
PKIN Phulchoki 72.18 292 *ePn* **P 01 42 50.3 -0.3**
comp=Z,24nm,0.6s,mb5.3
DMN Daman 72.33 292 *ePn* **P 01 42 51.0 -0.5**
comp=Z,12nm,0.5s,mb5.0
VSR Storozhevoye 72.85 336 *eP* **P 01 42 52.5 -1.6**
VSR pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
VSR pmax pmax
comp=N,1.0nm,0.3s
VSR pmax pmax
comp=E,3.0nm,0.5s
VORD Divnogorie 73.04 336 *eP* **P 01 42 53.6 -1.7**
VORD pmax pmax
comp=N,10.0nm,0.5s
VORD pmax pmax
comp=E,7.0nm,0.5s
VORD pmax pmax
comp=Z,7.0nm,0.5s,mb4.8
AKASG Malin Array Be 75.59 342 P **P 01 43 09.6 -0.5**
comp=Z,19nm,0.4s,mb5.4,baz=20,slow=6.7,SNR=62
AKASG Malin Array Be 75.59 342 *ceP* **P 01 43 09.6 -0.5**
AKASG pmax pmax
comp=Z,19nm,0.4s
AKASG Malin Array Be 75.59 342 P **P 01 43 09.6 -0.5**
AKBB Malin Array Si 75.59 342 *eP* **P 01 43 09.6 -0.5**
KIEV Kiev 75.60 342 *eP* **P 01 43 09.3 -0.8**
KIEV pmax pmax
comp=Z,20nm,0.4s,mb5.4
KIEV Kiev 75.60 342 *eP* **P 01 43 09.3 -0.9**
comp=Z,20nm,0.4s,mb5.4
KBL Kabul 75.70 308 *eP* **P 01 43 11.1 +0.1**
KBL pmax pmax
comp=Z,13nm,0.8s,mb4.9
KBL Kabul 75.70 308 *eP* **P 01 43 11.1 0.0**
comp=Z,13nm,0.8s,mb4.9
CLL Collm 77.29 352 *eP* **P 01 43 18.0 -1.7**
LVV L'vov 77.37 345 *eP* **P 01 43 19.7 -0.5**
KWP Kalwaria Pacla 77.77 346 ⇑P **P 01 43 22.9 +0.5**
KWP Kalwaria Pacla 77.77 346 *eP* **P 01 43 22.7 +0.3**
comp=Z,54nm,0.9s,mb5.5
DPC Dobruska-Polom 77.92 350 *eP* **P 01 43 23.5 +0.3**
DPC Dobruska-Polom 77.92 350 *eP* **P 01 43 23.5 +0.3**
STHS Stebnicka Huta 78.20 347 *eP* **P 01 43 25.6 +0.8**
STHS pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
STHS Stebnicka Huta 78.20 347 *eP* **P 01 43 25.6 +0.8**
comp=Z,5.0nm,0.8s,mb4.5
OKC Ostrava-Krasne 78.21 349 *eP* **P 01 43 24.4 -0.4**
OKC Ostrava-Krasne 78.21 349 *eP* **P 01 43 24.4 -0.4**
MORC Moravsky Berou 78.34 349 *eP* **P 01 43 25.8 +0.2**
MORC pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
MORC Moravsky Berou 78.34 349 *eP* **P 01 43 25.8 +0.2**
comp=Z,2.4nm,1.0s,mb4.1
NKC Novy Kostel 78.41 352 *eP* **P 01 43 25.9 0.0**
NKC Novy Kostel 78.41 352 *eP* **P 01 43 25.9 0.0**
KIV Kislovodsk 78.45 330 P **P 01 43 26.0 -0.3**
KIV pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
PRU Pruhonice 78.46 351 *eP* **P 01 43 26.7 +0.5**
PRU Pruhonice 78.46 351 *eP* **P 01 43 26.7 +0.5**
KOLS Kolonicke sedl 78.51 346 *eP* **P 01 43 27.0 +0.4**
KOLS pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
KOLS Kolonicke sedl 78.51 346 *eP* **P 01 43 27.0 +0.4**
comp=Z,8.6nm,0.8s,mb4.7
CRVS Cervenica-Dubn 78.67 346 *eP* **P 01 43 27.8 +0.4**
CRVS pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
CRVS Cervenica-Dubn 78.67 346 *eP* **P 01 43 27.8 +0.4**
comp=Z,4.9nm,0.8s,mb4.5
UZH Uzhgorod 78.81 346 *eP* **P 01 43 27.9 -0.3**
UZH *e* 01 43 32.7
VRAC Vranov 78.91 350 ⇑P **P 01 43 28.9 +0.2**
BAIF Baives 79.03 358 *eP* **P 01 43 29.6 +0.2**
comp=Z,16nm,0.8s,mb4.7
BAIF Baives 79.03 358 *eP* **P 01 43 29.6 +0.2**
BAIF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
BAIF Baives 79.03 358 *eP* **P 01 43 29.6 +0.2**
comp=Z,7.8nm,0.8s,mb4.7
GRA1 Grafenberg Arr 79.04 353 *eP* **P 01 43 29.7 +0.3**
comp=Z,5.0nm,0.9s,mb4.4
GRF Grafenberg Arr 79.04 353 *eP* **P 01 43 29.7 +0.3**
comp=Z,5.0nm,0.9s,mb4.4
GRF Grafenberg Arr 79.04 353 *eP* **P 01 43 29.7 +0.3**
GRF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
GRF Grafenberg Arr 79.04 353 *eP* **P 01 43 29.7 +0.3**
GRF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
TREC Trest 79.05 350 *eP* **P 01 43 29.4 -0.1**
TREC Trest 79.05 350 *eP* **P 01 43 29.4 -0.1**
KECS Kecovo 79.22 347 *eP* **P 01 43 30.8 +0.4**
KECS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
KECS Kecovo 79.22 347 *eP* **P 01 43 30.8 +0.4**
comp=Z,4.3nm,1.0s,mb4.3
BUR08 Bucovina Ar. S 79.27 343 *eP* **P 01 43 31.1 +0.3**
BURAR Bucovina Array 79.30 343 ⇑P **P 01 43 31.2 +0.3**
WLF Walferdange 79.36 356 *eP* **P 01 43 31.4 +0.2**
WLF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
WLF Walferdange 79.36 356 *eP* **P 01 43 31.4 +0.2**
comp=Z,4.6nm,0.7s,mb4.5
KHC Kasperske Hory 79.40 351 *eP* **P 01 43 31.6 +0.2**
KHC *e* 01 43 37.5
KHC Kasperske Hory 79.40 351 *eP* **P 01 43 31.6 +0.2**
KHC *ep*P pP 01 43 37.5 -8.2
VYHS Vyhne 79.44 348 *eP* **P 01 43 31.8 +0.2**
VYHS pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
VYHS Vyhne 79.44 348 *eP* **P 01 43 31.8 +0.2**
comp=Z,2.5nm,1.0s,mb4.1
SMOL Smolenice 79.59 349 *eP* **P 01 43 33.7 +1.2**
GERES GERESS Array B 79.67 351 P **P 01 43 32.9 0.0**
comp=Z,1.8nm,0.6s,mb4.2,baz=24,slow=5.2,SNR=21
GERES LR LR 02 24 44.0
comp=Z,37nm,18.6s,MS3.8,baz=280,slow=40
PSZ Piszkesteto 79.86 347 ⇓P **P 01 43 34.4 +0.5**
CONA Conrad Observa 80.36 350 ⇑ *iP* **P 01 43 37.2 +0.6**
comp=Z,4.0nm,0.8s,mb4.4
CSNA Conrad Observa 80.36 350 ⇑ *iP* **P 01 43 37.2 +0.6**
comp=Z,4.1nm,0.8s,mb4.4
FLN La Foliniere 80.36 1 *eP* **P 01 43 36.3 -0.3**
comp=Z,28nm,1.1s,mb4.8
FLN La Foliniere 80.36 1 *eP* **P 01 43 36.3 -0.3**
FLN pmax pmax
comp=Z,14nm,1.1s,mb4.8
FLN La Foliniere 80.36 1 *eP* **P 01 43 36.3 -0.3**
comp=Z,14nm,1.1s,mb4.8
DRGR 80.53 345 ⇑P **P 01 43 37.8 +0.3**
LDF La Druitiere 80.53 1 *eP* **P 01 43 37.1 -0.4**
comp=Z,7.6nm,0.6s,mb4.5
LDF La Druitiere 80.53 1 *eP* **P 01 43 37.1 -0.4**
LDF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
LDF La Druitiere 80.53 1 *eP* **P 01 43 37.1 -0.4**
comp=Z,3.8nm,0.6s,mb4.5
MEZF Maizieres J'vi 80.56 357 *eP* **P 01 43 38.0 +0.3**
CDF Champ du Feu 80.56 356 *eP* **P 01 43 37.5 -0.2**
VRI Vrincioaia 80.70 342 ⇓P **P 01 43 38.8 +0.3**
PLOR Plostina 80.73 342 ⇑P **P 01 43 39.1 +0.5**
GRR Gorron 80.73 1 *eP* **P 01 43 38.5 -0.1**
comp=Z,11nm,0.8s,mb4.6
GRR Gorron 80.73 1 *eP* **P 01 43 38.5 -0.1**
GRR pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
GRR Gorron 80.73 1 *eP* **P 01 43 38.5 -0.1**
comp=Z,5.6nm,0.8s,mb4.5
ROSF Rostrenen 80.73 3 *eP* **P 01 43 38.5 -0.1**
comp=Z,19nm,0.9s,mb4.7
ROSF Rostrenen 80.73 3 *eP* **P 01 43 38.5 -0.1**
ROSF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
ROSF Rostrenen 80.73 3 *eP* **P 01 43 38.5 -0.1**
comp=Z,9.4nm,0.9s,mb4.7
SGMF Saint Gilles 80.83 2 *eP* **P 01 43 39.1 -0.1**
comp=Z,14nm,0.7s,mb4.7
SGMF Saint Gilles 80.83 2 *eP* **P 01 43 39.1 -0.1**
SGMF pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
SGMF Saint Gilles 80.83 2 *eP* **P 01 43 39.1 -0.1**
comp=Z,7.2nm,0.7s,mb4.7
HAU Haudompre 81.01 356 *eP* **P 01 43 39.9 -0.2**
comp=Z,3.2nm,0.6s,mb4.2
HAU Haudompre 81.01 356 *eP* **P 01 43 39.9 -0.2**
HAU pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
HAU Haudompre 81.01 356 *eP* **P 01 43 39.9 -0.2**
comp=Z,1.6nm,0.6s,mb4.1
ARSA Arzberg 81.06 350 ⇑ *iP* **P 01 43 41.0 +0.6**
comp=Z,4.1nm,0.9s,mb4.4
HINF Hinteralfeld 81.17 356 *eP* **P 01 43 40.6 -0.4**
MLR Muntele Rosu 81.21 342 ⇓P **P 01 43 41.7 +0.5**
MOTA Moosalm 81.38 353 ⇑ *iP* **P 01 43 42.6 +0.5**
comp=Z,2.3nm,0.6s,mb4.3
WTTA Wattenberg 81.42 353 ⇑ *iP* **P 01 43 42.7 +0.4**
comp=Z,6.0nm,0.7s,mb4.7
KBA Koelnbreinsper 81.45 351 ⇑ *iP* **P 01 43 43.4 +0.9**
comp=Z,16nm,0.7s,mb5.1
SOKA Soboth 81.68 350 ⇑ *iP* **P 01 43 43.9 +0.2**
comp=Z,10nm,1.1s,mb4.7
WRA Warramunga Arr 81.73 224 P **P 01 43 41.6 -2.5**
comp=Z,0.9nm,0.7s,mb3.8,baz=40,slow=6.6,SNR=6.3
WRA Warramunga Arr 81.73 224 P **P 01 43 41.6 -2.5**
WRA pmax pmax
comp=Z,1.0nm,0.7s
FETA Feichten 81.73 353 ⇓ *iP* **P 01 43 44.3 +0.3**
comp=Z,5.6nm,1.0s,mb4.4
BZS Buzias 81.85 345 ⇓P **P 01 43 44.4 -0.2**
ABTA Abfaltersbach 81.86 352 ⇓ *iP* **P 01 43 44.7 +0.1**
comp=Z,5.1nm,0.8s,mb4.5
OBKA Obir 81.90 350 ⇑ *iP* **P 01 43 45.0 +0.2**
comp=Z,5.7nm,0.7s,mb4.6
SSF Saint Saulge 82.04 358 *eP* **P 01 43 45.5 -0.1**
comp=Z,8.1nm,0.9s,mb4.3
SSF Saint Saulge 82.04 358 *eP* **P 01 43 45.5 -0.1**
SSF pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
SSF Saint Saulge 82.04 358 *eP* **P 01 43 45.5 -0.1**
comp=Z,4.1nm,0.9s,mb4.4
AVF Avril sur Loir 82.31 358 *eP* **P 01 43 46.9 -0.1**
comp=Z,5.5nm,0.8s,mb4.2
AVF Avril sur Loir 82.31 358 *eP* **P 01 43 46.9 -0.1**
AVF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
AVF Avril sur Loir 82.31 358 *eP* **P 01 43 46.9 -0.1**
comp=Z,2.8nm,0.8s,mb4.2
CABF La Chapelle 82.41 356 *eP* **P 01 43 47.8 +0.3**
GCIS Gornji Cirnik 82.42 350 *i P* **P 01 43 47.3 -0.3**
SMF Signal de Mont 82.45 358 *eP* **P 01 43 47.6 -0.1**
comp=Z,15nm,1.0s,mb4.6
SMF Signal de Mont 82.45 358 *eP* **P 01 43 47.6 -0.1**
SMF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
SMF Signal de Mont 82.45 358 *eP* **P 01 43 47.6 -0.1**
comp=Z,7.4nm,1.0s,mb4.6
MFF Saint Martin d 82.53 1 *eP* **P 01 43 48.2 +0.1**
comp=Z,19nm,1.2s,mb4.7
MFF Saint Martin d 82.53 1 *eP* **P 01 43 48.2 +0.1**
MFF pmax pmax
comp=Z,9.0nm,1.2s,mb4.7
MFF Saint Martin d 82.53 1 *eP* **P 01 43 48.2 +0.1**
comp=Z,9.4nm,1.2s,mb4.7
BGF Bois d'Agland 82.56 359 *eP* **P 01 43 48.1 -0.2**
comp=Z,7.9nm,0.8s,mb4.5
BGF Bois d'Agland 82.56 359 *eP* **P 01 43 48.1 -0.2**
BGF pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
BGF Bois d'Agland 82.56 359 *eP* **P 01 43 48.1 -0.2**
comp=Z,4.0nm,0.8s,mb4.5
CEY Cerknica 82.67 350 *i P* **P 01 43 49.3 +0.4**
BOJS Bojanci 82.82 350 *i P* **P 01 43 49.5 -0.1**
TCF Toulx Ste Croi 82.83 359 *eP* **P 01 43 49.6 -0.1**
comp=Z,7.9nm,0.9s,mb4.4
TCF Toulx Ste Croi 82.83 359 *eP* **P 01 43 49.6 -0.1**
TCF pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
TCF Toulx Ste Croi 82.83 359 *eP* **P 01 43 49.6 -0.1**
comp=Z,4.0nm,0.9s,mb4.5
LPL La Plagne 83.48 356 *eP* **P 01 43 54.0 +1.0**
LPG La Plagne 83.49 356 *eP* **P 01 43 54.3 +1.2**
RJF Les Rejaudoux 83.82 359 *eP* **P 01 43 54.6 -0.2**
comp=Z,4.6nm,0.7s,mb4.4
RJF Les Rejaudoux 83.82 359 *eP* **P 01 43 54.6 -0.2**
RJF pmax pmax
comp=Z,2.0nm,0.7s,mb4.4
RJF Les Rejaudoux 83.82 359 *eP* **P 01 43 54.6 -0.2**
comp=Z,2.3nm,0.7s,mb4.4
BNI Bardonecchia 83.94 356 *eP* **P 01 43 56.4 +1.0**
BNI pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
BNI Bardonecchia 83.94 356 *eP* **P 01 43 56.4 +1.0**
comp=Z,3.6nm,0.9s,mb4.5
ORIF Oris-en-Rattie 84.11 356 *eP* **P 01 43 56.9 +0.6**
comp=Z,5.6nm,0.7s,mb4.5
LFF La Frestale 84.19 0 *eP* **P 01 43 56.8 +0.1**
CAF Calviac 84.20 359 *eP* **P 01 43 57.0 +0.3**
comp=Z,8.5nm,0.9s,mb4.6
CAF Calviac 84.20 359 *eP* **P 01 43 57.0 +0.3**
CAF pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
CAF Calviac 84.20 359 *eP* **P 01 43 57.0 +0.3**
comp=Z,4.3nm,0.9s,mb4.6
BR131 Keskin Array S 84.95 335 *eP* **P 01 44 00.6 -0.1**
comp=Z,3.0nm,0.7s,mb4.5
BRTR Keskin Array B 84.95 335 P **P 01 44 00.8 +0.2**
comp=Z,3.7nm,0.7s,mb4.6,baz=46,slow=2.6,SNR=23

BRTR	**Keskin Array B**	**84.95**	**335**	P	**P**		**01 44 00.9**	**+0.3**
BRTR				pmax	pmax			
	comp=Z,4.0nm,0.7s							
LASF	**Ste Croix**	**85.02**	**358**	*e*P	**P**		**01 44 01.2**	**+0.3**
	comp=Z,6.2nm,0.9s,mb4.4							
SMRF	**Simiane la Rot**	**85.06**	**357**	*e*P	**P**		**01 44 02.0**	**+0.9**
	comp=Z,9.2nm,0.9s,mb4.4							
SBF	**Sospel**	**85.09**	**355**	*e*P	**P**		**01 44 01.1**	**-0.1**
	comp=Z,22nm,0.9s,mb5.0							
SBF	**Sospel**	**85.09**	**355**	*e*P	**P**		**01 44 01.1**	**-0.1**
SBF				pmax	pmax			
	comp=Z,11nm,0.9s,mb5.0							
SBF	**Sospel**	**85.09**	**355**	*e*P	**P**		**01 44 01.1**	**-0.1**
	comp=Z,11nm,0.9s,mb5.0							
ASAR	**Alice Springs**	**85.21**	**222**	P	**P**		**01 44 00.1**	**-1.8**
	comp=Z,0.8nm,0.7s,mb4.0,baz=32,slow=4.8,SNR=6.1							
ASAR	**Alice Springs**	**85.21**	**222**	P	**P**		**01 44 00.2**	**-1.7**
ASAR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
FRF	**La Foret Royal**	**85.43**	**356**	*e*P	**P**		**01 44 02.8**	**-0.2**
	comp=Z,6.6nm,0.7s,mb4.6							
FRF	**La Foret Royal**	**85.43**	**356**	*e*P	**P**		**01 44 02.8**	**-0.2**
FRF				pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.5							
FRF	**La Foret Royal**	**85.43**	**356**	*e*P	**P**		**01 44 02.8**	**-0.2**
	comp=Z,3.3nm,0.7s,mb4.6							
LMR	**La Mourre**	**85.67**	**356**	*e*P	**P**		**01 44 04.1**	**0.0**
	comp=Z,6.9nm,0.8s,mb4.6							
LMR	**La Mourre**	**85.67**	**356**	*e*P	**P**		**01 44 04.1**	**0.0**
LMR				pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.6							
LMR	**La Mourre**	**85.67**	**356**	*e*P	**P**		**01 44 04.1**	**0.0**
	comp=Z,3.5nm,0.8s,mb4.6							
MTLF	**Montolieu**	**85.78**	**359**	*e*P	**P**		**01 44 04.9**	**+0.2**
	comp=Z,6.1nm,0.9s,mb4.5							
MTLF	**Montolieu**	**85.78**	**359**	*e*P	**P**		**01 44 04.9**	**+0.2**
MTLF				pmax	pmax			
	comp=Z,3.0nm,0.9s,mb4.5							
MTLF	**Montolieu**	**85.78**	**359**	*e*P	**P**		**01 44 04.9**	**+0.2**
	comp=Z,3.0nm,0.9s,mb4.5							
EPF	**Esparros**	**86.10**	**0**	*e*P	**P**		**01 44 06.6**	**+0.3**
AQU	**L'Aquila**	**86.13**	**351**	*e*P	**P**		**01 44 06.2**	**-0.2**
AQU				pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.8							
AQU	**L'Aquila**	**86.13**	**351**	*e*P	**P**		**01 44 06.2**	**-0.3**
	comp=Z,5.0nm,0.8s,mb4.8							
ETSF	**Etsaut**	**86.22**	**1**	*e*P	**P**		**01 44 07.3**	**+0.4**
	comp=Z,9.5nm,0.9s,mb4.7							
ETSF	**Etsaut**	**86.22**	**1**	*e*P	**P**		**01 44 07.3**	**+0.4**
ETSF				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.7							
ETSF	**Etsaut**	**86.22**	**1**	*e*P	**P**		**01 44 07.3**	**+0.4**
	comp=Z,4.8nm,0.9s,mb4.7							
PGF	**Pioggiola**	**86.31**	**354**	*e*P	**P**		**01 44 07.2**	**-0.1**
	comp=Z,17nm,0.9s,mb5.0							
PGF	**Pioggiola**	**86.31**	**354**	*e*P	**P**		**01 44 07.2**	**-0.1**
PGF				pmax	pmax			
	comp=Z,8.0nm,0.9s,mb5.0							
PGF	**Pioggiola**	**86.31**	**354**	*e*P	**P**		**01 44 07.2**	**-0.1**
	comp=Z,8.4nm,0.9s,mb5.0							
ESDC	**Sonseca Array**	**89.36**	**4**	P	**P**		**01 44 20.8**	**-1.1**
	comp=Z,0.4nm,0.7s,mb3.9,baz=352,slow=4.5,SNR=4.8							
MAW	**Mawson**	**146.22**	**218**	PKPbc	PKPbc		01 51 01.2	-3.2
	comp=Z,2.0nm,0.7s,baz=56,slow=3.6,SNR=3.4							
LBTB	**Lobatse**	**147.63**	**315**	*e*PKPbc	PKPbc		01 51 09.8	+0.1
LBTB				*e*PKPab	PKPab		01 51 12.7	+0.7
BOSA	**Boshof**	**150.86**	**312**	PKPbc	PKPbc		01 51 16.6	-1.1
	comp=Z,3.0nm,0.6s,baz=94,slow=5.6,SNR=9.2							
BOSA	**Boshof**	**150.86**	**312**	*e*PKPbc	PKPbc		01 51 17.9	+0.2

*ISCJB **11** 01:52:37.4±1.8,20°.01S±0°.07×175°.4W±0°.1,h97km±16km, mb4.3/25,Error ellipse: s-maj=18.0km s-min=9.2km az=30.9*
*VIE **11** 01:52:41.1,19°.25S×175°.83W,h80km,mb3.9 220 km NNW of Nuku'alofa*
*NEIC **11** 01:52:41.2±1.3,19°.89S×175°.43W,h118km±11km,mb4.4/9, Error ellipse: s-maj=14.8km s-min=7.8km az=133.0*
*IDC **11** 01:52:41.3±2.9,19°.88S×175°.46W,h115km±25km, mb3.8/12,mb1 4.1/14,mb1mx4.0/20,mbtmp3.9/14,Error ellipse: s-maj=24.9km s-min=14.1km az=136.0*

ISC 11 01:52:39.0±1.4,20°.02S±0°.07×175°.4W±0°.1,h97km±13km, n107,σ0°98/34,mb4.3/25,27C-6D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.61**	**289**	*e*Pn	**Pn**	**01 54 27.2**	**+14**
AFI	**Afiamalu**	**6.99**	**30**	P	**Pn**	**01 54 19.5**	**+0.8**
	22nm,0.3s,baz=232,slow=2.5,SNR=20						
AFI				S	**Sn**	**01 55 29.6**	**-7.1**
	91nm,0.3s,baz=6.4,slow=22,SNR=10						
RAO	**Raoul Island**	**9.48**	**194**	S	**Sn**	**01 56 35.9**	**-1.3**
	42nm,0.3s,baz=53,slow=20,SNR=2.7						
URZ	**Urewera**	**19.31**	**198**	P	**Pn**	**01 56 57.7**	**-0.6**
	1.7nm,0.3s,baz=350,slow=6.6,SNR=8.7						
URZ				S	**S**	**02 00 16.9**	**-13**
	0.8nm,0.3s,baz=336,slow=20,SNR=2.4						
URZ	**Urewera**	**19.31**	**198**	*e*P	**Pn**	**01 56 57.9**	**-0.4**
	50nm,1.2s						
URZ				S	**S**	**02 00 16.9**	**-13**
RPZ	**Rata Peaks**	**26.21**	**203**	P	**P**	**01 58 06.1**	**+1.5**
	6.0nm,0.5s,mb4.3,baz=353,slow=19,SNR=7.1						
CTA	**Charters Tower**	**35.98**	**263**	P	**P**	**01 59 31.9**	**+1.3**
	2.0nm,0.4s,mb4.4,baz=97,slow=12,SNR=3.0						
COEN	**Coen**	**40.00**	**272**	*e*P	**P**	**02 00 04.3**	**-0.2**
	69nm,1.0s,mb5.4						
ASAR	**Alice Springs**	**47.01**	**256**	P	**P**	**02 01 01.9**	**+1.2**
	4.4nm,0.7s,mb4.3,baz=92,slow=8.1,SNR=12						
ASAR				PcP	PcP	02 02 31.4	-0.1
	1.1nm,0.7s,baz=105,slow=3.4,SNR=5.8						
WRAB	**Tennant Creek**	**47.09**	**261**	*e*P	**P**	**02 01 01.5**	**+0.1**
	7.0nm,0.9s,mb4.4						
WRA	**Warramunga Arr**	**47.09**	**261**	P	**P**	**02 01 01.1**	**-0.3**
	0.7nm,0.3s,mb3.9,baz=96,slow=7.5,SNR=45						
FORT	**Forrest**	**51.73**	**246**	*e*P	**P**	**02 01 36.3**	**-0.2**
	23nm,0.9s,mb5.2						
QSPA	**South Pole Qui**	**70.05**	**180**	*e*P	**P**	**02 03 40.8**	**+0.9**
	5.4nm,1.1s,mb4.3						
MJAR	**Matsushiro Arr**	**71.30**	**322**	P	**P**	**02 03 45.7**	**-2.3**
	3.1nm,0.7s,mb4.2,baz=159,slow=5.3,SNR=6.1						
MAJO	**Matsushiro**	**71.31**	**322**	*e*P	**P**	**02 03 47.9**	**-0.1**
	2.8nm,0.5s,mb4.3						
PETK	**Petropavlovsk-**	**76.46**	**344**	P	**P**	**02 04 18.0**	**+0.3**
	7.0nm,0.7s,mb4.5,baz=132,slow=7.8,SNR=7.5						
KSRS	**Korea Array**	**78.17**	**317**	P	**P**	**02 04 27.4**	**-0.2**
	1.1nm,0.7s,mb3.7,baz=131,slow=5.7,SNR=6.4						
NVAR	**Mina Array Bea**	**79.01**	**42**	P	**P**	**02 04 33.3**	**+1.1**
	1.6nm,0.7s,mb4.0,baz=226,slow=8.0,SNR=5.3						
DUG	**Dugway**	**83.51**	**43**	*e*P	**P**	**02 04 55.3**	**-0.7**
	2.5nm,1.0s,mb4.0						
TTA	**Tatalina**	**84.07**	**9**	*e*P	**P**	**02 04 58.2**	**-0.1**
	10.0nm,1.2s,mb4.5						
HLID	**Hailey**	**84.38**	**40**	*e*P	**P**	**02 04 60.0**	**-0.4**
	2.3nm,0.9s,mb4.0						
TXAR	**Lajitas Array**	**84.74**	**56**	P	**P**	**02 05 04.8**	**+2.3**
	0.4nm,1.0s,mb3.3,baz=212,slow=5.0,SNR=3.2						
ANMO	**Albuquerque**	**85.20**	**50**	*e*P	**P**	**02 05 05.0**	**+0.4**
	0.5nm,1.1s,mb3.4						
KTH	**Kantishna Hill**	**85.47**	**11**	*e*P	**P**	**02 05 03.9**	**-1.4**
	5.0nm,0.7s,mb4.5						
TRF	**Thorofare Moun**	**85.49**	**11**	*e*P	**P**	**02 05 04.4**	**-1.0**
	15nm,0.7s,mb5.0						
MCK	**McKinley**	**85.99**	**11**	*e*P	**P**	**02 05 07.2**	**-0.7**
	16nm,0.9s,mb5.0						
PDAR	**Pinedale Array**	**86.94**	**42**	P	**P**	**02 05 13.2**	**+0.2**
	0.3nm,0.6s,mb3.4,baz=269,slow=7.2,SNR=3.4						
COLA	**College**	**87.23**	**11**	*e*P	**P**	**02 05 13.0**	**-0.9**
	4.2nm,0.6s,mb4.5						
CMAR	**Chiang Mai Arr**	**92.27**	**289**	P	**P**	**02 05 40.0**	**+1.4**
	0.7nm,0.3s,mb4.3,baz=146,slow=3.8,SNR=3.9						
YKA	**Yellowknife Ar**	**95.06**	**24**	P	**P**	**02 05 49.5**	**-0.9**
	0.7nm,0.8s,mb4.2,baz=235,slow=4.1,SNR=5.2						
YKA	**Yellowknife Ar**	**95.06**	**24**	P	**P**	**02 05 49.5**	**-0.9**
KURK	**Kurchatov**	**115.30**	**317**	PKP	PKPdf	02 11 07.0	-1.8
	0.5nm,0.7s,baz=108,slow=1.4,SNR=4.0						
BVAR	**Borovoye Array**	**120.28**	**320**	PKP	PKPdf	02 11 17.3	-1.1
	0.5nm,0.5s,baz=101,slow=1.5,SNR=4.6						
ARU	**Arti**	**126.18**	**326**	*e*PKPdf	PKPdf	02 11 28.6	-1.0
ABKAR	**Abkulak array**	**127.41**	**317**	*e*PKPdf	PKPdf	02 11 31.8	-0.4
ARCES	**ARCESS Array B**	**128.87**	**351**	PKP	PKPdf	02 11 32.2	-2.1
	0.6nm,0.4s,baz=15,slow=1.4,SNR=8.0						
AKASG	**Malin Array Be**	**143.73**	**333**	PKhKP		02 11 58.5	
	0.6nm,0.3s,baz=40,slow=4.7,SNR=8.0						
AKBB	**Malin Array Si**	**143.73**	**333**	*e*PKPdf	PKPdf	02 12 00.9	-1.5
KWP	**Kalwaria Pacla**	**147.11**	**338**	⇑P	PKPab	02 12 12.4	+0.1
KWP	**Kalwaria Pacla**	**147.11**	**338**	⇑*i*P	PKPab	02 12 12.4	+0.2
BUR08	**Bucovina Ar. S**	**147.77**	**334**	*e*PKPbc	PKPbc	02 12 13.4	+1.1
BURAR	**Bucovina Array**	**147.78**	**333**	⇓P	PKPab	02 12 13.7	-1.3
BURAR	**Bucovina Array**	**147.78**	**333**	⇓*i*P	PKPab	02 12 13.7	-1.3
STHS	**Stebnicka Huta**	**147.79**	**339**	*e*PKPab	PKPab	02 12 16.1	+1.2
STHS	**Stebnicka Huta**	**147.79**	**339**	*e*PKPab	PKPab	02 12 16.1	+1.2
KOLS	**Kolonicke sedl**	**147.85**	**338**	*e*PKPab	PKPab	02 12 15.8	+0.6
KOLS	**Kolonicke sedl**	**147.85**	**338**	*e*PKPab	PKPab	02 12 15.8	+0.6
CLL	**Collm**	**148.08**	**350**	⇑*i*PKP	PKPdf	02 12 12.4	+2.6
CLL				*i*		02 12 15.4	
CLL	**Collm**	**148.08**	**350**	⇑*i*PKPbc	PKPbc	02 12 12.4	-0.7
	comp=Z,8.0nm,0.9s						
CLL				*i* PKPab	PKPab	02 12 15.4	-0.6
	comp=Z,8.0nm,0.9s						
CRVS	**Cervenica-Dubn**	**148.16**	**339**	*e*PKP	PKPab	02 12 17.2	+0.8
CRVS	**Cervenica-Dubn**	**148.16**	**339**	*e*PKP	PKPab	02 12 17.2	+0.8
UPC	**Upice**	**148.26**	**346**	⇑*e*PKP	PKPbc	02 12 13.5	-0.1
UPC				*e*PKPAB	PKPab	02 12 17.3	+0.5
BR131	**Keskin Array S**	**148.29**	**315**	*e*PKPbc	PKPbc	02 12 12.8	-1.2
BR131				*e*PKPab	PKPab	02 12 17.3	0.0
BRTR	**Keskin Array B**	**148.29**	**315**	PKPbc	PKPbc	02 12 13.5	-0.5
	comp=Z,1.8nm,0.9s,baz=131,slow=2.5,SNR=7.5						
DPC	**Dobruska-Polom**	**148.34**	**346**	⇑*e*PKP	PKPbc	02 12 13.7	-0.1
DPC				*e*PKPAB	PKPab	02 12 17.6	+0.5
BRG	**Berggiesshubel**	**148.34**	**349**	*i* P	PKPbc	02 12 13.3	-0.4
	comp=Z,3.5nm,0.8s						
BRG				*i*		02 12 16.7	
	comp=Z,4.5nm,0.8s						
OKC	**Ostrava-Krasne**	**148.35**	**343**	⇑*e*PKP	PKPbc	02 12 13.1	-0.7
VRI	**Vrincioaia**	**148.44**	**330**	⇑P	PKPbc	02 12 13.7	-0.5
VRI	**Vrincioaia**	**148.44**	**330**	⇑*i*P	PKPbc	02 12 13.7	-0.5
PVCC	**Panska Ves**	**148.55**	**348**	⇑*e*PKP	PKPbc	02 12 14.2	-0.1
TIRR	**Tirgusor**	**148.60**	**326**	⇓P	PKPbc	02 12 13.5	-1.1
TIRR	**Tirgusor**	**148.60**	**326**	⇓*i*P	PKPbc	02 12 13.5	-1.2
HARR	**Harsova**	**148.69**	**327**	⇓P	PKPbc	02 12 14.8	0.0
HARR	**Harsova**	**148.69**	**327**	⇓*i*P	PKPbc	02 12 14.8	-0.1
KECS	**Kecovo**	**148.85**	**339**	*e*PKP	PKPab	02 12 19.9	+0.7
KECS				*e*		02 27 19.3	
KECS	**Kecovo**	**148.85**	**339**	*e*PKP	PKPab	02 12 19.8	+0.6
KECS				*e*		02 27 19.3	
PRU	**Pruhonice**	**149.06**	**347**	⇑*e*PKP	PKPbc	02 12 15.5	-0.1
PRU				*e*PKPAB	PKPab	02 12 20.2	+0.1
MLR	**Muntele Rosu**	**149.09**	**330**	⇑P	PKPbc	02 12 15.1	-0.8
MLR	**Muntele Rosu**	**149.09**	**330**	⇑*i*P	PKPbc	02 12 15.1	-0.7
VYHS	**Vyhne**	**149.36**	**341**	*e*PKP	PKPbc	02 12 16.3	-0.1
VYHS	**Vyhne**	**149.36**	**341**	*e*PKP	PKPbc	02 12 16.3	-0.1
VYHS				*e*		02 27 28.6	
MMAI	**Mount Meron Ar**	**149.68**	**302**	PKPbc	PKPbc	02 12 17.4	-0.3
	comp=Z,2.5nm,0.6s,baz=63,slow=7.3,SNR=3.6						
SMOL	**Smolenice**	**149.75**	**343**	*e*PKP	PKPbc	02 12 18.1	+0.7
SMOL	**Smolenice**	**149.75**	**343**	*e*PKP	PKPbc	02 12 18.1	+0.7
GRA1	**Grafenberg Arr**	**149.92**	**351**	*e*PKPdf	PKPbc	02 12 17.2	-0.5
GRA1				*e*PKPab	PKPab	02 12 23.1	-0.5
GRF	**Grafenberg Arr**	**149.92**	**351**	*e*PKP	PKPbc	02 12 17.2	-0.5
GRF				*e*PKP	PKPab	02 12 23.1	-0.5
GIVF	**Givet**	**149.98**	**360**	*e*PKP1	PKPbc	02 12 17.5	-0.4
BAIF	**Baives**	**150.02**	**1**	*e*PKP1	PKPbc	02 12 17.7	-0.3
	comp=Z,13nm,0.9s						
KHC	**Kasperske Hory**	**150.07**	**348**	*e*PKPbc	PKPbc	02 12 17.9	-0.2
KHC				*e*PKPab	PKPab	02 12 24.2	0.0
KHC	**Kasperske Hory**	**150.07**	**348**	⇑*e*PKP	PKPbc	02 12 17.8	-0.3
KHC				*e*PKPAB	PKPab	02 12 24.5	+0.3
GEC2	**GERESS Array S**	**150.32**	**348**	*e*PKPbc	PKPbc	02 12 18.3	-0.5
GERES	**GERESS Array B**	**150.32**	**348**	PKPbc	PKPbc	02 12 18.3	-0.4
	comp=Z,3.7nm,0.8s,baz=31,slow=2.0,SNR=27						
CONA	**Conrad Observa**	**150.70**	**344**	⇑*i*PKPbc	PKPbc	02 12 19.6	-0.1
	comp=Z,4.7nm,0.7s						
CSNA	**Conrad Observa**	**150.70**	**344**	⇑*i*PKPbc	PKPbc	02 12 19.5	-0.1
	comp=Z,4.1nm,0.6s						
BZS	**Buzias**	**150.87**	**335**	⇑P	PKPbc	02 12 19.4	-0.7
BZS	**Buzias**	**150.87**	**335**	⇑*i*P	PKPbc	02 12 19.4	-0.7
FLN	**La Foliniere**	**151.03**	**7**	*e*PKP1	PKPbc	02 12 19.0	-1.4
	comp=Z,12nm,0.9s						
MOA	**Molln**	**151.15**	**346**	⇑*i*PKPbc	PKPbc	02 12 20.0	-0.7
	comp=Z,2.2nm,0.5s						
LDF	**La Druitiere**	**151.24**	**7**	*e*PKP1	PKPbc	02 12 19.8	-1.1
GRR	**Gorron**	**151.35**	**8**	*e*PKP1	PKPbc	02 12 20.3	-0.9
	comp=Z,11nm,0.8s						
PKSM	**Moragy**	**151.44**	**339**	⇑P	PKPbc	02 12 20.4	-1.0
PKSM	**Moragy**	**151.44**	**339**	⇑*i*P	PKPbc	02 12 20.4	-1.0
CDF	**Champ du Feu**	**151.59**	**356**	*e*PKP1	PKPbc	02 12 21.2	-0.5
	comp=Z,6.4nm,0.8s						
HAU	**Haudompre**	**152.04**	**358**	*e*PKP1	PKPbc	02 12 22.1	-0.7
	comp=Z,5.1nm,0.5s						
SOKA	**Soboth**	**152.07**	**345**	⇑*i*PKPdf	PKPbc	02 12 21.6	-1.3
	comp=Z,3.9nm,1.0s						
KBA	**Koelnbreinsper**	**152.08**	**347**	⇑*i*PKPdf	PKPbc	02 12 21.1	-1.7
	comp=Z,3.0nm,0.6s						
HINF	**Hinteralfeld**	**152.21**	**357**	*e*PKP1	PKPbc	02 12 22.1	-1.0
	comp=Z,2.9nm,0.5s						
WTTA	**Wattenberg**	**152.22**	**350**	⇑*i*PKPbc	PKPbc	02 12 22.8	-0.4
	comp=Z,5.5nm,0.5s						
DAVA	**Damuels**	**152.46**	**352**	⇑*i*PKPbc	PKPbc	02 12 23.2	-0.5
	comp=Z,6.4nm,1.0s						
ABTA	**Abfaltersbach**	**152.56**	**348**	⇑*i*PKPbc	PKPbc	02 12 22.8	-1.2
	comp=Z,3.6nm,0.6s						
FETA	**Feichten**	**152.60**	**351**	⇑*i*PKPbc	PKPbc	02 12 23.6	-0.5
	comp=Z,4.1nm,0.8s						
VNDS	**Vrh nad Dolski**	**152.69**	**345**	*i* PKPbc	PKPbc	02 12 23.2	-1.0
LOR	**Lormes**	**152.81**	**1**	*e*PKP1	PKPbc	02 12 23.9	-0.6
CRNS	**Crni Vrh**	**152.82**	**345**	*i* PKPbc	PKPbc	02 12 23.2	-1.3
SSF	**Saint Saulge**	**153.01**	**2**	*e*PKP1	PKPbc	02 12 24.4	-0.5
	comp=Z,6.8nm,0.9s						
BOJS	**Bojanci**	**153.10**	**343**	*i* PKPbc	PKPbc	02 12 24.5	-0.7
TCF	**Toulx Ste Croi**	**153.72**	**4**	*e*PKP1	PKPbc	02 12 25.6	-0.9

*NOU **11** 01:57:10.3±1.0,20°.11S×168°.42E,h10km,MD2.9,ML3.6*
*IDC **11** 01:57:10.9±1.1,20°.11S×168°.09E,h0km,mb4.4/7, mb1 4.6/8,mb1mx4.4/15,mbtmp4.4/8,MS3.5/4,Ms1 3.5/4, ms1mx3.1/32,Error ellipse: s-maj=31.5km s-min=27.9km az=158.0*
*ISCJB **11** 01:57:11.7±2.4,20°.26S±0°.06×168°.1E±0°.1,h13km±15km, mb4.3/12,MS3.5/3,Error ellipse: s-maj=18.3km s-min=7.8km az=27.2*
*NEIC **11** 01:57:15.8±0.7,20°.34S×168°.20E,h35km,mb4.4/5,Error ellipse: s-maj=20.3km s-min=13.6km az=138.0*

ISC 11 01:57:12.5±2.9,20°.30S±0°.07×168°.1E±0°.1,h8km±18km, n31,σ1°03/29,mb4.3/12,MS3.5/3,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.16**	**211**	*e*P	**Pn**	**01 57 47.9**	**-0.9**
BAYA				*e*S	**Sn**	**01 58 15.1**	**-0.6**
DZM	**Mont Dzumac**	**2.33**	**221**	*e*P	**Pn**	**01 57 49.4**	**-1.8**
DZM				AMP		01 58 34.3	
	comp=Z,2μm,1.6s						
DZM	**Mont Dzumac**	**2.33**	**221**	*e*Pn	**Pn**	**01 57 50.2**	**-1.0**
NORM	**Noumea**	**2.43**	**217**	*e*P	**Pn**	**01 57 51.7**	**-0.8**
NORM				*e*S	**Sn**	**01 58 22.1**	**-0.3**
NOUC	**Port Laguerre**	**2.44**	**222**	*e*P	**Pn**	**01 57 53.0**	**+0.3**
NOUC				*e*S	**Sn**	**01 58 24.0**	**+1.3**
NOUC				AMP		01 58 39.8	
	comp=Z,138nm,1.5s						
ONTRN	**Noumea**	**2.51**	**217**	*e*P	**Pn**	**01 57 52.7**	**-0.9**
ONTRN				*e*S	**Sn**	**01 58 23.7**	**-0.7**
HNR	**Honiara**	**13.35**	**323**	LR	LR	02 04 14.9	
	comp=Z,97nm,20.7s,baz=290,slow=32						
ARMA	**Armidale**	**17.94**	**233**	*e*P	**Pn**	**02 01 26.1**	**+3.7**
ARMA	**Armidale**	**17.94**	**233**	*e*P	**Pn**	**02 01 25.8**	**+3.4**
	comp=Z,15nm,1.1s						
URZ	**Urewera**	**19.54**	**158**	P	**Pn**	**02 01 43.4**	**+1.6**
	baz=8.4,slow=2.5,SNR=3.8						
CTA	**Charters Tower**	**20.48**	**267**	P	**P**	**02 01 53.6**	**+2.6**
	comp=Z,8.2nm,0.7s,baz=98,slow=13,SNR=6.1						
CTA				LR	LR	02 07 27.7	
	comp=Z,99nm,21.4s,MS3.1,baz=57,slow=30						
CTAO	**Charters Tower**	**20.48**	**267**	*e*P	**P**	**02 01 53.1**	**+2.1**
	comp=Z,9.8nm,0.8s						
CNB	**Canberra Magne**	**22.25**	**224**	*e*P	**P**	**02 02 11.7**	**+1.8**
YNG	**Young**	**22.31**	**227**	*e*P	**P**	**02 02 11.6**	**+1.0**
	comp=Z,9.0nm,1.1s,mb4.1						
STKA	**Stephens Creek**	**26.36**	**239**	*e*P	**P**	**02 02 48.8**	**-0.5**
	comp=Z,8.2nm,1.3s,mb4.1						
STKA	**Stephens Creek**	**26.36**	**239**	P	**P**	**02 02 50.2**	**+0.9**
	comp=Z,6.1nm,0.7s,mb4.3,baz=52,slow=7.9,SNR=12						
STKA				LR	LR	02 12 44.6	
	comp=Z,221nm,20.0s,MS3.7,baz=26,slow=35						
WRA	**Warramunga Arr**	**31.65**	**265**	P	**P**	**02 03 35.4**	**-1.1**
	comp=Z,2.3nm,1.0s,mb4.0,baz=93,slow=9.2,SNR=6.4						
WRA				LR	LR	02 16 57.0	
	comp=Z,167nm,18.6s,MS3.7,baz=110,slow=37						
ASAR	**Alice Springs**	**31.82**	**258**	P	**P**	**02 03 37.6**	**-0.4**
	comp=Z,9.2nm,0.7s,mb4.7,baz=85,slow=9.0,SNR=31						
FITZ	**Fitzroy Crossi**	**40.06**	**266**	*e*P	**P**	**02 04 48.4**	**-0.2**
	comp=Z,14nm,0.8s,mb4.8						
SBA	**Scott Base**	**57.60**	**180**	*e*P	**P**	**02 07 02.7**	**+0.2**
	comp=Z,5.9nm,1.3s,mb4.5						
SBA				*e*pP	pP	02 07 12.3	+7.3
MAW	**Mawson**	**77.05**	**202**	P	**P**	**02 09 06.0**	**+0.2**
	comp=Z,3.4nm,0.8s,mb4.3,baz=120,slow=4.4,SNR=4.6						
CMAR	**Chiang Mai Arr**	**77.95**	**295**	P	**P**	**02 09 12.8**	**+1.1**
	comp=Z,1.1nm,0.4s,mb4.2,baz=133,slow=4.4,SNR=8.6						
CHTO	**Chiang Mai**	**78.10**	**295**	*e*P	**P**	**02 09 12.8**	**+0.3**
	comp=Z,4.4nm,0.9s,mb4.4						
ULN	**Ulaanbaatar**	**87.06**	**324**	*e*P	**P**	**02 09 57.6**	**-1.0**
	comp=Z,1.7nm,0.7s,mb4.4						
SONM	**Songino Array**	**87.41**	**324**	P	**P**	**02 09 59.6**	**-0.7**
	comp=Z,0.3nm,0.5s,mb3.8,baz=67,slow=3.9,SNR=3.8						
NVAR	**Mina Array Bea**	**90.32**	**49**	P	**P**	**02 10 13.0**	**-1.2**
	comp=Z,0.8nm,0.6s,mb4.2,baz=224,slow=7.9,SNR=5.9						
GERES	**GERESS Array B**	**144.88**	**330**	PKP	PKPdf	02 16 47.6	-2.6
	comp=Z,0.3nm,0.5s,baz=82,slow=2.8,SNR=5.7						
GRA1	**Grafenberg Arr**	**145.36**	**333**	*e*PKP	PKPdf	02 16 50.0	-0.9
GRA1				*ep*PKP	pPKPdf	02 16 59.4	+5.8
GRF	**Grafenberg Arr**	**145.36**	**333**	*e*PKP	PKPdf	02 16 50.0	-0.9
GRF				*ep*PKP	pPKPdf	02 16 59.4	+5.8
WLF	**Walferdange**	**147.35**	**338**	*e*PKPbc	PKPbc	02 16 55.9	-0.8
TIP	**Timpagrande**	**148.99**	**314**	*e*PKPbc	PKPbc	02 17 00.7	-0.7

*IDC **11** 01:58:19.4±4.2,36°.42N×71°.18E,h192km±37km,mb3.5/6, mb1 3.4/12,mb1mx3.2/30,mbtmp3.3/12,Error ellipse: s-maj=31.2km s-min=20.6km az=29.0*
*NNC **11** 01:58:20.3±7.7,36°.84N×70°.59E,h0km,mb4.0,mpv4.2, Error ellipse: s-maj=71.5km s-min=58.6km az=47.0*
*ISCJB **11** 01:58:22.9±0.4,36°.72N±0°.04×71°.14E±0°.08,h224km±6km, mb3.6/6,Error ellipse: s-maj=11.3km s-min=5.2km az=16.0*
*NEIC **11** 01:58:23.2±0.7,36°.58N×71°.27E,h225km±6km,mb3.7/1, Error ellipse: s-maj=13.1km s-min=7.9km az=128.0*

**ISC 11 01:

ENTT	**Nioudou**	**0.84 282**	P	**Pn**	**02 03 41.7**	**+0.4**
	baz=285					
ENTT			*e*S	**Sn**	**02 03 52.2**	**-1.4**
	baz=285					
NACB	**Ninganchiao**	**0.85 251**	*e*Pg	**Pn**	**02 03 40.5**	**-0.9**
NWF	**Wu-fen Shan**	**0.87 314**	⇓*i*P	**Pn**	**02 03 41.7**	**0.0**
	baz=309					
NWF			*i* S	**Sn**	**02 03 54.3**	**0.0**
	baz=309					
TWD	**Chiawan**	**0.88 245**	⇓*i*P	**Pn**	**02 03 41.4**	**-0.4**
	baz=237					
TWD			*i* S	**Sn**	**02 03 54.3**	**-0.3**
	baz=237					
HWA	**Hwalien**	**0.93 239**	P	**Pn**	**02 03 42.0**	**-0.3**
	baz=231					
HWA			*e*S	**Sn**	**02 03 55.7**	**+0.3**
	baz=231					
TWA	**Mucha**	**0.96 303**	P	**Pn**	**02 03 42.3**	**-0.4**
	baz=304					
TWA			*e*S	**Sn**	**02 03 55.2**	**-0.9**
	baz=304					
NNS	**Nan Shan**	**1.00 269**	*e*P	**Pn**	**02 03 43.2**	**0.0**
	baz=263					
NNS			*e*S	**Sn**	**02 03 57.2**	**+0.1**
	baz=263					
YHNB	**Yeheng**	**1.02 282**	*e*Pg	**Pn**	**02 03 43.3**	**-0.2**
NSK	**Sanguang**	**1.04 282**	*i* P	**Pn**	**02 03 43.8**	**+0.1**
	baz=282					
NSK			*e*S	**Sn**	**02 03 58.0**	**+0.2**
	baz=282					
TWY	**Chenhua**	**1.13 316**	P	**Pn**	**02 03 44.7**	**-0.2**
	baz=310					
TWY			*e*S	**Sn**	**02 03 59.8**	**-0.2**
	baz=310					
WHF	**Hehuan Shan**	**1.15 254**	⇓*i*P	**Pn**	**02 03 45.2**	**+0.2**
	baz=253					
WHF			S	**Sn**	**02 04 00.5**	**+0.2**
	baz=253					
ESL	**Shilin**	**1.15 236**	*e*P	**Pn**	**02 03 44.2**	**-0.8**
	baz=229					
ESL			*e*S	**Sn**	**02 03 59.9**	**-0.4**
	baz=229					
TWS1	**Kuangyinshan**	**1.15 304**	P	**Pn**	**02 03 44.6**	**-0.5**
	baz=305					
TWS1			*e*S	**Sn**	**02 04 00.1**	**-0.4**
	baz=305					
IRIF	**Iriomote-Funau**	**1.15 96**	P	**Pn**	**02 03 45.0**	**-0.2**
IRIF			S	**Sn**	**02 04 00.7**	**+0.2**
TWT	**Tachien**	**1.20 260**	P	**Pn**	**02 03 46.3**	**+0.6**
	baz=260					
TWT			S	**Sn**	**02 04 02.0**	**+0.4**
	baz=260					
NCU	**National Centr**	**1.27 294**	*e*P	**Pn**	**02 03 46.7**	**0.0**
	baz=295					
NCU			*e*S	**Sn**	**02 04 03.5**	**+0.3**
	baz=295					
HATJ	**Hateruma jima**	**1.28 108**	P	**Pn**	**02 03 47.3**	**+0.5**
HATJ			*e*S	**Sn**	**02 04 04.2**	**+0.8**
NSTT	**Nanjuang**	**1.35 278**	*e*P	**Pn**	**02 03 47.7**	**0.0**
	baz=278					
NSTT			*e*S	**Sn**	**02 04 05.1**	**+0.1**
	baz=278					
EHY	**Hungye**	**1.42 228**	*e*P	**Pn**	**02 03 47.7**	**-0.9**
	baz=234					
JKRS	**Kuro-shima**	**1.42 99**	P	**Pn**	**02 03 48.8**	**+0.2**
JKRS			*e*S	**Sn**	**02 04 06.9**	**+0.3**
YULB	**Yu-li**	**1.51 226**	*e*Pg	**Pn**	**02 03 48.5**	**-1.3**
JIJ	**Ishigaki jima**	**1.53 93**	P	**Pn**	**02 03 49.7**	**-0.3**
JIJ			S	**Sn**	**02 04 08.4**	**-0.8**
SSLB	**Suanglung**	**1.54 245**	*e*Pg	**Pn**	**02 03 49.4**	**-0.8**
TWF1	**Yuli**	**1.54 224**	*e*P	**Pn**	**02 03 49.3**	**-0.9**
	baz=231					
TWF1			*e*S	**Sn**	**02 04 08.4**	**-1.1**
	baz=231					
SMLT	**Sun Moon Lake**	**1.55 249**	*e*P	**Pn**	**02 03 50.5**	**+0.2**
	baz=243					
SMLT			*e*S	**Sn**	**02 04 09.9**	**+0.3**
	baz=243					
TWQ1	**Liyutan**	**1.55 266**	*e*P	**Pn**	**02 03 50.4**	**0.0**
	baz=266					
TWQ1			*e*S	**Sn**	**02 04 09.7**	**-0.1**
	baz=266					
NSY	**Sanyi**	**1.56 269**	*e*P	**Pn**	**02 03 50.7**	**+0.2**
	baz=269					
NSY			*e*S	**Sn**	**02 04 10.3**	**+0.4**
	baz=269					
TYC	**Yuchr**	**1.57 250**	*e*P	**Pn**	**02 03 50.9**	**+0.3**
	baz=245					
TYC			*e*S	**Sn**	**02 04 10.6**	**+0.4**
	baz=245					
TCU	**Taichung**	**1.67 260**	*e*P	**Pn**	**02 03 51.8**	**0.0**
	baz=270					
TCU			*e*S	**Sn**	**02 04 13.1**	**+0.6**
	baz=270					
YUS	**Yu-Shan**	**1.69 235**	*e*P	**Pn**	**02 03 52.8**	**+0.5**
	baz=230					
YUS			*e*S	**Sn**	**02 04 13.0**	**-0.1**
	baz=230					
ALS	**Alishan**	**1.79 239**	*e*P	**Pn**	**02 03 54.4**	**+0.8**
	baz=232					
ALS			*e*S	**Sn**	**02 04 16.0**	**+0.5**
	baz=232					
ELDTW	**Lidau**	**1.84 227**	*e*P	**Pn**	**02 03 53.3**	**-0.8**
	baz=223					
ELDTW			*e*S	**Sn**	**02 04 15.8**	**-0.8**
	baz=223					
CHN5	**Tsauling**	**1.85 243**	*e*P	**Pn**	**02 03 55.3**	**+0.9**
	baz=234					
CHN5			*e*S	**Sn**	**02 04 18.1**	**+1.2**
	baz=234					
WGK	**Gukeng**	**1.91 247**	*e*P	**Pn**	**02 03 54.8**	**-0.2**
	baz=258					
WGK			*e*S	**Sn**	**02 04 19.3**	**+1.0**
	baz=258					
JTJ	**Tarama**	**2.04 84**	P	**Pn**	**02 03 57.1**	**+0.3**
JTJ			*e*S	**Sn**	**02 04 21.2**	**-0.2**
TPUB	**Ta-pu**	**2.04 236**	*e*Pn	**Pn**	**02 03 57.1**	**+0.2**
TPUB			*e*Sn	**Sn**	**02 04 22.4**	**+0.9**
TWG	**Pinlang**	**2.08 218**	*e*P	**Pn**	**02 03 56.2**	**-1.2**
	baz=224					
TWG			*e*S	**Sn**	**02 04 20.3**	**-2.0**
	baz=224					
CHY	**Chiayi**	**2.10 243**	*e*P	**Pn**	**02 03 57.5**	**-0.2**
	baz=255					
CHY			*e*S	**Sn**	**02 04 24.0**	**+1.1**
	baz=255					
TWK	**Hsinying**	**2.17 237**	*e*P	**Pn**	**02 03 59.4**	**+0.7**
	baz=237					
TWK			*e*S	**Sn**	**02 04 24.9**	**+0.4**
	baz=237					
CHN1	**Nanshi**	**2.19 235**	*e*P	**Pn**	**02 03 59.3**	**+0.5**
	baz=234					
CHN1			*e*S	**Sn**	**02 04 25.4**	**+0.5**
	baz=234					
ECL	**Taimali**	**2.32 217**	*e*P	**Pn**	**02 03 59.5**	**-1.1**
	baz=216					
ECL			*e*S	**Sn**	**02 04 26.0**	**-2.1**
	baz=216					
SSD	**Sandimen**	**2.40 225**	*e*P	**Pn**	**02 04 02.7**	**+0.9**
	baz=230					
SCZT	**Fangliau**	**2.69 220**	*e*P	**Pn**	**02 04 07.7**	**+2.1**
	baz=232					
SCZT			*e*S	**Sn**	**02 04 37.8**	**+0.7**
	baz=232					

IDC 11 02:05:17.5±4.1,34°.64N×82°.13E,h0^{km},mb3.4/2,
mb1 3.6/4,mb1mx3.3/27,mbtmp3.5/4,ML3.1/2,MS3.3/1,
Ms1 3.3/1,ms1mx2.3/39,Error ellipse: s-maj=148.9km
s-min=26.3km az=62.0,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**12.14**	**1**	Pn	Pn	02 08 11.8	+0.2
	0.2nm,0.3s,baz=175,slow=14,SNR=5.0						
KURK	**Kurchatov**	**16.26**	**352**	Pn	Pn	02 09 04.3	-2.9
	0.0nm,0.3s,baz=172,slow=11,SNR=2.4						
BVAR	**Borovoye Array**	**20.18**	**339**	P	P	02 09 53.3	-0.2
	0.8nm,0.6s,baz=151,slow=13,SNR=5.6						
CMAR	**Chiang Mai Arr**	**22.00**	**133**	P	P	02 10 13.4	+0.1
	1.3nm,0.7s,baz=319,slow=11,SNR=5.9						
ASF	**Jabal al Asfar**	**37.60**	**279**	LR	LR	02 30 59.6	
	comp=Z,42nm,19.8s,baz=266,slow=41						

*NIED **11** 02:06:00,30°.70N×142°.10E,h5^{km},Mw4.2 Best double couple: M$_0$1.96000×10^{15} NP1:φ$_s$136.00000°,δ79.00000°, λ-99.00000°. NP2:φ$_s$357.00000°,δ14.00000°, λ-50.00000°.*

*IDC **11** 02:06:02.5±0.6,30°.67N×141°.99E,h0^{km},mb4.0/18, mb1 4.2/21,mb1mx4.1/30,mbtmp4.0/21,ML4.0/3,MS3.2/2, Ms1 3.3/2,ms1mx2.5/46,Error ellipse: s-maj=22.3km s-min=15.3km az=72.0*

*JMA **11** 02:06:04.2±0.2,30°.73N×142°.11E,h43^{km},M4.3*

*ISCJB **11** 02:06:04.3±1.7,30°.67N±0°.04×141°.8E±0°.1,h23^{km}±12^{km}, mb4.1/26,MS4.1/2,Error ellipse: s-maj=16.0km s-min=5.2km az=159.4*

*NEIC **11** 02:06:06.1±3.9,30°.65N×141°.90E,h23^{km}±26^{km},mb4.3/7, Error ellipse: s-maj=12.9km s-min=10.7km az=79.0*

*BJI **11** 02:06:12.8,31°.42N×140°.92E,h15^{km},mB4.7/4,mb4.3/6*

ISC 11 02:06:05.7±1.9,30°.66N±0°.04×141°.9E±0°.1,h20^{km}±14^{km},
n50,σ1^{s}01/54,mb4.1/26,MS4.1/2,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.01**	**325**	P	**Pn**	**02 06 52.2**	**0.0**
JHJ2				*e*S	**Sn**	**02 07 25.0**	**-2.7**
JHJ	**Hachijo jima 2**	**3.04**	**324**	Pn	**Pn**	**02 06 52.2**	**-0.4**
	41nm,0.3s,baz=252,slow=23,SNR=9.8						
JHJ				Sn	**Sn**	**02 07 24.7**	**-3.6**
	42nm,0.3s,baz=249,slow=22,SNR=5.8						
CBIJ	**Chichi jima**	**3.56**	**176**	P	**Pn**	**02 06 59.2**	**-0.6**
CBIJ				*e*S	**Sn**	**02 07 39.6**	**-1.6**
CBIJ	**Chichi jima**	**3.56**	**176**	Pn	**Pn**	**02 06 59.2**	**-0.5**
	18nm,0.3s,baz=294,slow=23,SNR=16						
CBIJ				Sn	**Sn**	**02 07 38.0**	**-3.2**
	30nm,0.3s,baz=294,slow=23,SNR=6.9						
JHHJ	**Haha-jima-NKT**	**4.02**	**176**	P	**Pn**	**02 07 06.8**	**+0.7**
BSO1	**Boso 1**	**4.06**	**349**	P	**Pn**	**02 07 04.5**	**-2.1**
BSO3	**Boso 3**	**4.29**	**345**	P	**Pn**	**02 07 08.3**	**-1.5**
JOD2	**Odawara 2**	**5.16**	**334**	P	**Pn**	**02 07 23.0**	**+1.3**
JOD2				*e*S	**Sn**	**02 08 22.1**	**+1.5**
JRY	**Ryogami san**	**5.90**	**336**	P	**Pn**	**02 07 32.6**	**+0.7**
JRY				*e*S	**Sn**	**02 08 39.1**	**+0.3**
MJAR	**Matsushiro Arr**	**6.62**	**333**	Pn	**Pn**	**02 07 42.1**	**+0.3**
	5.0nm,0.3s,baz=151,slow=10,SNR=25						
MJAR				Sn	**Sn**	**02 08 53.8**	**-2.8**
	0.7nm,0.3s,baz=162,slow=18,SNR=5.0						
MJAR				LR	LR	02 10 21.3	
	comp=Z,168nm,18.1s,baz=100,slow=39						
MAJO	**Matsushiro**	**6.62**	**333**	*e*Pn	**Pn**	**02 07 42.4**	**+0.6**
	18nm,0.3s						
MAT	**Matsushiro**	**6.62**	**333**	P	**Pn**	**02 07 42.4**	**+0.6**
MAT				*e*S	**Sn**	**02 08 56.4**	**-0.3**
MAT	**Matsushiro**	**6.62**	**333**	P	**Pn**	**02 07 42.6**	**+0.8**
KSRS	**Korea Array**	**13.40**	**304**	Pn	**Pn**	**02 09 20.3**	**+5.5**
	0.1nm,0.3s,baz=113,slow=12,SNR=3.0						
SONM	**Songino Array**	**32.04**	**313**	P	**P**	**02 12 32.1**	**+1.3**
	0.5nm,0.4s,mb3.7,baz=133,slow=7.4,SNR=3.4						
CMAR	**Chiang Mai Arr**	**40.67**	**263**	LR	LR	02 32 18.2	
	comp=Z,29nm,20.4s,MS3.1,baz=90,slow=39						
ZALV	**Zalesovo Beam**	**46.67**	**317**	P	**P**	**02 14 33.1**	**+0.5**
	0.4nm,0.3s,mb3.9,baz=106,slow=11,SNR=2.6						
MK31	**Makanchi Array**	**48.06**	**307**	*e*P	**P**	**02 14 44.2**	**+0.6**
MKAR	**Makanchi Array**	**48.06**	**307**	P	**P**	**02 14 44.8**	**+1.2**
	0.6nm,0.5s,mb3.9,baz=88,slow=9.8,SNR=6.4						
KURK	**Kurchatov**	**50.35**	**312**	P	**P**	**02 15 01.4**	**+0.4**
	0.7nm,0.3s,mb4.1,baz=90,slow=9.1,SNR=9.1						
KURK	**Kurchatov**	**50.35**	**312**	*e*P	**P**	**02 15 00.7**	**-0.4**
	5.5nm,1.1s,mb4.5						
WRAB	**Tennant Creek**	**50.82**	**189**	*e*P	**P**	**02 15 04.5**	**-0.3**
	5.7nm,0.9s,mb4.5						
WRA	**Warramunga Arr**	**50.83**	**189**	P	**P**	**02 15 04.7**	**-0.2**
	2.0nm,0.4s,mb4.4,baz=6.0,slow=7.6,SNR=33						
UCH	**Uchtor**	**54.13**	**302**	*e*P	**P**	**02 15 30.3**	**+1.1**
	1.9nm,1.1s,mb3.9						
ASAR	**Alice Springs**	**54.55**	**189**	P	**P**	**02 15 32.6**	**+0.2**
	0.7nm,0.5s,mb4.0,baz=9.0,slow=7.3,SNR=9.9						
EKS2	**Erkin-Say**	**54.58**	**303**	*e*P	**P**	**02 15 30.1**	**-2.4**
	2.2nm,0.8s,mb4.2						
BVAR	**Borovoye Array**	**55.28**	**316**	P	**P**	**02 15 37.8**	**+0.4**
	0.5nm,0.5s,mb3.8,baz=95,slow=4.9,SNR=3.7						
INK	**Inuvik**	**59.92**	**25**	P	**P**	**02 16 09.4**	**-0.4**
	1.1nm,0.4s,mb4.2,baz=262,slow=5.9,SNR=3.2						
ARU	**Arti**	**61.47**	**321**	*e*P	**P**	**02 16 20.4**	**-0.2**
	10nm,1.1s,mb4.9						
ABKAR	**Akbulak array**	**62.45**	**313**	*e*P	**P**	**02 16 27.1**	**-0.2**
	1.0nm,0.5s,mb4.2						
AKTK	**Aktyubinsk**	**63.32**	**315**	P	**P**	**02 16 33.7**	**+0.6**
AKTO	**Aktyubinsk**	**63.32**	**315**	P	**P**	**02 16 33.7**	**+0.6**
	0.5nm,0.3s,mb4.2,baz=66,slow=12,SNR=2.0						
RES	**Resolute Bay**	**68.67**	**14**	P	**P**	**02 17 05.3**	**-1.8**
	1.7nm,0.8s,mb4.0,baz=359,slow=7.4,SNR=2.2						
RES	**Resolute Bay**	**68.67**	**14**	P	**P**	**02 17 05.3**	**-1.8**
YKA	**Yellowknife Ar**	**69.15**	**29**	P	**P**	**02 17 09.5**	**-0.7**
	1.0nm,0.9s,mb3.8,baz=289,slow=5.9,SNR=4.4						
ARCES	**ARCESS Array B**	**70.10**	**340**	P	**P**	**02 17 17.4**	**+1.4**
	7.6nm,1.1s,mb4.5,baz=13,slow=8.7,SNR=3.8						
JOF	**Joensuu**	**71.79**	**333**	*e*p	**P**	**02 17 25.8**	**-0.5**
	5.2nm,0.8s,mb4.5						
JOF	**Joensuu**	**71.79**	**333**	*e*p	**P**	**02 17 25.8**	**-0.5**
	5.2nm,0.8s,mb4.5						
KAF	**Kangasniemi**	**74.17**	**334**	*e*p	**P**	**02 17 39.4**	**-1.0**
	2.5nm,0.4s,mb4.5						
KAF	**Kangasniemi**	**74.17**	**334**	*e*p	**P**	**02 17 39.4**	**-1.0**
	2.5nm,0.4s,mb4.5						
NEW	**Newport**	**74.47**	**43**	*e*P	**P**	**02 17 43.4**	**+0.9**
	2.5nm,0.8s,mb4.2						
FINES	**FINESS Array B**	**74.65**	**333**	P	**P**	**02 17 43.4**	**+0.2**
	1.6nm,0.4s,mb4.3,baz=84,slow=4.3,SNR=15						
NVAR	**Mina Array Bea**	**78.54**	**52**	P	**P**	**02 18 06.5**	**+0.8**
	0.8nm,0.5s,mb3.9,baz=297,slow=6.0,SNR=2.9						
AKASG	**Malin Array Be**	**79.60**	**323**	P	**P**	**02 18 11.5**	**+0.2**
	0.4nm,0.4s,mb3.8,baz=51,slow=5.6,SNR=4.2						
NOA	**NORSAR Array B**	**80.22**	**338**	P	**P**	**02 18 14.3**	**-0.1**
	0.3nm,0.4s,mb3.6,baz=33,slow=3.1,SNR=2.7						
PPT	**Papeete**	**81.46**	**116**	*e*LR	LR	02 18 49.7	
	389nm,26.0s						
PPT	**Papeete**	**81.46**	**116**	LR	LR	02 49 46.7	
	comp=Z,794nm,18.1s,MS5.1,baz=240,slow=32						
PDAR	**Pinedale Array**	**81.88**	**45**	P	**P**	**02 18 23.5**	**-0.1**
	0.7nm,0.8s,mb3.7,baz=304,slow=3.4,SNR=5.3						
TXAR	**Lajitas Array**	**93.68**	**53**	P	**P**	**02 19 21.7**	**+0.6**
	1.8nm,1.1s,mb4.4,baz=289,slow=3.8,SNR=9.0						
LPAZ	**La Paz**	**149.09**	**69**	PKPbc	PKPbc	02 25 54.9	+1.8
	1.4nm,0.8s,baz=33,slow=4.6,SNR=5.8						

*ISCJB **11** 02:07:19.6±0.5,23°.33S±0°.09×175°.57W±0°.09,h33^{km}, mb4.5/17,MS3.2/2,Error ellipse: s-maj=14.1km s-min=10.1km az=140.5*

*IDC **11** 02:07:23.4±0.7,23°.35S×175°.76W,h47^{km}±4^{km},mb4.2/11, mb1 4.3/12,mb1mx4.2/20,mbtmp4.1/12,MS3.3/2, Ms1 3.3/2,ms1mx2.7/42,Error ellipse: s-maj=33.7km s-min=15.7km az=144.0*

*NEIC **11** 02:07:25.0±3.3,23°.41S×175°.73W,h65^{km}±29^{km},mb4.8/4, Error ellipse: s-maj=18.1km s-min=12.7km az=168.0*

ISC 11 02:07:24.5±1.9,23°.44S±0°.08×175°.7W±0°.1,h57^{km}±16^{km},
h46^{km}±2.3^{km}:pP-P,n56,σ0^{s}96/29,mb4.5/17,MS3.2/2,
6C-3D,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**6.13**	**199**	S	**Sn**	**02 10 08.5**	**+7.3**
	91nm,0.3s,baz=82,slow=24,SNR=2.5						
MSVF	**Nonsavu**	**8.18**	**313**	*e*Pn	**Pn**	**02 09 21.3**	**+0.7**
	157nm,1.0s						
AFI	**Afiamalu**	**10.17**	**22**	P	**Pn**	**02 09 36.8**	**-11**
	3.4nm,0.3s,baz=75,slow=23,SNR=2.6						
AFI				S	Sn	02 11 16.0	-24
	10.0nm,0.3s,baz=220,slow=22,SNR=4.7						
RAR	**Rarotonga**	**14.87**	**85**	*e*Pn	**Pn**	**02 10 45.8**	**-5.6**
	142nm,1.1s						
URZ	**Urewera**	**16.01**	**201**	P	**Pn**	**02 11 05.8**	**-0.2**
	baz=349,slow=4.0,SNR=2.1						
URZ				S	**S**	**02 13 54.6**	**-19**
	1.4nm,0.3s,baz=37,slow=20,SNR=2.8						
RPZ	**Rata Peaks**	**23.00**	**205**	P	**P**	**02 12 23.8**	**-0.6**
	3.8nm,0.5s,mb4.1,baz=66,slow=20,SNR=7.3						
RPZ				S	**S**	**02 16 30.6**	**+0.1**
	4.7nm,0.7s,baz=73,slow=19,SNR=2.2						
PPT	**Papeete**	**25.10**	**81**	LR	LR	02 20 32.0	
	comp=Z,46nm,20.1s,MS3.0,baz=136,slow=31						
HNR	**Honiara**	**27.16**	**297**	LR	LR	02 22 20.6	
	comp=Z,106nm,18.0s,MS3.5,baz=145,slow=33						
ARMA	**Armidale**	**29.91**	**249**	*e*P	**P**	**02 13 29.1**	**+2.1**
CMSA	**Cobar Meteorol**	**35.08**	**248**	*e*P	**P**	**02 14 13.2**	**+1.0**
CTA	**Charters Tower**	**35.46**	**268**	*e*P	**P**	**02 14 14.3**	**-1.3**
	13nm,0.7s,mb5.0						
CTA	**Charters Tower**	**35.46**	**268**	P	**P**	**02 14 15.2**	**-0.4**
	13nm,0.6s,mb5.0,baz=109,slow=10,SNR=13						
CTAO	**Charters Tower**	**35.46**	**268**	*e*P	**P**	**02 14 14.6**	**-1.0**
	8.4nm,0.7s,mb4.8						
STKA	**Stephens Creek**	**38.58**	**248**	P	**P**	**02 14 42.7**	**+0.7**
	3.5nm,0.6s,mb4.3,baz=85,slow=10,SNR=8.2						
COEN	**Coen**	**39.99**	**276**	*e*P	**P**	**02 14 54.5**	**+0.6**
	24nm,0.8s,mb5.0						
ASAR	**Alice Springs**	**46.03**	**259**	P	**P**	**02 15 42.0**	**-0.7**
	3.5nm,0.8s,mb4.3,baz=98,slow=6.4,SNR=22						
WRAB	**Tennant Creek**	**46.40**	**264**	*e*P	**P**	**02 15 44.7**	**-0.9**
	9.4nm,0.7s,mb4.8						
WRA	**Warramunga Arr**	**46.41**	**264**	P	**P**	**02 15 43.8**	**-1.8**
	7.6nm,0.6s,mb4.8,baz=103,slow=8.1,SNR=33						
FORT	**Forrest**	**50.19**	**249**	*e*P	**P**	**02 16 14.6**	**-0.1**
	20nm,0.6s,mb5.3						
FITZ	**Fitzroy Crossi**	**54.83**	**264**	*e*P	**P**	**02 16 48.5**	**-0.7**
	10nm,0.8s,mb4.9						
MBWA	**Marble Bar**	**59.36**	**259**	*e*P	**P**	**02 17 20.2**	**-1.0**
	9.3nm,0.8s,mb4.9						
CASY	**Casey**	**62.27**	**206**	*e*P	**P**	**02 17 41.1**	**+0.9**
	4.0nm,0.8s,mb4.6						
FX1	**Attu Island--F**	**76.62**	**353**	P	**P**	**02 19 07.7**	**-1.0**
	2.5nm,0.6s,mb4.3,baz=112,slow=16,SNR=2.3						
PETK	**Petropavlovsk-**	**79.66**	**344**	P	**P**	**02 19 24.4**	**-1.1**
	4.8nm,0.9s,mb4.5,baz=245,slow=9.4,SNR=3.4						
PETK	**Petropavlovsk-**	**79.66**	**344**	P	**P**	**02 19 24.4**	**-1.1**
YBH	**Yreka Blue Hor**	**81.26**	**37**	P	**P**	**02 19 34.9**	**+0.5**
	2.0nm,0.8s,mb4.1,baz=278,slow=7.7,SNR=2.4						
YBH				pP	pP	02 19 49.2	-1.2
	2.5nm,0.7s,baz=336,slow=2.9,SNR=3.1						
NVAR	**Mina Array Bea**	**81.70**	**42**	P	**P**	**02 19 37.6**	**+0.8**
	0.5nm,0.5s,mb3.7,baz=234,slow=12,SNR=2.2						
NVAR				pP	pP	02 19 50.5	-2.4
	1.3nm,0.7s,baz=226,slow=8.6,SNR=2.7						
TXAR	**Lajitas Array**	**86.84**	**56**	P	**P**	**02 20 03.7**	**+0.7**
	0.6nm,0.8s,mb3.9,baz=198,slow=5.7,SNR=3.1						
TXAR				pP	pP	02 20 17.4	-1.9
	1.3nm,0.9s,baz=212,slow=12,SNR=5.1						
PDAR	**Pinedale Array**	**89.64**	**42**	pP	pP	02 20 32.0	-0.3
	0.7nm,0.8s,baz=222,slow=2.0,SNR=3.0						
CMAR	**Chiang Mai Arr**	**93.12**	**289**	P	**P**	**02 20 34.2**	**+1.4**
	1.1nm,0.3s,mb4.8,baz=8.1,slow=1.9,SNR=4.1						
CMAR				pP	pP	02 20 45.9	-3.2
	1.7nm,0.3s,baz=126,slow=2.5,SNR=2.5						
ZALV	**Zalesovo Beam**	**114.13**	**320**	PKP	PKiKP	02 25 52.0	-5.0
	0.3nm,0.3s,baz=194,slow=5.5,SNR=2.5						
MKAR	**Makanchi Array**	**114.78**	**312**	PKP	PKiKP	02 25 57.4	-1.1
	0.4nm,0.7s,baz=83,slow=4.5,SNR=2.5						
MKAR				pPKP		02 26 13.5	
	0.4nm,0.6s,baz=85,slow=1.5,SNR=3.5						
KURK	**Kurchatov**	**117.61**	**316**	PKP	PKPdf	02 26 02.9	-0.9
	0.4nm,0.5s,baz=84,slow=1.9,SNR=4.5						
KURK				pPKP	pPKPdf	02 26 18.6	-2.0
	0.8nm,0.7s,baz=86,slow=1.9,SNR=5.3						
BVAR	**Borovoye Array**	**122.71**	**319**	PKP	PKPdf	02 26 13.3	-0.2
	0.8nm,0.5s,baz=94,slow=9.0,SNR=4.4						
BVAR				pPKP	pPKPdf	02 26 27.0	-3.4
	0.8nm,0.6s,baz=114,slow=1.7,SNR=3.3						
AKASG	**Malin Array Be**	**146.62**	**331**	PKPbc	PKPbc	02 26 58.1	-1.4
	3.7nm,0.6s,baz=40,slow=4.1,SNR=22						
AKASG				pPKPbc	pPKPbc	02 27 12.8	-3.4
	3.0nm,0.6s,baz=43,slow=4.1,SNR=4.4						
AKBB	**Malin Array Si**	**146.62**	**331**	*e*PKPbc	PKPbc	02 26 58.0	-1.4
KIEV	**Kiev**	**146.63**	**331**	*e*PKPbc	PKPbc	02 26 57.8	-1.7
ASF	**Jabal al Asfar**	**150.00**	**294**	PKPbc	PKPbc	02 27 07.9	-1.1
	2.2nm,0.7s,baz=198,slow=3.2,SNR=3.3						
KWP	**Kalwaria Pacla**	**150.14**	**336**	*e*PKPbc	PKPbc	02 27 08.4	-0.2
KWP	**Kalwaria Pacla**	**150.14**	**336**	⇑*i*P	PKPbc	02 27 08.8	+0.1
BR131	**Keskin Array S**	**150.40**	**310**	*e*PKPbc	PKPbc	02 27 08.9	-0.8
BRTR	**Keskin Array B**	**150.40**	**310**	PKPbc	PKPbc	02 27 09.3	-0.3
	2.1nm,0.7s,baz=129,slow=3.3,SNR=11						
BRTR				pPKPbc	pPKPbc	02 27 22.6	-3.9
	1.4nm,0.6s,baz=128,slow=5.2,SNR=6.3						
BUR08	**Bucovina Ar. S**	**150.66**	**331**	*e*PKPbc	PKPbc	02 27 10.1	+0.1
BURAR	**Bucovina Array**	**150.67**	**331**	⇓*i*P	PKPbc	02 27 10.1	+0.1
MMAI	**Mount Meron Ar**	**151.10**	**296**	PKPbc	PKPbc	02 27 12.6	+1.1
	5.0nm,0.8s,baz=32,slow=6.9,SNR=3.8						
VRI	**Vrincioaia**	**151.20**	**326**	⇓*i*P	PKPbc	02 27 11.4	+0.1
UPC	**Upice**	**151.49**	**344**	⇑*e*PKP	PKPbc	02 27 12.6	+0.8
DPC	**Dobruska-Polom**	**151.55**	**344**	⇑*e*PKP	PKPbc	02 27 12.7	+0.7
DPC				*e*pPKP	pPKPdf	02 27 24.0	+1.3
BRG	**

comp=E,630nm,0.6s
YUK A 02 11 45.7
comp=E,800nm,0.6s
NEM2 Nemuro 2 6.02 238 P **Pn 02 10 22.4 -1.2**
NEM2 eS **Sn 02 11 27.4 -3.8**
JNK Nakash 6.52 244 P **Pn 02 10 31.1 +0.7**
JNK eS **Sn 02 11 43.8 +0.5**
JTKR Abashiri--Toko 6.84 249 P **Pn 02 10 36.4 +1.6**
JAK Akkeshi 6.86 240 P **Pn 02 10 33.7 -1.4**
JAK eS **Sn 02 11 47.3 -4.4**
YSS Yuzh-Sakhalins 6.88 275 ePN **Pn 02 10 38.0 +2.7**
YSS eS **Sn 02 11 53.0 +1.0**
YSS smax
comp=E,20nm,0.7s
YSS MLR MLR
comp=E,300nm,17.0s
YSS MLR MLR
comp=Z,300nm,17.0s
YSS Yuzh-Sakhalins 6.88 275 ePn **Pn 02 10 37.8 +2.6**
comp=Z,29nm,0.3s
YSS Yuzh-Sakhalins 6.88 275 eP **Pn 02 10 38.0 +2.7**
YSS eS **Sn 02 11 53.0 +1.0**
YSS A 02 11 56.0
comp=Z,20nm,0.7s
YSS AMS AMS 02 12 52.0
comp=Z,300nm,17.0s
YSS AMS AMS 02 12 52.0
comp=Z,300nm,17.0s
PEA0B Petropavlovsk- 7.11 25 ePn **Pn 02 10 42.5 +4.0**
PETK Petropavlovsk- 7.11 25 P **Pn 02 10 38.7 +0.3**
comp=Z,1.7nm,0.3s,baz=179,slow=8.3,SNR=8.4
PETK LR LR 02 13 29.0
comp=Z,39nm,19.5s,baz=213,slow=38
PETK Petropavlovsk- 7.11 25 P **Pn 02 10 38.7 +0.3**
PETK LR LR 02 13 29.0
JMP Maruseppu 7.18 251 P **Pn 02 10 41.8 +2.4**
JAR Ashorobuto 7.26 245 P **Pn 02 10 41.2 +0.7**
JOB Onbets 7.43 242 P **Pn 02 10 42.8 -0.1**
JOB eS **Sn 02 12 01.8 -3.9**
ASAJ Asahikawa 7.63 253 P **Pn 02 10 48.6 +3.0**
comp=Z,2.7nm,0.3s,baz=65,slow=13,SNR=18
ASAJ Asahikawa 7.63 253 PN **Pn 02 10 48.7 +3.1**
ASAJ pmax pmax
comp=Z,3.0nm,0.3s
JKK2 Kamakawa 2 7.63 251 P **Pn 02 10 47.8 +2.2**
JCH Churui 7.88 242 P **Pn 02 10 48.2 -0.8**
JCH eS **Sn 02 12 12.5 -4.2**
JBT2 Biratori 2 8.40 246 P **Pn 02 10 57.0 +0.8**
JKB Kayabe 9.72 244 P **Pn 02 11 12.2 -2.0**
JKB eS **Sn 02 12 54.2 -7.5**
JTM Tenmabayashi 10.35 239 P **Pn 02 11 20.2 -2.6**
JTM eS **Sn 02 13 08.3 -8.9**
JANG Nango 10.36 236 P **Pn 02 11 19.1 -3.9**
JANG eS **Sn 02 13 06.7 -11**
JTH Tanohata 10.46 233 eS **Sn 02 13 09.1 -11**
JOSM Okushiri--Mats 10.60 249 P **Pn 02 11 25.3 -0.9**
JRG Rokugo 11.52 235 eS **Sn 02 13 35.8 -10**
FX1 Attu Island--F 14.50 58 P **Pn 02 12 17.2 -1.7**
comp=Z,2.8nm,0.3s,baz=57,slow=8.8,SNR=4.9
FX1 LR LR 02 17 03.4
comp=Z,26nm,18.3s,baz=311,slow=33
FX1 Attu Island--F 14.50 58 P **Pn 02 12 17.2 -1.7**
FX1 pmax pmax
comp=Z,3.0nm,0.3s
FX1 MLR MLR
comp=Z,26nm,18.3s
MAJO Matsushiro 14.90 232 eP **Pn 02 12 29.9 +5.6**
MAJO pmax pmax
comp=Z,6.0nm,0.5s
MAJO Matsushiro 14.90 232 eP **Pn 02 12 29.9 +5.6**
comp=Z,6.4nm,0.5s
MJAR Matsushiro Arr 14.90 232 P **Pn 02 12 29.7 +5.4**
comp=Z,0.6nm,0.3s,baz=35,slow=8.8,SNR=8.2
MJAR Matsushiro Arr 14.90 232 P **Pn 02 12 29.7 +5.4**
MJAR pmax pmax
comp=Z,1.0nm,0.3s
KSRS Korea Array 20.58 252 P **P 02 13 32.0 +0.9**
comp=Z,2.6nm,0.5s,baz=57,slow=10,SNR=13
KSRS Korea Array 20.58 252 eP **P 02 13 35.3 +4.1**
KSRS pmax pmax
comp=Z,1.0nm,0.3s
ULN Ulaanbaatar 30.68 289 eP **P 02 15 09.9 +3.8**
ULN pmax pmax
comp=Z,2.0nm,0.8s,mb4.0
ULN Ulaanbaatar 30.68 289 eP **P 02 15 09.8 +3.7**
comp=Z,2.0nm,0.8s,mb4.0
SONM Songino Array 31.11 289 P **P 02 15 10.5 +0.5**
comp=Z,0.4nm,0.3s,mb3.7,baz=75,slow=7.6,SNR=2.2
COLA College 36.28 38 eP **P 02 15 55.2 +0.6**
COLA pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
COLA College 36.28 38 eP **P 02 15 55.2 +0.6**
comp=Z,4.3nm,0.6s,mb4.6
INK Inuvik 41.77 32 P **P 02 16 41.1 +0.7**
comp=Z,1.8nm,0.4s,mb4.0,baz=274,slow=6.2,SNR=5.8
INK Inuvik 41.77 32 P **P 02 16 41.1 +0.7**
INK pmax pmax
comp=Z,2.0nm,0.4s
INK Inuvik 41.77 32 eP **P 02 16 40.9 +0.5**
comp=Z,2.7nm,0.7s,mb4.0
ZALV Zalesovo Beam 42.42 306 P **P 02 16 44.7 -1.2**
comp=Z,1.0nm,0.5s,mb3.8,baz=63,slow=7.4,SNR=3.5
ZALV PcP PcP 02 18 38.3 +0.4
comp=Z,0.6nm,0.3s,baz=0.0,slow=0.7,SNR=4.3
ZALV Zalesovo Beam 42.42 306 P **P 02 16 44.7 -1.1**
ZALV 02 18 38.3
ZALV pmax pmax
comp=Z,1.0nm,0.5s,mb3.7
MK31 Makanchi Array 46.73 297 eP **P 02 17 19.3 -1.0**
MKAR Makanchi Array 46.73 297 P **P 02 17 19.4 -0.9**
comp=Z,1.1nm,0.6s,mb4.0,baz=64,slow=11,SNR=7.3
MKAR PcP PcP 02 18 53.0 +0.1
comp=Z,0.8nm,0.5s,baz=62,slow=6.2,SNR=4.8
MKAR Makanchi Array 46.73 297 eP **P 02 17 19.2 -1.1**
MKAR pmax pmax
comp=Z,1.0nm,0.6s
KURK Kurchatov 47.17 303 P **P 02 17 23.2 -0.4**
comp=Z,1.9nm,0.5s,mb4.2,baz=70,slow=8.4,SNR=12
KURK Kurchatov 47.17 303 P **P 02 17 23.2 -0.4**
KURK pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
KURK Kurchatov 47.17 303 eP **P 02 17 22.3 -1.4**
comp=Z,2.3nm,0.6s,mb4.3
LSA Lhasa 50.04 273 eP **P 02 17 48.0 +2.0**
LSA pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
LSA Lhasa 50.04 273 eP **P 02 17 48.0 +2.0**
comp=Z,8.8nm,0.6s,mb5.0
BVAR Borovoye Array 50.68 309 P **P 02 17 49.7 -0.7**
comp=Z,1.0nm,0.4s,mb4.1,baz=56,slow=7.6,SNR=8.1
BVAR PcP PcP 02 19 06.8 -0.2
comp=Z,1.3nm,0.5s,baz=64,slow=3.4,SNR=5.8
BVAR Borovoye Array 50.68 309 P **P 02 17 49.7 -0.7**
BVAR 02 19 06.8
BVAR pmax pmax
comp=Z,1.0nm,0.4s
RES Resolute Bay 50.91 18 P **P 02 17 52.1 +0.2**
comp=Z,2.1nm,0.8s,mb4.1,baz=220,slow=3.3,SNR=8.5
RES Resolute Bay 50.91 18 P **P 02 17 52.1 +0.2**
RES pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
RES Resolute Bay 50.91 18 eP **P 02 17 51.9 0.0**
comp=Z,3.3nm,0.9s,mb4.3
YKA Yellowknife Ar 51.06 37 P **P 02 17 53.5 +0.3**
comp=Z,1.1nm,0.8s,mb3.9,baz=299,slow=6.6,SNR=4.8
YKA PcP PcP 02 19 08.0 -0.3
comp=Z,0.6nm,0.5s,baz=304,slow=3.9,SNR=5.1
YKA Yellowknife Ar 51.06 37 P **P 02 17 53.5 +0.3**
YKA 02 19 08.0
YKA pmax pmax
comp=Z,1.0nm,0.8s
YKA Yellowknife Ar 51.06 37 P **P 02 17 53.5 +0.3**
YKA PcP PcP 02 19 08.0 -0.3
CHTO Chiang Mai 51.89 256 eP **P 02 18 01.2 +1.2**
CHTO pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
CHTO Chiang Mai 51.89 256 eP **P 02 18 01.2 +1.2**
comp=Z,3.2nm,0.7s,mb4.4
EKS2 Erkin-Say 54.05 297 eP **P 02 18 15.8 +0.2**
comp=Z,1.3nm,0.4s,mb4.2
ARCES ARCESS Array B 57.77 341 P **P 02 18 41.3 -0.5**
comp=Z,0.7nm,0.4s,mb4.0,baz=34,slow=7.3,SNR=7.0
ARCES ARCESS Array B 57.77 341 P **P 02 18 41.3 -0.5**
ARCES pmax pmax
comp=Z,1.0nm,0.4s

ABKAR Akbulak array 58.25 310 eP **P 02 18 44.6 -0.7**
comp=Z,1.5nm,0.4s,mb4.4
SUMG Summit 60.71 4 eP **P 02 19 02.1 0.0**
comp=Z,8.4nm,0.9s,mb4.9
FFC Flin Flon 60.88 40 eP **P 02 19 03.2 -0.3**
FFC pmax pmax
comp=Z,3.0nm,0.9s,mb4.4
FFC Flin Flon 60.88 40 eP **P 02 19 03.2 -0.3**
comp=Z,2.6nm,0.9s,mb4.4
KBL Kabul 61.85 291 eP **P 02 19 11.7 +1.4**
KBL pmax pmax
comp=Z,4.0nm,0.5s,mb4.8
KBL Kabul 61.85 291 eP **P 02 19 11.7 +1.4**
comp=Z,3.8nm,0.5s,mb4.8
BOZ Bozeman (W) 61.94 52 eP **P 02 19 11.5 +0.8**
BOZ pmax pmax
comp=Z,1.0nm,0.6s,mb4.1
BOZ Bozeman (W) 61.94 52 eP **P 02 19 11.5 +0.8**
comp=Z,0.9nm,0.6s,mb4.1
NVAR Mina Array Bea 62.64 62 P **P 02 19 16.3 +0.8**
comp=Z,0.8nm,0.5s,mb4.1,baz=305,slow=8.4,SNR=3.1
LOHW Long Hollow 63.80 54 eP **P 02 19 24.3 +1.2**
FINES FINESS Array B 63.94 335 P **P 02 19 23.0 -0.7**
comp=Z,5.9nm,0.4s,mb5.0,baz=33,slow=7.1,SNR=39
FINES FINESS Array B 63.94 335 P **P 02 19 23.0 -0.7**
FINES pmax pmax
comp=Z,6.0nm,0.4s
BW06 Boulder Array 64.93 54 eP **P 02 19 30.9 +0.4**
comp=Z,1.1nm,0.7s,mb4.0
PDAR Pinedale Array 64.93 54 P **P 02 19 31.1 +0.6**
comp=Z,0.9nm,0.7s,mb3.9,baz=306,slow=1.9,SNR=7.0
NB2 NORSAR Subarra 68.15 341 P **P 02 19 50.2 -0.5**
comp=Z,3.0nm,0.5s,mb4.6,baz=27,slow=6.5
NOA NORSAR Array B 68.15 341 P **P 02 19 50.1 -0.7**
comp=Z,3.3nm,0.5s,mb4.6,baz=28,slow=6.3,SNR=15
NOA NORSAR Array B 68.15 341 P **P 02 19 50.1 -0.6**
NOA pmax pmax
comp=Z,3.0nm,0.5s
AFI Afiamalu 68.25 143 LR LR 02 47 18.7
comp=Z,332nm,18.4s,baz=185,slow=34
WRA Warramunga Arr 68.44 199 P **P 02 19 52.3 -0.6**
comp=Z,0.5nm,0.5s,mb3.8,baz=20,slow=6.9,SNR=4.8
WRA Warramunga Arr 68.44 199 P **P 02 19 52.3 -0.7**
WRA pmax pmax
comp=Z,1.0nm,0.5s
AKASG Malin Array Be 71.41 326 P **P 02 20 09.9 -1.0**
comp=Z,3.5nm,0.3s,mb4.8,baz=33,slow=6.2,SNR=18
AKASG Malin Array Be 71.41 326 eP **P 02 20 10.2 -0.8**
AKASG pmax pmax
comp=Z,4.0nm,0.3s
AKBB Malin Array Si 71.41 326 eP **P 02 20 10.0 -1.0**
KIEV Kiev 71.43 326 eP **P 02 20 09.9 -1.1**
KIEV pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
KIEV Kiev 71.43 326 eP **P 02 20 09.8 -1.2**
comp=Z,6.1nm,0.9s,mb4.5
ASAR Alice Springs 72.14 198 P **P 02 20 16.3 +0.8**
comp=Z,1.3nm,0.6s,mb4.0,baz=12,slow=5.6,SNR=10
ASAR Alice Springs 72.14 198 eP **P 02 20 16.3 +0.8**
ASAR pmax pmax
comp=Z,1.0nm,0.6s
KWP Kalwaria Pacla 74.70 329 ⇓P **P 02 20 30.6 +0.2**
KWP Kalwaria Pacla 74.70 329 ⇓iP **P 02 20 30.6 +0.2**
STHS Stebnicka Huta 75.40 330 eP **P 02 20 35.4 +1.0**
STHS pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
STHS Stebnicka Huta 75.40 330 eP **P 02 20 35.4 +1.0**
comp=Z,2.6nm,0.7s,mb4.3
STHS Stebnicka Huta 75.40 330 eP **P 02 20 35.4 +1.0**
BUR08 Bucovina Ar. S 75.44 326 eP **P 02 20 34.9 +0.2**
KOLS Kolonicke sedl 75.44 329 eP **P 02 20 34.3 -0.4**
KOLS pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
KOLS Kolonicke sedl 75.44 329 eP **P 02 20 34.3 -0.4**
comp=Z,2.3nm,0.9s,mb4.1
KOLS e 02 27 11.1
KOLS e 02 27 23.5
KOLS Kolonicke sedl 75.44 329 eP **P 02 20 34.3 -0.4**
BURAR Bucovina Array 75.46 326 ⇑P **P 02 20 34.6 -0.2**
BURAR Bucovina Array 75.46 326 ⇑iP **P 02 20 34.6 -0.2**
CRVS Cervenica-Dubn 75.75 329 eP **P 02 20 36.6 +0.1**
CRVS pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
CRVS Cervenica-Dubn 75.75 329 eP **P 02 20 36.6 +0.1**
comp=Z,3.2nm,1.2s,mb4.1
CRVS e 02 27 11.7
CRVS e 02 27 23.4
CRVS Cervenica-Dubn 75.75 329 eP **P 02 20 36.6 +0.1**
TLCR 76.01 323 ⇓P **P 02 20 36.8 -1.2**
TLCR 76.01 323 ⇓iP **P 02 20 36.8 -1.2**
MORC Moravsky Berou 76.33 332 eP **P 02 20 38.8 -0.9**
MORC pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
MORC Moravsky Berou 76.33 332 eP **P 02 20 38.8 -0.9**
comp=Z,3.5nm,0.9s,mb4.3
MORC Moravsky Berou 76.33 332 ⇓iP **P 02 20 38.7 -1.0**
CLL Collm 76.37 335 ⇓iP **P 02 20 39.5 -0.4**
CLL pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
CLL Collm 76.37 335 ⇓iP **P 02 20 39.5 -0.4**
comp=Z,5.0nm,0.9s,mb4.4
CLL Collm 76.37 335 ⇓iP **P 02 20 39.5 -0.4**
comp=Z,5.0nm,0.9s,mb4.4
HARR Harsova 76.78 323 ⇑P **P 02 20 42.8 +0.4**
HARR Harsova 76.78 323 ⇑iP **P 02 20 42.8 +0.4**
MLR Muntele Rosu 76.93 325 ⇓P **P 02 20 43.2 0.0**
MLR Muntele Rosu 76.93 325 ⇓iP **P 02 20 43.2 0.0**
VYHS Vyhne 77.01 331 eP **P 02 20 43.7 +0.1**
VYHS pmax pmax
comp=Z,8.0nm,2.1s,mb4.3
VYHS Vyhne 77.01 331 eP **P 02 20 43.7 +0.1**
comp=Z,7.5nm,2.1s,mb4.2
VYHS Vyhne 77.01 331 eP **P 02 20 43.7 +0.1**
TXAR Lajitas Array 77.69 60 P **P 02 20 48.0 +0.2**
comp=Z,0.5nm,0.6s,mb3.6,baz=305,slow=5.3,SNR=11
TXAR Lajitas Array 77.69 60 P **P 02 20 48.0 +0.3**
TXAR pmax pmax
comp=Z,1.0nm,0.6s
TXAR Lajitas Array 77.69 60 P **P 02 20 48.0 +0.2**
BR131 Keskin Array S 78.23 317 eP **P 02 20 50.3 -0.3**
comp=Z,0.4nm,0.4s,mb3.7
BRTR Keskin Array B 78.23 317 P **P 02 20 50.9 +0.4**
comp=Z,1.3nm,0.8s,mb3.9,baz=69,slow=4.2,SNR=5.6
BRTR Keskin Array B 78.23 317 P **P 02 20 50.9 +0.4**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
GERES GERESS Array B 78.35 334 P **P 02 20 50.5 -0.5**
comp=Z,1.0nm,0.8s,mb3.8,baz=28,slow=6.3,SNR=6.0
GERES GERESS Array B 78.35 334 P **P 02 20 50.5 -0.5**
GERES pmax pmax
comp=Z,1.0nm,0.8s
BZS Buzias 78.49 327 ⇑P **P 02 20 51.8 0.0**
BZS Buzias 78.49 327 ⇑iP **P 02 20 51.8 0.0**
MMAI Mount Meron Ar 82.64 311 P **P 02 21 15.4 +1.1**
comp=Z,1.8nm,0.4s,mb4.5,baz=39,slow=7.4,SNR=4.7
PLCA Paso Flores 148.44 95 PKPbc PKPbc 02 28 37.2 +0.4
comp=Z,1.7nm,0.8s,baz=55,slow=3.6,SNR=2.9
CPUP Villa Florida 148.67 60 PKPbc PKPbc 02 28 37.6 -0.1
comp=Z,0.8nm,0.4s,baz=307,slow=6.5,SNR=4.8

CSEM ***11*** *02:13:15.7±0.1, 36°.97N×29°.24E, h10km, MD3.0, Error ellipse: s-maj=1.6km s-min=1.3km az=136.0*
ISK ***11*** *02:13:15.2, 36°.97N×29°.22E, h10km, MD3.0*
ISCJB ***11*** *02:13:15.8±0.5, 36°.94N±0°.03×29°.25E±0°.04, h8km±5km, Error ellipse: s-maj=5.9km s-min=4.5km az=44.3*
DDA ***11*** *02:13:16.4, 37°.00N×29°.29E, h20km, Md3.0, Ml3.0*
ISC 11 02:13:16.1±0.5, 36°.95N±0°.03×29°.24E±0°.04, h10km±5km, n36, σ0°78/49, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.29**	**44**	*e*PG	**Pg**	**02 13 21.5**	**-0.5**
GLHS				*e*SG	**Sg**	**02 13 26.6**	**+0.6**
GLHS	**Glhisar (BURDU**	**0.29**	**44**	*e*Pg	**Pg**	**02 13 21.5**	**-0.5**
GLHS				*e*Sg	**Sg**	**02 13 26.6**	**+0.7**
FETY	**Fethiye**	**0.34**	**202**	*e*PG	**Pg**	**02 13 22.4**	**-0.4**
FETY				*e*SG	**Sg**	**02 13 28.2**	**+0.9**
FETY	**Fethiye**	**0.34**	**202**	*e*Pg	**Pg**	**02 13 22.4**	**-0.4**
FETY				*e*Sg	**Sg**	**02 13 28.2**	**+0.9**
GOLH	**Golhisar**	**0.39**	**41**	*i* P	**Pg**	**02 13 23.4**	**-0.3**
GOLH				*i* S	**Sg**	**02 13 30.4**	**+1.6**
GOLH	**Golhisar**	**0.39**	**41**	*i* P	**Pg**	**02 13 23.4**	**-0.3**
GOLH				*i* S	**Sg**	**02 13 30.4**	**+1.5**
ELL	**Elmali**	**0.57**	**110**	*e*PG	**Pg**	**02 13 27.1**	**0.0**
ELL	**Elmali**	**0.57**	**110**	*e*Pg	**Pg**	**02 13 27.2**	**0.0**
DNZL	**Cakiroluk**	**0.76**	**348**	*i* P	**Pg**	**02 13 29.1**	**-1.6**
DNZL				*i* S	**Sg**	**02 13 41.8**	**+1.1**
DNZL	**Cakiroluk**	**0.76**	**348**	*i* P	**Pg**	**02 13 29.1**	**-1.7**
DNZL				*i* S	**Sg**	**02 13 41.8**	**+1.1**
AKAS	**Kas**	**0.77**	**158**	*i* P	**Pg**	**02 13 31.3**	**+0.3**
AKAS				*i* S	**Sg**	**02 13 46.8**	**+5.8**
AKAS	**Kas**	**0.77**	**158**	*i* P	**Pg**	**02 13 31.3**	**+0.3**
YER	**Yerkesik**	**0.79**	**284**	*e*PG	**Pg**	**02 13 30.9**	**-0.5**
YER	**Yerkesik**	**0.79**	**284**	*e*Pg	**Pg**	**02 13 30.9**	**-0.5**
DENT	**Denizli**	**0.82**	**348**	*e*PG	**Pg**	**02 13 30.8**	**-1.2**
DENT	**Denizli**	**0.82**	**348**	*e*Pg	**Pg**	**02 13 30.8**	**-1.2**
ANTB	**Antalya**	**1.13**	**92**	*e*PN	**Pg**	**02 13 37.4**	**-0.5**
ANTB	**Antalya**	**1.13**	**92**	*e*Pn	**Pg**	**02 13 37.4**	**-0.5**
BCK	**Bucak**	**1.19**	**64**	*e*PN	**Pn**	**02 13 38.4**	**-0.4**
BCK	**Bucak**	**1.19**	**64**	*e*Pn	**Pn**	**02 13 38.4**	**-0.4**
MLSB	**Milas**	**1.22**	**287**	*e*PN	**Pn**	**02 13 38.2**	**-1.0**
MLSB	**Milas**	**1.22**	**287**	*e*Pn	**Pn**	**02 13 38.2**	**-1.0**
AYDN	**Tasoluk**	**1.30**	**304**	*i* P	**Pn**	**02 13 40.7**	**+0.4**
AYDN				*i* S	**Sb**	**02 13 58.6**	**+1.3**
AYDN	**Tasoluk**	**1.30**	**304**	*i* P	**Pn**	**02 13 40.7**	**+0.4**
AYDN				*i* S	**Sb**	**02 13 58.7**	**+1.3**
DAT	**Datca**	**1.35**	**261**	*e*PN	**Pn**	**02 13 40.6**	**-0.4**
DAT	**Datca**	**1.35**	**261**	*e*Pn	**Pn**	**02 13 40.6**	**-0.4**
KHL	**Karahalli**	**1.39**	**9**	*e*PN	**Pn**	**02 13 41.0**	**-0.5**
KHL	**Karahalli**	**1.39**	**9**	*e*Pn	**Pn**	**02 13 41.1**	**-0.5**
BDRM	**Kayabasi**	**1.45**	**275**	*i* P	**Pn**	**02 13 42.7**	**+0.4**
BDRM				*i* S	**Sn**	**02 14 01.9**	**+0.7**
BDRM	**Kayabasi**	**1.45**	**275**	*i* P	**Pn**	**02 13 42.7**	**+0.4**
BDRM				*i* S	**Sn**	**02 14 01.9**	**+0.6**
SUTC	**Sutluce-Ispart**	**1.50**	**69**	*e*PN	**Pn**	**02 13 42.9**	**-0.1**
SUTC	**Sutluce-Ispart**	**1.50**	**69**	*e*Pn	**Pn**	**02 13 42.9**	**-0.1**
KULA	**Kula-Manisa**	**1.63**	**344**	*e*PN	**Pn**	**02 13 44.3**	**-0.6**
KULA	**Kula-Manisa**	**1.63**	**344**	*e*Pn	**Pn**	**02 13 44.3**	**-0.6**
HDMB	**Hadim**	**2.60**	**89**	*e*PN	**Pn**	**02 13 58.9**	**+0.7**
HDMB	**Hadim**	**2.60**	**89**	*e*Pn	**Pn**	**02 13 58.9**	**+0.8**

ISK ***11*** *02:25:43.0, 37°.03N×29°.20E, h5km, MD3.2*
ISCJB ***11*** *02:25:43.8±0.7, 36°.99N±0°.04×29°.18E±0°.04, h3km±7km, Error ellipse: s-maj=7.2km s-min=5.0km az=8.3*
DDA ***11*** *02:25:44.5, 37°.02N×29°.27E, h20km, Md3.2, Ml3.4*
CSEM ***11*** *02:25:44.1±0.2, 36°.99N×29°.19E, h5km, MD3.2, Error ellipse: s-maj=4.9km s-min=3.1km az=13.0*
ISC 11 02:25:44.5±0.7, 36°.99N±0°.04×29°.18E±0°.04, h7km±5km, n45, σ0°76/54, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**57**	*e*PG	**Pg**	**02 25 49.7**	**-0.8**
GLHS				*e*SG	**Sg**	**02 25 54.5**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.30**	**57**	*e*Pg	**Pg**	**02 25 49.7**	**-0.7**
GLHS				*e*Sg	**Sg**	**02 25 54.5**	**0.0**
GOLH	**Golhisar**	**0.39**	**51**	*i* P	**Pg**	**02 25 51.5**	**-0.6**
GOLH				*i* S	**Sg**	**02 25 58.2**	**+1.0**
GOLH	**Golhisar**	**0.39**	**51**	*i* P	**Pg**	**02 25 51.5**	**-0.6**
GOLH				*i* S	**Sg**	**02 25 58.2**	**+1.0**
ELL	**Elmali**	**0.63**	**112**	*e*PG	**Pg**	**02 25 56.3**	**-0.4**
ELL				*e*SG	**Sg**	**02 26 06.4**	**+1.5**
ELL	**Elmali**	**0.63**	**112**	*e*Pg	**Pg**	**02 25 56.3**	**-0.4**
ELL				*e*Sg	**Sg**	**02 26 06.4**	**+1.5**
YER	**Yerkesik**	**0.73**	**282**	*e*PG	**Pg**	**02 25 58.4**	**-0.1**
YER	**Yerkesik**	**0.73**	**282**	*e*Pg	**Pg**	**02 25 58.4**	**-0.2**
DENT	**Denizli**	**0.77**	**351**	*e*PG	**Pg**	**02 25 57.6**	**-1.7**
DENT	**Denizli**	**0.77**	**351**	*e*Pg	**Pg**	**02 25 57.6**	**-1.7**
AKAS	**Kas**	**0.83**	**155**	*i* P	**Pg**	**02 25 59.8**	**-0.6**
AKAS				*i* S	**Sg**	**02 26 15.8**	**+4.7**
AKAS	**Kas**	**0.83**	**155**	*i* P	**Pg**	**02 25 59.8**	**-0.6**
MLSB	**Milas**	**1.16**	**286**	*e*PN	**Pn**	**02 26 06.4**	**-0.8**
MLSB	**Milas**	**1.16**	**286**	*e*Pn	**Pn**	**02 26 06.4**	**-0.8**
ANTB	**Antalya**	**1.18**	**94**	*e*PN	**Pn**	**02 26 06.6**	**-0.9**
ANTB	**Antalya**	**1.18**	**94**	*e*Pn	**Pn**	**02 26 06.6**	**-0.9**
BCK	**Bucak**	**1.22**	**67**	*e*PN	**Pn**	**02 26 06.9**	**-1.1**
BCK	**Bucak**	**1.22**	**67**	*e*Pn	**Pn**	**02 26 06.9**	**-1.1**
AYDN	**Tasoluk**	**1.23**	**303**	*i* P	**Pb**	**02 26 07.9**	**-0.2**
AYDN				*i* S	**Sg**	**02 26 25.7**	**+1.6**
AYDN	**Tasoluk**	**1.23**	**303**	*i* P	**Pb**	**02 26 07.9**	**-0.2**
AYDN				*i* S	**Sg**	**02 26 25.7**	**+1.5**
DAT	**Datca**	**1.31**	**259**	*e*PN	**Pn**	**02 26 09.4**	**+0.2**
DAT	**Datca**	**1.31**	**259**	*e*Pn	**Pn**	**02 26 09.4**	**+0.2**
ISP	**Isparta**	**1.35**	**52**	*e*PN	**Pn**	**02 26 10.2**	**+0.4**
ISP	**Isparta**	**1.35**	**52**	*e*Pn	**Pn**	**02 26 10.3**	**+0.5**
KHL	**Karahalli**	**1.36**	**11**	*e*PN	**Pn**	**02 26 09.2**	**-0.7**
KHL	**Karahalli**	**1.36**	**11**	*e*Pn	**Pn**	**02 26 09.2**	**-0.7**
SUTC	**Sutluce-Ispart**	**1.53**	**71**	*e*PN	**Pn**	**02 26 12.2**	**-0.1**
SUTC	**Sutluce-Ispart**	**1.53**	**71**	*e*Pn	**Pn**	**02 26 12.2**	**0.0**
KULA	**Kula-Manisa**	**1.58**	**345**	*e*PN	**Pn**	**02 26 12.5**	**-0.4**
KULA	**Kula-Manisa**	**1.58**	**345**	*e*Pn	**Pn**	**02 26 12.5**	**-0.4**
SHUT	**Suhut-Afyon**	**1.90**	**34**	*e*PN	**Pn**	**02 26 17.3**	**0.0**
SHUT	**Suhut-Afyon**	**1.90**	**34**	*e*Pn	**Pn**	**02 26 17.3**	**0.0**
IZM	**Izmir**	**2.07**	**313**	*e*PN	**Pn**	**02 26 20.4**	**+0.7**
AKS	**Akhisar**	**2.17**	**331**	*e*PN	**Pn**	**02 26 21.3**	**+0.2**
AKS	**Akhisar**	**2.17**	**331**	*e*Pn	**Pn**	**02 26 21.3**	**+0.2**
ALT	**Altintas**	**2.19**	**19**	*e*PN	**Pn**	**02 26 21.3**	**0.0**
ALT	**Altintas**	**2.19**	**19**	*e*Pn	**Pn**	**02 26 21.3**	**0.0**
BLCB	**Balcova**	**2.19**	**310**	*e*PN	**Pn**	**02 26 21.7**	**+0.3**
BLCB	**Balcova**	**2.19**	**310**	*e*Pn	**Pn**	**02 26 21.7**	**+0.3**
DST	**Dursunbey**	**2.65**	**351**	*e*PN	**Pn**	**02 26 28.3**	**+0.7**
DST	**Dursunbey**	**2.65**	**351**	*e*Pn	**Pn**	**02 26 28.3**	**+0.7**
HDMB	**Hadim**	**2.65**	**90**	*e*PN	**Pn**	**02 26 28.4**	**+0.8**
HDMB	**Hadim**	**2.65**	**90**	*e*Pn	**Pn**	**02 26 28.4**	**+0.8**
KONT	**Konya--Tatoy**	**2.70**	**68**	*e*PN	**Pn**	**02 26 29.2**	**+0.8**
KONT	**Konya--Tatoy**	**2.70**	**68**	*e*Pn	**Pn**	**02 26 29.2**	**+0.8**

NOU ***11*** *02:26:26.6±1.3, 19°.88S×168°.27E, h10km, MD3.0, ML3.7*
IDC ***11*** *02:26:33.5±43.0, 20°.17S×167°.39E, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.9/15, mbtmp4.0/4, MS5.3/1, Ms1 5.3/1, ms1mx3.4/26, Error ellipse: s-maj=739.1km s-min=104.7km az=79.0*
ISC 11 02:26:29.7±2.3, 20°.4S±0°.2×168°.5E±0°.3, h35km, n10, σ0°84/10, mb3.8/4, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.33**	**221**	*e*P	**Pn**	**02 27 04.9**	**-0.6**
DZM	**Mont Dzumac**	**2.56**	**229**	*e*P	**Pn**	**02 27 07.9**	**-0.8**
DZM				AMP		02 27 53.8	
	comp=Z,744nm,1.1s						
NORM	**Noumea**	**2.64**	**226**	*e*P	**Pn**	**02 27 09.5**	**-0.3**
NOUC	**Port Laguerre**	**2.68**	**230**	*e*P	**Pn**	**02 27 10.4**	**0.0**
NOUC				*e*S	**Sn**	**02 27 41.3**	**-0.4**
NOUC				AMP		02 27 44.0	
	comp=Z,48nm,8.5s						
ONTRN	**Noumea**	**2.71**	**225**	*e*S	**Sn**	**02 27 43.3**	**+0.9**
RPZ	**Rata Peaks**	**23.36**	**175**	LR	LR	02 38 20.0	
	comp=Z,8μm,20.2s,baz=40,slow=30						
STKA	**Stephens Creek**	**26.67**	**239**	P	**P**	**02 32 07.5**	**+2.0**
	comp=Z,2.2nm,0.5s,mb3.9,baz=64,slow=9.7,SNR=4.5						
WRA	**Warramunga Arr**	**32.06**	**265**	P	**P**	**02 32 52.4**	**-1.0**
	comp=Z,0.3nm,0.6s,mb3.3,baz=94,slow=8.3,SNR=4.7						
ASAR	**Alice Springs**	**32.21**	**258**	P	**P**	**02 32 54.5**	**-0.2**
	comp=Z,2.3nm,0.6s,mb4.2,baz=88,

ITM	Ithomi	1.29	10	P	Pn	02 27 36.7	+0.6
ITM	Ithomi	1.29	10	P	Pn	02 27 35.5	-0.6
ITM	Ithomi	1.29	10	P	Pn	02 27 36.7	+0.6
VLI	Veliai	1.32	52	P	Pn	02 27 36.8	+0.3
VLI	Veliai	1.32	52	P	Pn	02 27 36.8	+0.3
VLX	Vlachokerasia	1.58	22	P	Pn	02 27 40.3	+0.3
VLX	Vlachokerasia	1.58	22	P	Pn	02 27 40.3	+0.3
KARN	Karanos	1.92	104	P	Pn	02 27 44.5	-0.1
KARN	Karanos	1.92	104	P	Pn	02 27 44.5	-0.1
GUR	Goura	2.10	15	P	Pn	02 27 48.7	+1.5
GUR	Goura	2.10	15	P	Pn	02 27 48.7	+1.5
VAM	Vamos	2.14	103	P	Pn	02 27 47.8	+0.1
VAM	Vamos	2.14	103	P	Pn	02 27 47.8	+0.1
GVD	Gavdhos	2.26	117	*e*Pn	Pn	02 27 48.7	-0.7
GVD	Gavdhos	2.26	117	*e*Pn	Pn	02 27 48.4	-0.6
LAKA	Lakka	2.35	6	P	Pn	02 27 51.8	+1.3
LAKA				S	Sn	02 28 19.6	+1.5
LAKA	Lakka	2.35	6	P	Pn	02 27 51.8	+1.3
LTK	Loutraki	2.37	26	P	Pn	02 27 50.6	-0.2
LTK	Loutraki	2.37	26	P	Pn	02 27 50.6	-0.2
VLS	Valsamata	2.42	340	P	Pn	02 27 51.1	-0.5
VLS	Valsamata	2.42	340	P	Pn	02 27 51.1	-0.5
KALE	Kalithea	2.51	9	P	Pn	02 27 53.8	+1.0
KALE				S	Sn	02 28 25.4	+3.2
KALE	Kalithea	2.51	9	P	Pn	02 27 53.8	+1.0
KALE				S	Sn	02 28 25.4	+3.2
DSF	Desfina	2.60	15	P	Pn	02 27 53.9	-0.1
DSF	Desfina	2.60	15	P	Pn	02 27 53.9	-0.1
IDI	Anoyia	2.71	102	P	Pn	02 27 55.5	0.0
	3.2nm,0.3s,baz=292,slow=12,SNR=9.8						
IDI				S	Sn	02 28 26.7	-0.5
	15nm,0.3s,baz=308,slow=23,SNR=7.7						
IDI				LR	LR	02 29 23.6	
	comp=Z,302nm,18.6s,baz=300,slow=49						
IDI	Anoyia	2.71	102	P	Pn	02 27 55.5	-0.1
IDI				S	Sn	02 28 26.7	-0.4
LKR	Lokris	2.95	21	P	Pn	02 28 01.6	+2.8
LKR	Lokris	2.95	21	P	Pn	02 27 58.3	-0.5
LKR	Lokris	2.95	21	P	Pn	02 27 58.3	-0.5
LKD2	Lefkada island	2.99	345	P	Pn	02 28 00.2	+0.9
LKD2	Lefkada island	2.99	345	P	Pn	02 28 00.2	+0.9
NPS	Neapolis	3.29	100	P	Pn	02 28 05.2	+1.7
NEO	Neokhori	3.62	20	P	Pn	02 28 09.6	+1.6
NEO	Neokhori	3.62	20	P	Pn	02 28 09.6	+1.6
THL	Klokotos Trika	3.67	4	P	Pn	02 28 08.8	+0.2
THL	Klokotos Trika	3.67	4	P	Pn	02 28 08.8	+0.2
KZN	Kozani	4.40	1	P	Pn	02 28 20.5	+1.8
KZN	Kozani	4.40	1	P	Pn	02 28 20.5	+1.8
PLG	Polygyros	4.68	17	P	Pn	02 28 24.2	+1.6
PLG	Polygyros	4.68	17	P	Pn	02 28 24.2	+1.6
SOI	Samo	4.97	297	Pn	Pn	02 28 25.8	-0.8
SOI	Samo	4.97	297	Pn	Pn	02 28 25.8	-0.8
TIP	Timpagrande	5.08	312	*e*Pn	Pn	02 28 26.5	-1.5
	10nm,0.6s						
TIP	Timpagrande	5.08	312	*e*Pn	Pn	02 28 26.5	-1.5
	10nm,0.6s						
GRI	Girifalco	5.08	307	Pn	Pn	02 28 27.3	-0.8
GRI	Girifalco	5.08	307	Pn	Pn	02 28 27.3	-0.8
BIA	Bitola	5.12	357	*e*Pn	Pn	02 28 27.9	-0.6
BIA				*e*Sn	Sn	02 29 25.4	-0.8
BIA				*e*Lg		02 29 25.7	
	comp=N,19nm,0.6s						
BIA				*e*Lg		02 29 26.5	
	comp=E,15nm,0.5s						
CEL	Celeste	5.17	299	*e*Pn	Pn	02 28 28.1	-1.2
	comp=E,22nm,0.7s						
CEL	Celeste	5.17	299	*e*Pn	Pn	02 28 28.0	-1.2
	comp=E,22nm,0.7s						
MTTG	Motta San Giov	5.21	295	Pn	Pn	02 28 28.7	-1.1
	comp=E,50nm,0.6s						
MTTG	Motta San Giov	5.21	295	Pn	Pn	02 28 28.7	-1.1
	comp=E,50nm,0.6s						
VAY	Valandovo	5.46	7	*e*Pn	Pn	02 28 32.2	-1.0
VAY				*e*Sn	Sn	02 29 31.7	-3.0
VAY				*e*Lg		02 29 31.8	
	comp=E,56nm,1.3s						
VAY				*e*Lg		02 29 33.4	
	comp=N,32nm,0.8s						
KRUS	Krusevo	5.47	357	*e*Pn	Pn	02 28 31.9	-1.5
KRUS				*e*Sn	Sn	02 29 32.6	-2.3
KRUS				*e*Lg		02 29 32.9	
	comp=E,6.1nm,0.5s						
KRUS				*e*Lg		02 29 33.4	
	comp=N,9.7nm,0.6s						
MMB	Musomiste	5.91	15	*i* P	Pn	02 28 38.4	-0.9
VAE	Valguarnera	6.02	287	P	Pn	02 28 43.2	+2.3
	comp=N,0.7nm,0.3s,baz=72,slow=7.2,SNR=6.5						
VAE				S	Sn	02 29 53.3	+4.7
	comp=N,1.5nm,0.3s,baz=67,slow=18,SNR=1.9						
VAE	Valguarnera	6.02	287	P	Pn	02 28 43.2	+2.3
VAE				S	Sn	02 29 53.3	+4.7
SLNA	Salina	6.05	298	Pn	Pn	02 28 42.6	+1.3
SLNA	Salina	6.05	298	Pn	Pn	02 28 42.6	+1.3
KKB	Krupnik	6.06	10	*i* P	Pn	02 28 42.2	+0.7
RZN	Rozhen	6.25	22	P	Pn	02 28 44.4	+0.3
SG1	Sgolgore (BA)	6.29	323	*e*Pn	Pn	02 28 44.8	+0.2
BAI	Bari	6.40	326	*e*Pn	Pn	02 28 46.7	+0.6
ACER	Acerenza	6.62	319	Pn	Pn	02 28 49.1	-0.1
	comp=N,30nm,0.6s						
ACER	Acerenza	6.62	319	Pn	Pn	02 28 49.1	-0.1
	comp=N,30nm,0.6s						
BARS	Barje	6.91	1⇑	*i*Pn	Pn	02 28 51.7	-1.3
STON	Ston	7.60	338	*i* Pn	Pn	02 28 59.9	-2.7
STON				Sn	Sn	02 30 18.4	-8.9
STON	Ston	7.60	338	*i* Pn	Pn	02 28 59.9	-2.7
KEST	Kesra	9.99	273	LR	LR	02 33 26.4	
	comp=N,23nm,19.6s,baz=32,slow=37						
NVLJ	Novalja	10.08	331	*e*Pn	Pn	02 29 36.2	-0.3
NVLJ				Sn	Sn	02 31 17.8	-10
NVLJ	Novalja	10.08	331	*e*Pn	Pn	02 29 36.2	-0.3
MLR	Muntele Rosu	10.12	17	P	Pn	02 29 35.6	-1.4
	comp=N,0.1nm,0.3s,baz=170,slow=11,SNR=2.2						
MLR	Muntele Rosu	10.12	17	P	Pn	02 29 35.6	-1.4
BR131	Keskin Array S	10.22	65	*e*Pn	Pn	02 29 38.0	-0.5
BR131	Keskin Array S	10.22	65	*e*Pn	Pn	02 29 38.0	-0.5
BRTR	Keskin Array B	10.22	65	P	Pn	02 29 39.6	+1.1
	comp=N,0.1nm,0.3s,baz=247,slow=15,SNR=5.0						
BRTR	Keskin Array B	10.22	65	P	Pn	02 29 39.6	+1.1
EIL	Elat	12.80	115	P	Pn	02 30 12.3	-1.5
	comp=N,0.8nm,0.3s,baz=313,slow=19,SNR=3.2						
EIL	Elat	12.80	115	P	Pn	02 30 12.3	-1.5
EIL	Elat	12.80	115	P	Pn	02 30 12.3	-1.4
GERES	GERESS Array B	14.19	338	P	Pn	02 30 32.4	-0.2
	comp=N,0.1nm,0.3s,baz=148,slow=13,SNR=3.7						
AKASG	Malin Array Be	15.77	18	P	Pn	02 30 54.4	+1.2
	comp=N,0.6nm,0.3s,baz=212,slow=11,SNR=3.9						
AKASG	Malin Array Be	15.77	18	P	Pn	02 30 54.4	+1.2
GNI	Garni	18.67	70	LR	LR	02 40 17.6	
	comp=N,33nm,20.3s,baz=55,slow=42						
ESDC	Sonseca Array	20.56	288	P	P	02 31 50.6	+1.5
	comp=N,1.2nm,0.6s,baz=79,slow=9.5,SNR=11						
ESDC	Sonseca Array	20.56	288	P	P	02 31 50.6	+1.4
MDT	Midelt	21.88	270	LR	LR	02 40 05.0	
	comp=N,39nm,20.9s,baz=101,slow=35						
HFS	Hagfors	24.79	350	P	P	02 32 31.6	-0.1
	comp=N,3.9nm,0.8s,mb4.0,baz=181,slow=11,SNR=6.1						
HFS	Hagfors	24.79	350	P	P	02 32 31.6	0.0
FINES	FINESS Array B	25.72	5	P	P	02 32 40.2	+0.1
	comp=N,3.0nm,0.9s,mb3.8,baz=172,slow=17,SNR=4.7						
FINES	FINESS Array B	25.72	5	P	P	02 32 40.2	+0.2
EKA	Eskdalemuir Ar	25.81	327	P	P	02 32 41.6	+0.6
	comp=N,0.8nm,0.7s,mb3.4,baz=125,slow=17,SNR=3.6						
EKA	Eskdalemuir Ar	25.81	327	P	P	02 32 41.6	+0.6
NOA	NORSAR Array B	26.02	348	P	P	02 32 44.9	+2.0
	comp=N,0.8nm,0.5s,mb3.5,baz=160,slow=10,SNR=3.2						
NOA	NORSAR Array B	26.02	348	P	P	02 32 44.9	+2.1
TORD	Torodi Ar. Bea	28.91	223	P	P	02 33 10.2	+1.0
	comp=N,1.0nm,0.6s,mb3.7,baz=34,slow=8.8,SNR=6.7						
AKTK	Aktyubinsk	29.90	50	P	P	02 33 17.5	-0.1
AKTK	Aktyubinsk	29.90	50	P	P	02 33 17.5	-0.1
AKTO	Aktyubinsk	29.90	50	P	P	02 33 17.5	-0.1
	comp=N,0.4nm,0.3s,mb3.6,baz=198,slow=6.4,SNR=3.5						
ARCES	ARCESS Array B	33.76	2	P	P	02 33 50.6	-0.6
	comp=N,1.5nm,0.8s,mb4.0,baz=170,slow=7.4,SNR=5.0						
ARCES	ARCESS Array B	33.76	2	P	P	02 33 50.6	-0.6
MK31	Makanchi Array	45.76	57	*e*P	P	02 35 30.3	-0.8
MK31	Makanchi Array	45.76	57	*e*P	P	02 35 30.3	-0.8
MKAR	Makanchi Array	45.76	57	P	P	02 35 30.5	-0.7
	comp=N,1.2nm,0.5s,mb4.0,baz=289,slow=6.1,SNR=9.8						
MKAR				pP	pP	02 35 42.6	-1.3
	comp=N,0.6nm,0.4s,baz=262,slow=9.3,SNR=4.2						
MKAR	Makanchi Array	45.76	57	P	P	02 35 30.5	-0.6
MKAR				pP	pP	02 35 42.6	-1.3
ZALV	Zalesovo Beam	46.57	47	P	P	02 35 35.8	-1.5
	comp=N,1.2nm,0.5s,mb4.0,baz=271,slow=10.0,SNR=5.1						
SONM	Songino Array	61.22	50	P	P	02 37 24.1	-0.3
	comp=N,1.1nm,1.1s,mb3.9,baz=282,slow=7.4,SNR=3.9						
SONM	Songino Array	61.22	50	P	P	02 37 24.1	-0.3
KSRS	Korea Array	80.07	51	P	P	02 39 19.8	+0.5
	comp=N,0.8nm,0.5s,mb4.0,baz=297,slow=3.1,SNR=2.9						

GCMT ***11*** *02:30:07.2±0.1, 33°.22S×179°.95E, h12km, MW5.5, Moment Tensor Solution. s71,c125; s52,c57; Moment tensor: Scale 10^17^Nm; Mrr-2.25±.03; Mθθ1.59±.03; Mφφ0.65±.03; Mrθ0.90±.10; Mrφ1.37±.03; Mθφ0.13±.10; Best double couple: M0 2.60000×10^17^ NP1:φs43.00000°, δ37.00000°, λ-108.00000°. NP2:φs245.00000°, δ55.00000°, λ-77.00000°. Principal axes: T 2.7000, Plg9.0000°, Azm326.0000°; N -0.2500, Plg11.0000°, Azm58.0000°; P -2.4600, Plg76.0000°, Azm195.0000°; Data Used: II IC G IU. Surface waves: sta= 94, comp=191, per= 50.*

BJI ***11*** *02:30:08.4, 33°.72S×179°.44E, h25km, mB5.6/25, mb5.3/24, Ms5.2/28, Ms7 5.1/26*

NEIC ***11*** *02:30:08.4±0.2, 33°.40S×179°.91E, mb5.6/52, MS5.1/174, Error ellipse: s-maj=8.3km s-min=5.5km az=152.0*

MOS ***11*** *02:30:09.4±1.1, 33°.31S×179°.75E, h33km, mb5.5/22, MS5.2/38, Error ellipse: s-maj=12.2km s-min=10.3km az=56.4*

ISCJB ***11*** *02:30:10.0±1.2, 33°.38S±0°.05×179°.70E±0°.05, h36km±10km, mb5.3/80, MS5.1/207, Error ellipse: s-maj=9.4km s-min=5.8km az=156.9*

IDC ***11*** *02:30:12.5±2.1, 33°.28S×179°.85E, h54km±17km, mb4.6/23, mb1 4.8/25, mb1mx4.8/26, mbtmp4.6/25, ML5.0/2, MS5.0/20, Ms1 5.0/20, ms1mx4.9/25, Error ellipse: s-maj=13.9km s-min=11.1km az=138.0*

DJA ***11*** *02:30:20, 33°.54S×179°.81E, h122km, Mw6.1/28*

ISC 11 02:30:11.1±2.4, 33°.38S±0°.05×179°.78E±0°.05, h33km±16km, h26km±1.1km: pP-P, n687, σ0.87/364, mb5.4/78, MS5.1/207, 94C-103D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.56**	**26**	P	**Pn**	**02 31 18.6**	**+0.7**
	124nm,0.3s,baz=263,slow=23,SNR=6.5						
RAO				S	**Sn**	**02 32 07.5**	**-2.2**
	141nm,0.3s,baz=108,slow=23,SNR=1.8						
RAO				LR	LR	02 32 40.6	
	comp=Z,21μm,18.8s,baz=199,slow=33						
RAO	**Raoul Island**	**4.56**	**26**	P	**Pn**	**02 31 18.6**	**+0.7**
RAO				S	**Sn**	**02 32 07.5**	**-2.3**
RAO				pmax	pmax		
	comp=Z,125nm,0.3s						
RAO				smax			
	comp=N,141nm,0.3s						
RAO				MLR	MLR		
	comp=Z,21μm,18.8s						
URZ	**Urewera**	**5.33**	**203**	P	**Pn**	**02 31 29.2**	**+0.8**
	comp=Z,29nm,0.3s,baz=30,slow=4.8,SNR=109						
URZ				S	**Sn**	**02 32 38.9**	**+10**
	baz=272,slow=20,SNR=0.9						
URZ	**Urewera**	**5.33**	**203**	*e*Pn	**Pn**	**02 31 28.7**	**+0.3**
	comp=Z,150nm,0.9s						
OUZ	**Omahuta**	**5.44**	**249**	*e*Pn	**Pn**	**02 31 28.7**	**-1.1**
	comp=Z,439nm,0.7s						
KHZ	**Kahutara**	**10.28**	**207**	*e*Pn	**Pn**	**02 32 33.1**	**-3.2**
	comp=Z,265nm,1.4s						
RPZ	**Rata Peaks**	**12.37**	**211**	P	**Pn**	**02 32 59.2**	**-5.6**
	comp=Z,1.7nm,0.3s,baz=339,slow=2.5,SNR=9.9						
RPZ				S	**Sn**	**02 35 14.6**	**-6.8**
	comp=Z,0.6nm,0.3s,baz=136,slow=23,SNR=1.1						
RPZ	**Rata Peaks**	**12.37**	**211**	*e*Pn	**Pn**	**02 32 60.0**	**-4.8**
	comp=Z,203nm,1.5s						
MSVF	**Nonsavu**	**15.66**	**354**	*e*Pn	**Pn**	**02 33 50.2**	**+0.8**
	comp=Z,311nm,1.4s						
DZM	**Mont Dzumac**	**16.30**	**310**	*e*P	**Pn**	**02 34 01.8**	**+4.2**
	comp=Z,365nm,1.4s						
DZM				*e*LR	LR	02 37 54.3	
	comp=Z,38μm,24.2s						
DZM	**Mont Dzumac**	**16.30**	**310**	*e*P	**Pn**	**02 34 07.1**	**+10**
AFI	**Afiamalu**	**20.85**	**24**	PFAKE		02 35 00.0	+10
AFI				LR	LR		
	comp=Z,2μm,21.0s,MS4.5						
RAR	**Rarotonga**	**21.80**	**61**	*e*P	**P**	**02 35 07.0**	**+6.6**
RAR				pmax	pmax		
	comp=Z,386nm,1.4s						
RAR	**Rarotonga**	**21.80**	**61**	*e*P	**P**	**02 35 07.0**	**+6.5**
	comp=Z,386nm,1.4s,mb5.6						
RIV	**Riverview**	**23.81**	**261**	*e*P	**P**	**02 35 26.0**	**+4.9**
ARMA	**Armidale**	**24.05**	**269**	*e*P	**P**	**02 35 24.6**	**+1.3**
ARMA				*e*S	**S**	**02 39 51.4**	**+13**
ARMA	**Armidale**	**24.05**	**269**	*e*P	**P**	**02 35 25.6**	**+2.3**
	comp=Z,182nm,1.3s,mb5.3						
FUNA	**Funafuti**	**24.74**	**359**	PFAKE		02 35 40.0	+10
FUNA				LR	LR		
	comp=Z,14μm,19.0s,MS5.5						
CNB	**Canberra Magne**	**25.14**	**257**	*e*P	**P**	**02 35 35.9**	**+2.7**
CAN	**Canberra**	**25.44**	**257**	*e*P	**P**	**02 35 37.9**	**+2.0**
CAN				pmax	pmax		
	comp=Z,234nm,1.5s,mb5.5						
CAN				MLR	MLR		
	comp=Z,2μm,19.0s,MS4.6						
CAN	**Canberra**	**25.44**	**257**	*e*P	**P**	**02 35 37.9**	**+2.0**
	comp=Z,234nm,1.5s,mb5.5						
CAN				LR	LR		
	comp=Z,2μm,19.0s,MS4.6						
EIDS	**Eidsvold**	**26.19**	**280**	*e*P	**P**	**02 35 43.4**	**+0.6**
	comp=Z,90nm,1.1s,mb5.2						
TAU	**Tasmania Unive**	**27.10**	**240**	*e*P	**P**	**02 35 52.3**	**+1.5**
TAU				pmax	pmax		
	comp=Z,248nm,1.4s,mb5.5						
TAU				MLR	MLR		
	comp=Z,4μm,21.0s,MS4.9						
TAU	**Tasmania Unive**	**27.10**	**240**	*e*P	**P**	**02 35 52.3**	**+1.4**
	comp=Z,248nm,1.4s,mb5.5						
TAU				LR	LR		
	comp=Z,4μm,21.0s,MS4.9						
MOO	**Moorlands**	**27.12**	**241**	*e*P	**P**	**02 35 53.5**	**+2.5**
TOO	**Toolangi**	**28.14**	**252**	*e*P	**P**	**02 36 03.0**	**+2.8**
TOO				*e*S	**S**	**02 40 55.6**	**+12**
HNR	**Honiara**	**30.03**	**318**	LR	LR	02 46 24.8	
	comp=Z,4μm,20.7s,MS5.0,baz=168,slow=32						
HNR	**Honiara**	**30.03**	**318**	PFAKE		02 36 30.0	+13
HNR				LR	LR		
	comp=Z,4μm,20.0s,MS5.0						
PPT	**Papeete**	**31.68**	**68**	*e*P	**P**	**02 36 28.5**	**-3.2**
	comp=Z,127nm,1.4s,mb5.5						
PPT				*e*S	**S**	**02 41 27.2**	**-12**
	comp=Z,222nm,25.8s						
PPT				*e*LQ		02 42 54.7	
	comp=Z,3μm,25.0s						
PPT				*e*LR	LR	02 44 21.7	
	comp=Z,2μm,29.8s						
PPT	**Papeete**	**31.68**	**68**	*e*P	**P**	**02 36 28.5**	**-3.2**
	comp=Z,127nm,1.4s,mb5.6						
PPT				*e*S	**S**	**02 41 27.2**	**-12**
PPT				*e*LQ		02 42 54.7	
TIAR	**Tiarei**	**31.86**	**68**	*e*P	**P**	**02 36 30.2**	**-3.1**
	comp=Z,134nm,0.9s,mb5.8						
STKA	**Stephens Creek**	**32.08**	**262**	*e*P	**P**	**02 36 36.3**	**+1.2**
	comp=Z,32nm,1.5s,mb4.9						
STKA	**Stephens Creek**	**32.08**	**262**	P	**P**	**02 36 36.5**	**+1.4**
	comp=Z,24nm,1.0s,mb5.0,baz=102,slow=9.1,SNR=14						
STKA				LR	LR	02 49 17.3	
	comp=Z,3μm,18.0s,MS4.9,baz=97,slow=36						
STKA	**Stephens Creek**	**32.08**	**262**	*e*P	**P**	**02 36 36.6**	**+1.5**
	comp=Z,100nm,2.3s,mb5.2						
CTA	**Charters Tower**	**32.58**	**285**	*e*P	**P**	**02 36 39.4**	**-0.2**
	comp=Z,57nm,1.1s,mb5.4						
CTA				*e*S	**S**	**02 41 57.4**	**+4.2**
CTA	**Charters Tower**	**32.58**	**285**	P	**P**	**02 36 40.3**	**+0.7**
	comp=Z,78nm,1.2s,mb5.5,baz=118,slow=10.0,SNR=12						
CTA				LR	LR	02 47 56.1	
	comp=Z,3μm,21.0s,MS5.0,baz=116,slow=33						
CTAO	**Charters Tower**	**32.58**	**285**	*e*P	**P**	**02 36 40.0**	**+0.4**
CTAO				pmax	pmax		
	comp=Z,168nm,1.3s,mb5.8						
CTAO				MLR	MLR		
	comp=Z,3μm,21.0s,MS5.0						
CTAO	**Charters Tower**	**32.58**	**285**	*e*P	**P**	**02 36 40.0**	**+0.4**
	comp=Z,168nm,1.3s,mb5.8						
CTAO				LR	LR		
	comp=Z,3μm,21.0s,MS5.0						
COEN	**Coen**	**38.43**	**291**	*e*P	**P**	**02 37 30.8**	**+0.9**
	comp=Z,987nm,1.5s,mb6.3						
RKT	**Rikitea**	**40.88**	**88**	*e*S	**S**	**02 43 53.0**	**-6.6**
	comp=Z,427nm,29.2s						
RKT				*e*LQ		02 46 56.7	
	comp=Z,2μm,23.8s						
RKT				*e*LR	LR	02 48 44.1	
	comp=Z,5μm,28.5s,baz=246						
ASAR	**Alice Springs**	**41.17**	**271**	P	**P**	**02 37 52.3**	**-0.3**
	comp=Z,88nm,0.8s,mb5.4,baz=110,slow=7.9,SNR=115						
ASAR	**Alice Springs**	**41.17**	**271**	P	**P**	**02 37 52.3**	**-0.3**
ASAR				pmax	pmax		
	comp=Z,88nm,0.9s						
WRAB	**Tennant Creek**	**42.43**	**277**	*e*P	**P**	**02 38 02.0**	**-1.0**
	comp=Z,790nm,0.7s,mb6.5,SNR=26						
WRAB	**Tennant Creek**	**42.43**	**277**	*e*P	**P**	**02 38 02.5**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,498nm,1.6s,mb5.9						
WRAB				MLR	MLR		
	comp=Z,2μm,19.0s,MS5.1						
WRAB	**Tennant Creek**	**42.43**	**277**	*e*P	**P**	**02 38 02.5**	**-0.4**
	comp=Z,498nm,1.6s,mb5.9						
WRAB				LR	LR		
	comp=Z,2μm,19.0s,MS5.1						
WRA	**Warramunga Arr**	**42.44**	**277**	P	**P**	**02 38 02.4**	**-0.6**
	comp=Z,109nm,1.1s,mb5.4,baz=117,slow=7.7,SNR=89						
WRA				LR	LR	02 53 34.1	
	comp=Z,2μm,20.8s,MS4.9,baz=90,slow=33						
FORT	**Forrest**	**43.53**	**259**	*e*P	**P**	**02 38 11.5**	**-0.3**
	comp=Z,165nm,0.8s,mb5.8						
FORT	**Forrest**	**43.53**	**259**	*e*P	**P**	**02 38 11.7**	**-0.1**
	comp=Z,273nm,0.9s,mb6.0						
FORT				*e*pP	pP	02 38 19.4	-2.0
TAOE	**Nuku Hiva Isla**	**44.23**	**66**	*e*S	**S**	**02 44 37.3**	**-12**
	comp=Z,205nm,28.6s						
TAOE				*e*LQ		02 48 18.5	
	comp=Z,2μm,32.2s						
TAOE				*e*LR	LR	02 49 48.5	
	comp=Z,524nm,32.0s						
SBA	**Scott Base**	**44.94**	**184**	*e*P	**P**	**02 38 23.9**	**+1.5**
SBA				pmax	pmax		
	comp=Z,275nm,1.8s,mb5.8						
SBA				MLR	MLR		
	comp=Z,2μm,19.0s,MS5.1						
SBA	**Scott Base**	**44.94**	**184**	*e*P	**P**	**02 38 23.9**	**+1.5**
	comp=Z,275nm,1.8s,mb5.8						
SBA				LR	LR		
	comp=Z,2μm,19.0s,MS5.1						
KAKA	**Kakadu**	**47.70**	**284**	*e*P	**P**	**02 38 43.9**	**-1.0**
	comp=Z,53nm,0.6s,mb5.7						
KAKA	**Kakadu**	**47.70**	**284**	*e*P	**P**	**02 38 45.1**	**+0.2**
	comp=Z,737nm,1.4s,mb6.5						
FITZ	**Fitzroy Crossi**	**50.55**	**273**	*e*P	**P**	**02 39 06.5**	**-0.2**
	comp=Z,257nm,0.8s,mb6.2						
FITZ				*e*S	**S**	**02 46 29.7**	**+11**
FITZ	**Fitzroy Crossi**	**50.55**	**273**	P	**P**	**02 39 06.6**	**-0.1**
	comp=Z,212nm,1.1s,mb6.0,baz=122,slow=6.9,SNR=65						
FITZ				LR	LR	03 00 31.0	
	comp=Z,3μm,18.0s,MS5.3,baz=114,slow=36						
FITZ	**Fitzroy Crossi**	**50.55**	**273**	*e*P	**P**	**02 39 06.9**	**+0.2**
	comp=Z,498nm,1.4s,mb6.2						
FITZ				*e*pP	pP	02 39 14.7	-1.8
CASY	**Casey**	**51.63**	**209**	*e*P	**P**	**02 39 11.8**	**-2.3**
CASY	**Casey**	**51.63**	**209**	*e*P	**P**	**02 39 12.1**	**-2.0**
	comp=Z,21nm,1.3s,mb4.9						
CASY				LR	LR		
	comp=Z,1μm,19.0s,MS5.0						
NWAO	**Narrogin (SRO)**	**51.63**	**252**	P	**P**	**02 39 13.8**	**-0.8**
	comp=Z,7.6nm,0.9s,mb4.6,baz=160,slow=8.1,SNR=3.6						
NWAO	**Narrogin (SRO)**	**51.63**	**252**	P	**P**	**02 39 13.8**	**-0.8**
NWAO				LR	LR		
	comp=Z,983nm,21.0s,MS4.8						
KLBR	**Kellerberrin**	**51.65**	**254**	*e*P	**P**	**02 39 14.6**	**-0.2**
	comp=Z,157nm,1.4s,mb5.8						
WAKE	**Wake Island**	**53.84**	**345**	PFAKE		02 39 40.0	+9.0
WAKE				LR	LR		
	comp=Z,1μm,20.0s,MS5.0						
MBWA	**Marble Bar**	**54.09**	**267**	*e*P	**P**	**02 39 31.7**	**-1.3**
	comp=Z,93nm,1.1s,mb5.6						
MBWA				LR	LR		
	comp=Z,2μm,20.0s,MS5.2						
QSPA	**South Pole Qui**	**56.74**	**180**	P	**P**	**02 39 51.5**	**+0.4**
	comp=Z,94nm,0.9s,mb5.8,baz=32,slow=2.1,SNR=83						
QSPA				LR	LR	03 02 14.6	
	comp=Z,2μm,19.8s,MS5.2,baz=234,slow=34						
QSPA	**South Pole Qui**	**56.74**	**180**	*e*P	**P**	**02 39 51.2**	**0.0**
	comp=Z,333nm,1.3s,mb6.2						
QSPA				LR	LR		
	comp=Z,3μm,21.0s,MS5.3						
GUMO	**Guam**	**57.36**	**319**	PFAKE		02 40 10.0	+14
GUMO				LR	LR		
	comp=Z,1μm,22.0s,MS5.0						
POHA	**Pohakuloa**	**

TATO Taipei 80.26 308 PFAKE 02 42 30.0 +11
TATO LR LR
comp=Z,1μm,19.0s,MS5.3
PLCA Paso Flores 81.84 134 P **P** **02 42 27.1 0.0**
comp=Z,14nm,1.0s,mb4.8,baz=186,slow=4.7,SNR=9.0
PLCA LR LR 03 14 15.5
comp=Z,938nm,18.1s,MS5.2,baz=24,slow=32
PLCA Paso Flores 81.84 134 *e*P **P** **02 42 26.1 -1.0**
PLCA *e**PP pP 02 42 33.6 -3.8
PLCA pmax pmax
comp=Z,83nm,1.2s
PLCA MLR MLR
comp=Z,1μm,19.0s
PLCA Paso Flores 81.84 134 *e*P **P** **02 42 26.1 -0.9**
comp=Z,83nm,1.2s,mb5.5
PLCA *e*pP pP 02 42 33.6 -3.8
PLCA LR LR
comp=Z,1μm,19.0s,MS5.3
QZH Quanzhou 82.16 307⇑*i*P **P** **02 42 28.4 -0.4**
QZH pmax pmax
comp=Z,1μm,3.9s
QZH LR LR
comp=N,1μm,19.2s,MS5.5
QZH LR LR
comp=E,1μm,17.4s,MS5.5
QZH LR LR
comp=Z,1μm,18.9s,MS5.3
ERM Erimo 82.22 333 PFAKE 02 42 40.0 +11
ERM LR LR
comp=Z,867nm,19.0s,MS5.1
KULM Kulim 83.86 280 PFAKE 02 42 50.0 +12
KULM LR LR
comp=Z,384nm,22.0s,MS4.7
PSI Prapat 83.90 277 P **P** **02 42 38.1 0.0**
comp=Z,1.7nm,0.4s,mb4.5,baz=180,slow=14,SNR=5.6
PSI PP PP 02 45 48.3 -3.6
comp=Z,21nm,1.2s,baz=184,slow=9.6,SNR=3.6
PSI LR LR 03 18 57.4
comp=Z,902nm,20.6s,MS5.1,baz=133,slow=35
PSI Prapat 83.90 277 P **P** **02 42 38.1 0.0**
PSI 02 45 48.3
PSI pmax pmax
comp=Z,2.0nm,0.4s,mb4.6
PSI pmax pmax
comp=Z,21nm,1.2s,mb5.1
PSI MLR MLR
comp=Z,902nm,20.6s,MS5.1
ASAJ Asahikawa 84.24 334 P **P** **02 42 38.7 -0.4**
comp=Z,11nm,1.0s,mb4.9,baz=220,slow=13,SNR=2.4
ASAJ Asahikawa 84.24 334 P **P** **02 42 38.7 -0.4**
ASAJ pmax pmax
comp=Z,11nm,1.0s
QIZ Qiongzhong 84.60 297 P **P** **02 42 39.5 -2.0**
QIZ pP pP 02 42 53.8 +2.0
QIZ S S 02 53 09.4 +2.9
QIZ pmax pmax
comp=Z,24nm,1.6s,mb5.1
QIZ pmax pmax
comp=Z,200nm,7.3s
QIZ LR LR
comp=N,260nm,29.7s,MS4.6
QIZ LR LR
comp=E,190nm,25.3s,MS4.6
QIZ LR LR
comp=Z,680nm,30.0s,MS4.8
QIZ Qiongzhong 84.60 297 PFAKE 02 42 50.0 +8.5
QIZ LR LR
comp=Z,533nm,22.0s,MS4.9
SSE Sheshan 84.68 313 *e*P **P** **02 42 40.3 -1.3**
SSE pP pP 02 42 50.5 -1.5
SSE sP sP 02 42 54.4 -1.3
SSE S S 02 53 05.3 -1.6
SSE sS sS 02 53 22.7 -1.3
SSE pmax pmax
comp=Z,23nm,1.3s,mb5.2
SSE pmax pmax
comp=Z,150nm,5.4s
SSE LR LR
comp=N,210nm,22.0s,MS4.8
SSE LR LR
comp=E,360nm,22.0s,MS4.8
SSE LR LR
comp=Z,570nm,18.4s,MS5.0
KSRS Korea Array 85.43 321 P **P** **02 42 42.5 -2.7**
comp=Z,2.0nm,0.7s,mb4.4,baz=157,slow=6.6,SNR=6.0
KSRS PP PP 02 46 01.1 -3.1
comp=Z,5.4nm,1.1s,baz=149,slow=9.0,SNR=7.6
KSRS Korea Array 85.43 321 P **P** **02 42 42.5 -2.7**
KSRS 02 46 01.1
KSRS pmax pmax
comp=Z,2.0nm,0.7s,mb4.4
KSRS pmax pmax
comp=Z,5.0nm,1.1s,mb4.6
INCN Inchon 86.13 320 PFAKE 02 43 00.0 +11
INCN LR LR
comp=Z,526nm,19.0s,MS5.0
SKR Severo-Kuril's 86.27 345 *e*P **P** **02 42 45.0 -4.0**
SKR *e* 02 53 24.0
SKR MLR MLR
comp=Z,1μm,20.0s,MS5.3
YSS Yuzh-Sakhalins 86.63 336⇓*e*P **P** **02 42 48.0 -2.9**
YSS *e**SP sP 02 43 06.0 +1.0
YSS *e*S S 02 53 21.0 -4.3
YSS *e*PS 02 54 32.0
YSS pmax pmax
comp=Z,400nm,4.0s
YSS MLR MLR
comp=Z,1μm,18.0s,MS5.3
YSS MLR MLR
comp=N,900nm,17.0s,MS5.4
YSS MLR MLR
comp=E,1μm,17.0s,MS5.4
YSS Yuzh-Sakhalins 86.63 336 PFAKE 02 43 00.0 +9.1
YSS LR LR
comp=Z,715nm,20.0s,MS5.1
NJ2 Nanjing 86.78 312 *e*P **P** **02 42 53.7 +1.7**
NJ2 pP pP 02 43 04.1 +1.7
NJ2 sP sP 02 43 08.1 +1.9
NJ2 SKS 02 53 16.0
NJ2 S S 02 53 28.0 +0.5
NJ2 pmax pmax
comp=Z,20nm,1.1s,mb5.3
NJ2 pmax pmax
comp=Z,520nm,7.3s
NJ2 LR LR
comp=N,540nm,31.6s,MS4.9
NJ2 LR LR
comp=E,550nm,28.2s,MS4.9
NJ2 LR LR
comp=Z,280nm,30.9s,MS4.5
VLA Vladivostok 87.83 327 P **P** **02 42 56.0 -0.8**
VLA MLR MLR
comp=Z,500nm,18.9s,MS5.0
SCI San Clemente I 87.88 48⇑P **P** **02 42 57.1 -0.2**
baz=88
BSC Santa Cruz Isl 87.90 46⇓P **P** **02 42 57.5 +0.1**
baz=88
PET Petropavlovsk 87.99 347 *e*P **P** **02 42 57.4 +0.1**
PET *e*S S 02 53 40.3 +2.2
PET *e*PS 02 54 39.5
PET *e*PPS 02 55 15.8
PET *e*SS SS 02 59 29.5 +2.2
PET *e*SSS 03 03 06.1
PET pmax pmax
comp=Z,200nm,13.5s
PET Petropavlovsk 87.99 347 PFAKE 02 43 10.0 +13
PET LR LR
comp=Z,990nm,21.0s,MS5.2
SBC Santa Barbara 88.16 46⇓P **P** **02 42 58.7 +0.1**
baz=88
PEA0B Petropavlovsk- 88.25 347 *e*P **P** **02 42 57.5 -1.0**
PETK Petropavlovsk- 88.25 347 P **P** **02 42 56.6 -1.9**
comp=Z,11nm,1.0s,mb5.1,baz=160,slow=4.7,SNR=7.5
PETK LR LR 03 16 11.1
comp=Z,799nm,21.9s,MS5.1,baz=174,slow=31
CIS Catalina Islan 88.25 48⇑P **P** **02 42 58.8 -0.3**
baz=88
BLG Laguna Peak 88.32 47⇓P **P** **02 42 59.5 +0.1**
baz=88
PKM Peak Mountain 88.40 46⇑P **P** **02 43 00.2 +0.5**
baz=89
FMP Fort Macarthur 88.53 47⇑P **P** **02 43 00.8 +0.4**
baz=89
SMMC Simmler 88.58 45⇑P **P** **02 43 00.9 +0.3**
baz=89
TRQA Tornquist 88.65 136 *e*P **P** **02 42 59.8 -1.4**
comp=Z,63nm,1.4s,mb5.8
TRQA *e*pP pP 02 43 06.9 -4.6
TRQA LR LR
comp=Z,2μm,22.0s,MS5.5
WHN Wuhan 88.66 308 P **P** **02 42 58.0 -3.1**
WHN PP PP 02 46 30.5 +0.1
WHN S S 02 53 36.8 -8.7
WHN SS SS 02 59 36.1 -1.9
WHN pmax pmax
comp=Z,440nm,12.8s
WHN LR LR
comp=N,620nm,13.1s
WHN LR LR
comp=Z,3μm,35.4s
109C Camp Elliot, M 88.72 49⇓P **P** **02 43 01.0 -0.3**
baz=89
BAR Barrett 88.85 49 *e*P **P** **02 43 01.3 -0.6**
BAR *e*pP pP 02 43 07.9 -4.5
comp=Z,79nm,1.5s,mb5.8
DECC Green Verdugo 88.87 47⇑P **P** **02 43 02.0 +0.1**
baz=89
OSI Osito Adit 88.87 46⇑P **P** **02 43 02.1 +0.1**
baz=89
LCO Las Campanas 88.89 124 *e*P **P** **02 43 02.1 -0.3**
comp=Z,118nm,1.5s,mb6.0
LCO LR LR
comp=Z,2μm,22.0s,MS5.6
PASC Pasadena Art C 88.90 47 *e*P **P** **02 43 00.8 -1.4**
comp=Z,202nm,1.4s,mb6.3
PASC *e*pP pP 02 43 07.8 -4.7
MWC Mount Wilson 89.02 47 *e*P **P** **02 43 01.6 -1.0**
MWC *e**PP pP 02 43 08.5 -4.6
MWC pmax pmax
comp=Z,117nm,1.5s,mb6.0
MWC Mount Wilson 89.02 47 *e*P **P** **02 43 01.6 -1.0**
comp=Z,117nm,1.5s,mb6.0
MWC *e*pP pP 02 43 08.5 -4.6
MURC Murrieta 89.13 48⇓P **P** **02 43 03.1 -0.1**
baz=89,SNR=8.7
MONP Monument Peak 89.15 49⇓P **P** **02 43 03.6 +0.3**
baz=89,SNR=7.1
ARVC Arvin 89.16 46⇑P **P** **02 43 03.6 +0.4**
baz=89
DVTC Desert V Tower 89.20 49⇑P **P** **02 43 04.0 +0.4**
baz=89,SNR=7.3
BFSC Mount Baldy Ra 89.27 47⇑P **P** **02 43 03.7 -0.2**
baz=89,SNR=30
HOPS Hopland 89.40 41 PFAKE 02 43 10.0 +5.7
HOPS LR LR
comp=Z,565nm,19.0s,MS5.0
VES Vestal, Richgr 89.49 45⇓P **P** **02 43 04.5 -0.3**
baz=90,SNR=6.3
EDW2 Edwards Air Fo 89.50 47⇓P **P** **02 43 04.7 -0.2**
baz=90,SNR=20
SWSC Sam W. Stewart 89.58 49⇑P **P** **02 43 05.6 +0.3**
baz=90
PFO Pinyon Flat Ob 89.60 48 P **P** **02 43 05.6 +0.2**
comp=Z,153nm,1.7s,mb6.1,SNR=5.7
PFO Pinyon Flat Ob 89.60 48⇑P **P** **02 43 05.0 -0.4**
baz=90,SNR=7.3
PFO Pinyon Flat Ob 89.60 48 *e*P **P** **02 43 04.9 -0.5**
PFO *e**PP pP 02 43 11.7 -4.1
PFO pmax pmax
comp=Z,99nm,1.6s,mb5.9
PFO MLR MLR
comp=Z,662nm,19.0s,MS5.1
PFO Pinyon Flat Ob 89.60 48 *e*P **P** **02 43 04.8 -0.6**
comp=Z,99nm,1.6s,mb5.9
PFO *e*pP pP 02 43 11.7 -4.1
PFO LR LR
comp=Z,662nm,19.0s,MS5.1
RCTC Rector, Farmer 89.71 45⇑P **P** **02 43 05.8 -0.1**
baz=90
ISA Isabella 89.73 46⇑P **P** **02 43 05.6 -0.4**
baz=90,SNR=8.1
ISA Isabella 89.73 46 *e*P **P** **02 43 05.5 -0.5**
ISA *e**PP pP 02 43 12.0 -4.4
ISA pmax pmax
comp=Z,54nm,1.0s,mb5.8
ISA Isabella 89.73 46 *e*P **P** **02 43 05.5 -0.4**
comp=Z,54nm,1.0s,mb5.8
ISA *e*pP pP 02 43 12.0 -4.4
BBRC Big Bear Solar 89.74 48⇓P **P** **02 43 06.5 +0.4**
baz=90
DL2 Dalian 89.88 318 P **P** **02 43 04.3 -2.3**
DL2 *e*S S 02 53 49.1 -7.5
DL2 pmax pmax
comp=Z,130nm,10.2s
DL2 LR LR
comp=N,240nm,20.6s,MS4.8
DL2 LR LR
comp=E,290nm,23.7s,MS4.8
DL2 LR LR
comp=Z,460nm,29.4s
MDJ Mudanjiang 90.04 327 P **P** **02 43 04.8 -2.3**
MDJ pP pP 02 43 14.4 -3.2
MDJ sP sP 02 43 18.1 -3.2
MDJ S S 02 53 51.7 -6.0
MDJ pmax pmax
comp=Z,8.0nm,1.5s,mb4.8
MDJ pmax pmax
comp=Z,150nm,5.8s
MDJ LR LR
comp=N,620nm,29.7s,MS5.0
MDJ LR LR
comp=E,470nm,29.7s,MS5.0
MDJ LR LR
comp=Z,1μm,29.7s,MS5.1
MDJ Mudanjiang 90.04 327 PFAKE 02 43 20.0 +13
MDJ LR LR
comp=Z,957nm,22.0s,MS5.2
LRMC Laurel Mountai 90.08 46⇑P **P** **02 43 07.9 +0.3**
baz=90
112A Yuma 90.09 50⇓P **P** **02 43 08.3 +0.5**
baz=90
RRX Edison Barstow 90.10 47⇓P **P** **02 43 07.8 +0.1**
baz=90
BELC Belle Mtn. Jos 90.14 48⇓P **P** **02 43 07.8 -0.1**
baz=90,SNR=8.3
CMB Columbia Colle 90.23 43 *e*P **P** **02 43 06.7 -1.5**
CMB *e**PP pP 02 43 13.4 -5.2
CMB pmax pmax
comp=Z,76nm,1.2s,mb5.9
CMB MLR MLR
comp=Z,872nm,19.0s,MS5.2
CMB Columbia Colle 90.23 43 *e*P **P** **02 43 06.7 -1.5**
comp=Z,76nm,1.2s,mb5.9
CMB *e*pP pP 02 43 13.4 -5.2
CMB LR LR
comp=Z,872nm,19.0s,MS5.2
BC3 Big Chuckawall 90.26 49⇑P **P** **02 43 08.7 +0.2**
baz=90,SNR=8.9
GLA Glamis 90.27 50⇑P **P** **02 43 08.6 +0.1**
baz=90,SNR=6.0
GLA Glamis 90.27 50 *e*P **P** **02 43 08.4 -0.1**
GLA *e**PP pP 02 43 15.1 -3.8
GLA pmax pmax
comp=Z,84nm,1.2s,mb6.0
GLA Glamis 90.27 50 *e*P **P** **02 43 08.4 -0.2**
comp=Z,84nm,1.2s,mb6.0
GLA *e*pP pP 02 43 15.1 -3.8
HEC Hector,Ludlow 90.48 48⇑P **P** **02 43 09.4 -0.1**
baz=91
CWC Cottonwood Cre 90.49 45⇓P **P** **02 43 09.6 +0.1**
baz=91
GSC Goldstone 90.50 47⇑P **P** **02 43 09.6 +0.1**
baz=91,SNR=6.7
GSC Goldstone 90.50 47 *e*P **P** **02 43 09.8 +0.2**
GSC pmax pmax
comp=Z,44nm,1.1s,mb5.7
GSC Goldstone 90.50 47 *e*P **P** **02 43 09.8 +0.2**
comp=Z,44nm,1.1s,mb5.7
MPMC Manual Prospec 90.59 46⇓P **P** **02 43 09.8 -0.1**
baz=91,SNR=6.9
DAC Darwin (Calif) 90.67 46 PFAKE 02 43 20.0 +10
DAC LR LR
comp=Z,963nm,19.0s,MS5.2
HABR Khabarovsk 90.75 332 P **P** **02 43 09.3 -1.1**
HABR *e**SP sP 02 43 22.9 -1.6
HABR *e* 02 54 05.8
HABR *e*SS SS 03 00 03.6 -4.0
HABR MLR MLR
comp=Z,403nm,18.0s,MS4.9
113A Mohawk Valley, 90.77 51⇑P **P** **02 43 11.0 +0.1**
baz=91,SNR=6.9
IRM Iron Mountain 90.78 49⇑P **P** **02 43 11.3 +0.4**
baz=91,SNR=9.9
WDC Whiskeytown Da 90.81 40 *e*P **P** **02 43 09.3 -1.6**
WDC *e**PP pP 02 43 16.4 -4.9
WDC pmax pmax
comp=Z,85nm,1.3s,mb5.9
WDC MLR MLR
comp=Z,618nm,20.0s,MS5.0
WDC Whiskeytown Da 90.81 40 *e*P **P** **02 43 09.3 -1.5**
comp=Z,85nm,1.3s,mb5.9
WDC *e*pP pP 02 43 16.4 -4.9
WDC LR LR
comp=Z,618nm,20.0s,MS5.0
TIN Tinemaha 90.82 45⇑P **P** **02 43 10.8 -0.2**
baz=91
MTUM Tungsten Hills 90.82 45 *e*P **P** **02 43 10.7 -0.3**
MLAC Mammoth Lakes 90.85 44⇑P **P** **02 43 11.8 +0.7**
baz=91
GMRC Granite Mounta 90.86 48⇓P **P** **02 43 11.4 +0.2**
baz=91,SNR=6.9
214A Organ Pipe Nat 90.87 52⇑P **P** **02 43 11.7 +0.3**
baz=91,SNR=8.3
Y12C Blythe 90.91 49⇓P **P** **02 43 11.7 +0.2**
baz=91
Z13A Yuma Proving G 91.11 50⇑P **P** **02 43 12.1 -0.3**
baz=91,SNR=11
TUQ Turquoise Moun 91.13 47⇑P **P** **02 43 13.3 +0.8**
baz=91
SHOC Shoshone 91.22 47⇓P **P** **02 43 13.0 +0.1**
baz=91
FURC Furnace Creek, 91.24 46⇑P **P** **02 43 13.0 0.0**
baz=91
GRAC Grapevine Rang 91.29 45⇑P **P** **02 43 13.5 +0.3**
baz=92
114A Black Gap (USA 91.33 51⇑P **P** **02 43 13.7 +0.2**
baz=92,SNR=5.9
CN2 Changchun 91.40 324 *e*P **P** **02 43 08.7 -4.8**
CN2 *e*pP pP 02 43 19.1 -4.8
CN2 *e*sP sP 02 43 23.4 -4.2
CN2 PP PP 02 46 50.7 -1.2
CN2 *e*S S 02 54 15.9 +5.7
CN2 SS SS 03 00 15.7 -1.4
CN2 pmax pmax
comp=Z,10.0nm,0.4s,mb5.5
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,500nm,25.0s,MS5.0
CN2 LR LR
comp=E,600nm,25.0s,MS5.0
CN2 LR LR
comp=Z,900nm,28.0s,MS5.1
GYA Guiyang 91.42 301 P **P** **02 43 16.8 +2.7**
GYA pP pP 02 43 27.6 +3.1
GYA SKS 02 53 44.2
GYA S S 02 54 12.0 +0.8
GYA SS SS 03 00 21.3 +3.3
GYA pmax pmax
comp=Z,30nm,1.0s,mb5.6
GYA pmax pmax
comp=Z,130nm,5.7s
GYA LR LR
comp=N,790nm,19.8s,MS5.2
GYA LR LR
comp=E,620nm,20.4s,MS5.2
GYA LR LR
comp=Z,830nm,21.0s,MS5.2
WCN Washoe City 91.46 42⇓P **P** **02 43 14.2 +0.3**
baz=92
BEKR Beckworth 91.51 42⇑P **P** **02 43 15.1 +0.9**
baz=92,SNR=6.4
NEE2 Needles Airpor 91.51 49⇓P **P** **02 43 14.4 +0.1**
baz=92
PDMCI Parker Dam,Lak 91.51 49⇓P **P** **02 43 14.4 +0.1**
baz=92,SNR=6.6
U10A Ash Meadows, A 91.53 46⇓P **P** **02 43 14.0 -0.3**
baz=92,SNR=5.7
YBH Yreka Blue Hor 91.53 39 P **P** **02 43 13.2 -1.0**
comp=Z,8.9nm,1.1s,mb5.0,baz=88,slow=4.6,SNR=5.6
YBH LR LR 03 15 36.3
comp=Z,349nm,19.7s,MS4.8,baz=252,slow=30
YBH Yreka Blue Hor 91.53 39 *e*P **P** **02 43 13.1 -1.1**
comp=Z,38nm,1.6s,mb5.5
YBH *e*pP pP 02 43 20.0 -4.6
YBH LR LR
comp=Z,408nm,21.0s,MS4.8
Z14A Wintersburg 91.67 51⇓P **P** **02 43 15.2 +0.1**
baz=92,SNR=5.4
NVAR Mina Array Bea 91.70 44 P **P** **02 43 13.9 -1.1**
comp=Z,4.4nm,1.0s,mb4.8,baz=215,slow=7.2,SNR=13
W12A Cal Nev Ari 91.70 48⇑P **P** **02 43 15.5 +0.4**
baz=92
V11A Goodsprings 91.70 47⇑P **P** **02 43 15.4 +0.3**
baz=92
115A Sonoran Desert 91.72 51⇑P **P** **02 43 15.3 0.0**
baz=92,SNR=6.7
ENH Enshi 91.75 305 *e*P **P** **02 43 16.3 +0.8**
comp=Z,35nm,1.2s,mb5.6
ENH LR LR
comp=Z,413nm,19.0s,MS4.9
216A Three Points, 91.79 52⇓P **P** **02 43 16.5 +0.8**
baz=92,SNR=5.9
X13A Yucca 91.89 49⇓P **P** **02 43 16.1 +0.1**
baz=92,SNR=7.6
116A Eloy 91.98 52⇓P **P** **02 43 16.7 +0.2**
baz=92,SNR=7.4
V12A Nelson 91.98 48⇑P **P** **02 43 16.8 +0.4**
baz=92
Y14A Wickenburg 92.00 50⇑P **P** **02 43 16.5 -0.1**
baz=92,SNR=8.1
HUMO Hull Mountain 92.02 38 PFAKE 02 43 30.0 +14
HUMO LR LR
comp=Z,384nm,19.0s,MS4.9
217A Green Valley 92.08 53⇓P **P** **02 43 17.1 +0.2**
baz=92,SNR=9.4
TPH Tonopah 92.09 45 PFAKE 02 43 30.0 +13
TPH LR LR
comp=Z,727nm,19.0s,MS5.1
U11A Corn Creek 92.11 47⇑P **P** **02 43 17.7 +0.7**
baz=92
Z15A Gila River Ind 92.14 51⇓P **P** **02 43 17.6 +0.4**
baz=92
W13A Hualapai Mount 92.18 49⇓P **P** **02 43 17.7 +0.4**
baz=92,SNR=6.5
S10A Tonopah Range, 92.36 45⇑P **P** **02 43 18.0 -0.1**
baz=92,SNR=6.5
X14A Yava 92.41 50⇑P **P** **02 43 18.5 +0.1**
baz=93,SNR=7.1
318A Bisbee 92.43 54⇓P **P** **02 43 19.0 +0.4**
baz=93,SNR=9.2
TUC Tucson 92.43 53 *e*P **P** **02 43 18.5 -0.1**
TUC *e**PP pP 02 43 25.4 -3.6
TUC pmax pmax
comp=Z,84nm,1.6s,mb5.8
TUC MLR MLR
comp=Z,527nm,21.0s,MS5.0
TUC Tucson 92.43 53 *e*P **P** **02 43 18.5 -0.1**
comp=Z,84nm,1.6s,mb5.8
TUC *e*pP pP 02 43 25.4 -3.6
TUC LR LR
comp=Z,527nm,21.0s,MS5.0
Y15A Casa Rosa Ranc 92.44 50⇑P **P** **02 43 18.9 +0.3**
baz=93,SNR=8.1
V13A Grand Canyon W 92.60 48⇓P **P** **02 43 19.7 +0.4**
baz=93
117A Oracle 92.62 52⇑P **P** **02 43 19.9 +0.4**
baz=93,SNR=8.5
CM31 Chiang Mai Arr 92.62 290 PFAKE 02 43 30.0 +10
CM31 LR LR
comp=Z,457nm,19.0s,MS5.0
CMAR Chiang Mai Arr 92.62 290 P **P** **02 43 19.0 -0.8**
comp=Z,0.8nm,0.4s,mb4.5,baz=138,slow=4.5,SNR=4.0
CMAR PP PP 02 47 00.8 -1.1
comp=Z,5.7nm,1.0s,baz=135,slow=6.5,SNR=12
CMAR LR LR 03 27 18.7
comp=Z,414nm,19.4s,MS4.9,baz=123,slow=37
CMAR Chiang Mai Arr 92.62 290 P **P** **02 43 19.0 -0.8**
CMAR 02 47 00.8
CMAR pmax pmax
comp=Z,1.0nm,0.4s
CMAR pmax pmax
comp=Z,6.0nm,1.0s
CMAR MLR MLR
comp=Z,414nm,19.4s
CMAR Chiang Mai Arr 92.62 290 P **P** **02 43 19.0 -0.8**
CMAR PP PP 02 47 00.8 -1.1
CMAR LR LR 03 27 18.7
U12A Valley of Fire 92.63 47⇑P **P** **02 43 20.1 +0.7**

baz=93
Z16A Peralta Trail, 92.65 51 ⇓P **P 02 43 20.2 +0.6**
baz=93
S11A Rachel 92.68 46 ⇑P **P 02 43 20.2 +0.6**
baz=93
T12A Moapa 92.71 47 ⇓P **P 02 43 20.2 +0.4**
baz=93
218A Dragoon 92.72 53 ⇓P **P 02 43 20.3 +0.4**
baz=93,SNR=6.2
T11A Corn Creek, Al 92.74 46 ⇓P **P 02 43 20.7 +0.8**
baz=93,SNR=8.5
W14A Seligman 92.76 49 ⇓P **P 02 43 20.8 +0.7**
baz=93,SNR=5.9
R10A Warm Springs 92.78 45 ⇓P **P 02 43 20.7 +0.7**
baz=93
CHTO Chiang Mai 92.82 291 PFAKE 02 43 30.0 +9.3
CHTO LR LR
comp=Z,448nm,19.0s,MS4.9
X15A Humboldt 92.84 50 ⇓P **P 02 43 21.0 +0.5**
baz=93,SNR=8.2
319A Douglas 92.87 54 ⇓P **P 02 43 21.1 +0.5**
baz=93,SNR=5.3
MOD Modoc 92.94 40 *e*P **P 02 43 19.0 -1.7**
comp=Z,13nm,1.2s,mb5.2
MOD *e*pP pP 02 43 26.2 -4.9
MOD LR LR
comp=Z,594nm,19.0s,MS5.1
Y16A Circle Bar Ran 92.95 51 ⇓P **P 02 43 21.5 +0.5**
baz=93,SNR=9.8
U13A Pakoon Wash 92.97 48 ⇑P **P 02 43 21.0 0.0**
baz=93,SNR=5.1
V14A Boquillas Ranc 93.01 49 ⇑P **P 02 43 21.6 +0.4**
baz=93,SNR=5.2
Q10A Clear Creek Ra 93.07 45 ⇑P **P 02 43 21.3 -0.1**
baz=93
118A Homack Ranch, 93.18 53 ⇓P **P 02 43 22.9 +0.9**
baz=93,SNR=8.6
K05A Summer Lake 93.19 39 ⇓P **P 02 43 22.5 +0.7**
baz=93,SNR=5.4
S12A Delamar Landin 93.20 46 ⇑P **P 02 43 22.6 +0.6**
baz=93,SNR=5.6
R11A Troy Canyon, C 93.24 45 ⇓P **P 02 43 22.7 +0.5**
baz=93,SNR=5.5
Z17A San Carlos Hig 93.25 52 ⇓P **P 02 43 22.8 +0.4**
baz=93
Y17A Roosevelt 93.25 51 ⇓P **P 02 43 23.3 +1.0**
baz=93,SNR=6.5
W15A Williams 93.26 50 ⇓P **P 02 43 22.8 +0.4**
baz=93
219A White Tail Can 93.26 54 ⇓P **P 02 43 23.0 +0.6**
baz=93,SNR=5.4
X16A Lo Mia Camp, P 93.31 51 ⇓P **P 02 43 22.9 +0.3**
baz=94,SNR=7.9
T13A Saint George 93.40 47 ⇑P **P 02 43 23.6 +0.7**
baz=94
Z18A Geronimo 93.41 52 ⇑P **P 02 43 23.5 +0.4**
baz=94
U14A Mt Trumbull 93.46 48 ⇓P **P 02 43 23.8 +0.5**
baz=94
KMI Kunming 93.50 298 P **P 02 43 26.9 +3.2**
KMI pP pP 02 43 37.9 +3.8
KMI PP PP 02 47 14.6 +5.8
KMI SKS 02 53 57.4
KMI S S 02 54 30.5 +0.7
KMI sS sS 02 54 48.1 +0.9
KMI SS SS 03 00 52.6 +4.6
KMI pmax pmax
comp=Z,220nm,6.9s
KMI LR LR
comp=N,230nm,20.3s,MS4.8
KMI LR LR
comp=E,340nm,22.6s,MS4.8
KMI LR LR
comp=Z,790nm,38.4s
Q11A Duckwater 93.52 45 ⇓P **P 02 43 23.9 +0.4**
baz=94
P10A Eureka 93.56 44 ⇑P **P 02 43 24.1 +0.5**
baz=94
BMN Battle Mountai 93.66 43 *e*P **P 02 43 23.5 -0.5**
BMN *e**PP pP 02 43 29.8 -4.7
BMN pmax pmax
comp=Z,38nm,1.3s,mb5.7
BMN MLR MLR
comp=Z,767nm,19.0s,MS5.2
BMN Battle Mountai 93.66 43 *e*P **P 02 43 23.5 -0.5**
comp=Z,38nm,1.3s,mb5.7
BMN *e*pP pP 02 43 29.8 -4.7
BMN LR LR
comp=Z,767nm,19.0s,MS5.2
X17A Forest Lakes 93.67 51 ⇓P **P 02 43 24.9 +0.6**
baz=94,SNR=5.3
W16A Flagstaff 93.67 50 ⇑P **P 02 43 24.9 +0.7**
baz=94
119A Ashpeak Ranch, 93.70 53 ⇑P **P 02 43 24.9 +0.5**
baz=94
220A Playas Peak, P 93.70 54 ⇓P **P 02 43 25.2 +0.7**
baz=94
V15A Kaibab Nationa 93.72 49 ⇑P **P 02 43 25.1 +0.7**
baz=94
BJT Baijiatuau 93.73 316 PFAKE 02 43 40.0 +16
BJT LR LR
comp=Z,643nm,20.0s,MS5.1
BJI Beijing 93.74 316 P **P 02 43 27.4 +3.0**
BJI PP PP 02 47 12.9 +2.5
BJI S S 02 54 36.8 +5.5
BJI pmax pmax
comp=Z,8.0nm,0.9s,mb5.2
BJI pmax pmax
comp=Z,80nm,5.0s
BJI LR LR
comp=N,350nm,24.7s,MS5.0
BJI LR LR
comp=E,540nm,23.0s,MS5.0
BJI LR LR
comp=Z,740nm,25.6s,MS5.0
KDAK Kodiak Island 93.74 14 PFAKE 02 43 30.0 +6.0
KDAK LR LR
comp=Z,453nm,19.0s,MS5.0
S13A Holt Ranch, En 93.78 47 ⇑P **P 02 43 25.1 +0.4**
baz=94,SNR=7.0
R12A Pony Springs, 93.81 46 ⇑P **P 02 43 25.3 +0.5**
baz=94
Y18A Canyon Day Jun 93.83 52 ⇓P **P 02 43 25.8 +0.8**
baz=94,SNR=6.4
H04A Detroit Lake 93.89 37 ⇑P **P 02 43 26.2 +1.2**
baz=94
P11A Circle Ranch, 93.93 44 ⇑P **P 02 43 25.7 +0.4**
baz=94
T14A Hurricane 93.93 48 ⇓P **P 02 43 25.9 +0.5**
baz=94
O10A Cortez Mining, 93.98 43 ⇑P **P 02 43 25.6 +0.1**
baz=94
120A U Bar Ranch, L 94.01 53 ⇓P **P 02 43 26.5 +0.6**
baz=94
U15A North Rim 94.03 49 ⇓P **P 02 43 25.9 +0.1**
baz=94,SNR=5.4
WUAZ Wupatki 94.04 50 ⇑P **P 02 43 26.6 +0.7**
baz=94
WUAZ Wupatki 94.04 50 PFAKE 02 43 40.0 +14
WUAZ LR LR
comp=Z,441nm,21.0s,MS4.9
Z19A T-Link Ranch, 94.04 53 ⇓P **P 02 43 26.7 +0.7**
baz=94
CCUT Cedar City 94.07 47 *e*P **P 02 43 25.8 -0.3**
comp=Z,19nm,1.4s,mb5.3
CCUT *e*pP pP 02 43 32.4 -4.0
R13A O'Grain Ranch, 94.10 46 ⇓P **P 02 43 26.7 +0.6**
baz=94
W17A Winslow 94.19 50 ⇓P **P 02 43 27.1 +0.5**
baz=94
WVOR Wild Horse Val 94.21 41 PFAKE 02 43 40.0 +13
WVOR LR LR
comp=Z,587nm,20.0s,MS5.0
N10A Dunphy 94.25 43 ⇓P **P 02 43 27.1 +0.4**
baz=94
X18A Snowflake 94.35 51 ⇑P **P 02 43 28.0 +0.6**
baz=94
O11A Cowboy Ranch, 94.36 44 ⇓P **P 02 43 27.7 +0.4**
baz=95
P12A McGill 94.37 45 ⇓P **P 02 43 27.9 +0.5**
baz=95,SNR=6.5
Z20A Nine Sixteen R 94.38 53 ⇓P **P 02 43 28.8 +1.2**
baz=94,SNR=8.4
NNA Nana 94.39 107 PFAKE 02 43 40.0 +12
NNA LR LR
comp=Z,2μm,22.0s,MS5.5
XAN Xi'an 94.43 308 P **P 02 43 30.4 +2.6**
XAN pP pP 02 43 40.1 +1.9
XAN sP sP 02 43 43.8 +1.9
XAN PP PP 02 47 18.8 +2.9
XAN S S 02 54 41.7 +4.1
XAN pmax pmax
comp=Z,2.0nm,1.0s,mb4.5
XAN pmax pmax
comp=Z,41nm,11.9s
XAN LR LR
comp=N,310nm,39.3s,MS4.6
XAN LR LR
comp=E,220nm,38.2s,MS4.6
Y19A Nutrioso 94.45 52 ⇓P **P 02 43 28.6 +0.7**
baz=95
V17A Tonalea, Kykot 94.47 50 ⇓P **P 02 43 28.8 +0.9**
baz=95,SNR=5.5
Q13A Wheeler Ranch, 94.57 46 ⇑P **P 02 43 28.7 +0.5**
baz=95,SNR=7.1
VIPM Ingram Point 94.57 38 P **P 02 43 33.7 +5.6**
VFP Flag Point 94.69 37 P **P 02 43 34.2 +5.5**
X19A St. Johns 94.72 52 ⇓P **P 02 43 29.5 +0.4**
baz=95
I07A Izee 94.86 39 ⇑P **P 02 43 31.0 +1.5**
baz=95,SNR=6.3
NLWA Neilton Lookou 94.98 35 PFAKE 02 43 40.0 +10
NLWA LR LR
comp=Z,663nm,19.0s,MS5.1
ELK Elko 95.00 44 P **P 02 43 28.9 -1.3**
comp=Z,0.7nm,0.3s,mb4.5,baz=139,slow=4.0,SNR=3.9
ELK Elko 95.00 44 P **P 02 43 28.9 -1.3**
ELK LR LR
comp=Z,1μm,19.0s,MS5.4
Y20A Horse Springs, 95.00 52 ⇓P **P 02 43 31.3 +0.9**
baz=95,SNR=5.3
G06A Carlson Farm, 95.06 38 ⇑P **P 02 43 30.2 -0.2**
baz=95
Z21A St. Cloud Mine 95.12 53 ⇓P **P 02 43 30.3 -0.6**
baz=95
M11A Holland Ranch, 95.13 43 ⇓P **P 02 43 31.4 +0.6**
baz=95,SNR=6.5
L10A Juniper Basin 95.17 42 ⇓P **P 02 43 30.7 -0.2**
baz=95,SNR=6.0
N12A Clover Valley, 95.19 44 ⇑P **P 02 43 31.4 +0.3**
baz=95,SNR=5.3
J09A Fry Pan Ranch, 95.30 41 ⇑P **P 02 43 31.7 +0.2**
baz=96,SNR=7.0
X20A Quemado 95.31 52 ⇑P **P 02 43 32.4 +0.7**
baz=95,SNR=7.7
T17A Navajo Res., N 95.31 49 ⇑P **P 02 43 32.2 +0.4**
baz=96
626A Big Bend Ranch 95.36 58 ⇑P **P 02 43 31.9 -0.3**
baz=96
MVU Marysvale 95.38 47 PFAKE 02 43 40.0 +8.0
MVU LR LR
comp=Z,644nm,19.0s,MS5.1
K10A MacKenzie Ranc 95.41 41 ⇓P **P 02 43 31.9 -0.1**
baz=96,SNR=14
CMIG Matias Romero 95.45 73 LR LR 03 16 04.7
comp=Z,151nm,22.0s,MS4.4,baz=227,slow=29
425A Indio Mountain 95.47 57 ⇑P **P 02 43 32.1 -0.6**
baz=96
324A Moseley Ranch, 95.51 56 ⇑P **P 02 43 32.6 -0.2**
baz=96
Y21A Point of Rocks 95.53 53 ⇓P **P 02 43 33.2 +0.4**
baz=96
P14A Drum Mountains 95.54 46 ⇑P **P 02 43 32.7 0.0**
baz=96
Z22A Elephant Butte 95.56 54 ⇓P **P 02 43 33.2 +0.2**
baz=96
TXAR Lajitas Array 95.57 59 P **P 02 43 32.4 -0.7**
comp=Z,2.1nm,1.0s,mb4.5,baz=214,slow=4.2,SNR=7.8
TXAR PP PP 02 47 26.2 +1.3
comp=Z,0.3nm,0.7s,baz=264,slow=5.9,SNR=4.0
TXAR LR LR 03 23 25.8
comp=Z,383nm,18.1s,MS4.9,baz=190,slow=33
M12A Wells 95.62 43 ⇑P **P 02 43 33.3 +0.3**
baz=96,SNR=5.3
L11A Cat Creek Ranc 95.63 42 ⇓P **P 02 43 33.3 +0.2**
baz=96,SNR=5.0
V19A Window Rock 95.66 51 ⇓P **P 02 43 33.8 +0.5**
baz=96
W20A Ramah 95.66 51 ⇑P **P 02 43 34.1 +0.8**
baz=96,SNR=6.1
N13A Wendover, West 95.67 44 *e*P **P 02 43 32.1 -1.2**
comp=Z,41nm,1.4s,mb5.7
N13A *e*pP pP 02 43 38.8 -4.9
526A Mary Lane Ranc 95.69 58 ⇑P **P 02 43 33.4 -0.3**
baz=96
X21A Alamocita Cree 95.72 52 ⇑P **P 02 43 34.0 +0.4**
baz=96,SNR=5.8
MNTX Cornudas Mount 95.73 56 *e*P **P 02 43 32.2 -1.5**
comp=Z,12nm,1.6s,mb5.1
MNTX *e*pP pP 02 43 39.2 -5.0
MNTX LR LR
comp=Z,289nm,19.0s,MS4.8
325A Bean Ranch, Si 95.82 56 ⇓P **P 02 43 33.2 -1.1**
baz=96
627A Terlingua Ranc 95.83 59 ⇓P **P 02 43 34.3 -0.1**
baz=96
224A Cornudas Mount 95.85 55 ⇓P **P 02 43 34.3 0.0**
baz=96
K11A Parker Ranch, 95.87 42 ⇓P **P 02 43 34.4 +0.3**
baz=96,SNR=6.7
G08A Pilot Rock 95.96 38 ⇓P **P 02 43 34.3 -0.2**
baz=96
T18A Mexican Hat 95.99 49 ⇓P **P 02 43 35.0 +0.2**
baz=96
M13A Montello 96.02 44 ⇓P **P 02 43 34.5 -0.3**
baz=96,SNR=6.4
M13A Montello 96.02 44 *e*P **P 02 43 34.4 -0.5**
comp=Z,34nm,1.3s,mb5.6
M13A *e*pP pP 02 43 40.4 -4.9
L12A House Creek Ra 96.03 43 ⇑P **P 02 43 34.6 -0.3**
baz=96
527A Woodward Ranch 96.07 58 ⇓P **P 02 43 34.9 -0.5**
baz=96
DUG Dugway 96.07 45 PFAKE 02 43 50.0 +15
DUG LR LR
comp=Z,1μm,19.0s,MS5.3
426A McDonald Obser 96.08 57 ⇓P **P 02 43 34.3 -1.1**
baz=96
V20A Brimhall 96.08 51 ⇓P **P 02 43 34.6 -0.7**
baz=96
CD2 Chengdu 96.09 303 P **P 02 43 37.4 +1.9**
CD2 pP pP 02 43 48.0 +2.1
CD2 sP sP 02 43 51.8 +2.2
CD2 PP PP 02 47 27.6 -1.3
CD2 SKS 02 54 08.5
CD2 S S 02 54 44.0 -8.2
CD2 sS sS 02 55 01.7 -7.9
CD2 pmax pmax
comp=Z,260nm,5.2s
CD2 LR LR
comp=N,510nm,23.8s,MS5.1
CD2 LR LR
comp=E,610nm,22.6s,MS5.1
CD2 LR LR
comp=Z,690nm,21.4s,MS5.1
LAZ Ladron 96.12 53 *e*P **P 02 43 36.8 +1.3**
comp=Z,9.6nm,1.8s,mb4.9
628A Black Gap, Mar 96.21 59 ⇓P **P 02 43 34.8 -1.2**
baz=96
BNM Barren Site 96.31 53 *e*P **P 02 43 37.1 +0.8**
comp=Z,6.8nm,1.5s,mb4.9
MFID Camas Ranch 96.40 41 ⇓P **P 02 43 35.8 -0.7**
baz=97,SNR=5.6
HAWA Hanford 96.41 37 PFAKE 02 43 50.0 +14
HAWA LR LR
comp=Z,298nm,19.0s,MS4.8
K12A Draper Farm, C 96.42 42 ⇓P **P 02 43 35.8 -0.8**
baz=97
BMO Blue Mountains 96.54 40 PFAKE 02 43 50.0 +13
BMO LR LR
comp=Z,358nm,21.0s,MS4.8
M14A Sheep Mountain 96.58 44 ⇓P **P 02 43 36.9 -0.5**
baz=97,SNR=7.0
427A Hayter Ranch, 96.62 57 ⇑P **P 02 43 36.6 -1.3**
baz=97
I11A Placerville 96.65 41 ⇓P **P 02 43 36.5 -1.1**
baz=97,SNR=5.8
528A Cox Ranch, San 96.67 58 ⇑P **P 02 43 37.5 -0.6**
baz=97
H10A Noah's Angus R 96.67 40 ⇑P **P 02 43 36.9 -0.8**
baz=97
J12A Stokes Ranch, 96.70 42 ⇑P **P 02 43 38.0 +0.1**
baz=97,SNR=5.5
K13A Stover Farm, H 96.89 43 ⇑P **P 02 43 38.2 -0.6**
baz=97
ANMO Albuquerque 96.90 53 P **P 02 43 39.2 +0.2**
comp=Z,0.8nm,0.6s,mb4.3,baz=251,slow=9.4,SNR=3.7
ANMO PP PP 02 47 33.9 -1.2
comp=Z,0.6nm,0.6s,baz=200,slow=5.6,SNR=3.7
ANMO Albuquerque 96.90 53 P **P 02 43 39.2 +0.2**
ANMO 02 47 33.9
ANMO pmax pmax
comp=Z,1.0nm,0.6s
ANMO pmax pmax
comp=Z,1.0nm,0.6s
ANMO Albuquerque 96.90 53 *e*P **P 02 43 37.5 -1.5**
comp=Z,3.7nm,1.7s,mb4.5
ANMO *e*pP pP 02 43 44.6 -4.8
ANMO LR LR
comp=Z,608nm,19.0s,MS5.1
MVCO Mesa Verde 96.91 50 PFAKE 02 43 50.0 +11
MVCO LR LR
comp=Z,577nm,20.0s,MS5.1
G10A Bishop Farm, J 96.93 39 ⇑P **P 02 43 38.7 -0.2**
baz=97
HHC Hu-ho-hao-te 96.96 315 *e*P **P 02 43 41.2 +2.1**
HHC pP pP 02 43 47.6 -2.0
HHC sP sP 02 43 50.3 -3.0
HHC PP PP 02 47 40.4 +5.0
HHC SKS 02 54 17.0
HHC S S 02 55 00.3 +1.1
HHC sS sS 02 55 11.9 -4.7
HHC SS SS 03 01 41.3 +4.6
HHC pmax pmax
comp=Z,16nm,0.8s,mb5.5
HHC pmax pmax
comp=Z,110nm,5.5s
HHC LR LR
comp=N,290nm,23.3s,MS5.0
HHC LR LR
comp=E,460nm,24.4s,MS5.0
HHC LR LR
comp=Z,810nm,25.7s,MS5.1
I12A Atlanta 97.03 41 ⇓P **P 02 43 39.5 +0.1**
baz=97,SNR=7.2
428A Kincaid Ranch, 97.06 58 ⇑P **P 02 43 38.8 -1.0**
baz=97
H11A Donnelly 97.14 40 ⇓P **P 02 43 39.4 -0.5**
baz=97
HLID Hailey 97.28 42 ⇓P **P 02 43 40.7 +0.2**
baz=98,SNR=5.2
HLID Hailey 97.28 42 *e*P **P 02 43 40.1 -0.4**
comp=Z,8.1nm,1.1s,mb5.1
HLID *e*pP pP 02 43 46.2 -4.7
HLID LR LR
comp=Z,643nm,20.0s,MS5.1
J13A Cove Ranch, Pi 97.31 42 ⇓P **P 02 43 40.1 -0.6**
baz=98,SNR=6.2
F10A Beach Ranch, E 97.32 39 ⇓P **P 02 43 39.7 -0.9**
baz=98
L15A Malad City 97.46 44 ⇑P **P 02 43 41.4 +0.1**
baz=98
Y25A Mesa, Roswell 97.49 54 ⇓P **P 02 43 40.7 -1.0**
baz=98
J14A Carey 97.64 43 ⇓P **P 02 43 41.9 -0.2**
baz=98
H12A Diamond D Ranc 97.67 41 ⇓P **P 02 43 42.1 -0.1**
baz=98,SNR=6.3
I13A Wildhorse Cree 97.67 42 ⇓P **P 02 43 42.1 -0.2**
baz=98
HWUT Hardware Ranch 97.69 45 PFAKE 02 43 50.0 +7.6
HWUT LR LR
comp=Z,1μm,19.0s,MS5.3
G12A Big Creek, Yel 97.79 40 ⇑P **P 02 43 43.0 +0.3**
baz=98
TTA Tatalina 97.92 11 *e*P **P 02 43 40.4 -2.5**
TTA pmax pmax
comp=Z,14nm,1.8s,mb5.2
TTA Tatalina 97.92 11 *e*P **P 02 43 40.4 -2.5**
comp=Z,14nm,1.8s,mb5.2
H13A Challis 98.01 41 ⇑P **P 02 43 43.3 -0.4**
baz=98
L16A Fish Haven 98.02 45 ⇓P **P 02 43 43.3 -0.6**
baz=98
HIA Hailar 98.05 325 PFAKE 02 43 50.0 +6.2
HIA LR LR
comp=Z,578nm,20.0s,MS5.1
I14A Mackay 98.06 42 ⇓P **P 02 43 43.5 -0.5**
baz=98
F12A Elk City 98.23 40 ⇓P **P 02 43 44.1 -0.6**
baz=98,SNR=6.4
H14A Leadore 98.53 42 ⇑P **P 02 43 45.8 -0.3**
baz=99,SNR=5.7
LPAZ La Paz 98.60 116 P **P 02 43 47.1 -0.1**
comp=Z,1.0nm,1.0s,mb4.3,baz=265,slow=11,SNR=3.2
LPAZ LR LR 03 18 19.8
comp=Z,510nm,21.9s,MS5.0,baz=178,slow=29
LPAZ La Paz 98.60 116 *e*P **P 02 43 46.8 -0.4**
comp=Z,2.5nm,0.8s,mb4.8
LPAZ *e*pP pP 02 43 53.6 -4.1
LPAZ LR LR
comp=Z,874nm,22.0s,MS5.2
AHID Auburn Hatcher 98.68 44 PFAKE 02 44 00.0 +13
AHID LR LR
comp=Z,684nm,19.0s,MS5.2
NEW Newport 98.89 37 PFAKE 02 44 00.0 +12
NEW LR LR
comp=Z,505nm,19.0s,MS5.0
JCT Junction City 98.98 60 PFAKE 02 44 00.0 +11
JCT LR LR
comp=Z,533nm,19.0s,MS5.1
LZH Lanzhou 99.00 307 *e*P **P 02 43 51.9 +3.5**
LZH pP pP 02 44 02.7 +3.8
LZH PP PP 02 47 56.5 +5.4
LZH *e*S S 02 55 18.6 +1.9
LZH sS sS 02 55 36.1 +2.0
LZH pmax pmax
comp=Z,18nm,1.0s,mb5.6
LZH pmax pmax
comp=Z,110nm,5.6s
LZH LR LR
comp=E,570nm,16.6s
LZH LR LR
comp=Z,890nm,19.6s,MS5.3
SDCO Great Sand Dun 99.15 51 PFAKE 02 44 00.0 +11
SDCO LR LR
comp=Z,353nm,19.0s,MS4.9
TPAW Teton Pass 99.21 44 *e*P **P 02 43 48.8 -0.3**
comp=Z,12nm,1.4s,mb5.2
LOHW Long Hollow 99.48 44 *e*P **P 02 43 49.2 -1.2**
comp=Z,7.1nm,1.4s,mb5.0
CPUP Villa Florida 99.57 130 PP PP 02 47 56.9 +2.1
comp=Z,1.8nm,0.8s,baz=168,slow=9.3,SNR=2.7
CPUP LR LR 03 20 50.0
comp=Z,2μm,22.0s,MS5.5,baz=212,slow=30
CPUP Villa Florida 99.57 130 PFAKE 02 44 00.0 +9.0
CPUP LR LR
comp=Z,494nm,22.0s,MS5.0
BW06 Boulder Array 99.58 45 *e*P Pdif 02 43 49.7 -1.4
comp=Z,1.0nm,0.8s
BW06 LR LR
comp=Z,896nm,19.0s,MS5.3
PDAR Pinedale Array 99.58 45 P Pdif 02 43 49.8 -1.3
comp=Z,0.5nm,0.8s,baz=268,slow=5.9,SNR=3.5
PDAR PP PP 02 47 55.6 +0.1
comp=Z,0.6nm,0.8s,baz=224,slow=6.2,SNR=4.8
PDAR LR LR 03 25 20.0
comp=Z,718nm,18.0s,MS5.2,baz=246,slow=33
MSO Missoula 99.61 40 PFAKE 02 44 00.0 +8.8
MSO LR LR
comp=Z,338nm,19.0s,MS4.9
JTS JuntasAbangare 99.95 84 PFAKE 02 44 00.0 +7.3
JTS LR LR
comp=Z,273nm,19.0s,MS4.8
OTAV Otavalo 99.96 96 PFAKE 02 44 00.0 +7.2
OTAV LR LR
comp=Z,428nm,20.0s,MS5.0
TGUH Tegucigalpa,Un 100.02 80 PFAKE 02 44 00.0 +7.0
TGUH LR LR
comp=Z,288nm,19.0s,MS4.8
AMTX Amarillo 100.08 55 PFAKE 02 44 00.0 +6.7
AMTX LR LR
comp=Z,378nm,20.0s,MS4.9
BOZ Bozeman (W) 100.14 42 *e*P Pdif 02 43 54.3 +0.7
BOZ pmax pmax
comp=Z,14nm,1.6s
BOZ MLR MLR
comp=Z,348nm,20.0s,MS4.9
BOZ Bozeman (W) 100.14 42 *e*Pdif Pdif 02 43 54.3 +0.7
comp=Z,14nm,1.6s
BOZ LR LR

comp=Z,348nm,20.0s,MS4.9
ISCO Idaho Springs 100.26 49 PFAKE 02 44 00.0 +5.9
ISCO LR LR
comp=Z,420nm,20.0s,MS4.9
COLA College 101.15 13 PFAKE 02 44 10.0 +12
COLA LR LR
comp=Z,848nm,20.0s,MS5.3
RLMT Red Lodge 101.15 43 PFAKE 02 44 10.0 +12
RLMT LR LR
comp=Z,649nm,20.0s,MS5.1
PALK Pallekele 101.53 271 PP PP 02 48 09.5 -1.0
comp=Z,12nm,1.0s,baz=121,slow=10,SNR=2.6
HKT Hockley 101.60 62 PFAKE 02 44 10.0 +10
HKT LR LR
comp=Z,252nm,19.0s,MS4.8
BILL Bilibino 101.61 355 PFAKE 02 44 10.0 +10
BILL LR LR
comp=Z,949nm,22.0s,MS5.3
WMOK Wichita Mounta 102.01 56 PFAKE 02 44 10.0 +8.1
WMOK LR LR
comp=Z,389nm,19.0s,MS5.0
EGAK Eagle 102.50 16 PFAKE 02 44 10.0 +5.9
EGAK LR LR
comp=Z,855nm,20.0s,MS5.3
EGMT Eagleton 102.59 40 PFAKE 02 44 10.0 +5.5
EGMT LR LR
comp=Z,654nm,19.0s,MS5.2
OGNE Ogallala 103.16 50 PFAKE 02 44 20.0 +13
OGNE LR LR
comp=Z,533nm,19.0s,MS5.1
YAK Yakutsk 103.29 338 PFAKE 02 44 20.0 +12
YAK LR LR
comp=Z,823nm,22.0s,MS5.2
NATX Nacogdoches 103.40 61 PFAKE 02 44 20.0 +12
NATX LR LR
comp=Z,323nm,19.0s,MS4.9
CBKS Cedar Bluff 103.52 52 PFAKE 02 44 20.0 +11
CBKS LR LR
comp=Z,586nm,19.0s,MS5.1
BCIP Isla Barro Col 103.63 88 PFAKE 02 44 20.0 +11
BCIP LR LR
comp=Z,966nm,21.0s,MS5.3
RSSD Black Hills 103.65 46 PFAKE 02 44 20.0 +11
RSSD LR LR
comp=Z,1μm,19.0s,MS5.5
ULN Ulaanbaatar 103.74 319 PFAKE 02 44 20.0 +10
ULN LR LR
comp=Z,477nm,19.0s,MS5.0
LAO LASA Array 103.79 43 PFAKE 02 44 20.0 +10
LAO LR LR
comp=Z,545nm,20.0s,MS5.1
SONM Songino Array 104.09 318 PP PP 02 48 23.9 -5.3
comp=Z,2.9nm,1.1s,baz=129,slow=6.3,SNR=6.4
SONM PKKPbc PKKPbc 03 00 05.2 +4.8
comp=Z,0.9nm,0.8s,baz=297,slow=3.2,SNR=4.9
SONM PKKPab PKKPab 03 00 20.9 +4.8
comp=Z,1.2nm,0.8s,baz=306,slow=3.4,SNR=3.4
LSA Lhasa 104.62 296 PFAKE 02 44 30.0 +16
LSA LR LR
comp=Z,269nm,20.0s,MS4.8
MIAR Mount Ida 105.59 59 PFAKE 02 48 40.0 +9.0
MIAR LR LR
comp=Z,187nm,19.0s,MS4.7
KSU1 Kansas State U 105.76 53 PFAKE 02 48 40.0 +8.9
KSU1 LR LR
comp=Z,447nm,19.0s,MS5.0
DGMT Dagmar 105.92 42 PFAKE 02 48 40.0 +8.9
DGMT LR LR
comp=Z,511nm,20.0s,MS5.1
SPB Sao Paulo 107.67 135 PFAKE 02 48 50.0 +15
SPB LR LR
comp=Z,1μm,19.0s,MS5.4
TLY Talaya 107.68 321 PFAKE 02 48 50.0 +16
TLY LR LR
comp=Z,525nm,20.0s,MS5.1
ECSD EROS Data Cent 108.04 49 PFAKE 02 48 50.0 +15
ECSD LR LR
comp=Z,385nm,20.0s,MS5.0
HYB Hyderabad 108.57 279 *e*P Pdif 02 44 32.0 +1.0
OXF Oxford 108.58 61 PFAKE 02 48 50.0 +13
OXF LR LR
comp=Z,340nm,19.0s,MS4.9
YKA Yellowknife Ar 108.94 27 PKKPab PKKPab 02 59 56.2 +2.2
comp=Z,0.4nm,0.7s,baz=63,slow=3.6,SNR=3.8
SCIA State Center 109.38 52 PFAKE 02 48 50.0 +12
SCIA LR LR
comp=Z,423nm,19.0s,MS5.0
LRAL Lakeview Retre 109.67 63 PFAKE 02 48 50.0 +11
LRAL LR LR
comp=Z,260nm,19.0s,MS4.8
MTDJ Mount Denham 110.18 81 PFAKE 02 48 50.0 +10
MTDJ LR LR
comp=Z,347nm,19.0s,MS5.0
FFC Flin Flon 110.31 37 PFAKE 02 48 50.0 +11
FFC LR LR
comp=Z,386nm,20.0s,MS5.0
WVT Waverly 110.47 60 *e*PKIKP PKiKP 02 48 39.0 -1.0
WVT MLR MLR
comp=Z,295nm,19.0s,MS4.9
TIXI Tiksi 110.63 345 PFAKE 02 48 50.0 +11
TIXI LR LR
comp=Z,1μm,22.0s,MS5.4
AGMN Agassiz Nation 110.65 45 PFAKE 02 48 50.0 +10
AGMN LR LR
comp=Z,533nm,19.0s,MS5.1
ABPO Ambohimpanom 110.97 228 PFAKE 02 48 50.0 +8.4
ABPO LR LR
comp=Z,753nm,19.0s,MS5.3
SDV Santo Domingo 111.18 93 PP PP 02 49 26.6 +5.0
comp=Z,0.7nm,0.3s,baz=43,slow=17,SNR=4.1
SDV Santo Domingo 111.18 93 PFAKE 02 48 50.0 +8.0
SDV LR LR
comp=Z,205nm,21.0s,MS4.7
HDIL Hopedale 111.41 55 PFAKE 02 48 50.0 +8.3
HDIL LR LR
comp=Z,262nm,20.0s,MS4.8
ULM Lac du Bonnet 111.53 43 PFAKE 02 48 50.0 +8.5
ULM LR LR
comp=Z,685nm,19.0s,MS5.3
SUR Sutherland 111.65 199 PFAKE 02 48 50.0 +7.4
SUR LR LR
comp=Z,2μm,21.0s,MS5.7
DWPF Disney 111.69 70 PFAKE 02 48 50.0 +7.4
DWPF LR LR
comp=Z,228nm,19.0s,MS4.8
JFWS Jewell Farm 111.79 52 *e*PKIKP PKiKP 02 48 40.6 -1.7
JFWS MLR MLR
comp=Z,404nm,19.0s,MS5.0
GOGA Godfrey 112.49 64 PFAKE 02 48 50.0 +6.1
GOGA LR LR
comp=Z,192nm,19.0s,MS4.7
WCI Wyandotte Cave 112.50 58 *e*PKIKP PKiKP 02 48 43.4 -0.4
WCI MLR MLR
comp=Z,305nm,19.0s,MS4.9
GTBY Guantanamo Bay 113.00 81 PFAKE 02 49 00.0 +15
GTBY LR LR
comp=Z,254nm,19.0s,MS4.8
EYMN Ely 113.13 47 PFAKE 02 49 00.0 +15
EYMN LR LR
comp=Z,682nm,19.0s,MS5.3
WMQ Urumqi 113.57 308 *e*PKP PKiKP 02 48 46.0 +0.3
COWI Conover 113.85 50 PFAKE 02 49 00.0 +14
COWI LR LR
comp=Z,617nm,20.0s,MS5.2
NHSC New Hope 114.85 66 PFAKE 02 49 00.0 +12
NHSC LR LR
comp=Z,321nm,19.0s,MS5.0
MSEY Mahe Island 115.19 245 PFAKE 02 49 00.0 +10
MSEY LR LR
comp=Z,506nm,20.0s,MS5.1
ACSO Alum Creek Sta 115.66 57 PFAKE 02 49 00.0 +10
ACSO LR LR
comp=Z,476nm,19.0s,MS5.1
SDDR Presa de Saban 115.72 83 PFAKE 02 49 00.0 +9.5
SDDR LR LR
comp=Z,223nm,21.0s,MS4.8
AAM Ann Arbor 115.99 55 PFAKE 02 49 00.0 +10
AAM LR LR
comp=Z,308nm,19.0s,MS4.9
GLMI Grayling 116.29 52 PFAKE 02 49 00.0 +9.2
GLMI LR LR
comp=Z,484nm,19.0s,MS5.1
BLA Blacksburg 116.33 61 *e*PKIKP PKPdf 02 48 50.5 -0.7
BLA MLR MLR
comp=Z,491nm,20.0s,MS5.1

LBTB Lobatse 116.94 206 PFAKE 02 49 00.0 +7.1
LBTB LR LR
comp=Z,958nm,19.0s,MS5.4
GRTK Grand Turk 117.03 81 PFAKE 02 49 00.0 +7.0
GRTK LR LR
comp=Z,279nm,19.0s,MS4.9
MCWV Mont Chateau 117.67 59 PFAKE 02 49 00.0 +6.3
MCWV LR LR
comp=Z,459nm,20.0s,MS5.1
MK31 Makanchi Array 118.22 309 *e*PKIKP PKPdf 02 48 53.8 -0.7
MKAR Makanchi Array 118.22 309 PKP PKPdf 02 48 52.6 -1.9
comp=Z,0.8nm,0.5s,baz=87,slow=4.4,SNR=3.6
MKAR PP PP 02 50 02.5 -8.4
comp=Z,0.9nm,0.7s,baz=86,slow=5.2,SNR=4.3
MKAR PKKPbc PKKPbc 02 59 12.9 -0.7
comp=Z,0.5nm,0.5s,baz=306,slow=4.1,SNR=4.0
MKAR PKKPab PKKPab 02 59 18.8 +4.5
comp=Z,1.3nm,0.6s,baz=322,slow=3.7,SNR=7.7
MKAR Makanchi Array 118.22 309 PKP PKPdf 02 48 52.6 -1.9
MKAR PP PP 02 50 02.5 -8.4
MKAR PKKPbc PKKPbc 02 59 12.9 -0.7
MKAR PKKPab PKKPab 02 59 18.8 +4.5
ERPA Erie 118.46 56 PFAKE 02 49 10.0 +15
ERPA LR LR
comp=Z,326nm,20.0s,MS5.0
CBN Corbin 118.94 61 PFAKE 02 49 10.0 +14
CBN LR LR
comp=Z,296nm,20.0s,MS4.9
ZALV Zalesovo Beam 118.97 318 PKP PKPdf 02 48 52.8 -2.9
comp=Z,0.4nm,0.4s,baz=318,slow=1.9,SNR=2.2
SSPA Standing Stone 119.42 59 *e*PKPdf PKPdf 02 48 55.7 -1.4
SSPA LR LR
comp=Z,343nm,19.0s,MS5.0
SJG San Juan 119.59 87 PFAKE 02 49 10.0 +12
SJG LR LR
comp=Z,261nm,21.0s,MS4.8
NIL Nilore 120.04 293 PFAKE 02 49 10.0 +12
NIL LR LR
comp=Z,66nm,20.0s,MS4.3
KSH Kashi 120.10 300 *e*PKP PKPdf 02 48 52.0 -6.4
KSH sPKP 02 49 06.5
KSH PKS 02 52 27.4
KSH LR LR
comp=N,160nm,5.7s
KSH LR LR
comp=E,140nm,5.3s
KSH LR LR
comp=Z,130nm,4.7s
GRGR Grenville 120.38 95 PFAKE 02 49 10.0 +10
GRGR LR LR
comp=Z,332nm,19.0s,MS5.0
RES Resolute Bay 120.65 18 PKP PKPdf 02 48 54.8 -3.6
comp=Z,5.1nm,1.1s,baz=195,slow=5.6,SNR=3.0
RES Resolute Bay 120.65 18 *e*PKPdf PKPdf 02 48 57.1 -1.3
BINY Binghamton 121.29 57 PFAKE 02 49 10.0 +9.4
BINY LR LR
comp=Z,641nm,19.0s,MS5.3
TKM2 Tokmak 2 121.47 303 PFAKE 02 49 10.0 +9.1
TKM2 LR LR
comp=Z,346nm,22.0s,MS5.0
KURK Kurchatov 121.71 313 PKP PKPdf 02 48 57.8 -3.2
comp=Z,1.6nm,0.6s,baz=123,slow=1.8,SNR=6.3
KURK PP PP 02 50 28.0 -6.8
comp=Z,2.6nm,1.1s,baz=112,slow=4.0,SNR=5.1
KURK PKKPbc PKKPbc 02 59 03.5 +2.9
comp=Z,1.3nm,1.0s,baz=282,slow=5.1,SNR=5.6
KURK PKKP PKKPdf 02 59 40.4 +3.9
comp=Z,0.4nm,0.9s,baz=291,slow=2.7,SNR=4.1
KURK Kurchatov 121.71 313 *e*PKPdf PKPdf 02 48 59.7 -1.3
KURK *e*PP PP 02 50 32.4 -2.3
KURK LR LR
comp=Z,654nm,22.0s,MS5.2
UCH Uchtor 122.02 302 PFAKE 02 49 10.0 +8.0
UCH LR LR
comp=Z,294nm,20.0s,MS4.9
FDF Fort de France 122.13 93 PFAKE 02 49 10.0 +7.0
FDF LR LR
comp=Z,310nm,21.0s,MS4.9
AAK Ala-Archa 122.16 303 PKKPbc PKKPbc 02 59 03.6 +4.8
comp=Z,1.3nm,0.3s,baz=201,slow=3.6,SNR=4.1
AAK Ala-Archa 122.16 303 PFAKE 02 49 10.0 +7.8
AAK LR LR
comp=Z,392nm,20.0s,MS5.1
AML Almayashu 122.58 302 PFAKE 02 49 10.0 +7.0
AML LR LR
comp=Z,347nm,20.0s,MS5.0
EKS2 Erkin-Say 122.67 303 PFAKE 02 49 10.0 +6.8
EKS2 LR LR
comp=Z,488nm,22.0s,MS5.1
LONY Lake Ozonia 122.98 55 PFAKE 02 49 10.0 +6.3
LONY LR LR
comp=Z,418nm,19.0s,MS5.1
ANWB Willy Bob 123.03 90 PFAKE 02 49 10.0 +5.4
ANWB LR LR
comp=Z,288nm,21.0s,MS4.9
NCB Newcomb 123.05 56 *e*PKPdf PKPdf 02 49 01.2 -2.7
NCB *ep*PKPdf pPKPdf 02 49 08.3 -6.3
NCB LR LR
comp=Z,302nm,20.0s,MS5.0
LSZ Lusaka 124.53 214 *e*PKIKP PKPdf 02 49 06.5 -1.2
LSZ MLR MLR
comp=Z,1μm,21.0s,MS5.6
LBNH Lisbon 124.72 56 *e*PKIKP PKPdf 02 49 05.4 -1.7
LBNH MLR MLR
comp=Z,484nm,20.0s,MS5.2
TSUM Tsumeb 125.02 201 PFAKE 02 49 20.0 +11
TSUM LR LR
comp=Z,2μm,21.0s,MS5.7
BBSR BB Station 126.65 72 PFAKE 02 49 20.0 +8.8
BBSR LR LR
comp=Z,318nm,19.0s,MS5.0
BVAR Borovoye Array 127.17 314 PKP PKPdf 02 49 09.0 -2.5
comp=Z,0.5nm,0.5s,baz=151,slow=1.5,SNR=5.2
BVAR PP PP 02 51 06.0 -5.3
comp=Z,2.0nm,0.9s,baz=141,slow=9.6,SNR=4.5
BVAR Borovoye Array 127.17 314 PKIKP PKPdf 02 49 09.0 -2.5
BVAR 02 51 06.0
BVAR pmax pmax
comp=Z,1.0nm,0.5s
BVAR pmax pmax
comp=Z,2.0nm,0.9s
BRVK Borovoye 127.24 314 *e*PKIKP PKPdf 02 49 08.8 -2.8
BRVK MLR MLR
comp=Z,742nm,22.0s,MS5.3
RCBR Riachuelo 128.39 132 *e*PKPdf PKPdf 02 49 13.6 -1.5
RCBR LR LR
comp=Z,1μm,21.0s,MS5.6
SCHQ Schefferville 129.70 44 PKP PKPdf 02 49 13.3 -2.9
comp=Z,4.7nm,1.0s,baz=296,slow=3.1,SNR=3.6
SCHQ Schefferville 129.70 44 PKP PKPdf 02 49 13.3 -2.9
SCHQ LR LR
comp=Z,550nm,20.0s,MS5.2
KMBO Kilima Mbogo 130.79 233 PFAKE 02 49 30.0 +10
KMBO LR LR
comp=Z,466nm,19.0s,MS5.2
ABKAR Akbulak array 133.35 309 *e*PKPdf PKPdf 02 49 21.3 -2.0
KBS Kingsbay 134.06 357 PFAKE 02 49 30.0 +6.1
KBS LR LR
comp=Z,340nm,22.0s,MS5.0
ARU Arti 134.12 319 PKIKP PKPdf 02 49 24.7 +0.2
ARU Arti 134.12 319 PFAKE 02 49 40.0 +15
ARU LR LR
comp=Z,490nm,20.0s,MS5.2
SPITS Spitsbergen Ar 134.52 355 PKP PKPdf 02 49 23.3 -1.5
comp=Z,6.7nm,1.0s,baz=320,slow=5.8,SNR=3.7
SPITS Spitsbergen Ar 134.52 355 PKIKP PKPdf 02 49 23.3 -1.5
SPITS pmax pmax
comp=Z,7.0nm,1.0s
AKTK Aktyubinsk 134.64 310 PKP PKPdf 02 49 24.1 -1.6
AKTK PP PP 02 52 00.2 +0.5
AKTO Aktyubinsk 134.64 310 PKP PKPdf 02 49 24.1 -1.6
comp=Z,1.4nm,0.7s,baz=126,slow=4.1,SNR=4.3
AKTO PP PP 02 52 00.2 +0.5
comp=Z,1.0nm,0.8s,baz=144,slow=10,SNR=4.4
AKTO Aktyubinsk 134.64 310 PKIKP PKPdf 02 49 24.1 -1.6
AKTO 02 52 00.2
AKTO pmax pmax
comp=Z,1.0nm,0.7s
AKTO pmax pmax
comp=Z,1.0nm,0.8s
SFJD Kangerlussuaq 135.49 26 PFAKE 02 49 40.0 +13
SFJD LR LR
comp=Z,808nm,21.0s,MS5.4
SUMG Summit 136.07 16 *e*PKPdf PKPdf 02 49 27.2 -0.6
SUMG Summit 136.07 16 *i* P PKPdf 02 49 27.9 +0.1

SUMG *i* PP PP 02 51 55.2 -13
ASCN Ascension 136.78 159 PFAKE 02 49 40.0 +9.1
ASCN LR LR
comp=Z,798nm,20.0s,MS5.5
LVZ Lovozero 140.05 340 PFAKE 02 49 50.0 +15
LVZ LR LR
comp=Z,958nm,21.0s,MS5.5
KEV Kevo 140.56 345 PFAKE 02 49 50.0 +14
KEV LR LR
comp=Z,798nm,20.0s,MS5.5
APA Apatity 140.63 340 *e*PKHKP 02 49 25.4
APA MLR MLR
comp=Z,1μm,18.0s,MS5.8
SCO Scoresbysund 140.99 11 *i* P 02 49 28.5
SCO
comp=Z,440nm,21.0s
ARCES ARCESS Array B 141.05 346 PKP PKPdf 02 49 36.7 -0.3
comp=Z,1.6nm,0.6s,baz=48,slow=1.8,SNR=8.7
ARCES ARCESS Array B 141.05 346 PKIKP PKPdf 02 49 36.7 -0.3
ARCES pmax pmax
comp=Z,2.0nm,0.6s
DGRG David-gareji 143.25 296 P 02 49 36.9
GNI Garni 143.66 294 PKP PKPdf 02 49 42.5 0.0
comp=Z,2.2nm,0.3s,baz=143,slow=12,SNR=3.6
GNI Garni 143.66 294 PKP PKPdf 02 49 42.5 0.0
GNI LR LR
comp=Z,353nm,20.0s,MS5.1
TBLG Delisi 143.74 297 *e*PKHKP 02 49 37.5
TBLG Delisi 143.74 297 P 02 49 37.5
KEH Kehvi 144.34 298 P 02 49 37.5
JOF Joensuu 144.42 336 *e*PKIKP PKPdf 02 49 42.0 -1.1
JOF pmax pmax
comp=Z,9.0nm,0.8s
JOF Joensuu 144.42 336 *ep* PKPdf 02 49 42.0 -1.1
comp=Z,9.3nm,0.8s
JOF Joensuu 144.42 336 *ep* PKPdf 02 49 42.0 -1.1
comp=Z,9.3nm,0.8s
MSL Mosul 144.54 287 *e*PKP PKPdf 02 49 44.0 -0.2
ONI Oni 144.70 298 P PKPdf 02 49 39.6 -4.6
VRHR Novokhopersk 144.89 313 *e*PKIKP PKPdf 02 49 40.7 -3.6
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.6s
VRHR pmax pmax
comp=Z,20nm,0.6s
GOF Gofitskoye 144.91 302 *e*PKIKP PKPdf 02 49 54.7 +10
GOF pmax pmax
comp=Z,53nm,1.3s
KIV Kislovodsk 145.22 300 *i* PKIKP PKPdf 02 49 44.0 -1.1
KIV *e* 02 49 50.8
KIV *e* 02 56 17.8
KIV pmax pmax
comp=Z,7.0nm,0.9s
KIV MLR MLR
comp=Z,400nm,23.0s,MS5.1
KIV Kislovodsk 145.22 300 *e*PKPdf PKPdf 02 49 44.8 -0.3
KIV LR LR
comp=Z,362nm,20.0s,MS5.2
MOS Moscow 145.62 322 *e*PKIKP PKPdf 02 49 42.2 -3.2
MOS *e* 02 53 15.2
MOS pmax pmax
comp=Z,114nm,1.4s
MOS MLR MLR
comp=Z,1μm,22.0s,MS5.6
BORG Borgarnes 146.05 16 PKPbc PKPbc 02 49 45.2 -1.5
comp=Z,32nm,1.1s,baz=287,slow=1.1,SNR=6.0
BORG Borgarnes 146.05 16 *e*PKPdf PKPdf 02 49 44.6 -1.3
VSR Storozhevoye 146.35 314 *e*PKIKP PKPdf 02 49 45.8 -1.0
VSR pmax pmax
comp=E,20nm,1.4s
VSR pmax pmax
comp=Z,40nm,1.4s
VSR pmax pmax
comp=N,8.0nm,0.7s
VSR MLR MLR
comp=N,900nm,27.0s
VSR MLR MLR
comp=Z,1μm,27.0s,MS5.5
VSR MLR MLR
comp=E,240nm,13.0s
OBN Obninsk 146.43 322 *i* PKP2 PKPbc 02 49 46.0 -2.2
OBN pmax pmax
comp=Z,5.0nm,0.6s
OBN MLR MLR
comp=Z,800nm,20.0s,MS5.5
OBN Obninsk 146.43 322 *e*PKPdf PKPdf 02 49 47.2 +0.5
OBN LR LR
comp=Z,1μm,22.0s,MS5.6
KAF Kangasniemi 146.65 338 *e*PKHKP 02 49 43.2
KAF pmax pmax
comp=Z,15nm,0.7s
KAF Kangasniemi 146.65 338 *ep* 02 49 43.2
comp=Z,15nm,0.7s
KAF Kangasniemi 146.65 338 *ep* 02 49 43.2
comp=Z,15nm,0.7s
FINES FINESS Array B 147.21 337 PKPbc PKPbc 02 49 46.8 -3.4
comp=Z,7.7nm,0.7s,baz=90,slow=1.9,SNR=11
FINES FINESS Array B 147.21 337 PKIKP PKPdf 02 49 46.8 -1.1
FINES pmax pmax
comp=Z,8.0nm,0.7s
FINES FINESS Array B 147.21 337 PKPbc PKPdf 02 49 46.8 -1.1
SOC Sochi 147.39 300 *e*PKIKP PKPdf 02 49 47.0 -1.8
SOC *i* 02 49 53.2
SOC *e* 02 50 02.7
SOC *e* 02 53 26.0
SOC *e*SSS 03 17 49.2
SOC pmax pmax
comp=Z,34nm,1.0s
ANN Anapa 148.89 303 *i* PKP2 PKPab 02 49 58.5 -0.7
ANN *e* 02 53 31.7
ANN pmax pmax
comp=Z,58nm,1.4s
ANN MLR MLR
comp=N,556nm,23.0s,MS5.5
ANN MLR MLR
comp=E,617nm,23.0s,MS5.5
ANN MLR MLR
comp=Z,571nm,23.0s,MS5.3
MMAI Mount Meron Ar 150.27 279 PKPbc PKPbc 02 49 58.5 -0.5
comp=Z,20nm,1.0s,baz=66,slow=6.5,SNR=5.7
IZAR Zarasai 151.06 329 *e*P PKPab 02 50 07.0 -0.8
MICGM Minsk 151.08 325 *e* PKPbc 02 50 00.0 -0.2
MNK Minsk 151.10 325 *e*PKIKP PKPbc 02 50 00.0 -0.2
IDID Didziasalis 151.12 328 *e*P PKPbc 02 50 03.6 +3.3
SIM Simferopol' 151.19 304 *e*PKIKP PKPbc 02 50 02.0 +1.3
SIM pmax pmax
comp=Z,40nm,8.3s
ISAL Salakas 151.23 328 *e*P PKPab 02 50 13.8 +5.3
NOA NORSAR Array B 151.34 348 PKPbc PKPbc 02 49 58.6 -2.0
comp=Z,2.2nm,0.9s,baz=38,slow=2.1,SNR=3.6
NOA NORSAR Array B 151.34 348 PKIKP PKPbc 02 49 58.6 -2.0
NOA pmax pmax
comp=Z,2.0nm,0.9s
HFS Hagfors 151.71 345 PKPbc PKPbc 02 50 00.1 -1.4
comp=Z,5.0nm,0.7s,baz=98,slow=3.3,SNR=4.6
HFS Hagfors 151.71 345 PKIKP PKPbc 02 50 00.1 -1.3
HFS pmax pmax
comp=Z,5.0nm,0.7s
SACV Santiago Islan 151.99 125 *e*PKPbc PKPbc 02 50 02.3 -1.1
SACV LR LR
comp=Z,506nm,21.0s,MS5.3
BR131 Keskin Array S 152.18 293 *e*PKPdf PKPdf 02 49 57.3 +0.8
BR131 LR LR
comp=Z,424nm,21.0s,MS5.2
BRTR Keskin Array B 152.18 293 PKPbc PKPbc 02 50 00.2 -2.9
comp=Z,2.4nm,0.9s,baz=100,slow=2.1,SNR=9.5
BRTR Keskin Array B 152.18 293 PKIKP PKPbc 02 50 00.3 -2.9
BRTR pmax pmax
comp=Z,2.0nm,0.9s
AKASG Malin Array Be 152.37 318 PKPbc PKPbc 02 50 00.8 -2.5
comp=Z,0.8nm,0.5s,baz=60,slow=1.5,SNR=6.5
AKASG Malin Array Be 152.37 318 PKIKP PKPbc 02 50 00.8 -2.4
AKASG pmax pmax
comp=Z,1.0nm,0.5s
KIEV Kiev 152.38 318 *e*PKIKP PKPbc 02 50 02.9 -0.4
KIEV MLR MLR
comp=Z,637nm,19.0s,MS5.5
LIC Lamto 152.62 170 *e*PKP1 PKPbc 02 50 04.2 -0.8
comp=Z,119nm,0.8s
KIC Kosan Boka 152.79 170 *e*PKP1 PKPbc 02 50 03.6 -1.7
comp=Z,131nm,1.0s
KONO Kongsberg 152.93 349 PFAKE 02 50 10.0 +13
KONO LR LR
comp=Z,592nm,19.0s,MS5.4

TIC Toumodi 153.03 169 *e*PKP1 PKPbc 02 50 03.2 -2.7
comp=Z,384nm,1.9s
DBIC Dimbokro 153.08 170 PKPdf 02 49 58.4 -0.2
comp=Z,9.9nm,1.1s,baz=202,slow=3.2,SNR=3.9
DBIC PKPbc PKPbc 02 50 04.2 -1.8
comp=Z,15nm,1.0s,baz=135,slow=2.9,SNR=6.7
DBIC Dimbokro 153.08 170 *e*PKPdf PKPdf 02 49 57.5 -1.1
DBIC *e*PKPbc PKPbc 02 50 04.0 -1.9
DBIC LR LR
comp=Z,1μm,22.0s,MS5.6
ISP Isparta 154.67 289 PFAKE 02 50 10.0 +10
ISP LR LR
comp=Z,511nm,22.0s,MS5.3
MUD Monsted U'grnd 156.03 347 *i* P PKPdf 02 50 08.4 +7.1
MUD
comp=Z,540nm,20.0s
KWP Kalwaria Pacla 156.51 321 *e*PKP2 PKPab 02 50 29.0 -2.1
KWP MLR MLR
comp=Z,872nm,20.0s,MS5.6
KOLS Kolonicke sedl 157.14 319 *e*PKP PKPab 02 50 33.9 +0.1
KOLS Kolonicke sedl 157.14 319 *e* PKPab 02 50 33.9 +0.1
UZH Uzhgorod 157.30 319 *e*PKP2 PKPab 02 50 32.0 -2.5
STHS Stebnicka Huta 157.40 322 *e*PKP PKPab 02 50 33.6 -1.3
STHS *e* 02 50 41.3
STHS Stebnicka Huta 157.40 322 *e* PKPab 02 50 33.6 -1.3
STHS *e* 02 50 41.3
CRVS Cervenica-Dubn 157.60 320 *e*PKP PKPab 02 50 33.8 -2.0
CRVS *e* 02 50 39.8
CRVS Cervenica-Dubn 157.60 320 *e* PKPab 02 50 33.8 -2.0
CRVS *e* 02 50 39.8
OJC Ojcow 157.62 325 *e*PKPdf PKPdf 02 50 06.0 +2.4
OJC *e*PKPab PKPab 02 50 38.9 +3.1
EKA Eskdalemuir Ar 157.95 4 PKPab PKPab 02 50 34.0 -3.1
comp=Z,2.4nm,0.9s,baz=37,slow=2.9,SNR=3.2
EKA Eskdalemuir Ar 157.95 4 PKP2 PKPab 02 50 34.0 -3.0
EKA pmax pmax
comp=Z,2.0nm,0.9s
EKA Eskdalemuir Ar 157.95 4 PKPab PKPab 02 50 34.0 -3.1
ESK Eskdalemuir 157.97 5 PFAKE 02 50 10.0 +6.2
ESK LR LR
comp=Z,349nm,19.0s,MS5.2
KECS Kecovo 158.37 320 *e*P PKPab 02 50 37.9 -1.2
KECS *e* 02 50 43.8
KECS Kecovo 158.37 320 *e*PKP PKPab 02 50 37.9 -1.2
KECS *e* 02 50 43.8
OKC Ostrava-Krasne 158.67 326 *e*PKP2 PKPab 02 50 38.0 -2.4
OKC MLR MLR
comp=Z,700nm,23.1s,MS5.4
OKC Ostrava-Krasne 158.67 326 *e*PKPab PKPab 02 50 38.0 -2.4
OKC AMS AMS 03 56 40.0
comp=Z,700nm,23.1s
MORC Moravsky Berou 158.99 327 *e*PKIKP PKPdf 02 50 04.6 -0.7
PSZ Piszkesteto 159.02 320 PFAKE 02 50 20.0 +15
PSZ LR LR
comp=Z,1μm,21.0s,MS5.7
DPC Dobruska-Polom 159.12 329 *e*PKIKP PKPdf 02 50 09.4 +4.0
DPC *e* 02 50 39.8
DPC MLR MLR
comp=Z,800nm,19.7s,MS5.6
DPC Dobruska-Polom 159.12 329 *e*PKPDF PKPdf 02 50 09.4 +4.0
DPC *e*PKPAB PKPab 02 50 39.8 -2.5
DPC *ep*PKP pPKPab 02 50 46.5 -6.3
DPC AMS AMS 04 01 40.0
comp=Z,800nm,19.7s
VYHS Vyhne 159.22 322 *e*PKP PKPab 02 50 39.4 -3.4
VYHS *e* 02 50 46.9
CLL Collm 159.65 336 *e*PKP2 PKPab 02 50 40.0 -4.5
CLL pmax pmax
comp=Z,13nm,1.3s
CLL Collm 159.65 336 *e*PKP PKPab 02 50 40.0 -4.5
CLL *i* pPKP pPKPab 02 50 48.0 -7.0
CLL Collm 159.65 336 *e*PKPab PKPab 02 50 40.0 -4.5
comp=Z,13nm,1.3s
CLL *i* pPKPab pPKPab 02 50 48.0 -7.0
comp=Z,18nm,1.1s
CLL *e*PP PP 02 54 32.0 +6.1
CLL *e* 02 54 53.0
CLL *e*PPPrev 03 02 49.0
CLL *e*PSKS 03 04 54.0
CLL *e*(PPS) 03 07 30.0
CLL *e* 03 10 50.0
CLL *e*SS SS 03 14 30.0 -0.5
CLL *e*SSS 03 20 45.0
CLL *e*PSSrev 03 22 37.0
CLL *e*SSSS 03 24 54.0
CLL *e* 03 30 12.0
BRG Berggiesshubel 159.67 333 *e*PKP PKPab 02 50 41.9 -2.7
comp=Z,9.7nm,1.2s
BRG *e* 02 50 49.1
comp=Z,18nm,1.4s
BRG
comp=Z,596nm,17.1s
BRG
comp=N,857nm,22.9s
BRG
comp=E,251nm,22.9s
PVCC Panska Ves 159.70 332 *e*PKP2 PKPab 02 50 42.6 -2.2
PVCC Panska Ves 159.70 332 *e*PKPAB PKPab 02 50 42.6 -2.2
TORD Torodi Ar. Bea 159.78 185 PKP PKPdf 02 50 04.8 -2.5
comp=E,4.6nm,1.0s,baz=263,slow=0.3,SNR=14
TORD PKPab PKPab 02 50 44.1 -1.8
comp=E,8.4nm,1.0s,baz=183,slow=2.9,SNR=9.8
TORD PP PP 02 54 29.6 +3.3
comp=E,5.6nm,1.3s,baz=183,slow=4.7,SNR=6.0
PRU Pruhonice 160.14 331 *e*PKP2 PKPab 02 50 50.9 +4.2
PRU MLR MLR
comp=Z,800nm,18.8s
PRU Pruhonice 160.14 331 *e*PKPAB PKPab 02 50 50.9 +4.2
PRU AMS AMS 04 01 40.0
comp=Z,800nm,18.8s
TREC Trest 160.27 328 AMS AMS 03 59 00.0
comp=Z,1μm,24.4s
MOX Moxa 160.68 337 *e*PKP PKPab 02 50 46.7 -2.3
comp=Z,18nm,1.6s
MOX
comp=Z,400nm,23.0s
MOX Moxa 160.68 337 *e*PKP2 PKPab 02 50 46.7 -2.3
MOX pmax pmax
comp=Z,18nm,1.6s
MOX MLR MLR
comp=Z,400nm,23.0s
NKC Novy Kostel 160.74 335 *e*PKP2 PKPab 02 50 46.7 -2.6
NKC MLR MLR
comp=Z,600nm,21.5s
NKC Novy Kostel 160.74 335 *e*PKPAB PKPab 02 50 46.7 -2.6
NKC *ep*PKP pPKPab 02 50 53.4 -6.4
NKC AMS AMS 03 58 30.0
comp=Z,600nm,21.5s
KHC Kasperske Hory 161.20 331 *e*PKIKP PKPdf 02 50 12.5 +4.7
KHC *e* 02 50 49.0
KHC MLR MLR
comp=Z,900nm,20.3s
KHC Kasperske Hory 161.20 331 *e*PKPDF PKPdf 02 50 12.5 +4.7
KHC *e*PKPAB PKPab 02 50 49.0 -2.4
KHC *ep*PKP pPKPab 02 50 54.5 -7.3
KHC AMS AMS 04 02 50.0
comp=Z,900nm,20.3s
GERES GERESS Array B 161.37 330 PKP PKPdf 02 50 08.4 +0.5
comp=Z,0.2nm,0.4s,baz=63,slow=0.6,SNR=4.3
GERES PKPab PKPab 02 50 49.0 -3.2
comp=Z,0.5nm,0.7s,baz=66,slow=3.3,SNR=3.7
GERES GERESS Array B 161.37 330 PKIKP PKPdf 02 50 08.4 +0.5
GERES 02 50 49.0
GERES pmax pmax
comp=Z,1.0nm,0.7s
GRA1 Grafenberg Arr 161.62 336 *e*PKP PKPab 02 50 50.7 -2.5
GRA1 LR LR
comp=Z,900nm,22.4s
GRF Grafenberg Arr 161.62 336 *e*PKP PKPab 02 50 50.7 -2.5
GRF *e*L 04 12 01.3
comp=Z,937nm,22.4s
MOA Molln 161.88 327 ⇑*i*PKPdf PKPdf 02 50 10.7 +2.2
comp=Z,2.6nm,1.0s
MOA ⇑*i*PKPab pPKPab 02 50 58.8 -6.0
comp=Z,9.2nm,1.6s
TIR Tirane 162.19 302 PFAKE 02 50 20.0 +11
TIR LR LR
comp=Z,1μm,22.0s
WLF Walferdange 163.05 346 PFAKE 02 50 20.0 +10
WLF LR LR
comp=Z,885nm,21.0s
TRI Trieste 163.66 323 PFAKE 02 50 20.0 +10
TRI LR LR
comp=Z,845nm,22.0s
BFO Black Forest 163.74 339 PFAKE 02 50 20.0 +10
BFO LR LR
comp=Z,530nm,22.0s
FETA Feichten 164.03 332 ⇑*i*pPKPdf PKPdf 02 50 13.2 +2.6
comp=Z,7.0nm,1.1s
FETA ⇑*i*PKPab PKPab 02 51 02.3 -1.6
comp=Z,7.5nm,1.1s
ECH Echery 164.17 342 PFAKE 02 50 20.0 +9.3
ECH LR LR
comp=Z,699nm,22.0s
TIP Timpagrande 165.14 298 PFAKE 02 50 20.0 +8.1
TIP LR LR
comp=Z,702nm,22.0s
LOR Lormes 165.78 349 *e*PKIKP PKPdf 02 50 10.9 -1.2
AQU L'Aquila 166.01 314 PFAKE 02 50 20.0 +7.5
AQU LR LR
comp=Z,1μm,22.0s
SSF Saint Saulge 166.04 349 *e*PKIKP PKPdf 02 50 10.7 -1.6
CEL Celeste 166.05 295 PFAKE 02 50 20.0 +7.4
CEL LR LR
comp=Z,995nm,20.0s
AVF Avril sur Loir 166.33 350 *e*PKIKP PKPdf 02 50 10.9 -1.7
SMF Signal de Mont 166.39 348 *e*PKIKP PKPdf 02 50 10.8 -1.8
VLC Villacollemand 166.44 326 PFAKE 02 50 20.0 +7.3
VLC LR LR
comp=Z,636nm,22.0s
TCF Toulx Ste Croi 166.97 352 *e*PKIKP PKPdf 02 50 11.8 -1.3
comp=Z,47nm,1.7s
BNI Bardonecchia 167.18 337 *e*PKIKP PKPdf 02 50 13.1 -0.2
BNI MLR MLR
comp=Z,1μm,22.0s
SSB Saint Sauveur 167.56 344 PFAKE 02 50 20.0 +6.5
SSB LR LR
comp=Z,762nm,21.0s
WDD Wield Dalam 167.60 286 PFAKE 02 50 20.0 +6.1
WDD LR LR
comp=Z,1μm,20.0s
TAM Tamanrasset 168.30 207 *e*PKIKP PKPdf 02 50 15.0 +0.2
TAM MLR MLR
comp=Z,987nm,20.0s
FRF La Foret Royal 168.50 334 *e*PKIKP PKPdf 02 50 10.0 -4.2
comp=Z,48nm,1.6s
LMR La Mourre 168.75 334 *e*PKIKP PKPdf 02 50 10.4 -4.0
comp=Z,34nm,1.6s
PVRL Vila Real 170.12 35 *e*PKPdf PKPdf 02 50 20.1 +4.8
PBRG Braganca 170.13 30 *e*PKPdf PKPdf 02 50 15.1 -0.2
VSL Villasalto 170.15 311 PFAKE 02 50 30.0 +15
VSL LR LR
comp=Z,782nm,20.0s
PVIS Viseu 170.45 38 *e*PKPdf PKPdf 02 50 13.4 -2.1
PVIS Viseu 170.45 38 *e*PKPab PKPab 02 51 30.4 -2.1
MVO Moncorvo 170.53 33 *e*PKPdf PKPdf 02 50 13.6 -1.9
MVO Moncorvo 170.53 33 *e*PKPab PKPab 02 51 30.1 -2.6
MVO Moncorvo 170.53 33 *e*LR LR 03 53 24.5
comp=Z,549nm,20.0s
PMAFR Mafra 170.80 50 *e*LR LR 03 53 01.3
comp=Z,611nm,20.0s
MTE Manteigas 170.87 38 PFAKE 02 50 30.0 +14
MTE LR LR
comp=Z,842nm,22.0s
MTE Manteigas 170.87 38 *e*PKPab PKPab 02 51 31.4 -2.9
MTE Manteigas 170.87 38 *e*LR LR 03 56 07.5
comp=Z,667nm,22.0s
PTOM Tomar 170.94 44 *e*PKPdf PKPdf 02 50 12.8 -3.0
PTOM Tomar 170.94 44 *e*PKPab PKPab 02 51 38.5 +3.8
PCBR Castelo Branco 171.31 40 *e*PKPdf PKPdf 02 50 15.8 -0.2
PCBR Castelo Branco 171.31 40 *e*PKPab PKPab 02 51 35.7 -0.6
PMRV Marv??o 171.65 42 *e*LR LR 03 56 02.7
comp=Z,477nm,18.0s
EVO Evora 171.86 49 *e*PKIKP PKPdf 02 50 14.0 -2.3
comp=Z,34nm,1.1s
EVO Evora 171.86 49 *e*PKPdf PKPdf 02 50 21.7 +5.4
EVO Evora 171.86 49 *e*PKPab PKPab 02 51 41.9 +3.1
PESTR Estremoz 171.91 45 *e*PKPdf PKPdf 02 50 16.9 +0.6
PESTR Estremoz 171.91 45 *e*PKPab PKPab 02 51 42.0 +3.0
PESTR Estremoz 171.91 45 *e*LR LR 03 54 18.1
comp=Z,656nm,20.0s
PTEO Sao Teotonio 172.92 57 *e*PKPdf PKPdf 02 50 22.3 +5.9
MORF Marmelete 172.08 58 *e*PKPdf PKPdf 02 50 17.0 +0.5
MORF Marmelete 172.08 58 *e*PKPab PKPab 02 51 43.6 +3.7
MORF Marmelete 172.08 58 *e*LR LR 03 54 07.0
comp=Z,787nm,20.0s
PBEJ Beja 172.25 51 *e*PKPdf PKPdf 02 50 16.7 +0.2
PCVE Castro Verde 172.34 54 *e*PKPdf PKPdf 02 50 16.4 -0.2
PCVE Castro Verde 172.34 54 *e*PKPab PKPab 02 51 43.4 +2.4
PCVE Castro Verde 172.34 54 *e*LR LR 03 55 20.8
comp=Z,772nm,20.0s
PBDV Barranco-do-Ve 172.61 56 *e*PKPdf PKPdf 02 50 17.5 +0.8
PBDV Barranco-do-Ve 172.61 56 *e*PKPab PKPab 02 51 46.8 +4.5
PBDV Barranco-do-Ve 172.61 56 *e*LR LR 03 55 15.1
comp=Z,1μm,20.0s
PBAR Barrancos 172.68 47 *e*PKPdf PKPdf 02 50 15.7 -1.0
PBAR Barrancos 172.68 47 *e*PKPab PKPab 02 51 46.3 +3.8
PBAR Barrancos 172.68 47 *e*LR LR 03 55 49.8
comp=Z,1μm,22.0s
PVAQ Vaqueiros 172.68 55 *e*PKPdf PKPdf 02 50 15.9 -0.8
PVAQ Vaqueiros 172.68 55 *e*PKPab PKPab 02 51 47.2 +4.7
PVAQ Vaqueiros 172.68 55 *e*LR LR 03 54 33.4
comp=Z,812nm,20.0s
PAB San Pablo 173.01 27 PFAKE 02 50 30.0 +13
PAB LR LR
comp=Z,961nm,22.0s
ESDC Sonseca Array 173.03 25 PKP PKPdf 02 50 15.6 -1.1
comp=Z,3.3nm,1.1s,baz=354,slow=3.0,SNR=5.0
ESDC PKPab PKPab 02 51 41.7 -2.2
comp=Z,0.8nm,0.8s,baz=350,slow=6.6,SNR=3.3
ESDC PP PP 02 55 37.6 +2.6
comp=Z,0.8nm,0.9s,baz=116,slow=3.0,SNR=3.1
ESLA Sonseca Array 173.03 25 PFAKE 02 50 30.0 +13
ESLA LR LR
comp=Z,4μm,21.0s
SFS San Fernando 174.20 56 PFAKE 02 50 30.0 +13
SFS LR LR
comp=Z,2μm,19.0s
MDT Midelt 176.27 97 PKP PKPdf 02 50 17.4 -0.6
comp=Z,5.1nm,1.0s,baz=233,slow=0.3,SNR=5.7
MDT PKPab PKPab 02 52 00.9 +2.2
comp=Z,3.6nm,1.0s,baz=284,slow=2.6,SNR=3.6

*IDC **11** 02:36:17.6±1.2, 33°.20S×179°.87W, h24km±4km, mb4.3/4, mb1 4.5/5, mb1mx4.1/18, mbtmp4.3/5, ML3.6/1, Error ellipse: s-maj=31.5km s-min=19.3km az=59.0*
*NEIC **11** 02:36:17.8±1.1, 33°.27S×179°.96W, mb4.6/3, Error ellipse: s-maj=24.3km s-min=18.9km az=84.0*
*ISCJB **11** 02:36:17.4±5.7, 33°.32S±0°.08×179°.8E±0°.3, h20km±38km, mb4.6/6, Error ellipse: s-maj=36.5km s-min=13.9km az=178.2*
ISC 11 02:36:18.8±5.9, 33°.29S±0°.08×179°.7E±0°.3, h15km±36km, h27km±2.0km: pP-P, n13, σ0°.54/11, mb4.6/6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.40**	**202**	Pn	**Pn**	**02 37 39.3**	**+0.5**
	1.7nm,0.3s,baz=66,slow=18,SNR=5.4						
URZ				Sn	**Sn**	**02 38 40.9**	**+0.3**
	2.8nm,0.3s,baz=333,slow=21,SNR=1.3						
OUZ	**Omahuta**	**5.43**	**247**	*e*Pn	**Pn**	**02 37 38.7**	**-0.5**
HNR	**Honiara**	**29.93**	**318**	P	**P**	**02 42 27.2**	**+0.9**
	54nm,0.4s,mb5.7,baz=210,slow=12,SNR=2.8						
ASAR	**Alice Springs**	**41.13**	**271**	P	**P**	**02 44 02.1**	**-0.3**
	7.1nm,0.8s,mb4.4,baz=112,slow=7.6,SNR=20						
ASAR				pP	pP	02 44 10.4	+3.3
	5.6nm,0.7s,baz=110,slow=7.4,SNR=9.7						
WRAB	**Tennant Creek**	**42.38**	**277**	*e*P	**P**	**02 44 13.2**	**+0.5**
	10nm,0.9s,mb4.5						
WRA	**Warramunga Arr**	**42.38**	**277**	P	**P**	**02 44 12.1**	**-0.6**
	4.3nm,0.6s,mb4.2,baz=116,slow=7.7,SNR=14						
WRA				pP	pP	02 44 20.1	+2.8
	4.9nm,0.6s,baz=116,slow=7.5,SNR=9.4						
FITZ	**Fitzroy Crossi**	**50.51**	**273**	P	**P**	**02 45 16.5**	**0.0**
	5.6nm,0.8s,mb4.6,baz=158,slow=8.9,SNR=5.0						
FITZ	**Fitzroy Crossi**	**50.51**	**273**	*e*P	**P**	**02 45 16.2**	**-0.3**
	12nm,1.0s,mb4.8						
QSPA	**South Pole Qui**	**56.83**	**180**	P	**P**	**02 46 01.6**	**-0.5**
	2.5nm,0.6s,mb4.4,baz=62,slow=1.5,SNR=8.2						
QSPA				pP	pP	02 46 08.2	+1.4
	8.4nm,0.7s,baz=62,slow=1.4,SNR=12						
QSPA	**South Pole Qui**	**56.83**	**180**	*e*P	**P**	**02 46 01.2**	**-0.8**
	2.7nm,0.6s,mb4.5						
QSPA				pP	pP	02 46 08.2	+1.4
KURK	**Kurchatov**	**121.62**	**313**	PKP	PKPdf	02 55 08.7	-2.6
	0.2nm,0.2s,baz=128,slow=5.0,SNR=2.8						
KURK				pPKP	pPKPdf	02 55 15.8	-0.6
	0.3nm,0.4s,baz=100,slow=2.6,SNR=1.9						
FINES	**FINESS Array B**	**147.11**	**337**	PKPbc	PKPbc	02 55 55.7	-4.6
	2.6nm,0.8s,baz=59,slow=5.4,SNR=2.5						
TORD	**Torodi Ar. Bea**	**159.87**	**186**	PKPab	PKPab	02 56 53.5	-3.3
	0.5nm,0.9s,baz=165,slow=3.8,SNR=4.3						
TORD				pPKPab	pPKPab	02 57 00.8	-0.9
	0.9nm,0.9s,baz=179,slow=2.6,SNR=3.5						

*IDC **11** 02:37:19.8±1.4, 37°.96N×21°.71E, h0km, mb3.7/8, mb1 3.8/8, mb1mx3.6/28, mbtmp3.7/8, MS2.8/1, Ms1 2.8/1, ms1mx2.2/40, Error ellipse: s-maj=30.4km s-min=25.0km az=133.0*
*CSEM **11** 02:37:22.6±0.3, 37°.87N×21°.77E, h17km±2km, ML3.3, Error ellipse: s-maj=4.4km s-min=3.7km az=43.0*
*THE **11** 02:37:22.6, 37°.86N×21°.74E, h12km±1km, ML4.6/3, Error ellipse: s-maj=1.3km s-min=0.4km az=63.0*
*ISCJB **11** 02:37:22.8±0.4, 37°.89N±0°.03×21°.71E±0°.03, h24km±4km, mb3.6/8, Error ellipse: s-maj=4.9km s-min=4.0km az=142.2*
*NEIC **11** 02:37:23.0±0.5, 37°.99N×21°.80E, h10km, ML3.3(ATH), Error ellipse: s-maj=9.7km s-min=5.8km az=213.0*
ISC 11 02:37:22.9±0.5, 37°.86N±0°.02×21°.73E±0°.03, h13km±3km, n86, σ1°.34/101, mb3.6/8, 3C, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.28**	**313**	P	**Pg**	**02 37 29.5**	**+0.7**
RLS	**Riolos of Patr**	**0.28**	**313**	P	**Pg**	**02 37 29.5**	**+0.7**
LAKA	**Lakka**	**0.42**	**27**	P	**Pg**	**02 37 30.7**	**-0.6**
LAKA				S	**Sg**	**02 37 37.6**	**+0.6**
LAKA	**Lakka**	**0.42**	**27**	P	**Pg**	**02 37 30.7**	**-0.6**
LAKA				S	**Sg**	**02 37 37.6**	**+0.6**
GUR	**Goura**	**0.49**	**81**	P	**Pg**	**02 37 31.7**	**-0.8**
GUR				S	**Sg**	**02 37 39.1**	**+0.1**
GUR	**Goura**	**0.49**	**81**	P	**Pg**	**02 37 31.7**	**-0.8**
GUR				S	**Sg**	**02 37 39.1**	**+0.1**
TRIZ	**Trizonia**	**0.57**	**28**	P	**Pg**	**02 37 33.2**	**-0.8**
TRIZ				S	**Sg**	**02 37 42.1**	**+0.6**
TRIZ	**Trizonia**	**0.57**	**28**	P	**Pg**	**02 37 33.2**	**-0.8**
TRIZ				S	**Sg**	**02 37 42.1**	**+0.6**
EFP	**Efpalio**	**0.58**	**14**	P	**Pg**	**02 37 33.3**	**-0.9**
EFP				S	**Sg**	**02 37 42.4**	**+0.5**
EFP	**Efpalio**	**0.58**	**14**	P	**Pg**	**02 37 33.3**	**-0.9**
EFP				S	**Sg**	**02 37 42.4**	**+0.5**
KALE	**Kalithea**	**0.62**	**31**	P	**Pg**	**02 37 33.8**	**-1.1**
KALE				S	**Sg**	**02 37 43.6**	**+0.5**
KALE	**Kalithea**	**0.62**	**31**	P	**Pg**	**02 37 33.8**	**-1.1**
KALE				S	**Sg**	**02 37 43.6**	**+0.5**
ITM	**Ithomi**	**0.70**	**167**	P	**Pg**	**02 37 37.3**	**+0.9**
ITM	**Ithomi**	**0.70**	**167**	P	**Pg**	**02 37 36.1**	**-0.3**
ITM	**Ithomi**	**0.70**	**167**	P	**Pg**	**02 37 36.1**	**-0.3**
VLX	**Vlachokerasia**	**0.71**	**134**	P	**Pg**	**02 37 36.1**	**-0.6**
VLX				S	**Sg**	**02 37 46.1**	**+0.1**
VLX	**Vlachokerasia**	**0.71**	**134**	P	**Pg**	**02 37 36.1**	**-0.6**
VLX				S	**Sg**	**02 37 46.1**	**+0.1**
KFL	**Anninata**	**0.79**	**289**	P	**Pg**	**02 37 37.4**	**-0.7**
DSF	**Desfina**	**0.83**	**49**	P	**Pg**	**02 37 38.1**	**-0.9**
DSF	**Desfina**	**0.83**	**49**	P	**Pg**	**02 37 38.1**	**-0.9**
VLS	**Valsamata**	**0.95**	**290**	P	**Pb**	**02 37 40.4**	**-0.8**
VLS	**Valsamata**	**0.95**	**290**	P	**Pb**	**02 37 40.4**	**-0.8**
PYL	**PYLOS**	**0.97**	**180**	P	**Pg**	**02 37 40.8**	**-0.7**
PYL	**PYLOS**	**0.97**	**180**	P	**Pg**	**02 37 40.8**	**-0.7**
LTK	**Loutraki**	**0.99**	**80**	P	**Pg**	**02 37 40.7**	**-1.2**
LTK	**Loutraki**	**0.99**	**80**	P	**Pg**	**02 37 40.7**	**-1.2**
EVR	**Evrytania**	**1.05**	**3**	P	**Pg**	**02 37 45.4**	**+2.2**
AGG	**Agios Georgios**	**1.25**	**22**	P	**Pn**	**02 37 44.8**	**-1.2**
AGG	**Agios Georgios**	**1.25**	**22**	P	**Pn**	**02 37 44.8**	**-1.2**
LKD2	**Lefkada island**	**1.25**	**318**	P	**Pn**	**02 37 45.0**	**-1.0**
LKD2	**Lefkada island**	**1.25**	**318**	P	**Pn**	**02 37 45.0**	**-1.0**
LKR	**Lokris**	**1.27**	**51**	P	**Pn**	**02 37 45.7**	**-0.6**
LKR	**Lokris**	**1.27**	**51**	P	**Pn**	**02 37 45.7**	**-0.6**
ATAL	**Atalanti**	**1.31**	**50**	P	**Pn**	**02 37 46.1**	**-0.7**
ATAL	**Atalanti**	**1.31**	**50**	P	**Pn**	**02 37 46.1**	**-0.7**
VLI	**Veliai**	**1.49**	**140**	P	**Pn**	**02 37 51.5**	**+2.1**
PTL	**Penteli**	**1.70**	**83**	P	**Pn**	**02 37 51.5**	**-0.6**
PTL	**Penteli**	**1.70**	**83**	P	**Pn**	**02 37 51.5**	**-0.6**
JAN	**Janina**	**1.92**	**339**	P	**Pn**	**02 38 00.5**	**+5.3**
KEK	**Kerkira**	**2.39**	**321**	P	**Pn**	**02 38 02.5**	**+0.9**
KEK	**Kerkira**	**2.39**	**321**	P	**Pn**	**02 38 02.5**	**+0.9**
KZN	**Kozani**	**2.44**	**1**	P	**Pn**	**02 38 04.8**	**+2.4**
VAM	**Vamos**	**3.15**	**140**	P	**Pn**	**02 38 14.6**	**+2.4**
BIA	**Bitola**	**3.17**	**354**	*e*Pn	**Pn**	**02 38 14.6**	**+2.2**
OHR	**Ohrid**	**3.32**	**348**	*e*Pn	**Pn**	**02 38 15.5**	**+1.0**
VAY	**Valandovo**	**3.51**	**10**	*e*Pn	**Pn**	**02 38 14.1**	**-3.0**
VAY				*e*Lg		02 38 59.1	
	comp=E,39nm,1.0s						
VAY				*e*Lg		02 38 59.9	
	comp=N,55nm,1.2s						
KRUS	**Krusevo**	**3.52**	**354**	*e*Pn	**Pn**	**02 38 17.7**	**+0.5**
KRUS				*e*Lg		02 38 59.8	
	comp=E,13nm,0.4s						
KRUS				*e*Lg		02 38 59.9	
	comp=N,14nm,0.5s						
IDI	**Anoyia**	**3.62**	**134**	P	**Pn**	**02 38 21.6**	**+3.1**
SMG	**Samos**	**4.05**	**91**	P	**Pn**	**02 38 24.6**	**+0.1**
SMG	**Samos**	**4.05**	**91**	P	**Pn**	**02 38 24.6**	**+0.1**
NPS	**Neapolis**	**4.06**	**129**	P	**Pn**	**02 38 27.5**	**+2.8**
TIP	**Timpagrande**	**4.12**	**290**	Pn	**Pn**	**02 38 26.6**	**+1.2**
TIP	**Timpagrande**	**4.12**	**290**	Pn	**Pn**	**02 38 26.6**	**+1.2**
VTS	**Vitosha**	**4.86**	**13**	*e*Pn	**Pn**	**02 38 37.8**	**+2.2**
SG1	**Sgolgore (BA)**	**4.92**	**309**	*e*Pn	**Pn**	**02 38 36.6**	**+0.2**
SG1				*e*Sn	**Sn**	**02 39 31.0**	**-2.1**
BARS	**Barje**	**4.95**	**1**	*e*Pn	**Pn**	**02 38 37.6**	**+0.8**
ACER	**Acerenza**	**5.35**	**305**	Pn	**Pn**	**02 38 43.8**	**+1.4**
	comp=N,92nm,1.0s						
ACER	**Acerenza**	**5.35**	**305**	Pn	**Pn**	**02 38 43.8**	**+1.4**
	comp=N,92nm,1.0s						
SLNA	**Salina**	**5.48**	**279**	Pn	**Pn**	**02 38 48.6**	**+4.5**
	comp=N,15nm,0.4s						
STON	**Ston**	**5.87**	**330**	*e*Pn	**Pn**	**02 38 47.9**	**-1.6**
STON				Sn	**Sn**	**02 39 50.5**	**-6.2**
STON	**Ston**	**5.87**	**330**	*e*Pn	**Pn**	**02 38 47.9**	**-1.6**
BBLS	**Lazići**	**6.25**	**344**	*e*Pn	**Pn**	**02 38 54.4**	**-0.3**
DIVS	**Divibare**	**6.37**	**349**	*e*Pn	**Pn**	**02 38 55.5**	**-0.8**
SDI	**San Donato**	**7.21**	**305**	Pn	**Pn**	**02 39 10.4**	**+2.5**
	comp=N,4.2nm,0.5s						
NRCA	**Norcia**	**8.24**	**310**	Pn	**Pn**	**02 39 23.3**	**+1.3**
NRCA	**Norcia**	**8.24**	**310**	Pn	**Pn**	**02 39 23.3**	**+1.3**
MLR	**Muntele Rosu**	**8.25**	**21**	Pn	**Pn**	**02 39 25.3**	**+3.2**
	comp=N,0.3nm,0.3s,baz=189,slow=5.8,SNR=4.2						
MLR	**Muntele Rosu**	**8.25**	**21**	⇑*i*P	**Pn**	**02 39 26.3**	**+4.2**
NVLJ	**Novalja**	**8.46**	**324**	*e*Pn	**Pn**	**02 39 23.6**	**-1.4**
NVLJ				Sn	**Sn**	**02 40 54.3**	**-5.9**
NVLJ	**Novalja**	**8.46**	**324**	*e*Pn	**Pn**	**02 39 23.6**	**-1.4**
PLOR	**Plostina**	**8.78**	**23**	⇑*i*P	**Pn**	**02 39 31.5**	**+2.1**
VRI	**Vrincioaia**	**8.82**	**23**	⇑*i*P	**Pn**	**02 39 31.8**	**+1.8**
BRTR	**Keskin Array B**	**9.48**	**75**	Pn	**Pn**	**02 39 42.9**	**+3.8**
	comp=N,0.1nm,0.3s,baz=258,slow=13,SNR=4.2						
HFS	**Hagfors**	**22.87**	**350**	P	**P**	**02 42 23.8**	**-1.9**
	comp=N,2.9nm,0.8s,mb3.8,baz=156,slow=11,SNR=7.2						
HFS				LR	LR	02 51 05.2	
	comp=N,27nm,21.1s,baz=116,slow=36						
HFS	**Hagfors**	**22.87**	**350**	P	**P**	**02 42 23.8**	**-1.9**
FINES	**FINESS Array B**	**23.76**	**5**	P	**P**	**02 42 32.4**	**-2.4**
	comp=N,1.1nm,0.8s,mb3.3,baz=152,slow=13,SNR=3.9						
NOA	**NORSAR Array B**	**24.12**	**347**	P	**P**	**02 42 34.6**	**-3.5**
	comp=N,1.0nm,0.8s,mb3.3,baz=152,slow=10,SNR=3.0						
EKA	**Eskdalemuir Ar**	**24.24**	**324**	P	**P**	**02 42 38.8**	**-0.4**
	comp=N,0.7nm,0.6s,mb3.3,baz=130,slow=8.8,SNR=3.8						
EKA	**Eskdalemuir Ar**	**24.24**	**324**	P	**P**	**02 42 38.8**	**-0.4**
TORD	**Torodi Ar. Bea**	**30.41**	**221**	P	**P**	**02 43 34.1**	**-0.7**
	comp=N,0.4nm,0.8s,mb3.2,baz=36,slow=8.8,SNR=5.1						
KURK	**Kurchatov**	**41.70**	**53**	P	**P**	**02 45 09.6**	**-1.5**
	comp=N,0.7nm,0.4s,mb3.6,baz=283,slow=8.8,SNR=4.5						
KURK	**Kurchatov**	**41.70**	**53**	P	**P**	**02 45 09.6**	**-1.5**
MKAR	**Makanchi Array**	**44.65**	**58**	P	**P**	**02 45 33.6**	**-1.4**
	comp=N,0.5nm,0.5s,mb3.6,baz=305,slow=6.3,SNR=4.9

*IDC **11** 02:41:05.2±0.7, 25°.55N×141°.25E, h159km±6km, mb3.5/14, mb1 3.6/17, mb1mx3.5/30, mbtmp3.5/17, Error ellipse: s-maj=19.6km s-min=9.8km az=101.0*
*JMA **11** 02:41:07.0±0.2, 25°.59N×141°.01E, h128km, M4.7*
ISC 11 02:41:05.7±0.7, 25°.62N±0°.06×141°.3E±0°.1, h167km±7km, h148km±5.2km; pP-P, n35, σ1§06/38, mb3.8/18, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**1.27**	**38**	P	**Pn**	**02 41 35.0**	**+0.6**
JHHJ				S	**Sn**	**02 41 56.0**	**-0.5**
CBIJ	**Chichi jima**	**1.67**	**28**	P	**Pn**	**02 41 39.2**	**+0.9**
CBIJ				S	**Sn**	**02 42 03.8**	**+0.4**
CBIJ	**Chichi jima**	**1.67**	**28**	P	**Pn**	**02 41 39.2**	**+0.9**
	208nm,0.3s,baz=193,slow=1.9,SNR=181						
CBIJ				S	**Sn**	**02 42 03.5**	**+0.1**
	880nm,0.3s,baz=285,slow=23,SNR=22						
BSO1	**Boso 1**	**9.01**	**358**	P	**Pn**	**02 43 12.0**	**-0.3**
BSO1				*e*S	**Sn**	**02 44 50.9**	**-1.7**
BSO3	**Boso 3**	**9.18**	**356**	P	**Pn**	**02 43 14.0**	**-0.5**
BSO3				*e*S	**Sn**	**02 44 55.0**	**-1.6**
JOD2	**Odawara 2**	**9.80**	**349**	P	**Pn**	**02 43 23.6**	**+0.9**
JRY	**Ryogami san**	**10.57**	**349**	P	**Pn**	**02 43 32.6**	**-0.2**
MJAR	**Matsushiro Arr**	**11.21**	**347**	P	**Pn**	**02 43 41.0**	**-0.1**
	2.7nm,0.3s,baz=160,slow=11,SNR=7.5						
MAJO	**Matsushiro**	**11.21**	**347**	*e*Pn	**Pn**	**02 43 42.1**	**+0.9**
	9.2nm,0.3s						
JMK	**Ichinoseki**	**13.29**	**360**	P	**Pn**	**02 44 08.2**	**+0.2**
KSRS	**Korea Array**	**16.39**	**319**	P	**Pn**	**02 44 47.4**	**+1.1**
	0.3nm,0.3s,baz=140,slow=12,SNR=6.0						
ERM	**Erimo**	**16.43**	**5**	*e*P	**Pn**	**02 44 50.1**	**+3.4**
	24nm,1.0s						
ASAJ	**Asahikawa**	**18.48**	**3**	P	**P**	**02 45 08.1**	**-0.9**
	0.4nm,0.3s,baz=231,slow=14,SNR=1.5						
SONM	**Songino Array**	**35.26**	**318**	P	**P**	**02 47 46.6**	**+2.4**
	0.2nm,0.4s,mb3.1,baz=106,slow=9.2,SNR=1.7						
CMAR	**Chiang Mai Arr**	**39.78**	**268**	P	**P**	**02 48 23.8**	**+1.2**
	1.2nm,0.5s,mb3.8,baz=68,slow=6.3,SNR=2.0						
WRAB	**Tennant Creek**	**45.78**	**189**	*e*P	**P**	**02 49 09.8**	**-0.9**
	6.8nm,0.3s,mb4.8						
WRAB				*e*pP	pP	02 49 40.0	-7.6
WRA	**Warramunga Arr**	**45.79**	**189**	P	**P**	**02 49 10.1**	**-0.7**
	9.4nm,0.4s,mb4.7,baz=11,slow=8.9,SNR=109						
FITZ	**Fitzroy Crossi**	**46.05**	**201**	P	**P**	**02 49 12.4**	**-0.5**
	3.2nm,0.8s,mb4.0,baz=13,slow=5.5,SNR=15						
ASAR	**Alice Springs**	**49.52**	**189**	P	**P**	**02 49 38.4**	**-1.1**
	0.6nm,0.5s,mb3.5,baz=22,slow=12,SNR=4.3						
KURK	**Kurchatov**	**53.47**	**315**	P	**P**	**02 50 09.1**	**+0.6**
	0.5nm,0.5s,mb3.5,baz=92,slow=7.7,SNR=2.5						
TKM2	**Tokmak 2**	**55.63**	**306**	*e*P	**P**	**02 50 24.0**	**-0.3**
	6.5nm,1.2s,mb4.3						
STKA	**Stephens Creek**	**57.17**	**180**	P	**P**	**02 50 34.8**	**-0.3**
	4.1nm,0.6s,mb4.5,baz=1.1,slow=5.1,SNR=8.2						
ABKAR	**Akbulak array**	**65.56**	**315**	*e*P	**P**	**02 51 29.3**	**-2.1**
	1.1nm,0.8s,mb3.7						
RES	**Resolute Bay**	**73.67**	**13**	P	**P**	**02 52 22.7**	**+2.1**
	2.2nm,0.9s,mb3.9,baz=297,slow=2.3,SNR=2.4						
YKA	**Yellowknife Ar**	**73.81**	**28**	P	**P**	**02 52 23.1**	**+1.6**
	0.3nm,0.4s,mb3.3,baz=295,slow=5.8,SNR=3.2						
YKA				pP	pP	02 53 00.5	-1.4
	0.8nm,0.6s,baz=297,slow=5.4,SNR=5.3						
FINES	**FINESS Array B**	**78.92**	**334**	P	**P**	**02 52 50.2**	**-0.1**
	1.8nm,0.6s,mb3.9,baz=77,slow=4.5,SNR=6.0						
ELK	**Elko**	**83.11**	**48**	P	**P**	**02 53 12.2**	**-0.7**
	0.5nm,0.3s,mb3.6,baz=207,slow=2.3,SNR=3.7						
AKASG	**Malin Array Be**	**83.34**	**324**	P	**P**	**02 53 13.6**	**-0.3**
	0.2nm,0.3s,mb3.4,baz=51,slow=5.6,SNR=4.4						
HFS	**Hagfors**	**84.46**	**337**	P	**P**	**02 53 18.7**	**-0.6**
	1.5nm,0.7s,mb3.8,baz=153,slow=1.0,SNR=6.2						
NB2	**NORSAR Subarra**	**84.68**	**338**	P	**P**	**02 53 19.9**	**-0.6**
	comp=Z,0.3nm,0.5s,mb3.3,baz=41,slow=5.6						
NOA	**NORSAR Array B**	**84.68**	**338**	P	**P**	**02 53 19.9**	**-0.5**
	comp=Z,0.8nm,0.5s,mb3.7,baz=45,slow=4.8,SNR=4.3						
NOA	**NORSAR Array B**	**84.68**	**338**	P	**P**	**02 53 19.9**	**-0.6**
PDAR	**Pinedale Array**	**85.81**	**44**	P	**P**	**02 53 29.6**	**+3.1**
	comp=Z,0.1nm,0.5s,mb2.8,baz=217,slow=2.8,SNR=2.3						
PDAR				pP	pP	02 54 07.6	-0.3
	comp=Z,0.4nm,0.5s,baz=222,slow=1.2,SNR=3.1						
TORD	**Torodi Ar. Bea**	**124.94**	**310**	PKP	PKPdf	02 59 46.1	-0.7
	comp=Z,0.2nm,0.7s,baz=34,slow=1.4,SNR=5.4						
LPAZ	**La Paz**	**151.04**	**77**	PKPbc	PKPbc	03 00 41.9	+2.2
	comp=Z,1.9nm,0.6s,baz=279,slow=2.8,SNR=10						
LPAZ				pPKPbc	pPKPbc	03 01 22.8	-0.4
	comp=Z,1.0nm,0.9s,baz=126,slow=2.6,SNR=1.9						

*IDC **11** 02:43:47.4±12.0, 36°.94N×20°.61E, h0km, mb3.9/3, mb1 3.7/4, mb1mx3.4/26, mbtmp3.7/4, ML3.0/1, Error ellipse: s-maj=236.8km s-min=45.8km az=27.0*
*ATH **11** 02:44:00.0, 38°.02N×21°.55E, h23km±2km, MD2.9/10*
*THE **11** 02:44:00.8, 38°.04N×21°.57E, h4km±2km, ML4.2/3, Error ellipse: s-maj=2.2km s-min=0.8km az=158.0*
*CSEM **11** 02:44:00.5±0.2, 38°.03N×21°.55E, h20km, MD2.9, Error ellipse: s-maj=3.9km s-min=3.4km az=42.0*
*NEIC **11** 02:44:00.0, 38°.02N×21°.55E, h23km, MD2.9(ATH), After ATH.*
*ISCJB **11** 02:44:00.6±0.4, 38°.03N±0°.03×21°.55E±0°.03, h22km±3km, mb3.8/3, Error ellipse: s-maj=4.2km s-min=3.5km az=7.5*
ISC 11 02:44:00.6±0.4, 38°.02N±0°.02×21°.56E±0°.03, h18km±2km, n83, σ1§05/126, mb3.8/3, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.08**	**296**	*e*Pb	**Pg**	**02 44 04.2**	**+0.2**
RLS				*e*Sb	**Sg**	**02 44 07.1**	**+0.8**
RLS	**Riolos of Patr**	**0.08**	**296**	*e*PB	**Pg**	**02 44 04.2**	**+0.2**
RLS				*e*SB	**Sg**	**02 44 07.1**	**+0.8**
RLS	**Riolos of Patr**	**0.08**	**296**	*e*Pb	**Pg**	**02 44 04.2**	**+0.2**
RLS				*e*Sb	**Sg**	**02 44 07.1**	**+0.8**
UPR	**University Cam**	**0.32**	**35**	P	**Pg**	**02 44 06.9**	**-0.5**
UPR	**University Cam**	**0.32**	**35**	*e*PB	**Pg**	**02 44 07.0**	**-0.4**
UPR				*e*SB	**Sg**	**02 44 12.9**	**+0.9**
UPR	**University Cam**	**0.32**	**35**	*e*Pb	**Pg**	**02 44 07.0**	**-0.4**
UPR				*e*Sb	**Sg**	**02 44 12.9**	**+0.9**
LAKA	**Lakka**	**0.40**	**57**	P	**Pg**	**02 44 08.2**	**-0.6**
LAKA				S	**Sg**	**02 44 14.3**	**0.0**
LAKA	**Lakka**	**0.40**	**57**	P	**Pg**	**02 44 08.2**	**-0.6**
LAKA				S	**Sg**	**02 44 14.3**	**0.0**
EFP	**Efpalio**	**0.49**	**34**	P	**Pg**	**02 44 09.6**	**-0.8**
EFP				S	**Sg**	**02 44 17.1**	**+0.1**
EFP	**Efpalio**	**0.49**	**34**	*e*PB	**Pb**	**02 44 09.7**	**-1.0**
EFP				*e*SB	**Sb**	**02 44 18.1**	**+0.6**
EFP	**Efpalio**	**0.49**	**34**	*e*Pb	**Pb**	**02 44 09.7**	**-1.0**
EFP				S	**Sg**	**02 44 17.1**	**+0.1**
EFP				*e*Sb	**Sb**	**02 44 18.1**	**+0.6**
TRIZ	**Trizonia**	**0.53**	**50**	P	**Pg**	**02 44 10.3**	**-0.9**
TRIZ				S	**Sg**	**02 44 18.7**	**+0.4**
TRIZ	**Trizonia**	**0.53**	**50**	P	**Pg**	**02 44 10.3**	**-0.9**
TRIZ				S	**Sg**	**02 44 18.7**	**+0.4**
KALE	**Kalithea**	**0.59**	**51**	P	**Pg**	**02 44 11.3**	**-0.9**
KALE				S	**Sg**	**02 44 20.6**	**+0.5**
KALE	**Kalithea**	**0.59**	**51**	P	**Pg**	**02 44 11.3**	**-0.9**
KALE				S	**Sg**	**02 44 20.6**	**+0.5**
KFL	**Anninata**	**0.61**	**278**	P	**Pg**	**02 44 12.7**	**0.0**
GUR	**Goura**	**0.63**	**98**	P	**Pg**	**02 44 12.1**	**-0.8**
GUR				S	**Sg**	**02 44 21.8**	**+0.5**
GUR	**Goura**	**0.63**	**98**	*e*PB	**Pb**	**02 44 12.0**	**-1.0**
GUR				*e*SN	**Sg**	**02 44 22.3**	**+1.0**
GUR	**Goura**	**0.63**	**98**	P	**Pg**	**02 44 12.1**	**-0.8**
GUR				S	**Sg**	**02 44 21.8**	**+0.5**
VLS	**Valsamata**	**0.78**	**282**	*e*Pn	**Pb**	**02 44 14.8**	**-0.8**
VLS				*e*Sn	**Sn**	**02 44 27.5**	**-0.5**
VLS	**Valsamata**	**0.78**	**282**	P	**Pb**	**02 44 14.8**	**-0.8**
VLS				S	**Sb**	**02 44 27.9**	**+2.0**
VLS	**Valsamata**	**0.78**	**282**	*e*PN	**Pb**	**02 44 14.8**	**-0.8**
VLS				*e*SN	**Sn**	**02 44 27.5**	**-0.5**
VLS	**Valsamata**	**0.78**	**282**	P	**Pb**	**02 44 14.8**	**-0.8**
VLS				*e*Sn	**Sn**	**02 44 27.5**	**-0.5**
VLS				S	**Sb**	**02 44 27.9**	**+2.0**
DSF	**Desfina**	**0.86**	**63**	P	**Pb**	**02 44 15.6**	**-1.3**
DSF				S	**Sb**	**02 44 28.1**	**0.0**
DSF	**Desfina**	**0.86**	**63**	P	**Pb**	**02 44 15.6**	**-1.3**
DSF				S	**Sb**	**02 44 28.1**	**0.0**
ITM	**Ithomi**	**0.89**	**161**	*e*Pn	**Pn**	**02 44 17.5**	**-0.8**
ITM				*e*Sn	**Sn**	**02 44 30.2**	**-0.5**
ITM	**Ithomi**	**0.89**	**161**	P	**Pb**	**02 44 18.1**	**+0.6**
ITM	**Ithomi**	**0.89**	**161**	*e*PN	**Pn**	**02 44 17.5**	**-0.8**
ITM				*e*SN	**Sn**	**02 44 30.2**	**-0.5**
ITM	**Ithomi**	**0.89**	**161**	*e*Pn	**Pn**	**02 44 17.5**	**-0.8**
ITM	**Ithomi**	**0.89**	**161**	P	**Pb**	**02 44 18.1**	**+0.6**
ITM				*e*Sn	**Sn**	**02 44 30.2**	**-0.5**
EVR	**Evrytania**	**0.91**	**12**	*e*Pn	**Pn**	**02 44 17.2**	**-1.4**
EVR				*e*Sn	**Sn**	**02 44 31.2**	**-0.1**
EVR	**Evrytania**	**0.91**	**12**	*e*PN	**Pn**	**02 44 17.2**	**-1.4**
EVR				*e*SN	**Sn**	**02 44 31.2**	**-0.1**
EVR	**Evrytania**	**0.91**	**12**	*e*Pn	**Pn**	**02 44 17.2**	**-1.4**
EVR				*e*Sn	**Sn**	**02 44 31.2**	**-0.1**
VLX	**Vlachokerasia**	**0.92**	**135**	P	**Pb**	**02 44 17.9**	**-0.1**
VLX				S	**Sb**	**02 44 32.4**	**+2.4**
VLX	**Vlachokerasia**	**0.92**	**135**	*e*PN	**Pn**	**02 44 18.2**	**-0.5**
VLX	**Vlachokerasia**	**0.92**	**135**	P	**Pb**	**02 44 17.9**	**-0.1**
VLX	**Vlachokerasia**	**0.92**	**135**	*e*Pn	**Pn**	**02 44 18.3**	**-0.4**
VLX				S	**Sb**	**02 44 32.4**	**+2.4**
LKD2	**Lefkada island**	**1.04**	**318**	P	**Pb**	**02 44 19.2**	**-0.9**
LKD2	**Lefkada island**	**1.04**	**318**	P	**Pb**	**02 44 19.2**	**-0.9**
LTK	**Loutraki**	**1.11**	**90**	P	**Pb**	**02 44 20.6**	**-0.7**
LTK	**Loutraki**	**1.11**	**90**	*e*PN	**Pn**	**02 44 20.7**	**-0.6**
LTK				*e*SN	**Sn**	**02 44 36.6**	**+0.4**
LTK	**Loutraki**	**1.11**	**90**	P	**Pb**	**02 44 20.6**	**-0.7**
LTK				*e*Sn	**Sn**	**02 44 36.6**	**+0.4**
PYL	**PYLOS**	**1.14**	**173**	P	**Pb**	**02 44 21.7**	**+0.1**
PYL				S	**Sb**	**02 44 40.0**	**+3.9**
PYL	**PYLOS**	**1.14**	**173**	*e*PN	**Pn**	**02 44 21.6**	**0.0**
PYL	**PYLOS**	**1.14**	**173**	*e*Pn	**Pn**	**02 44 21.6**	**0.0**
PYL				S	**Sb**	**02 44 40.0**	**+3.9**
AGG	**Agios Georgios**	**1.17**	**31**	P	**Pn**	**02 44 21.5**	**-0.6**
AGG	**Agios Georgios**	**1.17**	**31**	P	**Pn**	**02 44 21.5**	**-0.6**
LKR	**Lokris**	**1.29**	**61**	P	**Pn**	**02 44 24.5**	**+0.7**
LKR	**Lokris**	**1.29**	**61**	P	**Pn**	**02 44 23.6**	**-0.2**
LKR	**Lokris**	**1.29**	**61**	P	**Pn**	**02 44 23.6**	**-0.2**
ATAL	**Atalanti**	**1.33**	**59**	P	**Pn**	**02 44 25.2**	**+0.9**
ATAL				S	**Sn**	**02 44 43.7**	**+2.1**
ATAL	**Atalanti**	**1.33**	**59**	P	**Pn**	**02 44 25.2**	**+0.9**
ATAL				S	**Sn**	**02 44 43.7**	**+2.1**
THL	**Klokotos Trika**	**1.58**	**13**	P	**Pn**	**02 44 29.1**	**+1.4**
THL	**Klokotos Trika**	**1.58**	**13**	P	**Pn**	**02 44 29.1**	**+1.4**
VLI	**Veliai**	**1.70**	**139**	P	**Pn**	**02 44 34.0**	**+4.6**
JAN	**Janina**	**1.72**	**342**	P	**Pn**	**02 44 33.1**	**+3.4**
JAN	**Janina**	**1.72**	**342**	P	**Pn**	**02 44 33.1**	**+3.4**
IGT	**Igoumenitsa**	**1.79**	**328**	P	**Pn**	**02 44 32.1**	**+1.5**
IGT	**Igoumenitsa**	**1.79**	**328**	P	**Pn**	**02 44 32.1**	**+1.5**
NEO	**Neokhori**	**1.83**	**45**	P	**Pn**	**02 44 32.1**	**+1.0**
NEO	**Neokhori**	**1.83**	**45**	P	**Pn**	**02 44 32.1**	**+1.0**
KEK	**Kerkira**	**2.18**	**321**	P	**Pn**	**02 44 37.8**	**+1.9**
KEK	**Kerkira**	**2.18**	**321**	P	**Pn**	**02 44 37.8**	**+1.9**
BIA	**Bitola**	**3.00**	**357**	*e*Pn	**Pn**	**02 44 51.6**	**+4.4**
KRUS	**Krusevo**	**3.35**	**356**	*e*Pn	**Pn**	**02 44 53.5**	**+1.4**
VAY	**Valandovo**	**3.38**	**13**	*e*Pn	**Pn**	**02 44 51.9**	**-0.7**
TIP	**Timpagrande**	**3.93**	**289**	P	**Pn**	**02 45 04.2**	**+4.1**
TIP	**Timpagrande**	**3.93**	**289**	P	**Pn**	**02 45 04.2**	**+4.1**
VTS	**Vitosha**	**4.73**	**15**	*e*Pn	**Pn**	**02 45 14.8**	**+3.7**
BARS	**Barje**	**4.79**	**2**	*e*Pn	**Pn**	**02 45 14.9**	**+3.0**
STON	**Ston**	**5.67**	**330**	*e*Pn	**Pn**	**02 45 23.1**	**-0.8**
STON				Sn	**Sn**	**02 46 25.3**	**-3.2**
STON	**Ston**	**5.67**	**330**	*e*Pn	**Pn**	**02 45 23.1**	**-0.8**
STON				Sn	**Sn**	**02 46 25.3**	**-3.2**
BBLS	**Lazići**	**6.06**	**345**	*e*Pn	**Pn**	**02 45 28.4**	**-0.9**
DIVS	**Divibare**	**6.18**	**349**	*e*Pn	**Pn**	**02 45 31.0**	**0.0**
NVLJ	**Novalja**	**8.24**	**325**	*e*Pn	**Pn**	**02 45 59.3**	**+0.1**
NVLJ				Sn	**Sn**	**02 47 29.1**	**-2.9**
NVLJ	**Novalja**	**8.24**	**325**	*e*Pn	**Pn**	**02 45 59.3**	**0.0**
NVLJ				Sn	**Sn**	**02 47 29.1**	**-2.8**
BRTR	**Keskin Array B**	**9.57**	**76**	Pn	**Pn**	**02 46 21.8**	**+4.2**
	0.1nm,0.3s,baz=265,slow=13,SNR=3.6						
HFS	**Hagfors**	**22.69**	**350**	P	**P**	**02 49 00.3**	**-0.6**
	4.7nm,0.9s,mb3.9,baz=153,slow=13,SNR=4.8						
HFS	**Hagfors**	**22.69**	**350**	P	**P**	**02 49 00.3**	**-0.6**
MKAR	**Makanchi Array**	**44.69**	**58**	P	**P**	**02 52 11.5**	**-0.7**
	0.4nm,0.4s,mb3.6,baz=289,slow=7.5,SNR=3.4						
MKAR	**Makanchi Array**	**44.69**	**58**	P	**P**	**02 52 11.6**	**-0.7**
ZALV	**Zalesovo Beam**	**45.19**	**48**	P	**P**	**02 52 15.3**	**-0.9**
	1.0nm,0.4s,mb4.0,baz=280,slow=7.5,SNR=4.7						
ZALV	**Zalesovo Beam**	**45.19**	**48**	P	**P**	**02 52 15.3**	**-0.9**

*CSEM **11** 02:47:33.4±0.2, 37°.87N×21°.42E, h20km, MD3.0, Error ellipse: s-maj=3.8km s-min=3.5km az=76.0*
*ATH **11** 02:47:33.1, 37°.88N×21°.43E, h29km±1km, MD3.0/7*
*THE **11** 02:47:33.7, 37°.86N×21°.46E, h11km±1km, ML3.0/5, Error ellipse: s-maj=1.7km s-min=0.8km az=96.0*
*NEIC **11** 02:47:33.1, 37°.88N×21°.43E, h29km, MD3.0(ATH), After ATH.*
*ISCJB **11** 02:47:33.2±1.3, 37°.84N±0°.03×21°.43E±0°.03, h14km±11km, Error ellipse: s-maj=5.6km s-min=4.5km az=5.5*
ISC 11 02:47:33.9±0.5, 37°.87N±0°.03×21°.43E±0°.03, h25km±4km, n44, σ0§95/74, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.19**	**9**	*e*Pb	**Pb**	**02 47 38.8**	**-0.7**
RLS				*e*Sb	**Sb**	**02 47 42.8**	**-0.4**
RLS	**Riolos of Patr**	**0.19**	**9**	*e*PB	**Pb**	**02 47 38.8**	**-0.7**
RLS				*e*SB	**Sb**	**02 47 42.8**	**-0.4**
RLS	**Riolos of Patr**	**0.19**	**9**	*e*Pb	**Pb**	**02 47 38.8**	**-0.7**
RLS				*e*Sb	**Sb**	**02 47 42.8**	**-0.4**
UPR	**University Cam**	**0.50**	**34**	*e*PB	**Pb**	**02 47 44.0**	**-0.1**
UPR				*e*SB	**Sb**	**02 47 51.3**	**+0.2**
UPR	**University Cam**	**0.50**	**34**	*e*Pb	**Pb**	**02 47 44.0**	**-0.1**
UPR				*e*Sb	**Sb**	**02 47 51.3**	**+0.2**
KFL	**Anninata**	**0.56**	**296**	P	**Pb**	**02 47 44.8**	**-0.3**
LAKA	**Lakka**	**0.57**	**49**	P	**Pb**	**02 47 44.4**	**-0.9**
LAKA				S	**Sb**	**02 47 52.6**	**-0.4**
LAKA	**Lakka**	**0.57**	**49**	P	**Pb**	**02 47 44.4**	**-0.9**
LAKA				S	**Sb**	**02 47 52.6**	**-0.4**
EFP	**Efpalio**	**0.67**	**34**	P	**Pb**	**02 47 46.1**	**-0.9**
EFP				S	**Sb**	**02 47 56.5**	**+0.6**
EFP	**Efpalio**	**0.67**	**34**	*e*PN	**Pn**	**02 47 46.2**	**-1.6**
EFP				*e*SN	**Sn**	**02 47 56.7**	**-0.8**
EFP	**Efpalio**	**0.67**	**34**	P	**Pb**	**02 47 46.1**	**-0.9**
EFP				S	**Sb**	**02 47 56.5**	**+0.6**
TRIZ	**Trizonia**	**0.71**	**45**	P	**Pb**	**02 47 46.5**	**-1.1**
TRIZ				S	**Sb**	**02 47 57.6**	**+0.6**
TRIZ	**Trizonia**	**0.71**	**45**	P	**Pb**	**02 47 46.5**	**-1.1**
TRIZ				S	**Sb**	**02 47 57.6**	**+0.6**
GUR	**Goura**	**0.72**	**84**	P	**Pb**	**02 47 46.9**	**-0.9**
GUR	**Goura**	**0.72**	**84**	*e*PN	**Pb**	**02 47 46.9**	**-0.9**
GUR				*e*SN	**Sn**	**02 47 58.3**	**-0.4**
GUR	**Goura**	**0.72**	**84**	P	**Pb**	**02 47 46.9**	**-0.9**
GUR				*e*Sn	**Sn**	**02 47 58.3**	**-0.4**
VLS	**Valsamata**	**0.73**	**295**	*e*Pn	**Pn**	**02 47 47.1**	**-1.5**
VLS				*e*Sn	**Sn**	**02 47 59.4**	**+0.5**
VLS	**Valsamata**	**0.73**	**295**	P	**Pb**	**02 47 47.1**	**-0.7**
VLS				S	**Sb**	**02 47 59.8**	**+2.2**
VLS	**Valsamata**	**0.73**	**295**	*e*PN	**Pn**	**02 47 47.1**	**-1.5**
VLS				*e*SN	**Sn**	**02 47 59.4**	**+0.5**
VLS	**Valsamata**	**0.73**	**295**	P	**Pb**	**02 47 47.3**	**-0.7**
VLS				*e*Sn	**Sn**	**02 47 59.4**	**+0.5**
VLS				S	**Sb**	**02 47 59.8**	**+2.2**
KALE	**Kalithea**	**0.77**	**47**	P	**Pb**	**02 47 47.5**	**-1.0**
KALE				S	**Sb**	**02 47 59.5**	**+0.9**
KALE	**Kalithea**	**0.77**	**47**	P	**Pb**	**02 47 47.5**	**-1.0**
KALE				S	**Sb**	**02 47 59.5**	**+0.9**
ITM	**Ithomi**	**0.79**	**150**	*e*Pn	**Pn**	**02 47 49.3**	**-0.1**
ITM	**Ithomi**	**0.79**	**150**	*e*PN	**Pn**	**02 47 49.3**	**-0.1**
ITM	**Ithomi**	**0.79**	**150**	*e*Pn	**Pn**	**02 47 49.3**	**-0.1**
VLX	**Vlachokerasia**	**0.90**	**123**	P	**Pb**	**02 47 50.8**	**0.0**
VLX				S	**Sb**	**02 48 04.4**	**+2.0**
VLX	**Vlachokerasia**	**0.90**	**123**	*e*PN	**Pn**	**02 47 51.3**	**+0.4**
VLX	**Vlachokerasia**	**0.90**	**123**	P	**Pb**	**02 47 50.8**	**0.0**
VLX	**Vlachokerasia**	**0.90**	**123**	*e*Pn	**Pn**	**02 47 51.3**	**+0.4**
VLX				S	**Sb**	**02 48 04.4**	**+2.0**
PYL	**PYLOS**	**1.00**	**166**	*e*PN	**Pn**	**02 47 52.5**	**+0.2**
PYL	**PYLOS**	**1.00**	**166**	*e*Pn	**Pn**	**02 47 52.5**	**+0.2**
DSF	**Desfina**	**1.02**	**58**	P	**Pn**	**02 47 51.9**	**-0.7**
DSF				S	**Sb**	**02 48 07.5**	**+1.6**
DSF	**Desfina**	**1.02**	**58**	P	**Pn**	**02 47 51.9**	**-0.7**
DSF				S	**Sb**	**02 48 07.5**	**+1.6**
EVR	**Evrytania**	**1.09**	**16**	*e*Pn	**Pn**	**02 47 53.6**	**+0.1**
EVR				*e*Sn	**Sn**	**02 48 08.6**	**+0.8**
EVR	**Evrytania**	**1.09**	**16**	*e*PN	**Pn**	**02 47 53.6**	**+0.1**
EVR				*e*SN	**Sn**	**02 48 08.6**	**+0.8**
EVR	**Evrytania**	**1.09**	**16**	*e*Pn	**Pn**	**02 47 53.6**	**+0.1**
EVR				*e*Sn	**Sn**	**02 48 08.6**	**+0.8**
LKD2	**Lefkada island**	**1.10**	**327**	P	**Pn**	**02 47 53.6**	**-0.1**
LKD2				S	**Sb**	**02 48 11.2**	**+3.0**
LKD2	**Lefkada island**	**1.10**	**327**	P	**Pn**	**02 47 53.6**	**-0.1**
LKD2				S	**Sb**	**02 48 11.2**	**+3.0**
LTK	**Loutraki**	**1.23**	**82**	*e*PN	**Pn**	**02 47 55.9**	**+0.5**
LTK	**Loutraki**	**1.23**	**82**	*e*Pn	**Pn**	**02 47 55.9**	**+0.5**
LKR	**Lokris**	**1.46**	**57**	*e*Pn	**Pn**	**02 47 59.9**	**+1.3**
LKR	**Lokris**	**1.46**	**57**	*e*PN	**Pn**	**02 47 59.9**	**+1.3**
LKR	**Lokris**	**1.46**	**57**	P	**Pn**	**02 47 59.9**	**+1.3**

*IDC **11** 03:01:47.5±1.4, 28°.28N×86°.82E, h0km, mb3.7/7, mb1 3.8/9, mb1mx3.6/28, mbtmp3.7/9, ML4.1/2, MS4.0/2, Ms1 4.0/2, ms1mx3.1/36, Error ellipse: s-maj=54.9km s-min=19.5km az=60.0*
*NEIC **11** 03:01:48.8±0.6, 28°.21N×86°.72E, h10km, mb3.7/5, Error ellipse: s-maj=14.9km s-min=6.6km az=223.0*
*ISCJB **11** 03:01:52.1±0.8, 28°.29N±0°.05×86°.74E±0°.04, h52km±12km, mb3.7/8, MS3.9/2, Error ellipse: s-maj=9.2km s-min=5.0km az=12.9*
*NDI **11** 03:01:54.1±8.1, 28°.31N×86°.86E, h10km, ML3.7, mb3.7(NEIC)*
ISC 11 03:01:53.9±0.7, 28°.35N±0°.05×86°.81E±0°.04, h48km±11km, n31, σ1§29/37, mb3.7/8, MS3.9/2, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTK	**Gangtok**	**1.89**	**122**	*e*PKP	**Pn**	**03 02 24.5**	**+0.8**
GTK				*e*x	**Sn**	**03 02 40.5**	**-5.9**
LSA	**Lhasa**	**4.03**	**69**	Pg	**Pn**	**03 02 53.7**	**+0.6**
LSA				Sg	**Sn**	**03 03 35.4**	**-3.7**
LSA				smax			
	comp=E,50nm,0.5s						
LSA	**Lhasa**	**4.03**	**69**	*e*Pn	**Pn**	**03 02 53.6**	**+0.5**
LSA				*e*Sn	**Sn**	**03 03 35.1**	**-4.0**
BOK	**Bokaro**	**4.61**	**191**	*e*PKP	**Pn**	**03 03 04.0**	**+3.0**
BOK				*e*S	**Sn**	**03 03 53.0**	**-0.2**
SHL	**Shillong**	**5.31**	**120**	*e*PKP	**Pn**	**03 03 10.9**	**+0.3**
SHL				*e*S	**Sn**	**03 04 09.5**	**-1.0**
JOSI	**Joshimath**	**6.70**	**291**	*e*S	**Sn**	**03 04 44.7**	**+0.1**
DDI	**Dehra Dun**	**7.89**	**287**	*e*PKP	x	03 04 17.4	
DDI				*e*S	x	03 05 29.8	
AGRA	**Agra**	**7.93**	**264**	*e*PKP	**Pn**	**03 03 50.8**	**+4.2**
AGRA				*e*S	**Sn**	**03 05 13.6**	**-1.4**
BISR	**Bishrakh**	**8.25**	**274**	*e*x	x	03 05 23.9	
NDI	**New Delhi**	**8.45**	**275**	*e*S	**Sn**	**03 05 26.0**	**-1.6**
AYAN	**Aya Nagar**	**8.53**	**273**	*e*PKP	**Pn**	**03 03 58.5**	**+3.8**
AYAN				*e*S	**Sn**	**03 05 28.9**	**-0.8**
SONA	**Sohna**	**8.57**	**272**	*e*S	**Sn**	**03 05 28.9**	**-1.8**
SONA				*e*S	**Sn**	**03 05 31.4**	**+0.6**
SONA				AML

AOS				S	Sn	03 08 51.5	+2.7
AOS	**Alonnisos**	**1.48**	**272**	P	Pn	03 08 29.4	+0.3
AKHS	**Akhisar**	**1.61**	**99**	*i* P	Pn	03 08 31.2	+0.3
AKHS				*i* S	Sn	03 08 50.6	-1.4
AKHS	**Akhisar**	**1.61**	**99**	*i* P	Pn	03 08 31.2	+0.3
AKHS				*i* S	Sn	03 08 50.7	-1.4
AKS	**Akhisar**	**1.61**	**99**	*e*PN	Pn	03 08 31.1	+0.2
AKS	**Akhisar**	**1.61**	**99**	*e*Pn	Pn	03 08 31.2	+0.3
ENEZ	**Enez**	**1.61**	**10**	*e*PN	Pn	03 08 30.4	-0.6
ENEZ	**Enez**	**1.61**	**10**	*e*Pn	Pn	03 08 30.4	-0.6
SMG	**Samos**	**1.66**	**150**	*e*Pn	Pn	03 08 30.0	-1.6
SMG	**Samos**	**1.66**	**150**	*e*PN	Pn	03 08 30.0	-1.6
SMG	**Samos**	**1.66**	**150**	*e*Pn	Pn	03 08 30.0	-1.6
BALB	**Balikesir**	**1.70**	**73**	*e*PN	Pn	03 08 32.3	+0.1
BALB	**Balikesir**	**1.70**	**73**	*e*Pn	Pn	03 08 32.3	+0.1
ALN	**Alexandroupoli**	**1.76**	**7**	*e*Pn	Pn	03 08 32.0	-1.0
ALN	**Alexandroupoli**	**1.76**	**7**	P	Pn	03 08 31.9	-1.1
ALN				S	Sn	03 08 56.1	+0.3
ALN	**Alexandroupoli**	**1.76**	**7**	*e*PN	Pn	03 08 32.0	-1.0
ALN	**Alexandroupoli**	**1.76**	**7**	*e*Pn	Pn	03 08 32.0	-1.0
ALN				S	Sn	03 08 56.1	+0.3
OUR	**Ouranopolis**	**1.82**	**311**	P	Pn	03 08 33.2	-0.6
OUR	**Ouranopolis**	**1.82**	**311**	P	Pn	03 08 33.2	-0.6
RKY	**Sarkoy-Tekirda**	**1.88**	**35**	*e*PN	Pn	03 08 34.9	+0.3
RKY	**Sarkoy-Tekirda**	**1.88**	**35**	*e*Pn	Pn	03 08 34.9	+0.3
RDO	**Rodhopi**	**2.00**	**355**	*e*Pb	Pn	03 08 35.6	-0.8
RDO	**Rodhopi**	**2.00**	**355**	P	Pn	03 08 35.6	-0.8
RDO	**Rodhopi**	**2.00**	**355**	*e*PB	Pn	03 08 35.6	-0.8
RDO	**Rodhopi**	**2.00**	**355**	P	Pn	03 08 35.6	-0.8
EDC	**Edincik**	**2.01**	**53**	*e*PN	Pn	03 08 36.7	+0.3
EDC	**Edincik**	**2.01**	**53**	*e*Pn	Pn	03 08 36.7	+0.3
BNT	**Bandirma**	**2.05**	**53**	*e*PN	Pn	03 08 37.2	+0.3
APE	**Apeiranthos**	**2.08**	**185**	*e*Pn	Pn	03 08 35.9	-1.5
APE	**Apeiranthos**	**2.08**	**185**	*e*PN	Pn	03 08 35.9	-1.5
APE	**Apeiranthos**	**2.08**	**185**	*e*Pn	Pn	03 08 35.9	-1.5
DST	**Dursunbey**	**2.25**	**77**	*e*PN	Pn	03 08 40.3	+0.6
TKR	**Tekirdag**	**2.28**	**36**	*e*PN	Pn	03 08 40.5	+0.3
TKR	**Tekirdag**	**2.28**	**36**	*e*Pn	Pn	03 08 40.5	+0.3
KULA	**Kula-Manisa**	**2.34**	**105**	*e*PN	Pn	03 08 41.2	+0.3
KULA	**Kula-Manisa**	**2.34**	**105**	*e*Pn	Pn	03 08 41.2	+0.3
CRLT	**Corlu**	**2.48**	**37**	*e*PN	Pn	03 08 43.2	+0.3
CRLT	**Corlu**	**2.48**	**37**	*e*Pn	Pn	03 08 43.2	+0.2
NVR	**Nevrokopi**	**2.64**	**327**	*e*Pn	Pn	03 08 44.8	-0.3
NVR	**Nevrokopi**	**2.64**	**327**	*e*PN	Pn	03 08 44.8	-0.3
NVR	**Nevrokopi**	**2.64**	**327**	*e*Pn	Pn	03 08 44.8	-0.3
SLVT	**Silivri**	**2.79**	**41**	*e*PN	Pn	03 08 47.5	+0.3
SLVT	**Silivri**	**2.79**	**41**	*e*Pn	Pn	03 08 47.5	+0.3
GEMT	**Gemlik**	**2.93**	**63**	*e*PN	Pn	03 08 49.8	+0.8
GEMT	**Gemlik**	**2.93**	**63**	*e*Pn	Pn	03 08 49.8	+0.8
CTKS	**Kestanelik-??a**	**2.95**	**44**	*e*PN	Pn	03 08 50.1	+0.7
CTKS	**Kestanelik-??a**	**2.95**	**44**	*e*Pn	Pn	03 08 50.2	+0.8
CTYL	**Yal??k??y-??at**	**3.02**	**39**	*e*PN	Pn	03 08 51.2	+0.9
CTYL	**Yal??k??y-??at**	**3.02**	**39**	*e*Pn	Pn	03 08 51.2	+0.9
BGKT	**Bogazkoy**	**3.07**	**48**	*e*PN	Pn	03 08 51.7	+0.7
BGKT	**Bogazkoy**	**3.07**	**48**	*e*Pn	Pn	03 08 51.7	+0.8
YLV	**Yalova**	**3.11**	**62**	*e*PN	Pn	03 08 52.0	+0.5
YLV	**Yalova**	**3.11**	**62**	*e*Pn	Pn	03 08 52.0	+0.5
ISK	**Istanbul-Kandi**	**3.16**	**52**	*e*PN	Pn	03 08 53.1	+0.8
ISK	**Istanbul-Kandi**	**3.16**	**52**	*e*Pn	Pn	03 08 53.1	+0.8
KLYT	**Kilyos**	**3.27**	**49**	*e*PN	Pn	03 08 54.4	+0.7
KLYT	**Kilyos**	**3.27**	**49**	*e*Pn	Pn	03 08 54.4	+0.7
VLI	**Veliai**	**3.30**	**224**	*e*Pn	Pn	03 08 53.8	-0.4
VLI	**Veliai**	**3.30**	**224**	*e*PN	Pn	03 08 53.8	-0.4
VLI	**Veliai**	**3.30**	**224**	*e*Pn	Pn	03 08 53.8	-0.4
ADVT	**Abdulvahap**	**3.31**	**66**	*e*PN	Pn	03 08 55.4	+1.1
ADVT	**Abdulvahap**	**3.31**	**66**	*e*Pn	Pn	03 08 55.4	+1.1

MEX 11 03:19:49.3±0.7, 16°.09N×97°.58W, h12^{km}±8^{km}, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.61**	**300**	*i* P	Pg	03 19 59.5	-1.7
PNIG				*i* S	Sg	03 20 08.1	-1.1
VHO	**Vista Hermosa**	**1.27**	**39**	*i* P	Pn	03 20 09.2	-3.8
VHO				*i* S	Sb	03 20 24.5	-5.0
OXX	**Oaxaca**	**1.28**	**40**	*i* P	Pn	03 20 09.9	-3.2
OXX				*i* S	Sb	03 20 24.8	-5.1
HUIG	**Huatulco**	**1.45**	**102**	*i* P	Pn	03 20 11.9	-3.5
HUIG				*i* S	Sn	03 20 29.6	-4.7
UTMO	**Huajuapan**	**1.75**	**353**	*i* P	Pn	03 20 16.6	-2.9
UTMO				*i* S	Sn	03 20 38.4	-3.3
PPM	**Popocatepetl**	**3.13**	**341**	*e*P	Pn	03 20 36.3	-2.2
PPM				*i* S	Sn	03 21 13.3	-2.6

*CSEM **11** 03:34:38.6±1.0, 67°.64N×33°.43E, h2^{km}, ML2.2, Error ellipse: s-maj=21.6km s-min=7.6km az=84.0, Mining explosion.*
*HEL **11** 03:34:38.1±0.5, 67°.68N×33°.76E, h0^{km}, ML2.5, Explosion*
*NAO **11** 03:34:38.0±1.6, 67°.63N×33°.72E, ML2.2*
*ISCJB **11** 03:34:38.2±1.9, 67°.72N±0°.05×33°.5E±0°.3, h0km, Error ellipse: s-maj=15.2km s-min=7.3km az=177.1*

ISC 11 03:34:38.1±1.4, 67°.64N±0°.04×33°.5E±0°.2, h0^{km}, n17, σ1§09/27, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA0	**Apatity Array**	**0.20**	**259**	Pg	**Pg**	**03 34 43.4**	**+1.4**
	baz=85,slow=14						
APA0				Lg		03 34 47.5	
	baz=80,slow=37						
APA0				Rg		03 34 48.5	
	baz=80,slow=37						
VRF	**Varrio**	**1.49**	**276**	*e*P	**Pn**	**03 35 06.2**	**+0.1**
VRF				*e*S	**Sg**	**03 35 26.1**	**+0.2**
VRF	**Varrio**	**1.49**	**276**	P	**Pn**	**03 35 06.1**	**0.0**
KU6	**Riekki**	**2.17**	**223**	*e*PB	**Pb**	**03 35 17.9**	**-0.2**
KU6				*e*SB	**Sb**	**03 35 46.6**	**+1.2**
KU6	**Riekki**	**2.17**	**223**	Pb	**Pb**	**03 35 17.9**	**-0.2**
KU6				Sb	**Sb**	**03 35 46.6**	**+1.2**
KEV	**Kevo**	**3.18**	**315**	*e*P	**Pn**	**03 35 30.4**	**+1.1**
KEV				*e*S	**Sn**	**03 36 08.4**	**+0.6**
KEV				MSG		03 36 25.0	
	comp=Z,18nm,0.4s						
KEV	**Kevo**	**3.18**	**315**	P	**Pn**	**03 35 30.4**	**+1.1**
KEV				S	**Sn**	**03 36 08.4**	**+0.5**
	comp=Z,18nm,0.4s						
ARA0	**ARCESS Array S**	**3.49**	**307**	Pn	**Pn**	**03 35 34.2**	**+0.6**
	baz=122,slow=16						
ARA0				Pg	**Pg**	**03 35 42.9**	**-2.1**
	baz=114,slow=16						
ARA0				Sn	**Sn**	**03 36 15.6**	**0.0**
	baz=117,slow=28						
ARA0				Lg		03 36 25.7	
	baz=100,slow=28						
ARA0	**ARCESS Array S**	**3.49**	**307**	*e*P	**Pn**	**03 35 34.0**	**+0.4**
ARA0				*e*S	**Sn**	**03 36 14.9**	**-0.6**
ARA0	**ARCESS Array S**	**3.49**	**307**	P	**Pn**	**03 35 33.9**	**+0.3**
ARA0	**ARCESS Array S**	**3.49**	**307**	Pn	**Pn**	**03 35 34.2**	**+0.6**
	baz=122,slow=14,SNR=3.6						
ARA0	**ARCESS Array S**	**3.49**	**307**	Pg	**Pg**	**03 35 42.9**	**-2.1**
	baz=114,slow=15,SNR=1.7						
ARA0				S	**Sn**	**03 36 14.9**	**-0.7**
ARA0				Sn	**Sn**	**03 36 15.6**	**0.0**
	baz=117,slow=24,SNR=0.8						
HEF	**Hetta**	**3.78**	**286**	*e*S	**Sn**	**03 36 23.2**	**+0.6**
HEF				*e*SG	**Sg**	**03 36 37.5**	**-1.9**
HEF				MSG		03 36 41.3	
	comp=Z,7.3nm,0.4s						
HEF	**Hetta**	**3.78**	**286**	S	**Sn**	**03 36 23.2**	**+0.6**
JOF	**Joensuu**	**4.83**	**192**	*e*S	**Sn**	**03 36 47.0**	**-1.6**
JOF	**Joensuu**	**4.83**	**192**	S	**Sn**	**03 36 46.9**	**-1.7**
FIA0	**FINESS Array S**	**7.00**	**211**	Lg		03 38 13.3	
	baz=16,slow=28						

*ISK **11** 03:40:06.4, 37°.82N×29°.21E, h5^{km}, MD3.4*
*DDA **11** 03:40:06.8, 37°.88N×29°.16E, h13^{km}±1^{km}, Md3.5*
*NEIC **11** 03:40:06.0, 37°.78N×29°.23E, h5^{km}, MD3.5(ISK), After ISK.*
*CSEM **11** 03:40:07.5±0.1, 37°.80N×29°.22E, h2^{km}, MD3.4, Error ellipse: s-maj=3.8km s-min=3.7km az=82.0*
*IDC **11** 03:40:07.9±2.0, 37°.57N×29°.25E, h0^{km}, mb3.4/1, mb1 3.4/3, mb1mx3.2/24, mbtmp3.4/3, ML3.3/2, Error ellipse: s-maj=44.6km s-min=19.1km az=145.0*
*ISCJB **11** 03:40:07.5±0.2, 37°.85N±0°.02×29°.21E±0°.02, h10^{km}, Error ellipse: s-maj=2.8km s-min=2.3km az=7.2*

ISC 11 03:40:07.3±0.4, 37°.86N±0°.02×29°.23E±0°.02, h1^{km}±4^{km}, n106, σ1§18/131, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.18**	**237**	*e*PG	**Pg**	**03 40 10.7**	**-0.2**
DENT	**Denizli**	**0.18**	**237**	*e*Pg	**Pg**	**03 40 10.7**	**-0.2**
DNZL	**Cakiroluk**	**0.22**	**221**	*i* P	**Pg**	**03 40 11.3**	**-0.2**
DNZL				*i* S	**Sg**	**03 40 14.9**	**+0.5**
DNZL	**Cakiroluk**	**0.22**	**221**	*i* P	**Pg**	**03 40 11.3**	**-0.2**
DNZL				*i* S	**Sg**	**03 40 14.9**	**+0.5**
KHL	**Karahalli**	**0.52**	**26**	*e*PG	**Pg**	**03 40 17.8**	**+0.5**
KHL	**Karahalli**	**0.52**	**26**	*e*Pg	**Pg**	**03 40 17.8**	**+0.4**
KHAL	**Karahalli**	**0.56**	**22**	*i* P	**Pg**	**03 40 17.3**	**-0.7**
KHAL				*i* S	**Sg**	**03 40 25.4**	**+0.2**
KHAL	**Karahalli**	**0.56**	**22**	*i* P	**Pg**	**03 40 17.3**	**-0.7**
KHAL				*i* S	**Sg**	**03 40 25.4**	**+0.2**
GOLH	**Golhisar**	**0.67**	**157**	*i* P	**Pg**	**03 40 20.4**	**+0.2**
GOLH				*i* S	**Sg**	**03 40 32.3**	**+3.4**
GOLH	**Golhisar**	**0.67**	**157**	*i* P	**Pg**	**03 40 20.4**	**+0.2**
GLHS	**Glhisar (BURDU**	**0.73**	**163**	*e*PG	**Pg**	**03 40 21.1**	**-0.2**
GLHS				*e*SG	**Sg**	**03 40 32.2**	**+1.4**
GLHS	**Glhisar (BURDU**	**0.73**	**163**	*e*Pg	**Pg**	**03 40 21.1**	**-0.2**
KULA	**Kula-Manisa**	**0.80**	**326**	*e*PG	**Pg**	**03 40 22.4**	**-0.3**
KULA	**Kula-Manisa**	**0.80**	**326**	*e*Pg	**Pg**	**03 40 22.4**	**-0.2**
ISP	**Isparta**	**1.02**	**91**	*e*PG	**Pg**	**03 40 27.4**	**+0.5**
ISP	**Isparta**	**1.02**	**91**	*e*Pn	**Pg**	**03 40 27.0**	**0.0**
ISP				*e*Sg	**Sg**	**03 40 37.5**	**-2.7**
ISP				*e*Sn	**Sn**	**03 40 41.8**	**-2.1**
ISP	**Isparta**	**1.02**	**91**	*e*Pg	**Pg**	**03 40 27.5**	**+0.5**
ISP				*e*Sg	**Sg**	**03 40 37.5**	**-2.8**
YER	**Yerkesik**	**1.04**	**227**	*e*PG	**Pg**	**03 40 26.2**	**-1.1**
YER				*e*SG	**Sg**	**03 40 41.9**	**+1.2**
YER	**Yerkesik**	**1.04**	**227**	*e*Pg	**Pg**	**03 40 26.2**	**-1.1**
YER				*e*Sg	**Sg**	**03 40 41.9**	**+1.1**
AYDN	**Tasoluk**	**1.09**	**260**	*i* P	**Pg**	**03 40 26.8**	**-1.3**
AYDN				*i* S	**Sg**	**03 40 40.8**	**-1.4**
TURN	**Turunc**	**1.10**	**207**	*i* P	**Pg**	**03 40 30.3**	**+2.2**
TURN				*i* S	**Sg**	**03 40 52.4**	**+10**
TURN	**Turunc**	**1.10**	**207**	*i* P	**Pg**	**03 40 30.6**	**+2.2**
BCK	**Bucak**	**1.15**	**110**	*e*PN	**Pg**	**03 40 29.9**	**+0.5**
BCK	**Bucak**	**1.15**	**110**	*e*Pn	**Pg**	**03 40 29.9**	**+0.5**
FETY	**Fethiye**	**1.22**	**185**	*e*PN	**Pn**	**03 40 30.1**	**-1.5**
FETY	**Fethiye**	**1.22**	**185**	*e*Pn	**Pn**	**03 40 30.1**	**-1.5**
ELL	**Elmali**	**1.23**	**154**	*e*PN	**Pn**	**03 40 30.7**	**-1.0**
ELL	**Elmali**	**1.23**	**154**	*e*Pn	**Pn**	**03 40 30.7**	**-1.0**
KORT	**Korkueli**	**1.23**	**133**	*i* P	**Pg**	**03 40 32.0**	**+1.0**
GDZ	**Gediz**	**1.25**	**9**	*i* P	**Pn**	**03 40 29.9**	**-2.0**
GDZ				*i* S	**Sn**	**03 40 47.1**	**-2.4**
GDZ	**Gediz**	**1.25**	**9**	*i* P	**Pn**	**03 40 30.0**	**-2.0**
GDZ				*i* S	**Sn**	**03 40 47.1**	**-2.3**
DEMI	**Demirci**	**1.25**	**341**	*i* P	**Pn**	**03 40 30.3**	**-1.8**
DEMI				*i* S	**Sg**	**03 40 47.4**	**-0.2**
DEMI	**Demirci**	**1.25**	**341**	*i* P	**Pn**	**03 40 30.3**	**-1.7**
DEMI				*i* S	**Sg**	**03 40 47.4**	**-0.2**
SHUT	**Suhut-Afyon**	**1.25**	**56**	*e*PN	**Pn**	**03 40 32.2**	**+0.2**
SHUT	**Suhut-Afyon**	**1.25**	**56**	*e*Pn	**Pn**	**03 40 32.2**	**+0.2**
MLSB	**Milas**	**1.28**	**245**	*e*PN	**Pn**	**03 40 30.8**	**-1.6**
MLSB	**Milas**	**1.28**	**245**	*e*Pn	**Pn**	**03 40 30.8**	**-1.6**
ALT	**Altintas**	**1.38**	**30**	*e*PN	**Pn**	**03 40 33.7**	**-0.1**
ALT	**Altintas**	**1.38**	**30**	*e*Pn	**Pn**	**03 40 33.7**	**-0.1**
SUTC	**Sutluce-Ispart**	**1.46**	**105**	*e*PN	**Pn**	**03 40 34.9**	**+0.1**
SUTC	**Sutluce-Ispart**	**1.46**	**105**	*e*Pn	**Pn**	**03 40 34.9**	**+0.1**
ANTB	**Antalya**	**1.48**	**130**	*e*PN	**Pn**	**03 40 35.0**	**-0.2**
ANTB	**Antalya**	**1.48**	**130**	*e*Pn	**Pn**	**03 40 35.0**	**-0.2**
AKHS	**Akhisar**	**1.51**	**313**	*i* P	**Pn**	**03 40 34.3**	**-1.3**
AKHS				*i* S	**Sb**	**03 40 54.8**	**-1.0**
AKHS	**Akhisar**	**1.51**	**313**	*i* P	**Pn**	**03 40 34.3**	**-1.3**
AKHS				*i* S	**Sb**	**03 40 54.8**	**-1.1**
AKS	**Akhisar**	**1.51**	**313**	*e*PN	**Pg**	**03 40 36.7**	**+0.4**
AKS	**Akhisar**	**1.51**	**313**	*e*Pn	**Pg**	**03 40 36.7**	**+0.4**
BDRM	**Kayabasi**	**1.62**	**242**	*i* P	**Pn**	**03 40 35.5**	**-1.6**
BDRM				*i* S	**Sg**	**03 40 58.9**	**-0.6**
BDRM	**Kayabasi**	**1.62**	**242**	*i* P	**Pn**	**03 40 35.5**	**-1.6**
BDRM				*i* S	**Sg**	**03 40 58.9**	**-0.6**
IZM	**Izmir**	**1.64**	**290**	*e*PN	**Pn**	**03 40 37.6**	**+0.2**
AKAS	**Kas**	**1.65**	**169**	*i* P	**Pg**	**03 40 38.7**	**-0.2**
AKAS				*i* S	**Sg**	**03 41 07.6**	**+7.4**
DAT	**Datca**	**1.73**	**230**	*e*PN	**Pn**	**03 40 38.5**	**-0.1**
DAT	**Datca**	**1.73**	**230**	*e*Pn	**Pn**	**03 40 38.6**	**0.0**
BLCB	**Balcova**	**1.80**	**288**	*e*PN	**Pn**	**03 40 40.1**	**+0.5**
BLCB	**Balcova**	**1.80**	**288**	*e*Pn	**Pn**	**03 40 40.1**	**+0.5**
DST	**Dursunbey**	**1.81**	**345**	*e*PN	**Pn**	**03 40 40.4**	**+0.7**
DST	**Dursunbey**	**1.81**	**345**	*e*Pn	**Pn**	**03 40 40.4**	**+0.7**
BALB	**Balikesir**	**2.07**	**330**	*e*PN	**Pn**	**03 40 44.2**	**+0.9**
BALB	**Balikesir**	**2.07**	**330**	*e*Pn	**Pn**	**03 40 44.2**	**+0.9**
ULDT	**Uludag**	**2.29**	**358**	*i* P	**Pg**	**03 40 49.9**	**-1.3**
ULDT				*i* S	**Sg**	**03 41 21.6**	**+0.8**
ULDT	**Uludag**	**2.29**	**358**	*i* P	**Pg**	**03 40 49.9**	**-1.2**
ULDT				*i* S	**Sg**	**03 41 21.6**	**+0.8**
SVRH	**Sivrihisar-ESK**	**2.40**	**48**	*e*PN	**Pb**	**03 40 49.3**	**-2.0**
SVRH	**Sivrihisar-ESK**	**2.40**	**48**	*e*Pn	**Pb**	**03 40 49.3**	**-2.0**
KONT	**Konya--Tatoy**	**2.48**	**87**	*e*PN	**Pn**	**03 40 49.5**	**+0.6**
KONT	**Konya--Tatoy**	**2.48**	**87**	*e*Pn	**Pn**	**03 40 49.5**	**+0.6**
LADK	**Ladik-KONYA**	**2.50**	**81**	*e*PN	**Pn**	**03 40 49.9**	**+0.7**
LADK	**Ladik-KONYA**	**2.50**	**81**	*e*Pn	**Pn**	**03 40 49.9**	**+0.7**
GPA	**Golpazari**	**2.57**	**19**	*e*PN	**Pn**	**03 40 51.5**	**+1.4**
GPA	**Golpazari**	**2.57**	**19**	*e*Pn	**Pn**	**03 40 51.5**	**+1.3**
GEMT	**Gemlik**	**2.58**	**359**	*e*PN	**Pn**	**03 40 51.4**	**+1.1**
GEMT	**Gemlik**	**2.58**	**359**	*e*Pn	**Pn**	**03 40 51.4**	**+1.2**
ADVT	**Abdulvahap**	**2.60**	**9**	*e*PN	**Pn**	**03 40 51.8**	**+1.2**
ADVT	**Abdulvahap**	**2.60**	**9**	*e*Pn	**Pn**	**03 40 51.8**	**+1.2**
BNT	**Bandirma**	**2.70**	**338**	*e*PN	**Pn**	**03 40 53.2**	**+1.3**
BNT	**Bandirma**	**2.70**	**338**	*e*Pn	**Pn**	**03 40 53.2**	**+1.3**
ARMT	**Armutlu**	**2.72**	**354**	*e*PN	**Pb**	**03 40 54.2**	**-2.6**
ARMT	**Armutlu**	**2.72**	**354**	*e*Pn	**Pb**	**03 40 54.2**	**-2.6**
HDMB	**Hadim**	**2.74**	**108**	*e*PN	**Pn**	**03 40 52.7**	**+0.2**
HDMB	**Hadim**	**2.74**	**108**	*e*Pn	**Pn**	**03 40 52.7**	**+0.2**
GULT	**Gulveren**	**2.76**	**21**	*e*PN	**Pn**	**03 40 54.3**	**+1.5**
GULT	**Gulveren**	**2.76**	**21**	*e*Pn	**Pn**	**03 40 54.3**	**+1.5**
EZN	**Ezine**	**3.00**	**312**	*e*PN	**Pn**	**03 40 57.6**	**+1.5**
EZN	**Ezine**	**3.00**	**312**	*e*Pn	**Pn**	**03 40 57.6**	**+1.5**
MDU	**Mudurnu**	**3.03**	**30**	*e*PN	**Pb**	**03 40 58.6**	**-3.5**
MDU	**Mudurnu**	**3.03**	**30**	*e*Pn	**Pb**	**03 40 58.6**	**-3.5**
LPK	**Lapseki**	**3.16**	**323**	*e*PN	**Pn**	**03 40 59.2**	**+0.9**
LPK	**Lapseki**	**3.16**	**323**	*e*Pn	**Pn**	**03 40 59.2**	**+0.9**
ISK	**Istanbul-Kandi**	**3.21**	**358**	*e*PN	**Pn**	**03 40 59.9**	**+1.0**
ISK	**Istanbul-Kandi**	**3.21**	**358**	*e*Pn	**Pn**	**03 40 59.9**	**+1.0**
RKY	**Sarkoy-Tekirda**	**3.25**	**331**	*e*PN	**Pn**	**03 41 00.7**	**+1.3**
RKY	**Sarkoy-Tekirda**	**3.25**	**331**	*e*Pn	**Pn**	**03 41 00.7**	**+1.3**
KLYT	**Kilyos**	**3.40**	**358**	*e*PN	**Pn**	**03 41 03.0**	**+1.5**
KLYT	**Kilyos**	**3.40**	**358**	*e*Pn	**Pn**	**03 41 03.0**	**+1.5**
CTKS	**Kestanelik-??a**	**3.42**	**351**	*e*PN	**Pn**	**03 41 03.3**	**+1.4**
CTKS	**Kestanelik-??a**	**3.42**	**351**	*e*Pn	**Pn**	**03 41 03.3**	**+1.4**
CTYL	**Yal??k??y-??at**	**3.69**	**349**	*e*PN	**Pn**	**03 41 07.8**	**+2.3**
CTYL	**Yal??k??y-??at**	**3.69**	**349**	*e*Pn	**Pn**	**03 41 07.8**	**+2.3**
ENEZ	**Enez**	**3.74**	**321**	*e*PN	**Pn**	**03 41 07.5**	**+1.3**
ENEZ	**Enez**	**3.74**	**321**	*e*Pn	**Pn**	**03 41 07.5**	**+1.3**
BR131	**Keskin Array S**	**3.92**	**60**	*e*PN	**Pn**	**03 41 08.2**	**-0.5**
BR131	**Keskin Array S**	**3.92**	**60**	*e*Pn	**Pn**	**03 41 08.2**	**-0.5**
BRTR	**Keskin Array B**	**3.92**	**60**	Pn	**Pn**	**03 41 09.5**	**+0.8**
	0.4nm,0.3s,baz=242,slow=14,SNR=15						
BRTR				Pg	**Pg**	**03 41 20.8**	**-1.7**
	0.5nm,0.3s,baz=239,slow=18,SNR=8.2						
BRTR				Lg		03 42 18.9	
	baz=232,slow=27,SNR=2.3						
BRTR	**Keskin Array B**	**3.92**	**60**	Pn	**Pn**	**03 41 09.5**	**+0.8**
BRTR	**Keskin Array B**	**3.92**	**60**	Pg	**Pg**	**03 41 20.8**	**-1.6**
MMAI	**Mount Meron Ar**	**6.98**	**132**	Pn	**Pn**	**03 41 50.4**	**-0.3**
	2.8nm,0.3s,baz=318,slow=12,SNR=4.5						
TORD	**Torodi Ar. Bea**	**34.73**	**232**	P	**P**	**03 46 58.4**	**-0.7**
	0.5nm,0.9s,baz=35,slow=10,SNR=4.5						

*CSEM **11** 04:09:38.8±0.1, 37°.87N×29°.18E, h5^{km}, MD2.9, Error ellipse: s-maj=2.0km s-min=1.4km az=126.0*
*DDA **11** 04:09:38.5, 37°.87N×29°.17E, h7^{km}±2^{km}, Md2.9*
*ISK **11** 04:09:38.8, 37°.90N×29°.16E, h6^{km}, MD2.9*
*ISCJB **11** 04:09:39.1±0.4, 37°.88N±0°.02×29°.17E±0°.04, h10^{km}, Error ellipse: s-maj=4.8km s-min=3.2km az=13.1*

ISC 11 04:09:39.3±0.4, 37°.89N±0°.02×29°.17E±0°.04, h5^{km}±8^{km}, n30, σ0§67/45, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.17**	**220**	*e*PG	**Pg**	**04 09 42.4**	**-0.3**
DENT	**Denizli**	**0.17**	**220**	*e*Pg	**Pg**	**04 09 42.4**	**-0.3**
DNZL	**Cakiroluk**	**0.22**	**207**	*i* P	**Pg**	**04 09 43.0**	**-0.6**
DNZL				*i* S	**Sg**	**04 09 46.5**	**0.0**
DNZL	**Cakiroluk**	**0.22**	**207**	*i* P	**Pg**	**04 09 43.0**	**-0.6**
DNZL				*i* S	**Sg**	**04 09 46.5**	**+0.1**
KHL	**Karahalli**	**0.52**	**32**	*e*PG	**Pg**	**04 09 48.9**	**-0.5**
KHL				*e*SG	**Sg**	**04 09 56.6**	**+0.5**
KHL	**Karahalli**	**0.52**	**32**	*e*Pg	**Pg**	**04 09 48.9**	**-0.4**
KHL				*e*Sg	**Sg**	**04 09 56.6**	**+0.5**
KHAL	**Karahalli**	**0.55**	**28**	*i* P	**Pg**	**04 09 49.1**	**-0.7**
KHAL				*i* S	**Sg**	**04 09 56.5**	**-0.5**
KHAL	**Karahalli**	**0.55**	**28**	*i* P	**Pg**	**04 09 49.1**	**-0.8**
KHAL				*i* S	**Sg**	**04 09 56.5**	**-0.5**
GOLH	**Golhisar**	**0.72**	**154**	*i* P	**Pg**	**04 09 52.3**	**-0.8**
GOLH				*i* S	**Sg**	**04 10 02.8**	**+0.4**
GOLH	**Golhisar**	**0.72**	**154**	*i* P	**Pg**	**04 09 52.3**	**-0.8**
GOLH				*i* S	**Sg**	**04 10 02.8**	**+0.4**
KULA	**Kula-Manisa**	**0.75**	**328**	*e*PG	**Pg**	**04 09 53.6**	**-0.1**
KULA				*e*SG	**Sg**	**04 10 04.0**	**+0.7**
KULA	**Kula-Manisa**	**0.75**	**328**	*e*Pg	**Pg**	**04 09 53.6**	**-0.1**
KULA				*e*Sg	**Sg**	**04 10 04.0**	**+0.7**
GLHS	**Glhisar (BURDU**	**0.77**	**160**	*e*PG	**Pg**	**04 09 55.1**	**+0.9**
GLHS	**Glhisar (BURDU**	**0.77**	**160**	*e*Pg	**Pg**	**04 09 55.1**	**+0.9**
YER	**Yerkesik**	**1.03**	**224**	*e*PG	**Pg**	**04 09 58.8**	**-0.2**
YER	**Yerkesik**	**1.03**	**224**	*e*Pg	**Pg**	**04 09 58.8**	**-0.2**
AYDN	**Tasoluk**	**1.05**	**258**	*i* P	**Pg**	**04 09 58.7**	**-0.7**
AYDN				*i* S	**Sg**	**04 10 12.5**	**-0.5**
AYDN	**Tasoluk**	**1.05**	**258**	*i* P	**Pg**	**04 09 58.7**	**-0.7**
AYDN				*i* S	**Sg**	**04 10 12.5**	**-0.5**
ISP	**Isparta**	**1.06**	**92**	*e*PN	**Pn**	**04 10 00.6**	**-0.2**
ISP	**Isparta**	**1.06**	**92**	*e*Pn	**

TKM2 *e*Pg **Pg** **04 20 19.0 -0.5**
TKM2 *e*Sg **Sg** **04 21 01.2 -8.2**
KZA Kyzart 3.87 282 P **Pn** **04 20 08.5 +3.1**
SNR=34
KBK Karagaybulak 4.22 289 P **Pn** **04 20 15.2 +5.1**
SNR=22
UCH Uchtor 4.44 283 P **Pn** **04 20 19.0 +5.9**
SNR=6.3
UCH Uchtor 4.44 283 *e*Pn **Pn** **04 20 16.1 +3.0**
UCH *e*Pb **Pb** **04 20 25.1 +1.3**
UCH *e*Pg **Pg** **04 20 30.1 -0.7**
UCH *e*Sg **Sg** **04 21 24.1 -4.2**
CHMS Chumysh 4.46 293 P **Pb** **04 20 25.0 +0.8**
SNR=8.6
FRU Bishkek 4.50 291 *e*PN **Pb** **04 20 26.0 +1.1**
FRU *i* 04 20 29.0
FRU *i* 04 21 30.0
FRU pmax pmax
comp=E,494nm,1.8s
AAK Ala-Archa 4.53 288 P **Pg** **04 20 33.2 +0.6**
SNR=9.1
AAK Ala-Archa 4.53 288 Pn **Pn** **04 20 18.2 +3.7**
comp=E,0.1nm,0.3s,baz=114,slow=10,SNR=8.6
AAK Pg **Pg** **04 20 29.7 -2.9**
comp=E,0.1nm,0.3s,baz=104,slow=10,SNR=14
AAK Lg 04 21 23.1
comp=E,0.2nm,0.3s,baz=180,slow=20,SNR=7.3
AAK Ala-Archa 4.53 288 *e*PN **Pn** **04 20 20.1 +5.6**
AAK Ala-Archa 4.53 288 Pn **Pn** **04 20 18.2 +3.7**
AAK Pg **Pg** **04 20 29.7 -3.0**
AAK Lg 04 21 23.1
USP Ospenovka 4.72 295 P **Pg** **04 20 33.3 -3.0**
SNR=20
AML Almayashu 5.03 281 P **Pg** **04 20 40.6 -1.6**
SNR=13
AML Almayashu 5.03 281 *e*Pn **Pn** **04 20 26.6 +5.3**
comp=E,116nm,0.8s
AML *e*Pg **Pg** **04 20 40.3 -1.8**
AML *e*Sg **Sg** **04 21 41.6 -5.6**
EKS2 Erkin-Say 5.05 287 P **Pb** **04 20 34.5 +0.2**
SNR=15
EKS2 Erkin-Say 5.05 287 *e*Pn **Pn** **04 20 26.5 +4.9**
comp=E,74nm,0.6s
EKS2 *e*Pb **Pb** **04 20 35.4 +1.1**
EKS2 *e*Pg **Pg** **04 20 40.4 -2.2**
EKS2 *e*Sg **Sg** **04 21 41.8 -6.3**
MK31 Makanchi Array 5.59 14 ⇑Pn **Pn** **04 20 30.2 +1.2**
comp=E,12nm,0.2s,baz=184,slow=13,SNR=384
MK31 Makanchi Array 5.59 14 *e*Pn **Pn** **04 20 29.2 +0.2**
MK31 *e*Sn **Sn** **04 21 32.8 -0.5**
MKAR Makanchi Array 5.59 14 Pn **Pn** **04 20 30.0 +1.0**
comp=E,26nm,0.3s,baz=200,slow=16,SNR=76
MKAR Sn **Sn** **04 21 35.0 +1.7**
comp=E,12nm,0.3s,baz=207,slow=24,SNR=5.3
MKAR LR LR 04 22 46.0
comp=E,135nm,19.3s,baz=108,slow=40
MKAR Makanchi Array 5.59 14 *i* PN **Pn** **04 20 30.0 +1.0**
MKAR pmax pmax
comp=Z,43nm,0.2s
MKAR Makanchi Array 5.59 14 Pn **Pn** **04 20 30.0 +1.0**
MKAR Sn **Sn** **04 21 35.0 +1.7**
MKAR LR LR 04 22 46.0
WMQ Urumqi 5.95 63 Pn **Pn** **04 20 35.6 +1.6**
WMQ Sn **Sn** **04 21 43.0 +0.9**
WMQ smax
comp=N,170nm,0.8s
WMQ smax
comp=E,170nm,0.8s
KURK Kurchatov 9.41 353 Pn **Pn** **04 21 20.4 -1.1**
comp=E,0.1nm,0.3s,baz=179,slow=12,SNR=8.7
KURK Sn **Sn** **04 23 12.8 +5.6**
comp=E,0.3nm,0.3s,baz=170,slow=28,SNR=3.0
KURK Lg 04 24 00.3
comp=E,0.9nm,0.3s,baz=183,slow=30,SNR=5.8
KURK LR LR 04 25 14.0
comp=E,259nm,19.1s,baz=175,slow=40
KURK Kurchatov 9.41 353 *d iP* **Pn** **04 21 23.6 +2.2**
KURK Kurchatov 9.41 353 *e*Pn **Pn** **04 21 20.8 -0.6**
KURK *e*Sn **Sn** **04 23 04.5 -2.7**
KURK Lg 04 24 00.3
CHCP Chirah Chowk 9.53 218 P **Pn** **04 21 27.5 +4.3**
THN Thein Dam 9.66 204 *e*PKP **Pn** **04 21 25.0 +0.1**
THN *e*x x 04 22 11.0
KLP Kalpa 9.97 190 *e*PKP **Pn** **04 21 27.9 -1.2**
KLP *e*S **Sn** **04 23 13.9 -7.1**
KLP AML AML 04 23 52.7
comp=E,83nm,0.7s
KLP AML AML 04 23 56.8
comp=N,81nm,0.6s
SDNR Sundarnagar 10.22 196 *e*x x 04 21 35.5
KBL Kabul 11.22 236 *e*P **Pn** **04 21 47.6 +1.3**
NDI New Delhi 12.92 192 *e*PKP **Pn** **04 22 08.0 -1.5**
NDI *e*x x 04 24 32.0
ZAA0 Zalesovo Array 12.93 12 *e*Pn **Pn** **04 22 08.3 -1.2**
ZAA0 *e*Sn **Sn** **04 24 29.1 -4.2**
ZALV Zalesovo Beam 12.93 12 Pn **Pn** **04 22 08.7 -0.8**
comp=N,1.9nm,0.3s,baz=193,slow=16,SNR=11
ZALV Sn **Sn** **04 24 32.9 -0.4**
comp=N,1.5nm,0.3s,baz=196,slow=22,SNR=9.7
ZALV Zalesovo Beam 12.93 12 P **Pn** **04 22 08.7 -0.8**
ZALV 04 24 32.9
ZALV pmax pmax
comp=Z,2.0nm,0.3s
ZALV smax
comp=N,2.0nm,0.3s
AYAN Aya Nagar 13.13 193 *e*S **Sn** **04 24 25.6 -13**
SONA Sohna 13.37 193 *e*x x 04 24 33.4
SONA AML AML 04 24 59.8
comp=N,6.3nm,0.1s
SONA AML AML 04 25 02.6
comp=E,12nm,0.3s
BVAR Borovoye Array 13.46 333 Pn **Pn** **04 22 15.0 -1.7**
comp=E,0.6nm,0.3s,baz=140,slow=12,SNR=5.8
BVAR Sn **Sn** **04 24 40.4 -5.8**
comp=E,0.2nm,0.3s,baz=141,slow=18,SNR=2.2
BVAR Lg 04 26 05.8
comp=E,0.5nm,0.3s,baz=146,slow=26,SNR=5.3
BRVK Borovoye 13.52 333 *e*P **Pn** **04 22 20.0 +2.5**
BRVK pmax pmax
comp=Z,2.0nm,0.3s
GTA Gaotai 14.97 91 *e*P **Pn** **04 22 36.1 -1.3**
GTA pP pP 04 22 40.7 -5.1
GTA sP sP 04 22 43.8 -3.3
GTA pmax pmax
comp=Z,2.0nm,0.7s
AB31 Akbulak array 16.33 306 ⇑Pn **Pn** **04 22 55.0 -0.1**
comp=Z,2.6nm,0.7s,baz=106,slow=13,SNR=31
ABKAR Akbulak array 16.33 306 *e*P **Pn** **04 22 54.8 -0.3**
comp=Z,8.3nm,0.9s
AKTK Aktyubinsk 17.93 308 P **Pn** **04 23 15.4 +0.4**
AKTO Aktyubinsk 17.93 308 ⇓Pn **Pn** **04 23 15.2 +0.1**
comp=Z,0.7nm,0.9s
AKTO Aktyubinsk 17.93 308 P **Pn** **04 23 15.4 +0.4**
comp=Z,0.3nm,0.3s,baz=101,slow=11,SNR=7.8
SONM Songino Array 19.59 62 P **Pn** **04 23 33.3 -2.0**
comp=Z,0.4nm,0.3s,baz=263,slow=11,SNR=13
ULN Ulaanbaatar 20.03 62 *e*P **P** **04 23 40.2 +1.5**
ULN pmax pmax
comp=Z,2.0nm,0.5s
ULN Ulaanbaatar 20.03 62 *e*P **P** **04 23 40.2 +1.5**
comp=Z,1.9nm,0.5s
ARU Arti 20.64 324 *d iP* **P** **04 23 48.1 +2.8**
ARU *e* 04 24 03.4
ARU SS 04 28 01.7
ARU pmax pmax
comp=Z,6.0nm,1.0s
ARU Arti 20.64 324 *e*P **P** **04 23 45.7 +0.4**
comp=Z,6.1nm,0.6s
CMAR Chiang Mai Arr 27.84 140 P **P** **04 24 56.7 +1.2**
comp=Z,0.9nm,0.6s,mb3.6,baz=333,slow=13,SNR=5.7
CMAR Chiang Mai Arr 27.84 140 P **P** **04 24 56.7 +1.2**
CMAR pmax pmax
comp=Z,1.0nm,0.6s
OBN Obninsk 31.66 311 P **P** **04 25 32.0 +3.0**
OBN pmax pmax
comp=Z,5.0nm,1.0s,mb4.3
BRTR Keskin Array B 35.19 283 P **P** **04 26 00.3 +0.3**
comp=Z,0.7nm,0.7s,mb3.7,baz=101,slow=9.8,SNR=4.1
BRTR Keskin Array B 35.19 283 P **P** **04 26 00.3 +0.3**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
FINES FINESS Array B 37.93 321 P **P** **04 26 23.0 -0.1**
comp=Z,1.2nm,0.7s,mb3.8,baz=108,slow=13,SNR=3.1
FINES FINESS Array B 37.93 321 P **P** **04 26 23.0 -0.1**
FINES pmax pmax
comp=Z,1.0nm,0.7s
ARCES ARCESS Array B 39.75 333 P **P** **04 26 36.8 -1.3**
comp=Z,1.1nm,0.5s,mb3.8,baz=95,slow=9.1,SNR=9.6
ARCES ARCESS Array B 39.75 333 P **P** **04 26 36.8 -1.3**
ARCES pmax pmax
comp=Z,1.0nm,0.5s
NB2 NORSAR Subarra 45.11 320 P **P** **04 27 20.7 -1.2**
comp=Z,3.3nm,1.1s,mb4.1,baz=84,slow=7.9
NOA NORSAR Array B 45.11 320 P **P** **04 27 21.3 -0.6**
comp=Z,1.0nm,0.6s,mb3.8,baz=84,slow=7.8,SNR=3.6
NOA NORSAR Array B 45.11 320 P **P** **04 27 21.3 -0.6**
NOA pmax pmax
comp=Z,1.0nm,0.6s
NOA NORSAR Array B 45.11 320 P **P** **04 27 21.3 -0.6**
TORD Torodi Ar. Bea 72.95 273 P **P** **04 30 33.7 -2.0**
comp=Z,0.4nm,0.8s,mb3.4,baz=45,slow=4.3,SNR=13
TORD Torodi Ar. Bea 72.95 273 P **P** **04 30 33.7 -2.0**
YKA Yellowknife Ar 75.78 7 P **P** **04 30 50.8 -0.6**
comp=Z,1.4nm,0.8s,mb4.0,baz=341,slow=6.1,SNR=6.1
YKA Yellowknife Ar 75.78 7 P **P** **04 30 50.8 -0.6**
YKA pmax pmax
comp=Z,1.0nm,0.8s
WRA Warramunga Arr 78.88 129 P **P** **04 31 09.1 -0.2**
comp=Z,0.4nm,0.7s,mb3.5,baz=330,slow=5.3,SNR=6.2
ASAR Alice Springs 81.55 132 P **P** **04 31 23.1 -0.5**
comp=Z,0.3nm,0.4s,mb3.5,baz=321,slow=5.1,SNR=5.0

ISCJB ***11*** *04:24:48.0±0.5, 30.°87N±0.°04×103.°49E±0.°05, h10km, mb3.7/9, MS4.2/2, Error ellipse: s-maj=6.5km s-min=5.8km az=40.8*
IDC ***11*** *04:24:48.0±1.0, 30.°81N×103.°25E, h0km, mb3.7/8, mb1 3.9/9, mb1mx3.7/26, mbtmp3.7/9, ML3.5/1, MS4.3/2, Ms1 4.3/2, ms1mx2.9/40, Error ellipse: s-maj=39.0km s-min=17.4km az=57.0*
NEIC ***11*** *04:24:50.1±0.6, 30.°88N×103.°36E, h10km, mb3.8/2, Error ellipse: s-maj=15.0km s-min=10.1km az=65.0*
BJI ***11*** *04:24:50.8, 30.°90N×103.°46E, h16km, ML3.6/17, Ms3.6/1, Ms7 3.5/1*
ISC 11 04:24:50.0±0.5, 30.°95N±0.°04×103.°39E±0.°05, h10km, n22, σ1$02/28, **mb3.7**/9, **MS4.2**/2, **Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.32**	**97**	Pg	**Pg**	**04 24 57.5**	**+1.2**
CD2				Sg	**Sg**	**04 25 03.9**	**+3.3**
CD2				smax			
	comp=N,18μm,0.7s						
CD2				smax			
	comp=E,9μm,0.6s						
LZH	**Lanzhou**	**5.13**	**4**	*e*Pg	**Pg**	**04 26 34.2**	**+5.9**
LZH				Sg	**Sg**	**04 27 32.5**	**-2.4**
LZH				smax			
	comp=N,30nm,0.7s						
LZH				smax			
	comp=E,38nm,0.7s						
ENH	**Enshi**	**5.30**	**96**	*e*Pn	**Pn**	**04 26 09.5**	**+0.3**
	comp=E,33nm,0.4s						
ENH				*e*Pg	**Pg**	**04 26 30.1**	**-1.4**
ENH				*e*Sg	**Sg**	**04 27 40.9**	**+0.7**
GYA	**Guiyang**	**5.32**	**146**	Pn	**Pn**	**04 26 08.4**	**-1.1**
GYA				Sn	**Sn**	**04 27 09.4**	**-1.4**
GYA				Sg	**Sg**	**04 27 32.9**	**-7.9**
GYA				smax			
	comp=N,110nm,0.8s						
GYA				smax			
	comp=E,120nm,0.9s						
XAN	**Xi'an**	**5.59**	**55**	Pn	**Pn**	**04 26 13.5**	**+0.3**
XAN				Sn	**Sn**	**04 27 16.4**	**-1.2**
XAN				Sg	**Sg**	**04 27 42.7**	**-6.9**
XAN				smax			
	comp=N,98nm,0.6s						
XAN				smax			
	comp=E,31nm,0.8s						
KMI	**Kunming**	**5.83**	**186**	P	**Pg**	**04 26 42.6**	**+0.8**
KMI				pmax	pmax		
	comp=Z,15nm,1.2s						
CMAR	**Chiang Mai Arr**	**13.08**	**199**	Pn	**Pn**	**04 27 56.2**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=6.2,slow=11,SNR=4.5						
SONM	**Songino Array**	**17.02**	**7**	P	**Pn**	**04 28 51.4**	**+3.5**
	comp=Z,0.2nm,0.3s,baz=190,slow=7.2,SNR=2.9						
KSRS	**Korea Array**	**21.27**	**66**	P	**P**	**04 29 37.6**	**+1.2**
	comp=Z,1.5nm,0.5s,mb3.6,baz=241,slow=9.1,SNR=7.0						
MKAR	**Makanchi Array**	**22.70**	**320**	P	**P**	**04 29 52.0**	**+0.4**
	comp=Z,1.4nm,0.7s,mb3.5,baz=100,slow=12,SNR=3.4						
ZALV	**Zalesovo Beam**	**26.60**	**335**	P	**P**	**04 30 28.1**	**-0.1**
	comp=Z,0.4nm,0.3s,mb3.4,baz=144,slow=10.0,SNR=2.4						
KURK	**Kurchatov**	**27.01**	**324**	P	**P**	**04 30 32.1**	**+0.1**
	comp=Z,1.2nm,0.6s,mb3.6,baz=132,slow=9.6,SNR=3.1						
KURK	**Kurchatov**	**27.01**	**324**	*e*P	**P**	**04 30 32.1**	**+0.2**
	comp=Z,4.4nm,1.1s,mb3.9						
DAV	**Davao City (W)**	**31.56**	**134**	LR	LR	04 44 07.0	
	comp=Z,759nm,18.2s,MS4.4,baz=320,slow=37						
CBIJ	**Chichi jima**	**34.02**	**87**	LR	LR	04 43 58.5	
	comp=Z,349nm,19.7s,MS4.1,baz=257,slow=34						
ABKAR	**Akbulak array**	**37.32**	**312**	*e*P	**P**	**04 32 02.2**	**0.0**
	comp=Z,0.7nm,0.6s,mb3.7						
ARCES	**ARCESS Array B**	**57.15**	**336**	P	**P**	**04 34 36.6**	**+0.2**
	comp=Z,0.9nm,0.6s,mb4.0,baz=91,slow=7.9,SNR=5.3						
WRA	**Warramunga Arr**	**58.69**	**146**	P	**P**	**04 34 47.0**	**-0.9**
	comp=Z,2.2nm,0.9s,mb4.2,baz=337,slow=7.5,SNR=9.2						
WRA	**Warramunga Arr**	**58.69**	**146**	P	**P**	**04 34 47.0**	**-0.9**
ASAR	**Alice Springs**	**61.68**	**148**	P	**P**	**04 35 08.1**	**-0.2**
	comp=Z,0.4nm,0.6s,mb3.7,baz=335,slow=6.7,SNR=3.1						
YKA	**Yellowknife Ar**	**82.02**	**17**	P	**P**	**04 37 09.7**	**-0.2**
	comp=Z,0.6nm,0.6s,mb3.7,baz=330,slow=5.0,SNR=5.5						
YKA	**Yellowknife Ar**	**82.02**	**17**	P	**P**	**04 37 09.7**	**-0.2**

NIED ***11*** *04:33:00, 21.°80N×121.°20E, h47km, Mw5.2 Best double couple: M0:6.44000×10^16 NP1:φ1=53.00000°, δ1=88.00000°, λ1=87.00000°. NP2:φ2=284.00000°, δ2=4.00000°, λ2=141.00000°.*
ISCJB ***11*** *04:33:37.8±0.4, 21.°87N±0.°02×121.°10E±0.°02, h30km±2km, mb4.7/94, MS4.3/38, Error ellipse: s-maj=3.1km s-min=2.7km az=20.7*
BJI ***11*** *04:33:37.1, 21.°95N×121.°07E, h22km, mB4.8/30, mb4.5/41, ML4.3/6, Ms4.6/50, Ms7 4.4/46*
TAP ***11*** *04:33:37.6, 21.°89N×121.°00E, h21km, ML4.7, C*
IDC ***11*** *04:33:38.9±0.6, 21.°83N×121.°12E, h28km±4km, mb4.3/21, mb1 4.4/22, mb1mx4.4/27, mbtmp4.3/22, ML3.7/1, MS4.2/16, Ms1 4.2/16, ms1mx4.0/33, Error ellipse: s-maj=17.8km s-min=10.3km az=73.0*
MOS ***11*** *04:33:38.2±1.0, 21.°89N×121.°12E, h33km, mb5.0/42, MS4.4/12, Error ellipse: s-maj=9.5km s-min=5.2km az=113.2*
JMA ***11*** *04:33:39.6±0.2, 21.°79N×121.°25E, h72km, M4.8*
NEIC ***11*** *04:33:39.1±1.4, 21.°93N×121.°10E, h28km±9km, mb4.8/66, ML5.2(TAP), Error ellipse: s-maj=5.7km s-min=4.2km az=91.0*
NEIC Recorded [4 TAP] in P'ing-tung and [2 TAP] in T'ai-tung.
SZGRF ***11*** *04:33:43.5, 23.°30N×122.°10E, h33km, mb4.7, Taiwan region*
ISC 11 04:33:38.8±0.4, 21.°91N±0.°02×121.°07E±0.°02, h23km±2km, **h30**km±1.3km:**pP-P, n336,** σ1$08/369, **mb4.7**/94, **MS4.3**/38, **13C-20D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**0.16**	**267**	⇓*iP*	**Pb**	**04 33 42.9**	**-0.9**
	baz=271						
TWK1	**Hengchun**	**0.25**	**278**	⇓*iP*	**Pb**	**04 33 43.4**	**-1.6**
	baz=288						
HEN	**Hengchun**	**0.32**	**287**	⇑*iP*	**Pb**	**04 33 44.8**	**-1.2**
	baz=297						
LAY	**Lan-yu**	**0.47**	**74**	⇑P	**Pb**	**04 33 49.3**	**+0.9**
	baz=73						
LAY				*e*S	**Sb**	**04 33 57.3**	**+2.4**
	baz=73						
TAW	**Tawu**	**0.47**	**340**	⇓*iP*	**Pb**	**04 33 48.4**	**-0.2**
	baz=1.0						
TAW				S	**Sb**	**04 33 55.8**	**+0.6**
	baz=1.0						
EAST	**Anshuo**	**0.52**	**337**	⇓*iP*	**Pb**	**04 33 49.0**	**-0.2**
	baz=354						
EAST				*e*S	**Sb**	**04 33 57.4**	**+1.0**
	baz=354						
SCZT	**Fangliau**	**0.62**	**318**	⇑*iP*	**Pb**	**04 33 50.7**	**-0.3**
	baz=325						
SCZT				*e*S	**Sb**	**04 33 59.5**	**+0.1**
	baz=325						
ECL	**Taimali**	**0.69**	**351**	⇓*iP*	**Pb**	**04 33 51.0**	**-1.2**
	baz=12						
TWP	**Hsiaoliuchiu**	**0.79**	**304**	*e*P	**Pb**	**04 33 54.5**	**+0.6**
	baz=309						
TTN	**Taitung**	**0.84**	**5**	*e*P	**Pb**	**04 33 53.8**	**-1.1**
	baz=12						
TWG	**Pinlang**	**0.91**	**0**	*e*Pn	**Pn**	**04 33 53.5**	**-2.7**
TWG	**Pinlang**	**0.91**	**0**	⇓*iP*	**Pb**	**04 33 53.9**	**-2.0**
	baz=7.0						
SSD	**Sandimen**	**0.93**	**334**	⇓P	**Pb**	**04 33 55.5**	**-0.7**
	baz=348						
SSD				*e*S	**Sb**	**04 34 09.1**	**+0.9**
	baz=348						
KAU	**Kaohsiung**	**0.96**	**313**	*e*P	**Pb**	**04 33 55.3**	**-1.5**
	baz=299						
SGLT	**Jiouru**	**0.97**	**327**	*e*P	**Pb**	**04 33 57.0**	**0.0**
	baz=335						
TWM1	**Shoushan**	**1.09**	**327**	⇓P	**Pn**	**04 33 59.3**	**+0.6**
	baz=335						
CHKT	**Chengkung**	**1.22**	**13**	⇓P	**Pn**	**04 33 59.1**	**-1.3**
	baz=19						
SGST	**Jiashian**	**1.25**	**339**	⇓*e*P	**Pn**	**04 34 01.4**	**+0.5**
	baz=346						
SGST				*e*S	**Sn**	**04 34 19.3**	**+2.3**
	baz=346						
ELDTW	**Lidau**	**1.27**	**358**	*e*P	**Pn**	**04 33 59.5**	**-1.7**
	baz=13						
CHN3	**Shinhua**	**1.33**	**331**	*e*P	**Pn**	**04 34 01.4**	**-0.6**
	baz=339						
CHN1	**Nanshi**	**1.36**	**339**	⇓*iP*	**Pn**	**04 34 02.8**	**+0.3**
	baz=347						
TAI1	**Yung-k'ang**	**1.37**	**326**	*e*P	**Pn**	**04 34 01.8**	**-0.7**
	baz=314						
TPUB	**Ta-pu**	**1.44**	**344**	*e*Pn	**Pn**	**04 34 03.3**	**-0.3**
TPUB				*e*Sn	**Sn**	**04 34 21.1**	**-0.7**
TWF1	**Yuli**	**1.45**	**8**	*e*P	**Pn**	**04 34 01.5**	**-2.2**
	baz=14						
TWK	**Hsinying**	**1.45**	**338**	⇓*iP*	**Pn**	**04 34 03.7**	**0.0**
	baz=347						
YULB	**Yu-li**	**1.49**	**8**	*e*Pn	**Pn**	**04 34 01.9**	**-2.3**
SCLT	**Jiali**	**1.50**	**327**	*e*P	**Pn**	**04 34 03.5**	**-0.8**
	baz=317						
YUS	**Yu-Shan**	**1.58**	**356**	*e*P	**Pn**	**04 34 05.4**	**+0.1**
	baz=14						
EHY	**Hungye**	**1.61**	**8**	*e*P	**Pn**	**04 34 04.2**	**-1.5**
	baz=26						
ALS	**Alishan**	**1.61**	**351**	⇓*iP*	**Pn**	**04 34 07.1**	**+1.3**
	baz=359						
CHN8	**Yiju**	**1.64**	**331**	*e*P	**Pn**	**04 34 06.0**	**-0.2**
	baz=322						
BBP	**Basco**	**1.68**	**150**	*e*P	**Pn**	**04 34 04.9**	**-1.9**
CHY	**Chiayi**	**1.69**	**339**	⇓P	**Pn**	**04 34 07.0**	**+0.1**
	baz=349						
CHN5	**Tsauling**	**1.72**	**348**	⇓*iP*	**Pn**	**04 34 07.8**	**+0.5**
	baz=357						
WGK	**Gukeng**	**1.83**	**345**	*e*P	**Pn**	**04 34 09.0**	**+0.1**
	baz=355						
SSLB	**Suanglung**	**1.87**	**357**	*e*Pn	**Pn**	**04 34 09.8**	**+0.3**
WSF	**Szhu**	**1.89**	**336**	*e*P	**Pn**	**04 34 08.8**	**-0.8**
	baz=328						
ESL	**Shilin**	**1.93**	**10**	*e*P	**Pn**	**04 34 09.3**	**-0.8**
	baz=16						
SMLT	**Sun Moon Lake**	**1.97**	**355**	P	**Pn**	**04 34 12.0**	**+1.2**
	baz=1.0						
SMLT				*e*S	**Sn**	**04 34 37.6**	**+2.8**
	baz=1.0						
WNT	**Mingjian**	**1.99**	**350**	*e*P	**Pn**	**04 34 11.1**	**+0.1**
	baz=359						
TYC	**Yuchr**	**2.00**	**354**	⇓*iP*	**Pn**	**04 34 12.3**	**+1.1**
	baz=3.0						
WTCT	**Ta-ch'eng**	**2.08**	**340**	*e*P	**Pn**	**04 34 11.1**	**-1.1**
	baz=349						
HWA	**Hwalien**	**2.12**	**13**	*e*P	**Pn**	**04 34 12.3**	**-0.5**
	baz=20						
PNG	**Penghu**	**2.16**	**320**	P	**Pn**	**04 34 11.4**	**-2.1**
	baz=328						
PNG				*e*S	**Sn**	**04 34 36.4**	**-3.1**
	baz=328						
TWD	**Chiawan**	**2.21**	**13**	*e*P	**Pn**	**04 34 13.3**	**-0.9**
	baz=19						
WHF	**Hehuan Shan**	**2.23**	**5**	*e*P	**Pn**	**04 34 14.6**	**+0.2**
	baz=20						
WHF				*e*S	**Sn**	**04 34 43.8**	**+2.5**
	baz=20						
TCU	**Taichung**	**2.26**	**351**	⇓*e*P	**Pn**	**04 34 15.5**	**+0.8**
	baz=1.0						
NACB	**Ninganchiao**	**2.31**	**12**	*e*Pn	**Pn**	**04 34 13.7**	**-1.7**
TWT	**Tachien**	**2.34**	**2**	*e*P	**Pn**	**04 34 16.1**	**+0.3**
	baz=22						
TWQ1	**Liyutan**	**2.44**	**354**	*e*P	**Pn**	**04 34 18.0**	**+0.8**
	baz=4.0						
NSY	**Sanyi**	**2.51**	**354**	*e*P	**Pn**	**04 34 18.4**	**+0.2**
	baz=4.0						
NNS	**Nan Shan**	**2.54**	**6**	*e*P	**Pn**	**04 34 19.0**	**+0.4**
	baz=26						
ENA	**Nanau**	**2.58**	**14**	*e*P	**Pn**	**04 34 19.0**	**-0.2**
	baz=20						
NSTT	**Nanjuang**	**2.71**	**359**	*e*P	**Pn**	**04 34 21.4**	**+0.4**
	baz=10.0						
ENTT	**Nioudou**	**2.76**	**9**	*e*P	**Pn**	**04 34 21.6**	**0.0**
	baz=25						
YHNB	**Yeheng**	**2.76**	**6**	*e*Pn	**Pn**	**04 34 22.3**	**+0.7**
NSK	**Sanguang**	**2.77**	**5**	*e*P	**Pn**	**04 34 22.4**	**+0.7**
	baz=22						
NSK				*e*S	**Sn**	**04 34 57.3**	**+2.8**
	baz=22						
TWC	**Suao**	**2.78**	**15**	*e*P	**Pn**	**04 34 22.2**	**+0.3**
	baz=21						
TWE	**Neicheng**	**2.85**	**11**	*e*P	**Pn**	**04 34 23.6**	**+0.7**
	baz=28						
TATO	**Taipei**	**3.08**	**7**	*e*Pn	**Pn**	**04 34 26.1**	**+0.1**
TWA	**Mucha**	**3.09**	**9**	*e*P	**Pn**	**04 34 27.8**	**+1.6**
	baz=5.0						
YOJ	**Yonaguni jima**	**3.11**	**35**	P	**Pn**	**04 34 27.4**	**+1.0**
YOJ				*e*S	**Sn**	**04 35 04.1**	**+1.3**
YOJ	**Yonaguni jima**	**3.11**	**35**	*e*P	**Pn**	**04 34 27.3**	**+0.9**
	baz=47						
YOJ				*e*S	**Sn**	**04 35 04.2**	**+1.4**
	baz=47						
TAP1	**Taipei**	**3.14**	**8**	*e*P	**Pn**	**04 34 27.8**	**+0.8**
	baz=5.0						
TWS1	**Kuangyinshan**	**3.19**	**6**	*e*P	**Pn**	**04 34 29.1**	**+1.5**
	baz=4.0						
NWF	**Wu-fen Shan**	**3.21**	**12**	*e*P	**Pn**	**04 34 28.7**	**+0.8**
	baz=15						
NWF				*e*S	**Sn**	**04 35 06.5**	**+1.0**
	baz=15						
HATJ	**Hateruma jima**	**3.31**	**49**	P	**Pn**	**04 34 29.6**	**+0.5**
HATJ				*e*S	**Sn**	**04 35 07.3**	**-0.4**
TWY	**Chenhua**	**3.39**	**8**	*e*P	**Pn**	**04 34 30.6**	**+0.4**
	baz=6.0						
IRIF	**Iriomote-Funau**	**3.44**	**45**	P	**Pn**	**04 34 31.7**	**+0.7**
IRIF				*e*S	**Sn**	**04 35 11.2**	**+0.2**
KNM	**Kinmen**	**3.48**	**316**	*e*P	**Pn**	**04 34 30.8**	**-0.8**
	baz=323						
KNM				*e*S	**Sn**	**04 35 11.2**	**-0.9**
	baz=323						
JKRS	**Kuro-shima**	**3.56**	**49**	P	**Pn**	**04 34 33.3**	**+0.6**
JKRS				*e*S	**Sn**	**04 35 13.6**	**-0.5**
JIJ	**Ishigaki jima**	**3.74**	**49**	P	**Pn**	**04 34 35.1**	**0.0**
JIJ				*e*S	**Sn**	**04 35 17.2**	**-1.2**
QZH	**Quanzhou**	**3.78**	**323**	Pn	**Pn**	**04 34 35.9**	**+0.2**
QZH				Sn	**Sn**	**04 35 16.1**	**-3.4**
QZH				smax			
	comp=N,540nm,0.6s						
QZH				smax			
	comp=E,620nm,0.9s						
QZH				LR	LR		
	comp=N,4μm,9.9s						
QZH				LR	LR		
	comp=E,4μm,10.4s						
QZH				LR	LR		
	comp=Z,10μm,18.5s						
APYP	**Conner**	**4.03**	**178**	*e*P	**Pn**	**04 34 41.8**	**+2.7**
ABRA	**Dolores**	**4.25**	**185**	*e*P	**Pn**	**04 34 43.7**	**+1.6**
JTJ	**Tarama**	**4.31**	**50**	P	**Pn**	**04 34 43.7**	**+0.8**
JTJ				*e*S	**Sn**	**04 35 32.4**	**0.0**
JMJ	**Miyako jima 2**	**4.84**	**52**	*e*S	**Sn**	**04 35 45.4**	**-0.2**
JOGS	**Gusukube**	**4.89**	**54**	*e*S	**Sn**	**04 35 47.0**	**+0.1**
PALP	**Palanan**	**4.99**	**165**	*e*P	**Sn**	**04 35 52.4**	**+3.2**
BCPH	**Baguio City Da**	**5.52**	**185**	⇓*e*P	**Pn**	**04 35 08.5**	**+9.0**
BCPH				*e*S	**Sn**	**04 36 03.6**	**+1.3**

comp=N,240nm,0.9s
GZH smax
comp=E,220nm,1.0s
TGY Tagaytay City 7.76 181 Pn **Pn 04 35 35.3 +4.9**
comp=E,48nm,0.3s,baz=85,slow=17,SNR=2.7
LUBP Lubang 8.17 186 *e*P **Pn 04 35 34.6 -1.4**
SSE Sheshan 9.15 1 *e*P **Pn 04 35 47.5 -1.9**
SSE S **Sn 04 37 29.7 -2.0**
SSE pmax pmax
comp=Z,19nm,0.8s
SSE pmax pmax
comp=Z,140nm,4.0s
SSE LR LR
comp=N,940nm,18.2s
SSE LR LR
comp=E,2μm,18.2s
SSE LR LR
comp=Z,2μm,19.6s
NJ2 Nanjing 10.29 349 *e*P **Pn 04 36 07.0 +1.9**
NJ2 pP 04 36 12.4
NJ2 sP 04 36 16.4
NJ2 S **Sn 04 38 02.4 +2.6**
NJ2 sS 04 38 10.0
NJ2 pmax pmax
comp=Z,20nm,0.9s
NJ2 pmax pmax
comp=Z,120nm,5.3s
NJ2 LR LR
comp=N,2μm,13.5s
NJ2 LR LR
comp=E,2μm,13.5s
NJ2 LR LR
comp=Z,2μm,11.2s
WHN Wuhan 10.50 326 P **Pn 04 36 04.8 -3.1**
WHN S **Sn 04 38 13.0 +8.2**
WHN LR LR
comp=N,4μm,9.4s
WHN LR LR
comp=E,4μm,9.4s
WHN LR LR
comp=Z,4μm,16.0s
QIZ Qiongzhong 10.90 257 P **Pn 04 36 15.0 +1.5**
QIZ S **Sn 04 38 15.9 +1.0**
QIZ pmax pmax
comp=Z,24nm,1.6s
QIZ LR LR
comp=N,2μm,16.0s
QIZ LR LR
comp=E,530nm,17.1s
QIZ LR LR
comp=Z,3μm,16.6s
GYA Guiyang 13.90 292 P **Pn 04 36 57.4 +2.9**
GYA pP 04 37 02.9
GYA PP 04 37 09.7
GYA S **Sn 04 39 20.2 -8.0**
GYA SS 04 39 48.0
GYA pmax pmax
comp=Z,20nm,0.7s
GYA pmax pmax
comp=Z,90nm,4.2s
GYA LR LR
comp=N,2μm,14.4s
GYA LR LR
comp=E,1μm,10.9s
GYA LR LR
comp=Z,3μm,14.6s
XAN Xi'an 16.14 321 P **Pn 04 37 26.3 +2.1**
XAN pP pP 04 37 31.7 -2.0
XAN S **Sn 04 40 25.9 +3.3**
XAN sS sS 04 40 35.2 -10
XAN pmax pmax
comp=Z,8.0nm,1.4s
XAN pmax pmax
comp=Z,22nm,4.0s
XAN LR LR
comp=N,1μm,15.1s
XAN LR LR
comp=E,490nm,14.8s
XAN LR LR
comp=Z,770nm,16.4s
KKM Kota Kinabalu 16.45 197 *e*Pn **Pn 04 37 28.4 +0.1**
comp=Z,98nm,1.7s
KSRS Korea Array 16.59 19 Pn **Pn 04 37 30.8 +0.9**
comp=Z,0.3nm,0.3s,baz=200,slow=12,SNR=14
KSRS LR LR 04 44 39.7
comp=Z,752nm,19.8s,baz=205,slow=40
KMI Kunming 17.11 284 P **Pn 04 37 38.9 +2.3**
KMI pP pP 04 37 44.6 +0.1
KMI sP sP 04 37 48.2 +0.7
KMI PP 04 37 53.2
KMI S **Sn 04 40 47.3 +1.1**
KMI sS sS 04 40 56.7 -8.8
KMI SS 04 41 08.8
KMI PcP PcP 04 42 23.6 +2.8
KMI LR LR
comp=N,1μm,12.4s
KMI LR LR
comp=E,1μm,11.2s
KMI LR LR
comp=Z,1μm,12.4s
CD2 Chengdu 17.89 304⇑*i*P **Pn 04 37 46.5 +0.3**
CD2 pP pP 04 37 52.5 -0.6
CD2 sP sP 04 37 56.6 +0.5
CD2 PP 04 38 01.6
CD2 S **Sn 04 41 03.9 -1.2**
CD2 sS sS 04 41 12.4 -9.0
CD2 SS 04 41 26.9
CD2 pmax pmax
comp=Z,20nm,1.2s
CD2 pmax pmax
comp=Z,60nm,4.2s
CD2 LR LR
comp=N,2μm,16.7s
CD2 LR LR
comp=E,2μm,11.8s
CD2 LR LR
comp=Z,3μm,14.2s
BJT Baijiatuau 18.53 348 *e*P **Pn 04 37 55.0 +1.1**
BJT pmax pmax
comp=Z,87nm,0.8s
BJT Baijiatuau 18.53 348 *e*P **Pn 04 37 55.0 +1.1**
comp=Z,87nm,0.8s
BJI Beijing 18.55 348 P **Pn 04 37 54.9 +0.8**
BJI pP pP 04 38 00.5 +0.3
BJI sP sP 04 38 03.5 +0.3
BJI S **Sn 04 41 23.6 +2.8**
BJI pmax pmax
comp=Z,97nm,0.9s
BJI pmax pmax
comp=Z,400nm,3.8s
BJI LR LR
comp=N,1μm,13.6s
BJI LR LR
comp=E,2μm,16.4s
BJI LR LR
comp=Z,500nm,15.9s
CBIJ Chichi jima 19.89 71 P **Pn 04 38 13.1 +2.7**
comp=Z,5.0nm,0.3s,baz=144,slow=6.0,SNR=4.9
HHC Hu-ho-hao-te 20.53 339 *e*P **P 04 38 17.5 +2.1**
HHC pP 04 38 24.2
HHC sP sP 04 38 27.9 +3.0
HHC PP 04 38 39.1
HHC S **S 04 42 01.7 -2.3**
HHC sS sS 04 42 11.9 -2.4
HHC PcP PcP 04 42 27.5 +1.1
HHC SS 04 42 32.8
HHC ScP ScP 04 46 01.7 +0.1
HHC PcS PcS 04 46 05.0 +1.0
HHC pmax pmax
comp=Z,61nm,0.8s
HHC pmax pmax
comp=Z,260nm,6.0s
HHC LR LR
comp=N,670nm,13.4s,MS4.4
HHC LR LR
comp=E,880nm,12.9s,MS4.4
HHC LR LR
comp=Z,830nm,14.5s,MS4.2
LZH Lanzhou 20.61 317⇑P **P 04 38 18.1 +1.7**
LZH pP 04 38 26.5
LZH sP sP 04 38 30.4 +4.6
LZH PP 04 38 39.0
LZH *e*S **S 04 42 01.0 -4.7**
LZH sS sS 04 42 13.1 -2.9
LZH SS 04 42 35.2
LZH pmax pmax
comp=Z,97nm,1.3s
LZH pmax pmax
comp=Z,280nm,5.0s
LZH LR LR
comp=E,2μm,16.1s
LZH LR LR
comp=Z,3μm,16.7s,MS4.7
MAJO Matsushiro 20.84 42 *e*P **P 04 38 20.2 +1.3**
MAJO pmax pmax
comp=Z,131nm,1.9s
MAJO Matsushiro 20.84 42 *e*P **P 04 38 20.2 +1.3**
comp=Z,131nm,1.9s
MAT Matsushiro 20.84 42 P **P 04 38 19.4 +0.5**
MAT S **S 04 42 10.0 -0.3**
MJAR Matsushiro Arr 20.84 42 P **P 04 38 20.1 +1.2**
comp=Z,11nm,0.8s,baz=230,slow=8.2,SNR=33
MJAR LR LR 04 47 20.4
comp=Z,483nm,20.4s,MS3.9,baz=220,slow=39
BTO Baotou 20.86 336 *e*P **P 04 38 19.0 -0.1**
CHTO Chiang Mai 20.97 266 *e*P **P 04 38 20.9 +0.5**
CHTO pmax pmax
comp=Z,16nm,1.2s
CHTO Chiang Mai 20.97 266 *e*P **P 04 38 20.9 +0.5**
comp=Z,16nm,1.2s
CMAR Chiang Mai Arr 21.05 265 P **P 04 38 22.0 +0.7**
comp=Z,2.9nm,0.9s,mb3.6,baz=68,slow=8.2,SNR=15
CMAR PcP PcP 04 42 28.1 +0.4
comp=Z,0.7nm,0.4s,baz=70,slow=0.6,SNR=4.8
CMAR ScP ScP 04 46 03.1 -0.2
comp=Z,0.5nm,0.3s,baz=77,slow=1.9,SNR=3.0
CMAR LR LR 04 47 41.7
comp=Z,1μm,18.2s,MS4.3,baz=85,slow=40
CMAR Chiang Mai Arr 21.05 265 P **P 04 38 22.0 +0.7**
CMAR 04 42 28.2
CN2 Changchun 22.13 8 *e*P **P 04 38 32.4 -0.3**
CN2 *e*pP 04 38 39.4
CN2 *e*sP sP 04 38 42.8 +0.6
CN2 PP 04 38 59.2
CN2 *e*S **S 04 42 33.0 -2.5**
CN2 SS 04 43 12.4
CN2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.3
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,1μm,19.0s,MS4.4
CN2 LR LR
comp=E,500nm,19.0s,MS4.4
CN2 LR LR
comp=Z,1μm,17.0s,MS4.4
KSM Kuching 22.86 209 *e*P **P 04 38 41.5 +0.9**
comp=Z,31nm,1.1s,mb4.7
VLA Vladivostok 23.00 21 P **P 04 38 41.0 -0.9**
VLA MLR MLR
comp=Z,500nm,16.9s,MS4.0
MDJ Mudanjiang 23.71 15 P **P 04 38 49.3 +0.2**
MDJ pP 04 38 55.4
MDJ sP sP 04 38 58.1 -0.7
MDJ S **S 04 43 04.1 +1.5**
MDJ sS sS 04 43 14.6 +0.6
MDJ pmax pmax
comp=Z,16nm,1.1s,mb4.4
MDJ pmax pmax
comp=Z,48nm,4.6s
MDJ LR LR
comp=N,600nm,15.2s,MS4.3
MDJ LR LR
comp=E,580nm,17.6s,MS4.3
MDJ LR LR
comp=Z,830nm,14.8s,MS4.3
MDJ Mudanjiang 23.71 15 *e*P **P 04 38 48.8 -0.2**
comp=Z,17nm,1.0s,mb4.4
GTA Gaotai 25.17 319 *e*P **P 04 39 02.5 +0.1**
GTA pP pP 04 39 09.9 +0.6
GTA sP sP 04 39 12.7 +0.5
GTA S **S 04 43 25.5 -0.7**
GTA sS sS 04 43 37.4 -0.2
GTA SS 04 44 27.9
GTA pmax pmax
comp=Z,7.0nm,1.2s,mb4.1
GTA pmax pmax
comp=Z,140nm,7.7s
GTA LR LR
comp=N,830nm,16.4s,MS4.6
GTA LR LR
comp=E,1μm,16.8s,MS4.6
GTA LR LR
comp=Z,2μm,16.0s,MS4.7
KAPI Kappang 26.79 183 P **P 04 39 19.6 +2.4**
comp=Z,8.4nm,0.8s,mb4.3,baz=318,slow=11,SNR=6.0
KAPI LR LR 04 50 47.7
comp=Z,175nm,18.0s,MS3.7,baz=195,slow=38
KAPI Kappang 26.79 183 *e*P **P 04 39 18.6 +1.4**
comp=Z,45nm,1.1s,mb4.9
SHL Shillong 26.94 284 *e*PKP **P 04 39 22.0 +3.4**
ERM Erimo 27.30 38 *e*P **P 04 39 20.1 -1.5**
ULN Ulaanbaatar 28.24 340 *e*P **P 04 39 30.3 +0.3**
ULN pmax pmax
comp=Z,19nm,0.9s,mb4.7
ULN Ulaanbaatar 28.24 340 *e*P **P 04 39 30.3 +0.4**
comp=Z,19nm,0.9s,mb4.7
ASAJ Asahikawa 28.41 34 P **P 04 39 34.3 +2.8**
comp=Z,17nm,0.6s,mb4.8,baz=243,slow=13,SNR=12
SONM Songino Array 28.43 339 P **P 04 39 31.8 +0.1**
comp=Z,16nm,1.0s,mb4.6,baz=160,slow=9.3,SNR=47
SONM PcP PcP 04 42 43.6 +0.1
comp=Z,2.2nm,1.0s,baz=126,slow=3.8,SNR=4.1
KLR Kul'dur 28.55 15 *e*P **P 04 39 29.8 -2.9**
KLR MLR MLR
comp=N,1μm,16.0s,MS4.6
KLR MLR MLR
comp=E,600nm,16.0s,MS4.6
PSI Prapat 28.70 232 P **P 04 39 33.4 -1.1**
comp=E,4.2nm,0.8s,mb4.2,baz=342,slow=6.4,SNR=3.2
PSI LR LR 04 49 38.3
comp=E,137nm,19.9s,MS3.6,baz=225,slow=33
HABR Khabarovsk 28.77 20 *e*P **P 04 39 41.7 +7.1**
HABR *e* 04 40 23.8
HABR *e*SS SS 04 45 43.5 -41
HABR *e* 04 50 14.1
HABR MLR MLR
comp=Z,530nm,19.0s,MS4.2
YSS Yuzh-Sakhalins 30.53 30 *e*P **P 04 39 50.7 +0.4**
YSS pmax pmax
comp=Z,50nm,1.2s,mb5.2
YSS MLR MLR
comp=Z,300nm,15.0s,MS4.1
TAPN Taplejung 30.75 287 *e*P **P 04 40 01.5 +9.1**
comp=Z,22nm,0.9s,mb5.0
ODAN Odare 31.01 286 *e*P **P 04 40 01.5 +6.7**
comp=Z,9.4nm,0.6s,mb4.8
ZAK Zakamensk 31.67 338 *e*P **P 04 39 59.2 -1.1**
ZAK pmax pmax
comp=Z,4.0nm,1.1s,mb4.2
RAMN Ramite 31.72 286 *e*P **P 04 40 04.7 +3.7**
comp=Z,40nm,0.8s,mb5.3
GUN Gumba 32.40 288 *e*P **P 04 40 10.7 +3.7**
comp=Z,34nm,0.9s,mb5.2
TLY Talaya 32.65 340 *e*P **P 04 40 08.9 0.0**
TLY *e*S **S 04 45 22.1 -1.4**
TLY *e*SS SS 04 47 20.1 -24
TLY pmax pmax
comp=Z,12nm,1.0s,mb4.8
TLY MLR MLR
comp=Z,552nm,16.0s,MS4.3
TLY Talaya 32.65 340 *e*P **P 04 40 09.5 +0.6**
comp=Z,10nm,0.9s,mb4.8
DMN Daman 33.07 287 *e*P **P 04 40 12.7 -0.1**
comp=Z,22nm,0.9s,mb5.1
MOY Mondy 33.54 337 *e*P **P 04 40 16.5 -0.2**
MOY pmax pmax
comp=Z,25nm,1.6s,mb4.9
WMQ Urumqi 35.19 316 *e*P **P 04 40 32.0 +1.0**
WMQ sP sP 04 40 43.0 +2.1
WMQ PP PP 04 41 52.0 +1.0
WMQ S **S 04 46 03.0 +0.1**
WMQ SS SS 04 48 20.0 -16
WMQ pmax pmax
comp=Z,17nm,1.0s,mb4.9
WMQ LR LR
comp=N,270nm,16.0s,MS4.4
WMQ LR LR
comp=E,520nm,16.0s,MS4.4
WMQ LR LR
comp=Z,520nm,16.0s,MS4.4
MK31 Makanchi Array 39.92 318 *e*P **P 04 41 10.9 -0.1**
MKAR Makanchi Array 39.92 318 P **P 04 41 11.2 +0.1**
comp=Z,3.4nm,0.7s,mb4.2,baz=97,slow=12,SNR=30
MKAR ScP ScP 04 47 03.1 -0.9
comp=Z,1.1nm,1.1s,baz=64,slow=6.6,SNR=3.2
MKAR LR LR 04 59 21.7
comp=Z,518nm,19.7s,MS4.4,baz=272,slow=39
MKAR Makanchi Array 39.92 318 *c e*P **P 04 41 11.3 +0.3**
MKAR pmax pmax
comp=Z,3.0nm,0.7s
FITZ Fitzroy Crossi 40.01 173 *e*P **P 04 41 10.8 -1.2**
comp=Z,12nm,0.8s,mb4.7
FITZ Fitzroy Crossi 40.01 173 P **P 04 41 10.5 -1.6**
comp=Z,5.3nm,0.9s,mb4.3,baz=7.5,slow=8.6,SNR=10
FITZ pP pP 04 41 19.2 +0.1
comp=Z,6.5nm,0.8s,baz=94,slow=4.1,SNR=5.1
FITZ Fitzroy Crossi 40.01 173 *e*P **P 04 41 11.6 -0.5**
comp=Z,8.5nm,0.9s,mb4.5
YAK Yakutsk 40.53 6 *e*P **P 04 41 13.9 -2.0**
YAK *e**PP pP 04 41 22.6 -0.4
YAK *e*PPP 04 43 13.4
YAK *e* 04 43 19.8
YAK *e*S **S 04 47 17.8 -5.7**
YAK *e* 04 51 11.4
YAK pmax pmax
comp=Z,33nm,0.9s,mb5.0
YAK pmax pmax
comp=N,27nm,1.2s
YAK pmax pmax
comp=E,12nm,1.0s
YAK smax
comp=N,111nm,3.6s
YAK smax
comp=E,65nm,4.0s
YAK MLR MLR
comp=Z,1μm,21.0s,MS4.7
YAK MLR MLR
comp=N,739nm,16.0s,MS4.6
YAK MLR MLR
comp=E,137nm,17.0s,MS4.6
YAK Yakutsk 40.53 6 *e*P **P 04 41 15.3 -0.6**
comp=E,43nm,0.6s,mb5.3
COEN Coen 41.72 147 *e*P **P 04 41 25.2 -1.0**
COEN Coen 41.72 147 *e*P **P 04 41 26.4 +0.2**
comp=E,108nm,0.7s,mb5.6
PETK Petropavlovsk- 41.82 33 P **P 04 41 26.9 +0.3**
comp=E,3.4nm,0.8s,mb4.0,baz=279,slow=12,SNR=3.6
PETK LR LR 04 59 24.6
comp=E,156nm,19.4s,MS3.9,baz=124,slow=37
PETK Petropavlovsk- 41.82 33 P **P 04 41 26.9 +0.3**
PETK LR LR 04 59 24.6
KSH Kashi 42.08 305 *e*P **P 04 41 32.0 +3.0**
KSH pP pP 04 41 39.4 +3.3
KSH sP sP 04 41 42.8 +3.9
KSH PP PP 04 43 13.2 +6.7
KSH PcP PcP 04 43 26.5 +3.0
KSH ScP ScP 04 47 14.2 +1.5
KSH PcS PcS 04 47 17.2 +2.1
KSH S **S 04 47 50.5 +3.4**
KSH sS sS 04 48 02.8 +4.0
KSH SS SS 04 50 53.1 -1.7
KSH ScS ScS 04 51 30.3 +0.1
KSH pmax pmax
comp=Z,6.0nm,1.1s,mb4.1
KSH pmax pmax
comp=Z,150nm,7.0s
KSH LR LR
comp=N,330nm,12.5s
KSH LR LR
comp=E,230nm,7.3s
KSH LR LR
comp=Z,360nm,11.0s,MS4.5
ZAA0 Zalesovo Array 42.11 329 *e*P **P 04 41 28.6 -0.3**
ZALV Zalesovo Beam 42.11 329 P **P 04 41 28.7 -0.3**
comp=Z,16nm,0.8s,mb4.7,baz=111,slow=8.1,SNR=38
ZALV LR LR 05 01 17.8
comp=Z,177nm,18.2s,MS4.0,baz=129,slow=39
ZALV Zalesovo Beam 42.11 329 P **P 04 41 28.7 -0.3**
ZALV LR LR 05 01 17.8
TKM2 Tokmak 2 43.11 310 *e*P **P 04 41 38.2 +1.0**
TKM2 pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
TKM2 Tokmak 2 43.11 310 *e*P **P 04 41 38.2 +1.0**
comp=Z,4.8nm,0.8s,mb4.3
NVS Novosibirsk 43.38 329⇑*i*P **P 04 41 38.3 -0.9**
NVS pmax pmax
comp=Z,16nm,1.8s,mb4.5
NVS pmax pmax
comp=N,14nm,1.7s
NVS pmax pmax
comp=E,19nm,1.4s
WRAB Tennant Creek 43.56 162 *e*P **P 04 41 39.6 -1.5**
WRAB pmax pmax
comp=Z,14nm,0.9s,mb4.7
WRAB Tennant Creek 43.56 162 *e*P **P 04 41 39.6 -1.4**
comp=Z,14nm,0.9s,mb4.7
WRA Warramunga Arr 43.57 162 P **P 04 41 39.0 -2.1**
comp=Z,8.8nm,0.7s,mb4.6,baz=344,slow=8.8,SNR=27
WRA PcP PcP 04 43 27.7 -1.0
comp=Z,1.5nm,0.7s,baz=343,slow=3.6,SNR=8.0
UCH Uchtor 43.72 309 *e*P **P 04 41 43.7 +1.5**
UCH pmax pmax
comp=Z,6.0nm,1.0s,mb4.3
UCH Uchtor 43.72 309 *e*P **P 04 41 43.7 +1.5**
comp=Z,6.5nm,1.0s,mb4.3
KURK Kurchatov 43.78 322 P **P 04 41 42.8 +0.2**
comp=Z,20nm,1.0s,mb4.8,baz=119,slow=7.2,SNR=72
KURK LR LR 05 01 27.1
comp=Z,174nm,21.2s,MS3.9,baz=310,slow=38
KURK Kurchatov 43.78 322 *e*P **P 04 41 42.5 -0.1**
KURK pmax pmax
comp=Z,34nm,1.2s,mb5.0
KURK Kurchatov 43.78 322 *e*P **P 04 41 42.1 -0.4**
comp=Z,27nm,1.1s,mb4.9
AAK Ala-Archa 43.83 309 LR LR 05 02 58.2
comp=Z,975nm,18.4s,MS4.8,baz=102,slow=40
AAK Ala-Archa 43.83 309 *e*P **P 04 41 44.3 +1.2**
SEY Seymchan 46.15 19 *e*P **P 04 42 00.7 -0.5**
ASAR Alice Springs 46.99 164 P **P 04 42 07.4 -0.8**
comp=Z,2.2nm,0.5s,mb4.3,baz=344,slow=6.7,SNR=21
ASAR PcP PcP 04 43 39.5 -0.9
comp=Z,4.1nm,0.9s,baz=341,slow=2.9,SNR=7.4
ASAR ScP ScP 04 47 31.4 -1.5
comp=Z,1.1nm,0.9s,baz=350,slow=4.8,SNR=4.8
ASAR Alice Springs 46.99 164 P **P 04 42 07.4 -0.8**
ASAR 04 43 39.5
KBL Kabul 47.07 297 *e*P **P 04 42 09.7 +0.8**
KBL *e**PP pP 04 42 18.0 +1.9
KBL pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
KBL Kabul 47.07 297 *e*P **P 04 42 09.7 +0.8**
comp=Z,10nm,0.8s,mb4.8
KBL *e*pP pP 04 42 18.0 +2.0
CTA Charters Tower 48.45 148 P **P 04 42 22.1 +2.4**
comp=Z,4.2nm,0.7s,mb4.6,baz=341,slow=9.1,SNR=2.7
CTAO Charters Tower 48.45 148 *e*P **P 04 42 19.5 -0.2**
CTAO pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
CTAO Charters Tower 48.45 148 *e*P **P 04 42 19.5 -0.1**
comp=Z,8.4nm,0.7s,mb4.9
BVAR Borovoye Array 49.38 322 P **P 04 42 26.6 +0.2**
comp=Z,2.3nm,0.6s,mb4.4,baz=113,slow=10.0,SNR=14
BVAR PcP PcP 04 43 47.2 -1.4
comp=Z,0.9nm,0.5s,baz=66,slow=1.7,SNR=3.5
BRVK Borovoye 49.45 322 *c e*P **P 04 42 27.5 +0.6**
BRVK pmax pmax
comp=Z,22nm,1.7s,mb4.9
BRVK Borovoye 49.45 322 *e*P **P 04 42 26.9 0.0**
comp=Z,13nm,1.0s,mb4.9
TIXI Tiksi 49.96 3 *e*P **P 04 42 28.7 -1.9**
TIXI pmax pmax
comp=Z,12nm,0.9s,mb4.9
TIXI Tiksi 49.96 3 *e*P **P 04 42 28.7 -1.8**
comp=Z,12nm,0.9s,mb4.9
FORT Forrest 52.81 172 *e*P **P 04 42 45.5 -6.9**
comp=Z,28nm,0.8s,mb5.2
FORT Forrest 52.81 172 *e*P **P 04 42 52.6 +0.2**
comp=Z,34nm,0.8s,mb5.3
KLBR Kellerberrin 53.29 184 *e*P **P 04 42 54.4 -1.5**
comp=Z,66nm,1.3s,mb5.4
BILL Biiibino 53.85 19⇓*e*P **P 04 42 58.5 -1.1**
BILL *e* 04 43 15.4
BILL pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
BILL MLR MLR
comp=Z,400nm,17.0s,MS4.5

BILL Bilibino 53.85 19 *e*P **P 04 42 58.6 -1.0**
ABKAR Akbulak array 54.97 316 *e*P **P 04 43 07.8 -0.2**
comp=Z,2.0nm,0.8s,mb4.2
SVE Sverdlovsk 55.82 325 *e*P **P 04 43 14.5 +0.5**
SVE *e* 04 45 14.0
SVE *e*SSS 04 56 45.3
SVE pmax pmax
comp=Z,17nm,0.8s,mb5.1
SVE MLR MLR
comp=Z,497nm,18.0s,MS4.6
AKTO Aktyubinsk 56.34 317 LR LR 05 09 35.1
comp=Z,493nm,18.3s,MS4.6,baz=321,slow=38
ARU Arti 56.87 324 *i* P **P 04 43 21.2 -0.3**
ARU S **S 04 51 15.9 +2.3**
ARU SS SS 04 54 58.4 -3.2
ARU pmax pmax
comp=Z,33nm,1.7s,mb5.1
ARU Arti 56.87 324 *e*P **P 04 43 21.3 -0.1**
comp=Z,13nm,0.7s,mb5.1
STKA Stephens Creek 56.98 159 *e*P **P 04 43 21.4 -1.1**
comp=Z,7.0nm,0.9s,mb4.7
STKA Stephens Creek 56.98 159 P **P 04 43 21.2 -1.3**
comp=Z,4.2nm,0.6s,mb4.6,baz=320,slow=12,SNR=9.7
STKA pP pP 04 43 30.0 +0.2
comp=Z,7.6nm,0.8s,baz=328,slow=9.6,SNR=5.6
STKA Stephens Creek 56.98 159 *e*P **P 04 43 21.5 -1.0**
STKA pmax pmax
comp=Z,2.0nm,0.9s
STKA Stephens Creek 56.98 159 *e*P **P 04 43 21.5 -1.0**
comp=Z,2.2nm,0.9s,mb4.2
CMSA Cobar Meteorol 58.15 155 *e*P **P 04 43 30.6 -0.2**
ARMA Armidale 59.74 149 *e*P **P 04 43 42.2 +0.3**
KIV Kislovodsk 66.94 310⇑ *e*P **P 04 44 29.9 +0.4**
KIV *e* pP 04 44 37.1 +0.2
KIV pmax pmax
comp=Z,29nm,1.4s,mb5.1
KIV Kislovodsk 66.94 310 *e*P **P 04 44 29.7 +0.2**
comp=Z,16nm,0.9s,mb5.1
TTA Tatalina 67.53 29 *e*P **P 04 44 32.1 -0.8**
VSR Storozhevoye 68.24 318 *e*P **P 04 44 36.9 -0.7**
VSR pmax pmax
comp=E,4.0nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
VSR pmax pmax
comp=N,2.0nm,0.4s
APA Apatity 69.08 336⇑ *i* P **P 04 44 43.0 +0.5**
APA pmax pmax
comp=Z,21nm,1.2s,mb4.9
APA MLR MLR
comp=Z,600nm,12.0s,MS5.0
SOC Sochi 69.13 310 *e*P **P 04 44 44.9 +1.7**
SOC *e**PP pP 04 44 51.8 +1.1
SOC *e*S S 04 53 43.8 -3.7
SOC pmax pmax
comp=Z,39nm,1.1s,mb5.2
SOC MLR MLR
comp=Z,262nm,17.0s,MS4.5
OBN Obninsk 69.22 322⇑ *e*P **P 04 44 44.2 +0.6**
OBN *e* pP 04 44 51.4 +0.4
OBN pmax pmax
comp=Z,16nm,0.9s,mb5.0
OBN MLR MLR
comp=Z,200nm,17.0s,MS4.4
PPLA Purkeypile 69.27 29 *e*P **P 04 44 43.4 -0.4**
comp=Z,15nm,1.3s,mb4.8
BPAW Bear Paw Mtn. 69.64 28 *e*P **P 04 44 45.4 -0.7**
comp=Z,14nm,1.5s,mb4.7
KTH Kantishna Hill 69.75 28 *e*P **P 04 44 46.8 +0.1**
comp=Z,4.7nm,1.0s,mb4.4
TRF Thorofare Moun 70.05 29 *e*P **P 04 44 48.5 -0.1**
comp=Z,3.8nm,0.9s,mb4.3
ANN Anapa 70.50 311 *e*P **P 04 44 50.2 -1.5**
ANN *e*S S 04 54 01.8 -1.8
ANN pmax pmax
comp=Z,82nm,1.7s,mb5.4
MCK McKinley 70.59 28 *e*P **P 04 44 48.8 -3.1**
MCK pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
MCK McKinley 70.59 28 *e*P **P 04 44 48.8 -3.1**
comp=Z,7.8nm,1.0s,mb4.6
COLA College 70.85 27 *e*P **P 04 44 51.5 -1.9**
COLA pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
COLA College 70.85 27 *e*P **P 04 44 51.5 -1.9**
comp=Z,3.9nm,0.9s,mb4.3
ARCES ARCESS Array B 71.60 338 P **P 04 44 58.0 +0.1**
comp=Z,4.8nm,1.0s,mb4.4,baz=72,slow=7.8,SNR=6.1
ARCES LR LR 05 21 11.2
comp=Z,151nm,21.0s,MS4.2,baz=38,slow=40
FINES FINESS Array B 73.35 330 P **P 04 45 07.9 -0.6**
comp=Z,2.9nm,0.7s,mb4.3,baz=46,slow=5.5,SNR=4.3
EGAK Eagle 73.66 26 *e*P **P 04 45 09.0 -1.2**
comp=Z,6.7nm,1.2s,mb4.5
BR131 Keskin Array S 74.44 307 *e*P **P 04 45 15.2 -0.1**
comp=Z,0.7nm,0.6s,mb3.8
BRTR Keskin Array B 74.44 307 P **P 04 45 15.4 +0.2**
comp=Z,1.9nm,0.8s,mb4.1,baz=109,slow=7.1,SNR=8.8
AKASG Malin Array Be 74.50 319 P **P 04 45 14.5 -0.9**
comp=Z,5.3nm,0.8s,mb4.5,baz=62,slow=5.7,SNR=9.9
AKBB Malin Array Si 74.50 319 *e*P **P 04 45 14.2 -1.2**
KIEV Kiev 74.51 319 *e*P **P 04 45 14.3 -1.1**
KIEV pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
KIEV Kiev 74.51 319 *e*P **P 04 45 14.3 -1.1**
comp=Z,4.3nm,0.8s,mb4.4
DAWY Dawson 74.60 27 *e*P **P 04 45 15.0 -0.7**
MMAI Mount Meron Ar 74.92 300 LR LR 05 21 03.6
comp=Z,79nm,19.7s,MS4.0,baz=15,slow=38
INK Inuvik 75.37 22 *e*P **P 04 45 19.4 -0.7**
INK pmax pmax
comp=Z,9.0nm,0.8s
INK Inuvik 75.37 22 *e*P **P 04 45 19.4 -0.7**
comp=Z,9.4nm,0.8s,mb4.8
HYT Haines Junctio 76.51 30 *e*P **P 04 45 27.3 +0.6**
SUW Suwalki 77.04 323 *e*P **P 04 45 29.3 -0.5**
SUW Suwalki 77.04 323 *e*P **P 04 45 29.4 -0.5**
SUW pmax pmax
comp=Z,34nm,0.8s,mb5.3
SUW Suwalki 77.04 323 *e*P **P 04 45 29.4 -0.4**
comp=Z,34nm,0.8s,mb5.3
BUR08 Bucovina Ar. S 77.93 317 *e*P **P 04 45 35.0 0.0**
SKAG Skagway 78.03 30 *e*P **P 04 45 35.9 +0.6**
comp=Z,18nm,1.0s,mb5.0
DAG Danmarks Havn 78.59 351⇑ *i* P **P 04 45 37.5 -0.6**
comp=Z,5.0nm,1.0s,mb4.4
KWP Kalwaria Pacla 78.81 319 *e*P **P 04 45 40.1 +0.4**
KWP Kalwaria Pacla 78.81 319 *e*P **P 04 45 40.1 +0.3**
KWP pmax pmax
comp=Z,30nm,1.1s,mb5.1
KWP Kalwaria Pacla 78.81 319 *e*P **P 04 45 40.1 +0.3**
comp=Z,30nm,1.1s,mb5.1
KOLS Kolonicke sedl 79.33 318 *e*P **P 04 45 42.3 -0.3**
KOLS pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
KOLS Kolonicke sedl 79.33 318 *e*P **P 04 45 42.3 -0.3**
comp=Z,1.7nm,0.9s,mb4.0
KOLS Kolonicke sedl 79.33 318 *e*P **P 04 45 42.3 -0.3**
STHS Stebnicka Huta 79.78 319 *e*P **P 04 45 45.8 +0.7**
STHS pmax pmax
comp=Z,4.0nm,1.4s,mb4.2
STHS Stebnicka Huta 79.78 319 *e*P **P 04 45 45.8 +0.7**
comp=Z,3.7nm,1.4s,mb4.1
STHS Stebnicka Huta 79.78 319 *e*P **P 04 45 45.8 +0.7**
CRVS Cervenica-Dubn 79.84 319 *e*P **P 04 45 44.9 -0.5**
CRVS *e* 04 45 58.7
CRVS pmax pmax
comp=Z,16nm,1.9s,mb4.6
CRVS Cervenica-Dubn 79.84 319 *e*P **P 04 45 44.9 -0.5**
comp=Z,16nm,1.9s,mb4.6
CRVS *e* 04 45 58.7
CRVS Cervenica-Dubn 79.84 319 *e*P **P 04 45 44.9 -0.5**
CRVS *e*pP pP 04 45 58.6 +5.7
NB2 NORSAR Subarra 80.18 332 P **P 04 45 46.0 -1.0**
comp=Z,6.1nm,0.9s,mb4.5,baz=64,slow=5.6
NOA NORSAR Array B 80.18 332 P **P 04 45 46.0 -0.9**
comp=Z,1.9nm,0.6s,mb4.2,baz=64,slow=5.3,SNR=4.4
NOA pP pP 04 45 56.4 +1.9
comp=Z,3.6nm,0.8s,baz=61,slow=5.5,SNR=5.6
NOA LR LR 05 24 53.3
comp=Z,313nm,18.1s,MS4.7,baz=40,slow=38
NOA NORSAR Array B 80.18 332 P **P 04 45 46.1 -0.9**
NOA *PP pP 04 45 56.4 +1.9
NIE Niedzica 80.34 319 *e*P **P 04 45 48.5 +0.4**
OJC Ojcow 80.35 320 *e*P **P 04 45 47.0 -1.1**
KECS Kecovo 80.59 318 *e*P **P 04 45 47.5 -2.0**
KECS Kecovo 80.59 318 *e*P **P 04 45 47.5 -2.0**
RES Resolute Bay 80.92 9 *e*P **P 04 45 50.0 -0.7**
RES pmax pmax
comp=Z,21nm,1.1s,mb5.0
RES Resolute Bay 80.92 9 *e*P **P 04 45 50.0 -0.7**
comp=Z,21nm,1.1s,mb5.0
DLBC Dease Lake 80.95 30 *e*P **P 04 45 51.4 +0.2**
VYHS Vyhne 81.60 319 *e*P **P 04 45 55.2 +0.4**
VYHS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
VYHS Vyhne 81.60 319 *e*P **P 04 45 55.2 +0.4**
comp=Z,3.9nm,1.0s,mb4.3
VYHS Vyhne 81.60 319 *e*P **P 04 45 55.2 +0.4**
MORC Moravsky Berou 81.86 320 *e*P **P 04 45 56.0 -0.2**
MORC pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
MORC Moravsky Berou 81.86 320 *e*P **P 04 45 56.0 -0.2**
comp=Z,2.8nm,0.8s,mb4.2
KSP Ksiaz 82.14 322 *e*P **P 04 45 57.9 +0.3**
KSP Ksiaz 82.14 322 *e*P **P 04 45 57.7 +0.1**
DPC Dobruska-Polom 82.33 321 *e*P **P 04 45 58.4 -0.3**
DPC *e**PP pP 04 46 10.8 +4.6
DPC Dobruska-Polom 82.33 321 *e*P **P 04 45 58.4 -0.3**
DPC *e*pP pP 04 46 10.8 +4.6
UPC Upice 82.45 322 *e*P **P 04 45 59.6 +0.4**
UPC Upice 82.45 322 *e*P **P 04 45 59.6 +0.4**
PVCC Panska Ves 83.27 322 *e*P **P 04 46 04.2 +0.7**
PVCC Panska Ves 83.27 322 *e*P **P 04 46 04.2 +0.7**
PRU Pruhonice 83.52 321 *e*P **P 04 46 05.2 +0.4**
PRU MLR MLR
comp=Z,200nm,14.4s,MS4.6
PRU Pruhonice 83.52 321 *e*P **P 04 46 05.2 +0.4**
PRU AMS AMS 05 29 40.0
comp=Z,200nm,14.4s
CLL Collm 83.80 323 *e*P **P 04 46 05.0 -1.2**
CLL *e* 04 46 14.0
CLL pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
CLL MLR MLR
comp=Z,200nm,17.9s,MS4.5
CLL Collm 83.80 323 *e*P **P 04 46 05.0 -1.2**
comp=Z,9.0nm,1.0s,mb4.8
CLL *e* 04 46 14.0
CLL LR LR
comp=Z,200nm,17.9s,MS4.5
CLL Collm 83.80 323 *e*P **P 04 46 05.0 -1.2**
comp=Z,9.0nm,1.0s,mb4.8
CLL *e*pP pP 04 46 14.0 +0.2
KHC Kasperske Hory 84.47 321 *e*P **P 04 46 09.6 -0.1**
KHC *e**PP pP 04 46 18.4 +1.1
KHC Kasperske Hory 84.47 321 *e*P **P 04 46 09.6 -0.1**
KHC *e*pP pP 04 46 18.4 +1.1
GEC2 GERESS Array S 84.53 321 *e*P **P 04 46 09.2 -0.8**
comp=Z,874nm,0.8s
GEC2 *e*pP pP 04 46 18.6 +1.1
GERES GERESS Array B 84.53 321 P **P 04 46 09.7 -0.2**
comp=Z,3.3nm,0.7s,mb4.5,baz=57,slow=4.9,SNR=20
GERES LR LR 05 30 05.2
comp=Z,185nm,19.6s,MS4.5,baz=259,slow=40
KMBO Kilima Mbogo 84.68 267 P **P 04 46 12.3 +0.9**
comp=Z,2.5nm,0.8s,mb4.4,baz=38,slow=5.6,SNR=3.9
KMBO LR LR 05 23 20.0
comp=Z,95nm,18.9s,MS4.2,baz=93,slow=35
KMBO Kilima Mbogo 84.68 267 *e*P **P 04 46 12.6 +1.2**
KMBO *e**PP pP 04 46 21.1 +2.1
KMBO pmax pmax
comp=Z,16nm,1.3s
KMBO Kilima Mbogo 84.68 267 *e*P **P 04 46 12.6 +1.2**
comp=Z,16nm,1.3s,mb5.0
KMBO *e*pP pP 04 46 21.1 +2.1
SUMG Summit 84.74 354 *e*P **P 04 46 10.9 +0.3**
SUMG *e**PP pP 04 46 20.5 +2.3
SUMG pmax pmax
comp=Z,14nm,1.1s
SUMG Summit 84.74 354 *e*P **P 04 46 10.9 +0.3**
comp=Z,14nm,1.1s,mb5.0
SUMG *e*pP pP 04 46 20.5 +2.3
SUMG Summit 84.74 354 *i* P **P 04 46 10.6 0.0**
comp=Z,6.1nm,1.0s,mb4.7
MOX Moxa 84.89 323 *e*P **P 04 46 12.7 +1.0**
YKA Yellowknife Ar 85.10 23 P **P 04 46 11.2 -1.3**
comp=Z,8.9nm,0.8s,mb4.9,baz=316,slow=4.8,SNR=61
YKA pP pP 04 46 21.3 +1.1
comp=Z,4.7nm,0.8s,baz=312,slow=4.7,SNR=10
YKA LR LR 05 29 42.4
comp=Z,10nm,20.1s,MS3.2,baz=165,slow=40
YKA Yellowknife Ar 85.10 23 P **P 04 46 11.2 -1.4**
YKA *PP pP 04 46 21.3 +1.1
YKA Yellowknife Ar 85.10 23 P **P 04 46 11.2 -1.3**
YKA pP pP 04 46 21.3 +1.1
YKA LR LR 05 29 42.4
GRA1 Grafenberg Arr 85.56 322 *e*P **P 04 46 15.2 0.0**
comp=Z,7.0nm,1.3s,mb4.7
GRF Grafenberg Arr 85.56 322 *e*P **P 04 46 15.2 0.0**
comp=Z,7.0nm,1.3s,mb4.7
GRF Grafenberg Arr 85.56 322 *e*P **P 04 46 15.2 0.0**
GRF pmax pmax
comp=Z,7.0nm,1.3s,mb4.7
GRF Grafenberg Arr 85.56 322 *e*P **P 04 46 15.2 0.0**
GRF pmax pmax
comp=Z,7.0nm,1.3s,mb4.7
TIP Timpagrande 86.85 311 *e*P **P 04 46 21.9 +0.2**
comp=Z,9.5nm,1.4s,mb4.8
CASY Casey 88.27 184 *e*P **P 04 46 27.8 +0.1**
comp=Z,11nm,1.1s,mb5.0
CDF Champ du Feu 88.45 322 *e*P **P 04 46 29.0 -0.2**
HINF Hinteralfeld 89.01 322 *e*P **P 04 46 31.2 -0.6**
HAU Haudompre 89.19 322 *e*P **P 04 46 32.4 -0.3**
HAU *e*MLR MLR
comp=Z,216nm,18.5s,MS4.3
HAU Haudompre 89.19 322 *e*P **P 04 46 32.4 -0.3**
HAU LR LR
comp=Z,220nm,18.5s,MS4.6
LPG La Plagne 90.30 320 *e*P **P 04 46 38.1 +0.1**
LPL La Plagne 90.30 320 *e*P **P 04 46 37.8 -0.2**
JCW Jim Creek 90.37 37 *e*P **P 04 46 38.8 +0.6**
PGF Pioggiola 90.45 317 *e*P **P 04 46 38.5 -0.2**
comp=Z,11nm,0.9s,mb4.9
PGF Pioggiola 90.45 317 *e*P **P 04 46 38.5 -0.2**
PGF pmax pmax
comp=Z,6.0nm,0.9s,mb4.9
PGF Pioggiola 90.45 317 *e*P **P 04 46 38.5 -0.2**
comp=Z,5.5nm,0.9s,mb4.9
SSF Saint Saulge 91.32 323 *e*P **P 04 46 41.9 -0.8**
comp=Z,4.5nm,0.7s,mb4.6
SSF Saint Saulge 91.32 323 *e*P **P 04 46 41.9 -0.8**
SSF pmax pmax
comp=Z,2.0nm,0.7s,mb4.6
SSF Saint Saulge 91.32 323 *e*P **P 04 46 41.9 -0.8**
comp=Z,2.3nm,0.7s,mb4.6
SMF Signal de Mont 91.37 322 *e*P **P 04 46 42.2 -0.7**
AVF Avril sur Loir 91.56 323 *e*P **P 04 46 42.8 -1.0**
comp=Z,3.1nm,0.6s,mb4.5
AVF Avril sur Loir 91.56 323 *e*P **P 04 46 42.8 -1.0**
AVF pmax pmax
comp=Z,2.0nm,0.6s,mb4.6
AVF Avril sur Loir 91.56 323 *e*P **P 04 46 42.8 -1.0**
comp=Z,1.5nm,0.6s,mb4.5
LMR La Mourre 91.60 318 *e*P **P 04 46 43.4 -0.6**
comp=Z,15nm,1.2s,mb4.9
LMR La Mourre 91.60 318 *e*P **P 04 46 43.4 -0.6**
LMR pmax pmax
comp=Z,8.0nm,1.2s,mb4.9
LMR La Mourre 91.60 318 *e*P **P 04 46 43.4 -0.6**
comp=Z,7.6nm,1.2s,mb4.9
EDM Edmonton 91.63 29 *e*P **P 04 46 44.1 +0.1**
BGF Bois d'Agland 91.98 323 *e*P **P 04 46 45.2 -0.5**
comp=Z,4.5nm,0.6s,mb4.7
BGF Bois d'Agland 91.98 323 *e*P **P 04 46 45.2 -0.5**
BGF pmax pmax
comp=Z,2.0nm,0.6s,mb4.6
BGF Bois d'Agland 91.98 323 *e*P **P 04 46 45.2 -0.5**
comp=Z,2.3nm,0.6s,mb4.7
TCF Toulx Ste Croi 92.50 323 *e*P **P 04 46 47.7 -0.4**
GRR Gorron 92.91 325 *e*P **P 04 46 50.0 0.0**
NEW Newport 92.93 35 *e*P **P 04 46 50.3 +0.2**
NEW pmax pmax
comp=Z,4.0nm,0.8s
NEW Newport 92.93 35 *e*P **P 04 46 50.3 +0.3**
comp=Z,4.3nm,0.8s,mb4.9
RJF Les Rejaudoux 93.46 322 *e*P **P 04 46 52.5 -0.1**
comp=Z,8.9nm,0.9s,mb4.9
RJF *e*MLR MLR
comp=Z,163nm,22.0s,MS4.1
RJF Les Rejaudoux 93.46 322 *e*P **P 04 46 52.5 -0.1**
RJF pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
RJF MLR MLR
comp=Z,160nm,22.0s,MS4.4
RJF Les Rejaudoux 93.46 322 *e*P **P 04 46 52.5 -0.1**
comp=Z,4.4nm,0.9s,mb4.9
RJF LR LR
comp=Z,160nm,22.0s,MS4.4
FFC Flin Flon 95.25 23 *c*e*P **P 04 46 59.9 -0.7**
FFC Flin Flon 95.25 23 *e*P **P 04 46 58.9 -1.7**
comp=Z,4.4nm,0.9s,mb4.9
FFC *e*pP pP 04 47 07.9 -0.3
HLID Hailey 97.34 37 *e*P **P 04 47 10.5 +0.2**
comp=Z,1.3nm,0.8s,mb4.4
BOZ Bozeman (W) 97.49 34 *e*P **P 04 47 11.8 +0.8**
BOZ pmax pmax
comp=Z,1.0nm,0.9s,mb4.2
BOZ Bozeman (W) 97.49 34 *e*P **P 04 47 11.8 +0.8**
comp=Z,1.0nm,0.9s,mb4.2
CCUT Cedar City 101.78 41 *e*Pdif Pdif 04 47 27.9 -2.1
TORD Torodi Ar. Bea 111.09 295 PKKPab PKKPab 05 03 16.9 -1.8
comp=Z,1.5nm,1.0s,baz=256,slow=4.1,SNR=5.9
SDV Santo Domingo 147.31 22 *e*PKPbc PKPbc 04 53 20.8 -0.6
ROSC El Rosal 149.42 31 PKP PKPdf 04 53 19.3 -3.2
comp=Z,1.6nm,0.4s,baz=110,slow=5.9,SNR=2.9
ROSC PKPbc PKPbc 04 53 27.8 +0.9
comp=Z,3.4nm,0.8s,baz=102,slow=9.3,SNR=2.7
OTAV Otavalo 150.90 43 *e*PKPbc PKPbc 04 53 32.2 +1.7
LPAZ La Paz 169.66 59 PKP PKPdf 04 53 44.7 -0.5
comp=Z,1.0nm,0.8s,baz=354,slow=10,SNR=2.6
LPAZ PKPab PKPab 04 54 56.8 -2.2
comp=Z,4.1nm,1.2s,baz=349,slow=8.3,SNR=3.9
LPAZ La Paz 169.66 59 PKP PKPdf 04 53 44.7 -0.5
LPAZ PKPab PKPab 04 54 56.8 -2.2
LPAZ *e*PKPab PKPab 04 54 58.1 -0.9

DJA 11 05:00:32.2±2.32S×120.58E, h14km, MLv3.8/7, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTSI	**Tana Toraja**	**1.05**	**227**	P	Pb	05 00 50.8	-1.1
TTSI				S	Sb	05 01 04.9	-0.6
PCI	**Palu**	**1.59**	**332**	P	Pn	05 01 00.9	+1.2
APSI	**Ampana**	**1.76**	**37**	P	Pn	05 01 03.1	+1.0
SPSI	**Sidrap Palu**	**1.82**	**206**	P	Pn	05 01 03.5	+0.5
SPSI				S	Sn	05 01 28.6	+2.7
BNSI	**Bone**	**2.12**	**193**	P	Pn	05 01 07.9	+0.9
LUWI	**Luwuk**	**2.53**	**60**	P	Pn	05 01 18.5	+5.8
KDI	**Kendari**	**2.61**	**129**	P	Pn	05 01 14.9	+1.2
KAPI	**Kappang**	**2.80**	**197**	P	Pn	05 01 15.9	-0.5
MRSI	**Marisa**	**3.09**	**26**	P	Pn	05 01 19.5	-0.9

*IDC **11** 05:00:37.2±0.7, 31.71N×104.34E, h0km, mb4.0/12, mb1 4.1/14, mb1mx4.0/28, mbtmp4.0/14, ML3.5/2, MS3.4/2, Ms1 3.4/2, ms1mx2.7/33, Error ellipse: s-maj=30.0km s-min=14.3km az=55.0*
*ISCJB **11** 05:00:37.3±1.1, 31.68N±0.04×104.43E±0.03, h12km±8km, mb4.1/17, MS3.3/2, Error ellipse: s-maj=6.7km s-min=5.0km az=4.8*
*NEIC **11** 05:00:38.3±0.4, 31.59N×104.17E, h10km, mb4.5/11, Error ellipse: s-maj=7.7km s-min=6.7km az=185.0*
*BJI **11** 05:00:38.5, 31.70N×104.55E, h12km, mB4.5/6, mb4.2/8, ML4.2/19, Ms3.9/13, Ms7 3.8/11*
ISC 11 05:00:37.9±0.8, 31.73N±0.03×104.34E±0.04, h3km±5km, n48, σ1.916/58, mb4.1/17, MS3.3/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.96**	**211**	Pg	**Pg**	**05 00 56.8**	**+0.5**
CD2				Sg	**Sg**	**05 01 09.8**	**+1.1**
CD2				smax			
	comp=N,6μm,1.0s						
CD2				smax			
	comp=E,11μm,0.7s						
LZH	**Lanzhou**	**4.36**	**355**	Pn	**Pn**	**05 01 46.1**	**+1.1**
LZH				Pg	**Pg**	**05 02 00.3**	**-1.1**
LZH				Sn	**Sn**	**05 02 38.5**	**+2.1**
LZH				Sg	**Sg**	**05 02 56.7**	**-1.3**
LZH				smax			
	comp=N,270nm,0.7s						
LZH				smax			
	comp=E,220nm,0.6s						
LZH				LR	LR		
	comp=E,1μm,8.7s						
LZH				LR	LR		
	comp=Z,1μm,9.0s						
XAN	**Xi'an**	**4.49**	**58**	Pn	**Pn**	**05 01 47.1**	**+0.3**
XAN				Sn	**Sn**	**05 02 40.1**	**+0.5**
XAN				Sg	**Sg**	**05 02 58.1**	**-4.0**
XAN				smax			
	comp=N,660nm,0.6s						
XAN				smax			
	comp=E,290nm,0.6s						
XAN				LR	LR		
	comp=N,460nm,8.1s						
XAN				LR	LR		
	comp=E,290nm,8.5s						
XAN				LR	LR		
	comp=Z,400nm,8.8s						
ENH	**Enshi**	**4.66**	**107**	*e*Pn	**Pn**	**05 01 49.9**	**+0.8**
ENH				*e*Sg	**Sg**	**05 03 07.7**	**+0.3**
GYA	**Guiyang**	**5.64**	**158**	Pn	**Pn**	**05 02 03.7**	**+1.1**
GYA				Sn	**Sn**	**05 02 59.2**	**-8.7**
GYA				Sg	**Sb**	**05 03 24.8**	**-0.1**
GYA				smax			
	comp=N,220nm,0.8s						
GYA				smax			
	comp=E,210nm,0.8s						
GTA	**Gaotai**	**8.50**	**336**	*e*P	**Pn**	**05 02 50.3**	**+8.4**
GTA				pP		05 02 54.5	
GTA				sP		05 02 57.6	
GTA				S	**Sn**	**05 04 23.2**	**+4.9**
GTA				sS		05 04 29.5	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,100nm,5.0s						
GTA				LR	LR		
	comp=N,250nm,9.2s						
GTA				LR	LR		
	comp=E,260nm,11.0s						
GTA				LR	LR		
	comp=Z,250nm,12.2s						
WHN	**Wuhan**	**8.66**	**95**	*e*P	**Pn**	**05 02 43.0**	**-1.2**
WHN				S	**Sn**	**05 04 20.0**	**-2.4**
WHN				LR	LR		
	comp=N,1μm,7.4s						
WHN				LR	LR		
	comp=E,2μm,10.5s						
WHN				LR	LR		
	comp=Z,1μm,14.4s						
CMAR	**Chiang Mai Arr**	**14.09**	**202**	Pn	**Pn**	**05 04 00.0**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=14,slow=12,SNR=4.3						
TAPN	**Taplejung**	**15.12**	**257**	*e*P	**Pn**	**05 04 15.0**	**+2.6**
	comp=Z,9.7nm,0.8s						
ODAN	**Odare**	**15.56**	**256**	*e*P	**Pn**	**05 04 15.7**	**-2.5**
	comp=Z,24nm,0.9s						
SONM	**Songino Array**	**16.16**	**5**	Pn	**Pn**	**05 04 26.9**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=185,slow=15,SNR=7.3						
RAMN	**Ramite**	**16.18**	**257**	*e*P	**Pn**	**05 04 21.9**	**-4.4**
	comp=Z,18nm,0.5s						
ULN	**Ulaanbaatar**	**16.24**	**7**	*e*Pn	**Pn**	**05 04 27.0**	**0.0**
	comp=Z,4.8nm,0.9s						
GUN	**Gumba**	**16.46**	**261**	*e*P	**Pn**	**05 04 27.9**	**-2.0**
	comp=Z,19nm,0.7s						
PKI	**Pulchoki**	**16.97**	**261**	*e*P	**Pn**	**05 04 33.2**	**-3.1**
	comp=Z,27nm,0.7s						
KKN	**Kakani**	**17.01**	**262**	*e*P	**Pn**	**05 04 34.8**	**-2.0**
	comp=Z,10nm,0.4s						
DMN	**Daman**	**17.21**	**261**	*e*P	**Pn**	**05 04 35.6**	**-3.8**
	comp=Z,30nm,0.8s						
KSRS	**Korea Array**	**20.22**	**67**	P	**P**	**05 05 14.4**	**+0.4**
	comp=Z,11nm,0.7s,baz=256,slow=10,SNR=42						
CN2	**Changchun**	**20.52**	**48**	*e*P	**P**	**05 05 18.8**	**+1.6**
CN2				pmax	pmax		
	comp=Z,30nm,0.8s						
MK31	**Makanchi Array**	**22.64**	**318**	*e*P	**P**	**05 05 39.1**	**-0.8**
MKAR	**Makanchi Array**	**22.64**	**318**	P	**P**	**05 05 40.3**	**+0.3**
	comp=Z,1.5nm,0.8s,mb3.5,baz=105,slow=14,SNR=9.1						
MKAR				LR	LR	05 15 21.0	
	comp=Z,77nm,20.1s,MS3.1,baz=170,slow=39						
TKM2	**Tokmak 2**	**25.32**	**304**	P	**P**	**05 06 04.9**	**-0.8**

AAK	Ala-Archa	26.02 303	LR	LR	05 18 27.7	
	comp=Z,110nm,18.5s,MS3.4,baz=188,slow=41					
ZAA0	Zalesovo Array	26.25 333	*e*P	P	05 06 14.6	+0.6
ZALV	Zalesovo Beam	26.25 333	P	P	05 06 14.6	+0.6
	comp=Z,2.8nm,0.9s,mb3.8,baz=145,slow=11,SNR=8.6					
KURK	Kurchatov	26.87 322	P	P	05 06 20.0	+0.4
	comp=Z,1.0nm,0.5s,mb3.6,baz=129,slow=8.9,SNR=12					
KURK			PcP	PcP	05 09 40.2	-1.8
	comp=Z,0.2nm,0.6s,baz=112,slow=2.3,SNR=2.3					
KURK	Kurchatov	26.87 322	P	P	05 06 20.0	+0.3
KURK			PcP	PcP	05 09 40.2	-1.9
ABKAR	Akbulak array	37.41 311	*e*P	P	05 07 52.1	+0.1
	comp=Z,1.5nm,0.8s,mb3.9					
AKTK	Aktyubinsk	38.86 313	P	P	05 08 05.2	+1.0
AKTO	Aktyubinsk	38.86 313	P	P	05 08 05.2	+1.0
	comp=Z,0.9nm,0.5s,mb3.8,baz=110,slow=14,SNR=4.6					
BRTR	Keskin Array B	56.61 299	P	P	05 10 21.6	-0.5
	comp=Z,1.5nm,0.8s,mb4.1,baz=104,slow=5.2,SNR=6.3					
ARCES	ARCESS Array B	56.77 336	P	P	05 10 21.9	-0.8
	comp=Z,0.8nm,0.6s,mb3.9,baz=76,slow=10,SNR=5.7					
AKASG	Malin Array Be	57.10 313	P	P	05 10 28.0	+2.6
	comp=Z,1.2nm,0.5s,mb4.2,baz=68,slow=7.1,SNR=3.4					
FINES	FINESS Array B	57.16 326	P	P	05 10 25.3	-0.3
	comp=Z,3.3nm,0.8s,mb4.4,baz=71,slow=8.3,SNR=6.3					
WRAB	Tennant Creek	58.88 147	*e*P	P	05 10 36.7	-1.5
WRA	Warramunga Arr	58.89 147	P	P	05 10 37.9	-0.4
	comp=Z,3.4nm,0.6s,mb4.6,baz=340,slow=7.8,SNR=55					
ASAR	Alice Springs	61.93 149	P	P	05 10 59.0	0.0
	comp=Z,1.0nm,0.5s,mb4.2,baz=336,slow=6.8,SNR=12					
GERES	GERESS Array B	67.25 314	P	P	05 11 37.2	+3.6
	comp=Z,0.3nm,0.3s,mb3.8,baz=96,slow=4.0,SNR=5.3					
PPLA	Purkeypile	68.02 29	*e*P	P	05 11 37.8	-0.4
	comp=Z,15nm,1.3s,mb4.9					
CDF	Champ du Feu	71.31 316	*e*P	P	05 11 58.7	0.0
STKA	Stephens Creek	72.43 147	P	P	05 12 04.6	-0.9
	comp=Z,3.4nm,0.9s,mb4.3,baz=312,slow=14,SNR=3.3					
STKA	Stephens Creek	72.43 147	P	P	05 12 04.6	-0.9
LPG	La Plagne	72.97 313	*e*P	P	05 12 09.2	+0.5
	comp=Z,13nm,0.8s,mb4.6					
LPG	La Plagne	72.97 313	*e*P	P	05 12 09.2	+0.5
	comp=Z,6.4nm,0.8s,mb4.6					
LPL	La Plagne	72.97 313	*e*P	P	05 12 08.5	-0.2
SMF	Signal de Mont	74.19 315	*e*P	P	05 12 15.4	-0.5
ARMA	Armidale	76.38 139	*e*P	P	05 12 22.6	-5.9
	comp=Z,7.5nm,0.8s,mb4.7					
YKA	Yellowknife Ar	81.03 17	P	P	05 12 53.3	-0.5
	comp=Z,0.4nm,0.7s,mb3.5,baz=328,slow=5.4,SNR=5.0					

TAP ***11*** *05:15:09.8, 24°.65N×122°.65E, h115km, ML4.1, C*
JMA ***11*** *05:15:10.4±0.2, 24°.74N×122°.71E, h106km±2km, M2.7*
ISCJB ***11*** *05:15:10.2±0.6, 24°.62N±0°.03×122°.69E±0°.02, h107km±5km, Error ellipse: s-maj=5.6km s-min=3.2km az=174.6*

ISC 11 05:15:10.7±0.6, 24°.62N±0°.03×122°.69E±0°.02, h106km±5km, n44, σ0ˢ65/84, 8D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.34	118	P	Pn	05 15 26.2	0.0
YOJ				S	Sn	05 15 38.3	+0.6
TWC	Suao	0.76	269	⇓*i*P	Pn	05 15 28.9	-0.4
TWC				*i* S	Sn	05 15 42.8	-0.4
ILA	Ilan	0.87	280	*e*P	Pn	05 15 30.2	0.0
ENA	Nanau	0.88	258	P	Pn	05 15 30.2	-0.2
ENA				*e*S	Sn	05 15 45.6	+0.4
TWE	Neicheng	0.93	276	⇓*i*P	Pn	05 15 30.9	0.0
TWE				S	Sn	05 15 46.1	0.0
NWF	Wu-fen Shan	0.94	299	*i* P	Pn	05 15 31.1	+0.1
NWF				S	Sn	05 15 46.1	-0.1
IRIF	Iriomote-Funau	0.99	107	P	Pn	05 15 31.5	0.0
IRIF				S	Sn	05 15 47.5	+0.3
ENTT	Nioudou	1.02	271	P	Pn	05 15 32.1	+0.3
ENTT				*e*S	Sn	05 15 48.3	+0.6
TWA	Mucha	1.06	290	*e*P	Pn	05 15 31.9	-0.3
TWA				*e*S	Sn	05 15 47.8	-0.8
TWD	Chiawan	1.13	242	*i* P	Pn	05 15 32.6	-0.4
TWD				S	Sn	05 15 49.5	-0.4
HATJ	Hateruma jima	1.17	119	P	Pn	05 15 33.7	+0.3
HATJ				S	Sn	05 15 51.1	+0.6
HWA	Hwalien	1.18	237	P	Pn	05 15 33.2	-0.3
HWA				*e*S	Sn	05 15 51.0	+0.2
TWY	Chenhua	1.18	304	*e*P	Pn	05 15 32.5	-1.0
TWY				*e*S	Sn	05 15 50.5	-0.3
NNS	Nan Shan	1.21	262	*e*P	Pn	05 15 34.0	+0.1
NNS				S	Sn	05 15 51.6	+0.2
NSK	Sanguang	1.21	273	⇓*i*P	Pn	05 15 34.2	+0.3
NSK				S	Sn	05 15 51.5	+0.1
TWS1	Kuangyinshan	1.25	293	⇓*i*P	Pn	05 15 34.2	-0.1
TWS1				S	Sn	05 15 51.5	-0.7
JKRS	Kuro-shima	1.26	107	P	Pn	05 15 35.0	+0.5
JKRS				S	Sn	05 15 53.1	+0.6
JIJ	Ishigaki jima	1.35	101	P	Pn	05 15 35.4	-0.1
JIJ				S	Sn	05 15 53.4	-0.9
WHF	Hehuan Shan	1.38	250	⇓*i*P	Pn	05 15 36.2	+0.4
WHF				S	Sn	05 15 55.4	+0.5
ESL	Shilin	1.40	235	⇓P	Pn	05 15 35.5	-0.6
ESL				*e*S	Sn	05 15 54.3	-1.0
NCU	National Centr	1.41	285	*e*P	Pn	05 15 36.4	+0.2
NCU				*e*S	Sn	05 15 55.7	+0.2
TWT	Tachien	1.43	255	*e*P	Pn	05 15 37.2	+0.8
TWT				*e*S	Sn	05 15 56.7	+0.8
NSTT	Nanjuang	1.53	271	⇓P	Pn	05 15 37.6	-0.1
NSTT				S	Sn	05 15 58.0	-0.3
HSN	Hsinchu	1.57	277	*e*P	Pn	05 15 37.6	-0.5
EHY	Hungye	1.67	229	*e*P	Pn	05 15 38.5	-0.9
EHY				*e*S	Sn	05 15 59.5	-1.7
TWQ1	Liyutan	1.77	262	P	Pn	05 15 40.7	+0.1
TWQ1				S	Sn	05 16 02.9	-0.4
NSY	Sanyi	1.77	264	P	Pn	05 15 41.0	+0.5
NSY				*e*S	Sn	05 16 03.9	+0.5
SMLT	Sun Moon Lake	1.79	246	*e*P	Pn	05 15 41.4	+0.5
SMLT				S	Sn	05 16 04.5	+0.6
TWF1	Yuli	1.79	225	P	Pn	05 15 40.4	-0.6
TWF1				*e*S	Sn	05 16 02.7	-1.2
TYC	Yuchr	1.82	247	*e*P	Pn	05 15 41.7	+0.5
TYC				*e*S	Sn	05 16 05.0	+0.6
JTJ	Tarama	1.83	89	P	Pn	05 15 41.4	0.0
JTJ				S	Sn	05 16 04.5	-0.3
YUS	Yu-Shan	1.95	235	P	Pn	05 15 43.6	+0.8
YUS				S	Sn	05 16 07.8	+0.4
ALS	Alishan	2.04	238	⇓*i*P	Pn	05 15 45.2	+1.1
ALS				*e*S	Sn	05 16 10.4	+0.8
ELDTW	Lidau	2.09	227	*e*P	Pn	05 15 44.2	-0.5
ELDTW				*e*S	Sn	05 16 10.4	-0.2
CHN5	Tsauling	2.10	241	*e*P	Pn	05 15 45.6	+0.8
CHN5				*e*S	Sn	05 16 11.9	+1.0
TWG	Pinlang	2.33	220	*e*P	Pn	05 15 47.2	-0.6
TWG				*e*S	Sn	05 16 15.0	-1.1
CHY	Chiayi	2.35	242	*e*P	Pn	05 15 48.2	+0.1
CHY				*e*S	Sn	05 16 16.8	+0.1
TWK	Hsinying	2.42	237	*e*P	Pn	05 15 49.4	+0.4
TWK				*e*S	Sn	05 16 18.3	0.0
CHN1	Nanshi	2.44	235	P	Pn	05 15 50.1	+0.8
CHN1				*e*S	Sn	05 16 19.7	+0.9
ECL	Taimali	2.57	219	*e*P	Pn	05 15 49.5	-1.4
ECL				*e*S	Sn	05 16 19.8	-1.9
SSD	Sandimen	2.65	226	*e*P	Pn	05 15 52.9	+0.9
SSD				S	Sn	05 16 24.7	+0.9
EAST	Anshuo	2.80	218	*e*P	Pn	05 15 53.3	-0.6
SCZT	Fangliau	2.94	221	*e*P	Pn	05 15 56.9	+1.1
SCZT				*e*S	Sn	05 16 30.6	+0.1
PNG	Penghu	3.05	250	*e*P	Pn	05 15 55.5	-1.7

IDC 11 05:15:30.8±5.0, 15°.88S×174°.42W, h94km±34km, mb3.5/3, mb1 3.8/4, mb1mx3.5/17, mbtmp3.6/4, Error ellipse: s-maj=258.4km s-min=24.6km az=152.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	3.22	53	P	Pn	05 16 19.6	+0.3
	30nm,0.3s,baz=186,slow=1.5,SNR=20						
AFI				S	Sn	05 16 53.5	-3.3
	58nm,0.3s,baz=271,slow=23,SNR=13						
WRA	Warramunga Arr	48.78	257	P	P	05 24 06.4	-0.2
	0.5nm,0.7s,baz=96,slow=7.7,SNR=10						
WRA				PcP	PcP	05 25 31.2	+1.0
	0.2nm,0.5s,baz=89,slow=3.7,SNR=3.6						
ASAR	Alice Springs	49.03	252	P	P	05 24 08.2	-0.3
	2.4nm,0.6s,baz=87,slow=8.2,SNR=22						
PDAR	Pinedale Array	83.28	42	P	P	05 27 47.0	-0.1
	0.3nm,0.7s,baz=225,slow=4.8,SNR=2.9						

ISK ***11*** *05:15:30.8, 35°.65N×31°.70E, h13km, MD3.4*
CSEM ***11*** *05:15:31.7±0.2, 35°.65N×31°.68E, h15km, MD3.1, Error ellipse: s-maj=4.3km s-min=3.0km az=4.0*
ISCJB ***11*** *05:15:31.9±1.2, 35°.65N±0°.05×31°.67E±0°.07, h19km±10km, Error ellipse: s-maj=10.3km s-min=7.9km az=45.0*
DDA ***11*** *05:15:41.5, 36°.49N×31°.88E, h7km±3km, Md3.1*

ISC 11 05:15:32.2±0.9, 35°.64N±0°.05×31°.73E±0°.05, h15km±5km, n27, σ0ˢ73/38, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZI	Gazipasa	0.76	38	*i* P	Pg	05 15 47.3	+0.3
GAZI				*i* S	Sg	05 15 56.4	-0.6
GAZI	Gazipasa	0.76	38	*i* P	Pg	05 15 47.3	+0.3
GAZI				*i* S	Sg	05 15 56.4	-0.7
LEF	Lefka	1.08	118	*e*PN	Pg	05 15 51.9	-1.2
LEF				*e*SN	Sg	05 16 07.3	+0.1
LEF	Lefka	1.08	118	*e*Pn	Pg	05 15 51.9	-1.2
ERMK	Ermenek	1.39	43	*i* P	Pn	05 15 58.2	+1.1
ERMK				*i* S	Sn	05 16 15.5	+0.4
ERMK	Ermenek	1.39	43	*i* P	Pn	05 15 58.2	+1.2
ERMK				*i* S	Sn	05 16 15.5	+0.4
HDMB	Hadim	1.46	25	*e*PN	Pn	05 15 57.5	-0.5
HDMB				*e*SN	Sn	05 16 16.9	+0.1
HDMB	Hadim	1.46	25	*e*Pn	Pn	05 15 57.5	-0.5
HDMB				*e*Sn	Sn	05 16 16.9	0.0
LFK	Lefkose	1.52	103	*e*PN	Pn	05 15 58.8	-0.1
LFK	Lefkose	1.52	103	*e*Pn	Pn	05 15 58.8	0.0
IKL	Isikli	1.70	69	*e*PN	Pn	05 16 01.4	+0.1
IKL				*e*SN	Sn	05 16 23.2	+0.5
IKL	Isikli	1.70	69	*e*Sn	Sn	05 16 23.2	+0.4
KORT	Korkueli	1.76	321	*e*P	Pg	05 16 07.2	+1.2
KORT				*i* S	Sg	05 16 28.9	+0.1
ELL	Elmali	1.84	307	*e*PN	Pn	05 16 02.5	-0.8
ELL	Elmali	1.84	307	*e*Pn	Pn	05 16 02.5	-0.8
SUTC	Sutluce-Ispart	1.93	342	*e*PN	Pn	05 16 03.8	-0.7
SUTC	Sutluce-Ispart	1.93	342	*e*Pn	Pn	05 16 03.8	-0.7
KONT	Konya--Tatoy	2.36	12	*e*PN	Pn	05 16 10.2	-0.2
KONT	Konya--Tatoy	2.36	12	*e*Pn	Pn	05 16 10.2	-0.2
MERS	Mersin	2.57	61	*e*PN	Pn	05 16 13.5	+0.2
MERS	Mersin	2.57	61	*e*Pn	Pn	05 16 13.5	+0.2
LADK	Ladik-KONYA	2.61	11	*e*PN	Pn	05 16 13.5	-0.4
LADK	Ladik-KONYA	2.61	11	*e*Pn	Pn	05 16 13.5	-0.3
KDHN	Kadinhani	2.89	6	*i* P	Pn	05 16 19.2	+1.4
KDHN				*i* S	Sn	05 16 50.7	-1.6
KDHN	Kadinhani	2.89	6	*i* P	Pn	05 16 19.2	+1.4
KDHN				*i* S	Sn	05 16 50.7	-1.6
KARA	Karaisali	3.13	58	*e*PN	Pn	05 16 21.5	+0.5
KARA	Karaisali	3.13	58	*e*Pn	Pn	05 16 21.5	+0.5

MEX 11 05:22:49.1±0.8, 17°.70N×101°.62W, h37km±6km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.17	123	*i* P	Pn	05 22 54.7	-1.2
ZIIG				*i* S	Sn	05 22 58.4	-2.1
CAIG	El Cayaco	1.44	117	*i* P	Pn	05 23 10.2	-2.5
CAIG				*i* S	Sn	05 23 28.1	-2.3
MMIG	Aquila	1.75	290	*e*P	Pn	05 23 15.4	-1.5
MMIG				*i* S	Sn	05 23 34.5	-3.5
ACX	Acapulco	1.87	116	*i* P	Pn	05 23 17.0	-1.6
ACX				*i* S	Sn	05 23 37.4	-3.6
MEIG	Mezcala	1.91	83	*e*P	Pn	05 23 18.3	-0.9
MEIG				*i* S	Sn	05 23 39.5	-2.5
MOIG	Morelia	2.01	12	*e*P	Pn	05 23 19.5	-1.0
MOIG				*i* S	Sn	05 23 42.2	-2.2
PLIG	Platanillo	2.12	71	*i* P	Pn	05 23 20.1	-2.0
PLIG				*i* S	Sn	05 23 44.1	-3.2
MZVM		2.71	56	*e*P	Pn	05 23 30.4	+0.3
MZVM				*i* S	Sn	05 24 02.8	+1.2
PTVM	Pico Tres Padr	3.03	51	*e*P	Pn	05 23 36.0	+1.5
PTVM				*i* S	Sn	05 24 11.8	+2.2
PPM	Popocatepetl	3.15	64	*e*P	Pn	05 23 37.2	+1.1
PPM				*i* S	Sn	05 24 12.7	+0.2
IIO	Organos	3.33	55	*e*P	Pn	05 23 38.8	+0.1
IIO				*i* S	Sn	05 24 15.5	-1.4
PNIG	Pinotepa	3.58	111	*i* P	Pn	05 23 34.7	-7.4
PNIG				*i* S	Sn	05 24 21.9	-1.4
UTMO	Huajuapan	3.63	87	*e*P	Pn	05 23 41.8	-1.1
UTMO				*i* S	Sn	05 24 24.0	-0.5
VHO	Vista Hermosa	4.70	97	*e*P	Pn	05 23 56.7	-0.9
VHO				*i* S	Sn	05 24 50.3	-0.6

CSEM ***11*** *05:36:33.8±0.2, 38°.08N×21°.55E, h28km±1km, MD3.2, Error ellipse: s-maj=9.7km s-min=3.9km az=161.0*
ATH ***11*** *05:36:34.5, 38°.10N×21°.54E, h19km±2km, MD3.2/6*
ISCJB ***11*** *05:36:34.3±0.6, 38°.08N±0°.06×21°.55E±0°.04, h22km±5km, Error ellipse: s-maj=10.6km s-min=5.2km az=165.0*
THE ***11*** *05:36:36.0, 38°.10N×21°.68E, h26km±6km, ML2.6/2, Error ellipse: s-maj=6.9km s-min=1.6km az=31.0*

ISC 11 05:36:34.5±0.6, 38°.12N±0°.06×21°.52E±0°.04, h19km±3km, n22, σ0ˢ52/34, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.07	217	*e*PB	Pg	05 36 38.1	0.0
RLS				*e*SB	Sg	05 36 40.7	+0.2
RLS	Riolos of Patr	0.07	217	*e*Pb	Pg	05 36 38.1	0.0
RLS				*e*Sb	Sg	05 36 40.7	+0.2
UPR	University Cam	0.27	51	*e*PB	Pg	05 36 40.8	+0.3
UPR	University Cam	0.27	51	*e*Pb	Pg	05 36 40.8	+0.3
LAKA	Lakka	0.38	71	P	Pg	05 36 42.0	-0.4
LAKA				S	Sg	05 36 47.8	0.0
LAKA	Lakka	0.38	71	P	Pg	05 36 42.0	-0.4
LAKA				S	Sg	05 36 47.8	0.0
EFP	Efpalio	0.43	44	P	Pg	05 36 43.3	-0.1
EFP	Efpalio	0.43	44	*e*PB	Pg	05 36 43.3	-0.1
EFP				*e*SB	Sb	05 36 50.1	+0.6
EFP	Efpalio	0.43	44	P	Pg	05 36 43.3	-0.1
EFP				*e*Sb	Sb	05 36 50.1	+0.6
TRIZ	Trizonia	0.50	60	P	Pg	05 36 44.3	-0.3
TRIZ	Trizonia	0.50	60	P	Pg	05 36 44.3	-0.3
KALE	Kalithea	0.56	60	P	Pb	05 36 45.2	-0.4
KALE				S	Sg	05 36 53.5	+0.4
KALE	Kalithea	0.56	60	P	Pb	05 36 45.2	-0.4
KALE				S	Sg	05 36 53.5	+0.4
KFL	Anninata	0.58	269	P	Pb	05 36 50.0	+4.0
GUR	Goura	0.67	105	P	Pb	05 36 46.8	-0.7
GUR	Goura	0.67	105	*e*PB	Pb	05 36 46.7	-0.8
GUR				*e*SN	Sb	05 36 56.7	+0.3
GUR	Goura	0.67	105	P	Pb	05 36 46.8	-0.7
GUR				*e*Sn	Sb	05 36 56.7	+0.3
VLS	Valsamata	0.74	275	P	Pb	05 36 49.1	+0.4
VLS	Valsamata	0.74	275	*e*PN	Pn	05 36 48.7	-1.2
VLS				*e*SN	Sn	05 37 00.8	+0.2
VLS	Valsamata	0.74	275	*e*Pn	Pn	05 36 48.7	-1.2
VLS	Valsamata	0.74	275	P	Pb	05 36 49.1	+0.4
VLS				*e*Sn	Sn	05 37 00.8	+0.2
ITM	Ithomi	0.99	161	*e*PN	Pn	05 36 54.0	+0.7

IDC ***11*** *05:51:53.6±0.8, 54°.43S×132°.50W, h0km, mb3.9/7, mb1 4.1/7, mb1mx4.0/14, mbtmp3.9/7, MS4.1/6, Ms1 4.1/6, ms1mx3.7/21, Error ellipse: s-maj=32.8km s-min=21.3km az=144.0*
ISCJB ***11*** *05:51:53.6±0.8, 54°.5S±0°.2×132°.5W±0°.3, h10km, mb3.9/7, MS4.2/6, Error ellipse: s-maj=31.8km s-min=20.4km az=43.9*

ISC 11 05:51:55.5±0.8, 54°.5S±0°.2×132°.6W±0°.3, h10km, n18, σ1ˢ03/7, mb3.9/7, MS4.2/6, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKT	Rikitea	31.34	356	*e*LR	LR	06 06 49.9	
	571nm,25.2s						
QSPA	South Pole Qui	35.72	180	P	P	05 58 52.1	-1.4
	1.2nm,1.0s,mb3.8,baz=89,slow=3.3,SNR=2.2						
USHA	Ushuaia	35.95	118	LR	LR	06 09 17.6	
	comp=Z,268nm,19.5s,MS4.0,baz=306,slow=29						
PPT	Papeete	39.08	334	*e*LR	LR	06 10 24.9	
	565nm,23.8s,baz=174						
PPT	Papeete	39.08	334	LR	LR	06 11 32.9	
	comp=Z,403nm,20.7s,MS4.2,baz=152,slow=30						
TAOE	Nuku Hiva Isla	45.88	350	*e*LR	LR	06 13 34.6	
	399nm,23.9s						
DZM	Mont Dzumac	55.53	280	*e*LR	LR	06 18 19.5	
	128nm,22.1s						
MAW	Mawson	57.72	187	P	P	06 01 46.4	+0.8
	2.1nm,0.9s,mb4.2,baz=191,slow=10,SNR=2.6						
CPUP	Villa Florida	60.55	95	LR	LR	06 24 20.8	
	comp=Z,132nm,19.8s,MS4.1,baz=272,slow=32						
LPAZ	La Paz	62.08	79	P	P	06 02 17.6	+1.4
	0.9nm,0.9s,mb3.9,baz=176,slow=4.9,SNR=2.5						
LPAZ				LR	LR	06 21 57.3	
	comp=Z,91nm,21.8s,MS3.9,baz=216,slow=29						
ASAR	Alice Springs	73.08	253	P	P	06 03 25.8	+0.1
	1.5nm,0.7s,mb4.0,baz=142,slow=6.3,SNR=13						
WRA	Warramunga Arr	75.79	256	P	P	06 03 42.2	+0.7
	1.3nm,0.7s,mb4.0,baz=144,slow=5.2,SNR=12						
WRA				LR	LR	06 34 54.1	
	comp=Z,138nm,19.0s,MS4.3,baz=165,slow=34						
ROSC	El Rosal	76.22	61	P	P	06 03 43.8	-0.2
	1.6nm,0.5s,mb4.2,baz=256,slow=19,SNR=2.8						
TXAR	Lajitas Array	87.09	25	P	P	06 04 39.4	-1.5
	0.2nm,0.7s,mb3.5,baz=173,slow=7.9,SNR=2.6						
BOSA	Boshof	95.09	161	LR	LR	06 43 50.0	
	comp=Z,126nm,19.1s,MS4.4,baz=163,slow=33						
DIB	Dawson Inlet,	107.28	0	T		08 06 21.3	
SONM	Songino Array	143.39	285	PKP	PKPdf	06 11 27.0	-2.0
	0.9nm,0.9s,baz=132,slow=2.0,SNR=4.2						
MKAR	Makanchi Array	156.79	265	PKPab	PKPab	06 12 19.9	+0.2
	0.6nm,0.8s,baz=101,slow=5.1,SNR=4.2						

IDC ***11*** *05:52:17.4±1.1, 53°.33N×166°.71W, h0km, mb3.7/5, mb1 4.0/7, mb1mx3.7/31, mbtmp3.8/7, ML3.6/2, Error ellipse: s-maj=39.9km s-min=15.9km az=168.0*
NEIC ***11*** *05:52:25.7, 53°.25N×166°.40W, h17km, ML3.8(AEIC), After AEIC.*
ISCJB ***11*** *05:52:25.1±0.9, 53°.4N±0°.1×166°.5W±0°.1, h68km±8km, mb3.6/5, Error ellipse: s-maj=25.0km s-min=6.0km az=149.0*

ISC 11 05:52:26.2±0.9, 53°.4N±0°.1×166°.5W±0°.1, h60km±11km, n23, σ1ˢ11/30, mb3.6/5, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UNV	Unalaska Valle	0.47	2	P	Pn	05 52 37.0	-0.9
UNV				S	Sn	05 52 46.0	-0.4
OKFG	Magazine Ridge	0.83	273	P	Pn	05 52 41.7	-0.2
OKFG				S	Sn	05 52 54.8	+1.2
AKLV	Akutan Long Va	0.86	23	P	Pn	05 52 41.6	-0.8
AKLV				S	Sn	05 52 54.1	-0.3
AKGG	Akutan Green G	0.89	21	P	Pn	05 52 42.3	-0.5
AKUT	Akutan	0.89	30	P	Pn	05 52 42.2	-0.6
AKUT				S	Sn	05 52 54.7	-0.2
NIKO	Nikolski	1.45	255	P	Pn	05 52 50.1	-0.1
NIKO				S	Sn	05 53 09.3	+1.1
FALS	False Pass	2.36	50	P	Pn	05 53 03.7	+1.2
SDPT	Sand Point	4.06	58	*e*P	Pn	05 53 25.6	-0.1
CHGN	Chignik	5.53	55	*e*P	Pn	05 53 45.9	+0.1
KDAK	Kodiak Island	9.05	55	Pn	Pn	05 54 32.4	-1.5
	1.3nm,0.3s,baz=250,slow=7.3,SNR=8.4						
KDAK				Sn	Sn	05 56 06.7	-7.4
	0.4nm,0.3s,baz=144,slow=19,SNR=3.5						
KDAK	Kodiak Island	9.05	55	Pn	Pn	05 54 32.4	-1.5
KDAK				Sn	Sn	05 56 06.7	-7.4
SVW2	Sparrevohn	9.74	33	*e*Pn	Pn	05 54 45.5	+2.1
TTA	Tatalina	11.06	26	*e*Pn	Pn	05 55 00.7	-0.6
	3.6nm,1.0s						
FX1	Attu Island--F	12.20	276	Pn	Pn	05 55 15.5	-1.5
	0.8nm,0.3s,baz=258,slow=23,SNR=6.5						
TRF	Thorofare Moun	13.16	34	*e*Pn	Pn	05 55 32.1	+2.2
	11nm,1.3s						
BPAW	Bear Paw Mtn.	13.40	31	*e*Pn	Pn	05 55 35.6	+2.4
	1.8nm,0.7s						
DLBC	Dease Lake	20.89	61	P	P	05 57 08.8	+5.6
	1.0nm,0.5s,baz=233,slow=11,SNR=3.6						
INK	Inuvik	21.56	33	P	P	05 57 08.3	-1.9
	3.6nm,0.7s,mb3.9,baz=267,slow=7.9,SNR=11						
INK	Inuvik	21.56	33	*e*P	P	05 57 11.3	+1.1
YKA	Yellowknife Ar	28.28	50	P	P	05 58 13.3	0.0
	0.5nm,0.5s,mb3.4,baz=274,slow=7.9,SNR=11						
PDAR	Pinedale Array	38.54	82	P	P	05 59 44.0	+1.3
	0.3nm,0.5s,mb3.3,baz=300,slow=5.9,SNR=2.3						
TXAR	Lajitas Array	51.04	92	P	P	06 01 21.6	-0.4
	0.5nm,0.5s,mb3.7,baz=296,slow=5.3,SNR=9.6						
WRA	Warramunga Arr	88.98	234	P	P	06 05 12.3	-1.9
	0.3nm,0.6s,mb3.8,baz=34,slow=5.8,SNR=2.9						

IDC ***11*** *06:00:48.0±3.5, 3°.21S×101°.03E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.7/25, mbtmp3.8/7, Error ellipse: s-maj=154.4km s-min=17.9km az=54.0

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**1.09**	**20**	P	**Pn**	**06 01 15.3**	**-1.3**
KRJI				S	**Sn**	**06 01 30.2**	**-1.0**
KSI	**Kapahiang**	**1.60**	**109**	P	**Pn**	**06 01 23.0**	**-0.3**
KSI				S	**Sn**	**06 01 41.5**	**-1.6**
SDSI	**Sungai Dareh**	**2.20**	**9**	P	**Pn**	**06 01 31.4**	**+0.1**
SDSI				S	**Sn**	**06 01 59.0**	**+1.5**
MNAI	**Manna**	**2.24**	**123**	P	**Pn**	**06 01 31.7**	**-0.2**
MNAI				S	**Sn**	**06 01 59.6**	**+1.0**
PDSI	**Padang**	**2.28**	**344**	P	**Pn**	**06 01 31.5**	**-0.9**
PDSI				S	**Sn**	**06 02 01.6**	**+2.1**
SISI	**Saibi**	**2.67**	**312**	P	**Pn**	**06 01 37.0**	**-0.7**
PPI	**Padang Panjang**	**2.73**	**345**	P	**Pn**	**06 01 40.8**	**+2.2**
MDSI	**Maura Dua**	**3.38**	**114**	P	**Pn**	**06 01 48.4**	**+1.1**
BKNI	**Bangkinang**	**3.42**	**359**	P	**Pn**	**06 01 45.0**	**-3.0**
LWLI	**Liwa**	**3.52**	**123**	P	**Pn**	**06 01 50.2**	**+0.9**
KASI	**Kota Agung**	**4.16**	**125**	P	**Pn**	**06 02 00.2**	**+2.1**
PSI	**Prapat**	**6.26**	**340**	Pn	**Pn**	**06 02 25.2**	**-1.6**
	0.7nm,0.3s,baz=131,slow=18,SNR=2.9						
FITZ	**Fitzroy Crossi**	**28.30**	**123**	P	**P**	**06 06 43.0**	**-1.3**
	2.4nm,1.1s,mb3.6,baz=306,slow=14,SNR=2.5						
WRA	**Warramunga Arr**	**36.50**	**120**	P	**P**	**06 07 54.9**	**-1.0**
	0.6nm,0.4s,mb3.9,baz=303,slow=8.9,SNR=12						
ASAR	**Alice Springs**	**37.73**	**126**	P	**P**	**06 08 06.3**	**+0.1**
	0.4nm,0.4s,mb3.6,baz=296,slow=7.7,SNR=5.8						
SONM	**Songino Array**	**50.95**	**5**	P	**P**	**06 09 52.1**	**+0.7**
	0.3nm,0.6s,mb3.5,baz=157,slow=4.7,SNR=3.5						
MKAR	**Makanchi Array**	**52.39**	**344**	P	**P**	**06 10 02.0**	**-0.1**
	0.2nm,0.4s,mb3.5,baz=131,slow=6.6,SNR=3.6						
KURK	**Kurchatov**	**56.98**	**343**	P	**P**	**06 10 35.7**	**+0.4**
	0.3nm,0.5s,mb3.6,baz=166,slow=6.8,SNR=3.2						
ZALV	**Zalesovo Beam**	**58.46**	**349**	P	**P**	**06 10 45.9**	**+0.2**
	0.6nm,0.3s,mb4.1,baz=163,slow=11,SNR=3.6						
TXAR	**Lajitas Array**	**144.90**	**39**	PKPbc	PKPdf	06 20 26.7	-0.3
	0.3nm,0.6s,baz=59,slow=3.5,SNR=3.0						

IDC 11 06:15:11.5±3.9,30°.31S×138°.46E,h0km,mb1 3.0/3, mb1mx3.0/14,mbtmp2.8/3,ML2.2/2,Error ellipse: s-maj=109.4km s-min=15.9km az=43.0,South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**3.11**	**121**	Pn	Pn	06 16 01.4	-0.4
	0.1nm,0.3s,baz=308,slow=12,SNR=6.4						
STKA				Pg	Pg	06 16 08.4	-2.6
	0.5nm,0.3s,baz=306,slow=15,SNR=8.1						
STKA				Sn	Sn	06 16 40.2	+0.6
	1.1nm,0.3s,baz=353,slow=12,SNR=4.8						
STKA				Lg		06 16 50.5	
	2.0nm,0.3s,baz=7.7,slow=22,SNR=7.3						
ASAR	**Alice Springs**	**7.77**	**327**	Pn	Pn	06 17 06.2	+0.4
	0.1nm,0.3s,baz=148,slow=12,SNR=6.1						
ASAR				Sn	Sn	06 18 36.8	+2.2
	0.1nm,0.3s,baz=149,slow=21,SNR=4.7						
WRA	**Warramunga Arr**	**10.98**	**339**	Pn	Pn	06 17 49.5	-0.4
	baz=164,slow=12,SNR=3.1						
WRA				Sn	Sn	06 19 49.4	-4.1
	0.0nm,0.3s,baz=161,slow=25,SNR=2.4						

*BJI **11** 06:18:58.5,21°.29N×120°.98E,h28km,mB4.5/6,mb4.1/10, ML4.2/4,Ms4.2/9,Ms7 4.0/9*
*IDC **11** 06:18:59.9±0.6,21°.77N×120°.99E,h0km,mb4.0/15, mb1 4.2/16,mb1mx4.1/25,mbtmp4.1/16,ML3.5/1,MS3.8/11, Ms1 3.9/11,ms1mx3.4/32,Error ellipse: s-maj=24.0km s-min=12.9km az=73.0*
*NIED **11** 06:19:00,22°.00N×121°.40E,h44km,Mw4.6 Best double couple: M0:9.83000×10^15 NP1:φs=238.00000°,δ88.00000°, λ64.00000°. NP2:φs=144.00000°,δ26.00000°,λ175.00000°.*
*ISCJB **11** 06:19:01.5±0.7,21°.78N±0°.03×121°.15E±0°.03,h22km±4km, mb4.1/19,MS3.9/10,Error ellipse: s-maj=5.4km s-min=4.1km az=147.8*
*NEIC **11** 06:19:01.5±0.4,21°.80N×121°.05E,h10km,mb4.6/4,Error ellipse: s-maj=10.4km s-min=5.7km az=88.0*
NEIC Recorded [3 TAP] in P'ing-tung and [2 TAP] in T'ai-tung.
*TAP **11** 06:19:02.3,21°.85N×121°.00E,h21km,ML4.5,C*
*JMA **11** 06:19:03.8±0.3,21°.95N×121°.39E,h0km,M4.5*
ISC 11 06:19:02.3±0.6,21°.83N±0°.03×121°.11E±0°.03,h14km±3km, n104,σ1°.03/120,mb4.1/19,MS3.9/10,2C-11D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**0.21**	**290**	⇓*iP*	**Pg**	**06 19 07.7**	**+0.8**
	baz=285						
TWK1	**Hengchun**	**0.31**	**292**	*i* P	**Pg**	**06 19 08.2**	**-0.4**
	baz=291						
TWK1				*e*S	**Sg**	**06 19 12.0**	**-1.0**
	baz=291						
HEN	**Hengchun**	**0.39**	**297**	⇑*iP*	**Pg**	**06 19 09.8**	**-0.3**
	baz=303						
LAY	**Lan-yu**	**0.46**	**62**	P	**Pg**	**06 19 14.1**	**+2.8**
	baz=71						
LAY				S	**Sg**	**06 19 22.4**	**+4.9**
	baz=71						
TAW	**Tawu**	**0.57**	**339**	⇓*iP*	**Pg**	**06 19 13.5**	**+0.1**
TAW				*i* S	**Sg**	**06 19 21.9**	**+1.0**
EAST	**Anshuo**	**0.61**	**336**	⇓*iP*	**Pg**	**06 19 14.1**	**0.0**
	baz=354						
SCZT	**Fangliau**	**0.71**	**320**	⇑*iP*	**Pg**	**06 19 15.8**	**-0.4**
	baz=326						
SCZT				S	**Sg**	**06 19 25.4**	**-0.1**
	baz=326						
ECL	**Taimali**	**0.78**	**349**	⇓*iP*	**Pg**	**06 19 16.2**	**-1.2**
	baz=11						
TWP	**Hsiaoliuchiu**	**0.87**	**307**	P	**Pg**	**06 19 19.5**	**+0.4**
	baz=310						
TWP				*e*S	**Sg**	**06 19 32.4**	**+1.9**
	baz=310						
TTN	**Taitung**	**0.92**	**2**	*e*P	**Pb**	**06 19 19.4**	**-0.7**
	baz=11						
TWG	**Pinlang**	**0.99**	**358**	*e*Pg	**Pg**	**06 19 19.0**	**-2.4**
TWG				*e*Sg	**Sg**	**06 19 33.1**	**-1.2**
TWG	**Pinlang**	**0.99**	**358**	*i* P	**Pb**	**06 19 19.1**	**-2.2**
	baz=6.0						
SSD	**Sandimen**	**1.02**	**334**	⇓*iP*	**Pb**	**06 19 20.8**	**-0.9**
	baz=349						
SSD				*e*S	**Sb**	**06 19 34.1**	**-0.9**
	baz=349						
KAU	**Kaohsiung**	**1.05**	**315**	*e*P	**Pb**	**06 19 22.5**	**+0.3**
	baz=299						
SGLT	**Jiouru**	**1.06**	**327**	P	**Pb**	**06 19 23.2**	**+0.7**
	baz=349						
SGLT				*e*S	**Sb**	**06 19 38.6**	**+2.4**
	baz=349						
TWM1	**Shoushan**	**1.18**	**327**	P	**Pn**	**06 19 24.6**	**+0.2**
	baz=333						
SGST	**Jiashian**	**1.34**	**339**	⇓*eP*	**Pn**	**06 19 26.4**	**-0.3**
	baz=346						
ELDTW	**Lidau**	**1.36**	**356**	*e*P	**Pn**	**06 19 24.7**	**-2.1**
	baz=11						
CHN3	**Shinhua**	**1.42**	**331**	*e*P	**Pn**	**06 19 27.6**	**-0.1**
	baz=315						
CHN1	**Nanshi**	**1.46**	**338**	⇓*iP*	**Pn**	**06 19 27.9**	**-0.2**
	baz=346						
TAI1	**Yung-k'ang**	**1.46**	**326**	*e*P	**Pn**	**06 19 27.7**	**-0.5**
	baz=310						
TWF1	**Yuli**	**1.53**	**6**	*e*P	**Pn**	**06 19 26.9**	**-2.3**
	baz=14						
TPUB	**Ta-pu**	**1.53**	**343**	*e*Pn	**Pn**	**06 19 28.5**	**-0.7**
TPUB				*e*Sn	**Sn**	**06 19 49.3**	**+0.3**
TWK	**Hsinying**	**1.55**	**338**	⇓*eP*	**Pn**	**06 19 29.0**	**-0.4**
	baz=346						
YULB	**Yu-li**	**1.57**	**6**	*e*Pn	**Pn**	**06 19 30.5**	**+0.8**
YULB				*e*Sn	**Sn**	**06 19 53.7**	**+3.9**
SCLT	**Jiali**	**1.59**	**328**	*e*P	**Pn**	**06 19 29.3**	**-0.7**
	baz=312						
YUS	**Yu-Shan**	**1.66**	**355**	*e*P	**Pn**	**06 19 29.9**	**-1.1**
	baz=13						
EHY	**Hungye**	**1.68**	**7**	*e*P	**Pn**	**06 19 29.3**	**-2.0**
	baz=26						
ALS	**Alishan**	**1.70**	**350**	P	**Pn**	**06 19 31.9**	**+0.4**
	baz=358						
CHN8	**Yiju**	**1.73**	**331**	*e*P	**Pn**	**06 19 31.9**	**0.0**
	baz=318						
CHY	**Chiayi**	**1.78**	**339**	*e*P	**Pn**	**06 19 32.0**	**-0.7**
	baz=348						
CHN5	**Tsauling**	**1.81**	**347**	⇓P	**Pn**	**06 19 33.0**	**0.0**
	baz=356						
WGK	**Gukeng**	**1.92**	**345**	*e*P	**Pn**	**06 19 34.4**	**-0.1**
	baz=354						
SSLB	**Suanglung**	**1.96**	**356**	*e*Pn	**Pn**	**06 19 35.1**	**0.0**
SSLB				*e*Sn	**Sn**	**06 20 01.4**	**+1.9**
WSF	**Szhu**	**1.98**	**336**	*e*P	**Pn**	**06 19 34.3**	**-1.1**
	baz=325						
ESL	**Shilin**	**2.00**	**8**	*e*P	**Pn**	**06 19 34.9**	**-0.8**
	baz=16						
SMLT	**Sun Moon Lake**	**2.06**	**355**	⇓P	**Pn**	**06 19 37.2**	**+0.8**
	baz=4.0						
WNT	**Mingjian**	**2.08**	**349**	*e*P	**Pn**	**06 19 37.0**	**+0.3**
	baz=359						
TYC	**Yuchr**	**2.08**	**354**	⇓*iP*	**Pn**	**06 19 37.4**	**+0.6**
	baz=3.0						
HWA	**Hwalien**	**2.19**	**12**	*e*P	**Pn**	**06 19 37.6**	**-0.7**
	baz=20						
PNG	**Penghu**	**2.25**	**321**	P	**Pn**	**06 19 36.5**	**-2.6**
	baz=323						
PNG				*e*S	**Sn**	**06 20 01.5**	**-5.3**
	baz=323						
TWD	**Chiawan**	**2.29**	**11**	*e*P	**Pn**	**06 19 37.9**	**-1.7**
	baz=19						
WHF	**Hehuan Shan**	**2.31**	**3**	*e*P	**Pn**	**06 19 40.9**	**+0.9**
	baz=23						
TCU	**Taichung**	**2.34**	**350**	*e*P	**Pn**	**06 19 40.3**	**-0.1**
NACB	**Ninganchiao**	**2.38**	**11**	*e*Pn	**Pn**	**06 19 41.3**	**+0.5**
NACB				*e*Sn	**Sn**	**06 20 06.0**	**-3.8**
TWT	**Tachien**	**2.42**	**1**	*e*P	**Pn**	**06 19 41.4**	**0.0**
	baz=22						
TWQ1	**Liyutan**	**2.53**	**353**	*i* P	**Pn**	**06 19 43.9**	**+0.9**
	baz=1.0						
TWQ1				*e*S	**Sn**	**06 20 14.4**	**+0.8**
	baz=1.0						
NSY	**Sanyi**	**2.60**	**353**	*e*P	**Pn**	**06 19 44.9**	**+1.0**
	baz=3.0						
NNS	**Nan Shan**	**2.61**	**5**	*e*P	**Pn**	**06 19 45.7**	**+1.6**
	baz=25						
ENA	**Nanau**	**2.65**	**12**	*e*P	**Pn**	**06 19 44.4**	**-0.3**
	baz=21						
NSTT	**Nanjuang**	**2.79**	**358**	*e*P	**Pn**	**06 19 46.6**	**0.0**
	baz=10.0						
ENTT	**Nioudou**	**2.83**	**8**	*e*P	**Pn**	**06 19 47.6**	**+0.5**
	baz=26						
YHNB	**Yeheng**	**2.84**	**5**	*e*Pn	**Pn**	**06 19 47.7**	**+0.5**
NSK	**Sanguang**	**2.84**	**4**	*e*P	**Pn**	**06 19 47.9**	**+0.6**
	baz=26						
TWC	**Suao**	**2.85**	**14**	*e*P	**Pn**	**06 19 47.3**	**-0.1**
	baz=22						
TWE	**Neicheng**	**2.92**	**10**	*e*P	**Pn**	**06 19 49.0**	**+0.6**
	baz=19						
YOJ	**Yonaguni jima**	**3.15**	**33**	P	**Pn**	**06 19 52.6**	**+1.1**
YOJ				*e*S	**Sn**	**06 20 28.8**	**-0.1**
TATO	**Taipei**	**3.15**	**6**	*e*Pn	**Pn**	**06 19 52.3**	**+0.7**
NWF	**Wu-fen Shan**	**3.29**	**11**	*e*P	**Pn**	**06 19 53.4**	**+0.1**
	baz=16						
NWF				*e*S	**Sn**	**06 20 32.4**	**+0.1**
	baz=16						
HATJ	**Hateruma jima**	**3.33**	**48**	P	**Pn**	**06 19 54.6**	**+0.7**
HATJ				*e*S	**Sn**	**06 20 31.9**	**-1.4**
IRIF	**Iriomote-Funau**	**3.47**	**43**	P	**Pn**	**06 19 56.8**	**+0.9**
IRIF				*e*S	**Sn**	**06 20 36.3**	**-0.5**
KNM	**Kinmen**	**3.57**	**317**	*e*P	**Pn**	**06 19 56.2**	**-1.1**
	baz=318						
JKRS	**Kuro-shima**	**3.59**	**47**	P	**Pn**	**06 19 58.6**	**+1.1**
JKRS				*e*S	**Sn**	**06 20 38.8**	**-0.9**
JIJ	**Ishigaki jima**	**3.76**	**47**	P	**Pn**	**06 20 00.4**	**+0.5**
JIJ				*e*S	**Sn**	**06 20 42.0**	**-2.0**
QZH	**Quanzhou**	**3.87**	**324**	Pn	**Pn**	**06 20 02.4**	**+1.0**
QZH				smax			
	comp=N,280nm,0.7s						
QZH				smax			
	comp=E,290nm,0.9s						
QZH				LR	LR		
	comp=N,2μm,11.3s						
QZH				LR	LR		
	comp=E,2μm,11.6s						
QZH				LR	LR		
	comp=Z,3μm,18.0s						
JTJ	**Tarama**	**4.33**	**49**	P	**Pn**	**06 20 08.6**	**+0.9**
JTJ				*e*S	**Sn**	**06 20 57.3**	**-0.7**
JMJ	**Miyako jima 2**	**4.86**	**51**	*e*S	**Sn**	**06 21 09.9**	**-1.2**
JOGS	**Gusukube**	**4.91**	**53**	P	**Pn**	**06 20 17.9**	**+2.2**
JOGS				*e*S	**Sn**	**06 21 12.8**	**+0.5**
GZH	**Guangzhou**	**7.30**	**281**	P	**Pn**	**06 20 44.0**	**-4.5**
GZH				smax			
	comp=N,130nm,0.9s						
GZH				smax			
	comp=E,100nm,0.9s						
XAN	**Xi'an**	**16.23**	**321**	P	**Pn**	**06 22 53.2**	**+3.2**
XAN				pP	pP	06 22 57.8	+0.9
XAN				LR	LR		
	comp=N,380nm,14.6s						
XAN				LR	LR		
	comp=E,140nm,15.3s						
XAN				LR	LR		
	comp=Z,240nm,17.4s						
KSRS	**Korea Array**	**16.65**	**19**	Pn	**Pn**	**06 22 56.3**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=199,slow=12,SNR=6.9						
KSRS				LR	LR	06 30 13.8	
	comp=Z,229nm,18.9s,baz=43,slow=40						
BJT	**Baijiatuau**	**18.62**	**348**	*e*P	**Pn**	**06 23 20.6**	**+1.0**
BJI	**Beijing**	**18.64**	**348**	P	**Pn**	**06 23 21.0**	**+1.2**
BJI				S	**Sn**	**06 26 52.9**	**+4.9**
BJI				pmax	pmax		
	comp=Z,32nm,0.9s						
BJI				LR	LR		
	comp=N,380nm,12.6s						
BJI				LR	LR		
	comp=E,440nm,16.6s						
BJI				LR	LR		
	comp=Z,160nm,16.6s						
CBIJ	**Chichi jima**	**19.88**	**71**	LR	LR	06 29 56.8	
	comp=Z,108nm,18.9s,baz=172,slow=33						
LZH	**Lanzhou**	**20.70**	**317**	*e*P	**P**	**06 23 43.2**	**+1.2**
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
LZH				pmax	pmax		
	comp=Z,100nm,4.0s						
LZH				LR	LR		
	comp=E,780nm,15.4s						
LZH				LR	LR		
	comp=Z,820nm,16.3s,MS4.2						
MAJO	**Matsushiro**	**20.87**	**42**	*e*P	**P**	**06 23 45.3**	**+1.4**
	comp=Z,25nm,1.3s						
MJAR	**Matsushiro Arr**	**20.87**	**42**	P	**P**	**06 23 45.8**	**+1.8**
	comp=Z,3.0nm,0.7s,baz=232,slow=7.8,SNR=12						
MJAR				LR	LR	06 32 45.1	
	comp=Z,148nm,19.7s,MS3.4,baz=190,slow=39						
CMAR	**Chiang Mai Arr**	**21.08**	**265**	P	**P**	**06 23 46.6**	**+0.2**
	comp=Z,0.7nm,0.3s,mb3.4,baz=69,slow=9.2,SNR=4.4						
CMAR				LR	LR	06 32 58.1	
	comp=Z,327nm,18.2s,MS3.8,baz=80,slow=40						
GTA	**Gaotai**	**25.26**	**319**	*e*P	**P**	**06 24 26.7**	**-1.3**
GTA				pP	pP	06 24 31.0	-1.2
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.9						
KAPI	**Kappang**	**26.71**	**183**	LR	LR	06 34 48.3	
	comp=Z,96nm,21.6s,MS3.3,baz=53,slow=36						
ULN	**Ulaanbaatar**	**28.33**	**340**	*e*P	**P**	**06 24 55.8**	**+0.2**
	comp=Z,15nm,1.4s,mb4.4						
ASAJ	**Asahikawa**	**28.46**	**34**	P	**P**	**06 24 59.3**	**+2.6**
	comp=Z,6.0nm,0.5s,mb4.5,baz=241,slow=14,SNR=4.7						
SONM	**Songino Array**	**28.52**	**339**	P	**P**	**06 24 57.0**	**-0.2**
	comp=Z,3.7nm,0.9s,mb4.1,baz=157,slow=9.2,SNR=18						
FITZ	**Fitzroy Crossi**	**39.93**	**173**	P	**P**	**06 26 35.3**	**-0.8**
	comp=Z,1.3nm,0.6s,mb3.8,baz=6.3,slow=9.2,SNR=3.5						
MK31	**Makanchi Array**	**40.01**	**318**	*e*P	**P**	**06 26 36.6**	**0.0**
MKAR	**Makanchi Array**	**40.01**	**318**	P	**P**	**06 26 36.3**	**-0.3**
	comp=Z,1.0nm,0.6s,mb3.7,baz=100,slow=11,SNR=13						
MKAR				LR	LR	06 44 55.4	
	comp=Z,223nm,18.3s,MS4.0,baz=161,slow=39						
ZALV	**Zalesovo Beam**	**42.20**	**329**	P	**P**	**06 26 53.9**	**-0.6**
	comp=Z,6.8nm,0.8s,mb4.3,baz=111,slow=8.1,SNR=22						
ZALV				LR	LR	06 46 16.7	
	comp=Z,94nm,18.2s,MS3.7,baz=76,slow=39						
WRAB	**Tennant Creek**	**43.47**	**162**	*e*P	**P**	**06 27 04.6**	**-0.6**
WRA	**Warramunga Arr**	**43.48**	**162**	P	**P**	**06 27 04.2**	**-1.1**
	comp=Z,1.4nm,0.5s,mb3.9,baz=345,slow=9.0,SNR=15						
WRA				PcP	PcP	06 28 52.8	-0.5
	comp=Z,1.1nm,0.8s,baz=355,slow=4.4,SNR=5.0						
KURK	**Kurchatov**	**43.87**	**322**	*e*P	**P**	**06 27 07.8**	**-0.4**
	comp=Z,26nm,1.6s,mb4.7						
AAK	**Ala-Archa**	**43.91**	**309**	LR	LR	06 48 23.1	
	comp=Z,300nm,18.0s,MS4.2,baz=246,slow=40						
ASAR	**Alice Springs**	**46.90**	**164**	P	**P**	**06 27 33.2**	**+0.8**
	comp=Z,0.8nm,0.5s,mb3.9,baz=347,slow=9.2,SNR=13						
ASAR				PcP	PcP	06 29 04.5	-0.5
	comp=Z,2.2nm,1.1s,baz=323,slow=2.5,SNR=6.2						
BVAR	**Borovoye Array**	**49.47**	**322**	P	**P**	**06 27 51.4**	**-0.5**
	comp=Z,0.7nm,0.6s,mb3.9,baz=134,slow=6.4,SNR=3.7						
AKTO	**Aktyubinsk**	**56.42**	**317**	LR	LR	06 55 09.3	
	comp=Z,145nm,18.1s,MS4.1,baz=286,slow=38						
STKA	**Stephens Creek**	**56.89**	**159**	P	**P**	**06 28 46.6**	**-0.2**
	comp=Z,1.0nm,0.4s,mb4.2,baz=332,slow=8.7,SNR=3.2						
DZM	**Mont Dzumac**	**62.11**	**132**	*e*LR	LR	06 29 54.7	
	comp=Z,222nm,25.0s						
KTH	**Kantishna Hill**	**69.80**	**28**	*e*P	**P**	**06 30 10.9**	**-1.1**
	comp=Z,4.4nm,1.1s,mb4.3						
ARCES	**ARCESS Array B**	**71.69**	**338**	P	**P**	**06 30 24.0**	**+0.6**
	comp=Z,1.6nm,0.8s,mb4.0,baz=64,slow=4.2,SNR=4.5						
SPITS	**Spitsbergen Ar**	**71.76**	**348**	LR	LR	07 03 01.1	
	comp=Z,47nm,21.7s,MS3.7,baz=160,slow=37						
FINES	**FINESS Array B**	**73.44**	**330**	P	**P**	**06 30 36.9**	**+3.0**
	comp=Z,3.6nm,1.0s,mb4.3,baz=49,slow=5.8,SNR=4.3						
AKASG	**Malin Array Be**	**74.59**	**319**	P	**P**	**06 30 39.8**	**-1.0**
	comp=Z,0.3nm,0.3s,mb3.6,baz=60,slow=7.5,SNR=4.1						
NOA	**NORSAR Array B**	**80.27**	**332**	LR	LR	07 10 27.6	
	comp=Z,125nm,18.4s,MS4.3,baz=265,slow=38						
GERES	**GERESS Array B**	**84.62**	**321**	P	**P**	**06 31 35.5**	**+0.1**
	comp=Z,0.9nm,0.5s,mb4.1,baz=53,slow=5.2,SNR=6.4						
YKA	**Yellowknife Ar**	**85.16**	**23**	P	**P**	**06 31 36.6**	**-1.2**
	comp=Z,2.5nm,0.8s,mb4.4,baz=315,slow=4.6,SNR=19						

*IDC **11** 06:21:26.3±0.6,33°.53S×178°.68W,h0km,mb4.4/10, mb1 4.6/11,mb1mx4.4/18,mbtmp4.4/11,ML4.2/1,MS3.7/2, Ms1 3.7/2,ms1mx3.1/19,Error ellipse: s-maj=22.9km s-min=20.0km az=166.0*
*ISCJB **11** 06:21:27.6±3.3,33°.67S±0°.08×178°.7W±0°.1,h17km±23km, mb4.4/13,MS3.7/2,Error ellipse: s-maj=18.2km s-min=10.7km az=33.7*
*NEIC **11** 06:21:32.2±1.9,33°.56S×178°.67W,h38km±16km,mb4.7/3, Error ellipse: s-maj=16.0km s-min=13.8km az=119.0*
ISC 11 06:21:30.3±3.3,33°.64S±0°.08×178°.7W±0°.1,h23km±23km, n46,σ1°.12/30,mb4.4/13,MS3.7/2,1D,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.42**	**9**	Sn	**Sn**	**06 23 18.2**	**-8.6**
	88nm,0.3s,baz=49,slow=20,SNR=2.6						
URZ	**Urewera**	**5.72**	**215**	Pn	**Pn**	**06 22 53.2**	**-0.6**
	7.1nm,0.3s,baz=350,slow=4.1,SNR=47						
URZ				Sn	**Sn**	**06 23 58.2**	**-0.6**
	10nm,0.3s,baz=156,slow=20,SNR=7.8						
OUZ	**Omahuta**	**6.54**	**254**	*e*Pn	**Pn**	**06 23 09.3**	**+4.2**
	45nm,0.9s						
RPZ	**Rata Peaks**	**12.84**	**215**	Pn	**Pn**	**06 24 27.8**	**-3.5**
	1.2nm,0.3s,baz=45,slow=1.1,SNR=6.0						
RPZ				Sn	**Sn**	**06 26 41.0**	**-12**
	1.4nm,0.3s,baz=335,slow=21,SNR=8.2						
RPZ	**Rata Peaks**	**12.84**	**215**	Pn	**Pn**	**06 24 27.8**	**-3.5**
RPZ				*e*Sn	**Sn**	**06 26 40.8**	**-13**
RPZ				Sn	**Sn**	**06 26 41.0**	**-12**
AFI	**Afiamalu**	**20.63**	**19**	*e*P	**P**	**06 26 07.3**	**-0.9**
EIDS	**Eidsvold**	**27.47**	**279**	*e*P	**P**	**06 27 16.7**	**+1.9**
CMSA	**Cobar Meteorol**	**29.97**	**264**	*e*P	**P**	**06 27 38.6**	**+1.6**
STKA	**Stephens Creek**	**33.28**	**262**	P	**P**	**06 28 06.1**	**0.0**
	2.0nm,0.8s,mb4.1,baz=98,slow=7.8,SNR=2.6						
STKA				LR	LR	06 39 45.0	
	comp=Z,111nm,19.7s,MS3.6,baz=28,slow=33						
CTA	**Charters Tower**	**33.86**	**284**	*e*P	**P**	**06 28 12.9**	**+1.6**
	7.5nm,0.8s,mb4.7						
CTA	**Charters Tower**	**33.86**	**284**	P	**P**	**06 28 12.7**	**+1.4**
	6.9nm,0.5s,mb4.8,baz=92,slow=9.4,SNR=7.3						
CTAO	**Charters Tower**	**33.86**	**284**	*e*P	**P**	**06 28 11.7**	**+0.4**
	8.2nm,0.6s,mb4.8						
ASAR	**Alice Springs**	**42.43**	**271**	P	**P**	**06 29 23.4**	**0.0**
	9.3nm,0.8s,mb4.4,baz=111,slow=7.6,SNR=54						
ASAR				PcP	PcP	06 31 15.4	-0.9
	1.3nm,0.5s,baz=118,slow=3.9,SNR=6.0						
ASAR				S	**S**	**06 35 43.2**	**-0.8**
	1.5nm,1.1s,baz=107,slow=16,SNR=4.9						
WRAB	**Tennant Creek**	**43.71**	**276**	*e*P	**P**	**06 29 32.8**	**-1.0**
	8.1nm,0.7s,mb4.6						
WRA	**Warramunga Arr**	**43.72**	**276**	P	**P**	**06 29 33.5**	**-0.4**
	13nm,0.9s,mb4.7,baz=118,slow=7.5,SNR=32						
FITZ	**Fitzroy Crossi**	**51.82**	**273**	*e*P	**P**	**06 30 36.6**	**-0.2**
	5.9nm,0.6s,mb4.7						
FITZ	**Fitzroy Crossi**	**51.82**	**273**	P	**P**	**06 30 36.7**	**0.0**
	7.4nm,1.1s,mb4.5,baz=179,slow=6.2,SNR=5.0						
CASY	**Casey**	**52.01**	**209**	*e*P	**P**	**06 30 37.8**	**+0.3**
	7.5nm,0.9s,mb4.6						
QSPA	**South Pole Qui**	**56.48**	**180**	P	**P**	**06 31 10.9**	**+1.0**
	7.1nm,1.0s,mb4.7,baz=59,slow=3.4,SNR=11						
MAW	**Mawson**	**69.08**	**201**	P	**P**	**06 32 36.8**	**+2.9**
	3.0nm,0.9s,mb4.2,baz=93,slow=7.6,SNR=4.0						
SYO	**Syowa Base**	**73.84**	**193**	⇓*eP*	**P**	**06 33 01.6**	**-1.0**
KSRS	**Korea Array**	**86.42**	**320**	P	**P**	**06 34 08.6**	**-2.1**
	0.3nm,0.3

FETY					*e*Sg		**Sg**	**06 26 53.1**	**+0.7**
GOLH	**Golhisar**	**0.40**	**52**	*i* P			**Pg**	**06 26 47.7**	**-0.9**
GOLH				*i* S			**Sg**	**06 26 53.7**	**-0.2**
GOLH	**Golhisar**	**0.40**	**52**	*i* P			**Pg**	**06 26 47.7**	**-0.9**
GOLH				*i* S			**Sg**	**06 26 53.7**	**-0.2**
TURN	**Turunc**	**0.46**	**256**	*i* P			**Pg**	**06 26 55.2**	**+5.4**
TURN				*i* S			**Sg**	**06 27 06.5**	**+11**
ELL	**Elmali**	**0.65**	**112**	*e*PG			**Pg**	**06 26 52.0**	**-1.2**
ELL				*e*SG			**Sg**	**06 27 02.3**	**+0.6**
ELL	**Elmali**	**0.65**	**112**	*e*Pg			**Pg**	**06 26 52.0**	**-1.3**
ELL				*e*Sg			**Sg**	**06 27 02.3**	**+0.7**
DNZL	**Cakiroluk**	**0.70**	**353**	*i* P			**Pg**	**06 26 54.3**	**-0.1**
DNZL				*i* S			**Sg**	**06 27 04.4**	**+0.8**
DNZL	**Cakiroluk**	**0.70**	**353**	*i* P			**Pg**	**06 26 54.3**	**-0.1**
DNZL				*i* S			**Sg**	**06 27 04.4**	**+0.8**
YER	**Yerkesik**	**0.72**	**282**	*e*PG			**Pg**	**06 26 54.1**	**-0.5**
YER	**Yerkesik**	**0.72**	**282**	*e*Pg			**Pg**	**06 26 54.1**	**-0.5**
AKAS	**Kas**	**0.83**	**155**	*e*P			**Pg**	**06 26 57.6**	**+0.8**
AKAS				*i* S			**Sg**	**06 27 12.3**	**+4.6**
AKAS	**Kas**	**0.83**	**155**	*e*P			**Pg**	**06 26 57.6**	**+0.7**
KORT	**Korkueli**	**0.95**	**89**	*i* P			**Pg**	**06 26 58.2**	**-0.9**
KORT				*i* S			**Sg**	**06 27 13.8**	**+2.4**
KORT	**Korkueli**	**0.95**	**89**	*i* P			**Pg**	**06 26 58.2**	**-0.9**
KORT				*i* S			**Sg**	**06 27 13.9**	**+2.4**
AYDN	**Tasoluk**	**1.22**	**304**	*i* P			**Pg**	**06 27 04.8**	**+0.5**
AYDN				*i* S			**Sg**	**06 27 20.5**	**+0.3**
AYDN	**Tasoluk**	**1.22**	**304**	*i* P			**Pg**	**06 27 04.8**	**+0.5**
AYDN				*i* S			**Sg**	**06 27 20.5**	**+0.4**

ISK ***11*** *06:57:19.8, 36.′97N×29.°22E, h6km, MD2.8*
DDA ***11*** *06:57:20.5, 37.°02N×29.°16E, h9km±6km, Md3.1*
CSEM ***11*** *06:57:20.3±0.1, 36.°97N×29.°22E, h5km, MD2.8, Error ellipse: s-maj=2.0km s-min=1.8km az=169.0*
ISCJB ***11*** *06:57:20.1±0.6, 36.°97N±0.°03×29.°19E±0.°03, h2km±6km, Error ellipse: s-maj=5.1km s-min=4.4km az=149.9*
ISC 11 06:57:20.6±0.5, 36.°97N±0.°03×29.°19E±0.°04, h7km±6km, n32, σ0°75/48, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**53**	*e*PG	**Pg**	**06 57 25.8**	**-0.7**
GLHS				*e*SG	**Sg**	**06 57 30.6**	**0.0**
GLHS	**Glhisar (BURDU**	**0.30**	**53**	*e*Pg	**Pg**	**06 57 25.8**	**-0.7**
GLHS				*e*Sg	**Sg**	**06 57 30.6**	**0.0**
FETY	**Fethiye**	**0.35**	**195**	*e*PG	**Pg**	**06 57 26.9**	**-0.4**
FETY				*e*SG	**Sg**	**06 57 32.8**	**+0.8**
FETY	**Fethiye**	**0.35**	**195**	*e*Pg	**Pg**	**06 57 26.9**	**-0.5**
FETY				*e*Sg	**Sg**	**06 57 32.8**	**+0.9**
GOLH	**Golhisar**	**0.39**	**48**	*i* P	**Pg**	**06 57 27.6**	**-0.6**
GOLH				*i* S	**Sg**	**06 57 34.4**	**+1.0**
GOLH	**Golhisar**	**0.39**	**48**	*i* P	**Pg**	**06 57 27.6**	**-0.6**
GOLH				*i* S	**Sg**	**06 57 34.4**	**+1.0**
TURN	**Turunc**	**0.48**	**258**	*i* P	**Pg**	**06 57 34.9**	**+5.0**
TURN				*i* S	**Sg**	**06 57 46.2**	**+10**
TURN	**Turunc**	**0.48**	**258**	*i* P	**Pg**	**06 57 34.9**	**+5.0**
ELL	**Elmali**	**0.62**	**111**	*e*PG	**Pg**	**06 57 31.8**	**-0.6**
ELL	**Elmali**	**0.62**	**111**	*e*Pg	**Pg**	**06 57 31.8**	**-0.6**
DNZL	**Cakiroluk**	**0.72**	**351**	*i* P	**Pg**	**06 57 33.3**	**-1.2**
DNZL				*i* S	**Sg**	**06 57 44.7**	**+0.7**
DNZL	**Cakiroluk**	**0.72**	**351**	*i* P	**Pg**	**06 57 33.3**	**-1.2**
DNZL				*i* S	**Sg**	**06 57 44.7**	**+0.8**
YER	**Yerkesik**	**0.75**	**283**	*e*PG	**Pg**	**06 57 35.3**	**+0.3**
YER	**Yerkesik**	**0.75**	**283**	*e*Pg	**Pg**	**06 57 35.3**	**+0.4**
AKAS	**Kas**	**0.81**	**156**	*i* P	**Pg**	**06 57 36.3**	**+0.2**
AKAS				*i* S	**Sg**	**06 57 51.2**	**+4.6**
AKAS	**Kas**	**0.81**	**156**	*i* P	**Pg**	**06 57 36.3**	**+0.2**
KORT	**Korkueli**	**0.93**	**88**	*i* P	**Pg**	**06 57 37.2**	**-1.1**
KORT				*i* S	**Sg**	**06 57 53.3**	**+2.9**
KORT	**Korkueli**	**0.93**	**88**	*i* P	**Pg**	**06 57 37.2**	**-1.2**
KORT				*i* S	**Sg**	**06 57 53.3**	**+2.9**
AYDN	**Tasoluk**	**1.25**	**304**	*i* P	**Pn**	**06 57 44.7**	**+0.1**
AYDN				*i* S	**Sb**	**06 58 01.5**	**+0.6**
AYDN	**Tasoluk**	**1.25**	**304**	*i* P	**Pn**	**06 57 44.7**	**+0.2**
AYDN				*i* S	**Sb**	**06 58 01.5**	**+0.6**
DAT	**Datca**	**1.32**	**260**	*e*PN	**Pn**	**06 57 45.7**	**+0.3**
DAT	**Datca**	**1.32**	**260**	*e*Pn	**Pn**	**06 57 45.7**	**+0.2**
KHL	**Karahalli**	**1.37**	**11**	*e*PN	**Pn**	**06 57 46.0**	**-0.2**
KHL	**Karahalli**	**1.37**	**11**	*e*Pn	**Pn**	**06 57 46.1**	**-0.1**
BDRM	**Kayabasi**	**1.40**	**274**	*i* P	**Pn**	**06 57 46.3**	**-0.3**
BDRM				*i* S	**Sb**	**06 58 04.7**	**-0.5**
BDRM	**Kayabasi**	**1.40**	**274**	*i* P	**Pn**	**06 57 46.3**	**-0.3**
BDRM				*i* S	**Sb**	**06 58 04.7**	**-0.5**
SUTC	**Sutluce-Ispart**	**1.53**	**70**	*e*PN	**Pn**	**06 57 48.0**	**-0.3**
SUTC	**Sutluce-Ispart**	**1.53**	**70**	*e*Pn	**Pn**	**06 57 48.0**	**-0.3**
KULA	**Kula-Manisa**	**1.59**	**345**	*e*PN	**Pn**	**06 57 49.5**	**+0.2**
KULA	**Kula-Manisa**	**1.59**	**345**	*e*Pn	**Pn**	**06 57 49.5**	**+0.2**
HDMB	**Hadim**	**2.64**	**89**	*e*PN	**Pn**	**06 58 04.0**	**+0.4**
HDMB	**Hadim**	**2.64**	**89**	*e*Pn	**Pn**	**06 58 04.0**	**+0.4**

ISCJB ***11*** *06:57:39.5±1.2, 3.°95N±0.°06×126.°79E±0.°09, h85km±11km, mb4.1/16, Error ellipse: s-maj=16.2km s-min=7.5km az=149.8*
IDC ***11*** *06:57:42.2±0.9, 3.°87N×126.°56E, h94km±8km, mb3.8/13, mb1 3.9/14, mb1mx3.8/24, mbtmp3.8/14, MS2.9/2, Ms1 2.9/2, ms1mx2.4/41, Error ellipse: s-maj=33.4km s-min=10.8km az=75.0*
NEIC ***11*** *06:57:42.4±2.5, 3.°87N×126.°61E, h98km±24km, mb3.9/2, Error ellipse: s-maj=24.4km s-min=7.2km az=62.0*
DJA ***11*** *06:57:42, 3.°85N×126.°79E, h57km, mb4.6/10*
ISC 11 06:57:41.1±1.3, 3.°94N±0.°07×126.°77E±0.°10, h82km±13km, h95km±1.0km; pP-P, n35, σ0°95/35, mb4.1/16, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.26**	**259**	P	**Pn**	**06 58 02.5**	**-0.9**
SGSI				S	**Sn**	**06 58 18.8**	**-1.5**
MNI	**Manado**	**3.14**	**218**	P	**Pn**	**06 58 28.6**	**+0.3**
TNTI	**Ternate**	**3.20**	**169**	P	**Pn**	**06 58 29.9**	**+0.7**
TNTI				S	**Sn**	**06 59 05.1**	**-1.2**
MRSI	**Marisa**	**5.92**	**235**	P	**Pn**	**06 59 07.3**	**+1.0**
	1.2nm4μm254nm,0.5s						
LUWI	**Luwuk**	**6.36**	**219**	P	**Pn**	**06 59 15.5**	**+3.3**
	0.5nm2μm113nm,0.8s						
APSI	**Ampana**	**7.03**	**227**	P	**Pn**	**06 59 23.7**	**+2.4**
	9μm118nm,0.9s						
NLAI	**Namlea**	**7.13**	**177**	P	**Pn**	**06 59 22.3**	**-0.5**
	0.3nm2μm29nm,0.9s						
KDI	**Kendari**	**8.87**	**208**	P	**Pn**	**06 59 45.1**	**-1.4**
	26nm,0.5s						
TTSI	**Tana Toraja**	**9.81**	**225**	P	**Pn**	**07 00 01.0**	**+1.6**
	2μm21nm,1.0s						
SPSI	**Sidrap Palu**	**10.51**	**222**	P	**Pn**	**07 00 10.1**	**+1.2**
	15nm,0.8s						
KAPI	**Kappang**	**11.32**	**218**	P	**Pn**	**07 00 19.3**	**-0.6**
	1.1nm,0.3s,baz=56,slow=7.3,SNR=4.5						
SBUM	**Sibu**	**14.60**	**265**	P	**Pn**	**07 01 04.0**	**+0.4**
	9.5nm,0.8s						
KAKA	**Kakadu**	**17.47**	**161**	*e*P	**Pn**	**07 01 38.6**	**-0.9**
KAKA	**Kakadu**	**17.47**	**161**	P	**Pn**	**07 01 39.0**	**-0.5**
	22nm,0.7s						
FITZ	**Fitzroy Crossi**	**21.93**	**183**	P	**P**	**07 02 27.6**	**-0.3**
	5.1nm,0.5s,mb4.1,baz=15,slow=11,SNR=21						
FITZ	**Fitzroy Crossi**	**21.93**	**183**	P	**P**	**07 02 29.5**	**+1.6**
WRAB	**Tennant Creek**	**24.86**	**163**	*e*P	**P**	**07 02 56.0**	**-0.2**
	5.3nm,0.6s,mb4.2						
WRA	**Warramunga Arr**	**24.87**	**163**	P	**P**	**07 02 55.8**	**-0.4**
	3.2nm,0.5s,mb4.0,baz=342,slow=10,SNR=34						
ASAR	**Alice Springs**	**28.30**	**166**	P	**P**	**07 03 26.9**	**-0.1**
	1.4nm,0.6s,mb3.6,baz=344,slow=6.9,SNR=22						
ASAR				pP	pP	07 03 48.0	+2.0
	1.1nm,0.8s,baz=338,slow=12,SNR=3.6						
CMAR	**Chiang Mai Arr**	**30.80**	**300**	pP	pP	07 04 07.6	-0.7
	0.7nm,0.3s,baz=111,slow=7.8,SNR=1.7						
KSRS	**Korea Array**	**33.38**	**2**	P	**P**	**07 04 12.4**	**+0.8**
	3.5nm,0.5s,mb4.4,baz=182,slow=9.5,SNR=16						
KSRS				LR	LR	07 19 07.9	
	comp=Z,10nm,19.2s,baz=145,slow=38						
MJAR	**Matsushiro Arr**	**34.11**	**17**	LR	LR	07 17 55.1	
	comp=Z,34nm,19.8s,baz=260,slow=35						
BJI	**Beijing**	**37.20**	**346**	P	**P**	**07 04 45.1**	**+0.7**
BJI				pmax	pmax		
	comp=Z,38nm,0.5s						
BJI				pmax	pmax		
	comp=Z,25nm,0.4s						
STKA	**Stephens Creek**	**38.31**	**159**	P	**P**	**07 04 54.5**	**+0.7**
	comp=Z,1.4nm,0.4s,mb4.2,baz=353,slow=12,SNR=5.3						
MDJ	**Mudanjiang**	**40.59**	**3**	P	**P**	**07 05 13.8**	**+1.2**
MDJ				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.6						
MDJ				pmax	pmax		
	comp=Z,49nm,6.2s						
SONM	**Songino Array**	**47.12**	**341**	P	**P**	**07 06 05.0**	**+0.1**
	comp=Z,0.7nm,0.4s,mb3.8,baz=152,slow=10.0,SNR=5.3						
PETK	**Petropavlovsk-**	**55.23**	**22**	P	**P**	**07 07 06.3**	**+0.9**
	comp=Z,3.1nm,0.8s,mb4.4,baz=207,slow=5.6,SNR=5.5						
MKAR	**Makanchi Array**	**57.41**	**325**	P	**P**	**07 07 20.5**	**-0.6**
	comp=Z,0.9nm,0.4s,mb4.1,baz=100,slow=9.3,SNR=12						
MKAR				pP	pP	07 07 44.1	+2.4
	comp=Z,0.9nm,0.6s,baz=103,slow=10,SNR=4.5						
ZALV	**Zalesovo Beam**	**60.42**	**333**	P	**P**	**07 07 41.6**	**-0.2**
	comp=Z,1.3nm,0.3s,mb4.4,baz=119,slow=9.0,SNR=2.8						
KURK	**Kurchatov**	**61.59**	**327**	P	**P**	**07 07 49.1**	**-0.7**
	comp=Z,1.0nm,0.4s,mb4.2,baz=126,slow=6.7,SNR=6.7						
KURK				pP	pP	07 08 12.2	+1.5
	comp=Z,0.7nm,0.5s,baz=258,slow=4.8,SNR=3.9						
BVAR	**Borovoye Array**	**67.17**	**327**	P	**P**	**07 08 25.7**	**-0.5**
	comp=Z,0.6nm,0.4s,mb3.7,baz=119,slow=9.0,SNR=4.3						
ABKAR	**Abkulak array**	**72.02**	**321**	*e*P	**P**	**07 08 55.2**	**-0.9**
	comp=Z,0.4nm,0.3s,mb3.7						
AKTK	**Aktyubinsk**	**73.52**	**322**	P	**P**	**07 09 04.2**	**-0.8**
AKTO	**Aktyubinsk**	**73.52**	**322**	P	**P**	**07 09 04.2**	**-0.8**
	comp=Z,1.1nm,0.5s,mb3.8,baz=92,slow=8.2,SNR=5.6						
ARCES	**ARCESS Array B**	**90.27**	**340**	P	**P**	**07 10 31.7**	**-0.7**
	comp=Z,1.1nm,0.6s,mb4.2,baz=81,slow=7.5,SNR=7.0						

MEX 11 07:03:46.3±1.1, 16.°13N×97.°58W, h16km±13km, MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.58**	**296**	*i* P	Pg	07 03 55.6	-2.3
PNIG				*i* S	Sg	07 04 03.9	-1.8
VHO	**Vista Hermosa**	**1.24**	**41**	*i* P	Pn	07 04 04.9	-4.1
VHO				*i* S	Sb	07 04 19.9	-5.2
OXX	**Oaxaca**	**1.25**	**41**	*i* P	Pn	07 04 06.7	-2.5
OXX				*i* S	Sb	07 04 21.1	-4.4
HUIG	**Huatulco**	**1.46**	**104**	*i* P	Pn	07 04 08.8	-3.2
HUIG				*i* S	Sn	07 04 25.6	-5.3
TPIG	**Tehuac#an**	**2.29**	**5**	*i* P	Pn	07 04 21.1	-2.3
TPIG				*i* S	Sn	07 04 48.0	-3.2

NEIC ***11*** *07:20:16.3, 32.°70S×70.°80W, h85km, MD3.4(GUC), After GUC.*
GUC 11 07:20:16.3±0.5, 32.°70S×70.°80W, h85km±2km, MD3.4, ML3.5, 13C-4D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACH	**Jahuel**	**0.18**	**85**	⇓*i*P	Pn	07 20 28.8	+0.2
JACH	**Jahuel**	**0.18**	**85**	⇓*i*P	Pn	07 20 28.8	+0.2
ROCH	**El Roble**	**0.33**	**213**	*e*P	Pn	07 20 29.8	+0.5
ROCH				*i* S	Sn	07 20 39.8	+0.9
ROCH	**El Roble**	**0.33**	**213**	*e*P	Pn	07 20 29.8	+0.5
ROCH				*i* S	Sn	07 20 39.8	+0.9
PEL	**Peldehue**	**0.46**	**168**	⇑*i*P	Pn	07 20 30.1	-0.1
PEL				*i* S	Sn	07 20 40.7	+0.3
PEL				AML	AML	07 20 41.5	
	comp=N,8μm,0.2s						
PACH	**Papudo**	**0.56**	**286**	*e*P	Pn	07 20 31.6	+0.6
PACH				*i* S	Sn	07 20 42.3	+0.3
PACH	**Papudo**	**0.56**	**286**	*e*P	Pn	07 20 31.6	+0.6
PACH				*i* S	Sn	07 20 42.3	+0.3
CLCH	**Cerro Calan**	**0.73**	**162**	⇑*i*P	Pn	07 20 33.6	+0.9
CLCH				*i* S	Sn	07 20 46.3	+1.4
CLCH	**Cerro Calan**	**0.73**	**162**	⇑*i*P	Pn	07 20 33.6	+0.9
CLCH				*i* S	Sn	07 20 46.3	+1.4
CLCH				AML	AML	07 20 46.8	
	comp=N,3μm,0.3s						
SAN	**Santiago**	**0.76**	**171**	⇑*i*P	Pn	07 20 33.2	+0.1
SAN				*i* S	Sn	07 20 45.9	+0.4
SAN	**Santiago**	**0.76**	**171**	⇑*i*P	Pn	07 20 33.2	+0.1
SAN				*i* S	Sn	07 20 45.9	+0.4
SAN				AML	AML	07 20 46.6	
	comp=N,2μm,0.4s						
FSR	**Penalolen**	**0.81**	**164**	⇑*i*P	Pn	07 20 34.1	+0.5
FSR				*i* S	Sn	07 20 47.4	+1.0
FSR	**Penalolen**	**0.81**	**164**	⇑*i*P	Pn	07 20 34.1	+0.5
FSR				*i* S	Sn	07 20 47.4	+1.0
FSR				AML	AML	07 20 49.0	
	comp=N,897nm,0.3s						
ANTU	**Antumapu**	**0.88**	**171**	*e*P	Pn	07 20 34.2	-0.1
ANTU				*i* S	Sn	07 20 48.3	+0.6
ANTU	**Antumapu**	**0.88**	**171**	*e*P	Pn	07 20 34.2	-0.1
ANTU				*i* S	Sn	07 20 48.3	+0.6
ANTU				AML	AML	07 20 48.7	
	comp=N,2μm,0.3s						
PCH	**Pirque**	**0.95**	**165**	*e*P	Pn	07 20 35.2	+0.1
PCH				*i* S	Sn	07 20 49.9	+0.7
PCH	**Pirque**	**0.95**	**165**	*e*P	Pn	07 20 35.2	+0.1
PCH				*i* S	Sn	07 20 49.9	+0.7
TACH	**Talagante**	**0.96**	**187**	⇑*i*P	Pn	07 20 35.6	+0.4
TACH				*i* S	Sn	07 20 49.9	+0.5
TACH	**Talagante**	**0.96**	**187**	⇑*i*P	Pn	07 20 35.6	+0.4
TACH				*i* S	Sn	07 20 49.9	+0.5
CHCH	**Chadas Angostu**	**1.24**	**174**	⇑*i*P	Pn	07 20 38.8	+0.2
CHCH				*i* S	Sn	07 20 55.9	+0.6
CHCH	**Chadas Angostu**	**1.24**	**174**	⇑*i*P	Pn	07 20 38.8	+0.2
CHCH				*i* S	Sn	07 20 55.9	+0.6
LNV	**Longovilo**	**1.36**	**202**	⇓*i*P	Pn	07 20 40.2	+0.2
LNV				*e*S	Sn	07 20 58.4	+0.6
LNV	**Longovilo**	**1.36**	**202**	⇓*i*P	Pn	07 20 40.2	+0.2
LNV				*e*S	Sn	07 20 58.4	+0.6
CACH	**El Canelo**	**1.43**	**173**	⇑*i*P	Pn	07 20 41.8	+0.9
CACH				*i* S	Sn	07 21 01.8	+2.4
CACH	**El Canelo**	**1.43**	**173**	⇑*i*P	Pn	07 20 41.8	+0.9
CACH				*i* S	Sn	07 21 01.8	+2.4

IDC 11 07:20:44.5±0.8, 54.°43S×130.°49W, h0km, mb4.0/7, mb1 4.2/7, mb1mx4.1/14, mbtmp4.0/7, MS3.9/7, Ms1 3.8/7, ms1mx3.5/20, Error ellipse: s-maj=38.2km s-min=20.6km az=162.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKT	**Rikitea**	**31.45**	**352**	*e*T		08 00 20.7	
	4.0nm,0.3s						
QSPA	**South Pole Qui**	**35.74**	**180**	P	P	07 27 45.1	+0.8
	3.3nm,1.0s,baz=108,slow=7.3,SNR=6.3						
PPT	**Papeete**	**39.63**	**331**	*e*LR	LR	07 38 48.7	
	161nm,26.0s						
PPT	**Papeete**	**39.63**	**331**	LR	LR	07 38 46.9	
	comp=Z,182nm,21.8s,baz=152,slow=27						
PLCA	**Paso Flores**	**41.42**	**96**	LR	LR	07 41 24.7	
	comp=Z,88nm,18.7s,baz=146,slow=30						
CPUP	**Villa Florida**	**59.34**	**93**	P	P	07 30 48.2	0.0
	0.5nm,0.5s,baz=267,slow=2.4,SNR=2.3						
CPUP				LR	LR	07 54 38.5	
	comp=Z,119nm,19.2s,baz=92,slow=34						
NNA	**Nana**	**59.58**	**66**	LR	LR	07 49 52.0	
	comp=Z,94nm,18.5s,baz=297,slow=29						
LPAZ	**La Paz**	**60.89**	**77**	P	P	07 30 59.7	+0.8
	2.7nm,0.8s,baz=202,slow=3.1,SNR=12						
ATAH	**Atahualpa**	**62.85**	**62**	LR	LR	07 51 07.4	
	comp=Z,44nm,19.0s,baz=39,slow=29						
STKA	**Stephens Creek**	**63.60**	**252**	P	P	07 31 17.1	+0.2
	3.3nm,1.1s,baz=63,slow=16,SNR=3.6						
ASAR	**Alice Springs**	**74.24**	**251**	P	P	07 32 24.8	+1.6
	1.3nm,0.8s,baz=142,slow=6.9,SNR=9.5						
WRA	**Warramunga Arr**	**76.96**	**254**	P	P	07 32 37.6	-1.3
	1.1nm,0.8s,baz=143,slow=5.2,SNR=13						
PCRV	**Puerto La Cruz**	**84.67**	**64**	LR	LR	08 05 32.3	
	comp=Z,61nm,19.8s,baz=19,slow=32						
TXAR	**Lajitas Array**	**86.58**	**23**	P	P	07 33 29.9	+0.8
	0.3nm,0.8s,baz=192,slow=8.0,SNR=2.8						
BOSA	**Boshof**	**94.69**	**159**	LR	LR	08 14 54.2	
	comp=Z,67nm,21.0s,baz=351,slow=34						
TORD	**Torodi Ar. Bea**	**124.45**	**119**	PKP	PKPdf	07 39 44.1	-1.4
	0.8nm,1.1s,baz=240,slow=2.8,SNR=2.7						
SONM	**Songino Array**	**144.56**	**283**	PKP	PKPdf	07 40 21.3	-0.5
	1.4nm,1.1s,baz=147,slow=2.9,SNR=4.8						

ISK ***11*** *07:23:50.1, 39.°62N×25.°99E, h10km, MD2.8*
CSEM ***11*** *07:23:50.1, 39.°62N×25.°99E, h10km, MD2.8, After ISK*
DDA ***11*** *07:23:53.6, 39.°83N×26.°13E, h7km±6km, Md3.0*
ISC 11 07:23:50.4±2.0, 39.°59N±0.°08×25.°94E±0.°09, h5km±8km, n15, σ0°78/23, Aegean Sea

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

BOZC	**Bozcaada**	**0.26**	**19**	*i* P			**Pg**	**07 23 55.5**	**-0.1**
BOZC				*i* S			**Sg**	**07 24 00.6**	**+1.5**
EZN	**Ezine**	**0.38**	**52**	*e*PG			**Pg**	**07 23 57.2**	**-0.5**
EZN				*e*SG			**Sg**	**07 24 02.4**	**-0.3**
EZN	**Ezine**	**0.38**	**52**	*e*Pg			**Pg**	**07 23 57.2**	**-0.5**
EZN				*e*Sg			**Sg**	**07 24 02.4**	**-0.3**
GADA	**Gvkgeada**	**0.60**	**357**	*e*PG			**Pg**	**07 24 01.9**	**0.0**
GADA				*e*SG			**Sg**	**07 24 10.1**	**+0.4**
GADA	**Gvkgeada**	**0.60**	**357**	*e*Pg			**Pg**	**07 24 01.9**	**0.0**
GADA				*e*Sg			**Sg**	**07 24 10.1**	**+0.4**
LPK	**Lapseki**	**1.00**	**39**	*e*PG			**Pg**	**07 24 08.8**	**-0.9**
LPK	**Lapseki**	**1.00**	**39**	*e*Pg			**Pg**	**07 24 08.8**	**-0.8**
BALY	**Balya**	**1.30**	**83**	*i* P			**Pn**	**07 24 16.2**	**+1.0**
BALY				*i* S			**Sg**	**07 24 32.2**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.45**	**41**	*e*PN			**Pn**	**07 24 16.2**	**-1.0**
RKY	**Sarkoy-Tekirda**	**1.45**	**41**	*e*Pn			**Pn**	**07 24 16.2**	**-1.0**
SART	**Tekirdag**	**1.45**	**41**	*i* P			**Pn**	**07 24 17.0**	**-0.2**
SART				*i* S			**Sb**	**07 24 36.1**	**-0.4**
MFT	**Murefte**	**1.57**	**40**	*e*PN			**Pn**	**07 24 18.8**	**-0.2**
MFT	**Murefte**	**1.57**	**40**	*e*Pn			**Pn**	**07 24 18.8**	**-0.1**
BNT	**Bandirma**	**1.70**	**63**	*e*PN			**Pn**	**07 24 19.3**	**-1.4**
DURS	**Dursunbey**	**1.96**	**89**	*e*P			**Pn**	**07 24 25.5**	**+1.3**
DURS				*e*S			**Sn**	**07 24 49.9**	**+0.8**

ATH ***11*** *07:30:03.3, 37.°92N×21.°42E, h24km±2km, MD3.2/7*
CSEM ***11*** *07:30:04.1±0.2, 37.°91N×21.°43E, h28km±2km, MD3.2, Error ellipse: s-maj=5.1km s-min=4.8km az=13.0*
THE ***11*** *07:30:04.5, 37.°88N×21.°46E, h13km±1km, ML3.3/4, Error ellipse: s-maj=1.4km s-min=0.7km az=101.0*
ISCJB ***11*** *07:30:04.8±0.5, 37.°88N±0.°03×21.°45E±0.°04, h15km±13km, Error ellipse: s-maj=5.4km s-min=4.8km az=3.6*
ISC 11 07:30:04.2±0.6, 37.°88N±0.°03×21.°45E±0.°03, h19km±8km, n37, σ0°73/56, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.18**	**5**	*e*PB	**Pg**	**07 30 08.9**	**-0.1**
RLS				*e*SB	**Sg**	**07 30 11.8**	**-0.4**
RLS	**Riolos of Patr**	**0.18**	**5**	*e*Pb	**Pg**	**07 30 08.9**	**-0.1**
RLS				*e*Sb	**Sg**	**07 30 11.8**	**-0.4**
LAKA	**Lakka**	**0.55**	**49**	P	**Pg**	**07 30 15.2**	**-0.1**
LAKA				S	**Sg**	**07 30 23.1**	**+0.4**
LAKA	**Lakka**	**0.55**	**49**	P	**Pg**	**07 30 15.2**	**-0.1**
LAKA				S	**Sg**	**07 30 23.1**	**+0.4**
KFL	**Anninata**	**0.57**	**294**	P	**Pg**	**07 30 16.1**	**+0.5**
EFP	**Efpalio**	**0.66**	**33**	P	**Pg**	**07 30 17.2**	**+0.1**
EFP	**Efpalio**	**0.66**	**33**	*e*PN	**Pg**	**07 30 16.5**	**-0.6**
EFP				*e*SN	**Sg**	**07 30 25.6**	**-0.3**
EFP	**Efpalio**	**0.66**	**33**	*e*Pn	**Pg**	**07 30 16.5**	**-0.6**
EFP	**Efpalio**	**0.66**	**33**	P	**Pg**	**07 30 17.2**	**+0.1**
EFP				*e*Sn	**Sg**	**07 30 25.6**	**-0.3**
TRIZ	**Trizonia**	**0.69**	**45**	P	**Pg**	**07 30 17.2**	**-0.6**
TRIZ				S	**Sg**	**07 30 27.5**	**+0.4**
TRIZ	**Trizonia**	**0.69**	**45**	P	**Pg**	**07 30 17.2**	**-0.6**
TRIZ				S	**Sg**	**07 30 27.5**	**+0.4**
GUR	**Goura**	**0.71**	**85**	P	**Pg**	**07 30 17.8**	**-0.4**
GUR	**Goura**	**0.71**	**85**	*e*PN	**Pg**	**07 30 17.5**	**-0.7**
GUR				*e*SN	**Sg**	**07 30 28.1**	**+0.4**
GUR	**Goura**	**0.71**	**85**	*e*Pn	**Pg**	**07 30 17.5**	**-0.7**
GUR	**Goura**	**0.71**	**85**	P	**Pg**	**07 30 17.8**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS				eS	Sn	07 38 38.0	+1.5
RTR	**El Retiro**	**1.56**	**60**	eP	Pn	07 38 17.1	-0.5
SNJE	**San Jose**	**1.58**	**62**	eP	Pn	07 38 17.3	-0.6
NBG	**Las Nubes**	**1.60**	**25**	eP	Pn	07 38 19.0	+0.7
RBDL	**Robledal**	**1.64**	**53**	eP	Pn	07 38 18.4	-0.4
TP2	**Tecpan 2**	**1.65**	**1⇑**	eP	Pn	07 38 18.8	-0.1
BOQS	**Boqueron**	**1.82**	**70**	eP	Pn	07 38 21.1	-0.1
BOQS				AML	AML	07 38 57.3	
	comp=Z,462nm,0.5s						
SNET	**Serv Nac Est T**	**1.85**	**72**	eP	Pn	07 38 21.9	+0.3
SNET				eS	Sn	07 38 44.7	+1.0
APG	**El Apazote**	**1.95**	**17**	P	Pn	07 38 23.3	+0.2
	comp=Z,33nm,0.3s,baz=160,slow=6.2,SNR=358						
APG				S	Sn	07 38 50.2	+3.9
	comp=Z,47nm,0.3s,baz=111,slow=21,SNR=10						
LFRS	**El Faro**	**1.99**	**75**	eP	Pn	07 38 23.7	+0.2
LFRS				eS	Sn	07 38 47.0	-0.3
LBRS	**Las Brisas**	**2.04**	**72**	eP	Pn	07 38 24.1	-0.1
MTO2	**Montecristo 2**	**2.06**	**52**	eP	Pn	07 38 24.9	+0.2
MTO2				eS	Sn	07 38 49.1	-0.1
VSM	**San Miguel**	**2.71**	**83**	eP	Pn	07 38 33.4	-0.1
BLLM	**Bellamira**	**2.75**	**83**	eP	Pn	07 38 34.4	+0.4
BLLM				eS	Sn	07 39 05.6	-0.4
CAHU	**Cacacuatique**	**2.83**	**77**	eP	Pn	07 38 35.6	+0.6
CAHU				eS	Sn	07 39 08.9	+1.0
CNCH	**Conchagua**	**3.12**	**87**	eP	Pn	07 38 38.8	-0.4
TGUH	**Tegucigalpa,Un**	**3.78**	**75**	ePn	Pn	07 38 48.2	0.0
TGUH				eSn	Sn	07 39 18.9	-13
CRIN	**San Cristobal**	**3.91**	**96**	eP	Pn	07 38 50.2	+0.1
COPN	**Copaltepe**	**4.44**	**102**	eP	Pn	07 38 56.9	-0.4
CSAN		**4.60**	**101**	eP	Pn	07 38 59.1	-0.5
CSAN				eS	Sn	07 39 50.0	-1.7
CMIG	**Matias Romero**	**5.42**	**317**	P	Pn	07 39 11.0	+0.3
	comp=Z,0.8nm,0.3s,baz=132,slow=8.3,SNR=9.9						
CMIG				S	Sn	07 40 24.7	+13
	comp=Z,1.9nm,0.3s,baz=88,slow=23,SNR=3.9						
JTS	**JuntasAbangare**	**6.59**	**115**	P	Pn	07 39 27.5	+0.6
	comp=Z,0.9nm,0.3s,baz=317,slow=19,SNR=4.4						
JTS				LR	LR	07 42 26.9	
	comp=Z,96nm,21.7s,baz=164,slow=42						
TEIG	**Tepich**	**7.54**	**20**	ePn	Pn	07 39 40.7	+0.8
	comp=Z,22nm,0.5s						
BCIP	**Isla Barro Col**	**11.67**	**109**	Pn	Pn	07 40 36.3	-0.2
ROSC	**El Rosal**	**18.42**	**115**	P	Pn	07 42 06.4	+1.5
	comp=Z,0.5nm,0.3s,baz=81,slow=22,SNR=3.7						
TXAR	**Lajitas Array**	**19.94**	**326**	P	Pn	07 42 22.8	-0.1
	comp=Z,0.2nm,0.3s,baz=151,slow=13,SNR=14						
SDV	**Santo Domingo**	**20.46**	**100**	P	P	07 42 26.2	-0.6
	comp=Z,2.4nm,0.7s,baz=304,slow=9.1,SNR=5.2						
SDV	**Santo Domingo**	**20.46**	**100**	P	P	07 42 26.2	-0.7
GDL2	**Guadalupe Moun**	**22.58**	**329**	eP	P	07 42 50.1	+0.8
	comp=Z,1.7nm,0.5s,mb3.7						
MNTX	**Cornudas Mount**	**22.70**	**327**	eP	P	07 42 50.5	-0.1
	comp=Z,3.2nm,0.8s,mb3.8						
WVT	**Waverly**	**23.09**	**7**	eP	P	07 42 53.0	-1.7
	comp=Z,4.0nm,0.9s,mb3.9						
TKL	**Tuckaleechee C**	**23.37**	**15**	P	P	07 42 56.6	-1.0
	comp=Z,2.7nm,0.6s,mb3.9,baz=182,slow=11,SNR=7.0						
TKL				LR	LR	07 52 37.3	
	comp=Z,138nm,19.4s,MS3.4,baz=83,slow=38						
ANMO	**Albuquerque**	**25.83**	**330**	P	P	07 43 21.0	+1.0
	comp=Z,0.8nm,0.6s,mb3.5,baz=149,slow=11,SNR=4.9						
M13A	**Montello**	**34.62**	**329**	eP	P	07 44 39.4	+1.7
	comp=Z,2.8nm,0.7s,mb4.3						
NVAR	**Mina Array Bea**	**34.94**	**321**	P	P	07 44 43.7	+3.2
	comp=Z,4.1nm,0.9s,mb4.3,baz=141,slow=9.1,SNR=9.5						
ULM	**Lac du Bonnet**	**37.23**	**355**	LR	LR	08 03 35.1	
	comp=Z,44nm,20.7s,MS3.2,baz=261,slow=42						
SIV	**San Ignacio**	**41.41**	**133**	P	P	07 45 35.9	+0.7
	comp=Z,1.3nm,0.9s,mb3.5,baz=341,slow=12,SNR=6.3						
SCHQ	**Schefferville**	**45.72**	**19**	P	P	07 46 06.7	-2.7
	comp=Z,4.1nm,0.8s,mb4.4,baz=356,slow=1.2,SNR=4.2						
SCHQ				LR	LR	08 04 27.1	
	comp=Z,70nm,19.8s,MS3.6,baz=142,slow=35						
SCHQ	**Schefferville**	**45.72**	**19**	P	P	07 46 06.7	-2.7
SCHQ				LR	LR	08 04 27.1	
YKA	**Yellowknife Ar**	**52.09**	**346**	P	P	07 46 56.8	-1.3
	comp=Z,0.7nm,0.8s,mb3.7,baz=150,slow=7.9,SNR=6.7						
BORG	**Borgarnes**	**69.59**	**25**	LR	LR	08 22 14.5	
	comp=Z,1.4nm,20.0s,MS2.2,baz=250,slow=38						
WRA	**Warramunga Arr**	**136.08**	**255**	PKP	PKPdf	07 57 12.7	+2.6
	comp=Z,0.3nm,0.9s,baz=88,slow=3.6,SNR=2.4						
CMAR	**Chiang Mai Arr**	**147.11**	**342**	PKPbc	PKPbc	07 57 33.4	+1.4
	comp=Z,1.7nm,0.7s,baz=345,slow=4.1,SNR=6.3						

IDC 11 07:38:24.0±2.3, 53°.63N×87°.77E, h0km, mb1 3.3/3, mb1mx3.1/29, mbtmp3.3/3, ML3.2/3, Error ellipse: s-maj=19.2km s-min=11.6km az=81.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.78**	**281**	Pg	Pg	07 38 56.1	-1.9
	3.3nm,0.3s,baz=100,slow=17,SNR=26						
ZALV				Lg		07 39 21.4	
	6.3nm,0.3s,baz=105,slow=27,SNR=15						
KURK	**Kurchatov**	**6.34**	**246**	Pn	Pn	07 40 01.0	+2.4
	0.2nm,0.3s,baz=62,slow=14,SNR=13						
KURK				Sn	Sn	07 41 12.5	+0.9
	0.1nm,0.3s,baz=135,slow=24,SNR=4.3						
KURK				Lg		07 41 47.8	
	0.1nm,0.3s,baz=62,slow=35,SNR=9.3						
MKAR	**Makanchi Array**	**7.69**	**209**	Pn	Pn	07 40 18.2	+1.1
	0.3nm,0.3s,baz=25,slow=11,SNR=5.2						
MKAR				Sn	Sn	07 41 42.8	-2.1
	0.3nm,0.3s,baz=28,slow=18,SNR=5.2						
BVAR	**Borovoye Array**	**10.42**	**274**	Pn	Pn	07 40 54.6	+0.2
	0.2nm,0.3s,baz=78,slow=16,SNR=2.9						
BVAR				Sn	Sn	07 42 44.9	-6.8
	0.3nm,0.3s,baz=70,slow=17,SNR=3.4						

*ISK **11** 07:43:48.6, 38°.41N×38°.16E, h16km, MD2.8*
*CSEM **11** 07:43:48.4±0.3, 38°.41N×38°.08E, h10km, MD2.7, Error ellipse: s-maj=6.5km s-min=6.0km az=72.0*
*ISCJB **11** 07:43:48.7±0.5, 38°.40N±0°.03×38°.10E±0°.04, h1km±8km, Error ellipse: s-maj=5.3km s-min=4.6km az=149.2*
*DDA **11** 07:43:49.0, 38°.31N×38°.12E, h7km±6km, Md2.7*
ISC 11 07:43:49.1±0.6, 38°.41N±0°.03×38°.10E±0°.04, h9km±9km, n22, σ0°.93/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKCD	**Akcadag**	**0.18**	**231**	*i* P	**Pg**	**07 43 52.2**	**-0.7**
AKCD				*i* S	**Sg**	**07 43 55.1**	**-0.3**
AKCD	**Akcadag**	**0.18**	**231**	*i* P	**Pg**	**07 43 52.2**	**-0.7**
AKCD				*i* S	**Sg**	**07 43 55.1**	**-0.3**
MYA	**Malataya**	**0.27**	**107**	ePG	**Pg**	**07 43 54.3**	**-0.3**
MYA				eSG	**Sg**	**07 43 58.1**	**-0.1**
MYA	**Malataya**	**0.27**	**107**	ePg	**Pg**	**07 43 54.3**	**-0.3**
MYA				eSg	**Sg**	**07 43 58.1**	**-0.1**
DARE	**Darende-Malaty**	**0.59**	**337**	ePG	**Pg**	**07 43 59.3**	**-1.3**
DARE				eSG	**Sg**	**07 44 08.7**	**+0.4**
DARE	**Darende-Malaty**	**0.59**	**337**	ePg	**Pg**	**07 43 59.3**	**-1.3**
DARE				eSg	**Sg**	**07 44 08.7**	**+0.4**
ELZG	**Elazig**	**0.70**	**82**	*i* P	**Pg**	**07 44 02.4**	**-0.3**
ELZG				*i* S	**Sg**	**07 44 13.8**	**+1.9**
ELZG	**Elazig**	**0.70**	**82**	*i* P	**Pg**	**07 44 02.4**	**-0.3**
ELZG				*i* S	**Sg**	**07 44 13.8**	**+1.9**
KEMA	**Kemaliye**	**0.91**	**20**	*i* P	**Pg**	**07 44 07.7**	**+1.0**
KEMA				*i* S	**Sg**	**07 44 23.3**	**+4.7**
KEMA	**Kemaliye**	**0.91**	**20**	*i* P	**Pg**	**07 44 07.7**	**+1.0**
ATAB	**Bozova**	**0.95**	**170**	eP	**Pg**	**07 44 07.6**	**+0.2**
ATAB				eS	**Sg**	**07 44 20.8**	**+1.1**
ATAB	**Bozova**	**0.95**	**170**	eP	**Pg**	**07 44 07.6**	**+0.2**
ATAB				eS	**Sg**	**07 44 20.8**	**+1.1**
SVRC	**Sivrice-ELAZID**	**0.95**	**91**	ePG	**Pg**	**07 44 06.5**	**-0.9**
SVRC	**Sivrice-ELAZID**	**0.95**	**91**	ePg	**Pg**	**07 44 06.5**	**-0.9**
URFA	**Urfa**	**1.12**	**149**	ePN	**Pg**	**07 44 09.9**	**-0.8**
URFA	**Urfa**	**1.12**	**149**	ePn	**Pg**	**07 44 09.9**	**-0.8**
PTK	**Pertek**	**1.12**	**64**	ePN	**Pg**	**07 44 09.5**	**-1.2**
PTK	**Pertek**	**1.12**	**64**	ePn	**Pg**	**07 44 09.5**	**-1.2**
SARI	**SarD1z-Kayseri**	**1.13**	**284**	ePN	**Pg**	**07 44 13.7**	**+2.8**
GZT	**Gaziantep**	**1.13**	**202**	*i* P	**Pg**	**07 44 10.8**	**-0.1**
GZT				*i* S	**Sg**	**07 44 25.9**	**+0.3**
KMRS	**Kahramanmaras**	**1.31**	**227**	ePN	**Pn**	**07 44 13.1**	**-0.3**
KMRS	**Kahramanmaras**	**1.31**	**227**	ePn	**Pn**	**07 44 13.1**	**-0.4**

CASC 11 08:04:03.7±2.1, 8°.44N×83°.01W, h12km±7km, MD3.7, 2C-2D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.26**	**323**	⇓eP	Pg	08 04 08.9	-0.3
ACR				eS	Sg	08 04 15.0	+2.2
CTCR	**Cotoan**	**0.51**	**28**	⇓*i*P	Pg	08 04 13.9	+0.2
BAR1		**0.85**	**339**	⇓eP	Pg	08 04 19.2	-1.0
CNI	**Changuinola**	**1.08**	**26**	⇑*i*P	Pb	08 04 23.8	-0.6
BUS	**Buena Vista**	**1.33**	**326**	eP	Pn	08 04 27.3	-0.9
BUS				eS	Sb	08 04 45.6	-0.1
URSC	**Urasca**	**1.58**	**331**	eP	Pn	08 04 31.2	-0.4
URSC				eS	Sn	08 04 52.5	+0.5
PRS1	**Puriscal**	**2.00**	**320**	eP	Pn	08 04 38.5	+1.1
CGA2	**Cerro Gallo 2**	**2.13**	**317**	eP	Pn	08 04 44.8	+5.7

IDC 11 08:20:11.4±5.0, 56°.64S×143°.12W, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.7/12, mbtmp3.6/2, Error ellipse: s-maj=827.2km s-min=100.4km az=168.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**66.76**	**262**	P	P	08 31 04.8	+0.4
	0.3nm,0.5s,baz=145,slow=6.8,SNR=6.1						
WRA	**Warramunga Arr**	**69.51**	**265**	P	P	08 31 21.2	-0.5
	0.9nm,1.1s,baz=140,slow=5.3,SNR=4.6						
MKAR	**Makanchi Array**	**150.71**	**270**	PKPbc	PKPbc	08 40 04.0	-0.3
	0.2nm,0.4s,baz=85,slow=8.0,SNR=2.8						
MKAR				PKPab	PKPab	08 40 11.7	+0.3
	0.5nm,0.7s,baz=134,slow=4.2,SNR=3.5						

DHMR 11 08:27:34.0±0.9, 11°.65N×43°.04E, h4km±9km, ML3.6, 1C-2D, Ethiopia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRBA	**At Turbah**	**1.89**	**34**	⇓*i*P	Pn	08 28 08.8	+1.7
TRBA				*i* S	Sn	08 28 34.5	+3.1
TRBA				AML	AML	08 28 37.1	
	comp=Z,627nm,0.5s						
UDYN	**Al 'Udayn**	**2.48**	**21**	⇑*i*P	Pn	08 28 17.2	+2.1
UDYN				*i* S	Sn	08 28 51.4	+5.6
UDYN				AML	AML	08 28 57.3	
	comp=E,446nm,0.5s						
LBOS		**3.09**	**44**	⇓*i*P	Pn	08 28 26.2	+2.7
LBOS				*i* S	Sn	08 29 07.6	+6.7
DHBB	**Dhamar BB**	**3.19**	**24**	*i* P	Pn	08 28 27.8	+2.9
DHBB				*i* S	Sn	08 29 10.2	+6.8
BDHA	**Al Bayda'**	**3.38**	**47**	*i* P	Pn	08 28 30.6	+3.0
BDHA				*i* S	Sn	08 29 14.4	+6.3

*IDC **11** 08:29:58.9±1.2, 31°.82N×104°.82E, h0km, mb3.5/4, mb1 3.8/6, mb1mx3.6/27, mbtmp3.5/6, ML3.9/2, MS2.7/1, Ms1 2.7/1, ms1mx2.2/39, Error ellipse: s-maj=52.8km s-min=22.6km az=69.0*
*ISCJB **11** 08:29:59.5±0.6, 31°.66N±0°.04×104°.50E±0°.07, h10km, mb3.6/5, Error ellipse: s-maj=8.6km s-min=5.9km az=19.7*
*NEIC **11** 08:30:00.9±0.8, 31°.79N×104°.52E, h10km, mb4.1/1, Error ellipse: s-maj=19.7km s-min=13.3km az=75.0*
*BJI **11** 08:30:01.2, 31°.62N×104°.39E, h16km, ML3.6/15, Ms3.3/3, Ms7 3.2/2*
ISC 11 08:30:01.6±0.6, 31°.67N±0°.04×104°.44E±0°.06, h10km, n13, σ1°.45/20, mb3.6/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.95**	**218**	Pg	**Pg**	**08 30 27.4**	**+7.6**
CD2				Sg	**Sg**	**08 30 32.2**	**0.0**
CD2				smax			
	comp=N,2μm,0.6s						
LZH	**Lanzhou**	**4.44**	**354**	Pn	**Pn**	**08 31 11.4**	**+2.5**
LZH				Pg	**Pg**	**08 31 22.4**	**-4.1**
LZH				Sn	**Sn**	**08 32 01.4**	**+0.8**
LZH				Sg	**Sg**	**08 32 18.1**	**-5.9**
LZH				smax			
	comp=N,91nm,0.8s						
LZH				smax			
	comp=E,130nm,0.9s						
LZH				LR	LR		
	comp=E,360nm,8.3s						
LZH				LR	LR		
	comp=Z,540nm,8.5s						
XAN	**Xi'an**	**4.46**	**57**	Pn	**Pn**	**08 31 10.0**	**+0.8**
XAN				Pg	**Pg**	**08 31 22.0**	**-4.9**
XAN				Sn	**Sn**	**08 32 03.1**	**+2.0**
XAN				Sg	**Sg**	**08 32 18.8**	**-5.9**
XAN				smax			
	comp=N,66nm,0.7s						
XAN				smax			
	comp=E,36nm,0.6s						
XAN				LR	LR		
	comp=N,95nm,6.4s						
XAN				LR	LR		
	comp=E,57nm,6.0s						
XAN				LR	LR		
	comp=Z,65nm,6.8s						
ENH	**Enshi**	**4.56**	**106**	Pn	**Pn**	**08 31 11.3**	**+0.7**
ENH				ePg	**Pg**	**08 31 27.6**	**-1.3**
GYA	**Guiyang**	**5.54**	**159**	Pn	**Pn**	**08 31 25.7**	**+1.6**
GYA				smax			
	comp=N,90nm,0.8s						
GYA				smax			
	comp=E,90nm,0.6s						
CMAR	**Chiang Mai Arr**	**14.06**	**202**	Pn	**Pn**	**08 33 23.0**	**+2.2**
	comp=E,0.3nm,0.3s,baz=17,slow=12,SNR=4.1						
SONM	**Songino Array**	**16.22**	**5**	Pn	**Pn**	**08 33 47.5**	**-1.9**
	comp=E,0.2nm,0.3s,baz=171,slow=10,SNR=2.5						
MKAR	**Makanchi Array**	**22.75**	**318**	P	**P**	**08 35 03.8**	**+0.1**
	comp=E,0.5nm,0.6s,mb3.1,baz=96,slow=12,SNR=4.8						
TGY	**Tagaytay City**	**23.11**	**135**	LR	LR	08 43 11.6	
	comp=E,16nm,19.2s,baz=352,slow=34						
WRAB	**Tennant Creek**	**58.78**	**147**	eP	**P**	**08 39 59.5**	**-0.5**
	comp=E,1.0nm,0.6s,mb4.0						
WRA	**Warramunga Arr**	**58.78**	**147**	P	**P**	**08 39 58.7**	**-1.3**
	comp=E,0.8nm,0.6s,mb4.0,baz=339,slow=7.5,SNR=19						
ASAR	**Alice Springs**	**61.83**	**149**	P	**P**	**08 40 19.6**	**-1.2**
	comp=E,0.4nm,0.5s,mb3.8,baz=332,slow=6.7,SNR=8.8						
YKA	**Yellowknife Ar**	**81.07**	**17**	P	**P**	**08 42 13.6**	**-2.9**
	comp=E,0.1nm,0.4s,mb3.1,baz=328,slow=5.4,SNR=4.1						

*BJI **11** 08:37:39.5, 6°.12N×124°.48E, h41km, mB5.3/34, mb5.2/56, Ms4.6/56, Ms7 4.4/52*
*MAN **11** 08:37:39, 6°.56N×124°.11E, h2km, mb5.6, ML4.6, MS4.9*
MAN INTENSITY IV - COTABATO CITY; INTENSITY III - KORONADAL CITY; SHARIF CABUNSUAN MAGUINDANAO; INTENSITY II - GENERAL SANTOS CITY.
*DJA **11** 08:37:40, 6°.93N×124°.55E, h21km, Mw5.6/13*
*MOS **11** 08:37:41.9±1.0, 6°.55N×124°.24E, h33km, mb5.5/44, MS4.2/5, Error ellipse: s-maj=10.6km s-min=5.7km az=108.9*
*GCMT **11** 08:37:42.3±0.2, 6°.62N×124°.33E, h14km, MW5.1, Moment Tensor Solution. s47,c70; s74,c132; Moment tensor: Scale 10^16^Nm; M_{rr}=4.70±.22; $M_{\theta\theta}$=4.57±.14; $M_{\phi\phi}$=0.13±.17; $M_{r\theta}$=1.39±.31; $M_{\theta\phi}$=1.85±.12; $M_{\phi r}$=-1.88±.40; Best double couple: M_0=5.50000×10^16^ NP1:ϕ_s=49.00000°, δ46.00000°, λ-123.00000°. NP2:ϕ_s=272.00000°, δ53.00000°, λ-61.00000°. Principal axes: T 5.2900, Plg4.0000°, Azm342.0000°; N 0.4300, Plg23.0000°, Azm73.0000°; P -5.7100, Plg66.0000°, Azm242.0000°; Data Used: II IU IC G CN.*
*ISCJB **11** 08:37:43.3±0.5, 6°.54N±0°.02×124°.22E±0°.03, h44km±4km, mb5.2/133, MS4.3/46 Error ellipse: s-maj=4.5km s-min=4.2km az=6.8*
*NEIC **11** 08:37:45.8±0.6, 6°.56N×124°.22E, h52km±5km, mb5.3/71, Error ellipse: s-maj=4.3km s-min=3.3km az=70.0*
NEIC Felt [IV PIVS] at Cotabato; [III PIVS] at Koronadal and Tacurong; [II PIVS] at General Santos.
*IDC **11** 08:37:45.2±1.9, 6°.54N×124°.26E, h48km±18km, mb4.8/25, mb1 4.8/26, mb1mx4.8/29, mbtmp4.7/26, ML4.1/1, MS4.2/22, Ms1 4.2/22, ms1mx4.0/36, Error ellipse: s-maj=15.4km s-min=10.0km az=77.0*
ISC 11 08:37:45.7±0.5, 6°.53N±0°.02×124°.25E±0°.03, h50km±4km, h43km±1.6km: pP-P, n311, σ0°.95/309, mb5.2/133, MS4.3/46, 11C-15D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.43**	**68**	P	**Pn**	**08 38 07.2**	**-2.1**
	270nm,0.3s,baz=278,slow=1.9,SNR=45						
DAV	**Davao City (W)**	**1.43**	**68**	ePn	**Pn**	**08 38 07.8**	**-1.4**
PAGZ	**Pagadian**	**1.57**	**327**	eP	**Pn**	**08 38 06.3**	**-4.9**
PAGZ				eS	**Sn**	**08 38 25.3**	**-4.9**
BUKP	**Musuan**	**1.57**	**31**	eP	**Pn**	**08 38 08.4**	**-2.8**
BUKP				eS	**Sn**	**08 38 30.4**	**+0.1**
MATI	**Mati**	**2.04**	**78**	eP	**Pn**	**08 38 17.8**	**+0.2**
MATI				eS	**Sn**	**08 38 45.3**	**+3.4**
MYLDM	**Lahad Datu**	**5.87**	**257**	P	**Pn**	**08 39 09.3**	**-0.9**
TSM	**Tawau**	**6.72**	**251**	P	**Pn**	**08 39 19.3**	**-2.5**
SDKM	**Sandakan**	**7.07**	**263**	P	**Pn**	**08 39 25.2**	**-1.4**
KDM	**Kudat**	**7.37**	**273**	P	**Pn**	**08 39 31.1**	**+0.3**
GQP	**Guinayangan**	**7.54**	**347**	⇓eP	**Pn**	**08 39 38.1**	**+5.0**
KKM	**Kota Kinabalu**	**8.00**	**267**	P	**Pn**	**08 39 39.8**	**+0.4**
KKM	**Kota Kinabalu**	**8.00**	**267**	ePn	**Pn**	**08 39 39.2**	**-0.2**
TGY	**Tagaytay City**	**8.20**	**337**	P	**Pn**	**08 39 46.2**	**+4.1**
	146nm,0.3s,baz=17,slow=19,SNR=5.8						
BCPH	**Baguio City Da**	**10.43**	**340**	⇓eP	**Pn**	**08 40 14.3**	**+1.7**
KAPI	**Kappang**	**12.31**	**201**	P	**Pn**	**08 40 39.6**	**+1.2**
	1.1nm,0.3s,baz=30,slow=9.4,SNR=2.7						
KAPI				LR	LR	08 45 20.3	
	comp=Z,1μm,18.1s,baz=42,slow=37						
KAPI	**Kappang**	**12.31**	**201**	ePn	**Pn**	**08 40 38.5**	**+0.1**
	40nm,1.3s						
SBUM	**Sibu**	**12.65**	**252**	P	**Pn**	**08 40 43.5**	**+0.4**
KSM	**Kuching**	**14.78**	**251**	P	**Pn**	**08 41 12.8**	**+1.0**
KSM	**Kuching**	**14.78**	**251**	ePn	**Pn**	**08 41 11.9**	**+0.2**
	137nm,1.3s						
TWG	**Pinlang**	**16.49**	**350**	ePn	**Pn**	**08 41 32.8**	**-0.8**
	53nm,0.6s						
YULB	**Yu-li**	**17.01**	**351**	ePn	**Pn**	**08 41 39.9**	**-0.3**
TPUB	**Ta-pu**	**17.04**	**349**	ePn	**Pn**	**08 41 40.9**	**+0.4**
	155nm,1.1s						
SSLB	**Suanglung**	**17.45**	**350**	ePn	**Pn**	**08 41 45.6**	**0.0**
YHNB	**Yeheng**	**18.25**	**352**	eP	**Pn**	**08 41 55.2**	**-0.2**
	57nm,0.8s						
QIZ	**Qiongzhong**	**18.73**	**313**	P	**Pn**	**08 41 59.4**	**-1.9**
QIZ				pP	pP	08 42 09.4	-2.5
QIZ				sP	sP	08 42 15.4	-2.8
QIZ				S	**S**	**08 45 31.0**	**-0.1**
QIZ				pmax	pmax		
	comp=Z,71nm,1.4s						
QIZ				pmax	pmax		
	comp=Z,1μm,9.5s						
QIZ				LR	LR		
	comp=N,650nm,13.2s						
QIZ				LR	LR		
	comp=Z,1μm,22.5s						
QIZ	**Qiongzhong**	**18.73**	**313**	ePn	**Pn**	**08 42 01.2**	**-0.1**
	comp=Z,87nm,1.3s						
QZH	**Quanzhou**	**19.10**	**344**	⇑*i*P	**Pn**	**08 42 07.1**	**+1.5**
QZH				S	**S**	**08 45 39.7**	**+1.3**
QZH				pmax	pmax		
	comp=Z,90nm,0.9s						
QZH				LR	LR		
	comp=N,3μm,18.4s						
QZH				LR	LR		
	comp=E,2μm,18.0s						
QZH				LR	LR		
	comp=Z,2μm,14.2s						
GZH	**Guangzhou**	**19.53**	**329**	P	**Pn**	**08 42 13.8**	**+3.1**
GZH				S	**S**	**08 45 51.0**	**+3.9**
GZH				LR	LR		
	comp=N,900nm,13.9s						
GZH				LR	LR		
	comp=E,840nm,17.9s						
GZH				LR	LR		
	comp=Z,1μm,16.7s						
UBT	**Ubonrachathani**	**20.76**	**296**	⇑P	**P**	**08 42 23.4**	**+0.9**
KAKA	**Kakadu**	**20.77**	**157**	eP	**P**	**08 42 22.0**	**-0.7**
	comp=Z,440nm,0.7s						
KAKA	**Kakadu**	**20.77**	**157**	eP	**P**	**08 42 22.7**	**0.0**
	comp=Z,1μm,0.8s						
MYKOM	**Kota Tinggi**	**20.87**	**258**	P	**P**	**08 42 25.0**	**+1.2**
KTGM	**Kuala Trenggan**	**21.03**	**268**	P	**P**	**08 42 26.6**	**+1.1**
KGM	**Kluang**	**21.34**	**259**	P	**P**	**08 42 30.1**	**+1.2**
FRIM	**Kepong**	**22.77**	**263**	P	**P**	**08 42 44.7**	**+0.6**
IPM	**Ipoh**	**23.20**	**266**	P	**P**	**08 42 48.1**	**-0.5**
SNG	**Songkhla**	**23.47**	**273**	P	**P**	**08 42 51.0**	**-0.1**
	comp=Z,140nm,0.8s,mb5.4						
KULM	**Kulim**	**23.50**	**268**	P	**P**	**08 42 51.7**	**+0.2**
KULM	**Kulim**	**23.50**	**268**	eP	**P**	**08 42 50.9**	**-0.5**
	comp=Z,317nm,1.5s,mb5.5						
FITZ	**Fitzroy Crossi**	**24.51**	**177**	eP	**P**	**08 43 00.2**	**-0.3**
	comp=Z,48nm,0.6s,mb5.2						
FITZ	**Fitzroy Crossi**	**24.51**	**177**	P	**P**	**08 43 00.8**	**+0.3**
	comp=Z,30nm,0.8s,mb4.9,baz=16,slow=13,SNR=34						
FITZ	**Fitzroy Crossi**	**24.51**	**177**	eP	**P**	**08 43 00.6**	**+0.1**
	comp=Z,20nm,0.6s,mb4.8						
SSE	**Sheshan**	**24.61**	**354**	P	**P**	**08 43 02.0**	**+0.7**
SSE				pP		08 43 10.5	
SSE				sP	sP	08 43 14.1	-6.0
SSE				S	**S**	**08 47 22.1**	**+2.9**
SSE				sS	sS	08 47 37.9	-2.9
SSE				pmax	pmax		
	comp=Z,59nm,1.5s,mb4.9						
SSE				pmax	pmax		
	comp=Z,460nm,3.5s						
SSE				LR	LR		
	comp=N,370nm,26.0s,MS3.9						
SSE				LR	LR		
	comp=E,340nm,26.0s,MS3.9						
SSE				LR	LR		
	comp=Z,480nm,26

comp=Z,2.7nm,0.8s,baz=144,slow=0.5,SNR=7.1
CMAR LR LR 08 54 14.7
comp=Z,731nm,18.4s,MS4.3,baz=106,slow=36
CMAR Chiang Mai Arr 27.36 298 P **P** **08 43 25.3 -1.0**
CMAR 08 46 44.2
ENH Enshi 27.39 331 *e*P **P** **08 43 26.5 0.0**
comp=Z,89nm,1.3s,mb5.1
CHTO Chiang Mai 27.49 299 *e*P **P** **08 43 27.3 -0.2**
CHTO pmax pmax
comp=Z,65nm,1.9s,mb4.8
CHTO Chiang Mai 27.49 299 *e*P **P** **08 43 27.3 -0.2**
comp=Z,65nm,1.9s,mb4.8
KMI Kunming 27.67 314 P **P** **08 43 30.0 +1.0**
KMI pP pP 08 43 41.7 -0.2
KMI sP sP 08 43 46.8 -1.1
KMI PP 08 44 19.2
KMI S **S** **08 48 07.0 -0.7**
KMI sS sS 08 48 27.3 -2.2
KMI ScS ScS 08 54 12.9 -1.3
KMI pmax pmax
comp=Z,36nm,1.3s,mb4.8
KMI pmax pmax
comp=Z,360nm,4.8s
KMI LR LR
comp=N,470nm,23.7s
KMI LR LR
comp=E,530nm,17.8s
KMI LR LR
comp=Z,840nm,25.1s,MS4.2
COEN Coen 27.70 137 *e*P **P** **08 43 31.4 +2.0**
comp=Z,152nm,0.8s,mb5.7
MBWA Marble Bar 27.87 189 *e*P **P** **08 43 30.0 -0.8**
comp=Z,36nm,1.1s,mb4.9
WRAB Tennant Creek 28.11 159 P **P** **08 43 32.3 -0.7**
comp=Z,572nm,0.7s,mb6.3,SNR=29
WRAB Tennant Creek 28.11 159 *e*P **P** **08 43 33.1 +0.1**
WRAB pmax pmax
comp=Z,68nm,0.8s,mb5.3
WRAB Tennant Creek 28.11 159 *e*P **P** **08 43 33.1 +0.1**
comp=Z,68nm,0.8s,mb5.3
WRA Warramunga Arr 28.11 160 P **P** **08 43 31.9 -1.1**
comp=Z,54nm,0.7s,mb5.3,baz=336,slow=10.0,SNR=111
JHJ Hachijo jima 2 30.14 27 LR LR 08 53 28.4
comp=Z,443nm,19.7s,MS4.1,baz=109,slow=31
XAN Xi'an 30.83 335 P **P** **08 43 56.5 -0.5**
XAN pP pP 08 44 07.6 -2.4
XAN sP sP 08 44 12.7 -3.2
XAN S **S** **08 48 59.5 +2.2**
XAN sS sS 08 49 18.5 -0.6
XAN pmax pmax
comp=Z,6.0nm,1.4s,mb4.2
XAN pmax pmax
comp=Z,39nm,4.4s
XAN LR LR
comp=N,390nm,19.2s,MS4.1
XAN LR LR
comp=E,180nm,18.0s,MS4.1
XAN LR LR
comp=Z,250nm,17.5s,MS3.9
CD2 Chengdu 30.94 324⇑ *i*P **P** **08 43 58.3 +0.3**
CD2 pP pP 08 44 10.0 -1.0
CD2 sP sP 08 44 15.6 -1.3
CD2 PP PP 08 45 01.3 -7.3
CD2 PcP PcP 08 46 53.6 0.0
CD2 S **S** **08 48 58.8 -0.3**
CD2 sS sS 08 49 18.8 -2.1
CD2 ScS ScS 08 54 26.9 -2.5
CD2 pmax pmax
comp=Z,50nm,1.1s,mb5.3
CD2 pmax pmax
comp=Z,210nm,6.2s
CD2 LR LR
comp=N,740nm,16.6s,MS4.5
CD2 LR LR
comp=E,680nm,17.8s,MS4.5
CD2 LR LR
comp=Z,670nm,17.8s,MS4.3
KSRS Korea Array 30.97 6 P **P** **08 43 57.9 -0.2**
comp=Z,23nm,0.7s,mb5.1,baz=185,slow=10,SNR=101
KSRS PcP PcP 08 46 53.6 +0.1
comp=Z,2.2nm,0.7s,baz=190,slow=2.2,SNR=6.6
KSRS LR LR 08 57 02.0
comp=Z,256nm,18.3s,MS3.9,baz=199,slow=37
ASAR Alice Springs 31.45 163 P **P** **08 44 02.2 -0.4**
comp=Z,17nm,0.7s,mb5.0,baz=340,slow=6.6,SNR=63
ASAR PcP PcP 08 46 54.8 -0.3
comp=Z,2.8nm,0.6s,baz=348,slow=2.7,SNR=4.2
DL2 Dalian 32.32 356 P **P** **08 44 10.2 +0.2**
DL2 S **S** **08 49 21.3 +0.9**
DL2 pmax pmax
comp=Z,40nm,1.1s,mb5.2
DL2 LR LR
comp=N,290nm,21.2s,MS4.1
DL2 LR LR
comp=E,290nm,17.5s,MS4.1
DL2 LR LR
comp=Z,350nm,18.6s,MS4.1
MAJO Matsushiro 32.49 21 *e*P **P** **08 44 11.0 -0.6**
MAJO pmax pmax
comp=Z,78nm,1.9s,mb5.2
MAJO Matsushiro 32.49 21 *e*P **P** **08 44 11.0 -0.5**
comp=Z,78nm,1.9s,mb5.2
MAT Matsushiro 32.49 21 P **P** **08 44 10.1 -1.5**
MAT S **S** **08 49 27.0 +3.9**
MJAR Matsushiro Arr 32.49 21 P **P** **08 44 10.4 -1.1**
comp=Z,8.8nm,0.9s,mb4.6,baz=195,slow=9.3,SNR=14
MJAR PcP PcP 08 46 57.2 -0.5
comp=Z,2.5nm,0.7s,baz=184,slow=3.4,SNR=5.5
MJAR LR LR 08 55 47.4
comp=Z,393nm,20.5s,MS4.1,baz=210,slow=33
MJAR Matsushiro Arr 32.49 21 P **P** **08 44 10.4 -1.2**
MJAR 08 46 57.2
MJAR Matsushiro Arr 32.49 21 P **P** **08 44 10.4 -1.1**
MJAR PcP PcP 08 46 57.2 -0.5
MJAR LR LR 08 55 47.4
BJT Baijiatuau 34.13 349 *e*P **P** **08 44 26.2 +0.4**
BJT pmax pmax
comp=Z,57nm,0.8s
BJT Baijiatuau 34.13 349 *e*P **P** **08 44 26.1 +0.4**
comp=Z,57nm,0.8s,mb5.6
BJI Beijing 34.15 349 P **P** **08 44 25.8 -0.1**
BJI pP pP 08 44 37.7 -1.3
BJI sP sP 08 44 42.7 -2.2
BJI S **S** **08 49 46.8 -1.9**
BJI sS sS 08 50 09.0 -1.6
BJI pmax pmax
comp=Z,62nm,1.0s,mb5.5
BJI pmax pmax
comp=Z,410nm,3.5s
BJI LR LR
comp=N,390nm,25.1s
BJI LR LR
comp=E,260nm,16.9s
BJI LR LR
comp=Z,560nm,28.2s,MS4.1
CTA Charters Tower 34.18 141 *e*P **P** **08 44 29.7 +3.3**
comp=Z,12nm,0.8s,mb4.9
CTA Charters Tower 34.18 141 LR LR 08 58 30.1
comp=Z,279nm,21.4s,MS4.0,baz=320,slow=36
CTAO Charters Tower 34.18 141 *e*P **P** **08 44 26.6 +0.2**
CTAO pmax pmax
comp=Z,22nm,1.0s,mb5.0
CTAO Charters Tower 34.18 141 *e*P **P** **08 44 26.6 +0.1**
comp=Z,22nm,1.0s,mb5.0
LZH Lanzhou 34.86 330 ⇓P **P** **08 44 33.7 +1.5**
LZH pP pP 08 44 46.9 +1.7
LZH sP sP 08 44 51.5 +0.3
LZH PP PP 08 45 53.0 +1.0
LZH *e*S **S** **08 50 00.0 +0.2**
LZH sS sS 08 50 21.7 -0.1
LZH pmax pmax
comp=Z,90nm,1.0s,mb5.7
LZH pmax pmax
comp=Z,350nm,4.0s
LZH LR LR
comp=E,2μm,16.0s
LZH LR LR
comp=Z,2μm,17.0s,MS5.0
SNY Shenyang 35.16 359 ⇓P **P** **08 44 34.8 +0.2**
SNY S **S** **08 50 07.8 +3.6**
SNY pmax pmax
comp=Z,46nm,1.1s,mb5.3
SNY pmax pmax
comp=Z,340nm,4.7s
SNY LR LR
comp=N,540nm,16.5s
SNY LR LR
comp=E,560nm,23.1s
SNY LR LR
comp=Z,710nm,16.1s,MS4.5
HHC Hu-ho-hao-te 36.01 344 *e*P **P** **08 44 42.6 +0.6**
HHC pP pP 08 44 54.8 -0.3
HHC sP sP 08 45 00.1 -0.9
HHC PP PP 08 46 06.3 +1.7
HHC PcP PcP 08 47 07.7 0.0
HHC S **S** **08 50 17.7 +0.4**
HHC sS sS 08 50 39.7 +0.4
HHC ScP ScP 08 50 48.7 -1.2
HHC PcS PcS 08 50 55.0 -0.1
HHC SS SS 08 52 44.7 -11
HHC ScS ScS 08 54 53.9 -1.5
HHC pmax pmax
comp=Z,25nm,1.0s,mb5.1
HHC pmax pmax
comp=Z,370nm,5.9s
HHC LR LR
comp=N,380nm,16.3s,MS4.4
HHC LR LR
comp=E,390nm,19.0s,MS4.4
HHC LR LR
comp=Z,410nm,17.4s,MS4.3
BTO Baotou 36.24 342 *e*P **P** **08 44 39.9 -4.1**
SHL Shillong 36.24 305 *e*PKP **P** **08 44 44.5 +0.3**
SHL *ex* x 08 48 34.0
VLA Vladivostok 37.06 9 *d i*P **P** **08 44 52.0 +1.1**
VLA pmax pmax
comp=Z,87nm,1.9s,mb5.3
CN2 Changchun 37.14 1 *e*P **P** **08 44 51.2 -0.4**
CN2 *e*pP pP 08 45 02.8 -1.9
CN2 *e*S **S** **08 50 34.4 -0.1**
CN2 pmax pmax
comp=Z,20nm,1.2s,mb4.8
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,400nm,16.0s,MS4.5
CN2 LR LR
comp=E,400nm,16.0s,MS4.5
CN2 LR LR
comp=Z,300nm,20.0s,MS4.1
FORT Forrest 37.27 175 *e*P **P** **08 44 51.7 -1.1**
comp=Z,37nm,0.7s,mb5.3
FORT Forrest 37.27 175 *e*P **P** **08 44 53.4 +0.6**
comp=Z,47nm,0.8s,mb5.4
MDJ Mudanjiang 38.23 6 P **P** **08 45 01.4 +0.7**
MDJ pP pP 08 45 12.6 -1.3
MDJ sP sP 08 45 17.7 -2.1
MDJ PP PP 08 46 29.4 +0.5
MDJ PcP PcP 08 47 10.6 -3.7
MDJ S **S** **08 50 52.5 +1.6**
MDJ sS sS 08 51 13.1 0.0
MDJ pmax pmax
comp=Z,25nm,0.9s,mb4.9
MDJ pmax pmax
comp=Z,160nm,5.3s
MDJ LR LR
comp=N,220nm,24.2s,MS4.0
MDJ LR LR
comp=E,200nm,20.3s,MS4.0
MDJ LR LR
comp=Z,280nm,21.4s,MS4.0
MDJ Mudanjiang 38.23 6 *e*P **P** **08 44 59.9 -0.8**
comp=Z,29nm,0.8s,mb5.0
KLBR Kellerberrin 38.41 189 *e*P **P** **08 45 01.7 -0.7**
comp=Z,19nm,0.8s,mb4.9
LSA Lhasa 38.75 311 P **P** **08 45 06.8 +1.4**
LSA Lhasa 38.75 311 *e*P **P** **08 45 07.1 +1.7**
LSA pmax pmax
comp=Z,63nm,1.4s,mb5.2
LSA Lhasa 38.75 311 *e*P **P** **08 45 07.1 +1.7**
comp=Z,63nm,1.4s,mb5.2
ERM Erimo 39.13 23 *d i*P **P** **08 45 08.9 +0.6**
ERM Erimo 39.13 23 *e*P **P** **08 45 09.4 +1.1**
comp=Z,49nm,1.1s,mb5.2
GTA Gaotai 39.45 330 ⇓P **P** **08 45 12.2 +1.2**
GTA pP pP 08 45 24.6 +0.4
GTA sP sP 08 45 29.8 -0.3
GTA PP PP 08 46 48.2 +5.9
GTA PcP PcP 08 47 18.9 +0.6
GTA S **S** **08 51 10.2 +0.7**
GTA sS sS 08 51 29.5 -2.2
GTA pmax pmax
comp=Z,58nm,1.1s,mb5.2
GTA pmax pmax
comp=Z,470nm,5.4s
GTA LR LR
comp=N,520nm,19.6s,MS4.5
GTA LR LR
comp=E,360nm,19.6s,MS4.5
GTA LR LR
comp=Z,730nm,19.0s,MS4.5
TAPN Taplejung 40.38 305 *e*P **P** **08 45 18.7 -0.3**
comp=Z,68nm,0.9s,mb5.4
ODAN Odare 40.45 304 *e*P **P** **08 45 19.1 -0.5**
comp=Z,70nm,0.9s,mb5.4
EIDS Eidsvold 41.06 142 *e*P **P** **08 45 26.0 +1.4**
comp=Z,30nm,1.1s,mb4.8
RAMN Ramite 41.13 304 *e*P **P** **08 45 24.8 -0.4**
comp=Z,64nm,0.8s,mb5.3
STKA Stephens Creek 41.62 158 *e*P **P** **08 45 29.0 -0.1**
comp=Z,57nm,0.8s,mb5.2
STKA Stephens Creek 41.62 158 P **P** **08 45 29.4 +0.3**
comp=Z,78nm,0.9s,mb5.4,baz=334,slow=7.7,SNR=22
STKA PP PP 08 47 06.0 -0.1
comp=Z,20nm,0.8s,baz=331,slow=14,SNR=3.9
STKA Stephens Creek 41.62 158 *e*P **P** **08 45 29.6 +0.5**
comp=Z,18nm,0.9s,mb4.7
JIRN Jiri 41.75 305 *e*P **P** **08 45 30.0 -0.2**
comp=Z,17nm,0.6s,mb4.9
GUN Gumba 42.10 305 *e*P **P** **08 45 32.7 -0.4**
comp=Z,136nm,0.7s,mb5.7
PKI Pulchoki 42.35 304 *e*P **P** **08 45 34.3 -0.8**
comp=Z,36nm,0.8s,mb5.0
PKI Pulchoki 42.35 304 *e*P **P** **08 45 34.6 -0.5**
PKI pmax pmax
comp=Z,45nm,0.7s,mb5.2
PKI Pulchoki 42.35 304 *e*P **P** **08 45 34.6 -0.5**
comp=Z,45nm,0.7s,mb5.2
PKIN Phulchoki 42.36 304 *e*P **P** **08 45 34.6 -0.6**
comp=Z,45nm,0.7s,mb5.2
KKN Kakani 42.54 305 *e*P **P** **08 45 36.1 -0.6**
comp=Z,79nm,0.8s,mb5.5
KKN Kakani 42.54 305 *e*P **P** **08 45 36.1 -0.6**
KKN pmax pmax
comp=Z,79nm,0.8s,mb5.5
DMN Daman 42.61 304 *e*P **P** **08 45 36.4 -0.9**
comp=Z,54nm,0.9s,mb5.3
HIA Hailar 42.76 356 *e*P **P** **08 45 38.5 +0.4**
HIA pmax pmax
comp=Z,57nm,1.1s
HIA Hailar 42.76 356 *e*P **P** **08 45 38.5 +0.4**
comp=Z,57nm,1.1s,mb5.2
HABR Khabarovsk 42.80 11 P **P** **08 45 44.9 +6.5**
HABR *e* 08 47 15.2
HABR *e* 08 47 26.1
HABR *e*PPP 08 47 48.0
HABR *e*S **S** **08 51 58.0 -0.9**
HABR *e**SS sS 08 52 14.3 -7.0
HABR *e*SS SS 08 55 11.1 -0.3
HABR *e* 08 55 33.6
HABR SSS 08 55 46.6
HABR MLR MLR
comp=Z,182nm,18.0s,MS4.0
KLR Kul'dur 43.03 7 *e*P pP 08 45 55.3 +1.7
PALK Pallekele 43.22 274 LR LR 09 02 57.4
comp=Z,143nm,20.4s,MS3.9,baz=86,slow=35
PALK Pallekele 43.22 274 *i*P **P** **08 45 48.0 +5.6**
YSS Yuzh-Sakhalins 43.31 18 *e*P **P** **08 45 41.8 -0.7**
YSS *e*S **S** **08 52 05.0 -1.4**
YSS pmax pmax
comp=Z,30nm,1.1s,mb4.9
YSS MLR MLR
comp=Z,200nm,16.0s,MS4.1
ULN Ulaanbaatar 43.73 343 *e*P **P** **08 45 46.9 +1.0**
ULN pmax pmax
comp=Z,96nm,1.1s,mb5.4
ULN Ulaanbaatar 43.73 343 *e*P **P** **08 45 46.9 +1.0**
comp=Z,96nm,1.1s,mb5.4
SONM Songino Array 43.89 343 P **P** **08 45 47.9 +0.7**
comp=Z,56nm,1.0s,mb5.3,baz=161,slow=9.3,SNR=89
SONM PP PP 08 47 30.7 +0.5
comp=Z,5.3nm,0.9s,baz=153,slow=7.6,SNR=3.2
SONM LR LR 09 03 53.1
comp=Z,231nm,21.9s,MS4.0,baz=164,slow=36
SONM Songino Array 43.89 343 P **P** **08 45 47.9 +0.7**
SONM 08 47 30.7
ARMA Armidale 45.15 146 *e*P **P** **08 45 59.3 +1.8**
ARMA Armidale 45.15 146 *e*P **P** **08 45 58.8 +1.2**
comp=Z,28nm,0.9s,mb5.1
HYB Hyderabad 45.88 288 *e*P **P** **08 46 04.0 +0.5**
HYB Hyderabad 45.88 288 *i*P **P** **08 46 02.0 -1.5**
CIT Chita 46.20 351 *e*P **P** **08 46 06.4 +0.9**
CIT *e* 08 46 14.1
CIT pmax pmax
comp=Z,71nm,1.1s,mb5.5
ZAK Zakamensk 47.10 342 *e*P **P** **08 46 12.4 -0.2**
ZAK pmax pmax
comp=Z,12nm,1.2s,mb4.7
CAN Canberra 47.71 152 *e*P **P** **08 46 18.8 +1.3**
CAN pmax pmax
comp=Z,22nm,0.8s,mb5.2
CAN Canberra 47.71 152 *e*P **P** **08 46 18.8 +1.3**
comp=Z,22nm,0.8s,mb5.2
AKL Akola 47.83 292 *e*PKP **P** **08 46 18.9 +0.2**
AKL AMb AMB 08 46 24.7
comp=Z,136nm,1.6s,mb5.7
CNB Canberra Magne 47.87 152 *e*P **P** **08 46 22.4 +3.6**
LATR Latur 47.89 289 *e*PKP **P** **08 46 19.3 +0.1**
LATR AMb AMB 08 46 21.0
comp=Z,80nm,0.7s,mb5.8
BHPL Bhopal 47.96 295 *e*PKP **P** **08 46 18.8 -0.9**
BHPL AMb AMB 08 46 21.2
comp=Z,49nm,0.7s,mb5.7
TLY Talaya 48.13 343 P **P** **08 46 21.5 +0.9**
comp=Z,378nm,0.9s,mb6.4,SNR=16
TLY Talaya 48.13 343 ⇓ *i*P **P** **08 46 21.6 +1.0**
TLY *e*PPP 08 48 58.8
TLY *e*S **S** **08 53 28.1 +12**
TLY pmax pmax
comp=Z,60nm,0.9s,mb5.6
TLY Talaya 48.13 343 *e*P **P** **08 46 21.0 +0.4**
comp=Z,68nm,1.0s,mb5.6
TOO Toolangi 48.14 157 *e*P **P** **08 46 24.3 +3.5**
IRK Irkutsk 48.45 344 *e*P **P** **08 46 23.4 +0.4**
IRK pmax pmax
comp=Z,99nm,1.6s,mb5.6
MOY Mondy 48.94 341 *e*P **P** **08 46 27.7 +1.0**
MOY pmax pmax
comp=Z,105nm,1.7s,mb5.6
WMQ Urumqi 49.03 325 *e*P **P** **08 46 24.0 -3.6**
WMQ pmax pmax
comp=Z,18nm,1.0s,mb5.1
WMQ Urumqi 49.03 325 P **P** **08 46 28.0 +0.4**
WMQ pP pP 08 46 41.0 -0.2
WMQ sP sP 08 46 46.0 -1.0
WMQ PP PP 08 48 21.0 -0.5
WMQ S **S** **08 53 28.0 -0.7**
WMQ ScS ScS 08 56 13.0 -2.5
WMQ SS SS 08 56 56.0 -4.2
WMQ pmax pmax
comp=Z,54nm,1.0s,mb5.5
WMQ pmax pmax
comp=Z,140nm,5.0s
WMQ LR LR
comp=N,520nm,16.0s,MS4.8
WMQ LR LR
comp=E,530nm,16.0s,MS4.8
WMQ LR LR
comp=Z,610nm,16.0s,MS4.7
DDI Dehra Dun 49.35 305 *e*PKP **P** **08 46 29.4 -0.9**
KAD Karad 50.01 287 *e*PKP **P** **08 46 35.0 -0.5**
KAD AMb AMB 08 46 44.8
comp=Z,67nm,1.0s,mb5.6
DZM Mont Dzumac 50.16 126 *e*S **S** **08 53 54.9 +10**
comp=Z,200nm,35.0s
DZM *e*LR LR 09 01 15.2
comp=Z,729nm,26.1s
CLNS Chul'man 50.18 0 *e*P **P** **08 46 36.0 -0.1**
CLNS pmax pmax
comp=Z,19nm,0.9s,mb5.1
CLNS pmax pmax
comp=N,12nm,1.0s
CLNS pmax pmax
comp=E,7.0nm,1.0s
POO Poona 50.46 289 *e*PKP **P** **08 46 38.5 -0.4**
POO AMb AMB 08 46 39.4
comp=Z,65nm,0.7s,mb5.8
AJM Ajmer 51.15 299 *e*PKP **P** **08 46 43.0 -1.0**
AJM AMb AMB 08 46 44.3
comp=Z,21nm,0.9s,mb5.1
PETK Petropavlovsk- 53.85 24 P **P** **08 47 03.9 +0.4**
comp=Z,18nm,0.8s,mb5.0,baz=206,slow=6.4,SNR=14
PETK LR LR 09 07 24.6
comp=Z,112nm,19.6s,MS3.9,baz=95,slow=33
MK31 Makanchi Array 53.86 325 *e*P **P** **08 47 04.3 +0.6**
MKAR Makanchi Array 53.86 325 P **P** **08 47 04.3 +0.6**
comp=Z,44nm,0.9s,mb5.4,baz=112,slow=9.3,SNR=93
MKAR LR LR 09 11 24.5
comp=Z,455nm,18.1s,MS4.6,baz=133,slow=38
PET Petropavlovsk 54.19 25 *e*P **P** **08 47 05.2 -0.7**
PET *e*S **S** **08 54 35.6 -3.7**
PET pmax pmax
comp=Z,200nm,10.5s
PET pmax pmax
comp=Z,200nm,14.5s
PET MLR MLR
comp=Z,200nm,18.0s,MS4.2
KSH Kashi 54.33 315 ⇓ *i*P **P** **08 47 09.0 +1.7**
KSH pP pP 08 47 21.5 +0.5
KSH sP sP 08 47 26.8 0.0
KSH PcP PcP 08 48 12.8 +2.0
KSH PP PP 08 49 12.5 +2.9
KSH ScP ScP 08 52 05.7 +0.6
KSH PcS PcS 08 52 10.7 +0.4
KSH S **S** **08 54 41.2 -0.5**
KSH sS sS 08 55 02.4 -2.4
KSH ScS ScS 08 56 50.8 -1.6
KSH SS SS 08 58 22.7 -1.8
KSH pmax pmax
comp=Z,82nm,1.6s,mb5.4
KSH LR LR
comp=N,150nm,6.1s
KSH LR LR
comp=E,150nm,5.9s
KSH LR LR
comp=Z,77nm,5.0s
ULHL Ulahol 55.30 318 P **P** **08 47 15.4 +1.2**
SNR=12
YAK Yakutsk 55.53 3 *e*P **P** **08 47 13.4 -2.1**
YAK *e**PP pP 08 47 21.6 -7.7
YAK *e* 08 48 18.8
YAK *e* 08 49 23.5
YAK *e*PPP 08 50 33.0
YAK *e*S **S** **08 54 59.6 +2.5**
YAK *e* 08 56 55.0
YAK *e*SS SS 08 58 35.3 -7.3
YAK pmax pmax
comp=Z,45nm,0.9s,mb5.5
YAK pmax pmax
comp=N,13nm,1.0s
YAK pmax pmax
comp=E,6.0nm,1.0s
YAK pmax pmax
comp=Z,31nm,0.9s,mb5.3
YAK smax
comp=N,82nm,10.5s
YAK smax
comp=E,45nm,10.5s
YAK MLR MLR
comp=N,174nm,17.0s,MS4.2
YAK MLR MLR
comp=Z,265nm,22.0s,MS4.3
YAK MLR MLR
comp=E,114nm,20.0s,MS4.2
YAK Yakutsk 55.53 3 *e*P **P** **08 47 15.1 -0.4**
comp=E,63nm,1.0s,mb5.6
KZA Kyzart 55.89 317 P **P** **08 47 20.3 +1.8**
SNR=19
TKM2 Tokmak 2 56.03 318 P **P** **08 47 20.3 +0.9**
SNR=19
TKM2 Tokmak 2 56.03 318 *e*P **P** **08 47 20.1 +0.7**
TKM2 pmax pmax
comp=Z,74nm,1.4s,mb5.5
TKM2 Tokmak 2 56.03 318 *e*P **P** **08 47 20.1 +0.7**
comp=Z,74nm,1.4s,mb5.5
KBK Karagaybulak 56.34 318 P **P** **08 47 23.0 +1.3**

SNR=8.3
UCH **Uchtor** 56.45 317 P P 08 47 23.5 +1.0
SNR=38
UCH **Uchtor** 56.45 317 eP P 08 47 23.6 +1.1
comp=Z,92nm,1.1s,mb5.7
AAK **Ala-Archa** 56.64 318 P P 08 47 30.9 +7.1
SNR=5.1
AAK **Ala-Archa** 56.64 318 P P 08 47 25.0 +1.2
comp=Z,1.7nm,0.3s,mb4.5,baz=145,slow=4.9,SNR=13
AAK **Ala-Archa** 56.64 318d iP P 08 47 24.7 +0.9
AAK pmax pmax
comp=Z,19nm,2.2s,mb4.7
AAK **Ala-Archa** 56.64 318 eP P 08 47 24.7 +0.9
comp=Z,28nm,1.0s,mb5.2
USP **Ospenovka** 56.90 318 P P 08 47 26.2 +0.6
SNR=14
AML **Almayashu** 56.97 317 eP P 08 47 27.3 +1.2
comp=Z,33nm,0.8s,mb5.4
ZAA0 **Zalesovo Array** 56.99 333 eP P 08 47 25.5 -0.5
ZALV **Zalesovo Beam** 56.99 333 P P 08 47 26.1 0.0
comp=Z,30nm,0.9s,mb5.3,baz=116,slow=6.8,SNR=46
ZALV LR LR 09 13 12.7
comp=Z,173nm,20.6s,MS4.1,baz=135,slow=37
EKS2 **Erkin-Say** 57.13 317 P P 08 47 28.4 +1.2
SNR=13
EKS2 **Erkin-Say** 57.13 317 eP P 08 47 28.0 +0.8
comp=Z,62nm,1.2s,mb5.5
KBL **Kabul** 57.87 307 eP P 08 47 33.0 +0.3
KBL pmax pmax
comp=Z,29nm,0.8s,mb5.4
KBL **Kabul** 57.87 307 eP P 08 47 33.0 +0.3
comp=Z,29nm,0.8s,mb5.4
KURK **Kurchatov** 58.07 328 P P 08 47 34.6 +0.9
comp=Z,596nm,0.9s,mb6.6,SNR=53
KURK **Kurchatov** 58.07 328 P P 08 47 32.9 -0.8
comp=Z,21nm,0.8s,mb5.2,baz=118,slow=8.3,SNR=109
KURK PP PP 08 49 47.1 +4.4
comp=Z,8.5nm,1.1s,baz=121,slow=8.5,SNR=3.9
KURK **Kurchatov** 58.07 328d iP P 08 47 33.9 +0.2
KURK pmax pmax
comp=Z,105nm,1.2s,mb5.7
KURK **Kurchatov** 58.07 328 eP P 08 47 33.8 +0.1
comp=Z,116nm,1.0s,mb5.9
NVS **Novosibirsk** 58.28 333⇓ iP P 08 47 34.0 -1.1
NVS eS S 08 55 25.7 -7.8
NVS pmax pmax
comp=E,66nm,1.0s
NVS pmax pmax
comp=Z,99nm,1.0s,mb5.8
NVS pmax pmax
comp=N,79nm,1.5s
NVS smax
comp=N,18nm,1.4s
NVS smax
comp=E,10.0nm,0.9s
SEY **Seymchan** 59.92 14c iP P 08 47 46.7 +0.4
BVAR **Borovoye Array** 63.64 327 P P 08 48 11.3 -0.2
comp=E,15nm,0.9s,mb5.0,baz=120,slow=8.8,SNR=35
BRVK **Borovoye** 63.71 327 P P 08 48 12.0 0.0
comp=E,336nm,1.0s,mb6.3,SNR=10
BRVK **Borovoye** 63.71 327d iP P 08 48 11.9 -0.1
BRVK pmax pmax
comp=Z,47nm,1.2s,mb5.4
BRVK **Borovoye** 63.71 327 eP P 08 48 11.6 -0.4
comp=Z,46nm,0.8s,mb5.6
TIXI **Tiksi** 65.11 2 eP P 08 48 19.5 -1.3
TIXI pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
TIXI **Tiksi** 65.11 2 eP P 08 48 19.5 -1.3
comp=Z,8.2nm,0.7s,mb4.9
RPZ **Rata Peaks** 65.46 144 P P 08 48 23.6 +0.1
comp=Z,9.3nm,0.9s,mb4.8,baz=321,slow=14,SNR=2.8
RPZ LR LR 09 18 10.6
comp=Z,287nm,18.4s,MS4.5,baz=266,slow=37
RPZ **Rata Peaks** 65.46 144 eP P 08 48 26.5 +3.0
comp=Z,25nm,0.9s,mb5.2
URZ **Urewera** 66.26 137 eP P 08 48 31.0 +2.2
BILL **Bilibino** 67.53 16d iP P 08 48 35.8 -0.5
BILL e pP 08 48 46.9 -3.6
BILL e 08 49 00.7
BILL pmax pmax
comp=Z,19nm,1.2s,mb5.0
BILL **Bilibino** 67.53 16 eP P 08 48 35.8 -0.6
comp=Z,11nm,0.9s,mb4.9
ATKA **Atka Island** 67.65 36 eP P 08 48 37.6 +0.2
ABKAR **Akbulak array** 68.43 321 eP P 08 48 41.9 -0.5
comp=Z,10.0nm,0.9s,mb4.8
AKTO **Aktyubinsk** 69.94 321 LR LR 09 22 18.2
comp=Z,290nm,20.0s,MS4.5,baz=239,slow=38
SVE **Sverdlovsk** 70.30 328⇑ eP P 08 48 53.3 -0.4
SVE pmax pmax
comp=Z,56nm,1.1s,mb5.4
UNV **Unalaska Valle** 72.57 36 eP P 08 49 07.2 -0.3
GAMB **Gambell** 72.89 25 eP P 08 49 08.8 -0.4
comp=Z,109nm,1.3s,mb5.6
AKUT **Akutan** 73.06 35 eP P 08 49 09.7 -0.7
comp=Z,35nm,0.7s,mb5.4
SOKR **Solikamsk** 73.08 331⇑ iP P 08 49 10.0 -0.4
SOKR pmax pmax
comp=Z,40nm,1.5s,mb5.1
SOKR MLR MLR
comp=Z,240nm,20.0s,MS4.5
CASY **Casey** 73.31 186 eP P 08 49 11.4 -0.1
CASY **Casey** 73.31 186 eP P 08 49 11.2 -0.3
comp=Z,44nm,0.8s,mb5.4
FALS **False Pass** 74.55 35 eP P 08 49 18.9 -0.2
comp=Z,21nm,0.6s,mb5.2
RDF **Al-Radifah** 75.24 298 eP P 08 49 22.6 -1.0
RDF AMb AMB 08 49 33.0
comp=Z,47nm,1.2s,mb5.3
MIB **Mutribah** 75.44 299 eP P 08 49 23.7 -1.1
MIB AMb AMB 08 49 29.2
comp=Z,44nm,1.0s,mb5.3
NAY **Al-Naaiem** 75.51 298 eP P 08 49 23.7 -1.5
NAY AMb AMB 08 49 37.1
comp=Z,23nm,1.7s,mb4.8
MIR **Mirnyy** 76.32 192 eP P 08 49 29.0 +0.1
MIR pmax pmax
comp=Z,24nm,1.4s,mb4.9
CHGN **Chignik** 77.58 34 eP P 08 49 35.5 -0.8
GNI **Garni** 77.80 310 LR LR 09 28 19.2
comp=Z,90nm,21.1s,MS4.1,baz=317,slow=39
GNI **Garni** 77.80 310d iP P 08 49 38.7 +0.8
GNI pmax pmax
comp=Z,25nm,1.7s
TBLG **Delisi** 77.86 311 eP P 08 49 37.9 -0.3
TBLG **Delisi** 77.86 311 P P 08 49 37.9 -0.3
MSL **Mosul** 79.03 306 eP P 08 49 45.0 +0.2
KIV **Kislovodsk** 79.43 313⇑ eP P 08 49 47.5 +0.7
KIV e 08 49 51.4
KIV e pP 08 49 58.3 -2.9
KIV pmax pmax
comp=Z,36nm,1.2s,mb5.2
KIV MLR MLR
comp=Z,100nm,19.0s,MS4.2
TTA **Tatalina** 79.55 27 eP P 08 49 47.4 +0.4
SVW2 **Sparrevohn** 79.57 29 eP P 08 49 48.0 +0.8
OHAK **Old Harbor** 80.47 33 eP P 08 49 52.3 +0.2
comp=Z,17nm,0.8s,mb5.0
KDAK **Kodiak Island** 80.87 33 P P 08 49 54.3 0.0
comp=Z,163nm,1.4s,mb5.8,SNR=6.3
KDAK **Kodiak Island** 80.87 33 eP P 08 49 54.6 +0.3
KDAK pmax pmax
comp=Z,29nm,1.0s,mb5.2
KDAK **Kodiak Island** 80.87 33 iP P 08 49 55.2 +0.9
KDAK **Kodiak Island** 80.87 33 eP P 08 49 54.6 +0.4
comp=Z,29nm,1.0s,mb5.2
RSO **Redoubt South** 80.91 30 eP P 08 49 54.6 +0.2
CHUM **Lake Minchumin** 81.29 26 eP P 08 49 57.0 +0.6
comp=Z,24nm,0.7s,mb5.2
PPLA **Purkeypile** 81.30 27 eP P 08 49 56.6 +0.2
comp=Z,22nm,0.8s,mb5.1
SOC **Sochi** 81.58 313 eP P 08 49 54.4 -3.9
SOC e 08 52 59.1
SOC eS S 09 00 01.6 -5.2
SOC eSS SS 09 05 25.7 +1.2
SOC pmax pmax
comp=Z,15nm,0.9s,mb4.9
VORD **Divnogorie** 81.79 320 iP P 08 49 58.2 -1.1
VSR **Storozhevoye** 81.87 321 eP P 08 49 58.6 -1.1
BPAW **Bear Paw Mtn.** 81.88 26 eP P 08 49 59.6 +0.1
comp=Z,65nm,0.9s,mb5.6
KTH **Kantishna Hill** 81.89 27 eP P 08 49 58.2 -1.3
TRF **Thorofare Moun** 82.17 27 eP P 08 50 00.9 -0.1
comp=Z,47nm,1.0s,mb5.4
COLD **Coldfoot** 82.30 23 eP P 08 50 02.3 +0.7
comp=Z,28nm,0.9s,mb5.2
RC01 **Rabbit Creek A** 82.40 29 eP P 08 50 01.6 -0.7
comp=Z,58nm,1.3s,mb5.3
SEW **Seward** 82.54 30 eP P 08 50 03.0 0.0
comp=Z,101nm,1.4s,mb5.7
PMR **Palmer** 82.70 29 eP P 08 50 02.7 -1.1
MCK **McKinley** 82.78 27 eP P 08 50 03.9 -0.3
ANN **Anapa** 83.19 314 eP P 08 50 04.5 -2.2
ANN pmax pmax
comp=Z,31nm,1.3s,mb5.2
COLA **College** 83.25 25 eP P 08 50 05.7 -0.9
COLA pmax pmax
comp=Z,20nm,0.8s,mb5.2
COLA **College** 83.25 25 eP P 08 50 05.7 -0.8
comp=Z,20nm,0.8s,mb5.2
OBN **Obninsk** 83.36 325⇑ eP P 08 50 06.2 -1.2
OBN e 08 50 12.1
OBN pmax pmax
comp=Z,13nm,0.6s,mb5.1
OBN MLR MLR
comp=Z,200nm,18.0s,MS4.5
DIV **Divide** 84.33 29 eP P 08 50 13.3 +1.1
comp=Z,117nm,1.5s,mb5.8
APA **Apatity** 84.34 337⇑ iP P 08 50 12.0 -0.1
APA i pP 08 50 22.0 -4.7
APA pmax pmax
comp=Z,70nm,1.4s,mb5.6
APA MLR MLR
comp=Z,700nm,15.0s,MS5.2
PAX **Paxson** 84.37 27 eP P 08 50 12.6 +0.3
PAX pmax pmax
comp=Z,92nm,1.3s,mb5.8
PAX **Paxson** 84.37 27 eP P 08 50 12.6 +0.3
comp=Z,92nm,1.3s,mb5.8
BMRM **Bremner River** 84.90 29 eP P 08 50 15.3 +0.2
comp=Z,66nm,1.3s,mb5.6
MENT **Mentasta** 85.17 27 eP P 08 50 16.6 +0.2
MAW **Mawson** 85.52 200 eP P 08 50 17.9 0.0
comp=Z,7.0nm,0.9s,mb4.9
MAW **Mawson** 85.52 200 P P 08 50 17.5 -0.4
comp=Z,13nm,1.1s,mb5.1,baz=47,slow=4.5,SNR=5.3
MMAI **Mount Meron Ar** 85.52 303 LR LR 09 31 55.3
comp=Z,98nm,20.1s,MS4.2,baz=60,slow=38
SIM **Simferopol'** 85.53 315 eP P 08 50 25.0 +6.4
SIM pmax pmax
comp=Z,12nm,0.7s,mb5.2
JOF **Joensuu** 85.58 333 eP P 08 50 15.5 -2.9
JOF pmax pmax
comp=Z,17nm,1.0s,mb5.2
JOF **Joensuu** 85.58 333 ep P 08 50 15.5 -2.9
comp=Z,17nm,1.0s,mb5.2
JOF **Joensuu** 85.58 333 ep P 08 50 15.5 -2.9
comp=Z,17nm,1.0s,mb5.2
EGAK **Eagle** 86.11 25 eP P 08 50 20.9 -0.1
comp=Z,17nm,0.7s,mb5.4
BR131 **Keskin Array S** 86.34 309 eP P 08 50 22.1 -0.6
BRTR **Keskin Array B** 86.34 309 P P 08 50 21.9 -0.8
comp=Z,1.8nm,0.7s,mb4.4,baz=134,slow=4.2,SNR=8.5
DAWY **Dawson** 86.96 26 eP P 08 50 24.7 -0.5
ARCES **ARCESS Array B** 86.98 340 P P 08 50 24.0 -1.2
comp=Z,8.0nm,0.9s,mb5.0,baz=76,slow=7.6,SNR=17
ARCES LR LR 09 35 34.9
comp=Z,178nm,20.6s,MS4.5,baz=266,slow=40
KMBO **Kilima Mbogo** 87.14 269 P P 08 50 27.1 0.0
comp=Z,4.2nm,0.8s,mb4.7,baz=50,slow=7.2,SNR=7.2
KMBO **Kilima Mbogo** 87.14 269ce P P 08 50 28.7 +1.6
KMBO pmax pmax
comp=Z,4.0nm,0.8s
KMBO **Kilima Mbogo** 87.14 269 eP P 08 50 27.5 +0.4
comp=Z,5.4nm,0.9s,mb4.8
KAF **Kangasniemi** 87.99 332 eP P 08 50 26.7 -3.5
KAF pmax pmax
comp=Z,19nm,1.1s,mb5.2
KAF **Kangasniemi** 87.99 332 ep P 08 50 26.7 -3.5
comp=Z,19nm,1.1s,mb5.2
KAF **Kangasniemi** 87.99 332 ep P 08 50 26.7 -3.5
comp=Z,19nm,1.1s,mb5.2
AKASG **Malin Array Be** 88.18 321 P P 08 50 29.5 -1.8
comp=Z,1.8nm,0.7s,mb4.4,baz=71,slow=4.3,SNR=6.7
AKASG LR LR 09 32 19.4
comp=Z,116nm,19.5s,MS4.3,baz=40,slow=37
FINES **FINESS Array B** 88.21 332 P P 08 50 29.6 -1.6
comp=Z,4.2nm,0.7s,mb4.8,baz=50,slow=3.0,SNR=9.7
FINES LR LR 09 34 47.0
comp=Z,111nm,19.6s,MS4.3,baz=342,slow=39
FINES **FINESS Array B** 88.21 332 P P 08 50 29.6 -1.6
FINES LR LR 09 34 47.0
PPT **Papeete** 88.32 108 eLR LR 09 18 54.1
comp=Z,189nm,25.8s
HYT **Haines Junctio** 88.36 29 eP P 08 50 32.5 +0.5
INK **Inuvik** 88.48 21 eP P 08 50 31.8 -0.6
INK pmax pmax
comp=Z,14nm,0.7s
INK **Inuvik** 88.48 21 eP P 08 50 31.8 -0.6
comp=Z,14nm,0.7s,mb5.3
SKAG **Skagway** 89.70 30 eP P 08 50 38.8 +0.5
DLBC **Dease Lake** 92.62 30 eP P 08 50 51.7 -0.1
CRVS **Cervenica-Dubn** 93.45 320 eP P 08 50 55.7 -0.2
CRVS pmax pmax
comp=Z,13nm,1.5s,mb5.1
CRVS **Cervenica-Dubn** 93.45 320 eP P 08 50 55.7 -0.2
comp=Z,13nm,1.5s,mb5.2
DAG **Danmarks Havn** 94.17 352⇑ iP P 08 50 56.8 -1.9
comp=Z,4.2nm,0.9s,mb4.9
NB2 **NORSAR Subarra** 95.20 333 P P 08 51 01.5 -2.1
comp=Z,5.7nm,0.8s,mb5.0,baz=66,slow=4.6
NOA **NORSAR Array B** 95.20 333 P P 08 51 02.0 -1.6
comp=Z,4.8nm,0.8s,mb5.0,baz=66,slow=4.6,SNR=9.2
NOA LR LR 09 39 14.7
comp=Z,242nm,18.1s,MS4.7,baz=90,slow=39
RES **Resolute Bay** 95.51 10 eP P 08 51 03.9 -0.9
RES pmax pmax
comp=Z,22nm,1.4s,mb5.4
RES **Resolute Bay** 95.51 10 eP P 08 51 03.9 -0.9
comp=Z,22nm,1.4s,mb5.4
QSPA **South Pole Qui** 96.42 180 eP P 08 51 09.8 +1.0
comp=Z,5.7nm,1.0s,mb5.0
TAOE **Nuku Hiva Isla** 96.50 98 eLR LR 09 22 39.2
comp=Z,238nm,26.9s
BRG **Berggiesshubel** 97.53 323 eP P 08 51 15.2 +0.8
comp=Z,7.3nm,1.1s,mb5.1
CLL **Collm** 97.94 324 ePP PP 08 55 12.0 -3.0
CLL e 08 55 18.0
CLL ePS PS 09 04 06.0 -2.5
CLL eSS SS 09 09 17.0 -3.6
CLL e(SSS) 09 13 48.0
CLL eSSSS 09 16 06.0
CLL LmV 09 38 00.0
comp=Z,200nm,19.9s
YKA **Yellowknife Ar** 97.97 24 P P 08 51 15.6 -0.6
comp=Z,5.4nm,0.8s,mb5.1,baz=299,slow=4.6,SNR=45
YKA PP PP 08 55 17.1 +2.2
comp=Z,0.6nm,1.0s,baz=300,slow=8.2,SNR=4.5
YKA LR LR 09 36 38.6
comp=Z,9.9nm,19.8s,MS3.3,baz=265,slow=36
YKA **Yellowknife Ar** 97.97 24 P P 08 51 15.6 -0.6
YKA 08 55 17.1
YKA **Yellowknife Ar** 97.97 24 P P 08 51 15.6 -0.6
YKA PP PP 08 55 17.1 +2.2
YKA LR LR 09 36 38.6
GERES **GERESS Array B** 98.37 321 LR LR 09 37 55.9
comp=Z,144nm,20.4s,MS4.5,baz=267,slow=37
LPG **La Plagne** 104.03 320 ePP PP 08 55 58.3 -2.8
comp=Z,72nm,1.5s
LPL **La Plagne** 104.03 320 ePP PP 08 55 58.4 -2.8
comp=Z,46nm,1.3s
PDAR **Pinedale Array** 110.84 39 PKKPbc PKKPbc 09 07 20.1 +7.2
comp=Z,0.8nm,1.0s,baz=116,slow=3.4,SNR=4.5
SCHQ **Schefferville** 118.17 7 PKP PKPdf 08 56 26.9 -0.3
comp=Z,3.7nm,0.8s,baz=231,slow=2.6,SNR=3.6
TORD **Torodi Ar. Bea** 119.69 289 PKP PKPdf 08 56 29.9 -1.3
comp=Z,3.6nm,0.8s,baz=44,slow=1.9,SNR=18
TXAR **Lajitas Array** 121.77 50 PKP PKPdf 08 56 34.9 +0.1
comp=Z,0.5nm,0.7s,baz=172,slow=1.5,SNR=5.9
TXAR PKKPbc PKKPbc 09 06 32.6 -1.5
comp=Z,0.6nm,1.0s,baz=139,slow=4.3,SNR=3.4
TXAR **Lajitas Array** 121.77 50 PKP PKPdf 08 56 34.9 +0.1
TXAR PKKPbc PKKPbc 09 06 32.6 -1.5
JCT **Junction City** 124.03 46 ePKIKP PKPdf 08 56 39.0 -0.2
MIAR **Mount Ida** 125.75 39 ePKIKP PKPdf 08 56 42.1 -0.3
DBIC **Dimbokro** 127.55 284 PKP PKPdf 08 56 44.9 -1.5
comp=Z,7.2nm,0.9s,baz=201,slow=3.6,SNR=4.7
WVT **Waverly** 127.97 33 ePKIKP PKPdf 08 56 46.5 -0.1
BINY **Binghamton** 128.11 19 ePKPdf PKPdf 08 56 46.4 -0.3
TZTN **Tazewell** 129.86 29 ePKPdf PKPdf 08 56 50.6 +0.5
TKL **Tuckaleechee C** 130.45 30 ePKIKP PKPdf 08 56 51.6 +0.3
PLCA **Paso Flores** 143.46 161 PKP PKPdf 08 57 14.5 -0.6
comp=Z,8.6nm,1.2s,baz=135,slow=2.6,SNR=3.8
PLCA **Paso Flores** 143.46 161 PKP PKPdf 08 57 14.5 -0.6
JTS **JuntasAbangare** 146.47 60 ePKP2 PKPab 08 57 22.3 -1.1
TRQA **Tornquist** 148.11 171 ePKPbc PKPbc 08 57 26.1 -0.2
SDDR **Presa de Saban** 150.39 31 ePKPbc PKPbc 08 57 32.4 -0.2
SDV **Santo Domingo** 158.68 44 ePKPdf PKPdf 08 57 38.9 -0.1
LPAZ **La Paz** 164.48 130 PKP PKPdf 08 57 46.3 +1.4
comp=Z,5.3nm,1.2s,baz=273,slow=3.0,SNR=6.6

NEIC ***11*** *08:45:03.6±1.3,5°.99S×128°.61E,h326km±13km,mb4.7/10, Error ellipse: s-maj=22.1km s-min=6.7km az=47.0*
IDC ***11*** *08:45:05.2±2.2,6°.08S×128°.67E,h338km±22km,mb3.7/8, mb1 3.7/11,mb1mx3.5/19,mbtmp3.6/11,Error ellipse: s-maj=31.6km s-min=9.1km az=65.0*

ISC 11 08:45:04.5±1.3,6°.15S±0°.07×128°.5E±0°.1,h333km±14km, n30,σ0°82/32,mb4.3/19,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	7.60	149	ePn	Pn	08 46 53.2	-0.5
KAKA				eSn	S	08 48 12.3	-10
KAPI	**Kappang**	8.76	277	Pn	Pn	08 47 07.4	-0.2
FITZ	**Fitzroy Crossi**	12.20	193	P	Pn	08 47 51.7	+2.8
	2.6nm,0.3s,baz=39,slow=8.1,SNR=18						
FITZ				S	S	08 50 03.6	-0.9
	0.4nm,0.3s,baz=57,slow=17,SNR=2.2						
WRAB	**Tennant Creek**	14.84	158	eP	P	08 48 18.0	-0.3
WRA	**Warramunga Arr**	14.85	158	P	P	08 48 18.5	+0.2
	1.2nm,0.3s,baz=334,slow=13,SNR=15						
WRA				S	S	08 50 57.7	-1.4
	0.3nm,0.3s,baz=338,slow=20,SNR=4.0						
ASAR	**Alice Springs**	18.18	164	P	P	08 48 55.5	+1.2
	0.8nm,0.3s,baz=344,slow=12,SNR=12						
ASAR				S	S	08 52 05.6	+0.6
	0.2nm,0.3s,baz=346,slow=20,SNR=11						
ASAR				ScP	ScP	08 56 14.6	+0.4
	0.2nm,0.3s,baz=343,slow=1.7,SNR=9.4						
CTA	**Charters Tower**	22.14	130	P	P	08 49 33.0	-0.4
	3.9nm,0.7s,mb3.7,baz=345,slow=12,SNR=3.2						
CTAO	**Charters Tower**	22.14	130	eP	P	08 49 33.4	0.0
STKA	**Stephens Creek**	28.38	156	P	P	08 50 29.5	+0.4
	5.8nm,1.1s,mb3.7,baz=331,slow=10,SNR=2.6						
CMAR	**Chiang Mai Arr**	38.03	311	P	P	08 51 53.1	+1.1
	5.1nm,0.5s,mb4.0,baz=135,slow=7.3,SNR=23						
CHTO	**Chiang Mai**	38.24	311	eP	P	08 51 54.0	+0.2
	10nm,0.9s,mb4.1						
ODAN	**Odare**	51.56	311	eP	P	08 53 37.7	0.0
	25nm,0.5s,mb4.8						
TAPN	**Taplejung**	51.59	312	eP	P	08 53 37.6	-0.4
	21nm,0.5s,mb4.8						
RAMN	**Ramite**	52.20	311	eP	P	08 53 42.3	-0.1
	57nm,0.6s,mb5.1						
JIRN	**Jiri**	52.89	312	eP	P	08 53 46.9	-0.5
	11nm,0.3s,mb4.7						
GUN	**Gumba**	53.26	312	eP	P	08 53 49.3	-0.8
	43nm,0.6s,mb5.0						
PKI	**Pulchoki**	53.42	311	eP	P	08 53 50.9	-0.4
	15nm,0.5s,mb4.5						
PKIN	**Phulchoki**	53.44	311	eP	P	08 53 50.8	-0.6
	11nm,0.5s,mb4.5						
KKN	**Kakani**	53.64	311	eP	P	08 53 52.1	-0.7
	11nm,0.4s,mb4.5						
DMN	**Daman**	53.67	311	eP	P	08 53 52.7	-0.4
	25nm,1.0s,mb4.5						
SONM	**Songino Array**	57.17	342	P	P	08 54 18.3	+0.9
	0.8nm,0.6s,mb3.2,baz=164,slow=9.4,SNR=3.9						
MKAR	**Makanchi Array**	66.69	327	P	P	08 55 20.7	+0.4
	1.9nm,0.4s,mb4.2,baz=140,slow=7.6,SNR=20						
ZAA0	**Zalesovo Array**	70.16	334	eP	P	08 55 36.5	-5.0
KURK	**Kurchatov**	71.01	329	P	P	08 55 46.7	0.0
	3.5nm,0.6s,mb4.3,baz=124,slow=5.2,SNR=17						
KURK	**Kurchatov**	71.01	329	P	P	08 55 46.7	0.0
BVAR	**Borovoye Array**	76.54	328	P	P	08 56 18.3	-0.2
	0.8nm,0.4s,mb3.8,baz=129,slow=9.4,SNR=4.7						
ABKAR	**Akbulak array**	80.91	322	eP	P	08 56 41.6	-0.5
	0.6nm,0.4s,mb3.7						
KMBO	**Kilima Mbogo**	91.10	269	P	P	08 57 35.3	+2.6
	2.9nm,0.3s,mb4.7,baz=84,slow=16,SNR=10.0						
TORD	**Torodi Ar. Bea**	127.16	282	PKP	PKPdf	09 03 29.9	-0.7
	0.3nm,0.5s,baz=102,slow=2.4,SNR=4.3						
CPUP	**Villa Florida**	147.23	170	PKPbc	PKPbc	09 04 09.6	-0.1
	0.2nm,0.3s,baz=116,slow=8.7,SNR=3.2						

CASC 11 08:57:44.3±1.6,8°.41N×82°.96W,h0km±8km,MD3.6,1C, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	0.32	319⇑	eP	Pg	08 57 51.5	+1.1
CTCR	**Cotoan**	0.52	22	eP	Pg	08 57 56.1	+1.8
BAR1		0.90	337	eP	Pg	08 58 01.8	+0.3
BUS	**Buena Vista**	1.38	325	eP	Pg	08 58 10.2	-0.6
URSC	**Urasca**	1.63	330	eP	Pn	08 58 14.2	-0.1
PRS1	**Puriscal**	2.06	320	eP	Pn	08 58 20.9	+0.8

NOU ***11*** *09:00:15.2±0.9,17°.45S×167°.24E,h30km,MD3.0,ML4.0*
ISCJB ***11*** *09:00:17.0±1.1,17°.79S±0°.05×167°.3E±0°.1,h33km, mb4.4/10,MS3.6/2,Error ellipse: s-maj=19.2km s-min=6.7km az=168.9*
NEIC ***11*** *09:00:18.8±2.0,17°.67S×167°.43E,h46km±16km,mb4.2/6, Error ellipse: s-maj=21.1km s-min=13.1km az=66.0*
IDC ***11*** *09:00:20.9±4.5,17°.65S×167°.26E,h58km±40km,mb4.1/6, mb1 4.4/7,mb1mx4.0/18,mbtmp4.3/7,ML5.6/1,MS3.6/3, Ms1 3.5/3,ms1mx3.0/19,Error ellipse: s-maj=32.0km s-min=24.8km az=64.0*

ISC 11 09:00:18.6±1.1,17°.77S±0°.05×167°.4E±0°.1,h35km,n26, σ19°13/27,mb4.4/10,MS3.0/2,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	4.37	192	eP	Pn	09 01 21.9	-0.6
DZM				AMP		09 02 16.8	
	comp=Z,3μm,0.5s						
DZM	**Mont Dzumac**	4.37	192	ePn	Pn	09 01 22.7	+0.2
DZM				eSn	Sn	09 02 11.5	-0.7
BAYA	**Yate Dam**	4.39	186	eS	Sn	09 02 12.8	+0.2
NOUC	**Port Laguerre**	4.43	193	eP	Pn	09 01 23.3	-0.1
NOUC				eS	Sn	09 02 12.6	-1.1
NOUC				AMP		09 02 17.1	
	comp=Z,91nm,1.2s						
HNR	**Honiara**	11.02	318	P	Pn	09 02 52.9	-0.8
	comp=Z,46nm,0.3s,baz=151,slow=1.4,SNR=8.8						
HNR				LR	LR	09 06 02.0	
	comp=Z,112nm,21.6s,baz=72,slow=32						
EIDS	**Eidsvold**	16.96	241	ePn	Pn	09 04 15.5	+2.3
	comp=Z,21nm,1.2s						
ARMA	**Armidale**	19.11	226	eP	Pn	09 04 39.1	-0.3
	comp=Z,20nm,1.2s						
RMQ	**Roma**	19.32	240	eP	Pn	09 04 43.3	+1.3
	comp=Z,47nm,0.9s						
CTA	**Charters Tower**	20.15	260	eP	P	09 04 50.9	+1.0
	comp=Z,5.2nm,0.7s						
CTA	**Charters Tower**	20.15	260	P	P	09 04 50.9	+1.0
	comp=Z,4.5nm,0.8s,baz=86,slow=12,SNR=6.6						
CTA				LR	LR	09 11 34.0	
	comp=Z,237nm,19.7s,MS3.5,baz=274,slow=34						
CTA	**Charters Tower**	20.15	260	P	P	09 04 50.9	+1.0
CTA				LR	LR	09 11 34.0	
CTAO	**Charters Tower**	20.15	260	eP	P	09 04 50.8	+0.9
	comp=Z,5.5nm,0.7s						
MTSU	**Mount Surprise**	21.98	265	eP	P	09 05 11.7	+2.1
	comp=Z,42nm,0.9s,mb4.9						
URZ	**Urewera**	22.11	159	P	P	09 05 13.1	+2.3
	comp=Z,5.5nm,0.8s,mb4.1,baz=326,slow=7.3,SNR=8.2						
CNB	**Canberra Magne**	23.72	219	eP	P	09 05 28.6	+1.1
CAN	**Canberra**	23.95	220	eP	P	09 05 28.0	-1.5
	comp=Z,5.4nm,0.7s,mb4.1						
CMSA	**Cobar Meteorol**	23.97	231	eP	P	09 05 30.1	+0.3
STKA	**Stephens Creek**	27.23	234	eP	P	09 05 59.8	+0.5
	comp=Z,6.1nm,0.8s,mb4.2						
STKA	**Stephens Creek**	27.23	234	P	P	09 05 59.9	+0.5
	comp=Z,7.2nm,0.8s,mb4.3,baz=85,slow=12,SNR=13						
STKA				LR	LR	09 15 55.8	
	comp=Z,202nm,19.6s,MS3.7,baz=24,slow=34						
WRAB	**Tennant Creek**	31.34	261	eP	P	09 06 35.0	-0.9
	comp=Z,4.4nm,0.8s,mb4.3						
WRA	**Warramunga Arr**	31.35	261	P	P	09 06 34.1	-1.9
	comp=Z,2.4nm,0.7s,mb4.1,baz=91,slow=8.7,SNR=29						
ASAR	**Alice Springs**	31.84	254	P	P	09 06 39.0	-1.3
	comp=Z,11nm,0.6s,mb4.9,baz=80,slow=8.5,SNR=192						
FITZ	**Fitzroy Crossi**	39.69	263	eP	P	09 07 47.4	-0.3

comp=Z,18nm,0.6s,mb5.0
QSPA South Pole Qui 72.27 180 *e*P **P 09 11 39.9 +0.1**
comp=Z,4.1nm,0.9s,mb4.4
SONM Songino Array 85.02 324 P **P 09 12 49.5 -0.9**
comp=Z,0.3nm,0.4s,mb3.7,baz=104,slow=6.1,SNR=3.5
SONM pP pP 09 13 08.1 +6.7
comp=Z,2.3nm,0.8s,baz=135,slow=5.9,SNR=7.1
DAVOX Davos/Dischmat 145.64 332 PKPbc PKPbc 09 19 52.2 -1.3
comp=Z,9.3nm,0.7s,baz=70,slow=2.1,SNR=9.1

NEIC ***11*** *09:44:50.3±0.7, 36°.56N×106°.44W, h5km, ML2.5, Error ellipse: s-maj=12.3km s-min=7.3km az=84.0*
ISCJB ***11*** *09:44:50.0±0.3, 36°.54N±0°.02×106°.48W±0°.02, h10km, Error ellipse: s-maj=2.4km s-min=1.9km az=36.7*
ISC 11 09:44:50.0±0.2, 36°.53N±0°.02×106°.47W±0°.02, h10km, n51, σ0§99/85, 18C-36D, New Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
U23A	**El Rito**	**0.30**	**132**	⇑P	**Pg**	**09 44 56.0**	**0.0**
U23A	baz=0.3			⇓S	**Sg**	**09 45 00.1**	**0.0**
U22A	**Llaves**	**0.34**	**243**	⇑P	**Pg**	**09 44 56.6**	**-0.2**
U22A	baz=0.4,SNR=65			⇓S	**Sg**	**09 45 01.0**	**-0.4**
T22A	**Edith**	**0.59**	**324**	⇓S	**Sg**	**09 45 08.2**	**-1.0**
V22A	**San Miguel Ran**	**0.71**	**210**	P	**Pg**	**09 45 03.1**	**-0.6**
V22A	baz=0.7,SNR=181			⇓S	**Sg**	**09 45 13.1**	**+0.1**
V23A	**Ortiz Mt. (NFS**	**0.82**	**163**	⇓P	**Pg**	**09 45 05.9**	**+0.2**
U21A	**Nageezi**	**0.96**	**264**	⇓P	**Pg**	**09 45 07.6**	**-0.8**
U21A	baz=0.7,SNR=138			⇓S	**Sg**	**09 45 20.0**	**-1.0**
T21A	**Navajo Lake**	**0.97**	**299**	⇓S	**Sg**	**09 45 20.2**	**-1.0**
U24A	**Moreno Valley**	**0.97**	**97**	⇓P	**Pg**	**09 45 08.0**	**-0.7**
U24A	baz=0.9			⇓S	**Sg**	**09 45 20.9**	**-0.4**
V21A	**Milan**	**1.19**	**233**	⇓P	**Pb**	**09 45 11.6**	**-1.0**
V21A	baz=1.2,SNR=322			⇑S	**Sb**	**09 45 26.9**	**-1.1**
W23A	**Werner Place,**	**1.39**	**169**	Pb	**Pb**	**09 45 15.7**	**-0.4**
W23A	baz=1.4,SNR=103			⇓S	**Sn**	**09 45 33.1**	**-0.8**
SDCO	**Great Sand Dun**	**1.44**	**32**	*e*Pn	**Pn**	**09 45 15.4**	**-0.7**
SDCO				*e*Sg	**Sg**	**09 45 33.1**	**-3.2**
W22A	**Albuquerque**	**1.49**	**193**	⇓Pb	**Pb**	**09 45 17.5**	**-0.3**
S21A	**Coal Bank Pass**	**1.54**	**317**	⇑Pb	**Pb**	**09 45 17.7**	**-0.9**
S21A	baz=1.5			⇓S	**Sn**	**09 45 37.2**	**-0.4**
W24A	**Lazy 6 Ranch,**	**1.58**	**146**	Pb	**Pb**	**09 45 18.9**	**-0.3**
W24A	baz=1.6,SNR=155			⇓S	**Sn**	**09 45 37.9**	**-0.5**
ANMO	**Albuquerque**	**1.58**	**180**	*e*Pn	**Pn**	**09 45 18.4**	**+0.4**
ANMO				*e*Sn	**Sn**	**09 45 38.9**	**+0.4**
V25A	**Rancho No Teng**	**1.65**	**114**	⇓Pb	**Pb**	**09 45 20.0**	**-0.5**
U20A	**Newcomb**	**1.66**	**265**	⇓Pb	**Pb**	**09 45 20.0**	**-0.6**
U20A	baz=1.7,SNR=86			⇑Sb	**Sb**	**09 45 41.3**	**-0.2**
U25A	**Circle Dot Ran**	**1.67**	**94**	⇓Pb	**Pb**	**09 45 20.1**	**-0.7**
W21A	**San Fidel**	**1.71**	**214**	⇓Pb	**Pb**	**09 45 21.0**	**-0.4**
W21A	baz=1.7,SNR=21			⇑Sb	**Sb**	**09 45 43.0**	**+0.2**
R22A	**Saguache, Gunn**	**1.71**	**352**	⇓Pb	**Pb**	**09 45 21.1**	**-0.4**
R22A	baz=1.7			⇓Sb	**Sb**	**09 45 43.8**	**+0.8**
MVCO	**Mesa Verde**	**1.76**	**293**	⇑Pb	**Pb**	**09 45 21.7**	**-0.6**
MVCO	baz=1.8,SNR=191			⇓Sb	**Sb**	**09 45 44.5**	**0.0**
MVCO	**Mesa Verde**	**1.76**	**293**	*e*Pn	**Pn**	**09 45 21.6**	**+1.1**
MVCO				*e*Sn	**Sn**	**09 45 44.5**	**+1.6**
T25A	**Trinidad**	**1.76**	**69**	⇓Pb	**Pb**	**09 45 21.6**	**-0.8**
T25A	baz=1.7,SNR=70			⇓Sb	**Sb**	**09 45 44.4**	**-0.1**
V20A	**Brimhall**	**1.77**	**246**	⇑Pb	**Pb**	**09 45 22.3**	**-0.2**
V20A	baz=1.8,SNR=126			⇑Sb	**Sb**	**09 45 44.7**	**-0.1**
X23A	**Hourglass Bar**	**1.96**	**173**	⇑Pb	**Pb**	**09 45 25.6**	**-0.1**
X23A	baz=2.0,SNR=12			⇑Sb	**Sb**	**09 45 50.3**	**0.0**
R21A	**Cimarron**	**2.02**	**335**	⇓Sb	**Sb**	**09 45 52.5**	**+0.5**
T19A	**Beclabito**	**2.07**	**279**	⇑Sb	**Sb**	**09 45 53.5**	**0.0**
W25A	**X Bar L Ranch,**	**2.10**	**128**	⇑Pb	**Pb**	**09 45 27.3**	**-0.7**
W25A	baz=2.1,SNR=115			⇓Sb	**Sb**	**09 45 54.6**	**+0.5**
X24A	**Lazy VL Ranch,**	**2.14**	**156**	⇑Sb	**Sb**	**09 45 55.5**	**+0.2**
W20A	**Ramah**	**2.16**	**230**	⇓Pb	**Pb**	**09 45 27.7**	**-1.5**
W20A	baz=2.2,SNR=44			⇓Sb	**Sb**	**09 45 56.2**	**+0.1**
LAZ	**Ladron**	**2.19**	**195**	*e*Pn	**Pn**	**09 45 26.7**	**+0.2**
LAZ				*e*Sn	**Sn**	**09 45 58.8**	**+5.2**
U26A	**Atchley Ranch,**	**2.20**	**93**	⇓Pb	**Pb**	**09 45 29.2**	**-0.7**
U19A	**Dine' College,**	**2.22**	**265**	⇑Pb	**Pb**	**09 45 28.6**	**-1.6**
U19A	baz=2.2,SNR=123			⇑Sb	**Sb**	**09 45 57.5**	**-0.1**
LPM	**Los Pinos Moun**	**2.22**	**183**	*e*Pn	**Pn**	**09 45 29.9**	**+3.1**
LPM				*e*Sn	**Sn**	**09 45 59.1**	**+4.8**
V19A	**Window Rock**	**2.24**	**249**	⇓Pb	**Pb**	**09 45 29.5**	**-0.9**
PV01	**Paradox Valley**	**2.31**	**314**	*e*Pn	**Pn**	**09 45 30.6**	**+2.5**
PV01				*e*Sn	**Sn**	**09 46 02.4**	**+5.8**
X21A	**Alamocita Cree**	**2.34**	**208**	⇓P	**Pn**	**09 45 29.3**	**+0.9**
X21A	baz=2.4			⇓Sb	**Sb**	**09 46 01.8**	**+0.6**
BNM	**Barren Site**	**2.38**	**183**	*e*Pn	**Pn**	**09 45 32.0**	**+3.0**
BNM				*e*Sn	**Sn**	**09 46 03.4**	**+5.1**
X25A	**Clemmons Ranch**	**2.49**	**143**	⇑Sb	**Sb**	**09 46 05.7**	**+0.4**
X20A	**Quemado**	**2.58**	**220**	⇓P	**Pn**	**09 45 33.4**	**+1.6**
X20A	baz=2.6,SNR=7.1			⇓Sb	**Sb**	**09 46 08.9**	**+0.7**
Y23A	**Lovelace Mesa,**	**2.62**	**172**	⇓Sb	**Sb**	**09 46 10.7**	**+1.6**
W26A	**Owens Ranch, T**	**2.63**	**122**	⇑Sb	**Sb**	**09 46 10.5**	**+1.0**
SMCO	**Snowmass**	**2.67**	**352**	*e*Pn	**Pn**	**09 45 35.2**	**+2.2**
SMCO				*e*Sn	**Sn**	**09 46 14.4**	**+9.0**
T18A	**Mexican Hat**	**2.79**	**283**	⇓P	**Pn**	**09 45 36.3**	**+1.6**
ISCO	**Idaho Springs**	**3.33**	**11**	Pn	**Pn**	**09 45 43.2**	**+1.1**
CPRX	**Cap Rock**	**4.10**	**148**	Pn	**Pn**	**09 45 49.9**	**-2.7**
CPRX				*e*Sg	**Sg**	**09 46 56.7**	**-4.9**
WUAZ	**Wupatki**	**4.10**	**257**	Pn	**Pn**	**09 45 53.2**	**+0.5**
WUAZ				*e*Sg	**Sg**	**09 46 57.8**	**-3.9**
SRU	**San Rafael**	**4.11**	**310**	*e*Pn	**Pn**	**09 45 54.6**	**+1.8**
SRU				*e*Sg	**Sg**	**09 46 57.2**	**-4.8**
TMUT	**Trail Mountain**	**4.65**	**308**	*e*Pn	**Pn**	**09 46 00.7**	**+0.4**
MSU	**Marysvale**	**4.95**	**295**	Pn	**Pn**	**09 46 05.3**	**+1.0**
MSU				Sn	**Sn**	**09 47 04.3**	**+2.7**
ARUT	**Antelope Range**	**5.70**	**285**	*e*Pg	**Pg**	**09 46 36.2**	**-3.0**
ARUT				*e*Sn	**Sb**	**09 47 44.2**	**+6.2**

DJA 11 09:57:27.0±0°.57S×123°.02E, h42km, MLv3.8/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.53**	**208**	P	Pn	09 57 39.7	+1.5
LUWI				S	Sn	09 57 46.7	+0.5
APSI	**Ampana**	**1.41**	**256**	P	Pn	09 57 50.4	+0.2
APSI				S	Sn	09 58 09.4	+1.8
MRSI	**Marisa**	**1.50**	**314**	P	Pn	09 57 51.6	+0.2
TTSI	**Tana Toraja**	**4.04**	**232**	P	Pn	09 58 26.1	-0.2
BNSI	**Bone**	**4.79**	**217**	P	Pn	09 58 36.9	+0.2
NLAI	**Namlea**	**4.86**	**123**	P	Pn	09 58 38.0	+0.3

DDA ***11*** *10:04:02.8, 37°.22N×28°.18E, h7km±2km, Md3.0*
ISK ***11*** *10:04:02.3, 37°.26N×28°.15E, h5km, MD2.4, ML2.7*
CSEM ***11*** *10:04:03.4±0.2, 37°.25N×28°.18E, h5km, MD2.4, Error ellipse: s-maj=6.3km s-min=4.5km az=172.0*
ISCJB ***11*** *10:04:03.2±0.5, 37°.25N±0°.04×28°.17E±0°.04, h10km, Error ellipse: s-maj=6.4km s-min=4.0km az=168.2*
ISC 11 10:04:03.7±0.6, 37°.25N±0°.04×28°.17E±0°.04, h10km, n20, σ1§03/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.15**	**142**	*e*PG	**Pg**	**10 04 05.8**	**-1.2**
YER	**Yerkesik**	**0.15**	**142**	*e*Pg	**Pg**	**10 04 05.8**	**-1.2**
MLSB	**Milas**	**0.32**	**278**	*e*PG	**Pg**	**10 04 09.4**	**-0.6**
MLSB				*e*SG	**Sg**	**10 04 14.5**	**+0.3**
MLSB	**Milas**	**0.32**	**278**	*e*Pg	**Pg**	**10 04 09.4**	**-0.6**
MLSB				*e*Sg	**Sg**	**10 04 14.5**	**+0.3**
AYDN	**Tasoluk**	**0.47**	**331**	*i* P	**Pg**	**10 04 12.8**	**0.0**
AYDN	**Tasoluk**	**0.47**	**331**	*i* P	**Pg**	**10 04 12.8**	**-0.1**
TURN	**Turunc**	**0.51**	**137**	*i* P	**Pg**	**10 04 11.8**	**-1.9**
TURN	**Turunc**	**0.51**	**137**	*i* P	**Pg**	**10 04 11.8**	**-1.9**
BDRM	**Kayabasi**	**0.61**	**253**	*i* P	**Pg**	**10 04 14.6**	**-0.9**
BDRM				*i* S	**Sg**	**10 04 23.7**	**+0.3**
BDRM	**Kayabasi**	**0.61**	**253**	*i* P	**Pg**	**10 04 14.6**	**-0.9**
BDRM				*i* S	**Sg**	**10 04 23.7**	**+0.3**
DAT	**Datca**	**0.70**	**222**	*e*PG	**Pg**	**10 04 17.2**	**-0.1**
DAT				*e*SG	**Sg**	**10 04 28.2**	**+1.7**
DAT	**Datca**	**0.70**	**222**	*e*Pg	**Pg**	**10 04 17.2**	**-0.1**
DAT				*e*Sg	**Sg**	**10 04 28.2**	**+1.7**
DNZL	**Cakiroluk**	**0.82**	**58**	*i* P	**Pg**	**10 04 18.5**	**-1.1**
DNZL				*i* S	**Sg**	**10 04 32.0**	**+1.6**
DNZL	**Cakiroluk**	**0.82**	**58**	*i* P	**Pg**	**10 04 18.5**	**-1.1**
DNZL				*i* S	**Sg**	**10 04 32.0**	**+1.6**
GCAM	**G?zelcaml?**	**0.87**	**301**	*i* P	**Pg**	**10 04 20.2**	**-0.2**
GCAM	**G?zelcaml?**	**0.87**	**301**	*i* P	**Pg**	**10 04 20.2**	**-0.2**
FETY	**Fethiye**	**0.96**	**130**	*e*PG	**Pg**	**10 04 22.9**	**+0.8**
FETY	**Fethiye**	**0.96**	**130**	*e*Pg	**Pg**	**10 04 22.9**	**+0.8**
ELL	**Elmali**	**1.48**	**109**	*e*PN	**Pn**	**10 04 31.7**	**+1.3**
ELL	**Elmali**	**1.48**	**109**	*e*Pn	**Pn**	**10 04 31.7**	**+1.3**

NEIC ***11*** *10:39:39.5, 18°.15N×68°.50W, h82km, MD3.5(RSPR), After RSPR.*
RSPR 11 10:39:39.5, 18°.15N×68°.50W, h82km±4km, MD3.5/7, MD3.5/7, 3C-5D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMO	**Isla Mona**	**0.56**	**94**	⇓*e*P	Pn	10 39 53.0	-0.9
IMO				*e*S	Sn	10 40 05.3	+0.6
CRPR	**Cabo Rojo, PR**	**1.33**	**96**	⇓*e*P	Pn	10 40 02.0	-0.7
CRPR				*e*S	Sn	10 40 19.0	-1.2
AGPR	**Aguadilla, PR**	**1.36**	**76**	*e*S	Sn	10 40 21.3	+0.5
AOPR	**Arecibo Observ**	**1.67**	**83**	⇓*e*P	Pn	10 40 08.6	+1.6
AOPR				*e*S	Sn	10 40 26.7	-1.3
CELP	**Cerrillos**	**1.83**	**92**	*e*S	Sn	10 40 30.9	-0.8
ICM	**Isla Caja Muer**	**1.90**	**98**	⇑*e*P	Pn	10 40 09.1	-1.0
ICM				*e*S	Sn	10 40 32.1	-1.3
CPD	**Cerro la Pandu**	**2.46**	**92**	⇑*e*P	Pn	10 40 17.3	-0.3
CPD				*e*S	Sn	10 40 47.2	+0.4
CBYP	**Canovanas**	**2.52**	**87**	⇓*e*P	Pn	10 40 18.0	-0.3
CBYP				*e*S	Sn	10 40 47.6	-0.5
HUMP	**Col San Antoni**	**2.52**	**90**	⇓*e*P	Pn	10 40 19.0	+0.6
HUMP				*e*S	Sn	10 40 48.8	+0.6
MTP	**Monte Pirata**	**2.80**	**91**	⇑*e*P	Pn	10 40 22.7	+0.5
MTP				*e*S	Sn	10 40 54.3	-0.8

IDC 11 10:42:33.5±0.9, 20°.10N×121°.51E, h0km, mb3.9/6, mb1 4.0/7, mb1mx3.7/25, mbtmp3.9/7, ML3.3/1, MS3.8/2, Ms1 3.8/2, ms1mx2.8/34, Error ellipse: s-maj=50.8km s-min=17.9km az=68.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**18.17**	**17**	P	Pn	10 46 48.4	+1.2
	0.1nm,0.3s,baz=198,slow=11,SNR=3.8						
SONM	**Songino Array**	**30.26**	**340**	LR	LR	11 02 55.3	
	comp=Z,43nm,18.2s,baz=254,slow=40						
MKAR	**Makanchi Array**	**41.54**	**319**	P	P	10 50 22.9	+0.2
	1.5nm,0.7s,baz=100,slow=12,SNR=9.3						
WRA	**Warramunga Arr**	**41.73**	**162**	P	P	10 50 24.4	-0.1
	1.9nm,0.6s,baz=343,slow=9.0,SNR=15						
ZALV	**Zalesovo Beam**	**43.86**	**329**	P	P	10 50 41.2	-0.2
	0.8nm,0.3s,baz=104,slow=6.3,SNR=5.4						
ASAR	**Alice Springs**	**45.15**	**164**	P	P	10 50 52.2	+0.2
	1.3nm,0.6s,baz=346,slow=7.0,SNR=25						
KURK	**Kurchatov**	**45.46**	**323**	P	P	10 50 54.1	-0.1
	1.4nm,0.7s,baz=122,slow=7.5,SNR=12						
RES	**Resolute Bay**	**82.62**	**9**	LR	LR	11 29 33.4	
	comp=Z,178nm,21.2s,baz=61,slow=34						
YKA	**Yellowknife Ar**	**86.60**	**23**	P	P	10 55 17.8	-0.7
	0.2nm,0.7s,baz=301,slow=5.0,SNR=2.9						

IDC ***11*** *10:51:11.8±6.1, 16°.15S×177°.25W, h0km, mb4.2/5, mb1 4.4/5, mb1mx4.0/18, mbtmp4.2/5, Error ellipse: s-maj=156.5km s-min=41.2km az=28.0*
ISC 11 10:51:17.6±3.6, 16°.2S±0°.5×177°.2W±0°.4, h35km, n10, σ0§95/10, mb4.3/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EIDS	**Eidsvold**	**30.96**	**248**	*e*P	**P**	**10 57 32.3**	**+0.7**
ARMA	**Armidale**	**31.82**	**238**	*e*P	**P**	**10 57 40.1**	**+1.0**
CMSA	**Cobar Meteorol**	**37.02**	**239**	*e*P	**P**	**10 58 23.7**	**-0.3**
STKA	**Stephens Creek**	**40.48**	**240**	*e*P	**P**	**10 58 52.6**	**-0.5**
	2.7nm,0.4s,mb4.3						
STKA	**Stephens Creek**	**40.48**	**240**	P	**P**	**10 58 52.3**	**-0.8**
	3.7nm,0.5s,mb4.4,baz=88,slow=9.6,SNR=13						
WRA	**Warramunga Arr**	**46.09**	**258**	P	**P**	**10 59 37.7**	**-0.9**
	0.8nm,0.5s,mb3.9,baz=91,slow=8.5,SNR=22						
ASAR	**Alice Springs**	**46.38**	**253**	P	**P**	**10 59 40.0**	**-0.8**
	13nm,0.7s,mb5.0,baz=89,slow=8.0,SNR=276						
KAKA	**Kakadu**	**48.78**	**267**	*e*P	**P**	**11 00 01.6**	**+2.1**
	3.9nm,0.4s,mb4.8						
FITZ	**Fitzroy Crossi**	**54.46**	**259**	P	**P**	**11 00 41.1**	**-0.8**
	1.4nm,0.6s,mb4.1,baz=112,slow=5.4,SNR=9.5						
QSPA	**South Pole Qui**	**73.90**	**180**	P	**P**	**11 02 48.6**	**+0.2**
	0.8nm,0.9s,mb3.6,baz=21,slow=17,SNR=6.7						

IDC 11 10:55:53.4±1.9, 4°.29N×126°.81E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.6/21, mbtmp3.8/4, MS4.3/1, Ms1 4.4/1, ms1mx2.6/26, Error ellipse: s-maj=144.5km s-min=24.0km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**3.02**	**336**	LR	LR	10 58 22.4	
	comp=Z,261nm,18.0s,baz=154,slow=49						
WRA	**Warramunga Arr**	**25.19**	**163**	P	P	11 01 20.4	-0.5
	2.2nm,0.8s,baz=343,slow=11,SNR=17						
ASAR	**Alice Springs**	**28.63**	**166**	P	P	11 01 52.3	+0.5
	0.2nm,0.4s,baz=345,slow=7.7,SNR=4.4						
STKA	**Stephens Creek**	**38.62**	**160**	P	P	11 03 18.5	0.0
	2.7nm,0.7s,baz=328,slow=6.4,SNR=5.2						
MKAR	**Makanchi Array**	**57.15**	**325**	P	P	11 05 42.0	+0.1
	0.7nm,0.5s,baz=124,slow=7.8,SNR=7.5						
NOA	**NORSAR Array B**	**98.33**	**334**	LR	LR	12 04 20.7	
	comp=Z,117nm,18.7s,baz=350,slow=42						

IDC 11 10:56:14.3±1.0, 54°.46S×131°.94W, h0km, mb4.2/7, mb1 4.4/7, mb1mx4.1/15, mbtmp4.2/7, MS3.9/5, Ms1 3.9/5, ms1mx3.7/13, Error ellipse: s-maj=32.2km s-min=26.9km az=173.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKT	**Rikitea**	**31.38**	**355**	*e*LR	LR	11 10 50.4	
	174nm,27.2s						
RKT				*e*T		11 35 30.4	
	8.9nm,0.3s						
PMSA	**Palmer Station**	**34.14**	**135**	P	P	11 02 60.0	-0.4
	64nm,1.1s,baz=186,slow=9.2,SNR=4.5						
QSPA	**South Pole Qui**	**35.71**	**180**	P	P	11 03 14.7	+0.8
	1.1nm,0.9s,baz=65,slow=7.8,SNR=4.2						
URZ	**Urewera**	**37.79**	**274**	LR	LR	11 15 24.9	
	comp=Z,145nm,21.5s,baz=247,slow=30						
RPZ	**Rata Peaks**	**37.85**	**262**	LR	LR	11 14 30.4	
	comp=Z,98nm,19.7s,baz=99,slow=29						
PPT	**Papeete**	**39.26**	**333**	*e*LR	LR	11 14 30.4	
	225nm,26.5s,baz=159						
PPT	**Papeete**	**39.26**	**333**	LR	LR	11 16 52.4	
	comp=Z,231nm,19.9s,baz=140,slow=32						
PLCA	**Paso Flores**	**42.26**	**97**	LR	LR	11 16 16.6	
	comp=Z,116nm,19.2s,baz=46,slow=28						
TAOE	**Nuku Hiva Isla**	**45.95**	**349**	*e*LR	LR	11 17 36.5	
	167nm,23.1s						
CPUP	**Villa Florida**	**60.19**	**94**	LR	LR	11 28 31.7	
	comp=Z,104nm,18.5s,baz=345,slow=32						
LPAZ	**La Paz**	**61.72**	**78**	P	P	11 06 34.0	-0.4
	1.1nm,0.7s,baz=257,slow=6.2,SNR=4.9						
ASAR	**Alice Springs**	**73.42**	**253**	P	P	11 07 48.0	-0.3
	2.7nm,1.2s,baz=144,slow=5.7,SNR=7.0						
WRA	**Warramunga Arr**	**76.14**	**255**	P	P	11 08 03.8	-0.2
	1.3nm,1.0s,baz=139,slow=5.3,SNR=6.6						
TXAR	**Lajitas Array**	**86.95**	**24**	P	P	11 09 02.4	+1.6
	0.5nm,0.9s,baz=206,slow=11,SNR=5.0						
BOSA	**Boshof**	**94.96**	**160**	P	P	11 09 39.5	+1.0
	1.4nm,0.3s,baz=281,slow=5.2,SNR=6.9						
SONM	**Songino Array**	**143.75**	**284**	PKP	PKPdf	11 15 49.0	-1.2
	0.6nm,0.5s,baz=90,slow=4.4,SNR=3.8						

ISK ***11*** *10:59:14.0, 37°.80N×38°.26E, h8km, MD2.9, ML2.6*
DDA ***11*** *10:59:14.6, 37°.78N×38°.29E, h7km±2km, Md3.0*
CSEM ***11*** *10:59:14.4±0.1, 37°.80N×38°.27E, h10km, ML2.6, Error ellipse: s-maj=3.4km s-min=2.2km az=113.0*
ISCJB ***11*** *10:59:14.3±0.7, 37°.80N±0°.04×38°.27E±0°.08, h4km±10km, Error ellipse: s-maj=10.8km s-min=5.4km az=19.6*
ISC 11 10:59:14.8±0.6, 37°.80N±0°.04×38°.28E±0°.08, h7km±8km, n20, σ0§46/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAB	**Bozova**	**0.33**	**178**	*i* P	**Pg**	**10 59 21.3**	**+0.1**
ATAB				*i* S	**Sg**	**10 59 25.9**	**+0.4**
ATAB	**Bozova**	**0.33**	**178**	*i* P	**Pg**	**10 59 21.3**	**+0.1**
ATAB				*i* S	**Sg**	**10 59 26.0**	**+0.5**
MYA	**Malataya**	**0.54**	**12**	*e*PG	**Pg**	**10 59 25.0**	**-0.2**
MYA				*e*SG	**Sg**	**10 59 33.0**	**+0.7**
MYA	**Malataya**	**0.54**	**12**	*e*Pg	**Pg**	**10 59 25.0**	**-0.2**
MYA				*e*Sg	**Sg**	**10 59 33.0**	**+0.7**
URFA	**Urfa**	**0.56**	**129**	*e*PG	**Pg**	**10 59 25.6**	**0.0**
URFA	**Urfa**	**0.56**	**129**	*e*Pg	**Pg**	**10 59 25.6**	**0.0**
GZT	**Gaziantep**	**0.72**	**232**	*i* P	**Pg**	**10 59 28.4**	**-0.2**
SVRC	**Sivrice-ELAZID**	**1.00**	**54**	*e*PG	**Pg**	**10 59 33.4**	**-0.5**
SVRC	**Sivrice-ELAZID**	**1.00**	**54**	*e*Pg	**Pg**	**10 59 33.4**	**-0.5**
GAZ	**Gaziantep**	**1.05**	**234**	*e*PG	**Pg**	**10 59 34.5**	**-0.5**
GAZ	**Gaziantep**	**1.05**	**234**	*e*Pg	**Pg**	**10 59 34.5**	**-0.5**
DARE	**Darende-Malaty**	**1.21**	**342**	*e*PG	**Pg**	**10 59 33.1**	**-4.9**
PTK	**Pertek**	**1.40**	**38**	*e*PN	**Pn**	**10 59 40.6**	**-0.1**
PTK	**Pertek**	**1.40**	**38**	*e*Pn	**Pn**	**10 59 40.6**	**-0.1**
KUZU	**Kuzuini**	**1.40**	**224**	*i* P	**Pn**	**10 59 41.2**	**+0.5**
KUZU	**Kuzuini**	**1.40**	**224**	*i* P	**Pn**	**10 59 41.2**	**+0.5**
KEMA	**Kemaliye**	**1.48**	**6**	*i* P	**Pn**	**10 59 41.3**	**-0.5**
KEMA	**Kemaliye**	**1.48**	**6**	*i* P	**Pn**	**10 59 41.3**	**-0.4**
SARI	**SarD1z-Kayseri**	**1.52**	**306**	*e*PN	**Pn**	**10 59 43.2**	**+0.8**
KOZT	**Kozan**	**1.97**	**261**	*e*PN	**Pn**	**10 59 48.0**	**-0.5**

NEIC 11 11:12:05.2, 44°.05S×169°.06E, h0km, ML3.7(WEL), After WEL., South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCZ	**Jackson Bay**	**0.22**	**263**	P	Pg	11 12 09.0	-0.4
JCZ				S	Sg	11 12 11.9	-0.3
FOZ	**Fox Glacier**	**0.67**	**43**	P	Pg	11 12 20.7	+2.8
FOZ				S	Sg	11 12 31.0	+4.5
WKZ	**Wanaka**	**0.78**	**182**	P	Pg	11 12 20.9	+0.4
WKZ				S	Sg	11 12 32.4	+2.2
LBZ	**Lake Benmore**	**0.88**	**113**	P	Pg	11 12 22.6	+0.6
EAZ	**Earnscleugh**	**1.20**	**172**	P	Pg	11 12 28.1	0.0
TUZ	**Tuapeka**	**1.95**	**168**	P	Pn	11 12 41.7	+2.2

IDC ***11*** *11:12:22.2±2.5, 51°.12N×179°.21W, h20km±14km, mb4.7/30, mb1 4.8/31, mb1mx4.7/35, mbtmp4.7/31, ML5.0/1, MS4.5/24, Ms1 4.5/24, ms1mx4.3/37, Error ellipse: s-maj=16.9km s-min=9.7km az=163.0*
MOS ***11*** *11:12:22.9±1.0, 51°.08N×179°.23W, h33km, mb5.3/122, MS4.6/67, Error ellipse: s-maj=6.8km s-min=4.1km az=93.3*
ISCJB ***11*** *11:12:23.7±0.5, 51°.05N±0°.04×179°.22W±0°.02, h41km±4km, mb5.1/280, MS4.6/213, Error ellipse: s-maj=6.0km s-min=2.1km az=8.2*
SZGRF ***11*** *11:12:24.6, 51°.16N×179°.65E, h33km, mb5.2, MS4.7, Rat Islands, Aleutian Islands, United States*
GCMT ***11*** *11:12:25.9±0.2, 51°.01N×179°.10W, h18km, MW5.2, Moment Tensor Solution. s66,c98; s87,c143; Moment tensor: Scale 10^{16}Nm; M_{rr}5.57±.18; $M_{\theta\theta}$-5.45±.13; $M_{\phi\phi}$-0.12±.12; $M_{r\theta}$4.28±.31; $M_{\theta\phi}$-1.59±.09; $M_{r\phi}$3.84±.33; Best double couple: $M_0$8.10000×10^{16} NP1:φs271.00000°, δ26.00000°, λ122.00000°. NP2:φs57.00000°, δ68.00000°, λ76.00000°. Principal axes: T 8.2700, Plg64.0000°, Azm303.0000°; N -0.3000, Plg13.0000°, Azm62.0000°; P -7.9700, Plg22.0000°, Azm157.0000°; Data Used: II IU IC G CN.*
BJI ***11*** *11:12:26.5, 51°.50N×179°.88W, h40km, mB5.1/31, mb5.1/46, Ms4.9/39, Ms7 4.7/39*
NEIC ***11*** *11:12:26.4±0.2, 51°.16N×179°.25W, mb5.1/199, MS4.6/164, ML5.1(AEIC), Error ellipse: s-maj=5.1km s-min=2.0km az=2.0*
**ISC 11 11:12:26.3±0.5,

comp=Z,3µm,20.0s
PET MLR MLR
comp=Z,2µm,20.0s
PET Petropavlovsk 13.72 287 *e*Pn **Pn 11 15 35.0 -2.9**
PEA0B Petropavlovsk- 14.30 287 *e*Pn **Pn 11 15 47.7 +1.9**
PETK Petropavlovsk- 14.30 287 Pn **Pn 11 15 46.4 +0.6**
comp=Z,0.2nm,0.3s,baz=94,slow=15,SNR=11
PETK LR LR 11 20 55.0
comp=Z,2µm,22.0s,baz=279,slow=36
OHAK Old Harbor 16.30 58 *e*P **Pn 11 16 06.7 -5.0**
comp=Z,7.6nm,0.3s
SVW2 Sparrevohn 16.44 44 *e*P **Pn 11 16 13.5 +0.1**
KDAK Kodiak Island 16.79 56 Pn **Pn 11 16 13.0 -4.8**
comp=Z,214nm,0.4s,SNR=15
KDAK Kodiak Island 16.79 56 Pn **Pn 11 16 13.2 -4.6**
comp=Z,5.1nm,0.3s,baz=249,slow=5.0,SNR=29
KDAK Sn **Sn 11 19 16.4 -6.6**
comp=Z,0.6nm,0.3s,baz=342,slow=20,SNR=3.5
KDAK Kodiak Island 16.79 56 P **Pn 11 16 13.2 -4.6**
KDAK 11 19 16.5
KDAK pmax pmax
comp=Z,5.0nm,0.3s
KDAK smax
comp=N,1.0nm,0.3s
KDAK Kodiak Island 16.79 56 *e*Pn **Pn 11 16 12.7 -5.0**
comp=N,16nm,0.4s
KDAK *e*Sn **Sn 11 19 23.8 +0.7**
TTA Tatalina 17.18 38 *e*P **Pn 11 16 23.5 +0.9**
RSO Redoubt South 17.46 47 *e*Pn **Pn 11 16 27.1 +1.0**
RSO *e*Sn **Sn 11 19 38.0 -1.2**
BILL Bilibino 18.39 343 *oe*P **Pn 11 16 38.8 +1.4**
BILL pmax pmax
comp=Z,72nm,1.2s
BILL MLR MLR
comp=Z,1µm,18.0s
BILL Bilibino 18.39 343 *e*Pn **Pn 11 16 38.7 +1.3**
comp=Z,76nm,1.3s
SLKM Skilak Lake 18.66 49 *e*P **Pn 11 16 40.1 -0.6**
PPLA Purkeypile 18.68 41 *e*Pn **Pn 11 16 41.1 +0.1**
comp=Z,99nm,0.8s
SEW Seward 18.91 50 *e*P **Pn 11 16 41.7 -2.1**
comp=Z,53nm,0.8s
RC01 Rabbit Creek A 19.06 47 P **Pn 11 16 45.3 -0.2**
comp=Z,15nm,0.6s
CHUM Lake Minchumin 19.10 38 *e*P **Pn 11 16 45.5 -0.4**
comp=Z,153nm,1.3s
SEY Seymchan 19.25 319 *coe*P **Pn 11 16 48.7 +0.9**
KTH Kantishna Hill 19.49 40 *e*P **Pn 11 16 49.3 -1.3**
comp=Z,186nm,0.8s
PMR Palmer 19.50 46 *e*P **Pn 11 16 50.9 +0.2**
PMR pmax pmax
comp=Z,4.0nm,0.7s
PMR Palmer 19.50 46 *e*P **Pn 11 16 50.9 +0.2**
comp=Z,4.4nm,0.7s
TRF Thorofare Moun 19.70 40 *e*P **Pn 11 16 51.3 -1.8**
comp=Z,204nm,1.1s
BPAW Bear Paw Mtn. 19.71 38 *e*P **Pn 11 16 51.0 -2.3**
comp=Z,74nm,0.7s
MID Middleton Isla 20.31 53 *e*P **P 11 16 56.6 -1.4**
MID pmax pmax
comp=Z,57nm,0.8s
MID Middleton Isla 20.31 53 *e*P **P 11 16 56.6 -1.4**
comp=Z,57nm,0.8s
MCK McKinley 20.37 40 *e*P **P 11 16 57.4 -1.2**
MCK pmax pmax
comp=Z,48nm,0.8s
MCK McKinley 20.37 40 *e*P **P 11 16 57.4 -1.2**
comp=Z,48nm,0.8s
DIV Divide 20.93 49 *e*Pn **P 11 17 06.2 +1.6**
comp=Z,52nm,0.8s
COLA College 21.28 38 *e*P **P 11 17 07.7 -0.7**
COLA *e*S **S 11 21 03.7 +1.9**
COLA pmax pmax
comp=Z,74nm,0.9s,mb5.0
COLA MLR MLR
comp=Z,1µm,19.0s,MS4.2
COLA College 21.28 38 *e*P **P 11 17 07.7 -0.7**
comp=Z,74nm,0.9s,mb5.0
COLA *e*S **S 11 21 03.6 +1.8**
COLA LR LR
comp=Z,1µm,19.0s,MS4.2
BMRM Bremner River 21.45 49 *e*P **P 11 17 08.5 -1.7**
comp=Z,75nm,0.9s,mb5.0
PAX Paxson 21.56 44 *e*P **P 11 17 10.0 -1.4**
PAX *e*S **S 11 21 08.7 +1.4**
PAX pmax pmax
comp=Z,42nm,0.7s,mb5.0
PAX Paxson 21.56 44 *e*P **P 11 17 10.0 -1.4**
comp=Z,42nm,0.7s,mb5.0
PAX *e*S **S 11 21 08.7 +1.3**
COLD Coldfoot 21.61 31 *e*P **P 11 17 11.9 0.0**
comp=Z,58nm,1.0s,mb5.0
MENT Mentasta 22.32 44 *e*P **P 11 17 19.4 -0.1**
MIDW Midway 22.93 176 PFAKE 11 17 40.0 +14
MIDW LR LR
comp=Z,2µm,20.0s,MS4.5
PNL Peninsula 23.85 54 *e*P **P 11 17 33.0 -1.9**
comp=Z,22nm,0.8s,mb4.6
EGAK Eagle 23.92 41 *e*P **P 11 17 34.0 -1.4**
comp=Z,134nm,1.0s,mb5.3
EGAK LR LR
comp=Z,2µm,20.0s,MS4.5
YUK Yuzh-Kuril'sk 24.42 267⇑ *i*P **P 11 17 39.2 -1.0**
YUK *i* 11 18 25.6
YUK pmax pmax
comp=Z,220nm,0.9s,mb5.6
YUK pmax pmax
comp=N,600nm,4.2s
YUK pmax pmax
comp=E,800nm,4.2s
YUK pmax pmax
comp=E,150nm,0.2s
YUK MLR MLR
comp=E,230nm,19.7s
YUK MLR MLR
comp=Z,620nm,19.7s,MS4.1
YUK MLR MLR
comp=N,170nm,9.9s
DAWY Dawson 24.48 43 *e*P **P 11 17 39.3 -1.2**
HYT Haines Junctio 24.86 51 *e*P **P 11 17 42.9 -1.2**
YSS Yuzh-Sakhalins 25.07 275 *oe*P **P 11 17 47.0 +0.9**
YSS *e*S **S 11 22 05.0 -2.1**
YSS pmax pmax
comp=Z,70nm,1.0s,mb5.2
YSS pmax pmax
comp=Z,500nm,4.0s
YSS MLR MLR
comp=E,700nm,18.0s
YSS MLR MLR
comp=Z,1µm,18.0s,MS4.4
YSS Yuzh-Sakhalins 25.07 275 *e*P **P 11 17 47.1 +1.0**
comp=Z,58nm,0.9s,mb5.1
YSS LR LR
comp=Z,402nm,20.0s,MS3.9
ASAJ Asahikawa 26.43 270 P **P 11 17 56.4 -2.1**
comp=Z,17nm,1.0s,mb4.5,baz=50,slow=3.5,SNR=7.6
ASAJ LR LR 11 27 34.3
comp=Z,763nm,19.7s,MS4.2,baz=75,slow=34
ASAJ Asahikawa 26.43 270 P **P 11 17 56.4 -2.0**
ASAJ pmax pmax
comp=Z,17nm,1.0s
ASAJ MLR MLR
comp=Z,763nm,19.7s
ERM Erimo 27.15 265 PFAKE 11 18 20.0 +15
ERM LR LR
comp=Z,721nm,22.0s,MS4.2
INK Inuvik 27.82 35 P **P 11 18 09.8 -0.9**
comp=Z,7.2nm,0.8s,mb4.4,baz=259,slow=9.5,SNR=20
INK Inuvik 27.82 35 P **P 11 18 09.8 -0.9**
INK pmax pmax
comp=Z,7.0nm,0.8s
INK Inuvik 27.82 35 *e*P **P 11 18 09.6 -1.0**
comp=Z,14nm,0.8s,mb4.6
INK *e*PcP PcP 11 21 25.4 -0.1
DLBC Dease Lake 28.73 56 P **P 11 18 18.2 -0.5**
comp=Z,1.1nm,0.5s,mb3.8,baz=331,slow=15,SNR=3.3
HABR Khabarovsk 29.26 283 *c i*P **P 11 18 22.6 -1.1**
HABR *e**PP pP 11 18 35.5 -0.4
HABR *e* 11 21 27.3
HABR *e*S **S 11 23 13.9 +0.7**
HABR *e* 11 25 10.1
HABR pmax pmax
comp=E,28nm,1.4s
HABR pmax pmax
comp=Z,65nm,2.4s,mb4.9
HABR pmax pmax
comp=N,22nm,1.4s
HABR MLR MLR
comp=Z,350nm,18.0s,MS4.0
YAK Yakutsk 29.38 312 *e*P **P 11 18 23.7 -0.9**
YAK *e**PP pP 11 18 32.9 -3.9
YAK *e* 11 19 16.8
YAK *e*PPP 11 19 29.5
YAK *e* 11 21 27.9
YAK *e*S **S 11 23 12.6 -2.1**
YAK *e* 11 29 02.9
YAK pmax pmax
comp=Z,18nm,0.9s,mb4.8
YAK pmax pmax
comp=E,11nm,1.1s
YAK pmax pmax
comp=N,3.0nm,1.0s
YAK pmax pmax
comp=Z,21nm,1.0s,mb4.8
YAK smax
comp=N,19nm,1.3s
YAK smax
comp=E,67nm,2.6s
YAK MLR MLR
comp=Z,752nm,16.0s,MS4.4
YAK MLR MLR
comp=N,208nm,20.0s,MS4.3
YAK MLR MLR
comp=E,684nm,18.0s,MS4.3
YAK Yakutsk 29.38 312 PFAKE 11 18 40.0 +15
YAK LR LR
comp=Z,1µm,21.0s,MS4.4
TIXI Tiksi 30.72 331 *e*P **P 11 18 29.3 -7.0**
TIXI pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
TIXI MLR MLR
comp=Z,769nm,20.0s,MS4.3
TIXI Tiksi 30.72 331 *e*P **P 11 18 29.3 -7.0**
comp=Z,3.5nm,0.8s,mb4.2
TIXI LR LR
comp=Z,769nm,20.0s,MS4.3
KLR Kul'dur 30.99 286 *e*P **P 11 18 34.3 -4.6**
KLR pmax pmax
comp=E,160nm,1.8s
KLR pmax pmax
comp=Z,150nm,1.8s,mb5.5
KLR MLR MLR
comp=N,900nm,13.5s
KLR MLR MLR
comp=Z,1µm,13.5s,MS4.8
MAJO Matsushiro 33.48 261 *e*P **P 11 19 01.4 +0.5**
MAJO pmax pmax
comp=Z,26nm,1.3s,mb5.0
MAJO MLR MLR
comp=Z,753nm,20.0s,MS4.4
MAJO Matsushiro 33.48 261 *e*P **P 11 19 01.4 +0.5**
comp=Z,26nm,1.3s,mb5.0
MAJO LR LR
comp=Z,753nm,20.0s,MS4.4
MJAR Matsushiro Arr 33.48 261 P **P 11 19 00.7 -0.2**
comp=Z,2.1nm,0.8s,mb4.1,baz=49,slow=8.4,SNR=8.3
MJAR ScP ScP 11 25 22.9 +1.6
comp=Z,1.4nm,0.8s,baz=38,slow=2.2,SNR=4.4
MJAR LR LR 11 30 52.8
comp=Z,715nm,19.5s,MS4.4,baz=65,slow=33
MJAR Matsushiro Arr 33.48 261 P **P 11 19 00.7 -0.2**
MJAR ScP ScP 11 25 22.9 +1.6
MJAR LR LR 11 30 52.8
VLA Vladivostok 33.66 276 *e*P **P 11 19 02.5 +0.1**
VLA *e**PP pP 11 19 16.2 +1.5
VLA pmax pmax
comp=Z,45nm,1.7s,mb5.1
VLA MLR MLR
comp=Z,800nm,20.0s,MS4.4
WAKE Wake Island 33.68 205 PFAKE 11 19 20.0 +17
WAKE LR LR
comp=Z,684nm,19.0s,MS4.4
MDJ Mudanjiang 34.35 280 P **P 11 19 07.5 -0.8**
MDJ pP pP 11 19 20.5 -0.1
MDJ sP sP 11 19 26.7 +0.6
MDJ PP PP 11 20 25.8 -0.7
MDJ S **S 11 24 31.9 -0.5**
MDJ pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
MDJ pmax pmax
comp=Z,130nm,4.8s
MDJ LR LR
comp=N,140nm,16.6s,MS4.5
MDJ LR LR
comp=E,800nm,20.2s,MS4.5
MDJ LR LR
comp=Z,1µm,20.2s,MS4.5
MDJ Mudanjiang 34.35 280 *e*P **P 11 19 07.4 -0.9**
comp=Z,12nm,0.8s,mb4.9
MDJ LR LR
comp=Z,1µm,20.0s,MS4.6
YKA Yellowknife Ar 35.60 46 P **P 11 19 17.3 -1.6**
comp=Z,18nm,0.7s,mb5.1,baz=282,slow=8.4,SNR=141
YKA PcP PcP 11 21 46.3 -0.3
comp=Z,2.3nm,0.8s,baz=289,slow=2.8,SNR=4.4
YKA ScP ScP 11 25 30.6 +2.2
comp=Z,0.6nm,0.7s,baz=289,slow=3.1,SNR=5.9
YKA LR LR 11 35 49.4
comp=Z,201nm,18.9s,MS3.9,baz=0.0,slow=40
YKA Yellowknife Ar 35.60 46 P **P 11 19 17.3 -1.6**
YKA 11 21 46.3
YKA pmax pmax
comp=Z,18nm,0.7s
YKA MLR MLR
comp=Z,201nm,19.0s
YKA Yellowknife Ar 35.60 46 P **P 11 19 17.3 -1.6**
YKA PcP PcP 11 21 46.3 -0.3
YKA ScP ScP 11 25 30.6 +2.2
YKA LR LR 11 35 49.4
NLWA Neilton Lookou 35.60 74⇑P **P 11 19 19.6 +0.5**
baz=36
NLWA Neilton Lookou 35.60 74 *e*P **P 11 19 20.9 +1.8**
comp=Z,69nm,1.4s,mb5.4
NLWA LR LR
comp=Z,1µm,22.0s,MS4.7
A05A Maple Falls 35.96 70⇓P **P 11 19 22.5 +0.4**
baz=36,SNR=7.3
HDW Hoodsport 35.98 73 P **P 11 19 23.7 +1.4**
GNW Green Mountain 36.16 73 *e*P **P 11 19 24.7 +0.9**
comp=Z,20nm,1.0s,mb5.0
CMW Cultus Mountai 36.19 71 P **P 11 19 25.4 +1.3**
JCW Jim Creek 36.41 72 P **P 11 19 26.7 +0.7**
POHA Pohakuloa 36.45 140 PFAKE 11 19 40.0 +13
POHA LR LR
comp=Z,2µm,20.0s,MS4.8
B06A Marblemount 36.53 71⇑P **P 11 19 27.4 +0.4**
baz=36
RPW Rockport 36.54 71 P **P 11 19 27.4 +0.3**
D05A Enumclaw 36.83 73⇓P **P 11 19 30.8 +1.2**
baz=37,SNR=9.1
A07A Ashnola River, 36.95 70⇓P **P 11 19 31.3 +0.8**
baz=37,SNR=16
FL2 Flat Top 2 37.09 75 P **P 11 19 33.0 +1.2**
TDL Tradedollar La 37.09 74 P **P 11 19 33.2 +1.4**
LVP Lakeview Peak 37.11 75 P **P 11 19 33.3 +1.3**
LON Longmire 37.15 74 *e*P **P 11 19 33.5 +1.2**
LON pmax pmax
comp=Z,17nm,0.8s,mb4.9
LON Longmire 37.15 74 *e*P **P 11 19 33.5 +1.2**
comp=Z,16nm,0.8s,mb4.9
RCM Mount Rainier- 37.15 73 P **P 11 19 34.2 +1.9**
F04A Amboy 37.17 75⇓P **P 11 19 32.6 +0.2**
baz=37
MTMW Mount Mitchell 37.25 75 P **P 11 19 34.8 +1.6**
COR Corvallis 37.30 78 PFAKE 11 19 50.0 +16
COR LR LR
comp=Z,1µm,21.0s,MS4.7
CN2 Changchun 37.33 281 *e*P **P 11 19 35.0 +1.2**
CN2 *e*PP PP 11 20 55.4 -4.0
CN2 *e*S **S 11 25 18.2 +0.1**
CN2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
CN2 pmax pmax
comp=Z,200nm,10.0s
CN2 LR LR
comp=N,800nm,19.0s,MS4.6
CN2 LR LR
comp=E,600nm,19.0s,MS4.6
CN2 LR LR
comp=Z,900nm,20.0s,MS4.6
WPW White Pass 37.33 74 P **P 11 19 35.0 +1.2**
G04A Mulino 37.50 76⇓P **P 11 19 35.9 +0.7**
baz=37
ETW Entiat 37.63 72 *e*P **P 11 19 37.5 +1.1**
WTV Waterville 37.81 71 P **P 11 19 38.5 +0.6**
B08A Colville Reser 37.88 70⇓P **P 11 19 38.8 +0.4**
baz=38,SNR=16
BOD Bodaibo 37.91 307 *e*P **P 11 19 35.3 -3.3**
BOD pmax pmax
comp=Z,67nm,0.9s,mb5.4
H04A Detroit Lake 37.94 77⇓P **P 11 19 39.5 +0.5**
baz=38,SNR=7.3
HOOD Mount Hood Mea 37.94 76 *e*P **P 11 19 42.4 +3.4**
comp=Z,80nm,0.8s,mb5.5
HIA Hailar 38.13 292 *e*P **P 11 19 39.8 -0.7**
HIA pmax pmax
comp=Z,52nm,1.3s
HIA MLR MLR
comp=Z,1µm,19.0s
HIA Hailar 38.13 292 *e*P **P 11 19 39.8 -0.7**
comp=Z,52nm,1.3s,mb5.1
HIA LR LR
comp=Z,1µm,19.0s,MS4.7
E07A Sunnyside 38.42 73⇑P **P 11 19 43.4 +0.4**
baz=38
B09A Rice 38.55 69⇓P **P 11 19 44.4 +0.4**
baz=38,SNR=12
HUMO Hull Mountain 38.55 80 *e*P **P 11 19 49.3 +5.1**
comp=Z,95nm,2.3s,mb5.1
HUMO LR LR
comp=Z,799nm,19.0s,MS4.6
G06A Carlson Farm, 38.61 75⇑P **P 11 19 45.2 +0.6**
baz=38
A10A Northport 38.64 68⇓P **P 11 19 45.0 +0.2**
baz=38
RSW Rattlesnake Hi 38.66 73 *e*P **P 11 19 46.1 +1.1**
HAWA Hanford 38.70 73 *e*P **P 11 19 46.3 +1.0**
comp=Z,27nm,0.8s,mb5.0
HAWA LR LR
comp=Z,907nm,22.0s,MS4.5
OD2 Odessa Site #2 38.70 71 P **P 11 19 45.4 0.0**
F07A Phinny Hill Vi 38.70 74⇓P **P 11 19 45.7 +0.3**
baz=39
D08A Wollman Farm, 38.74 72⇑P **P 11 19 45.7 0.0**
baz=39
C09A Chrisman Ranch 38.77 70⇑P **P 11 19 45.9 0.0**
baz=39,SNR=5.3
B10A Chitwood Farm, 39.15 69⇑P **P 11 19 49.0 -0.1**
baz=39
EDM Edmonton 39.17 60 *e*P **P 11 19 48.5 -0.7**
YBH Yreka Blue Hor 39.19 81 *e*P **P 11 19 54.6 +5.1**
YBH pmax pmax
comp=Z,10.0nm,0.8s
YBH MLR MLR
comp=Z,905nm,22.0s
YBH Yreka Blue Hor 39.19 81 *e*P **P 11 19 54.6 +5.1**
comp=Z,9.6nm,0.8s,mb4.6
YBH LR LR
comp=Z,905nm,22.0s,MS4.6
NEW Newport 39.23 69 *e*P **P 11 19 49.7 0.0**
NEW pmax pmax
comp=Z,45nm,1.1s
NEW MLR MLR
comp=Z,733nm,21.0s
NEW Newport 39.23 69 *e*P **P 11 19 49.7 -0.1**
comp=Z,45nm,1.1s,mb5.1
NEW LR LR
comp=Z,733nm,21.0s,MS4.5
C10A Spilker Farm, 39.33 70⇓P **P 11 19 50.3 -0.3**
baz=39
A11A Hall Mountain, 39.34 68⇓P **P 11 19 51.5 +0.8**
baz=39,SNR=37
KSRS Korea Array 39.37 271 P **P 11 19 51.5 +0.5**
comp=Z,13nm,0.9s,mb4.7,baz=58,slow=8.3,SNR=40
KSRS LR LR 11 33 53.6
comp=Z,328nm,21.8s,MS4.1,baz=61,slow=33
E09A Wood Farm, Sta 39.47 72⇑P **P 11 19 51.7 -0.1**
baz=39
SNY Shenyang 39.55 279⇑P **P 11 19 53.0 +0.5**
SNY pmax pmax
comp=Z,35nm,1.4s,mb4.9
SNY pmax pmax
comp=Z,230nm,8.6s
SNY LR LR
comp=N,680nm,20.4s,MS4.6
SNY LR LR
comp=E,510nm,18.6s,MS4.6
SNY LR LR
comp=Z,830nm,21.0s,MS4.5
B11A Sandpoint 39.59 68⇓P **P 11 19 52.9 +0.2**
baz=39,SNR=6.7
G08A Pilot Rock 39.60 74⇑P **P 11 19 53.0 +0.2**
baz=39
D10A Wagner Farm, O 39.72 71⇓P **P 11 19 53.3 -0.5**
baz=40,SNR=7.4
K05A Summer Lake 39.77 79⇓P **P 11 19 54.8 +0.5**
baz=40
A12A Yaak River Ran 39.77 67⇓P **P 11 19 54.4 +0.1**
baz=40
I07A Izee 39.89 76⇓P **P 11 19 55.7 +0.4**
baz=40,SNR=17
WDC Whiskeytown Da 39.94 83 PFAKE 11 20 10.0 +14
WDC LR LR
comp=Z,622nm,22.0s,MS4.4
F09A S2 Ranch, Elgi 40.02 73⇑P **P 11 19 56.6 +0.3**
baz=40
B12A Libby 40.03 68⇓P **P 11 19 56.8 +0.4**
baz=40
RES Resolute Bay 40.08 24 P **P 11 19 56.0 -0.5**
comp=Z,7.8nm,1.1s,mb4.3,baz=278,slow=9.3,SNR=5.7
RES PcP PcP 11 22 00.1 -0.1
comp=Z,6.8nm,0.7s,baz=252,slow=3.0,SNR=11
RES Resolute Bay 40.08 24 *e*P **P 11 19 56.5 -0.1**
RES *e* 11 22 00.2
RES pmax pmax
comp=Z,10.0nm,1.2s,mb4.4
RES Resolute Bay 40.08 24 *e*P **P 11 19 56.5 -0.1**
comp=Z,10nm,1.2s,mb4.4
RES *e*PcP PcP 11 22 00.2 0.0
E10A Myers Farm, Un 40.10 71⇓P **P 11 19 56.5 -0.5**
baz=40
H08A Prairie City 40.17 75⇑P **P 11 19 57.7 +0.1**
baz=40
F10A Beach Ranch, E 40.29 72⇑P **P 11 19 58.4 -0.2**
baz=40,SNR=5.8
C12B Naegeli Ranch, 40.46 69⇓P **P 11 20 00.0 0.0**
baz=40,SNR=9.8
HOPS Hopland 40.53 85 PFAKE 11 20 10.0 +9.3
HOPS LR LR
comp=Z,959nm,19.0s,MS4.7
MOD Modoc 40.59 79 *e*P **P 11 20 02.1 +1.0**
comp=Z,19nm,0.9s,mb4.7
MOD LR LR
comp=Z,936nm,20.0s,MS4.6
H09A Durkee 40.71 74⇑P **P 11 20 02.2 +0.2**
baz=41
G10A Bishop Farm, J 40.71 73⇑P **P 11 20 02.2 +0.1**
baz=41,SNR=34
B13A Whitefish 40.73 68⇑P **P 11 20 02.1 -0.1**
baz=41,SNR=12
BSMT Bassoo Peak 40.80 68 *e*P **P 11 20 03.0 +0.2**
BMO Blue Mountains 40.83 74 *e*P **P 11 20 03.7 +0.6**
comp=Z,9.9nm,0.9s,mb4.4
BMO LR LR
comp=Z,542nm,20.0s,MS4.4
J08A Circle Bar Ran 40.91 76⇑P **P 11 20 04.0 +0.2**
baz=41,SNR=8.2
F11A Grangeville 40.98 72⇑P **P 11 20 03.8 -0.4**
baz=41,SNR=12
C13A Hot Springs 41.01 69⇑P **P 11 20 04.4 -0.1**
baz=41,SNR=20
I09A Lost Marbles R 41.03 75⇑P **P 11 20 04.8 +0.1**
baz=41
A14A Double T Ranch 41.04 66⇑P **P 11 20 04.8 0.0**
baz=41,SNR=20
JTMT Jette 41.15 68 *e*P **P 11 20 06.2 +0.5**
G11A Walters Elk Ra 41.16 72⇑P **P 11 20 05.3 -0.5**
baz=41,SNR=17
YBMT Yellow Bay 41.25 68 *e*P **P 11 20 07.5 +1.1**
H10A Noah's Angus R 41.30 74⇓P **P 11 20 07.0 0.0**
baz=41,SNR=32
WVOR Wild Horse Val 41.32 78 *e*P **P 11 20 07.5 +0.4**
WVOR pmax pmax
comp=Z,22nm,0.8s,mb4.8
WVOR MLR MLR
comp=Z,606nm,19.0s,MS4.5
WVOR Wild Horse Val 41.32 78 *e*P **P 11 20 07.5 +0.3**
comp=Z,22nm,0.8s,mb4.8
WVOR LR LR

comp=Z,606nm,19.0s,MS4.5
J09A **Fry Pan Ranch,** 41.36 76 ⇓P P 11 20 07.5 +0.1
baz=41
D13A **Huson** 41.37 69 ⇑P P 11 20 07.0 -0.4
baz=41,SNR=12
B14A **Marquette Ranc** 41.43 67 ⇓P P 11 20 08.1 +0.1
baz=41,SNR=44
SWMT **Swartz Lake** 41.43 68 eP P 11 20 08.2 +0.2
A15A **Johnson Ranch,** 41.44 66 ⇓P P 11 20 07.3 -0.7
baz=41,SNR=12
I10A **Payette** 41.54 74 ⇑P P 11 20 09.2 +0.3
baz=41
F12A **Elk City** 41.59 71 ⇑P P 11 20 09.3 +0.1
baz=41,SNR=52
H11A **Donnelly** 41.69 73 ⇓P P 11 20 09.8 -0.2
baz=42,SNR=20
BEKR **Beckworth** 41.72 82 ⇓P P 11 20 10.7 +0.3
baz=42
MSO **Missoula** 41.81 69 eP P 11 20 10.8 -0.3
comp=Z,46nm,1.4s,mb4.9
MSO LR LR
comp=Z,254nm,20.0s,MS4.1
SLMT **Seeley Lake** 41.86 69 eP P 11 20 11.1 -0.4
E13A **Victor** 41.86 70 ⇑P P 11 20 11.3 -0.2
baz=42,SNR=9.6
B15A **Bradely Ranch,** 41.87 67 ⇓P P 11 20 11.0 -0.5
baz=42,SNR=32
J10A **Berg Farm, Mel** 41.92 75 ⇑P P 11 20 11.9 -0.1
baz=42
D14A **Greenough** 41.94 69 ⇓P P 11 20 11.9 -0.2
baz=42,SNR=39
C15A **Salmond Ranch,** 42.11 67 ⇓P P 11 20 13.9 +0.4
baz=42,SNR=42
F13A **Darby** 42.12 71 ⇓P P 11 20 13.6 0.0
baz=42,SNR=13
I11A **Placerville** 42.15 74 ⇓P P 11 20 13.8 -0.1
baz=42,SNR=22
CHMT **Chamberlain Mo** 42.17 69 eP P 11 20 14.0 0.0
K10A **MacKenzie Ranc** 42.21 76 ⇓P P 11 20 14.8 +0.4
baz=42,SNR=18
E14A **Clinton** 42.29 70 ⇓P P 11 20 14.7 -0.2
baz=42,SNR=11
B16A **M & M Farms, S** 42.31 66 ⇑P P 11 20 14.4 -0.7
baz=42
PAHR **Pah Rah Range** 42.42 81 eP P 11 20 20.6 +4.5
comp=Z,15nm,1.0s,mb4.6
WCN **Washoe City** 42.42 82 ⇑P P 11 20 16.6 +0.4
baz=42
H12A **Diamond D Ranc** 42.47 73 ⇓P P 11 20 16.0 -0.4
baz=42,SNR=16
MFID **Camas Ranch** 42.50 75 ⇑P P 11 20 16.5 -0.2
baz=42,SNR=13
D15A **Lincoln** 42.53 68 ⇓P P 11 20 16.6 -0.4
baz=42,SNR=15
G13A **Cobalt** 42.55 72 ⇑P P 11 20 16.8 -0.3
baz=42,SNR=34
F14A **Wisdom** 42.68 70 ⇓P P 11 20 17.9 -0.2
baz=42
I12A **Atlanta** 42.71 74 ⇑P P 11 20 18.3 -0.1
baz=43,SNR=34
K11A **Parker Ranch,** 42.73 76 ⇑P P 11 20 18.7 +0.1
baz=43,SNR=13
E15A **Deer Lodge** 42.78 69 ⇑P P 11 20 18.7 -0.3
baz=43,SNR=16
CMB **Columbia Colle** 42.79 84 PFAKE 11 20 30.0 +11
CMB LR LR
comp=Z,474nm,19.0s,MS4.4
H13A **Challis** 42.82 72 ⇓P P 11 20 19.0 -0.3
baz=43,SNR=14
L10A **Juniper Basin** 42.85 77 ⇑P P 11 20 19.8 +0.2
baz=43,SNR=17
B17A **L&G Farms, Che** 42.89 66 ⇓P P 11 20 19.6 -0.3
baz=43,SNR=38
ALE **Alert** 42.92 10 P P 11 20 19.6 -0.1
comp=Z,99nm,1.0s,mb5.5,SNR=7.8
G14A **Jackson** 42.93 71 ⇑P P 11 20 19.7 -0.4
baz=43
J12A **Stokes Ranch,** 43.03 74 ⇑P P 11 20 21.4 +0.4
baz=43,SNR=16
HRY **Holter Researc** 43.11 68 eP P 11 20 22.1 +0.4
A18A **Metzger Ranch,** 43.12 65 ⇑P P 11 20 20.5 -1.2
baz=43,SNR=10
M10A **I.L. Ranch, Tu** 43.12 77 ⇑P P 11 20 22.2 +0.4
baz=43
F15A **Butte** 43.18 70 ⇑P P 11 20 21.9 -0.3
baz=43,SNR=5.3
LRM **Limekiln Ridge** 43.22 70 eP P 11 20 22.8 +0.2
L11A **Cat Creek Ranc** 43.24 76 ⇓P P 11 20 23.2 +0.5
baz=43,SNR=25
C17A **Wharram Farm,** 43.25 67 ⇓P P 11 20 22.2 -0.5
baz=43,SNR=16
I13A **Wildhorse Cree** 43.26 73 ⇑P P 11 20 23.0 +0.1
baz=43,SNR=39
HLID **Hailey** 43.27 74 ⇓P P 11 20 23.2 +0.2
baz=43,SNR=52
HLID **Hailey** 43.27 74 eP P 11 20 23.5 +0.5
comp=Z,20nm,0.9s,mb4.8
HLID LR LR
comp=Z,712nm,21.0s,MS4.5
E16A **East Helena** 43.30 69 ⇓P P 11 20 23.2 0.0
baz=43,SNR=8.1
H14A **Leadore** 43.32 72 ⇑P P 11 20 23.6 +0.2
baz=43,SNR=29
BMN **Battle Mountai** 43.34 79 eP P 11 20 25.5 +2.0
BMN pmax pmax
comp=Z,12nm,0.9s,mb4.6
BMN MLR MLR
comp=Z,725nm,20.0s,MS4.6
BMN **Battle Mountai** 43.34 79 eP P 11 20 25.5 +2.0
comp=Z,12nm,0.9s,mb4.6
BMN LR LR
comp=Z,725nm,20.0s,MS4.6
DLMT **Dillon** 43.38 70 eP P 11 20 24.6 +0.8
comp=Z,12nm,1.0s,mb4.6
B18A **Beardsley Farm** 43.43 65 ⇓P P 11 20 23.9 -0.3
baz=43,SNR=37
K12A **Draper Farm, C** 43.49 75 ⇑P P 11 20 25.2 +0.4
baz=43,SNR=20
J13A **Cove Ranch, Pi** 43.51 74 ⇓P P 11 20 25.3 +0.4
baz=43,SNR=53
MCMT **McKenzie Canyo** 43.52 71 eP P 11 20 24.9 -0.1
comp=Z,13nm,0.8s,mb4.7
D17A **Six Diamond Ra** 43.55 67 ⇑P P 11 20 25.0 -0.2
baz=43
G15A **Dillon** 43.55 71 ⇓P P 11 20 24.9 -0.3
baz=43,SNR=26
EGMT **Eagleton** 43.63 66 ⇑P P 11 20 25.5 -0.3
baz=44,SNR=34
EGMT **Eagleton** 43.63 66 eP P 11 20 24.8 -1.0
comp=Z,50nm,0.8s,mb5.3
EGMT LR LR
comp=Z,553nm,19.0s,MS4.5
M11A **Holland Ranch,** 43.64 77 ⇑P P 11 20 26.6 +0.6
baz=44,SNR=12
I14A **Mackay** 43.65 73 ⇑P P 11 20 26.3 +0.3
baz=44,SNR=31
L12A **House Creek Ra** 43.70 76 ⇓P P 11 20 27.0 +0.5
baz=44,SNR=39
F16A **Kennard Place,** 43.72 69 ⇓P P 11 20 26.4 -0.2
baz=44,SNR=12
H15A **Lima** 43.75 71 ⇑P P 11 20 26.9 0.0
baz=44,SNR=23
BOZ **Bozeman (W)** 43.80 70 ⇓P P 11 20 27.4 +0.2
baz=44,SNR=28
BOZ **Bozeman (W)** 43.80 70 eP P 11 20 26.9 -0.3
BOZ e*PP pP 11 20 42.3 +2.5
BOZ pmax pmax
comp=Z,22nm,0.8s,mb4.9
BOZ MLR MLR
comp=Z,230nm,20.0s,MS4.1
BOZ **Bozeman (W)** 43.80 70 eP P 11 20 26.9 -0.2
comp=Z,22nm,0.8s,mb4.9
BOZ epP pP 11 20 42.3 +2.6
BOZ LR LR
comp=Z,230nm,20.0s,MS4.1
E17A **Martinsdale** 43.81 68 ⇓P P 11 20 27.4 +0.1
baz=44,SNR=17
NVAR **Mina Array Bea** 43.85 82 P P 11 20 27.9 +0.2
comp=Z,3.9nm,0.8s,mb4.2,baz=280,slow=6.5,SNR=19
NVAR **Mina Array Bea** 43.85 82 P P 11 20 27.9 +0.2
O10A **Cortez Mining,** 43.86 79 ⇑P P 11 20 28.0 +0.2
baz=44
G16A **Moss Hill, Enn** 43.92 70 ⇑P P 11 20 27.9 -0.2
baz=44,SNR=33
K13A **Stover Farm, H** 43.98 75 ⇓P P 11 20 28.7 0.0
baz=44
MLAC **Mammoth Lakes** 44.01 84 ⇑P P 11 20 29.2 +0.2
baz=44

N11A **Elko Archery C** 44.03 78 ⇑P P 11 20 29.4 +0.3
baz=44
D18A **Linhart Farms,** 44.04 67 ⇓P P 11 20 29.4 +0.3
baz=44,SNR=44
M12A **Wells** 44.18 77 ⇓P P 11 20 31.0 +0.6
baz=44,SNR=7.6
I15A **Monteview** 44.19 72 ⇑P P 11 20 30.5 +0.2
baz=44
F17A **Fitzpatrick Pl** 44.23 69 ⇑P P 11 20 30.6 0.0
baz=44,SNR=19
E18A **Harlowton** 44.31 68 ⇓P P 11 20 31.5 +0.3
baz=44,SNR=31
MTUM **Tungsten Hills** 44.35 84 eP P 11 20 32.3 +0.6
QLMT **Earthquake Lak** 44.36 70 eP P 11 20 32.3 +0.6
ELK **Elko** 44.38 78 eP P 11 20 35.5 +3.6
ELK pmax pmax
comp=Z,14nm,0.8s
ELK MLR MLR
comp=Z,902nm,21.0s
ELK **Elko** 44.38 78 eP P 11 20 35.5 +3.6
comp=Z,14nm,0.8s,mb4.8
ELK LR LR
comp=Z,902nm,21.0s,MS4.7
L13A **Double Diamond** 44.39 75 ⇓P P 11 20 32.5 +0.5
baz=44,SNR=10
N12A **Clover Valley,** 44.44 77 ⇑P P 11 20 32.8 +0.4
baz=44,SNR=14
N12A **Clover Valley,** 44.44 77 eP P 11 20 33.1 +0.7
comp=Z,32nm,1.1s,mb5.0
O11A **Cowboy Ranch,** 44.48 79 ⇑P P 11 20 32.9 +0.2
baz=44
G17A **Pierce Place,** 44.50 69 ⇑P P 11 20 32.9 +0.1
baz=44,SNR=8.6
FFC **Flin Flon** 44.51 54 iP P 11 20 32.3 -0.5
FFC **Flin Flon** 44.51 54 eP P 11 20 31.3 -1.5
comp=Z,4.9nm,0.9s,mb4.3
FFC LR LR
comp=Z,948nm,21.0s,MS4.7
H16A **Russell Place,** 44.54 70 ⇓P P 11 20 33.1 0.0
baz=44,SNR=41
J15A **Blackfoot** 44.56 73 ⇓P P 11 20 34.2 +0.9
baz=44,SNR=18
K14A **Jones Ranch, D** 44.59 74 ⇑P P 11 20 34.0 +0.4
baz=44
M13A **Montello** 44.67 76 ⇑P P 11 20 34.4 +0.1
baz=44,SNR=12
M13A **Montello** 44.67 76 eP P 11 20 35.2 +1.0
comp=Z,18nm,0.9s,mb4.9
YMR **Madison River** 44.73 70 eP P 11 20 34.8 +0.2
comp=Z,47nm,0.9s,mb5.3
TPH **Tonopah** 44.74 82 PFAKE 11 20 50.0 +15
TPH LR LR
comp=Z,358nm,21.0s,MS4.3
F18A **Big Timber** 44.78 68 ⇑P P 11 20 35.3 +0.2
baz=45,SNR=8.7
Q10A **Clear Creek Ra** 44.80 80 ⇑P P 11 20 35.7 +0.4
baz=45,SNR=7.1
L14A **Malta** 44.85 75 ⇓P P 11 20 36.1 +0.4
baz=45,SNR=25
I16A **Newdale** 44.86 72 ⇓P P 11 20 36.3 +0.6
baz=45,SNR=5.8
YNR **Norris Junctio** 44.87 70 eP P 11 20 37.6 +1.8
comp=Z,40nm,0.9s,mb5.2
GCMT **Greycliff** 44.87 68 eP P 11 20 36.0 +0.2
comp=Z,12nm,0.8s,mb4.8
K15A **Arbon** 44.91 74 ⇑P P 11 20 36.6 +0.5
baz=45
YFT **Old Faithful** 44.92 71 eP P 11 20 38.4 +2.2
comp=Z,39nm,0.8s,mb5.3
N13A **Wendover, West** 44.95 77 ⇑P P 11 20 36.5 +0.1
baz=45
N13A **Wendover, West** 44.95 77 eP P 11 20 37.8 +1.4
comp=Z,25nm,0.9s,mb5.0
O12A **Currie** 44.96 78 ⇓P P 11 20 36.7 +0.1
baz=45,SNR=32
VES **Vestal, Richgr** 44.97 86 ⇑P P 11 20 36.3 -0.3
baz=45
M14A **Sheep Mountain** 45.09 75 ⇑P P 11 20 37.7 +0.1
baz=45,SNR=8.3
LKWY **Lake** 45.12 70 eP P 11 20 39.7 +2.0
LKWY pmax pmax
comp=Z,27nm,0.8s,mb5.1
LKWY **Lake** 45.12 70 eP P 11 20 39.6 +1.9
comp=Z,27nm,0.8s,mb5.1
BJI **Beijing** 45.16 282 P P 11 20 38.6 +0.5
BJI sP sP 11 20 56.2 0.0
BJI PP PP 11 22 22.8 -1.3
BJI S S 11 27 13.8 -0.4
BJI sS sS 11 27 35.5 +0.1
BJI pmax pmax
comp=Z,21nm,0.9s,mb5.0
BJI pmax pmax
comp=Z,150nm,3.8s
BJI LR LR
comp=N,600nm,19.6s,MS4.7
BJI LR LR
comp=E,720nm,19.6s,MS4.7
BJI LR LR
comp=Z,550nm,23.7s,MS4.4
IMW **Indian Meadow** 45.17 71 eP P 11 20 39.2 +1.0
comp=Z,15nm,0.8s,mb4.9
BJT **Baijiatuau** 45.18 282 PFAKE 11 20 50.0 +12
BJT LR LR
comp=Z,681nm,21.0s,MS4.6
R10A **Warm Springs** 45.19 81 ⇓P P 11 20 38.2 -0.1
baz=45
G18A **Lazy EL Ranch,** 45.19 69 ⇑P P 11 20 38.2 -0.2
baz=45
CWC **Cottonwood Cre** 45.22 84 ⇑P P 11 20 38.8 +0.1
baz=45
S10A **Tonopah Range,** 45.23 82 ⇑P P 11 20 38.3 -0.4
baz=45,SNR=13
Q11A **Duckwater** 45.25 80 ⇓P P 11 20 38.7 -0.2
baz=45
RRI2 **Red Ridge** 45.26 72 eP P 11 20 40.1 +1.3
comp=Z,26nm,1.0s,mb5.0
HVU **Hansel Valley** 45.28 75 eP P 11 20 39.9 +0.9
HVU pmax pmax
comp=Z,18nm,0.8s,mb5.0
HVU **Hansel Valley** 45.28 75 eP P 11 20 39.9 +0.9
comp=Z,18nm,0.8s,mb4.9
P12A **McGill** 45.34 79 ⇓P P 11 20 39.4 -0.1
baz=45,SNR=10
L15A **Malad City** 45.38 74 ⇑P P 11 20 39.9 0.0
baz=45,SNR=15
K16A **Soda Springs** 45.39 73 ⇓P P 11 20 40.6 +0.7
baz=45,SNR=37
TPAW **Teton Pass** 45.40 72 eP P 11 20 39.9 -0.1
comp=Z,113nm,2.4s,mb5.3
RLMT **Red Lodge** 45.48 69 ⇑P P 11 20 41.0 +0.4
baz=45,SNR=43
RLMT **Red Lodge** 45.48 69 eP P 11 20 40.5 0.0
comp=Z,45nm,0.9s,mb5.3
RLMT LR LR
comp=Z,313nm,19.0s,MS4.3
O13A **Hicks Ranch, I** 45.51 77 ⇓P P 11 20 41.0 +0.1
baz=45
REDW **Red Top Meadow** 45.53 72 eP P 11 20 42.1 +1.1
comp=Z,9.0nm,0.9s,mb4.7
LOHW **Long Hollow** 45.53 71 eP P 11 20 41.9 +0.8
comp=Z,5.4nm,0.8s,mb4.5
N14A **Grayback Hills** 45.57 76 ⇑P P 11 20 41.1 -0.3
baz=45
ARVC **Arvin** 45.58 86 ⇓P P 11 20 41.6 +0.1
baz=46
R11A **Troy Canyon, C** 45.60 80 ⇓P P 11 20 41.2 -0.4
baz=46,SNR=16
J17A **Brown Place, J** 45.61 72 ⇓P P 11 20 41.9 +0.3
baz=45,SNR=12
BGU **Big Grassy Mou** 45.62 76 eP P 11 20 42.3 +0.5
comp=Z,10nm,0.9s,mb4.8
DAC **Darwin (Calif)** 45.63 84 PFAKE 11 20 50.0 +8.1
DAC LR LR
comp=Z,406nm,19.0s,MS4.4
Q12A **Willow Creek R** 45.65 79 ⇑P P 11 20 42.0 +0.1
baz=46
M15A **Larsen Ranch,** 45.66 75 ⇓P P 11 20 41.9 -0.2
baz=46
AHID **Auburn Hatcher** 45.72 73 eP P 11 20 43.1 +0.5
comp=Z,30nm,1.0s,mb5.2
AHID LR LR
comp=Z,851nm,21.0s,MS4.7
BSC **Santa Cruz Isl** 45.81 88 ⇑P P 11 20 44.0 +0.6
baz=46
MPMC **Manual Prospec** 45.83 84 ⇓P P 11 20 43.1 -0.4
baz=46
K17A **Gardner Place,** 45.84 73 ⇓P P 11 20 43.6 +0.2
baz=46,SNR=7.5

P13A **Bates Ranch, G** 45.90 78 ⇑P P 11 20 42.9 -1.1
baz=46
I18A **Diamond G Ranc** 45.95 71 ⇓P P 11 20 44.8 +0.5
baz=46,SNR=5.4
L16A **Fish Haven** 45.96 74 ⇓P P 11 20 44.6 +0.2
baz=46,SNR=25
FURC **Furnace Creek,** 45.97 83 ⇑P P 11 20 44.4 -0.2
baz=46
TLY **Talaya** 45.97 302 P P 11 20 45.7 +1.3
comp=Z,212nm,0.9s,mb6.1,SNR=6.0
TLY **Talaya** 45.97 302 eP P 11 20 43.9 -0.5
TLY eS S 11 27 36.4 +11
TLY eSS SS 11 30 47.5 -2.8
TLY pmax pmax
comp=Z,55nm,1.3s,mb5.3
TLY MLR MLR
comp=Z,1μm,20.0s,MS4.8
TLY **Talaya** 45.97 302 eP P 11 20 45.0 +0.6
comp=Z,67nm,1.3s,mb5.4
TLY LR LR
comp=Z,1μm,21.0s,MS4.8
LRMC **Laurel Mountai** 46.08 85 ⇓P P 11 20 45.0 -0.4
baz=46
J18A **Kendall Valley** 46.11 72 ⇑P P 11 20 45.8 +0.2
baz=46,SNR=17
HWUT **Hardware Ranch** 46.12 74 eP P 11 20 46.3 +0.7
comp=Z,14nm,0.9s,mb4.9
HWUT LR LR
comp=Z,421nm,22.0s,MS4.3
ULN **Ulaanbaatar** 46.13 296 eP P 11 20 45.6 -0.1
ULN pmax pmax
comp=Z,17nm,0.8s,mb5.0
ULN MLR MLR
comp=Z,2μm,20.0s,MS5.0
ULN **Ulaanbaatar** 46.13 296 eP P 11 20 45.6 0.0
comp=Z,17nm,0.8s,mb5.0
ULN LR LR
comp=Z,2μm,20.0s,MS5.0
DUG **Dugway** 46.19 77 ⇑P P 11 20 46.4 +0.2
baz=46,SNR=16
DUG **Dugway** 46.19 77 eP P 11 20 47.1 +0.8
DUG pmax pmax
comp=Z,34nm,0.9s,mb5.3
DUG MLR MLR
comp=Z,622nm,20.0s,MS4.6
DUG **Dugway** 46.19 77 eP P 11 20 47.1 +0.9
comp=Z,34nm,0.9s,mb5.3
DUG LR LR
comp=Z,622nm,20.0s,MS4.6
Q13A **Wheeler Ranch,** 46.20 79 ⇓P P 11 20 46.3 0.0
baz=46,SNR=14
R12A **Pony Springs,** 46.22 80 ⇓P P 11 20 46.3 -0.2
baz=46
L17A **Cokeville** 46.24 73 ⇓P P 11 20 46.6 -0.1
baz=46,SNR=11
M16A **Huntsville** 46.25 75 ⇑P P 11 20 46.6 -0.1
baz=46,SNR=25
EDW2 **Edwards Air Fo** 46.27 86 ⇓P P 11 20 46.7 -0.2
baz=46
U10A **Ash Meadows, A** 46.33 83 ⇓P P 11 20 47.5 +0.1
baz=46
NOQ **North Oquirrh** 46.34 76 eP P 11 20 49.3 +1.8
comp=Z,21nm,0.7s,mb5.2
O15A **The Old Anders** 46.35 76 ⇑P P 11 20 47.6 +0.1
baz=46
LAO **LASA Array** 46.37 65 eP P 11 20 47.7 +0.1
comp=Z,78nm,0.9s,mb5.6
LAO LR LR
comp=Z,600nm,22.0s,MS4.5
P14A **Drum Mountains** 46.40 77 ⇑P P 11 20 48.2 +0.3
baz=46,SNR=23
K18A **Toltan Ranch,** 46.43 72 ⇑P P 11 20 48.5 +0.3
baz=46,SNR=36
T11A **Corn Creek, Al** 46.51 81 ⇑P P 11 20 48.5 -0.3
baz=46,SNR=24
S12A **Delamar Landin** 46.51 81 ⇑P P 11 20 48.9 +0.1
baz=46,SNR=18
SONM **Songino Array** 46.52 297 P P 11 20 49.2 +0.5
comp=Z,10nm,0.8s,mb4.8,baz=55,slow=9.5,SNR=48
SONM PcP PcP 11 22 22.5 +0.1
comp=Z,5.4nm,0.9s,baz=71,slow=2.9,SNR=5.1
SONM ScP ScP 11 26 13.0 +1.2
comp=Z,0.6nm,0.6s,baz=100,slow=1.7,SNR=4.0
SONM LR LR 11 41 46.6
comp=Z,2μm,19.1s,MS5.1,baz=58,slow=38
DGMT **Dagmar** 46.54 62 ⇑P P 11 20 48.3 -0.6
baz=46
DGMT **Dagmar** 46.54 62 eP P 11 20 48.8 -0.1
comp=Z,47nm,1.3s,mb5.3
DGMT LR LR
comp=Z,669nm,21.0s,MS4.6
N16A **Rees Ranch, Co** 46.62 75 ⇑P P 11 20 49.4 -0.2
baz=46
Q14A **Sevier Lake (B** 46.64 78 ⇑P P 11 20 50.0 +0.3
baz=46,SNR=32
BW06 **Boulder Array** 46.65 72 ⇑P P 11 20 49.8 0.0
baz=46,SNR=82
BW06 **Boulder Array** 46.65 72 eP P 11 20 49.6 -0.2
comp=Z,41nm,0.9s,mb5.3
BW06 LR LR
comp=Z,692nm,21.0s,MS4.6
PDAR **Pinedale Array** 46.65 72 P P 11 20 50.0 +0.2
comp=Z,38nm,0.8s,mb5.3,baz=316,slow=4.1,SNR=174
PDAR ScP ScP 11 26 15.4 +3.1
comp=Z,0.4nm,0.9s,baz=252,slow=1.8,SNR=2.1
PDAR LR LR 11 37 59.1
comp=Z,522nm,21.3s,MS4.5,baz=312,slow=33
SHOC **Shoshone** 46.69 84 ⇑P P 11 20 50.1 -0.1
baz=47
R13A **O'Grain Ranch,** 46.70 80 ⇓P P 11 20 50.2 -0.1
baz=47,SNR=10.0
M17A **Scullys Gap (B** 46.74 74 ⇑P P 11 20 50.3 -0.2
baz=47,SNR=8.5
GSC **Goldstone** 46.74 85 ⇑P P 11 20 50.3 -0.3
baz=47,SNR=8.4
GSC **Goldstone** 46.74 85 eP P 11 20 50.5 -0.1
GSC pmax pmax
comp=Z,13nm,0.8s,mb4.9
GSC **Goldstone** 46.74 85 eP P 11 20 50.5 -0.1
comp=Z,13nm,0.8s,mb4.9
JLU **Jordanelle** 46.78 75 eP P 11 20 51.8 +0.9
comp=Z,17nm,0.9s,mb5.0
NLU **North Lily Min** 46.79 76 eP P 11 20 52.1 +1.2
comp=Z,15nm,0.9s,mb4.9
ZAK **Zakamensk** 46.85 301 ⇑iP P 11 20 52.4 +1.1
ZAK pmax pmax
comp=Z,28nm,1.3s,mb5.0
L18A **Fontenelle, Gr** 46.85 73 ⇑P P 11 20 51.4 0.0
baz=47,SNR=19
BFSC **Mount Baldy Ra** 46.89 86 ⇓P P 11 20 51.4 -0.4
baz=47
P15A **Leamington** 46.90 77 ⇓P P 11 20 51.6 -0.2
baz=47,SNR=7.8
O16A **Springville** 46.99 76 ⇓P P 11 20 52.4 -0.1
baz=47
DAU **Daniels Canyon** 47.01 75 eP P 11 20 54.0 +1.3
MPU **Maple Canyon** 47.02 76 eP P 11 20 53.9 +1.1
comp=Z,14nm,0.9s,mb4.9
K19A **Absolon Red Bu** 47.04 71 ⇑P P 11 20 52.3 -0.5
baz=47,SNR=44
M18A **Lyman** 47.13 74 ⇓P P 11 20 53.0 -0.6
baz=47,SNR=16
L19A **Farson** 47.16 72 ⇓P P 11 20 53.5 -0.3
baz=47,SNR=21
Q15A **Fillmore** 47.18 78 ⇑P P 11 20 54.0 0.0
baz=47
V11A **Goodsprings** 47.26 83 ⇑P P 11 20 54.5 -0.2
baz=47
ARUT **Antelope Range** 47.27 80 eP P 11 20 54.9 +0.1
ARUT pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
ARUT **Antelope Range** 47.27 80 eP P 11 20 54.9 +0.1
comp=Z,9.2nm,1.0s,mb4.7
MOY **Mondy** 47.38 304 eP P 11 20 56.1 +0.7
MOY pmax pmax
comp=Z,70nm,2.2s,mb5.2
K20A **Yellowstone Ra** 47.44 71 ⇓P P 11 20 55.0 -0.9
baz=47,SNR=14
U12A **Valley of Fire** 47.44 82 ⇑P P 11 20 56.4 +0.3
baz=47
O17A **Robinson Place** 47.46 75 ⇓P P 11 20 55.3 -0.8
baz=47
T13A **Saint George** 47.47 81 ⇓P P 11 20 56.3 +0.1
baz=47,SNR=17
CCUT **Cedar City** 47.47 80 eP P 11 20 56.9 +0.6
comp=Z,8.2nm,0.9s,mb4.7
HHC **Hu-ho-hao-te** 47.50 286 eP P 11 20 57.0 +0.6
HHC pP pP 11 21 09.4 +0.2

HHC sP sP 11 21 14.8 +0.2
HHC PcP PcP 11 22 28.2 +2.2
HHC PP PP 11 22 48.2 +0.4
HHC ScP ScP 11 26 17.2 +1.2
HHC PcS PcS 11 26 22.3 +1.0
HHC S **S** **11 27 46.0 -1.7**
HHC sS sS 11 28 07.2 -1.7
HHC ScS ScS 11 30 44.3 -1.5
HHC pmax pmax
comp=Z,18nm,1.0s,mb5.0
HHC pmax pmax
comp=Z,220nm,4.1s
HHC LR LR
comp=N,410nm,17.0s,MS4.6
HHC LR LR
comp=E,480nm,20.8s,MS4.6
HHC LR LR
comp=Z,620nm,20.8s,MS4.6
MVU Marysvale 47.59 78 PFAKE 11 21 10.0 +13
MVU LR LR
comp=Z,696nm,19.0s,MS4.7
MURC Murrieta 47.60 87 ⇓P **P** **11 20 56.8 -0.5**
baz=48
MSU Marysvale 47.61 78 *e*P **P** **11 20 58.2 +0.9**
M19A Rock Springs 47.63 73 ⇓P **P** **11 20 56.9 -0.6**
baz=48,SNR=6.8
N18A Larsen Ranch, 47.64 74 ⇑P **P** **11 20 57.1 -0.5**
baz=48,SNR=9.4
TMUT Trail Mountain 47.72 77 *e*P **P** **11 20 59.7 +1.5**
comp=Z,37nm,0.8s,mb5.5
SSE Sheshan 47.72 269 *e*P **P** **11 20 55.8 -2.5**
SSE pP pP 11 21 09.7 -1.3
SSE S **S** **11 27 48.1 -3.0**
SSE pmax pmax
comp=Z,17nm,0.7s,mb5.2
SSE pmax pmax
comp=Z,380nm,3.6s
SSE LR LR
comp=N,220nm,23.8s,MS4.1
SSE LR LR
comp=E,130nm,23.8s,MS4.1
SSE LR LR
comp=Z,230nm,25.3s,MS4.0
R15A Junction 47.73 78 ⇓P **P** **11 20 58.3 0.0**
baz=48
GMRC Granite Mounta 47.80 84 ⇑P **P** **11 20 58.2 -0.6**
baz=48
U13A Pakoon Wash 47.81 81 ⇓P **P** **11 20 58.9 -0.1**
baz=48,SNR=7.4
L20A Wamsutter 47.82 72 ⇑P **P** **11 20 58.5 -0.5**
baz=48,SNR=9.5
O18A Roosevelt 47.86 75 ⇓P **P** **11 20 59.2 -0.1**
baz=48
P17A Butcher Ranch, 47.90 76 ⇑P **P** **11 20 59.6 0.0**
baz=48,SNR=5.3
LDFC Landfair 47.95 84 *e*P **P** **11 20 59.8 -0.3**
T14A Hurricane 47.95 80 ⇑P **P** **11 21 00.0 0.0**
baz=48,SNR=9.1
Q16A Castle Valley 47.98 77 ⇑P **P** **11 21 00.3 +0.1**
baz=48,SNR=15
N19A John Jarvie Ra 47.98 74 ⇑P **P** **11 20 59.7 -0.6**
baz=48,SNR=9.5
S15A Panguitch 48.01 79 ⇓P **P** **11 21 01.0 +0.5**
baz=48,SNR=5.3
PFO Pinyon Flat Ob 48.06 86 ⇑P **P** **11 21 00.7 -0.2**
baz=48
PFO Pinyon Flat Ob 48.06 86 *e*P **P** **11 20 57.7 -3.2**
PFO pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
PFO MLR MLR
comp=Z,330nm,19.0s,MS4.3
PFO Pinyon Flat Ob 48.06 86 *e*P **P** **11 20 57.7 -3.2**
comp=Z,4.6nm,0.9s,mb4.5
PFO LR LR
comp=Z,330nm,19.0s,MS4.3
V13A Grand Canyon W 48.16 82 ⇑P **P** **11 21 01.0 -0.6**
baz=48
R16A Teasdale 48.17 78 ⇑P **P** **11 21 02.3 +0.6**
baz=48,SNR=17
M20A Sweetwater, Wa 48.22 72 ⇑P **P** **11 21 01.9 -0.2**
baz=48,SNR=24
SRU San Rafael 48.25 76 ⇑P **P** **11 21 02.3 -0.1**
baz=48,SNR=30
SRU San Rafael 48.25 76 *e*P **P** **11 21 03.4 +1.1**
SRU pmax pmax
comp=Z,27nm,0.9s,mb5.3
SRU San Rafael 48.25 76 *e*P **P** **11 21 03.4 +1.1**
comp=Z,27nm,0.9s,mb5.3
U14A Mt Trumbull 48.30 81 ⇓P **P** **11 21 02.7 0.0**
baz=48,SNR=5.6
O19A Miners Draw (B 48.38 74 ⇑P **P** **11 21 02.9 -0.3**
baz=48,SNR=29
T15A Red Dirt Ranch 48.41 80 ⇑P **P** **11 21 03.7 +0.2**
baz=48,SNR=12
L21A Rawlins 48.43 71 ⇓P **P** **11 21 03.4 -0.2**
baz=48,SNR=31
Q18A Rafter H Ranch 48.50 76 ⇓P **P** **11 21 03.8 -0.4**
baz=48,SNR=11
BAR Barrett 48.54 87 *e*P **P** **11 21 04.5 -0.1**
comp=Z,16nm,1.2s,mb4.9
NJ2 Nanjing 48.55 272 *e*P **P** **11 21 08.1 +3.4**
NJ2 pP pP 11 21 20.6 +3.2
NJ2 sP sP 11 21 26.1 +3.3
NJ2 PP PP 11 23 01.0 +3.4
NJ2 pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
NJ2 pmax pmax
comp=Z,460nm,3.7s
NJ2 LR LR
comp=N,310nm,18.8s,MS4.5
NJ2 LR LR
comp=E,370nm,21.4s,MS4.5
NJ2 LR LR
comp=Z,430nm,24.4s,MS4.3
MONP Monument Peak 48.56 87 ⇓P **P** **11 21 04.0 -0.7**
baz=48,SNR=6.7
R17A Hanksville Air 48.57 77 ⇓P **P** **11 21 04.6 -0.1**
baz=48,SNR=25
N20A Spence Gulch, 48.57 73 ⇓P **P** **11 21 05.0 +0.2**
baz=48,SNR=24
BTO Baotou 48.58 287 *e*P **P** **11 21 05.4 +0.6**
M21A Separation Pea 48.65 72 ⇑P **P** **11 21 04.7 -0.6**
baz=48,SNR=11
BC3 Big Chuckawall 48.66 85 ⇑P **P** **11 21 05.2 -0.3**
baz=48
RWWY Rawlins 48.69 72 *e*P **P** **11 21 06.2 +0.6**
comp=Z,28nm,0.9s,mb5.3
W13A Hualapai Mount 48.70 83 ⇑P **P** **11 21 05.3 -0.5**
baz=49,SNR=8.1
U15A North Rim 48.84 80 ⇑P **P** **11 21 07.0 +0.1**
baz=49,SNR=31
P19A Cripple Cowboy 48.87 75 ⇑P **P** **11 21 06.9 -0.2**
baz=49,SNR=22
L22A Ellis Ranch, M 48.95 71 ⇑P **P** **11 21 07.4 -0.2**
baz=49
S17A Black Ridge (B 49.00 78 ⇑P **P** **11 21 07.5 -0.6**
baz=49
O20A White River Ci 49.01 74 ⇑P **P** **11 21 07.8 -0.4**
baz=49,SNR=35
PDMCI Parker Dam,Lak 49.06 84 ⇓P **P** **11 21 08.1 -0.5**
baz=49
X13A Yucca 49.06 83 ⇓P **P** **11 21 08.2 -0.4**
baz=49
N21A Black Mountain 49.07 73 ⇑P **P** **11 21 08.2 -0.4**
baz=49,SNR=17
R18A Canyonlands Na 49.09 77 ⇑P **P** **11 21 08.0 -0.7**
baz=49,SNR=25
RSSD Black Hills 49.11 67 *e*P **P** **11 21 07.8 -1.0**
RSSD pmax pmax
comp=Z,44nm,1.6s,mb5.2
RSSD MLR MLR
comp=Z,548nm,22.0s,MS4.5
RSSD Black Hills 49.11 67 *e*P **P** **11 21 07.8 -1.0**
comp=Z,44nm,1.6s,mb5.2
RSSD LR LR
comp=Z,548nm,22.0s,MS4.5
Q19A Hogan Spring (49.12 76 ⇓P **P** **11 21 08.3 -0.6**
baz=49,SNR=29
W14A Seligman 49.13 82 ⇑P **P** **11 21 09.0 -0.1**
baz=49
Y12C Blythe 49.18 85 ⇑P **P** **11 21 09.2 -0.4**
baz=49
V15A Kaibab Nationa 49.31 81 ⇑P **P** **11 21 10.6 +0.2**
baz=49,SNR=32
O21A Pagoda 49.43 73 ⇑P **P** **11 21 11.0 -0.3**
baz=49,SNR=9.3
GLA Glamis 49.45 85 ⇑P **P** **11 21 11.1 -0.4**
baz=49
GLA Glamis 49.45 85 *e*P **P** **11 21 11.6 0.0**
GLA pmax pmax
comp=Z,14nm,0.8s,mb5.0
GLA Glamis 49.45 85 *e*P **P** **11 21 11.6 0.0**
comp=Z,14nm,0.8s,mb5.0
S18A Hurst Farm, Bl 49.46 77 ⇑P **P** **11 21 11.1 -0.5**
baz=49,SNR=18
R19A Curley Farm, L 49.54 76 ⇑P **P** **11 21 11.5 -0.6**
baz=49,SNR=27
N22A Wattenberg Ran 49.68 72 ⇓P **P** **11 21 13.1 -0.1**
baz=50,SNR=24
PV04 Paradox Valley 49.69 76 *e*P **P** **11 21 13.5 +0.2**
Q20A Ridgley Place, 49.71 75 ⇑P **P** **11 21 12.8 -0.7**
baz=50,SNR=5.9
X14A Yava 49.73 83 ⇑P **P** **11 21 13.5 -0.2**
baz=50
T18A Mexican Hat 49.89 78 ⇑P **P** **11 21 13.8 -1.1**
baz=50,SNR=17
S19A Harvey Farm, M 49.95 77 ⇓P **P** **11 21 14.7 -0.6**
baz=50,SNR=19
WUAZ Wupatki 50.00 81 ⇑P **P** **11 21 15.2 -0.5**
baz=50
WUAZ Wupatki 50.00 81 PFAKE 11 21 30.0 +14
WUAZ LR LR
comp=Z,558nm,19.0s,MS4.6
Y14A Wickenburg 50.01 83 ⇓P **P** **11 21 15.4 -0.4**
baz=50
KBS Kingsbay 50.03 357 *c*e**P** **P** **11 21 16.1 +0.7**
KBS pmax pmax
comp=Z,42nm,0.7s,mb5.6
KBS Kingsbay 50.03 357 *e*P **P** **11 21 16.2 +0.8**
comp=Z,40nm,0.7s,mb5.6
KBS LR LR
comp=Z,230nm,19.0s,MS4.2
ULM Lac du Bonnet 50.05 56 P **P** **11 21 14.8 -1.0**
comp=Z,5.8nm,1.0s,mb4.6,baz=317,slow=9.1,SNR=4.3
ULM LR LR 11 43 48.0
comp=Z,682nm,18.5s,MS4.7,baz=18,slow=38
PV01 Paradox Valley 50.06 76 *e*P **P** **11 21 16.1 0.0**
comp=Z,2μm,0.8s
Z13A Yuma Proving G 50.09 84 ⇑P **P** **11 21 16.1 -0.4**
baz=50
X15A Humboldt 50.13 82 ⇓P **P** **11 21 16.5 -0.2**
baz=50
R20A Redvale 50.14 76 ⇑P **P** **11 21 16.4 -0.4**
baz=50,SNR=14
W16A Flagstaff 50.17 81 ⇓P **P** **11 21 17.1 0.0**
baz=50,SNR=6.6
V17A Tonalea, Kykot 50.29 80 ⇓P **P** **11 21 17.8 -0.2**
baz=50,SNR=19
U18A Rough Rock, Ch 50.35 79 ⇑P **P** **11 21 18.1 -0.2**
baz=50
SMCO Snowmass 50.37 74 *e*P **P** **11 21 18.8 +0.3**
comp=Z,7.3nm,0.8s,mb4.8
Y15A Casa Rosa Ranc 50.42 83 ⇑P **P** **11 21 19.0 +0.1**
baz=50
R21A Cimarron 50.53 75 ⇓P **P** **11 21 19.6 -0.1**
baz=50,SNR=5.8
T19A Beclabito 50.61 78 ⇓P **P** **11 21 19.6 -0.7**
baz=50,SNR=13
Q22A Crested Butte, 50.61 74 ⇑P **P** **11 21 20.0 -0.2**
baz=50
X16A Lo Mia Camp, P 50.67 82 ⇑P **P** **11 21 20.8 0.0**
baz=50,SNR=11
MVCO Mesa Verde 50.69 77 ⇓P **P** **11 21 20.4 -0.5**
baz=50,SNR=11
MVCO Mesa Verde 50.69 77 *e*P **P** **11 21 21.0 +0.1**
comp=Z,24nm,1.1s,mb5.0
MVCO LR LR
comp=Z,538nm,19.0s,MS4.6
V18A Ganado 50.77 79 ⇑P **P** **11 21 21.5 0.0**
baz=51,SNR=8.9
ISCO Idaho Springs 50.80 72 *e*P **P** **11 21 22.6 +0.9**
ISCO pmax pmax
comp=Z,16nm,1.1s,mb4.9
ISCO MLR MLR
comp=Z,587nm,20.0s,MS4.6
ISCO Idaho Springs 50.80 72 *e*P **P** **11 21 22.6 +0.9**
comp=Z,16nm,1.1s,mb4.8
ISCO LR LR
comp=Z,587nm,20.0s,MS4.6
S21A Coal Bank Pass 50.83 76 ⇓P **P** **11 21 22.2 +0.3**
baz=51,SNR=5.9
U19A Dine' College, 50.84 78 ⇓P **P** **11 21 22.0 -0.1**
baz=51
114A Black Gap (USA 50.87 84 ⇑P **P** **11 21 22.1 -0.2**
baz=51
R22A Saguache, Gunn 51.10 75 ⇓P **P** **11 21 24.5 +0.5**
baz=51,SNR=11
AGMN Agassiz Nation 51.20 58 *e*P **P** **11 21 23.6 -1.0**
comp=Z,13nm,1.0s,mb4.8
AGMN LR LR
comp=Z,577nm,19.0s,MS4.6
115A Sonoran Desert 51.31 84 ⇓P **P** **11 21 25.5 -0.1**
baz=51
214A Organ Pipe Nat 51.45 85 ⇓P **P** **11 21 26.2 -0.4**
baz=51
Y17A Roosevelt 51.52 82 ⇑P **P** **11 21 27.0 -0.2**
baz=51,SNR=7.3
X18A Snowflake 51.53 81 ⇑P **P** **11 21 27.3 +0.1**
baz=51,SNR=7.6
U21A Nagezi 51.71 77 ⇓P **P** **11 21 28.6 0.0**
baz=52,SNR=12
DAG Danmarks Havn 51.77 6 *i*P **P** **11 21 27.0 -1.5**
T22A Edith 51.79 76 ⇓P **P** **11 21 29.4 +0.2**
baz=52,SNR=15
TATO Taipei 51.81 263 PFAKE 11 21 40.0 +11
TATO LR LR
comp=Z,417nm,20.0s,MS4.5
Y18A Canyon Day Jun 51.97 81 ⇓P **P** **11 21 30.7 +0.2**
baz=52,SNR=11
Z17A San Carlos Hig 52.02 82 ⇑P **P** **11 21 31.1 +0.2**
baz=52
W20A Ramah 52.03 79 ⇓P **P** **11 21 31.2 +0.2**
baz=52
YHNB Yeheng 52.11 263 PFAKE 11 21 40.0 +8.3
YHNB LR LR
comp=Z,555nm,19.0s,MS4.6
V21A Milan 52.12 78 ⇓P **P** **11 21 31.7 0.0**
baz=52
SDCO Great Sand Dun 52.17 74 *e*P **P** **11 21 35.3 +3.3**
comp=Z,17nm,1.1s,mb4.9
SDCO LR LR
comp=Z,307nm,20.0s,MS4.3
OGNE Ogallala 52.22 69 PFAKE 11 21 40.0 +7.7
OGNE LR LR
comp=Z,379nm,20.0s,MS4.4
U22A Llaves 52.23 77 ⇑P **P** **11 21 32.6 +0.1**
baz=52
117A Oracle 52.33 83 ⇓P **P** **11 21 33.4 +0.1**
baz=52
Y19A Nutrioso 52.34 81 ⇓P **P** **11 21 33.0 -0.2**
baz=52
WHN Wuhan 52.40 274 P **P** **11 21 33.0 -0.8**
WHN S **S** **11 28 51.6 -4.7**
WHN LR LR
comp=N,870nm,11.6s
WHN LR LR
comp=E,840nm,19.3s
WHN LR LR
comp=Z,720nm,20.4s
X20A Quemado 52.42 80 ⇑P **P** **11 21 34.1 +0.3**
baz=52,SNR=9.9
Z18A Geronimo 52.43 82 ⇑P **P** **11 21 34.0 +0.1**
baz=52
TUC Tucson 52.48 83 *e*P **P** **11 21 33.1 -1.2**
TUC MLR MLR
comp=Z,312nm,22.0s,MS4.3
V22A San Miguel Ran 52.50 77 ⇑P **P** **11 21 34.2 -0.3**
baz=52
U23A El Rito 52.67 76 ⇓P **P** **11 21 35.8 +0.1**
baz=52,SNR=28
118A Homack Ranch, 52.77 82 ⇑P **P** **11 21 36.3 -0.2**
baz=53,SNR=11
217A Green Valley 52.82 84 ⇓P **P** **11 21 36.9 0.0**
baz=53
Y20A Horse Springs, 52.91 80 ⇑P **P** **11 21 37.8 +0.2**
baz=53
X21A Alamocita Cree 52.92 79 ⇑P **P** **11 21 37.7 +0.1**
baz=53,SNR=25
V23A Ortiz Mt. (NFS 53.06 77 ⇓P **P** **11 21 38.7 +0.1**
baz=53
119A Ashpeak Ranch, 53.10 82 ⇑P **P** **11 21 39.0 +0.1**
baz=53
218A Dragoon 53.17 83 ⇑P **P** **11 21 39.2 -0.3**
baz=53,SNR=12
T25A Trinidad 53.23 74 ⇑P **P** **11 21 39.8 0.0**
baz=53,SNR=14
Y21A Point of Rocks 53.28 79 ⇑P **P** **11 21 40.4 +0.2**
baz=53,SNR=12
LAZ Ladron 53.35 79 *e*P **P** **11 21 41.4 +0.6**
comp=Z,3.2nm,0.8s,mb4.3
X22A Bernardo 53.36 79 ⇑P **P** **11 21 40.9 +0.1**
baz=53
ANMO Albuquerque 53.41 78 *e*P **P** **11 21 41.5 +0.3**
ANMO pmax pmax
comp=Z,1.0nm,0.9s
ANMO MLR MLR
comp=Z,611nm,19.0s
ANMO Albuquerque 53.41 78 *e*P **P** **11 21 41.5 +0.3**
comp=Z,1.3nm,0.9s,mb3.9
ANMO LR LR
comp=Z,611nm,19.0s,MS4.7
XAN Xi'an 53.44 281 P **P** **11 21 40.5 -0.9**
XAN pP pP 11 21 55.3 +1.0
XAN S **S** **11 29 26.8 +16**
XAN ScS ScS 11 31 43.3 +17
XAN SS SS 11 33 22.8 +32
XAN pmax pmax
comp=Z,4.0nm,1.5s,mb4.1
XAN pmax pmax
comp=Z,40nm,10.8s
XAN LR LR
comp=N,240nm,17.8s,MS4.3
XAN LR LR
comp=E,140nm,21.1s,MS4.3
XAN LR LR
comp=Z,190nm,22.0s,MS4.1
XAN Xi'an 53.44 281 P **P** **11 21 40.1 -1.3**
XAN pP pP 11 21 52.8 -1.5
XAN pmax pmax
comp=Z,4.0nm,1.8s,mb4.0
XAN pmax pmax
comp=Z,40nm,10.8s
XAN LR LR
comp=N,240nm,17.8s,MS4.3
XAN LR LR
comp=E,140nm,21.1s,MS4.3
XAN LR LR
comp=Z,190nm,22.0s,MS4.1
W23A Werner Place, 53.46 77 ⇓P **P** **11 21 41.4 -0.1**
baz=53
318A Bisbee 53.56 83 ⇑P **P** **11 21 41.8 -0.5**
baz=53,SNR=6.5
ECSD EROS Data Cent 53.59 63 *e*P **P** **11 21 40.8 -1.5**
comp=Z,24nm,1.0s,mb5.1
ECSD LR LR
comp=Z,683nm,19.0s,MS4.7
SUMG Summit 53.61 14 *e*P **P** **11 21 41.7 -0.4**
comp=Z,34nm,1.0s,mb5.2
219A White Tail Can 53.64 82 ⇑P **P** **11 21 42.8 -0.2**
baz=54
120A U Bar Ranch, L 53.66 81 ⇑P **P** **11 21 42.9 -0.2**
baz=54,SNR=8.3
U25A Circle Dot Ran 53.71 75 ⇑P **P** **11 21 43.2 -0.1**
baz=54,SNR=17
LPM Los Pinos Moun 53.73 78 *e*P **P** **11 21 44.1 +0.7**
EYMN Ely 53.73 56 *e*P **P** **11 21 42.7 -0.7**
comp=Z,22nm,1.0s,mb5.0
EYMN LR LR
comp=Z,440nm,20.0s,MS4.5
Z21A St. Cloud Mine 53.75 80 ⇓P **P** **11 21 44.2 +0.5**
baz=54
Y22A Socorro 53.77 79 ⇓P **P** **11 21 44.0 +0.2**
baz=54,SNR=12
X23A Hourglass Bar 53.82 78 ⇑P **P** **11 21 44.0 -0.2**
baz=54
BNM Barren Site 53.84 79 *e*P **P** **11 21 44.6 +0.3**
comp=Z,11nm,1.2s,mb4.7
W24A Lazy 6 Ranch, 53.88 77 ⇓P **P** **11 21 44.7 +0.1**
baz=54,SNR=17
V25A Rancho No Teng 53.95 76 ⇑P **P** **11 21 45.2 +0.1**
baz=54,SNR=15
ZAA0 Zalesovo Array 54.01 313 *e*P **P** **11 21 44.7 -0.6**
ZAA0 *e*PP PP 11 23 44.5 -2.0
ZAA0 *e*ScP ScP 11 26 43.2 -0.6
ZALV Zalesovo Beam 54.01 313 P **P** **11 21 44.6 -0.6**
comp=Z,4.1nm,0.8s,mb4.4,baz=44,slow=8.1,SNR=12
ZALV PcP PcP 11 22 50.5 +0.7
comp=Z,8.1nm,0.8s,baz=24,slow=3.3,SNR=10
ZALV LR LR 11 46 13.1
comp=Z,383nm,20.3s,MS4.5,baz=61,slow=38
ZALV Zalesovo Beam 54.01 313 P **P** **11 21 44.7 -0.5**
ZALV 11 22 50.5
ZALV pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
ZALV MLR MLR
comp=Z,383nm,20.3s,MS4.5
319A Douglas 54.05 83 ⇑P **P** **11 21 45.4 -0.5**
baz=54
U26A Atchley Ranch, 54.12 75 ⇓P **P** **11 21 46.2 -0.1**
baz=54,SNR=17
NVS Novosibirsk 54.15 315 *e*P **P** **11 21 44.4 -1.9**
NVS *e* 11 22 50.8
NVS pmax pmax
comp=Z,21nm,1.4s,mb4.9
NVS pmax pmax
comp=E,15nm,1.3s
220A Playas Peak, P 54.16 82 ⇓P **P** **11 21 46.4 -0.3**
baz=54,SNR=11
121A Cookes Peak, D 54.20 81 ⇑P **P** **11 21 46.6 -0.3**
baz=54
Z22A Elephant Butte 54.23 80 ⇑P **P** **11 21 47.2 +0.1**
baz=54,SNR=8.1
Y23A Lovelace Mesa, 54.34 78 ⇑P **P** **11 21 48.1 +0.1**
baz=54,SNR=14
W25A X Bar L Ranch, 54.46 76 ⇑P **P** **11 21 48.8 0.0**
baz=54,SNR=10
V26A Tequesquite Ra 54.49 75 ⇑P **P** **11 21 48.7 -0.4**
baz=54,SNR=5.0
122A Conniff Cattle 54.58 80 ⇑P **P** **11 21 50.0 +0.3**
baz=54
Y24A Capitan 54.72 78 ⇓P **P** **11 21 50.5 -0.2**
baz=55,SNR=28
CBKS Cedar Bluff 54.94 70 *e*P **P** **11 21 52.7 +0.5**
CBKS pmax pmax
comp=Z,44nm,0.9s,mb5.5
CBKS MLR MLR
comp=Z,373nm,19.0s,MS4.5
CBKS Cedar Bluff 54.94 70 *e*P **P** **11 21 52.7 +0.5**
comp=Z,44nm,0.9s,mb5.5
CBKS LR LR
comp=Z,373nm,19.0s,MS4.5
Z24A Sheeppen Canyo 55.16 78 ⇑P **P** **11 21 53.6 -0.3**
baz=55,SNR=8.2
Y25A Mesa, Roswell 55.18 77 ⇑P **P** **11 21 53.7 -0.3**
baz=55,SNR=13
LZH Lanzhou 55.19 286 P **P** **11 21 54.7 +0.6**
LZH pP pP 11 22 05.4 -1.7
LZH sP sP 11 22 09.9 -2.5
LZH PP PP 11 23 59.5 +1.9
LZH *e*S **S** **11 29 31.0 -2.9**
LZH sS sS 11 29 52.0 -3.5
LZH SS SS 11 33 15.0 -2.9
LZH pmax pmax
comp=Z,32nm,1.0s,mb5.3
LZH pmax pmax
comp=Z,230nm,5.1s
LZH LR LR
comp=E,710nm,15.4s
LZH LR LR
comp=Z,970nm,16.6s,MS5.0
X26A CR and CF Fran 55.30 76 ⇑P **P** **11 21 54.9 0.0**
baz=55
GTA Gaotai 55.41 292 P **P** **11 21 55.8 +0.2**
GTA pP pP 11 22 05.1 -3.5
GTA sP sP 11 22 09.3 -4.6
GTA PP PP 11 24 00.3 +0.9
GTA S **S** **11 29 36.0 -0.7**
GTA sS sS 11 29 56.2 -2.1
GTA SS SS 11 33 19.8 -1.4
GTA pmax pmax
comp=Z,25nm,1.1s,mb5.2
GTA pmax pmax
comp=Z,160nm,4.5s
GTA LR LR
comp=N,530nm,16.9s,MS4.8
GTA LR LR
comp=E,520nm,16.4s,MS4.8
GTA LR LR
comp=Z,820nm,16.1s,MS4.9
124A Stringfield Ra 55.53 79 ⇑P **P** **11 21 56.1 -0.5**
baz=55,SNR=6.1
Z25A Roswell 55.60 78 ⇓P **P** **11 21 57.0 -0.1**

baz=55
ENH Enshi 55.64 277 PFAKE 11 22 10.0 +13
ENH LR LR
comp=Z,300nm,19.0s,MS4.4
224A Cornudas Mount 55.92 80 ⇑P **P 11 21 58.9 -0.5**
baz=56
SFJD Kangerlussuaq 55.98 22 PFAKE 11 22 10.0 +11
SFJD LR LR
comp=Z,593nm,19.0s,MS4.7
125A Gardner Draw, 56.05 79 ⇓P **P 11 21 59.8 -0.6**
baz=56,SNR=13
Z26A Caprock 56.06 78 ⇑P **P 11 21 59.7 -0.7**
baz=56
Y27A Causey 56.15 76 ⇓P **P 11 22 00.4 -0.6**
baz=56,SNR=20
COWI Conover 56.16 57 PFAKE 11 22 10.0 +9.1
COWI LR LR
comp=Z,523nm,22.0s,MS4.6
MNTX Cornudas Mount 56.26 80 *e*P **P 11 22 01.4 -0.4**
comp=Z,11nm,1.0s,mb4.8
MNTX LR LR
comp=Z,256nm,21.0s,MS4.3
225A Deer Hill, Car 56.33 79 ⇑P **P 11 22 02.0 -0.3**
baz=56
MSTX Muleshoe 56.33 76 ⇑P **P 11 22 01.7 -0.6**
baz=56,SNR=8.7
324A Moseley Ranch, 56.37 80 ⇑P **P 11 22 02.0 -0.6**
baz=56
AMTX Amarillo 56.38 75 PFAKE 11 22 20.0 +17
AMTX LR LR
comp=Z,436nm,19.0s,MS4.6
126A Clayton Basin, 56.46 78 ⇑P **P 11 22 02.9 -0.3**
baz=56
Z27A Tatum 56.50 77 ⇓P **P 11 22 02.7 -0.8**
baz=56,SNR=5.9
GDL2 Guadalupe Moun 56.55 79 *e*P **P 11 22 03.9 0.0**
KSU1 Kansas State U 56.59 68 *e*P **P 11 22 03.6 -0.4**
comp=Z,29nm,0.8s,mb5.4
KSU1 LR LR
comp=Z,444nm,21.0s,MS4.5
SCIA State Center 56.68 63 *e*P **P 11 22 04.4 -0.3**
comp=Z,49nm,0.9s,mb5.5
SCIA LR LR
comp=Z,706nm,19.0s,MS4.8
325A Bean Ranch, Si 56.74 80 ⇓P **P 11 22 04.7 -0.5**
baz=57,SNR=15
226A Malaga, Loving 56.81 79 ⇑P **P 11 22 05.1 -0.6**
baz=57,SNR=7.8
425A Indio Mountain 57.13 80 ⇓P **P 11 22 07.7 -0.3**
baz=57,SNR=11
JFWS Jewell Farm 57.66 60 *e*P **P 11 22 09.8 -1.7**
JFWS pmax pmax
comp=Z,42nm,1.2s,mb5.3
JFWS MLR MLR
comp=Z,765nm,21.0s,MS4.8
JFWS Jewell Farm 57.66 60 *e*P **P 11 22 09.8 -1.7**
comp=Z,42nm,1.2s,mb5.3
JFWS LR LR
comp=Z,765nm,21.0s,MS4.8
426A McDonald Obser 57.81 80 ⇓P **P 11 22 11.9 -0.9**
baz=58,SNR=13
KEV Kevo 57.91 350 PFAKE 11 22 30.0 +17
KEV LR LR
comp=Z,420nm,19.0s,MS4.6
328A Wristen Ranch, 58.07 78 ⇓P **P 11 22 13.4 -1.2**
baz=58,SNR=17
427A Hayter Ranch, 58.07 79 ⇓P **P 11 22 13.9 -0.8**
baz=58,SNR=5.2
526A Mary Lane Ranc 58.19 80 ⇑P **P 11 22 14.9 -0.5**
baz=58,SNR=13
WMOK Wichita Mounta 58.23 73 *e*P **P 11 22 15.7 0.0**
WMOK pmax pmax
comp=Z,13nm,0.9s,mb5.0
WMOK MLR MLR
comp=Z,519nm,19.0s,MS4.7
WMOK Wichita Mounta 58.23 73 *e*P **P 11 22 15.7 0.0**
comp=Z,13nm,0.9s,mb5.0
WMOK LR LR
comp=Z,519nm,19.0s,MS4.7
ARCES ARCESS Array B 58.29 350 P **P 11 22 14.7 -0.9**
comp=Z,13nm,0.8s,mb5.0,baz=9.9,slow=7.8,SNR=27
ARCES LR LR 11 51 33.7
comp=Z,289nm,19.1s,MS4.4,baz=298,slow=40
ARCES ARCESS Array B 58.29 350 P **P 11 22 14.7 -0.9**
ARCES pmax pmax
comp=Z,13nm,0.8s
ARCES MLR MLR
comp=Z,289nm,19.1s
ARE0 ARCESS Array S 58.29 350 *e*P **P 11 22 14.9 -0.7**
527A Woodward Ranch 58.43 80 ⇑P **P 11 22 16.2 -1.0**
baz=58,SNR=8.8
626A Big Bend Ranch 58.52 81 ⇑P **P 11 22 17.0 -0.7**
baz=58,SNR=14
428A Kincaid Ranch, 58.60 79 ⇑P **P 11 22 17.6 -0.7**
baz=58,SNR=16
LVZ Lovozero 58.62 346 PFAKE 11 22 30.0 +12
LVZ LR LR
comp=Z,587nm,19.0s,MS4.7
CD2 Chengdu 58.76 282 P **P 11 22 19.5 +0.1**
CD2 pP pP 11 22 33.5 +1.0
CD2 sP sP 11 22 39.7 +1.9
CD2 PP PP 11 24 31.3 +1.9
CD2 PcS PcS 11 27 09.0 -1.6
CD2 S **S 11 30 18.5 -2.5**
CD2 sS sS 11 30 42.1 -0.7
CD2 SS SS 11 34 12.5 -1.7
CD2 pmax pmax
comp=Z,20nm,0.6s,mb5.3
CD2 pmax pmax
comp=Z,130nm,6.2s
CD2 LR LR
comp=N,500nm,20.2s
CD2 LR LR
comp=Z,580nm,20.2s,MS4.7
528A Cox Ranch, San 58.93 79 ⇑P **P 11 22 19.9 -0.7**
baz=59,SNR=15
TXAR Lajitas Array 58.96 81 P **P 11 22 19.9 -1.0**
comp=Z,3.3nm,0.7s,mb4.5,baz=298,slow=4.8,SNR=31
TXAR LR LR 11 47 05.9
comp=Z,248nm,18.3s,MS4.4,baz=0.0,slow=35
KURK Kurchatov 59.00 314 P **P 11 22 20.6 -0.2**
comp=Z,230nm,0.6s,mb6.4,SNR=19
KURK Kurchatov 59.00 314 P **P 11 22 20.4 -0.3**
comp=Z,38nm,0.8s,mb5.5,baz=43,slow=6.7,SNR=9.7
KURK PcP PcP 11 23 09.7 +0.4
comp=Z,5.7nm,0.9s,baz=45,slow=4.5,SNR=5.8
KURK LR LR 11 48 17.8
comp=Z,304nm,21.9s,MS4.4,baz=55,slow=36
KURK Kurchatov 59.00 314*c i*P **P 11 22 20.2 -0.6**
KURK pmax pmax
comp=Z,42nm,1.0s,mb5.4
KURK Kurchatov 59.00 314 *e*P **P 11 22 20.1 -0.7**
comp=Z,48nm,1.1s,mb5.4
KURK LR LR
comp=Z,782nm,19.0s,MS4.8
627A Terlingua Ranc 59.05 80 ⇓P **P 11 22 20.6 -0.9**
baz=59,SNR=16
APA Apatity 59.11 346⇑*i*P **P 11 22 21.0 -0.3**
APA *e* 11 23 10.0
APA *e* 11 24 38.0
APA pmax pmax
comp=Z,54nm,14.0s
APA MLR MLR
comp=Z,400nm,16.0s,MS4.6
WMQ Urumqi 59.25 303 P **P 11 22 23.0 +0.4**
WMQ pP pP 11 22 36.0 +0.3
WMQ sP sP 11 22 41.0 0.0
WMQ PP PP 11 24 36.0 +2.6
WMQ S **S 11 30 25.0 -2.0**
WMQ ScS ScS 11 32 06.0 -2.5
WMQ pmax pmax
comp=Z,64nm,1.0s,mb5.6
WMQ pmax pmax
comp=Z,150nm,6.0s
WMQ LR LR
comp=N,950nm,18.0s,MS5.1
WMQ LR LR
comp=E,840nm,18.0s,MS5.1
WMQ LR LR
comp=Z,1μm,18.0s,MS5.0
628A Black Gap, Mar 59.34 80 ⇑P **P 11 22 22.6 -0.8**
baz=59,SNR=13
GLMI Grayling 59.37 56 PFAKE 11 22 40.0 +17
GLMI LR LR
comp=Z,1μm,20.0s,MS5.0
FUNA Funafuti 59.42 182 PFAKE 11 22 40.0 +16
FUNA LR LR
comp=Z,10μm,20.0s,MS6.0
HDIL Hopedale 59.77 62 *e*P **P 11 22 25.7 -0.5**
comp=Z,94nm,0.9s,mb5.8
HDIL LR LR
comp=Z,581nm,19.0s,MS4.7
MK31 Makanchi Array 59.98 308 *e*P **P 11 22 27.1 -0.5**
MKAR Makanchi Array 59.98 308 P **P 11 22 26.9 -0.7**
comp=Z,14nm,0.8s,mb5.0,baz=54,slow=11,SNR=58
MKAR LR LR 11 49 43.0
comp=Z,515nm,19.7s,MS4.7,baz=42,slow=37
MKAR Makanchi Array 59.98 308 P **P 11 22 26.9 -0.7**
MKAR pmax pmax
comp=Z,14nm,0.8s
MKAR MLR MLR
comp=Z,515nm,19.7s
GYA Guiyang 60.08 276 P **P 11 22 30.0 +1.4**
GYA pP pP 11 22 44.6 +2.9
GYA sP sP 11 22 50.4 +3.4
GYA PcP PcP 11 23 14.2 +0.2
GYA PP PP 11 24 44.8 +3.6
GYA ScP ScP 11 27 10.0 -1.0
GYA PcS PcS 11 27 16.9 +0.4
GYA S **S 11 30 36.0 -2.1**
GYA SS SS 11 34 35.5 +0.4
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,120nm,5.2s
GYA LR LR
comp=N,530nm,18.2s,MS4.9
GYA LR LR
comp=E,620nm,19.0s,MS4.9
GYA LR LR
comp=Z,580nm,18.4s,MS4.8
SCHQ Schefferville 60.37 38 P **P 11 22 29.4 -0.8**
comp=Z,24nm,1.0s,mb5.2,baz=328,slow=7.5,SNR=16
SCHQ LR LR 11 50 24.2
comp=Z,944nm,18.5s,MS5.0,baz=96,slow=38
SCHQ Schefferville 60.37 38 *e*P **P 11 22 29.2 -0.9**
SCHQ LR LR
comp=Z,1μm,19.0s,MS5.1
JCT Junction City 60.55 77 *e*P **P 11 22 30.7 -1.0**
JCT pmax pmax
comp=Z,13nm,0.9s,mb5.1
JCT MLR MLR
comp=Z,577nm,19.0s,MS4.7
JCT Junction City 60.55 77 *e*P **P 11 22 30.7 -1.1**
comp=Z,13nm,0.9s,mb5.1
JCT LR LR
comp=Z,577nm,19.0s,MS4.7
SOKR Solikamsk 60.72 331 *e*P **P 11 22 32.3 -0.1**
SOKR pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
SOKR MLR MLR
comp=Z,500nm,18.0s,MS4.7
BVAR Borovoye Array 60.90 320 P **P 11 22 32.9 -0.9**
comp=Z,6.9nm,0.7s,mb4.9,baz=50,slow=7.9,SNR=28
BVAR PcP PcP 11 23 17.4 +0.4
comp=Z,7.3nm,0.7s,baz=67,slow=3.1,SNR=9.2
BVAR Borovoye Array 60.90 320 P **P 11 22 32.9 -0.9**
BVAR 11 23 17.4
BVAR pmax pmax
comp=Z,7.0nm,0.7s
FVM French Village 60.91 65 *e*P **P 11 22 33.1 -1.0**
FVM pmax pmax
comp=Z,86nm,1.7s,mb5.6
FVM French Village 60.91 65 *e*P **P 11 22 33.1 -1.0**
comp=Z,86nm,1.7s,mb5.6
BRVK Borovoye 60.92 320*c i*P **P 11 22 33.5 -0.4**
BRVK pmax pmax
comp=Z,32nm,1.7s,mb5.2
BRVK Borovoye 60.92 320 *e*P **P 11 22 33.5 -0.4**
BRVK LR LR
comp=Z,774nm,22.0s,MS4.8
MIAR Mount Ida 61.47 70 *e*P **P 11 22 37.5 -0.4**
MIAR MLR MLR
comp=Z,465nm,20.0s,MS4.6
AAM Ann Arbor 61.62 57 *e*P **P 11 22 39.1 +0.3**
AAM MLR MLR
comp=Z,446nm,21.0s,MS4.6
SVE Sverdlovsk 61.66 327⇑*e*P **P 11 22 39.3 +0.5**
SVE *e* 11 23 18.7
SVE *e*S **S 11 31 16.5 +19**
SVE *e*SSS 11 37 38.3
SVE pmax pmax
comp=Z,11nm,0.9s,mb5.0
SVE MLR MLR
comp=Z,779nm,20.0s,MS4.9
OLIL Olney 61.70 63 *e*P **P 11 22 38.8 -0.6**
comp=Z,81nm,0.9s,mb5.8
SIUC Southern Illin 61.78 64 *e*P **P 11 22 39.5 -0.4**
comp=Z,26nm,1.1s,mb5.3
UALR University of 62.03 69 *e*P **P 11 22 42.1 +0.4**
comp=Z,36nm,1.5s,mb5.3
PARMO Parma 62.21 65 *e*P **P 11 22 43.1 +0.2**
BLO Bloomington 62.27 61 *e*P **P 11 22 42.9 -0.3**
BLO pmax pmax
comp=Z,76nm,1.0s,mb5.8
BLO Bloomington 62.27 61 *e*P **P 11 22 42.9 -0.3**
comp=Z,76nm,1.0s,mb5.8
HBAR Harrisburg 62.47 67 *e*P **P 11 22 44.3 -0.3**
USIN University of 62.48 63 *e*P **P 11 22 44.4 -0.3**
comp=Z,101nm,1.1s,mb5.9
ARU Arti 62.67 328*c i*P **P 11 22 45.4 -0.2**
ARU *e* 11 23 20.6
ARU S **S 11 31 12.7 +2.5**
ARU pmax pmax
comp=Z,19nm,1.7s,mb5.0
ARU MLR MLR
comp=Z,626nm,18.0s,MS4.8
ARU Arti 62.67 328 *e*P **P 11 22 45.0 -0.6**
ARU LR LR
comp=Z,723nm,19.0s,MS4.9
GLAT Glass 62.75 65 *e*P **P 11 22 47.4 +0.9**
NATX Nacogdoches 62.77 72 PFAKE 11 23 00.0 +13
NATX LR LR
comp=Z,727nm,21.0s,MS4.8
HNR Honiara 62.95 203 PFAKE 11 23 00.0 +12
HNR LR LR
comp=Z,597nm,20.0s,MS4.8
HALT Halls 62.98 66 *e*P **P 11 22 47.0 -1.0**
WCI Wyandotte Cave 63.06 62 *e*P **P 11 22 48.0 -0.5**
WCI pmax pmax
comp=Z,47nm,0.9s,mb5.6
WCI MLR MLR
comp=Z,457nm,20.0s,MS4.7
WCI Wyandotte Cave 63.06 62 *e*P **P 11 22 48.0 -0.6**
comp=Z,47nm,0.9s,mb5.6
WCI LR LR
comp=Z,457nm,20.0s,MS4.7
DAV Davao City (W) 63.13 246 PFAKE 11 23 00.0 +11
DAV LR LR
comp=Z,498nm,20.0s,MS4.7
ACSO Alum Creek Sta 63.45 58 *e*P **P 11 22 51.0 -0.1**
ACSO LR LR
comp=Z,399nm,19.0s,MS4.6
QIZ Qiongzhong 63.48 268 P **P 11 22 51.7 +0.2**
QIZ pP pP 11 23 03.5 -1.2
QIZ S **S 11 31 20.3 -1.0**
QIZ pmax pmax
comp=Z,11nm,1.1s,mb4.9
QIZ pmax pmax
comp=Z,83nm,4.0s
QIZ LR LR
comp=N,220nm,18.7s
QIZ LR LR
comp=Z,250nm,21.9s,MS4.3
QIZ Qiongzhong 63.48 268 PFAKE 11 23 00.0 +8.5
QIZ LR LR
comp=Z,301nm,22.0s,MS4.4
KMI Kunming 63.49 278 P **P 11 22 52.2 +0.7**
KMI pP pP 11 23 06.3 +1.6
KMI sP sP 11 23 11.6 +1.6
KMI PcP PcP 11 23 28.6 +0.7
KMI PP PP 11 25 14.0 +2.7
KMI ScP ScP 11 27 25.4 -0.8
KMI PcS 11 27 30.8
KMI S **S 11 31 19.5 -1.8**
KMI sS sS 11 31 42.8 -0.5
KMI SKS 11 32 37.2
KMI SS SS 11 35 28.0 -0.5
KMI pmax pmax
comp=Z,17nm,1.3s,mb5.0
KMI LR LR
comp=N,310nm,17.8s,MS4.8
KMI LR LR
comp=E,350nm,14.8s,MS4.8
KMI LR LR
comp=Z,250nm,23.7s
ERPA Erie 63.67 55 PFAKE 11 23 00.0 +7.5
ERPA LR LR
comp=Z,544nm,20.0s,MS4.7
WVT Waverly 63.68 65 *e*P **P 11 22 52.1 -0.6**
WVT MLR MLR
comp=Z,318nm,20.0s,MS4.5
JOF Joensuu 63.77 345 *e*P **P 11 22 51.4 -1.4**
JOF pmax pmax
comp=Z,39nm,0.8s,mb5.5
JOF Joensuu 63.77 345 *ep* **P 11 22 51.4 -1.4**
comp=Z,39nm,0.8s,mb5.5
JOF Joensuu 63.77 345 *ep* **P 11 22 51.4 -1.4**
comp=Z,39nm,0.8s,mb5.5
KVTX Kingsville 63.80 78 PFAKE 11 23 10.0 +16
KVTX LR LR
comp=Z,533nm,19.0s,MS4.7
OXF Oxford 63.93 67 *e*P **P 11 22 54.0 -0.3**
OXF pmax pmax
comp=Z,114nm,1.2s,mb5.8
OXF MLR MLR
comp=Z,278nm,19.0s,MS4.5
OXF Oxford 63.93 67 *e*P **P 11 22 54.0 -0.3**
comp=Z,114nm,1.2s,mb5.8
OXF LR LR
comp=Z,278nm,19.0s,MS4.5
ALLY Alegheny Colle 63.93 55 *e*P **P 11 22 54.4 +0.2**
comp=Z,46nm,1.0s,mb5.5
NCB Newcomb 65.20 50 PFAKE 11 23 10.0 +7.5
NCB LR LR
comp=Z,665nm,20.0s,MS4.8
KAF Kangasniemi 65.29 347 *e*P **P 11 23 00.6 -2.1**
KAF pmax pmax
comp=Z,32nm,1.0s,mb5.3
KAF Kangasniemi 65.29 347 *ep* **P 11 23 00.6 -2.1**
comp=Z,32nm,1.0s,mb5.3
KAF Kangasniemi 65.29 347 *ep* **P 11 23 00.6 -2.1**
comp=Z,32nm,1.0s,mb5.3
SWET Sewanee 65.42 64 *e*P **P 11 23 03.6 -0.3**
MCWV Mont Chateau 65.53 57 PFAKE 11 23 20.0 +15
MCWV LR LR
comp=Z,1μm,19.0s,MS5.1
BINY Binghamton 65.65 53 *e*P **P 11 23 05.3 0.0**
BINY LR LR
comp=Z,612nm,21.0s,MS4.8
TZTN Tazewell 65.79 61 *e*P **P 11 23 06.2 -0.2**
SSPA Standing Stone 65.83 55 *e*P **P 11 23 05.0 -1.6**
SSPA LR LR
comp=Z,469nm,20.0s,MS4.7
ACCN Adirondack Com 65.91 50 *e*P **P 11 23 06.1 -0.9**
FINES FINESS Array B 65.97 347 P **P 11 23 06.0 -1.1**
comp=Z,35nm,0.8s,mb5.4,baz=33,slow=7.3,SNR=47
FINES LR LR 11 57 39.1
comp=Z,613nm,18.7s,MS4.8,baz=205,slow=41
CPCT Cooper Cave 66.04 63 *e*P **P 11 23 07.6 -0.4**
TKM2 Tokmak 2 66.06 309 P **P 11 23 09.2 +1.1**
SNR=19
TKM2 Tokmak 2 66.06 309 *e*P **P 11 23 08.9 +0.9**
TKM2 pmax pmax
comp=Z,21nm,0.9s,mb5.2
TKM2 MLR MLR
comp=Z,524nm,20.0s,MS4.7
TKM2 Tokmak 2 66.06 309 *e*P **P 11 23 08.9 +0.9**
comp=Z,21nm,0.9s,mb5.2
TKM2 LR LR
comp=Z,524nm,20.0s,MS4.7
LBNH Lisbon 66.10 49 PFAKE 11 23 20.0 +12
LBNH LR LR
comp=Z,580nm,19.0s,MS4.8
TKL Tuckaleechee C 66.31 62 *e*P **P 11 23 09.0 -0.7**
USP Ospenovka 66.34 310 P **P 11 23 10.6 +0.8**
SNR=42
LRAL Lakeview Retre 66.38 66 *e*P **P 11 23 09.4 -0.8**
LRAL LR LR
comp=Z,297nm,22.0s,MS4.5
CHMS Chumysh 66.42 310 P **P 11 23 11.3 +1.0**
SNR=6.4
KBK Karagaybulak 66.58 309 P **P 11 23 13.2 +1.9**
SNR=8.0
FRU Bishkek 66.61 310 *e*P **P 11 23 11.6 +0.1**
FRU pmax pmax
comp=Z,114nm,1.8s,mb5.6
AAK Ala-Archa 66.82 310 P **P 11 23 13.5 +0.7**
comp=Z,208nm,0.8s,mb6.2,SNR=6.4
AAK Ala-Archa 66.82 310 P **P 11 23 14.1 +1.2**
SNR=14
AAK Ala-Archa 66.82 310 P **P 11 23 13.2 +0.3**
comp=Z,17nm,0.8s,mb5.2,baz=112,slow=2.9,SNR=35
AAK Ala-Archa 66.82 310*ce*P **P 11 23 13.5 +0.7**
AAK pmax pmax
comp=Z,37nm,1.7s,mb5.1
AAK Ala-Archa 66.82 310 *e*P **P 11 23 13.1 +0.3**
comp=Z,26nm,0.8s,mb5.3
AAK *e*pP pP 11 23 26.6 +0.5
AAK LR LR
comp=Z,598nm,20.0s,MS4.8
ELN Prospectdale 66.82 59 *e*P **P 11 23 12.5 -0.5**
KZA Kyzart 66.86 309 P **P 11 23 14.8 +1.7**
SNR=11
BLA Blacksburg 67.01 59 *e*P **P 11 23 14.5 +0.3**
BLA pmax pmax
comp=Z,30nm,1.1s,mb5.2
BLA MLR MLR
comp=Z,425nm,21.0s,MS4.6
BLA Blacksburg 67.01 59 *e*P **P 11 23 14.4 +0.3**
comp=Z,30nm,1.1s,mb5.2
BLA LR LR
comp=Z,425nm,21.0s,MS4.6
UCH Uchtor 67.11 309 P **P 11 23 17.1 +2.4**
SNR=12
UCH Uchtor 67.11 309 *e*P **P 11 23 15.8 +1.1**
UCH LR LR
comp=Z,349nm,19.0s,MS4.6
EKS2 Erkin-Say 67.14 310 P **P 11 23 15.9 +1.0**
SNR=25
EKS2 Erkin-Say 67.14 310 *e*P **P 11 23 15.6 +0.7**
EKS2 LR LR
comp=Z,694nm,21.0s,MS4.8
LSA Lhasa 67.27 289 P **P 11 23 17.7 +1.8**
LSA Lhasa 67.27 289 PFAKE 11 23 30.0 +14
LSA LR LR
comp=Z,645nm,20.0s,MS4.8
AML Almayashu 67.58 310 *e*P **P 11 23 19.5 +1.8**
comp=Z,36nm,0.9s,mb5.4
AML LR LR
comp=Z,641nm,20.0s,MS4.8
BRAL Brewton 67.82 68 *e*P **P 11 23 20.6 +1.2**
BRAL LR LR
comp=Z,399nm,19.0s,MS4.7
NB2 NORSAR Subarra 67.87 355 P **P 11 23 18.1 -1.1**
comp=Z,33nm,1.2s,mb5.2,baz=6.2,slow=6.5
NOA NORSAR Array B 67.87 355 P **P 11 23 18.6 -0.6**
comp=Z,10nm,0.9s,mb4.8,baz=4.7,slow=6.3,SNR=12
NOA LR LR 11 53 51.7
comp=Z,234nm,21.1s,MS4.4,baz=345,slow=37
NOA NORSAR Array B 67.87 355 P **P 11 23 18.6 -0.6**
NOA pmax pmax
comp=Z,10.0nm,0.9s
NOA MLR MLR
comp=Z,234nm,21.1s
CBN Corbin 67.90 56 PFAKE 11 23 30.0 +10
CBN LR LR
comp=Z,959nm,19.0s,MS5.0
ABKAR Akbulak array 67.97 323 *e*P **P 11 23 19.3 -0.7**
comp=Z,9.9nm,0.9s,mb4.8
ABKAR *e*PcP PcP 11 23 46.4 +0.4
GOGA Godfrey 68.12 64 *e*P **P 11 23 20.5 -0.7**
GOGA MLR MLR
comp=Z,317nm,19.0s,MS4.6
KSH Kashi 68.43 306 P **P 11 23 27.0 +3.9**
KSH pP pP 11 23 40.0 +3.6
KSH sP sP 11 23 45.3 +3.7
KSH PcP PcP 11 23 51.9 +3.7
KSH PP PP 11 26 01.1 +7.1
KSH ScP 11 27 50.4
KSH PcS 11 27 55.5
KSH S S 11 32 23.0 +2.0
KSH sS sS 11 32 46.7 +3.4
KSH ScS ScS 11 33 19.4 +0.7
KSH pmax pmax
comp=Z,74nm,1.0s,mb5.7
KSH LR LR
comp=N,230nm,10.0s

KSH LR LR
comp=E,140nm,8.1s
KSH LR LR
comp=Z,120nm,4.3s
TAOE Nuku Hiva Isla 68.62 138 eLR LR 11 44 17.3
comp=Z,1µm,23.0s,baz=340
JSC Jenkinsville 68.72 62 eP **P 11 23 24.8 -0.1**
MOS Moscow 69.19 339 eP **P 11 23 26.7 -0.8**
MOS e 11 26 00.0
MOS pmax pmax
comp=Z,100nm,0.9s,mb5.8
MOS pmax pmax
comp=Z,107nm,0.9s,mb5.8
MOS MLR MLR
comp=Z,2µm,20.0s,MS5.3
KKM Kota Kinabalu 69.48 254 PFAKE 11 23 40.0 +10
KKM LR LR
comp=Z,165nm,21.0s,MS4.2
COW Cow Castle Cre 69.70 62 eP **P 11 23 30.8 -0.2**
SHL Shillong 69.86 286 ePKP **P 11 23 36.5 +4.4**
OBN Obninsk 70.01 339 oeP **P 11 23 32.2 -0.3**
OBN *PP pP 11 23 48.0 +2.1
OBN e 11 32 31.5
OBN pmax pmax
comp=Z,88nm,0.8s,mb5.7
OBN MLR MLR
comp=Z,800nm,18.0s,MS5.0
OBN Obninsk 70.01 339 eP **P 11 23 32.2 -0.4**
comp=Z,41nm,0.9s,mb5.3
OBN LR LR
comp=Z,847nm,19.0s,MS5.0
NHSC New Hope 70.19 62 eP **P 11 23 34.8 +0.8**
comp=Z,23nm,0.5s,mb5.4
NHSC LR LR
comp=Z,828nm,20.0s,MS5.0
CHTO Chiang Mai 70.50 276 eP **P 11 23 36.1 0.0**
CHTO MLR MLR
comp=Z,233nm,20.0s,MS4.4
CM31 Chiang Mai Arr 70.77 276 PFAKE 11 23 50.0 +12
CM31 LR LR
comp=Z,274nm,21.0s,MS4.5
CMAR Chiang Mai Arr 70.77 276 P **P 11 23 37.2 -0.5**
comp=Z,3.1nm,0.8s,mb4.3,baz=28,slow=6.9,SNR=22
CMAR LR LR 11 56 50.4
comp=Z,247nm,19.0s,MS4.5,baz=48,slow=38
CMAR Chiang Mai Arr 70.77 276 P **P 11 23 37.3 -0.4**
CMAR pmax pmax
comp=Z,3.0nm,0.8s
CMAR MLR MLR
comp=Z,247nm,19.0s
TAPN Taplejung 71.04 290 eP **P 11 23 38.9 -0.4**
comp=Z,100nm,0.9s,mb5.8
IZAR Zarasai 71.41 345 eP **P 11 23 41.1 0.0**
IZAR AMB AMB 11 23 42.2
comp=Z,17nm,1.1s,mb4.9
ODAN Odare 71.59 290 eP **P 11 23 41.7 -0.9**
comp=Z,43nm,0.8s,mb5.4
ISAL Salakas 71.60 345 eP **P 11 23 42.4 +0.2**
ISAL AMB AMB 11 23 43.6
comp=Z,16nm,1.1s,mb4.8
GUN Gumba 71.70 292 eP **P 11 23 43.3 0.0**
comp=Z,76nm,0.4s,mb6.0
JIRN Jiri 71.70 291 eP **P 11 23 43.4 +0.1**
comp=Z,60nm,0.7s,mb5.7
IDID Didziasalis 71.75 345 eP **P 11 23 43.5 +0.4**
IDID AMB AMB 11 23 44.4
comp=Z,24nm,1.1s,mb5.1
IIGN Ignalina 71.80 345 eP **P 11 23 43.7 +0.3**
IIGN AMB AMB 11 23 44.7
comp=Z,21nm,1.0s,mb5.0
RAMN Ramite 71.99 291 eP **P 11 23 44.3 -0.7**
comp=Z,143nm,0.9s,mb5.9
KKN Kakani 72.14 292 eP **P 11 23 45.7 -0.2**
comp=Z,75nm,0.8s,mb5.7
KKN Kakani 72.14 292 eP **P 11 23 45.7 -0.2**
KKN pmax pmax
comp=Z,75nm,0.8s,mb5.7
PKI Pulchoki 72.23 292 eP **P 11 23 46.2 -0.2**
PKIN Phulchoki 72.23 292 eP **P 11 23 46.1 -0.4**
comp=Z,69nm,0.6s,mb5.7
DMN Daman 72.38 292 eP **P 11 23 46.8 -0.5**
comp=Z,198nm,1.6s,mb5.8
VRHR Novokhopersk 72.42 334 eP **P 11 23 45.9 -1.3**
VSR Storozhevoye 72.96 336 eP **P 11 23 49.8 -0.6**
VORD Divnogorie 73.15 336 eP **P 11 23 50.2 -1.3**
PPT Papeete 73.18 150 eS S 11 33 19.6 +3.3
PPT e LR LR 11 46 15.3
comp=Z,940nm,28.5s
comp=Z,815nm,27.5s,baz=347
PPT Papeete 73.18 150 LR LR 11 51 32.2
comp=Z,305nm,18.1s,MS4.6,baz=333,slow=32
DWPF Disney 73.24 66 PFAKE 11 24 00.0 +7.6
DWPF LR LR
comp=Z,279nm,19.0s,MS4.6
SUW Suwalki 73.56 346 eP **P 11 23 53.1 -0.8**
SUW Suwalki 73.56 346 eP **P 11 23 52.8 -1.1**
DZM Mont Dzumac 73.96 194 eS S 11 33 31.4 +6.4
comp=Z,212nm,24.9s
DZM e LR LR 11 46 42.1
comp=Z,938nm,23.1s
NIL Nilore 74.33 304 PFAKE 11 24 10.0 +11
NIL LR LR
comp=Z,67nm,20.0s,MS3.9
BSEG Bad Segeberg 75.00 354 eP **P 11 24 02.9 +0.6**
comp=Z,60nm,0.9s,mb5.5
BSEG Bad Segeberg 75.00 354 eP **P 11 24 02.9 +0.6**
BSEG pmax pmax
comp=Z,60nm,0.9s,mb5.5
TEIG Tepich 75.11 76 PFAKE 11 24 20.0 +17
TEIG LR LR
comp=Z,264nm,22.0s,MS4.5
AKASG Malin Array Be 75.70 342 P **P 11 24 05.3 -1.1**
comp=Z,39nm,0.5s,mb5.6,baz=20,slow=5.8,SNR=49
AKASG LR LR 12 01 59.2
comp=Z,274nm,18.1s,MS4.6,baz=20,slow=39
AKASG Malin Array Be 75.70 342 P **P 11 24 05.3 -1.1**
AKASG pmax pmax
comp=Z,39nm,0.5s
AKASG MLR MLR
comp=Z,274nm,18.2s
AKBB Malin Array Si 75.70 342 eP **P 11 24 05.5 -0.9**
KIEV Kiev 75.71 342 eP **P 11 24 05.5 -0.9**
KIEV pmax pmax
comp=Z,87nm,0.9s,mb5.7
KIEV MLR MLR
comp=Z,340nm,20.0s,MS4.7
KIEV Kiev 75.71 342 eP **P 11 24 05.5 -0.9**
comp=Z,87nm,0.9s,mb5.7
KIEV LR LR
comp=Z,340nm,20.0s,MS4.7
KBL Kabul 75.78 308 eP **P 11 24 07.5 +0.4**
KBL pmax pmax
comp=Z,37nm,0.8s,mb5.4
KBL Kabul 75.78 308 eP **P 11 24 07.5 +0.4**
comp=Z,38nm,0.8s,mb5.4
RUE Ruedersdorf 76.18 352 eP **P 11 24 09.1 0.0**
comp=Z,45nm,0.7s,mb5.5
NRDL Niedersach Rie 76.45 354 eP **P 11 24 10.5 -0.1**
comp=Z,28nm,1.0s,mb5.2
KSM Kuching 76.67 256 PFAKE 11 24 20.0 +7.6
KSM LR LR
comp=Z,181nm,21.0s,MS4.4
IBBN Ibbenburen 76.77 356 eP **P 11 24 12.9 +0.5**
comp=Z,73nm,1.0s,mb5.6
CLZ Clausthal 77.08 354 eP **P 11 24 14.7 +0.5**
comp=Z,48nm,1.1s,mb5.3
CLZ Clausthal 77.08 354 eP **P 11 24 14.7 +0.5**
CLZ pmax pmax
comp=Z,48nm,1.1s,mb5.3
CLL Collm 77.41 352 eP **P 11 24 15.5 -0.5**
comp=Z,17nm,0.9s,mb5.0
CLL Collm 77.41 352⇑iP **P 11 24 15.4 -0.6**
CLL pmax pmax
comp=Z,17nm,0.9s,mb5.0
CLL MLR MLR
comp=Z,300nm,18.4s,MS4.7
CLL Collm 77.41 352⇑iP **P 11 24 15.4 -0.6**
comp=Z,17nm,0.9s,mb5.0
CLL LR LR
comp=Z,300nm,18.4s,MS4.7
CLL Collm 77.41 352⇑iP **P 11 24 15.4 -0.6**
comp=Z,17nm,0.9s,mb5.0
CLL ePS 11 34 45.0
CLL eSS SS 11 39 06.0 +5.5
CLL e(SSSS) 11 44 06.0
LVV L'vov 77.49 345 iP **P 11 24 16.1 -0.4**

KSP Ksiaz 77.55 350 eP **P 11 24 16.7 -0.1**
OJC Ojcow 77.74 348 eP **P 11 24 16.8 -1.0**
BRG Berggiesshubel 77.76 352 iP **P 11 24 17.6 -0.4**
comp=Z,16nm,0.9s,mb5.0
KWP Kalwaria Pacla 77.89 346 eP **P 11 24 19.3 +0.7**
KWP Kalwaria Pacla 77.89 346 eP **P 11 24 19.2 +0.6**
comp=Z,125nm,0.8s,mb5.9
KWP LR LR
comp=Z,942nm,19.0s,MS5.1
KWP Kalwaria Pacla 77.89 346⇓iP **P 11 24 00.1 -19**
UPC Upice 77.91 350 eP **P 11 24 18.5 -0.3**
UPC Upice 77.91 350 eP **P 11 24 18.5 -0.3**
DPC Dobruska-Polom 78.03 350 eP **P 11 24 19.0 -0.5**
DPC MLR MLR
comp=Z,600nm,18.9s,MS4.9
DPC Dobruska-Polom 78.03 350 eP **P 11 24 19.0 -0.5**
DPC AMS AMS 12 05 20.0
comp=Z,600nm,18.9s
PVCC Panska Ves 78.04 351 eP **P 11 24 19.6 +0.1**
PVCC Panska Ves 78.04 351 eP **P 11 24 19.6 +0.1**
MOX Moxa 78.19 353 eP **P 11 24 20.2 -0.1**
comp=Z,34nm,1.5s,mb5.1
MOX
comp=Z,200nm,20.0s
MOX Moxa 78.19 353 eP **P 11 24 20.4 +0.1**
comp=Z,19nm,1.0s,mb5.0
MOX Moxa 78.19 353 eP **P 11 24 20.2 -0.1**
MOX pmax pmax
comp=Z,34nm,1.5s,mb5.1
MOX MLR MLR
comp=Z,200nm,20.0s,MS4.4
STHS Stebnicka Huta 78.32 347 eP **P 11 24 22.0 +0.9**
STHS pmax pmax
comp=Z,24nm,0.9s,mb5.1
STHS Stebnicka Huta 78.32 347 eP **P 11 24 22.0 +0.9**
comp=Z,24nm,0.9s,mb5.1
STHS ePcP PcP 11 24 27.5 -2.8
STHS ePP pP 11 24 32.5 -2.1
STHS Stebnicka Huta 78.32 347 eP **P 11 24 22.0 +0.9**
STHS ePCP PcP 11 24 27.4 -2.9
STHS epP pP 11 24 32.5 -2.1
OKC Ostrava-Krasne 78.33 349 eP **P 11 24 21.3 +0.2**
OKC MLR MLR
comp=Z,400nm,14.8s,MS4.9
OKC Ostrava-Krasne 78.33 349 eP **P 11 24 21.3 +0.2**
OKC AMS AMS 12 05 50.0
comp=Z,400nm,14.8s
WERD Werda 78.33 352 eP **P 11 24 21.1 0.0**
comp=Z,13nm,1.2s,mb4.7
TANN Tannenbergstha 78.35 352 eP **P 11 24 21.2 0.0**
comp=Z,12nm,1.2s,mb4.7
GUNZ Gunzen 78.41 352 eP **P 11 24 21.7 +0.2**
comp=Z,17nm,1.1s,mb4.9
MORC Moravsky Berou 78.46 349 P **P 11 24 22.3 +0.5**
MORC Moravsky Berou 78.46 349 eP **P 11 24 22.2 +0.4**
MORC Moravsky Berou 78.46 349⇑iP **P 11 24 21.9 +0.1**
WERN Wernitzgruen 78.48 352 eP **P 11 24 22.2 +0.3**
comp=Z,30nm,1.0s,mb5.2
NKC Novy Kostel 78.53 352 eP **P 11 24 21.7 -0.5**
NKC Novy Kostel 78.53 352 eP **P 11 24 21.7 -0.5**
KIV Kislovodsk 78.55 331⇑eP **P 11 24 22.9 +0.4**
KIV pP pP 11 24 31.0 -5.0
KIV pmax pmax
comp=Z,13nm,0.9s,mb4.9
KIV MLR MLR
comp=Z,400nm,22.0s,MS4.7
KIV Kislovodsk 78.55 331 PFAKE 11 24 30.0 +7.5
KIV LR LR
comp=Z,448nm,22.0s,MS4.8
PRU Pruhonice 78.58 351 eP **P 11 24 22.3 -0.2**
PRU MLR MLR
comp=Z,300nm,19.5s,MS4.6
PRU Pruhonice 78.58 351 eP **P 11 24 22.3 -0.2**
PRU AMS AMS 12 05 10.0
comp=Z,300nm,19.5s
KOLS Kolonicke sedl 78.63 346 eP **P 11 24 23.4 +0.6**
KOLS pmax pmax
comp=Z,33nm,0.9s,mb5.3
KOLS Kolonicke sedl 78.63 346 eP **P 11 24 23.4 +0.6**
comp=Z,33nm,0.9s,mb5.3
KOLS Kolonicke sedl 78.63 346 eP **P 11 24 23.4 +0.6**
CRVS Cervenica-Dubn 78.79 346 eP **P 11 24 24.2 +0.5**
CRVS pmax pmax
comp=Z,25nm,0.9s,mb5.1
CRVS Cervenica-Dubn 78.79 346 eP **P 11 24 24.2 +0.5**
comp=Z,24nm,0.9s,mb5.1
CRVS Cervenica-Dubn 78.79 346 eP **P 11 24 24.2 +0.5**
TNS Taunus Mts 78.82 355 eP **P 11 24 24.0 +0.2**
comp=Z,32nm,0.9s,mb5.2
TNS Taunus Mts 78.82 355 eP **P 11 24 24.0 +0.2**
TNS pmax pmax
comp=Z,32nm,0.9s,mb5.2
BBSR BB Station 78.91 52 PFAKE 11 24 40.0 +15
BBSR LR LR
comp=Z,311nm,20.0s,MS4.6
UZH Uzhgorod 78.92 346⇑iP **P 11 24 24.5 +0.1**
UZH e pP 11 24 35.5 -2.5
LIKS Likavka 78.97 348 eP **P 11 24 25.3 +0.6**
LIKS pmax pmax
comp=Z,30nm,0.8s,mb5.3
LIKS Likavka 78.97 348 eP **P 11 24 25.3 +0.6**
comp=Z,30nm,0.8s,mb5.3
LIKS Likavka 78.97 348 eP **P 11 24 25.3 +0.6**
ROTZ Rotzenmuhle 79.01 352 eP **P 11 24 25.2 +0.3**
comp=Z,18nm,1.1s,mb4.9
VRAC Vranov 79.03 350 P **P 11 24 25.7 +0.7**
VRAC Vranov 79.03 350⇓P **P 11 24 25.3 +0.3**
VRAC Vranov 79.03 350⇓iP **P 11 24 25.3 +0.3**
GIVF Givet 79.09 357 eP **P 11 24 25.3 0.0**
comp=Z,46nm,0.9s,mb5.1
GIVF Givet 79.09 357 eP **P 11 24 25.3 0.0**
GIVF pmax pmax
comp=Z,23nm,0.9s,mb5.1
GIVF Givet 79.09 357 eP **P 11 24 25.3 0.0**
comp=Z,23nm,0.9s,mb5.1
BAIF Baives 79.15 358 eP **P 11 24 25.8 +0.2**
comp=Z,66nm,0.9s,mb5.3
BAIF Baives 79.15 358 eP **P 11 24 25.8 +0.2**
BAIF pmax pmax
comp=Z,33nm,0.9s,mb5.3
BAIF Baives 79.15 358 eP **P 11 24 25.8 +0.2**
comp=Z,33nm,0.9s,mb5.3
GRA1 Grafenberg Arr 79.16 353 eP **P 11 24 26.2 +0.5**
comp=Z,43nm,0.8s,mb5.4
GRA1 LR LR
comp=Z,400nm,18.3s,MS4.8
GRF Grafenberg Arr 79.16 353 eP **P 11 24 26.2 +0.5**
comp=Z,43nm,0.8s,mb5.4
GRF eL 12 07 19.2
comp=Z,352nm,18.3s
GRF Grafenberg Arr 79.16 353 eP **P 11 24 26.2 +0.5**
GRF pmax pmax
comp=Z,43nm,0.8s,mb5.4
GRF MLR MLR
comp=Z,400nm,18.3s,MS4.8
TREC Trest 79.17 350 AMS AMS 12 03 40.0
comp=Z,500nm,16.7s
ABH Alteburg 79.20 356 eP **P 11 24 25.9 0.0**
ANN Anapa 79.31 334 eP **P 11 24 25.6 -1.0**
ANN e*PP pP 11 24 39.8 -0.4
ANN eS S 11 34 26.3 +3.0
ANN pmax pmax
comp=Z,33nm,0.8s,mb5.3
KIS Kishinev 79.31 341 eP **P 11 24 24.0 -2.6**
KIS LRM 12 04 22.0
comp=Z,800nm,16.0s
KIS Kishinev 79.31 341 eP **P 11 24 24.0 -2.6**
KIS MLR MLR
comp=N,800nm,15.0s
KIS MLR MLR
comp=Z,1µm,15.0s,MS5.3
KIS MLR MLR
comp=Z,800nm,16.0s
RUP Ruppelstein 79.41 356 eP **P 11 24 27.0 0.0**
TOD Tromm 79.41 355 eP **P 11 24 27.0 -0.1**
BURAR Bucovina Array 79.42 343⇑P **P 11 24 27.2 +0.1**
BURAR Bucovina Array 79.42 343⇑iP **P 11 24 27.2 +0.1**
WLF Walferdange 79.48 356 eP **P 11 24 28.2 +0.8**
WLF MLR MLR
comp=Z,519nm,19.0s,MS4.9
KHC Kasperske Hory 79.52 351 eP **P 11 24 28.0 +0.3**
KHC pmax pmax
comp=Z,13nm,0.9s,mb4.9
KHC Kasperske Hory 79.52 351 eP **P 11 24 28.0 +0.3**
comp=Z,13nm,0.9s,mb4.9

KHC Kasperske Hory 79.52 351 eP **P 11 24 27.8 +0.1**
KHC AMS AMS 12 10 00.0
comp=Z,300nm,18.7s
VYHS Vyhne 79.56 348 eP **P 11 24 28.3 +0.4**
VYHS pmax pmax
comp=Z,12nm,1.0s,mb4.8
VYHS Vyhne 79.56 348 eP **P 11 24 28.3 +0.4**
comp=Z,12nm,1.0s,mb4.8
VYHS Vyhne 79.56 348 eP **P 11 24 28.3 +0.4**
WET Wettzell 79.57 352 eP **P 11 24 28.2 +0.3**
comp=Z,11nm,1.0s,mb4.7
WET Wettzell 79.57 352 eP **P 11 24 28.2 +0.3**
WET pmax pmax
comp=Z,11nm,1.0s,mb4.7
BMR Baia Mare 79.66 345 P **P 11 24 29.1 +0.7**
KULM Kulim 79.70 266 PFAKE 11 24 40.0 +11
KULM LR LR
comp=Z,142nm,20.0s,MS4.3
SOC Sochi 79.79 332 eP **P 11 24 28.3 -0.9**
SOC e 11 24 34.6
SOC e pP 11 24 38.3 -4.5
SOC e 11 27 27.2
SOC ePPP 11 29 26.3
SOC eS S 11 34 34.0 +5.7
SOC eSS SS 11 39 46.9 +10
SOC pmax pmax
comp=Z,22nm,0.8s,mb5.1
SOC MLR MLR
comp=Z,740nm,19.0s,MS5.0
GEC2 GERESS Array S 79.79 351 eP **P 11 24 29.1 0.0**
comp=Z,12nm,0.9s,mb4.8
GEC2 GERESS Array S 79.79 351 eP **P 11 24 29.1 0.0**
GEC2 pmax pmax
comp=Z,12nm,0.9s,mb4.8
GERES GERESS Array B 79.79 351 P **P 11 24 28.7 -0.5**
comp=Z,6.3nm,0.8s,mb4.6,baz=34,slow=5.0,SNR=32
GERES LR LR 12 06 51.8
comp=Z,208nm,18.5s,MS4.5,baz=198,slow=41
PSZ Piszkesteto 79.97 347 P **P 11 24 31.5 +1.4**
PSZ Piszkesteto 79.97 347 eP **P 11 24 31.0 +0.8**
comp=Z,36nm,1.1s,mb5.2
PSZ LR LR
comp=Z,421nm,19.0s,MS4.8
PSZ Piszkesteto 79.97 347⇑eP **P 11 24 31.0 +0.9**
PSZ Piszkesteto 79.97 347⇑iP **P 11 24 31.2 +1.1**
SIM Simferopol' 80.04 337 eP **P 11 24 32.0 +1.4**
SIM pmax pmax
comp=Z,14nm,0.6s,mb5.1
SIM MLR MLR
comp=Z,1µm,21.3s,MS5.2
LANF Langenberg 80.09 355 eP **P 11 24 30.7 0.0**
TGUH Tegucigalpa,Un 80.42 80 eP **P 11 24 34.3 +1.3**
TGUH LR LR
comp=Z,319nm,22.0s,MS4.6
CONA Conrad Observa 80.48 350 iP **P 11 24 33.4 +0.6**
comp=Z,23nm,1.0s,mb5.0,SNR=12
FLN La Foliniere 80.48 1 eP **P 11 24 32.6 -0.3**
comp=Z,81nm,1.0s,mb5.3
FLN eMLR MLR
comp=Z,374nm,20.0s,MS4.4
FLN La Foliniere 80.48 1 eP **P 11 24 32.6 -0.3**
FLN pmax pmax
comp=Z,41nm,1.0s,mb5.3
FLN MLR MLR
comp=Z,370nm,20.0s,MS4.7
FLN La Foliniere 80.48 1 eP **P 11 24 32.6 -0.3**
comp=Z,40nm,1.0s,mb5.3
FLN LR LR
comp=Z,370nm,20.0s,MS4.7
BUD Budapest 80.52 348⇓eP **P 11 24 34.5 +1.4**
DRGR 80.64 345 P **P 11 24 34.5 +0.7**
DRGR 80.64 345⇓P **P 11 24 33.9 +0.1**
DRGR 80.64 345⇓iP **P 11 24 33.9 +0.1**
LDF La Druitiere 80.66 1 eP **P 11 24 33.3 -0.5**
comp=Z,56nm,0.9s,mb5.2
LDF La Druitiere 80.66 1 eP **P 11 24 33.3 -0.5**
LDF pmax pmax
comp=Z,28nm,0.9s,mb5.2
LDF La Druitiere 80.66 1 eP **P 11 24 33.3 -0.5**
comp=Z,28nm,0.9s,mb5.2
MEZF Maizieres J'vi 80.68 357 eP **P 11 24 34.1 +0.2**
comp=Z,49nm,0.8s,mb5.2
MEZF Maizieres J'vi 80.68 357 eP **P 11 24 34.1 +0.2**
comp=Z,49nm,0.8s,mb5.5
CDF Champ du Feu 80.68 356 eP **P 11 24 33.8 -0.1**
comp=Z,20nm,0.8s,mb4.8
CDF Champ du Feu 80.68 356 eP **P 11 24 33.8 -0.1**
CDF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
CDF Champ du Feu 80.68 356 eP **P 11 24 33.8 -0.1**
comp=Z,9.9nm,0.8s,mb4.8
BFO Black Forest 80.71 355 eP **P 11 24 34.0 -0.1**
comp=Z,28nm,1.6s,mb4.9
BFO Black Forest 80.71 355 eP **P 11 24 34.0 -0.1**
BFO pmax pmax
comp=Z,28nm,1.6s,mb4.9
VRI Vrincioaia 80.82 342 P **P 11 24 35.3 +0.6**
VRI Vrincioaia 80.82 342⇑P **P 11 24 35.0 +0.3**
VRI Vrincioaia 80.82 342⇑iP **P 11 24 35.0 +0.3**
PLOR Plostina 80.85 342⇑P **P 11 24 35.2 +0.3**
PLOR Plostina 80.85 342⇑iP **P 11 24 35.2 +0.3**
GRR Gorron 80.85 1 eP **P 11 24 34.8 -0.1**
comp=Z,70nm,0.9s,mb5.3
GRR Gorron 80.85 1 eP **P 11 24 34.8 -0.1**
GRR pmax pmax
comp=Z,35nm,0.9s,mb5.3
GRR Gorron 80.85 1 eP **P 11 24 34.8 -0.1**
comp=Z,35nm,0.9s,mb5.3
ROSF Rostrenen 80.86 3 eP **P 11 24 34.8 -0.1**
comp=Z,61nm,1.3s,mb5.1
ROSF Rostrenen 80.86 3 eP **P 11 24 34.8 -0.1**
ROSF pmax pmax
comp=Z,30nm,1.3s,mb5.1
ROSF Rostrenen 80.86 3 eP **P 11 24 34.8 -0.1**
comp=Z,30nm,1.3s,mb5.1
ECH Echery 80.88 356 eP **P 11 24 34.9 -0.1**
ECH Echery 80.88 356 eP **P 11 24 35.0 0.0**
ECH pmax pmax
comp=Z,17nm,1.1s,mb4.9
ECH MLR MLR
comp=Z,234nm,20.0s,MS4.5
ECH Echery 80.88 356 eP **P 11 24 35.0 -0.1**
comp=Z,17nm,1.1s,mb4.9
ECH LR LR
comp=Z,234nm,20.0s,MS4.5
THEF They Montfort 80.92 356 eP **P 11 24 35.2 0.0**
SGMF Saint Gilles 80.96 2 eP **P 11 24 35.4 0.0**
comp=Z,52nm,0.9s,mb5.2
SGMF Saint Gilles 80.96 2 eP **P 11 24 35.4 0.0**
SGMF pmax pmax
comp=Z,26nm,0.9s,mb5.2
SGMF Saint Gilles 80.96 2 eP **P 11 24 35.4 0.0**
comp=Z,26nm,0.9s,mb5.2
RJOB Jochberg 80.97 352 eP **P 11 24 35.8 +0.3**
comp=Z,18nm,0.8s,mb5.0
HAU Haudompre 81.13 356 eP **P 11 24 36.2 -0.1**
comp=Z,38nm,1.0s,mb5.0
HAU eMLR MLR
comp=Z,388nm,22.8s,MS4.4
HAU Haudompre 81.13 356 eP **P 11 24 36.2 -0.1**
HAU pmax pmax
comp=Z,19nm,1.0s,mb5.0
HAU MLR MLR
comp=Z,390nm,22.8s,MS4.7
HAU Haudompre 81.13 356 eP **P 11 24 36.2 -0.1**
comp=Z,19nm,1.0s,mb5.0
HAU LR LR
comp=Z,390nm,22.8s,MS4.7
FELD Feldberg im Sc 81.18 355 eP **P 11 24 36.3 -0.3**
ARSA Arzberg 81.18 350⇑iP **P 11 24 37.3 +0.6**
comp=Z,20nm,1.0s,mb5.0,SNR=7.0
CFR Carcaliu 81.19 341⇓P **P 11 24 37.1 +0.4**
CFR Carcaliu 81.19 341⇓iP **P 11 24 37.1 +0.4**
MOF Molkenrain 81.25 356 eP **P 11 24 36.3 -0.7**
QUIF Quistinic 81.28 3 eP **P 11 24 36.1 -1.0**
comp=Z,41nm,1.0s,mb5.0
QUIF Quistinic 81.28 3 eP **P 11 24 36.1 -1.0**
QUIF pmax pmax
comp=Z,20nm,1.0s,mb5.0
QUIF Quistinic 81.28 3 eP **P 11 24 36.1 -1.0**
comp=Z,20nm,1.0s,mb5.0
HINF Hinteralfeld 81.30 356 eP **P 11 24 36.9 -0.3**
comp=Z,19nm,0.9s,mb4.7
HINF Hinteralfeld 81.30 356 eP **P 11 24 36.9 -0.3**
HINF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8

HINF Hinteralfeld 81.30 356 *e*P **P 11 24 36.9 -0.3**
comp=Z,9.5nm,0.9s,mb4.7
GNI Garni 81.31 327 *c*e P **P 11 24 37.4 0.0**
GNI pmax pmax
comp=Z,49nm,1.6s
GNI Garni 81.31 327 PFAKE 11 24 50.0 +13
GNI LR LR
comp=Z,780nm,19.0s,MS5.1
MLR Muntele Rosu 81.33 342 ⇓P **P 11 24 38.8 +1.4**
MLR Muntele Rosu 81.33 342 ⇓*i*P **P 11 24 38.8 +1.4**
MOTA Moosalm 81.50 353 ⇑*i*P **P 11 24 38.6 +0.2**
comp=Z,12nm,0.7s,mb4.9
WTTA Wattenberg 81.54 353 ⇑*i*P **P 11 24 39.1 +0.6**
comp=Z,39nm,1.0s,mb5.3
KBA Koelnbreinsper 81.58 351 ⇑*i*P **P 11 24 39.2 +0.5**
comp=Z,74nm,0.9s,mb5.6,SNR=21
WRAB Tennant Creek 81.63 224 PFAKE 11 24 50.0 +11
WRAB LR LR
comp=Z,390nm,20.0s,MS4.8
WRA Warramunga Arr 81.64 224 P **P 11 24 37.7 -1.5**
comp=Z,1.9nm,0.7s,mb4.2,baz=33,slow=6.1,SNR=19
WRA Warramunga Arr 81.64 224 P **P 11 24 37.7 -1.6**
WRA pmax pmax
comp=Z,2.0nm,0.7s
WRA Warramunga Arr 81.64 224 P **P 11 24 37.7 -1.5**
HARR Harsova 81.70 341 ⇓P **P 11 24 36.6 -2.8**
HARR Harsova 81.70 341 ⇓*i*P **P 11 24 36.6 -2.8**
LOMF Lomont 81.76 356 *e*P **P 11 24 39.9 +0.2**
SOKA Soboth 81.80 350 ⇑*i*P **P 11 24 40.4 +0.5**
comp=Z,48nm,1.1s,mb5.3
TIRR Tirgusor 81.82 340 P **P 11 24 40.5 +0.4**
TIRR Tirgusor 81.82 340 *e*P **P 11 24 40.2 +0.2**
comp=Z,20nm,0.8s,mb5.1
TIRR Tirgusor 81.82 340 ⇓*i*P **P 11 24 40.1 0.0**
PERS Pernice 81.83 350 *i*P **P 11 24 40.4 +0.4**
FETA Feichten 81.86 353 ⇑*i*P **P 11 24 40.6 +0.4**
comp=Z,25nm,1.1s,mb5.1,SNR=15
KOGS Kog 81.89 349 *i*P **P 11 24 40.4 +0.1**
LOR Lormes 81.95 358 *e*P **P 11 24 40.6 -0.1**
comp=Z,34nm,1.0s,mb4.9
LOR *e*MLR MLR
comp=Z,459nm,21.0s,MS4.5
LOR Lormes 81.95 358 *e*P **P 11 24 40.6 -0.1**
LOR pmax pmax
comp=Z,17nm,1.0s,mb4.9
LOR MLR MLR
comp=Z,460nm,21.0s,MS4.8
LOR Lormes 81.95 358 *e*P **P 11 24 40.6 -0.1**
comp=Z,17nm,1.0s,mb4.9
LOR LR LR
comp=Z,460nm,21.0s,MS4.8
BZS Buzias 81.96 345 P **P 11 24 41.3 +0.5**
BZS Buzias 81.96 345 ⇓P **P 11 24 40.8 0.0**
BZS Buzias 81.96 345 ⇓*i*P **P 11 24 40.8 0.0**
GROS Grobnik 81.96 350 *e*P **P 11 24 41.0 +0.2**
ABTA Abfaltersbach 81.98 352 ⇑*i*P **P 11 24 41.1 +0.3**
comp=Z,24nm,1.0s,mb5.1,SNR=9.9
MYKA Terra Mystica 81.99 351 ⇑*i*P **P 11 24 41.9 +0.9**
comp=Z,11nm,0.9s,mb4.8
OBKA Obir 82.02 350 ⇑*i*P **P 11 24 41.5 +0.4**
comp=Z,28nm,0.8s,mb5.2,SNR=13
ZAVS Zavodnje 82.04 350 *e*P **P 11 24 40.6 -0.5**
SSF Saint Saulge 82.16 358 *e*P **P 11 24 41.8 0.0**
comp=Z,52nm,1.1s,mb5.1
SSF Saint Saulge 82.16 358 *e*P **P 11 24 41.8 0.0**
SSF pmax pmax
comp=Z,26nm,1.1s,mb5.1
SSF Saint Saulge 82.16 358 *e*P **P 11 24 41.8 0.0**
comp=Z,26nm,1.1s,mb5.1
CADS Cadrg 82.38 351 *i*P **P 11 24 42.1 -0.8**
AVF Avril sur Loir 82.44 358 *e*P **P 11 24 43.2 0.0**
comp=Z,30nm,0.9s,mb4.9
AVF Avril sur Loir 82.44 358 *e*P **P 11 24 43.2 0.0**
AVF pmax pmax
comp=Z,15nm,0.9s,mb4.9
AVF Avril sur Loir 82.44 358 *e*P **P 11 24 43.2 0.0**
comp=Z,15nm,0.9s,mb4.9
CABF La Chapelle 82.53 356 *e*P **P 11 24 44.1 +0.4**
comp=Z,44nm,1.1s,mb5.1
CABF La Chapelle 82.53 356 *e*P **P 11 24 44.1 +0.4**
CABF pmax pmax
comp=Z,22nm,1.1s,mb5.1
CABF La Chapelle 82.53 356 *e*P **P 11 24 44.1 +0.4**
comp=Z,22nm,1.1s,mb5.1
SMF Signal de Mont 82.57 358 *e*P **P 11 24 43.9 0.0**
comp=Z,66nm,1.1s,mb5.3
SMF Signal de Mont 82.57 358 *e*P **P 11 24 43.9 0.0**
SMF pmax pmax
comp=Z,33nm,1.1s,mb5.3
SMF Signal de Mont 82.57 358 *e*P **P 11 24 43.9 0.0**
comp=Z,33nm,1.1s,mb5.3
MFF Saint Martin d 82.65 1 *e*P **P 11 24 44.4 +0.1**
comp=Z,42nm,0.9s,mb5.2
MFF Saint Martin d 82.65 1 *e*P **P 11 24 44.4 +0.1**
MFF pmax pmax
comp=Z,21nm,0.9s,mb5.2
MFF Saint Martin d 82.65 1 *e*P **P 11 24 44.4 +0.1**
comp=Z,21nm,0.9s,mb5.2
BGF Bois d'Agland 82.68 359 *e*P **P 11 24 44.5 0.0**
comp=Z,26nm,0.9s,mb5.0
BGF Bois d'Agland 82.68 359 *e*P **P 11 24 44.5 0.0**
BGF pmax pmax
comp=Z,13nm,0.9s,mb5.0
BGF Bois d'Agland 82.68 359 *e*P **P 11 24 44.5 0.0**
comp=Z,13nm,0.9s,mb5.0
PSI Prapat 82.70 265 P **P 11 24 44.5 -0.6**
comp=Z,11nm,0.7s,mb5.0,baz=340,slow=5.9,SNR=4.9
PSI Prapat 82.70 265 P **P 11 24 44.5 -0.6**
PSI pmax pmax
comp=Z,11nm,0.7s,mb5.0
TRI Trieste 82.89 351 PFAKE 11 25 00.0 +14
TRI LR LR
comp=Z,383nm,20.0s,MS4.8
BOJS Bojanci 82.94 350 *i*P **P 11 24 45.7 -0.1**
TCF Toulx Ste Croi 82.96 359 *e*P **P 11 24 45.8 -0.1**
comp=Z,26nm,0.9s,mb5.0
TCF Toulx Ste Croi 82.96 359 *e*P **P 11 24 45.8 -0.1**
TCF pmax pmax
comp=Z,13nm,0.9s,mb5.0
TCF Toulx Ste Croi 82.96 359 *e*P **P 11 24 45.8 -0.1**
comp=Z,13nm,0.9s,mb5.0
MTDJ Mount Denham 83.11 70 PFAKE 11 25 00.0 +13
MTDJ LR LR
comp=Z,272nm,19.0s,MS4.6
AGO Saint Agoulin 83.18 358 *e*P **P 11 24 48.6 +1.5**
GTBY Guantanamo Bay 83.20 67 PFAKE 11 25 00.0 +12
GTBY LR LR
comp=Z,333nm,19.0s,MS4.7
PLDF La Plantade 83.25 358 *e*P **P 11 24 49.0 +1.5**
PYM Petit Puy Mans 83.48 358 *e*P **P 11 24 49.9 +1.2**
RKT Rikitea 83.55 140 *e*LR LR 11 51 06.9
comp=Z,589nm,25.0s,baz=333
LPL La Plagne 83.60 356 *e*P **P 11 24 50.3 +1.0**
comp=Z,12nm,0.8s,mb4.8
LPL La Plagne 83.60 356 *e*P **P 11 24 50.3 +1.0**
LPL pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
LPL La Plagne 83.60 356 *e*P **P 11 24 50.3 +1.0**
comp=Z,6.0nm,0.8s,mb4.8
LPG La Plagne 83.62 356 *e*P **P 11 24 50.6 +1.2**
comp=Z,21nm,1.0s,mb4.9
LPG La Plagne 83.62 356 *e*P **P 11 24 50.6 +1.2**
LPG pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
LPG La Plagne 83.62 356 *e*P **P 11 24 50.6 +1.2**
comp=Z,10nm,1.0s,mb4.9
RJF Les Rejaudoux 83.95 359 *e*P **P 11 24 50.9 -0.1**
comp=Z,82nm,1.4s,mb5.3
RJF *e*MLR MLR
comp=Z,473nm,22.0s,MS4.5
RJF Les Rejaudoux 83.95 359 *e*P **P 11 24 50.9 -0.1**
RJF pmax pmax
comp=Z,41nm,1.4s,mb5.4
RJF MLR MLR
comp=Z,470nm,22.0s,MS4.8
RJF Les Rejaudoux 83.95 359 *e*P **P 11 24 50.9 -0.1**
comp=Z,41nm,1.4s,mb5.4
RJF LR LR
comp=Z,470nm,22.0s,MS4.8
LBL Lubilhac 84.00 358 *e*P **P 11 24 52.9 +1.6**
HYB Hyderabad 84.05 290 *e*P **P 11 24 52.0 0.0**
HYB Hyderabad 84.05 290 *i*P **P 11 24 52.0 0.0**
BNI Bardonecchia 84.06 356 *e*P **P 11 24 52.6 +0.9**
BNI pmax pmax
comp=Z,26nm,1.1s,mb5.3
BNI MLR MLR
comp=Z,269nm,19.0s,MS4.7
BNI Bardonecchia 84.06 356 *e*P **P 11 24 52.6 +1.0**
comp=Z,26nm,1.1s,mb5.3
BNI LR LR
comp=Z,269nm,19.0s,MS4.7
FITZ Fitzroy Crossi 84.10 232 *e*P **P 11 24 51.3 -0.7**
comp=Z,15nm,1.0s,mb5.1
FITZ *e*pP pP 11 25 04.9 -0.8
BOB Bobbio (Coli) 84.19 354 P **P 11 24 52.5 +0.2**
GRTK Grand Turk 84.22 63 PFAKE 11 25 00.0 +7.2
GRTK LR LR
comp=Z,407nm,20.0s,MS4.8
ORIF Oris-en-Rattie 84.23 356 *e*P **P 11 24 53.3 +0.8**
comp=Z,26nm,1.0s,mb5.0
ORIF *e*MLR MLR
comp=Z,215nm,19.0s,MS4.2
ORIF Oris-en-Rattie 84.23 356 *e*P **P 11 24 53.3 +0.8**
ORIF pmax pmax
comp=Z,13nm,1.0s,mb5.0
ORIF Oris-en-Rattie 84.23 356 *e*P **P 11 24 53.3 +0.8**
comp=Z,13nm,1.0s,mb5.0
LFF La Frestale 84.31 0 *e*P **P 11 24 53.1 +0.2**
comp=Z,51nm,1.0s,mb5.3
LFF La Frestale 84.31 0 *e*P **P 11 24 53.1 +0.2**
LFF pmax pmax
comp=Z,25nm,1.0s,mb5.3
LFF La Frestale 84.31 0 *e*P **P 11 24 53.1 +0.2**
comp=Z,25nm,1.0s,mb5.3
CAF Calviac 84.32 359 *e*P **P 11 24 53.3 +0.3**
comp=Z,42nm,1.0s,mb5.2
CAF Calviac 84.32 359 *e*P **P 11 24 53.3 +0.3**
CAF pmax pmax
comp=Z,21nm,1.0s,mb5.2
CAF Calviac 84.32 359 *e*P **P 11 24 53.3 +0.3**
comp=Z,21nm,1.0s,mb5.2
VIVF Saint-Julien-l 84.34 357 *e*P **P 11 24 53.4 +0.4**
comp=Z,24nm,1.0s,mb5.0
VIVF Saint-Julien-l 84.34 357 *e*P **P 11 24 53.4 +0.4**
VIVF pmax pmax
comp=Z,12nm,1.0s,mb5.0
VIVF Saint-Julien-l 84.34 357 *e*P **P 11 24 53.4 +0.4**
comp=Z,12nm,1.0s,mb5.0
MBDF Montbardon 84.38 356 *e*P **P 11 24 54.1 +0.8**
comp=Z,25nm,0.9s,mb5.0
MBDF Montbardon 84.38 356 *e*P **P 11 24 54.1 +0.8**
MBDF pmax pmax
comp=Z,13nm,0.9s,mb5.1
MBDF Montbardon 84.38 356 *e*P **P 11 24 54.1 +0.8**
comp=Z,12nm,0.9s,mb5.0
ZCCA Zocca 84.49 353 P **P 11 24 55.4 +1.6**
FNVD Fontana Vidola 84.66 353 P **P 11 24 56.5 +1.8**
comp=Z,133nm,1.6s,mb5.8
VLC Villacollemand 84.73 353 PFAKE 11 25 10.0 +15
VLC LR LR
comp=Z,244nm,20.0s,MS4.6
BDI Bagni Di Lucca 84.81 353 P **P 11 24 55.5 +0.1**
BDI pmax pmax
comp=Z,24nm,0.9s,mb5.3
BDI Bagni Di Lucca 84.81 353 P **P 11 24 55.5 +0.1**
comp=Z,24nm,0.9s,mb5.3
SFI Santa Sofia 84.86 352 P **P 11 24 56.7 +1.0**
SFI pmax pmax
comp=Z,29nm,1.2s,mb5.3
SFI Santa Sofia 84.86 352 P **P 11 24 56.7 +1.0**
comp=Z,29nm,1.2s,mb5.3
FSSB Fossombrone 84.99 351 P **P 11 24 56.9 +0.6**
BRTR Keskin Array B 85.06 335 P **P 11 24 57.0 +0.2**
comp=Z,15nm,0.8s,mb5.2,baz=53,slow=2.9,SNR=57
BRTR Keskin Array B 85.06 335 P **P 11 24 57.0 +0.2**
BRTR pmax pmax
comp=Z,15nm,0.8s
ASAR Alice Springs 85.12 222 P **P 11 24 56.0 -1.1**
comp=Z,2.7nm,0.9s,mb4.4,baz=27,slow=5.4,SNR=12
ASAR Alice Springs 85.12 222 P **P 11 24 56.0 -1.1**
ASAR pmax pmax
comp=Z,3.0nm,0.9s
LASF Ste Croix 85.14 358 *e*P **P 11 24 57.5 +0.4**
comp=Z,18nm,0.9s,mb4.9
PIEI Pieia 85.16 351 P **P 11 24 57.8 +0.6**
comp=Z,8.5nm,0.8s,mb4.9
SMRF Simiane la Rot 85.19 357 *e*P **P 11 24 58.3 +1.0**
comp=Z,51nm,0.9s,mb5.3
SMRF Simiane la Rot 85.19 357 *e*P **P 11 24 58.3 +1.0**
comp=Z,51nm,0.9s,mb5.7
SBF Sospel 85.21 355 *e*P **P 11 24 57.4 -0.1**
comp=Z,101nm,1.0s,mb5.6
SBF Sospel 85.21 355 *e*P **P 11 24 57.4 -0.1**
SBF pmax pmax
comp=Z,51nm,1.0s,mb5.6
SBF Sospel 85.21 355 *e*P **P 11 24 57.4 -0.1**
comp=Z,50nm,1.0s,mb5.6
CING Cingoli 85.26 351 P **P 11 24 58.2 +0.5**
SNTG Esanatoglia 85.40 351 P **P 11 24 59.1 +0.7**
comp=Z,44nm,1.0s,mb5.5
MURB Monte Urbino 85.44 351 P **P 11 24 59.7 +1.1**
comp=Z,59nm,1.0s,mb5.7
FRF La Foret Royal 85.55 356 *e*P **P 11 24 59.1 -0.1**
comp=Z,40nm,0.9s,mb5.3
FRF La Foret Royal 85.55 356 *e*P **P 11 24 59.1 -0.1**
FRF pmax pmax
comp=Z,20nm,0.9s,mb5.3
FRF La Foret Royal 85.55 356 *e*P **P 11 24 59.1 -0.1**
comp=Z,20nm,0.9s,mb5.3
LMR La Mourre 85.79 356 *e*P **P 11 25 00.4 +0.1**
comp=Z,43nm,1.0s,mb5.3
LMR La Mourre 85.79 356 *e*P **P 11 25 00.4 +0.1**
LMR pmax pmax
comp=Z,22nm,1.0s,mb5.3
LMR La Mourre 85.79 356 *e*P **P 11 25 00.4 +0.1**
comp=Z,22nm,1.0s,mb5.3
NRCA Norcia 85.80 351 P **P 11 25 01.2 +0.8**
comp=Z,27nm,0.9s,mb5.5
MTLF Montolieu 85.90 359 *e*P **P 11 25 01.2 +0.3**
comp=Z,40nm,1.1s,mb5.2
MTLF Montolieu 85.90 359 *e*P **P 11 25 01.2 +0.3**
MTLF pmax pmax
comp=Z,20nm,1.1s,mb5.3
MTLF Montolieu 85.90 359 *e*P **P 11 25 01.2 +0.3**
comp=Z,20nm,1.1s,mb5.3
TERO Teramo 85.96 351 P **P 11 25 01.7 +0.5**
comp=Z,24nm,0.8s,mb5.5
SJPF Ste Jean 86.12 1 *e*P **P 11 25 02.7 +0.7**
comp=Z,17nm,0.8s,mb5.0
SJPF Ste Jean 86.12 1 *e*P **P 11 25 02.7 +0.7**
SJPF pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
SJPF Ste Jean 86.12 1 *e*P **P 11 25 02.7 +0.7**
comp=Z,8.6nm,0.8s,mb5.0
SDDR Presa de Saban 86.14 64 PFAKE 11 25 10.0 +7.5
SDDR LR LR
comp=Z,348nm,22.0s,MS4.7
EPF Esparros 86.22 0 *e*P **P 11 25 02.1 -0.4**
comp=Z,20nm,1.0s,mb5.0
EPF Esparros 86.22 0 *e*P **P 11 25 02.1 -0.4**
EPF pmax pmax
comp=Z,10.0nm,1.0s,mb5.0
EPF Esparros 86.22 0 *e*P **P 11 25 02.1 -0.4**
comp=Z,9.8nm,1.0s,mb5.0
AQU L'Aquila 86.25 351 *e*P **P 11 25 03.5 +0.9**
AQU pmax pmax
comp=Z,30nm,0.8s,mb5.6
AQU MLR MLR
comp=Z,323nm,21.0s,MS4.7
AQU L'Aquila 86.25 351 *e*P **P 11 25 03.5 +0.9**
comp=Z,30nm,0.8s,mb5.6
AQU LR LR
comp=Z,323nm,21.0s,MS4.7
ETSF Etsaut 86.35 1 *e*P **P 11 25 03.7 +0.6**
comp=Z,23nm,0.9s,mb5.1
ETSF Etsaut 86.35 1 *e*P **P 11 25 03.7 +0.6**
ETSF pmax pmax
comp=Z,12nm,0.9s,mb5.1
ETSF Etsaut 86.35 1 *e*P **P 11 25 03.7 +0.6**
comp=Z,12nm,0.9s,mb5.1
TIR Tirane 86.41 346 PFAKE 11 25 10.0 +6.6
TIR LR LR
comp=Z,201nm,19.0s,MS4.5
PGF Pioggiola 86.43 354 *e*P **P 11 25 03.5 0.0**
comp=Z,83nm,0.9s,mb5.6
PGF Pioggiola 86.43 354 *e*P **P 11 25 03.5 0.0**
PGF pmax pmax
comp=Z,41nm,0.9s,mb5.7
PGF Pioggiola 86.43 354 *e*P **P 11 25 03.5 0.0**
comp=Z,41nm,0.9s,mb5.7
ISP Isparta 87.65 337 PFAKE 11 25 20.0 +10
ISP LR LR
comp=Z,316nm,21.0s,MS4.7
MTE Manteigas 88.56 6 PFAKE 11 25 30.0 +16
MTE LR LR
comp=Z,212nm,19.0s,MS4.6
BCIP Isla Barro Col 88.78 77 PFAKE 11 25 30.0 +15
BCIP LR LR
comp=Z,182nm,20.0s,MS4.5
TIP Timpagrande 88.98 348 *e*P **P 11 25 15.8 0.0**
comp=Z,8.9nm,1.1s,mb5.0
TIP LR LR
comp=Z,332nm,19.0s,MS4.8
VSL Villasalto 89.44 353 PFAKE 11 25 30.0 +12
VSL LR LR
comp=Z,209nm,20.0s,MS4.6
ESDC Sonseca Array 89.48 4 P **P 11 25 17.6 -0.6**
comp=Z,3.5nm,0.8s,mb4.7,baz=357,slow=4.1,SNR=4.0
ESLA Sonseca Array 89.48 4 *e*P **P 11 25 17.7 -0.5**
comp=Z,0.3nm,0.6s,mb3.8
ESLA LR LR
comp=Z,1μm,20.0s,MS5.3
CELP Cerrillos 89.51 61 *e*P **P 11 25 19.3 +0.7**
STKA Stephens Creek 89.57 213 P **P 11 25 18.4 +0.1**
comp=Z,8.8nm,1.0s,mb5.0,baz=85,slow=2.3,SNR=5.7
STKA LR LR 12 03 22.9
comp=Z,547nm,18.8s,MS5.0,baz=23,slow=34
STKA Stephens Creek 89.57 213 P **P 11 25 18.4 +0.1**
STKA LR LR 12 03 22.9
MIB Mutribah 89.57 321 *e*P **P 11 25 18.2 -0.6**
MIB AMb AMB 11 25 19.5
comp=Z,47nm,0.9s,mb5.8
PAB San Pablo 89.59 4 PFAKE 11 25 30.0 +11
PAB LR LR
comp=Z,260nm,20.0s,MS4.7
SJG San Juan 89.72 61 *e*P **P 11 25 20.0 +0.4**
SJG *e**PP pP 11 25 34.1 +0.8
SJG pmax pmax
comp=Z,5.0nm,0.3s
SJG MLR MLR
comp=Z,290nm,20.0s
SJG San Juan 89.72 61 *e*P **P 11 25 20.0 +0.5**
comp=Z,5.3nm,0.3s,mb5.3
SJG *e*pP pP 11 25 34.1 +0.8
SJG LR LR
comp=Z,290nm,20.0s,MS4.7
HUMP Col San Antoni 89.86 61 *e*P **P 11 25 21.2 +0.9**
CEL Celeste 90.00 348 PFAKE 11 25 30.0 +9.4
CEL LR LR
comp=Z,214nm,20.0s,MS4.6
MTP Monte Pirata 90.06 61 *e*P **P 11 25 21.8 +0.7**
comp=Z,36nm,0.9s,mb5.7
MTP *e*pP pP 11 25 36.0 +1.1
NAY Al-Naaiem 90.10 321 *e*P **P 11 25 20.0 -1.2**
NAY AMb AMB 11 25 21.7
comp=Z,20nm,1.1s,mb5.3
RDF Al-Radifah 90.27 320 *e*P **P 11 25 21.5 -0.5**
RDF AMb AMB 11 25 23.2
comp=Z,33nm,1.0s,mb5.6
MMAI Mount Meron Ar 90.83 331 LR LR 12 13 10.1
comp=Z,274nm,19.2s,MS4.7,baz=5.0,slow=40
SNZO South Karori 92.21 185 PFAKE 11 25 40.0 +10
SNZO LR LR
comp=Z,598nm,19.0s,MS5.1
ANWB Willy Bob 92.45 58 PFAKE 11 25 40.0 +7.8
ANWB LR LR
comp=Z,381nm,21.0s,MS4.8
WDD Wield Dalam 92.53 349 PFAKE 11 25 40.0 +7.6
WDD LR LR
comp=Z,179nm,19.0s,MS4.5
SFS San Fernando 92.56 6 PFAKE 11 25 40.0 +7.5
SFS LR LR
comp=Z,519nm,19.0s,MS5.0
SDV Santo Domingo 94.56 70 PFAKE 11 25 50.0 +8.0
SDV LR LR
comp=Z,160nm,22.0s,MS4.4
ROSC El Rosal 95.52 75 LR LR 12 07 27.9
comp=Z,93nm,20.1s,MS4.2,baz=198,slow=35
OTAV Otavalo 96.58 81 PFAKE 11 26 00.0 +8.8
OTAV LR LR
comp=Z,105nm,21.0s,MS4.3
GRGR Grenville 97.07 61 PFAKE 11 26 00.0 +6.6
GRGR LR LR
comp=Z,321nm,20.0s,MS4.8
SACV Santiago Islan 110.82 25 PFAKE 11 31 10.0 +16
SACV LR LR
comp=Z,131nm,19.0s,MS4.5
TORD Torodi Ar. Bea 115.99 359 PKP PKPdf 11 31 01.6 -2.5
comp=Z,0.3nm,0.7s,baz=2.8,slow=2.7,SNR=2.7
TORD PP PP 11 31 56.4 -11
comp=Z,1.5nm,1.1s,baz=2.9,slow=5.4,SNR=3.4
TORD PKKPab PKKPab 11 41 47.0 +4.6
comp=Z,1.4nm,0.9s,baz=187,slow=2.2,SNR=5.3
TORD Torodi Ar. Bea 115.99 359 PKP PKPdf 11 31 01.6 -2.5
TORD PP PP 11 31 56.4 -11
TORD PKKPab PKKPab 11 41 47.0 +4.6
KMBO Kilima Mbogo 121.45 316 PFAKE 11 31 30.0 +15
KMBO LR LR
comp=Z,255nm,20.0s,MS4.9
DBIC Dimbokro 122.23 7 PFAKE 11 31 30.0 +14
DBIC LR LR
comp=Z,268nm,19.0s,MS4.9
RCBR Riachuelo 125.53 47 PFAKE 11 31 30.0 +7.5
RCBR LR LR
comp=Z,312nm,20.0s,MS5.0
CASY Casey 128.60 209 PFAKE 11 31 40.0 +13
CASY LR LR
comp=Z,536nm,20.0s,MS5.2
SBA Scott Base 129.00 184 PFAKE 11 31 40.0 +13
SBA LR LR
comp=Z,280nm,19.0s,MS5.0
CPUP Villa Florida 129.90 83 PKP PKPdf 11 31 28.7 -1.7
comp=Z,4.2nm,0.9s,baz=305,slow=4.6,SNR=5.1
CPUP Villa Florida 129.90 83 PKIKP PKPdf 11 31 28.7 -1.7
CPUP pmax pmax
comp=Z,4.0nm,1.0s
CPUP Villa Florida 129.90 83 PKP PKPdf 11 31 28.7 -1.7
TSUM Tsumeb 145.48 331 *e*PKPbc PKPbc 11 31 59.2 0.0
TSUM *e*pPKPdf pPKPdf 11 32 13.4 0.0
MAW Mawson 146.12 217 PKPbc PKPbc 11 31 59.1 -0.7
comp=Z,7.2nm,1.0s,baz=56,slow=4.6,SNR=7.8
MAW Mawson 146.12 217 *e*PKPbc PKPbc 11 31 58.9 -0.8
MAW *e*pPKPdf pPKPdf 11 32 13.2 +0.3
LBTB Lobatse 147.71 314 *e*PKPbc PKPbc 11 32 06.2 +0.7
LBTB *e*PKPab PKPab 11 32 09.3 +1.3
BOSA Boshof 150.94 311 PKPbc PKPbc 11 32 13.7 +0.2
comp=Z,9.1nm,0.8s,baz=355,slow=2.5,SNR=14
SYO Syowa Base 154.32 211 ⇓*e*PKPab PKPab 11 32 38.0 +3.9

BJI 11 11:16:53.8, 40.19N×74.93E, h11km, ML3.2/4
ISC 11 11:16:49.2±1.7, 38.88N±0.10×75.6E±0.2, h10km, n12, σ0.9 97/14, 4C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.70**	**24**	⇓*i*Pg		**Pn**	**11 17 04.1**	**-1.0**
KSH				Sg		**Sg**	**11 17 12.0**	**+0.3**
KSH				smax				
KSH	comp=N,3μm,0.5s			smax				
KZA	**Kyzart**	**3.21**	**355**	P		**Pn**	**11 17 38.7**	**-0.8**
ULHL	SNR=25 **Ulahol**	**3.40**	**8**	P		**Pn**	**11 17 43.2**	**+1.0**
UCH	SNR=5.9 **Uchtor**	**3.45**	**346**	P		**Pn**	**11 17 42.4**	**-0.5**
AML	SNR=14 **Almayashu**	**3.56**	**336**	P		**Pn**	**11 17 44.9**	**+0.5**
KBK	SNR=19 **Karagaybulak**	**3.81**	**353**	P		**Pn**	**11 17 51.7**	**+3.9**
AAK	SNR=8.5 **Ala-Archa**	**3.84**	**348**	P		**Pn**	**11 17 51.1**	**+2.8**
EKS2	SNR=12 **Erkin-Say**	**4.03**	**340**	P		**Pn**	**11 17 50.1**	**-0.7**
TKM2	SNR=8.7 **Tokmak 2**	**4.04**	**360**	⇑Pn		**Pn**	**11 17 50.7**	**-0.3**
TKM2	comp=E,22nm,0.7s			⇑Lg			11 18 32.7	
TKM2	comp=E,69nm,0.6s **Tokmak 2**	**4.04**	**360**	P		**Pn**	**11 17 50.9**	**-0.1**
CHMS	SNR=23 **Chumysh**	**4.17**	**351**	P		**Sg**	**11 19 02.6**	**-0.3**
KK31	SNR=5.7 **Karatay Array**	**5.72**	**319**	⇑Pn		**Pn**	**11 18 21.6**	**+7.5**
KK31	comp=E,8.1nm,0.7s,baz=130,slow=15,SNR=22			⇓Sn		**Sn**	**11 19 06.0**	**-14**
KK31	comp=E,6.7nm,0.4s,baz=128,slow=25			⇑Lg			11 19 27.7	

comp=E,8.3nm,0.5s,baz=132,slow=28

*IDC **11** 11:23:35.6±1.4,31°.33N×103°.32E,h0km,mb3.5/4,*
mb1 3.8/4,mb1mx3.5/24,mbtmp3.6/4,Error ellipse:
s-maj=43.7km s-min=27.3km az=54.0
*ISCJB **11** 11:23:38.0±1.1,31°.26N±0°.04×103°.8E±0°.1,h10km,*
mb3.6/3,Error ellipse: s-maj=14.4km s-min=5.6km
az=175.4

ISC 11 11:23:41.5±1.2,31°.23N±0°.04×103°.9E±0°.1,h10km,n7,
σ1°.44/14,mb3.6/3,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.84**	**360**	Pg	**Pg**	**11 25 16.3**	**+2.0**
LZH				Sg	**Sg**	**11 26 18.0**	**+0.9**
LZH				smax			
	comp=N,63nm,1.0s						
LZH				smax			
	comp=E,66nm,1.1s						
LZH				LR	LR		
	comp=N,110nm,4.2s						
LZH				LR	LR		
	comp=Z,190nm,5.9s						
XAN	**Xi'an**	**5.10**	**55**	Pn	**Pn**	**11 24 57.2**	**-0.8**
XAN				Pg	**Pg**	**11 25 19.2**	**0.0**
XAN				Sn	**Sn**	**11 25 56.9**	**0.0**
XAN				Sg	**Sg**	**11 26 21.7**	**-3.6**
XAN				smax			
	comp=N,63nm,0.9s						
XAN				smax			
	comp=E,43nm,0.7s						
XAN				LR	LR		
	comp=N,120nm,7.2s						
XAN				LR	LR		
	comp=E,25nm,6.2s						
XAN				LR	LR		
	comp=Z,43nm,8.2s						
GYA	**Guiyang**	**5.35**	**152**	Pn	**Pn**	**11 25 08.5**	**+7.1**
GYA				Pg	**Pg**	**11 25 26.4**	**+2.4**
GYA				Sn	**Sn**	**11 26 04.4**	**+1.3**
GYA				Sg	**Sg**	**11 26 25.8**	**-7.5**
GYA				smax			
	comp=N,60nm,0.8s						
GYA				smax			
	comp=E,60nm,0.7s						
KSRS	**Korea Array**	**20.78**	**66**	P	**P**	**11 28 22.4**	**-0.4**
	comp=E,3.4nm,0.7s,baz=263,slow=10,SNR=18						
MKAR	**Makanchi Array**	**22.75**	**319**	P	**P**	**11 28 35.1**	**-8.6**
	comp=E,0.4nm,0.9s,mb2.9,baz=108,slow=9.3,SNR=3.0						
WRA	**Warramunga Arr**	**58.69**	**146**	P	**P**	**11 33 37.3**	**-2.1**
	comp=E,1.2nm,0.6s,mb4.1,baz=338,slow=7.9,SNR=31						
ASAR	**Alice Springs**	**61.70**	**149**	P	**P**	**11 33 58.1**	**-1.9**
	comp=E,0.3nm,0.5s,mb3.7,baz=337,slow=6.4,SNR=4.9						

*CSEM **11** 11:34:28.8,34°.57N×26°.42E,h7km,MD3.6,After ATH*
*NEIC **11** 11:34:28.8,34°.57N×26°.42E,h7km,MD3.6(ATH),After*
ATH.

ATH 11 11:34:28.8,34°.57N×26°.42E,h7km±5km,MD3.6/5,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.57**	**343**	*e*Pb	Pg	11 34 39.3	-0.5
ZKR				*e*Sb	Sg	11 34 47.5	+0.3
ZKR	**Zakros**	**0.57**	**343**	*e*PB	Pg	11 34 39.3	-0.5
ZKR				*e*SB	Sg	11 34 47.5	+0.3
ZKR	**Zakros**	**0.57**	**343**	*e*Pb	Pg	11 34 39.3	-0.5
ZKR				*e*Sb	Sg	11 34 47.5	+0.3
XRY	**Khrisi**	**0.67**	**297**	*e*Pg	Pg	11 34 41.3	-0.4
XRY	**Khrisi**	**0.67**	**297**	*e*PG	Pg	11 34 41.3	-0.4
XRY	**Khrisi**	**0.67**	**297**	*e*Pg	Pg	11 34 41.3	-0.4
NPS	**Neapolis**	**0.96**	**316**	*e*Pn	Pn	11 34 47.4	-1.3
NPS	**Neapolis**	**0.96**	**316**	*e*PN	Pn	11 34 47.4	-1.3
NPS	**Neapolis**	**0.96**	**316**	*e*Pn	Pn	11 34 47.4	-1.3
LAST	**Lasithi**	**0.97**	**308**	*e*Pg	Pg	11 34 46.9	-0.6
LAST	**Lasithi**	**0.97**	**308**	*e*PG	Pg	11 34 46.9	-0.6
LAST	**Lasithi**	**0.97**	**308**	*e*Pg	Pg	11 34 46.9	-0.6
KARP	**Karpathos**	**1.15**	**32**	*e*Pb	Pb	11 34 50.5	-0.5
KARP	**Karpathos**	**1.15**	**32**	*e*PB	Pb	11 34 50.5	-0.5
KARP	**Karpathos**	**1.15**	**32**	*e*Pb	Pb	11 34 50.5	-0.5
SIVA	**Sivas**	**1.40**	**289**	*e*Pg	Pg	11 34 54.9	-0.7
SIVA	**Sivas**	**1.40**	**289**	*e*PG	Pg	11 34 54.9	-0.7
SIVA	**Sivas**	**1.40**	**289**	*e*Pg	Pg	11 34 54.9	-0.7
IDI	**Anoyia**	**1.45**	**300**	*e*Pb	Pb	11 34 56.5	+0.4
IDI	**Anoyia**	**1.45**	**300**	*e*PB	Pb	11 34 56.5	+0.4
IDI	**Anoyia**	**1.45**	**300**	*e*Pb	Pb	11 34 56.5	+0.4
GVD	**Gavdhos**	**1.94**	**279**	*e*Pn	Pn	11 35 04.2	+2.0
GVD	**Gavdhos**	**1.94**	**279**	*e*PN	Pn	11 35 04.2	+2.0
GVD	**Gavdhos**	**1.94**	**279**	*e*Pn	Pn	11 35 04.2	+2.0

*IDC **11** 11:55:58.2±4.3,5°.29S×147°.89E,h0km,mb4.1/2,*
mb1 4.5/3,mb1mx3.8/16,mbtmp4.3/3,Error ellipse:
s-maj=139.9km s-min=46.1km az=113.0

NEIC 11 11:55:58.3±2.1,5°.47S×148°.36E,h15km,mb4.3/3,Error ellipse: s-maj=47.1km s-min=24.6km az=109.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**9.86**	**211**	*e*Pn	Pn	11 58 18.4	-1.2
	319nm,0.5s						
COEN				*e*Sn	Sn	12 00 04.3	-5.8
KAKA	**Kakadu**	**17.28**	**244**	*e*P	Pn	11 59 59.6	+0.5
WRAB	**Tennant Creek**	**19.81**	**222**	*e*P	Pn	12 00 29.7	-0.3
	7.5nm,0.6s						
WRA	**Warramunga Arr**	**19.82**	**222**	P	Pn	12 00 29.2	-1.0
	1.3nm,0.3s,baz=42,slow=12,SNR=87						
WRA	**Warramunga Arr**	**19.82**	**222**	P	Pn	12 00 29.2	-1.0
ASAR	**Alice Springs**	**22.83**	**216**	P	P	12 01 01.4	+0.6
	2.9nm,0.6s,baz=49,slow=8.8,SNR=57						
FITZ	**Fitzroy Crossi**	**25.50**	**239**	P	P	12 01 25.5	-0.8
	3.5nm,0.5s,baz=54,slow=10,SNR=17						
MBWA	**Marble Bar**	**31.83**	**238**	P	P	12 02 22.5	-0.2
	17nm,1.3s						
TORD	**Torodi Ar. Bea**	**146.26**	**285**	PKPbc	PKPbc	12 15 39.6	+0.3
	0.6nm,0.6s,baz=59,slow=3.7,SNR=6.1						

IDC 11 12:00:28.9±5.1,29°.94S×177°.40W,h50km±41km,mb3.7/3,
mb1 3.9/3,mb1mx3.6/15,mbtmp3.7/3,Error ellipse:
s-maj=60.2km s-min=53.2km az=1.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.82**	**327**	P	Pn	12 00 44.3	+0.1
	181nm,0.3s,baz=92,slow=19,SNR=7.8						
RAO				S	Sn	12 00 56.6	+1.2
	346nm,0.3s,baz=132,slow=22,SNR=6.1						
STKA	**Stephens Creek**	**35.09**	**256**	P	P	12 07 18.6	+1.3
	3.3nm,0.8s,baz=102,slow=12,SNR=3.7						
ASAR	**Alice Springs**	**43.65**	**266**	P	P	12 08 28.1	-0.6
	0.7nm,0.8s,baz=106,slow=7.3,SNR=9.8						
WRA	**Warramunga Arr**	**44.60**	**271**	P	P	12 08 35.9	-0.5
	1.3nm,0.6s,baz=110,slow=8.0,SNR=29						
FINES	**FINESS Array B**	**144.89**	**341**	PKP	PKPdf	12 19 59.5	-0.1
	1.4nm,0.6s,baz=46,slow=4.0,SNR=4.0						

KRSC 11 12:06:59.6±0.8,55°.11N×161°.45E,h87km±87km,ML3.5,
Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.58**	**164**	*e*P	Pn	12 07 16.0	+1.3
MKZ				*e*S	Sn	12 07 27.7	+1.9
KMNR	**Kamenistaya**	**0.95**	**314**	*e*P	Pn	12 07 19.8	+1.4
KMNR				*e*S	Sn	12 07 34.5	+2.0
ZLN	**Zelenaya**	**0.98**	**338**	*e*P	Pn	12 07 20.5	+1.7
ZLN				*e*S	Sn	12 07 35.6	+2.4
BZMR	**Bezymyannaya**	**0.99**	**327**	*e*P	Pn	12 07 20.3	+1.4
BZMR				*e*S	Sn	12 07 35.4	+2.0
KIRR	**Kirishev**	**1.05**	**324**	*e*P	Pn	12 07 21.4	+1.7
KIRR				*e*S	Sn	12 07 36.7	+2.0
CIRR	**Tsirk**	**1.08**	**339**	*e*P	Pn	12 07 21.9	+1.9
CIRR				*e*S	Sn	12 07 37.9	+2.6
KPT	**Kopyto**	**1.11**	**321**	*e*P	Pn	12 07 21.9	+1.6
KPT				*e*S	Sn	12 07 38.1	+2.3
KRSR	**Krestovskiy**	**1.22**	**336**	*e*P	Pn	12 07 23.0	+1.4
KRSR				*e*S	Sn	12 07 39.7	+1.5
KLY	**Klyuchi**	**1.29**	**340**	*e*P	Pn	12 07 23.6	+1.1
KLY				*e*S	Sn	12 07 41.2	+1.5
KOZ	**Kozyrevsk**	**1.31**	**317**	*e*P	Pn	12 07 24.3	+1.6
KOZ				*e*S	Sn	12 07 42.5	+2.4
KBTR	**Krutoberegovo**	**1.35**	**35**	*e*P	Pn	12 07 25.2	+2.0
KBTR				*e*S	Sn	12 07 43.9	+2.9
BDR	**Baidarnaya**	**1.47**	**355**	*e*P	Pn	12 07 26.8	+2.1
BDR				*e*S	Sn	12 07 46.9	+3.2
SMKR	**Semkarok**	**1.48**	**0**	*e*P	Pn	12 07 26.8	+2.0
SMKR				*e*S	Sn	12 07 46.5	+2.6
SRKR	**Sorokina**	**1.56**	**354**	*e*P	Pn	12 07 27.7	+1.9
SRKR				*e*S	Sn	12 07 47.9	+2.2
SRDR	**Sredinnyy**	**1.56**	**322**	*e*P	Pn	12 07 27.0	+1.1
SRDR				*e*S	Sn	12 07 46.7	+0.9
KII	**Karymskiy**	**1.59**	**228**	*e*P	Pn	12 07 27.9	+1.7
KII				*e*S	Sn	12 07 48.7	+2.3
SPN	**Mys Shipunski**	**2.18**	**203**	*e*P	Pn	12 07 34.8	+0.7
SPN				*e*S	Sn	12 08 00.3	-0.1
NLC	**Nalytchevo**	**2.30**	**213**	*e*P	Pn	12 07 37.0	+1.3
NLC				*e*S	Sn	12 08 04.2	+0.9
AVH	**Avacha**	**2.44**	**222**	*e*P	Pn	12 07 39.8	+2.3
AVH				*e*S	Sn	12 08 09.0	+2.5
GNL	**Ganaly**	**2.49**	**237**	*e*P	Pn	12 07 40.1	+1.9
BKI	**Bering**	**2.60**	**86**	*e*S	Sn	12 08 09.5	-0.7
PET	**Petropavlovsk**	**2.66**	**219**	*e*P	Pn	12 07 42.5	+2.1
PET				*e*S	Sn	12 08 14.3	+2.5

*JMA **11** 12:27:45.8±0.7,47°.05N×141°.73E,h18km,M3.2*
*SKHL **11** 12:27:46.5±0.4,46°.84N×141°.71E,h10km,mb3.8/3*
SKHL Felt (IV) at Pravda.
*ISCJB **11** 12:27:47.3±0.5,46°.87N±0°.02×141°.75E±0°.05,h10km,*
Error ellipse: s-maj=5.0km s-min=3.4km az=4.2

ISC 11 12:27:48.1±0.5,46°.87N±0°.03×141°.73E±0°.07,h10km,n12,
σ0°.95/21,Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YSS	**Yuzh-Sakhalins**	**0.71**	**83**	*e*Pg	**Pg**	**12 28 01.0**	**-0.8**
YSS				AMB	AMB	12 28 02.0	
	70nm,0.4s						
YSS				*e*Sg	**Sg**	**12 28 11.0**	**0.0**
YSS				A		12 28 12.5	
	600nm,0.2s						
JWK2	**Keihoku**	**1.56**	**176**	P	**Pn**	**12 28 15.6**	**-0.3**
JWK2				*e*S	**Sn**	**12 28 37.2**	**+1.0**
JRR	**Rishiri**	**1.76**	**190**	P	**Pn**	**12 28 18.6**	**0.0**
JSE	**Soyaes**	**2.01**	**162**	P	**Pn**	**12 28 21.3**	**-0.7**
UGL	**Uglegorsk**	**2.22**	**6**	*e*P	**Pn**	**12 28 24.0**	**-0.9**
UGL				*e*Pg	**Pg**	**12 28 31.5**	**+0.9**
UGL				AMB	AMB	12 28 34.5	
	24nm,0.6s						
UGL				*e*Sb	**Sb**	**12 28 54.5**	**-1.2**
UGL				*e*Sg	**Sg**	**12 29 00.5**	**+1.2**
JSS	**Shosan**	**2.48**	**178**	P	**Pn**	**12 28 29.2**	**+0.8**
ASAJ	**Asahikawa**	**2.83**	**167**	P	**Pn**	**12 28 33.3**	**+0.1**
JMP	**Maruseppu**	**3.09**	**158**	P	**Pn**	**12 28 36.0**	**-0.9**
JAR	**Ashorobuto**	**3.86**	**157**	P	**Pn**	**12 28 47.3**	**-0.1**
TEY	**Ternei**	**4.02**	**245**	*e*Pg	**Pg**	**12 29 05.5**	**+0.4**
TEY				*e*Sg	**Sg**	**12 30 02.0**	**+4.9**
TYV	**Tymovskoe**	**4.04**	**8**	*e*Pg	**Pg**	**12 29 07.5**	**+2.1**
TYV				AMB	AMB	12 29 08.5	
	12nm,0.8s						
TYV				*e*Sg	**Sg**	**12 30 03.5**	**+5.8**
TYV				A		12 30 05.0	
	7.0nm,0.5s						
GRNR	**Gornyy**	**5.24**	**320**	*e*S	**Sn**	**12 30 05.0**	**-1.8**
GRNR				*e*Sb	**Sb**	**12 30 18.0**	**-4.7**
GRNR				*e*Sg	**Sg**	**12 30 43.5**	**+7.2**
GRNR				A		12 30 45.0	
	17nm,0.8s						
GRNR				A		12 30 45.0	
	21nm,0.8s						

*SZGRF **11** 12:29:54.3,35°.60S×15°.43W,h33km,mb5.2,Tristan da*
Cunha region
*IDC **11** 12:30:02.3±0.7,33°.08S×15°.87W,h0km,mb4.5/15,*
mb1 4.6/15,mb1mx4.4/22,mbtmp4.5/15,MS3.9/11,
Ms1 3.9/11,ms1mx3.8/21,Error ellipse: s-maj=21.6km
s-min=17.2km az=170.0
*ISCJB **11** 12:30:02.5±0.4,33°.14S±0°.08×15°.8W±0°.1,h10km,*
mb4.8/59,MS4.0/18,Error ellipse: s-maj=13.2km
s-min=11.3km az=6.2
*NEIC **11** 12:30:04.1±0.3,33°.10S×15°.86W,h10km,mb5.0/34,Error*
ellipse: s-maj=8.9km s-min=7.4km az=135.0
*BJI **11** 12:30:06.1,33°.10S×15°.90W,h10km,mB5.5/4*

ISC 11 12:30:04.3±0.4,33°.13S±0°.08×15°.8W±0°.1,h10km,n131,
σ0°.71/111,mb4.8/59,MS4.0/18,2D,Southern
Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**35.39**	**94**	P	**P**	**12 37 00.4**	**+0.1**
	6.2nm,1.0s,mb4.5,baz=288,slow=10.0,SNR=4.7						
CPUP	**Villa Florida**	**36.49**	**270**	LR	LR	12 49 47.0	
	comp=Z,122nm,18.9s,MS3.7,baz=120,slow=32						
LBTB	**Lobatse**	**36.91**	**88**	P	**P**	**12 37 11.3**	**-2.0**
	15nm,1.2s,mb4.7,baz=182,slow=6.1,SNR=3.8						
LBTB	**Lobatse**	**36.91**	**88**	P	**P**	**12 37 11.3**	**-2.0**
LIC	**Lamto**	**40.45**	**17**	*e*P	**P**	**12 37 42.4**	**-0.7**
	152nm,1.2s,mb5.3						
LIC				*e*MLR	MLR		
	comp=Z,326nm,20.0s,MS3.9						
LIC	**Lamto**	**40.45**	**17**	*e*P	**P**	**12 37 43.0**	**-0.1**
	comp=Z,167nm,1.2s,mb5.6						
LIC	**Lamto**	**40.45**	**17**	*e*P	**P**	**12 37 42.4**	**-0.7**
	comp=Z,76nm,1.2s,mb5.3						
LIC				LR	LR		
	comp=Z,160nm,20.0s,MS3.9						
KIC	**Kosan Boka**	**40.66**	**17**	*e*P	**P**	**12 37 43.5**	**-1.3**
	comp=Z,185nm,1.1s,mb5.6						
TIC	**Toumodi**	**40.86**	**17**	*e*P	**P**	**12 37 45.2**	**-1.3**
	comp=Z,110nm,0.8s,mb5.5						
DBIC	**Dimbokro**	**40.93**	**17**	P	**P**	**12 37 46.0**	**-1.0**
	comp=Z,36nm,1.0s,mb5.0,baz=180,slow=7.6,SNR=16						
DBIC				LR	LR	12 50 44.7	
	comp=Z,247nm,19.1s,MS4.1,baz=179,slow=30						
LSZ	**Lusaka**	**43.55**	**77**	P	**P**	**12 38 08.5**	**0.0**
	comp=Z,5.9nm,1.0s,mb4.3,baz=236,slow=13,SNR=5.2						
CFAA	**Coronel Fontan**	**43.91**	**257**	P	**P**	**12 38 10.2**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=102,slow=4.7,SNR=4.9						
SIV	**San Ignacio**	**44.18**	**281**	P	**P**	**12 38 13.7**	**+0.1**
	comp=Z,9.3nm,1.2s,mb4.4,baz=125,slow=8.9,SNR=15						
SYO	**Syowa Base**	**47.24**	**156**	‖*e*P	**P**	**12 38 36.0**	**-1.0**
TORD	**Torodi Ar. Bea**	**48.96**	**23**	P	**P**	**12 38 50.0**	**-0.9**
	comp=Z,36nm,1.1s,mb5.3,baz=200,slow=7.4,SNR=67						
TORD				LR	LR	12 56 01.8	
	comp=Z,151nm,18.3s,MS4.0,baz=185,slow=32						
TORD	**Torodi Ar. Bea**	**48.96**	**23**	P	**P**	**12 38 50.0**	**-0.9**
TORD				LR	LR	12 56 01.8	
LPAZ	**La Paz**	**49.88**	**276**	P	**P**	**12 38 56.5**	**-1.5**
	comp=Z,2.4nm,1.0s,mb4.2,baz=74,slow=9.0,SNR=3.9						
LPAZ				LR	LR	12 57 45.6	
	comp=Z,69nm,18.2s,MS3.7,baz=113,slow=33						
MAW	**Mawson**	**55.57**	**153**	P	**P**	**12 39 40.0**	**+0.5**
	comp=Z,7.6nm,0.9s,mb4.7,baz=284,slow=7.8,SNR=12						
MAW				LR	LR	12 59 30.6	
	comp=Z,168nm,20.0s,MS4.1,baz=308,slow=32						
QSPA	**South Pole Qui**	**57.12**	**180**	LR	LR	13 00 13.8	
	comp=Z,158nm,21.2s,MS4.1,baz=227,slow=32						
ROSC	**El Rosal**	**66.98**	**293**	LR	LR	13 07 21.3	
	comp=Z,105nm,18.7s,MS4.1,baz=15,slow=34						
SBA	**Scott Base**	**69.27**	**181**	*e*P	**P**	**12 41 12.2**	**+1.3**
	comp=Z,22nm,1.2s,mb5.0						
PBDV	**Barranco-do-Ve**	**70.39**	**7**	*e*P	**P**	**12 41 18.7**	**+0.4**
	comp=Z,32nm,1.6s,mb5.0						
PVAQ	**Vaqueiros**	**70.57**	**7**	*e*P	**P**	**12 41 18.9**	**-0.5**
	comp=Z,26nm,1.9s,mb4.8						
PBEJ	**Beja**	**71.18**	**7**	*e*P	**P**	**12 41 23.9**	**+0.9**
	comp=Z,17nm,1.6s,mb4.7						
PBAR	**Barrancos**	**71.41**	**7**	*e*P	**P**	**12 41 24.9**	**+0.5**
	comp=Z,39nm,1.7s,mb5.1						
EVO	**Evora**	**71.66**	**6**	*e*P	**P**	**12 41 26.0**	**+0.1**
	comp=Z,38nm,1.3s,mb4.8						
EVO				*e*MLR	MLR		
	comp=Z,122nm,22.8s,MS3.8						
EVO	**Evora**	**71.66**	**6**	*e*P	**P**	**12 41 26.8**	**+0.9**
	comp=Z,15nm,1.4s,mb4.7						
PESTR	**Estremoz**	**72.03**	**7**	*e*P	**P**	**12 41 29.8**	**+1.6**
	comp=Z,32nm,1.6s,mb5.0						
KEST	**Kesra**	**72.44**	**21**	P	**P**	**12 41 31.6**	**+0.9**
	comp=Z,4.9nm,1.1s,mb4.3,baz=119,slow=3.1,SNR=9.4						
KEST				LR	LR	13 09 32.4	
	comp=Z,51nm,20.6s,MS3.8,baz=207,slow=33						
KEST	**Kesra**	**72.44**	**21**	*e*P	**P**	**12 41 29.9**	**-0.7**
PMRV	**Marv??o**	**72.61**	**7**	*e*P	**P**	**12 41 32.5**	**+0.9**
	comp=Z,18nm,1.6s,mb4.7						
ESDC	**Sonseca Array**	**73.26**	**10**	P	**P**	**12 41 35.5**	**0.0**
	comp=Z,3.4nm,1.0s,mb4.2,baz=187,slow=6.4,SNR=13						
ETSF	**Etsaut**	**76.94**	**11**	*e*P	**P**	**12 41 56.9**	**+0.3**
	comp=Z,22nm,1.3s,mb4.6						
ETSF	**Etsaut**	**76.94**	**11**	*e*P	**P**	**12 41 56.9**	**+0.3**
	comp=Z,11nm,1.3s,mb4.6						
SJPF	**Ste Jean**	**77.04**	**11**	*e*P	**P**	**12 41 57.4**	**+0.3**
	comp=Z,64nm,1.5s,mb5.0						
SJPF	**Ste Jean**	**77.04**	**11**	*e*P	**P**	**12 41 57.4**	**+0.3**
	comp=Z,32nm,1.5s,mb5.0						
EPF	**Esparros**	**77.22**	**12**	*e*P	**P**	**12 41 58.4**	**+0.2**
	comp=Z,33nm,1.4s,mb4.8						
EPF	**Esparros**	**77.22**	**12**	*e*P	**P**	**12 41 58.4**	**+0.2**
	comp=Z,16nm,1.4s,mb4.8						
MTLF	**Montolieu**	**77.87**	**13**	*e*P	**P**	**12 42 00.9**	**-0.9**
	comp=Z,26nm,1.4s,mb4.7						
MTLF	**Montolieu**	**77.87**	**13**	*e*P	**P**	**12 42 00.9**	**-0.9**
	comp=Z,13nm,1.4s,mb4.7						
TIP	**Timpagrande**	**78.03**	**25**	*e*P	**P**	**12 42 02.1**	**-0.7**
	comp=Z,12nm,1.1s,mb4.7						
PGF	**Pioggiola**	**78.68**	**18**	*e*P	**P**	**12 42 05.5**	**-0.8**
	comp=Z,25nm,1.3s,mb4.7						
PGF	**Pioggiola**	**78.68**	**18**	*e*P	**P**	**12 42 05.5**	**-0.8**
	comp=Z,12nm,1.3s,mb4.7						
LMR	**La Mourre**	**78.79**	**16**	*e*P	**P**	**12 42 06.3**	**-0.6**
	comp=Z,33nm,1.3s,mb4.8						
LMR	**La Mourre**	**78.79**	**16**	*e*P	**P**	**12 42 06.3**	**-0.6**
	comp=Z,17nm,1.3s,mb4.8						
LASF	**Ste Croix**	**78.90**	**14**	*e*P	**P**	**12 42 07.3**	**-0.2**
	comp=Z,37nm,1.4s,mb4.8						
FRF	**La Foret Royal**	**79.03**	**16**	*e*P	**P**	**12 42 07.8**	**-0.4**
LFF	**La Frestale**	**79.14**	**12**	*e*P	**P**	**12 42 08.9**	**+0.1**
	comp=Z,80nm,1.5s,mb5.1						
LFF	**La Frestale**	**79.14**	**12**	*e*P	**P**	**12 42 08.9**	**+0.1**
	comp=Z,40nm,1.5s,mb5.1						
SMRF	**Simiane la Rot**	**79.18**	**16**	*e*P	**P**	**12 42 09.4**	**+0.4**
	comp=Z,19nm,1.1s,mb4.6						
SMRF	**Simiane la Rot**	**79.18**	**16**	*e*P	**P**	**12 42 09.4**	**+0.4**
	comp=Z,19nm,1.1s,mb4.9						
CAF	**Calviac**	**79.37**	**13**	*e*P	**P**	**12 42 10.0**	**0.0**
	comp=Z,35nm,1.4s,mb4.8						
CAF	**Calviac**	**79.37**	**13**	*e*P	**P**	**12 42 10.0**	**0.0**
	comp=Z,18nm,1.4s,mb4.8						
RJF	**Les Rejaudoux**	**79.63**	**12**	*e*P	**P**	**12 42 11.3**	**-0.1**
	comp=Z,41nm,1.2s,mb4.9						
RJF				*e*MLR	MLR		
	comp=Z,169nm,21.5s,MS4.0						
RJF	**Les Rejaudoux**	**79.63**	**12**	*e*P	**P**	**12 42 11.3**	**-0.1**
	comp=Z,20nm,1.2s,mb4.9						
RJF				LR	LR		
	comp=Z,170nm,21.5s,MS4.3						
AQU	**L'Aquila**	**79.76**	**22**	*e*P	**P**	**12 42 12.7**	**+0.5**
	comp=Z,6.9nm,0.5s,mb4.8						
VIVF	**Saint-Julien-l**	**79.82**	**15**	*e*P	**P**	**12 42 12.6**	**+0.1**
	comp=Z,54nm,1.4s,mb5.0						
VIVF	**Saint-Julien-l**	**79.82**	**15**	*e*P	**P**	**12 42 12.6**	**+0.1**
	comp=Z,27nm,1.4s,mb5.0						
ORIF	**Oris-en-Rattie**	**80.14**	**15**	*e*P	**P**	**12 42 14.7**	**+0.5**
	comp=Z,28nm,1.2s,mb4.8						
ORIF				*e*MLR	MLR		
	comp=Z,201nm,18.2s,MS4.2						
ORIF	**Oris-en-Rattie**	**80.14**	**15**	*e*P	**P**	**12 42 14.7**	**+0.5**
	comp=Z,14nm,1.2s,mb4.8						
MBDF	**Montbardon**	**80.17**	**16**	*e*P	**P**	**12 42 14.8**	**+0.5**
	comp=Z,46nm,1.3s,mb4.9						
MBDF	**Montbardon**	**80.17**	**16**	*e*P	**P**	**12 42 14.8**	**+0.5**
	comp=Z,23nm,1.3s,mb5.0						
MFF	**Saint Martin d**	**80.61**	**11**	*e*P	**P**	**12 42 16.8**	**+0.1**
	comp=Z,110nm,1.9s,mb5.2						
MFF	**Saint Martin d**	**80.61**	**11**	*e*P	**P**	**12 42 16.8**	**+0.1**
	comp=Z,55nm,1.9s,mb5.2						
TCF	**Toulx Ste Croi**	**80.71**	**13**	*e*P	**P**	**12 42 17.5**	**+0.3**
	comp=Z,32nm,1.4s,mb4.8						
TCF	**Toulx Ste Croi**	**80.71**	**13**	*e*P	**P**	**12 42 17.5**	**+0.3**
	comp=Z,16nm,1.4s,mb4.8						
LPG	**La Plagne**	**80.89**	**16**	*e*P	**P**	**12 42 18.8**	**+0.6**
	comp=Z,36nm,1.1s,mb4.9						
LPG	**La Plagne**	**80.89**	**16**	*e*P	**P**	**12 42 18.8**	**+0.6**
	comp=Z,18nm,1.1s,mb4.9						
LPL	**La Plagne**	**80.90**	**16**	*e*P	**P**	**12 42 18.7**	**+0.4**
	comp=Z,34nm,1.1s,mb4.9						
LPL	**La Plagne**	**80.90**	**16**	*e*P	**P**	**12 42 18.7**	**+0.4**
	comp=Z,17nm,1.1s,mb4.9						
TIR	**Tirane**	**81.07**	**26**	*e*P	**P**	**12 42 19.9**	**+0.6**
	comp=Z,13nm,0.3s,mb5.3						
SMF	**Signal de Mont**	**81.36**	**14**	*e*P	**P**	**12 42 20.7**	**0.0**
	comp=Z,34nm,1.0s,mb4.9						
SMF	**Signal de Mont**	**81.36**	**14**	*e*P	**P**	**12 42 20.7**	**0.0**
	comp=Z,17nm,1.0s,mb4.9						
AVF	**Avril sur Loir**	**81.41**	**13**

KECS Kecovo 87.49 23 *e*P **P 12 42 52.6 +0.9**
CLL Collm 87.82 18 *e*P **P 12 42 54.0 +0.8**
DPC Dobruska-Polom 87.85 20 *e*P **P 12 42 54.3 +0.9**
UPC Upice 87.90 20 *e*P **P 12 42 54.6 +1.0**
CRVS Cervenica-Dubn 88.17 24 *e*P **P 12 42 55.9 +0.9**
comp=Z,8.5nm,1.2s,mb4.8
CRVS Cervenica-Dubn 88.17 24 *e*P **P 12 42 55.9 +0.9**
EKA Eskdalemuir Ar 88.77 7 P **P 12 42 57.9 +0.3**
comp=Z,3.8nm,1.0s,mb4.7,baz=123,slow=3.1,SNR=4.6
AKASG Malin Array Be 92.45 27 P **P 12 43 14.9 0.0**
comp=Z,1.9nm,0.8s,mb4.5,baz=223,slow=4.7,SNR=9.8
NOA NORSAR Array B 96.39 13 LR LR 13 23 13.4
comp=Z,34nm,19.7s,MS3.8,baz=180,slow=33
SCHQ Schefferville 97.94 333 LR LR 13 20 20.7
comp=Z,65nm,18.1s,MS4.2,baz=98,slow=31
PDAR Pinedale Array 114.09 306 PKP PKiKP 12 48 42.4 -1.1
comp=Z,0.4nm,0.8s,baz=132,slow=2.2,SNR=3.7
CMAR Chiang Mai Arr 120.32 87 PKP PKPdf 12 48 56.4 +0.1
comp=Z,0.4nm,0.5s,baz=212,slow=3.6,SNR=4.9
YKA Yellowknife Ar 122.76 327 PKP PKPdf 12 48 58.8 -0.7
comp=Z,1.0nm,0.8s,baz=93,slow=1.9,SNR=8.3
YKA Yellowknife Ar 122.76 327 PKP PKPdf 12 48 58.8 -0.8
INK Inuvik 130.53 334 *e*PKPdf PKPdf 12 49 13.8 -0.5
BPAW Bear Paw Mtn. 138.59 332 *e*PKPdf PKPdf 12 49 28.9 -0.5
TRF Thorofare Moun 138.59 331 *e*PKPdf PKPdf 12 49 29.5 +0.1
KTH Kantishna Hill 138.80 331 *e*PKPdf PKPdf 12 49 30.2 +0.4
PPLA Purkeypile 139.61 331 *e*PKPdf PKPdf 12 49 31.4 0.0
TTA Tatalina 141.13 332 *e*PKPdf PKPdf 12 49 34.9 +0.8
BILL Bilibino 145.02 359 *e*PKPbc PKPbc 12 49 40.3 +0.1
CHGN Chignik 145.40 323 *e*PKPbc PKPbc 12 49 41.5 -0.3
KSRS Korea Array 150.22 71 PKPbc PKPbc 12 49 55.3 -0.2
comp=Z,1.0nm,0.6s,baz=281,slow=2.8,SNR=9.2
MDJ Mudanjiang 150.94 57 PKPbc PKPbc 12 49 56.7 -0.3
MDJ AMB AMB
comp=Z,73nm,3.8s

IDC 11 12:51:06.6±9.7, 30°.95S×179°.38W, h139km±67km, mb3.4/4, mb1 3.5/5, mb1mx3.4/16, mbtmp3.4/5, Error ellipse: s-maj=83.1km s-min=27.6km az=46.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.84**	**201**	P	Pn	12 52 59.4	+1.6
	0.4nm,0.3s,baz=360,slow=16,SNR=20						
URZ				S	Sn	12 54 23.1	-2.0
	3.7nm,0.3s,baz=46,slow=24,SNR=17						
STKA	**Stephens Creek**	**33.20**	**258**	P	P	12 57 31.5	+1.3
	4.2nm,1.1s,baz=105,slow=16,SNR=2.8						
ASAR	**Alice Springs**	**41.90**	**268**	P	P	12 58 42.7	-0.7
	0.2nm,0.3s,baz=108,slow=7.2,SNR=4.5						
WRA	**Warramunga Arr**	**42.94**	**273**	P	P	12 58 51.3	-0.5
	0.6nm,0.3s,baz=111,slow=8.0,SNR=33						
QSPA	**South Pole Qui**	**59.16**	**180**	P	P	13 00 52.3	+0.2
	0.6nm,0.5s,baz=117,slow=2.0,SNR=5.9						

*ISK **11** 13:02:17.6, 40°.00N×30°.71E, h4km, MD2.7*
*DDA **11** 13:02:17.8, 40°.02N×30°.69E, h7km±1km, Md3.0*
*CSEM **11** 13:02:18.3±0.1, 39°.98N×30°.69E, h5km, MD3.0, Error ellipse: s-maj=1.9km s-min=1.5km az=78.0*
*ISCJB **11** 13:02:18.4±0.5, 39°.99N±0°.03×30°.67E±0°.05, h10km, Error ellipse: s-maj=5.4km s-min=4.3km az=2.9*
ISC 11 13:02:18.7±0.5, 39°.99N±0°.03×30°.69E±0°.05, h8km±9km, n22, σ0°51/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORA	**Eskisehir**	**0.21**	**238**	*i* P	**Pg**	**13 02 22.9**	**-0.1**
BORA				*i* S	**Sg**	**13 02 26.3**	**+0.5**
BORA	**Eskisehir**	**0.21**	**238**	*i* P	**Pg**	**13 02 22.9**	**-0.1**
BORA				*i* S	**Sg**	**13 02 26.3**	**+0.5**
GPA	**Golpazari**	**0.41**	**316**	*e*PG	**Pg**	**13 02 26.3**	**-0.5**
GPA	**Golpazari**	**0.41**	**316**	*e*Pg	**Pg**	**13 02 26.3**	**-0.5**
GULT	**Gulveren**	**0.46**	**343**	*e*PG	**Pg**	**13 02 27.2**	**-0.4**
GULT				*e*SG	**Sg**	**13 02 34.2**	**+0.6**
GULT	**Gulveren**	**0.46**	**343**	*e*Pg	**Pg**	**13 02 27.2**	**-0.4**
GULT				*e*Sg	**Sg**	**13 02 34.2**	**+0.6**
ESKT	**Eskisehir**	**0.49**	**165**	*e*PG	**Pg**	**13 02 27.7**	**-0.4**
ESKT				*e*SG	**Sg**	**13 02 35.3**	**+0.8**
ESKT	**Eskisehir**	**0.49**	**165**	*i* P	**Pg**	**13 02 27.7**	**-0.5**
ESKT				*i* S	**Sg**	**13 02 35.5**	**+0.9**
ESKT	**Eskisehir**	**0.49**	**165**	*e*Pg	**Pg**	**13 02 27.7**	**-0.5**
ESKT				*e*Sg	**Sg**	**13 02 35.3**	**+0.7**
SEYT	**Eskypehyr**	**0.49**	**165**	*i* P	**Pg**	**13 02 27.7**	**-0.5**
SEYT				*i* S	**Sg**	**13 02 35.5**	**+0.9**
MDU	**Mudurnu**	**0.62**	**40**	*e*PG	**Pg**	**13 02 30.0**	**-0.7**
MDU	**Mudurnu**	**0.62**	**40**	*e*Pg	**Pg**	**13 02 30.0**	**-0.7**
SVRH	**Sivrihisar-ESK**	**0.84**	**130**	*e*PG	**Pg**	**13 02 34.4**	**-0.5**
SVRH	**Sivrihisar-ESK**	**0.84**	**130**	*e*Pg	**Pg**	**13 02 34.4**	**-0.5**
ALT	**Altintas**	**1.04**	**206**	*e*PG	**Pg**	**13 02 38.1**	**-0.5**
ALT	**Altintas**	**1.04**	**206**	*e*Pg	**Pg**	**13 02 38.1**	**-0.5**
SGKT	**Sivrigoynuk**	**1.20**	**61**	*i* P	**Pb**	**13 02 41.6**	**0.0**
SGKT				*i* S	**Sg**	**13 02 58.0**	**+0.8**
SGKT	**Sivrigoynuk**	**1.20**	**61**	*i* P	**Pb**	**13 02 41.6**	**0.0**
SGKT				*i* S	**Sg**	**13 02 58.0**	**+0.8**
KIZT	**Kizilcal**	**1.45**	**140**	*e*PN	**Pn**	**13 02 45.1**	**0.0**
KIZT	**Kizilcal**	**1.45**	**140**	*e*Pn	**Pn**	**13 02 45.1**	**0.0**
ARMT	**Armutlu**	**1.51**	**293**	*e*PN	**Pn**	**13 02 46.5**	**+0.4**
ARMT	**Armutlu**	**1.51**	**293**	*e*Pn	**Pn**	**13 02 46.5**	**+0.5**

*BJI **11** 13:13:14.4, 3°.76N×123°.45E, h557km, mB4.7/25, mb4.8/46*
*ISCJB **11** 13:13:18.9±0.2, 4°.21N±0°.02×123°.15E±0°.03, h566km±3km, mb4.7/100, Error ellipse: s-maj=5.5km s-min=3.6km az=163.7*
*MAN **11** 13:13:18, 4°.11N×123°.15E, h567km, mb5.6, ML4.6, MS5.0*
*MOS **11** 13:13:19.3±1.1, 4°.26N×123°.12E, h569km, mb4.6/24, Error ellipse: s-maj=12.6km s-min=6.1km az=117.3*
*NEIC **11** 13:13:19.6±0.4, 4°.22N×123°.13E, h557km±5km, mb4.8/56, Error ellipse: s-maj=6.4km s-min=3.7km az=65.0*
*IDC **11** 13:13:19.9±0.6, 4°.20N×123°.22E, h562km±6km, mb4.0/27, mb1 4.0/30, mb1mx4.0/36, mbtmp4.0/30, Error ellipse: s-maj=9.6km s-min=4.8km az=74.0*
*DJA **11** 13:13:20, 4°.19N×123°.16E, h538km, Mw5.1/12*
ISC 11 13:13:19.8±0.2, 4°.20N±0°.02×123°.17E±0°.03, h559km±2km, h552km±9.5km: pP-P, n268, σ0°97/272, mb4.7/100, 11C-6D, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	**Manado**	**3.21**	**149**	P	**P**	**13 14 36.3**	**-0.6**
IPIL	**Ipil**	**3.61**	**351**	*e*P	**P**	**13 14 39.5**	**0.0**
PAGZ	**Pagadian**	**3.63**	**3**	*e*P	**P**	**13 14 40.1**	**+0.5**
DAV	**Davao City (W)**	**3.72**	**40**	P	**P**	**13 14 41.4**	**+1.1**
	79nm,0.3s,baz=242,slow=0.7,SNR=17						
DAV				S	**S**	**13 15 46.0**	**+0.1**
	151nm,0.3s,baz=208,slow=19,SNR=15						
DAV	**Davao City (W)**	**3.72**	**40**	P	**P**	**13 14 40.2**	**-0.1**
DAV	**Davao City (W)**	**3.72**	**40**	P	**P**	**13 14 40.8**	**+0.5**
	SNR=9.4						
DAV				P		13 14 40.8	
	SNR=9.4						
DAV	**Davao City (W)**	**3.72**	**40**	P	**P**	**13 14 40.6**	**+0.3**
MRSI	**Marisa**	**3.90**	**198**	P	**P**	**13 14 41.3**	**-0.3**
MATI	**Mati**	**4.11**	**48**	*e*P	**P**	**13 14 43.4**	**+0.3**
BUKP	**Musuan**	**4.11**	**27**	*e*P	**P**	**13 14 43.4**	**+0.3**
MYLDM	**Lahad Datu**	**4.75**	**282**	P	**P**	**13 14 48.3**	**+0.1**
MYLDM	**Lahad Datu**	**4.75**	**282**	P	**P**	**13 14 48.8**	**+0.7**
LUWI	**Luwuk**	**5.22**	**184**	P	**P**	**13 14 50.6**	**-1.5**
	9.2nm977nm,1.3s						
TSM	**Tawau**	**5.28**	**271**	P	**P**	**13 14 52.3**	**-0.3**
APSI	**Ampana**	**5.30**	**197**	P	**P**	**13 14 51.8**	**-1.0**
	2.5nm7μm449nm,1.1s						
TNTI	**Ternate**	**5.40**	**129**	P	**P**	**13 14 52.5**	**-1.1**
	8.6nm2μm,1.3s						
PCI	**Palu**	**6.07**	**213**	P	**P**	**13 14 59.1**	**-0.4**
	0.0nm93nm5.4nm,0.5s						
MSLP	**Maasin**	**6.13**	**16**	*e*P	**P**	**13 14 59.9**	**-0.1**
GUIM	**Jordan**	**6.41**	**355**	*e*P	**P**	**13 15 01.3**	**-1.2**
KDM	**Kudat**	**6.86**	**293**	P	**P**	**13 15 06.4**	**-0.4**
CUYO	**Cuyo Island**	**6.94**	**342**	*e*P	**P**	**13 15 07.6**	**+0.1**
BATP	**Bataraza**	**7.02**	**311**	*e*P	**P**	**13 15 08.7**	**+0.4**
KKM	**Kota Kinabalu**	**7.16**	**285**	P	**P**	**13 15 09.2**	**-0.5**
KKM	**Kota Kinabalu**	**7.16**	**285**	*e*P	**P**	**13 15 08.9**	**-0.8**
	279nm,0.8s						
KKM				*e*S	**S**	**13 16 34.6**	**-5.1**
KKM	**Kota Kinabalu**	**7.16**	**285**	P	**P**	**13 15 08.7**	**-1.0**
	1.2nm3μm364nm,1.0s						
TTSI	**Tana Toraja**	**7.94**	**205**	P	**P**	**13 15 17.8**	**+0.6**
	2μm270nm,1.0s						
KDI	**Kendari**	**8.12**	**184**	P	**P**	**13 15 18.2**	**-0.9**
	2μm207nm,1.3s						
NLAI	**Namlea**	**8.37**	**152**	P	**P**	**13 15 22.5**	**+1.0**
	9μm1μm,0.9s						
SJMP	**San Jose**	**8.45**	**346**	*e*P	**P**	**13 15 23.0**	**+0.8**
SPSI	**Sidrap Palu**	**8.80**	**203**	P	**P**	**13 15 25.7**	**0.0**
BNSI	**Bone**	**9.08**	**200**	P	**P**	**13 15 30.3**	**+1.7**
	132nm,0.9s						
AAI	**Ambon**	**9.31**	**147**	P	**P**	**13 15 30.7**	**-0.2**
	4μm360nm,0.7s						
PVCP	**Virac**	**9.38**	**6**	*e*P	**P**	**13 15 31.3**	**-0.3**
KAPI	**Kappang**	**9.77**	**200**	P	**P**	**13 15 34.5**	**-1.1**
	1.2nm,0.3s,baz=12,slow=9.0,SNR=10						
KAPI				S	**S**	**13 17 27.0**	**0.0**
	3.1nm,0.3s,baz=163,slow=20,SNR=14						
KAPI	**Kappang**	**9.77**	**200**	*e*P	**P**	**13 15 34.1**	**-1.5**
	59nm,1.3s						
KAPI	**Kappang**	**9.77**	**200**	P	**P**	**13 15 35.3**	**-0.3**
	17nm,1.1s						
TGY	**Tagaytay City**	**10.08**	**348**	P	**P**	**13 15 38.3**	**-0.3**
	56nm,0.3s,baz=123,slow=18,SNR=4.0						
BTM	**Bintulu**	**10.11**	**265**	P	**P**	**13 15 40.1**	**+1.0**
SBUM	**Sibu**	**11.07**	**261**	P	**P**	**13 15 49.7**	**+0.9**
SBUM	**Sibu**	**11.07**	**261**	P	**P**	**13 15 49.7**	**+0.9**
	654nm89nm,0.8s						
BOLP	**Bolinao**	**12.52**	**345**	*e*P	**P**	**13 16 01.3**	**-2.4**
CAUP	**Cauayan**	**12.73**	**354**	*e*P	**P**	**13 16 06.5**	**+0.6**
MMRI	**Maumere**	**12.79**	**184**	P	**P**	**13 16 10.2**	**+3.7**
	1μm98nm,0.8s						
KSM	**Kuching**	**13.13**	**258**	P	**P**	**13 16 09.9**	**-0.1**
KSM	**Kuching**	**13.13**	**258**	*e*P	**P**	**13 16 09.7**	**-0.3**
	56nm,0.5s						
KSM	**Kuching**	**13.13**	**258**	P	**P**	**13 16 09.7**	**-0.3**
	1μm99nm,1.4s						
TLE	**Tual**	**13.67**	**136**	P	**P**	**13 16 15.9**	**+0.3**
	188nm,0.7s						
APYP	**Conner**	**13.71**	**352**	*e*P	**P**	**13 16 14.5**	**-1.3**
KHKI	**Kahang-Kahang**	**14.59**	**211**	P	**P**	**13 16 26.3**	**+1.3**
TWG	**Pinlang**	**18.62**	**354**	*e*P	**P**	**13 17 01.9**	**-1.0**
	59nm,0.6s						
TPUB	**Ta-pu**	**19.14**	**353**	*e*P	**P**	**13 17 07.1**	**-0.5**
	164nm,0.6s						
YULB	**Yu-li**	**19.16**	**355**	*e*P	**P**	**13 17 05.3**	**-2.4**
	37nm,0.4s						
KAKA	**Kakadu**	**19.16**	**151**	⇑*i*P	**P**	**13 17 08.4**	**+0.5**
	75nm,0.6s						
KAKA				*e*S	**S**	**13 20 22.4**	**+9.3**
KAKA	**Kakadu**	**19.16**	**151**	*e*P	**P**	**13 17 08.4**	**+0.5**
	218nm,0.7s						
SSLB	**Suanglung**	**19.59**	**354**	*e*P	**P**	**13 17 10.6**	**-1.0**
	79nm,0.8s						
QIZ	**Qiongzhong**	**19.66**	**320**	P	**P**	**13 17 12.6**	**+0.2**
QIZ				S	**S**	**13 20 22.0**	**+1.0**
QIZ				pmax	pmax		
	comp=Z,24nm,0.9s						
QIZ				pmax	pmax		
	comp=Z,120nm,4.4s						
YHNB	**Yeheng**	**20.42**	**355**	*e*P	**P**	**13 17 18.2**	**-0.9**
	comp=Z,26nm,0.7s						
FITZ	**Fitzroy Crossi**	**22.30**	**174**	*e*P	**P**	**13 17 35.8**	**-0.3**
	comp=Z,65nm,0.8s,mb5.3						
FITZ				*e*S	**S**	**13 20 59.6**	**-3.1**
FITZ	**Fitzroy Crossi**	**22.30**	**174**	P	**P**	**13 17 35.9**	**-0.2**
	comp=Z,38nm,0.8s,mb5.1,baz=3.5,slow=6.2,SNR=51						
FITZ				S	**S**	**13 21 00.3**	**-2.4**
	comp=Z,6.6nm,0.9s,baz=152,slow=15,SNR=4.5						
FITZ				ScP	ScP	13 23 54.8	-0.2
	comp=Z,4.4nm,0.8s,baz=315,slow=4.3,SNR=3.5						
FITZ	**Fitzroy Crossi**	**22.30**	**174**	*e*P	**P**	**13 17 35.8**	**-0.3**
	comp=Z,42nm,0.9s,mb5.1						
KULM	**Kulim**	**22.47**	**274**	P	**P**	**13 17 37.6**	**-0.2**
PSI	**Prapat**	**24.24**	**268**	P	**P**	**13 17 53.2**	**-0.3**
	comp=Z,24nm,0.9s,mb4.8,baz=79,slow=4.0,SNR=9.6						
NST	**Nakhon Sawan**	**25.36**	**298**	P	**P**	**13 18 04.0**	**+0.7**
MBWA	**Marble Bar**	**25.43**	**187**	*e*P	**P**	**13 18 02.9**	**-0.9**
	comp=Z,26nm,0.9s,mb4.9						
WRAB	**Tennant Creek**	**26.38**	**156**	*e*P	**P**	**13 18 12.5**	**+0.2**
WRAB				pmax	pmax		
	comp=Z,34nm,0.6s,mb5.2						
WRAB	**Tennant Creek**	**26.38**	**156**	*e*P	**P**	**13 18 12.5**	**+0.2**
	comp=Z,34nm,0.6s,mb5.2						
WRA	**Warramunga Arr**	**26.39**	**156**	P	**P**	**13 18 11.3**	**-1.0**
	comp=Z,18nm,0.3s,mb5.2,baz=324,slow=12,SNR=643						
WRA				PcP	PcP	13 21 18.5	-0.6
	comp=Z,1.9nm,0.5s,baz=322,slow=2.6,SNR=7.2						
WRA				S	**S**	**13 22 03.3**	**-3.6**
	comp=Z,14nm,0.9s,baz=334,slow=16,SNR=8.3						
WRA				PKiKP	PKiKP	13 28 55.9	-1.4
	comp=Z,0.4nm,0.7s,baz=315,slow=1.2,SNR=5.0						
WRA	**Warramunga Arr**	**26.39**	**156**	P	**P**	**13 18 11.3**	**-1.1**
WRA				PcP	PcP	13 21 18.5	-0.7
WRA				S	**S**	**13 22 03.3**	**-3.6**
GYA	**Guiyang**	**27.19**	**326**	⇓*i*P	**P**	**13 18 20.4**	**+1.1**
GYA				sP	sP	13 20 53.2	-1.9
GYA				PcP	PcP	13 21 22.7	+1.7
GYA				S	**S**	**13 22 22.0**	**+2.6**
GYA				ScP	ScP	13 24 11.8	+2.9
GYA				PcS	PcS	13 25 03.0	-0.5
GYA				ScS	ScS	13 28 02.9	+1.4
GYA				pmax	pmax		
	comp=Z,30nm,1.0s,mb4.9						
WHN	**Wuhan**	**27.49**	**343**	⇑P	**P**	**13 18 23.0**	**+1.1**
WHN				pmax	pmax		
	comp=Z,61nm,0.9s,mb5.2						
CM31	**Chiang Mai Arr**	**27.60**	**303**	*e*P	**P**	**13 18 23.8**	**+0.8**
	comp=Z,15nm,0.8s,mb4.7						
CMAR	**Chiang Mai Arr**	**27.60**	**303**	P	**P**	**13 18 23.6**	**+0.7**
	comp=Z,17nm,0.9s,mb4.7,baz=120,slow=7.0,SNR=84						
CMAR				ScP	ScP	13 24 11.3	+1.0
	comp=Z,6.0nm,1.1s,baz=156,slow=1.6,SNR=20						
CHG	**Chiang Mai**	**27.77**	**303**	P	**P**	**13 18 24.9**	**+0.5**
	comp=Z,40nm,0.7s,mb5.2						
CHTO	**Chiang Mai**	**27.77**	**303**	*e*P	**P**	**13 18 24.7**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,36nm,0.8s,mb5.0						
CHTO	**Chiang Mai**	**27.77**	**303**	*e*P	**P**	**13 18 24.7**	**+0.3**
	comp=Z,36nm,0.8s,mb5.0						
CHTO				*e*ScP	ScP	13 24 11.3	+0.5
CHTO	**Chiang Mai**	**27.77**	**303**	P	**P**	**13 18 25.4**	**+0.9**
	SNR=12						
CHTO				P		13 18 25.4	
	SNR=12						
NJ2	**Nanjing**	**28.00**	**352**	*e*P	**P**	**13 18 27.5**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.0						
KMI	**Kunming**	**28.60**	**319**	P	**P**	**13 18 33.3**	**+1.6**
KMI				sP	sP	13 21 07.6	-0.3
KMI				S	**S**	**13 22 44.3**	**+2.9**
KMI				pmax	pmax		
	comp=Z,31nm,1.5s,mb4.7						
KMI				pmax	pmax		
	comp=Z,190nm,3.7s						
ENH	**Enshi**	**28.97**	**335**	*e*P	**P**	**13 18 35.0**	**+0.2**
	comp=Z,70nm,0.8s,mb5.3						
CBIJ	**Chichi jima**	**29.12**	**37**	P	**P**	**13 18 35.4**	**-0.8**
	comp=Z,61nm,0.5s,mb5.5,baz=172,slow=23,SNR=25						
CBIJ				S	**S**	**13 22 44.8**	**-4.5**
	comp=Z,49nm,0.6s,baz=305,slow=23,SNR=18						
ASAR	**Alice Springs**	**29.61**	**160**	P	**P**	**13 18 40.6**	**+0.2**
	comp=Z,24nm,0.6s,mb4.9,baz=339,slow=7.1,SNR=542						
ASAR				PcP	PcP	13 21 26.8	-0.5
	comp=Z,2.9nm,0.5s,baz=352,slow=2.2,SNR=8.0						
ASAR				S	**S**	**13 22 55.6**	**-1.3**
	comp=Z,20nm,1.0s,baz=351,slow=17,SNR=24						
ASAR				ScP	ScP	13 24 15.9	-0.7
	comp=Z,4.3nm,0.6s,baz=340,slow=3.3,SNR=17						
ASAR	**Alice Springs**	**29.61**	**160**	P	**P**	**13 18 40.6**	**+0.2**
ASAR						13 21 26.8	
ASAR				S	**S**	**13 22 55.7**	**-1.3**
CD2	**Chengdu**	**32.25**	**328**	*e*P	**P**	**13 19 04.3**	**+1.4**
CD2				sP	sP	13 21 37.9	-2.6
CD2				S	**S**	**13 23 41.7**	**+4.4**
CD2				sS	sS	13 26 27.2	-3.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.5						
CD2				pmax	pmax		
	comp=Z,30nm,4.2s						
XAN	**Xi'an**	**32.51**	**338**	P	**P**	**13 19 05.1**	**0.0**
XAN				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.5						
XAN				pmax	pmax		
	comp=Z,36nm,4.4s						
CTA	**Charters Tower**	**33.12**	**138**	*e*P	**P**	**13 19 11.5**	**+1.1**
	comp=Z,17nm,1.2s,mb4.4						
CTA	**Charters Tower**	**33.12**	**138**	P	**P**	**13 19 11.6**	**+1.2**
	comp=Z,17nm,0.8s,mb4.6,baz=319,slow=11,SNR=14						
CTAO	**Charters Tower**	**33.12**	**138**	*e*P	**P**	**13 19 11.1**	**+0.7**
CTAO				pmax	pmax		
	comp=Z,35nm,1.1s,mb4.8						
CTAO	**Charters Tower**	**33.12**	**138**	*e*P	**P**	**13 19 11.1**	**+0.6**
	comp=Z,35nm,1.1s,mb4.8						
KSRS	**Korea Array**	**33.38**	**7**	P	**P**	**13 19 13.2**	**+0.8**
	comp=Z,5.3nm,0.8s,mb4.1,baz=183,slow=11,SNR=24						
KSRS				ScP	ScP	13 24 29.6	+0.4
	comp=Z,3.2nm,0.7s,baz=185,slow=3.8,SNR=11						
MJAR	**Matsushiro Arr**	**35.03**	**21**	P	**P**	**13 19 25.4**	**-0.7**
	comp=Z,6.7nm,0.7s,mb4.3,baz=198,slow=9.2,SNR=23						
MJAR				ScP	ScP	13 24 35.5	+0.3
	comp=Z,2.5nm,0.8s,baz=204,slow=4.1,SNR=7.1						
MAJO	**Matsushiro**	**35.03**	**21**	*e*P	**P**	**13 19 25.3**	**-0.9**
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.2						
MAJO	**Matsushiro**	**35.03**	**21**	*e*P	**P**	**13 19 25.3**	**-0.8**
	comp=Z,6.4nm,0.8s,mb4.2						
MAT	**Matsushiro**	**35.03**	**21**	P	**P**	**13 19 25.3**	**-0.9**
FORT	**Forrest**	**35.10**	**173**	*e*P	**P**	**13 19 27.1**	**+0.3**
	comp=Z,176nm,0.6s,mb5.8						
FORT	**Forrest**	**35.10**	**173**	*e*P	**P**	**13 19 27.1**	**+0.3**
	comp=Z,184nm,0.7s,mb5.7						
KLBR	**Kellerberrin**	**35.97**	**188**	*e*P	**P**	**13 19 33.6**	**-0.4**
	comp=Z,40nm,0.6s,mb5.1						
BJI	**Beijing**	**36.23**	**351**	P	**P**	**13 19 36.2**	**+0.2**
BJI				sP	sP	13 22 12.1	-3.2
BJI				S	**S**	**13 24 37.8**	**+0.9**
BJI				sS	sS	13 27 33.6	+1.1
BJI				pmax	pmax		
	comp=Z,39nm,0.6s,mb5.1						
BJI				pmax	pmax		
	comp=Z,190nm,3.9s						
LZH	**Lanzhou**	**36.39**	**333**	⇑P	**P**	**13 19 39.1**	**+1.7**
LZH				pP		13 21 17.1	
LZH				sP	sP	13 22 15.0	-1.7
LZH				pmax	pmax		
	comp=Z,70nm,1.1s,mb5.1						
LZH				pmax	pmax		
	comp=Z,200nm,4.0s						
SHL	**Shillong**	**36.77**	**308**	⇓*i*P	**P**	**13 19 40.5**	**-0.2**
NWAO	**Narrogin (SRO)**	**37.35**	**188**	P	**P**	**13 19 45.0**	**-0.3**
	comp=Z,41nm,0.5s,mb5.2,baz=5.1,slow=9.0,SNR=37						
NWAO	**Narrogin (SRO)**	**37.35**	**188**	*e*P	**P**	**13 19 45.7**	**+0.4**
NWAO				pmax	pmax		
	comp=Z,77nm,1.1s						
NWAO	**Narrogin (SRO)**	**37.35**	**188**	*e*P	**P**	**13 19 45.7**	**+0.4**
	comp=Z,77nm,1.1s,mb5.2						
HHC	**Hu-ho-hao-te**	**37.95**	**346**	*e*P	**P**	**13 19 50.2**	**+0.1**
HHC				pP		13 21 25.9	
HHC				PP	PP	13 21 34.7	-0.6
HHC				sP	sP	13 22 27.1	-3.0
HHC				S	**S**	**13 25 05.2**	**+2.9**
HHC				sS	sS	13 27 56.8	-2.5
HHC				SS	SS	13 28 14.3	-7.9
HHC				ScS	ScS	13 28 58.9	+1.7
HHC				pmax	pmax		
	comp=Z,15nm,0.7s,mb4.6						
HHC				pmax	pmax		
	comp=Z,92nm,4.3s						
HNR	**Honiara**	**39.08**	**110**	P	**P**	**13 20 02.6**	**+3.0**
	comp=Z,105nm,1.0s,mb5.3,baz=162,slow=19,SNR=15						
CN2	**Changchun**	**39.48**	**3**	*e*P	**P**	**13 20 04.9**	**+2.5**
LSA	**Lhasa**	**39.50**	**314**	P	**P**	**13 20 04.8**	**+2.0**
LSA	**Lhasa**	**39.50**	**314**	*e*P	**P**	**13 20 04.7**	**+1.9**
LSA				pmax	pmax		
	comp=Z,50nm,0.6s,mb5.2						
LSA	**Lhasa**	**39.50**	**314**	*e*P	**P**	**13 20 04.7**	**+1.9**
	comp=Z,50nm,0.6s,mb5.2						
STKA	**Stephens Creek**	**39.94**	**155**	*e*P	**P**	**13 20 07.0**	**+0.8**
	comp=Z,41nm,0.8s,mb5.0						
STKA				*e*S	**S**	**13 25 31.8**	**+0.1**
STKA	**Stephens Creek**	**39.94**	**155**	P	**P**	**13 20 07.1**	**+0.9**
	comp=Z,51nm,0.8s,mb5.1,baz=330,slow=7.3,SNR=76						
STKA				S	**S**	**13 25 31.4**	**-0.3**
	comp=Z,5.5nm,0.8s,baz=146,slow=16,SNR=4.8						
STKA	**Stephens Creek**	**39.94**	**155**	*e*P	**P**	**13 20 06.9**	**+0.7**
STKA				pmax	pmax		
	comp=Z,12nm,0.8s						
STKA	**Stephens Creek**	**39.94**	**155**	*e*P	**P**	**13 20 06.9**	**+0.7**
	comp=Z,12nm,0.8s,mb4.5						
EIDS	**Eidsvold**	**39.98**	**139**	*e*P	**P**	**13 20 06.4**	**-0.3**
	comp=Z,60nm,1.2s,mb5.0						
MDJ	**Mudanjiang**	**40.64**	**7**	P	**P**	**13 20 11.9**	**+0.2**
MDJ				pmax	pmax		
	comp=Z,26nm,1.1s,mb4.7						

CNB	Canberra Magne	46.37	150	eP	P	13 20 57.6	+1.3
TOO	Toolangi	46.46	155	∥iP	P	13 20 58.4	+1.5
LATR	Latur	47.67	291	ePKP	P	13 21 06.6	+0.2
AKL	Akola	47.75	294	ePKP	P	13 21 06.2	-0.7
BHPL	Bhopal	48.03	298	ePKP	P	13 21 07.9	-1.0
JOSI	Joshimath	48.72	308	ePKP	P	13 21 14.0	0.0
JOSI				AMb	AMB	13 21 15.9	
	comp=Z,246nm,1.0s,mb5.7						
AGRA	Agra	48.80	303	ePKP	P	13 21 13.2	-1.4
AGRA				AMb	AMB	13 21 14.4	
	comp=Z,46nm,0.6s,mb5.2						
ZAK	Zakamensk	48.98	343	eP	P	13 21 15.4	-0.1
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.9						
KAD	Karad	49.70	289	ePKP	P	13 21 21.0	-0.4
DDI	Dehra Dun	49.82	307	ex	x	13 21 21.4	
SONA	Sohna	49.87	304	ePKP	P	13 21 21.8	-0.6
NDI	New Delhi	49.91	304	ex	x	13 21 19.5	
AYAN	Aya Nagar	49.91	304	ePKP	P	13 21 21.9	-0.9
TLY	Talaya	50.04	344	eP	P	13 21 23.7	+0.4
TLY				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.5						
TLY	Talaya	50.04	344	eP	P	13 21 23.7	+0.4
	comp=Z,15nm,0.8s,mb4.5						
KLP	Kalpa	50.14	308	ePKP	P	13 21 23.3	-1.0
KLP				AMb	AMB	13 21 27.4	
	comp=Z,38nm,0.6s,mb5.0						
POO	Poona	50.22	291	ePKP	P	13 21 24.4	-0.8
WMQ	Urumqi	50.35	327	eP	P	13 21 27.0	+1.3
WMQ				pP	pP	13 23 09.0	-1.0
WMQ				sP	sP	13 24 07.0	-4.3
WMQ				S	S	13 27 59.0	+1.6
WMQ				ScS	ScS	13 30 17.0	0.0
WMQ				pmax	pmax		
	comp=Z,47nm,1.0s,mb4.9						
WMQ				pmax	pmax		
	comp=Z,140nm,5.0s						
KHET	Khetri	50.87	303	ePKP	P	13 21 28.9	-0.9
KHET				AMb	AMB	13 21 30.7	
AJM	Ajmer	51.37	301	ePKP	P	13 21 32.4	-1.0
MK31	Makanchi Array	55.18	327	eP	P	13 22 00.4	+0.3
MK31				eScP	ScP	13 25 57.3	-0.7
MKAR	Makanchi Array	55.18	327	P	P	13 22 00.4	+0.4
	comp=Z,24nm,0.4s,mb4.8,baz=99,slow=9.2,SNR=275						
MKAR				ScP	ScP	13 25 57.9	-0.1
	comp=Z,4.3nm,0.8s,baz=95,slow=7.4,SNR=10						
MKAR				S	S	13 29 02.2	+1.0
	comp=Z,0.9nm,0.8s,baz=112,slow=18,SNR=7.3						
KSH	Kashi	55.23	316	P	P	13 22 01.8	+1.3
KSH				PcP	PcP	13 22 55.2	+2.2
KSH				pP	pP	13 23 46.9	-0.8
KSH				PP	PP	13 24 15.1	+2.7
KSH				sP	sP	13 24 44.2	-4.0
KSH				ScP	ScP	13 26 01.8	+3.4
KSH				PcS	PcS	13 26 54.5	+0.7
KSH				S	S	13 29 00.0	-2.1
KSH				ScS	ScS	13 30 52.5	+0.6
KSH				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.2						
KSH				pmax	pmax		
	comp=Z,120nm,3.6s						
PETK	Petropavlovsk-	56.40	24	P	P	13 22 09.6	+1.3
	comp=Z,7.0nm,0.7s,mb4.0,baz=185,slow=1.8,SNR=11						
KZA	Kyzart	56.89	319	P	P	13 22 13.8	+1.9
	SNR=8.7						
TKM2	Tokmak 2	57.07	320	P	P	13 22 14.1	+0.9
	SNR=21						
TKM2	Tokmak 2	57.07	320	eP	P	13 22 14.0	+0.9
TKM2				pmax	pmax		
	comp=Z,21nm,0.8s,mb4.4						
TKM2	Tokmak 2	57.07	320	eP	P	13 22 14.0	+0.9
	comp=Z,21nm,0.8s,mb4.4						
KBK	Karagaybulak	57.36	319	P	P	13 22 16.4	+1.2
	SNR=8.6						
UCH	Uchtor	57.45	319	P	P	13 22 17.4	+1.7
	SNR=28						
UCH	Uchtor	57.45	319	eP	P	13 22 17.3	+1.6
UCH				e	pP	13 24 10.1	+5.9
UCH				pmax	pmax		
	comp=Z,23nm,0.8s,mb4.5						
UCH	Uchtor	57.45	319	eP	P	13 22 17.3	+1.5
	comp=Z,23nm,0.8s,mb4.5						
UCH				e	pP	13 24 10.1	+5.9
AAK	Ala-Archa	57.65	319	P	P	13 22 18.4	+1.3
	comp=Z,2.8nm,0.3s,mb4.0,baz=169,slow=8.2,SNR=14						
AAK				ScP	ScP	13 26 09.8	+0.8
	comp=Z,4.5nm,0.8s,baz=151,slow=6.0,SNR=5.9						
AAK	Ala-Archa	57.65	319	i P	P	13 22 17.6	+0.5
AAK				pmax	pmax		
	comp=Z,17nm,2.1s,mb3.9						
AAK	Ala-Archa	57.65	319	eP	P	13 22 18.1	+1.0
	comp=Z,11nm,0.9s,mb4.1						
AAK				eScP	ScP	13 26 09.5	+0.5
AAK	Ala-Archa	57.65	319	P	P	13 22 18.4	+1.3
	SNR=8.9						
AAK				P		13 22 18.4	
	SNR=8.9						
YAK	Yakutsk	57.90	4	eP	P	13 22 17.8	-0.6
YAK				e		13 23 03.0	
YAK				e*PP	pP	13 24 08.0	+0.9
YAK				eS	S	13 29 32.4	-3.3
YAK				e		13 31 05.5	
YAK				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.3						
YAK				pmax	pmax		
	comp=N,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.2s						
YAK				smax			
	comp=N,95nm,2.8s						
YAK				smax			
	comp=E,91nm,2.2s						
YAK	Yakutsk	57.90	4	eP	P	13 22 18.5	+0.1
	comp=E,24nm,0.8s,mb4.5						
USP	Ospenovka	57.94	320	P	P	13 22 19.5	+0.4
	SNR=22						
AML	Almayashu	57.95	318	P	P	13 22 20.8	+1.6
	SNR=6.6						
AML	Almayashu	57.95	318	eP	P	13 22 20.4	+1.3
AML				e		13 26 11.3	
AML				pmax	pmax		
	comp=Z,23nm,0.8s,mb4.5						
AML	Almayashu	57.95	318	eP	P	13 22 20.4	+1.3
	comp=Z,23nm,0.8s,mb4.5						
AML				eScP	ScP	13 26 11.3	+1.0
EKS2	Erkin-Say	58.13	319	P	P	13 22 21.5	+1.2
	SNR=14						
EKS2	Erkin-Say	58.13	319	eP	P	13 22 21.4	+1.1
EKS2				e		13 26 11.2	
EKS2				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.2						
EKS2	Erkin-Say	58.13	319	eP	P	13 22 21.4	+1.1
	comp=Z,14nm,0.8s,mb4.3						
EKS2				eScP	ScP	13 26 11.2	0.0
KBL	Kabul	58.43	308	eP	P	13 22 22.7	+0.2
KBL				pmax	pmax		
	comp=Z,30nm,0.8s,mb4.6						
KBL	Kabul	58.43	308	eP	P	13 22 22.7	+0.2
	comp=Z,30nm,0.8s,mb4.6						
ZAA0	Zalesovo Array	58.60	335	eP	P	13 22 22.2	-1.0
ZALV	Zalesovo Beam	58.60	335	P	P	13 22 22.5	-0.8
	comp=Z,7.0nm,0.4s,mb4.3,baz=120,slow=5.8,SNR=47						
ZALV				S	S	13 29 41.6	-3.2
	comp=Z,0.7nm,0.4s,baz=150,slow=15,SNR=4.4						
KURK	Kurchatov	59.47	329	P	P	13 22 28.9	-0.3
	comp=Z,38nm,0.7s,mb4.7,baz=132,slow=6.4,SNR=146						
KURK				PcP	PcP	13 23 11.8	+2.3
	comp=Z,2.7nm,0.5s,baz=126,slow=5.9,SNR=5.0						
KURK				ScP	ScP	13 26 16.2	-0.7
	comp=Z,1.1nm,0.7s,baz=117,slow=3.9,SNR=5.4						
KURK	Kurchatov	59.47	329	d iP	P	13 22 29.0	-0.1
KURK				pmax	pmax		
	comp=Z,75nm,0.8s,mb5.0						
KURK	Kurchatov	59.47	329	P	P	13 22 28.9	-0.3
KURK				PcP	PcP	13 23 11.8	+2.3
KURK				ScP	ScP	13 26 16.2	-0.7
KURK	Kurchatov	59.47	329	P	P	13 22 29.6	+0.4
	SNR=17						
KURK				P		13 22 29.6	
	SNR=17						
NVS	Novosibirsk	59.88	335	eP	P	13 22 30.4	-1.4
NVS				eS	S	13 29 58.1	-2.8
NVS				e		13 31 18.7	
NVS				pmax	pmax		
	comp=Z,25nm,0.8s,mb4.6						
NVS				pmax	pmax		
	comp=N,33nm,1.5s						
NVS				pmax	pmax		
	comp=E,35nm,1.4s						
NVS				smax			
	comp=N,37nm,1.8s						
NVS				smax			
	comp=E,50nm,1.7s						
SEY	Seymchan	62.42	15	c iP	P	13 22 48.0	-0.3
RPZ	Rata Peaks	64.22	143	P	P	13 23 00.9	+0.7
	comp=E,19nm,0.7s,mb4.7,baz=277,slow=2.0,SNR=15						
RPZ	Rata Peaks	64.22	143	eP	P	13 23 00.6	+0.4
	comp=E,8.6nm,0.5s,mb4.4						
BVAR	Borovoye Array	65.01	328	P	P	13 23 04.7	-0.3
	comp=E,10nm,0.7s,mb4.4,baz=134,slow=8.4,SNR=62						
BRVK	Borovoye	65.08	328	d iP	P	13 23 05.4	0.0
BRVK				pmax	pmax		
	comp=Z,44nm,1.3s,mb4.7						
BRVK	Borovoye	65.08	328	eP	P	13 23 04.7	-0.7
	comp=Z,37nm,1.0s,mb4.8						
BRVK	Borovoye	65.08	328	P	P	13 23 05.6	+0.2
	SNR=15						
BRVK				P		13 23 05.6	
	SNR=15						
URZ	Urewera	65.34	136	P	P	13 23 07.3	0.0
	comp=Z,7.6nm,0.5s,mb4.4,baz=322,slow=4.3,SNR=21						
TIXI	Tiksi	67.45	2	eP	P	13 23 18.8	-1.0
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.3						
TIXI	Tiksi	67.45	2	eP	P	13 23 18.8	-1.0
	comp=Z,9.0nm,0.8s,mb4.3						
ABKAR	Abkulak array	69.55	321	eP	P	13 23 32.3	-0.5
	comp=Z,10nm,0.6s,mb4.5						
BILL	Bilibino	70.04	16	∥eP	P	13 23 34.9	-0.5
BILL				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.0						
CASY	Casey	70.91	185	eP	P	13 23 40.4	-0.1
CASY	Casey	70.91	185	eP	P	13 23 40.3	-0.2
	comp=Z,7.1nm,0.7s,mb4.3						
AKTK	Aktyubinsk	71.10	322	P	P	13 23 41.8	-0.2
AKTO	Aktyubinsk	71.10	322	P	P	13 23 41.8	-0.2
	comp=Z,6.7nm,0.3s,mb4.6,baz=106,slow=8.1,SNR=39						
SVE	Sverdlovsk	71.72	329	∥eP	P	13 23 45.2	-0.3
SVE				pmax	pmax		
	comp=Z,27nm,1.1s,mb4.6						
ARU	Arti	72.65	328	d iP	P	13 23 49.1	-1.8
ARU				e		13 26 41.5	
ARU				S	S	13 32 27.4	-3.9
ARU				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.4						
ARU	Arti	72.65	328	eP	P	13 23 50.0	-0.9
	comp=Z,20nm,1.1s,mb4.5						
QRN	Al-Qurain	75.06	298	eP	P	13 24 04.1	-1.0
QRN				AMb	AMB	13 24 04.8	
	comp=Z,45nm,0.9s,mb4.9						
RDF	Al-Radifah	75.39	299	eP	P	13 24 06.4	-0.6
RDF				AMb	AMB	13 24 07.5	
	comp=Z,38nm,1.3s,mb4.7						
AKUT	Akutan	75.56	35	eP	P	13 24 07.2	-0.2
	comp=Z,16nm,0.8s,mb4.5						
MIB	Mutribah	75.63	300	eP	P	13 24 07.1	-1.1
MIB				AMb	AMB	13 24 08.0	
	comp=Z,48nm,0.8s,mb5.0						
NAY	Al-Naaiem	75.68	299	eP	P	13 24 07.2	-1.3
NAY				AMb	AMB	13 24 08.2	
	comp=Z,17nm,0.8s,mb4.5						
FALS	False Pass	77.06	35	eP	P	13 24 15.3	-0.3
	comp=Z,18nm,0.4s,mb4.8						
KIV	Kislovodsk	80.24	314	P	P	13 24 32.0	-0.8
KIV				pmax	pmax		
	comp=Z,12nm,1.5s,mb4.0						
TTA	Tatalina	82.09	27	eP	P	13 24 42.8	+1.0
TTA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.3						
TTA	Tatalina	82.09	27	eP	P	13 24 42.8	+1.0
	comp=Z,10nm,0.8s,mb4.3						
VORD	Divnogorie	82.89	321	eP	P	13 24 45.2	-0.9
VSR	Storozhevoye	82.98	321	eP	P	13 24 45.7	-0.9
MAW	Mawson	82.98	200	eP	P	13 24 46.1	-0.1
	comp=Z,4.0nm,0.8s,mb4.0						
MAW	Mawson	82.98	200	P	P	13 24 46.2	0.0
	comp=Z,8.3nm,1.1s,mb4.2,baz=57,slow=5.6,SNR=10						
OHAK	Old Harbor	82.99	33	eP	P	13 24 47.1	+0.7
	comp=Z,11nm,0.9s,mb4.4						
KDAK	Kodiak Island	83.39	32	i P	P	13 24 49.8	+1.3
PPLA	Purkeypile	83.84	27	eP	P	13 24 50.9	+0.3
ANN	Anapa	84.03	314	eP	P	13 24 49.7	-2.2
ANN				pmax	pmax		
	comp=Z,55nm,1.3s,mb4.9						
BPAW	Bear Paw Mtn.	84.43	26	eP	P	13 24 53.9	+0.5
	comp=Z,3.3nm,0.7s,mb4.0						
OBN	Obninsk	84.63	325	oeP	P	13 24 54.3	-0.3
OBN				pmax	pmax		
	comp=Z,60nm,1.9s,mb4.8						
TRF	Thorofare Moun	84.72	27	eP	P	13 24 54.7	-0.2
	comp=Z,3.4nm,0.9s,mb3.9						
COLD	Coldfoot	84.84	23	eP	P	13 24 56.6	+1.2
	comp=Z,4.8nm,0.9s,mb4.0						
MCK	McKinley	85.33	26	eP	P	13 24 57.7	-0.1
MCK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.2						
MCK	McKinley	85.33	26	eP	P	13 24 57.7	-0.1
	comp=Z,7.3nm,0.8s,mb4.3						
BRTR	Keskin Array B	86.98	309	P	P	13 25 05.2	-1.0
	comp=Z,0.8nm,0.7s,mb3.5,baz=91,slow=6.8,SNR=4.1						
BMRM	Bremner River	87.44	29	P	P	13 25 08.4	+0.5
ARCES	ARCESS Array B	88.78	340	P	P	13 25 12.4	-1.5
	comp=Z,1.6nm,0.7s,mb3.9,baz=75,slow=6.5,SNR=5.3						
ARCES				PKKP	PKKPbc	13 42 49.1	-4.5
	comp=Z,2.0nm,1.0s,baz=251,slow=2.8,SNR=6.8						
AKASG	Malin Array Be	89.28	321	P	P	13 25 14.8	-1.8
	comp=Z,0.5nm,0.3s,mb3.8,baz=71,slow=5.7,SNR=5.8						
KAF	Kangasniemi	89.53	332	eP	P	13 25 15.4	-2.2
KAF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.4						
KAF	Kangasniemi	89.53	332	ep	P	13 25 15.4	-2.2
	comp=Z,2.6nm,0.5s,mb4.3						
KAF	Kangasniemi	89.53	332	ep	P	13 25 15.4	-2.2
	comp=Z,2.6nm,0.5s,mb4.3						
FINES	FINESS Array B	89.73	332	P	P	13 25 17.2	-1.3
	comp=Z,3.0nm,0.6s,mb4.3,baz=101,slow=1.9,SNR=7.4						
SYO	Syowa Base	91.59	201	∥eP	P	13 25 25.8	-1.1
BUR08	Bucovina Ar. S	92.28	318	eP	P	13 25 30.3	-0.3
QSPA	South Pole Qui	94.11	180	P	P	13 25 38.1	-0.1
	comp=Z,2.6nm,0.8s,mb4.4,baz=359,slow=0.7,SNR=14						
QSPA	South Pole Qui	94.11	180	P	P	13 25 38.1	-0.1
YKA	Yellowknife Ar	100.51	24	P	Pdif	13 26 08.5	+1.0
	comp=Z,0.3nm,0.6s,baz=307,slow=4.0,SNR=3.9						
YKA				PKKPbc	PKKPbc	13 42 16.0	-6.7
	comp=Z,0.3nm,0.5s,baz=125,slow=3.2,SNR=4.4						
YKA	Yellowknife Ar	100.51	24	P	Pdif	13 26 08.5	+1.0
YKA				PKKPbc	PKKPbc	13 42 16.0	-6.7
PDAR	Pinedale Array	113.30	40	PKiKP	PKiKP	13 30 55.4	+0.9
	comp=Z,0.3nm,0.6s,baz=187,slow=0.7,SNR=3.4						
PDAR				PKKPab	PKKPab	13 41 49.8	-2.2
	comp=Z,0.7nm,0.7s,baz=127,slow=5.7,SNR=5.4						
TORD	Torodi Ar. Bea	119.39	288	PKP	PKPdf	13 31 06.3	-0.8
	comp=Z,0.9nm,0.5s,baz=67,slow=1.5,SNR=18						
TORD				PP	PP	13 32 31.3	-7.1
	comp=Z,0.4nm,0.7s,baz=76,slow=4.5,SNR=3.4						
TORD				PKKPbc	PKKPbc	13 41 21.4	+0.4
	comp=Z,0.5nm,0.7s,baz=276,slow=3.8,SNR=5.3						
TORD	Torodi Ar. Bea	119.39	288	PKP	PKPdf	13 31 06.3	-0.8
TORD				PP	PP	13 32 31.3	-7.1
TORD				PKKPbc	PKKPbc	13 41 21.4	+0.4
SCHQ	Schefferville	120.59	7	PKP	PKPdf	13 31 08.3	+0.1
	comp=Z,2.1nm,0.5s,baz=359,slow=8.0,SNR=4.1						
SCHQ	Schefferville	120.59	7	PKP	PKPdf	13 31 08.3	+0.1
TXAR	Lajitas Array	124.07	50	PKP	PKPdf	13 31 16.0	+0.3
	comp=Z,0.9nm,0.7s,baz=190,slow=1.0,SNR=12						
TXAR	Lajitas Array	124.07	50	PKP	PKPdf	13 31 16.0	+0.3
WVT	Waverly	130.49	33	ePKiKP	PKPdf	13 31 27.5	-0.2
PLCA	Paso Flores	141.59	163	PKhKP		13 31 44.5	
	comp=Z,2.6nm,0.8s,baz=333,slow=3.3,SNR=4.9						
PLCA	Paso Flores	141.59	163	PKP		13 31 44.5	
JTS	JuntasAbangare	148.51	63	PKPbc	PKPbc	13 32 05.0	0.0
	comp=Z,4.9nm,0.3s,baz=346,slow=11,SNR=6.4						
CFAA	Coronel Fontan	150.71	160	PKPbc	PKPbc	13 32 09.8	+0.1
	comp=Z,1.9nm,0.6s,baz=223,slow=2.2,SNR=24						
CFAA	Coronel Fontan	150.71	160	PKPbc	PKPbc	13 32 09.8	+0.1
CPUP	Villa Florida	157.99	179	PKPab	PKPab	13 32 51.1	+0.7
	comp=Z,1.9nm,0.5s,baz=120,slow=2.4,SNR=7.6						
SDV	Santo Domingo	161.07	47	PKP	PKPdf	13 32 17.5	0.0
	comp=Z,2.5nm,0.6s,baz=268,slow=5.8,SNR=7.6						
SDV				PKPab	PKPab	13 33 04.1	-0.3
	comp=Z,4.7nm,0.8s,baz=32,slow=4.9,SNR=6.4						
SDV	Santo Domingo	161.07	47	PKP	PKPdf	13 32 17.5	0.0
SDV				PKPab	PKPab	13 33 04.1	-0.3
LPAZ	La Paz	163.65	138	PKP	PKPdf	13 32 20.5	+0.6
	comp=Z,1.5nm,0.8s,baz=352,slow=6.2,SNR=5.2						
SIV	San Ignacio	167.57	161	PKP	PKPdf	13 32 23.4	+0.3
	comp=Z,1.7nm,0.7s,baz=209,slow=1.8,SNR=11						
SIV				PKPab	PKPab	13 33 32.8	+0.1
	comp=Z,1.0nm,0.6s,baz=240,slow=5.8,SNR=7.7						

*TRN **11** 13:31:19.0, 10°.52N×62°.44W, h1km, MD3.1*
*NEIC **11** 13:31:18.9, 10°.52N×62°.44W, h1km, MD3.1(TRN), After TRN.*
*ISCJB **11** 13:31:19.7±1.0, 10°.30N±0°.04×62°.37W±0°.03, h12km±7km, Error ellipse: s-maj=7.5km s-min=4.7km az=162.4*
*FUNV **11** 13:31:20.8, 10°.36N×62°.32W, h17km, MW3.1*

ISC 11 13:31:20.2±0.7, 10°.34N±0°.04×62°.38W±0°.03, h11km±5km, n19, σ1.9±1.1/31, 1C, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	Guiria	0.34	27	∥eP	Pg	13 31 26.8	-0.2
GUIV				eS	Sg	13 31 31.6	+0.1
GUNV	Guanoco	0.59	252	eP	Pg	13 31 32.8	+1.1
GUNV				eS	Sg	13 31 42.3	+2.9
TCE	Chacachacare	0.71	60	eP	Pg	13 31 33.0	-0.9
TCE				eS	Sg	13 31 41.9	-1.2
TCE	Chacachacare	0.71	60	eP	Pg	13 31 33.0	-0.9
TCE				eS	Sg	13 31 41.9	-1.2
CRUV	Carupano	0.91	291	eP	Pg	13 31 37.2	-0.5
CRUV				eS	Sg	13 31 49.3	-0.3
TRN	Trinidad (W)	1.00	72	eP	Pg	13 31 38.4	-1.2
TRN				eS	Sg	13 31 54.0	+1.3
TRN	Trinidad (W)	1.00	72	eP	Pg	13 31 38.4	-1.2
TRN				eS	Sg	13 31 54.0	+1.3
ITEV	Isla Los Testi	1.25	324	eP	Pn	13 31 43.9	+0.3
ITEV				eS	Sb	13 32 00.4	+0.5
TBH	Brigand Hill	1.29	84	eP	Pn	13 31 45.6	+1.3
TBH				eS	Sb	13 32 04.1	+2.8
TBH	Brigand Hill	1.29	84	eP	Pn	13 31 45.6	+1.3
TBH				eS	Sb	13 32 04.1	+2.8
TPR	Prospect	1.78	62	eP	Pn	13 31 51.0	+0.1
TPR	Prospect	1.78	62	eP	Pn	13 31 51.0	+0.1
BOT	Bacolet	1.82	63	eP	Pn	13 31 50.9	-0.6
BOT	Bacolet	1.82	63	eP	Pn	13 31 50.9	-0.6
GRW	Mount Saint Ca	1.94	21	eP	Pn	13 31 51.4	-1.7
GRW	Mount Saint Ca	1.94	21	eP	Pn	13 31 51.4	-1.7
TOSP	Speyside	2.04	62	eP	Pn	13 31 54.9	+0.4
TOSP				eS	Sn	13 32 21.0	+1.0
GURV	El Guri	2.66	195	eS	Sn	13 32 33.9	-1.4
CAOV	Caicara del Or	4.92	233	eP	Pn	13 32 33.0	-1.1
CAOV				eS	Sn	13 33 25.8	-5.2

*ATH **11** 13:58:11.7, 37°.94N×21°.45E, h26km±1km, MD3.2/7*
*NEIC **11** 13:58:11.7, 37°.94N×21°.45E, h26km, MD3.2(ATH), After ATH.*
*ISCJB **11** 13:58:11.9±0.5, 37°.89N±0°.02×21°.48E±0°.03, h3km±4km, Error ellipse: s-maj=4.2km s-min=3.6km az=179.3*
*CSEM **11** 13:58:12.2±0.3, 37°.89N×21°.48E, h15km, MD3.2, Error ellipse: s-maj=5.7km s-min=5.2km az=96.0*
*THE **11** 13:58:12.8, 37°.90N×21°.51E, h0km±2km, ML3.5/13, Error ellipse: s-maj=2.4km s-min=0.8km az=205.0*

ISC 11 13:58:12.6±0.5, 37°.86N±0°.03×21°.49E±0°.03, h6km±4km, n63, σ1.9±1.8/99, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.20	354	ePb	Pg	13 58 16.5	0.0
RLS				eSb	Sg	13 58 20.7	+1.6
RLS	Riolos of Patr	0.20	354	ePB	Pg	13 58 16.5	0.0
RLS				eSB	Sg	13 58 20.7	+1.6
RLS	Riolos of Patr	0.20	354	ePb	Pg	13 58 16.5	0.0
UPR	University Cam	0.48	29	P	Pg	13 58 20.9	-1.0
UPR				S	Sg	13 58 27.5	-0.6
UPR	University Cam	0.48	29	ePB	Pg	13 58 20.8	-1.1
UPR				eSB	Sg	13 58 28.8	+0.7
UPR	University Cam	0.48	29	ePb	Pg	13 58 20.8	-1.1
UPR				S	Sg	13 58 27.5	-0.6
UPR				eSb	Sg	13 58 28.8	+0.7
LAKA	Lakka	0.54	45	P	Pg	13 58 22.3	-0.6
LAKA				S	Sg	13 58 30.0	0.0
LAKA	Lakka	0.54	45	P	Pg	13 58 22.3	-0.6
LAKA				S	Sg	13 58 30.0	0.0
KFL	Anninata	0.61	294	P	Pg	13 58 24.1	-0.2
KFL				S	Sg	13 58 34.0	+1.8
EFP	Efpalio	0.65	30	P	Pg	13 58 23.8	-1.3
EFP				S	Sg	13 58 33.0	-0.6
EFP	Efpalio	0.65	30	ePN	Pg	13 58 23.8	-1.3
EFP				eSN	Sg	13 58 32.8	-0.8
EFP	Efpalio	0.65	30	P	Pg	13 58 23.8	-1.3
EFP				S	Sg	13 58 33.0	-0.6
GUR	Goura	0.68	83	P	Pg	13 58 25.2	-0.4
GUR				S	Sg	13 58 35.4	+1.0
GUR	Goura	0.68	83	ePN	Pg	13 58 25.1	-0.5
GUR	Goura	0.68	83	P	Pg	13 58 25.2	-0.4
GUR				S	Sg	13 58 35.4	+1.0
TRIZ	Trizonia	0.68	42	P	Pg	13 58 24.6	-1.0
TRIZ				S	Sg	13 58 34.7	+0.2
TRIZ	Trizonia	0.68	42	P	Pg	13 58 24.6	-1.0
TRIZ				S	Sg	13 58 34.7	+0.2
KALE	Kalithea	0.73	44	P	Pg	13 58 25.5	-1.2
KALE				S	Sg	13 58 36.4	+0.2
KALE	Kalithea	0.73	44	P	Pg	13 58 25.5	-1.2
KALE				S	Sg	13 58 36.4	+0.2
ITM	Ithomi	0.76	153	ePn	Pg	13 58 28.5	+1.3
ITM

XOR	**Xorichti**	**2.01**	**41**	P	**Pn**	**13 58 45.8**	**-1.2**
XOR				S	**Sn**	**13 59 13.9**	**+1.5**
KEK	**Kerkira**	**2.27**	**325**	*e*Pb	**Pn**	**13 58 49.1**	**-1.5**
KEK	**Kerkira**	**2.27**	**325**	*e*PB	**Pn**	**13 58 49.1**	**-1.5**
AOS	**Alonnisos**	**2.28**	**54**	P	**Pn**	**13 58 49.5**	**-1.3**
AOS				S	**Sn**	**13 59 20.1**	**+0.9**
AOS	**Alonnisos**	**2.28**	**54**	P	**Pn**	**13 58 49.5**	**-1.3**
AOS				S	**Sn**	**13 59 20.1**	**+0.9**

ISCJB ***11*** *14:01:15.6±0.9, 19°.00N±0°.04×145°.48E±0°.03, h158km±8km, mb4.6/119, Error ellipse: s-maj=7.1km s-min=4.7km az=4.0*

MOS ***11*** *14:01:16.3±1.1, 18°.92N×145°.44E, h177km, mb4.7/28, Error ellipse: s-maj=11.0km s-min=7.1km az=97.1*

BJI ***11*** *14:01:16.5, 18°.90N×145°.50E, h181km, mB4.7/19, mb4.5/27*

NEIC ***11*** *14:01:18.5±1.1, 18°.86N×145°.53E, h181km±11km, mb4.7/83, Error ellipse: s-maj=6.2km s-min=5.1km az=163.0*

IDC ***11*** *14:01:20.2±2.0, 18°.88N×145°.35E, h200km±18km, mb4.1/24, mb1 4.2/26, mb1mx4.2/28, mbtmp4.1/26, Error ellipse: s-maj=14.7km s-min=9.8km az=87.0*

ISC 11 14:01:17.0±0.9,**18°.91N**±0°.04×**145°.53E**±0°.03,**h160**km±8km, **h174**km±2.9km:**pP-P,n459,**σ0**.63**/460,**mb4.6**/119, **148C-129D,Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.33**	**187**	*e*P	**Pn**	**14 02 34.7**	**-0.2**
CBIJ	**Chichi jima**	**8.71**	**340**	P	**Pn**	**14 03 18.6**	**-1.2**
	7.3nm,0.3s,baz=303,slow=15,SNR=12						
CBIJ				S	**Sn**	**14 04 52.6**	**-4.0**
	24nm,0.3s,baz=290,slow=22,SNR=11						
JHJ	**Hachijo jima 2**	**15.06**	**341**	P	**Pn**	**14 04 41.2**	**-0.4**
	3.0nm,0.3s,baz=119,slow=6.6,SNR=2.6						
MJAR	**Matsushiro Arr**	**18.71**	**341**	P	**P**	**14 05 22.4**	**-0.7**
	1.6nm,0.3s,baz=162,slow=9.3,SNR=12						
MAJO	**Matsushiro**	**18.71**	**341**	*e*P	**P**	**14 05 23.1**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,12nm,0.6s						
MAJO	**Matsushiro**	**18.71**	**341**	*e*P	**P**	**14 05 23.1**	**-0.1**
	comp=Z,12nm,0.6s						
NACB	**Ninganchiao**	**22.86**	**287**	*e*P	**P**	**14 06 07.1**	**+0.5**
	comp=Z,42nm,0.6s,mb5.0						
YULB	**Yu-li**	**23.03**	**285**	*e*P	**P**	**14 06 09.1**	**+1.0**
	comp=Z,47nm,0.6s,mb5.1						
YHNB	**Yeheng**	**23.14**	**289**	*e*P	**P**	**14 06 10.2**	**+1.1**
	comp=Z,125nm,0.8s,mb5.4						
TWG	**Pinlang**	**23.18**	**284**	*e*P	**P**	**14 06 10.1**	**+0.5**
	comp=Z,32nm,0.8s,mb4.8						
SSLB	**Suanglung**	**23.39**	**286**	*e*P	**P**	**14 06 12.7**	**+1.2**
	comp=Z,53nm,0.6s,mb5.1						
TPUB	**Ta-pu**	**23.63**	**285**	*e*P	**P**	**14 06 14.6**	**+1.0**
	comp=Z,43nm,0.8s,mb5.0						
KSRS	**Korea Array**	**24.06**	**324**	P	**P**	**14 06 17.1**	**-0.2**
	comp=Z,3.3nm,0.6s,mb4.0,baz=141,slow=8.8,SNR=19						
ASAJ	**Asahikawa**	**25.25**	**355**	P	**P**	**14 06 28.8**	**+0.7**
	comp=Z,5.5nm,0.6s,mb4.3,baz=196,slow=3.4,SNR=12						
MDJ	**Mudanjiang**	**28.89**	**336**	P	**P**	**14 07 01.7**	**+1.2**
MDJ				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.2						
MDJ				pmax	pmax		
	comp=Z,55nm,3.7s						
CN2	**Changchun**	**30.01**	**330**	*e*P	**P**	**14 07 14.5**	**+4.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
KLR	**Kul'dur**	**32.22**	**343**	*e*P	**P**	**14 07 25.1**	**-4.7**
COEN	**Coen**	**32.74**	**184**	*e*P	**P**	**14 07 32.9**	**-1.8**
KAKA	**Kakadu**	**33.97**	**203**	*e*P	**P**	**14 07 44.6**	**-0.7**
PEA0B	**Petropavlovsk-**	**35.42**	**13**	*e*P	**P**	**14 07 58.4**	**+1.0**
PETK	**Petropavlovsk-**	**35.42**	**13**	P	**P**	**14 07 58.4**	**+1.0**
	comp=Z,5.8nm,0.9s,mb4.2,baz=174,slow=6.6,SNR=12						
HHC	**Hu-ho-hao-te**	**36.34**	**314**	*e*P	**P**	**14 08 07.0**	**+1.6**
HHC				pP	pP	14 08 44.5	+4.7
HHC				sP	sP	14 09 04.6	+6.5
HHC				PcP	PcP	14 10 28.4	+1.8
HHC				S	**S**	**14 13 35.2**	**+0.7**
HHC				ScP	ScP	14 13 56.8	-1.3
HHC				PcS	PcS	14 14 14.2	-0.2
HHC				sS	sS	14 14 40.0	+5.2
HHC				ScS	ScS	14 18 02.2	-2.4
HHC				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.6						
HHC				pmax	pmax		
	comp=Z,66nm,6.9s						
HHC				LR	LR		
	comp=N,92nm,15.6s						
HHC				LR	LR		
	comp=E,76nm,18.0s						
HHC				LR	LR		
	comp=Z,72nm,16.8s						
GYA	**Guiyang**	**36.53**	**289**	P	**P**	**14 08 08.0**	**+0.7**
GYA				pP	pP	14 08 45.6	+4.0
GYA				sP	sP	14 09 05.5	+5.6
GYA				PP	PP	14 09 38.7	+4.9
GYA				PcP	PcP	14 10 28.8	+1.4
GYA				S	**S**	**14 13 37.4**	**-0.4**
GYA				ScP	ScP	14 13 58.0	-1.1
GYA				PcS	PcS	14 14 15.2	-0.4
GYA				ScS	ScS	14 18 03.8	-2.4
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4						
GYA				pmax	pmax		
	comp=Z,90nm,4.9s						
CD2	**Chengdu**	**39.51**	**296**	*e*P	**P**	**14 08 31.4**	**-0.8**
CD2				pP	pP	14 09 09.3	+2.3
CD2				sP	sP	14 09 29.3	+4.1
CD2				PP	PP	14 10 09.4	+3.2
CD2				S	**S**	**14 14 19.4**	**-3.2**
CD2				sS	sS	14 15 25.8	+2.4
CD2				SS	SS	14 17 14.5	-9.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.6						
CD2				pmax	pmax		
	comp=Z,40nm,5.2s						
KMI	**Kunming**	**40.03**	**287**	P	**P**	**14 08 38.6**	**+2.1**
KMI				pP	pP	14 09 15.1	+3.8
KMI				sP	sP	14 09 35.0	+5.5
KMI				PP	PP	14 10 16.4	+4.5
KMI				S	**S**	**14 14 30.2**	**-0.2**
KMI				sS	sS	14 15 35.9	+4.6
KMI				SS	SS	14 17 28.2	-6.1
KMI				pmax	pmax		
	comp=Z,6.0nm,1.6s,mb4.0						
KMI				pmax	pmax		
	comp=Z,42nm,4.5s						
KMI				LR	LR		
	comp=N,140nm,19.4s						
KMI				LR	LR		
	comp=E,58nm,18.6s						
KMI				LR	LR		
	comp=Z,84nm,19.4s						
WRAB	**Tennant Creek**	**40.13**	**196**	*e*P	**P**	**14 08 37.0**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.5						
WRAB	**Tennant Creek**	**40.13**	**196**	*e*P	**P**	**14 08 37.0**	**-0.3**
	comp=Z,7.9nm,0.6s,mb4.5						
WRA	**Warramunga Arr**	**40.14**	**196**	P	**P**	**14 08 36.2**	**-1.1**
	comp=Z,18nm,0.9s,mb4.7,baz=16,slow=9.0,SNR=46						
LZH	**Lanzhou**	**40.40**	**304**	*e*P	**P**	**14 08 39.1**	**-0.3**
LZH				pP	pP	14 09 18.8	+4.5
LZH				sP	sP	14 09 35.8	+3.3
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.5						
FITZ	**Fitzroy Crossi**	**41.65**	**209**	*e*P	**P**	**14 08 48.8**	**-0.9**
	comp=Z,24nm,1.4s,mb4.6						
ULN	**Ulaanbaatar**	**42.51**	**322**	P	**P**	**14 08 57.0**	**+0.6**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
ULN	**Ulaanbaatar**	**42.51**	**322**	P	**P**	**14 08 57.0**	**+0.6**
	comp=Z,1.3nm,0.4s,mb3.9						
SONM	**Songino Array**	**42.88**	**321**	P	**P**	**14 08 58.7**	**-0.7**
	comp=Z,1.3nm,0.4s,mb3.9,baz=129,slow=7.2,SNR=8.0						
ASAR	**Alice Springs**	**43.81**	**195**	P	**P**	**14 09 06.1**	**-0.9**
	comp=Z,2.8nm,0.5s,mb4.2,baz=18,slow=11,SNR=44						
CHTO	**Chiang Mai**	**43.98**	**278**	*e*P	**P**	**14 09 09.0**	**+0.4**
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.1						
CHTO	**Chiang Mai**	**43.98**	**278**	*e*P	**P**	**14 09 09.0**	**+0.4**
	comp=Z,3.2nm,0.6s,mb4.1						
CM31	**Chiang Mai Arr**	**44.04**	**277**	*e*P	**P**	**14 09 10.6**	**+1.5**
	comp=Z,9.1nm,0.5s,mb4.7						
CMAR	**Chiang Mai Arr**	**44.04**	**277**	P	**P**	**14 09 10.0**	**+0.9**
	comp=Z,15nm,0.7s,mb4.7,baz=70,slow=6.8,SNR=108						
CMAR				PcP	PcP	14 10 51.4	-0.4
	comp=Z,1.6nm,0.7s,baz=75,slow=2.2,SNR=5.8						
GTA	**Gaotai**	**44.30**	**307**	*e*P	**P**	**14 09 14.0**	**+3.2**
GTA				pP	pP	14 09 51.9	+5.6
GTA				sP	sP	14 10 12.8	+8.5
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.0						
YAK	**Yakutsk**	**44.49**	**349**	*e*P	**P**	**14 09 10.7**	**-1.3**
YAK				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.7						
YAK				pmax	pmax		
	comp=N,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK	**Yakutsk**	**44.49**	**349**	*e*P	**P**	**14 09 10.8**	**-1.2**
	comp=E,29nm,0.6s,mb5.1						
LSA	**Lhasa**	**50.32**	**293**	P	**P**	**14 09 59.5**	**+1.9**
UNV	**Unalaska Valle**	**50.58**	**35**	*e*P	**P**	**14 09 58.5**	**-0.5**
	comp=E,7.2nm,0.6s,mb4.5						
STKA	**Stephens Creek**	**50.63**	**184**	P	**P**	**14 09 58.0**	**-1.8**
	comp=E,1.6nm,0.5s,mb3.9,baz=33,slow=13,SNR=5.2						
BILL	**Billibino**	**50.84**	**10**	*x*eP	**P**	**14 10 01.0**	**+0.2**
BILL				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.6						
BILL	**Billibino**	**50.84**	**10**	*e*P	**P**	**14 10 00.8**	**0.0**
	comp=Z,5.7nm,0.4s,mb4.5						
AKUT	**Akutan**	**51.09**	**35**	*e*P	**P**	**14 10 02.6**	**-0.3**
	comp=Z,32nm,0.9s,mb5.0						
TAPN	**Taplejung**	**53.44**	**290**	*e*P	**P**	**14 10 21.9**	**+1.2**
	comp=Z,6.8nm,0.4s,mb4.7						
TIXI	**Tiksi**	**53.65**	**354**	*e*P	**P**	**14 10 19.7**	**-1.7**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
TIXI	**Tiksi**	**53.65**	**354**	*e*P	**P**	**14 10 19.7**	**-1.7**
	comp=Z,1.8nm,0.6s,mb4.0						
ODAN	**Odare**	**53.76**	**290**	*e*P	**P**	**14 10 23.6**	**+0.6**
	comp=Z,12nm,0.6s,mb4.8						
WMQ	**Urumqi**	**54.05**	**311**	*e*P	**P**	**14 10 25.0**	**+0.1**
WMQ				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.8						
RAMN	**Ramite**	**54.46**	**290**	*e*P	**P**	**14 10 28.5**	**+0.4**
	comp=Z,14nm,0.5s,mb4.9						
JIRN	**Jiri**	**54.77**	**291**	*e*P	**P**	**14 10 31.3**	**+1.0**
	comp=Z,14nm,0.5s,mb4.9						
GUN	**Gumba**	**55.02**	**291**	*e*P	**P**	**14 10 33.3**	**+1.2**
	comp=Z,23nm,0.7s,mb5.0						
PKI	**Pulchoki**	**55.46**	**291**	*e*P	**P**	**14 10 35.8**	**+0.5**
	comp=Z,8.9nm,0.5s,mb4.8						
PKI	**Pulchoki**	**55.46**	**291**	*e*P	**P**	**14 10 36.0**	**+0.7**
PKI				pmax	pmax		
	comp=Z,11nm,0.5s,mb4.8						
PKI	**Pulchoki**	**55.46**	**291**	*e*P	**P**	**14 10 36.0**	**+0.7**
	comp=Z,11nm,0.5s,mb4.8						
PKIN	**Phulchoki**	**55.48**	**291**	*e*P	**P**	**14 10 36.0**	**+0.6**
	comp=Z,11nm,0.5s,mb4.8						
KKN	**Kakani**	**55.56**	**291**	*e*P	**P**	**14 10 36.5**	**+0.5**
	comp=Z,16nm,0.7s,mb4.9						
KKN	**Kakani**	**55.56**	**291**	*e*P	**P**	**14 10 36.5**	**+0.5**
KKN				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.0						
DMN	**Daman**	**55.73**	**291**	*e*P	**P**	**14 10 37.8**	**+0.6**
	comp=Z,17nm,0.6s,mb5.0						
ZALV	**Zalesovo Beam**	**57.76**	**322**	P	**P**	**14 10 49.2**	**-1.8**
	comp=Z,1.4nm,0.4s,mb4.2,baz=102,slow=6.7,SNR=8.0						
ZALV				PcP	PcP	14 11 39.1	-2.9
	comp=Z,1.9nm,0.5s,baz=111,slow=6.0,SNR=5.5						
MK31	**Makanchi Array**	**58.20**	**314**	P	**P**	**14 10 54.0**	**-0.3**
MKAR	**Makanchi Array**	**58.20**	**314**	P	**P**	**14 10 53.5**	**-0.7**
	comp=Z,1.7nm,0.7s,mb4.0,baz=82,slow=12,SNR=14						
MKAR				PcP	PcP	14 11 42.3	-1.6
	comp=Z,1.7nm,0.7s,baz=82,slow=3.8,SNR=6.4						
MKAR	**Makanchi Array**	**58.20**	**314**	*c*eP	**P**	**14 10 53.5**	**-0.8**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SVW2	**Sparrevohn**	**58.72**	**29**	*e*P	**P**	**14 10 57.7**	**+0.1**
OHAK	**Old Harbor**	**58.77**	**34**	*e*P	**P**	**14 10 58.3**	**+0.3**
	comp=Z,26nm,0.8s,mb5.1						
TTA	**Tatalina**	**59.13**	**27**	*e*P	**P**	**14 11 00.5**	**+0.1**
TTA				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.7						
TTA	**Tatalina**	**59.13**	**27**	*e*P	**P**	**14 11 00.5**	**+0.1**
	comp=Z,8.7nm,0.8s,mb4.6						
KDAK	**Kodiak Island**	**59.27**	**33**	P	**P**	**14 11 01.6**	**+0.2**
	comp=Z,12nm,0.5s,mb5.0,baz=273,slow=3.5,SNR=16						
KDAK	**Kodiak Island**	**59.27**	**33**	*i* P	**P**	**14 11 01.3**	**-0.1**
KDAK	**Kodiak Island**	**59.27**	**33**	*e*P	**P**	**14 11 01.6**	**+0.2**
	comp=Z,13nm,0.6s,mb4.9						
RSO	**Reoubt South**	**59.86**	**30**	*e*P	**P**	**14 11 05.0**	**-0.4**
PPLA	**Purkeypile**	**60.79**	**28**	*e*P	**P**	**14 11 12.0**	**+0.3**
	comp=Z,9.6nm,0.8s,mb4.7						
KURK	**Kurchatov**	**61.01**	**318**	P	**P**	**14 11 11.8**	**-1.6**
	comp=Z,6.4nm,0.7s,mb4.6,baz=95,slow=7.4,SNR=24						
KURK				PcP	PcP	14 11 53.6	-1.4
	comp=Z,1.4nm,0.5s,baz=95,slow=7.5,SNR=3.5						
KURK	**Kurchatov**	**61.01**	**318**	*d* iP	**P**	**14 11 12.4**	**-1.0**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.7s,mb4.3						
KURK	**Kurchatov**	**61.01**	**318**	*e*P	**P**	**14 11 11.9**	**-1.5**
	comp=Z,5.3nm,0.9s,mb4.4						
CHUM	**Lake Minchumin**	**61.02**	**27**	*e*P	**P**	**14 11 13.3**	**+0.1**
	comp=Z,17nm,0.7s,mb5.0						
SEW	**Seward**	**61.38**	**31**	*e*P	**P**	**14 11 15.0**	**-0.6**
	comp=Z,37nm,0.9s,mb5.2						
RC01	**Rabbit Creek A**	**61.45**	**30**	*e*P	**P**	**14 11 15.4**	**-0.7**
	comp=Z,36nm,0.7s,mb5.3						
KTH	**Kantishna Hill**	**61.52**	**27**	*e*P	**P**	**14 11 15.8**	**-0.8**
	comp=Z,27nm,0.9s,mb5.1						
BPAW	**Bear Paw Mtn.**	**61.64**	**27**	*e*P	**P**	**14 11 17.5**	**+0.1**
	comp=Z,37nm,0.9s,mb5.2						
TRF	**Thorofare Moun**	**61.77**	**27**	*e*P	**P**	**14 11 16.9**	**-1.4**
	comp=Z,27nm,0.9s,mb5.1						
PMR	**Palmer**	**61.85**	**30**	*e*P	**P**	**14 11 17.9**	**-0.9**
PMR				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
PMR	**Palmer**	**61.85**	**30**	*e*P	**P**	**14 11 17.9**	**-0.9**
	comp=Z,20nm,0.9s,mb5.0						
KSH	**Kashi**	**62.62**	**305**	*e*P	**P**	**14 11 26.7**	**+2.3**
KSH				PcP	PcP	14 12 03.2	+1.4
KSH				pP	pP	14 12 07.8	+5.6
KSH				sP	sP	14 12 27.1	+7.5
KSH				PP	PP	14 13 48.6	+4.7
KSH				ScP	ScP	14 15 47.1	-1.7
KSH				PcS	PcS	14 16 05.3	0.0
KSH				S	**S**	**14 19 37.2**	**-2.6**
KSH				sS	sS	14 20 51.6	+6.3
KSH				ScS	ScS	14 20 58.0	-3.4
KSH				SS	SS	14 23 50.1	+3.2
KSH				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3						
KSH				pmax	pmax		
	comp=Z,83nm,4.4s						
KSH				LR	LR		
	comp=N,82nm,4.6s						
KSH				LR	LR		
	comp=E,95nm,5.9s						
KSH				LR	LR		
	comp=Z,130nm,5.1s						
TKM2	**Tokmak 2**	**62.80**	**309**	*e*P	**P**	**14 11 25.8**	**+0.3**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.2						
TKM2	**Tokmak 2**	**62.80**	**309**	*e*P	**P**	**14 11 25.8**	**+0.3**
	comp=Z,2.7nm,0.8s,mb4.1						
COLD	**Coldfoot**	**62.83**	**23**	*e*P	**P**	**14 11 25.4**	**+0.3**
	comp=Z,9.4nm,1.0s,mb4.6						
COLD				*e*	pP	14 12 01.9	-1.1
COLA	**College**	**63.15**	**26**	*e*P	**P**	**14 11 26.3**	**-1.1**
COLA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
COLA	**College**	**63.15**	**26**	*e*P	**P**	**14 11 26.2**	**-1.1**
	comp=Z,10.0nm,0.8s,mb4.7						
AAK	**Ala-Archa**	**63.62**	**309**	*c*eP	**P**	**14 11 30.8**	**-0.1**
AAK				pmax	pmax		
	comp=Z,5.0nm,2.5s,mb3.9						
UCH	**Uchtor**	**63.62**	**308**	*e*P	**P**	**14 11 31.7**	**+0.8**
UCH				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2						
UCH	**Uchtor**	**63.62**	**308**	*e*P	**P**	**14 11 31.7**	**+0.9**
	comp=Z,1.9nm,0.5s,mb4.2						
PAX	**Paxson**	**63.80**	**28**	*e*P	**P**	**14 11 31.4**	**-0.3**
PAX				pmax	pmax		
	comp=Z,11nm,0.5s,mb4.9						
PAX	**Paxson**	**63.80**	**28**	*e*P	**P**	**14 11 31.4**	**-0.3**
	comp=Z,11nm,0.5s,mb4.9						
BMRM	**Bremner River**	**63.89**	**31**	*e*P	**P**	**14 11 32.1**	**-0.2**
	comp=Z,31nm,1.0s,mb5.1						
MENT	**Mentasta**	**64.58**	**29**	*e*P	**P**	**14 11 36.9**	**+0.1**
EGAK	**Eagle**	**65.95**	**27**	*e*P	**P**	**14 11 45.0**	**-0.6**
	comp=Z,3.6nm,0.6s,mb4.4						
BVAR	**Borovoye Array**	**66.22**	**320**	P	**P**	**14 11 46.7**	**-0.8**
	comp=Z,7.7nm,0.5s,mb4.8,baz=94,slow=7.5,SNR=59						
BRVK	**Borovoye**	**66.28**	**320**	*c i*P	**P**	**14 11 46.8**	**-1.0**
BRVK				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.6						
BRVK	**Borovoye**	**66.28**	**320**	*e*P	**P**	**14 11 46.6**	**-1.2**
	comp=Z,6.0nm,0.6s,mb4.6						
PNL	**Peninsula**	**66.34**	**32**	*e*P	**P**	**14 11 48.5**	**+0.4**
	comp=Z,18nm,0.9s,mb4.9						
DAWY	**Dawson**	**66.64**	**28**	*e*P	**P**	**14 11 49.9**	**0.0**
DAWY				*e*PcP	PcP	14 12 17.7	-0.2
SKAG	**Skagway**	**68.41**	**33**	*e*P	**P**	**14 12 01.5**	**+0.4**
	comp=Z,13nm,0.9s,mb4.7						
INK	**Inuvik**	**69.24**	**23**	*e*P	**P**	**14 12 05.5**	**-0.6**
INK				pmax	pmax		
	comp=Z,19nm,1.1s						
INK	**Inuvik**	**69.24**	**23**	*e*P	**P**	**14 12 05.5**	**-0.6**
	comp=Z,19nm,1.1s,mb4.7						
DLBC	**Dease Lake**	**71.20**	**34**	*e*P	**P**	**14 12 19.1**	**+0.9**
SVE	**Sverdlovsk**	**71.62**	**325⇑**	*e*P	**P**	**14 12 20.0**	**-0.7**
SVE				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
ARU	**Arti**	**72.81**	**324**	*d i*P	**P**	**14 12 26.3**	**-1.5**
ARU				SS	SS	14 26 27.1	+3.9
ARU				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
ARU	**Arti**	**72.81**	**324**	*e*P	**P**	**14 12 26.1**	**-1.7**
	comp=Z,5.8nm,0.7s,mb4.4						
ABKAR	**Akbulak array**	**73.08**	**317**	*e*P	**P**	**14 12 27.6**	**-1.9**
	comp=Z,6.6nm,0.5s,mb4.6						
AKTK	**Aktyubinsk**	**74.11**	**318**	P	**P**	**14 12 34.1**	**-1.4**
AKTO	**Aktyubinsk**	**74.11**	**318**	P	**P**	**14 12 34.1**	**-1.4**
	comp=Z,5.1nm,0.6s,mb4.4,baz=86,slow=7.5,SNR=30						
NLWA	**Neilton Lookou**	**76.73**	**44**	⇑P	**P**	**14 12 51.4**	**+0.9**
	baz=77						
HDW	**Hoodsport**	**77.20**	**44**	P	**P**	**14 12 54.2**	**+1.0**
GNW	**Green Mountain**	**77.37**	**44**	*e*P	**P**	**14 12 54.5**	**+0.4**
	comp=Z,8.1nm,0.8s,mb4.4						
A05A	**Maple Falls**	**77.50**	**42**	⇑P	**P**	**14 12 54.9**	**+0.1**
	baz=77						
JCW	**Jim Creek**	**77.80**	**43**	P	**P**	**14 12 57.1**	**+0.7**
YKA	**Yellowknife Ar**	**77.88**	**28**	P	**P**	**14 12 55.8**	**-0.8**
	comp=Z,10nm,0.6s,mb4.7,baz=291,slow=5.4,SNR=89						
B06A	**Marblemount**	**78.00**	**43**	⇑P	**P**	**14 12 58.1**	**+0.5**
	baz=78						
D05A	**Enumclaw**	**78.02**	**44**	⇓P	**P**	**14 12 58.3**	**+0.6**
	baz=78						
F04A	**Amboy**	**78.05**	**45**	⇑P	**P**	**14 12 58.4**	**+0.5**
	baz=78						
G04A	**Mulino**	**78.19**	**46**	⇑P	**P**	**14 12 59.2**	**+0.4**
	baz=78						
H04A	**Detroit Lake**	**78.53**	**47**	⇑P	**P**	**14 13 00.7**	**+0.1**
	baz=78						
A07A	**Ashnola River,**	**78.57**	**42**	⇑P	**P**	**14 13 00.8**	**+0.1**
	baz=78						
NAC	**Naches**	**78.90**	**44**	P	**P**	**14 13 03.2**	**+0.6**
YBH	**Yreka Blue Hor**	**78.94**	**50**	*e*P	**P**	**14 13 03.0**	**+0.1**
YBH				pmax	pmax		
	comp=Z,3.0nm,0.6s						
YBH	**Yreka Blue Hor**	**78.94**	**50**	*e*P	**P**	**14 13 03.0**	**+0.2**
	comp=Z,3.0nm,0.6s,mb4.1						
EBG	**Ellensburg**	**79.03**	**44**	P	**P**	**14 13 03.8**	**+0.6**
WTV	**Waterville**	**79.21**	**43**	P	**P**	**14 13 04.2**	**0.0**
B08A	**Colville Reser**	**79.43**	**43**	⇑P	**P**	**14 13 05.0**	**-0.3**
	baz=79,SNR=7.7						
G06A	**Carlson Farm,**	**79.44**	**46**	⇑P	**P**	**14 13 05.5**	**0.0**
	baz=79						
VIPM	**Ingram Point**	**79.66**	**47**	P	**P**	**14 13 06.9**	**+0.2**
K05A	**Summer Lake**	**79.97**	**48**	⇑P	**P**	**14 13 09.0**	**+0.6**
	baz=80						
LTIM	**Timbered Crate**	**79.97**	**50**	P	**P**	**14 13 08.9**	**+0.4**
D08A	**Wollman Farm,**	**80.07**	**44**	⇑P	**P**	**14 13 09.0**	**+0.2**
	baz=80,SNR=6.8						
OD2	**Odessa Site #2**	**80.11**	**43**	P	**P**	**14 13 08.8**	**-0.2**
B09A	**Rice**	**80.16**	**42**	⇑P	**P**	**14 13 09.4**	**0.0**
	baz=80						
C09A	**Chrisman Ranch**	**80.27**	**43**	⇑P	**P**	**14 13 09.7**	**-0.2**
	baz=80						
I07A	**Izee**	**80.55**	**47**	⇓P	**P**	**14 13 11.7**	**+0.2**
	baz=80						
MOD	**Modoc**	**80.62**	**49**	*e*P	**P**	**14 13 11.6**	**-0.3**
	comp=Z,7.3nm,0.8s,mb4.4						
E09A	**Wood Farm, Sta**	**80.74**	**44**	⇑P	**P**	**14 13 12.4**	**0.0**
	baz=81						
B10A	**Chitwood Farm,**	**80.79**	**42**	⇓P	**P**	**14 13 12.9**	**+0.2**
	baz=81						
NEW	**Newport**	**80.86**	**42**	*e*P	**P**	**14 13 12.8**	**-0.3**
NEW				pmax	pmax		
	comp=Z,13nm,0.8s						
NEW	**Newport**	**80.86**	**42**	*e*P	**P**	**14 13 12.8**	**-0.3**
	comp=Z,13nm,0.8s,mb4.6						
C10A

baz=83,SNR=5.7
F12A Elk City 82.88 44 ⇓P P 14 13 23.7 0.0
baz=83
A14A Double T Ranch 82.95 41 ⇓P P 14 13 23.9 0.0
baz=83,SNR=6.6
D13A Huson 82.95 43 ⇑P P 14 13 23.6 -0.4
baz=83
I11A Placerville 83.03 46 ⇑P P 14 13 24.4 -0.1
baz=83
G12A Big Creek, Yel 83.05 45 ⇓P P 14 13 24.3 -0.3
baz=83
NVAR Mina Array Bea 83.14 52 P P 14 13 25.4 +0.2
comp=Z,14nm,0.7s,mb4.8,baz=269,slow=5.8,SNR=83
C14A Swan Lake 83.17 42 ⇓P P 14 13 24.8 -0.3
baz=83
B14A Marquette Ranc 83.26 41 ⇑P P 14 13 25.9 +0.4
baz=83,SNR=8.3
L10A Juniper Basin 83.28 48 ⇑P P 14 13 25.8 0.0
baz=83,SNR=9.7
MFID Camas Ranch 83.28 47 ⇑P P 14 13 25.7 -0.1
baz=83,SNR=12
E13A Victor 83.35 43 ⇓P P 14 13 25.9 -0.1
baz=83
K11A Parker Ranch, 83.36 47 ⇓P P 14 13 26.3 +0.1
baz=83,SNR=8.3
A15A Johnson Ranch, 83.37 40 ⇓P P 14 13 26.1 0.0
baz=83,SNR=11
M10A I.L. Ranch, Tu 83.42 48 ⇑P P 14 13 26.7 +0.2
baz=83
F13A Darby 83.48 44 ⇓P P 14 13 26.1 -0.6
baz=83,SNR=7.9
BSC Santa Cruz Isl 83.51 56 ⇓P P 14 13 26.7 -0.5
baz=83
SLMT Seeley Lake 83.51 42 eP P 14 13 26.1 -0.8
comp=Z,4.6nm,0.6s,mb4.4
H12A Diamond D Ranc 83.56 45 ⇑P P 14 13 27.0 -0.2
baz=83
D14A Greenough 83.56 42 ⇓P P 14 13 26.9 -0.2
baz=83
I12A Atlanta 83.63 46 ⇓P P 14 13 27.4 -0.2
baz=84,SNR=8.7
B15A Bradely Ranch, 83.72 41 ⇑P P 14 13 27.8 -0.1
baz=84,SNR=19
L11A Cat Creek Ranc 83.75 48 ⇓P P 14 13 28.3 +0.1
baz=84,SNR=9.6
JOF Joensuu 83.76 335 ep P 14 13 25.1 -2.7
comp=Z,18nm,0.5s,mb5.0
CHMT Chamberlain Mo 83.78 43 eP P 14 13 27.5 -0.8
comp=Z,1.1nm,0.4s,mb3.9
G13A Cobalt 83.79 45 ⇑P P 14 13 27.9 -0.4
baz=84
E14A Clinton 83.81 43 ⇓P P 14 13 28.0 -0.4
baz=84
J12A Stokes Ranch, 83.84 46 ⇑P P 14 13 28.7 0.0
baz=84
O10A Cortez Mining, 83.85 50 ⇑P P 14 13 29.0 +0.3
baz=84
C15A Salmond Ranch, 83.88 42 ⇓P P 14 13 28.8 0.0
baz=84,SNR=7.3
ISA Isabella 83.89 55 ⇓P P 14 13 28.2 -0.8
baz=84
CWC Cottonwood Cre 83.94 54 ⇑P P 14 13 29.2 -0.1
baz=84
H13A Challis 83.96 45 ⇑P P 14 13 29.1 -0.1
baz=84,SNR=19
M11A Holland Ranch, 83.98 48 ⇑P P 14 13 29.3 0.0
baz=84
P10A Eureka 84.10 50 ⇑P P 14 13 29.9 -0.1
baz=84
F14A Wisdom 84.10 44 ⇑P P 14 13 30.1 +0.2
baz=84
K12A Draper Farm, C 84.19 47 ⇓P P 14 13 30.4 0.0
baz=84,SNR=8.4
HLID Hailey 84.20 46 ⇑P P 14 13 30.5 +0.1
baz=84,SNR=8.0
HLID Hailey 84.20 46 eP P 14 13 29.9 -0.5
comp=Z,5.0nm,1.0s,mb4.2
D15A Lincoln 84.21 42 ⇑P P 14 13 30.3 -0.1
baz=84
B16A M & M Farms, S 84.21 41 ⇑P P 14 13 30.3 -0.1
baz=84,SNR=33
L12A House Creek Ra 84.28 47 ⇓P P 14 13 31.0 +0.1
baz=84,SNR=9.8
I13A Wildhorse Cree 84.28 46 ⇓P P 14 13 31.0 +0.2
baz=84,SNR=7.7
GRAC Grapevine Rang 84.30 53 ⇓P P 14 13 31.0 -0.1
baz=84
E15A Deer Lodge 84.35 43 ⇑P P 14 13 31.1 -0.1
baz=84,SNR=18
J13A Cove Ranch, Pi 84.42 46 ⇑P P 14 13 31.4 -0.2
baz=84,SNR=9.5
O11A Cowboy Ranch, 84.51 50 ⇑P P 14 13 32.2 +0.1
baz=84,SNR=6.2
MPMC Manual Prospec 84.52 54 ⇑P P 14 13 32.2 0.0
baz=84
EDW2 Edwards Air Fo 84.52 55 ⇑P P 14 13 32.4 +0.2
baz=84
H14A Leadore 84.53 45 ⇓P P 14 13 32.3 +0.2
baz=84,SNR=23
LRMC Laurel Mountai 84.55 55 ⇑P P 14 13 32.5 +0.1
baz=84
S10A Tonopah Range, 84.57 52 ⇑P P 14 13 32.8 +0.3
baz=84
M12A Wells 84.60 48 ⇓P P 14 13 32.8 +0.2
baz=84
ELK Elko 84.60 49 eP P 14 13 32.7 +0.2
ELK pmax pmax
comp=Z,14nm,0.9s
ELK Elko 84.60 49 eP P 14 13 32.7 +0.2
comp=Z,14nm,0.9s,mb4.7
P11A Circle Ranch, 84.64 50 ⇓P P 14 13 32.8 0.0
baz=84
F15A Butte 84.66 43 ⇓P P 14 13 32.6 -0.1
baz=84,SNR=24
CIS Catalina Islan 84.67 57 ⇑P P 14 13 32.1 -0.9
baz=85
LRM Limekiln Ridge 84.70 43 eP P 14 13 32.6 -0.2
comp=Z,99nm,0.8s,mb5.6
I14A Mackay 84.72 45 ⇑P P 14 13 33.8 +0.7
baz=85,SNR=12
K13A Stover Farm, H 84.75 47 ⇓P P 14 13 33.7 +0.5
baz=85
HRY Holter Researc 84.77 42 eP P 14 13 33.2 0.0
comp=Z,32nm,0.7s,mb5.2
MCMT McKenzie Canyo 84.80 44 eP P 14 13 33.3 -0.1
comp=Z,2.1nm,0.6s,mb4.0
B17A L&G Farms, Che 84.82 41 ⇑P P 14 13 33.3 -0.2
baz=85
D16A Dana Ranch, Ca 84.83 42 ⇓P P 14 13 33.5 -0.1
baz=85
J14A Carey 84.89 46 ⇑P P 14 13 34.2 +0.3
baz=85
G15A Dillon 84.91 44 ⇓P P 14 13 33.9 -0.1
baz=85
E16A East Helena 84.93 43 ⇓P P 14 13 33.7 -0.3
baz=85,SNR=10
Q11A Duckwater 84.95 51 ⇑P P 14 13 34.3 -0.1
baz=85
H15A Lima 85.01 45 ⇓P P 14 13 34.6 +0.1
baz=85
L13A Double Diamond 85.04 47 ⇑P P 14 13 34.9 +0.2
baz=85
C17A Wharram Farm, 85.09 41 ⇓P P 14 13 34.2 -0.6
baz=85,SNR=6.5
O12A Currie 85.12 49 ⇑P P 14 13 35.2 0.0
baz=85,SNR=8.8
M13A Montello 85.15 48 ⇓P P 14 13 35.2 0.0
baz=85,SNR=10
M13A Montello 85.15 48 eP P 14 13 35.0 -0.2
comp=Z,12nm,0.9s,mb4.6
A18A Metzger Ranch, 85.16 40 ⇓P P 14 13 34.6 -0.5
baz=85
R11A Troy Canyon, C 85.18 51 ⇑P P 14 13 35.5 +0.1
baz=85,SNR=6.5
F16A Kennard Place, 85.25 43 ⇑P P 14 13 35.7 +0.1
baz=85,SNR=14
VSR Storozhevoye 85.26 323 eP P 14 13 33.0 -2.6
VSR pmax pmax
comp=N,190nm,0.4s
VSR pmax pmax
comp=E,310nm,0.4s
VSR pmax pmax
comp=Z,1μm,0.4s
P12A McGill 85.28 50 ⇓P P 14 13 36.0 +0.1
baz=85
GSC Goldstone 85.29 54 ⇓P P 14 13 36.0 -0.1
baz=85
BOZ Bozeman (W) 85.30 43 ⇓P P 14 13 35.7 -0.2
baz=85,SNR=7.2
S11A Rachel 85.30 52 ⇑P P 14 13 36.4 +0.4
baz=85
N13A Wendover, West 85.30 48 eP P 14 13 35.5 -0.5
comp=Z,12nm,0.8s,mb4.7
D17A Six Diamond Ra 85.33 42 ⇓P P 14 13 35.8 -0.2
baz=85
G16A Moss Hill, Enn 85.34 44 ⇑P P 14 13 36.2 +0.1
baz=85,SNR=22
B18A Beardsley Farm 85.41 40 ⇓P P 14 13 36.1 -0.2
baz=85,SNR=19
K14A Jones Ranch, D 85.41 47 ⇓P P 14 13 37.0 +0.5
baz=85,SNR=7.5
E17A Martinsdale 85.48 42 ⇑P P 14 13 36.7 -0.1
baz=85,SNR=10
Q12A Willow Creek R 85.49 50 ⇓P P 14 13 37.2 +0.2
baz=85
SHOC Shoshone 85.49 54 ⇓P P 14 13 37.1 +0.1
baz=85
L14A Malta 85.55 47 ⇑P P 14 13 37.6 +0.4
baz=85
EGMT Eagleton 85.56 41 ⇓P P 14 13 36.9 -0.2
baz=85
EGMT Eagleton 85.56 41 eP P 14 13 36.4 -0.8
comp=Z,8.5nm,0.9s,mb4.5
J15A Blackfoot 85.60 46 ⇓P P 14 13 38.4 +1.0
baz=86,SNR=17
M14A Sheep Mountain 85.67 48 ⇑P P 14 13 38.0 +0.1
baz=86,SNR=9.2
K15A Arbon 85.80 46 ⇓P P 14 13 38.8 +0.4
baz=86,SNR=5.4
HEC Hector,Ludlow 85.82 55 ⇑P P 14 13 38.2 -0.5
baz=86
F17A Fitzpatrick Pl 85.83 43 ⇑P P 14 13 38.3 -0.2
baz=86,SNR=7.2
T11A Corn Creek, Al 85.83 52 ⇑P P 14 13 38.5 -0.3
baz=86
D18A Linhart Farms, 85.86 41 ⇓P P 14 13 38.7 0.0
baz=86
R12A Pony Springs, 85.90 51 ⇓P P 14 13 39.4 +0.3
baz=86
H16A Russell Place, 85.91 44 ⇓P P 14 13 39.5 +0.6
baz=86,SNR=10
P13A Bates Ranch, G 85.94 50 ⇓P P 14 13 39.1 -0.1
baz=86,SNR=12
HVU Hansel Valley 85.97 47 eP P 14 13 39.3 0.0
HVU pmax pmax
comp=Z,11nm,1.0s,mb4.5
HVU Hansel Valley 85.97 47 eP P 14 13 39.2 0.0
comp=Z,11nm,1.0s,mb4.5
S12A Delamar Landin 85.98 52 ⇑P P 14 13 39.7 +0.2
baz=86
G17A Pierce Place, 86.00 43 ⇓P P 14 13 39.3 -0.1
baz=86
N14A Grayback Hills 86.02 48 ⇓P P 14 13 39.7 +0.2
baz=86
E18A Harlowton 86.04 42 ⇑P P 14 13 39.7 +0.2
baz=86,SNR=14
I16A Newdale 86.06 45 ⇑P P 14 13 39.9 +0.2
baz=86
PFO Pinyon Flat Ob 86.14 56 ⇑P P 14 13 40.3 0.0
baz=86
L15A Malad City 86.16 47 ⇑P P 14 13 40.1 -0.1
baz=86,SNR=7.5
KAF Kangasniemi 86.16 336 eP P 14 13 36.2 -3.6
KAF pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
KAF Kangasniemi 86.16 336 ep P 14 13 36.2 -3.6
comp=Z,6.2nm,0.6s,mb4.5
M15A Larsen Ranch, 86.31 47 ⇑P P 14 13 41.1 +0.1
baz=86
GMRC Granite Mounta 86.36 55 ⇑P P 14 13 41.3 0.0
baz=86
K16A Soda Springs 86.39 46 ⇑P P 14 13 41.8 +0.5
baz=86
MONP Monument Peak 86.41 57 ⇑P P 14 13 41.8 +0.1
baz=86
IMW Indian Meadow 86.42 45 eP P 14 13 42.0 +0.6
comp=Z,4.3nm,0.6s,mb4.4
R13A O'Grain Ranch, 86.43 51 ⇑P P 14 13 41.8 +0.2
baz=86,SNR=5.3
F18A Big Timber 86.43 43 ⇑P P 14 13 41.8 +0.3
baz=86
N15A Stansbury Isla 86.48 48 ⇓P P 14 13 41.8 0.0
baz=86
DUG Dugway 86.53 49 ⇑P P 14 13 42.1 +0.1
baz=86,SNR=7.9
DUG Dugway 86.53 49 eP P 14 13 41.7 -0.4
DUG pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
DUG Dugway 86.53 49 eP P 14 13 41.7 -0.4
comp=Z,9.3nm,0.8s,mb4.7
P14A Drum Mountains 86.57 49 ⇓P P 14 13 42.5 +0.2
baz=86,SNR=10
TPAW Teton Pass 86.57 45 eP P 14 13 42.2 0.0
comp=Z,3.9nm,0.6s,mb4.4
U12A Valley of Fire 86.63 53 ⇑P P 14 13 42.5 -0.1
baz=86
FINES FINESS Array B 86.63 335 P P 14 13 38.8 -3.3
comp=Z,11nm,0.4s,mb5.0,baz=67,slow=4.4,SNR=84
Q14A Sevier Lake (B 86.64 50 ⇓P P 14 13 42.8 +0.2
baz=86,SNR=12
V12A Nelson 86.64 53 ⇓P P 14 13 42.9 +0.2
baz=86,SNR=5.5
S13A Holt Ranch, En 86.72 51 ⇓P P 14 13 43.1 0.0
baz=87
L16A Fish Haven 86.81 47 ⇑P P 14 13 43.5 +0.1
baz=87
HWUT Hardware Ranch 86.87 47 eP P 14 13 43.5 -0.3
comp=Z,10nm,0.8s,mb4.7
T13A Saint George 86.89 52 ⇑P P 14 13 44.3 +0.4
baz=87
BC3 Big Chuckawall 86.91 56 ⇑P P 14 13 43.8 -0.2
baz=87
ARUT Antelope Range 86.96 51 eP P 14 13 44.4 +0.2
ARUT pmax pmax
comp=Z,8.0nm,0.7s,mb4.7
ARUT Antelope Range 86.96 51 eP P 14 13 44.4 +0.2
comp=Z,8.0nm,0.7s,mb4.7
FFC Flin Flon 87.00 32 iP P 14 13 43.5 -0.5
FFC Flin Flon 87.00 32 eP P 14 13 43.0 -1.1
comp=Z,15nm,0.9s,mb4.8
RLMT Red Lodge 87.03 43 ⇑P P 14 13 45.4 +1.0
baz=87,SNR=5.5
RLMT Red Lodge 87.03 43 eP P 14 13 44.7 +0.3
comp=Z,7.8nm,0.8s,mb4.6
U13A Pakoon Wash 87.07 53 ⇓P P 14 13 44.9 +0.2
baz=87,SNR=14
CCUT Cedar City 87.10 51 eP P 14 13 45.2 +0.3
comp=Z,5.4nm,0.8s,mb4.4
P15A Leamington 87.14 49 ⇓P P 14 13 45.1 +0.1
baz=87
L17A Cokeville 87.16 46 ⇑P P 14 13 45.0 -0.1
baz=87
S14A Cedar City 87.17 51 ⇑P P 14 13 45.2 0.0
baz=87
V13A Grand Canyon W 87.26 53 ⇑P P 14 13 45.9 +0.2
baz=87
Q15A Filmore 87.28 50 ⇑P P 14 13 46.1 +0.4
baz=87
J18A Kendall Valley 87.30 45 ⇓P P 14 13 46.3 +0.5
baz=87
JLU Jordanelle 87.34 48 eP P 14 13 46.0 +0.1
comp=Z,4.2nm,0.6s,mb4.5
T14A Hurricane 87.49 52 ⇓P P 14 13 47.1 +0.3
baz=87
K18A Toltan Ranch, 87.52 46 ⇓P P 14 13 47.2 +0.4
baz=87
M17A Scullys Gap (B 87.55 47 ⇑P P 14 13 46.8 -0.2
baz=87
Y12C Blythe 87.60 55 ⇓P P 14 13 47.5 +0.2
baz=88
W13A Hualapai Mount 87.60 54 ⇓P P 14 13 47.8 +0.5
baz=88,SNR=9.1
GLA Glamis 87.61 56 ⇓P P 14 13 47.4 -0.1
baz=88
U14A Mt Trumbull 87.65 52 ⇑P P 14 13 47.8 +0.2
baz=88,SNR=10
R15A Junction 87.66 50 ⇓P P 14 13 47.7 +0.1
baz=88
PDMCI Parker Dam,Lak 87.70 55 ⇓P P 14 13 47.9 +0.1
baz=88
BW06 Boulder Array 87.79 45 ⇑P P 14 13 47.7 -0.3
baz=88
PDAR Pinedale Array 87.79 45 P P 14 13 47.3 -0.8
comp=Z,1.6nm,0.5s,mb4.1,baz=120,slow=0.6,SNR=19
X13A Yucca 87.83 54 ⇓P P 14 13 48.5 +0.1
baz=88
O17A Robinson Place 88.00 48 ⇓P P 14 13 49.0 -0.1
baz=88
V14A Boquillas Ranc 88.00 53 ⇑P P 14 13 49.6 +0.3
baz=88
T15A Red Dirt Ranch 88.03 52 ⇓P P 14 13 49.5 +0.2
baz=88,SNR=6.0
W14A Seligman 88.17 53 ⇓P P 14 13 50.5 +0.5
baz=88,SNR=11
Q16A Castle Valley 88.19 49 ⇓P P 14 13 50.3 +0.3
baz=88,SNR=5.1
L19A Farson 88.19 46 ⇓P P 14 13 50.2 +0.2
baz=88
R16A Teasdale 88.20 50 ⇑P P 14 13 50.8 +0.6
baz=88,SNR=6.4
K19A Absolon Red Bu 88.25 45 ⇑P P 14 13 49.6 -0.6
baz=88,SNR=7.4
LAO LASA Array 88.30 41 eP P 14 13 50.1 -0.3
comp=Z,4.5nm,0.6s,mb4.5
U15A North Rim 88.32 52 ⇑P P 14 13 51.4 +0.7
baz=88,SNR=12
Z13A Yuma Proving G 88.47 55 ⇑P P 14 13 51.5 +0.1
baz=88,SNR=5.4
113A Mohawk Valley, 88.54 56 ⇓P P 14 13 51.8 -0.1
baz=88
P18A Preston Nutter 88.57 48 ⇓P P 14 13 51.8 0.0
baz=88
SRU San Rafael 88.57 49 ⇑P P 14 13 51.6 -0.2
baz=88,SNR=5.3
X14A Yava 88.60 54 ⇓P P 14 13 52.7 +0.6
baz=88
V15A Kaibab Nationa 88.64 53 ⇓P P 14 13 53.0 +0.8
baz=88,SNR=11
K20A Yellowstone Ra 88.65 45 ⇑P P 14 13 52.1 -0.1
baz=88
Y14A Wickenburg 88.71 55 ⇓P P 14 13 52.7 +0.1
baz=89,SNR=13
R17A Hanksville Air 88.71 50 ⇓P P 14 13 52.4 -0.1
baz=89,SNR=13
W15A Williams 88.81 53 ⇑P P 14 13 54.0 +1.0
baz=89,SNR=6.4
Q18A Rafter H Ranch 88.86 49 ⇑P P 14 13 52.9 -0.3
baz=89
L20A Wamsutter 88.92 46 ⇑P P 14 13 53.4 -0.1
baz=89
S17A Black Ridge (B 88.95 50 ⇑P P 14 13 53.6 -0.1
baz=89
Z14A Wintersburg 88.97 55 ⇑P P 14 13 53.4 -0.4
baz=89
O19A Miners Draw (B 89.09 48 ⇑P P 14 13 53.4 -0.9
baz=89
X15A Humboldt 89.09 54 ⇑P P 14 13 54.6 +0.3
baz=89,SNR=7.2
T17A Navajo Res., N 89.20 51 ⇓P P 14 13 54.8 -0.1
baz=89,SNR=5.4
Y15A Casa Rosa Ranc 89.22 54 ⇑P P 14 13 55.5 +0.5
baz=89,SNR=10
114A Black Gap (USA 89.24 56 ⇓P P 14 13 55.3 +0.2
baz=89
M20A Sweetwater, Wa 89.24 46 ⇓P P 14 13 54.8 -0.2
baz=89
R18A Canyonlands Na 89.31 50 ⇓P P 14 13 55.2 -0.1
baz=89
WUAZ Wupatki 89.35 53 ⇑P P 14 13 56.3 +0.7
baz=89,SNR=5.8
WUAZ Wupatki 89.35 53 eP P 14 13 56.0 +0.5
comp=Z,12nm,0.9s,mb4.8
W16A Flagstaff 89.39 53 ⇓P P 14 13 56.4 +0.6
baz=89
P19A Cripple Cowboy 89.46 48 ⇑P P 14 13 56.1 +0.1
baz=89,SNR=6.0
U17A Shonto 89.46 51 ⇑P P 14 13 56.6 +0.6
baz=89
N20A Spence Gulch, 89.47 47 ⇑P P 14 13 55.4 -0.5
baz=89
S18A Hurst Farm, Bl 89.52 50 ⇓P P 14 13 56.3 0.0
baz=89
Q19A Hogan Spring (89.54 49 ⇑P P 14 13 56.0 -0.4
baz=89
214A Organ Pipe Nat 89.59 56 ⇓P P 14 13 56.6 -0.2
baz=90
L21A Rawlins 89.60 45 ⇑P P 14 13 56.3 -0.3
baz=90
X16A Lo Mia Camp, P 89.72 54 ⇑P P 14 13 57.1 -0.2
baz=90
V17A Tonalea, Kykot 89.75 52 ⇓P P 14 13 57.5 +0.1
baz=90,SNR=5.6
M21A Separation Pea 89.76 46 ⇑P P 14 13 57.0 -0.3
baz=90
O20A White River Ci 89.77 47 ⇓P P 14 13 57.0 -0.4
baz=90
115A Sonoran Desert 89.77 55 ⇑P P 14 13 57.8 +0.2
baz=90
R19A Curley Farm, L 89.81 49 ⇓P P 14 13 57.6 0.0
baz=90
T18A Mexican Hat 89.83 51 ⇑P P 14 13 57.4 -0.3
baz=90,SNR=5.3
Y16A Circle Bar Ran 89.90 54 ⇑P P 14 13 58.6 +0.4
baz=90,SNR=5.7
N21A Black Mountain 90.01 47 ⇓P P 14 13 58.5 -0.1
baz=90,SNR=8.8
U18A Rough Rock, Ch 90.12 51 ⇓P P 14 13 59.2 +0.1
baz=90
S19A Harvey Farm, M 90.12 50 ⇓P P 14 13 58.9 -0.2
baz=90
L22A Ellis Ranch, M 90.20 45 ⇓P P 14 13 58.8 -0.6
baz=90
Q20A Ridgley Place, 90.22 48 ⇑P P 14 13 59.3 -0.3
baz=90,SNR=6.7
V18A Ganado 90.35 52 ⇑P P 14 14 00.6 +0.3
baz=90
Y17A Roosevelt 90.46 54 ⇑P P 14 14 01.3 +0.5
baz=90
R20A Redvale 90.48 49 ⇓P P 14 14 00.8 0.0
baz=90
T19A Beclabito 90.57 51 ⇓P P 14 14 01.3 0.0
baz=90,SNR=8.4
X18A Snowflake 90.81 53 ⇓P P 14 14 02.6 +0.2
baz=91
RSSD Black Hills 90.83 42 eP P 14 14 01.3 -1.0
RSSD pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
RSSD Black Hills 90.83 42 eP P 14 14 01.3 -1.0
comp=Z,2.4nm,0.6s,mb4.4
Z17A San Carlos Hig 90.90 54 ⇓P P 14 14 03.7 +0.9
baz=91
117A Oracle 90.98 55 ⇓P P 14 14 03.5 +0.3
baz=91
R21A Cimarron 91.00 49 ⇑P P 14 14 03.3 +0.1
baz=91,SNR=7.0
AKASG Malin Array Be 91.05 325 P P 14 13 60.0 -3.1
comp=Z,0.4nm,0.3s,mb3.9,baz=70,slow=5.3,SNR=4.0
Y18A Canyon Day Jun 91.05 54 ⇓P P 14 14 03.9 +0.4
baz=91,SNR=5.1
SMCO Snowmass 91.06 48 eP P 14 14 03.7 +0.2
comp=Z,3.1nm,0.6s,mb4.5
S21A Coal Bank Pass 91.12 49 ⇑P P 14 14 04.1 +0.4
baz=91
U20A Newcomb 91.13 51 ⇑P P 14 14 04.0 +0.2
baz=91
217A Green Valley 91.23 56 ⇓P P 14 14 05.0 +0.6
baz=91
Q22A Crested Butte, 91.24 48 ⇓P P 14 14 04.3 0.0
baz=91
X19A St. Johns 91.35 53 ⇓P P 14 14 05.1 +0.2
baz=91
V20A Brimhall 91.41 51 ⇓P P 14 14 05.5 +0.4
baz=91
118A Homack Ranch, 91.55 55 ⇑P P 14 14 06.2 +0.4
baz=91
Y19A Nutrioso 91.57 53 ⇓P P 14 14 06.6 +0.7
baz=92
R22A Saguache, Gunn 91.62 49 ⇑P P 14 14 06.7 +0.6
baz=92
W20A Ramah 91.66 52 ⇓P P 14 14 06.7 +0.4
baz=92
U21A Nageezi 91.74 51 ⇓P P 14 14 06.9 +0.3
baz=92
218A Dragoon 91.76 55 ⇓P P 14 14 07.5 +0.7
baz=92
Z19A T-Link Ranch, 91.83 54 ⇓P P 14 14 07.5 +0.4
baz=92
X20A Quemado 91.90 53 ⇓P P 14 14 08.1 +0.7
baz=92
318A Bisbee 92.01 56 ⇑P P 14 14 08.6 +0.5
baz=92
119A Ashpeak Ranch, 92.02 54 ⇓P P 14 14 08.4 +0.4
baz=92,SNR=7.5
T22A Edith 92.04 50 ⇓P P 14 14 08.3 +0.2

baz=92
HFS Hagfors 92.13 338 P **P 14 14 04.7 -3.2**
comp=Z,3.8nm,0.4s,mb4.8,baz=93,slow=3.0,SNR=24
NB2 NORSAR Subarra 92.32 340 P **P 14 14 06.5 -2.3**
comp=Z,0.8nm,0.4s,mb4.1,baz=44,slow=5.1
NOA NORSAR Array B 92.32 340 P **P 14 14 06.0 -2.8**
comp=Z,0.9nm,0.5s,mb4.0,baz=45,slow=4.8,SNR=5.3
219A White Tail Can 92.36 55 ⇓P **P 14 14 09.8 +0.2**
baz=92
Z20A Nine Sixteen R 92.42 54 ⇑P **P 14 14 10.3 +0.5**
baz=92
ULM Lac du Bonnet 92.52 34 P **P 14 14 07.7 -2.2**
comp=Z,2.0nm,0.6s,mb4.4,baz=293,slow=4.4,SNR=3.9
ULM Lac du Bonnet 92.52 34 P **P 14 14 07.7 -2.2**
319A Douglas 92.59 56 ⇓P **P 14 14 11.0 +0.3**
baz=92
120A U Bar Ranch, L 92.62 54 ⇓P **P 14 14 11.7 +0.9**
baz=92
U23A El Rito 92.85 50 ⇑P **P 14 14 12.1 +0.4**
baz=93
220A Playas Peak, P 92.97 55 ⇑P **P 14 14 12.6 +0.2**
baz=93
W23A Werner Place, 93.39 51 ⇑P **P 14 14 14.0 -0.3**
baz=93
Z22A Elephant Butte 93.60 53 ⇑P **P 14 14 15.8 +0.6**
baz=94
BRTR Keskin Array B 93.85 314 P **P 14 14 13.2 -3.1**
comp=Z,2.8nm,0.8s,mb4.5,baz=75,slow=3.4,SNR=11
W24A Lazy 6 Ranch, 93.92 51 ⇑P **P 14 14 16.7 0.0**
baz=94
Y23A Lovelace Mesa, 93.99 52 ⇓P **P 14 14 16.7 -0.4**
baz=94
U25A Circle Dot Ran 94.11 49 ⇓P **P 14 14 18.0 +0.4**
baz=94
V25A Rancho No Teng 94.21 50 ⇑P **P 14 14 17.0 -1.0**
baz=94
124A Stringfield Ra 94.98 53 ⇑P **P 14 14 21.5 -0.1**
baz=95
224A Cornudas Mount 95.20 54 ⇑P **P 14 14 22.8 +0.2**
baz=95
Z26A Caprock 95.84 52 ⇓P **P 14 14 25.1 -0.4**
baz=96
325A Bean Ranch, Si 95.94 54 ⇑P **P 14 14 25.8 -0.2**
baz=96
TXAR Lajitas Array 97.85 55 P **P 14 14 33.1 -1.6**
comp=Z,0.2nm,0.8s,mb3.6,baz=236,slow=4.2,SNR=3.3
628A Black Gap, Mar 98.39 55 ⇑P **P 14 14 36.7 -0.4**
baz=98
TOA0 Torodi Ar. Sit 132.20 309 *e*PKPdf PKPdf 14 20 11.2 -1.5
TORD Torodi Ar. Bea 132.20 309 PKP PKPdf 14 20 11.0 -1.7
comp=Z,0.4nm,0.3s,baz=63,slow=0.8,SNR=13
TORD SKPbc SKPbc 14 23 18.6 -5.8
comp=Z,1.1nm,0.7s,baz=37,slow=2.6,SNR=6.7
TORD Torodi Ar. Bea 132.20 309 PKP PKPdf 14 20 11.0 -1.7
TORD SKPbc SKPbc 14 23 18.6 -5.8
LPAZ La Paz 147.83 91 PKPbc PKPbc 14 20 43.9 0.0
comp=Z,4.8nm,0.7s,baz=317,slow=2.8,SNR=19
LPAZ La Paz 147.83 91 *e*PKPbc PKPbc 14 20 43.8 -0.1

IDC 11 14:20:17.5±4.9, 16°.85S×176°.27W, h0km, mb4.4/4, mb1 4.6/4, mb1mx4.0/17, mbtmp4.4/4, Error ellipse: s-maj=99.2km s-min=46.9km az=63.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**22.11 194**		P	P	14 25 14.8	+0.3
	3.0nm,0.3s,baz=278,slow=4.1,SNR=25						
STKA	**Stephens Creek**	**40.92 241**		P	P	14 28 01.6	-0.3
	1.9nm,0.5s,baz=92,slow=11,SNR=7.3						
WRA	**Warramunga Arr**	**46.84 258**		P	P	14 28 49.6	0.0
	1.4nm,0.4s,baz=94,slow=7.2,SNR=20						
ASAR	**Alice Springs**	**47.04 253**		P	P	14 28 51.1	0.0
	11nm,0.5s,baz=89,slow=7.8,SNR=367						
ASAR				PcP	PcP	14 30 23.2	-0.3
	0.4nm,0.5s,baz=105,slow=4.2,SNR=4.2						

DDA ***11*** *14:24:25.7, 40°.17N×37°.11E, h6km±1km, Md3.5*
ISK ***11*** *14:24:26.3, 40°.17N×37°.06E, h5km, ML3.5*
CSEM ***11*** *14:24:28.0±0.2, 40°.15N×37°.04E, h2km, ML3.5, Error ellipse: s-maj=4.7km s-min=3.5km az=20.0*
ISCJB ***11*** *14:24:28.2±0.3, 40°.23N±0°.02×37°.08E±0°.02, h10km, Error ellipse: s-maj=3.2km s-min=2.4km az=9.2*
ISC 11 14:24:28.7±0.3, 40°.23N±0°.02×37°.08E±0°.02, h10km, n72, σ1§22/99, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVSK	**Karacayir**	**0.32 192**		*e*Pg	**Pg**	14 24 32.0	-3.0
SVSK	**Karacayir**	**0.32 192**		*e*Pg	**Pg**	14 24 32.0	-3.0
TOKT	**Tokat**	**0.42 283**		*e*PG	**Pg**	14 24 35.5	-1.5
TOKT				*e*SG	**Sg**	14 24 42.0	-0.6
TOKT	**Tokat**	**0.42 283**		*e*Pg	**Pg**	14 24 35.5	-1.5
TOKT				*e*Sg	**Sg**	14 24 42.0	-0.6
TOKA	**Tokat**	**0.47 282**		*i* P	**Pg**	14 24 35.9	-2.1
TOKA				*i* S	**Sg**	14 24 43.6	-0.6
ERBA	**Erbaa**	**0.52 331**		*i* P	**Pg**	14 24 37.7	-1.1
ERBA				*i* S	**Sg**	14 24 45.7	0.0
ERBA	**Erbaa**	**0.52 331**		*i* P	**Pg**	14 24 37.7	-1.1
ERBA				*i* S	**Sg**	14 24 45.7	0.0
GRSN	**GIRESUNGRSN**	**1.14 52**		*i* P	**Pn**	14 24 47.7	-3.1
GRSN				*i* S	**Sn**	14 25 03.3	-3.1
GRSN	**GIRESUNGRSN**	**1.14 52**		*i* P	**Pn**	14 24 47.7	-3.0
GRSN				*i* S	**Sn**	14 25 03.3	-3.1
KVT	**Kavak**	**1.16 318**		*e*PN	**Pn**	14 24 49.4	-1.6
DARE	**Darende-Malaty**	**1.39 156**		*e*PN	**Pg**	14 24 57.8	+2.4
KEMA	**Kemaliye**	**1.45 131**		*i* P	**Pn**	14 24 52.0	-2.9
KEMA				*i* S	**Sn**	14 25 13.0	-1.0
KEMA	**Kemaliye**	**1.45 131**		*i* S	**Sn**	14 25 13.0	-1.0
YOZ	**Yozgat**	**1.48 247**		*e*PN	**Pn**	14 24 53.7	-1.7
YOZ	**Yozgat**	**1.48 247**		*e*Pn	**Pn**	14 24 53.7	-1.7
SARI	**SarD1z-Kayseri**	**1.57 191**		*e*PN	**Pg**	14 25 00.7	+1.7
PINB	**Pinarbasi**	**1.64 199**		*i* P	**Pn**	14 24 55.9	-1.7
PINB				*i* S	**Sn**	14 25 19.0	+0.4
PINB	**Pinarbasi**	**1.64 199**		*i* P	**Pn**	14 24 55.8	-1.7
PINB				*i* S	**Sn**	14 25 19.0	+0.4
CTKT	**Corum**	**1.79 283**		*i* P	**Pn**	14 25 00.0	+0.3
CTKT				*i* S	**Sb**	14 25 25.1	+0.8
CTKT	**Corum**	**1.79 283**		*i* P	**Pn**	14 25 00.0	+0.3
CTKT				*i* S	**Sb**	14 25 25.1	+0.9
GUMT	**Gumushane**	**1.85 82**		*e*PN	**Pn**	14 24 59.9	-0.5
GUMT	**Gumushane**	**1.85 82**		*e*Pn	**Pn**	14 24 59.9	-0.5
CORM	**Corum**	**1.88 269**		*e*PN	**Pn**	14 25 01.0	+0.1
CORM	**Corum**	**1.88 269**		*e*Pn	**Pn**	14 25 01.0	+0.1
DIKM	**Dikmen**	**1.98 316**		*e*PN	**Pn**	14 25 03.3	+1.0
DIKM	**Dikmen**	**1.98 316**		*e*Pn	**Pn**	14 25 03.3	+1.0
AKCD	**Akcadag**	**2.04 161**		*i* P	**Pn**	14 25 02.3	-0.8
AKCD				*i* S	**Sb**	14 25 30.1	-1.0
AKCD	**Akcadag**	**2.04 161**		*i* P	**Pn**	14 25 02.3	-0.7
AKCD				*i* S	**Sb**	14 25 30.1	-1.1
BYBT	**Boyabat**	**2.15 306**		*e*PN	**Pn**	14 25 05.9	+1.3
BYBT	**Boyabat**	**2.15 306**		*e*Pn	**Pn**	14 25 05.9	+1.3
MYA	**Malataya**	**2.17 151**		*e*PN	**Pn**	14 25 03.3	-1.5
MYA	**Malataya**	**2.17 151**		*e*Pn	**Pn**	14 25 03.3	-1.5
MACK	**Trabzon**	**2.17 70**		*i* P	**Pn**	14 25 06.0	+1.1
MACK				*i* S	**Sb**	14 25 34.5	-0.4
MACK	**Trabzon**	**2.17 70**		*i* P	**Pn**	14 25 06.0	+1.2
MACK				*i* S	**Sb**	14 25 34.5	-0.4
CDAG	**Cicekdag**	**2.17 255**		*i* P	**Pn**	14 25 04.0	-0.9
CDAG				*i* S	**Sb**	14 25 35.2	+0.2
CDAG	**Cicekdag**	**2.17 255**		*i* P	**Pn**	14 25 04.0	-0.9
CDAG				*i* S	**Sb**	14 25 35.2	+0.2
KTUT	**Trabzon**	**2.18 69**		*e*PN	**Pn**	14 25 05.9	+0.9
KTUT	**Trabzon**	**2.18 69**		*e*Pn	**Pn**	14 25 05.9	+0.9
PTK	**Pertek**	**2.23 126**		*e*PN	**Pn**	14 25 05.2	-0.4
PTK	**Pertek**	**2.23 126**		*e*Pn	**Pn**	14 25 05.3	-0.4
AVNT	**Avonos**	**2.25 231**		*i* P	**Pn**	14 25 05.1	-0.9
AVNT				*i* S	**Sb**	14 25 36.8	-0.5
AVNT	**Avonos**	**2.25 231**		*i* P	**Pn**	14 25 05.1	-0.9
AVNT				*i* S	**Sb**	14 25 36.8	-0.5
ELZG	**Elazig**	**2.27 139**		*i* P	**Pn**	14 25 05.7	-0.6
ELZG				*i* S	**Sb**	14 25 39.4	+1.5
ELZG	**Elazig**	**2.27 139**		*i* P	**Pn**	14 25 05.7	-0.6
TOS	**Tosya**	**2.46 290**		*e*PN	**Pn**	14 25 09.5	+0.6
TOS	**Tosya**	**2.46 290**		*e*Pn	**Pn**	14 25 09.5	+0.6
SVRC	**Sivrice-ELAZID**	**2.53 136**		*e*PN	**Pn**	14 25 09.5	-0.3
SVRC	**Sivrice-ELAZID**	**2.53 136**		*e*Pn	**Pn**	14 25 09.5	-0.3
KOPT	**Kop Dagi**	**2.63 93**		*e*P	**Pn**	14 25 12.3	+1.2
KOPT				*e*S	**Sb**	14 25 52.9	+4.7
KOPT	**Kop Dagi**	**2.63 93**		*e*P	**Pn**	14 25 12.3	+1.1
KMRS	**Kahramanmaras**	**2.72 183**		*e*PN	**Pn**	14 25 12.1	-0.3
KMRS	**Kahramanmaras**	**2.72 183**		*e*Pn	**Pn**	14 25 12.1	-0.4
KOZT	**Kozan**	**2.91 200**		*e*PN	**Pn**	14 25 15.4	+0.3
BALT	**Daday**	**3.09 296**		*i* P	**Pn**	14 25 17.7	+0.1
BALT				*i* S	**Sb**	14 26 03.8	+2.2
BALT	**Daday**	**3.09 296**		*i* P	**Pn**	14 25 17.7	+0.1
URFA	**Urfa**	**3.10 153**		*e*PN	**Pn**	14 25 17.7	+0.1
URFA	**Urfa**	**3.10 153**		*e*Pn	**Pn**	14 25 17.7	+0.1
BBAL	**Bala**	**3.12 259**		*i* P	**Pn**	14 25 17.6	-0.3
BBAL				*i* S	**Sb**	14 26 05.3	+2.8
BBAL	**Bala**	**3.12 259**		*i* P	**Pn**	14 25 17.6	-0.4
EZM	**Erzurum**	**3.30 94**		*e*PN	**Pn**	14 25 21.6	+1.2
SULT	**Sultanhani-AKS**	**3.43 235**		*e*PN	**Pn**	14 25 23.0	+0.7
SULT	**Sultanhani-AKS**	**3.43 235**		*e*Pn	**Pn**	14 25 23.0	+0.8
GULE	**Gulek**	**3.45 212**		*i* P	**Pn**	14 25 23.2	+0.7
GULE				*i* S	**Sb**	14 26 13.1	+1.3
GULE	**Gulek**	**3.45 212**		*i* P	**Pn**	14 25 23.2	+0.7
DBAD	**Bademkaya**	**3.60 76**		*i* P	**Pn**	14 25 27.5	+3.0
DBAD				*i* S	**Sb**	14 26 15.8	-0.3
DBAD	**Bademkaya**	**3.60 76**		*i* P	**Pn**	14 25 27.5	+3.0
BCA	**Borcka**	**3.65 69**		*e*PN	**Pn**	14 25 26.6	+1.3
BCA	**Borcka**	**3.65 69**		*e*Pn	**Pn**	14 25 26.6	+1.3
ARTV	**Artvin**	**3.81 74**		*i* P	**Pn**	14 25 31.8	+4.4
ARTV				*i* S	**Sb**	14 26 22.7	+0.6
ARTV	**Artvin**	**3.81 74**		*i* P	**Pn**	14 25 31.8	+4.4
SVRH	**Sivrihisar-ESK**	**4.35 261**		*e*PN	**Pn**	14 25 36.1	+1.2
SVRH	**Sivrihisar-ESK**	**4.35 261**		*e*Pn	**Pn**	14 25 36.1	+1.2

MOS ***11*** *14:30:09.5±1.2, 31°.65S×178°.69W, h33km, mb5.3/14, Error ellipse: s-maj=16.3km s-min=12.3km az=80.1*
NEIC ***11*** *14:30:10.3±0.3, 31°.72S×178°.53W, h35km, mb5.2/23, Error ellipse: s-maj=12.0km s-min=8.4km az=141.0*
ISCJB ***11*** *14:30:10.4±0.2, 31°.74S±0°.05×178°.67W±0°.05, h35km, mb5.1/49, MS4.5/26, Error ellipse: s-maj=7.7km s-min=4.8km az=136.8*
IDC ***11*** *14:30:12.6±1.6, 31°.61S×178°.63W, h53km±13km, mb4.4/11, mb1 4.7/12, mb1mx4.6/15, mbtmp4.5/12, ML4.9/2, MS4.4/16, Ms1 4.4/16, ms1mx4.1/21, Error ellipse: s-maj=19.6km s-min=9.6km az=110.0*
BJI ***11*** *14:30:12.0, 30°.94S×178°.97W, h27km, mB5.5/20, mb5.3/24, Ms5.0/16, Ms7 4.6/18*
GCMT ***11*** *14:30:14.7±0.2, 31°.64S×178°.37W, h59km±1km, MW5.2, Moment Tensor Solution. s63,c99; s73,c116; Moment tensor: Scale 10^16 Nm; Mrr6.73±.20; Mθθ-0.17±.18; Mφφ-6.56±.16; Mrθ0.01±.13; Mrφ-1.79±.13; Mθφ1.76±.13; Best double couple: M0 7.10000×10^16 NP1:φs 198.00000°, δ38.00000°, λ96.00000°. NP2:φs 11.00000°, δ52.00000°, λ85.00000°. Principal axes: T 6.9700, Plg82.0000°, Azm256.0000°; N 0.2700, Plg4.0000°, Azm14.0000°; P -7.2400, Plg7.0000°, Azm104.0000°; Data Used: II IU IC G CN.*
DJA ***11*** *14:30:53, 32°.30S×179°.82W, h394km, mb5.1/8*
ISC 11 14:30:12.2±1.0, 31°.71S±0°.05×178°.65W±0°.06, h37km±8km, h36km±2.3km: pP-P, n317, σ0§81/219, mb5.1/49, MS4.5/26, 60C-66D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.52 15**		P	**Pn**	14 30 49.5	-1.2
	737nm,0.3s,baz=247,slow=8.6,SNR=15						
RAO				S	**Sn**	14 31 19.2	-0.9
	2μm,0.3s,baz=124,slow=24,SNR=11						
RAO				LR	LR	14 31 46.5	
	comp=Z,5μm,20.8s,baz=189,slow=39						
RAO	**Raoul Island**	**2.52 15**		P	**Pn**	14 30 49.5	-1.2
RAO				S	**Sn**	14 31 19.3	-0.9
OUZ	**Omahuta**	**7.37 240**		*e*P	**Pn**	14 32 03.8	+6.5
	163nm,0.4s						
URZ	**Urewera**	**7.41 207**		P	**Pn**	14 31 59.2	+1.5
	5.9nm,0.3s,baz=8.9,slow=1.3,SNR=40						
URZ				S	**Sn**	14 33 20.4	-0.1
	38nm,0.3s,baz=104,slow=24,SNR=7.1						
URZ	**Urewera**	**7.41 207**		*e*Pn	**Pn**	14 31 56.2	-1.5
	96nm,0.4s						
URZ				*e*Sn	**Sn**	14 33 16.2	-4.3
KHZ	**Kahutara**	**12.37 208**		*e*Pn	**Pn**	14 32 59.9	-5.8
	23nm,0.5s						
MSVF	**Nonsavu**	**14.23 347**		*e*P	**Pn**	14 33 32.9	+1.7
	55nm,1.0s						
RPZ	**Rata Peaks**	**14.48 211**		P	**Pn**	14 33 27.2	-7.3
	2.8nm,0.3s,baz=31,slow=4.8,SNR=15						
RPZ				S	**Sn**	14 36 04.6	-9.2
	5.3nm,0.3s,baz=22,slow=19,SNR=14						
RPZ	**Rata Peaks**	**14.48 211**		*e*Pn	**Pn**	14 33 27.4	-7.1
	13nm,0.5s						
DZM	**Mont Dumac**	**16.39 302**		*e*P	**Pn**	14 34 03.5	+4.1
	143nm,1.4s						
DZM				*e*LR	LR	14 37 43.6	
	6μm,25.6s						
AFI	**Afiamalu**	**18.80 21**		P	**Pn**	14 34 22.9	-6.4
	3.0nm,0.3s,baz=201,slow=20,SNR=3.8						
ARMA	**Armidale**	**25.46 265**		*e*P	**P**	14 35 40.3	+3.5
CNB	**Canberra Magne**	**26.86 254**		*e*P	**P**	14 35 52.0	+2.7
EIDS	**Eidsvold**	**27.28 276**		*e*P	**P**	14 35 54.6	+1.4
	8.3nm,0.4s,mb4.6						
HNR	**Honiara**	**29.76 313**		LR	LR	14 46 31.2	
	comp=Z,435nm,18.8s,MS4.1,baz=154,slow=33						
PPT	**Papeete**	**29.82 69**		*e*S	**S**	14 41 01.9	-8.4
	352nm,27.5s						
PPT				*e*LR	LR	14 43 43.6	
	2μm,29.5s,baz=235						
PPT	**Papeete**	**29.82 69**		LR	LR	14 45 17.2	
	comp=Z,321nm,21.2s,MS3.9,baz=251,slow=30						
TOO	**Toolangi**	**29.96 249**		*e*P	**P**	14 36 19.3	+2.4
CTA	**Charters Tower**	**33.49 282**		*e*P	**P**	14 36 50.8	+2.7
	76nm,0.8s,mb5.7						
CTA	**Charters Tower**	**33.49 282**		LR	LR	14 48 20.1	
	comp=Z,859nm,21.2s,MS4.4,baz=142,slow=32						
CTAO	**Charters Tower**	**33.49 282**		*e*P	**P**	14 36 49.7	+1.6
CTAO				pmax	pmax		
	comp=Z,165nm,1.0s,mb5.9						
CTAO	**Charters Tower**	**33.49 282**		*e*P	**P**	14 36 49.7	+1.6
	comp=Z,165nm,1.0s,mb5.9						
STKA	**Stephens Creek**	**33.66 259**		*e*P	**P**	14 36 51.2	+1.6
	comp=Z,16nm,0.3s,mb5.4						
STKA	**Stephens Creek**	**33.66 259**		P	**P**	14 36 51.6	+2.1
	comp=Z,22nm,0.4s,mb5.5,baz=101,slow=9.3,SNR=141						
STKA				LR	LR	14 48 38.4	
	comp=Z,959nm,20.6s,MS4.5,baz=37,slow=33						
STKA	**Stephens Creek**	**33.66 259**		*e*P	**P**	14 36 51.4	+1.8
	comp=Z,8.4nm,0.8s,mb4.7						
COEN	**Coen**	**39.12 288**		*e*P	**P**	14 37 37.4	+1.1
	comp=Z,247nm,0.8s,mb6.0						
RKT	**Rikitea**	**39.49 89**		*e*LQ		14 46 41.8	
	comp=Z,512nm,27.8s						
RKT				*e*LR	LR	14 48 19.5	
	comp=Z,2μm,30.8s,baz=253						
TAOE	**Nuku Hiva Isla**	**42.34 66**		*e*S	**S**	14 44 14.7	-6.9
	comp=Z,243nm,26.5s						
TAOE				*e*LR	LR	14 49 31.1	
	comp=Z,1μm,29.1s						
ASAR	**Alice Springs**	**42.51 269**		P	**P**	14 38 03.6	-0.5
	comp=Z,39nm,0.4s,mb5.5,baz=106,slow=7.2,SNR=2253						
WRAB	**Tennant Creek**	**43.61 274**		P	**P**	14 38 12.0	-1.1
	comp=Z,1μm,0.5s						
WRAB	**Tennant Creek**	**43.61 274**		*e*P	**P**	14 38 13.3	+0.2
WRAB				pmax	pmax		
	comp=Z,85nm,0.6s,mb5.7						
WRAB	**Tennant Creek**	**43.61 274**		*e*P	**P**	14 38 13.3	+0.2
	comp=Z,85nm,0.6s,mb5.7						
WRA	**Warramunga Arr**	**43.61 274**		P	**P**	14 38 12.6	-0.5
	comp=Z,112nm,0.4s,mb5.9,baz=113,slow=7.9,SNR=2393						
WRA				S	**S**	14 44 35.3	-5.0
	comp=Z,0.3nm,0.6s,baz=158,slow=26,SNR=3.8						
WRA				LR	LR	14 55 21.3	
	comp=Z,844nm,21.8s,MS4.6,baz=105,slow=35						
WRA	**Warramunga Arr**	**43.61 274**		P	**P**	14 38 12.6	-0.5
WRA				S	**S**	14 44 35.3	-5.0
WRA	**Warramunga Arr**	**43.61 274**		P	**P**	14 38 12.6	-0.5
WRA				S	**S**	14 44 35.3	-5.0
WRA				LR	LR	14 55 21.2	
FORT	**Forrest**	**45.19 257**		*e*P	**P**	14 38 24.5	-1.1
	comp=Z,27nm,0.6s,mb5.2						
SBA	**Scott Base**	**46.70 184**		*e*P	**P**	14 38 38.9	+2.0
SBA				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.0						
SBA	**Scott Base**	**46.70 184**		*e*P	**P**	14 38 38.9	+2.1
	comp=Z,22nm,1.1s,mb5.0						
KAKA	**Kakadu**	**48.63 281**		⇑*i*P	**P**	14 38 52.3	-0.3
	comp=Z,21nm,0.4s,mb5.5						
KAKA	**Kakadu**	**48.63 281**		*e*P	**P**	14 38 52.3	-0.4
	comp=Z,52nm,0.4s,mb5.9						
FITZ	**Fitzroy Crossi**	**51.82 271**		*e*P	**P**	14 39 15.5	-1.3
	comp=Z,47nm,0.9s,mb5.4						
FITZ	**Fitzroy Crossi**	**51.82 271**		LR	LR	15 00 19.6	
	comp=Z,842nm,19.8s,MS4.8,baz=111,slow=35						
FITZ	**Fitzroy Crossi**	**51.82 271**		*e*P	**P**	14 39 15.6	-1.2
	comp=Z,30nm,0.9s,mb5.2						
KLBR	**Kellerberrin**	**53.41 252**		*e*P	**P**	14 39 26.2	-2.2
	comp=Z,43nm,1.0s,mb5.3						
CASY	**Casey**	**53.73 208**		*e*P	**P**	14 39 28.2	-2.0
CASY	**Casey**	**53.73 208**		*e*P	**P**	14 39 28.2	-2.0
	comp=Z,16nm,0.5s,mb5.2						
QSPA	**South Pole Qui**	**58.41 180**		P	**P**	14 40 04.9	+1.4
	comp=Z,10nm,0.5s,mb5.2,baz=25,slow=1.3,SNR=116						
MIR	**Mirnyy**	**60.71 207**	⇓	*i*P	**P**	14 40 18.4	-1.1
MIR				pmax	pmax		
	comp=Z,72nm,1.4s,mb5.6						
KAPI	**Kappang**	**63.31 281**		LR	LR	15 06 45.5	
	comp=Z,596nm,20.7s,MS4.7,baz=35,slow=35						
MAW	**Mawson**	**70.90 201**		*e*P	**P**	14 41 23.7	-1.3
	comp=Z,2.9nm,0.3s,mb4.7						
MAW	**Mawson**	**70.90 201**		P	**P**	14 41 24.1	-0.9
	comp=Z,4.4nm,0.3s,mb4.8,baz=113,slow=7.1,SNR=28						
MAW				LR	LR	15 10 20.3	
	comp=Z,387nm,21.3s,MS4.6,baz=105,slow=34						
MAW	**Mawson**	**70.90 201**		*e*P	**P**	14 41 23.7	-1.3
MAW				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MAW	**Mawson**	**70.90 201**		*e*P	**P**	14 41 23.7	-1.3
	comp=Z,4.5nm,1.2s,mb4.3						
SYO	**Syowa Base**	**75.72 193**	‖	*e*P	**P**	14 41 50.4	-3.0
MAIT	**Maitri**	**77.54 184**		*e*P	**P**	14 42 03.8	+0.1
NVL	**N'lazarevskaya**	**77.55 184**		*e*P	**P**	14 42 03.7	0.0
NVL				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.0						
VNA1	**Neumayer--Stat**	**77.70 177**		*e*P	**P**	14 42 04.1	-0.5
MJAR	**Matsushiro Arr**	**79.00 326**		P	**P**	14 42 08.8	-3.3
	comp=Z,1.2nm,0.5s,mb4.1,baz=169,slow=5.2,SNR=5.6						
MJAR				LR	LR	15 11 02.1	
	comp=Z,115nm,21.3s,MS4.2,baz=115,slow=31						
MAT	**Matsushiro**	**79.00 326**		P	**P**	14 42 08.4	-3.7
MAT				*e*S		14 51 28.0	
PLCA	**Paso Flores**	**82.02 133**		P	**P**	14 42 26.7	-1.9
	comp=Z,5.5nm,0.8s,mb4.5,baz=235,slow=5.1,SNR=7.5						
PLCA				LR	LR	15 09 27.0	
	comp=Z,303nm,21.2s,MS4.6,baz=273,slow=29						
PLCA	**Paso Flores**	**82.02 133**		P	**P**	14 42 26.7	-1.9
PLCA				LR	LR	15 09 27.0	
KSRS	**Korea Array**	**84.98 320**		P	**P**	14 42 42.6	-0.9
	comp=Z,5.6nm,0.9s,mb4.7,baz=143,slow=5.5,SNR=25						
KSRS				LR	LR	15 17 57.0	
	comp=Z,102nm,19.5s,MS4.2,baz=311,slow=34						
QIZ	**Qiongzhong**	**85.06 296**		P	**P**	14 42 44.4	+0.1
QIZ				sP	sP	14 42 56.5	-3.5
QIZ				S	S	14 53 10.2	-1.0
QIZ				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.9						
QIZ				LR	LR		
	comp=Z,250nm,32.5s,MS4.4						
YSS	**Yuzh-Sakhalins**	**85.68 335**		*e*P	**P**	14 42 45.0	-1.7
YSS				*e*	pP	14 42 53.0	-5.2
YSS				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.3						
YSS				MLR	MLR		
	comp=Z,300nm,18.0s,MS4.7						
YSS	**Yuzh-Sakhalins**	**85.68 335**		*e*P	**P**	14 42 45.0	-1.7
	comp=Z,18nm,0.9s,mb5.3						
BSC	**Santa Cruz Isl**	**85.78 46**	⇑	P	**P**	14 42 48.1	+0.5
	baz=86						
NJ2	**Nanjing**	**86.67 311**		*e*P	**P**	14 42 51.8	-0.2
NJ2				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.4						
PETK	**Petropavlovsk-**	**86.94 346**		P	**P**	14 42 50.7	-2.1
	comp=Z,8.4nm,0.7s,mb5.1,baz=121,slow=5.7,SNR=8.7						
PETK				LR	LR	15 17 40.9	
	comp=Z,108nm,20.1s,MS4.2,baz=172,slow=33						
PETK	**Petropavlovsk-**	**86.94 346**		P	**P**	14 42 50.7	-2.1
PETK				LR	LR	15 17 40.9	
MURC	**Murrieta**	**87.02 47**	⇑	P	**P**	14 42 54.1	+0.4
	baz=87						
MONP	**Monument Peak**	**87.05 48**	⇑	P	**P**	14 42 54.2	+0.4
	baz=87						
BFSC	**Mount Baldy Ra**	**87.16 47**	⇑	P	**P**	14 42 54.9	+0.5
	baz=87						
VES	**Vestal, Richgr**	**87.36 45**	⇑	P	**P**	14 42 55.2	-0.1
	baz=88						
EDW2	**Edwards Air Fo**	**87.38 46**	⇓	P	**P**	14 42 55.3	-0.1
	baz=88,SNR=7.5						
PFO	**Pin

HUMO Hull Mountain 89.89 38 P **P 14 43 06.2 -0.9**
comp=Z,25nm,1.5s,mb5.3
Y14A Wickenburg 89.91 49 ⇑P **P 14 43 07.9 +0.5**
baz=90
HABR Khabarovsk 89.92 331 *e*P **P 14 43 05.4 -1.6**
HABR *e**SP sP 14 43 20.6 -2.1
HABR 14 46 41.1
HABR *e*S SKSac 14 53 35.2 +0.7
HABR *e**SS S 14 53 53.4 -3.1
HABR *e*SS SS 15 00 01.7 +6.0
HABR pmax pmax
comp=N,5.0nm,0.9s
HABR pmax pmax
comp=E,6.0nm,1.2s
HABR pmax pmax
comp=Z,16nm,1.5s,mb5.1
HABR MLR MLR
comp=Z,47nm,17.0s,MS4.0
217A Green Valley 90.00 52 ⇓P **P 14 43 08.1 +0.2**
baz=90,SNR=6.0
W13A Hualapai Mount 90.08 48 ⇓P **P 14 43 08.5 +0.4**
baz=90,SNR=6.1
S10A Tonopah Range, 90.24 44 ⇓P **P 14 43 08.7 -0.1**
baz=90
X14A Yava 90.31 49 ⇑P **P 14 43 09.4 +0.2**
baz=90,SNR=8.5
Y15A Casa Rosa Ranc 90.35 50 ⇑P **P 14 43 09.7 +0.3**
baz=90,SNR=8.6
TUC Tucson 90.35 52 *e*P **P 14 43 09.7 +0.2**
TUC pmax pmax
comp=Z,37nm,1.7s,mb5.4
TUC Tucson 90.35 52 *e*P **P 14 43 09.7 +0.2**
comp=Z,37nm,1.7s,mb5.4
318A Bisbee 90.36 53 ⇑P **P 14 43 10.0 +0.4**
baz=90
V13A Grand Canyon W 90.49 47 ⇓P **P 14 43 10.2 +0.2**
baz=91,SNR=5.7
U12A Valley of Fire 90.52 47 ⇑P **P 14 43 11.0 +0.8**
baz=91
117A Oracle 90.54 51 ⇓P **P 14 43 10.8 +0.4**
baz=91
Z16A Peralta Trail, 90.56 51 ⇓P **P 14 43 11.1 +0.7**
baz=91
T11A Corn Creek, Al 90.62 46 ⇑P **P 14 43 10.9 +0.3**
baz=91,SNR=8.9
218A Dragoon 90.64 52 ⇑P **P 14 43 11.2 +0.3**
baz=91,SNR=6.8
W14A Seligman 90.66 48 ⇓P **P 14 43 11.4 +0.6**
baz=91,SNR=11
X15A Humboldt 90.74 49 ⇓P **P 14 43 11.8 +0.5**
baz=91
319A Douglas 90.80 53 ⇓P **P 14 43 11.9 +0.3**
baz=91
CN2 Changchun 90.85 323 *e*P **P 14 43 11.4 -0.1**
CN2 pmax pmax
comp=Z,20nm,0.8s,mb5.5
CN2 pmax pmax
comp=Z,200nm,4.0s
Y16A Circle Bar Ran 90.86 50 ⇓P **P 14 43 12.2 +0.4**
baz=91,SNR=15
U13A Pakoon Wash 90.86 47 ⇑P **P 14 43 12.3 +0.6**
baz=91
Q10A Clear Creek Ra 90.94 44 ⇑P **P 14 43 13.0 +0.9**
baz=91
K05A Summer Lake 91.05 39 ⇓P **P 14 43 12.6 +0.1**
baz=91
S12A Delamar Landin 91.08 45 ⇓P **P 14 43 13.2 +0.4**
baz=91,SNR=5.8
118A Homack Ranch, 91.10 52 ⇑P **P 14 43 13.2 +0.2**
baz=91,SNR=8.0
R11A Troy Canyon, C 91.12 45 ⇑P **P 14 43 13.0 +0.1**
baz=91
OHAK Old Harbor 91.14 13 *e*P **P 14 43 11.1 -1.4**
comp=Z,9.2nm,1.1s,mb5.0
Y17A Roosevelt 91.16 51 ⇑P **P 14 43 13.6 +0.3**
baz=91,SNR=7.9
X16A Lo Mia Camp, P 91.22 50 ⇓P **P 14 43 14.2 +0.8**
baz=91,SNR=6.7
U14A Mt Trumbull 91.35 47 ⇑P **P 14 43 14.6 +0.5**
baz=92,SNR=10
Q11A Duckwater 91.40 44 ⇑P **P 14 43 14.1 -0.1**
baz=92
W16A Flagstaff 91.58 49 ⇓P **P 14 43 16.0 +0.9**
baz=92
V15A Kaibab Nationa 91.61 48 ⇑P **P 14 43 15.7 +0.5**
baz=92,SNR=5.2
119A Ashpeak Ranch, 91.62 52 ⇓P **P 14 43 15.9 +0.5**
baz=92
220A Playas Peak, P 91.63 53 ⇑P **P 14 43 16.2 +0.8**
baz=92
R12A Pony Springs, 91.69 45 ⇓P **P 14 43 15.7 +0.2**
baz=92,SNR=6.5
GYA Guiyang 91.72 300 P **P 14 43 16.3 +0.3**
GYA pP pP 14 43 28.0 +0.5
GYA sP sP 14 43 32.9 +1.2
GYA SKS 14 53 45.0
GYA S S 14 54 13.9 -0.2
GYA sS sS 14 54 31.4 -1.9
GYA pmax pmax
comp=Z,30nm,1.0s,mb5.6
GYA pmax pmax
comp=Z,90nm,6.9s
GYA LR LR
comp=N,630nm,20.8s,MS5.2
GYA LR LR
comp=E,530nm,21.7s,MS5.2
GYA LR LR
comp=Z,730nm,22.6s,MS5.1
Y18A Canyon Day Jun 91.75 51 ⇑P **P 14 43 16.5 +0.6**
baz=92,SNR=6.2
KLR Kul'dur 91.88 330 *e*P **P 14 43 06.8 -9.3**
ENH Enshi 91.88 305 *e*P **P 14 43 15.7 -0.9**
comp=Z,17nm,1.1s,mb5.3
U15A North Rim 91.92 48 ⇑P **P 14 43 16.8 +0.1**
baz=92,SNR=16
120A U Bar Ranch, L 91.94 53 ⇑P **P 14 43 17.1 +0.2**
baz=92
R13A O'Grain Ranch, 91.98 45 ⇑P **P 14 43 17.7 +0.8**
baz=92
Q12A Willow Creek R 92.01 44 ⇑P **P 14 43 17.5 +0.5**
baz=92
WVOR Wild Horse Val 92.07 40 *e*P **P 14 43 16.7 -0.5**
WVOR pmax pmax
comp=Z,3.0nm,1.1s,mb4.5
WVOR Wild Horse Val 92.07 40 *e*P **P 14 43 16.6 -0.6**
comp=Z,3.3nm,1.1s,mb4.6
O11A Cowboy Ranch, 92.23 43 ⇑P **P 14 43 17.8 -0.2**
baz=92,SNR=9.2
P12A McGill 92.25 44 ⇓P **P 14 43 17.8 -0.2**
baz=92,SNR=6.0
V17A Tonalea, Kykot 92.37 49 ⇓P **P 14 43 18.6 -0.2**
baz=93
Q13A Wheeler Ranch, 92.44 45 ⇓P **P 14 43 18.8 -0.2**
baz=93
M10A I.L. Ranch, Tu 92.63 42 ⇑P **P 14 43 19.5 -0.3**
baz=93,SNR=5.3
I07A Izee 92.72 38 ⇓P **P 14 43 19.9 -0.3**
baz=93,SNR=6.1
P13A Bates Ranch, G 92.77 44 ⇑P **P 14 43 20.0 -0.5**
baz=93,SNR=5.8
J08A Circle Bar Ran 92.78 39 ⇓P **P 14 43 20.6 +0.2**
baz=93
O12A Currie 92.85 43 ⇑P **P 14 43 20.9 0.0**
baz=93
Q14A Sevier Lake (B 92.91 45 ⇑P **P 14 43 21.0 -0.2**
baz=93,SNR=5.9
M11A Holland Ranch, 93.00 42 ⇑P **P 14 43 21.8 +0.2**
baz=93
L10A Juniper Basin 93.03 41 ⇑P **P 14 43 21.2 -0.5**
baz=93,SNR=12
J09A Fry Pan Ranch, 93.17 40 ⇓P **P 14 43 21.6 -0.6**
baz=93,SNR=5.1
K10A MacKenzie Ranc 93.27 41 ⇑P **P 14 43 22.2 -0.5**
baz=94,SNR=8.5
MSU Marysvale 93.29 46 *e*P **P 14 43 23.0 +0.1**
MSU pmax pmax
comp=Z,11nm,1.7s,mb5.0
MSU Marysvale 93.29 46 *e*P **P 14 43 23.0 +0.1**
comp=Z,11nm,1.7s,mb5.0
CMAR Chiang Mai Arr 93.31 290 P **P 14 43 22.8 -0.7**
comp=Z,1.1nm,0.9s,mb4.3,baz=149,slow=3.5,SNR=6.6
CMAR PP PP 14 47 08.9 +1.0
comp=Z,2.8nm,1.1s,baz=138,slow=6.1,SNR=9.5
P14A Drum Mountains 93.42 45 ⇑P **P 14 43 23.8 +0.3**
baz=94
U18A Rough Rock, Ch 93.45 49 ⇓P **P 14 43 23.7 -0.1**
baz=94

BJI Beijing 93.47 316 P **P 14 43 24.7 +1.0**
BJI sP sP 14 43 37.9 -1.5
BJI PP PP 14 47 02.7 -6.1
BJI S S 14 54 32.2 +3.2
BJI pmax pmax
comp=Z,15nm,0.4s,mb5.8
BJI LR LR
comp=Z,190nm,29.5s,MS4.4
M12A Wells 93.49 43 ⇓P **P 14 43 24.0 +0.2**
baz=94
Z22A Elephant Butte 93.50 53 ⇓P **P 14 43 23.9 -0.1**
baz=94
L11A Cat Creek Ranc 93.50 42 ⇑P **P 14 43 23.4 -0.4**
baz=94,SNR=5.1
TXAR Lajitas Array 93.55 58 P **P 14 43 23.2 -1.2**
comp=Z,0.8nm,1.0s,mb4.1,baz=224,slow=5.2,SNR=5.1
TXAR LR LR 15 20 17.9
comp=Z,135nm,18.6s,MS4.4,baz=240,slow=32
W20A Ramah 93.57 51 ⇓P **P 14 43 25.0 +0.7**
baz=94
S17A Black Ridge (B 93.60 47 ⇑P **P 14 43 23.9 -0.5**
baz=94
526A Mary Lane Ranc 93.66 57 ⇓P **P 14 43 24.3 -0.6**
baz=94
K11A Parker Ranch, 93.73 41 ⇑P **P 14 43 24.4 -0.4**
baz=94,SNR=5.4
627A Terlingua Ranc 93.82 58 ⇓P **P 14 43 25.3 -0.3**
baz=94
G08A Pilot Rock 93.83 38 ⇓P **P 14 43 25.3 +0.1**
baz=94
T18A Mexican Hat 93.88 48 ⇑P **P 14 43 25.7 0.0**
baz=94
M13A Montello 93.89 43 ⇓P **P 14 43 24.9 -0.7**
baz=94,SNR=9.0
M13A Montello 93.89 43 *e*P **P 14 43 25.4 -0.2**
comp=Z,8.4nm,0.9s,mb5.2
L12A House Creek Ra 93.90 42 ⇓P **P 14 43 25.9 +0.2**
baz=94
KMI Kunming 93.92 297 P **P 14 43 25.6 -0.6**
KMI pP pP 14 43 38.3 +0.6
KMI sP sP 14 43 43.1 +1.2
KMI PP PP 14 47 16.6 +4.0
KMI S S 14 54 32.8 -0.9
KMI sS sS 14 54 50.9 -2.0
KMI pmax pmax
comp=Z,8.0nm,2.0s,mb4.8
KMI pmax pmax
comp=Z,160nm,4.2s
KMI LR LR
comp=N,60nm,19.0s,MS4.4
KMI LR LR
comp=E,120nm,20.3s,MS4.4
KMI LR LR
comp=Z,190nm,28.9s
MFID Camas Ranch 94.27 41 ⇑P **P 14 43 27.0 -0.3**
baz=94
K12A Draper Farm, C 94.28 42 ⇑P **P 14 43 27.4 0.0**
baz=94
M14A Sheep Mountain 94.46 43 ⇑P **P 14 43 27.5 -0.7**
baz=95,SNR=6.2
I11A Placerville 94.52 40 ⇓P **P 14 43 28.1 -0.3**
baz=95
H10A Noah's Angus R 94.53 39 ⇓P **P 14 43 27.9 -0.6**
baz=95
SRU San Rafael 94.67 46 ⇓P **P 14 43 29.1 -0.2**
baz=95
G10A Bishop Farm, J 94.79 39 ⇓P **P 14 43 29.6 -0.1**
baz=95
I12A Atlanta 94.90 41 ⇑P **P 14 43 29.8 -0.3**
baz=95,SNR=5.2
H11A Donnelly 95.00 39 ⇓P **P 14 43 30.2 -0.4**
baz=95,SNR=7.4
HLID Hailey 95.15 41 ⇓P **P 14 43 30.7 -0.6**
baz=95,SNR=5.2
HLID Hailey 95.15 41 *e*P **P 14 43 30.5 -0.9**
comp=Z,2.4nm,0.7s,mb4.7
J13A Cove Ranch, Pi 95.18 41 ⇓P **P 14 43 31.2 -0.3**
baz=95,SNR=5.0
K14A Jones Ranch, D 95.21 42 ⇓P **P 14 43 32.1 +0.4**
baz=95
G11A Walters Elk Ra 95.32 39 ⇓P **P 14 43 31.4 -0.6**
baz=96
L15A Malad City 95.33 43 ⇓P **P 14 43 31.9 -0.3**
baz=96
H12A Diamond D Ranc 95.53 40 ⇓P **P 14 43 32.4 -0.7**
baz=96,SNR=6.2
I14A Mackay 95.92 41 ⇓P **P 14 43 35.6 +0.7**
baz=96
J15A Blackfoot 96.17 42 ⇓P **P 14 43 35.8 -0.2**
baz=96
CD2 Chengdu 96.31 302 *e*P **P 14 43 37.9 +0.9**
CD2 pP pP 14 43 48.5 -0.1
CD2 sP sP 14 43 52.6 -0.1
CD2 PP PP 14 47 35.7 +4.5
CD2 SKS 14 54 11.0
CD2 S S 14 54 53.9 -0.4
CD2 sS sS 14 55 11.7 -1.9
CD2 pmax pmax
comp=Z,30nm,0.6s,mb5.9
CD2 pmax pmax
comp=Z,130nm,6.8s
CD2 LR LR
comp=E,180nm,22.6s
CD2 LR LR
comp=Z,120nm,21.4s,MS4.3
HHC Hu-ho-hao-te 96.74 314 *e*P **P 14 43 40.5 +1.8**
HHC pP pP 14 43 51.1 +0.9
HHC sP sP 14 43 55.0 +0.6
HHC SKS 14 54 13.4
HHC S S 14 54 58.1 +0.6
HHC pmax pmax
comp=Z,21nm,0.8s,mb5.6
HHC pmax pmax
comp=Z,92nm,6.2s
HHC LR LR
comp=N,160nm,20.4s,MS4.6
HHC LR LR
comp=E,170nm,24.0s,MS4.6
HHC LR LR
comp=Z,170nm,22.8s,MS4.5
SEY Seymchan 97.12 347 *c e*P **P 14 43 39.6 -0.2**
L19A Farson 97.18 45 ⇓P **P 14 43 40.8 +0.2**
baz=97
J18A Kendall Valley 97.45 43 ⇓P **P 14 43 41.8 0.0**
baz=98
PDAR Pinedale Array 97.46 44 P **P 14 43 40.9 -0.9**
comp=Z,0.8nm,0.9s,mb4.2,baz=211,slow=1.7,SNR=6.7
PDAR PKKP PKKPbc 15 00 18.3 -1.7
comp=Z,0.4nm,0.4s,baz=93,slow=5.5,SNR=7.7
PDAR LR LR 15 19 30.3
comp=Z,166nm,21.5s,MS4.5,baz=250,slow=30
TRF Thorofare Moun 97.48 12 P **P 14 43 39.6 -1.8**
comp=Z,3.7nm,0.8s,mb4.9
LPAZ La Paz 98.11 115 LR LR 15 17 19.5
comp=Z,105nm,19.7s,MS4.3,baz=39,slow=29
JTS JuntasAbangare 98.44 83 *i* P **P 14 43 38.6 -8.4**
LZH Lanzhou 99.06 307 *e*P **P 14 43 50.2 +1.0**
LZH pP pP 14 44 02.2 +1.4
LZH sP sP 14 44 06.8 +1.8
LZH pmax pmax
comp=Z,19nm,1.0s,mb5.6
BOSA Boshof 115.85 203 PKP PKPdf 14 48 49.4 -1.8
comp=Z,2.8nm,0.4s,baz=123,slow=1.2,SNR=13
BOSA Boshof 115.85 203 PKP PKPdf 14 48 49.4 -1.8
MK31 Makanchi Array 118.18 310 *e*PKIKP PKPdf 14 48 52.3 -2.6
MKAR Makanchi Array 118.18 310 PKP PKPdf 14 48 52.7 -2.3
comp=Z,3.1nm,1.0s,baz=57,slow=4.5,SNR=14
MKAR Makanchi Array 118.18 310 PKP PKPdf 14 48 52.7 -2.3
ZALV Zalesovo Beam 118.63 318 PKP PKPdf 14 48 52.7 -2.9
comp=Z,0.7nm,0.3s,baz=143,slow=3.0,SNR=5.2
ZALV Zalesovo Beam 118.63 318 PKP PKPdf 14 48 52.7 -2.9
NVS Novosibirsk 119.75 319 *e*PKIKP PKPdf 14 48 54.3 -3.4
KSH Kashi 120.42 300 *e*PKP PKPdf 14 48 58.7 -0.8
KSH sPKP 14 49 13.2
KSH SKS SKSdf 14 56 05.7 -2.9
KSH SKKS SKKSac 14 57 18.7 -4.4
KSH SS SS 15 06 55.0 +1.7
KSH AMB AMB
comp=Z,78nm,5.4s
KSH LR LR
comp=N,67nm,4.8s
KSH LR LR
comp=E,130nm,5.2s
KSH LR LR
comp=Z,120nm,4.9s
KURK Kurchatov 121.54 313 PKP PKPdf 14 48 58.5 -2.8
comp=Z,4.0nm,0.2s,baz=112,slow=2.0
KURK Kurchatov 121.54 313 *c i* PKIKP PKPdf 14 48 57.0 -4.3
KURK pmax pmax
comp=Z,14nm,1.7s
KURK Kurchatov 121.54 313 *e*PKPdf PKPdf 14 48 58.9 -2.4
TKM2 Tokmak 2 121.66 304 *e*PKIKP PKPdf 14 48 59.7 -2.1
UCH Uchtor 122.25 303 *e*PKPdf PKPdf 14 49 01.0 -1.9
AAK Ala-Archa 122.37 303 PKP PKPdf 14 49 00.3 -2.9
comp=Z,1.0nm,0.3s,baz=295,slow=7.0,SNR=4.2
AAK Ala-Archa 122.37 303 *c i* PKIKP PKPdf 14 49 00.6 -2.5
AAK pmax pmax
comp=Z,1.0nm,0.8s
AML Almayashu 122.81 303 *e*PKPdf PKPdf 14 49 03.2 -0.8
KBL Kabul 124.22 293 *e*PKIKP PKPdf 14 49 05.2 -1.8
LSZ Lusaka 126.66 213 PKP PKPdf 14 49 11.2 -1.1
comp=Z,7.5nm,0.4s,baz=175,slow=2.4,SNR=16
LSZ Lusaka 126.66 213 *e*PKPdf PKPdf 14 49 11.7 -0.6
BVAR Borovoye Array 126.94 315 PKP PKPdf 14 49 09.5 -2.1
comp=Z,2.3nm,0.4s,baz=98,slow=3.0,SNR=25
BRVK Borovoye 127.01 315 *c i* PKIKP PKPdf 14 49 10.0 -1.7
BRVK pmax pmax
comp=Z,19nm,2.5s
BRVK Borovoye 127.01 315 *e*PKPdf PKPdf 14 49 09.6 -2.1
SVE Sverdlovsk 132.55 320 *e*PKIKP PKPdf 14 49 21.4 -0.7
ABKAR Akbulak array 133.33 310 *e*PKPdf PKPdf 14 49 21.8 -2.0
ARU Arti 133.73 320 *i* PKIKP PKPdf 14 49 20.9 -3.4
ARU Arti 133.73 320 *e*PKPdf PKPdf 14 49 21.6 -2.8
ARCES ARCESS Array B 139.74 347 PKhKP PKPpre 14 49 25.5
comp=Z,1.5nm,0.4s,baz=30,slow=3.0,SNR=20
ARCES PKP PKPdf 14 49 33.2 -1.9
comp=Z,2.6nm,0.5s,baz=354,slow=1.2,SNR=10
JOF Joensuu 143.42 337 *e*PKHKP PKPdf 14 49 36.1 -5.8
JOF pmax pmax
comp=Z,4.0nm,0.5s
JOF Joensuu 143.42 337 *e p* PKPdf 14 49 36.1 -5.8
comp=Z,4.3nm,0.5s
JOF Joensuu 143.42 337 *e p* PKPdf 14 49 36.1 -5.8
comp=Z,4.3nm,0.5s
DGRG David-gareji 143.67 298 P PKPdf 14 49 39.8 -3.2
TBLG Delisi 144.14 299 *e*PKHKP PKPdf 14 49 38.9 -4.9
TBLG Delisi 144.14 299 P PKPdf 14 49 38.9 -4.9
KEH Kehvi 144.72 300 P PKPdf 14 49 42.3 -2.5
ONI Oni 145.05 300 P PKPbc 14 49 42.9 -1.9
MOS Moscow 145.08 324 *e*PKP2 PKPab 14 49 40.5 -4.0
MOS *e* 14 53 02.9
MOS pmax pmax
comp=Z,53nm,1.1s
KIV Kislovodsk 145.48 303 ⇓ *i* PKIKP PKPdf 14 49 45.4 -0.7
KIV *e* 14 49 52.6
KIV pmax pmax
comp=Z,14nm,1.0s
KIV MLR MLR
comp=Z,100nm,18.0s,MS4.6
KAF Kangasniemi 145.58 339 *e*PKIKP PKPdf 14 49 42.5 -3.1
KAF pmax pmax
comp=Z,27nm,0.7s
KAF Kangasniemi 145.58 339 *e p* PKPdf 14 49 42.5 -3.1
comp=Z,27nm,0.7s
KAF Kangasniemi 145.58 339 *e p* PKPdf 14 49 42.5 -3.1
comp=Z,27nm,0.7s
OBN Obninsk 145.91 324 κ *i* PKP2 PKPdf 14 49 45.3 -1.1
OBN pmax pmax
comp=Z,92nm,1.6s
OBN MLR MLR
comp=Z,100nm,19.0s,MS4.6
VSR Storozhevoye 146.11 316 *e*PKIKP PKPdf 14 49 44.4 -2.5
VSR pmax pmax
comp=N,550nm,0.9s
VSR pmax pmax
comp=E,2μm,0.9s
VSR pmax pmax
comp=Z,3μm,0.9s
VORD Divnogorie 146.12 316 *e*PKIKP PKPdf 14 49 44.2 -2.7
VORD pmax pmax
comp=N,11μm,0.8s
VORD pmax pmax
comp=E,3μm,0.8s
VORD pmax pmax
comp=Z,2μm,0.8s
FINES FINESS Array B 146.17 339 PKPbc PKPbc 14 49 45.6 -2.1
comp=Z,22nm,0.5s,baz=46,slow=4.0,SNR=160
ANN Anapa 149.06 305 *i* PKIKP PKPdf 14 49 52.2 +0.2
ANN pmax pmax
comp=Z,66nm,1.4s
ASF Jabal al Asfar 149.92 280 PKPbc PKPbc 14 49 57.1 -1.6
comp=Z,9.0nm,0.9s,baz=248,slow=2.6,SNR=8.1
NOA NORSAR Array B 149.95 350 PKPbc PKPbc 14 49 56.0 -1.8
comp=Z,6.4nm,0.6s,baz=16,slow=4.1,SNR=23
NOA NORSAR Array B 149.95 350 PKPbc PKPbc 14 49 56.0 -1.8
NAO01 NORSAR Array S 150.18 351 *e*PKPbc PKPbc 14 49 56.4 -1.9
IZAR Zarasai 150.29 331 *e*P PKPbc 14 49 57.4 -1.3
IDID Didziasalis 150.38 330 *e*P PKPbc 14 49 57.6 -1.4
HFS Hagfors 150.40 347 PKPbc PKPbc 14 49 56.6 -2.3
comp=Z,8.3nm,0.3s,baz=146,slow=3.2,SNR=65
ISAL Salakas 150.46 331 *e*P PKPbc 14 49 57.7 -1.4
IIGN Ignalina 150.57 331 *e*P PKPbc 14 49 57.9 -1.5
EIL Elat 151.10 275 PKPbc PKPbc 14 49 59.0 -2.6
comp=Z,20nm,1.0s,baz=41,slow=3.9,SNR=8.6
EIL Elat 151.10 275 PKPbc PKPbc 14 49 59.0 -2.6
MMAI Mount Meron Ar 151.28 282 PKPbc PKPbc 14 50 00.8 -1.0
comp=Z,8.7nm,0.4s,baz=83,slow=7.6,SNR=22
SIM Simferopol' 151.31 307 *e*PKIKP PKPbc 14 50 02.0 +0.5
SIM pmax pmax
comp=Z,18nm,0.8s
AKASG Malin Array Be 151.98 321 PKPbc PKPbc 14 49 59.9 -3.0
comp=Z,6.5nm,0.7s,baz=56,slow=2.3,SNR=24
AKASG Malin Array Be 151.98 321 *i* PKIKP PKPdf 14 49 54.4 -1.9
AKBB Malin Array Si 151.98 321 *e*PKIKP PKPbc 14 50 00.0 -2.9
KIEV Kiev 151.99 321 *e*PKIKP PKPbc 14 50 00.0 -2.9
BR131 Keskin Array S 152.70 296 *e*PKPbc PKPbc 14 50 03.1 -1.8
BRTR Keskin Array B 152.70 296 PKPbc PKPbc 14 50 02.6 -2.2
comp=Z,3.1nm,0.4s,baz=129,slow=3.3,SNR=19
BRTR PKPab PKPab 14 50 14.5 -1.3
comp=Z,3.9nm,0.8s,baz=103,slow=4.6,SNR=6.0
LIC Lamto 153.96 165 *e*PKIKP PKPbc 14 50 07.3 -1.1
comp=Z,50nm,1.0s
LIC Lamto 153.96 165 *e*P PKPbc 14 50 07.3 -1.1
comp=Z,68nm,1.0s
KIC Kosan Boka 154.15 166 *e*P PKPbc 14 50 08.4 -0.4
comp=Z,60nm,0.9s
TIC Toumodi 154.37 165 *e*P PKPbc 14 50 08.9 -0.4
comp=Z,21nm,0.2s
STHS Stebnicka Huta 156.85 326 *e*PKP2 PKPab 14 50 31.7 -1.4
STHS Stebnicka Huta 156.85 326 *e*PKP PKPab 14 50 31.7 -1.4
CRVS Cervenica-Dubn 157.09 324 *e*PKP2 PKPab 14 50 31.1 -3.0
CRVS Cervenica-Dubn 157.09 324 *e*PKP PKPab 14 50 31.1 -3.0
CLL Collm 158.61 340 ⇓ *e*PKIKP PKPdf 14 50 03.0 -2.3
CLL *i* 14 50 38.1
CLL pmax pmax
comp=Z,11nm,1.0s
CLL Collm 158.61 340 *e*PKPdf PKPdf 14 50 03.0 -2.3
CLL ⇓ *i*PKPab PKPab 14 50 38.1 -2.5
comp=Z,11nm,1.0s
VYHS Vyhne 158.64 327 *e*PKP2 PKPab 14 50 39.2 -1.6
VYHS Vyhne 158.64 327 *e*PKP PKPab 14 50 39.2 -1.6
BRG Berggiesshubel 158.70 338 *e*PKP PKPab 14 50 39.0 -2.0
comp=Z,5.7nm,0.9s
GERES GERESS Array B 160.50 335 PKP PKPdf 14 50 05.3 -2.3
comp=Z,0.3nm,0.2s,baz=103,slow=6.0,SNR=5.5
TOA0 Torodi Ar. Sit 161.53 181 *e*PKPdf PKPdf 14 50 08.2 -1.5
TORD Torodi Ar. Bea 161.53 181 PKP PKPdf 14 50 07.9 -1.7
comp=Z,6.2nm,1.1s,baz=345,slow=0.4,SNR=15
TORD PKPab PKPab 14 50 53.2 -0.9
comp=Z,16nm,0.8s,baz=178,slow=3.4,SNR=28
TORD Torodi Ar. Bea 161.53 181 PKP PKPdf 14 50 07.9 -1.7
TORD PKPab PKPab 14 50 53.2 -0.9
FLN La Foliniere 162.91 4 *e*PKP2 PKPab 14 50 57.4 -1.9
SGMF Saint Gilles 163.21 9 *e*PKP2 PKPab 14 50 58.7 -2.0
comp=Z,30nm,0.8s
GRR Gorron 163.25 5 *e*PKP2 PKPab 14 50 59.1 -1.8
comp=Z,24nm,1.1s
QUIF Quistinic 163.44 11 *e*PKP2 PKPab 14 50 59.6 -2.1
comp=Z,19nm,0.9s
DAVOX Davos/Dischmat 163.58 339 PKP PKPdf 14 50 08.6 -2.1
comp=Z,3.5nm,0.3s,baz=162,slow=14,SNR=8.7
SSF Saint Saulge 164.57 354 *e*PKP2 PKPab 14 51 04.2 -2.5
comp=Z,13nm,0.9s
AVF Avril sur Loir 164.86 355 *e*PKP2 PKPab 14 51 05.4 -2.6
SMF Signal de Mont 164.96 353 *e*PKP2 PKPab 14 51 05.8 -2.6
MFF Saint Martin d 165.08 4 *e*PKP2 PKPab 14 51 07.3 -1.6
comp=Z,19nm,1.0s
LPG La Plagne 165.60 345 *e*PKP2 PKPab 14 51 10.7 -0.6
TAM Tamanrasset 170.38 204 *e*PKIKP PKPdf 14 50 15.6 -1.0
PAB San Pablo 170.91 29 *e*PKIKP PKPdf 14 50 15.8 -0.5
ESDC Sonseca Array 170.95 27 PKP PKPdf 14 50 14.3 -2.0

comp=Z,1.9nm,0.7s,baz=4.2,slow=3.0,SNR=14
ESDC PKPab PKPab 14 51 32.5 -2.6
comp=Z,0.7nm,0.5s,baz=329,slow=3.4,SNR=5.6
ESDC Sonseca Array 170.95 27 PKP PKPdf 14 50 14.3 -2.0
ESDC PKPab PKPab 14 51 32.5 -2.6
KEST Kesra 172.23 303 PKP PKPdf 14 50 15.3 -1.8
comp=Z,1.9nm,1.0s,baz=299,slow=10,SNR=4.4
KEST Kesra 172.23 303 *e*PKPdf PKPdf 14 50 16.4 -0.7
MDT Midelt 174.82 76 PKP PKPdf 14 50 16.6 -1.6
comp=Z,4.0nm,1.1s,baz=164,slow=6.8,SNR=7.0

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*ISCJB **11** 14:43:13.0±0.5, 6°.75N±0°.05×72°.91W±0°.04, h170km±4km, mb4.2/14, Error ellipse: s-maj=7.8km s-min=6.1km az=163.4*
*NEIC **11** 14:43:13.8±0.6, 6°.65N×72°.92W, h167km±5km, mb4.6/7, Error ellipse: s-maj=10.2km s-min=7.6km az=134.0*
*IDC **11** 14:43:13.5±0.7, 6°.76N×72°.94W, h159km±6km, mb3.8/10, mb1 4.0/15, mb1mx3.8/25, mbtmp3.8/15, Error ellipse: s-maj=15.1km s-min=7.3km az=136.0*
*FUNV **11** 14:43:14.0, 6°.79N×73°.09W, h172km, MW4.2*
ISC 11 14:43:13.9±0.5, 6°.76N±0°.05×72°.92W±0°.04, h163km±4km, n70, σ0°91/72, mb4.2/14, 19C-2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.26**	**29**	⇑*i*P	**Pn**	**14 43 42.8**	**+0.7**
CAPV				*e*S	**Sn**	**14 44 04.2**	**+0.4**
ROSC	**El Rosal**	**2.35**	**217**	P	**Pn**	**14 43 54.5**	**+0.6**
	228nm,0.3s,baz=94,slow=21,SNR=130						
ROSC				S	**Sn**	**14 44 24.7**	**-0.1**
	121nm,0.3s,baz=91,slow=19,SNR=6.9						
ROSC	**El Rosal**	**2.35**	**217**	*e*Pn	**Pn**	**14 43 54.3**	**+0.4**
ROSC				*e*S	**Sn**	**14 44 21.2**	**-3.5**
SOCV	**Socops**	**2.55**	**53**	⇑*i*P	**Pn**	**14 43 57.5**	**+1.3**
SOCV				*e*S	**Sn**	**14 44 29.7**	**+0.7**
VIGV	**El Vigia**	**2.58**	**37**	⇑*i*P	**Pn**	**14 43 57.2**	**+0.6**
VIGV				*e*S	**Sn**	**14 44 29.0**	**-0.8**
SDV	**Santo Domingo**	**3.10**	**47**	P	**Pn**	**14 44 04.2**	**+1.2**
	88nm,0.3s,baz=226,slow=3.9,SNR=346						
SDV				S	**Sn**	**14 44 41.8**	**+0.6**
	174nm,0.3s,baz=84,slow=22,SNR=15						
SDV	**Santo Domingo**	**3.10**	**47**	*e*Pn	**Pn**	**14 44 03.9**	**+0.9**
SDV				*e*S	**Sn**	**14 44 41.8**	**+0.6**
ELOV	**Elorza**	**3.42**	**86**	⇑*i*P	**Pn**	**14 44 09.1**	**+2.0**
ELOV				*e*S	**Sn**	**14 44 48.3**	**-0.1**
VIRV	**Villa del Rosa**	**3.76**	**8**	⇓*i*P	**Pn**	**14 44 09.4**	**-2.0**
VIRV				*e*S	**Sn**	**14 44 51.9**	**-4.3**
QARV	**Quebrada Arrib**	**4.17**	**34**	⇑*i*P	**Pn**	**14 44 17.1**	**+0.4**
SANV	**Sanarito**	**4.32**	**51**	⇑*i*P	**Pn**	**14 44 18.9**	**+0.3**
CURV	**Curarigua**	**4.37**	**42**	⇑*i*P	**Pn**	**14 44 19.3**	**+0.1**
CURV				*e*S	**Sn**	**14 45 07.2**	**-3.0**
DABV	**Dabajuro**	**4.72**	**28**	⇑*i*P	**Pn**	**14 44 23.6**	**-0.2**
TEPV	**Terepaima**	**4.88**	**49**	⇑*i*P	**Pn**	**14 44 26.1**	**+0.2**
SIQV	**Siquisique**	**4.94**	**38**	⇑*i*P	**Pn**	**14 44 26.5**	**-0.3**
BAUV	**El Baul**	**5.30**	**65**	⇑*i*P	**Pn**	**14 44 30.9**	**-0.6**
MAPV	**Macapo**	**5.37**	**55**	⇑*i*P	**Pn**	**14 44 32.8**	**+0.4**
IMOV	**Isla Los Monje**	**5.91**	**20**	*e*P	**Pn**	**14 44 38.8**	**-0.8**
MONV	**Montecano**	**5.93**	**29**	*e*P	**Pn**	**14 44 38.8**	**-0.9**
TURV	**Turiamo**	**6.22**	**53**	⇑*i*P	**Pn**	**14 44 43.1**	**-0.5**
CAOV	**Caicara del Or**	**6.57**	**85**	⇑*i*P	**Pn**	**14 44 48.1**	**-0.2**
FUNV	**FUNVISIS**	**7.08**	**58**	*e*P	**Pn**	**14 44 54.3**	**-0.7**
BCIP	**Isla Barro Col**	**7.26**	**290**	*e*P	**Pn**	**14 44 52.4**	**-5.0**
	42nm,0.9s						
BIRV	**Birongo**	**7.54**	**60**	⇑*i*P	**Pn**	**14 45 00.6**	**-0.6**
CUPV	**Cepira**	**7.78**	**65**	⇑*i*P	**Pn**	**14 45 03.7**	**-0.6**
OTAV	**Otavalo**	**8.51**	**221**	*e*P	**Pn**	**14 45 12.9**	**-1.1**
	6.0nm,0.6s						
PCRV	**Puerto La Cruz**	**8.87**	**67**	P	**Pn**	**14 45 18.3**	**-0.5**
	1.7nm,0.3s,baz=239,slow=4.6,SNR=3.5						
GUNV	**Guanoco**	**10.43**	**70**	*e*P	**Pn**	**14 45 38.1**	**-1.3**
PCJ	**Portland Cotta**	**11.68**	**340**	⇓*e*P	**Pn**	**14 45 55.4**	**-0.2**
CMJ	**Castle Mountai**	**11.80**	**344**	*e*P	**Pn**	**14 45 57.7**	**+0.5**
GWJ	**Greenwich**	**11.85**	**342**	⇓*e*P	**Pn**	**14 45 58.6**	**+0.8**
STH	**Stony Hill**	**11.88**	**342**	⇓*e*P	**Pn**	**14 45 58.3**	**+0.1**
STH				*e*S	**Sn**	**14 47 56.1**	**-14**
STH				*e*S	**Sn**	**14 47 57.5**	**-12**
MCJ	**Malvern**	**12.04**	**338**	⇑*i*P	**Pn**	**14 46 01.1**	**+0.8**
MTDJ	**Mount Denham**	**12.26**	**339**	*e*Pn	**Pn**	**14 46 04.0**	**+0.9**
	96nm,0.5s						
SDDR	**Presa de Saban**	**12.26**	**7**	*e*P	**Pn**	**14 46 05.8**	**+2.7**
	11nm,0.6s						
GRGR	**Grenville**	**12.33**	**63**	*e*P	**Pn**	**14 46 10.7**	**+6.6**
JTS	**JuntasAbangare**	**12.41**	**287**	P	**Pn**	**14 46 04.8**	**-0.3**
	0.2nm,0.3s,baz=108,slow=20,SNR=3.3						
JTS	**JuntasAbangare**	**12.41**	**287**	*e*P	**Pn**	**14 46 10.6**	**+5.5**
SJG	**San Juan**	**13.08**	**30**	P	**Pn**	**14 46 11.1**	**-2.5**
	5.0nm,0.3s,baz=337,slow=17,SNR=4.5						
APG	**El Apazote**	**19.07**	**297**	P	**P**	**14 47 22.4**	**-1.5**
	1.8nm,0.3s,baz=331,slow=18,SNR=4.6						
TXAR	**Lajitas Array**	**36.65**	**312**	P	**P**	**14 50 04.7**	**-0.2**
	1.1nm,0.5s,mb3.8,baz=125,slow=9.0,SNR=18						
TXAR				PcP	PcP	14 52 25.8	+1.4
	0.4nm,0.7s,baz=126,slow=6.4,SNR=3.7						
TXAR	**Lajitas Array**	**36.65**	**312**	P	**P**	**14 50 04.7**	**-0.2**
TXAR				PcP	PcP	14 52 25.8	+1.5
MNTX	**Cornudas Mount**	**39.16**	**314**	*e*P	**P**	**14 50 25.6**	**-0.3**
	2.8nm,0.7s,mb4.0						
LAZ	**Ladron**	**41.86**	**316**	*e*P	**P**	**14 50 48.9**	**+0.9**
SCHQ	**Schefferville**	**48.19**	**5**	P	**P**	**14 51 37.7**	**+0.1**
	15nm,0.6s,mb4.8,baz=192,slow=6.8,SNR=29						
SCHQ	**Schefferville**	**48.19**	**5**	P	**P**	**14 51 37.7**	**+0.1**
PDAR	**Pinedale Array**	**48.25**	**324**	P	**P**	**14 51 37.5**	**-0.8**
	0.6nm,0.5s,mb3.5,baz=124,slow=9.1,SNR=5.3						
YKA	**Yellowknife Ar**	**63.39**	**340**	P	**P**	**14 53 25.5**	**-0.1**
	1.5nm,0.5s,mb4.1,baz=132,slow=6.8,SNR=22						
TIC	**Toumodi**	**67.38**	**86**	*e*P	**P**	**14 53 54.9**	**+2.7**
	13nm,0.2s						
LIC	**Lamto**	**67.41**	**86**	*e*P	**P**	**14 53 52.5**	**+0.1**
	33nm,1.0s,mb5.1						
DBIC	**Dimbokro**	**67.54**	**86**	P	**P**	**14 53 52.3**	**-0.9**
	3.6nm,0.6s,mb4.3,baz=228,slow=7.9,SNR=5.6						
DBIC	**Dimbokro**	**67.54**	**86**	*e*P	**P**	**14 53 52.9**	**-0.3**
	4.1nm,0.6s,mb4.3						
KIC	**Kosan Boka**	**67.68**	**86**	*e*P	**P**	**14 53 54.4**	**+0.3**
	24nm,0.7s,mb5.0						
SUMG	**Summit**	**69.02**	**11**	*e*P	**P**	**14 54 02.1**	**+0.8**
	19nm,0.7s,mb4.9						
ESDC	**Sonseca Array**	**69.54**	**50**	P	**P**	**14 54 05.2**	**0.0**
	1.0nm,0.3s,mb4.0,baz=302,slow=31,SNR=10						
TORD	**Torodi Ar. Bea**	**73.56**	**78**	P	**P**	**14 54 29.4**	**-0.3**
	0.5nm,0.4s,mb3.6,baz=285,slow=6.7,SNR=9.2						
NB2	**NORSAR Subarra**	**81.29**	**29**	P	**P**	**14 55 12.4**	**+0.7**
	comp=Z,1.2nm,0.6s,mb3.7,baz=267,slow=5.6						
NOA	**NORSAR Array B**	**81.29**	**29**	P	**P**	**14 55 12.8**	**+1.2**
	comp=Z,2.6nm,0.8s,mb3.9,baz=266,slow=5.4,SNR=4.0						
GERES	**GERESS Array B**	**82.74**	**42**	P	**P**	**14 55 19.3**	**-0.2**
	comp=Z,0.3nm,0.3s,mb3.5,baz=251,slow=4.1,SNR=4.9						
ARCES	**ARCESS Array B**	**86.66**	**20**	P	**P**	**14 55 39.1**	**+0.4**
	comp=Z,1.1nm,0.5s,mb3.9,baz=286,slow=4.5,SNR=7.0						
ZALV	**Zalesovo Beam**	**116.68**	**15**	PKP	PKPdf	15 01 38.5	-0.2
	comp=Z,1.0nm,0.4s,baz=311,slow=2.9,SNR=6.2						
ZALV	**Zalesovo Beam**	**116.68**	**15**	PKP	PKPdf	15 01 38.5	-0.2
KURK	**Kurchatov**	**117.70**	**20**	PKP	PKPdf	15 01 41.4	+0.6
	comp=Z,0.9nm,0.7s,baz=321,slow=2.4,SNR=5.4						
MKAR	**Makanchi Array**	**122.32**	**20**	PKP	PKPdf	15 01 49.3	-0.4
	comp=Z,0.7nm,0.4s,baz=353,slow=3.3,SNR=10						
SONM	**Songino Array**	**125.64**	**1**	PKP	PKPdf	15 01 57.6	+1.5
	comp=Z,1.1nm,0.5s,baz=285,slow=2.1,SNR=4.2						
KSRS	**Korea Array**	**131.91**	**338**	PKP	PKPdf	15 02 09.3	+1.0
	comp=Z,0.5nm,0.6s,baz=5.4,slow=1.5,SNR=3.1						
ASAR	**Alice Springs**	**149.23**	**234**	PKP	PKPdf	15 02 37.8	-1.8
	comp=Z,2.0nm,0.7s,baz=129,slow=1.5,SNR=6.7						
ASAR				PKPbc	PKPbc	15 02 43.5	-0.6
	comp=Z,2.0nm,0.6s,baz=113,slow=3.3,SNR=34						
ASAR				PKPab	PKPab	15 02 49.6	+0.6
	comp=Z,1.3nm,0.7s,baz=114,slow=3.8,SNR=9.2						
WRA	**Warramunga Arr**	**150.48**	**241**	PKP	PKPdf	15 02 41.9	+0.3
	comp=Z,2.0nm,0.6s,baz=107,slow=2.5,SNR=4.7						
WRA				PKPbc	PKPbc	15 02 46.5	-0.6
	comp=Z,2.0nm,0.6s,baz=109,slow=2.4,SNR=45						
WRA				PKPab	PKPab	15 02 55.2	+1.0
	comp=Z,0.5nm,0.4s,baz=105,slow=2.7,SNR=6.3						
WRA	**Warramunga Arr**	**150.48**	**241**	PKP	PKPdf	15 02 41.9	+0.3
WRA				PKPbc	PKPbc	15 02 46.5	-0.6
WRA				PKPab	PKPab	15 02 55.2	+1.0
CMAR	**Chiang Mai Arr**	**153.69**	**18**	PKP	PKPdf	15 02 45.1	-1.3
	comp=Z,0.4nm,0.4s,baz=140,slow=25,SNR=4.0						
CMAR				PKPbc	PKPbc	15 02 55.1	+0.7
	comp=Z,2.1nm,0.6s,baz=327,slow=3.4,SNR=12						

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*CSEM **11** 14:49:30.5, 46°.23N×6°.99E, h-1km, ML1.1, Suspected Mining explosion. After ZUR*
ZUR 11 14:49:30.5, 46°.23N×6°.99E, h-1km±3km, ML1.1/5, 2C, Suspected Mining explosion., Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALAN	**Lac Salanfe**	**0.08**	**187**	*e*Pg		14 49 32.5	
	120nm,0.5s						
SALAN	**Lac Salanfe**	**0.08**	**187**	*e*Pg		14 49 32.5	
	120nm,0.5s						
GRYON	**Gryon**	**0.09**	**74**	⇑*i*Pg		14 49 32.7	
	36nm,0.6s						
GRYON	**Gryon**	**0.09**	**74**	⇑*i*Pg		14 49 32.7	
	36nm,0.6s						
AIGLE	**Aigle**	**0.12**	**349**	*e*Pg		14 49 33.2	
	156nm,0.6s						
AIGLE	**Aigle**	**0.12**	**349**	*e*Pg		14 49 33.2	
	156nm,0.6s						
EMV	**Vieux Emosson**	**0.17**	**201**	*i* Pg		14 49 34.3	
	245nm,0.5s						
EMV	**Vieux Emosson**	**0.17**	**201**	*i* Pg		14 49 34.3	
	245nm,0.5s						
SENIN	**Lac Senin/Sane**	**0.26**	**57**	*e*Pg		14 49 36.0	
	49nm,0.5s						
SENIN	**Lac Senin/Sane**	**0.26**	**57**	*e*Pg		14 49 36.0	
	49nm,0.5s						

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*ISCJB **11** 14:55:09.4±0.7, 33°.20N±0°.08×92°.1E±0°.2, h10km, mb3.5/5, Error ellipse: s-maj=21.6km s-min=10.1km az=168.0*
*NEIC **11** 14:55:10.7±0.6, 33°.15N×92°.09E, h10km, Error ellipse: s-maj=18.6km s-min=8.4km az=79.0*
*IDC **11** 14:55:10.4±1.0, 33°.19N×91°.93E, h0km, mb3.5/6, mb1 3.6/8, mb1mx3.5/27, mbtmp3.5/8, ML3.8/1, Error ellipse: s-maj=43.6km s-min=19.2km az=59.0*
*BJI **11** 14:55:11.6, 33°.40N×91°.98E, h12km, mB4.5/1, mb4.1/1, ML3.6/2*
ISC 11 14:55:11.1±0.7, 33°.17N±0°.08×92°.1E±0°.2, h10km, n10, σ0°94/10, mb3.5/5, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.55**	**193**	Pn	**Pn**	**14 56 06.4**	**+0.2**
MKAR	**Makanchi Array**	**15.52**	**334**	Pn	**Pn**	**14 58 49.0**	**-0.9**
	baz=123,slow=16,SNR=2.4						
CMAR	**Chiang Mai Arr**	**15.90**	**155**	Pn	**Pn**	**14 58 53.4**	**-1.6**
	baz=1.1,slow=14,SNR=3.8						
SONM	**Songino Array**	**18.21**	**32**	P	**Pn**	**14 59 23.4**	**-0.5**
	0.3nm,0.3s,baz=215,slow=12,SNR=2.9						
KURK	**Kurchatov**	**20.13**	**335**	P	**P**	**14 59 45.1**	**+0.1**
	1.1nm,0.8s,baz=145,slow=10,SNR=7.5						
ZALV	**Zalesovo Beam**	**21.40**	**348**	P	**P**	**14 59 59.4**	**+0.6**
	1.2nm,0.8s,mb3.3,baz=159,slow=9.5,SNR=3.7						
BVAR	**Borovoye Array**	**25.21**	**328**	P	**P**	**15 00 37.1**	**+0.4**
	0.6nm,0.6s,mb3.3,baz=150,slow=12,SNR=4.9						
WRA	**Warramunga Arr**	**66.47**	**136**	P	**P**	**15 06 03.9**	**+3.0**
	0.6nm,0.9s,mb3.6,baz=324,slow=6.1,SNR=3.7						
ASAR	**Alice Springs**	**69.17**	**139**	P	**P**	**15 06 18.6**	**+0.7**
	1.3nm,0.9s,mb3.9,baz=322,slow=6.5,SNR=8.0						
TORD	**Torodi Ar. Bea**	**83.23**	**281**	P	**P**	**15 07 37.8**	**-0.4**
	0.6nm,1.0s,mb3.6,baz=139,slow=36,SNR=3.0						

CASC 11 15:02:55.9±2.1, 14°.91N×89°.66W, h0km±5km, MD3.5, 2C-1D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRL	**Marmol**	**0.15**	**347**	⇑*e*P	Pg	15 02 58.5	-0.4
MRL				*e*S	Sg	15 03 04.1	+3.2
NBG	**Las Nubes**	**0.74**	**244**	*e*P	Pg	15 03 11.3	+1.1
RBDL	**Robledal**	**0.80**	**182**	*e*P	Pg	15 03 11.7	+0.5
RBDL				*e*S	Sg	15 03 24.9	+3.3
RTR	**El Retiro**	**1.01**	**179**	*e*P	Pg	15 03 15.7	+0.4
SNJE	**San Jose**	**1.04**	**177**	*e*P	Pg	15 03 16.0	+0.1
IXG	**Ixpaco**	**1.07**	**227**	⇓*e*P	Pg	15 03 17.2	+0.8
IXG				*e*S	Sg	15 03 34.3	+4.0
SBLS	**San Blas**	**1.07**	**178**	*e*P	Pg	15 03 16.5	+0.1
SBLS				*e*S	Sg	15 03 33.2	+2.9
BOQS	**Boqueron**	**1.23**	**163**	*e*P	Pg	15 03 19.4	0.0
BOQS				*e*S	Sg	15 03 38.7	+3.3
FUG	**Fuego 3**	**1.24**	**248**	⇑*e*P	Pg	15 03 20.3	+0.6
FUG				*e*S	Sg	15 03 43.0	+7.2
TP2	**Tecpan 2**	**1.33**	**265**	*e*P	Pg	15 03 21.2	-0.1
TP2				*e*S	Sg	15 03 41.1	+2.5
LFRS	**El Faro**	**1.41**	**156**	*e*P	Pn	15 03 21.9	-0.9
CAHU	**Cacacuatique**	**1.80**	**129**	*e*P	Pn	15 03 29.1	+0.8
CAHU				*e*S	Sn	15 03 54.4	+2.6

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*IDC **11** 15:03:54.8±2.6, 5°.23S×103°.26E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.4/22, mbtmp3.6/5, Error ellipse: s-maj=97.7km s-min=23.2km az=54.0*
*DJA **11** 15:04:01, 5°.67S×103°.61E, h32km, MLv3.5/3*
ISC 11 15:04:00.7±3.5, 5°.7S±0°.2×103°.6E±0°.3, h68km±22km, n9, σ0°52/10, mb3.6/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LWLI	**Liwa**	**0.80**	**35**	P	**Pn**	**15 04 16.3**	**-0.3**
LWLI				S	**Sn**	**15 04 28.3**	**-0.1**
KASI	**Kota Agung**	**0.91**	**81**	P	**Pn**	**15 04 18.6**	**+0.6**
KASI				S	**Sn**	**15 04 30.2**	**-0.6**
MDSI	**Maura Dua**	**1.32**	**26**	P	**Pn**	**15 04 23.8**	**+0.6**
WRA	**Warramunga Arr**	**33.08**	**118**	P	**P**	**15 10 36.6**	**+6.4**
	0.3nm,0.8s,mb3.2,baz=285,slow=9.8,SNR=3.8						
ASAR	**Alice Springs**	**34.21**	**125**	P	**P**	**15 10 47.8**	**+7.7**
	0.2nm,0.6s,mb3.2,baz=301,slow=7.5,SNR=5.7						
KSRS	**Korea Array**	**48.53**	**26**	P	**P**	**15 12 37.8**	**+0.7**
	1.0nm,0.9s,mb3.7,baz=182,slow=28,SNR=4.4						
MKAR	**Makanchi Array**	**55.55**	**342**	P	**P**	**15 13 28.6**	**-0.4**
	0.6nm,0.6s,mb3.8,baz=123,slow=8.8,SNR=8.1						
ZALV	**Zalesovo Beam**	**61.46**	**347**	P	**P**	**15 14 09.5**	**-0.5**
	0.7nm,0.4s,mb4.0,baz=163,slow=5.7,SNR=4.6						
TXAR	**Lajitas Array**	**145.12**	**44**	PKPbc	PKPbc	15 23 31.9	+1.2
	0.2nm,0.5s,baz=290,slow=2.0,SNR=3.8						

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*ISK **11** 15:11:43.7, 36°.97N×29°.21E, h8km, MD2.4*
*DDA **11** 15:11:44.0, 37°.00N×29°.18E, h7km±5km, Md2.8*
*CSEM **11** 15:11:44.1±0.2, 36°.98N×29°.22E, h10km, MD2.4, Error ellipse: s-maj=3.5km s-min=3.1km az=4.0*
*ISCJB **11** 15:11:44.2±0.5, 36°.97N±0°.03×29°.20E±0°.03, h4km±6km, Error ellipse: s-maj=4.8km s-min=4.1km az=2.5*
ISC 11 15:11:44.6±0.5, 36°.97N±0°.03×29°.20E±0°.03, h10km±6km, n26, σ0°81/44, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**52**	*e*PG	**Pg**	**15 11 49.7**	**-1.0**
GLHS				*e*SG	**Sg**	**15 11 54.8**	**0.0**
GLHS	**Glhisar (BURDU**	**0.30**	**52**	*e*Pg	**Pg**	**15 11 49.7**	**-0.9**
GLHS				*e*Sg	**Sg**	**15 11 54.8**	**+0.1**
FETY	**Fethiye**	**0.35**	**195**	*e*PG	**Pg**	**15 11 50.8**	**-0.7**
FETY				*e*SG	**Sg**	**15 11 56.5**	**+0.4**
FETY	**Fethiye**	**0.35**	**195**	*e*Pg	**Pg**	**15 11 50.8**	**-0.7**
FETY				*e*Sg	**Sg**	**15 11 56.5**	**+0.4**
GOLH	**Golhisar**	**0.39**	**47**	*i* P	**Pg**	**15 11 51.4**	**-0.9**
GOLH				*i* S	**Sg**	**15 11 57.8**	**+0.2**
GOLH	**Golhisar**	**0.39**	**47**	*i* P	**Pg**	**15 11 51.4**	**-0.9**
GOLH				*i* S	**Sg**	**15 11 57.8**	**+0.2**
TURN	**Turunc**	**0.49**	**259**	*e*P	**Pg**	**15 11 58.9**	**+4.8**
TURN				*e*S	**Sg**	**15 12 10.1**	**+10**
TURN	**Turunc**	**0.49**	**259**	*e*P	**Pg**	**15 11 58.9**	**+4.8**
ELL	**Elmali**	**0.61**	**111**	*e*PG	**Pg**	**15 11 56.2**	**-0.3**
ELL				*e*SG	**Sg**	**15 12 05.3**	**+0.8**
ELL	**Elmali**	**0.61**	**111**	*e*Pg	**Pg**	**15 11 56.2**	**-0.2**
ELL				*e*Sg	**Sg**	**15 12 05.3**	**+0.8**
DNZL	**Cakiroluk**	**0.73**	**350**	*i* P	**Pg**	**15 11 57.1**	**-1.5**
DNZL				*i* S	**Sg**	**15 12 09.2**	**+1.0**
DNZL	**Cakiroluk**	**0.73**	**350**	*i* P	**Pg**	**15 11 57.1**	**-1.5**
DNZL				*i* S	**Sg**	**15 12 09.2**	**+1.0**
YER	**Yerkesik**	**0.75**	**283**	*e*PG	**Pg**	**15 11 58.9**	**-0.2**
YER				*e*SG	**Sg**	**15 12 10.0**	**+1.1**
YER	**Yerkesik**	**0.75**	**283**	*e*Pg	**Pg**	**15 11 58.9**	**-0.2**
YER				*e*Sg	**Sg**	**15 12 10.0**	**+1.1**
AKAS	**Kas**	**0.81**	**156**	*e*P	**Pg**	**15 11 59.4**	**-0.8**
AKAS				*i* S	**Sg**	**15 12 14.8**	**+4.2**
AKAS	**Kas**	**0.81**	**156**	*e*P	**Pg**	**15 11 59.3**	**-0.8**
KORT	**Korkueli**	**0.92**	**88**	*e*P	**Pg**	**15 12 01.9**	**-0.5**
KORT				*e*S	**Sg**	**15 12 16.4**	**+2.0**
KORT	**Korkueli**	**0.92**	**88**	*e*P	**Pg**	**15 12 01.9**	**-0.4**
KORT				*e*S	**Sg**	**15 12 16.4**	**+2.0**
AYDN	**Tasoluk**	**1.26**	**304**	*i* P	**Pn**	**15 12 08.5**	**+0.3**
AYDN				*i* S	**Sb**	**15 12 24.5**	**-0.1**
AYDN	**Tasoluk**	**1.26**	**304**	*i* P	**Pn**	**15 12 08.5**	**+0.3**
AYDN				*i* S	**Sb**	**15 12 24.5**	**-0.1**
DAT	**Datca**	**1.32**	**260**	*e*PN	**Pn**	**15 12 09.4**	**+0.3**
DAT	**Datca**	**1.32**	**260**	*e*Pn	**Pn**	**15 12 09.4**	**+0.3**
KHL	**Karahalli**	**1.37**	**11**	*e*PN	**Pn**	**15 12 09.8**	**0.0**
KHL	**Karahalli**	**1.37**	**11**	*e*Pn	**Pn**	**15 12 09.8**	**0.0**
SUTC	**Sutluce-Ispart**	**1.52**	**70**	*e*PN	**Pn**	**15 12 11.4**	**-0.4**
SUTC	**Sutluce-Ispart**	**1.52**	**70**	*e*Pn	**Pn**	**15 12 11.5**	**-0.3**

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*CSEM **11** 15:17:42.9±0.2, 43°.78N×8°.25E, h10km, ML3.7/22, Error ellipse: s-maj=4.1km s-min=2.7km az=178.0*
*ROM **11** 15:17:43.1±0.2, 43°.79N×8°.21E, h13km±3km, Md3.1/11, Ml3.0/16, Error ellipse: s-maj=4.2km s-min=1.4km az=178.0*
*STR **11** 15:17:43.9±0.4, 43°.85N×8°.22E, h10km, Ml3.3, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*GEN **11** 15:17:43.8, 43°.82N×8°.20E, h3km, ML3.0*
*ISCJB **11** 15:17:43.8±0.3, 43°.81N±0°.02×8°.22E±0°.02, h24km±2km, Error ellipse: s-maj=3.6km s-min=2.6km az=7.6*
*NEIC **11** 15:17:43.1, 43°.79N×8°.21E, h13km, ML3.4(LDG), ML3.3(STR), ML3.0(ROM), After ROM.*
*LDG **11** 15:17:44.0±0.1, 43°.64N×8°.19E, h10km, Md3.3/3, Ml3.4/22, Error ellipse: s-maj=2.8km s-min=1.9km az=14.0*
ISC 11 15:17:43.3±0.3, 43.79N±0°.02×8.23E±0°.02, h13km±2km, n138, σ1°13/247, Corsica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMI	**Imperia**	**0.27**	**297**	Pg	**Pg**	**15 17 48.8**	**-0.2**
IMI				Sg	**Sg**	**15 17 52.3**	**-0.5**
	2μm,0.3s						
IMI	**Imperia**	**0.27**	**297**	P	**Pg**	**15 17 48.8**	**-0.2**
IMI				Sg	**Sg**	**15 17 52.3**	**-0.5**
	2μm,0.3s						
RORO	**Rocca Rossa**	**0.34**	**340**	P	**Pg**	**15 17 49.7**	**-0.6**
RORO				S	**Sg**	**15 17 53.9**	**-1.1**
SAOF	**Saorge**	**0.53**	**292**	Pg	**Pg**	**15 17 54.0**	**+0.4**
SAOF	**Saorge**	**0.53**	**292**	Pg	**Pg**	**15 17 54.0**	**+0.4**
QLNO	**Quiliano**	**0.54**	**9**	Pg	**Pg**	**15 17 54.3**	**+0.3**
QLNO				Sg	**Sg**	**15 18 01.0**	**-0.2**
	1μm,0.3s						
QLNO	**Quiliano**	**0.54**	**9**	Pg	**Pg**	**15 17 54.3**	**+0.3**
QLNO				Sg	**Sg**	**15 18 01.0**	**-0.2**
	1μm,0.3s						
SBF	**Sospel**	**0.58**	**278**	*e*P	**Pg**	**15 17 56.0**	**+1.4**
SBF				*e*Sg	**Sg**	**15 18 02.7**	**+0.4**
	4μm,0.2s						
SBF	**Sospel**	**0.58**	**278**	*e*Pg	**Pg**	**15 17 55.0**	**+0.4**
SBF				*e*P		15 17 56.0	
SBF				*e*Sg	**Sg**	**15 18 02.7**	**+0.4**
SBF	**Sospel**	**0.58**	**278**	*e*Pg	**Pg**	**15 17 55.0**	**+0.4**
SBF	**Sospel**	**0.58**	**278**	*e*P	**Pg**	**15 17 56.0**	**+1.4**
SBF				*e*Sg	**Sg**	**15 18 02.7**	**+0.4**
	2μm,0.2s						
AUTN	**L'Aution**	**0.61**	**290**	Pg	**Pg**	**15 17 55.8**	**+0.5**
AUTN				Sg	**Sg**	**15 18 03.9**	**+0.5**
AUTN	**L'Aution**	**0.61**	**290**	Pg	**Pg**	**15 17 55.8**	**+0.5**
AUTN				Sg	**Sg**	**15 18 03.9**	**+0.5**
REVF	**Revere**	**0.62**	**266**	Pg	**Pg

TRAV	**Traversella**	**1.76 349**	P	**Pn**	**15 18 13.6**	**+0.2**
TRAV			S	**Sn**	**15 18 33.8**	**-1.9**
GSCL	**Gusciola**	**1.79 71**	Pg	**Pn**	**15 18 15.1**	**+1.2**
	23nm,0.5s					
GSCL	**Gusciola**	**1.79 71**	Pg	**Pn**	**15 18 15.1**	**+1.2**
	23nm,0.5s					
LSD	**Lago del Serru**	**1.84 335**	Pg	**Pn**	**15 18 15.0**	**+0.4**
	77nm,0.5s					
LSD	**Lago del Serru**	**1.84 335**	P	**Pn**	**15 18 15.1**	**+0.5**
LSD			S	**Sn**	**15 18 38.0**	**+0.2**
SMRF	**Simiane la Rot**	**1.93 277**	*e*Pg	**Pg**	**15 18 19.7**	**-0.6**
SMRF			*e*Sg	**Sg**	**15 18 44.7**	**-0.6**
	370nm,0.3s					
SMRF	**Simiane la Rot**	**1.93 277**	*e*Pn	**Pn**	**15 18 14.9**	**-0.8**
SMRF			*e*Pg	**Pg**	**15 18 19.7**	**-0.6**
SMRF			*e*Sg	**Sg**	**15 18 44.7**	**-0.6**
SMRF	**Simiane la Rot**	**1.93 277**	*e*Pn	**Pn**	**15 18 14.9**	**-0.8**
SMRF	**Simiane la Rot**	**1.93 277**	*e*Pg	**Pg**	**15 18 19.7**	**-0.6**
SMRF			*e*Sg	**Sg**	**15 18 44.7**	**-0.6**
	185nm,0.3s					
LPG	**La Plagne**	**2.01 329**	*e*Pn	**Pn**	**15 18 18.6**	**+1.7**
LPG			*e*Sn	**Sn**	**15 18 43.0**	**+1.2**
	59nm,0.4s					
LPG	**La Plagne**	**2.01 329**	*e*Pn	**Pn**	**15 18 18.6**	**+1.7**
LPG			*e*Sn	**Sn**	**15 18 43.0**	**+1.2**
	29nm,0.4s					
ORIF	**Oris-en-Rattie**	**2.03 305**	*e*Pg	**Pg**	**15 18 23.3**	**+1.1**
ORIF			*e*Sn	**Sn**	**15 18 42.3**	**0.0**
ORIF			*e*Sg	**Sg**	**15 18 49.5**	**+1.0**
	112nm,0.4s					
ORIF	**Oris-en-Rattie**	**2.03 305**	*e*P	**Pn**	**15 18 20.0**	**+2.9**
ORIF			*e*Pg	**Pg**	**15 18 23.3**	**+1.1**
ORIF			*e*Sn	**Sn**	**15 18 42.3**	**0.0**
ORIF			*e*Sg	**Sg**	**15 18 49.5**	**+1.0**
ORIF	**Oris-en-Rattie**	**2.03 305**	*e*P	**Pn**	**15 18 20.0**	**+2.9**
ORIF	**Oris-en-Rattie**	**2.03 305**	*e*Pg	**Pg**	**15 18 23.3**	**+1.1**
ORIF			*e*Sn	**Sn**	**15 18 42.3**	**0.0**
ORIF			*e*Sg	**Sg**	**15 18 49.5**	**+1.0**
	56nm,0.4s					
LPL	**La Plagne**	**2.03 329**	*e*Pn	**Pn**	**15 18 18.9**	**+1.7**
LPL			*e*Sn	**Sn**	**15 18 43.4**	**+1.0**
	72nm,0.3s					
LPL	**La Plagne**	**2.03 329**	*e*Pn	**Pn**	**15 18 18.9**	**+1.7**
LPL			*e*Sn	**Sn**	**15 18 43.4**	**+1.0**
	36nm,0.3s					
GDM	**Grand'Maison**	**2.07 314**	Pg	**Pn**	**15 18 21.1**	**+3.4**
GDM	**Grand'Maison**	**2.07 314**	Pg	**Pn**	**15 18 21.1**	**+3.4**
CASP	**Castiglione de**	**2.17 116**	Pg	**Pn**	**15 18 19.4**	**+0.3**
	62nm,0.4s					
OSPF	**L'Ospedale**	**2.24 161**	Pn	**Pn**	**15 18 20.6**	**+0.6**
OSPF	**L'Ospedale**	**2.24 161**	Pn	**Pn**	**15 18 20.6**	**+0.6**
OCF	**Saint Nazaire**	**2.25 292**	Pg	**Pg**	**15 18 26.6**	**+0.2**
OCF			Sg	**Sg**	**15 18 57.3**	**+1.7**
OCF	**Saint Nazaire**	**2.25 292**	Pg	**Pg**	**15 18 26.6**	**+0.2**
OCF			Sg	**Sg**	**15 18 57.3**	**+1.7**
OG26	**St.-Nazaire-De**	**2.25 292**	Pg	**Pg**	**15 18 26.6**	**+0.2**
OG26			Sg	**Sg**	**15 18 57.3**	**+1.7**
OG26	**St.-Nazaire-De**	**2.25 292**	Pg	**Pg**	**15 18 26.6**	**+0.2**
OG26			Sg	**Sg**	**15 18 57.3**	**+1.7**
GRN	**Grenoble**	**2.29 310**	Pg	**Pg**	**15 18 25.9**	**-1.4**
GRN	**Grenoble**	**2.29 310**	Pg	**Pg**	**15 18 25.9**	**-1.4**
MAON	**Monte Argentar**	**2.52 122**	Pg	**Pn**	**15 18 24.5**	**+0.6**
SFI	**Santa Sofia**	**2.62 86**	Pg	**Pn**	**15 18 25.7**	**+0.4**
	54nm,1.6s					
VIVF	**Saint-Julien-l**	**2.77 294**	*e*P	**Pn**	**15 18 29.7**	**+2.4**
VIVF	**Saint-Julien-l**	**2.77 294**	*e*Pg	**Pg**	**15 18 35.5**	**-0.8**
VIVF			*e*Sn	**Sn**	**15 18 58.5**	**-2.0**
	68nm,0.4s					
VIVF	**Saint-Julien-l**	**2.77 294**	*e*Pn	**Pn**	**15 18 27.4**	**+0.1**
VIVF			*e*Pg	**Pg**	**15 18 35.5**	**-0.8**
VIVF			*e*Sn	**Sn**	**15 18 58.5**	**-2.0**
VIVF	**Saint-Julien-l**	**2.77 294**	*e*Pn	**Pn**	**15 18 27.4**	**+0.1**
VIVF	**Saint-Julien-l**	**2.77 294**	*e*P	**Pn**	**15 18 29.7**	**+2.4**
VIVF	**Saint-Julien-l**	**2.77 294**	*e*Pg	**Pg**	**15 18 35.5**	**-0.8**
VIVF			*e*Sn	**Sn**	**15 18 58.5**	**-2.0**
	34nm,0.4s					
SSB	**Saint Sauveur**	**3.03 301**	*e*Pn	**Pn**	**15 18 32.7**	**+1.8**
SSB			*e*Pg	**Pg**	**15 18 40.0**	**-1.3**
SSB	**Saint Sauveur**	**3.03 301**	*e*Pn	**Pn**	**15 18 32.7**	**+1.8**
LASF	**Ste Croix**	**3.17 277**	*e*Pg	**Pg**	**15 18 42.6**	**-1.5**
LASF			*e*Sn	**Sn**	**15 19 06.6**	**-3.9**
	21nm,0.3s					
LASF	**Ste Croix**	**3.17 277**	*e*Pn	**Pn**	**15 18 31.8**	**-1.0**
LASF			*e*Pg	**Pg**	**15 18 42.6**	**-1.5**
LASF			*e*Sn	**Sn**	**15 19 06.6**	**-3.9**
LASF	**Ste Croix**	**3.17 277**	*e*Pn	**Pn**	**15 18 31.8**	**-1.0**
LASF	**Ste Croix**	**3.17 277**	*e*Pg	**Pg**	**15 18 42.6**	**-1.5**
LASF			*e*Sn	**Sn**	**15 19 06.6**	**-3.9**
	10nm,0.3s					
CABF	**La Chapelle**	**3.20 333**	*e*Pn	**Pn**	**15 18 35.5**	**+2.2**
CABF			*e*Pg	**Pg**	**15 18 45.5**	**+0.8**
CABF			*e*Sn	**Sn**	**15 19 11.3**	**0.0**
CABF	**La Chapelle**	**3.20 333**	*e*Pn	**Pn**	**15 18 35.5**	**+2.2**
HINF	**Hinteralfeld**	**4.14 347**	*e*Pg	**Pg**	**15 19 03.0**	**+0.4**
HINF			*e*Sn	**Sn**	**15 19 34.1**	**-0.3**
	13nm,0.6s					
HINF	**Hinteralfeld**	**4.14 347**	*e*Pn	**Pn**	**15 18 47.7**	**+1.5**
HINF			*e*Pg	**Pg**	**15 19 03.0**	**+0.4**
HINF			*e*Sn	**Sn**	**15 19 34.1**	**-0.3**
HINF	**Hinteralfeld**	**4.14 347**	*e*Pn	**Pn**	**15 18 47.7**	**+1.5**
HINF	**Hinteralfeld**	**4.14 347**	*e*Pg	**Pg**	**15 19 03.0**	**+0.4**
HINF			*e*Sn	**Sn**	**15 19 34.1**	**-0.3**
	6.4nm,0.6s					
SMF	**Signal de Mont**	**4.21 314**	*e*Pn	**Pn**	**15 18 48.5**	**+1.3**
SMF			*e*Sn	**Sn**	**15 19 35.3**	**-0.9**
	12nm,0.4s					
SMF	**Signal de Mont**	**4.21 314**	*e*Pn	**Pn**	**15 18 48.5**	**+1.3**
SMF			*e*Sn	**Sn**	**15 19 35.3**	**-0.9**
	6.1nm,0.4s					
MTLF	**Montolieu**	**4.39 266**	*e*Pn	**Pn**	**15 18 49.0**	**-0.6**
MTLF			*e*Sn	**Sn**	**15 19 36.7**	**-3.9**
MTLF			*e*Sg	**Sg**	**15 20 00.8**	**-3.4**
	7.4nm,0.4s					
MTLF	**Montolieu**	**4.39 266**	*e*Pn	**Pn**	**15 18 49.0**	**-0.6**
MTLF			*e*Sn	**Sn**	**15 19 36.7**	**-3.9**
MTLF			*e*Sg	**Sg**	**15 20 00.8**	**-3.4**
	3.7nm,0.4s					
HAU	**Haudompre**	**4.42 343**	*e*Pn	**Pn**	**15 18 51.6**	**+1.6**
HAU			*e*Sn	**Sn**	**15 19 40.6**	**-0.6**
	22nm,0.3s					
HAU	**Haudompre**	**4.42 343**	*e*Pn	**Pn**	**15 18 51.6**	**+1.6**
HAU			*e*Sn	**Sn**	**15 19 40.6**	**-0.6**
	11nm,0.3s					
CAF	**Calviac**	**4.56 287**	*e*P	**Pn**	**15 18 55.1**	**+3.1**
CAF			*e*Sn	**Sn**	**15 19 41.0**	**-3.8**
CAF	**Calviac**	**4.56 287**	*e*Pn	**Pn**	**15 18 52.6**	**+0.6**
CAF			*e*Sn	**Sn**	**15 19 41.0**	**-3.8**
CAF	**Calviac**	**4.56 287**	*e*Pn	**Pn**	**15 18 52.6**	**+0.6**
CAF	**Calviac**	**4.56 287**	*e*P	**Pn**	**15 18 55.1**	**+3.1**
CAF			*e*Sn	**Sn**	**15 19 41.0**	**-3.8**
AVF	**Avril sur Loir**	**4.57 313**	*e*Pn	**Pn**	**15 18 52.0**	**0.0**
AVF			*e*Sn	**Sn**	**15 19 43.7**	**-1.2**
	4.8nm,0.4s					
AVF	**Avril sur Loir**	**4.57 313**	*e*Pn	**Pn**	**15 18 52.0**	**0.0**
AVF			*e*Sn	**Sn**	**15 19 43.7**	**-1.2**
	2.4nm,0.4s					
VOY	**Vojsko**	**4.61 59**	*e*Pn	**Pn**	**15 18 53.4**	**+0.8**
VOY			*e*Sn	**Sn**	**15 19 45.3**	**-0.6**
VOY	**Vojsko**	**4.61 59**	*e*Pn	**Pn**	**15 18 53.4**	**+0.8**
VOY			*e*Sn	**Sn**	**15 19 45.3**	**-0.6**
LOR	**Lormes**	**4.64 320**	*e*Pn	**Pn**	**15 18 53.2**	**+0.2**
	baz=143					
LOR			*e*Sn	**Sn**	**15 19 45.5**	**-1.2**
	7.0nm,0.4s					
LOR	**Lormes**	**4.64 320**	*e*Pn	**Pn**	**15 18 53.2**	**+0.2**
	baz=143					
LOR			*e*Sn	**Sn**	**15 19 45.5**	**-1.2**
	3.5nm,0.4s					
SSF	**Saint Saulge**	**4.67 316**	*e*Pn	**Pn**	**15 18 54.0**	**+0.6**
SSF			*e*Sn	**Sn**	**15 19 45.8**	**-1.5**
	6.1nm,0.4s					
SSF	**Saint Saulge**	**4.67 316**	*e*Pn	**Pn**	**15 18 54.0**	**+0.6**
SSF			*e*Sn	**Sn**	**15 19 45.8**	**-1.5**
	3.0nm,0.4s					
CDF	**Champ du Feu**	**4.67 352**	*e*Pn	**Pn**	**15 18 54.9**	**+1.4**
CDF			*e*Sn	**Sn**	**15 19 47.0**	**-0.5**
	4.1nm,0.3s					
CDF	**Champ du Feu**	**4.67 352**	*e*Pn	**Pn**	**15 18 54.9**	**+1.4**
CDF			*e*Sn	**Sn**	**15 19 47.0**	**-0.5**
	2.0nm,0.3s					
BGF	**Bois d'Agland**	**4.71 308**	*e*Pn	**Pn**	**15 18 55.8**	**+1.9**
BGF			*e*Pg	**Pg**	**15 19 11.9**	**-1.5**
BGF			*e*Sn	**Sn**	**15 19 46.0**	**-2.3**
BGF	**Bois d'Agland**	**4.71 308**	*e*Pn	**Pn**	**15 18 55.8**	**+1.9**
TCF	**Toulx Ste Croi**	**4.94 302**	*e*Pn	**Pn**	**15 18 59.3**	**+2.1**
TCF			*e*Sn	**Sn**	**15 19 52.1**	**-2.1**
TCF	**Toulx Ste Croi**	**4.94 302**	*e*Pn	**Pn**	**15 18 59.3**	**+2.1**
TCF			*e*Sn	**Sn**	**15 19 52.1**	**-2.1**
SFTF	**Sexfontaines**	**4.95 334**	*e*Pn	**Pn**	**15 18 59.7**	**+2.5**
	baz=150					
SFTF			*e*Sn	**Sn**	**15 19 54.1**	**-0.1**
SFTF	**Sexfontaines**	**4.95 334**	*e*Pn	**Pn**	**15 18 59.7**	**+2.5**
	baz=150					
SFTF			*e*Sn	**Sn**	**15 19 54.1**	**-0.1**
RJF	**Les Rejaudoux**	**5.03 290**	*e*Sn	**Sn**	**15 19 52.0**	**-4.3**
EPF	**Esparros**	**5.79 265**	*e*P	**Pn**	**15 19 11.7**	**+2.8**
EPF	**Esparros**	**5.79 265**	*e*Pn	**Pn**	**15 19 07.0**	**-1.9**
EPF			*e*Pg	**Pg**	**15 19 30.0**	**-4.3**
EPF			*e*Sn	**Sn**	**15 20 09.0**	**-6.2**
EPF	**Esparros**	**5.79 265**	*e*Pn	**Pn**	**15 19 07.0**	**-1.9**
EPF	**Esparros**	**5.79 265**	*e*P	**Pn**	**15 19 11.7**	**+2.8**
GIVF	**Givet**	**6.73 341**	*e*Pn	**Pn**	**15 19 23.3**	**+1.6**
GIVF	**Givet**	**6.73 341**	*e*Pn	**Pn**	**15 19 23.3**	**+1.6**
GRR	**Gorron**	**7.81 309**	*e*Pn	**Pn**	**15 19 38.9**	**+2.3**
GRR	**Gorron**	**7.81 309**	*e*Pn	**Pn**	**15 19 38.9**	**+2.3**

MEX 11 15:34:40.6±0.6, 16°.64N×99°.94W, h12km±3km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.23**	**5**	*i* P	Pg	15 34 45.3	-0.2
ACX				*i* S	Sg	15 34 48.2	-0.7
CAIG	**El Cayaco**	**0.52**	**322**	*i* P	Pg	15 34 49.3	-1.4
CAIG				*i* S	Sg	15 34 56.5	-1.1
MEIG	**Mezcala**	**1.32**	**13**	*i* P	Pn	15 35 01.7	-3.1
MEIG				*i* S	Sb	15 35 16.9	-5.2
ZIIG	**Zihuatanejo**	**1.75**	**304**	*i* P	Pn	15 35 07.2	-3.6
ZIIG				*i* S	Sn	15 35 28.8	-4.1
PNIG	**Pinotepa**	**1.75**	**98**	*i* P	Pn	15 35 07.7	-3.3
PNIG				*i* S	Sn	15 35 27.8	-5.2
PLIG	**Platanillo**	**1.79**	**13**	*e*P	Pn	15 35 08.1	-3.3
PLIG				*i* S	Sn	15 35 29.6	-4.4
UTMO	**Huajuapan**	**2.36**	**60**	*i* P	Pn	15 35 16.4	-2.7
UTMO				*i* S	Sn	15 35 44.5	-3.5
TPIG	**Tehuac#an**	**3.03**	**54**	*i* S	Sn	15 36 02.5	-2.1

*ISK **11** 15:47:04.8, 40°.61N×29°.12E, h5km, MD2.4*
*DDA **11** 15:47:04.7, 40°.63N×29°.14E, h7km±2km, Md2.6*
*CSEM **11** 15:47:04.9±0.1, 40°.64N×29°.12E, h8km, MD2.4, Error ellipse: s-maj=1.7km s-min=0.9km az=17.0*
*ISCJB **11** 15:47:04.6±0.7, 40°.66N±0°.05×29°.13E±0°.05, h2km±11km, Error ellipse: s-maj=8.5km s-min=4.9km az=27.4*

ISC 11 15:47:05.0±0.7, 40°.64N±0°.05×29°.12E±0°.05, h7km±8km, n16, σ0°.22/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YLV	**Yalova**	**0.20**	**112**	*e*PG	**Pg**	**15 47 09.3**	**+0.2**
YLV				*e*SG	**Sg**	**15 47 12.1**	**+0.2**
YLV	**Yalova**	**0.20**	**112**	*e*Pg	**Pg**	**15 47 09.3**	**+0.2**
YLV				*e*Sg	**Sg**	**15 47 12.1**	**+0.2**
GEMT	**Gemlik**	**0.21**	**166**	*e*PG	**Pg**	**15 47 09.1**	**-0.1**
GEMT				*e*SG	**Sg**	**15 47 11.9**	**-0.3**
GEMT	**Gemlik**	**0.21**	**166**	*e*Pg	**Pg**	**15 47 09.1**	**-0.2**
GEMT				*e*Sg	**Sg**	**15 47 11.9**	**-0.2**
ARMT	**Armutlu**	**0.21**	**249**	*e*PG	**Pg**	**15 47 09.3**	**0.0**
ARMT				*e*SG	**Sg**	**15 47 12.6**	**+0.4**
ARMT	**Armutlu**	**0.21**	**249**	*e*Pg	**Pg**	**15 47 09.3**	**0.0**
ARMT				*e*Sg	**Sg**	**15 47 12.6**	**+0.4**
ADVT	**Abdulvahap**	**0.51**	**114**	*e*PG	**Pg**	**15 47 14.6**	**-0.3**
ADVT	**Abdulvahap**	**0.51**	**114**	*e*Pg	**Pg**	**15 47 14.6**	**-0.3**
KCT	**Karacabey**	**0.70**	**238**	*e*PG	**Pg**	**15 47 18.3**	**-0.1**
KCT	**Karacabey**	**0.70**	**238**	*e*Pg	**Pg**	**15 47 18.3**	**-0.1**
ELBA	**Catalca**	**0.73**	**314**	*e*P	**Pg**	**15 47 19.0**	**-0.1**
ELBA				*i* S	**Sg**	**15 47 28.5**	**-0.1**
ELBA	**Catalca**	**0.73**	**314**	*e*P	**Pg**	**15 47 19.0**	**0.0**
ELBA				*i* S	**Sg**	**15 47 28.5**	**0.0**
GULT	**Gulveren**	**1.08**	**101**	*e*PG	**Pg**	**15 47 25.8**	**+0.1**
GULT	**Gulveren**	**1.08**	**101**	*e*Pg	**Pg**	**15 47 25.8**	**0.0**
BORA	**Eskisehir**	**1.27**	**126**	*e*P	**Pn**	**15 47 28.9**	**-0.3**
BORA				*i* S	**Sb**	**15 47 46.1**	**+0.4**
BORA	**Eskisehir**	**1.27**	**126**	*e*P	**Pn**	**15 47 28.9**	**-0.2**
BORA				*i* S	**Sb**	**15 47 46.1**	**+0.4**

*ATH **11** 15:47:22.1, 37°.99N×21°.51E, h26km±1km, MD2.9/7*
*CSEM **11** 15:47:22.8±0.2, 38°.01N×21°.52E, h20km, MD2.9, Error ellipse: s-maj=4.1km s-min=3.1km az=128.0*
*THE **11** 15:47:23.4, 37°.99N×21°.56E, h18km±1km, ML2.7/5, Error ellipse: s-maj=1.7km s-min=0.6km az=14.0*
*ISCJB **11** 15:47:23.4±0.5, 38°.00N±0°.04×21°.55E±0°.03, h26km±8km, Error ellipse: s-maj=7.0km s-min=4.5km az=168.9*

ISC 11 15:47:23.3±0.4, 37°.98N±0°.04×21°.55E±0°.03, h18km±6km, n27, σ0°.80/44, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.10**	**318**	*e*PB	**Pg**	**15 47 26.9**	**0.0**
RLS	**Riolos of Patr**	**0.10**	**318**	*e*Pb	**Pg**	**15 47 26.9**	**0.0**
LAKA	**Lakka**	**0.42**	**53**	P	**Pg**	**15 47 31.6**	**-0.4**
LAKA				S	**Sg**	**15 47 38.5**	**+0.7**
LAKA	**Lakka**	**0.42**	**53**	P	**Pg**	**15 47 31.6**	**-0.4**
LAKA				S	**Sg**	**15 47 38.5**	**+0.7**
EFP	**Efpalio**	**0.52**	**32**	*e*PN	**Pg**	**15 47 33.2**	**-0.6**
EFP	**Efpalio**	**0.52**	**32**	*e*Pn	**Pg**	**15 47 33.2**	**-0.6**
TRIZ	**Trizonia**	**0.56**	**47**	P	**Pg**	**15 47 33.7**	**-0.8**
TRIZ				S	**Sg**	**15 47 43.3**	**+1.3**
TRIZ	**Trizonia**	**0.56**	**47**	P	**Pg**	**15 47 33.7**	**-0.8**
TRIZ				S	**Sg**	**15 47 43.3**	**+1.3**
KFL	**Anninata**	**0.61**	**282**	P	**Pg**	**15 47 35.0**	**-0.4**
KFL				S	**Sg**	**15 47 45.0**	**+1.3**
KALE	**Kalithea**	**0.62**	**49**	P	**Pg**	**15 47 34.8**	**-0.7**
KALE				S	**Sg**	**15 47 44.2**	**+0.4**
KALE	**Kalithea**	**0.62**	**49**	P	**Pg**	**15 47 34.8**	**-0.7**
KALE				S	**Sg**	**15 47 44.2**	**+0.4**
GUR	**Goura**	**0.63**	**94**	P	**Pg**	**15 47 34.8**	**-0.9**
GUR				S	**Sg**	**15 47 44.4**	**+0.3**
GUR	**Goura**	**0.63**	**94**	*e*PN	**Pg**	**15 47 34.7**	**-1.0**
GUR	**Goura**	**0.63**	**94**	P	**Pg**	**15 47 34.8**	**-0.9**
GUR				S	**Sg**	**15 47 44.4**	**+0.3**
VLS	**Valsamata**	**0.78**	**285**	P	**Pg**	**15 47 37.2**	**-1.4**
VLS				S	**Sg**	**15 47 49.9**	**+1.0**
VLS	**Valsamata**	**0.78**	**285**	*e*PN	**Pg**	**15 47 37.1**	**-1.5**
VLS	**Valsamata**	**0.78**	**285**	P	**Pg**	**15 47 37.2**	**-1.4**
VLS				S	**Sg**	**15 47 49.9**	**+1.0**
ITM	**Ithomi**	**0.86**	**159**	P	**Pb**	**15 47 39.4**	**-0.2**
ITM				S	**Sb**	**15 47 52.0**	**+1.3**
ITM	**Ithomi**	**0.86**	**159**	*e*PN	**Pn**	**15 47 39.2**	**-1.2**
ITM	**Ithomi**	**0.86**	**159**	P	**Pb**	**15 47 39.4**	**-0.2**
ITM				S	**Sb**	**15 47 52.0**	**+1.3**
DSF	**Desfina**	**0.88**	**61**	P	**Pb**	**15 47 39.2**	**-0.8**
DSF				S	**Sb**	**15 47 52.2**	**+0.8**
DSF	**Desfina**	**0.88**	**61**	P	**Pb**	**15 47 39.2**	**-0.8**
DSF				S	**Sb**	**15 47 52.2**	**+0.8**
PYL	**PYLOS**	**1.10**	**172**	P	**Pb**	**15 47 43.3**	**-0.4**
PYL				S	**Sb**	**15 47 58.5**	**+0.9**
PYL	**PYLOS**	**1.10**	**172**	*e*PN	**Pn**	**15 47 43.4**	**-0.3**
PYL	**PYLOS**	**1.10**	**172**	*e*Pn	**Pn**	**15 47 43.4**	**-0.3**
PYL				S	**Sb**	**15 47 58.5**	**+0.9**
LTK	**Loutraki**	**1.12**	**88**	*e*PN	**Pn**	**15 47 44.0**	**0.0**
LTK	**Loutraki**	**1.12**	**88**	*e*Pn	**Pn**	**15 47 44.0**	**0.0**

MEX 11 15:53:09.3±0.7, 16°.45N×97°.97W, h29km±8km, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.16**	**250**	*i* P	Pb	15 53 13.6	-1.4
PNIG				*i* S	Sb	15 53 17.7	-1.2
VHO	**Vista Hermosa**	**1.33**	**62**	*i* P	Pn	15 53 30.4	-1.5
VHO				*i* S	Sn	15 53 45.3	-3.5
OXX	**Oaxaca**	**1.35**	**62**	*e*P	Pn	15 53 32.8	+0.6
OXX				*i* S	Sn	15 53 48.5	-0.6
UTMO	**Huajuapan**	**1.38**	**6**	*i* P	Pn	15 53 30.6	-2.0
UTMO				*i* S	Sn	15 53 47.4	-2.6
ACX	**Acapulco**	**1.86**	**283**	*i* P	Pn	15 53 38.1	-1.1
ACX				*i* S	Sn	15 53 59.8	-1.9
HUIG	**Huatulco**	**1.91**	**110**	*i* P	Pn	15 53 38.1	-1.8
HUIG				*i* S	Sn	15 53 59.9	-3.0
CAIG	**El Cayaco**	**2.28**	**285**	*e*P	Pn	15 53 43.8	-1.2
CAIG				*i* S	Sn	15 54 10.2	-1.9

*IDC **11** 15:53:15.1±5.1, 20°.27S×168°.17E, h0km, mb4.1/5, mb1 4.3/5, mb1mx4.0/15, mbtmp4.1/5, MS3.5/3, Ms1 3.4/3, ms1mx3.0/21, Error ellipse: s-maj=108.2km s-min=54.8km az=120.0*
*NOU **11** 15:53:15.9±1.2, 20°.00S×168°.16E, h10km, MD2.8, ML3.6*
*NEIC **11** 15:53:20.6±4.4, 20°.39S×168°.13E, h35km, mb3.8/1, Error ellipse: s-maj=80.0km s-min=31.8km az=102.0*

ISC 11 15:53:16.7±2.8, 20°.4S±0°.1×168°.2E±0°.3, h13km±27km, n16, σ0°.71/21, mb3.9/5, MS3.3/2, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.17**	**215**	*e*P	**Pn**	**15 53 52.1**	**-0.5**
BAYA				*e*S	**Sn**	**15 54 19.3**	**-0.2**
DZM	**Mont Dzumac**	**2.37**	**224**	*e*P	**Pn**	**15 53 55.3**	**-0.1**
DZM				*e*S	**Sn**	**15 54 24.4**	**-0.1**
DZM				AMP		15 54 29.3	
	comp=Z,2μm,0.6s						
DZM	**Mont Dzumac**	**2.37**	**224**	*e*P	**Pn**	**15 53 55.6**	**+0.2**
PLUM	**Mont Dore**	**2.40**	**218**	*e*P	**Pn**	**15 53 55.7**	**-0.1**
PLUM				*e*S	**Sn**	**15 54 25.8**	**+0.6**
NORM	**Noumea**	**2.46**	**221**	*e*P	**Pn**	**15 53 56.5**	**-0.1**
NORM				*e*S	**Sn**	**15 54 26.5**	**-0.1**
NOUC	**Port Laguerre**	**2.49**	**226**	*e*P	**Pn**	**15 53 57.2**	**+0.2**
NOUC				*e*S	**Sn**	**15 54 26.6**	**-0.7**
NOUC				AMP		15 54 43.5	
	comp=Z,127nm,3.4s						
ONTRN	**Noumea**	**2.54**	**220**	*e*P	**Pn**	**15 53 57.8**	**+0.2**
ONTRN				*e*S	**Sn**	**15 54 28.9**	**+0.4**
URZ	**Urewera**	**19.42**	**159**	LR	LR	16 02 37.2	
	comp=Z,142nm,20.5s,baz=44,slow=29						
CTA	**Charters Tower**	**20.62**	**267**	P	**P**	**15 57 57.7**	**+1.7**
	comp=Z,4.3nm,0.7s,baz=86,slow=14,SNR=3.1						
CTA				LR	LR	16 05 03.3	
	comp=Z,83nm,18.4s,MS3.1,baz=42,slow=34						
CTA	**Charters Tower**	**20.62**	**267**	P	**P**	**15 57 57.7**	**+1.7**
CTA				LR	LR	16 05 03.3	
STKA	**Stephens Creek**	**26.44**	**239**	P	**P**	**15 58 53.8**	**+0.3**
	comp=Z,2.7nm,0.5s,mb4.0,baz=87,slow=10,SNR=8.9						
STKA				LR	LR	16 07 59.1	
	comp=Z,121nm,19.2s,MS3.5,baz=358,slow=33						
STKA	**Stephens Creek**	**26.44**	**239**	*e*P	**P**	**15 58 55.2**	**+1.7**
STKA				LR	LR	16 07 59.1	
WRAB	**Tennant Creek**	**31.77**	**265**	*e*P	**P**	**15 59 39.8**	**-1.3**
	comp=Z,0.6nm,0.4s,mb3.8						
WRA	**Warramunga Arr**	**31.78**	**265**	P	**P**	**15 59 39.8**	**-1.3**
	comp=Z,0.6nm,0.5s,mb3.7,baz=90,slow=8.4,SNR=19						
ASAR	**Alice Springs**	**31.94**	**258**	P	**P**	**15 59 42.1**	**-0.3**
	comp=Z,4.5nm,0.7s,mb4.4,baz=87,slow=9.1,SNR=81						
CMAR	**Chiang Mai Arr**	**78.10**	**295**	P	**P**	**16 05 16.4**	**+0.5**
	comp=Z,1.0nm,0.8s,mb3.8,baz=140,slow=5.5,SNR=9.2						

NEIC 11 16:07:53.0, 37°.31S×177°.55E, h95km, ML4.0(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	**White Island**	**0.36**	**233**	P	Pn	16 08 07.3	0.0
WIZ				S	Sn	16 08 17.6	-0.4
MXZ	**Matakaoa Point**	**0.65**	**113**	P	Pn	16 08 09.4	-0.1
MXZ				S	Sn	16 08 23.1	+1.3
PUZ	**Puketiti**	**0.95**	**144**	P	Pn	16 08 12.4	0.0
PUZ				S	Sn	16 08 27.0	0.0
MARZ	**Manawahe**	**0.97**	**226**	P	Pn	16 08 12.8	+0.1
URZ	**Urewera**	**1.01**	**200**	P	Pn	16 08 13.2	+0.1
MWZ	**Matawai**	**1.02**	**181**	P	Pn	16 08 13.3	0.0
MWZ				S	Sn	16 08 28.7	+0.2

*BJI **11**

BRTR	**Keskin Array B**	**88.95**	**310**	P		**P**	**16 21 23.8 +0.5**
	0.5nm,0.6s,mb3.8,baz=17,slow=10,SNR=2.4						
ARCES	**ARCESS Array B**	**89.01**	**340**	P		**P**	**16 21 22.0 -1.0**
	0.8nm,0.6s,mb3.9,baz=76,slow=6.6,SNR=5.6						
FINES	**FINESS Array B**	**90.46**	**332**	P		**P**	**16 21 28.8 -1.1**
	2.3nm,0.8s,mb4.3,baz=90,slow=6.9,SNR=3.4						
FINES				LR	LR		17 06 57.2
	comp=Z,90nm,19.9s,baz=328,slow=39						
NOA	**NORSAR Array B**	**97.40**	**334**	P		**P**	**16 22 00.1 -1.5**
	1.3nm,0.8s,mb4.4,baz=68,slow=4.6,SNR=3.3						
TORD	**Torodi Ar. Bea**	**122.28**	**289**	PKP	PKPdf		16 27 23.7 -0.4
	0.4nm,0.6s,baz=347,slow=1.9,SNR=2.9						

*ISCJB **11** 16:09:42.8±0.4,37°.98N±0°.02×21°.55E±0°.03,h6km±3km, Error ellipse: s-maj=3.5km s-min=3.2km az=21.5*
*ATH **11** 16:09:43.4,37°.99N×21°.54E,h14km±2km,MD3.2/8,ML3.3*
*THE **11** 16:09:43.7,38°.00N×21°.56E,h7km±1km,ML3.7/11,Error ellipse: s-maj=1.9km s-min=0.9km az=198.0*
*CSEM **11** 16:09:43.0±0.2,38°.00N×21°.54E,h10km,ML3.2,Error ellipse: s-maj=4.3km s-min=3.6km az=76.0*
*NEIC **11** 16:09:44.3,37°.99N×21°.64E,h9km,ML3.2(ATH),After ATH.*

ISC 11 16:09:43.4±0.4,37°.98N±0°.02×21°.55E±0°.03,h14km±3km, n70,σ1°.01/106,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.10**	**317**	*e*Pg	**Pg**	**16 09 46.5**	**0.0**
RLS	**Riolos of Patr**	**0.10**	**317**	*e*PG	**Pg**	**16 09 46.5**	**0.0**
RLS	**Riolos of Patr**	**0.10**	**317**	*e*Pg	**Pg**	**16 09 46.5**	**0.0**
UPR	**University Cam**	**0.35**	**31**	P	**Pg**	**16 09 50.3**	**-0.3**
UPR				S	**Sg**	**16 09 56.1**	**+0.7**
UPR	**University Cam**	**0.35**	**31**	*e*PG	**Pg**	**16 09 50.0**	**-0.6**
UPR				*e*SB	**Sg**	**16 09 56.2**	**+0.8**
UPR	**University Cam**	**0.35**	**31**	*e*Pg	**Pg**	**16 09 50.0**	**-0.6**
UPR				S	**Sg**	**16 09 56.1**	**+0.7**
LAKA	**Lakka**	**0.42**	**52**	P	**Pg**	**16 09 51.3**	**-0.5**
LAKA				S	**Sg**	**16 09 57.7**	**+0.2**
LAKA	**Lakka**	**0.42**	**52**	P	**Pg**	**16 09 51.3**	**-0.5**
LAKA				S	**Sg**	**16 09 57.7**	**+0.2**
EFP	**Efpalio**	**0.52**	**32**	P	**Pg**	**16 09 52.8**	**-0.9**
EFP				S	**Sg**	**16 10 00.8**	**+0.1**
EFP	**Efpalio**	**0.52**	**32**	*e*PB	**Pb**	**16 09 52.9**	**-1.5**
EFP				*e*SB	**Sb**	**16 10 01.0**	**-0.8**
EFP	**Efpalio**	**0.52**	**32**	*e*Pb	**Pb**	**16 09 52.9**	**-1.5**
EFP				S	**Sg**	**16 10 00.8**	**+0.1**
TRIZ	**Trizonia**	**0.56**	**47**	P	**Pg**	**16 09 53.5**	**-0.9**
TRIZ				S	**Sg**	**16 10 01.8**	**0.0**
KALE	**Kalithea**	**0.62**	**48**	P	**Pg**	**16 09 54.5**	**-0.9**
KALE				S	**Sg**	**16 10 04.1**	**+0.5**
KFL	**Anninata**	**0.62**	**282**	P	**Pg**	**16 09 55.2**	**-0.3**
KFL				S	**Sg**	**16 10 05.3**	**+1.6**
GUR	**Goura**	**0.62**	**94**	P	**Pg**	**16 09 55.0**	**-0.6**
GUR				S	**Sb**	**16 10 05.0**	**+0.3**
GUR	**Goura**	**0.62**	**94**	*e*PG	**Pg**	**16 09 55.2**	**-0.4**
GUR				*e*SB	**Sb**	**16 10 05.0**	**+0.3**
GUR	**Goura**	**0.62**	**94**	*e*Pb	**Pg**	**16 09 55.2**	**-0.4**
GUR				S	**Sb**	**16 10 05.0**	**+0.3**
VLS	**Valsamata**	**0.79**	**285**	*e*Pb	**Pg**	**16 10 02.5**	**+3.9**
VLS	**Valsamata**	**0.79**	**285**	P	**Pg**	**16 09 57.3**	**-1.3**
VLS				S	**Sg**	**16 10 10.1**	**+1.1**
VLS	**Valsamata**	**0.79**	**285**	P	**Pg**	**16 09 57.3**	**-1.3**
VLS				S	**Sg**	**16 10 10.1**	**+1.1**
ITM	**Ithomi**	**0.85**	**160**	*e*Pg	**Pg**	**16 09 59.9**	**0.0**
ITM	**Ithomi**	**0.85**	**160**	P	**Pg**	**16 09 59.8**	**-0.1**
ITM				S	**Sg**	**16 10 12.2**	**+1.1**
ITM	**Ithomi**	**0.85**	**160**	*e*PB	**Pg**	**16 09 59.9**	**0.0**
ITM	**Ithomi**	**0.85**	**160**	P	**Pg**	**16 09 59.8**	**-0.1**
ITM				S	**Sg**	**16 10 12.2**	**+1.1**
DSF	**Desfina**	**0.88**	**61**	P	**Pg**	**16 09 59.0**	**-1.4**
DSF				S	**Sg**	**16 10 12.4**	**+0.5**
VLX	**Vlachokerasia**	**0.90**	**133**	P	**Pb**	**16 10 00.7**	**0.0**
VLX				S	**Sg**	**16 10 14.1**	**+1.6**
VLX	**Vlachokerasia**	**0.90**	**133**	*e*PB	**Pg**	**16 10 00.6**	**-0.1**
VLX	**Vlachokerasia**	**0.90**	**133**	P	**Pb**	**16 10 00.7**	**0.0**
VLX				S	**Sg**	**16 10 14.1**	**+1.6**
EVR	**Evrytania**	**0.95**	**12**	*e*Pb	**Pg**	**16 10 01.2**	**-0.6**
EVR				*e*Sb	**Sg**	**16 10 15.6**	**+1.3**
EVR	**Evrytania**	**0.95**	**12**	*e*PB	**Pg**	**16 10 01.2**	**-0.6**
EVR				*e*SB	**Sg**	**16 10 15.6**	**+1.3**
EVR	**Evrytania**	**0.95**	**12**	*e*Pb	**Pg**	**16 10 01.2**	**-0.6**
EVR				*e*Sb	**Sg**	**16 10 15.6**	**+1.3**
LKD2	**Lefkada island**	**1.07**	**319**	P	**Pg**	**16 10 02.0**	**-2.0**
LKD2				S	**Sg**	**16 10 23.9**	**+5.9**
LKD2	**Lefkada island**	**1.07**	**319**	P	**Pg**	**16 10 02.0**	**-2.0**
PYL	**PYLOS**	**1.10**	**172**	P	**Pg**	**16 10 04.0**	**-0.5**
PYL				S	**Sg**	**16 10 23.2**	**+4.4**
PYL	**PYLOS**	**1.10**	**172**	*e*PB	**Pg**	**16 10 04.6**	**+0.1**
PYL	**PYLOS**	**1.10**	**172**	*e*Pg	**Pg**	**16 10 04.6**	**+0.1**
PYL				S	**Sg**	**16 10 23.2**	**+4.4**
LTK	**Loutraki**	**1.12**	**88**	P	**Pg**	**16 10 03.8**	**-1.1**
LTK				S	**Sg**	**16 10 20.4**	**+0.9**
LTK	**Loutraki**	**1.12**	**88**	*e*PG	**Pg**	**16 10 03.9**	**-1.0**
LTK	**Loutraki**	**1.12**	**88**	*e*Pg	**Pg**	**16 10 03.9**	**-1.0**
LTK				S	**Sg**	**16 10 20.4**	**+0.9**
AGG	**Agios Georgios**	**1.20**	**30**	P	**Pn**	**16 10 04.8**	**-1.0**
AGG				S	**Sb**	**16 10 23.4**	**+2.0**
AGG	**Agios Georgios**	**1.20**	**30**	P	**Pn**	**16 10 04.8**	**-1.0**
AGG				S	**Sb**	**16 10 23.4**	**+2.0**
LKR	**Lokris**	**1.32**	**59**	*e*Pb	**Pb**	**16 10 06.7**	**-1.2**
LKR	**Lokris**	**1.32**	**59**	P	**Pn**	**16 10 07.0**	**-0.4**
LKR				S	**Sb**	**16 10 26.5**	**+1.8**
LKR	**Lokris**	**1.32**	**59**	*e*PB	**Pb**	**16 10 06.7**	**-1.2**
LKR	**Lokris**	**1.32**	**59**	*e*Pb	**Pb**	**16 10 06.7**	**-1.2**
LKR	**Lokris**	**1.32**	**59**	P	**Pn**	**16 10 07.0**	**-0.4**
LKR				S	**Sb**	**16 10 26.5**	**+1.8**
ATAL	**Atalanti**	**1.35**	**58**	P	**Pn**	**16 10 07.7**	**-0.2**
ATAL				S	**Sn**	**16 10 25.9**	**+0.2**
ATAL	**Atalanti**	**1.35**	**58**	P	**Pn**	**16 10 07.7**	**-0.2**
ATAL				S	**Sn**	**16 10 25.9**	**+0.2**
NAIG	**Nisos Aigina**	**1.55**	**98**	*e*Pb	**Pb**	**16 10 13.3**	**+1.5**
NAIG	**Nisos Aigina**	**1.55**	**98**	*e*PB	**Pb**	**16 10 13.3**	**+1.5**
NAIG	**Nisos Aigina**	**1.55**	**98**	*e*Pb	**Pb**	**16 10 13.3**	**+1.5**
THL	**Klokotos Trika**	**1.62**	**13**	P	**Pn**	**16 10 12.8**	**+1.2**
THL				S	**Sg**	**16 10 37.5**	**+1.9**
THL	**Klokotos Trika**	**1.62**	**13**	P	**Pn**	**16 10 12.8**	**+1.2**
VLI	**Veliai**	**1.68**	**138**	*e*Pb	**Pg**	**16 10 15.4**	**-0.2**
VLI	**Veliai**	**1.68**	**138**	*e*PG	**Pg**	**16 10 15.4**	**-0.2**
VLI	**Veliai**	**1.68**	**138**	*e*Pb	**Pg**	**16 10 15.4**	**-0.2**
ATH	**Athens Observa**	**1.71**	**90**	*e*Pg	**Pn**	**16 10 14.2**	**+1.4**
ATH	**Athens Observa**	**1.71**	**90**	*e*PN	**Pn**	**16 10 14.2**	**+1.4**
ATH	**Athens Observa**	**1.71**	**90**	*e*Pg	**Pn**	**16 10 14.2**	**+1.4**
VLY	**Voula,Athens**	**1.78**	**94**	*e*Pb	**Pb**	**16 10 14.4**	**-1.4**
PTL	**Penteli**	**1.83**	**87**	*e*Pb	**Pb**	**16 10 15.3**	**-1.3**
XOR	**Xorichti**	**1.88**	**42**	P	**Pn**	**16 10 15.4**	**+0.2**
XOR	**Xorichti**	**1.88**	**42**	P	**Pn**	**16 10 15.4**	**+0.2**
KYTH	**Kithira**	**2.07**	**145**	*e*Pg	**Pg**	**16 10 22.9**	**-0.2**
KYTH	**Kithira**	**2.07**	**145**	*e*Pg	**Pg**	**16 10 22.9**	**-0.2**
AOS	**Alonnisos**	**2.17**	**56**	P	**Pn**	**16 10 18.7**	**-0.5**
AOS	**Alonnisos**	**2.17**	**56**	P	**Pn**	**16 10 18.7**	**-0.5**
KEK	**Kerkira**	**2.21**	**322**	*e*Pn	**Pn**	**16 10 20.7**	**+1.1**
KEK	**Kerkira**	**2.21**	**322**	*e*Pn	**Pn**	**16 10 20.7**	**+1.1**
KRUS	**Krusevo**	**3.39**	**356**	*e*Pn	**Pb**	**16 10 41.9**	**-1.3**

*IDC **11** 16:10:52.0±0.6, 17°.88S×65°.52E, h0km, mb4.1/17, mb1 4.2/18, mb1mx4.1/27, mbtmp4.1/18, ML4.8/1, MS4.3/17, Ms1 4.3/17, ms1mx4.1/27, Error ellipse: s-maj=19.6km s-min=15.1km az=16.0*
*ISCJB **11** 16:10:52.1±0.4, 17°.96S±0°.08×65°.57E±0°.06, h10km, mb4.3/39, MS4.3/17, Error ellipse: s-maj=11.2km s-min=8.8km az=168.5*
*NEIC **11** 16:10:53.6±0.4, 17°.94S×65°.52E, h10km, mb4.7/21, Error ellipse: s-maj=11.7km s-min=8.6km az=162.0*
*GCMT **11** 16:10:59.4±0.2, 17°.70S×65°.45E, h22km±1km, MW5.3, Moment Tensor Solution. s51,c76; s90,c160; Moment tensor: Scale 10^{17}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\phi r}$0.00; $M_{\theta r}$0.00; Best double couple: $M_0$1.00000×10^{17} NP1:ϕ_s151.00000°, δ76.00000°, λ177.00000°. NP2:ϕ_s241.00000°, δ87.00000°, λ14.00000°. Principal axes: T 1.1100, Plg12.0000°, Azm107.0000°; N -0.1600, Plg76.0000°, Azm254.0000°; P -0.9500, Plg7.0000°, Azm15.0000°; Data Used: II IU IC G CN.*

ISC 11 16:10:54.0±0.4, 17°.96S±0°.08×65°.53E±0°.06, h10km, n88, σ1°.27/78, mb4.3/39, MS4.3/17, 12C-2D, Mauritius - Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**9.76**	**249**	*e*Pn	**Pn**	**16 13 11.7**	**-2.7**
MSEY	**Mahe Island**	**16.46**	**322**	*e*P	**Pn**	**16 14 46.4**	**+1.2**
ABPO	**Ambohimpanom**	**17.39**	**264**	*e*P	**Pn**	**16 14 57.1**	**+0.2**
	35nm,1.2s						
OPO	**Ambohidratompo**	**17.43**	**265**	P	**Pn**	**16 14 56.0**	**-1.5**
	2.9nm,0.3s,baz=91,slow=11,SNR=18						
OPO				S	**Sn**	**16 17 59.8**	**-12**
	0.7nm,0.3s,baz=110,slow=12,SNR=3.0						
PALK	**Pallekele**	**29.21**	**32**	LR	LR	16 25 31.2	
	comp=Z,282nm,18.1s,MS3.9,baz=206,slow=30						
KMBO	**Kilima Mbogo**	**32.42**	**298**	P	**P**	**16 17 22.3**	**-2.2**
	1.2nm,0.3s,mb4.3,baz=80,slow=18,SNR=5.2						
KMBO				LR	LR	16 28 31.8	
	comp=Z,652nm,18.2s,MS4.4,baz=100,slow=33						
KMBO	**Kilima Mbogo**	**32.42**	**298**	P	**P**	**16 17 22.3**	**-2.2**
KMBO				LR	LR	16 28 31.8	
LSZ	**Lusaka**	**35.84**	**269**	*e*P	**P**	**16 17 54.6**	**+0.5**
	9.1nm,1.1s,mb4.6						
LBTB	**Lobatse**	**37.71**	**252**	P	**P**	**16 18 10.6**	**+0.6**
	5.4nm,1.1s,mb4.2,baz=112,slow=6.0,SNR=3.9						
BOSA	**Boshof**	**38.32**	**246**	P	**P**	**16 18 17.4**	**+2.3**
	4.2nm,1.0s,mb4.1,baz=352,slow=20,SNR=3.1						
BOSA				LR	LR	16 31 05.7	
	comp=Z,565nm,19.4s,MS4.4,baz=86,slow=32						
BOSA	**Boshof**	**38.32**	**246**	*e*P	**P**	**16 18 17.7**	**+2.6**
	1.0nm,0.6s,mb3.7						
BOSA				LR	LR	16 31 05.7	
PSI	**Prapat**	**38.84**	**61**	P	**P**	**16 18 19.6**	**0.0**
	3.7nm,0.4s,mb4.5,baz=158,slow=22,SNR=6.2						
PSI				LR	LR	16 31 04.8	
	comp=Z,402nm,18.1s,MS4.3,baz=232,slow=31						
CM31	**Chiang Mai Arr**	**48.87**	**44**	*e*P	**P**	**16 19 43.2**	**+3.1**
	6.7nm,1.0s,mb4.6						
CMAR	**Chiang Mai Arr**	**48.87**	**44**	P	**P**	**16 19 38.4**	**-1.7**
	1.0nm,0.9s,mb3.8,baz=232,slow=9.8,SNR=5.7						
MAW	**Mawson**	**49.65**	**181**	LR	LR	16 36 26.7	
	comp=Z,335nm,21.3s,MS4.3,baz=350,slow=31						
MAW	**Mawson**	**49.65**	**181**	*e*P	**P**	**16 19 45.0**	**-0.5**
	2.2nm,1.2s,mb4.1						
KBL	**Kabul**	**52.31**	**4**	*e*P	**P**	**16 20 07.2**	**+1.4**
	9.7nm,0.8s,mb4.8						
LSA	**Lhasa**	**53.44**	**28**	P	**P**	**16 20 16.3**	**+2.0**
FITZ	**Fitzroy Crossi**	**56.92**	**100**	P	**P**	**16 20 39.5**	**-0.3**
	2.4nm,0.7s,mb4.3,baz=270,slow=16,SNR=4.2						
EKS2	**Erkin-Say**	**60.79**	**7**	P	**P**	**16 21 05.6**	**-0.5**
	8.0nm,1.0s,mb4.8						
TKM2	**Tokmak 2**	**61.28**	**8**	*e*P	**P**	**16 21 08.5**	**-0.9**
	5.3nm,0.7s,mb4.8						
ASAR	**Alice Springs**	**63.64**	**108**	P	**P**	**16 21 25.1**	**-0.6**
	2.5nm,0.7s,mb4.3,baz=274,slow=5.7,SNR=30						
ASAR				PcP	PcP	16 22 00.8	-1.3
	2.0nm,0.8s,baz=272,slow=5.4,SNR=4.5						
BRTR	**Keskin Array B**	**64.64**	**333**	LR	LR	16 48 04.1	
	comp=Z,211nm,20.9s,MS4.3,baz=312,slow=35						
WRA	**Warramunga Arr**	**64.68**	**104**	P	**P**	**16 21 31.8**	**-0.8**
	6.3nm,0.9s,mb4.7,baz=264,slow=5.8,SNR=21						
WRA				LR	LR	16 48 45.6	
	comp=Z,363nm,18.9s,MS4.6,baz=255,slow=35						
WRAB	**Tennant Creek**	**64.70**	**104**	*e*P	**P**	**16 21 32.6**	**-0.1**
	12nm,0.9s,mb4.9						
MKAR	**Makanchi Array**	**66.20**	**13**	P	**P**	**16 21 39.9**	**-1.8**
	0.3nm,0.7s,mb3.4,baz=158,slow=1.6,SNR=3.7						
MKAR				LR	LR	16 48 36.5	
	comp=Z,148nm,20.9s,MS4.2,baz=188,slow=34						
MKAR	**Makanchi Array**	**66.20**	**13**	P	**P**	**16 21 39.9**	**-1.8**
MKAR				LR	LR	16 48 36.5	
ABKAR	**Akbulak array**	**67.09**	**356**	*e*P	**P**	**16 21 45.7**	**-1.7**
	2.5nm,0.6s,mb4.4						
AKTK	**Aktyubinsk**	**68.41**	**355**	P	**P**	**16 21 54.5**	**-1.2**
AKTO	**Aktyubinsk**	**68.41**	**355**	P	**P**	**16 21 54.5**	**-1.2**
	2.1nm,0.8s,mb4.2,baz=166,slow=7.9,SNR=4.1						
STKA	**Stephens Creek**	**69.14**	**118**	LR	LR	16 46 31.4	
	comp=Z,405nm,19.6s,MS4.7,baz=213,slow=31						
KURK	**Kurchatov**	**69.34**	**9**	*e*P	**P**	**16 21 59.9**	**-1.6**
	5.3nm,0.9s,mb4.5						
TORD	**Torodi Ar. Bea**	**70.15**	**292**	P	**P**	**16 22 06.3**	**-1.0**
	0.7nm,1.0s,mb3.5,baz=120,slow=8.5,SNR=4.0						
TIRR	**Tirgusor**	**70.75**	**333**	⇑P	**P**	**16 22 17.0**	**+6.7**
TIRR	**Tirgusor**	**70.75**	**333**	⇑/P	**P**	**16 22 17.0**	**+6.7**
BVAR	**Borovoye Array**	**70.81**	**3**	P	**P**	**16 22 08.7**	**-1.8**
	1.3nm,0.8s,mb3.9,baz=161,slow=5.8,SNR=5.9						
QSPA	**South Pole Qui**	**72.14**	**180**	P	**P**	**16 22 19.0**	**+0.8**
	6.9nm,1.0s,mb4.6,baz=223,slow=1.1,SNR=11						
QSPA	**South Pole Qui**	**72.14**	**180**	P	**P**	**16 22 19.0**	**+0.8**
VRI	**Vrincioaia**	**72.60**	**333**	⇑P	**P**	**16 22 25.1**	**+3.7**
VRI	**Vrincioaia**	**72.60**	**333**	⇑/P	**P**	**16 22 25.0**	**+3.6**
MLR	**Muntele Rosu**	**72.65**	**332**	⇑P	**P**	**16 22 26.3**	**+4.6**
MLR	**Muntele Rosu**	**72.65**	**332**	⇑/P	**P**	**16 22 26.3**	**+4.6**
ZAA0	**Zalesovo Array**	**73.51**	**12**	P	**P**	**16 22 25.6**	**-1.0**
ZALV	**Zalesovo Beam**	**73.51**	**12**	P	**P**	**16 22 25.7**	**-0.9**
	0.7nm,0.5s,mb3.9,baz=207,slow=5.0,SNR=4.8						
ZALV				LR	LR	16 53 12.0	
	comp=Z,108nm,20.4s,MS4.1,baz=71,slow=35						
ZALV	**Zalesovo Beam**	**73.51**	**12**	P	**P**	**16 22 25.7**	**-0.9**
ZALV				LR	LR	16 53 12.0	
DBIC	**Dimbokro**	**73.62**	**283**	LR	LR	16 53 22.9	
	comp=Z,220nm,20.1s,MS4.4,baz=95,slow=35						
ARU	**Arti**	**74.33**	**356**	*e*P	**P**	**16 22 31.3**	**-0.1**
	7.0nm,1.0s,mb4.5						
BURAR	**Bucovina Array**	**74.61**	**333**	⇑P	**P**	**16 22 39.2**	**+6.0**
BURAR	**Bucovina Array**	**74.61**	**333**	⇑/P	**P**	**16 22 39.2**	**+6.0**
SONM	**Songino Array**	**75.02**	**27**	P	**P**	**16 22 36.2**	**+0.6**
	1.3nm,0.7s,mb4.0,baz=193,slow=12,SNR=4.1						
SONM				LR	LR	16 54 07.2	
	comp=Z,356nm,20.0s,MS4.7,baz=75,slow=35						
DRGR		**75.10**	**331**	⇓P	**P**	**16 22 43.3**	**+7.2**
DRGR		**75.10**	**331**	⇓/P	**P**	**16 22 43.3**	**+7.2**
AKASG	**Malin Array Be**	**75.45**	**337**	P	**P**	**16 22 38.0**	**+0.1**
	0.3nm,0.3s,mb3.7,baz=136,slow=5.3,SNR=6.3						
AKBB	**Malin Array Si**	**75.45**	**337**	P	**P**	**16 22 39.3**	**+1.3**
KIEV	**Kiev**	**75.45**	**337**	*e*P	**P**	**16 22 38.1**	**+0.2**
	8.1nm,0.8s,mb4.7						
PKSM	**Moragy**	**76.63**	**329**	⇑P	**P**	**16 22 45.2**	**+0.3**
PKSM	**Moragy**	**76.63**	**329**	⇑/P	**P**	**16 22 45.2**	**+0.4**
MORC	**Moravsky Berou**	**79.65**	**331**	⇑P	**P**	**16 23 09.4**	**+8.0**
MORC	**Moravsky Berou**	**79.65**	**331**	⇑/P	**P**	**16 23 09.4**	**+7.9**
KSRS	**Korea Array**	**80.48**	**46**	P	**P**	**16 23 08.6**	**+2.3**
	1.9nm,0.9s,mb4.0,baz=235,slow=6.1,SNR=7.2						
KSRS				LR	LR	16 56 18.7	
	comp=Z,147nm,20.3s,MS4.3,baz=52,slow=34						
GERES	**GERESS Array B**	**80.88**	**328**	P	**P**	**16 23 07.7**	**-0.4**
	0.2nm,0.3s,mb3.5,baz=29,slow=12,SNR=3.9						
GERES				LR	LR	16 57 22.7	
	comp=Z,74nm,20.1s,MS4.0,baz=297,slow=34						
MBDF	**Montbardon**	**82.13**	**322**	*e*P	**P**	**16 23 20.8**	**+6.0**
	11nm,0.7s,mb4.6						
MBDF	**Montbardon**	**82.13**	**322**	*e*P	**P**	**16 23 20.8**	**+6.0**
	5.7nm,0.7s,mb4.6						
SMRF	**Simiane la Rot**	**82.41**	**321**	*e*P	**P**	**16 23 23.6**	**+7.2**
	9.9nm,0.8s,mb4.5						
SMRF	**Simiane la Rot**	**82.41**	**321**	*e*P	**P**	**16 23 23.6**	**+7.2**
	9.9nm,0.8s,mb4.8						
LPG	**La Plagne**	**82.58**	**323**	*e*P	**P**	**16 23 24.1**	**+6.9**
ORIF	**Oris-en-Rattie**	**82.76**	**322**	*e*P	**P**	**16 23 25.1**	**+7.0**
	7.9nm,0.7s,mb4.5						
ORIF	**Oris-en-Rattie**	**82.76**	**322**	*e*P	**P**	**16 23 25.1**	**+7.0**
	4.0nm,0.7s,mb4.6						
CDF	**Champ du Feu**	**83.96**	**325**	*e*P	**P**	**16 23 30.8**	**+6.5**
	10nm,0.9s,mb4.7						
CDF	**Champ du Feu**	**83.96**	**325**	*e*P	**P**	**16 23 30.8**	**+6.5**
	5.1nm,0.9s,mb4.7						
MTLF	**Montolieu**	**84.13**	**319**	*e*P	**P**	**16 23 32.1**	**+6.9**
	6.6nm,0.7s,mb4.5						
MTLF	**Montolieu**	**84.13**	**319**	*e*P	**P**	**16 23 32.1**	**+6.9**
	3.3nm,0.7s,mb4.6						
CAF	**Calviac**	**85.04**	**320**	*e*P	**P**	**16 23 37.9**	**+8.1**
	6.6nm,0.8s,mb4.5						
CAF	**Calviac**	**85.04**	**320**	*e*P	**P**	**16 23 37.9**	**+8.1**
	3.3nm,0.8s,mb4.5						
LOR	**Lormes**	**85.23**	**323**	*e*P	**P**	**16 23 36.2**	**+5.5**
ETSF	**Etsaut**	**85.66**	**318**	*e*P	**P**	**16 23 39.7**	**+6.7**
	10nm,1.0s,mb4.7						
ETSF	**Etsaut**	**85.66**	**318**	*e*P	**P**	**16 23 39.7**	**+6.7**
	5.3nm,1.0s,mb4.7						
SJPF	**Ste Jean**	**86.19**	**318**	*e*P	**P**	**16 23 40.5**	**+4.9**
	17nm,1.0s,mb4.9						
SJPF	**Ste Jean**	**86.19**	**318**	*e*P	**P**	**16 23 40.5**	**+4.9**
	8.6nm,1.0s,mb4.9						
ESDC	**Sonseca Array**	**86.42**	**314**	P	**P**	**16 23 39.9**	**+3.1**
	1.9nm,0.6s,mb4.5,baz=111,slow=4.0,SNR=6.3						
ESDC				LR	LR	17 01 40.0	
	comp=Z,129nm,21.4s,MS4.3,baz=135,slow=35						
ESDC	**Sonseca Array**	**86.42**	**314**	P	**P**	**16 23 39.9**	**+3.1**
ESDC				LR	LR	17 01 40.0	
MJAR	**Matsushiro Arr**	**87.33**	**50**	P	**P**	**16 23 42.2**	**+0.9**
	0.3nm,0.3s,mb4.0,baz=74,slow=11,SNR=4.6						
MJAR				LR	LR	17 02 31.6	
	comp=Z,94nm,19.6s,MS4.2,baz=315,slow=36						
ARCES	**ARCESS Array B**	**91.75**	**347**	LR	LR	17 06 10.4	
	comp=Z,68nm,18.1s,MS4.1,baz=131,slow=36						
YKA	**Yellowknife Ar**	**135.51**	**0**	PKP	PKPdf	16 30 15.1	+1.1
	0.3nm,0.6s,baz=137,slow=35,SNR=3.0						
RSSD	**Black Hills**	**152.48**	**344**	*e*PKPbc	PKPbc	16 30 48.9	-1.7
PDAR	**Pinedale Array**	**154.92**	**351**	PKPbc	PKPbc	16 30 57.2	+1.3
	0.2nm,0.6s,baz=48,slow=2.7,SNR=2.4						
NVAR	**Mina Array Bea**	**159.33**	**9**	PKPab	PKPab	16 31 31.1	+0.9
	0.8nm,0.7s,baz=320,slow=0.8,SNR=3.9						
TXAR	**Lajitas Array**	**164.97**	**321**	PKPab	PKPab	16 31 55.7	+0.4
	0.3nm,0.8s,baz=200,slow=2.4,SNR=3.3						

*NIED **11** 16:14:00,37°.40N×141°.20E,h20km,Mw3.4 Best double couple: $M_0$1.25000×10^{14} NP1:ϕ_s86.00000°, δ69.00000°, λ133.00000°. NP2:ϕ_s197.00000°, δ47.00000°, λ30.00000°.*
*JMA **11** 16:14:34.5±0.1,37°.45N×141°.19E,h26km±1km,M3.6 Broadband fault plane solution: P waves. NP1: ϕ_s208.00000°, δ26.00000°, λ36.00000°. NP2:ϕ_s85.00000°, δ75.00000°, λ112.00000°. Principal axes: T Plg55.0000°, Azm22.0000°; N Plg21.0000°, Azm259.0000°; P Plg27.0000°, Azm158.0000°;*
JMA Felt II J1.
*ISCJB **11** 16:14:34.1±1.0,37°.41N±0°.04×141°.24E±0°.08,h33km Error ellipse: s-maj=10.0km s-min=4.9km az=15.9*

ISC 11 16:14:33.4±1.2,37°.43N±0°.03×141°.28E±0°.07,h17km±5km, n10,σ0°.83/20,3C-5D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.33**	**258**	⇑P	**Pg**	**16 14 40.9**	**+0.5**
JFK				S	**Sg**	**16 14 45.3**	**+0.2**
ONAJ	**Iwakimizuishiy**	**0.51**	**229**	⇑P	**Pg**	**16 14 43.8**	**+0.3**
ONAJ				S	**Sg**	**16 14 50.5**	**+0.1**
JMM	**Marumori**	**0.58**	**318**	⇓P	**Pg**	**16 14 44.8**	**-0.1**
JMM				S	**Sg**	**16 14 52.3**	**-0.4**
JFT	**Otama**	**0.75**	**277**	⇓P	**Pb**	**16 14 48.0**	**-0.1**
JFT				S	**Sb**	**16 14 57.3**	**-0.7**
JHO	**Hitachi**	**1.00**	**215**	⇓P	**Pb**	**16 14 51.0**	**-1.2**
JHO				*e*S	**Sb**	**16 15 03.6**	**-1.4**
JIO	**Ouri**	**1.02**	**3**	⇑P	**Pb**	**16 14 52.3**	**-0.3**
JIO				*e*S	**Sb**	**16 15 05.9**	**+0.2**
JOU	**Okura**	**1.05**	**333**	⇓P	**Pb**	**16 14 53.0**	**-0.1**
JOU				S	**Sb**	**16

VLI	**Veliai**	**1.72 142**	*e*Pn	**Pn**	**16 26 24.6**	**+0.8**
VLI	**Veliai**	**1.72 142**	*e*PN	**Pn**	**16 26 24.6**	**+0.8**
VLI	**Veliai**	**1.72 142**	*e*Pn	**Pn**	**16 26 24.6**	**+0.8**
PTL	**Penteli**	**1.78 90**	*e*Pn	**Pn**	**16 26 24.1**	**-0.4**
PTL	**Penteli**	**1.78 90**	*e*PN	**Pn**	**16 26 24.1**	**-0.4**
PTL	**Penteli**	**1.78 90**	*e*Pn	**Pn**	**16 26 24.1**	**-0.4**
AOS	**Alonnisos**	**2.08 58**	P	**Pn**	**16 26 27.1**	**-1.6**
AOS	**Alonnisos**	**2.08 58**	P	**Pn**	**16 26 27.1**	**-1.6**
LIT	**Litokhoron**	**2.13 18**	P	**Pn**	**16 26 30.5**	**+1.1**
LIT	**Litokhoron**	**2.13 18**	P	**Pn**	**16 26 30.5**	**+1.1**
KEK	**Kerkira**	**2.16 320**	*e*Pb	**Pn**	**16 26 29.3**	**-0.5**
KEK	**Kerkira**	**2.16 320**	P	**Pn**	**16 26 29.3**	**-0.5**
KEK	**Kerkira**	**2.16 320**	*e*PB	**Pn**	**16 26 29.3**	**-0.5**
KEK	**Kerkira**	**2.16 320**	P	**Pn**	**16 26 29.3**	**-0.5**
KRUS	**Krusevo**	**3.29 355**	*e*Pn	**Pn**	**16 26 41.5**	**-3.9**

DDA 11 16:26:33.1, 37°.07N×29°.39E, h42km±1km**, Md2.5, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.13**	**44**	*e*PG	Pn	16 26 38.8	-1.3
GLHS				*e*SG	Sn	16 26 43.4	-1.7
GOLH	**Golhisar**	**0.22**	**39**	*i* P	Pn	16 26 40.8	0.0
GOLH				*i* S	Sn	16 26 47.5	+1.3
ELL	**Elmali**	**0.52**	**127**	*e*PG	Pn	16 26 47.0	+2.8
DNZL	**Cakiroluk**	**0.68**	**336**	*i* P	Pn	16 26 45.7	-0.7
DNZL				*i* S	Sn	16 26 58.0	+2.2
AKAS	**Kas**	**0.85**	**168**	*i* P	Pn	16 26 50.1	+1.5
DAT	**Datca**	**1.49**	**258**	*e*PG	Pn	16 26 55.8	-1.6

*CSEM **11** 16:48:08.1±0.3, 41°.75N×15°.78E, h10km, ML3.6/7, Error ellipse: s-maj=5.6km s-min=3.3km az=22.0*
*NEIC **11** 16:48:08.6, 41°.69N×15°.74E, h1km, ML2.5(ROM), After ROM.*
*ROM **11** 16:48:08.6±0.1, 41°.69N×15°.74E, h1km, Md2.8/19, Ml2.5/17, Error ellipse: s-maj=1.2km s-min=1.1km az=157.0*
*ISCJB **11** 16:48:08.4±0.6, 41°.72N±0°.03×15°.77E±0°.03, h9km±4km, Error ellipse: s-maj=5.6km s-min=3.8km az=16.1*
ISC 11 16:48:08.4±0.7**, 41°.76N**±0°.04×**15°.78E**±0°.04**, h9**km±3km**, n39**, σ0°69/60**, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGRT	**San Giovanni R**	**0.03**	**254**	Pg	**Pg**	**16 48 10.3**	**+0.2**
SGRT				Sg	**Sg**	**16 48 11.5**	**+0.2**
	4μm,0.2s						
SGRT	**San Giovanni R**	**0.03**	**254**	Pg	**Pg**	**16 48 10.3**	**+0.2**
SGRT				Sg	**Sg**	**16 48 11.5**	**+0.2**
	4μm,0.2s						
MSAG	**Monte S. Angel**	**0.11**	**118**	Pg	**Pg**	**16 48 11.4**	**+0.4**
MSAG				Sg	**Sg**	**16 48 13.5**	**+0.7**
	784nm,0.6s						
MSAG	**Monte S. Angel**	**0.11**	**118**	Pg	**Pg**	**16 48 11.4**	**+0.4**
MSAG				Sg	**Sg**	**16 48 13.5**	**+0.7**
	784nm,0.6s						
MS1	**Monte Sant'Ang**	**0.13**	**115**	*e*Sg	**Sg**	**16 48 12.8**	**-0.7**
RGNG	**Rignano Grg**	**0.17**	**239**	Pg	**Pg**	**16 48 11.3**	**-0.7**
RGNG				Sg	**Sg**	**16 48 13.3**	**-1.2**
RGNG	**Rignano Grg**	**0.17**	**239**	Pg	**Pg**	**16 48 11.3**	**-0.7**
RGNG				Sg	**Sg**	**16 48 13.3**	**-1.2**
MOCO	**Biccari - m.te**	**0.61**	**230**	Pg	**Pg**	**16 48 19.9**	**-0.3**
	67nm,0.4s						
CIGN	**Sant'Elia a Pi**	**0.67**	**261**	Pg	**Pg**	**16 48 21.2**	**0.0**
	60nm,0.4s						
CIGN	**Sant'Elia a Pi**	**0.67**	**261**	Pg	**Pg**	**16 48 21.2**	**0.0**
	60nm,0.4s						
SGTA	**Sant Agata di**	**0.70**	**207**	Pg	**Pg**	**16 48 21.0**	**-0.9**
	190nm,0.3s						
SGTA	**Sant Agata di**	**0.70**	**207**	Pg	**Pg**	**16 48 21.0**	**-0.9**
	190nm,0.3s						
VULT	**Monte Vulture**	**0.82**	**189**	Pg	**Pg**	**16 48 23.9**	**-0.2**
	376nm,0.4s						
VULT	**Monte Vulture**	**0.82**	**189**	Pg	**Pg**	**16 48 23.9**	**-0.2**
	376nm,0.4s						
BSSO	**Busso**	**0.92**	**257**	Pg	**Pg**	**16 48 27.1**	**+1.1**
BSSO				Sg	**Sg**	**16 48 39.3**	**+1.4**
BSSO	**Busso**	**0.92**	**257**	Pg	**Pg**	**16 48 27.1**	**+1.1**
BSSO				Sg	**Sg**	**16 48 39.3**	**+1.4**
SNAL	**S. Angelo Dei**	**0.94**	**207**	Pg	**Pg**	**16 48 25.9**	**-0.6**
SNAL				Sg	**Sg**	**16 48 39.6**	**+0.9**
	140nm,0.6s						
SNAL	**S. Angelo Dei**	**0.94**	**207**	Pg	**Pg**	**16 48 25.9**	**-0.6**
SNAL				Sg	**Sg**	**16 48 39.6**	**+0.9**
	140nm,0.6s						
ACER	**Acerenza**	**0.98**	**173**	Pg	**Pg**	**16 48 26.7**	**-0.6**
ACER				Sg	**Sg**	**16 48 40.8**	**+0.8**
	338nm,0.8s						
ACER	**Acerenza**	**0.98**	**173**	Pg	**Pg**	**16 48 26.7**	**-0.6**
ACER				Sg	**Sg**	**16 48 40.8**	**+0.8**
	338nm,0.8s						
MRLC	**Muro Lucano**	**1.03**	**192**	Pg	**Pg**	**16 48 27.6**	**-0.6**
MRLC				Sg	**Sg**	**16 48 42.3**	**+0.8**
	187nm,0.4s						
MRLC	**Muro Lucano**	**1.03**	**192**	Pg	**Pg**	**16 48 27.6**	**-0.6**
MRLC				Sg	**Sg**	**16 48 42.3**	**+0.8**
	187nm,0.4s						
AMUR	**Altamura**	**1.06**	**144**	Pg	**Pg**	**16 48 27.7**	**-1.0**
	113nm,0.4s						
AMUR	**Altamura**	**1.06**	**144**	Pg	**Pg**	**16 48 27.7**	**-1.0**
	113nm,0.4s						
SG1	**Sgolgore (BA)**	**1.14**	**143**	*e*Pg	**Pg**	**16 48 30.1**	**-0.2**
SG1				*e*Sg	**Sg**	**16 48 45.9**	**+0.7**
PTRP	**Pietrapertosa**	**1.26**	**170**	Pg	**Pg**	**16 48 32.4**	**-0.1**
	198nm,0.6s						
PTRP	**Pietrapertosa**	**1.26**	**170**	Pg	**Pg**	**16 48 32.4**	**-0.1**
	198nm,0.6s						
MIGL	**Miglionico**	**1.26**	**156**	Pg	**Pg**	**16 48 32.2**	**-0.4**
MIGL				Sg	**Sg**	**16 48 49.5**	**+0.6**
	410nm,0.6s						
MIGL	**Miglionico**	**1.26**	**156**	Pg	**Pg**	**16 48 32.2**	**-0.4**
MIGL				Sg	**Sg**	**16 48 49.5**	**+0.6**
	410nm,0.6s						
MATE	**Matera**	**1.31**	**148**	Pg	**Pn**	**16 48 32.8**	**0.0**
MATE				Sg	**Sg**	**16 48 51.1**	**+0.5**
	130nm,0.5s						
MATE	**Matera**	**1.31**	**148**	Pg	**Pn**	**16 48 32.8**	**0.0**
MATE				Sg	**Sg**	**16 48 51.1**	**+0.5**
	130nm,0.5s						
CDRU	**Civita di Ruta**	**1.32**	**196**	Pg	**Pn**	**16 48 31.7**	**-1.3**
CDRU				Sg	**Sg**	**16 48 50.0**	**-0.9**
	47nm,0.4s						
CDRU	**Civita di Ruta**	**1.32**	**196**	Pg	**Pn**	**16 48 31.7**	**-1.3**
CDRU				Sg	**Sg**	**16 48 50.0**	**-0.9**
	47nm,0.4s						
NOCI	**Noci**	**1.37**	**135**	Pg	**Pn**	**16 48 34.1**	**+0.5**
	99nm,0.3s						
NOCI	**Noci**	**1.37**	**135**	Pg	**Pn**	**16 48 34.1**	**+0.5**
	99nm,0.3s						
INTR	**Introdacqua**	**1.42**	**281**	Pg	**Pn**	**16 48 35.0**	**+0.6**
	98nm,0.6s						
INTR	**Introdacqua**	**1.42**	**281**	Pg	**Pn**	**16 48 35.0**	**+0.6**
	98nm,0.6s						
SCHR	**S. Chirico Rap**	**1.58**	**172**	Pg	**Pn**	**16 48 36.6**	**+0.1**
	20nm,0.5s						
SCHR	**S. Chirico Rap**	**1.58**	**172**	Pg	**Pn**	**16 48 36.6**	**+0.1**
	20nm,0.5s						

*DDA **11** 16:52:56.4, 40°.64N×29°.14E, h17km±1km, Md3.1*
*ISK **11** 16:52:56.7, 40°.63N×29°.13E, h6km, MD2.9*
*ISCJB **11** 16:52:56.8±0.3, 40°.65N±0°.02×29°.12E±0°.03, h6km±4km, Error ellipse: s-maj=4.1km s-min=3.1km az=33.7*
*CSEM **11** 16:52:57.1±0.1, 40°.64N×29°.13E, h8km, MD2.9, Error ellipse: s-maj=2.2km s-min=1.6km az=31.0*
ISC 11 16:52:57.3±0.3**, 40°.65N**±0°.02×**29°.13E**±0°.03**, h9**km±3km**, n76**, σ0°67/101**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YLV	**Yalova**	**0.20**	**113**	*e*PG	**Pg**	**16 53 01.3**	**-0.2**
YLV				*e*SG	**Sg**	**16 53 04.4**	**+0.1**
YLV	**Yalova**	**0.20**	**113**	*e*Pg	**Pg**	**16 53 01.3**	**-0.2**
YLV				*e*Sg	**Sg**	**16 53 04.4**	**+0.1**
ARMT	**Armutlu**	**0.22**	**248**	*e*PG	**Pg**	**16 53 01.5**	**-0.1**
ARMT	**Armutlu**	**0.22**	**248**	*e*Pg	**Pg**	**16 53 01.5**	**-0.2**
GEMT	**Gemlik**	**0.22**	**167**	*e*PG	**Pg**	**16 53 01.4**	**-0.3**
GEMT				*e*SG	**Sg**	**16 53 04.1**	**-0.5**
GEMT	**Gemlik**	**0.22**	**167**	*e*Pg	**Pg**	**16 53 01.4**	**-0.3**
GEMT				*e*Sg	**Sg**	**16 53 04.1**	**-0.5**
ISK	**Istanbul-Kandi**	**0.42**	**353**	*e*PG	**Pg**	**16 53 05.9**	**+0.4**
ISK	**Istanbul-Kandi**	**0.42**	**353**	*e*Pg	**Pg**	**16 53 05.9**	**+0.4**
ULDT	**Uludag**	**0.50**	**179**	*i* P	**Pg**	**16 53 07.0**	**-0.1**
ULDT				*i* S	**Sg**	**16 53 14.2**	**+0.5**
ULDT	**Uludag**	**0.50**	**179**	*i* P	**Pg**	**16 53 07.0**	**0.0**
ULDT				*i* S	**Sg**	**16 53 14.2**	**+0.6**
ADVT	**Abdulvahap**	**0.51**	**114**	*e*PG	**Pg**	**16 53 06.9**	**-0.3**
ADVT	**Abdulvahap**	**0.51**	**114**	*e*Pg	**Pg**	**16 53 06.9**	**-0.3**
BGKT	**Bogazkoy**	**0.60**	**334**	*e*PG	**Pg**	**16 53 09.1**	**+0.2**
BGKT	**Bogazkoy**	**0.60**	**334**	*e*Pg	**Pg**	**16 53 09.1**	**+0.3**
KLYT	**Kilyos**	**0.61**	**354**	*e*PG	**Pg**	**16 53 08.8**	**-0.3**
KLYT	**Kilyos**	**0.61**	**354**	*e*Pg	**Pg**	**16 53 08.8**	**-0.3**
SILT	**Sile**	**0.64**	**38**	*e*PG	**Pg**	**16 53 09.3**	**-0.3**
SILT	**Sile**	**0.64**	**38**	*e*Pg	**Pg**	**16 53 09.3**	**-0.4**
KCT	**Karacabey**	**0.70**	**237**	*e*PG	**Pg**	**16 53 10.7**	**-0.1**
KCT	**Karacabey**	**0.70**	**237**	*e*Pg	**Pg**	**16 53 10.7**	**-0.1**
ELBA	**Catalca**	**0.73**	**314**	*i* P	**Pg**	**16 53 11.2**	**-0.1**
ELBA				*i* S	**Sg**	**16 53 21.1**	**+0.3**
ELBA	**Catalca**	**0.73**	**314**	*e*P	**Pg**	**16 53 11.7**	**+0.4**
ELBA				*i* S	**Sg**	**16 53 21.2**	**+0.4**
ELBA	**Catalca**	**0.73**	**314**	*i* P	**Pg**	**16 53 11.1**	**-0.2**
ELBA				*i* S	**Sg**	**16 53 21.1**	**+0.3**
CTKS	**Kestanelik-??a**	**0.75**	**322**	*e*PG	**Pg**	**16 53 11.9**	**+0.1**
CTKS	**Kestanelik-??a**	**0.75**	**322**	*e*Pg	**Pg**	**16 53 11.9**	**+0.1**
SLVT	**Silivri**	**0.91**	**310**	*e*PG	**Pg**	**16 53 14.6**	**-0.1**
SLVT	**Silivri**	**0.91**	**310**	*e*Pg	**Pg**	**16 53 14.6**	**-0.1**
BNT	**Bandirma**	**0.96**	**253**	*e*PG	**Pg**	**16 53 15.2**	**-0.6**
GPA	**Golpazari**	**0.97**	**111**	*e*PG	**Pg**	**16 53 16.0**	**+0.1**
GPA	**Golpazari**	**0.97**	**111**	*e*Pg	**Pg**	**16 53 16.0**	**+0.1**
CTYL	**Yal??k??y-??at**	**1.04**	**323**	*e*PG	**Pg**	**16 53 17.2**	**-0.1**
CTYL	**Yal??k??y-??at**	**1.04**	**323**	*e*Pg	**Pg**	**16 53 17.2**	**-0.1**
GULT	**Gulveren**	**1.08**	**101**	*e*PG	**Pg**	**16 53 17.8**	**-0.3**
GULT	**Gulveren**	**1.08**	**101**	*e*Pg	**Pg**	**16 53 17.8**	**-0.2**
DURS	**Dursunbey**	**1.16**	**206**	*i* P	**Pb**	**16 53 18.4**	**-1.1**
DURS				*i* S	**Sg**	**16 53 34.6**	**+0.1**
DURS	**Dursunbey**	**1.16**	**206**	*e*P	**Pb**	**16 53 19.9**	**+0.4**
DURS				*i* S	**Sg**	**16 53 36.1**	**+1.6**
DURS	**Dursunbey**	**1.16**	**206**	*i* P	**Pb**	**16 53 18.4**	**-1.0**
DURS				*i* S	**Sg**	**16 53 34.7**	**+0.2**
BORA	**Eskisehir**	**1.27**	**127**	*i* P	**Pn**	**16 53 20.9**	**-0.3**
BORA				*i* S	**Sb**	**16 53 37.8**	**-0.1**
BORA	**Eskisehir**	**1.27**	**127**	*i* P	**Pn**	**16 53 21.0**	**-0.3**
BORA				*i* S	**Sb**	**16 53 39.4**	**+1.5**
BORA	**Eskisehir**	**1.27**	**127**	*i* P	**Pn**	**16 53 20.9**	**-0.3**
BORA				*i* S	**Sb**	**16 53 37.8**	**-0.1**
HENT	**Hendek**	**1.36**	**82**	*i* P	**Pn**	**16 53 22.2**	**-0.2**
HENT				*i* S	**Sb**	**16 53 40.0**	**-0.4**
HENT	**Hendek**	**1.36**	**82**	*i* P	**Pn**	**16 53 22.2**	**-0.2**
HENT				*i* S	**Sb**	**16 53 40.0**	**-0.4**
MFT	**Murefte**	**1.41**	**276**	*e*PN	**Pn**	**16 53 23.8**	**+0.7**
MFT	**Murefte**	**1.41**	**276**	*e*Pn	**Pn**	**16 53 23.8**	**+0.7**
BALY	**Balya**	**1.47**	**232**	*i* P	**Pn**	**16 53 23.1**	**-0.8**
BALY				*i* S	**Sn**	**16 53 41.8**	**-1.4**
BALY	**Balya**	**1.47**	**232**	*e*P	**Pn**	**16 53 23.7**	**-0.2**
BALY				*i* S	**Sn**	**16 53 46.1**	**+2.9**
BALY	**Balya**	**1.47**	**232**	*i* P	**Pn**	**16 53 23.1**	**-0.8**
BALY				*i* S	**Sn**	**16 53 41.8**	**-1.4**
SART	**Tekirdag**	**1.48**	**272**	*i* P	**Pn**	**16 53 22.6**	**-1.5**
SART				*i* S	**Sn**	**16 53 41.8**	**-1.8**
SART	**Tekirdag**	**1.48**	**272**	*i* P	**Pn**	**16 53 22.6**	**-1.5**
SART				*i* S	**Sn**	**16 53 41.8**	**-1.8**
RKY	**Sarkoy-Tekirda**	**1.48**	**272**	*e*PN	**Pn**	**16 53 24.7**	**+0.5**
RKY	**Sarkoy-Tekirda**	**1.48**	**272**	*e*Pn	**Pn**	**16 53 24.7**	**+0.6**
GDZ	**Gediz**	**1.58**	**170**	*i* P	**Pn**	**16 53 25.7**	**+0.2**
GDZ				*i* S	**Sn**	**16 53 44.5**	**-1.5**
GDZ	**Gediz**	**1.58**	**170**	*i* P	**Pn**	**16 53 27.5**	**+2.1**
GDZ				*i* S	**Sn**	**16 53 48.9**	**+2.9**
GDZ	**Gediz**	**1.58**	**170**	*i* P	**Pn**	**16 53 25.7**	**+0.2**
GDZ				*i* S	**Sn**	**16 53 44.5**	**-1.5**
MDU	**Mudurnu**	**1.60**	**96**	*e*PN	**Pn**	**16 53 25.9**	**+0.1**
MDU	**Mudurnu**	**1.60**	**96**	*e*Pn	**Pn**	**16 53 25.9**	**+0.1**
ESKT	**Eskisehir**	**1.74**	**130**	*e*PN	**Pn**	**16 53 28.0**	**+0.4**
ESKT	**Eskisehir**	**1.74**	**130**	*i* P	**Pn**	**16 53 27.6**	**0.0**
ESKT	**Eskisehir**	**1.74**	**130**	*e*Pn	**Pn**	**16 53 28.0**	**+0.4**
SEYT	**Eskypehyr**	**1.74**	**130**	*i* P	**Pn**	**16 53 27.6**	**0.0**
ALT	**Altintas**	**1.76**	**154**	*e*PN	**Pn**	**16 53 28.1**	**+0.1**
ALT	**Altintas**	**1.76**	**154**	*e*Pn	**Pn**	**16 53 28.1**	**+0.2**
LPK	**Lapseki**	**1.82**	**262**	*e*PN	**Pn**	**16 53 29.4**	**+0.6**
LPK	**Lapseki**	**1.82**	**262**	*e*Pn	**Pn**	**16 53 29.4**	**+0.6**
EDRB	**Edirne**	**2.16**	**305**	*e*PN	**Pn**	**16 53 34.2**	**+0.7**
EDRB	**Edirne**	**2.16**	**305**	*e*Pn	**Pn**	**16 53 34.2**	**+0.8**
KULA	**Kula-Manisa**	**2.16**	**190**	*e*PN	**Pn**	**16 53 34.1**	**+0.6**
KULA	**Kula-Manisa**	**2.16**	**190**	*e*Pn	**Pn**	**16 53 34.1**	**+0.7**
SVRH	**Sivrihisar-ESK**	**2.20**	**122**	*e*PN	**Pn**	**16 53 34.1**	**+0.1**
SVRH	**Sivrihisar-ESK**	**2.20**	**122**	*e*Pn	**Pn**	**16 53 34.1**	**+0.2**
SGKT	**Sivrigoynuk**	**2.23**	**91**	*i* P	**Pn**	**16 53 34.5**	**0.0**
SGKT	**Sivrigoynuk**	**2.23**	**91**	*i* P	**Pn**	**16 53 34.5**	**+0.1**
EZN	**Ezine**	**2.29**	**250**	*e*PN	**Pn**	**16 53 35.9**	**+0.6**
EZN	**Ezine**	**2.29**	**250**	*e*Pn	**Pn**	**16 53 35.9**	**+0.6**
GADA	**Gvkgeada**	**2.50**	**261**	*e*PN	**Pn**	**16 53 39.2**	**+1.1**
GADA	**Gvkgeada**	**2.50**	**261**	*e*Pn	**Pn**	**16 53 39.2**	**+1.0**

*CSEM **11** 17:00:01.7±0.2, 39°.99N×42°.54E, h2km, MD2.7, Error ellipse: s-maj=5.4km s-min=4.0km az=20.0*
*ISK **11** 17:00:01.3, 39°.98N×42°.57E, h4km, MD2.7, ML2.4*
*DDA **11** 17:00:02.2, 39°.97N×42°.58E, h7km±7km, Md3.0*
*ISCJB **11** 17:00:02.1±0.6, 39°.99N±0°.03×42°.57E±0°.03, h6km±6km, Error ellipse: s-maj=5.4km s-min=4.0km az=6.3*
ISC 11 17:00:02.6±0.5**, 39°.98N**±0°.04×**42°.58E**±0°.03**, h12**km±6km**, n20**, σ0°99/38**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGRB	**Hanur-Agry**	**0.51**	**141**	*e*PG	**Pg**	**17 00 11.7**	**-0.9**
AGRB				*e*SG	**Sg**	**17 00 20.4**	**+0.9**
AGRB	**Hanur-Agry**	**0.51**	**141**	*e*Pg	**Pg**	**17 00 11.7**	**-1.0**
AGRB				*e*Sg	**Sg**	**17 00 20.4**	**+0.9**
HOMI	**Horasan**	**0.52**	**278**	*i* P	**Pg**	**17 00 12.3**	**-0.5**
HOMI				*i* S	**Sg**	**17 00 21.6**	**+1.9**
DIGO	**Kars**	**0.75**	**54**	*i* P	**Pg**	**17 00 16.0**	**-1.1**
DIGO				*i* S	**Sg**	**17 00 28.4**	**+1.4**
DIGO	**Kars**	**0.75**	**54**	*i* P	**Pg**	**17 00 16.0**	**-1.2**
DIGO				*i* S	**Sg**	**17 00 28.4**	**+1.4**
KARS	**Kars**	**0.75**	**30**	*e*PG	**Pg**	**17 00 16.6**	**-0.6**
KARS				*e*SG	**Sg**	**17 00 27.0**	**-0.1**
KARS	**Kars**	**0.75**	**30**	*e*Pg	**Pg**	**17 00 16.6**	**-0.6**
KARS				*e*Sg	**Sg**	**17 00 27.0**	**-0.1**
ERZM	**Erzurum**	**0.94**	**266**	*e*P	**Pg**	**17 00 21.2**	**+0.6**
ERZM				*i* S	**Sg**	**17 00 32.5**	**-0.4**
ERZM	**Erzurum**	**0.94**	**266**	*e*P	**Pg**	**17 00 21.2**	**+0.6**
ERZM				*i* S	**Sg**	**17 00 32.5**	**-0.4**
EZM	**Erzurum**	**0.94**	**266**	*e*PG	**Pg**	**17 00 20.3**	**-0.4**
EZM				*e*SG	**Sg**	**17 00 32.6**	**-0.3**
DYDN	**Diyadin**	**0.96**	**116**	*i* P	**Pb**	**17 00 21.5**	**+0.4**
DYDN				*i* S	**Sg**	**17 00 33.9**	**+0.2**
DYDN	**Diyadin**	**0.96**	**116**	*i* P	**Pb**	**17 00 21.5**	**+0.4**
DYDN				*i* S	**Sg**	**17 00 33.8**	**+0.2**
DDEM	**Demirkent**	**1.11**	**326**	*i* P	**Pb**	**17 00 22.8**	**-0.9**
DDEM				*i* S	**Sb**	**17 00 40.8**	**+2.7**
DDEM	**Demirkent**	**1.11**	**326**	*i* P	**Pb**	**17 00 22.8**	**-0.9**
DDEM				*i* S	**Sb**	**17 00 40.8**	**+2.7**
DBAD	**Bademkaya**	**1.24**	**327**	*i* P	**Pn**	**17 00 24.9**	**-0.8**
DBAD				*i* S	**Sb**	**17 00 40.5**	**-1.3**
DBAD	**Bademkaya**	**1.24**	**327**	*i* P	**Pn**	**17 00 24.9**	**-0.8**
DBAD				*i* S	**Sb**	**17 00 40.5**	**-1.3**
ARTV	**Artvin**	**1.30**	**338**	*i* P	**Pn**	**17 00 25.8**	**-0.8**
ARTV	**Artvin**	**1.30**	**338**	*i* P	**Pn**	**17 00 25.8**	**-0.8**
BCA	**Borcka**	**1.64**	**334**	*e*PN	**Pn**	**17 00 31.2**	**0.0**
BCA				*e*SN	**Sn**	**17 00 53.8**	**+1.7**
BCA	**Borcka**	**1.64**	**334**	*e*Pn	**Pn**	**17 00 31.2**	**0.0**
BCA				*e*Sn	**Sn**	**17 00 53.8**	**+1.7**

*NEIC **11** 17:14:27.7±0.7, 55°.62N×160°.89E, h146km±8km, mb4.2/12, Error ellipse: s-maj=9.1km s-min=6.9km az=156.0*
*KRSC **11** 17:14:27.4±1.0, 55°.43N×161°.20E, h151km±40km, ML4.4*
*MOS **11** 17:14:27.1±1.0, 55°.57N×160°.92E, h159km, mb4.0/12, Error ellipse: s-maj=15.4km s-min=8.3km az=76.4*
*ISCJB **11** 17:14:27.1±0.2, 55°.50N±0°.03×161°.08E±0°.06, h160km±2km, mb3.7/21, Error ellipse: s-maj=5.6km s-min=4.2km az=30.3*
*IDC **11** 17:14:28.7±2.3, 55°.65N×160°.81E, h151km±22km, mb3.3/13, mb1 3.6/15, mb1mx3.4/28, mbtmp3.4/15, Error ellipse: s-maj=18.7km s-min=12.2km az=150.0*
ISC 11 17:14:28.2±0.3**, 55°.49N**±0°.03×**161°.11E**±0°.06**, h155**km±2km**, n78**, σ1°01/105**, mb3.7/21**, 1C-2D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZLN	**Zelenaya**	**0.56**	**342**	*e*P	**Pn**	**17 14 51.0**	**+0.6**
ZLN				*i* S	**Sn**	**17 15 08.3**	**+0.9**
KMNR	**Kamenistaya**	**0.56**	**299**	*e*P	**Pn**	**17 14 50.9**	**+0.5**
KMNR				*i* S	**Sn**	**17 15 08.4**	**+1.0**
BZMR	**Bezymyannaya**	**0.57**	**322**	*e*P	**Pn**	**17 14 50.6**	**+0.2**
BZMR				*i* S	**Sn**	**17 15 07.9**	**+0.4**
KIRR	**Kirishev**	**0.64**	**317**	*e*P	**Pn**	**17 14 51.2**	**+0.4**
KIRR				*i* S	**Sn**	**17 15 08.6**	**+0.4**
CIRR	**Tsirk**	**0.66**	**342**	*e*P	**Pn**	**17 14 51.6**	**+0.6**
CIRR				*i* S	**Sn**	**17 15 09.0**	**+0.5**
KPT	**Kopyto**	**0.70**	**314**	*e*P	**Pn**	**17 14 51.2**	**0.0**
KPT				*i* S	**Sn**	**17 15 08.6**	**-0.2**
KRSR	**Krestovskiy**	**0.79**	**337**	*e*P	**Pn**	**17 14 52.1**	**+0.3**
KRSR				*i* S	**Sn**	**17 15 10.2**	**+0.2**
KLY	**Klyuchi**	**0.87**	**343**	*e*P	**Pn**	**17 14 52.3**	**-0.1**
KLY				*i* S	**Sn**	**17 15 10.9**	**0.0**
KOZR	**Kozyr**	**0.90**	**311**	PN	**Pn**	**17 14 52.9**	**+0.3**
KOZR				S	**Sn**	**17 15 11.8**	**+0.5**
KOZ	**Kozyrevsk**	**0.90**	**310**	*i* P	**Pn**	**17 14 52.9**	**+0.3**
KOZ				*i* S	**Sn**	**17 15 11.8**	**+0.4**
MKZ	**Mys Kozlova**	**1.00**	**159**	*e*P	**Pn**	**17 14 53.0**	**-0.4**
MKZ				*i* S	**Sn**	**17 15 11.7**	**-1.0**
BDR	**Baidarnaya**	**1.09**	**3**	*e*P	**Pn**	**17 14 53.6**	**-0.5**
BDR				*i* S	**Sn**	**17 15 12.4**	**-1.7**
SMKR	**Semkarok**	**1.12**	**10**	*e*P	**Pn**	**17 14 54.3**	**-0.1**
SMKR				*i* S	**Sn**	**17 15 14.2**	**-0.3**
SRDR	**Sredinnyy**	**1.15**	**317**	*e*P	**Pn**	**17 14 54.7**	**+0.1**
SRDR				*i* S	**Sn**	**17 15 14.5**	**-0.4**
SRKR	**Sorokina**	**1.17**	**2**	*e*P	**Pn**	**17 14 55.1**	**+0.2**
SRKR				*i* S	**Sn**	**17 15 15.2**	**-0.2**
KBTR	**Krutoberegovo**	**1.20**	**52**	*e*P	**Pn**	**17 14 54.9**	**-0.3**
KBTR				*i* S	**Sn**	**17 15 14.9**	**-1.0**
KII	**Karymskiy**	**1.74**	**214**	*e*P	**Pn**	**17 15 01.3**	**+0.6**
KII				*i* S	**Sn**	**17 15 25.8**	**+0.1**
SPN	**Mys Shipunski**	**2.48**	**195**	*e*P	**Pn**	**17 15 08.1**	**-1.2**
SPN				*i* S	**Sn**	**17 15 37.9**	**-3.0**
NLC	**Nalytchevo**	**2.54**	**205**	*e*P	**Pn**	**17 15 09.8**	**-0.2**
NLC				*i* S	**Sn**	**17 15 40.9**	**-1.4**
GNL	**Ganaly**	**2.57**	**227**	*e*P	**Pn**	**17 15 11.4**	**+1.0**
GNL				*i* S	**Sn**	**17 15 43.0**	**0.0**
AVH	**Avacha**	**2.62**	**213**	*e*P	**Pn**	**17 15 12.1**	**+1.1**
BKI	**Bering**	**2.79**	**94**	*i* P	**Pn**	**17 15 13.4**	**+0.3**
BKI				*i* S	**Sn**	**17 15 46.6**	**-1.1**
PET	**Petropavlovsk**	**2.86**	**211**	||*i*PN	**Pn**	**17 15 14.3**	**+0.4**
PET				*e*S	**Sn**	**17 15 49.1**	**-0.2**
PET				pmax	pmax		
	comp=Z,51nm,0.5s						
PET				smax			
	comp=E,72nm,0.7s						
PET				smax			
	comp=N,83nm,0.8s						
PET	**Petropavlovsk**	**2.86**	**211**	*e*P	**Pn**	**17 15 14.4**	**+0.5**
PET		

comp=Z,0.9nm,0.4s,mb4.0,baz=40,slow=8.3,SNR=8.9
FINES FINESS Array B 58.16 336 P **P 17 24 04.5 -0.5**
FINES pmax pmax
comp=Z,1.0nm,0.4s
FINES FINESS Array B 58.16 336 P **P 17 24 04.5 -0.6**
CMAR Chiang Mai Arr 59.27 258 P **P 17 24 13.7 +0.4**
comp=Z,0.6nm,0.7s,mb3.5,baz=19,slow=7.0,SNR=6.9
CMAR PcP PcP 17 25 00.6 +0.7
comp=Z,0.9nm,0.7s,baz=17,slow=4.2,SNR=8.1
CMAR Chiang Mai Arr 59.27 258 P **P 17 24 13.7 +0.4**
CMAR 17 25 00.6
CMAR pmax pmax
comp=Z,1.0nm,0.7s
AKASG Malin Array Be 66.87 329 *i* P **P 17 24 59.0 -3.9**
AKASG pmax pmax
comp=Z,1.0nm,0.6s
TXAR Lajitas Array 69.18 68 P **P 17 25 19.0 +1.3**
comp=Z,0.1nm,0.4s,mb2.9,baz=308,slow=6.2,SNR=4.0
WRA Warramunga Arr 78.50 206 P **P 17 26 11.7 -0.1**
comp=Z,0.4nm,0.4s,mb3.4,baz=10,slow=5.6,SNR=6.6
MMAI Mount Meron Ar 80.40 316 P **P 17 26 22.4 +0.3**
comp=Z,0.9nm,0.5s,mb3.7,baz=18,slow=2.3,SNR=2.6
ASAR Alice Springs 82.19 205 P **P 17 26 32.6 +1.3**
comp=Z,1.0nm,0.7s,mb3.6,baz=13,slow=5.4,SNR=20
ASAR Alice Springs 82.19 205 *e*P **P 17 26 32.6 +1.2**
ASAR pmax pmax
comp=Z,1.0nm,0.7s

NIED ***11*** *17:25:00,36°.20N×139°.80E,h56km,Mw3.8 Best double couple: M0=4.76000×10^14 NP1:φ0=40.00000°,δ57.00000°, λ68.00000°. NP2:φ0=256.00000°,δ38.00000°,λ120.00000°.*
IDC ***11*** *17:25:07.6±3.6,36°.10N×139°.98E,h42km±26km,mb3.5/5, mb1 3.7/8,mb1mx3.4/29,mbtmp3.7/8,ML3.8/3,Error ellipse: s-maj=39.7km s-min=7.7km az=54.0*
ISCJB ***11*** *17:25:07.8±0.5,36°.09N±0°.03×139°.86E±0°.05,h62km±5km, mb3.7/5,Error ellipse: s-maj=7.2km s-min=5.7km az=2.9*
NEIC ***11*** *17:25:09.4,36°.14N×139°.83E,h52km,MG3.7(JMA),After JMA.*
JMA ***11*** *17:25:09.3±0.1,36°.14N×139°.83E,h52km±1km,M3.7 Broadband fault plane solution: P waves. NP1: φ0=246.00000°,δ15.00000°,λ130.00000°. NP2: φ0=25.00000°,δ79.00000°,λ80.00000°. Principal axes: T Plg55.0000°, Azm283.0000°; N Plg9.0000°, Azm27.0000°; P Plg33.0000°, Azm123.0000°;*
JMA Felt II J1.
ISC 11 17:25:09.0±0.5,36°.10N±0°.03×139°.85E±0°.05,h53km±5km, n20,σ0°.77/32,mb3.7/5,1C-6D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.31**	**66**	↑P	**Pn**	**17 25 18.7**	**+0.3**
JYT				S	**Sn**	**17 25 25.4**	**+0.2**
JAG	**Ashikaga**	**0.45**	**315**	↓P	**Pn**	**17 25 19.8**	**-0.1**
JAG				S	**Sn**	**17 25 27.0**	**-0.8**
JRY	**Ryogami san**	**0.77**	**264**	↓P	**Pn**	**17 25 23.9**	**+0.2**
JRY				S	**Sn**	**17 25 34.5**	**0.0**
JKT	**Katashina**	**0.82**	**324**	↓P	**Pn**	**17 25 24.0**	**-0.4**
JKT				S	**Sn**	**17 25 35.2**	**-0.5**
JOD2	**Odawara 2**	**1.04**	**217**	P	**Pn**	**17 25 28.4**	**+1.1**
JOD2				S	**Sn**	**17 25 42.3**	**+1.4**
JFY	**Yanaizu**	**1.31**	**355**	↓P	**Pn**	**17 25 30.9**	**0.0**
JFY				*e*S	**Sn**	**17 25 47.6**	**+0.4**
JHK	**Hiroka**	**1.32**	**330**	↓P	**Pn**	**17 25 31.0**	**-0.1**
MJAR	**Matsushiro Arr**	**1.40**	**289**	P	**Pn**	**17 25 31.0**	**-1.0**
	45nm,0.3s,baz=155,slow=1.8,SNR=427						
MJAR				S	**Sn**	**17 25 49.7**	**+0.3**
	22nm,0.3s,baz=177,slow=15,SNR=12						
MAJO	**Matsushiro**	**1.40**	**289**	*e*Pn	**Pn**	**17 25 32.4**	**+0.3**
MAT	**Matsushiro**	**1.40**	**289**	P	**Pn**	**17 25 31.5**	**-0.6**
MAT				S	**Sn**	**17 25 47.2**	**-2.2**
MAT	**Matsushiro**	**1.40**	**289**	P	**Pn**	**17 25 31.9**	**-0.2**
MAT				*e*S	**Sn**	**17 25 49.9**	**+0.5**
JFT	**Otama**	**1.47**	**15**	↓P	**Pn**	**17 25 33.6**	**+0.6**
JFT				S	**Sn**	**17 25 51.4**	**+0.3**
JHJ	**Hachijo jima 2**	**2.98**	**181**	P	**Pn**	**17 25 54.2**	**+0.6**
	72nm,0.3s,baz=343,slow=11,SNR=95						
JHJ				S	**Sn**	**17 26 26.8**	**-1.4**
	69nm,0.3s,baz=255,slow=23,SNR=8.5						
CBIJ	**Chichi jima**	**9.20**	**167**	P	**Pn**	**17 27 17.1**	**-1.9**
	6.0nm,0.3s,baz=275,slow=22,SNR=14						
CBIJ				S	**Sn**	**17 28 55.0**	**-6.1**
	1.8nm,0.3s,baz=292,slow=22,SNR=2.8						
KSRS	**Korea Array**	**9.66**	**282**	P	**Pn**	**17 27 26.9**	**+1.6**
	0.2nm,0.3s,baz=94,slow=14,SNR=7.0						
ZALV	**Zalesovo Beam**	**41.62**	**313**	P	**P**	**17 32 50.8**	**-0.8**
	0.7nm,0.5s,mb3.6,baz=102,slow=6.1,SNR=4.4						
MKAR	**Makanchi Array**	**43.55**	**303**	P	**P**	**17 33 07.6**	**+0.2**
	0.2nm,0.5s,mb3.1,baz=75,slow=17,SNR=3.8						
FITZ	**Fitzroy Crossi**	**55.56**	**196**	P	**P**	**17 34 39.2**	**+0.2**
	5.9nm,1.1s,mb4.5,baz=18,slow=6.4,SNR=3.2						
WRA	**Warramunga Arr**	**55.98**	**186**	P	**P**	**17 34 41.6**	**-0.3**
	0.6nm,0.4s,mb3.9,baz=1.1,slow=7.7,SNR=16						
ASAR	**Alice Springs**	**59.71**	**186**	P	**P**	**17 35 08.6**	**+0.5**
	0.2nm,0.5s,mb3.4,baz=14,slow=12,SNR=4.6						

NOU ***11*** *17:25:35.0±1.2,20°.14S×168°.35E,h10km,MD3.0,ML2.7, MS3.2*
ISCJB ***11*** *17:25:38.2±1.0,20°.27S±0°.06×168°.0E±0°.1,h33km, mb4.1/7,Error ellipse: s-maj=17.8km s-min=6.9km az=19.9*
NEIC ***11*** *17:25:41.6±1.1,20°.36S×167°.87E,h35km,mb4.2/2,Error ellipse: s-maj=20.8km s-min=16.0km az=45.0*
IDC ***11*** *17:25:41.2±2.0,20°.21S×167°.86E,h31km±7km,mb4.0/6, mb1 4.2/7,mb1mx3.9/17,mbtmp4.1/7,ML3.1/1,Error ellipse: s-maj=46.6km s-min=24.2km az=34.0*
ISC 11 17:25:40.1±1.0,20°.34S±0°.06×168°.1E±0°.1,h35km, (h33km±2.2km:pP-P),n20,σ1°.06/25,mb4.1/7,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.11**	**211**	*e*P	**Pn**	**17 26 10.7**	**-2.3**
BAYA				*e*S	**Sn**	**17 26 38.0**	**0.0**
DZM	**Mont Dzumac**	**2.29**	**221**	*e*P	**Pn**	**17 26 13.8**	**-1.6**
DZM				AMP		17 26 56.3	
	comp=Z,2μm,11.3s						
DZM	**Mont Dzumac**	**2.29**	**221**	*e*Pn	**Pn**	**17 26 14.1**	**-1.3**
PLUM	**Mont Dore**	**2.34**	**214**	*e*P	**Pn**	**17 26 15.1**	**-0.9**
PLUM				*e*S	**Sn**	**17 26 44.3**	**+0.8**
NORM	**Noumea**	**2.39**	**218**	*e*P	**Pn**	**17 26 15.2**	**-1.5**
NORM				*e*S	**Sn**	**17 26 44.6**	**-0.2**
NOUC	**Port Laguerre**	**2.40**	**223**	*e*P	**Pn**	**17 26 16.4**	**-0.5**
NOUC				*e*S	**Sn**	**17 26 46.9**	**+1.7**
NOUC				AMP		17 27 01.5	
	comp=Z,72nm,1.7s						
MVNO	**Noumea**	**2.44**	**218**	*e*P	**Pn**	**17 26 16.5**	**-1.0**
MVNO				*e*S	**Sn**	**17 26 46.4**	**+0.2**
ONTRN	**Noumea**	**2.47**	**217**	*e*P	**Pn**	**17 26 16.9**	**-0.9**
ONTRN				*e*S	**Sn**	**17 26 48.1**	**+1.4**
URZ	**Urewera**	**19.50**	**158**	P	**Pn**	**17 30 07.3**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=150,slow=11,SNR=3.3						
URZ				pP	pP	17 30 16.7	+3.3
	comp=Z,0.3nm,0.3s,baz=16,slow=7.6,SNR=5.7						
CTA	**Charters Tower**	**20.47**	**267**	P	**P**	**17 30 14.2**	**-0.7**
	comp=Z,6.4nm,0.8s,baz=122,slow=13,SNR=2.1						
CTAO	**Charters Tower**	**20.47**	**267**	P	**P**	**17 30 16.2**	**+1.3**
STKA	**Stephens Creek**	**26.33**	**239**	P	**P**	**17 31 13.4**	**+0.7**
	comp=Z,4.9nm,1.0s,mb4.0,baz=56,slow=9.6,SNR=3.8						
WRAB	**Tennant Creek**	**31.62**	**265**	P	**P**	**17 31 59.4**	**-0.6**
	comp=Z,3.2nm,0.8s,mb4.2						
WRA	**Warramunga Arr**	**31.63**	**265**	P	**P**	**17 31 59.7**	**-0.4**
	comp=Z,0.8nm,0.4s,mb3.9,baz=90,slow=8.5,SNR=9.1						
WRA				pP	pP	17 32 08.2	-1.9
	comp=Z,0.6nm,0.4s,baz=91,slow=8.5,SNR=4.0						
WRA	**Warramunga Arr**	**31.63**	**265**	P	**P**	**17 31 59.7**	**-0.4**
WRA				pP	pP	17 32 08.2	-1.9
ASAR	**Alice Springs**	**31.80**	**258**	P	**P**	**17 32 01.8**	**+0.3**
	comp=Z,5.8nm,0.8s,mb4.5,baz=88,slow=9.0,SNR=67						
ASAR				pP	pP	17 32 10.8	-0.8
	comp=Z,2.7nm,0.8s,baz=88,slow=8.9,SNR=6.6						
FITZ	**Fitzroy Crossi**	**40.04**	**266**	P	**P**	**17 33 12.1**	**0.0**
	comp=Z,4.4nm,0.8s,mb4.2,baz=104,slow=8.7,SNR=7.3						
FITZ				pP	pP	17 33 22.4	0.0
	comp=Z,2.6nm,0.9s,baz=128,slow=9.6,SNR=2.5						
CMAR	**Chiang Mai Arr**	**77.95**	**295**	P	**P**	**17 37 36.6**	**+1.6**
	comp=Z,1.4nm,0.9s,mb3.9,baz=137,slow=4.6,SNR=7.2						
CHTO	**Chiang Mai**	**78.11**	**295**	P	**P**	**17 37 36.8**	**+0.9**
	comp=Z,2.4nm,0.9s,mb4.1						
GERES	**GERESS Array B**	**144.91**	**330**	PKP	PKPdf	17 45 13.3	-0.1
	comp=Z,0.2nm,0.5s,baz=23,slow=5.3,SNR=3.3						

IDC 11 17:26:01.6±1.8,2°.31N×125°.66E,h0km,mb3.7/4, mb1 3.9/4,mb1mx3.6/21,mbtmp3.7/4,Error ellipse: s-maj=115.4km s-min=23.4km az=68.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.28**	**180**	P	P	17 30 39.4	+0.3
	2.9nm,0.9s,baz=321,slow=6.5,SNR=7.5						
WRA	**Warramunga Arr**	**23.70**	**159**	P	P	17 31 15.7	+0.3
	2.7nm,0.5s,baz=338,slow=10,SNR=26						
ASAR	**Alice Springs**	**27.04**	**163**	P	P	17 31 45.3	-0.4
	0.5nm,0.5s,baz=342,slow=7.2,SNR=22						
MKAR	**Makanchi Array**	**58.12**	**326**	P	P	17 35 57.1	+0.1
	0.2nm,0.4s,baz=117,slow=8.6,SNR=6.8						

IDC 11 17:27:10.3±3.9,19°.85S×167°.90E,h31km±8km,mb3.7/4, mb1 3.9/4,mb1mx3.6/15,mbtmp3.8/4,Error ellipse: s-maj=74.6km s-min=61.9km az=145.0,Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**20.34**	**266**	P	P	17 31 44.6	+0.4
	4.6nm,1.1s,baz=60,slow=18,SNR=1.5						
STKA	**Stephens Creek**	**26.45**	**238**	P	P	17 32 43.8	-0.8
	1.8nm,0.8s,baz=83,slow=17,SNR=1.6						
STKA				pP	pP	17 32 53.0	-0.5
	4.7nm,0.6s,baz=43,slow=8.5,SNR=3.5						
WRA	**Warramunga Arr**	**31.53**	**264**	P	P	17 33 30.1	+0.2
	1.1nm,1.1s,baz=91,slow=8.4,SNR=3.4						
WRA				pP	pP	17 33 39.0	+0.2
	0.6nm,0.5s,baz=90,slow=8.2,SNR=2.6						
ASAR	**Alice Springs**	**31.75**	**257**	P	P	17 33 32.0	+0.2
	1.5nm,0.6s,baz=86,slow=8.7,SNR=7.3						
ASAR				pP	pP	17 33 41.4	+0.5
	3.1nm,0.7s,baz=84,slow=9.1,SNR=6.9						
GERES	**GERESS Array B**	**144.41**	**330**	PKP	PKPdf	17 46 43.6	+0.2
	0.2nm,0.3s,baz=42,slow=4.6,SNR=2.9						

BJI ***11*** *17:28:57.6,19°.85S×168°.80E,h27km,mB5.1/3,mb4.7/6*
ISCJB ***11*** *17:28:58.3±1.0,20°.4S±0°.1×168°.1E±0°.2,h33km,mb4.5/15, MS3.7/7,Error ellipse: s-maj=29.2km s-min=8.8km az=36.8*
NEIC ***11*** *17:28:59.2±0.8,20°.40S×168°.28E,h35km,mb4.6/3,Error ellipse: s-maj=25.5km s-min=12.9km az=139.0*
IDC ***11*** *17:28:59.7±1.5,20°.20S×168°.11E,h29km±6km,mb4.3/12, mb1 4.4/12,mb1mx4.4/18,mbtmp4.3/12,MS3.7/8, Ms1 3.7/8,ms1mx3.5/21,Error ellipse: s-maj=40.3km s-min=20.2km az=144.0*
ISC 11 17:28:59.7±1.1,20°.5S±0°.1×168°.2E±0°.2,h35km, (h32km±1.0km:pP-P),n28,σ1°.12/23,mb4.5/15,MS3.7/7, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.29**	**226**	*e*Pn	**Pn**	**17 29 35.6**	**+0.6**
	77nm,0.2s						
DZM				*e*Sn	**Sn**	**17 30 01.3**	**-0.7**
	139nm,0.3s						
DZM	**Mont Dzumac**	**2.29**	**226**	*e*Pn	**Pn**	**17 29 33.9**	**-1.1**
HNR	**Honiara**	**13.58**	**323**	LR	LR	17 36 37.5	
	comp=Z,167nm,20.1s,baz=115,slow=34						
AFI	**Afiamalu**	**20.18**	**74**	LR	LR	17 40 22.7	
	comp=Z,281nm,18.7s,MS3.6,baz=170,slow=34						
CTA	**Charters Tower**	**20.61**	**267**	P	**P**	**17 33 37.2**	**+1.1**
	16nm,0.9s,baz=85,slow=12,SNR=6.4						
CTA				LR	LR	17 40 02.0	
	comp=Z,246nm,21.7s,MS3.5,baz=86,slow=32						
CTA	**Charters Tower**	**20.61**	**267**	P	**P**	**17 33 37.2**	**+1.1**
CTA				LR	LR	17 40 02.0	
CTAO	**Charters Tower**	**20.61**	**267**	*e*P	**P**	**17 33 38.0**	**+2.0**
	31nm,1.1s						
STKA	**Stephens Creek**	**26.38**	**239**	P	**P**	**17 34 35.0**	**+2.2**
	10nm,0.8s,mb4.4,baz=75,slow=6.7,SNR=9.1						
STKA				pP	pP	17 34 43.9	+1.1
	5.3nm,0.7s,baz=55,slow=8.2,SNR=3.5						
STKA				LR	LR	17 44 19.8	
	comp=Z,286nm,20.3s,MS3.8,baz=30,slow=35						
WRA	**Warramunga Arr**	**31.77**	**265**	P	**P**	**17 35 19.0**	**-1.8**
	3.6nm,1.1s,mb4.1,baz=92,slow=9.4,SNR=8.3						
WRA				pP	pP	17 35 28.4	-2.6
	1.2nm,0.7s,baz=99,slow=8.3,SNR=3.9						
WRA	**Warramunga Arr**	**31.77**	**265**	P	**P**	**17 35 19.0**	**-1.8**
WRA				pP	pP	17 35 28.4	-2.6
ASAR	**Alice Springs**	**31.92**	**258**	P	**P**	**17 35 21.9**	**-0.2**
	12nm,0.8s,mb4.8,baz=82,slow=9.1,SNR=27						
ASAR				pP	pP	17 35 31.2	-1.0
	7.0nm,0.7s,baz=87,slow=9.0,SNR=11						
PPT	**Papeete**	**39.92**	**93**	*e*LR	LR	17 47 59.9	
	181nm,25.0s						
PPT	**Papeete**	**39.92**	**93**	LR	LR	17 50 06.3	
	comp=Z,96nm,18.0s,MS3.7,baz=145,slow=32						
FITZ	**Fitzroy Crossi**	**40.19**	**266**	P	**P**	**17 36 33.0**	**+0.1**
	9.8nm,0.8s,mb4.6,baz=128,slow=6.8,SNR=12						
FITZ				pP	pP	17 36 41.5	-1.6
	7.8nm,0.8s,baz=115,slow=5.9,SNR=6.5						
FITZ				LR	LR	17 51 12.8	
	comp=Z,184nm,21.3s,MS3.9,baz=161,slow=33						
KAPI	**Kappang**	**49.50**	**281**	P	**P**	**17 37 46.2**	**-0.9**
	12nm,1.0s,mb4.9,baz=58,slow=5.9,SNR=3.7						
MJAR	**Matsushiro Arr**	**63.41**	**333**	P	**P**	**17 39 24.3**	**-1.4**
	1.9nm,0.9s,mb4.2,baz=172,slow=8.1,SNR=6.5						
KSRS	**Korea Array**	**69.00**	**327**	P	**P**	**17 40 00.9**	**-0.6**
	0.7nm,0.8s,mb3.7,baz=126,slow=5.4,SNR=4.4						
KSRS				LR	LR	18 04 50.1	
	comp=Z,24nm,19.8s,MS3.4,baz=50,slow=31						
KMI	**Kunming**	**78.12**	**303**	P	**P**	**17 40 56.9**	**+1.4**
KMI				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.5						
CMAR	**Chiang Mai Arr**	**78.15**	**295**	P	**P**	**17 40 56.1**	**+0.4**
	comp=Z,2.3nm,0.7s,mb4.2,baz=141,slow=4.3,SNR=17						
CHTO	**Chiang Mai**	**78.31**	**295**	*e*P	**P**	**17 40 57.4**	**+0.8**
	comp=Z,24nm,1.9s,mb4.8						
LZH	**Lanzhou**	**82.86**	**313**	*e*P	**P**	**17 41 23.0**	**+2.4**
LZH				pP	pP	17 41 32.6	+0.9
LZH				sP	sP	17 41 37.9	+2.2
LZH				pmax	pmax		
	comp=Z,23nm,1.4s,mb5.0						
LZH				pmax	pmax		
	comp=Z,120nm,5.0s						
KDAK	**Kodiak Island**	**84.52**	**20**	P	**P**	**17 41 29.1**	**+0.6**
	comp=Z,6.5nm,0.9s,mb4.7,baz=318,slow=1.8,SNR=5.5						
ULN	**Ulaanbaatar**	**87.29**	**324**	*e*P	**P**	**17 41 41.1**	**-1.4**
SONM	**Songino Array**	**87.64**	**324**	P	**P**	**17 41 44.2**	**0.0**
	comp=Z,0.5nm,0.4s,mb4.1,baz=152,slow=4.7,SNR=4.9						
BILL	**Bilibino**	**88.27**	**359**	*e*P	**P**	**17 41 46.0**	**-0.8**
	comp=Z,3.1nm,0.9s,mb4.5						
NVAR	**Mina Array Bea**	**90.33**	**49**	P	**P**	**17 41 57.0**	**-0.2**
	comp=Z,2.3nm,0.8s,mb4.6,baz=226,slow=8.2,SNR=9.1						
TXAR	**Lajitas Array**	**98.19**	**62**	LR	LR	18 17 43.4	
	comp=Z,63nm,19.9s,MS4.1,baz=265,slow=30						
TORD	**Torodi Ar. Bea**	**165.19**	**243**	PKP	PKPdf	17 49 01.4	+0.3
	comp=Z,1.2nm,1.0s,baz=214,slow=1.6,SNR=4.5						
TORD				PKPab	PKPab	17 49 58.6	+0.2
	comp=Z,1.6nm,1.0s,baz=129,slow=3.9,SNR=4.6						

SZGRF ***11*** *17:28:29.0,23°.27S×178°.43W,h33km,South of Fiji Islands*
ISCJB ***11*** *17:29:36.2±1.1,21°.34S±0°.08×179°.33W±0°.09, h593km±15km,mb4.5/36,Error ellipse: s-maj=14.9km s-min=10.3km az=43.9*
IDC ***11*** *17:29:38.6±1.8,21°.20S×179°.35W,h608km±19km, mb3.9/17,mb1 4.1/18,mb1mx4.0/22,mbtmp4.0/18,Error ellipse: s-maj=21.5km s-min=11.8km az=142.0*
NEIC ***11*** *17:29:39.1±0.9,21°.49S×179°.25W,h628km±9km,mb4.8/14, Error ellipse: s-maj=12.9km s-min=10.0km az=131.0*
ISC 11 17:29:37.0±1.2,21°.33S±0°.08×179°.28W±0°.09, h587km±15km,h614km±3.7km:pP-P,n127,σ1°.11/69, mb4.5/36,12C-6D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.37**	**324**	*e*P	**P**	**17 31 10.5**	**+6.3**
AFI	**Afiamalu**	**10.27**	**45**	P	**P**	**17 31 58.7**	**+0.4**
	14nm,0.3s,baz=320,slow=8.6,SNR=11						
AFI				S	**S**	**17 33 48.9**	**-5.3**
	3.6nm,0.3s,baz=56,slow=18,SNR=5.7						
AFI	**Afiamalu**	**10.27**	**45**	*e*P	**P**	**17 31 58.1**	**-0.1**
	85nm,0.6s						
AFI				*e*S	**S**	**17 33 48.6**	**-5.6**
URZ	**Urewera**	**17.16**	**190**	P	**P**	**17 33 03.1**	**-2.1**
	7.3nm,0.3s,baz=278,slow=2.6,SNR=44						
URZ				S	**S**	**17 35 46.7**	**-8.1**
	1.9nm,0.3s,baz=220,slow=23,SNR=13						
URZ	**Urewera**	**17.16**	**190**	*e*P	**P**	**17 33 02.9**	**-2.4**
	15nm,0.3s						
URZ				*e*		17 33 36.5	
URZ				*e*S	**S**	**17 35 41.3**	**-13**
HNR	**Honiara**	**23.23**	**297**	P	**P**	**17 34 00.3**	**0.0**
	43nm,0.5s,mb5.4,baz=130,slow=5.1,SNR=6.2						
RPZ	**Rata Peaks**	**23.73**	**198**	P	**P**	**17 34 02.1**	**-2.3**
	6.4nm,0.8s,mb4.3,baz=159,slow=11,SNR=3.6						
EIDS	**Eidsvold**	**27.48**	**256**	*e*P	**P**	**17 34 38.5**	**+0.8**
	30nm,0.5s,mb5.2						
ARMA	**Armidale**	**27.64**	**245**	↓*i*P	**P**	**17 34 40.8**	**+1.9**
CNB	**Canberra Magne**	**30.78**	**236**	*e*P	**P**	**17 35 07.2**	**+1.2**
CTA	**Charters Tower**	**32.23**	**266**	↓*i*P	**P**	**17 35 19.5**	**+1.0**
	40nm,0.4s,mb5.4						
CTA	**Charters Tower**	**32.23**	**266**	P	**P**	**17 35 19.5**	**+1.0**
	54nm,0.4s,mb5.5,baz=92,slow=11,SNR=127						
CTA	**Charters Tower**	**32.23**	**266**	P	**P**	**17 35 19.5**	**+1.0**
CTAO	**Charters Tower**	**32.23**	**266**	*e*P	**P**	**17 35 19.3**	**+0.8**
	53nm,0.5s,mb5.4						
CMSA	**Cobar Meteorol**	**32.85**	**245**	*e*P	**P**	**17 35 24.4**	**+0.8**
TOO	**Toolangi**	**34.45**	**234**	*e*P	**P**	**17 35 37.6**	**+0.7**
STKA	**Stephens Creek**	**36.36**	**245**	*e*P	**P**	**17 35 53.6**	**+0.8**
	16nm,0.5s,mb4.8						
STKA	**Stephens Creek**	**36.36**	**245**	P	**P**	**17 35 53.5**	**+0.7**
	19nm,0.5s,mb4.9,baz=92,slow=9.2,SNR=47						
ASAR	**Alice Springs**	**43.17**	**258**	P	**P**	**17 36 46.0**	**-1.3**
	54nm,0.8s,mb5.1,baz=93,slow=7.9,SNR=221						
ASAR				PcP	PcP	17 38 22.2	-1.1
	3.6nm,0.7s,baz=104,slow=4.0,SNR=4.3						
ASAR				ScP	ScP	17 41 17.1	-2.1
	2.4nm,0.9s,baz=100,slow=3.6,SNR=7.0						
ASAR				S	**S**	**17 42 28.8**	**-3.7**
	2.3nm,0.9s,baz=92,slow=15,SNR=9.0						
WRAB	**Tennant Creek**	**43.30**	**263**	*e*P	**P**	**17 36 47.6**	**-0.8**
	51nm,0.8s,mb5.1						
WRA	**Warramunga Arr**	**43.31**	**263**	P	**P**	**17 36 48.0**	**-0.4**
	21nm,0.3s,mb5.1,baz=96,slow=7.7,SNR=718						
WRA				S	**S**	**17 42 29.1**	**-5.4**
	1.1nm,0.9s,baz=100,slow=18,SNR=4.4						
WRA	**Warramunga Arr**	**43.31**	**263**	P	**P**	**17 36 48.0**	**-0.5**
WRA				S	**S**	**17 42 29.1**	**-5.4**
KAKA	**Kakadu**	**46.81**	**272**	*e*P	**P**	**17 37 15.8**	**+0.6**
	32nm,0.4s,mb5.2						
KAKA	**Kakadu**	**46.81**	**272**	*e*P	**P**	**17 37 15.4**	**+0.2**
	94nm,0.5s,mb5.6						
FORT	**Forrest**	**47.87**	**247**	*e*P	**P**	**17 37 22.2**	**-0.7**
	60nm,0.6s,mb5.3						
FORT	**Forrest**	**47.87**	**247**	*e*P	**P**	**17 37 22.0**	**-0.9**
	40nm,0.5s,mb5.2						
FITZ	**Fitzroy Crossi**	**51.74**	**263**	*e*P	**P**	**17 37 51.3**	**-0.1**
	18nm,0.6s,mb4.6						
FITZ	**Fitzroy Crossi**	**51.74**	**263**	P	**P**	**17 37 50.9**	**-0.5**
	7.6nm,0.4s,mb4.4,baz=109,slow=3.3,SNR=48						
FITZ	**Fitzroy Crossi**	**51.74**	**263**	*e*P	**P**	**17 37 51.2**	**-0.2**
	13nm,0.8s,mb4.3						
MBWA	**Marble Bar**	**56.51**	**258**	*e*P	**P**	**17 38 23.7**	**-1.1**
KLBR	**Kellerberrin**	**56.63**	**246**	*e*P	**P**	**17 38 24.7**	**-0.7**
	30nm,0.8s,mb4.6						
NWAO	**Narrogin (SRO)**	**56.93**	**244**	*e*P	**P**	**17 38 27.1**	**-0.4**
SBA	**Scott Base**	**56.97**	**183**	*e*P	**P**	**17 38 28.8**	**+1.8**
	40nm,1.8s,mb4.3						
SBA				*e*		17 38 47.0	
SBA				*e*		17 38 56.5	
CBIJ	**Chichi jima**	**60.90**	**321**	P	**P**	**17 38 53.1**	**-0.9**
	26nm,0.6s,mb4.7,baz=81,slow=22,SNR=6.7						
QSPA	**South Pole Qui**	**68.75**	**180**	*e*P	**P**	**17 39 42.0**	**-0.4**
	7.4nm,1.0s,mb4.1						
KKM	**Kota Kinabalu**	**68.82**	**286**	*e*P	**P**	**17 39 43.6**	**-0.4**
	13nm,1.1s,mb4.3						
MJAR	**Matsushiro Arr**	**70.18**	**325**	P	**P**	**17 39 51.2**	**-0.4**
	4.4nm,0.6s,mb4.0,baz=155,slow=6.1,SNR=14						
MJAR	**Matsushiro Arr**	**70.18**	**325**	P	**P**	**17 39 51.2**	**-0.4**
MAT	**Matsushiro**	**70.18**	**325**	P	**P**	**17 39 51.0**	**-0.6**
MAT				*e*S	S	17 48 33.0	+16
KSM	**Kuching**	**72.35**	**279**	*e*P	**P**	**17 40 04.3**	**-0.5**
	21nm,0.9s,mb4.7						
SSLB	**Suanglung**	**73.44**	**304**	*e*P	**P**	**17 40 09.4**	**-1.4**
	14nm,0.7s,mb4.6						
FX1	**Attu Island--F**	**74.19**	**355**	P	**P**	**17 40 13.2**	**-1.1**
	6.1nm,0.6s,mb4.3,baz=110,slow=4.0,SNR=7.6						
KSRS	**Korea Array**	**76.72**	**319**	P	**P**	**17 40 28.3**	**-0.4**
	1.5nm,0.9s,mb3.4,baz=148,slow=6.1,S

comp=Z,7.7nm,0.8s,mb4.8
WMQ Urumqi 106.57 311 *e*P Pdif 17 42 51.0 +1.9
ZALV Zalesovo Beam 110.39 321 PKiKP PKiKP 17 47 00.1 -2.7
comp=Z,0.7nm,0.6s,baz=101,slow=1.5,SNR=3.7
MKAR Makanchi Array 110.89 313 PKiKP PKiKP 17 47 01.4 -2.6
comp=Z,0.2nm,0.5s,baz=88,slow=1.4,SNR=6.0
BVAR Borovoye Array 118.94 320 PKP PKPdf 17 47 17.1 -2.2
comp=Z,1.0nm,0.4s,baz=58,slow=5.8,SNR=5.3
ARCES ARCESS Array B 129.51 349 PKP PKPdf 17 47 36.8 -2.2
comp=Z,1.7nm,0.6s,baz=352,slow=2.5,SNR=9.8
FINES FINESS Array B 136.22 343 PKP PKPdf 17 47 51.7 -0.1
comp=Z,1.9nm,0.8s,baz=48,slow=2.8,SNR=5.1
AKASG Malin Array Be 143.14 330 PKhKP 17 48 00.9
comp=Z,11nm,0.6s,baz=42,slow=4.0,SNR=31
SUW Suwalki 143.17 338 *e*PKP PKPdf 17 48 01.9 -2.7
BR131 Keskin Array S 146.49 311 *e*PKPdf PKPdf 17 48 12.0 +1.2
BRTR Keskin Array B 146.49 311 PKPbc PKPbc 17 48 11.8 -1.5
comp=Z,4.4nm,0.8s,baz=132,slow=4.4,SNR=24
KWP Kalwaria Pacla 146.81 334 *e*PKP PKPbc 17 48 13.2 -0.6
KWP Kalwaria Pacla 146.81 334⇑*i*P PKPbc 17 48 13.0 -0.9
TLCR 146.86 322⇓*i*P PKPbc 17 48 13.3 -0.8
MMAI Mount Meron Ar 147.17 298 PKPbc PKPbc 17 48 14.2 -1.2
comp=Z,6.3nm,0.6s,baz=69,slow=4.6,SNR=8.1
BURAR Bucovina Array 147.17 329⇑*i*P PKPbc 17 48 15.5 +0.6
TIRR Tirgusor 147.52 322⇑*i*P PKPbc 17 48 14.8 -1.1
KOLS Kolonicke sedl 147.53 333 *e*PKP PKPbc 17 48 15.4 -0.4
KOLS *e* 17 48 19.3
KOLS Kolonicke sedl 147.53 333 *e*PKP PKPbc 17 48 15.4 -0.4
KOLS *e* 17 48 19.3
STHS Stebnicka Huta 147.57 335 *e*PKP PKPbc 17 48 15.5 -0.3
STHS *e* 17 48 20.6
STHS Stebnicka Huta 147.57 335 *e*PKP PKPbc 17 48 15.5 -0.3
STHS *e* 17 48 20.6
HARR Harsova 147.66 322⇓*i*P PKPbc 17 48 15.2 -1.0
CRVS Cervenica-Dubn 147.89 334 *e*PKP PKPbc 17 48 16.0 -0.7
CRVS Cervenica-Dubn 147.89 334 *e*PKP PKPbc 17 48 16.0 -0.7
NIE Niedzica 147.94 336 *e*PKP PKPbc 17 48 16.6 -0.2
OKC Ostrava-Krasne 148.38 338 *e*PKPAB PKPab 17 48 23.1 -0.3
OKC *ex* x 17 48 28.6
UPC Upice 148.49 341⇑*e*PKP PKPbc 17 48 17.5 -0.6
UPC *e*PKPAB PKPab 17 48 24.0 +0.2
DPC Dobruska-Polom 148.53 341⇑*e*PKP PKPbc 17 48 17.1 -1.1
DPC *e*PKPAB PKPab 17 48 24.1 +0.1
CLL Collm 148.57 345 *e*PKPbc PKPbc 17 48 17.4 -0.9
CLL *e*PKPab PKPab 17 48 23.2 -1.0
CLL Collm 148.57 345⇓*i*PKPbc PKPbc 17 48 17.0 -1.3
comp=Z,10.0nm,1.2s
CLL ⇑*i*PKPab PKPab 17 48 23.2 -1.0
comp=Z,5.0nm,0.9s
KECS Kecovo 148.62 334 *e*PKP PKPbc 17 48 18.5 0.0
KECS Kecovo 148.62 334 *e*PKP PKPbc 17 48 18.5 0.0
CLZ Clausthal 148.63 348 *e*PKPbc PKPbc 17 48 17.8 -0.6
BRG Berggiesshubel 148.74 344 *i* PKP PKPbc 17 48 17.9 -0.8
comp=Z,6.7nm,0.9s
PVCC Panska Ves 148.88 343⇑*e*PKP PKPbc 17 48 18.0 -1.1
VYHS Vyhne 149.25 336 *e*PKP PKPbc 17 48 19.3 -0.7
VYHS *e* 17 48 27.0
VYHS Vyhne 149.25 336 *e*PKP PKPbc 17 48 19.3 -0.7
VYHS *e* 17 48 27.0
PRU Pruhonice 149.38 342⇑*e*PKP PKPbc 17 48 19.4 -0.9
PRU *e*PKPAB PKPab 17 48 27.6 +0.1
MOX Moxa 149.51 346 *e*PKPbc PKPbc 17 48 19.8 -0.8
TANN Tannenbergstha 149.53 345 *e*PKPbc PKPbc 17 48 19.9 -0.7
GUNZ Gunzen 149.61 345 *e*PKPbc PKPbc 17 48 20.2 -0.6
ROTZ Rotzenmuhle 150.19 345 *e*PKPbc PKPbc 17 48 21.5 -0.7
BZS Buzias 150.33 330⇓*i*P PKPbc 17 48 21.3 -1.4
KHC Kasperske Hory 150.42 343 *e*PKPdf PKPdf 17 48 18.8 +2.1
KHC *e* 17 48 31.7
KHC Kasperske Hory 150.42 343⇑*e*PKP PKPbc 17 48 21.7 -1.0
KHC *e*PKPAB PKPab 17 48 31.8 -0.1
GRF Grafenberg Arr 150.49 346 *e*PKPab PKPab 17 48 31.8 -0.4
GRF Grafenberg Arr 150.49 346 *e*PKP PKPab 17 48 31.8 -0.4
TNS Taunus Mts 150.53 350 *e*PKPbc PKPbc 17 48 22.3 -0.6
WET Wettzell 150.60 344 *e*PKPbc PKPbc 17 48 23.2 0.0
WET *e*PKPab PKPab 17 48 33.3 +0.6
GEC2 GERESS Array S 150.65 342 *e*PKPbc PKPbc 17 48 22.3 -1.0
GEC2 *e*PKPab PKPab 17 48 32.9 0.0
GERES GERESS Array B 150.65 342 PKPbc PKPbc 17 48 22.0 -1.2
comp=Z,1.8nm,0.6s,baz=21,slow=1.9,SNR=13
GERES PKPab PKPab 17 48 32.3 -0.6
comp=Z,0.9nm,0.6s,baz=46,slow=5.8,SNR=5.4
GERES GERESS Array B 150.65 342 PKPab PKPab 17 48 32.3 -0.6
CONA Conrad Observa 150.79 339⇑*i*PKiKP PKiKP 17 48 23.0 -1.0
comp=Z,7.7nm,1.0s
PKSM Moragy 151.19 334⇑*i*P PKPbc 17 48 23.5 -1.1
RJOB Jochberg 151.91 343 *e*PKPbc PKPbc 17 48 25.7 -0.4
RJOB *e*PKPab PKPab 17 48 38.3 +0.1
BFO Black Forest 152.37 349 *e*PKPbc PKPbc 17 48 26.2 -0.9
CDF Champ du Feu 152.47 351 *e*PKP1 PKPab 17 48 42.1 +1.5
FLN La Foliniere 152.61 2 *e*PKP1 PKPab 17 48 47.0 +5.9
FETA Feichten 153.11 345⇑*i*PKPab PKPab 17 48 41.7 -1.6
comp=Z,7.8nm,1.3s
LOR Lormes 154.00 355 *e*PKP1 PKPab 17 48 47.6 +0.5
SSF Saint Saulge 154.23 356 *e*PKP1 PKPab 17 48 48.4 +0.3
comp=Z,16nm,1.1s
AVF Avril sur Loir 154.51 356 *e*PKP1 PKPab 17 48 48.5 -0.8
comp=Z,18nm,1.3s
BGF Bois d'Agland 154.77 357 *e*PKP1 PKPab 17 48 49.8 -0.7
TCF Toulx Ste Croi 155.07 358 *e*PKP1 PKPab 17 48 51.2 -0.6
comp=Z,14nm,1.1s
ORIF Oris-en-Rattie 156.09 351 *e*PKP1 PKPab 17 48 50.5 -5.7
KEST Kesra 163.78 334 PKPab PKPab 17 49 29.5 -0.7
comp=Z,0.4nm,0.5s,baz=26,slow=5.6,SNR=4.3

NIED ***11*** *17:31:00,23.°60N×125.°90E,h20km,Mw3.6 Best double couple: M₀2.98000×10¹⁴ NP1:φs100.00000°,δ80.00000°, λ-21.00000°. NP2:φs194.00000°,δ69.00000°, λ-170.00000°.*

JMA 11 17:31:48.8±0.3,23.°56N×125.°93E,h0km,M3.5, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**1.29**	**338**	P	Pg	17 32 13.2	-0.3
JOGS				*e*S	Sg	17 32 31.7	+1.5
JMJ	**Miyako jima 2**	**1.38**	**335**	P	Pg	17 32 14.8	-0.4
JMJ				*e*S	Sg	17 32 33.9	+0.8
JTJ	**Tarama**	**1.56**	**314**	P	Pn	17 32 17.7	0.0
JTJ				*e*S	Sn	17 32 37.8	-0.8
JIJ	**Ishigaki jima**	**1.82**	**296**	P	Pn	17 32 21.9	+0.5
JIJ				S	Sn	17 32 44.6	-0.6
JKRS	**Kuro-shima**	**1.88**	**291**	P	Pn	17 32 23.1	+0.9
JKRS				*e*S	Sn	17 32 47.1	+0.4
HATJ	**Hateruma jima**	**2.01**	**285**	*e*S	Sn	17 32 49.3	-0.5
IRIF	**Iriomote-Funau**	**2.16**	**291**	P	Pn	17 32 26.8	+0.8
IRIF				*e*S	Sn	17 32 53.4	0.0
YOJ	**Yonaguni jima**	**2.82**	**289**	P	Pn	17 32 36.1	+1.0
YOJ				*e*S	Sn	17 33 08.2	-1.5
JKE	**Kume jima 2**	**2.86**	**16**	P	Pn	17 32 31.9	-3.8
JKE				*e*S	Sn	17 33 03.8	-7.1

MAN 11 17:41:16,16.°67N×122.°14E,h22km,mb4.6,ML3.5,MS3.5, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAUP	**Cauayan**	**0.40**	**312**	*e*P	Pb	17 41 25.3	+0.8
PALP	**Palanan**	**0.48**	**36**	*e*P	Pb	17 41 26.8	+1.1
BALP	**Baler**	**1.07**	**210**	*e*P	Pn	17 41 35.3	-0.4
APYP	**Conner**	**1.46**	**324**	*e*P	Pn	17 41 41.0	0.0
ABRA	**Dolores**	**1.67**	**306**	*e*P	Pn	17 41 44.6	+0.7

IDC 11 17:54:00.2±4.7,5.°97S×149.°24E,h0km,mb3.5/4, mb1 3.8/4,mb1mx3.5/16,mbtmp3.6/4,Error ellipse: s-maj=129.0km s-min=28.5km az=107.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.06**	**225**	P	P	17 58 34.7	-0.6
0.3nm,0.3s,baz=51,slow=10,SNR=7.6							
ASAR	**Alice Springs**	**22.96**	**218**	P	P	17 59 06.9	+0.5
0.8nm,0.5s,baz=51,slow=8.9,SNR=36							
FITZ	**Fitzroy Crossi**	**26.00**	**240**	P	P	17 59 35.0	0.0
1.1nm,0.4s,baz=64,slow=9.2,SNR=14							
SONM	**Songino Array**	**65.48**	**330**	P	P	18 04 45.4	+0.3
0.3nm,0.3s,baz=144,slow=10,SNR=2.0							

IDC ***11*** *18:19:21.9±1.0, 1.°70N×126.°68E,h0km,mb4.0/6, mb1 4.1/8,mb1mx3.8/21,mbtmp4.0/8,ML3.7/2,Error ellipse: s-maj=53.2km s-min=13.5km az=67.0*
NEIC ***11*** *18:19:26.8±0.6, 1.°67N×126.°75E,h35km,mb4.3/4,Error ellipse: s-maj=15.5km s-min=8.2km az=64.0*

ISC 11 18:19:21.7±4.7,1.73N±0.09×126.8E±0.1,h1km±28km,n17, σ1°09/16,mb4.2/10,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**9.75**	**227**	Pn	**Pn**	**18 21 42.9**	**-0.3**
1.2nm,0.3s,baz=64,slow=7.3,SNR=3.0							
KKM	**Kota Kinabalu**	**11.43**	**292**	*e*Pn	**Pn**	**18 22 07.1**	**+0.8**
7.6nm,0.6s							
KSM	**Kuching**	**16.53**	**269**	*e*Pn	**Pn**	**18 23 16.6**	**+1.6**
FITZ	**Fitzroy Crossi**	**19.74**	**183**	P	**Pn**	**18 23 52.2**	**-2.3**
0.1nm,0.3s,baz=7.1,slow=10,SNR=5.1							
WRAB	**Tennant Creek**	**22.75**	**161**	*e*P	**P**	**18 24 25.9**	**+0.4**
6.1nm,0.6s,mb4.3							
WRA	**Warramunga Arr**	**22.76**	**162**	P	**P**	**18 24 26.1**	**+0.5**
5.6nm,0.6s,mb4.3,baz=339,slow=11,SNR=55							
WRA				S	**S**	**18 28 36.9**	**+1.1**
0.7nm,0.8s,baz=337,slow=19,SNR=2.8							
MBWA	**Marble Bar**	**23.79**	**197**	*e*P	**P**	**18 24 33.8**	**-2.4**
3.8nm,0.7s,mb4.0							
ASAR	**Alice Springs**	**26.16**	**165**	P	**P**	**18 24 58.7**	**+0.9**
1.3nm,0.5s,mb3.8,baz=345,slow=8.4,SNR=53							
ASAR				PcP	PcP	18 28 26.4	+1.1
0.3nm,0.7s,baz=355,slow=2.4,SNR=5.6							
ENH	**Enshi**	**32.82**	**332**	*e*P	**P**	**18 25 57.0**	**+0.1**
3.5nm,0.5s,mb4.5							
STKA	**Stephens Creek**	**36.23**	**158**	P	**P**	**18 26 27.9**	**+1.4**
2.1nm,0.6s,mb4.1,baz=321,slow=10,SNR=5.4							
MK31	**Makanchi Array**	**59.26**	**326**	*e*P	**P**	**18 29 24.7**	**-0.2**
MKAR	**Makanchi Array**	**59.26**	**326**	P	**P**	**18 29 24.9**	**0.0**
1.0nm,0.6s,mb4.0,baz=105,slow=9.8,SNR=14							
KURK	**Kurchatov**	**63.48**	**328**	*e*P	**P**	**18 29 53.2**	**-0.2**
4.2nm,0.7s,mb4.7							
BVAR	**Borovoye Array**	**69.05**	**327**	P	**P**	**18 30 28.9**	**-0.2**
0.5nm,0.6s,mb4.0,baz=127,slow=9.5,SNR=4.5							
BRTR	**Keskin Array B**	**91.38**	**310**	P	**P**	**18 32 28.1**	**-1.7**
1.0nm,1.0s,mb4.1,baz=84,slow=11,SNR=4.0							
TORD	**Torodi Ar. Bea**	**123.62**	**287**	PKP	PKPdf	18 38 22.7	+0.4
0.7nm,0.7s,baz=54,slow=1.7,SNR=4.0							
TORD	**Torodi Ar. Bea**	**123.62**	**287**	PKP	PKPdf	18 38 22.7	+0.4

IDC ***11*** *18:26:00.0±2.0, 11.°38S×162.°11E,h0km,mb4.1/7, mb1 4.2/9,mb1mx4.1/19,mbtmp4.1/9,ML4.4/2,MS3.5/7, Ms1 3.5/7,ms1mx3.1/28,Error ellipse: s-maj=49.1km s-min=25.7km az=111.0*
NEIC ***11*** *18:26:04.0±1.8, 11.°27S×162.°24E,h35km,mb4.4/3,Error ellipse: s-maj=36.8km s-min=17.7km az=107.0*

ISC 11 18:26:02.6±1.2,11.°34S±0.09×162.°5E±0.1,h35km,n23, σ1°30/22,mb4.0/8,MS3.5/6,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.17**	**307**	Pn	**Pn**	**18 26 47.7**	**-2.2**
49nm,0.3s,baz=156,slow=8.8,SNR=23							
HNR				Sn	**Sn**	**18 27 28.3**	**+1.7**
164nm,0.3s,baz=162,slow=16,SNR=7.9							
HNR	**Honiara**	**3.17**	**307**	*e*Pn	**Pn**	**18 26 47.3**	**-2.6**
HNR				Pn	**Pn**	**18 26 47.8**	**-2.2**
HNR				Sn	**Sn**	**18 27 28.3**	**+1.7**
HNR				*e*Sg	**Sn**	**18 27 32.4**	**+5.8**
CTA	**Charters Tower**	**17.90**	**239**	P	**Pn**	**18 30 07.8**	**-1.1**
0.8nm,0.3s,baz=85,slow=10.0,SNR=7.2							
CTA				LR	LR	18 36 03.0	
comp=Z,210nm,19.2s,baz=56,slow=34							
CTAO	**Charters Tower**	**17.90**	**239**	*e*Pn	**Pn**	**18 30 10.6**	**+1.7**
9.1nm,0.7s							
MTSU	**Mount Surprise**	**18.85**	**247**	*e*P	**Pn**	**18 30 21.8**	**+1.3**
48nm,0.9s							
COEN	**Coen**	**19.06**	**260**	P	**Pn**	**18 30 23.2**	**+0.2**
173nm,1.1s							
RMQ	**Roma**	**19.88**	**219**	*e*P	**Pn**	**18 30 33.4**	**+0.6**
58nm,1.2s							
CMSA	**Cobar Meteorol**	**25.41**	**215**	*e*P	**P**	**18 31 28.5**	**+1.6**
STKA	**Stephens Creek**	**28.11**	**220**	P	**P**	**18 31 51.2**	**0.0**
3.1nm,0.8s,mb4.0,baz=24,slow=12,SNR=3.6							
STKA				LR	LR	18 42 02.6	
comp=Z,293nm,19.4s,MS3.9,baz=23,slow=35							
WRAB	**Tennant Creek**	**28.41**	**249**	*e*P	**P**	**18 31 52.0**	**-2.0**
6.2nm,1.0s,mb4.2							
WRA	**Warramunga Arr**	**28.42**	**249**	P	**P**	**18 31 53.2**	**-0.9**
1.3nm,0.6s,mb3.7,baz=77,slow=9.5,SNR=8.3							
WRA				PcP	PcP	18 35 08.1	+2.0
1.3nm,1.0s,baz=300,slow=4.4,SNR=5.4							
WRA	**Warramunga Arr**	**28.42**	**249**	P	**P**	**18 31 53.2**	**-0.9**
WRA				PcP	PcP	18 35 08.1	+2.0
ASAR	**Alice Springs**	**29.85**	**242**	P	**P**	**18 32 05.8**	**-1.0**
1.8nm,0.9s,mb3.8,baz=64,slow=9.8,SNR=13							
FITZ	**Fitzroy Crossi**	**36.25**	**255**	P	**P**	**18 33 01.2**	**-1.5**
2.5nm,0.9s,mb4.1,baz=78,slow=9.3,SNR=4.5							
PPT	**Papeete**	**46.70**	**103**	LR	LR	18 51 17.8	
comp=Z,95nm,20.5s,MS3.7,baz=296,slow=32							
KSRS	**Korea Array**	**58.39**	**328**	LR	LR	18 58 37.4	
comp=Z,28nm,18.3s,MS3.4,baz=160,slow=34							
FX1	**Attu Island--F**	**64.61**	**7**	LR	LR	19 02 19.6	
comp=Z,41nm,19.6s,MS3.6,baz=290,slow=34							
CMAR	**Chiang Mai Arr**	**69.35**	**295**	P	**P**	**18 37 07.9**	**+0.8**
1.2nm,0.8s,mb3.9,baz=126,slow=5.0,SNR=11							
CMAR				LR	LR	19 03 35.2	
comp=Z,29nm,19.7s,MS3.5,baz=175,slow=33							
SONM	**Songino Array**	**77.06**	**325**	P	**P**	**18 37 54.6**	**+2.6**
1.7nm,0.7s,mb4.1,baz=138,slow=5.4,SNR=5.7							
MK31	**Makanchi Array**	**91.59**	**317**	*e*P	**P**	**18 39 05.3**	**-0.6**
MKAR	**Makanchi Array**	**91.59**	**317**	P	**P**	**18 39 05.9**	**+0.1**
0.3nm,0.5s,mb3.9,baz=79,slow=8.6,SNR=8.2							
YKA	**Yellowknife Ar**	**96.69**	**28**	LR	LR	19 18 30.1	
comp=Z,4.6nm,21.6s,MS2.9,baz=185,slow=32							
KEST	**Kesra**	**145.66**	**319**	PKPbc	PKPbc	18 45 41.2	+3.2
1.3nm,0.7s,baz=304,slow=4.5,SNR=4.7							

IDC 11 18:40:15.1±9.6,23.°78N×143.°64E,h0km,mb3.5/3, mb1 3.7/3,mb1mx3.4/23,mbtmp3.5/3,Error ellipse: s-maj=373.6km s-min=31.2km az=74.0,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**38.03**	**319**	P	P	18 47 35.2	+0.2
0.7nm,0.4s,baz=126,slow=7.3,SNR=3.7							
WRA	**Warramunga Arr**	**44.39**	**193**	P	P	18 48 27.1	-0.4
0.3nm,0.4s,baz=13,slow=8.2,SNR=8.1							
ASAR	**Alice Springs**	**48.10**	**192**	P	P	18 48 57.0	+0.3
0.3nm,0.9s,baz=16,slow=6.7,SNR=6.5							

NIED ***11*** *18:44:00,39.°20N×144.°30E,h11km,Mw3.5 Best double couple: M₀2.29000×10¹⁴ NP1:φs190.00000°,δ68.00000°, λ-153.00000°. NP2:φs89.00000°,δ65.00000°, λ-24.00000°.*
IDC ***11*** *18:44:26.4±6.9, 39.°21N×144.°92E,h0km,mb3.5/2, mb1 3.6/5,mb1mx3.4/27,mbtmp3.7/5,ML3.7/1,Error ellipse: s-maj=128.7km s-min=28.0km az=101.0*
ISCJB ***11*** *18:44:31.9±1.1,39.°21N±0.°05×144.°50E±0.°08, h43km±14km,Error ellipse: s-maj=11.1km s-min=5.8km az=33.1*
JMA ***11*** *18:44:34.3±0.2,39.°19N×144.°33E,h51km,M3.8*

ISC 11 18:44:33.7±1.0,39.°21N±0.°05×144.°47E±0.°08,h36km±15km, n19,σ1°01/31,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**2.09**	**281**	P	**Pn**	**18 45 06.4**	**+0.2**
MIYJ				S	**Sn**	**18 45 30.0**	**-0.9**
JTH	**Tanohata**	**2.14**	**291**	P	**Pn**	**18 45 07.0**	**+0.1**
JTH				*e*S	**Sn**	**18 45 31.8**	**-0.5**
OFUJ	**Ofunato**	**2.18**	**267**	P	**Pn**	**18 45 07.4**	**-0.1**
OFUJ				*e*S	**Sn**	**18 45 32.2**	**-1.1**
JOM	**Ohasama**	**2.48**	**277**	P	**Pn**	**18 45 12.1**	**+0.5**
JOM				S	**Sn**	**18 45 40.2**	**-0.4**
JMK	**Ichinoseki**	**2.54**	**265**	P	**Pn**	**18 45 12.7**	**+0.3**
JMK				*e*S	**Sn**	**18 45 41.3**	**-0.9**
JANG	**Nango**	**2.56**	**298**	P	**Pn**	**18 45 12.5**	**-0.1**
JOT	**Ohata**	**3.40**	**311**	P	**Pn**	**18 45 24.9**	**+0.7**
JCH	**Churui**	**3.50**	**346**	P	**Pn**	**18 45 25.5**	**-0.1**
JCH				*e*S	**Sn**	**18 46 04.7**	**-1.1**
JKB	**Kayabe**	**3.74**	**317**	P	**Pn**	**18 45 29.9**	**+1.0**
NEM2	**Nemuro 2**	**4.26**	**13**	P	**Pn**	**18 45 34.5**	**-1.5**
NEM2				*e*S	**Sn**	**18 46 20.3**	**-4.2**
JOSM	**Okushiri--Mats**	**4.76**	**309**	P	**Pn**	**18 45 44.7**	**+1.8**
JTKR	**Abashiri--Toko**	**4.78**	**355**	P	**Pn**	**18 45 43.1**	**0.0**
JTKR				*e*S	**Sn**	**18 46 35.4**	**-1.8**
JHR	**Hokuryu**	**4.98**	**336**	P	**Pn**	**18 45 48.5**	**+2.6**
JHR				*e*S	**Sn**	**18 46 44.1**	**+2.0**
ASAJ	**Asahikawa**	**5.10**	**345**	Pn	**Pn**	**18 45 46.2**	**-1.3**
1.4nm,0.3s,baz=188,slow=8.5,SNR=18							
ASAJ				Sn	**Sn**	**18 46 46.3**	**+1.2**
1.3nm,0.3s,baz=35,slow=21,SNR=4.3							
MJAR	**Matsushiro Arr**	**5.62**	**244**	Pn	**Pn**	**18 45 55.6**	**+0.8**
1.1nm,0.3s,baz=58,slow=11,SNR=14							
MAT	**Matsushiro**	**5.62**	**244**	P	**Pn**	**18 45 55.5**	**+0.7**
MAT				*e*S	**Sn**	**18 46 58.6**	**+0.4**
JHJ	**Hachijo jima 2**	**7.16**	**213**	Pn	**Pn**	**18 46 14.8**	**-1.1**
4.4nm,0.3s,baz=90,slow=19,SNR=4.2							
JHJ				Sn	**Sn**	**18 47 28.1**	**-8.0**
3.9nm,0.3s,baz=90,slow=20,SNR=5.5							
ZALV	**Zalesovo Beam**	**42.28**	**311**	P	**P**	**18 52 22.7**	**-0.7**
0.3nm,0.3s,baz=67,slow=8.0,SNR=2.5							
MKAR	**Makanchi Array**	**45.04**	**301**	P	**P**	**18 52 46.4**	**+0.6**
0.1nm,0.3s,baz=76,slow=12,SNR=3.2							

IDC 11 19:05:01.3±1.3,55.°91S×127.°07W,h0km,mb4.0/3, mb1 4.2/3,mb1mx3.9/14,mbtmp4.0/3,MS4.1/16, Ms1 4.1/16,ms1mx3.9/23,Error ellipse: s-maj=50.0km s-min=32.8km az=152.0,Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**31.11**	**132**	LR	LR	19 20 40.2	
comp=Z,331nm,18.9s,baz=124,slow=30							
USHA	**Ushuaia**	**32.48**	**113**	LR	LR	19 20 46.2	
comp=Z,367nm,19.7s,baz=346,slow=29							
RKT	**Rikitea**	**33.27**	**347**	*e*LR	LR	19 19 52.0	
561nm,29.0s							
RKT				*e*T		19 45 14.0	
8.9nm,0.3s							
QSPA	**South Pole Qui**	**34.27**	**180**	P	P	19 11 49.0	+0.6
3.0nm,1.0s,baz=92,slow=4.2,SNR=5.5							
QSPA				LR	LR	19 24 10.3	
comp=Z,356nm,18.5s,baz=283,slow=34							
PLCA	**Paso Flores**	**39.35**	**92**	LR	LR	19 25 06.9	
comp=Z,263nm,19.9s,baz=176,slow=31							
URZ	**Urewera**	**40.66**	**272**	LR	LR	19 25 11.1	
comp=Z,203nm,19.4s,baz=136,slow=30							
PPT	**Papeete**	**41.91**	**327**	*e*LR	LR	19 23 52.2	
579nm,26.0s							
PPT	**Papeete**	**41.91**	**327**	LR	LR	19 24 08.5	
comp=Z,285nm,20.8s,baz=281,slow=27							
TAOE	**Nuku Hiva Isla**	**48.05**	**342**	*e*LR	LR	19 26 42.9	
404nm,28.6s							
MAW	**Mawson**	**56.58**	**185**	LR	LR	19 39 11.7	
comp=Z,103nm,21.9s,baz=359,slow=36							
CPUP	**Villa Florida**	**57.34**	**89**	LR	LR	19 37 55.6	
comp=Z,149nm,18.6s,baz=27,slow=34							
LPAZ	**La Paz**	**59.38**	**73**	P	P	19 15 05.7	+0.4
2.6nm,1.0s,baz=195,slow=4.7,SNR=6.3							
LPAZ				LR	LR	19 33 58.2	
comp=Z,84nm,19.8s,baz=304,slow=29							
STKA	**Stephens Creek**	**64.97**	**250**	LR	LR	19 37 13.3	
comp=Z,173nm,19.3s,baz=204,slow=30							
CTA	**Charters Tower**	**71.77**	**261**	LR	LR	19 44 01.9	
comp=Z,115nm,20.8s,baz=48,slow=33							
ROSC	**El Rosal**	**74.32**	**55**	LR	LR	19 42 36.6	
comp=Z,112nm,19.4s,baz=8.5,slow=30							
ASAR	**Alice Springs**	**75.59**	**249**	P	P	19 16 47.3	-0.5
0.8nm,0.8s,baz=145,slow=5.7,SNR=8.6							
FITZ	**Fitzroy Crossi**	**84.49**	**246**	LR	LR	19 49 17.5	
comp=Z,111nm,19.7s,baz=208,slow=31							
BOSA	**Boshof**	**92.57**	**156**	LR	LR	19 54 28.2	
comp=Z,147nm,19.5s,baz=166,slow=32							
KAPI	**Kappang**	**98.58**	**248**	LR	LR	19 59 07.5	
comp=Z,102nm,20.0s,baz=45,slow=33							
PDAR	**Pinedale Array**	**99.42**	**13**	LR	LR	19 54 31.9	
comp=Z,75nm,20.4s,baz=350,slow=30							
SONM	**Songino Array**	**146.78**	**279**	PKPbc	PKPbc	19 24 45.0	+0.8
1.4nm,0.6s,baz=134,slow=6.2,SNR=3.9							

NEIC ***11*** *19:38:11.5±0.5, 11.°22N×124.°75E,h100km,mb4.4/19, Error ellipse: s-maj=14.9km s-min=10.2km az=57.0*
ISCJB ***11*** *19:38:21.0±0.4, 11.°18N±0.°05×124.°77E±0.°06, h209km±3km,mb4.0/38,Error ellipse: s-maj=11.1km s-min=7.2km az=150.4*
IDC ***11*** *19:38:21.5±4.5, 11.°14N×124.°80E,h197km±45km, mb3.7/17,mb1 3.7/17,mb1mx3.6/27,mbtmp3.7/17,Error ellipse: s-maj=17.6km s-min=11.0km az=73.0*
MAN ***11*** *19:38:22, 11.°22N×124.°83E,h184km,mb4.6,ML3.5, MS3.4*

ISC 11 19:38:21.9±0.4,11.°19N±0.°05×124.°79E±0.°06,h202km±3km, n62,σ1°00/62,mb4.0/38,1D,Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.23**	**231**	*e*P	**Pn**	**19 38 48.1**	**-0.3**
BESP	**Borongan**	**0.75**	**57**	*e*P	**Pn**	**19 38 48.9**	**-1.4**
MSLP	**Maasin**	**1.06**	**176**	*e*P	**Pn**	**19 38 52.1**	**-0.1**
CNP	**Cataman**	**1.31**	**355**	*e*P	**Pn**	**19 38 53.2**	**-1.0**
BUTP	**Butuan**	**2.36**	**160**	*e*P	**Pn**	**19 39 04.4**	**0.0**
PVCP	**Virac**	**2.47**	**345**	*e*P	**Pn**	**19 39 06.0**	**+0.5**
AUQP	**San Andres**	**

ZALV **Zalesovo Beam** 53.12 332 P P 19 47 18.5 -0.1
comp=Z,0.6nm,0.3s,mb3.5,baz=111,slow=7.7,SNR=5.9
ZALV **Zalesovo Beam** 53.12 332 P P 19 47 18.5 -0.1
UCH **Uchtor** 53.49 315 eP P 19 47 23.2 +1.7
comp=Z,2.2nm,0.7s,mb3.7
EKS2 **Erkin-Say** 54.15 315 eP P 19 47 27.4 +1.0
comp=Z,1.3nm,0.6s,mb3.6
KURK **Kurchatov** 54.49 326 P P 19 47 29.2 +0.6
comp=Z,2.6nm,0.5s,mb4.0,baz=126,slow=6.9,SNR=22
KURK **Kurchatov** 54.49 326 eP P 19 47 29.0 +0.4
comp=Z,6.8nm,1.0s,mb4.1
BVAR **Borovoye Array** 60.08 325 P P 19 48 08.0 +0.4
comp=Z,1.2nm,0.6s,mb3.7,baz=125,slow=7.4,SNR=6.2
BRVK **Borovoye** 60.16 325 eP P 19 48 08.5 +0.4
comp=Z,2.9nm,0.6s,mb4.1
TIXI **Tiksi** 60.46 1 eP P 19 48 09.8 -0.2
comp=Z,4.7nm,0.9s,mb4.1
AKTK **Aktyubinsk** 66.69 320 P P 19 48 50.4 -0.6
AKTO **Aktyubinsk** 66.69 320 P P 19 48 50.4 -0.6
comp=Z,0.5nm,0.5s,mb3.4,baz=73,slow=11,SNR=3.6
NIKO **Nikolski** 66.95 37 eP P 19 48 55.2 +2.6
comp=Z,81nm,1.1s,mb5.3
ARU **Arti** 67.66 327 eP P 19 48 56.2 -0.8
comp=Z,3.5nm,0.5s,mb4.2
KDAK **Kodiak Island** 76.68 33 P P 19 49 51.1 +0.7
comp=Z,4.4nm,0.5s,mb4.3,baz=297,slow=3.8,SNR=9.2
CHUM **Lake Minchumin** 76.90 27 eP P 19 49 52.5 +1.0
BPAW **Bear Paw Mtn.** 77.49 27 eP P 19 49 55.1 +0.3
comp=Z,4.0nm,0.9s,mb4.0
MCK **McKinley** 78.40 27 P P 19 49 59.8 0.0
JOF **Joensuu** 81.71 333 ep P 19 50 16.3 -1.2
comp=Z,2.8nm,0.7s,mb4.0
JOF **Joensuu** 81.71 333 ep P 19 50 16.3 -1.2
comp=Z,2.8nm,0.7s,mb4.0
ARCES **ARCESS Array B** 82.83 340 P P 19 50 22.9 -0.4
comp=Z,0.7nm,0.5s,mb3.6,baz=86,slow=7.1,SNR=9.1
FINES **FINESS Array B** 84.39 331 P P 19 50 31.1 -0.3
comp=Z,0.6nm,0.3s,mb3.8,baz=58,slow=4.7,SNR=7.6
YKA **Yellowknife Ar** 93.50 24 P P 19 51 13.9 -0.5
comp=Z,0.4nm,0.7s,mb3.6,baz=295,slow=4.6,SNR=3.9

*ISCJB **11** 19:46:23.1±0.4,3°.39S±0°.03×127°.29E±0°.04,h72km±4km, mb4.3/33,Error ellipse: s-maj=7.7km s-min=4.7km az=146.4*
*DJA **11** 19:46:25,3°.32S×127°.35E,h37km,Mw5.1/6*
*IDC **11** 19:46:25.7±2.1,3°.45S×127°.21E,h81km±19km,mb4.0/14, mb1 4.1/17,mb1mx4.0/26,mbtmp4.0/17,Error ellipse: s-maj=23.8km s-min=8.3km az=66.0*
*NEIC **11** 19:46:27.1±1.4,3°.49S×127°.20E,h95km±15km,mb4.4/18, Error ellipse: s-maj=13.0km s-min=6.6km az=50.0*
ISC 11 19:46:24.7±0.4,**3°.40S**±0°.03×**127°.33E**±0°.04,**h72**km±4km, **n71**,σ1**00/78**,**mb4.3**/33,**Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.28**	**305**	P	**Pn**	**19 46 33.2**	**-2.8**
NLAI				S	**Sn**	**19 46 40.7**	**-3.6**
AAI	**Ambon**	**0.91**	**108**	P	**Pn**	**19 46 41.8**	**-0.4**
AAI				S	**Sn**	**19 46 54.7**	**-0.5**
TNTI	**Ternate**	**4.15**	**1**	P	**Pn**	**19 47 25.5**	**-0.2**
TNTI				S	**Sn**	**19 48 13.1**	**+0.2**
KDI	**Kendari**	**4.73**	**263**	P	**Pn**	**19 47 33.8**	**+0.2**
LUWI	**Luwuk**	**5.12**	**297**	P	**Pn**	**19 47 38.9**	**-0.1**
1.1nm3μm164nm,0.7s							
MNI	**Manado**	**5.42**	**333**	P	**Pn**	**19 47 42.7**	**-0.3**
0.8nm2μm109nm,0.7s							
TLE	**Tual**	**5.83**	**113**	P	**Pn**	**19 47 51.9**	**+3.2**
APSI	**Ampana**	**6.19**	**293**	P	**Pn**	**19 47 54.1**	**+0.5**
0.7nm7μm109nm,0.6s							
MRSI	**Marisa**	**6.62**	**305**	P	**Pn**	**19 47 59.7**	**+0.2**
0.4nm1μm66nm,0.5s							
BNSI	**Bone**	**7.27**	**262**	P	**Pn**	**19 48 10.4**	**+2.0**
0.1nm24nm,1.9s							
KAPI	**Kappang**	**7.72**	**258**	P	**Pn**	**19 48 15.6**	**+1.0**
5.5nm,0.3s,baz=112,slow=4.5,SNR=17							
KAPI	**Kappang**	**7.72**	**258**	P	**Pn**	**19 48 15.6**	**+1.0**
KAPI	**Kappang**	**7.72**	**258**	P	**Pn**	**19 48 16.4**	**+1.8**
0.1nm17nm,0.6s							
KAKA	**Kakadu**	**10.54**	**152**	eP	**Pn**	**19 48 55.4**	**+2.4**
6.8nm,0.3s							
KAKA	**Kakadu**	**10.54**	**152**	ePn	**Pn**	**19 48 54.3**	**+1.3**
24nm,0.4s							
KAKA				eSn	**Sn**	**19 50 49.3**	**-0.2**
KAKA	**Kakadu**	**10.54**	**152**	P	**Pn**	**19 48 54.8**	**+1.8**
289nm25nm,0.7s							
KNA	**Kununurra**	**12.35**	**174**	eP	**Pn**	**19 49 18.5**	**+0.8**
16nm,0.8s							
KNA	**Kununurra**	**12.35**	**174**	P	**Pn**	**19 49 19.3**	**+1.6**
668nm78nm,0.8s							
FITZ	**Fitzroy Crossi**	**14.70**	**186**	eP	**Pn**	**19 49 47.5**	**-1.4**
9.2nm,0.8s							
FITZ	**Fitzroy Crossi**	**14.70**	**186**	P	**Pn**	**19 49 47.4**	**-1.5**
0.2nm,0.3s,baz=51,slow=8.2,SNR=4.4							
FITZ	**Fitzroy Crossi**	**14.70**	**186**	P	**Pn**	**19 49 48.9**	**0.0**
24nm,2.1s							
KSM	**Kuching**	**17.69**	**286**	eP	**Pn**	**19 50 27.6**	**+1.2**
6.7nm,0.8s							
WRAB	**Tennant Creek**	**17.80**	**158**	eP	**Pn**	**19 50 27.7**	**-0.1**
11nm,0.6s							
WRAB	**Tennant Creek**	**17.80**	**158**	P	**Pn**	**19 50 29.2**	**+1.4**
18nm,1.4s							
WRA	**Warramunga Arr**	**17.81**	**158**	P	**Pn**	**19 50 28.4**	**+0.6**
2.3nm,0.3s,baz=341,slow=12,SNR=68							
WRA				S	**S**	**19 53 46.9**	**-1.8**
0.1nm,0.3s,baz=334,slow=22,SNR=3.3							
WRA	**Warramunga Arr**	**17.81**	**158**	P	**Pn**	**19 50 28.4**	**+0.6**
WRA				S	**S**	**19 53 46.9**	**-1.8**
COEN	**Coen**	**18.83**	**125**	eP	**Pn**	**19 50 39.4**	**-0.8**
COEN	**Coen**	**18.83**	**125**	P	**Pn**	**19 50 39.7**	**-0.5**
MBWA	**Marble Bar**	**19.14**	**202**	eP	**Pn**	**19 50 42.3**	**-1.5**
ASAR	**Alice Springs**	**21.12**	**163**	P	**P**	**19 51 04.3**	**+0.5**
12nm,0.8s,mb4.3,baz=342,slow=11,SNR=60							
ASAR				S	**S**	**19 54 54.5**	**-0.4**
4.3nm,1.1s,baz=344,slow=21,SNR=13							
ASAR				ScP	ScP	19 58 38.8	+0.5
0.4nm,0.7s,baz=350,slow=1.8,SNR=5.0							
MTSU	**Mount Surprise**	**22.16**	**133**	eP	**P**	**19 51 14.8**	**-0.1**
53nm,1.3s,mb4.7							
MEEK	**Meekatharra**	**24.57**	**199**	eP	**P**	**19 51 37.8**	**-0.2**
CTA	**Charters Tower**	**24.81**	**133**	P	**P**	**19 51 42.2**	**+1.9**
2.8nm,0.5s,mb3.9,baz=314,slow=13,SNR=4.3							
CTAO	**Charters Tower**	**24.81**	**133**	P	**P**	**19 51 41.9**	**+1.6**
FORT	**Forrest**	**27.24**	**179**	eP	**P**	**19 52 01.7**	**-0.4**
15nm,0.6s,mb4.7							
PSI	**Prapat**	**29.05**	**282**	P	**P**	**19 52 18.1**	**-0.5**
5.6nm,0.8s,mb4.2,baz=235,slow=14,SNR=3.6							
NWAO	**Narrogin (SRO)**	**30.86**	**197**	P	**P**	**19 52 30.9**	**-3.3**
6.1nm,0.8s,mb4.4							
STKA	**Stephens Creek**	**31.34**	**156**	P	**P**	**19 52 39.0**	**+0.5**
1.9nm,0.6s,mb4.0,baz=342,slow=13,SNR=9.8							
STKA	**Stephens Creek**	**31.34**	**156**	eP	**P**	**19 52 38.8**	**+0.3**
0.6nm,0.7s,mb3.4							
CMAR	**Chiang Mai Arr**	**35.41**	**309**	P	**P**	**19 53 12.9**	**-1.1**
0.6nm,0.7s,mb3.5,baz=141,slow=7.5,SNR=6.5							
NJ2	**Nanjing**	**36.17**	**348**	eP	**P**	**19 53 19.8**	**-0.5**
NJ2				pmax	pmax		
comp=Z,10.0nm,0.6s,mb4.9							
ENH	**Enshi**	**37.58**	**334**	eP	**P**	**19 53 32.8**	**+0.4**
comp=Z,6.0nm,0.8s,mb4.5							
KSRS	**Korea Array**	**40.65**	**1**	P	**P**	**19 53 58.3**	**+0.4**
comp=Z,2.8nm,0.8s,mb4.2,baz=177,slow=9.4,SNR=16							
MAJO	**Matsushiro**	**41.02**	**13**	P	**P**	**19 54 01.9**	**+0.9**
comp=Z,2.7nm,0.5s,mb4.3							
MJAR	**Matsushiro Arr**	**41.02**	**13**	P	**P**	**19 54 00.5**	**-0.4**
comp=Z,1.7nm,0.8s,mb3.9,baz=186,slow=10,SNR=5.8							
LSA	**Lhasa**	**47.78**	**316**	P	**P**	**19 54 49.3**	**-5.7**
LSA	**Lhasa**	**47.78**	**316**	eP	**P**	**19 54 57.1**	**+2.1**
comp=Z,4.2nm,0.8s,mb4.3							
ODAN	**Odare**	**48.91**	**310**	eP	**P**	**19 55 03.5**	**-0.3**
comp=Z,15nm,0.8s,mb5.0							
TAPN	**Taplejung**	**48.93**	**311**	eP	**P**	**19 55 02.9**	**-1.0**
comp=Z,7.1nm,0.4s,mb5.0							
RAMN	**Ramite**	**49.56**	**310**	eP	**P**	**19 55 06.9**	**-1.8**
comp=Z,22nm,0.6s,mb5.2							
GUN	**Gumba**	**50.60**	**311**	eP	**P**	**19 55 13.2**	**-3.4**
comp=Z,16nm,0.6s,mb5.2							
KKN	**Kakani**	**50.99**	**310**	eP	**P**	**19 55 15.5**	**-4.1**
comp=Z,12nm,0.8s,mb5.0							
ULN	**Ulaanbaatar**	**54.06**	**343**	eP	**P**	**19 55 41.9**	**0.0**
comp=Z,3.5nm,0.9s,mb4.4							
SONM	**Songino Array**	**54.22**	**343**	P	**P**	**19 55 43.5**	**+0.5**
comp=Z,0.8nm,0.4s,mb4.1,baz=168,slow=9.1,SNR=5.4							
MK31	**Makanchi Array**	**63.78**	**327**	eP	**P**	**19 56 49.3**	**+0.1**
MKAR	**Makanchi Array**	**63.78**	**327**	P	**P**	**19 56 49.1**	**-0.1**
comp=Z,3.2nm,0.7s,mb4.3,baz=104,slow=9.5,SNR=34							
MKAR				PcP	PcP	19 57 24.2	-0.4
comp=Z,0.6nm,0.6s,baz=108,slow=4.7,SNR=4.0							
MKAR	**Makanchi Array**	**63.78**	**327**	P	**P**	**19 56 49.1**	**-0.1**
MKAR				PcP	PcP	19 57 24.2	-0.4
YAK	**Yakutsk**	**65.28**	**1**	eP	**P**	**19 56 59.0**	**+0.4**
comp=Z,20nm,0.8s,mb5.0							
TKM2	**Tokmak 2**	**65.53**	**321**	eP	**P**	**19 57 01.1**	**+0.4**
comp=Z,1.6nm,0.7s,mb4.0							
UCH	**Uchtor**	**65.88**	**320**	eP	**P**	**19 57 03.4**	**+0.4**
comp=Z,2.0nm,0.8s,mb4.0							
EKS2	**Erkin-Say**	**66.57**	**320**	eP	**P**	**19 57 07.9**	**+0.5**
comp=Z,2.3nm,0.8s,mb4.1							
ZAA0	**Zalesovo Array**	**67.20**	**334**	eP	**P**	**19 57 10.4**	**-0.7**
ZALV	**Zalesovo Beam**	**67.20**	**334**	P	**P**	**19 57 10.2**	**-1.0**
comp=Z,2.1nm,0.8s,mb4.0,baz=108,slow=4.8,SNR=8.9							
KURK	**Kurchatov**	**68.08**	**329**	P	**P**	**19 57 16.5**	**-0.2**
comp=Z,3.4nm,0.7s,mb4.3,baz=132,slow=5.6,SNR=26							
KURK	**Kurchatov**	**68.08**	**329**	P	**P**	**19 57 16.5**	**-0.2**
BVAR	**Borovoye Array**	**73.62**	**328**	P	**P**	**19 57 50.0**	**-0.3**
comp=Z,1.0nm,0.5s,mb3.8,baz=136,slow=9.0,SNR=11							
TIXI	**Tiksi**	**74.92**	**1**	eP	**P**	**19 57 57.3**	**-0.1**
comp=Z,4.9nm,1.0s,mb4.2							
ABKAR	**Akbulak array**	**78.06**	**322**	eP	**P**	**19 58 14.9**	**-0.8**
comp=Z,0.3nm,0.5s,mb3.3							
ABKAR				e		19 58 21.6	
ARU	**Arti**	**81.27**	**328**	eP	**P**	**19 58 34.5**	**+1.6**
KDAK	**Kodiak Island**	**87.58**	**32**	P	**P**	**19 59 06.3**	**+1.5**
comp=Z,3.6nm,0.7s,mb4.5,baz=337,slow=3.3,SNR=3.6							
ARCES	**ARCESS Array B**	**97.30**	**340**	P	**P**	**19 59 48.8**	**-0.7**
comp=Z,1.9nm,0.7s,mb4.6,baz=77,slow=6.4,SNR=8.1							

IDC 11 19:50:24.7±13.0,**57°.36S**×**27°.61W**,**h0**km,**mb4.1**/3, **mb1 4.3**/3,**mb1mx3.9**/14,**mbtmp4.1**/3,**Error ellipse: s-maj=371.9km s-min=45.7km az=180.0,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**15.68**	**156**	ePdiff	Pn	19 54 05.3	-1.3
CPUP	**Villa Florida**	**37.52**	**313**	P	P	19 57 40.0	-0.1
0.6nm,0.3s,baz=141,slow=6.5,SNR=4.4							
LPAZ	**La Paz**	**50.95**	**307**	P	P	19 59 28.5	+0.7
6.3nm,0.7s,baz=136,slow=5.0,SNR=24							
TORD	**Torodi Ar. Bea**	**74.31**	**30**	P	P	20 02 03.8	+0.1
0.4nm,0.5s,baz=193,slow=5.6,SNR=4.3							

IDC 11 19:54:22.2±3.2,**33°.49S**×**178°.79W**,**h0**km,**mb3.8**/3, **mb1 4.0**/4,**mb1mx3.8**/17,**mbtmp3.8**/4,**ML4.0**/1,**Error ellipse: s-maj=69.8km s-min=46.0km az=120.0,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.81**	**214**	Pn	Pn	19 55 47.4	-2.2
3.8nm,0.3s,baz=301,slow=1.0,SNR=18							
URZ				Sn	Sn	19 56 51.4	-5.4
2.0nm,0.3s,baz=145,slow=21,SNR=6.3							
ASAR	**Alice Springs**	**42.37**	**271**	P	P	20 02 18.8	+0.5
0.6nm,0.7s,baz=108,slow=8.3,SNR=14							
WRA	**Warramunga Arr**	**43.64**	**276**	P	P	20 02 28.4	-0.2
0.4nm,0.3s,baz=115,slow=8.1,SNR=18							
FITZ	**Fitzroy Crossi**	**51.76**	**273**	P	P	20 03 31.7	0.0
1.2nm,0.8s,baz=94,slow=16,SNR=4.4							
FINES	**FINESS Array B**	**147.77**	**338**	PKPbc	PKPbc	20 14 07.5	-0.5
5.7nm,1.1s,baz=7.4,slow=3.2,SNR=4.2							

*NEIC **11** 19:56:19.2,32°.68S×71°.72W,h33km,ML3.5(GUC),After GUC.*
GUC 11 19:56:19.2±0.6,**32°.68S**×**71°.72W**,**h33**km±2km,**MD3.8, ML3.5,4C-4D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PACH	**Papudo**	**0.28**	**59**	⇓iP	Pb	19 56 26.7	+0.1
PACH				i S	Sb	19 56 32.4	+0.7
PACH	**Papudo**	**0.28**	**59**	⇓iP	Pb	19 56 26.7	+0.1
PACH				i S	Sb	19 56 32.4	+0.7
ROCH	**El Roble**	**0.67**	**116**	eP	Pn	19 56 32.2	-0.1
ROCH				i S	Sb	19 56 41.9	+0.4
ROCH	**El Roble**	**0.67**	**116**	eP	Pn	19 56 32.2	-0.1
ROCH				i S	Sb	19 56 41.9	+0.4
JACH	**Jahuel**	**0.95**	**90**	eP	Pn	19 56 36.6	+0.3
JACH				eS	Sn	19 56 50.0	+1.4
JACH	**Jahuel**	**0.95**	**90**	eP	Pn	19 56 36.6	+0.3
JACH				eS	Sn	19 56 50.0	+1.4
PEL	**Peldehue**	**0.99**	**118**	⇑iP	Pn	19 56 37.3	+0.6
PEL				i S	Sn	19 56 50.7	+1.2
PEL				AML	AML	19 56 53.1	
comp=E,6μm,0.3s							
TACH	**Talagante**	**1.17**	**146**	eP	Pn	19 56 39.8	+0.6
TACH	**Talagante**	**1.17**	**146**	eP	Pn	19 56 39.8	+0.6
SAN	**Santiago**	**1.18**	**131**	eP	Pn	19 56 40.0	+0.7
SAN				i S	Sn	19 56 55.6	+1.4
SAN	**Santiago**	**1.18**	**131**	eP	Pn	19 56 40.0	+0.7
SAN				i S	Sn	19 56 55.6	+1.4
SAN				AML	AML	19 57 00.2	
comp=E,3μm,0.5s							
CLCH	**Cerro Calan**	**1.22**	**126**	eP	Pn	19 56 41.7	+1.7
CLCH				i S	Sn	19 56 57.9	+2.5
CLCH	**Cerro Calan**	**1.22**	**126**	eP	Pn	19 56 41.7	+1.7
CLCH				i S	Sn	19 56 57.9	+2.5
CLCH				AML	AML	19 57 02.3	
comp=N,2μm,0.6s							
ANTU	**Antumapu**	**1.27**	**134**	eP	Pn	19 56 41.6	+1.0
ANTU				i S	Sn	19 56 58.2	+1.7
ANTU	**Antumapu**	**1.27**	**134**	eP	Pn	19 56 41.6	+1.0
ANTU				i S	Sn	19 56 58.2	+1.7
ANTU				AML	AML	19 57 01.7	
comp=N,2μm,0.6s							
FSR	**Penalolen**	**1.28**	**129**	eP	Pn	19 56 41.8	+1.0
FSR				i S	Sn	19 56 58.6	+1.8
FSR	**Penalolen**	**1.28**	**129**	eP	Pn	19 56 41.8	+1.0
FSR				i S	Sn	19 56 58.6	+1.8
FSR				AML	AML	19 57 07.4	
comp=N,334nm,0.5s							
FCH	**Farellones**	**1.36**	**119**	⇑iP	Pn	19 56 43.8	+1.9
FCH				i S	Sn	19 57 02.2	+3.4
FCH				AML	AML	19 57 06.3	
comp=N,1μm,0.2s							
PCH	**Pirque**	**1.38**	**133**	⇑iP	Pn	19 56 43.5	+1.4
PCH				i S	Sn	19 57 01.8	+2.5
PCH	**Pirque**	**1.38**	**133**	⇑iP	Pn	19 56 43.5	+1.4
PCH				i S	Sn	19 57 01.8	+2.5
CHCH	**Chadas Angostu**	**1.54**	**145**	eP	Pn	19 56 45.9	+1.6
CHCH				i S	Sn	19 57 05.3	+2.2
CHCH	**Chadas Angostu**	**1.54**	**145**	eP	Pn	19 56 45.9	+1.6
CHCH				i S	Sn	19 57 05.3	+2.2
CACH	**El Canelo**	**1.71**	**147**	⇓iP	Pn	19 56 48.9	+2.2
CACH				i S	Sn	19 57 12.1	+4.6
CACH	**El Canelo**	**1.71**	**147**	⇓iP	Pn	19 56 48.9	+2.2
CACH				i S	Sn	19 57 12.1	+4.6
TLL	**Tololo Astrono**	**2.62**	**18**	eP	Pn	19 57 01.1	+1.8
TLL				i S	Sn	19 57 33.1	+3.2
TLL	**Tololo Astrono**	**2.62**	**18**	eP	Pn	19 57 01.1	+1.8
TLL				i S	Sn	19 57 33.1	+3.2
LCO	**Las Campanas**	**3.76**	**14**	ePn	Pn	19 57 15.5	+0.6
LCO				eS	Sn	19 58 04.0	+6.0

KRSC 11 20:10:58.1±1.1,**51°.38N**×**160°.06E**,**h10**km±10km,**ML3.6, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	**Gorelyy**	**1.70**	**314**	eP	Pn	20 11 27.4	-0.4
GRL				i S	Sn	20 11 48.6	-0.9
SPN	**Mys Shipunski**	**1.72**	**359**	P	Pn	20 11 30.3	+2.2
SPN				i S	Sn	20 11 53.6	+3.5
NLC	**Nalytchevo**	**1.85**	**347**	P	Pn	20 11 30.2	+0.4
NLC				i S	Sn	20 11 53.8	+0.6
PET	**Petropavlovsk**	**1.86**	**333**	eP	Pn	20 11 31.2	+1.2
PET				i S	Sn	20 11 55.1	+1.6
AVH	**Avacha**	**2.06**	**337**	eP	Pn	20 11 34.1	+1.5
MIPR	**Malaya Ipel'ka**	**2.24**	**295**	eP	Pn	20 11 37.5	+2.4
GNL	**Ganaly**	**2.66**	**332**	eP	Pn	20 11 43.1	+2.2
MKZ	**Mys Kozlova**	**3.34**	**17**	P	Pn	20 11 51.0	+0.7
MKZ				i S	Sn	20 12 28.9	-1.0

IDC 11 20:13:48.9±6.7,**16°.02S**×**172°.92W**,**h0**km,**mb3.8**/2, **mb1 4.2**/3,**mb1mx3.8**/19,**mbtmp4.0**/3,**Error ellipse: s-maj=268.7km s-min=27.9km az=135.0,Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.37**	**28**	Pn	Pn	20 14 28.6	-0.5
199nm,0.3s,baz=221,slow=9.3,SNR=127							
AFI				Sn	Sn	20 14 48.4	-11
384nm,0.3s,baz=56,slow=21,SNR=6.5							
WRA	**Warramunga Arr**	**50.15**	**257**	P	P	20 22 46.2	-0.4
0.5nm,0.7s,baz=96,slow=7.7,SNR=9.5							
ASAR	**Alice Springs**	**50.36**	**252**	P	P	20 22 48.1	0.0
1.7nm,0.6s,baz=86,slow=8.1,SNR=28							
BRTR	**Keskin Array B**	**146.93**	**321**	PKPbc	PKPbc	20 33 33.7	0.0
0.4nm,0.6s,baz=74,slow=2.1,SNR=3.4							

*ISK **11** 20:17:30.7,38°.53N×40°.62E,h8km,MD3.0*
*ISCJB **11** 20:17:30.2±0.5,38°.56N±0°.03×40°.67E±0°.04,h10km,Error ellipse: s-maj=4.7km s-min=3.8km az=32.6*
*CSEM **11** 20:17:31.0±0.1,38°.55N×40°.63E,h5km,MD3.0,Error ellipse: s-maj=2.7km s-min=2.2km az=167.0*
*DDA **11** 20:17:32.4,38°.53N×40°.73E,h19km,Md3.0*
ISC 11 20:17:30.6±0.6,**38°.56N**±0°.03×**40°.69E**±0°.04,**h6**km±9km, **n20**,σ0**92/31**,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BINT	**Bingol**	**0.35**	**334**	ePG	**Pg**	**20 17 38.4**	**+1.0**
BINT	**Bingol**	**0.35**	**334**	ePg	**Pg**	**20 17 38.4**	**+0.9**
BTMT	**Batman**	**0.73**	**120**	ePG	**Pg**	**20 17 44.0**	**-0.6**
BTMT				eSG	**Sg**	**20 17 53.9**	**-0.1**
DIY	**Diyarbakir**	**0.76**	**209**	ePG	**Pg**	**20 17 44.9**	**-0.2**
DIY	**Diyarbakir**	**0.76**	**209**	ePg	**Pg**	**20 17 44.9**	**-0.2**
DIYA	**Diyarbakir**	**0.78**	**215**	i P	**Pg**	**20 17 45.5**	**0.0**
DIYA				i S	**Sg**	**20 17 57.5**	**+1.9**
DIYA	**Diyarbakir**	**0.78**	**215**	i P	**Pg**	**20 17 45.5**	**0.0**
DIYA				i S	**Sg**	**20 17 57.5**	**+2.0**
BEST	**Besiri**	**0.81**	**145**	i P	**Pg**	**20 17 45.6**	**-0.6**
BEST				i S	**Sg**	**20 17 57.3**	**+0.7**
PTK	**Pertek**	**1.07**	**289**	ePG	**Pg**	**20 17 50.2**	**-0.8**
PTK				eSG	**Sg**	**20 18 05.3**	**+0.4**
PTK	**Pertek**	**1.07**	**289**	ePg	**Pg**	**20 17 50.3**	**-0.8**
PTK				eSg	**Sg**	**20 18 05.3**	**+0.4**
SVRC	**Sivrice-ELAZID**	**1.10**	**261**	ePG	**Pg**	**20 17 51.2**	**-0.5**
SVRC				eSG	**Sg**	**20 18 06.0**	**+0.1**
SVRC	**Sivrice-ELAZID**	**1.10**	**261**	ePg	**Pg**	**20 17 51.2**	**-0.5**
SVRC				eSg	**Sg**	**20 18 06.0**	**+0.1**
MARD	**Mardin**	**1.25**	**177**	eP	**Pn**	**20 17 52.8**	**-1.7**
MARD				i S	**Sg**	**20 18 10.6**	**0.0**
ERZM	**Erzurum**	**1.44**	**21**	eP	**Pn**	**20 17 56.1**	**-1.1**
ERZM				i S	**Sb**	**20 18 17.7**	**+1.2**
ERZM	**Erzurum**	**1.44**	**21**	eP	**Pn**	**20 17 56.1**	**-1.1**
ERZM				i S	**Sb**	**20 18 17.7**	**+1.2**
EZC	**Erzincan**	**1.58**	**319**	ePN	**Pg**	**20 17 59.5**	**-1.4**
URFA	**Urfa**	**1.85**	**233**	ePN	**Pn**	**20 18 03.0**	**+0.2**
URFA	**Urfa**	**1.85**	**233**	ePn	**Pn**	**20 18 03.0**	**+0.2**
AGRB	**Hanur-Agry**	**2.06**	**60**	ePN	**Pn**	**20 18 07.2**	**+1.5**
AGRB	**Hanur-Agry**	**2.06**	**60**	ePn	**Pn**	**20 18 07.2**	**+1.5**

*IDC **11** 20:35:14.1±1.6,25°.46S×66°.19W,h177km±16km,mb3.5/2, mb1 3.6/6,mb1mx3.4/17,mbtmp3.4/6,Error ellipse: s-maj=29.3km s-min=13.4km az=98.0*
*ISCJB **11** 20:35:14.5±0.9,25°.47S±0°.05×66°.3W±0°.1,h199km±14km, mb4.5/5,Error ellipse: s-maj=17.8km s-min=7.6km az=2.8*
*NEIC **11** 20:35:15.3±0.7,25°.43S×66°.20W,h189km±7km,mb4.5/3, Error ellipse: s-maj=13.3km s-min=6.7km az=95.0*
ISC 11 20:35:14.9±0.9,**25°.44S**±0°.05×**66°.3W**±0°.1,**h182**km±13km, **n19**,σ1**03/19**,**mb4.6**/5,**Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**5.30**	**227**	ePn	**Pn**	**20 36 34.0**	**+1.3**
16nm,0.4s							
LCO				eSn	**Sn**	**20 37 32.9**	**-0.9**
CFAA	**Coronel Fontan**	**6.37**	**195**	P	**Pn**	**20 36 47.7**	**+1.0**
1.5nm,0.3s,baz=4.2,slow=12,SNR=54							
CFAA				S	**Sn**	**20 37 56.7**	**-2.5**
1.4nm,0.3s,baz=262,slow=21,SNR=14							
CFAA	**Coronel Fontan**	**6.37**	**195**	P	**Pn**	**20 36 47.7**	**+0.9**
CFAA				S	**Sn**	**20 37 56.7**	**-2.5**
LPAZ	**La Paz**	**9.27**	**349**	P	**Pn**	**20 37 26.0**	**+1.1**
4.9nm,0.3s,baz=157,slow=9.3,SNR=56							
LPAZ				S	**Sn**	**20 39 07.6**	**-0.8**
0.2nm,0.3s,baz=313,slow=23,SNR=2.4							
LPAZ	**La Paz**	**9.27**	**349**	ePn	**Pn**	**20 37 25.8**	**+0.9**
LPAZ

σ0°58/23, **mb3.8**/12, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	**Kulim**	**8.94**	**358**	Pn	**Pn**	**21 09 07.4**	**+0.2**
KSM	**Kuching**	**10.70**	**61**	*e*Pn	**Pn**	**21 09 31.3**	**-0.1**
CM31	**Chiang Mai Arr**	**22.11**	**355**	*e*P	**P**	**21 11 52.8**	**-0.6**
CMAR	**Chiang Mai Arr**	**22.11**	**355**	P	**P**	**21 11 53.2**	**-0.2**
	0.3nm,0.5s,mb3.0,baz=189,slow=7.6,SNR=5.8						
PALK	**Pallekele**	**22.94**	**298**	P	**P**	**21 12 02.5**	**+0.2**
QIZ	**Qiongzhong**	**24.24**	**21**	P	**P**	**21 12 14.8**	**-0.1**
MBWA	**Marble Bar**	**25.21**	**135**	*e*P	**P**	**21 12 23.8**	**0.0**
	4.3nm,0.8s,mb4.0						
ENH	**Enshi**	**34.76**	**13**	*e*P	**P**	**21 13 48.4**	**+0.1**
	2.1nm,0.6s,mb4.2						
WRA	**Warramunga Arr**	**36.35**	**119**	P	**P**	**21 14 02.9**	**+0.7**
	0.3nm,0.7s,mb3.3,baz=299,slow=10,SNR=3.4						
WRAB	**Tennant Creek**	**36.36**	**119**	*e*P	**P**	**21 14 01.5**	**-0.7**
ASAR	**Alice Springs**	**37.52**	**125**	P	**P**	**21 14 12.4**	**+0.4**
	0.3nm,0.8s,mb3.1,baz=299,slow=7.3,SNR=2.8						
UCH	**Uchtor**	**51.62**	**335**	*e*P	**P**	**21 16 05.1**	**+0.8**
TKM2	**Tokmak 2**	**51.75**	**336**	*e*P	**P**	**21 16 05.6**	**+0.3**
	0.9nm,0.4s,mb4.0						
AAK	**Ala-Archa**	**51.96**	**335**	P	**P**	**21 16 05.6**	**-1.3**
EKS2	**Erkin-Say**	**52.29**	**335**	*e*P	**P**	**21 16 08.3**	**-1.0**
	0.9nm,0.6s,mb3.9						
MK31	**Makanchi Array**	**52.91**	**344**	*e*P	**P**	**21 16 15.0**	**+1.1**
MKAR	**Makanchi Array**	**52.91**	**344**	P	**P**	**21 16 14.5**	**+0.7**
	0.4nm,0.3s,mb3.8,baz=143,slow=8.3,SNR=9.1						
MKAR	**Makanchi Array**	**52.91**	**344**	P	**P**	**21 16 14.5**	**+0.7**
TAU	**Tasmania Unive**	**56.69**	**140**	P	**P**	**21 16 41.1**	**-0.3**
KURK	**Kurchatov**	**57.49**	**343**	*e*P	**P**	**21 16 46.9**	**+0.1**
	1.6nm,1.0s,mb4.0						
ZALV	**Zalesovo Beam**	**59.00**	**349**	P	**P**	**21 16 57.8**	**+0.5**
	1.2nm,0.7s,mb4.0,baz=160,slow=4.6,SNR=5.9						
BVAR	**Borovoye Array**	**62.09**	**340**	P	**P**	**21 17 18.1**	**-0.4**
	0.5nm,0.5s,mb3.9,baz=128,slow=9.6,SNR=4.6						
ABKAR	**Akbulak array**	**63.57**	**331**	*e*P	**P**	**21 17 27.9**	**-0.4**
	0.9nm,0.8s,mb3.9						
TXAR	**Lajitas Array**	**145.45**	**40**	PKPbc	PKPbc	21 26 38.4	+1.8
	1.1nm,0.8s,baz=216,slow=1.1,SNR=12						

IDC 11 21:17:08.0±1.5, 31°.91N×104°.50E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.3/25, mbtmp3.4/4, ML3.8/1, Error ellipse: s-maj=90.4km s-min=25.8km az=57.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**15.97**	**5**	Pn	Pn	21 20 54.5	+0.5
	0.4nm,0.3s,baz=191,slow=14,SNR=3.6						
MKAR	**Makanchi Array**	**22.60**	**317**	P	P	21 22 10.2	+0.1
	0.2nm,0.3s,baz=114,slow=10,SNR=4.9						
KURK	**Kurchatov**	**26.81**	**322**	P	P	21 22 49.7	-0.1
	0.2nm,0.5s,baz=127,slow=8.5,SNR=3.8						
WRA	**Warramunga Arr**	**58.96**	**147**	P	P	21 27 09.4	0.0
	0.6nm,0.9s,baz=339,slow=7.8,SNR=5.9						

*IDC **11** 21:21:08.2±0.8, 20°.30S×168°.24E, h0km, mb4.2/10, mb1 4.4/10, mb1mx4.2/17, mbtmp4.2/10, Error ellipse: s-maj=31.3km s-min=20.9km az=151.0*
*ISCJB **11** 21:21:08.6±3.0, 20°.32S±0°.08×168°.21E±0°.09, h15km±22km, mb4.2/12, Error ellipse: s-maj=18.3km s-min=7.9km az=40.4*
*NOU **11** 21:21:09.0±0.8, 20°.18S×168°.36E, h10km, MD2.6, ML2.8*
*NEIC **11** 21:21:13.5±0.5, 20°.37S×168°.23E, h35km, mb4.3/3, Error ellipse: s-maj=14.8km s-min=8.9km az=151.0*
ISC 11 21:21:09.3±3.2, 20°.37S±0°.07×168°.20E±0°.10, h7km±20km, n26, σ0°72/29, **mb4.2**/12, **Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.15**	**214**	*e*P	**Pn**	**21 21 44.9**	**-0.9**
BAYA				*e*S	**Sn**	**21 22 11.6**	**-1.2**
BAYA				AMP		21 22 22.5	
	comp=Z,40nm,0.7s						
DZM	**Mont Dzumac**	**2.35**	**224**	*e*Pn	**Pn**	**21 21 48.8**	**+0.3**
DZM				*e*Sn	**Sn**	**21 22 19.0**	**+1.4**
NORM	**Noumea**	**2.44**	**221**	*e*P	**Pn**	**21 21 49.6**	**-0.1**
NORM				*e*S	**Sn**	**21 22 19.1**	**-0.7**
NOUC	**Port Laguerre**	**2.47**	**225**	*e*P	**Pn**	**21 21 49.8**	**-0.2**
NOUC				*e*S	**Sn**	**21 22 20.4**	**0.0**
NOUC				AMP		21 22 34.7	
	comp=Z,183nm,3.9s						
AFI	**Afiamalu**	**20.18**	**75**	P	**P**	**21 25 44.7**	**0.0**
CTA	**Charters Tower**	**20.59**	**267**	P	**P**	**21 25 52.5**	**+3.3**
	comp=Z,6.8nm,0.9s,baz=229,slow=23,SNR=3.4						
STKA	**Stephens Creek**	**26.42**	**239**	P	**P**	**21 26 48.2**	**+1.4**
	comp=Z,3.6nm,0.8s,mb4.0,baz=80,slow=14,SNR=6.5						
TAU	**Tasmania Unive**	**28.50**	**213**	P	**P**	**21 27 05.9**	**+0.6**
WRAB	**Tennant Creek**	**31.75**	**265**	*e*P	**P**	**21 27 33.8**	**-0.5**
	comp=Z,1.3nm,0.5s,mb4.0						
WRA	**Warramunga Arr**	**31.76**	**265**	P	**P**	**21 27 33.8**	**-0.6**
	comp=Z,0.6nm,0.5s,mb3.7,baz=90,slow=8.5,SNR=14						
WRA				PcP	PcP	21 30 25.3	-0.6
	comp=Z,0.7nm,0.8s,baz=96,slow=3.8,SNR=3.5						
ASAR	**Alice Springs**	**31.92**	**258**	P	**P**	**21 27 35.6**	**-0.1**
	comp=Z,2.8nm,0.7s,mb4.2,baz=88,slow=9.1,SNR=36						
FITZ	**Fitzroy Crossi**	**40.17**	**266**	P	**P**	**21 28 46.6**	**+0.1**
	comp=Z,0.9nm,0.5s,mb3.7,baz=67,slow=9.6,SNR=6.5						
FITZ	**Fitzroy Crossi**	**40.17**	**266**	*e*P	**P**	**21 28 47.1**	**+0.7**
	comp=Z,4.3nm,0.8s,mb4.2						
MBWA	**Marble Bar**	**45.18**	**260**	*e*P	**P**	**21 29 27.2**	**0.0**
NWAO	**Narrogin (SRO)**	**46.83**	**244**	P	**P**	**21 29 39.5**	**-0.6**
KSM	**Kuching**	**60.68**	**284**	*e*P	**P**	**21 31 21.3**	**-0.5**
	comp=Z,1.9nm,0.3s,mb4.7						
YULB	**Yu-li**	**63.10**	**311**	*e*P	**P**	**21 31 37.4**	**-0.5**
NACB	**Ningianchiao**	**63.40**	**312**	*e*P	**P**	**21 31 39.7**	**-0.1**
COCO	**West Island**	**68.55**	**265**	*e*P	**P**	**21 32 13.0**	**-0.2**
	comp=Z,93nm,0.9s						
QSPA	**South Pole Qui**	**69.69**	**180**	P	**P**	**21 32 19.9**	**+0.6**
	comp=Z,1.4nm,0.8s,mb3.9,baz=302,slow=4.8,SNR=6.8						
MAW	**Mawson**	**77.02**	**202**	P	**P**	**21 33 03.4**	**+0.8**
	comp=Z,1.3nm,0.8s,mb3.9,baz=101,slow=5.2,SNR=2.8						
CMAR	**Chiang Mai Arr**	**78.08**	**295**	P	**P**	**21 33 10.5**	**+1.1**
	comp=Z,1.5nm,0.9s,mb3.9,baz=125,slow=4.1,SNR=9.2						
KDAK	**Kodiak Island**	**84.42**	**20**	P	**P**	**21 33 41.4**	**-0.9**
	comp=Z,4.9nm,0.8s,mb4.7,baz=241,slow=6.4,SNR=4.7						
YBH	**Yreka Blue Hor**	**88.79**	**44**	P	**P**	**21 34 03.8**	**-0.2**
	comp=Z,2.2nm,0.7s,mb4.6,baz=252,slow=4.4,SNR=4.1						
NVAR	**Mina Array Bea**	**90.28**	**49**	P	**P**	**21 34 11.0**	**-0.1**
	comp=Z,1.5nm,0.7s,mb4.5,baz=226,slow=8.7,SNR=8.6						
GERES	**GERESS Array B**	**145.00**	**330**	PKP	PKPdf	21 40 47.1	-0.3
	comp=Z,0.7nm,0.8s,baz=64,slow=3.4,SNR=5.3						

*IDC **11** 21:24:08.2±1.0, 33°.63S×178°.53W, h0km, mb4.3/5, mb1 4.5/6, mb1mx4.1/18, mbtmp4.3/6, ML4.2/1, MS3.6/4, Ms1 3.6/4, ms1mx3.3/24, Error ellipse: s-maj=32.9km s-min=29.4km az=30.0*
*ISCJB **11** 21:24:12.4±3.9, 33°.8S±0°.1×178°.6W±0°.2, h39km±29km, mb4.4/7, MS3.8/3, Error ellipse: s-maj=31.4km s-min=18.0km az=156.5*
*NEIC **11** 21:24:13.3±0.6, 33°.63S×178°.53W, h35km, mb4.4/5, Error ellipse: s-maj=14.4km s-min=13.2km az=64.0*
ISC 11 21:24:13.5±3.5, 33°.7S±0°.1×178°.6W±0°.2, h35km±26km, n28, σ0°95/16, **mb4.4/7, MS3.8**/3, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.75**	**216**	Pn	**Pn**	**21 25 35.4**	**-0.8**
	6.8nm,0.3s,baz=10,0,slow=3.1,SNR=20						
URZ				Sn	**Sn**	**21 26 40.1**	**-0.8**
	20nm,0.3s,baz=142,slow=21,SNR=18						
URZ				LR	LR	21 27 19.0	
	comp=Z,70nm,18.6s,baz=31,slow=33						
OUZ	**Omahuta**	**6.64**	**254**	*e*Pn	**Pn**	**21 25 50.4**	**+1.9**
	45nm,1.0s						
PPT	**Papeete**	**30.54**	**66**	LR	LR	21 39 53.9	
	comp=Z,113nm,21.2s,MS3.5,baz=262,slow=31						
HNR	**Honiara**	**31.19**	**316**	*e*P	**P**	**21 30 27.4**	**-2.0**
STKA	**Stephens Creek**	**33.39**	**262**	LR	LR	21 43 31.6	
	comp=Z,191nm,18.5s,MS3.8,baz=169,slow=35						
CTA	**Charters Tower**	**33.99**	**284**	P	**P**	**21 30 55.1**	**+1.3**
	3.2nm,0.6s,mb4.4,baz=92,slow=10,SNR=5.5						
CTAO	**Charters Tower**	**33.99**	**284**	*e*P	**P**	**21 30 54.6**	**+0.7**
	1.9nm,0.5s,mb4.3						
ASAR	**Alice Springs**	**42.55**	**271**	P	**P**	**21 32 05.9**	**0.0**
	5.9nm,0.9s,mb4.3,baz=111,slow=7.4,SNR=51						
ASAR				PcP	PcP	21 33 57.6	-0.4
	1.0nm,0.7s,baz=120,slow=4.2,SNR=4.9						
WRAB	**Tennant Creek**	**43.83**	**276**	*e*P	**P**	**21 32 15.9**	**-0.3**
	6.3nm,0.7s,mb4.5						
WRA	**Warramunga Arr**	**43.83**	**276**	P	**P**	**21 32 16.1**	**-0.2**
	6.6nm,0.8s,mb4.4,baz=116,slow=7.8,SNR=43						
WRA				PcP	PcP	21 34 02.3	-0.1
	0.7nm,0.8s,baz=113,slow=3.2,SNR=3.0						
FITZ	**Fitzroy Crossi**	**51.94**	**273**	P	**P**	**21 33 19.2**	**+0.1**
	3.1nm,0.8s,mb4.3,baz=122,slow=8.8,SNR=6.9						
FITZ	**Fitzroy Crossi**	**51.94**	**273**	*e*P	**P**	**21 33 19.2**	**+0.1**
	1.9nm,0.6s,mb4.2						
CASY	**Casey**	**52.02**	**209**	*e*P	**P**	**21 33 19.7**	**+0.6**
	4.2nm,0.6s,mb4.5						
QSPA	**South Pole Qui**	**56.43**	**180**	P	**P**	**21 33 52.0**	**+1.0**
	1.5nm,0.9s,mb4.0,baz=51,slow=3.3,SNR=3.2						
QSPA	**South Pole Qui**	**56.43**	**180**	P	**P**	**21 33 52.6**	**+1.6**
	3.9nm,0.8s,mb4.5						
PMSA	**Palmer Station**	**69.49**	**155**	P	**P**	**21 35 17.4**	**-0.5**
KULM	**Kulim**	**85.26**	**280**	P	**P**	**21 36 46.8**	**-0.2**
NNA	**Nana**	**92.99**	**106**	LR	LR	22 08 23.8	
	comp=Z,64nm,18.7s,MS4.1,baz=136,slow=29						
KURK	**Kurchatov**	**122.93**	**312**	PKP	PKPdf	21 43 05.2	-0.2
	0.6nm,0.6s,baz=112,slow=1.7,SNR=5.6						
BVAR	**Borovoye Array**	**128.37**	**314**	PKP	PKPdf	21 43 16.9	+1.2
	0.5nm,0.7s,baz=126,slow=2.6,SNR=3.9						
JOF	**Joensuu**	**145.25**	**336**	*ep*	PKPbc	21 43 44.2	-2.1
	3.1nm,0.7s						
JOF	**Joensuu**	**145.25**	**336**	*ep*	PKPbc	21 43 44.2	-2.1
	3.1nm,0.7s						
KAF	**Kangasniemi**	**147.44**	**338**	*ep*	PKPdf	21 43 51.6	+1.4
	1.9nm,0.5s						
KAF	**Kangasniemi**	**147.44**	**338**	*ep*	PKPdf	21 43 51.6	+1.4
	1.9nm,0.5s						
FINES	**FINESS Array B**	**148.02**	**338**	PKPbc	PKPbc	21 43 54.0	-0.4
	2.1nm,0.5s,baz=35,slow=3.2,SNR=22						
MMAI	**Mount Meron Ar**	**151.67**	**278**	PKPbc	PKPbc	21 44 06.3	+2.1
	1.9nm,0.5s,baz=91,slow=6.7,SNR=9.4						
AKASG	**Malin Array Be**	**153.52**	**318**	PKPbc	PKPbc	21 44 07.3	-0.4
	0.7nm,0.5s,baz=59,slow=3.0,SNR=3.4						
BRTR	**Keskin Array B**	**153.56**	**293**	PKPbc	PKPbc	21 44 08.3	+0.1
	1.7nm,0.7s,baz=149,slow=3.9,SNR=9.8						

*NEIC **11** 21:26:55.6, 35°.55N×27°.35E, h19km, MD3.0(ATH), After ATH.*
*CSEM **11** 21:26:55.6, 35°.55N×27°.35E, h19km, MD3.0, After ATH*
ATH 11 21:26:55.6, 35°.55N×27°.35E, h19km±1km, MD3.0/4, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.15**	**269**	*e*Pb	Pg	21 26 59.6	-0.4
KARP				*e*Sb	Sg	21 27 03.2	+0.2
KARP	**Karpathos**	**0.15**	**269**	*e*PB	Pg	21 26 59.6	-0.4
KARP				*e*SB	Sg	21 27 03.2	+0.2
KARP	**Karpathos**	**0.15**	**269**	*e*Pb	Pg	21 26 59.6	-0.4
KARP				*e*Sb	Sg	21 27 03.2	+0.2
ARG	**Arkhangelos**	**0.92**	**43**	*e*Pn	Pn	21 27 13.2	-0.2
ARG	**Arkhangelos**	**0.92**	**43**	*e*PN	Pn	21 27 13.2	-0.2
ARG	**Arkhangelos**	**0.92**	**43**	*e*Pn	Pn	21 27 13.2	-0.2
NPS	**Neapolis**	**1.45**	**259**	*e*Pn	Pn	21 27 22.6	+1.8
NPS	**Neapolis**	**1.45**	**259**	*e*PN	Pn	21 27 22.6	+1.8
NPS	**Neapolis**	**1.45**	**259**	*e*Pn	Pn	21 27 22.6	+1.8
LAST	**Lasithi**	**1.58**	**256**	*e*Pn	Pn	21 27 24.8	+2.3
LAST	**Lasithi**	**1.58**	**256**	*e*PN	Pn	21 27 24.8	+2.3
LAST	**Lasithi**	**1.58**	**256**	*e*Pn	Pn	21 27 24.8	+2.3
IDI	**Anoyia**	**2.03**	**263**	*e*Pn	Pn	21 27 30.8	+2.1
IDI	**Anoyia**	**2.03**	**263**	*e*PN	Pn	21 27 30.8	+2.1
IDI	**Anoyia**	**2.03**	**263**	*e*Pn	Pn	21 27 30.8	+2.1

NEIC 11 21:31:43.7, 37°.98S×176°.16E, h190km, MG3.9(WEL), **After WEL., North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.80**	**111**	P	Pn	21 32 10.8	-0.3
MWZ	**Matawai**	**1.14**	**109**	P	Pn	21 32 13.3	-0.1
BKZ	**Black Stump Fm**	**1.21**	**168**	P	Pn	21 32 13.6	-0.4
TUVZ	**Tukino**	**1.35**	**197**	P	Pn	21 32 14.9	-0.2
FWVZ	**Far West T-bar**	**1.36**	**200**	P	Pn	21 32 15.7	+0.5
WNVZ	**Wahianoa**	**1.42**	**198**	P	Pn	21 32 15.4	-0.3
KNZ	**Kokohu**	**1.58**	**132**	P	Pn	21 32 17.1	-0.1
PUZ	**Puketiti**	**1.66**	**94**	P	Pn	21 32 17.5	-0.5
MXZ	**Matakaoa Point**	**1.75**	**77**	P	Pn	21 32 19.0	+0.1
TSZ	**Takapari Road**	**2.08**	**184**	P	Pn	21 32 20.9	-1.4
MRZ	**Mangatainoka R**	**2.72**	**189**	P	Pn	21 32 26.8	-2.6
KIW	**Kapiti Island**	**3.04**	**198**	P	Pn	21 32 30.0	-3.2
MTW	**Mount Morrison**	**3.22**	**189**	P	Pn	21 32 31.9	-3.4
CAW	**Cannon Point**	**3.24**	**195**	P	Pn	21 32 32.4	-3.2
MSWZ	**Moikau Station**	**3.50**	**191**	P	Pn	21 32 35.2	-3.6
TCW	**Tory Channel**	**3.54**	**204**	P	Pn	21 32 35.7	-3.6
QRZ	**Quartz Range**	**4.00**	**224**	P	Pn	21 32 40.7	-4.3
BSWZ	**Blackbirch Sta**	**4.12**	**205**	P	Pn	21 32 42.8	-3.8
THZ	**Tophouse**	**4.53**	**213**	P	Pn	21 32 47.4	-4.4
KHZ	**Kahutara**	**4.87**	**204**	P	Pn	21 32 51.7	-4.3
LTZ	**Lake Taylor**	**5.64**	**211**	P	Pn	21 33 00.7	-5.3
MQZ	**McQueen's Vall**	**6.31**	**204**	P	Pn	21 33 08.7	-6.0

IGQ 11 21:34:21.9, 1°.04S×78°.30W, h11km±4km, Mb4.2, Ms4.0, 16C-15D, Error ellipse: s-maj=2.8km s-min=0.5km az=1.5, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PISA	**Pisayambo**	**0.09**	**261**	⇓P	Pg	21 34 25.5	+1.0
BMOR	**Cotopaxi Volca**	**0.35**	**332**	⇓P	Pg	21 34 29.6	+0.7
TAMB	**Tambo**	**0.35**	**348**	⇑P	Pg	21 34 29.8	+0.8
MOV1	**Cotopaxi Vol s**	**0.36**	**336**	⇓P	Pg	21 34 29.7	+0.6
BTAM	**Cotopaxi Volca**	**0.38**	**344**	⇑P	Pg	21 34 30.2	+0.8
COV1	**Cotopaxi Volc**	**0.38**	**353**	⇑P	Pg	21 34 30.9	+1.4
RUN5	**Runtun**	**0.39**	**199**	⇑P	Pg	21 34 30.4	+0.7
BRUN	**Tungurahua Vol**	**0.39**	**197**	⇓S	Sg	21 34 35.8	+0.8
BRUN	**Tungurahua Vol**	**0.39**	**197**	⇓P	Pg	21 34 30.3	+0.6
BREF	**Cotopaxi Volca**	**0.40**	**339**	⇓S	Sg	21 34 37.1	+1.9
BREF	**Cotopaxi Volca**	**0.40**	**339**	⇓P	Pg	21 34 30.8	+1.0
BVC2	**Cotopaxi Volca**	**0.40**	**343**	⇑P	Pg	21 34 30.7	+0.8
VC1	**Cotopaxi 1**	**0.41**	**345**	⇑P	Pg	21 34 30.9	+0.8
BNAS	**Cotopaxi Volca**	**0.41**	**333**	⇓P	Pg	21 34 30.7	+0.6
JUI6	**Juive**	**0.42**	**205**	S	Sg	21 34 36.0	+0.3
JUI6	**Juive**	**0.42**	**205**	P	Pg	21 34 29.7	-0.5
ULBA	**Ulba**	**0.42**	**196**	⇑P	Pg	21 34 30.8	+0.6
NAS2	**Nasa**	**0.43**	**336**	⇓P	Pg	21 34 31.4	+0.9
RETU	**Refugio**	**0.43**	**200**	⇑S	Sg	21 34 37.2	+1.0
RETU	**Refugio**	**0.43**	**200**	⇑P	Pg	21 34 31.2	+0.8
BIL2	**Estacion Bilba**	**0.46**	**207**	⇑S	Sg	21 34 38.0	+1.0
BIL2	**Estacion Bilba**	**0.46**	**207**	⇑P	Pg	21 34 31.6	+0.6
ARRY	**Arrayan**	**0.49**	**199**	⇓P	Pg	21 34 31.7	+0.2
BMAS	**Trigal station**	**0.49**	**202**	⇓P	Pg	21 34 30.8	-0.8
BMAS	**Trigal station**	**0.49**	**202**	⇓S	Sg	21 34 37.0	-1.1
PITA	**Cotopaxi Volc**	**0.50**	**344**	⇑P	Pg	21 34 32.4	+0.7
IGUA	**Igualata**	**0.56**	**218**	⇓P	Pg	21 34 33.5	+0.6
ANTI	**Antisana**	**0.60**	**13**	⇑P	Pg	21 34 34.0	+0.2
RIOE	**Riobamba**	**0.78**	**206**	P	Pg	21 34 38.1	+1.1
JUA2	**San Juan 2**	**0.88**	**339**	S	Sg	21 34 51.5	+1.0
JUA2	**San Juan 2**	**0.88**	**339**	P	Pg	21 34 39.1	+0.1
GGP	**Refugio Guagua**	**0.91**	**341**	⇑P	Pg	21 34 40.0	+0.4
TERV	**Terraza Guagua**	**0.92**	**340**	S	Sg	21 34 53.1	+1.5
TERV	**Terraza Guagua**	**0.92**	**340**	P	Pg	21 34 40.2	+0.6
PINO	**Pino**	**0.93**	**340**	⇑S	Sg	21 34 56.1	+4.0
PINO	**Pino**	**0.93**	**340**	⇑P	Pg	21 34 40.4	+0.5
YANA	**Yana**	**0.96**	**343**	P	Pg	21 34 40.6	+0.2
CAYR	**Refugio Cayamb**	**1.09**	**15**	S	Sb	21 34 58.5	+1.4
CAYR	**Refugio Cayamb**	**1.09**	**15**	P	Pb	21 34 43.6	+0.8
LAV3	**Lava3-Reventad**	**1.15**	**35**	⇓S	Sb	21 34 59.7	+0.8
LAV3	**Lava3-Reventad**	**1.15**	**35**	⇓P	Pb	21 34 44.4	+0.6
CONE	**Cono NE Rev Vo**	**1.17**	**34**	P	Pb	21 34 44.0	-0.2
MACE	**Macas**	**1.21**	**175**	P	Pn	21 34 45.8	+1.0
COTA	**Cotacachi**	**1.37**	**358**	P	Pn	21 34 50.0	+3.0
MAG1	**Magdalena**	**1.77**	**303**	P	Pn	21 34 54.3	+1.8

*CSEM **11** 21:40:01.4±0.5, 37°.15N×26°.85E, h26km±6km, MD2.8, Error ellipse: s-maj=8.9km s-min=5.4km az=75.0*
*DDA **11** 21:40:02.3, 37°.16N×26°.92E, h7km±2km, Md2.8*
*ISCJB **11** 21:40:02.0±1.4, 37°.16N±0°.05×26°.89E±0°.08, h9km±9km, Error ellipse: s-maj=11.4km s-min=7.5km az=154.5*
*ISK **11** 21:40:03.0, 37°.17N×26°.95E, h17km, MD2.8*
ISC 11 21:40:02.1±1.8, 37°.17N±0°.05×26°.9E±0°.1, h8km±15km, n14, σ0°63/26, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.48**	**102**	*i* P	**Pg**	**21 40 11.0**	**-0.5**
BDRM				*i* S	**Sg**	**21 40 17.6**	**-0.2**
BDRM	**Kayabasi**	**0.48**	**102**	*i* P	**Pg**	**21 40 11.0**	**-0.5**
BDRM				*i* S	**Sg**	**21 40 17.6**	**-0.2**
GCAM	**G?zelcaml?**	**0.61**	**30**	*i* P	**Pg**	**21 40 13.7**	**-0.2**
GCAM				*i* S	**Sg**	**21 40 23.0**	**+1.2**
GCAM	**G?zelcaml?**	**0.61**	**30**	*i* P	**Pg**	**21 40 13.7**	**-0.2**
GCAM				*i* S	**Sg**	**21 40 23.0**	**+1.2**
DAT	**Datca**	**0.73**	**127**	*e*PG	**Pg**	**21 40 16.4**	**+0.3**
DAT				*e*SG	**Sg**	**21 40 26.6**	**+1.0**
DAT	**Datca**	**0.73**	**127**	*e*Pg	**Pg**	**21 40 16.4**	**+0.3**
DAT				*e*Sg	**Sg**	**21 40 26.6**	**+1.0**
MLSB	**Milas**	**0.75**	**80**	*e*PG	**Pg**	**21 40 16.6**	**+0.1**
MLSB				*e*SG	**Sg**	**21 40 26.5**	**+0.3**
MLSB	**Milas**	**0.75**	**80**	*e*Pg	**Pg**	**21 40 16.6**	**+0.1**
MLSB				*e*Sg	**Sg**	**21 40 26.5**	**+0.3**
AYDN	**Tasoluk**	**0.95**	**59**	*i* P	**Pg**	**21 40 18.8**	**-1.7**
AYDN				*i* S	**Sg**	**21 40 32.7**	**-0.1**
AYDN	**Tasoluk**	**0.95**	**59**	*i* P	**Pg**	**21 40 18.8**	**-1.6**
AYDN				*i* S	**Sg**	**21 40 32.7**	**-0.1**
YER	**Yerkesik**	**1.14**	**91**	*e*PG	**Pg**	**21 40 23.7**	**-0.4**
YER				*e*SG	**Sg**	**21 40 38.6**	**-0.2**
YER	**Yerkesik**	**1.14**	**91**	*e*Pg	**Pg**	**21 40 23.7**	**-0.3**
YER				*e*Sg	**Sg**	**21 40 38.6**	**-0.3**
BLCB	**Balcova**	**1.22**	**7**	*e*PN	**Pn**	**21 40 25.8**	**+0.3**
IZM	**Izmir**	**1.27**	**15**	*e*PN	**Pn**	**21 40 26.2**	**0.0**

*BJI **11** 22:10:24.9, 3°.19N×95°.41E, h57km, mb4.3/3*
*ISCJB **11** 22:10:24.6±1.4, 2°.88N±0°.07×95°.70E±0°.06, h85km±12km, mb4.2/25, Error ellipse: s-maj=12.9km s-min=8.0km az=42.6*
*IDC **11** 22:10:25.4±5.5, 2°.90N×95°.69E, h75km±44km, mb3.8/11, mb1 3.9/13, mb1mx3.7/27, mbtmp3.9/13, ML4.0/2, MS3.3/1, Ms1 3.3/1, ms1mx2.5/32, Error ellipse: s-maj=49.2km s-min=14.7km az=57.0*
*NEIC **11** 22:10:25.6±0.9, 2°.85N×95°.66E, h80km±8km, mb4.2/18, Error ellipse: s-maj=8.7km s-min=4.9km az=48.0*
ISC 11 22:10:25.5±1.3, 2°.86N±0°.07×95°.68E±0°.06, h76km±12km, n46, σ0°71/48, **mb4.2**/25, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**3.25**	**91**	P	**Pn**	**22 11 14.1**	**-0.1**
	8.9nm,0.3s,baz=301,slow=5.3,SNR=23						
PSI				S	**Sn**	**22 11 51.7**	**0.0**
	1.6nm,0.3s,baz=180,slow=12,SNR=4.0						
PSI	**Prapat**	**3.25**	**91**	P	**Pn**	**22 11 14.1**	**-0.1**
PSI				S	**Sn**	**22 11 51.7**	**0.0**
KULM	**Kulim**	**5.52**	**64**	*e*Pn	**Pn**	**22 11 44.9**	**-0.3**
	40nm,0.7s						
KULM				*e*Sn	**Sn**	**22 12 46.3**	**-1.0**
KSM	**Kuching**	**14.69**	**95**	Pn	**Pn**	**22 13 48.7**	**-0.7**
PALK	**Pallekele**	**15.54**	**287**	LR	LR	22 19 24.0	
	comp=Z,109nm,18.2s,baz=97,slow=35						
PALK

PECH AML AML 22 13 20.1
comp=E,2μm,0.4s
MECH Mejillones 3.43 201 AML AML 22 13 55.8
comp=N,876nm,0.5s
LPAZ La Paz 3.71 15 P **Pn 22 12 59.7 +4.6**
comp=N,9.7nm,0.3s,baz=193,slow=7.4,SNR=75
LPAZ La Paz 3.71 15 *e*Pn **Pn 22 12 59.9 +4.8**
LPAZ *e*Sn **Sn 22 13 37.0 -0.9**
SIV San Ignacio 8.58 64 P **Pn 22 14 00.8 -0.4**
comp=N,9.0nm,0.3s,baz=260,slow=11,SNR=265
LCO Las Campanas 9.19 189 *e*Pn **Pn 22 14 03.8 -5.7**
comp=N,20nm,0.8s
LCO *e*Sn **Sn 22 15 43.7 -7.3**
CFAA Coronel Fontan 11.69 176 P **Pn 22 14 39.9 -3.3**
comp=N,0.1nm,0.3s,baz=328,slow=10,SNR=7.2
CPUP Villa Florida 12.59 123 P **Pn 22 14 54.3 -0.9**
comp=N,3.2nm,0.3s,baz=284,slow=12,SNR=31
CPUP Villa Florida 12.59 123 *e*Pn **Pn 22 14 53.9 -1.2**
TRQA Tornquist 19.13 163 *e*P **P 22 16 14.7 -0.1**
comp=N,5.1nm,0.5s
PLCA Paso Flores 20.81 183 P **P 22 16 30.9 -1.9**
comp=N,3.7nm,0.7s,baz=5.4,slow=14,SNR=2.4
PLCA Paso Flores 20.81 183 *e*P **P 22 16 35.1 +2.2**
comp=N,2.7nm,0.6s
OTAV Otavalo 22.00 334 P **P 22 16 45.0 -0.8**
SDV Santo Domingo 28.64 357 *e*P **P 22 17 46.3 -0.5**
RCBR Riachuelo 35.17 71 *e*P **P 22 18 45.9 +1.9**
comp=N,12nm,0.4s,mb5.1
WVT Waverly 58.47 342 *e*P **P 22 21 43.8 -1.2**
comp=N,2.0nm,0.6s,mb4.3
WVT *e* pP 22 22 09.3 -0.8
MIAR Mount Ida 58.93 336 *e*P **P 22 21 47.2 -1.0**
comp=N,1.6nm,0.5s,mb4.3
TXAR Lajitas Array 59.21 325 P **P 22 21 50.1 -0.2**
comp=N,0.2nm,0.5s,mb3.4,baz=156,slow=9.7,SNR=3.8
TXAR pP pP 22 22 15.9 +0.4
comp=N,0.3nm,0.7s,baz=141,slow=8.1,SNR=3.5
SIUC Southern Illin 60.34 342 *e*P **P 22 21 59.5 +1.7**
comp=N,31nm,0.6s,mb5.5
FVM French Village 60.96 341 *e*P **P 22 22 01.4 -0.6**
comp=N,2.7nm,0.5s,mb4.5
DBIC Dimbokro 68.47 74 P **P 22 22 51.0 -0.4**
comp=N,2.6nm,0.3s,mb4.6,baz=224,slow=3.7,SNR=34
DBIC pP pP 22 23 19.7 +2.6
comp=N,5.7nm,0.7s,baz=257,slow=6.8,SNR=3.0
DBIC Dimbokro 68.47 74 *e*P **P 22 22 50.8 -0.6**
comp=N,5.5nm,0.6s,mb4.6
QSPA South Pole Qui 70.29 180 *e*P **P 22 23 02.9 +1.4**
comp=N,5.6nm,1.1s,mb4.3
NVAR Mina Array Bea 74.12 322 P **P 22 23 25.8 +0.9**
comp=N,0.9nm,0.7s,mb3.6,baz=150,slow=7.8,SNR=3.2
NVAR pP pP 22 23 54.2 +3.2
comp=N,0.4nm,0.4s,baz=194,slow=5.5,SNR=2.4
TSUM Tsumeb 80.69 107 P **P 22 24 02.6 +0.6**
YKA Yellowknife Ar 89.62 341 P **P 22 24 46.0 +0.6**
comp=N,2.2nm,0.6s,mb4.4,baz=134,slow=4.8,SNR=24
YKA pP pP 22 25 14.2 +1.8
comp=N,1.1nm,0.6s,baz=134,slow=4.8,SNR=4.7
LSZ Lusaka 91.54 107 *e*P **P 22 24 55.6 +0.1**
ESK Eskdalemuir 93.32 32 P **P 22 25 01.9 -0.9**
ASAR Alice Springs 131.24 208 PKP PKPdf 22 30 59.8 -0.8
comp=N,0.3nm,0.4s,baz=137,slow=2.0,SNR=3.9
ASAR Alice Springs 131.24 208 PKP PKPdf 22 30 59.8 -0.8
WRA Warramunga Arr 134.23 211 PKP PKPdf 22 31 05.5 -0.8
comp=N,0.3nm,0.4s,baz=141,slow=1.6,SNR=11
MKAR Makanchi Array 144.44 34 PKP PKPdf 22 31 23.3 -0.6
comp=N,0.2nm,0.3s,baz=3.8,slow=3.6,SNR=3.7
MKAR pPKP pPKPdf 22 31 53.9 +1.8
comp=N,0.3nm,0.5s,baz=352,slow=3.5,SNR=3.4
MJAR Matsushiro Arr 150.91 311 PKPbc PKPbc 22 31 41.2 +0.5
comp=N,0.8nm,0.5s,baz=84,slow=3.4,SNR=4.1
MJAR Matsushiro Arr 150.91 311 PKPbc PKPbc 22 31 41.2 +0.5

*BJI **11** 22:14:48.3,50'.90N×179'.00W,h62km,mB4.9/9,mb4.8/12,*
Ms4.3/6,Ms7 4.0/6
*MOS **11** 22:14:50.2±1.4,50'.79N×178'.97W,h33km,mb4.4/9,Error*
ellipse: s-maj=14.9km s-min=9.4km az=102.9
*ISCJB **11** 22:14:54.8±0.9,51'.01N±0'.10×179'.03W±0'.06,h70km±6km,*
mb4.3/39,Error ellipse: s-maj=16.5km s-min=5.8km
az=168.4
*IDC **11** 22:14:55.6±3.3,51'.05N×179'.07W,h59km±28km,mb3.8/18,*
mb1 4.0/21,mb1mx3.9/33,mbtmp3.9/21,ML3.8/3,MS3.7/19,
Ms1 3.7/19,ms1mx3.6/41,Error ellipse: s-maj=20.8km
s-min=14.2km az=166.0
*NEIC **11** 22:14:55.3±0.8,50'.91N×179'.01W,h62km±6km,mb4.4/24,*
ML4.0(PMR),ML3.7(AEIC),Error ellipse: s-maj=14.2km
s-min=4.9km az=170.0
ISC 11 22:14:55.8±0.9,51'.01N±0'.10×178'.99W±0'.06,h63km±6km,
h74km±1.2km:pP-P,n124,σ1§12/117,mb4.4/39,3C-12D,
Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**1.14**	**290**	*e*P	**Pn**	**22 15 15.2**	**-0.5**
GSTR	**Great Sitkin T**	**2.13**	**58**	*e*Pn	**Pn**	**22 15 30.6**	**+1.6**
ATKA	**Atka Island**	**3.22**	**66**	P	**Pn**	**22 15 43.2**	**-0.6**
SMY	**Shemya**	**4.62**	**295**	*e*P	**Pn**	**22 16 03.9**	**+1.0**
FX1	**Attu Island--F**	**5.21**	**294**	P	**Pn**	**22 16 10.2**	**-0.8**
	6.1nm,0.3s,baz=236,slow=6.7,SNR=49						
FX1				LR	LR	22 18 15.3	
	comp=Z,984nm,19.5s,baz=110,slow=39						
NIKO	**Nikolski**	**6.56**	**69**	*e*Pn	**Pn**	**22 16 27.0**	**-2.5**
UNV	**Unalaska Valle**	**8.14**	**65**	*e*Pn	**Pn**	**22 16 51.8**	**+0.6**
AKUT	**Akutan**	**8.64**	**64**	*e*Pn	**Pn**	**22 16 57.9**	**0.0**
AKUT				Sn	**Sn**	**22 18 39.5**	**+5.8**
PET	**Petropavlovsk**	**13.91**	**287**	*e*P	**Pn**	**22 18 19.5**	**+10**
PET				MLR	MLR		
	comp=Z,500nm,20.0s						
PETK	**Petropavlovsk-**	**14.48**	**287**	P	**Pn**	**22 18 17.9**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=102,slow=12,SNR=3.6						
PETK				LR	LR	22 23 33.8	
	comp=Z,258nm,21.3s,baz=283,slow=36						
TNA	**Tin City**	**15.67**	**17**	Pn	**Pn**	**22 18 38.7**	**+6.4**
OHAK	**Old Harbor**	**16.24**	**58**	*e*Pn	**Pn**	**22 18 35.8**	**-3.8**
	comp=Z,11nm,0.7s						
SVW2	**Sparrevohn**	**16.42**	**43**	*e*P	**Pn**	**22 18 44.6**	**+2.7**
KDAK	**Kodiak Island**	**16.73**	**56**	P	**Pn**	**22 18 43.9**	**-1.8**
	comp=Z,1.2nm,0.3s,baz=258,slow=5.5,SNR=12						
KDAK	**Kodiak Island**	**16.73**	**56**	*e*P	**Pn**	**22 18 45.3**	**-0.4**
KDAK				pmax	pmax		
	comp=Z,11nm,1.2s						
KDAK	**Kodiak Island**	**16.73**	**56**	*e*Pn	**Pn**	**22 18 45.3**	**-0.4**
	comp=Z,11nm,1.2s						
TTA	**Tatalina**	**17.18**	**37**	*e*P	**Pn**	**22 18 53.4**	**+2.2**
RSO	**Redoubt South**	**17.43**	**47**	*e*P	**Pn**	**22 18 55.5**	**+1.2**
BILL	**Bilibino**	**18.55**	**342⇑**	*e*P	**Pn**	**22 19 08.6**	**+0.7**
BILL				pmax	pmax		
	comp=Z,11nm,1.7s						
BILL				MLR	MLR		
	comp=Z,200nm,17.0s						
BILL	**Bilibino**	**18.55**	**342**	*e*P	**Pn**	**22 19 08.0**	**+0.2**
	comp=Z,17nm,1.3s						
PPLA	**Purkeypile**	**18.68**	**40**	*e*P	**Pn**	**22 19 10.9**	**+1.5**
	comp=Z,15nm,0.8s						
RC01	**Rabbit Creek A**	**19.03**	**47**	*e*P	**Pn**	**22 19 12.5**	**-1.1**
CHUM	**Lake Minchumin**	**19.10**	**37**	*e*P	**Pn**	**22 19 12.8**	**-1.6**
	comp=Z,8.8nm,0.6s						
KTH	**Kantishna Hill**	**19.49**	**39**	*e*P	**Pn**	**22 19 17.1**	**-1.9**
TRF	**Thorofare Moun**	**19.70**	**40**	*e*P	**Pn**	**22 19 19.7**	**-1.8**
	comp=Z,19nm,1.0s						
BPAW	**Bear Paw Mtn.**	**19.72**	**38**	*e*P	**Pn**	**22 19 20.4**	**-1.4**
	comp=Z,12nm,0.8s						
MCK	**McKinley**	**20.36**	**40**	*e*P	**P**	**22 19 29.7**	**+2.9**
MCK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MCK	**McKinley**	**20.36**	**40**	*e*P	**P**	**22 19 29.6**	**+2.9**
	comp=Z,5.4nm,0.8s						
DIV	**Divide**	**20.89**	**48**	*e*P	**P**	**22 19 32.9**	**+0.4**
	comp=Z,5.6nm,0.6s						
BMRM	**Bremner River**	**21.41**	**49**	*e*P	**P**	**22 19 38.1**	**+0.1**
	comp=Z,6.0nm,0.7s,mb4.0						
EGAK	**Eagle**	**23.91**	**40**	*e*P	**P**	**22 20 02.8**	**-0.5**
	comp=Z,10.0nm,0.9s,mb4.2						
DAWY	**Dawson**	**24.46**	**43**	*e*P	**P**	**22 20 08.1**	**-0.2**
HYT	**Haines Junctio**	**24.82**	**51**	*e*P	**P**	**22 20 11.1**	**-0.5**
ASAJ	**Asahikawa**	**26.59**	**270**	LR	LR	22 31 25.1	
	comp=Z,116nm,19.2s,baz=90,slow=37						
KLR	**Kul'dur**	**31.17**	**286**	*e*P	**P**	**22 21 03.2**	**-5.2**
MJAR	**Matsushiro Arr**	**33.61**	**261**	LR	LR	22 34 11.6	
	comp=Z,113nm,20.0s,baz=60,slow=34						
MDJ	**Mudanjiang**	**34.52**	**280**	P	**P**	**22 21 30.2**	**-7.5**
MDJ				pP	pP	22 21 47.0	-6.2
MDJ				sP	sP	22 21 55.5	-5.0
MDJ				PP	PP	22 22 50.3	-6.4
MDJ				S	**S**	**22 26 54.8**	**-6.9**
MDJ				sS	sS	22 27 22.4	-5.6
MDJ				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
MDJ				pmax	pmax		
	comp=Z,44nm,5.1s						
MDJ				LR	LR		
	comp=N,100nm,13.7s						
MDJ				LR	LR		
	comp=E,170nm,17.6s						
MDJ				LR	LR		
	comp=Z,230nm,17.2s						
YKA	**Yellowknife Ar**	**35.58**	**46**	P	**P**	**22 21 46.6**	**+0.1**
	comp=Z,2.2nm,0.8s,mb4.2,baz=283,slow=8.2,SNR=15						
YKA				LR	LR	22 38 27.2	
	comp=Z,26nm,19.5s,baz=170,slow=40						
KSRS	**Korea Array**	**39.53**	**271**	P	**P**	**22 22 20.5**	**+0.3**
	comp=Z,1.3nm,0.6s,mb3.9,baz=58,slow=8.9,SNR=8.1						
KSRS				LR	LR	22 36 32.3	
	comp=Z,64nm,19.7s,baz=238,slow=33						
KSRS	**Korea Array**	**39.53**	**271**	P	**P**	**22 22 20.5**	**+0.3**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
KSRS				MLR	MLR		
	comp=Z,65nm,19.7s						
BSMT	**Bassoo Peak**	**40.70**	**68**	*e*P	**P**	**22 22 24.6**	**-5.3**
DUG	**Dugway**	**46.07**	**77**	P	**P**	**22 23 05.6**	**-7.5**
DUG				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
DUG	**Dugway**	**46.07**	**77**	P	**P**	**22 23 05.6**	**-7.5**
	comp=Z,2.3nm,0.9s,mb4.1						
TLY	**Talaya**	**46.16**	**303**	P	**P**	**22 23 10.0**	**-3.7**
ULN	**Ulaanbaatar**	**46.32**	**297**	*e*P	**P**	**22 23 10.0**	**-5.0**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
ULN	**Ulaanbaatar**	**46.32**	**297**	*e*P	**P**	**22 23 10.0**	**-5.0**
	comp=Z,1.7nm,0.6s,mb4.2						
PDAR	**Pinedale Array**	**46.54**	**72**	P	**P**	**22 23 18.4**	**+1.7**
	comp=Z,4.2nm,0.8s,mb4.4,baz=309,slow=4.7,SNR=22						
SONM	**Songino Array**	**46.71**	**297**	P	**P**	**22 23 17.9**	**-0.1**
	comp=Z,1.1nm,0.5s,mb4.0,baz=49,slow=9.8,SNR=4.8						
SONM				LR	LR	22 44 15.2	
	comp=Z,296nm,19.4s,baz=252,slow=38						
ZAK	**Zakamensk**	**47.05**	**301**	*e*P	**P**	**22 23 21.2**	**+0.6**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.1						
HHC	**Hu-ho-hao-te**	**47.68**	**286**	*e*P	**P**	**22 23 20.8**	**-4.9**
HHC				pP	pP	22 23 39.5	-2.2
HHC				sP	sP	22 23 48.3	-0.6
HHC				PcP	PcP	22 24 47.8	-6.3
HHC				PP	PP	22 25 13.0	-4.5
HHC				ScP	ScP	22 28 35.8	-6.8
HHC				PcS	PcS	22 28 43.0	-6.6
HHC				S	**S**	**22 30 11.9**	**-4.9**
HHC				ScS	ScS	22 33 03.8	-9.2
HHC				SS	SS	22 33 37.1	-8.1
HHC				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.0						
HHC				pmax	pmax		
	comp=Z,74nm,4.2s						
HHC				LR	LR		
	comp=N,84nm,20.4s						
HHC				LR	LR		
	comp=E,130nm,21.6s						
HHC				LR	LR		
	comp=Z,140nm,22.8s						
ULM	**Lac du Bonnet**	**49.99**	**56**	LR	LR	22 44 38.5	
	comp=Z,106nm,20.6s,baz=268,slow=36						
SPITS	**Spitsbergen Ar**	**50.74**	**356**	P	**P**	**22 23 48.3**	**-0.2**
	comp=Z,8.0nm,0.5s,mb4.9,baz=51,slow=6.6,SNR=12						
ZALV	**Zalesovo Beam**	**54.20**	**314**	LR	LR	22 48 51.5	
	comp=Z,58nm,19.3s,baz=81,slow=38						
ARCES	**ARCESS Array B**	**58.44**	**350**	P	**P**	**22 24 44.1**	**-0.2**
	comp=Z,2.0nm,0.8s,mb4.2,baz=27,slow=8.2,SNR=6.4						
ARE0	**ARCESS Array S**	**58.44**	**350**	*e*P	**P**	**22 24 43.7**	**-0.6**
TXAR	**Lajitas Array**	**58.83**	**81**	P	**P**	**22 24 48.2**	**+0.5**
	comp=Z,1.3nm,1.0s,mb3.9,baz=282,slow=3.1,SNR=7.1						
CD2	**Chengdu**	**58.94**	**282**	*e*P	**P**	**22 24 40.9**	**-7.5**
CD2				pP	pP	22 24 59.4	-5.5
CD2				sP	sP	22 25 08.9	-3.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
CD2				pmax	pmax		
	comp=Z,30nm,5.2s						
KURK	**Kurchatov**	**59.19**	**314**	P	**P**	**22 24 50.4**	**+0.6**
	comp=Z,4.1nm,0.5s,mb4.7,baz=42,slow=6.7,SNR=25						
KURK	**Kurchatov**	**59.19**	**314**	P	**P**	**22 24 50.4**	**+0.6**
WMQ	**Urumqi**	**59.45**	**303**	*e*P	**P**	**22 24 48.0**	**-3.7**
MK31	**Makanchi Array**	**60.17**	**308**	*e*P	**P**	**22 24 55.8**	**-0.8**
MKAR	**Makanchi Array**	**60.17**	**308**	P	**P**	**22 24 56.2**	**-0.5**
	comp=Z,0.9nm,0.5s,mb4.1,baz=50,slow=8.7,SNR=16						
MKAR				LR	LR	22 51 05.7	
	comp=Z,68nm,19.6s,baz=6.7,slow=36						
MKAR	**Makanchi Array**	**60.17**	**308**	P	**P**	**22 24 56.2**	**-0.5**
MKAR				LR	LR	22 51 05.7	
SCHQ	**Schefferville**	**60.37**	**38**	LR	LR	22 54 50.5	
	comp=Z,143nm,18.4s,baz=333,slow=40						
BVAR	**Borovoye Array**	**61.10**	**320**	P	**P**	**22 25 02.6**	**-0.2**
	comp=Z,0.9nm,0.5s,mb4.1,baz=58,slow=3.6,SNR=4.9						
HNR	**Honiara**	**62.90**	**203**	LR	LR	22 51 57.6	
	comp=Z,71nm,18.1s,baz=244,slow=35						
KMI	**Kunming**	**63.66**	**278**	P	**P**	**22 25 14.1**	**-6.3**
KMI				pP	pP	22 25 33.0	-4.1
KMI				sP	sP	22 25 40.8	-3.3
KMI				PP	PP	22 27 37.0	-3.7
KMI				S	**S**	**22 33 41.3**	**-8.4**
KMI				sS	sS	22 34 13.5	-4.6
KMI				SS	SS	22 37 51.6	-6.2
KMI				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.3						
KMI				pmax	pmax		
	comp=Z,100nm,5.0s						
KMI				LR	LR		
	comp=N,170nm,16.7s						
KMI				LR	LR		
	comp=E,77nm,17.4s						
KMI				LR	LR		
	comp=Z,110nm,18.1s						
NCB	**Newcomb**	**65.16**	**50**	P	**P**	**22 25 25.6**	**-4.3**
	comp=Z,4.0nm,0.3s,mb4.9						
FINES	**FINESS Array B**	**66.12**	**347**	P	**P**	**22 25 34.4**	**-1.3**
	comp=Z,2.4nm,0.7s,mb4.3,baz=33,slow=7.3,SNR=6.2						
FINES				LR	LR	23 00 07.3	
	comp=Z,74nm,20.6s,baz=311,slow=41						
FINES	**FINESS Array B**	**66.12**	**347**	P	**P**	**22 25 34.4**	**-1.4**
FINES				LR	LR	23 00 07.3	
TKL	**Tuckaleechee C**	**66.23**	**62**	*e*P	**P**	**22 25 37.3**	**+0.4**
AAK	**Ala-Archa**	**67.01**	**310**	*e*P	**P**	**22 25 37.2**	**-4.6**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
AAK	**Ala-Archa**	**67.01**	**310**	*e*P	**P**	**22 25 37.2**	**-4.5**
	comp=Z,2.8nm,0.6s,mb4.5						
LSA	**Lhasa**	**67.45**	**290**	P	**P**	**22 25 38.1**	**-6.7**
LSA	**Lhasa**	**67.45**	**290**	*e*P	**P**	**22 25 38.6**	**-6.2**
LSA				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
LSA	**Lhasa**	**67.45**	**290**	*e*P	**P**	**22 25 38.6**	**-6.1**
	comp=Z,3.1nm,0.7s,mb4.5						
NOA	**NORSAR Array B**	**68.01**	**355**	P	**P**	**22 25 46.6**	**-1.2**
	comp=Z,1.6nm,1.0s,mb4.0,baz=7.7,slow=6.6,SNR=3.6						
NOA				LR	LR	22 56 19.4	
	comp=Z,37nm,19.7s,baz=355,slow=37						
NOA	**NORSAR Array B**	**68.01**	**355**	P	**P**	**22 25 46.6**	**-1.1**
NOA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
NOA				MLR	MLR		
	comp=Z,37nm,19.7s						
NOA	**NORSAR Array B**	**68.01**	**355**	P	**P**	**22 25 46.5**	**-1.2**
NOA				LR	LR	22 56 19.4	
KSH	**Kashi**	**68.63**	**307**	P	**P**	**22 25 56.0**	**+4.0**
KSH				PcP	PcP	22 26 17.2	+0.7
KSH				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
KSH				pmax	pmax		
	comp=Z,110nm,5.7s						
KSH				LR	LR		
	comp=N,45nm,4.5s						
KSH				LR	LR		
	comp=E,41nm,4.9s						
KSH				LR	LR		
	comp=Z,47nm,4.3s						
CMAR	**Chiang Mai Arr**	**70.93**	**276**	LR	LR	22 57 33.4	
	comp=Z,47nm,18.5s,baz=253,slow=36						
TAPN	**Taplejung**	**71.22**	**290**	*e*P	**P**	**22 26 09.0**	**+0.9**
	comp=Z,21nm,1.0s,mb5.0						
ODAN	**Odare**	**71.78**	**290**	*e*P	**P**	**22 26 12.0**	**+0.6**
	comp=Z,5.9nm,0.6s,mb4.7						
GUN	**Gumba**	**71.89**	**292**	*e*P	**P**	**22 26 12.3**	**+0.2**
	comp=Z,19nm,0.5s,mb5.2						
JIRN	**Jiri**	**71.89**	**292**	*e*P	**P**	**22 26 11.9**	**-0.2**
	comp=Z,14nm,0.5s,mb5.1						
RAMN	**Ramite**	**72.18**	**291**	*e*P	**P**	**22 26 13.9**	**+0.1**
	comp=Z,14nm,0.6s,mb5.1						
KKN	**Kakani**	**72.33**	**292**	*e*P	**P**	**22 26 13.6**	**-1.1**
	comp=Z,10nm,0.5s,mb5.0						
KKN	**Kakani**	**72.33**	**292**	*e*P	**P**	**22 26 13.6**	**-1.1**
KKN				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
AKASG	**Malin Array Be**	**75.87**	**342**	P	**P**	**22 26 34.5**	**-0.4**
	comp=Z,5.1nm,0.5s,mb4.7,baz=22,slow=6.4,SNR=18						
AKASG				LR	LR	23 09 02.4	
	comp=Z,62nm,18.1s,baz=10.0,slow=43						
AKASG	**Malin Array Be**	**75.87**	**342**	P	**P**	**22 26 34.5**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.5s						
AKASG				MLR	MLR		
	comp=Z,62nm,18.1s						
AKASG	**Malin Array Be**	**75.87**	**342**	P	**P**	**22 26 34.5**	**-0.4**
AKASG				LR	LR	23 09 02.4	
AKBB	**Malin Array Si**	**75.87**	**342**	*e*P	**P**	**22 26 32.8**	**-2.1**
KIEV	**Kiev**	**75.88**	**342**	*e*P	**P**	**22 26 28.6**	**-6.4**
KIEV				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
KIEV	**Kiev**	**75.88**	**342**	*e*P	**P**	**22 26 28.6**	**-6.4**
	comp=Z,6.1nm,0.6s,mb4.7						
KBL	**Kabul**	**75.97**	**308**	*e*P	**P**	**22 26 30.6**	**-5.2**
KBL				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
KBL	**Kabul**	**75.97**	**308**	*e*P	**P**	**22 26 30.6**	**-5.2**
	comp=Z,6.4nm,0.9s,mb4.5						
KWP	**Kalwaria Pacla**	**78.04**	**346**	⇓*i*P	**P**	**22 26 48.0**	**+0.8**
KWP	**Kalwaria Pacla**	**78.04**	**346**	P	**P**	**22 26 43.7**	**-3.4**
KWP	**Kalwaria Pacla**	**78.04**	**346**	⇓*i*P	**P**	**22 26 48.0**	**+0.8**
BUR08	**Bucovina Ar. S**	**79.55**	**344**	*e*P	**P**	**22 26 56.1**	**+0.6**
BURAR	**Bucovina Array**	**79.58**	**344**	⇓P	**P**	**22 26 56.5**	**+0.9**
BURAR	**Bucovina Array**	**79.58**	**344**	⇓*i*P	**P**	**22 26 56.5**	**+0.9**
GERES	**GERESS Array B**	**79.94**	**352**	P	**P**	**22 26 57.6**	**+0.1**
	comp=Z,0.7nm,0.7s,mb3.7,baz=5.0,slow=4.6,SNR=6.0						
GERES				LR	LR	23 05 28.1	
	comp=Z,51nm,18.1s,baz=273,slow=38						
VRI	**Vrincioaia**	**80.98**	**342**	⇓P	**P**	**22 27 04.6**	**+1.4**
VRI	**Vrincioaia**	**80.98**	**342**	⇓*i*P	**P**	**22 27 04.6**	**+1.4**
MLR	**Muntele Rosu**	**81.49**	**343**	⇓P	**P**	**22 27 08.3**	**+2.4**
MLR	**Muntele Rosu**	**81.49**	**343**	⇓*i*P	**P**	**22 27 08.3**	**+2.4**
WRA	**Warramunga Arr**	**81.66**	**224**	P	**P**	**22 27 05.6**	**-1.4**
	comp=Z,0.5nm,0.7s,mb3.5,baz=33,slow=6.2,SNR=6.3						
TIRR	**Tirgusor**	**81.99**	**341**	⇓P	**P**	**22 27 09.2**	**+0.7**
TIRR	**Tirgusor**	**81.99**	**341**	*e*P	**P**	**22 27 05.4**	**-3.2**
TIRR	**Tirgusor**	**81.99**	**341**	⇓*i*P	**P**	**22 27 09.2**	**+0.7**
BZS	**Buzias**	**82.12**	**346**	⇓P	**P**	**22 27 16.4**	**+7.2**
BZS	**Buzias**	**82.12**	**346**	⇓*i*P	**P**	**22 27 16.4**	**+7.2**
GZR	**Gura Zlata**	**82.15**	**345**	⇑P	**P**	**22 27 10.5**	**+1.1**
GZR	**Gura Zlata**	**82.15**	**345**	⇑*i*P	**P**	**22 27 10.5**	**+1.1**
FITZ	**Fitzroy Crossi**	**84.14**	**232**	P	**P**	**22 27 20.1**	**+0.2**
	comp=Z,2.6nm,0.8s,mb4.4,baz=156,slow=2.7,SNR=5.3						
ASAR	**Alice Springs**	**85.13**	**222**	P	**P**	**22 27 24.6**	**-0.1**
	comp=Z,0.7nm,0.9s,mb3.8,baz=30,slow=5.9,SNR=5.5						
ASAR	**Alice Springs**	**85.13**	**222**	P	**P**	**22 27 24.6**	**-0.1**
ASAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BR131	**Keskin Array S**	**85.24**	**335**	*e*P	**P**	**22 27 21.5**	**-3.7**
BRTR	**Keskin Array B**	**85.24**	**335**	P	**P**	**22 27 26.1**	**+0.8**
	comp=Z,1.0nm,0.7s,mb4.0,baz=71,slow=2.0,SNR=7.5						
BRTR				LR	LR	23 13 40.8	
	comp=Z,21nm,19.7s,baz=160,slow=41						
MMAI	**Mount Meron Ar**	**91.02**	**332**	LR	LR	23 15 29.4	
	comp=Z,52nm,18.2s,baz=85,slow=40						
LBTB	**Lobatse**	**147.91**	**315**	PKPbc	PKPbc	22 34 35.0	+1.4
	comp=Z,4.3nm,0.7s,baz=137,slow=4.4,SNR=6.4						
LBTB	**Lobatse**	**147.91**	**315**	PKPbc	PKPbc	22 34 35.0	+1.4
BOSA	**Boshof**	**151.14**	**312**	PKPbc	PKPbc	22 34 42.0	+0.6
	comp=Z,6.7nm,1.1s,baz=135,slow=4.3,SNR=3.1						

CASC 11 22:16:34.3±1.7,8'.31N×82'.85W,h23km±6km,MD3.5,
1C-2D,Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.46**	**317**	*e*P	Pb	22 16 43.2	-0.6
ACR				*e*P		22 16 43.2	
BRU2	**Volcan**	**0.51**	**18**	⇓*i*P	Pb	22 16 45.0	+0.4
BRU2				*e*S	Sb	22 16 52.5	+0.9
BAR1		**1.03**	**334⇑**	*e*P	Pn	22 16 53.2	-0.2
BAR1				*e*S	Sb	22 17 07.4	+0.8
CNI	**Changuinola**	**1.15**	**17**	*e*S	Sn	22 17 06.4	-3.6
BUS	**Buena Vista**	**1.53**	**324**	*e*P	Pn	22 17 00.9	+0.7
BUS				*e*S	Sn	22 17 20.2	+0.8
URSC	**Urasca**	**1.77**	**329**	⇓*e*P	Pn	22 17 05.0	+1.4
URSC				*e*S	Sn	22 17 27.2	+1.9
PRS1	**Puriscal**	**2.20**	**319**	*e*P	Pn	22 17 08.6	-0.8
CGA2	**Cerro Gallo 2

*NEIC **11** 22:42:02.3, 35°.07N×26°.20E, h24km, MD3.1(ATH), After ATH.*
*CSEM **11** 22:42:02.8±0.3, 35°.25N×26°.18E, h10km, MD3.1, Error ellipse: s-maj=12.6km s-min=6.8km az=170.0*
*ISCJB **11** 22:42:02.7±0.6, 35°.25N±0°.05×26°.12E±0°.04, h13km±5km, Error ellipse: s-maj=7.7km s-min=5.0km az=178.6*
ISC 11 22:42:03.6±0.7, 35°.2N±0°.1×26°.16E±0°.04, h16km±8km, n22, σ0°99/35, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.10**	**153**	*e*Pb	**Pg**	**22 42 06.3**	**-0.6**
ZKR				*e*Sb	**Sg**	**22 42 10.1**	**+0.9**
ZKR	**Zakros**	**0.10**	**153**	P	**Pg**	**22 42 06.2**	**-0.7**
ZKR				S	**Sg**	**22 42 10.0**	**+0.8**
ZKR	**Zakros**	**0.10**	**153**	*e*PB	**Pg**	**22 42 06.3**	**-0.6**
ZKR				*e*SB	**Sg**	**22 42 10.1**	**+0.9**
ZKR	**Zakros**	**0.10**	**153**	*e*Pb	**Pg**	**22 42 06.3**	**-0.6**
ZKR				S	**Sg**	**22 42 10.0**	**+0.8**
NPS	**Neapolis**	**0.45**	**278**	*e*Pn	**Pg**	**22 42 12.4**	**-0.3**
NPS				*e*Sn	**Sg**	**22 42 20.0**	**+1.2**
NPS	**Neapolis**	**0.45**	**278**	*e*PN	**Pg**	**22 42 12.4**	**-0.3**
NPS				*e*SN	**Sg**	**22 42 20.0**	**+1.2**
NPS	**Neapolis**	**0.45**	**278**	*e*Pn	**Pg**	**22 42 12.4**	**-0.3**
LAST	**Lasithi**	**0.56**	**266**	P	**Pg**	**22 42 13.5**	**-1.2**
LAST				S	**Sg**	**22 42 22.9**	**+0.7**
LAST	**Lasithi**	**0.56**	**266**	P	**Pg**	**22 42 13.5**	**-1.2**
LAST				S	**Sg**	**22 42 22.9**	**+0.7**
KARP	**Karpathos**	**0.89**	**67**	*e*Pn	**Pg**	**22 42 19.6**	**-1.2**
KARP				*e*Sn	**Sg**	**22 42 33.3**	**+0.8**
KARP	**Karpathos**	**0.89**	**67**	*e*PN	**Pg**	**22 42 19.6**	**-1.2**
KARP				*e*SN	**Sg**	**22 42 33.3**	**+0.8**
KARP	**Karpathos**	**0.89**	**67**	*e*Pn	**Pg**	**22 42 19.6**	**-1.2**
KARP				*e*Sn	**Sg**	**22 42 33.3**	**+0.8**
SIVA	**Sivas**	**1.12**	**261**	P	**Pg**	**22 42 23.4**	**-1.9**
SIVA				S	**Sg**	**22 42 40.1**	**+0.1**
SIVA	**Sivas**	**1.12**	**261**	P	**Pg**	**22 42 23.4**	**-1.9**
SIVA				S	**Sg**	**22 42 40.1**	**+0.1**
THR5	**Thira Island,**	**1.38**	**332**	P	**Pn**	**22 42 27.5**	**-0.7**
THR5	**Thira Island,**	**1.38**	**332**	P	**Pn**	**22 42 27.5**	**-0.7**
VAM	**Vamos**	**1.62**	**278**	*e*Pn	**Pn**	**22 42 32.8**	**+1.4**
VAM	**Vamos**	**1.62**	**278**	*e*PN	**Pn**	**22 42 32.8**	**+1.4**
VAM	**Vamos**	**1.62**	**278**	*e*Pn	**Pn**	**22 42 32.8**	**+1.4**
ARG	**Arkhangelos**	**1.89**	**57**	*e*Pn	**Pn**	**22 42 35.9**	**+0.7**
ARG	**Arkhangelos**	**1.89**	**57**	*e*PN	**Pn**	**22 42 35.9**	**+0.7**
ARG	**Arkhangelos**	**1.89**	**57**	*e*Pn	**Pn**	**22 42 35.9**	**+0.7**

*ISK **11** 22:44:17.7, 37°.05N×29°.18E, h14km, MD2.7*
*CSEM **11** 22:44:18.0±0.2, 37°.03N×29°.19E, h15km, MD2.7, Error ellipse: s-maj=4.2km s-min=3.0km az=6.0*
*ISCJB **11** 22:44:18.0±0.7, 37°.02N±0°.06×29°.17E±0°.04, h11km±10km, Error ellipse: s-maj=9.7km s-min=5.7km az=7.7*
ISC 11 22:44:18.4±0.7, 37°.03N±0°.06×29°.18E±0°.05, h14km±13km, n16, σ0°52/23, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.29**	**63**	*e*PG	**Pg**	**22 44 23.4**	**-0.9**
GLHS				*e*SG	**Sg**	**22 44 28.6**	**+0.2**
GLHS	**Glhisar (BURDU**	**0.29**	**63**	*e*Pg	**Pg**	**22 44 23.4**	**-1.0**
GLHS				*e*Sg	**Sg**	**22 44 28.6**	**+0.2**
GOLH	**Golhisar**	**0.37**	**55**	*i* P	**Pg**	**22 44 25.8**	**-0.1**
GOLH	**Golhisar**	**0.37**	**55**	*i* P	**Pg**	**22 44 25.8**	**-0.1**
GOLH				*i* S	**Sg**	**22 44 31.2**	**+0.2**
TURN	**Turunc**	**0.48**	**252**	*i* P	**Pg**	**22 44 32.9**	**+4.9**
TURN	**Turunc**	**0.48**	**252**	*i* P	**Pg**	**22 44 32.8**	**+4.9**
ELL	**Elmali**	**0.65**	**115**	*e*PG	**Pg**	**22 44 30.8**	**-0.2**
ELL				*e*SG	**Sg**	**22 44 40.6**	**+1.1**
ELL	**Elmali**	**0.65**	**115**	*e*Pg	**Pg**	**22 44 30.8**	**-0.2**
ELL				*e*Sg	**Sg**	**22 44 40.6**	**+1.0**
DNZL	**Cakiroluk**	**0.67**	**351**	*i* P	**Pg**	**22 44 31.5**	**0.0**
DNZL	**Cakiroluk**	**0.67**	**351**	*i* P	**Pg**	**22 44 31.5**	**0.0**
YER	**Yerkesik**	**0.72**	**279**	*e*PG	**Pg**	**22 44 32.4**	**-0.1**
YER				*e*SG	**Sg**	**22 44 42.4**	**+0.4**
YER	**Yerkesik**	**0.72**	**279**	*e*Pg	**Pg**	**22 44 32.4**	**0.0**
YER				*e*Sg	**Sg**	**22 44 42.4**	**+0.4**
AKAS	**Kas**	**0.86**	**156**	*i* P	**Pg**	**22 44 34.3**	**-0.8**
AKAS	**Kas**	**0.86**	**156**	*i* P	**Pg**	**22 44 34.3**	**-0.7**
DAT	**Datca**	**1.32**	**258**	*e*PN	**Pn**	**22 44 42.5**	**+0.1**
DAT	**Datca**	**1.32**	**258**	*e*Pn	**Pn**	**22 44 42.5**	**+0.2**

*BJI **11** 23:02:22.5, 50°.31N×179°.19W, h60km, mB4.7/8, mb4.5/9, Ms4.4/4, Ms7.4 4/5*
*NEIC **11** 23:02:25.5±1.4, 50°.94N×179°.37W, h42km±8km, mb4.0/8, ML3.5(AEIC), Error ellipse: s-maj=24.6km s-min=7.4km az=176.0*
*ISCJB **11** 23:02:25.7±1.2, 51°.1N±0°.2×179°.26W±0°.07, h52km±7km, mb4.1/21, Error ellipse: s-maj=26.6km s-min=6.2km az=171.4*
*IDC **11** 23:02:29.4±3.6, 51°.27N×179°.14W, h59km±32km, mb3.7/16, mb1 3.9/18, mb1mx3.7/33, mbtmp3.8/18, ML3.6/2, MS3.0/1, Ms1 3.0/1, ms1mx2.4/35, Error ellipse: s-maj=38.6km s-min=16.0km az=3.0*
ISC 11 23:02:27.0±1.2, 51°.2N±0°.2×179°.42W±0°.08, h41km±9km, h67km±3.4km: pP-P, n64, σ1°25/68, mb4.1/21, 3C-5D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.83**	**285**	*e*P	**Pn**	**23 02 42.4**	**+0.2**
GSTR	**Great Sitkin T**	**2.29**	**65**	Pn	**Pn**	**23 03 02.8**	**+0.5**
ATKA	**Atka Island**	**3.42**	**70**	P	**Pn**	**23 03 15.7**	**-1.9**
ATKA				S	**Sn**	**23 03 59.2**	**+2.4**
SMY	**Shemya**	**4.30**	**294**	*e*Pn	**Pn**	**23 03 36.0**	**+6.2**
SMY				*e*Sn	Sx	23 04 38.0	
FX1	**Attu Island--F**	**4.89**	**293**	P	**Pn**	**23 03 42.8**	**+4.9**
FX1	4.3nm,0.3s,baz=302,slow=2.2,SNR=16			S	Sx	23 04 49.7	
FX1	5.9nm,0.3s,baz=303,slow=24,SNR=8.9			LR	LR	23 05 38.5	
FX1	comp=Z,158nm,19.9s,baz=302,slow=38 **Attu Island--F**	**4.89**	**293**	P	**Pn**	**23 03 42.8**	**+4.9**
FX1				S	Sx	23 04 49.7	
FX1				LR	LR	23 05 38.5	
NIKO	**Nikolski**	**6.76**	**70**	*e*Pn	**Pn**	**23 04 02.7**	**-0.9**
NIKO				*e*Sn	**Sn**	**23 05 20.3**	**+1.1**
UNV	**Unalaska Valle**	**8.33**	**66**	*e*Pn	**Pn**	**23 04 25.0**	**0.0**
UNV				Sn	**Sn**	**23 05 57.7**	**+0.1**
OHAK	**Old Harbor**	**16.39**	**58**	*e*Pn	**Pn**	**23 06 08.0**	**-5.7**
	6.4nm,0.8s						
SVW2	**Sparrevohn**	**16.50**	**44**	*e*P	**Pn**	**23 06 17.0**	**+1.9**
KDAK	**Kodiak Island**	**16.87**	**56**	P	**Pn**	**23 06 16.8**	**-2.9**
	0.8nm,0.3s,baz=271,slow=9.2,SNR=8.6						
KDAK	**Kodiak Island**	**16.87**	**56**	*e*Pn	**Pn**	**23 06 17.5**	**-2.3**
	4.0nm,0.6s						
TTA	**Tatalina**	**17.22**	**38**	*e*Pn	**Pn**	**23 06 25.7**	**+1.6**
PPLA	**Purkeypile**	**18.73**	**41**	*e*P	**Pn**	**23 06 43.0**	**+0.4**
	6.8nm,0.8s						
KTH	**Kantishna Hill**	**19.54**	**40**	*e*P	**Pn**	**23 06 50.4**	**-1.8**
	8.1nm,0.7s						
TRF	**Thorofare Moun**	**19.75**	**40**	*e*P	**Pn**	**23 06 52.3**	**-2.5**
	9.5nm,1.1s						
BPAW	**Bear Paw Mtn.**	**19.76**	**38**	*e*P	**Pn**	**23 06 53.2**	**-1.7**
	6.1nm,0.7s						
PAX	**Paxson**	**21.61**	**44**	P	**P**	**23 07 13.6**	**+0.5**
EGAK	**Eagle**	**23.97**	**41**	*e*P	**P**	**23 07 35.7**	**-1.3**
	4.9nm,0.8s,mb4.0						
DAWY	**Dawson**	**24.53**	**43**	*e*P	**P**	**23 07 40.8**	**-1.4**
SIT	**Sitka**	**26.14**	**60**	P	**P**	**23 07 56.6**	**-0.3**
YKA	**Yellowknife Ar**	**35.66**	**46**	P	**P**	**23 09 19.4**	**-1.2**
	1.1nm,0.7s,mb3.9,baz=284,slow=8.8,SNR=6.7						
YKA	**Yellowknife Ar**	**35.66**	**46**	P	**P**	**23 09 19.4**	**-1.2**
KSRS	**Korea Array**	**39.25**	**271**	P	**P**	**23 09 52.9**	**+1.6**
	0.5nm,0.4s,mb3.6,baz=158,slow=31,SNR=5.2						
TLY	**Talaya**	**45.85**	**302**	P	**P**	**23 10 43.4**	**-1.3**
ULN	**Ulaanbaatar**	**46.01**	**296**	P	**P**	**23 10 44.4**	**-1.6**
PDAR	**Pinedale Array**	**46.75**	**72**	P	**P**	**23 10 52.5**	**+0.6**
	2.1nm,0.8s,mb4.1,baz=316,slow=6.2,SNR=14						
HHC	**Hu-ho-hao-te**	**47.37**	**286**	*e*P	**P**	**23 10 56.5**	**-0.2**
HHC				pP	pP	23 11 15.3	+7.0
HHC				PcP	PcP	23 12 25.7	-1.2
HHC				PP	PP	23 12 48.6	+0.7
HHC				ScP	ScP	23 16 10.9	-6.4
HHC				PcS	PcS	23 16 18.6	-3.5
HHC				S	**S**	**23 17 45.9**	**-1.7**
HHC				ScS	ScS	23 20 40.2	-6.7
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
HHC				pmax	pmax		
	comp=Z,130nm,4.6s						
HHC				LR	LR		
	comp=N,98nm,19.2s						
HHC				LR	LR		
	comp=E,120nm,19.2s						
HHC				LR	LR		
	comp=Z,55nm,19.2s						
SPITS	**Spitsbergen Ar**	**50.56**	**356**	P	**P**	**23 11 20.3**	**-0.4**
	comp=Z,4.0nm,0.5s,mb4.6,baz=31,slow=3.9,SNR=8.2						
AGMN	**Agassiz Nation**	**51.28**	**58**	P	**P**	**23 11 28.4**	**+1.9**
	comp=Z,57nm,1.3s						
LZH	**Lanzhou**	**55.07**	**286**	*e*P	**P**	**23 11 57.1**	**+2.6**
LZH				pP	pP	23 12 13.0	+6.7
LZH				sP	sP	23 12 18.4	+7.4
ARCES	**ARCESS Array B**	**58.24**	**350**	P	**P**	**23 12 16.4**	**0.0**
	comp=Z,2.3nm,1.0s,mb4.2,baz=26,slow=8.5,SNR=7.8						
CD2	**Chengdu**	**58.63**	**281**	*e*P	**P**	**23 12 18.2**	**-1.6**
CD2				pP	pP	23 12 36.2	+4.5
CD2				sP	sP	23 12 43.8	+7.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
CD2				pmax	pmax		
	comp=Z,30nm,4.6s						
KURK	**Kurchatov**	**58.89**	**313**	P	**P**	**23 12 23.2**	**+2.0**
	comp=Z,2.6nm,0.6s,mb4.5,baz=42,slow=6.6,SNR=18						
KURK	**Kurchatov**	**58.89**	**313**	*e*P	**P**	**23 12 21.9**	**+0.6**
TXAR	**Lajitas Array**	**59.07**	**81**	P	**P**	**23 12 21.2**	**-1.7**
	comp=Z,0.1nm,0.5s,mb3.1,baz=311,slow=6.9,SNR=3.0						
TXAR	**Lajitas Array**	**59.07**	**81**	P	**P**	**23 12 21.2**	**-1.7**
WMQ	**Urumqi**	**59.13**	**303**	*e*P	**P**	**23 12 24.0**	**+0.9**
MK31	**Makanchi Array**	**59.86**	**308**	*e*P	**P**	**23 12 27.7**	**-0.3**
MKAR	**Makanchi Array**	**59.86**	**308**	P	**P**	**23 12 28.9**	**+0.8**
	comp=Z,0.6nm,0.5s,mb3.9,baz=59,slow=10,SNR=7.3						
BVAR	**Borovoye Array**	**60.80**	**319**	P	**P**	**23 12 34.4**	**+0.1**
	comp=Z,0.2nm,0.3s,mb3.7,baz=76,slow=7.8,SNR=4.1						
FINES	**FINESS Array B**	**65.91**	**347**	P	**P**	**23 13 07.7**	**-0.3**
	comp=Z,2.1nm,0.9s,mb4.2,baz=148,slow=33,SNR=5.7						
FINES	**FINESS Array B**	**65.91**	**347**	P	**P**	**23 13 07.7**	**-0.3**
AAK	**Ala-Archa**	**66.70**	**309**	P	**P**	**23 13 11.6**	**-1.8**
LSA	**Lhasa**	**67.14**	**289**	P	**P**	**23 13 12.6**	**-3.8**
NOA	**NORSAR Array B**	**67.82**	**354**	P	**P**	**23 13 20.0**	**-0.1**
	comp=Z,1.1nm,0.9s,mb3.9,baz=238,slow=11,SNR=4.3						
NOA	**NORSAR Array B**	**67.82**	**354**	P	**P**	**23 13 20.0**	**-0.2**
KSH	**Kashi**	**68.31**	**306**	P	**P**	**23 13 28.9**	**+5.3**
KSH				pP	pP	23 13 45.3	+10
KSH				sP	sP	23 13 52.3	+12
KSH				PP	PP	23 16 04.6	+10
KSH				ScP		23 17 49.6	
KSH				PcS		23 17 56.2	
KSH				S	S	23 22 27.6	+6.2
KSH				sS	sS	23 22 56.8	+15
KSH				ScS	ScS	23 23 20.9	+1.3
KSH				SS	SS	23 26 57.9	+14
KSH				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
KSH				pmax	pmax		
	comp=Z,110nm,4.5s						
KSH				LR	LR		
	comp=Z,100nm,4.4s						
HFS	**Hagfors**	**68.55**	**353**	P	**P**	**23 13 24.1**	**-0.7**
	comp=Z,1.1nm,0.6s,mb4.0,baz=46,slow=6.4,SNR=6.8						
AKASG	**Malin Array Be**	**75.63**	**342**	P	**P**	**23 14 07.1**	**-0.2**
	comp=Z,2.8nm,0.4s,mb4.6,baz=21,slow=5.7,SNR=12						
AKASG	**Malin Array Be**	**75.63**	**342**	P	**P**	**23 14 07.1**	**-0.2**
KWP	**Kalwaria Pacla**	**77.82**	**345**	*e*P	**P**	**23 14 19.6**	**0.0**
	comp=Z,14nm,1.0s,mb4.9						
KWP	**Kalwaria Pacla**	**77.82**	**345**	||*i*P	**P**	**23 14 20.6**	**+1.0**
BUR08	**Bucovina Ar. S**	**79.32**	**343**	*e*P	**P**	**23 14 28.1**	**+0.2**
BURAR	**Bucovina Array**	**79.35**	**343**	||*i*P	**P**	**23 14 29.1**	**+1.0**
GERES	**GERESS Array B**	**79.74**	**351**	P	**P**	**23 14 29.8**	**-0.4**
	comp=Z,0.1nm,0.4s,mb3.1,baz=23,slow=4.4,SNR=3.9						
VRI	**Vrincioaia**	**80.75**	**342**	||*i*P	**P**	**23 14 39.5**	**+3.9**
MLR	**Muntele Rosu**	**81.26**	**342**	P	**P**	**23 14 39.9**	**+1.5**
	comp=Z,2.5nm,0.7s,mb4.2						
MLR	**Muntele Rosu**	**81.26**	**342**	⇑P	**P**	**23 14 40.6**	**+2.3**
MLR	**Muntele Rosu**	**81.26**	**342**	||*i*P	**P**	**23 14 40.6**	**+2.2**
TIRR	**Tirgusor**	**81.75**	**340**	||*i*P	**P**	**23 14 41.9**	**+0.9**
BZS	**Buzias**	**81.90**	**345**	⇑P	**P**	**23 14 42.7**	**+0.9**
GZR	**Gura Zlata**	**81.92**	**344**	||*i*P	**P**	**23 14 43.2**	**+1.3**
BRTR	**Keskin Array B**	**84.98**	**335**	P	**P**	**23 14 58.8**	**+1.1**
	comp=Z,0.9nm,0.7s,mb4.0,baz=46,slow=3.6,SNR=5.6						

*ISCJB **11** 23:12:11.0±0.7, 33°.03N±0°.05×92°.0E±0°.1, h10km, mb3.5/3, Error ellipse: s-maj=15.7km s-min=6.8km az=174.4*
*IDC **11** 23:12:11.3±1.4, 32°.86N×91°.85E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.4/26, mbtmp3.6/5, MS2.6/1, Ms1 2.6/1, ms1mx2.1/29, Error ellipse: s-maj=89.5km s-min=23.4km az=54.0*
*NEIC **11** 23:12:13.8±0.9, 33°.15N×91°.96E, h10km, mb3.3/2, Error ellipse: s-maj=20.2km s-min=12.0km az=70.0*
ISC 11 23:12:13.2±0.7, 33°.08N±0°.05×92°.0E±0°.1, h10km, n14, σ0°82/14, mb3.5/3, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.45**	**193**	*e*Pn	**Pn**	**23 13 10.6**	**+3.7**
LSA				Sn	**Sg**	**23 14 04.7**	**+0.7**
CMAR	**Chiang Mai Arr**	**15.83**	**155**	Pn	**Pn**	**23 15 55.2**	**-0.9**
	baz=322,slow=12,SNR=3.7						
TKM2	**Tokmak 2**	**16.23**	**312**	Pn	**Pn**	**23 16 01.5**	**+0.3**
UCH	**Uchtor**	**16.58**	**308**	*e*Pn	**Pn**	**23 16 05.1**	**-0.6**
	2.3nm,1.0s						
AAK	**Ala-Archa**	**16.79**	**310**	LR	LR	23 22 42.7	
	comp=Z,21nm,19.7s,baz=31,slow=38						
AAK	**Ala-Archa**	**16.79**	**310**	Pn	**Pn**	**23 16 08.1**	**-0.1**
KURK	**Kurchatov**	**20.20**	**335**	P	**P**	**23 16 49.6**	**+1.7**
	0.7nm,0.5s,baz=143,slow=12,SNR=6.3						
KURK	**Kurchatov**	**20.20**	**335**	*e*P	**P**	**23 16 48.4**	**+0.5**
	0.9nm,0.6s						
TLY	**Talaya**	**20.43**	**21**	P	**P**	**23 16 51.8**	**+1.4**
BVAR	**Borovoye Array**	**25.27**	**329**	P	**P**	**23 17 39.5**	**+0.1**
	0.4nm,0.5s,mb3.2,baz=147,slow=12,SNR=3.0						
BRVK	**Borovoye**	**25.34**	**329**	P	**P**	**23 17 39.8**	**-0.2**
KIV	**Kislovodsk**	**39.57**	**301**	P	**P**	**23 19 43.5**	**-0.9**
BRTR	**Keskin Array B**	**46.75**	**296**	P	**P**	**23 20 42.0**	**-0.5**
	0.6nm,0.6s,mb3.7,baz=98,slow=8.9,SNR=3.7						
ASAR	**Alice Springs**	**69.12**	**139**	P	**P**	**23 23 18.9**	**-0.8**
	0.9nm,0.8s,mb3.8,baz=328,slow=6.1,SNR=5.4						

*IDC **11** 23:14:26.2±2.5, 9°.70S×116°.57E, h0km, mb3.0/1, mb1 3.7/3, mb1mx3.3/21, mbtmp3.5/3, ML3.6/1, Error ellipse: s-maj=55.6km s-min=39.8km az=85.0*
*ISCJB **11** 23:14:29.2±0.8, 8°.8S±0°.2×116°.11E±0°.08, h144km±8km, Error ellipse: s-maj=30.6km s-min=11.6km az=15.2*
*DJA **11** 23:14:32, 8°.60S×115°.98E, h126km, MLv3.7/7*
ISC 11 23:14:29.8±0.8, 8°.7S±0°.2×116°.13E±0°.08, h142km±9km, n14, σ0°75/18, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHKI	**Kahang-Kahang**	**0.64**	**305**	P	**Pn**	**23 14 50.6**	**-0.4**
KHKI				S	**Sn**	**23 15 06.3**	**-0.8**
DNP	**Denpasar**	**0.91**	**274**	P	**Pn**	**23 14 54.3**	**+1.2**
IGBI	**Denpasar**	**0.98**	**265**	P	**Pn**	**23 14 54.3**	**+0.7**
IGBI				S	**Sn**	**23 15 11.9**	**+0.2**
SRBI	**Singaraja**	**1.12**	**305**	P	**Pn**	**23 14 54.4**	**-0.5**
NBBI	**Negara**	**1.54**	**284**	P	**Pn**	**23 14 58.9**	**-0.3**
NBBI				S	**Sn**	**23 15 21.7**	**+0.1**
BYJI	**Banyuwangi**	**1.83**	**286**	P	**Pn**	**23 15 03.2**	**+0.7**
ABJI	**Asem Bagus**	**2.10**	**296**	P	**Pn**	**23 15 05.9**	**+0.3**
GMJI	**Gumukmas**	**2.70**	**280**	P	**Pn**	**23 15 12.4**	**-0.6**
GMJI				S	**Sn**	**23 15 45.1**	**-1.2**
KMMI	**Kalianget**	**2.72**	**308**	P	**Pn**	**23 15 14.1**	**+0.8**
PWJI	**Pagerwojo**	**4.34**	**279**	P	**Pn**	**23 15 35.9**	**+1.5**
PWJI				S	**Sn**	**23 16 23.9**	**-0.6**
KAPI	**Kappang**	**5.16**	**44**	Pn	**Pn**	**23 15 51.7**	**+6.5**
	1.8nm,0.3s,baz=230,slow=5.1,SNR=5.9						
WRA	**Warramunga Arr**	**20.84**	**124**	P	**P**	**23 18 59.6**	**-0.9**
	0.3nm,0.3s,baz=299,slow=12,SNR=15						
ASAR	**Alice Springs**	**22.58**	**133**	P	**P**	**23 19 18.5**	**0.0**
	0.3nm,0.5s,baz=312,slow=10,SNR=4.5						
LPAZ	**La Paz**	**154.78**	**170**	PKPbc	PKPab	23 34 28.9	-1.7
	0.9nm,0.7s,baz=224,slow=7.2,SNR=3.9						

*ISK **12** 00:13:34.7, 36°.99N×29°.20E, h5km, MD2.9*
*CSEM **12** 00:13:35.8±0.2, 37°.00N×29°.19E, h5km, MD2.9, Error ellipse: s-maj=4.5km s-min=3.1km az=10.0*
*ISCJB **12** 00:13:36.0±0.5, 36°.99N±0°.03×29°.18E±0°.04, h10km, Error ellipse: s-maj=4.9km s-min=4.1km az=168.3*
*DDA **12** 00:13:36.1, 36°.99N×29°.18E, h7km±6km, Md2.8*
ISC 12 00:13:36.2±0.5, 37°.00N±0°.04×29°.16E±0°.05, h3km±12km, n18, σ0°72/27, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.31**	**61**	*e*PG	**Pg**	**00 13 41.5**	**-0.8**
GLHS				*e*SG	**Sg**	**00 13 46.7**	**+0.3**
GLHS	**Glhisar (BURDU**	**0.31**	**61**	*e*Pg	**Pg**	**00 13 41.5**	**-0.8**
GLHS				*e*Sg	**Sg**	**00 13 46.7**	**+0.3**
FETY	**Fethiye**	**0.37**	**189**	*e*PG	**Pg**	**00 13 42.9**	**-0.4**
FETY				*e*SG	**Sg**	**00 13 49.0**	**+0.8**
FETY	**Fethiye**	**0.37**	**189**	*e*Pg	**Pg**	**00 13 42.9**	**-0.4**
FETY				*e*Sg	**Sg**	**00 13 49.0**	**+0.8**
GOLH	**Golhisar**	**0.40**	**54**	*i* P	**Pg**	**00 13 44.0**	**+0.1**
GOLH				*i* S	**Sg**	**00 13 50.5**	**+1.3**
ELL	**Elmali**	**0.65**	**113**	*e*PG	**Pg**	**00 13 47.7**	**-1.1**
ELL				*e*SG	**Sg**	**00 13 57.6**	**+0.3**
ELL	**Elmali**	**0.65**	**113**	*e*Pg	**Pg**	**00 13 47.7**	**-1.1**
ELL				*e*Sg	**Sg**	**00 13 57.6**	**+0.3**
DNZL	**Cakiroluk**	**0.69**	**353**	*i* P	**Pg**	**00 13 47.9**	**-1.6**
DNZL	**Cakiroluk**	**0.69**	**353**	*i* P	**Pg**	**00 13 47.9**	**-1.6**
YER	**Yerkesik**	**0.71**	**281**	*e*PG	**Pg**	**00 13 50.1**	**+0.2**
YER	**Yerkesik**	**0.71**	**281**	*e*Pg	**Pg**	**00 13 50.1**	**+0.2**
AKAS	**Kas**	**0.85**	**155**	*i* P	**Pg**	**00 13 52.0**	**-0.4**
MLSB	**Milas**	**1.14**	**285**	*e*PN	**Pg**	**00 13 58.4**	**+0.3**
MLSB	**Milas**	**1.14**	**285**	*e*Pn	**Pg**	**00 13 58.4**	**+0.3**
AYDN	**Tasoluk**	**1.21**	**303**	*i* P	**Pb**	**00 13 59.7**	**-0.1**
AYDN				*i* S	**Sb**	**00 14 16.4**	**+0.5**
AYDN	**Tasoluk**	**1.21**	**303**	*i* P	**Pb**	**00 13 59.7**	**-0.1**
AYDN				*i* S	**Sb**	**00 14 16.4**	**+0.6**
DAT	**Datca**	**1.29**	**258**	*e*PN	**Pn**	**00 14 01.1**	**0.0**
DAT	**Datca**	**1.29**	**258**	*e*Pn	**Pn**	**00 14 01.1**	**-0.1**

*PDG **12** 00:20:34.5±0.2, 34°.46N×25°.78E, h8km±2km, ML5.0/10, Error ellipse: s-maj=2.4km s-min=1.0km az=90.0*
*SZGRF **12** 00:20:39.6, 34°.76N×26°.85E, h33km, mb4.8, MS4.1, Crete, Greece*
*DDA **12** 00:20:39.2, 34°.85N×25°.88E, h20km, Ml5.4*
*ISK **12** 00:20:40.6, 34°.72N×25°.94E, h56km, ML5.3*
*MOS **12** 00:20:42.2±1.4, 34°.97N×26°.11E, h23km, mb5.3/98, MS4.3/45, Error ellipse: s-maj=3.6km s-min=1.9km az=110.1*
*IPEC **12** 00:20:42.6±0.1, 35°.11N×26°.30E, h0km, Error ellipse: s-maj=1.5km s-min=1.1km az=19.0*
*ISCJB **12** 00:20:43.2±0.1, 34°.956N±0°.010×26°.190E±0°.010, h30km, mb5.1/259, MS4.3/45, Error ellipse: s-maj=1.4km s-min=1.1km az=15.6*
*SGS **12** 00:20:43.9, 34°.79N×26°.12E, h12km*
*CSEM **12** 00:20:44.7±0.1, 34°.98N×26°.15E, h27km, mb5.2/99, Ms4.3, Mw5.0, Error ellipse: s-maj=2.3km s-min=1.7km az=15.0*
*NIC **12** 00:20:44.5±0.1, 34°.86N×26°.21E, h56km, mb5.2, ML4.9, MW4.3, Crete, Greece 26 km. S. Palaikastro*
*ATH **12** 00:20:45.6, 35°.11N×26°.19E, h29km, MD4.8/19, ML5.0*
*IDC **12** 00:20:45.5±0.4, 35°.20N×26°.16E, h28km±2km, mb4.7/31, mb1 4.8/39, mb1mx4.7/41, mbtmp4.7/39, ML4.8/5, MS4.4/26, Ms1 4.4/26, ms1mx4.3/37, Error ellipse: s-maj=9.5km s-min=6.3km az=165.0*
*NEIC **12** 00:20:45.6, 35°.11N×26°.19E, h29km, mb5.2/221, MS4.4/4, ML5.5(THE), ML5.0(ATH), ML5.3(ISK), After ATH.*
*THE **12** 00:20:46.6, 35°.19N×26°.08E, h0km, ML5.5/32, Error ellipse: s-maj=0.8km s-min=0.6km az=171.0*
*HLW **12** 00:20:46.5, 34°.98N×26°.41E, h31km±27km, Md4.4, Ml4.5*
*BJI **12** 00:20:47.1, 35°.17N×26°.32E, h52km, mB5.1/29, mb5.1/42, Ms4.8/36, Ms7 4.5/37*
*SFS **12** 00:20:47.0, 35°.10N×26°.00E, h47km, ML5.1*
*GII **12** 00:20:48.4±0.0, 34°.83N×26°.51E, h30km±1km, Mb4.7/7, Md4.7/7*
*GCMT **12** 00:20:49.1±0.3, 35°.28N×26°.36E, h41km±1km, MW5.1, Moment Tensor Solution. s50,c69; s70,c112; Moment tensor: Scale 10^{16}Nm; M_{rr}-2.94±.24; $M_{\theta\theta}$-1.16±.16; $M_{

GVD				*e*Sn	Sn	00 21 37.8	+4.2
NIS1	**Nisyros Isl.**	**1.83**	**27**	P	Pn	00 21 15.0	+0.3
NIS1				S	Sn	00 21 38.9	+2.2
NIS1	**Nisyros Isl.**	**1.83**	**27**	P	Pn	00 21 15.0	+0.3
NIS1				S	Sn	00 21 38.9	+2.2
KARN	**Karanos**	**1.88**	**284**	P	Pn	00 21 17.1	+1.7
KARN				S	Sn	00 21 41.3	+3.3
KARN	**Karanos**	**1.88**	**284**	*e*PB	Pb	00 21 18.7	-0.5
KARN				*e*SN	Sn	00 21 41.6	+3.6
KARN	**Karanos**	**1.88**	**284**	P	Pn	00 21 17.1	+1.7
KARN				S	Sn	00 21 41.3	+3.3
KARN				*e*Sn	Sn	00 21 41.6	+3.6
ARG	**Arkhangelos**	**2.03**	**52**	P	Pn	00 21 19.1	+1.7
ARG				S	Sn	00 21 46.4	+4.7
ARG	**Arkhangelos**	**2.03**	**52**	P	Pn	00 21 19.2	+1.7
ARG				S	Sn	00 21 46.4	+4.7
ARG	**Arkhangelos**	**2.03**	**52**	⇑*i*PB	Pb	00 21 19.2	-2.5
ARG				*e*SN	Sn	00 21 43.7	+2.0
ARG	**Arkhangelos**	**2.03**	**52**	P	Pn	00 21 19.1	+1.7
ARG				*e*Sn	Sn	00 21 43.7	+2.0
ARG				S	Sn	00 21 46.4	+4.7
DAT	**Datca**	**2.10**	**33**	*e*PN	Pn	00 21 19.0	+0.5
DAT				*e*SN	Sn	00 21 46.8	+3.4
DAT	**Datca**	**2.10**	**33**	*e*Pn	Pn	00 21 19.0	+0.6
DAT				*e*Sn	Sn	00 21 46.8	+3.3
APE	**Apeiranthos**	**2.15**	**347**	P	Pn	00 21 19.0	-0.1
APE				S	Sn	00 21 44.7	-0.1
APE	**Apeiranthos**	**2.15**	**347**	P	Pn	00 21 19.0	-0.1
APE				S	Sn	00 21 44.7	-0.1
APE	**Apeiranthos**	**2.15**	**347**	‖*i*P	Sn	00 21 46.8	+2.0
APE	**Apeiranthos**	**2.15**	**347**	‖*i*PN	Pn	00 21 19.2	+0.1
APE				*e*SN	Sn	00 21 45.9	+1.1
APE	**Apeiranthos**	**2.15**	**347**	‖*i*Pn	Pn	00 21 19.2	+0.1
APE				S	Sn	00 21 44.7	-0.1
APE				*e*Sg	Sn	00 21 45.5	+0.7
	baz=162						
APE				*e*Sn	Sn	00 21 45.9	+1.1
BDRM	**Kayabasi**	**2.34**	**26**	*i* P	Pn	00 21 21.2	-0.5
BDRM				*i* S	Sn	00 21 48.4	-0.9
BDRM	**Kayabasi**	**2.34**	**26**	*i* P	Pn	00 21 21.2	-0.5
BDRM				*i* S	Sn	00 21 48.4	-0.9
MLSB	**Milas**	**2.67**	**29**	*e*PN	Pn	00 21 27.2	+1.1
MLSB	**Milas**	**2.67**	**29**	*e*Pn	Pn	00 21 27.2	+1.0
TURN	**Turunc**	**2.75**	**46**	*i* P	Pn	00 21 24.3	-3.0
TURN				*i* S	Sn	00 21 52.6	-6.8
TURN	**Turunc**	**2.75**	**46**	*i* P	Pn	00 21 24.3	-3.0
TURN				*i* S	Sn	00 21 52.6	-6.8
YER	**Yerkesik**	**2.76**	**38**	*e*PN	Pn	00 21 29.2	+1.6
YER	**Yerkesik**	**2.76**	**38**	*e*Pn	Pn	00 21 29.2	+1.7
SMG	**Samos**	**2.79**	**11**	*e*Pn	Pn	00 21 28.1	+0.2
SMG	**Samos**	**2.79**	**11**	*e*PN	Pn	00 21 28.1	+0.2
SMG	**Samos**	**2.79**	**11**	*e*Pn	Pn	00 21 28.1	+0.2
KYTH	**Kithira**	**2.86**	**298**	*e*Pn	Pn	00 21 30.6	+1.8
KYTH	**Kithira**	**2.86**	**298**	*e*PN	Pn	00 21 30.6	+1.8
KYTH	**Kithira**	**2.86**	**298**	*e*Pn	Pn	00 21 30.6	+1.8
GCAM	**G?zelcaml?**	**2.86**	**17**	*i* P	Pn	00 21 29.2	+0.3
GCAM				*i* S	Sn	00 21 59.7	-2.5
GCAM	**G?zelcaml?**	**2.86**	**17**	*i* P	Pn	00 21 29.2	+0.4
GCAM				*i* S	Sn	00 21 59.7	-2.5
FETY	**Fethiye**	**2.90**	**54**	*e*PN	Pn	00 21 30.3	+0.9
FETY	**Fethiye**	**2.90**	**54**	*e*Pn	Pn	00 21 30.3	+0.9
AYDN	**Tasoluk**	**3.02**	**27**	*i* P	Pn	00 21 32.4	+1.3
AYDN				*i* S	Sn	00 22 06.0	-0.2
AYDN	**Tasoluk**	**3.02**	**27**	*i* P	Pn	00 21 32.4	+1.3
AYDN				*i* S	Sn	00 22 06.0	-0.2
KSL	**Kastellorizon**	**3.03**	**66**	⇑*i*Pn	Pn	00 21 32.1	+0.9
KSL	**Kastellorizon**	**3.03**	**66**	⇑*i*PN	Pn	00 21 32.1	+0.9
AKAS	**Kas**	**3.08**	**65**	*i* P	Pn	00 21 32.4	+0.6
AKAS				*i* S	Sx	00 22 30.5	
AKAS	**Kas**	**3.08**	**65**	*i* P	Pn	00 21 32.4	+0.5
VLI	**Veliai**	**3.14**	**305**	‖*i*Pn	Pn	00 21 34.2	+1.5
VLI	**Veliai**	**3.14**	**305**	‖*i*PN	Pn	00 21 34.2	+1.5
VLI	**Veliai**	**3.14**	**305**	‖*i*Pn	Pn	00 21 34.2	+1.5
CHOS	**Chios island**	**3.41**	**359**	P	Pn	00 21 36.3	-0.1
CHOS				S	Sn	00 22 16.7	+1.0
CHOS	**Chios island**	**3.41**	**359**	*e*PN	Pn	00 21 36.8	+0.4
CHOS	**Chios island**	**3.41**	**359**	P	Pn	00 21 36.3	-0.1
CHOS	**Chios island**	**3.41**	**359**	*e*Pn	Pn	00 21 36.8	+0.4
CHOS				S	Sn	00 22 16.7	+1.0
VLY	**Voula,Athens**	**3.45**	**327**	*e*Pn	Pn	00 21 38.2	+1.3
VLY	**Voula,Athens**	**3.45**	**327**	*e*PN	Pn	00 21 38.2	+1.3
VLY	**Voula,Athens**	**3.45**	**327**	*e*Pn	Pn	00 21 38.2	+1.3
LTBQ	**Tobruq**	**3.45**	**213**	*i* P	Pn	00 21 40.7	+3.7
	SNR=23						
LTBQ				*e*S	Sn	00 22 21.1	+4.3
	279nm,0.7s,SNR=23						
GLHS	**Glhisar (BURDU**	**3.48**	**50**	*e*PN	Pn	00 21 38.9	+1.6
GLHS	**Glhisar (BURDU**	**3.48**	**50**	*e*Pn	Pn	00 21 38.9	+1.6
BLCB	**Balcova**	**3.48**	**12**	*e*PN	Pn	00 21 38.2	+0.8
BLCB	**Balcova**	**3.48**	**12**	P	Pn	00 21 37.8	+0.4
BLCB				S	Sn	00 22 18.4	+0.9
BLCB	**Balcova**	**3.48**	**12**	P	Pn	00 21 37.8	+0.4
BLCB				S	Sn	00 22 18.4	+0.9
BLCB	**Balcova**	**3.48**	**12**	P	Pn	00 21 37.8	+0.4
BLCB	**Balcova**	**3.48**	**12**	*e*Pn	Pn	00 21 38.2	+0.8
BLCB				S	Sn	00 22 18.4	+0.9
NAIG	**Nisos Aigina**	**3.52**	**323**	*e*Pn	Pn	00 21 39.7	+1.8
NAIG	**Nisos Aigina**	**3.52**	**323**	*e*PN	Pn	00 21 39.7	+1.8
NAIG	**Nisos Aigina**	**3.52**	**323**	*e*Pn	Pn	00 21 39.7	+1.8
ELL	**Elmali**	**3.53**	**59**	*e*PN	Pn	00 21 39.7	+1.7
ELL	**Elmali**	**3.53**	**59**	*e*Pn	Pn	00 21 39.7	+1.7
IZM	**Izmir**	**3.54**	**14**	*e*PN	Pn	00 21 39.9	+1.8
IZM	**Izmir**	**3.54**	**14**	Pn	Pn	00 21 39.9	+1.8
KDAG	**Bornova**	**3.54**	**14**	*i* P	Pn	00 21 39.2	+1.0
KDAG				*i* S	Sn	00 22 22.4	+3.5
KDAG	**Bornova**	**3.54**	**14**	*i* P	Pn	00 21 39.2	+1.0
KDAG				*i* S	Sn	00 22 22.4	+3.5
ATHU	**Athens Univers**	**3.55**	**328**	P	Pn	00 21 39.5	+1.2
ATHU				S	Sn	00 22 20.5	+1.4
ATHU	**Athens Univers**	**3.55**	**328**	P	Pn	00 21 39.5	+1.2
ATHU				S	Sn	00 22 20.5	+1.4
SLUM		**3.56**	**193**	P	Pn	00 21 40.2	+1.8
	baz=197						
SLUM				AMP		00 22 00.0	
	comp=E,1210µm,0.6s,logA/T=6.3,baz=197						
SLUM				S	Sn	00 22 21.1	+1.7
	baz=197						
SLUM		**3.56**	**193**	P	Pn	00 21 40.2	+1.7
SLUM				S	Sn	00 22 21.1	+1.7
GOLH	**Golhisar**	**3.57**	**50**	*i* P	Pn	00 21 39.9	+1.3
GOLH				*i* S	Sn	00 22 29.1	+10
GOLH	**Golhisar**	**3.57**	**50**	*i* P	Pn	00 21 39.9	+1.3
DNZL	**Cakiroluk**	**3.58**	**40**	*i* P	Pn	00 21 39.0	+0.3
DNZL				*i* S	Sn	00 22 23.8	+3.9
DNZL	**Cakiroluk**	**3.58**	**40**	*i* P	Pn	00 21 39.0	+0.3
DNZL				*i* S	Sn	00 22 23.8	+3.9
ATH	**Athens Observa**	**3.58**	**327**	P	Pn	00 21 39.5	+0.7
ATH				S	Sn	00 22 20.5	+0.5
ATH	**Athens Observa**	**3.58**	**327**	‖*i*PN	Pn	00 21 40.3	+1.5
ATH	**Athens Observa**	**3.58**	**327**	‖*i*Pn	Pn	00 21 40.3	+1.5
PTL	**Penteli**	**3.58**	**330**	‖*i*Pn	Pn	00 21 40.3	+1.5
PTL	**Penteli**	**3.58**	**330**	‖*i*PN	Pn	00 21 40.3	+1.5
PTL	**Penteli**	**3.58**	**330**	‖*i*Pn	Pn	00 21 40.3	+1.5
DENT	**Denizli**	**3.62**	**39**	*e*PN	Pn	00 21 40.6	+1.3
DENT	**Denizli**	**3.62**	**39**	*e*Pn	Pn	00 21 40.6	+1.3
VLX	**Vlachokerasia**	**3.88**	**309**	P	Pn	00 21 44.7	+1.8
VLX				S	Sn	00 22 29.3	+1.9
VLX	**Vlachokerasia**	**3.88**	**309**	‖*i*PN	Pn	00 21 44.8	+1.9
VLX	**Vlachokerasia**	**3.88**	**309**	P	Pn	00 21 44.7	+1.8
VLX				S	Sn	00 22 29.3	+1.9
HMAT	**Matruh**	**3.94**	**168**	P	Pn	00 21 44.8	+1.0
	baz=171						
HMAT				S	Sn	00 22 28.6	-0.4
	baz=171						
HMAT	**Matruh**	**3.94**	**168**	P	Pn	00 21 44.8	+1.0
HMAT				S	Sn	00 22 28.6	-0.4
LTK	**Loutraki**	**3.98**	**321**	P	Pn	00 21 46.1	+1.8
LTK	**Loutraki**	**3.98**	**321**	‖*i*PN	Pn	00 21 46.4	+2.1
LTK	**Loutraki**	**3.98**	**321**	P	Pn	00 21 46.1	+1.8
LTK	**Loutraki**	**3.98**	**321**	‖*i*Pn	Pn	00 21 46.4	+2.1
PYL	**PYLOS**	**4.06**	**299**	P	Pn	00 21 46.3	+0.9
PYL	**PYLOS**	**4.06**	**299**	‖*i*PN	Pn	00 21 46.7	+1.3
PYL	**PYLOS**	**4.06**	**299**	P	Pn	00 21 46.3	+0.9
PYL	**PYLOS**	**4.06**	**299**	‖*i*Pn	Pn	00 21 46.7	+1.3
KULA	**Kula-Manisa**	**4.07**	**29**	*e*PN	Pn	00 21 47.0	+1.6
KULA	**Kula-Manisa**	**4.07**	**29**	*e*Pn	Pn	00 21 47.0	+1.5
ITM	**Ithomi**	**4.07**	**304**	P	Pn	00 21 47.5	+2.0
ITM	**Ithomi**	**4.07**	**304**	P	Pn	00 21 47.5	+2.0
ITM	**Ithomi**	**4.07**	**304**	‖*i*PN	Pn	00 21 47.8	+2.3
ITM	**Ithomi**	**4.07**	**304**	P	Pn	00 21 47.5	+2.0
AKHS	**Akhisar**	**4.12**	**18**	*i* P	Pn	00 21 47.4	+1.3
AKHS				*i* S	Sn	00 22 37.2	+3.9
AKHS	**Akhisar**	**4.12**	**18**	*i* P	Pn	00 21 47.4	+1.2
AKHS				*i* S	Sn	00 22 37.2	+3.9
AKS	**Akhisar**	**4.12**	**18**	*e*PN	Pn	00 21 47.6	+1.4
AKS	**Akhisar**	**4.12**	**18**	Pn	Pn	00 21 48.2	+2.0
AKS	**Akhisar**	**4.12**	**18**	*e*Pn	Pn	00 21 47.6	+1.4
ANTB	**Antalya**	**4.13**	**61**	*e*PN	Pn	00 21 48.2	+2.0
ANTB	**Antalya**	**4.13**	**61**	*e*Pn	Pn	00 21 48.2	+1.9
SIGR	**SIGRI**	**4.24**	**357**	P	Pn	00 21 48.0	+0.2
SIGR				S	Sn	00 22 36.3	+0.1
SIGR	**SIGRI**	**4.24**	**357**	P	Pn	00 21 48.0	+0.2
SIGR				S	Sn	00 22 36.3	+0.1
SIGR	**SIGRI**	**4.24**	**357**	P	Pn	00 21 48.0	+0.2
SIGR				S	Sn	00 22 36.3	+0.1
GUR	**Goura**	**4.27**	**315**	P	Pn	00 21 49.4	+1.2
GUR	**Goura**	**4.27**	**315**	*e*PN	Pn	00 21 49.9	+1.7
GUR	**Goura**	**4.27**	**315**	P	Pn	00 21 49.4	+1.2
GUR	**Goura**	**4.27**	**315**	*e*Pn	Pn	00 21 49.9	+1.7
PRK	**Paraskevi**	**4.27**	**1**	P	Pn	00 21 48.2	0.0
PRK	**Paraskevi**	**4.27**	**1**	P	Pn	00 21 48.2	0.0
PRK	**Paraskevi**	**4.27**	**1**	‖*i*PN	Pn	00 21 48.7	+0.5
PRK	**Paraskevi**	**4.27**	**1**	P	Pn	00 21 48.2	0.0
PRK	**Paraskevi**	**4.27**	**1**	‖*i*Pn	Pn	00 21 48.7	+0.5
KHL	**Karahalli**	**4.30**	**38**	*e*PN	Pn	00 21 49.7	+1.0
KHL	**Karahalli**	**4.30**	**38**	*e*Pn	Pn	00 21 49.7	+1.0
KHAL	**Karahalli**	**4.33**	**37**	*i* P	Pn	00 21 49.4	+0.4
KHAL				*i* S	Sn	00 22 37.4	-0.9
KHAL	**Karahalli**	**4.33**	**37**	*i* P	Pn	00 21 49.4	+0.4
KHAL				*i* S	Sn	00 22 37.4	-0.9
BCK	**Bucak**	**4.36**	**54**	*e*PN	Pn	00 21 51.0	+1.5
BCK	**Bucak**	**4.36**	**54**	*e*Pn	Pn	00 21 51.0	+1.5
LKR	**Lokris**	**4.46**	**326**	P	Pn	00 21 52.6	+1.8
LKR	**Lokris**	**4.46**	**326**	P	Pn	00 21 52.6	+1.8
LKR	**Lokris**	**4.46**	**326**	*e*PN	Pn	00 21 52.7	+1.9
LKR	**Lokris**	**4.46**	**326**	P	Pn	00 21 52.6	+1.8
ATAL	**Atalanti**	**4.49**	**327**	P	Pn	00 21 52.8	+1.6
ATAL	**Atalanti**	**4.49**	**327**	P	Pn	00 21 52.8	+1.6
DSF	**Desfina**	**4.50**	**321**	P	Pn	00 21 52.9	+1.5
DSF	**Desfina**	**4.50**	**321**	P	Pn	00 21 52.9	+1.5
ISP	**Isparta**	**4.53**	**50**	*e*PN	Pn	00 21 53.4	+1.6
ISP	**Isparta**	**4.53**	**50**	P	Pn	00 21 51.5	-0.3
ISP	**Isparta**	**4.53**	**50**	P	Pn	00 21 51.5	-0.3
ISP	**Isparta**	**4.53**	**50**	P	Pn	00 21 51.5	-0.3
ISP	**Isparta**	**4.53**	**50**	*e*Pn	Pn	00 21 53.4	+1.6
ISP	**Isparta**	**4.53**	**50**	Pn	Pn	00 21 52.4	+0.6
DEMI	**Demirci**	**4.55**	**26**	*i* P	Pn	00 21 53.0	+0.9
DEMI				*i* S	Sn	00 22 45.7	+1.8
DEMI	**Demirci**	**4.55**	**26**	*i* P	Pn	00 21 53.0	+0.9
DEMI				*i* S	Sn	00 22 45.7	+1.8
AOS	**Alonnisos**	**4.57**	**337**	P	Pn	00 21 53.3	+1.0
AOS	**Alonnisos**	**4.57**	**337**	P	Pn	00 21 53.3	+1.0
AOS	**Alonnisos**	**4.57**	**337**	P	Pn	00 21 53.3	+1.0
SUTC	**Sutluce-Ispart**	**4.65**	**56**	*e*PN	Pn	00 21 55.6	+2.2
SUTC	**Sutluce-Ispart**	**4.65**	**56**	*e*Pn	Pn	00 21 55.6	+2.2
LAKA	**Lakka**	**4.68**	**315**	P	Pn	00 21 54.8	+0.9
LAKA	**Lakka**	**4.68**	**315**	P	Pn	00 21 54.8	+0.9
KALE	**Kalithea**	**4.70**	**318**	P	Pn	00 21 55.3	+1.2
KALE	**Kalithea**	**4.70**	**318**	P	Pn	00 21 55.3	+1.2
TRIZ	**Trizonia**	**4.72**	**317**	P	Pn	00 21 55.5	+1.1
TRIZ	**Trizonia**	**4.72**	**317**	P	Pn	00 21 55.5	+1.1
UPR	**University Cam**	**4.82**	**315**	P	Pn	00 21 57.6	+1.8
UPR	**University Cam**	**4.82**	**315**	*e*PN	Pn	00 21 58.5	+2.7
UPR	**University Cam**	**4.82**	**315**	P	Pn	00 21 57.6	+1.8
UPR	**University Cam**	**4.82**	**315**	*e*Pn	Pn	00 21 58.5	+2.7
EZN	**Ezine**	**4.85**	**2**	*e*PN	Pn	00 21 56.5	+0.3
EZN	**Ezine**	**4.85**	**2**	*e*Pn	Pn	00 21 56.5	+0.3
EFP	**Efpalio**	**4.85**	**317**	P	Pn	00 21 57.3	+1.3
EFP	**Efpalio**	**4.85**	**317**	*e*PN	Pn	00 21 58.3	+2.1
EFP	**Efpalio**	**4.85**	**317**	P	Pn	00 21 57.5	+1.3
EFP	**Efpalio**	**4.85**	**317**	*e*Pn	Pn	00 21 58.3	+2.1
BALB	**Balikesir**	**4.86**	**16**	*e*PN	Pn	00 21 58.2	+1.9
BALB	**Balikesir**	**4.86**	**16**	*e*Pn	Pn	00 21 58.2	+1.9
RLS	**Riolos of Patr**	**4.87**	**311**	*e*Pn	Pn	00 21 59.4	+2.9
RLS	**Riolos of Patr**	**4.87**	**311**	*e*PN	Pn	00 21 59.4	+2.9
RLS	**Riolos of Patr**	**4.87**	**311**	*e*Pn	Pn	00 21 59.4	+2.9
BALY	**Balya**	**4.90**	**13**	*i* P	Pn	00 21 58.0	+1.1
BALY				*i* S	Sn	00 22 51.5	-1.0
BALY	**Balya**	**4.90**	**13**	*i* P	Pn	00 21 58.0	+1.1
BALY				*i* S	Sn	00 22 51.5	-1.0
NEO	**Neokhori**	**4.92**	**332**	*e*Pn	Pn	00 21 58.8	+1.6
NEO	**Neokhori**	**4.92**	**332**	*e*PN	Pn	00 21 58.8	+1.6
NEO	**Neokhori**	**4.92**	**332**	*e*Pn	Pn	00 21 58.8	+1.6
LIA	**Limnos Island**	**4.98**	**351**	P	Pn	00 21 58.2	+0.2
LIA	**Limnos Island**	**4.98**	**351**	P	Pn	00 21 58.2	+0.2
LIA	**Limnos Island**	**4.98**	**351**	‖*i*PN	Pn	00 21 58.4	+0.4
LIA	**Limnos Island**	**4.98**	**351**	‖*i*Pn	Pn	00 21 58.4	+0.4
XOR	**Xorichti**	**4.99**	**333**	P	Pn	00 21 59.5	+1.5
XOR	**Xorichti**	**4.99**	**333**	P	Pn	00 21 59.5	+1.5
XOR	**Xorichti**	**4.99**	**333**	P	Pn	00 21 59.5	+1.5
SHUT	**Suhut-Afyon**	**5.02**	**43**	*e*PN	Pn	00 21 59.2	+0.6
SHUT	**Suhut-Afyon**	**5.02**	**43**	*e*Pn	Pn	00 21 59.2	+0.6
AGG	**Agios Georgios**	**5.07**	**324**	P	Pn	00 22 01.2	+2.0
AGG				S	Sn	00 22 56.0	-0.7
AGG	**Agios Georgios**	**5.07**	**324**	P	Pn	00 22 01.2	+2.0
AGG				S	Sn	00 22 56.0	-0.7
AGG	**Agios Georgios**	**5.07**	**324**	*e*PN	Pn	00 22 01.8	+2.6
AGG	**Agios Georgios**	**5.07**	**324**	P	Pn	00 22 01.2	+2.0
AGG	**Agios Georgios**	**5.07**	**324**	*e*Pn	Pn	00 22 01.8	+2.6
AGG				S	Sn	00 22 56.0	-0.7
PPCY	**Paphos**	**5.09**	**89**	P	Pn	00 21 58.6	-0.8
PPCY	**Paphos**	**5.09**	**89**	P	Pn	00 21 58.6	-0.8
ALT	**Altintas**	**5.16**	**37**	*e*PN	Pn	00 22 01.4	+0.9
ALT	**Altintas**	**5.16**	**37**	*e*Pn	Pn	00 22 01.4	+0.9
GAZI	**Gazipasa**	**5.18**	**74**	*i* P	Pn	00 21 58.7	-2.0
GAZI				*i* S	Sn	00 22 48.7	-11
GAZI	**Gazipasa**	**5.18**	**74**	*i* P	Pn	00 21 58.7	-2.0
GADA	**Gvkgeada**	**5.22**	**358**	*e*PN	Pn	00 22 01.6	+0.4
GADA	**Gvkgeada**	**5.22**	**358**	*e*Pn	Pn	00 22 01.6	+0.4
EVR	**Evrytania**	**5.26**	**320**	*e*Pn	Pn	00 22 04.4	+2.6
EVR	**Evrytania**	**5.26**	**320**	*e*PN	Pn	00 22 04.4	+2.6
EVR	**Evrytania**	**5.26**	**320**	*e*Pn	Pn	00 22 04.4	+2.6
ALFC	**Alevga**	**5.29**	**86**	P	Pn	00 22 01.7	-0.5
	comp=E,54nm,0.2s						
ALFC				S	Sn	00 23 02.1	0.0
ALFC	**Alevga**	**5.29**	**86**	P	Pn	00 22 01.7	-0.5
	comp=E,54nm,0.2s						
ALFC				S	Sn	00 23 02.1	0.0
PAIG	**Paliouri**	**5.33**	**339**	P	Pn	00 22 03.8	+1.1
PAIG	**Paliouri**	**5.33**	**339**	P	Pn	00 22 03.8	+1.1
PAIG	**Paliouri**	**5.33**	**339**	P	Pn	00 22 03.8	+1.1
KFL	**Anninata**	**5.34**	**308**	P	Pn	00 22 02.6	-0.3
BOLV	**Bolvadin**	**5.36**	**44**	*i* P	Pn	00 22 03.7	+0.5
BOLV				*i* S	Sn	00 23 05.4	+1.5
BOLV	**Bolvadin**	**5.36**	**44**	*i* P	Pn	00 22 03.7	+0.4
BOLV				*i* S	Sn	00 23 05.4	+1.5
LPK	**Lapseki**	**5.42**	**5**	*e*PN	Pn	00 22 04.9	+1.0
LPK	**Lapseki**	**5.42**	**5**	*e*Pn	Pn	00 22 04.9	+1.0
VLS	**Valsamata**	**5.50**	**307**	P	Pn	00 22 05.0	-0.2
VLS	**Valsamata**	**5.50**	**307**	P	Pn	00 22 05.0	-0.2
VLS	**Valsamata**	**5.50**	**307**	*e*PN	Pn	00 22 06.7	+1.5
VLS	**Valsamata**	**5.50**	**307**	P	Pn	00 22 05.0	-0.2
VLS	**Valsamata**	**5.50**	**307**	*e*Pn	Pn	00 22 06.7	+1.5
HDMB	**Hadim**	**5.51**	**67**	*e*PN	Pn	00 22 05.8	+0.6
HDMB	**Hadim**	**5.51**	**67**	*e*Pn	Pn	00 22 05.8	+0.6
EDC	**Edincik**	**5.54**	**14**	*e*PN	Pn	00 22 06.6	+1.0
EDC	**Edincik**	**5.54**	**14**	*e*Pn	Pn	00 22 06.6	+1.0
BNT	**Bandirma**	**5.56**	**14**	*e*PN	Pn	00 22 06.9	+1.0
OUR	**Ouranopolis**	**5.62**	**343**	P	Pn	00 22 07.4	+0.6
OUR	**Ouranopolis**	**5.62**	**343**	P	Pn	00 22 07.4	+0.6
OUR	**Ouranopolis**	**5.62**	**343**	P	Pn	00 22 07.4	+0.6
THL	**Klokotos Trika**	**5.65**	**325**	P	Pn	00 22 08.1	+0.9
THL	**Klokotos Trika**	**5.65**	**325**	*e*PN	Pn	00 22 10.3	+3.1
THL	**Klokotos Trika**	**5.65**	**325**	P	Pn	00 22 08.1	+0.9
THL	**Klokotos Trika**	**5.65**	**325**	*e*Pn	Pn	00 22 10.3	+3.1
SWA2		**5.74**	**186**	P	Pn	00 22 10.3	+1.8
	baz=189						
SWA2				S	Sn	00 23 13.7	+0.5
	baz=189						
SWA2		**5.74**	**186**	P	Pn	00 22 10.3	+1.8
SWA2				S	Sn	00 23 13.7	+0.5
ENEZ	**Enez**	**5.76**	**360**	*e*PN	Pn	00 22 09.4	+0.7
ENEZ	**Enez**	**5.76**	**360**	*e*Pn	Pn	00 22 09.4	+0.8
RKY	**Sarkoy-Tekirda**	**5.76**	**8**	*e*PN	Pn	00 22 09.8	+1.0
RKY	**Sarkoy-Tekirda**	**5.76**	**8**	*e*Pn	Pn	00 22 09.8	+1.1
MAMC	**Mammari**	**5.80**	**86**	P	Pn	00 22 08.7	-0.5
MAMC	**Mammari**	**5.80**	**86**	P	Pn	00 22 08.7	-0.5
PLG	**Polygyros**	**5.81**	**339**	P	Pn	00 22 10.3	+1.0
PLG	**Polygyros**	**5.81**	**339**	P	Pn	00 22 10.3	+1.0
PLG	**Polygyros**	**5.81**	**339**	*e*PN	Pn	00 22 11.1	+1.8
PLG	**Polygyros**	**5.81**	**339**	P	Pn	00 22 10.3	+1.0
PLG	**Polygyros**	**5.81**	**339**	*e*Pn	Pn	00 22 11.1	+1.8
KONT	**Konya--Tatoy**	**5.82**	**58**	*e*PN	Pn	00 22 10.3	+0.9
KONT	**Konya--Tatoy**	**5.82**	**58**	*e*Pn	Pn	00 22 10.4	+0.9
LKD2	**Lefkada island**	**5.83**	**312**	P	Pn	00 22 10.0	+0.4
LKD2	**Lefkada island**	**5.83**	**312**	P	Pn	00 22 10.0	+0.4
MFT	**Murefte**	**5.88**	**8**	*e*PN	Pn	00 22 11.2	+0.9
MFT	**Murefte**	**5.88**	**8**	*e*Pn	Pn	00 22 11.2	+0.9
ESKT	**Eskisehir**	**5.89**	**38**	*e*PN	Pn	00 22 11.1	+0.6
ESKT	**Eskisehir**	**5.89**	**38**	Pn	Pn	00 22 11.2	+0.8
ESKT	**Eskisehir**	**5.89**	**38**	*e*Pn	Pn	00 22 11.1	+0.7
LIT	**Litokhoron**	**5.89**	**331**	P	Pn	00 22 12.4	+1.9
LIT	**Litokhoron**	**5.89**	**331**	P	Pn	00 22 12.4	+1.9
LIT	**Litokhoron**	**5.89**	**331**	*e*PN	Pn	00 22 12.5	+2.0
LIT	**Litokhoron**	**5.89**	**331**	P	Pn	00 22 12.4	+1.9
CSS	**Prodhromos**	**5.89**	**88**	P	Pn	00 22 10.3	-0.2
	comp=E,12nm,0.4s						
CSS				S	Sn	00 23 17.3	+0.4
CSS	**Prodhromos**	**5.89**	**88**	P	Pn	00 22 10.3	-0.2
	comp=E,12nm,0.4s						
CSS				S	Sn	00 23 17.3	+0.4
ALN	**Alexandroupoli**	**5.92**	**359**	P	Pn	00 22 11.0	+0.2
ALN	**Alexandroupoli**	**5.92**	**359**	P	Pn	00 22 11.0	+0.2
LADK	**Ladik-KONYA**	**5.95**	**55**	*e*PN	Pn	00 22 12.1	+0.8
LADK	**Ladik-KONYA**

GLL	Jalalah	7.14	137	P	Pn	00 22 27.6	-0.1
LOD	Lodumlu	7.19	45	*e*PN	Pn	00 22 29.0	+0.6
LOD	Lodumlu	7.19	45	*e*Pn	Pn	00 22 29.0	+0.6
PLD	Plovdiv	7.21	351	P	Pn	00 22 30.2	+1.6
PLD	Plovdiv	7.21	351	P	Pn	00 22 30.2	+1.6
PLD	Plovdiv	7.21	351	P	Pn	00 22 30.2	+1.6
OHR	Ohrid	7.45	327	P	Pn	00 22 31.7	-0.1
OHR	Ohrid	7.45	327	*e*Pn	Pn	00 22 33.1	+1.3
OHR	Ohrid	7.45	327	P	Pn	00 22 31.7	-0.1
OHR	Ohrid	7.45	327	P	Pn	00 22 31.7	-0.1
KRUS	Krusevo	7.46	330	*e*Pn	Pn	00 22 33.8	+1.7
JMB	Yambol	7.49	2	P	Pn	00 22 33.4	+0.9
JMB	Yambol	7.49	2	P	Pn	00 22 33.4	+0.9
KARA	Karaisali	7.56	70	*e*PN	Pn	00 22 33.8	+0.4
KARA	Karaisali	7.56	70	*e*Pn	Pn	00 22 33.8	+0.4
KDZE	Karadeniz Ereo	7.58	32	*e*PN	Pn	00 22 33.9	+0.2
KDZE	Karadeniz Ereo	7.58	32	*e*Pn	Pn	00 22 33.9	+0.3
SUZ		7.62	130	P	Pn	00 22 34.0	-0.2
	baz=131						
SUZ		7.62	130	P	Pn	00 22 34.0	-0.2
BR131	Keskin Array S	7.62	49	*e*Pn	Pn	00 22 34.6	+0.4
BR131				*e*Sn	Sn	00 24 03.8	+4.4
BR131	Keskin Array S	7.62	49	*e*Pn	Pn	00 22 34.6	+0.4
BRTR	Keskin Array B	7.62	49		Pn	00 22 34.4	+0.2
	comp=E,2.6nm,0.3s,baz=229,slow=11,SNR=83						
BRTR				Sn	Sn	00 23 56.8	-2.6
	comp=E,0.5nm,0.3s,baz=230,slow=22,SNR=2.5						
BRTR	Keskin Array B	7.62	49	*ce*P	Pn	00 22 34.4	+0.2
BRTR				pmax	pmax		
	comp=Z,43nm,0.7s						
BRTR	Keskin Array B	7.62	49	*e*P	Pn	00 22 34.4	+0.2
	comp=Z,43nm,0.7s						
BRTR				Sn	Sn	00 23 56.8	-2.6
KRTS	Karatas	7.66	75	*e*PN	Pn	00 22 34.7	-0.2
KRTS	Karatas	7.66	75	*e*Pn	Pn	00 22 34.7	-0.1
OFRI	'Ofer	7.71	105	Pn	Pn	00 22 34.2	-1.3
OFRI	'Ofer	7.71	105	Pn	Pn	00 22 34.2	-1.3
OFRI	'Ofer	7.71	105	Pn	Pn	00 22 34.2	-1.3
HNTI	Hanita	7.72	102	Sn	Sn	00 23 58.4	-3.6
BLGI	Bet Lehem HaGe	7.84	104	Pn	Pn	00 22 35.9	-1.4
ZAF		7.84	135	P	Pn	00 22 37.4	0.0
	baz=135						
ZAF		7.84	135	P	Pn	00 22 37.4	+0.1
SLTI	Sal'it	7.90	108	Pn	Pn	00 22 36.4	-1.6
SLTI				S	Sn	00 24 01.7	-4.6
SLTI	Sal'it	7.90	108	Pn	Pn	00 22 36.4	-1.6
SLTI	Sal'it	7.90	108	Pn	Pn	00 22 36.4	-1.6
SLTI				Sn	Sn	00 24 01.7	-4.6
SKO	Skopje	7.91	334	P	Pn	00 22 38.8	+0.7
SKO				P		00 22 42.5	
SKO	Skopje	7.91	334	*e*Pn	Pn	00 22 42.6	+4.5
SKO	Skopje	7.91	334	P	Pn	00 22 38.8	+0.7
SKO	Skopje	7.91	334	P	Pn	00 22 38.8	+0.7
BHL	Bhannes	7.92	95	*e*Pn	Pn	00 22 36.9	-1.4
BHL	Bhannes	7.92	95	*e*Pn	Pn	00 22 36.9	-1.4
MMAI	Mount Meron Ar	7.92	102	Pn	Pn	00 22 37.0	-1.5
	comp=Z,46nm,0.3s,baz=304,slow=12,SNR=112						
MMAI				Sn	Sn	00 24 05.5	-1.4
	comp=Z,50nm,0.3s,baz=289,slow=24,SNR=8.8						
VTS	Vitosha	7.95	344	P	Pn	00 22 39.9	+1.2
VTS	Vitosha	7.95	344	P	Pn	00 22 39.9	+1.2
VTS	Vitosha	7.95	344	P	Pn	00 22 39.9	+1.2
VTS	Vitosha	7.95	344	⇓*i*Pn	Pn	00 22 41.5	+2.8
ZNM		7.97	133	P	Pn	00 22 39.1	+0.1
	baz=133						
ZNM		7.97	133	P	Pn	00 22 39.1	0.0
KZIT	Kziot	8.03	118	Pn	Pn	00 22 37.9	-1.9
KZIT	Kziot	8.03	118	Pn	Pn	00 22 37.9	-1.9
KZIT	Kziot	8.03	118	Pn	Pn	00 22 37.9	-1.9
KZIT				Sn	Sn	00 24 04.5	-5.0
TIR	Tirane	8.06	324	P	Pn	00 22 38.5	-1.8
TIR	Tirane	8.06	324	P	Pn	00 22 38.5	-1.8
TIR	Tirane	8.06	324	P	Pn	00 22 38.5	-1.8
PHP	Peshkopia	8.07	328	*e*PN	Pn	00 22 39.6	-0.7
PHP	Peshkopia	8.07	328	*e*Pn	Pn	00 22 39.6	-0.7
KSDI	Kefar Szold	8.08	100	Pn	Pn	00 22 39.1	-1.5
KSDI	Kefar Szold	8.08	100	Pn	Pn	00 22 39.1	-1.5
KSDI	Kefar Szold	8.08	100	Pn	Pn	00 22 39.1	-1.5
HWQ	Hawqa	8.10	92	*e*Pn	Pn	00 22 38.8	-2.0
HWQ	Hawqa	8.10	92	*e*Pn	Pn	00 22 38.8	-2.0
SAFT	Safranbolu	8.10	37	*e*PN	Pn	00 22 41.8	+1.0
SAFT	Safranbolu	8.10	37	*e*Pn	Pn	00 22 41.8	+1.0
HRI	Mount Hermon	8.12	99	P	Pn	00 22 39.8	-1.4
HRI	Mount Hermon	8.12	99	P	Pn	00 22 39.8	-1.4
HRI	Mount Hermon	8.12	99	Pn	Pn	00 22 39.8	-1.4
MMLI	Mount Malkishu	8.12	106	Pn	Pn	00 22 39.0	-2.2
MMLI				S	Sn	00 24 07.5	-4.4
MMLI	Mount Malkishu	8.12	106	Pn	Pn	00 22 39.0	-2.2
MMLI	Mount Malkishu	8.12	106	Pn	Pn	00 22 39.0	-2.2
MMLI				Sn	Sn	00 24 07.5	-4.4
RCY	Rachaya	8.14	98	*e*Pn	Pn	00 22 39.8	-1.5
RCY	Rachaya	8.14	98	*e*Pn	Pn	00 22 39.8	-1.6
CANT	Cankiri	8.16	44	*e*PN	Pn	00 22 41.7	+0.1
RTMI	Retamim	8.16	116	Pn	Pn	00 22 39.7	-2.0
RTMI				S	Sn	00 24 07.3	-5.5
RTMI	Retamim	8.16	116	Pn	Pn	00 22 39.7	-2.0
RTMI	Retamim	8.16	116	Pn	Pn	00 22 39.7	-2.0
RTMI				Sn	Sn	00 24 07.3	-5.5
KOZT	Kozan	8.21	69	*e*PN	Pn	00 22 42.1	-0.2
HMDT	Nahal Hemdat	8.27	106	Pn	Pn	00 22 42.4	-0.8
HMDT	Nahal Hemdat	8.27	106	Pn	Pn	00 22 42.4	-0.8
HMDT	Nahal Hemdat	8.27	106	Pn	Pn	00 22 42.4	-0.8
YTIR	Yattir	8.33	113	Pn	Pn	00 22 43.1	-0.9
YTIR	Yattir	8.33	113	Pn	Pn	00 22 43.1	-0.9
YTIR	Yattir	8.33	113	Pn	Pn	00 22 43.1	-0.9
DSI	Dead Sea	8.44	111	Pn	Pn	00 22 44.0	-1.4
DSI				S	Sn	00 24 15.4	-4.1
DSI	Dead Sea	8.44	111	Pn	Pn	00 22 44.0	-1.4
DSI	Dead Sea	8.44	111	Pn	Pn	00 22 44.0	-1.4
DSI				Sn	Sn	00 24 15.4	-4.1
FKH	Fakeheh	8.48	92	*e*Pn	Pn	00 22 44.4	-1.6
FKH	Fakeheh	8.48	92	*e*Pn	Pn	00 22 44.4	-1.6
CORM	Corum	8.50	50	*e*PN	Pn	00 22 46.4	+0.1
CORM	Corum	8.50	50	*e*Pn	Pn	00 22 46.4	+0.1
BARS	Barje	8.53	338	P	Pn	00 22 49.2	+2.5
BARS	Barje	8.53	338	⇓*i*Pn	Pn	00 22 48.4	+1.7
BARS	Barje	8.53	338	P	Pn	00 22 49.2	+2.5
MZDA	Masada	8.54	113	Pn	Pn	00 22 45.6	-1.3
MZDA				S	Sn	00 24 17.8	-4.3
MZDA	Masada	8.54	113	Pn	Pn	00 22 45.6	-1.3
MZDA	Masada	8.54	113	Pn	Pn	00 22 45.6	-1.3
MZDA				Sn	Sn	00 24 17.8	-4.3
PUK	Puka	8.60	327	*e*PN	Pn	00 22 46.3	-1.3
PUK	Puka	8.60	327	*e*Pn	Pn	00 22 46.3	-1.3
TIP	Timpagrande	8.60	302	*e*Pn	Pn	00 22 46.2	-1.5
TIP				*e*Sn	Sn	00 24 22.9	-0.7
TIP	Timpagrande	8.60	302	*e*Pn	Pn	00 22 46.2	-1.5
TIP				*e*Sn	Sn	00 24 22.9	-0.7
YOZ	Yozgat	8.66	55	*e*PN	Pn	00 22 48.4	-0.1
YOZ	Yozgat	8.66	55	*e*Pn	Pn	00 22 48.4	-0.1
TOS	Tosya	8.67	43	*e*PN	Pn	00 22 48.7	+0.1
TOS	Tosya	8.67	43	*e*Pn	Pn	00 22 48.7	+0.1
ZIMR		8.70	356	⇓P	Pn	00 22 50.4	+1.4
ZIMR		8.70	356	⇓*i*P	Pn	00 22 50.4	+1.4
KRMI	Paran Flat	8.70	121	Pn	Pn	00 22 47.7	-1.4
KRMI	Paran Flat	8.70	121	Pn	Pn	00 22 47.7	-1.4
KRMI	Paran Flat	8.70	121	Pn	Pn	00 22 47.7	-1.4
HRDS	Abu Rudays	8.71	134	P	Pn	00 22 48.4	-0.8
	baz=135						
PRNI	Paran	8.77	119	P	Pn	00 22 48.4	-1.6
PRNI	Paran	8.77	119	P	Pn	00 22 48.4	-1.6
PRNI	Paran	8.77	119	Pn	Pn	00 22 48.4	-1.6
ZFRI	Zfri	8.78	118	Pn	Pn	00 22 48.0	-2.2
ZFRI	Zfri	8.78	118	Pn	Pn	00 22 48.0	-2.2
ZFRI	Zfri	8.78	118	Pn	Pn	00 22 48.0	-2.2
BCI	Bajram Curri	8.78	329	*e*PN	Pn	00 22 49.3	-0.9
BCI	Bajram Curri	8.78	329	*e*Pn	Pn	00 22 49.3	-0.9
ULC	Ulcinj	8.83	324	⇓*i*Pn	Pn	00 22 48.8	-2.0
ULC				*i* Sn	Sn	00 24 27.9	-1.3
ULC	Ulcinj	8.83	324	⇓*i*Pn	Pn	00 22 48.8	-2.0
ULC				*i* Sn	Sn	00 24 27.9	-1.3
CEL	Celeste	8.88	295	*e*Pn	Pn	00 22 50.2	-1.3
	comp=Z,176nm,0.7s						
CEL				*e*Sn	Sn	00 24 26.1	-4.3
CEL	Celeste	8.88	295	*e*Pn	Pn	00 22 50.2	-1.3
	comp=Z,176nm,0.7s						
CEL				*e*Sn	Sn	00 24 26.1	-4.3
HRFI	Mount Harif	8.97	121	Pn	Pn	00 22 51.5	-1.3
HRFI	Mount Harif	8.97	121	Pn	Pn	00 22 51.5	-1.3
HRFI	Mount Harif	8.97	121	Pn	Pn	00 22 51.5	-1.3
HRFI				Sn	Sn	00 24 28.1	-4.5
PVY	Plav	9.01	329	⇑*i*Pn	Pn	00 22 51.9	-1.4
PVY				*i* Sn	Sn	00 24 33.7	+0.1
PVY	Plav	9.01	329	⇑*i*Pn	Pn	00 22 51.9	-1.4
PVY				*i* Sn	Sn	00 24 33.7	+0.1
MBRI	Mt Berech	9.03	122	Pn	Pn	00 22 52.5	-1.0
NISS		9.03	340	⇑*i*Pn	Pn	00 22 55.7	+2.2
KMRS	Kahramanmaras	9.04	71	*e*PN	Pn	00 22 52.6	-1.1
KMRS	Kahramanmaras	9.04	71	*e*Pn	Pn	00 22 52.6	-1.1
EIL	Elat	9.13	123	Pn	Pn	00 22 54.0	-1.0
	comp=Z,19nm,0.3s,baz=308,slow=6.1,SNR=214						
EIL				Sn	Sn	00 24 31.3	-5.2
	comp=Z,20nm,0.3s,baz=81,slow=19,SNR=5.2						
EIL	Elat	9.13	123	Pn	Pn	00 22 53.8	-1.1
EIL	Elat	9.13	123	*e*Pn	Pn	00 22 53.9	-1.0
	baz=309						
EIL	Elat	9.13	123	Pn	Pn	00 22 53.8	-1.1
PDG	Podgorica	9.19	326	⇓*i*Pn	Pn	00 22 53.2	-2.5
PDG				*i* Sn	Sn	00 24 36.8	-1.2
TTG	Podgorica	9.19	326	⇓*i*Pn	Pn	00 22 53.2	-2.5
TTG				*i* Sn	Sn	00 24 36.8	-1.2
TTG	Podgorica	9.19	326	*i* P	Pn	00 22 53.2	-2.5
TTG				*i* S	Sn	00 24 36.8	-1.2
GAZ	Gaziantep	9.22	73	*e*PN	Pn	00 22 55.6	-0.5
GAZ	Gaziantep	9.22	73	*e*Pn	Pn	00 22 55.6	-0.5
SARI	SarD1z-Kayseri	9.23	63	*e*PN	Pn	00 22 52.6	-3.6
BUM	Brajici-Budva	9.26	324	⇓*i*Pn	Pn	00 22 54.0	-2.7
BUM				*i* Sn	Sn	00 24 38.8	-0.9
BUM	Brajici-Budva	9.26	324	⇓*i*Pn	Pn	00 22 54.0	-2.7
BUM				*i* Sn	Sn	00 24 38.8	-0.9
BEY	Berane	9.27	330	⇓*i*Pn	Pn	00 22 55.6	-1.2
BEY				*e*Sn	Sn	00 24 39.5	-0.5
IVA	Berane	9.27	330	⇓*i*Pn	Pn	00 22 55.6	-1.2
IVA				*e*Sn	Sn	00 24 39.5	-0.5
IVA	Berane	9.27	330	⇓*i*Pn	Pn	00 22 55.6	-1.2
IVA				*e*Sn	Sn	00 24 39.5	-0.5
BZK	Bozkurt	9.30	39	*e*PN	Pn	00 22 57.0	-0.2
BZK	Bozkurt	9.30	39	*e*Pn	Pn	00 22 57.0	-0.3
BYBT	Boyabat	9.38	44	*e*PN	Pn	00 22 58.8	+0.5
BYBT	Boyabat	9.38	44	*e*Pn	Pn	00 22 58.8	+0.5
ASF	Jabal al Asfar	9.39	104	Pn	Pn	00 22 57.6	-0.9
	comp=Z,4.7nm,0.3s,baz=150,slow=5.0,SNR=22						
ASF				Sn	Sn	00 24 41.4	-1.5
	comp=Z,4.6nm,0.3s,baz=0.0,slow=18,SNR=3.1						
ASF	Jabal al Asfar	9.39	104	P	Pn	00 22 57.6	-0.9
ASF						00 24 41.4	
ASF				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ASF				smax			
	comp=N,5.0nm,0.3s						
CVD	Cernavoda	9.44	8	⇓P	Pn	00 23 01.7	+2.5
CVD	Cernavoda	9.44	8	⇓*i*P	Pn	00 23 01.7	+2.5
CVD	Cernavoda	9.44	8	P	Pn	00 23 01.7	+2.5
HAQS	Haql	9.49	126	P	Pn	00 22 58.4	-1.5
HAQS	Haql	9.49	126	P	Pn	00 22 58.4	-1.6
SG1	Sgolgore (BA)	9.51	311	*e*Pn	Pn	00 22 57.7	-2.4
SG1				*e*Sn	Sn	00 24 41.5	-4.2
WDD	Wield Dalam	9.54	279	*e*Pn	Pn	00 22 59.7	-0.9
	comp=N,552nm,0.8s						
WDD				*e*Sn	Sn	00 24 45.4	-1.2
WDD	Wield Dalam	9.54	279	*e*Pn	Pn	00 22 59.7	-0.8
	comp=N,552nm,0.8s						
WDD				*e*Sn	Sn	00 24 45.4	-1.2
BAI	Bari	9.54	313	*e*Pn	Pn	00 22 58.4	-2.1
BAI				*e*Sn	Sn	00 24 43.0	-3.6
HCY	Herceg Novi	9.56	324	⇓*i*Pn	Pn	00 22 57.5	-3.4
HCY				*e*Sn	Sn	00 24 45.4	-1.8
HCY	Herceg Novi	9.56	324	⇓*i*Pn	Pn	00 22 57.5	-3.4
NKY	Niksic	9.61	327	⇑*i*Pn	Pn	00 22 59.0	-2.5
NKY				*i* Sn	Sn	00 24 47.1	-1.2
NKY	Niksic	9.61	327	⇑*i*Pn	Pn	00 22 59.0	-2.5
NKY				*i* Sn	Sn	00 24 47.1	-1.2
TIRR	Tirgusor	9.63	10	*e*Pn	Pn	00 23 02.8	+1.0
TIRR				*e*Sn	Sn	00 24 48.3	-0.6
TIRR	Tirgusor	9.63	10	⇓*i*P	Pn	00 23 02.9	+1.1
TIRR	Tirgusor	9.63	10	*e*P	Pn	00 23 02.8	+1.0
TIRR				*e*S	Sn	00 24 48.3	-0.6
AMRR	Amara	9.67	5	⇑P	Pn	00 23 04.9	+2.6
AMRR	Amara	9.67	5	⇑*i*P	Pn	00 23 04.9	+2.6
AMRR	Amara	9.67	5	⇑P	Pn	00 23 04.9	+2.6
LZLA	Zalla	9.71	231	*i* P	Pn	00 23 04.0	+1.0
	SNR=22						
DIKM	Dikmen	9.78	44	*e*PN	Pn	00 23 03.6	-0.2
DIKM	Dikmen	9.78	44	*e*Pn	Pn	00 23 03.6	-0.2
HARR	Harsova	9.80	7	⇑P	Pn	00 23 05.8	+1.7
HARR	Harsova	9.80	7	⇑*i*P	Pn	00 23 05.8	+1.7
HARR	Harsova	9.80	7	P	Pn	00 23 05.8	+1.7
VAE	Valguarnera	9.81	288	Pn	Pn	00 23 06.1	+1.8
	comp=N,9.0nm,0.3s,baz=14,slow=2.8,SNR=48						
VAE				Sn	Sn	00 24 48.7	-4.6
	comp=N,18nm,0.3s,baz=328,slow=19,SNR=4.2						
VAE	Valguarnera	9.81	288	Pn	Pn	00 23 06.1	+1.8
GRUS	Gruza	9.85	336	P	Pn	00 23 06.0	+1.3
GRUS	Gruza	9.85	336	⇑*i*Pn	Pn	00 23 05.6	+0.9
GRUS	Gruza	9.85	336	P	Pn	00 23 06.0	+1.3
PLE	Pljevlja	9.86	330	⇓*i*Pn	Pn	00 23 03.0	-1.9
PLE				*i* Sn	Sn	00 24 53.5	-0.9
PLE	Pljevlja	9.86	330	⇓*i*Pn	Pn	00 23 03.0	-1.9
PLE				*i* Sn	Sn	00 24 53.5	-0.9
BRY	Bratogost	9.89	325	⇓*i*Pn	Pn	00 23 03.0	-2.3
BRY				*e*Sn	Sn	00 24 53.4	-1.7
BRY	Bratogost	9.89	325	⇓*i*Pn	Pn	00 23 03.0	-2.3
UPM	Unac-Piva	9.96	328	⇑*i*Pn	Pn	00 23 04.3	-2.0
UPM				*e*Sn	Sn	00 24 56.5	-0.4
UPM	Unac-Piva	9.96	328	⇑*i*Pn	Pn	00 23 04.3	-2.0
UPM				*e*Sn	Sn	00 24 56.5	-0.4
BDAS	Al Bad'	10.02	128	P	Pn	00 23 05.8	-1.5
BDAS	Al Bad'	10.02	128	P	Pn	00 23 05.8	-1.4
SVIS	Svilajnac	10.03	339	P	Pn	00 23 09.4	+2.1
DJES	Djerdap	10.08	345	P	Pn	00 23 09.2	+1.3
ISR	Istrita	10.14	2	⇓*i*P	Pn	00 23 05.4	-3.3
TRUS	Trudelj	10.25	336	*e*Pn	Pn	00 23 08.8	-1.4
STON	Ston	10.27	323	⇑*i*Pn	Pn	00 23 06.5	-4.1
STON				Sn	Sn	00 24 55.9	-8.6
STON	Ston	10.27	323	⇑*i*Pn	Pn	00 23 06.5	-4.1
BBLS	Lazići	10.30	332	P	Pn	00 23 08.9	-2.0
BBLS	Lazići	10.30	332	⇑*i*Pn	Pn	00 23 08.5	-2.4
BBLS	Lazići	10.30	332	P	Pn	00 23 08.9	-2.0
CFR	Carcaliu	10.31	8	⇓P	Pn	00 23 12.1	+1.1
CFR	Carcaliu	10.31	8	⇓*i*P	Pn	00 23 12.1	+1.1
CFR	Carcaliu	10.31	8	⇓P	Pn	00 23 12.1	+1.1
TLCR		10.40	10	⇑P	Pn	00 23 13.4	+1.0
TLCR		10.40	10	⇑*i*P	Pn	00 23 13.4	+1.0
TLCR		10.40	10	P	Pn	00 23 13.4	+1.0
MYA	Malataya	10.41	68	*e*PN	Pn	00 23 11.3	-1.2
MYA	Malataya	10.41	68	*e*Pn	Pn	00 23 11.3	-1.2
MS1	Monte Sant'Ang	10.46	313	*e*Pn	Pn	00 23 10.6	-2.6
MS1				*e*Sn	Sn	00 25 04.8	-4.4
MLR	Muntele Rosu	10.51	359	Pn	Pn	00 23 16.0	+2.2
	comp=N,2.2nm,0.3s,baz=197,slow=3.5,SNR=76						
MLR				LR	LR	00 27 47.7	
	comp=N,2µm,20.4s,baz=183,slow=41						
MLR	Muntele Rosu	10.51	359	⇓P	Pn	00 23 15.6	+1.8
MLR	Muntele Rosu	10.51	359	⇓*i*P	Pn	00 23 15.6	+1.8
MLR	Muntele Rosu	10.51	359	P	Pn	00 23 15.6	+1.8
LJFR	Jufra	10.54	239	*i* P	Pn	00 23 15.7	+1.3
	comp=N,38nm,1.0s,SNR=22						
GZR	Gura Zlata	10.72	347	⇓P	Pn	00 23 17.9	+1.2
GZR	Gura Zlata	10.72	347	⇓*i*P	Pn	00 23 17.9	+1.2
GZR	Gura Zlata	10.72	347	P	Pn	00 23 17.9	+1.2
PLOR	Plostina	10.88	2	P	Pn	00 23 21.1	+2.3
PLOR	Plostina	10.88	2	⇓*i*P	Pn	00 23 21.2	+2.4
PLOR	Plostina	10.88	2	P	Pn	00 23 21.1	+2.3
VRI	Vrincioaia	10.89	2	P	Pn	00 23 21.1	+2.1
VRI	Vrincioaia	10.89	2	⇓P	Pn	00 23 21.2	+2.2
VRI	Vrincioaia	10.89	2	⇓*i*P	Pn	00 23 21.2	+2.2
VRI	Vrincioaia	10.89	2	P	Pn	00 23 21.1	+2.1
LKFR	Kufra	11.07	194	*e*P	Pn	00 23 21.6	0.0
	comp=N,57nm,1.8s,SNR=22						
SVRC	Sivrice-ELAZID	11.10	68	*e*PN	Pn	00 23 21.0	-0.8
SVRC	Sivrice-ELAZID	11.10	68	*e*Pn	Pn	00 23 21.0	-0.8
TBKS	Tabuk	11.12	124	P	Pn	00 23 21.3	-0.9
TBKS	Tabuk	11.12	124	P	Pn	00 23 21.3	-0.9
DEV	Deva	11.18	348	⇑P	Pn	00 23 23.3	+0.4
DEV	Deva	11.18	348	⇑*i*P	Pn	00 23 23.3	+0.4
DEV	Deva	11.18	348	P	Pn	00 23 23.3	+0.4
BZS	Buzias	11.18	343	⇓P	Pn	00 23 23.4	+0.5
BZS	Buzias	11.18	343	⇓*i*P	Pn	00 23 23.4	+0.4
BZS	Buzias	11.18	343	P	Pn	00 23 24.3	+1.3
LSHF	Shwairf	11.21	247	*i* P	Pn	00 23 23.8	+0.3
	comp=N,43nm,0.6s,SNR=22						
GHAR	Gharyan	11.27	259	*e*P	Pn	00 23 26.0	+1.8
	SNR=22						
PTK	Pertek	11.29	66	*e*PN	Pn	00 23 24.0	-0.6
PTK	Pertek	11.29	66	*e*Pn	Pn	00 23 24.0	-0.5
EZC	Erzincan	11.53	62	*e*PN	Pn	00 23 26.7	-1.1
SIM	Simferopol'	11.68	29	*c i*P	Pn	00 23 33.0	+3.2
SIM				*e*S	Sn	00 25 43.0	+4.0
SIM				pmax	pmax		
	comp=Z,111nm,0.8s						
SIM				MLR	MLR		
	comp=Z,1µm,16.8s						
GUMT	Gumushane	11.89	59	*e*PN	Pn	00 23 31.7	-1.0
GUMT	Gumushane	11.89	59	*e*Pn	Pn	00 23 31.7	-1.0
BLY	Banja Luka	11.95	328	P	Pn	00 23 30.3	-3.1
BLY	Banja Luka	11.95	328	P	Pn	00 23 30.3	-3.1
WJHS		12.03	130	P	Pn	00 23 33.6	-1.1
WJHS		12.03	130	P	Pn	00 23 33.6	-1.1
DRGR		12.09	349	P	Pn	00 23 36.8	+1.4
DRGR		12.09	349	⇓P	Pn	00 23 34.9	-0.5
DRGR		12.09	349	⇓*i*P	Pn	00 23 34.9	-0.5
DRGR		12.09	349	P	Pn	00 23 36.8	+1.4
KIS	Kishinev	12.18	9	*e*P	Pn	00 23 37.0	+0.3
KIS				*e*S	Sn	00 25 40.0	-11
KIS				*i* LQ		00 26 50.0	
KIS				LRM		00 28 36.0	
	comp=Z,2µm,16.0s						
KIS	Kishinev	12.18	9	*e*P	Pn	00 23 37.0	+0.3
KIS				MLR	MLR		
	comp=Z,2µm,12.0s						
KIS				MLR	MLR		
	comp=Z,2µm,16.0s						
KIS	Kishinev	12.18	9	⇑P	Pn	00 23 37.8	+1.2
KIS	Kishinev	12.18	9	⇑*i*P	Pn	00 23 37.8	+1.1
KIS	Kishinev	12.18	9	*e*P	Pn	00 23 37.0	+0.3
	comp=Z,2µm,16.0s						
IAS	Iasi	12.26	5	P	Pn	00 23 39.1	+1.4
IAS	Iasi	12.26	5	⇓P	Pn	00 23 38.1	+0.4
IAS	Iasi	12.26	5	⇓*i*P	Pn	00 23 38.1	+0.4
IAS	Iasi	12.26	5	⇓P	Pn	00 23 38.1	+0.4
AQU	L'Aquila	12.39	310	⇑P	Pn	00 23 39.8	+0.3
AQU	L'Aquila	12.39	310	*e*Pn	Pn	00 23 38.5	-1.0
AQU	L'Aquila	12.39	310	⇑*i*P	Pn	00 23 39.8	+0.3
AQU	L'Aquila	12.39	310	*e*Pn	Pn	00 23 38.5	-1.0
AQU	L'Aquila	12.39	310	P	Pn	00 23 39.8	+0.3
FIAM	Fiamignano	12.52	309	Pn	Pn	00 23 40.3	-1.0
FIAM	Fiamignano	12.52	309	Pn	Pn	00 23 40.3	-1.0
P

ARSA Arzberg 14.63 330⇑ *i*Pn Pn 00 24 06.6 -3.5
comp=Z,12nm,0.6s,SNR=9.7
ARSA Arzberg 14.63 330 Pn **Pn 00 24 06.6 -3.5**
comp=Z,12nm,0.6s,SNR=9.7
CLDR Caldiran 14.78 68 *e*PN **Pn 00 24 10.6 -1.6**
CLDR Caldiran 14.78 68 *e*Pn **Pn 00 24 10.6 -1.6**
KWP Kalwaria Pacla 14.87 351 *e*P **Pn 00 24 16.9 +3.6**
KWP *e*S **Sn 00 27 06.2 +9.5**
KWP LMZ 00 29 57.2
comp=Z,2μm,25.2s
KWP Kalwaria Pacla 14.87 351⇑P **Pn 00 24 14.5 +1.2**
KWP Kalwaria Pacla 14.87 351 *e*Pn **Pn 00 24 16.0 +2.7**
comp=Z,54nm,0.8s
KWP Kalwaria Pacla 14.87 351⇑ *i*P **Pn 00 24 14.5 +1.2**
KWP Kalwaria Pacla 14.87 351 P **Pn 00 24 14.5 +1.2**
STHS Stebnicka Huta 14.88 347 *e*P **Pn 00 24 16.2 +2.8**
STHS Stebnicka Huta 14.88 347 *e*PN **Pn 00 24 16.2 +2.8**
STHS Stebnicka Huta 14.88 347 *e*P **Pn 00 24 16.2 +2.8**
LVV L'vov 14.92 355 *e*P **Pn 00 24 15.5 +1.5**
LVV *e*S **Sn 00 27 04.0 +6.0**
LVV MLR MLR
comp=Z,900nm,11.0s
LVV MLR MLR
comp=E,800nm,12.0s
LVV MLR MLR
comp=N,700nm,11.0s
LVV L'vov 14.92 355 *e*P **Pn 00 24 15.5 +1.5**
comp=N,900nm,11.0s
ZCCA Zocca 14.96 313 Pn **Pn 00 24 16.3 +1.8**
ZCCA Zocca 14.96 313 Pn **Pn 00 24 16.3 +1.8**
PTCC Patocco-Chiusa 14.97 324 Pn **Pn 00 24 10.9 -3.7**
PTCC Patocco-Chiusa 14.97 324 Pn **Pn 00 24 10.9 -3.7**
SMOL Smolenice 15.00 337 *e*P **Pn 00 24 18.5 +3.5**
SMOL Smolenice 15.00 337 *e*PN **Pn 00 24 18.5 +3.5**
SMOL Smolenice 15.00 337 *e*P **Pn 00 24 18.5 +3.5**
CONA Conrad Observa 15.05 332⇑ *i*Pn **Pn 00 24 15.1 -0.6**
comp=N,26nm,0.8s,SNR=20
CONA Conrad Observa 15.05 332 Pn **Pn 00 24 15.1 -0.6**
comp=N,26nm,0.8s,SNR=20
NIE Niedzica 15.07 345 *e*P **Pn 00 24 17.6 +1.7**
NIE e 00 24 22.5
NIE Niedzica 15.07 345 *e*P **Pn 00 24 17.6 +1.7**
BHD Baghdad 15.19 91 *e*P **Pn 00 24 15.0 -2.6**
BHD *i*S **Sn 00 27 18.0 +13**
VLC Villacollemand 15.21 312 *e*Pn **Pn 00 24 19.0 +1.2**
comp=N,85nm,1.2s
VLC Villacollemand 15.21 312 *e*Pn **Pn 00 24 19.0 +1.2**
comp=N,85nm,1.2s
JAVC Velka Javorina 15.23 338 *e*Pn **Pn 00 24 17.8 -0.2**
baz=152
ABSA Djebel Ababsia 15.25 280 P **Pn 00 24 25.3 +6.9**
ABSA Djebel Ababsia 15.25 280 P **Pn 00 24 25.3 +6.9**
CMAH Djebel Manchou 15.30 282 P **Pn 00 24 26.0 +7.0**
CMAH Djebel Manchou 15.30 282 P **Pn 00 24 26.0 +7.0**
PGF Pioggiola 15.36 305 *e*P **Pn 00 24 18.6 -1.1**
comp=N,438nm,1.2s
PGF Pioggiola 15.36 305 *e*P **Pn 00 24 18.6 -1.1**
PGF pmax pmax
comp=Z,219nm,1.2s
PGF Pioggiola 15.36 305 *e*P **Pn 00 24 18.6 -1.1**
comp=Z,219nm,1.2s
KBA Koelnbreinsper 15.46 325⇓ *i*Pn **Pn 00 24 23.7 +2.7**
comp=Z,31nm,0.7s,SNR=6.8
KBA Koelnbreinsper 15.46 325 P **Pn 00 24 23.7 +2.7**
comp=Z,31nm,0.7s,SNR=6.8
ONI Oni 15.47 55 P **Pn 00 24 18.3 -2.9**
KIV Kislovodsk 15.58 50 P **Pn 00 24 27.6 +4.9**
comp=Z,964nm,1.0s,SNR=25
KIV Kislovodsk 15.58 50*c* *i*P **Pn 00 24 25.2 +2.5**
KIV pmax pmax
comp=Z,130nm,1.1s
KIV MLR MLR
comp=Z,500nm,16.0s
KIV Kislovodsk 15.58 50 *e*Pn **Pn 00 24 25.6 +3.0**
comp=Z,238nm,1.1s
KIV Kislovodsk 15.58 50 P **Pn 00 24 27.5 +4.8**
SNR=43
KIV P 00 24 27.5
SNR=43
KIV Kislovodsk 15.58 50 *i*P **Pn 00 24 25.2 +2.5**
comp=Z,500nm,16.0s
GNI Garni 15.61 65 *e*PN **Pn 00 24 21.7 -1.4**
GNI Garni 15.61 65 Pn **Pn 00 24 24.7 +1.6**
comp=Z,0.9nm,0.3s,baz=298,slow=1.0,SNR=19
GNI LR LR 00 31 46.9
comp=Z,3μm,20.7s,baz=267,slow=43
GNI Garni 15.61 65*c* *i*P **Pn 00 24 24.4 +1.3**
GNI pmax pmax
comp=Z,131nm,1.7s
GNI Garni 15.61 65 *e*Pn **Pn 00 24 23.9 +0.8**
comp=Z,70nm,1.0s
GNI Garni 15.61 65 P **Pn 00 24 25.7 +2.6**
SNR=7.8
GNI P 00 24 25.7
SNR=7.8
GNI Garni 15.61 65 *e*Pn **Pn 00 24 21.7 -1.4**
GNI Garni 15.61 65 P **Pn 00 24 25.7 +2.6**
SNR=7.8
ABTA Abfaltersbach 15.62 323⇑ *i*Pn **Pn 00 24 19.3 -3.8**
comp=Z,32nm,0.6s,SNR=7.3
ABTA Abfaltersbach 15.62 323 Pn **Pn 00 24 19.3 -3.8**
comp=Z,32nm,0.6s,SNR=7.3
MOA Molln 15.63 329⇓ *i*Pn **Pn 00 24 20.1 -3.1**
comp=Z,28nm,0.8s,SNR=15
MOA Molln 15.63 329 Pn **Pn 00 24 20.1 -3.1**
comp=Z,28nm,0.8s,SNR=15
KEH Kehvi 15.69 57 P **Pn 00 24 24.7 +0.6**
GOR Gori 15.69 58 P **Pn 00 24 25.2 +1.1**
CAEH 'Ain El Ouahch 15.76 282 P **Pn 00 24 31.4 +6.5**
KRUC Moravsky 15.82 336 *e*Pn **Pn 00 24 26.6 +0.9**
baz=149
ZEI Tsey 15.84 55 *e*P **Pn 00 24 27.5 +1.5**
ZEI *e*S **Sn 00 27 29.5 +8.9**
ZEI pmax pmax
comp=Z,94nm,1.0s
ZEI MLR MLR
comp=Z,539nm,14.0s
ZEI Tsey 15.84 55 *e*P **Pn 00 24 27.5 +1.5**
comp=Z,94nm,1.0s
CKFL Kef-Lekhel 15.86 281 P **Pn 00 24 29.7 +3.4**
CKFL Kef-Lekhel 15.86 281 P **Pn 00 24 29.7 +3.4**
KIEV Kiev 15.87 7 *e*P **Pn 00 24 26.5 +0.2**
KIEV *e* 00 27 21.8
KIEV pmax pmax
comp=Z,69nm,0.6s
KIEV Kiev 15.87 7 *e*Pn **Pn 00 24 26.5 +0.1**
comp=Z,69nm,0.6s
KIEV *e*Sn **Sn 00 27 21.8 +0.7**
KIEV Kiev 15.87 7 *e*P **Pn 00 24 26.5 +0.2**
comp=Z,69nm,0.6s
AKASG Malin Array Be 15.88 7 Pn **Pn 00 24 24.0 -2.4**
comp=Z,1.9nm,0.3s,baz=195,slow=11,SNR=18
AKASG Sn **Sn 00 27 27.7 +6.3**
baz=194,slow=22,SNR=14
AKASG LR LR 00 31 00.2
comp=Z,1μm,19.6s,baz=185,slow=39
AKASG Malin Array Be 15.88 7*ce*P **Pn 00 24 24.0 -2.4**
AKASG pmax pmax
comp=Z,3.0nm,0.4s
AKASG Malin Array Be 15.88 7 Pn **Pn 00 24 24.0 -2.4**
AKASG Sn **Sn 00 27 27.7 +6.3**
AKASG LR LR 00 31 00.2
AKASG Malin Array Be 15.88 7 Pn **Pn 00 24 24.0 -2.4**
AKBB Malin Array Si 15.88 7 *e*Pn **Pn 00 24 26.6 +0.2**
AKBB *e*Sn **Sn 00 27 21.4 +0.1**
AKBB Malin Array Si 15.88 7 *e*P **Pn 00 24 26.6 +0.2**
OJC Ojcow 15.93 345 *e*P **Pn 00 24 24.0 -3.1**
OJC *e*PP 00 24 36.8
OJC *e*SS 00 27 28.8
OJC L 00 34 25.4
comp=Z,1.1nm,16.8s
OJC Ojcow 15.93 345 *e*P **Pn 00 24 24.0 -3.1**
OJC *e*SS 00 27 28.8
OJC Ojcow 15.93 345 *e*S **Sn 00 27 28.8 +6.2**
VRAC Vranov 15.97 337 Pn **Pn 00 24 25.7 -1.9**
comp=Z,3.2nm,0.3s,baz=150,slow=10,SNR=49
VRAC Vranov 15.97 337 P **Pn 00 24 26.5 -1.1**
VRAC Vranov 15.97 337 P **Pn 00 24 26.5 -1.1**
VRAC Vranov 15.97 337 *e*Pn **Pn 00 24 28.3 +0.7**
OKC Ostrava-Krasne 15.98 341 *e*P **Pn 00 24 27.4 -0.3**
OKC MLR MLR
comp=Z,1μm,12.4s
OKC Ostrava-Krasne 15.98 341 *e*P **Pn 00 24 27.4 -0.3**
OKC AMS AMS 00 31 40.0
comp=Z,1μm,12.4s
OKC Ostrava-Krasne 15.98 341 *e*P **Pn 00 24 27.4 -0.3**
comp=Z,1μm,12.4s
CASM Ain Smara 16.05 280 P **Pn 00 24 31.7 +3.0**
CASM Ain Smara 16.05 280 P **Pn 00 24 31.7 +3.0**
TBLG Delisi 16.05 60 P **Pn 00 24 29.1 +0.4**
TBLG Delisi 16.05 60 P **Pn 00 24 29.1 +0.4**
MORC Moravsky Berou 16.09 339 P **Pn 00 24 28.8 -0.3**
MORC Moravsky Berou 16.09 339 *e*Pn **Pn 00 24 28.6 -0.5**
comp=Z,69nm,1.0s
MORC Moravsky Berou 16.09 339⇑ *i*P **Pn 00 24 28.4 -0.7**
MORC Moravsky Berou 16.09 339 *e*Pn **Pn 00 24 28.6 -0.5**
comp=Z,69nm,1.0s
APPI Appiano 16.10 320 Pn **Pn 00 24 28.1 -1.2**
APPI Appiano 16.10 320 Pn **Pn 00 24 28.1 -1.2**
CTEI Djebel Teioual 16.12 280 P **Pn 00 24 32.0 +2.4**
CTEI Djebel Teioual 16.12 280 P **Pn 00 24 32.0 +2.4**
RAC Raciborz 16.19 341 *e*P **Pn 00 24 30.0 -0.4**
RAC Raciborz 16.19 341 *e*P **Pn 00 24 30.0 -0.4**
MABI Malga Bissina 16.22 318 Pn **Pn 00 24 29.4 -1.4**
MABI Malga Bissina 16.22 318 Pn **Pn 00 24 29.4 -1.4**
TREC Trest 16.33 334 *e*P **Pn 00 24 30.7 -1.5**
TREC MLR MLR
comp=Z,2μm,17.9s
TREC Trest 16.33 334 *e*P **Pn 00 24 30.7 -1.5**
TREC *ep*P pP 00 24 41.5 -1.7
TREC AMS AMS 00 32 40.0
comp=Z,2μm,17.9s
TREC Trest 16.33 334 *e*P **Pn 00 24 30.7 -1.5**
comp=Z,2μm,17.9s
WTTA Wattenberg 16.41 323⇑ *i*Pn **Pn 00 24 34.0 +0.7**
comp=Z,81nm,1.1s,SNR=38
WTTA Wattenberg 16.41 323 P **Pn 00 24 34.0 +0.7**
comp=Z,81nm,1.1s,SNR=38
DGRG David-gareji 16.42 61 P **Pn 00 24 35.1 +1.7**
WATA Walderalm 16.49 323⇑ *i*Pn **Pn 00 24 34.3 0.0**
comp=Z,40nm,0.5s,SNR=18
WATA Walderalm 16.49 323 P **Pn 00 24 34.3 0.0**
comp=Z,40nm,0.5s,SNR=18
BRMO Bormio 16.55 319 Pn **Pn 00 24 34.9 -0.2**
BRMO Bormio 16.55 319 Pn **Pn 00 24 34.9 -0.2**
QLNO Quiliano 16.57 310 Pn **Pn 00 24 35.2 0.0**
QLNO Quiliano 16.57 310 Pn **Pn 00 24 35.2 0.0**
GEC2 GERESS Array S 16.64 330 *e*P **Pn 00 24 34.4 -1.8**
comp=Z,61nm,1.4s
GEC2 GERESS Array S 16.64 330 *e*P **Pn 00 24 34.4 -1.8**
GEC2 pmax pmax
comp=Z,61nm,1.4s
GEC2 GERESS Array S 16.64 330 *e*P **Pn 00 24 34.4 -1.8**
comp=Z,61nm,1.4s
GERES GERESS Array B 16.64 330 Pn **Pn 00 24 35.0 -1.2**
comp=Z,1.8nm,0.3s,baz=147,slow=12,SNR=43
GERES LR LR 00 31 37.2
comp=Z,904nm,18.1s,baz=145,slow=40
GERES ScP ScP 00 32 56.6 -0.3
comp=Z,0.1nm,0.3s,baz=106,slow=2.9,SNR=5.1
GERES GERESS Array B 16.64 330 P **Pn 00 24 35.0 -1.2**
comp=Z,904nm,18.1s
IMI Imperia 16.67 308 Pn **Pn 00 24 34.7 -1.8**
IMI Imperia 16.67 308 Pn **Pn 00 24 34.7 -1.8**
FETA Feichten 16.71 321⇑ *i*Pn **Pn 00 24 37.6 +0.6**
comp=Z,92nm,1.3s,SNR=22
FETA Feichten 16.71 321 P **Pn 00 24 37.6 +0.5**
comp=Z,92nm,1.3s,SNR=22
MOTA Moosalm 16.73 322⇑ *i*Pn **Pn 00 24 34.1 -3.2**
comp=Z,32nm,0.8s,SNR=12
MOTA Moosalm 16.73 322 Pn **Pn 00 24 34.1 -3.2**
comp=Z,32nm,0.8s,SNR=12
CKHR Kef el Ahmar 16.85 280 P **Pn 00 24 33.0 -5.8**
KHC Kasperske Hory 16.92 331 *e*P **Pn 00 24 37.5 -2.1**
KHC *e*S **Sn 00 27 51.1 +4.5**
KHC MLR MLR
comp=Z,2μm,17.2s
KHC Kasperske Hory 16.92 331 *e*Pn **Pn 00 24 37.9 -1.7**
comp=Z,29nm,0.7s
KHC Kasperske Hory 16.92 331 *e*P **Pn 00 24 37.5 -2.1**
KHC *ep*P pP 00 24 49.7 -0.1
KHC *ex* x 00 25 44.5
KHC *e*S **Sn 00 27 51.1 +4.5**
KHC AMS AMS 00 32 10.0
comp=Z,2μm,17.2s
KHC Kasperske Hory 16.92 331 *e*P **Pn 00 24 37.5 -2.1**
comp=Z,2μm,17.2s
KHC Kasperske Hory 16.92 331 *e*Pn **Pn 00 24 37.9 -1.7**
comp=Z,28nm,0.7s
KHC *e*S **Sn 00 27 51.1 +4.5**
SAOF Saorge 16.92 308 *e*P **Pn 00 24 40.2 +0.5**
SAOF Saorge 16.92 308 *e*P **Pn 00 24 40.2 +0.5**
REVF Revere 16.94 307 *e*P **Pn 00 24 40.5 +0.6**
REVF Revere 16.94 307 *e*P **Pn 00 24 40.5 +0.6**
SBF Sospel 16.95 307⇓ *i*P **Pn 00 24 39.9 -0.1**
comp=Z,234nm,0.6s
SBF Sospel 16.95 307⇓ *i*P **Pn 00 24 39.9 -0.1**
SBF pmax pmax
comp=Z,117nm,0.6s
SBF Sospel 16.95 307⇓ *i*P **Pn 00 24 39.9 -0.1**
comp=Z,117nm,0.6s
SBF Sospel 16.95 307⇓ *i*P **Pn 00 24 39.9 -0.1**
comp=Z,117nm,0.6s
DPC Dobruska-Polom 16.96 338 *e*P **Pn 00 24 39.0 -1.2**
DPC MLR MLR
comp=Z,1μm,15.4s
DPC Dobruska-Polom 16.96 338 *e*P **Pn 00 24 39.0 -1.2**
DPC *ep*P pP 00 24 48.7 -1.5
DPC AMS AMS 00 32 20.0
comp=Z,1μm,15.4s
DPC Dobruska-Polom 16.96 338 P **Pn 00 24 39.0 -1.2**
RETA Reutte 17.00 322⇑ *i*Pn **Pn 00 24 37.4 -3.3**
comp=Z,30nm,0.7s,SNR=22
RETA Reutte 17.00 322 Pn **Pn 00 24 37.4 -3.3**
comp=Z,30nm,0.7s,SNR=22
AUTN L'Aution 17.01 308 *e*P **Pn 00 24 41.8 +1.0**
AUTN L'Aution 17.01 308 *e*P **Pn 00 24 41.8 +1.0**
DAVOX Davos/Dischmat 17.01 319 Pn **Pn 00 24 42.4 +1.6**
comp=Z,2.2nm,0.3s,baz=140,slow=16,SNR=16
DAVOX Davos/Dischmat 17.01 319 P **Pn 00 24 42.4 +1.6**
LUCF Luceram 17.02 307 *e*P **Pn 00 24 41.0 +0.1**
LUCF Luceram 17.02 307 *e*P **Pn 00 24 41.0 +0.1**
VAI Varese 17.10 315 P **Pn 00 24 39.9 -2.0**
VAI pmax pmax
comp=Z,100nm,0.4s
VAI Varese 17.10 315 Pn **Pn 00 24 39.9 -2.0**
comp=Z,100nm,0.4s
VAI Varese 17.10 315 P **Pn 00 24 39.9 -2.0**
comp=Z,100nm,0.4s
TOUF Mont Tournerai 17.13 307 *e*P **Pn 00 24 42.1 -0.2**
TOUF Mont Tournerai 17.13 307 *e*P **Pn 00 24 42.1 -0.2**
MVIF Mont Vial 17.14 307 *e*P **Pn 00 24 43.9 +1.4**
MVIF Mont Vial 17.14 307 *e*P **Pn 00 24 43.9 +1.4**
STV Sant Anna di V 17.18 308 P **Pn 00 24 43.8 +0.8**
STV Sant Anna di V 17.18 308 P **Pn 00 24 43.8 +0.8**
UPC Upice 17.20 338 *e*P **Pn 00 24 42.1 -1.0**
UPC Upice 17.20 338 *e*P **Pn 00 24 42.1 -1.0**
UPC *ep*P pP 00 24 52.3 -0.5
UPC Upice 17.20 338 P **Pn 00 24 42.1 -1.0**
FUR Furstenfeldbru 17.21 324 *e*P **Pn 00 24 43.6 +0.3**
FUR Furstenfeldbru 17.21 324 *e*P **Pn 00 24 43.6 +0.3**
WET Wettzell 17.22 329 *e*P **Pn 00 24 41.6 -1.8**
comp=Z,62nm,1.5s
WET Wettzell 17.22 329 *e*P **Pn 00 24 41.6 -1.8**
WET pmax pmax
comp=Z,62nm,1.5s
WET Wettzell 17.22 329 *e*P **Pn 00 24 41.6 -1.8**
comp=Z,62nm,1.5s
PRU Pruhonice 17.25 334 *e*P **Pn 00 24 42.0 -1.7**
PRU *e*S **Sn 00 27 59.4 +4.9**
PRU MLR MLR
comp=Z,1μm,12.7s
PRU Pruhonice 17.25 334 *e*P **Pn 00 24 42.0 -1.7**
PRU *ep*P pP 00 24 52.5 -0.9
PRU *e*S **Sn 00 27 59.4 +4.9**
PRU AMS AMS 00 33 20.0
comp=Z,1μm,12.7s
PRU Pruhonice 17.25 334 P **Pn 00 24 42.0 -1.7**
CALN Calern 17.26 306 *e*P **Pn 00 24 45.7 +1.8**
CALN Calern 17.26 306 *e*P **Pn 00 24 45.7 +1.8**
DAVA Damuels 17.33 320⇑ *i*Pn **Pn 00 24 44.7 0.0**
comp=Z,45nm,0.7s,SNR=9.9
DAVA Damuels 17.33 320 P **Pn 00 24 44.7 0.0**
comp=Z,45nm,0.7s,SNR=9.9
FRF La Foret Royal 17.34 305 *e*P **Pn 00 24 43.9 -1.1**
comp=Z,410nm,1.3s
FRF La Foret Royal 17.34 305 *e*P **Pn 00 24 43.9 -1.1**
FRF pmax pmax
comp=Z,205nm,1.3s
FRF La Foret Royal 17.34 305 *e*P **Pn 00 24 43.9 -1.1**
comp=Z,205nm,1.3s
FRF La Foret Royal 17.34 305 *e*P **Pn 00 24 43.9 -1.1**
comp=Z,205nm,1.3s
DOI San Damiano 17.35 309 P **Pn 00 24 44.6 -0.4**
DOI San Damiano 17.35 309 P **Pn 00 24 44.6 -0.4**
LMR La Mourre 17.35 305 *e*P **Pn 00 24 43.4 -1.6**
comp=Z,159nm,1.1s
LMR La Mourre 17.35 305 *e*P **Pn 00 24 43.4 -1.6**
LMR pmax pmax
comp=Z,80nm,1.1s
LMR La Mourre 17.35 305 *e*P **Pn 00 24 43.4 -1.6**
comp=Z,80nm,1.1s
LMR La Mourre 17.35 305 *e*P **Pn 00 24 43.4 -1.6**
comp=Z,80nm,1.1s
PRA Prague 17.36 334 P **Pn 00 24 43.0 -2.1**
PRA pP pP 00 24 54.0 -0.6
PRA AMS AMS 00 33 20.0
KSP Ksiaz 17.41 339 *e*P **Pn 00 24 44.3 -1.4**
KSP *e*S **Sn 00 27 59.0 +0.7**
KSP LMZ 00 30 48.9
comp=Z,2μm,25.6s
KSP Ksiaz 17.41 339⇓ *e*P **Pn 00 24 44.2 -1.5**
KSP *e*S **Sn 00 28 01.0 +2.7**
KSP Ksiaz 17.41 339⇓ *e*P **Pn 00 24 44.2 -1.5**
KSP *e*S **Sn 00 28 01.0 +2.7**
ORO Oropa 17.44 313 P **Pn 00 24 44.0 -2.1**
ORO pmax pmax
comp=Z,32nm,0.5s
ORO Oropa 17.44 313 Pn **Pn 00 24 44.0 -2.1**
comp=Z,32nm,0.5s
ORO Oropa 17.44 313 P **Pn 00 24 44.0 -2.1**
comp=Z,32nm,0.5s
UBR Ueberruh 17.46 322 P **Pn 00 24 47.1 +0.7**
UBR Ueberruh 17.46 322 P **Pn 00 24 47.1 +0.7**
AKF Akfadou 17.59 282 P **Pn 00 24 49.4 +1.3**
AKF Akfadou 17.59 282 P **Pn 00 24 49.4 +1.3**
SURF Saint Ours 17.62 308 *e*P **Pn 00 24 48.8 +0.5**
SURF Saint Ours 17.62 308 *e*P **Pn 00 24 48.8 +0.5**
WAR Warsaw 17.65 350 *e*P **Pn 00 24 48.2 -0.5**
WAR Warsaw 17.65 350 *e*P **Pn 00 24 48.2 -0.5**
PVCC Panska Ves 17.69 335 *e*P **Pn 00 24 47.4 -1.8**
PVCC Panska Ves 17.69 335 *e*P **Pn 00 24 47.4 -1.8**
PVCC *ep*P pP 00 24 57.6 -0.7
PVCC Panska Ves 17.69 335 P **Pn 00 24 47.4 -1.8**
MBDF Montbardon 17.75 309 *e*P **Pn 00 24 49.6 -0.4**
comp=Z,256nm,0.9s
MBDF Montbardon 17.75 309 *e*P **Pn 00 24 49.6 -0.4**
MBDF pmax pmax
comp=Z,128nm,0.9s
MBDF Montbardon 17.75 309 *e*P **Pn 00 24 49.6 -0.4**
comp=Z,128nm,0.9s
MBDF Montbardon 17.75 309 *e*P **Pn 00 24 49.6 -0.4**
comp=Z,128nm,0.9s
ATAF Djebel Tarf 17.85 279 P **Pn 00 24 53.5 +2.1**
ATAF Djebel Tarf 17.85 279 P **Pn 00 24 53.5 +2.1**
BNI Bardonecchia 17.96 310 *e*P **Pn 00 24 52.0 -0.5**
BNI pmax pmax
comp=Z,91nm,0.9s
BNI Bardonecchia 17.96 310 *e*Pn **Pn 00 24 52.0 -0.6**
comp=Z,91nm,0.9s
BNI Bardonecchia 17.96 310 *e*P **Pn 00 24 52.0 -0.5**
comp=Z,91nm,0.9s
ROTZ Rotzenmuhle 17.98 330 *e*P **Pn 00 24 50.3 -2.4**
comp=Z,68nm,1.7s
HDH Heidenheim-Cha 18.02 324 P **Pn 00 24 51.5 -1.8**
HDH Heidenheim-Cha 18.02 324 P **Pn 00 24 51.5 -1.8**
MAHO Mahon 18.05 292 *i* P **Pn 00 24 53.5 -0.3**
SISB Singen-Schiene 18.06 320 P **Pn 00 24 53.2 -0.6**
SISB Singen-Schiene 18.06 320 P **Pn 00 24 53.2 -0.6**
LPG La Plagne 18.12 311⇓ *i*P **Pn 00 24 54.4 -0.2**
comp=Z,221nm,0.9s
LPG La Plagne 18.12 311⇓ *i*P **Pn 00 24 54.4 -0.2**
LPG pmax pmax
comp=Z,111nm,0.9s
LPG La Plagne 18.12 311⇓ *i*P **Pn 00 24 54.4 -0.2**
comp=Z,111nm,0.9s
LPG La Plagne 18.12 311⇓ *i*P **Pn 00 24 54.4 -0.2**
comp=Z,111nm,0.9s
LPL La Plagne 18.14 311⇓ *i*P **Pn 00 24 54.7 -0.1**
comp=Z,109nm,0.7s
LPL La Plagne 18.14 311⇓ *i*P **Pn 00 24 54.7 -0.1**
LPL pmax pmax
comp=Z,55nm,0.7s
LPL La Plagne 18.14 311⇓ *i*P **Pn 00 24 54.7 -0.1**
comp=Z,54nm,0.7s
LPL La Plagne 18.14 311⇓ *i*P **Pn 00 24 54.7 -0.1**
comp=Z,54nm,0.7s
AKET Djebel Ketaf 18.16 280 P **Pn 00 24 52.8 -2.4**
AKET Djebel Ketaf 18.16 280 P **Pn 00 24 52.8 -2.4**
BRG Berggiesshubel 18.20 335 *i* P **Pn 00 24 53.6 -1.8**
comp=Z,45nm,1.1s
BRG *i* 00 25 03.5
comp=Z,46nm,0.9s
BRG *e* 00 25 22.4
comp=Z,47nm,1.1s
BRG S **Sn 00 28 17.0 -0.5**
BRG
comp=Z,1μm,18.4s
BRG
comp=N,972nm,14.1s
BRG
comp=E,1μm,14.1s
SMRF Simiane la Rot 18.22 306 *e*P **Pn 00 24 56.1 +0.3**
comp=E,76nm,0.8s
SMRF Simiane la Rot 18.22 306 *e*P **Pn 00 24 56.1 +0.3**
comp=E,76nm,0.8s
SMRF Simiane la Rot 18.22 306 *e*P **Pn 00 24 56.1 +0.3**
comp=E,38nm,0.8s
GUT Gutenstein 18.23 321 P **Pn 00 24 54.6 -1.2**
GUT Gutenstein 18.23 321 P **Pn 00 24 54.6 -1.2**
NKC Novy Kostel 18.24 331 *e*P **Pn 00 24 53.9 -2.1**
NKC *e*S **Sn 00 28 20.2 +1.7**
NKC MLR MLR
comp=Z,2μm,15.3s
NKC Novy Kostel 18.24 331 *e*P **Pn 00 24 53.9 -2.1**
NKC *e*S **Sn 00 28 20.2 +1.7**
NKC AMS AMS 00 33 10.0
comp=Z,2μm,15.3s
NKC Novy Kostel 18.24 331 P **Pn 00 24 53.9 -2.1**
NKC *e*S **Sn 00 28 20.2 +1.7**
WERN Wernitzgruen 18.31 331 *e*P **Pn 00 24 54.1 -2.7**
comp=Z,50nm,1.1s
GRA1 Grafenberg Arr 18.34 328 *e*P **Pn 00 24 55.0 -2.2**
comp=Z,110nm,1.4s
GRA1 Grafenberg Arr 18.34 328 *e*P **Pn 00 24 55.0 -2.2**
comp=Z,110nm,1.4s
GRF Grafenberg Arr 18.34 328 *e*P **Pn 00 24 55.0 -2.2**
comp=Z,110nm,1.4s
GRF *e*L 00 33 06.9
comp=Z,1μm,21.5s
GRF Grafenberg Arr 18.34 328 *e*P **Pn 00 24 55.0 -2.2**
GRF pmax pmax
comp=Z,110nm,1.4s
GRF MLR MLR
comp=Z,2μm,21.5s
GRF Grafenberg Arr 18.34 328 *e*P **Pn 00 24 55.0 -2.2**
comp=Z,110nm,1.4s
GRFO Grafenberg 18.34 328 *e*P **Pn 00 24 54.9 -2.3**
comp=Z,86nm,1.4s
BUCH Bad Urach 18.35 322 P **Pn 00 24 55.6 -1.7**
BUCH Bad Urach 18.35 322 P **Pn 00 24 55.6 -1.7**
TANN Tannenbergstha 18.38 331 *e*P **Pn 00 24 55.6 -2.0**
comp=Z,68nm,1.1s
GDM Grand'Maison 18.38 310 *e*P **Pn 00 24 57.9 +0.2**
GDM Grand'Maison 18.38 310 *e*P **Pn 00 24 57.9 +0.2**
MAK Makhachkala 18.39 58 *e*P **Pn 00 24 58.9 +1.1**
MAK *e*S **Sn 00 28 24.7 +2.5**
MAK pmax pmax
comp=Z,639nm,1.5s
MAK MLR MLR
comp=Z,1μm,22.0s
MAK Makhachkala 18.39 58 *e*P **Pn 00 24 58.9 +1.1**
comp=Z,639nm,1.5s
MAK *e*S **Sn 00 28 24.7 +2.5**
comp=Z,1μm,22.0s
GUNZ Gunzen 18.39 331 *e*P **Pn 00 24 55.8 -2.0**
comp=Z,54nm,0.9s
ORIF Oris-en-Rattie 18.41 309 *e*P **Pn 00 24 56.5 -1.5**
comp=Z,63nm,0.7s
ORIF *e*MLR MLR
comp=Z,3μm,23.0s
ORIF Oris-en-Rattie 18.41 309 *e*P **Pn 00 24 56.5 -1.5**
ORIF pmax pmax
comp=Z,32nm,0.7s

ORIF	**Oris-en-Rattie**	**18.41 309**	*e*P	**Pn**	**00 24 56.5**	**-1.5**
	comp=Z,32nm,0.7s					
ORIF	**Oris-en-Rattie**	**18.41 309**	*e*P	**Pn**	**00 24 56.5**	**-1.5**
	comp=Z,32nm,0.7s					
WERD	**Werda**	**18.47 331**	*e*P	**Pn**	**00 24 56.5**	**-2.2**
	comp=Z,596nm,3.0s					
ADJB	**Djebel Djouab**	**18.52 280**	P	**Pn**	**00 24 57.2**	**-2.3**
ADJB	**Djebel Djouab**	**18.52 280**	P	**Pn**	**00 24 57.2**	**-2.3**
MIB	**Mutribah**	**18.61 100**	*e*P	**Pn**	**00 25 00.7**	**+0.1**
MIB			AMb	AMB	00 25 03.7	
	comp=Z,215nm,1.2s					
MIB	**Mutribah**	**18.61 100**	*e*P	**Pn**	**00 25 00.7**	**+0.1**
	comp=Z,215nm,1.2s					
VORD	**Divnogorie**	**18.61 27**	*e*P	**Pn**	**00 25 01.1**	**+0.7**
VORD			*e*S	**Sn**	**00 28 24.4**	**-3.0**
VORD			pmax	pmax		
	comp=N,20nm,0.7s					
VORD			pmax	pmax		
	comp=E,60nm,0.7s					
VORD			pmax	pmax		
	comp=Z,10.0nm,0.7s					
VORD			smax			
	comp=N,100nm,1.1s					
VORD			smax			
	comp=E,80nm,1.1s					
VORD			smax			
	comp=Z,50nm,1.1s					
VORD	**Divnogorie**	**18.61 27**	*e*P	**Pn**	**00 25 01.1**	**+0.7**
VORD			*e*S	**Sn**	**00 28 24.4**	**-3.0**
GRN	**Grenoble**	**18.63 310**	*e*P	**Pn**	**00 25 00.7**	**-0.1**
GRN	**Grenoble**	**18.63 310**	*e*P	**Pn**	**00 25 00.7**	**-0.1**
STU	**Stuttgart**	**18.64 323**	*e*P	**Pn**	**00 25 00.6**	**-0.2**
	comp=Z,53nm,0.8s					
STU	**Stuttgart**	**18.64 323**	*e*P	**Pn**	**00 25 00.3**	**-0.5**
STU			pmax	pmax		
	comp=Z,72nm,0.8s					
STU	**Stuttgart**	**18.64 323**	*e*P	**Pn**	**00 25 00.3**	**-0.5**
	comp=Z,72nm,0.8s					
STU	**Stuttgart**	**18.64 323**	*e*P	**Pn**	**00 25 00.3**	**-0.5**
	comp=Z,72nm,0.8s					
FELD	**Feldberg im Sc**	**18.69 319**	*e*P	**Pn**	**00 25 00.3**	**-1.1**
FELD	**Feldberg im Sc**	**18.69 319**	*e*P	**Pn**	**00 25 00.3**	**-1.1**
BBS	**Basel-Blauen**	**18.72 317**	*e*P	**Pn**	**00 25 00.3**	**-1.5**
BBS	**Basel-Blauen**	**18.72 317**	*e*P	**Pn**	**00 25 00.3**	**-1.5**
NAY	**Al-Naaiem**	**18.74 102**	*e*P	**Pn**	**00 25 01.4**	**-0.8**
NAY			AMb	AMB	00 25 04.9	
	comp=Z,137nm,0.9s					
NAY	**Al-Naaiem**	**18.74 102**	*e*P	**Pn**	**00 25 01.4**	**-0.8**
	comp=Z,137nm,0.9s					
VSR	**Storozhevoye**	**18.77 26**	*e*P	**Pn**	**00 25 03.3**	**+1.0**
VSR			*e*S	**Sn**	**00 28 24.6**	**-6.6**
VSR			pmax	pmax		
	comp=N,7.0nm,0.6s					
VSR			pmax	pmax		
	comp=E,9.0nm,0.6s					
VSR			pmax	pmax		
	comp=Z,10.0nm,0.6s					
VSR			smax			
	comp=E,120nm,1.5s					
VSR			smax			
	comp=N,70nm,1.5s					
VSR			MLR	MLR		
	comp=N,300nm,17.0s					
VSR			MLR	MLR		
	comp=E,600nm,17.0s					
VSR			MLR	MLR		
	comp=Z,930nm,17.0s					
LBG	**Lerchenberg**	**18.77 322**	P	**Pn**	**00 25 01.9**	**-0.5**
LBG	**Lerchenberg**	**18.77 322**	P	**Pn**	**00 25 01.9**	**-0.5**
KIZ	**Kirchzarten**	**18.78 319**	P	**Pn**	**00 25 01.4**	**-1.2**
KIZ	**Kirchzarten**	**18.78 319**	P	**Pn**	**00 25 01.4**	**-1.2**
BFO	**Black Forest**	**18.80 321**	P	**Pn**	**00 25 01.2**	**-1.5**
	comp=Z,232nm,0.8s,SNR=10					
BFO	**Black Forest**	**18.80 321**	*e*P	**Pn**	**00 25 01.3**	**-1.4**
	comp=Z,35nm,0.8s					
BFO	**Black Forest**	**18.80 321**	*e*P	**Pn**	**00 25 01.3**	**-1.4**
BFO			pmax	pmax		
	comp=Z,35nm,0.8s					
BFO	**Black Forest**	**18.80 321**	*e*P	**Pn**	**00 25 01.3**	**-1.4**
	comp=Z,35nm,0.8s					
ABA	**Alger-Bouzarea**	**18.82 282**	P	**Pn**	**00 24 59.1**	**-4.0**
SIND	**Sindeldorf**	**18.83 325**	P	**Pn**	**00 25 02.3**	**-0.8**
SIND	**Sindeldorf**	**18.83 325**	P	**Pn**	**00 25 02.3**	**-0.8**
CLL	**Collm**	**18.89 334**	*e*P	**Pn**	**00 25 02.1**	**-1.7**
	comp=Z,92nm,1.4s					
CLL	**Collm**	**18.89 334**	*e*P	**Pn**	**00 25 01.0**	**-2.8**
CLL			*e*S	**Sn**	**00 28 31.0**	**-3.2**
CLL			pmax	pmax		
	comp=Z,92nm,1.4s					
CLL			MLR	MLR		
	comp=Z,1μm,21.3s					
CLL	**Collm**	**18.89 334**	*e*P	**Pn**	**00 25 01.0**	**-2.8**
	comp=Z,92nm,1.4s					
CLL			*i* pP	pP	00 25 10.3	-1.2
CLL			*e*S	**Sn**	**00 28 31.0**	**-3.2**
CLL			*e*PcP	PcP	00 29 26.0	-2.4
CLL	**Collm**	**18.89 334**	*e*P	**Pn**	**00 25 01.0**	**-2.8**
	comp=Z,92nm,1.4s					
CLL			*i* pP	pP	00 25 10.3	-1.2
CLL			*i* PP		00 25 16.4	
CLL			*i* sPP		00 25 26.3	
CLL			*e*S	**Sn**	**00 28 31.0**	**-3.2**
CLL			*e*(PcP)	PcP	00 29 26.0	-2.4
	comp=Z,100nm,2.6s					
CLL			Lm		00 34 06.0	
	comp=Z,1μm,21.3s					
CLL			*e*Lmax		00 34 12.0	
CLL	**Collm**	**18.89 334**	*e*P	**Pn**	**00 25 01.0**	**-2.8**
	comp=Z,92nm,1.4s					
CLL			*e*S	**Sn**	**00 28 31.0**	**-3.2**
	comp=Z,1μm,21.3s					
MOX	**Moxa**	**18.90 330**	*e*P	**Pn**	**00 25 02.0**	**-1.9**
	comp=Z,106nm,1.6s					
MOX			*e*S	**Sn**	**00 28 34.0**	**-0.4**
MOX						
	comp=Z,2μm,19.0s					
MOX	**Moxa**	**18.90 330**	*e*P	**Pn**	**00 25 01.6**	**-2.3**
	comp=Z,52nm,1.4s					
MOX	**Moxa**	**18.90 330**	*e*P	**Pn**	**00 25 02.0**	**-1.9**
MOX			*e*S	**Sn**	**00 28 34.0**	**-0.4**
MOX			pmax	pmax		
	comp=Z,106nm,1.6s					
MOX			MLR	MLR		
	comp=Z,2μm,19.0s					
MOX	**Moxa**	**18.90 330**	*e*P	**Pn**	**00 25 02.0**	**-1.9**
	comp=Z,106nm,1.6s					
MOX			*e*S	**Sn**	**00 28 34.0**	**-0.4**
MOX	**Moxa**	**18.90 330**	*e*P	**Pn**	**00 25 02.0**	**-1.9**
	comp=Z,106nm,1.6s					
MOX			*e*S	**Sn**	**00 28 34.0**	**-0.4**
	comp=Z,2μm,19.0s					
EMHD	**Djebel Mahouad**	**18.91 280**	P	**Pn**	**00 25 06.0**	**+1.8**
EMHD	**Djebel Mahouad**	**18.91 280**	P	**Pn**	**00 25 06.0**	**+1.8**
UMR	**Umm Al-Rimmam**	**19.01 101**	*e*P	**Pn**	**00 25 04.8**	**-0.6**
UMR			AMb	AMB	00 25 07.5	
	comp=Z,451nm,1.3s					
UMR	**Umm Al-Rimmam**	**19.01 101**	*e*P	**Pn**	**00 25 04.8**	**-0.6**
	comp=Z,451nm,1.3s					
LOMF	**Lomont**	**19.04 316**	*e*P	**Pn**	**00 25 04.0**	**-1.6**
LOMF	**Lomont**	**19.04 316**	*e*P	**Pn**	**00 25 04.0**	**-1.6**
CABF	**La Chapelle**	**19.07 314**⇓	*i*P	**Pn**	**00 25 03.6**	**-2.5**
	comp=Z,222nm,0.7s					
CABF	**La Chapelle**	**19.07 314**⇓	*i*P	**Pn**	**00 25 03.6**	**-2.5**
CABF			pmax	pmax		
	comp=Z,111nm,0.7s					
CABF	**La Chapelle**	**19.07 314**⇓	*i*P	**Pn**	**00 25 03.6**	**-2.5**
	comp=Z,111nm,0.7s					
CABF	**La Chapelle**	**19.07 314**⇓	*i*P	**Pn**	**00 25 03.6**	**-2.5**
	comp=Z,111nm,0.7s					
RDF	**Al-Radifah**	**19.11 102**	*e*P	**Pn**	**00 25 06.3**	**-0.4**
RDF			AMb	AMB	00 25 34.4	
	comp=Z,172nm,1.3s					
RDF	**Al-Radifah**	**19.11 102**	*e*P	**Pn**	**00 25 06.3**	**-0.4**
	comp=Z,172nm,1.3s					
ETOS	**Mallorca**	**19.14 291**	P	**Pn**	**00 25 08.0**	**+1.0**
	comp=Z,23nm,0.8s					
ETOS	**Mallorca**	**19.14 291**	P	**Pn**	**00 25 07.9**	**+0.9**
	comp=Z,23nm,0.8s					
MOF	**Molkenrain**	**19.15 318**	*e*P	**Pn**	**00 25 05.3**	**-1.7**
MOF	**Molkenrain**	**19.15 318**	*e*P	**Pn**	**00 25 05.3**	**-1.7**
SUW	**Suwalki**	**19.15 355**	*e*P	**Pn**	**00 25 05.5**	**-1.5**
SUW			*e*S	**Sn**	**00 28 36.1**	**-4.4**
SUW			LMZ		00 32 35.5	
	comp=Z,1μm,28.9s					
SUW	**Suwalki**	**19.15 355**	*e*P	**Pn**	**00 25 04.8**	**-2.1**
	comp=Z,232nm,0.8s					
SUW	**Suwalki**	**19.15 355**	*e*P	**Pn**	**00 25 04.8**	**-2.2**
	comp=Z,232nm,0.8s					
SUW			*e*S	**Sn**	**00 28 36.1**	**-4.4**
VIVF	**Saint-Julien-l**	**19.16 307**	*e*P	**Pn**	**00 25 03.8**	**-3.3**
	comp=Z,101nm,0.9s					
VIVF	**Saint-Julien-l**	**19.16 307**	*e*P	**Pn**	**00 25 03.8**	**-3.3**
VIVF			pmax	pmax		
	comp=Z,51nm,0.9s					
VIVF	**Saint-Julien-l**	**19.16 307**	*e*P	**Pn**	**00 25 03.8**	**-3.3**
	comp=Z,51nm,0.9s					
VIVF	**Saint-Julien-l**	**19.16 307**	*e*P	**Pn**	**00 25 03.8**	**-3.3**
	comp=Z,51nm,0.9s					
VOR	**Voronezh**	**19.20 25**	*e*P	**Pn**	**00 25 07.0**	**-0.6**
VOR			pmax	pmax		
	comp=Z,260nm,1.4s					
VOR	**Voronezh**	**19.20 25**	*e*P	**Pn**	**00 25 07.0**	**-0.6**
	comp=Z,260nm,1.4s					
HINF	**Hinteralfeld**	**19.28 318**⇓	*i*P	**Pn**	**00 25 05.4**	**-3.2**
	comp=Z,56nm,0.5s					
HINF	**Hinteralfeld**	**19.28 318**⇓	*i*P	**Pn**	**00 25 05.4**	**-3.2**
HINF			pmax	pmax		
	comp=Z,28nm,0.5s					
HINF	**Hinteralfeld**	**19.28 318**⇓	*i*P	**Pn**	**00 25 05.4**	**-3.2**
	comp=Z,28nm,0.5s					
HINF	**Hinteralfeld**	**19.28 318**⇓	*i*P	**Pn**	**00 25 05.4**	**-3.2**
	comp=Z,28nm,0.5s					
ECH	**Echery**	**19.35 319**	*e*P	**Pn**	**00 25 08.5**	**-0.9**
ECH	**Echery**	**19.35 319**	*e*P	**Pn**	**00 25 07.1**	**-2.3**
ECH			*e*S	**Sn**	**00 28 43.7**	**-1.6**
ECH			pmax	pmax		
	comp=Z,119nm,1.2s					
ECH	**Echery**	**19.35 319**	*e*P	**Pn**	**00 25 07.1**	**-2.3**
	comp=Z,119nm,1.2s					
ECH			*e*S	**Sn**	**00 28 43.7**	**-1.6**
ECH	**Echery**	**19.35 319**	*e*P	**Pn**	**00 25 07.1**	**-2.3**
	comp=Z,119nm,1.2s					
ECH			*e*S	**Sn**	**00 28 43.7**	**-1.6**
GKP	**Gorka Klasztor**	**19.35 344**	*e*P	**Pn**	**00 25 05.8**	**-3.5**
GKP			*e*S	**Sn**	**00 28 47.0**	**+1.6**
GKP	**Gorka Klasztor**	**19.35 344**⇓	*e*P	**Pn**	**00 25 05.8**	**-3.6**
SWS	**Schriesheim-Wi**	**19.36 324**	P	**Pn**	**00 25 07.6**	**-1.9**
SWS	**Schriesheim-Wi**	**19.36 324**	P	**Pn**	**00 25 07.6**	**-1.9**
TOD	**Tromm**	**19.39 324**	*e*P	**Pn**	**00 25 07.6**	**-2.2**
TOD	**Tromm**	**19.39 324**	*e*P	**Pn**	**00 25 07.6**	**-2.2**
CDF	**Champ du Feu**	**19.40 320**	*e*P	**Pn**	**00 25 07.1**	**-2.9**
	comp=Z,159nm,0.8s					
CDF	**Champ du Feu**	**19.40 320**	*e*P	**Pn**	**00 25 07.1**	**-2.9**
CDF			pmax	pmax		
	comp=Z,79nm,0.8s					
CDF	**Champ du Feu**	**19.40 320**	*e*P	**Pn**	**00 25 07.1**	**-2.9**
	comp=Z,79nm,0.8s					
CDF	**Champ du Feu**	**19.40 320**	*e*P	**Pn**	**00 25 07.1**	**-2.9**
	comp=Z,79nm,0.8s					
LASF	**Ste Croix**	**19.41 305**	*e*P	**Pn**	**00 25 07.0**	**-3.1**
	comp=Z,244nm,1.1s					
LASF	**Ste Croix**	**19.41 305**	*e*P	**Pn**	**00 25 07.0**	**-3.1**
	comp=Z,122nm,1.1s					
SSB	**Saint Sauveur**	**19.42 309**	*e*P	**Pn**	**00 25 06.9**	**-3.3**
SSB			pmax	pmax		
	comp=Z,57nm,0.9s					
SSB	**Saint Sauveur**	**19.42 309**	*e*P	**Pn**	**00 25 06.9**	**-3.3**
	comp=Z,57nm,0.9s					
SSB	**Saint Sauveur**	**19.42 309**	*e*P	**Pn**	**00 25 06.9**	**-3.3**
	comp=Z,57nm,0.9s					
LANF	**Langenberg**	**19.48 322**	*e*P	**Pn**	**00 25 09.4**	**-1.5**
LANF	**Langenberg**	**19.48 322**	*e*P	**Pn**	**00 25 09.4**	**-1.5**
KTD	**Kalmit**	**19.55 323**	*e*P	**Pn**	**00 25 09.6**	**-2.2**
KTD	**Kalmit**	**19.55 323**	*e*P	**Pn**	**00 25 09.6**	**-2.2**
MNK	**Minsk**	**19.56 3**	*e*P	**Pn**	**00 25 08.0**	**-3.9**
MNK	**Minsk**	**19.56 3**	*e*P	**Pn**	**00 25 08.0**	**-3.9**
EJON	**La Jonquera**	**19.59 299**	P	**Pn**	**00 25 12.3**	**0.0**
	comp=Z,17nm,0.8s					
EJON	**La Jonquera**	**19.59 299**	P	**Pn**	**00 25 12.4**	**0.0**
	comp=Z,17nm,0.8s					
RUE	**Ruedersdorf**	**19.61 337**	*e*P	**Pn**	**00 25 08.9**	**-3.5**
	comp=Z,154nm,1.0s					
RUE	**Ruedersdorf**	**19.61 337**	*e*P	**Pn**	**00 25 10.9**	**-1.5**
	comp=Z,236nm,1.1s					
RUE	**Ruedersdorf**	**19.61 337**	*e*P	**Pn**	**00 25 10.9**	**-1.5**
	comp=Z,236nm,1.1s					
VRHR	**Novokhopersk**	**19.62 30**	*e*P	**Pn**	**00 25 11.1**	**-1.5**
VRHR			*e*S	**Sn**	**00 28 44.0**	**-7.8**
VRHR			pmax	pmax		
	comp=N,20nm,0.6s					
VRHR			pmax	pmax		
	comp=Z,50nm,0.6s					
VRHR			pmax	pmax		
	comp=E,4.0nm,0.3s					
VRHR			smax			
	comp=N,110nm,1.2s					
VRHR			smax			
	comp=E,110nm,1.2s					
VRHR			smax			
	comp=Z,20nm,1.2s					
VRHR			MLR	MLR		
	comp=N,590nm,18.0s					
VRHR			MLR	MLR		
	comp=E,500nm,18.0s					
VRHR			MLR	MLR		
	comp=Z,780nm,18.0s					
VRHR	**Novokhopersk**	**19.62 30**	*e*P	**Pn**	**00 25 11.1**	**-1.5**
HAU	**Haudompre**	**19.67 317**⇓	*i*P	**Pn**	**00 25 10.5**	**-2.7**
	comp=Z,195nm,0.9s					
HAU			*e*MLR	MLR		
	comp=Z,2μm,21.0s					
HAU	**Haudompre**	**19.67 317**⇓	*i*P	**Pn**	**00 25 10.5**	**-2.7**
HAU			pmax	pmax		
	comp=Z,98nm,0.9s					
HAU	**Haudompre**	**19.67 317**⇓	*i*P	**Pn**	**00 25 10.5**	**-2.7**
	comp=Z,98nm,0.9s					
HAU	**Haudompre**	**19.67 317**⇓	*i*P	**Pn**	**00 25 10.5**	**-2.7**
	comp=Z,98nm,0.9s					
UBBA	**Unterbreizbach**	**19.70 328**	*e*P	**Pn**	**00 25 10.5**	**-3.0**
	comp=Z,26nm,1.2s					
CFON	**Fontmartina**	**19.76 297**	P	**Pn**	**00 25 13.0**	**-1.3**
	comp=Z,39nm,0.6s					
CFON	**Fontmartina**	**19.76 297**	P	**Pn**	**00 25 13.0**	**-1.4**
	comp=Z,39nm,0.6s					
FILF	**Fillols**	**19.86 299**	*e*P	**Pn**	**00 25 12.1**	**-3.4**
FILF	**Fillols**	**19.86 299**	*e*P	**Pn**	**00 25 12.1**	**-3.4**
NACGM	**Naroch**	**19.93 1**	*e*P	**Pn**	**00 25 12.0**	**-4.2**
NACGM	**Naroch**	**19.93 1**	*e*P	**Pn**	**00 25 12.0**	**-4.2**
LRDF	**Laroque-de-Fa**	**19.97 301**	*e*P	**Pn**	**00 25 14.3**	**-2.5**
LRDF	**Laroque-de-Fa**	**19.97 301**	*e*P	**Pn**	**00 25 14.3**	**-2.5**
TNS	**Taunus Mts**	**19.98 325**	*e*P	**Pn**	**00 25 14.4**	**-2.4**
	comp=Z,64nm,0.7s					
TNS	**Taunus Mts**	**19.98 325**	*e*P	**Pn**	**00 25 14.4**	**-2.4**
TNS			pmax	pmax		
	comp=Z,64nm,0.7s					
TNS	**Taunus Mts**	**19.98 325**	*e*P	**Pn**	**00 25 14.4**	**-2.4**
	comp=Z,64nm,0.7s					
THEF	**They Montfort**	**20.00 318**	*e*P	**Pn**	**00 25 14.6**	**-2.4**
THEF	**They Montfort**	**20.00 318**	*e*P	**Pn**	**00 25 14.6**	**-2.4**
EBNR	**Beni Rached**	**20.05 281**	P	**P**	**00 25 18.0**	**+2.1**
EBNR	**Beni Rached**	**20.05 281**	P	**P**	**00 25 18.0**	**+2.1**
ABH	**Alteburg**	**20.18 323**	P	**P**	**00 25 17.9**	**+0.7**
ABH	**Alteburg**	**20.18 323**	P	**P**	**00 25 17.9**	**+0.7**
ECHA	**Ech Chlef**	**20.19 281**	P	**P**	**00 25 19.5**	**+2.1**
ECHA	**Ech Chlef**	**20.19 281**	P	**P**	**00 25 19.5**	**+2.1**
EIBI	**Ibiza**	**20.21 289**	P	**P**	**00 25 18.6**	**+1.0**
	comp=Z,28nm,0.8s					
EIBI	**Ibiza**	**20.21 289**	P	**P**	**00 25 18.6**	**+1.0**
	comp=Z,28nm,0.8s					
VALF	**Valcebollere**	**20.21 299**	*e*P	**P**	**00 25 18.1**	**+0.5**
VALF	**Valcebollere**	**20.21 299**	*e*P	**P**	**00 25 18.1**	**+0.5**
LBL	**Lubilhac**	**20.24 307**	*e*P	**P**	**00 25 20.2**	**+2.4**
CLLI	**Llivia**	**20.26 299**	P	**P**	**00 25 18.0**	**-0.1**
CLLI	**Llivia**	**20.26 299**	P	**P**	**00 25 18.0**	**-0.1**
PLDF	**La Plantade**	**20.29 310**	*e*P	**P**	**00 25 18.8**	**+0.4**
PLDF	**La Plantade**	**20.29 310**	*e*P	**P**	**00 25 18.8**	**+0.4**
MTLF	**Montolieu**	**20.31 301**⇓	*i*P	**P**	**00 25 17.7**	**-0.9**
	comp=Z,113nm,1.2s					
MTLF	**Montolieu**	**20.31 301**⇓	*i*P	**P**	**00 25 17.7**	**-0.9**
MTLF			pmax	pmax		
	comp=Z,56nm,1.2s					
MTLF	**Montolieu**	**20.31 301**⇓	*i*P	**P**	**00 25 17.7**	**-0.9**
	comp=Z,56nm,1.2s					
MTLF	**Montolieu**	**20.31 301**⇓	*i*P	**P**	**00 25 17.7**	**-0.9**
	comp=Z,56nm,1.2s					
ETRT	**Tiaret**	**20.31 278**	P	**P**	**00 25 22.9**	**+4.2**
CLZ	**Clausthal**	**20.32 331**	*e*P	**P**	**00 25 16.6**	**-2.0**
	comp=Z,45nm,1.1s					
CLZ	**Clausthal**	**20.32 331**	*e*P	**P**	**00 25 16.6**	**-2.0**
CLZ			pmax	pmax		
	comp=Z,45nm,1.1s					
CLZ	**Clausthal**	**20.32 331**	*e*P	**P**	**00 25 16.6**	**-2.0**
	comp=Z,45nm,1.1s					
IDID	**Didziasalis**	**20.35 1**	*e*P	**P**	**00 25 18.6**	**-0.3**
IDID			AMB	AMB	00 25 21.2	
	comp=Z,15nm,1.2s					
IDID	**Didziasalis**	**20.35 1**	*e*P	**P**	**00 25 18.6**	**-0.3**
	comp=Z,15nm,1.2s,SNR=33					
IIGN	**Ignalina**	**20.38 0**	*e*P	**P**	**00 25 18.9**	**-0.4**
IIGN			AMB	AMB	00 25 21.7	
	comp=Z,32nm,1.2s					
IIGN	**Ignalina**	**20.38 0**	*e*P	**P**	**00 25 18.9**	**-0.4**
	comp=Z,32nm,1.2s,SNR=33					
EANR	**'Ain N'Sour**	**20.42 280**	P	**P**	**00 25 21.0**	**+1.1**
EANR	**'Ain N'Sour**	**20.42 280**	P	**P**	**00 25 21.0**	**+1.1**
SMF	**Signal de Mont**	**20.45 312**⇓	*i*P	**P**	**00 25 18.6**	**-1.5**
	comp=Z,289nm,0.8s					
SMF	**Signal de Mont**	**20.45 312**⇓	*i*P	**P**	**00 25 18.6**	**-1.5**
SMF			pmax	pmax		
	comp=Z,145nm,0.8s					
SMF	**Signal de Mont**	**20.45 312**⇓	*i*P	**P**	**00 25 18.6**	**-1.5**
	comp=Z,145nm,0.8s					
SMF	**Signal de Mont**	**20.45 312**⇓	*i*P	**P**	**00 25 18.6**	**-1.5**
	comp=Z,145nm,0.8s					
PYM	**Petit Puy Mans**	**20.59 309**	*e*P	**P**	**00 25 22.1**	**+0.4**
PYM	**Petit Puy Mans**	**20.59 309**	*e*P	**P**	**00 25 22.1**	**+0.4**
ISAL	**Salakas**	**20.60 360**	*e*P	**P**	**00 25 21.0**	**-0.7**
ISAL			AMB	AMB	00 25 23.9	
	comp=Z,21nm,1.0s					
ISAL	**Salakas**	**20.60 360**	*e*P	**P**	**00 25 21.0**	**-0.7**
	comp=Z,21nm,1.0s,SNR=29					
AGO	**Saint Agoulin**	**20.64 309**	*e*P	**P**	**00 25 22.9**	**+0.7**
AGO	**Saint Agoulin**	**20.64 309**	*e*P	**P**	**00 25 22.9**	**+0.7**
MEZF	**Maizieres J'vi**	**20.67 317**⇓	*i*P	**P**	**00 25 21.7**	**-0.7**
	comp=Z,308nm,0.8s,baz=132					
MEZF	**Maizieres J'vi**	**20.67 317**⇓	*i*P	**P**	**00 25 21.7**	**-0.7**
	comp=Z,308nm,0.8s					
MEZF	**Maizieres J'vi**	**20.67 317**⇓	*i*P	**P**	**00 25 21.7**	**-0.7**
	comp=Z,154nm,0.8s,baz=132					
EPOB	**Poblet**	**20.68 295**	P	**P**	**00 25 22.5**	**-0.2**
	comp=Z,48nm,0.6s					
EPOB	**Poblet**	**20.68 295**	P	**P**	**00 25 22.5**	**-0.2**
	comp=Z,48nm,0.6s					
LOR	**Lormes**	**20.73 313**⇓	*i*P	**P**	**00 25 21.9**	**-1.2**
	comp=Z,156nm,0.7s,baz=123					
LOR			*e*MLR	MLR		
	comp=Z,2μm,21.8s,MS4.1					
LOR	**Lormes**	**20.73 313**⇓	*i*P	**P**	**00 25 21.9**	**-1.2**
LOR			pmax	pmax		
	comp=Z,78nm,0.7s					
LOR			MLR	MLR		
	comp=Z,2μm,21.8s,MS4.4					
LOR	**Lormes**	**20.73 313**⇓	*i*P	**P**	**00 25 21.9**	**-1.2**
	comp=Z,78nm,0.7s					
LOR			LR	LR		
	comp=Z,2μm,21.8s,MS4.4					
LOR	**Lormes**	**20.73 313**⇓	*i*P	**P**	**00 25 21.9**	**-1.2**
	comp=Z,78nm,0.7s,baz=123					
WLF	**Walferdange**	**20.75 321**	P	**P**	**00 25 22.2**	**-1.1**
	comp=Z,74nm,1.6s					
WLF	**Walferdange**	**20.75 321**	*e*P	**P**	**00 25 22.7**	**-0.6**
	comp=Z,64nm,1.0s					
WLF	**Walferdange**	**20.75 321**	*e*P	**P**	**00 25 22.4**	**-0.9**
WLF			pmax	pmax		
	comp=Z,66nm,0.9s					
WLF	**Walferdange**	**20.75 321**	*e*P	**P**	**00 25 22.4**	**-1.0**
	comp=Z,66nm,0.9s					
WLF	**Walferdange**	**20.75 321**	*e*P	**P**	**00 25 22.4**	**-0.9**
	comp=Z,66nm,0.9s					
IZAR	**Zarasai**	**20.78 0**	*e*P	**P**	**00 25 22.7**	**-0.9**
IZAR			AMB	AMB	00 25 26.8	
	comp=Z,30nm,1.3s					
IZAR	**Zarasai**	**20.78 0**	*e*P	**P**	**00 25 22.7**	**-0.9**
	comp=Z,30nm,1.3s,SNR=28					
AVF	**Avril sur Loir**	**20.82 311**⇓	*i*P	**P**	**00 25 23.0**	**-1.1**
	comp=Z,385nm,1.0s					
AVF	**Avril sur Loir**	**20.82 311**⇓	*i*P	**P**	**00 25 23.0**	**-1.1**
AVF			pmax	pmax		
	comp=Z,193nm,1.0s					
AVF	**Avril sur Loir**	**20.82 311**⇓	*i*P	**P**	**00 25 23.0**	**-1.1**
	comp=Z,192nm,1.0s					
AVF	**Avril sur Loir**	**20.82 311**⇓	*i*P	**P**	**00 25 23.0**	**-1.1**
	comp=Z,192nm,1.0s					
CSOR	**Sort**	**20.84 298**	P	**P**	**00 25 25.1**	**+0.7**
	comp=Z,60nm,0.5s					
CSOR	**Sort**	**20.84 298**	P	**P**	**00 25 25.0**	**+0.6**
	comp=Z,60nm,0.5s					
SSF	**Saint Saulge**	**20.84 312**	*e*P	**P**	**00 25 23.0**	**-1.4**
	comp=Z,1μm,1.2s					
SSF	**Saint Saulge**	**20.84 312**	*e*P	**P**	**00 25 23.0**	**-1.4**
SSF			pmax	pmax		
	comp=Z,513nm,1.2s					
SSF	**Saint Saulge**	**20.84 312**	*e*P	**P**	**00 25 23.0**	**-1.4**
	comp=Z,513nm,1.2s					
SSF	**Saint Saulge**	**20.84 312**	*e*P	**P**	**00 25 23.0**	**-1.4**
	comp=Z,513nm,1.2s					
CAF	**Calviac**	**20.91 306**⇓	*i*P	**P**	**00 25 24.1**	**-1.0**
	comp=Z,80nm,1.0s					
CAF	**Calviac**	**20.91 306**⇓	*i*P	**P**	**00 25 24.1**	**-1.0**
CAF			pmax	pmax		
	comp=Z,40nm,1.0s					
CAF	**Calviac**	**20.91 306**⇓	*i*P	**P**	**00 25 24.1**	**-1.0**
	comp=Z,40nm,1.0s					
CAF	**Calviac**	**20.91 306**⇓	*i*P	**P**	**00 25 24.1**	**-1.0**
	comp=Z,40nm,1.0s					
NRDL	**Niedersach Rie**	**20.93 332**	*e*P	**P**	**00 25 23.0**	**-2.2**
	comp=Z,124nm,2.0s					
BGF	**Bois d'Agland**	**21.03 310**

EBEN Beniarda 21.41 288 P **P 00 25 31.1 +0.5**
comp=Z,34nm,0.6s,mb4.9
HYF Humbligny 21.46 312 *e*P **P 00 25 30.3 -0.8**
HYF Humbligny 21.46 312 *e*P **P 00 25 30.3 -0.8**
ODJA Bouhanifia 21.50 279 P **P 00 25 33.0 +1.5**
RESF Ens 21.51 299 *e*P **P 00 25 31.6 0.0**
RESF Ens 21.51 299 *e*P **P 00 25 31.6 0.0**
EPF Esparros 21.56 300 *e*P **P 00 25 29.6 -2.5**
comp=Z,46nm,0.8s,mb4.6
EPF Esparros 21.56 300 *e*P **P 00 25 29.6 -2.5**
EPF pmax pmax
comp=Z,23nm,0.8s,mb4.7
EPF Esparros 21.56 300 *e*P **P 00 25 29.6 -2.5**
comp=Z,23nm,0.8s,mb4.7
EPF Esparros 21.56 300 *e*P **P 00 25 29.6 -2.5**
comp=Z,23nm,0.8s,mb4.6
BSD Bornholm Skovb 21.60 342 *i* P **P 00 25 29.4 -3.0**
comp=Z,30nm,0.9s,mb4.7
BSD
comp=Z,1µm,18.0s
BSD Bornholm Skovb 21.60 342 *i* P **P 00 25 29.5 -2.9**
comp=Z,30nm,0.9s,mb4.7,SNR=34
EBIE Bielsa 21.62 299 P **P 00 25 33.0 +0.2**
comp=Z,16nm,0.5s,mb4.7
EBIE Bielsa 21.62 299 P **P 00 25 33.0 +0.2**
comp=Z,16nm,0.5s,mb4.7
BCLA Clavier 21.64 322 P **P 00 25 32.2 -0.8**
comp=Z,124nm,1.4s,mb5.2
BCLA Clavier 21.64 322 P **P 00 25 32.1 -0.8**
comp=Z,124nm,1.4s,mb5.2
BEBN Eben Emael 21.69 323 P **P 00 25 32.9 -0.5**
comp=Z,35nm,1.7s,mb4.5
BEBN Eben Emael 21.69 323 P **P 00 25 32.9 -0.5**
comp=Z,35nm,1.7s,mb4.5
GIVF Givet 21.70 321⇓*i*P **P 00 25 32.2 -1.3**
comp=Z,188nm,0.9s,mb5.2
GIVF Givet 21.70 321⇓*i*P **P 00 25 32.2 -1.3**
GIVF pmax pmax
comp=Z,94nm,0.9s,mb5.2
GIVF Givet 21.70 321⇓*i*P **P 00 25 32.2 -1.3**
comp=Z,94nm,0.9s,mb5.2
GIVF Givet 21.70 321⇓*i*P **P 00 25 32.2 -1.3**
comp=Z,94nm,0.9s,mb5.2
TAM Tamanrasset 21.71 242 *e*P **P 00 25 36.0 +2.1**
TAM pmax pmax
comp=Z,212nm,1.4s,mb5.4
TAM Tamanrasset 21.71 242 *e*P **P 00 25 36.0 +2.0**
comp=Z,212nm,1.4s,mb5.4
TAM Tamanrasset 21.71 242 *e*P **P 00 25 36.0 +2.1**
comp=Z,212nm,1.4s,mb5.4
EMOS Mosqueruela 21.71 292 P **P 00 25 34.6 +0.8**
comp=Z,19nm,0.6s,mb4.7
EMOS Mosqueruela 21.71 292 P **P 00 25 34.7 +0.9**
comp=Z,19nm,0.6s,mb4.7
IBBN Ibbenburen 21.75 328 *e*P **P 00 25 32.7 -1.3**
comp=Z,150nm,1.6s,mb5.2
LABF Labassere 21.75 300 *e*P **P 00 25 33.8 -0.4**
LABF Labassere 21.75 300 *e*P **P 00 25 33.8 -0.4**
VIEF Viey 21.75 299 *e*P **P 00 25 33.7 -0.5**
VIEF Viey 21.75 299 *e*P **P 00 25 33.7 -0.5**
USTO Oran 21.78 280 P **P 00 25 40.0 +5.5**
DOU Dourbes 21.82 320 P **P 00 25 33.5 -1.3**
comp=Z,104nm,1.6s,mb5.0
DOU Dourbes 21.82 320 P **P 00 25 33.4 -1.4**
comp=Z,104nm,1.6s,mb5.0
ESAC San Caprasio 21.89 296 P **P 00 25 35.4 -0.3**
comp=Z,52nm,0.5s,mb5.2
ESAC San Caprasio 21.89 296 P **P 00 25 35.4 -0.3**
comp=Z,52nm,0.5s,mb5.2
BSEG Bad Segeberg 21.98 334 *e*P **P 00 25 34.4 -2.1**
comp=Z,52nm,1.4s,mb4.8
BSEG Bad Segeberg 21.98 334 *e*P **P 00 25 34.4 -2.1**
BSEG pmax pmax
comp=Z,52nm,1.4s,mb4.8
BSEG Bad Segeberg 21.98 334 *e*P **P 00 25 34.4 -2.1**
comp=Z,52nm,1.4s,mb4.8
BAIF Baives 22.00 320⇓*i*P **P 00 25 35.5 -1.2**
comp=Z,351nm,0.7s,mb5.6
BAIF Baives 22.00 320⇓*i*P **P 00 25 35.5 -1.2**
BAIF pmax pmax
comp=Z,176nm,0.7s,mb5.6
BAIF Baives 22.00 320⇓*i*P **P 00 25 35.5 -1.2**
comp=Z,176nm,0.7s,mb5.6
BAIF Baives 22.00 320⇓*i*P **P 00 25 35.5 -1.2**
comp=Z,176nm,0.7s,mb5.6
CART Cartagena 22.02 285 *e*P **P 00 25 36.6 -0.6**
comp=Z,84nm,0.9s,mb5.2
CART Cartagena 22.02 285 *i* P **P 00 25 36.1 -1.0**
CART *i* S **S 00 29 36.1 -2.2**
REYF Montagne du Re 22.09 299 *e*P **P 00 25 38.1 +0.3**
REYF Montagne du Re 22.09 299 *e*P **P 00 25 38.1 +0.3**
ETSF Etsaut 22.17 299 *e*P **P 00 25 38.5 -0.2**
comp=Z,102nm,0.9s,mb5.0
ETSF Etsaut 22.17 299 *e*P **P 00 25 38.5 -0.2**
ETSF pmax pmax
comp=Z,51nm,0.9s,mb5.0
ETSF Etsaut 22.17 299 *e*P **P 00 25 38.5 -0.2**
comp=Z,51nm,0.9s,mb5.0
ETSF Etsaut 22.17 299 *e*P **P 00 25 38.5 -0.2**
comp=Z,51nm,0.9s,mb5.0
SNF Seneffe 22.22 321 P **P 00 25 38.0 -1.1**
comp=Z,82nm,1.8s,mb4.9
SNF Seneffe 22.22 321 P **P 00 25 38.0 -1.1**
comp=Z,82nm,1.8s,mb4.9
MOS Moscow 22.22 17 *e*P **P 00 25 36.4 -2.6**
MOS *e* 00 26 00.5
MOS *e* 00 29 34.7
MOS MLR MLR
comp=Z,1µm,20.0s,MS4.4
MOS Moscow 22.22 17 *e*P **P 00 25 36.4 -2.6**
MOS Moscow 22.22 17 *e*PcP PcP 00 29 34.7 +0.2
UCC Uccle 22.35 322 P **P 00 25 39.4 -1.1**
UCC Uccle 22.35 322 P **P 00 25 39.3 -1.2**
ODZI Dziouia 22.38 279 P **P 00 25 43.0 +2.1**
ETOB Tobarra 22.45 288 P **P 00 25 41.4 -0.2**
comp=Z,20nm,0.8s,mb4.6
ETOB Tobarra 22.45 288 P **P 00 25 41.4 -0.2**
comp=Z,20nm,0.8s,mb4.6
SJPF Ste Jean 22.70 299 *e*P **P 00 25 44.0 -0.2**
comp=Z,242nm,0.9s,mb5.3
SJPF Ste Jean 22.70 299 *e*P **P 00 25 44.0 -0.2**
SJPF pmax pmax
comp=Z,121nm,0.9s,mb5.3
SJPF Ste Jean 22.70 299 *e*P **P 00 25 44.0 -0.2**
comp=Z,121nm,0.9s,mb5.3
SJPF Ste Jean 22.70 299 *e*P **P 00 25 44.0 -0.2**
comp=Z,121nm,0.9s,mb5.3
OSSF Osses 22.75 300 *e*P **P 00 25 44.8 0.0**
OSSF Osses 22.75 300 *e*P **P 00 25 44.8 0.0**
COP Copenhagen 22.77 340 *i* P **P 00 25 40.9 -4.0**
COP *i* S **S 00 29 56.9 +5.2**
COP
comp=Z,560nm,18.0s
COP Copenhagen 22.77 340 *e*P **P 00 25 41.0 -3.9**
SNR=33
EALK Alkurruntz 22.92 299 P **P 00 25 47.4 +0.8**
comp=Z,35nm,0.8s,mb4.8
EALK Alkurruntz 22.92 299 P **P 00 25 47.4 +0.8**
comp=Z,35nm,0.8s,mb4.8
ELIZ Elizondo 22.92 299 P **P 00 25 47.1 +0.5**
ELIZ pmax pmax
comp=Z,94nm,0.8s,mb5.3
ELIZ Elizondo 22.92 299 P **P 00 25 47.1 +0.5**
comp=Z,94nm,0.8s,mb5.3
ELIZ Elizondo 22.92 299 P **P 00 25 47.1 +0.5**
comp=Z,94nm,0.8s,mb5.3
MFF Saint Martin d 22.94 308⇓*i*P **P 00 25 45.1 -1.7**
comp=Z,259nm,1.0s,mb5.3
MFF Saint Martin d 22.94 308⇓*i*P **P 00 25 45.1 -1.7**
MFF pmax pmax
comp=Z,129nm,1.0s,mb5.3
MFF Saint Martin d 22.94 308⇓*i*P **P 00 25 45.1 -1.7**
comp=Z,129nm,1.0s,mb5.3
MFF Saint Martin d 22.94 308⇓*i*P **P 00 25 45.1 -1.7**
comp=Z,129nm,1.0s,mb5.3
ETOR Torete 22.96 293 P **P 00 25 46.4 -0.7**
ETOR pmax pmax
comp=Z,27nm,0.8s,mb4.7
ETOR Torete 22.96 293 P **P 00 25 46.4 -0.6**
comp=Z,26nm,0.8s,mb4.7
ETOR Torete 22.96 293 P **P 00 25 46.4 -0.7**
comp=Z,27nm,0.8s,mb4.7
ENIJ Nijar 23.01 283 P **P 00 25 47.6 0.0**
ENIJ pmax pmax
comp=Z,74nm,0.7s,mb5.2
ENIJ Nijar 23.01 283 P **P 00 25 47.6 0.0**
comp=Z,74nm,0.7s,mb5.2
ENIJ Nijar 23.01 283 P **P 00 25 47.6 0.0**
comp=Z,74nm,0.7s,mb5.2
EVIA Vianos 23.20 288 P **P 00 25 49.3 -0.2**
EVIA pmax pmax
comp=Z,79nm,0.7s,mb5.2
EVIA Vianos 23.20 288 P **P 00 25 49.3 -0.2**
comp=Z,79nm,0.7s,mb5.2
EVIA Vianos 23.20 288 P **P 00 25 49.3 -0.2**
comp=Z,79nm,0.7s,mb5.2
EHUE Huescar 23.28 285 P **P 00 25 50.5 +0.1**
EHUE pmax pmax
comp=Z,31nm,1.0s,mb4.7
EHUE Huescar 23.28 285 P **P 00 25 50.5 +0.1**
comp=Z,31nm,1.0s,mb4.7
EHUE Huescar 23.28 285 P **P 00 25 50.5 +0.1**
comp=Z,31nm,1.0s,mb4.7
MENF Mencas 23.37 319 *e*P **P 00 25 49.5 -1.7**
MENF Mencas 23.37 319 *e*P **P 00 25 49.5 -1.7**
VSU Vasula 23.50 1 *c*e*P **P 00 25 51.4 -1.0**
VSU Vasula 23.50 1 *e*P **P 00 25 51.4 -1.0**
ECRI Cripan 23.53 298 P **P 00 25 53.1 +0.2**
ECRI pmax pmax
comp=Z,73nm,0.6s,mb5.3
ECRI Cripan 23.53 298 P **P 00 25 53.1 +0.3**
comp=Z,73nm,0.6s,mb5.3
ECRI Cripan 23.53 298 P **P 00 25 53.1 +0.2**
comp=Z,73nm,0.6s,mb5.3
EBER Berja 23.56 283 P **P 00 25 53.7 +0.5**
comp=Z,67nm,0.7s,mb5.2
EBER Berja 23.56 283 P **P 00 25 53.7 +0.5**
comp=Z,67nm,0.7s,mb5.2
ZAI Zaio 23.65 278 *i* P **P 00 25 56.0 +1.9**
EQES Quesada 23.66 285 P **P 00 25 53.9 -0.2**
comp=Z,52nm,0.7s,mb5.1
EQES Quesada 23.66 285 P **P 00 25 53.8 -0.3**
comp=Z,52nm,0.7s,mb5.1
LDF La Druitiere 23.71 313⇓*i*P **P 00 25 52.6 -1.9**
comp=Z,83nm,0.7s,mb5.0
LDF La Druitiere 23.71 313⇓*i*P **P 00 25 52.6 -1.9**
LDF pmax pmax
comp=Z,42nm,0.6s,mb5.0
LDF La Druitiere 23.71 313⇓*i*P **P 00 25 52.6 -1.9**
comp=Z,42nm,0.6s,mb5.0
LDF La Druitiere 23.71 313⇓*i*P **P 00 25 52.6 -1.9**
comp=Z,42nm,0.7s,mb5.0
MELI Melilla 23.76 279 *i* P **P 00 25 55.7 +0.7**
EALB Alboran 23.76 281 P **P 00 25 56.0 +1.0**
comp=Z,89nm,0.9s,mb5.2
EALB Alboran 23.76 281 P **P 00 25 56.0 +0.9**
comp=Z,89nm,0.9s,mb5.2
FLN La Foliniere 24.00 313⇓*i*P **P 00 25 55.1 -2.0**
comp=Z,144nm,0.6s,mb5.3,baz=119
FLN *e*MLR MLR
comp=Z,2µm,20.8s,MS4.2
FLN La Foliniere 24.00 313⇓*i*P **P 00 25 55.1 -2.0**
FLN pmax pmax
comp=Z,72nm,0.6s,mb5.3
FLN MLR MLR
comp=Z,2µm,20.8s,MS4.5
FLN La Foliniere 24.00 313⇓*i*P **P 00 25 55.1 -2.0**
comp=Z,72nm,0.6s,mb5.3
FLN LR LR
comp=Z,2µm,20.8s,MS4.5
FLN La Foliniere 24.00 313⇓*i*P **P 00 25 55.1 -2.0**
comp=Z,72nm,0.6s,mb5.3,baz=119
GRR Gorron 24.07 312⇓*i*P **P 00 25 56.3 -1.5**
comp=Z,118nm,0.5s,mb5.3
GRR Gorron 24.07 312⇓*i*P **P 00 25 56.3 -1.5**
GRR pmax pmax
comp=Z,59nm,0.5s,mb5.3
GRR Gorron 24.07 312⇓*i*P **P 00 25 56.3 -1.5**
comp=Z,59nm,0.5s,mb5.3
GRR Gorron 24.07 312⇓*i*P **P 00 25 56.3 -1.5**
comp=Z,59nm,0.5s,mb5.3
ECOG Cogollos-Vega 24.07 284 P **P 00 25 59.0 +1.1**
ECOG pmax pmax
comp=Z,54nm,0.9s,mb5.0
ECOG Cogollos-Vega 24.07 284 P **P 00 25 59.0 +1.1**
comp=Z,54nm,0.9s,mb5.0
ECOG Cogollos-Vega 24.07 284 P **P 00 25 59.0 +1.1**
comp=Z,54nm,0.9s,mb5.0
EGUA Guajares 24.11 283 P **P 00 25 58.6 +0.4**
EGUA pmax pmax
comp=Z,372nm,0.8s,mb5.9
EGUA Guajares 24.11 283 P **P 00 25 58.6 +0.4**
comp=Z,372nm,0.8s,mb5.9
EGUA Guajares 24.11 283 P **P 00 25 58.6 +0.4**
comp=Z,372nm,0.8s,mb5.9
EBAN Banos Encina 24.21 286 P **P 00 25 59.6 +0.5**
EBAN pmax pmax
comp=Z,31nm,0.6s,mb4.9
EBAN Banos Encina 24.21 286 P **P 00 25 59.6 +0.5**
comp=Z,31nm,0.6s,mb4.9
EBAN Banos Encina 24.21 286 P **P 00 25 59.6 +0.5**
comp=Z,31nm,0.6s,mb4.9
ERON Agron 24.28 284 P **P 00 26 00.4 +0.6**
comp=Z,44nm,0.8s,mb4.9
ERON Agron 24.28 284 P **P 00 26 00.4 +0.6**
comp=Z,44nm,0.8s,mb4.9
ELAN Lanestosa 24.30 299 P **P 00 26 00.4 +0.5**
comp=Z,106nm,0.9s,mb5.3
ELAN Lanestosa 24.30 299 P **P 00 26 00.4 +0.5**
comp=Z,106nm,0.9s,mb5.3
ESDC Sonseca Array 24.35 290 P **P 00 26 00.3 0.0**
comp=Z,30nm,0.6s,mb4.9,baz=82,slow=9.6,SNR=221
ESDC LR LR 00 36 28.3
comp=Z,286nm,19.1s,MS3.8,baz=80,slow=39
ESDC Sonseca Array 24.35 290 P **P 00 26 00.3 0.0**
comp=Z,18nm,0.4s,mb4.8
ESDC Sonseca Array 24.35 290 P **P 00 26 00.3 -0.1**
comp=Z,18nm,0.4s,mb4.8
ESLA Sonseca Array 24.35 290 *e*P **P 00 26 00.2 -0.1**
comp=Z,14nm,0.8s,mb4.4
ESLA Sonseca Array 24.35 290 *e*P **P 00 26 00.2 -0.2**
comp=Z,14nm,0.8s,mb4.4
MUD Monsted U'grnd 24.41 337 *i* P **P 00 26 02.7 +2.0**
comp=Z,23nm,0.9s,mb4.6
MUD *i* S **S 00 30 32.1 +14**
MUD
comp=Z,890nm,18.0s
GUD Guadarrama 24.54 292 P **P 00 26 02.9 +0.8**
GUD pmax pmax
comp=Z,114nm,0.6s,mb5.6
GUD Guadarrama 24.54 292 P **P 00 26 02.9 +0.9**
comp=Z,114nm,0.6s,mb5.6
GUD Guadarrama 24.54 292 P **P 00 26 02.9 +0.8**
comp=Z,114nm,0.6s,mb5.6
ELOJ Sierra Loja 24.55 284 P **P 00 26 02.1 -0.1**
ELOJ pmax pmax
comp=Z,29nm,0.9s,mb4.8
ELOJ Sierra Loja 24.55 284 P **P 00 26 02.1 -0.1**
comp=Z,29nm,0.9s,mb4.8
ELOJ Sierra Loja 24.55 284 P **P 00 26 02.1 -0.1**
comp=Z,29nm,0.9s,mb4.8
ELUQ Luque 24.61 285 P **P 00 26 03.3 +0.5**
ELUQ pmax pmax
comp=Z,51nm,0.6s,mb5.2
ELUQ Luque 24.61 285 P **P 00 26 03.3 +0.4**
comp=Z,51nm,0.6s,mb5.2
ELUQ Luque 24.61 285 P **P 00 26 03.3 +0.5**
comp=Z,51nm,0.6s,mb5.2
PAB San Pablo 24.64 290 *e*P **P 00 26 03.3 +0.3**
PAB pmax pmax
comp=Z,229nm,1.5s,mb5.5
PAB San Pablo 24.64 290 *e*P **P 00 26 03.3 +0.2**
comp=Z,229nm,1.5s,mb5.5
PAB San Pablo 24.64 290 *e*P **P 00 26 03.3 +0.3**
comp=Z,229nm,1.5s,mb5.5
EADA Adamuz 24.83 286 P **P 00 26 05.2 +0.5**
comp=Z,12nm,0.7s,mb4.5
EADA Adamuz 24.83 286 P **P 00 26 05.2 +0.4**
comp=Z,12nm,0.7s,mb4.5
TZK Tazeka 24.97 277 *i* P **P 00 26 06.5 +0.4**
SGMF Saint Gilles 25.07 311 *e*P **P 00 26 05.8 -1.0**
comp=Z,73nm,0.5s,mb5.1
SGMF Saint Gilles 25.07 311 *e*P **P 00 26 05.8 -1.0**
SGMF pmax pmax
comp=Z,36nm,0.5s,mb5.2
SGMF Saint Gilles 25.07 311 *e*P **P 00 26 05.8 -1.0**
comp=Z,36nm,0.5s,mb5.2
SGMF Saint Gilles 25.07 311 *e*P **P 00 26 05.8 -1.0**
comp=Z,36nm,0.5s,mb5.1
EMIJ Mijas 25.09 283 P **P 00 26 07.2 0.0**
comp=Z,86nm,0.5s,mb5.5
EMIJ Mijas 25.09 283 P **P 00 26 07.2 0.0**
comp=Z,86nm,0.5s,mb5.5
QUIF Quistinic 25.33 310⇓*i*P **P 00 26 07.5 -1.7**
comp=Z,74nm,0.6s,mb5.1
QUIF Quistinic 25.33 310⇓*i*P **P 00 26 07.5 -1.7**
QUIF pmax pmax
comp=Z,37nm,0.6s,mb5.1
QUIF Quistinic 25.33 310⇓*i*P **P 00 26 07.5 -1.7**
comp=Z,37nm,0.6s,mb5.1
QUIF Quistinic 25.33 310⇓*i*P **P 00 26 07.5 -1.7**
comp=Z,37nm,0.6s,mb5.1
ROSF Rostrenen 25.55 311⇓*i*P **P 00 26 09.4 -1.8**
comp=Z,71nm,0.6s,mb5.1
ROSF Rostrenen 25.55 311⇓*i*P **P 00 26 09.4 -1.8**
ROSF pmax pmax
comp=Z,36nm,0.6s,mb5.1
ROSF Rostrenen 25.55 311⇓*i*P **P 00 26 09.4 -1.8**
comp=Z,36nm,0.6s,mb5.1
ROSF Rostrenen 25.55 311⇓*i*P **P 00 26 09.4 -1.8**
comp=Z,36nm,0.6s,mb5.1
LIJA Lijar 25.57 284 *i* P **P 00 26 10.2 -1.3**
MDT Midelt 25.58 274 P **P 00 26 12.6 +0.9**
comp=Z,34nm,1.0s,mb4.8,baz=84,slow=11,SNR=42
MDT LR LR 00 38 53.5
comp=Z,2µm,20.2s,MS4.5,baz=77,slow=43
MDT Midelt 25.58 274 P **P 00 26 12.6 +0.9**
EARI Arriondas 25.60 298 P **P 00 26 11.6 -0.1**
comp=Z,37nm,0.7s,mb5.0
EARI Arriondas 25.60 298 P **P 00 26 11.6 -0.1**
comp=Z,37nm,0.7s,mb5.0
EJIF Jimena Fronter 25.66 283 P **P 00 26 12.3 -0.1**
EJIF pmax pmax
comp=Z,34nm,0.6s,mb5.0
EJIF Jimena Fronter 25.66 283 P **P 00 26 12.3 0.0**
comp=Z,34nm,0.6s,mb5.1
EJIF Jimena Fronter 25.66 283 P **P 00 26 12.3 -0.1**
comp=Z,34nm,0.6s,mb5.0
DKH Dar Kharkhour 25.70 280 *i* P **P 00 26 14.0 +1.3**
ABKT Ailbek 25.82 74 P **P 00 26 16.6 +2.9**
comp=Z,769nm,0.7s,SNR=18
ESPR Espera 25.93 284 P **P 00 26 14.2 -0.6**
comp=Z,56nm,0.7s,mb5.2
ESPR Espera 25.93 284 P **P 00 26 14.2 -0.6**
comp=Z,56nm,0.7s,mb5.2
MIF Mishlifen 25.96 276 *i* P **P 00 26 15.0 0.0**
GIBL Gibalbin 26.02 284 *i* P **P 00 26 14.2 -1.4**
CNIL Conil 26.14 282 *e*P **P 00 26 16.8 +0.1**
RSA Sarsar 26.17 279 *i* P **P 00 26 18.0 +1.1**
SFS San Fernando 26.25 283 *e*P **P 00 26 17.0 -0.7**
SFS pmax pmax
comp=Z,131nm,0.8s,mb5.5
SFS San Fernando 26.25 283 *e*P **P 00 26 16.9 -0.8**
comp=Z,131nm,0.8s,mb5.5
SFS San Fernando 26.25 283 *e*P **P 00 26 17.0 -0.7**
comp=Z,131nm,0.8s,mb5.5
HFS Hagfors 26.45 346 P **P 00 26 17.5 -1.8**
comp=Z,2.8nm,0.4s,mb4.2,baz=134,slow=10,SNR=18
HFS LR LR 00 38 02.5
comp=Z,845nm,20.9s,MS4.3,baz=156,slow=40
HFS Hagfors 26.45 346 P **P 00 26 17.5 -1.7**
HFS pmax pmax
comp=Z,3.0nm,0.4s
HFS MLR MLR
comp=Z,845nm,20.9s
HFS Hagfors 26.45 346 P **P 00 26 17.5 -1.7**
comp=Z,845nm,20.9s
HFA0 Hagfors New Ar 26.46 346 P **P 00 26 16.0 -3.3**
FINES FINESS Array B 26.49 360 P **P 00 26 17.6 -2.0**
comp=Z,3.6nm,0.4s,mb4.3,baz=158,slow=10,SNR=30
FINES PcP PcP 00 29 43.1 -0.5
comp=Z,4.6nm,0.7s,baz=108,slow=3.1,SNR=4.0
FINES LR LR 00 37 38.5
comp=Z,666nm,18.7s,MS4.2,baz=177,slow=39
FINES FINESS Array B 26.49 360 P **P 00 26 17.6 -2.0**
FINES 00 29 43.2
FINES pmax pmax
comp=Z,4.0nm,0.4s
FINES MLR MLR
comp=Z,666nm,18.7s
FINES FINESS Array B 26.49 360 P **P 00 26 17.6 -2.0**
comp=Z,4.0nm,0.4s,mb4.3
FINES FINESS Array B 26.49 360 PcP PcP 00 29 43.2 -0.5
comp=Z,666nm,18.7s
EMIN Mina Concepcio 26.51 286 P **P 00 26 20.3 +0.3**
comp=Z,61nm,0.9s,mb5.1
EMIN Mina Concepcio 26.51 286 P **P 00 26 20.3 +0.3**
comp=Z,61nm,0.9s,mb5.1
PBRG Braganca 26.56 295 *e*P **P 00 26 20.4 0.0**
comp=Z,187nm,1.3s,mb5.5
PBRG Braganca 26.56 295 *e*P **P 00 26 20.4 0.0**
comp=Z,187nm,1.3s,mb5.5
ECAL Calabor 26.57 295 P **P 00 26 20.8 +0.3**
comp=Z,70nm,0.7s,mb5.3
ECAL Calabor 26.57 295 P **P 00 26 20.8 +0.3**
comp=Z,70nm,0.7s,mb5.3
EBAD Badajoz 26.72 288 P **P 00 26 21.5 -0.4**
comp=Z,84nm,0.7s,mb5.4
EBAD Badajoz 26.72 288 P **P 00 26 21.5 -0.4**
comp=Z,84nm,0.7s,mb5.4
DESE Dese 26.73 149 *e*P **P 00 26 29.4 +7.3**
MVO Moncorvo 26.74 293 P **P 00 26 22.1 +0.1**
MVO Moncorvo 26.74 293 *i* P **P 00 26 22.1 +0.1**
comp=Z,180nm,1.8s,mb5.3
MVO *e*S **S 00 31 09.3 +14**
MVO *e*LR LR 00 34 58.0
comp=Z,586nm,20.0s
MVO Moncorvo 26.74 293 P **P 00 26 22.1 +0.1**
PBAR Barrancos 26.77 287 *i* P **P 00 26 22.3 0.0**
comp=Z,113nm,1.2s,mb5.3
PBAR *e*S **S 00 31 08.5 +12**
KIB El Ksiba 26.81 274 *i* P **P 00 26 25.0 +2.3**
ERUA La Rua 26.90 296 P **P 00 26 23.3 -0.2**
ERUA pmax pmax
comp=Z,28nm,0.8s,mb4.8
ERUA La Rua 26.90 296 P **P 00 26 23.3 -0.2**
comp=Z,28nm,0.8s,mb4.8
ERUA La Rua 26.90 296 P **P 00 26 23.3 -0.2**
comp=Z,28nm,0.8s,mb4.8
PMRV Marv??o 27.00 289 *e*P **P 00 26 23.9 -0.5**
comp=Z,104nm,1.8s,mb5.1
PMRV *e*S **S 00 31 08.2 +8.5**
EPON Pontenova 27.00 298 P **P 00 26 24.3 -0.1**
comp=Z,110nm,0.9s,mb5.4
EPON Pontenova 27.00 298 P **P 00 26 24.3 -0.1**
comp=Z,110nm,0.9s,mb5.4
PCBR Castelo Branco 27.06 290 *e*P **P 00 26 24.9 0.0**
comp=Z,72nm,1.8s,mb4.9
PCBR Castelo Branco 27.06 290 *e*P **P 00 26 24.9 0.0**
comp=Z,72nm,1.8s,mb4.9
MTE Manteigas 27.11 292 *e*P Px 00 26 38.8
comp=Z,72nm,1.1s
MTE *e*S Sx 00 31 29.4
MTE *e*LR LR 00 35 12.9
comp=Z,478nm,20.0s
KAF Kangasniemi 27.16 0 *e*P **P 00 26 23.5 -2.1**
KAF pmax pmax
comp=Z,3.0nm,0.4s,mb4.2
KAF Kangasniemi 27.16 0 *e*p **P 00 26 23.5 -2.1**
comp=Z,3.2nm,0.4s,mb4.2
KAF Kangasniemi 27.16 0 *e*p **P 00 26 23.5 -2.1**
comp=Z,3.2nm,0.4s,mb4.2
KAF Kangasniemi 27.16 0 *e*P **P 00 26 23.5 -2.1**
comp=Z,3.0nm,0.4s,mb4.2
EGRO El Granado 27.17 285 P **P 00 26 25.6 -0.3**
comp=Z,55nm,0.7s,mb5.2
EGRO El Granado 27.17 285 P **P 00 26 25.6 -0.3**
comp=Z,55nm,0.7s,mb5.2
PESTR Estremoz 27.17 288 *i* P **P 00 26 25.4 -0.5**
comp=Z,91nm,1.3s,mb5.2
PESTR *e*S **S 00 31 14.3 +12**
PESTR *e*LR LR 00 34 17.5
comp=Z,254nm,20.0s
ASUD Al Ashush, Dub 27.25 104⇓P **P 00 26 28.0 +1.3**
ASUD Al Ashush, Dub 27.25 104 P **P 00 26 28.0 +1.2**
PVRL Vila Real 27.26 293 *e*P **P 00 26 27.1 +0.4**
comp=Z,85nm,1.7s,mb5.0
PVRL Vila Real 27.26 293 *e*P **P 00 26 27.1 +0.4**
comp=Z,85nm,1.7s,mb5.0
TZC Tazercounte 27.28 273 *i* P **P 00 26 29.0 +2.0**
NAZ Nazwa, Dubai 27.34 103 P **P 00 26 29.8 +2.2**
SNR=6.4
NAZ Nazwa, Dubai 27.34 103 P **P 00 26 29.8 +2.2**
SNR=6.4
PVAQ Vaqueiros 27.36 285 *i* P **P 00 26 27.5 -0.2**
comp=Z,113nm,1.4s,mb5.2
PVAQ *e*S **S 00 31 09.9 +4.3**
PVAQ *e*LR LR 00 34 55.8
comp=Z,240nm,18.0s
PVIS Viseu 27.38 292 *e*P **P 00 26 28.2 +0.4**

comp=Z,82nm,1.4s,mb5.1
PVIS Viseu 27.38 292 *e*P **P 00 26 28.2 +0.4**
comp=Z,82nm,1.4s,mb5.1
BANOM Banah 27.42 101 ⇓P **P 00 26 29.7 +1.4**
BANOM Banah 27.42 101 P **P 00 26 29.7 +1.4**
PBEJ Beja 27.43 286 *e*P **P 00 26 28.2 -0.1**
comp=Z,62nm,1.9s,mb4.8
PBEJ Beja 27.43 286 *e*P **P 00 26 28.2 -0.1**
comp=Z,62nm,1.9s,mb4.8
EVO Evora 27.51 288 ⇓*i*P **P 00 26 29.6 +0.6**
comp=Z,83nm,1.1s,mb5.0
EVO *e*MLR MLR
comp=Z,417nm,22.2s,MS3.7
EVO Evora 27.51 288 *i*P **P 00 26 28.8 -0.2**
comp=Z,72nm,1.6s,mb5.1
PCAB Cabril 27.52 294 *e*P **P 00 26 29.0 0.0**
comp=Z,111nm,1.3s,mb5.3
PCAB Cabril 27.52 294 *e*P **P 00 26 29.0 0.0**
comp=Z,111nm,1.3s,mb5.3
ELOB Lobios 27.55 295 P **P 00 26 29.4 +0.1**
comp=Z,20nm,0.6s,mb4.9
ELOB Lobios 27.55 295 P **P 00 26 29.4 +0.1**
comp=Z,20nm,0.6s,mb4.9
PBDV Barranco-do-Ve 27.55 285 *i*P **P 00 26 29.5 +0.1**
comp=Z,134nm,1.2s,mb5.5
PBDV *e*S S 00 31 37.5 +29
PCVE Castro Verde 27.60 286 *i*P **P 00 26 31.1 +1.3**
comp=Z,65nm,1.1s,mb5.2
PCVE *e*S S 00 31 30.5 +21
EVOP Sao Brissos 27.60 288 *e*P **P 00 26 29.8 -0.1**
EVOP AMb AMB 00 26 31.7
comp=Z,68nm,1.8s,mb5.0
EVOP *e*S **S 00 31 11.6 +2.3**
EVOP *e*S **S 00 31 11.7 +2.5**
EVOP Sao Brissos 27.60 288 *e*P **P 00 26 29.8 0.0**
EVOP *e*S **S 00 31 11.6 +2.3**
EVOP Sao Brissos 27.60 288 ⇓*i*P **P 00 26 29.6 -0.2**
comp=Z,41nm,1.1s,mb5.0
NAO01 NORSAR Array S 27.70 344 *e*P **P 00 26 27.6 -2.8**
comp=Z,19nm,0.8s,mb4.8
NAO01 NORSAR Array S 27.70 344 *e*P **P 00 26 27.6 -2.8**
comp=Z,19nm,0.8s,mb4.8
PTOM Tomar 27.78 290 *i*P **P 00 26 31.4 0.0**
comp=Z,59nm,1.7s,mb4.9
AKTK Aktyubinsk 27.79 46 P **P 00 26 30.8 -0.5**
AKTK S **S 00 31 10.9 -1.0**
AKTK Aktyubinsk 27.79 46 P **P 00 26 30.8 -0.5**
comp=Z,24nm,0.5s,mb5.1
AKTK S **S 00 31 10.9 -1.0**
comp=Z,7.0nm,1.1s
AKTO Aktyubinsk 27.79 46 P **P 00 26 30.8 -0.5**
comp=Z,24nm,0.5s,mb5.0,baz=252,slow=7.7,SNR=37
AKTO S **S 00 31 10.9 -1.0**
comp=Z,7.0nm,1.1s,baz=76,slow=17,SNR=4.3
AKTO Aktyubinsk 27.79 46 P **P 00 26 30.8 -0.5**
AKTO S **S 00 31 10.9 -1.0**
AKTO pmax pmax
comp=Z,24nm,0.5s,mb5.1
AKTO smax
comp=N,7.0nm,1.1s
HATD Hatta, Dubai 27.79 103 ⇑P **P 00 26 32.8 +1.2**
HATD Hatta, Dubai 27.79 103 P **P 00 26 32.8 +1.2**
NB2 NORSAR Subarra 27.80 344 P **P 00 26 28.8 -2.5**
comp=Z,6.3nm,0.9s,mb4.2,baz=153,slow=9.3
NB2 NORSAR Subarra 27.80 344 P **P 00 26 28.8 -2.5**
comp=Z,6.3nm,0.9s,mb4.2,baz=153,slow=9.0,SNR=8.3
NOA NORSAR Array B 27.80 344 P **P 00 26 28.9 -2.3**
comp=Z,1.7nm,0.5s,mb3.9,baz=152,slow=8.5,SNR=8.1
NOA LR LR 00 38 30.5
comp=Z,519nm,20.3s,MS4.1,baz=130,slow=39
NOA NORSAR Array B 27.80 344 P **P 00 26 29.0 -2.3**
NOA pmax pmax
comp=Z,2.0nm,0.5s
NOA MLR MLR
comp=Z,519nm,20.3s
NOA NORSAR Array B 27.80 344 P **P 00 26 29.0 -2.3**
comp=Z,519nm,20.3s
ALMR Almeirim 27.92 289 *e*P **P 00 26 32.2 -0.4**
ALMR Almeirim 27.92 289 *e*P **P 00 26 32.3 -0.4**
PTO Porto 27.93 293 *e*P **P 00 26 33.9 +1.2**
comp=Z,102nm,1.4s,mb5.3
PTO Porto 27.93 293 *e*P **P 00 26 33.9 +1.2**
comp=Z,102nm,1.4s,mb5.3
STS Santiago 27.98 297 P **P 00 26 33.2 +0.1**
STS pmax pmax
comp=Z,15nm,0.6s,mb4.8
STS Santiago 27.98 297 P **P 00 26 33.2 +0.1**
comp=Z,15nm,0.6s,mb4.8
STS Santiago 27.98 297 P **P 00 26 33.2 +0.1**
comp=Z,15nm,0.6s,mb4.8
EZAM Zamans 28.04 295 P **P 00 26 33.6 0.0**
EZAM pmax pmax
comp=Z,53nm,0.9s,mb5.2
EZAM Zamans 28.04 295 P **P 00 26 33.6 0.0**
comp=Z,53nm,0.9s,mb5.2
EZAM Zamans 28.04 295 P **P 00 26 33.6 0.0**
comp=Z,53nm,0.9s,mb5.2
MORF Marmelete 28.11 285 *e*P **P 00 26 34.2 -0.2**
MORF *e*S **S 00 31 20.2 +2.8**
MORF Marmelete 28.11 285 *e*P **P 00 26 34.2 -0.2**
PTEO Sao Teotonio 28.15 286 *i*P **P 00 26 35.2 +0.5**
comp=Z,107nm,1.6s,mb5.2
JOF Joensuu 28.16 5 *e*P **P 00 26 31.9 -2.6**
JOF pmax pmax
comp=Z,4.0nm,0.4s,mb4.4
JOF Joensuu 28.16 5 *e*p **P 00 26 31.9 -2.6**
comp=Z,3.6nm,0.4s,mb4.3
JOF Joensuu 28.16 5 *e*p **P 00 26 31.9 -2.6**
comp=Z,3.6nm,0.4s,mb4.3
JOF Joensuu 28.16 5 *e*P **P 00 26 31.9 -2.6**
comp=Z,4.0nm,0.4s,mb4.4
EMAZ Mazaricos 28.30 297 P **P 00 26 36.0 0.0**
comp=Z,50nm,0.8s,mb5.2
EMAZ Mazaricos 28.30 297 P **P 00 26 36.0 0.0**
comp=Z,50nm,0.8s,mb5.2
LIS Lisbon 28.39 288 *e*P **P 00 26 37.1 +0.3**
LIS AMb AMB 00 26 39.1
comp=Z,135nm,2.1s,mb5.2
LIS *e*S **S 00 31 24.4 +2.6**
LIS *e*S **S 00 31 24.5 +2.8**
PMAFR Mafra 28.48 289 *i*P **P 00 26 38.0 +0.3**
comp=Z,98nm,1.5s,mb5.2
PMAFR *e*S **S 00 31 37.9 +15**
PMAFR *e*LR LR 00 34 59.8
comp=Z,245nm,18.0s
PMAFR Mafra 28.48 289 *i*P **P 00 26 38.0 +0.3**
comp=Z,98nm,1.5s,mb5.2
ABKAR Akbulak array 28.57 50 *e*P **P 00 26 38.0 -0.4**
comp=Z,47nm,0.8s,mb5.3
ABKAR *e*S **S 00 31 23.3 -1.0**
ABKAR Akbulak array 28.57 50 *e*P **P 00 26 38.0 -0.3**
comp=Z,47nm,0.8s,mb5.3
ABKAR *e*S **S 00 31 23.3 -1.0**
EKA Eskdalemuir Ar 28.67 324 P **P 00 26 37.9 -1.3**
comp=Z,17nm,0.7s,mb4.9,baz=128,slow=11,SNR=39
EKA Eskdalemuir Ar 28.67 324 P **P 00 26 37.9 -1.2**
EKA pmax pmax
comp=Z,17nm,0.7s
EKA Eskdalemuir Ar 28.67 324 P **P 00 26 37.8 -1.3**
OUK Oukaimeden 28.67 272 *i*P **P 00 26 41.0 +1.6**
ESK Eskdalemuir 28.68 324 P **P 00 26 37.2 -2.0**
comp=Z,320nm,1.2s,mb5.9,SNR=10
ESK Eskdalemuir 28.68 324 *e*P **P 00 26 37.3 -1.9**
ESK pmax pmax
comp=Z,31nm,0.6s,mb5.2
ESK Eskdalemuir 28.68 324 *e*P **P 00 26 37.2 -2.0**
comp=Z,31nm,0.6s,mb5.2
ESK Eskdalemuir 28.68 324 *e*P **P 00 26 37.2 -2.0**
comp=Z,31nm,0.6s,mb5.2
ARQ Araqi 28.83 106 P **P 00 26 43.0 +2.1**
SNR=7.1
ARQ Araqi 28.83 106 P **P 00 26 43.0 +2.1**
SNR=7.1
DSB Dublin 29.29 319 P **P 00 26 43.7 -0.9**
comp=Z,45nm,1.3s,mb5.0
DSB Dublin 29.29 319 P **P 00 26 43.7 -1.0**
comp=Z,45nm,1.3s,mb5.0
HOQ Hoqain 29.34 104 P **P 00 26 46.7 +1.3**
SNR=9.8
HOQ Hoqain 29.34 104 P **P 00 26 46.7 +1.3**
SNR=9.8
BSY Bisya 29.67 106 ⇓P **P 00 26 49.1 +0.8**
BSYO Bisya 29.71 106 P **P 00 26 49.1 +0.4**
JHA Jbel Lahdid 29.82 274 *i*P **P 00 26 51.0 +1.4**
ABTO Aybut 29.88 119 ⇓P **P 00 26 52.6 +2.4**
ABTO Aybut 29.88 119 P **P 00 26 52.6 +2.4**

SMDO Samad 30.18 105 P **P 00 26 54.7 +1.8**
SNR=9.4
SMDO Samad 30.18 105 P **P 00 26 54.7 +1.8**
SNR=9.4
RBK Rabkut 30.43 118 ⇓P **P 00 26 56.7 +1.6**
RBK Rabkut 30.43 118 P **P 00 26 56.7 +1.6**
JMDO Jabal Madar 30.58 106 ⇓P **P 00 26 57.4 +1.0**
JMDO Jabal Madar 30.58 106 P **P 00 26 57.4 +1.0**
ARU Arti 30.73 36 *d*i*P* **P 00 26 56.2 -1.1**
ARU *e* 00 27 54.7
ARU *e*PPP 00 28 09.0
ARU *e* 00 29 49.4
ARU S **S 00 31 54.6 -3.4**
ARU pmax pmax
comp=Z,16nm,1.2s,mb4.7
ARU MLR MLR
comp=Z,769nm,20.0s,MS4.3
ARU Arti 30.73 36 *e*P **P 00 26 56.0 -1.3**
comp=Z,31nm,0.9s,mb5.1
ARU Arti 30.73 36 *e*P **P 00 26 56.0 -1.3**
comp=Z,31nm,0.9s,mb5.1
TORD Torodi Ar. Bea 31.00 232 P **P 00 27 01.4 +1.3**
comp=Z,76nm,0.8s,mb5.6,baz=39,slow=9.4,SNR=332
TORD LR LR 00 42 01.4
comp=Z,356nm,19.1s,MS4.0,baz=20,slow=41
SOKR Solikamsk 31.70 30 *c i*P **P 00 27 04.5 -1.4**
SOKR S **S 00 32 08.2 -4.9**
SOKR pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
SOKR MLR MLR
comp=Z,540nm,19.0s,MS4.2
SOKR Solikamsk 31.70 30 *i*P **P 00 27 04.5 -1.4**
comp=Z,10.0nm,0.8s,mb4.7
SVE Sverdlovsk 31.92 36 ⇑*e*P **P 00 27 07.3 -0.5**
SVE *e*S **S 00 32 10.1 -6.6**
SVE pmax pmax
comp=Z,49nm,0.9s,mb5.3
SVE MLR MLR
comp=Z,800nm,20.0s,MS4.4
SVE Sverdlovsk 31.92 36 *e*P **P 00 27 07.3 -0.5**
comp=Z,49nm,0.9s,mb5.3
APA Apatity 32.91 5 ⇑*i*P **P 00 27 15.0 -1.4**
APA *i* 00 28 20.0
APA *e*S **S 00 32 24.0 -7.8**
APA pmax pmax
comp=Z,14nm,0.8s,mb4.9
APA MLR MLR
comp=Z,600nm,14.0s,MS4.5
APA Apatity 32.91 5 *i*P **P 00 27 15.0 -1.4**
comp=Z,14nm,0.8s,mb4.9
ARCES ARCESS Array B 34.62 360 P **P 00 27 28.6 -2.6**
comp=Z,6.7nm,0.5s,mb4.8,baz=179,slow=9.1,SNR=67
ARCES PcP PcP
comp=Z,10nm,1.1s,baz=188,slow=4.6,SNR=4.3
ARCES ARCESS Array B 34.62 360 P **P 00 27 28.6 -2.6**
ARCES 00 30 04.5
ARCES pmax pmax
comp=Z,7.0nm,0.5s
ARCES ARCESS Array B 34.62 360 P **P 00 27 28.6 -2.6**
comp=Z,7.0nm,0.5s,mb4.8
ARCES ARCESS Array B 34.62 360 PcP PcP 00 30 04.5 -0.4
ARE0 ARCESS Array S 34.62 360 *e*P **P 00 27 29.0 -2.2**
ARE0 ARCESS Array S 34.62 360 *e*P **P 00 27 29.0 -2.2**
KEV Kevo 34.84 1 *e*P **P 00 27 31.7 -1.4**
KEV pmax pmax
comp=Z,3.0nm,0.4s,mb4.6
KEV Kevo 34.84 1 *e*p **P 00 27 31.7 -1.4**
comp=Z,3.0nm,0.4s,mb4.6
KEV Kevo 34.84 1 *e*p **P 00 27 31.7 -1.4**
comp=Z,3.0nm,0.4s,mb4.6
KEV Kevo 34.84 1 *e*P **P 00 27 31.7 -1.4**
comp=Z,3.0nm,0.4s,mb4.6
KBL Kabul 35.04 78 *e*P **P 00 27 36.2 +0.9**
KBL pmax pmax
comp=Z,14nm,0.9s,mb4.9
KBL Kabul 35.04 78 *e*P **P 00 27 36.2 +0.9**
comp=Z,14nm,0.9s,mb4.9
KBL Kabul 35.04 78 *e*P **P 00 27 36.2 +0.9**
comp=Z,14nm,0.9s,mb4.9
PMPS Porto Santo 35.08 279 *i*P **P 00 27 37.0 +1.4**
comp=Z,168nm,1.5s,mb5.8
PMAR Madeira 35.64 279 *e*P **P 00 27 41.7 +1.2**
comp=Z,128nm,0.9s,mb5.8
BRVK Borovoye 35.84 46 P **P 00 27 42.6 +0.7**
comp=Z,254nm,1.4s,mb6.0,SNR=10
BRVK Borovoye 35.84 46 *e*P **P 00 27 42.0 +0.1**
BRVK 00 29 01.1
BRVK pmax pmax
comp=Z,101nm,1.4s,mb5.6
BRVK Borovoye 35.84 46 *d i*P **P 00 27 42.2 +0.3**
BRVK pmax pmax
comp=Z,16nm,1.0s,mb4.9
BRVK Borovoye 35.84 46 *e*P **P 00 27 42.0 +0.1**
comp=Z,102nm,1.4s,mb5.6
BRVK PP PP 00 29 01.1 -2.4
BRVK Borovoye 35.84 46 P **P 00 27 42.6 +0.7**
SNR=41
BRVK P 00 27 42.6
SNR=41
BRVK Borovoye 35.84 46 *e*P **P 00 27 42.0 +0.1**
comp=Z,101nm,1.4s,mb5.6
BRVK Borovoye 35.84 46 PP PP 00 29 01.1 -2.4
BVAR Borovoye Array 35.89 46 P **P 00 27 42.3 -0.1**
comp=Z,5.2nm,0.5s,mb4.7,baz=245,slow=6.4,SNR=50
BVAR pP pP 00 27 50.7 -0.9
comp=Z,31nm,0.9s,baz=255,slow=4.7,SNR=20
BVAR LR LR 00 47 04.2
comp=Z,590nm,20.4s,MS4.3,baz=265,slow=44
BVAR Borovoye Array 35.89 46 P **P 00 27 42.3 0.0**
comp=Z,5.0nm,0.5s,mb4.7
BVAR pP pP 00 27 50.7 -0.9
KMBO Kilima Mbogo 37.38 162 P **P 00 27 59.3 +3.9**
comp=Z,3.5nm,0.9s,mb4.2,baz=348,slow=11,SNR=6.3
KMBO LR LR 00 42 50.0
comp=Z,418nm,21.4s,MS4.2,baz=83,slow=35
KMBO Kilima Mbogo 37.38 162 *ce*P **P 00 28 00.2 +4.8**
KMBO pmax pmax
comp=Z,4.0nm,0.9s
KMBO Kilima Mbogo 37.38 162 *e*P **P 00 27 58.6 +3.2**
KMBO Kilima Mbogo 37.38 162 *e*P **P 00 27 58.6 +3.2**
AML Almayashu 37.46 64 *e*P **P 00 27 55.1 -0.8**
comp=Z,14nm,0.6s,mb5.0
AML Almayashu 37.46 64 *e*P **P 00 27 55.1 -0.8**
comp=Z,14nm,0.6s,mb5.0
EKS2 Erkin-Say 37.48 64 P **P 00 27 57.1 +1.1**
SNR=12
EKS2 Erkin-Say 37.48 64 *e*P **P 00 27 56.7 +0.6**
comp=Z,71nm,1.1s,mb5.4
EKS2 Erkin-Say 37.48 64 *e*P **P 00 27 56.7 +0.7**
comp=Z,71nm,1.1s,mb5.4
AAK Ala-Archa 38.01 64 P **P 00 28 02.4 +1.9**
comp=Z,353nm,0.6s,SNR=9.7
AAK Ala-Archa 38.01 64 P **P 00 28 01.5 +1.0**
SNR=16
AAK Ala-Archa 38.01 64 P **P 00 28 01.8 +1.2**
comp=Z,16nm,0.5s,mb5.0,baz=248,slow=8.3,SNR=12
AAK Ala-Archa 38.01 64 *d i*P **P 00 28 01.3 +0.8**
AAK pmax pmax
comp=Z,13nm,0.7s,mb4.8
AAK Ala-Archa 38.01 64 *e*P **P 00 28 01.2 +0.7**
comp=Z,153nm,1.4s,mb5.5
AAK PcP PcP 00 30 15.4 -0.2
AAK Ala-Archa 38.01 64 P **P 00 28 02.4 +1.9**
SNR=46
AAK P 00 28 02.4
SNR=46
AAK Ala-Archa 38.01 64 *e*P **P 00 28 01.2 +0.7**
comp=Z,153nm,1.4s,mb5.5
AAK Ala-Archa 38.01 64 PcP PcP 00 30 15.4 -0.2
UCH Uchtor 38.06 64 P **P 00 28 02.1 +1.2**
SNR=12
UCH Uchtor 38.06 64 *e*P **P 00 28 02.2 +1.2**
comp=Z,17nm,0.7s,mb4.9
UCH Uchtor 38.06 64 *e*P **P 00 28 02.2 +1.3**
comp=Z,17nm,0.7s,mb4.9
FRU Bishkek 38.08 63 *e*P **P 00 28 01.0 -0.1**
FRU *i* 00 28 06.0
FRU *i* 00 28 15.0
FRU pmax pmax
comp=Z,57nm,1.8s,mb5.0
FRU Bishkek 38.08 63 *e*P **P 00 28 01.0 -0.1**
comp=Z,57nm,1.8s,mb5.0
CHMS Chumysh 38.17 63 P **P 00 28 02.7 +0.9**
SNR=9.7
KBK Karagaybulak 38.34 63 P **P 00 28 04.8 +1.6**
SNR=8.8

KZA Kyzart 38.62 64 P **P 00 28 07.7 +2.0**
SNR=13
TKM2 Tokmak 2 38.79 63 P **P 00 28 08.1 +1.0**
SNR=13
TKM2 Tokmak 2 38.79 63 *e*P **P 00 28 07.9 +0.8**
TKM2 pmax pmax
comp=Z,31nm,0.8s,mb5.1
TKM2 Tokmak 2 38.79 63 *e*P **P 00 28 07.8 +0.8**
comp=Z,30nm,0.8s,mb5.1
TKM2 Tokmak 2 38.79 63 *e*P **P 00 28 07.8 +0.7**
comp=Z,30nm,0.8s,mb5.1
ULHL Ulahol 39.34 64 P **P 00 28 13.2 +1.5**
SNR=14
KSH Kashi 39.51 68 *e*P **P 00 28 11.9 -1.2**
KSH pP pP 00 28 24.0 +1.5
KSH sP sP 00 28 29.4 +3.0
KSH PP PP 00 29 46.2 +2.2
KSH PcP PcP 00 30 20.1 -0.2
KSH ScP ScP 00 34 05.4 -1.2
KSH S **S 00 34 06.9 -6.5**
KSH PcS PcS 00 34 10.4 +0.2
KSH sS sS 00 34 27.9 -0.9
KSH SS SS 00 36 52.7 -16
KSH ScS ScS 00 38 15.2 -3.6
KSH pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
KSH pmax pmax
comp=Z,190nm,4.4s
KSH LR LR
comp=N,130nm,5.8s
KSH LR LR
comp=E,140nm,4.2s
KSH LR LR
comp=Z,110nm,4.9s
DBIC Dimbokro 40.09 233 P **P 00 28 18.8 +0.6**
comp=Z,40nm,0.8s,mb5.2,baz=24,slow=9.7,SNR=46
DBIC LR LR 00 44 47.8
comp=Z,350nm,19.8s,MS4.2,baz=20,slow=36
DBIC Dimbokro 40.09 233 P **P 00 28 18.8 +0.6**
DBIC pmax pmax
comp=Z,40nm,0.8s
DBIC MLR MLR
comp=Z,350nm,19.8s
DBIC Dimbokro 40.09 233 *e*P **P 00 28 18.8 +0.6**
comp=Z,43nm,0.8s,mb5.2
DBIC *e*PcP PcP 00 30 20.9 -1.6
DBIC Dimbokro 40.09 233 P **P 00 28 18.8 +0.6**
comp=Z,350nm,19.8s
TIC Toumodi 40.22 233 *e*P **P 00 28 20.0 +0.8**
comp=Z,141nm,1.0s,mb5.6
KIC Kosan Boka 40.25 232 *e*P **P 00 28 20.3 +0.8**
comp=Z,172nm,0.8s,mb5.8
LIC Lamto 40.54 232 *e*P **P 00 28 22.6 +0.7**
comp=Z,198nm,1.0s,mb5.4,baz=47
LIC *e*MLR MLR
comp=Z,824nm,18.5s,MS4.3
LIC Lamto 40.54 232 *e*P **P 00 28 22.7 +0.8**
comp=Z,271nm,1.0s,mb5.8
LIC Lamto 40.54 232 *e*P **P 00 28 22.6 +0.7**
comp=Z,99nm,1.0s,mb5.4
LIC LR LR
comp=Z,410nm,18.5s,MS4.3
LIC Lamto 40.54 232 *e*P **P 00 28 22.6 +0.7**
comp=Z,99nm,1.0s,mb5.4,baz=47
KURK Kurchatov 40.67 51 P **P 00 28 22.4 -0.2**
comp=Z,733nm,1.0s,SNR=29
KURK Kurchatov 40.67 51 P **P 00 28 21.5 -1.1**
comp=Z,32nm,0.7s,mb5.1,baz=276,slow=8.7,SNR=92
KURK pP pP 00 28 30.2 -1.8
comp=Z,94nm,0.9s,baz=274,slow=8.7,SNR=19
KURK S **S 00 34 27.6 -2.7**
comp=Z,0.8nm,0.4s,baz=267,slow=4.5,SNR=4.1
KURK LR LR 00 49 18.5
comp=Z,368nm,19.8s,MS4.2,baz=280,slow=42
KURK Kurchatov 40.67 51 *c i*P **P 00 28 22.5 -0.1**
KURK pmax pmax
comp=Z,49nm,1.2s,mb5.0
KURK Kurchatov 40.67 51 *e*P **P 00 28 22.6 +0.1**
comp=Z,172nm,1.1s,mb5.6
KURK *e*PP PP 00 29 55.0 -1.4
KURK Kurchatov 40.67 51 P **P 00 28 22.8 +0.3**
SNR=72
KURK P 00 28 22.8
SNR=72
KURK Kurchatov 40.67 51 *i*P **P 00 28 22.5 -0.1**
comp=Z,49nm,1.2s,mb5.0
KURK Kurchatov 40.67 51 *e*PP PP 00 29 55.0 -1.4
BORG Borgarnes 41.11 331 *e*P **P 00 28 27.5 +1.5**
BORG Borgarnes 41.11 331 *e*P **P 00 28 27.5 +1.5**
BHK Bhakra 41.86 80 *ex* pP 00 28 46.0 +4.0
AJM Ajmer 42.19 88 *e*PKP **P 00 28 35.8 +0.4**
AJM AMb AMB 00 28 46.1
comp=Z,22nm,0.9s,mb4.8
SDNR Sundarnagar 42.28 80 *ex* x 00 28 35.5
KHET Khetri 42.53 85 *e*PKP **P 00 28 38.7 +0.6**
MK31 Makanchi Array 43.20 56 *e*P **P 00 28 43.8 +0.5**
MK31 *e* 00 30 31.7
MK31 Makanchi Array 43.20 56 *e*P **P 00 28 43.8 +0.5**
MK31 Makanchi Array 43.20 56 *e*PcP PcP 00 30 31.7 -0.5
MKAR Makanchi Array 43.20 56 P **P 00 28 43.8 +0.5**
comp=Z,16nm,0.5s,mb5.0,baz=288,slow=6.3,SNR=127
MKAR pP pP 00 28 52.8 0.0
comp=Z,46nm,0.6s,baz=290,slow=6.0,SNR=24
MKAR ScP ScP 00 34 21.5 +0.4
comp=Z,1.8nm,0.8s,baz=347,slow=4.4,SNR=4.0
MKAR S **S 00 35 06.4 -1.4**
comp=Z,1.8nm,1.0s,baz=294,slow=9.0,SNR=4.3
MKAR LR LR 00 49 27.6
comp=Z,394nm,21.7s,MS4.3,baz=274,slow=40
MKAR Makanchi Array 43.20 56 P **P 00 28 43.8 +0.5**
MKAR *PP pP 00 28 52.8 +0.1
MKAR S **S 00 35 06.4 -1.4**
MKAR pmax pmax
comp=Z,16nm,0.5s
MKAR smax
comp=N,2.0nm,1.0s
MKAR MLR MLR
comp=Z,394nm,21.7s
BBTS Babate 43.30 253 P **P 00 28 45.7 +1.2**
comp=Z,32nm,0.9s,mb5.0,baz=87,slow=2.3,SNR=4.8
BBTS Babate 43.30 253 P **P 00 28 45.7 +1.2**
BBTS Babate 43.30 253 P **P 00 28 45.7 +1.3**
KLP Kalpa 43.30 79 *e*PKP **P 00 28 44.5 +0.1**
KLP AMb AMB 00 28 54.8
comp=Z,30nm,0.7s,mb5.1
AYAN Aya Nagar 43.45 84 *e*PKP **P 00 28 45.8 +0.2**
AYAN AMb AMB 00 28 57.3
comp=Z,25nm,0.9s,mb4.9
SONA Sohna 43.51 84 *e*PKP **P 00 28 46.1 +0.1**
SONA AMb AMB 00 28 56.5
comp=Z,8.5nm,0.3s,mb5.0
SPITS Spitsbergen Ar 43.52 357 P **P 00 28 44.4 -1.0**
comp=Z,9.8nm,0.5s,mb4.8,baz=148,slow=9.6,SNR=19
SPITS Spitsbergen Ar 43.52 357 P **P 00 28 44.4 -1.1**
SPITS pmax pmax
comp=Z,10.0nm,0.5s
SPITS Spitsbergen Ar 43.52 357 P **P 00 28 44.4 -1.1**
comp=Z,10.0nm,0.5s,mb4.8
DDI Dehra Dun 43.55 81 *ex* x 00 28 46.0
NVS Novosibirsk 43.65 45 *e*P **P 00 28 46.6 -0.2**
NVS *e* 00 30 35.7
NVS *e*S **S 00 35 11.7 -2.5**
NVS *e* 00 38 39.9
NVS pmax pmax
comp=Z,168nm,1.2s,mb5.7
NVS pmax pmax
comp=N,60nm,1.5s
NVS pmax pmax
comp=E,92nm,1.0s
NVS smax
comp=N,141nm,2.1s
NVS Novosibirsk 43.65 45 *e*P **P 00 28 46.6 -0.2**
comp=N,60nm,1.5s,mb5.1
NVS Novosibirsk 43.65 45 *e*PcP PcP 00 30 35.7 +2.1
comp=N,141nm,2.1s
NVS *e*S **S 00 35 11.7 -2.5**
ZALV Zalesovo Beam 44.55 46 P **P 00 28 53.1 -0.9**
comp=N,17nm,0.4s,mb5.2,baz=269,slow=8.6,SNR=118
ZALV pP pP 00 29 01.5 -2.0
comp=N,49nm,0.6s,baz=269,slow=8.8,SNR=26
ZALV LR LR 00 52 29.6
comp=N,273nm,19.9s,MS4.2,baz=268,slow=43
ZALV Zalesovo Beam 44.55 46 P **P 00 28 53.1 -0.9**
ZALV pP pP 00 29 01.5 -2.0
ZALV LR LR 00 52 29.6
AGRA Agra 44.60 85 *e*PKP **P 00 28 55.4 +0.6**

AGRA AMb AMB 00 28 56.0
comp=Z,45nm,0.3s,mb5.8
JOSI Joshimath 44.69 80 *e*PKP **P 00 28 56.7 +1.2**
JOSI AMb AMB 00 29 07.9
comp=Z,769nm,1.1s
BHPL Bhopal 45.85 90 *e*PKP **P 00 29 04.5 -0.2**
BHPL AMb AMB 00 29 11.9
comp=Z,25nm,0.8s,mb5.2
KAD Karad 46.10 100 *e*PKP **P 00 29 08.0 +1.2**
KAD AMb AMB 00 29 16.8
comp=Z,67nm,1.7s,mb5.3
DAG Danmarks Havn 46.42 347 *i* P **P 00 29 06.0 -2.5**
WMQ Urumqi 47.39 60 P **P 00 29 18.0 +1.4**
WMQ pP pP 00 29 30.0 +3.9
WMQ sP sP 00 29 36.0 +6.1
WMQ PP PP 00 31 09.0 +1.2
WMQ S **S 00 36 08.0 -0.5**
WMQ ScS ScS 00 39 05.0 -3.0
WMQ SS SS 00 39 30.0 -6.1
WMQ pmax pmax
comp=Z,45nm,1.0s,mb5.3
WMQ pmax pmax
comp=Z,97nm,5.0s
WMQ LR LR
comp=N,570nm,16.0s,MS4.8
WMQ LR LR
comp=E,570nm,16.0s,MS4.8
WMQ LR LR
comp=Z,490nm,16.0s,MS4.6
SUMG Summit 49.45 339 *e*P **P 00 29 31.0 -1.0**
comp=Z,24nm,1.0s,mb5.2
SUMG PcP PcP 00 30 56.9 +3.1
SUMG Summit 49.45 339 *i* P **P 00 29 31.5 -0.5**
comp=Z,16nm,0.9s,mb5.0
SUMG Summit 49.45 339 *i* P **P 00 29 31.5 -0.5**
comp=Z,16nm,0.9s,mb5.0,SNR=23
HYB Hyderabad 49.60 97 *e*P **P 00 29 34.0 +0.1**
HYB Hyderabad 49.60 97 *i* P **P 00 29 33.0 -0.9**
HYB Hyderabad 49.60 97 *e*P **P 00 29 34.0 +0.1**
LSZ Lusaka 50.01 177 P **P 00 29 39.6 +2.8**
comp=Z,8.1nm,1.0s,mb4.7,baz=14,slow=7.8,SNR=7.0
LSZ PcP PcP 00 30 58.6 +2.1
comp=Z,5.3nm,0.8s,baz=49,slow=2.9,SNR=4.2
LSZ Lusaka 50.01 177 P **P 00 29 39.6 +2.8**
LSZ 00 30 58.6
LSZ pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
LSZ Lusaka 50.01 177 *e*P **P 00 29 38.7 +1.9**
comp=Z,20nm,1.3s,mb5.0
LSZ *e*PcP PcP 00 30 57.6 +1.1
LSZ Lusaka 50.01 177 *e*P **P 00 29 38.7 +1.9**
comp=Z,20nm,1.3s,mb5.0
LSZ Lusaka 50.01 177 *e*PcP PcP 00 30 57.6 +1.1
DMN Daman 50.29 81 *e*P **P 00 29 39.0 0.0**
comp=Z,191nm,1.1s,mb6.0
DMN Daman 50.29 81 *e*P **P 00 29 39.0 0.0**
comp=Z,191nm,1.1s,mb6.0
KKN Kakani 50.36 81 *e*P **P 00 29 39.6 0.0**
comp=Z,140nm,1.1s,mb5.9
KKN Kakani 50.36 81 *e*P **P 00 29 39.6 0.0**
KKN pmax pmax
comp=Z,140nm,1.1s,mb5.9
KKN Kakani 50.36 81 *e*P **P 00 29 39.6 0.0**
comp=Z,140nm,1.1s,mb5.9
PKIN Phulchoki 50.54 81 *e*P **P 00 29 40.5 -0.4**
comp=Z,62nm,0.7s,mb5.7
PKI Pulchoki 50.55 81 *e*P **P 00 29 40.8 -0.2**
comp=Z,122nm,1.0s,mb5.8
PKI Pulchoki 50.55 81 *e*P **P 00 29 40.8 -0.2**
PKI pmax pmax
comp=Z,122nm,1.0s,mb5.8
PKI Pulchoki 50.55 81 *e*P **P 00 29 40.8 -0.2**
comp=Z,122nm,1.0s,mb5.8
GUN Gumba 50.80 81 *e*P **P 00 29 43.2 +0.3**
comp=Z,143nm,0.9s,mb5.9
GUN Gumba 50.80 81 *e*P **P 00 29 43.2 +0.3**
comp=Z,143nm,0.9s,mb5.9
JIRN Jiri 51.15 81 *e*P **P 00 29 45.2 -0.3**
comp=Z,168nm,0.9s,mb6.0
JIRN Jiri 51.15 81 *e*P **P 00 29 45.2 -0.3**
comp=Z,168nm,0.9s,mb6.0
RAMN Ramite 51.77 81 *e*P **P 00 29 49.0 -1.2**
comp=Z,99nm,0.9s,mb5.7
RAMN Ramite 51.77 81 *e*P **P 00 29 49.0 -1.2**
comp=Z,99nm,0.9s,mb5.7
ODAN Odare 52.45 81 *e*P **P 00 29 54.5 -0.7**
comp=Z,77nm,1.1s,mb5.6
ODAN Odare 52.45 81 *e*P **P 00 29 54.5 -0.7**
comp=Z,77nm,1.1s,mb5.5
TAPN Taplejung 52.51 80 *e*P **P 00 29 55.2 -0.4**
comp=Z,76nm,0.9s,mb5.6
TAPN Taplejung 52.51 80 *e*P **P 00 29 55.2 -0.4**
comp=Z,76nm,0.9s,mb5.6
SFJD Kangerlussuaq 53.24 331 *e*P **P 00 29 59.4 -1.0**
SFJD pmax pmax
comp=Z,26nm,0.9s,mb5.2
SFJD Kangerlussuaq 53.24 331 *e*P **P 00 29 59.4 -1.0**
comp=Z,26nm,0.9s,mb5.2
SFJD Kangerlussuaq 53.24 331 *i* P **P 00 29 59.3 -1.1**
comp=Z,13nm,0.7s,mb5.0
SFJD
comp=Z,450nm,20.0s
SFJD Kangerlussuaq 53.24 331 *e*P **P 00 29 59.4 -1.0**
comp=Z,26nm,0.9s,mb5.2
LSA Lhasa 54.32 76 P **P 00 30 09.8 +0.9**
LSA LR LR
comp=Z,580nm,30.2s,MS4.5
LSA Lhasa 54.32 76 *e*P **P 00 30 10.3 +1.4**
LSA *e* 00 31 13.9
LSA pmax pmax
comp=Z,52nm,1.3s,mb5.3
LSA Lhasa 54.32 76 *e*P **P 00 30 10.3 +1.3**
comp=Z,52nm,1.3s,mb5.3
LSA *e*PcP PcP 00 31 13.9 +1.2
LSA Lhasa 54.32 76 *e*P **P 00 30 10.3 +1.4**
comp=Z,52nm,1.3s,mb5.3
LSA Lhasa 54.32 76 *e*PcP PcP 00 31 13.9 +1.2
TSUM Tsumeb 54.48 190 P **P 00 30 12.0 +2.0**
comp=Z,4.9nm,0.8s,mb4.5,baz=354,slow=9.3,SNR=11
TSUM Tsumeb 54.48 190 *e*P **P 00 30 10.8 +0.7**
comp=Z,3.7nm,0.8s,mb4.4
TSUM Tsumeb 54.48 190 *e*P **P 00 30 10.8 +0.8**
comp=Z,3.7nm,0.8s,mb4.4
MOY Mondy 54.54 48 *e*P **P 00 30 18.6 +8.4**
MOY pmax pmax
comp=Z,51nm,2.2s,mb5.2
ALE Alert 55.36 351 P **P 00 30 14.8 -0.9**
comp=Z,125nm,1.1s,mb5.9,SNR=7.6
TLY Talaya 56.13 47 *e*P **P 00 30 29.8 +8.1**
TLY *e* 00 31 15.0
TLY *e*S **S 00 38 09.0 +0.5**
TLY *e*SS SS 00 42 01.4 +6.8
TLY pmax pmax
comp=Z,31nm,1.5s,mb5.1
TLY MLR MLR
comp=Z,695nm,26.0s,MS4.6
TLY Talaya 56.13 47 *e*P **P 00 30 21.9 +0.3**
comp=Z,19nm,1.0s,mb5.1
TLY Talaya 56.13 47 *e*P **P 00 30 21.9 +0.2**
comp=Z,19nm,1.0s,mb5.1
TLY *e*S **S 00 38 09.0 +0.5**
ZAK Zakamensk 56.26 49 *e*P **P 00 30 23.4 +0.8**
ZAK pmax pmax
comp=Z,12nm,1.2s,mb4.8
ZAK Zakamensk 56.26 49 *e*P **P 00 30 23.4 +0.8**
comp=Z,12nm,1.2s,mb4.8
IRK Irkutsk 56.36 46 *e*P pP 00 30 37.6 +4.6
IRK pmax pmax
comp=Z,95nm,1.7s,mb5.5
SHL Shillong 56.65 80 *e*PKP **P 00 30 26.0 +0.3**
GTA Gaotai 57.33 62 P **P 00 30 31.2 +0.8**
GTA pP pP 00 30 43.4 +3.3
GTA sP sP 00 30 49.8 +5.9
GTA PP PP 00 32 40.7 +3.1
GTA S **S 00 38 24.4 -0.3**
GTA sS sS 00 38 45.8 +5.1
GTA pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
GTA pmax pmax
comp=Z,80nm,5.3s
GTA LR LR
comp=N,230nm,19.3s
GTA LR LR
comp=E,310nm,24.4s
GTA LR LR
comp=Z,250nm,25.0s

SONM Songino Array 58.98 51 P **P 00 30 42.5 +0.8**
comp=Z,6.4nm,0.5s,mb4.9,baz=289,slow=7.3,SNR=48
SONM pP pP 00 30 50.6 -0.9
comp=Z,13nm,0.6s,baz=286,slow=7.4,SNR=16
SONM LR LR 00 59 04.1
comp=Z,352nm,21.0s,MS4.5,baz=294,slow=39
SONM Songino Array 58.98 51 P **P 00 30 42.5 +0.8**
SONM *PP pP 00 30 50.6 -0.9
SONM pmax pmax
comp=Z,6.0nm,0.5s
SONM MLR MLR
comp=Z,352nm,21.0s
SONM Songino Array 58.98 51 P **P 00 30 42.5 +0.8**
comp=Z,6.0nm,0.5s,mb4.9
SONM pP pP 00 30 50.6 -0.9
ULN Ulaanbaatar 59.38 51 *e*P **P 00 30 44.7 +0.2**
ULN pmax pmax
comp=Z,25nm,1.0s,mb5.2
ULN Ulaanbaatar 59.38 51 *e*P **P 00 30 44.7 +0.1**
comp=Z,25nm,1.0s,mb5.2
ULN Ulaanbaatar 59.38 51 P **P 00 30 46.1 +1.5**
SNR=13
ULN P 00 30 46.1
SNR=13
ULN Ulaanbaatar 59.38 51 *e*P **P 00 30 44.7 +0.2**
comp=Z,25nm,1.0s,mb5.2
LBTB Lobatse 59.66 181 *e*P **P 00 30 47.7 +1.1**
LBTB 00 31 34.8
LBTB pmax pmax
comp=Z,118nm,1.9s,mb5.6
LBTB Lobatse 59.66 181 *e*P **P 00 30 47.7 +1.1**
comp=Z,118nm,1.9s,mb5.6
LBTB PcP PcP 00 31 34.8 +1.5
LBTB Lobatse 59.66 181 *e*P **P 00 30 47.7 +1.1**
comp=Z,118nm,1.9s,mb5.6
LBTB Lobatse 59.66 181 PcP PcP 00 31 34.8 +1.4
BOD Bodaibo 60.10 38 *e*P **P 00 30 55.2 +5.9**
BOD pmax pmax
comp=Z,29nm,1.0s,mb5.3
TIXI Tiksi 61.06 21 *e*P **P 00 30 54.3 -1.3**
TIXI pmax pmax
comp=Z,43nm,1.0s,mb5.5
TIXI Tiksi 61.06 21 *e*P **P 00 30 54.2 -1.4**
comp=Z,43nm,1.0s,mb5.5
TIXI Tiksi 61.06 21 *e*P **P 00 30 54.2 -1.4**
comp=Z,43nm,1.0s,mb5.5
BOSA Boshof 63.25 181 P **P 00 31 12.4 +1.7**
comp=Z,16nm,0.8s,mb5.2,baz=15,slow=8.3,SNR=24
BOSA LR LR 01 00 20.9
comp=Z,415nm,19.0s,MS4.6,baz=5.4,slow=37
BOSA Boshof 63.25 181 P **P 00 31 12.4 +1.7**
BOSA pmax pmax
comp=Z,16nm,0.8s,mb5.2
BOSA MLR MLR
comp=Z,415nm,19.0s,MS4.6
BOSA Boshof 63.25 181 *e*P **P 00 31 11.6 +0.8**
comp=Z,19nm,1.0s,mb5.2
BOSA Boshof 63.25 181 *e*P **P 00 31 11.6 +0.9**
comp=Z,19nm,1.0s,mb5.2
CD2 Chengdu 63.69 69 P **P 00 31 14.7 +0.8**
CD2 pP pP 00 31 27.6 +3.8
CD2 sP sP 00 31 32.9 +5.4
CD2 PP PP 00 33 36.5 +2.5
CD2 PcS 00 35 52.9
CD2 S **S 00 39 43.6 -2.7**
CD2 sS sS 00 40 05.3 +2.8
CD2 ScS ScS 00 41 00.4 -4.8
CD2 SS SS 00 43 53.1 -0.9
CD2 pmax pmax
comp=Z,40nm,0.9s,mb5.5
CD2 pmax pmax
comp=Z,160nm,5.2s
CD2 LR LR
comp=N,310nm,21.4s,MS4.5
CD2 LR LR
comp=E,220nm,23.8s,MS4.5
CD2 LR LR
comp=Z,290nm,21.4s,MS4.4
SCHQ Schefferville 63.86 320 P **P 00 31 14.2 -0.4**
comp=Z,24nm,0.5s,mb5.5,baz=68,slow=5.0,SNR=13
SCHQ pP pP 00 31 23.1 -1.3
comp=Z,59nm,0.5s,baz=62,slow=5.7,SNR=23
SCHQ LR LR 00 59 30.0
comp=Z,214nm,18.5s,MS4.4,baz=90,slow=36
SCHQ Schefferville 63.86 320 *e*P **P 00 31 14.1 -0.5**
comp=Z,62nm,0.5s,mb5.9
SCHQ Schefferville 63.86 320 *e*P **P 00 31 14.1 -0.5**
comp=Z,62nm,0.5s,mb5.9
RES Resolute Bay 64.06 345 *e*P **P 00 31 14.2 -1.4**
RES pmax pmax
comp=Z,21nm,1.1s,mb5.1
RES Resolute Bay 64.06 345 *e*P **P 00 31 14.2 -1.5**
comp=Z,21nm,1.1s,mb5.1
RES Resolute Bay 64.06 345 *e*P **P 00 31 14.1 -1.5**
comp=Z,21nm,1.1s,mb5.1
BTO Baotou 64.11 57 *e*P pP 00 31 27.6 +1.3
HHC Hu-ho-hao-te 65.06 57 *e*P **P 00 31 23.8 +1.1**
HHC pP pP 00 31 34.1 +1.5
HHC PcP PcP 00 31 57.0 +1.6
HHC PP PP 00 33 49.0 +3.2
HHC ScP 00 35 56.2
HHC PcS 00 35 59.9
HHC S S 00 40 01.8 -1.1
HHC sS sS 00 40 18.4 -0.8
HHC ScS ScS 00 41 12.2 -3.2
HHC SS SS 00 44 14.0 -0.9
HHC pmax pmax
comp=Z,25nm,0.8s,mb5.3
HHC pmax pmax
comp=Z,62nm,4.7s
HHC LR LR
comp=N,240nm,20.4s,MS4.5
HHC LR LR
comp=E,160nm,19.2s,MS4.5
HHC LR LR
comp=Z,130nm,21.6s,MS4.1
KMI Kunming 65.57 76 P **P 00 31 27.0 +0.8**
KMI pP pP 00 31 41.2 +5.1
KMI sP sP 00 31 47.3 +7.5
KMI PP PP 00 33 52.5 +1.9
KMI S S 00 40 05.3 -4.3
KMI sS sS 00 40 29.8 +4.0
KMI SS SS 00 44 21.0 -2.4
KMI pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
KMI pmax pmax
comp=Z,80nm,4.6s
KMI LR LR
comp=N,200nm,16.2s
KMI LR LR
comp=E,230nm,21.9s
KMI LR LR
comp=Z,290nm,18.3s,MS4.5
CHG Chiang Mai 65.60 83 ⇑P **P 00 31 27.2 +0.7**
comp=Z,18nm,0.8s,mb5.2
CHTO Chiang Mai 65.60 83 *e*P **P 00 31 25.9 -0.6**
CHTO pmax pmax
comp=Z,21nm,1.0s,mb5.1
CHTO Chiang Mai 65.60 83 *e*P **P 00 31 25.9 -0.7**
comp=Z,21nm,1.0s,mb5.1
CHTO Chiang Mai 65.60 83 *e*P **P 00 31 25.9 -0.6**
comp=Z,21nm,1.0s,mb5.1
YAK Yakutsk 65.63 30 *e*P **P 00 31 31.5 +5.5**
YAK pmax pmax
comp=Z,49nm,0.9s,mb5.5
YAK Yakutsk 65.63 30 *e*P **P 00 31 26.1 +0.1**
comp=Z,40nm,0.6s,mb5.6
YAK Yakutsk 65.63 30 *e*P **P 00 31 26.1 +0.1**
comp=Z,40nm,0.6s,mb5.6
CM31 Chiang Mai Arr 65.78 84 *e*P **P 00 31 28.2 +0.5**
comp=Z,7.0nm,0.5s,mb5.0
CM31 Chiang Mai Arr 65.78 84 *e*P **P 00 31 28.2 +0.5**
comp=Z,7.0nm,0.5s,mb5.0
CMAR Chiang Mai Arr 65.78 84 P **P 00 31 27.9 +0.3**
comp=Z,7.1nm,0.9s,mb4.7,baz=301,slow=8.2,SNR=25
CMAR pP pP 00 31 35.0 -2.5
comp=Z,14nm,0.9s,baz=292,slow=7.3,SNR=10
CMAR LR LR 01 05 54.6
comp=Z,178nm,20.9s,MS4.2,baz=283,slow=41
CMAR Chiang Mai Arr 65.78 84 P **P 00 31 28.0 +0.3**
comp=Z,7.0nm,0.9s,mb4.7
CMAR pP pP 00 31 35.0 -2.6
XAN Xi'an 66.19 64 P **P 00 31 30.5 +0.4**
XAN pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
XAN pmax pmax
comp=Z,30nm,4.4s
HIA Hailar 66.58 45 *e*P **P 00 31 32.0 -0.4**
HIA pmax pmax
comp=Z,19nm,0.8s
HIA Hailar 66.58 45 *e*P **P 00 31 32.0 -0.3**
comp=Z,19nm,0.8s,mb5.2
HIA Hailar 66.58 45 *e*P **P 00 31 32.0 -0.4**
comp=Z,19nm,0.8s,mb5.2
GYA Guiyang 68.02 72 P **P 00 31 43.0 +1.1**
GYA pP pP 00 31 57.8 +6.0
GYA sP sP 00 32 02.5 +7.0
GYA PcP PcP 00 32 09.9 +1.9
GYA PP PP 00 34 15.8 +3.9
GYA ScP 00 36 07.4
GYA PcS 00 36 13.9
GYA S S 00 40 37.9 -1.3
GYA sS sS 00 41 00.3 +4.8
GYA SKS 00 41 33.7
GYA SS SS 00 45 01.0 -0.4
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,130nm,5.6s
GYA LR LR
comp=N,630nm,18.9s,MS5.0
GYA LR LR
comp=E,570nm,19.0s,MS5.0
GYA LR LR
comp=Z,720nm,19.4s,MS4.9
NST Nakhon Sawan 68.19 86 P **P 00 31 40.5 -2.5**
ENH Enshi 68.37 68 *e*P **P 00 31 43.9 -0.1**
comp=Z,26nm,0.8s,mb5.3
ENH Enshi 68.37 68 *e*P **P 00 31 43.9 -0.1**
comp=Z,26nm,0.8s,mb5.3
BJI Beijing 68.57 56 P **P 00 31 44.7 -0.4**
BJI pP pP 00 31 56.4 +1.4
BJI PP PP 00 34 20.2 +3.9
BJI S S 00 40 47.8 +2.5
BJI LR LR
comp=N,360nm,25.3s,MS4.6
BJI LR LR
comp=E,310nm,28.5s,MS4.6
BJI LR LR
comp=Z,390nm,21.3s
RCBR Riachuelo 71.01 248 *e*P **P 00 32 00.3 -0.1**
RCBR Riachuelo 71.01 248 *e*P **P 00 32 00.3 -0.1**
LBNH Lisbon 71.72 311 *e*P **P 00 32 05.0 +0.7**
LBNH pmax pmax
comp=Z,23nm,0.9s,mb5.1
LBNH Lisbon 71.72 311 *e*P **P 00 32 05.0 +0.7**
comp=Z,23nm,0.9s,mb5.1
LBNH Lisbon 71.72 311 *e*P **P 00 32 05.0 +0.7**
comp=Z,23nm,0.9s,mb5.1
WHN Wuhan 71.89 65 ⇑P **P 00 32 09.8 +4.2**
CN2 Changchun 72.69 48 *e*P **P 00 32 11.1 +1.0**
CN2 *e*pP pP 00 32 23.7 +3.6
CN2 *e*S S 00 41 30.3 -2.9
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,18.0s,MS4.6
CN2 LR LR
comp=E,200nm,18.0s,MS4.6
CN2 LR LR
comp=Z,200nm,20.0s,MS4.4
DL2 Dalian 72.80 54 P **P 00 32 18.5 +7.7**
DL2 pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
BILL Bilibino 73.05 15⇑*e*P **P 00 32 11.2 -0.6**
BILL *e* pP 00 32 19.3 -2.5
BILL *e* 00 32 25.1
BILL pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
BILL MLR MLR
comp=Z,200nm,19.0s,MS4.4
BILL Bilibino 73.05 15 *e*P **P 00 32 11.6 -0.2**
comp=Z,32nm,1.3s,mb5.1
BILL Bilibino 73.05 15 *e*P **P 00 32 11.2 -0.6**
comp=Z,7.0nm,1.2s,mb4.5
LONY Lake Ozonia 73.14 313 *e*P **P 00 32 13.6 +0.9**
comp=Z,24nm,0.9s,mb5.1
LONY Lake Ozonia 73.14 313 *e*P **P 00 32 13.6 +0.9**
comp=Z,24nm,0.9s,mb5.1
NCB Newcomb 73.27 312 *e*P **P 00 32 13.4 -0.1**
comp=Z,14nm,1.1s,mb4.8
NCB Newcomb 73.27 312 *e*P **P 00 32 13.4 -0.1**
comp=Z,14nm,1.1s,mb4.8
KLR Kul'dur 73.37 41 *e*P **P 00 32 09.9 -4.2**
SEY Seymchan 73.42 23*d i*P **P 00 32 15.2 +1.1**
SEY Seymchan 73.42 23 *i* P **P 00 32 15.2 +1.1**
KULM Kulim 74.28 95 *e*P **P 00 32 20.7 +0.7**
comp=Z,40nm,1.1s,mb5.3
KULM Kulim 74.28 95 *e*P **P 00 32 20.7 +0.8**
comp=Z,40nm,1.1s,mb5.3
NJ2 Nanjing 74.43 62 *e*P **P 00 32 22.7 +2.2**
NJ2 pmax pmax
comp=Z,40nm,1.0s,mb5.3
MDJ Mudanjiang 74.75 46 P **P 00 32 24.5 +2.3**
MDJ pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
MDJ pmax pmax
comp=Z,56nm,3.8s
MDJ LR LR
comp=N,150nm,19.1s,MS4.4
MDJ LR LR
comp=E,88nm,20.3s,MS4.4
MDJ LR LR
comp=Z,160nm,19.1s,MS4.3
BINY Binghamton 75.32 311 *e*P **P 00 32 26.2 +0.7**
comp=Z,24nm,0.9s,mb5.1
BINY Binghamton 75.32 311 *e*P **P 00 32 26.2 +0.7**
comp=Z,24nm,0.9s,mb5.1
INK Inuvik 75.92 352 LR LR 01 05 19.3
comp=Z,178nm,21.2s,MS4.3,baz=22,slow=35
INK Inuvik 75.92 352 *e*P **P 00 32 27.0 -1.4**
INK pmax pmax
comp=Z,23nm,1.1s
INK Inuvik 75.92 352 *e*P **P 00 32 27.0 -1.4**
comp=Z,23nm,1.1s,mb5.0
INK Inuvik 75.92 352 *e*P **P 00 32 27.0 -1.4**
comp=Z,23nm,1.1s,mb5.0
SSPA Standing Stone 77.38 311 *e*P **P 00 32 37.6 +0.4**
comp=Z,23nm,1.1s,mb5.0
SSPA Standing Stone 77.38 311 *e*P **P 00 32 37.6 +0.4**
comp=Z,23nm,1.1s,mb5.0
KSRS Korea Array 77.75 53 P **P 00 32 39.5 +0.2**
comp=Z,6.3nm,1.0s,mb4.5,baz=299,slow=5.2,SNR=17
KSRS pP pP 00 32 47.4 -2.0
comp=Z,16nm,0.8s,baz=306,slow=4.4,SNR=17
KSRS LR LR 01 11 30.8
comp=Z,209nm,20.9s,MS4.4,baz=309,slow=39
KSRS Korea Array 77.75 53 P **P 00 32 39.6 +0.2**
KSRS *PP pP 00 32 47.4 -2.0
KSRS pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
KSRS MLR MLR
comp=Z,209nm,20.9s,MS4.4
KSRS Korea Array 77.75 53 P **P 00 32 39.6 +0.2**
comp=Z,6.0nm,1.0s,mb4.5
KSRS Korea Array 77.75 53 PcP PcP 00 32 47.4 -1.9
comp=Z,209nm,20.9s
ERPA Erie 77.80 313 *e*P **P 00 32 39.9 +0.4**
comp=Z,32nm,0.8s,mb5.3
ERPA Erie 77.80 313 *e*P **P 00 32 39.9 +0.4**
comp=Z,32nm,0.8s,mb5.3
YKA Yellowknife Ar 77.88 343 P **P 00 32 38.5 -1.1**
comp=Z,4.0nm,0.7s,mb4.4,baz=34,slow=5.4,SNR=25
YKA pP pP 00 32 47.3 -2.3
comp=Z,9.8nm,0.7s,baz=34,slow=5.5,SNR=22
YKA LR LR 01 06 12.7
comp=Z,19nm,20.2s,MS3.4,baz=90,slow=35
YKA Yellowknife Ar 77.88 343 P **P 00 32 38.5 -1.1**
YKA *PP pP 00 32 47.3 -2.3
YKA pmax pmax
comp=Z,4.0nm,0.7s
YKA MLR MLR
comp=Z,19nm,20.2s
YKA Yellowknife Ar 77.88 343 P **P 00 32 38.5 -1.1**
YKA pP pP 00 32 47.3 -2.3
YKA LR LR 01 06 12.7
YKA Yellowknife Ar 77.88 343 P **P 00 32 38.5 -1.1**
comp=Z,4.0nm,0.7s,mb4.5
YKA Yellowknife Ar 77.88 343 PcP PcP 00 32 47.3 -2.1
comp=Z,19nm,20.2s

YKA pP pP 00 32 47.3 -2.3
COLD Coldfoot 78.08 359 *e*P **P 00 32 40.5 -0.2**
comp=Z,23nm,1.0s,mb5.1
COLD Coldfoot 78.08 359 *e*P **P 00 32 40.5 -0.2**
comp=Z,23nm,1.0s,mb5.1
GLMI Grayling 78.84 317 *e*P **P 00 32 44.8 -0.5**
comp=Z,57nm,0.9s,mb5.5
GLMI Grayling 78.84 317 *e*P **P 00 32 44.8 -0.4**
comp=Z,56nm,0.9s,mb5.5
MCWV Mont Chateau 79.17 311 *e*P **P 00 32 47.2 0.0**
comp=Z,32nm,1.0s,mb5.2
MCWV Mont Chateau 79.17 311 *e*P **P 00 32 47.2 +0.1**
comp=Z,32nm,1.0s,mb5.2
EGAK Eagle 80.08 355 *e*P **P 00 32 50.6 -1.0**
comp=Z,27nm,1.2s,mb5.0
EGAK Eagle 80.08 355 *e*P **P 00 32 50.6 -1.0**
comp=Z,27nm,1.2s,mb5.0
FFC Flin Flon 80.18 332 P **P 00 32 51.5 -0.8**
comp=Z,176nm,0.7s,mb6.1,SNR=13
FFC Flin Flon 80.18 332 *i* P **P 00 32 52.2 -0.1**
FFC Flin Flon 80.18 332 *e*P **P 00 32 51.2 -1.1**
comp=Z,36nm,1.0s,mb5.2
FFC *e*PcP PcP 00 33 00.2 +0.7
FFC Flin Flon 80.18 332 *e*P **P 00 32 51.2 -1.1**
comp=Z,36nm,1.0s,mb5.2
FFC Flin Flon 80.18 332 *e*PcP PcP 00 33 00.2 +0.7
EYMN Ely 80.44 323 *e*P **P 00 32 53.9 0.0**
EYMN Ely 80.44 323 *e*P **P 00 32 53.8 -0.1**
COWI Conover 80.47 320 *e*P **P 00 32 53.0 -1.1**
comp=Z,27nm,0.8s,mb5.2
COWI Conover 80.47 320 *e*P **P 00 32 53.0 -1.0**
comp=Z,27nm,0.8s,mb5.2
YSS Yuzh-Sakhalins 80.58 38 *e*P **P 00 32 55.0 +0.4**
YSS *e**PP pP 00 33 08.2 +3.5
YSS *e*S S 00 42 55.0 -4.3
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.2
YSS Yuzh-Sakhalins 80.58 38 *e*P **P 00 32 55.6 +1.0**
comp=Z,28nm,0.8s,mb5.2
YSS Yuzh-Sakhalins 80.58 38 *e*P **P 00 32 55.0 +0.4**
comp=Z,30nm,1.0s,mb5.2
DAWY Dawson 80.64 354 *e*P **P 00 32 54.2 -0.4**
DAWY *e*PcP PcP 00 33 02.3 +0.9
DAWY Dawson 80.64 354 *e*P **P 00 32 54.2 -0.4**
ULM Lac du Bonnet 80.92 327 P **P 00 32 55.3 -1.1**
comp=Z,4.7nm,0.5s,mb4.7,baz=52,slow=4.3,SNR=4.7
ULM LR LR 01 10 22.1
comp=Z,244nm,18.4s,MS4.6,baz=60,slow=37
ULM Lac du Bonnet 80.92 327 *e*P **P 00 32 55.4 -1.0**
comp=Z,14nm,0.7s,mb5.0
ULM *e*PcP PcP 00 33 04.0 +1.1
ULM Lac du Bonnet 80.92 327 *e*P **P 00 32 55.4 -1.0**
comp=Z,14nm,0.7s,mb5.0
ULM Lac du Bonnet 80.92 327 *e*PcP PcP 00 33 04.0 +1.1
YULB Yu-li 80.93 68 P **P 00 32 57.2 +0.3**
comp=Z,42nm,1.2s,mb5.2
YULB Yu-li 80.93 68 P **P 00 32 57.2 +0.3**
comp=Z,42nm,1.2s,mb5.2
MTP Monte Pirata 81.21 286 *e*P **P 00 32 59.0 +0.5**
MTP Monte Pirata 81.21 286 *e*P **P 00 32 59.0 +0.5**
BPAW Bear Paw Mtn. 81.24 359 *e*P **P 00 32 56.4 -1.4**
comp=Z,18nm,0.9s,mb5.0
BPAW *e*PcP PcP 00 33 04.3 +0.3
BPAW Bear Paw Mtn. 81.24 359 *e*P **P 00 32 56.4 -1.4**
comp=Z,18nm,0.9s,mb5.0
CHUM Lake Minchumin 81.47 359 *e*P **P 00 32 58.7 -0.3**
comp=Z,56nm,1.1s,mb5.4
CHUM *e*PcP PcP 00 33 06.7 +1.7
CHUM Lake Minchumin 81.47 359 *e*P **P 00 32 58.7 -0.4**
comp=Z,56nm,1.1s,mb5.4
MCK McKinley 81.56 358 *e*P **P 00 32 58.6 -0.9**
MCK *e* pP 00 33 06.2 -3.4
MCK pmax pmax
comp=Z,33nm,1.0s,mb5.2
MCK McKinley 81.56 358 *e*P **P 00 32 58.6 -0.9**
comp=Z,33nm,1.0s,mb5.2
MCK *e*PcP PcP 00 33 06.2 +0.8
MCK McKinley 81.56 358 *e*P **P 00 32 58.6 -0.9**
comp=Z,33nm,1.0s,mb5.2
KTH Kantishna Hill 81.78 359 *e*P **P 00 32 59.6 -1.1**
comp=Z,36nm,1.1s,mb5.2
KTH *e*PcP PcP 00 33 08.1 +1.7
KTH Kantishna Hill 81.78 359 *e*P **P 00 32 59.6 -1.1**
comp=Z,36nm,1.1s,mb5.2
TRF Thorofare Moun 81.87 358 *e*P **P 00 33 00.6 -0.6**
comp=Z,28nm,1.1s,mb5.1
TRF *e*PcP PcP 00 33 08.9 +2.1
TRF Thorofare Moun 81.87 358 *e*P **P 00 33 00.6 -0.6**
comp=Z,28nm,1.1s,mb5.1
MENT Mentasta 82.09 355 *e*P **P 00 33 04.0 +1.7**
MENT Mentasta 82.09 355 *e*P **P 00 33 04.0 +1.7**
TTA Tatalina 82.42 1 *e*P **P 00 33 03.6 -0.5**
TTA Tatalina 82.42 1 *e*P **P 00 33 03.6 -0.5**
PPLA Purkeypile 82.46 359 *e*P **P 00 33 04.7 +0.4**
comp=Z,31nm,0.7s,mb5.3
PPLA Purkeypile 82.46 359 *e*P **P 00 33 04.7 +0.4**
comp=Z,31nm,0.7s,mb5.3
CRPR Cabo Rojo, PR 82.48 287 *e*P **P 00 33 06.1 +0.9**
CRPR Cabo Rojo, PR 82.48 287 *e*P **P 00 33 06.1 +0.9**
PETK Petropavlovsk- 82.71 27 P **P 00 33 05.9 +0.1**
comp=Z,1.4nm,0.5s,mb4.2,baz=354,slow=2.9,SNR=3.3
PETK LR LR 01 12 06.1
comp=Z,201nm,20.6s,MS4.5,baz=131,slow=37
PETK Petropavlovsk- 82.71 27 P **P 00 33 05.9 +0.1**
PETK pmax pmax
comp=Z,1.0nm,0.5s,mb4.1
PETK MLR MLR
comp=Z,201nm,20.6s,MS4.5
JFWS Jewell Farm 83.18 318 *e*P **P 00 33 08.1 -0.3**
JFWS pmax pmax
comp=Z,13nm,0.8s,mb5.0
JFWS Jewell Farm 83.18 318 *e*P **P 00 33 08.1 -0.3**
comp=Z,13nm,0.8s,mb5.0
JFWS Jewell Farm 83.18 318 *e*P **P 00 33 08.1 -0.3**
comp=Z,13nm,0.8s,mb5.0
TZTN Tazewell 83.38 310 *e*P **P 00 33 09.4 -0.2**
comp=Z,14nm,1.1s,mb4.9
TZTN Tazewell 83.38 310 *e*P **P 00 33 09.4 -0.2**
comp=Z,14nm,1.1s,mb4.9
BLO Bloomington 83.52 314 *e*P **P 00 33 10.2 0.0**
BLO pmax pmax
comp=Z,21nm,0.6s,mb5.4
BLO Bloomington 83.52 314 *e*P **P 00 33 10.2 -0.1**
comp=Z,21nm,0.6s,mb5.5
BLO Bloomington 83.52 314 *e*P **P 00 33 10.2 0.0**
comp=Z,21nm,0.6s,mb5.4
WCI Wyandotte Cave 84.00 313 *e*P **P 00 33 13.1 +0.4**
WCI pmax pmax
comp=Z,15nm,0.8s,mb5.2
WCI Wyandotte Cave 84.00 313 *e*P **P 00 33 13.1 +0.4**
comp=Z,15nm,0.8s,mb5.2
WCI Wyandotte Cave 84.00 313 *e*P **P 00 33 13.1 +0.4**
comp=Z,15nm,0.8s,mb5.2
TKL Tuckaleechee C 84.08 310 *e*P **P 00 33 12.8 -0.4**
TKL *e* pP 00 33 23.1 -0.2
TKL Tuckaleechee C 84.08 310 *e*P **P 00 33 12.8 -0.4**
BMRM Bremner River 84.11 355 *e*P **P 00 33 12.4 -0.4**
comp=Z,30nm,1.2s,mb5.3
BMRM Bremner River 84.11 355 *e*P **P 00 33 12.4 -0.4**
comp=Z,30nm,1.2s,mb5.3
HDIL Hopedale 84.22 316 *e*P **P 00 33 13.4 -0.4**
comp=Z,18nm,0.6s,mb5.4
HDIL *e* pP 00 33 22.9 -1.0
HDIL Hopedale 84.22 316 *e*P **P 00 33 13.4 -0.4**
RC01 Rabbit Creek A 84.23 358 *e*P **P 00 33 13.7 +0.3**
comp=Z,58nm,1.1s,mb5.6
RC01 *e* pP 00 33 21.4 -2.1
RC01 Rabbit Creek A 84.23 358 *e*P **P 00 33 13.7 +0.3**
SVW2 Sparrevohn 84.27 1 *e*P **P 00 33 13.7 +0.1**
SVW2 Sparrevohn 84.27 1 *e*P **P 00 33 13.7 +0.1**
SKAG Skagway 84.67 351 *e*P **P 00 33 16.1 +0.4**
comp=Z,26nm,1.2s,mb5.2
SKAG Skagway 84.67 351 *e*P **P 00 33 16.1 +0.4**
comp=Z,26nm,1.2s,mb5.2
CPCT Cooper Cave 84.68 310 *e*P **P 00 33 15.9 -0.3**
CPCT *e* pP 00 33 26.2 -0.1
CPCT Cooper Cave 84.68 310 *e*P **P 00 33 15.9 -0.3**
OLIL Olney 84.74 314 *e*P **P 00 33 15.7 -0.8**
comp=Z,15nm,0.7s,mb5.2
OLIL Olney 84.74 314 *e*P **P 00 33 15.7 -0.7**
comp=Z,15nm,0.7s,mb5.2
DLBC Dease Lake 84.83 348 *e*P **P 00 33 17.6 +1.0**
DLBC *e* pP 00 33 25.7 -1.0
DLBC Dease Lake 84.83 348 *e*P **P 00 33 17.6 +1.1**
MAJO Matsushiro 84.84 49 *e*P **P 00 33 17.3 +0.3**
MAJO pmax pmax
comp=Z,13nm,1.1s,mb5.0
MAJO Matsushiro 84.84 49 *e*P **P 00 33 17.3 +0.3**
comp=Z,13nm,1.1s,mb5.0
MAJO Matsushiro 84.84 49 *e*P **P 00 33 17.3 +0.3**
comp=Z,13nm,1.1s,mb5.0
MJAR Matsushiro Arr 84.84 49 P **P 00 33 17.5 +0.5**
comp=Z,8.8nm,1.0s,mb4.8,baz=305,slow=5.4,SNR=14
MJAR LR LR 01 17 11.9
comp=Z,150nm,21.9s,MS4.3,baz=320,slow=40
MJAR Matsushiro Arr 84.84 49 P **P 00 33 17.5 +0.5**
comp=Z,9.0nm,1.0s,mb4.8
RSO Redoubt South 84.91 359 P **P 00 33 17.5 +0.6**
RSO *e* pP 00 33 26.7 -0.3
RSO Redoubt South 84.91 359 P **P 00 33 17.5 +0.6**
PNL Peninsula 84.95 353 P **P 00 33 17.1 0.0**
comp=Z,26nm,1.1s,mb5.3
PNL Peninsula 84.95 353 P **P 00 33 17.1 0.0**
comp=Z,26nm,1.1s,mb5.3
SEW Seward 85.20 358 *e*P **P 00 33 18.4 0.0**
comp=Z,32nm,1.0s,mb5.4
SEW *e* pP 00 33 26.5 -2.0
SEW Seward 85.20 358 *e*P **P 00 33 18.4 +0.1**
GOGA Godfrey 85.30 308 *e*P **P 00 33 19.4 +0.1**
GOGA *e* pP 00 33 28.6 -0.9
GOGA pmax pmax
comp=Z,14nm,1.0s,mb5.0
GOGA Godfrey 85.30 308 *e*P **P 00 33 19.4 +0.1**
comp=Z,14nm,1.0s,mb5.1
GOGA *e* pP 00 33 28.6 -0.9
GOGA Godfrey 85.30 308 *e*P **P 00 33 19.4 +0.1**
comp=Z,14nm,1.0s,mb5.0
EDM Edmonton 85.39 337 *e*P **P 00 33 18.6 -0.8**
EDM *e* pP 00 33 27.7 -1.9
EDM Edmonton 85.39 337 *e*P **P 00 33 18.6 -0.8**
SWET Sewanee 85.72 310 *e*P **P 00 33 21.3 -0.1**
SWET Sewanee 85.72 310 *e*P **P 00 33 21.3 -0.1**
ECSD EROS Data Cent 85.94 322 *e*P **P 00 33 22.2 -0.1**
comp=Z,12nm,0.8s,mb5.2
ECSD *e* pP 00 33 31.5 -1.0
ECSD EROS Data Cent 85.94 322 *e*P **P 00 33 22.2 -0.1**
SIUC Southern Illin 86.07 314 *e*P **P 00 33 22.9 -0.2**
comp=Z,36nm,0.8s,mb5.7
SIUC Southern Illin 86.07 314 *e*P **P 00 33 22.9 -0.2**
comp=Z,36nm,0.8s,mb5.7
WVT Waverly 86.29 312 *e*P **P 00 33 23.1 -1.1**
WVT *e* pP 00 33 33.0 -1.4
WVT pmax pmax
comp=Z,9.0nm,0.7s,mb5.1
WVT Waverly 86.29 312 *e*P **P 00 33 23.1 -1.1**
comp=Z,9.3nm,0.7s,mb5.1
WVT *e* pP 00 33 33.0 -1.3
WVT Waverly 86.29 312 *e*P **P 00 33 23.1 -1.1**
comp=Z,9.0nm,0.7s,mb5.1
FVM French Village 86.60 315 *e*P **P 00 33 25.5 -0.2**
FVM *e* pP 00 33 34.2 -1.7
FVM pmax pmax
comp=Z,38nm,1.1s,mb5.5
FVM French Village 86.60 315 *e*P **P 00 33 25.4 -0.3**
comp=Z,38nm,1.1s,mb5.5
FVM *e* pP 00 33 34.2 -1.7
FVM French Village 86.60 315 *e*P **P 00 33 25.5 -0.2**
comp=Z,38nm,1.1s,mb5.5
KDAK Kodiak Island 87.60 359 *e*P **P 00 33 29.8 -0.3**
KDAK *e* pP 00 33 38.6 -1.7
KDAK pmax pmax
comp=Z,41nm,1.1s,mb5.6
KDAK Kodiak Island 87.60 359 *e*P **P 00 33 29.8 -0.3**
comp=Z,41nm,1.1s,mb5.6
KDAK *e* pP 00 33 38.6 -1.7
KDAK Kodiak Island 87.60 359 *e*P **P 00 33 29.8 -0.3**
comp=Z,41nm,1.1s,mb5.6
LRAL Lakeview Retre 87.80 309 *e*P **P 00 33 31.4 -0.3**
comp=Z,43nm,1.0s,mb5.6
LRAL *e* pP 00 33 40.1 -1.7
LRAL Lakeview Retre 87.80 309 *e*P **P 00 33 31.4 -0.2**
LAO LASA Array 88.12 329 *e*P **P 00 33 33.0 +0.2**
comp=Z,7.0nm,0.6s,mb5.1
LAO *e* pP 00 33 42.0 -1.0
LAO LASA Array 88.12 329 *e*P **P 00 33 33.0 +0.1**
OHAK Old Harbor 88.16 360 *e*P **P 00 33 32.4 -0.4**
comp=Z,41nm,1.0s,mb5.6
OHAK *e* pP 00 33 41.0 -2.0
OHAK Old Harbor 88.16 360 *e*P **P 00 33 32.4 -0.4**
EGMT Eagleton 88.46 332 *e*P **P 00 33 34.5 0.0**
comp=Z,190nm,1.9s,mb6.0
EGMT *e* pP 00 33 44.3 -0.3
EGMT Eagleton 88.46 332 *e*P **P 00 33 34.5 +0.1**
WALA Waterton Lakes 89.11 335 *e*P **P 00 33 37.5 0.0**
comp=Z,0.4nm,0.8s
WALA Waterton Lakes 89.11 335 *e*P **P 00 33 37.5 0.0**
comp=Z,0.4nm,0.8s
RSSD Black Hills 89.19 327 *e*P **P 00 33 38.2 +0.2**
RSSD *e* pP 00 33 47.6 -0.5
RSSD pmax pmax
comp=Z,15nm,1.0s,mb5.3
RSSD Black Hills 89.19 327 *e*P **P 00 33 38.1 +0.2**
comp=Z,15nm,1.0s,mb5.3
RSSD *e* pP 00 33 47.6 -0.6
RSSD Black Hills 89.19 327 *e*P **P 00 33 38.2 +0.2**
comp=Z,15nm,1.0s,mb5.3
YBMT Yellow Bay 90.16 334 *e*P **P 00 33 42.2 -0.2**
comp=Z,16nm,0.9s,mb5.4
YBMT *e* pP 00 33 51.5 -1.1
YBMT Yellow Bay 90.16 334 *e*P **P 00 33 42.2 -0.2**
JTMT Jette 90.36 335 *e*P **P 00 33 42.9 -0.5**
comp=Z,30nm,1.1s,mb5.5
JTMT Jette 90.36 335 *e*P **P 00 33 42.9 -0.4**
comp=Z,30nm,1.1s,mb5.5
BSMT Bassoo Peak 90.45 335 *e*P **P 00 33 43.7 0.0**
comp=Z,12nm,1.1s,mb5.1
BSMT Bassoo Peak 90.45 335 *e*P **P 00 33 43.7 0.0**
comp=Z,12nm,1.1s,mb5.1
SWMT Swartz Lake 90.46 334 *e*P **P 00 33 44.0 +0.2**
comp=Z,23nm,1.1s,mb5.4
SWMT Swartz Lake 90.46 334 *e*P **P 00 33 44.0 +0.2**
comp=Z,23nm,1.1s,mb5.4
SDV Santo Domingo 90.48 281 *e*P **P 00 33 45.2 +0.7**
comp=Z,6.4nm,0.6s,mb5.1
SDV Santo Domingo 90.48 281 *e*P **P 00 33 45.2 +0.7**
comp=Z,6.4nm,0.6s,mb5.1
SLMT Seeley Lake 90.51 334 *e*P **P 00 33 43.6 -0.4**
comp=Z,4.9nm,0.7s,mb5.0
SLMT Seeley Lake 90.51 334 *e*P **P 00 33 43.6 -0.4**
comp=Z,4.9nm,0.7s,mb5.0
RLMT Red Lodge 90.64 330 *e*P **P 00 33 44.9 +0.2**
comp=Z,19nm,1.4s,mb5.2
RLMT Red Lodge 90.64 330 *e*P **P 00 33 44.9 +0.2**
comp=Z,19nm,1.4s,mb5.2
CHMT Chamberlain Mo 90.70 334 *e*P **P 00 33 43.9 -1.0**
comp=Z,6.1nm,1.1s,mb4.8
CHMT Chamberlain Mo 90.70 334 *e*P **P 00 33 43.9 -1.0**
comp=Z,6.1nm,1.1s,mb4.8
MIAR Mount Ida 90.81 314 *e*P **P 00 33 45.7 0.0**
MIAR *e* pP 00 33 55.2 -0.7
MIAR pmax pmax
comp=Z,7.0nm,0.9s,mb5.0
MIAR Mount Ida 90.81 314 *e*P **P 00 33 45.7 0.0**
comp=Z,7.1nm,0.9s,mb5.0
MIAR *e* pP 00 33 55.2 -0.7
MIAR Mount Ida 90.81 314 *e*P **P 00 33 45.7 0.0**
comp=Z,7.0nm,0.9s,mb5.0
NEW Newport 90.88 336 *e*P **P 00 33 45.4 -0.4**
NEW *e* pP 00 33 54.6 -1.3
NEW pmax pmax
comp=Z,20nm,1.0s
NEW Newport 90.88 336 *e*P **P 00 33 45.4 -0.4**
comp=Z,20nm,1.0s,mb5.4
NEW *e* pP 00 33 54.6 -1.4
NEW Newport 90.88 336 *e*P **P 00 33 45.3 -0.5**
MSO Missoula 91.02 334 *e*P **P 00 33 45.1 -1.3**
comp=Z,4.6nm,0.9s,mb4.8
MSO Missoula 91.02 334 *e*P **P 00 33 45.1 -1.3**
comp=Z,4.6nm,0.9s,mb4.8
BOZ Bozeman (W) 91.15 332 *e*P **P 00 33 46.8 -0.3**
BOZ pmax pmax
comp=Z,6.0nm,1.3s,mb4.8
BOZ Bozeman (W) 91.15 332 *e*P **P 00 33 46.8 -0.3**
comp=Z,5.6nm,1.3s,mb4.7
BOZ Bozeman (W) 91.15 332 *e*P **P 00 33 46.8 -0.3**
comp=Z,6.0nm,1.3s,mb4.8
LRM Limekiln Ridge 91.32 332 *e*P **P 00 33 47.8 0.0**
comp=Z,33nm,0.9s,mb5.7
LRM Limekiln Ridge 91.32 332 *e*P **P 00 33 47.8 0.0**
comp=Z,33nm,0.9s,mb5.7
PHWY Pilot Hill 92.05 326 *e*P **P 00 33 47.9 -3.4**
comp=Z,13nm,0.9s,mb5.3
IMW Indian Meadow 92.33 330 *e*P **P 00 33 52.8 +0.2**
comp=Z,3.8nm,0.8s,mb4.8
IMW Indian Meadow 92.33 330 *e*P **P 00 33 52.8 +0.2**
comp=Z,3.8nm,0.8s,mb4.8
JCW Jim Creek 92.43 339 *e*P **P 00 33 52.0 -1.0**
comp=Z,9.1nm,0.5s,mb5.4
JCW Jim Creek 92.43 339 *e*P **P 00 33 52.0 -0.9**
comp=Z,9.1nm,0.5s,mb5.4
PDAR Pinedale Array 92.69 329 P **P 00 33 53.4 -0.9**
comp=Z,1.0nm,0.6s,mb4.4,baz=64,slow=3.4,SNR=7.1
PDAR Pinedale Array 92.69 329 P **P 00 33 53.3 -0.9**
GNW Green Mountain 93.26 340 *e*P **P 00 33 56.0 -0.7**
comp=Z,6.9nm,0.9s,mb5.1
GNW Green Mountain 93.26 340 *e*P **P 00 33 56.0 -0.8**
comp=Z,6.9nm,0.9s,mb5.1
ISCO Idaho Springs 93.31 325 *e*P **P 00 33 56.9 -0.3**
ISCO pmax pmax
comp=Z,5.0nm,1.0s,mb4.9
ISCO Idaho Springs 93.31 325 *e*P **P 00 33 56.9 -0.2**
comp=Z,5.0nm,1.0s,mb4.9
ISCO Idaho Springs 93.31 325 *e*P **P 00 33 56.9 -0.3**
comp=Z,5.0nm,1.0s,mb4.9
HWUT Hardware Ranch 94.49 330 *e*P **P 00 34 01.5 -1.0**
comp=Z,7.9nm,0.8s,mb5.2
HWUT Hardware Ranch 94.49 330 *e*P **P 00 34 01.5 -1.0**
comp=Z,7.9nm,0.8s,mb5.2
SDCO Great Sand Dun 94.87 324 *e*P **P 00 34 04.0 -0.4**
SDCO Great Sand Dun 94.87 324 *e*P **P 00 34 04.0 -0.4**
PV10 Paradox Valley 96.04 326 *e*P **P 00 34 09.4 -0.3**
comp=Z,87nm,0.8s,mb6.2
PV10 Paradox Valley 96.04 326 *e*P **P 00 34 09.4 -0.3**
comp=Z,87nm,0.8s,mb6.2
SRU San Rafael 96.11 328 *e*P **P 00 34 09.8 -0.2**
SRU pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
SRU San Rafael 96.11 328 *e*P **P 00 34 09.8 -0.2**
comp=Z,5.0nm,0.8s,mb5.0
SRU San Rafael 96.11 328 *e*P **P 00 34 09.8 -0.2**
comp=Z,5.0nm,0.8s,mb5.0
CPUP Villa Florida 99.67 245 LR LR 01 22 17.8
comp=Z,465nm,18.1s,MS5.0,baz=32,slow=37
NVAR Mina Array Bea 99.89 332 P Pdif 00 34 27.6 +0.7
comp=Z,0.2nm,0.4s,baz=85,slow=3.0,SNR=3.0
NVAR Mina Array Bea 99.89 332 P Pdif 00 34 27.6 +0.7
TXAR Lajitas Array 100.44 317 P Pdif 00 34 30.0 +0.7
comp=Z,0.4nm,0.8s,baz=48,slow=1.9,SNR=5.4
TXAR PP PP 00 38 34.3 -1.2
comp=Z,0.5nm,0.7s,baz=46,slow=6.5,SNR=3.4
TXAR Lajitas Array 100.44 317 P Pdif 00 34 30.0 +0.7
TXAR 00 38 34.3
TXAR pmax pmax
comp=Z,1.0nm,0.7s
TXAR Lajitas Array 100.44 317 P Pdif 00 34 30.0 +0.7
TXAR PP PP 00 38 34.3 -1.2
TXAR Lajitas Array 100.44 317 P Pdif 00 34 30.0 +0.7
comp=Z,1.0nm,0.7s
TXAR Lajitas Array 100.44 317 PP PP 00 38 34.3 -1.2
WRA Warramunga Arr 115.76 97 PKP PKPdf 00 39 25.3 +0.3
comp=Z,0.8nm,0.9s,baz=316,slow=1.9,SNR=3.4
WRA pPKP pPKPdf 00 39 33.0 -2.5
comp=Z,0.9nm,0.9s,baz=300,slow=2.4,SNR=4.7
WRA Warramunga Arr 115.76 97 PKIKP PKPdf 00 39 25.3 +0.3
WRA 00 39 33.0
WRA pmax pmax
comp=Z,1.0nm,0.9s
WRAB Tennant Creek 115.76 97 *e*PKIKP PKPdf 00 39 25.5 +0.5
ASAR Alice Springs 117.21 101 PKP PKPdf 00 39 28.4 +0.7
comp=Z,0.6nm,0.4s,baz=303,slow=1.2,SNR=13
ASAR Alice Springs 117.21 101 PKIKP PKPdf 00 39 28.4 +0.7
ASAR pmax pmax
comp=Z,1.0nm,0.4s
QSPA South Pole Qui 124.82 180 *e*PKPdf PKPdf 00 39 41.0 +0.3
STKA Stephens Creek 126.87 106 PKP PKPdf 00 39 47.2 +1.2
comp=Z,5.2nm,0.9s,baz=234,slow=2.8,SNR=3.0
STKA Stephens Creek 126.87 106 PKP PKPdf 00 39 47.2 +1.2
URZ Urewera 156.50 107 PKPab PKPab 00 41 07.0 +1.2
comp=Z,4.1nm,0.6s,baz=346,slow=0.4,SNR=3.3

ISCJB ***12*** *00:39:42.7±2.2,51°.0N±0°.2×179°.21W±0°.08,h58km±13km, mb3.9/12, Error ellipse: s-maj=37.1km s-min=8.8km az=1.2*
NEIC ***12*** *00:39:43.6±2.0,51°.01N×179°.19W,h48km±13km,mb4.0/5, ML3.4(AEIC), Error ellipse: s-maj=33.8km s-min=9.6km az=177.0*
IDC ***12*** *00:39:46.5±3.6,51°.16N×179°.19W,h67km±29km,mb3.5/11, mb1 3.7/12,mb1mx3.5/30,mbtmp3.5/12,ML3.3/1,MS3.1/1, Ms1 3.1/1,ms1mx2.7/25, Error ellipse: s-maj=54.2km s-min=16.8km az=10.0*

ISC 12 00:39:45.0±2.0,51°.1N±0°.2×179°.09W±0°.09,h55km±12km, n22,σ0°85/24,mb3.9/12,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**3.23**	**69**	P	**Pn**	**00 40 33.2**	**+0.1**
ATKA				S	**Sn**	**00 41 16.2**	**+5.9**
FX1	**Attu Island--F**	**5.09**	**293**	P	**Pn**	**00 40 58.1**	**-0.5**
FX1				S	**Sn**	**00 41 57.1**	**+1.1**
FX1				LR	LR	00 42 55.2	
FX1	**Attu Island--F**	**5.09**	**293**	P	**Pn**	**00 40 57.7**	**-0.9**
KDAK	**Kodiak Island**	**16.71**	**56**	P	**Pn**	**00 43 32.6**	**-2.4**
KTH	**Kantishna Hill**	**19.43**	**39**	*e*P	**Pn**	**00 44 07.8**	**-0.2**
TRF	**Thorofare Moun**	**19.64**	**40**	*e*P	**Pn**	**00 44 11.6**	**+1.1**
BPAW	**Bear Paw Mtn.**	**19.66**	**38**	*e*P	**Pn**	**00 44 10.2**	**-0.5**
EGAK	**Eagle**	**23.85**	**41**	P	**P**	**00 44 53.2**	**+0.5**
YKA	**Yellowknife Ar**	**35.53**	**46**	P	**P**	**00 46 36.3**	**+0.2**
PDAR	**Pinedale Array**	**46.56**	**72**	P	**P**	**00 48 08.3**	**+1.4**
PDAR				pP	pP	00 48 24.2	+2.9
SONM	**Songino Array**	**46.59**	**297**	P	**P**	**00 48 07.4**	**+0.3**
SPITS	**Spitsbergen Ar**	**50.60**	**356**	P	**P**	**00 48 37.6**	**+0.1**
ARCES	**ARCESS Array B**	**58.30**	**350**	P	**P**	**00 49 33.8**	**+0.3**
TXAR	**Lajitas Array**	**58.87**	**81**	P	**P**	**00 49 38.7**	**+0.7**
KURK	**Kurchatov**	**59.06**	**314**	P	**P**	**00 49 39.0**	**+0.1**
KURK	**Kurchatov**	**59.06**	**314**	*e*P	**P**	**00 49 39.3**	**+0.3**
MKAR	**Makanchi Array**	**60.04**	**308**	P	**P**	**00 49 45.1**	**-0.7**
BVAR	**Borovoye Array**	**60.96**	**320**	P	**P**	**00 49 52.1**	**+0.2**
FINES	**FINESS Array B**	**65.98**	**347**	P	**P**	**00 50 24.7**	**-0.3**
FINES	**FINESS Array B**	**65.98**	**347**	P	**P**	**00 50 24.7**	**-0.3**
TKM2	**Tokmak 2**	**66.13**	**309**	P	**P**	**00 50 24.2**	**-1.9**
AKASG	**Malin Array Be**	**75.72**	**342**	P	**P**	**00 51 23.9**	**-0.3**

IDC 12 00:41:23.7±7.3,27°.95S×176°.20W,h42km±57km,mb3.4/2, mb1 3.7/2,mb1mx3.5/14,mbtmp3.4/2, Error ellipse: s-maj=53.2km s-min=45.0km az=170.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.99**	**229**	P	Pn	00 41 54.8	0.0
RAO				S	Sn	00 42 18.9	+0.4
URZ	**Urewera**	**11.71**	**207**	P	Pn	00 43 58.4	-10
URZ				S	Sn	00 46 04.1	-13
ASAR	**Alice Springs**	**44.88**	**264**	P	P	00 49 34.4	+0.1
WRA	**Warramunga Arr**	**45.66**	**269**	P	P	00 49 40.4	-0.1
FINES	**FINESS Array B**	**143.35**	**342**	PKP	PKPdf	01 00 51.6	-1.2
TORD	**Torodi Ar. Bea**	**165.14**	**172**	PKPab	PKPab	01 02 20.5	-0.4

0.5nm,0.7s,baz=182,slow=4.7,SNR=3.4

NEIC 12 00:41:33.9, 18°.88N×70°.41W, h79km, MD3.6(RSPR), After RSPR.
RSPR 12 00:41:33.9, 18°.88N×70°.41W, h79km±7km, MD3.6/5, MD3.6/5, 4C-1D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDDR	**Presa de Saban**	**0.83**	**277**	⇑*e*P	Pn	00 41 50.0	-0.9
SDDR	**Presa de Saban**	**0.83**	**277**	*e*S	Sn	00 42 03.5	-0.1
SDDR	**Presa de Saban**	**0.83**	**277**	*e*Pn	Pn	00 41 49.8	-1.1
SDDR				*e*Sn	Sn	00 42 03.4	-0.3
PCDR	**Punta Cana, DR**	**1.96**	**100**	*e*S	Sn	00 42 30.6	+1.5
PCDR	**Punta Cana, DR**	**1.96**	**100**	⇑*e*P	Pn	00 42 05.5	+0.3
CRPR	**Cabo Rojo, PR**	**3.25**	**105**	⇑*e*P	Pn	00 42 23.0	+0.3
CRPR				*e*Sn	Sn	00 42 59.8	-0.6
AOPR	**Arecibo Observ**	**3.51**	**98**	⇓*e*P	Pn	00 42 26.9	+0.7
MTP	**Monte Pirata**	**4.68**	**99**	⇑*e*P	Pn	00 42 40.0	-2.0

CSEM 12 00:42:48.7±0.3, 37°.98N×21°.53E, h8km, ML3.0, Error ellipse: s-maj=5.0km s-min=4.7km az=43.0
ISCJB 12 00:42:48.6±0.5, 37°.99N±0°.02×21°.53E±0°.03, h4km±3km, Error ellipse: s-maj=3.7km s-min=3.4km az=15.6
ATH 12 00:42:49.0, 38°.02N×21°.57E, h24km±1km, MD3.2/10, ML3.0
THE 12 00:42:49.2, 37°.99N×21°.55E, h0km±1km, ML3.5/11, Error ellipse: s-maj=1.8km s-min=0.7km az=220.0
NEIC 12 00:42:49.0, 38°.02N×21°.57E, h24km, ML3.5(THE), ML3.0(ATH), After ATH.
ISC 12 00:42:49.1±0.5, 37°.99N±0°.02×21°.52E±0°.03, h6km±3km, n90, σ1°.02/129, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.36**	**36**	P	**Pg**	**00 42 56.1**	**+0.1**
UPR				S	**Sg**	**00 43 01.3**	**+0.6**
UPR	**University Cam**	**0.36**	**36**	*e*PB	**Pg**	**00 42 56.1**	**+0.1**
UPR				*e*SB	**Sg**	**00 43 01.4**	**+0.7**
UPR	**University Cam**	**0.36**	**36**	P	**Pg**	**00 42 56.1**	**+0.1**
UPR				S	**Sg**	**00 43 01.3**	**+0.6**
LAKA	**Lakka**	**0.44**	**55**	P	**Pg**	**00 42 57.0**	**-0.5**
LAKA				S	**Sg**	**00 43 03.7**	**+0.5**
LAKA	**Lakka**	**0.44**	**55**	P	**Pg**	**00 42 57.0**	**-0.5**
LAKA				S	**Sg**	**00 43 03.7**	**+0.5**
EFP	**Efpalio**	**0.53**	**35**	P	**Pg**	**00 42 58.6**	**-0.7**
EFP				S	**Sg**	**00 43 07.0**	**+0.8**
EFP	**Efpalio**	**0.53**	**35**	*e*PB	**Pg**	**00 42 58.6**	**-0.7**
EFP				*e*SB	**Sg**	**00 43 06.9**	**+0.7**
EFP	**Efpalio**	**0.53**	**35**	P	**Pg**	**00 42 58.6**	**-0.7**
EFP				*e*Sb	**Sg**	**00 43 06.9**	**+0.7**
TRIZ	**Trizonia**	**0.57**	**49**	P	**Pg**	**00 42 59.3**	**-0.8**
TRIZ				S	**Sg**	**00 43 07.5**	**-0.1**
TRIZ	**Trizonia**	**0.57**	**49**	P	**Pg**	**00 42 59.3**	**-0.8**
TRIZ				S	**Sg**	**00 43 07.5**	**-0.1**
KFL	**Anninata**	**0.59**	**282**	P	**Pg**	**00 43 00.9**	**+0.4**
KALE	**Kalithea**	**0.63**	**51**	P	**Pg**	**00 43 00.2**	**-1.0**
KALE				S	**Sg**	**00 43 09.9**	**+0.5**
KALE	**Kalithea**	**0.63**	**51**	P	**Pg**	**00 43 00.2**	**-1.0**
KALE				S	**Sg**	**00 43 09.9**	**+0.5**
GUR	**Goura**	**0.65**	**95**	P	**Pg**	**00 43 00.7**	**-0.9**
GUR				S	**Sg**	**00 43 10.6**	**+0.5**
GUR	**Goura**	**0.65**	**95**	*e*PB	**Pg**	**00 43 00.9**	**-0.7**
GUR				*e*SN	**Sg**	**00 43 10.6**	**+0.5**
GUR	**Goura**	**0.65**	**95**	*e*Pb	**Pg**	**00 43 00.9**	**-0.7**
GUR				S	**Sg**	**00 43 10.6**	**+0.5**
VLS	**Valsamata**	**0.76**	**284**	P	**Pg**	**00 43 03.0**	**-0.7**
VLS				S	**Sg**	**00 43 15.8**	**+2.3**
VLS	**Valsamata**	**0.76**	**284**	P	**Pg**	**00 43 03.0**	**-0.7**
VLS				S	**Sg**	**00 43 15.8**	**+2.3**
VLS	**Valsamata**	**0.76**	**284**	P	**Pg**	**00 43 03.0**	**-0.7**
VLS				S	**Sg**	**00 43 15.8**	**+2.3**
ITM	**Ithomi**	**0.87**	**158**	*e*Pb	**Pg**	**00 43 05.6**	**-0.2**
ITM				*e*Sn	**Sg**	**00 43 19.6**	**+2.4**
ITM	**Ithomi**	**0.87**	**158**	P	**Pg**	**00 43 05.7**	**-0.1**
ITM	**Ithomi**	**0.87**	**158**	*e*PB	**Pg**	**00 43 05.6**	**-0.2**
ITM				*e*SN	**Sg**	**00 43 19.6**	**+2.4**
ITM	**Ithomi**	**0.87**	**158**	*e*Pb	**Pg**	**00 43 05.6**	**-0.2**
DSF	**Desfina**	**0.90**	**62**	P	**Pg**	**00 43 04.8**	**-1.5**
DSF				S	**Sg**	**00 43 19.0**	**+1.1**
DSF	**Desfina**	**0.90**	**62**	P	**Pg**	**00 43 04.8**	**-1.5**
DSF				S	**Sg**	**00 43 19.0**	**+1.1**
VLX	**Vlachokerasia**	**0.92**	**132**	P	**Pg**	**00 43 05.9**	**-0.9**
VLX				S	**Sg**	**00 43 20.4**	**+1.7**
VLX	**Vlachokerasia**	**0.92**	**132**	*e*PB	**Pg**	**00 43 06.1**	**-0.7**
VLX	**Vlachokerasia**	**0.92**	**132**	*e*Pb	**Pg**	**00 43 06.1**	**-0.7**
VLX				S	**Sg**	**00 43 20.4**	**+1.7**
EVR	**Evrytania**	**0.95**	**14**	*e*Pn	**Pg**	**00 43 06.3**	**-1.0**
EVR	**Evrytania**	**0.95**	**14**	*e*PN	**Pg**	**00 43 06.3**	**-1.0**
PYL	**PYLOS**	**1.11**	**171**	P	**Pg**	**00 43 10.3**	**-0.1**
PYL	**PYLOS**	**1.11**	**171**	*e*PN	**Pg**	**00 43 10.4**	**0.0**
PYL	**PYLOS**	**1.11**	**171**	*e*Pn	**Pg**	**00 43 10.4**	**0.0**
LTK	**Loutraki**	**1.14**	**88**	P	**Pg**	**00 43 09.5**	**-1.5**
LTK				S	**Sg**	**00 43 26.1**	**+0.3**
LTK	**Loutraki**	**1.14**	**88**	P	**Pg**	**00 43 09.5**	**-1.5**
LTK				S	**Sg**	**00 43 26.1**	**+0.3**
AGG	**Agios Georgios**	**1.21**	**31**	*e*Pn	**Pn**	**00 43 11.4**	**-1.2**
AGG				S	**Sg**	**00 43 29.2**	**+1.2**
AGG	**Agios Georgios**	**1.21**	**31**	P	**Pn**	**00 43 11.4**	**-1.2**
AGG				S	**Sg**	**00 43 29.2**	**+1.2**
AGG	**Agios Georgios**	**1.21**	**31**	*e*PN	**Pn**	**00 43 11.4**	**-1.2**
AGG	**Agios Georgios**	**1.21**	**31**	P	**Pn**	**00 43 11.4**	**-1.2**
AGG				S	**Sg**	**00 43 29.2**	**+1.2**
LKR	**Lokris**	**1.33**	**60**	*e*Pb	**Pn**	**00 43 12.3**	**-2.0**
LKR	**Lokris**	**1.33**	**60**	P	**Pn**	**00 43 12.8**	**-1.5**
LKR	**Lokris**	**1.33**	**60**	*e*PB	**Pn**	**00 43 12.3**	**-2.0**
LKR	**Lokris**	**1.33**	**60**	*e*Pb	**Pn**	**00 43 12.3**	**-2.0**
LKR	**Lokris**	**1.33**	**60**	P	**Pn**	**00 43 12.8**	**-1.5**
ATAL	**Atalanti**	**1.37**	**59**	P	**Pn**	**00 43 13.6**	**-1.2**
ATAL				S	**Sb**	**00 43 33.8**	**+0.8**
ATAL	**Atalanti**	**1.37**	**59**	P	**Pn**	**00 43 13.6**	**-1.2**
ATAL				S	**Sb**	**00 43 33.8**	**+0.8**
NAIG	**Nisos Aigina**	**1.57**	**98**	*e*Pn	**Pn**	**00 43 16.7**	**-0.9**
NAIG	**Nisos Aigina**	**1.57**	**98**	*e*PN	**Pn**	**00 43 16.7**	**-0.9**
NAIG	**Nisos Aigina**	**1.57**	**98**	*e*Pn	**Pn**	**00 43 16.7**	**-0.9**
THL	**Klokotos Trika**	**1.62**	**14**	P	**Pn**	**00 43 18.9**	**+0.7**
THL				S	**Sn**	**00 43 41.1**	**+1.7**
THL	**Klokotos Trika**	**1.62**	**14**	P	**Pn**	**00 43 18.9**	**+0.7**
THL				S	**Sn**	**00 43 41.1**	**+1.7**
VLI	**Veliai**	**1.70**	**138**	*e*Pn	**Pn**	**00 43 20.4**	**+1.1**
VLI	**Veliai**	**1.70**	**138**	*e*PN	**Pn**	**00 43 20.4**	**+1.1**
VLI	**Veliai**	**1.70**	**138**	*e*Pn	**Pn**	**00 43 20.4**	**+1.1**
ATH	**Athens Observa**	**1.73**	**90**	*e*Pn	**Pn**	**00 43 18.8**	**-1.0**
ATH	**Athens Observa**	**1.73**	**90**	*e*PN	**Pn**	**00 43 18.8**	**-1.0**
ATH	**Athens Observa**	**1.73**	**90**	*e*Pn	**Pn**	**00 43 18.8**	**-1.0**
JAN	**Janina**	**1.74**	**343**	*e*Pn	**Pn**	**00 43 20.6**	**+0.7**
JAN	**Janina**	**1.74**	**343**	*e*PN	**Pn**	**00 43 20.6**	**+0.7**
JAN	**Janina**	**1.74**	**343**	*e*Pn	**Pn**	**00 43 20.6**	**+0.7**
ATHU	**Athens Univers**	**1.79**	**90**	P	**Pn**	**00 43 20.7**	**+0.2**
ATHU				S	**Sn**	**00 43 44.6**	**+1.0**
ATHU	**Athens Univers**	**1.79**	**90**	P	**Pn**	**00 43 20.7**	**+0.2**
ATHU				S	**Sn**	**00 43 44.6**	**+1.0**
IGT	**Igoumenitsa**	**1.80**	**329**	P	**Pn**	**00 43 21.1**	**+0.4**
IGT	**Igoumenitsa**	**1.80**	**329**	P	**Pn**	**00 43 21.1**	**+0.4**
IGT	**Igoumenitsa**	**1.80**	**329**	P	**Pn**	**00 43 21.1**	**+0.4**
VLY	**Voula,Athens**	**1.80**	**94**	*e*Pn	**Pn**	**00 43 20.7**	**0.0**
VLY	**Voula,Athens**	**1.80**	**94**	*e*PN	**Pn**	**00 43 20.7**	**0.0**
VLY	**Voula,Athens**	**1.80**	**94**	*e*Pn	**Pn**	**00 43 20.7**	**0.0**
PTL	**Penteli**	**1.85**	**88**	*e*Pn	**Pn**	**00 43 21.2**	**-0.2**
PTL	**Penteli**	**1.85**	**88**	*e*PN	**Pn**	**00 43 21.2**	**-0.2**
PTL	**Penteli**	**1.85**	**88**	*e*Pn	**Pn**	**00 43 21.2**	**-0.2**
NEO	**Neokhori**	**1.87**	**45**	*e*Pb	**Pb**	**00 43 20.4**	**-3.3**
NEO	**Neokhori**	**1.87**	**45**	*e*PB	**Pb**	**00 43 20.4**	**-3.3**
XOR	**Xorichti**	**1.89**	**43**	P	**Pn**	**00 43 21.1**	**-0.9**
XOR				S	**Sn**	**00 43 47.1**	**+0.9**
XOR	**Xorichti**	**1.89**	**43**	P	**Pn**	**00 43 21.1**	**-0.9**
XOR				S	**Sn**	**00 43 47.1**	**+0.9**
XOR	**Xorichti**	**1.89**	**43**	P	**Pn**	**00 43 21.1**	**-0.9**
XOR				S	**Sn**	**00 43 47.1**	**+0.9**
KEK	**Kerkira**	**2.18**	**322**	*e*Pn	**Pn**	**00 43 26.1**	**+0.1**
KEK	**Kerkira**	**2.18**	**322**	*e*PN	**Pn**	**00 43 26.1**	**+0.1**
KEK	**Kerkira**	**2.18**	**322**	*e*Pn	**Pn**	**00 43 26.1**	**+0.1**
AOS	**Alonnisos**	**2.19**	**57**	P	**Pn**	**00 43 25.1**	**-1.0**
AOS	**Alonnisos**	**2.19**	**57**	P	**Pn**	**00 43 25.1**	**-1.0**
AOS	**Alonnisos**	**2.19**	**57**	P	**Pn**	**00 43 25.1**	**-1.0**
LIT	**Litokhoron**	**2.24**	**19**	P	**Pn**	**00 43 27.1**	**+0.4**
LIT	**Litokhoron**	**2.24**	**19**	P	**Pn**	**00 43 27.1**	**+0.4**
LIT	**Litokhoron**	**2.24**	**19**	P	**Pn**	**00 43 27.1**	**+0.4**
FNA	**Florina**	**2.79**	**358**	P	**Pn**	**00 43 35.0**	**+0.7**
FNA	**Florina**	**2.79**	**358**	P	**Pn**	**00 43 35.0**	**+0.7**
KRUS	**Krusevo**	**3.38**	**357**	*e*Pn	**Pn**	**00 43 43.1**	**+0.7**
STON	**Ston**	**5.68**	**330**	*e*Pn	**Pn**	**00 44 11.6**	**-2.4**
STON				Sn	**Sn**	**00 45 14.7**	**-4.9**
STON	**Ston**	**5.68**	**330**	*e*Pn	**Pn**	**00 44 11.6**	**-2.4**

MAN 12 00:44:04, 10°.41N×125°.97E, h78km, mb4.8, ML3.7, MS3.8, 1C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**1.13**	**256**	*e*P	Pn	00 44 24.0	-0.4
MSLP				*e*S	Sn	00 44 34.1	-5.7
BESP	**Borongan**	**1.29**	**336**	*e*P	Pn	00 44 27.8	+1.2
OCLP	**Ormoc**	**1.48**	**296**	*e*P	Pn	00 44 30.4	+1.4
LLP	**Lapu-Lapu**	**1.97**	**267**	⇓*e*P	Pn	00 44 36.1	+0.7
LLP				*e*S	Sn	00 45 01.2	+1.7
TBP	**Tagbilaran**	**2.19**	**251**	*e*P	Pn	00 44 39.9	+1.4
CNP	**Catarman**	**2.45**	**329**	*e*P	Pn	00 44 43.5	+1.7
BUKP	**Musuan**	**2.67**	**200**	*e*P	Pn	00 44 46.9	+2.0
RCP	**Roxas**	**3.36**	**290**	⇑*e*P	Pn	00 44 56.2	+2.0
PAGZ	**Pagadian**	**3.61**	**225**	*e*P	Pn	00 44 59.4	+1.8
PVCP	**Virac**	**3.63**	**331**	*e*P	Pn	00 44 58.7	+0.8

NNC 12 01:02:07.1±7.7, 39°.75N×74°.71E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=58.1km s-min=28.7km az=163.0
ISC 12 01:02:01.7±2.3, 39°.3N±0°.2×75°.30E±0°.08, h10km, n13, σ1°.25/16, 1C-5D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.58**	**65**	Pg	**Pg**	**01 02 12.0**	**-0.9**
KSH				Sg	**Sg**	**01 02 20.6**	**+0.1**
KSH				smax			
	comp=N,1μm,0.4s						
KSH				smax			
	comp=E,470nm,0.3s						
KZA	**Kyzart**	**2.81**	**359**	P	**Pn**	**01 02 48.8**	**+2.2**
	SNR=17						
UCH	**Uchtor**	**3.01**	**349**	P	**Pn**	**01 02 49.9**	**+0.5**
	SNR=12						
ULHL	**Ulahol**	**3.06**	**13**	P	**Pn**	**01 02 50.1**	**+0.1**
	SNR=12						
AML	**Almayashu**	**3.11**	**337**	P	**Pn**	**01 02 52.7**	**+2.0**
	SNR=30						
KBK	**Karagaybulak**	**3.39**	**356**	P	**Pn**	**01 02 54.6**	**-0.1**
	SNR=12						
AAK	**Ala-Archa**	**3.42**	**350**	P	**Pn**	**01 02 59.1**	**+4.2**
	SNR=13						
EKS2	**Erkin-Say**	**3.58**	**342**	P	**Pn**	**01 03 02.3**	**+5.1**
	SNR=12						
TKM2	**Tokmak 2**	**3.66**	**3**	⇓Pn	**Pn**	**01 02 58.9**	**+0.7**
	comp=E,14nm,0.6s						
TKM2				⇓Sn	**Sn**	**01 03 41.0**	**-0.4**
	comp=E,53nm,0.6s						
TKM2	**Tokmak 2**	**3.66**	**3**	P	**Pn**	**01 02 58.7**	**+0.5**
	SNR=16						
USP	**Ospenovka**	**4.04**	**352**	P	**Pb**	**01 03 10.9**	**-2.0**
	SNR=7.3						
KK31	**Karatay Array**	**5.26**	**318**	⇑Pg	**Pb**	**01 03 28.5**	**-5.2**
	comp=E,1.0nm,0.3s,baz=133,slow=17						
KK31				⇓Sn	**Sn**	**01 04 12.9**	**-8.2**
	comp=E,5.5nm,0.5s,baz=147,slow=24						
KK31				⇓Lg		01 04 35.2	
	comp=E,17nm,0.8s,baz=129,slow=27						
AB31	**Akbulak array**	**14.83**	**317**	⇓P	**Pn**	**01 05 29.1**	**-2.1**
	comp=E,1.7nm,0.8s,baz=130,slow=12,SNR=9.0						

NEIC 12 01:16:18.5, 17°.20N×67°.62W, h64km, MD3.5(RSPR), After RSPR.
RSPR 12 01:16:18.5, 17°.20N×67°.62W, h64km±11km, MD3.5/6, MD3.5/6, 4C-1D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRPR	**Cabo Rojo, PR**	**0.94**	**311**	⇑*e*P	Pn	01 16 34.0	-2.0
CRPR	**Cabo Rojo, PR**	**0.94**	**31**	*e*Pg	Pn	01 16 34.4	-1.7
CRPR				*e*S	Sn	01 16 48.4	-0.6
LSP	**Las Mesas**	**1.10**	**28**	⇑*e*P	Pn	01 16 37.4	-0.7
AOPR	**Arecibo Observ**	**1.41**	**36**	⇓*e*P	Pn	01 16 41.3	-0.9
CBYP	**Canovanas**	**2.00**	**57**	⇑*e*P	Pn	01 16 49.6	-0.4
CBYP	**Canovanas**	**2.00**	**57**	*e*Pn	Pn	01 16 50.4	+0.4
MTP	**Monte Pirata**	**2.17**	**65**	⇑*e*P	Pn	01 16 51.5	-0.8

ATH 12 01:19:09.6, 38°.33N×23°.52E, h25km±1km, MD2.8/9, ML2.2
ISCJB 12 01:19:09.1±0.6, 38°.33N±0°.02×23°.58E±0°.03, h4km±5km, Error ellipse: s-maj=4.5km s-min=3.5km az=156.1
CSEM 12 01:19:10.0±0.2, 38°.34N×23°.53E, h8km, ML2.2, Error ellipse: s-maj=3.7km s-min=2.6km az=62.0
THE 12 01:19:10.2, 38°.32N×23°.54E, h1km±1km, ML2.7/11, Error ellipse: s-maj=1.9km s-min=0.6km az=70.0
ISC 12 01:19:10.2±0.4, 38°.34N±0°.02×23°.56E±0°.03, h9km±4km, n49, σ0°.82/78, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTL	**Penteli**	**0.38**	**140**	*e*PB	**Pg**	**01 19 17.8**	**+0.2**
PTL	**Penteli**	**0.38**	**140**	*e*Pb	**Pg**	**01 19 17.8**	**+0.2**
ATH	**Athens Observa**	**0.39**	**161**	*e*PB	**Pg**	**01 19 18.0**	**+0.3**
ATH				*e*SB	**Sg**	**01 19 23.6**	**+0.7**
ATH	**Athens Observa**	**0.39**	**161**	*e*Pb	**Pg**	**01 19 18.0**	**+0.3**
ATH				*e*Sb	**Sg**	**01 19 23.6**	**+0.7**
ATHU	**Athens Univers**	**0.41**	**154**	P	**Pg**	**01 19 18.3**	**+0.1**
ATHU				S	**Sg**	**01 19 23.9**	**+0.2**
ATHU	**Athens Univers**	**0.41**	**154**	P	**Pg**	**01 19 18.3**	**+0.1**
ATHU				S	**Sg**	**01 19 23.9**	**+0.2**
VLY	**Voula,Athens**	**0.52**	**159**	*e*PN	**Pg**	**01 19 20.2**	**-0.1**
VLY	**Voula,Athens**	**0.52**	**159**	*e*Pn	**Pg**	**01 19 20.2**	**-0.1**
LKR	**Lokris**	**0.54**	**305**	P	**Pg**	**01 19 19.7**	**-0.9**
LKR				S	**Sg**	**01 19 28.3**	**+0.7**
LKR	**Lokris**	**0.54**	**305**	*e*PN	**Pg**	**01 19 19.7**	**-0.9**
LKR				*e*SN	**Sg**	**01 19 28.5**	**+0.8**
LKR	**Lokris**	**0.54**	**305**	P	**Pg**	**01 19 19.7**	**-0.9**
LKR				S	**Sg**	**01 19 28.3**	**+0.7**
ATAL	**Atalanti**	**0.55**	**310**	P	**Pg**	**01 19 20.1**	**-0.7**
ATAL				S	**Sg**	**01 19 28.9**	**+0.9**
ATAL	**Atalanti**	**0.55**	**310**	P	**Pg**	**01 19 20.1**	**-0.7**
ATAL				S	**Sg**	**01 19 28.9**	**+0.9**
LTK	**Loutraki**	**0.56**	**236**	P	**Pg**	**01 19 20.6**	**-0.5**
LTK				S	**Sg**	**01 19 28.0**	**-0.4**
LTK	**Loutraki**	**0.56**	**236**	*e*PN	**Pg**	**01 19 20.0**	**-1.1**
LTK				*e*SN	**Sg**	**01 19 28.4**	**0.0**
LTK	**Loutraki**	**0.56**	**236**	*e*Pn	**Pg**	**01 19 20.0**	**-1.1**
LTK	**Loutraki**	**0.56**	**236**	P	**Pg**	**01 19 20.6**	**-0.5**
LTK				S	**Sg**	**01 19 28.0**	**-0.4**
NAIG	**Nisos Aigina**	**0.58**	**185**	*e*PN	**Pg**	**01 19 21.1**	**-0.3**
NAIG	**Nisos Aigina**	**0.58**	**185**	*e*Pn	**Pg**	**01 19 21.1**	**-0.3**
DSF	**Desfina**	**0.81**	**275**	P	**Pg**	**01 19 24.5**	**-1.3**
DSF				S	**Sg**	**01 19 36.7**	**+0.3**
DSF	**Desfina**	**0.81**	**275**	P	**Pg**	**01 19 24.5**	**-1.3**
DSF				S	**Sg**	**01 19 36.7**	**+0.3**
AOS	**Alonnisos**	**0.87**	**17**	P	**Pg**	**01 19 26.6**	**-0.3**
AOS				S	**Sg**	**01 19 39.4**	**+1.3**
AOS	**Alonnisos**	**0.87**	**17**	P	**Pg**	**01 19 26.6**	**-0.3**
AOS				S	**Sg**	**01 19 39.4**	**+1.3**
GUR	**Goura**	**1.04**	**248**	P	**Pg**	**01 19 29.4**	**-0.8**
GUR				S	**Sg**	**01 19 43.9**	**+0.2**
GUR	**Goura**	**1.04**	**248**	*e*PN	**Pg**	**01 19 29.4**	**-0.8**
GUR				*e*SN	**Sg**	**01 19 43.7**	**0.0**
GUR	**Goura**	**1.04**	**248**	P	**Pg**	**01 19 29.4**	**-0.8**
GUR				*e*Sn	**Sg**	**01 19 43.7**	**0.0**
XOR	**Xorichti**	**1.06**	**345**	P	**Pg**	**01 19 30.6**	**0.0**
XOR				S	**Sg**	**01 19 44.9**	**+0.4**
XOR	**Xorichti**	**1.06**	**345**	P	**Pg**	**01 19 30.6**	**0.0**
XOR				S	**Sg**	**01 19 44.9**	**+0.4**
KALE	**Kalithea**	**1.12**	**273**	P	**Pg**	**01 19 30.9**	**-0.7**
KALE				S	**Sg**	**01 19 47.1**	**+1.0**
KALE	**Kalithea**	**1.12**	**273**	P	**Pg**	**01 19 30.9**	**-0.7**
KALE				S	**Sg**	**01 19 47.1**	**+1.0**
AGG	**Agios Georgios**	**1.18**	**306**	P	**Pb**	**01 19 31.2**	**-1.5**
AGG				S	**Sb**	**01 19 49.4**	**+1.3**
AGG	**Agios Georgios**	**1.18**	**306**	*e*PN	**Pn**	**01 19 31.1**	**-1.7**
AGG	**Agios Georgios**	**1.18**	**306**	P	**Pb**	**01 19 31.2**	**-1.5**
AGG				S	**Sb**	**01 19 49.4**	**+1.3**
LAKA	**Lakka**	**1.25**	**266**	P	**Pn**	**01 19 33.2**	**-0.6**
LAKA	**Lakka**	**1.25**	**266**	P	**Pn**	**01 19 33.2**	**-0.6**
EFP	**Efpalio**	**1.30**	**274**	P	**Pn**	**01 19 33.4**	**-1.1**
EFP				S	**Sb**	**01 19 52.7**	**+1.1**
EFP	**Efpalio**	**1.30**	**274**	*e*PN	**Pn**	**01 19 33.4**	**-1.1**
EFP	**Efpalio**	**1.30**	**274**	P	**Pn**	**01 19 33.4**	**-1.1**
EFP				S	**Sb**	**01 19 52.7**	**+1.1**
VLX	**Vlachokerasia**	**1.34**	**224**	P	**Pn**	**01 19 34.7**	**-0.4**
VLX				S	**Sb**	**01 19 53.8**	**+1.0**
VLX	**Vlachokerasia**	**1.34**	**224**	*e*PN	**Pn**	**01 19 34.7**	**-0.4**
VLX	**Vlachokerasia**	**1.34**	**224**	P	**Pn**	**01 19 34.7**	**-0.4**
VLX				S	**Sb**	**01 19 53.8**	**+1.0**
THL	**Klokotos Trika**	**1.72**	**316**	*e*PN	**Pn**	**01 19 40.0**	**-0.2**
THL	**Klokotos Trika**	**1.72**	**316**	*e*Pn	**Pn**	**01 19 40.0**	**-0.2**
ITM	**Ithomi**	**1.74**	**229**	P	**Pn**	**01 19 41.2**	**+0.7**
ITM	**Ithomi**	**1.74**	**229**	P	**Pn**	**01 19 41.2**	**+0.7**
LIT	**Litokhoron**	**1.94**	**335**	*e*PN	**Pn**	**01 19 43.1**	**-0.3**
LIT	**Litokhoron**	**1.94**	**335**	*e*Pn	**Pn**	**01 19 43.1**	**-0.3**
PYL	**PYLOS**	**2.04**	**226**	P	**Pn**	**01 19 46.2**	**+1.5**
PYL	**PYLOS**	**2.04**	**226**	P	**Pn**	**01 19 46.2**	**+1.5**

SOF 12 01:34:54.5, 41°.69N×22°.47E, h20km, MD2.7
CSEM 12 01:34:55.8±0.1, 41°.70N×22°.43E, h2km, ML3.4/6, Error ellipse: s-maj=2.3km s-min=2.0km az=110.0
THE 12 01:34:56.7, 41°.66N×22°.43E, h2km±1km, ML3.4/6, Error ellipse: s-maj=1.6km s-min=0.6km az=352.0
SKO 12 01:34:56.5, 41°.59N×22°.40E, h20km, M1.9, ML2.3
BEO 12 01:34:57.0±0.4, 41°.69N×22°.45E, h0km, ML2.5/5
ISC 12 01:34:56.7±0.4, 41°.67N±0°.02×22°.43E±0°.03, h3km±4km, n72, σ0°.92/100, 8C-1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.36**	**164**	⇑*i*Pg	**Pg**	**01 35 03.3**	**-0.4**
VAY				*e*Sg	**Sg**	**01 35 08.7**	**+0.3**
VAY	**Valandovo**	**0.36**	**164**	⇑*i*Pg	**Pg**	**01 35 03.3**	**-0.4**
VAY				*i* Sg	**Sg**	**01 35 08.6**	**+0.2**
VAY				*e*Lg		01 35 08.8	
	comp=E,275nm,0.2s						
VAY				*e*Lg		01 35 09.3	
	comp=N,371nm,0.4s						
VAY	**Valandovo**	**0.36**	**164**	P	**Pg**	**01 35 03.3**	**-0.4**
VAY				S	**Sg**	**01 35 08.8**	**+0.4**
VAY	**Valandovo**	**0.36**	**164**	P	**Pg**	**01 35 03.3**	**-0.4**
VAY				*e*Sg	**Sg**	**01 35 08.7**	**+0.3**
KKB	**Krupnik**	**0.52**	**68**	*i* Pg	**Pg**	**01 35 06.4**	**-0.4**
KKB	**Krupnik**	**0.52**	**68**	*i* Pg	**Pg**	**01 35 06.4**	**-0.4**
SKO	**Skopje**	**0.80**	**292**	*e*Pg	**Pg**	**01 35 13.1**	**+1.0**
SKO				*e*Sg	**Sg**	**01 35 24.9**	**+2.3**
SKO				*e*Lg		01 35 25.4	
	comp=E,110nm,0.8s						
SKO				*e*Lg		01 35 25.9	
	comp=N,53nm,0.5s						
KRUS	**Krusevo**	**0.94**	**252**	⇓*i*Pg	**Pg**	**01 35 13.9**	**-0.9**
KRUS				*e*Sg	**Sg**	**01 35 27.1**	**+0.1**
MMB	**Musomiste**	**0.97**	**94**	*i* Pg	**Pg**	**01 35 14.8**	**-0.6**
SRS	**Serrai**	**1.03**	**122**	P	**Pg**	**01 35 15.6**	**-0.9**
SRS				S	**Sg**	**01 35 30.4**	**+0.5**
SRS	**Serrai**	**1.03**	**122**	P	**Pg**	**01 35 15.6**	**-0.9**
BIA	**Bitola**	**1.06**	**232**	*i* Pg	**Pg**	**01 35 16.3**	**-0.7**
BIA				*e*Sg	**Sg**	**01 35 31.5**	**+0.8**
BIA				*e*Lg		01 35 31.6	
	comp=N,66nm,0.3s						
BIA				*e*Lg		01 35 32.5	
	comp=E,64nm,0.4s						
BIA	**Bitola**	**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.26**	**10**	*e*Pb	**Pg**	**01 35 35.0**	**+0.1**
RLS				*e*Sb	**Sg**	**01 35 39.2**	**+0.9**
RLS	**Riolos of Patr**	**0.26**	**10**	*e*PB	**Pg**	**01 35 35.0**	**+0.1**
RLS				*e*SB	**Sg**	**01 35 39.2**	**+0.9**
RLS	**Riolos of Patr**	**0.26**	**10**	*e*Pb	**Pg**	**01 35 35.0**	**+0.1**
RLS				*e*Sb	**Sg**	**01 35 39.2**	**+0.9**
UPR	**University Cam**	**0.56**	**32**	P	**Pg**	**01 35 40.3**	**-0.3**
UPR				S	**Sg**	**01 35 48.0**	**0.0**
UPR	**University Cam**	**0.56**	**32**	*e*PN	**Pg**	**01 35 40.5**	**-0.1**
UPR	**University Cam**	**0.56**	**32**	P	**Pg**	**01 35 40.3**	**-0.3**
UPR				S	**Sg**	**01 35 48.0**	**0.0**
KFL	**Anninata**	**0.58**	**302**	P	**Pg**	**01 35 40.7**	**-0.2**
LAKA	**Lakka**	**0.62**	**46**	P	**Pg**	**01 35 41.1**	**-0.7**
LAKA				S	**Sg**	**01 35 50.1**	**+0.2**
LAKA	**Lakka**	**0.62**	**46**	S	**Sg**	**01 35 50.1**	**+0.2**
LAKA	**Lakka**	**0.62**	**46**	P	**Pg**	**01 35 41.1**	**-0.7**
EFP	**Efpalio**	**0.73**	**32**	P	**Pg**	**01 35 42.7**	**-1.2**
EFP				S	**Sg**	**01 35 53.4**	**0.0**
EFP	**Efpalio**	**0.73**	**32**	*e*PN	**Pg**	**01 35 42.8**	**-1.1**
EFP				*e*SN	**Sg**	**01 35 53.4**	**0.0**
EFP	**Efpalio**	**0.73**	**32**	P	**Pg**	**01 35 42.7**	**-1.2**
EFP				*e*Sn	**Sg**	**01 35 53.4**	**0.0**
ITM	**Ithomi**	**0.75**	**147**	*e*Pn	**Pg**	**01 35 47.5**	**+3.4**
ITM	**Ithomi**	**0.75**	**147**	P	**Pg**	**01 35 45.8**	**+1.7**
ITM				S	**Sg**	**01 35 52.4**	**-1.4**
ITM	**Ithomi**	**0.75**	**147**	*e*PN	**Pg**	**01 35 47.5**	**+3.4**
ITM	**Ithomi**	**0.75**	**147**	P	**Pg**	**01 35 45.8**	**+1.7**
ITM	**Ithomi**	**0.75**	**147**	*e*Pn	**Pg**	**01 35 47.5**	**+3.4**
ITM				S	**Sg**	**01 35 52.4**	**-1.4**
GUR	**Goura**	**0.75**	**80**	P	**Pg**	**01 35 43.5**	**-0.6**
GUR				S	**Sg**	**01 35 54.3**	**+0.4**
GUR	**Goura**	**0.75**	**80**	*e*PN	**Pg**	**01 35 43.4**	**-0.7**
GUR	**Goura**	**0.75**	**80**	P	**Pg**	**01 35 43.5**	**-0.6**
GUR				S	**Sg**	**01 35 54.3**	**+0.4**
VLS	**Valsamata**	**0.75**	**300**	*e*Pn	**Pg**	**01 35 43.3**	**-0.9**
VLS	**Valsamata**	**0.75**	**300**	P	**Pg**	**01 35 44.4**	**+0.2**
VLS				S	**Sg**	**01 35 55.7**	**+1.8**
VLS	**Valsamata**	**0.75**	**300**	*e*PN	**Pg**	**01 35 43.3**	**-0.9**
VLS	**Valsamata**	**0.75**	**300**	*e*Pn	**Pg**	**01 35 43.3**	**-0.9**
VLS	**Valsamata**	**0.75**	**300**	P	**Pg**	**01 35 44.4**	**+0.2**
VLS				S	**Sg**	**01 35 55.7**	**+1.8**
TRIZ	**Trizonia**	**0.77**	**43**	P	**Pg**	**01 35 43.4**	**-1.1**
TRIZ				S	**Sg**	**01 35 54.6**	**+0.2**
TRIZ	**Trizonia**	**0.77**	**43**	P	**Pg**	**01 35 43.4**	**-1.1**
TRIZ				S	**Sg**	**01 35 54.6**	**+0.2**
KALE	**Kalithea**	**0.82**	**44**	P	**Pg**	**01 35 44.3**	**-1.2**
KALE				S	**Sg**	**01 35 56.6**	**+0.4**
KALE	**Kalithea**	**0.82**	**44**	P	**Pg**	**01 35 44.3**	**-1.2**
KALE				S	**Sg**	**01 35 56.6**	**+0.4**
VLX	**Vlachokerasia**	**0.88**	**119**	P	**Pg**	**01 35 47.3**	**+0.6**
VLX				S	**Sg**	**01 36 00.3**	**+2.2**
VLX	**Vlachokerasia**	**0.88**	**119**	P	**Pg**	**01 35 47.3**	**+0.6**
VLX				S	**Sg**	**01 36 00.3**	**+2.2**
PYL	**PYLOS**	**0.94**	**164**	P	**Pg**	**01 35 48.7**	**+0.8**
PYL				S	**Sg**	**01 35 59.9**	**-0.2**
PYL	**PYLOS**	**0.94**	**164**	*e*PB	**Pg**	**01 35 48.2**	**+0.3**
PYL	**PYLOS**	**0.94**	**164**	*e*Pb	**Pg**	**01 35 48.2**	**+0.3**
PYL	**PYLOS**	**0.94**	**164**	P	**Pg**	**01 35 48.7**	**+0.8**
PYL				S	**Sg**	**01 35 59.9**	**-0.2**
DSF	**Desfina**	**1.07**	**55**	P	**Pg**	**01 35 48.7**	**-1.5**
DSF	**Desfina**	**1.07**	**55**	P	**Pg**	**01 35 48.7**	**-1.5**
LKD2	**Lefkada island**	**1.15**	**329**	P	**Pg**	**01 35 50.1**	**-1.7**
LKD2				S	**Sg**	**01 36 07.8**	**+1.1**
LKD2	**Lefkada island**	**1.15**	**329**	P	**Pg**	**01 35 50.1**	**-1.7**
LKD2				S	**Sg**	**01 36 07.8**	**+1.1**
LTK	**Loutraki**	**1.25**	**79**	P	**Pg**	**01 35 53.4**	**-0.3**
LTK				S	**Sg**	**01 36 11.1**	**+1.2**
LTK	**Loutraki**	**1.25**	**79**	*e*PN	**Pn**	**01 35 52.6**	**-0.9**
LTK	**Loutraki**	**1.25**	**79**	*e*Pn	**Pn**	**01 35 52.6**	**-0.9**
LTK	**Loutraki**	**1.25**	**79**	P	**Pg**	**01 35 53.4**	**-0.3**
LTK				S	**Sg**	**01 36 11.1**	**+1.2**
LKR	**Lokris**	**1.51**	**55**	P	**Pn**	**01 35 57.4**	**+0.4**
LKR				S	**Sn**	**01 36 17.6**	**+0.7**
LKR	**Lokris**	**1.51**	**55**	P	**Pn**	**01 35 57.4**	**+0.4**
LKR				S	**Sn**	**01 36 17.6**	**+0.7**
IDI	**Anoyia**	**3.76**	**131**	*e*Pn	**Pn**	**01 36 24.2**	**-3.8**
IDI	**Anoyia**	**3.76**	**131**	*e*Pn	**Pn**	**01 36 24.2**	**-3.8**

ATH ***12*** *01:43:47.3, 35.°00N×26.°22E, h27km±1km, MD3.0/4*
NEIC ***12*** *01:43:47.3, 35.°00N×26.°22E, h27km, MD3.0(ATH), After ATH.*
CSEM ***12*** *01:43:48.6±0.5, 35.°14N×26.°25E, h20km, MD3.0, Error ellipse: s-maj=18.1km s-min=8.0km az=167.0*
THE ***12*** *01:43:49.5, 35.°25N×26.°14E, h0km±2km, Error ellipse: s-maj=3.2km s-min=1.2km az=39.0*
ISCJB ***12*** *01:43:49.3±0.7, 35.°26N±0.°05×26.°16E±0.°04, h8km±5km, Error ellipse: s-maj=7.7km s-min=4.9km az=5.7*
ISC 12 01:43:49.1±0.9,**35.°2N**±0.°1×**26.°24E**±0.°05,**h21**km±6km,**n26**, σ1**9**/**05**/45,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.04**	**213**	*e*Pb	**Pb**	**01 43 52.5**	**-0.3**
ZKR				*e*Sb	**Sb**	**01 43 56.2**	**+0.9**
ZKR	**Zakros**	**0.04**	**213**	P	**Pb**	**01 43 52.5**	**-0.3**
ZKR				S	**Sb**	**01 43 56.1**	**+0.8**
ZKR	**Zakros**	**0.04**	**213**	*e*PB	**Pb**	**01 43 52.5**	**-0.3**
ZKR				*e*SB	**Sb**	**01 43 56.2**	**+0.9**
ZKR	**Zakros**	**0.04**	**213**	P	**Pb**	**01 43 52.5**	**-0.3**
ZKR				*e*Sb	**Sb**	**01 43 56.2**	**+0.9**
NPS	**Neapolis**	**0.53**	**283**	*e*Pn	**Pb**	**01 43 58.6**	**-1.1**
NPS				*e*Sn	**Sb**	**01 44 06.5**	**-0.4**
NPS	**Neapolis**	**0.53**	**283**	*e*PN	**Pb**	**01 43 58.6**	**-1.1**
NPS				*e*SN	**Sb**	**01 44 06.5**	**-0.4**
NPS	**Neapolis**	**0.53**	**283**	*e*Pn	**Pb**	**01 43 58.6**	**-1.1**
NPS				*e*Sn	**Sb**	**01 44 06.5**	**-0.4**
LAST	**Lasithi**	**0.63**	**272**	*e*Pn	**Pn**	**01 43 59.6**	**-3.1**
LAST				*e*Sn	**Sb**	**01 44 09.6**	**-0.1**
LAST	**Lasithi**	**0.63**	**272**	P	**Pb**	**01 43 59.8**	**-1.6**
LAST				S	**Sb**	**01 44 09.6**	**-0.1**
LAST	**Lasithi**	**0.63**	**272**	*e*PN	**Pn**	**01 43 59.6**	**-3.1**
LAST				*e*SN	**Sb**	**01 44 09.6**	**-0.1**
LAST	**Lasithi**	**0.63**	**272**	P	**Pb**	**01 43 59.8**	**-1.6**
LAST				S	**Sb**	**01 44 09.6**	**-0.1**
KARP	**Karpathos**	**0.85**	**62**	*e*Pn	**Pn**	**01 44 05.7**	**-0.1**
KARP	**Karpathos**	**0.85**	**62**	*e*PN	**Pn**	**01 44 05.7**	**-0.1**
KARP	**Karpathos**	**0.85**	**62**	*e*Pn	**Pn**	**01 44 05.7**	**-0.1**
IDI	**Anoyia**	**1.12**	**278**	*e*Pg	**Pn**	**01 44 08.6**	**-0.9**
IDI				*e*S	**Sb**	**01 44 24.4**	**+0.6**
IDI	**Anoyia**	**1.12**	**278**	*e*Pg	**Pn**	**01 44 08.6**	**-0.9**
IDI				*e*S	**Sb**	**01 44 24.5**	**+0.7**
SIVA	**Sivas**	**1.18**	**264**	P	**Pn**	**01 44 09.8**	**-0.6**
SIVA				S	**Sb**	**01 44 26.7**	**+1.0**
SIVA	**Sivas**	**1.18**	**264**	P	**Pn**	**01 44 09.8**	**-0.6**
SIVA				S	**Sb**	**01 44 26.7**	**+1.0**
THR5	**Thira Island,**	**1.46**	**330**	P	**Pn**	**01 44 14.1**	**-0.1**
THR5	**Thira Island,**	**1.46**	**330**	P	**Pn**	**01 44 14.1**	**-0.1**
ARG	**Arkhangelos**	**1.87**	**55**	P	**Pn**	**01 44 23.2**	**+3.4**
ARG				S	**Sn**	**01 44 47.7**	**+5.0**
ARG	**Arkhangelos**	**1.87**	**55**	P	**Pn**	**01 44 23.2**	**+3.4**
ARG				S	**Sn**	**01 44 47.7**	**+5.0**
KARN	**Karanos**	**1.92**	**278**	P	**Pn**	**01 44 21.6**	**+1.1**
KARN				S	**Sn**	**01 44 45.8**	**+1.8**
KARN	**Karanos**	**1.92**	**278**	P	**Pn**	**01 44 21.6**	**+1.1**
KARN				S	**Sn**	**01 44 45.8**	**+1.8**
APE	**Apeiranthos**	**2.00**	**343**	P	**Pn**	**01 44 21.5**	**-0.2**
APE	**Apeiranthos**	**2.00**	**343**	P	**Pn**	**01 44 21.5**	**-0.2**

ATH ***12*** *02:00:03.2, 34.°97N×26.°06E, h31km±1km, MD3.0/4*
NEIC ***12*** *02:00:03.2, 34.°97N×26.°06E, h31km, MD3.0(ATH), After ATH.*
THE ***12*** *02:00:04.8, 35.°28N×26.°02E, h0km±3km, Error ellipse: s-maj=4.0km s-min=1.4km az=20.0*
CSEM ***12*** *02:00:04.8±0.3, 35.°26N×26.°06E, h15km, MD3.0, Error ellipse: s-maj=9.1km s-min=5.0km az=176.0*
ISCJB ***12*** *02:00:05.3±0.7, 35.°17N±0.°10×26.°06E±0.°04, h27km±4km, Error ellipse: s-maj=16.5km s-min=5.3km az=175.7*
ISC 12 02:00:05.4±0.7,**35.°27N**±0.°08×**26.°06E**±0.°04,**h17**km±6km, **n25**, σ0**9**/**98**/42,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.20**	**141**	*e*Pb	**Pg**	**02 00 09.5**	**-0.8**
ZKR				*e*Sb	**Sg**	**02 00 14.4**	**+0.7**
ZKR	**Zakros**	**0.20**	**141**	P	**Pg**	**02 00 09.4**	**-0.9**
ZKR				S	**Sg**	**02 00 14.3**	**+0.6**
ZKR	**Zakros**	**0.20**	**141**	*e*PB	**Pg**	**02 00 09.5**	**-0.8**
ZKR				*e*SB	**Sg**	**02 00 14.4**	**+0.7**
ZKR	**Zakros**	**0.20**	**141**	*e*Pb	**Pg**	**02 00 09.5**	**-0.8**
ZKR				S	**Sg**	**02 00 14.3**	**+0.6**
NPS	**Neapolis**	**0.37**	**268**	*e*Pb	**Pg**	**02 00 13.2**	**+0.1**
NPS				*e*Sb	**Sg**	**02 00 20.1**	**+1.9**
NPS	**Neapolis**	**0.37**	**268**	*e*PB	**Pg**	**02 00 13.2**	**+0.1**
NPS				*e*SB	**Sg**	**02 00 20.1**	**+1.9**
NPS	**Neapolis**	**0.37**	**268**	*e*Pb	**Pg**	**02 00 13.2**	**+0.1**
LAST	**Lasithi**	**0.49**	**257**	*e*Pn	**Pg**	**02 00 14.2**	**-1.1**
LAST				*e*Sn	**Sg**	**02 00 22.7**	**+0.8**
LAST	**Lasithi**	**0.49**	**257**	P	**Pg**	**02 00 14.2**	**-1.1**
LAST				S	**Sg**	**02 00 22.6**	**+0.7**
LAST	**Lasithi**	**0.49**	**257**	*e*PN	**Pg**	**02 00 14.2**	**-1.1**
LAST				*e*SN	**Sg**	**02 00 22.7**	**+0.8**
LAST	**Lasithi**	**0.49**	**257**	P	**Pg**	**02 00 14.2**	**-1.1**
LAST				S	**Sg**	**02 00 22.6**	**+0.7**
KARP	**Karpathos**	**0.94**	**73**	*e*Pn	**Pn**	**02 00 23.1**	**-0.7**
KARP				*e*Sn	**Sn**	**02 00 38.3**	**+1.5**
KARP	**Karpathos**	**0.94**	**73**	*e*PN	**Pn**	**02 00 23.1**	**-0.7**
KARP				*e*SN	**Sn**	**02 00 38.3**	**+1.5**
KARP	**Karpathos**	**0.94**	**73**	*e*Pn	**Pn**	**02 00 23.1**	**-0.7**
KARP				*e*Sn	**Sn**	**02 00 38.3**	**+1.5**
IDI	**Anoyia**	**0.96**	**271**	*e*Pg	**Pg**	**02 00 22.4**	**-1.6**
IDI				*e*S	**Sb**	**02 00 36.2**	**+0.3**
IDI	**Anoyia**	**0.96**	**271**	*e*Pg	**Pg**	**02 00 22.5**	**-1.5**
IDI				*e*S	**Sb**	**02 00 36.2**	**+0.3**
SIVA	**Sivas**	**1.06**	**256**	P	**Pb**	**02 00 23.6**	**-1.6**
SIVA				S	**Sb**	**02 00 39.1**	**+0.4**
SIVA	**Sivas**	**1.06**	**256**	P	**Pb**	**02 00 23.6**	**-1.6**
SIVA				S	**Sb**	**02 00 39.1**	**+0.4**
THR5	**Thira Island,**	**1.28**	**333**	P	**Pn**	**02 00 28.3**	**-0.2**
THR5	**Thira Island,**	**1.28**	**333**	P	**Pn**	**02 00 28.3**	**-0.2**
KARN	**Karanos**	**1.76**	**275**	P	**Pn**	**02 00 35.8**	**+0.7**
KARN	**Karanos**	**1.76**	**275**	P	**Pn**	**02 00 35.8**	**+0.7**
APE	**Apeiranthos**	**1.84**	**347**	P	**Pn**	**02 00 36.1**	**-0.1**
APE	**Apeiranthos**	**1.84**	**347**	P	**Pn**	**02 00 36.1**	**-0.1**
ONI	**Oni**	**15.37**	**56**	P	**Pn**	**02 03 46.6**	**+5.3**
ONI				S		02 03 48.3	

IDC ***12*** *02:04:52.8±0.8, 20.°55S×169.°95E, h0km, mb4.7/14, mb1 4.8/15, mb1mx4.8/18, mbtmp4.7/15, ML3.9/1, MS4.4/19, Ms1 4.4/19, ms1mx4.3/24, Error ellipse: s-maj=24.9km s-min=17.1km az=124.0*
SZGRF ***12*** *02:04:52.5, 23.°26S×167.°87E, h33km, New Caledonia*
ISCJB ***12*** *02:04:55.1±2.2, 20.°47S±0.°06×169.°89E±0.°05, h18km±15km, mb5.0/48, MS4.5/22, Error ellipse: s-maj=11.4km s-min=6.1km az=154.8*
NOU ***12*** *02:04:55.3±0.5, 20.°56S×170.°24E, h10km, MD3.4, ML4.8*
BJI ***12*** *02:04:56.5, 20.°50S×170.°00E, h35km, mB5.1/25, mb4.9/32, Ms4.9/20, Ms7 4.5/22*
GCMT ***12*** *02:04:58.3±0.2, 20.°54S×170.°12E, h16km, MW5.2, Moment Tensor Solution. s51,c70; s98,c167; Moment tensor: Scale 10^16Nm; Mrr-3.34±.20; Mθθ-3.10±.16; Mφφ6.44±.18; Mrθ-0.76±.45; Mθφ-6.11±.14; Mφr-1.40±.43; Best double couple: M0 8.10000×10^16 NP1:φs111.00000°, δ72.00000°, λ-167.00000°. NP2:φs16.00000°, δ78.00000°, λ-19.00000°. Principal axes: T 9.4900, Plg4.0000°, Azm64.0000°; N -2.8800, Plg68.0000°, Azm165.0000°; P -6.6000, Plg22.0000°, Azm333.0000°; Data Used: II IU IC G CN.*
NEIC ***12*** *02:04:58.5±0.3, 20.°54S×169.°99E, h35km, mb5.1/27 Error ellipse: s-maj=13.0km s-min=7.8km az=145.0*
ISC 12 02:04:57.3±2.1,**20.°54S**±0.°06×**169.°94E**±0.°04,**h24**km±14km, **h35**km±.8km:**pP-P,n253**,σ0**9**/**76**/180,**mb5.0**/48,**MS4.5**/22, **52C-42D,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.27**	**240**	*e*P	**Pn**	**02 05 47.5**	**+0.5**
BAYA	**Yate Dam**	**3.27**	**240**	*e*P	**Pn**	**02 05 46.8**	**-0.2**
BAYA				*e*S	**Sn**	**02 06 24.4**	**-0.7**
DZM	**Mont Dzumac**	**3.59**	**244**	*e*Pn	**Pn**	**02 05 51.7**	**+0.2**
	58nm,0.3s						
DZM				*e*Sn	**Sn**	**02 06 32.7**	**-0.5**
	200nm,0.3s						
DZM				*e*LR	LR	02 06 42.0	
	17μm,26.4s						
DZM	**Mont Dzumac**	**3.59**	**244**	*e*P	**Pn**	**02 05 51.1**	**-0.4**
DZM				*e*S	**Sn**	**02 06 33.1**	**-0.1**
DZM				AMP		02 06 40.0	
	comp=Z,5μm,4.0s						
MVNO	**Noumea**	**3.68**	**242**	*e*P	**Pn**	**02 05 52.5**	**-0.3**
NOUC	**Port Laguerre**	**3.73**	**245**	*e*P	**Pn**	**02 05 53.4**	**+0.1**
NOUC				*e*S	**Sn**	**02 06 41.5**	**+5.0**
MSVF	**Nonsavu**	**8.16**	**71**	Pn	**Pn**	**02 06 53.7**	**-0.6**
	comp=Z,1μm,1.0s,SNR=9.1						
MSVF	**Nonsavu**	**8.16**	**71**	*e*Pn	**Pn**	**02 06 52.7**	**-1.6**
	comp=Z,734nm,1.3s						
MSVF	**Nonsavu**	**8.16**	**71**	Pn	**Pn**	**02 06 53.7**	**-0.6**
	comp=Z,456nm,0.8s,SNR=9.1						
RAO	**Raoul Island**	**14.01**	**131**	LR	LR	02 12 14.9	
	comp=Z,2μm,20.2s,baz=196,slow=32						
HNR	**Honiara**	**14.66**	**317**	LR	LR	02 12 11.0	
	comp=Z,547nm,18.3s,baz=143,slow=30						
EIDS	**Eidsvold**	**18.01**	**251**	*e*P	**Pn**	**02 09 07.9**	**+1.8**
	comp=Z,59nm,1.5s						
AFI	**Afiamalu**	**18.66**	**72**	LR	LR	02 15 09.8	
	comp=Z,623nm,18.8s,baz=255,slow=33						
URZ	**Urewera**	**18.71**	**162**	P	**Pn**	**02 09 13.4**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=314,slow=8.6,SNR=3.6						
URZ				LR	LR	02 14 57.8	
	comp=Z,2μm,19.1s,baz=348,slow=32						
URZ	**Urewera**	**18.71**	**162**	*e*P	**Pn**	**02 09 12.9**	**-1.7**
	comp=Z,54nm,1.3s						
ARMA	**Armidale**	**19.21**	**236**	*e*P	**Pn**	**02 09 22.5**	**+1.9**
ARMA	**Armidale**	**19.21**	**236**	*e*P	**Pn**	**02 09 22.6**	**+2.0**
	comp=Z,26nm,1.0s						
CTA	**Charters Tower**	**22.21**	**267**	*e*P	**P**	**02 09 55.8**	**+3.6**
	comp=Z,15nm,1.1s,mb4.3						
CTA	**Charters Tower**	**22.21**	**267**	P	**P**	**02 09 54.0**	**+1.8**
	comp=Z,20nm,1.0s,mb4.5,baz=76,slow=13,SNR=6.0						
CTAO	**Charters Tower**	**22.21**	**267**	*e*P	**P**	**02 09 53.1**	**+0.9**
	comp=Z,4.5nm,0.8s,mb4.0						
RPZ	**Rata Peaks**	**23.12**	**178**	LR	LR	02 17 45.1	
	comp=Z,982nm,18.2s,MS4.3,baz=15,slow=33						
CNB	**Canberra Magne**	**23.32**	**227**	*e*P	**P**	**02 10 04.7**	**+0.9**
CAN	**Canberra**	**23.57**	**227**	*e*P	**P**	**02 10 07.7**	**+1.4**
	comp=Z,25nm,1.0s,mb4.6						
TOO	**Toolangi**	**27.16**	**226**	*e*P	**P**	**02 10 40.6**	**+1.7**
STKA	**Stephens Creek**	**27.74**	**240**	*e*P	**P**	**02 10 44.2**	**+0.1**
	comp=Z,14nm,0.7s,mb4.7						
STKA	**Stephens Creek**	**27.74**	**240**	P	**P**	**02 10 44.5**	**+0.4**
	comp=Z,22nm,0.9s,mb4.8,baz=80,slow=9.6,SNR=21						
STKA				LR	LR	02 21 19.3	
	comp=Z,2μm,18.9s,MS4.8,baz=75,slow=36						
STKA	**Stephens Creek**	**27.74**	**240**	*e*P	**P**	**02 10 44.4**	**+0.4**
	comp=Z,9.0nm,1.1s,mb4.3						
WRAB	**Tennant Creek**	**33.36**	**265**	*e*P	**P**	**02 11 32.2**	**-1.6**
	comp=Z,20nm,1.2s,mb4.9						
WRA	**Warramunga Arr**	**33.37**	**265**	P	**P**	**02 11 32.6**	**-1.3**
	comp=Z,7.2nm,0.9s,mb4.6,baz=94,slow=8.4,SNR=22						
WRA				LR	LR	02 24 30.8	
	comp=Z,1μm,21.0s,MS4.6,baz=90,slow=35						
ASAR	**Alice Springs**	**33.48**	**258**	P	**P**	**02 11 34.1**	**-0.7**
	comp=Z,28nm,1.0s,mb5.1,baz=81,slow=9.2,SNR=77						
PPT	**Papeete**	**38.32**	**93**	*e*S	**S**	**02 18 08.5**	**-1.1**
	comp=Z,244nm,24.0s						
PPT				*e*LQ		02 21 06.3	
	comp=Z,3μm,28.0s						
PPT				*e*LR	LR	02 22 45.7	
	comp=Z,2μm,28.2s,baz=253						
PPT	**Papeete**	**38.32**	**93**	LR	LR	02 22 59.8	
	comp=Z,266nm,20.5s,MS4.0,baz=267,slow=28						
FORT	**Forrest**	**38.91**	**246**	*e*P	**P**	**02 12 20.1**	**-1.1**
	comp=Z,26nm,0.7s,mb5.1						
FORT	**Forrest**	**38.91**	**246**	*e*P	**P**	**02 12 21.2**	**0.0**
	comp=Z,35nm,0.8s,mb5.2						
GUMO	**Guam**	**41.93**	**322**	LR	LR	02 27 08.4	
	comp=Z,270nm,20.4s,MS4.1,slow=32						
MBWA	**Marble Bar**	**46.76**	**260**	*e*P	**P**	**02 13 24.6**	**-0.4**
	comp=Z,74nm,1.0s,mb5.6						
NWAO	**Narrogin (SRO)**	**48.22**	**244**	P	**P**	**02 13 35.1**	**-1.1**
	comp=Z,14nm,0.9s,mb5.0,baz=94,slow=7.8,SNR=3.8						
NWAO				LR	LR	02 33 51.1	
	comp=Z,11nm,19.2s,baz=57,slow=36						
NWAO	**Narrogin (SRO)**	**48.22**	**244**	P	**P**	**02 13 35.1**	**-1.1**
NWAO				LR	LR	02 33 51.1	
TAOE	**Nuku Hiva Isla**	**49.48**	**84**	*e*S	**S**	**02 20 53.4**	**+0.8**
	comp=Z,424nm,24.6s						
TAOE				*e*LR	LR	02 27 53.1	
	comp=Z,919nm,26.8s						
RKT	**Rikitea**	**50.95**	**104**	*e*LR	LR	02 28 34.5	
	comp=Z,403nm,30.8s						
KAPI	**Kappang**	**51.09**	**280**	LR	LR	02 34 16.9	
	comp=Z,240nm,18.9s,MS4.2,baz=121,slow=34						
CBIJ	**Chichi jima**	**54.46**	**329**	LR	LR	02 34 23.6	
	comp=Z,270nm,21.6s,MS4.3,baz=114,slow=32						
SBA	**Scott Base**	**57.37**	**181**	*e*P	**P**	**02 14 42.1**	**-1.1**
	comp=Z,22nm,1.0s,mb5.1						
CASY	**Casey**	**59.20**	**204**	*e*P	**P**	**02 14 53.9**	**-2.2**
CASY	**Casey**	**59.20**	**204**	*e*P	**P**	**02 14 54.4**	**-1.7**
	comp=Z,16nm,1.1s,mb5.0						
MJAR	**Matsushiro Arr**	**64.21**	**332**	P	**P**	**02 15 29.0**	**-1.1**
	comp=Z,6.7nm,0.9s,mb4.7,baz=170,slow=7.0,SNR=12						
MJAR				LR	LR	02 37 09.5	
	comp=Z,268nm,21.5s,MS4.4,baz=165,slow=30						
MJAR	**Matsushiro Arr**	**64.21**	**332**	P	**P**	**02 15 29.0**	**-1.1**
MJAR				LR	LR	02 37 09.6	
MAT	**Matsushiro**	**64.21**	**332**	P	**P**	**02 15 28.9**	**-1.3**
MAT				S	S	02 24 40.0	+34
ASAJ	**Asahikawa**	**69.05**	**339**	P	**P**	**02 16 00.7**	**-0.3**
	comp=Z,2.1nm,0.3s,mb4.5,baz=230,slow=14,SNR=5.0						
ASAJ				LR	LR	02 46 22.1	
	comp=Z,188nm,19.3s,MS4.3,baz=359,slow=36						
QSPA	**South Pole Qui**	**69.52**	**180**	*e*P	**P**	**02 16 01.4**	**-2.0**
	comp=Z,26nm,1.0s,mb5.1						
KSRS	**Korea Array**	**69.95**	**325**	P	**P**	**02 16 06.3**	**-0.3**
	comp=Z,2.4nm,0.9s,mb4.2,baz=145,slow=6.3,SNR=15						
QIZ	**Qiongzhong**	**70.79**	**300**	P	**P**	**02 16 15.7**	**+3.5**
QIZ				pmax	pmax		
	comp=Z,180nm,2.7s,mb5.5						
QIZ				LR	LR		
	comp=N,270nm,13.9s						
NJ2	**Nanjing**	**71.60**	**316**	*e*P	**P**	**02 16 19.4**	**+2.6**
NJ2				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.3						
SMY	**Shemya**	**73.05**	**3**	*e*P	**P**	**02 16 24.7**	**-0.3**
	comp=Z,161nm,1.3s,mb5.8						
FX1	**Attu Island--F**	**73.17**	**2**	P	**P**	**02 16 24.6**	**-1.1**
	comp=Z,39nm,0.9s,mb5.3,baz=230,slow=2.7						
ATKA	**Atka Island**	**73.75**	**10**	*e*P	**P**	**02 16 28.6**	**-0.5**
	comp=Z,136nm,1.1s,mb5.8						
PETK	**Petropavlovsk-**	**74.11**	**352**	P	**P**	**02 16 31.2**	**0.0**
	comp=Z,13nm,1.0s,mb4.8,baz=152,slow=6.7,SNR=9.7						
PETK				LR	LR	02 47 11.0	
	comp=Z,161nm,19.0s,MS4.3,baz=74,slow=34						
PETK	**Petropavlovsk-**	**74.11**	**352**	P	**P**	**02 16 31.2**	**0.0**
PETK				LR	LR	02 47 10.9	
DL2	**Dalian**	**74.45**	**323**	P	**P**	**02 16 33.6**	**+0.1**
DL2				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
MDJ	**Mudanjiang**	**74.58**	**331**	P	**P**	**02 16 34.0**	**-0.1**
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
MDJ				pmax	pmax		
	comp=Z,79nm,5.2s						
MDJ				LR	LR		
	comp=N,180nm,25.3s,MS4.3						
MDJ				LR	LR		
	comp=E,130nm,28.4s,MS4.3						
MDJ				LR	LR		
	comp=Z,280nm,24.2s,MS4.5						
MDJ	**Mudanjiang**	**74.58**	**331**	*e*P	**P**	**02 16 34.0**	**-0.1**
	comp=Z,8.7nm,1.4s,mb4.5						
CN2	**Changchun**	**75.91**	**328**	*e*P	**P**	**02 16 41.2**	**-0.6**
CN2				*e*pP	pP	02 16 52.0	+2.5
CN2				*e*S	S	02 26 21.8	-

comp=Z,65nm,1.3s,mb5.6
LZH Lanzhou 84.08 312 ⇓P P 02 17 27.0 +0.8
LZH pP pP 02 17 36.5 +2.5
LZH sP sP 02 17 40.0 +3.2
LZH PP PP 02 20 44.1 +3.3
LZH SKS 02 27 44.5
LZH *e*S S 02 27 49.0 -0.5
LZH sS sS 02 28 06.7 +4.4
LZH pmax pmax
comp=Z,46nm,1.3s,mb5.5
LZH pmax pmax
comp=Z,170nm,5.9s
LZH LR LR
comp=E,380nm,16.2s
LZH LR LR
comp=Z,580nm,18.4s,MS5.0
SVW2 Sparrevohn 85.96 16 *e*P P 02 17 35.0 0.0
RSO Redoubt South 86.20 18 *e*P P 02 17 35.1 -1.1
TTA Tatalina 87.42 15 *e*P P 02 17 41.2 -0.9
MAIT Maitri 87.65 187 *e*P P 02 17 45.7 +2.3
EDW2 Edwards Air Fo 87.79 52 ⇑P P 02 17 44.6 0.0
baz=88
ISA Isabella 87.79 51 ⇓P P 02 17 44.9 +0.3
baz=88
ISA Isabella 87.79 51 *e*P P 02 17 44.5 0.0
comp=Z,8.1nm,1.1s,mb4.9
MONP Monument Peak 88.08 54 ⇑P P 02 17 46.2 +0.1
baz=88
PMR Palmer 88.15 18 *e*P P 02 17 43.8 -1.9
comp=Z,9.1nm,1.0s,mb5.0
ULN Ulaanbaatar 88.30 323 *e*P P 02 17 46.4 -0.3
comp=Z,25nm,1.4s,mb5.3
BILL Bilibino 88.36 359 *e*P P 02 17 45.8 -0.7
comp=Z,20nm,1.4s,mb5.2
BEKR Beckworth 88.43 46 ⇓P P 02 17 48.0 +0.5
baz=89
GTA Gaotai 88.50 313 *e*P P 02 17 47.5 -0.3
GTA pP pP 02 17 58.0 +2.4
GTA sP sP 02 18 02.3 +3.9
GTA PP PP 02 21 19.0 +2.6
GTA S S 02 28 31.2 -1.2
GTA sS sS 02 28 48.4 +3.1
GTA SS SS 02 34 27.1 +3.5
GTA pmax pmax
comp=Z,7.0nm,1.5s,mb4.7
GTA pmax pmax
comp=Z,58nm,5.3s
GTA LR LR
comp=N,150nm,16.9s,MS4.6
GTA LR LR
comp=E,170nm,20.2s,MS4.6
GTA LR LR
comp=Z,110nm,19.9s,MS4.3
SONM Songino Array 88.65 323 P P 02 17 47.0 -1.4
comp=Z,5.2nm,1.1s,mb4.8,baz=128,slow=3.2,SNR=24
SONM LR LR 02 53 22.5
comp=Z,140nm,21.8s,MS4.3,baz=272,slow=33
MPMC Manual Prospec 88.68 51 ⇑P P 02 17 48.7 -0.1
baz=89
BELC Belle Mtn. Jos 88.88 53 ⇑P P 02 17 50.0 +0.2
baz=89
HEC Hector,Ludlow 88.99 52 ⇑P P 02 17 50.1 -0.2
baz=89
BC3 Big Chuckawall 89.14 54 ⇓P P 02 17 51.2 +0.2
baz=89
NVAR Mina Array Bea 89.17 48 P P 02 17 50.9 -0.1
comp=Z,1.7nm,0.8s,mb4.4,baz=221,slow=8.1,SNR=8.2
GRAC Grapevine Rang 89.19 50 ⇑P P 02 17 51.7 +0.6
baz=89
FURC Furnace Creek, 89.32 51 ⇑P P 02 17 51.8 0.0
baz=89
K05A Summer Lake 89.44 44 ⇑P P 02 17 52.5 +0.3
baz=90
IRM Iron Mountain 89.58 53 ⇓P P 02 17 53.3 +0.2
baz=90
U10A Ash Meadows, A 89.68 51 ⇑P P 02 17 54.1 +0.7
baz=90
LDFC Landfair 90.00 52 *e*P P 02 17 55.9 +0.9
comp=Z,25nm,2.0s,mb5.2
113A Mohawk Valley, 90.05 55 ⇑P P 02 17 55.5 +0.2
baz=90
S10A Tonopah Range, 90.15 49 ⇑P P 02 17 55.2 -0.4
baz=90,SNR=6.9
Z13A Yuma Proving G 90.31 55 ⇑P P 02 17 56.7 +0.2
baz=90
PDMCI Parker Dam,Lak 90.40 53 ⇓P P 02 17 57.0 +0.2
baz=90
214A Organ Pipe Nat 90.45 56 ⇓P P 02 17 57.5 +0.3
baz=91
V12A Nelson 90.47 52 ⇑P P 02 17 57.8 +0.6
baz=91
114A Black Gap (USA 90.72 55 ⇓P P 02 17 58.5 +0.1
baz=91
X13A Yucca 90.75 53 ⇓P P 02 17 58.7 +0.2
baz=91
WVOR Wild Horse Val 90.78 45 *e*P P 02 17 58.5 0.0
comp=Z,7.9nm,1.1s,mb5.0
T11A Corn Creek, Al 90.84 50 ⇓P P 02 17 59.4 +0.5
baz=91
Z14A Wintersburg 90.92 55 ⇑P P 02 17 59.4 +0.1
baz=91
W13A Hualapai Mount 90.92 53 ⇑P P 02 17 59.5 +0.2
baz=91
D05A Enumclaw 90.94 39 ⇓P P 02 18 00.0 +0.9
baz=91
I07A Izee 90.98 43 ⇓P P 02 17 59.6 +0.3
baz=91
P10A Eureka 90.98 48 ⇓P P 02 17 59.8 +0.3
baz=91
R11A Troy Canyon, C 91.05 49 ⇑P P 02 17 59.8 0.0
baz=91
COLA College 91.09 17 *e*P P 02 17 57.3 -2.1
comp=Z,2.7nm,0.7s,mb4.7
Y14A Wickenburg 91.11 54 ⇑P P 02 18 00.2 0.0
baz=91
V13A Grand Canyon W 91.16 52 ⇑P P 02 18 00.6 +0.2
baz=91
Q11A Duckwater 91.22 49 ⇑P P 02 18 00.8 +0.2
baz=91
O10A Cortez Mining, 91.25 47 ⇑P P 02 18 01.0 +0.3
baz=91
S12A Delamar Landin 91.26 50 ⇓P P 02 18 01.2 +0.4
baz=91,SNR=5.7
J08A Circle Bar Ran 91.30 44 ⇑P P 02 18 01.2 +0.3
baz=91
SKAG Skagway 91.35 25 *e*P P 02 18 00.3 -0.4
comp=Z,33nm,1.3s,mb5.5
X14A Yava 91.41 54 ⇑P P 02 18 00.6 -1.0
baz=92,SNR=6.1
HYT Haines Junctio 91.43 23 *e*P P 02 18 00.1 -0.9
W14A Seligman 91.57 53 ⇓P P 02 18 02.6 +0.3
baz=92
Y15A Casa Rosa Ranc 91.63 54 ⇓P P 02 18 02.0 -0.6
baz=92,SNR=6.8
T13A Saint George 91.70 51 ⇓P P 02 18 03.2 +0.4
baz=92
V14A Boquillas Ranc 91.72 53 ⇑P P 02 18 02.5 -0.5
baz=92,SNR=5.4
R12A Pony Springs, 91.74 50 ⇑P P 02 18 03.6 +0.6
baz=92
O11A Cowboy Ranch, 91.77 48 ⇑P P 02 18 03.2 +0.2
baz=92
J09A Fry Pan Ranch, 91.77 44 ⇑P P 02 18 03.3 +0.3
baz=92
Q12A Willow Creek R 91.88 49 ⇓P P 02 18 04.0 +0.3
baz=92
X15A Humboldt 91.91 54 ⇓P P 02 18 03.6 -0.3
baz=92,SNR=6.5
217A Green Valley 91.94 57 ⇑P P 02 18 04.3 +0.2
baz=92
U14A Mt Trumbull 91.98 52 ⇓P P 02 18 03.8 -0.4
baz=92,SNR=5.8
L10A Juniper Basin 92.05 46 ⇓P P 02 18 04.6 +0.3
baz=92
Z16A Peralta Trail, 92.08 55 ⇑P P 02 18 04.6 -0.1
baz=92
K10A MacKenzie Ranc 92.09 45 ⇑P P 02 18 04.9 +0.4
baz=92
R13A O'Grain Ranch, 92.13 50 ⇑P P 02 18 04.9 0.0
baz=92
Y16A Circle Bar Ran 92.25 55 ⇓P P 02 18 06.1 +0.6
baz=92
117A Oracle 92.31 56 ⇑P P 02 18 06.3 +0.5
baz=92
CCUT Cedar City 92.31 51 *e*P P 02 18 06.7 +1.0
T14A Hurricane 92.32 51 ⇑P P 02 18 06.1 +0.4
baz=92
318A Bisbee 92.46 57 ⇓P P 02 18 06.7 +0.2
baz=92
X16A Lo Mia Camp, P 92.49 54 ⇑P P 02 18 06.6 +0.1
baz=93,SNR=5.6
V15A Kaibab Nationa 92.49 53 ⇑P P 02 18 07.2 +0.7
baz=93
L11A Cat Creek Ranc 92.57 46 ⇓P P 02 18 07.1 +0.4
baz=93
218A Dragoon 92.62 57 ⇑P P 02 18 07.5 +0.2
baz=93
P13A Bates Ranch, G 92.63 49 ⇓P P 02 18 07.4 +0.3
baz=93
U15A North Rim 92.64 52 ⇓P P 02 18 07.4 +0.2
baz=93,SNR=9.4
K11A Parker Ranch, 92.65 45 ⇑P P 02 18 07.5 +0.4
baz=93
Y17A Roosevelt 92.66 55 ⇑P P 02 18 07.6 +0.2
baz=93
W16A Flagstaff 92.69 54 ⇓P P 02 18 07.8 +0.4
baz=93
118A Homack Ranch, 92.94 56 ⇓P P 02 18 08.5 -0.1
baz=93
EGAK Eagle 92.94 19 *e*P P 02 18 06.6 -1.3
comp=Z,22nm,1.2s,mb5.5
X17A Forest Lakes 92.94 54 ⇓P P 02 18 08.7 +0.1
baz=93
Q14A Sevier Lake (B 92.96 49 ⇑P P 02 18 08.7 +0.1
baz=93
H10A Noah's Angus R 92.97 43 ⇑P P 02 18 08.0 -0.5
baz=93
WUAZ Wupatki 92.97 53 ⇓P P 02 18 09.3 +0.5
baz=93
WUAZ Wupatki 92.97 53 *e*P P 02 18 09.4 +0.7
DAWY Dawson 92.99 20 *e*P P 02 18 06.7 -1.5
319A Douglas 93.00 58 ⇓P P 02 18 09.2 +0.2
baz=93
219A White Tail Can 93.25 57 ⇓P P 02 18 09.8 -0.3
baz=93
Y18A Canyon Day Jun 93.32 55 ⇑P P 02 18 10.9 +0.5
baz=93
V17A Tonalea, Kykot 93.45 53 ⇓P P 02 18 11.1 +0.1
baz=94,SNR=6.7
H11A Donnelly 93.49 43 ⇓P P 02 18 10.6 -0.3
baz=94
Y19A Nutrioso 93.99 55 ⇑P P 02 18 13.8 +0.3
baz=94
Z20A Nine Sixteen R 94.19 56 ⇑P P 02 18 14.3 -0.2
baz=94
H13A Challis 94.57 44 ⇑P P 02 18 16.7 +0.8
baz=95
Y20A Horse Springs, 94.65 56 ⇑P P 02 18 16.8 +0.2
baz=95
T18A Mexican Hat 94.71 52 ⇓P P 02 18 16.9 +0.1
baz=95
U19A Dine' College, 94.89 53 ⇓P P 02 18 17.8 +0.2
baz=95
Z21A St. Cloud Mine 94.98 56 ⇑P P 02 18 18.2 +0.2
baz=95
U21A Nageezi 96.11 54 ⇓P P 02 18 23.0 -0.1
baz=96
224A Cornudas Mount 96.24 58 ⇓P P 02 18 23.9 +0.1
baz=96
626A Big Bend Ranch 96.50 61 ⇑P P 02 18 24.9 -0.2
baz=97
TXAR Lajitas Array 96.81 61 P P 02 18 26.2 -0.3
comp=Z,0.9nm,0.8s,mb4.3,baz=219,slow=5.9,SNR=13
TXAR LR LR 02 53 14.5
comp=Z,185nm,19.7s,MS4.6,baz=110,slow=30
E16A East Helena 97.02 43 ⇑P P 02 18 27.4 +0.5
baz=97
PDAR Pinedale Array 97.02 47 LR LR 02 59 09.1
comp=Z,115nm,18.3s,MS4.4,baz=245,slow=34
627A Terlingua Ranc 97.08 61 ⇓P P 02 18 27.0 -0.7
baz=97
PLCA Paso Flores 97.13 138 LR LR 02 51 22.6
comp=Z,244nm,20.1s,MS4.7,baz=208,slow=29
WMQ Urumqi 98.58 314 *e*P P 02 18 35.0 +0.9
YKA Yellowknife Ar 101.52 27 P Pdif 02 18 46.3 -0.9
comp=Z,1.1nm,0.8s,baz=254,slow=4.7,SNR=6.4
YKA Yellowknife Ar 101.52 27 P Pdif 02 18 46.3 -0.9
MKAR Makanchi Array 103.12 315 Pdiff Pdif 02 18 54.4 +0.1
comp=Z,0.1nm,0.3s,baz=87,slow=9.8,SNR=2.2
KURK Kurchatov 106.44 318 Pdiff Pdif 02 19 10.0 +0.9
comp=Z,0.2nm,0.3s,baz=85,slow=2.0,SNR=4.1
SCHQ Schefferville 125.57 37 PKP PKPdf 02 23 58.5 +2.2
comp=Z,5.0nm,0.9s,baz=246,slow=3.8,SNR=4.1
BHD Baghdad 130.32 297 *e*P(diff) Pdif 02 20 54.0 -1.2
BHD *e*PKP PKPdf 02 24 02.0 -4.0
BRTR Keskin Array B 138.12 307 PKP PKPdf
comp=Z,0.4nm,0.8s,baz=48,slow=2.1,SNR=2.4
KOLS Kolonicke sedl 141.67 325 *e*P PKPdf 02 24 29.0 +2.4
KOLS Kolonicke sedl 141.67 325 pPDIF PKPdf 02 24 29.0 +2.4
CRVS Cervenica-Dubn 142.12 326 pPDIF PKPdf 02 24 31.1 +3.7
BSEG Bad Segeberg 143.21 340 *e*PKPbc PKPdf 02 24 24.5 -4.6
PSZ Piszkesteto 143.54 326⇑ *e*PKP PKPdf 02 24 26.4 -3.5
DPC Dobruska-Polom 143.68 331 *e*PKP PKPdf 02 24 26.2 -3.9
DPC *ex* x 02 24 31.8
DPC AMS AMS 03 23 50.0
comp=Z,200nm,25.4s
UPC Upice 143.71 332 *e*PKP PKPdf 02 24 26.4 -3.7
VYHS Vyhne 143.73 327 *e*P PKPdf 02 24 26.6 -3.6
VYHS Vyhne 143.73 327 pPDIF pPKPdf 02 24 37.1 -1.1
BUD Budapest 144.28 326⇑ *e*PKP PKPdf 02 24 28.5 -2.7
PVCC Panska Ves 144.32 333 *e*PKP PKPdf 02 24 28.0 -3.2
BRG Berggiesshubel 144.32 334 *i* P PKPdf 02 24 28.1 -3.1
comp=Z,19nm,1.0s
BRG *e* 02 24 33.3
comp=Z,19nm,1.2s
CLL Collm 144.37 335 *e*PKPbc PKPdf 02 24 27.3 -4.0
CLL Collm 144.37 335⇓ *i*P PKPdf 02 24 27.6 -3.7
CLL *i* 02 24 33.5
CLL *i* 02 24 36.3
CLL Collm 144.37 335⇓ *i*PKPdf PKPdf 02 24 27.6 -3.7
comp=Z,14nm,1.0s
CLL *i* PKiKP PKiKP 02 24 33.5 -1.4
CLL *i* 02 24 36.3
CLL Lm 02 26 00.0
comp=Z,100nm,21.5s
NRDL Niedersach Rie 144.48 339 *e*PKPbc PKPdf 02 24 28.1 -3.3
PRU Pruhonice 144.73 332 *e*PKP PKPdf 02 24 29.3 -2.6
PRU *ep*PKP pPKPdf 02 24 36.1 -3.8
TREC Trest 144.81 331 *e*PKP PKPdf 02 24 29.1 -3.0
TREC *ep*PKP pPKPdf 02 24 35.3 -4.8
TREC AMS AMS 03 23 40.0
comp=Z,300nm,23.7s
CLZ Clausthal 144.93 338 *e*PKPbc PKPdf 02 24 29.9 -2.3
TANN Tannenbergstha 145.28 335 *e*PKPbc PKPbc 02 24 30.9 -1.7
IBBN Ibbenburen 145.41 341 *e*PKPbc PKPbc 02 24 31.7 -1.3
NKC Novy Kostel 145.43 334 *e*PKP PKPdf 02 24 31.8 -1.3
NKC *ep*PKP pPKPdf 02 24 38.1 -3.0
MOX Moxa 145.44 336 *e*PKPbc PKPbc 02 24 31.2 -1.9
CONA Conrad Observa 145.59 329⇑ *i*PKPdf PKPdf 02 24 32.6 -0.8
comp=Z,25nm,1.3s
KHC Kasperske Hory 145.79 332 *e*PKP PKPdf 02 24 32.6 -1.2
KHC *ep*PKP pPKPdf 02 24 40.0 -1.8
UBBA Unterbreizbach 145.90 337 *e*PKPbc PKPdf 02 24 32.5 -1.4
GEC2 GERESS Array S 145.95 332 *e*PKPbc PKPdf 02 24 31.3 -2.8
GEC2 GERESS Array S 145.95 332 *e*PKPbc PKPdf 02 24 31.3 -2.8
GERES GERESS Array B 145.95 332 PKPbc PKPdf 02 24 33.3 -0.7
comp=Z,2.0nm,0.6s,baz=34,slow=3.1,SNR=22
GRA1 Grafenberg Arr 146.35 335 *e*PKPbc PKPbc 02 24 34.1 -1.8
GRF Grafenberg Arr 146.35 335 *e*PKPbc PKPdf 02 24 34.1 -0.6
GRF Grafenberg Arr 146.35 335 *e*PKP PKPdf 02 24 34.1 -0.6
TIR Tirane 147.26 316 *e*PKPbc PKPbc 02 24 38.2 -0.7
MEM Membach 147.42 341 PKPbc PKPdf 02 24 37.6 +1.2
MEM E 02 24 45.7
SNF Seneffe 148.02 343 PKP PKPdf 02 24 37.4 -0.1
WLF Walferdange 148.20 340 PKPbc PKPbc 02 24 39.8 -1.3
WLF Walferdange 148.20 340 *e*PKPbc PKPbc 02 24 40.2 -0.9
FETA Feichten 148.63 332⇑ *i*PKPdf PKPbc 02 24 40.8 -1.5
comp=Z,16nm,1.1s
HINF Hinteralfeld 149.55 337 *e*PKP1 PKPbc 02 24 42.7 -1.9
HAU Haudompre 149.57 338 *e*PKP1 PKPdf 02 24 41.8 +1.7
RGNG Rignano Grg 149.77 320 P PKPbc 02 24 43.0 -2.3
VAI Varese 150.38 333 P PKPbc 02 24 43.8 -2.9
TIP Timpagrande 150.41 315 *e*PKPbc PKPbc 02 24 46.0 -1.0
NRCA Norcia 150.47 324 P PKPbc 02 24 45.0 -2.0
INTR Introdacqua 150.56 322 P PKPbc 02 24 44.7 -2.5
CSSN Cassano Irpino 150.59 319 P PKPbc 02 24 44.8 -2.5
FLN La Foliniere 150.81 347 *e*PKP1 PKPbc 02 24 45.1 -2.5
CABF La Chapelle 150.84 337 *e*PKP1 PKPbc 02 24 45.4 -2.3
comp=Z,24nm,1.1s
LDF La Druitiere 150.90 346 *e*PKP1 PKPbc 02 24 45.1 -2.7
LOR Lormes 151.04 340 *e*PKP1 PKPbc 02 24 46.5 -1.7
comp=Z,18nm,1.1s
GRR Gorron 151.25 347 *e*PKP1 PKPbc 02 24 46.4 -2.2
SSF Saint Saulge 151.33 340 *e*PKP PKPbc 02 24 47.1 -1.8
SOI Samo 151.45 313 P PKPbc 02 24 47.7 -1.7
LPL La Plagne 151.51 335 *e*PKP1 PKPbc 02 24 48.1 -1.2
LPG La Plagne 151.52 335 *e*PKP1 PKPbc 02 24 48.2 -1.1
comp=Z,18nm,0.8s
SMF Signal de Mont 151.60 340 *e*PKP1 PKPbc 02 24 47.7 -1.8
comp=Z,42nm,1.3s
AVF Avril sur Loir 151.62 340 *e*PKP1 PKPbc 02 24 47.7 -1.8
comp=Z,31nm,1.4s
TCF Toulx Ste Croi 152.42 341 *e*PKP1 PKPbc 02 24 49.5 -1.9
TORD Torodi Ar. Bea 166.56 239 PKPab PKPab 02 26 01.6 -2.2
comp=Z,0.9nm,1.0s,baz=140,slow=0.8,SNR=4.1

ISCJB ***12*** *02:09:54.6±0.2,7°.39S±0°.03×127°.83E±0°.03,h31km, mb5.1/77,MS4.3/14,Error ellipse: s-maj=5.1km s-min=3.3km az=148.5*
MOS ***12*** *02:09:55.0±1.0,7°.35S×127°.71E,h33km,mb5.3/30, MS4.5/4,Error ellipse: s-maj=14.4km s-min=7.1km az=111.8*
GCMT ***12*** *02:09:56.7±0.2,7°.21S×127°.87E,h20km±1km,MW5.0, Moment Tensor Solution. s35,c48; s69,c112; Moment tensor: Scale 10^{16}Nm; M_{rr}2.54±.21; $M_{\theta\theta}$-3.94±.14; $M_{\phi\phi}$1.39±.16; $M_{r\theta}$-1.96±.25; $M_{\theta\phi}$-0.88±.11; $M_{\phi r}$0.10±.41; Best double couple: $M_0$3.90000×10^{16} NP1:ϕ_s64.00000°, δ32.00000°,λ65.00000°. NP2:ϕ_s273.00000°,δ61.00000°, λ105.00000°. Principal axes: T 3.1500, Plg70.0000°, Azm214.0000°; N 1.4400, Plg13.0000°, Azm85.0000°; P -4.6000, Plg15.0000°, Azm352.0000°; Data Used: II IU IC CN G.*
DJA ***12*** *02:09:56,7°.35S×127°.89E,h19km,Mw5.4/25*
BJI ***12*** *02:09:56.2,7°.40S×127°.80E,h37km,mB5.1/25,mb5.1/34, Ms4.7/24,Ms7 4.5/24*
IDC ***12*** *02:09:56.6±0.5,7°.38S×127°.69E,h31km±3km,mb4.8/24, mb1 4.8/27,mb1mx4.8/30,mbtmp4.8/27,ML5.0/3,MS4.0/3, Ms1 4.1/3,ms1mx3.2/29,Error ellipse: s-maj=15.6km s-min=9.7km az=70.0*
NEIC ***12*** *02:09:57.2±0.8,7°.39S×127°.78E,h38km±8km,mb5.3/30, Error ellipse: s-maj=9.6km s-min=5.1km az=56.0*
ISC 12 02:09:57.0±0.2,7°.39S±0°.03×127°.82E±0°.03,h33km, h33km±,9km:pP-P,n238,σ1s17/227,mb5.1/77,MS4.3/14, 12C-6D,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**3.70**	**6**	P	**Pn**	**02 10 49.2**	**-2.7**
NLAI	**Namlea**	**4.19**	**350**	P	**Pn**	**02 10 57.4**	**-1.2**
TLE	**Tual**	**5.19**	**71**	P	**Pn**	**02 11 14.3**	**+1.9**
1.0nm326nm,1.1s							
MMRI	**Maumere**	**5.66**	**257**	P	**Pn**	**02 11 21.4**	**+2.5**
1.4nm3μm427nm,1.1s							
KDI	**Kendari**	**6.20**	**303**	P	**Pn**	**02 11 25.0**	**-1.3**
1.1nm6μm201nm,0.6s							
LBMI	**Labuha**	**6.72**	**357**	P	**Pn**	**02 11 34.8**	**+1.4**
1.7nm5μm393nm,1.0s							
KAKA	**Kakadu**	**6.97**	**140**	*e*P	**Pn**	**02 11 38.1**	**+1.2**
188nm,0.6s							
KAKA				*e*S	**Sn**	**02 12 55.7**	**+0.6**
KAKA	**Kakadu**	**6.97**	**140**	*e*Pn	**Pn**	**02 11 39.3**	**+2.4**
315nm,0.5s							
KAKA				*e*S	**Sn**	**02 12 55.8**	**+0.7**
KAKA	**Kakadu**	**6.97**	**140**	P	**Pn**	**02 11 39.5**	**+2.6**
2.9nm7μm307nm,0.6s							
SWI	**Sorong**	**7.34**	**28**	P	**Pn**	**02 11 42.9**	**+0.9**
0.4nm1μm109nm,0.8s							
LUWI	**Luwuk**	**8.07**	**321**	P	**Pn**	**02 11 52.3**	**+0.3**
2μm141nm,0.8s							
TNTI	**Ternate**	**8.12**	**357**	P	**Pn**	**02 11 53.4**	**+0.7**
3μm263nm,1.0s							
BNSI	**Bone**	**8.23**	**291**	P	**Pn**	**02 11 54.5**	**+0.4**
KNA	**Kununurra**	**8.36**	**174**	P	**Pn**	**02 11 56.6**	**+0.7**
7μm738nm,0.9s							
KAPI	**Kappang**	**8.36**	**286**	Pn	**Pn**	**02 11 55.2**	**-0.8**
161nm,0.7s,SNR=5.8							
KAPI	**Kappang**	**8.36**	**286**	Pn	**Pn**	**02 11 54.0**	**-2.0**
3.7nm,0.3s,baz=156,slow=6.0,SNR=11							
KAPI				Sn	**Sn**	**02 13 25.4**	**-3.9**
1.9nm,0.3s,baz=254,slow=18,SNR=2.1							
KAPI	**Kappang**	**8.36**	**286**	*e*Pn	**Pn**	**02 11 54.5**	**-1.4**
KAPI				*e*S	**Sn**	**02 13 28.1**	**-1.2**
SPSI	**Sidrap Palu**	**8.70**	**293**	P	**Pn**	**02 12 01.9**	**+1.2**
APSI	**Ampana**	**8.90**	**316**	P	**Pn**	**02 12 03.0**	**-0.4**
10μm103nm,0.7s							
TTSI	**Tana Toraja**	**9.06**	**298**	P	**Pn**	**02 12 06.9**	**+1.3**
1μm87nm,0.9s							
MNI	**Manado**	**9.27**	**341**	P	**Pn**	**02 12 09.3**	**+0.9**
5μm671nm,0.8s							
MRSI	**Marisa**	**9.77**	**323**	P	**Pn**	**02 12 15.6**	**+0.3**
749nm88nm,0.8s							
FITZ	**Fitzroy Crossi**	**10.85**	**191**	*e*P	**Pn**	**02 12 27.6**	**-2.5**
77nm,0.8s							
FITZ				*e*S	**Sn**	**02 14 23.8**	**-6.7**
FITZ	**Fitzroy Crossi**	**10.85**	**191**	Pn	**Pn**	**02 12 27.6**	**-2.5**
7.4nm,0.3s,baz=29,slow=11,SNR=122							
FITZ				Sn	**Sn**	**02 14 24.1**	**-6.4**
11nm,0.3s,baz=117,slow=22,SNR=7.8							
FITZ				LR	LR	02 17 23.1	
comp=Z,729nm,18.3s,baz=14,slow=41							
FITZ	**Fitzroy Crossi**	**10.85**	**191**	*e*Pn	**Pn**	**02 12 28.4**	**-1.8**
37nm,0.6s							
FITZ				*e*S	**Sn**	**02 14 24.0**	**-6.5**
FITZ	**Fitzroy Crossi**	**10.85**	**191**	P	**Pn**	**02 12 29.4**	**-0.7**
132nm,0.7s							
SMPI	**Sarmi**	**12.11**	**64**	P	**Pn**	**02 12 46.8**	**-0.5**
4μm55nm,1.3s							
WRAB	**Tennant Creek**	**13.98**	**154**	Pn	**Pn**	**02 13 09.0**	**-3.9**
546nm,0.9s,SNR=22							
WRAB	**Tennant Creek**	**13.98**	**154**	*e*Pn	**Pn**	**02 13 09.6**	**-3.3**
WRAB				*e*S	**Sn**	**02 15 39.0**	**-8.0**
WRAB	**Tennant Creek**	**13.98**	**154**	P	**Pn**	**02 13 09.8**	**-3.1**
98nm,0.9s							
WRA	**Warramunga Arr**	**13.98**	**154**	Pn	**Pn**	**02 13 08.5**	**-4.4**
5.6nm,0.3s,baz=327,slow=14,SNR=75							
WRA				Sn	**Sn**	**02 15 39.1**	**-8.0**
6.7nm,0.3s,baz=324,slow=23,SNR=11							
DAV	**Davao City (W)**	**14.54**	**351**	Pn	**Pn**	**02 13 19.4**	**-1.2**
42nm,0.3s,baz=45,slow=17,SNR=4.3							
GRJI	**Gresik**	**15.23**	**271**	P	**Pn**	**02 13 35.0**	**+5.3**
6μm,0.6s							
MYLDM	**Lahad Datu**	**15.57**	**323**	P	**Pn**	**02 13 36.9**	**+2.7**
1μm131nm,1.3s							
SJI	**Sawahan**	**15.92**	**268**	P	**Pn**	**02 13 40.3**	**+1.6**
4μm53nm,1.2s							
COEN	**Coen**	**16.43**	**115**	*e*Pn	**Pn**	**02 13 43.6**	**-1.7**
1μm,1.1s							
COEN				*e*S	**Sn**	**02 16 36.3**	**-11**
COEN	**Coen**	**16.43**	**115**	P	**Pn**	**02 13 43.5**	**-1.8**
5μm533nm,1.1s							
ASAR	**Alice Springs**	**17.20**	**161**	P	**Pn**	**02 13 52.3**	**-2.6**
2.1nm,0.3s,baz=339,slow=10,SNR=37							
ASAR				S	**Sn**	**02 17 00.3**	**-5.0**
3.1nm,0.3s,baz=340,slow=24,SNR=5.8							
ASAR	**Alice Springs**	**17.20**	**161**	P	**Pn**	**02 13 52.3**	**-2.6**
ASAR				S	**Sn**	**02 17 00.3**	**-5.0**
ASAR				pmax	pmax		
comp=Z,2.0nm,0.3s							
ASAR				smax			
comp=N,3.0nm,0.3s							
KKM	**Kota Kinabalu**	**17.67**	**319**	*e*Pn	**Pn**	**02 14 01.1**	**+0.4**
comp=N,57nm,1.0s							
KKM	**Kota Kinabalu**	**17.67**	**319**	P	**Pn**	**02 14 01.7**	**+1.0**
comp=N,867nmcomp=N,57nm,1.1s							
STKI	**Sintang**	**17.90**	**294**	P	**Pn**	**02 14 00.3**	**-3.3**
comp=N,50nm,1.2s							
SBUM	**Sibu**	**18.38**	**302**	P	**Pn**	**02 14 09.4**	**-0.1**
comp=N,827nmcomp=N,58nm,1.2s							
KSM	**Kuching**	**19.56**	**296**	*e*P	**Pn**	**02 14 23.2**	**-0.5**
comp=N,58nm,1.1s							
KSM	**Kuching**	**19.56**	**296**	P	**Pn**	**02 14 25.9**	**+2.1**
comp=N,710nmcomp=N,51nm,1.2s							
TPI	**Tanjungpandan**	**20.60**	**282**	P	**P**	**02 14 37.5**	**+3.9**
comp=N,883nmcomp=N,53nm,2.3s							
CTA	**Charters Tower**	**21.88**	**127**	*e*P	**P**	**02 14 48.0**	**+0.8**
comp=N,19nm,0.7s,mb4.6							
CTA	**Charters Tower**	**21.88**	**127**	P	**P**	**02 14 48.1**	**+0.9**
comp=N,21nm,0.8s,mb4.7,baz=302,slow=12,SNR=16							
CTA	**Charters Tower**	**21.88**	**127**	P	**P**	**02 14 48.1**	**+0.9**
CTA				pmax	pmax		
comp=Z,21nm,0.8s							
CTAO	**Charters Tower**	**21.88**	**127**	*e*P	**P**	**02 14 48.1**	**+0.9**
CTAO				pmax	pmax		
comp=Z,96nm,1.4s,mb5.0							

CTAO	Charters Tower	21.88	127	*e*P	P	02 14 48.1 +0.8
	comp=Z,96nm,1.4s,mb5.0					
CTAO	Charters Tower	21.88	127	P	P	02 14 48.4 +1.2
	comp=Z,48nm,1.3s,mb4.8					
CGJI	Cibinong	21.97	271	P	P	02 14 47.5 -0.8
	comp=Z,124nm,0.8s,mb5.4					
PPBI	Pangkal Pinang	22.21	282	P	P	02 14 53.1 +2.2
	comp=Z,74nm,1.3s,mb5.0					
TGY	Tagaytay City	22.42	342	P	P	02 14 54.1 +1.1
	comp=Z,149nm,0.3s,mb5.9,baz=166,slow=12,SNR=2.9					
TGY	Tagaytay City	22.42	342	P	P	02 14 54.1 +1.1
TGY				pmax	pmax	
	comp=Z,149nm,0.3s					
FORT	Forrest	23.27	179	*e*P	P	02 15 02.3 +0.5
	comp=Z,96nm,0.7s,mb5.3					
FORT	Forrest	23.27	179	*e*P	P	02 15 02.1 +0.3
	comp=Z,106nm,0.7s,mb5.4					
MYKOM	Kota Tinggi	25.59	290	P	P	02 15 24.6 +1.1
	comp=Z,700nmcomp=Z,36nm,1.5s,mb4.7					
KLBR	Kellerberrin	25.84	200	*e*P	P	02 15 24.4 -1.1
	comp=Z,56nm,0.8s,mb5.2					
SDSI	Sungai Dareh	27.08	282	P	P	02 15 36.5 -0.4
	comp=Z,53nm,1.7s,mb4.8					
NWAO	Narrogin (SRO)	27.24	200	P	P	02 15 38.5 +0.3
	comp=Z,69nm,0.8s,mb5.2,baz=29,slow=11,SNR=23					
NWAO	Narrogin (SRO)	27.24	200	P	P	02 15 38.5 +0.4
NWAO				pmax	pmax	
	comp=Z,69nm,0.8s					
NWAO	Narrogin (SRO)	27.24	200	*e*P	P	02 15 38.5 +0.4
	comp=Z,65nm,0.9s,mb5.2					
STKA	Stephens Creek	27.54	154	*e*P	P	02 15 41.2 +0.4
	comp=Z,12nm,0.7s,mb4.6					
STKA	Stephens Creek	27.54	154	P	P	02 15 40.8 0.0
	comp=Z,12nm,0.8s,mb4.6,baz=322,slow=8.8,SNR=11					
STKA	Stephens Creek	27.54	154	*e*P	P	02 15 41.4 +0.6
	comp=Z,12nm,1.4s,mb4.3					
BKNI	Bangkinang	27.79	285	P	P	02 15 47.9 +4.6
	comp=Z,92nm,0.6s,mb5.6					
PPI	Padang Panjang	28.19	283	P	P	02 15 46.4 -0.5
	comp=Z,4µmcomp=Z,51nm,1.3s,mb5.0					
IPM	Ipoh	29.22	293	P	P	02 15 54.7 -1.3
PSI	Prapat	30.56	288	P	P	02 16 06.5 -1.4
	comp=Z,49nm,0.8s,mb5.4,baz=112,slow=4.2,SNR=28					
PSI	Prapat	30.56	288	P	P	02 16 06.5 -1.4
PSI				pmax	pmax	
	comp=Z,49nm,0.8s,mb5.4					
ARMA	Armidale	31.98	139	*e*P	P	02 16 21.4 +1.2
CAN	Canberra	33.92	148	*e*P	P	02 16 39.1 +2.0
CAN				pmax	pmax	
	comp=Z,73nm,0.8s,mb5.7					
CAN	Canberra	33.92	148	*e*P	P	02 16 39.0 +2.0
	comp=Z,73nm,0.8s,mb5.7					
TOO	Toolangi	34.06	154	*e*P	P	02 16 38.7 +0.5
CNB	Canberra Magne	34.11	148	*e*P	P	02 16 40.6 +1.9
CBIJ	Chichi jima	37.00	22	P	P	02 17 03.0 -0.6
	comp=Z,19nm,0.4s,mb5.3,baz=236,slow=15,SNR=5.3					
BDT	Bhumibol Dam	37.56	311	P	P	02 17 08.0 -0.5
	comp=Z,11nm,1.1s,mb4.5					
CMAR	Chiang Mai Arr	38.36	312	LR	LR	02 32 28.0
	comp=Z,128nm,18.7s,MS3.8,baz=321,slow=35					
GYA	Guiyang	39.42	329	⇓*i*P	P	02 17 26.0 +2.0
GYA				pP	pP	02 17 36.8 +3.0
GYA				sP	sP	02 17 41.7 +4.0
GYA				PP	PP	02 19 02.4 +7.5
GYA				PcP	PcP	02 19 34.0 +2.2
GYA				ScP	ScP	02 23 18.4 +0.2
GYA				PcS	PcS	02 23 25.7 +3.9
GYA				S	S	02 23 26.9 +3.2
GYA				sS	sS	02 23 43.5 +3.7
GYA				SS	SS	02 26 15.4 -3.4
GYA				pmax	pmax	
	comp=Z,30nm,1.0s,mb5.0					
GYA				pmax	pmax	
	comp=Z,140nm,5.7s					
GYA				LR	LR	
	comp=N,2µm,17.8s,MS5.1					
GYA				LR	LR	
	comp=E,2µm,17.4s,MS5.1					
GYA				LR	LR	
	comp=Z,2µm,16.6s,MS5.0					
NJ2	Nanjing	40.15	348	*e*P	P	02 17 31.1 +1.1
NJ2				pmax	pmax	
	comp=Z,10.0nm,0.5s,mb4.8					
KMI	Kunming	40.51	324	P	P	02 17 34.6 +1.5
KMI				pP	pP	02 17 44.8 +2.0
KMI				sP	sP	02 17 49.0 +2.2
KMI				PP	PP	02 19 11.2 +4.4
KMI				S	S	02 23 40.6 +0.6
KMI				sS	sS	02 23 57.7 +1.6
KMI				SS	SS	02 26 33.6 -7.0
KMI				pmax	pmax	
	comp=Z,11nm,1.4s,mb4.3					
KMI				pmax	pmax	
	comp=Z,85nm,3.8s					
KMI				LR	LR	
	comp=N,220nm,16.5s,MS4.1					
KMI				LR	LR	
	comp=E,150nm,19.4s,MS4.1					
KMI				LR	LR	
	comp=Z,180nm,18.7s,MS4.0					
CD2	Chengdu	44.52	330	*e*P	P	02 18 07.2 +1.6
CD2				pP	pP	02 18 17.1 +1.7
CD2				sP	sP	02 18 21.1 +1.7
CD2				PP	PP	02 19 53.0 +3.0
CD2				PcS	PcS	02 23 41.6 -0.4
CD2				S	S	02 24 41.6 +2.6
CD2				sS	sS	02 24 58.0 +2.8
CD2				SS	SS	02 27 54.1 -5.3
CD2				pmax	pmax	
	comp=Z,60nm,0.8s,mb5.5					
CD2				pmax	pmax	
	comp=Z,160nm,4.8s					
CD2				LR	LR	
	comp=E,220nm,14.2s					
CD2				LR	LR	
	comp=Z,280nm,10.7s,MS4.5					
KSRS	Korea Array	44.61	0	P	P	02 18 06.4 +0.2
	comp=Z,6.3nm,0.7s,mb4.6,baz=177,slow=10,SNR=18					
KSRS				PcP	PcP	02 19 47.6 -1.1
	comp=Z,2.7nm,0.8s,baz=184,slow=4.4,SNR=6.1					
KSRS	Korea Array	44.61	0	P	P	02 18 06.4 +0.2
KSRS						02 19 47.6
KSRS				pmax	pmax	
	comp=Z,6.0nm,0.7s,mb4.5					
MAT	Matsushiro	44.78	12	P	P	02 18 06.3 -1.3
MAT				S	S	02 24 41.0 -1.6
MJAR	Matsushiro Arr	44.78	12	P	P	02 18 06.3 -1.2
	comp=Z,3.7nm,0.8s,mb4.3,baz=189,slow=9.1,SNR=6.8					
MJAR	Matsushiro Arr	44.78	12	P	P	02 18 06.3 -1.3
MJAR				pmax	pmax	
	comp=Z,4.0nm,0.8s					
MJAR	Matsushiro Arr	44.78	12	P	P	02 18 06.3 -1.2
BJI	Beijing	48.41	348	P	P	02 18 37.0 +1.0
BJI				S	S	02 25 25.1 -9.3
BJI				SS	SS	02 28 59.2 -5.5
BJI				pmax	pmax	
	comp=Z,18nm,1.0s,mb5.1					
BJI				pmax	pmax	
	comp=Z,160nm,5.8s					
BJI				LR	LR	
	comp=N,170nm,16.0s,MS4.1					
BJI				LR	LR	
	comp=E,110nm,20.5s,MS4.1					
LZH	Lanzhou	48.77	334	*e*P	P	02 18 40.0 +1.2
LZH				pP	pP	02 18 47.0 -1.8
LZH				sP	sP	02 18 52.5 -0.2
LZH				PP	PP	02 20 34.0 +1.7
LZH				*e*S	S	02 25 41.1 +1.5
LZH				sS	sS	02 25 58.0 +2.0
LZH				SS	SS	02 29 09.6 -1.1
LZH				pmax	pmax	
	comp=Z,32nm,1.0s,mb5.3					
LZH				pmax	pmax	
	comp=Z,220nm,5.5s					
LZH				LR	LR	
	comp=E,1µm,13.9s					
LZH				LR	LR	
	comp=Z,1µm,15.6s,MS5.1					
SNY	Shenyang	49.13	356	⇑P	P	02 18 40.5 -1.0
SNY				pmax	pmax	
	comp=Z,10.0nm,0.8s,mb4.9					
HHC	Hu-ho-hao-te	50.28	344	*e*P	P	02 18 53.8 +3.5
HHC				pP	pP	02 19 03.7 +3.5
HHC				sP	sP	02 19 07.7 +3.5
HHC				PcP	PcP	02 20 11.8 +3.0
HHC				PP	PP	02 20 51.2 +5.2
HHC				ScP	ScP	02 24 04.4 +1.9
HHC				PcS	PcS	02 24 08.1 +2.2
HHC				S	S	02 26 04.4 +3.8
HHC				sS	sS	02 26 20.2 +3.1
HHC				ScS	ScS	02 28 39.0 0.0
HHC				SS	SS	02 29 34.9 +0.1
HHC				pmax	pmax	
	comp=Z,14nm,0.8s,mb5.0					
HHC				pmax	pmax	
	comp=Z,120nm,4.4s					
HHC				LR	LR	
	comp=N,130nm,19.2s,MS4.0					
HHC				LR	LR	
	comp=E,81nm,19.2s,MS4.0					
HHC				LR	LR	
	comp=Z,130nm,21.6s,MS3.9					
CN2	Changchun	51.00	358	*e*P	P	02 19 03.5 +7.9
CN2				*e*pP	pP	02 19 11.2 +5.6
CN2				*e*S	S	02 26 19.1 +8.6
CN2				pmax	pmax	
	comp=Z,10.0nm,0.8s,mb4.8					
CN2				pmax	pmax	
	comp=Z,200nm,3.0s					
CN2				LR	LR	
	comp=N,200nm,19.0s,MS4.3					
CN2				LR	LR	
	comp=E,200nm,19.0s,MS4.3					
CN2				LR	LR	
	comp=Z,200nm,20.0s,MS4.1					
LSA	Lhasa	51.01	318	P	P	02 18 58.8 +2.8
LSA	Lhasa	51.01	318	*e*P	P	02 18 58.8 +2.8
LSA				pmax	pmax	
	comp=Z,14nm,1.2s,mb4.8					
LSA	Lhasa	51.01	318	*e*P	P	02 18 58.8 +2.8
	comp=Z,14nm,1.2s,mb4.8					
MDJ	Mudanjiang	51.79	2	P	P	02 19 02.9 +1.4
MDJ				pP	pP	02 19 11.3 -0.2
MDJ				sP	sP	02 19 15.6 +0.1
MDJ				PP	PP	02 21 01.0 +1.3
MDJ				ScP	ScP	02 24 09.5 +0.6
MDJ				PcS	PcS	02 24 13.2 +1.0
MDJ				S	S	02 26 25.8 +4.4
MDJ				pmax	pmax	
	comp=Z,14nm,1.2s,mb4.8					
MDJ				pmax	pmax	
	comp=Z,80nm,5.4s					
MDJ				LR	LR	
	comp=N,180nm,26.1s,MS4.0					
MDJ				LR	LR	
	comp=E,130nm,28.7s,MS4.0					
MDJ				LR	LR	
	comp=Z,280nm,27.8s,MS4.2					
MDJ	Mudanjiang	51.79	2	*e*P	P	02 19 02.6 +1.1
	comp=Z,6.5nm,0.8s,mb4.6					
ODAN	Odare	51.90	313	*e*P	P	02 19 02.6 -0.1
	comp=Z,27nm,0.8s,mb5.2					
TAPN	Taplejung	51.95	313	*e*P	P	02 19 02.8 -0.3
	comp=Z,26nm,0.9s,mb5.2					
RPZ	Rata Peaks	52.27	141	P	P	02 19 06.6 +1.4
	comp=Z,168nm,0.9s,mb6.0,baz=309,slow=2.1,SNR=43					
RPZ	Rata Peaks	52.27	141	*e*P	P	02 19 06.9 +1.7
	comp=Z,208nm,0.9s,mb6.1					
RAMN	Ramite	52.53	312	*e*P	P	02 19 07.2 -0.2
	comp=Z,44nm,0.7s,mb5.5					
ASAJ	Asahikawa	52.98	13	P	P	02 19 10.1 -0.3
	comp=Z,5.5nm,0.6s,mb4.7,baz=77,slow=31,SNR=6.1					
ASAJ	Asahikawa	52.98	13	P	P	02 19 10.1 -0.3
ASAJ				pmax	pmax	
	comp=Z,6.0nm,0.6s					
KHZ	Kahutara	53.23	139	*e*P	P	02 19 13.2 +0.8
	comp=Z,84nm,0.8s,mb5.7					
JIRN	Jiri	53.23	313	*e*P	P	02 19 12.5 -0.1
	comp=Z,43nm,1.0s,mb5.3					
GTA	Gaotai	53.30	333	*e*P	P	02 19 13.1 +0.2
GTA				pP	pP	02 19 23.1 +0.2
GTA				sP	sP	02 19 27.6 +0.8
GTA				PP	PP	02 21 15.0 +1.6
GTA				S	S	02 26 41.5 -0.8
GTA				sS	sS	02 26 59.0 +0.2
GTA				SS	SS	02 30 19.7 -3.0
GTA				pmax	pmax	
	comp=Z,7.0nm,1.4s,mb4.4					
GTA				pmax	pmax	
	comp=Z,130nm,5.6s					
GTA				LR	LR	
	comp=N,96nm,13.7s,MS4.3					
GTA				LR	LR	
	comp=E,150nm,12.5s,MS4.3					
GTA				LR	LR	
	comp=Z,86nm,12.8s,MS4.0					
GUN	Gumba	53.60	313	*e*P	P	02 19 15.0 -0.3
	comp=Z,64nm,1.0s,mb5.5					
PKI	Pulchoki	53.76	312	*e*P	P	02 19 16.7 +0.3
	comp=Z,13nm,0.5s,mb5.1					
PKI	Pulchoki	53.76	312	*e*P	P	02 19 16.7 +0.3
PKI				pmax	pmax	
	comp=Z,13nm,0.5s,mb5.1					
PKIN	Phulchoki	53.77	312	*e*P	P	02 19 16.4 -0.1
	comp=Z,34nm,0.6s,mb5.5					
URZ	Urewera	53.98	132	P	P	02 19 17.5 -0.4
	comp=Z,7.3nm,0.6s,mb4.8,baz=255,slow=4.9,SNR=3.0					
DMN	Daman	54.00	312	*e*P	P	02 19 18.0 -0.2
	comp=Z,21nm,0.7s,mb5.2					
HYB	Hyderabad	54.56	297	*e*P	P	02 19 21.0 -1.4
HYB	Hyderabad	54.56	297	*i* P	P	02 19 20.5 -1.9
YSS	Yuzh-Sakhalins	55.71	12	⇓*e*P	P	02 19 30.0 -0.2
YSS				*e*		02 19 46.5
YSS				*e*S	S	02 27 11.0 -3.4
YSS				MLR	MLR	
	comp=Z,300nm,16.0s,MS4.5					
YSS				MLR	MLR	
	comp=E,300nm,18.0s					
YSS	Yuzh-Sakhalins	55.71	12	⇓*i*P	P	02 19 30.2 0.0
HABR	Khabarovsk	55.99	6	*e*P	P	02 19 40.0 +7.9
HABR				*e*		02 20 26.1
HABR				*e*		02 21 33.2
HABR				*e*S	S	02 27 16.5 -1.6
HABR				*e*		02 27 28.9
HABR				pmax	pmax	
	comp=E,62nm,2.3s					
HABR				pmax	pmax	
	comp=N,16nm,1.2s					
HABR				MLR	MLR	
	comp=Z,408nm,19.0s,MS4.5					
KLR	Kul'dur	56.49	3	*e*P	P	02 19 30.8 -4.9
ULN	Ulaanbaatar	58.00	344	*e*P	P	02 19 47.1 +0.7
ULN				pmax	pmax	
	comp=Z,16nm,0.8s,mb5.1					
ULN	Ulaanbaatar	58.00	344	*e*P	P	02 19 47.1 +0.7
	comp=Z,16nm,0.8s,mb5.1					
ULN	Ulaanbaatar	58.00	344	P	P	02 19 48.0 +1.6
	SNR=7.2					
ULN				P		02 19 48.0
	SNR=7.2					
SONM	Songino Array	58.16	343	P	P	02 19 48.0 +0.5
	comp=Z,14nm,0.8s,mb5.0,baz=157,slow=5.1,SNR=38					
SONM				PcP	PcP	02 20 38.4 -0.4
	comp=Z,3.3nm,0.9s,baz=162,slow=4.3,SNR=3.8					
SONM	Songino Array	58.16	343	P	P	02 19 48.0 +0.5
SONM						02 20 38.4
SONM				pmax	pmax	
	comp=Z,14nm,0.8s					
CASY	Casey	60.00	188	*e*P	P	02 20 00.3 +0.3
CASY	Casey	60.00	188	*e*P	P	02 20 00.5 +0.4
ZAK	Zakamensk	61.35	342	*e*P	P	02 20 09.8 +0.4
ZAK				pmax	pmax	
	comp=Z,4.0nm,1.0s,mb4.5					
TLY	Talaya	62.40	343	*e*P	P	02 20 17.3 +0.9
TLY				*e*S	S	02 28 37.3 -3.6
TLY				pmax	pmax	
	comp=Z,20nm,2.0s,mb4.9					
TLY	Talaya	62.40	343	*e*P	P	02 20 17.6 +1.2
	comp=Z,9.5nm,1.0s,mb4.9					
WMQ	Urumqi	62.56	328	P	P	02 20 18.5 +0.8
WMQ				pP	pP	02 20 28.5 +0.6
WMQ				sP	sP	02 20 32.5 +0.7
WMQ				PP	PP	02 22 38.5 +2.7
WMQ				S	S	02 28 42.5 -0.8
WMQ				ScS	ScS	02 30 04.5 -3.2
WMQ				SS	SS	02 32 48.5 +0.3
WMQ				pmax	pmax	
	comp=Z,45nm,1.0s,mb5.5					
WMQ				pmax	pmax	
	comp=Z,120nm,6.0s					
WMQ				LR	LR	
	comp=N,160nm,18.0s,MS4.3					
WMQ				LR	LR	
	comp=E,130nm,18.0s,MS4.3					
WMQ				LR	LR	
	comp=Z,150nm,18.0s,MS4.2					
MOY	Mondy	63.18	342	*e*P	P	02 20 22.8 +1.2
MOY				pmax	pmax	
	comp=Z,44nm,1.5s,mb5.4					
PETK	Petropavlovsk-	65.39	19	P	P	02 20 36.4 +0.3
	comp=Z,8.2nm,0.8s,mb4.8,baz=195,slow=4.6,SNR=9.1					
PETK	Petropavlovsk-	65.39	19	P	P	02 20 36.4 +0.3
PETK				pmax	pmax	
	comp=Z,8.0nm,0.8s,mb4.8					
KSH	Kashi	66.86	319	P	P	02 20 45.7 -0.2
KSH				pP	pP	02 20 56.0 -0.1
KSH				sP	sP	02 20 59.9 -0.1
KSH				PcP	PcP	02 21 14.8 +0.4
KSH				PP	PP	02 23 14.4 +0.8
KSH				ScP		02 25 14.2
KSH				PcS		02 25 18.2
KSH				S	S	02 29 31.5 -5.0
KSH				ScS	ScS	02 30 36.3 -4.6
KSH				SS	SS	02 33 52.2 -3.1
KSH				pmax	pmax	
	comp=Z,28nm,1.1s,mb5.2					
KSH				pmax	pmax	
	comp=Z,110nm,5.3s					
KSH				LR	LR	
	comp=N,190nm,7.8s					
KSH				LR	LR	
	comp=E,130nm,7.1s					
KSH				LR	LR	
	comp=Z,180nm,4.5s					
MK31	Makanchi Array	67.39	328	*e*P	P	02 20 49.1 +0.1
MKAR	Makanchi Array	67.39	328	P	P	02 20 48.9 -0.1
	comp=Z,24nm,0.8s,mb5.3,baz=105,slow=9.4,SNR=157					
MKAR				pP	pP	02 20 58.2 -1.1
	comp=Z,10nm,0.7s,baz=102,slow=8.8,SNR=9.5					
MKAR	Makanchi Array	67.39	328	*c*e P	P	02 20 49.4 +0.4
MKAR				pmax	pmax	
	comp=Z,24nm,0.8s					
MKAR	Makanchi Array	67.39	328	P	P	02 20 48.9 -0.1
MKAR				pP	pP	02 20 58.2 -1.1
ULHL	Ulahol	68.16	321	P	P	02 20 54.7 +0.7
	SNR=10					
KZA	Kyzart	68.69	321	P	P	02 20 58.2 +0.9
	SNR=32					
TKM2	Tokmak 2	68.93	322	P	P	02 20 58.7 -0.1
	SNR=24					
YAK	Yakutsk	69.23	1	*c i*P	P	02 20 59.8 -0.4
YAK				*e*	pP	02 21 09.2 -1.4
YAK				pmax	pmax	
	comp=Z,128nm,0.9s,mb5.8					
YAK				pmax	pmax	
	comp=N,45nm,1.1s					
YAK	Yakutsk	69.23	1	*e*P	P	02 21 00.3 0.0
	comp=N,155nm,0.8s,mb6.0					
UCH	Uchtor	69.23	320	P	P	02 21 01.6 +0.9
	SNR=28					
KBL	Kabul	69.37	311	*e*P	P	02 21 01.4 -0.3
KBL				pmax	pmax	
	comp=Z,30nm,1.0s,mb5.2					
KBL	Kabul	69.37	311	*e*P	P	02 21 01.4 -0.3
	comp=Z,30nm,1.0s,mb5.2					
AAK	Ala-Archa	69.46	321	P	P	02 21 02.3 +0.2
	comp=Z,192nm,0.9s,mb6.0,SNR=9.4					
AAK	Ala-Archa	69.46	321	P	P	02 21 03.1 +1.0
	SNR=16					
AAK	Ala-Archa	69.46	321	P	P	02 21 02.7 +0.6
	comp=Z,17nm,0.8s,mb5.0,baz=129,slow=4.8,SNR=48					
AAK	Ala-Archa	69.46	321	*c i*P	P	02 21 02.3 +0.2
AAK				pmax	pmax	
	comp=Z,35nm,1.7s,mb5.0					
AAK	Ala-Archa	69.46	321	*e*P	P	02 21 02.6 +0.5
	comp=Z,26nm,0.9s,mb5.2					
AAK	Ala-Archa	69.46	321	P	P	02 21 02.4 +0.3
	SNR=21					
AAK				P		02 21 02.4
	SNR=21					
AML	Almayashu	69.70	320	P	P	02 21 04.7 +1.1
	SNR=7.5					
USP	Ospenovka	69.79	321	P	P	02 21 04.2 0.0
	SNR=19					
EKS2	Erkin-Say	69.92	321	P	P	02 21 05.5 +0.6
	SNR=23					
ZALV	Zalesovo Beam	71.00	335	P	P	02 21 10.4 -0.8
	comp=Z,57nm,0.9s,mb5.5,baz=116,slow=5.1,SNR=137					
ZALV				pP	pP	02 21 20.3 -1.3
	comp=Z,18nm,0.8s,baz=114,slow=3.6,SNR=9.2					
ZALV	Zalesovo Beam	71.00	335	P	P	02 21 10.5 -0.7
ZALV				*PP	pP	02 21 20.3 -1.3
ZALV				pmax	pmax	
	comp=Z,57nm,0.9s,mb5.5					
FX1	Attu Island--F	71.29	27	P	P	02 21 13.2 +0.1
	comp=Z,11nm,0.8s,mb4.9,baz=39,slow=4.6,SNR=6.8					
FX1	Attu Island--F	71.29	27	P	P	02 21 13.2 +0.1
FX1				pmax	pmax	
	comp=Z,11nm,0.8s					
KURK	Kurchatov	71.74	330	P	P	02 21 15.3 -0.5
	comp=Z,450nm,0.9s,SNR=60					
KURK	Kurchatov	71.74	330	P	P	02 21 15.4 -0.4
	comp=Z,40nm,0.8s,mb5.4,baz=133,slow=5.1,SNR=136					
KURK				pP	pP	02 21 25.2 -1.0
	comp=Z,28nm,0.9s,baz=132,slow=5.1,SNR=12					
KURK	Kurchatov	71.74	330	*c i*P	P	02 21 14.4 -1.4
KURK				pmax	pmax	
	comp=Z,123nm,1.2s,mb5.7					
KURK	Kurchatov	71.74	330	*e*P	P	02 21 15.5 -0.3
	comp=Z,71nm,0.9s,mb5.6					
KURK	Kurchatov	71.74	330	P	P	02 21 15.7 -0.1
	SNR=44					
KURK				P		02 21 15.7
	SNR=44					
NVS	Novosibirsk	72.28	335	⇑*i*P	P	02 21 17.9 -1.1
NVS				*e*S	S	02 30 35.6 -4.0
NVS				pmax	pmax	
	comp=N,76nm,1.3s					
NVS				pmax	pmax	
	comp=E,80nm,1.3s					
NVS				pmax	pmax	
	comp=Z,106nm,1.3s,mb5.6					
NVS				smax		
	comp=N,17nm,1.8s					
NVS				smax		
	comp=E,30nm,1.9s					
SEY	Seymchan	72.60	11	*c i*P	P	02 21 19.9 -0.8
MAW	Mawson	73.80	201	P	P	02 21 28.1 +0.3
	comp=E,4.5nm,1.1s,mb4.3,baz=53,slow=5.8,SNR=4.6					
MAW	Mawson	73.80	201	P	P	02 21 28.1 +0.3
MAW				pmax	pmax	
	comp=Z,5.0nm,1.1s					
HOQ	Hoqain	75.36	297	P	P	02 21 37.7 0.0
	SNR=6.9					
BVAR	Borovoye Array	77.25	329	P	P	02 21 47.4 -0.4
	comp=Z,37nm,0.9s,mb5.3,baz=132,slow=6.2,SNR=129					
BVAR				pP	pP	02 21 57.4 -0.8
	comp=Z,21nm,0.9s,baz=119,slow=7.9,SNR=12					
BVAR	Borovoye Array	77.25	329	P	P	02 21 47.4 -0.4
BVAR				*PP	pP	02 21 57.4 -0.8
BVAR				pmax	pmax	
	comp=Z,37nm,1.0s					
BRVK	Borovoye	77.33	329	P	P	02 21 47.3 -0.9
	comp=Z,333nm,1.1s,mb6.2,SNR=23					
BRVK	Borovoye	77.33	329	*c i*P	P	02 21 47.3 -0.9
BRVK				pmax	pmax	
	comp=Z,89nm,1.2s,mb5.6					
BRVK	Borovoye	77.33	329	*e*P	P	02 21 47.9 -0.3
	comp=Z,75nm,1.1s,mb5.5					
OPO	Ambohidratompo	78.83	253	P	P	02 21 56.9 -0.4
	comp=Z,4.2nm,0.9s,mb4.3,baz=52,slow=11,SNR=3.6					
TIXI	Tiksi	78.88	0	*e*P	P	02 21 55.0 -1.5
TIXI				pmax	pmax	
	comp=Z,35nm,1.0s,mb5.2					
TIXI	Tiksi	78.88	0	*e*P	P	02 21 55.0 -1.5
	comp=Z,35nm,1.0s,mb5.2					
BILL	Bilibino	80.00	14	*e*P	P	02 22 03.3 +0.7
BILL				pmax	pmax	
	comp=Z,3.0nm,1.3s,mb4.1					
PPT	Papeete	80.79	107	LR	LR	02 54 58.1
	comp=Z,136nm,18.5s,MS4.3,baz=286,slow=33					
ABKAR	Akbulak array	81.48	322	*e*P	P	02 22 09.7 -1.2
	comp=Z,22nm,1.1s,mb5.0					
SYO	Syowa Base	82.51	201	⇓*e*X		02 22 11.0
SYO	Syowa Base	82.51	201	⇓*e*PcP	PcP	02 22 23.4 +2.3
QSPA	South Pole Qui	82.59	180	*e*P	P	02 22 16.2 0.0

comp=Z,19nm,1.0s,mb5.1
AKTK Aktyubinsk 83.07 323 P **P** **02 22 18.6 -0.7**
AKTO Aktyubinsk 83.07 323 P **P** **02 22 18.6 -0.7**
comp=Z,17nm,1.0s,mb5.0,baz=107,slow=6.1,SNR=27
AKTO Aktyubinsk 83.07 323 P **P** **02 22 18.6 -0.6**
AKTO pmax pmax
comp=Z,17nm,1.0s,mb5.0
SVE Sverdlovsk 83.99 329⇓ *e*P **P** **02 22 22.8 -1.0**
SVE pmax pmax
comp=Z,47nm,1.4s,mb5.4
ARU Arti 84.90 329*c i*P **P** **02 22 27.7 -0.7**
ARU 02 25 41.4
ARU S S 02 32 49.5 -5.1
ARU SS SS 02 38 32.7 +4.9
ARU pmax pmax
comp=Z,38nm,1.7s,mb5.2
ARU Arti 84.90 329 *e*P **P** **02 22 27.9 -0.6**
comp=Z,34nm,1.5s,mb5.2
SOKR Solikamsk 86.90 331 *e*P **P** **02 22 36.0 -2.2**
SOKR pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
TTA Tatalina 90.30 26 *e*P **P** **02 22 52.8 -1.5**
KMBO Kilima Mbogo 90.42 269 P **P** **02 22 54.9 -1.1**
comp=Z,1.5nm,0.7s,mb4.4,baz=67,slow=7.9,SNR=4.6
KMBO Kilima Mbogo 90.42 269*ce*P **P** **02 22 56.0 0.0**
KMBO pmax pmax
comp=Z,2.0nm,0.7s
KIV Kislovodsk 91.58 314 *e*P **P** **02 22 58.6 -2.1**
KIV *e**PP pP 02 23 10.2 -1.1
KIV pmax pmax
comp=Z,1.0nm,0.5s,mb4.4
MCK McKinley 93.59 26 *e*P **P** **02 23 07.5 -2.0**
VORD Divnogorie 94.75 321 *e*P **P** **02 23 11.9 -3.2**
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,10.0nm,0.8s
VORD pmax pmax
comp=Z,8.0nm,0.8s,mb5.2
VSR Storozhevoye 94.86 321 *e*P **P** **02 23 13.7 -1.9**
VSR pmax pmax
comp=N,1.0nm,0.4s
VSR pmax pmax
comp=E,3.0nm,0.4s
VSR pmax pmax
comp=Z,4.0nm,0.4s,mb5.2
OBN Obninsk 96.72 325 *e*P **P** **02 23 22.0 -2.0**
OBN pmax pmax
comp=Z,6.0nm,1.1s,mb4.9
BOSA Boshof 97.40 240 P **P** **02 23 26.4 -1.4**
comp=Z,4.7nm,0.9s,mb4.9,baz=49,slow=4.1,SNR=4.3
BOSA Boshof 97.40 240 P **P** **02 23 26.4 -1.4**
BOSA pmax pmax
comp=Z,5.0nm,0.9s,mb4.9
BRTR Keskin Array B 97.88 309 P **P** **02 23 27.0 -2.6**
comp=Z,1.0nm,0.8s,mb4.4,baz=96,slow=6.5,SNR=5.5
BRTR Keskin Array B 97.88 309*ce*P **P** **02 23 27.5 -2.1**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
AKASG Malin Array Be 101.12 320 P Pdif 02 23 42.7 -1.1
comp=Z,0.4nm,0.6s,baz=78,slow=4.6,SNR=4.4
AKASG Malin Array Be 101.12 320 P Pdif 02 23 42.7 -1.1
ARCES ARCESS Array B 101.19 339 P Pdif 02 23 42.0 -2.0
comp=Z,3.3nm,0.8s,baz=81,slow=5.6,SNR=9.7
ARCES ARCESS Array B 101.19 339 P Pdif 02 23 42.1 -1.9
ARCES pmax pmax
comp=Z,3.0nm,0.8s
CRVS Cervenica-Dubn 106.28 319 *e*P 02 24 16.2
CRVS Cervenica-Dubn 106.28 319 PDIF 02 24 16.2
VYHS Vyhne 108.06 319 PDIF 02 24 26.6
YKA Yellowknife Ar 109.05 26 PKiKP PKiKP 02 28 21.3 -1.6
comp=Z,0.8nm,0.7s,baz=304,slow=2.3,SNR=4.6
YKA Yellowknife Ar 109.05 26 PKPdf PKiKP 02 28 21.3 -1.6
GERES GERESS Array B 111.33 320 PKiKP PKiKP 02 28 26.0 -1.6
comp=Z,0.6nm,0.7s,baz=72,slow=4.3,SNR=4.1
GERES GERESS Array B 111.33 320 *i* PKIKP PKiKP 02 28 26.0 -1.6
GERES pmax pmax
comp=Z,1.0nm,0.7s
KEST Kesra 117.32 306 PKP PKPdf 02 28 39.3 -0.3
comp=Z,0.7nm,0.9s,baz=360,slow=5.3,SNR=3.8
KEST PP PP 02 29 47.0 -3.8
comp=Z,3.3nm,1.1s,baz=95,slow=12,SNR=5.4
FFC Flin Flon 118.39 30*c i*PKIKP PKPdf 02 28 40.6 -0.4
PDAR Pinedale Array 118.70 45 PKP PKPdf 02 28 41.3 -0.7
comp=Z,0.8nm,0.7s,baz=268,slow=1.5,SNR=6.4
PDAR PKKPab PKKPab 02 38 59.2 -1.1
comp=Z,0.3nm,0.3s,baz=111,slow=11,SNR=4.2
ESDC Sonseca Array 126.25 314 PKP PKPdf 02 28 55.2 -1.4
comp=Z,1.2nm,0.9s,baz=22,slow=4.8,SNR=5.6
TORD Torodi Ar. Bea 126.76 281 PKP PKPdf 02 28 56.4 -1.8
comp=Z,6.3nm,0.9s,baz=51,slow=2.1,SNR=21
TORD Torodi Ar. Bea 126.76 281 PKP PKPdf 02 28 56.4 -1.8
TXAR Lajitas Array 126.98 59 PKP PKPdf 02 28 58.0 -0.4
comp=Z,0.9nm,0.9s,baz=304,slow=2.7,SNR=7.3
TXAR Lajitas Array 126.98 59 PKIKP PKPdf 02 28 58.0 -0.3
TXAR pmax pmax
comp=Z,1.0nm,1.0s
WMOK Wichita Mounta 129.33 51 *e*PKIKP PKPdf 02 29 02.3 -0.3
JCT Junction City 129.91 56 *e*PKIKP PKPdf 02 29 02.2 -1.7
DBIC Dimbokro 133.04 272 PKP PKPdf 02 29 09.4 -0.8
comp=Z,6.1nm,0.9s,baz=100,slow=4.4,SNR=4.3
DBIC Dimbokro 133.04 272 PKIKP PKPdf 02 29 09.4 -0.8
DBIC pmax pmax
comp=Z,6.0nm,0.9s
TGUH Tegucigalpa,Un 144.93 76 *e*PKPdf PKPdf 02 29 30.6 -1.2
CPUP Villa Florida 146.11 172 PKPbc PKPbc 02 29 33.6 -0.8
comp=Z,14nm,0.8s,baz=164,slow=2.4,SNR=30
CPUP pPKPbc pPKPbc 02 29 44.0 -1.3
comp=Z,1.5nm,0.4s,baz=156,slow=5.6,SNR=5.6
CPUP Villa Florida 146.11 172 PKPbc PKPbc 02 29 33.6 -0.8
CPUP pPKPbc pPKPbc 02 29 44.0 -1.3
JTS JuntasAbangare 147.50 82 *e*PKP2 PKPab 02 29 38.5 -2.4
NNA Nana 148.82 128 *e*PKPbc PKPbc 02 29 43.0 +0.7
LPAZ La Paz 151.67 146 PKP PKPdf 02 29 43.7 +0.9
comp=Z,2.8nm,1.1s,baz=299,slow=1.3,SNR=6.0
LPAZ PKPbc PKPbc 02 29 49.6 +0.5
comp=Z,14nm,0.9s,baz=338,slow=1.1,SNR=27
LPAZ PKPab PKPab 02 29 59.0 +1.4
comp=Z,27nm,0.8s,baz=213,slow=3.3,SNR=31
LPAZ La Paz 151.67 146 PKIKP PKPdf 02 29 43.7 +0.9
LPAZ 02 29 49.6
LPAZ 02 29 59.0
LPAZ pmax pmax
comp=Z,3.0nm,1.2s
LPAZ La Paz 151.67 146 PKP PKPdf 02 29 43.7 +0.9
LPAZ PKPbc PKPbc 02 29 49.6 +0.5
LPAZ *e*PKPbc PKPbc 02 29 50.1 +1.0
LPAZ PKPab PKPab 02 29 59.0 +1.4
ROSC El Rosal 157.84 95 PKPab PKPab 02 30 26.3 +2.1
comp=Z,5.1nm,0.5s,baz=270,slow=20,SNR=4.3
SDV Santo Domingo 161.68 84 *e*PKPdf PKPdf 02 29 54.9 -0.8

CSEM ***12*** *02:20:50.7,38.°02N×21.°55E,h18km,ML2.3/3,After THE*
THE 12 02:20:50.7,38.°02N×21.°55E,h18km,ML2.3/3,Error ellipse: s-maj=2.3km s-min=0.7km az=142.0,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAKA	**Lakka**	**0.40**	**57**	S	Sg	02 21 05.0	+0.5
LAKA	**Lakka**	**0.40**	**57**	P	Sg	02 21 05.7	+1.2
LAKA	**Lakka**	**0.40**	**57**	P	Pg	02 20 58.8	-0.2
LAKA				S	Sg	02 21 05.0	+0.5
LAKA	**Lakka**	**0.40**	**57**	S	Sg	02 21 05.0	+0.5
LAKA	**Lakka**	**0.40**	**57**	P	Sg	02 21 05.7	+1.2
LAKA	**Lakka**	**0.40**	**57**	P	Pg	02 20 58.8	-0.2
LAKA				S	Sg	02 21 05.0	+0.5
EFP	**Efpalio**	**0.49**	**34**	P	Sg	02 21 08.2	+1.0
EFP	**Efpalio**	**0.49**	**34**	P	Pg	02 21 00.3	-0.3
EFP				S	Sg	02 21 07.9	+0.7
EFP	**Efpalio**	**0.49**	**34**	P	Sg	02 21 08.2	+1.0
EFP	**Efpalio**	**0.49**	**34**	P	Pg	02 21 00.3	-0.3
EFP				S	Sg	02 21 07.9	+0.7
TRIZ	**Trizonia**	**0.53**	**50**	P	Pg	02 21 01.0	-0.4
TRIZ				S	Sg	02 21 09.1	+0.5
TRIZ	**Trizonia**	**0.53**	**50**	P	Pg	02 21 01.0	-0.4
TRIZ				S	Sg	02 21 09.1	+0.5
KALE	**Kalithea**	**0.59**	**51**	P	Sg	02 21 12.0	+1.6
KALE	**Kalithea**	**0.59**	**51**	P	Pg	02 21 01.9	-0.5
KALE				S	Sg	02 21 11.0	+0.6
KALE	**Kalithea**	**0.59**	**51**	P	Pg	02 21 12.0	+10
KALE	**Kalithea**	**0.59**	**51**	P	Pg	02 21 01.9	-0.5
KALE				S	Sg	02 21 11.0	+0.6

IDC ***12*** *02:46:17.6±0.9,30.°77N×141.°98E,h0km,mb3.9/7, mb1 4.1/9,mb1mx3.8/25,mbtmp3.9/9,ML3.8/2,MS3.2/1, Ms1 3.2/1,ms1mx2.2/42,Error ellipse: s-maj=35.2km s-min=16.6km az=79.0*
ISCJB ***12*** *02:46:19.3±3.1,30.°74N±0.°07×141.°7E±0.°2,h22km±23km, mb4.0/8,Error ellipse: s-maj=33.5km s-min=6.7km az=163.6*
NEIC ***12*** *02:46:22.9±0.6,30.°78N×141.°89E,h35km,mb4.3/1,Error ellipse: s-maj=23.4km s-min=9.9km az=74.0*
ISC 12 02:46:21.0±3.4,30.°76N±0.°07×141.°9E±0.°2,h21km±25km, n12,σ0°45/15,mb4.0/8,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.66**	**176**	Pn	**Pn**	**02 47 16.2**	**-0.2**
	10nm,0.3s,baz=335,slow=18,SNR=11						
CBIJ				Sn	**Sn**	**02 47 58.7**	**-0.2**
	16nm,0.3s,baz=272,slow=22,SNR=4.7						
MJAR	**Matsushiro Arr**	**6.53**	**333**	Pn	**Pn**	**02 47 55.3**	**-0.5**
	3.2nm,0.3s,baz=151,slow=11,SNR=25						
MJAR				Sn	**Sn**	**02 49 09.0**	**-0.5**
	0.6nm,0.3s,baz=163,slow=18,SNR=4.0						
MJAR				LR	LR	02 50 45.2	
	comp=Z,172nm,18.2s,baz=150,slow=41						
MAJO	**Matsushiro**	**6.53**	**333**	*e*Pn	**Pn**	**02 47 56.3**	**+0.5**
	9.8nm,0.3s						
MAT	**Matsushiro**	**6.53**	**333**	P	**Pn**	**02 47 56.2**	**+0.4**
MAT				S	**Sn**	**02 49 09.3**	**-0.3**
MKAR	**Makanchi Array**	**47.99**	**307**	P	**P**	**02 54 58.4**	**+0.1**
	0.5nm,0.4s,mb3.9,baz=79,slow=12,SNR=6.1						
WRAB	**Tennant Creek**	**50.91**	**189**	*e*P	**P**	**02 55 20.8**	**+0.1**
	2.6nm,0.7s,mb4.3						
WRA	**Warramunga Arr**	**50.92**	**189**	P	**P**	**02 55 20.4**	**-0.4**
	1.3nm,0.4s,mb4.2,baz=5.9,slow=7.6,SNR=40						
ASAR	**Alice Springs**	**54.65**	**189**	P	**P**	**02 55 48.6**	**+0.3**
	0.6nm,0.5s,mb3.9,baz=357,slow=5.1,SNR=9.3						
BVAR	**Borovoye Array**	**55.20**	**316**	P	**P**	**02 55 52.2**	**+0.1**
	0.7nm,0.6s,mb3.9,baz=99,slow=9.2,SNR=5.0						
FINES	**FINESS Array B**	**74.56**	**333**	P	**P**	**02 57 59.2**	**+1.3**
	2.6nm,0.8s,mb4.2,baz=121,slow=3.3,SNR=4.9						
PDAR	**Pinedale Array**	**81.82**	**45**	P	**P**	**02 58 38.1**	**-0.4**
	0.2nm,0.4s,mb3.4,baz=296,slow=4.9,SNR=3.1						
TXAR	**Lajitas Array**	**93.63**	**53**	P	**P**	**02 59 36.0**	**-0.1**
	0.4nm,0.7s,mb4.0,baz=309,slow=2.1,SNR=6.7						

IDC ***12*** *03:15:31.5±1.0,38.°12N×21.°72E,h0km,mb3.7/11, mb1 3.8/13,mb1mx3.7/30,mbtmp3.7/13,ML3.3/2,MS2.8/1, Ms1 2.8/1,ms1mx2.3/42,Error ellipse: s-maj=20.4km s-min=17.2km az=49.0*
ATH ***12*** *03:15:33.9,38.°02N×21.°60E,h25km±1km,MD3.8/16, ML3.6*
NEIC ***12*** *03:15:33.9,38.°02N×21.°60E,h25km,ML3.6(ATH),After ATH.*
ISCJB ***12*** *03:15:34.5±0.3,37.°99N±0.°02×21.°61E±0.°02,h22km±2km, mb3.7/10,Error ellipse: s-maj=2.8km s-min=2.4km az=24.0*
CSEM ***12*** *03:15:34.3±0.1,37.°97N×21.°65E,h15km,ML3.6,Error ellipse: s-maj=3.8km s-min=3.1km az=23.0*
THE ***12*** *03:15:34.7,37.°97N×21.°65E,h13km,ML4.4/21,Error ellipse: s-maj=0.8km s-min=0.5km az=104.0*
BEO ***12*** *03:15:53.4,39.°33N×21.°22E,h14km*
ISC 12 03:15:34.5±0.3,37.°98N±0.°02×21.°63E±0.°02,h14km±2km, n216,σ1°27/291,mb3.7/10,13C-5D,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.15**	**302**	*e*Pb	**Pg**	**03 15 38.7**	**+0.3**
RLS				*e*Sb	**Sg**	**03 15 42.3**	**+1.2**
RLS	**Riolos of Patr**	**0.15**	**302**	*e*PB	**Pg**	**03 15 38.7**	**+0.3**
RLS				*e*SB	**Sg**	**03 15 42.3**	**+1.2**
RLS	**Riolos of Patr**	**0.15**	**302**	*e*Pb	**Pg**	**03 15 38.7**	**+0.3**
RLS				*e*Sb	**Sg**	**03 15 42.3**	**+1.2**
UPR	**University Cam**	**0.33**	**22**	P	**Pg**	**03 15 41.3**	**0.0**
UPR				S	**Sg**	**03 15 46.7**	**+0.8**
UPR	**University Cam**	**0.33**	**22**	*e*PB	**Pg**	**03 15 41.4**	**+0.1**
UPR				*e*SB	**Sg**	**03 15 46.7**	**+0.8**
UPR	**University Cam**	**0.33**	**22**	*e*Pb	**Pg**	**03 15 41.4**	**+0.1**
UPR				S	**Sg**	**03 15 46.7**	**+0.8**
LAKA	**Lakka**	**0.38**	**46**	P	**Pg**	**03 15 42.2**	**0.0**
LAKA				S	**Sg**	**03 15 47.8**	**+0.4**
LAKA	**Lakka**	**0.38**	**46**	P	**Pg**	**03 15 42.2**	**0.0**
LAKA				S	**Sg**	**03 15 47.8**	**+0.4**
EFP	**Efpalio**	**0.50**	**26**	P	**Pg**	**03 15 43.8**	**-0.6**
EFP				S	**Sg**	**03 15 51.7**	**+0.6**
EFP	**Efpalio**	**0.50**	**26**	*e*PB	**Pg**	**03 15 43.8**	**-0.6**
EFP				*e*SB	**Sg**	**03 15 51.2**	**+0.1**
EFP	**Efpalio**	**0.50**	**26**	P	**Pg**	**03 15 43.8**	**-0.6**
EFP				*e*Sb	**Sg**	**03 15 51.2**	**+0.1**
EFP				S	**Sg**	**03 15 51.7**	**+0.6**
TRIZ	**Trizonia**	**0.52**	**42**	P	**Pg**	**03 15 44.3**	**-0.5**
TRIZ				S	**Sg**	**03 15 52.3**	**+0.5**
TRIZ	**Trizonia**	**0.52**	**42**	P	**Pg**	**03 15 44.3**	**-0.5**
TRIZ				S	**Sg**	**03 15 52.3**	**+0.5**
GUR	**Goura**	**0.56**	**94**	P	**Pg**	**03 15 45.4**	**-0.2**
GUR				S	**Sg**	**03 15 53.5**	**+0.4**
GUR	**Goura**	**0.56**	**94**	*e*PN	**Pg**	**03 15 45.4**	**-0.2**
GUR				*e*SN	**Sg**	**03 15 54.2**	**+1.1**
GUR	**Goura**	**0.56**	**94**	P	**Pg**	**03 15 45.4**	**-0.2**
GUR				S	**Sg**	**03 15 53.5**	**+0.4**
KALE	**Kalithea**	**0.58**	**44**	P	**Pg**	**03 15 45.2**	**-0.6**
KALE				S	**Sg**	**03 15 54.0**	**+0.5**
KALE	**Kalithea**	**0.58**	**44**	P	**Pg**	**03 15 45.2**	**-0.6**
KALE				S	**Sg**	**03 15 54.0**	**+0.5**
KFL	**Anninata**	**0.68**	**281**	P	**Pg**	**03 15 46.6**	**-1.1**
DSF	**Desfina**	**0.83**	**58**	P	**Pg**	**03 15 49.3**	**-1.3**
DSF				S	**Sg**	**03 16 01.6**	**+0.1**
DSF	**Desfina**	**0.83**	**58**	P	**Pg**	**03 15 49.3**	**-1.3**
DSF				S	**Sg**	**03 16 01.6**	**+0.1**
ITM	**Ithomi**	**0.83**	**163**	*e*Pn	**Pg**	**03 15 51.0**	**+0.4**
ITM				*e*Sn	**Sn**	**03 16 03.9**	**+0.2**
ITM	**Ithomi**	**0.83**	**163**	P	**Pg**	**03 15 50.3**	**-0.3**
ITM				S	**Sg**	**03 16 02.6**	**+1.1**
ITM	**Ithomi**	**0.83**	**163**	*e*PN	**Pg**	**03 15 51.0**	**+0.4**
ITM				*e*SN	**Sn**	**03 16 03.9**	**+0.2**
ITM	**Ithomi**	**0.83**	**163**	P	**Pg**	**03 15 50.3**	**-0.3**
ITM	**Ithomi**	**0.83**	**163**	*e*Pn	**Pg**	**03 15 51.0**	**+0.4**
ITM				S	**Sg**	**03 16 02.6**	**+1.1**
ITM				*e*Sn	**Sn**	**03 16 03.9**	**+0.2**
VLS	**Valsamata**	**0.84**	**284**	*e*Pb	**Pg**	**03 15 49.0**	**-1.9**
VLS				*e*Sn	**Sg**	**03 16 02.1**	**+0.1**
VLS	**Valsamata**	**0.84**	**284**	P	**Pg**	**03 15 48.9**	**-2.0**
VLS				S	**Sg**	**03 16 02.0**	**0.0**
VLS	**Valsamata**	**0.84**	**284**	*e*PB	**Pg**	**03 15 49.0**	**-1.9**
VLS				*e*SN	**Sg**	**03 16 02.1**	**+0.1**
VLS	**Valsamata**	**0.84**	**284**	P	**Pg**	**03 15 48.9**	**-2.0**
VLS				S	**Sg**	**03 16 02.0**	**0.0**
VLX	**Vlachokerasia**	**0.85**	**135**	P	**Pg**	**03 15 50.5**	**-0.5**
VLX				S	**Sg**	**03 16 02.9**	**+0.8**
VLX	**Vlachokerasia**	**0.85**	**135**	*e*PB	**Pg**	**03 15 50.7**	**-0.3**
VLX				*e*SN	**Sn**	**03 16 04.6**	**+0.5**
VLX	**Vlachokerasia**	**0.85**	**135**	P	**Pg**	**03 15 50.5**	**-0.5**
VLX				S	**Sg**	**03 16 02.9**	**+0.8**
VLX				*e*Sn	**Sn**	**03 16 04.6**	**+0.5**
EVR	**Evrytania**	**0.95**	**8**	*e*Pn	**Pg**	**03 15 51.4**	**-1.5**
EVR	**Evrytania**	**0.95**	**8**	*e*PN	**Pg**	**03 15 51.4**	**-1.5**
EVR	**Evrytania**	**0.95**	**8**	*e*Pn	**Pg**	**03 15 51.4**	**-1.5**
LTK	**Loutraki**	**1.06**	**87**	P	**Pg**	**03 15 53.6**	**-1.3**
LTK				S	**Sg**	**03 16 09.5**	**+0.8**
LTK	**Loutraki**	**1.06**	**87**	*e*PN	**Pg**	**03 15 54.1**	**-0.8**
LTK	**Loutraki**	**1.06**	**87**	P	**Pg**	**03 15 53.6**	**-1.3**
LTK	**Loutraki**	**1.06**	**87**	*e*Pn	**Pg**	**03 15 54.1**	**-0.8**
LTK				S	**Sg**	**03 16 09.5**	**+0.8**
PYL	**PYLOS**	**1.08**	**175**	P	**Pg**	**03 15 54.4**	**-1.0**
PYL				S	**Sg**	**03 16 10.3**	**+0.8**
PYL	**PYLOS**	**1.08**	**175**	*e*PN	**Pg**	**03 15 55.1**	**-0.3**
PYL	**PYLOS**	**1.08**	**175**	P	**Pg**	**03 15 54.4**	**-1.0**
PYL	**PYLOS**	**1.08**	**175**	*e*Pn	**Pg**	**03 15 55.1**	**-0.3**
PYL				S	**Sg**	**03 16 10.3**	**+0.8**
LKD2	**Lefkada island**	**1.11**	**317**	P	**Pg**	**03 15 53.7**	**-2.3**
LKD2				S	**Sg**	**03 16 10.9**	**+0.4**
LKD2	**Lefkada island**	**1.11**	**317**	P	**Pg**	**03 15 53.7**	**-2.3**
LKD2				S	**Sg**	**03 16 10.9**	**+0.4**
AGG	**Agios Georgios**	**1.18**	**28**	P	**Pn**	**03 15 55.1**	**-1.4**
AGG				S	**Sb**	**03 16 12.3**	**+0.6**
AGG	**Agios Georgios**	**1.18**	**28**	P	**Pn**	**03 15 55.1**	**-1.4**
AGG				S	**Sb**	**03 16 12.3**	**+0.6**
LKR	**Lokris**	**1.27**	**58**	*e*Pn	**Pn**	**03 15 57.3**	**-0.4**
LKR	**Lokris**	**1.27**	**58**	P	**Pn**	**03 15 57.2**	**-0.5**
LKR				S	**Sb**	**03 16 14.1**	**-0.2**
LKR	**Lokris**	**1.27**	**58**	*e*PN	**Pn**	**03 15 57.3**	**-0.4**
LKR	**Lokris**	**1.27**	**58**	*e*Pn	**Pn**	**03 15 57.3**	**-0.4**
LKR				S	**Sb**	**03 16 14.1**	**-0.2**
ATAL	**Atalanti**	**1.31**	**56**	P	**Pn**	**03 15 57.5**	**-0.8**
ATAL				S	**Sb**	**03 16 15.3**	**-0.1**
ATAL	**Atalanti**	**1.31**	**56**	P	**Pn**	**03 15 57.5**	**-0.8**
ATAL				S	**Sb**	**03 16 15.3**	**-0.1**
NAIG	**Nisos Aigina**	**1.49**	**98**	*e*Pn	**Pn**	**03 16 01.1**	**+0.4**
NAIG	**Nisos Aigina**	**1.49**	**98**	*e*PN	**Pn**	**03 16 01.1**	**+0.4**
NAIG	**Nisos Aigina**	**1.49**	**98**	*e*Pn	**Pn**	**03 16 01.1**	**+0.4**
THL	**Klokotos Trika**	**1.61**	**11**	P	**Pn**	**03 16 02.8**	**+0.3**
THL				S	**Sn**	**03 16 23.7**	**+0.7**
THL	**Klokotos Trika**	**1.61**	**11**	*e*PN	**Pn**	**03 16 02.8**	**+0.3**
THL	**Klokotos Trika**	**1.61**	**11**	P	**Pn**	**03 16 02.8**	**+0.3**
THL				S	**Sn**	**03 16 23.7**	**+0.7**
VLI	**Veliai**	**1.63**	**140**	*e*Pn	**Pn**	**03 16 05.3**	**+2.6**
VLI	**Veliai**	**1.63**	**140**	*e*PN	**Pn**	**03 16 05.3**	**+2.6**
ATH	**Athens Observa**	**1.65**	**90**	*e*Pn	**Pn**	**03 16 03.2**	**+0.2**
ATH	**Athens Observa**	**1.65**	**90**	*e*PN	**Pn**	**03 16 03.2**	**+0.2**
ATH	**Athens Observa**	**1.65**	**90**	*e*Pn	**Pn**	**03 16 03.2**	**+0.2**
ATHU	**Athens Univers**	**1.70**	**90**	P	**Pn**	**03 16 02.8**	**-0.9**
ATHU	**Athens Univers**	**1.70**	**90**	P	**Pn**	**03 16 02.8**	**-0.9**
VLY	**Voula,Athens**	**1.72**	**94**	*e*Pb	**Pb**	**03 16 03.8**	**-2.0**
VLY	**Voula,Athens**	**1.72**	**94**	*e*PB	**Pb**	**03 16 03.8**	**-2.0**
PTL	**Penteli**	**1.77**	**87**	*e*Pb	**Pb**	**03 16 04.7**	**-1.9**
PTL	**Penteli**	**1.77**	**87**	*e*PB	**Pb**	**03 16 04.7**	**-1.9**
JAN	**Janina**	**1.78**	**340**	*e*Pn	**Pn**	**03 16 06.1**	**+1.3**
JAN	**Janina**	**1.78**	**340**	*e*PN	**Pn**	**03 16 06.1**	**+1.3**
JAN	**Janina**	**1.78**	**340**	*e*Pn	**Pn**	**03 16 06.1**	**+1.3**
NEO	**Neokhori**	**1.82**	**43**	*e*Pb	**Pb**	**03 16 05.0**	**-2.6**
NEO	**Neokhori**	**1.82**	**43**	*e*PB	**Pb**	**03 16 05.0**	**-2.6**
MEV	**Metsovon**	**1.83**	**350**	P	**Pn**	**03 16 07.7**	**+2.2**
MEV	**Metsovon**	**1.83**	**350**	P	**Pn**	**03 16 07.7**	**+2.2**
XOR	**Xorichti**	**1.85**	**41**	P	**Pn**	**03 16 05.0**	**-0.7**
XOR				S	**Sn**	**03 16 29.8**	**+1.0**
XOR	**Xorichti**	**1.85**	**41**	P	**Pn**	**03 16 05.0**	**-0.7**
XOR				S	**Sn**	**03 16 29.8**	**+1.0**
IGT	**Igoumenitsa**	**1.85**	**327**	P	**Pn**	**03 16 06.4**	**+0.6**
IGT				S	**Sn**	**03 16 30.0**	**+1.0**
IGT	**Igoumenitsa**	**1.85**	**327**	P	**Pn**	**03 16 06.4**	**+0.6**
IGT				S	**Sn**	**03 16 30.0**	**+1.0**
AOS	**Alonnisos**	**2.13**	**55**	P	**Pn**	**03 16 08.6**	**-0.9**
AOS				S	**Sn**	**03 16 36.2**	**+0.5**
AOS	**Alonnisos**	**2.13**	**55**	P	**Pn**	**03 16 08.6**	**-0.9**
AOS				S	**Sn**	**03 16 36.2**	**+0.5**
LIT	**Litokhoron**	**2.22**	**17**	P	**Pn**	**03 16 11.5**	**+0.6**
LIT	**Litokhoron**	**2.22**	**17**	P	**Pn**	**03 16 11.5**	**+0.6**
KEK	**Kerkira**	**2.25**	**321**	*e*Pb	**Pb**	**03 16 11.8**	**-3.0**
KEK	**Kerkira**	**2.25**	**321**	P	**Pn**	**03 16 11.7**	**+0.5**
KEK				S	**Sn**	**03 16 39.0**	**+0.3**
KEK	**Kerkira**	**2.25**	**321**	*e*PB	**Pb**	**03 16 11.8**	**-3.0**
KEK	**Kerkira**	**2.25**	**321**	P	**Pn**	**03 16 11.7**	**+0.5**
KEK				S	**Sn**	**03 16 39.0**	**+0.3**
SRN	**Sarande**	**2.29**	**327**	*e*PN	**Pn**	**03 16 12.1**	**+0.4**
SRN				*i* SN	**Sn**	**03 16 39.0**	**-0.6**
SRN	**Sarande**	**2.29**	**327**	*e*Pn	**Pn**	**03 16 12.1**	**+0.4**
SRN				*i* Sn	**Sn**	**03 16 39.0**	**-0.6**
KZN	**Kozani**	**2.33**	**3**	*e*Pb	**Pb**	**03 16 14.0**	**-2.2**
KZN	**Kozani**	**2.33**	**3**	P	**Pn**	**03 16 14.5**	**+2.2**
KZN	**Kozani**	**2.33**	**3**	*e*PB	**Pb**	**03 16 14.0**	**-2.2**
KZN	**Kozani**	**2.33**	**3**	P	**Pn**	**03 16 14.5**	**+2.2**
PAIG	**Paliouri**	**2.52**	**39**	P	**Pn**	**03 16 14.4**	**-0.5**
PAIG				S	**Sn**	**03 16 46.9**	**+1.5**
PAIG	**Paliouri**	**2.52**	**39**	P	**Pn**	**03 16 14.4**	**-0.5**
PAIG				S	**Sn**	**03 16 46.9**	**+1.5**
KBN	**Korca**	**2.72**	**346**	*e*PN	**Pn**	**03 16 19.9**	**+2.2**
KBN	**Korca**	**2.72**	**346**	*e*Pn	**Pn**	**03 16 19.9**	**+2.2**
PLG	**Polygyros**	**2.78**	**30**	*e*Pn	**Pn**	**03 16 17.4**	**-1.1**
PLG	**Polygyros**	**2.78**	**30**	P	**Pn**	**03 16 18.9**	**+0.4**
PLG				S	**Sn**	**03 16 52.2**	**+0.4**
PLG	**Polygyros**	**2.78**	**30**	*e*PN	**Pn**	**03 16 17.4**	**-1.1**
PLG	**Polygyros**	**2.78**	**30**	*e*Pn	**Pn**	**03 16 17.4**	**-1.1**
PLG	**Polygyros**	**2.78**	**30**	P	**Pn**	**03 16 18.9**	**+0.4**
PLG				S	**Sn**	**03 16 52.2**	**+0.4**
FNA	**Florina**	**2.81**	**356**	P	**Pn**	**03 16 20.2**	**+1.3**
FNA	**Florina**	**2.81**	**356**	P	**Pn**	**03 16 20.2**	**+1.3**
BIA	**Bitola**	**3.05**	**356**	*e*Pn	**Pn**	**03 16 23.4**	**+1.2**
OHR	**Ohrid**	**3.19**	**349**	*e*Pn	**Pn**	**03 16 25.4**	**+1.1**
OHR				*e*Sn	**Sg**	**03 17 17.5**	**+0.4**
OHR				*e*Lg		03 17 18.1	
	comp=E,356nm,1.4s						
OHR				*e*Lg		03 17 18.4	
	comp=N,146nm,0.8s						
APE	**Apeiranthos**	**3.23**	**105**⇑	*i*P	**Pn**	**03 16 25.5**	**+0.8**
VAM	**Vamos**	**3.29**	**140**	P	**Pn**	**03 16 30.4**	**+4.8**
LIA	**Limnos Island**	**3.37**	**54**	*e*Pn	**Pn**	**03 16 25.8**	**-0.8**
LIA	**Limnos Island**	**3

comp=N,25nm,0.5s
SGG Gregorio Mates 6.55 304 Pn **Pn 03 17 11.2 +0.9**
comp=N,25nm,0.5s
SDI San Donato 7.08 304 Pn **Pn 03 17 18.7 +1.2**
comp=N,6.2nm,0.5s
SDI San Donato 7.08 304 Pn **Pn 03 17 18.7 +1.2**
comp=N,6.2nm,0.5s
INTR Introdacqua 7.17 307 Pn **Pn 03 17 20.1 +1.3**
comp=N,27nm,0.6s
INTR Introdacqua 7.17 307 Pn **Pn 03 17 20.1 +1.3**
comp=N,27nm,0.6s
AQU L'Aquila 7.67 307 ⇑P Px 03 17 35.7
AQU L'Aquila 7.67 307 ⇑*i*P Px 03 17 35.7
NRCA Norcia 8.11 309 Pn **Pn 03 17 33.2 +1.5**
comp=N,11nm,1.0s
NRCA Norcia 8.11 309 Pn **Pn 03 17 33.2 +1.5**
comp=N,11nm,1.0s
MLR Muntele Rosu 8.17 22 Pn **Pn 03 17 35.1 +2.6**
comp=N,0.3nm,0.3s,baz=212,slow=17,SNR=6.0
MLR Muntele Rosu 8.17 22 ⇑P **Pn 03 17 35.6 +3.0**
MLR Muntele Rosu 8.17 22 ⇑*i*P **Pn 03 17 35.6 +3.1**
TIRR Tirgusor 8.25 36 ⇑P **Pn 03 17 29.9 -3.6**
TIRR Tirgusor 8.25 36 ⇑*i*P **Pn 03 17 29.9 -3.7**
PLOR Plostina 8.71 24 ⇑*i*P **Pn 03 17 47.0 +7.1**
VRI Vrincioaia 8.75 24 ⇑P **Pn 03 17 45.2 +4.8**
VRI Vrincioaia 8.75 24 ⇑*i*P **Pn 03 17 45.2 +4.8**
BOJS Bojanci 8.90 330 *i*Pn **Pn 03 17 40.9 -1.7**
BOJS *i*Sn **Sn 03 19 16.9 -5.6**
BOJS Bojanci 8.90 330 *i*Pn **Pn 03 17 40.9 -1.6**
CEY Cerknica 9.43 328 *i*Pn **Pn 03 17 48.7 -1.1**
CEY *i*Sn **Sn 03 19 32.2 -3.3**
CEY Cerknica 9.43 328 *i*Pn **Pn 03 17 48.7 -1.1**
BRTR Keskin Array B 9.53 76 Pn **Pn 03 17 53.4 +2.2**
comp=N,0.2nm,0.3s,baz=263,slow=13,SNR=6.9
BRTR Keskin Array B 9.53 76 Pn **Pn 03 17 53.3 +2.1**
JAVS Javornik 9.71 327 *i*Pn **Pn 03 17 53.7 +0.1**
JAVS *i*Sn **Sn 03 19 38.0 -4.3**
JAVS Javornik 9.71 327 *i*Pn **Pn 03 17 53.7 +0.1**
SOKA Soboth 9.97 333 ⇓*i*Pn **Pn 03 17 55.2 -1.9**
SOKA ⇑*i*Sn **Sn 03 19 41.5 -7.2**
SOKA Soboth 9.97 333 Pn **Pn 03 17 55.2 -2.0**
BURAR Bucovina Array 9.98 14 ⇓P Px 03 18 16.5
BURAR Bucovina Array 9.98 14 ⇓*i*P Px 03 18 16.5
OBKA Obir 10.01 331 ⇑*i*Pn **Pn 03 17 56.1 -1.6**
OBKA ⇓*i*Sn **Sn 03 19 43.9 -5.8**
OBKA Obir 10.01 331 Pn **Pn 03 17 56.1 -1.6**
PSZ Piszkesteto 10.02 353 ⇓P **Pn 03 18 06.2 +8.4**
VYHS Vyhne 10.71 350 *e*Pn **Pn 03 18 14.0 +6.7**
VYHS *e*Sn **Sn 03 20 03.7 -3.1**
MOA Molln 11.24 334 ⇑*i*Pn **Pn 03 18 12.0 -2.6**
GERES GERESS Array B 12.29 335 Pn **Pn 03 18 27.1 -1.8**
comp=N,0.1nm,0.3s,baz=162,slow=13,SNR=4.3
GERES GERESS Array B 12.29 335 Pn **Pn 03 18 27.1 -1.8**
BHD Baghdad 19.07 97 *e*P **Pn 03 19 56.0 -1.2**
ESDC Sonseca Array 20.00 283 P **Pn 03 20 06.7 -1.5**
comp=N,1.0nm,0.7s,baz=74,slow=11,SNR=8.0
ESDC Sonseca Array 20.00 283 P **Pn 03 20 06.7 -1.5**
HFS Hagfors 22.74 350 P **P 03 20 34.2 -1.6**
comp=N,1.0nm,0.5s,mb3.5,baz=178,slow=7.4,SNR=6.4
HFS Hagfors 22.74 350 P **P 03 20 34.2 -1.6**
FINES FINESS Array B 23.66 5 P **P 03 20 42.3 -2.9**
comp=N,1.2nm,0.7s,mb3.5,baz=182,slow=16,SNR=4.2
NB2 NORSAR Subarra 24.00 348 P **P 03 20 45.9 -2.4**
comp=Z,3.3nm,1.0s,mb3.7,baz=156,slow=9.3
NB2 NORSAR Subarra 24.00 348 P **P 03 20 45.9 -2.4**
comp=Z,3.3nm,1.0s,mb3.7,SNR=3.4
NOA NORSAR Array B 24.00 348 P **P 03 20 46.0 -2.3**
comp=Z,0.6nm,0.6s,mb3.2,baz=155,slow=8.4,SNR=5.1
NOA NORSAR Array B 24.00 348 P **P 03 20 46.0 -2.3**
EKA Eskdalemuir Ar 24.10 324 P **P 03 20 48.8 -0.6**
comp=Z,1.4nm,0.6s,mb3.6,baz=126,slow=11,SNR=6.5
EKA Eskdalemuir Ar 24.10 324 P **P 03 20 48.8 -0.5**
TORD Torodi Ar. Bea 30.44 221 P **P 03 21 47.2 +0.6**
comp=Z,0.4nm,0.5s,mb3.4,baz=32,slow=8.8,SNR=8.9
ARCES ARCESS Array B 31.69 3 P **P 03 21 55.0 -2.0**
comp=Z,1.1nm,0.7s,mb3.8,baz=183,slow=8.5,SNR=4.7
ARCES ARCESS Array B 31.69 3 P **P 03 21 55.0 -2.1**
KURK Kurchatov 41.70 53 P **P 03 23 20.8 -1.6**
comp=Z,0.7nm,0.3s,mb3.8,baz=279,slow=8.7,SNR=4.9
KURK Kurchatov 41.70 53 P **P 03 23 20.8 -1.7**
MKAR Makanchi Array 44.66 58 P **P 03 23 45.1 -1.4**
comp=Z,0.8nm,0.4s,mb3.9,baz=300,slow=5.9,SNR=6.6
MKAR Makanchi Array 44.66 58 P **P 03 23 45.1 -1.4**
ZALV Zalesovo Beam 45.17 48 P **P 03 23 49.0 -1.5**
comp=Z,1.1nm,0.3s,mb4.1,baz=276,slow=9.2,SNR=6.0
ZALV Zalesovo Beam 45.17 48 P **P 03 23 49.0 -1.5**
KSRS Korea Array 78.78 51 P **P 03 27 34.1 -2.6**
comp=Z,0.5nm,0.4s,mb3.8,baz=307,slow=4.3,SNR=3.5

NEIC 12 03:18:03.0,38.60S×178.05E,h31km, ML3.7(WEL), **After WEL., Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MWZ	**Matawai**	**0.49**	**302**	P	Pb	03 18 13.3	0.0
KNZ	**Kokohu**	**0.52**	**215**	P	Pb	03 18 13.6	-0.2
PUZ	**Puketiti**	**0.55**	**17**	P	Pb	03 18 14.2	0.0
URZ	**Urewera**	**0.81**	**294**	*e*Pg	Pn	03 18 18.1	-0.2
URZ				*e*S	Sb	03 18 27.9	-1.4

*NEIC **12** 03:18:37.4, 38.02N×21.58E, h27km, MD2.9(ATH), After ATH.*
*CSEM **12** 03:18:37.6±0.3, 38.05N×21.54E, h26km±2km, MD2.9, Error ellipse: s-maj=7.6km s-min=7.3km az=58.0*
ATH 12 03:18:37.4, 38.02N×21.58E, h27km±2km, MD2.9/8, **3C-3D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.10**	**293**	⇓*i*Pb	Pb	03 18 42.2	-0.1
RLS				*e*Sb	Sb	03 18 45.7	+0.1
RLS	**Riolos of Patr**	**0.10**	**293**	⇓*i*PB	Pb	03 18 42.2	-0.1
RLS				*e*SB	Sb	03 18 45.7	+0.1
RLS	**Riolos of Patr**	**0.10**	**293**	⇓*i*Pb	Pb	03 18 42.2	-0.1
RLS				*e*Sb	Sb	03 18 45.7	+0.1
UPR	**University Cam**	**0.31**	**32**	*e*PB	Pb	03 18 45.1	+0.4
UPR				*e*SB	Sb	03 18 51.1	+1.4
UPR	**University Cam**	**0.31**	**32**	*e*Pb	Pb	03 18 45.1	+0.4
UPR				*e*Sb	Sb	03 18 51.1	+1.4
EFP	**Efpalio**	**0.48**	**32**	*e*PB	Pb	03 18 47.4	0.0
EFP				*e*SB	Sb	03 18 55.7	+1.6
EFP	**Efpalio**	**0.48**	**32**	*e*Pb	Pb	03 18 47.4	0.0
EFP				*e*Sb	Sb	03 18 55.7	+1.6
GUR	**Goura**	**0.61**	**98**	*e*PB	Pb	03 18 49.0	-0.5
GUR				*e*SN	Sn	03 18 58.6	-0.6
GUR	**Goura**	**0.61**	**98**	*e*Pb	Pb	03 18 49.0	-0.5
GUR				*e*Sn	Sn	03 18 58.6	-0.6
VLS	**Valsamata**	**0.80**	**282**	⇑*i*Pn	Pn	03 18 52.8	0.0
VLS				*e*Sn	Sn	03 19 06.1	+2.3
VLS	**Valsamata**	**0.80**	**282**	⇑*i*PN	Pn	03 18 52.8	0.0
VLS				*e*SN	Sn	03 19 06.1	+2.3
VLS	**Valsamata**	**0.80**	**282**	⇑*i*Pn	Pn	03 18 52.8	0.0
ITM	**Ithomi**	**0.88**	**162**	*e*Pn	Pn	03 18 54.8	+0.8
ITM	**Ithomi**	**0.88**	**162**	*e*PN	Pn	03 18 54.8	+0.8
ITM	**Ithomi**	**0.88**	**162**	*e*Pn	Pn	03 18 54.8	+0.8
EVR	**Evrytania**	**0.91**	**11**	*e*Pb	Pb	03 18 53.8	-0.8
EVR	**Evrytania**	**0.91**	**11**	*e*PB	Pb	03 18 53.8	-0.8
EVR	**Evrytania**	**0.91**	**11**	*e*Pb	Pb	03 18 53.8	-0.8
LTK	**Loutraki**	**1.09**	**89**	*e*PN	Pn	03 18 58.2	+1.3
LTK	**Loutraki**	**1.09**	**89**	*e*Pn	Pn	03 18 58.2	+1.3

*IDC **12** 03:18:50.3±1.4, 36.61N×22.01E, h0km, mb3.7/5, mb1 3.6/6, mb1mx3.4/27, mbtmp3.6/6, ML2.5/1, Error ellipse: s-maj=29.2km s-min=25.6km az=56.0*
ISC 12 03:18:50.8±6.0, 36.6N±0.1×22.0E±0.1, h4km±40km, n8, σ0**79**/9, **mb3.7**/5, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**2.42**	**135**	*e*Pn	**Pn**	**03 19 29.5**	**-1.5**
IDI	**Anoyia**	**2.67**	**118**	Pn	**Pn**	**03 19 35.9**	**+1.5**
IDI				Sn	**Sn**	**03 20 07.2**	**0.0**
2.5nm,0.3s,baz=0.0,slow=20,SNR=4.6
IDI Anoyia 2.67 118 Pn **Pn 03 19 35.9 +1.5**
HFS Hagfors 24.18 350 P **P 03 24 07.3 -0.5**
7.9nm,1.1s,mb4.0,baz=163,slow=15,SNR=3.5
TORD Torodi Ar. Bea 29.60 223 P **P 03 24 57.3 +0.4**
0.6nm,0.9s,mb3.3,baz=44,slow=7.4,SNR=3.0
ARCES ARCESS Array B 33.08 2 P **P 03 25 27.6 +0.5**
0.7nm,0.7s,mb3.7,baz=189,slow=11,SNR=5.2
MKAR Makanchi Array 45.15 57 P **P 03 27 08.1 -0.2**
0.4nm,0.3s,mb3.7,baz=267,slow=8.8,SNR=4.3
ZALV Zalesovo Beam 45.90 47 P **P 03 27 13.8 -0.3**
0.4nm,0.3s,mb3.8,baz=285,slow=7.3,SNR=2.6

*IDC **12** 03:33:51.8±3.7, 6.24N×126.57E, h54km±30km, mb3.8/10, mb1 4.0/11, mb1mx3.8/24, mbtmp3.9/11, ML4.0/1, Error ellipse: s-maj=59.6km s-min=11.5km az=68.0*
*ISCJB **12** 03:33:51.8±0.7, 6.22N±0.04×126.40E±0.07, h67km±8km, mb4.1/12, Error ellipse: s-maj=11.7km s-min=7.1km az=177.7*
*NEIC **12** 03:33:53.8±1.6, 6.22N×126.37E, h69km±13km, mb4.3/1, Error ellipse: s-maj=32.3km s-min=8.2km az=73.0*
*DJA **12** 03:33:54, 6.29N×126.50E, h30km, mb5.0/8*
*MAN **12** 03:33:54, 6.42N×126.40E, h35km, mb5.2, ML4.1, MS4.3*
ISC 12 03:33:52.4±0.7, 6.23N±0.04×126.44E±0.07, h56km±8km, **n35,** σ1**9**05/42, **mb4.2**/12, **2C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.74**	**346**	*e*P	**Pn**	**03 34 07.2**	**+0.4**
MATI				*e*S	**Sn**	**03 34 15.5**	**-2.0**
DAV	**Davao City (W)**	**1.20**	**314**	P	**Pn**	**03 34 13.8**	**+0.9**
305nm,0.3s,baz=182,slow=1.0,SNR=98
DAV S **Sn 03 34 29.4 +1.2**
525nm,0.3s,baz=287,slow=19,SNR=7.6
DAV Davao City (W) 1.20 314 *e*Pn **Pn 03 34 13.9 +1.0**
DAV S **Sn 03 34 29.4 +1.2**
DMPH Davao City--Mi 1.26 313 ⇓*i*P **Pn 03 34 14.5 +0.8**
DMPH *i*S **Sn 03 34 36.4 +6.8**
GSPH General Santos 1.49 265 ⇓*e*P **Pn 03 34 14.5 -2.3**
GSPH *i*S **Sn 03 34 33.8 -1.4**
BIPH Bislig 1.94 358 ⇑*i*P **Pn 03 34 23.2 +0.1**
BIPH *i*S **Sn 03 34 44.7 -1.7**
BUKP Musuan 2.14 320 *e*P **Pn 03 34 26.4 +0.7**
BUKP *e*S **Sn 03 34 49.5 -1.5**
CTBH Cotabato--PC H 2.39 295 ⇑*i*P **Pn 03 34 30.2 +1.1**
CGP Cagayan de Oro 2.81 322 *e*P **Pn 03 34 35.2 +0.3**
CGP *i*S **Sn 03 35 06.9 -0.7**
BUTP Butuan 2.84 343 *e*P **Pn 03 34 39.1 +3.8**
BUTP *e*S **Sn 03 35 08.6 +0.3**
PAGZ Pagadian 3.44 298 *e*P **Pn 03 34 44.0 +0.6**
MSLP Maasin 4.18 338 *e*P **Pn 03 34 57.9 +4.2**
TBP Tagbilaran 4.29 324 *e*P **Pn 03 34 57.4 +2.3**
PVCP Virac 7.66 343 *e*P **Pn 03 35 45.2 +3.8**
KAPI Kappang 13.01 211 P **Pn 03 36 55.2 +0.6**
0.8nm,0.3s,baz=72,slow=19,SNR=3.9
KAPI Kappang 13.01 211 P **Pn 03 36 55.2 +0.6**
KAKA Kakadu 19.74 162 *e*P **Pn 03 38 19.2 -0.4**
13nm,0.6s
KAKA Kakadu 19.74 162 *e*P **Pn 03 38 19.9 +0.4**
37nm,0.6s
KNA Kununurra 21.96 174 *e*P **P 03 38 41.5 -0.1**
19nm,0.6s,mb4.7
FITZ Fitzroy Crossi 24.19 182 *e*P **P 03 39 03.5 -0.2**
11nm,1.2s,mb4.2
FITZ Fitzroy Crossi 24.19 182 P **P 03 39 03.5 -0.2**
4.6nm,0.7s,mb4.0,baz=17,slow=8.5,SNR=12
WRAB Tennant Creek 27.14 164 *e*P **P 03 39 31.7 +1.3**
7.8nm,0.9s,mb4.2
WRA Warramunga Arr 27.14 164 P **P 03 39 29.7 -0.8**
5.6nm,0.7s,mb4.2,baz=344,slow=10,SNR=32
ASAR Alice Springs 30.59 166 P **P 03 40 00.5 -0.7**
1.3nm,0.6s,mb4.0,baz=338,slow=7.1,SNR=27
NWAO Narrogin (SRO) 39.91 192 P **P 03 41 21.4 +0.3**
7.8nm,0.9s,mb4.5,baz=27,slow=4.5,SNR=5.1
STKA Stephens Creek 40.56 160 *e*P **P 03 41 24.2 -2.2**
5.3nm,1.0s,mb4.1
STKA Stephens Creek 40.56 160 P **P 03 41 25.7 -0.7**
3.6nm,0.7s,mb4.1,baz=339,slow=7.5,SNR=6.5
ARMA Armidale 43.71 148 *e*P **P 03 41 52.3 +0.2**
MKAR Makanchi Array 55.36 324 P **P 03 43 20.7 +0.1**
0.8nm,0.5s,mb4.0,baz=106,slow=9.1,SNR=7.9
ZALV Zalesovo Beam 58.25 333 P **P 03 43 41.6 +0.6**
0.5nm,0.4s,mb3.9,baz=119,slow=8.9,SNR=2.7
BVAR Borovoye Array 65.09 326 P **P 03 44 27.7 +0.6**
0.4nm,0.5s,mb3.8,baz=146,slow=10,SNR=3.2
ARCES ARCESS Array B 88.02 340 P **P 03 46 35.2 -1.0**
1.6nm,0.9s,mb4.2,baz=79,slow=6.3,SNR=5.4
FINES FINESS Array B 89.51 332 P **P 03 46 42.7 -0.7**
0.7nm,0.5s,mb4.2,baz=108,slow=3.1,SNR=3.5
TORD Torodi Ar. Bea 121.84 290 PKP PKPdf 03 52 41.1 -0.2
0.4nm,0.6s,baz=56,slow=1.6,SNR=9.2
CFAA Coronel Fontan 151.26 153 PKPbc PKPbc 03 53 40.1 -0.2
0.3nm,0.6s,baz=268,slow=2.7,SNR=3.8

*BJI **12** 04:32:00.3, 51.05N×157.12E, h152km, mB4.7/5, mb4.4/5*
*KRSC **12** 04:32:00.8±0.8, 51.30N×157.61E, h103km±92km, ML4.4*
*MOS **12** 04:32:00.0±0.9, 51.49N×156.82E, h129km, mb4.5/8, Error ellipse: s-maj=18.7km s-min=7.4km az=62.0*
*ISCJB **12** 04:32:00.5±0.4, 51.41N±0.05×156.97E±0.08, h132km±3km, mb3.8/10, Error ellipse: s-maj=10.7km s-min=4.4km az=44.4*
*NEIC **12** 04:32:01.1±0.8, 51.47N×156.83E, h124km±7km, mb4.8/2, Error ellipse: s-maj=14.6km s-min=7.9km az=148.0*
*IDC **12** 04:32:02.8±0.8, 51.57N×156.76E, h136km±6km, mb3.6/10, mb1 3.9/12, mb1mx3.6/29, mbtmp3.7/12, MS2.7/2, Ms1 2.7/2, ms1mx2.4/36, Error ellipse: s-maj=17.4km s-min=9.2km az=137.0*
ISC 12 04:32:01.7±0.4, 51.40N±0.05×157.01E±0.08, h126km±3km, **h137**km±2.8km:**pP-P, n69,** σ1**9**10/79, **mb3.9**/10, **1C, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIPR	**Malaya Ipel'ka**	**0.89**	**350**	*e*P	**Pn**	**04 32 22.7**	**-0.4**
MIPR				*i*S	**Sn**	**04 32 38.1**	**-1.3**
SKR	**Severo-Kuril's**	**0.92**	**218**	⇑*i*PN	**Pn**	**04 32 22.6**	**-0.8**
SKR				*i*S	**Sn**	**04 32 40.0**	**+0.2**
SKR				pmax	pmax		
comp=N,90nm,0.5s
SKR pmax pmax
comp=E,150nm,0.5s
SKR pmax pmax
comp=Z,540nm,0.5s
SKR smax
comp=E,720nm,0.6s
SKR smax
comp=Z,320nm,0.6s
SKR smax
comp=N,3μm,1.0s
SKR smax
comp=N,3μm,2.0s
SKR smax
comp=E,2μm,2.0s
ALID Alaid 1.06 240 *e*P **Pn 04 32 25.2 +0.4**
ALID *i*S **Sn 04 32 43.4 +1.1**
GRL Gorelyy 1.33 29 *e*P **Pn 04 32 27.8 +0.3**
PETK Petropavlovsk- 1.76 14 P **Pn 04 32 32.2 -0.2**
comp=E,51nm,0.3s,baz=175,slow=11,SNR=578
PETK S **Sn 04 32 56.3 +0.3**
comp=E,9.8nm,0.3s,baz=225,slow=16,SNR=9.4
PETK Petropavlovsk- 1.76 14 *e*PN **Pn 04 32 32.2 -0.2**
PETK pmax pmax
comp=Z,51nm,0.3s
PETK Petropavlovsk- 1.76 14 P **Pn 04 32 32.2 -0.2**
PETK S **Sn 04 32 56.3 +0.3**
PET Petropavlovsk 1.91 31 *e*PN **Pn 04 32 33.9 -0.4**
PET *e*S **Sn 04 32 58.9 -0.3**
PET pmax pmax
comp=Z,123nm,0.4s
PET smax
comp=N,2μm,1.6s
PET smax
comp=E,2μm,1.8s
PET smax
comp=E,500nm,5.4s
PET smax
comp=N,866nm,0.6s
PET smax
comp=E,600nm,0.7s
PET Petropavlovsk 1.91 31 *e*P **Pn 04 32 34.0 -0.3**
PET *i*S **Sn 04 32 58.7 -0.5**
PET Petropavlovsk 1.91 31 *e*Pn **Pn 04 32 33.9 -0.4**
PET *e*S **Sn 04 32 58.6 -0.6**
AVH Avacha 2.15 29 *e*P **Pn 04 32 38.1 +1.0**
NLC Nalytchevo 2.28 38 *e*P **Pn 04 32 37.8 -1.0**
NLC *i*S **Sn 04 33 04.7 -2.6**
GNL Ganaly 2.37 14 *e*P **Pn 04 32 40.2 +0.3**
KII Karymskiy 3.03 28 *e*P **Pn 04 32 47.7 -0.7**
MKZ Mys Kozlova 4.26 40 *e*P **Pn 04 33 03.1 -1.5**
MKZ *i*S **Sn 04 33 49.0 -4.5**
KMNR Kamenistaya 4.77 23 *e*P **Pn 04 33 12.7 +1.3**
KPT Kopyto 4.95 21 *e*P **Pn 04 33 14.5 +0.6**
KOZ Kozyrevsk 4.96 19 *e*P **Pn 04 33 14.5 +0.4**
KIRR Kirishev 4.97 22 *e*P **Pn 04 33 15.1 +0.9**
KOZR Kozyr 4.98 19 PN **Pn 04 33 14.5 +0.3**
BZMR Bezymyannaya 4.99 23 *e*P **Pn 04 33 15.4 +1.0**
ZLN Zelenaya 5.14 24 *e*P **Pn 04 33 18.3 +1.8**
SRDR Sredinnyy 5.18 17 *e*P **Pn 04 33 18.1 +1.2**
CIRR Tsirk 5.22 24 *e*P **Pn 04 33 17.9 +0.5**
BDR Baidarnaya 5.74 24 *e*P **Pn 04 33 25.3 +0.9**
SRKR Sorokina 5.80 23 P **Pn 04 33 26.8 +1.5**
SMKR Semkarok 5.82 25 *e*P **Pn 04 33 27.3 +1.8**
KBTR Krutoberegovo 5.92 33 *e*P **Pn 04 33 25.9 -1.0**
KBTR *i*S **Sn 04 34 28.4 -4.9**
BKI Bering 6.58 51 *e*P **Pn 04 33 34.2 -1.7**
BKI *i*S **Sn 04 34 40.2 -9.2**
FX1 Attu Island--F 10.04 75 P **Pn 04 34 22.6 +0.1**
comp=E,12nm,0.3s,baz=302,slow=4.0,SNR=58
FX1 S **Sn 04 36 07.8 -5.4**
comp=E,11nm,0.3s,baz=177,slow=23,SNR=12
FX1 LR LR 04 37 38.4
comp=E,50nm,19.6s,baz=116,slow=33
YSS Yuzh-Sakhalins 10.34 250 *e*PN **Pn 04 34 24.0 -2.4**
SMY Shemya 10.61 76 *e*PN **Pn 04 34 30.2 +0.2**
SMY pmax pmax
comp=Z,25nm,0.6s
SMY Shemya 10.61 76 *e*Pn **Pn 04 34 30.2 +0.2**
comp=Z,25nm,0.6s
SMY *e*S **Sn 04 36 25.2 -1.6**
ASAJ Asahikawa 12.12 239 P **Pn 04 34 50.8 +0.8**
comp=Z,4.0nm,0.3s,baz=67,slow=11,SNR=58
ASAJ Asahikawa 12.12 239 PN **Pn 04 34 50.8 +0.8**
ASAJ pmax pmax
comp=Z,4.0nm,0.3s
ERM Erimo 13.34 231 *e*PN **Pn 04 35 02.8 -3.1**
ERM pmax pmax
comp=Z,18nm,0.4s
ERM Erimo 13.34 231 *e*Pn **Pn 04 35 02.8 -3.1**
comp=Z,18nm,0.4s
KLR Kul'dur 16.26 272 *e*P **Pn 04 35 39.6 -2.9**
MAJO Matsushiro 20.01 229 *e*P **P 04 36 24.1 -0.2**
MAJO pmax pmax
comp=Z,11nm,0.5s
MAJO Matsushiro 20.01 229 *e*P **P 04 36 24.1 -0.2**
comp=Z,12nm,0.5s
MAT Matsushiro 20.01 229 P **P 04 36 25.0 +0.7**
MJAR Matsushiro Arr 20.01 229 P **P 04 36 25.0 +0.7**
comp=Z,1.7nm,0.3s,baz=22,slow=9.4,SNR=13
MJAR Matsushiro Arr 20.01 229 P **P 04 36 25.0 +0.7**
MJAR pmax pmax
comp=Z,2.0nm,0.3s
CBIJ Chichi jima 26.75 210 LR LR 04 47 28.9
comp=Z,16nm,20.4s,baz=95,slow=34
ZALV Zalesovo Beam 42.10 303 pP pP 04 40 09.8 +0.7
comp=Z,0.6nm,0.4s,baz=63,slow=6.8,SNR=2.5
RES Resolute Bay 45.59 21 P **P 04 40 07.7 -0.7**
comp=Z,2.7nm,0.9s,mb4.0,baz=153,slow=1.3,SNR=8.2
RES Resolute Bay 45.59 21 P **P 04 40 07.7 -0.7**
RES pmax pmax
comp=Z,3.0nm,0.9s,mb4.0
RES Resolute Bay 45.59 21 P **P 04 40 07.7 -0.7**
YKA Yellowknife Ar 45.69 40 P **P 04 40 09.2 -0.1**
comp=Z,0.9nm,0.7s,mb3.6,baz=295,slow=7.0,SNR=7.3
YKA PcP PcP 04 41 44.6 -0.4
comp=Z,0.7nm,0.9s,baz=328,slow=4.0,SNR=3.6
YKA Yellowknife Ar 45.69 40 P **P 04 40 09.2 -0.1**
YKA 04 41 44.6
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 45.69 40 P **P 04 40 09.2 -0.1**
YKA PcP PcP 04 41 44.6 -0.4
KURK Kurchatov 47.01 302 P **P 04 40 18.9 -0.9**
comp=Z,1.9nm,0.4s,mb4.2,baz=61,slow=7.4,SNR=18
KURK pP pP 04 40 49.7 +1.1
comp=Z,3.8nm,1.0s,baz=56,slow=7.8,SNR=9.2
KURK Kurchatov 47.01 302 P **P 04 40 18.9 -0.9**
KURK *PP pP 04 40 49.7 +1.1
KURK pmax pmax
comp=Z,2.0nm,0.4s,mb4.2
MKAR Makanchi Array 47.17 295 P **P 04 40 19.0 -2.1**
comp=Z,0.5nm,0.5s,mb3.5,baz=51,slow=9.9,SNR=6.3
MKAR pP pP 04 40 51.0 +1.1
comp=Z,1.9nm,0.8s,baz=59,slow=12,SNR=10.0
MKAR Makanchi Array 47.17 295 *e*P **P 04 40 19.4 -1.7**
MKAR pmax pmax
comp=Z,1.0nm,0.5s
MKAR Makanchi Array 47.17 295 P **P 04 40 19.0 -2.1**
MKAR pP pP 04 40 51.0 +1.1
BVAR Borovoye Array 49.95 308 P **P 04 40 40.4 -1.9**
comp=Z,1.0nm,0.5s,mb4.0,baz=57,slow=5.5,SNR=5.9
BVAR pP pP 04 41 11.5 +0.1
comp=Z,0.7nm,0.6s,baz=50,slow=8.5,SNR=2.3
BVAR Borovoye Array 49.95 308 *e*P **P 04 40 40.3 -1.9**
BVAR pmax pmax
comp=Z,1.0nm,0.5s
NVAR Mina Array Bea 58.13 67 P **P 04 41 43.1 +1.3**
comp=Z,0.9nm,0.6s,mb4.0,baz=298,slow=6.2,SNR=5.2
PDAR Pinedale Array 60.02 58 P **P 04 41 55.3 +0.5**
comp=Z,1.4nm,0.7s,mb4.1,baz=343,slow=3.1,SNR=10
TXAR Lajitas Array 73.06 64 P **P 04 43 18.5 +0.6**
comp=Z,2.4nm,0.6s,mb4.2,baz=298,slow=5.1,SNR=35
TXAR pP pP 04 43 51.1 +2.1
comp=Z,0.5nm,0.7s,baz=285,slow=4.4,SNR=3.2
TXAR Lajitas Array 73.06 64 P **P 04 43 18.5 +0.6**
TXAR *PP pP 04 43 51.1 +2.1
TXAR pmax pmax
comp=Z,2.0nm,0.6s
TXAR Lajitas Array 73.06 64 P **P 04 43 18.5 +0.6**
TXAR pP pP 04 43 51.1 +2.1
WRA Warramunga Arr 73.77 202 P **P 04 43 22.1 +0.2**
comp=Z,1.6nm,0.7s,mb3.9,baz=17,slow=6.2,SNR=14
WRA Warramunga Arr 73.77 202 P **P 04 43 22.1 +0.2**
WRA pmax pmax
comp=Z,2.0nm,0.7s
ASAR Alice Springs 77.46 202 P **P 04 43 43.8 +1.0**
comp=Z,1.3nm,0.7s,mb3.7,baz=14,slow=5.3,SNR=11
ASAR Alice Springs 77.46 202 *e*P **P 04 43 43.8 +1.0**
ASAR pmax pmax
comp=Z,1.0nm,0.7s
CPUP Villa Florida 143.91 59 PKP PKPdf 04 51 19.6 -2.2
comp=Z,0.4nm,0.4s,baz=315,slow=1.4,SNR=3.7
PLCA Paso Flores 145.88 91 PKPbc PKPbc 04 51 25.9 +0.2
comp=Z,3.3nm,0.7s,baz=277,slow=4.2,SNR=9.6

*IDC **12** 04:39:43.7±2.1, 18.88S×68.78W, h138km±16km, mb3.5/5, mb1 3.6/8, mb1mx3.4/19, mbtmp3.4/8, Error ellipse: s-maj=28.1km s-min=18.1km az=75.0*
*NEIC **12** 04:39:43.9±1.4, 18.92S×68.79W, h141km±13km, Error ellipse: s-maj=20.6km s-min=12.2km az=71.0*
*ISCJB **12** 04:39:43.9±1.7, 18.9S±0.1×68.7W±0.2, h152km±15km, mb3.6/5, Error ellipse: s-maj=28.3km s-min=16.2km az=158.0*
ISC 12 04:39:44.3±1.6, 18.9S±0.1×68.8W±0.2, h142km±14km, **n12,** σ0**40**/13, **mb3.6**/5, **Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**2.68**	**13**	P	**Pn**	**04 40 27.3**	**-0.1**
4.5nm,0.3s,baz=200,slow=5.4,SNR=278
LPAZ S **Sn 04 41 00.2 -0.3**
1.3nm,0.3s,baz=313,slow=19,SNR=4.9
LPAZ La Paz 2.68 13 *e*Pn **Pn 04 40 27.2 -0.1**
LPAZ *e*S **Sn 04 40 43.0 -18**
SIV San Ignacio 7.89 70 P **Pn 04 41 36.9 +0.7**
1.0nm,0.3s,baz=270,slow=11,SNR=13
CPUP Villa Florida 12.87 127 P **Pn 04 42 41.6 -0.4**
0.5nm,0.3s,baz=260,slow=11,SNR=5.4
PLCA Paso Flores 21.80 184 P **P 04 44 25.0 +0.2**
2.7nm,0.8s,mb3.7,baz=330,slow=7.0,SNR=4.4
PLCA Paso Flores 21.80 184 P **P 04 44 25.0 +0.2**
DBIC Dimbokro 67.88 74 P **P 04 50 27.7 -0.2**
3.7nm,0.9s,mb4.1,baz=225,slow=3.5,SNR=3.9
PDAR Pinedale Array 71.96 330 P **P 04 50 52.8 +0.6**
0.1nm,0.4s,mb2.9,baz=150,slow=5.9,SNR=2.6
TORD Torodi Ar. Bea 76.37 71 P **P 04 51 18.4 0.0**
0.3nm,0.4s,mb3.3,baz=255,slow=5.6,SNR=21
YKA Yellowknife Ar 88.81 341 P **P 04 52 21.1 -0.5**
0.8nm,0.4s,mb4.0,baz=130,slow=4.8,SNR=17
YKA Yellowknife Ar 88.81 341 P **P 04 52 21.1 -0.5**
WRA Warramunga Arr 135.23 212 PKP PKPdf 04 58 47.0 -0.8

0.2nm,0.4s,baz=150,slow=1.5,SNR=6.1

MEX 12 04:47:56.9±0.8, 17°21'N×94°95'W, h142km±22km, MD3.8, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.71**	**266**	*i* P	Pn	04 48 27.1	-1.0
VHO				*i* S	Sn	04 48 50.9	-1.1
TGIG		**1.80**	**104**	*i* P	Pn	04 48 28.9	-0.3
TGIG				*i* S	Sn	04 48 50.6	-3.4
HUIG	**Huatulco**	**1.81**	**218**	*i* P	Pn	04 48 27.9	-1.5
HUIG				*i* S	Sn	04 48 52.1	-2.2
PCIG		**2.24**	**132**	*i* P	Pn	04 48 34.4	0.0
PCIG				*i* S	Sn	04 48 59.8	-3.4
TPIG	**Tehuac#an**	**2.59**	**298**	*e*P	Pn	04 48 37.6	-1.1
TPIG				*i* S	Sn	04 49 08.6	-2.4
PNIG	**Pinotepa**	**3.15**	**255**	*e*P	Pn	04 48 42.8	-3.1
PNIG				*i* S	Sn	04 49 20.3	-3.4

*IDC **12** 04:48:35.6±1.4, 34°29'N×25°11'E, h0km, mb3.7/3, mb1 3.8/4, mb1mx3.5/23, mbtmp3.7/4, ML3.9/1, Error ellipse: s-maj=28.8km s-min=20.4km az=101.0*
*THE **12** 04:48:37.7, 34°30'N×25°21'E, h0km±2km, Error ellipse: s-maj=4.5km s-min=1.3km az=157.0*
*CSEM **12** 04:48:37.7, 34°30'N×25°21'E, h0km, After THE*
ISC 12 04:48:37.1±1.8, 34°23'N±0°07×25°23'E±0°07, h11km±9km, n15, σ0°84/22, mb3.6/3, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.86**	**336**	P	**Pg**	**04 48 53.0**	**-0.7**
SIVA				S	**Sg**	**04 49 05.5**	**+0.5**
SIVA	**Sivas**	**0.86**	**336**	P	**Pg**	**04 48 53.0**	**-0.7**
SIVA				S	**Sg**	**04 49 05.5**	**+0.5**
LAST	**Lasithi**	**0.95**	**12**	P	**Pb**	**04 48 55.9**	**+0.3**
LAST				S	**Sb**	**04 49 08.8**	**+0.6**
LAST	**Lasithi**	**0.95**	**12**	P	**Pb**	**04 48 55.9**	**+0.3**
LAST				S	**Sb**	**04 49 08.8**	**+0.6**
IDI	**Anoyia**	**1.10**	**345**	Pn	**Pn**	**04 48 57.5**	**-0.9**
IDI	22nm,0.3s,baz=153,slow=16,SNR=71			Sn	**Sn**	**04 49 12.0**	**-1.5**
	21nm,0.3s,baz=304,slow=20,SNR=11						
GVD	**Gavdhos**	**1.13**	**303**	P	**Pb**	**04 48 57.6**	**-0.9**
GVD				S	**Sb**	**04 49 14.2**	**+1.0**
GVD	**Gavdhos**	**1.13**	**303**	P	**Pb**	**04 48 57.6**	**-0.9**
GVD				S	**Sb**	**04 49 14.2**	**+1.0**
ZKR	**Zakros**	**1.20**	**42**	P	**Pn**	**04 48 59.3**	**-0.5**
ZKR	**Zakros**	**1.20**	**42**	P	**Pn**	**04 48 59.3**	**-0.5**
KARN	**Karanos**	**1.60**	**318**	P	**Pn**	**04 49 05.5**	**+0.3**
KARN	**Karanos**	**1.60**	**318**	P	**Pn**	**04 49 05.5**	**+0.3**
GERES	**GERESS Array B**	**16.94**	**333**	Pn	**Pn**	**04 52 34.9**	**+1.1**
	0.2nm,0.3s,baz=148,slow=14,SNR=4.8						
TORD	**Torodi Ar. Bea**	**29.94**	**231**	P	**P**	**04 54 45.0**	**-0.2**
	0.8nm,0.5s,mb3.7,baz=33,slow=8.5,SNR=23						
MKAR	**Makanchi Array**	**44.24**	**56**	P	**P**	**04 56 47.8**	**+1.5**
	0.4nm,0.6s,mb3.3,baz=288,slow=5.6,SNR=3.1						
ZALV	**Zalesovo Beam**	**45.61**	**46**	P	**P**	**04 56 56.5**	**-0.5**
	0.7nm,0.5s,mb3.9,baz=265,slow=9.3,SNR=2.9						

*IDC **12** 05:12:50.2±2.4, 1°59S×128°66E, h0km, mb3.3/2, mb1 3.6/3, mb1mx3.4/19, mbtmp3.4/3, ML3.6/1, Error ellipse: s-maj=185.1km s-min=25.4km az=68.0*
*DJA **12** 05:12:53, 1°19S×129°80E, h30km, MLv3.8/5*
*ISCJB **12** 05:12:53.6±0.8, 1°25S±0°09×129°81E±0°05, h56km±14km, mb3.5/2, Error ellipse: s-maj=14.7km s-min=8.5km az=1.3*
ISC 12 05:12:54.7±0.8, 1°24S±0°09×129°82E±0°05, h49km±15km, n9, σ0°97/10, mb3.5/2, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SWI	**Sorong**	**1.49**	**75**	P	**Pn**	**05 13 17.6**	**-1.5**
SWI				S	**Sn**	**05 13 38.5**	**+1.1**
LBMI	**Labuha**	**2.39**	**285**	P	**Pn**	**05 13 29.8**	**-1.6**
LBMI				S	**Sn**	**05 14 00.9**	**+1.4**
AAI	**Ambon**	**2.92**	**214**	P	**Pn**	**05 13 38.8**	**+0.2**
NLAI	**Namlea**	**3.36**	**234**	P	**Pn**	**05 13 44.4**	**-0.3**
TLE	**Tual**	**5.25**	**146**	P	**Pn**	**05 14 11.2**	**+0.6**
SPSI	**Sidrap Palu**	**10.39**	**255**	P	Px	05 15 08.7	
WRA	**Warramunga Arr**	**19.10**	**167**	P	**Pn**	**05 17 13.9**	**-0.9**
	0.2nm,0.3s,baz=346,slow=12,SNR=14						
ASAR	**Alice Springs**	**22.64**	**170**	P	**P**	**05 17 52.5**	**+0.8**
	0.9nm,0.4s,mb3.5,baz=349,slow=9.8,SNR=10						
MKAR	**Makanchi Array**	**63.37**	**325**	P	**P**	**05 23 19.0**	**0.0**
	0.2nm,0.5s,mb3.5,baz=113,slow=7.0,SNR=2.8						

*MOS **12** 05:19:54.7±1.1, 9°14S×112°82E, h33km, mb5.4/36, Error ellipse: s-maj=12.0km s-min=6.0km az=114.5*
*BJI **12** 05:19:55.4, 9°40S×112°80E, h51km, mB5.1/29, mb5.3/50, Ms4.7/29, Ms7 4.4/30*
*ISCJB **12** 05:19:55.8±0.2, 9°43S±0°03×112°67E±0°02, h51km, mb5.2/107, MS4.3/17, Error ellipse: s-maj=4.5km s-min=3.2km az=21.4*
*DJA **12** 05:19:55, 9°68S×112°67E, h15km, Mw5.4/27*
*IDC **12** 05:19:57.8±0.5, 9°29S×112°73E, h44km±5km, mb4.7/21, mb1 4.7/22, mb1mx4.7/23, mbtmp4.6/22, ML4.4/1, MS4.1/6, Ms1 4.1/6, ms1mx3.6/29, Error ellipse: s-maj=15.2km s-min=9.6km az=56.0*
*NEIC **12** 05:19:57.4±0.3, 9°38S×112°77E, mb5.2/42, Error ellipse: s-maj=9.1km s-min=5.2km az=53.0*
ISC 12 05:19:57.8±0.2, 9°42S±0°03×112°71E±0°02, h53km, h53km±1.4km: pP-P, n341, σ1°18/280, mb5.2/107, MS4.3/17, 6C-12D, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRKI	**Karangkates**	**1.27**	**349**	P	**Pn**	**05 20 19.2**	**-0.1**
GMJI	**Gumukmas**	**1.35**	**33**	P	**Pn**	**05 20 19.3**	**-1.0**
PWJI	**Pagerwojo**	**1.65**	**327**	P	**Pn**	**05 20 23.8**	**-0.6**
SJI	**Sawahan**	**1.91**	**331**	P	**Pn**	**05 20 28.4**	**+0.4**
PCJI	**Pacitan**	**1.94**	**309**	P	**Pn**	**05 20 29.2**	**+0.8**
BYJI	**Banyuwangi**	**2.02**	**54**	P	**Pn**	**05 20 29.6**	**+0.1**
NBBI	**Negara**	**2.16**	**61**	P	**Pn**	**05 20 30.7**	**-0.6**
ABJI	**Asem Bagus**	**2.21**	**43**	P	**Pn**	**05 20 33.7**	**+1.7**
NGJI	**Ngawi**	**2.38**	**329**	P	**Pn**	**05 20 38.5**	**+4.1**
IGBI	**Denpasar**	**2.48**	**76**	P	**Pn**	**05 20 34.5**	**-1.3**
GRJI	**Gresik**	**2.50**	**355**	P	**Pn**	**05 20 38.3**	**+2.3**
DNP	**Denpasar**	**2.58**	**74**	P	**Pn**	**05 20 36.7**	**-0.4**
UGM	**Wanagama**	**2.62**	**304**	P	**Pn**	**05 20 38.3**	**+0.5**
KMMI	**Kalianget**	**2.66**	**28**	P	**Pn**	**05 20 38.8**	**+0.6**
SRBI	**Singaraja**	**2.81**	**62**	P	**Pn**	**05 20 40.2**	**-0.1**
KHKI	**Kahang-Kahang**	**3.05**	**70**	P	**Pn**	**05 20 43.3**	**-0.3**
SMRI	**Semarang**	**3.25**	**316**	P	**Pn**	**05 20 48.4**	**+2.1**
JCJI	**Jatiwangi**	**5.27**	**303**	P	**Pn**	**05 21 13.8**	**-0.2**
	6.5nm830nm,0.9s						
JCJI				S	Px	05 21 38.6	
	830nm,0.9s,6.5nm						
LEM	**Lembang**	**5.66**	**297**	P	**Pn**	**05 21 21.5**	**+2.1**
	4.5nm797nm,1.1s						
KBKI	**Kotabaru**	**6.98**	**30**	P	**Pn**	**05 21 39.3**	**+1.8**
	0.5nm3μm183nm,0.7s						
CGJI	**Cibinong**	**7.48**	**291**	P	**Pn**	**05 21 45.3**	**+0.9**
	1μm,0.5s						
RBSI	**Rajabasa**	**7.76**	**297**	P	**Pn**	**05 21 51.1**	**+2.9**
	3.1nm8μm947nm,0.6s						
KAPI	**Kappang**	**8.24**	**58**	Pn	**Pn**	**05 21 53.2**	**-1.6**
	469nm,1.0s,SNR=6.7						
KAPI	**Kappang**	**8.24**	**58**	P	**Pn**	**05 21 53.6**	**-1.2**
	5.1nm,0.3s,baz=244,slow=10,SNR=19						
KAPI				S	**Sn**	**05 23 21.6**	**-5.0**
	1.6nm,0.3s,baz=53,slow=20,SNR=2.2						
KAPI				LR	LR	05 25 31.7	
	comp=Z,1μm,19.5s,baz=24,slow=41						
KAPI	**Kappang**	**8.24**	**58**	*e*Pn	**Pn**	**05 21 53.6**	**-1.2**
KAPI				*e*Sn	**Sn**	**05 23 23.6**	**-3.0**
KAPI	**Kappang**	**8.24**	**58**	P	**Pn**	**05 21 53.7**	**-1.1**
	393nm43nm,1.0s						
TPI	**Tanjungpandan**	**8.31**	**322**	P	**Pn**	**05 21 59.2**	**+3.5**
	934nm66nm,0.8s						
SPSI	**Sidrap Palu**	**8.86**	**53**	P	**Pn**	**05 22 05.8**	**+2.5**
	1μm59nm,1.1s						
BNSI	**Bone**	**8.87**	**56**	P	**Pn**	**05 22 05.5**	**+2.0**
KASI	**Kota Agung**	**9.01**	**295**	P	**Pn**	**05 22 06.0**	**+0.7**
	3μm262nm,0.9s						
MMRI	**Maumere**	**9.45**	**86**	P	**Pn**	**05 22 11.4**	**+0.1**
	3μm237nm,0.7s						
TTSI	**Tana Toraja**	**9.49**	**49**	P	**Pn**	**05 22 16.1**	**+4.2**
	1μm143nm,1.0s						
TTSI				S	Px	05 23 03.9	
	143nm,1.0s,1μm						
STKI	**Sintang**	**9.50**	**353**	P	**Pn**	**05 22 16.0**	**+4.0**
	148nm,0.9s						
LWLI	**Liwa**	**9.63**	**296**	P	**Pn**	**05 22 15.8**	**+2.0**
PPBI	**Pangkal Pinang**	**9.73**	**317**	P	**Pn**	**05 22 18.1**	**+3.0**
	8μm70nm,0.7s						
MDSI	**Maura Dua**	**9.78**	**299**	P	**Pn**	**05 22 18.2**	**+2.3**
	1μm93nm,0.9s						
SMKI	**Samarinda**	**9.97**	**27**	P	**Pn**	**05 22 23.5**	**+5.0**
	176nm,1.2s						
MNAI	**Manna**	**10.90**	**297**	P	**Pn**	**05 22 30.3**	**-0.9**
	2μm,0.6s						
KSM	**Kuching**	**11.08**	**347**	*e*Pn	**Pn**	**05 22 35.0**	**+1.4**
KSM	**Kuching**	**11.08**	**347**	P	**Pn**	**05 22 35.5**	**+1.9**
	40nm,0.9s						
KDI	**Kendari**	**11.24**	**62**	P	**Pn**	**05 22 38.3**	**+2.5**
	736nm74nm,1.1s						
KSI	**Kapahiang**	**11.56**	**299**	P	**Pn**	**05 22 40.7**	**+0.4**
	2μm,0.6s						
SBUM	**Sibu**	**11.80**	**358**	P	**Pn**	**05 22 46.5**	**+3.1**
	692nm53nm,1.4s						
APSI	**Ampana**	**12.27**	**47**	P	**Pn**	**05 22 51.0**	**+1.1**
	7μm117nm,1.0s						
MRSI	**Marisa**	**13.46**	**44**	P	**Pn**	**05 23 09.0**	**+2.9**
	989nm109nm,1.1s						
MBWA	**Marble Bar**	**13.49**	**151**	*e*P	**Pn**	**05 23 00.5**	**-6.1**
MBWA				*e*S	**Sn**	**05 25 16.9**	**-18**
MBWA	**Marble Bar**	**13.49**	**151**	*e*Pn	**Pn**	**05 23 00.4**	**-6.2**
	43nm,0.5s						
MBWA	**Marble Bar**	**13.49**	**151**	P	**Pn**	**05 23 00.9**	**-5.7**
	75nm,0.6s						
SDSI	**Sungai Dareh**	**14.04**	**306**	P	**Pn**	**05 23 12.3**	**-1.7**
	1μm30nm,0.8s						
PPI	**Padang Panjang**	**15.14**	**305**	P	**Pn**	**05 23 25.5**	**-3.0**
	40nm,0.7s						
FITZ	**Fitzroy Crossi**	**15.23**	**126**	*e*P	**Pn**	**05 23 24.9**	**-4.7**
	49nm,0.6s						
FITZ				*e*S	**Sn**	**05 26 03.1**	**-14**
FITZ	**Fitzroy Crossi**	**15.23**	**126**	P	**Pn**	**05 23 26.0**	**-3.6**
	3.2nm,0.3s,baz=310,slow=7.5,SNR=71						
FITZ				S	**Sn**	**05 26 03.9**	**-13**
	3.0nm,0.3s,baz=132,slow=15,SNR=7.4						
FITZ				LR	LR	05 29 42.1	
	comp=Z,564nm,18.3s,baz=309,slow=38						
FITZ	**Fitzroy Crossi**	**15.23**	**126**	*e*Pn	**Pn**	**05 23 25.9**	**-3.7**
	37nm,0.9s						
FITZ				*e*Sn	**Sn**	**05 26 01.3**	**-16**
FITZ	**Fitzroy Crossi**	**15.23**	**126**	P	**Pn**	**05 23 26.4**	**-3.2**
	106nm,1.2s						
FITZ				S	Px	05 23 38.7	
	106nm,1.2s						
NLAI	**Namlea**	**15.56**	**68**	P	**Pn**	**05 23 37.4**	**+3.5**
	1μm113nm,1.3s						
MYLDM	**Lahad Datu**	**15.61**	**22**	P	**Pn**	**05 23 38.8**	**+4.3**
	76nm,1.2s						
KKM	**Kota Kinabalu**	**15.75**	**13**	*e*P	**Pn**	**05 23 37.0**	**+0.7**
	12nm,0.6s						
KKM	**Kota Kinabalu**	**15.75**	**13**	P	**Pn**	**05 23 36.7**	**+0.4**
	665nm32nm,1.4s						
AAI	**Ambon**	**16.40**	**71**	P	**Pn**	**05 23 42.8**	**-1.8**
	117nm,0.9s						
MNSI	**Mandailing Nat**	**16.55**	**307**	P	**Pn**	**05 23 42.6**	**-3.8**
	45nm,0.8s						
KNA	**Kunumurra**	**16.89**	**113**	*e*P	**Pn**	**05 23 48.9**	**-1.7**
	117nm,0.9s						
KNA	**Kunumurra**	**16.89**	**113**	P	**Pn**	**05 23 49.3**	**-1.3**
	3μm375nm,0.9s						
LBMI	**Labuha**	**17.11**	**60**	P	**Pn**	**05 23 56.5**	**+3.1**
	162nm,0.9s						
MEEK	**Meekatharra**	**18.02**	**163**	*e*P	**Pn**	**05 24 02.2**	**-2.3**
MEEK				*e*S	S	05 27 06.3	-22
GSI	**Gunungsitoli**	**18.45**	**304**	P	**Pn**	**05 24 04.1**	**-5.8**
	46nm,0.6s						
KULM	**Kulim**	**18.91**	**320**	*e*Pn	**Pn**	**05 24 15.7**	**+0.3**
	7.6nm,0.8s						
KAKA	**Kakadu**	**19.64**	**101**	*e*P	**Pn**	**05 24 22.4**	**-1.6**
	47nm,0.6s						
KAKA	**Kakadu**	**19.64**	**101**	*e*P	**Pn**	**05 24 22.4**	**-1.6**
	135nm,0.6s						
KAKA	**Kakadu**	**19.64**	**101**	P	**Pn**	**05 24 22.7**	**-1.3**
	996nm134nm,0.7s						
SWI	**Sorong**	**20.32**	**66**	P	**P**	**05 24 32.1**	**+2.4**
	1μm114nm,1.1s						
DAV	**Davao City (W)**	**20.80**	**39**	LR	LR	05 33 06.5	
	comp=Z,347nm,20.1s,MS3.7,baz=180,slow=38						
KLBR	**Kellerberrin**	**22.56**	**169**	*e*P	**P**	**05 24 53.5**	**0.0**
	92nm,1.5s,mb5.0						
WRA	**Warramunga Arr**	**23.37**	**119**	P	**P**	**05 25 01.2**	**-0.7**
	16nm,0.5s,mb4.7,baz=291,slow=11,SNR=95						
WRA				PcP	PcP	05 28 49.4	+2.0
	2.7nm,0.9s,baz=308,slow=2.7,SNR=4.8						
WRA				S	**S**	**05 29 15.9**	**+5.1**
	3.2nm,0.8s,baz=288,slow=22,SNR=4.7						
WRA	**Warramunga Arr**	**23.37**	**119**	P	**P**	**05 25 01.2**	**-0.7**
WRA				PcP	PcP	05 28 49.4	+2.0
WRA				S	**S**	**05 29 15.9**	**+5.1**
WRAB	**Tennant Creek**	**23.37**	**119**	P	**P**	**05 25 01.4**	**-0.6**
	233nm,0.5s,mb5.9,SNR=24						
WRAB	**Tennant Creek**	**23.37**	**119**	*e*P	**P**	**05 25 01.4**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,37nm,0.9s,mb4.8						
WRAB	**Tennant Creek**	**23.37**	**119**	*e*P	**P**	**05 25 01.4**	**-0.5**
	comp=Z,37nm,0.9s,mb4.8						
WRAB	**Tennant Creek**	**23.37**	**119**	P	**P**	**05 25 02.0**	**0.0**
	comp=Z,46nm,0.8s,mb4.9						
NWAO	**Narrogin (SRO)**	**23.77**	**171**	P	**P**	**05 25 06.1**	**+0.7**
	comp=Z,8.2nm,0.8s,mb4.2,baz=350,slow=11,SNR=3.3						
NWAO				pP		05 25 19.3	
	comp=Z,11nm,0.7s,baz=2.3,slow=9.1,SNR=3.0						
ASAR	**Alice Springs**	**24.72**	**128**	P	**P**	**05 25 14.8**	**+0.6**
	comp=Z,42nm,0.8s,mb5.0,baz=305,slow=9.1,SNR=217						
ASAR				PcP	PcP	05 28 51.8	+1.5
	comp=Z,3.9nm,0.7s,baz=341,slow=2.1,SNR=5.9						
TGY	**Tagaytay City**	**24.75**	**19**	P	**P**	**05 25 15.1**	**+0.6**
	comp=Z,121nm,0.3s,mb5.9,baz=176,slow=15,SNR=8.4						
FORT	**Forrest**	**25.62**	**148**	*e*P	**P**	**05 25 23.2**	**+0.9**
	comp=Z,51nm,0.6s,mb5.2						
FORT	**Forrest**	**25.62**	**148**	*e*P	**P**	**05 25 23.4**	**+1.0**
	comp=Z,54nm,0.6s,mb5.3						
SMPI	**Sarmi**	**26.89**	**76**	P	**P**	**05 25 34.2**	**+0.2**
	comp=Z,791nmcomp=Z,48nm,1.4s,mb4.8						
QIZ	**Qiongzhong**	**28.40**	**354**	P	**P**	**05 25 48.3**	**+0.9**
QIZ				S	**S**	**05 30 33.0**	**+2.2**
QIZ				pmax	pmax		
	comp=Z,33nm,2.1s,mb4.6						
QIZ				pmax	pmax		
	comp=Z,160nm,3.5s						
QIZ				LR	LR		
	comp=Z,220nm,14.9s,MS3.9						
COEN	**Coen**	**30.16**	**102**	*e*P	**P**	**05 26 03.0**	**-0.1**
	comp=Z,145nm,0.9s,mb5.7						
COEN	**Coen**	**30.16**	**102**	P	**P**	**05 26 05.6**	**+2.5**
	comp=Z,84nm,0.9s,mb5.5						
CM31	**Chiang Mai Arr**	**30.85**	**334**	*e*P	**P**	**05 26 08.4**	**-0.7**
CM31				*e*PcP	PcP	05 29 06.7	+1.5
CMAR	**Chiang Mai Arr**	**30.85**	**334**	P	**P**	**05 26 09.8**	**+0.7**
	comp=Z,5.4nm,0.6s,mb4.5,baz=164,slow=8.2,SNR=29						
CMAR				PcP	PcP	05 29 07.3	+2.2
	comp=Z,2.6nm,0.5s,baz=230,slow=2.8,SNR=7.0						
CHTO	**Chiang Mai**	**31.16**	**334**	*e*P	**P**	**05 26 12.3**	**+0.5**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
CHTO	**Chiang Mai**	**31.16**	**334**	*e*P	**P**	**05 26 12.2**	**+0.4**
	comp=Z,7.3nm,0.8s,mb4.6						
CHTO	**Chiang Mai**	**31.16**	**334**	P	**P**	**05 26 11.3**	**-0.5**
CTA	**Charters Tower**	**34.06**	**112**	P	**P**	**05 26 37.8**	**+0.5**
	comp=Z,3.2nm,0.3s,mb4.7,baz=254,slow=7.4,SNR=3.2						
CTA				LR	LR	05 40 56.9	
	comp=Z,447nm,19.0s,MS4.2,baz=278,slow=37						
STKA	**Stephens Creek**	**34.87**	**134**	*e*P	**P**	**05 26 45.2**	**+1.0**
	comp=Z,16nm,0.6s,mb5.1						
STKA	**Stephens Creek**	**34.87**	**134**	P	**P**	**05 26 45.2**	**+1.1**
	comp=Z,17nm,0.7s,mb5.1,baz=302,slow=8.3,SNR=32						
STKA				pP	pP	05 26 58.5	+0.6
	comp=Z,18nm,0.6s,baz=309,slow=8.5,SNR=7.8						
STKA				PcP	PcP	05 29 17.1	+0.8
	comp=Z,6.7nm,0.7s,baz=16,slow=7.4,SNR=3.0						
STKA				LR	LR	05 41 11.5	
	comp=Z,622nm,18.5s,MS4.4,baz=246,slow=36						
STKA	**Stephens Creek**	**34.87**	**134**	*e*P	**P**	**05 26 45.2**	**+1.0**
STKA				*e*PP	pP	05 26 58.2	+0.3
STKA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
STKA	**Stephens Creek**	**34.87**	**134**	*e*P	**P**	**05 26 45.2**	**+1.0**
	comp=Z,3.8nm,0.7s,mb4.4						
STKA				*e*pP	pP	05 26 58.2	+0.3
KMI	**Kunming**	**35.68**	**344**	P	**P**	**05 26 53.1**	**+2.0**
KMI				pP	pP	05 27 08.0	+3.2
KMI				sP	sP	05 27 14.0	+2.9
KMI				PP	PP	05 28 15.4	+2.4
KMI				S	**S**	**05 32 27.0**	**+3.0**
KMI				sS	sS	05 32 51.7	+4.5
KMI				SS	SS	05 34 50.9	-10
KMI				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
KMI				pmax	pmax		
	comp=Z,76nm,3.7s						
KMI				LR	LR		
	comp=N,210nm,12.6s,MS4.2						
KMI				LR	LR		
	comp=E,240nm,15.7s,MS4.2						
KMI				LR	LR		
	comp=Z,270nm,17.6s,MS4.1						
PALK	**Pallekele**	**35.94**	**296**	*i* P	**P**	**05 26 56.4**	**+2.9**
GYA	**Guiyang**	**36.14**	**351**	P	**P**	**05 26 55.5**	**+0.5**
GYA				pP	pP	05 27 10.7	+1.9
GYA				sP	sP	05 27 17.8	+2.8
GYA				PP	PP	05 28 19.6	+1.5
GYA				PcP	PcP	05 29 21.6	+1.6
GYA				S	**S**	**05 32 30.3**	**-0.7**
GYA				sS	sS	05 32 56.4	+2.1
GYA				ScP	ScP	05 33 00.1	-1.9
GYA				SS	SS	05 34 57.2	-13
GYA				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
GYA				LR	LR		
	comp=N,520nm,17.4s,MS4.5						
GYA				LR	LR		
	comp=E,490nm,17.1s,MS4.5						
GYA				LR	LR		
	comp=Z,700nm,17.5s,MS4.5						
CMSA	**Cobar Meteorol**	**37.69**	**131**	*e*P	**P**	**05 27 09.9**	**+1.7**
RMQ	**Roma**	**38.09**	**121**	*e*P	**P**	**05 27 13.5**	**+1.9**
	comp=Z,9.7nm,0.6s,mb4.7						
ENH	**Enshi**	**39.58**	**356**	*e*P	**P**	**05 27 23.9**	**-0.1**
	comp=Z,16nm,0.6s,mb4.9						
EIDS	**Eidsvold**	**39.73**	**119**	*e*P	**P**	**05 27 27.2**	**+1.8**
EIDS	**Eidsvold**	**39.73**	**119**	*e*P	**P**	**05 27 27.0**	**+1.6**
	comp=Z,11nm,0.8s,mb4.7						
WHN	**Wuhan**	**39.76**	**2**	*e*P	**P**	**05 27 26.0**	**+0.5**
SHL	**Shillong**	**40.25**	**330**	⇓*i*P	**P**	**05 27 30.0**	**+0.4**
SHL				*e*S	**S**	**05 33 35.0**	**+1.8**
CD2	**Chengdu**	**41.00**	**348**	⇓*i*P	**P**	**05 27 35.9**	**+0.2**
CD2				pP	pP	05 27 49.7	0.0
CD2				sP	sP	05 27 55.1	-0.8
CD2				PP	PP	05 29 14.9	+3.6
CD2				PcP	PcP	05 29 35.0	-0.1
CD2				PcS	PcS	05 33 24.8	-1.3
CD2				S	**S**	**05 33 46.1**	**+1.8**
CD2				sS	sS	05 34 06.7	-1.1
CD2				SS	SS	05 36 45.6	-2.7
CD2				ScS	ScS	05 37 34.0	-1.8
CD2				pmax	pmax		
	comp=Z,60nm,1.1s,mb5.1						
CD2				pmax	pmax		
	comp=Z,210nm,6.8s						
CD2				LR	LR		
	comp=E,330nm,14.2s						
CD2				LR	LR		
	comp=Z,250nm,10.8s,MS4.3						
NJ2	**Nanjing**	**41.65**	**8**	*e*P	**P**	**05 27 43.0**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,30nm,0.6s,mb5.1						
ARMA	**Armidale**	**41.84**	**126**	*e*P	**P**	**05 27 44.7**	**+2.0**
HYB	**Hyderabad**	**43.01**	**308**	*e*P	**P**	**05 27 51.0**	**-1.3**
HYB	**Hyderabad**	**43.01**	**308**	*i* P	**P**	**05 27 51.0**	**-1.3**
XAN	**Xi'an**	**43.36**	**355**	P	**P**	**05 27 54.1**	**-0.8**
XAN				pP	pP	05 28 06.7	-2.3
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
XAN				pmax	pmax		
	comp=Z,17nm,4.8s						
ODAN	**Odare**	**43.63**	**326**	*e*P	**P**	**05 27 56.6**	**-0.6**
	comp=Z,44nm,0.7s,mb5.3						
TAPN	**Taplejung**	**43.85**	**327**	*e*P	**P**	**05 27 58.9**	**0.0**
	comp=Z,48nm,0.6s,mb5.4						
LSA	**Lhasa**	**44.08**	**333**	P	**P**	**05 28 01.4**	**+0.6**
LSA	**Lhasa**	**44.08**	**333**	*e*P	**P**	**05 28 01.5**	**+0.7**
LSA				pmax	pmax		
	comp=Z,17nm,0.6s,mb5.0						
LSA	**Lhasa**	**44.08**	**333**	*e*P	**P**	**05 28 01.4**	**+0.7**
	comp=Z,17nm,0.6s,mb4.9						
RAMN	**Ramite**	**44.14**	**326**	*e*P	**P**	**05 28 00.8**	**-0.5**
	comp=Z,17nm,0.6s,mb4.9						
NGP	**Nagpur**	**44.90**	**313**	*ex*	x	05 28 03.6	
JIRN	**Jiri**	**44.92**	**326**	*e*P	**P**	**05 28 07.0**	**-0.5**
	comp=Z,34nm,0.5s,mb5.4						
LATR	**Latur**	**45.13**	**308**	*e*PKP	**P**	**05 28 08.6**	**-0.8**
GUN	**Gumba**	**45.29**	**326**	*e*P	**P**	**05 28 10.0**	**-0.4**
	comp=Z,51nm,0.5s,mb5.6						
PKI	**Pulchoki**	**45.29**	**325**	*e*P	**P**	**05 28 09.5**	**-0.9**
	comp=Z,9.6nm,0.4s,mb5.0

HHC ScS ScS 05 38 28.6 -4.9
HHC pmax pmax
comp=Z,20nm,1.0s,mb5.1
HHC pmax pmax
comp=Z,91nm,4.1s
HHC LR LR
comp=N,96nm,19.2s,MS4.2
HHC LR LR
comp=E,210nm,19.2s,MS4.2
HHC LR LR
comp=Z,180nm,19.2s,MS4.1
GTA Gaotai 50.03 347 P **P 05 28 47.7 +0.7**
GTA pP pP 05 29 00.3 -1.0
GTA sP sP 05 29 05.3 -2.1
GTA PcP PcP 05 30 07.9 +1.7
GTA PP PP 05 30 44.2 +1.6
GTA S **S 05 35 54.9 +0.8**
GTA sS sS 05 36 16.6 -1.6
GTA SS SS 05 39 27.1 -1.0
GTA pmax pmax
comp=Z,12nm,0.9s,mb4.9
GTA pmax pmax
comp=Z,69nm,3.9s
GTA LR LR
comp=N,150nm,14.9s,MS4.3
GTA LR LR
comp=E,160nm,16.0s,MS4.3
GTA LR LR
comp=Z,140nm,14.3s,MS4.1
SONA Sohna 50.87 319 *e*PKP **P 05 28 51.9 -1.7**
SONA AMb AMB 05 28 52.8
comp=Z,18nm,0.5s,mb5.3
JOSI Joshimath 50.92 323 *e*PKP **P 05 28 53.1 -0.8**
JOSI AMb AMB 05 28 59.6
comp=Z,134nm,1.0s,mb5.8
AYAN Aya Nagar 51.00 319 *e*PKP **P 05 28 52.5 -2.0**
NDI New Delhi 51.08 319 *ex* x 05 28 51.0
AJM Ajmer 51.38 315 *e*PKP **P 05 28 56.1 -1.3**
AJM AMb AMB 05 29 06.5
comp=Z,10nm,0.2s,mb5.4
KHET Khetri 51.60 317 *e*PKP **P 05 28 57.4 -1.6**
MAJO Matsushiro 51.62 26 *e*P **P 05 28 56.9 -2.1**
MAJO pmax pmax
comp=Z,14nm,0.5s,mb5.2
MAJO Matsushiro 51.62 26 *e*P **P 05 28 56.9 -2.1**
comp=Z,14nm,0.5s,mb5.2
MAT Matsushiro 51.62 26 P **P 05 28 57.2 -1.8**
MJAR Matsushiro Arr 51.62 26 P **P 05 28 57.5 -1.5**
comp=Z,18nm,0.6s,mb5.2,baz=204,slow=8.3,SNR=34
MJAR PcP PcP 05 30 13.6 +1.4
comp=Z,6.1nm,0.9s,baz=208,slow=4.1,SNR=4.6
DDI Dehra Dun 51.67 321 *ex* x 05 28 55.5
SNY Shenyang 51.96 10 ||P **P 05 29 00.3 -1.1**
SNY pmax pmax
comp=Z,54nm,0.7s,mb5.6
KLP Kalpa 52.40 322 *e*PKP **P 05 29 04.1 -0.8**
KLP AMb AMB 05 29 05.3
comp=Z,13nm,0.2s,mb5.4
CN2 Changchun 54.21 11 *e*P **P 05 29 16.6 -1.4**
CN2 *ep*P pP 05 29 29.5 -2.9
CN2 *es*P sP 05 29 34.0 -4.5
CN2 PcP PcP 05 30 23.0 +1.2
CN2 *e*S **S 05 36 50.2 -1.1**
CN2 SS SS 05 40 32.5 -1.6
CN2 pmax pmax
comp=Z,40nm,0.8s,mb5.4
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,300nm,22.0s,MS4.4
CN2 LR LR
comp=E,200nm,22.0s,MS4.4
CN2 LR LR
comp=Z,900nm,25.0s,MS4.7
THN Thein Dam 54.57 321 *ex* x 05 29 18.2
VLA Vladivostok 55.13 17 *i* P **P 05 29 23.2 -1.4**
VLA pmax pmax
comp=Z,31nm,1.2s,mb5.2
VLA Vladivostok 55.13 17 *i* P **P 05 29 23.3 -1.3**
MDJ Mudanjiang 55.91 15 P **P 05 29 29.3 -0.9**
MDJ pmax pmax
comp=Z,49nm,0.8s,mb5.6
MDJ pmax pmax
comp=Z,58nm,4.3s
MDJ Mudanjiang 55.91 15 *e*P **P 05 29 29.5 -0.7**
comp=Z,31nm,0.8s,mb5.4
SONM Songino Array 57.27 355 P **P 05 29 39.9 +0.1**
comp=Z,20nm,0.6s,mb5.3,baz=176,slow=8.2,SNR=22
SONM PcP PcP 05 30 34.5 +1.0
comp=Z,3.3nm,0.5s,baz=178,slow=5.0,SNR=2.5
WMQ Urumqi 57.65 339 P **P 05 29 43.0 +0.5**
WMQ pP pP 05 29 59.0 +1.9
WMQ sP sP 05 30 06.0 +2.8
WMQ PP PP 05 31 53.0 +2.0
WMQ S **S 05 37 35.0 -2.0**
WMQ ScS ScS 05 39 23.0 -4.4
WMQ SS SS 05 41 28.0 -0.2
WMQ pmax pmax
comp=Z,35nm,1.0s,mb5.3
WMQ pmax pmax
comp=Z,150nm,6.0s
WMQ LR LR
comp=N,71nm,16.0s,MS4.2
WMQ LR LR
comp=E,160nm,17.0s,MS4.2
WMQ LR LR
comp=Z,160nm,16.0s,MS4.2
ERM Erimo 58.30 26 *e*P **P 05 29 45.8 -1.3**
ERM pmax pmax
comp=Z,22nm,0.7s,mb5.3
ERM Erimo 58.30 26 *e*P **P 05 29 45.8 -1.3**
comp=Z,22nm,0.7s,mb5.3
HIA Hailar 58.76 5 *e*P **P 05 29 49.2 -1.0**
HIA *e* 05 30 40.2
HIA pmax pmax
comp=Z,6.0nm,0.4s
HIA Hailar 58.76 5 *e*P **P 05 29 49.2 -1.0**
comp=Z,6.3nm,0.4s,mb5.0
HIA *ep*PcP PcP 05 30 40.2 +0.8
KSH Kashi 59.42 327 P **P 05 29 53.3 -1.7**
KSH pP pP 05 30 06.0 -3.6
KSH sP sP 05 30 11.3 -4.4
KSH PcP PcP 05 30 42.3 0.0
KSH PP PP 05 32 05.4 -1.5
KSH ScP ScP 05 34 37.5 -1.3
KSH PcS PcS 05 34 42.6 -1.7
KSH S **S 05 37 52.9 -7.3**
KSH ScS ScS 05 39 35.5 -5.2
KSH pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
KSH pmax pmax
comp=Z,57nm,4.5s
KSH LR LR
comp=N,530nm,12.7s,MS4.9
KSH LR LR
comp=E,380nm,13.9s,MS4.9
KSH LR LR
comp=Z,110nm,4.5s
ZAK Zakamensk 60.11 353 *e*P **P 05 29 59.0 -0.5**
ZAK pmax pmax
comp=Z,6.0nm,1.4s,mb4.4
KBL Kabul 60.16 319 *e*P **P 05 29 58.8 -1.4**
KBL pmax pmax
comp=Z,14nm,0.8s,mb5.0
KBL Kabul 60.16 319 *e*P **P 05 29 58.8 -1.4**
comp=Z,14nm,0.8s,mb5.0
KLR Kul'dur 60.74 14 *e*P **P 05 29 58.3 -5.5**
HABR Khabarovsk 60.92 17 *e*P **P 05 30 01.4 -3.6**
HABR *e* 05 38 33.3
HABR *e**SS sS 05 38 43.9 +0.1
HABR *e*SSS 05 44 59.0
HABR pmax pmax
comp=Z,139nm,1.8s,mb5.8
HABR pmax pmax
comp=N,85nm,1.5s
HABR pmax pmax
comp=E,258nm,1.6s
CIT Chita 61.19 1 *e*P **P 05 30 07.0 +0.2**
CIT pmax pmax
comp=Z,108nm,1.4s,mb5.8
ULHL Ulahol 61.29 330 P **P 05 30 07.9 +0.2**
SNR=10
TLY Talaya 61.35 354 *e*P **P 05 30 06.9 -1.0**
TLY pmax pmax
comp=Z,22nm,1.1s,mb5.2
TLY MLR MLR
comp=Z,119nm,20.0s,MS4.0
TLY Talaya 61.35 354 *i* P **P 05 30 07.8 -0.1**
KZA Kyzart 61.67 329 P **P 05 30 10.8 +0.6**
SNR=19
MOY Mondy 61.67 352 *e*P **P 05 30 10.2 +0.2**
MOY pmax pmax
comp=Z,33nm,1.7s,mb5.2
TKM2 Tokmak 2 62.11 330 P **P 05 30 13.3 +0.1**
SNR=20
TKM2 Tokmak 2 62.11 330 *e*P **P 05 30 12.9 -0.3**
TKM2 *e**PP pP 05 30 27.7 -0.2
TKM2 pmax pmax
comp=Z,24nm,0.9s,mb5.3
TKM2 Tokmak 2 62.11 330 *e*P **P 05 30 12.9 -0.3**
comp=Z,24nm,0.9s,mb5.3
TKM2 *ep*P pP 05 30 27.7 -0.2
UCH Uchtor 62.15 329 P **P 05 30 13.9 +0.4**
SNR=8.9
UCH Uchtor 62.15 329 *e*P **P 05 30 13.8 +0.3**
UCH pmax pmax
comp=Z,6.0nm,0.6s,mb4.9
UCH Uchtor 62.15 329 *e*P **P 05 30 13.8 +0.3**
comp=Z,5.8nm,0.6s,mb4.9
YSS Yuzh-Sakhalins 62.18 23 ||*i*P **P 05 30 12.9 -0.7**
YSS pmax pmax
comp=Z,90nm,1.2s,mb5.8
YSS Yuzh-Sakhalins 62.18 23 *e*P **P 05 30 13.2 -0.4**
comp=Z,46nm,0.9s,mb5.6
MK31 Makanchi Array 62.19 337 *e*P **P 05 30 13.2 -0.4**
MKAR Makanchi Array 62.19 337 P **P 05 30 13.2 -0.5**
comp=Z,16nm,0.5s,mb5.4,baz=123,slow=7.7,SNR=194
MKAR Makanchi Array 62.19 337 *ce*P **P 05 30 13.1 -0.5**
MKAR pmax pmax
comp=Z,16nm,0.5s
KBK Karagaybulak 62.24 329 P **P 05 30 14.7 +0.6**
SNR=15
AAK Ala-Archa 62.45 329 P **P 05 30 15.4 -0.1**
comp=Z,111nm,1.0s,mb5.9,SNR=6.1
AAK Ala-Archa 62.45 329 P **P 05 30 15.9 +0.4**
SNR=9.3
AAK Ala-Archa 62.45 329 *d*P **P 05 30 15.6 +0.1**
AAK pmax pmax
comp=Z,14nm,1.2s,mb5.0
AAK Ala-Archa 62.45 329 *e*P **P 05 30 15.8 +0.3**
comp=Z,25nm,1.2s,mb5.2
AAK *ep*P pP 05 30 30.8 +0.5
AML Almayashu 62.50 328 *e*P **P 05 30 16.1 +0.2**
AML pmax pmax
comp=Z,20nm,0.8s,mb5.3
AML Almayashu 62.50 328 *e*P **P 05 30 16.1 +0.3**
comp=Z,20nm,0.8s,mb5.3
FRU Bishkek 62.54 329 *e*P **P 05 30 15.0 -1.1**
EKS2 Erkin-Say 62.84 329 P **P 05 30 18.4 +0.3**
SNR=17
EKS2 Erkin-Say 62.84 329 *e*P **P 05 30 18.3 +0.2**
EKS2 pmax pmax
comp=Z,20nm,0.8s,mb5.3
EKS2 Erkin-Say 62.84 329 *e*P **P 05 30 18.3 +0.2**
comp=Z,20nm,0.8s,mb5.3
USP Ospenovka 62.91 330 P **P 05 30 17.9 -0.7**
SNR=5.8
KURK Kurchatov 66.79 337 P **P 05 30 43.1 -0.5**
comp=Z,107nm,0.6s,mb6.0,SNR=9.4
KURK Kurchatov 66.79 337 *e*P **P 05 30 43.0 -0.6**
KURK pmax pmax
comp=Z,25nm,1.2s,mb5.1
KURK Kurchatov 66.79 337 *e*P **P 05 30 43.0 -0.6**
comp=Z,25nm,1.2s,mb5.1
MAW Mawson 66.80 199 P **P 05 30 44.9 +1.5**
comp=Z,3.3nm,0.9s,mb4.4,baz=40,slow=7.2,SNR=8.5
MAW pP pP 05 30 57.0 -1.4
comp=Z,8.1nm,0.8s,baz=52,slow=8.4,SNR=7.6
MAW Mawson 66.80 199 *e*P **P 05 30 44.5 +1.1**
comp=Z,2.1nm,0.9s,mb4.2
MAW *ep*P pP 05 30 58.9 +0.5
ZAA0 Zalesovo Array 67.39 343 *e*P **P 05 30 46.0 -1.3**
ZAA0 *ep*P pP 05 31 01.5 -0.7
ZALV Zalesovo Beam 67.39 343 P **P 05 30 46.4 -1.0**
comp=Z,23nm,0.7s,mb5.3,baz=150,slow=4.4,SNR=95
BVAR Borovoye Array 71.87 335 P **P 05 31 14.3 -0.7**
comp=Z,3.4nm,0.6s,mb4.5,baz=142,slow=8.3,SNR=5.8
BRVK Borovoye 71.94 335 *d*P **P 05 31 14.6 -0.8**
BRVK pmax pmax
comp=Z,13nm,1.2s,mb4.7
BRVK Borovoye 71.94 335 *e*P **P 05 31 14.8 -0.6**
YAK Yakutsk 72.45 8 *e*P **P 05 31 17.5 -0.7**
YAK pmax pmax
comp=Z,100nm,0.7s,mb5.8
YAK Yakutsk 72.45 8 *e*P **P 05 31 17.5 -0.7**
comp=Z,100nm,0.7s,mb5.8
QRN Al-Qurain 73.06 304 *e*P **P 05 31 21.4 -1.3**
QRN AMb AMB 05 31 22.6
comp=Z,52nm,0.6s,mb5.6
PETK Petropavlovsk- 73.08 26 P **P 05 31 22.3 +0.1**
comp=Z,26nm,0.8s,mb5.2,baz=216,slow=3.8,SNR=23
RDF Al-Radifah 73.43 304 *e*P **P 05 31 24.0 -0.8**
RDF AMb AMB 05 31 32.3
comp=Z,61nm,1.0s,mb5.5
SBA Scott Base 73.65 170 *e*P **P 05 31 27.1 +1.9**
SBA pmax pmax
comp=Z,58nm,2.0s,mb5.2
SBA Scott Base 73.65 170 *e*P **P 05 31 27.1 +1.9**
comp=Z,58nm,2.0s,mb5.2
NAY Al-Naaiem 73.80 304 *e*P **P 05 31 25.8 -1.1**
NAY AMb AMB 05 31 27.5
comp=Z,24nm,1.2s,mb5.0
MIB Mutribah 73.91 305 *e*P **P 05 31 26.7 -0.9**
MIB AMb AMB 05 31 46.4
comp=Z,40nm,0.7s,mb5.5
ABKAR Akbulak array 74.43 327 *e*P **P 05 31 30.1 0.0**
comp=Z,27nm,0.5s,mb5.4
SYO Syowa Base 75.23 201 ||*e*P **P 05 31 33.6 -0.9**
SYO Syowa Base 75.23 201 ||*e*PcP PcP 05 31 47.3 -0.4
KMBO Kilima Mbogo 75.47 271 P **P 05 31 39.6 +2.6**
comp=Z,1.1nm,0.5s,mb4.1,baz=67,slow=12,SNR=4.3
BHD Baghdad 77.49 307 *e*P **P 05 31 48.5 +0.5**
BHD *e*S S 05 41 34.5 -0.7
SEY Seymchan 78.29 17 ||*i*P **P 05 31 50.9 -0.8**
SVE Sverdlovsk 78.60 334 ||*e*P **P 05 31 53.5 -0.1**
SVE *e*S S 05 41 52.2 +6.1
SVE pmax pmax
comp=Z,59nm,0.9s,mb5.5
ARU Arti 79.28 333 P **P 05 31 57.0 -0.3**
comp=Z,176nm,0.5s,mb6.2,SNR=5.4
ARU Arti 79.28 333 *d*P **P 05 31 57.1 -0.2**
ARU *PP pP 05 32 15.3 +2.8
ARU 05 34 57.4
ARU S S 05 41 53.1 -0.3
ARU SS SS 05 46 54.9 -6.5
ARU pmax pmax
comp=Z,67nm,1.7s,mb5.3
ARU Arti 79.28 333 *e*P **P 05 31 57.3 0.0**
GNI Garni 79.67 314 ||*i*P **P 05 32 00.5 +0.7**
QSPA South Pole Qui 80.59 180 *e*P **P 05 32 05.2 +1.2**
comp=Z,22nm,1.3s,mb4.9
QSPA *ep*P pP 05 32 20.0 +0.7
ZEI Tsey 81.22 316 *e*P **P 05 32 08.5 +0.4**
ZEI pmax pmax
comp=Z,18nm,0.6s,mb5.2
TIXI Tiksi 81.60 5 *e*P **P 05 32 08.4 -1.1**
TIXI pmax pmax
comp=Z,37nm,0.7s,mb5.4
TIXI Tiksi 81.60 5 *e*P **P 05 32 08.4 -1.1**
comp=Z,37nm,0.7s,mb5.4
SOKR Solikamsk 81.86 335 *d*P **P 05 32 10.8 -0.3**
SOKR pmax pmax
comp=Z,20nm,1.1s,mb5.0
LSZ Lusaka 82.33 256 *e*P **P 05 32 15.5 +1.0**
KIV Kislovodsk 82.47 317 ||*i*P **P 05 32 16.0 +1.4**
BOSA Boshof 83.34 242 P **P 05 32 21.4 +1.8**
comp=Z,8.2nm,1.3s,mb4.6,baz=174,slow=10,SNR=3.2
MMAI Mount Meron Ar 84.60 305 P **P 05 32 28.4 +2.5**
comp=Z,14nm,0.7s,mb5.2,baz=110,slow=7.2,SNR=12
MMAI pP pP 05 32 41.9 +0.7
comp=Z,5.9nm,0.6s,baz=125,slow=5.6,SNR=4.3
VRHR Novokhopersk 85.67 323 *e*P **P 05 32 30.7 0.0**
VRHR *e* pP 05 32 45.5 -0.6
VRHR pmax pmax
comp=N,30nm,0.9s
VRHR pmax pmax
comp=E,10.0nm,0.9s
VRHR pmax pmax
comp=Z,40nm,0.9s,mb5.7
BILL Biiibino 85.99 18 *c i*P **P 05 32 31.1 -0.9**
BILL *e*SS SS 05 48 36.9 -3.6
BILL pmax pmax
comp=Z,9.0nm,1.2s,mb4.9
BILL Biiibino 85.99 18 *e*P **P 05 32 31.4 -0.6**
comp=Z,4.2nm,0.6s,mb4.8
BILL *ep*P pP 05 32 48.1 +0.7
ANN Anapa 86.31 316 *e*P **P 05 32 31.1 -2.9**
ANN *e**PP pP 05 32 45.3 -4.1
ANN *e*S SKSac 05 42 49.7 -6.2
ANN pmax pmax
comp=Z,33nm,0.9s,mb5.6
VORD Divnogorie 87.01 323 *e*P **P 05 32 37.2 -0.1**
VORD pmax pmax
comp=E,30nm,1.0s
VORD pmax pmax
comp=Z,20nm,1.0s,mb5.3
VORD pmax pmax
comp=N,8.0nm,0.5s
VSR Storozhevoye 87.16 323 *e*P **P 05 32 37.9 -0.2**
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,30nm,0.8s
VSR pmax pmax
comp=Z,60nm,0.8s,mb5.9
BR131 Keskin Array S 87.66 311 *e*P **P 05 32 41.2 +0.5**
comp=Z,6.0nm,0.7s,mb4.9
BR131 *e*PcP PcP 05 32 43.7 +1.1
BRTR Keskin Array B 87.66 311 P **P 05 32 41.2 +0.5**
comp=Z,12nm,0.9s,mb5.1,baz=130,slow=6.8,SNR=47
MOS Moscow 89.45 327 *e*P **P 05 32 46.8 -2.0**
MOS pmax pmax
comp=Z,50nm,1.4s,mb5.7
OBN Obninsk 89.84 326 *d i*P **P 05 32 50.9 +0.3**
OBN *e* pP 05 33 08.5 +2.4
OBN pmax pmax
comp=Z,58nm,1.7s,mb5.6
OBN Obninsk 89.84 326 *i* P **P 05 32 50.9 +0.3**
VNA1 Neumayer--Stat 90.92 197 *e*P **P 05 32 57.2 +1.7**
VNA1 *e* pP 05 33 11.4 +0.5
AKASG Malin Array Be 93.11 321 P **P 05 33 05.2 -0.7**
comp=Z,3.4nm,0.7s,mb4.9,baz=86,slow=4.8,SNR=16
AKASG pP pP 05 33 18.4 -3.0
comp=Z,5.5nm,0.8s,baz=85,slow=4.6,SNR=6.6
AKBB Malin Array Si 93.11 321 *e*P **P 05 33 05.4 -0.5**
AKBB *e**PP pP 05 33 20.2 -1.2
KIEV Kiev 93.12 321 *e*P **P 05 33 05.3 -0.6**
KIEV *e**PP pP 05 33 19.5 -1.9
KIEV pmax pmax
comp=Z,6.0nm,0.8s,mb5.1
KIEV Kiev 93.12 321 *e*P **P 05 33 05.3 -0.6**
comp=Z,6.0nm,0.8s,mb5.1
KIEV *ep*P pP 05 33 19.5 -1.9
FALS False Pass 94.11 35 *e*P **P 05 33 09.7 -0.7**
JOF Joensuu 94.41 333 *ep* **P 05 33 11.4 -0.2**
comp=Z,6.7nm,0.7s,mb5.2
JOF Joensuu 94.41 333 *ep* **P 05 33 11.4 -0.2**
comp=Z,6.7nm,0.7s,mb5.2
APA Apatity 94.58 338 ||*e*P **P 05 33 14.0 +1.7**
APA pmax pmax
comp=Z,61nm,1.6s,mb5.8
APA MLR MLR
comp=Z,300nm,18.0s,MS4.8
KAF Kangasniemi 96.56 332 *e*P **P 05 33 21.1 -0.3**
KAF pmax pmax
comp=Z,9.0nm,0.7s,mb5.3
KAF Kangasniemi 96.56 332 *ep* **P 05 33 21.1 -0.3**
comp=Z,9.4nm,0.7s,mb5.3
KAF Kangasniemi 96.56 332 *ep* **P 05 33 21.1 -0.3**
comp=Z,9.4nm,0.7s,mb5.3
FINES FINESS Array B 96.58 331 P **P 05 33 21.7 +0.2**
comp=Z,2.1nm,0.6s,mb4.8,baz=133,slow=8.4,SNR=6.8
ARCES ARCESS Array B 97.77 339 P **P 05 33 26.1 -0.7**
comp=Z,2.0nm,0.8s,mb4.7,baz=91,slow=4.9,SNR=7.8
TTA Tatalina 98.89 28 *e*P **P 05 33 31.7 -0.2**
TRF Thorofare Moun 101.49 27 *e*Pdif Pdif 05 33 43.8 0.0
comp=Z,14nm,1.5s
TORD Torodi Ar. Bea 112.42 280 PKiKP PKiKP 05 38 29.4 +0.5
comp=Z,1.1nm,0.6s,baz=57,slow=1.7,SNR=19
YKA Yellowknife Ar 117.04 23 PKP PKPdf 05 38 36.9 +0.6
comp=Z,1.9nm,0.5s,baz=321,slow=1.6,SNR=29
YKA Yellowknife Ar 117.04 23 PKP PKPdf 05 38 36.9 +0.6
DBIC Dimbokro 118.18 273 PKP PKPdf 05 38 41.0 +1.0
comp=Z,4.6nm,0.7s,baz=114,slow=3.8,SNR=8.1
DBIC *p*PKP *p*PKPdf 05 38 55.6 -0.4
comp=Z,6.3nm,1.1s,baz=238,slow=8.0,SNR=2.5
EDM Edmonton 122.79 31 *e*PKIKP PKPdf 05 38 48.8 +1.1
BSMT Bassoo Peak 124.69 37 *e*PKPdf PKPdf 05 38 52.7 +1.2
SWMT Swartz Lake 125.32 37 *e*PKPdf PKPdf 05 38 54.0 +1.2
MSO Missoula 125.68 38 *e*PKPdf PKPdf 05 38 54.9 +1.4
NVAR Mina Array Bea 126.03 49 PKP PKPdf 05 38 57.1 +2.7
comp=Z,2.7nm,0.8s,baz=247,slow=2.5,SNR=17
NVAR *p*PKP *p*PKPdf 05 39 11.6 +1.2
comp=Z,2.4nm,0.9s,baz=234,slow=3.5,SNR=6.0
CHMT Chamberlain Mo 126.05 38 *e*PKPdf PKPdf 05 38 55.2 +1.1
HLID Hailey 126.85 42 *e*PKPdf PKPdf 05 38 58.2 +2.5
HLID *ep*PKPdf *p*PKPdf 05 39 11.9 +0.1
FFC Flin Flon 127.09 24 *i* PKIKP PKPdf 05 38 57.1 +1.2
DLMT Dillon 127.19 39 *e*PKPdf PKPdf 05 38 57.8 +1.4
EGMT Eagleton 127.53 35 *e*PKPdf PKPdf 05 38 58.1 +1.1
EGMT *ep*PKPdf *p*PKPdf 05 39 13.4 +0.5
N12A Clover Valley, 127.53 45 *e*PKPdf PKPdf 05 38 59.6 +2.4
BOZ Bozeman (W) 127.65 38 *e*PKIKP PKPdf 05 38 58.8 +1.5
BOZ *e* 05 39 14.7
M13A Montello 127.93 44 *e*PKPdf PKPdf 05 39 00.3 +2.4
GSC Goldstone 128.13 52 *e*PKIKP PKPdf 05 39 00.5 +2.0
REDW Red Top Meadow 129.25 40 *e*PKPdf PKPdf 05 39 02.8 +2.4
HWUT Hardware Ranch 129.59 43 *e*PKPdf PKPdf 05 39 03.0 +2.0
LAO LASA Array 130.26 35 *e*PKPdf PKPdf 05 39 04.8 +2.6
PDAR Pinedale Array 130.37 41 PKP PKPdf 05 39 03.5 +0.9
comp=Z,0.7nm,0.5s,baz=349,slow=1.5,SNR=8.3
PDAR *p*PKP *p*PKPdf 05 39 18.6 0.0
comp=Z,0.5nm,0.6s,baz=172,slow=1.0,SNR=3.9
MSU Marysvale 130.49 47 *e*PKIKP PKPdf 05 39 06.4 +3.5
SRU San Rafael 131.41 45 *e*PKIKP PKPdf 05 39 03.6 -1.0
PV01 Paradox Valley 133.21 46 *e*PKPdf PKPdf 05 39 10.2 +2.2
SMCO Snowmass 133.83 43 *e*PKPdf PKPdf 05 39 02.3 -6.9
TUC Tucson 133.84 54 *e*PKIKP PKPdf 05 39 08.7 -0.7
SCHQ Schefferville 134.70 360 PKP PKPdf 05 39 10.7 +0.4
comp=Z,2.5nm,0.8s,baz=271,slow=2.0,SNR=5.9
ANMO Albuquerque 136.15 48 *e*PKIKP PKPdf 05 39 08.2 -5.4
ECSD EROS Data Cent 137.35 32 *e*PKPdf PKPdf 05 39 16.6 +1.0
MNTX Cornudas Mount 138.33 52 *e*PKPdf 05 39 09.2
TXAR Lajitas Array 140.62 55 PKhKP 05 39 14.6
comp=Z,2.2nm,0.7s,baz=225,slow=3.7,SNR=21
JCT Junction City 143.16 51 *e*PKIKP PKPdf 05 39 24.2 -2.3
CPUP Villa Florida 143.17 195 PKhKP 05 39 24.6
comp=Z,5.1nm,0.7s,baz=229,slow=3.2,SNR=5.2
AAM Ann Arbor 144.23 21 *e*PKIKP PKPdf 05 39 27.1 -0.9
LONY Lake Ozonia 144.36 9 *e*PKPdf PKPdf 05 39 27.5 -0.7
FVM French Village 144.75 33 *e*PKIKP PKPdf 05 39 28.4 -0.7
NCB Newcomb 145.05 9 *e*PKPbc PKPbc 05 39 29.8 +0.9
NCB *ep*PKPdf *p*PKPdf 05 39 45.1 -0.3
LBNH Lisbon 145.07 6 *e*PKIKP PKPdf 05 39 29.9 +0.5
MIAR Mount Ida 145.29 40 *e*PKIKP PKPdf 05 39 30.7 +0.6
OLIL Olney 145.35 29 *e*PKPbc PKPbc 05 39 30.8 +0.8
ERPA Erie 145.56 17 *e*PKPdf PKPdf 05 39 30.9 +0.5
SIUC Southern Illin 145.58 32 *e*PKPbc PKPbc 05 39 31.6 +0.9
BLO Bloomington 145.74 27 *e*PKIKP PKPdf 05 39 31.7 +1.0
BLO *e* 05 39 45.7
UALR University of 145.91 38 *e*PKPbc PKPbc 05 39 33.0 +1.1
PARMO Parma 146.08 33 *e*PKPbc PKPbc 05 39 32.9 +0.6
USIN University of 146.17 30 *e*PKPbc PKPbc 05 39 33.1 +0.6
USIN *ep*PKPdf *p*PKPdf 05 39 47.6 +0.1
NATX Nacogdoches 146.26 45 *e*PKPbc PKPbc 05 39 34.3 +1.2
ACSO Alum Creek Sta 146.28 22 *e*PKPbc PKPbc 05 39 33.5 +0.6
ACSO *ep*PKPdf *p*PKPdf 05 39 47.8 +0.1
HBAR Harrisburg 146.37 36 *e*PKPbc PKPbc 05 39 33.9 +0.7
HKT Hockley 146.41 49 *e*PKP2 PKPab 05 39 35.5 +1.0
BINY Binghamton 146.46 12 *e*PKPbc PKPbc 05 39 34.0 +0.7
BINY *ep*PKPdf *p*PKPdf 05 39 49.2 +1.3
WCI Wyandotte Cave 146.61 28 *e*PKP2 PKPab 05 39 34.7 -0.2
GLAT Glass 146.62 33 *e*PKPbc PKPbc 05 39 34.3 +0.3
UTMT University of 146.80 33 *e*PKPbc PKPbc 05 39 35.6 +1.2
WVT Waverly 147.50 32 *e*PKIKP PKPdf 05 39 34.4 +0.6
WVT *e* 05 39 37.0
SSPA Standing Stone 147.52 15 *e*PKPdf PKPdf 05 39 34.1 +0.4
SSPA *e*PKPbc PKPbc 05 39 37.1 +0.9
OXF Oxford 147.83 36 *e*PKP2 PKPab 05 39 38.1 -1.8
MCWV Mont Chateau 147.87 18 *e*PKPbc PKPbc 05 39 38.3 +1.1
SWET Sewanee 149.19 31 *e*PKPbc PKPbc 05 39 41.0 +0.2
SWET *e*PKPab PKPab 05 39 45.6 +0.3
TZTN Tazewell 149.23 26 *e*PKPbc PKPbc 05 39 41.7 +0.8
TZTN *e*PKPab PKPab 05 39 46.1 +0.7

CPCT	**Cooper Cave**	**149.69**	**29**	*e*PKPdf	PKPdf	05 39 38.6	+1.2
CPCT				*e*PKPbc	PKPbc	05 39 42.9	+0.8
CPCT				*e*PKPab	PKPab	05 39 47.8	+0.5
ELN	**Prospectdale**	**149.75**	**22**	*e*PKPdf	PKPdf	05 39 37.9	+0.5
ELN				*e*PKPbc	PKPbc	05 39 42.6	+0.4
ELN				*e*PKPab	PKPab	05 39 48.3	+0.8
TKL	**Tuckaleechee C**	**149.87**	**27**	PKP	PKPdf	05 39 39.1	+1.5
	comp=Z,28nm,0.6s,baz=295,slow=3.5,SNR=8.1						
TKL				PKPbc	PKPbc	05 39 43.9	+1.4
	comp=Z,28nm,0.6s,baz=339,slow=1.0,SNR=16						
TKL	**Tuckaleechee C**	**149.87**	**27**	*e*PKHKP	PKPdf	05 39 39.4	+1.7
TKL				*e*		05 39 43.7	
TKL	**Tuckaleechee C**	**149.87**	**27**	*e*PKPdf	PKPdf	05 39 39.4	+1.7
TKL				*e*PKPbc	PKPbc	05 39 43.7	+1.2
TKL				*e*PKPab	PKPab	05 39 48.6	+0.6
BLA	**Blacksburg**	**149.89**	**21**	*e*PKPbc	PKPbc	05 39 43.4	+0.9
BLA				*e*PKPab	PKPab	05 39 48.9	+0.9
CBN	**Corbin**	**149.93**	**16**	*e*PKPbc	PKPbc	05 39 43.7	+1.2
CBN				*e*PKPab	PKPab	05 39 48.9	+0.7
LRAL	**Lakeview Retre**	**150.28**	**35**	*e*PKPdf	PKPdf	05 39 39.7	+1.3
LRAL				*e*PKPbc	PKPbc	05 39 44.3	+0.7
BRAL	**Brewton**	**151.71**	**38**	*e*PKPbc	PKPbc	05 39 48.5	+1.5
GOGA	**Godfrey**	**151.85**	**30**	*e*PKIKP	PKPdf	05 39 41.9	+1.1
GOGA				*e*		05 39 48.3	
GOGA				*e*		05 39 57.0	
JSC	**Jenkinsville**	**152.13**	**25**	*e*PKIKP	PKPdf	05 39 42.9	+1.7
JSC				*e*		05 39 49.0	
LPAZ	**La Paz**	**154.45**	**178**	*e*PKIKP	PKPbc	05 39 51.9	-1.5
OTAV	**Otavalo**	**165.63**	**129**	*e*PKPdf	PKPdf	05 39 58.5	+0.9

*IDC **12** 05:23:57.1±0.6, 10°.94N×84°.68W, h126km±8km, mb3.6/10, mb1 3.8/11, mb1mx3.6/21, mbtmp3.5/11, MS4.1/1, Ms1 4.1/1, ms1mx2.6/31, Error ellipse: s-maj=27.8km s-min=14.7km az=61.0*

*ISCJB **12** 05:23:57.6±0.3, 10°.67N±0°.06×85°.00W±0°.05, h147km±3km, mb4.1/23, Error ellipse: s-maj=12.2km s-min=3.6km az=40.0*

*NEIC **12** 05:23:58.9±0.8, 10°.71N×85°.01W, h149km±8km, mb4.5/13, Error ellipse: s-maj=18.1km s-min=9.2km az=51.0*

*CASC **12** 05:23:58.1±1.8, 10°.67N×85°.06W, h145km±5km, MD3.6, mb4.5(NEIC)*

ISC 12 05:23:58.6±0.3, 10°.69N±0°.06×84°.99W±0°.05, h143km±3km, n77, σ1§01/91, mb4.1/23, 11C-1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTEN	**Parque Tenorio**	**0.03**	**358**	*i* P	**Pn**	**05 24 17.9**	**0.0**
PTEN				*i* S	**Sn**	**05 24 33.3**	**+0.8**
CUI	**Cuipilapa**	**0.18**	**261**	*i* P	**Pn**	**05 24 17.8**	**-0.2**
MESS	**Mesas**	**0.21**	**285**	*i* P	**Pn**	**05 24 17.9**	**-0.1**
GUAB	**Guayabo de Bag**	**0.24**	**275**	⇑*i*P	**Pn**	**05 24 17.9**	**-0.3**
CHPA	**Chiripa**	**0.25**	**162**	*i* P	**Pn**	**05 24 18.2**	**0.0**
LIM1	**Limonal**	**0.26**	**273**	*i* P	**Pn**	**05 24 18.0**	**-0.2**
GPS2	**Hotel Rinc^‡n**	**0.37**	**281**	*i* P	**Pn**	**05 24 18.3**	**-0.3**
GPS1	**Guardaparques**	**0.37**	**284**	*i* P	**Pn**	**05 24 18.3**	**-0.2**
GPS3	**Bodega del ICE**	**0.38**	**281**	*i* P	**Pn**	**05 24 18.3**	**-0.3**
JTS	**JuntasAbangare**	**0.39**	**175**	P	**Pn**	**05 24 18.2**	**-0.5**
	811nm,0.3s,baz=11,slow=8.6,SNR=2348						
JTS				S	**Sn**	**05 24 33.2**	**-0.8**
	868nm,0.3s,baz=320,slow=21,SNR=32						
GB1A	**Borinquen Arri**	**0.43**	**288**	*i* P	**Pn**	**05 24 18.8**	**0.0**
LAPC	**Finca la Perla**	**0.45**	**281**	⇑*i*P	**Pn**	**05 24 18.4**	**-0.5**
LAPC				*i* S	**Sn**	**05 24 33.6**	**-0.6**
GBS3	**Finca Las lm^¡**	**0.47**	**282**	*i* P	**Pn**	**05 24 18.4**	**-0.6**
A494	**Palo Verde**	**0.49**	**227**	⇑*i*P	**Pn**	**05 24 18.8**	**-0.3**
NY14	**Universidad de**	**0.54**	**266**	*i* P	**Pn**	**05 24 19.1**	**-0.3**
NY14				*i* S	**Sn**	**05 24 35.5**	**+0.4**
A495	**El Viejo**	**0.55**	**238**	⇑*i*P	**Pn**	**05 24 19.2**	**-0.2**
A495				*i* S	**Sn**	**05 24 35.6**	**+0.4**
CGA2	**Cerro Gallo 2**	**0.84**	**142**	⇑*e*P	**Pn**	**05 24 21.6**	**+0.2**
CGA2				*e*S	**Sn**	**05 24 38.1**	**-0.6**
JCR	**Jicaral**	**0.84**	**189**	⇑*e*P	**Pn**	**05 24 21.1**	**-0.3**
JCR				*e*S	**Sn**	**05 24 38.1**	**-0.7**
VCR	**Vista de Mar**	**0.84**	**229**	⇑*i*P	**Pn**	**05 24 20.8**	**-0.7**
PRS1	**Puriscal**	**0.96**	**136**	⇑*e*P	**Pn**	**05 24 23.0**	**+0.6**
PRS1				*e*S	**Sn**	**05 24 44.5**	**+4.0**
SSN	**San Juan del S**	**1.05**	**306**	⇑*i*P	**Pn**	**05 24 22.9**	**-0.3**
SSN				*e*S	**Sn**	**05 24 41.5**	**-0.3**
LAJ	**Bijagual**	**1.18**	**134**	⇓*e*P	**Pn**	**05 24 23.6**	**-0.8**
LAJ				*e*S	**Sn**	**05 24 42.9**	**-1.2**
URSC	**Urasca**	**1.46**	**125**	⇑*e*P	**Pn**	**05 24 27.9**	**+0.7**
URSC				*e*S	**Sn**	**05 24 50.0**	**+0.9**
QCR	**Quepos**	**1.49**	**147**	⇑*e*P	**Pn**	**05 24 28.2**	**+0.6**
QCR				*e*S	**Sn**	**05 24 49.7**	**0.0**
BUS	**Buena Vista**	**1.65**	**133**	*e*P	**Pn**	**05 24 30.7**	**+1.4**
HUEN		**2.01**	**325**	*e*P	**Pn**	**05 24 33.2**	**-0.3**
COPN	**Copaltepe**	**2.17**	**314**	*e*P	**Pn**	**05 24 35.2**	**-0.1**
COPN				*e*S	**Sn**	**05 25 03.8**	**+0.3**
BAR1		**2.19**	**131**	*e*P	**Pn**	**05 24 36.9**	**+1.3**
ACR	**Cerro Adams**	**2.70**	**138**	*e*S	**Sn**	**05 25 14.2**	**-1.1**
CNCH	**Conchagua**	**3.79**	**313**	*e*P	**Pn**	**05 24 56.7**	**+0.7**
CNCH				*e*S	**Sn**	**05 25 41.2**	**+0.7**
TGUH	**Tegucigalpa,Un**	**4.03**	**327**	*e*Pn	**Pn**	**05 24 59.8**	**+0.7**
LFRS	**El Faro**	**4.94**	**307**	*e*P	**Pn**	**05 25 12.1**	**+1.0**
LFRS				*e*S	**Sn**	**05 26 07.3**	**-0.3**
LBRS	**Las Brisas**	**4.99**	**308**	*e*P	**Pn**	**05 25 13.4**	**+1.5**
LBRS				*e*S	**Sn**	**05 26 09.7**	**+0.8**
BOQS	**Boqueron**	**5.18**	**306**	*e*P	**Pn**	**05 25 15.1**	**+0.8**
BOQS				*e*S	**Sn**	**05 26 13.6**	**+0.3**
SBLS	**San Blas**	**5.51**	**305**	*e*P	**Pn**	**05 25 19.5**	**+0.8**
RTR	**El Retiro**	**5.56**	**306**	*e*P	**Pn**	**05 25 20.0**	**+0.6**
CMIG	**Matias Romero**	**11.53**	**305**	P	**Pn**	**05 26 38.6**	**-0.3**
	0.4nm,0.3s,baz=120,slow=14,SNR=5.4						
CMIG				S	**Sn**	**05 28 43.7**	**-2.6**
	0.3nm,0.3s,baz=344,slow=18,SNR=3.7						
CMIG	**Matias Romero**	**11.53**	**305**	P	**Pn**	**05 26 38.6**	**-0.3**
CMIG				S	**Sn**	**05 28 43.7**	**-2.6**
ROSC	**El Rosal**	**12.04**	**118**	*e*Pn	**Pn**	**05 26 46.8**	**+1.1**
SDV	**Santo Domingo**	**14.26**	**96**	P	**Pn**	**05 27 16.5**	**+2.3**
	0.3nm,0.3s,baz=272,slow=7.2,SNR=8.3						
KVTX	**Kingsville**	**20.71**	**326**	*e*P	**P**	**05 28 20.9**	**-6.8**
	29nm,1.0s						
LRAL	**Lakeview Retre**	**22.32**	**356**	*e*P	**P**	**05 28 45.5**	**+0.8**
	14nm,0.8s,mb4.5						
GOGA	**Godfrey**	**22.66**	**3**	*e*P	**P**	**05 28 48.1**	**+0.2**
	16nm,0.6s,mb4.6						
COW	**Cow Castle Cre**	**22.93**	**9**	*e*P	**P**	**05 28 51.1**	**+0.8**
JSC	**Jenkinsville**	**23.73**	**8**	*e*P	**P**	**05 28 58.2**	**+0.6**
JSC				*e*pP		05 29 24.1	
SWET	**Sewanee**	**24.43**	**358**	*e*P	**P**	**05 29 04.0**	**0.0**
CPCT	**Cooper Cave**	**24.66**	**1**	*e*P	**P**	**05 29 06.7**	**+0.7**
TKL	**Tuckaleechee C**	**24.89**	**2**	P	**P**	**05 29 09.0**	**+0.9**
	3.5nm,0.6s,mb4.0,baz=168,slow=11,SNR=7.2						
MIAR	**Mount Ida**	**25.01**	**343**	*e*P	**P**	**05 29 09.5**	**+0.2**
	4.6nm,0.8s,mb4.1						
WVT	**Waverly**	**25.46**	**355**	*e*P	**P**	**05 29 12.4**	**-0.9**
	4.6nm,0.7s,mb4.1						
TXAR	**Lajitas Array**	**25.47**	**319**	P	**P**	**05 29 13.5**	**0.0**
	0.2nm,0.3s,mb3.1,baz=145,slow=11,SNR=7.5						
TXAR				pP	pP	05 29 43.9	+0.4
	1.4nm,0.8s,baz=139,slow=11,SNR=9.2						
TXAR				PcP	PcP	05 32 42.3	+0.6
	0.6nm,0.9s,baz=166,slow=4.2,SNR=4.5						
PARMO	**Parma**	**26.22**	**351**	*e*P	**P**	**05 29 19.5**	**-0.6**
ACSO	**Alum Creek Sta**	**29.48**	**3**	*e*P	**P**	**05 29 48.8**	**-0.3**
	7.1nm,0.6s,mb4.6						
LPAZ	**La Paz**	**31.57**	**148**	P	**P**	**05 30 10.0**	**+2.3**
	0.6nm,0.8s,mb3.4,baz=333,slow=14,SNR=3.3						
LPAZ				PcP	PcP	05 32 58.1	+1.1
	0.5nm,0.6s,baz=342,slow=3.2,SNR=3.2						
BINY	**Binghamton**	**32.37**	**13**	*e*P	**P**	**05 30 14.9**	**+0.5**
	7.9nm,0.9s,mb4.4						
ECSD	**EROS Data Cent**	**34.44**	**345**	*e*P	**P**	**05 30 30.4**	**-2.0**
	3.0nm,0.4s,mb4.4						
RWWY	**Rawlins**	**36.53**	**332**	*e*P	**P**	**05 30 50.0**	**-0.3**
	37nm,0.6s,mb5.2						
PDAR	**Pinedale Array**	**38.48**	**331**	PcP	PcP	05 33 16.6	-0.2
	0.3nm,0.5s,baz=133,slow=6.6,SNR=3.0						
AGMN	**Agassiz Nation**	**38.59**	**348**	*e*P	**P**	**05 31 05.5**	**-1.9**
	7.8nm,1.1s,mb4.2						
HWUT	**Hardware Ranch**	**38.64**	**327**	*e*P	**P**	**05 31 10.8**	**+2.7**
	4.4nm,0.4s,mb4.4						
RLMT	**Red Lodge**	**40.15**	**333**	*e*P	**P**	**05 31 23.3**	**+2.9**
	19nm,1.3s,mb4.6						
ULM	**Lac du Bonnet**	**40.46**	**349**	P	**P**	**05 31 20.5**	**-2.4**
	4.0nm,0.6s,mb4.2,baz=178,slow=8.4,SNR=2.9						
ULM	**Lac du Bonnet**	**40.46**	**349**	P	**P**	**05 31 20.5**	**-2.4**
NVAR	**Mina Array Bea**	**40.62**	**318**	P	**P**	**05 31 26.8**	**+2.3**
	1.3nm,0.7s,mb3.7,baz=135,slow=7.4,SNR=7.5						
NVAR				PcP	PcP	05 33 24.7	+1.0
	1.3nm,0.6s,baz=138,slow=4.3,SNR=8.6						
CFAA	**Coronel Fontan**	**45.01**	**160**	PcP	PcP	05 33 39.1	+0.6
	0.1nm,0.5s,baz=22,slow=5.4,SNR=3.7						
CFAA				LR	LR	05 48 15.0	
	comp=Z,216nm,19.0s,baz=48,slow=32						
SCHQ	**Schefferville**	**46.32**	**14**	P	**P**	**05 32 08.3**	**-1.5**
	6.9nm,0.6s,mb4.5,baz=235,slow=6.7,SNR=9.3						
PLCA	**Paso Flores**	**52.87**	**166**	P	**P**	**05 33 00.7**	**+1.1**
	1.2nm,0.5s,mb3.9,baz=314,slow=10,SNR=3.6						
PLCA				PcP	PcP	05 34 07.2	+0.3
	0.8nm,0.5s,baz=297,slow=2.3,SNR=3.3						
YKA	**Yellowknife Ar**	**55.95**	**344**	P	**P**	**05 33 19.4**	**-2.1**
	0.4nm,0.5s,mb3.5,baz=141,slow=7.0,SNR=7.8						
YKA	**Yellowknife Ar**	**55.95**	**344**	P	**P**	**05 33 19.4**	**-2.2**
SUMG	**Summit**	**67.71**	**14**	*e*P	**P**	**05 34 38.2**	**-1.8**
	12nm,1.3s,mb4.5						
ESDC	**Sonseca Array**	**76.38**	**52**	P	**P**	**05 35 31.2**	**-1.2**
	1.9nm,0.6s,mb3.9,baz=279,slow=5.6,SNR=10						
ESDC	**Sonseca Array**	**76.38**	**52**	P	**P**	**05 35 31.2**	**-1.2**
TORD	**Torodi Ar. Bea**	**84.43**	**78**	P	**P**	**05 36 13.8**	**-2.0**
	0.3nm,0.6s,mb3.2,baz=299,slow=5.9,SNR=3.4						
ARCES	**ARCESS Array B**	**87.05**	**19**	P	**P**	**05 36 25.2**	**-2.4**
	0.7nm,0.8s,mb3.5,baz=260,slow=5.2,SNR=5.6						
ASAR	**Alice Springs**	**140.80**	**246**	PKhKP		05 43 06.0	
	0.4nm,0.4s,baz=104,slow=3.0,SNR=5.1						
WRA	**Warramunga Arr**	**141.06**	**252**	PKhKP		05 43 07.3	
	0.9nm,0.6s,baz=94,slow=2.9,SNR=16						
WRA				PKP	PKPdf	05 43 13.1	+0.3
	1.7nm,0.7s,baz=91,slow=2.5,SNR=12						
WRA	**Warramunga Arr**	**141.06**	**252**	PKP	PKPdf	05 43 13.1	+0.3

*IDC **12** 05:30:40.9±0.5, 50°.09S×114°.42W, h0km, mb4.6/15, mb1 4.7/15, mb1mx4.7/17, mbtmp4.5/15, MS5.6/17, Ms1 5.6/17, ms1mx5.5/19, Error ellipse: s-maj=26.0km s-min=14.8km az=153.0*

*NEIC **12** 05:30:43.9±0.3, 50°.16S×114°.17W, h10km, mb5.3/60, MS5.6/196, MW5.9, MW5.8, Error ellipse: s-maj=13.2km s-min=10.6km az=112.0, Moment Tensor Solution. s31 Moment tensor: Scale 10^{17}Nm; M_{rr}=0.63; $M_{\theta\theta}$3.43; $M_{\phi\phi}$=-2.80; $M_{r\theta}$=0.30; $M_{\theta\phi}$5.43; $M_{r\phi}$0.16; Best double couple: $M_0$6.30000×10^{17} NP1:ϕ_s105.00000°, δ89.00000°, λ-3.00000°. NP2:ϕ_s195.00000°, δ87.00000°, λ-179.00000°. Principal axes: T 6.5800, Plg1.0000°, Azm149.0000°; N -0.6200, Plg86.0000°, Azm265.0000°; P -5.9600, Plg3.0000°, Azm59.0000°;*

*ISCJB **12** 05:30:43.2±0.3, 50°.08S±0°.06×113°.9W±0°.1, h10km, mb5.1/76, MS5.6/223 Error ellipse: s-maj=11.6km s-min=8.8km az=164.6*

*MOS **12** 05:30:44.0±2.3, 49°.94S×114°.14W, h10km, mb5.4/19, MS5.5/37, Error ellipse: s-maj=26.5km s-min=11.3km az=80.2*

*SZGRF **12** 05:30:44.6, 50°.15S×114°.77W, h33km, mb5.8, Southern East Pacific Rise*

*BJI **12** 05:30:44.9, 50°.20S×114°.20W, h10km, mB5.6/21, Ms5.8/25, Ms7 5.5/25*

*GCMT **12** 05:30:48.0±0.1, 50°.03S×114°.50W, h15km, MW5.9, Moment Tensor Solution. s108,c233; s78,c106; Moment tensor: Scale 10^{17}Nm; M_{rr}=0.58±.06; $M_{\theta\theta}$3.08±.07; $M_{\phi\phi}$-2.49±.07; $M_{r\theta}$0.65±.12; $M_{\theta\phi}$8.22±.07; $M_{r\phi}$1.29±.14; Best double couple: $M_0$8.80000×10^{17} NP1:ϕ_s100.00000°, δ81.00000°, λ2.00000°. NP2: ϕ_s9.00000°, δ88.00000°, λ171.00000°. Principal axes: T 9.1400, Plg8.0000°, Azm324.0000°; N -0.6900, Plg81.0000°, Azm178.0000°; P -8.4400, Plg5.0000°, Azm55.0000°; Data Used: II IU IC G CN. Surface waves: sta=110, comp=224, per= 50.*

ISC 12 05:30:44.6±0.3, 50°.07S±0°.06×114°.2W±0°.1, h10km, n467, σ1§25/131, mb5.1/76, MS5.6/223, 15C-3D, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USHA	**Ushuaia**	**27.87**	**118**	LR	LR	05 44 48.8	
	comp=Z,23μm,20.0s,MS5.8,baz=242,slow=30						
PMSA	**Palmer Station**	**29.77**	**139**	LR	LR	05 45 27.7	
	comp=Z,25μm,20.0s,MS5.8,baz=253,slow=30						
PMSA	**Palmer Station**	**29.77**	**139**	PFAKE		05 37 00.0	+9.1
PMSA				LR	LR		
	comp=Z,28μm,21.0s,MS5.9						
RKT	**Rikitea**	**31.45**	**321**	*e*S	**S**	**05 42 19.2**	**+5.4**
	comp=Z,2μm,28.5s						
RKT				*e*LR	LR	05 45 11.1	
	comp=Z,42μm,27.8s,baz=151						
PLCA	**Paso Flores**	**31.61**	**90**	P	**P**	**05 37 05.3**	**-2.0**
	comp=Z,3.9nm,1.1s,mb4.1,baz=315,slow=5.7,SNR=2.4						
PLCA				LR	LR	05 46 34.0	
	comp=Z,6μm,22.0s,MS5.2,baz=232,slow=30						
PLCA	**Paso Flores**	**31.61**	**90**	*e*P	**P**	**05 37 08.0**	**+0.7**
PLCA				pmax	pmax		
	comp=Z,45nm,1.7s						
PLCA				MLR	MLR		
	comp=Z,8μm,19.0s						
PLCA	**Paso Flores**	**31.61**	**90**	*e*P	**P**	**05 37 08.0**	**+0.6**
	comp=Z,45nm,1.7s,mb5.0						
PLCA				LR	LR		
	comp=Z,8μm,19.0s,MS5.4						
TRQA	**Tornquist**	**38.61**	**92**	*e*P	**P**	**05 38 06.9**	**-0.8**
	comp=Z,76nm,1.4s,mb5.2						
CFAA	**Coronel Fontan**	**38.62**	**79**	P	**P**	**05 38 06.6**	**-1.2**
	comp=Z,3.3nm,1.1s,mb4.0,baz=227,slow=10,SNR=17						
CFAA	**Coronel Fontan**	**38.62**	**79**	P	**P**	**05 38 06.6**	**-1.2**
LCO	**Las Campanas**	**38.86**	**74**	*e*P	**P**	**05 38 10.7**	**+0.9**
	comp=Z,81nm,1.4s,mb5.3						
LCO				LR	LR		
	comp=Z,7μm,21.0s,MS5.5						
SBA	**Scott Base**	**39.36**	**199**	*e*P	**P**	**05 38 13.8**	**+0.3**
SBA				*e*		05 40 15.1	
SBA				*e*		05 44 12.7	
SBA				pmax	pmax		
	comp=Z,105nm,2.0s,mb5.2						
SBA				MLR	MLR		
	comp=Z,3μm,20.0s,MS5.0						
SBA	**Scott Base**	**39.36**	**199**	*e*P	**P**	**05 38 13.8**	**+0.2**
	comp=Z,105nm,2.0s,mb5.2						
SBA				*e*PcP	PcP	05 40 15.1	-6.5
SBA				*e*ScP	ScP	05 44 12.7	+2.7
SBA				LR	LR		
	comp=Z,3μm,20.0s,MS5.0						
QSPA	**South Pole Qui**	**40.14**	**180**	P	**P**	**05 38 20.5**	**+0.5**
	comp=Z,23nm,1.0s,mb4.9,baz=103,slow=4.0,SNR=26						
QSPA				LR	LR	05 53 43.9	
	comp=Z,9μm,18.3s,MS5.6,baz=293,slow=34						
QSPA	**South Pole Qui**	**40.14**	**180**	*e*P	**P**	**05 38 21.2**	**+1.2**
	comp=Z,45nm,1.1s,mb5.1						
QSPA				*e*PP	PP	05 39 46.6	-5.3
QSPA				LR	LR		
	comp=Z,9μm,19.0s,MS5.6						
PPT	**Papeete**	**43.09**	**306**	*e*S	**S**	**05 45 14.5**	**+3.8**
	comp=Z,3μm,25.5s						
PPT				*e*LQ		05 48 30.1	
	comp=Z,38μm,27.5s						
PPT				*e*LR	LR	05 50 24.1	
	comp=Z,31μm,27.0s,baz=149						
PPT	**Papeete**	**43.09**	**306**	LR	LR	05 51 38.6	
	comp=Z,8μm,19.1s,MS5.6,baz=142,slow=29						
LPA	**La Plata**	**43.10**	**91**	*de*P	**P**	**05 38 47.0**	**+2.2**
LPA				*e*S	**S**	**05 45 14.0**	**+3.3**
RAR	**Rarotonga**	**45.92**	**292**	PFAKE		05 39 20.0	+13
RAR				LR	LR		
	comp=Z,5μm,22.0s,MS5.4						
TAOE	**Nuku Hiva Isla**	**46.42**	**323**	*e*S	**S**	**05 46 03.1**	**+4.0**
	comp=Z,2μm,24.8s						
TAOE				*e*LR	LR	05 52 11.1	
	comp=Z,28μm,26.6s						
SNZO	**South Karori**	**48.72**	**252**	PFAKE		05 39 40.0	+11
SNZO				LR	LR		
	comp=Z,9μm,20.0s,MS5.8						
NNA	**Nana**	**48.75**	**52**	*e*P	**P**	**05 39 29.4**	**-0.1**
	comp=Z,28nm,1.2s,mb5.2						
NNA				LR	LR		
	comp=Z,11μm,19.0s,MS5.8						
CPUP	**Villa Florida**	**49.17**	**83**	P	**P**	**05 39 32.3**	**-0.3**
	comp=Z,6.7nm,0.8s,mb4.8,baz=223,slow=11,SNR=14						
CPUP				LR	LR	05 56 49.8	
	comp=Z,9μm,20.1s,MS5.7,baz=214,slow=32						
CPUP	**Villa Florida**	**49.17**	**83**	P	**P**	**05 39 30.7**	**-1.9**
CPUP				pmax	pmax		
	comp=Z,56nm,1.0s						
CPUP				MLR	MLR		
	comp=Z,1μm,21.0s						
CPUP	**Villa Florida**	**49.17**	**83**	P	**P**	**05 39 30.7**	**-1.9**
	comp=Z,56nm,1.0s,mb5.5						
CPUP				LR	LR		
	comp=Z,1μm,21.0s,MS4.9						
RPZ	**Rata Peaks**	**49.52**	**247**	P	**P**	**05 39 32.6**	**-2.5**
	comp=Z,13nm,1.1s,mb4.9,baz=152,slow=15,SNR=4.1						
RPZ				LR	LR	05 54 49.3	
	comp=Z,5μm,21.2s,MS5.5,baz=115,slow=29						
LPAZ	**La Paz**	**49.99**	**64**	P	**P**	**05 39 38.6**	**-0.4**
	comp=Z,7.2nm,0.8s,mb4.8,baz=195,slow=5.2,SNR=25						
LPAZ				LR	LR	05 55 46.5	
	comp=Z,5μm,18.7s,MS5.5,baz=230,slow=30						
LPAZ	**La Paz**	**49.99**	**64**	P	**P**	**05 39 38.6**	**-0.4**
LPAZ				*e*		05 41 30.9	
LPAZ	**La Paz**	**49.99**	**64**	P	**P**	**05 39 38.6**	**-0.4**
LPAZ				*e*PP	PP	05 41 30.9	-3.0
LPAZ				LR	LR	05 55 46.5	
DRV	**Dumont d'Urvil**	**50.85**	**210**	S	**S**	**05 47 04.0**	**+3.5**
DRV				L		05 52 00.0	
RAO	**Raoul Island**	**51.64**	**269**	PFAKE		05 40 00.0	+8.7
RAO				LR	LR		
	comp=Z,3μm,21.0s,MS5.3						
ATAH	**Atahualpa**	**52.17**	**47**	P	**P**	**05 39 54.2**	**-1.1**
	comp=Z,5.7nm,0.9s,mb4.5,baz=236,slow=9.0,SNR=2.4						
PAYG	**Puerto Ayora**	**53.26**	**30**	PFAKE		05 40 20.0	+17
PAYG				LR	LR		
	comp=Z,8μm,20.0s,MS5.8						
MAIT	**Maitri**	**53.39**	**160**	*e*P	**P**	**05 40 04.4**	**+0.7**
NVL	**N'lazarevskaya**	**53.42**	**160**	*e*P	**P**	**05 40 03.3**	**-0.6**
NVL				*e*S	**S**	**05 47 36.7**	**+1.1**
NVL				pmax	pmax		
	comp=Z,31nm,1.1s,mb5.2						
NVL				MLR	MLR		
	comp=Z,11μm,16.0s,MS6.0						
SPB	**Sao Paulo**	**57.45**	**89**	PFAKE		05 40 50.0	+16
SPB				LR	LR		
	comp=Z,3μm,19.0s,MS5.4						
OTAV	**Otavalo**	**58.66**	**43**	*e*P	**P**	**05 40 41.5**	**-0.6**
	comp=Z,15nm,0.9s,mb5.0						
OTAV				LR	LR		
	comp=Z,4μm,20.0s,MS5.5						
CASY	**Casey**	**59.07**	**199**	PFAKE		05 41 00.0	+16
CASY				LR	LR		
	comp=Z,2μm,20.0s,MS5.3						
MSVF	**Nonsavu**	**62.38**	**275**	PFAKE		05 41 20.0	+12
MSVF				LR	LR		
	comp=Z,2μm,20.0s,MS5.3						
MAW	**Mawson**	**62.63**	**179**	P	**P**	**05 41 06.4**	**-2.0**
	comp=Z,7.8nm,0.9s,mb4.8,baz=193,slow=8.9,SNR=9.3						
MAW				LR	LR	06 07 31.8	
	comp=Z,10μm,18.0s,MS6.0,baz=178,slow=35						
MAW	**Mawson**	**62.63**	**179**	*e*P	**P**	**05 41 07.5**	**-1.0**
TAU	**Tasmania Unive**	**63.35**	**234**	PFAKE		05 41 20.0	+6.4
TAU				LR	LR		
	comp=Z,9μm,22.0s,MS5.9						
XMAS	**Kiritimati**	**63.79**	**310**	PFAKE		05 41 30.0	+13
XMAS				LR	LR		
	comp=Z,6μm,20.0s,MS5.8						
ROSC	**El Rosal**	**64.60**	**45**	P	**P**	**05 41 21.7**	**-0.5**
	comp=Z,10nm,0.9s,mb4.9,baz=105,slow=7.8,SNR=9.3						
ROSC				LR	LR	06 04 28.3	
	comp=Z,4μm,19.4s,MS5.7,baz=197,slow=31						
ROSC	**El Rosal**	**64.60**	**45**	*e*P	**P**	**05 41 22.0**	**-0.2**
JTS	**JuntasAbangare**	**65.30**	**32**	*e*P	**P**	**05 41 26.5**	**-0.1**
JTS				pmax	pmax		
	comp=Z,2.0nm,1.5s						
JTS				MLR	MLR		
	comp=Z,4μm,22.0s						
JTS	**JuntasAbangare**	**65.30**	**32**	*e*P	**P**	**05 41 26.4**	**-0.2**
	comp=Z,1.9nm,1.5s						
JTS				LR	LR		
	comp=Z,4μm,22.0s,MS5.6						
BCIP	**Isla Barro Col**	**66.14**	**37**	PFAKE		05 41 40.0	+8.0
BCIP				LR	LR		
	comp=Z,6μm,19.0s,MS5.8						
DZM	**Mont Dzumac**	**66.70**	**263**	*e*S	S	05 50 32.2	+4.8
DZM				*e*SS	SS	05 54 50.4	+5.8
	comp=Z,3μm,28.9s						
DZM				*e*LQ		05 58 49.7	
	comp=Z,978nm,26.7s						
DZM				*e*LR	LR	06

JCT Junction City 81.19 13 P **P** **05 42 54.1 -6.0**
JCT pmax pmax
comp=Z,81nm,1.3s,mb5.5
JCT MLR MLR
comp=Z,2μm,21.0s,MS5.3
JCT Junction City 81.19 13 P **P** **05 42 54.1 -6.0**
comp=Z,81nm,1.3s,mb5.5
JCT LR LR
comp=Z,2μm,21.0s,MS5.3
HKT Hockley 81.31 16 *eP* **P** **05 43 00.2 -0.5**
HKT pmax pmax
comp=Z,55nm,1.6s,mb5.2
HKT MLR MLR
comp=Z,2μm,19.0s,MS5.5
HKT Hockley 81.31 16 *eP* **P** **05 43 00.2 -0.5**
comp=Z,55nm,1.6s,mb5.2
HKT LR LR
comp=Z,2μm,19.0s,MS5.5
ANWB Willy Bob 81.69 50 PFAKE 05 43 10.0 +7.0
ANWB LR LR
comp=Z,3μm,20.0s,MS5.7
MNTX Cornudas Mount 81.77 8 P **P** **05 43 01.4 -1.8**
comp=Z,52nm,2.1s,mb5.1
MNTX LR LR
comp=Z,2μm,20.0s,MS5.5
TUC Tucson 82.07 3 *eP* **P** **05 43 05.0 +0.3**
TUC pmax pmax
comp=Z,34nm,1.4s,mb5.1
TUC MLR MLR
comp=Z,3μm,21.0s,MS5.6
TUC Tucson 82.07 3 *eP* **P** **05 43 05.0 +0.4**
comp=Z,34nm,1.4s,mb5.1
TUC LR LR
comp=Z,3μm,21.0s,MS5.6
GDL2 Guadalupe Moun 82.36 8 *eP* **P** **05 43 05.8 -0.4**
BAR Barrett 82.41 358 *eP* **P** **05 43 08.5 +2.1**
comp=Z,27nm,1.6s,mb4.9
JOHN Johnston Islan 82.41 307 PFAKE 05 43 20.0 +13
JOHN LR LR
comp=Z,3μm,20.0s,MS5.6
DWPF Disney 83.08 29 *eP* **P** **05 43 07.0 -3.1**
comp=Z,38nm,1.4s,mb5.2
DWPF LR LR
comp=Z,3μm,19.0s,MS5.7
CPRX Cap Rock 83.23 9 *eP* **P** **05 43 10.8 0.0**
comp=Z,12nm,1.3s,mb4.8
NATX Nacogdoches 83.28 17 PFAKE 05 43 20.0 +9.0
NATX LR LR
comp=Z,2μm,20.0s,MS5.5
PFO Pinyon Flat Ob 83.33 358 *eP* **P** **05 43 09.3 -1.9**
PFO pmax pmax
comp=Z,30nm,1.4s,mb5.1
PFO MLR MLR
comp=Z,3μm,19.0s,MS5.7
PFO Pinyon Flat Ob 83.33 358 *eP* **P** **05 43 09.3 -1.9**
comp=Z,30nm,1.4s,mb5.1
PFO LR LR
comp=Z,3μm,19.0s,MS5.7
BNM Barren Site 84.11 6 *eP* **P** **05 43 13.8 -1.4**
comp=Z,77nm,2.3s,mb5.4
BRAL Brewton 84.23 23 *eP* **P** **05 43 17.0 +1.1**
comp=Z,132nm,1.4s,mb5.9
BRAL LR LR
comp=Z,2μm,20.0s,MS5.5
LPM Los Pinos Moun 84.27 6 *eP* **P** **05 43 18.2 +2.2**
LAZ Ladron 84.33 6 *eP* **P** **05 43 15.1 -1.2**
comp=Z,17nm,1.8s,mb4.9
LDFC Landfair 84.78 359 *eP* **P** **05 43 18.0 -0.6**
comp=Z,29nm,1.2s,mb5.3
ANMO Albuquerque 84.92 6 *eP* **P** **05 43 18.6 -0.7**
ANMO pmax pmax
comp=Z,5.0nm,1.3s
ANMO MLR MLR
comp=Z,2μm,21.0s
ANMO Albuquerque 84.92 6 *eP* **P** **05 43 18.6 -0.6**
comp=Z,4.7nm,1.3s,mb4.5
ANMO LR LR
comp=Z,2μm,21.0s,MS5.5
GSC Goldstone 85.03 358 *eP* **P** **05 43 18.5 -1.3**
GSC pmax pmax
comp=Z,19nm,1.2s,mb5.1
GSC Goldstone 85.03 358 *eP* **P** **05 43 18.5 -1.3**
comp=Z,19nm,1.2s,mb5.1
ASAR Alice Springs 85.16 239 P **P** **05 43 17.6 -3.5**
comp=Z,9.2nm,1.2s,mb4.8,baz=143,slow=5.0,SNR=14
WUAZ Wupatki 85.25 2 *eP* **P** **05 43 19.5 -1.4**
comp=Z,29nm,1.4s,mb5.2
WUAZ LR LR
comp=Z,2μm,21.0s,MS5.5
AMTX Amarillo 85.30 10 *eP* **P** **05 43 20.5 -0.7**
comp=Z,84nm,2.1s,mb5.5
AMTX LR LR
comp=Z,3μm,20.0s,MS5.6
ISA Isabella 85.44 356 *eP* **P** **05 43 22.0 +0.1**
ISA pmax pmax
comp=Z,21nm,1.2s,mb5.1
ISA Isabella 85.44 356 *eP* **P** **05 43 22.0 +0.2**
comp=Z,21nm,1.2s,mb5.1
WMOK Wichita Mounta 85.53 13 *eP* **P** **05 43 24.8 +2.5**
WMOK pmax pmax
comp=Z,12nm,1.2s,mb5.0
WMOK MLR MLR
comp=Z,1μm,20.0s,MS5.3
WMOK Wichita Mounta 85.53 13 *eP* **P** **05 43 24.8 +2.5**
comp=Z,12nm,1.2s,mb5.0
WMOK LR LR
comp=Z,1μm,20.0s,MS5.3
NWAO Narrogin (SRO) 85.67 221 PFAKE 05 43 30.0 +6.5
NWAO LR LR
comp=Z,4μm,22.0s,MS5.8
DAC Darwin (Calif) 86.02 357 PFAKE 05 43 40.0 +15
DAC LR LR
comp=Z,4μm,21.0s,MS5.8
LRAL Lakeview Retre 86.17 23 *eP* **P** **05 43 25.0 -0.5**
comp=Z,14nm,1.1s,mb5.1
LRAL LR LR
comp=Z,1μm,20.0s,MS5.4
MIAR Mount Ida 86.19 17 *eP* **P** **05 43 23.2 -2.4**
MIAR pmax pmax
comp=Z,56nm,2.0s,mb5.5
MIAR MLR MLR
comp=Z,2μm,20.0s,MS5.5
MIAR Mount Ida 86.19 17 *eP* **P** **05 43 23.2 -2.4**
comp=Z,56nm,2.0s,mb5.5
MIAR LR LR
comp=Z,2μm,20.0s,MS5.5
UALR University of 86.65 18 *eP* **P** **05 43 28.3 +0.5**
comp=Z,31nm,1.2s,mb5.4
OXF Oxford 87.02 20 PFAKE 05 43 40.0 +10
OXF LR LR
comp=Z,1μm,20.0s,MS5.2
MVCO Mesa Verde 87.04 5 *eP* **P** **05 43 29.0 -0.7**
comp=Z,32nm,1.2s,mb5.4
MVCO LR LR
comp=Z,2μm,19.0s,MS5.6
GOGA Godfrey 87.45 25 *eP* **P** **05 43 31.1 -0.7**
GOGA pmax pmax
comp=Z,31nm,1.3s,mb5.4
GOGA MLR MLR
comp=Z,971nm,22.0s,MS5.2
GOGA Godfrey 87.45 25 *eP* **P** **05 43 31.1 -0.7**
comp=Z,31nm,1.3s,mb5.4
GOGA LR LR
comp=Z,971nm,22.0s,MS5.2
SDCO Great Sand Dun 87.77 7 *eP* **P** **05 43 33.5 +0.3**
comp=Z,37nm,1.9s,mb5.3
SDCO LR LR
comp=Z,1μm,19.0s,MS5.4
TPH Tonopah 87.81 358 PFAKE 05 43 40.0 +6.6
TPH LR LR
comp=Z,2μm,20.0s,MS5.6
WRA Warramunga Arr 87.88 241 P **P** **05 43 29.7 -4.7**
comp=Z,3.5nm,1.3s,mb4.4,baz=139,slow=4.1,SNR=3.4
WRA LR LR 06 19 44.5
comp=Z,4μm,18.4s,MS5.8,baz=180,slow=34
WRA Warramunga Arr 87.88 241 P **P** **05 43 29.7 -4.7**
WRA LR LR 06 19 44.5
WRAB Tennant Creek 87.88 241 PFAKE 05 43 40.0 +5.6
WRAB LR LR
comp=Z,4μm,19.0s,MS5.8
CMB Columbia Colle 87.90 355 *eP* **P** **05 43 34.4 +0.6**
CMB pmax pmax
comp=Z,8.0nm,1.1s,mb4.9
CMB MLR MLR
comp=Z,5μm,19.0s,MS5.9
CMB Columbia Colle 87.90 355 *eP* **P** **05 43 34.4 +0.6**
comp=Z,8.4nm,1.1s,mb4.9
CMB LR LR
comp=Z,5μm,19.0s,MS5.9
PV01 Paradox Valley 87.96 4 *eP* **P** **05 43 33.6 -0.5**
comp=Z,922nm,1.3s
NHSC New Hope 88.11 28 *eP* **P** **05 43 38.1 +3.1**
comp=Z,118nm,1.4s,mb5.9
NHSC LR LR
comp=Z,299nm,22.0s,MS4.7
MCCM Marconi Confer 88.17 353 PFAKE 05 43 50.0 +15
MCCM LR LR
comp=Z,5μm,19.0s,MS5.9
PV10 Paradox Valley 88.18 4 *eP* **P** **05 43 35.0 -0.1**
NVAR Mina Array Bea 88.19 357 P **P** **05 43 36.3 +1.1**
comp=Z,2.8nm,1.0s,mb4.4,baz=191,slow=5.4,SNR=4.6
PV04 Paradox Valley 88.20 4 *eP* **P** **05 43 41.1 +5.8**
MVU Marysvale 88.21 2 PFAKE 05 43 50.0 +15
MVU LR LR
comp=Z,3μm,19.0s,MS5.8
MSU Marysvale 88.22 2 *eP* **P** **05 43 33.8 -1.5**
SWET Sewanee 88.51 23 *eP* **P** **05 43 35.9 -0.9**
SUR Sutherland 88.73 143 PFAKE 05 43 50.0 +12
SUR LR LR
comp=Z,5μm,20.0s,MS6.0
GLAT Glass 88.73 20 *eP* **P** **05 43 37.8 0.0**
SRU San Rafael 88.86 3 *eP* **P** **05 43 37.8 -0.5**
SRU pmax pmax
comp=Z,18nm,1.4s,mb5.2
SRU San Rafael 88.86 3 *eP* **P** **05 43 37.8 -0.5**
comp=Z,18nm,1.4s,mb5.2
UTMT University of 88.89 20 *eP* **P** **05 43 39.0 +0.4**
comp=Z,147nm,1.6s,mb6.1
WVT Waverly 88.92 21 *eP* **P** **05 43 40.0 +1.3**
WVT pmax pmax
comp=Z,36nm,1.3s,mb5.5
WVT MLR MLR
comp=Z,1μm,20.0s,MS5.4
WVT Waverly 88.92 21 *eP* **P** **05 43 40.0 +1.2**
comp=Z,36nm,1.3s,mb5.5
WVT LR LR
comp=Z,1μm,20.0s,MS5.4
HOPS Hopland 89.03 353 PFAKE 05 43 50.0 +11
HOPS LR LR
comp=Z,5μm,21.0s,MS5.9
CPCT Cooper Cave 89.09 24 *eP* **P** **05 43 40.5 +1.0**
SHEL Horse Pasture 89.24 114 PFAKE 05 43 50.0 +9.1
SHEL LR LR
comp=Z,3μm,19.0s,MS5.7
CBKS Cedar Bluff 89.41 11 PFAKE 05 43 50.0 +9.1
CBKS LR LR
comp=Z,1μm,20.0s,MS5.3
NLU North Lily Min 89.66 2 *eP* **P** **05 43 41.5 -0.5**
comp=Z,22nm,1.2s,mb5.4
ISCO Idaho Springs 89.80 7 *eP* **P** **05 43 48.3 +5.6**
ISCO pmax pmax
comp=Z,18nm,1.5s,mb5.2
ISCO MLR MLR
comp=Z,4μm,19.0s,MS5.8
ISCO Idaho Springs 89.80 7 *eP* **P** **05 43 48.3 +5.6**
comp=Z,18nm,1.5s,mb5.2
ISCO LR LR
comp=Z,4μm,19.0s,MS5.8
DUG Dugway 89.89 1 *eP* **P** **05 43 45.2 +2.1**
DUG pmax pmax
comp=Z,15nm,1.4s,mb5.1
DUG MLR MLR
comp=Z,2μm,19.0s,MS5.6
DUG Dugway 89.89 1 *eP* **P** **05 43 45.2 +2.1**
comp=Z,15nm,1.4s,mb5.1
DUG LR LR
comp=Z,2μm,19.0s,MS5.6
DAU Daniels Canyon 90.13 2 *eP* **P** **05 43 42.6 -1.7**
SIUC Southern Illin 90.13 20 *eP* **P** **05 43 44.3 -0.1**
comp=Z,50nm,1.7s,mb5.6
FVM French Village 90.14 19 *eP* **P** **05 43 45.6 +1.2**
FVM pmax pmax
comp=Z,12nm,1.1s,mb5.1
FVM French Village 90.14 19 *eP* **P** **05 43 45.6 +1.3**
comp=Z,12nm,1.1s,mb5.1
BMN Battle Mountai 90.16 358 PFAKE 05 44 00.0 +16
BMN LR LR
comp=Z,5μm,20.0s,MS5.9
ASCN Ascension 90.21 103 PFAKE 05 44 00.0 +15
ASCN LR LR
comp=Z,3μm,20.0s,MS5.7
TZTN Tazewell 90.38 24 *eP* **P** **05 43 48.4 +2.8**
comp=Z,28nm,1.3s,mb5.4
N12A Clover Valley, 90.54 359 *eP* **P** **05 43 48.6 +2.5**
comp=Z,18nm,1.4s,mb5.2
WDC Whiskeytown Da 90.57 354 PFAKE 05 44 00.0 +14
WDC LR LR
comp=Z,5μm,20.0s,MS5.9
USIN University of 90.72 21 *eP* **P** **05 43 48.4 +1.4**
comp=Z,69nm,1.4s,mb5.8
M13A Montello 91.05 360 *eP* **P** **05 43 48.9 +0.4**
comp=Z,16nm,1.5s,mb5.1
OGNE Ogallala 91.25 9 PFAKE 05 44 00.0 +11
OGNE LR LR
comp=Z,3μm,21.0s,MS5.7
WCI Wyandotte Cave 91.29 22 PFAKE 05 44 00.0 +10
WCI LR LR
comp=Z,1μm,21.0s,MS5.3
HWUT Hardware Ranch 91.32 2 *eP* **P** **05 43 53.0 +3.3**
comp=Z,12nm,1.4s,mb5.0
HWUT LR LR
comp=Z,3μm,19.0s,MS5.8
YBH Yreka Blue Hor 91.72 354 LR LR 06 16 16.0
comp=Z,5μm,20.1s,MS6.0,baz=176,slow=30
YBH Yreka Blue Hor 91.72 354 PFAKE 05 44 00.0 +8.4
YBH LR LR
comp=Z,5μm,20.0s,MS6.0
MOD Modoc 91.75 355 PFAKE 05 44 00.0 +8.3
MOD LR LR
comp=Z,4μm,20.0s,MS5.8
BLA Blacksburg 91.87 26 PFAKE 05 44 00.0 +7.6
BLA LR LR
comp=Z,2μm,19.0s,MS5.6
WVOR Wild Horse Val 92.20 357 PFAKE 05 44 00.0 +6.2
WVOR LR LR
comp=Z,3μm,22.0s,MS5.8
AHID Auburn Hatcher 92.49 2 *eP* **P** **05 43 55.1 0.0**
comp=Z,29nm,1.5s,mb5.4
AHID LR LR
comp=Z,4μm,19.0s,MS5.9
BW06 Boulder Array 92.54 3 PFAKE 05 44 10.0 +15
BW06 LR LR
comp=Z,2μm,21.0s,MS5.6
PDAR Pinedale Array 92.54 3 P **P** **05 43 53.9 -1.5**
comp=Z,3.1nm,0.9s,mb4.7,baz=174,slow=4.2,SNR=13
PDAR LR LR 06 17 55.7
comp=Z,2μm,21.8s,MS5.6,baz=192,slow=31
HUMO Hull Mountain 92.61 354 PFAKE 05 44 10.0 +14
HUMO LR LR
comp=Z,4μm,21.0s,MS5.9
HDIL Hopedale 92.85 19 PFAKE 05 44 10.0 +13
HDIL LR LR
comp=Z,2μm,20.0s,MS5.6
BBSR BB Station 93.03 40 PFAKE 05 44 10.0 +12
BBSR LR LR
comp=Z,1μm,21.0s,MS5.4
REDW Red Top Meadow 93.09 2 *eP* **P** **05 44 00.1 +2.2**
comp=Z,21nm,1.4s,mb5.4
TPAW Teton Pass 93.22 2 *eP* **P** **05 44 00.9 +2.5**
comp=Z,14nm,1.0s,mb5.3
HLID Hailey 93.25 360 *eP* **P** **05 43 59.0 +0.4**
comp=Z,13nm,1.2s,mb5.2
HLID LR LR
comp=Z,3μm,20.0s,MS5.7
LOHW Long Hollow 93.35 3 *eP* **P** **05 43 58.9 -0.2**
comp=Z,13nm,1.5s,mb5.1
SCIA State Center 93.41 15 PFAKE 05 44 10.0 +11
SCIA LR LR
comp=Z,1μm,21.0s,MS5.3
IMW Indian Meadow 93.62 2 *eP* **P** **05 44 00.4 +0.1**
comp=Z,12nm,1.1s,mb5.2
CBN Corbin 93.69 28 PFAKE 05 44 10.0 +9.2
CBN LR LR
comp=Z,4μm,19.0s,MS5.9
BOSA Boshof 93.78 145 LR LR 06 20 18.6
comp=Z,3μm,18.2s,MS5.8,baz=203,slow=32
BOSA Boshof 93.78 145 PFAKE 05 44 10.0 +8.2
BOSA LR LR
comp=Z,3μm,22.0s,MS5.8
ACSO Alum Creek Sta 94.00 23 PFAKE 05 44 10.0 +7.8
ACSO LR LR
comp=Z,1μm,21.0s,MS5.4
RSSD Black Hills 94.22 7 *eP* **P** **05 44 03.0 -0.1**
RSSD MLR MLR
comp=Z,2μm,19.0s,MS5.6
LKWY Lake 94.31 3 PFAKE 05 44 10.0 +6.5
LKWY LR LR
comp=Z,4μm,22.0s,MS5.8
MCWV Mont Chateau 94.31 26 PFAKE 05 44 10.0 +6.4
MCWV LR LR
comp=Z,3μm,19.0s,MS5.7
QLMT Earthquake Lak 94.54 2 *eP* **P** **05 44 05.8 +1.3**
BMO Blue Mountains 94.58 358 PFAKE 05 44 20.0 +15
BMO LR LR
comp=Z,3μm,19.0s,MS5.8
MBWA Marble Bar 94.60 229 PFAKE 05 44 20.0 +14
MBWA LR LR
comp=Z,3μm,20.0s,MS5.7
COR Corvallis 94.61 353 PFAKE 05 44 20.0 +15
COR LR LR
comp=Z,2μm,19.0s,MS5.5
ECSD EROS Data Cent 94.66 13 *eP* **P** **05 44 05.8 +0.6**
comp=Z,77nm,2.3s,mb5.7
ECSD LR LR
comp=Z,2μm,19.0s,MS5.5
RLMT Red Lodge 94.90 3 PFAKE 05 44 20.0 +14
RLMT LR LR
comp=Z,2μm,20.0s,MS5.6
JFWS Jewell Farm 94.93 17 PFAKE 05 44 20.0 +14
JFWS LR LR
comp=Z,1μm,21.0s,MS5.3
DLMT Dillon 95.06 1 *eP* **P** **05 44 06.1 -0.7**
comp=Z,25nm,1.5s,mb5.4
BOZ Bozeman (W) 95.36 2 *eP* **P** **05 44 09.7 +1.5**
BOZ pmax pmax
comp=Z,14nm,1.6s,mb5.1
BOZ MLR MLR
comp=Z,2μm,19.0s,MS5.5
BOZ Bozeman (W) 95.36 2 *eP* **P** **05 44 09.7 +1.5**
comp=Z,14nm,1.6s,mb5.2
BOZ LR LR
comp=Z,2μm,19.0s,MS5.5
SSPA Standing Stone 95.77 27 PFAKE 05 44 20.0 +10
SSPA LR LR
comp=Z,2μm,20.0s,MS5.7
AAM Ann Arbor 95.78 22 PFAKE 05 44 20.0 +10
AAM LR LR
comp=Z,2μm,22.0s,MS5.5
MIDW Midway 95.93 308 PFAKE 05 44 20.0 +8.6
MIDW LR LR
comp=Z,3μm,22.0s,MS5.7
HAWA Hanford 96.19 356 PFAKE 05 44 20.0 +8.0
HAWA LR LR
comp=Z,2μm,21.0s,MS5.5
MSO Missoula 96.51 0 PFAKE 05 44 20.0 +6.5
MSO LR LR
comp=Z,720nm,21.0s,MS5.1
ERPA Erie 96.56 25 PFAKE 05 44 20.0 +6.2
ERPA LR LR
comp=Z,2μm,20.0s,MS5.6
LAO LASA Array 96.62 5 PFAKE 05 44 30.0 +16
LAO LR LR
comp=Z,1μm,20.0s,MS5.4
LBTB Lobatse 97.16 144 PFAKE 05 44 30.0 +13
LBTB LR LR
comp=Z,7μm,20.0s,MS6.1
NLWA Neilton Lookou 97.44 353 PFAKE 05 44 30.0 +12
NLWA LR LR
comp=Z,2μm,21.0s,MS5.5
BINY Binghamton 97.77 28 PFAKE 05 44 30.0 +11
BINY LR LR
comp=Z,2μm,20.0s,MS5.7
EGMT Eagleton 97.78 3 *eP* **P** **05 44 21.2 +2.1**
comp=Z,23nm,1.8s,mb5.4
EGMT LR LR
comp=Z,2μm,19.0s,MS5.6
WAKE Wake Island 97.87 291 PFAKE 05 44 30.0 +10
WAKE LR LR
comp=Z,1μm,21.0s,MS5.3
GLMI Grayling 97.94 21 PFAKE 05 44 30.0 +10
GLMI LR LR
comp=Z,2μm,20.0s,MS5.5
NEW Newport 97.98 358 PFAKE 05 44 30.0 +10
NEW LR LR
comp=Z,4μm,20.0s,MS5.9
DGMT Dagmar 98.53 7 PFAKE 05 44 30.0 +7.5
DGMT LR LR
comp=Z,2μm,19.0s,MS5.5
TSUM Tsumeb 98.94 134 PFAKE 05 44 40.0 +15
TSUM LR LR
comp=Z,2μm,21.0s,MS5.5
AGMN Agassiz Nation 99.24 12 PFAKE 05 44 40.0 +14
AGMN LR LR
comp=Z,1μm,19.0s,MS5.5
EYMN Ely 99.57 15 PFAKE 05 44 40.0 +13
EYMN LR LR
comp=Z,2μm,20.0s,MS5.5
NCB Newcomb 99.92 28 PFAKE 05 44 40.0 +10
NCB LR LR
comp=Z,2μm,20.0s,MS5.7
LONY Lake Ozonia 100.40 28 PFAKE 05 44 40.0 +8.3
LONY LR LR
comp=Z,3μm,20.0s,MS5.8
LBNH Lisbon 100.87 29 PFAKE 05 44 40.0 +6.2
LBNH LR LR
comp=Z,2μm,20.0s,MS5.6
ULM Lac du Bonnet 101.15 12 PFAKE 05 44 50.0 +15
ULM LR LR
comp=Z,3μm,21.0s,MS5.7
SACV Santiago Islan 101.66 81 PFAKE 05 44 50.0 +13
SACV LR LR
comp=Z,1μm,21.0s,MS5.4
FFC Flin Flon 104.92 7 PFAKE 05 49 20.0 +14
FFC LR LR
comp=Z,2μm,20.0s,MS5.6
LSZ Lusaka 106.99 142 PFAKE 05 49 20.0 +9.2
LSZ LR LR
comp=Z,3μm,22.0s,MS5.9
GUMO Guam 107.33 271 PFAKE 05 49 20.0 +8.7
GUMO LR LR
comp=Z,550nm,20.0s,MS5.1
DBIC Dimbokro 107.44 101 PFAKE 05 49 20.0 +8.4
DBIC LR LR
comp=Z,3μm,21.0s,MS5.8
KAPI Kappang 108.17 238 PFAKE 05 49 20.0 +7.0
KAPI LR LR
comp=Z,3μm,20.0s,MS5.8
ABPO Ambohimpanom 109.28 161 PFAKE 05 49 30.0 +15
ABPO LR LR
comp=Z,5μm,22.0s,MS6.0
SCHQ Schefferville 111.77 27 PFAKE 05 49 30.0 +12
SCHQ LR LR
comp=Z,2μm,20.0s,MS5.8
KDAK Kodiak Island 112.04 339 PFAKE 05 49 30.0 +11
KDAK LR LR
comp=Z,3μm,19.0s,MS5.9
COCO West Island 112.32 213 PFAKE 05 49 30.0 +9.2
COCO LR LR
comp=Z,2μm,21.0s,MS5.6
DAV Davao City (W) 114.58 250 PFAKE 05 49 40.0 +15
DAV LR LR
comp=Z,1μm,21.0s,MS5.5
EGAK Eagle 116.42 347 PFAKE 05 49 40.0 +13
EGAK LR LR
comp=Z,3μm,19.0s,MS5.9
CMLA Cha da Macela 117.00 63 PFAKE 05 49 40.0 +11
CMLA LR LR
comp=Z,2μm,22.0s,MS5.8
COLA College 117.55 345 PFAKE 05 49 40.0 +11
COLA LR LR
comp=Z,3μm,20.0s,MS5.9
KSM Kuching 118.64 233 PFAKE 05 49 40.0 +7.0
KSM LR LR
comp=Z,1μm,20.0s,MS5.6
KKM Kota Kinabalu 119.26 241 PFAKE 05 49 50.0 +16
KKM LR LR
comp=Z,546nm,22.0s,MS5.1
DGAR Diego Garcia 122.47 188 PFAKE 05 49 50.0 +10
DGAR LR LR
comp=Z,4μm,21.0s,MS6.0
KMBO Kilima Mbogo 123.42 145 PFAKE 05 49 50.0 +7.8
KMBO LR LR
comp=Z,4μm,20.0s,MS6.0
MSEY Mahe Island 124.75 167 PFAKE 05 50 00.0 +15
MSEY LR LR
comp=Z,2μm,20.0s,MS5.8
RES Resolute Bay 125.13 6 *eP*KIKP PKPdf 05 49 41.9 -1.6
TAM Tamanrasset 126.08 97 PFAKE 05 50 00.0 +13

TAM LR LR
comp=Z,1μm,20.0s,MS5.6
SFJD Kangerlussuaq 126.17 26 PFAKE 05 50 00.0 +14
SFJD LR LR
comp=Z,1μm,19.0s,MS5.7
PET Petropavlovsk 126.18 312 PFAKE 05 50 00.0 +14
PET LR LR
comp=Z,3μm,22.0s,MS5.9
KULM Kulim 126.65 225 PFAKE 05 50 00.0 +12
KULM LR LR
comp=Z,972nm,20.0s,MS5.5
MORF Marmelete 126.78 74 *e*SS SS 06 08 55.6 +3.5
MORF Marmelete 126.78 74 *e*LR LR 06 31 24.8
comp=Z,1μm,20.0s
PBDV Barranco-do-Ve 127.19 74 *e*SS SS 06 09 01.9 +4.7
PBDV Barranco-do-Ve 127.19 74 *e*LQ 06 24 09.1
PBDV *e*LR LR 06 31 36.2
comp=Z,1μm,20.0s
PCVE Castro Verde 127.36 74 *e*SS SS 06 09 00.8 +1.4
PCVE Castro Verde 127.36 74 *e*LQ 06 23 19.7
PCVE *e*LR LR 06 28 38.3
comp=Z,1μm,20.0s
PVAQ Vaqueiros 127.42 74 *e*SS SS 06 09 02.5 +2.4
PVAQ Vaqueiros 127.42 74 *e*LQ 06 24 33.5
PVAQ *e*LR LR 06 31 40.3
comp=Z,1μm,20.0s
PMAFR Mafra 127.42 72 *e*SS SS 06 09 02.5 +2.4
PMAFR Mafra 127.42 72 *e*LQ 06 23 42.8
PMAFR *e*LR LR 06 31 23.6
comp=Z,1μm,20.0s
MAJO Matsushiro 127.63 284 PFAKE 05 50 00.0 +11
MAJO LR LR
comp=Z,815nm,22.0s,MS5.4
MAT Matsushiro 127.63 284 *e*PKP PKPdf 05 49 55.6 +6.1
SFS San Fernando 127.77 76 PFAKE 05 50 00.0 +10
SFS LR LR
comp=Z,1μm,19.0s,MS5.7
ERM Erimo 127.98 293 PFAKE 05 50 00.0 +10
ERM LR LR
comp=Z,2μm,21.0s,MS5.8
PBAR Barrancos 128.32 74 *e*SS SS 06 09 16.8 +5.5
PBAR Barrancos 128.32 74 *e*LQ 06 24 52.0
PBAR *e*LR LR 06 32 09.1
comp=Z,1μm,20.0s
PESTR Estremoz 128.41 73 *e*SS SS 06 09 19.2 +6.9
PESTR Estremoz 128.41 73 *e*LQ 06 25 54.8
PESTR *e*LR LR 06 29 08.2
comp=Z,1μm,20.0s
PMRV Marv??o 128.87 72 *e*SS SS 06 09 25.5 +7.4
PMRV Marv??o 128.87 72 *e*LQ 06 26 14.2
PMRV *e*LR LR 06 29 54.5
comp=Z,1μm,20.0s
MTE Manteigas 129.37 71 PFAKE 05 50 00.0 +7.4
MTE LR LR
comp=Z,1μm,20.0s,MS5.6
MTE Manteigas 129.37 71 *e*SS SS 06 09 28.7 +4.5
MTE Manteigas 129.37 71 *e*LQ 06 25 40.6
MTE *e*LR LR 06 32 00.3
comp=Z,1μm,18.0s
MVO Moncorvo 130.14 71 *e*SS SS 06 09 35.3 +1.7
MVO Moncorvo 130.14 71 *e*LQ 06 26 28.7
MVO *e*LR LR 06 32 12.3
comp=Z,1μm,20.0s
PAB San Pablo 130.82 74 PFAKE 05 50 10.0 +15
PAB LR LR
comp=Z,1μm,20.0s,MS5.5
YSS Yuzh-Sakhalins 131.08 298 PFAKE 05 50 10.0 +14
YSS LR LR
comp=Z,535nm,19.0s,MS5.3
ESDC Sonseca Array 131.14 74 PKP PKPdf 05 49 54.9 -1.1
comp=Z,0.1nm,0.3s,baz=300,slow=2.5,SNR=2.5
ESDC Sonseca Array 131.14 74 PKP PKPdf 05 49 54.9 -1.1
ESLA Sonseca Array 131.14 74 PFAKE 05 50 10.0 +14
ESLA LR LR
comp=Z,5μm,20.0s,MS6.2
BILL Bilibino 131.66 330 PFAKE 05 50 10.0 +14
BILL LR LR
comp=Z,5μm,22.0s,MS6.1
SUMG Summit 132.93 24 *e*PKPdf PKPdf 05 50 00.8 +2.4
SUMG Summit 132.93 24 *i* P PKPdf 05 50 00.0 +1.6
comp=Z,3.7nm,0.9s
QIZ Qiongzhong 133.35 245 PKP PKPdf 05 50 01.1 +0.3
QIZ PP PP 05 52 29.5 +1.4
QIZ PKS 05 53 36.5
QIZ LR LR
comp=N,420nm,16.5s
QIZ LR LR
comp=Z,690nm,29.1s
QIZ Qiongzhong 133.35 245 PFAKE 05 50 10.0 +9.2
QIZ LR LR
comp=Z,776nm,20.0s,MS5.4
SEY Seymchan 134.25 320 *i* PKIKP PKPdf 05 50 01.4 +0.3
BORG Borgarnes 134.78 37 PFAKE 05 50 10.0 +8.0
BORG LR LR
comp=Z,2μm,19.0s,MS5.8
INCN Inchon 135.53 278 PFAKE 05 50 20.0 +16
INCN LR LR
comp=Z,681nm,21.0s,MS5.3
NJ2 Nanjing 137.15 266 *e*PKP PKPdf 05 50 07.3 -0.2
KEST Kesra 137.22 87 PKP PKPdf 05 50 11.0 +3.4
comp=Z,1.6nm,0.9s,baz=198,slow=3.2,SNR=2.9
MDJ Mudanjiang 137.63 288 PKP PKPdf 05 50 10.7 +2.7
MDJ LR LR
comp=N,260nm,22.1s,MS5.4
MDJ LR LR
comp=E,680nm,22.1s,MS5.4
MDJ LR LR
comp=Z,960nm,22.1s,MS5.5
MDJ Mudanjiang 137.63 288 PFAKE 05 50 20.0 +12
MDJ LR LR
comp=Z,885nm,21.0s,MS5.5
KLR Kul'dur 138.59 295 *e*PKIKP PKPdf 05 50 08.8 -0.8
CM31 Chiang Mai Arr 138.86 232 PFAKE 05 50 20.0 +8.9
CM31 LR LR
comp=Z,942nm,20.0s,MS5.5
CMAR Chiang Mai Arr 138.86 232 PKP PKPdf 05 50 14.7 +3.6
comp=Z,0.7nm,0.4s,baz=242,slow=1.9,SNR=5.3
WHN Wuhan 139.03 260 *e*PKP PKPdf 05 50 13.9 +2.9
CHTO Chiang Mai 139.16 232 PFAKE 05 50 20.0 +8.4
CHTO LR LR
comp=Z,809nm,20.0s,MS5.5
ESK Eskdalemuir 139.38 55 PFAKE 05 50 20.0 +9.1
ESK LR LR
comp=Z,1μm,20.0s,MS5.7
VSL Villasalto 139.45 83 PFAKE 05 50 20.0 +8.5
VSL LR LR
comp=Z,952nm,19.0s,MS5.6
SSB Saint Sauveur 139.46 72 PFAKE 05 50 20.0 +8.7
SSB LR LR
comp=Z,1μm,20.0s,MS5.6
CN2 Changchun 139.78 285 *e*PKP PKPdf 05 50 16.5 +4.5
CN2 PP PP 05 53 17.2 +8.6
CN2 AMB AMB
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,700nm,18.0s,MS5.5
CN2 LR LR
comp=E,500nm,18.0s,MS5.5
CN2 LR LR
comp=Z,700nm,16.0s,MS5.5
WDD Wield Dalam 140.63 91 PFAKE 05 50 20.0 +6.2
WDD LR LR
comp=Z,3μm,20.0s,MS6.0
BNI Bardonecchia 140.67 74 PFAKE 05 50 20.0 +6.5
BNI LR LR
comp=Z,3μm,22.0s,MS5.9
GYA Guiyang 140.90 248 PKP PKPdf 05 50 15.2 +0.6
GYA PP PP 05 53 21.0 +5.6
GYA PKS 05 53 50.4
GYA SKKS SKKSac 06 00 09.7 +0.9
GYA SS SS 06 11 45.5 +3.1
GYA AMB AMB
comp=Z,280nm,8.0s
GYA LR LR
comp=N,5μm,24.4s,MS6.2
GYA LR LR
comp=E,3μm,23.1s,MS6.2
GYA LR LR
comp=Z,5μm,25.5s,MS6.1
ENH Enshi 141.91 255 PFAKE 05 50 30.0 +14
ENH LR LR
comp=Z,934nm,21.0s,MS5.5
KMI Kunming 142.19 243 PKP PKPdf 05 50 19.2 +2.3
KMI pPKP pPKPdf 05 50 22.5 +2.1
KMI PP PP 05 53 27.9 +4.7

KMI PKS 05 53 53.4
KMI SKKS SKKSac 06 00 18.3 +2.0
KMI SS SS 06 11 57.3 +0.1
KMI LR LR
comp=N,730nm,20.0s,MS5.6
KMI LR LR
comp=E,690nm,18.7s,MS5.6
KMI LR LR
comp=Z,1μm,27.7s
ECH Echery 142.41 70 PFAKE 05 50 30.0 +13
ECH LR LR
comp=Z,1μm,22.0s,MS5.6
WLF Walferdange 142.42 67 PFAKE 05 50 30.0 +13
WLF LR LR
comp=Z,1μm,19.0s,MS5.8
VLC Villacollemand 142.54 77 PFAKE 05 50 30.0 +13
VLC LR LR
comp=Z,806nm,21.0s,MS5.5
CEL Celeste 142.93 89 PFAKE 05 50 30.0 +12
CEL LR LR
comp=Z,2μm,20.0s,MS6.0
BFO Black Forest 143.17 70 *e*PKPbc PKPdf 05 50 12.7 -5.2
BFO Black Forest 143.17 70 PFAKE 05 50 30.0 +12
BFO LR LR
comp=Z,1μm,20.0s,MS5.6
AQU L'Aquila 143.55 82 PFAKE 05 50 30.0 +11
AQU LR LR
comp=Z,2μm,20.0s,MS5.8
SGG Gregorio Mates 143.68 84 PKP PKPdf 05 50 16.3 -2.7
BJT Baijiatuau 143.68 274 PFAKE 05 50 30.0 +11
BJT LR LR
comp=Z,598nm,20.0s,MS5.4
BJI Beijing 143.69 274 PKP PKPdf 05 50 15.9 -3.2
BJI SS SS 06 12 17.6 +2.6
BJI AMB AMB
comp=Z,260nm,10.1s
BJI LR LR
comp=N,700nm,21.3s,MS5.5
BJI LR LR
comp=E,440nm,18.9s,MS5.5
BJI LR LR
comp=Z,360nm,30.8s
BUG Bochum--Univer 143.77 65 *e*PKPbc PKPdf 05 50 13.6 -5.2
STU Stuttgart 143.88 70 *e*PKPbc PKPdf 05 50 14.4 -4.7
YAK Yakutsk 143.93 314 PFAKE 05 50 30.0 +11
YAK LR LR
comp=Z,2μm,20.0s,MS5.8
TNS Taunus Mts 144.00 67 *e*PKPbc PKPdf 05 50 15.2 -4.1
TIP Timpagrande 144.01 88 *e*PKPdf PKPdf 05 50 18.5 -1.2
TIP LR LR
comp=Z,2μm,21.0s,MS5.8
MRLC Muro Lucano 144.06 85 PKP PKPdf 05 50 16.3 -3.4
FETA Feichten 144.08 73⇑*i*PKPdf PKPdf 05 50 17.8 -1.7
comp=Z,36nm,1.1s
CTI Castel Tesino 144.22 75 PKIKP PKPdf 05 50 16.6 -3.2
IBBN Ibbenburen 144.36 63 *e*PKPbc PKPdf 05 50 15.9 -3.9
WTTA Wattenberg 144.74 73⇑*i*PKPbc PKPdf 05 50 18.3 -2.4
comp=Z,68nm,1.3s
XAN Xi'an 144.78 260 PKP PKPdf 05 50 18.1 -3.1
XAN LR LR
comp=N,460nm,19.7s,MS5.2
XAN LR LR
comp=E,140nm,24.0s,MS5.2
XAN LR LR
comp=Z,280nm,19.5s,MS5.0
TIXI Tiksi 144.88 331 *e*PKHKP 05 50 15.4
TIXI *i* 05 50 19.1
TIXI MLR MLR
comp=Z,3μm,21.0s,MS6.0
FUR Furstenfeldbru 144.90 72 *e*PKPbc PKPdf 05 50 18.0 -2.9
ABTA Abfaltersbach 145.06 74⇑*i*PKPbc PKPbc 05 50 19.2 -1.5
comp=Z,53nm,1.2s
UBBA Unterbreizbach 145.15 67 *e*PKPbc PKPbc 05 50 19.2 -1.7
FVI Forni Avoltri 145.16 75 PKP2 PKPab 05 50 20.0 -1.1
CLNS Chul'man 145.19 304 *e*PKP2 PKPab 05 50 18.5 -2.4
CLNS pmax pmax
comp=Z,37nm,1.0s
CLNS pmax pmax
comp=N,20nm,1.2s
CLNS pmax pmax
comp=E,10.0nm,0.9s
BER Bergen 145.21 49 *e* PKPbc 05 50 24.3 +3.5
BER *e*PP PP 05 53 47.5 +6.4
BER AMS AMS 06 47 54.8
comp=Z,1μm,24.8s,MS5.5
TRI Trieste 145.39 77 *e*PKHKP 05 50 11.5
TRI MLR MLR
comp=Z,1μm,20.0s,MS5.6
PTCC Patocco-Chiusa 145.44 75 PKP PKPdf 05 50 19.6 -2.3
KBS Kingsbay 145.45 16 *e*P PKPdf 05 50 22.2 +1.2
KBS AMB AMB 05 50 30.1
comp=Z,71nm,0.9s
KBS AMS AMS 06 49 57.1
comp=Z,2μm,24.1s,MS5.7
KBS Kingsbay 145.45 16 *e*PKPbc PKPbc 05 50 23.8 +2.6
KBS LR LR
comp=Z,2μm,20.0s,MS5.9
GRF Grafenberg Arr 145.46 69 *e*PKPbc PKPbc 05 50 20.4 -1.5
GRF *e*SS SS 06 12 40.4 +5.3
GRF *e*L 06 47 08.6
comp=Z,2μm,22.0s
GRF Grafenberg Arr 145.46 69 *e*PKP2 PKPab 05 50 20.4 -1.7
GRF *e*SS SS 06 12 40.4 +5.3
VOY Vojsko 145.61 76 *e*PKPdf PKPdf 05 50 29.9 +7.7
VOY Vojsko 145.61 76 *e*PKPdf PKPdf 05 50 21.8 -0.4
RJOB Jochberg 145.65 73 *e*PKPbc PKPbc 05 50 20.5 -2.1
JAVS Javornik 145.66 77 *i* PKPdf PKPdf 05 50 25.4 +3.1
CLZ Clausthal 145.72 65 *e*PKPbc PKPbc 05 50 21.1 -1.6
HIA Hailar 145.74 290 *e*PKIKP PKPdf 05 50 20.0 -2.3
HIA MLR MLR
comp=Z,1μm,20.0s
NRDL Niedersach Rie 145.78 64 *e*PKPbc PKPbc 05 50 21.3 -1.5
HYB Hyderabad 145.86 202 *e*PKP2 PKPab 05 50 26.5 +2.0
HYB Hyderabad 145.86 202 *i* PKP PKPdf 05 50 21.0 -2.5
CD2 Chengdu 145.88 250 *e*PKPbc PKPbc 05 50 26.5 +2.7
CD2 pPKP pPKPdf 05 50 30.8 +4.2
CD2 PP PP 05 53 53.0 +7.6
CD2 SKS SKSdf 05 57 30.1 -2.0
CD2 SKKS SKKSac 06 00 37.9 +0.7
CD2 SS SS 06 12 42.0 +2.2
CD2 AMB AMB
comp=Z,180nm,10.0s
CD2 LR LR
comp=N,750nm,24.0s
CD2 LR LR
comp=Z,790nm,20.2s,MS5.5
MOX Moxa 146.04 68 *e*PKP PKPdf 05 50 22.7 -0.1
comp=Z,51nm,1.7s
MOX Moxa 146.04 68 *e*PKPbc PKPbc 05 50 22.3 -1.4
MOX Moxa 146.04 68 *e*PKP2 PKPab 05 50 22.7 -1.6
MOX *e*SS SS 06 12 45.0 +3.3
MOX pmax pmax
comp=Z,51nm,1.7s
MOX MLR MLR
comp=Z,1μm,20.0s,MS5.6
MOX Moxa 146.04 68 *e*PKP PKPdf 05 50 22.7 -0.1
MOX *e*SS SS 06 12 45.0 +3.3
MOX LR LR
comp=Z,1μm,20.0s,MS5.6
ROTZ Rotzenmuhle 146.08 69 *e*PKPbc PKPbc 05 50 22.6 -1.2
VISS Visnje 146.10 77 *i* PKPdf PKPab 05 50 29.5 +4.8
BOJS Bojanci 146.23 78 *i* PKPdf PKPab 05 50 29.8 +4.6
WET Wettzell 146.26 71 *e*PKPbc PKPbc 05 50 22.5 -1.9
BSEG Bad Segeberg 146.34 62 *e*PKPbc PKPbc 05 50 22.9 -1.6
MUD Monsted U'grnd 146.36 57 *i* P PKPab 05 50 29.2 +3.9
comp=Z,14nm,1.0s
MUD
comp=Z,780nm,20.0s
NKC Novy Kostel 146.40 69 *e*PKIKP PKPdf 05 50 23.2 -0.2
NKC *e* 05 50 29.6
NKC MLR MLR
comp=Z,2μm,23.7s,MS5.7
NKC Novy Kostel 146.40 69 *e*PKP PKPdf 05 50 23.2 -0.2
NKC *ep*PKP pPKPdf 05 50 29.6 +2.8
NKC AMS AMS 06 47 00.0
comp=Z,2μm,23.7s
TANN Tannenbergstha 146.47 68 *e*PKPbc PKPbc 05 50 22.4 -2.6
SOKA Soboth 146.60 76⇑*i*PKPdf PKPdf 05 50 22.9 -0.9
comp=Z,27nm,1.3s
MOA Molln 146.60 74⇑*i*PKPdf PKPdf 05 50 23.2 -0.6
comp=Z,42nm,1.2s
PERS Pernice 146.64 76 *i* PKPdf PKPdf 05 50 29.0 +5.1
GEC2 GERESS Array S 146.65 72 *e*PKPbc PKPbc 05 50 23.2 -2.3
GERES GERESS Array B 146.65 72 PKPbc PKPbc 05 50 23.0 -2.6

comp=Z,3.3nm,0.7s,baz=204,slow=2.9,SNR=14
KHC Kasperske Hory 146.68 71 *e*PKP2 PKPab 05 50 25.0 -1.8
KHC *e* 06 12 48.6
KHC MLR MLR
comp=Z,900nm,22.9s,MS5.5
KHC Kasperske Hory 146.68 71 *e*PKPdf PKPdf 05 50 23.6 -0.4
KHC Kasperske Hory 146.68 71 *e*PKP PKPdf 05 50 25.0 +1.1
KHC *ep*PKP pPKPdf 05 50 31.4 +4.0
KHC *e*SS SS 06 12 48.6 -0.4
KHC AMS AMS 06 51 20.0
comp=Z,900nm,22.9s
CLL Collm 147.09 67 *e*PKPbc PKPbc 05 50 25.2 -1.5
CLL Collm 147.09 67 *e*PKIKP PKPdf 05 50 25.0 +0.5
CLL *i* 05 50 29.1
CLL *e* 05 53 52.0
CLL pmax pmax
comp=Z,56nm,2.0s
CLL MLR MLR
comp=Z,1μm,21.7s,MS5.6
CLL Collm 147.09 67 *e*PKP PKPdf 05 50 25.0 +0.5
CLL *i* PKP PKPdf 05 50 29.1 +4.6
CLL *i* 05 50 33.7
CLL *e*PP PP 05 53 52.0 -0.5
CLL LR LR
comp=Z,1μm,21.7s,MS5.6
CLL Collm 147.09 67 *e*PKPdf PKPdf 05 50 25.0 +0.5
CLL *e*(PKPbc) PKPbc 05 50 29.0 +2.3
comp=Z,56nm,2.0s
CLL *i* pPKiKP 05 50 33.7
CLL *e* 05 50 38.0
CLL *e* 05 50 45.0
CLL *e* 05 51 32.0
CLL *e*PP PP 05 53 52.0 -0.5
CLL *e*SKKSac SKKSac 06 00 50.0 +6.8
CLL *e*PSKS 06 04 05.0
CLL *e*SS SS 06 12 58.0 +4.4
CLL *e*PSS 06 13 38.0
CLL *e*SSS 06 18 18.0
CLL Lm(360 06 19 00.0
comp=Z,800nm,20.8s
CLL *e*SSSS 06 22 18.0
CLL Lm 06 48 00.0
comp=N,300nm,22.0s
CLL Lm 06 48 00.0
comp=E,800nm,22.0s
CLL Lm 06 48 00.0
comp=Z,1μm,21.7s
HHC Hu-ho-hao-te 147.09 272 *e*PKPbc PKPbc 05 50 26.1 -1.0
HHC PP PP 05 53 56.3 +3.6
HHC PKS 05 54 00.8
HHC SKS SKSdf 05 57 33.2 -0.1
HHC SKKS SKKSac 06 00 47.0 +3.3
HHC SS SS 06 12 57.6 +3.8
HHC AMB AMB
comp=Z,70nm,6.6s
HHC LR LR
comp=N,390nm,20.4s,MS5.4
HHC LR LR
comp=E,480nm,20.5s,MS5.4
HHC LR LR
comp=Z,720nm,23.4s,MS5.4
TIR Tirane 147.18 87 *e*PKP2 PKPab 05 50 27.5 -1.5
TIR MLR MLR
comp=Z,1μm,21.0s,MS5.7
KONO Kongsberg 147.20 51 *e*P PKPdf 05 50 26.5 +2.0
KONO Kongsberg 147.20 51 PFAKE 05 50 40.0 +16
KONO LR LR
comp=Z,1μm,22.0s,MS5.6
BRG Berggiesshubel 147.51 68 *e*PDIF PKPdf 05 50 27.9 +2.6
comp=Z,26nm,1.2s
BRG SKS SKKSac 06 00 55.0 +9.4
BRG SS SS 06 13 06.0 +7.7
BRG SSS 06 18 09.0
comp=Z,1μm,21.2s
BRG
comp=N,590nm,21.6s
BRG
comp=E,778nm,21.6s
PRA Prague 147.53 70 AMS AMS 06 50 00.0
PRU Pruhonice 147.57 70 *e*PKP2 PKPdf 05 50 26.8 +1.4
PRU *e* 06 13 02.0
PRU MLR MLR
comp=Z,1μm,25.3s,MS5.6
PRU Pruhonice 147.57 70 *e*PKP PKPdf 05 50 26.8 +1.4
PRU *ep*PKP pPKPdf 05 50 34.0 +5.2
PRU *e*SS SS 06 13 02.0 +3.0
PRU AMS AMS 06 48 40.0
comp=Z,1μm,25.3s
PVCC Panska Ves 147.77 69 *e*PKP2 PKPab 05 50 29.6 -1.5
PVCC Panska Ves 147.77 69 *e*PKP PKPdf 05 50 29.6 +3.9
PVCC *ep*PKP pPKPdf 05 50 34.8 +5.7
TREC Trest 147.90 72 *e*PKP2 PKPab 05 50 31.0 -0.6
TREC MLR MLR
comp=Z,1μm,18.3s,MS5.6
TREC Trest 147.90 72 *e*PKP PKPab 05 50 31.0 -0.6
TREC AMS AMS 06 53 10.0
comp=Z,1μm,18.3s
COP Copenhagen 147.97 59 *i* P PKPab 05 50 32.2 +0.5
COP
comp=Z,380nm,20.0s
NAO01 NORSAR Array S 147.98 49 PFAKE 05 50 40.0 +14
NAO01 LR LR
comp=Z,1μm,20.0s,MS5.7
UPC Upice 148.63 70 *e*PKP2 PKPbc 05 50 30.6 -0.3
UPC Upice 148.63 70 *e*PKP PKPbc 05 50 30.6 -0.3
UPC *ep*PKP pPKPdf 05 50 37.9 +7.3
PKSM Moragy 148.68 79⇑*i*PKP2 PKPab 05 50 35.9 +1.1
PKSM Moragy 148.68 79⇑*i*P PKPab 05 50 35.9 +1.1
DPC Dobruska-Polom 148.77 70 *e*PKIKP PKPdf 05 50 29.2 +1.9
DPC *e* 05 50 36.8
DPC *e* 06 13 11.6
DPC MLR MLR
comp=Z,900nm,21.4s,MS5.5
DPC Dobruska-Polom 148.77 70 *e*PKP PKPdf 05 50 29.2 +1.9
DPC *ep*PKP pPKPdf 05 50 36.8 +6.0
DPC *e*SS SS 06 13 11.6 -0.9
DPC AMS AMS 06 49 50.0
comp=Z,900nm,21.4s
KSP Ksiaz 148.91 69 *e*PKP PKPdf 05 50 30.9 +3.4
KSP Ksiaz 148.91 69 *e*PKIKP PKPdf 05 50 29.8 +2.2
KSP *e* 05 54 01.0
KSP *e*SS SS 06 13 14.0 -0.1
BSD Bornholm Skovb 149.23 61 *i* P PKPab 05 50 36.2 -0.6
BSD
comp=Z,900nm,21.0s
LZH Lanzhou 149.29 258 *e*PKPbc PKPdf 05 50 29.0 +0.3
LZH pPKP pPKPdf 05 50 36.5 +4.4
LZH PP PP 05 54 10.0 +4.5
LZH SKKS SKKSac 06 00 58.3 +2.1
LZH SS SS 06 13 23.1 +4.7
LZH AMB AMB
comp=Z,240nm,6.3s
LZH LR LR
comp=E,970nm,19.5s
LZH LR LR
comp=Z,1μm,20.4s,MS5.6
MORC Moravsky Berou 149.33 72⇑PKP2 PKPab 05 50 37.4 0.0
MORC Moravsky Berou 149.33 72 *e*PKPdf PKPdf 05 50 29.4 +1.1
MORC Moravsky Berou 149.33 72⇑*i*P PKPab 05 50 37.4 0.0
KKB Krupnik 149.52 89 P PKPbc 05 50 35.0 +1.6
VYHS Vyhne 149.68 75 *e*PKHKP PKPbc 05 50 32.1 -1.4
VYHS *e* 05 50 36.6
VYHS Vyhne 149.68 75 *e*PKP PKPbc 05 50 32.1 -1.4
VYHS *e* 05 50 36.6
VYHS LR LR
comp=Z,700nm,38.1s,MS5.2
VYHS Vyhne 149.68 75 *e*PKP PKPbc 05 50 32.1 -1.4
VYHS *e* 05 50 36.6
OKC Ostrava-Krasne 149.72 72 *e*PKP2 PKPbc 05 50 34.0 +0.4
OKC *e* 06 13 29.8
OKC MLR MLR
comp=Z,600nm,18.2s,MS5.4
OKC Ostrava-Krasne 149.72 72 *e*PKP PKPbc 05 50 34.0 +0.4
OKC *ex* x 06 13 29.8
OKC AMS AMS 06 59 20.0
comp=Z,600nm,18.2s
MMB Musomiste 149.79 90 P PKPbc 05 50 34.5 +0.4
VTS Vitosha 149.96 88 P PKPbc 05 50 33.9 -0.5
PSZ Piszkesteto 150.13 76 *e*PKIKP PKPbc 05 50 33.2 -1.5
PSZ MLR MLR
comp=Z,1μm,20.0s,MS5.7
PSZ Piszkesteto 150.13 76⇑*e*PKP pPKPdf 05 50 33.7 +0.7

BZS	**Buzias**	**150.31**	**81**	⇑PKIKP	PKPbc	05 50 35.7	+0.5
BZS	**Buzias**	**150.31**	**81**	*i*P	PKPbc	05 50 35.7	+0.5
TRO	**Tromso**	**150.50**	**31**	*e*P	PKPbc	05 50 34.4	-0.5
TRO				AMS	AMS	06 54 24.5	
	comp=Z,787nm,21.7s,MS5.5						
KECS	**Kecovo**	**150.70**	**75**	*e*PKIKP	PKPdf	05 50 33.9	+3.4
KECS				*e*		05 50 41.1	
KECS	**Kecovo**	**150.70**	**75**	*e*PKP	PKPdf	05 50 33.9	+3.4
KECS				*e*		05 50 41.1	
OJC	**Ojcow**	**150.85**	**72**	*e*PKP	PKPdf	05 50 33.7	+3.1
KDZ	**Kurdzhali**	**150.91**	**91**	P	PKPdf	05 50 34.0	+3.0
CRVS	**Cervenica-Dubn**	**151.45**	**75**	*e*PKIKP	PKPbc	05 50 41.1	+3.4
CRVS	**Cervenica-Dubn**	**151.45**	**75**	*e*PKP	PKPbc	05 50 41.1	+3.4
CRVS				*e*		05 50 53.8	
MMAI	**Mount Meron Ar**	**151.82**	**116**	PKPbc	PKPbc	05 50 38.3	-0.8
	comp=Z,0.4nm,0.3s,baz=64,slow=3.4,SNR=2.8						
UZH	**Uzhgorod**	**151.88**	**76**	*e*PKIKP	PKPbc	05 50 41.7	+3.0
UZH				*e*		05 57 42.7	
KOLS	**Kolonicke sedl**	**151.97**	**75**	*e*PKIKP	PKPbc	05 50 39.0	+0.1
KOLS				*e*		05 50 44.3	
KOLS	**Kolonicke sedl**	**151.97**	**75**	*e*PKP	PKPbc	05 50 39.0	+0.1
KOLS				*e*		05 50 44.3	
SZH	**Strazhica**	**152.04**	**89**	P	PKPbc	05 50 38.4	-0.9
ISP	**Isparta**	**152.04**	**102**	PFAKE		05 50 40.0	+7.1
ISP				LR	LR		
	comp=Z,1μm,20.0s,MS5.7						
LSA	**Lhasa**	**152.11**	**233**	P	PKPbc	05 50 44.2	+4.3
LSA	**Lhasa**	**152.11**	**233**	*e*PKIKP	PKPab	05 50 46.2	-3.3
LSA				MLR	MLR		
	comp=Z,2μm,22.0s,MS5.9						
LSA	**Lhasa**	**152.11**	**233**	*e*PKPbc	PKPab	05 50 46.2	-3.3
LSA				LR	LR		
	comp=Z,2μm,22.0s,MS5.9						
KWP	**Kalwaria Pacla**	**152.46**	**74**	*e*PKIKP	PKPdf	05 50 28.9	-4.2
KWP				MLR	MLR		
	comp=Z,1μm,20.0s,MS5.7						
KWP	**Kalwaria Pacla**	**152.46**	**74**	⇑*i*P	PKPbc	05 50 39.3	-0.7
ARCES	**ARCESS Array B**	**152.69**	**30**	PKPbc	PKPbc	05 50 37.4	-2.5
	comp=Z,2.0nm,0.8s,baz=256,slow=1.5,SNR=5.4						
MLR	**Muntele Rosu**	**153.03**	**84**	⇓PKIKP	PKPbc	05 50 44.4	+3.0
MLR	**Muntele Rosu**	**153.03**	**84**	⇓*i*P	PKPbc	05 50 44.4	+3.0
ULN	**Ulaanbaatar**	**153.10**	**281**	*e*PKIKP	PKPbc	05 50 43.7	+2.2
ULN				MLR	MLR		
	comp=Z,1μm,21.0s,MS5.7						
LVV	**L'vov**	**153.34**	**74**	*e*PKIKP	PKPdf	05 50 26.5	-7.9
BUR08	**Bucovina Ar. S**	**153.37**	**79**	*e*PKPdf	PKPdf	05 50 38.4	+3.9
BURAR	**Bucovina Array**	**153.38**	**79**	⇑PKIKP	PKPbc	05 50 47.1	+5.0
BURAR	**Bucovina Array**	**153.38**	**79**	⇑*i*P	PKPbc	05 50 47.1	+5.0
SONM	**Songino Array**	**153.51**	**281**	PKPbc	PKPbc	05 50 44.1	+1.7
	comp=Z,2.4nm,0.7s,baz=70,slow=2.3,SNR=4.9						
GTA	**Gaotai**	**153.84**	**259**	*e*PKPbc	PKPbc	05 50 41.3	-2.1
GTA				PKS		05 54 14.3	
GTA				PP	PP	05 54 37.8	+6.3
GTA				SKKS	SKKSac	06 01 24.0	+3.1
GTA				SS	SS	06 14 10.1	+1.4
GTA				AMB	AMB		
	comp=Z,250nm,8.3s						
GTA				LR	LR		
	comp=N,490nm,22.3s,MS5.4						
GTA				LR	LR		
	comp=E,510nm,24.1s,MS5.4						
GTA				LR	LR		
	comp=Z,410nm,25.0s,MS5.2						
TIRR	**Tirgusor**	**154.18**	**88**	*e*PKIKP	PKPdf	05 50 38.6	+2.8
BR131	**Keskin Array S**	**155.13**	**102**	*e*PKPdf	PKPdf	05 50 37.5	+0.2
BR131				*e*PKPab	PKPab	05 51 03.2	+1.1
BR131				LR	LR		
	comp=Z,877nm,19.0s,MS5.6						
BRTR	**Keskin Array B**	**155.13**	**102**	PKP	PKPdf	05 50 38.8	+1.5
	comp=Z,1.1nm,0.7s,baz=180,slow=1.4,SNR=2.8						
BRTR				PKPab	PKPab	05 51 01.4	-0.6
	comp=Z,3.0nm,0.9s,baz=219,slow=1.8,SNR=4.9						
KIS	**Kishinev**	**155.45**	**83**	*e*PKIKP	PKPdf	05 50 49.0	+12
KIS				LRM		07 01 52.0	
	comp=Z,900nm,20.0s						
KIS	**Kishinev**	**155.45**	**83**	*i* PKIKP	PKPdf	05 50 43.0	+5.6
VSU	**Vasula**	**155.97**	**55**	*i* PKIKP	PKPdf	05 50 39.8	+2.1
ZAK	**Zakamensk**	**156.21**	**285**	*e*PKIKP	PKPdf	05 50 39.6	+1.3
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.7s						
TLY	**Talaya**	**156.27**	**289**	PFAKE		05 50 50.0	+12
TLY				LR	LR		
	comp=Z,1μm,21.0s,MS5.8						
LVZ	**Lovozero**	**156.41**	**29**	PFAKE		05 50 50.0	+12
LVZ				LR	LR		
	comp=Z,1μm,21.0s,MS5.7						
KIEV	**Kiev**	**156.77**	**74**	*e*PKIKP	PKPdf	05 50 36.6	-2.4
KIEV				*e*		05 51 05.2	
KIEV				MLR	MLR		
	comp=Z,1μm,22.0s,MS5.7						
AKASG	**Malin Array Be**	**156.78**	**74**	PKP	PKPdf	05 50 38.1	-1.0
	comp=Z,2.0nm,0.7s,baz=266,slow=1.9,SNR=7.1						
SIM	**Simferopol'**	**158.06**	**91**	*i* PKIKP	PKPdf	05 50 47.0	+6.1
SIM				*e*SS	SS	06 14 53.0	-1.3
SIM				*e*SSS		06 21 00.0	
SIM				pmax	pmax		
	comp=Z,120nm,17.2s						
SOC	**Sochi**	**161.04**	**100**	*e*PKIKP	PKPdf	05 50 40.7	-3.6
SOC				*e*		05 50 44.5	
OBN	**Obninsk**	**161.59**	**63**	PFAKE		05 50 50.0	+5.5
OBN				LR	LR		
	comp=Z,2μm,19.0s						
GNI	**Garni**	**162.16**	**116**	PFAKE		05 51 00.0	+14
GNI				LR	LR		
	comp=Z,2μm,20.0s						
NIL	**Nilore**	**162.71**	**201**	PFAKE		05 51 00.0	+14
NIL				LR	LR		
	comp=Z,89nm,21.0s						
KIV	**Kislovodsk**	**163.10**	**102**	PFAKE		05 51 00.0	+14
KIV				LR	LR		
	comp=Z,1μm,22.0s						
WMQ	**Urumqi**	**163.86**	**256**	*e*PKP	PKPdf	05 50 50.0	+2.9
WMQ				PP	PP	05 55 32.0	+6.0
WMQ				SKS	SKSdf	05 57 53.0	+1.7
WMQ				SKKS	SKKSac	06 02 18.0	+4.8
WMQ				SS	SS	06 16 00.0	+5.1
WMQ				AMB	AMB		
	comp=Z,71nm,10.0s						
WMQ				LR	LR		
	comp=N,2μm,20.0s						
WMQ				LR	LR		
	comp=E,1μm,20.0s						
WMQ				LR	LR		
	comp=Z,2μm,20.0s						
ZALV	**Zalesovo Beam**	**167.69**	**296**	PKP	PKPdf	05 50 48.8	-1.1
	comp=Z,0.8nm,0.6s,baz=22,slow=8.2,SNR=3.2						
ZALV				PKPab	PKPab	05 51 52.4	-4.1
	comp=Z,1.3nm,0.8s,baz=70,slow=6.5,SNR=3.8						
MKAR	**Makanchi Array**	**168.60**	**260**	PKP	PKPdf	05 50 50.3	-0.4
	comp=Z,0.2nm,0.4s,baz=50,slow=4.5,SNR=3.4						
MKAR				PKPab	PKPab	05 51 58.7	-2.0
	comp=Z,0.7nm,0.7s,baz=83,slow=6.2,SNR=3.3						
MKAR	**Makanchi Array**	**168.60**	**260**	PKP	PKPdf	05 50 50.3	-0.4
MKAR				PKPab	PKPab	05 51 58.7	-2.0
UCH	**Uchtor**	**170.13**	**221**	*e*PKPdf	PKPdf	05 50 52.5	+0.6
UCH				*e*PKPab	PKPab	05 52 14.7	+7.2
UCH				LR	LR		
	comp=Z,1μm,22.0s						
TKM2	**Tokmak 2**	**170.19**	**227**	PFAKE		05 51 00.0	+8.2
TKM2				LR	LR		
	comp=Z,2μm,20.0s						
AML	**Almayashu**	**170.38**	**217**	PFAKE		05 51 00.0	+8.0
AML				LR	LR		
	comp=Z,2μm,20.0s						
AAK	**Ala-Archa**	**170.47**	**222**	PFAKE		05 51 00.0	+8.0
AAK				LR	LR		
	comp=Z,2μm,19.0s						
EKS2	**Erkin-Say**	**170.79**	**219**	PFAKE		05 51 00.0	+7.8
EKS2				LR	LR		
	comp=Z,2μm,22.0s						
KURK	**Kurchatov**	**171.81**	**279**	*i* PKIKP	PKPdf	05 50 53.1	+0.7
KURK	**Kurchatov**	**171.81**	**279**	PFAKE		05 51 00.0	+7.6
KURK				LR	LR		
	comp=Z,2μm,21.0s						
ARU	**Arti**	**172.28**	**32**	PFAKE		05 51 00.0	+7.6
ARU				LR	LR		
	comp=Z,2μm,21.0s						
BVAR	**Borovoye Array**	**175.90**	**318**	PKPab	PKPab	05 52 30.1	-2.7
	comp=Z,0.6nm,0.5s,baz=20,slow=9.5,SNR=3.3						
BRVK	**Borovoye**	**175.92**	**319**	PFAKE		05 51 00.0	+6.2
BRVK				LR	LR		
	comp=Z,3μm,22.0s						

*THE **12** 05:56:38.5,37°.93N×21°.61E,h4km±31km,ML2.6/5,Error ellipse: s-maj=31.5km s-min=0.9km az=40.0*
*CSEM **12** 05:56:39.5±0.4,38°.07N×21°.50E,h5km,ML2.6/5,Error ellipse: s-maj=8.6km s-min=6.4km az=129.0*
*ISCJB **12** 05:56:39.7±0.7,38°.09N±0°.03×21°.50E±0°.05,h10km,Error ellipse: s-maj=5.6km s-min=4.3km az=33.8*
*ATH **12** 05:56:40.7,37°.97N×21°.34E,h28km±2km,MD3.0/7*
ISC 12 05:56:40.3±0.7,38°.11N±0°.03×21°.49E±0°.05,h10km,n24,σ1§31/39,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAKA	**Lakka**	**0.41**	**71**	P	**Pg**	**05 56 46.8**	**-1.5**
LAKA				S	**Sg**	**05 56 52.8**	**-0.9**
LAKA	**Lakka**	**0.41**	**71**	P	**Pg**	**05 56 46.8**	**-1.5**
LAKA				S	**Sg**	**05 56 52.8**	**-0.9**
EFP	**Efpalio**	**0.46**	**46**	P	**Pg**	**05 56 48.4**	**-0.8**
EFP				S	**Sg**	**05 56 57.1**	**+1.8**
EFP	**Efpalio**	**0.46**	**46**	*e*PN	**Pg**	**05 56 53.5**	**+4.3**
EFP	**Efpalio**	**0.46**	**46**	P	**Pg**	**05 56 48.4**	**-0.8**
EFP				S	**Sg**	**05 56 57.1**	**+1.8**
TRIZ	**Trizonia**	**0.53**	**61**	P	**Pg**	**05 56 49.4**	**-1.1**
TRIZ				S	**Sg**	**05 56 57.9**	**+0.4**
TRIZ	**Trizonia**	**0.53**	**61**	P	**Pg**	**05 56 49.4**	**-1.1**
TRIZ				S	**Sg**	**05 56 57.9**	**+0.4**
KFL	**Anninata**	**0.55**	**270**	P	**Pg**	**05 56 51.7**	**+0.6**
KALE	**Kalithea**	**0.58**	**61**	P	**Pg**	**05 56 50.0**	**-1.6**
KALE				S	**Sg**	**05 56 59.1**	**-0.2**
KALE	**Kalithea**	**0.58**	**61**	P	**Pg**	**05 56 50.0**	**-1.6**
KALE				S	**Sg**	**05 56 59.1**	**-0.2**
GUR	**Goura**	**0.70**	**104**	P	**Pg**	**05 56 50.1**	**-3.7**
GUR				S	**Sg**	**05 56 57.3**	**-5.5**
GUR	**Goura**	**0.70**	**104**	*e*PN	**Pg**	**05 56 57.0**	**+3.2**
GUR				*e*SN	**Sg**	**05 57 07.4**	**+4.6**
GUR	**Goura**	**0.70**	**104**	*e*Pn	**Pg**	**05 56 57.0**	**+3.2**
VLS	**Valsamata**	**0.71**	**276**	P	**Pg**	**05 56 53.8**	**-0.3**
VLS	**Valsamata**	**0.71**	**276**	*e*PN	**Pg**	**05 56 53.8**	**-0.3**
VLS	**Valsamata**	**0.71**	**276**	P	**Pg**	**05 56 53.8**	**-0.3**
ITM	**Ithomi**	**0.99**	**159**	*e*PB	**Pg**	**05 56 57.8**	**-1.6**
ITM				*e*SN	**Sg**	**05 57 12.5**	**+0.2**
ITM	**Ithomi**	**0.99**	**159**	*e*Pb	**Pg**	**05 56 57.8**	**-1.6**
ITM				*e*Sn	**Sg**	**05 57 12.5**	**+0.2**
VLX	**Vlachokerasia**	**1.02**	**136**	*e*PB	**Pg**	**05 56 59.5**	**-0.4**
VLX				*e*SN	**Sg**	**05 57 14.7**	**+1.5**
VLX	**Vlachokerasia**	**1.02**	**136**	*e*Pb	**Pg**	**05 56 59.5**	**-0.4**
VLX				*e*Sn	**Sg**	**05 57 14.7**	**+1.5**
AGG	**Agios Georgios**	**1.12**	**36**	*e*PN	**Pg**	**05 57 05.1**	**+3.2**
AGG				*e*SN	**Sg**	**05 57 22.9**	**+6.4**
AGG	**Agios Georgios**	**1.12**	**36**	*e*Pn	**Pg**	**05 57 05.1**	**+3.2**
LTK	**Loutraki**	**1.17**	**94**	*e*PN	**Pn**	**05 57 04.8**	**+2.1**
LTK	**Loutraki**	**1.17**	**94**	*e*Pn	**Pn**	**05 57 04.8**	**+2.1**

*CSEM **12** 05:59:49.5±0.2,43°.80N×8°.23E,h10km,ML3.2/16,Error ellipse: s-maj=4.7km s-min=3.0km az=165.0*
*GEN **12** 05:59:49.8,43°.83N×8°.22E,h1km,ML2.3*
*ISCJB **12** 05:59:49.1±0.4,43°.76N±0°.02×8°.27E±0°.02,h18km±4km,Error ellipse: s-maj=4.2km s-min=3.0km az=174.5*
*STR **12** 05:59:50.7±0.4,43°.90N×8°.20E,h10km,Ml2.7,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*LDG **12** 05:59:50.3±0.2,43°.66N×8°.18E,h10km,Md3.0/1,Ml2.9/13,Error ellipse: s-maj=4.0km s-min=3.3km az=47.0*
*NEIC **12** 05:59:50.6,43°.86N×8°.17E,h7km,ML2.9(LDG),ML2.7(STR),ML2.4(ROM),After ROM.*
*ROM **12** 05:59:50.6±0.3,43°.86N×8°.17E,h7km±2km,Md2.6/7,Ml2.4/9,Error ellipse: s-maj=5.2km s-min=1.9km az=178.0*
ISC 12 05:59:49.4±0.5,43°.79N±0°.02×8°.23E±0°.03,h14km±2km,n101,σ1§19/174,1D,Corsica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMI	**Imperia**	**0.27**	**296**	⇓*i*Pg	**Pg**	**05 59 55.1**	**-0.1**
IMI				Sg	**Sg**	**05 59 58.9**	**-0.2**
	306nm,0.1s						
IMI	**Imperia**	**0.27**	**296**	P	**Pg**	**05 59 55.1**	**-0.1**
IMI				Sg	**Sg**	**05 59 58.9**	**-0.2**
	306nm,0.1s						
RORO	**Rocca Rossa**	**0.34**	**340**	P	**Pg**	**05 59 56.0**	**-0.5**
NEGI	**Seborga**	**0.39**	**279**	P	**Pg**	**05 59 57.4**	**+0.2**
MONE	**Monesi**	**0.45**	**310**	P	**Pg**	**05 59 58.2**	**-0.2**
RONM	**Roccetta Nervi**	**0.47**	**281**	P	**Pg**	**05 59 58.8**	**+0.1**
SAOF	**Saorge**	**0.53**	**292**	Pg	**Pg**	**06 00 00.3**	**+0.5**
SAOF	**Saorge**	**0.53**	**292**	Pg	**Pg**	**06 00 00.3**	**+0.5**
QLNO	**Quiliano**	**0.54**	**9**	Pg	**Pg**	**06 00 00.6**	**+0.5**
	300nm,0.3s						
QLNO	**Quiliano**	**0.54**	**9**	Pg	**Pg**	**06 00 00.6**	**+0.5**
	300nm,0.3s						
SBF	**Sospel**	**0.58**	**278**	*e*P	**Pg**	**06 00 02.3**	**+1.5**
SBF				*e*Sg	**Sg**	**06 00 08.8**	**+0.3**
	386nm,0.2s						
SBF	**Sospel**	**0.58**	**278**	*e*Pg	**Pg**	**06 00 01.3**	**+0.5**
SBF				*e*Sg	**Sg**	**06 00 08.8**	**+0.3**
SBF	**Sospel**	**0.58**	**278**	*e*Pg	**Pg**	**06 00 01.3**	**+0.5**
SBF	**Sospel**	**0.58**	**278**	*e*P	**Pg**	**06 00 02.3**	**+1.5**
SBF				*e*Sg	**Sg**	**06 00 08.8**	**+0.3**
	193nm,0.2s						
AUTN	**L'Aution**	**0.62**	**290**	Pg	**Pg**	**06 00 01.8**	**+0.3**
AUTN				Sg	**Sg**	**06 00 09.9**	**+0.2**
AUTN	**L'Aution**	**0.62**	**290**	Pg	**Pg**	**06 00 01.8**	**+0.3**
AUTN				Sg	**Sg**	**06 00 09.9**	**+0.2**
REVF	**Revere**	**0.63**	**266**	Pg	**Pg**	**06 00 02.7**	**+1.0**
REVF				Sg	**Sg**	**06 00 11.3**	**+1.3**
REVF	**Revere**	**0.63**	**266**	Pg	**Pg**	**06 00 02.7**	**+1.0**
REVF				Sg	**Sg**	**06 00 11.3**	**+1.3**
LUCF	**Luceram**	**0.65**	**279**	Pg	**Pg**	**06 00 02.6**	**+0.5**
LUCF	**Luceram**	**0.65**	**279**	Pg	**Pg**	**06 00 02.6**	**+0.5**
ENR	**Entracque**	**0.73**	**307**	P	**Pg**	**06 00 03.2**	**-0.4**
ENR				S	**Sg**	**06 00 11.2**	**-2.1**
TOUF	**Mont Tournerai**	**0.75**	**288**	Pg	**Pg**	**06 00 04.0**	**+0.1**
TOUF	**Mont Tournerai**	**0.75**	**288**	Pg	**Pg**	**06 00 04.0**	**+0.1**
PCP	**Piancastagn**	**0.79**	**17**	Pg	**Pg**	**06 00 05.2**	**+0.5**
PCP				Sg	**Sg**	**06 00 15.5**	**+0.5**
	80nm,0.2s						
PCP	**Piancastagn**	**0.79**	**17**	Pg	**Pg**	**06 00 05.2**	**+0.5**
PCP				S	**Sg**	**06 00 14.6**	**-0.4**
PCP				Sg	**Sg**	**06 00 15.5**	**+0.5**
	80nm,0.2s						
MVIF	**Mont Vial**	**0.79**	**278**	Pg	**Pg**	**06 00 05.3**	**+0.6**
MVIF				Sg	**Sg**	**06 00 15.4**	**+0.3**
MVIF	**Mont Vial**	**0.79**	**278**	Pg	**Pg**	**06 00 05.3**	**+0.6**
MVIF				Sg	**Sg**	**06 00 15.4**	**+0.3**
STV	**Sant Anna di V**	**0.80**	**305**	Pg	**Pg**	**06 00 04.6**	**-0.3**
STV				Sg	**Sg**	**06 00 14.1**	**-1.3**
	594nm,0.4s						
STV	**Sant Anna di V**	**0.80**	**305**	P	**Pg**	**06 00 04.6**	**-0.3**
STV				S	**Sg**	**06 00 13.4**	**-2.0**
STV				Sg	**Sg**	**06 00 14.1**	**-1.3**
	594nm,0.4s						
CALN	**Calern**	**0.97**	**268**	Pg	**Pg**	**06 00 08.3**	**+0.1**
CALN	**Calern**	**0.97**	**268**	Pg	**Pg**	**06 00 08.3**	**+0.1**
DOI	**San Damiano**	**1.01**	**316**	Pg	**Pg**	**06 00 08.8**	**-0.1**
DOI				Sg	**Sg**	**06 00 21.6**	**-0.4**
	240nm,0.4s						
DOI	**San Damiano**	**1.01**	**316**	Pg	**Pg**	**06 00 08.8**	**-0.1**
DOI				Sg	**Sg**	**06 00 21.6**	**-0.4**
	240nm,0.4s						
ROTM	**Rocchetta Tana**	**1.06**	**5**	P	**Pb**	**06 00 10.7**	**+1.1**
ROTM				S	**Sb**	**06 00 22.9**	**-0.5**
PZZ	**Stroppo**	**1.08**	**312**	Pg	**Pb**	**06 00 09.8**	**0.0**
PZZ				Sg	**Sg**	**06 00 23.5**	**-0.8**
	174nm,0.3s						
PZZ	**Stroppo**	**1.08**	**312**	P	**Pb**	**06 00 09.8**	**0.0**
PZZ				S	**Sb**	**06 00 21.6**	**-2.2**
PZZ				Sg	**Sg**	**06 00 23.5**	**-0.8**
	174nm,0.3s						
SC2M	**Scurtabo**	**1.12**	**56**	P	**Pb**	**06 00 10.6**	**0.0**
SC2M				S	**Sb**	**06 00 22.7**	**-2.4**
FRF	**La Foret Royal**	**1.17**	**259**	*e*Pn	**Pn**	**06 00 10.7**	**-0.7**
FRF				*e*Sn	**Sn**	**06 00 24.9**	**-2.3**
FRF	**La Foret Royal**	**1.17**	**259**	*e*Pn	**Pn**	**06 00 10.7**	**-0.7**
FRF				*e*Sn	**Sn**	**06 00 24.9**	**-2.3**
SURF	**Saint Ours**	**1.23**	**305**	Pg	**Pg**	**06 00 12.9**	**-0.3**
SURF				Sg	**Sg**	**06 00 28.8**	**-0.4**
SURF	**Saint Ours**	**1.23**	**305**	Pg	**Pg**	**06 00 12.9**	**-0.3**
SURF				Sg	**Sg**	**06 00 28.8**	**-0.4**
CODM	**Codolo**	**1.31**	**62**	P	**Pn**	**06 00 12.9**	**-0.4**
CODM				S	**Sb**	**06 00 27.0**	**-3.5**
LMR	**La Mourre**	**1.33**	**251**	*e*Pn	**Pn**	**06 00 12.7**	**-0.9**
LMR				*e*Sn	**Sn**	**06 00 28.4**	**-2.7**
	74nm,0.2s						
LMR	**La Mourre**	**1.33**	**251**	*e*Pn	**Pn**	**06 00 12.7**	**-0.9**
LMR				*e*Sn	**Sn**	**06 00 28.4**	**-2.7**
	37nm,0.2s						
PGF	**Pioggiola**	**1.36**	**155**	*e*Pg	**Pn**	**06 00 13.5**	**-0.5**
PGF				*e*Sn	**Sn**	**06 00 28.4**	**-3.4**
	15nm,0.2s						
PGF	**Pioggiola**	**1.36**	**155**	*e*Pg	**Pn**	**06 00 13.5**	**-0.5**
OG22	**Abries**	**1.39**	**319**	Pg	**Pn**	**06 00 14.3**	**-0.1**
OG22				Sg	**Sg**	**06 00 32.3**	**-1.8**
OG22	**Abries**	**1.39**	**319**	Pg	**Pn**	**06 00 14.3**	**-0.1**
OG22				Sg	**Sg**	**06 00 32.3**	**-1.8**
MBDF	**Montbardon**	**1.41**	**312**	*e*Pn	**Pn**	**06 00 15.2**	**+0.6**
MBDF				*e*Sn	**Sn**	**06 00 33.7**	**+0.7**
	47nm,0.3s						
MBDF	**Montbardon**	**1.41**	**312**	*e*Pn	**Pn**	**06 00 15.2**	**+0.6**
MBDF				*e*Sn	**Sn**	**06 00 33.7**	**+0.7**
	24nm,0.3s						
GRAM	**Graiana**	**1.50**	**61**	P	**Pn**	**06 00 16.5**	**+0.7**
GRAM				S	**Sn**	**06 00 32.6**	**-2.5**
RSP	**Reno Superiore**	**1.52**	**333**	Pg	**Pn**	**06 00 16.9**	**+0.6**
RSP				Sg	**Sg**	**06 00 36.3**	**-2.2**
	30nm,0.8s						
RSP	**Reno Superiore**	**1.52**	**333**	P	**Pn**	**06 00 16.7**	**+0.4**
RSP				S	**Sn**	**06 00 32.6**	**-3.3**
RSP				Sg	**Sg**	**06 00 36.3**	**-2.2**
	30nm,0.8s						
SARO	**Sassorosso**	**1.61**	**75**	P	**Pn**	**06 00 17.2**	**-0.3**
MAIM	**Mastiano**	**1.64**	**85**	P	**Pn**	**06 00 17.8**	**0.0**
MAIM				S	**Sn**	**06 00 35.1**	**-3.6**
OG25	**Le Caire**	**1.66**	**291**	Pg	**Pg**	**06 00 21.7**	**+0.4**
OG25				Sg	**Sg**	**06 00 44.1**	**+1.2**
OG25	**Le Caire**	**1.66**	**291**	Pg	**Pg**	**06 00 21.7**	**+0.4**
OG25				Sg	**Sg**	**06 00 44.1**	**+1.2**
BNI	**Bardonecchia**	**1.68**	**319**	Pg	**Pn**	**06 00 20.1**	**+1.7**
	11nm,0.6s						
BNI	**Bardonecchia**	**1.68**	**319**	Pg	**Pn**	**06 00 20.1**	**+1.7**
	11nm,0.6s						
TRAV	**Traversella**	**1.76**	**349**	P	**Pn**	**06 00 21.8**	**+2.3**
TRAV				S	**Sn**	**06 00 42.1**	**+0.5**
LSD	**Lago del Serru**	**1.84**	**335**	Pg	**Pn**	**06 00 21.9**	**+1.2**
LSD				Sg	**Sg**	**06 00 44.9**	**-3.9**
SMRF	**Simiane la Rot**	**1.93**	**276**	*e*Pg	**Pg**	**06 00 26.3**	**-0.2**
SMRF				*e*Sg	**Sg**	**06 00 50.8**	**-0.7**
	56nm,0.4s						
SMRF	**Simiane la Rot**	**1.93**	**276**	*e*P	**Pn**	**06 00 22.5**	**+0.7**
SMRF				*e*Pg	**Pg**	**06 00 26.3**	**-0.2**
SMRF				*e*Sg	**Sg**	**06 00 50.8**	**-0.7**
SMRF	**Simiane la Rot**	**1.93**	**276**	*e*P	**Pn**	**06 00 22.5**	**+0.7**
SMRF	**Simiane la Rot**	**1.93**	**276**	*e*Pg	**Pg**	**06 00 26.3**	**-0.2**
SMRF				*e*Sg	**Sg**	**06 00 50.8**	**-0.7**
	28nm,0.4s						
LPG	**La Plagne**	**2.01**	**329**	*e*Pn	**Pn**	**06 00 24.9**	**+2.0**
LPG	**La Plagne**	**2.01**	**329**	*e*P	**Pn**	**06 00 26.4**	**+3.5**
LPG				*e*Sn	**Sn**	**06 00 49.5**	**+1.7**
	14nm,0.5s						
LPG	**La Plagne**	**2.01**	**329**	*e*P	**Pn**	**06 00 26.4**	**+3.5**
LPG				*e*Sn	**Sn**	**06 00 49.5**	**+1.7**
LPG	**La Plagne**	**2.01**	**329**	*e*Pn	**Pn**	**06 00 24.9**	**+2.0**
LPG	**La Plagne**	**2.01**	**329**	*e*P	**Pn**	**06 00 26.4**	**+3.5**
LPG				*e*Sn	**Sn**	**06 00 49.5**	**+1.7**
	7.2nm,0.5s						
ORIF	**Oris-en-Rattie**	**2.03**	**305**	*e*Pg	**Pg**	**06 00 29.5**	**+1.1**
ORIF				*e*Sg	**Sg**	**06 00 55.4**	**+0.7**
	31nm,0.4s						
ORIF	**Oris-en-Rattie**	**2.03**	**305**	*e*P	**Pn**	**06 00 26.3**	**+3.1**
ORIF				*e*Pg	**Pg**	**06 00 29.5**	**+1.1**
ORIF				*e*Sg	**Sg**	**06 00 55.4**	**+0.7**
ORIF	**Oris-en-Rattie**	**2.03**	**305**	*e*P	**Pn**	**06 00 26.3**	**+3.1**
ORIF	**Oris-en-Rattie**	**2.03**	**305**	*e*Pg	**Pg**	**06 00 29.5**	**+1.1**
ORIF				*e*Sg	**Sg**	**06 00 55.4**	**+0.7**
	16nm,0.4s						
LPL	**La Plagne**	**2.03**	**329**	*e*Pn	**Pn**	**06 00 25.3**	**+2.1**
LPL				*e*Sn	**Sn**	**06 00 49.7**	**+1.3**
	11nm,0.4s						
LPL	**La Plagne**	**2.03**	**329**	*e*Pn	**Pn**	**06 00 25.3**	**+2.1**
LPL				*e*Sn	**Sn**	**06 00 49.7**	**+1.3**
	5.4nm,0.4s						
RSL	**

SPITS Spitsbergen Ar 50.02 355 P **P** **06 10 22.9 0.0**
1.2nm,0.3s,mb4.4,baz=50,slow=6.7,SNR=10.0
ZALV Zalesovo Beam 52.30 312 P **P** **06 10 40.1 -0.1**
0.4nm,0.3s,mb3.8,baz=64,slow=9.8,SNR=2.0
ARCES ARCESS Array B 57.51 349 P **P** **06 11 17.2 -0.3**
0.7nm,0.6s,mb3.9,baz=28,slow=8.2,SNR=6.7
MKAR Makanchi Array 58.19 306 P **P** **06 11 22.5 -0.2**
0.5nm,0.5s,mb3.8,baz=56,slow=4.5,SNR=5.7
BVAR Borovoye Array 59.32 318 P **P** **06 11 31.1 +0.7**
2.3nm,0.6s,mb4.4,baz=53,slow=7.6,SNR=12
NOA NORSAR Array B 67.23 353 P **P** **06 12 22.1 -0.4**
1.0nm,0.7s,mb3.9,baz=22,slow=5.7,SNR=3.4
AKASG Malin Array Be 74.66 340 P **P** **06 13 08.4 +0.7**
0.4nm,0.3s,mb3.8,baz=23,slow=6.1,SNR=4.7
WRA Warramunga Arr 80.68 221 P **P** **06 13 40.2 -1.3**
0.5nm,0.9s,mb3.4,baz=30,slow=6.1,SNR=3.0

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*CSEM **12** 06:03:48.4±0.9, 51°.37N×16°.15E, h1km, ML2.8/5, Error ellipse: s-maj=14.9km s-min=7.3km az=1.0*
*PRU **12** 06:03:48.0, 51°.41N×16°.15E, h0km*
*WAR **12** 06:03:48.0, 51°.45N×16°.13E, ML2.2, Mining Induced*
ISC 12 06:03:46.7±1.2, 51°.45N±0°.05×16°.15E±0°.06, h0km, n18, σ0s87/28, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.61**	**172**	*e*Pg	**Pg**	**06 03 59.2**	**+0.8**
KSP				*e*Sg	**Sg**	06 04 06.7	+0.3
KSP	**Ksiaz**	**0.61**	**172**	*e*Pg	**Pg**	06 03 59.3	+0.8
KSP				*e*Sg	**Sg**	06 04 06.6	+0.2
UPC	**Upice**	**0.95**	**185**	*e*PG	**Pg**	06 04 06.2	+1.4
UPC	**Upice**	**0.95**	**185**	Pg	**Pg**	06 04 06.2	+1.4
DPC	**Dobruska-Polom**	**1.10**	**174**	*e*PG	**Pg**	06 04 08.2	+0.3
DPC				*e*SG	**Sg**	06 04 21.6	-0.6
	comp=Z,7.7nm,0.5s						
DPC	**Dobruska-Polom**	**1.10**	**174**	Pg	**Pg**	06 04 08.2	+0.3
DPC				Sg	**Sg**	06 04 21.6	-0.6
	comp=Z,7.7nm,0.5s						
PVCC	**Panska Ves**	**1.36**	**228**	*e*PG	**Pg**	06 04 13.1	+0.3
PVCC				*e*SG	**Sg**	06 04 30.6	+0.2
	comp=Z,22nm,0.2s						
PVCC	**Panska Ves**	**1.36**	**228**	Pg	**Pg**	06 04 13.1	+0.3
PVCC				Sg	**Sg**	06 04 30.6	+0.2
	comp=Z,22nm,0.2s						
BRG	**Berggiesshubel**	**1.50**	**248**	PG	**Pg**	06 04 15.5	-0.1
BRG				SG	**Sg**	06 04 35.6	+0.6
	comp=Z,6.8nm,0.4s						
PRU	**Pruhonice**	**1.78**	**216**	*e*SG	**Sg**	06 04 44.0	0.0
	comp=Z,4.1nm,0.2s						
PRU	**Pruhonice**	**1.78**	**216**	Sg	**Sg**	06 04 44.0	0.0
	comp=Z,4.1nm,0.2s						
MORC	**Moravsky Berou**	**1.89**	**152**	*e*Pn	**Pn**	06 04 20.2	-0.1
MORC				*e*Sg	**Sg**	06 04 46.1	-1.4
CLL	**Collm**	**1.98**	**267**	*e*Pn	**Pn**	06 04 20.0	-1.4
CLL				*e*Pg	**Pg**	06 04 24.0	-0.6
CLL				*i* Sg	**Sg**	06 04 49.8	-0.4
VRAC	**Vranov**	**2.16**	**172**	*e*Pn	**Pn**	06 04 25.2	+1.3
NKC	**Novy Kostel**	**2.64**	**244**	*e*SG	**Sg**	06 05 12.7	+1.1
	comp=Z,6.7nm,0.2s						
NKC	**Novy Kostel**	**2.64**	**244**	Sg	**Sg**	06 05 12.7	+1.1
	comp=Z,6.7nm,0.2s						
KHC	**Kasperske Hory**	**2.85**	**216**	*e*SG	**Sg**	06 05 16.3	-1.8
	comp=Z,1.7nm,0.3s						
KHC	**Kasperske Hory**	**2.85**	**216**	Sg	**Sg**	06 05 16.3	-1.8
	comp=Z,1.7nm,0.3s						

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*IDC **12** 06:19:18.8±1.0, 33°.04N×92°.13E, h0km, mb3.6/7, mb1 3.7/8, mb1mx3.6/26, mbtmp3.6/8, ML3.5/1, Error ellipse: s-maj=56.5km s-min=18.9km az=54.0*
*ISCJB **12** 06:19:18.1±0.8, 33°.06N±0°.05×92°.2E±0°.2, h10km, mb3.6/7, Error ellipse: s-maj=22.2km s-min=7.0km az=2.1*
*NEIC **12** 06:19:20.0±0.8, 33°.00N×91°.99E, h10km, mb3.6/1, Error ellipse: s-maj=26.1km s-min=10.1km az=80.0*
ISC 12 06:19:20.2±0.8, 33°.09N±0°.05×92°.1E±0°.2, h10km, n11, σ1s11/13, mb3.6/7, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.48**	**194**	Pg	**Pg**	**06 20 25.5**	**-1.4**
LSA				Sg	**Sg**	**06 21 13.3**	**+1.2**
LSA				smax			
	comp=N,40nm,1.0s						
LSA				smax			
	comp=E,50nm,0.9s						
LSA	**Lhasa**	**3.48**	**194**	*e*Pg	**Pg**	**06 20 24.0**	**-2.9**
LSA				*e*Sg	**Sg**	**06 21 14.0**	**+2.0**
MKAR	**Makanchi Array**	**15.61**	**334**	Pn	**Pn**	**06 22 58.2**	**-2.1**
	comp=E,0.2nm,0.3s,baz=143,slow=12,SNR=2.7						
KURK	**Kurchatov**	**20.23**	**335**	P	**P**	**06 23 56.4**	**+1.2**
	comp=E,0.5nm,0.4s,baz=142,slow=12,SNR=5.1						
ZALV	**Zalesovo Beam**	**21.49**	**348**	P	**P**	**06 24 09.5**	**+0.7**
	comp=E,0.4nm,0.3s,baz=146,slow=10,SNR=2.1						
BVAR	**Borovoye Array**	**25.31**	**328**	P	**P**	**06 24 46.3**	**-0.4**
	comp=E,0.3nm,0.4s,mb3.2,baz=129,slow=11,SNR=2.8						
ABKAR	**Akbulak array**	**28.84**	**314**	*e*P	**P**	**06 25 10.5**	**-8.1**
	comp=E,0.3nm,0.3s,mb3.5						
BRTR	**Keskin Array B**	**46.83**	**296**	P	**P**	**06 27 51.0**	**+0.8**
	comp=E,1.0nm,0.9s,mb3.8,baz=89,slow=6.5,SNR=4.1						
WRA	**Warramunga Arr**	**66.37**	**136**	P	**P**	**06 30 09.2**	**-0.2**
	comp=E,1.2nm,0.9s,mb3.9,baz=330,slow=7.4,SNR=5.8						
ASAR	**Alice Springs**	**69.07**	**139**	P	**P**	**06 30 26.6**	**+0.3**
	comp=E,1.2nm,0.7s,mb3.9,baz=326,slow=6.4,SNR=8.4						
TORD	**Torodi Ar. Bea**	**83.31**	**281**	P	**P**	**06 31 47.9**	**+0.2**
	comp=E,0.2nm,0.5s,mb3.4,baz=41,slow=5.9,SNR=5.0						

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*NEIC **12** 06:28:07.7, 37°.98N×21°.47E, h24km, MD3.1(ATH), After ATH.*
*ATH **12** 06:28:07.7, 37°.98N×21°.47E, h24km±1km, MD3.1/9*
*CSEM **12** 06:28:08.2±0.2, 37°.93N×21°.47E, h20km, MD3.1, Error ellipse: s-maj=4.3km s-min=3.9km az=175.0*
*THE **12** 06:28:08.5, 37°.92N×21°.49E, h15km±3km, ML2.8/6, Error ellipse: s-maj=3.2km s-min=0.6km az=50.0*
*ISCJB **12** 06:28:08.5±0.4, 37°.96N±0°.03×21°.47E±0°.03, h27km±4km, Error ellipse: s-maj=5.3km s-min=4.3km az=174.7*
ISC 12 06:28:08.5±0.5, 37°.95N±0°.03×21°.47E±0°.03, h24km±4km, n37, σ1s08/68, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.11**	**360**	*e*Pb	**Pb**	**06 28 12.7**	**-0.3**
RLS				*e*Sb	**Sb**	06 28 15.7	-0.4
RLS	**Riolos of Patr**	**0.11**	**360**	*e*PB	**Pb**	06 28 12.7	-0.3
RLS				*e*SB	**Sb**	06 28 15.7	-0.4
RLS	**Riolos of Patr**	**0.11**	**360**	*e*Pb	**Pb**	06 28 12.7	-0.3
RLS				*e*Sb	**Sb**	06 28 15.7	-0.4
UPR	**University Cam**	**0.42**	**37**	*e*PB	**Pb**	06 28 16.5	-0.8
UPR				*e*SB	**Sb**	06 28 22.5	-0.8
UPR	**University Cam**	**0.42**	**37**	*e*Pb	**Pb**	06 28 16.5	-0.8
UPR				*e*Sb	**Sb**	06 28 22.5	-0.8
LAKA	**Lakka**	**0.50**	**54**	P	**Pb**	06 28 18.4	-0.2
LAKA				S	**Sb**	06 28 26.1	+0.6
LAKA	**Lakka**	**0.50**	**54**	P	**Pb**	06 28 18.4	-0.2
LAKA				S	**Sb**	06 28 26.1	+0.6
KFL	**Anninata**	**0.56**	**287**	P	**Pb**	06 28 19.8	+0.2
EFP	**Efpalio**	**0.59**	**36**	P	**Pb**	06 28 19.7	-0.5
EFP				S	**Sb**	06 28 29.3	+1.1
EFP	**Efpalio**	**0.59**	**36**	*e*PN	**Pn**	06 28 19.1	-2.3
EFP				*e*SN	**Sb**	06 28 27.2	-1.0
EFP	**Efpalio**	**0.59**	**36**	P	**Pb**	06 28 19.7	-0.5
EFP				S	**Sb**	06 28 29.3	+1.1
TRIZ	**Trizonia**	**0.64**	**49**	P	**Pb**	06 28 20.7	-0.2
TRIZ				S	**Sb**	06 28 30.7	+1.3
TRIZ	**Trizonia**	**0.64**	**49**	P	**Pb**	06 28 20.7	-0.2
TRIZ				S	**Sb**	06 28 30.7	+1.3
GUR	**Goura**	**0.69**	**90**	P	**Pb**	06 28 21.0	-0.9
GUR				S	**Sb**	06 28 31.8	+0.8
GUR	**Goura**	**0.69**	**90**	*e*PN	**Pn**	06 28 21.1	-1.7
GUR				*e*SN	**Sn**	06 28 31.2	-1.6
GUR	**Goura**	**0.69**	**90**	P	**Pb**	06 28 21.0	-0.9
GUR				*e*Sn	**Sn**	06 28 31.2	-1.6
GUR				S	**Sb**	06 28 31.8	+0.8
KALE	**Kalithea**	**0.69**	**50**	P	**Pb**	06 28 21.4	-0.5
KALE				S	**Sb**	06 28 32.3	+1.3
KALE	**Kalithea**	**0.69**	**50**	P	**Pb**	06 28 21.4	-0.5
KALE				S	**Sb**	06 28 32.3	+1.3
VLS	**Valsamata**	**0.73**	**289**	*e*Pn	**Pn**	06 28 22.1	-1.2
VLS				*e*Sn	**Sn**	06 28 32.5	-1.2
VLS	**Valsamata**	**0.73**	**289**	P	**Pb**	06 28 22.4	-0.1
VLS				S	**Sb**	06 28 34.5	+2.4
ITM	**Ithomi**	**0.85**	**154**	*e*Pn	**Pn**	06 28 24.5	-0.4
ITM	**Ithomi**	**0.85**	**154**	P	**Pb**	06 28 24.2	-0.3
ITM	**Ithomi**	**0.85**	**154**	*e*PN	**Pn**	06 28 24.5	-0.4
ITM	**Ithomi**	**0.85**	**154**	P	**Pb**	06 28 24.2	-0.3
ITM	**Ithomi**	**0.85**	**154**	*e*Pn	**Pn**	06 28 24.5	-0.4
VLX	**Vlachokerasia**	**0.92**	**128**	*e*PN	**Pn**	06 28 25.9	-0.1
VLX				*e*SN	**Sn**	06 28 38.5	0.0
VLX	**Vlachokerasia**	**0.92**	**128**	*e*Pn	**Pn**	06 28 25.9	-0.1
VLX				*e*Sn	**Sn**	06 28 38.5	0.0
LKD2	**Lefkada island**	**1.05**	**323**	P	**Pn**	06 28 28.2	+0.4
LKD2				S	**Sb**	06 28 45.8	+4.4
LKD2	**Lefkada island**	**1.05**	**323**	P	**Pn**	06 28 28.2	+0.4
LKD2				S	**Sb**	06 28 45.8	+4.4
PYL	**PYLOS**	**1.07**	**168**	*e*PN	**Pn**	06 28 29.3	+1.3
PYL				*e*SN	**Sn**	06 28 44.2	+2.1
PYL	**PYLOS**	**1.07**	**168**	*e*Pn	**Pn**	06 28 29.3	+1.3
AGG	**Agios Georgios**	**1.27**	**32**	*e*Pn	**Pn**	06 28 32.1	+1.4
AGG				*e*Sn	**Sn**	06 28 48.7	+1.6
AGG	**Agios Georgios**	**1.27**	**32**	*e*PN	**Pn**	06 28 32.1	+1.4
AGG				*e*SN	**Sn**	06 28 48.7	+1.6
AGG	**Agios Georgios**	**1.27**	**32**	*e*Pn	**Pn**	06 28 32.1	+1.4
AGG				*e*Sn	**Sn**	06 28 48.7	+1.6

IDC 12 06:44:19.9±4.0, 30°.48N×141°.29E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.5/24, mbtmp3.5/4, ML3.6/1, MS3.8/1, Ms1 3.8/1, ms1mx3.2/21, Error ellipse: s-maj=163.5km s-min=25.4km az=73.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**6.57**	**338**	Pn	Pn	06 45 57.2	-0.5
	1.2nm,0.3s,baz=156,slow=11,SNR=10.0						
KSRS	**Korea Array**	**13.09**	**306**	LR	LR	06 52 21.6	
	comp=Z,364nm,19.2s,baz=220,slow=37						
MKAR	**Makanchi Array**	**47.76**	**307**	P	P	06 52 58.8	+0.1
	0.4nm,0.7s,baz=82,slow=10,SNR=5.2						
WRA	**Warramunga Arr**	**50.58**	**188**	P	P	06 53 20.1	-0.3
	0.3nm,0.3s,baz=6.1,slow=7.6,SNR=11						
ASAR	**Alice Springs**	**54.30**	**188**	P	P	06 53 48.2	+0.3
	0.5nm,1.0s,baz=12,slow=4.8,SNR=3.0						

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*NSSC **12** 06:44:24, 36°.25N×36°.03E, h12km±2km*
*DDA **12** 06:44:24.2, 36°.26N×36°.06E, h7km±4km, Md3.0*
*CSEM **12** 06:44:25.0±0.1, 36°.22N×36°.07E, h15km, MD2.9, Error ellipse: s-maj=3.9km s-min=3.2km az=60.0*
*ISK **12** 06:44:25.0, 36°.23N×36°.06E, h18km, MD2.9*
*ISCJB **12** 06:44:25.3±0.4, 36°.22N±0°.03×36°.07E±0°.04, h17km±6km, Error ellipse: s-maj=5.1km s-min=5.0km az=171.1*
ISC 12 06:44:25.2±0.4, 36°.22N±0°.03×36°.07E±0°.04, h16km±3km, n35, σ0s75/54, 4D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTY	**Hatay**	**0.11**	**151**	PG	**Pg**	**06 44 29.4**	**+0.7**
HTY				SG	**Sg**	06 44 31.8	+0.6
HTY	**Hatay**	**0.11**	**151**	*i* Pg	**Pg**	06 44 29.4	+0.6
HTY				*i* Sg	**Sg**	06 44 31.8	+0.7
YAYL	**Yayladag**	**0.18**	**171**	*i* P	**Pg**	06 44 29.1	-0.6
YAYL				*i* S	**Sg**	06 44 32.6	-0.3
YAYL	**Yayladag**	**0.18**	**171**	*i* P	**Pg**	06 44 29.1	-0.7
YAYL				*i* S	**Sg**	06 44 32.6	-0.3
BTCH	**Batrach**	**0.36**	**120**	⇑P	**Pg**	06 44 32.0	-0.7
BTCH				⇑S	**Sg**	06 44 39.0	+1.3
BTCH	**Batrach**	**0.36**	**120**	⇑*i*P	**Pg**	06 44 32.7	0.0
BTCH				⇑*i*S	**Sg**	06 44 39.2	+1.5
DRWC	**Darouich**	**0.62**	**50**	⇓P	**Pg**	06 44 36.0	-1.6
DRWC				⇓S	**Sg**	06 44 45.0	-0.9
DRWC	**Darouich**	**0.62**	**50**	⇓*i*P	**Pg**	06 44 36.6	-1.0
DRWC				⇓*i*S	**Sg**	06 44 45.3	-0.6
SLNF	**Slenfeh**	**0.63**	**169**	⇑P	**Pg**	06 44 37.0	-0.7
SLNF				⇑S	**Sg**	06 44 46.0	-0.1
SLNF	**Slenfeh**	**0.63**	**169**	⇑*i*P	**Pg**	06 44 37.6	-0.1
SLNF				⇑*i*S	**Sg**	06 44 46.6	+0.5
KRTS	**Karatas**	**0.67**	**302**	*e*PG	**Pg**	06 44 38.3	0.0
KRTS				*e*SG	**Sg**	06 44 47.9	+0.8
KRTS	**Karatas**	**0.67**	**302**	*e*Pg	**Pg**	06 44 38.3	0.0
KRTS				*e*Sg	**Sg**	06 44 47.9	+0.7
YURE	**YUREGIR**	**0.70**	**330**	*i* P	**Pg**	06 44 38.1	-0.9
YURE	**YUREGIR**	**0.70**	**330**	*i* P	**Pg**	06 44 38.1	-0.9
KUZU	**Kuzuini**	**0.98**	**55**	*i* P	**Pb**	06 44 43.2	-0.6
KUZU				*i* S	**Sb**	06 44 56.2	-0.2
KUZU	**Kuzuini**	**0.98**	**55**	*i* P	**Pb**	06 44 43.2	-0.6
KUZU				*i* S	**Sb**	06 44 56.2	-0.2
BIDA	**Albida**	**1.22**	**170**	⇑P	**Pb**	06 44 47.0	-0.5
BIDA				⇑S	**Sb**	06 45 02.0	-1.3
BIDA	**Albida**	**1.22**	**170**	⇑*i*P	**Pb**	06 44 47.2	-0.3
BIDA				⇑*i*S	**Sb**	06 45 02.8	-0.5
KOZT	**Kozan**	**1.27**	**351**	*e*PN	**Pn**	06 44 48.4	+0.1
KOZT				*e*SN	**Sn**	06 45 05.2	+0.1
GAZ	**Gaziantep**	**1.32**	**44**	*e*PN	**Pn**	06 44 49.5	+0.5
GAZ				*e*SN	**Sn**	06 45 06.7	+0.5
GAZ	**Gaziantep**	**1.32**	**44**	*e*Pn	**Pn**	06 44 49.5	+0.5
GAZ				*e*Sn	**Sn**	06 45 06.7	+0.5
KARA	**Karaisali**	**1.32**	**322**	*e*PN	**Pn**	06 44 49.1	+0.1
KARA	**Karaisali**	**1.32**	**322**	*e*Pn	**Pn**	06 44 49.1	+0.1
MERS	**Mersin**	**1.41**	**298**	*e*PN	**Pn**	06 44 50.4	+0.2
MERS	**Mersin**	**1.41**	**298**	*e*Pn	**Pn**	06 44 50.4	+0.3
KMRS	**Kahramanmaras**	**1.45**	**27**	*e*PN	**Pn**	06 44 51.2	+0.6
KMRS	**Kahramanmaras**	**1.45**	**27**	*e*Pn	**Pn**	06 44 51.2	+0.5
GULE	**Gulek**	**1.49**	**316**	*e*P	**Pn**	06 44 50.5	-0.7
GULE	**Gulek**	**1.49**	**316**	*e*P	**Pn**	06 44 50.5	-0.8
GZT	**Gaziantep**	**1.65**	**46**	*e*P	**Pn**	06 44 54.5	+1.0
IKL	**Isikli**	**1.93**	**271**	*e*PN	**Pn**	06 44 57.9	+0.6
IKL	**Isikli**	**1.93**	**271**	*e*Pn	**Pn**	06 44 57.9	+0.6
SARI	**SarD1z-Kayseri**	**2.51**	**11**	*e*PN	**Pn**	06 45 02.0	-3.3
URFA	**Urfa**	**2.52**	**60**	*e*PN	**Pn**	06 45 06.6	+1.1
URFA	**Urfa**	**2.52**	**60**	*e*Pn	**Pn**	06 45 06.6	+1.2

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*CSEM **12** 07:17:29.7±0.1, 38°.09N×21°.57E, h20km, MD3.0, Error ellipse: s-maj=3.3km s-min=2.7km az=145.0*
*ATH **12** 07:17:29.8, 38°.08N×21°.58E, h19km±2km, MD3.0/9*
*THE **12** 07:17:29.9, 38°.06N×21°.58E, h17km±1km, ML2.7/6, Error ellipse: s-maj=1.1km s-min=0.5km az=35.0*
*ISCJB **12** 07:17:30.2±0.4, 38°.07N±0°.03×21°.58E±0°.03, h20km±5km, Error ellipse: s-maj=5.0km s-min=3.6km az=174.3*
ISC 12 07:17:30.0±0.4, 38°.06N±0°.03×21°.58E±0°.03, h17km±3km, n34, σ0s75/66, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.09**	**267**	*e*PB	**Pg**	**07 17 33.4**	**-0.1**
RLS				*e*SB	**Sg**	07 17 35.9	0.0
RLS	**Riolos of Patr**	**0.09**	**267**	*e*Pb	**Pg**	07 17 33.4	-0.1
RLS				*e*Sb	**Sg**	07 17 35.9	0.0
UPR	**University Cam**	**0.27**	**36**	*e*PB	**Pg**	07 17 36.1	0.0
UPR				*e*SB	**Sg**	07 17 40.7	+0.5
UPR	**University Cam**	**0.27**	**36**	*e*Pb	**Pg**	07 17 36.1	0.0
UPR				*e*Sb	**Sg**	07 17 40.7	+0.5
LAKA	**Lakka**	**0.36**	**60**	P	**Pg**	07 17 37.2	-0.4
LAKA				S	**Sg**	07 17 43.4	+0.8
LAKA	**Lakka**	**0.36**	**60**	P	**Pg**	07 17 37.2	-0.4
LAKA				S	**Sg**	07 17 43.4	+0.8
EFP	**Efpalio**	**0.44**	**35**	P	**Pg**	07 17 38.5	-0.6
EFP				S	**Sg**	07 17 46.0	+0.8
EFP	**Efpalio**	**0.44**	**35**	*e*PB	**Pb**	07 17 38.6	-0.8
EFP				*e*SB	**Sb**	07 17 45.1	-0.6
EFP	**Efpalio**	**0.44**	**35**	*e*Pb	**Pb**	07 17 38.6	-0.8
EFP				*e*Sb	**Sb**	07 17 45.1	-0.6
EFP				S	**Sg**	07 17 46.0	+0.8
TRIZ	**Trizonia**	**0.49**	**52**	P	**Pg**	07 17 39.2	-0.7
TRIZ				S	**Sg**	07 17 47.0	+0.4
TRIZ	**Trizonia**	**0.49**	**52**	P	**Pg**	07 17 39.2	-0.7
TRIZ				S	**Sg**	07 17 47.0	+0.4
KALE	**Kalithea**	**0.55**	**53**	P	**Pg**	07 17 40.2	-0.8
KALE				S	**Sg**	07 17 49.2	+0.8
KALE	**Kalithea**	**0.55**	**53**	P	**Pg**	07 17 40.2	-0.8
KALE				S	**Sg**	07 17 49.2	+0.8
GUR	**Goura**	**0.61**	**102**	P	**Pg**	07 17 41.5	-0.7
GUR				S	**Sg**	07 17 51.2	+0.8
GUR	**Goura**	**0.61**	**102**	*e*PB	**Pb**	07 17 41.3	-1.0
GUR				*e*SN	**Sg**	07 17 50.6	+0.2
GUR	**Goura**	**0.61**	**102**	P	**Pg**	**07 17 41.5**	**-0.7**
GUR				S	**Sg**	**07 17 51.2**	**+0.8**
KFL	**Anninata**	**0.63**	**274**	P	**Pg**	**07 17 42.3**	**-0.1**
VLS	**Valsamata**	**0.79**	**279**	P	**Pb**	**07 17 44.3**	**-1.0**
VLS				S	**Sb**	**07 17 57.5**	**+1.9**
VLS	**Valsamata**	**0.79**	**279**	*e*PB	**Pb**	**07 17 44.4**	**-0.9**
VLS				*e*SN	**Sn**	**07 17 57.4**	**-0.3**
VLS	**Valsamata**	**0.79**	**279**	P	**Pb**	**07 17 44.3**	**-1.0**
VLS				*e*Sn	**Sn**	**07 17 57.4**	**-0.3**
DSF	**Desfina**	**0.82**	**65**	P	**Pb**	**07 17 44.8**	**-1.0**
DSF				S	**Sb**	**07 17 57.3**	**+0.7**
DSF	**Desfina**	**0.82**	**65**	P	**Pb**	**07 17 44.8**	**-1.0**
DSF				S	**Sb**	**07 17 57.3**	**+0.7**
ITM	**Ithomi**	**0.92**	**163**	P	**Pb**	**07 17 47.3**	**-0.2**
ITM				S	**Sb**	**07 18 00.5**	**+1.0**
ITM	**Ithomi**	**0.92**	**163**	*e*PN	**Pn**	**07 17 47.4**	**-0.8**
ITM				*e*SN	**Sn**	**07 18 00.9**	**-0.1**
ITM	**Ithomi**	**0.92**	**163**	P	**Pb**	**07 17 47.3**	**-0.2**
ITM				S	**Sb**	**07 18 00.5**	**+1.0**
ITM				*e*Sn	**Sn**	**07 18 00.9**	**-0.1**
VLX	**Vlachokerasia**	**0.94**	**137**	*e*PN	**Pn**	**07 17 47.7**	**-0.6**
VLX				*e*SN	**Sn**	**07 18 02.0**	**+0.7**
VLX	**Vlachokerasia**	**0.94**	**137**	*e*Pn	**Pn**	**07 17 47.7**	**-0.6**
VLX				*e*Sn	**Sn**	**07 18 02.0**	**+0.7**
LKD2	**Lefkada island**	**1.02**	**315**	P	**Pb**	**07 17 48.5**	**-0.8**
LKD2				S	**Sb**	**07 18 03.6**	**+1.2**
LKD2	**Lefkada island**	**1.02**	**315**	P	**Pb**	**07 17 48.5**	**-0.8**
LKD2				S	**Sb**	**07 18 03.6**	**+1.2**
LTK	**Loutraki**	**1.09**	**92**	P	**Pb**	**07 17 50.0**	**-0.5**
LTK				S	**Sb**	**07 18 05.1**	**+0.7**
LTK	**Loutraki**	**1.09**	**92**	*e*PN	**Pb**	**07 17 50.0**	**-0.5**
LTK	**Loutraki**	**1.09**	**92**	P	**Pb**	**07 17 50.0**	**-0.5**
LTK				S	**Sb**	**07 18 05.1**	**+0.7**
PYL	**PYLOS**	**1.17**	**174**	*e*PN	**Pn**	**07 17 52.7**	**+1.1**
PYL	**PYLOS**	**1.17**	**174**	*e*Pn	**Pn**	**07 17 52.7**	**+1.1**

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*IDC **12** 07:31:16.4±0.8, 12°.53N×143°.78E, h0km, mb3.9/8, mb1 4.1/8, mb1mx4.0/23, mbtmp3.9/8, MS3.6/1, Ms1 3.8/1, ms1mx2.8/29, Error ellipse: s-maj=33.5km s-min=21.5km az=92.0*
*NEIC **12** 07:31:21.5±0.4, 12°.51N×143°.85E, h35km, mb4.3/1, Error ellipse: s-maj=18.6km s-min=10.2km az=114.0*
ISC 12 07:31:17.9±6.7, 12°.5N±0°.1×143°.8E±0°.1, h11km±42km, n14, σ0s45/12, mb4.0/9, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.48**	**43**	*e*Pn	**Pn**	**07 31 44.6**	**0.0**
GUMO				*e*Sn	**Sn**	07 32 03.7	-0.2
WRAB	**Tennant Creek**	**33.56**	**196**	*e*P	**P**	**07 37 57.9**	**-0.2**
	3.6nm,0.8s,mb4.3						
WRA	**Warramunga Arr**	**33.57**	**196**	P	**P**	**07 37 57.9**	**-0.4**
	2.5nm,0.7s,mb4.2,baz=20,slow=9.7,SNR=19						
ASAR	**Alice Springs**	**37.24**	**195**	P	**P**	**07 38 30.0**	**+0.3**
	0.4nm,0.7s,mb3.4,baz=19,slow=12,SNR=5.3						
CMAR	**Chiang Mai Arr**	**43.57**	**284**	LR	LR	07 57 11.8	
	comp=Z,75nm,20.8s,baz=245,slow=36						
MKAR	**Makanchi Array**	**61.56**	**317**	P	**P**	**07 41 35.4**	**+0.1**
	0.3nm,0.5s,mb3.7,baz=84,slow=12,SNR=4.2						
ZALV	**Zalesovo Beam**	**61.91**	**325**	P	**P**	**07 41 37.0**	**-0.4**
	0.4nm,0.4s,mb3.9,baz=101,slow=7.5,SNR=2.4						
BVAR	**Borovoye Array**	**70.14**	**322**	P	**P**	**07 42 30.8**	**+0.4**
	1.1nm,0.4s,mb4.1,baz=118,slow=7.4,SNR=7.3						
YKA	**Yellowknife Ar**	**84.28**	**27**	P	**P**	**07 43 48.9**	**-0.7**
	0.6nm,0.6s,mb3.9,baz=286,slow=4.9,SNR=6.3						
YKA	**Yellowknife Ar**	**84.28**	**27**	P	**P**	**07 43 48.9**	**-0.7**
NVAR	**Mina Array Bea**	**88.39**	**51**	P	**P**	**07 44 11.4**	**+1.1**
	1.5nm,0.7s,mb4.3,baz=270,slow=5.6,SNR=12						
PDAR	**Pinedale Array**	**93.44**	**45**	P	**P**	**07 44 33.8**	**0.0**
	0.2nm,0.7s,mb3.7,baz=298,slow=1.9,SNR=2.7						
TORD	**Torodi Ar. Bea**	**134.61**	**303**	PKP	PKPdf	07 50 38.4	+0.8

comp=N,6μm,2.0s
KUR smax
comp=E,3μm,2.0s
KUR Kuril'sk 2.45 255 *e*P **Pn 07 58 43.6 +0.1**
KUR AMB AMB 07 58 44.5
comp=E,210nm,0.8s
KUR AMB AMB 07 58 44.5
comp=E,180nm,0.8s
KUR AMB AMB 07 58 44.5
comp=E,740nm,0.8s
KUR *i* S **Sn 07 59 14.0 +1.6**
KUR A 07 59 15.2
comp=E,3μm,0.4s
KUR A 07 59 15.2
comp=E,900nm,0.4s
KUR A 07 59 15.6
comp=E,6μm,2.0s
KUR A 07 59 15.6
comp=E,3μm,2.0s
YUK Yuzh-Kuril'sk 4.25 245⇓ *i*PN **Pn 07 59 10.1 +2.3**
YUK *i* S **Sn 07 59 59.7 +3.6**
YUK pmax pmax
comp=Z,390nm,0.3s
YUK pmax pmax
comp=Z,290nm,0.5s
YUK pmax pmax
comp=N,100nm,0.2s
YUK pmax pmax
comp=E,70nm,0.2s
YUK smax
comp=E,580nm,0.4s
YUK smax
comp=N,140nm,0.2s
YUK smax
comp=N,2μm,0.6s
YUK smax
comp=E,970nm,0.5s
YUK Yuzh-Kuril'sk 4.25 245⇓ *i*P **Pn 07 59 10.1 +2.3**
YUK AMB AMB 07 59 20.0
comp=E,390nm,0.2s
YUK AMB AMB 07 59 20.1
comp=E,100nm,0.2s
YUK AMB AMB 07 59 20.1
comp=E,70nm,0.2s
YUK *i* S **Sn 07 59 59.7 +3.6**
YUK A 08 00 08.3
comp=E,2μm,0.5s
YUK A 08 00 08.3
comp=E,970nm,0.5s
NEM2 Nemuro 2 4.67 239 P **Pn 07 59 13.3 -0.3**
NEM2 *e*S **Sn 08 00 05.0 -1.5**
JNK Nakash 5.19 245 P **Pn 07 59 22.1 +1.4**
JAK Akkeshi 5.51 240 P **Pn 07 59 24.7 -0.4**
JAK *e*S **Sn 08 00 25.6 -1.4**
JTKR Abashiri--Toko 5.54 252 P **Pn 07 59 28.0 +2.5**
SKR Severo-Kuril's 5.77 33 *e*PN **Pn 07 59 26.0 -2.6**
SKR pmax pmax
comp=Z,220nm,1.0s
SKR Severo-Kuril's 5.77 33 *e*S **Sn 08 00 31.5 -1.9**
SKR A 08 00 49.0
comp=Z,80nm,0.6s
SKR A 08 00 49.0
comp=Z,100nm,0.6s
SKR A 08 00 49.0
comp=Z,60nm,0.6s
SKR *e*P 08 59 26.5
SKR AMB AMB 08 59 29.0
comp=Z,220nm,1.0s
JMP Maruseppu 5.90 254 P **Pn 07 59 34.0 +3.6**
JAR Ashorobuto 5.93 246 P **Pn 07 59 32.7 +1.9**
YSS Yuzh-Sakhalins 5.94 283⇑ *i*PN **Pn 07 59 33.3 +2.4**
YSS *e*S **Sn 08 00 37.8 +0.3**
YSS pmax pmax
comp=N,50nm,0.4s
YSS pmax pmax
comp=E,50nm,0.4s
YSS pmax pmax
comp=Z,70nm,0.4s
YSS smax
comp=E,50nm,0.8s
YSS Yuzh-Sakhalins 5.94 283 *e*Pn **Pn 07 59 33.5 +2.6**
comp=E,71nm,0.7s
YSS *e*Sn **Sn 08 00 42.7 +5.2**
YSS Yuzh-Sakhalins 5.94 283⇑ *i*P **Pn 07 59 33.3 +2.4**
YSS AMB AMB 07 59 34.0
comp=E,70nm,0.4s
YSS AMB AMB 07 59 34.0
comp=E,50nm,0.4s
YSS *e*S **Sn 08 00 37.8 +0.3**
YSS A 08 00 42.1
comp=E,50nm,0.8s
JOB Onbets 6.09 243 P **Pn 07 59 33.5 +0.5**
JOB *e*S **Sn 08 00 40.3 -0.9**
JKK2 Kamakawa 2 6.36 254 P **Pn 07 59 39.8 +3.2**
ASAJ Asahikawa 6.37 257 P **Pn 07 59 39.1 +2.2**
comp=E,3.1nm,0.3s,baz=91,slow=16,SNR=18
ASAJ LR LR 08 02 00.6
comp=E,181nm,21.3s,baz=202,slow=37
ASAJ Asahikawa 6.37 257 PN **Pn 07 59 39.1 +2.2**
ASAJ pmax pmax
comp=Z,3.0nm,0.3s
ASAJ MLR MLR
comp=Z,181nm,21.3s
JCH Churui 6.54 242 P **Pn 07 59 39.4 +0.3**
JCH *e*S **Sn 08 00 50.7 -1.5**
JWK2 Keihoku 6.56 268 P **Pn 07 59 44.4 +4.9**
JFR Furan 6.75 249 P **Pn 07 59 44.7 +2.6**
UGL Uglegorsk 6.95 300 *e*P **Pn 07 59 49.0 +4.3**
ERM Erimo 7.01 239 *e*Pn **Pn 07 59 46.8 +1.3**
comp=Z,42nm,0.6s
ERM *e*Sn **Sn 08 01 03.5 -0.2**
JEM Erimo 7.01 239 P **Pn 07 59 45.8 +0.3**
JEM *e*S **Sn 08 01 01.6 -2.0**
JBT2 Biratori 2 7.08 247 P **Pn 07 59 47.9 +1.3**
JNBK Urakawa-nobuka 7.10 242 P **Pn 07 59 46.1 -0.7**
JNBK *e*S **Sn 08 01 03.1 -2.8**
JNB Noboribetsu 8.09 248 P **Pn 08 00 01.7 +1.4**
PEA0B Petropavlovsk- 8.33 28 Pn **Pn 08 00 03.6 +0.1**
PETK Petropavlovsk- 8.33 28 P **Pn 08 00 01.8 -1.7**
comp=Z,2.1nm,0.3s,baz=186,slow=12,SNR=11
PETK LR LR 08 03 12.4
comp=Z,107nm,19.4s,baz=298,slow=37
PETK Petropavlovsk- 8.33 28 PN **Pn 08 00 01.8 -1.7**
PETK pmax pmax
comp=Z,2.0nm,0.3s
PETK MLR MLR
comp=Z,107nm,19.4s
JKB Kayabe 8.39 245 P **Pn 08 00 04.4 0.0**
JKB *e*S **Sn 08 01 32.5 -4.9**
JTM Tenmabayashi 9.00 239 P **Pn 08 00 11.4 -1.3**
JANG Nango 9.00 235 P **Pn 08 00 10.7 -2.1**
OFUJ Ofunato 9.82 229 P **Pn 08 00 22.7 -1.2**
JRG Rokugo 10.16 234 P **Pn 08 00 26.6 -2.0**
JRG *e*S **Sn 08 02 13.4 -7.4**
JIO Ouri 10.45 228 P **Pn 08 00 30.2 -2.4**
MJAR Matsushiro Arr 13.54 231 P **Pn 08 01 14.2 -0.2**
comp=Z,0.1nm,0.3s,baz=27,slow=13,SNR=6.0
KLR Kul'dur 13.55 291 *e*P **Pn 08 01 13.4 -1.0**
FX1 Attu Island--F 15.85 56 P **Pn 08 01 45.2 +1.1**
comp=Z,1.1nm,0.3s,baz=172,slow=7.1,SNR=5.8
FX1 Attu Island--F 15.85 56 P **Pn 08 01 45.2 +1.1**
FX1 pmax pmax
comp=Z,1.0nm,0.3s
FX1 Attu Island--F 15.85 56 P **Pn 08 01 45.2 +1.1**
SEY Seymchan 17.05 2 *i*P **Pn 08 02 03.8 +4.9**
ZEA Zeya 17.26 306 *e*P **Pn 08 02 00.5 -1.1**
ZEA AMB AMB 08 02 01.7
comp=Z,15nm,1.0s
KSRS Korea Array 19.30 252 P **Pn 08 02 25.9 -0.3**
comp=Z,0.3nm,0.3s,baz=54,slow=11,SNR=8.3
KSRS LR LR 08 08 57.8
comp=Z,41nm,19.2s,baz=315,slow=34
YAK Yakutsk 20.34 330 *e*P **P 08 02 36.5 +0.9**
YAK pmax pmax
comp=Z,24nm,0.9s
YAK pmax pmax
comp=E,15nm,1.6s
YAK pmax pmax
comp=N,15nm,1.7s
YAK Yakutsk 20.34 330 *e*P **P 08 02 37.0 +1.4**
comp=N,30nm,0.6s
BILL Bilibino 23.50 14 *i*P **P 08 03 11.2 +2.8**
BILL *e**PP 08 03 30.8
BILL *e**SP sP 08 03 48.6 +15
BILL *e* 08 03 56.0
BILL pmax pmax
comp=Z,4.0nm,1.2s,mb3.6
LZH Lanzhou 36.60 272 *e*P **P 08 05 03.0 -1.5**
LZH pmax pmax
comp=Z,17nm,1.3s,mb4.8
GTA Gaotai 37.80 279 *e*P **P 08 05 18.2 +3.6**
GTA pP pP 08 05 22.5 -10
GTA pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
EGAK Eagle 40.46 38 *e*P **P 08 05 35.8 -0.6**
comp=Z,1.5nm,0.5s,mb4.1
EGAK *e*pP pP 08 05 53.9 -0.5
ZALV Zalesovo Beam 42.03 306 PcP PcP 08 07 42.8 -0.3
comp=Z,1.0nm,0.5s,baz=61,slow=3.1,SNR=7.1
INK Inuvik 43.05 32 *e*P **P 08 05 56.6 -0.9**
INK pmax pmax
comp=Z,1.0nm,0.4s
INK Inuvik 43.05 32 *e*P **P 08 05 56.5 -0.9**
comp=Z,1.3nm,0.4s,mb4.0
MK31 Makanchi Array 46.15 297 *e*P **P 08 06 22.5 0.0**
MK31 *e* 08 07 57.7
MKAR Makanchi Array 46.15 297 P **P 08 06 23.1 +0.6**
comp=Z,1.3nm,0.6s,mb3.9,baz=62,slow=10.0,SNR=19
MKAR PcP PcP 08 07 57.5 +0.3
comp=Z,0.6nm,0.6s,baz=58,slow=4.6,SNR=4.2
MKAR ScP ScP 08 11 43.4 -0.3
comp=Z,0.3nm,0.7s,baz=48,slow=4.3,SNR=4.2
MKAR Makanchi Array 46.15 297 *c*e*P **P 08 06 23.1 +0.6**
MKAR pmax pmax
comp=Z,1.0nm,0.6s
KURK Kurchatov 46.73 304 P **P 08 06 27.2 +0.3**
comp=Z,1.0nm,0.4s,mb3.9,baz=72,slow=8.5,SNR=7.4
KURK Kurchatov 46.73 304 P **P 08 06 27.2 +0.3**
KURK pmax pmax
comp=Z,1.0nm,0.4s,mb3.9
KURK Kurchatov 46.73 304 P **P 08 06 27.2 +0.3**
BVAR Borovoye Array 50.36 309 P **P 08 06 53.6 -1.2**
comp=Z,0.6nm,0.6s,mb3.7,baz=87,slow=8.0,SNR=4.2
BVAR LR LR 08 29 21.7
comp=Z,72nm,18.6s,baz=68,slow=37
BVAR Borovoye Array 50.36 309 P **P 08 06 53.6 -1.2**
BVAR pmax pmax
comp=Z,1.0nm,0.6s
BVAR MLR MLR
comp=Z,73nm,18.6s
CMAR Chiang Mai Arr 50.90 255 P **P 08 07 00.7 +1.5**
comp=Z,1.1nm,0.4s,mb4.3,baz=39,slow=7.4,SNR=4.1
CMAR Chiang Mai Arr 50.90 255 P **P 08 07 00.7 +1.5**
CMAR pmax pmax
comp=Z,1.0nm,0.4s
YKA Yellowknife Ar 52.36 36 P **P 08 07 09.7 +0.2**
comp=Z,1.5nm,0.5s,mb4.2,baz=300,slow=7.2,SNR=18
YKA Yellowknife Ar 52.36 36 P **P 08 07 09.7 +0.1**
YKA pmax pmax
comp=Z,2.0nm,0.5s
YKA Yellowknife Ar 52.36 36 P **P 08 07 09.7 +0.2**
AAK Ala-Archa 53.02 296⇓ *e*P **P 08 07 16.0 +1.3**
AAK pmax pmax
comp=Z,3.0nm,2.5s,mb3.9
AAK MLR MLR
comp=Z,25nm,15.0s
EKS2 Erkin-Say 53.45 296 P **P 08 07 18.2 +0.3**
comp=Z,3.4nm,0.8s,mb4.4
ARCES ARCESS Array B 58.19 340 P **P 08 07 50.5 -0.9**
comp=Z,1.4nm,0.9s,mb4.0,baz=20,slow=8.1,SNR=4.0
ARCES ARCESS Array B 58.19 340 P **P 08 07 50.5 -0.8**
ARCES pmax pmax
comp=Z,1.0nm,0.9s
SUMG Summit 61.60 3 *e*P **P 08 08 15.0 +0.3**
comp=Z,13nm,0.9s,mb5.0
LRM Limekiln Ridge 62.74 51 *e*P **P 08 08 22.9 +0.3**
comp=Z,13nm,1.1s,mb4.8
LRM *e*pP pP 08 08 43.0 +1.1
NVAR Mina Array Bea 63.98 61 P **P 08 08 32.2 +1.2**
comp=Z,0.2nm,0.4s,mb3.3,baz=322,slow=7.2,SNR=4.2
NVAR pP pP 08 08 51.7 +1.5
comp=Z,0.4nm,0.5s,baz=301,slow=7.3,SNR=4.1
FINES FINESS Array B 64.22 334 P **P 08 08 31.2 -0.9**
comp=Z,1.5nm,0.6s,mb4.0,baz=32,slow=7.5,SNR=6.1
FINES FINESS Array B 64.22 334 P **P 08 08 31.3 -0.8**
FINES pmax pmax
comp=Z,2.0nm,0.6s
PDAR Pinedale Array 66.29 53 P **P 08 08 46.4 +0.5**
comp=Z,1.2nm,0.6s,mb3.9,baz=303,slow=1.7,SNR=14
WRA Warramunga Arr 67.32 197 P **P 08 08 53.4 +0.9**
comp=Z,3.8nm,0.8s,mb4.3,baz=14,slow=6.7,SNR=21
WRA pP pP 08 09 13.1 +1.1
comp=Z,1.2nm,0.6s,baz=13,slow=6.5,SNR=3.6
WRA Warramunga Arr 67.32 197 P **P 08 08 53.4 +0.9**
WRA *PP pP 08 09 13.1 +1.1
WRA pmax pmax
comp=Z,4.0nm,0.8s
NB2 NORSAR Subarra 68.57 340 P **P 08 08 59.2 -0.7**
comp=Z,1.3nm,0.7s,mb3.9,baz=26,slow=6.5
NOA NORSAR Array B 68.57 340 P **P 08 08 59.4 -0.5**
comp=Z,1.6nm,0.6s,mb4.0,baz=28,slow=6.5,SNR=5.2
NOA NORSAR Array B 68.57 340 P **P 08 08 59.4 -0.5**
NOA pmax pmax
comp=Z,2.0nm,0.6s
NOA NORSAR Array B 68.57 340 P **P 08 08 59.4 -0.5**
KIV Kislovodsk 70.42 313 *e*P **P 08 09 09.5 -2.1**
KIV pmax pmax
comp=Z,3.0nm,0.9s,mb4.1
ASAR Alice Springs 71.03 197 P **P 08 09 17.2 +1.9**
comp=Z,2.6nm,0.7s,mb4.2,baz=12,slow=5.0,SNR=24
ASAR Alice Springs 71.03 197 P **P 08 09 17.3 +1.9**
ASAR pmax pmax
comp=Z,3.0nm,0.7s
AKASG Malin Array Be 71.49 325 P **P 08 09 13.8 -4.2**
comp=Z,1.1nm,0.4s,mb4.0,baz=36,slow=6.4,SNR=4.2
AKASG Malin Array Be 71.49 325 *c*e*P **P 08 09 16.8 -1.2**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
SCHQ Schefferville 74.57 22 P **P 08 09 35.2 -0.8**
comp=Z,2.1nm,0.7s,mb4.0,baz=282,slow=9.3,SNR=3.3
SCHQ Schefferville 74.57 22 P **P 08 09 35.2 -0.9**
BUR08 Bucovina Ar. S 75.52 326 *e*P **P 08 09 41.3 -0.4**
MORC Moravsky Berou 76.54 331 *e*P **P 08 09 47.2 -0.2**
MORC pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
MORC Moravsky Berou 76.54 331 *e*P **P 08 09 47.2 -0.2**
comp=Z,5.9nm,0.9s,mb4.3
CLL Collm 76.66 335 *e*P **P 08 09 47.0 -1.1**
CLL pmax pmax
comp=Z,5.0nm,0.9s,mb4.2
CLL Collm 76.66 335 *e*P **P 08 09 47.0 -1.1**
comp=Z,5.0nm,0.9s,mb4.2
BRTR Keskin Array B 78.08 316 P **P 08 09 55.5 -0.8**
comp=Z,1.1nm,0.9s,mb3.6,baz=46,slow=3.6,SNR=5.0
BRTR Keskin Array B 78.08 316 *c*e*P **P 08 09 56.4 +0.2**
BRTR pmax pmax
comp=Z,1.0nm,0.9s
GERES GERESS Array B 78.61 333 P **P 08 09 58.6 -0.3**
comp=Z,0.9nm,0.5s,mb3.9,baz=38,slow=5.0,SNR=4.5
GERES GERESS Array B 78.61 333 P **P 08 09 58.6 -0.4**
GERES pmax pmax
comp=Z,1.0nm,0.5s
TXAR Lajitas Array 79.04 59 P **P 08 10 02.4 +0.6**
comp=Z,1.3nm,0.5s,mb4.0,baz=296,slow=4.4,SNR=27
TXAR pP pP 08 10 22.8 +1.2
comp=Z,2.2nm,0.6s,baz=297,slow=4.0,SNR=10.0
TXAR Lajitas Array 79.04 59 P **P 08 10 02.4 +0.7**
TXAR *PP pP 08 10 22.8 +1.2
TXAR pmax pmax
comp=Z,1.0nm,0.5s
TXAR Lajitas Array 79.04 59 P **P 08 10 02.4 +0.6**
TXAR pP pP 08 10 22.8 +1.2
LPL La Plagne 83.70 336 *e*P **P 08 10 26.6 +0.6**
comp=Z,7.6nm,0.6s,mb4.4
LPL La Plagne 83.70 336 *e*P **P 08 10 26.6 +0.6**
LPL pmax pmax
comp=Z,4.0nm,0.6s,mb4.4
LPL La Plagne 83.70 336 *e*P **P 08 10 26.6 +0.6**
comp=Z,3.8nm,0.6s,mb4.4
LPG La Plagne 83.71 336 *e*P **P 08 10 26.9 +0.8**
comp=Z,8.9nm,0.7s,mb4.4
LPG La Plagne 83.71 336 *e*P **P 08 10 26.9 +0.8**
LPG pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
LPG La Plagne 83.71 336 *e*P **P 08 10 26.9 +0.8**
comp=Z,4.4nm,0.7s,mb4.4
ORIF Oris-en-Rattie 84.49 336 *e*P **P 08 10 30.3 +0.2**
comp=Z,18nm,0.8s,mb4.7
ORIF Oris-en-Rattie 84.49 336 *e*P **P 08 10 30.3 +0.2**
ORIF pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
ORIF Oris-en-Rattie 84.49 336 *e*P **P 08 10 30.3 +0.2**
comp=Z,9.0nm,0.8s,mb4.7
CAF Calviac 85.51 339 *e*P **P 08 10 35.0 -0.2**
comp=Z,15nm,0.8s,mb4.7
CAF Calviac 85.51 339 *e*P **P 08 10 35.0 -0.2**
CAF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
CAF Calviac 85.51 339 *e*P **P 08 10 35.0 -0.2**
comp=Z,7.6nm,0.8s,mb4.7
QSPA South Pole Qui 135.66 180 *e*PKPdf PKPdf 08 17 17.8 +2.0
PLCA Paso Flores 149.44 95 PKPbc PKPbc 08 17 46.7 +1.1
comp=Z,2.1nm,0.6s,baz=236,slow=1.5,SNR=9.7
PLCA pPKPbc pPKPbc 08 18 06.4 -0.3
comp=Z,2.5nm,0.9s,baz=4.0,slow=4.4,SNR=3.6
PLCA Paso Flores 149.44 95 PKPbc PKPbc 08 17 46.7 +1.1
PLCA pPKPbc pPKPbc 08 18 06.4 -0.3
CPUP Villa Florida 150.01 59 PKPbc PKPbc 08 17 47.9 +0.3
comp=Z,0.5nm,0.4s,baz=82,slow=8.5,SNR=5.1

*ISK **12** 08:06:54.8, 37°.91N×27°.00E, h10km, MD2.6*
*CSEM **12** 08:06:55.4±0.7, 37°.90N×27°.05E, h10km, MD2.8, Error ellipse: s-maj=18.8km s-min=5.1km az=73.0*
*DDA **12** 08:06:55.7, 37°.95N×27°.22E, h7km±2km, Md2.8*
*ISCJB **12** 08:06:56.4±0.9, 37°.93N±0°.04×27°.18E±0°.10, h4km±17km, Error ellipse: s-maj=13.6km s-min=4.5km az=161.2*
ISC 12 08:06:56.6±1.1**, 37°.92N**±0°.04**×27°.2E**±0°.1**, h8**km±13km**, n12,** σ0**93/21, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.23**	**164**	*i* P	**Pg**	**08 07 00.7**	**-0.5**
GCAM				*i* S	**Sg**	**08 07 04.7**	**+0.4**
GCAM	**G?zelcaml?**	**0.23**	**164**	*i* P	**Pg**	**08 07 00.7**	**-0.5**
GCAM				*i* S	**Sg**	**08 07 04.7**	**+0.4**
BLCB	**Balcova**	**0.47**	**349**	*e*PG	**Pg**	**08 07 04.5**	**-1.2**
BLCB				*e*SG	**Sg**	**08 07 11.9**	**-0.1**
BLCB	**Balcova**	**0.47**	**349**	*e*Pg	**Pg**	**08 07 04.6**	**-1.2**
BLCB				*e*Sg	**Sg**	**08 07 11.9**	**0.0**
IZM	**Izmir**	**0.48**	**10**	*e*PG	**Pg**	**08 07 06.2**	**+0.2**
IZM				*e*SG	**Sg**	**08 07 13.7**	**+1.4**
IZM	**Izmir**	**0.48**	**10**	*e*Pg	**Pg**	**08 07 06.2**	**+0.2**
IZM				*e*Sg	**Sg**	**08 07 13.7**	**+1.4**
AYDN	**Tasoluk**	**0.63**	**114**	*i* P	**Pg**	**08 07 07.8**	**-1.0**
AYDN				*i* S	**Sg**	**08 07 15.9**	**-1.1**
AYDN	**Tasoluk**	**0.63**	**114**	*i* P	**Pg**	**08 07 07.8**	**-1.0**
MLSB	**Milas**	**0.80**	**141**	*e*PG	**Pg**	**08 07 12.0**	**0.0**
MLSB				*e*SG	**Sg**	**08 07 24.3**	**+2.0**
MLSB	**Milas**	**0.80**	**141**	*e*Pg	**Pg**	**08 07 12.0**	**0.0**
MLSB				*e*Sg	**Sg**	**08 07 24.3**	**+2.0**
KULA	**Kula-Manisa**	**1.33**	**63**	*e*PN	**Pn**	**08 07 21.6**	**+0.2**
KULA	**Kula-Manisa**	**1.33**	**63**	*e*Pn	**Pn**	**08 07 21.6**	**+0.2**

CASC 12 08:25:34.3±2.5**, 15°.47N**×**89°.67W, h10km**±**49km, MD3.7, ML2.9, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RBDL	**Robledal**	**1.35**	**181**	*e*P	Pn	08 26 06.3	+7.1
RBDL				*e*S	Sb	08 26 28.1	+11
RTR	**El Retiro**	**1.57**	**179**	*e*P	Pn	08 26 03.5	+1.4
SNJE	**San Jose**	**1.60**	**178**	*e*P	Pn	08 26 03.2	+0.7
SBLS	**San Blas**	**1.62**	**178**	*e*P	Pn	08 26 02.9	0.0
BOQS	**Boqueron**	**1.77**	**168**	*e*P	Pn	08 26 03.9	-1.0
BOQS				*e*P		08 26 04.0	
BOQS				*e*S	Sn	08 26 27.9	+0.4
LBRS	**Las Brisas**	**1.83**	**160**	*e*P	Pn	08 26 06.5	+0.7
LFRS	**El Faro**	**1.93**	**162**	*e*P	Pn	08 26 05.2	-1.9
CAHU	**Cacacuatique**	**2.21**	**140**	*e*P	Pn	08 26 15.7	+4.8
VSM	**San Miguel**	**2.44**	**146**	*e*P	Pn	08 26 14.3	+0.1
BLLM	**Bellamira**	**2.45**	**145**	*e*P	Pn	08 26 14.2	-0.1
TGUH	**Tegucigalpa,Un**	**2.72**	**121**	*e*S	Sn	08 26 51.6	+0.8
TGUH				AML	AML	08 27 19.1	
comp=E,71nm,0.8s							
CNCH	**Conchagua**	**2.82**	**141**	*e*P	Pn	08 26 18.4	-1.0

*IDC **12** 08:48:43.7±0.7, 6°.84N×101°.03W, h0km, mb4.3/12, mb1 4.5/13, mb1mx4.4/20, mbtmp4.3/13, ML3.3/1, MS3.7/9, Ms1 3.7/9, ms1mx3.5/21, Error ellipse: s-maj=28.1km s-min=13.5km az=59.0*
*ISCJB **12** 08:48:44.0±0.5, 6°.83N±0°.07×100°.84W±0°.06, h10km, mb4.5/63, MS3.8/10, Error ellipse: s-maj=11.1km s-min=6.3km az=31.5*
*BJI **12** 08:48:44.6, 6°.90N×100°.90W, h10km, mB5.6/4, Ms4.8/2, Ms7 4.4/4*
*NEIC **12** 08:48:45.7±0.5, 6°.86N×100°.90W, h10km, mb4.6/52, Error ellipse: s-maj=9.9km s-min=5.6km az=219.0*
ISC 12 08:48:46.2±0.5**, 6°.87N**±0°.07×**100°.81W**±0°.06**, h10km, n357,** σ0**60**/332**, mb4.5**/63**, MS3.8**/10**, 122C-118D, Galapagos Triple Junction region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**11.69**	**29**	Pn	**Pn**	**08 51 35.5**	**+2.3**
0.2nm,0.3s,baz=212,slow=10,SNR=6.0							
CMIG				LR	LR	08 54 14.3	
comp=Z,24nm,20.0s,baz=80,slow=28							
CMIG	**Matias Romero**	**11.69**	**29**	Pn	**Pn**	**08 51 35.5**	**+2.3**
CMIG				LR	LR	08 54 14.3	
TGUH	**Tegucigalpa,Un**	**15.10**	**61**	*e*P	**Pn**	**08 52 26.1**	**+6.3**
55nm,1.2s							
JTS	**JuntasAbangare**	**16.05**	**77**	LR	LR	08 56 56.3	
comp=Z,718nm,20.2s,baz=240,slow=30							
JTS	**JuntasAbangare**	**16.05**	**77**	*e*Pn	**Pn**	**08 52 31.7**	**-0.5**
23nm,1.3s							
TXAR	**Lajitas Array**	**22.50**	**353**	P	**P**	**08 53 46.3**	**+0.3**
4.8nm,0.9s,mb3.9,baz=172,slow=9.6,SNR=33							
TXAR				PcP	PcP	08 57 39.1	-1.0
0.7nm,0.7s,baz=182,slow=4.6,SNR=6.9							
TXAR				LR	LR	09 01 49.1	
comp=Z,96nm,21.5s,MS3.2,baz=0.0,slow=35							
628A	**Black Gap, Mar**	**22.58**	**355**	⇓P	**P**	**08 53 47.9**	**+1.0**
baz=23,SNR=9.3							
627A	**Terlingua Ranc**	**22.59**	**354**	⇑P	**P**	**08 53 48.0**	**+1.0**
baz=23,SNR=20							
626A	**Big Bend Ranch**	**22.78**	**353**	⇑P	**P**	**08 53 49.8**	**+0.9**
baz=23,SNR=12							
528A	**Cox Ranch, San**	**23.24**	**356**	⇓P	**P**	**08 53 54.4**	**+0.6**
baz=23,SNR=18							
OTAV	**Otavalo**	**23.26**	**106**	*e*P	**P**	**08 53 56.2**	**+2.0**
13nm,0.8s,mb4.4							
526A	**Mary Lane Ranc**	**23.27**	**353**	⇓P	**P**	**08 53 55.1**	**+0.9**
baz=23,SNR=16							
527A	**Woodward Ranch**	**23.30**	**354**	⇓P	**P**	**08 53 55.3**	**+0.8**
baz=23,SNR=28							
JCT	**Junction City**	**23.50**	**2**	*e*P	**P**	**08 53 56.7**	**+0.1**
276nm,2.2s,mb5.3							
428A	**Kincaid Ranch,**	**23.80**	**356**	⇑P	**P**	**08 53 59.4**	**+0.1**
baz=24,SNR=33							
426A	**McDonald Obser**	**23.86**	**353**	⇓P	**P**	**08 54 00.2**	**+0.2**
baz=24,SNR=28							
427A	**Hayter Ranch,**	**23.98**	**355**	⇑P	**P**	**08 54 01.0**	**0.0**
baz=24,SNR=15							
425A	**Indio Mountain**	**24.11**	**351**	⇓P	**P**	**08 54 02.1**	**-0.1**
baz=24,SNR=35							
328A	**Wristen Ranch,**	**24.46**	**356**	⇑P	**P**	**08 54 04.8**	**-0.6**
baz=25,SNR=10							
326A	**Caldwell Ranch**	**24.50**	**353**	⇑P	**P**	**08 54 05.4**	**-0.4**
baz=25							
325A	**Bean Ranch, Si**	**24.68**	**351**	⇓P	**P**	**08 54 07.1**	**-0.3**
baz=25,SNR=23							
324A	**Moseley Ranch,**	**24.83**	**350**	⇓P	**P**	**08 54 08.4**	**-0.4**
baz=25,SNR=15							
MNTX	**Cornudas Mount**	**25.07**	**351**	*e*P	**P**	**08 54 10.0**	**-0.9**
14nm,1.1s,mb4.4							
227A	**Bennet, Jal**	**25.12**	**355**	⇓P	**P**	**08 54 11.7**	**+0.3**
baz=25							
226A	**Malaga, Loving**	**25.25**	**353**	⇓P	**P**	**08 54 12.5**	**-0.1**
baz=25,SNR=16							
225A	**Deer Hill, Car**	**25.39**	**352**	⇓P	**P**	**08 54 13.3**	**-0.5**
baz=26,SNR=11							
320A	**Kipp Ranch, An**	**25.39**	**344**	⇓P	**P**	**08 54 13.8**	**-0.1**
baz=26,SNR=7.8							
GDL2	**Guadalupe Moun**	**25.42**	**353**	*e*P	**P**	**08 54 14.1**	**0.0**
224A	**Cornudas Mount**	**25.46**	**351**	⇑P	**P**	**08 54 13.8**	**-0.7**
baz=26,SNR=7.0							
319A	**Douglas**	**25.63**	**343**	⇑P	**P**	**08 54 16.1**	**0.0**
baz=26,SNR=7.4							
127A	**Arkansas Junct**	**25.78**	**355**	⇑P	**P**	**08 54 17.0**	**-0.5**
baz=26							
318A	**Bisbee**	**25.91**	**342**	⇑P	**P**	**08 54 18.5**	**-0.1**

baz=26
125A Gardner Draw, 25.91 353 ⇓P P 08 54 18.1 -0.5
baz=26,SNR=7.0
220A Playas Peak, P 25.93 345 ⇓P P 08 54 18.9 +0.2
baz=26,SNR=5.4
124A Stringfield Ra 26.06 351 ⇓P P 08 54 19.8 -0.1
baz=26
CPRX Cap Rock 26.18 354 eP P 08 54 20.0 -1.0
19nm,1.0s,mb4.6
219A White Tail Can 26.21 344 ⇓P P 08 54 21.2 -0.1
baz=26,SNR=6.3
ATAH Atahualpa 26.34 121 P P 08 54 26.6 +3.9
5.2nm,0.8s,mb4.1,baz=329,slow=19,SNR=3.7
ATAH LR LR 09 02 43.5
comp=Z,460nm,20.0s,MS4.0,baz=295,slow=32
121A Cookes Peak, D 26.34 347 ⇓P P 08 54 22.7 +0.2
baz=26,SNR=5.8
Z27A Tatum 26.41 355 ⇓P P 08 54 22.9 -0.2
baz=26
ROSC El Rosal 26.42 93 P P 08 54 25.6 +2.2
1.7nm,0.4s,mb3.9,baz=268,slow=15,SNR=3.7
ROSC El Rosal 26.42 93 P P 08 54 25.0 +1.6
218A Dragoon 26.42 342 ⇑P P 08 54 22.9 -0.3
baz=26
Z26A Caprock 26.43 354 ⇓P P 08 54 23.2 0.0
baz=27,SNR=5.4
217A Green Valley 26.48 341 ⇑P P 08 54 23.6 -0.1
baz=27
Z25A Roswell 26.53 353 ⇑P P 08 54 23.7 -0.5
baz=27,SNR=9.1
120A U Bar Ranch, L 26.56 345 ⇓P P 08 54 24.6 +0.1
baz=27
Z24A Sheeppen Canyo 26.66 351 ⇓P P 08 54 25.3 -0.1
baz=27
Z22A Elephant Butte 26.87 349 ⇑P P 08 54 27.4 +0.2
baz=27
TUC Tucson 26.96 341 eP P 08 54 27.9 -0.2
5.9nm,1.2s,mb4.0
Y27A Causey 26.97 356 ⇓P P 08 54 27.9 -0.2
baz=27,SNR=6.8
118A Homack Ranch, 27.02 343 ⇓P P 08 54 28.4 -0.1
baz=27
MSTX Muleshoe 27.03 356 ⇓P P 08 54 28.3 -0.3
baz=27
Y26A Elida 27.06 354 ⇑P P 08 54 29.0 +0.1
baz=27
Z20A Nine Sixteen R 27.09 346 ⇓P P 08 54 29.3 0.0
baz=27
Y25A Mesa, Roswell 27.16 353 ⇑P P 08 54 29.6 -0.3
baz=27,SNR=7.5
117A Oracle 27.19 341 ⇓P P 08 54 30.1 -0.1
baz=27
Y24A Capitan 27.26 352 ⇑P P 08 54 30.4 -0.3
baz=27
Y23A Lovelace Mesa, 27.36 350 ⇑P P 08 54 31.2 -0.5
baz=28
Y22A Socorro 27.53 349 ⇓P P 08 54 33.1 0.0
baz=28
BNM Barren Site 27.67 350 eP P 08 54 34.5 +0.1
4.5nm,1.2s,mb4.0
X26A CR and CF Fran 27.68 355 ⇑P P 08 54 34.6 +0.1
baz=28
X27A F and S Farms, 27.72 356 ⇓P P 08 54 34.7 -0.2
baz=28
Y21A Point of Rocks 27.74 348 ⇑P P 08 54 35.1 +0.1
baz=28
Z17A San Carlos Hig 27.78 342 ⇓P P 08 54 34.8 -0.6
baz=28
Y20A Horse Springs, 27.80 346 ⇑P P 08 54 35.9 +0.3
baz=28
115A Sonoran Desert 27.81 339 ⇑P P 08 54 35.8 +0.1
baz=28
Y19A Nutrioso 28.06 345 ⇑P P 08 54 38.5 +0.5
baz=28,SNR=14
114A Black Gap (USA 28.09 338 ⇓P P 08 54 38.3 +0.1
baz=28
Y18A Canyon Day Jun 28.10 344 ⇑P P 08 54 38.4 +0.1
baz=28
Z16A Peralta Trail, 28.12 341 ⇑P P 08 54 38.8 +0.3
baz=28
W27A Bowe Ranch, En 28.13 356 ⇑P P 08 54 38.2 -0.3
baz=28,SNR=7.3
X21A Alamocita Cree 28.18 348 ⇑P P 08 54 39.2 +0.2
baz=28
W26A Owens Ranch, T 28.21 355 ⇑P P 08 54 39.1 -0.2
baz=28
MIAR Mount Ida 28.34 13 eP P 08 54 39.5 -0.9
26nm,1.3s,mb4.7
ANMO Albuquerque 28.42 350 P P 08 54 41.2 0.0
1.8nm,1.1s,mb3.6,baz=154,slow=11,SNR=5.7
ANMO LR LR 09 04 55.4
comp=Z,97nm,21.9s,MS3.4,baz=157,slow=34
ANMO Albuquerque 28.42 350 P P 08 54 41.2 0.0
ANMO LR LR 09 04 55.4
X20A Quemado 28.43 347 ⇓P P 08 54 41.6 +0.3
baz=29
113A Mohawk Valley, 28.45 337 ⇑P P 08 54 41.0 -0.4
baz=28
X19A St. Johns 28.52 345 ⇓P P 08 54 42.5 +0.6
baz=29
W24A Lazy 6 Ranch, 28.52 352 ⇓P P 08 54 42.5 +0.6
baz=29
W23A Werner Place, 28.58 351 ⇑P P 08 54 43.0 +0.5
baz=29
Z13A Yuma Proving G 28.78 337 ⇓P P 08 54 44.2 -0.1
baz=29
V26A Tequesquite Ra 28.92 355 ⇓P P 08 54 45.2 -0.3
baz=29,SNR=12
Y15A Casa Rosa Ranc 28.98 340 ⇓P P 08 54 45.6 -0.5
baz=29
W20A Ramah 29.00 347 ⇑P P 08 54 46.2 0.0
baz=29
LRAL Lakeview Retre 29.02 24 eP P 08 54 46.0 -0.5
32nm,2.5s,mb4.6
V25A Rancho No Teng 29.04 354 ⇓P P 08 54 46.2 -0.4
baz=29,SNR=7.9
X15A Humboldt 29.43 341 ⇑P P 08 54 49.7 -0.4
baz=30
V22A San Miguel Ran 29.44 350 ⇓P P 08 54 50.3 +0.1
baz=30,SNR=10
U26A Atchley Ranch, 29.51 355 ⇑P P 08 54 51.1 +0.4
baz=30
U25A Circle Dot Ran 29.57 354 ⇑P P 08 54 51.0 -0.4
baz=30
U23A El Rito 29.73 351 ⇓P P 08 54 52.7 -0.1
baz=30
W16A Flagstaff 29.77 342 ⇑P P 08 54 52.7 -0.4
baz=30
U22A Llaves 29.88 350 ⇓P P 08 54 54.5 +0.5
baz=30,SNR=6.5
BC3 Big Chuckawall 29.90 335 ⇑P P 08 54 54.3 0.0
baz=30
SDV Santo Domingo 29.96 84 P P 08 54 55.3 +0.2
3.8nm,0.8s,mb4.2,baz=263,slow=8.9,SNR=5.4
SDV PcP PcP 08 57 56.9 -0.8
2.9nm,0.7s,baz=285,slow=8.0,SNR=4.4
SDV LR LR 09 06 25.9
comp=Z,143nm,18.5s,MS3.6,baz=150,slow=35
V17A Tonalea, Kykot 30.05 344 ⇑P P 08 54 55.8 +0.3
baz=30,SNR=6.5
U21A Nageezi 30.08 349 ⇓P P 08 54 56.0 +0.2
baz=30
W15A Williams 30.08 341 ⇓P P 08 54 56.8 +1.0
baz=30
X13A Yucca 30.09 338 ⇑P P 08 54 56.2 +0.3
baz=30
WUAZ Wupatki 30.11 343 ⇓P P 08 54 56.8 +0.7
baz=30
WUAZ Wupatki 30.11 343 eP P 08 54 57.3 +1.1
7.6nm,1.3s,mb4.3
IRM Iron Mountain 30.22 336 ⇑P P 08 54 57.6 +0.6
baz=30
U19A Dine' College, 30.27 346 ⇑P P 08 54 57.7 +0.1
baz=30
PFO Pinyon Flat Ob 30.30 334 ⇓P P 08 54 57.7 0.0
baz=30
T25A Trinidad 30.30 354 ⇓P P 08 54 58.3 +0.5
baz=30
W14A Seligman 30.38 340 ⇓P P 08 54 59.0 +0.5
baz=30
BELC Belle Mtn. Jos 30.43 335 ⇓P P 08 54 59.0 +0.1
baz=30
T22A Edith 30.51 350 ⇑P P 08 54 59.8 +0.2
baz=31
W13A Hualapai Mount 30.56 339 ⇓P P 08 55 00.4 +0.3
baz=31
T21A Navajo Lake 30.60 349 ⇑P P 08 55 00.4 -0.1
baz=31
MURC Murrieta 30.62 332 ⇓P P 08 55 00.8 +0.1
baz=31
V15A Kaibab Nationa 30.64 342 ⇑P P 08 55 01.3 +0.5
baz=31
T19A Beclabito 30.75 347 ⇑P P 08 55 02.2 +0.5
baz=31
V14A Boquillas Ranc 30.77 340 ⇑P P 08 55 02.0 +0.1
baz=31
GOGA Godfrey 30.92 29 eP P 08 55 03.0 -0.3
18nm,1.4s,mb4.7
GMRC Granite Mounta 30.96 336 ⇓P P 08 55 03.8 +0.1
baz=31
MVCO Mesa Verde 31.00 348 ⇓P P 08 55 04.2 +0.3
baz=31
U15A North Rim 31.23 342 ⇓P P 08 55 06.4 +0.4
baz=31
T18A Mexican Hat 31.24 346 ⇑P P 08 55 06.1 0.0
baz=31
V13A Grand Canyon W 31.27 339 ⇑P P 08 55 06.7 +0.3
baz=31
T17A Navajo Res., N 31.34 345 ⇑P P 08 55 07.7 +0.7
baz=32
WVT Waverly 31.45 20 eP P 08 55 06.8 -1.2
2.5nm,0.7s,mb4.2
V12A Nelson 31.48 338 ⇓P P 08 55 08.6 +0.4
baz=32
U14A Mt Trumbull 31.51 341 ⇓P P 08 55 08.9 +0.5
baz=32
T16A Glen Canyon Da 31.52 343 ⇓P P 08 55 09.3 +0.8
baz=32
TUQ Turquoise Moun 31.64 336 ⇑P P 08 55 09.8 +0.2
baz=32
S19A Harvey Farm, M 31.65 347 ⇓P P 08 55 09.7 0.0
baz=32,SNR=5.4
R22A Saguache, Gunn 31.68 351 ⇑P P 08 55 10.5 +0.6
baz=32,SNR=5.7
U13A Pakoon Wash 31.77 340 ⇓P P 08 55 11.0 +0.2
baz=32
S18A Hurst Farm, Bl 31.79 346 ⇓P P 08 55 11.3 +0.4
baz=32
T15A Red Dirt Ranch 31.81 342 ⇑P P 08 55 11.6 +0.5
baz=32
GSC Goldstone 31.89 335 ⇑P P 08 55 12.1 +0.3
baz=32
GSC Goldstone 31.89 335 eP P 08 55 12.5 +0.7
6.9nm,1.1s,mb4.4
R20A Redvale 31.92 349 ⇓P P 08 55 12.4 +0.3
baz=32,SNR=5.2
S17A Black Ridge (B 31.94 345 ⇓P P 08 55 12.5 +0.2
baz=32
R21A Cimarron 31.94 350 ⇑P P 08 55 12.9 +0.7
baz=32
EDW2 Edwards Air Fo 32.05 333 ⇓P P 08 55 13.4 +0.2
baz=32
CPCT Cooper Cave 32.14 26 eP P 08 55 13.5 -0.5
R19A Curley Farm, L 32.20 347 ⇓P P 08 55 14.7 +0.1
baz=32
U11A Corn Creek 32.29 338 ⇑P P 08 55 15.7 +0.4
baz=32
T13A Saint George 32.30 340 ⇑P P 08 55 15.3 0.0
baz=32
Q22A Crested Butte, 32.32 351 ⇓P P 08 55 15.8 +0.2
baz=32,SNR=9.0
Q21A Lamborn Mesa, 32.40 350 ⇑P P 08 55 16.5 +0.3
baz=32,SNR=6.0
LRMC Laurel Mountai 32.42 334 ⇑P P 08 55 16.5 0.0
baz=32
R18A Canyonlands Na 32.43 347 ⇓P P 08 55 16.8 +0.2
baz=33,SNR=16
CCUT Cedar City 32.60 341 eP P 08 55 19.0 +0.9
32nm,2.6s,mb4.8
SMCO Snowmass 32.64 351 eP P 08 55 18.2 -0.2
5.0nm,1.0s,mb4.4
TKL Tuckaleechee C 32.64 26 eP P 08 55 18.9 +0.5
R17A Hanksville Air 32.66 346 ⇑P P 08 55 18.7 +0.2
baz=33,SNR=8.3
S14A Cedar City 32.73 342 ⇑P P 08 55 19.6 +0.4
baz=33
MPMC Manual Prospec 32.82 335 ⇑P P 08 55 20.0 0.0
baz=33,SNR=5.8
Q19A Hogan Spring (32.84 348 ⇑P P 08 55 20.5 +0.4
baz=33
ARUT Antelope Range 32.84 341 eP P 08 55 20.9 +0.7
5.1nm,1.2s,mb4.3
FURC Furnace Creek, 32.91 336 ⇑P P 08 55 21.4 +0.6
baz=33
ISA Isabella 32.92 333 ⇓P P 08 55 21.3 +0.4
baz=33
T11A Corn Creek, Al 32.95 339 ⇓P P 08 55 22.1 +0.9
baz=33
ISCO Idaho Springs 33.07 353 eP P 08 55 22.0 -0.1
10nm,1.1s,mb4.7
SRU San Rafael 33.27 346 ⇓P P 08 55 24.1 +0.2
baz=33
VES Vestal, Richgr 33.35 332 ⇑P P 08 55 24.2 -0.4
baz=33
R13A O'Grain Ranch, 33.37 341 ⇑P P 08 55 25.0 +0.2
baz=34
P19A Cripple Cowboy 33.44 349 ⇑P P 08 55 26.1 +0.8
baz=34
TZTN Tazewell 33.48 26 eP P 08 55 26.3 +0.5
9.6nm,0.9s,mb4.7
S11A Rachel 33.51 338 ⇑P P 08 55 26.4 +0.5
baz=34
P18A Preston Nutter 33.70 347 ⇓P P 08 55 27.8 +0.2
baz=34
R12A Pony Springs, 33.72 340 ⇑P P 08 55 28.2 +0.5
baz=34
O20A White River Ci 33.78 350 ⇑P P 08 55 28.7 +0.4
baz=34,SNR=7.4
Q14A Sevier Lake (B 33.90 342 ⇑P P 08 55 30.1 +0.8
baz=34,SNR=8.5
S10A Tonopah Range, 34.07 337 ⇓P P 08 55 31.1 +0.3
baz=34
Q13A Wheeler Ranch, 34.09 341 ⇑P P 08 55 31.3 +0.3
baz=34,SNR=8.0
O19A Miners Draw (B 34.11 349 ⇓P P 08 55 31.6 +0.5
baz=34
N22A Wattenberg Ran 34.16 352 ⇑P P 08 55 32.0 +0.5
baz=34,SNR=7.0
O18A Roosevelt 34.26 347 ⇑P P 08 55 32.9 +0.5
baz=34,SNR=7.8
N21A Black Mountain 34.27 351 ⇑P P 08 55 33.5 +0.9
baz=34,SNR=5.4
R10A Warm Springs 34.28 338 ⇑P P 08 55 33.4 +0.8
baz=34
P14A Drum Mountains 34.39 343 ⇑P P 08 55 34.5 +0.9
baz=34,SNR=5.8
N20A Spence Gulch, 34.47 350 ⇑P P 08 55 34.8 +0.6
baz=35,SNR=5.6
Q11A Duckwater 34.54 339 ⇑P P 08 55 35.3 +0.4
baz=35
P13A Bates Ranch, G 34.55 342 ⇑P P 08 55 35.2 +0.3
baz=35
Q10A Clear Creek Ra 34.79 338 ⇑P P 08 55 37.6 +0.5
baz=35
N18A Larsen Ranch, 34.87 348 ⇑P P 08 55 38.1 +0.3
baz=35,SNR=6.5
DUG Dugway 34.88 344 ⇓P P 08 55 38.1 +0.3
baz=35
M21A Separation Pea 35.08 351 ⇓P P 08 55 39.7 +0.2
baz=35
HDIL Hopedale 35.09 15 eP P 08 55 39.2 -0.5
43nm,1.2s,mb5.2
NVAR Mina Array Bea 35.18 336 P P 08 55 40.8 +0.4
0.7nm,0.6s,mb3.8,baz=164,slow=8.9,SNR=8.0
NVAR PcP PcP 08 58 11.0 -0.6
0.6nm,0.8s,baz=168,slow=4.3,SNR=4.3
ELN Prospectdale 35.31 28 eP P 08 55 41.2 -0.3
L22A Ellis Ranch, M 35.37 353 ⇓P P 08 55 42.7 +0.7
baz=36
L21A Rawlins 35.43 352 ⇓P P 08 55 42.5 0.0
baz=36,SNR=5.4
BLA Blacksburg 35.45 29 eP P 08 55 42.5 -0.3
13nm,1.0s,mb4.8
O12A Currie 35.52 342 ⇑P P 08 55 44.0 +0.6
baz=36,SNR=5.7
M17A Scullys Gap (B 35.55 347 ⇑P P 08 55 44.1 +0.5
baz=36
L20A Wamsutter 35.62 350 ⇓P P 08 55 44.6 +0.4
baz=36
M16A Huntsville 35.63 346 ⇑P P 08 55 44.6 +0.3
baz=36
O11A Cowboy Ranch, 35.69 340 ⇑P P 08 55 45.2 +0.3
baz=36
HWUT Hardware Ranch 35.89 346 eP P 08 55 46.7 +0.2
7.4nm,1.1s,mb4.5
L19A Farson 35.89 349 ⇑P P 08 55 46.6 +0.1
baz=36,SNR=5.4
M15A Larsen Ranch, 35.97 345 ⇓P P 08 55 47.6 +0.5
baz=36
N12A Clover Valley, 36.14 342 ⇓P P 08 55 49.2 +0.5
baz=36
N12A Clover Valley, 36.14 342 eP P 08 55 50.0 +1.3
7.5nm,1.1s,mb4.5
L16A Fish Haven 36.24 347 ⇓P P 08 55 49.3 -0.3
baz=36
M14A Sheep Mountain 36.24 344 ⇓P P 08 55 50.0 +0.4
baz=36,SNR=9.3
K20A Yellowstone Ra 36.26 351 ⇓P P 08 55 49.4 -0.2
baz=36,SNR=9.2
M13A Montello 36.34 343 ⇓P P 08 55 50.3 -0.1
baz=36
M13A Montello 36.34 343 eP P 08 55 51.2 +0.8
5.8nm,1.1s,mb4.4
HVU Hansel Valley 36.35 345 eP P 08 55 51.3 +0.8
104nm,2.9s,mb5.2
L15A Malad City 36.46 345 ⇑P P 08 55 51.6 +0.2
baz=37,SNR=5.4
K19A Absolon Red Bu 36.50 350 ⇑P P 08 55 51.9 +0.2
baz=37
K18A Toltan Ranch, 36.54 349 ⇓P P 08 55 52.6 +0.5
baz=37
BW06 Boulder Array 36.57 349 ⇑P P 08 55 52.4 +0.1
baz=37,SNR=14
BW06 Boulder Array 36.57 349 eP P 08 55 52.2 -0.1
9.9nm,0.9s,mb4.6
PDAR Pinedale Array 36.57 349 P P 08 55 52.1 -0.2
8.7nm,1.0s,mb4.5,baz=150,slow=6.6,SNR=44
PDAR PcP PcP 08 58 14.3 -1.3
1.3nm,1.1s,baz=151,slow=2.8,SNR=4.4
M12A Wells 36.62 342 ⇑P P 08 55 52.9 +0.1
baz=37
L14A Malta 36.71 344 ⇓P P 08 55 53.2 -0.3
baz=37
K17A Gardner Place, 36.83 348 ⇓P P 08 55 54.4 -0.1
baz=37
ACSO Alum Creek Sta 36.86 23 eP P 08 55 53.9 -0.9
14nm,1.0s,mb4.7
ECSD EROS Data Cent 36.90 5 eP P 08 55 54.1 -1.0
17nm,1.2s,mb4.7
L13A Double Diamond 36.95 344 ⇓P P 08 55 55.7 +0.2
baz=37
JSRW J. Sargeant Re 37.08 31 eP P 08 55 56.7 -0.1
JFWS Jewell Farm 37.09 13 eP P 08 55 55.8 -0.9
17nm,0.9s,mb4.9
J18A Kendall Valley 37.09 349 ⇓P P 08 55 56.6 -0.1
baz=37,SNR=13
K15A Arbon 37.14 346 ⇓P P 08 55 57.2 +0.1
baz=37
K14A Jones Ranch, D 37.17 345 ⇓P P 08 55 57.4 0.0
baz=37,SNR=5.1
RSSD Black Hills 37.21 356 eP P 08 55 58.2 +0.5
5.8nm,1.2s,mb4.3
L12A House Creek Ra 37.32 342 ⇓P P 08 55 58.3 -0.4
baz=37
J17A Brown Place, J 37.37 348 ⇑P P 08 55 59.2 +0.1
baz=38,SNR=7.9
REDW Red Top Meadow 37.40 348 eP P 08 55 58.8 -0.6
14nm,1.3s,mb4.6
K13A Stover Farm, H 37.51 344 ⇓P P 08 56 00.8 +0.5
baz=38,SNR=9.1
I18A Diamond G Ranc 37.52 349 ⇓P P 08 56 01.2 +0.8
baz=38
TPAW Teton Pass 37.55 348 eP P 08 56 00.6 +0.1
26nm,1.8s,mb4.7
L11A Cat Creek Ranc 37.56 342 ⇓P P 08 56 01.3 +0.6
baz=38,SNR=5.3
LOHW Long Hollow 37.59 348 eP P 08 56 00.2 -0.8
8.9nm,0.9s,mb4.5
MCWV Mont Chateau 37.69 27 eP P 08 56 01.8 -0.1
25nm,1.3s,mb4.8
L10A Juniper Basin 37.71 341 ⇑P P 08 56 02.3 +0.3
baz=38
K12A Draper Farm, C 37.73 343 ⇓P P 08 56 02.4 +0.2
baz=38
J15A Blackfoot 37.79 346 ⇓P P 08 56 02.8 +0.1
baz=38
IMW Indian Meadow 37.93 348 eP P 08 56 03.8 -0.1
7.1nm,0.8s,mb4.5
J14A Carey 37.99 345 ⇑P P 08 56 04.2 -0.2
baz=38
I16A Newdale 38.03 347 ⇑P P 08 56 04.7 0.0
baz=38
J12A Stokes Ranch, 38.35 343 ⇑P P 08 56 07.4 0.0
baz=38,SNR=5.8
HLID Hailey 38.45 344 ⇓P P 08 56 08.1 -0.1
baz=39
HLID Hailey 38.45 344 eP P 08 56 08.7 +0.5
7.3nm,1.4s,mb4.2
K10A MacKenzie Ranc 38.47 341 ⇓P P 08 56 08.5 +0.1
baz=39,SNR=6.4
I14A Mackay 38.54 345 ⇓P P 08 56 09.4 +0.5
baz=39
I13A Wildhorse Cree 38.70 345 ⇑P P 08 56 10.6 +0.3
baz=39,SNR=7.5
MFID Camas Ranch 38.72 342 ⇓P P 08 56 10.6 +0.1
baz=39
H16A Russell Place, 38.77 348 ⇓P P 08 56 11.3 +0.4
baz=39
RLMT Red Lodge 38.81 350 ⇓P P 08 56 11.0 -0.2
baz=39,SNR=7.3
RLMT Red Lodge 38.81 350 eP P 08 56 10.4 -0.8
5.6nm,0.8s,mb4.3
H15A Lima 38.99 347 ⇓P P 08 56 12.7 -0.1
baz=39
G18A Lazy EL Ranch, 39.05 350 ⇑P P 08 56 12.9 -0.3
baz=39,SNR=7.8
H14A Leadore 39.16 346 ⇓P P 08 56 14.0 -0.2
baz=39,SNR=11
G17A Pierce Place, 39.26 349 ⇓P P 08 56 15.8 +0.8
baz=39,SNR=8.5
J09A Fry Pan Ranch, 39.27 340 ⇓P P 08 56 15.3 +0.2
baz=39,SNR=7.1
H13A Challis 39.34 345 ⇓P P 08 56 15.8 +0.1
baz=40,SNR=14
SSPA Standing Stone 39.37 28 eP P 08 56 15.5 -0.5
13nm,0.9s,mb4.7
G16A Moss Hill, Enn 39.39 348 ⇓P P 08 56 16.6 +0.5
baz=40,SNR=14
G15A Dillon 39.48 347 ⇑P P 08 56 17.2 +0.4
baz=40,SNR=9.6
H12A Diamond D Ranc 39.48 344 ⇓P P 08 56 17.1 +0.3
baz=40,SNR=6.4
MVL Millersville 39.61 30 eP P 08 56 18.2 +0.1
36nm,1.4s,mb4.9
I10A Payette 39.62 342 ⇓P P 08 56 18.3 +0.2
baz=40
F18A Big Timber 39.64 350 ⇑P P 08 56 18.2 0.0
baz=40,SNR=21
DLMT Dillon 39.69 347 eP P 08 56 18.7 +0.2
9.4nm,1.1s,mb4.4
LPAZ La Paz 39.69 126 P P 08 56 20.7 +1.7
16nm,0.8s,mb4.8,baz=310,slow=6.8,SNR=70
LPAZ LR LR 09 11 18.5
comp=Z,79nm,21.9s,MS3.5,baz=305,slow=34
LPAZ La Paz 39.69 126 eP P 08 56 20.7 +1.7
23nm,0.8s,mb5.0
BOZ Bozeman (W) 39.75 348 ⇑P P 08 56 18.8 -0.2
baz=40
BOZ Bozeman (W) 39.75 348 eP P 08 56 19.1 0.0
5.8nm,1.4s,mb4.1
YBH Yreka Blue Hor 39.79 334 P P 08 56 18.2 -1.3
3.5nm,0.9s,mb4.1,baz=135,slow=12,SNR=4.7
F17A Fitzpatrick Pl 39.81 349 ⇓P P 08 56 19.7 +0.2
baz=40,SNR=6.2
G13A Cobalt 39.83 345 ⇑P P 08 56 19.8 +0.1
baz=40,SNR=15
K05A Summer Lake 39.87 337 ⇓P P 08 56 19.7 -0.4
baz=40
F16A Kennard Place, 39.88 348 ⇓P P 08 56 20.3 +0.1
baz=40
H11A Donnelly 39.95 343 ⇑P P 08 56 20.3 -0.5
baz=40,SNR=5.4
H10A Noah's Angus R 40.06 342 ⇑P P 08 56 20.9 -0.8
baz=40,SNR=11
LRM Limekiln Ridge 40.09 347 eP P 08 56 21.4 -0.4
F15A Butte 40.12 347 ⇑P P 08 56 21.9 -0.2
baz=40,SNR=6.5
E18A Harlowton 40.32 350 ⇑P P 08 56 23.6 -0.2
baz=40,SNR=10
E17A Martinsdale 40.38 349 ⇑P P 08 56 23.7 -0.6
baz=40
H09A Durkee 40.41 341 ⇑P P 08 56 24.3 -0.3
baz=40
F13A Darby 40.50 345 ⇑P P 08 56 25.2 0.0

	baz=41					
G11A	Walters Elk Ra	40.66 343	⇑P	P	08 56 25.8	-0.8
	baz=41,SNR=6.2					
E15A	Deer Lodge	40.70 347	⇑P	P	08 56 26.8	-0.1
	baz=41					
G10A	Bishop Farm, J	40.81 342	⇑P	P	08 56 27.6	-0.2
	baz=41					
E14A	Clinton	40.89 347	⇑P	P	08 56 28.4	0.0
	baz=41					
D18A	Linhart Farms,	40.91 351	⇑P	P	08 56 28.6	-0.1
	baz=41					
D16A	Dana Ranch, Ca	41.06 349	⇑P	P	08 56 29.1	-0.8
	baz=41,SNR=6.0					
E13A	Victor	41.08 346	⇓P	P	08 56 29.7	-0.3
	baz=41					
D15A	Lincoln	41.27 348	⇑P	P	08 56 31.2	-0.4
	baz=41					
CHMT	Chamberlain Mo	41.30 347	eP	P	08 56 31.2	-0.6
MSO	Missoula	41.38 346	eP	P	08 56 31.6	-0.9
	1.9nm,0.8s,mb3.8					
BINY	Binghamton	41.48 28	eP	P	08 56 33.4	-0.1
	33nm,1.0s,mb4.9					
AGMN	Agassiz Nation	41.49 5	eP	P	08 56 32.4	-1.0
C17A	Wharram Farm,	41.50 350	⇓P	P	08 56 32.9	-0.6
	baz=42,SNR=5.9					
D14A	Greenough	41.52 347	⇓P	P	08 56 33.1	-0.6
	baz=42,SNR=6.3					
DGMT	Dagmar	41.55 357	⇑P	P	08 56 33.3	-0.6
	baz=42,SNR=5.7					
DGMT	Dagmar	41.55 357	eP	P	08 56 33.7	-0.2
	24nm,0.9s,mb4.8					
PAL	Palisades	41.60 31	eP	P	08 56 33.8	-0.7
	14nm,0.8s,mb4.6					
SLMT	Seeley Lake	41.67 347	eP	P	08 56 34.2	-0.7
D13A	Huson	41.75 346	⇓P	P	08 56 34.7	-0.9
	baz=42,SNR=6.5					
C15A	Salmond Ranch,	41.98 348	⇑P	P	08 56 37.3	-0.1
	baz=42					
H04A	Detroit Lake	42.02 337	⇓P	P	08 56 37.4	-0.4
	baz=42					
B18A	Beardsley Farm	42.07 351	⇑P	P	08 56 38.1	-0.1
	baz=42					
A18A	Metzger Ranch,	42.59 351	⇑P	P	08 56 42.1	-0.3
	baz=43					
B14A	Marquette Ranc	42.68 348	⇑P	P	08 56 43.1	0.0
	baz=43					
B13A	Whitefish	42.95 347	⇑P	P	08 56 44.3	-1.0
	baz=43,SNR=8.6					
A15A	Johnson Ranch,	43.16 349	⇓P	P	08 56 46.0	-0.9
	baz=43,SNR=9.7					
A14A	Double T Ranch	43.29 348	⇓P	P	08 56 47.8	-0.3
	baz=43					
B12A	Libby	43.31 346	⇑P	P	08 56 47.9	-0.3
	baz=43					
ULM	Lac du Bonnet	43.43 5	P	P	08 56 47.0	-2.1
	9.3nm,0.7s,mb4.7,baz=199,slow=8.2,SNR=6.4					
NEW	Newport	43.52 344	eP	P	08 56 49.7	-0.2
	12nm,1.4s,mb4.4					
JCW	Jim Creek	44.92 340	eP	P	08 57 00.5	-0.7
A07A	Ashnola River,	45.17 342	⇑P	P	08 57 02.9	-0.2
	baz=45					
EDM	Edmonton	47.33 350	eP	P	08 57 19.1	-1.0
FFC	Flin Flon	47.73 359	eP	P	08 57 21.6	-1.5
CPUP	Villa Florida	53.55 130	P	P	08 58 07.6	0.0
	11nm,0.9s,mb4.8,baz=292,slow=8.1,SNR=21					
PPT	Papeete	53.94 243	LR	LR	09 15 17.8	
	comp=Z,252nm,19.5s,MS4.3,baz=95,slow=30					
PLCA	Paso Flores	54.94 152	P	P	08 58 18.0	+0.6
	7.5nm,1.0s,mb4.7,baz=338,slow=7.0,SNR=8.3					
PLCA			LR	LR	09 16 16.9	
	comp=Z,208nm,20.4s,MS4.2,baz=101,slow=30					
PLCA	Paso Flores	54.94 152	P	P	08 58 18.0	+0.6
PLCA			LR	LR	09 16 16.9	
DLBC	Dease Lake	56.16 342	eP	P	08 58 25.4	-0.5
YKA	Yellowknife Ar	56.43 352	P	P	08 58 25.7	-2.0
	1.6nm,0.7s,mb4.2,baz=160,slow=7.6,SNR=15					
YKA			PcP	PcP	08 59 22.8	-1.9
	0.8nm,0.8s,baz=162,slow=4.2,SNR=5.5					
YKA			LR	LR	09 22 51.1	
	comp=Z,6.9nm,18.3s,MS2.8,baz=325,slow=36					
YKA	Yellowknife Ar	56.43 352	P	P	08 58 25.8	-2.0
YKA			PcP	PcP	08 59 22.8	-1.9
YKA			LR	LR	09 22 51.1	
SKAG	Skagway	58.67 340	eP	P	08 58 43.0	-0.6
HYT	Haines Junctio	60.41 340	eP	P	08 58 56.2	+0.6
BMRM	Bremner River	63.04 338	eP	P	08 59 12.7	-0.7
	8.9nm,0.8s,mb5.0					
DAWY	Dawson	63.38 342	eP	P	08 59 14.6	-1.0
EGAK	Eagle	64.43 342	eP	P	08 59 20.7	-1.7
	12nm,1.3s,mb4.8					
INK	Inuvik	65.11 347	eP	P	08 59 25.6	-1.2
PMR	Palmer	65.16 337	eP	P	08 59 25.4	-1.8
TRF	Thorofare Moun	66.67 338	eP	P	08 59 34.9	-2.0
	17nm,1.4s,mb4.9					
KTH	Kantishna Hill	66.96 338	eP	P	08 59 36.8	-2.0
	16nm,1.2s,mb4.9					
PPLA	Purkeypile	67.07 337	eP	P	08 59 37.6	-1.9
	63nm,1.6s,mb5.4					
SVW2	Sparrevohn	67.53 335	eP	P	08 59 40.0	-2.5
SUMG	Summit	75.40 16	iP	P	09 00 29.2	-0.6
	13nm,1.0s,mb4.8					
CLL	Collm	99.16 36	ePdif	P	09 02 26.0	-2.0
CN2	Changchun	114.53 325	ePKP	PKiKP	09 07 27.7	+0.8
BJI	Beijing	122.19 327	PKP	PKPdf	09 07 37.8	-4.0
BJI			PP	PP	09 09 15.4	-0.6
BJI			AMB	AMB		
	comp=Z,95nm,4.7s					
BJI			LR	LR		
	comp=Z,26nm,19.1s,MS3.9					
KURK	Kurchatov	122.65 0	PKP	PKPdf	09 07 40.8	-1.6
	comp=Z,1.8nm,0.8s,baz=355,slow=2.1,SNR=5.5					
HHC	Hu-ho-hao-te	123.97 331	ePKP	PKPdf	09 07 43.5	-1.7
HHC			PKS		09 11 19.2	
HHC			SKS	SKSdf	09 14 48.7	-8.7
HHC			SKKS	SKKSac	09 16 19.1	-8.7
HHC			SS	SS	09 26 12.9	-4.3
HHC			AMB	AMB		
	comp=Z,96nm,4.9s					
HHC			LR	LR		
	comp=N,100nm,13.1s,MS4.8					
HHC			LR	LR		
	comp=E,90nm,11.9s,MS4.8					
HHC			LR	LR		
	comp=Z,84nm,16.3s,MS4.5					
ASAR	Alice Springs	124.98 246	PKP	PKPdf	09 07 45.9	-1.7
	comp=Z,0.9nm,0.8s,baz=78,slow=1.7,SNR=8.2					
WRA	Warramunga Arr	125.03 251	PKP	PKPdf	09 07 45.9	-1.8
	comp=Z,1.9nm,0.8s,baz=87,slow=2.3,SNR=12					
NJ2	Nanjing	125.89 318	ePKP	PKPdf	09 07 44.5	-4.6
MKAR	Makanchi Array	126.50 357	PKP	PKPdf	09 07 47.8	-2.0
	comp=Z,1.2nm,0.7s,baz=38,slow=4.6,SNR=6.9					
WMQ	Urumqi	128.96 352	ePKP	PKPdf	09 07 56.0	+1.4
LZH	Lanzhou	131.40 333	ePKP	PKPdf	09 07 55.0	-4.5
KSH	Kashi	133.75 3	iPKP	PKPdf	09 07 58.1	-5.7
CD2	Chengdu	135.67 329	ePKP	PKPdf	09 08 06.2	-1.5
GYA	Guiyang	137.48 322	ePdif	Pdif	09 05 16.8	-1.4
GYA			PKP	PKPdf	09 08 08.9	-2.3
GYA			PP	PP	09 10 58.0	+2.2
GYA			AMB	AMB		
	comp=Z,80nm,7.6s					
KMI	Kunming	140.80 325	PKP	PKPdf	09 08 16.4	-0.9
GUN	Gumba	144.82 350	ePcP	PKPdf	09 08 21.4	-2.9
TAPN	Taplejung	145.00 347	ePcP	PKPdf	09 08 22.0	-2.6
JIRN	Jiri	145.01 349	ePcP	PKPbc	09 08 21.8	-2.1
KKN	Kakani	145.04 351	ePcP	PKPbc	09 08 21.5	-2.5
PKI	Pulchoki	145.24 350	ePcP	PKPbc	09 08 22.3	-2.3
DMN	Daman	145.25 351	ePcP	PKPbc	09 08 22.2	-2.5
ODAN	Odare	145.54 347	ePcP	PKPbc	09 08 23.5	-2.1
RAMN	Ramite	145.62 348	ePcP	PKPbc	09 08 23.3	-2.6
CMAR	Chiang Mai Arr	148.17 323	PKP	PKPdf	09 08 29.6	-0.5
	comp=Z,2.3nm,0.4s,baz=11,slow=0.9,SNR=11					
CMAR			PKPbc	PKPbc	09 08 32.2	-1.2
	comp=Z,3.0nm,0.6s,baz=352,slow=1.5,SNR=25					

MEX 12 08:49:44.7±1.1, 17°.39N×100°.93W, h8km±14km, MD3.5, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.55	293	iP	Pg	08 49 55.1	-0.3
ZIIG				iS	Sg	08 50 02.6	0.0
CAIG	El Cayaco	0.72	118	iP	Pg	08 49 56.5	-2.0
CAIG				iS	Sg	08 50 06.0	-2.0
ACX	Acapulco	1.10	118	iP	Pg	08 50 03.0	-2.9
ACX				iS	Sg	08 50 18.0	-2.2
PNIG	Pinotepa	2.86	110	eP	Pn	08 50 27.9	-2.8
PNIG				iS	Sn	08 51 02.1	-3.2

CSEM 12 08:57:49.2±0.2, 37°.35N×28°.04E, h20km, MD2.2, Error ellipse: s-maj=5.5km s-min=3.5km az=42.0
ISCJB 12 08:57:49.7±0.8, 37°.33N±0°.05×28°.04E±0°.07, h14km±8km, Error ellipse: s-maj=10.6km s-min=6.6km az=141.6
ISK 12 08:57:50.1, 37°.29N×28°.03E, h5km, MD2.2
DDA 12 08:57:50.1, 37°.36N×28°.03E, h7km±3km, Md2.8

ISC 12 08:57:49.7±1.6, 37°.33N±0°.05×28°.04E±0°.07, h17km±15km, n10, σ0°.46/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSB	Milas	0.21	260	ePG	Pg	08 57 54.8	+0.1
MLSB				eSG	Sg	08 57 57.9	-0.2
MLSB	Milas	0.21	260	ePg	Pg	08 57 54.8	+0.1
MLSB				eSg	Sg	08 57 57.9	-0.2
YER	Yerkesik	0.28	135	ePG	Pg	08 57 56.0	+0.2
YER				eSG	Sg	08 57 59.7	-0.2
YER	Yerkesik	0.28	135	ePg	Pg	08 57 56.0	+0.2
YER				eSg	Sg	08 57 59.7	-0.2
AYDN	Tasoluk	0.35	339	iP	Pg	08 57 57.0	0.0
AYDN				iS	Sg	08 58 02.2	+0.2
AYDN	Tasoluk	0.35	339	iP	Pg	08 57 57.0	0.0
AYDN				iS	Sg	08 58 02.2	+0.2
TURN	Turunc	0.65	135	iP	Pg	08 58 01.3	-1.1
TURN				iS	Sg	08 58 11.7	+0.7
TURN	Turunc	0.65	135	iP	Pg	08 58 01.3	-1.1
TURN				iS	Sg	08 58 11.7	+0.7
DAT	Datca	0.70	211	ePG	Pg	08 58 03.7	+0.2
DAT	Datca	0.70	211	ePg	Pg	08 58 03.7	+0.2

NEIC 12 09:02:32.1, 38°.34N×20°.36E, h11km, MD3.5(ATH), After ATH.
CSEM 12 09:02:32.6±0.3, 38°.36N×20°.41E, h2km, ML3.5/5, Error ellipse: s-maj=5.9km s-min=3.8km az=57.0
ATH 12 09:02:32.1, 38°.34N×20°.36E, h11km±1km, MD3.5/12
ISCJB 12 09:02:32.3±0.7, 38°.32N±0°.03×20°.33E±0°.05, h10km, Error ellipse: s-maj=5.9km s-min=3.5km az=156.6
THE 12 09:02:34.0, 38°.35N×20°.52E, h2km±1km, ML3.5/5, Error ellipse: s-maj=1.6km s-min=0.8km az=72.0

ISC 12 09:02:32.3±0.9, 38°.34N±0°.03×20°.38E±0°.05, h2km±5km, n66, σ1°.05/101, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	Valsamata	0.23	134	ePg	Pg	09 02 37.4	+0.6
VLS	Valsamata	0.23	134	P	Pg	09 02 37.5	+0.7
VLS				S	Sg	09 02 40.6	+0.7
VLS	Valsamata	0.23	134	ePG	Pg	09 02 37.4	+0.6
VLS	Valsamata	0.23	134	P	Pg	09 02 37.5	+0.7
VLS				S	Sg	09 02 40.6	+0.7
KFL	Anninata	0.40	125	P	Pg	09 02 40.1	+0.2
LKD2	Lefkada island	0.50	26	P	Pg	09 02 42.4	+0.5
LKD2				S	Sg	09 02 49.6	+1.3
LKD2	Lefkada island	0.50	26	P	Pg	09 02 42.4	+0.5
LKD2				S	Sg	09 02 49.6	+1.3
RLS	Riolos of Patr	0.91	108	ePg	Pg	09 02 49.4	-0.2
RLS	Riolos of Patr	0.91	108	ePG	Pg	09 02 49.4	-0.2
RLS	Riolos of Patr	0.91	108	ePg	Pg	09 02 49.4	-0.2
UPR	University Cam	1.11	93	ePB	Pg	09 02 53.3	-0.3
UPR	University Cam	1.11	93	ePb	Pg	09 02 53.3	-0.3
EFP	Efpalio	1.21	85	P	Pn	09 02 54.0	-2.2
EFP				S	Sg	09 03 11.1	+0.1
EFP	Efpalio	1.21	85	ePG	Pn	09 02 54.8	-1.4
EFP				eSB	Sb	09 03 11.5	-0.4
EFP	Efpalio	1.21	85	P	Pn	09 02 54.0	-2.2
EFP	Efpalio	1.21	85	ePg	Pn	09 02 54.8	-1.4
EFP				S	Sg	09 03 11.1	+0.1
EFP				eSb	Sb	09 03 11.5	-0.4
EVR	Evrytania	1.26	62	ePb	Pb	09 02 56.3	-0.5
EVR				eSb	Sb	09 03 12.6	-0.9
EVR	Evrytania	1.26	62	ePB	Pb	09 02 56.3	-0.5
EVR				eSB	Sb	09 03 12.6	-0.9
EVR	Evrytania	1.26	62	ePb	Pb	09 02 56.3	-0.5
EVR				eSb	Sb	09 03 12.6	-0.9
LAKA	Lakka	1.27	94	P	Pn	09 02 55.2	-1.8
LAKA				S	Sg	09 03 12.0	-0.9
LAKA	Lakka	1.27	94	P	Pn	09 02 55.2	-1.8
LAKA				S	Sg	09 03 12.0	-0.9
TRIZ	Trizonia	1.33	88	P	Pn	09 02 56.1	-1.8
TRIZ				S	Sg	09 03 14.9	-0.3
TRIZ	Trizonia	1.33	88	P	Pn	09 02 56.1	-1.8
TRIZ				S	Sg	09 03 14.9	-0.3
JAN	Janina	1.36	16	ePb	Pb	09 02 58.4	-0.2
JAN				eSb	Sb	09 03 16.3	-0.1
JAN	Janina	1.36	16	ePB	Pb	09 02 58.4	-0.2
JAN				eSB	Sb	09 03 16.3	-0.1
JAN	Janina	1.36	16	ePb	Pb	09 02 58.4	-0.2
JAN				eSb	Sb	09 03 16.3	-0.1
KALE	Kalithea	1.39	87	P	Pn	09 02 57.6	-1.1
KALE				S	Sg	09 03 16.8	-0.1
KALE	Kalithea	1.39	87	P	Pn	09 02 57.6	-1.1
KALE				S	Sg	09 03 16.8	-0.1
KEK	Kerkira	1.44	342	ePg	Pn	09 02 58.8	-0.6
KEK	Kerkira	1.44	342	P	Pn	09 03 00.8	+1.4
KEK	Kerkira	1.44	342	ePG	Pn	09 02 58.8	-0.6
KEK	Kerkira	1.44	342	ePg	Pn	09 02 58.8	-0.6
KEK	Kerkira	1.44	342	P	Pn	09 03 00.8	+1.4
GUR	Goura	1.60	104	P	Pn	09 03 01.0	-0.6
GUR				S	Sn	09 03 21.8	-1.1
GUR	Goura	1.60	104	ePB	Pb	09 03 02.9	+0.3
GUR				eSB	Sb	09 03 24.7	+1.4
GUR	Goura	1.60	104	P	Pn	09 03 01.0	-0.6
GUR	Goura	1.60	104	ePb	Pb	09 03 02.9	+0.3
GUR				S	Sn	09 03 21.8	-1.1
GUR				eSb	Sb	09 03 24.7	+1.4
AGG	Agios Georgios	1.67	65	ePb	Pb	09 03 03.9	+0.1
AGG				eSb	Sb	09 03 26.1	+0.8
AGG	Agios Georgios	1.67	65	ePB	Pb	09 03 03.9	+0.1
AGG				eSB	Sb	09 03 26.1	+0.8
AGG	Agios Georgios	1.67	65	ePb	Pb	09 03 03.9	+0.1
AGG				eSb	Sb	09 03 26.1	+0.8
ITM	Ithomi	1.69	133	ePg	Pg	09 03 03.5	-1.2
ITM				eSb	Sb	09 03 26.1	+0.3
ITM	Ithomi	1.69	133	P	Pn	09 03 03.0	+0.2
ITM	Ithomi	1.69	133	ePG	Pg	09 03 03.5	-1.2
ITM				eSB	Sb	09 03 26.1	+0.3
ITM	Ithomi	1.69	133	P	Pn	09 03 03.0	+0.2
ITM	Ithomi	1.69	133	ePg	Pg	09 03 03.5	-1.2
ITM				eSb	Sb	09 03 26.1	+0.3
PYL	PYLOS	1.81	143	P	Pn	09 03 04.3	-0.1
PYL	PYLOS	1.81	143	ePN	Pn	09 03 05.0	+0.6
PYL	PYLOS	1.81	143	P	Pn	09 03 04.3	-0.1
PYL	PYLOS	1.81	143	ePn	Pn	09 03 05.0	+0.6
VLX	Vlachokerasia	1.86	121	ePN	Pn	09 03 06.2	+1.0
VLX				eSN	Sn	09 03 31.8	+2.6
VLX	Vlachokerasia	1.86	121	ePn	Pn	09 03 06.2	+1.0
VLX				eSn	Sn	09 03 31.8	+2.6
LTK	Loutraki	2.07	98	ePN	Pn	09 03 09.4	+1.4
LTK	Loutraki	2.07	98	ePn	Pn	09 03 09.4	+1.4
LKR	Lokris	2.08	81	ePn	Pn	09 03 09.1	+0.9
LKR	Lokris	2.08	81	ePN	Pn	09 03 09.1	+0.9
LKR	Lokris	2.08	81	ePn	Pn	09 03 09.1	+0.9
VLI	Veliai	2.60	128	ePn	Pn	09 03 16.6	+1.2
VLI	Veliai	2.60	128	ePN	Pn	09 03 16.6	+1.2
VLI	Veliai	2.60	128	ePn	Pn	09 03 16.6	+1.2
OHR	Ohrid	2.79	7	eSn	Sn	09 03 55.4	+3.3
KYTH	Kithira	2.96	133	ePb	Pb	09 03 22.2	-3.5
KYTH	Kithira	2.96	133	ePB	Pb	09 03 22.2	-3.5
KYTH	Kithira	2.96	133	ePb	Pb	09 03 22.2	-3.5
KRUS	Krusevo	3.10	12	ePn	Pn	09 03 25.8	+3.6
KRUS				eSn	Sn	09 04 00.6	+0.9
STON	Ston	4.96	337	ePn	Pn	09 03 47.4	-0.4
STON				eSn	Sn	09 04 42.6	-3.1
STON	Ston	4.96	337	ePn	Pn	09 03 47.4	-0.4
STON				eSn	Sn	09 04 42.6	-3.1

ISK 12 09:04:09.5, 37°.31N×28°.26E, h4km, MD2.7
CSEM 12 09:04:10.4±0.2, 37°.30N×28°.27E, h8km, MD2.7, Error ellipse: s-maj=4.1km s-min=3.3km az=31.0
ISCJB 12 09:04:10.5±0.6, 37°.28N±0°.04×28°.27E±0°.04, h10km, Error ellipse: s-maj=5.9km s-min=4.1km az=43.7
DDA 12 09:04:11.1, 37°.22N×28°.17E, h7km±6km, Md2.8

ISC 12 09:04:10.9±0.7, 37°.30N±0°.04×28°.29E±0°.05, h3km±12km, n18, σ0°.87/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.16	181	ePG	Pg	09 04 13.4	-0.6
YER				eSG	Sg	09 04 16.9	+0.7
YER	Yerkesik	0.16	181	ePg	Pg	09 04 13.4	-0.7
YER				eSg	Sg	09 04 16.9	+0.7
MLSB	Milas	0.41	270	ePG	Pg	09 04 17.7	-1.0
MLSB				eSG	Sg	09 04 23.6	-0.3
MLSB	Milas	0.41	270	ePg	Pg	09 04 17.7	-1.0
MLSB				eSg	Sg	09 04 23.7	-0.3
AYDN	Tasoluk	0.49	318	iP	Pg	09 04 20.3	+0.1
AYDN				iS	Sg	09 04 28.4	+1.9
AYDN	Tasoluk	0.49	318	iP	Pg	09 04 20.3	+0.1
AYDN				iS	Sg	09 04 28.4	+1.9
TURN	Turunc	0.49	149	iP	Pg	09 04 19.1	-1.2
TURN				iS	Sg	09 04 27.5	+0.8
TURN	Turunc	0.49	149	iP	Pg	09 04 19.1	-1.3
TURN				iS	Sg	09 04 27.5	+0.7
DAT	Datca	0.80	225	ePG	Pg	09 04 25.5	-0.7
DAT				eSG	Sg	09 04 37.2	+0.5
DAT	Datca	0.80	225	ePg	Pg	09 04 25.5	-0.8
DAT				eSg	Sg	09 04 37.2	+0.5
FETY	Fethiye	0.92	136	ePG	Pg	09 04 28.8	+0.3
FETY	Fethiye	0.92	136	ePg	Pg	09 04 28.8	+0.3
GLHS	Glhisar (BURDU	0.98	98	ePG	Pg	09 04 29.4	-0.2
GLHS	Glhisar (BURDU	0.98	98	ePg	Pg	09 04 29.4	-0.2
KULA	Kula-Manisa	1.25	14	ePN	Pn	09 04 34.1	-1.0
KULA	Kula-Manisa	1.25	14	ePn	Pn	09 04 34.2	-1.0
AKAS	Kas	1.50	135	iP	Pn	09 04 39.8	+1.2
AKAS				iS	Sg	09 05 07.4	+8.4
AKAS	Kas	1.50	135	iP	Pn	09 04 39.8	+1.2

GUC 12 09:12:35.9±0.6, 20°.79S×69°.08W, h82km±5km, ML3.8, 2C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	Plate Boundary	0.46	237	⇑iP	Pn	09 12 49.8	+0.4
PB01				iS	Sn	09 12 60.0	+0.4
PB01				AML	AML	09 13 00.8	
	comp=N,7μm,0.3s						
PB04	Plate Boundary	1.51	195	eP	Pn	09 13 05.8	+4.3
PB04				iS	Sn	09 13 28.2	+7.4
PB04				AML	AML	09 13 36.2	
	comp=N,838nm,0.3s						
MNMC	Miæe Miæ	1.72	344	⇓iP	Pn	09 13 04.9	+0.6
MNMC				iS	Sn	09 13 27.8	+2.1
MNMC				AML	AML	09 13 33.8	
	comp=N,1μm,0.5s						
PECH	Pedro de Valdi	1.88	197	⇑iP	Pn	09 13 07.4	+1.2
PECH				iS	Sn	09 13 31.1	+1.8
PECH				AML	AML	09 13 36.6	
	comp=E,1μm,0.3s						

CSEM 12 09:27:51.6±0.1, 37°.32N×28°.07E, h12km, MD2.8
ISK 12 09:27:51.1, 37°.36N×28°.06E, h8km, MD2.8, ML2.5
ISCJB 12 09:27:51.6±0.5, 37°.32N±0°.03×28°.09E±0°.04, h3km±8km, Error ellipse: s-maj=5.5km s-min=5.4km az=167.2
DDA 12 09:27:52.8, 37°.38N×27°.97E, h7km±6km, Md2.8

ISC 12 09:27:52.1±0.5, 37°.32N±0°.03×28°.06E±0°.05, h11km±8km, n24, σ0°.79/35, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSB	Milas	0.23	263	ePG	Pg	09 27 56.4	-0.5
MLSB				eSG	Sg	09 27 59.8	-0.3
MLSB	Milas	0.23	263	ePg	Pg	09 27 56.4	-0.5
MLSB				eSg	Sg	09 27 59.8	-0.3
YER	Yerkesik	0.26	137	ePG	Pg	09 27 57.5	+0.1
YER	Yerkesik	0.26	137	ePg	Pg	09 27 57.5	+0.1
AYDN	Tasoluk	0.37	337	iP	Pg	09 27 58.7	-0.7
AYDN				iS	Sg	09 28 04.1	-0.3
AYDN	Tasoluk	0.37	337	iP	Pg	09 27 58.7	-0.7
AYDN				iS	Sg	09 28 04.1	-0.3
BDRM	Kayabasi	0.56	243	iP	Pg	09 28 02.4	-0.6
BDRM	Kayabasi	0.56	243	iP	Pg	09 28 02.4	-0.6
DAT	Datca	0.71	213	ePG	Pg	09 28 05.8	0.0
DAT				eSG	Sg	09 28 16.5	+1.4
DAT	Datca	0.71	213	ePg	Pg	09 28 05.8	0.0
DAT				eSg	Sg	09 28 16.5	+1.4
GCAM	G?zelcaml?	0.76	300	iP	Pg	09 28 06.8	0.0
GCAM				iS	Sg	09 28 20.3	+3.6
GCAM	G?zelcaml?	0.76	300	iP	Pg	09 28 06.8	0.0
GCAM				iS	Sg	09 28 20.3	+3.6
FETY	Fethiye	1.07	130	ePN	Pg	09 28 11.9	-0.7
FETY	Fethiye	1.07	130	ePn	Pg	09 28 12.0	-0.7
GLHS	Glhisar (BURDU	1.16	98	ePN	Pg	09 28 13.6	-0.8
GLHS	Glhisar (BURDU	1.16	98	ePn	Pg	09 28 13.6	-0.8
MANT	Manisa	1.23	18	iP	Pn	09 28 15.8	+0.5
MANT				iS	Sg	09 28 33.4	+1.6
MANT	Manisa	1.23	18	iP	Pn	09 28 15.8	+0.5
MANT				iS	Sg	09 28 33.4	+1.6
KULA	Kula-Manisa	1.28	22	ePN	Pn	09 28 15.5	-0.5
KULA	Kula-Manisa	1.28	22	ePn	Pn	09 28 15.5	-0.5
KHL	Karahalli	1.53	49	ePN	Pn	09 28 19.0	-0.4
KHL	Karahalli	1.53	49	ePn	Pn	09 28 19.0	-0.4
AKAS	Kas	1.65	131	iP	Pg	09 28 24.7	+0.9
AKAS				iS	Sg	09 28 52.1	+7.0
AKAS	Kas	1.65	131	iP	Pg	09 28 24.7	+0.9

MDD 12 09:37:02.9±0.6, 35°.74N×0°.65W, h20km±6km, mb3.9/6, Error ellipse: s-maj=10.8km s-min=6.7km az=25.0, PRIMO SOLUCI POBRE
CSEM 12 09:37:02.4±0.3, 35°.80N×0°.65W, h20km, ML3.5, Error ellipse: s-maj=9.7km s-min=5.3km az=23.0
NEIC 12 09:37:02.1±0.6, 35°.86N×0°.60W, h10km, ML3.0(ALG), Error ellipse: s-maj=8.9km s-min=6.9km az=53.0
CRAAG 12 09:37:02.4, 35°.85N×0°.48W, Ml3.5
*ISCJB 12 09:37:02.2±0.7, 35°.85N±0°.06×0°.63W±0°.05, h25km±11km, Error ell

EALB S Sn 09 37 58.7 -0.3
6.5nm,0.2s,SNR=7.9
EALB Alboran 1.99 273 P Pn 09 37 34.9 -0.1
1.5nm,0.1s,SNR=7.9
EALB S Sn 09 37 58.7 -0.3
6.5nm,0.2s,SNR=7.9
EALB Alboran 1.99 273 P Pn 09 37 34.9 -0.1
1.5nm,0.1s,SNR=7.9
EALB S Sn 09 37 58.7 -0.3
6.5nm,0.2s,SNR=7.9
EBER Berja 2.12 300 P Pn 09 37 36.1 -0.7
EBER S Sn 09 38 01.7 -0.7
EBER Berja 2.12 300 P Pn 09 37 36.1 -0.7
0.8nm,0.1s,SNR=7.9
EBER S Sn 09 38 01.7 -0.7
1.7nm,0.1s,SNR=7.9
EBER Berja 2.12 300 P Pn 09 37 36.1 -0.7
0.8nm,0.1s,SNR=7.9
EBER S Sn 09 38 01.7 -0.7
1.7nm,0.1s,SNR=7.9
EBER Berja 2.12 300 P Pn 09 37 36.1 -0.7
0.8nm,0.1s,SNR=7.9
EBER S Sn 09 38 01.7 -0.6
1.7nm,0.1s,SNR=7.9
EBEN Beniarda 2.84 6 P Pn 09 37 48.4 +1.7
EBEN S Sn 09 38 18.2 -1.8
EBEN Beniarda 2.84 6 P Pn 09 37 48.4 +1.7
0.6nm,0.1s,SNR=6.9
EBEN S Sn 09 38 18.2 -1.8
1.7nm,0.2s,SNR=7.9
EBEN Beniarda 2.84 6 P Pn 09 37 48.4 +1.7
0.6nm,0.1s,SNR=6.9
EBEN S Sn 09 38 18.2 -1.8
1.7nm,0.2s,SNR=7.9
EBEN Beniarda 2.84 6 P Pn 09 37 48.4 +1.7
0.6nm,0.1s,SNR=6.9
EBEN S Sn 09 38 18.2 -1.9
1.7nm,0.2s,SNR=7.9
ETOB Tobarra 2.87 345 P Pn 09 37 48.5 +1.4
ETOB S Sn 09 38 20.6 -0.3
ETOB Tobarra 2.87 345 P Pn 09 37 48.5 +1.4
2.6nm,0.1s,SNR=24
ETOB S Sn 09 38 20.6 -0.3
4.5nm,0.1s,SNR=6.5
ETOB Tobarra 2.87 345 P Pn 09 37 48.5 +1.4
2.6nm,0.1s,SNR=24
ETOB S Sn 09 38 20.6 -0.3
4.5nm,0.1s,SNR=6.5
ETOB Tobarra 2.87 345 P Pn 09 37 48.5 +1.4
2.6nm,0.1s,SNR=24
ETOB S Sn 09 38 20.6 -0.2
4.5nm,0.1s,SNR=6.5
EVIA Vianos 3.16 332 P Pn 09 37 52.4 +1.3
EVIA S Sn 09 38 30.5 +2.6
EVIA Vianos 3.16 332 P Pn 09 37 52.4 +1.3
1.9nm,0.1s,SNR=7.9
EVIA S Sn 09 38 30.5 +2.6
1.6nm,0.2s,SNR=7.9
EVIA Vianos 3.16 332 P Pn 09 37 52.4 +1.3
1.9nm,0.1s,SNR=7.9
EVIA S Sn 09 38 30.5 +2.6
1.6nm,0.2s,SNR=7.9
EVIA Vianos 3.16 332 P Pn 09 37 52.4 +1.4
1.9nm,0.1s,SNR=7.9
EVIA S Sn 09 38 30.5 +2.6
1.6nm,0.2s,SNR=7.9
EIBI Ibiza 3.50 25 P Pn 09 37 56.5 +0.7
EIBI S Sn 09 38 34.0 -2.4
EIBI Ibiza 3.50 25 P Pn 09 37 56.5 +0.7
2.1nm,0.1s,SNR=6.5
EIBI S Sn 09 38 34.0 -2.4
2.9nm,0.2s,SNR=7.9
EIBI Ibiza 3.50 25 P Pn 09 37 56.5 +0.7
2.1nm,0.1s,SNR=6.5
EIBI S Sn 09 38 34.0 -2.4
2.9nm,0.2s,SNR=7.9
EIBI Ibiza 3.50 25 P Pn 09 37 56.5 +0.7
2.1nm,0.1s,SNR=6.5
EIBI S Sn 09 38 34.0 -2.4
2.9nm,0.2s,SNR=7.9
EMOS Mosqueruela 4.49 1 P Pn 09 38 11.5 +2.2
EMOS S Sn 09 38 57.2 -3.4
EMOS Mosqueruela 4.49 1 P Pn 09 38 11.5 +2.2
1.1nm,0.4s,SNR=7.9
EMOS S Sn 09 38 57.2 -3.4
3.4nm,0.2s,SNR=7.9
EMOS Mosqueruela 4.49 1 P Pn 09 38 11.5 +2.2
1.1nm,0.4s,SNR=7.9
EMOS S Sn 09 38 57.2 -3.4
3.4nm,0.2s,SNR=7.9
EMOS Mosqueruela 4.49 1 P Pn 09 38 11.5 +2.2
1.1nm,0.4s,SNR=7.9
EMOS S Sn 09 38 57.2 -3.4
3.4nm,0.2s,SNR=7.9

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*IDC **12** 09:39:16.6±1.5, 1°.39N×96°.99E, h0km, mb3.9/7, mb1 3.9/9, mb1mx3.7/25, mbtmp3.8/9, ML3.6/2, Error ellipse: s-maj=41.0km s-min=21.3km az=53.0*
*DJA **12** 09:39:18, 1°.56N×96°.86E, h10km, MLv4.3/11*
*NEIC **12** 09:39:22.2±0.8, 1°.45N×97°.07E, h35km, mb4.0/1, Error ellipse: s-maj=20.2km s-min=12.5km az=50.0*
ISC 12 09:39:17.6±1.6, 1°.51N±0°.07×96°.84E±0°.06, h1km±10km, n25, σ1§27/28, mb3.9/8, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.76**	**105**	P		**Pg**	**09 39 32.9**	**+0.7**
GSI				S		**Sg**	**09 39 42.1**	**0.0**
GSI	**Gunungsitoli**	**0.76**	**105**	P		**Pg**	**09 39 33.1**	**+0.9**
TRSI	**Tarutung**	**2.18**	**76**	P		**Pn**	**09 39 56.3**	**+1.2**
TRSI				S		**Sn**	**09 40 23.4**	**+0.6**
PSI	**Prapat**	**2.45**	**58**	Pn		**Pn**	**09 39 57.4**	**-1.4**
2.5nm,0.3s,baz=262,slow=2.9,SNR=7.8								
MNSI	**Mandailing Nat**	**2.83**	**104**	P		**Pn**	**09 40 01.3**	**-2.7**
MNSI	**Mandailing Nat**	**2.83**	**104**	P		**Pn**	**09 40 01.3**	**-2.7**
MNSI				S		**Sn**	**09 40 40.7**	**+1.9**
SISI	**Saibi**	**3.60**	**141**	P		**Pn**	**09 40 16.7**	**+2.0**
PPI	**Padang Panjang**	**4.06**	**119**	P		**Pn**	**09 40 20.8**	**-0.1**
PPI	**Padang Panjang**	**4.06**	**119**	P		**Pn**	**09 40 20.5**	**-0.4**
BSI	**Banda Aceh**	**4.25**	**339**	P		**Pn**	**09 40 24.4**	**+0.8**
PDSI	**Padang**	**4.34**	**124**	P		**Pn**	**09 40 25.4**	**+0.5**
BKNI	**Bangkinang**	**4.36**	**106**	P		**Pn**	**09 40 22.3**	**-2.8**
IPM	**Ipoh**	**5.12**	**55**	P		**Pn**	**09 40 35.5**	**0.0**
0.2nm23nm,0.9s								
SDSI	**Sungai Dareh**	**5.19**	**118**	P		**Pn**	**09 40 36.6**	**+0.1**
0.4nm11nm,1.1s								
KULM	**Kulim**	**5.35**	**45**	P		**Pn**	**09 40 35.2**	**-3.5**
CMAR	**Chiang Mai Arr**	**16.97**	**7**	P		**Pn**	**09 43 16.4**	**-0.1**
0.3nm,0.3s,baz=190,slow=8.2,SNR=4.7								
WRA	**Warramunga Arr**	**42.50**	**122**	P		**P**	**09 47 11.9**	**-3.0**
0.4nm,0.6s,mb3.3,baz=301,slow=9.3,SNR=5.9								
ASAR	**Alice Springs**	**43.87**	**127**	P		**P**	**09 47 24.3**	**-1.6**
0.9nm,1.0s,mb3.5,baz=295,slow=7.4,SNR=3.8								
KSRS	**Korea Array**	**45.80**	**35**	P		**P**	**09 47 39.1**	**-2.1**
2.5nm,0.9s,mb4.2,baz=221,slow=9.1,SNR=8.8								
MK31	**Makanchi Array**	**46.86**	**346**	*eP*		**P**	**09 47 50.9**	**+1.6**
MKAR	**Makanchi Array**	**46.86**	**346**	P		**P**	**09 47 49.9**	**+0.5**
1.4nm,0.6s,mb4.3,baz=123,slow=8.8,SNR=12								
ZALV	**Zalesovo Beam**	**53.20**	**351**	P		**P**	**09 48 38.0**	**+0.6**
2.0nm,0.4s,mb4.4,baz=174,slow=8.0,SNR=8.3								
BVAR	**Borovoye Array**	**55.84**	**341**	P		**P**	**09 48 56.1**	**-0.5**
0.4nm,0.4s,mb3.8,baz=169,slow=8.5,SNR=3.2								
ABKAR	**Akbulak array**	**57.08**	**332**	*eP*		**P**	**09 49 06.2**	**+0.7**
0.4nm,0.2s,mb4.1								
ARCES	**ARCESS Array B**	**82.13**	**340**	P		**P**	**09 51 39.8**	**0.0**
0.6nm,0.5s,mb4.0,baz=90,slow=3.0,SNR=5.4								

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*CASC **12** 10:07:36.7±2.4, 7°.07N×82°.41W, h14km±15km, MD4.0*
*IDC **12** 10:07:44.6±6.4, 8°.61N×81°.90W, h0km, mb3.5/4, mb1 3.9/5, mb1mx3.7/21, mbtmp3.6/5, ML3.9/1, MS2.9/2, Ms1 3.0/2, ms1mx2.5/26, Error ellipse: s-maj=179.9km s-min=29.6km az=17.0*
ISC 12 10:07:38.1±1.3, 6°.97N±0°.08×82°.45W±0°.07, h35km, n18, σ1§14/21, mb3.5/4, 4C-2D, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**1.82**	**337**	⇑*eP*		**Pn**	**10 08 05.0**	**-1.9**
BRU2	**Volcan**	**1.83**	**352**	⇑*iP*		**Pn**	**10 08 05.7**	**-1.4**
BRU2				*eS*		**Sn**	**10 08 29.3**	**+0.3**
CTCR	**Cotoan**	**1.94**	**351**	⇑*iP*		**Pn**	**10 08 07.3**	**-1.3**
CTCR				*eS*		**Sn**	**10 08 31.1**	**-0.7**
BAR1		**2.42**	**339**	⇓*eP*		**Pn**	**10 08 14.5**	**-0.6**
BAR1				*eS*		**Sn**	**10 08 43.7**	**+0.2**
CNI	**Changuinola**	**2.43**	**358**	*i P*		**Pn**	**10 08 15.8**	**+0.4**
CNI				*eS*		**Sn**	**10 08 46.1**	**+2.2**
BUS	**Buena Vista**	**2.88**	**333**	*eP*		**Pn**	**10 08 21.8**	**+0.3**
QCR	**Quepos**	**2.98**	**325**	⇑*eP*		**Pn**	**10 08 22.1**	**-0.7**
URSC	**Urasca**	**3.14**	**335**	*eP*		**Pn**	**10 08 25.6**	**+0.5**
LAJ	**Bijagual**	**3.32**	**330**	*eP*		**Pn**	**10 08 28.7**	**+1.1**
BCIP	**Isla Barro Col**	**3.38**	**50**	*eP*		**Pn**	**10 08 27.3**	**-1.1**
BCIP				*eS*		**Sn**	**10 09 07.8**	**+0.4**
PRS1	**Puriscal**	**3.52**	**329**	⇓*eP*		**Pn**	**10 08 29.4**	**-0.9**
JTS	**JuntasAbangare**	**4.13**	**323**	Pn		**Pn**	**10 08 38.6**	**-0.1**
13nm,0.3s,baz=92,slow=5.5,SNR=64								
JTS				Lg			10 09 34.0	
0.5nm,0.3s,baz=270,slow=20,SNR=2.3								
APG	**El Apazote**	**11.21**	**316**	LR		LR	10 14 19.2	
comp=Z,46nm,21.1s,baz=245,slow=38								
LPAZ	**La Paz**	**27.10**	**149**	LR		LR	10 23 37.7	
comp=Z,42nm,21.6s,baz=310,slow=34								
TXAR	**Lajitas Array**	**29.91**	**321**	P		**P**	**10 13 45.5**	**+2.7**
0.4nm,0.9s,mb3.2,baz=126,slow=13,SNR=4.4								
ANMO	**Albuquerque**	**35.55**	**325**	P		**P**	**10 14 36.3**	**+4.3**
0.3nm,0.4s,mb3.6,baz=129,slow=13,SNR=4.5								
NVAR	**Mina Array Bea**	**45.05**	**319**	P		**P**	**10 15 55.9**	**+5.3**
0.4nm,0.7s,mb3.4,baz=123,slow=7.8,SNR=3.6								
YKA	**Yellowknife Ar**	**60.20**	**343**	P		**P**	**10 17 44.1**	**+1.8**
0.8nm,0.8s,mb3.8,baz=134,slow=7.0,SNR=10								

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*IDC **12** 10:08:14.7±10.0, 56°.34S×27°.07W, h128km±95km, mb3.8/4, mb1 3.9/4, mb1mx3.7/14, mbtmp3.8/4, Error ellipse: s-maj=42.0km s-min=23.7km az=52.0*
NEIC 12 10:08:17.4±6.4, 56°.30S×27°.07W, h151km±57km, mb4.2/3, Error ellipse: s-maj=23.5km s-min=16.6km az=75.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
QSPA	**South Pole Qui**	**33.95**	**180**	*eP*		P	10 14 45.7	+0.2
5.6nm,0.6s								
MAW	**Mawson**	**39.91**	**143**	P		P	10 15 35.1	-0.8
1.4nm,0.4s,baz=212,slow=7.2,SNR=8.5								
SBA	**Scott Base**	**45.84**	**184**	*eP*		P	10 16 24.7	+1.3
1.5nm,0.7s								
LPAZ	**La Paz**	**50.57**	**305**	P		P	10 17 00.9	+0.5
0.9nm,0.4s,baz=135,slow=3.7,SNR=8.9								
MCQ	**Macquarie Isla**	**69.46**	**184**	*eP*		P	10 19 08.5	-0.1
13μm,1.1s								
TORD	**Torodi Ar. Bea**	**73.24**	**29**	P		P	10 19 31.9	+0.2
0.9nm,0.4s,baz=201,slow=6.4,SNR=26								
TORD				pP		pP	10 19 59.5	-9.0
1.8nm,0.7s,baz=198,slow=6.3,SNR=6.0								
KMBO	**Kilima Mbogo**	**75.06**	**69**	*eP*		P	10 19 43.6	+1.2
7.2nm,1.3s								
ASAR	**Alice Springs**	**98.74**	**162**	P		P	10 21 39.1	-0.4
0.2nm,0.3s,baz=184,slow=4.6,SNR=4.4								
FINES	**FINESS Array B**	**124.57**	**28**	PKP		PKPdf	10 26 56.9	-0.1
1.2nm,0.4s,baz=166,slow=2.9,SNR=7.8								
FINES	**FINESS Array B**	**124.57**	**28**	PKP		PKPdf	10 26 56.9	-0.2
ARCES	**ARCESS Array B**	**131.15**	**22**	PKP		PKPdf	10 27 09.4	0.0
1.3nm,0.6s,baz=207,slow=1.8,SNR=4.9								
YKA	**Yellowknife Ar**	**136.40**	**318**	PKP		PKPdf	10 27 19.6	+0.2
0.4nm,0.5s,baz=126,slow=2.3,SNR=10								
YKA	**Yellowknife Ar**	**136.40**	**318**	PKP		PKPdf	10 27 19.6	+0.2

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*IDC **12** 10:17:28.9±0.9, 51°.52N×75°.62E, h0km, mb1 2.8/4, mb1mx2.7/30, mbtmp2.8/4, ML2.5/3, Error ellipse: s-maj=22.7km s-min=7.8km az=30.0*
*NNC **12** 10:17:28.3±1.6, 51°.89N×75°.77E, h0km, mb3.2, mpv2.8, Error ellipse: s-maj=32.7km s-min=10.3km az=26.0*
ISC 12 10:17:30.6±0.6, 51°.4N±0°.1×75°.4E±0°.1, h10km, n9, σ1§37/14, 3C-4D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.12**	**109**	⇑Pn		**Pn**	**10 18 05.7**	**-0.3**
1.7nm,0.6s,baz=308,slow=17								
KURBB				⇓Sn		**Sn**	**10 18 34.9**	**+2.5**
5.6nm,0.6s,baz=309,slow=30								
KURK	**Kurchatov**	**2.14**	**106**	⇓Pn		**Pn**	**10 18 05.5**	**-0.8**
6.0nm,0.6s								
KURK				⇓Sn		**Sn**	**10 18 34.0**	**+1.1**
28nm,0.9s								
KURK	**Kurchatov**	**2.14**	**106**	Pn		**Pn**	**10 18 04.1**	**-2.2**
0.6nm,0.3s,baz=295,slow=20,SNR=23								
KURK				Lg			10 18 34.4	
0.4nm,0.3s,baz=296,slow=29,SNR=6.1								
VOSK	**Vostochnaya**	**3.04**	**298**	⇑Pn		**Pn**	**10 18 17.6**	**-1.1**
3.4nm,0.7s								
VOSK				⇑Sn		**Sn**	**10 18 54.2**	**-1.0**
14nm,0.6s								
BVA0	**Borovoye Array**	**3.50**	**300**	Sn		**Sn**	**10 19 09.1**	**+2.8**
1.2nm,0.7s,baz=114,slow=27,SNR=6.7								
BVAR	**Borovoye Array**	**3.50**	**300**	Pn		**Pn**	**10 18 24.4**	**-0.6**
0.4nm,0.3s,baz=108,slow=16,SNR=11								
BVAR				Sn		**Sn**	**10 19 08.5**	**+2.1**
1.7nm,0.3s,baz=117,slow=27,SNR=8.7								
ZALV	**Zalesovo Beam**	**6.30**	**62**	Pn		**Pn**	**10 18 59.0**	**-4.4**
0.1nm,0.3s,baz=254,slow=12,SNR=4.5								
ZALV				Lg			10 20 42.9	
0.1nm,0.3s,baz=248,slow=32,SNR=6.4								
MK31	**Makanchi Array**	**6.43**	**133**	⇓Sn		**Sn**	**10 20 19.7**	**+1.0**
1.3nm,0.7s,baz=318,slow=21,SNR=4.3								
MK31				Lg			10 20 53.6	
1.7nm,0.6s,baz=324,slow=26,SNR=6.3								
MKAR	**Makanchi Array**	**6.43**	**133**	Pn		**Pn**	**10 19 04.3**	**-1.0**
0.1nm,0.3s,baz=326,slow=9.0,SNR=6.1								
MKAR				Sn		**Sn**	**10 20 18.2**	**-0.5**
0.2nm,0.3s,baz=330,slow=20,SNR=3.5								
MKAR				Lg			10 20 52.7	
0.5nm,0.3s,baz=319,slow=24,SNR=8.3								

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*SZGRF **12** 10:25:29.4, 19°.49S×178°.18W, h33km, Fiji Islands region*
*IDC **12** 10:26:29.0±1.6, 17°.86S×178°.76W, h517km±18km, mb3.7/13, mb1 3.9/14, mb1mx3.7/20, mbtmp3.7/14, Error ellipse: s-maj=21.2km s-min=10.9km az=148.0*
*NEIC **12** 10:26:30.4±0.7, 17°.82S×178°.79W, h532km±8km, mb4.1/15, Error ellipse: s-maj=18.4km s-min=7.8km az=148.0*
*ISCJB **12** 10:26:32.1±1.0, 17°.6S±0°.1×179°.1W±0°.1, h557km±12km, mb4.1/29, Error ellipse: s-maj=26.6km s-min=9.1km az=146.7*
ISC 12 10:26:32.8±1.0, 17°.6S±0°.1×179°.0W±0°.1, h553km±11km, n97, σ0§63/54, mb4.1/29, 5C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.79**	**267**	*eP*		**P**	**10 27 46.5**	**-0.3**
AFI	**Afiamalu**	**7.89**	**63**	P		**P**	**10 28 23.0**	**-6.5**
5.6nm,0.3s,baz=255,slow=22,SNR=6.9								
AFI	**Afiamalu**	**7.89**	**63**	*eP*		**P**	**10 28 23.1**	**-6.5**
URZ	**Urewera**	**20.85**	**189**	P		**P**	**10 30 31.1**	**-5.1**
5.3nm,0.8s,baz=0.0,slow=14,SNR=3.9								
ARMA	**Armidale**	**29.59**	**239**	*eP*		**P**	**10 31 53.9**	**+0.4**
ARMA	**Armidale**	**29.59**	**239**	*eP*		**P**	**10 31 54.0**	**+0.6**
13nm,0.6s,mb4.7								
CTA	**Charters Tower**	**32.92**	**260**	*eP*		**P**	**10 32 22.2**	**+0.1**
11nm,0.8s,mb4.4								
CTA	**Charters Tower**	**32.92**	**260**	P		**P**	**10 32 22.2**	**+0.1**
11nm,0.7s,mb4.5,baz=90,slow=11,SNR=13								
CNB	**Canberra Magne**	**33.15**	**232**	*eP*		**P**	**10 32 24.1**	**+0.3**
TOO	**Toolangi**	**36.91**	**230**	*eP*		**P**	**10 32 55.2**	**+0.1**
STKA	**Stephens Creek**	**38.26**	**241**	*eP*		**P**	**10 33 06.2**	**0.0**
8.2nm,0.5s,mb4.5								
STKA	**Stephens Creek**	**38.26**	**241**	P		**P**	**10 33 06.8**	**+0.5**
11nm,0.5s,mb4.6,baz=92,slow=9.8,SNR=39								
WRAB	**Tennant Creek**	**44.10**	**259**	*eP*		**P**	**10 33 52.2**	**-0.4**
4.8nm,0.5s,mb4.3								
WRA	**Warramunga Arr**	**44.11**	**259**	P		**P**	**10 33 52.3**	**-0.4**
3.9nm,0.5s,mb4.2,baz=96,slow=7.1,SNR=92								
ASAR	**Alice Springs**	**44.31**	**254**	P		**P**	**10 33 54.3**	**+0.1**
40nm,0.6s,mb5.1,baz=89,slow=8.2,SNR=567								
ASAR				ScP		ScP	10 38 28.0	+2.1
0.8nm,0.9s,baz=94,slow=5.1,SNR=4.2								
ASAR				S		**S**	**10 39 48.0**	**-0.4**
1.4nm,0.9s,baz=90,slow=15,SNR=7.9								
KAKA	**Kakadu**	**47.00**	**269**	*eP*		**P**	**10 34 15.8**	**+1.0**
9.6nm,0.4s,mb4.7								
KAKA	**Kakadu**	**47.00**	**269**	*eP*		**P**	**10 34 15.9**	**+1.1**
FORT	**Forrest**	**49.61**	**244**	*eP*		**P**	**10 34 33.0**	**-0.9**
18nm,0.6s,mb4.7								
FITZ	**Fitzroy Crossi**	**52.50**	**260**	*eP*		**P**	**10 34 55.2**	**+0.1**
8.7nm,1.7s,mb3.8								
FITZ	**Fitzroy Crossi**	**52.50**	**260**	P		**P**	**10 34 55.5**	**+0.4**
1.8nm,0.6s,mb3.5,baz=65,slow=6.5,SNR=7.2								
MJAR	**Matsushiro Arr**	**67.32**	**324**	P		**P**	**10 36 33.8**	**+0.8**
1.7nm,0.8s,mb3.6,baz=162,slow=5.8,SNR=4.8								
PETK	**Petropavlovsk-**	**73.25**	**346**	P		**P**	**10 37 08.8**	**+1.1**
4.4nm,0.8s,mb4.0,baz=141,slow=9.3,SNR=5.4								
ISA	**Isabella**	**78.03**	**46**	*eP*		**P**	**10 37 35.0**	**+0.3**
KDAK	**Kodiak Island**	**78.25**	**14**	*eP*		**P**	**10 37 35.4**	**+0.1**
NVAR	**Mina Array Bea**	**79.62**	**44**	P		**P**	**10 37 43.2**	**+0.2**
3.3nm,0.8s,mb3.7,baz=224,slow=8.7,SNR=22								
MOD	**Modoc**	**80.24**	**40**	*eP*		**P**	**10 37 46.5**	**+0.3**
SEW	**Seward**	**81.07**	**14**	*eP*		**P**	**10 37 48.3**	**-1.7**
3.6nm,0.8s,mb3.9								
WVOR	**Wild Horse Val**	**81.56**	**41**	*eP*		**P**	**10 37 52.9**	**-0.1**
9.1nm,1.0s,mb4.2								
TUC	**Tucson**	**81.98**	**53**	*eP*		**P**	**10 37 56.0**	**+0.6**
TTA	**Tatalina**	**82.29**	**10**	*eP*		**P**	**10 37 56.2**	**+0.1**
4.5nm,1.1s,mb3.8								
PMR	**Palmer**	**82.45**	**14**	*eP*		**P**	**10 37 56.6**	**-0.5**
CCUT	**Cedar City**	**82.54**	**47**	*eP*		**P**	**10 37 58.8**	**+0.8**
ARUT	**Antelope Range**	**82.60**	**47**	*eP*		**P**	**10 37 58.3**	**0.0**
3.0nm,0.9s,mb3.8								
N12A	**Clover Valley,**	**83.03**	**43**	*eP*		**P**	**10 38 00.7**	**+0.2**
BMRM	**Bremner River**	**83.03**	**16**	*eP*		**P**	**10 37 59.7**	**-0.3**
14nm,1.5s,mb4.3								
MSU	**Marysvale**	**83.82**	**47**	*eP*		**P**	**10 38 05.8**	**+1.4**
4.6nm,1.2s,mb3.9								
TRF	**Thorofare Moun**	**83.85**	**13**	*eP*		**P**	**10 38 03.2**	**-0.7**
7.3nm,0.7s,mb4.3								
MAW	**Mawson**	**83.94**	**200**	P		**P**	**10 38 03.8**	**-0.7**
1.1nm,0.5s,mb3.7,baz=124,slow=3.6,SNR=4.7								
MCK	**McKinley**	**84.38**	**13**	*eP*		**P**	**10 38 05.8**	**-0.8**
3.2nm,0.7s,mb4.0								
HLID	**Hailey**	**84.79**	**41**	*eP*		**P**	**10 38 09.7**	**+0.6**
2.6nm,0.7s,mb3.9								
MENT	**Mentasta**	**84.92**	**15**	*eP*		**P**	**10 38 09.2**	**0.0**
SRU	**San Rafael**	**85.24**	**47**	*eP*		**P**	**10 38 11.0**	**-0.4**
TXAR	**Lajitas Array**	**86.33**	**58**	P		**P**	**10 38 17.5**	**+0.7**
3.4nm,0.8s,mb4.0,baz=216,slow=6.2,SNR=40								
ANMO	**Albuquerque**	**86.37**	**52**	P		**P**	**10 38 16.5**	**-0.3**
baz=238,slow=6.8								
MCMT	**McKenzie Canyo**	**86.39**	**41**	*eP*		**P**	**10 38 17.3**	**+0.6**
2.6nm,1.1s,mb3.8								
BSMT	**Bassoo Peak**	**86.74**	**37**	*eP*		**P**	**10 38 16.9**	**-1.3**
2.8nm,0.9s,mb3.9								
IMW	**Indian Meadow**	**87.16**	**42**	*eP*		**P**	**10 38 20.9**	**+0.6**
4.4nm,0.8s,mb4.1								
CHMT	**Chamberlain Mo**	**87.17**	**39**	*eP*		**P**	**10 38 20.0**	**-0.3**
BW06	**Boulder Array**	**87.54**	**44**	*eP*		**P**	**10 38 21.8**	**-0.4**
PDAR	**Pinedale Array**	**87.54**	**44**	P		**P**	**10 38 21.9**	**-0.3**
1.8nm,0.6s,mb4.0,baz=221,slow=3.0,SNR=20								
BOZ	**Bozeman (W)**	**87.54**	**40**	*eP*		**P**	**10 38 22.3**	**+0.2**
1.7nm,0.9s,mb3.8								
YKA	**Yellowknife Ar**	**94.31**	**25**	P		**P**	**10 38 51.7**	**-1.2**
0.8nm,0.7s,mb3.9,baz=246,slow=4.5,SNR=8.0								
YKA	**Yellowknife Ar**	**94.31**	**25**	P		**P**	**10 38 51.7**	**-1.2**
MKAR	**Makanchi Array**	**108.51**	**314**	PKiKP		PKiKP	10 43 57.8	-1.0
0.4nm,0.6s,baz=64,slow=3.4,SNR=5.4								
BVAR	**Borovoye Array**	**116.25**	**321**	PKP		PKPdf	10 44 12.7	-0.6
0.4nm,0.4s,baz=88,slow=3.3,SNR=3.9								
AKTK	**Aktyubinsk**	**124.26**	**320**	PKP		PKPdf	10 44 28.3	-0.6
AKTO	**Aktyubinsk**	**124.26**	**320**	PKP		PKPdf	10 44 28.3	-0.6
0.5nm,0.6s,baz=162,slow=3.2,SNR=4.1								
ARCES	**ARCESS Array B**	**125.92**	**350**	PKP		PKPdf	10 44 31.2	-0.2
2.4nm,0.8s,baz=38,slow=1.6,SNR=4.5								
AKASG	**Malin Array Be**	**140.03**	**332**	PKP		PKPdf	10 44 59.5	+1.1
0.3nm,0.3s,baz=41,slow=2.5,SNR=2.6								
BSEG	**Bad Segeberg**	**143.03**	**351**	*e*PKPbc		PKPdf	10 45 01.4	-2.2
KWP	**Kalwaria Pacla**	**143.56**	**336**	*e*PKPbc		PKPdf	10 45 04.2	-0.6
BUR08	**Bucovina Ar. S**	**144.06**	**332**	*e*PKPbc		PKPdf	10 45 06.2	+0.6
BR131	**Keskin Array S**	**144.16**	**315**	*e*PKPdf		PKPdf	10 45 05.9	-0.2
BRTR	**Keskin Array B**	**144.16**	**315**	PKP		PKPdf	10 45 06.1	0.0
2.0nm,0.6s,baz=78,slow=2.0,SNR=9.0								
KOLS	**Kolonicke sedl**	**144.30**	**336**	*eP*		PKPdf	10 45 06.3	+0.3
KOLS	**Kolonicke sedl**	**144.30**	**336**	*e*PKP		PKPdf	10 45 06.3	+0.3
NRDL	**Niedersach Rie**	**144.46**	**350**	*e*PKPbc		PKPdf	10 45 06.2	0.0
CRVS	**Cervenica-Dubn**	**144.63**	**336**	*e*P		PKPdf	10 45 07.2	+0.6
CRVS	**Cervenica-Dubn**	**144.63**	**336**	*e*PKP		PKPdf	10 45 07.2	+0.6
CLL	**Collm**	**145.04**	**347**	*e*PKPbc		PKPbc	10 45 08.1	+0.1
CLL	**Collm**	**145.04**	**347**	⇑*i*P		PKPdf	10 45 08.0	+0.8
CLL	**Collm**	**145.04**	**347**	⇑*i*PKPbc		PKPbc	10 45 08.0	0.0
comp=Z,10.0nm,0.6s								
CLZ	**Clausthal**	**145.04**	**350**	*e*PKPbc		PKPbc	10 45 08.4	+0.4
BRG	**Berggiesshubel**	**145.24**	**346**	*i P*		PKPbc	10 45 08.9

KALE	**Kalithea**	**0.70**	**47**	P	**Pg**	**10 37 25.0**	**-1.2**
KALE				S	**Sg**	**10 37 35.9**	**+0.6**
KALE	**Kalithea**	**0.70**	**47**	P	**Pg**	**10 37 25.0**	**-1.2**
KALE				S	**Sg**	**10 37 35.9**	**+0.6**
VLS	**Valsamata**	**0.76**	**291**	P	**Pg**	**10 37 25.8**	**-1.5**
VLS				S	**Sg**	**10 37 38.5**	**+1.3**
VLS	**Valsamata**	**0.76**	**291**	*e*PN	**Pg**	**10 37 25.8**	**-1.5**
VLS	**Valsamata**	**0.76**	**291**	P	**Pg**	**10 37 25.8**	**-1.5**
VLS				S	**Sg**	**10 37 38.5**	**+1.3**
ITM	**Ithomi**	**0.81**	**154**	P	**Pg**	**10 37 28.1**	**-0.1**
ITM	**Ithomi**	**0.81**	**154**	*e*PN	**Pg**	**10 37 28.4**	**+0.2**
ITM				*e*SN	**Sg**	**10 37 41.4**	**+2.7**
ITM	**Ithomi**	**0.81**	**154**	P	**Pg**	**10 37 28.1**	**-0.1**
ITM	**Ithomi**	**0.81**	**154**	*e*Pn	**Pg**	**10 37 28.4**	**+0.2**
ITM				*e*Sn	**Sg**	**10 37 41.4**	**+2.7**
VLX	**Vlachokerasia**	**0.89**	**127**	P	**Pg**	**10 37 29.1**	**-0.7**
VLX				S	**Sg**	**10 37 42.5**	**+1.2**
VLX	**Vlachokerasia**	**0.89**	**127**	*e*PB	**Pg**	**10 37 29.5**	**-0.3**
VLX				*e*SN	**Sn**	**10 37 43.2**	**-1.5**
VLX	**Vlachokerasia**	**0.89**	**127**	P	**Pg**	**10 37 29.1**	**-0.7**
VLX	**Vlachokerasia**	**0.89**	**127**	*e*Pb	**Pg**	**10 37 29.5**	**-0.3**
VLX				S	**Sg**	**10 37 42.5**	**+1.2**
VLX				*e*Sn	**Sn**	**10 37 43.2**	**-1.5**
DSF	**Desfina**	**0.96**	**58**	P	**Pg**	**10 37 29.8**	**-1.3**
DSF				S	**Sg**	**10 37 44.3**	**+0.8**
DSF	**Desfina**	**0.96**	**58**	P	**Pg**	**10 37 29.8**	**-1.3**
DSF				S	**Sg**	**10 37 44.3**	**+0.8**
PYL	**PYLOS**	**1.03**	**169**	P	**Pg**	**10 37 32.3**	**-0.2**
PYL	**PYLOS**	**1.03**	**169**	*e*PB	**Pg**	**10 37 32.0**	**-0.5**
PYL	**PYLOS**	**1.03**	**169**	*e*Pb	**Pg**	**10 37 32.0**	**-0.5**
PYL	**PYLOS**	**1.03**	**169**	P	**Pg**	**10 37 32.3**	**-0.2**
EVR	**Evrytania**	**1.03**	**14**	*e*Pn	**Pg**	**10 37 31.1**	**-1.5**
EVR	**Evrytania**	**1.03**	**14**	*e*PN	**Pg**	**10 37 31.1**	**-1.5**
EVR	**Evrytania**	**1.03**	**14**	*e*Pn	**Pg**	**10 37 31.1**	**-1.5**
LKD2	**Lefkada island**	**1.09**	**323**	P	**Pg**	**10 37 33.7**	**0.0**
LKD2				S	**Sg**	**10 37 49.7**	**+1.8**
LKD2	**Lefkada island**	**1.09**	**323**	P	**Pg**	**10 37 33.7**	**0.0**
LKD2				S	**Sg**	**10 37 49.7**	**+1.8**
LTK	**Loutraki**	**1.17**	**84**	P	**Pn**	**10 37 33.7**	**-1.8**
LTK	**Loutraki**	**1.17**	**84**	*e*PB	**Pn**	**10 37 33.7**	**-1.8**
LTK	**Loutraki**	**1.17**	**84**	P	**Pn**	**10 37 33.7**	**-1.8**
AGG	**Agios Georgios**	**1.29**	**30**	*e*Pn	**Pn**	**10 37 35.3**	**-1.8**
AGG				*e*Sn	**Sn**	**10 37 53.4**	**-1.2**
AGG	**Agios Georgios**	**1.29**	**30**	P	**Pn**	**10 37 36.3**	**-0.8**
AGG				S	**Sb**	**10 37 54.7**	**+0.6**
AGG	**Agios Georgios**	**1.29**	**30**	*e*PN	**Pn**	**10 37 35.3**	**-1.8**
AGG				*e*SN	**Sn**	**10 37 53.4**	**-1.2**
AGG	**Agios Georgios**	**1.29**	**30**	*e*Pn	**Pn**	**10 37 35.3**	**-1.8**
AGG	**Agios Georgios**	**1.29**	**30**	P	**Pn**	**10 37 36.3**	**-0.8**
AGG				*e*Sn	**Sn**	**10 37 53.4**	**-1.2**
AGG				S	**Sb**	**10 37 54.7**	**+0.6**
LKR	**Lokris**	**1.40**	**58**	P	**Pn**	**10 37 37.7**	**-0.9**
LKR				S	**Sb**	**10 37 58.0**	**+0.8**
LKR	**Lokris**	**1.40**	**58**	*e*PN	**Pn**	**10 37 37.9**	**-0.7**
LKR	**Lokris**	**1.40**	**58**	*e*Pn	**Pn**	**10 37 37.9**	**-0.7**
LKR				S	**Sb**	**10 37 58.0**	**+0.8**
ATAL	**Atalanti**	**1.44**	**57**	P	**Pn**	**10 37 38.8**	**-0.3**
ATAL				S	**Sb**	**10 37 59.5**	**+1.3**
ATAL	**Atalanti**	**1.44**	**57**	P	**Pn**	**10 37 38.8**	**-0.3**
ATAL				S	**Sb**	**10 37 59.5**	**+1.3**
NAIG	**Nisos Aigina**	**1.59**	**95**	*e*Pn	**Pn**	**10 37 42.4**	**+1.2**
NAIG	**Nisos Aigina**	**1.59**	**95**	*e*PN	**Pn**	**10 37 42.4**	**+1.2**
NAIG	**Nisos Aigina**	**1.59**	**95**	*e*Pn	**Pn**	**10 37 42.4**	**+1.2**
VLI	**Veliai**	**1.66**	**135**	*e*Pn	**Pn**	**10 37 43.4**	**+1.2**
VLI	**Veliai**	**1.66**	**135**	*e*PN	**Pn**	**10 37 43.4**	**+1.2**
VLI	**Veliai**	**1.66**	**135**	*e*Pn	**Pn**	**10 37 43.4**	**+1.2**
THL	**Klokotos Trika**	**1.70**	**14**	P	**Pn**	**10 37 43.1**	**+0.3**
THL				S	**Sn**	**10 38 07.0**	**+2.2**
THL	**Klokotos Trika**	**1.70**	**14**	*e*PN	**Pn**	**10 37 42.9**	**+0.1**
THL	**Klokotos Trika**	**1.70**	**14**	*e*Pn	**Pn**	**10 37 42.9**	**+0.1**
THL				S	**Sn**	**10 38 07.0**	**+2.2**
ATH	**Athens Observa**	**1.76**	**87**	*e*Pn	**Pn**	**10 37 44.5**	**+0.9**
ATH	**Athens Observa**	**1.76**	**87**	*e*PN	**Pn**	**10 37 44.5**	**+0.9**
ATH	**Athens Observa**	**1.76**	**87**	*e*Pn	**Pn**	**10 37 44.5**	**+0.9**
VLY	**Voula,Athens**	**1.82**	**91**	*e*Pn	**Pn**	**10 37 45.9**	**+1.4**
VLY	**Voula,Athens**	**1.82**	**91**	*e*PN	**Pn**	**10 37 45.9**	**+1.4**
VLY	**Voula,Athens**	**1.82**	**91**	*e*Pn	**Pn**	**10 37 45.9**	**+1.4**
PTL	**Penteli**	**1.88**	**85**	*e*Pb	**Pn**	**10 37 45.0**	**-0.2**
PTL	**Penteli**	**1.88**	**85**	*e*PB	**Pn**	**10 37 45.0**	**-0.2**
NEO	**Neokhori**	**1.94**	**44**	*e*Pb	**Pn**	**10 37 45.4**	**-0.7**
NEO	**Neokhori**	**1.94**	**44**	*e*PB	**Pn**	**10 37 45.4**	**-0.7**
XOR	**Xorichti**	**1.97**	**42**	P	**Pn**	**10 37 46.6**	**+0.1**
XOR	**Xorichti**	**1.97**	**42**	P	**Pn**	**10 37 46.6**	**+0.1**
KYTH	**Kithira**	**2.04**	**142**	*e*Pn	**Pn**	**10 37 49.8**	**+2.3**
KYTH	**Kithira**	**2.04**	**142**	*e*PN	**Pn**	**10 37 49.8**	**+2.3**
AOS	**Alonnisos**	**2.26**	**55**	P	**Pn**	**10 37 50.2**	**-0.2**
AOS	**Alonnisos**	**2.26**	**55**	P	**Pn**	**10 37 50.2**	**-0.2**
LIT	**Litokhoron**	**2.32**	**19**	*e*Pn	**Pn**	**10 37 51.7**	**+0.4**
LIT	**Litokhoron**	**2.32**	**19**	*e*PN	**Pn**	**10 37 51.7**	**+0.4**
LIT	**Litokhoron**	**2.32**	**19**	*e*Pn	**Pn**	**10 37 51.7**	**+0.4**
PLG	**Polygyros**	**2.89**	**31**	*e*Pn	**Pn**	**10 37 59.3**	**+0.2**
PLG	**Polygyros**	**2.89**	**31**	*e*PN	**Pn**	**10 37 59.2**	**+0.1**
PLG	**Polygyros**	**2.89**	**31**	*e*Pn	**Pn**	**10 37 59.3**	**+0.2**
BALY	**Balya**	**5.12**	**67**	*i* P	**Pn**	**10 38 21.6**	**-8.2**
DURS	**Dursunbey**	**5.71**	**71**	*i* P	**Pn**	**10 38 31.5**	**-6.4**
DURS				*i* S	**Pb**	**10 38 50.1**	**-2.6**
STON	**Ston**	**5.74**	**331**	Sn	**Sn**	**10 39 37.4**	**-6.9**

MEX 12 10:43:03.0±0.4, 16°.05N×97°.55W, h17km±374km, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.66**	**302**	*i* P	Pg	10 43 13.8	-2.1
PNIG				*i* S	Sg	10 43 21.9	-2.8
VHO	**Vista Hermosa**	**1.28**	**37**	*i* P	Pn	10 43 23.0	-3.2
VHO				*i* S	Sb	10 43 38.2	-4.7
HUIG	**Huatulco**	**1.41**	**101**	*e*P	Pn	10 43 24.9	-3.1
HUIG				*i* S	Sn	10 43 40.9	-5.2
TPIG	**Tehuac#an**	**2.37**	**4**	*i* P	Pn	10 43 38.0	-3.1
TPIG				*i* S	Sn	10 44 05.9	-3.8
CAIG	**El Cayaco**	**2.79**	**291**	*i* P	Pn	10 43 44.3	-2.6
CAIG				*i* S	Sn	10 44 17.2	-3.1

ISCJB ***12*** *10:55:32.7±1.0, 31°.41N±0°.03×103°.52E±0°.07, h1km±7km, mb3.8/10, MS3.5/2, Error ellipse: s-maj=10.0km s-min=4.5km az=162.9*
IDC ***12*** *10:55:34.1±1.1, 31°.36N×103°.41E, h0km, mb3.8/8, mb1 3.9/9, mb1mx3.7/27, mbtmp3.8/9, ML3.7/1, MS3.6/2, Ms1 3.6/2, ms1mx2.9/41, Error ellipse: s-maj=39.0km s-min=17.8km az=51.0*
BJI ***12*** *10:55:34.8, 31°.32N×103°.55E, h14km, mB4.5/3, mb4.3/4, ML3.7/19, Ms4.0/5, Ms7 3.7/3*
NEIC ***12*** *10:55:36.4±0.6, 31°.48N×103°.57E, h10km, mb3.8/3, Error ellipse: s-maj=18.3km s-min=10.2km az=58.0*
ISC 12 10:55:33.9±1.0, 31°.35N±0°.03×103°.45E±0°.06, h1km±6km, n25, σ1°.27/33, mb3.8/11, MS3.5/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.51**	**149**	Pg	**Pg**	**10 55 43.4**	**-0.3**
CD2				Sg	**Sg**	**10 55 51.8**	**+1.5**
CD2				smax			
	comp=N,13μm,0.9s						
CD2				smax			
	comp=E,10μm,0.7s						
LZH	**Lanzhou**	**4.74**	**4**	Pg	**Pb**	**10 56 56.1**	**-1.7**
LZH				Sg	**Sb**	**10 57 53.5**	**-1.8**
LZH				smax			
	comp=N,66nm,0.5s						
LZH				smax			
	comp=E,98nm,0.7s						
LZH				LR	LR		
	comp=E,370nm,5.4s						
LZH				LR	LR		
	comp=Z,520nm,6.9s						
LZH	**Lanzhou**	**4.74**	**4**	Pg	**Pg**	**10 57 03.6**	**-1.1**
LZH				Sg	**Sg**	**10 58 08.0**	**+1.9**
LZH				smax			
	comp=N,66nm,0.5s						
LZH				smax			
	comp=E,98nm,0.7s						
LZH				LR	LR		
	comp=E,470nm,5.4s						
LZH				LR	LR		
	comp=Z,520nm,6.9s						
ENH	**Enshi**	**5.30**	**100**	*e*Pn	**Pn**	**10 56 54.8**	**+0.5**
	comp=Z,41nm,0.7s						
ENH				*e*Sn	**Sn**	**10 57 56.4**	**+0.3**
XAN	**Xi'an**	**5.34**	**58**	Pg	**Pb**	**10 57 11.1**	**+3.1**
XAN				Sn	**Sn**	**10 57 50.6**	**-6.3**
XAN				Sg	**Sg**	**10 58 23.4**	**-2.0**
XAN				smax			
	comp=N,98nm,0.9s						
XAN				smax			
	comp=E,57nm,0.9s						
GYA	**Guiyang**	**5.63**	**149**	Pg	**Pb**	**10 57 16.3**	**+3.3**
GYA				Sg	**Sb**	**10 58 19.9**	**-1.1**
GYA				smax			
	comp=N,130nm,1.0s						
GYA				smax			
	comp=E,130nm,1.0s						
KMI	**Kunming**	**6.23**	**186**	Pn	**Pn**	**10 57 05.8**	**-1.3**
KMI				Sn	**Sn**	**10 58 16.5**	**-2.5**
KMI				Sg	**Sg**	**10 58 50.2**	**-4.0**
KMI				smax			
	comp=N,39nm,1.9s						
KMI				smax			
	comp=E,22nm,1.5s						
KMI				LR	LR		
	comp=N,420nm,12.0s						
KMI				LR	LR		
	comp=E,1μm,7.6s						
CMAR	**Chiang Mai Arr**	**13.47**	**199**	Pn	**Pn**	**10 58 51.0**	**+4.7**
	baz=4.0,slow=8.6,SNR=3.4						
SONM	**Songino Array**	**16.62**	**7**	Pn	**Pn**	**10 59 29.7**	**+1.6**
	comp=E,0.3nm,0.3s,baz=187,slow=11,SNR=5.2						
KSRS	**Korea Array**	**21.07**	**67**	P	**P**	**11 00 19.8**	**+0.3**
	comp=E,3.7nm,0.7s,mb3.9,baz=263,slow=11,SNR=21						
CN2	**Changchun**	**21.34**	**48**	*e*P	**P**	**11 00 22.2**	**-0.2**
MK31	**Makanchi Array**	**22.43**	**319**	*e*P	**P**	**11 00 34.2**	**+0.2**
MKAR	**Makanchi Array**	**22.43**	**319**	P	**P**	**11 00 34.5**	**+0.5**
	comp=E,0.7nm,0.8s,mb3.1,baz=113,slow=13,SNR=4.8						
MKAR				LR	LR	11 09 53.4	
	comp=E,74nm,18.1s,MS3.1,baz=170,slow=38						
AAK	**Ala-Archa**	**25.60**	**304**	LR	LR	11 11 22.9	
	comp=E,231nm,18.2s,MS3.7,baz=143,slow=37						
ZALV	**Zalesovo Beam**	**26.26**	**335**	P	**P**	**11 01 09.1**	**-1.4**
	comp=E,0.6nm,0.3s,mb3.6,baz=148,slow=8.7,SNR=5.3						
KURK	**Kurchatov**	**26.71**	**324**	P	**P**	**11 01 14.7**	**0.0**
	comp=E,1.2nm,0.3s,mb4.2,baz=130,slow=9.5,SNR=5.9						
KURK	**Kurchatov**	**26.71**	**324**	*e*P	**P**	**11 01 14.2**	**-0.5**
	comp=E,1.2nm,0.6s,mb3.8						
BVAR	**Borovoye Array**	**32.25**	**322**	P	**P**	**11 02 05.2**	**+1.4**
	comp=E,0.5nm,0.5s,mb3.7,baz=106,slow=11,SNR=3.9						
ABKAR	**Akbulak array**	**37.09**	**312**	*e*P	**P**	**11 02 45.7**	**0.0**
	comp=E,0.3nm,0.6s,mb3.2						
AKTK	**Aktyubinsk**	**38.56**	**313**	P	**P**	**11 03 02.1**	**+4.1**
AKTO	**Aktyubinsk**	**38.56**	**313**	P	**P**	**11 03 02.1**	**+4.1**
	comp=E,0.9nm,0.7s,mb3.5,baz=112,slow=7.4,SNR=3.7						
WRAB	**Tennant Creek**	**58.99**	**146**	P	**P**	**11 05 36.1**	**+0.8**
	comp=E,3.8nm,0.8s,mb4.5						
WRA	**Warramunga Arr**	**58.99**	**146**	P	**P**	**11 05 35.3**	**-0.1**
	comp=E,0.7nm,0.5s,mb4.0,baz=339,slow=7.8,SNR=7.1						
CTA	**Charters Tower**	**65.59**	**135**	P	**P**	**11 06 20.8**	**+1.2**
	comp=E,1.2nm,0.3s,mb4.5,baz=315,slow=13,SNR=2.7						
YKA	**Yellowknife Ar**	**81.62**	**17**	P	**P**	**11 07 53.6**	**+0.3**
	comp=E,0.1nm,0.3s,mb3.4,baz=327,slow=5.1,SNR=3.6						

BJI ***12*** *10:57:52.0, 12°.19N×145°.61E, h35km, mB5.0/26, mb4.8/31, Ms5.1/26, Ms7 4.9/25*
IDC ***12*** *10:57:54.8±0.6, 12°.81N×145°.00E, h0km, mb4.3/20, mb1 4.5/20, mb1mx4.4/27, mbtmp4.3/20, Error ellipse: s-maj=19.7km s-min=15.0km az=90.0*
MOS ***12*** *10:57:57.7±1.0, 12°.77N×145°.05E, h33km, mb4.9/17, MS5.0/4, Error ellipse: s-maj=14.2km s-min=7.8km az=104.0*
ISCJB ***12*** *10:57:57.8±1.2, 12°.72N±0°.06×145°.06E±0°.05, h33km±10km, mb4.7/65, MS5.0/12, Error ellipse: s-maj=10.0km s-min=8.3km az=164.1*
NEIC ***12*** *10:57:59.4±3.2, 12°.78N×145°.00E, h31km±21km, mb4.9/26, Error ellipse: s-maj=8.5km s-min=6.1km az=130.0*
ISC 12 10:57:59.2±1.8, 12°.74N±0°.06×145°.04E±0°.05, h29km±12km, h35km±1.3km; pP-P, n107, σ0°.98/105, mb4.7/65, MS5.0/12, 2C-5D, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.86**	**349**	*e*P	**Pn**	**10 58 15.0**	**-0.3**
MJAR	**Matsushiro Arr**	**24.48**	**347**	P	**P**	**11 03 13.9**	**-1.9**
	3.8nm,0.7s,mb3.9,baz=167,slow=9.5,SNR=9.7						
MAJO	**Matsushiro**	**24.48**	**347**	*e*P	**P**	**11 03 15.0**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,154nm,2.5s,mb5.0						
MAJO	**Matsushiro**	**24.48**	**347**	*e*P	**P**	**11 03 15.0**	**-0.8**
	comp=Z,154nm,2.5s,mb5.0						
MAT	**Maushiro**	**24.48**	**347**	P	**P**	**11 03 14.2**	**-1.6**
SSLB	**Suanglung**	**25.33**	**299**	*e*P	**P**	**11 03 24.4**	**+0.8**
	comp=Z,28nm,0.8s,mb4.8						
KSRS	**Korea Array**	**28.98**	**331**	P	**P**	**11 03 55.1**	**-1.2**
	comp=Z,3.0nm,0.8s,mb4.1,baz=145,slow=9.9,SNR=14						
NJ2	**Nanjing**	**30.77**	**313**	*e*P	**P**	**11 04 14.8**	**+2.6**
NJ2				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.2						
WHN	**Wuhan**	**33.42**	**307**	||P	**P**	**11 04 36.2**	**+0.7**
WRAB	**Tennant Creek**	**34.13**	**198**	*e*P	**P**	**11 04 41.3**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
WRAB	**Tennant Creek**	**34.13**	**198**	*e*P	**P**	**11 04 41.3**	**-0.4**
	comp=Z,7.4nm,0.8s,mb4.7						
WRA	**Warramunga Arr**	**34.14**	**198**	P	**P**	**11 04 41.2**	**-0.6**
	comp=Z,5.3nm,0.8s,mb4.5,baz=23,slow=9.8,SNR=21						
QIZ	**Qiongzhong**	**34.38**	**285**	P	**P**	**11 04 41.5**	**-2.5**
QIZ				S	**S**	**11 10 11.4**	**+1.2**
QIZ				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.8						
QIZ				LR	LR		
	comp=N,1μm,18.3s,MS4.8						
QIZ				LR	LR		
	comp=E,1μm,18.7s,MS4.8						
QIZ				LR	LR		
	comp=Z,4μm,18.9s,MS5.1						
MDJ	**Mudanjiang**	**34.41**	**340**	P	**P**	**11 04 45.1**	**+1.2**
MDJ				pP	pP	11 04 53.3	+0.9
MDJ				sP	sP	11 04 56.9	+0.9
MDJ				PP	PP	11 06 03.4	+1.3
MDJ				S	**S**	**11 10 12.5**	**+2.5**
MDJ				ScP	ScP	11 11 02.3	-0.1
MDJ				PcS	PcS	11 11 05.2	-0.1
MDJ				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
MDJ				pmax	pmax		
	comp=Z,67nm,5.0s						
MDJ				LR	LR		
	comp=N,660nm,15.4s,MS5.0						
MDJ				LR	LR		
	comp=E,2μm,19.2s,MS5.0						
MDJ				LR	LR		
	comp=Z,3μm,16.6s,MS5.1						
CN2	**Changchun**	**35.24**	**335**	*e*P	**P**	**11 04 53.8**	**+2.7**
CN2				*e*pP	pP	11 05 03.5	+3.8
CN2				*e*S	**S**	**11 10 25.0**	**+2.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,2μm,17.0s,MS5.2						
CN2				LR	LR		
	comp=E,2μm,17.0s,MS5.2						
CN2				LR	LR		
	comp=Z,1μm,15.0s,MS4.7						
FITZ	**Fitzroy Crossi**	**36.13**	**212**	P	**P**	**11 04 58.7**	**-0.4**
	comp=Z,4.7nm,1.0s,mb4.4,baz=50,slow=9.8,SNR=4.5						
KSM	**Kuching**	**36.18**	**255**	*e*P	**P**	**11 05 00.0**	**+0.5**
	comp=Z,29nm,0.9s,mb5.2						
HABR	**Khabarovsk**	**36.58**	**349**	*e*P	**P**	**11 05 00.1**	**-2.4**
HABR				*e*SP	sP	11 05 14.1	-0.5
HABR						11 06 23.4	
HABR				*e*		11 07 23.1	
HABR				*e*SS	SS	11 13 12.8	-11
HABR				*e*		11 15 13.7	
HABR				MLR	MLR		
	comp=Z,2μm,16.0s,MS5.0						
BJI	**Beijing**	**37.21**	**322**	P	**P**	**11 05 08.1**	**+0.1**
BJI				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.8						
BJI				pmax	pmax		
	comp=Z,61nm,3.9s						
ASAR	**Alice Springs**	**37.79**	**197**	P	**P**	**11 05 12.3**	**-0.6**
	comp=Z,0.9nm,0.6s,mb3.6,baz=24,slow=9.2,SNR=7.9						
GYA	**Guiyang**	**38.48**	**297**	*e*P	**P**	**11 05 19.2**	**+0.3**
GYA				pP	pP	11 05 30.2	+2.6
GYA				sP	sP	11 05 35.8	+4.7
GYA				PP	PP	11 06 52.4	+5.1
GYA				S	**S**	**11 11 12.0**	**-0.7**
GYA				sS	sS	11 11 30.7	+3.7
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.8						
GYA				pmax	pmax		
	comp=Z,300nm,5.6s						
GYA				LR	LR		
	comp=N,830nm,17.0s,MS4.7						
GYA				LR	LR		
	comp=E,650nm,18.9s,MS4.7						
GYA				LR	LR		
	comp=Z,910nm,17.6s,MS4.7						
HHC	**Hu-ho-hao-te**	**40.52**	**320**	*e*P	**P**	**11 05 36.4**	**+0.7**
HHC				pP	pP	11 05 48.6	+4.2
HHC				sP	sP	11 05 53.8	+5.9
HHC				PP	PP	11 07 12.9	+3.6
HHC				PcS	PcS	11 11 29.7	+1.3
HHC				S	**S**	**11 11 38.7**	**-4.3**
HHC				ScS	ScS	11 15 36.5	-3.1
HHC				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.6						
HHC				pmax	pmax		
	comp=Z,120nm,4.5s						
HHC				LR	LR		
	comp=N,1μm,15.8s,MS5.1						
HHC				LR	LR		
	comp=E,2μm,18.1s,MS5.1						
HHC				LR	LR		
	comp=Z,2μm,17.4s,MS5.0						
PETK	**Petropavlovsk-**	**41.52**	**12**	PcP	PcP	11 07 40.9	+0.1
	comp=Z,3.0nm,0.7s,baz=169,slow=5.3,SNR=4.2						
KMI	**Kunming**	**41.69**	**293**	P	**P**	**11 05 46.7**	**+1.1**
KMI				pP	pP	11 05 56.2	+1.9
KMI				sP	sP	11 06 00.5	+2.7
KMI				PP	PP	11 07 23.5	+1.2
KMI				S	**S**	**11 11 58.5**	**-2.4**
KMI				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.5						
KMI				pmax	pmax		
	comp=Z,99nm,5.5s						
KMI				LR	LR		
	comp=N,840nm,21.9s,MS4.8						
KMI				LR	LR		
	comp=E,960nm,20.1s,MS4.8						
KMI				LR	LR		
	comp=Z,1μm,19.5s,MS4.8						
CD2	**Chengdu**	**42.08**	**302**	P	**P**	**11 05 48.5**	**-0.2**
CD2				pP	pP	11 05 58.3	+0.9
CD2				sP	sP	11 06 02.3	+1.4
CD2				PP	PP	11 07 29.4	+3.0
CD2				S	**S**	**11 12 04.9**	**-1.5**
CD2				pmax	pmax		
	comp=Z,20nm,0.7s,mb4.9						
CD2				pmax	pmax		
	comp=Z,100nm,5.8s						
CD2				LR	LR		
	comp=N,960nm,14.2s						
CD2				LR	LR		
	comp=Z,2μm,13.0s,MS5.1						
LZH	**Lanzhou**	**43.68**	**309**	*e*P	**P**	**11 06 02.2**	**+0.6**
LZH				pP	pP	11 06 11.0	+0.7
LZH				sP	sP	11 06 15.5	+1.7
LZH				PP	PP	11 07 45.9	+2.4
LZH				*e*S	**S**	**11 12 29.2**	**-0.6**
LZH				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.7						
LZH				pmax	pmax		
	comp=Z,51nm,4.0s						
LZH				LR	LR		
	comp=E,840nm,14.7s						
LZH				LR	LR		
	comp=Z,2μm,16.5s,MS5.1						
CMAR	**Chiang Mai Arr**	**44.67**	**283**	P	**P**	**11 06 10.5**	**+0.8**
	comp=Z,6.1nm,0.8s,mb4.5,baz=84,slow=6.1,SNR=30						
CMAR				PcP	PcP	11 07 53.9	+1.7
	comp=Z,4.4nm,0.7s,baz=98,slow=1.8,SNR=12						
PSI	**Prapat**	**46.67**	**262**	P	**P**	**11 06 26.6**	**+0.9**
	comp=Z,9.2nm,0.8s,mb4.7,baz=67,slow=4.3,SNR=3.5						
SONM	**Songino Array**	**47.52**	**325**	P	**P**	**11 06 31.3**	**-0.5**
	comp=Z,1.4nm,0.7s,mb4.1,baz=128,slow=12,SNR=4.2						
SONM				PcP	PcP	11 08 02.5	+0.9
	comp=Z,4.9nm,0.9s,baz=142,slow=4.7,SNR=6.2						
SEY	**Seymchan**	**50.39**	**4**	*i* P	**P**	**11 06 53.7**	**+0.2**
YAK	**Yakutsk**	**50.44**	**351**	*e*P	**P**	**11 06 53.3**	**-0.6**
YAK				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.0						
ZAK	**Zakamensk**	**50.63**	**327**	*e*P	**P**	**11 06 54.8**	**-0.7**
ZAK				*e*		11 08 13.5	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
ATKA	**Atka Island**	**51.13**	**31**	*e*P	**P**	**11 06 59.5**	**+0.2**
	comp=Z,20nm,0.9s,mb5.0						
LSA	**Lhasa**	**52.53**	**298**	*e*P	**P**	**11 07 11.4**	**+1.3**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
LSA	**Lhasa**	**52.53**	**298**	*e*P	**P**	**11 07 11.4**	**+1.3**
	comp=Z,7.1nm,0.6s,mb4.8						
BILL	**Bilibino**	**56.97**	**9**	||*e*P	**P**	**11 07 40.3**	**-1.3**
BILL				*e**PP	pP	11 07 50.9	+0.3
BILL				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						
BILL				MLR	MLR		
	comp=Z,1μm,23.0s,MS4.9						
BILL	**Bilibino**	**56.97**	**9**	*e*P	**P**	**11 07 40.6**	**-0.9**
	comp=

comp=Z,24nm,1.0s,mb5.2
BPAW Bear Paw Mtn. 67.36 25 *e*P **P 11 08 51.2 -0.1**
comp=Z,14nm,0.9s,mb5.0
PMR Palmer 67.45 28 *e*P **P 11 08 51.2 -0.8**
TRF Thorofare Moun 67.46 26 *e*P **P 11 08 51.5 -0.4**
comp=Z,14nm,0.9s,mb5.0
MCK McKinley 68.12 26 *e*P **P 11 08 55.5 -0.6**
MCK pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
MCK McKinley 68.12 26 *e*P **P 11 08 55.5 -0.7**
comp=Z,2.6nm,0.7s,mb4.4
COLD Coldfoot 68.66 22 *e*P **P 11 09 00.2 +0.7**
comp=Z,84nm,1.1s,mb5.6
COLA College 68.89 25 *e*P **P 11 09 00.6 -0.3**
COLA pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
COLA College 68.89 25 *e*P **P 11 09 00.6 -0.4**
comp=Z,4.4nm,0.8s,mb4.4
PAX Paxson 69.44 27 *e*P **P 11 09 04.7 +0.3**
PAX pmax pmax
comp=Z,21nm,1.2s,mb4.9
PAX Paxson 69.44 27 *e*P **P 11 09 04.7 +0.3**
comp=Z,21nm,1.2s,mb5.0
MENT Mentasta 70.22 27 *e*P **P 11 09 09.7 +0.5**
BVAR Borovoye Array 70.69 322 P **P 11 09 12.3 +0.1**
comp=Z,3.7nm,0.7s,mb4.4,baz=96,slow=7.7,SNR=11
BRVK Borovoye 70.76 322*d i*P **P 11 09 14.6 +2.0**
BRVK pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
KBL Kabul 71.42 302 *e*P **P 11 09 17.0 -0.1**
KBL pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
KBL Kabul 71.42 302 *e*P **P 11 09 17.0 0.0**
comp=Z,4.0nm,0.5s,mb4.6
EGAK Eagle 71.66 26 *e*P **P 11 09 17.9 0.0**
comp=Z,6.9nm,0.8s,mb4.6
DAWY Dawson 72.32 27 *e*P **P 11 09 22.3 +0.5**
SKAG Skagway 73.85 32 *e*P **P 11 09 31.6 +0.6**
comp=Z,6.6nm,1.0s,mb4.5
ABKAR Akbulak array 77.28 318 *e*P **P 11 09 50.1 -0.7**
comp=Z,3.2nm,0.7s,mb4.4
ARU Arti 77.55 325*c i*P **P 11 09 53.0 +0.8**
ARU *e* 11 12 45.7
ARU S S 11 19 43.4 +1.8
ARU SS SS 11 24 39.1 -1.6
ARU pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
ARU MLR MLR
comp=Z,1μm,17.0s,MS5.4
AKTK Aktyubinsk 78.41 319 P **P 11 09 56.6 -0.5**
AKTO Aktyubinsk 78.41 319 P **P 11 09 56.6 -0.5**
comp=Z,1.2nm,0.8s,mb3.9,baz=63,slow=9.0,SNR=4.2
YKA Yellowknife Ar 83.53 27 P **P 11 10 24.0 -0.2**
comp=Z,2.9nm,0.8s,mb4.4,baz=288,slow=5.6,SNR=20
APA Apatity 86.31 339⇑*e*P **P 11 10 37.2 -0.9**
APA *i* 11 13 54.0
APA pmax pmax
comp=Z,15nm,1.0s,mb5.2
APA MLR MLR
comp=Z,400nm,19.0s,MS4.8
BMO Blue Mountains 86.47 45 *e*P **P 11 10 39.8 +0.5**
BMO pmax pmax
comp=Z,6.0nm,1.1s,mb4.7
BMO Blue Mountains 86.47 45 *e*P **P 11 10 39.8 +0.5**
comp=Z,6.1nm,1.1s,mb4.7
NVAR Mina Array Bea 87.32 51 P **P 11 10 44.6 +1.0**
comp=Z,1.6nm,0.7s,mb4.3,baz=274,slow=6.0,SNR=11
BSMT Bassoo Peak 87.37 42 *e*P **P 11 10 45.0 +1.4**
comp=Z,15nm,1.3s,mb5.1
ARCES ARCESS Array B 87.94 342 P **P 11 10 44.7 -1.2**
comp=Z,3.6nm,0.7s,mb4.7,baz=59,slow=9.5,SNR=9.0
HLID Hailey 88.82 46 *e*P **P 11 10 51.7 +1.1**
comp=Z,4.4nm,1.1s,mb4.7
JOF Joensuu 89.13 335 *e*p **P 11 10 50.1 -1.6**
comp=Z,8.6nm,0.8s,mb5.1
JOF Joensuu 89.13 335 *e*p **P 11 10 50.1 -1.6**
comp=Z,8.6nm,0.8s,mb5.1
OBN Obninsk 89.90 327⇓*e*P **P 11 10 54.7 -0.7**
OBN pmax pmax
comp=Z,20nm,1.3s,mb5.3
BOZ Bozeman (W) 90.09 43 *e*P **P 11 10 57.4 +0.8**
BOZ pmax pmax
comp=Z,3.0nm,1.2s,mb4.5
BOZ Bozeman (W) 90.09 43 *e*P **P 11 10 57.4 +0.9**
comp=Z,2.7nm,1.2s,mb4.5
KAF Kangasniemi 91.55 336 *e*P **P 11 11 01.1 -1.9**
KAF pmax pmax
comp=Z,2.0nm,0.5s,mb4.7
KAF Kangasniemi 91.55 336 *e*p **P 11 11 01.1 -1.9**
comp=Z,1.8nm,0.5s,mb4.7
KAF Kangasniemi 91.55 336 *e*p **P 11 11 01.1 -1.9**
comp=Z,1.8nm,0.5s,mb4.7
FINES FINESS Array B 92.00 335 P **P 11 11 03.6 -1.4**
comp=Z,3.5nm,0.7s,mb4.8,baz=57,slow=7.0,SNR=8.5
PDAR Pinedale Array 92.44 45 P **P 11 11 08.4 +0.9**
comp=Z,0.2nm,0.5s,mb3.7,baz=258,slow=4.2,SNR=2.5
NOA NORSAR Array B 97.90 339 P **P 11 11 30.5 -1.5**
comp=Z,1.4nm,0.7s,mb4.6,baz=52,slow=4.4,SNR=3.9
MDT Midelt 126.21 328 PKP PKPdf 11 16 59.7 +0.1
comp=Z,1.7nm,0.8s,baz=34,slow=5.7,SNR=4.2
TORD Torodi Ar. Bea 135.47 304 PKP PKPdf 11 17 19.1 +1.6
comp=Z,1.8nm,0.7s,baz=45,slow=2.0,SNR=8.1
PLCA Paso Flores 138.19 138 PKP PKPdf 11 17 22.4 +0.6
comp=Z,2.2nm,1.0s,baz=245,slow=1.2,SNR=2.9
DBIC Dimbokro 144.41 301 PKP PKPdf 11 17 32.3 -1.4
comp=Z,10nm,0.7s,baz=37,slow=4.7,SNR=16
KIC Kosan Boka 144.47 301 *e*PKP1 PKPdf 11 17 32.3 -1.5
comp=Z,84nm,1.1s
TIC Toumodi 144.56 301 *e*PKP1 PKPdf 11 17 32.6 -1.4
comp=Z,78nm,1.1s
LIC Lamto 144.79 301 *e*PKP1 PKPdf 11 17 33.4 -1.0
comp=Z,128nm,1.0s
LPAZ La Paz 147.72 100 PKPbc PKPbc 11 17 43.6 +1.6
comp=Z,7.9nm,1.0s,baz=357,slow=3.6,SNR=11
CPUP Villa Florida 155.01 126 PKPab PKPab 11 18 15.3 +0.9
comp=Z,3.2nm,0.9s,baz=229,slow=4.0,SNR=2.2

NEIC 12 10:58:54.5,37°.89S×177°.22E,h91km,ML3.7(WEL)**,After WEL.,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.38**	**193**	P	Pn	10 59 08.3	-0.2
MARZ	**Manawahe**	**0.44**	**257**	P	Pn	10 59 08.9	0.0
MWZ	**Matawai**	**0.51**	**151**	P	Pn	10 59 09.3	-0.1
MWZ				S	Sn	10 59 21.1	+0.6
PUZ	**Puketiti**	**0.84**	**103**	P	Pn	10 59 12.1	-0.4
MXZ	**Matakaoa Point**	**0.92**	**70**	P	Pn	10 59 13.6	+0.3

BJI ***12*** *10:59:59.7,12°.31N×145°.73E,h35km,mB5.3/37,mb4.9/44, Ms5.2/49,Ms7 5.0/44*
IDC ***12*** *11:00:03.1±0.5,12°.74N×145°.06E,h0km,mb4.6/30, mb1 4.7/31,mb1mx4.7/35,mbtmp4.6/31,MS4.9/13, Ms1 4.9/13,ms1mx4.8/21,Error ellipse: s-maj=16.0km s-min=12.0km az=91.0*
MOS ***12*** *11:00:05.7±0.9,12°.70N×145°.06E,h33km,mb5.4/34, MS5.1/19,Error ellipse: s-maj=10.5km s-min=6.2km az=105.7*
ISCJB ***12*** *11:00:07.8±1.2,13°.22N±0°.05×144°.76E±0°.02,h23km±8km, mb5.1/127,MS5.0/50,Error ellipse: s-maj=8.2km s-min=3.5km az=179.9*
NEIC ***12*** *11:00:08.5±0.2,12°.76N×144°.95E,h35km,mb5.3/63, MS5.3/3,Error ellipse: s-maj=7.0km s-min=5.4km az=140.0*
GCMT ***12*** *11:00:11.0±0.1,12°.63N×145°.21E,h16km,MW5.4, Moment Tensor Solution. s75,c136; s88,c173; Moment tensor: Scale 10^{17}Nm; M_{rr}1.22±.03; $M_{\theta\theta}$-0.28±.02; $M_{\phi\phi}$-0.94±.02; $M_{r\theta}$0.32±.06; $M_{\theta\phi}$-0.78±.02; $M_{r\phi}$1.09±.07; Best double couple: $M_0$1.80000×10^{17} NP1:ϕ_s228.00000°, δ27.00000°,λ114.00000°. NP2:ϕ_s21.00000°,δ66.00000°, λ78.00000°. Principal axes: T 1.6800, Plg67.0000°, Azm270.0000°; N 0.1800, Plg11.0000°, Azm26.0000°; P -1.8500, Plg20.0000°, Azm120.0000°; Data Used: II IU IC G CN.*
DJA ***12*** *11:00:11,13°.02N×145°.09E,h65km,Mw5.7/25*
ISC 12 11:00:11.7±0.8,**13°.17N**±0°.05×**144°.80E**±0°.02,**h42**km±6km, **h35**km±1.3km:**pP-P,n558,**σ0**.86**/520,**mb5.1**/127,**MS5.0**/50, **131C-114D,Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.42**	**9**	*e*P	**Pn**	**11 00 21.7**	**+0.2**
CNP	**Cataram**	**19.64**	**270**	*e*P	**Pn**	**11 04 40.8**	**+2.0**
DAV	**Davao City (W)**	**19.86**	**254**	P	**Pn**	**11 04 38.6**	**-2.8**
	17nm,0.3s,baz=59,slow=12,SNR=9.6						
DAV				LR	LR	11 10 59.4	
	comp=Z,2μm,20.3s,baz=72,slow=33						
DAV	**Davao City (W)**	**19.86**	**254**	*e*P	**Pn**	**11 04 39.4**	**-2.0**
DMPH	**Davao City--Mi**	**19.92**	**254**⇑	*e*P	**Pn**	**11 04 41.1**	**-1.0**
PVCP	**Virac**	**20.09**	**274**	*e*P	**P**	**11 04 45.4**	**+3.4**
BUKP	**Musuan**	**20.10**	**257**	*e*P	**P**	**11 04 43.0**	**+0.9**
JHJ	**Hachijo jima 2**	**20.38**	**348**	LR	LR	11 11 08.3	
	comp=Z,4μm,18.5s,MS4.8,baz=333,slow=32						
PAGZ	**Pagadian**	**21.70**	**258**	*e*P	**P**	**11 05 00.3**	**+0.9**
WAKE	**Wake Island**	**21.84**	**71**	*e*P	**P**	**11 04 56.4**	**-4.4**
	375nm,1.2s,mb5.7						
CAUP	**Cauayan**	**22.50**	**282**	*e*P	**P**	**11 05 10.0**	**+2.2**
BALP	**Baler**	**22.63**	**279**	*e*P	**P**	**11 05 09.9**	**+0.7**
APYP	**Conner**	**23.16**	**285**	*e*P	**P**	**11 05 15.8**	**+0.9**
TGY	**Tagaytay City**	**23.21**	**275**	P	**P**	**11 05 15.9**	**+0.6**
	98nm,0.3s,mb5.7,baz=151,slow=10,SNR=5.7						
TGY				LR	LR	11 14 31.3	
	comp=Z,25nm,18.8s,baz=75,slow=37						
MJAR	**Matsushiro Arr**	**24.01**	**347**	P	**P**	**11 05 24.4**	**+1.8**
	2.5nm,0.4s,mb4.0,baz=170,slow=11,SNR=11						
MJAR				PcP	PcP	11 09 02.9	-0.9
	1.5nm,0.7s,baz=154,slow=4.0,SNR=3.2						
MJAR				LR	LR	11 14 38.3	
	comp=Z,3μm,18.1s,MS4.9,baz=165,slow=36						
MJAR	**Matsushiro Arr**	**24.01**	**347**	P	**P**	**11 05 24.4**	**+1.8**
MJAR						11 09 02.9	
MAJO	**Matsushiro**	**24.01**	**347**	*e*P	**P**	**11 05 22.2**	**-0.4**
MAJO				pmax	pmax		
	comp=Z,44nm,1.0s,mb4.8						
MAJO	**Matsushiro**	**24.01**	**347**	*e*P	**P**	**11 05 22.2**	**-0.4**
	comp=Z,44nm,1.0s,mb4.8						
MAT	**Matsushiro**	**24.01**	**347**	P	**P**	**11 05 22.1**	**-0.5**
MAT				S	**S**	**11 09 44.0**	**+7.1**
BOLP	**Bolinao**	**24.27**	**281**	*e*P	**P**	**11 05 24.4**	**-0.8**
YULB	**Yu-li**	**24.48**	**298**	*e*P	**P**	**11 05 26.6**	**-0.5**
	comp=Z,30nm,0.6s,mb4.9						
TWG	**Pinlang**	**24.49**	**296**	*e*P	**P**	**11 05 26.0**	**-1.1**
	comp=Z,57nm,0.9s,mb5.0						
YHNB	**Yeheng**	**24.89**	**301**	*e*P	**P**	**11 05 28.0**	**-2.8**
SSLB	**Suanglung**	**24.92**	**298**	*e*P	**P**	**11 05 31.5**	**+0.5**
	comp=Z,115nm,1.0s,mb5.4						
TPUB	**Ta-pu**	**25.03**	**297**	*e*P	**P**	**11 05 29.0**	**-3.1**
	comp=Z,108nm,1.3s,mb5.2						
MYLDM	**Lahad Datu**	**27.13**	**255**	P	**P**	**11 05 54.2**	**+3.0**
QZH	**Quanzhou**	**27.34**	**299**⇑	*i*P	**P**	**11 05 52.9**	**-0.1**
QZH				S	**S**	**11 10 36.0**	**+5.9**
QZH				LR	LR		
	comp=N,3μm,12.2s						
QZH				LR	LR		
	comp=E,6μm,19.5s						
QZH				LR	LR		
	comp=Z,6μm,17.3s						
TSM	**Tawau**	**28.01**	**254**	P	**P**	**11 06 01.9**	**+2.9**
SSE	**Sheshan**	**28.12**	**313**	P	**P**	**11 05 58.8**	**-1.0**
SSE				S	**S**	**11 10 42.1**	**-0.1**
SSE				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.6						
SSE				pmax	pmax		
	comp=Z,430nm,9.9s						
SSE				LR	LR		
	comp=N,1μm,18.9s,MS4.6						
SSE				LR	LR		
	comp=E,1μm,18.9s,MS4.6						
SSE				LR	LR		
	comp=Z,2μm,16.4s,MS4.7						
KSRS	**Korea Array**	**28.49**	**331**	P	**P**	**11 06 04.2**	**+1.2**
	comp=Z,5.9nm,0.8s,mb4.3,baz=140,slow=10.0,SNR=11						
KSRS				PcP	PcP	11 09 14.7	+0.4
	comp=Z,4.8nm,0.9s,baz=170,slow=1.6,SNR=9.9						
KSRS				ScP	ScP	11 12 56.5	+4.2
	comp=Z,7.2nm,1.2s,baz=180,slow=3.7,SNR=13						
KKM	**Kota Kinabalu**	**29.04**	**259**	*e*P	**P**	**11 06 07.4**	**-0.8**
	comp=Z,42nm,1.2s,mb5.0						
NJ2	**Nanjing**	**30.30**	**313**	*e*P	**P**	**11 06 21.2**	**+2.0**
NJ2				pP	pP	11 06 30.8	+0.2
NJ2				sP	sP	11 06 34.8	-0.8
NJ2				PP	PP	11 07 20.3	-7.9
NJ2				S	**S**	**11 11 16.0**	**-0.6**
NJ2				sS	sS	11 11 40.0	+4.5
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.8						
NJ2				pmax	pmax		
	comp=Z,460nm,10.2s						
NJ2				LR	LR		
	comp=N,2μm,16.1s,MS5.0						
NJ2				LR	LR		
	comp=E,2μm,14.2s,MS5.0						
NJ2				LR	LR		
	comp=Z,2μm,14.8s,MS4.9						
KAPI	**Kappang**	**30.75**	**236**	P	**P**	**11 06 20.0**	**-3.4**
	comp=Z,7.9nm,0.4s,mb4.9,baz=55,slow=4.6,SNR=4.8						
KAPI				LR	LR	11 17 19.5	
	comp=Z,780nm,20.6s,MS4.3,baz=131,slow=34						
YUK	**Yuzh-Kuril'sk**	**30.77**	**2**⇓	*i*P	**P**	**11 06 25.5**	**+2.4**
YUK				*i*		11 07 48.8	
YUK				*i* PPP		11 09 23.1	
YUK				*i*		11 11 33.1	
YUK				pmax	pmax		
	comp=N,80nm,7.3s						
YUK				pmax	pmax		
	comp=E,30nm,3.7s						
YUK				MLR	MLR		
	comp=N,2μm,15.0s,MS4.9						
YUK				MLR	MLR		
	comp=E,900nm,15.0s,MS4.9						
YUK				MLR	MLR		
	comp=Z,1μm,15.0s,MS4.8						
GZH	**Guangzhou**	**31.41**	**293**	P	**P**	**11 06 28.0**	**-1.1**
GZH				S	**S**	**11 11 36.4**	**+2.3**
GZH				LR	LR		
	comp=N,2μm,16.1s,MS4.9						
GZH				LR	LR		
	comp=E,2μm,20.6s,MS4.9						
GZH				LR	LR		
	comp=Z,5μm,17.9s,MS5.2						
DL2	**Dalian**	**32.83**	**326**	⇑P	**P**	**11 06 43.5**	**+2.2**
DL2				PP	PP	11 07 56.9	+0.8
DL2				S	**S**	**11 12 03.0**	**+7.2**
DL2				sS	sS	11 12 17.5	+2.7
DL2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
DL2				pmax	pmax		
	comp=Z,270nm,5.4s						
DL2				LR	LR		
	comp=N,920nm,14.6s,MS4.7						
DL2				LR	LR		
	comp=E,880nm,19.1s,MS4.7						
DL2				LR	LR		
	comp=Z,1μm,16.6s,MS4.7						
BTM	**Bintulu**	**32.87**	**255**	P	**P**	**11 06 44.3**	**+2.2**
WHN	**Wuhan**	**32.97**	**307**	P	**P**	**11 06 44.3**	**+1.6**
WHN				S	**S**	**11 12 04.2**	**+5.9**
WHN				LR	LR		
	comp=N,3μm,15.2s,MS5.4						
WHN				LR	LR		
	comp=E,4μm,14.7s,MS5.4						
WHN				LR	LR		
	comp=Z,7μm,17.6s,MS5.4						
CTA	**Charters Tower**	**33.08**	**177**	P	**P**	**11 06 35.4**	**-8.3**
	comp=Z,7.2nm,1.0s,mb4.5,baz=343,slow=11,SNR=2.1						
CTA				LR	LR	11 19 19.1	
	comp=Z,866nm,18.5s,MS4.5,baz=3.2,slow=35						
CTA	**Charters Tower**	**33.08**	**177**	P	**P**	**11 06 35.4**	**-8.3**
CTA				LR	LR	11 19 19.1	
CTAO	**Charters Tower**	**33.08**	**177**	*e*P	**P**	**11 06 35.7**	**-8.0**
YSS	**Yuzh-Sakhalins**	**33.72**	**357**	*e*P	**P**	**11 06 45.0**	**-4.0**
YSS				*e*		11 08 03.0	
YSS				*e*S	**S**	**11 12 09.0**	**-0.4**
YSS				MLR	MLR		
	comp=Z,1μm,17.0s,MS4.6						
YSS				MLR	MLR		
	comp=E,3μm,14.0s						
TIA	**Tai'an**	**33.82**	**318**	P	**P**	**11 06 53.1**	**+3.1**
TIA				S	**S**	**11 12 17.0**	**+5.8**
TIA				LR	LR		
	comp=N,770nm,11.0s						
MDJ	**Mudanjiang**	**33.92**	**340**	P	**P**	**11 06 52.0**	**+1.2**
MDJ				pP	pP	11 07 00.7	-1.5
MDJ				sP	sP	11 07 05.2	-2.0
MDJ				PP	PP	11 08 10.9	+2.8
MDJ				S	**S**	**11 12 15.9**	**+3.3**
MDJ				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
MDJ				pmax	pmax		
	comp=Z,330nm,8.2s						
MDJ				LR	LR		
	comp=N,660nm,14.6s,MS5.0						
MDJ				LR	LR		
	comp=E,2μm,17.0s,MS5.0						
MDJ				LR	LR		
	comp=Z,2μm,17.0s,MS5.0						
SBUM Sibu		**33.94**	**254**	P	**P**	**11 06 52.3**	**+1.0**
QIZ Qiongzhong		**34.04**	**284**	P	**P**	**11 06 52.8**	**+0.6**
QIZ				PP	PP	11 08 08.9	-0.9
QIZ				S	**S**	**11 12 17.6**	**+2.5**
QIZ				pmax	pmax		
	comp=Z,33nm,1.8s,mb5.0						
QIZ				pmax	pmax		
	comp=Z,480nm,9.9s						
QIZ				LR	LR		
	comp=N,1μm,17.1s,MS4.8						
QIZ				LR	LR		
	comp=E,1μm,19.6s,MS4.8						
QIZ				LR	LR		
	comp=Z,4μm,18.6s,MS5.1						
WRAB Tennant Creek		**34.47**	**198**	P	**P**	**11 06 49.0**	**-6.7**
	comp=Z,139nm,0.8s,mb5.9,SNR=6.6						
WRAB Tennant Creek		**34.47**	**198**	*e*P	**P**	**11 06 49.5**	**-6.2**
WRAB				pmax	pmax		
	comp=Z,45nm,1.1s,mb5.3						
WRAB Tennant Creek		**34.47**	**198**	*e*P	**P**	**11 06 49.5**	**-6.2**
	comp=Z,45nm,1.1s,mb5.3						
WRA Warramunga Arr		**34.48**	**198**	P	**P**	**11 06 49.6**	**-6.2**
	comp=Z,11nm,0.7s,mb4.9,baz=21,slow=9.6,SNR=11						
WRA				ScP	ScP	11 13 12.2	-0.4
	comp=Z,4.0nm,1.2s,baz=23,slow=4.5,SNR=4.2						
WRA				LR	LR	11 21 01.0	
	comp=Z,2μm,19.4s,MS4.8,baz=35,slow=37						
CN2 Changchun		**34.75**	**335**	*e*P	**P**	**11 07 04.8**	**+6.8**
CN2				*e*pP	pP	11 07 14.7	+5.3
CN2				*e*S	**S**	**11 12 36.0**	**+11**
CN2				SS	SS	11 14 53.9	-3.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,3μm,16.0s,MS5.2						
CN2				LR	LR		
	comp=E,2μm,16.0s,MS5.2						
CN2				LR	LR		
	comp=Z,3μm,16.0s,MS5.1						
KSM Kuching		**36.07**	**254**	P	**P**	**11 07 11.3**	**+1.6**
KSM Kuching		**36.07**	**254**	*e*P	**P**	**11 07 08.5**	**-1.2**
	comp=Z,154nm,1.2s,mb5.8						
HABR Khabarovsk		**36.11**	**349**	*e*P	**P**	**11 07 07.4**	**-2.2**
HABR				*e**PP	pP	11 07 16.9	-4.2
HABR				*e*		11 08 28.7	
HABR				*e*S	**S**	**11 12 45.1**	**-1.1**
HABR				*e**SS	sS	11 13 01.2	-4.1
HABR				*e*SS	SS	11 15 12.5	-12
HABR				*e*		11 17 24.1	
HABR				pmax	pmax		
	comp=N,29nm,2.2s						
HABR				pmax	pmax		
	comp=E,36nm,2.4s						
HABR				pmax	pmax		
	comp=Z,53nm,2.2s,mb5.1						
HABR				MLR	MLR		
	comp=Z,2μm,17.0s,MS5.0						
FITZ Fitzroy Crossi		**36.37**	**212**	*e*P	**P**	**11 07 06.9**	**-5.3**
	comp=Z,22nm,1.5s,mb4.9						
FITZ Fitzroy Crossi		**36.37**	**212**	P	**P**	**11 07 07.2**	**-4.9**
	comp=Z,12nm,1.1s,mb4.7,baz=45,slow=11,SNR=4.4						
FITZ Fitzroy Crossi		**36.37**	**212**	*e*P	**P**	**11 07 07.1**	**-5.0**
	comp=Z,16nm,1.2s,mb4.8						
BJI Beijing		**36.73**	**322**	P	**P**	**11 07 15.3**	**+0.3**
BJI				S	**S**	**11 12 57.2**	**+1.4**
BJI				SS	SS	11 15 38.3	+0.7
BJI				pmax	pmax		
	comp=Z,22nm,1.1s,mb4.9						
BJI				pmax	pmax		
	comp=Z,360nm,5.0s						
BJI				LR	LR		
	comp=N,2μm,20.2s,MS5.0						
BJI				LR	LR		
	comp=E,2μm,18.9s,MS5.0						
BJI				LR	LR		
	comp=Z,2μm,36.0s						
ENH Enshi		**36.76**	**303**	*e*P	**P**	**11 07 15.8**	**+0.4**
	comp=Z,18nm,0.9s,mb4.9						
KLR Kul'dur		**37.53**	**346**	*e*P	**P**	**11 07 16.8**	**-4.8**
KLR				*e*		11 09 33.8	
KLR				*e*		11 17 28.5	
KLR				MLR	MLR		
	comp=N,2μm,13.0s						
KLR				MLR	MLR		
	comp=Z,3μm,13.0s,MS5.2						
GYA Guiyang		**38.08**	**296**⇑	*i*P	**P**	**11 07 27.8**	**+1.1**
GYA				pP	pP	11 07 37.6	-0.6
GYA				sP	sP	11 07 41.5	-1.6
GYA				PP	PP	11 08 57.5	+3.3
GYA				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.0						
GYA				pmax	pmax		
	comp=Z,390nm,5.5s						
GYA				LR	LR		
	comp=N,1μm,18.0s,MS5.1						
GYA				LR	LR		
	comp=E,3μm,19.9s,MS5.1						
GYA				LR	LR		
	comp=Z,3μm,19.6s,MS5.2						
ASAR Alice Springs		**38.13**	**196**	P	**P**	**11 07 21.0**	**-6.0**
	comp=Z,2.1nm,0.7s,mb4.0,baz=17,slow=10,SNR=7.0						
ASAR Alice Springs		**38.13**	**196**	P	**P**	**11 07 21.0**	**-6.0**
SKR Severo-Kuril's		**38.53**	**12**	P	**P**	**11 07 25.0**	**-5.0**
SKR				*e*S	**S**	**11 13 20.0**	**-2.8**
SKR				pmax	pmax		
	comp=Z,1μm,4.0s						
SKR				smax			
	comp=E,1μm,12.0s						
SKR				smax			
	comp=Z,800nm,10.0s						
SKR				MLR	MLR		
	comp=N,2μm,20.0s,MS5.0						
SKR				MLR	MLR		
	comp=E,2μm,20.0s,MS5.0						
SKR				MLR	MLR		
	comp=Z,3μm,20.0s,MS5.1						
XAN Xi'an		**38.60**	**309**	P	**P**	**11 07 29.6**	**-1.3**
XAN				pP	pP	11 07 40.8	-1.6
XAN				pmax	pmax		
	comp=Z,120nm,10.5s						
HHC Hu-ho-hao-te		**40.04**	**320**	*e*P	**P**	**11 07 43.4**	**+0.6**
HHC				pP	pP	11 07 55.5	+1.1
HHC				ScS	ScS	11 17 46.7	+0.3
HHC				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.6						
HHC				pmax	pmax		
	comp=Z,400nm,7.5s						
HHC				LR	LR		
	comp=N,2μm,17.4s,MS5.2						
HHC				LR	LR		
	comp=E,2μm,19.1s,MS5.2						
HHC				LR	LR		
	comp=Z,3μm,17.2s,MS5.2						
BTO Baotou		**40.89**	**318**	*e*P	**P**	**11 07 50.2**	**+0.3**
DZM Mont Dzumac		**40.96**	**149**	*e*S	**S**	**11 13 52.2**	**-7.7**
	comp=Z,648nm,29.1s						
DZM				*e*LR	LR	11 18 56.6	
	comp=Z,3μm,20.2s						
DZM Mont Dzumac		**40.96**	**149**	*e*P	**P**	**11 07 43.4**	**-7.2**
	comp=Z,60nm,1.3s,mb5.1						
PETK Petropavlovsk-		**41.14**	**12**	P	**P**	**11 07 53.1**	**+1.4**
	comp=Z,2.5nm,0.8s,mb3.9,baz=205,slow=13,SNR=2.8						
PETK				PcP	PcP	11 09 50.8	+0.3
	comp=Z,3.4nm,0.8s,baz=182,slow=4.3,SNR=2.9						
PET Petropavlovsk		**41.26**	**13**	*e*P	**P**	**11 07 51.5**	**-1.2**
PET				*e*S	**S**	**11 14 04.0**	**+0.3**
PET				pmax	pmax		
	comp=Z,200nm,13.1s						
PET				MLR	MLR		
	comp=Z,1μm,16.0s,MS4.8						
KMI Kunming		**41.31**	**293**	P	**P**	**11 07 55.2**	**+1.7**
KMI				pP	pP	11 08 05.2	+0.1
KMI				sP	sP	11 08 09.3	-0.8
KMI				PP	PP	11 09 33.9	+4.4

KMI S S 11 14 07.0 +1.8
KMI ScS ScS 11 17 54.2 -0.4
KMI pmax pmax
comp=Z,29nm,1.2s,mb4.8
KMI pmax pmax
comp=Z,390nm,6.1s
KMI LR LR
comp=N,1μm,20.0s
KMI LR LR
comp=E,1μm,13.3s
KMI LR LR
comp=Z,2μm,18.6s,MS4.9
CD2 Chengdu 41.65 302 ⇓*i*P **P 11 07 57.0 +0.7**
CD2 pP pP 11 08 06.9 -1.0
CD2 sP sP 11 08 10.9 -1.9
CD2 PP PP 11 09 37.0 +3.9
CD2 S **S 11 14 10.9 +0.7**
CD2 ScS ScS 11 17 55.7 -0.8
CD2 pmax pmax
comp=Z,30nm,1.1s,mb4.8
CD2 pmax pmax
comp=Z,200nm,5.2s
CD2 LR LR
comp=N,2μm,16.6s,MS5.2
CD2 LR LR
comp=E,2μm,17.8s,MS5.2
CD2 LR LR
comp=Z,2μm,16.6s,MS5.1
MYKOM Kota Tinggi 42.07 258 P **P 11 08 00.5 +0.6**
MBWA Marble Bar 42.08 216 *e*P **P 11 07 55.1 -4.7**
MBWA Marble Bar 42.08 216 *e*P **P 11 07 55.5 -4.3**
comp=Z,51nm,1.1s,mb5.1
KGM Kluang 42.51 258 P **P 11 08 03.6 +0.1**
LZH Lanzhou 43.23 309 *e*P **P 11 08 10.5 +1.5**
LZH pP pP 11 08 21.0 +0.3
LZH sP sP 11 08 25.2 -0.4
LZH PP PP 11 09 52.8 +2.8
LZH S **S 11 14 33.5 +0.3**
LZH pmax pmax
comp=Z,42nm,1.5s,mb5.0
LZH pmax pmax
comp=Z,200nm,5.0s
LZH LR LR
comp=E,2μm,14.8s
LZH LR LR
comp=Z,2μm,15.4s,MS5.1
NST Nakhon Sawan 43.27 279 P **P 11 08 10.0 +0.4**
FRIM Kepong 43.79 261 P **P 11 08 14.0 +0.2**
ARMA Armidale 43.83 171 *e*P **P 11 08 06.5 -7.3**
SNG Songkhla 43.84 267 P **P 11 08 15.0 +0.7**
comp=Z,120nm,0.8s,mb5.7
IPM Ipoh 44.05 263 P **P 11 08 15.8 -0.1**
KULM Kulim 44.22 264 P **P 11 08 17.5 +0.2**
KULM Kulim 44.22 264 *e*P **P 11 08 17.5 +0.2**
comp=Z,34nm,0.9s,mb5.1
BDT Bhumibol Dam 44.30 281 P **P 11 08 19.0 +1.1**
CHTO Chiang Mai 44.34 283 *e*P **P 11 08 18.1 -0.1**
CHTO pmax pmax
comp=Z,69nm,2.2s,mb5.0
CHTO Chiang Mai 44.34 283 *e*P **P 11 08 18.1 -0.1**
comp=Z,69nm,2.2s,mb5.0
CM31 Chiang Mai Arr 44.34 283 *e*P **P 11 08 18.8 +0.6**
CMAR Chiang Mai Arr 44.34 283 P **P 11 08 18.9 +0.7**
comp=Z,14nm,0.8s,mb4.7,baz=83,slow=6.0,SNR=26
CMAR PcP PcP 11 10 02.2 +0.4
comp=Z,8.3nm,0.9s,baz=65,slow=2.2,SNR=6.2
STKA Stephens Creek 44.90 184 P **P 11 08 17.8 -4.5**
comp=Z,11nm,1.1s,mb4.6,baz=356,slow=7.8,SNR=3.4
STKA LR LR 11 28 35.6
comp=Z,2μm,18.6s,MS5.1,baz=2.6,slow=38
STKA Stephens Creek 44.90 184 P **P 11 08 17.8 -4.5**
STKA LR LR 11 28 35.6
SMY Shemya 45.87 25 *e*P **P 11 08 29.9 +0.1**
CLNS Chul'man 46.17 345 *e**PP **P 11 08 32.8 +0.7**
CLNS *e* 11 10 08.7
CLNS *e* 11 18 19.9
CLNS pmax pmax
comp=N,3.0nm,0.9s
CLNS pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
CLNS pmax pmax
comp=E,7.0nm,1.0s
CLNS MLR MLR
comp=Z,1μm,15.0s,MS5.0
CLNS MLR MLR
comp=E,373nm,14.0s,MS4.9
CLNS MLR MLR
comp=N,927nm,15.0s,MS4.9
PSI Prapat 46.50 261 P **P 11 08 34.6 -0.8**
comp=N,27nm,1.0s,mb5.2,baz=95,slow=3.8,SNR=7.8
FORT Forrest 46.57 200 *e*P **P 11 08 31.1 -4.5**
comp=N,27nm,0.8s,mb5.2
SONM Songino Array 47.03 325 P **P 11 08 40.5 +1.5**
comp=N,2.7nm,0.8s,mb4.2,baz=144,slow=10,SNR=4.5
SONM PcP PcP 11 10 10.8 +0.1
comp=N,9.0nm,0.9s,baz=156,slow=4.9,SNR=6.4
SONM ScP ScP 11 14 04.0 +2.7
comp=N,1.4nm,0.8s,baz=131,slow=5.9,SNR=3.8
SONM LR LR 11 28 56.3
comp=N,3μm,19.1s,MS5.3,baz=109,slow=36
SONM Songino Array 47.03 325 P **P 11 08 40.5 +1.5**
SONM 11 10 10.8
GTA Gaotai 47.40 312 *e*P **P 11 08 42.8 +0.8**
GTA pP pP 11 08 52.1 -1.7
GTA sP sP 11 08 56.0 -2.7
GTA PP PP 11 10 32.0 -1.5
GTA S **S 11 15 40.6 +7.3**
GTA pmax pmax
comp=Z,8.0nm,1.5s,mb4.4
GTA pmax pmax
comp=Z,420nm,6.2s
GTA LR LR
comp=N,550nm,15.5s,MS5.0
GTA LR LR
comp=E,1μm,17.2s,MS5.0
GTA LR LR
comp=Z,2μm,17.8s,MS5.1
SEY Seymchan 49.98 5 *i*P **P 11 09 01.6 +0.2**
YAK Yakutsk 49.98 351 *c i*P **P 11 09 00.8 -0.7**
YAK *e**PP pP 11 09 08.2 -5.1
YAK *e* 11 10 19.3
YAK *e* 11 10 59.9
YAK *e*S **S 11 16 09.4 +0.4**
YAK *e**SS sS 11 16 18.4 -10
YAK *e* 11 18 48.9
YAK *e*SS SS 11 19 51.4 +9.2
YAK *e*SSS 11 21 12.2
YAK pmax pmax
comp=E,5.0nm,1.2s
YAK pmax pmax
comp=N,18nm,1.1s
YAK pmax pmax
comp=Z,32nm,1.1s,mb5.3
YAK pmax pmax
comp=N,79nm,2.9s
YAK pmax pmax
comp=Z,104nm,2.8s,mb5.4
YAK pmax pmax
comp=E,53nm,2.8s
YAK smax
comp=E,217nm,5.1s
YAK smax
comp=N,48nm,3.0s
YAK MLR MLR
comp=Z,2μm,17.0s,MS5.1
YAK MLR MLR
comp=N,2μm,19.0s
YAK MLR MLR
comp=E,296nm,12.0s
YAK Yakutsk 49.98 351 *e*P **P 11 09 02.4 +0.9**
comp=E,53nm,0.7s,mb5.7
ZAK Zakamensk 50.14 326 *e*P **P 11 09 03.4 +0.5**
ZAK *e* 11 10 21.5
ZAK pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
TOO Toolangi 50.48 179 *e*P **P 11 09 00.1 -5.4**
TLY Talaya 50.67 328 *e*P **P 11 09 07.2 +0.4**
TLY *e* 11 10 28.0
TLY *e* 11 11 03.6
TLY *e*S **S 11 16 20.3 +1.4**
TLY *e* 11 18 57.0
TLY *e*SS SS 11 19 54.0 +0.5
TLY pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
TLY MLR MLR
comp=Z,1μm,17.0s,MS5.0
TLY Talaya 50.67 328 *e*P **P 11 09 08.1 +1.3**
comp=Z,23nm,1.3s,mb4.9
ATKA Atka Island 50.89 31 *e*P **P 11 09 06.6 -1.9**
comp=Z,109nm,1.3s,mb5.6
SHL Shillong 51.12 292 *e*PKP **P 11 09 17.0 +6.3**
SHL *e*S **S 11 16 35.0 +9.0**
MOY Mondy 52.05 327 *e*P **P 11 09 25.6 +8.4**
LSA Lhasa 52.12 297 *e*P **P 11 09 18.9 +0.8**
LSA pmax pmax
comp=Z,17nm,0.8s,mb5.0
LSA Lhasa 52.12 297 *e*P **P 11 09 18.9 +0.8**
comp=Z,17nm,0.8s,mb5.0
TAPN Taplejung 54.95 294 *e*P **P 11 09 38.5 -0.4**
comp=Z,121nm,1.1s,mb5.8
ODAN Odare 55.22 294 *e*P **P 11 09 39.8 -1.0**
comp=Z,233nm,1.5s,mb6.0
UNV Unalaska Valle 55.71 33 *e*P **P 11 09 44.2 +0.3**
comp=Z,68nm,1.1s,mb5.6
RAMN Ramite 55.93 294 *e*P **P 11 09 44.6 -1.3**
comp=Z,167nm,1.4s,mb5.9
AKUT Akutan 56.23 33 *e*P **P 11 09 48.2 +0.6**
comp=Z,150nm,1.3s,mb5.9
JIRN Jiri 56.32 295 *e*P **P 11 09 47.9 -0.8**
comp=Z,221nm,1.5s,mb6.0
BILL Bilibino 56.58 9 *e*P **P 11 09 49.5 -0.4**
BILL *e* 11 11 56.0
BILL pmax pmax
comp=Z,12nm,1.0s,mb4.9
BILL Bilibino 56.58 9 *e*P **P 11 09 49.1 -0.7**
comp=Z,25nm,1.1s,mb5.2
BILL Bilibino 56.58 9 *e* **P 11 09 48.7 -1.2**
GUN Gumba 56.60 295 *e*P **P 11 09 49.9 -0.8**
comp=Z,64nm,0.9s,mb5.7
PKI Pulchoki 57.01 294 *e*P **P 11 09 52.4 -1.2**
PKI Pulchoki 57.01 294 *e*P **P 11 09 52.5 -1.1**
PKI pmax pmax
comp=Z,19nm,0.6s,mb5.3
PKI Pulchoki 57.01 294 *e*P **P 11 09 52.5 -1.1**
comp=Z,19nm,0.6s,mb5.3
PKIN Phulchoki 57.02 294 *e*P **P 11 09 52.5 -1.2**
comp=Z,19nm,0.6s,mb5.3
KKN Kakani 57.13 295 *e*P **P 11 09 53.3 -1.2**
comp=Z,99nm,1.3s,mb5.7
KKN Kakani 57.13 295 *e*P **P 11 09 53.3 -1.2**
KKN pmax pmax
comp=Z,99nm,1.3s,mb5.7
DMN Daman 57.28 294 *e*P **P 11 09 54.3 -1.2**
comp=Z,76nm,1.1s,mb5.7
WMQ Urumqi 57.37 314 P **P 11 09 57.0 +1.1**
WMQ pP pP 11 10 07.0 -1.0
WMQ sP sP 11 10 11.0 -1.8
WMQ PP PP 11 12 06.0 +2.5
WMQ S **S 11 17 49.0 -0.7**
WMQ ScS ScS 11 19 40.0 -2.0
WMQ pmax pmax
comp=Z,25nm,1.0s,mb5.2
WMQ pmax pmax
comp=Z,98nm,6.0s
WMQ LR LR
comp=N,1μm,18.0s,MS5.1
WMQ LR LR
comp=E,990nm,18.0s,MS5.1
WMQ LR LR
comp=Z,1μm,18.0s,MS5.0
TIXI Tiksi 59.24 354 *e*P **P 11 10 08.0 -0.4**
TIXI pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
TIXI Tiksi 59.24 354 *e*P **P 11 10 08.0 -0.5**
comp=Z,10nm,0.8s,mb4.9
URZ Urewera 59.44 151 P **P 11 10 03.6 -6.7**
comp=Z,9.1nm,1.0s,mb4.8,baz=297,slow=4.5,SNR=3.9
SDPT Sand Point 59.53 33 *e*P **P 11 10 09.8 -0.9**
comp=Z,135nm,1.0s,mb5.9
CHGN Chignik 60.96 32 *e*P **P 11 10 19.0 -1.5**
MK31 Makanchi Array 61.74 316 *e*P **P 11 10 26.9 +0.9**
MKAR Makanchi Array 61.74 316 P **P 11 10 26.7 +0.8**
comp=Z,2.5nm,0.6s,mb4.5,baz=82,slow=9.9,SNR=8.4
MKAR PKPPKP 11 39 44.3
comp=Z,0.2nm,0.3s,baz=349,slow=3.9,SNR=5.2
MKAR Makanchi Array 61.74 316 *i* P **P 11 10 28.3 +2.3**
MKAR pmax pmax
comp=Z,3.0nm,0.6s
ZALV Zalesovo Beam 61.92 325 P **P 11 10 27.7 +0.7**
comp=Z,0.8nm,0.4s,mb4.2,baz=104,slow=6.1,SNR=3.6
ZALV PcP PcP 11 11 06.0 -1.5
comp=Z,5.1nm,0.5s,baz=110,slow=4.3,SNR=8.8
JOSI Joshimath 62.20 298 *e*PKP **P 11 10 30.3 +1.0**
KLP Kalpa 63.33 299 *e*PKP **P 11 10 36.1 -0.7**
KLP AMb AMB 11 10 51.4
comp=Z,54nm,1.2s,mb5.5
AGRA Agra 63.64 294 *e*PKP **P 11 10 38.1 -0.9**
AGRA AMb AMB 11 10 39.0
comp=Z,59nm,0.2s,mb6.3
HYB Hyderabad 63.77 283 *e*P **P 11 10 38.0 -2.0**
HYB Hyderabad 63.77 283 *i* P **P 11 10 38.0 -2.0**
OHAK Old Harbor 63.93 32 *e*P **P 11 10 40.0 -0.3**
comp=Z,116nm,2.0s,mb5.6
SVW2 Sparrevohn 64.07 28 *e*P **P 11 10 40.9 -0.3**
NDI New Delhi 64.25 296 *ex* x 11 10 39.0
BHPL Bhopal 64.31 290 *e*PKP **P 11 10 42.2 -1.2**
BHPL AMb AMB 11 10 43.8
comp=Z,44nm,1.1s,mb5.4
AYAN Aya Nagar 64.33 295 *e*PKP **P 11 10 41.8 -1.7**
SONA Sohna 64.37 295 *e*PKP **P 11 10 42.6 -1.2**
KDAK Kodiak Island 64.46 32 P **P 11 10 43.6 -0.2**
comp=Z,156nm,0.8s,mb6.1,SNR=6.5
KDAK Kodiak Island 64.46 32 P **P 11 10 43.5 -0.3**
comp=Z,20nm,0.8s,mb5.2,baz=249,slow=3.5,SNR=11
KDAK Kodiak Island 64.46 32 *e*P **P 11 10 43.3 -0.5**
KDAK pmax pmax
comp=Z,29nm,1.0s,mb5.3
KDAK Kodiak Island 64.46 32 *e*P **P 11 10 43.3 -0.5**
comp=Z,29nm,1.0s,mb5.3
TTA Tatalina 64.56 26 *e*P **P 11 10 42.9 -1.4**
KURK Kurchatov 64.86 320 P **P 11 10 47.0 +0.6**
comp=Z,5.2nm,0.5s,mb4.8,baz=103,slow=6.4,SNR=5.8
KURK Kurchatov 64.86 320 *c i*P **P 11 10 46.1 -0.4**
KURK pmax pmax
comp=Z,16nm,1.1s,mb5.0
KURK MLR MLR
comp=Z,2μm,17.0s,MS5.4
KURK Kurchatov 64.86 320 *e*P **P 11 10 46.7 +0.2**
comp=Z,33nm,1.2s,mb5.2
RSO Redoubt South 65.17 29 *e*P **P 11 10 48.6 +0.3**
KSH Kashi 65.44 308 ⇑*i*P **P 11 10 53.5 +3.0**
KSH pP pP 11 11 03.8 +1.1
KSH sP sP 11 11 07.7 +0.2
KSH PP PP 11 13 19.6 +4.8
KSH S S 11 19 32.9 +0.7
KSH ScS ScS 11 20 42.4 -0.5
KSH pmax pmax
comp=Z,12nm,1.0s,mb4.9
KSH pmax pmax
comp=Z,380nm,8.4s
KSH LR LR
comp=N,650nm,14.6s,MS5.2
KSH LR LR
comp=E,1μm,15.7s,MS5.2
KSH LR LR
comp=Z,420nm,10.2s
KHET Khetri 65.51 295 *e*PKP **P 11 10 50.4 -0.8**
TKM2 Tokmak 2 65.94 311 *e*P **P 11 10 53.6 -0.1**
TKM2 *e**PP pP 11 11 04.2 -1.7
TKM2 pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
TKM2 Tokmak 2 65.94 311 *e*P **P 11 10 53.6 -0.1**
comp=Z,4.1nm,0.9s,mb4.5
TKM2 *e*pP pP 11 11 04.2 -1.7
PPLA Purkeypile 66.19 26 *e*P **P 11 10 53.8 -1.1**
CHUM Lake Minchumin 66.45 25 *e*P **P 11 10 56.1 -0.4**
comp=Z,150nm,1.7s,mb5.8
AJM Ajmer 66.62 293 *e*PKP **P 11 10 57.0 -1.4**
AJM AMb AMB 11 11 00.4
comp=Z,59nm,1.6s,mb5.4
SEW Seward 66.65 30 *e*P **P 11 10 56.6 -1.2**
FRU Bishkek 66.65 311 *e*P **P 11 10 56.5 -1.7**
FRU *e* 11 11 22.0
UCH Uchtor 66.69 310 *e*P **P 11 10 59.1 +0.6**
comp=Z,503nm,0.6s
AAK Ala-Archa 66.73 311 P **P 11 10 59.7 +0.9**
comp=Z,1.2nm,0.3s,mb4.4,baz=90,slow=2.0,SNR=4.5
KTH Kantishna Hill 66.94 26 *e*P **P 11 10 58.7 -0.9**
BPAW Bear Paw Mtn. 67.08 25 *e*P **P 11 10 59.5 -1.1**
TRF Thorofare Moun 67.18 26 *e*P **P 11 10 59.9 -1.2**
PMR Palmer 67.18 28 *e*P **P 11 10 59.5 -1.7**
PMR pmax pmax
comp=Z,86nm,1.6s,mb5.5
PMR Palmer 67.18 28 *e*P **P 11 10 59.5 -1.7**
comp=Z,86nm,1.6s,mb5.5
MCK McKinley 67.84 26 *e*P **P 11 11 03.4 -1.9**
MCK pmax pmax
comp=Z,87nm,1.3s,mb5.6
MCK McKinley 67.84 26 *e*P **P 11 11 03.4 -1.9**
comp=Z,87nm,1.3s,mb5.6
KAD Karad 67.93 283 *e*PKP **P 11 11 05.4 -1.3**
KAD AMb AMB 11 11 22.3
comp=Z,112nm,1.2s,mb5.8
MID Middleton Isla 68.03 31 *e*P **P 11 11 05.7 -0.9**
MID pmax pmax
comp=Z,87nm,1.3s,mb5.6
MID Middleton Isla 68.03 31 *e*P **P 11 11 05.7 -0.9**
comp=Z,87nm,1.3s,mb5.6
POO Poona 68.09 285 *e*PKP **P 11 11 06.3 -1.5**
POO AMb AMB 11 11 09.2
comp=Z,117nm,1.2s,mb5.8
COLD Coldfoot 68.36 22 *e*P **P 11 11 08.2 -0.4**
comp=Z,22nm,1.1s,mb5.1
COLA College 68.60 25 *e*P **P 11 11 08.5 -1.6**
COLA pmax pmax
comp=Z,22nm,0.6s,mb5.3
COLA College 68.60 25 *e*P **P 11 11 08.5 -1.6**
comp=Z,22nm,0.6s,mb5.3
DIV Divide 68.65 29 *e*P **P 11 11 10.7 +0.2**
comp=Z,74nm,1.2s,mb5.5
PAX Paxson 69.17 27 *e*P **P 11 11 12.9 -0.8**
PAX pmax pmax
comp=Z,49nm,1.1s,mb5.3
PAX Paxson 69.17 27 *e*P **P 11 11 12.9 -0.7**
comp=Z,49nm,1.1s,mb5.3
JASL Jaisalmer 69.93 294 *e*PKP **P 11 11 18.4 -0.7**
MENT Mentasta 69.95 27 *e*P **P 11 11 17.4 -1.1**
BVAR Borovoye Array 70.21 322 P **P 11 11 20.6 +0.3**
comp=Z,8.3nm,0.8s,mb4.7,baz=105,slow=7.4,SNR=8.9
BRVK Borovoye 70.28 322 *c i*P **P 11 11 20.5 -0.2**
BRVK pmax pmax
comp=Z,13nm,1.0s,mb4.8
BRVK Borovoye 70.28 322 *e*P **P 11 11 21.4 +0.8**
comp=Z,22nm,1.2s,mb5.0
KBL Kabul 70.99 302 *e*P **P 11 11 25.4 0.0**
KBL pmax pmax
comp=Z,26nm,1.0s,mb5.1
KBL Kabul 70.99 302 *e*P **P 11 11 25.4 0.0**
comp=Z,26nm,1.0s,mb5.1
EGAK Eagle 71.38 26 *e*P **P 11 11 26.5 -0.7**
comp=Z,36nm,1.3s,mb5.1
PNL Peninsula 71.56 31 *e*P **P 11 11 28.5 +0.2**
comp=Z,30nm,1.0s,mb5.2
PPT Papeete 71.61 114 *e*S S 11 20 37.7 -8.4
comp=Z,576nm,24.0s
PPT *e*LR LR 11 32 49.8
comp=Z,2μm,29.0s,baz=292
DAWY Dawson 72.04 27 *e*P **P 11 11 31.2 0.0**
HYT Haines Junctio 72.60 30 *e*P **P 11 11 34.8 +0.3**
SKAG Skagway 73.61 32 *e*P **P 11 11 40.1 -0.4**
comp=Z,57nm,1.5s,mb5.3
INK Inuvik 74.78 22 *e*P **P 11 11 46.3 -0.9**
INK pmax pmax
comp=Z,48nm,1.3s
INK Inuvik 74.78 22 *e*P **P 11 11 46.3 -0.8**
comp=Z,48nm,1.3s,mb5.3
DLBC Dease Lake 76.37 33 *e*P **P 11 11 56.9 +0.4**
ABKAR Akbulak array 76.80 318 *e*P **P 11 11 58.6 -0.6**
comp=Z,4.3nm,0.7s,mb4.5
ARU Arti 77.07 325 P **P 11 12 04.3 +3.9**
ARU Arti 77.07 325 *e*P **P 11 12 03.0 +2.5**
comp=Z,13nm,0.7s,mb5.0
TAOE Nuku Hiva Isla 77.67 102 *e*LR LR 11 35 35.1
comp=Z,796nm,21.3s,baz=291
SOKR Solikamsk 77.75 329 *e*P **P 11 12 08.1 +3.9**
SOKR S S 11 22 05.3 +12
SOKR pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
SOKR MLR MLR
comp=Z,1μm,18.0s,MS5.3
AKTK Aktyubinsk 77.93 319 P **P 11 12 04.8 -0.6**
AKTO Aktyubinsk 77.93 319 P **P 11 12 04.8 -0.6**
comp=Z,0.7nm,0.4s,mb3.9,baz=97,slow=7.7,SNR=2.6
WBK Wadi Bani Khal 81.25 291 P **P 11 12 24.5 +0.5**
SNR=8.1
NLWA Neilton Lookou 81.33 43 ⇓P **P 11 12 23.5 -0.4**
baz=81
GNW Green Mountain 82.00 43 *e*P **P 11 12 28.7 +1.2**
comp=Z,12nm,1.1s,mb4.8
JMDO Jabal Madar 82.09 291 ⇑P **P 11 12 27.2 -1.3**
A05A Maple Falls 82.21 42 ⇓P **P 11 12 28.6 +0.1**
baz=82
HOQ Hoqain 82.57 292 ⇑P **P 11 12 30.2 -0.7**
F04A Amboy 82.58 45 ⇑P **P 11 12 30.6 +0.1**
baz=82
D05A Enumclaw 82.62 43 ⇑P **P 11 12 30.4 -0.3**
baz=82
G04A Mulino 82.68 45 ⇓P **P 11 12 31.1 +0.1**
baz=83
B06A Marblemount 82.69 42 ⇓P **P 11 12 30.9 -0.2**
baz=83
LON Longmire 82.83 44 *e*P **P 11 12 32.2 +0.4**
LON pmax pmax
comp=Z,17nm,1.3s,mb4.9
LON Longmire 82.83 44 *e*P **P 11 12 32.1 +0.3**
comp=Z,17nm,1.3s,mb4.9
H04A Detroit Lake 82.98 46 ⇑P **P 11 12 32.2 -0.5**
baz=83
YBH Yreka Blue Hor 83.20 49 *e*P **P 11 12 34.5 +0.7**
YBH pmax pmax
comp=Z,19nm,1.2s
YBH Yreka Blue Hor 83.20 49 *e*P **P 11 12 34.5 +0.7**
comp=Z,18nm,1.2s,mb5.0
YKA Yellowknife Ar 83.26 27 P **P 11 12 32.4 -1.3**
comp=Z,5.2nm,0.9s,mb4.6,baz=289,slow=5.3,SNR=11
A07A Ashnola River, 83.30 41 ⇑P **P 11 12 33.5 -0.7**
baz=83
ARQ Araqi 83.33 292 P **P 11 12 34.7 -0.1**
SNR=19
HATD Hatta, Dubai 83.39 294 ⇓P **P 11 12 34.6 -0.6**
ASHO Ashiyiah 83.48 294 ⇑P **P 11 12 35.2 -0.4**
ALE Alert 83.65 3 P **P 11 12 35.8 +0.4**
comp=Z,170nm,1.2s,mb6.0,SNR=9.6
G06A Carlson Farm, 83.95 45 ⇑P **P 11 12 37.6 0.0**
baz=84
B08A Colville Reser 84.13 42 ⇑P **P 11 12 37.9 -0.6**
baz=84
K05A Summer Lake 84.31 48 ⇑P **P 11 12 39.1 -0.4**
baz=84
SPITS Spitsbergen Ar 84.45 351 LR LR 11 52 54.6
comp=Z,605nm,18.4s,MS5.0,baz=330,slow=37
KBS Kingsbay 84.60 352 *e*P **P 11 12 39.6 -0.7**
KBS *e* 11 23 01.6
D08A Wollman Farm, 84.70 43 ⇓P **P 11 12 41.3 -0.1**
baz=85
E08A Dider Farm, El 84.74 44 ⇓P **P 11 12 42.2 +0.6**
baz=85
B09A Rice 84.88 42 ⇑P **P 11 12 42.5 +0.3**
baz=85
C09A Chrisman Ranch 84.95 42 ⇑P **P 11 12 42.5 -0.1**
baz=85
I07A Izee 84.99 46 ⇓P **P 11 12 43.5 +0.6**
baz=85
G08A Pilot Rock 85.09 45 ⇑P **P 11 12 43.2 -0.1**
baz=85
BEKR Beckworth 85.34 50 ⇑P **P 11 12 44.8 +0.1**
baz=85
E09A Wood Farm, Sta 85.35 43 ⇑P **P 11 12 44.8 +0.1**
baz=85
H08A Prairie City 85.47 45 ⇑P **P 11 12 45.7 +0.4**
baz=85
F09A S2 Ranch, Elgi 85.70 44 ⇓P **P 11 12 46.4 0.0**
baz=86
D10A Wagner Farm, O 85.79 43 ⇑P **P 11 12 46.6 -0.3**
baz=86
APA Apatity 85.83 339 ⇑*i*P **P 11 12 45.8 -0.8**
APA pmax pmax
comp=Z,11nm,0.9s,mb5.1
APA MLR MLR
comp=Z,300nm,20.0s,MS4.7
J08A Circle Bar Ran 85.89 47 ⇑P **P 11 12 47.2 -0.2**
baz=86
A11A Hall Mountain, 85.89 41 ⇑P **P 11 12 48.0 +0.8**
baz=86
WCN Washoe City 85.92 51 ⇓P **P 11 12 47.7 +0.1**
baz=86
WVOR Wild Horse Val 86.00 47 *e*P **P 11 12 48.8 +0.8**

WVOR pmax pmax
comp=Z,22nm,1.5s,mb5.2
WVOR Wild Horse Val 86.00 47 *e*P **P 11 12 48.8 +0.8**
comp=Z,22nm,1.5s,mb5.2
B11A Sandpoint 86.03 41 ⇑P **P 11 12 48.1 +0.1**
baz=86
F10A Beach Ranch, E 86.10 44 ⇑P **P 11 12 48.7 +0.4**
baz=86
H09A Durkee 86.13 45 ⇓P **P 11 12 48.9 +0.3**
baz=86
I09A Lost Marbles R 86.25 46 ⇓P **P 11 12 49.0 -0.2**
baz=86
RKT Rikitea 86.34 115 *e*S S 11 23 17.3 -5.6
comp=Z,864nm,26.5s
RKT *e*SS SS 11 28 52.1 -12
comp=Z,276nm,26.8s
RKT *e*LR LR 11 39 28.5
comp=Z,1μm,29.5s,baz=291
G10A Bishop Farm, J 86.35 44 ⇑P **P 11 12 50.3 +0.7**
baz=86,SNR=8.0
A12A Yaak River Ran 86.35 41 ⇑P **P 11 12 49.9 +0.4**
baz=86
MAK Makhachkala 86.39 313 *e*P **P 11 12 48.4 -1.5**
MAK *e* 11 16 10.2
MAK *e*S S 11 23 13.4 -9.4
MAK *e*SS SS 11 29 04.4 +1.6
MAK pmax pmax
comp=Z,185nm,1.1s,mb6.2
J09A Fry Pan Ranch, 86.40 46 ⇑P **P 11 12 50.1 +0.2**
baz=86
B12A Libby 86.52 41 ⇓P **P 11 12 50.9 +0.5**
baz=86
RBK Rabkut 86.67 287 P **P 11 12 51.5 -0.2**
SNR=7.1
H10A Noah's Angus R 86.78 45 ⇓P **P 11 12 51.9 +0.1**
baz=87,SNR=10
C12B Naegeli Ranch, 86.80 42 ⇓P **P 11 12 52.0 +0.2**
baz=87
F11A Grangeville 86.84 44 ⇓P **P 11 12 51.6 -0.4**
baz=87
I10A Payette 86.88 46 ⇓P **P 11 12 52.3 +0.1**
baz=87
KEV Kevo 86.89 342 *e*P **P 11 12 51.4 -0.4**
KEV pmax pmax
comp=Z,5.0nm,0.6s,mb4.9
KEV Kevo 86.89 342 *e*p **P 11 12 51.4 -0.4**
comp=Z,5.3nm,0.6s,mb5.0
KEV Kevo 86.89 342 *e*p **P 11 12 51.4 -0.4**
comp=Z,5.3nm,0.6s,mb5.0
G11A Walters Elk Ra 86.90 44 ⇓P **P 11 12 52.4 +0.1**
baz=87,SNR=8.5
PKM Peak Mountain 86.91 55 ⇓P **P 11 12 52.3 -0.3**
baz=87
WHFO Wadi Hawf 86.98 288 P **P 11 12 52.5 -0.8**
SNR=6.2
MLAC Mammoth Lakes 87.02 52 ⇑P **P 11 12 52.6 -0.5**
baz=87
J10A Berg Farm, Mel 87.08 46 ⇓P **P 11 12 53.5 +0.3**
baz=87
SBC Santa Barbara 87.11 55 ⇓P **P 11 12 54.0 +0.4**
baz=87
K10A MacKenzie Ranc 87.17 47 ⇑P **P 11 12 53.8 +0.1**
baz=87,SNR=6.6
NVAR Mina Array Bea 87.23 51 P **P 11 12 53.2 -0.9**
comp=Z,1.3nm,0.7s,mb4.3,baz=271,slow=5.9,SNR=6.8
H11A Donnelly 87.26 45 ⇓P **P 11 12 54.2 +0.1**
baz=87,SNR=7.9
B13A Whitefish 87.26 41 ⇑P **P 11 12 53.7 -0.3**
baz=87
C13A Hot Springs 87.39 42 ⇓P **P 11 12 54.2 -0.4**
baz=87
ARCES ARCESS Array B 87.46 342 P **P 11 12 54.8 +0.3**
comp=Z,3.7nm,0.7s,mb4.8,baz=67,slow=6.9,SNR=8.7
I11A Placerville 87.51 46 ⇑P **P 11 12 55.4 +0.1**
baz=87,SNR=10.0
D13A Huson 87.63 42 ⇓P **P 11 12 55.5 -0.3**
baz=88
TIN Tinemaha 87.64 53 ⇑P **P 11 12 56.8 +0.8**
baz=88
L10A Juniper Basin 87.64 47 ⇑P **P 11 12 56.2 +0.2**
baz=88,SNR=7.2
MFID Camas Ranch 87.74 46 ⇓P **P 11 12 56.2 -0.2**
baz=88,SNR=14
A14A Double T Ranch 87.75 40 ⇓P **P 11 12 57.0 +0.7**
baz=88
K11A Parker Ranch, 87.77 47 ⇑P **P 11 12 57.2 +0.7**
baz=88,SNR=7.8
SWMT Swartz Lake 87.81 42 *e*P **P 11 12 57.5 +0.8**
comp=Z,12nm,1.3s,mb5.0
E13A Victor 88.00 43 ⇑P **P 11 12 57.5 -0.1**
baz=88
B14A Marquette Ranc 88.03 41 ⇑P **P 11 12 58.0 +0.3**
baz=88
MSO Missoula 88.05 42 *e*P **P 11 12 57.3 -0.5**
comp=Z,11nm,1.5s,mb4.9
F13A Darby 88.09 43 ⇓P **P 11 12 58.0 -0.1**
baz=88,SNR=7.1
H12A Diamond D Ranc 88.10 45 ⇑P **P 11 12 58.0 -0.1**
baz=88
I12A Atlanta 88.12 46 ⇑P **P 11 12 57.9 -0.3**
baz=88
L11A Cat Creek Ranc 88.13 47 ⇑P **P 11 12 58.4 0.0**
baz=88
A15A Johnson Ranch, 88.18 40 ⇑P **P 11 12 58.5 +0.1**
baz=88
D14A Greenough 88.26 42 ⇓P **P 11 12 58.6 -0.2**
baz=88
DECC Green Verdugo 88.26 55 ⇑P **P 11 12 58.5 -0.6**
baz=88
J12A Stokes Ranch, 88.30 46 ⇓P **P 11 12 59.3 +0.3**
baz=88,SNR=7.8
M11A Holland Ranch, 88.31 48 ⇓P **P 11 12 58.7 -0.5**
baz=88
GRAC Grapevine Rang 88.31 53 ⇑P **P 11 12 59.3 0.0**
baz=88
G13A Cobalt 88.36 44 ⇓P **P 11 12 58.6 -0.7**
baz=88
EDW2 Edwards Air Fo 88.37 55 ⇓P **P 11 12 58.5 -1.1**
baz=88
PASC Pasadena Art C 88.40 55 *e*P **P 11 13 00.1 +0.3**
LRMC Laurel Mountai 88.46 54 ⇑P **P 11 12 59.4 -0.6**
baz=88
MPMC Manual Prospec 88.47 53 ⇑P **P 11 12 58.8 -1.2**
baz=88
E14A Clinton 88.47 43 ⇑P **P 11 12 59.6 -0.2**
baz=88
B15A Bradely Ranch, 88.49 41 ⇑P **P 11 12 59.6 -0.3**
baz=88
H13A Challis 88.50 45 ⇑P **P 11 13 00.5 +0.5**
baz=88,SNR=7.1
N11A Elko Archery C 88.52 48 ⇓P **P 11 12 59.8 -0.4**
baz=88
Q10A Clear Creek Ra 88.57 51 ⇑P **P 11 13 00.6 +0.1**
baz=88
K12A Draper Farm, C 88.61 47 ⇑P **P 11 13 00.1 -0.5**
baz=88
MOS Moscow 88.62 327 *e*P **P 11 12 58.1 -2.2**
MOS pmax pmax
comp=Z,44nm,1.2s,mb5.7
MOS MLR MLR
comp=Z,1μm,21.0s,MS5.3
JOF Joensuu 88.64 335 *e*P **P 11 12 58.2 -2.1**
JOF pmax pmax
comp=Z,6.0nm,0.6s,mb5.1
JOF Joensuu 88.64 335 *e*p **P 11 12 58.2 -2.1**
comp=Z,5.7nm,0.6s,mb5.1
JOF Joensuu 88.64 335 *e*p **P 11 12 58.2 -2.1**
comp=Z,5.7nm,0.6s,mb5.1
S10A Tonopah Range, 88.67 51 ⇑P **P 11 13 01.3 +0.4**
baz=89
L12A House Creek Ra 88.67 47 ⇓P **P 11 13 00.9 0.0**
baz=89,SNR=8.4
HLID Hailey 88.68 46 ⇓P **P 11 13 01.3 +0.4**
baz=89,SNR=10
F14A Wisdom 88.73 43 ⇑P **P 11 13 00.7 -0.3**
baz=89
O11A Cowboy Ranch, 88.77 49 ⇓P **P 11 13 00.7 -0.6**
baz=89
I13A Wildhorse Cree 88.79 45 ⇓P **P 11 13 01.9 +0.5**
baz=89
FURC Furnace Creek, 88.85 53 ⇑P **P 11 13 01.1 -0.8**
baz=89
P11A Circle Ranch, 88.85 50 ⇑P **P 11 13 01.8 0.0**
baz=89
J13A Cove Ranch, Pi 88.90 46 ⇑P **P 11 13 02.1 +0.1**
baz=89,SNR=7.8
D15A Lincoln 88.91 42 ⇓P **P 11 13 01.4 -0.5**
baz=89
M12A Wells 88.95 48 ⇑P **P 11 13 01.9 -0.2**
baz=89,SNR=6.6
B16A M & M Farms, S 89.00 40 ⇑P **P 11 13 01.8 -0.4**
baz=89
N12A Clover Valley, 89.02 48 ⇑P **P 11 13 02.4 -0.1**
baz=89
E15A Deer Lodge 89.03 42 ⇑P **P 11 13 02.6 +0.2**
baz=89
H14A Leadore 89.09 44 ⇑P **P 11 13 03.1 +0.3**
baz=89,SNR=7.5
Q11A Duckwater 89.12 50 ⇓P **P 11 13 02.6 -0.5**
baz=89
K13A Stover Farm, H 89.18 46 ⇑P **P 11 13 03.3 0.0**
baz=89
I14A Mackay 89.24 45 ⇓P **P 11 13 03.5 0.0**
baz=89
U10A Ash Meadows, A 89.27 53 ⇑P **P 11 13 03.9 +0.1**
baz=89
TRO Tromso 89.30 344 *e*P **P 11 13 03.1 -0.1**
TRO *e*SKS 11 23 29.6
TRO AMS AMS 11 57 10.1
comp=Z,703nm,18.5s,MS5.1
TRO Tromso 89.30 344 *e*P **P 11 13 05.7 +2.5**
TRO LR LR
comp=Z,700nm,18.5s,MS5.1
F15A Butte 89.31 43 ⇓P **P 11 13 03.9 +0.2**
baz=89
R11A Troy Canyon, C 89.31 51 ⇑P **P 11 13 04.1 +0.1**
baz=89
VSR Storozhevoye 89.37 323 *e*P **P 11 13 02.7 -1.2**
VSR pmax pmax
comp=N,7.0nm,0.4s
VSR pmax pmax
comp=Z,9.0nm,0.4s,mb5.5
VSR pmax pmax
comp=E,1.0nm,0.2s
VSR MLR MLR
comp=N,700nm,14.0s,MS5.3
VSR MLR MLR
comp=E,510nm,14.0s,MS5.3
VSR MLR MLR
comp=Z,1μm,14.0s,MS5.4
J14A Carey 89.38 46 ⇑P **P 11 13 04.0 -0.1**
baz=89,SNR=7.8
MCMT McKenzie Canyo 89.38 44 *e*P **P 11 13 06.1 +2.0**
comp=Z,6.1nm,1.4s,mb4.7
S11A Rachel 89.39 52 ⇓P **P 11 13 04.6 +0.2**
baz=89
O12A Currie 89.40 49 ⇑P **P 11 13 04.2 -0.1**
baz=89
OBN Obninsk 89.41 327 *c i*P **P 11 13 02.4 -1.6**
OBN *e* 11 23 33.2
OBN *e*SS SS 11 29 53.3 +7.3
OBN pmax pmax
comp=Z,46nm,1.5s,mb5.6
OBN Obninsk 89.41 327 *e*P **P 11 13 02.3 -1.7**
L13A Double Diamond 89.45 47 ⇓P **P 11 13 05.1 +0.6**
baz=89
KIV Kislovodsk 89.48 315 *i* P **P 11 13 03.1 -1.5**
KIV *e*PS PS 11 25 04.5 +2.2
KIV pmax pmax
comp=Z,13nm,1.5s,mb5.0
M13A Montello 89.50 48 ⇓P **P 11 13 05.4 +0.6**
baz=89
P12A McGill 89.50 50 ⇓P **P 11 13 05.1 +0.2**
baz=89
G15A Dillon 89.52 44 ⇓P **P 11 13 05.0 +0.3**
baz=89
D16A Dana Ranch, Ca 89.55 42 ⇑P **P 11 13 05.0 +0.2**
baz=89
H15A Lima 89.58 44 ⇑P **P 11 13 05.4 +0.3**
baz=90
109C Camp Elliot, M 89.60 56 ⇓P **P 11 13 04.8 -0.6**
baz=90
N13A Wendover, West 89.62 48 ⇓P **P 11 13 04.7 -0.6**
baz=90
E16A East Helena 89.62 42 ⇑P **P 11 13 05.1 -0.1**
baz=90
Q12A Willow Creek R 89.69 50 ⇑P **P 11 13 05.8 +0.1**
baz=90
DAG Danmarks Havn 89.69 356 ⇑*i*P **P 11 13 03.9 -1.1**
comp=Z,4.2nm,0.9s,mb4.8
HEC Hector,Ludlow 89.70 54 ⇓P **P 11 13 05.5 -0.4**
baz=90
K14A Jones Ranch, D 89.85 46 ⇓P **P 11 13 06.5 +0.1**
baz=90
TUQ Turquoise Moun 89.86 54 ⇓P **P 11 13 05.9 -0.6**
baz=90
I15A Monteview 89.89 45 ⇓P **P 11 13 07.5 +1.0**
baz=90
F16A Kennard Place, 89.90 43 ⇑P **P 11 13 06.8 +0.3**
baz=90
T11A Corn Creek, Al 89.90 52 ⇓P **P 11 13 06.5 -0.3**
baz=90
BOZ Bozeman (W) 89.94 43 ⇓P **P 11 13 06.9 +0.1**
baz=90
L14A Malta 89.96 47 ⇑P **P 11 13 06.9 0.0**
baz=90,SNR=7.9
A18A Metzger Ranch, 90.00 40 ⇑P **P 11 13 07.3 +0.4**
baz=90
M14A Sheep Mountain 90.05 47 ⇓P **P 11 13 07.3 0.0**
baz=90,SNR=7.0
R12A Pony Springs, 90.06 51 ⇑P **P 11 13 07.9 +0.5**
baz=90
S12A Delamar Landin 90.08 51 ⇓P **P 11 13 07.7 +0.1**
baz=90
J15A Blackfoot 90.11 45 ⇓P **P 11 13 07.8 +0.2**
baz=90,SNR=10
MONP Monument Peak 90.16 56 ⇓P **P 11 13 08.0 0.0**
baz=90
P13A Bates Ranch, G 90.17 49 ⇑P **P 11 13 07.4 -0.5**
baz=90
E17A Martinsdale 90.18 42 ⇑P **P 11 13 08.2 +0.4**
baz=90
BELC Belle Mtn. Jos 90.19 55 ⇑P **P 11 13 08.3 +0.1**
baz=90
B18A Beardsley Farm 90.22 40 ⇑P **P 11 13 07.9 -0.1**
baz=90
GMRC Granite Mounta 90.25 54 ⇑P **P 11 13 09.0 +0.6**
baz=90
Q13A Wheeler Ranch, 90.31 50 ⇑P **P 11 13 09.2 +0.6**
baz=90
QLMT Earthquake Lak 90.34 44 *e*P **P 11 13 10.8 +2.2**
T12A Moapa 90.44 52 ⇓P **P 11 13 09.1 -0.2**
baz=90
H16A Russell Place, 90.50 44 ⇓P **P 11 13 09.2 -0.1**
baz=90
L15A Malad City 90.58 47 ⇑P **P 11 13 09.9 +0.1**
baz=90,SNR=5.7
R13A O'Grain Ranch, 90.58 51 ⇓P **P 11 13 09.9 0.0**
baz=90
I16A Newdale 90.61 45 ⇓P **P 11 13 09.9 0.0**
baz=90
V12A Nelson 90.62 53 ⇑P **P 11 13 09.8 -0.3**
baz=90
SWSC Sam W. Stewart 90.65 56 ⇓P **P 11 13 10.1 -0.2**
baz=91
U12A Valley of Fire 90.66 52 ⇑P **P 11 13 09.9 -0.4**
baz=91
M15A Larsen Ranch, 90.70 47 ⇑P **P 11 13 10.3 0.0**
baz=91
IRM Iron Mountain 90.83 55 ⇑P **P 11 13 10.8 -0.3**
baz=91
N15A Stansbury Isla 90.83 48 ⇑P **P 11 13 10.9 0.0**
baz=91
P14A Drum Mountains 90.83 49 ⇑P **P 11 13 10.4 -0.7**
baz=91
DUG Dugway 90.83 48 ⇓P **P 11 13 11.2 +0.2**
baz=91,SNR=7.4
Q14A Sevier Lake (B 90.86 50 ⇓P **P 11 13 11.1 0.0**
baz=91
K16A Soda Springs 90.88 46 ⇑P **P 11 13 11.4 +0.2**
baz=91,SNR=8.1
T13A Saint George 90.97 52 ⇓P **P 11 13 11.8 +0.1**
baz=91
O15A The Old Anders 91.06 48 ⇑P **P 11 13 12.5 +0.5**
baz=91
KAF Kangasniemi 91.07 336 *e*P **P 11 13 09.0 -2.6**
KAF pmax pmax
comp=Z,4.0nm,0.5s,mb5.0
KAF Kangasniemi 91.07 336 *e*p **P 11 13 09.0 -2.6**
comp=Z,3.6nm,0.5s,mb5.0
KAF Kangasniemi 91.07 336 *e*p **P 11 13 09.0 -2.6**
comp=Z,3.6nm,0.5s,mb5.0
ARUT Antelope Range 91.10 51 *e*P **P 11 13 13.8 +1.5**
ARUT pmax pmax
comp=Z,14nm,1.2s,mb5.2
ARUT Antelope Range 91.10 51 *e*P **P 11 13 13.8 +1.5**
comp=Z,14nm,1.2s,mb5.2
U13A Pakoon Wash 91.10 52 ⇑P **P 11 13 12.3 -0.1**
baz=91
F18A Big Timber 91.12 42 ⇑P **P 11 13 12.1 -0.1**
baz=91
L16A Fish Haven 91.25 46 ⇑P **P 11 13 13.1 +0.2**
baz=91
V13A Grand Canyon W 91.25 53 ⇓P **P 11 13 13.3 +0.2**
baz=91
J17A Brown Place, J 91.31 45 ⇓P **P 11 13 13.7 +0.6**
baz=91
S14A Cedar City 91.31 51 ⇑P **P 11 13 14.7 +1.4**
baz=91
M16A Huntsville 91.33 47 ⇓P **P 11 13 14.8 +1.4**
baz=91
GLA Glamis 91.40 56 ⇓P **P 11 13 14.7 +0.9**
baz=91
G18A Lazy EL Ranch, 91.42 43 ⇓P **P 11 13 15.2 +1.6**
baz=91
Y12C Blythe 91.44 55 ⇓P **P 11 13 14.3 +0.3**
baz=91
FINES FINESS Array B 91.51 335 P **P 11 13 12.4 -1.3**
comp=Z,9.0nm,0.9s,mb5.1,baz=68,slow=5.1,SNR=12
W13A Hualapai Mount 91.55 54 ⇓P **P 11 13 15.0 +0.6**
baz=92
T14A Hurricane 91.59 51 ⇓P **P 11 13 14.9 +0.3**
baz=92
PDMCI Parker Dam,Lak 91.59 54 ⇓P **P 11 13 15.3 +0.7**
baz=92
L17A Cokeville 91.61 46 ⇑P **P 11 13 15.2 +0.6**
baz=92
SOC Sochi 91.64 315 *e*P **P 11 13 19.7 +5.0**
SOC *e*S SKSac 11 23 44.8 +0.6
SOC *e*SS SS 11 30 30.9 +12
RLMT Red Lodge 91.69 43 ⇓P **P 11 13 15.6 +0.7**
baz=92
U14A Mt Trumbull 91.71 52 ⇑P **P 11 13 15.6 +0.4**
baz=92
SBA Scott Base 91.72 175 *e*P **P 11 13 16.0 +1.8**
X13A Yucca 91.75 54 ⇑P **P 11 13 15.4 +0.1**
baz=92
J18A Kendall Valley 91.83 45 ⇑P **P 11 13 15.7 +0.1**
baz=92
DAU Daniels Canyon 91.89 48 *e*P **P 11 13 18.7 +2.8**
DAU pmax pmax
comp=Z,8.0nm,1.3s,mb4.9
DAU Daniels Canyon 91.89 48 *e*P **P 11 13 18.7 +2.8**
comp=Z,8.1nm,1.3s,mb4.9
V14A Boquillas Ranc 92.00 53 ⇑P **P 11 13 16.8 +0.3**
baz=92
K18A Toltan Ranch, 92.01 45 ⇑P **P 11 13 16.9 +0.4**
baz=92
W14A Seligman 92.15 53 ⇓P **P 11 13 17.4 +0.2**
baz=92
L18A Fontenelle, Gr 92.26 46 ⇑P **P 11 13 18.5 +0.9**
baz=92
Z13A Yuma Proving G 92.30 55 ⇑P **P 11 13 18.4 +0.4**
baz=92
PDAR Pinedale Array 92.31 45 P **P 11 13 15.9 -1.9**
comp=Z,0.4nm,0.7s,baz=308,slow=4.4,SNR=2.8
PDAR PP PP 11 17 03.9 +5.5
comp=Z,0.6nm,0.8s,baz=292,slow=7.8,SNR=4.1
113A Mohawk Valley, 92.33 56 ⇓P **P 11 13 18.4 +0.3**
baz=92
O17A Robinson Place 92.34 48 ⇑P **P 11 13 19.2 +1.2**
baz=92
U15A North Rim 92.39 52 ⇓P **P 11 13 18.5 +0.2**
baz=92
M18A Lyman 92.41 47 ⇓P **P 11 13 18.8 +0.6**
baz=92
R16A Teasdale 92.41 50 ⇓P **P 11 13 18.5 +0.2**
baz=92
Q16A Castle Valley 92.44 49 ⇑P **P 11 13 18.9 +0.4**
baz=92
X14A Yaa 92.52 54 ⇑P **P 11 13 19.0 0.0**
baz=92
Y14A Wickenburg 92.59 54 ⇓P **P 11 13 19.6 +0.3**
baz=92
V15A Kaibab Nationa 92.67 52 ⇓P **P 11 13 19.8 +0.2**
baz=93
L19A Farson 92.67 46 ⇓P **P 11 13 19.5 0.0**
baz=93
ANN Anapa 92.75 317 *e**PP **P 11 13 19.6 -0.2**
ANN pmax pmax
comp=N,62nm,1.4s
ANN pmax pmax
comp=E,19nm,1.4s
ANN pmax pmax
comp=Z,42nm,1.4s,mb5.7
K19A Absolon Red Bu 92.78 45 ⇑P **P 11 13 19.5 -0.5**
baz=93
W15A Williams 92.79 53 ⇓P **P 11 13 20.4 +0.1**
baz=93
Z14A Wintersburg 92.81 55 ⇓P **P 11 13 20.5 +0.1**
baz=93
N18A Larsen Ranch, 92.84 47 ⇑P **P 11 13 19.8 -0.5**
baz=93
O18A Roosevelt 92.84 48 ⇑P **P 11 13 19.8 -0.5**
baz=93
SRU San Rafael 92.85 49 ⇓P **P 11 13 19.8 -0.6**
baz=93
P18A Preston Nutter 92.88 48 ⇓P **P 11 13 20.8 +0.3**
baz=93
R17A Hanksville Air 92.94 50 ⇓P **P 11 13 20.1 -0.7**
baz=93
X15A Humboldt 93.03 54 ⇑P **P 11 13 21.5 +0.1**
baz=93
114A Black Gap (USA 93.05 56 ⇓P **P 11 13 21.8 +0.4**
baz=93
Y15A Casa Rosa Ranc 93.12 54 ⇓P **P 11 13 21.1 -0.6**
baz=93
S17A Black Ridge (B 93.13 50 ⇑P **P 11 13 21.6 -0.1**
baz=93
K20A Yellowstone Ra 93.18 45 ⇓P **P 11 13 21.7 -0.1**
baz=93
T17A Navajo Res., N 93.34 51 ⇓P **P 11 13 22.8 +0.1**
baz=93
214A Organ Pipe Nat 93.35 56 ⇓P **P 11 13 23.2 +0.4**
baz=93
WUAZ Wupatki 93.38 53 ⇑P **P 11 13 23.3 +0.4**
baz=93
W16A Flagstaff 93.39 53 ⇓P **P 11 13 23.3 +0.4**
baz=93
R18A Canyonlands Na 93.56 49 ⇓P **P 11 13 22.8 -0.9**
baz=94
115A Sonoran Desert 93.59 55 ⇑P **P 11 13 24.4 +0.5**
baz=94
X16A Lo Mia Camp, P 93.68 54 ⇑P **P 11 13 23.5 -0.7**
baz=94
M20A Sweetwater, Wa 93.71 46 ⇓P **P 11 13 24.2 -0.1**
baz=94
V17A Tonalea, Kykot 93.79 52 ⇓P **P 11 13 25.4 +0.6**
baz=94
P19A Cripple Cowboy 93.80 48 ⇑P **P 11 13 25.6 +0.9**
baz=94
Y16A Circle Bar Ran 93.82 54 ⇓P **P 11 13 24.6 -0.4**
baz=94
R19A Curley Farm, L 94.06 49 ⇓P **P 11 13 25.8 -0.1**
baz=94
L21A Rawlins 94.11 45 ⇓P **P 11 13 25.8 -0.3**
baz=94
X17A Forest Lakes 94.20 53 ⇑P **P 11 13 27.1 +0.4**
baz=94
U18A Rough Rock, Ch 94.24 51 ⇓P **P 11 13 26.8 0.0**
baz=94
M21A Separation Pea 94.24 46 ⇑P **P 11 13 27.1 +0.4**
baz=94
S19A Harvey Farm, M 94.34 50 ⇑P **P 11 13 27.1 -0.1**
baz=94
SUMG Summit 94.42 1 *i* P **P 11 13 20.0 -6.9**
V18A Ganado 94.43 52 ⇑P **P 11 13 27.7 0.0**
baz=94
Q20A Ridgley Place, 94.54 48 ⇓P **P 11 13 27.7 -0.4**
baz=94
PV01 Paradox Valley 94.62 49 *e*P **P 11 13 30.8 +2.3**
comp=Z,333nm,1.1s
U19A Dine' College, 94.78 51 ⇑P **P 11 13 29.4 +0.1**
baz=95
X18A Snowflake 94.81 53 ⇑P **P 11 13 30.4 +1.0**
baz=95
117A Oracle 94.82 55 ⇑P **P 11 13 29.6 0.0**
baz=95
Y18A Canyon Day Jun 94.99 54 ⇓P **P 11 13 30.3 0.0**
baz=95
MVCO Mesa Verde 95.00 50 ⇓P **P 11 13 30.9 +0.6**
baz=95
217A Green Valley 95.02 56 ⇓P **P 11 13 30.3 -0.2**
baz=95

R21A	Cimarron	95.29	49	⇑P	P	11 13 31.4	-0.2
	baz=95						
AKASG	Malin Array Be	95.31	325	P	P	11 13 29.9	-1.5
	comp=Z,1.5nm,0.5s,mb4.7,baz=51,slow=3.0,SNR=8.7						
118A	Homack Ranch,	95.42	55	⇑P	P	11 13 33.1	+0.8
	baz=95						
V20A	Brimhall	95.52	51	⇑P	P	11 13 33.5	+0.8
	baz=95						
Y19A	Nutrioso	95.54	53	⇑P	P	11 13 32.9	+0.1
	baz=96						
218A	Dragoon	95.57	56	⇑P	P	11 13 33.7	+0.7
	baz=96						
W20A	Ramah	95.72	52	⇓P	P	11 13 34.7	+1.0
	baz=96						
X20A	Quemado	95.93	53	⇓P	P	11 13 35.3	+0.7
	baz=96						
Y20A	Horse Springs,	96.24	53	⇓P	P	11 13 37.3	+1.3
	baz=96						
Z20A	Nine Sixteen R	96.35	54	⇓P	P	11 13 36.2	-0.4
	baz=96						
Y21A	Point of Rocks	96.75	53	⇓P	P	11 13 39.4	+1.0
	baz=97						
HFS	Hagfors	97.15	338	P	P	11 13 38.4	-1.1
	comp=Z,2.4nm,0.7s,mb4.8,baz=120,slow=8.7,SNR=4.8						
HFS				LR	LR	12 03 15.3	
	comp=Z,633nm,19.3s,MS5.1,baz=43,slow=39						
BRTR	Keskin Array B	97.30	314	P	P	11 13 39.1	-1.5
	comp=Z,0.9nm,0.8s,mb4.3,baz=52,slow=4.8,SNR=3.6						
NB2	NORSAR Subarra	97.41	339	P	P	11 13 39.2	-1.5
	baz=43,slow=5.1						
NB2	NORSAR Subarra	97.41	339	P	P	11 13 39.2	-1.5
NB2	NORSAR Subarra	97.41	339	P	P	11 13 39.2	-1.5
NOA	NORSAR Array B	97.41	339	P	P	11 13 39.4	-1.3
	comp=Z,3.1nm,0.9s,mb4.8,baz=46,slow=4.5,SNR=5.3						
NOA				LR	LR	12 01 08.5	
	comp=Z,419nm,20.2s,MS4.9,baz=25,slow=37						
NOA	NORSAR Array B	97.41	339	P	P	11 13 39.4	-1.3
NOA				LR	LR	12 01 08.5	
ULM	Lac du Bonnet	97.62	34	LR	LR	11 57 54.7	
	comp=Z,1μm,18.6s,MS5.4,baz=56,slow=36						
MMAI	Mount Meron Ar	98.57	307	LR	LR	12 05 03.2	
	comp=Z,359nm,18.2s,MS4.9,baz=65,slow=39						
224A	Cornudas Mount	99.14	54	⇑P	P	11 13 49.9	+0.8
	baz=99						
KOLS	Kolonicke sedl	100.09	326	*e*Pdif	Pdif	11 13 53.0	+0.2
KOLS				*e*SS	SS	11 33 08.7	+51
KOLS				LR	LR		
	comp=Z,900nm,18.8s,MS5.3						
KOLS	Kolonicke sedl	100.09	326	PDIF	Pdif	11 13 53.0	+0.2
KOLS				*e*		11 33 08.7	
UZH	Uzhgorod	100.24	325	*e*P	Pdif	11 13 55.7	+2.2
UZH				*e*		11 17 56.8	
UZH				*e*		11 20 09.0	
UZH				*e*		11 24 29.4	
UZH				*e*S	Sdif	11 25 24.0	-1.9
UZH				*e*		11 26 51.0	
STHS	Stebnicka Huta	100.38	326	*e*P	Pdif	11 13 54.4	+0.3
STHS	Stebnicka Huta	100.38	326	PDIF	Pdif	11 13 54.4	+0.3
CRVS	Cervenica-Dubn	100.55	326	*e*Pdif	Pdif	11 13 53.1	-1.8
CRVS				*e*SS	SS	11 33 14.1	+50
CRVS				LR	LR		
	comp=Z,600nm,18.2s,MS5.1						
CRVS	Cervenica-Dubn	100.55	326	PDIF	Pdif	11 13 53.1	-1.8
CRVS				*e*		11 33 14.1	
KECS	Kecovo	101.32	326	*e*P	Pdif	11 13 58.2	-0.1
KECS	Kecovo	101.32	326	PDIF	Pdif	11 13 58.2	-0.1
OKC	Ostrava-Krasne	101.77	328	*e*SKS	SKSac	11 24 39.3	+2.7
OKC				AMS	AMS	12 05 10.0	
	comp=Z,1μm,16.4s						
VYHS	Vyhne	102.20	327	*e*Pdif	Pdif	11 14 01.9	-0.3
VYHS				*e*SS	SS	11 33 32.2	+45
VYHS				LR	LR		
	comp=Z,1μm,20.1s,MS5.4						
VYHS	Vyhne	102.20	327	PDIF	Pdif	11 14 01.9	-0.3
VYHS				*e*		11 33 32.2	
DPC	Dobruska-Polom	102.38	329	*e*SKS	SKSac	11 24 43.5	+4.0
DPC				AMS	AMS	12 14 10.0	
	comp=Z,600nm,17.7s						
BSEG	Bad Segeberg	102.76	334	*e*SS	SS	11 33 23.8	+29
BRG	Berggiesshubel	103.21	331	*e*(P)	PKiKP	11 18 00.2	-26
	comp=Z,2.5nm,0.7s						
BRG				PP	PP	11 18 28.0	+6.5
BRG				SKS		11 24 50.0	
BRG				SP	SP	11 27 38.0	+12
BRG				*e*		11 28 23.0	
BRG				SS	SS	11 33 32.0	+31
BRG							
	comp=Z,1μm,17.4s						
BRG							
	comp=N,696nm,15.8s						
BRG							
	comp=E,371nm,15.8s						
CLL	Collm	103.37	331	*e*SS	SS	11 33 32.9	+30
CLL	Collm	103.37	331	*e*Pdif	Pdif	11 14 12.0	+4.6
CLL				*e*PP	PP	11 18 19.0	-3.6
CLL				*e*SKS		11 24 47.0	
CLL				*e*Sdif	Sdif	11 25 58.0	+6.0
CLL				LR	LR		
	comp=Z,900nm,19.9s,MS5.3						
CLL	Collm	103.37	331	*e*(Pdif)		11 14 12.0	
CLL				*e*PP	PP	11 18 19.0	-3.6
CLL				*e*SKSac	SKSac	11 24 47.0	+2.9
CLL				*e*Sdif	Sdif	11 25 58.0	+6.0
CLL				*e*PS	PS	11 27 40.0	+7.2
CLL				*e*PPS		11 28 25.0	
CLL				*e*SS	SS	11 33 30.0	+27
CLL				*e*SSS		11 36 54.0	
CLL				*e*		11 42 00.0	
CLL				LmH		11 58 00.0	
	comp=N,700nm,18.5s						
CLL				LmH		11 58 00.0	
	comp=E,1μm,20.6s						
CLL				LmV		12 04 00.0	
	comp=Z,900nm,19.9s						
TREC	Trest	103.46	329	AMS	AMS	12 03 00.0	
	comp=Z,800nm,20.0s						
PRU	Pruhonice	103.49	330	*e*P	Pdif	11 14 10.9	+3.0
PRU				*e*		11 24 46.1	
PRU				MLR	MLR		
	comp=Z,700nm,16.8s,MS5.3						
PRU	Pruhonice	103.49	330	*e*PDIFF	Pdif	11 14 10.9	+3.0
PRU				*e*SKS	SKSac	11 24 46.1	+1.4
PRU				*e*SP	SP	11 27 22.4	-6.2
PRU				*e*SKKP		11 33 36.2	
PRU				AMS	AMS	12 08 40.0	
	comp=Z,700nm,16.8s						
NRDL	Niedersach Rie	103.86	333	*e*SS	SS	11 33 38.3	+29
CLZ	Clausthal	104.20	333	*e*SS	SS	11 33 44.1	+30
TANN	Tannenbergstha	104.22	331	*e*SS	SS	11 33 46.4	+32
NKC	Novy Kostel	104.35	331	AMS	AMS	12 05 20.0	
	comp=Z,1μm,17.9s						
MOX	Moxa	104.46	331	*e*SS	SS	11 33 48.8	+31
KHC	Kasperske Hory	104.53	329	*e*SKS	SKSac	11 24 52.5	+3.0
KHC				*e*PS	PS	11 27 44.7	-0.4
KHC				*e*PKKS		11 33 46.3	
KHC				AMS	AMS	12 04 20.0	
	comp=Z,1μm,20.8s						
GEC2	GERESS Array S	104.65	329	*e*SS	SS	11 33 54.7	+34
WET	Wettzell	104.86	330	*e*SS	SS	11 33 57.7	+34
UBBA	Unterbreizbach	105.09	332	*e*SS	SS	11 33 56.4	+30
GRA1	Grafenberg Arr	105.30	331	*e*Pdif	Pdif	11 14 17.8	+1.8
GRA1				*e*SS	SS	11 34 01.5	+32
GRA1				LR	LR		
	comp=Z,1μm,19.8s,MS5.4						
GRF	Grafenberg Arr	105.30	331	*e*Pdiff	Pdif	11 14 17.8	+1.8
GRF				*e*SS	SS	11 34 01.5	+32
GRF				*e*L		12 06 39.8	
	comp=Z,973nm,19.8s						
RJOB	Jochberg	105.84	329	*e*SS	SS	11 34 15.3	+38
BUG	Bochum--Univer	105.85	334	*e*SS	SS	11 34 05.3	+28
TNS	Taunus Mts	106.21	333	*e*SS	SS	11 34 12.4	+30
FUR	Furstenfeldbru	106.31	330	*e*SS	SS	11 34 17.9	+34
STU	Stuttgart	106.89	331	*e*SS	SS	11 34 24.3	+33
BFO	Black Forest	107.61	331	*e*SS	SS	11 34 34.0	+33
WLF	Walferdange	107.64	333	*e*SS	SS	11 34 32.3	+31
MDT	Midelt	125.73	328	PKP	PKPdf	11 19 09.3	-0.2
	comp=Z,4.5nm,1.0s,baz=4.0,slow=3.7,SNR=6.7						
TAM	Tamanrasset	126.44	312	*e*PKIKP	PKPdf	11 19 11.6	+0.6
TOA0	Torodi Ar. Sit	135.04	304	*e*PKPdf	PKPdf	11 19 27.5	0.0
TORD	Torodi Ar. Bea	135.04	304	PKP	PKPdf	11 19 27.8	+0.3
	comp=Z,8.3nm,1.1s,baz=49,slow=2.1,SNR=7.9						
TORD				SKPbc	SKPbc	11 22 56.5	+1.6
	comp=Z,8.4nm,1.2s,baz=48,slow=3.2,SNR=9.4						
SDV	Santo Domingo	138.55	60	*e*PKPdf	PKPdf	11 19 36.1	+2.1
PLCA	Paso Flores	138.67	138	PKP	PKPdf	11 19 28.5	-4.9
	comp=Z,1.2nm,0.8s,baz=203,slow=1.9,SNR=2.1						
PLCA	Paso Flores	138.67	138	PKP	PKPdf	11 19 28.5	-4.9
DBIC	Dimbokro	143.98	301	PKP	PKPdf	11 19 40.9	-3.0
	comp=Z,82nm,1.2s,baz=44,slow=4.4,SNR=31						
DBIC	Dimbokro	143.98	301	*e*PKPdf	PKPdf	11 19 41.1	-2.7
KIC	Kosan Boka	144.05	301	*e*PKP2	PKPdf	11 19 40.2	-3.7
	comp=Z,327nm,1.3s						
TIC	Toumodi	144.13	302	*e*PKP2	PKPdf	11 19 40.6	-3.5
	comp=Z,230nm,1.1s						
LIC	Lamto	144.37	301	*e*PKP2	PKPdf	11 19 41.4	-3.1
	comp=Z,502nm,1.3s						
LPAZ	La Paz	148.02	100	PKPbc	PKPbc	11 19 50.1	-3.6
	comp=Z,29nm,1.1s,baz=313,slow=2.5,SNR=12						
LPAZ	La Paz	148.02	100	*e*PKPdf	PKPdf	11 19 49.7	-0.8
CPUP	Villa Florida	155.46	126	PKPab	PKPab	11 20 23.7	-3.4
	comp=Z,14nm,1.0s,baz=229,slow=4.9,SNR=7.6						

DDA ***12*** *11:06:37.8, 40°.32N×29°.11E, h7km±2km, Md2.9*
ISK ***12*** *11:06:37.1, 40°.30N×29°.13E, h8km, MD2.8*
CSEM ***12*** *11:06:37.8±0.1, 40°.33N×29°.12E, h8km, MD2.8, Error ellipse: s-maj=2.2km s-min=1.9km az=136.0*
ISCJB ***12*** *11:06:37.6±0.5, 40°.33N±0°.03×29°.10E±0°.04, h2km±7km, Error ellipse: s-maj=5.3km s-min=4.7km az=14.1*

ISC 12 11:06:38.1±0.4, **40°.33N**±0°.03×**29°.11E**±0°.04, **h7**km±6km, **n45**, σ0°**53**/57, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEMT	**Gemlik**	**0.12**	**30**	PG	**Pg**	**11 06 40.7**	**0.0**
GEMT				*e*SG	**Sg**	**11 06 43.8**	**+1.3**
GEMT	**Gemlik**	**0.12**	**30**	*i* Pg	**Pg**	**11 06 40.7**	**0.0**
GEMT				*e*Sg	**Sg**	**11 06 43.8**	**+1.3**
ULDT	**Uludag**	**0.19**	**174**	*i* P	**Pg**	**11 06 41.4**	**-0.6**
ULDT	**Uludag**	**0.19**	**174**	*i* P	**Pg**	**11 06 41.4**	**-0.5**
ARMT	**Armutlu**	**0.30**	**321**	*e*Pg	**Pg**	**11 06 44.0**	**0.0**
ARMT	**Armutlu**	**0.30**	**321**	*e*Pg	**Pg**	**11 06 44.0**	**0.0**
YLV	**Yalova**	**0.31**	**40**	*e*PG	**Pg**	**11 06 43.9**	**-0.3**
YLV				*e*SG	**Sg**	**11 06 49.2**	**+0.9**
YLV	**Yalova**	**0.31**	**40**	*e*Pg	**Pg**	**11 06 43.9**	**-0.2**
YLV				*e*Sg	**Sg**	**11 06 49.2**	**+1.0**
ADVT	**Abdulvahap**	**0.49**	**78**	*e*PG	**Pg**	**11 06 46.8**	**-0.8**
ADVT				*e*SG	**Sg**	**11 06 54.2**	**+0.3**
ADVT	**Abdulvahap**	**0.49**	**78**	*e*Pg	**Pg**	**11 06 46.8**	**-0.8**
ADVT				*e*Sg	**Sg**	**11 06 54.2**	**+0.2**
KCT	**Karacabey**	**0.58**	**264**	*e*PG	**Pg**	**11 06 49.6**	**+0.3**
KCT	**Karacabey**	**0.58**	**264**	*e*Pg	**Pg**	**11 06 49.6**	**+0.3**
ISK	**Istanbul-Kandi**	**0.73**	**357**	*e*PG	**Pg**	**11 06 52.0**	**-0.2**
ISK	**Istanbul-Kandi**	**0.73**	**357**	*e*Pg	**Pg**	**11 06 52.0**	**-0.2**
DURS	**Dursunbey**	**0.88**	**214**	*i* P	**Pg**	**11 06 54.4**	**-0.6**
DURS	**Dursunbey**	**0.88**	**214**	*i* P	**Pg**	**11 06 54.4**	**-0.6**
BNT	**Bandirma**	**0.91**	**272**	*e*PG	**Pg**	**11 06 55.4**	**-0.2**
SILT	**Sile**	**0.91**	**26**	*e*PG	**Pg**	**11 06 55.4**	**-0.2**
SILT	**Sile**	**0.91**	**26**	*e*Pg	**Pg**	**11 06 55.4**	**-0.3**
GPA	**Golpazari**	**0.92**	**92**	*e*PG	**Pg**	**11 06 56.0**	**+0.3**
GPA	**Golpazari**	**0.92**	**92**	*e*Pg	**Pg**	**11 06 56.0**	**+0.3**
KLYT	**Kilyos**	**0.92**	**357**	*e*PG	**Pg**	**11 06 55.7**	**-0.1**
KLYT	**Kilyos**	**0.92**	**357**	*e*Pg	**Pg**	**11 06 55.7**	**-0.1**
EDC	**Edincik**	**0.95**	**271**	*e*PG	**Pg**	**11 06 56.1**	**-0.3**
EDC	**Edincik**	**0.95**	**271**	*e*Pg	**Pg**	**11 06 56.1**	**-0.3**
ELBA	**Catalca**	**0.96**	**328**	*i* P	**Pg**	**11 06 56.5**	**-0.2**
ELBA	**Catalca**	**0.96**	**328**	*i* P	**Pg**	**11 06 56.5**	**-0.1**
CTKS	**Kestanelik-??a**	**1.01**	**333**	*e*PG	**Pg**	**11 06 57.4**	**-0.1**
CTKS	**Kestanelik-??a**	**1.01**	**333**	*e*Pg	**Pg**	**11 06 57.4**	**-0.2**
GULT	**Gulveren**	**1.08**	**84**	*e*PG	**Pg**	**11 06 57.8**	**-0.9**
GULT	**Gulveren**	**1.08**	**84**	*e*Pg	**Pg**	**11 06 57.8**	**-1.0**
GDZ	**Gediz**	**1.27**	**167**	*i* P	**Pn**	**11 07 01.9**	**-0.3**
GDZ				*i* S	**Sb**	**11 07 19.9**	**+1.0**
GDZ	**Gediz**	**1.27**	**167**	*i* P	**Pn**	**11 07 01.9**	**-0.3**
GDZ				*i* S	**Sb**	**11 07 19.9**	**+1.0**
BALY	**Balya**	**1.29**	**243**	*i* P	**Pn**	**11 07 02.8**	**+0.4**
BALY				*i* S	**Sb**	**11 07 20.2**	**+0.9**
BALY	**Balya**	**1.29**	**243**	*i* P	**Pn**	**11 07 02.8**	**+0.3**
BALY				*i* S	**Sb**	**11 07 20.2**	**+0.8**
CTYL	**Yal??k??y-??at**	**1.30**	**332**	*e*PN	**Pn**	**11 07 02.4**	**-0.2**
CTYL	**Yal??k??y-??at**	**1.30**	**332**	*e*Pn	**Pn**	**11 07 02.4**	**-0.2**
DEMI	**Demirci**	**1.32**	**193**	*i* P	**Pn**	**11 07 02.9**	**-0.1**
DEMI				*i* S	**Sb**	**11 07 21.0**	**+0.7**
DEMI	**Demirci**	**1.32**	**193**	*i* P	**Pn**	**11 07 02.8**	**-0.1**
DEMI				*i* S	**Sb**	**11 07 21.0**	**+0.7**
MFT	**Murefte**	**1.47**	**289**	*e*PN	**Pn**	**11 07 04.9**	**0.0**
MFT	**Murefte**	**1.47**	**289**	*e*Pn	**Pn**	**11 07 04.9**	**0.0**
ALT	**Altintas**	**1.49**	**149**	*e*PN	**Pn**	**11 07 04.6**	**-0.6**
ALT	**Altintas**	**1.49**	**149**	*e*Pn	**Pn**	**11 07 04.6**	**-0.6**
RKY	**Sarkoy-Tekirda**	**1.52**	**284**	*e*PN	**Pn**	**11 07 05.3**	**-0.3**
RKY	**Sarkoy-Tekirda**	**1.52**	**284**	*e*Pn	**Pn**	**11 07 05.3**	**-0.3**

CASC ***12*** *11:29:57.1±0.9, 15°.64N×93°.25W, h0km±321km, MD4.3, mb3.8(NEIC)*
ISCJB ***12*** *11:29:57.7±0.4, 15°.71N±0°.05×93°.26W±0°.04, h93km±4km, mb3.5/7, Error ellipse: s-maj=9.4km s-min=4.5km az=29.5*
MEX ***12*** *11:29:58.5±0.9, 15°.58N×93°.37W, h98km±8km, MD4.5*
NEIC ***12*** *11:29:58.0, 15°.58N×93°.38W, h93km, mb3.8/6, MD4.5(MEX), After MEX.*
IDC ***12*** *11:29:59.4±2.0, 15°.74N×93°.11W, h94km±19km, mb3.2/4, mb1 3.7/8, mb1mx3.5/25, mbtmp3.4/8, Error ellipse: s-maj=56.8km s-min=13.2km az=27.0*

ISC 12 11:29:58.9±0.4, **15°.70N**±0°.05×**93°.27W**±0°.04, **h86**km±5km, **n30**, σ1°**39**/38, **mb3.5**/7, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.05**	**85**	*i* P	**Pn**	**11 30 11.1**	**+0.1**
PCIG				*i* S	**Sn**	**11 30 21.3**	**+1.4**
TGIG		**1.08**	**7**	*i* P	**Pn**	**11 30 20.3**	**+1.1**
TGIG				*e*S	**Sn**	**11 30 35.9**	**+1.3**
THIG		**1.25**	**129**	*i* P	**Pn**	**11 30 20.3**	**-1.0**
THIG				*e*S	**Sn**	**11 30 37.3**	**-0.9**
CMIG	**Matias Romero**	**2.08**	**312**	P	**Pn**	**11 30 32.9**	**+0.8**
	16nm,0.3s,baz=130,slow=11,SNR=207						
CMIG				S	**Sn**	**11 30 56.3**	**-1.0**
	152nm,0.3s,baz=142,slow=8.8,SNR=21						
JAT	**Jato**	**2.09**	**131**	*e*P	**Pn**	**11 30 32.5**	**+0.4**
TP2	**Tecpan 2**	**2.35**	**113**	*e*P	**Pn**	**11 30 36.5**	**+0.9**
FG6		**2.57**	**116**	*e*P	**Pn**	**11 30 40.0**	**+1.5**
FUG	**Fuego 3**	**2.65**	**118**	*e*P	**Pn**	**11 30 36.9**	**-2.8**
FUG				*e*S	**Sn**	**11 31 14.9**	**+3.8**
HUIG	**Huatulco**	**2.74**	**272**	*i* P	**Pn**	**11 30 38.8**	**-2.0**
HUIG				*e*S	**Sn**	**11 31 08.1**	**-4.9**
APG	**El Apazote**	**2.79**	**104**	P	**Pn**	**11 30 40.8**	**-0.8**
	11nm,0.3s,baz=319,slow=10.0,SNR=125						
APG				S	**Sn**	**11 31 12.8**	**-1.5**
	159nm,0.3s,baz=65,slow=19,SNR=40						
NBG	**Las Nubes**	**3.03**	**111**	*e*P	**Pn**	**11 30 47.0**	**+2.2**
VHO	**Vista Hermosa**	**3.60**	**293**	*i* P	**Pn**	**11 30 50.7**	**-1.7**
VHO				*e*S	**Sn**	**11 31 33.1**	**-0.8**
PNIG	**Pinotepa**	**4.72**	**279**	*i* P	**Pn**	**11 31 09.5**	**+1.7**
PNIG				*e*S	**Sn**	**11 31 56.5**	**-4.9**
TPIG	**Tehuac#an**	**4.76**	**305**	*i* P	**Pn**	**11 31 08.3**	**0.0**
TPIG				*e*S	**Sn**	**11 32 00.8**	**-1.3**
TEIG	**Tepich**	**6.54**	**46**	*e*Pn	**Pn**	**11 31 31.3**	**-1.3**
	109nm,0.4s						
TEIG				*e*Sn	**Sn**	**11 32 44.7**	**-1.0**
JTS	**JuntasAbangare**	**9.72**	**123**	P	**Pn**	**11 32 16.2**	**+0.2**
	0.8nm,0.3s,baz=323,slow=15,SNR=3.2						
TXAR	**Lajitas Array**	**16.61**	**327**	P	**Pn**	**11 33 49.3**	**+2.8**
	0.1nm,0.3s,baz=149,slow=13,SNR=18						
MIAR	**Mount Ida**	**18.77**	**359**	*e*P	**Pn**	**11 34 11.0**	**-1.6**
	14nm,1.0s						
GDL2	**Guadalupe Moun**	**19.28**	**330**	*e*P	**Pn**	**11 34 17.4**	**-1.2**
	3.9nm,0.7s						
AMTX	**Amarillo**	**20.54**	**340**	*e*P	**P**	**11 34 28.9**	**-1.6**
	7.2nm,0.6s						
TKL	**Tuckaleechee C**	**21.61**	**21**	pP	pP	11 34 58.1	-1.0
	1.8nm,0.5s,baz=196,slow=14,SNR=4.8						
BNM	**Barren Site**	**21.96**	**329**	*e*P	**P**	**11 34 47.6**	**+1.9**
	2.8nm,0.9s,mb3.6						
LAZ	**Ladron**	**22.42**	**329**	*e*P	**P**	**11 34 53.5**	**+3.0**
	2.3nm,1.3s,mb3.4						
ANMO	**Albuquerque**	**22.53**	**331**	P	**P**	**11 34 52.6**	**+1.0**
	2.2nm,0.9s,mb3.5,baz=153,slow=14,SNR=8.0						
PDAR	**Pinedale Array**	**30.38**	**336**	P	**P**	**11 36 03.2**	**+0.6**
	0.2nm,0.6s,mb2.9,baz=177,slow=4.5,SNR=2.7						
ELK	**Elko**	**31.41**	**327**	pP	pP	11 36 34.8	+3.3
	0.6nm,0.6s,baz=174,slow=9.6,SNR=3.8						
NVAR	**Mina Array Bea**	**31.59**	**321**	P	**P**	**11 36 15.4**	**+2.0**
	0.5nm,0.6s,mb3.4,baz=141,slow=8.7,SNR=5.3						
NVAR				pP	pP	11 36 36.6	+3.5
	1.8nm,0.8s,baz=138,slow=9.7,SNR=10						
MCMT	**McKenzie Canyo**	**33.42**	**334**	*e*P	**P**	**11 36 30.6**	**+1.3**
	1.2nm,0.8s,mb3.8						
YKA	**Yellowknife Ar**	**49.10**	**347**	P	**P**	**11 38 35.8**	**-1.6**
	0.5nm,0.5s,mb3.7,baz=151,slow=7.4,SNR=9.0						
YKA				pP	pP	11 38 58.9	+0.6
	0.7nm,0.5s,baz=151,slow=7.4,SNR=6.7						
WRA	**Warramunga Arr**	**134.60**	**257**	PKP	PKPdf	11 49 06.3	-1.9
	0.5nm,0.8s,baz=76,slow=2.5,SNR=5.4						

MEX 12 11:39:22.3±0.5, **18°.16N**×**100°.67W**, **h70**km±10km, **MD3.8, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.94**	**234**	*i* P	**Pn**	**11 39 38.7**	**-1.3**
ZIIG				*i* S	**Sn**	**11 39 51.5**	**-1.6**
MEIG	**Mezcala**	**1.03**	**103**	*i* P	**Pn**	**11 39 39.9**	**-1.3**
MEIG				*i* S	**Sn**	**11 39 53.7**	**-1.4**
PLIG	**Platanillo**	**1.13**	**78**	*i* P	**Pn**	**11 39 40.8**	**-1.7**
PLIG				*i* S	**Sn**	**11 39 56.0**	**-1.5**
CAIG	**El Cayaco**	**1.17**	**161**	*i* P	**Pn**	**11 39 41.8**	**-1.2**
CAIG				*i* S	**Sn**	**11 39 56.0**	**-2.5**
MMIG	**Aquila**	**2.54**	**273**	*e*P	**Pn**	**11 39 60.0**	**-1.3**
MMIG				*i* S	**Sn**	**11 40 28.9**	**-2.4**
PNIG	**Pinotepa**	**3.00**	**126**	*i* P	**Pn**	**11 40 07.5**	**0.0**
PNIG				*i* S	**Sn**	**11 40 41.9**	**-0.5**

MEX 12 12:11:49.9±1.2, **15°.36N**×**94°.81W**, **h59**km±45km, **MD3.9, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.32**	**288**	*i* P	**Pn**	**12 12 11.5**	**-0.6**
HUIG				*i* S	**Sn**	**12 12 26.5**	**-2.3**
PCIG		**1.57**	**77**	*i* P	**Pn**	**12 12 13.4**	**-2.1**
PCIG				*i* S	**Sn**	**12 12 33.1**	**-1.7**
TGIG		**2.15**	**49**	*i* P	**Pn**	**12 12 22.3**	**-1.0**
TGIG				*i* S	**Sn**	**12 12 47.5**	**-1.4**
THIG		**2.50**	**100**	*i* P	**Pn**	**12 12 27.4**	**-0.7**
THIG				*i* S	**Sn**	**12 12 56.4**	**-1.0**
VHO	**Vista Hermosa**	**2.52**	**313**	*i* P	**Pn**	**12 12 27.8**	**-0.6**
VHO				*i* S	**Sn**	**12 12 55.0**	**-2.9**
PNIG	**Pinotepa**	**3.36**	**288**	*i* P	**Pn**	**12 12 39.3**	**-0.6**
PNIG				*i* S	**Sn**	**12 13 15.1**	**-3.4**
TPIG	**Tehuac#an**	**3.90**	**322**	*i* S	**Sn**	**12 13 35.3**	**+3.4**

ISK ***12*** *12:21:46.7, 36°.93N×29°.25E, h11km, MD2.9*
CSEM ***12*** *12:21:47.2±0.1, 36°.93N×29°.25E, h10km, MD2.9, Error ellipse: s-maj=2.2km s-min=1.7km az=150.0*
ISCJB ***12*** *12:21:47.4±0.5, 36°.92N±0°.03×29°.27E±0°.04, h10km±5km, Error ellipse: s-maj=6.5km s-min=4.7km az=37.5*
DDA ***12*** *12:21:48.0, 36°.96N×29°.21E, h7km±4km, Md3.2*

ISC 12 12:21:47.8±0.5, **36°.93N**±0°.03×**29°.25E**±0°.04, **h12**km±5km, **n32**, σ0°**80**/45, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**41**	*e*PG	**Pg**	**12 21 53.0**	**-0.8**
GLHS				*e*SG	**Sg**	**12 21 58.2**	**+0.2**
GLHS	**Glhisar (BURDU**	**0.30**	**41**	*e*Pg	**Pg**	**12 21 53.0**	**-0.9**
GLHS				*e*Sg	**Sg**	**12 21 58.2**	**+0.2**
FETY	**Fethiye**	**0.32**	**205**	*e*PG	**Pg**	**12 21 53.6**	**-0.7**
FETY				*e*SG	**Sg**	**12 21 58.5**	**-0.2**
FETY	**Fethiye**	**0.32**	**205**	*e*Pg	**Pg**	**12 21 53.6**	**-0.7**
FETY				*e*Sg	**Sg**	**12 21 58.5**	**-0.1**
GOLH	**Golhisar**	**0.39**	**39**	*i* P	**Pg**	**12 21 55.3**	**-0.3**
GOLH				*i* S	**Sg**	**12 22 02.7**	**+1.9**
GOLH	**Golhisar**	**0.39**	**39**	*i* P	**Pg**	**12 21 55.3**	**-0.3**
GOLH				*i* S	**Sg**	**12 22 02.7**	**+1.8**
TURN	**Turunc**	**0.52**	**264**	*e*P	**Pg**	**12 22 01.1**	**+3.1**
TURN				*i* S	**Sg**	**12 22 14.8**	**+10**
**TUR

ISC 12 12:49:06.7±0.3, 38°.08N±0°.01×21°.51E±0°.02, h6km±2km, n183, σ1°23/275, mb3.8/10, 4C-8D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.04**	**240**	*e*Pb	**Pg**	**12 49 09.5**	**+1.5**
RLS				*e*Sb	**Sg**	**12 49 11.6**	**+2.6**
RLS	**Riolos of Patr**	**0.04**	**240**	*e*PB	**Pg**	**12 49 09.5**	**+1.5**
RLS				*e*SB	**Sg**	**12 49 11.6**	**+2.6**
RLS	**Riolos of Patr**	**0.04**	**240**	*e*Pb	**Pg**	**12 49 09.5**	**+1.5**
RLS				*e*Sb	**Sg**	**12 49 11.6**	**+2.6**
UPR	**University Cam**	**0.30**	**46**	P	**Pg**	**12 49 12.7**	**+0.2**
UPR				S	**Sg**	**12 49 17.6**	**+1.2**
UPR	**University Cam**	**0.30**	**46**	*e*PB	**Pg**	**12 49 12.7**	**+0.2**
UPR				*e*SB	**Sg**	**12 49 17.4**	**+1.0**
UPR	**University Cam**	**0.30**	**46**	P	**Pg**	**12 49 12.7**	**+0.2**
UPR				S	**Sg**	**12 49 17.6**	**+1.2**
LAKA	**Lakka**	**0.40**	**66**	P	**Pg**	**12 49 14.0**	**-0.4**
LAKA				S	**Sg**	**12 49 20.3**	**+0.6**
LAKA	**Lakka**	**0.40**	**66**	P	**Pg**	**12 49 14.0**	**-0.4**
LAKA				S	**Sg**	**12 49 20.3**	**+0.6**
EFP	**Efpalio**	**0.47**	**42**	P	**Pg**	**12 49 15.2**	**-0.4**
EFP				S	**Sg**	**12 49 22.6**	**+0.9**
EFP	**Efpalio**	**0.47**	**42**	*e*PB	**Pg**	**12 49 15.3**	**-0.3**
EFP				*e*SB	**Sg**	**12 49 21.9**	**+0.2**
EFP	**Efpalio**	**0.47**	**42**	*e*Pb	**Pg**	**12 49 15.3**	**-0.3**
EFP				*e*Sb	**Sg**	**12 49 21.9**	**+0.2**
EFP				S	**Sg**	**12 49 22.6**	**+0.9**
TRIZ	**Trizonia**	**0.53**	**57**	P	**Pg**	**12 49 16.2**	**-0.6**
TRIZ				S	**Sg**	**12 49 24.1**	**+0.5**
TRIZ	**Trizonia**	**0.53**	**57**	P	**Pg**	**12 49 16.2**	**-0.6**
TRIZ				S	**Sg**	**12 49 24.1**	**+0.5**
KFL	**Anninata**	**0.57**	**273**	P	**Pg**	**12 49 17.6**	**-0.1**
KFL				S	**Sg**	**12 49 26.4**	**+1.2**
KALE	**Kalithea**	**0.58**	**58**	P	**Pg**	**12 49 17.1**	**-0.8**
KALE				S	**Sg**	**12 49 26.3**	**+0.8**
KALE	**Kalithea**	**0.58**	**58**	P	**Pg**	**12 49 17.1**	**-0.8**
KALE				S	**Sg**	**12 49 26.3**	**+0.8**
GUR	**Goura**	**0.67**	**102**	P	**Pg**	**12 49 18.3**	**-1.2**
GUR				S	**Sg**	**12 49 28.6**	**+0.3**
GUR	**Goura**	**0.67**	**102**	*e*PB	**Pg**	**12 49 18.4**	**-1.1**
GUR				*e*SN	**Sg**	**12 49 27.6**	**-0.7**
GUR	**Goura**	**0.67**	**102**	*e*Pb	**Pg**	**12 49 18.4**	**-1.1**
GUR				S	**Sg**	**12 49 28.6**	**+0.3**
VLS	**Valsamata**	**0.73**	**278**	*e*Pb	**Pg**	**12 49 19.7**	**-1.1**
VLS				*e*Sn	**Sg**	**12 49 31.8**	**+1.5**
VLS	**Valsamata**	**0.73**	**278**	P	**Pg**	**12 49 19.8**	**-1.0**
VLS				S	**Sg**	**12 49 31.8**	**+1.5**
VLS	**Valsamata**	**0.73**	**278**	*e*PB	**Pg**	**12 49 19.7**	**-1.1**
VLS				*e*SN	**Sg**	**12 49 31.8**	**+1.5**
VLS	**Valsamata**	**0.73**	**278**	P	**Pg**	**12 49 19.8**	**-1.0**
VLS				S	**Sg**	**12 49 31.8**	**+1.5**
DSF	**Desfina**	**0.86**	**67**	P	**Pg**	**12 49 21.6**	**-1.7**
DSF				S	**Sg**	**12 49 34.7**	**+0.2**
DSF	**Desfina**	**0.86**	**67**	P	**Pg**	**12 49 21.6**	**-1.7**
DSF				S	**Sg**	**12 49 34.7**	**+0.2**
EVR	**Evrytania**	**0.87**	**15**	*e*Pn	**Pg**	**12 49 22.2**	**-1.1**
EVR				*e*Sn	**Sg**	**12 49 34.7**	**+0.1**
EVR	**Evrytania**	**0.87**	**15**	*e*PN	**Pg**	**12 49 22.2**	**-1.1**
EVR				*e*SN	**Sg**	**12 49 34.7**	**+0.1**
ITM	**Ithomi**	**0.96**	**160**	*e*Pb	**Pg**	**12 49 23.6**	**-1.4**
ITM				*e*Sn	**Sg**	**12 49 37.8**	**+0.4**
ITM	**Ithomi**	**0.96**	**160**	P	**Pg**	**12 49 23.6**	**-1.4**
ITM				S	**Sg**	**12 49 36.9**	**-0.5**
ITM	**Ithomi**	**0.96**	**160**	*e*PB	**Pg**	**12 49 23.6**	**-1.4**
ITM				*e*SN	**Sg**	**12 49 37.8**	**+0.4**
ITM	**Ithomi**	**0.96**	**160**	P	**Pg**	**12 49 23.6**	**-1.4**
ITM				S	**Sg**	**12 49 36.9**	**-0.5**
ITM				*e*Sn	**Sg**	**12 49 37.8**	**+0.4**
LKD2	**Lefkada island**	**0.98**	**317**	P	**Pg**	**12 49 24.1**	**-1.3**
LKD2				S	**Sg**	**12 49 40.0**	**+1.9**
LKD2	**Lefkada island**	**0.98**	**317**	P	**Pg**	**12 49 24.1**	**-1.3**
LKD2				S	**Sg**	**12 49 40.0**	**+1.9**
VLX	**Vlachokerasia**	**0.99**	**136**	P	**Pg**	**12 49 23.9**	**-1.7**
VLX				S	**Sg**	**12 49 38.3**	**-0.1**
VLX	**Vlachokerasia**	**0.99**	**136**	*e*PB	**Pg**	**12 49 24.5**	**-1.1**
VLX				*e*SN	**Sg**	**12 49 38.3**	**-0.1**
VLX	**Vlachokerasia**	**0.99**	**136**	P	**Pg**	**12 49 23.9**	**-1.7**
VLX	**Vlachokerasia**	**0.99**	**136**	*e*Pb	**Pg**	**12 49 24.5**	**-1.1**
VLX				S	**Sg**	**12 49 38.3**	**-0.1**
AGG	**Agios Georgios**	**1.14**	**34**	*e*Pb	**Pb**	**12 49 26.7**	**-2.0**
AGG				*e*Sn	**Sn**	**12 49 43.7**	**-1.3**
AGG	**Agios Georgios**	**1.14**	**34**	P	**Pg**	**12 49 26.5**	**-2.0**
AGG				S	**Sg**	**12 49 44.8**	**+1.5**
AGG	**Agios Georgios**	**1.14**	**34**	*e*PB	**Pb**	**12 49 26.7**	**-2.0**
AGG				*e*SN	**Sn**	**12 49 43.7**	**-1.3**
AGG	**Agios Georgios**	**1.14**	**34**	*e*Pb	**Pb**	**12 49 26.7**	**-2.0**
AGG				*e*Sn	**Sn**	**12 49 43.7**	**-1.3**
AGG				S	**Sg**	**12 49 44.8**	**+1.5**
LTK	**Loutraki**	**1.15**	**92**	P	**Pg**	**12 49 27.4**	**-1.3**
LTK				S	**Sg**	**12 49 44.2**	**+0.6**
LTK	**Loutraki**	**1.15**	**92**	*e*PN	**Pg**	**12 49 27.7**	**-1.0**
LTK	**Loutraki**	**1.15**	**92**	P	**Pg**	**12 49 27.4**	**-1.3**
LTK	**Loutraki**	**1.15**	**92**	*e*Pn	**Pg**	**12 49 27.7**	**-1.0**
LTK				S	**Sg**	**12 49 44.2**	**+0.6**
PYL	**PYLOS**	**1.20**	**171**	P	**Pg**	**12 49 27.6**	**-2.0**
PYL				S	**Sg**	**12 49 45.2**	**+0.1**
PYL	**PYLOS**	**1.20**	**171**	*e*PN	**Pn**	**12 49 28.9**	**-0.9**
PYL				*e*SN	**Sn**	**12 49 46.6**	**+0.2**
PYL	**PYLOS**	**1.20**	**171**	P	**Pg**	**12 49 27.6**	**-2.0**
PYL	**PYLOS**	**1.20**	**171**	*e*Pn	**Pn**	**12 49 28.9**	**-0.9**
PYL				S	**Sg**	**12 49 45.2**	**+0.1**
LKR	**Lokris**	**1.30**	**64**	*e*Pn	**Pn**	**12 49 29.8**	**-1.5**
LKR				*e*Sn	**Sn**	**12 49 49.0**	**+0.1**
LKR	**Lokris**	**1.30**	**64**	P	**Pn**	**12 49 29.4**	**-1.9**
LKR				S	**Sb**	**12 49 49.5**	**+1.1**
LKR	**Lokris**	**1.30**	**64**	*e*PN	**Pn**	**12 49 29.8**	**-1.5**
LKR				*e*SN	**Sn**	**12 49 49.0**	**+0.1**
LKR	**Lokris**	**1.30**	**64**	P	**Pn**	**12 49 29.4**	**-1.9**
LKR	**Lokris**	**1.30**	**64**	*e*Pn	**Pn**	**12 49 29.8**	**-1.5**
LKR				*e*Sn	**Sn**	**12 49 49.0**	**+0.1**
LKR				S	**Sb**	**12 49 49.5**	**+1.1**
ATAL	**Atalanti**	**1.33**	**62**	P	**Pn**	**12 49 30.2**	**-1.6**
ATAL				S	**Sb**	**12 49 49.9**	**+0.6**
ATAL	**Atalanti**	**1.33**	**62**	P	**Pn**	**12 49 30.2**	**-1.6**
ATAL				S	**Sb**	**12 49 49.9**	**+0.6**
THL	**Klokotos Trika**	**1.53**	**15**	P	**Pn**	**12 49 34.1**	**-0.4**
THL				S	**Sn**	**12 49 56.5**	**+1.8**
THL	**Klokotos Trika**	**1.53**	**15**	*e*PN	**Pn**	**12 49 34.0**	**-0.5**
THL				*e*SN	**Sn**	**12 49 55.0**	**+0.3**
THL	**Klokotos Trika**	**1.53**	**15**	P	**Pn**	**12 49 34.1**	**-0.4**
THL				*e*Sn	**Sn**	**12 49 55.0**	**+0.3**
THL				S	**Sn**	**12 49 56.5**	**+1.8**
NAIG	**Nisos Aigina**	**1.59**	**101**	*e*Pn	**Pn**	**12 49 35.1**	**-0.2**
NAIG	**Nisos Aigina**	**1.59**	**101**	*e*PN	**Pn**	**12 49 35.1**	**-0.2**
NAIG	**Nisos Aigina**	**1.59**	**101**	*e*Pn	**Pn**	**12 49 35.1**	**-0.2**
JAN	**Janina**	**1.66**	**342**	*e*Pn	**Pn**	**12 49 37.1**	**+0.9**
JAN				*e*Sn	**Sn**	**12 49 57.9**	**+0.1**
JAN	**Janina**	**1.66**	**342**	*e*PN	**Pn**	**12 49 37.1**	**+0.9**
JAN				*e*SN	**Sn**	**12 49 57.9**	**+0.1**
JAN	**Janina**	**1.66**	**342**	*e*Pn	**Pn**	**12 49 37.1**	**+0.9**
JAN				*e*Sn	**Sn**	**12 49 57.9**	**+0.1**
IGT	**Igoumenitsa**	**1.72**	**328**	P	**Pn**	**12 49 37.0**	**-0.1**
IGT				S	**Sn**	**12 50 01.9**	**+2.6**
IGT	**Igoumenitsa**	**1.72**	**328**	P	**Pn**	**12 49 37.0**	**-0.1**
IGT				S	**Sn**	**12 50 01.9**	**+2.6**
ATH	**Athens Observa**	**1.74**	**93**	*e*Pn	**Pn**	**12 49 38.1**	**+0.7**
ATH	**Athens Observa**	**1.74**	**93**	*e*PN	**Pn**	**12 49 38.1**	**+0.7**
ATH	**Athens Observa**	**1.74**	**93**	*e*Pn	**Pn**	**12 49 38.1**	**+0.7**
VLI	**Veliai**	**1.77**	**140**	*e*Pn	**Pn**	**12 49 39.1**	**+1.4**
VLI				*e*Sn	**Sn**	**12 50 02.7**	**+2.2**
VLI	**Veliai**	**1.77**	**140**	*e*PN	**Pn**	**12 49 39.1**	**+1.4**
VLI				*e*SN	**Sn**	**12 50 02.7**	**+2.2**
ATHU	**Athens Univers**	**1.80**	**93**	P	**Pn**	**12 49 37.9**	**-0.2**
ATHU				S	**Sn**	**12 50 01.2**	**0.0**
ATHU	**Athens Univers**	**1.80**	**93**	P	**Pn**	**12 49 37.9**	**-0.2**
ATHU				S	**Sn**	**12 50 01.2**	**0.0**
NEO	**Neokhori**	**1.81**	**47**	*e*Pb	**Pb**	**12 49 37.7**	**-2.5**
NEO	**Neokhori**	**1.81**	**47**	*e*PB	**Pb**	**12 49 37.7**	**-2.5**
VLY	**Voula,Athens**	**1.82**	**96**	*e*Pn	**Pn**	**12 49 39.9**	**+1.5**
VLY				*e*Sn	**Sn**	**12 50 03.4**	**+1.7**
VLY	**Voula,Athens**	**1.82**	**96**	*e*PN	**Pn**	**12 49 39.9**	**+1.5**
VLY				*e*SN	**Sn**	**12 50 03.4**	**+1.7**
XOR	**Xorichti**	**1.84**	**45**	P	**Pn**	**12 49 37.7**	**-1.0**
XOR	**Xorichti**	**1.84**	**45**	P	**Pn**	**12 49 37.7**	**-1.0**
PTL	**Penteli**	**1.86**	**90**	*e*Pn	**Pn**	**12 49 39.5**	**+0.6**
PTL				*e*Sn	**Sn**	**12 50 03.6**	**+0.9**
PTL	**Penteli**	**1.86**	**90**	*e*PN	**Pn**	**12 49 39.5**	**+0.6**
PTL				*e*SN	**Sn**	**12 50 03.6**	**+0.9**
PTL	**Penteli**	**1.86**	**90**	*e*Pn	**Pn**	**12 49 39.5**	**+0.6**
KEK	**Kerkira**	**2.11**	**321**	P	**Pn**	**12 49 43.1**	**+0.7**
KEK	**Kerkira**	**2.11**	**321**	P	**Pn**	**12 49 42.4**	**0.0**
KEK	**Kerkira**	**2.11**	**321**	P	**Pn**	**12 49 42.4**	**0.0**
AOS	**Alonnisos**	**2.15**	**59**	P	**Pn**	**12 49 41.6**	**-1.4**
AOS				S	**Sn**	**12 50 09.8**	**-0.1**
AOS	**Alonnisos**	**2.15**	**59**	P	**Pn**	**12 49 41.6**	**-1.4**
AOS				S	**Sn**	**12 50 09.8**	**-0.1**
SRN	**Sarande**	**2.15**	**327**	*e*PN	**Pn**	**12 49 43.4**	**+0.4**
SRN				*e*SN	**Sn**	**12 50 10.7**	**+0.8**
SRN	**Sarande**	**2.15**	**327**	*e*Pn	**Pn**	**12 49 43.4**	**+0.4**
SRN=35							
SRN				*e*Sn	**Sn**	**12 50 10.7**	**+0.8**
SRN=35							
LIT	**Litokhoron**	**2.16**	**20**	P	**Pn**	**12 49 43.2**	**+0.1**
LIT				S	**Sn**	**12 50 11.4**	**+1.3**
LIT	**Litokhoron**	**2.16**	**20**	P	**Pn**	**12 49 43.2**	**+0.1**
LIT				S	**Sn**	**12 50 11.4**	**+1.3**
KYTH	**Kithira**	**2.17**	**145**	*e*Pn	**Pn**	**12 49 45.2**	**+2.0**
KYTH	**Kithira**	**2.17**	**145**	*e*PN	**Pn**	**12 49 45.2**	**+2.0**
KZN	**Kozani**	**2.23**	**5**	P	**Pn**	**12 49 45.4**	**+1.3**
KZN	**Kozani**	**2.23**	**5**	P	**Pn**	**12 49 45.4**	**+1.3**
PAIG	**Paliouri**	**2.50**	**42**	P	**Pn**	**12 49 46.5**	**-1.3**
PAIG	**Paliouri**	**2.50**	**42**	P	**Pn**	**12 49 46.5**	**-1.3**
KBN	**Korca**	**2.60**	**348**	*e*PN	**Pn**	**12 49 50.9**	**+1.7**
KBN				*e*SN	**Sn**	**12 50 22.0**	**+0.9**
KBN	**Korca**	**2.60**	**348**	*e*Pn	**Pn**	**12 49 50.9**	**+1.7**
SNR=35							
KBN				*e*Sn	**Sn**	**12 50 22.0**	**+0.9**
SNR=35							
FNA	**Florina**	**2.70**	**358**	P	**Pn**	**12 49 51.4**	**+0.8**
FNA	**Florina**	**2.70**	**358**	P	**Pn**	**12 49 51.4**	**+0.8**
PLG	**Polygyros**	**2.74**	**33**	*e*Pn	**Pn**	**12 49 50.8**	**-0.3**
PLG	**Polygyros**	**2.74**	**33**	P	**Pn**	**12 49 50.3**	**-0.8**
PLG	**Polygyros**	**2.74**	**33**	*e*PN	**Pn**	**12 49 50.8**	**-0.3**
PLG	**Polygyros**	**2.74**	**33**	P	**Pn**	**12 49 50.3**	**-0.8**
PLG	**Polygyros**	**2.74**	**33**	*e*Pn	**Pn**	**12 49 50.8**	**-0.3**
HORT	**Hortiatis**	**2.80**	**26**	P	**Pn**	**12 49 52.0**	**+0.1**
HORT	**Hortiatis**	**2.80**	**26**	P	**Pn**	**12 49 52.0**	**+0.1**
BIA	**Bitola**	**2.94**	**357**	*e*Pn	**Pn**	**12 49 54.8**	**+1.0**
OUR	**Ouranopolis**	**2.96**	**40**	P	**Pn**	**12 49 54.7**	**+0.6**
OUR	**Ouranopolis**	**2.96**	**40**	P	**Pn**	**12 49 54.7**	**+0.6**
OHR	**Ohrid**	**3.08**	**350**	*e*Pn	**Pn**	**12 49 56.1**	**+0.3**
OHR				*e*Sn	**Sg**	**12 50 44.9**	**-0.6**
OHR				*e*Lg		12 50 45.2	
comp=E,117nm,0.6s							
OHR				*e*Lg		12 50 46.3	
comp=N,226nm,1.3s							
SOH	**Sokhos**	**3.09**	**27**	P	**Pn**	**12 49 56.0**	**+0.1**
SOH				S	**Sn**	**12 50 34.1**	**+1.1**
SOH	**Sokhos**	**3.09**	**27**	P	**Pn**	**12 49 56.0**	**+0.1**
SOH				S	**Sn**	**12 50 34.1**	**+1.1**
KRUS	**Krusevo**	**3.29**	**357**	*e*Pn	**Pn**	**12 49 58.6**	**-0.1**
KARN	**Karanos**	**3.30**	**143**	*e*PN	**Pn**	**12 50 00.4**	**+1.7**
VAY	**Valandovo**	**3.34**	**14**	*e*Pn	**Pn**	**12 49 59.4**	**+0.1**
VAY				*e*Sn	**Sb**	**12 50 46.0**	**-1.0**
VAY				*e*Lg		12 50 46.4	
comp=N,96nm,1.0s							
VAY				*e*Lg		12 50 47.1	
comp=E,57nm,0.7s							
APE	**Apeiranthos**	**3.35**	**106**	P	**Pn**	**12 49 58.3**	**-1.1**
APE	**Apeiranthos**	**3.35**	**106**	||*P*	**Pb**	**12 50 07.8**	**+1.4**
APE	**Apeiranthos**	**3.35**	**106**	P	**Pn**	**12 49 58.3**	**-1.1**
LIA	**Limnos Island**	**3.39**	**56**	P	**Pn**	**12 49 59.8**	**-0.2**
LIA	**Limnos Island**	**3.39**	**56**	P	**Pn**	**12 49 59.8**	**-0.2**
TIR	**Tirane**	**3.50**	**339**	P	**Pn**	**12 50 02.3**	**+0.7**
TIR	**Tirane**	**3.50**	**339**	P	**Pn**	**12 50 02.3**	**+0.7**
CHOS	**Chios island**	**3.59**	**84**	P	**Pn**	**12 50 03.1**	**+0.3**
CHOS	**Chios island**	**3.59**	**84**	P	**Pn**	**12 50 03.1**	**+0.3**
PHP	**Peshkopia**	**3.69**	**347**	*e*PN	**Pn**	**12 50 04.9**	**+0.7**
PHP				*e*SN	**Sn**	**12 50 51.6**	**+3.6**
PHP	**Peshkopia**	**3.69**	**347**	*e*Pn	**Pn**	**12 50 04.9**	**+0.7**
SNR=35							
PHP				*e*Sn	**Sn**	**12 50 51.6**	**+3.6**
SNR=35							
KAVA	**Kavala**	**3.72**	**38**	P	**Pn**	**12 50 04.2**	**-0.4**
KAVA	**Kavala**	**3.72**	**38**	P	**Pn**	**12 50 04.2**	**-0.4**
TIP	**Timpagrande**	**3.88**	**288**	*e*Pn	**Pn**	**12 50 06.9**	**+0.1**
TIP	**Timpagrande**	**3.88**	**288**	*e*PN	**Pn**	**12 50 06.9**	**+0.1**
IDI	**Anoyia**	**3.89**	**135**	P	**Pn**	**12 50 07.4**	**+0.5**
comp=E,1.4nm,0.3s,baz=334,slow=11,SNR=7.9							
IDI				S	**Sn**	**12 50 55.3**	**+2.5**
comp=E,2.5nm,0.3s,baz=48,slow=21,SNR=5.5							
IDI	**Anoyia**	**3.89**	**135**	P	**Pn**	**12 50 07.4**	**+0.5**
IDI				S	**Sn**	**12 50 55.3**	**+2.5**
PUK	**Puka**	**4.15**	**343**	*e*PN	**Pn**	**12 50 11.1**	**+0.6**
PUK	**Puka**	**4.15**	**343**	*e*Pn	**Pn**	**12 50 11.1**	**+0.6**
SNR=35							
BCI	**Bajram Curri**	**4.42**	**346**	*e*PN	**Pn**	**12 50 15.0**	**+0.8**
BCI	**Bajram Curri**	**4.42**	**346**	*e*Pn	**Pn**	**12 50 15.0**	**+0.8**
SNR=35							
LTRZ	**Laterza**	**4.43**	**306**	Pn	**Pn**	**12 50 13.8**	**-0.5**
LTRZ	**Laterza**	**4.43**	**306**	Pn	**Pn**	**12 50 13.8**	**-0.5**
ALN	**Alexandroupoli**	**4.50**	**50**	P	**Pn**	**12 50 16.3**	**+1.1**
ALN	**Alexandroupoli**	**4.50**	**50**	P	**Pn**	**12 50 16.3**	**+1.1**
BARS	**Barje**	**4.74**	**3**	||*Pn*	**Pn**	**12 50 18.5**	**0.0**
MRLC	**Muro Lucano**	**5.38**	**302**	Pn	**Pn**	**12 50 27.7**	**+0.4**
comp=E,18nm,0.6s							
MRLC	**Muro Lucano**	**5.38**	**302**	Pn	**Pn**	**12 50 27.7**	**+0.4**
comp=E,18nm,0.6s							
SGO	**Sicignano**	**5.41**	**299**	Pn	**Pn**	**12 50 29.1**	**+1.3**
comp=E,22nm,0.4s							
SGO	**Sicignano**	**5.41**	**299**	Pn	**Pn**	**12 50 29.1**	**+1.3**
comp=E,22nm,0.4s							
STON	**Ston**	**5.60**	**330**	*e*Pn	**Pn**	**12 50 28.1**	**-2.3**
STON				Sn	**Sn**	**12 51 31.2**	**-3.8**
STON	**Ston**	**5.60**	**330**	*e*Pn	**Pn**	**12 50 28.1**	**-2.3**
STON				Sn	**Sn**	**12 51 31.2**	**-3.8**
GRUS	**Gruza**	**5.83**	**354**	*e*Pn	**Pn**	**12 50 32.0**	**-1.6**
BBLS	**Lazići**	**6.00**	**345**	||*Pn*	**Pn**	**12 50 34.5**	**-1.3**
DIVS	**Divibare**	**6.12**	**350**	||*Pn*	**Pn**	**12 50 36.1**	**-1.4**
MLR	**Muntele Rosu**	**8.11**	**23**	P	**Pn**	**12 51 06.8**	**+1.9**
comp=E,0.4nm,0.3s,baz=252,slow=13,SNR=3.0							
MLR				LR	LR	12 54 16.4	
comp=E,120nm,19.6s,baz=296,slow=38							
MLR	**Muntele Rosu**	**8.11**	**23**	||*P*	**Pn**	**12 51 11.1**	**+6.3**
MLR	**Muntele Rosu**	**8.11**	**23**	P	**Pn**	**12 51 06.8**	**+2.0**
NVLJ	**Novalja**	**8.18**	**324**	*e*Pn	**Pn**	**12 51 04.1**	**-1.7**
NVLJ				Sn	**Sn**	**12 52 32.1**	**-6.4**
NVLJ	**Novalja**	**8.18**	**324**	*e*Pn	**Pn**	**12 51 04.1**	**-1.7**
NVLJ				Sn	**Sn**	**12 52 32.1**	**-6.4**
TIRR	**Tirgusor**	**8.22**	**37**	||*P*	**Pn**	**12 51 08.1**	**+1.8**
TIRR	**Tirgusor**	**8.22**	**37**	||*P*	**Pn**	**12 51 08.1**	**+1.8**
TIRR	**Tirgusor**	**8.22**	**37**	||*P*	**Pn**	**12 51 08.1**	**+1.8**
PLOR	**Plostina**	**8.65**	**25**	||*P*	**Pn**	**12 51 12.4**	**+0.1**
VRI	**Vrincioaia**	**8.69**	**25**	||*P*	**Pn**	**12 51 09.1**	**-3.8**
VRI	**Vrincioaia**	**8.69**	**25**	||*P*	**Pn**	**12 51 09.1**	**-3.7**
VRI	**Vrincioaia**	**8.69**	**25**	||*P*	**Pn**	**12 51 09.1**	**-3.7**
BRTR	**Keskin Array B**	**9.60**	**76**	P	**Pn**	**12 51 27.8**	**+2.5**
comp=E,1.8nm,0.3s,baz=274,slow=15,SNR=39							
BRTR	**Keskin Array B**	**9.60**	**76**	P	**Pn**	**12 51 27.8**	**+2.6**
GERES	**GERESS Array B**	**12.16**	**335**	P	**Pn**	**12 51 58.9**	**-1.3**
comp=E,0.2nm,0.3s,baz=172,slow=14,SNR=2.9							
ESDC	**Sonseca Array**	**19.88**	**283**	P	**Pn**	**12 53 33.7**	**-6.4**
comp=E,0.1nm,0.3s,baz=164,slow=11,SNR=2.8							
HFS	**Hagfors**	**22.63**	**350**	P	**P**	**12 54 04.4**	**-3.5**
comp=E,2.2nm,0.5s,mb3.9,baz=162,slow=11,SNR=18							
FINES	**FINESS Array B**	**23.56**	**5**	P	**P**	**12 54 13.6**	**-4.1**
comp=E,1.6nm,0.5s,mb3.7,baz=161,slow=11,SNR=11							
NB2	**NORSAR Subarra**	**23.88**	**348**	P	**P**	**12 54 17.3**	**-3.3**
comp=Z,0.8nm,0.4s,mb3.5,baz=160,slow=11							
NOA	**NORSAR Array B**	**23.88**	**348**	P	**P**	**12 54 17.9**	**-2.7**
comp=Z,2.1nm,0.7s,mb3.7,baz=156,slow=8.5,SNR=7.5							
EKA	**Eskdalemuir Ar**	**23.96**	**324**	P	**P**	**12 54 19.1**	**-2.4**
comp=Z,2.0nm,0.6s,mb3.7,baz=128,slow=10,SNR=6.5							
TORD	**Torodi Ar. Bea**	**30.45**	**221**	P	**P**	**12 55 18.3**	**-1.8**
comp=Z,0.7nm,0.6s,mb3.5,baz=33,slow=9.7,SNR=4.4							
ARCES	**ARCESS Array B**	**31.59**	**3**	P	**P**	**12 55 26.7**	**-2.9**
comp=Z,0.8nm,0.4s,mb3.9,baz=183,slow=9.2,SNR=13							
BVAR	**Borovoye Array**	**36.58**	**50**	P	**P**	**12 56 12.7**	**-0.4**
comp=Z,0.5nm,0.5s,mb3.6,baz=272,slow=11,SNR=4.0							
KURK	**Kurchatov**	**41.71**	**53**	P	**P**	**12 56 53.0**	**-3.0**
comp=Z,1.8nm,0.7s,mb3.8,baz=283,slow=8.6,SNR=11							
MK31	**Makanchi Array**	**44.69**	**59**	*e*P	**P**	**12 57 17.3**	**-2.8**
MKAR	**Makanchi Array**	**44.69**	**59**	P	**P**	**12 57 17.4**	**-2.8**
comp=Z,1.0nm,0.5s,mb3.9,baz=303,slow=5.9,SNR=14							
MKAR	**Makanchi Array**	**44.69**	**59**	P	**P**	**12 57 17.4**	**-2.8**
ZALV	**Zalesovo Beam**	**45.17**	**48**	P	**P**	**12 57 21.0**	**-2.9**
comp=Z,3.7nm,0.4s,mb4.5,baz=272,slow=8.3,SNR=18							
ZALV	**Zalesovo Beam**	**45.17**	**48**	P	**P**	**12 57 21.0**	**-2.9**

IDC 12 12:53:52.5±4.5, 25°.48N×141°.58E, h36km±37km, mb3.5/8, mb1 3.8/9, mb1mx3.6/24, mbtmp3.5/9, ML3.2/1, Error ellipse: s-maj=28.3km s-min=18.6km az=102.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.70**	**18**	Pn	Pn	12 54 19.6	-0.1
34nm,0.3s,baz=199,slow=4.6,SNR=22							
CBIJ				Sn	Sn	12 54 41.0	+0.8
16nm,0.3s,baz=109,slow=23,SNR=8.2							
KSRS	**Korea Array**	**16.66**	**319**	Pn	Pn	12 57 44.1	+1.0
0.1nm,0.3s,baz=134,slow=12,SNR=14							
SONM	**Songino Array**	**35.53**	**318**	P	P	13 00 46.2	+0.3
0.9nm,0.6s,baz=101,slow=7.5,SNR=2.6							
WRA	**Warramunga Arr**	**45.69**	**190**	P	P	13 02 09.8	-0.3
4.2nm,0.8s,baz=8.9,slow=8.6,SNR=31							
ASAR	**Alice Springs**	**49.41**	**189**	P	P	13 02 39.2	+0.3
0.5nm,0.7s,baz=15,slow=12,SNR=6.6							
MKAR	**Makanchi Array**	**51.10**	**311**	P	P	13 02 51.3	-0.2
0.2nm,0.4s,baz=83,slow=15,SNR=2.5							
KURK	**Kurchatov**	**53.74**	**315**	P	P	13 03 10.9	-0.1
0.5nm,0.5s,baz=92,slow=8.0,SNR=3.1							
YKA	**Yellowknife Ar**	**73.82**	**28**	P	P	13 05 23.3	+0.3
1.1nm,0.8s,baz=292,slow=6.0,SNR=7.4							
FINES	**FINESS Array B**	**79.16**	**334**	P	P	13 05 50.5	-2.8
1.8nm,0.9s,baz=35,slow=10,SNR=2.8							
NVAR	**Mina Array Bea**	**81.95**	**51**	P	P	13 06 08.3	-0.4
0.1nm,0.4s,baz=262,slow=5.3,SNR=2.3							
PDAR	**Pinedale Array**	**85.74**	**44**	P	P	13 06 29.3	+1.3
0.6nm,0.9s,baz=278,slow=9.0,SNR=4.4							

HLW ***12*** *12:58:08.9, 33°.56N×35°.92E, h15km±21km, Md3.1, MI3.0*
ISCJB ***12*** *12:58:11.7±0.3, 33°.38N

PRNI	Paran	3.04 187	Pn	Pn	12 59 01.3 +0.4
PRNI	Paran	3.04 187	Pn	Pn	12 59 01.3 +0.4
PRNI	Paran	3.04 187	Pn	Pn	12 59 01.1 +0.2
KRTS	Karatas	3.19 359	*e*PN	Pn	12 59 01.6 -1.2
KRTS	Karatas	3.19 359	*e*Pn	Pn	12 59 01.6 -1.3
IKL	Isikli	3.19 334	*e*PN	Pn	12 59 01.6 -1.3
IKL	Isikli	3.19 334	*e*Pn	Pn	12 59 01.6 -1.4
AMAG	Maghara	3.32 215	P	Pn	12 59 05.4 +0.7
baz=220					
AMAG	Maghara	3.32 215	P	Pn	12 59 05.4 +0.7
MERS	Mersin	3.56 348	*e*PN	Pn	12 59 07.1 -0.9
MERS	Mersin	3.56 348	*e*Pn	Pn	12 59 07.1 -0.9
HNKL	Nakhl	3.66 200	P	Pn	12 59 09.7 +0.4
baz=205					
HNKL			S	Sn	12 59 54.4 +1.7
baz=205					
HNKL			AMP		13 00 00.0
comp=E,60μm,1.7s,logA/T=4.6,baz=205					
HNKL	Nakhl	3.66 200	P	Pn	12 59 09.7 +0.4
HNKL			S	Sn	12 59 54.4 +1.7
KARA	Karaisali	3.88 356	*e*PN	Pn	12 59 12.1 -0.4
KARA	Karaisali	3.88 356	*e*Pn	Pn	12 59 12.1 -0.4
GAZ	Gaziantep	4.05 21	*e*PN	Pn	12 59 14.8 0.0
GAZ	Gaziantep	4.05 21	*e*Pn	Pn	12 59 14.8 0.0
KOZT	Kozan	4.10 4	*e*PN	Pn	12 59 15.4 -0.1
KMRS	Kahramanmaras	4.29 16	*e*PN	Pn	12 59 17.3 -0.7
KMRS	Kahramanmaras	4.29 16	*e*Pn	Pn	12 59 17.3 -0.7
HDMB	Hadim	4.31 327	*e*PN	Pn	12 59 17.0 -1.3
HDMB	Hadim	4.31 327	*e*Pn	Pn	12 59 17.0 -1.3
HHAG	Hagoal	4.44 221	P	Pn	12 59 21.2 +1.0
baz=224					
HHAG	Hagoal	4.44 221	P	Pn	12 59 21.2 +1.1
KOT	Kottamia	4.61 223	P	Pn	12 59 23.4 +0.9
baz=225					
KOT	Kottamia	4.61 223	P	Pn	12 59 23.4 +0.9
URFA	Urfa	4.91 33	*e*PN	Pn	12 59 26.9 +0.4
URFA	Urfa	4.91 33	*e*Pn	Pn	12 59 27.0 +0.4
GLL	Jalalah	4.95 221	P	Pn	12 59 28.2 +1.2
baz=224					
GLL	Jalalah	4.95 221	P	Pn	12 59 28.2 +1.1
KONT	Konya--Tatoy	5.19 332	*e*PN	Pn	12 59 28.1 -2.4
KONT	Konya--Tatoy	5.19 332	*e*Pn	Pn	12 59 28.1 -2.4
SARI	SarD1z-Kayseri	5.39 11	*e*PN	Pn	12 59 29.1 -4.0
SUTC	Sutluce-Ispart	5.46 320	*e*PN	Pn	12 59 31.4 -2.7
MYA	Malataya	5.50 25	*e*PN	Pn	12 59 34.6 -0.1
MYA	Malataya	5.50 25	*e*Pn	Pn	12 59 34.7 0.0
ELL	Elmali	5.63 308	*e*PN	Pn	12 59 32.5 -4.1
SVRC	Sivrice-ELAZID	5.90 31	*e*PN	Pn	12 59 40.1 0.0
SVRC	Sivrice-ELAZID	5.90 31	*e*Pn	Pn	12 59 40.2 +0.1
FETY	Fethiye	6.13 304	*e*PN	Pn	12 59 38.5 -4.9
GLHS	Glhisar (BURDU	6.14 310	*e*PN	Pn	12 59 39.6 -3.9
KIZT	Kizilcal	6.19 333	*e*PN	Pn	12 59 41.1 -3.1
YOZ	Yozgat	6.25 359	*e*PN	Pn	12 59 43.5 -1.5
YOZ	Yozgat	6.25 359	*e*Pn	Pn	12 59 43.5 -1.4
HHRG	Al Ghardaqah	6.35 195	P	Pn	12 59 45.6 -0.7
baz=199					
HHRG			S	Sn	13 00 58.7 -0.4
baz=199					
HHRG			AMP		13 01 00.0
comp=N,10μm,2.0s,logA/T=3.7,baz=199					
HHRG	Al Ghardaqah	6.35 195	P	Pn	12 59 45.6 -0.8
HHRG			S	Sn	13 00 58.7 -0.4
PTK	Pertek	6.37 29	*e*PN	Pn	12 59 46.2 -0.4
PTK	Pertek	6.37 29	*e*Pn	Pn	12 59 46.2 -0.4
BR131	Keskin Array S	6.49 348	*e*Pn	Pn	12 59 49.3 +1.0
comp=N,1.6nm,0.6s					
BR131	Keskin Array S	6.49 348	*e*Pn	Pn	12 59 49.3 +1.0
comp=N,1.6nm,0.6s					
YER	Yerkesik	6.94 305	*e*PN	Pn	12 59 50.1 -4.4
DAT	Datca	7.25 300	*e*PN	Pn	12 59 53.9 -4.8

IDC ***12*** *13:05:47.2±2.1,22°.29N×143°.26E,h156km±18km, mb3.5/12,mb1 3.6/14,mb1mx3.4/28,mbtmp3.5/14,MS4.1/1, Ms1 4.1/1,ms1mx3.2/24,Error ellipse: s-maj=27.4km s-min=12.3km az=85.0*

ISCJB ***12*** *13:05:47.4±1.4,22°.26N±0°.08×143°.2E±0°.2,h173km±12km, mb3.7/13,Error ellipse: s-maj=30.5km s-min=12.5km az=172.9*

NEIC ***12*** *13:05:48.5±2.1,22°.27N×143°.21E,h169km±19km,mb3.8/3, Error ellipse: s-maj=22.7km s-min=9.7km az=86.0*

ISC 12 13:05:48.3±1.4,22°.28N±0°.08×143°.3E±0°.2,h167km±12km**, n42,**σ0**96/41,mb3.7/13,Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	Haha-jima-NKT	4.44	347	P	Pn	13 06 55.8	+1.2
JHHJ				S	Sn	13 07 45.8	-0.7
CBIJ	Chichi jima	4.89	349	P	Pn	13 07 01.2	+0.7
CBIJ	Chichi jima	4.89	349	P	Pn	13 07 01.1	+0.6
30nm,0.3s,baz=232,slow=8.3,SNR=30							
CBIJ				S	Sn	13 07 54.8	-2.4
44nm,0.3s,baz=282,slow=23,SNR=13							
JOD2	Odawara 2	13.44	345	P	Pn	13 08 52.3	-0.1
JYN	Shimob	13.80	344	P	Pn	13 08 57.0	+0.1
JNY	Yasuok	13.86	341	P	Pn	13 08 57.8	+0.1
JHU	Hanno	13.96	346	P	Pn	13 08 58.0	-0.9
JRY	Ryogami san	14.20	345	P	Pn	13 09 00.9	-1.1
JGF	Kuroka	14.24	340	P	Pn	13 09 01.9	-0.5
JNT	Takato	14.26	343	P	Pn	13 09 02.9	+0.2
JAG	Ashikaga	14.48	348	P	Pn	13 09 04.1	-1.3
JNG	Nsakai	14.77	343	P	Pn	13 09 09.0	-0.1
JGN	Niukaw	14.82	341	P	Pn	13 09 10.4	+0.7
JKT	Katashina	14.85	347	P	Pn	13 09 12.8	+2.8
MJAR	Matsushiro Arr	14.87	344	P	Pn	13 09 09.8	-0.5
1.0nm,0.3s,baz=163,slow=14,SNR=7.9							
MJAR	Matsushiro Arr	14.87	344	P	Pn	13 09 09.8	-0.5
MAJO	Matsushiro	14.87	344	*e*Pn	Pn	13 09 10.8	+0.5
1.9nm,0.3s							
MAT	Matsushiro	14.87	344	P	Pn	13 09 11.2	+0.9
JFT	Otama	15.39	351	P	Pn	13 09 18.8	+2.1
JHS	Saijyo	15.48	327	P	Pn	13 09 20.9	+3.2
JYS	Shiratake	16.12	351	P	Pn	13 09 25.5	-0.1
KSRS	Korea Array	20.10	322	P	P	13 10 09.5	+0.5
1.2nm,0.5s,baz=148,slow=10,SNR=5.8							
KAPI	Kappang	35.58	223	LR	LR	13 25 28.4	
comp=Z,278nm,21.1s,baz=326,slow=33							
WRAB	Tennant Creek	42.85	192	*e*P	P	13 13 29.7	-0.4
1.3nm,0.4s,mb3.9							
WRA	Warramunga Arr	42.87	192	P	P	13 13 30.0	-0.2
0.9nm,0.3s,mb3.8,baz=17,slow=8.8,SNR=28							
WRA				PcP	PcP	13 15 18.2	+0.1
0.6nm,0.5s,baz=7.3,slow=3.6,SNR=5.9							
ASAR	Alice Springs	46.57	192	P	P	13 13 58.7	-0.8
0.3nm,0.3s,mb3.4,baz=11,slow=7.3,SNR=17							
STKA	Stephens Creek	53.88	182	P	P	13 14 54.5	+0.3
2.6nm,1.0s,mb3.9,baz=34,slow=7.3,SNR=4.4							
MKAR	Makanchi Array	54.37	312	P	P	13 14 58.7	+1.0
0.4nm,0.6s,mb3.4,baz=79,slow=12,SNR=5.8							
MKAR				PcP	PcP	13 15 59.8	+0.3
0.3nm,0.4s,baz=45,slow=2.9,SNR=6.2							
MKAR	Makanchi Array	54.37	312	P	P	13 14 58.7	+1.0
MKAR				PcP	PcP	13 15 59.8	+0.3
KURK	Kurchatov	57.10	317	P	P	13 15 17.4	+0.3
1.0nm,0.4s,mb4.0,baz=94,slow=7.5,SNR=4.7							
KURK	Kurchatov	57.10	317	P	P	13 15 17.4	+0.3
BVAR	Borovoye Array	62.28	319	P	P	13 15 52.8	+0.4
1.0nm,0.3s,mb4.1,baz=94,slow=7.2,SNR=4.9							
ABKAR	Akbulak array	69.19	316	*e*P	P	13 16 36.0	-0.7
0.4nm,0.4s,mb3.5							
YKA	Yellowknife Ar	75.90	28	P	P	13 17 17.3	+1.2
0.3nm,0.5s,mb3.2,baz=290,slow=5.7,SNR=4.6							
YKA	Yellowknife Ar	75.90	28	P	P	13 17 17.3	+1.2
ARCES	ARCESS Array B	78.39	341	P	P	13 17 29.4	-0.5
0.7nm,0.5s,mb3.6,baz=77,slow=9.5,SNR=8.2							
FINES	FINESS Array B	82.69	334	P	P	13 17 51.8	-1.1
1.4nm,0.6s,mb3.8,baz=76,slow=5.8,SNR=7.2							
NVAR	Mina Array Bea	82.72	52	P	P	13 17 53.4	-0.1
0.4nm,0.4s,mb3.5,baz=251,slow=4.7,SNR=5.8							
NVAR	Mina Array Bea	82.72	52	P	P	13 17 53.4	-0.1
HFS	Hagfors	88.22	337	P	P	13 18 18.9	-1.4
0.9nm,0.6s,mb3.8,baz=104,slow=12,SNR=2.8							
TORD	Torodi Ar. Bea	128.44	309	PKP	PKPdf	13 24 36.0	0.0
0.2nm,0.4s,baz=46,slow=1.9,SNR=3.8							
LPAZ	La Paz	149.80	84	PKPbc	PKPbc	13 25 21.1	+1.8
0.9nm,0.4s,baz=248,slow=5.4,SNR=4.9							

NIED ***12*** *13:10:00,25°.20N×142°.60E,h5km,Mw5.6 Best double couple: M0*2.87000×10^17 *NP1:*φ*s304.00000°,*δ*72.00000°,* λ*-136.00000°. NP2:*φ*s198.00000°,*δ*49.00000°,* λ*-24.00000°.*

IDC ***12*** *13:10:06.8±0.4,25°.55N×141°.35E,h0km,mb4.6/28, mb1 4.6/30,mb1mx4.6/35,mbtmp4.5/30,ML3.3/2,MS4.9/25, Ms1 4.9/25,ms1mx4.8/31,Error ellipse: s-maj=14.7km s-min=10.0km az=102.0*

JMA ***12*** *13:10:06.1±0.2,25°.18N×142°.61E,h101km,M4.5*

DJA ***12*** *13:10:08,25°.63N×142°.16E,h16km,Mw6.0/23*

BJI ***12*** *13:10:09.9,25°.52N×141°.55E,h35km,mB5.9/58,mb5.1/50, Ms5.4/71,Ms7 5.1/60*

MOS ***12*** *13:10:10.6±1.4,25°.50N×141°.25E,h33km,mb5.2/57, MS5.1/32,Error ellipse: s-maj=8.4km s-min=4.9km az=102.1*

ISCJB ***12*** *13:10:11.7±0.1,25°.51N±0°.03×141°.17E±0°.02,h32km, mb5.0/161,MS5.1/65,Error ellipse: s-maj=3.7km s-min=2.6km az=177.5*

NEIC ***12*** *13:10:13.0±0.2,25°.46N×141°.25E,h35km,mb5.1/95, MW5.6(NIED),Error ellipse: s-maj=6.0km s-min=4.7km az=153.0*

GCMT ***12*** *13:10:13.5±0.1,25°.51N×141°.18E,h12km,MW5.3, Moment Tensor Solution. s80,c141; s99,c182; Moment tensor: Scale 10^17Nm; Mrr1.30±.02; Mθθ-0.60±.02; Mφφ-0.69±.02; Mrθ-0.23±.04; Mθφ-0.22±.01; Mφr0.04±.05; Best double couple: M0*1.10000×10^17 *NP1:*φ*s34.00000°,* δ*42.00000°,* λ*80.00000°. NP2:*φ*s227.00000°,* δ*48.00000°,* λ*99.00000°. Principal axes: T 1.3300, Plg83.0000°, Azm196.0000°; N -0.4500, Plg6.0000°, Azm41.0000°; P -0.8800, Plg3.0000°, Azm310.0000°; Data Used: II IU IC G CN. Surface waves from 104 sta.*

ISC 12 13:10:12.6±0.9,25°.49N±0°.03×141°.23E±0°.02,h28km±6km**, h33**km±1.2km**:pP-P,n763,**σ0**82/751,mb5.0/161,MS5.1/65, 206C-199D,Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	Haha-jima-NKT	1.42	37	P	Pn	13 10 32.8	-3.7
JHHJ				S	Sn	13 10 52.7	-1.6
CBIJ	Chichi jima	1.81	28	P	Pn	13 10 38.2	-3.8
CBIJ				S	Sn	13 11 02.7	-1.3
CBIJ	Chichi jima	1.81	28	Pn	Pn	13 10 38.0	-4.0
369nm,0.3s,baz=196,slow=5.0,SNR=124							
CBIJ				LR	LR	13 10 55.1	
comp=Z,32μm,21.0s,baz=318,slow=28							
CBIJ				Sn	Sn	13 11 00.8	-3.2
138nm,0.3s,baz=124,slow=22,SNR=3.5							
JHJ	Hachijo jima 2	7.70	351	LR	LR	13 14 48.8	
comp=Z,15μm,19.0s,baz=136,slow=37							
JMY	Miyakejima3	8.68	351	*e*S	Sn	13 14 02.2	+9.0
JIE	Ise	9.70	337	P	Pn	13 12 34.6	+4.4
JKN2	Miekihoku	9.72	335	P	Pn	13 12 33.1	+2.6
HMMJ	Hamamatsu 2	9.81	343	P	Pn	13 12 35.4	+3.6
JOD2	Odawara 2	9.91	350	P	Pn	13 12 37.3	+4.1
JNY	Yasuok	10.25	344	P	Pn	13 12 42.6	+4.7
JAO	Obara	10.33	342	P	Pn	13 12 43.3	+4.4
JHU	Hanno	10.46	351	P	Pn	13 12 40.5	-0.2
JEG	Eigenji	10.48	338	P	Pn	13 12 46.9	+5.9
JRY	Ryogami san	10.68	350	P	Pn	13 12 44.7	+1.0
JAG	Ashikaga	11.00	352	P	Pn	13 12 49.4	+1.3
JHO	Hitachi	11.10	357	P	Pn	13 12 48.2	-1.2
MJAR	Matsushiro Arr	11.31	348	Pn	Pn	13 12 51.0	-1.4
0.4nm,0.3s,baz=158,slow=12,SNR=4.4							
MJAR				LR	LR	13 17 01.3	
comp=Z,17μm,18.4s,baz=170,slow=37							
MAJO	Matsushiro	11.31	347	*e*P	Pn	13 12 55.2	+2.8
MAT	Matsushiro	11.31	347	P	Pn	13 12 52.0	-0.4
MAT				*e*S	Sn	13 15 03.0	+5.1
JHS	Saijyo	11.78	325	P	Pn	13 13 04.7	+5.9
JFK	Kawauchi	11.84	359	P	Pn	13 12 59.0	-0.6
JFK				*e*S	Sn	13 15 11.1	+0.3
GUMO	Guam	12.33	163	*e*P	Pn	13 13 06.4	+0.1
SAI	Saigo	12.64	329	P	Pn	13 13 16.9	+6.4
JKE	Kume jima 2	13.03	277	P	Pn	13 13 16.5	+0.6
JMK	Ichinoseki	13.42	360	P	Pn	13 13 22.0	+0.8
JTU	Tsushima	13.63	314	P	Pn	13 13 30.2	+6.1
KSRS	Korea Array	16.44	320	Pn	Pn	13 14 04.0	+2.7
2.2nm,0.3s,baz=131,slow=11,SNR=84							
KSRS				LR	LR	13 19 47.1	
comp=Z,8μm,19.2s,baz=135,slow=35							
KSRS	Korea Array	16.44	320	P	Pn	13 14 04.1	+2.8
KSRS				pmax	pmax		
comp=Z,2.0nm,0.3s							
KSRS				MLR	MLR		
comp=Z,8μm,19.2s							
ERM	Erimo	16.56	5	*d* *i*P	Pn	13 14 00.9	-1.8
INCN	Inchon	17.23	317	*e*P	Pn	13 14 15.4	+4.1
comp=Z,552nm,1.8s							
INCN	Inchon	17.23	317	Pn	Pn	13 14 14.9	+3.7
SNR=24							
INCN				Pn	Pn	13 14 14.9	+3.7
SNR=24							
YHNB	Yeheng	18.01	272	*e*Pn	Pn	13 14 19.8	-1.1
comp=Z,327nm,1.8s							
YULB	Yu-li	18.27	268	*e*Pn	Pn	13 14 26.4	+2.2
comp=Z,175nm,1.7s							
SSE	Sheshan	18.50	292	P	Pn	13 14 24.5	-2.5
SSE				S	Sn	13 17 51.6	-1.4
SSE				sS	sS	13 18 08.7	+0.2
SSE				pmax	pmax		
comp=Z,140nm,1.0s							
SSE				pmax	pmax		
comp=Z,6μm,7.8s							
SSE				LR	LR		
comp=N,2μm,11.1s							
SSE				LR	LR		
comp=E,2μm,11.1s							
SSE				LR	LR		
comp=Z,3μm,11.0s							
SSLB	Suanglung	18.51	269	*e*Pn	Pn	13 14 27.0	-0.1
comp=Z,362nm,1.9s							
ASAJ	Asahikawa	18.61	3	P	Pn	13 14 25.7	-2.5
comp=Z,0.1nm,0.3s,baz=160,slow=12,SNR=3.0							
ASAJ				LR	LR	13 22 47.1	
comp=Z,1μm,18.8s,baz=207,slow=41							
YUK	Yuzh-Kuril'sk	18.88	10	⇑*i*P	Pn	13 14 30.7	-0.7
YUK				pmax	pmax		
comp=N,4μm,7.5s							
YUK				pmax	pmax		
comp=E,1μm,7.5s							
YUK				pmax	pmax		
comp=Z,3μm,7.5s							
YUK				MLR	MLR		
comp=N,2μm,11.0s							
YUK				MLR	MLR		
comp=E,1μm,11.0s							
YUK				MLR	MLR		
comp=Z,3μm,11.0s							
TPUB	Ta-pu	18.89	268	*e*P	Pn	13 14 32.4	+0.7
comp=Z,3μm,2.8s							
VLA	Vladivostok	19.18	339	*i* P	Pn	13 14 31.1	-3.9
VLA				pmax	pmax		
comp=Z,51nm,1.2s							
QZH	Quanzhou	20.49	273	⇑*i*P	P	13 14 49.9	+1.5
QZH				S	S	13 18 43.6	+7.2
QZH				pmax	pmax		
comp=Z,100nm,1.0s							
QZH				pmax	pmax		
comp=Z,7μm,7.9s							
QZH				LR	LR		
comp=N,4μm,9.9s							
QZH				LR	LR		
comp=E,3μm,6.5s							
QZH				LR	LR		
comp=Z,7μm,16.8s,MS5.1							
NJ2	Nanjing	20.66	294	*e*P	P	13 14 52.0	+1.8
NJ2				pP		13 15 00.5	
NJ2				sP	sP	13 15 05.0	+3.6
NJ2				PP		13 15 10.9	
NJ2				pmax	pmax		
comp=Z,30nm,0.9s							
NJ2				pmax	pmax		
comp=Z,4μm,5.5s							
NJ2				LR	LR		
comp=N,3μm,12.3s							
NJ2				LR	LR		
comp=E,7μm,18.3s							
NJ2				LR	LR		
comp=Z,5μm,14.7s,MS5.0							
DL2	Dalian	21.25	314	⇑*i*P	P	13 14 56.5	0.0
DL2				S	S	13 18 53.5	+2.3
DL2				sS	sS	13 19 02.3	-1.1
DL2				pmax	pmax		
comp=Z,40nm,2.2s,mb4.4							
DL2				pmax	pmax		
comp=Z,1μm,7.1s							
DL2				LR	LR		
comp=N,2μm,11.0s,MS4.9							
DL2				LR	LR		
comp=E,3μm,15.0s,MS4.9							
DL2				LR	LR		
comp=Z,3μm,14.3s,MS4.8							
MDJ	Mudanjiang	21.29	337	P	P	13 14 59.5	+2.7
MDJ				pP		13 15 06.8	
MDJ				sP	sP	13 15 11.2	+3.2
MDJ				PcP	PcP	13 19 01.6	+0.8
MDJ				ScP	ScP	13 22 35.8	0.0
MDJ				PcS	PcS	13 22 40.1	+1.4
MDJ				pmax	pmax		
comp=Z,6.0nm,0.6s,mb4.1							
MDJ				pmax	pmax		
comp=Z,1μm,9.1s							
MDJ				LR	LR		
comp=N,5μm,12.2s,MS5.1							
MDJ				LR	LR		
comp=E,2μm,11.0s,MS5.1							
MDJ				LR	LR		
comp=Z,5μm,13.4s,MS5.1							
MDJ	Mudanjiang	21.29	337	*e*P	P	13 14 57.8	+1.0
comp=Z,4.4nm,0.5s,mb4.0							
YSS	Yuzh-Sakhalins	21.45	3	*o*e*P	P	13 14 58.0	-0.6
YSS				*e**SP	sP	13 15 14.0	+4.2
YSS				*e*PPP		13 15 34.0	
YSS				*e*S	S	13 18 52.0	-3.0
YSS				pmax	pmax		
comp=N,2μm,10.0s							
YSS				pmax	pmax		
comp=Z,3μm,10.0s							
YSS				pmax	pmax		
comp=Z,130nm,1.4s,mb5.1							
YSS				smax			
comp=N,5μm,8.0s							
YSS				smax			
comp=E,5μm,10.0s							
YSS				MLR	MLR		
comp=E,4μm,14.0s,MS5.0							
YSS				MLR	MLR		
comp=Z,7μm,14.0s,MS5.2							
YSS				MLR	MLR		
comp=N,3μm,15.0s,MS5.0							
YSS	Yuzh-Sakhalins	21.45	3	*e*P	P	13 14 59.0	+0.4
comp=N,83nm,1.3s,mb4.9							
SNY	Shenyang	21.87	323	⇑P	P	13 15 03.4	+0.3
SNY				S	S	13 19 07.3	+4.0
SNY				pmax	pmax		
comp=Z,190nm,1.6s,mb5.3							
SNY				LR	LR		
comp=E,5μm,11.0s							
SNY				LR	LR		
comp=Z,4μm,10.2s,MS5.1							
TGY	Tagaytay City	22.17	243	P	P	13 15 06.9	+0.4
comp=Z,70nm,0.4s,mb5.4,baz=167,slow=18,SNR=3.6							
TGY				LR	LR	13 23 14.4	
comp=Z,15nm,19.6s,baz=313,slow=35							
TGY	Tagaytay City	22.17	243	P	P	13 15 06.9	+0.4
TGY				pmax	pmax		
comp=Z,70nm,0.4s							
TGY				MLR	MLR		
comp=Z,15nm,19.6s							
CN2	Changchun	22.34	329	*e*P	P	13 15 06.9	-1.2
CN2				pmax	pmax		
comp=Z,20nm,0.8s,mb4.6							
CN2				pmax	pmax		
comp=Z,3μm,7.0s							
CN2				LR	LR		
comp=N,6μm,11.0s,MS5.4							
CN2				LR	LR		
comp=E,6μm,11.0s,MS5.4							
CN2				LR	LR		
comp=Z,5μm,13.0s,MS5.1							
TIA	Tai'an	23.23	303	P	P	13 15 17.7	+0.1
TIA				PP		13 15 52.0	
TIA				pmax	pmax		
comp=Z,950nm,2.1s,mb5.9							
TIA				pmax	pmax		
comp=Z,5μm,6.0s							
TIA				LR	LR		
comp=N,2μm,9.0s							
TIA				LR	LR		
comp=E,1μm,7.0s							
HABR	Khabarovsk	23.45	350	*c* *i*P	P	13 15 17.0	-2.7
HABR				*e**PP		13 15 26.0	
HABR				*e**SP	sP	13 15 30.6	-0.4
HABR						13 15 44.4	
HABR				*e*S	S	13 19 29.7	-1.2
HABR				*e**SS	sS	13 19 46.3	+1.9
HABR				*e*SS		13 20 09.1	
HABR				*e*SSS		13 20 23.1	
HABR				*e*		13 26 23.6	
HABR				pmax	pmax		
comp=E,19nm,1.0s							
HABR				pmax	pmax		
comp=N,39nm,1.6s							
HABR				pmax	pmax		
comp=Z,39nm,1.5s,mb4.6							
HABR				MLR	MLR		
comp=Z,4μm,14.0s,MS5.0							
HABR				MLR	MLR		
comp=N,3μm,15.0s,MS5.1							
HABR				MLR	MLR		
comp=E,4μm,14.0s,MS5.1							
DAV	Davao City (W)	23.64	222	P	P	13 15 22.7	+0.8
comp=E,116nm,0.3s,mb5.7,baz=47,slow=19,SNR=3.0							
WHN	Wuhan	24.23	288	⇑P	P	13 15 28.5	+1.4
WHN				PP		13 16 05.1	
WHN				S	S	13 19 47.9	+3.9
WHN				pmax	pmax		
comp=Z,12μm,5.0s							
WHN				LR	LR		
comp=N,8μm,7.7s							
WHN				LR	LR		
comp=E,3μm,9.2s							
WHN				LR	LR		
comp=Z,8μm,10.0s,MS5.5							
KLR	Kul'dur	24.82	345	*e*P	P	13 15 26.0	-6.3
KLR				*e*S	S	13 19 54.0	+0.8
KLR				smax			
comp=N,4μm,13.0s							
KLR				smax			
comp=E,3μm,13.0s							
KLR				MLR	MLR		
comp=N,5μm,13.0s							
KLR				MLR	MLR		
comp=Z,11μm,13.0s,MS5.5							
HKC	Hong Kong Obse	24.92	268	⇑*i*P	P	13 15 34.0	+0.5
HKC				S	S	13 20 06.0	+11
BJI	Beijing	25.47	311	P	P	13 15 38.4	+0.1
BJI				S	S	13 20 07.0	+3.4
BJI				pmax	pmax		
comp=Z,4μm,5.2s							
BJI				LR	LR		
comp=N,3μm,18.9s,MS5.0							
BJI				LR	LR		
comp=E,3μm,18.9s,MS5.0							
BJI				LR	LR		
comp=Z,2μm,28.3s							
GZH	Guangzhou	25.51	271	P	P	13 15 35.2	-3.6
GZH				S	S	13 20 01.4	-3.3
GZH				LR	LR		
comp=N,2μm,8.7s							
GZH				LR	LR		
comp=E,2μm,12.2s							
TIY	Taiyuan	27.27	304	*e*P	P	13 15 55.5	+0.9
TIY				PP		13 16 46.0	
TIY				S	S	13 20 40.2	+8.0
TIY				pmax	pmax		
comp=Z,2μm,5.6s							
TIY				LR	LR		
comp=N,3μm,14.3s,MS5.1							
TIY				LR	LR		
comp=E,1μm,10.1s,MS5.1							
TIY				LR	LR		
comp=Z,3μm,15.8s							
SKR	Severo-Kuril's	27.64	21	*e*P	P	13 15 56.0	-1.7
SKR	

comp=N,2μm,12.0s,MS5.2
SKR MLR MLR
comp=E,3μm,12.0s,MS5.2
SKR MLR MLR
comp=Z,2μm,12.0s,MS5.0
ENH Enshi 28.41 287 *e*P **P 13 16 06.3 +1.5**
comp=Z,28nm,1.0s,mb4.8
HHC Hu-ho-hao-te 29.00 309 *e*P **P 13 16 10.3 +0.3**
HHC pP pP 13 16 19.8 +1.6
HHC sP sP 13 16 23.9 +2.2
HHC S **S 13 20 57.4 -1.9**
HHC sS sS 13 21 13.6 +0.6
HHC SS SS 13 22 27.4 -35
HHC PcS PcS 13 22 59.4 -1.3
HHC ScS ScS 13 26 48.4 -3.1
HHC pmax pmax
comp=Z,75nm,1.4s,mb5.2
HHC pmax pmax
comp=Z,2μm,7.0s
HHC LR LR
comp=N,3μm,11.8s,MS5.2
HHC LR LR
comp=E,3μm,13.1s,MS5.2
HHC LR LR
comp=Z,4μm,14.5s,MS5.2
XAN Xi'an 29.22 295 P **P 13 16 13.2 +1.2**
XAN PP PP 13 17 11.5 -6.6
XAN S **S 13 21 10.4 +7.5**
XAN pmax pmax
comp=Z,430nm,6.4s
XAN LR LR
comp=N,2μm,16.7s,MS4.8
XAN LR LR
comp=E,570nm,14.0s,MS4.8
XAN LR LR
comp=Z,780nm,12.7s,MS4.5
QIZ Qiongzhong 29.70 264 ⇑P **P 13 16 18.0 +1.6**
QIZ S **S 13 21 16.8 +6.0**
QIZ pmax pmax
comp=Z,21nm,1.9s,mb4.5
QIZ pmax pmax
comp=Z,830nm,8.0s
QIZ LR LR
comp=Z,2μm,29.3s,MS4.5
BTO Baotou 30.00 308 *e*P **P 13 16 17.2 -1.6**
BTO S **S 13 21 11.3 -3.8**
BTO LR LR
comp=N,780nm,12.3s,MS4.7
BTO LR LR
comp=E,660nm,13.2s,MS4.7
PET Petropavlovsk 30.46 21 *e*P **P 13 16 23.6 +0.9**
PET *e*S **S 13 21 21.9 0.0**
PET pmax pmax
comp=Z,40nm,1.7s,mb4.9
PET pmax pmax
comp=Z,800nm,7.4s
PET pmax pmax
comp=Z,1μm,6.4s
PET MLR MLR
comp=Z,2μm,11.0s,MS5.1
PET MLR MLR
comp=Z,3μm,13.0s
GYA Guiyang 31.04 279⇑ *i*P **P 13 16 27.8 -0.4**
GYA pP pP 13 16 37.3 +0.9
GYA sP sP 13 16 41.3 +1.4
GYA PP PP 13 17 28.8 -10
GYA PcP PcP 13 19 24.7 +1.1
GYA S **S 13 21 26.6 -5.0**
GYA pmax pmax
comp=Z,20nm,0.6s,mb5.1
GYA pmax pmax
comp=Z,290nm,5.9s
GYA LR LR
comp=N,1μm,14.6s,MS4.8
GYA LR LR
comp=E,1μm,16.2s,MS4.8
GYA LR LR
comp=Z,2μm,16.2s,MS4.8
CD2 Chengdu 33.36 288⇓ *i*P **P 13 16 50.4 +1.9**
CD2 pP pP 13 16 59.8 +3.1
CD2 sP sP 13 17 03.9 +3.7
CD2 PP PP 13 18 02.4 -1.7
CD2 PcP PcP 13 19 31.6 +1.7
CD2 S **S 13 22 08.6 +0.9**
CD2 sS sS 13 22 24.3 +3.0
CD2 PcS PcS 13 23 16.2 +0.6
CD2 SS SS 13 24 12.1 -20
CD2 ScS ScS 13 27 11.7 -1.7
CD2 pmax pmax
comp=Z,70nm,1.8s,mb5.3
CD2 pmax pmax
comp=Z,870nm,5.8s
CD2 LR LR
comp=N,5μm,15.4s,MS5.5
CD2 LR LR
comp=E,4μm,10.7s,MS5.5
CD2 LR LR
comp=Z,4μm,10.6s,MS5.5
CLNS Chul'man 33.46 344 *e**PP **P 13 16 46.9 -2.1**
CLNS pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
CLNS pmax pmax
comp=N,6.0nm,0.8s
CLNS pmax pmax
comp=E,4.0nm,0.8s
CLNS MLR MLR
comp=E,1μm,12.0s,MS5.2
CLNS MLR MLR
comp=N,3μm,16.0s,MS5.2
CLNS MLR MLR
comp=Z,3μm,15.0s,MS5.1
LZH Lanzhou 33.63 297⇓ P **P 13 16 51.8 +1.0**
LZH pP pP 13 17 00.2 +1.2
LZH sP sP 13 17 03.1 +0.6
LZH PP PP 13 18 05.4 -1.6
LZH S **S 13 22 12.3 +0.5**
LZH sS sS 13 22 32.4 +7.0
LZH SS SS 13 24 15.3 -22
LZH pmax pmax
comp=Z,260nm,1.6s,mb5.9
LZH pmax pmax
comp=Z,1μm,5.4s
LZH LR LR
comp=N,4μm,14.4s
LZH LR LR
comp=Z,5μm,16.2s,MS5.4
KMI Kunming 34.72 278 P **P 13 17 03.5 +3.1**
KMI pP pP 13 17 13.6 +4.9
KMI sP sP 13 17 18.0 +5.9
KMI PP PP 13 18 22.0 +2.7
KMI PcP PcP 13 19 36.6 +2.7
KMI S **S 13 22 31.6 +2.7**
KMI sS sS 13 22 48.7 +6.1
KMI ScP ScP 13 23 17.9 +0.5
KMI PcS PcS 13 23 21.9 +1.3
KMI SS SS 13 24 43.9 -16
KMI ScS ScS 13 27 15.5 -5.2
KMI pmax pmax
comp=Z,35nm,1.3s,mb5.1
KMI pmax pmax
comp=Z,2μm,5.9s
KMI LR LR
comp=N,2μm,10.8s,MS5.2
KMI LR LR
comp=E,2μm,13.6s,MS5.2
KMI LR LR
comp=Z,2μm,15.9s,MS4.9
ULN Ulaanbaatar 34.92 319 *e*P **P 13 17 00.8 -1.0**
ULN pmax pmax
comp=Z,85nm,1.3s,mb5.5
ULN Ulaanbaatar 34.92 319 *e*P **P 13 17 00.8 -1.0**
comp=Z,85nm,1.3s,mb5.5
ULN Ulaanbaatar 34.92 319 P **P 13 17 03.5 +1.7**
SNR=31
ULN P 13 17 03.5
SNR=31
SONM Songino Array 35.30 318 P **P 13 17 05.0 -0.2**
comp=Z,14nm,0.9s,mb4.9,baz=131,slow=8.3,SNR=24
SONM LR LR 13 31 39.6
comp=Z,4μm,19.1s,MS5.2,baz=91,slow=37
SONM Songino Array 35.30 318 P **P 13 17 05.0 -0.1**
SONM pmax pmax
comp=Z,14nm,1.0s
SONM MLR MLR
comp=Z,4μm,19.1s

KAPI Kappang 36.81 218 P **P 13 17 16.5 -1.8**
comp=Z,8.5nm,0.6s,mb4.8,baz=110,slow=6.2,SNR=4.3
GTA Gaotai 37.28 302 ⇑P **P 13 17 22.3 +0.2**
GTA pP pP 13 17 31.4 +1.0
GTA sP sP 13 17 35.9 +2.0
GTA PP PP 13 18 50.8 +3.5
GTA S **S 13 23 09.7 +2.0**
GTA sS sS 13 23 23.5 +2.0
GTA SS SS 13 25 40.7 -11
GTA pmax pmax
comp=Z,20nm,1.5s,mb4.7
GTA pmax pmax
comp=Z,2μm,4.8s
GTA LR LR
comp=N,3μm,16.9s,MS5.2
GTA LR LR
comp=E,2μm,16.3s,MS5.2
GTA LR LR
comp=Z,2μm,16.1s,MS4.9
YAK Yakutsk 37.35 351 *c i*P **P 13 17 19.0 -3.4**
YAK *e**PP pP 13 17 31.5 +0.8
YAK *e*PPP 13 18 50.8
YAK *e* 13 19 34.7
YAK *e*S **S 13 23 03.0 -5.2**
YAK *e**SS sS 13 23 15.9 -6.1
YAK *e* 13 27 28.0
YAK pmax pmax
comp=Z,798nm,9.5s
YAK smax
comp=N,120nm,3.8s
YAK smax
comp=E,557nm,9.5s
YAK MLR MLR
comp=Z,4μm,17.0s,MS5.2
YAK MLR MLR
comp=N,3μm,17.0s,MS5.1
YAK MLR MLR
comp=E,1μm,20.0s,MS5.1
SEY Seymchan 38.16 8⇓ *e*P **P 13 17 28.8 -0.4**
ZAK Zakamensk 38.27 321 *e*P **P 13 17 30.6 +0.3**
ZAK *e* 13 19 03.5
ZAK pmax pmax
comp=Z,26nm,1.7s,mb4.7
IRK Irkutsk 38.59 324 *e*P **P 13 17 34.8 +1.8**
IRK *e* 13 19 02.9
IRK pmax pmax
comp=Z,70nm,2.6s,mb4.9
TLY Talaya 38.66 323 *c i*P **P 13 17 32.0 -1.6**
TLY *e*PPP 13 19 03.1
TLY *e* 13 19 50.4
TLY pmax pmax
comp=Z,35nm,1.4s,mb4.9
TLY MLR MLR
comp=Z,3μm,21.0s,MS5.1
TLY Talaya 38.66 323 *e*P **P 13 17 35.8 +2.2**
comp=Z,49nm,1.5s,mb5.0
TLY Talaya 38.66 323 P **P 13 17 36.0 +2.4**
SNR=12
TLY P 13 17 36.0
SNR=12
CHTO Chiang Mai 39.60 269 *e*P **P 13 17 42.5 +0.6**
CHTO pmax pmax
comp=Z,92nm,2.1s,mb5.1
CHTO Chiang Mai 39.60 269 *e*P **P 13 17 42.5 +0.6**
comp=Z,92nm,2.1s,mb5.1
CM31 Chiang Mai Arr 39.71 269 *e*P **P 13 17 41.7 -1.1**
CMAR Chiang Mai Arr 39.71 269 P **P 13 17 42.6 -0.1**
comp=Z,1.6nm,0.6s,mb3.9,baz=61,slow=8.0,SNR=10
CMAR LR LR 13 33 17.7
comp=Z,757nm,19.0s,MS4.5,baz=75,slow=35
CMAR Chiang Mai Arr 39.71 269 P **P 13 17 42.7 -0.1**
CMAR pmax pmax
comp=Z,2.0nm,0.6s
CMAR MLR MLR
comp=Z,757nm,19.0s
MOY Mondy 40.13 321 *e*P **P 13 17 46.7 +0.8**
MOY pmax pmax
comp=Z,113nm,4.2s
LSA Lhasa 44.31 287 P **P 13 18 20.2 0.0**
LSA PP PP 13 20 03.0 -0.7
LSA S **S 13 24 50.7 -2.0**
LSA pmax pmax
comp=Z,1μm,8.1s
LSA LR LR
comp=E,1μm,24.2s
LSA LR LR
comp=Z,1μm,24.7s,MS4.8
LSA Lhasa 44.31 287 *e*P **P 13 18 20.7 +0.5**
LSA pmax pmax
comp=Z,130nm,1.9s,mb5.3
LSA Lhasa 44.31 287 *e*P **P 13 18 20.7 +0.5**
comp=Z,130nm,1.9s,mb5.3
SHL Shillong 44.32 281 *e*PKP **P 13 18 20.5 +0.2**
SHL *i* x x 13 25 04.0
BILL Bilibino 45.20 13⇑ *e*P **P 13 18 26.7 -0.1**
BILL pmax pmax
comp=Z,37nm,1.7s,mb4.9
BILL MLR MLR
comp=Z,1μm,15.0s,MS5.0
BILL Bilibino 45.20 13 *e*P **P 13 18 25.4 -1.3**
comp=Z,50nm,1.6s,mb5.1
CTA Charters Tower 45.57 173 *e*P **P 13 18 28.8 -1.4**
comp=Z,13nm,0.9s,mb4.9
CTA Charters Tower 45.57 173 P **P 13 18 28.1 -2.1**
comp=Z,8.9nm,1.0s,mb4.7,baz=350,slow=7.0,SNR=3.6
CTA LR LR 13 36 53.9
comp=Z,1μm,19.4s,MS4.8,baz=334,slow=35
CTA Charters Tower 45.57 173 P **P 13 18 28.1 -2.1**
CTA pmax pmax
comp=Z,9.0nm,1.0s
CTA MLR MLR
comp=Z,1μm,19.4s
CTAO Charters Tower 45.57 173 *e*P **P 13 18 28.6 -1.6**
WRAB Tennant Creek 45.65 189 P **P 13 18 29.0 -1.8**
comp=Z,790nm,1.1s,SNR=36
WRAB Tennant Creek 45.65 189 *e*P **P 13 18 28.8 -2.0**
WRAB pmax pmax
comp=Z,142nm,1.0s,mb5.8
WRAB Tennant Creek 45.65 189 *e*P **P 13 18 28.8 -2.0**
comp=Z,142nm,1.0s,mb5.8
WRA Warramunga Arr 45.66 189 P **P 13 18 29.2 -1.6**
comp=Z,101nm,0.9s,mb5.7,baz=8.5,slow=8.8,SNR=118
WRA Warramunga Arr 45.66 189 P **P 13 18 29.3 -1.6**
WRA pmax pmax
comp=Z,101nm,0.9s
FITZ Fitzroy Crossi 45.91 201 *e*P **P 13 18 31.8 -1.1**
comp=Z,24nm,1.1s,mb5.0
FITZ Fitzroy Crossi 45.91 201 P **P 13 18 31.6 -1.3**
comp=Z,16nm,1.0s,mb4.9,baz=15,slow=8.9,SNR=8.5
PSI Prapat 46.50 248 P **P 13 18 39.4 +1.6**
comp=Z,16nm,0.9s,mb4.9,baz=17,slow=4.2,SNR=6.9
PSI PcP PcP 13 20 12.2 +0.2
comp=Z,8.5nm,0.9s,baz=294,slow=20,SNR=3.8
PSI LR LR 13 38 49.8
comp=Z,563nm,18.8s,MS4.5,baz=226,slow=37
PSI Prapat 46.50 248 P **P 13 18 39.4 +1.7**
PSI 13 20 12.2
PSI pmax pmax
comp=Z,16nm,0.9s,mb5.0
PSI MLR MLR
comp=Z,563nm,18.8s,MS4.5
TIXI Tiksi 46.72 355 *e*P **P 13 18 37.9 -0.8**
TIXI pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
TIXI Tiksi 46.72 355 *e*P **P 13 18 37.9 -0.8**
comp=Z,3.2nm,0.6s,mb4.4
WMQ Urumqi 46.83 307 P **P 13 18 41.0 +1.0**
WMQ pP pP 13 18 51.0 +2.5
WMQ sP sP 13 18 55.0 +3.1
WMQ PP PP 13 20 31.0 +0.8
WMQ S **S 13 25 29.0 +0.3**
WMQ ScS ScS 13 28 30.0 -2.7
WMQ SS SS 13 28 49.0 -6.2
WMQ pmax pmax
comp=Z,54nm,1.0s,mb5.4
WMQ pmax pmax
comp=Z,160nm,5.0s
WMQ LR LR
comp=N,790nm,16.0s,MS5.1
WMQ LR LR
comp=E,2μm,16.0s,MS5.1
WMQ LR LR
comp=Z,2μm,16.0s,MS5.2
TAPN Taplejung 47.66 285 *e*P **P 13 18 47.4 +0.7**
comp=Z,575nm,1.9s,mb6.3
ODAN Odare 48.03 284 *e*P **P 13 18 49.7 +0.1**

comp=Z,654nm,1.9s,mb6.3
RAMN Ramite 48.71 284 *e*P **P 13 18 55.1 +0.3**
comp=Z,440nm,1.9s,mb6.2
JIRN Jiri 48.93 285 *e*P **P 13 18 57.0 +0.5**
comp=Z,185nm,0.9s,mb6.1
GUN Gumba 49.15 286 *e*P **P 13 18 58.7 +0.5**
comp=Z,1μm,2.0s
ASAR Alice Springs 49.38 189 P **P 13 18 58.5 -1.3**
comp=Z,5.8nm,0.8s,mb4.7,baz=15,slow=12,SNR=37
ASAR PcP PcP 13 20 21.7 -0.3
comp=Z,2.4nm,0.9s,baz=13,slow=4.9,SNR=3.3
ASAR Alice Springs 49.38 189 P **P 13 18 58.5 -1.3**
ASAR 13 20 21.7
ASAR pmax pmax
comp=Z,6.0nm,0.8s
PKI Pulchoki 49.63 285 *e*P **P 13 19 02.2 +0.4**
comp=Z,345nm,1.8s,mb6.1
PKI Pulchoki 49.63 285 *e*P **P 13 19 02.4 +0.6**
PKI pmax pmax
comp=Z,37nm,0.7s,mb5.5
PKI Pulchoki 49.63 285 *e*P **P 13 19 02.4 +0.6**
comp=Z,37nm,0.7s,mb5.5
PKIN Phulchoki 49.64 285 *e*P **P 13 19 02.4 +0.5**
comp=Z,37nm,0.7s,mb5.5
KKN Kakani 49.70 286 *e*P **P 13 19 02.4 +0.1**
comp=Z,419nm,1.9s,mb6.1
DMN Daman 49.88 286 *e*P **P 13 19 04.1 +0.3**
comp=Z,410nm,1.9s,mb6.1
ZAA0 Zalesovo Array 50.15 320 *e*P **P 13 19 04.7 -0.6**
ZALV Zalesovo Beam 50.15 320 P **P 13 19 04.0 -1.4**
comp=Z,1.3nm,0.7s,mb4.1,baz=96,slow=6.0,SNR=7.8
ZALV PcP PcP 13 20 22.9 -1.6
comp=Z,0.9nm,0.4s,baz=85,slow=3.1,SNR=4.5
ZALV LR LR 13 40 46.4
comp=Z,1μm,18.6s,MS5.0,baz=92,slow=37
ZALV Zalesovo Beam 50.15 320 P **P 13 19 04.0 -1.4**
ZALV 13 20 22.9
ZALV pmax pmax
comp=Z,1.0nm,0.7s,mb4.0
ZALV MLR MLR
comp=Z,1μm,18.6s,MS5.0
ZALV Zalesovo Beam 50.15 320 P **P 13 19 04.0 -1.4**
ZALV PcP PcP 13 20 22.9 -1.6
ZALV LR LR 13 40 46.4
MK31 Makanchi Array 50.85 311 *e*P **P 13 19 11.1 +0.3**
MKAR Makanchi Array 50.85 311 P **P 13 19 10.5 -0.3**
comp=Z,8.5nm,0.9s,mb4.7,baz=84,slow=11,SNR=24
MKAR LR LR 13 42 04.4
comp=Z,1μm,18.7s,MS5.0,baz=96,slow=38
MKAR Makanchi Array 50.85 311 *e*P **P 13 19 10.5 -0.3**
MKAR pmax pmax
comp=Z,9.0nm,0.9s
MBWA Marble Bar 50.85 206 *e*P **P 13 19 11.0 -0.1**
comp=Z,35nm,1.4s,mb5.1
EIDS Eidsvold 51.45 169 *e*P **P 13 19 14.8 -0.6**
EIDS Eidsvold 51.45 169 *e*P **P 13 19 15.0 -0.4**
DZM Mont Dzumac 53.23 150 *e*S **S 13 26 57.2 -1.0**
comp=Z,615nm,30.9s
DZM *e*SS SS 13 30 39.2 +0.7
comp=Z,429nm,25.8s
DZM *e*LR LR 13 34 52.8
comp=Z,3μm,26.4s
KURK Kurchatov 53.51 315 P **P 13 19 29.7 -0.8**
comp=Z,127nm,1.0s,mb5.8,SNR=12
KURK Kurchatov 53.51 315 P **P 13 19 29.0 -1.5**
comp=Z,19nm,1.0s,mb5.0,baz=94,slow=7.5,SNR=32
KURK LR LR 13 40 19.0
comp=Z,669nm,20.2s,MS4.7,baz=80,slow=34
KURK Kurchatov 53.51 315 *d i*P **P 13 19 30.6 +0.1**
KURK pmax pmax
comp=Z,56nm,1.7s,mb5.2
KURK MLR MLR
comp=Z,4μm,17.0s,MS5.5
KURK Kurchatov 53.51 315 P **P 13 19 31.3 +0.8**
SNR=19
KURK P 13 19 31.3
SNR=19
VIS Vishakhapatnam 54.04 274 *e*PKP **P 13 19 34.7 -0.1**
VIS AMb AMB 13 19 39.9
comp=Z,66nm,2.3s,mb5.2
SVW2 Sparrevohn 55.10 32 *e*P **P 13 19 41.9 0.0**
DDI Dehra Dun 55.41 290 *e*PKP **P 13 19 45.5 +0.8**
TKM2 Tokmak 2 55.65 306 *e*P **P 13 19 46.7 +0.6**
TKM2 pmax pmax
comp=Z,15nm,1.0s,mb5.0
TKM2 Tokmak 2 55.65 306 *e*P **P 13 19 46.7 +0.6**
comp=Z,15nm,1.0s,mb5.0
KSH Kashi 55.68 302 P **P 13 19 48.6 +2.2**
KSH pP pP 13 19 58.6 +3.5
KSH sP sP 13 20 02.5 +4.1
KSH PcP PcP 13 20 47.7 +2.1
KSH PP PP 13 21 54.2 +3.5
KSH ScP ScP 13 24 42.7 -0.1
KSH PcS PcS 13 24 46.5 +0.7
KSH S **S 13 27 29.2 -1.8**
KSH ScS ScS 13 29 31.5 -2.3
KSH pmax pmax
comp=Z,29nm,1.1s,mb5.2
KSH pmax pmax
comp=Z,1μm,5.9s
KSH LR LR
comp=N,470nm,12.3s,MS5.2
KSH LR LR
comp=E,1μm,12.8s,MS5.2
KSH LR LR
comp=Z,2μm,18.1s
KDAK Kodiak Island 56.16 36 P **P 13 19 48.2 -1.3**
comp=Z,6.4nm,0.6s,mb4.8,baz=286,slow=5.2,SNR=9.1
KDAK Kodiak Island 56.16 36 *i* P **P 13 19 49.3 -0.2**
FRU Bishkek 56.37 306 *e*P **P 13 19 51.5 +0.2**
FRU *e* 13 20 55.0
FRU pmax pmax
comp=Z,610nm,3.5s
NDI New Delhi 56.48 289 *e*PKP **P 13 19 51.0 -1.3**
AAK Ala-Archa 56.48 306 P **P 13 19 51.7 -0.4**
comp=Z,1.2nm,0.3s,mb4.5,baz=56,slow=5.2,SNR=12
AAK Ala-Archa 56.48 306 *c i*P **P 13 19 52.9 +0.8**
AAK pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
AAK MLR MLR
comp=Z,1μm,19.0s,MS5.0
AAK Ala-Archa 56.48 306 P **P 13 19 56.1 +4.0**
SNR=6.6
AAK P 13 19 56.1
SNR=6.6
ARMA Armidale 56.48 169 *e*P **P 13 19 51.4 -0.6**
UCH Uchtor 56.50 305 *e*P **P 13 19 52.4 +0.2**
comp=Z,88nm,1.8s,mb5.5
NGP Nagpur 56.82 279 *e*PKP **P 13 19 52.6 -2.2**
NGP AMb AMB 13 19 56.6
comp=Z,140nm,1.5s,mb5.8
PPLA Purkeypile 56.98 30 *e*P **P 13 19 54.1 -1.2**
comp=Z,72nm,1.8s,mb5.4
STKA Stephens Creek 57.05 180 *e*P **P 13 19 54.2 -1.9**
comp=Z,20nm,0.9s,mb5.2
STKA Stephens Creek 57.05 180 P **P 13 19 54.5 -1.6**
comp=Z,34nm,1.1s,mb5.3,baz=347,slow=7.1,SNR=11
STKA LR LR 13 42 34.2
comp=Z,1μm,20.3s,MS5.0,baz=9.4,slow=34
STKA Stephens Creek 57.05 180 *e*P **P 13 19 53.9 -2.1**
comp=Z,6.8nm,1.0s,mb4.6
CHUM Lake Minchumin 57.07 29 *e*P **P 13 19 55.7 -0.2**
comp=Z,41nm,1.7s,mb5.2
AML Almayashu 57.12 305 *e*P **P 13 19 55.8 -0.8**
COCO West Island 57.21 234 *i* P **P 13 19 56.5 -1.1**
KTH Kantishna Hill 57.63 29 *e*P **P 13 19 59.6 -0.3**
comp=Z,63nm,1.8s,mb5.3
BHPL Bhopal 57.66 282 *e*PKP **P 13 20 00.0 -0.8**
BHPL AMb AMB 13 20 05.6
comp=Z,62nm,1.5s,mb5.4
BPAW Bear Paw Mtn. 57.68 29 *e*P **P 13 19 59.8 -0.4**
comp=Z,49nm,1.6s,mb5.3
TRF Thorofare Moun 57.90 30 *e*P **P 13 20 01.1 -0.7**
comp=Z,76nm,1.7s,mb5.5
SEW Seward 57.97 34 *e*P **P 13 20 00.4 -1.9**
comp=Z,80nm,1.7s,mb5.5
PMR Palmer 58.24 32 *e*P **P 13 20 02.6 -1.6**
PMR pmax pmax
comp=Z,51nm,1.8s,mb5.2
PMR Palmer 58.24 32 *e*P **P 13 20 02.6 -1.6**
comp=Z,51nm,1.8s,mb5.2
HYB Hyderabad 58.44 275 *e*P **P 13 20 06.0 -0.3**
HYB Hyderabad 58.44 275 *i* P **P 13 20 04.0 -2.3**
COLD Coldfoot 58.48 25 *e*P **P 13 20 06.4 +0.7**
comp=Z,56nm,1.9s,mb5.3
MCK McKinley 58.54 29 *e*P **P 13 20 05.8 -0.4**

MCK pmax pmax
comp=Z,68nm,1.6s,mb5.4
MCK McKinley 58.54 29 *e*P **P 13 20 05.8 -0.5**
comp=Z,68nm,1.6s,mb5.4
BVAR Borovoye Array 58.65 318 P **P 13 20 05.5 -1.7**
comp=Z,6.4nm,0.5s,mb4.9,baz=92,slow=7.9,SNR=16
BVAR Borovoye Array 58.65 318 P **P 13 20 05.5 -1.7**
BVAR pmax pmax
comp=Z,6.0nm,0.5s
BRVK Borovoye 58.71 318 P **P 13 20 08.2 +0.6**
comp=Z,87nm,1.6s,mb5.5,SNR=7.6
BRVK Borovoye 58.71 318 *e*P **P 13 20 07.9 +0.3**
BRVK pmax pmax
comp=Z,15nm,0.9s,mb5.0
BRVK Borovoye 58.71 318 *e*P **P 13 20 07.9 +0.3**
comp=Z,15nm,0.9s,mb5.0
BRVK Borovoye 58.71 318 P **P 13 20 08.4 +0.8**
SNR=17
BRVK P 13 20 08.4
SNR=17
AKL Akola 58.77 280 *e*PKP **P 13 20 07.8 -0.7**
COLA College 59.12 28 *e*P **P 13 20 08.5 -1.8**
COLA pmax pmax
comp=Z,22nm,1.5s,mb5.0
COLA College 59.12 28 *e*P **P 13 20 08.5 -1.7**
comp=Z,22nm,1.5s,mb5.0
AJM Ajmer 59.22 287 *e*PKP **P 13 20 11.4 -0.3**
AJM AMb AMB 13 20 17.3
comp=Z,77nm,1.4s,mb5.5
DIV Divide 59.84 32 *e*P **P 13 20 15.9 +0.7**
comp=Z,87nm,1.6s,mb5.5
BMRM Bremner River 60.40 33 *e*P **P 13 20 19.3 +0.2**
comp=Z,94nm,1.5s,mb5.6
MENT Mentasta 60.84 30 *e*P **P 13 20 21.5 -0.6**
CAN Canberra 60.93 173 *e*P **P 13 20 21.6 -1.3**
CAN pmax pmax
comp=Z,37nm,1.1s,mb5.4
CAN Canberra 60.93 173 *e*P **P 13 20 21.6 -1.3**
comp=Z,36nm,1.1s,mb5.4
CNB Canberra Magne 60.96 172 *e*P **P 13 20 22.2 -1.0**
EGAK Eagle 61.98 28 *e*P **P 13 20 27.1 -2.7**
comp=Z,50nm,1.9s,mb5.3
KBL Kabul 61.98 297 *e*P **P 13 20 29.9 -0.4**
KBL pmax pmax
comp=Z,37nm,1.0s,mb5.5
KBL Kabul 61.98 297 *e*P **P 13 20 29.9 -0.3**
comp=Z,37nm,1.0s,mb5.5
POO Poona 62.29 278 *e*PKP **P 13 20 32.5 0.0**
DAWY Dawson 62.76 29 *e*P **P 13 20 34.3 -0.7**
SVE Sverdlovsk 63.98 323⇓ *e*P **P 13 20 41.9 -1.2**
SVE *e* 13 23 04.3
SVE *e*PPP 13 24 38.5
SVE *e*S **S 13 29 20.3 +3.1**
SVE *e* 13 30 34.2
SVE pmax pmax
comp=Z,17nm,1.6s,mb4.8
SVE MLR MLR
comp=Z,1μm,15.0s,MS5.3
INK Inuvik 64.84 24 P **P 13 20 47.1 -1.4**
comp=Z,3.8nm,0.9s,mb4.5,baz=268,slow=5.9,SNR=6.7
INK Inuvik 64.84 24 P **P 13 20 47.2 -1.4**
INK pmax pmax
comp=Z,4.0nm,0.9s
SKAG Skagway 65.12 34 *e*P **P 13 20 50.6 0.0**
comp=Z,2.0nm,0.3s,mb4.6
ARU Arti 65.17 323*c i*P **P 13 20 48.6 -2.3**
ARU *e* 13 21 15.7
ARU *e* 13 23 14.0
ARU S S 13 29 30.5 -1.4
ARU SS SS 13 33 36.9 -7.3
ARU pmax pmax
comp=Z,19nm,1.7s,mb4.8
ARU MLR MLR
comp=Z,1μm,16.0s,MS5.1
ABKAR Akbulak array 65.60 315 *e*P **P 13 20 49.8 -4.1**
comp=Z,8.6nm,0.6s,mb5.0
SOKR Solikamsk 65.61 326 *e*P **P 13 20 44.5 -9.2**
SOKR S S 13 29 36.6 -0.6
SOKR SS SS 13 33 57.2 +6.4
SOKR pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
SOKR MLR MLR
comp=Z,2μm,18.0s,MS5.4
AKTK Aktyubinsk 66.59 316 P **P 13 21 00.4 +0.2**
AKTO Aktyubinsk 66.59 316 P **P 13 21 00.4 +0.2**
comp=Z,2.0nm,0.7s,mb4.3,baz=75,slow=12,SNR=5.7
AKTO Aktyubinsk 66.59 316 P **P 13 21 00.4 +0.2**
AKTO pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
DLBC Dease Lake 68.01 35 *e*P **P 13 21 09.9 +0.9**
ALE Alert 71.61 3 P **P 13 21 31.0 +0.1**
comp=Z,69nm,1.7s,mb5.3,SNR=5.1
APA Apatity 73.20 338⇑ *e*P **P 13 21 43.0 +2.5**
APA *i* pP 13 21 50.0 +0.6
APA *i* 13 24 29.0
APA *i* PPP 13 26 12.0
APA *i* S S 13 31 06.0 -0.4
APA *i* PS 13 32 00.0
APA *i* SS SS 13 35 51.0 +3.7
APA pmax pmax
comp=Z,18nm,1.2s,mb4.9
APA MLR MLR
comp=N,800nm,19.0s
RES Resolute Bay 73.81 13 *e*P **P 13 21 41.8 -2.2**
RES pmax pmax
comp=Z,36nm,1.7s,mb5.0
RES Resolute Bay 73.81 13 *e*P **P 13 21 41.8 -2.2**
comp=Z,36nm,1.7s,mb5.0
YKA Yellowknife Ar 73.95 28 P **P 13 21 43.3 -1.7**
comp=Z,4.8nm,0.8s,mb4.5,baz=293,slow=5.7,SNR=40
YKA LR LR 13 54 39.7
comp=Z,35nm,20.7s,baz=40,slow=36
ARCES ARCESS Array B 74.77 341 P **P 13 21 47.4 -2.3**
comp=Z,4.4nm,0.9s,mb4.4,baz=72,slow=7.8,SNR=8.8
ARCES ARCESS Array B 74.77 341 P **P 13 21 47.4 -2.3**
ARCES pmax pmax
comp=Z,4.0nm,0.9s
NLWA Neilton Lookou 74.83 45⇓P **P 13 21 50.9 +0.5**
baz=75
A05A Maple Falls 75.36 43⇓P **P 13 21 53.8 +0.4**
baz=75
GNW Green Mountain 75.43 44 *e*P **P 13 21 54.5 +0.6**
comp=Z,26nm,1.6s,mb4.9
F03A Seaside 75.57 46⇓P **P 13 21 54.5 -0.2**
baz=75
MAK Makhachkala 75.67 311 *e*P **P 13 21 51.7 -3.6**
MAK *e* 13 24 44.7
MAK *e*S S 13 31 31.6 -3.3
MAK *e* 13 32 01.8
MAK *e*SS SS 13 36 31.4 +5.4
MAK pmax pmax
comp=Z,259nm,1.5s,mb5.9
MAK MLR MLR
comp=Z,3μm,16.0s,MS5.7
JCW Jim Creek 75.75 43 *e*P **P 13 21 57.2 +1.5**
comp=Z,38nm,1.1s,mb5.2
B06A Marblemount 75.91 43⇓P **P 13 21 57.0 +0.4**
baz=76
RPW Rockport 75.91 43 *e*P **P 13 21 56.8 +0.2**
comp=Z,12nm,1.4s,mb4.7
D05A Enumclaw 76.10 44⇓P **P 13 21 58.2 +0.5**
baz=76
JOF Joensuu 76.14 334 *e*P **P 13 21 53.9 -3.7**
JOF pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
JOF Joensuu 76.14 334 *e*p **P 13 21 53.9 -3.7**
comp=Z,1.9nm,0.4s,mb4.4
JOF Joensuu 76.14 334 *e*p **P 13 21 53.9 -3.7**
comp=Z,1.9nm,0.4s,mb4.4
F04A Amboy 76.30 46⇑P **P 13 21 59.9 +0.9**
baz=76
A07A Ashnola River, 76.37 42⇓P **P 13 21 59.5 +0.3**
baz=76,SNR=8.2
LON Longmire 76.38 45 *e*P **P 13 21 59.1 -0.2**
LON pmax pmax
comp=Z,24nm,1.7s,mb4.8
LON Longmire 76.38 45 *e*P **P 13 21 59.0 -0.3**
comp=Z,24nm,1.7s,mb4.8
G04A Mulino 76.54 46⇑P **P 13 22 00.7 +0.4**
baz=76
H04A Detroit Lake 76.94 47⇑P **P 13 22 02.5 0.0**
baz=77
ETW Entiat 76.97 43 *e*P **P 13 22 01.2 -1.5**
comp=Z,22nm,1.3s,mb4.9
B08A Colville Reser 77.28 42⇓P **P 13 22 04.0 -0.4**
baz=77,SNR=6.2

OBN Obninsk 77.36 325 *i*P **P 13 22 04.6 0.0**
OBN *e* pP 13 22 13.1 -0.5
OBN *e*S S 13 31 56.1 +3.1
OBN pmax pmax
comp=Z,13nm,0.7s,mb5.0
OBN MLR MLR
comp=Z,2μm,17.0s,MS5.4
VSR Storozhevoye 77.64 321 *e*P **P 13 22 04.7 -1.6**
VSR *e*S S 13 31 52.7 -3.6
VSR pmax pmax
comp=N,4.0nm,0.4s
VSR pmax pmax
comp=E,5.0nm,0.4s
VSR pmax pmax
comp=Z,9.0nm,0.4s,mb5.0
VSR smax
comp=N,40nm,2.5s
VSR smax
comp=E,120nm,2.5s
VSR smax
comp=Z,110nm,2.5s
VSR MLR MLR
comp=N,840nm,18.0s,MS5.3
VSR MLR MLR
comp=E,940nm,18.0s,MS5.3
VSR MLR MLR
comp=Z,1μm,18.0s,MS5.2
E07A Sunnyside 77.69 44⇓P **P 13 22 07.3 +0.6**
baz=78
G06A Carlson Farm, 77.73 46⇑P **P 13 22 06.3 -0.7**
baz=78
F07A Phinny Hill Vi 77.92 45⇓P **P 13 22 07.5 -0.4**
baz=78
HAWA Hanford 77.96 44 *e*P **P 13 22 08.8 +0.6**
comp=Z,38nm,1.5s,mb5.1
B09A Rice 77.98 42⇓P **P 13 22 07.9 -0.4**
baz=78
OD2 Odessa Site #2 78.06 43 *e*P **P 13 22 09.2 +0.5**
comp=Z,46nm,1.6s,mb5.2
D08A Wollman Farm, 78.07 44⇓P **P 13 22 08.2 -0.6**
baz=78
A10A Northport 78.10 41⇑P **P 13 22 09.1 +0.2**
baz=78
C09A Chrisman Ranch 78.16 43⇑P **P 13 22 09.7 +0.4**
baz=78
E08A Dider Farm, El 78.22 44⇓P **P 13 22 09.9 +0.2**
baz=78
KIV Kislovodsk 78.52 313*d i*P **P 13 22 11.1 -0.2**
KIV pmax pmax
comp=Z,30nm,1.9s,mb4.9
KIV MLR MLR
comp=Z,2μm,19.0s,MS5.5
KAF Kangasniemi 78.54 334 *e*P **P 13 22 07.2 -3.9**
KAF pmax pmax
comp=Z,7.0nm,0.5s,mb4.8
KAF Kangasniemi 78.54 334 *e*p **P 13 22 07.2 -3.9**
comp=Z,7.3nm,0.5s,mb4.9
KAF Kangasniemi 78.54 334 *e*p **P 13 22 07.2 -3.9**
comp=Z,7.3nm,0.5s,mb4.9
K05A Summer Lake 78.57 48⇓P **P 13 22 11.7 0.0**
baz=78
EDM Edmonton 78.61 36 *e*P **P 13 22 11.5 -0.1**
GNI Garni 78.66 309*ce*P **P 13 22 13.0 +0.8**
GNI MLR MLR
comp=Z,484nm,16.0s
NEW Newport 78.67 42 *e*P **P 13 22 12.0 -0.1**
NEW pmax pmax
comp=Z,15nm,1.0s
NEW Newport 78.67 42 *e*P **P 13 22 12.0 -0.1**
comp=Z,15nm,1.0s,mb4.9
E09A Wood Farm, Sta 78.78 44⇓P **P 13 22 13.1 +0.3**
baz=79
G08A Pilot Rock 78.79 45⇑P **P 13 22 12.7 -0.1**
baz=79
A11A Hall Mountain, 78.82 41⇑P **P 13 22 13.2 +0.3**
baz=79,SNR=9.7
I07A Izee 78.94 46⇑P **P 13 22 13.9 +0.3**
baz=79
FINES FINESS Array B 79.00 334 P **P 13 22 10.5 -3.1**
comp=Z,6.0nm,0.5s,mb4.8,baz=61,slow=5.3,SNR=24
FINES LR LR 14 03 20.5
comp=Z,631nm,18.1s,MS5.0,baz=56,slow=40
FINES FINESS Array B 79.00 334 P **P 13 22 10.5 -3.1**
FINES LR LR 14 03 20.5
B11A Sandpoint 79.04 41⇓P **P 13 22 14.8 +0.6**
baz=79
D10A Wagner Farm, O 79.09 43⇓P **P 13 22 14.5 +0.1**
baz=79
A12A Yaak River Ran 79.25 41⇑P **P 13 22 15.0 -0.2**
baz=79
F09A S2 Ranch, Elgi 79.28 44⇓P **P 13 22 14.9 -0.6**
baz=79
H08A Prairie City 79.30 46⇓P **P 13 22 16.3 +0.7**
baz=79,SNR=6.3
MOD Modoc 79.31 49 *e*P **P 13 22 15.9 +0.2**
comp=Z,24nm,1.5s,mb4.9
B12A Libby 79.50 41⇑P **P 13 22 17.1 +0.5**
baz=79
F10A Beach Ranch, E 79.59 44⇓P **P 13 22 17.3 +0.1**
baz=79
PPT Papeete 79.76 115 *e*LR LR 13 47 01.2
comp=Z,2μm,27.8s,baz=294
PPT Papeete 79.76 115 LR LR 13 52 26.8
comp=Z,666nm,18.3s,MS5.0,baz=319,slow=32
H09A Durkee 79.88 45⇓P **P 13 22 18.8 0.0**
baz=80
C12B Naegeli Ranch, 79.90 42⇓P **P 13 22 18.7 -0.1**
baz=80
J08A Circle Bar Ran 79.92 47⇑P **P 13 22 19.3 +0.3**
baz=80,SNR=5.6
G10A Bishop Farm, J 79.96 45⇑P **P 13 22 19.1 -0.1**
baz=80,SNR=15
BMO Blue Mountains 80.03 45 *e*P **P 13 22 19.4 -0.2**
BMO pmax pmax
comp=Z,16nm,1.2s,mb4.8
BMO Blue Mountains 80.03 45 *e*P **P 13 22 19.4 -0.2**
comp=Z,16nm,1.2s,mb4.8
BEKR Beckworth 80.12 51⇑P **P 13 22 20.4 +0.2**
baz=80,SNR=8.9
I09A Lost Marbles R 80.14 46⇓P **P 13 22 20.3 +0.1**
baz=80
B13A Whitefish 80.20 41⇑P **P 13 22 20.5 0.0**
baz=80,SNR=10
WVOR Wild Horse Val 80.21 48 *e*P **P 13 22 19.3 -1.3**
WVOR pmax pmax
comp=Z,29nm,1.5s,mb5.0
WVOR Wild Horse Val 80.21 48 *e*P **P 13 22 19.3 -1.3**
comp=Z,29nm,1.5s,mb5.0
WALA Waterton Lakes 80.22 40 *e*P **P 13 22 20.6 +0.1**
comp=Z,1.0nm,1.1s,mb3.7
BSMT Bassoo Peak 80.25 42 *e*P **P 13 22 21.6 +0.9**
comp=Z,36nm,1.6s,mb5.0
F11A Grangeville 80.30 44⇓P **P 13 22 21.0 -0.1**
baz=80
J09A Fry Pan Ranch, 80.40 47⇓P **P 13 22 21.1 -0.5**
baz=80
G11A Walters Elk Ra 80.45 44⇓P **P 13 22 21.5 -0.3**
baz=80,SNR=13
C13A Hot Springs 80.46 42⇓P **P 13 22 21.7 -0.1**
baz=80,SNR=17
H10A Noah's Angus R 80.51 45⇓P **P 13 22 21.6 -0.6**
baz=80,SNR=8.4
A14A Double T Ranch 80.54 40⇑P **P 13 22 22.5 +0.3**
baz=80,SNR=15
JTMT Jette 80.60 41 *e*P **P 13 22 23.2 +0.6**
comp=Z,20nm,1.2s,mb4.9
SOC Sochi 80.62 314 *e*P **P 13 22 20.6 -2.2**
SOC *e**PP pP 13 22 30.6 -1.2
SOC *e* 13 25 23.7
SOC *e*PPP 13 27 14.2
SOC *e*S S 13 32 26.4 -1.8
SOC *e*SS SS 13 37 42.0 +1.5
SOC *e*SSS 13 41 09.7
SOC pmax pmax
comp=Z,14nm,0.7s,mb5.0
SOC MLR MLR
comp=Z,2μm,17.0s,MS5.5
I10A Payette 80.69 46⇑P **P 13 22 22.8 -0.4**
baz=80
YBMT Yellow Bay 80.71 41 *e*P **P 13 22 23.4 +0.3**
comp=Z,16nm,1.2s,mb4.8
WCN Washoe City 80.78 51⇓P **P 13 22 23.8 0.0**
baz=81
D13A Huson 80.80 42⇓P **P 13 22 22.8 -0.9**
baz=81
CMB Columbia Colle 80.88 52 *e*P **P 13 22 24.7 +0.4**
CMB pmax pmax
comp=Z,19nm,1.3s,mb4.9
CMB Columbia Colle 80.88 52 *e*P **P 13 22 24.7 +0.5**
comp=Z,19nm,1.3s,mb4.9
SWMT Swartz Lake 80.88 42 *e*P **P 13 22 23.9 -0.2**
comp=Z,12nm,1.1s,mb4.7
B14A Marquette Ranc 80.92 41⇑P **P 13 22 24.3 0.0**
baz=81,SNR=19
H11A Donnelly 80.92 45⇓P **P 13 22 24.3 -0.1**
baz=81,SNR=5.9
A15A Johnson Ranch, 80.94 40⇓P **P 13 22 24.0 -0.3**
baz=81,SNR=17
J10A Berg Farm, Mel 81.01 46⇓P **P 13 22 24.6 -0.2**
baz=81
K10A MacKenzie Ranc 81.23 47⇑P **P 13 22 25.4 -0.6**
baz=81,SNR=6.9
MSO Missoula 81.24 42 *e*P **P 13 22 25.8 -0.2**
comp=Z,7.9nm,1.4s,mb4.5
E13A Victor 81.27 43⇓P **P 13 22 25.6 -0.5**
baz=81
SLMT Seeley Lake 81.31 42 *e*P **P 13 22 26.1 -0.3**
comp=Z,31nm,1.4s,mb5.0
I11A Placerville 81.32 45⇓P **P 13 22 26.4 -0.1**
baz=81
B15A Bradely Ranch, 81.36 40⇑P **P 13 22 26.4 -0.2**
baz=81,SNR=16
D14A Greenough 81.38 42⇑P **P 13 22 26.4 -0.4**
baz=81,SNR=5.2
F13A Darby 81.48 43⇑P **P 13 22 26.5 -0.8**
baz=81
ANN Anapa 81.54 316*d i*P **P 13 22 26.8 -0.9**
ANN *e**PP pP 13 22 36.4 -0.3
ANN *e* 13 25 35.3
ANN *e*S S 13 32 38.7 +1.0
ANN *e*SS SS 13 38 00.4 +6.3
ANN pmax pmax
comp=Z,19nm,1.1s,mb4.9
ANN MLR MLR
comp=N,337nm,20.0s,MS5.1
ANN MLR MLR
comp=E,691nm,20.0s,MS5.1
ANN MLR MLR
comp=Z,1μm,20.0s,MS5.2
CHMT Chamberlain Mo 81.61 42 *e*P **P 13 22 27.7 -0.3**
comp=Z,4.6nm,1.0s,mb4.4
MFID Camas Ranch 81.63 46⇑P **P 13 22 28.1 0.0**
baz=81,SNR=6.8
E14A Clinton 81.70 42⇓P **P 13 22 28.2 -0.3**
baz=82
H12A Diamond D Ranc 81.73 45⇓P **P 13 22 28.6 -0.1**
baz=82
K11A Parker Ranch, 81.78 47⇑P **P 13 22 28.9 -0.1**
baz=82,SNR=8.8
B16A M & M Farms, S 81.81 40⇓P **P 13 22 29.0 0.0**
baz=82
L10A Juniper Basin 81.81 47⇑P **P 13 22 28.7 -0.4**
baz=82
G13A Cobalt 81.87 44⇑P **P 13 22 28.9 -0.5**
baz=82,SNR=10.0
I12A Atlanta 81.90 45⇑P **P 13 22 29.5 -0.1**
baz=82
D15A Lincoln 81.99 42⇓P **P 13 22 29.8 -0.2**
baz=82
M10A I.L. Ranch, Tu 82.02 48⇓P **P 13 22 30.2 0.0**
baz=82
F14A Wisdom 82.06 43⇓P **P 13 22 30.3 -0.1**
baz=82
H13A Challis 82.10 44⇓P **P 13 22 30.5 -0.1**
baz=82,SNR=23
MLAC Mammoth Lakes 82.16 52⇑P **P 13 22 30.8 -0.2**
baz=82
J12A Stokes Ranch, 82.17 46⇓P **P 13 22 30.8 -0.3**
baz=82
NVAR Mina Array Bea 82.18 51 P **P 13 22 30.8 -0.4**
comp=Z,2.3nm,0.7s,mb4.2,baz=284,slow=5.8,SNR=15
SUMG Summit 82.19 360 *i*P **P 13 22 28.6 -2.0**
comp=Z,3.0nm,0.9s,mb4.2
SUMG *i*S S 13 33 06.3 +23
E15A Deer Lodge 82.22 42⇑P **P 13 22 30.6 -0.5**
baz=82,SNR=12
L11A Cat Creek Ranc 82.24 47⇑P **P 13 22 31.3 -0.2**
baz=82
G14A Jackson 82.28 43⇓P **P 13 22 31.2 -0.3**
baz=82
SMMC Simmler 82.32 55⇓P **P 13 22 31.9 0.0**
baz=82
N10A Dunphy 82.40 49⇑P **P 13 22 32.5 +0.2**
baz=82
RCTC Rector, Farmer 82.44 53⇓P **P 13 22 32.3 -0.3**
baz=82
HLID Hailey 82.47 45⇓P **P 13 22 32.5 -0.1**
baz=82,SNR=5.9
HLID Hailey 82.47 45 *e*P **P 13 22 32.6 0.0**
comp=Z,5.1nm,1.0s,mb4.4
I13A Wildhorse Cree 82.50 45⇑P **P 13 22 33.1 +0.4**
baz=82,SNR=11
M11A Holland Ranch, 82.56 48⇓P **P 13 22 33.8 +0.7**
baz=82
D16A Dana Ranch, Ca 82.58 41⇑P **P 13 22 32.9 -0.2**
baz=82,SNR=12
K12A Draper Farm, C 82.59 46⇓P **P 13 22 32.9 -0.3**
baz=82
F15A Butte 82.59 43⇑P **P 13 22 32.8 -0.3**
baz=82,SNR=28
O10A Cortez Mining, 82.60 49⇓P **P 13 22 33.6 +0.3**
baz=82
LRM Limekiln Ridge 82.62 43 *e*P **P 13 22 33.7 +0.4**
comp=Z,88nm,1.0s,mb5.7
A18A Metzger Ranch, 82.62 39⇓P **P 13 22 33.8 +0.5**
baz=82
H14A Leadore 82.64 44⇑P **P 13 22 33.2 -0.2**
baz=82
PKM Peak Mountain 82.64 55⇓P **P 13 22 33.5 -0.1**
baz=82
J13A Cove Ranch, Pi 82.70 45⇓P **P 13 22 34.0 +0.2**
baz=82
L12A House Creek Ra 82.74 47⇑P **P 13 22 34.4 +0.3**
baz=83
C17A Wharram Farm, 82.74 40⇓P **P 13 22 33.8 -0.1**
baz=82
E16A East Helena 82.75 42⇑P **P 13 22 34.9 +0.9**
baz=83
DLMT Dillon 82.76 43 *e*P **P 13 22 34.4 +0.3**
comp=Z,28nm,1.5s,mb5.1
VES Vestal, Richgr 82.76 54⇑P **P 13 22 33.7 -0.5**
baz=83
TIN Tinemaha 82.85 52⇑P **P 13 22 34.1 -0.5**
baz=83
N11A Elko Archery C 82.88 48⇓P **P 13 22 34.8 +0.1**
baz=83
I14A Mackay 82.91 45⇓P **P 13 22 34.5 -0.4**
baz=83,SNR=18
G15A Dillon 82.92 43⇓P **P 13 22 35.4 +0.5**
baz=83
P10A Eureka 82.93 50⇓P **P 13 22 34.8 -0.2**
baz=83
B18A Beardsley Farm 82.93 39⇑P **P 13 22 34.6 -0.2**
baz=83,SNR=12
D17A Six Diamond Ra 83.03 41⇑P **P 13 22 35.0 -0.4**
baz=83
H15A Lima 83.09 44⇓P **P 13 22 35.3 -0.5**
baz=83
K13A Stover Farm, H 83.11 46⇓P **P 13 22 36.3 +0.4**
baz=83
EGMT Eagleton 83.13 40⇑P **P 13 22 35.7 -0.3**
baz=83
F16A Kennard Place, 83.14 42⇑P **P 13 22 35.8 -0.2**
baz=83,SNR=8.2
M12A Wells 83.15 47⇓P **P 13 22 36.5 +0.3**
baz=83,SNR=6.8
J14A Carey 83.16 45⇑P **P 13 22 36.4 +0.2**
baz=83,SNR=12
BOZ Bozeman (W) 83.21 42⇑P **P 13 22 36.8 +0.4**
baz=83
BOZ Bozeman (W) 83.21 42 *e*P **P 13 22 36.6 +0.2**
BOZ pmax pmax
comp=Z,21nm,1.5s,mb5.0
BOZ Bozeman (W) 83.21 42 *e*P **P 13 22 36.6 +0.2**
comp=Z,21nm,1.5s,mb5.0
CWC Cottonwood Cre 83.23 53⇓P **P 13 22 36.2 -0.4**
baz=83
ELK Elko 83.24 48 LR LR 13 53 11.5
comp=Z,803nm,21.9s,MS5.0,baz=289,slow=31
O11A Cowboy Ranch, 83.25 49⇓P **P 13 22 36.6 -0.1**
baz=83
ARVC Arvin 83.26 54⇓P **P 13 22 37.2 +0.3**
baz=83
E17A Martinsdale 83.27 41⇑P **P 13 22 37.2 +0.6**
baz=83,SNR=13

ISA **Isabella** 83.29 54 ⇑P P 13 22 36.7 -0.3
baz=83
G16A **Moss Hill, Enn** 83.31 43 ⇑P P 13 22 36.9 0.0
baz=83
N12A **Clover Valley,** 83.33 48 ⇓P P 13 22 37.8 +0.7
baz=83
N12A **Clover Valley,** 83.33 48 *e*P P 13 22 37.1 +0.1
comp=Z,14nm,1.2s,mb4.9
Q10A **Clear Creek Ra** 83.34 50 ⇑P P 13 22 37.2 0.0
baz=83
AKASG **Malin Array Be** 83.40 324 P P 13 22 34.1 -3.1
comp=Z,2.1nm,0.6s,mb4.3,baz=51,slow=5.3,SNR=9.4
AKASG LR LR 14 02 10.6
comp=Z,1µm,19.8s,MS5.3,baz=35,slow=37
AKASG **Malin Array Be** 83.40 324 *i* P P 13 22 35.7 -1.5
AKASG pmax pmax
comp=Z,2.0nm,0.6s
P11A **Circle Ranch,** 83.45 49 ⇑P P 13 22 37.8 0.0
baz=83
L13A **Double Diamond** 83.47 46 ⇑P P 13 22 37.9 +0.1
baz=83
GRAC **Grapevine Rang** 83.48 52 ⇑P P 13 22 38.1 +0.1
baz=83
I15A **Monteview** 83.49 44 ⇑P P 13 22 38.2 +0.4
baz=83
D18A **Linhart Farms,** 83.53 40 ⇓P P 13 22 37.7 -0.3
baz=83
BLG **Laguna Peak** 83.54 55 ⇑P P 13 22 38.0 -0.3
baz=83
SIM **Simferopol'** 83.54 317 *e*P P 13 22 39.0 +0.9
SIM *e*S S 13 33 00.0 +1.8
SIM pmax pmax
comp=Z,90nm,7.5s
SIM MLR MLR
comp=Z,800nm,18.7s,MS5.1
FFC **Flin Flon** 83.55 31 *i* P P 13 22 38.6 +0.7
FFC **Flin Flon** 83.55 31 *e*P P 13 22 34.9 -3.1
comp=Z,18nm,1.1s,mb5.1
OSI **Osito Adit** 83.57 55 ⇓P P 13 22 37.9 -0.6
baz=83
S10A **Tonopah Range,** 83.61 51 ⇓P P 13 22 38.2 -0.4
baz=83,SNR=6.6
TAOE **Nuku Hiva Isla** 83.64 103 *e*LR LR 13 48 59.7
comp=Z,2µm,25.5s,baz=294
R10A **Warm Springs** 83.65 51 ⇑P P 13 22 38.6 -0.2
baz=84
F17A **Fitzpatrick Pl** 83.67 42 ⇓P P 13 22 38.3 -0.4
baz=84,SNR=7.4
M13A **Montello** 83.67 47 ⇓P P 13 22 38.4 -0.4
baz=84
M13A **Montello** 83.67 47 *e*P P 13 22 39.0 +0.1
comp=Z,50nm,1.9s,mb5.3
QLMT **Earthquake Lak** 83.74 43 *e*P P 13 22 40.5 +1.4
comp=Z,6.0nm,0.8s,mb4.8
K14A **Jones Ranch, D** 83.75 46 ⇑P P 13 22 39.7 +0.5
baz=84
E18A **Harlowton** 83.78 41 ⇑P P 13 22 38.9 -0.4
baz=84,SNR=13
O12A **Currie** 83.80 48 ⇓P P 13 22 39.7 +0.2
baz=84
J15A **Blackfoot** 83.81 45 ⇑P P 13 22 39.6 +0.1
baz=84
MPMC **Manual Prospec** 83.82 53 ⇓P P 13 22 39.3 -0.4
baz=84
Q11A **Duckwater** 83.84 50 ⇑P P 13 22 39.5 -0.2
baz=84,SNR=5.5
N13A **Wendover, West** 83.89 48 ⇑P P 13 22 39.7 -0.2
baz=84
N13A **Wendover, West** 83.89 48 *e*P P 13 22 37.8 -2.2
H16A **Russell Place,** 83.91 43 ⇑P P 13 22 40.4 +0.4
baz=84,SNR=7.7
G17A **Pierce Place,** 83.92 42 ⇓P P 13 22 39.8 -0.2
baz=84
LRMC **Laurel Mountai** 83.94 54 ⇑P P 13 22 40.3 0.0
baz=84
L14A **Malta** 83.96 46 ⇓P P 13 22 40.4 +0.1
baz=84
EDW2 **Edwards Air Fo** 83.99 54 ⇓P P 13 22 40.4 -0.2
baz=84
DECC **Green Verdugo** 84.02 55 ⇓P P 13 22 40.9 +0.2
baz=84
P12A **McGill** 84.06 49 ⇓P P 13 22 40.4 -0.5
baz=84
FURC **Furnace Creek,** 84.09 52 ⇓P P 13 22 40.8 -0.3
baz=84
K15A **Arbon** 84.10 45 ⇓P P 13 22 40.6 -0.4
baz=84
YMR **Madison River** 84.11 43 *e*P P 13 22 40.8 -0.2
comp=Z,18nm,0.9s,mb5.2
R11A **Troy Canyon, C** 84.12 50 ⇑P P 13 22 41.2 0.0
baz=84,SNR=11
M14A **Sheep Mountain** 84.14 47 ⇑P P 13 22 41.3 +0.1
baz=84,SNR=12
I16A **Newdale** 84.18 44 ⇓P P 13 22 41.5 +0.1
baz=84
F18A **Big Timber** 84.24 42 ⇓P P 13 22 41.4 -0.2
baz=84
FMP **Fort Macarthur** 84.29 55 ⇓P P 13 22 42.2 +0.1
baz=84
YFT **Old Faithful** 84.30 43 *e*P P 13 22 44.1 +2.1
comp=Z,112nm,1.7s,mb5.7
Q12A **Willow Creek R** 84.32 49 ⇓P P 13 22 42.6 +0.4
baz=84
S11A **Rachel** 84.34 51 ⇑P P 13 22 42.3 0.0
baz=84
O13A **Hicks Ranch, I** 84.38 48 ⇑P P 13 22 42.9 +0.4
baz=84
H17A **Grant Village** 84.48 43 ⇓P P 13 22 43.9 +1.0
baz=84
U10A **Ash Meadows, A** 84.49 52 ⇓P P 13 22 44.0 +0.8
baz=84
IMW **Indian Meadow** 84.51 44 *e*P P 13 22 44.7 +1.6
comp=Z,12nm,0.9s,mb5.0
BFSC **Mount Baldy Ra** 84.52 55 ⇑P P 13 22 43.4 +0.1
baz=84
L15A **Malad City** 84.53 46 ⇑P P 13 22 43.8 +0.6
baz=84
RRI2 **Red Ridge** 84.55 44 *e*P P 13 22 43.9 +0.7
comp=Z,14nm,0.9s,mb5.1
HFS **Hagfors** 84.55 337 P P 13 22 38.3 -4.7
comp=Z,2.5nm,0.7s,mb4.5,baz=60,slow=3.6,SNR=7.0
HFS **Hagfors** 84.55 337 P P 13 22 38.3 -4.6
HFS pmax pmax
comp=Z,3.0nm,0.7s
K16A **Soda Springs** 84.63 45 ⇓P P 13 22 44.2 +0.5
baz=84,SNR=9.7
G18A **Lazy EL Ranch,** 84.63 42 ⇑P P 13 22 44.4 +0.8
baz=84
GSC **Goldstone** 84.66 53 ⇑P P 13 22 43.7 -0.3
baz=84
P13A **Bates Ranch, G** 84.68 49 ⇑P P 13 22 44.3 +0.3
baz=84,SNR=11
TPAW **Teton Pass** 84.71 44 *e*P P 13 22 45.2 +1.2
comp=Z,7.6nm,0.8s,mb4.9
RRX **Edison Barstow** 84.72 54 ⇓P P 13 22 44.4 +0.1
baz=85
M15A **Larsen Ranch,** 84.75 46 ⇓P P 13 22 44.4 +0.1
baz=85
SHOC **Shoshone** 84.77 53 ⇓P P 13 22 44.3 -0.3
baz=85
NOA **NORSAR Array B** 84.77 338 P P 13 22 40.9 -3.1
comp=Z,3.2nm,0.7s,mb4.6,baz=46,slow=4.9,SNR=9.1
NOA LR LR 14 03 39.9
comp=Z,610nm,20.9s,MS5.0,baz=20,slow=38
NOA **NORSAR Array B** 84.77 338 P P 13 22 40.9 -3.1
NOA pmax pmax
comp=Z,3.0nm,0.7s
NOA MLR MLR
comp=Z,610nm,20.9s
NOA **NORSAR Array B** 84.77 338 P P 13 22 40.9 -3.1
NOA LR LR 14 03 39.9
R12A **Pony Springs,** 84.81 50 ⇓P P 13 22 45.2 +0.5
baz=85,SNR=6.8
SPUT **South Promonto** 84.83 47 *e*P P 13 22 46.1 +1.4
comp=Z,15nm,1.2s,mb5.0
REDW **Red Top Meadow** 84.83 44 *e*P P 13 22 44.7 0.0
comp=Z,21nm,1.4s,mb5.1
LOHW **Long Hollow** 84.86 44 *e*P P 13 22 45.5 +0.7
comp=Z,14nm,1.3s,mb4.9
T11A **Corn Creek, Al** 84.90 51 ⇓P P 13 22 45.6 +0.5
baz=85
RLMT **Red Lodge** 84.91 42 ⇓P P 13 22 45.8 +0.8
baz=85,SNR=9.9
RLMT **Red Lodge** 84.91 42 *e*P P 13 22 45.8 +0.8
comp=Z,31nm,1.2s,mb5.3
Q13A **Wheeler Ranch,** 84.92 49 ⇑P P 13 22 44.5 -0.7
baz=85
J17A **Brown Place, J** 84.92 44 ⇑P P 13 22 45.1 0.0
baz=85
S12A **Delamar Landin** 84.98 51 ⇑P P 13 22 46.3 +0.7
baz=85
N15A **Stansbury Isla** 84.99 47 ⇑P P 13 22 45.8 +0.3
baz=85
BBRC **Big Bear Solar** 85.06 54 ⇑P P 13 22 46.2 +0.2
baz=85
K17A **Gardner Place,** 85.10 45 ⇑P P 13 22 46.0 0.0
baz=85
DUG **Dugway** 85.13 48 ⇓P P 13 22 46.2 -0.1
baz=85,SNR=7.5
DUG **Dugway** 85.13 48 *e*P P 13 22 46.2 -0.1
DUG pmax pmax
comp=Z,29nm,1.5s,mb5.2
DUG **Dugway** 85.13 48 *e*P P 13 22 46.2 0.0
comp=Z,29nm,1.5s,mb5.2
L16A **Fish Haven** 85.14 46 ⇓P P 13 22 46.8 +0.6
baz=85
MURC **Murrieta** 85.15 55 ⇑P P 13 22 46.9 +0.4
baz=85
HEC **Hector,Ludlow** 85.23 54 ⇓P P 13 22 47.5 +0.7
baz=85
TUQ **Turquoise Moun** 85.24 53 ⇑P P 13 22 46.7 -0.2
baz=85,SNR=6.7
P14A **Drum Mountains** 85.26 48 ⇓P P 13 22 47.3 +0.4
baz=85
HWUT **Hardware Ranch** 85.26 46 *e*P P 13 22 46.8 0.0
comp=Z,10nm,1.1s,mb4.9
I18A **Diamond G Ranc** 85.31 43 ⇓P P 13 22 47.6 +0.5
baz=85
O15A **The Old Anders** 85.32 47 ⇓P P 13 22 47.5 +0.3
baz=85
R13A **O'Grain Ranch,** 85.32 50 ⇑P P 13 22 48.0 +0.8
baz=85
M16A **Huntsville** 85.36 46 ⇑P P 13 22 47.7 +0.3
baz=85
Q14A **Sevier Lake (B** 85.41 49 ⇑P P 13 22 47.6 -0.1
baz=85,SNR=12
J18A **Kendall Valley** 85.43 44 ⇑P P 13 22 48.1 +0.4
baz=85
L17A **Cokeville** 85.46 45 ⇓P P 13 22 48.2 +0.3
baz=85
T12A **Moapa** 85.50 51 ⇑P P 13 22 48.6 +0.5
baz=85
KIS **Kishinev** 85.63 321 *e*P P 13 22 44.0 -4.6
KIS LRM 14 06 34.0
comp=Z,1µm,15.0s
KIS **Kishinev** 85.63 321 *e*P P 13 22 44.0 -4.6
KIS *e* 13 26 09.0
KIS *e* 13 28 10.0
KIS *e* 13 33 15.0
KIS *e* 13 34 20.0
N16A **Rees Ranch, Co** 85.70 47 ⇓P P 13 22 49.5 +0.4
baz=86
PFO **Pinyon Flat Ob** 85.70 55 ⇑P P 13 22 50.0 +0.8
baz=86
K18A **Toltan Ranch,** 85.71 44 ⇓P P 13 22 49.0 -0.2
baz=86
GMRC **Granite Mounta** 85.74 54 ⇓P P 13 22 48.3 -1.1
baz=86,SNR=7.8
NLU **North Lily Min** 85.74 48 *e*P P 13 22 46.5 -2.8
comp=Z,6.5nm,0.9s,mb4.9
U12A **Valley of Fire** 85.76 52 ⇑P P 13 22 49.2 -0.3
baz=86
P15A **Leamington** 85.80 48 ⇑P P 13 22 49.9 +0.3
baz=86
JLU **Jordanelle** 85.83 47 *e*P P 13 22 50.5 +0.7
comp=Z,25nm,1.5s,mb5.2
BELC **Belle Mtn. Jos** 85.86 54 ⇓P P 13 22 50.3 +0.3
baz=86
V12A **Nelson** 85.88 52 ⇓P P 13 22 50.3 +0.2
baz=86
ARUT **Antelope Range** 85.88 50 *e*P P 13 22 49.5 -0.5
ARUT pmax pmax
comp=Z,64nm,1.0s,mb5.8
ARUT **Antelope Range** 85.88 50 *e*P P 13 22 49.5 -0.5
comp=Z,64nm,1.0s,mb5.8
M17A **Scullys Gap (B** 85.91 46 ⇓P P 13 22 49.5 -0.6
baz=86
R14A **James Farms, M** 85.92 49 ⇓P P 13 22 50.6 +0.4
baz=86
T13A **Saint George** 85.92 51 ⇑P P 13 22 50.5 +0.2
baz=86
BW06 **Boulder Array** 85.95 44 ⇑P P 13 22 50.1 -0.1
baz=86
PDAR **Pinedale Array** 85.95 44 P P 13 22 49.9 -0.4
comp=Z,1.7nm,0.8s,mb4.3,baz=298,slow=3.2,SNR=15
PDAR LR LR 13 55 26.8
comp=Z,1µm,20.8s,MS5.2,baz=317,slow=32
LDFC **Landfair** 86.00 53 *e*P P 13 22 51.1 +0.4
comp=Z,25nm,1.1s,mb5.3
O16A **Springville** 86.00 47 ⇑P P 13 22 50.5 -0.1
baz=86
Q15A **Fillmore** 86.01 49 ⇓P P 13 22 50.2 -0.5
baz=86
DGMT **Dagmar** 86.02 37 ⇓P P 13 22 49.9 -0.6
baz=86
DAU **Daniels Canyon** 86.06 47 *e*P P 13 22 48.8 -2.1
DAU pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
DAU **Daniels Canyon** 86.06 47 *e*P P 13 22 48.8 -2.1
comp=Z,9.1nm,1.0s,mb5.0
MONP **Monument Peak** 86.06 55 ⇓P P 13 22 50.4 -0.6
baz=86
W12A **Cal Nev Ari** 86.06 53 ⇓P P 13 22 50.8 -0.2
baz=86
N17A **Moffit Pass** 86.07 46 ⇑P P 13 22 51.2 +0.3
baz=86
S14A **Cedar City** 86.08 50 ⇑P P 13 22 51.3 +0.2
baz=86
L18A **Fontenelle, Gr** 86.08 45 ⇓P P 13 22 50.9 0.0
baz=86
U13A **Pakoon Wash** 86.17 51 ⇑P P 13 22 51.2 -0.3
baz=86
P16A **Fountain Green** 86.19 48 ⇓P P 13 22 51.5 -0.1
baz=86
M18A **Lyman** 86.32 46 ⇑P P 13 22 51.6 -0.6
baz=86
K19A **Absolon Red Bu** 86.37 44 ⇑P P 13 22 52.7 +0.3
baz=86
MSU **Marysvale** 86.39 49 *e*P P 13 22 51.3 -1.2
MSU pmax pmax
comp=Z,33nm,1.8s,mb5.3
MSU **Marysvale** 86.39 49 *e*P P 13 22 51.3 -1.2
comp=Z,33nm,1.8s,mb5.3
IRM **Iron Mountain** 86.40 54 ⇑P P 13 22 52.3 -0.4
baz=86
DVTC **Desert V Tower** 86.41 56 ⇓P P 13 22 52.8 0.0
baz=86
BC3 **Big Chuckawall** 86.42 54 ⇓P P 13 22 52.5 -0.3
baz=86
L19A **Farson** 86.42 45 ⇑P P 13 22 52.6 0.0
baz=86
V13A **Grand Canyon W** 86.43 52 ⇓P P 13 22 52.8 0.0
baz=86
BR131 **Keskin Array S** 86.46 313 *e*P P 13 22 52.9 +0.1
comp=Z,2.2nm,0.9s,mb4.4
BRTR **Keskin Array B** 86.46 313 P P 13 22 53.2 +0.4
comp=Z,1.8nm,0.9s,mb4.3,baz=86,slow=4.0,SNR=6.3
BRTR PP PP 13 26 19.9 +5.8
comp=Z,1.7nm,1.2s,baz=115,slow=8.3,SNR=3.9
BRTR LR LR 14 04 53.9
comp=Z,493nm,19.7s,MS4.9,baz=238,slow=38
BRTR **Keskin Array B** 86.46 313 P P 13 22 53.2 +0.4
BRTR 13 26 19.9
BRTR pmax pmax
comp=Z,2.0nm,0.9s
BRTR pmax pmax
comp=Z,2.0nm,1.2s
BRTR MLR MLR
comp=Z,493nm,19.7s
BRTR **Keskin Array B** 86.46 313 *i* P P 13 22 54.0 +1.2
BRTR pmax pmax
comp=Z,2.0nm,0.9s
R15A **Junction** 86.47 49 ⇓P P 13 22 53.3 +0.4
baz=86
T14A **Hurricane** 86.48 50 ⇓P P 13 22 52.9 -0.1
baz=86
NEE2 **Needles Airpor** 86.50 53 ⇓P P 13 22 53.6 +0.4
baz=86
SWSC **Sam W. Stewart** 86.50 55 ⇓P P 13 22 53.2 0.0
baz=86
O17A **Robinson Place** 86.51 47 ⇑P P 13 22 53.4 +0.3
baz=86
U14A **Mt Trumbull** 86.73 51 ⇓P P 13 22 54.3 +0.1
baz=86
U14A ⇓P 13 22 54.9
baz=86
K20A **Yellowstone Ra** 86.77 44 ⇓P P 13 22 54.0 -0.3
baz=87
N18A **Larsen Ranch,** 86.81 46 ⇑P P 13 22 54.5 -0.1
baz=87
M19A **Rock Springs** 86.86 45 ⇑P P 13 22 55.5 +0.7
baz=87
W13A **Hualapai Mount** 86.87 53 ⇑P P 13 22 54.5 -0.4
baz=87
Q16A **Castle Valley** 86.87 48 ⇑P P 13 22 55.9 +1.0
baz=87
P17A **Butcher Ranch,** 86.88 47 ⇑P P 13 22 54.8 -0.1
baz=87
O18A **Roosevelt** 86.95 47 ⇑P P 13 22 55.3 0.0
baz=87
R16A **Teasdale** 86.98 49 ⇑P P 13 22 55.9 +0.5
baz=87
T15A **Red Dirt Ranch** 86.99 50 ⇓P P 13 22 55.1 -0.4
baz=87
Y12C **Blythe** 87.05 54 ⇓P P 13 22 56.2 +0.3
baz=87
PDMCI **Parker Dam,Lak** 87.07 53 ⇑P P 13 22 56.5 +0.5
baz=87
L20A **Wamsutter** 87.12 44 ⇑P P 13 22 57.1 +1.1
baz=87
P18A **Preston Nutter** 87.12 47 ⇓P P 13 22 56.5 +0.4
baz=87
X13A **Yucca** 87.15 53 ⇓P P 13 22 57.0 +0.7
baz=87
V14A **Boquillas Ranc** 87.16 52 ⇓P P 13 22 57.1 +0.7
baz=87
GLA **Glamis** 87.17 55 ⇓P P 13 22 57.0 +0.5
baz=87
GLA **Glamis** 87.17 55 *e*P P 13 22 56.3 -0.1
GLA pmax pmax
comp=Z,28nm,1.5s,mb5.3
GLA **Glamis** 87.17 55 *e*P P 13 22 56.3 -0.1
comp=Z,28nm,1.5s,mb5.3
N19A **John Jarvie Ra** 87.17 46 ⇓P P 13 22 56.4 +0.1
baz=87
SRU **San Rafael** 87.20 48 ⇑P P 13 22 56.5 0.0
baz=87
SRU **San Rafael** 87.20 48 *e*P P 13 22 56.8 +0.3
SRU pmax pmax
comp=Z,30nm,1.7s,mb5.2
SRU **San Rafael** 87.20 48 *e*P P 13 22 56.8 +0.3
comp=Z,30nm,1.7s,mb5.2
U15A **North Rim** 87.35 51 ⇓P P 13 22 58.1 +0.8
baz=87
SFJD **Kangerlussuaq** 87.37 5 *i* P P 13 22 55.8 -0.9
comp=Z,7.2nm,0.8s,mb5.0
SFJD *i* 13 26 24.9
SFJD
comp=Z,230nm,18.0s
W14A **Seligman** 87.39 52 ⇓P P 13 22 58.0 +0.6
baz=87
R17A **Hanksville Air** 87.43 48 ⇑P P 13 22 58.0 +0.4
baz=87
Q18A **Rafter H Ranch** 87.47 48 ⇓P P 13 22 56.4 -1.3
baz=87
M20A **Sweetwater, Wa** 87.49 45 ⇑P P 13 22 58.0 +0.2
baz=87
O19A **Miners Draw (B** 87.52 46 ⇓P P 13 22 58.3 +0.3
baz=87
BSD **Bornholm Skovb** 87.55 332 *i* P P 13 22 56.3 -1.5
BSD *i* 13 26 19.6
BSD
comp=Z,530nm,16.0s
T16A **Glen Canyon Da** 87.61 50 ⇓P P 13 22 58.6 +0.1
baz=87
V15A **Kaibab Nationa** 87.73 51 ⇑P P 13 22 59.6 +0.5
baz=88
L21A **Rawlins** 87.75 44 ⇓P P 13 22 59.3 +0.2
baz=88
S17A **Black Ridge (B** 87.77 49 ⇓P P 13 22 59.6 +0.4
baz=88
N20A **Spence Gulch,** 87.79 45 ⇑P P 13 22 59.3 +0.1
baz=88
X14A **Yava** 87.89 53 ⇑P P 13 23 00.4 +0.6
baz=88
M21A **Separation Pea** 87.95 44 ⇓P P 13 23 00.2 +0.2
baz=88
Z13A **Yuma Proving G** 87.95 54 ⇑P P 13 23 00.5 +0.3
baz=88
P19A **Cripple Cowboy** 87.96 47 ⇓P P 13 23 00.4 +0.3
baz=88
W15A **Williams** 87.98 52 ⇑P P 13 23 00.5 +0.2
baz=88
R18A **Canyonlands Na** 88.00 48 ⇑P P 13 23 00.3 0.0
baz=88
Y14A **Wickenburg** 88.07 53 ⇓P P 13 23 01.0 +0.3
baz=88
113A **Mohawk Valley,** 88.08 55 ⇑P P 13 23 00.9 0.0
baz=88
T17A **Navajo Res., N** 88.09 50 ⇓P P 13 23 00.9 +0.1
baz=88
KOLS **Kolonicke sedl** 88.10 325 *e*P P 13 23 00.5 -0.1
KOLS **Kolonicke sedl** 88.10 325 *e*P P 13 23 00.5 -0.1
Q19A **Hogan Spring (** 88.12 47 ⇑P P 13 23 00.4 -0.5
baz=88
COP **Copenhagen** 88.16 334 *i* P P 13 22 58.7 -2.0
COP *i* 13 26 26.3
COP
comp=Z,360nm,18.0s
O20A **White River Ci** 88.17 46 ⇓P P 13 23 01.0 -0.1
baz=88
S18A **Hurst Farm, Bl** 88.29 49 ⇓P P 13 23 02.2 +0.5
baz=88
L22A **Ellis Ranch, M** 88.30 44 ⇑P P 13 23 02.0 +0.3
baz=88
N21A **Black Mountain** 88.31 45 ⇑P P 13 23 02.0 +0.3
baz=88
X15A **Humboldt** 88.35 52 ⇑P P 13 23 02.3 +0.2
baz=88
Z14A **Wintersburg** 88.39 54 ⇓P P 13 23 02.5 +0.2
baz=88
WUAZ **Wupatki** 88.44 51 ⇑P P 13 23 02.7 +0.2
baz=88
R19A **Curley Farm, L** 88.47 48 ⇓P P 13 23 02.5 -0.1
baz=88
CRVS **Cervenica-Dubn** 88.54 325 *e*P P 13 23 02.6 0.0
CRVS *e* pP 13 23 12.0 +0.3
CRVS pmax pmax
comp=Z,9.0nm,1.5s,mb4.9
CRVS **Cervenica-Dubn** 88.54 325 *e*P P 13 23 02.6 0.0
comp=Z,8.5nm,1.5s,mb4.8
CRVS *e* pP 13 23 12.0 +0.3
CRVS **Cervenica-Dubn** 88.54 325 *e*P P 13 23 02.6 0.0
CRVS *e*pP pP 13 23 12.0 +0.3
Y15A **Casa Rosa Ranc** 88.55 53 ⇑P P 13 23 03.9 +0.9
baz=88
W16A **Flagstaff** 88.55 52 ⇓P P 13 23 03.7 +0.7
baz=88
MMAI **Mount Meron Ar** 88.57 306 LR LR 14 07 17.5
comp=Z,343nm,19.3s,MS4.8,baz=80,slow=39
RSSD **Black Hills** 88.59 41 *e*P P 13 23 03.0 0.0
RSSD pmax pmax
comp=Z,39nm,1.9s,mb5.4
RSSD **Black Hills** 88.59 41 *e*P P 13 23 03.0 0.0
comp=Z,39nm,1.9s,mb5.4
O21A **Pagoda** 88.63 46 ⇑P P 13 23 03.3 0.0
baz=88
T18A **Mexican Hat** 88.66 49 ⇑P P 13 23 03.7 +0.2
baz=88
114A **Black Gap (USA** 88.74 54 ⇑P P 13 23 04.5 +0.5
baz=89
Q20A **Ridgley Place,** 88.77 47 ⇓P P 13 23 04.0 0.0
baz=89
V17A **Tonalea, Kykot** 88.80 51 ⇑P P 13 23 04.0 -0.2
baz=89
S19A **Harvey Farm, M** 88.84 48 ⇓P P 13 23 04.3 0.0
baz=89
MUD **Monsted U'grnd** 88.86 336 *i* P P 13 23 04.3 +0.3
MUD
comp=Z,610nm,17.0s
X16A **Lo Mia Camp, P** 88.95 52 ⇑P P 13 23 06.0 +1.1
baz=89
N22A **Wattenberg Ran** 88.96 45 ⇑P P 13 23 05.1 +0.3
baz=89
Z15A **Gila River Ind** 89.00 53 ⇑P P 13 23 05.3 +0.2
baz=89
PV01 **Paradox Valley** 89.02 48 *e*P P 13 23 06.9 +1.7
U18A **Rough Rock, Ch** 89.03 50 ⇓P P 13 23 05.0 -0.3
baz=89
R20A **Redvale** 89.12 48 ⇑P P 13 23 05.7 +0.1
baz=89
W17A **Winslow** 89.13 51 ⇑P P 13 23 06.6 +0.8
baz=89

214A	Organ Pipe Nat	89.19	55	⇓P	P	13 23 05.7 -0.3
	baz=89					
Y16A	Circle Bar Ran	89.20	53	⇑P	P	13 23 06.9 +0.8
	baz=89					
ULM	Lac du Bonnet	89.25	33	LR	LR	14 09 02.1
	comp=Z,402nm,18.5s,MS4.9,baz=247,slow=40					
Q21A	Lamborn Mesa,	89.31	47	⇑P	P	13 23 07.2 +0.8
	baz=89					
V18A	Ganado	89.36	50	⇓P	P	13 23 07.4 +0.6
	baz=89					
T19A	Beclabito	89.40	49	⇓P	P	13 23 07.1 +0.1
	baz=89					
X17A	Forest Lakes	89.45	52	⇓P	P	13 23 07.5 +0.3
	baz=89					
U19A	Dine' College,	89.56	50	⇓P	P	13 23 07.8 +0.1
	baz=89					
MVCO	Mesa Verde	89.56	48	⇑P	P	13 23 08.3 +0.6
	baz=89					
R21A	Cimarron	89.57	47	⇑P	P	13 23 08.2 +0.5
	baz=89					
OKC	Ostrava-Krasne	89.61	327	eSS	SS	13 39 58.0 +5.9
OKC				AMS	AMS	14 06 30.0
	comp=Z,2μm,16.4s					
116A	Eloy	89.70	54	⇓P	P	13 23 09.1 +0.6
	baz=90					
Q22A	Crested Butte,	89.73	46	⇓P	P	13 23 09.2 +0.8
	baz=90					
Y17A	Roosevelt	89.75	52	⇑P	P	13 23 09.3 +0.7
	baz=90					
S21A	Coal Bank Pass	89.79	48	⇑P	P	13 23 09.4 +0.6
	baz=90					
W18A	Petrified Fore	89.80	51	⇑P	P	13 23 09.4 +0.6
	baz=90					
X18A	Snowflake	89.95	51	⇑P	P	13 23 10.0 +0.4
	baz=90					
U20A	Newcomb	89.98	49	⇑P	P	13 23 10.2 +0.5
	baz=90					
ISCO	Idaho Springs	90.05	45	eP	P	13 23 08.9 -1.0
ISCO				pmax	pmax	
	comp=Z,8.0nm,1.4s,mb4.9					
ISCO	Idaho Springs	90.05	45	eP	P	13 23 08.8 -1.1
	comp=Z,7.9nm,1.4s,mb4.8					
VYHS	Vyhne	90.14	326	eP	P	13 23 07.8 -2.4
VYHS				e		13 23 19.7
VYHS				pmax	pmax	
	comp=Z,5.0nm,1.3s,mb4.7					
VYHS	Vyhne	90.14	326	eP	P	13 23 07.8 -2.4
	comp=Z,4.8nm,1.3s,mb4.7					
VYHS				e		13 23 19.7
VYHS	Vyhne	90.14	326	eP	P	13 23 07.8 -2.4
VYHS				epP	pP	13 23 19.6 +0.3
DPC	Dobruska-Polom	90.15	328	eP	P	13 23 07.8 -2.4
DPC				eSS	SS	13 40 12.8 +13
DPC				MLR	MLR	
	comp=Z,1μm,14.2s,MS5.5					
DPC	Dobruska-Polom	90.15	328	eP	P	13 23 07.8 -2.4
DPC				ex	x	13 40 12.8
DPC				AMS	AMS	14 09 20.0
	comp=Z,1μm,14.2s					
216A	Three Points,	90.16	54	⇑P	P	13 23 10.9 +0.3
	baz=90					
R22A	Saguache, Gunn	90.17	47	⇓P	P	13 23 10.7 +0.1
	baz=90					
UPC	Upice	90.19	329	eP	P	13 23 09.5 -0.9
UPC	Upice	90.19	329	eP	P	13 23 09.5 -0.9
Z17A	San Carlos Hig	90.22	53	⇓P	P	13 23 10.6 -0.2
	baz=90					
BSEG	Bad Segeberg	90.28	333	eSS	SS	13 40 14.3 +13
Y18A	Canyon Day Jun	90.28	52	⇓P	P	13 23 10.3 -0.8
	baz=90					
T21A	Navajo Lake	90.32	48	⇑P	P	13 23 11.1 -0.2
	baz=90					
V20A	Brimhall	90.33	50	⇑P	P	13 23 11.8 +0.4
	baz=90					
117A	Oracle	90.39	53	⇓P	P	13 23 11.7 0.0
	baz=90					
X19A	St. Johns	90.47	51	⇑P	P	13 23 12.8 +0.8
	baz=90					
U21A	Nageezi	90.54	49	⇑P	P	13 23 12.7 +0.3
	baz=90					
Z18A	Geronimo	90.64	53	⇓P	P	13 23 13.7 +0.9
	baz=90					
W20A	Ramah	90.66	50	⇓P	P	13 23 13.5 +0.7
	baz=90					
VRAC	Vranov	90.72	327	P	P	13 23 10.8 -2.0
	comp=Z,1.2nm,0.3s,mb4.7,baz=256,slow=19,SNR=4.3					
VRAC	Vranov	90.72	327	P	P	13 23 10.8 -2.1
VRAC				pmax	pmax	
	comp=Z,1.0nm,0.3s					
T22A	Edith	90.74	48	⇓P	P	13 23 14.2 +1.0
	baz=90					
217A	Green Valley	90.74	54	⇓P	P	13 23 13.8 +0.5
	baz=91					
Y19A	Nutrioso	90.74	52	⇓P	P	13 23 14.3 +1.0
	baz=91					
PVCC	Panska Ves	90.85	329	eP	P	13 23 12.8 -0.6
PVCC	Panska Ves	90.85	329	eP	P	13 23 12.8 -0.6
PVCC				AMS	AMS	14 08 00.0
V21A	Milan	90.89	49	⇑P	P	13 23 14.6 +0.7
	baz=91					
BRG	Berggiesshubel	90.90	330	eP	P	13 23 11.0 -2.7
	comp=Z,200nm,7.7s					
BRG				PP	PP	13 26 51.0 +1.9
BRG				S	S	13 34 12.0 +3.2
BRG				SS	SS	13 40 09.0 -1.7
BRG						
	comp=Z,2μm,14.8s					
BRG						
	comp=N,1μm,15.1s					
BRG						
	comp=E,1μm,15.1s					
118A	Homack Ranch,	90.92	53	⇑P	P	13 23 14.6 +0.5
	baz=91					
X20A	Quemado	90.97	51	⇓P	P	13 23 15.2 +0.9
	baz=91					
CLL	Collm	91.02	330	eSS	SS	13 40 24.9 +13
CLL	Collm	91.02	330	eP	P	13 23 12.0 -2.2
CLL				eS	S	13 34 10.0 +0.1
CLL				MLR	MLR	
	comp=Z,1μm,15.1s,MS5.5					
CLL	Collm	91.02	330	eP	P	13 23 12.0 -2.2
CLL				eS	S	13 34 10.0 +0.1
CLL				eSP	SP	13 35 13.0 -3.8
CLL				eSS	SS	13 40 08.0 -4.3
CLL				e		13 41 07.0
CLL				eSSS		13 44 06.0
CLL				e		13 45 54.0
CLL				eSSSS		13 47 18.0
CLL				LV		14 06 00.0
	comp=Z,900nm,21.7s					
Z19A	T-Link Ranch,	91.08	52	⇑P	P	13 23 16.0 +1.1
	baz=91					
U22A	Llaves	91.11	48	⇑P	P	13 23 14.5 -0.4
	baz=91					
218A	Dragoon	91.20	54	⇑P	P	13 23 15.7 +0.3
	baz=91					
PRU	Pruhonice	91.24	329	eSS	SS	13 40 24.3 +8.7
PRU				AMS	AMS	14 10 30.0
	comp=Z,1μm,13.2s					
W21A	San Fidel	91.25	50	⇑P	P	13 23 15.9 +0.3
	baz=91					
TREC	Trest	91.27	328	AMS	AMS	14 07 50.0
	comp=Z,2μm,17.2s					
SDCO	Great Sand Dun	91.27	47	eP	P	13 23 16.0 +0.3
	comp=Z,22nm,1.9s,mb5.2					
119A	Ashpeak Ranch,	91.33	53	⇑P	P	13 23 15.8 -0.2
	baz=91					
V22A	San Miguel Ran	91.33	49	⇑P	P	13 23 15.9 -0.1
	baz=91					
Y20A	Horse Springs,	91.39	51	⇓P	P	13 23 17.1 +0.8
	baz=91					
NRDL	Niedersach Rie	91.42	333	eSS	SS	13 40 30.9 +13
X21A	Alamocita Cree	91.52	51	⇑P	P	13 23 17.4 +0.5
	baz=91					
U23A	El Rito	91.59	48	⇑P	P	13 23 17.7 +0.6
	baz=91					
Z20A	Nine Sixteen R	91.66	52	⇑P	P	13 23 17.2 -0.4
	baz=92					
CLZ	Clausthal	91.78	332	eSS	SS	13 40 36.7 +13
W22A	Albuquerque	91.82	50	⇓P	P	13 23 18.3 0.0
	baz=92					
Y21A	Point of Rocks	91.83	51	⇑P	P	13 23 18.5 +0.2
	baz=92					
TANN	Tannenbergstha	91.90	330	eSS	SS	13 40 38.8 +14
V23A	Ortiz Mt. (NFS	91.92	49	⇓P	P	13 23 19.4 +0.7
	baz=92					
120A	U Bar Ranch, L	91.93	53	⇑P	P	13 23 18.9 +0.1
	baz=92					
LAZ	Ladron	91.99	50	eP	P	13 23 19.9 +0.8
	comp=Z,1.1nm,0.9s,mb4.2					
NKC	Novy Kostel	92.03	330	ex	SS	13 40 38.9 +12
NKC				AMS	AMS	14 09 20.0
	comp=Z,1μm,11.6s					
319A	Douglas	92.07	54	⇓P	P	13 23 19.5 0.0
	baz=92					
MOX	Moxa	92.11	331	eSS	SS	13 40 34.0 +6.0
MOX						
	comp=Z,800nm,18.0s					
MOX	Moxa	92.11	331	eSS	SS	13 40 41.3 +13
U24A	Moreno Valley	92.16	48	⇑P	P	13 23 20.5 +0.7
	baz=92					
ANMO	Albuquerque	92.16	50	LR	LR	13 59 17.5
	comp=Z,670nm,20.8s,MS5.1,baz=296,slow=32					
Z21A	St. Cloud Mine	92.21	51	⇓P	P	13 23 19.8 -0.2
	baz=92					
W23A	Werner Place,	92.26	49	⇓P	P	13 23 20.7 +0.4
	baz=92					
KHC	Kasperske Hory	92.29	329	eP	P	13 23 18.0 -2.1
KHC				eSS	SS	13 40 34.5 +3.9
KHC				MLR	MLR	
	comp=Z,2μm,15.3s,MS5.5					
KHC	Kasperske Hory	92.29	329	eP	P	13 23 18.0 -2.1
KHC				eSS	SS	13 40 34.5 +3.9
KHC				AMS	AMS	14 10 40.0
	comp=Z,2μm,15.3s					
T25A	Trinidad	92.33	47	⇓P	P	13 23 21.1 +0.6
	baz=92					
220A	Playas Peak, P	92.34	53	⇓P	P	13 23 21.4 +0.6
	baz=92					
Y22A	Socorro	92.36	51	⇓P	P	13 23 21.6 +0.8
	baz=92					
GEC2	GERESS Array S	92.43	328	eSS	SS	13 40 47.7 +15
GERES	GERESS Array B	92.43	328	P	P	13 23 17.9 -2.9
	comp=Z,0.5nm,0.2s,mb4.5,baz=72,slow=6.0,SNR=4.3					
GERES				LR	LR	14 10 17.6
	comp=Z,851nm,18.8s,MS5.2,baz=208,slow=39					
ROTZ	Rotzenmuhle	92.47	330	eSS	SS	13 40 47.7 +14
121A	Cookes Peak, D	92.54	52	⇑P	P	13 23 22.1 +0.5
	baz=92					
X23A	Hourglass Bar	92.55	50	⇓P	P	13 23 21.4 -0.2
	baz=92					
WET	Wettzell	92.61	329	eSS	SS	13 40 50.2 +15
320A	Kipp Ranch, An	92.64	53	⇑P	P	13 23 21.9 -0.3
	baz=92					
UBBA	Unterbreizbach	92.69	331	eSS	SS	13 40 49.1 +13
Z22A	Elephant Butte	92.73	51	⇑P	P	13 23 21.8 -0.7
	baz=92					
W24A	Lazy 6 Ranch,	92.74	49	⇓P	P	13 23 22.4 -0.1
	baz=92					
U25A	Circle Dot Ran	92.74	47	⇑P	P	13 23 22.4 -0.1
	baz=92					
221A	Mesquite Ranch	92.82	53	⇓P	P	13 23 22.6 -0.4
	baz=93					
V25A	Rancho No Teng	92.92	48	⇑P	P	13 23 23.6 +0.3
	baz=93					
GRF	Grafenberg Arr	92.97	330	eSS	SS	13 40 54.3 +14
GRF				eL		14 08 20.0
	comp=Z,965nm,18.1s					
Y23A	Lovelace Mesa,	93.00	50	⇑P	P	13 23 23.7 0.0
	baz=93					
X24A	Lazy VL Ranch,	93.08	49	⇑P	P	13 23 25.0 +0.9
	baz=93					
U26A	Atchley Ranch,	93.19	47	⇑P	P	13 23 25.3 +0.8
	baz=93					
Z23A	Rita Site, Whi	93.24	51	⇓P	P	13 23 25.5 +0.6
	baz=93					
222A	Williams Famil	93.26	52	⇑P	P	13 23 25.6 +0.6
	baz=93					
BUG	Bochum--Univer	93.37	333	eSS	SS	13 41 00.9 +15
W25A	X Bar L Ranch,	93.38	48	⇓P	P	13 23 26.2 +0.8
	baz=93					
V26A	Tequesquite Ra	93.50	48	⇑P	P	13 23 26.0 0.0
	baz=93					
123A	Bell Site, Whi	93.56	51	⇑P	P	13 23 27.3 +1.0
	baz=93					
X25A	Clemmons Ranch	93.63	49	⇓P	P	13 23 26.6 0.0
	baz=93					
TNS	Taunus Mts	93.80	332	eSS	SS	13 41 05.8 +14
Z24A	Sheeppen Canyo	93.81	50	⇓P	P	13 23 27.2 -0.3
	baz=94					
W26A	Owens Ranch, T	93.92	48	⇓P	P	13 23 28.3 +0.4
	baz=94					
Y25A	Mesa, Roswell	93.95	50	⇑P	P	13 23 28.0 -0.1
	baz=94					
FUR	Furstenfeldbru	94.05	329	eSS	SS	13 41 11.9 +16
124A	Stringfield Ra	94.10	51	⇓P	P	13 23 28.5 -0.3
	baz=94					
224A	Cornudas Mount	94.39	51	⇑P	P	13 23 30.4 +0.2
	baz=94					
W27A	Bowe Ranch, En	94.41	48	⇑P	P	13 23 30.3 +0.1
	baz=94					
RKT	Rikitea	94.43	113	eLR	LR	13 53 51.9
	comp=Z,498nm,33.8s					
Y26A	Elida	94.54	49	⇓P	P	13 23 31.1 +0.2
	baz=94					
X27A	F and S Farms,	94.62	48	⇑P	P	13 23 31.8 +0.6
	baz=94					
125A	Gardner Draw,	94.68	51	⇑P	P	13 23 32.1 +0.6
	baz=94					
324A	Moseley Ranch,	94.77	52	⇑P	P	13 23 32.1 +0.2
	baz=95					
225A	Deer Hill, Car	94.87	51	⇑P	P	13 23 31.9 -0.4
	baz=95					
Y27A	Causey	95.02	49	⇑P	P	13 23 33.1 +0.1
	baz=95					
126A	Clayton Basin,	95.13	50	⇑P	P	13 23 33.5 -0.1
	baz=95					
325A	Bean Ranch, Si	95.18	52	⇓P	P	13 23 33.6 -0.2
	baz=95					
WLF	Walferdange	95.19	333	eSS	SS	13 41 27.2 +15
MSTX	Muleshoe	95.23	49	⇓P	P	13 23 33.9 0.0
	baz=95					
BFO	Black Forest	95.27	331	eSS	SS	13 41 27.8 +15
Z27A	Tatum	95.31	49	⇑P	P	13 23 33.8 -0.5
	baz=95					
226A	Malaga, Loving	95.40	51	⇓P	P	13 23 34.4 -0.4
	baz=95					
425A	Indio Mountain	95.49	52	⇓P	P	13 23 34.9 -0.3
	baz=95					
127A	Arkansas Junct	95.57	50	⇑P	P	13 23 35.7 +0.2
	baz=95					
326A	Caldwell Ranch	95.91	51	⇑P	P	13 23 36.0 -1.1
	baz=96					
227A	Bennet, Jal	96.00	50	⇑P	P	13 23 37.5 0.0
	baz=96					
426A	McDonald Obser	96.24	52	⇓P	P	13 23 38.9 +0.3
	baz=96					
SCHQ	Schefferville	96.45	16	LR	LR	14 13 01.3
	comp=Z,330nm,18.4s,MS4.8,baz=272,slow=39					
526A	Mary Lane Ranc	96.54	52	⇓P	P	13 23 40.2 +0.2
	baz=96					
427A	Hayter Ranch,	96.58	51	⇑P	P	13 23 40.1 -0.1
	baz=96					
626A	Big Bend Ranch	96.79	53	⇓P	P	13 23 41.6 +0.5
	baz=97					
428A	Kincaid Ranch,	97.16	51	⇑P	P	13 23 42.8 0.0
	baz=97					
TXAR	Lajitas Array	97.25	53	P	P	13 23 41.9 -1.4
	comp=Z,0.4nm,0.6s,mb4.0,baz=320,slow=3.3,SNR=3.6					
TXAR				LR	LR	14 00 27.9
	comp=Z,327nm,20.6s,MS4.8,baz=355,slow=31					
528A	Cox Ranch, San	97.41	52	⇓P	P	13 23 44.2 +0.2
	baz=97					
MVO	Moncorvo	107.44	335	eLR	LR	14 02 55.5
	comp=Z,472nm,20.0s					
MTE	Manteigas	108.29	335	eLR	LR	14 03 26.9
	comp=Z,542nm,20.0s					
PMRV	Marv??o	109.08	335	eLR	LR	14 03 29.5
	comp=Z,543nm,16.0s					
PESTR	Estremoz	109.64	335	eLR	LR	14 03 39.4
	comp=Z,639nm,18.0s					
PBAR	Barrancos	110.02	334	eLR	LR	14 04 28.9
	comp=Z,719nm,18.0s					
PMAFR	Mafra	110.20	336	eLR	LR	14 04 02.3
	comp=Z,454nm,20.0s					
PCVE	Castro Verde	110.89	334	eLR	LR	14 04 21.6
	comp=Z,800nm,20.0s					
PVAQ	Vaqueiros	110.96	334	eLR	LR	14 04 18.6
	comp=Z,685nm,18.0s					
PBDV	Barranco-do-Ve	111.18	334	eLR	LR	14 04 23.1
	comp=Z,706nm,18.0s					
MORF	Marmelete	111.41	335	eLR	LR	14 06 01.4
	comp=Z,706nm,18.0s					
TORD	Torodi Ar. Bea	124.96	310	PKP	PKPdf	13 29 07.8 -3.1
	comp=Z,0.5nm,0.8s,baz=17,slow=1.7,SNR=3.7					
PLCA	Paso Flores	149.55	128	PKPbc	PKPbc	13 29 58.3 -1.1
	comp=Z,5.6nm,0.9s,baz=202,slow=4.6,SNR=6.9					
LPAZ	La Paz	151.13	77	PKPbc	PKPbc	13 30 02.9 -0.9
	comp=Z,5.9nm,0.7s,baz=346,slow=3.5,SNR=17					
LPAZ	La Paz	151.13	77	PKPbc	PKPbc	13 30 02.9 -0.9

*CSEM **12** 13:10:42.8±0.3, 33°.33N×35°.38E, h5km, ML2.7, Error ellipse: s-maj=10.6km s-min=3.9km az=101.0*

GRAL 12 13:10:42.6±0.3, 33°.27N×35°.37E, h3km±2km, MD2.7, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
MATL	Matarih	0.22	351	eP		Pg	13 10 46.6	-0.3
MATL	Matarih	0.22	351	eP		Pg	13 10 46.6	-0.3
RCY	Rachaya	0.43	60	eP		Pg	13 10 50.6	-0.3
RCY				eS		Sg	13 10 56.7	+0.2
RCY	Rachaya	0.43	60	eP		Pg	13 10 50.6	-0.3
RCY				eS		Sg	13 10 56.7	+0.2
BHL	Bhannes	0.68	20	eP		Pg	13 10 54.8	-0.7
BHL				eS		Sg	13 11 03.7	-0.7
BHL	Bhannes	0.68	20	eP		Pg	13 10 54.8	-0.8
BHL				eS		Sg	13 11 03.7	-0.6
HWQ	Hawqa	1.11	25	eP		Pg	13 11 02.5	-1.5
HWQ				eS		Sg	13 11 17.4	-1.0
HWQ	Hawqa	1.11	25	eP		Pg	13 11 02.5	-1.5
HWQ				eS		Sg	13 11 17.4	-1.0

IDC 12 13:19:37.5±16.0, 2°.05S×125°.45E, h0km, mb3.8/2, mb1 3.9/4, mb1mx3.5/21, mbtmp3.7/4, ML3.5/2, Error ellipse: s-maj=250.6km s-min=121.1km az=135.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	15.96	179	Pn		Pn	13 23 25.0	+1.5
	0.2nm,0.3s,baz=356,slow=13,SNR=4.1							
WRA	Warramunga Arr	19.79	155	P		Pn	13 24 08.3	-2.7
	0.1nm,0.3s,baz=330,slow=12,SNR=6.5							
ASAR	Alice Springs	23.00	160	P		P	13 24 44.4	+0.4
	0.6nm,0.7s,baz=338,slow=10,SNR=8.2							
STKA	Stephens Creek	33.35	155	P		P	13 26 17.6	+0.2
	2.3nm,0.8s,baz=342,slow=9.6,SNR=3.9							

*IDC **12** 13:22:09.8±1.1, 11°.06N×92°.80E, h0km, mb4.0/10, mb1 4.0/11, mb1mx3.7/28, mbtmp3.9/11, ML3.7/1, Error ellipse: s-maj=53.1km s-min=16.2km az=56.0*
*NEIC **12** 13:22:11.5±0.5, 11°.08N×92°.86E, h10km, mb4.2/3, Error ellipse: s-maj=14.5km s-min=9.1km az=61.0*
*ISCJB **12** 13:22:13.3±0.7, 11°.17N±0°.10×93°.0E±0°.1, h33km, mb3.9/13, Error ellipse: s-maj=19.0km s-min=11.9km az=151.5*

ISC 12 13:22:15.4±0.7, 11°.13N±0°.10×93°.0E±0°.1, h35km, n16, σ0=59/16, mb3.9/13, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	9.31	38	ePn		Pn	13 24 26.7	-0.5
	1.7nm,0.5s							
CMAR	Chiang Mai Arr	9.31	38	Pn		Pn	13 24 27.9	+0.8
	0.2nm,0.3s,baz=233,slow=14,SNR=5.1							
MKAR	Makanchi Array	36.67	348	P		P	13 29 19.1	+0.4
	0.4nm,0.3s,mb3.7,baz=121,slow=7.4,SNR=5.1							
KURK	Kurchatov	41.18	346	P		P	13 29 55.1	-1.3
	0.4nm,0.2s,mb3.6,baz=157,slow=6.0,SNR=3.5							
ZALV	Zalesovo Beam	43.19	353	P		P	13 30 12.1	-0.7
	2.2nm,0.3s,mb4.4,baz=174,slow=8.8,SNR=12							
ZALV	Zalesovo Beam	43.19	353	P		P	13 30 12.1	-0.7
FITZ	Fitzroy Crossi	43.42	132	P		P	13 30 15.1	0.0
	2.3nm,1.0s,mb3.9,baz=285,slow=20,SNR=4.4							
BVAR	Borovoye Array	45.54	341	P		P	13 30 31.4	-0.1
	0.6nm,0.4s,mb3.9,baz=139,slow=9.9,SNR=5.2							
ABKAR	Akbulak array	46.83	331	eP		P	13 30 43.0	+1.3
	0.8nm,0.5s,mb3.9							
WRA	Warramunga Arr	51.13	127	P		P	13 31 15.1	-0.1
	0.2nm,0.4s,mb3.4,baz=304,slow=10,SNR=8.3							
WRAB	Tennant Creek	51.13	127	eP		P	13 31 14.9	-0.2
	1.6nm,0.6s,mb4.1							
ASAR	Alice Springs	52.92	131	P		P	13 31 28.6	+0.3
	0.3nm,0.5s,mb3.5,baz=311,slow=6.9,SNR=11							
STKA	Stephens Creek	63.20	134	eP		P	13 32 32.8	-7.6
	5.9nm,1.5s,mb4.5							
FINES	FINESS Array B	69.30	332	P		P	13 33 19.1	+0.2
	0.6nm,0.3s,mb4.0,baz=111,slow=8.4,SNR=5.5							
ARCES	ARCESS Array B	71.82	340	P		P	13 33 34.3	+0.2
	0.5nm,0.4s,mb3.8,baz=93,slow=7.7,SNR=8.5							
HFS	Hagfors	75.07	329	P		P	13 33 53.2	-0.2
	0.7nm,0.3s,mb4.0,baz=90,slow=3.0,SNR=8.3							

*GII **12** 13:51:54.5±0.9, 33°.32N×35°.46E, h1km±3km, Md2.0/4*
*ISCJB **12** 13:51:55.1±0.5, 33°.34N±0°.02×35°.45E±0°.04, h4km±7km, Error ellipse: s-maj=6.1km s-min=3.8km az=18.2*
*GRAL **12** 13:51:56.0±0.3, 33°.33N×35°.46E, h2km±20km, MD3.2*

ISC 12 13:51:55.6±0.5, 33°.35N±0°.02×35°.45E±0°.04, h4km±8km, n14, σ0=71/23, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
MATL	Matarih	0.17	325	eP		Pg	13 51 59.5	+0.6
KSDI	Kefar Szold	0.23	131	Pg		Pg	13 51 59.6	-0.5
KSDI				Sg		Sg	13 52 03.2	0.0
HRI	Mount Hermon	0.25	109	Pg		Pg	13 52 00.0	-0.4
MMA0B	Mount Meron ar	0.33	187	Pg		Pg	13 52 01.1	-0.9
MMA0B				Sg		Sg	13 52 07.0	+0.7
RCY	Rachaya	0.34	66	eP		Pg	13 52 02.4	+0.3
RCY				eS		Sg	13 52 07.0	+0.5
HNTI	Hanita	0.35	221	Pg		Pg	13 52 02.7	+0.4
HNTI				Sg		Sg	13 52 07.3	+0.5
KSHT	Keshet	0.47	140	Pg		Pg	13 52 04.4	-0.3
KSHT				Sg		Sg	13 52 11.3	+0.5
BHL	Bhannes	0.58	17	eP		Pg	13 52 06.7	-0.1
BHL				eS		Sg	13 52 14.7	+0.4
BLGI	Bet Lehem HaGe	0.65	200	Pg		Pg	13 52 07.5	-0.5
OFRI	'Ofer	0.82	208	Pg		Pg	13 52 10.7	-0.6
MMLI	Mount Malkishu	0.91	181	Pg		Pg	13 52 11.9	-1.1
MMLI				Sg		Sg	13 52 26.6	+1.9
HWQ	Hawqa	1.02	24	eP		Pg	13 52 15.1	0.0
HMDT	Nahal Hemdat	1.09	177	Pg		Pg	13 52 15.1	-1.4
HMDT				Sg		Sg	13 52 31.0	+0.3
DSI	Dead Sea	1.77	182	Pn		Pn	13 52 26.2	-0.8
DSI				Sn		Sn	13 52 50.8	+0.8

*ISK **12** 13:54:23.9, 37°.88N×29°.19E, h19km, MD2.8*
*CSEM **12** 13:54:24.3±0.1, 37°.87N×29°.21E, h15km, MD2.8, Error ellipse: s-maj=3.4km s-min=2.3km az=105.0*
*DDA **12** 13:54:24.7, 37°.87N×29°.17E, h5km±2km, Md2.8*
*ISCJB **12** 13:54:24.7±0.5, 37°.88N±0°.03×29°.19E±0°.05, h17km±10km, Error ellipse: s-maj=7.0km s-min=4.7km az=16.6*

ISC 12 13:54:24.5±0.5, 37°.88N±0°.03×29°.16E±0°.05, h15km±5km, n24, σ0=59/34, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
DENT	Denizli	0.16	220	ePG		Pg	13 54 29.0	+0.4
DENT	Denizli	0.16	220	ePg		Pg	13 54 29.0	+0.4
DNZL	Cakiroluk	0.21	207	iP		Pg	13 54 29.1	-0.2
DNZL				iS		Sg	13 54 32.1	-0.4
DNZL	Caki

GLHS	Glhisar (BURDU	0.77 160	*e*Pg	Pg	13 54 39.3	-0.1
YER	Yerkesik	1.02 224	*e*PG	Pg	13 54 43.5	-0.7
YER	Yerkesik	1.02 224	*e*Pg	Pg	13 54 43.5	-0.7
AYDN	Tasoluk	1.04 258	*i* P	Pg	13 54 44.7	+0.1
AYDN			*i* S	Sg	13 54 58.0	-0.2
AYDN	Tasoluk	1.04 258	*i* P	Pg	13 54 44.7	+0.1
FETY	Fethiye	1.24 183	*e*PN	Pn	13 54 46.7	-0.5
FETY	Fethiye	1.24 183	*e*Pn	Pn	13 54 46.7	-0.5
SHUT	Suhut-Afyon	1.28 58	*e*PN	Pn	13 54 47.4	-0.4
SHUT	Suhut-Afyon	1.28 58	*e*Pn	Pn	13 54 47.4	-0.4
ALT	Altintas	1.39 32	*e*PN	Pn	13 54 48.5	-0.8
ALT	Altintas	1.39 32	*e*Pn	Pn	13 54 48.5	-0.8

DDA ***12*** *14:07:33.8, 38°.70N×35°.81E, h8km±5km, Md3.0*
ISK ***12*** *14:07:34.0, 38°.68N×35°.72E, h5km, MD3.1*
ISCJB ***12*** *14:07:34.5±0.4, 38°.69N±0°.03×35°.77E±0°.03, h10km, Error ellipse: s-maj=3.9km s-min=3.6km az=24.9*
CSEM ***12*** *14:07:36.2±0.1, 38°.69N×35°.71E, h10km, MD3.0, Error ellipse: s-maj=2.6km s-min=2.3km az=35.0*

ISC 12 14:07:34.5±0.6, 38°.66N±0°.03×35°.78E±0°.04, h7km±7km, n30, σ1°19/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SARI	SarD1z-Kayseri	0.72	88	*e*PG	Pg	14 07 46.9	-1.4
SARI				*e*SG	Sg	14 07 56.4	-1.2
AVNT	Avonos	0.73	279	*i* P	Pg	14 07 48.1	-0.5
AVNT				*i* S	Sg	14 07 58.8	+0.7
AVNT	Avonos	0.73	279	*i* P	Pg	14 07 48.1	-0.5
AVNT				*i* S	Sg	14 07 58.8	+0.7
YOZ	Yozgat	1.04	340	*e*PG	Pg	14 07 54.2	-0.3
YOZ				*e*SG	Sg	14 08 09.4	+1.5
YOZ	Yozgat	1.04	340	*e*Pg	Pg	14 07 54.2	-0.3
YOZ				*e*Sg	Sg	14 08 09.4	+1.4
KOZT	Kozan	1.18	178	*e*PN	Pn	14 07 57.6	-0.3
KOZT				*e*SN	Sn	14 08 15.5	+1.0
KMRS	Kahramanmaras	1.45	142	*e*PN	Pg	14 08 03.5	+1.1
KMRS	Kahramanmaras	1.45	142	*e*Pn	Pg	14 08 03.6	+1.2
CDAG	Cicekdag	1.46	312	*i* P	Pg	14 08 01.6	-0.9
CDAG				*i* S	Sg	14 08 22.1	+0.7
CDAG	Cicekdag	1.46	312	*i* P	Pg	14 08 01.6	-0.9
CDAG				*i* S	Sg	14 08 22.1	+0.8
KARA	Karaisali	1.51	203	*e*PN	Pg	14 08 03.5	0.0
KARA	Karaisali	1.51	203	*e*Pn	Pg	14 08 03.5	0.0
SVSK	Karacayir	1.57	37	*e*PN	Pb	14 08 04.0	-0.1
SVSK	Karacayir	1.57	37	*e*Pn	Pb	14 08 04.0	-0.2
GULE	Gulek	1.59	210	*i* P	Pn	14 08 03.4	-0.1
GULE				*i* S	Sg	14 08 28.8	+3.2
GULE	Gulek	1.59	210	*i* P	Pn	14 08 03.4	-0.1
DARE	Darende-Malaty	1.61	79	*e*PN	Pn	14 08 01.5	-2.3
DARE	Darende-Malaty	1.61	79	*e*Pn	Pn	14 08 01.5	-2.3
CORM	Corum	1.76	330	*e*PN	Pb	14 08 06.3	-1.1
CORM	Corum	1.76	330	*e*Pn	Pb	14 08 06.3	-1.1
SULT	Sultanhani-AKS	1.84	256	*e*PN	Pb	14 08 07.5	-1.3
SULT	Sultanhani-AKS	1.84	256	*e*Pn	Pb	14 08 07.5	-1.3
GAZ	Gaziantep	1.87	142	*e*PN	Pb	14 08 09.4	+0.1
GAZ	Gaziantep	1.87	142	*e*Pn	Pb	14 08 09.4	+0.1
MERS	Mersin	2.05	209	*e*PN	Pb	14 08 10.8	-1.6
MERS	Mersin	2.05	209	*e*Pn	Pb	14 08 10.8	-1.6
KEMA	Kemaliye	2.20	73	*i* P	Pn	14 08 13.2	+1.3
KEMA				*i* S	Sg	14 08 48.7	+3.5
KEMA	Kemaliye	2.20	73	*i* P	Pn	14 08 13.2	+1.3
PTK	Pertek	2.83	84	*e*PN	Pn	14 08 22.8	+2.2
PTK	Pertek	2.83	84	*e*Pn	Pn	14 08 22.8	+2.2

DDA ***12*** *14:23:39.9, 41°.10N×31°.45E, h7km±6km, Md2.8*
CSEM ***12*** *14:23:40.7±0.2, 40°.95N×31°.49E, h2km, MD2.7, Error ellipse: s-maj=4.9km s-min=3.7km az=141.0*
ISK ***12*** *14:23:40.4, 40°.94N×31°.50E, h7km, MD2.7*
ISCJB ***12*** *14:23:41.1±0.6, 40°.96N±0°.03×31°.47E±0°.04, h5km±7km, Error ellipse: s-maj=6.3km s-min=5.1km az=136.2*

ISC 12 14:23:41.5±0.6, 40°.96N±0°.04×31°.47E±0°.05, h7km±6km, n22, σ1°02/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDZE	Karadeniz Ereo	0.35	357	*e*PG	Pg	14 23 48.3	-0.1
KDZE				*e*SG	Sg	14 23 54.0	+1.0
KDZE	Karadeniz Ereo	0.35	357	*e*Pg	Pg	14 23 48.3	-0.1
KDZE				*e*Sg	Sg	14 23 54.0	+0.9
HENT	Hendek	0.45	252	*i* P	Pg	14 23 49.2	-1.1
HENT				*i* S	Sg	14 23 58.2	+2.0
HENT	Hendek	0.45	252	*i* P	Pg	14 23 49.2	-1.1
HENT				*i* S	Sg	14 23 58.2	+2.0
MDU	Mudurnu	0.53	201	*e*PG	Pg	14 23 51.1	-0.7
MDU				*e*SG	Sg	14 23 58.9	+0.2
MDU	Mudurnu	0.53	201	*e*Pg	Pg	14 23 51.1	-0.7
MDU				*e*Sg	Sg	14 23 58.9	+0.2
SGKT	Sivrigoynuk	0.59	131	*i* P	Pg	14 23 52.3	-0.6
SGKT				*i* S	Sg	14 24 03.6	+3.0
SGKT	Sivrigoynuk	0.59	131	*i* P	Pg	14 23 52.3	-0.6
SGKT				*i* S	Sg	14 24 03.6	+3.0
GULT	Gulveren	0.90	234	*e*PG	Pg	14 23 57.8	-1.0
GULT	Gulveren	0.90	234	*e*Pg	Pg	14 23 57.8	-0.9
SAFT	Safranbolu	0.96	73	*e*PG	Pg	14 23 58.8	-1.2
SAFT	Safranbolu	0.96	73	*e*Pg	Pg	14 23 58.8	-1.2
SILT	Sile	1.39	279	*e*PN	Pn	14 24 06.7	-0.6
SILT	Sile	1.39	279	*e*Pn	Pn	14 24 06.7	-0.6
ESKT	Eskisehir	1.52	198	*e*PN	Pn	14 24 08.7	-0.3
ESKT	Eskisehir	1.52	198	*e*Pn	Pn	14 24 08.7	-0.3
BALT	Daday	1.56	68	*i* P	Pn	14 24 08.7	-0.9
BALT				*i* S	Sn	14 24 30.2	+0.3
BALT	Daday	1.56	68	*i* P	Pn	14 24 08.7	-0.9
BALT				*i* S	Sn	14 24 30.2	+0.2
ELDT	Eldivan	1.56	107	*i* P	Pn	14 24 10.7	+1.1
ELDT				*i* S	Sn	14 24 34.3	+4.2
ELDT	Eldivan	1.56	107	*i* P	Pn	14 24 10.7	+1.1
ELDT				*i* S	Sn	14 24 34.3	+4.2
YLV	Yalova	1.64	257	*e*PN	Pn	14 24 11.5	+0.8
YLV	Yalova	1.64	257	*e*Pn	Pn	14 24 11.5	+0.8

IDC ***12*** *14:32:18.9±1.8, 5°.56S×147°.48E, h0km, mb4.5/3, mb1 4.7/4, mb1mx3.9/16, mbtmp4.5/4, ML4.6/1, Error ellipse: s-maj=60.4km s-min=35.5km az=114.0*
NEIC ***12*** *14:32:23.9±1.0, 5°.41S×147°.16E, h35km, mb4.7/3, Error ellipse: s-maj=28.0km s-min=14.4km az=103.0*
ISCJB ***12*** *14:32:25.5±6.2, 5°.5S±0°.2×147°.2E±0°.2, h70km±57km, mb4.4/4, Error ellipse: s-maj=29.9km s-min=26.8km az=5.1*

ISC 12 14:32:26.3±4.7, 5°.5S±0°.2×147°.2E±0°.2, h56km±43km, n16, σ0°98/15, mb4.5/4, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	14.51	184	Pn	Pn	14 35 49.1	+0.5
	0.4nm,0.3s,baz=7.3,slow=15,SNR=5.6						
WRAB	Tennant Creek	19.01	220	*e*P	Pn	14 36 43.3	-1.5
	19nm,0.7s						
WRA	Warramunga Arr	19.02	220	P	Pn	14 36 44.1	-0.9
	1.9nm,0.3s,baz=41,slow=12,SNR=91						
WRA				PcP	PcP	14 41 08.5	+1.3
	0.1nm,0.3s,baz=29,slow=2.0,SNR=7.9						
KNA	Kununurra	20.75	239	*e*P	P	14 37 04.2	+1.7
	44nm,1.8s						
ASAR	Alice Springs	22.12	214	P	P	14 37 17.4	+0.2
	5.8nm,0.5s,mb4.3,baz=50,slow=9.1,SNR=113						
ASAR				PcP	PcP	14 41 14.5	+1.6
	0.3nm,0.4s,baz=2.5,slow=1.3,SNR=5.4						
FITZ	Fitzroy Crossi	24.49	237	*e*P	P	14 37 42.1	+1.7
	20nm,0.4s,mb4.9						
FITZ	Fitzroy Crossi	24.49	237	P	P	14 37 42.5	+2.1
	11nm,0.5s,mb4.6,baz=59,slow=7.5,SNR=90						
FITZ	Fitzroy Crossi	24.49	237	*e*P	P	14 37 41.6	+1.3
	10nm,0.5s,mb4.5						
ARMA	Armidale	25.11	171	*e*P	P	14 37 46.1	+0.1
CMSA	Cobar Meteorol	25.92	183	*e*P	P	14 37 53.3	+0.1
STKA	Stephens Creek	26.74	191	*e*P	P	14 38 00.2	-0.4
	3.5nm,0.6s,mb4.1						
STKA	Stephens Creek	26.74	191	P	P	14 38 00.3	-0.3
	5.3nm,0.8s,mb4.1,baz=4.7,slow=11,SNR=11						
STKA	Stephens Creek	26.74	191	*e*P	P	14 37 59.7	-0.9
	0.5nm,0.4s,mb3.4						
GSTR	Great Sitkin T	65.36	24	*e*P	P	14 43 02.8	+0.2
PALK	Pallekele	67.55	280	*e*P	P	14 43 16.2	-1.2
	35nm,1.3s,mb5.2						
TORD	Torodi Ar. Bea	145.16	285	PKPbc	PKPbc	14 51 58.3	+0.1
	0.5nm,0.5s,baz=67,slow=3.5,SNR=8.5						

NEIC ***12*** *14:37:42.0±1.1, 1°.98S×125°.82E, h35km, mb3.8/1, Error ellipse: s-maj=25.5km s-min=15.6km az=46.0*

IDC 12 14:37:36.9±1.4, 1°.87S×125°.85E, h0km, mb3.5/3, mb1 3.6/5, mb1mx3.5/22, mbtmp3.6/5, ML3.6/2, Error ellipse: s-maj=49.2km s-min=22.8km az=67.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	Kappang	6.84	243	Pn	Pn	14 39 18.2	-0.4
	5.1nm,0.3s,baz=104,slow=6.1,SNR=15						
KSM	Kuching	15.89	282	*e*Pn	Pn	14 41 24.1	+2.0
	11nm,1.3s						
WRA	Warramunga Arr	19.79	156	P	Pn	14 42 07.1	-3.3
	0.1nm,0.3s,baz=334,slow=11,SNR=3.7						
ASAR	Alice Springs	23.04	161	P	P	14 42 45.2	+1.4
	0.5nm,0.6s,baz=345,slow=13,SNR=8.1						
MKAR	Makanchi Array	61.69	327	P	P	14 47 57.1	+0.3
	0.3nm,0.5s,baz=121,slow=7.2,SNR=5.6						
KURK	Kurchatov	66.01	329	P	P	14 48 25.1	-0.2
	0.5nm,0.6s,baz=125,slow=5.5,SNR=3.2						

ISK ***12*** *14:38:02.7, 36°.92N×29°.32E, h2km, MD3.0*
DDA ***12*** *14:38:03.6, 36°.98N×29°.23E, h7km±5km, Md2.9*
CSEM ***12*** *14:38:03.8±0.2, 36°.93N×29°.32E, h8km, MD3.0, Error ellipse: s-maj=4.6km s-min=3.3km az=138.0*
ISCJB ***12*** *14:38:03.9±0.5, 36°.94N±0°.03×29°.29E±0°.04, h10km, Error ellipse: s-maj=5.5km s-min=4.1km az=32.6*

ISC 12 14:38:04.1±0.6, 36°.95N±0°.03×29°.27E±0°.05, h6km±7km, n24, σ0°90/35, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.28	42	*e*PG	Pg	14 38 09.0	-0.4
GLHS				*e*SG	Sg	14 38 13.9	+0.7
GLHS	Glhisar (BURDU	0.28	42	*e*Pg	Pg	14 38 09.0	-0.5
GLHS				*e*Sg	Sg	14 38 13.9	+0.8
FETY	Fethiye	0.35	205	*e*PG	Pg	14 38 10.2	-0.6
FETY				*e*SG	Sg	14 38 16.0	+0.7
FETY	Fethiye	0.35	205	*e*Pg	Pg	14 38 10.2	-0.6
FETY				*e*Sg	Sg	14 38 16.0	+0.6
GOLH	Golhisar	0.37	40	*i* P	Pg	14 38 10.6	-0.7
GOLH				*i* S	Sg	14 38 17.3	+1.2
GOLH	Golhisar	0.37	40	*i* P	Pg	14 38 10.6	-0.7
GOLH				*i* S	Sg	14 38 17.3	+1.2
ELL	Elmali	0.55	111	*e*PG	Pg	14 38 13.6	-1.1
ELL	Elmali	0.55	111	*e*Pg	Pg	14 38 13.6	-1.1
DNZL	Cakiroluk	0.76	347	*i* P	Pg	14 38 16.3	-2.3
DNZL				*i* S	Sg	14 38 28.7	+0.2
DNZL	Cakiroluk	0.76	347	*i* P	Pg	14 38 16.3	-2.4
DNZL				*i* S	Sg	14 38 28.7	+0.2
AKAS	Kas	0.77	159	*i* P	Pg	14 38 19.6	+0.8
AKAS				*i* S	Sg	14 38 34.2	+5.4
AKAS	Kas	0.77	159	*i* P	Pg	14 38 19.6	+0.8
YER	Yerkesik	0.81	283	*e*PG	Pg	14 38 20.4	+0.8
YER	Yerkesik	0.81	283	*e*Pg	Pg	14 38 20.4	+0.8
AYDN	Tasoluk	1.31	303	*i* P	Pn	14 38 27.6	-1.3
AYDN				*i* S	Sb	14 38 46.3	0.0
AYDN	Tasoluk	1.31	303	*i* P	Pn	14 38 27.6	-1.4
AYDN				*i* S	Sb	14 38 46.3	0.0
DAT	Datca	1.37	261	*e*PN	Pn	14 38 30.3	+0.5
DAT	Datca	1.37	261	*e*Pn	Pn	14 38 30.3	+0.5
KHL	Karahalli	1.38	8	*e*PN	Pn	14 38 30.6	+0.6
KHL	Karahalli	1.38	8	*e*Pn	Pn	14 38 30.6	+0.6
SUTC	Sutluce-Ispart	1.48	69	*e*PN	Pn	14 38 30.9	-0.4
SUTC	Sutluce-Ispart	1.48	69	*e*Pn	Pn	14 38 30.9	-0.4
KULA	Kula-Manisa	1.63	343	*e*PN	Pn	14 38 34.3	+0.9
KULA	Kula-Manisa	1.63	343	*e*Pn	Pn	14 38 34.3	+0.9

CASC 12 14:51:23.9±1.8, 13°.50N×90°.73W, h16km±18km, MD3.5, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	Pacaya	0.89	8	*e*P	Pb	14 51 41.3	+0.3
FUG	Fuego 3	0.94	354	*e*P	Pb	14 51 42.0	+0.1
FG6		1.06	352	*e*P	Pb	14 51 43.2	-0.7
RTR	El Retiro	1.13	70	*e*P	Pn	14 51 44.2	-0.8
RTR				*e*S	Sb	14 52 00.4	+1.0
SBLS	San Blas	1.13	73	*e*P	Pn	14 51 44.3	-0.8
SBLS				*e*S	Sb	14 51 59.6	+0.1
SNJE	San Jose	1.15	72	*e*P	Pn	14 51 44.4	-1.0
RBDL	Robledal	1.18	59	*e*P	Pn	14 51 45.4	-0.3
JAT	Jato	1.19	313	*e*P	Pn	14 51 44.6	-1.3
TP2	Tecpan 2	1.30	348	*e*P	Pn	14 51 47.5	0.0
TP2				*e*S	Sb	14 52 05.0	+0.5
MRL	Marmol	1.85	33	*e*P	Pn	14 51 56.2	+1.2

NEIC ***12*** *14:57:32.8±4.2, 24°.58N×122°.48E, h10km, MG3.1(JMA), Error ellipse: s-maj=42.6km s-min=13.6km az=61.0*
ISCJB ***12*** *14:57:40.0±0.4, 24°.58N±0°.02×121°.89E±0°.02, h65km±4km, Error ellipse: s-maj=3.9km s-min=2.7km az=147.9*
TAP ***12*** *14:57:40.1, 24°.58N×121°.83E, h63km, ML4.0, B*
JMA ***12*** *14:57:40.5±0.2, 24°.70N×121°.95E, h69km±3km, M3.1*

ISC 12 14:57:40.5±0.4, 24°.59N±0°.02×121°.89E±0°.02, h62km±4km, n65, σ0°87/126, 3C-10D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	Suao	0.04	305	⇓*i*P	Pn	14 57 50.0	+0.3
	baz=52						
TWC				*i* S	Sn	14 57 57.1	+0.8
	baz=52						
ENA	Nanau	0.21	221	⇓*i*P	Pn	14 57 50.5	+0.2
	baz=207						
ENA				S	Sn	14 57 58.0	+0.7
	baz=207						
ILA	Ilan	0.22	325	⇓*i*P	Pn	14 57 51.0	+0.7
	baz=330						
ILA				*i* S	Sn	14 57 59.0	+1.5
	baz=330						
TWE	Neicheng	0.24	304	⇓*i*P	Pn	14 57 50.7	+0.2
	baz=310						
TWE				S	Sn	14 57 57.9	+0.2
	baz=310						
ENTT	Nioudou	0.30	281	⇓*i*P	Pn	14 57 50.9	+0.1
	baz=285						
ENTT				*e*S	Sn	14 57 58.7	+0.3
	baz=285						
EHP	Heping Village	0.30	206	*e*P	Pn	14 57 50.3	-0.6
	baz=204						
YHNB	Yeheng	0.47	280	*e*P	Pn	14 57 51.7	-0.7
YHNB				*e*S	Sn	14 57 59.7	-1.3
TWA	Mucha	0.48	325	⇑*i*P	Pn	14 57 52.6	+0.1
	baz=331						
TWA				*e*S	Sn	14 58 01.5	+0.3
	baz=331						
NACB	Ninganchiao	0.49	213	*e*P	Pn	14 57 50.8	-1.8
NACB				*e*S	Sn	14 57 59.6	-1.7
NNS	Nan Shan	0.49	253	⇓*i*P	Pn	14 57 52.8	+0.2
	baz=252						
NNS				*e*S	Sn	14 58 01.4	+0.1
	baz=252						
NSK	Sanguang	0.49	281	⇓*i*P	Pn	14 57 52.3	-0.3
	baz=283						
NSK				*i* S	Sn	14 58 00.8	-0.6
	baz=283						
NWF	Wu-fen Shan	0.49	349	*i* P	Pn	14 57 53.0	+0.3
	baz=354						
NWF				*i* S	Sn	14 58 02.1	+0.6
	baz=354						
TATO	Taipei	0.53	317	*e*P	Pn	14 57 52.2	-0.8
TATO				*e*S	Sn	14 58 01.1	-1.0
TAP1	Taipei	0.56	324	*e*P	Pn	14 57 52.6	-0.7
	baz=319						
TAP1				S	Sn	14 58 02.1	-0.6
	baz=319						
TWD	Chiawan	0.57	208	P	Pn	14 57 52.9	-0.5
	baz=213						
TWD				*e*S	Sn	14 58 02.4	-0.4
	baz=213						
HWA	Hwalien	0.66	203	*e*P	Pn	14 57 54.3	-0.1
	baz=210						
HWA				*e*S	Sn	14 58 05.1	+0.6
	baz=210						
TWS1	Kuangyinshan	0.67	320	⇑*i*P	Pn	14 57 54.5	0.0
	baz=318						
TWS1				S	Sn	14 58 05.0	+0.2
	baz=318						
WHF	Hehuan Shan	0.72	233	*i* P	Pn	14 57 55.3	+0.2
	baz=228						
WHF				S	Sn	14 58 06.1	+0.3
	baz=228						
TWT	Tachien	0.73	243	⇓*i*P	Pn	14 57 55.9	+0.7
	baz=236						
TWT				S	Sn	14 58 06.3	+0.3
	baz=236						
TWY	Chenhua	0.74	339	P	Pn	14 57 55.5	+0.1
	baz=343						
TWY				S	Sn	14 58 06.9	+0.6
	baz=343						
NCU	National Centr	0.74	301	P	Pn	14 57 55.2	-0.2
	baz=303						
NCU				*i* S	Sn	14 58 06.3	-0.1
	baz=303						
ESF	Shoufeng Towns	0.79	206	*e*P	Pn	14 57 53.7	-2.3
	baz=210						
NSTT	Nanjuang	0.81	273	⇓*i*P	Pn	14 57 55.9	-0.3
	baz=283						
NSTT				S	Sn	14 58 07.2	-0.6
	baz=283						
HSN	Hsinchu	0.86	285	*e*P	Pn	14 57 57.0	+0.1
	baz=288						
HSN				*e*S	Sn	14 58 07.7	-1.3
	baz=288						
ESL	Shilin	0.87	209	⇓P	Pn	14 57 55.7	-1.3
	baz=205						
ESL				*e*S	Sn	14 58 07.9	-1.3
	baz=205						
YOJ	Yonaguni jima	1.03	97	P	Pn	14 57 59.1	+0.1
YOJ				*e*S	Sn	14 58 12.8	0.0
NSY	Sanyi	1.04	261	*e*P	Pn	14 57 59.1	-0.1
	baz=260						
NSY				*e*S	Sn	14 58 12.9	-0.1
	baz=260						
TWQ1	Liyutan	1.04	257	*e*P	Pn	14 57 59.2	0.0
	baz=257						
TWQ1				*e*S	Sn	14 58 12.7	-0.4
	baz=257						
SMLT	Sun Moon Lake	1.14	232	*e*P	Pn	14 58 01.0	+0.5
	baz=225						
SMLT				*e*S	Sn	14 58 16.0	+0.6
	baz=225						
TYC	Yuchr	1.16	234	*e*P	Pn	14 58 01.2	+0.4
	baz=228						
TYC				*e*S	Sn	14 58 16.5	+0.7
	baz=228						
SSLB	Suanglung	1.17	227	*e*P	Pn	14 58 00.5	-0.3
SSLB				*e*S	Sn	14 58 16.5	+0.5
TCU	Taichung	1.19	249	*e*P	Pn	14 58 01.7	+0.6
	baz=259						
TCU				*e*S	Sn	14 58 16.6	+0.1
	baz=259						
EHY	Hungye	1.19	206	*e*P	Pn	14 58 00.1	-1.1
	baz=203						
EHY				*e*S	Sn	14 58 15.8	-0.7
	baz=203						
YULB	Yu-li	1.30	205	*e*Pn	Pn	14 58 00.2	-2.4
YULB				*e*Sn	Sn	14 58 17.6	-1.6
WNT	Mingjian	1.30	238	*e*P	Pn	14 58 03.1	+0.5
	baz=248						
WNT				*e*S	Sn	14 58 19.6	+0.4
	baz=248						
TWF1	Yuli	1.34	204	*e*P	Pn	14 58 01.5	-1.6
	baz=207						
TWF1				*e*S	Sn	14 58 20.2	+0.1
	baz=207						
YUS	Yu-Shan	1.39	218	*e*P	Pn	14 58 04.4	+0.7
	baz=208						
YUS				*e*S	Sn	14 58 21.7	+0.5
	baz=208						
ALS	Alishan	1.46	223	*e*P	Pn	14 58 05.6	+0.9
	baz=232						
ALS				*e*S	Sn	14 58 24.2	+1.4
	baz=232						
CHN5	Tsauling	1.48	229	*e*P	Pn	14 58 05.3	+0.4
	baz=238						
CHN5				*e*S	Sn	14 58 24.5	+1.1
	baz=238						
WGK	Gukeng	1.51	234	*e*P	Pn	14 58 05.8	+0.5
	baz=244						
WGK				*e*S	Sn	14 58 24.2	+0.2
	baz=244						
ELDTW	Lidau	1.60	210	*e*P	Pn	14 58 06.9	+0.2
	baz=200						
ELDTW				*e*S	Sn	14 58 26.9	+0.5
	baz=200						
IRIF	Iriomote-Funau	1.70	98	P	Pn	14 58 07.8	-0.1
IRIF				S	Sn	14 58 28.6	0.0
TPUB	Ta-pu	1.72	222	*e*Pn	Pn	14 58 08.5	+0.3
TPUB				*e*Sn	Sn	14 58 30.1	+0.9
CHY	Chiayi	1.72	231	*e*P	Pn	14 58 08.3	0.0
	baz=242						
CHY				*e*S	Sn	14 58 29.2	0.0
	baz=242						
WTP	Ta-pu	1.77	221	*e*P	Pn	14 58 09.5	+0.6
	baz=232						
WTP				*e*S	Sn	14 58 32.1	+1.7
	baz=232						
WSF	Szhu	1.79	239	*e*P	Pn	14 58 09.1	-0.1
	baz=238						
WSF				*e*S	Sn	14 58 30.8	-0.1
	baz=238						
HATJ	Hateruma jima	1.83	106	P	Pn	14 58 10.1	+0.4
HATJ				*e*S	Sn	14 58 32.7	+0.9
TWK	Hsinying	1.83	225	*e*P	Pn	14 58 10.4	+0.7
	baz=237						
TWK				*e*S	Sn	14 58 34.3	+2.3
	baz=237						
CHN1	Nanshi	1.87	222	*e*P	Pn	14 58 10.9	+0.7
	baz=234						
CHN1				*e*S	Sn	14 58 34.4	+1.6
	baz=234						
TWG	Pinlang	1.91	203	*e*Pn	Pn	14 58 10.3	-0.5
TWG				*e*Sn	Sn	14 58 31.5	-2.2
TWG	Pinlang	1.91	203	*e*P	Pn	14 58 10.4	-0.3
	baz=191						
TWG				*e*S	Sn	14 58 31.6	-2.2
	baz=191						
SGST	Jiashian	1.92	219	*e*P	Pn	14 58 11.6	+0.7
	baz=229						
SGST				*e*S	Sn	14 58 34.9	+0.9
	baz=229						
JKRS	Kuro-shima	1.96	100	P	Pn	14 58 11.9	+0.4
JKRS				S	Sn	14 58 35.7	+0.6
CHN8	Yiju	1.97	232	*e*P	Pn	14 58 11.7	+0.1
	baz=230						
JIJ	Ishigaki jima	2.07	96	P	Pn	14 58 12.9	0.0
JIJ				*e*S	Sn	14 58 36.6	-1.0
ECL	Ta

comp=E,90nm,0.7s

*IDC **12** 14:59:46.3±1.1, 25°44N×141°37E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.7/23, mbtmp3.7/6, Error ellipse: s-maj=36.9km s-min=19.5km az=92.0*
*ISCJB **12** 14:59:50.4±2.5, 25°5N±0°1×141°5E±0°2, h47km±26km, mb3.8/7, Error ellipse: s-maj=29.3km s-min=17.3km az=173.0*
*NEIC **12** 14:59:51.3±0.7, 25°47N×141°41E, h35km, mb4.1/2, Error ellipse: s-maj=26.9km s-min=10.5km az=88.0*
ISC 12 14:59:51.4±2.5, 25°5N±0°1×141°6E±0°2, h37km±26km, n11, σ0§68/12, mb3.8/7, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.73**	**18**	Pn	**Pn**	**15 00 18.6**	**-0.3**
	17nm,0.3s,baz=212,slow=4.5,SNR=36						
CBIJ				Sn	**Sn**	**15 00 39.9**	**+0.1**
	12nm,0.3s,baz=277,slow=23,SNR=8.4						
CBIJ				T		15 02 02.3	
	4.0nm,0.3s,baz=292,slow=23,SNR=2.7						
ERM	**Erimo**	**16.57**	**4**	*e*Pn	**Pn**	**15 03 40.1**	**-0.8**
	20nm,1.2s						
KSRS	**Korea Array**	**16.68**	**319**	Pn	**Pn**	**15 03 43.6**	**+1.4**
	0.1nm,0.3s,baz=135,slow=11,SNR=15						
SONM	**Songino Array**	**35.54**	**318**	P	**P**	**15 06 44.2**	**-0.5**
	0.6nm,0.6s,mb3.7,baz=109,slow=7.8,SNR=2.3						
WRAB	**Tennant Creek**	**45.66**	**190**	*e*P	**P**	**15 08 08.4**	**-0.1**
	2.1nm,0.7s,mb4.2						
WRA	**Warramunga Arr**	**45.66**	**190**	P	**P**	**15 08 08.8**	**+0.2**
	3.1nm,0.8s,mb4.3,baz=8.5,slow=8.6,SNR=12						
ASAR	**Alice Springs**	**49.39**	**189**	P	**P**	**15 08 37.2**	**-0.2**
	0.5nm,0.9s,mb3.5,baz=16,slow=11,SNR=3.2						
MKAR	**Makanchi Array**	**51.11**	**311**	P	**P**	**15 08 49.8**	**-0.5**
	0.4nm,0.7s,mb3.5,baz=78,slow=12,SNR=4.2						
BVAR	**Borovoye Array**	**58.89**	**318**	P	**P**	**15 09 45.8**	**-0.5**
	0.5nm,0.6s,mb3.7,baz=111,slow=8.4,SNR=3.9						
YKA	**Yellowknife Ar**	**73.84**	**28**	P	**P**	**15 11 23.2**	**+1.3**
	0.6nm,0.7s,mb3.6,baz=291,slow=6.1,SNR=4.7						
YKA	**Yellowknife Ar**	**73.84**	**28**	P	**P**	**15 11 23.2**	**+1.3**

KRSC 12 15:05:12.4±0.4, 54°33N×162°29E, h28km±18km, ML3.8, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.40**	**305**	*e*P	Pb	15 05 21.5	+0.4
MKZ				*i* S	Sb	15 05 27.8	+0.8
KII	**Karymskiy**	**1.70**	**261**	*e*P	Pn	15 05 41.0	+0.9
KII				*i* S	Sn	15 06 01.3	+0.5
KMNR	**Kamenistaya**	**1.85**	**321**	*e*P	Pn	15 05 43.5	+1.2
KMNR				*i* S	Sn	15 06 06.5	+1.8
ZLN	**Zelenaya**	**1.89**	**334**	*e*P	Pn	15 05 44.2	+1.4
ZLN				*i* S	Sn	15 06 08.0	+2.3
KBTR	**Krutoberegovo**	**1.91**	**9**	*e*P	Pn	15 05 44.9	+1.9
KBTR				*i* S	Sn	15 06 08.5	+2.5
BZMR	**Bezymyannaya**	**1.91**	**328**	*e*P	Pn	15 05 45.4	+2.4
BZMR				*i* S	Sn	15 06 08.9	+2.8
KIRR	**Kirishev**	**1.97**	**326**	*e*P	Pn	15 05 45.6	+1.7
KIRR				*i* S	Sn	15 06 09.8	+2.1
CIRR	**Tsirk**	**2.00**	**334**	*e*P	Pn	15 05 46.0	+1.8
CIRR				*i* S	Sn	15 06 10.5	+2.3
KPT	**Kopyto**	**2.02**	**325**	*e*P	Pn	15 05 46.3	+1.7
KPT				*i* S	Sn	15 06 11.0	+2.1
NLC	**Nalytchevo**	**2.10**	**238**	*e*P	Pn	15 05 46.3	+0.7
NLC				*i* S	Sn	15 06 11.0	+0.2
KRSR	**Krestovskiy**	**2.13**	**333**	*e*P	Pn	15 05 47.0	+0.9
KRSR				*i* S	Sn	15 06 12.3	+0.7
KLY	**Klyuchi**	**2.20**	**335**	*e*P	Pn	15 05 47.3	+0.3
KLY				*i* S	Sn	15 06 12.2	-1.0
KOZ	**Kozyrevsk**	**2.22**	**322**	*e*P	Pn	15 05 48.9	+1.7
KOZ				*i* S	Sn	15 06 15.8	+2.1
SMKR	**Semkarok**	**2.31**	**349**	P	Pn	15 05 49.9	+1.4
SMKR				*i* S	Sn	15 06 16.6	+0.8
BKI	**Bering**	**2.31**	**66**	*e*P	Pn	15 05 48.6	+0.1
BKI				*i* S	Sn	15 06 14.6	-1.3
BDR	**Baidarnaya**	**2.33**	**345**	*e*P	Pn	15 05 50.8	+2.1
BDR				*i* S	Sn	15 06 18.9	+2.5
SRKR	**Sorokina**	**2.42**	**345**	P	Pn	15 05 51.6	+1.6
SRDR	**Sredinnyy**	**2.48**	**325**	*e*P	Pn	15 05 51.8	+1.0
PET	**Petropavlovsk**	**2.53**	**240**	*e*P	Pn	15 05 52.9	+1.4
PET				*i* S	Sn	15 06 22.6	+1.3

IDC 12 15:24:22.7±2.7, 22°83N×11°54W, h0km, mb3.8/3, mb1 3.8/4, mb1mx3.5/25, mbtmp3.7/4, ML2.5/1, Error ellipse: s-maj=80.0km s-min=36.5km az=76.0, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDT	**Midelt**	**11.68**	**30**	Lg		15 30 33.8	
	0.3nm,0.3s,baz=314,slow=16,SNR=4.4						
TORD	**Torodi Ar. Bea**	**15.84**	**125**	Pn	Pn	15 28 07.4	+0.2
	0.0nm,0.3s,baz=316,slow=12,SNR=2.5						
TORD				Sn	Sn	15 31 04.5	+0.9
	0.1nm,0.3s,baz=306,slow=22,SNR=3.8						
TORD				Lg		15 32 52.4	
	baz=308,slow=22,SNR=2.3						
DBIC	**Dimbokro**	**17.31**	**157**	P	Pn	15 28 21.6	-4.3
	0.2nm,0.3s,baz=339,slow=8.6,SNR=2.7						
GERES	**GERESS Array B**	**32.77**	**31**	P	P	15 30 57.6	+0.3
	0.4nm,0.3s,baz=223,slow=6.7,SNR=6.8						
FINES	**FINESS Array B**	**46.41**	**24**	P	P	15 32 50.5	-0.2
	0.5nm,0.3s,baz=251,slow=5.8,SNR=3.7						
MKAR	**Makanchi Array**	**76.24**	**45**	P	P	15 36 13.2	+0.1
	0.4nm,0.5s,baz=289,slow=4.4,SNR=3.3						
WRA	**Warramunga Arr**	**148.14**	**91**	PKPbc	PKPbc	15 44 10.5	-0.7
	0.6nm,0.7s,baz=294,slow=2.6,SNR=5.3						
ASAR	**Alice Springs**	**148.29**	**98**	PKPbc	PKPbc	15 44 11.1	-0.4
	0.7nm,0.7s,baz=299,slow=1.7,SNR=9.8						

*GII **12** 15:28:58.4±0.8, 33°32N×35°45E, h1km±2km, Md3.4/6, Mm3.1/8*
*ISCJB **12** 15:28:58.7±0.3, 33°35N±0°01×35°37E±0°03, h8km±3km, Error ellipse: s-maj=4.8km s-min=2.4km az=8.4*
*NEIC **12** 15:28:59.9±5.3, 33°36N×35°42E, h10km, MD4.0(GRAL), ML3.8(NIC), Error ellipse: s-maj=58.3km s-min=10.1km az=155.0*
NEIC Felt at Tyre, Lebanon.
*GRAL **12** 15:28:59.8±0.6, 33°31N×35°45E, h4km±26km, MD4.1*
*CSEM **12** 15:28:59.3±0.1, 33°34N×35°40E, h2km, Mw3.3, Error ellipse: s-maj=4.8km s-min=2.7km az=86.0*
*HLW **12** 15:29:03.5, 33°03N×35°45E, h8km±19km, Md3.1, Ml3.0*
*NIC **12** 15:29:04.0±0.2, 33°33N×35°28E, h25km, mb4.1, ML3.8, MW3.3*
ISC 12 15:28:59.4±0.4, 33°35N±0°01×35°39E±0°03, h5km±3km, n91, σ1§03/128, 4C, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.15**	**340**	*e*P	**Pg**	**15 29 03.6**	**+1.2**
MATL	**Matarih**	**0.15**	**340**	*e*P	**Pg**	**15 29 03.6**	**+1.2**
KSDI	**Kefar Szold**	**0.28**	**125**	Pg	**Pg**	**15 29 03.5**	**-1.3**
KSDI				Sg	**Sg**	**15 29 07.8**	**-0.6**
HRI	**Mount Hermon**	**0.30**	**106**	Pg	**Pg**	**15 29 03.4**	**-1.8**
HNTI	**Hanita**	**0.32**	**214**	Pg	**Pg**	**15 29 05.4**	**-0.2**
HNTI				Sg	**Sg**	**15 29 11.3**	**+1.5**
MMA0B	**Mount Meron ar**	**0.34**	**178**	Pg	**Pg**	**15 29 04.5**	**-1.4**
MMA0B				Sg	**Sg**	**15 29 10.7**	**+0.5**
RCY	**Rachaya**	**0.38**	**70**	*e*P	**Pg**	**15 29 06.3**	**-0.5**
RCY				*e*S	**Sg**	**15 29 11.6**	**-0.2**
RCY	**Rachaya**	**0.38**	**70**	*e*P	**Pg**	**15 29 06.3**	**-0.5**
RCY				*e*S	**Sg**	**15 29 11.6**	**-0.2**
KSHT	**Keshet**	**0.51**	**136**	Pg	**Pg**	**15 29 08.5**	**-0.7**
BEYL	**Beirut**	**0.53**	**10**	*e*P	**Pg**	**15 29 09.8**	**+0.3**
BHL	**Bhannes**	**0.59**	**22**	*e*P	**Pg**	**15 29 10.5**	**-0.3**
BHL				*e*S	**Sg**	**15 29 19.1**	**+0.5**
BHL	**Bhannes**	**0.59**	**22**	*e*P	**Pg**	**15 29 11.6**	**+0.8**
BHL				*e*S	**Sg**	**15 29 20.4**	**+1.9**
BHL	**Bhannes**	**0.59**	**22**	*e*P	**Pg**	**15 29 10.5**	**-0.3**
BHL				*e*S	**Sg**	**15 29 19.1**	**+0.5**
BLGI	**Bet Lehem HaGe**	**0.64**	**195**	Pg	**Pg**	**15 29 11.3**	**-0.3**
OFRI	**'Ofer**	**0.80**	**205**	Pg	**Pg**	**15 29 14.6**	**-0.2**
MMLI	**Mount Malkishu**	**0.91**	**178**	Pg	**Pg**	**15 29 15.5**	**-1.3**
MMLI				Sg	**Sg**	**15 29 29.5**	**+0.8**
HWQ	**Hawqa**	**1.03**	**27**	*e*P	**Pg**	**15 29 18.8**	**-0.5**
HWQ				*e*S	**Sg**	**15 29 32.9**	**+0.2**
HWQ	**Hawqa**	**1.03**	**27**	*e*P	**Pg**	**15 29 19.4**	**+0.2**
HWQ				*e*S	**Sg**	**15 29 34.1**	**+1.4**
HWQ	**Hawqa**	**1.03**	**27**	*e*P	**Pg**	**15 29 19.4**	**+0.1**
HWQ				*e*S	**Sg**	**15 29 32.9**	**+0.2**
HMDT	**Nahal Hemdat**	**1.10**	**174**	Pg	**Pg**	**15 29 18.8**	**-1.7**
HMDT				Sg	**Sg**	**15 29 35.1**	**+0.3**
SLTI	**Sal'it**	**1.15**	**195**	Pg	**Pg**	**15 29 20.5**	**-0.8**
SLTI				Sg	**Sg**	**15 29 36.7**	**+0.5**
DSI	**Dead Sea**	**1.77**	**180**	Pn	**Pn**	**15 29 30.1**	**-0.6**
DSI				Sn	**Sn**	**15 29 54.6**	**+1.0**
YTIR	**Yattir**	**2.00**	**187**	Pn	**Pn**	**15 29 34.0**	**+0.3**
PHNC	**Paralimni**	**2.00**	**326**	P	**Pn**	**15 29 34.1**	**+0.4**
	3.9nm,0.5s						
PHNC				S	**Sn**	**15 29 57.9**	**-1.1**
PHNC	**Paralimni**	**2.00**	**326**	P	**Pn**	**15 29 34.1**	**+0.4**
	3.9nm,0.5s						
PHNC				S	**Sn**	**15 29 57.9**	**-1.1**
MZDA	**Masada**	**2.04**	**181**	Pn	**Pn**	**15 29 33.9**	**-0.3**
MZDA				Sn	**Sn**	**15 30 02.1**	**+2.1**
CSS	**Prodhromos**	**2.34**	**314**	P	**Pn**	**15 29 38.4**	**-0.1**
CSS				S	**Sn**	**15 30 05.9**	**-1.7**
CSS	**Prodhromos**	**2.34**	**314**	P	**Pn**	**15 29 38.4**	**-0.1**
CSS				S	**Sn**	**15 30 05.9**	**-1.7**
RTMI	**Retamim**	**2.36**	**195**	Pn	**Pn**	**15 29 39.5**	**+0.7**
EREN	**Erenkoy**	**2.40**	**335**	*e*PN	**Pn**	**15 29 39.1**	**-0.1**
EREN				*e*SN	**Sn**	**15 30 06.8**	**-2.1**
EREN	**Erenkoy**	**2.40**	**335**	Pn	**Pn**	**15 29 38.1**	**-1.1**
EREN	**Erenkoy**	**2.40**	**335**	Pn	**Pn**	**15 29 38.1**	**-1.1**
EREN				*e*Sn	**Sn**	**15 30 06.8**	**-2.1**
LFK	**Lefkose**	**2.46**	**322**	*e*PN	**Pn**	**15 29 39.6**	**-0.5**
LFK				*e*SN	**Sn**	**15 30 08.4**	**-2.1**
LFK	**Lefkose**	**2.46**	**322**	Pn	**Pn**	**15 29 39.4**	**-0.7**
LFK	**Lefkose**	**2.46**	**322**	Pn	**Pn**	**15 29 39.4**	**-0.7**
LFK				*e*Sn	**Sn**	**15 30 08.4**	**-2.1**
MAMC	**Mammari**	**2.56**	**316**	P	**Pn**	**15 29 43.0**	**+1.6**
MAMC				S	**Sn**	**15 30 08.0**	**-4.8**
MAMC	**Mammari**	**2.56**	**316**	P	**Pn**	**15 29 43.0**	**+1.6**
KZIT	**Kziot**	**2.58**	**199**	Pn	**Pn**	**15 29 41.9**	**+0.2**
LEF	**Lefka**	**2.72**	**311**	*e*PN	**Pn**	**15 29 43.7**	**+0.1**
LEF				*e*SN	**Sn**	**15 30 15.2**	**-1.7**
LEF	**Lefka**	**2.72**	**311**	*e*Pn	**Pn**	**15 29 43.7**	**+0.1**
LEF				*e*Sn	**Sn**	**15 30 15.2**	**-1.7**
HTY	**Hatay**	**2.83**	**12**	*e*PN	**Pn**	**15 29 46.7**	**+1.5**
HTY				*e*SN	**Sn**	**15 30 19.7**	**0.0**
HTY	**Hatay**	**2.83**	**12**	*e*Pn	**Pn**	**15 29 46.7**	**+1.5**
HTY				*e*Sn	**Sn**	**15 30 19.7**	**0.0**
ALFC	**Alevga**	**2.93**	**309**	⇑P	**Pn**	**15 29 47.0**	**+0.5**
	9.9nm,0.2s						
ALFC				S	**Sn**	**15 30 20.3**	**-1.8**
ALFC	**Alevga**	**2.93**	**309**	⇑P	**Pn**	**15 29 47.0**	**+0.5**
	9.9nm,0.2s						
ALFC				S	**Sn**	**15 30 20.3**	**-1.8**
PPCY	**Paphos**	**2.95**	**302**	⇑P	**Pn**	**15 29 47.2**	**+0.4**
PPCY				S	**Sn**	**15 30 23.4**	**+0.8**
PPCY	**Paphos**	**2.95**	**302**	⇑P	**Pn**	**15 29 47.2**	**+0.4**
PPCY				S	**Sn**	**15 30 23.4**	**+0.8**
PRNI	**Paran**	**3.01**	**186**	Pn	**Pn**	**15 29 47.4**	**-0.2**
IKL	**Isikli**	**3.20**	**335**	*e*PN	**Pn**	**15 29 49.7**	**-0.6**
IKL	**Isikli**	**3.20**	**335**	*e*Pn	**Pn**	**15 29 49.7**	**-0.6**
KRTS	**Karatas**	**3.21**	**360**	*e*PN	**Pn**	**15 29 51.3**	**+0.9**
KRTS	**Karatas**	**3.21**	**360**	*e*Pn	**Pn**	**15 29 51.3**	**+0.8**
KRMI	**Paran Flat**	**3.27**	**190**	Pn	**Pn**	**15 29 51.2**	**-0.1**
AMAG	**Maghara**	**3.27**	**215**	P	**Pn**	**15 29 51.1**	**-0.2**
	baz=220						
AMAG				S	**Sn**	**15 30 27.6**	**-2.9**
	baz=220						
AMAG	**Maghara**	**3.27**	**215**	P	**Pn**	**15 29 51.1**	**-0.2**
AMAG				S	**Sn**	**15 30 27.6**	**-3.0**
MBRI	**Mt Berech**	**3.57**	**187**	Pn	**Pn**	**15 29 55.2**	**-0.1**
MERS	**Mersin**	**3.58**	**349**	*e*PN	**Pn**	**15 29 55.4**	**-0.1**
MERS	**Mersin**	**3.58**	**349**	*e*Pn	**Pn**	**15 29 55.4**	**-0.1**
HNKL	**Nakhl**	**3.62**	**200**	P	**Pn**	**15 29 55.7**	**-0.2**
	baz=203						
HNKL				AMP		15 31 00.0	
	comp=E,60μm,1.7s,logA/T=4.5,baz=203						
HNKL	**Nakhl**	**3.62**	**200**	P	**Pn**	**15 29 55.7**	**-0.3**
CEYT	**Ceyhan**	**3.66**	**5**	*e*PN	**Pn**	**15 29 58.0**	**+1.4**
CEYT	**Ceyhan**	**3.66**	**5**	*e*Pn	**Pn**	**15 29 58.0**	**+1.4**
KARA	**Karaisali**	**3.91**	**356**	*e*PN	**Pn**	**15 30 00.5**	**+0.5**
KARA	**Karaisali**	**3.91**	**356**	*e*Pn	**Pn**	**15 30 00.5**	**+0.5**
SUZ		**4.12**	**213**	P	**Pn**	**15 30 03.3**	**+0.4**
	baz=216						
SUZ				S	**Sn**	**15 30 48.0**	**-3.5**
	baz=216						
SUZ		**4.12**	**213**	P	**Pn**	**15 30 03.3**	**+0.3**
SUZ				S	**Sn**	**15 30 48.0**	**-3.5**
KOZT	**Kozan**	**4.14**	**5**	*e*PN	**Pn**	**15 30 04.5**	**+1.3**
HDMB	**Hadim**	**4.32**	**327**	*e*PN	**Pn**	**15 30 05.6**	**0.0**
HDMB	**Hadim**	**4.32**	**327**	*e*Pn	**Pn**	**15 30 05.6**	**0.0**
KMRS	**Kahramanmaras**	**4.33**	**16**	*e*PN	**Pn**	**15 30 08.4**	**+2.7**
KMRS	**Kahramanmaras**	**4.33**	**16**	*e*Pn	**Pn**	**15 30 08.4**	**+2.7**
HHAG	**Hagoal**	**4.40**	**221**	P	**Pn**	**15 30 08.0**	**+1.3**
	baz=224						
HHAG	**Hagoal**	**4.40**	**221**	P	**Pn**	**15 30 08.0**	**+1.3**
ZNM		**4.51**	**209**	P	**Pn**	**15 30 08.7**	**+0.5**
	baz=212						
ZNM		**4.51**	**209**	P	**Pn**	**15 30 08.7**	**+0.5**
KOT	**Kottamia**	**4.57**	**223**	P	**Pn**	**15 30 10.0**	**+0.9**
	baz=226						
KOT	**Kottamia**	**4.57**	**223**	P	**Pn**	**15 30 10.0**	**+0.9**
ZAF		**4.73**	**212**	P	**Pn**	**15 30 11.7**	**+0.4**
	baz=215						
ZAF		**4.73**	**212**	P	**Pn**	**15 30 11.7**	**+0.4**
GLL	**Jalalah**	**4.90**	**221**	P	**Pn**	**15 30 14.2**	**+0.5**
	baz=224						
GLL	**Jalalah**	**4.90**	**221**	P	**Pn**	**15 30 14.2**	**+0.5**
HKAT	**Jabal Katrina**	**4.96**	**194**	P	**Pn**	**15 30 14.3**	**-0.2**
	baz=196						
HKAT	**Jabal Katrina**	**4.96**	**194**	P	**Pn**	**15 30 14.3**	**-0.2**
KONT	**Konya--Tatoy**	**5.21**	**333**	*e*PN	**Pn**	**15 30 19.0**	**+1.2**
KONT	**Konya--Tatoy**	**5.21**	**333**	*e*Pn	**Pn**	**15 30 19.0**	**+1.2**
SARI	**SarD1z-Kayseri**	**5.42**	**11**	*e*PN	**Pn**	**15 30 18.6**	**-2.2**
LADK	**Ladik-KONYA**	**5.43**	**334**	*e*PN	**Pn**	**15 30 22.2**	**+1.4**
LADK	**Ladik-KONYA**	**5.43**	**334**	*e*Pn	**Pn**	**15 30 22.2**	**+1.3**
SUTC	**Sutluce-Ispart**	**5.46**	**320**	*e*PN	**Pn**	**15 30 22.1**	**+0.9**
SUTC	**Sutluce-Ispart**	**5.46**	**320**	*e*Pn	**Pn**	**15 30 22.1**	**+0.8**
HHRG	**Al Ghardaqah**	**6.31**	**195**	P	**Pn**	**15 30 32.3**	**-0.7**
	baz=197						
HHRG	**Al Ghardaqah**	**6.31**	**195**	P	**Pn**	**15 30 32.3**	**-0.7**

*NEIC **12** 15:30:19.4±1.3, 8°49S×108°78E, h10km, mb4.3/2, Error ellipse: s-maj=72.7km s-min=9.7km az=49.0*
IDC 12 15:30:18.4±2.5, 8°41S×108°86E, h0km, mb3.9/7, mb1 3.9/8, mb1mx3.8/22, mbtmp3.8/8, ML3.5/1, Error ellipse: s-maj=131.2km s-min=16.7km az=50.0, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**18.94**	**122**	P	Pn	15 34 39.5	-2.3
	0.1nm,0.3s,baz=100,slow=18,SNR=4.3						
WRA	**Warramunga Arr**	**27.19**	**118**	P	P	15 36 04.3	+0.4
	0.8nm,0.8s,baz=289,slow=11,SNR=3.8						
ASAR	**Alice Springs**	**28.37**	**125**	P	P	15 36 15.3	+0.8
	0.4nm,0.9s,baz=303,slow=9.6,SNR=3.5						
STKA	**Stephens Creek**	**38.33**	**132**	P	P	15 37 41.0	-0.1
	4.3nm,0.9s,baz=264,slow=10,SNR=3.8						
SONM	**Songino Array**	**56.04**	**358**	P	P	15 39 59.2	+0.3
	1.0nm,0.6s,baz=165,slow=7.6,SNR=4.2						
MK31	**Makanchi Array**	**59.84**	**339**	*e*P	P	15 40 25.5	-0.1
MKAR	**Makanchi Array**	**59.84**	**339**	P	P	15 40 25.9	+0.3
	1.5nm,0.5s,baz=127,slow=8.0,SNR=18						
KURK	**Kurchatov**	**64.45**	**339**	*e*P	P	15 40 56.0	-0.5
	2.7nm,1.0s						
ZALV	**Zalesovo Beam**	**65.36**	**345**	P	P	15 41 02.3	-0.1
	0.5nm,0.4s,baz=136,slow=5.2,SNR=3.4						
BVAR	**Borovoye Array**	**69.38**	**336**	P	P	15 41 27.6	-0.3
	0.8nm,0.5s,baz=129,slow=11,SNR=5.8						
ABKAR	**Akbulak array**	**71.56**	**329**	*e*P	P	15 41 40.0	-1.4
	1.1nm,0.5s						

IDC 12 15:34:20.1±3.2, 6°63S×150°84E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.4/16, mbtmp3.6/3, Error ellipse: s-maj=108.5km s-min=44.7km az=123.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.78**	**229**	P	P	15 39 02.0	-0.8
	1.1nm,0.6s,baz=54,slow=11,SNR=12						
ASAR	**Alice Springs**	**23.49**	**222**	P	P	15 39 32.0	+0.2
	0.6nm,0.5s,baz=57,slow=8.7,SNR=14						
FITZ	**Fitzroy Crossi**	**27.08**	**243**	P	P	15 40 04.2	-0.5
	1.6nm,0.7s,baz=60,slow=9.8,SNR=7.1						
TORD	**Torodi Ar. Bea**	**148.94**	**284**	PKPbc	PKPbc	15 54 11.1	+0.1
	0.7nm,0.7s,baz=62,slow=2.4,SNR=2.9						

*SGS **12** 15:40:46.9, 34°59N×35°66E, h3km*
*IDC **12** 15:41:02.0±0.8, 33°35N×35°48E, h0km, mb3.6/6, mb1 3.8/10, mb1mx3.6/26, mbtmp3.7/10, ML3.7/4, MS3.2/5, Ms1 3.2/5, ms1mx2.7/36, Error ellipse: s-maj=13.4km s-min=6.1km az=93.0*
*NEIC **12** 15:41:01.0, 33°31N×35°45E, h0km, mb4.2/2, MD4.3(GRAL), ML3.8(GII), ML3.8(NIC), After GII.*
NEIC Felt at Tyre, Lebanon.
*GII **12** 15:41:01.6±0.7, 33°31N×35°45E, h1km±1km, Mb4.0/2, Md3.8/4, Mm3.6/6*
*ISCJB **12** 15:41:01.4±0.3, 33°34N±0°01×35°36E±0°02, h7km±2km, mb3.7/8, MS3.2/3, Error ellipse: s-maj=2.5km s-min=1.9km az=18.3*
*GRAL **12** 15:41:02.9±0.7, 33°32N×35°45E, h0km±5km, MD4.0*
*CSEM **12** 15:41:02.0±0.1, 33°34N×35°40E, h2km, ML4.0, Mw3.7, Error ellipse: s-maj=2.5km s-min=1.9km az=95.0*
*HLW **12** 15:41:03.0, 33°50N×35°48E, h33km±37km, Md3.9, Ml3.9*
*NSSC **12** 15:41:03, 33°31N×35°48E, h10km±1km*
*NIC **12** 15:41:05.6±0.3, 33°42N×35°42E, h49km, mb4.2, ML3.8, MW3.7*
ISC 12 15:41:02.2±0.3, 33°35N±0°01×35°40E±0°02, h4km±2km, n219, σ0§94/280, mb3.7/8, MS3.2/3, 4C-26D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.15**	**338**	*e*P	**Pg**	**15 41 06.4**	**+1.2**
MATL	**Matarih**	**0.15**	**338**	*e*P	**Pg**	**15 41 06.4**	**+1.2**
KSDI	**Kefar Szold**	**0.27**	**125**	Pg	**Pg**	**15 41 06.6**	**-0.7**
KSDI				Sg	**Sg**	**15 41 10.9**	**+0.1**
HRI	**Mount Hermon**	**0.29**	**106**	Pg	**Pg**	**15 41 06.9**	**-0.9**
HNTI	**Hanita**	**0.32**	**216**	Pg	**Pg**	**15 41 08.5**	**+0.1**
MMA1	**Mount Meron ar**	**0.33**	**179**	Pg	**Pg**	**15 41 08.1**	**-0.4**
MMA0	**Mount Meron ar**	**0.33**	**179**	Pg	**Pg**	**15 41 08.1**	**-0.4**
MMA0				Sg	**Sg**	**15 41 14.1**	**+1.3**
MMAI	**Mount Meron Ar**	**0.33**	**179**	Pg	**Pg**	**15 41 08.4**	**-0.1**
	2μm,0.3s,baz=17,slow=17,SNR=4790						
MMAI				Lg		15 41 13.3	
	7μm,0.3s,baz=7.1,slow=36,SNR=61						
RCY	**Rachaya**	**0.38**	**68**	*e*P	**Pg**	**15 41 09.4**	**-0.1**
RCY				*e*S	**Sg**	**15 41 14.6**	**+0.2**
RCY	**Rachaya**	**0.38**	**68**	*e*P	**Pg**	**15 41 09.4**	**-0.1**
RCY				*e*S	**Sg**	**15 41 14.6**	**+0.2**
BRBR	**Barbar**	**0.47**	**82**	⇓P	**Pg**	**15 41 10.0**	**-1.1**
BRBR				⇑S	**Sg**	**15 41 17.0**	**-0.2**
BRBR	**Barbar**	**0.47**	**82**	⇓*i*P	**Pg**	**15 41 10.7**	**-0.4**
BRBR				⇑*i*S	**Sg**	**15 41 17.9**	**+0.7**
KSHT	**Keshet**	**0.50**	**136**	Pg	**Pg**	**15 41 11.1**	**-0.5**
BEYL	**Beirut**	**0.53**	**9**	*e*P	**Pg**	**15 41 13.2**	**+0.8**
BEYL	**Beirut**	**0.53**	**9**	*e*P	**Pg**	**15 41 13.1**	**+0.7**
BHL	**Bhannes**	**0.60**	**21**	*e*P	**Pg**	**15 41 13.3**	**-0.3**
BHL				*e*S	**Sg**	**15 41 22.1**	**+0.8**
BHL	**Bhannes**	**0.60**	**21**	*e*P	**Pg**	**15 41 14.1**	**+0.4**
BHL				*e*S	**Sg**	**15 41 22.7**	**+1.3**
BHL	**Bhannes**	**0.60**	**21**	*e*P	**Pg**	**15 41 13.3**	**-0.3**
BHL				*e*S	**Sg**	**15 41 22.1**	**+0.7**
BLGI	**Bet Lehem HaGe**	**0.64**	**196**	Pg	**Pg**	**15 41 14.0**	**-0.3**
QASN	**Qassioun**	**0.76**	**75**	⇓P	**Pg**	**15 41 16.0**	**-0.7**
QASN				⇑S	**Sg**	**15 41 27.0**	**+0.5**
QASN	**Qassioun**	**0.76**	**75**	⇓*i*P	**Pg**	**15 41 16.4**	**-0.3**
QASN				⇑*i*S	**Sg**	**15 41 27.2**	**+0.7**
OFRI	**'Ofer**	**0.80**	**206**	Pg	**Pg**	**15 41 17.4**	**-0.1**
TCHB	**Talchebab**	**0.83**	**144**	⇑P	**Pg**	**15 41 17.0**	**-1.0**
TCHB				⇑S	**Sg**	**15 41 28.0**	**-0.8**
TCHB	**Talchebab**	**0.83**	**144**	⇑*i*P	**Pg**	**15 41 17.8**	**-0.2**

BTCH	**Batrach**	**2.82**	**18**	⇑P	**Pn**	**15 41 48.0**	**-0.1**
BTCH				⇑S	**Sn**	**15 42 23.0**	**+0.5**
BTCH	**Batrach**	**2.82**	**18**	⇑*i*P	**Pn**	**15 41 48.6**	**+0.5**
BTCH				⇑*i*S	**Sn**	**15 42 23.2**	**+0.7**
HTY	**Hatay**	**2.83**	**12**	*e*PN	**Pn**	**15 41 49.4**	**+1.1**
HTY	**Hatay**	**2.83**	**12**	*e*Pn	**Pn**	**15 41 49.4**	**+1.2**
ALFC	**Alevga**	**2.94**	**309**	⇑P	**Pn**	**15 41 49.9**	**+0.3**
	16nm,0.2s						
ALFC				S	**Sn**	**15 42 25.5**	**+0.1**
ALFC	**Alevga**	**2.94**	**309**	⇑P	**Pn**	**15 41 49.9**	**+0.3**
	16nm,0.2s						
ALFC				S	**Sn**	**15 42 25.5**	**+0.1**
PPCY	**Paphos**	**2.96**	**302**	⇑P	**Pn**	**15 41 50.0**	**+0.1**
PPCY	**Paphos**	**2.96**	**302**	⇑P	**Pn**	**15 41 50.0**	**+0.1**
PRNI	**Paran**	**3.00**	**187**	Pn	**Pn**	**15 41 50.8**	**+0.3**
IKL	**Isikli**	**3.21**	**334**	*e*PN	**Pn**	**15 41 52.2**	**-1.2**
IKL	**Isikli**	**3.21**	**334**	*e*Pn	**Pn**	**15 41 52.2**	**-1.2**
KRTS	**Karatas**	**3.22**	**360**	*e*PN	**Pn**	**15 41 54.0**	**+0.5**
KRTS	**Karatas**	**3.22**	**360**	*e*Pn	**Pn**	**15 41 54.0**	**+0.5**
AMAG	**Maghara**	**3.27**	**215**	P	**Pn**	**15 41 54.4**	**+0.1**
	baz=215						
AMAG				S	**Sn**	**15 42 32.9**	**-0.7**
	baz=215						
AMAG	**Maghara**	**3.27**	**215**	P	**Pn**	**15 41 54.4**	**+0.2**
AMAG				S	**Sn**	**15 42 32.9**	**-0.7**
HRFI	**Mount Harif**	**3.31**	**185**	Pn	**Pn**	**15 41 54.7**	**-0.1**
JHLN	**Al Jahlan**	**3.42**	**46**	⇑P	**Pn**	**15 41 57.0**	**+0.7**
JHLN	**Al Jahlan**	**3.42**	**46**	⇑*i*P	**Pn**	**15 41 57.4**	**+1.1**
DRWC	**Darouich**	**3.43**	**17**	⇑P	**Pn**	**15 41 56.0**	**-0.4**
DRWC				⇑S	**Sn**	**15 42 38.0**	**+0.5**
DRWC	**Darouich**	**3.43**	**17**	⇑*i*P	**Pn**	**15 41 56.9**	**+0.5**
DRWC				⇑*i*S	**Sn**	**15 42 38.4**	**+0.9**
MERS	**Mersin**	**3.59**	**349**	*e*PN	**Pn**	**15 41 57.9**	**-0.7**
MERS	**Mersin**	**3.59**	**349**	*e*Pn	**Pn**	**15 41 57.9**	**-0.6**
HNKL	**Nakhl**	**3.61**	**200**	P	**Pn**	**15 41 59.2**	**+0.3**
	baz=201						
HNKL	**Nakhl**	**3.61**	**200**	P	**Pn**	**15 41 59.2**	**+0.3**
CEYT	**Ceyhan**	**3.67**	**4**	*e*PN	**Pn**	**15 42 01.1**	**+1.4**
CEYT	**Ceyhan**	**3.67**	**4**	*e*Pn	**Pn**	**15 42 01.1**	**+1.5**
EIL	**Elat**	**3.68**	**186**	Pn	**Pn**	**15 41 59.9**	**0.0**
	4.2nm,0.3s,baz=360,slow=11,SNR=36						
EIL				Pg	**Pg**	**15 42 08.7**	**-4.1**
	65nm,0.3s,baz=3.2,slow=4.8,SNR=70						
EIL				Lg		15 42 59.2	
	38nm,0.3s,baz=104,slow=14,SNR=8.1						
EIL				LR	LR	15 43 49.3	
	comp=Z,228nm,18.9s,baz=187,slow=45						
EIL	**Elat**	**3.68**	**186**	Pn	**Pn**	**15 41 59.9**	**0.0**
EIL				Pg	**Pg**	**15 42 08.7**	**-4.0**
EIL				Lg		15 42 59.2	
EIL				LR	LR	15 43 49.3	
EIL	**Elat**	**3.68**	**186**	Pn	**Pn**	**15 41 59.9**	**0.0**
EIL	**Elat**	**3.68**	**186**	Pg	**Pg**	**15 42 08.7**	**-4.1**
KARA	**Karaisali**	**3.92**	**356**	*e*PN	**Pn**	**15 42 03.7**	**+0.6**
KARA	**Karaisali**	**3.92**	**356**	*e*Pn	**Pn**	**15 42 03.7**	**+0.6**
GAZ	**Gaziantep**	**4.10**	**21**	*e*PN	**Pn**	**15 42 07.5**	**+2.0**
GAZ	**Gaziantep**	**4.10**	**21**	*e*Pn	**Pn**	**15 42 07.6**	**+2.1**
SUZ		**4.12**	**213**	P	**Pn**	**15 42 06.2**	**+0.3**
	baz=213						
SUZ		**4.12**	**213**	P	**Pn**	**15 42 06.2**	**+0.3**
KOZT	**Kozan**	**4.14**	**5**	*e*PN	**Pn**	**15 42 07.6**	**+1.4**
HBST	**Basata**	**4.16**	**188**	P	**Pn**	**15 42 06.7**	**+0.3**
	baz=189						
HBST	**Basata**	**4.16**	**188**	P	**Pn**	**15 42 06.7**	**+0.3**
HAQS	**Haql**	**4.30**	**186**	P	**Pn**	**15 42 09.1**	**+0.7**
HAQS	**Haql**	**4.30**	**186**	P	**Pn**	**15 42 09.1**	**+0.7**
HDMB	**Hadim**	**4.33**	**327**	*e*PN	**Pn**	**15 42 08.0**	**-0.7**
HDMB	**Hadim**	**4.33**	**327**	*e*Pn	**Pn**	**15 42 08.0**	**-0.7**
KMRS	**Kahramanmaras**	**4.33**	**16**	*e*PN	**Pn**	**15 42 10.9**	**+2.2**
KMRS	**Kahramanmaras**	**4.33**	**16**	*e*Pn	**Pn**	**15 42 10.9**	**+2.2**
HHAG	**Hagoal**	**4.40**	**221**	P	**Pn**	**15 42 10.1**	**+0.4**
	baz=221						
HHAG	**Hagoal**	**4.40**	**221**	P	**Pn**	**15 42 10.1**	**+0.4**
ZNM		**4.51**	**209**	P	**Pn**	**15 42 11.9**	**+0.7**
	baz=210						
ZNM		**4.51**	**209**	P	**Pn**	**15 42 11.9**	**+0.7**
KOT	**Kottamia**	**4.57**	**223**	P	**Pn**	**15 42 12.6**	**+0.6**
	baz=223						
KOT				AMP		15 43 00.0	
	comp=N,180μm,0.4s,logA/T=5.7,baz=223						
KOT	**Kottamia**	**4.57**	**223**	P	**Pn**	**15 42 12.6**	**+0.6**
JLOS		**4.60**	**179**	S	**Sb**	**15 43 17.2**	**-1.9**
JLOS		**4.60**	**179**	P	**Pn**	**15 42 12.6**	**+0.1**
JLOS		**4.60**	**179**	P	**Pn**	**15 42 12.6**	**+0.2**
HDHB	**Dhahab**	**4.66**	**188**	P	**Pn**	**15 42 13.5**	**+0.2**
	baz=190						
HDHB	**Dhahab**	**4.66**	**188**	P	**Pn**	**15 42 13.5**	**+0.2**
ZAF		**4.73**	**212**	P	**Pn**	**15 42 14.7**	**+0.5**
	baz=212						
ZAF		**4.73**	**212**	P	**Pn**	**15 42 14.7**	**+0.5**
GLL	**Jalalah**	**4.90**	**221**	P	**Pn**	**15 42 17.3**	**+0.6**
	baz=221						
GLL	**Jalalah**	**4.90**	**221**	P	**Pn**	**15 42 17.3**	**+0.6**
BDAS	**Al Bad'**	**4.91**	**183**	P	**Pn**	**15 42 17.8**	**+1.1**
BDAS	**Al Bad'**	**4.91**	**183**	P	**Pn**	**15 42 17.8**	**+1.1**
URFA	**Urfa**	**4.95**	**33**	*e*PN	**Pn**	**15 42 20.1**	**+2.8**
URFA	**Urfa**	**4.95**	**33**	*e*Pn	**Pn**	**15 42 20.1**	**+2.8**
HKAT	**Jabal Katrina**	**4.96**	**194**	P	**Pn**	**15 42 17.5**	**+0.1**
	baz=195						
HKAT	**Jabal Katrina**	**4.96**	**194**	P	**Pn**	**15 42 17.5**	**+0.1**
HSAF	**As Saff**	**4.96**	**222**	P	**Pn**	**15 42 17.6**	**+0.2**
	baz=222						
HSAF	**As Saff**	**4.96**	**222**	P	**Pn**	**15 42 17.6**	**+0.2**
SQR		**4.98**	**227**	P	**Pn**	**15 42 18.5**	**+0.8**
	baz=227						
SQR		**4.98**	**227**	P	**Pn**	**15 42 18.5**	**+0.8**
SULT	**Sultanhani-AKS**	**5.08**	**343**	*e*PN	**Pn**	**15 42 19.2**	**+0.1**
SULT	**Sultanhani-AKS**	**5.08**	**343**	*e*Pn	**Pn**	**15 42 19.2**	**+0.2**
TR2		**5.15**	**197**	P	**Pn**	**15 42 20.7**	**+0.7**
	baz=197						
TR2		**5.15**	**197**	P	**Pn**	**15 42 20.7**	**+0.7**
TBKS	**Tabuk**	**5.20**	**169**	P	**Pn**	**15 42 20.5**	**-0.3**
TBKS	**Tabuk**	**5.20**	**169**	P	**Pn**	**15 42 20.5**	**-0.3**
KONT	**Konya--Tatoy**	**5.21**	**333**	*e*PN	**Pn**	**15 42 20.9**	**0.0**
KONT	**Konya--Tatoy**	**5.21**	**333**	*e*Pn	**Pn**	**15 42 20.9**	**0.0**
HMYD	**Mayadein**	**5.28**	**229**	P	**Pn**	**15 42 22.4**	**+0.6**
	baz=229						
HMYD	**Mayadein**	**5.28**	**229**	P	**Pn**	**15 42 22.4**	**+0.5**
SARI	**SarD1z-Kayseri**	**5.42**	**11**	*e*PN	**Pn**	**15 42 21.6**	**-2.2**
LADK	**Ladik-KONYA**	**5.43**	**334**	*e*PN	**Pn**	**15 42 24.1**	**+0.1**
LADK	**Ladik-KONYA**	**5.43**	**334**	*e*Pn	**Pn**	**15 42 24.1**	**+0.2**
TR1		**5.46**	**194**	P	**Pn**	**15 42 24.1**	**-0.3**
	baz=194						
TR1		**5.46**	**194**	P	**Pn**	**15 42 24.1**	**-0.3**
SUTC	**Sutluce-Ispart**	**5.47**	**320**	*e*PN	**Pn**	**15 42 23.6**	**-0.8**
SUTC	**Sutluce-Ispart**	**5.47**	**320**	*e*Pn	**Pn**	**15 42 23.6**	**-0.8**
GRB	**Gharib**	**5.54**	**205**	P	**Pn**	**15 42 25.3**	**-0.1**
	baz=205						
GRB	**Gharib**	**5.54**	**205**	P	**Pn**	**15 42 25.3**	**0.0**
ELL	**Elmali**	**5.64**	**309**	*e*PN	**Pn**	**15 42 26.6**	**-0.1**
ELL	**Elmali**	**5.64**	**309**	*e*Pn	**Pn**	**15 42 26.6**	**-0.1**
DARE	**Darende-Malaty**	**5.92**	**19**	*e*PN	**Pn**	**15 42 27.9**	**-2.7**
SVRC	**Sivrice-ELAZID**	**5.94**	**31**	*e*PN	**Pn**	**15 42 34.3**	**+3.4**
FETY	**Fethiye**	**6.13**	**304**	*e*PN	**Pn**	**15 42 33.0**	**-0.5**
FETY	**Fethiye**	**6.13**	**304**	*e*Pn	**Pn**	**15 42 33.0**	**-0.5**
GLHS	**Glhisar (BURDU**	**6.14**	**310**	*e*PN	**Pn**	**15 42 33.8**	**+0.2**
GLHS	**Glhisar (BURDU**	**6.14**	**310**	*e*Pn	**Pn**	**15 42 33.8**	**+0.1**
KIZT	**Kizilcal**	**6.21**	**334**	*e*PN	**Pn**	**15 42 34.9**	**+0.3**
KIZT	**Kizilcal**	**6.21**	**334**	*e*Pn	**Pn**	**15 42 34.9**	**+0.3**
YOZ	**Yozgat**	**6.28**	**359**	*e*PN	**Pn**	**15 42 37.6**	**+2.0**
YOZ	**Yozgat**	**6.28**	**359**	*e*Pn	**Pn**	**15 42 37.6**	**+2.0**
HHRG	**Al Ghardaqah**	**6.31**	**195**	P	**Pn**	**15 42 35.6**	**-0.4**
	baz=196						
HHRG	**Al Ghardaqah**	**6.31**	**195**	P	**Pn**	**15 42 35.6**	**-0.3**
PTK	**Pertek**	**6.41**	**29**	*e*PN	**Pn**	**15 42 41.0**	**+3.7**
BRTR	**Keskin Array B**	**6.52**	**348**	Pn	**Pn**	**15 42 40.4**	**+1.5**
	comp=N,0.6nm,0.3s,baz=160,slow=17,SNR=28						
BRTR	**Keskin Array B**	**6.52**	**348**	Pn	**Pn**	**15 42 40.3**	**+1.4**
BR131	**Keskin Array S**	**6.52**	**348**	*e*Pn	**Pn**	**15 42 40.9**	**+2.0**
	comp=N,4.7nm,0.6s						
BR131	**Keskin Array S**	**6.52**	**348**	*e*Pn	**Pn**	**15 42 40.9**	**+2.0**
	comp=N,4.7nm,0.6s						
BIDS	**Bi'r al Bayda'**	**6.60**	**168**	P	**Pn**	**15 42 39.7**	**-0.2**
BIDS	**Bi'r al Bayda'**	**6.60**	**168**	P	**Pn**	**15 42 39.7**	**-0.2**
WJHS		**6.65**	**172**	P	**Pn**	**15 42 40.9**	**+0.2**
WJHS		**6.65**	**172**	P	**Pn**	**15 42 40.9**	**+0.3**
SVSK	**Karacayir**	**6.68**	**11**	*e*PN	**Pn**	**15 42 43.2**	**+2.2**
SVSK	**Karacayir**	**6.68**	**11**	*e*Pn	**Pn**	**15 42 43.2**	**+2.1**
KHL	**Karahalli**	**6.89**	**318**	*e*PN	**Pn**	**15 42 43.9**	**0.0**
KHL	**Karahalli**	**6.89**	**318**	*e*Pn	**Pn**	**15 42 43.9**	**0.0**
YER	**Yerkesik**	**6.94**	**305**	*e*PN	**Pn**	**15 42 44.7**	**+0.1**
YER	**Yerkesik**	**6.94**	**305**	*e*Pn	**Pn**	**15 42 44.7**	**+0.1**
MSL	**Mosul**	**7.03**	**62**	*e*Pn	**Pn**	**15 42 50.0**	**+4.1**
MSL				*e*Sn	**Sn**	**15 44 13.0**	**+6.7**
MSL				*e*Lg		15 44 50.0	
MSL				*e*Sg	**Sg**	**15 45 01.0**	**+13**
DAT	**Datca**	**7.25**	**300**	*e*PN	**Pn**	**15 42 48.0**	**-0.9**
DAT	**Datca**	**7.25**	**300**	*e*Pn	**Pn**	**15 42 48.0**	**-0.8**
HMAT	**Matruh**	**7.38**	**255**	P	**Pn**	**15 42 50.1**	**-0.6**
	baz=254						
HMAT	**Matruh**	**7.38**	**255**	P	**Pn**	**15 42 50.1**	**-0.6**
AWBH		**7.50**	**230**	P	**Pn**	**15 42 52.5**	**+0.2**
	baz=230						
AWBH		**7.50**	**230**	P	**Pn**	**15 42 52.5**	**+0.2**
BHD	**Baghdad**	**7.52**	**88**	*e*Pn	**Pn**	**15 42 56.3**	**+3.7**
BHD				*e*Pg	**Pg**	**15 43 31.3**	**+5.1**
BHD				*e*Sn	**Sn**	**15 44 28.0**	**+10**
IDI	**Anoyia**	**8.91**	**285**	Pn	**Pn**	**15 43 10.7**	**-0.9**
	comp=N,1.6nm,0.3s,baz=77,slow=17,SNR=10.0						
IDI				Sn	**Sn**	**15 44 49.4**	**-3.0**
	comp=N,1.7nm,0.3s,baz=197,slow=23,SNR=6.2						
IDI	**Anoyia**	**8.91**	**285**	Pn	**Pn**	**15 43 10.7**	**-0.9**
GNI	**Garni**	**10.11**	**45**	LR	LR	15 47 37.9	
	comp=N,81nm,18.4s,baz=63,slow=39						
TIP	**Timpagrande**	**16.11**	**296**	*e*P	**Pn**	**15 44 45.1**	**-4.3**
	comp=N,5.4nm,0.7s						
AKASG	**Malin Array Be**	**17.93**	**347**	P	**Pn**	**15 45 10.9**	**-1.3**
	comp=N,0.5nm,0.3s,baz=161,slow=11,SNR=3.9						
AKASG	**Malin Array Be**	**17.93**	**347**	P	**Pn**	**15 45 10.9**	**-1.3**
OBN	**Obninsk**	**21.78**	**2**	*e*P	**P**	**15 45 53.7**	**-1.1**
	comp=N,51nm,1.4s,mb4.8						
OBN	**Obninsk**	**21.78**	**2**	*e*P	**P**	**15 45 53.7**	**-1.1**
	comp=N,51nm,1.4s,mb4.8						
GERES	**GERESS Array B**	**22.40**	**320**	P	**P**	**15 46 01.6**	**+0.1**
	comp=N,0.9nm,0.7s,mb3.3,baz=118,slow=10,SNR=5.6						
GERES	**GERESS Array B**	**22.40**	**320**	P	**P**	**15 46 01.6**	**+0.1**
AKTK	**Aktyubinsk**	**23.83**	**37**	P	**P**	**15 46 15.5**	**-0.7**
AKTK	**Aktyubinsk**	**23.83**	**37**	P	**P**	**15 46 15.5**	**-0.7**
AKTO	**Aktyubinsk**	**23.83**	**37**	P	**P**	**15 46 15.5**	**-0.7**
	comp=N,1.2nm,0.7s,mb3.5,baz=264,slow=6.2,SNR=4.5						
BVAR	**Borovoye Array**	**31.76**	**41**	LR	LR	16 02 10.0	
	comp=N,78nm,19.3s,MS3.4,baz=250,slow=40						
ESDC	**Sonseca Array**	**32.07**	**293**	P	**P**	**15 47 32.9**	**+2.8**
	comp=N,1.1nm,0.8s,mb3.8,baz=96,slow=9.8,SNR=4.9						
ESDC	**Sonseca Array**	**32.07**	**293**	P	**P**	**15 47 32.9**	**+2.8**
ESDC	**Sonseca Array**	**32.07**	**293**	P	**P**	**15 47 32.9**	**+2.8**
ARCES	**ARCESS Array B**	**36.66**	**354**	P	**P**	**15 48 10.0**	**+0.5**
	comp=N,2.3nm,1.1s,mb3.9,baz=160,slow=11,SNR=2.8						
ARCES				LR	LR	16 04 35.5	
	comp=N,22nm,18.1s,MS3.0,baz=189,slow=39						
ARCES	**ARCESS Array B**	**36.66**	**354**	P	**P**	**15 48 09.9**	**+0.5**
ARCES				LR	LR	16 04 35.5	
ARCES	**ARCESS Array B**	**36.66**	**354**	P	**P**	**15 48 09.9**	**+0.4**
TORD	**Torodi Ar. Bea**	**36.68**	**245**	P	**P**	**15 48 11.8**	**+1.6**
	comp=N,0.3nm,0.4s,mb3.5,baz=66,slow=7.0,SNR=3.8						
MKAR	**Makanchi Array**	**37.76**	**55**	P	**P**	**15 48 22.7**	**+3.6**
	comp=N,0.4nm,0.7s,mb3.3,baz=270,slow=5.8,SNR=5.0						
ZALV	**Zalesovo Beam**	**40.26**	**44**	P	**P**	**15 48 39.9**	**0.0**
	comp=N,0.5nm,0.4s,mb3.6,baz=260,slow=8.6,SNR=2.6						
ZALV				LR	LR	16 07 33.9	
	comp=N,38nm,18.6s,MS3.3,baz=238,slow=40						

*NEIC **12** 15:42:55.0±0.7, 18°.96N×67°.76W, h10km, MD3.4(RSPR), Error ellipse: s-maj=11.5km s-min=6.5km az=208.0*

RSPR 12 15:42:56.2, 18°.97N×67°.87W, h6km±31km, MD3.4/19, MD3.4/19, 13C-5D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**0.66**	**227**	*e*S	Sg	15 43 19.9	+2.3
PCDR	**Punta Cana, DR**	**0.66**	**227**	⇑*e*P	Pg	15 43 09.7	+0.8
IMO	**Isla Mona**	**0.86**	**182**	⇑*e*P	Pg	15 43 11.3	-1.4
IMO				*e*S	Sg	15 43 22.8	-1.0
AGPR	**Aguadilla, PR**	**0.88**	**125**	⇓*e*P	Pg	15 43 10.4	-2.7
AGPR				*e*S	Sg	15 43 22.7	-1.8
MPR	**Mayaguez**	**1.03**	**137**	*e*S	Sg	15 43 28.1	-1.2
MPR	**Mayaguez**	**1.03**	**137**	*e*Pg	Pg	15 43 12.8	-3.1
LSP	**Las Mesas**	**1.09**	**137**	⇑*e*P	Pg	15 43 14.4	-2.7
LSP				*e*S	Sg	15 43 30.5	-0.7
LRS	**Lares**	**1.19**	**125**	⇑*e*P	Pg	15 43 15.3	-3.7
LRS				*e*S	Sg	15 43 30.2	-4.2
CRPR	**Cabo Rojo, PR**	**1.20**	**143**	⇑*e*P	Pg	15 43 15.9	-3.4
CRPR				*e*S	Sg	15 43 32.7	-2.2
AOPR	**Arecibo Observ**	**1.23**	**120**	⇑*e*P	Pg	15 43 16.0	-3.8
AOPR				*e*S	Sg	15 43 32.4	-3.4
GBPR	**Guanica, Bosqu**	**1.37**	**136**	⇓*e*P	Pn	15 43 19.9	-2.0
GBPR				*e*S	Sb	15 43 36.7	-3.3
OBIP	**Obispado Ponce**	**1.52**	**127**	⇓*e*P	Pn	15 43 20.8	-3.1
OBIP				*e*S	Sn	15 43 39.6	-4.3
CELP	**Cerrillos**	**1.52**	**126**	⇓*e*P	Pn	15 43 20.5	-3.4
CELP				*e*S	Sn	15 43 39.7	-4.2
ICM	**Isla Caja Muer**	**1.67**	**130**	⇑*e*P	Pn	15 43 24.1	-1.9
ICM				*e*S	Sn	15 43 45.2	-2.6
SJG	**San Juan**	**1.84**	**117**	⇑*e*P	Pn	15 43 25.3	-3.1
SJG				*e*S	Sn	15 43 47.4	-4.7
SJG	**San Juan**	**1.84**	**117**	⇑*e*P	Pn	15 43 25.1	-3.3
SJG				*e*S	Sn	15 43 49.1	-2.9
CBYP	**Canovanas**	**2.04**	**110**	⇓*e*P	Pn	15 43 28.5	-2.5
CBYP				*e*S	Sn	15 43 53.8	-3.0
CPD	**Cerro la Pandu**	**2.08**	**116**	⇑*e*P	Pn	15 43 28.4	-3.2
CPD				*e*S	Sn	15 43 54.7	-3.1
HUMP	**Col San Antoni**	**2.09**	**113**	⇑*e*P	Pn	15 43 28.9	-2.9
HUMP				*e*S	Sn	15 43 54.1	-4.0
MTP	**Monte Pirata**	**2.37**	**111**	⇑*e*P	Pn	15 43 33.7	-1.9
MTP				*e*S	Sn	15 44 01.8	-3.2
STVI	**Saint Thomas**	**2.84**	**102**	⇑*e*P	Pn	15 43 39.4	-2.7
STVI				*e*S	Sn	15 44 12.8	-3.7
SDDR	**Presa de Saban**	**3.23**	**271**	*e*Pn	Pn	15 43 49.5	+2.1
SDDR				*e*Sn	Sn	15 44 31.0	+4.7
GRTK	**Grand Turk**	**3.97**	**310**	*e*Pn	Pn	15 43 55.0	-2.6
GRTK				*e*Sn	Sn	15 44 39.0	-5.5

*GII **12** 15:43:23.0±0.7, 33°.32N×35°.44E, h1km, Mb4.1/4, Md3.9/6, Mm3.3/4*

*ISCJB **12** 15:43:23.5±0.3, 33°.34N±0°.02×35°.43E±0°.02, h9km±2km, Error ellipse: s-maj=3.5km s-min=2.6km az=20.3*

*NSSC **12** 15:43:24, 33°.31N×35°.46E, h9km±1km*

*NEIC **12** 15:43:24.3, 33°.30N×35°.41E, h4km, MD3.9(GRAL), After GRAL.*

*GRAL **12** 15:43:24.2±0.4, 33°.33N×35°.44E, h6km±2km, MD4.1*

*CSEM **12** 15:43:24.0±0.1, 33°.34N×35°.46E, h8km, Mw3.4, Error ellipse: s-maj=3.3km s-min=2.6km az=62.0*

*NIC **12** 15:43:33.2±0.4, 33°.12N×34°.48E, h25km, ML3.5, MW3.4*

ISC 12 15:43:24.0±0.3, 33°.34N±0°.02×35°.44E±0°.02, h9km±2km, n66, σ0°.80/116, 4C-20D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.18**	**327**	*e*P	**Pg**	**15 43 27.9**	**+0.1**
MATL	**Matarih**	**0.18**	**327**	*e*P	**Pg**	**15 43 27.9**	**+0.2**
KSDI	**Kefar Szold**	**0.23**	**129**	Pg	**Pg**	**15 43 28.0**	**-0.7**
KSDI				Sg	**Sg**	**15 43 32.9**	**+1.0**
HRI	**Mount Hermon**	**0.25**	**107**	Pg	**Pg**	**15 43 28.4**	**-0.7**
MMA0B	**Mount Meron ar**	**0.33**	**186**	Pg	**Pg**	**15 43 29.6**	**-0.8**
HNTI	**Hanita**	**0.34**	**221**	Pg	**Pg**	**15 43 30.3**	**-0.5**
HNTI				Sg	**Sg**	**15 43 36.4**	**+1.1**
RCY	**Rachaya**	**0.34**	**65**	*e*P	**Pg**	**15 43 30.8**	**0.0**
RCY				*e*S	**Sg**	**15 43 36.1**	**+0.7**
RCY	**Rachaya**	**0.34**	**65**	*e*P	**Pg**	**15 43 30.8**	**0.0**
RCY				*e*S	**Sg**	**15 43 36.1**	**+0.7**
BRBR	**Barbar**	**0.43**	**80**	⇓P	**Pg**	**15 43 32.0**	**-0.4**
BRBR				⇓S	**Sg**	**15 43 38.0**	**-0.1**
BRBR	**Barbar**	**0.43**	**80**	⇓*i*P	**Pg**	**15 43 32.1**	**-0.3**
BRBR				⇓*i*S	**Sg**	**15 43 38.7**	**+0.6**
KSHT	**Keshet**	**0.47**	**139**	Pg	**Pg**	**15 43 33.3**	**+0.1**
BEYL	**Beirut**	**0.53**	**4**	*e*P	**Pg**	**15 43 33.9**	**-0.4**
BEYL	**Beirut**	**0.53**	**4**	*e*P	**Pg**	**15 43 33.9**	**-0.4**
BHL	**Bhannes**	**0.59**	**17**	*e*P	**Pg**	**15 43 34.9**	**-0.6**
BHL				*e*S	**Sg**	**15 43 43.1**	**-0.1**
BHL	**Bhannes**	**0.59**	**17**	*e*P	**Pg**	**15 43 35.3**	**-0.1**
BHL				*e*S	**Sg**	**15 43 44.1**	**+1.0**
BHL	**Bhannes**	**0.59**	**17**	*e*P	**Pg**	**15 43 35.3**	**-0.1**
BHL				*e*S	**Sg**	**15 43 43.1**	**0.0**
BLGI	**Bet Lehem HaGe**	**0.64**	**199**	Pg	**Pg**	**15 43 36.1**	**-0.3**
QASN	**Qassioun**	**0.72**	**74**	⇑P	**Pg**	**15 43 38.0**	**+0.1**
QASN				⇑S	**Sg**	**15 43 48.0**	**+0.7**
QASN	**Qassioun**	**0.72**	**74**	⇑*i*P	**Pg**	**15 43 38.2**	**+0.3**
QASN				⇑*i*S	**Sg**	**15 43 48.3**	**+1.0**
TCHB	**Talchebab**	**0.80**	**147**	⇑P	**Pg**	**15 43 39.0**	**-0.4**
TCHB				⇑S	**Sg**	**15 43 49.0**	**-0.9**
TCHB	**Talchebab**	**0.80**	**147**	⇑*i*P	**Pg**	**15 43 39.3**	**-0.1**
TCHB				⇑*i*S	**Sg**	**15 43 49.7**	**-0.2**
OFRI	**'Ofer**	**0.81**	**208**	Pg	**Pg**	**15 43 39.2**	**-0.5**
TOTH	**TOTAH**	**0.82**	**88**	⇓P	**Pg**	**15 43 39.0**	**-0.9**
TOTH				⇓S	**Sg**	**15 43 51.0**	**+0.4**
TOTH	**TOTAH**	**0.82**	**88**	⇓*i*P	**Pg**	**15 43 39.7**	**-0.2**
TOTH				⇓*i*S	**Sg**	**15 43 51.1**	**+0.5**
MMLI	**Mount Malkishu**	**0.90**	**181**	Pg	**Pg**	**15 43 40.2**	**-1.1**
MMLI				Sg	**Sg**	**15 43 54.2**	**+1.2**
HWQ	**Hawqa**	**1.02**	**24**	*e*P	**Pg**	**15 43 42.8**	**-0.9**
HWQ				*e*S	**Sg**	**15 43 56.3**	**-0.8**
HWQ	**Hawqa**	**1.02**	**24**	*e*P	**Pg**	**15 43 43.4**	**-0.3**
HWQ				*e*S	**Sg**	**15 43 57.6**	**+0.6**
HWQ	**Hawqa**	**1.02**	**24**	*e*P	**Pg**	**15 43 43.4**	**-0.3**
HWQ				*e*S	**Sg**	**15 43 57.6**	**+0.6**
HMDT	**Nahal Hemdat**	**1.09**	**176**	Pg	**Pg**	**15 43 43.8**	**-1.1**
HMDT				Sg	**Sg**	**15 43 59.5**	**+0.5**
MARH	**Ras Al Marh**	**1.10**	**51**	⇑P	**Pg**	**15 43 45.0**	**-0.2**
MARH				⇑S	**Sg**	**15 44 00.0**	**+0.5**
MARH	**Ras Al Marh**	**1.10**	**51**	⇑*i*P	**Pg**	**15 43 45.1**	**-0.1**
MARH				⇑*i*S	**Sg**	**15 44 00.6**	**+1.1**
SLTI	**Sal'it**	**1.15**	**197**	Pg	**Pg**	**15 43 44.9**	**-1.2**
SLTI				Sg	**Sg**	**15 44 01.6**	**+0.6**
SALA	**Sala**	**1.25**	**120**	⇓P	**Pn**	**15 43 46.0**	**-1.7**
SALA				⇓S	**Sb**	**15 44 03.0**	**-1.0**
SALA	**Sala**	**1.25**	**120**	⇓*i*P	**Pn**	**15 43 47.0**	**-0.7**
SALA				⇓*i*S	**Sb**	**15 44 03.6**	**-0.4**
HAWK	**Haweek**	**1.42**	**34**	⇑P	**Pn**	**15 43 50.0**	**0.0**
HAWK				⇑S	**Sn**	**15 44 09.0**	**+0.1**
HAWK	**Haweek**	**1.42**	**34**	⇑*i*P	**Pn**	**15 43 50.3**	**+0.3**
HAWK				⇑*i*S	**Sn**	**15 44 09.9**	**+1.0**
ZALF	**Zalf**	**1.64**	**104**	⇑P	**Pn**	**15 43 52.0**	**-1.0**
ZALF

ICM	**Isla Caja Muer**	**1.66 131**⇑	*e*P	Pn	15 47 52.0	-2.0
ICM			*e*S	Sn	15 48 12.9	-2.9
SJG	**San Juan**	**1.83 118**⇓	*e*P	Pn	15 47 53.1	-3.2
SJG			*e*S	Sn	15 48 15.4	-4.4
SJG	**San Juan**	**1.83 118**↑	*e*P	Pn	15 47 53.0	-3.4
SJG			*e*S	Sn	15 48 16.4	-3.4
CBYP	**Canovanas**	**2.01 110**⇑	*e*P	Pn	15 47 56.5	-2.4
CPD	**Cerro la Pandu**	**2.06 117**⇑	*e*P	Pn	15 47 57.1	-2.4
CPD			*e*S	Sn	15 48 22.4	-3.2
HUMP	**Col San Antoni**	**2.07 114**⇑	*e*P	Pn	15 47 56.6	-3.1
MTP	**Monte Pirata**	**2.34 112**⇑	*e*P	Pn	15 48 01.1	-2.4
MTP			*e*S	Sn	15 48 30.4	-2.2
STVI	**Saint Thomas**	**2.81 103**⇑	*e*P	Pn	15 48 06.7	-3.1
STVI			*e*S	Sn	15 48 41.5	-2.6
SDDR	**Presa de Saban**	**3.26 270**	*e*Pn	Pn	15 48 17.2	+1.1
SDDR			*e*Sn	Sn	15 48 60.0	+4.6

GII ***12*** *15:49:04.7±0.4, 33°.33N×35°.45E, h1km±1km, Md2.1/5*
ISCJB ***12*** *15:49:05.4±0.5, 33°.34N±0°.02×35°.43E±0°.04, h9km±6km, Error ellipse: s-maj=6.4km s-min=3.8km az=18.8*
GRAL ***12*** *15:49:06.2±0.3, 33°.32N×35°.44E, h5km±8km, MD3.1*
ISC 12 15:49:05.8±0.6, 33°.35N±0°.02×35°.43E±0°.04, h9km±7km, n17, σ0°65/26, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.16**	**329**	*e*P	**Pg**	**15 49 09.8**	**+0.6**
KSDI	**Kefar Szold**	**0.25**	**129**	Pg	**Pg**	**15 49 10.1**	**-0.7**
KSDI				Sg	**Sg**	**15 49 14.0**	**-0.1**
HRI	**Mount Hermon**	**0.27**	**108**	Pg	**Pg**	**15 49 10.5**	**-0.6**
MMC7	**Mount Meron ar**	**0.33**	**185**	Pg	**Pg**	**15 49 11.7**	**-0.5**
MMB3	**Mount Meron ar**	**0.33**	**185**	Pg	**Pg**	**15 49 11.7**	**-0.6**
MMC3	**Mount Meron ar**	**0.33**	**182**	Pg	**Pg**	**15 49 11.7**	**-0.6**
MMA0	**Mount Meron ar**	**0.33**	**184**	Pg	**Pg**	**15 49 11.7**	**-0.7**
MMA0B	**Mount Meron ar**	**0.33**	**184**	Pg	**Pg**	**15 49 11.8**	**-0.6**
MMA0B				Sg	**Sg**	**15 49 18.1**	**+1.3**
HNTI	**Hanita**	**0.34**	**219**	Pg	**Pg**	**15 49 12.3**	**-0.2**
HNTI				Sg	**Sg**	**15 49 18.1**	**+1.1**
RCY	**Rachaya**	**0.35**	**67**	*e*P	**Pg**	**15 49 13.0**	**+0.3**
RCY				*e*S	**Sg**	**15 49 18.0**	**+0.6**
KSHT	**Keshet**	**0.49**	**139**	Pg	**Pg**	**15 49 15.1**	**-0.1**
KSHT				Sg	**Sg**	**15 49 22.5**	**+0.9**
BHL	**Bhannes**	**0.58**	**19**	*e*P	**Pg**	**15 49 17.1**	**0.0**
BHL				*e*S	**Sg**	**15 49 25.3**	**+0.5**
OFRI	**'Ofer**	**0.82**	**207**	Pg	**Pg**	**15 49 21.2**	**-0.3**
MMLI	**Mount Malkishu**	**0.91**	**180**	Pg	**Pg**	**15 49 22.3**	**-1.0**
MMLI				Sg	**Sg**	**15 49 36.1**	**+1.0**
HWQ	**Hawqa**	**1.02**	**25**	*e*P	**Pg**	**15 49 25.3**	**-0.1**
HMDT	**Nahal Hemdat**	**1.10**	**176**	Pg	**Pg**	**15 49 25.7**	**-1.1**
HMDT				Sg	**Sg**	**15 49 41.6**	**+0.5**
DSI	**Dead Sea**	**1.77**	**181**	Pn	**Pn**	**15 49 36.6**	**-0.1**
DSI				Sn	**Sn**	**15 49 59.9**	**+0.5**

IDC 12 15:59:05.2±2.0, 27°.98N×143°.55E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.4/24, mbtmp3.5/4, ML3.6/1, Error ellipse: s-maj=52.2km s-min=24.9km az=84.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.50**	**234**	Pn	Pn	15 59 33.4	+0.1
MJAR	**Matsushiro Arr**	**9.66**	**333**	Pn	Pn	16 01 23.5	-1.9
	0.5nm,0.3s,baz=156,slow=10,SNR=5.1						
WRA	**Warramunga Arr**	**48.47**	**192**	P	P	16 07 49.4	-0.2
	0.8nm,0.6s,baz=12,slow=8.6,SNR=9.9						
ASAR	**Alice Springs**	**52.18**	**191**	P	P	16 08 17.6	0.0
	0.3nm,0.9s,baz=7.6,slow=7.0,SNR=2.9						
BVAR	**Borovoye Array**	**58.22**	**317**	P	P	16 09 01.5	+0.4
	0.5nm,0.5s,baz=90,slow=7.4,SNR=2.7						

GII ***12*** *16:13:10.9±0.5, 33°.29N×35°.45E, h1km±1km, Md2.4/9, Mm2.3/3*
CSEM ***12*** *16:13:11.4±0.3, 33°.33N×35°.44E, h2km, ML3.1, Error ellipse: s-maj=10.8km s-min=4.7km az=99.0*
GRAL ***12*** *16:13:11.8±0.4, 33°.33N×35°.45E, h9km±7km, MD3.1*
ISCJB ***12*** *16:13:11.1±0.5, 33°.34N±0°.02×35°.42E±0°.04, h6km±4km, Error ellipse: s-maj=5.6km s-min=3.4km az=24.0*
ISC 12 16:13:11.6±0.5, 33°.35N±0°.02×35°.43E±0°.04, h5km±4km, n21, σ0°61/38, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.16**	**330**	*e*P	**Pg**	**16 13 15.5**	**+0.8**
MATL	**Matarih**	**0.16**	**330**	*e*P	**Pg**	**16 13 15.5**	**+0.7**
KSDI	**Kefar Szold**	**0.25**	**129**	Pg	**Pg**	**16 13 16.1**	**-0.3**
KSDI				Sg	**Sg**	**16 13 20.0**	**+0.3**
HRI	**Mount Hermon**	**0.27**	**108**	Pg	**Pg**	**16 13 16.4**	**-0.4**
HRI				Sg	**Sg**	**16 13 20.6**	**+0.2**
MMA0	**Mount Meron ar**	**0.33**	**183**	Pg	**Pg**	**16 13 17.1**	**-0.9**
MMA0				Sg	**Sg**	**16 13 23.0**	**+0.7**
HNTI	**Hanita**	**0.34**	**219**	Pg	**Pg**	**16 13 18.2**	**+0.1**
HNTI				Sg	**Sg**	**16 13 23.8**	**+1.3**
RCY	**Rachaya**	**0.35**	**68**	*e*P	**Pg**	**16 13 18.4**	**0.0**
RCY				*e*S	**Sg**	**16 13 23.8**	**+0.7**
RCY	**Rachaya**	**0.35**	**68**	*e*P	**Pg**	**16 13 18.4**	**0.0**
RCY				*e*S	**Sg**	**16 13 23.8**	**+0.7**
KSHT	**Keshet**	**0.49**	**138**	Pg	**Pg**	**16 13 20.6**	**-0.3**
KSHT				Sg	**Sg**	**16 13 27.9**	**+0.6**
BHL	**Bhannes**	**0.58**	**19**	*e*P	**Pg**	**16 13 22.7**	**-0.2**
BHL				*e*S	**Sg**	**16 13 30.9**	**+0.5**
BHL	**Bhannes**	**0.58**	**19**	*e*P	**Pg**	**16 13 22.7**	**-0.1**
BHL				*e*S	**Sg**	**16 13 30.9**	**+0.5**
BLGI	**Bet Lehem HaGe**	**0.65**	**198**	Pg	**Pg**	**16 13 23.7**	**-0.2**
BLGI				Sg	**Sg**	**16 13 32.9**	**+0.6**
OFRI	**'Ofer**	**0.81**	**207**	Pg	**Pg**	**16 13 26.9**	**-0.3**
MMLI	**Mount Malkishu**	**0.91**	**180**	Pg	**Pg**	**16 13 27.9**	**-1.1**
MMLI				Sg	**Sg**	**16 13 41.0**	**+0.2**
HWQ	**Hawqa**	**1.02**	**25**	*e*P	**Pg**	**16 13 31.0**	**-0.2**
HMDT	**Nahal Hemdat**	**1.10**	**176**	Pg	**Pg**	**16 13 31.1**	**-1.5**
HMDT				Sg	**Sg**	**16 13 47.1**	**+0.3**
SLTI	**Sal'it**	**1.15**	**196**	Pg	**Pg**	**16 13 32.4**	**-1.2**
SLTI				Sg	**Sg**	**16 13 48.7**	**+0.1**
DSI	**Dead Sea**	**1.77**	**181**	Pn	**Pn**	**16 13 42.0**	**-0.9**
DSI				Sn	**Sn**	**16 14 05.9**	**+0.1**
MZDA	**Masada**	**2.03**	**182**	Pn	**Pn**	**16 13 46.3**	**-0.2**
MZDA				Sn	**Sn**	**16 14 12.9**	**+0.7**
RTMI	**Retamim**	**2.37**	**195**	Pn	**Pn**	**16 13 51.1**	**0.0**
RTMI				Sn	**Sn**	**16 14 20.9**	**+0.3**
PRNI	**Paran**	**3.01**	**187**	Pn	**Pn**	**16 13 59.6**	**-0.3**
PRNI				Sn	**Sn**	**16 14 36.8**	**+0.5**

IDC ***12*** *16:13:37.3±3.3, 11°.13N×126°.62E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.7/22, mbtmp3.9/6, MS3.0/2, Ms1 3.0/2, ms1mx2.1/37, Error ellipse: s-maj=331.7km s-min=18.3km az=67.0*
ISCJB ***12*** *16:13:39.8±0.7, 11°.28N±0°.08×126°.85E±0°.09, h33km, mb4.0/8, Error ellipse: s-maj=14.3km s-min=8.6km az=142.1*
NEIC ***12*** *16:13:40.7±1.0, 10°.57N×125°.41E, h10km, mb4.6/2, Error ellipse: s-maj=77.2km s-min=10.0km az=69.0*
MAN ***12*** *16:13:41, 11°.43N×126°.68E, h59km, mb5.2, ML4.1, MS4.3*
ISC 12 16:13:42.4±0.7, 11°.27N±0°.08×126°.76E±0°.09, h35km, n21, σ1°05/21, mb4.0/8, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**1.34**	**285**	*e*P	**Pn**	**16 14 03.6**	**-0.9**
BESP				*e*S	**Sn**	**16 14 13.0**	**-8.1**
OCLP	**Ormoc**	**2.12**	**264**	*e*P	**Pn**	**16 14 15.4**	**+0.1**
CNP	**Cataman**	**2.40**	**301**	*e*P	**Pn**	**16 14 17.9**	**-1.2**
CNP				*e*S	**Sn**	**16 14 36.2**	**-11**
PVCP	**Virac**	**3.44**	**313**	*e*P	**Pn**	**16 14 31.2**	**-2.3**
BUKP	**Musuan**	**3.76**	**207**	*e*P	**Pn**	**16 14 41.0**	**+3.1**
GUIM	**Jordan**	**4.14**	**262**	*e*P	**Pn**	**16 14 43.0**	**-0.2**
DAV	**Davao City (W)**	**4.33**	**196**	LR	LR	16 16 42.2	
	comp=Z,110nm,18.1s,baz=220,slow=44						
AUQP	**San Andres**	**4.48**	**298**	*e*P	**Pn**	**16 14 49.1**	**+1.3**
PAGZ	**Pagadian**	**4.75**	**225**	*e*P	**Pn**	**16 14 51.9**	**+0.3**
BOAC	**Boac**	**5.27**	**295**	*e*P	**Pn**	**16 14 58.9**	**+0.2**
WRAB	**Tennant Creek**	**31.89**	**166**	*e*P	**P**	**16 20 04.2**	**-0.3**
	11nm,1.4s,mb4.5						
WRA	**Warramunga Arr**	**31.90**	**166**	P	**P**	**16 20 04.1**	**-0.5**
	0.8nm,0.6s,mb3.7,baz=350,slow=9.1,SNR=13						
ASAR	**Alice Springs**	**35.41**	**169**	P	**P**	**16 20 33.4**	**-1.8**
	0.6nm,0.4s,mb3.9,baz=351,slow=6.5,SNR=28						
STKA	**Stephens Creek**	**45.19**	**162**	P	**P**	**16 21 56.2**	**+0.2**
	1.0nm,0.4s,mb4.0,baz=344,slow=8.0,SNR=3.1						
STKA	**Stephens Creek**	**45.19**	**162**	P	**P**	**16 21 56.2**	**+0.2**
MK31	**Makanchi Array**	**51.54**	**322**	*e*P	**P**	**16 22 46.1**	**+1.3**
MKAR	**Makanchi Array**	**51.54**	**322**	P	**P**	**16 22 46.0**	**+1.2**
	1.4nm,0.7s,mb4.0,baz=97,slow=10.0,SNR=9.8						
ZALV	**Zalesovo Beam**	**53.99**	**331**	P	**P**	**16 23 02.7**	**-0.1**
	0.4nm,0.4s,mb3.7,baz=101,slow=7.8,SNR=3.1						
KURK	**Kurchatov**	**55.53**	**325**	*e*P	**P**	**16 23 15.0**	**+1.0**
	4.2nm,0.8s,mb4.5						
BVAR	**Borovoye Array**	**61.13**	**325**	P	**P**	**16 23 53.1**	**0.0**
	0.6nm,0.6s,mb3.9,baz=157,slow=8.0,SNR=5.1						
AKTO	**Aktyubinsk**	**67.87**	**320**	LR	LR	16 55 55.8	
	comp=Z,14nm,18.9s,baz=52,slow=37						

IDC ***12*** *16:21:33.1±1.7, 9°.27S×125°.62E, h0km, mb3.8/1, mb1 4.1/4, mb1mx3.7/18, mbtmp3.9/4, ML4.0/3, Error ellipse: s-maj=98.6km s-min=26.5km az=67.0*
ISCJB ***12*** *16:21:35.7±1.4, 9°.55S±0°.07×125°.53E±0°.09, h33km, Error ellipse: s-maj=13.4km s-min=10.7km az=173.1*
ISC 12 16:21:38.5±1.4, 9°.48S±0°.09×125°.5E±0°.1, h35km, n7, σ1°48/13, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNA	**Kununurra**	**6.99**	**154**	*e*P	**Pn**	**16 23 21.3**	**+2.9**
	23nm,1.2s						
KNA				*e*S	**Sn**	**16 24 36.3**	**-0.3**
KAKA	**Kakadu**	**7.50**	**116**	*e*P	**Pn**	**16 23 29.0**	**+3.6**
	4.8nm,0.3s						
KAKA				*e*S	**Sn**	**16 24 49.2**	**0.0**
FITZ	**Fitzroy Crossi**	**8.57**	**179**	*e*P	**Pn**	**16 23 42.9**	**+2.7**
	8.4nm,0.3s						
FITZ				*e*S	**Sn**	**16 25 14.3**	**-1.5**
FITZ	**Fitzroy Crossi**	**8.57**	**179**	Pn	**Pn**	**16 23 42.9**	**+2.7**
	1.9nm,0.3s,baz=21,slow=9.7,SNR=48						
FITZ				Sn	**Sn**	**16 25 15.4**	**-0.3**
	1.1nm,0.3s,baz=112,slow=20,SNR=6.9						
WRA	**Warramunga Arr**	**13.44**	**142**	Pn	**Pn**	**16 24 44.8**	**-2.0**
	0.7nm,0.3s,baz=314,slow=14,SNR=26						
WRA				Sn	**Sn**	**16 27 07.2**	**-7.7**
	0.5nm,0.3s,baz=316,slow=25,SNR=6.6						
ASAR	**Alice Springs**	**16.22**	**151**	Pn	**Pn**	**16 25 24.4**	**+0.6**
	0.5nm,0.3s,baz=320,slow=11,SNR=59						
ASAR				Sn	**Sn**	**16 28 15.8**	**-6.9**
	0.2nm,0.3s,baz=317,slow=20,SNR=6.6						
MKAR	**Makanchi Array**	**67.98**	**329**	P	**P**	**16 32 33.3**	**-0.7**
	0.6nm,0.5s,baz=128,slow=6.4,SNR=9.0						

GII ***12*** *16:26:28.5±0.5, 33°.33N×35°.45E, h1km±1km, Md2.0/3*
GRAL ***12*** *16:26:29.8±0.3, 33°.32N×35°.44E, h8km±7km, MD2.9*
ISCJB ***12*** *16:26:29.3±0.6, 33°.35N±0°.03×35°.43E±0°.04, h5km±7km, Error ellipse: s-maj=5.9km s-min=4.2km az=34.9*
ISC 12 16:26:29.7±0.6, 33°.36N±0°.03×35°.43E±0°.04, h6km±8km, n15, σ0°82/24, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.15**	**327**	*e*P	**Pg**	**16 26 33.6**	**+0.8**
KSDI	**Kefar Szold**	**0.25**	**131**	Pg	**Pg**	**16 26 33.8**	**-0.8**
KSDI				Sg	**Sg**	**16 26 37.9**	**-0.1**
HRI	**Mount Hermon**	**0.27**	**110**	Pg	**Pg**	**16 26 34.4**	**-0.5**
HRI				Sg	**Sg**	**16 26 38.9**	**+0.4**
MMA0	**Mount Meron ar**	**0.34**	**184**	Pg	**Pg**	**16 26 35.5**	**-0.8**
MMA0B	**Mount Meron ar**	**0.34**	**184**	Pg	**Pg**	**16 26 35.6**	**-0.7**
RCY	**Rachaya**	**0.35**	**69**	*e*P	**Pg**	**16 26 36.6**	**+0.2**
RCY				*e*S	**Sg**	**16 26 42.0**	**+1.0**
HNTI	**Hanita**	**0.35**	**218**	Pg	**Pg**	**16 26 36.4**	**-0.1**
HNTI				Sg	**Sg**	**16 26 41.9**	**+0.9**
KSHT	**Keshet**	**0.49**	**140**	Pg	**Pg**	**16 26 39.1**	**-0.1**
KSHT				Sg	**Sg**	**16 26 46.1**	**+0.5**
BHL	**Bhannes**	**0.57**	**19**	*e*P	**Pg**	**16 26 40.9**	**+0.2**
OFRI	**'Ofer**	**0.83**	**207**	Pg	**Pg**	**16 26 44.9**	**-0.6**
OFRI				Sg	**Sg**	**16 26 57.8**	**+1.5**
MMLI	**Mount Malkishu**	**0.92**	**181**	Pg	**Pg**	**16 26 46.1**	**-1.2**
MMLI				Sg	**Sg**	**16 27 00.4**	**+1.2**
HWQ	**Hawqa**	**1.01**	**25**	*e*P	**Pg**	**16 26 49.0**	**-0.1**
HMDT	**Nahal Hemdat**	**1.11**	**176**	Pg	**Pg**	**16 26 49.3**	**-1.6**
HMDT				Sg	**Sg**	**16 27 05.9**	**+0.7**
SLTI	**Sal'it**	**1.16**	**197**	Pg	**Pg**	**16 26 51.0**	**-1.0**
DSI	**Dead Sea**	**1.79**	**181**	Pn	**Pn**	**16 27 00.2**	**-0.8**
DSI				Sn	**Sn**	**16 27 25.1**	**+1.1**

THE ***12*** *16:26:33.5, 37°.74N×21°.43E, h13km±1km, ML2.9/5, Error ellipse: s-maj=2.2km s-min=0.8km az=181.0*
ATH ***12*** *16:26:34.2, 37°.87N×21°.39E, h23km±2km, MD3.1/10*
NEIC ***12*** *16:26:34.2, 37°.87N×21°.39E, h23km, MD3.1(ATH), After ATH.*
CSEM ***12*** *16:26:34.3±0.3, 37°.86N×21°.37E, h20km, MD3.1, Error ellipse: s-maj=6.0km s-min=5.6km az=39.0*
ISCJB ***12*** *16:26:35.4±0.5, 37°.86N±0°.03×21°.40E±0°.04, h18km±9km, Error ellipse: s-maj=5.6km s-min=4.4km az=30.1*
ISC 12 16:26:35.1±0.5, 37°.84N±0°.03×21°.41E±0°.03, h13km±5km, n40, σ1°12/67, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.22**	**11**	*e*Pb	**Pg**	**16 26 39.7**	**-0.2**
RLS				*e*Sb	**Sg**	**16 26 43.7**	**+0.5**
RLS	**Riolos of Patr**	**0.22**	**11**	*e*PB	**Pg**	**16 26 39.7**	**-0.2**
RLS				*e*SB	**Sg**	**16 26 43.7**	**+0.5**
RLS	**Riolos of Patr**	**0.22**	**11**	*e*Pb	**Pg**	**16 26 39.7**	**-0.2**
RLS				*e*Sb	**Sg**	**16 26 43.7**	**+0.5**
KFL	**Anninata**	**0.56**	**299**	P	**Pg**	**16 26 45.4**	**-0.7**
KFL				S	**Sg**	**16 26 55.4**	**+1.8**
LAKA	**Lakka**	**0.60**	**48**	P	**Pg**	**16 26 46.2**	**-0.6**
LAKA				S	**Sg**	**16 26 55.8**	**+1.1**
LAKA	**Lakka**	**0.60**	**48**	P	**Pg**	**16 26 46.2**	**-0.6**
LAKA				S	**Sg**	**16 26 55.8**	**+1.1**
EFP	**Efpalio**	**0.70**	**34**	P	**Pg**	**16 26 48.0**	**-0.8**
EFP				S	**Sg**	**16 26 59.1**	**+1.1**
EFP	**Efpalio**	**0.70**	**34**	*e*PN	**Pg**	**16 26 48.5**	**-0.3**
EFP				*e*SN	**Sg**	**16 26 57.8**	**-0.2**
EFP	**Efpalio**	**0.70**	**34**	P	**Pg**	**16 26 48.0**	**-0.8**
EFP	**Efpalio**	**0.70**	**34**	*e*Pn	**Pg**	**16 26 48.5**	**-0.3**
EFP				*e*Sn	**Sg**	**16 26 57.8**	**-0.2**
EFP				S	**Sg**	**16 26 59.1**	**+1.1**
VLS	**Valsamata**	**0.73**	**297**	*e*Pn	**Pg**	**16 26 47.5**	**-1.8**
VLS				*e*Sn	**Sg**	**16 26 58.9**	**0.0**
VLS	**Valsamata**	**0.73**	**297**	P	**Pg**	**16 26 47.9**	**-1.4**
VLS				S	**Sg**	**16 27 00.4**	**+1.5**
VLS	**Valsamata**	**0.73**	**297**	*e*PN	**Pg**	**16 26 47.5**	**-1.8**
VLS				*e*SN	**Sg**	**16 26 58.9**	**0.0**
VLS	**Valsamata**	**0.73**	**297**	*e*Pn	**Pg**	**16 26 47.5**	**-1.8**
VLS	**Valsamata**	**0.73**	**297**	P	**Pg**	**16 26 47.9**	**-1.4**
VLS				*e*Sn	**Sg**	**16 26 58.9**	**0.0**
VLS				S	**Sg**	**16 27 00.4**	**+1.5**
TRIZ	**Trizonia**	**0.74**	**45**	P	**Pg**	**16 26 48.5**	**-0.9**
TRIZ	**Trizonia**	**0.74**	**45**	P	**Pg**	**16 26 48.5**	**-0.9**
GUR	**Goura**	**0.74**	**82**	P	**Pg**	**16 26 48.3**	**-1.2**
GUR				S	**Sg**	**16 26 59.3**	**0.0**
GUR	**Goura**	**0.74**	**82**	*e*PB	**Pg**	**16 26 48.2**	**-1.3**
GUR				*e*SN	**Sg**	**16 26 59.5**	**+0.2**
GUR	**Goura**	**0.74**	**82**	P	**Pg**	**16 26 48.3**	**-1.2**
GUR				*e*Sn	**Sg**	**16 26 59.5**	**+0.2**
ITM	**Ithomi**	**0.78**	**148**	*e*Pn	**Pg**	**16 26 50.2**	**0.0**
ITM				*e*Sn	**Sg**	**16 27 01.6**	**+1.2**
ITM	**Ithomi**	**0.78**	**148**	*e*PN	**Pg**	**16 26 50.2**	**0.0**
ITM				*e*SN	**Sg**	**16 27 01.6**	**+1.2**
ITM	**Ithomi**	**0.78**	**148**	*e*Pn	**Pg**	**16 26 50.2**	**0.0**
ITM				*e*Sn	**Sg**	**16 27 01.6**	**+1.2**
KALE	**Kalithea**	**0.79**	**46**	P	**Pg**	**16 26 49.2**	**-1.3**
KALE				S	**Sg**	**16 27 02.7**	**+1.8**
KALE	**Kalithea**	**0.79**	**46**	P	**Pg**	**16 26 49.2**	**-1.3**
KALE				S	**Sg**	**16 27 02.7**	**+1.8**
VLX	**Vlachokerasia**	**0.90**	**121**	*e*PN	**Pg**	**16 26 52.2**	**-0.3**
VLX				*e*SN	**Sg**	**16 27 05.9**	**+1.6**
VLX	**Vlachokerasia**	**0.90**	**121**	*e*Pn	**Pg**	**16 26 52.2**	**-0.3**
VLX				*e*Sn	**Sg**	**16 27 05.9**	**+1.6**
PYL	**PYLOS**	**0.98**	**164**	*e*PN	**Pg**	**16 26 53.5**	**-0.5**
PYL	**PYLOS**	**0.98**	**164**	*e*Pn	**Pg**	**16 26 53.5**	**-0.5**
DSF	**Desfina**	**1.05**	**57**	P	**Pg**	**16 26 53.1**	**-2.2**
DSF	**Desfina**	**1.05**	**57**	P	**Pg**	**16 26 53.1**	**-2.2**
LKD2	**Lefkada island**	**1.12**	**328**	P	**Pb**	**16 26 54.7**	**-1.5**
LKD2				S	**Sb**	**16 27 12.8**	**+2.2**
LKD2	**Lefkada island**	**1.12**	**328**	P	**Pb**	**16 26 54.7**	**-1.5**
LKD2				S	**Sb**	**16 27 12.8**	**+2.2**
LTK	**Loutraki**	**1.24**	**81**	*e*PN	**Pn**	**16 26 57.8**	**-0.3**
LTK	**Loutraki**	**1.24**	**81**	*e*Pn	**Pn**	**16 26 57.8**	**-0.3**
THL	**Klokotos Trika**	**1.78**	**15**	*e*PN	**Pn**	**16 27 05.8**	**+0.3**
THL	**Klokotos Trika**	**1.78**	**15**	*e*Pn	**Pn**	**16 27 05.8**	**+0.3**
KYTH	**Kithira**	**2.03**	**140**	*e*Pn	**Pn**	**16 27 09.6**	**+0.7**
KYTH	**Kithira**	**2.03**	**140**	*e*PN	**Pn**	**16 27 09.6**	**+0.7**
KYTH	**Kithira**	**2.03**	**140**	*e*Pn	**Pn**	**16 27 09.6**	**+0.7**

CSEM ***12*** *16:27:13.4, 12°.24N×44°.31E, h6km, ML3.5, After DHMR*
DHMR 12 16:27:13.4±1.0, 12°.24N×44°.31E, h6km±4km, ML3.5, 1C-2D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADEN	**Aden**	**0.84**	**51**	*i* P	Pg	16 27 28.8	-0.8
ADEN				*i* S	Sg	16 27 41.4	+0.8
ADEN				AML	AML	16 27 48.2	
	comp=E,3μm,0.7s						
ADEN	**Aden**	**0.84**	**51**	*i* P	Pg	16 27 28.8	-0.8
ADEN				*i* S	Sg	16 27 41.3	+0.8
	comp=E,2μm,0.7s						
TRBA	**At Turbah**	**1.00**	**349**⇑	*i* P	Pg	16 27 31.7	-1.0
TRBA				*i* S	Sg	16 27 46.9	+1.3
TRBA				AML	AML	16 27 58.6	
	comp=N,440nm,0.4s						
UDYN	**Al 'Udayn**	**1.75**	**349**⇓	*i* P	Pn	16 27 45.1	+0.9
UDYN				*i* S	Sn	16 28 09.5	+2.7
UDYN				AML	AML	16 28 16.2	
	comp=E,479nm,0.6s						
UDYN	**Al 'Udayn**	**1.75**	**349**⇓	*i* P	Pn	16 27 45.1	+0.9
UDYN				*i* S	Sn	16 28 09.5	+2.7
	comp=E,240nm,0.6s						
LBOS		**1.86**	**29**	*i* P	Pn	16 27 46.4	+0.6
LBOS				*i* S	Sn	16 28 13.0	+3.5
BDHA	**Al Bayda'**	**2.11**	**35**	*i* P	Pn	16 27 51.0	+1.8
BDHA				*i* S	Sn	16 28 20.0	+4.2
BDHA				AML	AML	16 28 31.6	
	comp=E,618nm,0.6s						
DHBB	**Dhamar BB**	**2.31**	**2**	*i* P	Pn	16 27 54.6	+2.6
DHBB				*i* S	Sn	16 28 25.4	+4.6

MEX 12 16:31:15.6±0.4, 14°.71N×94°.40W, h26km±14km, MD3.8, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.50**	**49**	*i* P	Pn	16 31 38.5	-2.4
PCIG				*i* S	Sn	16 31 56.2	-3.4
HUIG	**Huatulco**	**1.96**	**303**	*e*P	Pn	16 31 45.4	-1.7
HUIG				*i* S	Sn	16 32 07.9	-2.9
THIG		**2.07**	**84**	*e*P	Pn	16 31 46.5	-2.2
THIG				*i* S	Sn	16 32 11.3	-2.3
TGIG		**2.39**	**31**	*i* P	Pn	16 31 50.5	-2.6
TGIG				*i* S	Sn	16 32 19.4	-2.2
SCX	**San Cristobal**	**2.63**	**40**	*e*P	Pn	16 31 54.1	-2.3
SCX				*i* S	Sn	16 32 25.3	-2.2
VHO	**Vista Hermosa**	**3.25**	**317**	*e*P	Pn	16 32 04.8	-0.1
VHO				*i* S	Sn	16 32 42.5	-0.2
PNIG	**Pinotepa**	**3.96**	**295**	*i* P	Pn	16 32 13.2	-1.5
PNIG				*i* S	Sn	16 32 59.3	-1.1

JMA 12 16:38:56.1±0.5, 44°.20N×147°.81E, h0km, M3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.71**	**242**	P	Pn	16 39 27.8	+0.6
NEM2				*e*S	Sn	16 39 50.2	+0.4
JRA	**Rausu**	**1.96**	**263**	P	Pn	16 39 30.6	+0.1
JNK	**Nakash**	**2.32**	**256**	P	Pn	16 39 36.3	+0.8
JAK	**Akkeshi**	**2.56**	**243**	P	Pn	16 39 39.3	+0.5
JTKR	**Abashiri--Toko**	**2.82**	**267**	P	Pn	16 39 42.1	-0.3
JAR	**Ashorobuto**	**3.06**	**254**	P	Pn	16 39 47.3	+1.6
JOB	**Onbets**	**3.17**	**247**	P	Pn	16 39 49.1	+1.9
JOB				*e*S	Sn	16 40 27.4	+1

AMAG	**Maghara**	**3.27 214**	P	**Pn**	**16 41 32.8**	**+0.1**
YURE	**YUREGIR**	**3.46 4**	*i* P	**Pn**	**16 41 35.5**	**+0.1**
YURE	**YUREGIR**	**3.46 4**	*i* P	**Pn**	**16 41 35.5**	**+0.1**
HNKL	**Nakhl**	**3.62 199**	P	**Pn**	**16 41 37.9**	**+0.3**
	baz=202					
HNKL			AMP		16 42 00.0	
	comp=N,100μm,0.6s,logA/T=5.2,baz=202					
HNKL	**Nakhl**	**3.62 199**	P	**Pn**	**16 41 37.8**	**+0.2**
ERMK	**Ermenek**	**3.84 329**	*i* P	**Pn**	**16 41 43.9**	**+3.3**
ERMK	**Ermenek**	**3.84 329**	*i* P	**Pn**	**16 41 43.9**	**+3.4**
GULE	**Gulek**	**3.94 353**	*i* P	**Pn**	**16 41 43.1**	**+1.1**
GULE	**Gulek**	**3.94 353**	*i* P	**Pn**	**16 41 43.1**	**+1.1**
SUZ		**4.12 212**	P	**Pn**	**16 41 45.2**	**+0.7**
	baz=215					
SUZ		**4.12 212**	P	**Pn**	**16 41 45.2**	**+0.8**
HHAG	**Hagoal**	**4.39 220**	P	**Pn**	**16 41 49.2**	**+1.0**
	baz=222					
HHAG			S	**Sn**	**16 42 38.0**	**-1.7**
	baz=222					
HHAG	**Hagoal**	**4.39 220**	P	**Pn**	**16 41 49.2**	**+1.0**
HHAG			S	**Sn**	**16 42 38.0**	**-1.7**
ZNM		**4.50 209**	P	**Pn**	**16 41 50.4**	**+0.6**
	baz=211					
ZNM		**4.50 209**	P	**Pn**	**16 41 50.4**	**+0.6**
KOT	**Kottamia**	**4.56 222**	P	**Pn**	**16 41 51.2**	**+0.7**
	baz=224					
KOT			AMP		16 42 00.0	
	comp=E,40μm,0.5s,logA/T=4.9,baz=224					
KOT	**Kottamia**	**4.56 222**	P	**Pn**	**16 41 51.2**	**+0.7**
ZAF		**4.72 211**	P	**Pn**	**16 41 53.6**	**+0.9**
	baz=213					
ZAF		**4.72 211**	P	**Pn**	**16 41 53.6**	**+0.8**
GLL	**Jalalah**	**4.89 221**	P	**Pn**	**16 41 55.7**	**+0.6**
	baz=222					
GLL	**Jalalah**	**4.89 221**	P	**Pn**	**16 41 55.7**	**+0.6**
HSAF	**As Saff**	**4.95 222**	P	**Pn**	**16 41 56.2**	**+0.3**
	baz=224					
HSAF	**As Saff**	**4.95 222**	P	**Pn**	**16 41 56.2**	**+0.4**
HKAT	**Jabal Katrina**	**4.96 194**	P	**Pn**	**16 41 56.1**	**0.0**
	baz=197					
HKAT	**Jabal Katrina**	**4.96 194**	P	**Pn**	**16 41 56.1**	**0.0**
TR2		**5.16 196**	P	**Pn**	**16 41 58.6**	**-0.1**
	baz=199					
TR2		**5.16 196**	P	**Pn**	**16 41 58.6**	**-0.1**
TR1		**5.47 193**	P	**Pn**	**16 42 02.5**	**-0.6**
	baz=196					
TR1		**5.47 193**	P	**Pn**	**16 42 02.5**	**-0.6**
GRB	**Gharib**	**5.54 204**	P	**Pn**	**16 42 04.0**	**+0.1**
	baz=206					
GRB	**Gharib**	**5.54 204**	P	**Pn**	**16 42 04.0**	**+0.1**
MSL	**Mosul**	**7.06 62**	*e*Pn	**Pn**	**16 42 28.0**	**+3.2**
MSL			*e*Sn	**Sn**	**16 43 50.0**	**+4.6**
BHD	**Baghdad**	**7.56 88**	*e*Pn	**Pn**	**16 42 32.6**	**+0.9**
BHD			*e*Pg	**Pg**	**16 43 08.5**	**+3.0**
BHD			*e*Sn	**Sn**	**16 44 03.5**	**+5.8**
BHD			*i* Sg	**Sg**	**16 44 56.0**	**+13**
BHD	**Baghdad**	**7.56 88**	*e*Pn	**Pn**	**16 42 32.6**	**+0.9**

SZGRF ***12*** *16:53:17.3, 51.°09S×127.°19W, h33km, South Pacific Ocean*
GCMT ***12*** *16:53:37.6, 50.°30S×114.°03W, h16km, MW5.0, Moment Tensor Solution. s24,c30; s66,c79; Moment tensor: Scale 10^{16}Nm; M_{rr}-0.04±.14; $M_{\theta\theta}$0.79±.16; $M_{\phi\phi}$-0.75±.16; $M_{r\theta}$-2.54±.56; $M_{\theta\phi}$3.00±.12; $M_{\phi r}$-2.21±.55; Best double couple: $M_0$4.20000×10^{16} NP1:ϕ_s284.00000°, δ61.00000°, λ18.00000°. NP2:ϕ_s185.00000°, δ74.00000°, λ150.00000°. Principal axes: T 5.2500, Plg32.0000°, Azm141.0000°; N -2.1500, Plg56.0000°, Azm340.0000°; P -3.1100, Plg9.0000°, Azm237.0000°; Data Used: II IU CN G IC.*
NEIC 12 16:53:34.9±1.0, 50.°02S×113.°66W, h10km, mb4.7/4 Error ellipse: s-maj=45.4km s-min=21.2km az=133.0, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRQA	**Tornquist**	**38.30**	**92**	P	P	17 00 53.2	-2.2
	43nm,1.7s						
SBA	**Scott Base**	**39.51**	**199**	P	P	17 01 06.4	+1.3
QSPA	**South Pole Qui**	**40.18**	**180**	*e*P	P	17 01 10.8	+0.2
	12nm,1.0s						
LPAZ	**La Paz**	**49.69**	**64**	*e*P	P	17 02 27.2	+0.2
	17nm,1.0s						
WRAB	**Tennant Creek**	**88.18**	**241**	*e*P	P	17 06 23.4	-2.7
	2.7nm,1.0s						
TIXI	**Tiksi**	**144.99**	**331**	*e*PKPpre		17 13 06.2	
TIXI				*e*PKPdf	PKPdf	17 13 08.9	-1.8
GRA1	**Grafenberg Arr**	**145.15**	**69**	*e*PKPbc	PKPbc	17 13 11.9	+0.6
GRF	**Grafenberg Arr**	**145.15**	**69**	*e*PKPbc	PKPbc	17 13 11.9	+0.6
GRF	**Grafenberg Arr**	**145.15**	**69**	*e*PKP	PKPdf	17 13 11.9	+0.3
RJOB	**Jochberg**	**145.34**	**73**	*e*PKPbc	PKPbc	17 13 14.2	+2.2
CLZ	**Clausthal**	**145.42**	**65**	*e*PKPbc	PKPbc	17 13 13.0	+0.9
CLZ	**Clausthal**	**145.42**	**65**	*e*PKPbc	PKPbc	17 13 13.0	+0.9
MOX	**Moxa**	**145.74**	**67**	*e*PKPbc	PKPbc	17 13 13.9	+0.8
ROTZ	**Rotzenmuhle**	**145.77**	**69**	*e*PKPbc	PKPbc	17 13 14.7	+1.5
WET	**Wettzell**	**145.94**	**70**	*e*PKPbc	PKPab	17 13 14.8	+0.5
WET	**Wettzell**	**145.94**	**70**	*e*PKPbc	PKPab	17 13 14.8	+0.5
PLN	**Plauen**	**146.00**	**68**	*e*PKPbc	PKPbc	17 13 14.3	+0.4
BSEG	**Bad Segeberg**	**146.04**	**61**	*e*PKPbc	PKPab	17 13 14.5	0.0
BSEG	**Bad Segeberg**	**146.04**	**61**	*e*PKPbc	PKPab	17 13 14.5	0.0
WERN	**Wernitzgruen**	**146.06**	**68**	*e*PKPbc	PKPbc	17 13 14.4	+0.3
GUNZ	**Gunzen**	**146.06**	**68**	*e*PKPbc	PKPbc	17 13 13.9	-0.2
WERD	**Werda**	**146.08**	**68**	*e*PKPbc	PKPbc	17 13 14.0	-0.1
NKC	**Novy Kostel**	**146.09**	**68**	*e*PKPbc	PKPbc	17 13 14.0	-0.2
NKC	**Novy Kostel**	**146.09**	**68**	*e*P	PKPbc	17 13 13.7	-0.5
TANN	**Tannenbergstha**	**146.16**	**68**	*e*PKPbc	PKPab	17 13 15.0	-0.1
GEC2	**GERESS Array S**	**146.33**	**71**	*e*PKPbc	PKPbc	17 13 15.0	0.0
GEC2	**GERESS Array S**	**146.33**	**71**	*e*PKPbc	PKPbc	17 13 15.0	0.0
KHC	**Kasperske Hory**	**146.37**	**71**	*e*P	PKPbc	17 13 15.5	+0.5
CLL	**Collm**	**146.79**	**67**	*i* P	PKPab	17 13 17.1	-0.4
CLL	**Collm**	**146.79**	**67**	*i* PKPbc	PKPab	17 13 17.1	-0.4
	comp=Z,7.0nm,1.0s						
CLL				LmV		17 12 00.0	
	comp=Z,100nm,18.1s						
BRG	**Berggiesshubel**	**147.20**	**68**	*e*P	PKPab	17 13 17.9	-1.2
	comp=Z,5.8nm,0.9s						
PRU	**Pruhonice**	**147.26**	**70**	*e*P	PKPab	17 13 19.0	-0.4
PVCC	**Panska Ves**	**147.46**	**69**	*e*P	PKPbc	17 13 17.8	-0.3
UPC	**Upice**	**148.32**	**69**	*e*P	PKPab	17 13 21.7	-1.9
DPC	**Dobruska-Polom**	**148.46**	**70**	*e*P	PKPab	17 13 22.1	-2.1
VYHS	**Vyhne**	**149.37**	**74**	*e*PKP	PKPbc	17 13 23.2	+0.1
VYHS				*e*		17 14 34.5	
VYHS	**Vyhne**	**149.37**	**74**	*e*PKP	PKPbc	17 13 23.2	+0.1
VYHS				*e*		17 14 34.5	
OKC	**Ostrava-Krasne**	**149.40**	**71**	*e*P	PKPbc	17 13 23.9	+0.7
KECS	**Kecovo**	**150.39**	**75**	*e*PKP	PKPbc	17 13 26.8	+1.2
KECS	**Kecovo**	**150.39**	**75**	*e*PKP	PKPbc	17 13 26.8	+1.2
CRVS	**Cervenica-Dubn**	**151.14**	**75**	*e*PKP	PKPbc	17 13 30.1	+2.7
CRVS	**Cervenica-Dubn**	**151.14**	**75**	*e*PKP	PKPbc	17 13 30.1	+2.7
KOLS	**Kolonicke sedl**	**151.65**	**75**	*e*PKP	PKPbc	17 13 29.6	+1.1
KOLS	**Kolonicke sedl**	**151.65**	**75**	*e*PKP	PKPbc	17 13 29.5	+0.9
BR131	**Keskin Array S**	**154.83**	**102**	*e*PKPab	PKPab	17 13 52.7	+1.6

ISCJB ***12*** *17:01:06.8±0.5, 33.°32N±0.°02×35.°44E±0.°04, h7km±5km, Error ellipse: s-maj=6.7km s-min=3.5km az=23.2*
GII ***12*** *17:01:07.0±0.8, 33.°27N×35.°46E, h1km±4km, Md2.5/7, Mm2.2/6*
CSEM ***12*** *17:01:07.2±0.3, 33.°33N×35.°43E, h2km, ML3.2, Error ellipse: s-maj=9.6km s-min=4.1km az=98.0*
GRAL ***12*** *17:01:07.7±0.3, 33.°32N×35.°46E, h6km±2km, MD3.2*
ISC 12 17:01:07.3±0.5, 33.°33N±0.°02×35.°44E±0.°04, h5km±7km, n22, σ0.°47/32, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.18**	**328**	*e*P	**Pg**	**17 01 11.5**	**+0.6**
MATL	**Matarih**	**0.18**	**328**	*e*P	**Pg**	**17 01 11.5**	**+0.6**
KSDI	**Kefar Szold**	**0.23**	**128**	Pg	**Pg**	**17 01 11.2**	**-0.5**
KSDI				Sg	**Sg**	**17 01 15.1**	**+0.3**
HRI	**Mount Hermon**	**0.25**	**105**	Pg	**Pg**	**17 01 11.9**	**-0.3**
HNTI	**Hanita**	**0.34**	**222**	Pg	**Pg**	**17 01 13.9**	**+0.1**
HNTI				Sg	**Sg**	**17 01 18.3**	**+0.1**
RCY	**Rachaya**	**0.35**	**64**	*e*P	**Pg**	**17 01 14.4**	**+0.3**
RCY				*e*S	**Sg**	**17 01 19.3**	**+0.7**
RCY	**Rachaya**	**0.35**	**64**	*e*P	**Pg**	**17 01 14.4**	**+0.4**
RCY				*e*S	**Sg**	**17 01 19.3**	**+0.7**
KSHT	**Keshet**	**0.47**	**139**	Pg	**Pg**	**17 01 16.2**	**0.0**
BHL	**Bhannes**	**0.60**	**17**	*e*P	**Pg**	**17 01 18.5**	**-0.2**
BHL				*e*S	**Sg**	**17 01 26.8**	**+0.3**
BHL	**Bhannes**	**0.60**	**17**	*e*P	**Pg**	**17 01 18.5**	**-0.3**
BHL				*e*S	**Sg**	**17 01 26.8**	**+0.3**
BLGI	**Bet Lehem HaGe**	**0.63**	**200**	Pg	**Pg**	**17 01 19.5**	**0.0**
OFRI	**'Ofer**	**0.81**	**209**	Pg	**Pg**	**17 01 22.6**	**-0.2**
MMLI	**Mount Malkishu**	**0.89**	**181**	Pg	**Pg**	**17 01 23.7**	**-0.7**
MMLI				Sg	**Sg**	**17 01 35.8**	**-0.2**
HWQ	**Hawqa**	**1.03**	**24**	*e*P	**Pg**	**17 01 26.8**	**-0.3**
HWQ				*e*S	**Sg**	**17 01 40.0**	**-0.5**
HWQ	**Hawqa**	**1.03**	**24**	*e*S	**Sg**	**17 01 40.0**	**-0.5**
HMDT	**Nahal Hemdat**	**1.08**	**176**	Pg	**Pg**	**17 01 27.0**	**-1.0**
HMDT				Sg	**Sg**	**17 01 42.6**	**+0.7**
SLTI	**Sal'it**	**1.14**	**197**	Pg	**Pg**	**17 01 28.6**	**-0.6**
SLTI				Sg	**Sg**	**17 01 44.8**	**+0.9**
DSI	**Dead Sea**	**1.76**	**182**	Pn	**Pn**	**17 01 37.9**	**-0.4**
YTIR	**Yattir**	**1.98**	**188**	Pn	**Pn**	**17 01 42.2**	**+0.8**
MZDA	**Masada**	**2.02**	**182**	Pn	**Pn**	**17 01 42.0**	**+0.1**
RTMI	**Retamim**	**2.36**	**196**	Pn	**Pn**	**17 01 46.5**	**-0.1**
PRNI	**Paran**	**3.00**	**187**	Pn	**Pn**	**17 01 55.4**	**+0.1**

BYKL ***12*** *17:08:19.5±0.2, 53.°30N×108.°60E, h7km,* **MD4.2/1, 4C-1D, Error ellipse: s-maj=37.0km s-min=24.6km az=140.0, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KELR	**Kotokel**	**0.63**	**210**	*e*Pg	Pg	17 08 30.7	-0.2
KELR				*e*Sg	Sg	17 08 38.9	-0.1
KELR				Pmax			
	102nm,0.1s						
KELR				Smax			
	1μm,0.3s						
OGRR	**Ongureny**	**0.69**	**300**	⇑*i*PG	Pg	17 08 32.1	-0.1
OGRR				*e*		17 08 41.2	
OGRR				pmax	pmax		
	comp=Z,127nm,0.1s						
OGRR				smax			
	comp=N,447nm,0.5s						
OGRR	**Ongureny**	**0.69**	**300**	⇑*i*Pg	Pg	17 08 32.1	-0.1
	comp=N,123nm,0.4s						
OGRR				⇓*i*Pg	Pg	17 08 32.1	-0.1
	comp=N,173nm,0.4s						
OGRR				⇑*i*Pg	Pg	17 08 32.1	-0.1
	comp=N,195nm,0.4s						
OGRR				*e*Sg	Sg	17 08 41.1	-0.1
OGRR				*e*Sb	Sb	17 08 46.4	+3.4
OGRR				Pmax			
	comp=N,143nm,0.2s						
OGRR				max			
	comp=N,502nm,0.3s						
SYVR	**Suvo**	**0.91**	**66**	*e*Pg	Pg	17 08 36.5	+0.1
SYVR				*e*Sg	Sg	17 08 49.2	+1.0
SYVR				*e*Sb	Sb	17 08 53.6	+4.3
SYVR				Pmax			
	comp=N,25nm,0.1s						
SYVR				max			
	comp=N,603nm,0.2s						
ZRHB	**Zarechye**	**1.15**	**230**	*e*Pg	Pg	17 08 40.6	-0.4
ZRHB				*e*Sg	Sg	17 08 56.6	+0.7
ZRHB				Pmax			
	comp=N,164nm,0.7s						
ZRHB				Smax			
	comp=N,900nm,0.8s						
TRG	**Tyrgan**	**1.46**	**249**	*e*PG	Pg	17 08 45.4	-1.5
TRG				*e*		17 09 04.6	
TRG				pmax	pmax		
	comp=Z,55nm,0.3s						
TRG				smax			
	comp=E,501nm,0.3s						
TRG	**Tyrgan**	**1.46**	**249**	*e*Pg	Pg	17 08 45.4	-1.5
TRG				*e*Sg	Sg	17 09 04.0	-1.9
TRG				Pmax			
	comp=E,38nm,0.4s						
TRG				Smax			
	comp=E,494nm,0.4s						
UUDB	**Ulan-Yde**	**1.54**	**202**	*e*Pg	Pg	17 08 47.1	-1.4
UUDB				*e*Sg	Sg	17 09 07.4	-1.1
UUDB				Pmax			
	comp=E,191nm,0.8s						
UUDB				Smax			
	comp=E,263nm,1.0s						
FFNB	**Fofonovo**	**1.68**	**222**	*e*Pg	Pg	17 08 49.6	-1.5
FFNB				*e*Sg	Sg	17 09 11.4	-1.4
FFNB				Pmax			
	comp=E,338nm,0.1s						
FFNB				Smax			
	comp=E,606nm,0.6s						
KAB	**Kabansk**	**1.72**	**224**	*e*Pg	Pg	17 08 50.9	-1.0
KAB				*e*Sg	Sg	17 09 13.4	-0.8
KAB				Pmax			
	comp=E,219nm,0.6s						
KAB				Smax			
	comp=E,934nm,1.0s						
HRMR	**Khuramsha**	**1.95**	**212**	⇑*i*Pg	Pg	17 08 54.4	-1.9
HRMR				*e*Sg	Sg	17 09 20.2	-1.4
HRMR				Pmax			
	comp=E,278nm,0.4s						
HRMR				Smax			
	comp=E,970nm,0.5s						
YLYR	**Ulyunkhan**	**2.18**	**43**	*e*Pg	Pg	17 08 59.8	-0.9
YLYR				*e*Sg	Sg	17 09 28.1	-0.9
YLYR				Pmax			
	comp=E,8.0nm,0.3s						
YLYR				Smax			
	comp=E,114nm,0.4s						
LSTR	**Listvyanka**	**2.71**	**240**	*e*Pn	Pn	17 09 03.0	+0.2
LSTR				*e*Pg	Pg	17 09 07.3	-3.5
LSTR				*e*Sn	Sn	17 09 34.8	-1.0
LSTR				*e*Sg	Sg	17 09 41.3	-4.6
LSTR				Pmax			
	comp=E,11nm,0.4s						
LSTR				Smax			
	comp=E,121nm,1.1s						
IRK	**Irkutsk**	**2.83**	**250**	*e* Pg	Pg	17 09 14.6	+1.4
IRK				*e*Sg	Sg	17 09 45.1	-4.8
IRK				Smax			
	comp=E,276nm,0.8s						
KMO	**Kumora**	**3.00**	**29**	*e*PN	Pn	17 09 07.0	+0.2
KMO				*e*		17 09 12.9	
KMO				*e*S	Sn	17 09 42.8	-0.2
KMO				*e*		17 09 51.3	
KMO				pmax	pmax		
	comp=Z,23nm,0.3s						
KMO				smax			
	comp=N,132nm,0.7s						
KMO	**Kumora**	**3.00**	**29**	*e*Pn	Pn	17 09 08.5	+1.7
KMO				*e*Pg	Pg	17 09 14.0	-2.4
KMO				*e*Sg	Sg	17 09 52.7	-2.5
KMO				Pmax			
	comp=N,23nm,0.3s						
KMO				Smax			
	comp=N,131nm,1.0s						
CIT	**Chita**	**3.28**	**111**	*e*	Sn	17 09 50.7	+0.9
CIT				*e*Sg	Sg	17 10 01.8	-2.2
CIT				Smax			
	comp=N,177nm,0.3s						
TLY	**Talaya**	**3.44**	**244**	*e*Pn	Pn	17 09 12.9	+0.1
TLY				*e*Pg	Pg	17 09 20.6	-4.1
TLY				*e*Sg	Sg	17 10 04.2	-5.0
TLY				Pmax			
	comp=N,7.0nm,0.9s						
TLY				Smax			
	comp=N,77nm,1.4s						
UKT	**Uakit**	**3.67**	**51**	*e*	Pn	17 09 19.3	+3.4
UKT				*e*Pg	Pg	17 09 26.3	-2.8
UKT				*e*Sg	Sg	17 10 13.5	-3.0
UKT				Pmax			
	comp=N,8.0nm,0.7s						
UKT				Smax			
	comp=N,48nm,1.2s						
ARS	**Arshan**	**4.01**	**252**	*e*Pn	Pn	17 09 20.4	-0.3
ARS				*e*Pg	Pg	17 09 31.0	-4.7
ARS				*e*Sg	Sg	17 10 21.4	-6.2
ARS				Pmax			
	comp=N,20nm,0.6s						
ARS				Smax			
	comp=N,463nm,1.1s						
KPC	**Khapcheranga**	**4.31**	**145**	*e*Pn	Pn	17 09 25.6	+0.9
KPC				*e*Pg	Pg	17 09 36.5	-4.8
KPC				*e*Sn	Sn	17 10 13.7	-1.4
KPC				*e*Sg	Sg	17 10 31.0	-6.1
KPC				Pmax			
	comp=N,5.0nm,0.6s						
KPC				Smax			
	comp=N,55nm,1.0s						
ZAK	**Zakamensk**	**4.41**	**231**	*e*Pg	Pg	17 09 38.5	-4.7
ZAK				*e*Sg	Sg	17 10 35.1	-5.2
ZAK				Pmax			
	comp=N,6.0nm,0.8s						
ZAK				Smax			
	comp=N,30nm,1.9s						
MOY	**Mondy**	**4.93**	**254**	*e*PN	Pg	17 09 48.4	-4.8
MOY	**Mondy**	**4.93**	**254**	*e*	Pg	17 09 45.4	-7.8
MOY				*e*Sg	Sg	17 10 50.0	-7.0
MOY				*e*		17 10 59.3	
MOY				max			
	comp=N,117nm,1.2s						
NLYR	**Nelyaty**	**5.20**	**49**	*e*PN	Pg	17 09 52.0	-6.4
NLYR				*e*		17 11 01.2	
NLYR				pmax	pmax		
	comp=Z,20nm,1.2s						
NLYR				smax			
	comp=N,55nm,1.2s						
ORL	**Orlik**	**5.37**	**265**	*e*PN	Pn	17 09 41.4	+2.0
ORL				*e*		17 09 56.5	
ORL				*e*S	Sn	17 10 40.6	-0.8
ORL				*e*		17 11 03.9	
ORL				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ORL				smax			
	comp=N,54nm,0.6s						
ORL	**Orlik**	**5.37**	**265**	*e*Pn	Pn	17 09 40.9	+1.5
ORL				*e*Pg	Pg	17 09 55.1	-6.6
ORL				*e*Sn	Sn	17 10 39.5	-1.9
ORL				*e*Sg	Sg	17 11 03.1	-8.2
ORL				Pmax			
	comp=N,4.0nm,0.9s						
ORL				Smax			
	comp=N,83nm,1.3s						
TUP	**Tupik**	**6.81**	**76**	*e*PN	Pn	17 10 00.4	+1.3
TUP				*e*		17 10 22.1	
TUP				*e*		17 11 50.3	
TUP				pmax	pmax		
	comp=Z,2.0nm,0.5s						
TUP				smax			
	comp=N,74nm,1.2s						
TUP	**Tupik**	**6.81**	**76**	*e*	Sn	17 11 18.0	+1.2
TUP				*e*Sg	Sg	17 11 50.7	-6.7
TUP				Smax			
	comp=N,83nm,1.4s						

DJA 12 17:17:18, 9.°15S×116.°92E, h29km, MLv3.8/6, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHKI	**Kahang-Kahang**	**1.51**	**301**	P	Pn	17 17 43.4	+0.2
KHKI				S	Sn	17 18 03.8	+1.9
DNP	**Denpasar**	**1.75**	**285**	P	Pn	17 17 47.3	+0.8
IGBI	**Denpasar**	**1.78**	**281**	P	Pn	17 17 47.9	+1.0
SRBI	**Singaraja**	**1.99**	**302**	P	Pn	17 17 49.9	+0.1
NBBI	**Negara**	**2.40**	**289**	P	Pn	17 17 55.7	+0.3
WSI	**Waingapu**	**3.37**	**99**	P	Pn	17 18 09.6	+0.9

MEX 12 17:20:32.0±0.7, 17.°19N×100.°42W, h22km±13km, MD4.0, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.20**	**135**	*i* P	Pb	17 20 35.8	-1.6
CAIG				*e*S	Sb	17 20 40.1	-0.9
ACX	**Acapulco**	**0.58**	**124**	*i* P	Pb	17 20 41.7	-1.7
ACX				*e*S	Sb	17 20 49.3	-1.9
MEIG	**Mezcala**	**1.05**	**46**	*i* P	Pn	17 20 48.1	-3.4
MEIG				*e*S	Sb	17 21 01.6	-3.4
ZIIG	**Zihuatanejo**	**1.08**	**293**	*i* P	Pn	17 20 48.6	-3.2
ZIIG				*i* S	Sb	17 21 02.5	-3.3
PLIG	**Platanillo**	**1.48**	**36**	*i* P	Pn	17 20 54.6	-2.7
PLIG				*e*S	Sn	17 21 12.5	-3.5
PNIG	**Pinotepa**	**2.33**	**110**	*i* P	Pn	17 21 07.1	-1.9
PNIG				*i* S	Sn	17 21 34.4	-2.6

IDC ***12*** *17:31:31.0±1.0, 9.°84S×113.°18E, h0km, mb3.9/12, mb1 3.9/13, mb1mx3.9/23, mbtmp3.9/13, ML3.5/1, Error ellipse: s-maj=41.5km s-min=16.0km az=48.0*
NEIC ***12*** *17:31:32.2±0.5, 9.°91S×113.°20E, h10km, mb4.6/2, Error ellipse: s-maj=17.2km s-min=8.1km az=52.0*
ISCJB ***12*** *17:31:37.5±1.4, 9.°8S±0.°1×113.°23E±0.°09, h62km±10km, mb4.0/14, Error ellipse: s-maj=21.9km s-min=10.7km az=28.3*
DJA ***12*** *17:31:45, 9.°06S×113.°09E, h25km, MLv3.8/4*
ISC 12 17:31:37.9±1.4, 9.°8S±0.°1×113.°25E±0.°09, h49km±10km, n25, σ0.°84/25, mb4.0/14, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**1.56**	**7**	P	**Pn**	**17 32 00.5**	**-2.8**
KRKI	**Karangkates**	**1.84**	**335**	P	**Pn**	**17 32 08.1**	**+1.0**
ABJI	**Asem Bagus**	**2.25**	**26**	P	**Pn**	**17 32 12.7**	**0.0**
DNP	**Denpasar**	**2.25**	**59**	P	**Pn**	**17 32 19.4**	**+6.7**
PWJI	**Pagerwojo**	**2.30**	**321**	P	**Pn**	**17 32 12.9**	**-0.5**
SRBI	**Singaraja**	**2.60**	**48**	P	**Pn**	**17 32 19.8**	**+2.2**
PCJI	**Pacitan**	**2.62**	**308**	P	**Pn**	**17 32 17.6**	**-0.1**
KHKI	**Kahang-Kahang**	**2.75**	**58**	P	**Pn**	**17 32 20.1**	**+0.6**
KAPI	**Kappang**	**8.03**	**54**	Pn	**Pn**	**17 33 29.5**	**-2.5**
	0.7nm,0.3s,baz=261,slow=13,SNR=2.9						
MBWA	**Marble Bar**	**12.87**	**152**	*e*P	**Pn**	**17 34 32.8**	**-5.4**
WRA	**Warramunga Arr**	**22.70**	**119**	P	**P**	**17 36 35.2**	**-0.3**
	1.1nm,0.7s,mb3.4,baz=288,slow=12,SNR=4.9						
ASAR	**Alice Springs**	**24.04**	**127**	P	**P**	**17 36 48.7**	**+0.1**
	2.5nm,0.8s,mb3.7,baz=301,slow=8.6,SNR=35						
CMAR	**Chiang Mai Arr**	**31.46**	**333**	P	**P**	**17 37 55.1**	**+0.2**
	0.9nm,0.6s,mb3.8,baz=166,slow=8.6,SNR=8.0						
STKA	**Stephens Creek**	**34.20**	**134**	P	**P**	**17 38 18.6**	**-0.2**
	2.0nm,0.8s,mb4.1,baz=309,slow=13,SNR=3.0						
LSA	**Lhasa**	**44.70**	**332**	*e*P	**P**	**17 39 46.6**	**+0.3**
	4.3nm,1.0s,mb4.2						
KSRS	**Korea Array**	**49.01**	**15**	P	**P**	**17 40 19.9**	**+0.1**
	0.8nm,0.7s,mb3.9,baz=188,slow=6.3,SNR=4.7						
SONM	**Songino Array**	**57.73**	**355**	P	**P**	**17 41 23.3**	**-0.3**
	1.0nm,0.5s,mb4.1,baz=169,slow=11,SNR=6.2						
MKAR	**Makanchi Array**	**62.78**	**337**	P	**P**	**17 41 58.1**	**0.0**
	1.0nm,0.6s,mb4.1,baz=124,slow=7.8,SNR=12

IMO			eS	Sn	17 38 49.8	-1.9
AGPR	**Aguadilla, PR**	**1.03 122**	⇑iP	Pn	17 38 36.1	-3.0
LSP	**Las Mesas**	**1.23 133**	⇑iP	Pn	17 38 39.8	-1.5
LSP			eS	Sn	17 38 59.7	+1.5
CRPR	**Cabo Rojo, PR**	**1.33 139**	⇓eP	Pn	17 38 41.7	-0.9
CRPR			eS	Sn	17 39 00.9	+0.4
LRS	**Lares**	**1.34 122**	⇓iP	Pn	17 38 41.2	-1.5
LRS			eS	Sn	17 39 00.2	-0.5
AOPR	**Arecibo Observ**	**1.38 118**	⇑eP	Pn	17 38 41.4	-1.9
AOPR			eS	Sn	17 39 01.5	-0.1
GBPR	**Guanica, Bosqu**	**1.50 133**	⇑eP	Pn	17 38 45.4	+0.6
GBPR			eS	Sn	17 39 05.5	+1.2
OBIP	**Obispado Ponce**	**1.66 125**	⇓eP	Pn	17 38 46.7	-0.1
OBIP			eS	Sn	17 39 07.4	-0.5
CELP	**Cerrillos**	**1.67 124**	⇓iP	Pn	17 38 46.3	-0.5
CELP			eS	Sn	17 39 07.4	-0.6
ICM	**Isla Caja Muer**	**1.82 127**	⇑eP	Pn	17 38 49.9	+1.1
SJG	**San Juan**	**2.00 116**	⇑iP	Pn	17 38 51.1	-0.1
SJG			eS	Sn	17 39 15.7	-0.1
SJG	**San Juan**	**2.00 116**	⇓eP	Pn	17 38 50.9	-0.2
SJG			eS	Sn	17 39 15.7	-0.1
CBYP	**Canovanas**	**2.19 109**	⇓eP	Pn	17 38 54.1	+0.4
HUMP	**Col San Antoni**	**2.25 112**	⇑eP	Pn	17 38 54.6	+0.2
MTP	**Monte Pirata**	**2.52 111**	⇓eP	Pn	17 38 58.0	-0.1
STVI	**Saint Thomas**	**2.99 102**	⇑eP	Pn	17 39 04.9	+0.5

IDC 12 17:48:58.7±2.1, 32°06′N×105°10′E, h0km, mb3.2/4, mb1 3.4/4, mb1mx3.2/26, mbtmp3.2/4, Error ellipse: s-maj=364.2km s-min=21.9km az=53.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.84**	**317**	P	P	17 54 02.2	-1.1
	0.2nm,0.8s,baz=122,slow=7.1,SNR=2.1						
KURK	**Kurchatov**	**27.01**	**321**	P	P	17 54 42.9	+0.7
	0.3nm,0.8s,baz=130,slow=8.6,SNR=2.8						
WRA	**Warramunga Arr**	**58.81**	**148**	P	P	17 58 58.7	-0.2
	0.5nm,0.7s,baz=340,slow=7.6,SNR=5.7						
ASAR	**Alice Springs**	**61.88**	**150**	P	P	17 59 20.1	+0.2
	0.3nm,0.6s,baz=332,slow=6.8,SNR=10.0						

*TRN **12** 17:52:44.8, 19°.58N×64°.66W, h3km*
*NEIC **12** 17:52:46.9, 19°.58N×64°.47W, h75km, MD3.5(RSPR), After RSPR.*

RSPR 12 17:52:46.9, 19°.58N×64°.47W, h75km±14km, MD3.5/4, MD3.5/4, 4C-6D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STVI	**Saint Thomas**	**1.31**	**201**	⇓eP	Pn	17 53 08.8	-0.8
STVI				eS	Sn	17 53 25.9	-0.7
STVI	**Saint Thomas**	**1.31**	**201**	⇓eP	Pn	17 53 08.8	-0.8
STVI				eS	Sn	17 53 25.9	-0.7
MTP	**Monte Pirata**	**1.80**	**215**	⇓eP	Pn	17 53 15.6	-0.4
MTP				eS	Sn	17 53 38.0	0.0
MTP	**Monte Pirata**	**1.80**	**215**	⇓eP	Pn	17 53 15.6	-0.4
MTP				eS	Sn	17 53 38.4	+0.3
CBYP	**Canovanas**	**1.85**	**225**	⇓eP	Pn	17 53 15.9	-0.8
CBYP				eS	Sn	17 53 38.8	-0.5
CBYP	**Canovanas**	**1.85**	**225**	⇓eP	Pn	17 53 15.9	-0.8
CBYP				eS	Sn	17 53 38.8	-0.5
HUMP	**Col San Antoni**	**1.94**	**223**	⇑eP	Pn	17 53 17.6	-0.2
HUMP				eS	Sn	17 53 40.8	-0.6
HUMP	**Col San Antoni**	**1.94**	**223**	⇑eP	Pn	17 53 17.6	-0.2
HUMP				eS	Sn	17 53 40.8	-0.6
CPD	**Cerro la Pandu**	**2.06**	**222**	⇑eP	Pn	17 53 18.6	-0.9
CPD	**Cerro la Pandu**	**2.06**	**222**	⇑eP	Pn	17 53 18.6	-0.9

IDC 12 17:56:22.1±2.5, 6°23S×130°23E, h0km, mb3.6/1, mb1 3.4/3, mb1mx3.2/16, mbtmp3.2/3, ML3.3/2, Error ellipse: s-maj=144.0km s-min=32.4km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.21**	**164**	Pn	Pn	17 59 43.2	-1.5
	0.1nm,0.3s,baz=347,slow=14,SNR=9.4						
WRA				Sn	Sn	18 02 09.8	-13
	0.6nm,0.3s,baz=333,slow=23,SNR=10						
ASAR	**Alice Springs**	**17.70**	**169**	P	Pn	18 00 31.3	+1.1
	0.1nm,0.3s,baz=347,slow=8.7,SNR=8.9						
ASAR				S	Sn	18 03 31.2	-17
	0.1nm,0.3s,baz=359,slow=29,SNR=3.9						
MKAR	**Makanchi Array**	**67.71**	**327**	P	P	18 07 21.4	+0.1
	0.5nm,0.7s,baz=120,slow=5.2,SNR=4.2						

*CSEM **12** 17:57:41.7±0.4, 37°.28N×38°.92E, h8km, MD2.9, Error ellipse: s-maj=10.0km s-min=5.2km az=165.0*
*ISCJB **12** 17:57:42.0±1.0, 37°.30N±0°.06×38°.94E±0°.05, h10km, Error ellipse: s-maj=9.1km s-min=4.6km az=162.1*
*ISK **12** 17:57:42.2, 37°.36N×38°.79E, h8km, MD2.9*
*DDA **12** 17:57:43.7, 37°.38N×38°.88E, h8km, Md2.8*

ISC 12 17:57:42.4±1.2, 37°29N±0°.07×38°92E±0°.05, h8km±6km, n18, σ0°97/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.17**	**332**	ePG	**Pg**	**17 57 44.8**	**-1.1**
URFA				eSG	**Sg**	**17 57 46.6**	**-1.6**
URFA	**Urfa**	**0.17**	**332**	ePg	**Pg**	**17 57 44.8**	**-1.1**
URFA				eSg	**Sg**	**17 57 46.6**	**-1.6**
ATAB	**Bozova**	**0.53**	**290**	*i* P	**Pg**	**17 57 52.6**	**+0.1**
ATAB				*i* S	**Sg**	**17 58 00.1**	**+0.6**
ATAB	**Bozova**	**0.53**	**290**	*i* P	**Pg**	**17 57 52.6**	**0.0**
ATAB				*i* S	**Sg**	**17 58 00.1**	**+0.6**
GZT	**Gaziantep**	**1.08**	**274**	*i* P	**Pg**	**17 58 04.3**	**+1.2**
GZT				*i* S	**Sg**	**17 58 20.3**	**+3.1**
SVRC	**Sivrice-ELAZID**	**1.12**	**16**	ePN	**Pg**	**17 58 03.6**	**-0.3**
SVRC				eSN	**Sg**	**17 58 19.2**	**+0.6**
SVRC	**Sivrice-ELAZID**	**1.12**	**16**	ePn	**Pg**	**17 58 03.6**	**-0.4**
SVRC				eSn	**Sg**	**17 58 19.2**	**+0.6**
DIYA	**Diyarbakir**	**1.14**	**56**	*i* P	**Pg**	**17 58 04.0**	**-0.4**
DIYA				*i* S	**Sg**	**17 58 20.4**	**+1.3**
DIYA	**Diyarbakir**	**1.14**	**56**	*i* P	**Pg**	**17 58 04.0**	**-0.3**
DIYA				*i* S	**Sg**	**17 58 20.4**	**+1.2**
AKCD	**Akcadag**	**1.27**	**322**	*i* P	**Pn**	**17 58 06.6**	**+0.2**
AKCD				*i* S	**Sb**	**17 58 23.9**	**+0.8**
AKCD	**Akcadag**	**1.27**	**322**	*i* P	**Pn**	**17 58 06.6**	**+0.1**
AKCD				*i* S	**Sb**	**17 58 23.9**	**+0.8**
GAZ	**Gaziantep**	**1.37**	**265**	ePN	**Pn**	**17 58 07.0**	**-0.7**
GAZ	**Gaziantep**	**1.37**	**265**	ePn	**Pn**	**17 58 07.0**	**-0.7**
KMRS	**Kahramanmaras**	**1.62**	**278**	ePN	**Pn**	**17 58 10.0**	**-1.2**
KMRS	**Kahramanmaras**	**1.62**	**278**	ePn	**Pn**	**17 58 10.0**	**-1.2**
PTK	**Pertek**	**1.64**	**13**	ePN	**Pn**	**17 58 11.7**	**+0.2**
PTK	**Pertek**	**1.64**	**13**	ePn	**Pn**	**17 58 11.7**	**+0.2**
SARI	**SarD1z-Kayseri**	**2.23**	**309**	ePN	**Pn**	**17 58 18.8**	**-0.8**

*LDG **12** 18:02:03.6±0.5, 14°.84S×166°.99E, h10km, Mb4.3/1, Error ellipse: s-maj=70.3km s-min=36.8km az=33.0*
*NOU **12** 18:02:08.9±0.9, 14°.28S×166°.38E, h30km, MD3.7*
*ISCJB **12** 18:02:17.8±1.7, 15°.02S±0°.07×167°.3E±0°.1, h143km±13km, mb4.0/10, Error ellipse: s-maj=22.0km s-min=7.5km az=158.2*
*IDC **12** 18:02:18.2±3.9, 15°.08S×167°.35E, h133km±32km, mb3.9/10, mb1 3.9/11, mb1mx3.8/18, mbtmp3.9/11, Error ellipse: s-maj=27.2km s-min=16.4km az=81.0*
*NEIC **12** 18:02:20.4±2.2, 15°.10S×167°.25E, h150km±18km, Error ellipse: s-maj=19.7km s-min=12.0km az=88.0*

ISC 12 18:02:18.3±1.5, 14°99S±0°.06×167°.4E±0°.1, h134km±11km, n47, σ1°13/26, mb4.0/10, 5C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.11**	**187**	*e*P	**Pn**	**18 03 58.0**	**-1.7**
DZM				*e*S	**Sn**	**18 05 19.4**	**+0.3**
DZM				AMP		18 05 22.6	
	comp=Z,552nm,7.8s						
BAYA	**Yate Dam**	**7.15**	**184**	*e*P	**Pn**	**18 04 00.1**	**-0.2**
BAYA				*e*S	**Sn**	**18 05 21.6**	**+1.5**
NOUC	**Port Laguerre**	**7.15**	**188**	*e*S	**Sn**	**18 05 19.4**	**-0.9**
LASL	**Noumea**	**7.25**	**186**	*e*P	**Pn**	**18 04 00.9**	**-0.8**
MVNO	**Noumea**	**7.30**	**187**	*e*S	**Sn**	**18 05 24.8**	**+1.0**
HNR	**Honiara**	**9.14**	**306**	P	**Pn**	**18 04 28.4**	**+1.3**
	comp=Z,8.3nm,0.3s,baz=213,slow=2.8,SNR=6.2						
HNR				S	**Sn**	**18 06 07.8**	**-0.5**
	comp=Z,3.8nm,0.3s,baz=185,slow=20,SNR=4.0						
EIDS	**Eidsvold**	**18.45**	**233**	*e*P	**P**	**18 06 23.1**	**-0.6**
RMQ	**Roma**	**20.82**	**234**	*e*P	**P**	**18 06 52.4**	**+3.1**
	comp=Z,18nm,1.5s						
ARMA	**Armidale**	**21.11**	**221**	*e*P	**P**	**18 06 54.7**	**+2.3**
URZ	**Urewera**	**24.72**	**161**	P	**P**	**18 07 26.2**	**-1.0**
	comp=Z,9.3nm,0.6s,mb4.5,baz=13,slow=19,SNR=9.2						
URZ	**Urewera**	**24.72**	**161**	*e*P	**P**	**18 07 27.0**	**-0.1**
CMSA	**Cobar Meteorol**	**25.79**	**227**	*e*P	**P**	**18 07 36.6**	**-0.3**
STKA	**Stephens Creek**	**28.92**	**230**	*e*P	**P**	**18 08 05.2**	**+0.3**
	comp=Z,3.5nm,0.5s,mb4.3						
STKA	**Stephens Creek**	**28.92**	**230**	P	**P**	**18 08 05.1**	**+0.2**
	comp=Z,4.3nm,0.5s,mb4.4,baz=25,slow=7.5,SNR=14						
STKA				PcP	PcP	18 11 10.5	-0.2
	comp=Z,3.0nm,0.9s,baz=37,slow=10,SNR=3.1						
STKA	**Stephens Creek**	**28.92**	**230**	*e*P	**P**	**18 08 04.8**	**-0.1**
STKA				PcP	PcP	18 11 10.5	-0.2
WRA	**Warramunga Arr**	**31.89**	**256**	P	**P**	**18 08 29.0**	**-2.1**
	comp=Z,0.4nm,0.7s,mb3.3,baz=80,slow=6.1,SNR=5.6						
WRA				PcP	PcP	18 11 18.7	0.0
	comp=Z,0.9nm,0.9s,baz=86,slow=3.6,SNR=3.9						
ASAR	**Alice Springs**	**32.70**	**249**	P	**P**	**18 08 36.7**	**-1.5**
	comp=Z,0.7nm,0.3s,mb3.8,baz=76,slow=9.3,SNR=20						
ASAR				PcP	PcP	18 11 20.2	-0.7
	comp=Z,0.5nm,0.6s,baz=87,slow=2.5,SNR=5.0						
PETK	**Petropavlovsk-**	**68.33**	**354**	P	**P**	**18 13 05.4**	**+0.6**
	comp=Z,1.4nm,0.7s,mb3.8,baz=111,slow=8.2,SNR=3.4						
CMAR	**Chiang Mai Arr**	**75.17**	**294**	P	**P**	**18 13 47.6**	**+1.1**
	comp=Z,1.1nm,0.7s,mb3.6,baz=136,slow=4.6,SNR=7.8						
MAW	**Mawson**	**81.70**	**202**	P	**P**	**18 14 21.3**	**-0.2**
	comp=Z,1.3nm,0.8s,mb3.6,baz=185,slow=4.4,SNR=3.8						
SONM	**Songino Array**	**82.78**	**324**	P	**P**	**18 14 27.9**	**+0.6**
	comp=Z,1.5nm,0.8s,mb3.8,baz=149,slow=6.8,SNR=8.1						
MKAR	**Makanchi Array**	**97.47**	**316**	P	**P**	**18 15 37.6**	**+0.7**
	comp=Z,1.0nm,0.6s,mb4.3,baz=74,slow=9.2,SNR=8.6						
ZALV	**Zalesovo Beam**	**97.67**	**324**	P	**P**	**18 15 36.4**	**-1.2**
	comp=Z,0.7nm,0.4s,mb4.4,baz=114,slow=6.0,SNR=3.9						
ARCES	**ARCESS Array B**	**120.53**	**345**	PKP	PKPdf	18 20 52.6	-0.8
	comp=Z,1.6nm,0.6s,baz=91,slow=2.3,SNR=9.7						
FINES	**FINESS Array B**	**126.01**	**338**	PKP	PKPdf	18 21 03.2	-0.9
	comp=Z,1.8nm,0.9s,baz=343,slow=6.0,SNR=3.8						
CABF	**La Chapelle**	**144.81**	**337**	*e*PKP1	PKPdf	18 21 39.5	+0.1
	comp=Z,29nm,1.2s						
FLN	**La Foliniere**	**144.87**	**346**	*e*PKP1	PKPdf	18 21 39.1	-0.3
LDF	**La Druitiere**	**144.94**	**346**	*e*PKP1	PKPdf	18 21 39.8	+0.2
LOR	**Lormes**	**145.02**	**340**	⇑*i*PKP1	PKPbc	18 21 39.8	+0.4
GRR	**Gorron**	**145.31**	**346**	*e*PKP1	PKPbc	18 21 40.5	+0.2
SSF	**Saint Saulge**	**145.31**	**341**	⇑*i*PKP1	PKPbc	18 21 40.9	+0.6
	comp=Z,18nm,0.9s						
LPL	**La Plagne**	**145.48**	**336**	⇑*i*PKP1	PKPbc	18 21 41.9	+1.0
LPG	**La Plagne**	**145.48**	**336**	⇑*i*PKP1	PKPbc	18 21 41.9	+1.0
	comp=Z,13nm,0.9s						
SGMF	**Saint Gilles**	**145.80**	**348**	*e*PKP1	PKPbc	18 21 41.3	-0.5
BGF	**Bois d'Agland**	**145.97**	**341**	*e*PKP1	PKPbc	18 21 42.7	+0.4
ORIF	**Oris-en-Rattie**	**146.31**	**336**	*e*PKP1	PKPbc	18 21 43.9	+0.5
	comp=Z,11nm,0.8s						
TCF	**Toulx Ste Croi**	**146.41**	**341**	*e*PKP1	PKPbc	18 21 43.9	+0.2
MFF	**Saint Martin d**	**146.80**	**344**	*e*PKP1	PKPbc	18 21 45.1	+0.3
	comp=Z,8.3nm,0.5s						
PGF	**Pioggiola**	**146.84**	**330**	*e*PKP1	PKPbc	18 21 44.4	-0.6
FRF	**La Foret Royal**	**147.11**	**334**	*e*PKP1	PKPbc	18 21 45.6	-0.1
SMRF	**Simiane la Rot**	**147.21**	**335**	*e*PKP1	PKPbc	18 21 45.6	-0.4
LMR	**La Mourre**	**147.35**	**334**	⇑*i*PKP1	PKPbc	18 21 46.3	-0.1
RJF	**Les Rejaudoux**	**147.51**	**341**	*e*PKP1	PKPbc	18 21 47.1	+0.3
CAF	**Calviac**	**147.67**	**340**	*e*PKP1	PKPbc	18 21 46.2	-1.0
LFF	**La Frestale**	**148.07**	**342**	*e*PKP1	PKPbc	18 21 48.6	+0.3
MTLF	**Montolieu**	**149.02**	**339**	*e*PKP1	PKPbc	18 21 51.0	+0.2
	comp=Z,11nm,0.9s						
TORD	**Torodi Ar. Bea**	**166.01**	**264**	PKP	PKPdf	18 22 07.7	-0.6
	comp=Z,0.7nm,0.6s,baz=332,slow=0.7,SNR=5.6						

IDC 12 18:09:09.1±4.5, 29°70S×178°30W, h0km, mb3.9/3, mb1 4.0/3, mb1mx3.8/14, mbtmp3.9/3, Error ellipse: s-maj=171.6km s-min=69.4km az=158.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**34.39**	**256**	P	P	18 15 58.0	-0.1
	6.7nm,0.8s,baz=102,slow=11,SNR=6.5						
ASAR	**Alice Springs**	**42.90**	**266**	P	P	18 17 09.6	+0.1
	0.4nm,0.9s,baz=106,slow=7.0,SNR=7.7						
WRA	**Warramunga Arr**	**43.82**	**272**	P	P	18 17 16.9	-0.1
	0.6nm,0.6s,baz=112,slow=7.9,SNR=8.3						
FINES	**FINESS Array B**	**144.40**	**340**	PKP	PKPdf	18 28 46.0	-0.6
	0.9nm,0.4s,baz=48,slow=4.1,SNR=12						

*GII **12** 18:12:05.5±0.7, 33°.32N×35°.45E, h1km±1km, Md2.6/8, Mm2.4/6*
*ISCJB **12** 18:12:05.8±0.5, 33°.35N±0°.02×35°.43E±0°.04, h4km±4km, Error ellipse: s-maj=6.0km s-min=3.0km az=20.9*
*CSEM **12** 18:12:06.2±0.2, 33°.34N×35°.45E, h2km, ML3.2, Error ellipse: s-maj=6.6km s-min=2.4km az=101.0*
*GRAL **12** 18:12:07.1±0.3, 33°.34N×35°.46E, h0km±51km, MD3.2*

ISC 12 18:12:06.3±0.4, 33°36N±0°.02×35°43E±0°.04, h3km±5km, n25, σ0°69/42, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.16**	**327**	*e*P	**Pg**	**18 12 10.4**	**+1.1**
MATL	**Matarih**	**0.16**	**327**	*e*P	**Pg**	**18 12 10.4**	**+1.0**
KSDI	**Kefar Szold**	**0.25**	**131**	Pg	**Pg**	**18 12 10.5**	**-0.6**
KSDI				Sg	**Sg**	**18 12 14.7**	**+0.3**
HRI	**Mount Hermon**	**0.27**	**110**	Pg	**Pg**	**18 12 11.2**	**-0.3**
MMA0	**Mount Meron ar**	**0.34**	**184**	Pg	**Pg**	**18 12 11.9**	**-1.0**
MMA0				Sg	**Sg**	**18 12 18.0**	**+0.7**
MMA0B	**Mount Meron ar**	**0.34**	**184**	Pg	**Pg**	**18 12 11.7**	**-1.2**
MMA0B				Sg	**Sg**	**18 12 18.6**	**+1.3**
MMA3	**Mount Meron ar**	**0.34**	**185**	Pg	**Pg**	**18 12 12.5**	**-0.4**
RCY	**Rachaya**	**0.35**	**68**	*e*P	**Pg**	**18 12 13.4**	**+0.5**
RCY				*e*S	**Sg**	**18 12 18.1**	**+0.6**
RCY	**Rachaya**	**0.35**	**68**	*e*P	**Pg**	**18 12 13.4**	**+0.4**
RCY				*e*S	**Sg**	**18 12 18.1**	**+0.6**
HNTI	**Hanita**	**0.35**	**219**	Pg	**Pg**	**18 12 13.0**	**0.0**
HNTI				Sg	**Sg**	**18 12 18.6**	**+1.1**
KSHT	**Keshet**	**0.49**	**140**	Pg	**Pg**	**18 12 15.5**	**-0.2**
KSHT				Sg	**Sg**	**18 12 22.4**	**+0.3**
BHL	**Bhannes**	**0.58**	**19**	*e*P	**Pg**	**18 12 17.6**	**+0.2**
BHL				*e*S	**Sg**	**18 12 25.4**	**+0.6**
BHL	**Bhannes**	**0.58**	**19**	*e*P	**Pg**	**18 12 17.6**	**+0.2**
BHL				*e*S	**Sg**	**18 12 25.4**	**+0.5**
BLGI	**Bet Lehem HaGe**	**0.65**	**198**	Pg	**Pg**	**18 12 18.5**	**-0.3**
OFRI	**'Ofer**	**0.82**	**207**	Pg	**Pg**	**18 12 21.7**	**-0.4**
MMLI	**Mount Malkishu**	**0.92**	**181**	Pg	**Pg**	**18 12 22.7**	**-1.2**
MMLI				Sg	**Sg**	**18 12 36.7**	**+1.0**
HWQ	**Hawqa**	**1.01**	**25**	*e*P	**Pg**	**18 12 25.9**	**+0.1**
HWQ				*e*S	**Sg**	**18 12 38.7**	**-0.2**
HMDT	**Nahal Hemdat**	**1.10**	**176**	Pg	**Pg**	**18 12 26.2**	**-1.3**
HMDT				Sg	**Sg**	**18 12 42.3**	**+0.6**
SLTI	**Sal'it**	**1.16**	**197**	Pg	**Pg**	**18 12 27.5**	**-1.1**
SLTI				Sg	**Sg**	**18 12 43.9**	**+0.3**
FKH	**Fakeheh**	**1.19**	**42**	*e*P	**Pg**	**18 12 28.8**	**-0.4**
FKH				*e*S	**Sg**	**18 12 44.6**	**0.0**
FKH	**Fakeheh**	**1.19**	**42**	*e*P	**Pg**	**18 12 28.8**	**-0.4**
FKH				*e*S	**Sg**	**18 12 44.6**	**0.0**
DSI	**Dead Sea**	**1.78**	**181**	Pn	**Pn**	**18 12 36.9**	**-1.1**
DSI				Sn	**Sn**	**18 13 01.8**	**+0.7**
YTIR	**Yattir**	**2.01**	**188**	Pn	**Pn**	**18 12 41.0**	**0.0**
MZDA	**Masada**	**2.04**	**182**	Pn	**Pn**	**18 12 41.4**	**-0.1**
MZDA				Sn	**Sn**	**18 13 08.3**	**+0.8**
PRNI	**Paran**	**3.02**	**187**	Pn	**Pn**	**18 12 54.5**	**-0.5**

IDC 12 18:24:26.9±4.1, 3°65S×155°00E, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.3/16, mbtmp3.5/2, Error ellipse: s-maj=176.6km s-min=56.0km az=120.0, North of Solomon Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.85**	**230**	P	P	18 30 00.8	+0.4
	0.6nm,0.5s,baz=56,slow=10,SNR=12						
ASAR	**Alice Springs**	**28.48**	**224**	P	P	18 30 23.6	-0.3
	0.5nm,0.9s,baz=58,slow=9.3,SNR=3.6						
TORD	**Torodi Ar. Bea**	**151.98**	**291**	PKPbc	PKPbc	18 44 24.9	-0.2
	0.4nm,1.0s,baz=72,slow=2.8,SNR=2.2						

*ISCJB **12** 18:38:25.2±1.1, 7°.34S±0°.07×126°.59E±0°.10, h305km±12km, mb3.8/12, Error ellipse: s-maj=17.4km s-min=7.4km az=151.5*

*NEIC **12** 18:38:26.6±0.8, 7°.29S×126°.63E, h303km±10km, mb3.8/4, Error ellipse: s-maj=12.6km s-min=6.0km az=53.0*
*IDC **12** 18:38:26.5±2.1, 7°.32S×126°.58E, h302km±23km, mb3.5/10, mb1 3.7/14, mb1mx3.6/20, mbtmp3.6/14, Error ellipse: s-maj=22.3km s-min=10.6km az=62.0*

ISC 12 18:38:27.0±1.1, 7°35S±0°.08×126°6E±0°.1, h308km±13km, n30, σ0°68/34, mb3.8/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**7.19**	**288**	P	**Pn**	**18 40 10.4**	**-0.4**
	1.3nm,0.3s,baz=112,slow=11,SNR=9.1						
KAKA	**Kakadu**	**7.84**	**133**	*e*P	**Pn**	**18 40 18.8**	**+0.1**
	16nm,0.4s						
KAKA	**Kakadu**	**7.84**	**133**	*e*P	**Pn**	**18 40 18.6**	**-0.2**
	38nm,0.4s						
FITZ	**Fitzroy Crossi**	**10.73**	**185**	*e*P	**Pn**	**18 40 53.3**	**-0.7**
	3.4nm,0.2s						
FITZ	**Fitzroy Crossi**	**10.73**	**185**	P	**Pn**	**18 40 53.4**	**-0.6**
	0.4nm,0.3s,baz=7.9,slow=11,SNR=14						
FITZ				S	**S**	**18 42 47.7**	**-6.7**
	0.5nm,0.3s,baz=57,slow=22,SNR=2.8						
WRAB	**Tennant Creek**	**14.60**	**150**	*e*P	**P**	**18 41 39.8**	**+0.6**
	5.9nm,0.6s						
WRA	**Warramunga Arr**	**14.60**	**150**	P	**P**	**18 41 39.0**	**-0.3**
	3.2nm,0.3s,baz=325,slow=12,SNR=152						
WRA				S	**S**	**18 44 14.5**	**-4.4**
	0.7nm,0.3s,baz=327,slow=21,SNR=12						
WRA	**Warramunga Arr**	**14.60**	**150**	P	**P**	**18 41 39.0**	**-0.3**
WRA				S	**S**	**18 44 14.5**	**-4.4**
MBWA	**Marble Bar**	**15.25**	**205**	P	**P**	**18 41 49.0**	**+2.5**
ASAR	**Alice Springs**	**17.68**	**157**	P	**P**	**18 42 13.2**	**+0.5**
	5.8nm,0.3s,baz=334,slow=11,SNR=626						
ASAR				S	**S**	**18 45 18.9**	**-1.4**
	0.1nm,0.3s,baz=341,slow=22,SNR=4.7						
CTA	**Charters Tower**	**22.88**	**126**	*e*P	**P**	**18 43 06.2**	**+1.7**
	4.8nm,0.5s,mb4.1						
CTA	**Charters Tower**	**22.88**	**126**	P	**P**	**18 43 04.8**	**+0.3**
	7.4nm,0.6s,mb4.2,baz=288,slow=12,SNR=12						
CTAO	**Charters Tower**	**22.88**	**126**	*e*P	**P**	**18 43 04.5**	**0.0**
STKA	**Stephens Creek**	**28.13**	**152**	*e*P	**P**	**18 43 51.4**	**+0.1**
	2.0nm,0.4s,mb3.9						
STKA	**Stephens Creek**	**28.13**	**152**	P	**P**	**18 43 51.5**	**+0.2**
	3.3nm,0.5s,mb4.1,baz=318,slow=8.9,SNR=11						
STKA	**Stephens Creek**	**28.13**	**152**	*e*P	**P**	**18 43 50.9**	**-0.5**
STKA				P		18 43 51.5	
CMSA	**Cobar Meteorol**	**29.95**	**146**	*e*P	**P**	**18 44 07.6**	**+0.2**
CMAR	**Chiang Mai Arr**	**37.44**	**314**	P	**P**	**18 45 11.9**	**+0.1**
	1.5nm,1.1s,mb3.3,baz=141,slow=7.0,SNR=4.1						
CMAR				PcP	PcP	18 47 23.6	+0.4
	0.6nm,0.6s,baz=162,slow=2.7,SNR=5.8						
ENH	**Enshi**	**40.85**	**337**	*e*P	**P**	**18 45 39.1**	**-0.5**
	2.8nm,0.8s,mb3.5						
KSRS	**Korea Array**	**44.58**	**2**	P	**P**	**18 46 08.8**	**-0.5**
	0.5nm,0.5s,mb3.0,baz=181,slow=11,SNR=4.8						
ULN	**Ulaanbaatar**	**57.62**	**345**	*e*P	**P**	**18 47 45.9**	**+0.5**
	2.0nm,1.1s,mb3.5						
SONM	**Songino Array**	**57.77**	**344**	P	**P**	**18 47 46.4**	**0.0**
	1.4nm,0.8s,mb3.4,baz=165,slow=7.7,SNR=10						
PEA0B	**Petropavlovsk-**	**65.75**	**20**	*e*P	**P**	**18 48 39.6**	**+0.4**
PETK	**Petropavlovsk-**	**65.75**	**20**	P	**P**	**18 48 39.6**	**+0.4**
	2.5nm,0.5s,mb4.2,baz=183,slow=3.1,SNR=17						
MKAR	**Makanchi Array**	**66.71**	**328**	P	**P**	**18 48 45.1**	**-0.3**
	0.7nm,0.5s,mb3.7,baz=98,slow=11,SNR=15						
ZALV	**Zalesovo Beam**	**70.44**	**335**	P	**P**	**18 49 07.3**	**-0.8**
	2.2nm,0.5s,mb4.2,baz=131,slow=4.6,SNR=12						
KURK	**Kurchatov**	**71.09**	**330**	*e*P	**P**	**18 49 12.1**	**0.0**
MAW	**Mawson

KMI smax
comp=E,21nm,1.3s
CMAR Chiang Mai Arr 13.73 201 Pn **Pn** **19 12 03.7 -0.8**
comp=E,0.0nm,0.3s,baz=10,slow=10,SNR=2.9
SONM Songino Array 16.46 6 Pn **Pn** **19 12 40.9 +0.2**
comp=E,0.1nm,0.3s,baz=177,slow=9.9,SNR=4.6
KSRS Korea Array 20.59 67 P **P** **19 13 28.7 -0.2**
comp=E,0.4nm,0.3s,baz=268,slow=10,SNR=4.8
CN2 Changchun 20.91 48 *e*P **P** **19 13 33.2 +0.9**
MKAR Makanchi Array 22.66 319 P **P** **19 13 52.2 +1.3**
comp=E,0.3nm,0.4s,mb3.1,baz=107,slow=12,SNR=7.9
MKAR Makanchi Array 22.66 319 P **P** **19 13 52.2 +1.3**
ZALV Zalesovo Beam 26.36 334 P **P** **19 14 26.2 +0.3**
comp=E,2.4nm,0.7s,mb3.9,baz=133,slow=9.4,SNR=12
KURK Kurchatov 26.91 323 P **P** **19 14 31.2 +0.4**
comp=E,1.3nm,0.9s,mb3.5,baz=125,slow=9.3,SNR=11
BVAR Borovoye Array 32.46 321 P **P** **19 15 20.3 +0.3**
comp=E,0.4nm,0.6s,mb3.4,baz=116,slow=13,SNR=3.6
FINES FINESS Array B 57.23 326 P **P** **19 18 36.3 -0.5**
comp=E,0.8nm,0.7s,mb3.9,baz=101,slow=7.5,SNR=2.7
WRA Warramunga Arr 58.81 146 P **P** **19 18 47.8 -0.6**
comp=E,0.6nm,0.5s,mb3.9,baz=339,slow=7.9,SNR=11
ASAR Alice Springs 61.84 149 P **P** **19 19 07.3 -1.8**
comp=E,0.8nm,1.0s,mb3.8,baz=339,slow=6.9,SNR=4.9
YKA Yellowknife Ar 81.38 17 P **P** **19 21 04.9 -1.4**
comp=E,0.4nm,0.6s,mb3.5,baz=323,slow=5.0,SNR=3.8

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*ISCJB **12** 19:22:19.8±3.6,25°.4S±0°.2×177°.4W±0°.3,h136km±33km, mb3.6/5,Error ellipse: s-maj=46.1km s-min=36.1km az=9.2*
*NEIC **12** 19:22:20.8±3.1,25°.54S×177°.19W,h146km±28km,mb3.4/1, Error ellipse: s-maj=35.4km s-min=31.1km az=140.0*
*IDC **12** 19:22:21.9±3.3,25°.51S×177°.39W,h144km±26km,mb3.6/5, mb1 3.7/7,mb1mx3.6/17,mbtmp3.7/7,MS3.2/1,Ms1 3.2/1, ms1mx2.7/23,Error ellipse: s-maj=30.9km s-min=24.5km az=62.0*
ISC 12 19:22:21.1±3.4,25°.5S±0°.2×177°.4W±0°.3,h135km±31km, n12,σ0s82/9,mb3.6/5,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.80**	**187**	P	**Pn**	**19 23 17.4**	**-1.0**
	57nm,0.3s,baz=72,slow=20,SNR=2.9						
RAO				S	**Sn**	**19 24 03.8**	**+1.0**
	248nm,0.3s,baz=92,slow=22,SNR=7.4						
RAO				LR	LR	19 24 25.8	
	comp=Z,308nm,19.6s,baz=170,slow=33						
AFI	**Afiamalu**	**12.65**	**26**	S	Sx	19 27 23.2	
	11nm,0.3s,baz=114,slow=22,SNR=6.5						
URZ	**Urewera**	**13.58**	**199**	P	**Pn**	**19 25 27.6**	**-0.5**
	1.7nm,0.3s,baz=14,slow=19,SNR=15						
URZ				S	Sx	19 27 40.8	
	1.4nm,0.3s,baz=171,slow=21,SNR=9.0						
STKA	**Stephens Creek**	**36.37**	**250**	P	**P**	**19 29 13.4**	**+1.1**
	0.8nm,0.4s,mb3.7,baz=105,slow=20,SNR=3.3						
ASAR	**Alice Springs**	**44.12**	**262**	P	**P**	**19 30 15.9**	**-0.3**
	0.7nm,0.5s,mb3.6,baz=92,slow=6.8,SNR=33						
WRA	**Warramunga Arr**	**44.66**	**267**	P	**P**	**19 30 19.9**	**-0.7**
	0.3nm,0.5s,mb3.2,baz=102,slow=6.1,SNR=10						
MAW	**Mawson**	**77.11**	**200**	P	**P**	**19 33 58.9**	**-0.2**
	1.8nm,0.5s,mb3.9,baz=141,slow=6.0,SNR=20						
MAW	**Mawson**	**77.11**	**200**	*e*P	**P**	**19 33 58.2**	**-0.9**
	0.6nm,0.7s,mb3.3						
PETK	**Petropavlovsk-**	**81.18**	**345**	P	**P**	**19 34 22.2**	**+0.9**
	2.1nm,0.5s,mb4.0,baz=117,slow=5.9,SNR=15						
NOA	**NORSAR Array B**	**143.95**	**353**	PKP	PKPdf	19 41 37.1	-2.7
	1.1nm,0.7s,baz=8.1,slow=2.3,SNR=3.9						
BRTR	**Keskin Array B**	**150.40**	**306**	PKPbc	PKPbc	19 41 55.2	-1.4
	0.2nm,0.6s,baz=77,slow=3.3,SNR=2.6						
TORD	**Torodi Ar. Bea**	**167.72**	**176**	PKPab	PKPab	19 43 17.7	-1.1
	0.4nm,0.8s,baz=176,slow=3.8,SNR=3.3						

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*BJI **12** 19:27:10.8,33°.19N×91°.86E,h12km,ML3.7/4,Ms3.4/1, Ms7 3.3/1*
*ISCJB **12** 19:27:10.4±0.6,33°.10N±0°.05×92°.1E±0°.1,h10km,mb3.4/4, MS2.6/3,Error ellipse: s-maj=14.9km s-min=6.5km az=3.1*
*IDC **12** 19:27:11.2±1.1,33°.14N×92°.25E,h0km,mb3.3/5, mb1 3.5/8,mb1mx3.4/28,mbtmp3.4/8,ML3.3/3,MS2.8/5, Ms1 2.8/5,ms1mx2.6/28,Error ellipse: s-maj=45.8km s-min=19.8km az=60.0*
*NEIC **12** 19:27:12.7±0.7,33°.39N×92°.50E,h10km,mb3.7/1,Error ellipse: s-maj=19.1km s-min=9.9km az=73.0*
ISC 12 19:27:12.4±0.6,33°.12N±0°.05×92°.2E±0°.1,h10km,n16, σ1s05/14,mb3.4/4,MS2.6/3,Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.52**	**195**	Pg	**Pb**	**19 28 12.8**	**-1.9**
LSA				Sg	**Sg**	**19 29 05.5**	**+0.2**
LSA				smax			
	comp=E,110nm,0.6s						
LSA	**Lhasa**	**3.52**	**195**	*e*P	**Pb**	**19 28 13.2**	**-1.5**
SHL	**Shillong**	**7.53**	**182**	*e*PKP	Px	19 29 13.0	
SHL				*e*S	**Sn**	**19 30 20.0**	**-7.6**
MKAR	**Makanchi Array**	**15.60**	**334**	Pn	**Pn**	**19 30 50.4**	**-1.8**
	comp=E,0.1nm,0.3s,baz=133,slow=12,SNR=2.9						
CMAR	**Chiang Mai Arr**	**15.81**	**156**	Pn	**Pn**	**19 30 55.3**	**+0.2**
	comp=E,0.1nm,0.3s,baz=334,slow=12,SNR=3.9						
AAK	**Ala-Archa**	**16.86**	**309**	LR	LR	19 38 55.9	
	comp=E,38nm,19.5s,baz=218,slow=42						
SONM	**Songino Array**	**18.21**	**32**	P	**Pn**	**19 31 26.0**	**+0.9**
	comp=E,0.1nm,0.3s,baz=211,slow=13,SNR=9.5						
SONM				LR	LR	19 38 41.4	
	comp=E,29nm,20.7s,baz=256,slow=38						
KBL	**Kabul**	**19.27**	**281**	*e*P	**Pn**	**19 31 39.5**	**+1.5**
	comp=E,3.1nm,0.7s						
KURK	**Kurchatov**	**20.21**	**334**	P	**P**	**19 31 47.1**	**-0.2**
	comp=E,0.6nm,0.7s,baz=144,slow=11,SNR=6.0						
ZALV	**Zalesovo Beam**	**21.47**	**348**	P	**P**	**19 31 59.7**	**-1.1**
	comp=E,0.4nm,0.4s,mb3.1,baz=163,slow=10,SNR=4.4						
ZALV				LR	LR	19 40 28.3	
	comp=E,8.7nm,21.6s,MS2.1,baz=205,slow=37						
AKTO	**Aktyubinsk**	**30.44**	**315**	LR	LR	19 48 20.6	
	comp=E,14nm,20.0s,MS2.6,baz=44,slow=42						
GNI	**Garni**	**38.34**	**294**	LR	LR	19 54 08.0	
	comp=E,26nm,18.5s,MS3.1,baz=76,slow=42						
BRTR	**Keskin Array B**	**46.84**	**296**	P	**P**	**19 35 43.9**	**+1.4**
	comp=E,0.4nm,0.7s,mb3.4,baz=91,slow=8.8,SNR=3.4						
WRA	**Warramunga Arr**	**66.37**	**136**	P	**P**	**19 38 01.4**	**-0.1**
	comp=E,0.5nm,0.8s,mb3.6,baz=317,slow=7.7,SNR=3.3						
WRA	**Warramunga Arr**	**66.37**	**136**	P	**P**	**19 38 01.4**	**-0.1**
ASAR	**Alice Springs**	**69.07**	**139**	P	**P**	**19 38 19.1**	**+0.6**
	comp=E,0.4nm,0.5s,mb3.6,baz=328,slow=6.6,SNR=9.1						

IDC 12 19:40:58.4±3.3,15°.31S×167°.69E,h0km,mb3.9/3, mb1 4.2/3,mb1mx3.8/16,mbtmp3.9/3,Error ellipse: s-maj=123.2km s-min=39.2km az=140.0,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.82**	**190**	*e*P	Pn	19 42 50.2	+10
DZM				*e*S	Sn	19 44 04.5	+6.2
WRA	**Warramunga Arr**	**32.08**	**257**	P	P	19 47 27.1	-0.3
	0.4nm,0.3s,baz=85,slow=8.7,SNR=16						
ASAR	**Alice Springs**	**32.85**	**250**	P	P	19 47 34.2	+0.2
	1.6nm,0.4s,baz=76,slow=9.1,SNR=70						
SONM	**Songino Array**	**83.20**	**323**	P	P	19 53 27.5	+1.0
	0.4nm,0.4s,baz=134,slow=4.2,SNR=5.4						
ARCES	**ARCESS Array B**	**120.92**	**345**	PKP	PKPdf	19 59 51.5	-0.7
	1.7nm,0.9s,baz=56,slow=1.6,SNR=4.2						

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*TAP **12** 19:46:55.9,24°.18N×122°.41E,h66km±1km,ML2.6,C*
*JMA **12** 19:46:55.2±0.1,24°.97N×122°.63E,h34km±4km,M1.6*
*ISCJB **12** 19:46:56.1±0.3,24°.14N±0°.04×122°.49E±0°.02,h33km, Error ellipse: s-maj=5.5km s-min=3.0km az=174.4*
ISC 12 19:46:56.3±0.7,24°.16N±0°.04×122°.49E±0°.02,h32km±6km, n26,σ0s71/40,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jma**	**0.56**	**58**	P	**Pb**	**19 47 07.2**	**-0.7**
YOJ				*e*S	**Sb**	**19 47 15.8**	**+0.1**
ENA	**Nanau**	**0.73**	**292**	*e*P	**Pn**	**19 47 10.2**	**-0.2**
	baz=298						
ENA				*e*S	**Sb**	**19 47 20.9**	**+0.6**
	baz=298						
TWC	**Suao**	**0.73**	**308**	P	**Pn**	**19 47 10.4**	**0.0**
	baz=310						
TWC				*e*S	**Sb**	**19 47 20.1**	**-0.4**
	baz=310						
TWD	**Chiawan**	**0.82**	**265**	*e*P	**Pn**	**19 47 11.2**	**-0.4**
	baz=255						
TWE	**Neicheng**	**0.93**	**307**	*e*P	**Pn**	**19 47 12.8**	**-0.3**
	baz=315						
TWE				*e*S	**Sn**	**19 47 26.1**	**+0.6**
	baz=315						
ENTT	**Nioudou**	**0.97**	**300**	P	**Pn**	**19 47 13.5**	**-0.1**
	baz=301						
ENTT				*e*S	**Sn**	**19 47 25.8**	**-0.5**
	baz=301						
ESL	**Shilin**	**1.02**	**251**	*e*P	**Pn**	**19 47 13.3**	**-1.1**
	baz=248						
WHF	**Hehuan Shan**	**1.12**	**269**	*e*P	**Pn**	**19 47 15.7**	**+0.1**
	baz=259						
WHF				S	**Sn**	**19 47 30.2**	**+0.2**
	baz=259						
IRIF	**Iriomote-Funau**	**1.15**	**81**	P	**Pn**	**19 47 15.8**	**-0.3**
IRIF				*e*S	**Sn**	**19 47 30.8**	**+0.1**
NSK	**Sanguang**	**1.15**	**297**	*e*P	**Pn**	**19 47 16.0**	**-0.1**
	baz=290						
NSK				*e*S	**Sn**	**19 47 30.8**	**0.0**
	baz=290						
HATJ	**Hateruma jima**	**1.21**	**95**	P	**Pn**	**19 47 19.3**	**+2.4**
HATJ				*e*S	**Sn**	**19 47 36.7**	**+4.5**
EHY	**Hungye**	**1.25**	**239**	*e*P	**Pn**	**19 47 16.7**	**-0.8**
	baz=247						
TWF1	**Yuli**	**1.35**	**234**	P	**Pn**	**19 47 18.3**	**-0.6**
	baz=242						
TWF1				*e*S	**Sn**	**19 47 34.9**	**-0.9**
	baz=242						
JKRS	**Kuro-shima**	**1.39**	**87**	P	**Pn**	**19 47 20.0**	**+0.5**
JKRS				*e*S	**Sn**	**19 47 37.0**	**+0.2**
SMLT	**Sun Moon Lake**	**1.48**	**260**	*e*P	**Pn**	**19 47 20.8**	**+0.2**
	baz=258						
TYC	**Yuchr**	**1.51**	**261**	*e*P	**Pn**	**19 47 20.9**	**-0.2**
	baz=253						
JIJ	**Ishigaki jima**	**1.52**	**82**	P	**Pn**	**19 47 20.9**	**-0.4**
JIJ				*e*S	**Sn**	**19 47 39.1**	**-0.9**
YUS	**Yu-Shan**	**1.56**	**245**	*e*P	**Pn**	**19 47 22.3**	**+0.6**
	baz=242						
YUS				*e*S	**Sn**	**19 47 40.9**	**0.0**
	baz=242						
ELDTW	**Lidau**	**1.66**	**235**	*e*P	**Pn**	**19 47 22.9**	**-0.2**
	baz=225						
ALS	**Alishan**	**1.67**	**248**	*e*P	**Pn**	**19 47 22.6**	**-0.7**
	baz=246						
CHN5	**Tsauling**	**1.75**	**252**	*e*P	**Pn**	**19 47 24.7**	**+0.4**
	baz=250						
WTP	**Ta-pu**	**1.94**	**242**	*e*P	**Pn**	**19 47 28.0**	**+0.9**
	baz=240						
CHN1	**Nanshi**	**2.04**	**242**	*e*P	**Pn**	**19 47 29.9**	**+1.5**
	baz=240						
SGST	**Jiashian**	**2.05**	**239**	*e*P	**Pn**	**19 47 29.6**	**+1.1**
	baz=243						
SSD	**Sandimen**	**2.21**	**231**	*e*P	**Pn**	**19 47 31.9**	**+1.2**
	baz=226						
LAY	**Lan-yu**	**2.28**	**202**	*e*P	**Pn**	**19 47 30.6**	**-1.1**
	baz=203						
LAY				*e*S	**Sn**	**19 47 54.5**	**-4.2**
	baz=203						

IDC 12 19:55:43.5±28.0,15°.76S×173°.68W,h0km,mb4.3/4, mb1 4.5/4,mb1mx3.9/18,mbtmp4.3/4,Error ellipse: s-maj=561.2km s-min=148.5km az=84.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**43.62**	**240**	P	P	20 03 50.1	+0.2
	1.6nm,0.4s,baz=89,slow=11,SNR=8.9						
WRA	**Warramunga Arr**	**49.50**	**257**	P	P	20 04 35.5	-0.7
	1.3nm,0.5s,baz=94,slow=6.8,SNR=38						
ASAR	**Alice Springs**	**49.74**	**252**	P	P	20 04 37.6	-0.3
	9.4nm,0.5s,baz=88,slow=8.1,SNR=203						
FITZ	**Fitzroy Crossi**	**57.87**	**258**	P	P	20 05 38.3	+0.7
	2.3nm,1.1s,baz=88,slow=16,SNR=4.6						

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*DDA **12** 20:09:06.7,37°.68N×31°.77E,h7km±4km,Md2.9*
*CSEM **12** 20:09:07.2±0.2,37°.65N×32°.03E,h2km,MD2.6,Error ellipse: s-maj=4.4km s-min=3.5km az=126.0*
ISK 12 20:09:05.9,37°.67N×32°.10E,h29km,MD2.6,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KONT	**Konya--Tatoy**	**0.34**	**36**	*e*PG	Pb	20 09 14.7	+0.8
KONT				*e*SG	Sb	20 09 20.4	+1.1
KONT	**Konya--Tatoy**	**0.34**	**36**	*e*Pg	Pb	20 09 14.7	+0.8
KONT				*e*Sg	Sb	20 09 20.4	+1.1
HDMB	**Hadim**	**0.77**	**156**	*e*PG	Pb	20 09 21.4	+0.8
HDMB				*e*SG	Sb	20 09 31.7	+1.0
HDMB	**Hadim**	**0.77**	**156**	*e*Pg	Pb	20 09 21.5	+0.8
HDMB				*e*Sg	Sb	20 09 31.7	+1.0
KDHN	**Kadinhani**	**0.85**	**1**	*i* P	Pn	20 09 24.1	+2.2
KDHN				*i* S	Sb	20 09 36.1	+2.9
KDHN	**Kadinhani**	**0.85**	**1**	*i* P	Pn	20 09 24.1	+2.2
KDHN				*i* S	Sb	20 09 36.1	+2.9
SUTC	**Sutluce-Ispart**	**0.90**	**258**	*e*PG	Pn	20 09 24.0	+1.5
SUTC				*e*SG	Sb	20 09 35.6	+1.2
SUTC	**Sutluce-Ispart**	**0.90**	**258**	*e*Pg	Pn	20 09 23.2	+0.7
SUTC				*e*Sg	Sb	20 09 34.9	+0.4
ERMK	**Ermenek**	**1.21**	**147**	*i* P	Pn	20 09 32.6	+5.7
ERMK				*i* S	Sn	20 09 48.1	+5.8
ERMK	**Ermenek**	**1.21**	**147**	*i* P	Pn	20 09 32.6	+5.8
ERMK				*i* S	Sn	20 09 48.1	+5.8

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*IDC **12** 20:10:02.2±4.8,2°.40S×100°.33E,h0km,mb3.2/3, mb1 3.6/3,mb1mx3.3/23,mbtmp3.3/3,MS4.2/1,Ms1 4.1/1, ms1mx2.6/12,Error ellipse: s-maj=179.1km s-min=31.1km az=61.0*
*DJA **12** 20:10:07,2°.39S×100°.37E,h10km,MLv3.8/10*
*ISCJB **12** 20:10:07.6±0.9,2°.44S±0°.06×100°.21E±0°.08,h63km±12km, mb3.2/2,Error ellipse: s-maj=14.6km s-min=6.7km az=146.3*
ISC 12 20:10:08.9±0.9,2°.41S±0°.06×100°.23E±0°.08,h57km±13km, n15,σ1s03/19,mb3.2/2,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**1.51**	**9**	P	**Pn**	**20 10 32.4**	**-1.3**
PDSI				S	**Sn**	**20 10 52.4**	**0.0**
SISI	**Saibi**	**1.57**	**313**	P	**Pn**	**20 10 34.4**	**-0.1**
SISI				S	**Sn**	**20 10 59.8**	**+6.0**
SDSI	**Sungai Dareh**	**1.90**	**39**	P	**Pn**	**20 10 38.3**	**-0.7**
SDSI				S	**Sn**	**20 11 00.8**	**-1.0**
PPI	**Padang Panjang**	**1.95**	**5**	P	**Pn**	**20 10 39.7**	**0.0**
PPI				S	**Sn**	**20 11 04.9**	**+1.8**
KSI	**Kapahiang**	**2.66**	**118**	P	**Pn**	**20 10 46.6**	**-2.8**
KSI				S	**Sn**	**20 11 23.3**	**+2.8**
BKNI	**Bangkinang**	**2.84**	**17**	P	**Pn**	**20 10 52.1**	**+0.2**
MNSI	**Mandailing Nat**	**3.25**	**348**	P	**Pn**	**20 10 59.2**	**+1.6**
MNAI	**Manna**	**3.34**	**125**	P	**Pn**	**20 10 59.1**	**+0.4**
MNAI				S	**Sn**	**20 11 37.1**	**0.0**
MDSI	**Maura Dua**	**4.45**	**118**	P	**Pn**	**20 11 14.5**	**+0.6**
GSI	**Gunungsitoli**	**4.55**	**324**	P	**Pn**	**20 11 14.6**	**-0.7**
CMAR	**Chiang Mai Arr**	**20.78**	**357**	P	**P**	**20 14 45.4**	**0.0**
	0.3nm,0.3s,baz=185,slow=9.9,SNR=4.1						
WRA	**Warramunga Arr**	**37.59**	**120**	P	**P**	**20 17 18.1**	**-0.2**
	0.3nm,0.5s,mb3.3,baz=304,slow=8.8,SNR=5.1						
ASAR	**Alice Springs**	**38.83**	**126**	P	**P**	**20 17 28.8**	**+0.1**
	0.3nm,0.5s,mb3.2,baz=301,slow=7.6,SNR=7.7						
STKA	**Stephens Creek**	**48.70**	**132**	LR	LR	20 41 27.8	
	comp=Z,233nm,20.4s,baz=194,slow=39						
TXAR	**Lajitas Array**	**144.89**	**38**	PKP	PKPdf	20 29 40.6	+0.3
	0.2nm,0.5s,baz=153,slow=0.7,SNR=4.5						

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*ISCJB **12** 20:16:13.7±0.5,37°.80N±0°.02×21°.41E±0°.03,h8km±4km, Error ellipse: s-maj=4.5km s-min=4.0km az=150.0*
*CSEM **12** 20:16:14.3±0.2,37°.83N×21°.38E,h19km,MD3.2,Error ellipse: s-maj=5.6km s-min=4.5km az=89.0*
*ATH **12** 20:16:14.6,37°.86N×21°.39E,h16km±3km,MD3.2/15*
*THE **12** 20:16:14.5,37°.81N×21°.42E,h10km±2km,ML3.0/6,Error ellipse: s-maj=2.5km s-min=1.0km az=101.0*
*NEIC **12** 20:16:14.6,37°.86N×21°.39E,h16km,MD3.2(ATH),After ATH.*
ISC 12 20:16:14.4±0.5,37°.81N±0°.03×21°.40E±0°.03,h12km±4km, n51,σ0s99/82,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.26**	**12**	*e*Pb	**Pg**	**20 16 19.5**	**-0.3**
RLS				*e*Sb	**Sg**	**20 16 23.7**	**+0.4**
RLS	**Riolos of Patr**	**0.26**	**12**	*e*PB	**Pg**	**20 16 19.5**	**-0.3**
RLS				*e*SB	**Sg**	**20 16 23.7**	**+0.4**
RLS	**Riolos of Patr**	**0.26**	**12**	*e*Pb	**Pg**	**20 16 19.5**	**-0.3**
RLS				*e*Sb	**Sg**	**20 16 23.7**	**+0.4**
UPR	**University Cam**	**0.56**	**33**	*e*PN	**Pg**	**20 16 25.7**	**+0.2**
UPR				*e*SN	**Sg**	**20 16 33.4**	**+0.5**
UPR	**University Cam**	**0.56**	**33**	*e*Pn	**Pg**	**20 16 25.7**	**+0.2**
KFL	**Anninata**	**0.57**	**302**	P	**Pg**	**20 16 25.5**	**0.0**
LAKA	**Lakka**	**0.63**	**46**	P	**Pg**	**20 16 26.1**	**-0.6**
LAKA				S	**Sg**	**20 16 35.9**	**+1.0**
LAKA	**Lakka**	**0.63**	**46**	P	**Pg**	**20 16 26.1**	**-0.6**
LAKA				S	**Sg**	**20 16 35.9**	**+1.0**
EFP	**Efpalio**	**0.74**	**33**	P	**Pg**	**20 16 27.8**	**-0.9**
EFP				S	**Sg**	**20 16 38.9**	**+0.6**
EFP	**Efpalio**	**0.74**	**33**	*e*PB	**Pg**	**20 16 27.7**	**-1.0**
EFP				*e*SN	**Sg**	**20 16 37.1**	**-1.2**
EFP	**Efpalio**	**0.74**	**33**	P	**Pg**	**20 16 27.8**	**-0.9**
EFP				*e*Sn	**Sg**	**20 16 37.1**	**-1.2**
EFP				S	**Sg**	**20 16 38.9**	**+0.6**
VLS	**Valsamata**	**0.74**	**300**	*e*Pb	**Pg**	**20 16 27.7**	**-1.0**
VLS				*e*Sn	**Sg**	**20 16 39.3**	**+0.9**
VLS	**Valsamata**	**0.74**	**300**	P	**Pg**	**20 16 27.8**	**-0.9**
VLS				*e*Sn	**Sg**	**20 16 40.4**	**+2.0**
VLS	**Valsamata**	**0.74**	**300**	*e*PB	**Pg**	**20 16 27.7**	**-1.0**
VLS				*e*SN	**Sg**	**20 16 39.2**	**+0.8**
VLS	**Valsamata**	**0.74**	**300**	P	**Pg**	**20 16 27.8**	**-0.9**
VLS				*e*Sn	**Sg**	**20 16 39.3**	**+0.9**
VLS				S	**Sg**	**20 16 40.4**	**+2.0**
ITM	**Ithomi**	**0.76**	**146**	*e*Pn	**Pg**	**20 16 29.7**	**+0.7**
ITM				*e*Sn	**Sg**	**20 16 42.0**	**+3.1**
ITM	**Ithomi**	**0.76**	**146**	P	**Pg**	**20 16 29.4**	**+0.4**
ITM	**Ithomi**	**0.76**	**146**	*e*PN	**Pg**	**20 16 29.7**	**+0.7**
ITM				*e*SN	**Sg**	**20 16 42.0**	**+3.1**
ITM	**Ithomi**	**0.76**	**146**	P	**Pg**	**20 16 29.4**	**+0.4**
ITM	**Ithomi**	**0.76**	**146**	*e*Pn	**Pg**	**20 16 29.7**	**+0.7**
ITM				*e*Sn	**Sg**	**20 16 42.0**	**+3.1**
GUR	**Goura**	**0.76**	**80**	P	**Pg**	**20 16 28.2**	**-0.9**
GUR				S	**Sg**	**20 16 39.4**	**+0.4**
GUR	**Goura**	**0.76**	**80**	*e*PB	**Pg**	**20 16 28.4**	**-0.7**
GUR				*e*SN	**Sg**	**20 16 39.4**	**+0.4**
GUR	**Goura**	**0.76**	**80**	P	**Pg**	**20 16 28.2**	**-0.9**
GUR				S	**Sg**	**20 16 39.4**	**+0.4**
TRIZ	**Trizonia**	**0.77**	**43**	P	**Pg**	**20 16 28.2**	**-1.1**
TRIZ				S	**Sg**	**20 16 40.0**	**+0.6**
TRIZ	**Trizonia**	**0.77**	**43**	P	**Pg**	**20 16 28.2**	**-1.1**
TRIZ				S	**Sg**	**20 16 40.0**	**+0.6**
KALE	**Kalithea**	**0.82**	**45**	P	**Pg**	**20 16 29.2**	**-1.2**
KALE				S	**Sg**	**20 16 41.7**	**+0.5**
KALE	**Kalithea**	**0.82**	**45**	P	**Pg**	**20 16 29.2**	**-1.2**
KALE				S	**Sg**	**20 16 41.7**	**+0.5**
VLX	**Vlachokerasia**	**0.89**	**119**	*e*PN	**Pg**	**20 16 31.8**	**+0.2**
VLX	**Vlachokerasia**	**0.89**	**119**	*e*Pn	**Pg**	**20 16 31.8**	**+0.2**
PYL	**PYLOS**	**0.95**	**163**	P	**Pg**	**20 16 32.8**	**0.0**
PYL	**PYLOS**	**0.95**	**163**	*e*PB	**Pg**	**20 16 32.8**	**0.0**
PYL	**PYLOS**	**0.95**	**163**	P	**Pg**	**20 16 32.8**	**0.0**
LKD2	**Lefkada island**	**1.14**	**329**	P	**Pg**	**20 16 34.8**	**-1.6**
LKD2				S	**Sg**	**20 16 53.6**	**+2.4**
LKD2	**Lefkada island**	**1.14**	**329**	P	**Pg**	**20 16 34.8**	**-1.6**
LKD2				S	**Sg**	**20 16 53.6**	**+2.4**
EVR	**Evrytania**	**1.15**	**16**	*e*Pn	**Pn**	**20 16 36.1**	**-0.2**
EVR				*e*Sn	**Sn**	**20 16 50.5**	**-1.5**
EVR	**Evrytania**	**1.15**	**16**	*e*PN	**Pn**	**20 16 36.1**	**-0.2**
EVR				*e*SN	**Sn**	**20 16 50.5**	**-1.5**
EVR	**Evrytania**	**1.15**	**16**	*e*Pn	**Pn**	**20 16 36.1**	**-0.2**
EVR				*e*Sn	**Sn**	**20 16 50.5**	**-1.5**
LTK	**Loutraki**	**1.26**	**80**	P	**Pn**	**20 16 36.3**	**-1.5**
LTK	**Loutraki**	**1.26**	**80**	*e*PN	**Pn**	**20 16 37.7**	**-0.1**
LTK				*e*SN	**Sn**	**20 16 56.1**	**+1.5**
LTK	**Loutraki**	**1.26**	**80**	P	**Pn**	**20 16 36.3**	**-1.5**
LTK	**Loutraki**	**1.26**	**80**	*e*Pn	**Pn**	**20 16 37.7**	**-0.1**
LKR	**Lokris**	**1.52**	**56**	*e*Pn	**Pn**	**20 16 42.5**	**+1.2**
LKR	**Lokris**	**1.52**	**56**	*e*PN	**Pn**	**20 16 42.5**	**+1.2**
LKR	**Lokris**	**1.52**	**56**	*e*Pn	**Pn**	**20 16 42.5**	**+1.2**
VLI	**Veliai**	**1.64**	**131**	*e*Pn	**Pg**	**20 16 45.9**	**0.0**
VLI	**Veliai**	**1.64**	**131**	*e*PN	**Pg**	**20 16 45.9**	**0.0**
THL	**Klokotos Trika**	**1.82**	**15**	*e*PN	**Pn**	**20 16 46.5**	**+1.0**
VLY	**Voula,Athens**	**1.90**	**88**	*e*Pn	**Pg**	**20 16 49.5**	**-1.3**
VLY	**Voula,Athens**	**1.90**	**88**	*e*PN	**Pg**	**20 16 49.5**	**-1.3**
KYTH	**Kithira**	**2.01**	**139**	*e*Pn	**Pg**	**20 16 52.3**	**-0.7**
KYTH	**Kithira**	**2.01**	**139**	*e*PN	**Pg**	**20 16 52.3**	**-0.7**

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*IDC **12** 20:21:30.7±1.1,33°.98S×178°.87W,h0km,mb4.1/3, mb1 4.4/4,mb1mx4.0/17,mbtmp4.2/4,ML4.5/1,Error ellipse: s-maj=38.6km s-min=28.3km az=144.0*
*NEIC **12** 20:21:31.5±0.9,34°.02S×178°.62W,h10km,mb4.2/1,Error ellipse: s-maj=29.0km s-min=15.4km az=143.0*
**ISC 12 20:21:32.3±3.2

UPR				*e*Sb	Sg	20 37 10.0	+0.5
LAKA	**Lakka**	**0.40**	**60**	P	Pg	20 37 06.4	-0.4
LAKA				S	Sg	20 37 12.7	+0.5
LAKA	**Lakka**	**0.40**	**60**	P	Pg	20 37 06.4	-0.4
LAKA				S	Sg	20 37 12.7	+0.5
EFP	**Efpalio**	**0.48**	**37**	P	Pg	20 37 07.8	-0.5
EFP				S	Sg	20 37 16.0	+1.3
EFP	**Efpalio**	**0.48**	**37**	*e*PB	Pg	20 37 07.9	-0.4
EFP				*e*SB	Sg	20 37 15.5	+0.8
EFP	**Efpalio**	**0.48**	**37**	S	Sg	20 37 16.0	+1.3
EFP	**Efpalio**	**0.48**	**37**	*e*Pb	Pg	20 37 07.9	-0.4
EFP				*e*Sb	Sg	20 37 15.5	+0.8
TRIZ	**Trizonia**	**0.53**	**52**	P	Pg	20 37 08.7	-0.5
TRIZ				S	Sg	20 37 16.7	+0.4
TRIZ	**Trizonia**	**0.53**	**52**	S	Sg	20 37 16.7	+0.4
TRIZ	**Trizonia**	**0.53**	**52**	P	Pg	20 37 08.7	-0.5
KALE	**Kalithea**	**0.59**	**53**	P	Pg	20 37 09.6	-0.7
KALE				S	Sg	20 37 18.7	+0.6
KALE	**Kalithea**	**0.59**	**53**	S	Sg	20 37 18.7	+0.6
KALE	**Kalithea**	**0.59**	**53**	P	Pg	20 37 09.6	-0.7
KFL	**Anninata**	**0.59**	**277**	P	Pg	20 37 10.5	+0.2
KFL				S	Sg	20 37 19.4	+1.2
GUR	**Goura**	**0.65**	**99**	P	Pg	20 37 10.2	-1.1
GUR				S	Sg	20 37 20.1	+0.3
GUR	**Goura**	**0.65**	**99**	*e*PN	Pg	20 37 10.3	-1.0
GUR				*e*SN	Sg	20 37 19.7	-0.1
GUR	**Goura**	**0.65**	**99**	P	Pg	20 37 10.2	-1.1
GUR				S	Sg	20 37 20.1	+0.3
VLS	**Valsamata**	**0.76**	**281**	*e*Pn	Pg	20 37 12.2	-1.2
VLS				*e*Sn	Sg	20 37 23.8	+0.4
VLS	**Valsamata**	**0.76**	**281**	P	Pg	20 37 12.6	-0.8
VLS				S	Sg	20 37 25.1	+1.7
VLS	**Valsamata**	**0.76**	**281**	*e*PN	Pg	20 37 12.3	-1.2
VLS				*e*SN	Sg	20 37 23.8	+0.4
VLS	**Valsamata**	**0.76**	**281**	*e*Pn	Pg	20 37 12.2	-1.2
VLS	**Valsamata**	**0.76**	**281**	P	Pg	20 37 12.6	-0.8
VLS				*e*Sn	Sg	20 37 23.8	+0.4
VLS				S	Sg	20 37 25.1	+1.7
DSF	**Desfina**	**0.86**	**64**	P	Pg	20 37 14.0	-1.4
DSF				S	Sg	20 37 26.9	+0.1
DSF	**Desfina**	**0.86**	**64**	S	Sg	20 37 26.9	+0.1
DSF	**Desfina**	**0.86**	**64**	P	Pg	20 37 14.0	-1.4
EVR	**Evrytania**	**0.90**	**14**	*e*Pn	Pg	20 37 15.6	-0.5
EVR				*e*Sn	Sg	20 37 27.6	-0.3
EVR	**Evrytania**	**0.90**	**14**	*e*PN	Pg	20 37 15.6	-0.5
EVR				*e*SN	Sg	20 37 27.6	-0.3
EVR	**Evrytania**	**0.90**	**14**	*e*Pn	Pg	20 37 15.6	-0.5
EVR				*e*Sn	Sg	20 37 27.6	-0.3
ITM	**Ithomi**	**0.91**	**160**	*e*Pn	Pg	20 37 15.7	-0.6
ITM				*e*Sn	Sg	20 37 28.7	+0.4
ITM	**Ithomi**	**0.91**	**160**	P	Pg	20 37 15.5	-0.8
ITM				S	Sg	20 37 28.6	+0.3
ITM	**Ithomi**	**0.91**	**160**	*e*PN	Pg	20 37 15.7	-0.6
ITM				*e*SB	Sg	20 37 28.7	+0.4
ITM	**Ithomi**	**0.91**	**160**	S	Sg	20 37 28.6	+0.3
ITM	**Ithomi**	**0.91**	**160**	P	Pg	20 37 15.5	-0.8
ITM				*e*Sn	Sg	20 37 28.7	+0.4
VLX	**Vlachokerasia**	**0.95**	**135**	P	Pg	20 37 15.8	-1.2
VLX				S	Sg	20 37 29.2	-0.1
VLX	**Vlachokerasia**	**0.95**	**135**	*e*PN	Pg	20 37 15.7	-1.3
VLX				*e*SN	Sg	20 37 28.9	-0.4
VLX	**Vlachokerasia**	**0.95**	**135**	P	Pg	20 37 15.8	-1.2
VLX				*e*Sn	Sg	20 37 28.9	-0.4
VLX				S	Sg	20 37 29.2	-0.1
LKD2	**Lefkada island**	**1.02**	**318**	P	Pg	20 37 17.2	-1.1
LKD2	**Lefkada island**	**1.02**	**318**	P	Pg	20 37 17.2	-1.1
LTK	**Loutraki**	**1.13**	**90**	P	Pg	20 37 19.2	-1.3
LTK	**Loutraki**	**1.13**	**90**	*e*PN	Pg	20 37 19.2	-1.3
LTK	**Loutraki**	**1.13**	**90**	P	Pg	20 37 19.2	-1.3
PYL	**PYLOS**	**1.15**	**172**	P	Pb	20 37 19.5	-1.0
PYL				S	Sb	20 37 35.0	-0.3
PYL	**PYLOS**	**1.15**	**172**	*e*PN	Pn	20 37 20.5	0.0
PYL				*e*SN	Sn	20 37 36.5	+0.4
PYL	**PYLOS**	**1.15**	**172**	P	Pb	20 37 19.5	-1.0
PYL	**PYLOS**	**1.15**	**172**	*e*Pn	Pn	20 37 20.5	0.0
PYL				S	Sb	20 37 35.0	-0.3
PYL				*e*Sn	Sn	20 37 36.5	+0.4
AGG	**Agios Georgios**	**1.16**	**32**	*e*Pn	Pn	20 37 19.2	-1.4
AGG				*e*Sn	Sn	20 37 35.9	-0.4
AGG	**Agios Georgios**	**1.16**	**32**	P	Pb	20 37 19.5	-1.1
AGG				S	Sb	20 37 36.3	+0.7
AGG	**Agios Georgios**	**1.16**	**32**	*e*PN	Pn	20 37 19.2	-1.4
AGG				*e*SN	Sn	20 37 35.9	-0.4
AGG	**Agios Georgios**	**1.16**	**32**	*e*Pn	Pn	20 37 19.2	-1.4
AGG	**Agios Georgios**	**1.16**	**32**	P	Pb	20 37 19.5	-1.1
AGG				*e*Sn	Sn	20 37 35.9	-0.4
AGG				S	Sb	20 37 36.3	+0.7
LKR	**Lokris**	**1.30**	**62**	*e*Pn	Pn	20 37 22.1	-0.5
LKR				*e*Sb	Sb	20 37 39.7	+0.1
LKR	**Lokris**	**1.30**	**62**	P	Pn	20 37 21.7	-0.9
LKR	**Lokris**	**1.30**	**62**	*e*PN	Pn	20 37 22.1	-0.5
LKR				*e*SB	Sb	20 37 39.7	+0.1
LKR	**Lokris**	**1.30**	**62**	P	Pn	20 37 21.7	-0.9
LKR	**Lokris**	**1.30**	**62**	*e*Pn	Pn	20 37 22.1	-0.5
LKR				*e*Sb	Sb	20 37 39.7	+0.1
ATAL	**Atalanti**	**1.34**	**60**	P	Pn	20 37 22.7	-0.3
ATAL	**Atalanti**	**1.34**	**60**	P	Pn	20 37 22.7	-0.3
THL	**Klokotos Trika**	**1.57**	**14**	*e*PN	Pn	20 37 27.3	+1.1
THL				*e*SN	Sn	20 37 48.0	+1.6
THL	**Klokotos Trika**	**1.57**	**14**	*e*Pn	Pn	20 37 27.3	+1.1
NAIG	**Nisos Aigina**	**1.57**	**100**	*e*Pn	Pn	20 37 26.2	0.0
NAIG	**Nisos Aigina**	**1.57**	**100**	*e*PN	Pn	20 37 26.2	0.0
NAIG	**Nisos Aigina**	**1.57**	**100**	*e*Pn	Pn	20 37 26.2	0.0
JAN	**Janina**	**1.70**	**342**	*e*Pn	Pn	20 37 28.7	+0.7
JAN	**Janina**	**1.70**	**342**	*e*PN	Pn	20 37 28.7	+0.7
JAN	**Janina**	**1.70**	**342**	*e*Pn	Pn	20 37 28.7	+0.7
ATH	**Athens Observa**	**1.73**	**92**	*e*Pn	Pn	20 37 28.6	+0.3
ATH				*e*Sb	Sb	20 37 51.7	-0.1
ATH	**Athens Observa**	**1.73**	**92**	*e*PN	Pn	20 37 28.6	+0.3
ATH				*e*SB	Sb	20 37 51.7	-0.1
ATH	**Athens Observa**	**1.73**	**92**	*e*Pn	Pn	20 37 28.6	+0.3
ATH				*e*Sb	Sb	20 37 51.7	-0.1
VLI	**Veliai**	**1.73**	**139**	*e*Pn	Pn	20 37 29.8	+1.4
VLI				*e*Sn	Sn	20 37 51.4	+1.1
VLI	**Veliai**	**1.73**	**139**	*e*PN	Pn	20 37 29.8	+1.4
VLI				*e*SN	Sn	20 37 51.4	+1.1
VLI	**Veliai**	**1.73**	**139**	*e*Pn	Pn	20 37 29.8	+1.4
VLI				*e*Sn	Sn	20 37 51.4	+1.1
VLY	**Voula,Athens**	**1.80**	**95**	*e*Pb	Pn	20 37 29.3	0.0
VLY				*e*Sn	Sn	20 37 52.5	+0.9
VLY	**Voula,Athens**	**1.80**	**95**	*e*PB	Pn	20 37 29.3	0.0
VLY				*e*SN	Sn	20 37 52.9	+0.9
NEO	**Neokhori**	**1.83**	**46**	*e*Pb	Pn	20 37 29.8	0.0
NEO	**Neokhori**	**1.83**	**46**	*e*PN	Pn	20 37 29.8	0.0
PTL	**Penteli**	**1.84**	**89**	*e*Pb	Pn	20 37 29.9	0.0
PTL				*e*Sn	Sn	20 37 53.1	+0.1
PTL	**Penteli**	**1.84**	**89**	*e*PN	Pn	20 37 29.9	0.0
PTL				*e*SN	Sn	20 37 53.1	+0.1
XOR	**Xorichti**	**1.85**	**44**	P	Pn	20 37 30.2	+0.1
XOR				S	Sn	20 37 54.1	+0.7
XOR	**Xorichti**	**1.85**	**44**	P	Pn	20 37 30.2	+0.1
XOR				S	Sn	20 37 54.1	+0.7
KYTH	**Kithira**	**2.13**	**145**	*e*Pn	Pn	20 37 36.8	+2.9
KYTH	**Kithira**	**2.13**	**145**	*e*PN	Pn	20 37 36.8	+2.9
KEK	**Kerkira**	**2.15**	**321**	*e*Pb	Pn	20 37 34.5	+0.3
KEK	**Kerkira**	**2.15**	**321**	*e*PB	Pn	20 37 34.5	+0.3
AOS	**Alonnisos**	**2.16**	**58**	P	Pn	20 37 34.0	-0.3
AOS	**Alonnisos**	**2.16**	**58**	P	Pn	20 37 34.0	-0.3
KZN	**Kozani**	**2.27**	**5**	*e*Pn	Pn	20 37 37.5	+1.6
KZN	**Kozani**	**2.27**	**5**	*e*PN	Pn	20 37 37.5	+1.6
PLG	**Polygyros**	**2.76**	**32**	*e*Pn	Pn	20 37 38.7	-3.9
APE	**Apeiranthos**	**3.32**	**106**	P	Pn	20 37 50.2	-0.1
APE	**Apeiranthos**	**3.32**	**106**	P	Pn	20 37 50.2	-0.1
STON	**Ston**	**5.64**	**330**	*e*Pn	Pn	20 38 21.3	-0.9
STON				Sn	Sn	20 39 24.3	-2.5
STON	**Ston**	**5.64**	**330**	*e*Pn	Pn	20 38 21.2	-1.0
STON				Sn	Sn	20 39 24.2	-2.6
NVLJ	**Novalja**	**8.22**	**325**	*i* Pn	Pn	20 38 58.3	+0.7
NVLJ				Sn	Sn	20 40 27.7	-2.5
NVLJ	**Novalja**	**8.22**	**325**	*i* Pn	Pn	20 38 58.3	+0.7
NVLJ				Sn	Sn	20 40 27.7	-2.6

MAN 12 20:39:53,7°.68N×125°.16E,h37km,mb4.5,ML3.4,MS3.3, 1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.22**	**334**	*e*P	Pn	20 40 02.2	+2.0
BUKP				*e*S	Sn	20 40 06.4	+1.3
CGP	**Cagayan de Oro**	**0.89**	**329**	⇓*e*P	Pn	20 40 10.9	+1.8
CGP				*i* S	Sn	20 40 22.9	+2.1
PAGZ	**Pagadian**	**1.77**	**275**	*e*P	Pn	20 40 22.6	+1.5
PAGZ				*e*S	Sn	20 40 40.5	-1.9

MAN 12 20:43:39,6°.89N×124°.18E,h22km,mb4.6,ML3.5,MS3.4, 1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.34**	**11**	⇑*i*P	Pb	20 43 47.9	+1.5
CTBH				*i* S	Sb	20 43 56.9	+5.5
PAGZ	**Pagadian**	**1.24**	**320**	*e*P	Pn	20 44 01.7	+0.7
PAGZ				*e*S	Sn	20 44 17.9	+0.9
IPIL	**Ipil**	**1.83**	**299**	*e*P	Pn	20 44 09.9	+0.7
IPIL				*e*S	Sn	20 44 26.7	-5.0

CSEM ***12*** *20:59:50.3, 42°.58N×47°.07E, h17km, mb4.2, After OBN*
MOS 12 20:59:50.3±1.5, 42°.58N×47°.07E, h17km, mb4.2/1, 5C-4D, Error ellipse: s-maj=9.5km s-min=5.5km az=40.3, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARKR	**Arakani**	**0.06**	**295**	*e*PG	Pg	20 59 52.0	-1.4
ARKR	**Arakani**	**0.06**	**295**	*e*Pg	Pg	20 59 52.0	-1.4
BUJR	**Buynaksk**	**0.25**	**7**	⇑*i*PG	Pg	20 59 57.2	+1.3
BUJR				*i* S	Sg	21 00 03.2	+3.5
BUJR				pmax	pmax		
	comp=Z,134nm,0.2s						
BUJR	**Buynaksk**	**0.25**	**7**	*i* Sg	Sg	21 00 03.2	+3.5
BUJR	**Buynaksk**	**0.25**	**7**	*i* Pg	Pg	20 59 57.2	+1.3
	comp=Z,134nm,0.2s						
XNZR	**Khunzakh**	**0.27**	**262**	⇑*i*PG	Pg	20 59 52.0	-4.2
XNZR	**Khunzakh**	**0.27**	**262**	*i* Pg	Pg	20 59 52.0	-4.2
KRNR	**Karanay**	**0.28**	**335**	⇓*i*PG	Pg	20 59 56.0	-0.3
KRNR				*e*S	Sg	21 00 02.0	+1.6
KRNR				pmax	pmax		
	comp=Z,200nm,0.2s						
KRNR	**Karanay**	**0.28**	**335**	*e*Sg	Sg	21 00 02.0	+1.6
KRNR	**Karanay**	**0.28**	**335**	*i* Pg	Pg	20 59 56.0	-0.3
	comp=Z,200nm,0.2s						
KMKR	**Kumukh**	**0.45**	**177**	*i* PG	Pg	20 59 52.5	-6.8
KMKR				pmax	pmax		
	comp=Z,161nm,0.3s						
KMKR	**Kumukh**	**0.45**	**177**	*i* Pg	Pg	20 59 52.5	-6.8
	comp=Z,161nm,0.3s						
SGKR	**Sergokala**	**0.45**	**105**	*e*PG	Pg	21 00 00.0	+0.5
SGKR				*i* S	Sg	21 00 12.0	+6.4
SGKR	**Sergokala**	**0.45**	**105**	*e*Pg	Pg	21 00 00.0	+0.5
SGKR				*i* Sg	Sg	21 00 12.0	+6.4
DBC	**Dubki**	**0.47**	**339**	⇑*i*PG	Pg	20 59 56.5	-3.4
DBC				*i* S	Sg	21 00 04.5	-1.8
DBC				pmax	pmax		
	comp=Z,104nm,0.1s						
DBC	**Dubki**	**0.47**	**339**	*i* Sg	Sg	21 00 04.5	-1.8
DBC	**Dubki**	**0.47**	**339**	*i* Pg	Pg	20 59 56.5	-3.4
	comp=Z,104nm,0.1s						
MAK	**Makhachkala**	**0.50**	**40**	*e*PG	Pg	21 00 03.3	+3.0
MAK				pmax	pmax		
	comp=Z,89nm,0.2s						
MAK	**Makhachkala**	**0.50**	**40**	*e*Pg	Pg	21 00 03.3	+3.0
	comp=Z,89nm,0.2s						
DLMR	**Dylym**	**0.59**	**327**	*e*PG	Pg	21 00 00.0	-1.9
DLMR				*i* S	Sg	21 00 11.6	+1.8
DLMR				pmax	pmax		
	comp=Z,127nm,0.2s						
DLMR	**Dylym**	**0.59**	**327**	*e*Pg	Pg	21 00 00.0	-1.9
	comp=Z,127nm,0.2s						
DLMR				*i* Sg	Sg	21 00 11.6	+1.8
URKR	**Urkarakh**	**0.59**	**134**	*e*PG	Pg	21 00 02.0	+0.1
URKR				*e*S	Sg	21 00 16.0	+6.2
URKR				pmax	pmax		
	comp=Z,134nm,0.2s						
URKR	**Urkarakh**	**0.59**	**134**	*e*Pg	Pg	21 00 02.0	+0.1
	comp=Z,134nm,0.2s						
URKR				*e*Sg	Sg	21 00 16.0	+6.2
BTLR	**Botlikh**	**0.63**	**278**	PG	Pg	20 59 59.0	-3.7
BTLR				*e*S	Sg	21 00 10.0	-1.1
BTLR				pmax	pmax		
	comp=Z,317nm,0.2s						
BTLR	**Botlikh**	**0.63**	**278**	*e*Sg	Sg	21 00 10.0	-1.1
BTLR	**Botlikh**	**0.63**	**278**	Pg	Pg	20 59 59.0	-3.7
	comp=Z,317nm,0.2s						
DRN	**Derbent**	**1.09**	**120**	⇑*i*PG	Pg	21 00 12.5	+1.2
DRN				*i* S	Sb	21 00 30.5	+6.0
DRN				pmax	pmax		
	comp=Z,131nm,0.2s						
DRN	**Derbent**	**1.09**	**120**	*i* Pg	Pg	21 00 12.5	+1.2
	comp=Z,131nm,0.2s						
DRN				*i* Sg	Sg	21 00 30.5	+5.0
AKT	**Akhty**	**1.20**	**156**	*e*PG	Pg	21 00 12.0	-1.5
AKT				*e*S	Sb	21 00 28.0	+0.2
AKT				pmax	pmax		
	comp=Z,97nm,0.2s						
AKT	**Akhty**	**1.20**	**156**	*e*Pg	Pg	21 00 12.0	-1.5
	comp=Z,97nm,0.2s						
AKT				*e*Sg	Sg	21 00 28.0	-1.2
DGRG	**David-gareji**	**1.69**	**229**	P	Pn	21 00 20.5	+1.4
DGRG				S	Sn	21 00 48.6	+8.3
SNJR	**Sundja**	**1.73**	**287**	⇑*i*PN	Pn	21 00 21.0	+1.4
SNJR				*i* S	Sn	21 00 45.0	+3.8
SNJR	**Sundja**	**1.73**	**287**	*i* Pn	Pn	21 00 21.0	+1.4
SNJR				*i* Sg	Sg	21 00 45.0	-1.0
VLKR	**Vladikavkaz**	**1.82**	**286**	*e*PN	Pn	21 00 23.2	+2.4
VLKR				*e*S	Sn	21 00 47.8	+4.4
VLKR	**Vladikavkaz**	**1.82**	**286**	*e*Pn	Pn	21 00 23.2	+2.4
VLKR				*e*Sg	Sg	21 00 47.8	-1.1
TBLG	**Delisi**	**1.93**	**245**	P	Pn	21 00 20.3	-2.0
TBLG				S	Sn	21 00 50.4	+4.4
TBLG	**Delisi**	**1.93**	**245**	Pn	Pn	21 00 20.3	-2.0
TBLG				Sg	Sg	21 00 50.4	-1.9
BTKR	**Batakoyurt**	**2.02**	**294**	*e*PN	Pn	21 00 26.5	+3.0
BTKR				*e*S	Sn	21 00 53.7	+5.4
BTKR	**Batakoyurt**	**2.02**	**294**	*e*Pn	Pn	21 00 26.5	+3.0
BTKR				*e*Sg	Sg	21 00 53.7	-1.4
TRKR	**Terskaya**	**2.06**	**305**	⇓*i*PN	Pn	21 00 27.7	+3.7
TRKR				*e*S	Sn	21 00 55.9	+6.6
TRKR	**Terskaya**	**2.06**	**305**	*i* Pn	Pn	21 00 27.7	+3.7
TRKR				*e*Sg	Sg	21 00 55.9	-0.6
LACR	**Lac**	**2.06**	**278**	⇓*i*PN	Pn	21 00 24.7	+0.6
LACR	**Lac**	**2.06**	**278**	*i* Pn	Pn	21 00 24.7	+0.6
ARNR	**Ardon**	**2.14**	**288**	*e*PN	Pn	21 00 28.0	+2.8
ARNR				*e*S	Sn	21 00 56.2	+4.9
ARNR	**Ardon**	**2.14**	**288**	*e*Pn	Pn	21 00 28.0	+2.8
ARNR				*e*Sb	Sb	21 00 56.2	+1.5
KMSR	**Komsomolskaya**	**2.18**	**292**	⇓*i*PN	Pn	21 00 28.3	+2.5
KMSR				*i* S	Sn	21 00 57.4	+5.0
KMSR	**Komsomolskaya**	**2.18**	**292**	*i* Pn	Pn	21 00 28.3	+2.5
KMSR				*i* Sn	Sn	21 00 57.4	+5.0
KORR	**Kora**	**2.26**	**284**	*e*PN	Pn	21 00 29.5	+2.6
KORR				*e*S	Sn	21 00 59.1	+4.7
KORR	**Kora**	**2.26**	**284**	*e*Pn	Pn	21 00 29.5	+2.6
KORR				*e*Sn	Sn	21 00 59.1	+4.7
KEH	**Kehvi**	**2.33**	**264**	P	Pn	21 00 29.7	+1.9
KEH				S	Sn	21 00 59.7	+3.6
ZEI	**Tsey**	**2.34**	**276**	*e*PN	Pn	21 00 30.5	+2.5
ZEI				*e*S	Sn	21 01 00.4	+4.0
ZEI	**Tsey**	**2.34**	**276**	*e*Pn	Pn	21 00 30.5	+2.5
ZEI				*e*Sn	Sn	21 01 00.4	+4.0
PRTR	**Priterechnaya**	**2.35**	**301**	*e*PN	Pn	21 00 31.1	+3.0
PRTR				*e*S	Sn	21 01 01.7	+5.2
PRTR	**Priterechnaya**	**2.35**	**301**	*e*Pn	Pn	21 00 31.1	+3.0
PRTR				*e*Sn	Sn	21 01 01.7	+5.2
LSNR	**Lesken**	**2.49**	**287**	*e*PN	Pn	21 00 32.9	+2.9
LSNR				*e*S	Sn	21 01 04.7	+4.8
LSNR	**Lesken**	**2.49**	**287**	*e*Pn	Pn	21 00 32.9	+2.9
LSNR				*e*Sn	Sn	21 01 04.7	+4.8
DIGR	**Digorskoe uzhe**	**2.59**	**278**	*e*PN	Pn	21 00 34.0	+2.7
DIGR				*e*S	Sn	21 01 06.6	+4.2
DIGR	**Digorskoe uzhe**	**2.59**	**278**	*e*Pn	Pn	21 00 34.0	+2.7
DIGR				*e*Sn	Sn	21 01 06.6	+4.2
ONI	**Oni**	**2.67**	**271**	P	Pn	21 00 36.4	+3.9
ONI				S	Sn	21 01 14.8	+10
KUBR	**Kubataba**	**2.94**	**296**	*i* PN	Pn	21 00 40.7	+4.5
KUBR	**Kubataba**	**2.94**	**296**	*i* Pn	Pn	21 00 40.7	+4.5
GNI	**Garni**	**2.99**	**217**	*i* PN	Pn	21 00 38.9	+2.0
GNI	**Garni**	**2.99**	**217**	*i* Pn	Pn	21 00 38.9	+2.0
PYA	**Pyatigorsk**	**3.27**	**298**	*i* PN	Pn	21 00 42.6	+1.9
PYA	**Pyatigorsk**	**3.27**	**298**	*i* Pn	Pn	21 00 42.6	+1.9
KIV	**Kislovodsk**	**3.48**	**295**	*e*PN	Pn	21 00 45.4	+1.8
KIV				*e*S	Sn	21 01 32.7	+8.3
KIV				*e*SS		21 01 43.8	
KIV				pmax	pmax		
	comp=Z,3.0nm,1.3s						
KIV	**Kislovodsk**	**3.48**	**295**	*e*Pn	Pn	21 00 45.4	+1.8
	comp=Z,3.0nm,1.3s						
KIV				*e*Sn	Sn	21 01 32.7	+8.3
KIV				*e*Sg	Sg	21 01 43.8	+1.7

LDG ***12*** *21:01:43.6±0.6, 41°.63N×80°.92E, h10km, Mb4.5/12, Ms2.6/1, Error ellipse: s-maj=26.1km s-min=6.9km az=140.0*
ISCJB ***12*** *21:01:45.7±0.3, 41°.92N±0°.03×80°.92E±0°.04, h10km, mb4.3/29, MS3.4/6, Error ellipse: s-maj=4.6km s-min=4.3km az=165.5*
IDC ***12*** *21:01:46.3±1.0, 42°.02N×80°.82E, h0km, mb3.9/11, mb1 4.0/17, mb1mx3.9/32, mbtmp3.9/17, ML3.7/6, MS3.1/5, Ms1 3.1/5, ms1mx2.7/35, Error ellipse: s-maj=16.6km s-min=13.7km az=155.0*
NNC ***12*** *21:01:47.6±3.0, 41°.94N×81°.15E, h0km, mb4.3, mpv4.2, Error ellipse: s-maj=27.0km s-min=12.9km az=146.0*
MOS ***12*** *21:01:49.7±0.9, 42°.08N×80°.84E, h33km, mb4.6/19, Error ellipse: s-maj=11.7km s-min=6.2km az=119.5*
BJI ***12*** *21:01:49.0, 41°.89N×81°.02E, h25km, mB4.6/7, mb4.2/12, ML4.0/8, Ms4.0/5, Ms7 3.5/4*
NEIC ***12*** *21:01:51.3±1.7, 42°.01N×80°.79E, h32km±13km, mb4.5/20, Error ellipse: s-maj=7.0km s-min=5.6km az=58.0*
ISC 12 21:01:47.4±0.3, 41°.86N±0°.03×80°.93E±0°.04, h10km, n129, σ1§27/142, mb4.3/29, MS3.4/6, 12C-8D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDC	**Almaty**	**3.23**	**296**	⇑Pn	**Pn**	**21 02 41.3**	**+3.2**
	202nm,0.5s						
KNDC				⇑Sn	**Sg**	**21 03 25.1**	**-6.0**
	458nm,0.5s						
ULHL	**Ulahol**	**3.51**	**278**	P	**Pn**	**21 02 44.1**	**+2.1**
	SNR=20						
TKM2	**Tokmak 2**	**4.09**	**287**	⇓Pn	**Pn**	**21 02 52.4**	**+2.4**
	59nm,0.6s						
TKM2				⇑Lg		21 03 57.7	
	383nm,0.6s						
TKM2	**Tokmak 2**	**4.09**	**287**	P	**Pn**	**21 02 52.5**	**+2.5**
	SNR=131						
KZA	**Kyzart**	**4.24**	**275**	P	**Pn**	**21 02 55.2**	**+3.2**
	SNR=24						
KSH	**Kashi**	**4.44**	**240**	*e*Pn	**Pb**	**21 03 04.5**	**-0.9**
KSH				Sn	**Sg**	**21 04 06.8**	**-3.0**
KSH				smax			
	comp=N,120nm,0.8s						
KSH				smax			
	comp=E,170nm,0.9s						
KBK	**Karagaybulak**	**4.51**	**282**	P	**Pn**	**21 02 58.2**	**+2.4**
	SNR=84						
CHMS	**Chumysh**	**4.71**	**286**	P	**Pn**	**21 03 00.5**	**+2.0**
	SNR=17						
UCH	**Uchtor**	**4.79**	**277**	P	**Pn**	**21 03 02.8**	**+3.2**
	SNR=31						
AAK	**Ala-Archa**	**4.84**	**281**	P	**Pn**	**21 03 02.5**	**+2.3**
	SNR=16						
AAK	**Ala-Archa**	**4.84**	**281**	Pn	**Pn**	**21 03 02.6**	**+2.3**
	comp=E,0.1nm,0.3s,baz=103,slow=9.2,SNR=24						
AAK				Pg	**Pg**	**21 03 14.6**	**-5.5**
	comp=E,0.9nm,0.3s,baz=103,slow=14,SNR=48						
AAK				Lg		21 04 14.9	
	comp=E,0.4nm,0.3s,baz=255,slow=22,SNR=9.4						
AAK	**Ala-Archa**	**4.84**	**281**	*c i*PN	**Pn**	**21 03 02.3**	**+2.1**
AAK	**Ala-Archa**	**4.84**	**281**	*e*Pn	**Pn**	**21 03 02.4**	**+2.2**
AAK				*e*Sn	**Sb**	**21 04 14.5**	**+4.0**
USP	**Ospenovka**	**4.96**	**289**	P	**Pn**	**21 03 03.5**	**+1.7**
	SNR=13						
MK31	**Makanchi Array**	**5.03**	**11**	Pn	**Pn**	**21 03 04.2**	**+1.4**
	comp=E,12nm,0.5s,baz=199,slow=14,SNR=468						
MK31				⇓Sn	**Sn**	**21 04 01.4**	**+0.5**
	comp

LSA Lhasa 14.68 142 *e*Pn **Pn 21 05 21.0 +5.9**
comp=Z,3.3nm,0.8s
JIRN Jiri 14.80 161 *e*P **Pn 21 05 21.9 +5.2**
comp=Z,12nm,0.3s
TAPN Taplejung 15.50 157 *e*P **Pn 21 05 27.6 +1.6**
comp=Z,12nm,0.4s
RAMN Ramite 15.58 161 *e*P **Pn 21 05 26.4 -0.7**
comp=Z,9.5nm,0.5s
ODAN Odare 15.88 158 *e*P **Pn 21 05 29.5 -1.4**
comp=Z,10nm,0.4s
AB31 Akbulak array 16.42 304 P **Pn 21 05 39.1 +1.3**
comp=Z,2.1nm,0.5s,baz=110,slow=12,SNR=39
AKTK Aktyubinsk 17.99 306 P **Pn 21 05 55.8 -1.6**
AKTK Lg 21 11 06.5
AKTK LR LR 21 13 07.3
AKTO Aktyubinsk 17.99 306 ⇓P **Pn 21 05 56.1 -1.2**
comp=Z,0.5nm,0.7s
AKTO Aktyubinsk 17.99 306 P **Pn 21 05 55.8 -1.6**
comp=Z,0.3nm,0.3s,baz=108,slow=13,SNR=12
AKTO Lg 21 11 06.5
comp=Z,0.0nm,0.3s,baz=232,slow=7.8,SNR=3.9
AKTO LR LR 21 13 07.4
comp=Z,56nm,18.2s,baz=102,slow=38
SONM Songino Array 18.97 63 P **Pn 21 06 08.8 -0.5**
comp=Z,0.1nm,0.3s,baz=272,slow=11,SNR=3.7
ULN Ulaanbaatar 19.41 63 *e*P **Pn 21 06 15.2 +0.5**
ULN pmax pmax
comp=Z,3.0nm,0.8s
ULN Ulaanbaatar 19.41 63 *e*P **Pn 21 06 15.2 +0.5**
comp=Z,3.0nm,0.8s
ARU Arti 20.52 323*c i*P **P 21 06 24.6 -0.9**
ARU *e* 21 06 33.7
ARU pmax pmax
comp=Z,14nm,0.7s
ARU Arti 20.52 323 *e*P **P 21 06 24.5 -1.0**
comp=Z,17nm,0.9s
HHC Hu-ho-hao-te 22.96 82 *e*P **P 21 06 52.6 +0.8**
HHC pP 21 07 01.6
HHC sP sP 21 07 06.6 +11
HHC PP 21 07 21.9
HHC PcP PcP 21 10 42.7 +1.0
HHC S **S 21 10 56.6 -5.4**
HHC sS sS 21 11 11.9 +4.9
HHC SS 21 11 41.7
HHC ScP ScP 21 14 17.6 -1.8
HHC PcS PcS 21 14 21.1 +0.5
HHC ScS ScS 21 18 01.6 -3.5
HHC pmax pmax
comp=Z,13nm,0.7s,mb4.5
HHC pmax pmax
comp=Z,89nm,5.6s
HHC LR LR
comp=N,91nm,19.0s,MS3.4
HHC LR LR
comp=E,86nm,19.0s,MS3.4
KMI Kunming 24.58 126 P **P 21 07 08.8 +1.3**
KMI S **S 21 11 26.9 -1.5**
KMI pmax pmax
comp=Z,5.0nm,0.6s,mb4.2
KMI LR LR
comp=Z,47nm,17.8s,MS3.0
ENH Enshi 25.70 108 *e*P **P 21 07 21.9 +4.3**
comp=Z,14nm,1.2s,mb4.4
GNI Garni 27.24 279 LR LR 21 19 49.2
comp=Z,24nm,18.6s,MS2.8,baz=227,slow=40
CMAR Chiang Mai Arr 27.93 141 P **P 21 07 41.0 +3.2**
comp=Z,0.4nm,0.7s,mb3.2,baz=324,slow=9.4,SNR=4.0
KIV Kislovodsk 27.93 287 *e*P **P 21 07 38.2 +0.6**
KIV *e* 21 10 51.5
KIV pmax pmax
comp=Z,3.0nm,0.8s,mb4.0
KIV Kislovodsk 27.93 287 *e*P **P 21 07 38.1 +0.5**
comp=Z,2.7nm,0.6s,mb4.0
BR131 Keskin Array S 35.52 283 *e*P **P 21 08 44.8 +0.5**
BRTR Keskin Array B 35.52 283 P **P 21 08 44.7 +0.4**
comp=Z,2.2nm,0.7s,mb4.2,baz=97,slow=8.7,SNR=13
BRTR Keskin Array B 35.52 283 P **P 21 08 44.7 +0.4**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
JOF Joensuu 35.65 323 *e*P **P 21 08 43.8 -1.3**
JOF pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
JOF Joensuu 35.65 323 *e*p **P 21 08 43.8 -1.3**
comp=Z,1.7nm,0.4s,mb4.3
AKASG Malin Array Be 36.15 302 P **P 21 08 47.9 -1.7**
comp=Z,0.6nm,0.5s,mb3.8,baz=73,slow=8.4,SNR=4.7
AKASG Malin Array Be 36.15 302 P **P 21 08 47.9 -1.7**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
FINES FINESS Array B 37.85 320 P **P 21 09 02.8 -1.1**
comp=Z,2.3nm,0.6s,mb4.1,baz=90,slow=5.7,SNR=9.1
FINES FINESS Array B 37.85 320 P **P 21 09 02.8 -1.1**
FINES pmax pmax
comp=Z,2.0nm,0.6s
TIRR Tirgusor 37.86 292 P **P 21 09 04.0 -0.2**
BUR08 Bucovina Ar. S 39.27 298 *e*P **P 21 09 15.1 -0.8**
ARCES ARCESS Array B 39.52 333 P **P 21 09 16.7 -1.1**
comp=Z,2.7nm,0.7s,mb4.1,baz=91,slow=9.7,SNR=12
ARCES LR LR 21 26 17.7
comp=Z,34nm,19.0s,MS3.2,baz=51,slow=37
ARCES ARCESS Array B 39.52 333 P **P 21 09 16.7 -1.1**
ARCES pmax pmax
comp=Z,3.0nm,0.7s
ARCES MLR MLR
comp=Z,34nm,19.0s
KWP Kalwaria Pacla 40.46 302 *e*P **P 21 09 26.0 +0.1**
KWP pmax pmax
comp=Z,23nm,1.5s,mb4.7
KWP Kalwaria Pacla 40.46 302 *e*P **P 21 09 26.0 +0.2**
comp=Z,23nm,1.5s,mb4.7
MORC Moravsky Berou 43.69 303 *e*P **P 21 09 51.9 -0.3**
HFS Hagfors 43.93 318 P **P 21 09 53.1 -0.9**
comp=Z,6.2nm,0.5s,mb4.2,baz=95,slow=11,SNR=15
HFS LR LR 21 28 53.6
comp=Z,36nm,19.2s,MS3.3,baz=246,slow=37
HFS Hagfors 43.93 318 P **P 21 09 53.1 -0.9**
HFS pmax pmax
comp=Z,3.0nm,0.5s
HFS MLR MLR
comp=Z,36nm,19.2s
GVD Gavdhos 44.43 280 *e*P **P 21 09 57.1 -1.2**
comp=Z,30nm,0.5s,mb5.3
NB2 NORSAR Subarra 45.03 320 P **P 21 10 01.5 -1.2**
comp=Z,1.1nm,0.6s,mb3.9,baz=81,slow=7.9
NOA NORSAR Array B 45.03 320 P **P 21 10 01.7 -1.0**
comp=Z,1.3nm,0.6s,mb4.0,baz=81,slow=7.8,SNR=5.9
NOA NORSAR Array B 45.03 320 P **P 21 10 01.7 -1.0**
NOA pmax pmax
comp=Z,1.0nm,0.6s
GERES GERESS Array B 46.36 303 P **P 21 10 13.4 -0.1**
comp=Z,0.8nm,0.7s,mb3.8,baz=65,slow=7.6,SNR=6.7
GERES GERESS Array B 46.36 303 P **P 21 10 13.4 -0.1**
GERES pmax pmax
comp=Z,1.0nm,0.7s
HINF Hinteralfeld 51.01 303 *e*P **P 21 10 48.6 -0.6**
PGF Pioggiola 51.75 297 *e*P **P 21 10 54.8 -0.1**
MEZF Maizieres J'vi 51.86 305 *e*P **P 21 10 55.4 -0.1**
comp=Z,14nm,0.9s,mb4.6
MEZF Maizieres J'vi 51.86 305 *e*P **P 21 10 55.4 -0.1**
comp=Z,14nm,0.9s,mb4.9
LPG La Plagne 51.99 301 *e*P **P 21 10 56.8 +0.2**
comp=Z,15nm,0.7s,mb4.8
LPG La Plagne 51.99 301 *e*P **P 21 10 56.8 +0.2**
LPG pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
LPG La Plagne 51.99 301 *e*P **P 21 10 56.8 +0.2**
comp=Z,7.7nm,0.7s,mb4.7
LPL La Plagne 51.99 301 *e*P **P 21 10 56.8 +0.2**
comp=Z,17nm,0.7s,mb4.8
LPL La Plagne 51.99 301 *e*P **P 21 10 56.8 +0.2**
LPL pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
LPL La Plagne 51.99 301 *e*P **P 21 10 56.8 +0.2**
comp=Z,8.6nm,0.7s,mb4.8
BNI Bardonecchia 52.22 300 *e*P **P 21 10 57.7 -0.6**
BNI pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
BNI Bardonecchia 52.22 300 *e*P **P 21 10 57.7 -0.6**
comp=Z,6.0nm,0.9s,mb4.5
MBDF Montbardon 52.30 300 *e*P **P 21 10 59.6 +0.7**
ORIF Oris-en-Rattie 52.79 300 *e*P **P 21 11 01.8 -0.8**
comp=Z,10nm,0.6s,mb4.6
ORIF Oris-en-Rattie 52.79 300 *e*P **P 21 11 01.8 -0.8**
ORIF pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
ORIF Oris-en-Rattie 52.79 300 *e*P **P 21 11 01.8 -0.8**
comp=Z,5.1nm,0.6s,mb4.6
SMF Signal de Mont 53.36 303 *e*P **P 21 11 05.7 -1.0**
comp=Z,5.8nm,0.8s,mb4.3
SMF Signal de Mont 53.36 303 *e*P **P 21 11 05.7 -1.0**
SMF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
SMF Signal de Mont 53.36 303 *e*P **P 21 11 05.7 -1.0**
comp=Z,2.9nm,0.8s,mb4.3
SSF Saint Saulge 53.39 304 *e*P **P 21 11 06.0 -0.9**
VIVF Saint-Julien-l 53.59 301 *e*P **P 21 11 07.8 -0.7**
comp=Z,15nm,0.8s,mb4.7
VIVF Saint-Julien-l 53.59 301 *e*P **P 21 11 07.8 -0.7**
VIVF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
VIVF Saint-Julien-l 53.59 301 *e*P **P 21 11 07.8 -0.7**
comp=Z,7.7nm,0.8s,mb4.7
AVF Avril sur Loir 53.60 304 *e*P **P 21 11 07.6 -0.9**
comp=Z,8.8nm,0.7s,mb4.5
AVF Avril sur Loir 53.60 304 *e*P **P 21 11 07.6 -0.9**
AVF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
AVF Avril sur Loir 53.60 304 *e*P **P 21 11 07.6 -0.9**
comp=Z,4.4nm,0.7s,mb4.5
LASF Ste Croix 54.46 300 *e*P **P 21 11 14.5 -0.3**
TCF Toulx Ste Croi 54.53 303 *e*P **P 21 11 14.7 -0.6**
CAF Calviac 55.23 302 *e*P **P 21 11 20.1 -0.2**
RJF Les Rejaudoux 55.40 303 *e*P **P 21 11 20.9 -0.7**
comp=Z,4.5nm,0.6s,mb4.3
RJF Les Rejaudoux 55.40 303 *e*P **P 21 11 20.9 -0.7**
RJF pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
RJF Les Rejaudoux 55.40 303 *e*P **P 21 11 20.9 -0.7**
comp=Z,2.3nm,0.6s,mb4.4
MTLF Montolieu 55.85 300 *e*P **P 21 11 24.4 -0.5**
comp=Z,4.2nm,0.7s,mb4.3
MTLF Montolieu 55.85 300 *e*P **P 21 11 24.4 -0.5**
MTLF pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
MTLF Montolieu 55.85 300 *e*P **P 21 11 24.4 -0.5**
comp=Z,2.1nm,0.6s,mb4.3
LFF La Frestale 56.06 302 *e*P **P 21 11 26.1 -0.2**
comp=Z,14nm,0.7s,mb4.8
LFF La Frestale 56.06 302 *e*P **P 21 11 26.1 -0.2**
LFF pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
LFF La Frestale 56.06 302 *e*P **P 21 11 26.1 -0.2**
comp=Z,6.8nm,0.7s,mb4.8
ESDC Sonseca Array 61.70 299 P **P 21 12 04.7 -0.9**
comp=Z,0.2nm,0.3s,mb3.7,baz=42,slow=7.5,SNR=3.9
TORD Torodi Ar. Bea 73.37 273 P **P 21 13 18.1 -1.6**
comp=Z,0.9nm,0.4s,mb4.0,baz=43,slow=5.1,SNR=15
YKA Yellowknife Ar 75.25 7 P **P 21 13 28.4 -1.5**
comp=Z,0.8nm,0.7s,mb3.8,baz=333,slow=5.5,SNR=5.7
YKA Yellowknife Ar 75.25 7 P **P 21 13 28.4 -1.5**
YKA pmax pmax
comp=Z,1.0nm,0.7s
PDAR Pinedale Array 95.23 8 LR LR 22 00 20.0
comp=Z,273nm,19.4s,MS4.7,baz=239,slow=37

IDC ***12*** *21:06:21.4±0.7, 37°.55S×177°.58E, h0km, mb4.6/9, mb1 4.7/9, mb1mx4.6/14, mbtmp4.6/9, MS4.6/27, Ms1 4.6/27, ms1mx4.5/30, Error ellipse: s-maj=23.7km s-min=9.7km az=109.0*
ISCJB ***12*** *21:06:23.4±0.5, 37°.60S±0°.03×177°.11E±0°.04, h9km±3km, mb4.7/18, MS4.6/26, Error ellipse: s-maj=5.8km s-min=4.6km az=31.4*
NEIC ***12*** *21:06:24.3, 37°.56S×177°.09E, h5km, mb5.0/8, ML5.4(WEL), After WEL.*
NEIC Felt [IV] in the Bay of Plenty area. Also felt at Gisborne.
GCMT ***12*** *21:06:29.2±0.2, 37°.58S×177°.17E, h13km, MW5.2, Moment Tensor Solution. s51,c92; s89,c163; Moment tensor: Scale 10^16Nm; Mrr=3.85±.19; Mθθ=0.98±.15; Mφφ=4.83±.15; Mrθ=1.27±.36; Mrφ=6.45±.12; Mθφ=3.13±.40; Best double couple: M0=7.70000×10^16 NP1:φs=77.00000°, δ=56.00000°, λ=-15.00000°. NP2:φs=175.00000°, δ=77.00000°, λ=-145.00000°. Principal axes: T 9.8100, Plg14.0000°, Azm302.0000°; N -4.2400, Plg54.0000°, Azm193.0000°; P -5.5700, Plg33.0000°, Azm41.0000°; Data Used: II IC IU G CN.*

ISC 12 21:06:24.3±0.5, 37°.62S±0°.03×177°.15E±0°.04, h6km±3km, n128, σ1§21/84, mb4.7/18, MS4.6/26, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	**White Island**	**0.09**	**22**	P	**Pg**	**21 06 26.2**	**-0.2**
WIZ				S	**Sg**	**21 06 28.4**	**+0.6**
MARZ	**Manawahe**	**0.53**	**225**	P	**Pg**	**21 06 33.8**	**-0.6**
EDRZ	**Edgecumbe**	**0.59**	**213**	P	**Pg**	**21 06 36.1**	**+0.5**
URZ	**Urewera**	**0.65**	**182**	Pg	**Pg**	**21 06 35.9**	**-0.8**
1μm,0.3s,baz=348,slow=6.1,SNR=1547							
URZ				Lg		21 06 48.5	
3μm,0.3s,baz=356,slow=19,SNR=33							
URZ	**Urewera**	**0.65**	**182**	P	**Pg**	**21 06 36.0**	**-0.7**
TGRZ	**Tauranga**	**0.71**	**260**	P	**Pg**	**21 06 37.3**	**-0.7**
TGRZ				S	**Sg**	**21 06 48.1**	**+0.9**
LIRZ	**Lichensteins R**	**0.72**	**237**	P	**Pg**	**21 06 37.9**	**-0.2**
LIRZ				S	**Sg**	**21 06 47.2**	**-0.2**
MKRZ	**Makatiti**	**0.75**	**225**	P	**Pg**	**21 06 38.7**	**0.0**
MWZ	**Matawai**	**0.78**	**157**	P	**Pg**	**21 06 38.8**	**-0.5**
KARZ	**Kaharoa**	**0.82**	**240**	P	**Pg**	**21 06 39.4**	**-0.7**
MXZ	**Matakaoa Point**	**0.92**	**87**	P	**Pg**	**21 06 41.6**	**-0.4**
UTU	**Utuhina**	**0.94**	**233**	P	**Pg**	**21 06 42.8**	**+0.5**
PUZ	**Puketiti**	**0.99**	**118**	P	**Pg**	**21 06 44.1**	**+0.8**
KUZ	**Kuaotunu**	**1.43**	**307**	P	**Pn**	**21 06 46.6**	**-4.1**
KNZ	**Kokohu**	**1.46**	**164**	P	**Pn**	**21 06 52.1**	**+0.9**
BKZ	**Black Stump Fm**	**1.63**	**198**	P	**Pn**	**21 06 51.8**	**-1.7**
MKAZ	**Moumakai**	**1.65**	**287**	P	**Pn**	**21 06 50.4**	**-3.4**
HIZ	**Hauiti**	**2.02**	**243**	P	**Pn**	**21 06 56.8**	**-2.0**
MOVZ	**Moawhango**	**2.10**	**211**	*e*P	**Pn**	**21 06 59.9**	**0.0**
WTAZ	**Waiatarua**	**2.16**	**288**	P	**Pn**	**21 06 58.8**	**-2.0**
TSZ	**Takapari Road**	**2.61**	**200**	P	**Pn**	**21 07 06.5**	**-0.5**
PRHZ	**Porangahau**	**2.68**	**188**	P	**Pn**	**21 07 07.4**	**-0.5**
WAZ	**Wanganui**	**2.73**	**218**	P	**Pn**	**21 07 10.2**	**+1.7**
WCZ	**Waipu Caves**	**2.80**	**306**	P	**Pn**	**21 07 06.5**	**-3.1**
DFE	**Dawson Falls**	**2.94**	**233**	P	**Pn**	**21 07 12.7**	**+1.3**
MRZ	**Mangatainoka R**	**3.28**	**201**	P	**Pn**	**21 07 15.3**	**-0.8**
KIW	**Kapiti Island**	**3.68**	**207**	P	**Pn**	**21 07 21.6**	**0.0**
OUZ	**Omahuta**	**3.73**	**309**	P	**Pn**	**21 07 19.7**	**-2.6**
SNZO	**South Karori**	**4.14**	**206**	*e*Pn	**Pn**	**21 07 28.4**	**+0.3**
SNZO				*e*Pg	**Pg**	**21 07 43.8**	**+0.1**
SNZO				S	**Sn**	**21 08 21.9**	**+5.1**
QRZ	**Quartz Range**	**4.81**	**227**	P	**Pn**	**21 07 38.0**	**+0.8**
KHZ	**Kahutara**	**5.54**	**209**	*e*Pn	**Pn**	**21 07 45.8**	**-1.4**
198nm,0.9s							
KHZ				*e*Pg	**Pg**	**21 08 12.1**	**+1.7**
KHZ				*e*S	**Sg**	**21 09 23.1**	**+1.1**
RPZ	**Rata Peaks**	**7.65**	**215**	Pn	**Pn**	**21 08 12.8**	**-3.3**
1.4nm,0.3s,baz=324,slow=18,SNR=6.4							
RPZ				Sn	**Sn**	**21 09 36.2**	**-6.9**
baz=355,slow=12,SNR=2.2							
RPZ				LR	LR	21 11 34.9	
comp=Z,5μm,19.6s,baz=40,slow=40							
RPZ	**Rata Peaks**	**7.65**	**215**	*e*Pn	**Pn**	**21 08 14.7**	**-1.5**
65nm,0.7s							
RPZ				*e*Sn	**Sn**	**21 09 43.7**	**+0.5**
ODZ	**Otahua Downs**	**8.89**	**211**	P	**Pn**	**21 08 30.4**	**-2.7**
RAO	**Raoul Island**	**9.30**	**28**	LR	LR	21 11 48.0	
comp=Z,4μm,18.1s,baz=205,slow=36							
DZM	**Mont Dzumac**	**18.04**	**326**	*e*LR	LR	21 15 18.7	
6μm,26.6s							
MSVF	**Nonsavu**	**19.82**	**3**	P	**Pn**	**21 10 59.2**	**+2.0**
636nm,1.1s,SNR=8.0							
MSVF	**Nonsavu**	**19.82**	**3**	*e*P	**Pn**	**21 10 55.3**	**-1.9**
104nm,1.0s							
ARMA	**Armidale**	**22.29**	**281**	*e*P	**P**	**21 11 26.7**	**+4.4**
CNB	**Canberra Magne**	**22.43**	**267**	*e*P	**P**	**21 11 28.0**	**+4.3**
EIDS	**Eidsvold**	**25.27**	**291**	*e*P	**P**	**21 11 55.0**	**+3.7**
EIDS	**Eidsvold**	**25.27**	**291**	*e*P	**P**	**21 11 50.4**	**-0.9**
40nm,1.2s,mb4.8							
EIDS				*e*PcP	PcP	21 15 24.9	+0.4
CMSA	**Cobar Meteorol**	**26.52**	**274**	*e*P	**P**	**21 12 05.3**	**+2.7**
STKA	**Stephens Creek**	**29.65**	**270**	*e*P	**P**	**21 12 33.2**	**+2.7**
15nm,1.1s,mb4.6							
STKA	**Stephens Creek**	**29.65**	**270**	P	**P**	**21 12 32.1**	**+1.6**
16nm,1.0s,mb4.7,baz=116,slow=9.7,SNR=7.6							
STKA				LR	LR	21 24 23.0	
comp=Z,1μm,18.6s,MS4.5,baz=110,slow=36							
STKA	**Stephens Creek**	**29.65**	**270**	*e*P	**P**	**21 12 32.7**	**+2.2**
9.6nm,1.3s,mb4.4							
CTA	**Charters Tower**	**32.00**	**294**	LR	LR	21 24 26.3	
comp=Z,541nm,21.1s,MS4.2,baz=122,slow=34							
CTAO	**Charters Tower**	**32.00**	**294**	*e*P	**P**	**21 12 51.0**	**-0.4**
HNR	**Honiara**	**32.07**	**327**	LR	LR	21 24 27.8	
comp=Z,872nm,18.1s,MS4.5,baz=157,slow=34							
PPT	**Papeete**	**35.35**	**65**	*e*S	**S**	**21 19 04.1**	**+8.8**
123nm,22.8s							
PPT				*e*LR	LR	21 23 11.2	
1μm,21.2s,baz=231							
PPT	**Papeete**	**35.35**	**65**	LR	LR	21 25 53.0	
comp=Z,975nm,18.6s,MS4.6,baz=207,slow=34							
COEN	**Coen**	**38.27**	**299**	*e*P	**P**	**21 13 47.5**	**+2.0**
ASAR	**Alice Springs**	**39.38**	**278**	P	**P**	**21 13 55.1**	**+0.5**
14nm,1.0s,mb4.7,baz=122,slow=8.5,SNR=75							
SBA	**Scott Base**	**40.59**	**183**	*e*P	**P**	**21 14 03.6**	**-0.5**
28nm,1.7s,mb4.6							
FORT	**Forrest**	**40.79**	**265**	*e*P	**P**	**21 14 07.1**	**+0.7**
36nm,0.7s,mb5.1							
FORT	**Forrest**	**40.79**	**265**	*e*P	**P**	**21 14 07.4**	**+1.0**
41nm,0.7s,mb5.2							
WRAB	**Tennant Creek**	**41.04**	**283**	P	**P**	**21 14 09.2**	**+0.7**
156nm,1.4s,mb5.5,SNR=6.5							
WRAB	**Tennant Creek**	**41.04**	**283**	*e*P	**P**	**21 14 09.9**	**+1.4**
30nm,1.0s,mb4.9							
WRA	**Warramunga Arr**	**41.05**	**283**	P	**P**	**21 14 09.1**	**+0.5**
23nm,1.1s,mb4.7,baz=122,slow=7.6,SNR=89							
WRA				LR	LR	21 29 52.4	
comp=Z,2μm,21.2s,MS4.9,baz=120,slow=34							
RKT	**Rikitea**	**43.31**	**85**	*e*S	**S**	**21 21 02.1**	**+7.1**
199nm,26.2s							
RKT				*e*LR	LR	21 26 44.7	
844nm,21.5s,baz=239							
CASY	**Casey**	**46.89**	**211**	*e*P	**P**	**21 14 52.5**	**-2.5**
KNA	**Kununurra**	**47.79**	**284**	*e*P	**P**	**21 15 03.3**	**+0.8**
53nm,1.5s,mb5.3							
TAOE	**Nuku Hiva Isla**	**47.96**	**64**	*e*S	**S**	**21 22 09.5**	**+7.4**
216nm,26.9s							
TAOE				*e*LR	LR	21 29 00.9	
930nm,21.9s							
FITZ	**Fitzroy Crossi**	**48.87**	**279**	*e*P	**P**	**21 15 10.9**	**+0.1**
27nm,1.4s,mb5.1							
FITZ	**Fitzroy Crossi**	**48.87**	**279**	LR	LR	21 35 33.6	
comp=Z,1μm,18.4s,MS4.9,baz=149,slow=36							
FITZ	**Fitzroy Crossi**	**48.87**	**279**	*e*P	**P**	**21 15 11.4**	**+0.6**
63nm,1.6s,mb5.4							
MEEK	**Meekatharra**	**50.05**	**265**	*e*P	**P**	**21 15 19.6**	**-0.2**
QSPA	**South Pole Qui**	**52.51**	**180**	P	**P**	**21 15 38.4**	**+0.9**
4.4nm,0.6s,mb4.6,baz=26,slow=2.0,SNR=40							
QSPA				LR	LR	21 36 19.2	
comp=Z,684nm,19.2s,MS4.7,baz=220,slow=34							
QSPA	**South Pole Qui**	**52.51**	**180**	*e*P	**P**	**21 15 39.5**	**+2.0**
14nm,1.0s,mb4.8							
KAPI	**Kappang**	**61.38**	**287**	LR	LR	21 43 14.0	
comp=Z,957nm,20.9s,MS4.9,baz=175,slow=36							
MAW	**Mawson**	**64.13**	**203**	*e*P	**P**	**21 16 58.5**	**-0.4**
14nm,1.1s,mb4.9							
MAW	**Mawson**	**64.13**	**203**	P	**P**	**21 16 58.2**	**-0.7**
9.8nm,1.0s,mb4.8,baz=132,slow=4.9,SNR=10							
MAW				LR	LR	21 46 22.5	
comp=Z,554nm,18.8s,MS4.8,baz=120,slow=37							
MAW	**Mawson**	**64.13**	**203**	P	**P**	**21 16 58.2**	**-0.6**
MAW				LR	LR	21 46 22.5	
DAV	**Davao City (W)**	**65.44**	**301**	LR	LR	21 44 27.5	
comp=Z,289nm,21.9s,MS4.4,baz=154,slow=35							
PMSA	**Palmer Station**	**67.35**	**156**	LR	LR	21 41 10.3	
comp=Z,363nm,19.6s,MS4.6,baz=262,slow=31							
USHA	**Ushuaia**	**72.20**	**146**	LR	LR	21 43 29.8	
comp=Z,959nm,21.2s,MS5.0,baz=206,slow=31							
CBIJ	**Chichi jima**	**72.25**	**328**	LR	LR	21 46 05.3	
comp=Z,154nm,20.6s,MS4.3,baz=128,slow=33							
JHJ	**Hachijo jima 2**	**78.51**	**329**	LR	LR	21 49 18.2	
comp=Z,255nm,19.3s,MS4.6,baz=175,slow=33							
PLCA	**Paso Flores**	**80.44**	**135**	P	**P**	**21 18 38.4**	**+1.6**
3.5nm,0.9s,mb4.3,baz=210,slow=6.0,SNR=5.2							
PLCA				LR	LR	21 46 39.9	
comp=Z,374nm,21.2s,MS4.7,baz=223,slow=30							
PLCA	**Paso Flores**	**80.44**	**135**	*e*P	**P**	**21 18 39.4**	**+2.6**
MJAR	**Matsushiro Arr**	**82.12**	**329**	LR	LR	21 51 30.6	
comp=Z,149nm,19.8s,MS4.3,baz=205,slow=33							
PSI	**Prapat**	**82.39**	**279**	LR	LR	21 59 07.9	
comp=Z,588nm,18.0s,MS5.0,baz=120,slow=38							
ASAJ	**Asahikawa**	**87.16**	**336**	LR	LR	21 56 07.4	
comp=Z,324nm,19.4s,MS4.7,baz=183,slow=34							
KSRS	**Korea Array**	**87.44**	**323**	P	**P**	**21 19 13.2**	**+0.9**
2.1nm,0.7s,mb4.5,baz=142,slow=5.4,SNR=9.0							
KSRS				LR	LR	21 53 16.3	
comp=Z,110nm,20.6s,MS4.2,baz=140,slow=32							
PETK	**Petropavlovsk-**	**91.92**	**348**	P	**P**	**21 19 32.2**	**-0.6**
0.6nm,0.4s,mb4.3,baz=157,slow=4.3,SNR=5.1							
PETK				LR	LR	21 57 44.7	
comp=Z,162nm,19.7s,MS4.5,baz=159,slow=34							
PETK	**Petropavlovsk-**	**91.92**	**348**	P	**P**	**21 19 32.2**	**-0.6**
PETK				LR	LR	21 57 44.7	
CMAR	**Chiang Mai Arr**	**92.13**	**292**	P	**P**	**21 19 34.9**	**+0.1**
1.0nm,0.7s,mb4.2,baz=141,slow=3.1,SNR=6.1							
CMAR				LR	LR	22 02 55.6	
comp=Z,293nm,20.6s,MS4.7,baz=320,slow=37							
KMI	**Kunming**	**93.62**	**299**	P	**P**	**21 19 46.3**	**+4.8**
KMI				pmax	pmax		
comp=Z,3.0nm,1.2s,mb4.6							
KDAK	**Kodiak Island**	**98.38**	**16**	LR	LR	21 56 03.8	
comp=Z,232nm,21.4s,MS4.6,baz=6.7,slow=30							
CPUP	**Villa Florida**	**98.39**	**132**	LR	LR	21 57 54.9	
comp=Z,498nm,20.3s,MS5.0,baz=198,slow=32							
HHC	**Hu-ho-hao-te**	**98.45**	**316**	*e*P	**P**	**21 20 02.2**	**-0.8**
HHC				PP	PP	21 24 05.6	+1.8
HHC				SKS		21 30 40.9	
HHC				S	S	21 31 23.9	-7.9
HHC				SS	SS	21 38 19.7	+2.6
HHC				pmax	pmax		
comp=Z,6.0nm,0.7s,mb5.2							
HHC				pmax	pmax		
comp=Z,50nm,6.2s							
HHC				LR	LR		
comp=N,160nm,21.4s,MS4.6							
HHC				LR	LR		
comp=E,150nm,20.2s,MS4.6							
HHC				LR	LR		
comp=Z,200nm,25.0s,MS4.5							
LPAZ	**La Paz**	**98.60**	**118**	P	**P**	**21 20 01.4**	**-3.0**
comp=Z,0.6nm,0.8s,mb4.2,baz=270,slow=6.1,SNR=2.6							
LPAZ				LR	LR	21 56 24.8	
comp=Z,134nm,18.5s,MS4.5,baz=245,slow=30							
TXAR	**Lajitas Array**	**99.56**	**60**	LR	LR	21 57 10.4	
comp=Z,338nm,19.7s,MS4.8,baz=115,slow=31							
YKA	**Yellowknife Ar**	**113.68**	**28**	PKiKP	PKiKP	21 25 03.2	+0.7
comp=Z,0.4nm,0.6s,baz=261,slow=1.8,SNR=3.8							
YKA	**Yellowknife Ar**	**113.68**	**28**	PKPdf	PKiKP	21 25 03.2	+0.7
MKAR	**Makanchi Array**	**119.19**	**308**	PKP	PKPdf	21 25 11.0	-2.7
comp=Z,0.3nm,0.2s,baz=132,slow=2.1,SNR=3.3							
MKAR				PKKPab	PKKPab	21 35 30.5	+3.4
comp=Z,0.3nm,0.3s,baz=344,slow=4.3,SNR=4.6							
KURK	**Kurchatov**	**122.95**	**311**	PKPdf	PKPdf	21 25 17.5	-3.3
BVAR	**Borovoye Array**	**128.51**	**312**	PKhKP		21 25 26.8	
comp=Z,0.5nm,0.7s,baz=122,slow=1.9,SNR=4.2							
BRVK	**Borovoye**	**128.58**	**312**	PKPdf	PKPdf	21 25 31.8	+0.4
AKTK	**Aktyubinsk**	**135.60**	**307**	PKP	PKPdf	21 25 43.6	-1.1
AKTO	**Aktyubinsk**	**135.60**	**307**	PKP	PKPdf	21 25 43.6	-1.1

comp=Z,2.4nm,0.8s,baz=75,slow=6.8,SNR=4.7
TOA0 Torodi Ar. Sit 155.30 191 *e*PKPbc PKPdf 21 26 28.1 +9.1
TORD Torodi Ar. Bea 155.30 191 PKP PKPdf 21 26 17.7 -1.3
comp=Z,1.6nm,0.8s,baz=31,slow=0.1,SNR=8.0
TORD PKPab PKPab 21 26 41.6 -2.2
comp=Z,2.8nm,0.7s,baz=184,slow=2.1,SNR=5.2
TORD Torodi Ar. Bea 155.30 191 PKP PKPdf 21 26 17.7 -1.3
TORD PKPab PKPab 21 26 41.6 -2.2
KOLS Kolonicke sedl 158.59 310 *e*PKP PKPab 21 27 04.8 +7.5
KOLS *e* 21 27 10.6
CRVS Cervenica-Dubn 159.10 310 *e*PKP PKPab 21 27 04.1 +4.6
CRVS *e* 21 27 12.0
CRVS *e* 21 27 30.8
KECS Kecovo 159.86 310 *e*PKP PKPab 21 27 07.7 +4.8
KECS *e* 21 27 14.7
VYHS Vyhne 160.85 311 *e*PKP PKPab 21 27 13.0 +5.8
VYHS *e* 21 27 31.3
CLL Collm 162.29 326 *e*PKPab PKPab 21 27 13.0 -0.3

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*LJU **12** 21:12:44.9, 45°.54N×16°.16E, h16km, ML1.8*
*CSEM **12** 21:12:44.9±0.1, 45°.53N×16°.20E, h12km, ML2.6/6, Error ellipse: s-maj=2.4km s-min=1.5km az=6.0*
*ISCJB **12** 21:12:44.8±0.4, 45°.58N±0°.03×16°.22E±0°.03, h9km±3km, Error ellipse: s-maj=5.0km s-min=3.2km az=21.8*
*VIE **12** 21:12:45.4±0.3, 45°.62N×16°.22E, h6km±2km, mb1.6/2, ML2.1/2, Error ellipse: s-maj=2.4km s-min=1.1km az=5.0*
26 km SE of Zagreb
ISC 12 21:12:45.3±0.5, 45°.55N±0°.03×16°.21E±0°.03, h12km±3km, n34, σ0°61/58, 2C-4D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISC	**Sisak**	**0.14**	**125**	⇑*i*Pg	**Pg**	**21 12 49.1**	**+0.4**
SISC				*e*Sg	**Sg**	**21 12 52.2**	**+1.0**
GCIS	**Gornji Cirnik**	**0.51**	**308**	*i* Pg	**Pg**	**21 12 55.2**	**-0.2**
GCIS				*e*Sg	**Sg**	**21 13 02.4**	**+0.2**
GCIS							
	comp=Z,22nm,0.1s						
GCIS	**Gornji Cirnik**	**0.51**	**308**	*i* Pg	**Pg**	**21 12 55.2**	**-0.2**
GCIS				*e*Sg	**Sg**	**21 13 02.4**	**+0.2**
	comp=Z,22nm,0.1s						
CRES	**Cresnjev**	**0.59**	**298**	*i* Pg	**Pg**	**21 12 56.4**	**-0.5**
CRES				*i* Sg	**Sg**	**21 13 05.0**	**+0.3**
CRES							
	comp=Z,18nm,0.2s						
CRES	**Cresnjev**	**0.59**	**298**	*i* Pg	**Pg**	**21 12 56.4**	**-0.4**
CRES				*i* Sg	**Sg**	**21 13 05.0**	**+0.3**
	comp=Z,18nm,0.2s						
GOLS	**Golise**	**0.61**	**319**	*i* Pg	**Pg**	**21 12 57.1**	**-0.1**
GOLS				*e*Sg	**Sg**	**21 13 05.8**	**+0.4**
GOLS							
	comp=Z,27nm,0.2s						
GOLS	**Golise**	**0.61**	**319**	*i* Pg	**Pg**	**21 12 57.1**	**-0.1**
GOLS				*e*Sg	**Sg**	**21 13 05.7**	**+0.4**
BOJS	**Bojanci**	**0.67**	**266**	*i* Pg	**Pg**	**21 12 57.7**	**-0.7**
BOJS				*e*Sg	**Sg**	**21 13 06.1**	**-1.1**
BOJS							
	comp=Z,17nm,0.2s						
BOJS	**Bojanci**	**0.67**	**266**	*i* Pg	**Pg**	**21 12 57.7**	**-0.6**
BOJS				*e*Sg	**Sg**	**21 13 06.1**	**-1.1**
	comp=Z,17nm,0.2s						
LEGS	**Legarje**	**0.74**	**303**	*i* Pg	**Pg**	**21 12 59.1**	**-0.5**
LEGS				*e*Sg	**Sg**	**21 13 09.6**	**+0.4**
LEGS	**Legarje**	**0.74**	**303**	*i* Pg	**Pg**	**21 12 59.1**	**-0.5**
LEGS				*e*Sg	**Sg**	**21 13 09.6**	**+0.3**
DOBS	**Dobrina**	**0.79**	**319**	*i* Pg	**Pg**	**21 13 00.6**	**0.0**
DOBS				*e*Sg	**Sg**	**21 13 11.1**	**+0.2**
DOBS							
	comp=Z,22nm,0.2s						
DOBS	**Dobrina**	**0.79**	**319**	*i* Pg	**Pg**	**21 13 00.5**	**-0.1**
DOBS				*e*Sg	**Sg**	**21 13 11.1**	**+0.2**
	comp=Z,22nm,0.2s						
KOGS	**Kog**	**0.90**	**2**	*i* Pg	**Pg**	**21 13 02.7**	**+0.1**
KOGS							
	comp=Z,20nm,0.1s						
KOGS	**Kog**	**0.90**	**2**	*i* Pg	**Pg**	**21 13 02.7**	**+0.1**
	comp=Z,20nm,0.1s						
PDKS	**Podkum**	**0.99**	**301**	*i* Pg	**Pg**	**21 13 04.1**	**-0.2**
PDKS							
	comp=Z,9.0nm,0.1s						
PDKS	**Podkum**	**0.99**	**301**	*i* Pg	**Pg**	**21 13 04.1**	**-0.2**
	comp=Z,9.0nm,0.1s						
VISS	**Visnje**	**0.99**	**285**	*i* Pg	**Pg**	**21 13 03.6**	**-0.7**
VISS	**Visnje**	**0.99**	**285**	*i* Pg	**Pg**	**21 13 03.7**	**-0.7**
GROS	**Grobnik**	**1.03**	**332**	*i* Pg	**Pg**	**21 13 05.3**	**+0.1**
GROS							
	comp=Z,13nm,0.2s						
GROS	**Grobnik**	**1.03**	**332**	*i* Pg	**Pg**	**21 13 05.3**	**+0.1**
	comp=Z,13nm,0.2s						
CEY	**Cerknica**	**1.26**	**279**	*i* Sn	**Sn**	**21 13 25.9**	**+0.4**
CEY	**Cerknica**	**1.26**	**279**	*i* Sn	**Sn**	**21 13 25.9**	**+0.4**
NVLJ	**Novalja**	**1.37**	**224**	*i* Pg	**Pn**	**21 13 10.8**	**+0.7**
NVLJ				Sg	**Sg**	**21 13 29.1**	**-0.3**
NVLJ	**Novalja**	**1.37**	**224**	*i* Pg	**Pn**	**21 13 10.8**	**+0.7**
NVLJ				Sg	**Sg**	**21 13 29.0**	**-0.3**
SOKA	**Soboth**	**1.39**	**324**	⇓⇓*i*Pg	**Pn**	**21 13 11.0**	**+0.5**
SOKA				⇑⇑*i*Sg	**Sg**	**21 13 29.7**	**-0.3**
	comp=Z,5.6nm,0.3s						
SOKA	**Soboth**	**1.39**	**324**	Pn	**Pn**	**21 13 10.9**	**+0.4**
SOKA				Sg	**Sg**	**21 13 29.7**	**-0.4**
	comp=Z,5.6nm,0.3s						
RHK3	**Tenkes**	**1.47**	**76**	*e*Pn	**Pn**	**21 13 11.6**	**0.0**
RHK3				*e*Sn	**Sn**	**21 13 30.0**	**-0.7**
OBKA	**Obir**	**1.50**	**310**	⇓⇓*i*Pg	**Pg**	**21 13 13.7**	**-0.4**
OBKA				⇓⇓*i*Sn	**Sn**	**21 13 33.0**	**+1.6**
OBKA				⇓⇓*i*Sg	**Sg**	**21 13 33.8**	**+0.2**
	comp=Z,12nm,0.3s						
OBKA	**Obir**	**1.50**	**310**	Pg	**Pg**	**21 13 13.7**	**-0.4**
OBKA				Sn	**Sn**	**21 13 33.0**	**+1.6**
OBKA				Sg	**Sg**	**21 13 33.8**	**+0.2**
	comp=Z,12nm,0.3s						
PKSM	**Moragy**	**1.82**	**68**	*e*Pn	**Pn**	**21 13 15.6**	**-0.8**
PKSM	**Moragy**	**1.82**	**68**	*e*Pg	**Pg**	**21 13 20.4**	**+0.1**
PKSM				*e*Sn	**Sn**	**21 13 38.4**	**-1.0**
PKSM				*e*Sg	**Sg**	**21 13 44.3**	**+0.4**
STON	**Ston**	**2.89**	**158**	Sn	**Sn**	**21 14 09.2**	**+3.6**
STON	**Ston**	**2.89**	**158**	Sn	**Sn**	**21 14 09.2**	**+3.6**

NEIC 12 21:13:14.0, 37°.60S×177°.10E, h5km, ML3.8(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	**White Island**	**0.10**	**45**	P	Pg	21 13 16.5	+0.4
WIZ				S	Sg	21 13 18.4	+0.9
MARZ	**Manawahe**	**0.51**	**221**	P	Pg	21 13 24.6	+0.7
URZ	**Urewera**	**0.66**	**179**	P	Pg	21 13 26.7	0.0
MWZ	**Matawai**	**0.81**	**155**	P	Pg	21 13 29.3	-0.2
OUZ	**Omahuta**	**3.69**	**309**	*e*Pn	Pn	21 14 09.9	-1.8
OUZ				*e*Sn	Sn	21 14 55.2	-0.4

NEIC 12 21:18:23.0, 37°.59S×177°.10E, h5km, ML4.1(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	**White Island**	**0.09**	**49**	P	Pg	21 18 25.5	+0.5
WIZ				S	Sg	21 18 27.2	+0.9
MARZ	**Manawahe**	**0.52**	**220**	P	Pg	21 18 33.6	+0.6
URZ	**Urewera**	**0.67**	**179**	P	Pg	21 18 35.7	-0.2
MWZ	**Matawai**	**0.82**	**156**	P	Pg	21 18 38.4	-0.3

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*HLW **12** 21:20:46.6, 33°.59N×35°.31E, h15km±20km, Md2.5, Ml2.4*
*GII **12** 21:20:46.2±1.0, 33°.34N×35°.44E, h1km±2km, Md2.4/6, Mm2.4/5*
*ISCJB **12** 21:20:46.8±0.4, 33°.35N±0°.02×35°.43E±0°.04, h9km±3km, Error ellipse: s-maj=6.0km s-min=2.9km az=29.1*
*GRAL **12** 21:20:47.7±0.3, 33°.33N×35°.44E, h3km±2km, MD3.3*
*CSEM **12** 21:20:47.2±0.2, 33°.34N×35°.44E, h2km, ML3.3, Error ellipse: s-maj=5.3km s-min=3.2km az=123.0*
*NSSC **12** 21:20:51, 33°.31N×35°.76E, h7km±3km*
ISC 12 21:20:47.2±0.4, 33°.36N±0°.02×35°.44E±0°.04, h8km±4km, n40, σ0°81/56, 6D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.16**	**324**	*e*P	**Pg**	**21 20 51.1**	**+0.5**
MATL	**Matarih**	**0.16**	**324**	*e*P	**Pg**	**21 20 51.1**	**+0.5**
KSDI	**Kefar Szold**	**0.24**	**132**	Pg	**Pg**	**21 20 51.4**	**-0.7**
KSDI				Sg	**Sg**	**21 20 55.8**	**+0.4**
RCY	**Rachaya**	**0.34**	**68**	*e*P	**Pg**	**21 20 54.2**	**+0.3**
RCY				*e*S	**Sg**	**21 20 59.5**	**+1.1**
RCY	**Rachaya**	**0.34**	**68**	*e*P	**Pg**	**21 20 54.2**	**+0.3**
RCY				*e*S	**Sg**	**21 20 59.5**	**+1.1**
MMA0B	**Mount Meron ar**	**0.34**	**186**	Pg	**Pg**	**21 20 52.8**	**-1.1**
MMA0B				Sg	**Sg**	**21 20 58.5**	**0.0**
HNTI	**Hanita**	**0.35**	**220**	Pg	**Pg**	**21 20 53.7**	**-0.5**
HNTI				Sg	**Sg**	**21 20 59.4**	**+0.6**
BRBR	**Barbar**	**0.43**	**83**	⇓⇓P	**Pg**	**21 20 56.0**	**+0.5**
BRBR	**Barbar**	**0.43**	**83**	⇓⇓P	**Pg**	**21 20 56.0**	**+0.5**
KSHT	**Keshet**	**0.48**	**140**	Pg	**Pg**	**21 20 56.6**	**0.0**
BHL	**Bhannes**	**0.57**	**18**	*e*P	**Pg**	**21 20 58.4**	**+0.1**
BHL				*e*S	**Sg**	**21 21 06.4**	**+0.6**
BHL	**Bhannes**	**0.57**	**18**	*e*P	**Pg**	**21 20 58.4**	**+0.1**
BHL				*e*S	**Sg**	**21 21 06.4**	**+0.6**
BLGI	**Bet Lehem HaGe**	**0.66**	**199**	Pg	**Pg**	**21 20 59.4**	**-0.5**
QASN	**Qassioun**	**0.72**	**76**	⇓⇓P	**Pg**	**21 21 01.0**	**-0.1**
QASN				⇓⇓S	**Sg**	**21 21 08.0**	**-2.4**
QASN	**Qassioun**	**0.72**	**76**	⇓⇓*i*P	**Pg**	**21 21 01.4**	**+0.3**
QASN				⇓⇓*i*S	**Sg**	**21 21 08.5**	**-1.9**
TOTH	**TOTAH**	**0.82**	**89**	⇑⇑P	**Pg**	**21 21 03.0**	**-0.1**
TOTH	**TOTAH**	**0.82**	**89**	⇑⇑*i*P	**Pg**	**21 21 03.2**	**+0.1**
OFRI	**'Ofer**	**0.83**	**208**	Pg	**Pg**	**21 21 02.6**	**-0.6**
MMLI	**Mount Malkishu**	**0.92**	**181**	Pg	**Pg**	**21 21 03.5**	**-1.3**
MMLI				Sg	**Sg**	**21 21 18.1**	**+1.3**
HWQ	**Hawqa**	**1.01**	**24**	*e*P	**Pg**	**21 21 06.5**	**-0.1**
HWQ				*e*S	**Sg**	**21 21 19.9**	**+0.2**
HMDT	**Nahal Hemdat**	**1.10**	**176**	Pg	**Pg**	**21 21 07.2**	**-1.2**
HMDT				Sg	**Sg**	**21 21 24.1**	**+1.4**
SLTI	**Sal'it**	**1.16**	**197**	Pg	**Pg**	**21 21 08.4**	**-1.2**
SLTI				Sg	**Sg**	**21 21 25.7**	**+1.0**
FKH	**Fakeheh**	**1.19**	**42**	*e*P	**Pb**	**21 21 09.8**	**-0.1**
FKH				*e*S	**Sg**	**21 21 25.4**	**0.0**
SALA	**Sala**	**1.26**	**120**	⇑⇑P	**Pn**	**21 21 10.0**	**-1.1**
SALA	**Sala**	**1.26**	**120**	⇑⇑*i*P	**Pn**	**21 21 10.8**	**-0.3**
ZALF	**Zalf**	**1.64**	**105**	⇑⇑P	**Pn**	**21 21 16.0**	**-0.4**
ZALF	**Zalf**	**1.64**	**105**	⇑⇑*i*P	**Pn**	**21 21 17.0**	**+0.6**
DSI	**Dead Sea**	**1.78**	**182**	Pn	**Pn**	**21 21 18.2**	**-0.1**
YTIR	**Yattir**	**2.01**	**188**	Pn	**Pn**	**21 21 22.1**	**+0.7**
MZDA	**Masada**	**2.04**	**182**	Pn	**Pn**	**21 21 21.5**	**-0.4**
MZDA				Sn	**Sn**	**21 21 50.6**	**+3.0**
RTMI	**Retamim**	**2.38**	**196**	Pn	**Pn**	**21 21 27.2**	**+0.6**
RSH		**2.80**	**212**	P	**Pn**	**21 21 32.2**	**-0.1**
RSH				S	**Sn**	**21 22 04.8**	**-1.5**
ZFRI	**Zfri**	**2.80**	**185**	Pn	**Pn**	**21 21 32.0**	**-0.4**
PRNI	**Paran**	**3.02**	**187**	Pn	**Pn**	**21 21 35.5**	**+0.1**
AMAG	**Maghara**	**3.31**	**216**	P	**Pn**	**21 21 39.5**	**+0.2**
	baz=212						
AMAG	**Maghara**	**3.31**	**216**	P	**Pn**	**21 21 39.5**	**+0.2**
HNKL	**Nakhl**	**3.64**	**200**	P	**Pn**	**21 21 44.4**	**+0.5**
	baz=198						
HNKL				AMP		21 22 00.0	
	comp=N,10μm,0.5s,logA/T=4.3,baz=198						
HNKL	**Nakhl**	**3.64**	**200**	P	**Pn**	**21 21 44.4**	**+0.5**
SUZ		**4.15**	**213**	P	**Pn**	**21 21 51.6**	**+0.6**
	baz=211						
SUZ		**4.15**	**213**	P	**Pn**	**21 21 51.6**	**+0.6**

NEIC 12 21:22:14.1, 37°.58S×177°.07E, h27km, ML4.1(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDRZ	**Edgecumbe**	**0.59**	**206**	P	Pb	21 22 24.5	-1.4
URZ	**Urewera**	**0.68**	**177**	*e*P	Pb	21 22 24.8	-2.5
UIRZ				S	Sb	21 22 37.2	+0.8
LIRZ	**Lichensteins R**	**0.69**	**232**	P	Pb	21 22 26.7	-0.8
LIRZ				S	Sb	21 22 35.9	-0.8
MKRZ	**Makatiti**	**0.73**	**220**	P	Pb	21 22 27.7	-0.6
KARZ	**Kaharoa**	**0.79**	**236**	P	Pb	21 22 28.4	-0.8
MWZ	**Matawai**	**0.84**	**155**	P	Pb	21 22 28.1	-1.9
MXZ	**Matakaoa Point**	**0.98**	**89**	P	Pn	21 22 31.0	-1.1
PUZ	**Puketiti**	**1.06**	**118**	P	Pn	21 22 32.7	-0.5
TOZ	**Tahuroa Road**	**1.25**	**263**	P	Pn	21 22 35.8	0.0
KUZ	**Kuaotunu**	**1.36**	**307**	P	Pn	21 22 35.9	-1.4
MKAZ	**Moumakai**	**1.59**	**287**	P	Pn	21 22 39.7	-0.7
OUZ	**Omahuta**	**3.66**	**309**	*e*Pn	Pn	21 23 08.9	0.0

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*IDC **12** 21:34:49.5±2.8, 4°.91S×145°.67E, h0km, mb3.7/6, mb1 4.1/7, mb1mx3.9/16, mbtmp3.9/7, ML4.1/1, Error ellipse: s-maj=84.7km s-min=23.6km az=102.0*
*NEIC **12** 21:34:55.5±0.5, 4°.87S×145°.45E, h35km, mb3.9/5, Error ellipse: s-maj=14.1km s-min=11.4km az=87.0*
*ISCJB **12** 21:34:55.5±4.4, 5°.0S±0°.1×145°.5E±0°.1, h55km±44km, mb3.8/9, Error ellipse: s-maj=28.1km s-min=16.8km az=143.3*
ISC 12 21:34:57.6±3.6, 5°.0S±0°.1×145°.5E±0°.1, h58km±37km, n21, σ0°70/18, mb3.8/9, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**14.98**	**108**	Pn	**Pn**	**21 38 25.9**	**-0.1**
WRAB	**Tennant Creek**	**18.41**	**215**	*e*P	**Pn**	**21 39 09.4**	**+0.6**
	12nm,0.8s						
WRA	**Warramunga Arr**	**18.43**	**215**	P	**Pn**	**21 39 08.2**	**-0.8**
	0.7nm,0.3s,baz=36,slow=12,SNR=56						
ASAR	**Alice Springs**	**21.69**	**210**	P	**P**	**21 39 44.5**	**+0.8**
	2.0nm,0.7s,mb3.6,baz=34,slow=10,SNR=18						
FITZ	**Fitzroy Crossi**	**23.40**	**235**	P	**P**	**21 40 00.6**	**-1.0**
	1.7nm,0.6s,mb3.7,baz=47,slow=5.1,SNR=5.5						
FITZ	**Fitzroy Crossi**	**23.40**	**235**	*e*P	**P**	**21 40 00.5**	**-1.1**
	2.3nm,0.7s,mb3.7						
MBWA	**Marble Bar**	**29.74**	**235**	*e*P	**P**	**21 40 58.3**	**-0.3**
CMAR	**Chiang Mai Arr**	**51.47**	**298**	P	**P**	**21 43 59.0**	**+1.5**
	0.8nm,0.6s,mb3.8,baz=118,slow=5.7,SNR=6.3						
LSA	**Lhasa**	**62.45**	**307**	*e*P	**P**	**21 45 14.6**	**-0.4**
	0.6nm,0.5s,mb4.0						
SONM	**Songino Array**	**62.81**	**331**	P	**P**	**21 45 17.3**	**+0.3**
	0.3nm,0.6s,mb3.6,baz=114,slow=9.6,SNR=2.3						
SBA	**Scott Base**	**73.68**	**175**	P	**P**	**21 46 24.6**	**0.0**
MKAR	**Makanchi Array**	**75.78**	**321**	P	**P**	**21 46 36.6**	**-0.7**
	0.2nm,0.2s,mb3.6,baz=93,slow=9.2,SNR=5.0						
KURK	**Kurchatov**	**79.52**	**324**	*e*P	**P**	**21 46 57.1**	**-0.9**
	1.2nm,0.7s,mb3.9						
EKS2	**Erkin-Say**	**80.10**	**315**	*e*P	**P**	**21 47 01.1**	**-0.3**
	0.7nm,0.6s,mb3.8						
KBL	**Kabul**	**81.74**	**306**	*e*P	**P**	**21 47 11.2**	**+0.9**
QSPA	**South Pole Qui**	**84.98**	**180**	*e*P	**P**	**21 47 30.2**	**+4.1**
BVAR	**Borovoye Array**	**85.08**	**324**	P	**P**	**21 47 27.2**	**+0.1**
	0.8nm,0.8s,mb3.9,baz=76,slow=6.3,SNR=5.0						
BRVK	**Borovoye**	**85.16**	**324**	P	**P**	**21 47 27.3**	**0.0**
TORD	**Torodi Ar. Bea**	**143.41**	**285**	PKhKP		21 54 23.1	
	0.4nm,0.5s,baz=77,slow=2.7,SNR=7.9						
DBIC	**Dimbokro**	**150.48**	**275**	PKPbc	PKPbc	21 54 44.7	+0.8
	3.5nm,0.6s,baz=118,slow=5.1,SNR=6.7						
DBIC	**Dimbokro**	**150.48**	**275**	PKPbc	PKPbc	21 54 44.7	+0.8

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*CSEM **12** 21:40:52.8±0.2, 37°.89N×21°.41E, h20km, MD3.0, Error ellipse: s-maj=3.9km s-min=3.1km az=80.0*
*ATH **12** 21:40:52.9, 37°.88N×21°.43E, h16km±2km, MD3.0/11*
*THE **12** 21:40:52.8, 37°.88N×21°.44E, h11km±1km, ML3.2/6, Error ellipse: s-maj=1.1km s-min=0.5km az=32.0*
*NEIC **12** 21:40:52.9, 37°.88N×21°.43E, h16km, MD3.0(ATH), ML3.2(THE), After ATH.*
*ISCJB **12** 21:40:52.4±0.4, 37°.86N±0°.02×21°.42E±0°.03, h5km±4km, Error ellipse: s-maj=3.9km s-min=3.3km az=170.0*
ISC 12 21:40:53.0±0.4, 37°.87N±0°.02×21°.43E±0°.03, h11km±4km, n58, σ1°01/104, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.19**	**10**	*e*Pb	**Pg**	**21 40 57.5**	**+0.3**
RLS				*e*Sb	**Sg**	**21 41 01.1**	**+1.1**
RLS	**Riolos of Patr**	**0.19**	**10**	*e*PB	**Pg**	**21 40 57.5**	**+0.3**
RLS				*e*SB	**Sg**	**21 41 01.1**	**+1.1**
RLS	**Riolos of Patr**	**0.19**	**10**	*e*Pb	**Pg**	**21 40 57.5**	**+0.3**
RLS				*e*Sb	**Sg**	**21 41 01.1**	**+1.1**
UPR	**University Cam**	**0.50**	**34**	*e*PB	**Pg**	**21 41 02.3**	**-0.6**
UPR				S	**Sg**	**21 41 10.3**	**+0.8**
UPR	**University Cam**	**0.50**	**34**	*e*Pb	**Pg**	**21 41 02.9**	**0.0**
UPR				*e*SB	**Sg**	**21 41 10.1**	**+0.6**
UPR	**University Cam**	**0.50**	**34**	P	**Pg**	**21 41 02.3**	**-0.6**
UPR	**University Cam**	**0.50**	**34**	*e*Pb	**Pg**	**21 41 02.9**	**0.0**
UPR				*e*Sb	**Sg**	**21 41 10.1**	**+0.6**
KFL	**Anninata**	**0.56**	**296**	P	**Pg**	**21 41 03.9**	**0.0**
LAKA	**Lakka**	**0.57**	**49**	P	**Pg**	**21 41 03.4**	**-0.8**
LAKA				S	**Sg**	**21 41 11.9**	**+0.2**
LAKA	**Lakka**	**0.57**	**49**	P	**Pg**	**21 41 03.4**	**-0.8**
LAKA				S	**Sg**	**21 41 11.9**	**+0.2**
EFP	**Efpalio**	**0.68**	**34**	P	**Pg**	**21 41 04.9**	**-1.2**
EFP				S	**Sg**	**21 41 15.6**	**+0.6**
EFP	**Efpalio**	**0.68**	**34**	*e*PB	**Pg**	**21 41 05.1**	**-1.0**
EFP				*e*SN	**Sg**	**21 41 15.4**	**+0.4**
EFP	**Efpalio**	**0.68**	**34**	P	**Pg**	**21 41 04.9**	**-1.2**
EFP				S	**Sg**	**21 41 15.6**	**+0.6**
TRIZ	**Trizonia**	**0.71**	**46**	P	**Pg**	**21 41 05.7**	**-1.1**
TRIZ				S	**Sg**	**21 41 16.8**	**+0.6**
TRIZ	**Trizonia**	**0.71**	**46**	P	**Pg**	**21 41 05.7**	**-1.1**
TRIZ				S	**Sg**	**21 41 16.8**	**+0.6**
VLS	**Valsamata**	**0.73**	**295**	*e*Pb	**Pg**	**21 41 06.4**	**-0.7**
VLS				*e*Sn	**Sg**	**21 41 17.9**	**+1.3**
VLS	**Valsamata**	**0.73**	**295**	P	**Pg**	**21 41 06.3**	**-0.8**
VLS				S	**Sg**	**21 41 17.4**	**+0.8**
VLS	**Valsamata**	**0.73**	**295**	*e*PB	**Pg**	**21 41 06.4**	**-0.7**
VLS				*e*SN	**Sg**	**21 41 17.9**	**+1.3**
VLS	**Valsamata**	**0.73**	**295**	P	**Pg**	**21 41 06.3**	**-0.8**
VLS				S	**Sg**	**21 41 17.4**	**+0.8**
VLS				*e*Sn	**Sg**	**21 41 17.9**	**+1.3**
GUR	**Goura**	**0.73**	**84**	P	**Pg**	**21 41 05.9**	**-1.2**
GUR				S	**Sg**	**21 41 16.7**	**0.0**
GUR	**Goura**	**0.73**	**84**	*e*PB	**Pg**	**21 41 05.9**	**-1.2**
GUR				*e*SN	**Sg**	**21 41 16.9**	**+0.2**
GUR	**Goura**	**0.73**	**84**	P	**Pg**	**21 41 05.9**	**-1.2**
GUR				S	**Sg**	**21 41 16.7**	**0.0**
KALE	**Kalithea**	**0.77**	**47**	P	**Pg**	**21 41 06.7**	**-1.2**
KALE				S	**Sg**	**21 41 18.4**	**+0.5**
KALE	**Kalithea**	**0.77**	**47**	P	**Pg**	**21 41 06.7**	**-1.2**
KALE				S	**Sg**	**21 41 18.4**	**+0.5**
ITM	**Ithomi**	**0.80**	**150**	*e*Pb	**Pg**	**21 41 08.0**	**-0.4**
ITM				*e*Sn	**Sn**	**21 41 20.5**	**-1.5**
ITM	**Ithomi**	**0.80**	**150**	P	**Pg**	**21 41 08.3**	**-0.1**
ITM				S	**Sg**	**21 41 19.8**	**+1.1**
ITM	**Ithomi**	**0.80**	**150**	*e*PB	**Pg**	**21 41 08.0**	**-0.4**
ITM				*e*SN	**Sn**	**21 41 20.5**	**-1.5**
ITM	**Ithomi**	**0.80**	**150**	*e*Pb	**Pg**	**21 41 08.0**	**-0.4**
ITM	**Ithomi**	**0.80**	**150**	P	**Pg**	**21 41 08.3**	**-0.1**
ITM				S	**Sg**	**21 41 19.8**	**+1.1**
ITM				*e*Sn	**Sn**	**21 41 20.5**	**-1.5**
VLX	**Vlachokerasia**	**0.91**	**123**	P	**Pg**	**21 41 09.8**	**-0.7**
VLX				S	**Sg**	**21 41 22.9**	**+0.6**
VLX	**Vlachokerasia**	**0.91**	**123**	*e*PN	**Pg**	**21 41 10.2**	**-0.3**
VLX				*e*SN	**Sg**	**21 41 22.9**	**+0.6**
VLX	**Vlachokerasia**	**0.91**	**123**	P	**Pg**	**21 41 09.8**	**-0.7**
VLX	**Vlachokerasia**	**0.91**	**123**	*e*Pn	**Pg**	**21 41 10.2**	**-0.3**
VLX				S	**Sg**	**21 41 22.9**	**+0.6**
PYL	**PYLOS**	**1.00**	**165**	P	**Pg**	**21 41 11.6**	**-0.7**
PYL				S	**Sg**	**21 41 26.8**	**+1.4**
PYL	**PYLOS**	**1.00**	**165**	*e*PB	**Pg**	**21 41 11.6**	**-0.7**
PYL				*e*SN	**Sn**	**21 41 27.1**	**0.0**
PYL	**PYLOS**	**1.00**	**165**	P	**Pg**	**21 41 11.6**	**-0.7**
PYL				S	**Sg**	**21 41 26.8**	**+1.4**
PYL				*e*Sn	**Sn**	**21 41 27.1**	**0.0**
DSF	**Desfina**	**1.02**	**58**	P	**Pg**	**21 41 11.0**	**-1.7**
DSF				S	**Sg**	**21 41 26.1**	**0.0**
DSF	**Desfina**	**1.02**	**58**	P	**Pg**	**21 41 11.0**	**-1.7**
DSF				S	**Sg**	**21 41 26.1**	**0.0**
EVR	**Evrytania**	**1.09**	**16**	*e*Pn	**Pg**	**21 41 12.9**	**-1.1**
EVR				*e*Sn	**Sg**	**21 41 29.1**	**+0.9**
EVR	**Evrytania**	**1.09**	**16**	*e*PN	**Pg**	**21 41 12.9**	**-1.1**
EVR				*e*SN	**Sg**	**21 41 29.1**	**+0.9**
EVR	**Evrytania**	**1.09**	**16**	*e*Pn	**Pg**	**21 41 12.9**	**-1.1**
EVR				*e*Sn	**Sg**	**21 41 29.1**	**+0.9**
LKD2	**Lefkada island**	**1.10**	**327**	P	**Pg**	**21 41 12.8**	**-1.4**
LKD2				S	**Sg**	**21 41 29.2**	**+0.7**
LKD2	**Lefkada island**	**1.10**	**327**	P	**Pg**	**21 41 12.8**	**-1.4**
LKD2				S	**Sg**	**21 41 29.2**	**+0.7**
LTK	**Loutraki**	**1.23**	**82**	P	**Pn**	**21 41 14.9**	**-1.2**
LTK				S	**Sb**	**21 41 32.8**	**+0.7**
LTK	**Loutraki**	**1.23**	**82**	*e*PB	**Pb**	**21 41 15.2**	**-1.1**

LTK	**Loutraki**	**1.07**	**89**	*e*PN	**Pn**	**21 59 51.5**	**0.0**
LTK	**Loutraki**	**1.07**	**89**	*e*Pn	**Pn**	**21 59 51.5**	**0.0**
LKD2	**Lefkada island**	**1.08**	**317**	P	**Pn**	**21 59 50.9**	**-0.7**
LKD2				S	**Sb**	**22 00 07.3**	**+1.9**
LKD2	**Lefkada island**	**1.08**	**317**	P	**Pn**	**21 59 50.9**	**-0.7**
LKD2				S	**Sb**	**22 00 07.3**	**+1.9**
AGG	**Agios Georgios**	**1.16**	**29**	P	**Pn**	**21 59 52.7**	**0.0**
AGG	**Agios Georgios**	**1.16**	**29**	P	**Pn**	**21 59 52.7**	**0.0**

*ISCJB **12** 22:06:26.8±0.4, 51.°47N×0.°03×6.°83E±0.°04, h0km, Error ellipse: s-maj=4.2km s-min=2.7km az=145.1*
*BUG **12** 22:06:26.7, 51.°62N×6.°78E, h1km, ML2.1*
*LDG **12** 22:06:27.8±0.1, 51.°63N×6.°86E, h1km, Md3.0/1, Ml2.8/10, Error ellipse: s-maj=2.3km s-min=1.8km az=31.0, Suspected Mining induced.*
*NEIC **12** 22:06:27.8, 51.°63N×6.°86E, h1km, ML2.8(LDG), After LDG.*
*CSEM **12** 22:06:27.4±0.3, 51.°57N×6.°76E, h1km, ML2.8/9, Error ellipse: s-maj=5.6km s-min=4.1km az=177.0*
*BNS **12** 22:06:28.4±0.6, 51.°60N×6.°88E, h1km, ML2.2*
*BGR **12** 22:06:28.4±0.6, 51.°52N×6.°83E, h1km, ML2.3/6, Error ellipse: s-maj=8.9km s-min=5.6km az=123.0*

ISC 12 22:06:27.4±0.5,**51.°57N**±0.°03×**6.77E**±0.°03,**h0**km,**n79,** σ1§**18**/120,**1D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAUG	**Laupendahl**	**0.24**	**153**	*e*Pg	**Pg**	**22 06 33.2**	**+1.2**
LAUG				*e*Sg	**Sg**	**22 06 37.2**	**+2.1**
LAUG	**Laupendahl**	**0.24**	**153**	Pg	**Pg**	**22 06 33.2**	**+1.2**
LAUG				Sg	**Sg**	**22 06 37.2**	**+2.1**
BUG	**Bochum--Univer**	**0.34**	**112**	⇓*e*Pg	**Pg**	**22 06 34.4**	**+0.6**
BUG				Sg	**Sg**	**22 06 40.0**	**+1.8**
BNS	**Bensberg**	**0.66**	**157**	*e*Pg	**Pg**	**22 06 41.2**	**+1.3**
BNS	**Bensberg**	**0.66**	**157**	Pg	**Pg**	**22 06 41.2**	**+1.3**
HOBG	**Hohbusch**	**0.68**	**148**	*e*Pg	**Pg**	**22 06 41.1**	**+0.7**
HOBG	**Hohbusch**	**0.68**	**148**	Pg	**Pg**	**22 06 41.1**	**+0.6**
IBBN	**Ibbenburen**	**0.96**	**39**	*e*Pg	**Pg**	**22 06 45.4**	**-0.4**
	SNR=5.9						
IBBN				*e*Sg	**Sg**	**22 07 00.4**	**+2.1**
KLL	**Kalltalsperre**	**0.96**	**198**	*e*Pg	**Pg**	**22 06 47.3**	**+1.5**
KLL				*e*Sg	**Sg**	**22 07 02.0**	**+3.6**
	87nm,0.2s						
KLL	**Kalltalsperre**	**0.96**	**198**	Pg	**Pg**	**22 06 47.3**	**+1.5**
STB	**Steinbach**	**0.97**	**177**	*e*Pg	**Pg**	**22 06 47.6**	**+1.6**
STB				*e*Sg	**Sg**	**22 07 01.3**	**+2.6**
	74nm,0.3s						
STB	**Steinbach**	**0.97**	**177**	Pg	**Pg**	**22 06 47.6**	**+1.6**
BEBN	**Eben Emael**	**1.03**	**222**	P	**Pg**	**22 06 48.4**	**+1.3**
BEBN	**Eben Emael**	**1.03**	**222**	P	**Pg**	**22 06 48.4**	**+1.3**
MEM	**Membach**	**1.07**	**207**	P	**Pg**	**22 06 48.8**	**+0.9**
MEM	**Membach**	**1.07**	**207**	P	**Pg**	**22 06 48.8**	**+0.9**
HILG	**Hillesheim**	**1.28**	**183**	*e*Pg	**Pg**	**22 06 52.5**	**+0.7**
HILG	**Hillesheim**	**1.28**	**183**	Pg	**Pg**	**22 06 52.5**	**+0.7**
KOE	**Koeppel**	**1.29**	**152**	*e*Pg	**Pg**	**22 06 52.2**	**+0.1**
KOE	**Koeppel**	**1.29**	**152**	Pg	**Pg**	**22 06 52.2**	**0.0**
BCLA	**Clavier**	**1.48**	**219**	P	**Pn**	**22 06 55.1**	**-0.1**
BCLA	**Clavier**	**1.48**	**219**	P	**Pn**	**22 06 55.0**	**-0.1**
UCC	**Uccle**	**1.70**	**244**	P	**Pn**	**22 06 60.0**	**+1.7**
UCC	**Uccle**	**1.70**	**244**	P	**Pn**	**22 06 59.9**	**+1.7**
TNS	**Taunus Mts**	**1.71**	**141**	*e*Pn	**Pn**	**22 06 58.5**	**+0.1**
TNS				*e*Pg	**Pg**	**22 06 59.3**	**-1.0**
	SNR=3.4						
TNS				*e*Sg	**Sg**	**22 07 20.5**	**-2.0**
TNS	**Taunus Mts**	**1.71**	**141**	Pn	**Pn**	**22 06 58.5**	**0.0**
SNF	**Seneffe**	**1.89**	**237**	P	**Pn**	**22 07 00.9**	**0.0**
SNF	**Seneffe**	**1.89**	**237**	P	**Pn**	**22 07 00.8**	**-0.1**
GIVF	**Givet**	**1.92**	**221**	*e*Pg	**Pg**	**22 07 04.8**	**+0.7**
GIVF				*e*Sn	**Sn**	**22 07 24.7**	**-1.3**
GIVF				*e*Sg	**Sg**	**22 07 30.8**	**+1.9**
	21nm,0.2s						
GIVF	**Givet**	**1.92**	**221**	*e*Pn	**Pn**	**22 07 00.7**	**-0.5**
GIVF				*e*Pg	**Pg**	**22 07 04.8**	**+0.7**
GIVF				*e*Sn	**Sn**	**22 07 24.7**	**-1.3**
GIVF				*e*Sg	**Sg**	**22 07 30.8**	**+1.9**
GIVF	**Givet**	**1.92**	**221**	*e*Pn	**Pn**	**22 07 00.7**	**-0.5**
GIVF	**Givet**	**1.92**	**221**	*e*Pg	**Pg**	**22 07 04.8**	**+0.7**
GIVF				*e*Sg	**Sg**	**22 07 30.8**	**+1.9**
	11nm,0.2s						
WLF	**Walferdange**	**1.94**	**192**	P	**Pn**	**22 07 04.7**	**+3.1**
WLF	**Walferdange**	**1.94**	**192**	*e*Pg	**Pg**	**22 07 04.1**	**-0.5**
	SNR=3.0						
WLF				*e*Sg	**Sg**	**22 07 28.7**	**-1.1**
WLF	**Walferdange**	**1.94**	**192**	Pg	**Pg**	**22 07 04.1**	**-0.5**
	SNR=3.0						
WLF	**Walferdange**	**1.94**	**192**	P	**Pn**	**22 07 04.6**	**+3.0**
WLF				Sg	**Sg**	**22 07 28.7**	**-1.1**
GTTG	**Gvttingen**	**2.00**	**89**	*e*Sg	**Sg**	**22 07 31.7**	**+0.2**
GTTG	**Gvttingen**	**2.00**	**89**	Sg	**Sg**	**22 07 31.7**	**+0.2**
DOU	**Dourbes**	**2.02**	**224**	P	**Pn**	**22 07 02.8**	**+0.2**
DOU	**Dourbes**	**2.02**	**224**	P	**Pn**	**22 07 02.8**	**+0.2**
BAIF	**Baives**	**2.22**	**228**	*e*Pg	**Pg**	**22 07 10.3**	**+0.5**
BAIF				*e*Sn	**Sn**	**22 07 31.9**	**-1.5**
BAIF				*e*Sg	**Sg**	**22 07 40.4**	**+1.9**
	17nm,0.4s						
BAIF	**Baives**	**2.22**	**228**	*e*Pn	**Pn**	**22 07 04.7**	**-0.6**
BAIF				*e*Pg	**Pg**	**22 07 10.3**	**+0.5**
BAIF				*e*Sn	**Sn**	**22 07 31.9**	**-1.5**
BAIF				*e*Sg	**Sg**	**22 07 40.4**	**+1.9**
BAIF	**Baives**	**2.22**	**228**	*e*Pn	**Pn**	**22 07 04.7**	**-0.6**
BAIF	**Baives**	**2.22**	**228**	*e*Pg	**Pg**	**22 07 10.3**	**+0.5**
BAIF				*e*Sg	**Sg**	**22 07 40.4**	**+1.9**
	8.4nm,0.4s						
CLZ	**Clausthal**	**2.26**	**82**	*e*Sg	**Sg**	**22 07 36.7**	**-3.3**
CDF	**Champ du Feu**	**3.17**	**174**	*e*Pn	**Pn**	**22 07 18.1**	**-0.4**
CDF				*e*Sg	**Sg**	**22 08 08.7**	**-0.6**
	8.6nm,0.5s						
CDF	**Champ du Feu**	**3.17**	**174**	*e*Pn	**Pn**	**22 07 18.1**	**-0.4**
CDF				*e*Sg	**Sg**	**22 08 08.7**	**-0.6**
	4.3nm,0.5s						
MOX	**Moxa**	**3.19**	**105**	*e*PN	**Pn**	**22 07 18.7**	**-0.1**
MOX				*e*SG	**Sg**	**22 08 07.6**	**-2.3**
MOX	**Moxa**	**3.19**	**105**	*e*Pn	**Pn**	**22 07 18.8**	**+0.1**
	SNR=3.1						
MOX				*e*Sg	**Sg**	**22 08 06.7**	**-3.1**
MOX	**Moxa**	**3.19**	**105**	*e*Pn	**Pn**	**22 07 18.7**	**-0.1**
MOX				*e*Sg	**Sg**	**22 08 07.6**	**-2.3**
MEZF	**Maizieres J'vi**	**3.26**	**200**	*e*Pn	**Pn**	**22 07 19.4**	**-0.3**
	baz=23						
MEZF	**Maizieres J'vi**	**3.26**	**200**	*e*Pg	**Pg**	**22 07 29.4**	**-0.4**
MEZF				*e*Sg	**Sg**	**22 08 12.3**	**+0.2**
	6.3nm,0.4s						
MEZF	**Maizieres J'vi**	**3.26**	**200**	*e*Pn	**Pn**	**22 07 19.4**	**-0.3**
MEZF				*e*Pg	**Pg**	**22 07 29.4**	**-0.4**
MEZF				*e*Sg	**Sg**	**22 08 12.3**	**+0.2**
MEZF	**Maizieres J'vi**	**3.26**	**200**	*e*Pn	**Pn**	**22 07 19.4**	**-0.3**
	baz=23						
MEZF	**Maizieres J'vi**	**3.26**	**200**	*e*Pg	**Pg**	**22 07 29.4**	**-0.4**
MEZF				*e*Sg	**Sg**	**22 08 12.3**	**+0.2**
	3.2nm,0.4s						
SFTF	**Sexfontaines**	**3.55**	**199**	*e*Sg	**Sg**	**22 08 21.9**	**+0.7**
	5.4nm,0.3s						
SFTF	**Sexfontaines**	**3.55**	**199**	*e*Sg	**Sg**	**22 08 21.9**	**+0.7**
	2.7nm,0.3s						
HAU	**Haudompre**	**3.58**	**185**	*e*Pg	**Pg**	**22 07 35.0**	**-0.9**
HAU				*e*Sg	**Sg**	**22 08 22.0**	**-0.2**
	5.9nm,0.4s						
HAU	**Haudompre**	**3.58**	**185**	*e*Pg	**Pg**	**22 07 35.0**	**-0.9**
HAU				*e*Sg	**Sg**	**22 08 22.0**	**-0.2**
	3.0nm,0.4s						
HINF	**Hinteralfeld**	**3.75**	**179**	*e*Sg	**Sg**	**22 08 26.9**	**-1.0**
	2.6nm,0.3s						
HINF	**Hinteralfeld**	**3.75**	**179**	*e*Sg	**Sg**	**22 08 26.9**	**-1.0**
	1.3nm,0.3s						
CLL	**Collm**	**3.91**	**91**	*e*Sg	**Sg**	**22 08 31.0**	**-1.9**
BRG	**Berggiesshubel**	**4.56**	**96**	SG	**Sg**	**22 08 55.0**	**+1.1**
	1.5nm,0.5s						
LOR	**Lormes**	**4.70**	**205**	*e*Pn	**Pn**	**22 07 38.9**	**-0.6**
	baz=33						
LOR				*e*Sn	**Sn**	**22 08 31.5**	**-3.2**
LOR				*e*Sg	**Sg**	**22 08 58.0**	**-0.3**
	4.6nm,0.4s						
LOR	**Lormes**	**4.70**	**205**	*e*Pn	**Pn**	**22 07 38.9**	**-0.6**
	baz=33						
LOR				*e*Sn	**Sn**	**22 08 31.5**	**-3.2**
LOR				*e*Sg	**Sg**	**22 08 58.0**	**-0.3**
	2.3nm,0.4s						
SSF	**Saint Saulge**	**4.99**	**207**	*e*Pn	**Pn**	**22 07 42.7**	**-0.7**
SSF				*e*Sg	**Sg**	**22 09 06.3**	**-1.2**
	1.5nm,0.4s						
AVF	**Avril sur Loir**	**5.28**	**206**	*e*Pn	**Pn**	**22 07 46.5**	**-0.9**
AVF	**Avril sur Loir**	**5.28**	**206**	*e*Pn	**Pn**	**22 07 46.5**	**-0.9**
SMF	**Signal de Mont**	**5.29**	**202**	*e*Pn	**Pn**	**22 07 46.6**	**-0.9**
SMF	**Signal de Mont**	**5.29**	**202**	*e*Pn	**Pn**	**22 07 46.6**	**-0.9**
LDF	**La Druitiere**	**5.34**	**239**	*e*Pn	**Pn**	**22 07 47.9**	**-0.4**
LDF	**La Druitiere**	**5.34**	**239**	*e*Pn	**Pn**	**22 07 47.9**	**-0.4**
FLN	**La Foliniere**	**5.44**	**242**	*e*Pn	**Pn**	**22 07 48.6**	**-1.0**
	baz=59						
FLN	**La Foliniere**	**5.44**	**242**	*e*Pn	**Pn**	**22 07 48.6**	**-1.0**
	baz=59						
BGF	**Bois d'Agland**	**5.64**	**209**	*e*Pn	**Pn**	**22 07 51.0**	**-1.3**
BGF				*e*Sn	**Sn**	**22 08 53.5**	**-4.2**
BGF	**Bois d'Agland**	**5.64**	**209**	*e*Pn	**Pn**	**22 07 51.0**	**-1.3**
BGF				*e*Sn	**Sn**	**22 08 53.5**	**-4.2**
MFF	**Saint Martin d**	**6.73**	**225**	*e*Pn	**Pn**	**22 08 06.2**	**-1.1**
MFF	**Saint Martin d**	**6.73**	**225**	*e*Pn	**Pn**	**22 08 06.2**	**-1.1**

*FUNV **12** 22:16:14.9, 11.°50N×61.°96W, h128km, MW3.1*
*ISCJB **12** 22:16:14.7±0.5, 11.°36N±0.°03×62.°04W±0.°04, h129km±5km, Error ellipse: s-maj=6.1km s-min=3.7km az=24.3*
*TRN **12** 22:16:17.9, 11.°39N×61.°84W, h121km, MD3.3*
*NEIC **12** 22:16:17.9, 11.°39N×61.°84W, h121km, MD3.3(TRN), After TRN.*

ISC 12 22:16:15.4±0.6,**11.°36N**±0.°03×**62.°02W**±0.°03,**h128**km±5km, **n43,** σ1§**06**/78,**3C-2D, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TCE	**Chacachacare**	**0.71**	**158**	*e*P	**Pn**	**22 16 37.2**	**+1.6**
TCE				*e*S	**Sn**	**22 16 51.4**	**+0.5**
TCE	**Chacachacare**	**0.71**	**158**	*e*P	**Pn**	**22 16 37.2**	**+1.6**
TCE				*e*S	**Sn**	**22 16 51.4**	**+0.5**
GUIV	**Guiria**	**0.74**	**196**	⇑*e*P	**Pn**	**22 16 36.6**	**+0.8**
GUIV				*e*S	**Sn**	**22 16 51.7**	**+0.4**
GRGR	**Grenville**	**0.84**	**25**	*e*Pn	**Pn**	**22 16 36.9**	**+0.2**
GRGR				*e*Sn	**Sn**	**22 16 52.6**	**-0.2**
GRW	**Mount Saint Ca**	**0.87**	**24**	*e*P	**Pn**	**22 16 37.9**	**+1.0**
GRW				*e*S	**Sn**	**22 16 53.8**	**+0.6**
GRW	**Mount Saint Ca**	**0.87**	**24**	*e*P	**Pn**	**22 16 37.9**	**+1.0**
GRW				*e*S	**Sn**	**22 16 53.8**	**+0.6**
TRN	**Trinidad (W)**	**0.93**	**139**	*e*P	**Pn**	**22 16 39.2**	**+1.8**
TRN				*e*S	**Sn**	**22 16 54.0**	**-0.2**
TRN	**Trinidad (W)**	**0.93**	**139**	*e*P	**Pn**	**22 16 39.2**	**+1.8**
TRN				*e*S	**Sn**	**22 16 54.0**	**-0.2**
GRHS	**Sauteurs**	**0.93**	**23**	*e*P	**Pn**	**22 16 38.5**	**+1.1**
GRHS				*e*S	**Sn**	**22 16 54.4**	**+0.2**
GRHS	**Sauteurs**	**0.93**	**23**	*e*P	**Pn**	**22 16 38.5**	**+1.1**
GRHS				*e*S	**Sn**	**22 16 54.4**	**+0.2**
GRIC	**Isle de Caille**	**1.01**	**25**	*e*P	**Pn**	**22 16 39.4**	**+1.2**
GRIC				*e*S	**Sn**	**22 16 55.1**	**-0.4**
GRSS	**Sisters**	**1.01**	**23**	*e*P	**Pn**	**22 16 39.3**	**+1.1**
GRSS				*e*S	**Sn**	**22 16 54.8**	**-0.7**
GRSS	**Sisters**	**1.01**	**23**	*e*P	**Pn**	**22 16 39.3**	**+1.1**
GRSS				*e*S	**Sn**	**22 16 54.8**	**-0.7**
ITEV	**Isla Los Testi**	**1.09**	**270**	⇓*i*P	**Pn**	**22 16 38.6**	**-0.3**
ITEV				*e*S	**Sn**	**22 16 55.7**	**-1.1**
TPR	**Prospect**	**1.23**	**98**	*e*P	**Pn**	**22 16 41.4**	**+1.1**
TPR				*e*S	**Sn**	**22 16 57.1**	**-2.2**
TPR	**Prospect**	**1.23**	**98**	*e*P	**Pn**	**22 16 41.4**	**+1.1**
TPR				*e*S	**Sn**	**22 16 57.1**	**-2.2**
TBH	**Brigand Hill**	**1.28**	**133**	*e*P	**Pn**	**22 16 42.8**	**+2.0**
TBH				*e*S	**Sn**	**22 16 59.0**	**-1.3**
TBH	**Brigand Hill**	**1.28**	**133**	*e*P	**Pn**	**22 16 42.8**	**+2.0**
TBH				*e*S	**Sn**	**22 16 59.0**	**-1.3**
BOT	**Bacolet**	**1.29**	**98**	*e*P	**Pn**	**22 16 41.9**	**+0.9**
BOT				*e*S	**Sn**	**22 16 58.4**	**-2.1**
BOT	**Bacolet**	**1.29**	**98**	*e*P	**Pn**	**22 16 41.9**	**+0.9**
BOT				*e*S	**Sn**	**22 16 58.4**	**-2.1**
CRUV	**Carupano**	**1.38**	**240**	*e*P	**Pn**	**22 16 41.5**	**-0.4**
CRUV				*e*S	**Sn**	**22 17 02.1**	**-0.1**
TOSP	**Speyside**	**1.46**	**92**	⇑*i*P	**Pn**	**22 16 43.5**	**+0.7**
TOSP				*e*S	**Sn**	**22 17 01.1**	**-2.5**
GUNV	**Guanoco**	**1.50**	**217**	*e*P	**Pn**	**22 16 44.4**	**+1.1**
GUNV				*e*S	**Sn**	**22 17 05.8**	**+1.2**
FCV	**Fort Charlotte**	**1.94**	**23**	*e*P	**Pn**	**22 16 49.1**	**+0.6**
FCV				*e*S	**Sn**	**22 17 12.8**	**-1.0**
FCV	**Fort Charlotte**	**1.94**	**23**	*e*P	**Pn**	**22 16 49.1**	**+0.6**
FCV				*e*S	**Sn**	**22 17 12.8**	**-1.0**
SVB	**Belmont**	**2.04**	**21**	*e*P	**Pn**	**22 16 50.0**	**+0.3**
SVB				*e*S	**Sn**	**22 17 15.3**	**-0.7**
SVB	**Belmont**	**2.04**	**21**	*e*P	**Pn**	**22 16 50.0**	**+0.3**
SVB				*e*S	**Sn**	**22 17 15.3**	**-0.7**
SVV	**Soufriere Volc**	**2.10**	**22**	*e*P	**Pn**	**22 16 51.0**	**+0.5**
SVV				*e*S	**Sn**	**22 17 17.1**	**-0.2**
SVV	**Soufriere Volc**	**2.10**	**22**	*e*P	**Pn**	**22 16 51.0**	**+0.5**
SVV				*e*S	**Sn**	**22 17 17.1**	**-0.2**
SSV	**Crater Summit**	**2.11**	**22**	*e*P	**Pn**	**22 16 51.4**	**+0.7**
SSV				*e*S	**Sn**	**22 17 18.0**	**+0.4**
SSV	**Crater Summit**	**2.11**	**22**	*e*P	**Pn**	**22 16 51.4**	**+0.7**
SSV				*e*S	**Sn**	**22 17 16.8**	**-0.8**
IBAV	**Isla La Blanqu**	**2.55**	**281**	*e*P	**Pn**	**22 16 54.7**	**-1.4**
MCLT	**Moule a Chique**	**2.56**	**24**	*e*P	**Pn**	**22 16 58.4**	**+2.2**
MCLT				*e*S	**Sn**	**22 17 26.2**	**-1.5**
MCLT	**Moule a Chique**	**2.56**	**24**	*e*P	**Pn**	**22 16 58.4**	**+2.2**
MCLT				*e*S	**Sn**	**22 17 26.2**	**-1.5**
PCRV	**Puerto La Cruz**	**2.83**	**246**	*e*P	**Pn**	**22 16 59.7**	**0.0**
RIOV	**Rio Grande**	**3.28**	**176**	*e*P	**Pn**	**22 17 05.7**	**+0.1**
RIOV				*e*S	**Sn**	**22 17 43.5**	**-0.8**
PRGV	**PARIAGUAN**	**3.66**	**225**	*e*P	**Pn**	**22 17 10.5**	**-0.1**
GURV	**El Guri**	**3.73**	**196**	*e*P	**Pn**	**22 17 11.9**	**+0.3**
BIRV	**Birongo**	**4.27**	**259**	*e*P	**Pn**	**22 17 18.5**	**-0.1**
LUEV	**Luepa**	**5.51**	**174**	⇑*e*P	**Pn**	**22 17 34.3**	**-1.1**
LUEV				*e*S	**Sn**	**22 18 33.6**	**-4.1**
TURV	**Turiamo**	**5.79**	**262**	*e*P	**Pn**	**22 17 38.1**	**-0.9**
CAOV	**Caicara del Or**	**5.84**	**227**	*e*P	**Pn**	**22 17 38.5**	**-1.3**
BAUV	**El Baul**	**6.40**	**248**	⇓*e*P	**Pn**	**22 17 45.2**	**-2.1**

IDC 12 22:17:41.5±4.3,**10.°01S**×**152.°14E, h0**km,**mb3.8/5, mb1 3.9**/6,**mb1mx3.7**/15,**mbtmp3.8/6, ML3.2/1, Error ellipse: s-maj=135.2km s-min=28.1km az=119.0, D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.81**	**238**	P	Pn	22 22 14.6	-0.7
	0.1nm,0.3s,baz=59,slow=10,SNR=5.6						
ASAR	**Alice Springs**	**22.08**	**230**	P	P	22 22 39.1	+0.8
	1.7nm,0.6s,baz=59,slow=8.9,SNR=25						
FITZ	**Fitzroy Crossi**	**26.91**	**250**	P	P	22 23 23.2	-1.4
	1.6nm,0.9s,baz=90,slow=10,SNR=3.7						
SONM	**Songino Array**	**70.39**	**329**	P	P	22 28 59.0	+1.6
	0.3nm,0.5s,baz=158,slow=4.3,SNR=3.8						
MKAR	**Makanchi Array**	**83.81**	**320**	P	P	22 30 13.2	+0.4
	0.3nm,0.2s,baz=91,slow=8.6,SNR=2.7						
ZALV	**Zalesovo Beam**	**85.11**	**327**	P	P	22 30 18.0	-1.2
	0.4nm,0.3s,baz=147,slow=3.4,SNR=2.5						
TORD	**Torodi Ar. Bea**	**150.88**	**279**	PKPbc	PKPbc	22 37 36.8	-0.4
	0.2nm,0.6s,baz=64,slow=3.4,SNR=3.3						

*ISCJB **12** 22:22:57.2±1.1, 6.°09S±0.°06×127.°56E±0.°09, h393km±15km, mb4.0/22, Error ellipse: s-maj=15.6km s-min=7.9km az=155.2*
*IDC **12** 22:23:00.6±2.3, 6.°19S×127.°59E, h418km±28km, mb3.4/10, mb1 3.5/13, mb1mx3.4/20, mbtmp3.4/13, Error ellipse: s-maj=20.6km s-min=9.4km az=69.0*
*NEIC **12** 22:23:00.4±1.0, 6.°16S×127.°52E, h415km±14km, mb4.3/13, Error ellipse: s-maj=12.9km s-min=7.6km az=223.0*

ISC 12 22:23:00.6±1.2,**6.°20S**±0.°06×**127.°54E**±0.°10,**h418**km±15km, **n36,** σ0§**61**/39,**mb4.0**/22,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**8.07**	**144**	*e*P	**P**	**22 24 56.5**	**0.0**
	306nm,0.6s						
KAKA				*e*S	**S**	**22 26 26.3**	**-5.3**
FITZ	**Fitzroy Crossi**	**11.97**	**189**	P	**P**	**22 25 39.5**	**0.0**
	0.4nm,0.3s,baz=30,slow=9.1,SNR=11						
FITZ	**Fitzroy Crossi**	**11.97**	**189**	*e*P	**P**	**22 25 39.7**	**+0.2**
FITZ				*e*S	**S**	**22 27 50.6**	**-0.2**
WRAB	**Tennant Creek**	**15.17**	**155**	*e*P	**P**	**22 26 15.0**	**+0.7**
	9.4nm,0.8s						
WRA	**Warramunga Arr**	**15.17**	**155**	P	**P**	**22 26 14.2**	**-0.2**
	1.6nm,0.3s,baz=331,slow=11,SNR=67						
WRA				S	**S**	**22 28 53.2**	**-1.5**
	0.4nm,0.3s,baz=341,slow=24,SNR=5.0						
MBWA	**Marble Bar**	**16.68**	**206**	*e*P	**P**	**22 26 30.9**	**+0.4**
ASAR	**Alice Springs**	**18.41**	**161**	P	**P**	**22 26 49.0**	**+0.3**
	0.8nm,0.3s,baz=349,slow=13,SNR=23						
ASAR				pP		22 27 44.8	
	0.1nm,0.3s,baz=341,slow=12,SNR=2.4						
ASAR				S	**S**	**22 29 56.9**	**+0.3**
	0.2nm,0.3s,baz=338,slow=18,SNR=13						
KSM	**Kuching**	**18.82**	**293**	*e*P	**P**	**22 26 52.8**	**-0.3**
	15nm,0.6s						
STKA	**Stephens Creek**	**28.73**	**155**	P	**P**	**22 28 22.6**	**+0.6**
	1.3nm,0.5s,mb3.5,baz=333,slow=11,SNR=2.8						
STKA				pP		22 29 35.9	
	1.8nm,0.7s,baz=316,slow=10,SNR=3.6						
PSI	**Prapat**	**29.94**	**287**	P	**P**	**22 28 33.3**	**+0.5**
	23nm,0.8s,mb4.6,baz=61,slow=3.7,SNR=17						
CMAR	**Chiang Mai Arr**	**37.36**	**312**	P	**P**	**22 29 36.1**	**+0.3**
	3.4nm,0.6s,mb3.9,baz=135,slow=7.0,SNR=19						
KSRS	**Korea Array**	**43.43**	**0**	P	**P**	**22 30 24.4**	**-0.2**
	1.1nm,0.6s,mb3.3,baz=178,slow=9.8,SNR=6.8						
MJAR	**Matsushiro Arr**	**43.68**	**12**	P	**P**	**22 30 25.3**	**-1.2**
	2.3nm,0.5s,mb3.8,baz=191,slow=9.2,SNR=10						
LSA	**Lhasa**	**49.95**	**318**	*e*P	**P**	**22 31 15.4**	**+1.0**
	2.2nm,0.6s,mb3.7						
ODAN	**Odare**	**50.90**	**312**	*e*P	**P**	**22 31 20.8**	**-0.7**
	13nm,0.5s,mb4.4						
TAPN	**Taplejung**	**50.94**	**313**	*e*P	**P**	**22 31 21.9**	**+0.1**
	14nm,0.4s,mb4.6						
RAMN	**Ramite**	**51.53**	**312**	*e*P	**P**	**22 31 25.1**	**-1.1**
	27nm,0.6s,mb4.7						
JIRN	**Jiri**	**52.23**	**312**	*e*P	**P**	**22 31 31.1**	**-0.1**
	6.7nm,0.3s,mb4.3						
GUN	**Gumba**	**52.60**	**312**	*e*P	**P**	**22 31 33.7**	**-0.2**
	26nm,0.6s,mb4.6						
PKI	**Pulchoki**	**52.76**	**312**	*e*P	**P**	**22 31 34.3**	**-0.8**
	8.4nm,0.5s,mb4.2						
PKI	**Pulchoki**	**52.76**	**312**	*e*P	**P**	**22 31 34.5**	**-0.6**
	5.0nm,0.4s,mb4.1						
PKIN	**Phulchoki**	**52.77**	**312**	*e*P	**P**	**22 31 34.5**	**-0.6**
	5.0nm,0.4s,mb4.1						
KKN	**Kakani**	**52.98**	**312**	*e*P	**P**	**22 31 36.3**	**-0.3**
	11nm,0.6s,mb4.3						
SONM	**Songino Array**	**56.94**	**343**	P	**P**	**22 32 05.2**	**+1.0**
	0.4nm,0.4s,mb3.1,baz=156,slow=9.0,SNR=3.4						
PETK	**Petropavlovsk-**	**64.37**	**20**	P	**P**	**22 32 54.3**	**+0.8**
	3.0nm,0.6s,mb4.0,baz=178,slow=3.0,SNR=11						
MK31	**Makanchi Array**	**66.24**	**328**	*e*P	**P**	**22 33 05.9**	**+0.4**
MKAR	**Makanchi Array**	**66.24**	**328**	P	**P**	**22 33 05.8**	**+0.4**
	1.4nm,0.4s,mb3.9,baz=97,slow=10,SNR=19						
TKM2	**Tokmak 2**	**67.83**	**321**	*e*P	**P**	**22 33 15.9**	**+0.5**
	1.1nm,0.6s,mb3.7						
UCH	**Uchtor**	**68.14**	**320**	*e*P	**P**	**22 33 18.2**	**+0.8**
	1.3nm,0.7s,mb3.7						
AAK	**Ala-Archa**	**68.36**	**321**	P	**P**	**22 33 18.7**	**0.0**
KBL	**Kabul**	**68.39**	**311**	*e*P	**P**	**22 33 18.6**	**-0.5**
EKS2	**Erkin-Say**	**68.83**	**320**	*e*P	**P**	**22 33 22.3**	**+0.7**
ZALV	**Zalesovo Beam**	**69.81**	**335**	P	**P**	**22 33 26.4**	**-0.9**
	1.4nm,0.4s,mb3.8,baz=128,slow=4.0,SNR=5.3						
KURK	**Kurchatov**	**70.58**	**329**	*e*P	**P**	**22 33 31.3**	**-0.7**
	3.8nm,1.0s,mb3

TCU	**Taichung**	**0.82**	**277**	*e*P	**Pb**	**22 28 20.6**	**-0.2**
	baz=276						
TCU				*e*S	**Sb**	**22 28 32.9**	**+1.2**
	baz=276						
NSY	**Sanyi**	**0.83**	**297**	⇑*i*P	**Pb**	**22 28 21.2**	**+0.4**
	baz=306						
NSY				*e*S	**Sb**	**22 28 31.9**	**+0.1**
	baz=306						
WNT	**Mingjian**	**0.83**	**259**	*e*P	**Pb**	**22 28 21.6**	**+0.7**
	baz=255						
ALS	**Alishan**	**0.88**	**233**	⇓P	**Pb**	**22 28 21.6**	**-0.2**
	baz=229						
ALS				*e*S	**Sb**	**22 28 33.2**	**-0.1**
	baz=229						
CHN5	**Tsauling**	**0.93**	**242**	P	**Pb**	**22 28 22.4**	**-0.2**
	baz=237						
CHN5				S	**Sb**	**22 28 35.9**	**+1.1**
	baz=237						
TATO	**Taipei**	**0.93**	**355**	*e*P	**Pb**	**22 28 22.4**	**-0.3**
TATO				*e*S	**Sb**	**22 28 35.1**	**+0.3**
HSN	**Hsinchu**	**0.93**	**324**	*e*P	**Pb**	**22 28 24.2**	**+1.5**
	baz=333						
TWA	**Mucha**	**0.93**	**1**	*e*P	**Pb**	**22 28 22.1**	**-0.6**
	baz=358						
TWA				*e*S	**Sb**	**22 28 35.2**	**+0.4**
	baz=358						
NCU	**National Centr**	**0.98**	**339**	*e*P	**Pb**	**22 28 24.2**	**+0.6**
	baz=343						
NCU				S	**Sb**	**22 28 38.4**	**+2.0**
	baz=343						
WGK	**Gukeng**	**0.99**	**249**	*e*P	**Pb**	**22 28 24.8**	**+1.1**
	baz=244						
ELDTW	**Lidau**	**0.99**	**211**	*e*P	**Pb**	**22 28 22.2**	**-1.5**
	baz=200						
TAP1	**Taipei**	**0.99**	**358**	P	**Pb**	**22 28 24.1**	**+0.4**
	baz=2.0						
TAP1				*e*S	**Sb**	**22 28 35.9**	**-0.7**
	baz=2.0						
NWF	**Wu-fen Shan**	**1.04**	**11**	*e*P	**Pb**	**22 28 24.2**	**-0.4**
	baz=14						
NWF				*e*S	**Sb**	**22 28 37.8**	**-0.1**
	baz=14						
TWS1	**Kuangyinshan**	**1.06**	**353**	*e*P	**Pb**	**22 28 25.0**	**+0.1**
	baz=356						
TWS1				*e*S	**Sb**	**22 28 39.7**	**+1.2**
	baz=356						
CHY	**Chiayi**	**1.18**	**243**	*e*P	**Pn**	**22 28 27.6**	**+0.9**
	baz=239						
CHY				*e*S	**Sb**	**22 28 43.0**	**+1.0**
	baz=239						
WTP	**Ta-pu**	**1.18**	**228**	*i* P	**Pn**	**22 28 26.9**	**+0.1**
	baz=214						
WTP				*e*S	**Sb**	**22 28 42.7**	**+0.7**
	baz=214						
WTCT	**Ta-ch'eng**	**1.19**	**262**	*e*P	**Pn**	**22 28 27.3**	**+0.4**
	baz=257						
TWY	**Chenhua**	**1.23**	**1**	*e*P	**Pn**	**22 28 27.7**	**+0.3**
	baz=8.0						
TWK	**Hsinying**	**1.26**	**232**	*e*P	**Pn**	**22 28 28.2**	**+0.4**
	baz=228						
TWK				*e*S	**Sb**	**22 28 45.0**	**+0.8**
	baz=228						
CHN1	**Nanshi**	**1.28**	**228**	P	**Pn**	**22 28 28.5**	**+0.4**
	baz=224						
CHN1				*e*S	**Sb**	**22 28 46.6**	**+1.7**
	baz=224						
WSF	**Szhu**	**1.30**	**252**	*e*P	**Pn**	**22 28 27.4**	**-1.0**
	baz=247						
TWG	**Pinlang**	**1.30**	**201**	*e*P	**Pn**	**22 28 28.3**	**-0.1**
	baz=183						
SGST	**Jiashian**	**1.32**	**224**	*e*P	**Pn**	**22 28 29.2**	**+0.6**
	baz=208						
SGST				*e*S	**Sn**	**22 28 47.6**	**+1.7**
	baz=208						
YOJ	**Yonaguni jima**	**1.38**	**72**	P	**Pn**	**22 28 28.9**	**-0.6**
YOJ				S	**Sn**	**22 28 46.9**	**-0.5**
CHN8	**Yiju**	**1.43**	**241**	*e*P	**Pn**	**22 28 31.4**	**+1.2**
	baz=233						
ECL	**Taimali**	**1.55**	**202**	*e*P	**Pn**	**22 28 30.7**	**-1.1**
	baz=187						
SSD	**Sandimen**	**1.55**	**214**	*e*P	**Pn**	**22 28 32.3**	**+0.5**
	baz=208						
PCYT	**Pengchaiyu**	**1.64**	**16**	*e*P	**Pn**	**22 28 32.6**	**-0.5**
	baz=16						
EAST	**Anshuo**	**1.78**	**202**	*e*P	**Pn**	**22 28 35.5**	**+0.5**
	baz=190						
SCZT	**Fangliau**	**1.88**	**208**	*e*P	**Pn**	**22 28 38.2**	**+1.8**
	baz=201						
PNG	**Penghu**	**1.91**	**256**	*e*P	**Pn**	**22 28 36.2**	**-0.5**
	baz=248						
IRIF	**Iriomote-Funau**	**1.99**	**81**	P	**Pn**	**22 28 37.8**	**-0.1**
IRIF				S	**Sn**	**22 29 02.3**	**-0.3**
LAY	**Lan-yu**	**2.00**	**180**	*e*P	**Pn**	**22 28 36.0**	**-2.0**
	baz=170						
HATJ	**Hateruma jima**	**2.04**	**89**	P	**Pn**	**22 28 38.8**	**+0.2**
HATJ				S	**Sn**	**22 29 03.6**	**-0.2**
TWK1	**Hengchun**	**2.21**	**199**	*e*P	**Pn**	**22 28 42.3**	**+1.5**
	baz=190						
JKRS	**Kuro-shima**	**2.24**	**85**	P	**Pn**	**22 28 41.4**	**+0.1**
JKRS				S	**Sn**	**22 29 09.0**	**+0.4**
JIJ	**Ishigaki jima**	**2.37**	**82**	P	**Pn**	**22 28 42.7**	**-0.4**
JIJ				S	**Sn**	**22 29 10.8**	**-1.1**
JTJ	**Tarama**	**2.92**	**78**	P	**Pn**	**22 28 50.5**	**-0.1**
JTJ				S	**Sn**	**22 29 24.6**	**-0.8**

*CSEM **12** 22:29:21.4±0.2, 37°.85N×21°.36E, h20km, MD2.8, Error ellipse: s-maj=5.1km s-min=4.2km az=86.0*
*ATH **12** 22:29:21.5, 37°.83N×21°.39E, h19km±3km, MD2.8/9*
*THE **12** 22:29:21.8, 37°.85N×21°.39E, h17km±4km, ML2.7/6, Error ellipse: s-maj=4.4km s-min=0.8km az=262.0*
*NEIC **12** 22:29:21.5, 37°.83N×21°.39E, h19km, MD2.8(ATH), After ATH.*
*ISCJB **12** 22:29:21.7±0.6, 37°.85N±0°.03×21°.36E±0°.04, h26km±4km, Error ellipse: s-maj=5.7km s-min=5.1km az=9.3*
ISC 12 22:29:21.6±0.6, 37°.84N±0°.03×21°.36E±0°.04, h23km±5km, n39, σ0s87/60, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.24**	**22**	*e*Pb	**Pb**	**22 29 27.0**	**-0.5**
RLS				*e*Sb	**Sb**	**22 29 31.1**	**-0.5**
RLS	**Riolos of Patr**	**0.24**	**22**	*e*PB	**Pb**	**22 29 27.0**	**-0.5**
RLS				*e*SB	**Sb**	**22 29 31.1**	**-0.5**
RLS	**Riolos of Patr**	**0.24**	**22**	*e*Pb	**Pb**	**22 29 27.0**	**-0.5**
KFL	**Anninata**	**0.53**	**301**	P	**Pb**	**22 29 32.7**	**+0.6**
UPR	**University Cam**	**0.56**	**37**	*e*PN	**Pn**	**22 29 32.9**	**-1.2**
UPR				*e*SN	**Sb**	**22 29 41.0**	**+0.7**
UPR	**University Cam**	**0.56**	**37**	*e*Pn	**Pn**	**22 29 32.9**	**-1.2**
UPR				*e*Sn	**Sb**	**22 29 41.0**	**+0.7**
LAKA	**Lakka**	**0.64**	**51**	P	**Pb**	**22 29 33.3**	**-0.7**
LAKA				S	**Sb**	**22 29 42.9**	**+0.4**
LAKA	**Lakka**	**0.64**	**51**	P	**Pb**	**22 29 33.3**	**-0.7**
LAKA				S	**Sb**	**22 29 42.9**	**+0.4**
VLS	**Valsamata**	**0.69**	**300**	*e*Pn	**Pn**	**22 29 35.4**	**-0.6**
VLS				*e*Sn	**Sn**	**22 29 46.3**	**+0.3**
VLS	**Valsamata**	**0.69**	**300**	P	**Pb**	**22 29 35.2**	**+0.2**
VLS	**Valsamata**	**0.69**	**300**	*e*PN	**Pn**	**22 29 35.4**	**-0.6**
VLS				*e*SN	**Sn**	**22 29 46.3**	**+0.3**
VLS	**Valsamata**	**0.69**	**300**	P	**Pb**	**22 29 35.2**	**+0.2**
VLS				*e*Sn	**Sn**	**22 29 46.3**	**+0.3**
EFP	**Efpalio**	**0.73**	**36**	P	**Pb**	**22 29 34.8**	**-0.8**
EFP				S	**Sb**	**22 29 46.0**	**+0.8**
EFP	**Efpalio**	**0.73**	**36**	*e*PB	**Pb**	**22 29 34.8**	**-0.8**
EFP				*e*SN	**Sn**	**22 29 46.1**	**-0.8**
EFP	**Efpalio**	**0.73**	**36**	P	**Pb**	**22 29 34.8**	**-0.8**
EFP				S	**Sb**	**22 29 46.0**	**+0.8**
TRIZ	**Trizonia**	**0.77**	**47**	P	**Pb**	**22 29 35.5**	**-0.8**
TRIZ				S	**Sb**	**22 29 47.3**	**+0.9**
TRIZ	**Trizonia**	**0.77**	**47**	P	**Pb**	**22 29 35.5**	**-0.8**
TRIZ				S	**Sb**	**22 29 47.3**	**+0.9**
GUR	**Goura**	**0.79**	**82**	P	**Pb**	**22 29 35.4**	**-1.2**
GUR				S	**Sb**	**22 29 46.7**	**-0.1**
GUR	**Goura**	**0.79**	**82**	*e*PB	**Pb**	**22 29 35.5**	**-1.1**
GUR				*e*SN	**Sn**	**22 29 46.6**	**-1.7**
GUR	**Goura**	**0.79**	**82**	P	**Pb**	**22 29 35.4**	**-1.2**
GUR				S	**Sb**	**22 29 46.7**	**-0.1**
ITM	**Ithomi**	**0.80**	**145**	*e*Pn	**Pn**	**22 29 37.3**	**-0.1**
ITM	**Ithomi**	**0.80**	**145**	P	**Pb**	**22 29 37.0**	**+0.3**
ITM	**Ithomi**	**0.80**	**145**	*e*PN	**Pn**	**22 29 37.3**	**-0.1**
ITM	**Ithomi**	**0.80**	**145**	P	**Pb**	**22 29 37.0**	**+0.3**
ITM	**Ithomi**	**0.80**	**145**	*e*Pn	**Pn**	**22 29 37.3**	**-0.1**
KALE	**Kalithea**	**0.83**	**48**	P	**Pb**	**22 29 36.4**	**-0.9**
KALE				S	**Sb**	**22 29 48.6**	**+0.6**
KALE	**Kalithea**	**0.83**	**48**	P	**Pb**	**22 29 36.4**	**-0.9**
KALE				S	**Sb**	**22 29 48.6**	**+0.6**
VLX	**Vlachokerasia**	**0.94**	**120**	P	**Pb**	**22 29 39.1**	**0.0**
VLX				S	**Sb**	**22 29 52.2**	**+1.1**
VLX	**Vlachokerasia**	**0.94**	**120**	P	**Pb**	**22 29 39.1**	**0.0**
VLX				S	**Sb**	**22 29 52.2**	**+1.1**
PYL	**PYLOS**	**0.99**	**162**	P	**Pb**	**22 29 39.6**	**-0.4**
PYL	**PYLOS**	**0.99**	**162**	*e*PN	**Pb**	**22 29 39.6**	**-0.4**
PYL	**PYLOS**	**0.99**	**162**	P	**Pb**	**22 29 39.6**	**-0.4**
EVR	**Evrytania**	**1.14**	**18**	*e*Pn	**Pn**	**22 29 42.8**	**+0.8**
EVR	**Evrytania**	**1.14**	**18**	*e*PN	**Pn**	**22 29 42.8**	**+0.8**
EVR	**Evrytania**	**1.14**	**18**	*e*Pn	**Pn**	**22 29 42.8**	**+0.8**
LTK	**Loutraki**	**1.29**	**81**	*e*PN	**Pn**	**22 29 45.8**	**+1.7**
LTK	**Loutraki**	**1.29**	**81**	*e*Pn	**Pn**	**22 29 45.8**	**+1.7**
LKR	**Lokris**	**1.53**	**57**	*e*Pn	**Pn**	**22 29 49.8**	**+2.4**
LKR	**Lokris**	**1.53**	**57**	*e*PN	**Pn**	**22 29 49.8**	**+2.4**

*GII **12** 22:39:41.5±0.5, 33°.30N×35°.45E, h2km±2km, Md2.0/6*
*CSEM **12** 22:39:41.3±0.3, 33°.34N×35°.46E, h8km, ML3.0, Error ellipse: s-maj=12.0km s-min=4.5km az=94.0*
*GRAL **12** 22:39:41.5±0.4, 33°.31N×35°.44E, h15km±8km, MD3.0*
*ISCJB **12** 22:39:41.0±0.5, 33°.32N±0°.03×35°.45E±0°.05, h14km±6km, Error ellipse: s-maj=7.8km s-min=4.5km az=25.2*
ISC 12 22:39:41.3±0.6, 33°.34N±0°.02×35°.45E±0°.05, h11km±9km, n19, σ0s48/28, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.18**	**325**	*e*P	**Pg**	**22 39 45.8**	**+0.6**
MATL	**Matarih**	**0.18**	**325**	*e*P	**Pg**	**22 39 45.8**	**+0.5**
KSDI	**Kefar Szold**	**0.23**	**131**	Pg	**Pg**	**22 39 45.9**	**-0.2**
KSDI				Sg	**Sg**	**22 39 49.2**	**-0.1**
HRI	**Mount Hermon**	**0.25**	**108**	Pg	**Pg**	**22 39 46.4**	**0.0**
MMA0B	**Mount Meron ar**	**0.33**	**187**	Pg	**Pg**	**22 39 47.4**	**-0.5**
MMA0B				Sg	**Sg**	**22 39 52.5**	**+0.2**
MMA3	**Mount Meron ar**	**0.33**	**188**	Pg	**Pg**	**22 39 47.6**	**-0.3**
RCY	**Rachaya**	**0.34**	**65**	*e*P	**Pg**	**22 39 48.6**	**+0.5**
RCY	**Rachaya**	**0.34**	**65**	*e*P	**Pg**	**22 39 48.6**	**+0.6**
HNTI	**Hanita**	**0.35**	**222**	Pg	**Pg**	**22 39 48.5**	**+0.3**
HNTI				Sg	**Sg**	**22 39 53.1**	**+0.2**
KSHT	**Keshet**	**0.47**	**140**	Pg	**Pg**	**22 39 50.8**	**+0.4**
BHL	**Bhannes**	**0.58**	**16**	*e*P	**Pg**	**22 39 52.5**	**-0.1**
BHL				*e*S	**Sg**	**22 40 01.0**	**+0.6**
BHL	**Bhannes**	**0.58**	**16**	*e*P	**Pg**	**22 39 52.5**	**-0.2**
BHL				*e*S	**Sg**	**22 40 01.0**	**+0.6**
BLGI	**Bet Lehem HaGe**	**0.65**	**200**	Pg	**Pg**	**22 39 53.8**	**0.0**
OFRI	**'Ofer**	**0.82**	**209**	Pg	**Pg**	**22 39 57.0**	**-0.1**
MMLI	**Mount Malkishu**	**0.90**	**182**	Pg	**Pg**	**22 39 58.1**	**-0.6**
MMLI				Sg	**Sg**	**22 40 11.1**	**+0.7**
HWQ	**Hawqa**	**1.02**	**24**	*e*P	**Pg**	**22 40 01.1**	**+0.2**
HWQ				*e*S	**Sg**	**22 40 13.2**	**-1.0**
HMDT	**Nahal Hemdat**	**1.09**	**177**	Pg	**Pg**	**22 40 01.4**	**-0.8**
HMDT				Sg	**Sg**	**22 40 17.1**	**+0.8**
SLTI	**Sal'it**	**1.15**	**198**	Pg	**Pg**	**22 40 02.9**	**-0.5**
SLTI				Sg	**Sg**	**22 40 17.9**	**-0.5**
DSI	**Dead Sea**	**1.77**	**182**	Pn	**Pn**	**22 40 12.2**	**+0.5**

*NEIC **12** 22:51:48.4, 35°.84N×31°.45E, h5km, MD3.7(ISK), ML3.6(NIC), After ISK.*
*HLW **12** 22:51:49.2, 36°.23N×31°.49E, h32km±31km, Md3.6, Ml3.7*
*ISCJB **12** 22:51:52.1±0.8, 35°.84N±0°.03×31°.45E±0°.03, h30km±8km, Error ellipse: s-maj=4.9km s-min=3.3km az=43.3*
*CSEM **12** 22:51:52.6±0.1, 35°.88N×31°.48E, h20km, Mw3.1, Error ellipse: s-maj=4.4km s-min=3.1km az=44.0*
*NIC **12** 22:51:53.3±0.2, 36°.01N×31°.89E, h5km, ML3.6, MW3.1*
*DDA **12** 22:51:53.5, 36°.17N×31°.49E, h22km±2km, Md3.5*
ISC 12 22:51:53.3±0.9, 35°.87N±0°.02×31°.50E±0°.03, h28km±8km, n85, σ1s05/113, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZI	**Gazipasa**	**0.75**	**61**	*i* P	**Pb**	**22 52 06.9**	**-0.9**
GAZI				*i* S	**Sb**	**22 52 16.6**	**-1.1**
GAZI	**Gazipasa**	**0.75**	**61**	*i* P	**Pb**	**22 52 06.9**	**-0.9**
GAZI				*i* S	**Sb**	**22 52 16.6**	**-1.1**
ALFC	**Alevga**	**1.14**	**128**	P	**Pn**	**22 52 12.9**	**-0.4**
	16nm,0.2s						
ALFC				S	**Sn**	**22 52 27.3**	**-0.7**
ALFC	**Alevga**	**1.14**	**128**	P	**Pn**	**22 52 12.9**	**-0.4**
	16nm,0.2s						
PPCY	**Paphos**	**1.20**	**145**	P	**Pn**	**22 52 15.4**	**+1.3**
PPCY				S	**Sn**	**22 52 32.4**	**+2.9**
PPCY	**Paphos**	**1.20**	**145**	P	**Pn**	**22 52 15.4**	**+1.3**
PPCY				S	**Sn**	**22 52 32.4**	**+2.9**
HDMB	**Hadim**	**1.35**	**36**	Pn	**Pn**	**22 52 16.0**	**-0.2**
HDMB	**Hadim**	**1.35**	**36**	Pn	**Pn**	**22 52 16.0**	**-0.2**
LEF	**Lefka**	**1.36**	**123**	Pn	**Pn**	**22 52 15.3**	**-1.0**
LEF	**Lefka**	**1.36**	**123**	Pn	**Pn**	**22 52 15.3**	**-1.0**
ERMK	**Ermenek**	**1.38**	**56**	*i* P	**Pn**	**22 52 17.1**	**+0.6**
ERMK				*i* S	**Sn**	**22 52 33.8**	**0.0**
ERMK	**Ermenek**	**1.38**	**56**	*i* P	**Pn**	**22 52 17.1**	**+0.6**
ERMK				*i* S	**Sn**	**22 52 33.8**	**0.0**
KORT	**Korkueli**	**1.46**	**321**	*i* P	**Pn**	**22 52 17.1**	**-0.6**
KORT	**Korkueli**	**1.46**	**321**	*i* P	**Pn**	**22 52 17.1**	**-0.6**
ELL	**Elmali**	**1.56**	**305**	Pn	**Pn**	**22 52 18.4**	**-0.7**
ELL	**Elmali**	**1.56**	**305**	Pn	**Pn**	**22 52 18.4**	**-0.7**
MAMC	**Mammari**	**1.56**	**116**	P	**Pn**	**22 52 18.6**	**-0.5**
MAMC	**Mammari**	**1.56**	**116**	P	**Pn**	**22 52 18.6**	**-0.5**
AKAS	**Kas**	**1.58**	**284**	*i* P	**Pn**	**22 52 19.0**	**-0.3**
AKAS				*i* S	**Sn**	**22 52 43.0**	**+4.1**
AKAS	**Kas**	**1.58**	**284**	*i* P	**Pn**	**22 52 19.0**	**-0.4**
CSS	**Prodhromos**	**1.75**	**121**	*e*Pn	**Pn**	**22 52 20.1**	**-1.5**
CSS				*e*Sn	**Sn**	**22 52 41.6**	**-1.4**
CSS	**Prodhromos**	**1.75**	**121**	*e*Pn	**Pn**	**22 52 20.1**	**-1.5**
BCK	**Bucak**	**1.75**	**335**	Pn	**Pn**	**22 52 21.4**	**-0.3**
BCK	**Bucak**	**1.75**	**335**	Pn	**Pn**	**22 52 21.4**	**-0.3**
LFK	**Lefkose**	**1.76**	**109**	Pn	**Pn**	**22 52 21.1**	**-0.6**
LFK	**Lefkose**	**1.76**	**109**	Pn	**Pn**	**22 52 21.1**	**-0.7**
IKL	**Isikli**	**1.81**	**78**	Pn	**Pn**	**22 52 23.1**	**+0.6**
IKL	**Isikli**	**1.81**	**78**	Pn	**Pn**	**22 52 23.1**	**+0.6**
GLHS	**Glhisar (BURDU**	**2.06**	**309**	Pn	**Pn**	**22 52 25.8**	**-0.2**
GLHS	**Glhisar (BURDU**	**2.06**	**309**	Pn	**Pn**	**22 52 25.8**	**-0.2**
GOLH	**Golhisar**	**2.08**	**312**	*i* P	**Pn**	**22 52 28.2**	**+2.1**
GOLH				*i* S	**Sn**	**22 52 54.9**	**+3.8**
GOLH	**Golhisar**	**2.08**	**312**	*i* P	**Pn**	**22 52 28.2**	**+2.0**
ISP	**Isparta**	**2.12**	**338**	Pn	**Pn**	**22 52 27.0**	**+0.2**
KONT	**Konya--Tatoy**	**2.18**	**18**	Pn	**Pn**	**22 52 27.9**	**+0.3**
KONT	**Konya--Tatoy**	**2.18**	**18**	Pn	**Pn**	**22 52 28.0**	**+0.4**
EREN	**Erenkoy**	**2.20**	**98**	Pn	**Pn**	**22 52 28.8**	**+1.0**
EREN	**Erenkoy**	**2.20**	**98**	Pn	**Pn**	**22 52 28.8**	**+1.0**
PHNC	**Paralimni**	**2.24**	**112**	P	**Pn**	**22 52 31.3**	**+2.9**
	2.3nm,0.3s						
PHNC				S	**Sn**	**22 52 57.7**	**+2.6**
PHNC	**Paralimni**	**2.24**	**112**	P	**Pn**	**22 52 31.3**	**+2.9**
	2.3nm,0.3s						
DNZL	**Cakiroluk**	**2.68**	**313**	*i* P	**Pn**	**22 52 37.8**	**+3.3**
DNZL				*i* S	**Sn**	**22 53 15.1**	**+9.1**
KDHN	**Kadinhani**	**2.69**	**10**	*i* P	**Pn**	**22 52 34.3**	**-0.3**
KDHN				*i* S	**Sn**	**22 53 07.0**	**+0.7**
KDHN	**Kadinhani**	**2.69**	**10**	*i* P	**Pn**	**22 52 34.3**	**-0.3**
KDHN				*i* S	**Sn**	**22 53 07.0**	**+0.7**
SULT	**Sultanhani-AKS**	**2.83**	**34**	Pn	**Pn**	**22 52 37.3**	**+0.7**
SULT	**Sultanhani-AKS**	**2.83**	**34**	Pn	**Pn**	**22 52 37.3**	**+0.8**
BOLV	**Bolvadin**	**2.88**	**351**	*i* P	**Pn**	**22 52 38.5**	**+1.3**
BOLV				*i* S	**Sn**	**22 53 10.8**	**0.0**
BOLV	**Bolvadin**	**2.88**	**351**	*i* P	**Pn**	**22 52 38.5**	**+1.3**
BOLV				*i* S	**Sn**	**22 53 10.8**	**0.0**
YER	**Yerkesik**	**2.88**	**297**	Pn	**Pn**	**22 52 36.8**	**-0.5**
YER	**Yerkesik**	**2.88**	**297**	Pn	**Pn**	**22 52 36.8**	**-0.5**
KHL	**Karahalli**	**2.92**	**328**	Pn	**Pn**	**22 52 37.7**	**0.0**
KHL	**Karahalli**	**2.92**	**328**	Pn	**Pn**	**22 52 37.7**	**0.0**
KHAL	**Karahalli**	**2.97**	**328**	*i* P	**Pn**	**22 52 39.4**	**+1.0**
KHAL				*i* S	**Sn**	**22 53 13.8**	**+0.8**
KHAL	**Karahalli**	**2.97**	**328**	*i* P	**Pn**	**22 52 39.4**	**+0.9**
KHAL				*i* S	**Sn**	**22 53 13.9**	**+0.8**
KIZT	**Kizilcal**	**3.02**	**6**	Pn	**Pn**	**22 52 39.5**	**+0.3**
KIZT	**Kizilcal**	**3.02**	**6**	Pn	**Pn**	**22 52 39.5**	**+0.3**
MLSB	**Milas**	**3.32**	**296**	Pn	**Pn**	**22 52 42.9**	**-0.4**
MLSB	**Milas**	**3.32**	**296**	Pn	**Pn**	**22 52 42.8**	**-0.5**
ALT	**Altintas**	**3.37**	**341**	Pn	**Pn**	**22 52 44.2**	**+0.3**
ALT	**Altintas**	**3.37**	**341**	Pn	**Pn**	**22 52 44.2**	**+0.3**
AYDN	**Tasoluk**	**3.41**	**303**	*i* P	**Pn**	**22 52 45.0**	**+0.4**
AYDN				*i* S	**Sn**	**22 53 22.0**	**-2.1**
AYDN	**Tasoluk**	**3.41**	**303**	*i* P	**Pn**	**22 52 45.0**	**+0.4**
AYDN				*i* S	**Sn**	**22 53 22.0**	**-2.1**
BDRM	**Kayabasi**	**3.48**	**291**	*i* P	**Pn**	**22 52 45.4**	**-0.1**
BDRM				*i* S	**Sn**	**22 53 24.2**	**-1.5**
BDRM	**Kayabasi**	**3.48**	**291**	*i* P	**Pn**	**22 52 45.4**	**-0.1**
BDRM				*i* S	**Sn**	**22 53 24.2**	**-1.6**
SVRH	**Sivrihisar-ESK**	**3.57**	**0**	Pn	**Pn**	**22 52 46.7**	**0.0**
SVRH	**Sivrihisar-ESK**	**3.57**	**0**	Pn	**Pn**	**22 52 46.7**	**0.0**
ESKT	**Eskisehir**	**3.68**	**352**	Pn	**Pn**	**22 52 48.6**	**+0.4**
ESKT	**Eskisehir**	**3.68**	**352**	Pn	**Pn**	**22 52 48.6**	**+0.4**
DEMI	**Demirci**	**3.87**	**326**	*i* P	**Pn**	**22 52 52.0**	**+1.2**
DEMI	**Demirci**	**3.87**	**326**	*i* P	**Pn**	**22 52 52.0**	**+1.2**
BR131	**Keskin Array S**	**4.20**	**23**	*e*Pn	**Pn**	**22 52 55.2**	**-0.3**
BR131				*e*Sn	**Sn**	**22 53 40.3**	**-3.3**
BR131	**Keskin Array S**	**4.20**	**23**	*e*Pn	**Pn**	**22 52 55.2**	**-0.2**
BR131				*e*Sn	**Sn**	**22 53 40.3**	**-3.3**
DURS	**Dursunbey**	**4.43**	**328**	*i* P	**Pn**	**22 52 59.2**	**+0.7**
DURS				*i* S	**Sn**	**22 53 47.5**	**-1.6**
DURS	**Dursunbey**	**4.43**	**328**	*i* P	**Pn**	**22 52 59.2**	**+0.7**
DURS				*i* S	**Sn**	**22 53 47.5**	**-1.7**
KUZU	**Kuzuini**	**4.59**	**77**	*i* P	**Pn**	**22 53 00.8**	**+0.1**
KUZU				*i* S	**Sn**	**22 53 51.0**	**-2.1**
KUZU	**Kuzuini**	**4.59**	**77**	*i* P	**Pn**	**22 53 00.8**	**+0.1**
RSH		**5.24**	**159**	P	**Pn**	**22 53 10.4**	**+0.7**
HMAT	**Matruh**	**6.02**	**219**	P	**Pn**	**22 53 20.2**	**-0.2**
	baz=217						
HMAT	**Matruh**	**6.02**	**219**	P	**Pn**	**22 53 20.2**	**-0.2**
SUZ		**6.12**	**169**	P	**Pn**	**22 53 22.2**	**+0.5**
	baz=169						
SUZ		**6.12**	**169**	P	**Pn**	**22 53 22.2**	**+0.5**
GLL	**Jalalah**	**6.28**	**178**	P	**Pn**	**22 53 24.4**	**+0.5**
	baz=178						
GLL				S	**Sn**	**22 54 33.0**	**-1.8**
	baz=178						
GLL	**Jalalah**	**6.28**	**178**	P	**Pn**	**22 53 24.4**	**+0.4**
HNKL	**Nakhl**	**6.28**	**160**	P	**Pn**	**22 53 25.2**	**+1.2**
	baz=160						
HNKL	**Nakhl**	**6.28**	**160**	P	**Pn**	**22 53 25.2**	**+1.2**
SLUM		**6.82**	**232**	P	**Pn**	**22 53 30.6**	**-0.9**
	baz=230						
SLUM		**6.82**	**232**	P	**Pn**	**22 53 30.6**	**-0.8**

*ISCJB **12** 23:13:06.3±0.6, 56°.53N±0°.06×155°.94W±0°.08, h63km±11km, mb3.5/3, Error ellipse: s-maj=10.5km s-min=5.2km az=146.3*
*IDC **12** 23:13:07.5±4.1, 56°.65N×155°.96W, h47km±46km, mb3.3/3, mb1 3.9/6, mb1mx3.4/30, mbtmp3.7/6, ML3.7/2, MS3.6/1, Ms1 3.6/1, ms1mx2.5/23, Error ellipse: s-maj=63.4km s-min=23.2km az=170.0*
*NEIC **12** 23:13:08.6, 56°.42N×155°.82W, h44km, ML4.0(PMR), ML3.7(AEIC), After AEIC.*
ISC 12 23:13:07.7±0.6, 56°.46N±0°.06×155°.89W±0°.08, h50km±12km, n33, σ0s78/39, mb3.6/3, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHGN	**Chignik**	**1.41**	**264**	P	**Pn**	**23 13 31.2**	**+0.3**
OHAK	**Old Harbor**	**1.62**	**61**	P	**Pn**	**23 13 34.2**	**+0.5**
OHAK				S	**Sn**	**23 13 53.1**	**-0.2**
KDAK	**Kodiak Island**	**2.23**	**52**	P	**Pn**	**23 13 42.5**	**+0.3**
	49nm,0.3s,baz=230,slow=7.1,SNR=338						
KDAK				S	**Sn**	**23 14 06.8**	**-1.7**
	109nm,0.3s,baz=24,slow=19,SNR=30						
KDAK	**Kodiak Island**	**2.23**	**52**	P	**Pn**	**23 13 42.3**	**+0.2**
KDAK				S	**Sn**	**23 14 07.3**	**-1.1**
SDPT	**Sand Point**	**2.81**	**249**	*e*P	**Pn**	**23 13 50.7**	**+0.6**
SDPT				S	**Sn**	**23 14 22.3**	**-0.4**
RSO	**Redoubt South**	**4.33**	**21**	*e*Pn	**Pn**	**23 14 11.9**	**+1.1**
RSO				*e*Sn	**Sn**	**23 15 00.1**	**+0.1**
SVW2	**Sparrevohn**	**4.65**	**2**	*e*P	**Pn**	**23 14 15.4**	**+0.

LCO				Sn	Sn	23 22 23.3	+0.2
PLCA	Paso Flores	7.17	177	Pn	Pn	23 22 06.5	-0.9
CPUP	Villa Florida	13.95	63	*e*Pn	Pn	23 23 38.8	-0.8
LPAZ	La Paz	17.41	10	*e*Pn	Pn	23 24 23.6	+0.2
NNA	Nana	22.10	345	P	P	23 25 14.8	0.0

CSEM ***12*** *23:25:45.9±0.2, 37°.92N×21°.46E, h20km, MD2.8, Error ellipse: s-maj=3.8km s-min=3.1km az=101.0*
ATH ***12*** *23:25:45.5, 37°.93N×21°.47E, h27km±2km, MD2.8/8*
NEIC ***12*** *23:25:45.5, 37°.93N×21°.47E, h27km, MD2.8(ATH), ML3.0(THE), After ATH.*
ISCJB ***12*** *23:25:45.4±0.8, 37°.90N±0°.03×21°.46E±0°.03, h10km±5km, Error ellipse: s-maj=4.3km s-min=3.8km az=175.3*
THE ***12*** *23:25:46.0, 37°.91N×21°.48E, h13km±1km, ML3.0/8, Error ellipse: s-maj=1.4km s-min=0.6km az=337.0*

ISC 12 23:25:46.0±0.5, 37°.91N±0°.03×21°.47E±0°.03, h19km±3km, n53, σ0°78/86, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.15**	**1**	*e*Pb	**Pg**	**23 25 50.4**	**+0.1**
RLS				*e*Sb	**Sg**	**23 25 53.9**	**+0.7**
RLS	**Riolos of Patr**	**0.15**	**1**	*e*PB	**Pg**	**23 25 50.4**	**+0.1**
RLS				*e*SB	**Sg**	**23 25 53.9**	**+0.7**
RLS	**Riolos of Patr**	**0.15**	**1**	*e*Pb	**Pg**	**23 25 50.4**	**+0.1**
RLS				*e*Sb	**Sg**	**23 25 53.9**	**+0.7**
UPR	**University Cam**	**0.45**	**34**	P	**Pg**	**23 25 54.7**	**-0.5**
UPR				S	**Sg**	**23 26 01.8**	**+0.3**
UPR	**University Cam**	**0.45**	**34**	*e*PB	**Pb**	**23 25 55.3**	**-0.1**
UPR				*e*SB	**Sb**	**23 26 02.3**	**+0.6**
UPR	**University Cam**	**0.45**	**34**	P	**Pg**	**23 25 54.7**	**-0.5**
UPR	**University Cam**	**0.45**	**34**	*e*Pb	**Pb**	**23 25 55.3**	**-0.1**
UPR				S	**Sg**	**23 26 01.8**	**+0.3**
UPR				*e*Sb	**Sb**	**23 26 02.3**	**+0.6**
LAKA	**Lakka**	**0.52**	**51**	P	**Pg**	**23 25 55.9**	**-0.6**
LAKA				S	**Sg**	**23 26 03.1**	**-0.5**
LAKA	**Lakka**	**0.52**	**51**	P	**Pg**	**23 25 55.9**	**-0.6**
LAKA				S	**Sg**	**23 26 03.1**	**-0.5**
KFL	**Anninata**	**0.57**	**291**	P	**Pg**	**23 25 57.4**	**0.0**
KFL				S	**Sg**	**23 26 06.5**	**+1.4**
EFP	**Efpalio**	**0.62**	**34**	P	**Pb**	**23 25 57.2**	**-1.1**
EFP				S	**Sb**	**23 26 06.9**	**+0.2**
EFP	**Efpalio**	**0.62**	**34**	*e*PB	**Pb**	**23 25 57.2**	**-1.1**
EFP				*e*SN	**Sb**	**23 26 06.8**	**+0.1**
EFP	**Efpalio**	**0.62**	**34**	P	**Pb**	**23 25 57.2**	**-1.1**
EFP				S	**Sb**	**23 26 06.9**	**+0.2**
TRIZ	**Trizonia**	**0.66**	**46**	P	**Pb**	**23 25 58.0**	**-0.9**
TRIZ				S	**Sb**	**23 26 08.6**	**+0.8**
TRIZ	**Trizonia**	**0.66**	**46**	P	**Pb**	**23 25 58.0**	**-0.9**
TRIZ				S	**Sb**	**23 26 08.6**	**+0.8**
GUR	**Goura**	**0.69**	**87**	P	**Pb**	**23 25 58.5**	**-1.0**
GUR				S	**Sb**	**23 26 09.6**	**+0.9**
GUR	**Goura**	**0.69**	**87**	*e*PB	**Pb**	**23 25 58.6**	**-0.9**
GUR				*e*SN	**Sb**	**23 26 10.0**	**-1.0**
GUR	**Goura**	**0.69**	**87**	P	**Pb**	**23 25 58.5**	**-1.0**
GUR				S	**Sb**	**23 26 09.6**	**+0.9**
GUR				*e*Sn	**Sn**	**23 26 10.0**	**-1.0**
KALE	**Kalithea**	**0.72**	**48**	P	**Pb**	**23 25 59.0**	**-0.9**
KALE				S	**Sb**	**23 26 09.7**	**+0.3**
KALE	**Kalithea**	**0.72**	**48**	P	**Pb**	**23 25 59.0**	**-0.9**
KALE				S	**Sb**	**23 26 09.7**	**+0.3**
VLS	**Valsamata**	**0.74**	**292**	*e*Pn	**Pn**	**23 25 59.8**	**-1.6**
VLS				*e*Sn	**Sn**	**23 26 11.8**	**-0.4**
VLS	**Valsamata**	**0.74**	**292**	P	**Pb**	**23 25 59.6**	**-0.7**
VLS				S	**Sb**	**23 26 11.0**	**+1.0**
VLS	**Valsamata**	**0.74**	**292**	*e*PN	**Pn**	**23 25 59.8**	**-1.6**
VLS				*e*SN	**Sn**	**23 26 11.8**	**-0.4**
VLS	**Valsamata**	**0.74**	**292**	P	**Pb**	**23 25 59.6**	**-0.7**
VLS				S	**Sb**	**23 26 11.0**	**+1.0**
VLS				*e*Sn	**Sn**	**23 26 11.8**	**-0.4**
ITM	**Ithomi**	**0.81**	**153**	*e*Pn	**Pn**	**23 26 02.0**	**-0.4**
ITM	**Ithomi**	**0.81**	**153**	P	**Pb**	**23 26 01.7**	**+0.2**
ITM	**Ithomi**	**0.81**	**153**	*e*PN	**Pn**	**23 26 02.0**	**-0.4**
ITM	**Ithomi**	**0.81**	**153**	P	**Pb**	**23 26 01.7**	**+0.2**
ITM	**Ithomi**	**0.81**	**153**	*e*Pn	**Pn**	**23 26 02.0**	**-0.4**
VLX	**Vlachokerasia**	**0.90**	**126**	P	**Pb**	**23 26 02.7**	**-0.3**
VLX				S	**Sb**	**23 26 15.8**	**+1.2**
VLX	**Vlachokerasia**	**0.90**	**126**	P	**Pb**	**23 26 02.7**	**-0.3**
VLX				S	**Sb**	**23 26 15.8**	**+1.2**
DSF	**Desfina**	**0.98**	**59**	P	**Pb**	**23 26 03.3**	**-1.0**
DSF				S	**Sb**	**23 26 17.5**	**+0.7**
DSF	**Desfina**	**0.98**	**59**	P	**Pb**	**23 26 03.3**	**-1.0**
DSF				S	**Sb**	**23 26 17.5**	**+0.7**
PYL	**PYLOS**	**1.03**	**168**	P	**Pb**	**23 26 05.5**	**+0.2**
PYL	**PYLOS**	**1.03**	**168**	*e*PN	**Pn**	**23 26 06.0**	**+0.5**
PYL	**PYLOS**	**1.03**	**168**	P	**Pb**	**23 26 05.5**	**+0.2**
PYL	**PYLOS**	**1.03**	**168**	*e*Pn	**Pn**	**23 26 06.0**	**+0.5**
EVR	**Evrytania**	**1.04**	**15**	*e*Pb	**Pb**	**23 26 04.5**	**-0.9**
EVR	**Evrytania**	**1.04**	**15**	*e*PB	**Pb**	**23 26 04.5**	**-0.9**
EVR	**Evrytania**	**1.04**	**15**	*e*Pb	**Pb**	**23 26 04.5**	**-0.9**
LTK	**Loutraki**	**1.19**	**84**	P	**Pn**	**23 26 07.2**	**-0.4**
LTK	**Loutraki**	**1.19**	**84**	*e*PN	**Pn**	**23 26 07.6**	**0.0**
LTK	**Loutraki**	**1.19**	**84**	P	**Pn**	**23 26 07.2**	**-0.4**
LTK	**Loutraki**	**1.19**	**84**	*e*Pn	**Pn**	**23 26 07.6**	**0.0**
AGG	**Agios Georgios**	**1.30**	**31**	P	**Pn**	**23 26 09.0**	**-0.2**
AGG				S	**Sn**	**23 26 27.3**	**+1.2**
AGG	**Agios Georgios**	**1.30**	**31**	P	**Pn**	**23 26 09.0**	**-0.2**
AGG				S	**Sn**	**23 26 27.3**	**+1.2**
AGG	**Agios Georgios**	**1.30**	**31**	P	**Pn**	**23 26 09.0**	**-0.2**
AGG				S	**Sn**	**23 26 27.3**	**+1.2**
LKR	**Lokris**	**1.42**	**58**	*e*Pn	**Pn**	**23 26 11.3**	**+0.6**
LKR	**Lokris**	**1.42**	**58**	*e*PN	**Pn**	**23 26 11.3**	**+0.6**
LKR	**Lokris**	**1.42**	**58**	*e*Pn	**Pn**	**23 26 11.3**	**+0.6**
VLY	**Voula,Athens**	**1.84**	**91**	*e*Pn	**Pn**	**23 26 18.0**	**+1.4**
VLY	**Voula,Athens**	**1.84**	**91**	*e*PN	**Pn**	**23 26 18.0**	**+1.4**
VLY	**Voula,Athens**	**1.84**	**91**	*e*Pn	**Pn**	**23 26 18.0**	**+1.4**

ISCJB ***12*** *23:29:05.4±0.5, 50°.13N±0°.03×18°.42E±0°.03, h0km, Error ellipse: s-maj=5.1km s-min=2.6km az=8.3*
CSEM ***12*** *23:29:06.4±0.3, 50°.13N×18°.42E, h1km, ML2.7/5, Error ellipse: s-maj=6.4km s-min=3.0km az=2.0*
IPEC ***12*** *23:29:07.0±0.1, 50°.08N×18°.47E, h4km±1km, ML1.7/3, Error ellipse: s-maj=1.7km s-min=0.7km az=164.0*
WAR ***12*** *23:29:07.5, 50°.05N×18°.45E*
PRU ***12*** *23:29:08.4, 50°.09N×18°.37E, h0km*

ISC 12 23:29:06.7±0.5, 50°.10N±0°.03×18°.42E±0°.03, h0km, n32, σ1°12/54, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.14**	**262**	*e*Pg	**Pg**	**23 29 11.8**	**+2.4**
RAC				*e*Sg	**Sg**	**23 29 15.1**	**+3.9**
OKC	**Ostrava-Krasne**	**0.32**	**213**	*e*PG	**Pg**	**23 29 13.5**	**+0.8**
OKC				*e*SG	**Sg**	**23 29 18.0**	**+1.2**
	comp=Z,63nm,0.5s						
OKC	**Ostrava-Krasne**	**0.32**	**213**	*e*Pg	**Pg**	**23 29 13.3**	**+0.6**
	baz=40						
OKC				*e*Sg	**Sg**	**23 29 17.7**	**+0.9**
	baz=40						
MORC	**Moravsky Berou**	**0.65**	**240**	*e*Pg	**Pg**	**23 29 19.7**	**+0.6**
	baz=63						
MORC				*e*Sg	**Sg**	**23 29 28.8**	**+1.2**
	comp=Z,16nm,0.2s,baz=63						
OJC	**Ojcow**	**0.90**	**82**	*e*Pg	**Pg**	**23 29 23.1**	**-0.8**
OJC				*e*Sg	**Sg**	**23 29 35.3**	**-0.2**
OJC	**Ojcow**	**0.90**	**82**	*e*Pg	**Pg**	**23 29 23.0**	**-0.9**
	baz=261						
OJC				*e*Sg	**Sg**	**23 29 35.0**	**-0.5**
	baz=261						
JAVC	**Velka Javorina**	**1.34**	**202**	*e*Pn	**Pn**	**23 29 32.5**	**0.0**
	baz=23						
DPC	**Dobruska-Polom**	**1.37**	**281**	*e*PG	**Pg**	**23 29 33.6**	**+0.8**
DPC				*e*SG	**Sg**	**23 29 51.9**	**+1.4**
	comp=Z,19nm,0.5s						
DPC	**Dobruska-Polom**	**1.37**	**281**	Pg	**Pg**	**23 29 33.6**	**+0.8**
DPC				*e*Sg	**Sg**	**23 29 50.9**	**+0.4**
	baz=100						
NIE	**Niedzica**	**1.41**	**118**	*e*Pg	**Pg**	**23 29 33.8**	**+0.2**
NIE				*e*Sg	**Sg**	**23 29 53.1**	**+1.2**
NIE	**Niedzica**	**1.41**	**118**	*e*Pg	**Pg**	**23 29 33.8**	**+0.2**
NIE				*e*Sg	**Sg**	**23 29 53.1**	**+1.2**
VRAC	**Vranov**	**1.43**	**237**	*e*Pn	**Pn**	**23 29 33.7**	**-0.1**
VRAC				*e*Sg	**Sg**	**23 29 52.6**	**+0.2**
	comp=Z,13nm,0.2s,baz=57						
KSP	**Ksiaz**	**1.54**	**299**	*e*Pg	**Pg**	**23 29 36.2**	**-0.1**
KSP				e		23 29 39.3	
KSP				*e*Sg	**Sg**	**23 29 57.6**	**+1.3**
VYHS	**Vyhne**	**1.63**	**170**	*e*PN	**Pn**	**23 29 36.3**	**-0.3**
VYHS				*e*SN	**Sn**	**23 29 57.8**	**-0.5**
VYHS	**Vyhne**	**1.63**	**170**	*e*Pn	**Pn**	**23 29 35.9**	**-0.7**
	baz=352						
VYHS				*e*Sn	**Sn**	**23 29 57.8**	**-0.5**
KRUC	**Moravsky**	**1.68**	**232**	*e*Pn	**Pn**	**23 29 37.5**	**+0.3**
	baz=52						
KRUC				*e*Sg	**Sg**	**23 29 59.6**	**-0.9**
	comp=Z,6.5nm,0.3s,baz=52						
STHS	**Stebnicka Huta**	**1.96**	**109**	*e*PN	**Pn**	**23 29 44.7**	**+3.6**
STHS				*e*SN	**Sg**	**23 30 09.9**	**+0.3**
STHS	**Stebnicka Huta**	**1.96**	**109**	*e*Sn	**Sg**	**23 30 09.9**	**+0.3**
KECS	**Kecovo**	**2.11**	**139**	*e*	**Pg**	**23 29 48.3**	**+1.2**
KECS	**Kecovo**	**2.11**	**139**	*e*SN	**Sn**	**23 30 09.0**	**-1.1**
CRVS	**Cervenica-Dubn**	**2.32**	**120**	*e*PN	**Pg**	**23 29 49.8**	**-1.3**
CRVS				*e*SN	**Sg**	**23 30 18.2**	**-3.0**
CRVS	**Cervenica-Dubn**	**2.32**	**120**	*e*Pn	**Pg**	**23 29 49.8**	**-1.3**
CRVS				*e*Sn	**Sg**	**23 30 18.2**	**-3.0**
PRU	**Pruhonice**	**2.50**	**269**	*e*PG	**Pg**	**23 29 53.7**	**-0.8**
PRU				*e*SG	**Sg**	**23 30 25.5**	**-1.4**
	comp=Z,4.2nm,0.6s						
PRU	**Pruhonice**	**2.50**	**269**	Pg	**Pg**	**23 29 53.7**	**-0.8**
PRU				Sg	**Sg**	**23 30 25.5**	**-1.4**
	comp=Z,4.2nm,0.6s						
KOLS	**Kolonicke sedl**	**2.77**	**113**	*e*	**Pg**	**23 30 06.4**	**+6.6**
KOLS	**Kolonicke sedl**	**2.77**	**113**	*e*SN	**Sn**	**23 30 29.3**	**+2.9**
KOLS	**Kolonicke sedl**	**2.77**	**113**	*e*Sn	**Sn**	**23 30 29.3**	**+2.9**
BRG	**Berggiesshubel**	**2.96**	**287**	SG	**Sg**	**23 30 41.4**	**-0.3**
	comp=Z,2.3nm,0.5s						
KHC	**Kasperske Hory**	**3.29**	**255**	*e*PG	**Pg**	**23 30 08.3**	**-1.4**
KHC				*e*SG	**Sg**	**23 30 51.1**	**-1.3**
	comp=Z,3.5nm,0.5s						
KHC	**Kasperske Hory**	**3.29**	**255**	Pg	**Pg**	**23 30 08.3**	**-1.4**
KHC				Sg	**Sg**	**23 30 51.1**	**-1.3**
	comp=Z,3.5nm,0.5s						
NKC	**Novy Kostel**	**3.84**	**274**	*e*SG	**Sg**	**23 31 08.2**	**-1.7**
NKC	**Novy Kostel**	**3.84**	**274**	Sg	**Sg**	**23 31 08.2**	**-1.7**

IDC 12 23:39:51.2±5.0, 18°.58N×145°.42E, h397km±55km, mb3.1/8, mb1 3.4/9, mb1mx3.1/23, mbtmp3.1/9, Error ellipse: s-maj=33.3km s-min=12.9km az=82.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**18.99**	**342**	P	P	23 43 46.0	0.0
	0.7nm,0.3s,baz=165,slow=9.6,SNR=7.4						
KSRS	**Korea Array**	**24.25**	**324**	P	P	23 44 34.1	-0.2
	1.3nm,0.6s,baz=130,slow=8.6,SNR=8.7						
WRA	**Warramunga Arr**	**39.80**	**196**	P	P	23 46 48.4	+0.4
	2.3nm,0.5s,baz=18,slow=8.5,SNR=10.0						
ASAR	**Alice Springs**	**43.47**	**195**	P	P	23 47 17.1	-0.1
	1.5nm,0.6s,baz=16,slow=6.9,SNR=17						
CMAR	**Chiang Mai Arr**	**43.97**	**278**	P	P	23 47 22.0	+0.7
	0.8nm,0.4s,baz=64,slow=7.1,SNR=4.3						
STKA	**Stephens Creek**	**50.30**	**184**	P	P	23 48 08.4	-0.9
	2.1nm,0.6s,baz=319,slow=16,SNR=5.5						
MKAR	**Makanchi Array**	**58.35**	**314**	P	P	23 49 06.7	+0.3
	0.1nm,0.4s,baz=90,slow=14,SNR=4.7						
BVAR	**Borovoye Array**	**66.39**	**320**	P	P	23 49 58.3	-0.7
	0.4nm,0.5s,baz=79,slow=7.7,SNR=5.3						
NVAR	**Mina Array Bea**	**83.42**	**52**	P	P	23 51 36.7	+1.2
	0.3nm,0.5s,baz=262,slow=6.3,SNR=3.0						
PLCA	**Paso Flores**	**142.12**	**133**	PKhKP		23 58 32.1	
	2.0nm,1.0s,baz=270,slow=3.0,SNR=3.4						
LPAZ	**La Paz**	**147.94**	**91**	PKPbc	PKPbc	23 58 51.5	+0.2
	1.5nm,0.5s,baz=306,slow=1.7,SNR=8.7						

NEIC ***12*** *23:55:01.2±5.5, 43°.07N×147°.50E, h48km±27km, mb3.6/2, Error ellipse: s-maj=66.3km s-min=15.1km az=107.0*

JMA 12 23:55:03.5±0.1, 43°.18N×147°.35E, h55km±4km, M3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.19**	**280**	P	Pn	23 55 24.2	+0.4
NEM2				*e*S	Sn	23 55 39.6	+0.6
JRA	**Rausu**	**1.79**	**296**	P	Pn	23 55 32.7	+0.7
JRA				*e*S	Sn	23 55 54.7	+1.2
JAK	**Akkeshi**	**1.95**	**266**	P	Pn	23 55 35.2	+1.0
JAK				*e*S	Sn	23 55 58.0	+0.5
JNK	**Nakash**	**1.96**	**283**	P	Pn	23 55 34.9	+0.6
JNK				*e*S	Sn	23 55 58.3	+0.6
JOB	**Onbets**	**2.59**	**265**	P	Pn	23 55 44.0	+1.1
JOB				*e*S	Sn	23 56 14.0	+0.8
JAR	**Ashorobuto**	**2.62**	**274**	P	Pn	23 55 44.7	+1.4
JAR				*e*S	Sn	23 56 15.4	+1.5
JTKR	**Abashiri--Toko**	**2.62**	**289**	P	Pn	23 55 45.0	+1.6
JCH	**Churui**	**2.98**	**260**	P	Pn	23 55 49.5	+1.2
JCH				*e*S	Sn	23 56 23.7	+0.9
ERM	**Erimo**	**3.31**	**251**	*e*Pn	Pn	23 55 51.4	-1.4
ERM				*e*Sn	Sn	23 56 30.6	-0.2
JNBK	**Urakawa-nobuka**	**3.50**	**257**	P	Pn	23 55 57.0	+1.6
YSS	**Yuzh-Sakhalins**	**4.98**	**321**	Pn	Pn	23 56 15.4	-0.3
MDJ	**Mudanjiang**	**12.89**	**282**	Pn	Pn	23 58 03.3	-0.5
YAK	**Yakutsk**	**21.58**	**337**	P	P	23 59 47.9	-0.3
TATO	**Taipei**	**27.91**	**238**	*e*P	P	00 00 46.8	-1.5
	18nm,0.3s						
ULN	**Ulaanbaatar**	**28.39**	**294**	*e*P	P	00 00 51.9	-0.4
	0.6nm,0.6s						
KURK	**Kurchatov**	**45.97**	**305**	*e*P	P	00 03 20.8	0.0
	0.5nm,0.4s						

NIED ***13*** *00:03:00, 42°.20N×140°.10E, h175km, Mw4.1 Best double couple: M0=1.35000×10^15 NP1:φs=239.00000°, δ64.00000°, λ47.00000°. NP2:φs=124.00000°, δ49.00000°, λ144.00000°.*
IDC ***13*** *00:03:14.8±1.1, 42°.24N×140°.15E, h160km±10km, mb3.6/13, mb1 3.8/15, mb1mx3.6/27, mbtmp3.6/15, Error ellipse: s-maj=13.7km s-min=12.1km az=137.0*
ISCJB ***13*** *00:03:14.1±0.3, 42°.23N±0°.03×140°.13E±0°.07, h167km±2km, mb3.9/17, Error ellipse: s-maj=8.6km s-min=5.0km az=14.7*
MOS ***13*** *00:03:14.5±0.8, 42°.23N×140°.20E, h177km, mb4.2/11, Error ellipse: s-maj=16.2km s-min=10.3km az=94.7*
JMA ***13*** *00:03:15.4±0.1, 42°.24N×140°.12E, h161km±1km, M3.8*
NEIC ***13*** *00:03:15.1±0.9, 42°.30N×140°.11E, h161km±12km, mb4.2/6, Error ellipse: s-maj=21.8km s-min=8.8km az=94.0*

ISC 13 00:03:15.3±0.3, 42°.23N±0°.03×140°.15E±0°.07, h163km±2km, n63, σ0°64/76, mb3.9/17, 5C-6D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYM2	**Yakumo 2**	**0.20**	**124**	↑P	**Pn**	**00 03 37.2**	**+0.1**
JYM2				*e*S	**Sn**	**00 03 54.0**	**+0.3**
JSH	**Shimam**	**0.42**	**350**	↑P	**Pn**	**00 03 37.7**	**0.0**
JSH				*e*S	**Sn**	**00 03 55.5**	**+0.5**
JOSM	**Okushiri--Mats**	**0.52**	**254**	↑P	**Pn**	**00 03 38.0**	**-0.2**
JOSM				*e*S	**Sn**	**00 03 55.1**	**-0.5**
JNB	**Noboribetsu**	**0.70**	**70**	↑P	**Pn**	**00 03 39.0**	**-0.1**
JNB				*e*S	**Sn**	**00 03 57.1**	**-0.3**
JSR	**Shiriuchi**	**0.73**	**164**	↓P	**Pn**	**00 03 39.4**	**0.0**
JSR				*e*S	**Sn**	**00 03 57.4**	**-0.3**
JKB	**Kayabe**	**0.74**	**117**	P	**Pn**	**00 03 39.6**	**+0.2**
JKB				*e*S	**Sn**	**00 03 58.2**	**+0.3**
JOT	**Ohata**	**1.08**	**141**	↓P	**Pn**	**00 03 41.8**	**-0.2**
JEW	**Eniwo**	**1.14**	**57**	P	**Pn**	**00 03 43.0**	**+0.6**
JEW				*e*S	**Sn**	**00 04 04.9**	**+1.6**
JSK	**Shakotan**	**1.15**	**12**	↑P	**Pn**	**00 03 42.5**	**0.0**
JSK				*e*S	**Sn**	**00 04 03.1**	**-0.4**
JHR	**Hokuryu**	**1.91**	**37**	↓P	**Pn**	**00 03 50.9**	**+0.8**
JNBK	**Urakawa-nobuka**	**1.94**	**88**	P	**Pn**	**00 03 50.5**	**+0.1**
JFR	**Furan**	**2.03**	**62**	P	**Pn**	**00 03 51.8**	**+0.3**
JANG	**Nango**	**2.12**	**150**	↓P	**Pn**	**00 03 51.7**	**-0.9**
JANG				*e*S	**Sn**	**00 04 19.6**	**-1.7**
JYG	**Yagishiri**	**2.39**	**23**	↓P	**Pn**	**00 03 55.7**	**+0.1**
ASAJ	**Asahikawa**	**2.60**	**43**	P	**Pn**	**00 03 58.6**	**+0.4**
	19nm,0.3s,baz=236,slow=12,SNR=43						
ASAJ				S	**Sn**	**00 04 30.6**	**-0.8**
	6.0nm,0.3s,baz=342,slow=28,SNR=8.3						
ASAJ	**Asahikawa**	**2.60**	**43**	PN	**Pn**	**00 03 58.6**	**+0.4**
ASAJ				S	**Sn**	**00 04 30.7**	**-0.8**
ASAJ				pmax	pmax		
	comp=Z,19nm,0.3s						
ASAJ				smax			
	comp=N,6.0nm,0.3s						
YSS	**Yuzh-Sakhalins**	**5.08**	**21**	↓*i*PN	**Pn**	**00 04 30.0**	**+0.2**
YSS				*e*S	**Sn**	**00 05 27.2**	**-0.9**
YSS				pmax	pmax		
	comp=Z,730nm,0.3s						
YSS				pmax	pmax		
	comp=N,540nm,0.5s						
YSS				smax			
	comp=N,40nm,1.0s						
YSS				smax			
	comp=E,30nm,0.9s						
YSS	**Yuzh-Sakhalins**	**5.08**	**21**	*e*Pn	**Pn**	**00 04 29.9**	**+0.2**
YSS				*e*Sn	**Sn**	**00 05 26.9**	**-1.3**
MAJO	**Matsushiro**	**5.87**	**195**	*e*Pn	**Pn**	**00 04 40.5**	**+0.1**
MAJO				Sn	**Sn**	**00 05 47.4**	**+0.3**
MAT	**Matsushiro**	**5.87**	**195**	P	**Pn**	**00 04 40.6**	**+0.2**
MJAR	**Matsushiro Arr**	**5.88**	**195**	P	**Pn**	**00 04 41.2**	**+0.8**
	comp=E,3.7nm,0.3s,baz=20,slow=12,SNR=24						
MJAR	**Matsushiro Arr**	**5.88**	**195**	PN	**Pn**	**00 04 41.2**	**+0.8**
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.3s						
YAK	**Yakutsk**	**20.79**	**346**	*e*P	**P**	**00 07 38.7**	**-4.6**
YAK				pmax	pmax		
	comp=N,11nm,1.1s						
YAK				pmax	pmax		
	comp=Z,32nm,0.9s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.0s						
YAK	**Yakutsk**	**20.79**	**346**	*e*P	**P**	**00 07 39.8**	**-3.5**
	comp=E,28nm,0.6s						
ULN	**Ulaanbaatar**	**23.93**	**295**	*e*P	**P**	**00 08 12.9**	**-1.1**
SONM	**Songino Array**	**24.37**	**295**	P	**P**	**00 08 17.3**	**-0.7**
	comp=E,0.5nm,0.4s,mb3.4,baz=83,slow=10.0,SNR=4.2						
SONM	**Songino Array**	**24.37**	**295**	P	**P**	**00 08 17.3**	**-0.7**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**37.83**	**308**	P	**P**	**00 10 15.3**	**-0.4**
	comp=Z,2.7nm,0.4s,mb4.2,baz=85,slow=9.9,SNR=13						
ZALV				PcP	PcP	00 12 28.4	-0.1
	comp=Z,1.2nm,0.5s,baz=102,slow=2.3,SNR=5.9						
ZALV				ScP	ScP	00 16 00.8	+0.3
	comp=Z,1.5nm,0.6s,baz=97,slow=3.6,SNR=7.4						
ZALV	**Zalesovo Beam**	**37.83**	**308**	P	**P**	**00 10 15.3**	**-0.3**
ZALV						00 12 28.4	
ZALV						00 16 00.8	
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.3						
ZALV	**Zalesovo Beam**	**37.83**	**308**	P	**P**	**00 10 15.3**	**-0.4**
ZALV				PcP	PcP	00 12 28.4	-0.1
ZALV				ScP	ScP	00 16 00.8	+0.3
MK31	**Makanchi Array**	**40.71**	**297**	*e*P	**P**	**00 10 39.5**	**-0.1**
MKAR	**Makanchi Array**	**40.71**	**297**	P	**P**	**00 10 39.5**	**-0.1**
	comp=Z,1.5nm,0.6s,mb3.8,baz=75,slow=13,SNR=15						
MKAR	**Makanchi Array**	**40.71**	**297**	P	**P**	**00 10 39.5**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
LSA	**Lhasa**	**41.06**	**269**	P	**P**	**00 10 43.1**	**+0.4**
KURK	**Kurchatov**	**42.10**	**304**	P	**P**	**00 10 51.0**	**+0.2**
	comp=Z,4.6nm,0.4s,mb4.5,baz=79,slow=8.9,SNR=19						
KURK	**Kurchatov**	**42.10**	**304**	P	**P**	**00 10 51.0**	**+0.1**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.5						
KURK	**Kurchatov**	**42.10**	**304**	*e*P	**P**	**00 10 50.4**	**-0.5**
	comp=Z,4.8nm,0.8s,mb4.2						
BVAR	**Borovoye Array**	**46.46**	**309**	P	**P**	**00 11 25.8**	**+0.4**
	comp=Z,2.1nm,0.4s,mb4.2,baz=78,slow=9.4,SNR=14						
BVAR	**Borovoye Array**	**46.46**	**309**	P	**P**	**00 11 25.8**	**+0.4**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
TKM2	**Tokmak 2**	**46.46**	**294**	*e*P	**P**	**00 11 26.4**	**+0.8**
BRVK	**Borovoye**	**46.51**	**309**	*e*P	**P**	**00 11 26.0**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.3						
BRVK	**Borovoye**	**46.51**	**309**	*e*P	**P**	**00 11 26.0**	**+0.2**
	comp=Z,2.5nm,0.4s,mb4.2						
AML	**Almayashu**	**48.07**	**294**	*e*P	**P**	**00 11 38.9**	**+0.8**
	comp=Z,0.9nm,0.4s,mb3.8						
ARU	**Arti**	**51.89**	**316**	*e*P	**P**	**00 12 06.4**	**-0.2**
ARU				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.9						
ARU	**Arti**	**51.89**	**316**	*e

KALE	Kalithea	0.67	49	P		Pb	00 07 29.8	-0.6
KALE				S		Sb	00 07 40.3	+0.9
VLS	Valsamata	0.75	288	ePb		Pb	00 07 31.1	-0.7
VLS				eSn		Sn	00 07 43.7	-0.2
VLS	Valsamata	0.75	288	P		Pb	00 07 31.1	-0.7
VLS	Valsamata	0.75	288	ePB		Pb	00 07 31.1	-0.7
VLS				eSN		Sn	00 07 43.7	-0.2
VLS	Valsamata	0.75	288	P		Pb	00 07 31.1	-0.7
VLS				eSn		Sn	00 07 43.7	-0.2
ITM	Ithomi	0.84	156	ePn		Pn	00 07 33.4	-0.8
ITM				eSn		Sn	00 07 46.1	0.0
ITM	Ithomi	0.84	156	P		Pb	00 07 33.2	-0.1
ITM				S		Sb	00 07 45.3	+1.0
ITM	Ithomi	0.84	156	ePN		Pn	00 07 33.4	-0.8
ITM				eSN		Sn	00 07 46.1	0.0
ITM	Ithomi	0.84	156	P		Pb	00 07 33.2	-0.1
ITM				S		Sb	00 07 45.3	+1.0
ITM				eSn		Sn	00 07 46.1	0.0
EVR	Evrytania	0.99	14	ePn		Pn	00 07 37.6	+1.3
EVR	Evrytania	0.99	14	ePN		Pn	00 07 37.6	+1.3
EVR	Evrytania	0.99	14	ePn		Pn	00 07 37.6	+1.3
LKD2	Lefkada island	1.07	322	P		Pb	00 07 36.8	-0.4
LKD2	Lefkada island	1.07	322	P		Pb	00 07 36.8	-0.4
PYL	PYLOS	1.07	169	ePN		Pn	00 07 38.0	+0.6
PYL	PYLOS	1.07	169	ePn		Pn	00 07 38.0	+0.6

NEIC ***13*** *00:10:40.7, 37°.91N×21°.44E, h24km, MD2.7(ATH), After ATH.*
ATH ***13*** *00:10:40.7, 37°.91N×21°.44E, h24km±3km, MD2.7/8*
THE ***13*** *00:10:41.6, 37°.91N×21°.48E, h16km, ML2.6/7, Error ellipse: s-maj=1.0km s-min=0.5km az=344.0*
CSEM ***13*** *00:10:41.3±0.2, 37°.92N×21°.44E, h26km±1km, MD2.7, Error ellipse: s-maj=4.7km s-min=3.7km az=3.0*
ISCJB ***13*** *00:10:41.5±0.4, 37°.92N±0°.03×21°.45E±0°.03, h27km±4km, Error ellipse: s-maj=4.7km s-min=4.2km az=0.3*

ISC 13 00:10:41.3±0.6, 37°.90N±0°.03×21°.45E±0°.03, h20km±4km, n44, σ0s87/78, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.15	6	ePb	Pg	00 10 45.7	-0.1
RLS				eSb	Sg	00 10 48.9	+0.1
RLS	Riolos of Patr	0.15	6	ePB	Pg	00 10 45.7	-0.1
RLS				eSB	Sg	00 10 48.9	+0.1
RLS	Riolos of Patr	0.15	6	ePb	Pg	00 10 45.7	-0.1
RLS				eSb	Sg	00 10 48.9	+0.1
UPR	University Cam	0.46	35	P	Pb	00 10 50.7	-0.1
UPR				S	Sg	00 10 57.7	+0.5
UPR	University Cam	0.46	35	ePB	Pb	00 10 50.8	0.0
UPR				eSB	Sb	00 10 58.3	+1.0
UPR	University Cam	0.46	35	ePb	Pb	00 10 50.8	0.0
UPR				S	Sg	00 10 57.7	+0.5
UPR				eSb	Sb	00 10 58.3	+1.0
LAKA	Lakka	0.54	51	P	Pb	00 10 51.6	-0.5
LAKA				S	Sb	00 10 59.5	+0.1
LAKA	Lakka	0.54	51	P	Pb	00 10 51.6	-0.5
LAKA				S	Sb	00 10 59.5	+0.1
KFL	Anninata	0.56	292	P	Pb	00 10 52.9	+0.5
EFP	Efpalio	0.64	35	P	Pb	00 10 53.2	-0.5
EFP				S	Sb	00 11 02.7	+0.5
EFP	Efpalio	0.64	35	ePN	Pn	00 10 53.4	-1.8
EFP				eSN	Sb	00 11 03.2	+1.0
EFP	Efpalio	0.64	35	P	Pb	00 10 53.2	-0.5
EFP				S	Sb	00 11 02.7	+0.5
EFP				eSn	Sb	00 11 03.2	+1.0
TRIZ	Trizonia	0.68	47	P	Pb	00 10 53.8	-0.6
TRIZ				S	Sb	00 11 04.2	+0.8
TRIZ	Trizonia	0.68	47	P	Pb	00 10 53.8	-0.6
TRIZ				S	Sb	00 11 04.2	+0.8
GUR	Goura	0.71	87	P	Pb	00 10 54.3	-0.7
GUR				S	Sb	00 11 04.4	+0.1
GUR	Goura	0.71	87	ePN	Pn	00 10 54.2	-2.0
GUR				eSN	Sn	00 11 05.2	-1.4
GUR	Goura	0.71	87	P	Pb	00 10 54.3	-0.7
GUR				S	Sb	00 11 04.4	+0.1
GUR				eSn	Sn	00 11 05.2	-1.4
VLS	Valsamata	0.73	292	ePb	Pb	00 10 54.0	-1.3
VLS				eSn	Sn	00 11 06.5	-0.5
VLS	Valsamata	0.73	292	P	Pb	00 10 55.6	+0.3
VLS				S	Sb	00 11 07.1	+2.2
VLS	Valsamata	0.73	292	ePB	Pb	00 10 54.0	-1.3
VLS				eSN	Sn	00 11 06.5	-0.5
VLS	Valsamata	0.73	292	ePb	Pb	00 10 54.0	-1.3
VLS	Valsamata	0.73	292	P	Pb	00 10 55.6	+0.3
VLS				eSn	Sn	00 11 06.5	-0.5
VLS				S	Sb	00 11 07.1	+2.2
KALE	Kalithea	0.73	48	P	Pb	00 10 54.9	-0.5
KALE				S	Sb	00 11 05.8	+0.8
KALE	Kalithea	0.73	48	P	Pb	00 10 54.9	-0.5
KALE				S	Sb	00 11 05.8	+0.8
ITM	Ithomi	0.82	152	ePn	Pn	00 10 57.1	-0.6
ITM	Ithomi	0.82	152	P	Pb	00 10 57.2	+0.4
ITM	Ithomi	0.82	152	ePN	Pn	00 10 57.1	-0.6
ITM	Ithomi	0.82	152	P	Pb	00 10 57.2	+0.4
VLX	Vlachokerasia	0.91	125	P	Pb	00 10 58.1	-0.3
VLX				S	Sb	00 11 10.7	+0.5
VLX	Vlachokerasia	0.91	125	P	Pb	00 10 58.1	-0.3
VLX				S	Sb	00 11 10.7	+0.5
DSF	Desfina	0.99	59	P	Pb	00 10 59.0	-0.8
DSF				S	Sb	00 11 13.5	+1.1
DSF	Desfina	0.99	59	P	Pb	00 10 59.0	-0.8
DSF				S	Sb	00 11 13.5	+1.1
PYL	PYLOS	1.03	167	P	Pb	00 11 00.7	+0.2
PYL				S	Sb	00 11 15.6	+2.0
PYL	PYLOS	1.03	167	ePN	Pn	00 11 00.6	-0.1
PYL	PYLOS	1.03	167	ePn	Pn	00 11 00.6	-0.1
PYL				S	Sb	00 11 15.6	+2.0
EVR	Evrytania	1.05	16	ePn	Pn	00 11 00.3	-0.6
EVR	Evrytania	1.05	16	ePN	Pn	00 11 00.3	-0.6
EVR	Evrytania	1.05	16	ePn	Pn	00 11 00.3	-0.6
LKD2	Lefkada island	1.08	325	P	Pb	00 11 01.1	-0.2
LKD2	Lefkada island	1.08	325	P	Pb	00 11 01.1	-0.2
LTK	Loutraki	1.21	84	P	Pn	00 11 03.1	0.0
LTK				S	Sb	00 11 19.4	+0.7
LTK	Loutraki	1.21	84	ePN	Pn	00 11 03.9	+0.8
LTK	Loutraki	1.21	84	P	Pn	00 11 03.1	0.0
LTK	Loutraki	1.21	84	ePn	Pn	00 11 03.9	+0.8
LTK				S	Sb	00 11 19.4	+0.7

MAN ***13*** *00:26:46, 4°.83N×126°.84E, h55km, mb5.2, ML4.1, MS4.3*
IDC ***13*** *00:26:47.3±0.6, 5°.24N×126°.02E, h0km, mb4.2/14, mb1 4.2/14, mb1mx4.1/23, mbtmp4.2/14, MS3.4/5, Ms1 3.4/5, ms1mx2.9/26, Error ellipse: s-maj=42.8km s-min=12.9km az=77.0*
NEIC ***13*** *00:26:52.5±0.4, 5°.24N×126°.09E, h35km, mb4.5/11, Error ellipse: s-maj=21.6km s-min=7.1km az=76.0*
ISCJB ***13*** *00:26:54.7±0.8, 5°.24N±0°.06×126°.2E±0°.1, h78km±7km, mb4.2/23, Error ellipse: s-maj=18.7km s-min=8.9km az=169.7*

ISC 13 00:26:55.6±0.8, 5°.21N±0°.06×126°.2E±0°.1, h68km±7km, n45, σ0s95/45, mb4.2/23, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	General Santos	1.51	305	eP	Pn	00 27 18.9	-1.9
GSPH				eS	Sn	00 27 45.0	+5.3
MATI	Mati	1.72	2	eP	Pn	00 27 22.9	-0.7
MATI				eS	Sn	00 27 47.2	+2.5
DAV	Davao City (W)	1.94	342	Pn	Pn	00 27 24.8	-1.7
	52nm,0.3s,baz=239,slow=12,SNR=4.4						
DMPH	Davao City--Mi	1.98	340	eP	Pn	00 27 27.3	+0.3
BUKP	Musuan	2.88	337	eP	Pn	00 27 39.6	+0.4
BUKP				eS	Sn	00 28 20.4	+7.7
BIPH	Bislig	2.96	3	‖ iP	Pn	00 27 38.7	-1.5
CGP	Cagayan de Oro	3.55	335	eP	Pn	00 27 48.7	+0.3
PAGZ	Pagadian	3.83	313	eP	Pn	00 27 55.2	+3.1
FITZ	Fitzroy Crossi	23.17	181	P	P	00 31 55.9	-0.7
	1.9nm,0.4s,mb3.8,baz=50,slow=5.1,SNR=7.3						
FITZ				LR	LR	00 39 49.2	
	comp=Z,67nm,20.4s,baz=338,slow=34						
FITZ	Fitzroy Crossi	23.17	181	eP	P	00 31 56.2	-0.4
	12nm,1.1s,mb4.2						
WRAB	Tennant Creek	26.24	162	eP	P	00 32 24.2	-0.3
	7.1nm,0.7s,mb4.2						
WRA	Warramunga Arr	26.25	162	P	P	00 32 24.7	+0.2
	2.0nm,0.4s,mb3.9,baz=343,slow=10,SNR=6.5						
MBWA	Marble Bar	26.96	193	eP	P	00 32 31.6	+0.6
	16nm,1.0s,mb4.5						
ASAR	Alice Springs	29.67	166	P	P	00 32 54.8	-0.2
	0.4nm,0.4s,mb3.5,baz=341,slow=6.9,SNR=7.3						
ASAR				PcP	PcP	00 35 59.2	+1.1
	0.7nm,0.5s,baz=350,slow=2.6,SNR=6.2						
KSRS	Korea Array	32.13	3	P	P	00 33 17.5	+0.9
	1.6nm,0.5s,mb4.0,baz=188,slow=9.2,SNR=8.0						
MJAR	Matsushiro Arr	33.07	18	LR	LR	00 44 41.7	
	comp=Z,52nm,21.1s,baz=100,slow=32						
BJT	Baijiatuau	35.81	347	eP	P	00 33 48.2	-0.3
	24nm,0.6s,mb5.3						
NWAO	Narrogin (SRO)	38.87	192	P	P	00 34 14.3	-0.1
	7.7nm,0.8s,mb4.6,baz=33,slow=20,SNR=5.6						
NWAO	Narrogin (SRO)	38.87	192	eP	P	00 34 15.2	+0.8
	5.3nm,0.6s,mb4.5						
STKA	Stephens Creek	39.70	159	P	P	00 34 23.8	+2.4
	1.6nm,0.4s,mb4.2,baz=322,slow=10.0,SNR=8.4						
STKA				LR	LR	00 53 04.2	
	comp=Z,121nm,19.3s,baz=25,slow=40						
STKA	Stephens Creek	39.70	159	eP	P	00 34 24.8	+3.5
LSA	Lhasa	41.07	310	eP	P	00 34 32.7	0.0
YSS	Yuzh-Sakhalins	43.97	16	P	P	00 34 56.3	+0.3
ULN	Ulaanbaatar	45.55	342	eP	P	00 35 08.1	-0.5
	2.7nm,0.6s,mb4.2						
SONM	Songino Array	45.73	341	P	P	00 35 09.5	-0.5
	1.3nm,0.5s,mb3.9,baz=158,slow=8.5,SNR=9.5						
TLY	Talaya	49.96	342	eP	P	00 35 41.6	-1.0
	4.1nm,0.8s,mb4.4						
PETK	Petropavlovsk-	54.27	23	P	P	00 36 14.7	+0.1
	1.9nm,0.8s,mb4.2,baz=92,slow=28,SNR=4.4						
MK31	Makanchi Array	56.04	325	eP	P	00 36 27.6	+0.2
MKAR	Makanchi Array	56.04	325	P	P	00 36 28.1	+0.6
	2.0nm,0.5s,mb4.4,baz=98,slow=10,SNR=21						
MKAR				LR	LR	01 04 50.0	
	comp=Z,17nm,19.1s,baz=169,slow=41						
UCH	Uchtor	58.73	317	eP	P	00 36 48.9	+2.4
AAK	Ala-Archa	58.91	317	P	P	00 36 46.7	-1.0
ZALV	Zalesovo Beam	59.03	333	P	P	00 36 47.9	-0.4
	1.0nm,0.4s,mb4.2,baz=134,slow=5.9,SNR=4.2						
ZALV	Zalesovo Beam	59.03	333	P	P	00 36 47.9	-0.4
EKS2	Erkin-Say	59.40	317	eP	P	00 36 50.2	-0.9
KBL	Kabul	60.21	307	P	P	00 36 56.5	-0.3
KURK	Kurchatov	60.21	327	eP	P	00 36 56.0	-0.5
	3.5nm,0.6s,mb4.6						
BVAR	Borovoye Array	65.79	327	P	P	00 37 33.8	+0.3
	1.5nm,0.5s,mb4.0,baz=113,slow=11,SNR=12						
BRVK	Borovoye	65.87	327	eP	P	00 37 34.1	+0.2
	3.4nm,0.8s,mb4.2						
TIXI	Tiksi	66.38	1	eP	P	00 37 37.2	+0.4
	2.0nm,0.5s,mb4.2						
ARU	Arti	73.41	328	eP	P	00 38 19.3	-1.0
	3.2nm,0.7s,mb4.3						
BRTR	Keskin Array B	88.67	310	P	P	00 39 42.9	+1.2
	0.6nm,0.8s,mb3.6,baz=56,slow=5.6,SNR=3.2						
ARCES	ARCESS Array B	88.88	340	P	P	00 39 41.5	-0.5
	1.2nm,0.5s,mb4.2,baz=84,slow=6.7,SNR=10						
FINES	FINESS Array B	90.28	332	P	P	00 39 48.6	-0.1
	0.8nm,0.5s,mb4.2,baz=44,slow=3.9,SNR=11						
NOA	NORSAR Array B	97.23	334	LR	LR	01 25 17.0	
	comp=Z,22nm,21.1s,baz=90,slow=36						
TORD	Torodi Ar. Bea	121.94	289	PKP	PKPdf	00 45 43.2	-0.1
	0.6nm,0.7s,baz=42,slow=2.0,SNR=10						

GII ***13*** *00:42:02.8±0.6, 33°.30N×35°.46E, h2km±2km, Md2.1/5*
GRAL ***13*** *00:42:02.5±0.4, 33°.30N×35°.44E, h14km±10km, MD2.7*
ISCJB ***13*** *00:42:02.3±0.6, 33°.33N±0°.03×35°.44E±0°.04, h10km±5km, Error ellipse: s-maj=6.1km s-min=3.6km az=35.4*

ISC 13 00:42:02.6±0.6, 33°.35N±0°.03×35°.44E±0°.04, h8km±7km, n14, σ0s54/27, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	Matarih	0.16	327	eP	Pg	00 42 06.8	+0.8
KSDI	Kefar Szold	0.24	130	Pg	Pg	00 42 07.1	-0.4
KSDI				Sg	Sg	00 42 10.6	-0.2
HRI	Mount Hermon	0.26	109	Pg	Pg	00 42 07.4	-0.4
HRI				Sg	Sg	00 42 11.6	+0.3
MMA0B	Mount Meron ar	0.34	185	Pg	Pg	00 42 08.8	-0.3
MMA0B				Sg	Sg	00 42 14.0	+0.4
HNTI	Hanita	0.35	219	Pg	Pg	00 42 09.8	+0.5
HNTI				Sg	Sg	00 42 14.7	+0.8
RCY	Rachaya	0.35	67	eP	Pg	00 42 09.7	+0.3
RCY				eS	Sg	00 42 15.1	+1.2
KSHT	Keshet	0.48	139	Pg	Pg	00 42 11.7	-0.3
KSHT				Sg	Sg	00 42 18.6	+0.3
BLGI	Bet Lehem HaGe	0.65	198	Pg	Pg	00 42 15.2	+0.1
BLGI				Sg	Sg	00 42 23.6	+0.1
OFRI	'Ofer	0.82	208	Pg	Pg	00 42 18.1	-0.3
OFRI				Sg	Sg	00 42 29.1	+0.1
MMLI	Mount Malkishu	0.91	181	Pg	Pg	00 42 19.3	-0.8
MMLI				Sg	Sg	00 42 32.2	+0.3
HWQ	Hawqa	1.02	25	eP	Pg	00 42 21.8	-0.3
HWQ				eS	Sg	00 42 34.6	-0.7
HMDT	Nahal Hemdat	1.10	176	Pg	Pg	00 42 22.6	-1.0
HMDT				Sg	Sg	00 42 38.1	+0.2
SLTI	Sal'it	1.16	197	Pg	Pg	00 42 23.9	-0.9
SLTI				Sg	Sg	00 42 39.3	-0.5
DSI	Dead Sea	1.78	182	Pn	Pn	00 42 33.6	0.0
DSI				Sn	Sn	00 42 57.1	+0.7

CSEM ***13*** *00:56:26.7±0.2, 38°.13N×21°.52E, h20km, MD2.7, Error ellipse: s-maj=5.5km s-min=3.6km az=134.0*
NEIC ***13*** *00:56:27.0, 38°.10N×21°.54E, h19km, MD2.7(ATH), After ATH.*
ATH ***13*** *00:56:27.0, 38°.10N×21°.54E, h19km±2km, MD2.7/7*
THE ***13*** *00:56:27.1, 38°.10N×21°.56E, h17km±1km, ML2.4/4, Error ellipse: s-maj=1.6km s-min=0.5km az=6.0*
ISCJB ***13*** *00:56:27.2±0.4, 38°.09N±0°.04×21°.55E±0°.03, h20km±4km, Error ellipse: s-maj=6.8km s-min=4.0km az=163.9*

ISC 13 00:56:27.1±0.5, 38°.11N±0°.04×21°.54E±0°.03, h19km±3km, n37, σ0s74/61, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.07	228	ePb	Pg	00 56 30.5	-0.2
RLS				eSb	Sg	00 56 33.2	+0.2
RLS	Riolos of Patr	0.07	228	ePB	Pg	00 56 30.5	-0.2
RLS				eSB	Sg	00 56 33.2	+0.2
RLS	Riolos of Patr	0.07	228	ePb	Pg	00 56 30.5	-0.2
RLS				eSb	Sg	00 56 33.2	+0.2
UPR	University Cam	0.26	48	P	Pg	00 56 32.8	-0.3
UPR				S	Sg	00 56 37.7	+0.5
UPR	University Cam	0.26	48	ePB	Pg	00 56 33.2	+0.1
UPR				eSB	Sg	00 56 38.2	+1.0
UPR	University Cam	0.26	48	P	Pg	00 56 32.8	-0.3
UPR	University Cam	0.26	48	ePb	Pg	00 56 33.2	+0.1
UPR				S	Sg	00 56 37.7	+0.5
UPR				eSb	Sg	00 56 38.3	+1.1
LAKA	Lakka	0.37	69	P	Pg	00 56 34.5	-0.5
LAKA				S	Sg	00 56 40.3	0.0
LAKA	Lakka	0.37	69	P	Pg	00 56 34.5	-0.5
LAKA				S	Sg	00 56 40.3	0.0
EFP	Efpalio	0.43	42	P	Pg	00 56 35.4	-0.6
EFP				S	Sg	00 56 42.4	+0.4
EFP	Efpalio	0.43	42	ePB	Pb	00 56 35.6	-0.5
EFP				eSB	Sb	00 56 42.3	0.0
EFP	Efpalio	0.43	42	ePb	Pb	00 56 35.6	-0.5
EFP				eSb	Sb	00 56 42.3	0.0
TRIZ	Trizonia	0.49	59	P	Pg	00 56 36.5	-0.6
TRIZ				S	Sg	00 56 44.6	+0.7
TRIZ	Trizonia	0.49	59	P	Pg	00 56 36.5	-0.6
TRIZ				S	Sg	00 56 44.6	+0.7
KFL	Anninata	0.59	270	P	Pb	00 56 38.8	0.0
KFL				S	Sb	00 56 48.0	+1.2
GUR	Goura	0.66	105	P	Pb	00 56 39.2	-0.8
GUR				S	Sb	00 56 49.3	+0.5
GUR	Goura	0.66	105	ePB	Pb	00 56 39.3	-0.7
GUR				eSN	Sb	00 56 49.5	+0.7
GUR	Goura	0.66	105	P	Pb	00 56 39.2	-0.8
GUR				eSn	Sb	00 56 49.5	+0.7
VLS	Valsamata	0.75	276	ePb	Pb	00 56 40.9	-0.7
VLS				eSn	Sn	00 56 53.3	-0.2
VLS	Valsamata	0.75	276	P	Pb	00 56 40.8	-0.8
VLS				S	Sn	00 56 53.3	-0.2
VLS	Valsamata	0.75	276	ePB	Pb	00 56 40.9	-0.7
VLS				eSN	Sn	00 56 53.3	-0.2
VLS	Valsamata	0.75	276	P	Pb	00 56 40.8	-0.8
VLS				S	Sn	00 56 53.3	-0.2
EVR	Evrytania	0.83	15	ePn	Pn	00 56 43.2	-0.7
EVR	Evrytania	0.83	15	ePN	Pn	00 56 43.2	-0.7
EVR	Evrytania	0.83	15	ePn	Pn	00 56 43.2	-0.7
DSF	Desfina	0.84	68	P	Pb	00 56 42.0	-1.0
DSF				S	Sb	00 56 54.6	+0.7
DSF	Desfina	0.84	68	P	Pb	00 56 42.0	-1.0
DSF				S	Sb	00 56 54.6	+0.7
ITM	Ithomi	0.98	161	ePn	Pn	00 56 45.4	-0.4
ITM	Ithomi	0.98	161	P	Pb	00 56 45.1	-0.3
ITM	Ithomi	0.98	161	ePN	Pn	00 56 45.4	-0.4
ITM	Ithomi	0.98	161	P	Pb	00 56 45.1	-0.3
ITM	Ithomi	0.98	161	ePn	Pn	00 56 45.4	-0.4
AGG	Agios Georgios	1.10	34	P	Pn	00 56 47.1	-0.5
AGG	Agios Georgios	1.10	34	P	Pn	00 56 47.1	-0.5
PYL	PYLOS	1.22	172	ePN	Pn	00 56 50.7	+1.5
PYL	PYLOS	1.22	172	ePn	Pn	00 56 50.7	+1.5
THL	Klokotos Trika	1.50	14	ePN	Pn	00 56 56.1	+3.1

ISCJB ***13*** *01:14:09.6±0.8, 43°.7N±0°.1×152°.08E±0°.07, h33km, mb3.7/9, Error ellipse: s-maj=17.2km s-min=4.8km az=160.6*
MOS ***13*** *01:14:13.0±1.4, 44°.61N×152°.32E, h39km, mb4.2/4, Error ellipse: s-maj=35.0km s-min=17.5km az=83.4*
JMA ***13*** *01:14:15.0±0.6, 44°.91N×151°.81E, h30km, M4.5*
NEIC ***13*** *01:14:19.3±1.0, 44°.93N×152°.32E, mb3.9/1, Error ellipse: s-maj=25.3km s-min=12.2km az=170.0*
IDC ***13*** *01:14:19.5±2.1, 44°.93N×152°.25E, h63km±8km, mb3.5/9, mb1 3.7/10, mb1mx3.4/26, mbtmp3.5/10, Error ellipse: s-maj=54.9km s-min=17.5km az=177.0*

ISC 13 01:14:12.9±0.8, 43°.8N±0°.1×152°.11E±0°.07, h35km, (h62km±1.6km:pP-P), n35, σ1s51/40, mb3.7/9, 1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	4.65	267	P	Pn	01 15 22.1	+1.5
NEM2				eS	Sn	01 16 11.9	-1.3
JRA	Rausu	5.05	274	P	Pn	01 15 28.2	+2.1
JNK	Nakash	5.37	270	P	Pn	01 15 32.4	+2.0
JNK				eS	Sn	01 16 29.5	-1.4
JAK	Akkeshi	5.46	264	P	Pn	01 15 33.9	+2.1
JAK				eS	Sn	01 16 32.0	-1.3
JTKR	Abashiri--Toko	5.93	274	P	Pn	01 15 40.4	+2.2
JAR	Ashorobuto	6.08	268	P	Pn	01 15 43.3	+3.0
JAR				eS	Sn	01 16 48.3	-0.3
JOB	Onbets	6.10	264	P	Pn	01 15 43.5	+3.0
JOB				eS	Sn	01 16 49.6	+0.5
JCH	Churui	6.50	262	eS	Sn	01 16 58.7	-0.3
JNBK	Urakawa-nobuka	7.03	261	eS	Sn	01 17 09.6	-2.2
SKR	Severo-Kuril's	7.40	20	ePN	Pn	01 15 51.5	-6.8
JNB	Noboribetsu	8.21	264	eS	Sn	01 17 41.0	+0.1
JTH	Tanohata	8.57	247	eS	Sn	01 17 49.6	-0.1
JANG	Nango	8.59	250	eS	Sn	01 17 48.6	-1.7
JTM	Tenmabayashi	8.72	254	eS	Sn	01 17 52.9	-0.6
JRG	Rokugo	9.66	247	eS	Sn	01 18 18.5	+2.0
JIO	Ouri	9.72	240	eS	Sn	01 18 17.2	-0.8
PETK	Petropavlovsk-	10.02	20	P	Pn	01 16 25.3	-8.8
	0.5nm,0.3s,baz=178,slow=14,SNR=8.9						
PETK	Petropavlovsk-	10.02	20	PN	Pn	01 16 25.3	-8.8
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM	Songino Array	31.75	294	P	P	01 20 35.0	+1.6
	comp=Z,0.7nm,0.5s,mb3.8,baz=81,slow=9.6,SNR=4.0						
SONM	Songino Array	31.75	294	P	P	01 20 35.0	+1.6
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	Makanchi Array	47.72	299	P	P	01 22 46.7	+0.7
	comp=Z,0.5nm,0.4s,mb3.9,baz=66,slow=15,SNR=5.0						
MKAR				pP	pP	01 23 01.8	+5.4
	comp=Z,0.8nm,0.7s,baz=61,slow=13,SNR=2.7						
MKAR	Makanchi Array	47.72	299	eP	P	01 22 48.3	+2.3
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KURK	Kurchatov	48.45	305	P	P	01 22 51.3	-0.3
	comp=Z,1.8nm,0.6s,mb4.3,baz=72,slow=8.8,SNR=13						
KURK				pP	pP	01 23 07.3	+5.3
	comp=Z,1.7nm,0.6s,baz=71,slow=8.5,SNR=7.1						
KURK	Kurchatov	48.45 305	‖	eP	P	01 22 51.9	+0.3
KURK				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
KURK	Kurchatov	48.45	305	eP	P	01 22 51.7	+0.1
	comp=Z,0.6nm,0.4s,mb4.0						
KURK				pP	pP	01 23 07.3	+5.3
YKA	Yellowknife Ar	53.72	35	P	P	01 23 27.8	-3.2
	comp=Z,0.2nm,0.7s,mb3.2,baz=291,slow=12,SNR=2.8						
YKA				pP	pP	01 23 44.2	+2.7
	comp=Z,0.5nm,0.8s,baz=303,slow=8.1,SNR=4.5						
YKA	Yellowknife Ar	53.72	35	P	P	01 23 27.8	-3.2
YKA				pP	pP	01 23 44.2	+2.7
NVAR	Mina Array Bea	64.46	61	P	P	01 24 45.5	-0.2
	comp=Z,0.1nm,0.3s,mb3.3,baz=289,slow=6.4,SNR=5.2						
FINES	FINESS Array B	66.40	335	P	P	01 24 55.8	-2.1
	comp=Z,1.4nm,0.7s,mb4.1,baz=20,slow=6.3,SNR=6.3						
FINES	FINESS Array B	66.40	335	P	P	01 24 55.8	-2.1
FINES			

MKAR Makanchi Array 84.21 319 P P 01 36 53.0 +0.4
0.3nm,0.5s,baz=67,slow=11,SNR=4.1
TORD Torodi Ar. Bea 153.83 285 PKPbc PKPbc 01 44 22.0 +0.4
0.4nm,0.8s,baz=45,slow=2.2,SNR=8.0

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*IDC **13** 01:25:26.2±1.2, 7°.09S×155°.46E, h0km, mb4.2/10, mb1 4.3/10, mb1mx4.2/16, mbtmp4.1/10, MS3.4/3, Ms1 3.4/3, ms1mx3.0/18, Error ellipse: s-maj=42.7km s-min=20.3km az=112.0*
*ISCJB **13** 01:25:35.6±6.5, 7°.2S±0°.2×155°.5E±0°.2, h89km±61km, mb4.0/13, Error ellipse: s-maj=45.5km s-min=28.0km az=38.8*
*NEIC **13** 01:25:36.8±3.9, 7°.14S×155°.40E, h82km±35km, mb4.4/3, Error ellipse: s-maj=23.7km s-min=16.2km az=110.0*
ISC 13 01:25:37.7±6.0, 7°.2S±0°.2×155°.5E±0°.2, h94km±57km, n19, σ0§53/16, mb4.0/13, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.91**	**117**	LR	LR	01 27 47.8	
	comp=Z,220nm,20.3s,baz=281,slow=28						
CTA	**Charters Tower**	**15.62**	**214**	Pn	**Pn**	**01 29 12.6**	**-0.1**
	0.2nm,0.3s,baz=60,slow=10.0,SNR=4.0						
CTA				LR	LR	01 32 50.5	
	comp=Z,148nm,21.5s,baz=52,slow=28						
CTA	**Charters Tower**	**15.62**	**214**	Pn	**Pn**	**01 29 12.6**	**-0.1**
CTA				LR	LR	01 32 50.5	
WRAB	**Tennant Creek**	**24.10**	**236**	*e*P	**P**	**01 30 45.5**	**+0.8**
	6.9nm,0.8s,mb4.0						
WRA	**Warramunga Arr**	**24.11**	**236**	P	**P**	**01 30 45.0**	**+0.2**
	8.2nm,0.8s,mb4.1,baz=62,slow=9.5,SNR=12						
ASAR	**Alice Springs**	**26.41**	**229**	P	**P**	**01 31 05.2**	**-0.5**
	0.8nm,0.8s,mb3.2,baz=51,slow=12,SNR=3.7						
STKA	**Stephens Creek**	**27.75**	**206**	P	**P**	**01 31 17.3**	**-0.3**
	6.5nm,0.8s,mb4.2,baz=35,slow=8.8,SNR=6.5						
STKA				LR	LR	01 41 27.9	
	comp=Z,130nm,19.0s,baz=24,slow=34						
PETK	**Petropavlovsk-**	**60.12**	**2**	P	**P**	**01 35 34.6**	**-0.5**
	1.0nm,0.6s,mb4.0,baz=246,slow=7.2,SNR=3.5						
CMAR	**Chiang Mai Arr**	**61.34**	**295**	P	**P**	**01 35 43.6**	**-0.4**
	1.9nm,0.5s,mb4.3,baz=124,slow=5.4,SNR=5.5						
SONM	**Songino Array**	**69.80**	**327**	P	**P**	**01 36 39.2**	**+1.2**
	2.0nm,0.8s,mb4.0,baz=131,slow=6.2,SNR=8.2						
MCK	**McKinley**	**82.08**	**22**	*e*P	**P**	**01 37 47.3**	**-0.1**
	4.0nm,0.7s,mb4.4						
MK31	**Makanchi Array**	**83.91**	**319**	*e*P	**P**	**01 37 57.5**	**+0.3**
MKAR	**Makanchi Array**	**83.91**	**319**	P	**P**	**01 37 56.8**	**-0.5**
	1.0nm,0.9s,mb3.6,baz=100,slow=5.3,SNR=3.2						
ZALV	**Zalesovo Beam**	**84.65**	**326**	P	**P**	**01 38 00.2**	**-0.6**
	0.9nm,0.6s,mb3.9,baz=116,slow=6.7,SNR=3.0						
BVAR	**Borovoye Array**	**92.78**	**323**	P	**P**	**01 38 39.5**	**0.0**
	0.3nm,0.6s,mb3.8,baz=120,slow=2.4,SNR=4.0						
BRVK	**Borovoye**	**92.85**	**323**	*e*P	**P**	**01 38 39.4**	**-0.4**
	1.3nm,0.8s,mb4.3						
YKA	**Yellowknife Ar**	**96.30**	**28**	P	**P**	**01 38 56.1**	**+0.7**
	0.5nm,0.7s,mb4.0,baz=266,slow=4.7,SNR=6.2						
LPAZ	**La Paz**	**130.91**	**119**	PKP	PKPdf	01 44 42.3	+3.1
	2.4nm,0.9s,baz=293,slow=0.8,SNR=7.0						
TORD	**Torodi Ar. Bea**	**153.57**	**285**	PKPbc	PKPbc	01 45 26.2	-0.3
	0.5nm,0.6s,baz=73,slow=2.0,SNR=4.7						

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*TIF **13** 01:33:38.7, 41°.33N×43°.98E, h18km±1km*
*CSEM **13** 01:33:39.3±0.3, 41°.35N×43°.92E, h2km, ML3.0, Error ellipse: s-maj=6.2km s-min=3.8km az=153.0*
*ISCJB **13** 01:33:39.7±0.6, 41°.36N±0°.04×43°.96E±0°.04, h10km, Error ellipse: s-maj=6.1km s-min=3.6km az=154.5*
ISC 13 01:33:40.2±0.6, 41°.37N±0°.04×43°.94E±0°.04, h10km, n15, σ0§81/27, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOR	**Gori**	**0.63**	**11**	P	**Pg**	**01 33 52.4**	**0.0**
GOR				S	**Sg**	**01 34 02.2**	**+1.5**
GOR	**Gori**	**0.63**	**11**	P	**Pg**	**01 33 52.4**	**0.0**
GOR				S	**Sg**	**01 34 02.2**	**+1.5**
TBLG	**Delisi**	**0.70**	**59**	P	**Pg**	**01 33 53.1**	**-0.6**
TBLG				S	**Sg**	**01 34 03.4**	**+0.5**
TBLG	**Delisi**	**0.70**	**59**	P	**Pg**	**01 33 53.1**	**-0.6**
TBLG				S	**Sg**	**01 34 03.4**	**+0.5**
KEH	**Kehvi**	**0.94**	**360**	P	**Pg**	**01 33 56.3**	**-2.0**
KEH				S	**Sg**	**01 34 10.0**	**-0.5**
KEH	**Kehvi**	**0.94**	**360**	P	**Pg**	**01 33 56.3**	**-2.0**
KEH				S	**Sg**	**01 34 10.0**	**-0.5**
DGRG	**David-gareji**	**1.08**	**85**	P	**Pg**	**01 33 59.9**	**-1.1**
DGRG				S	**Sg**	**01 34 16.0**	**+1.0**
DGRG	**David-gareji**	**1.08**	**85**	P	**Pg**	**01 33 59.9**	**-1.1**
DGRG				S	**Sg**	**01 34 16.0**	**+1.0**
ONI	**Oni**	**1.27**	**344**	P	**Pn**	**01 34 03.3**	**-0.7**
ONI				S	**Sb**	**01 34 21.3**	**+0.6**
ARTV	**Artvin**	**1.53**	**264**	*i* P	**Pn**	**01 34 07.3**	**-0.2**
ARTV	**Artvin**	**1.53**	**264**	*i* P	**Pn**	**01 34 07.3**	**-0.2**
ARTV				*i* S	**Sn**	**01 34 27.2**	**-0.2**
DDEM	**Demirkent**	**1.72**	**255**	*i* P	**Pn**	**01 34 10.5**	**+0.3**
DDEM	**Demirkent**	**1.72**	**255**	*i* P	**Pn**	**01 34 10.5**	**+0.3**
DDEM				*i* S	**Sn**	**01 34 32.9**	**+0.7**
DBAD	**Bademkaya**	**1.73**	**259**	*i* P	**Pn**	**01 34 10.8**	**+0.5**
DBAD	**Bademkaya**	**1.73**	**259**	*i* P	**Pn**	**01 34 10.8**	**+0.5**
DBAD				*i* S	**Sn**	**01 34 32.6**	**+0.2**

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*DDA **13** 01:59:50.4, 35°.84N×29°.47E, h17km±2km, Md3.6*
*IDC **13** 01:59:51.3±0.8, 35°.91N×29°.60E, h0km, mb3.8/8, mb1 3.8/15, mb1mx3.7/31, mbtmp3.8/15, ML3.7/7, MS2.7/5, Ms1 2.7/5, ms1mx2.4/41, Error ellipse: s-maj=16.4km s-min=13.6km az=167.0*
*ISK **13** 01:59:51.6, 35°.98N×29°.53E, h2km, ML3.7*
*ISCJB **13** 01:59:52.9±0.6, 35°.87N±0°.02×29°.61E±0°.02, h20km±6km, mb3.6/10, Error ellipse: s-maj=2.8km s-min=2.0km az=33.6*
*ATH **13** 01:59:52.1, 36°.00N×29°.75E, h34km±24km, MD3.9/11*
*NEIC **13** 01:59:52.1, 36°.00N×29°.75E, h34km, mb3.8/3, MD3.9(ATH), ML3.6(ISK), After ATH.*
*CSEM **13** 01:59:53.5±0.1, 35°.94N×29°.58E, h10km, ML3.7, Error ellipse: s-maj=2.6km s-min=2.3km az=18.0*
*HLW **13** 01:59:54.6, 36°.00N×29°.63E, h30km±22km, Md4.0, Ml3.7*
*THE **13** 01:59:55.4, 36°.07N×29°.44E, h0km, ML4.6/3, Error ellipse: s-maj=2.2km s-min=0.6km az=141.0*
*GII **13** 01:59:55.9±0.8, 35°.79N×29°.53E, h24km±8km, Md3.2/10*
ISC 13 01:59:53.8±0.8, 35°.92N±0°.02×29°.59E±0°.02, h13km±5km, n279, σ1§03/344, mb3.6/10, 6C-4D, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELL	**Elmali**	**0.86**	**17**	*e*PG	**Pg**	**02 00 07.8**	**-2.8**
ELL				*e*SG	**Sg**	**02 00 20.1**	**-1.8**
ELL	**Elmali**	**0.86**	**17**	*e*Pg	**Pg**	**02 00 07.8**	**-2.7**
ELL				*e*Sg	**Sg**	**02 00 20.1**	**-1.7**
ARG	**Arkhangelos**	**1.22**	**284**	P	Pn	**02 00 15.5**	**-1.1**
ARG				S	**Sb**	**02 00 32.0**	**-0.4**
ARG	**Arkhangelos**	**1.22**	**284**	P	**Pn**	**02 00 15.5**	**-1.1**
ARG				S	**Sb**	**02 00 32.0**	**-0.4**
ARG	**Arkhangelos**	**1.22**	**284**	*e*PB	**Pb**	**02 00 15.8**	**-1.0**
ARG				*e*SN	**Sn**	**02 00 34.3**	**+1.4**
ARG	**Arkhangelos**	**1.22**	**284**	P	**Pn**	**02 00 15.5**	**-1.1**
ARG	**Arkhangelos**	**1.22**	**284**	*e*Pb	**Pb**	**02 00 15.8**	**-1.0**
ARG				S	**Sb**	**02 00 32.0**	**-0.4**
ARG				*e*Sn	**Sn**	**02 00 34.3**	**+1.4**
GLHS	**Gihisar (BURDU**	**1.23**	**357**	*e*PN	**Pn**	**02 00 14.8**	**-1.9**
GLHS	**Gihisar (BURDU**	**1.23**	**357**	*e*Pn	**Pn**	**02 00 14.8**	**-2.0**
KORT	**Korkueli**	**1.24**	**29**	*i* P	**Pn**	**02 00 15.0**	**-1.8**
KORT				*i* S	**Sb**	**02 00 36.3**	**+3.4**
KORT	**Korkueli**	**1.24**	**29**	*i* P	**Pn**	**02 00 15.0**	**-1.8**
KORT				*i* S	**Sb**	**02 00 36.3**	**+3.4**
TURN	**Turunc**	**1.24**	**320**	*i* P	**Pn**	**02 00 17.0**	**+0.2**
TURN				*i* S	**Sb**	**02 00 35.0**	**+2.1**
TURN	**Turunc**	**1.24**	**320**	*i* P	**Pn**	**02 00 17.0**	**+0.2**
TURN				*i* S	**Sb**	**02 00 35.0**	**+2.1**
ANTB	**Antalya**	**1.30**	**41**	*e*PN	**Pn**	**02 00 17.1**	**-0.5**
ANTB	**Antalya**	**1.30**	**41**	*e*Pn	**Pn**	**02 00 17.1**	**-0.6**
GOLH	**Golhisar**	**1.31**	**359**	*i* P	**Pn**	**02 00 16.8**	**-1.1**
GOLH				*i* S	**Sb**	**02 00 36.2**	**+1.1**
GOLH	**Golhisar**	**1.31**	**359**	*i* P	**Pn**	**02 00 16.8**	**-1.0**
GOLH				*i* S	**Sb**	**02 00 36.2**	**+1.2**
YER	**Yerkesik**	**1.60**	**319**	*e*PN	**Pn**	**02 00 20.6**	**-1.3**
YER	**Yerkesik**	**1.60**	**319**	*e*Pn	**Pn**	**02 00 20.6**	**-1.2**
BCK	**Bucak**	**1.73**	**27**	*e*PN	**Pn**	**02 00 23.3**	**-0.3**
BCK	**Bucak**	**1.73**	**27**	*e*Pn	**Pn**	**02 00 23.3**	**-0.3**
DAT	**Datca**	**1.81**	**297**	*e*PN	**Pn**	**02 00 23.8**	**-0.9**
DAT				*e*SN	**Sn**	**02 00 47.2**	**-0.3**
DAT	**Datca**	**1.81**	**297**	*e*Pn	**Pn**	**02 00 23.8**	**-0.9**
DAT				*e*Sn	**Sn**	**02 00 47.2**	**-0.3**
DNZL	**Cakiroluk**	**1.82**	**346**	*i* P	**Pn**	**02 00 24.2**	**-0.6**
DNZL				*i* S	**Sn**	**02 00 47.1**	**-0.6**
DNZL	**Cakiroluk**	**1.82**	**346**	*i* P	**Pn**	**02 00 24.2**	**-0.6**
DNZL				*i* S	**Sn**	**02 00 47.1**	**-0.5**
DENT	**Denizli**	**1.88**	**346**	*e*PN	**Pn**	**02 00 25.0**	**-0.6**
DENT	**Denizli**	**1.88**	**346**	*e*Pn	**Pn**	**02 00 25.0**	**-0.7**
SUTC	**Sutluce-Ispart**	**1.92**	**36**	*e*PN	**Pn**	**02 00 26.4**	**+0.2**
SUTC	**Sutluce-Ispart**	**1.92**	**36**	*e*Pn	**Pn**	**02 00 26.4**	**+0.2**
MLSB	**Milas**	**2.00**	**314**	*e*PN	**Pn**	**02 00 26.6**	**-0.7**
MLSB	**Milas**	**2.00**	**314**	*e*Pn	**Pn**	**02 00 26.7**	**-0.6**
KARP	**Karpathos**	**2.01**	**260**	*e*Pn	**Pn**	**02 00 27.7**	**+0.3**
KARP				*e*Sn	**Sn**	**02 00 53.7**	**+1.3**
KARP	**Karpathos**	**2.01**	**260**	*e*PN	**Pn**	**02 00 27.7**	**+0.3**
KARP				*e*SN	**Sn**	**02 00 53.7**	**+1.3**
ISP	**Isparta**	**2.04**	**21**	*e*PN	**Pn**	**02 00 28.1**	**+0.3**
ISP	**Isparta**	**2.04**	**21**	P	**Pn**	**02 00 28.9**	**+1.1**
ISP				S	**Sn**	**02 00 54.3**	**+1.2**
ISP	**Isparta**	**2.04**	**21**	P	**Pn**	**02 00 28.9**	**+1.1**
ISP				S	**Sn**	**02 00 54.3**	**+1.2**
ISP	**Isparta**	**2.04**	**21**	Pn	**Pn**	**02 00 29.7**	**+1.9**
ISP				Sn	**Sn**	**02 00 54.5**	**+1.4**
NIS1	**Nisyros Isl.**	**2.06**	**290**	P	**Pn**	**02 00 27.3**	**-0.9**
NIS1				S	**Sn**	**02 00 53.2**	**-0.5**
NIS1	**Nisyros Isl.**	**2.06**	**290**	P	**Pn**	**02 00 27.3**	**-0.9**
NIS1				S	**Sn**	**02 00 53.2**	**-0.5**
BDRM	**Kayabasi**	**2.07**	**304**	*i* P	**Pn**	**02 00 26.8**	**-1.5**
BDRM				*i* S	**Sn**	**02 00 52.4**	**-1.5**
BDRM	**Kayabasi**	**2.07**	**304**	*i* P	**Pn**	**02 00 26.8**	**-1.5**
BDRM				*i* S	**Sn**	**02 00 52.4**	**-1.5**
AYDN	**Tasoluk**	**2.21**	**322**	*i* P	**Pn**	**02 00 30.1**	**-0.1**
AYDN				*i* S	**Sn**	**02 00 59.1**	**+1.7**
AYDN	**Tasoluk**	**2.21**	**322**	*i* P	**Pn**	**02 00 30.1**	**-0.1**
AYDN				*i* S	**Sn**	**02 00 59.1**	**+1.7**
GAZI	**Gazipasa**	**2.23**	**81**	*i* P	**Pn**	**02 00 29.7**	**-0.8**
GAZI				*i* S	**Sn**	**02 00 55.3**	**-2.5**
GAZI	**Gazipasa**	**2.23**	**81**	*i* P	**Pn**	**02 00 29.7**	**-0.8**
GAZI				*i* S	**Sn**	**02 00 55.3**	**-2.5**
KHL	**Karahalli**	**2.40**	**359**	*e*PN	**Pn**	**02 00 32.4**	**-0.4**
KHL	**Karahalli**	**2.40**	**359**	*e*Pn	**Pn**	**02 00 32.4**	**-0.3**
KHAL	**Karahalli**	**2.44**	**358**	*i* P	**Pn**	**02 00 32.3**	**-1.1**
HDMB	**Hadim**	**2.56**	**65**	*e*PN	**Pn**	**02 00 36.1**	**+1.2**
HDMB	**Hadim**	**2.56**	**65**	*e*Pn	**Pn**	**02 00 36.1**	**+1.2**
GCAM	**G?zelcaml?**	**2.59**	**314**	*i* P	**Pn**	**02 00 34.7**	**-0.8**
GCAM				*i* S	**Sn**	**02 01 02.8**	**-4.0**
GCAM	**G?zelcaml?**	**2.59**	**314**	*i* P	**Pn**	**02 00 34.7**	**-0.7**
GCAM				*i* S	**Sn**	**02 01 02.8**	**-4.0**
KULA	**Kula-Manisa**	**2.69**	**344**	*e*PN	**Pn**	**02 00 36.5**	**-0.3**
KULA	**Kula-Manisa**	**2.69**	**344**	*e*Pn	**Pn**	**02 00 36.5**	**-0.3**
SHUT	**Suhut-Afyon**	**2.73**	**16**	*e*PN	**Pn**	**02 00 37.3**	**-0.1**
SHUT	**Suhut-Afyon**	**2.73**	**16**	*e*Pn	**Pn**	**02 00 37.3**	**-0.1**
LEF	**Lefka**	**2.81**	**106**	*e*PN	**Pn**	**02 00 38.8**	**+0.4**
LEF	**Lefka**	**2.81**	**106**	*e*Pn	**Pn**	**02 00 38.8**	**+0.4**
SMG	**Samos**	**2.84**	**310**	*e*Pn	**Pn**	**02 00 37.7**	**-1.1**
SMG				*e*Sn	**Sn**	**02 01 11.5**	**-1.3**
SMG	**Samos**	**2.84**	**310**	*e*PN	**Pn**	**02 00 37.7**	**-1.1**
SMG				*e*SN	**Sn**	**02 01 11.5**	**-1.3**
SMG	**Samos**	**2.84**	**310**	*e*Pn	**Pn**	**02 00 37.7**	**-1.1**
SMG				*e*Sn	**Sn**	**02 01 11.5**	**-1.3**
ZKR	**Zakros**	**2.87**	**255**	P	**Pn**	**02 00 39.8**	**+0.6**
ZKR				S	**Sn**	**02 01 14.8**	**+1.2**
ZKR	**Zakros**	**2.87**	**255**	P	**Pn**	**02 00 39.8**	**+0.6**
ZKR				S	**Sn**	**02 01 14.8**	**+1.2**
ZKR	**Zakros**	**2.87**	**255**	*e*PN	**Pn**	**02 00 40.2**	**+1.0**
ZKR	**Zakros**	**2.87**	**255**	P	**Pn**	**02 00 39.8**	**+0.6**
ZKR	**Zakros**	**2.87**	**255**	*e*Pn	**Pn**	**02 00 40.2**	**+1.0**
ZKR				S	**Sn**	**02 01 14.8**	**+1.2**
BOLV	**Bolvadin**	**2.99**	**21**	*i* P	**Pn**	**02 00 41.0**	**+0.1**
KONT	**Konya--Tatoy**	**3.00**	**47**	*e*PN	**Pn**	**02 00 41.9**	**+0.8**
KONT	**Konya--Tatoy**	**3.00**	**47**	*e*Pn	**Pn**	**02 00 41.9**	**+0.9**
IZM	**Izmir**	**3.09**	**324**	*e*PN	**Pn**	**02 00 41.6**	**-0.7**
IZM	**Izmir**	**3.09**	**324**	*e*Pn	**Pn**	**02 00 41.6**	**-0.7**
ALT	**Altintas**	**3.15**	**7**	*e*PN	**Pn**	**02 00 42.8**	**-0.4**
ALT	**Altintas**	**3.15**	**7**	*e*Pn	**Pn**	**02 00 42.8**	**-0.4**
LADK	**Ladik-KONYA**	**3.18**	**44**	*e*PN	**Pn**	**02 00 44.1**	**+0.6**
LADK	**Ladik-KONYA**	**3.18**	**44**	*e*Pn	**Pn**	**02 00 44.1**	**+0.6**
DEMI	**Demirci**	**3.19**	**348**	*i* P	**Pn**	**02 00 42.5**	**-1.2**
DEMI	**Demirci**	**3.19**	**348**	*i* P	**Pn**	**02 00 42.5**	**-1.2**
BLCB	**Balcova**	**3.19**	**321**	*e*PN	**Pn**	**02 00 43.8**	**+0.1**
BLCB	**Balcova**	**3.19**	**321**	P	**Pn**	**02 00 42.3**	**-1.4**
BLCB	**Balcova**	**3.19**	**321**	P	**Pn**	**02 00 42.3**	**-1.4**
BLCB	**Balcova**	**3.19**	**321**	P	**Pn**	**02 00 42.3**	**-1.4**
BLCB	**Balcova**	**3.19**	**321**	*e*Pn	**Pn**	**02 00 43.8**	**+0.1**
CSS	**Prodhromos**	**3.20**	**106**	*e*PN	**Pn**	**02 00 43.8**	**-0.1**
CSS	**Prodhromos**	**3.20**	**106**	*e*Pn	**Pn**	**02 00 43.8**	**0.0**
LFK	**Lefkose**	**3.28**	**100**	*e*PN	**Pn**	**02 00 46.2**	**+1.4**
LFK	**Lefkose**	**3.28**	**100**	*e*Pn	**Pn**	**02 00 46.3**	**+1.4**
KDHN	**Kadinhani**	**3.29**	**37**	*i* P	**Pn**	**02 00 46.2**	**+1.2**
KDHN				*i* S	**Sn**	**02 01 27.9**	**+4.0**
KDHN	**Kadinhani**	**3.29**	**37**	*i* P	**Pn**	**02 00 46.2**	**+1.2**
KDHN				*i* S	**Sn**	**02 01 27.9**	**+4.0**
NPS	**Neapolis**	**3.31**	**260**	*e*Pn	**Pn**	**02 00 45.6**	**+0.3**
NPS	**Neapolis**	**3.31**	**260**	*e*PN	**Pn**	**02 00 45.6**	**+0.3**
NPS	**Neapolis**	**3.31**	**260**	*e*Pn	**Pn**	**02 00 45.6**	**+0.3**
IKL	**Isikli**	**3.33**	**83**	*e*PN	**Pn**	**02 00 46.3**	**+0.7**
IKL	**Isikli**	**3.33**	**83**	*e*Pn	**Pn**	**02 00 46.3**	**+0.7**
THR1	**Thera Island**	**3.37**	**279**	P	**Pn**	**02 00 45.7**	**-0.5**
THR1	**Thera Island**	**3.37**	**279**	P	**Pn**	**02 00 45.7**	**-0.5**
THR2	**Thira Island,**	**3.40**	**280**	P	**Pn**	**02 00 45.9**	**-0.7**
THR2	**Thira Island,**	**3.40**	**280**	P	**Pn**	**02 00 45.9**	**-0.7**
THR3	**Thira Island,**	**3.42**	**279**	P	**Pn**	**02 00 46.4**	**-0.5**
THR3	**Thira Island,**	**3.42**	**279**	P	**Pn**	**02 00 46.4**	**-0.5**
THR3	**Thira Island,**	**3.42**	**279**	P	**Pn**	**02 00 46.4**	**-0.5**
LAST	**Lasithi**	**3.44**	**258**	P	**Pn**	**02 00 47.5**	**+0.4**
LAST	**Lasithi**	**3.44**	**258**	P	**Pn**	**02 00 47.5**	**+0.4**
LAST	**Lasithi**	**3.44**	**258**	*e*PN	**Pn**	**02 00 47.9**	**+0.8**
LAST	**Lasithi**	**3.44**	**258**	P	**Pn**	**02 00 47.5**	**+0.4**
LAST	**Lasithi**	**3.44**	**258**	*e*Pn	**Pn**	**02 00 47.9**	**+0.8**
APE	**Apeiranthos**	**3.46**	**290**	P	**Pn**	**02 00 46.8**	**-0.6**
APE	**Apeiranthos**	**3.46**	**290**	P	**Pn**	**02 00 46.8**	**-0.6**
APE	**Apeiranthos**	**3.46**	**290**	P	**Pn**	**02 00 46.8**	**-0.6**
THR5	**Thira Island,**	**3.47**	**279**	P	**Pn**	**02 00 47.0**	**-0.5**
THR5	**Thira Island,**	**3.47**	**279**	P	**Pn**	**02 00 47.0**	**-0.5**
THR5	**Thira Island,**	**3.47**	**279**	P	**Pn**	**02 00 47.0**	**-0.5**
KIZT	**Kizilcal**	**3.47**	**31**	*e*PN	**Pn**	**02 00 48.6**	**+1.1**
KIZT	**Kizilcal**	**3.47**	**31**	*e*Pn	**Pn**	**02 00 48.6**	**+1.1**
ESKT	**Eskisehir**	**3.73**	**15**	*e*PN	**Pn**	**02 00 51.6**	**+0.5**
ESKT	**Eskisehir**	**3.73**	**15**	*e*Pn	**Pn**	**02 00 51.6**	**+0.6**
CHOS	**Chios island**	**3.74**	**312**	P	**Pn**	**02 00 50.5**	**-0.8**
CHOS	**Chios island**	**3.74**	**312**	*e*PN	**Pn**	**02 00 51.1**	**-0.2**
CHOS	**Chios island**	**3.74**	**312**	P	**Pn**	**02 00 50.5**	**-0.8**
CHOS	**Chios island**	**3.74**	**312**	*e*Pn	**Pn**	**02 00 51.1**	**-0.2**
SVRH	**Sivrihisar-ESK**	**3.84**	**23**	*e*PN	**Pn**	**02 00 53.7**	**+1.2**
SVRH	**Sivrihisar-ESK**	**3.84**	**23**	*e*Pn	**Pn**	**02 00 53.7**	**+1.1**
SULT	**Sultanhani-AKS**	**3.88**	**53**	*e*PN	**Pn**	**02 00 54.6**	**+1.6**
SULT	**Sultanhani-AKS**	**3.88**	**53**	*e*Pn	**Pn**	**02 00 54.6**	**+1.5**
IDI	**Anoyia**	**3.88**	**262**	Pn	**Pn**	**02 00 53.1**	**-0.1**
	7.2nm,0.3s,baz=86,slow=14,SNR=58						
IDI				Sn	**Sn**	**02 01 39.5**	**+0.9**
	4.3nm,0.3s,baz=292,slow=19,SNR=2.6						
IDI	**Anoyia**	**3.88**	**262**	*e*Pn	**Pn**	**02 00 53.1**	**-0.1**
IDI	**Anoyia**	**3.88**	**262**	*e*PN	**Pn**	**02 00 53.1**	**-0.1**
IDI	**Anoyia**	**3.88**	**262**	*e*Pn	**Pn**	**02 00 53.1**	**-0.1**
SIVA	**Sivas**	**4.00**	**258**	P	**Pn**	**02 00 55.8**	**+0.9**
SIVA	**Sivas**	**4.00**	**258**	P	**Pn**	**02 00 55.8**	**+0.9**
SIVA	**Sivas**	**4.00**	**258**	*e*PN	**Pn**	**02 00 55.9**	**+1.0**
SIVA	**Sivas**	**4.00**	**258**	P	**Pn**	**02 00 55.8**	**+0.9**
MERS	**Mersin**	**4.09**	**75**	*e*PN	**Pn**	**02 00 57.9**	**+1.8**
MERS	**Mersin**	**4.09**	**75**	*e*Pn	**Pn**	**02 00 57.9**	**+1.9**
PRK	**Paraskevi**	**4.24**	**323**	P	**Pn**	**02 00 57.2**	**-0.8**
PRK	**Paraskevi**	**4.24**	**323**	P	**Pn**	**02 00 57.2**	**-0.8**
PRK	**Paraskevi**	**4.24**	**323**	*e*PN	**Pn**	**02 00 57.6**	**-0.4**
PRK	**Paraskevi**	**4.24**	**323**	P	**Pn**	**02 00 57.2**	**-0.8**
PRK	**Paraskevi**	**4.24**	**323**	*e*Pn	**Pn**	**02 00 57.6**	**-0.4**
VAM	**Vamos**	**4.42**	**265**	*e*Pn	**Pn**	**02 01 02.5**	**+1.9**
VAM	**Vamos**	**4.42**	**265**	*e*PN	**Pn**	**02 01 02.5**	**+1.9**
VAM	**Vamos**	**4.42**	**265**	*e*Pn	**Pn**	**02 01 02.5**	**+1.9**
GVD	**Gavdhos**	**4.62**	**258**	P	**Pn**	**02 01 04.3**	**+0.9**
GVD	**Gavdhos**	**4.62**	**258**	P	**Pn**	**02 01 04.3**	**+0.9**
GVD	**Gavdhos**	**4.62**	**258**	*e*PN	**Pn**	**02 01 04.3**	**+0.9**
GVD	**Gavdhos**	**4.62**	**258**	P	**Pn**	**02 01 04.3**	**+0.9**
YLV	**Yalova**	**4.64**	**358**	*e*PN	**Pn**	**02 01 05.0**	**+1.5**
YLV	**Yalova**	**4.64**	**358**	*e*Pn	**Pn**	**02 01 05.0**	**+1.4**
KARN	**Karanos**	**4.65**	**265**	P	**Pn**	**02 01 04.2**	**+0.5**
KARN	**Karanos**	**4.65**	**265**	P	**Pn**	**02 01 04.2**	**+0.5**
KARN	**Karanos**	**4.65**	**265**	*e*PN	**Pn**	**02 01 04.8**	**+1.1**
KARN	**Karanos**	**4.65**	**265**	*e*Pn	**Pn**	**02 01 04.8**	**+1.1**
ARMT	**Armutlu**	**4.67**	**353**	*e*PN	**Pn**	**02 01 04.7**	**+0.7**
ARMT	**Armutlu**	**4.67**	**353**	*e*Pn	**Pn**	**02 01 04.7**	**+0.7**
MDU	**Mudurnu**	**4.71**	**15**	*e*PN	**Pn**	**02 01 05.9**	**+1.3**
MDU	**Mudurnu**	**4.71**	**15**	*e*Pn	**Pn**	**02 01 05.9**	**+1.3**
BRTR	**Keskin Array B**	**4.97**	**39**	Pn	**Pn**	**02 01 08.3**	**+0.3**
	2.6nm,0.3s,baz=209,slow=15,SNR=106						
BRTR				Sn	**Sn**	**02 02 08.7**	**+3.3**
	2.5nm,0.3s,baz=218,slow=26,SNR=14						
BRTR	**Keskin Array B**	**4.97**	**39**	Pn	**Pn**	**02 01 08.4**	**+0.3**
BRTR				Sn	**Sn**	**02 02 08.7**	**+3.3**
BR131	**Keskin Array S**	**4.97**	**39**	*e*Pn	**Pn**	**02 01 08.6**	**+0.5**
BR131				*e*Sn	**Sn**	**02 02 04.2**	**-1.2**
BR131	**Keskin Array S**	**4.97**	**39**	*e*Pn	**Pn**	**02 01 08.6**	**+0.5**
BR131				*e*Sn	**Sn**	**02 02 04.2**	**-1.2**
LPK	**Lapseki**	**4.97**	**334**	*e*PN	**Pn**	**02 01 09.0**	**+0.9**
LPK	**Lapseki**	**4.97**	**334**	*e*Pn	**Pn**	**02 01 09.0**	**+0.9**
RKY	**Sarkoy-Tekirda**	**5.12**	**339**	*e*PN	**Pn**	**02 01 11.1**	**+1.0**
RKY	**Sarkoy-Tekirda**	**5.12**	**339**	*e*Pn	**Pn**	**02 01 11.1**	**+0.9**
GADA	**Gvkgeada**	**5.16**	**327**	*e*PN	**Pn**	**02 01 10.6**	**-0.2**
GADA	**Gvkgeada**	**5.16**	**327**	*e*Pn	**Pn**	**02 01 10.6**	**-0.1**
MFT	**Murefte**	**5.18**	**340**	*e*PN	**Pn**	**02 01 11.6**	**+0.6**
MFT	**Murefte**	**5.18**	**340**	*e*Pn	**Pn**	**02 01 11.6**	**+0.6**
HMAT	**Matruh**	**5.25**	**204**	P	**Pn**	**02 01 12.2**	**+0.2**
	baz=205						
HMAT				AMP		02 02 00.0	
	comp=E

KEST	Kesra	16.42	275	Pn	Pn	02 03 44.5	+0.6
	comp=E,0.1nm,0.3s,baz=269,slow=3.2,SNR=3.7						
TAM	Tamanrasset	24.64	244	eP	P	02 05 15.4	+1.3
	comp=E,3.7nm,1.3s,mb3.8						
TAM	Tamanrasset	24.64	244	eP	P	02 05 15.4	+1.3
	comp=E,3.7nm,1.3s,mb3.8						
AKTK	Aktyubinsk	25.10	46	P	P	02 05 17.7	-0.4
AKTK	Aktyubinsk	25.10	46	P	P	02 05 17.7	-0.4
AKTO	Aktyubinsk	25.10	46	P	P	02 05 17.7	-0.4
	comp=E,1.5nm,0.5s,mb3.8,baz=263,slow=11,SNR=8.0						
FINES	FINESS Array B	25.64	356	P	P	02 05 23.3	+0.5
	comp=E,0.5nm,0.5s,mb3.3,baz=181,slow=9.5,SNR=4.9						
FINES	FINESS Array B	25.64	356	P	P	02 05 23.3	+0.5
ABKAR	Akbulak array	25.82	49	eP	P	02 05 23.9	-0.7
	comp=E,1.0nm,0.5s,mb3.6						
ABKAR	Akbulak array	25.82	49	eP	P	02 05 23.9	-0.7
	comp=E,1.0nm,0.5s,mb3.6						
HFS	Hagfors	26.31	342	P	P	02 05 29.7	+0.8
	comp=E,1.1nm,0.6s,mb3.6,baz=124,slow=13,SNR=6.1						
HFS	Hagfors	26.31	342	P	P	02 05 29.7	+0.8
ESDC	Sonseca Array	26.69	288	P	P	02 05 30.5	-2.1
	comp=E,0.5nm,0.6s,mb3.3,baz=84,slow=9.8,SNR=6.9						
ESDC	Sonseca Array	26.69	288	P	P	02 05 30.5	-2.0
NOA	NORSAR Array B	27.73	341	LR	LR	02 17 26.1	
	comp=E,15nm,19.3s,baz=175,slow=38						
TOA0	Torodi Ar. Sit	33.82	235	eP	P	02 06 35.2	-0.6
TOA0	Torodi Ar. Sit	33.82	235	eP	P	02 06 35.2	-0.6
TORD	Torodi Ar. Bea	33.82	235	P	P	02 06 35.6	-0.2
	comp=E,2.1nm,0.8s,mb4.1,baz=35,slow=8.0,SNR=20						
KURK	Kurchatov	37.89	51	P	P	02 07 08.4	-1.9
	comp=E,1.7nm,0.6s,mb3.9,baz=274,slow=8.9,SNR=11						
KURK	Kurchatov	37.89	51	eP	P	02 07 09.0	-1.4
	comp=E,2.1nm,0.9s,mb3.9						
KURK	Kurchatov	37.89	51	eP	P	02 07 09.0	-1.4
	comp=E,2.1nm,0.9s,mb3.9						
MK31	Makanchi Array	40.33	58	eP	P	02 07 29.5	-1.3
MK31	Makanchi Array	40.33	58	eP	P	02 07 29.5	-1.3
MKAR	Makanchi Array	40.33	58	P	P	02 07 29.4	-1.4
	comp=E,0.4nm,0.6s,mb3.3,baz=297,slow=6.1,SNR=5.1						
MKAR	Makanchi Array	40.33	58	P	P	02 07 29.4	-1.4
DBIC	Dimbokro	42.92	236	P	P	02 07 52.0	-0.4
	comp=E,2.2nm,0.8s,mb3.9,baz=40,slow=7.9,SNR=3.6						
DBIC	Dimbokro	42.92	236	P	P	02 07 52.0	-0.4

DDA 13 02:04:47.5, 35°.88N×29°.45E, h12km±3km, Md3.4
CSEM 13 02:04:48.5±0.4, 35°.93N×29°.57E, h2km, MD3.4, Error ellipse: s-maj=8.1km s-min=5.5km az=173.0
IDC 13 02:04:48.3±1.8, 35°.84N×29°.54E, h0km, mb3.2/1, mb1 3.2/4, mb1mx3.1/24, mbtmp3.2/4, ML3.1/3, Error ellipse: s-maj=39.8km s-min=21.9km az=158.0
NEIC 13 02:04:49.0, 36°.08N×29°.53E, h5km, MD3.3(ISK), After ISK.
ISK 13 02:04:49.2, 36°.08N×29°.53E, h5km, MD3.2

ISC 13 02:04:48.4±1.3, 35°.98N±0°.06×29°.54E±0°.03, h4km±8km, n56, σ1°11/76, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKAS	Kas	0.26	12	iP	Pg	02 04 52.7	-0.6
AKAS				iS	Sg	02 04 56.5	-0.2
AKAS	Kas	0.26	12	iP	Pg	02 04 52.7	-0.6
FETY	Fethiye	0.75	331	ePG	Pg	02 05 03.4	+0.7
FETY				eSG	Sg	02 05 13.4	+0.9
FETY	Fethiye	0.75	331	ePg	Pg	02 05 03.4	+0.7
FETY				eSg	Sg	02 05 13.4	+0.9
ELL	Elmali	0.82	21	ePG	Pg	02 05 04.4	+0.3
ELL	Elmali	0.82	21	ePg	Pg	02 05 04.4	+0.3
TURN	Turunc	1.17	320	iP	Pg	02 05 13.5	+2.7
TURN				iS	Sg	02 05 31.4	+5.5
TURN	Turunc	1.17	320	iP	Pg	02 05 13.5	+2.8
GLHS	Glhisar (BURDU	1.17	358	ePG	Pg	02 05 10.9	0.0
GLHS	Glhisar (BURDU	1.17	358	ePg	Pg	02 05 10.9	+0.1
KORT	Korkueli	1.21	32	iP	Pg	02 05 11.8	+0.3
KORT				iS	Sg	02 05 32.9	+5.7
KORT	Korkueli	1.21	32	iP	Pg	02 05 11.8	+0.3
GOLH	Golhisar	1.25	1	iP	Pg	02 05 12.2	-0.2
GOLH				iS	Sg	02 05 32.0	+3.4
GOLH	Golhisar	1.25	1	iP	Pg	02 05 12.2	-0.2
GOLH				iS	Sg	02 05 32.0	+3.4
ANTB	Antalya	1.28	44	ePN	Pn	02 05 13.6	+0.5
ANTB	Antalya	1.28	44	ePn	Pn	02 05 13.6	+0.5
YER	Yerkesik	1.53	319	ePN	Pg	02 05 17.8	+0.1
YER	Yerkesik	1.53	319	ePn	Pg	02 05 17.8	+0.1
BCK	Bucak	1.70	29	ePN	Pb	02 05 20.1	-0.1
BCK	Bucak	1.70	29	ePn	Pb	02 05 20.1	-0.1
DNZL	Cakiroluk	1.75	347	iP	Pg	02 05 21.6	-0.3
DNZL				iS	Sg	02 05 45.3	+0.7
DNZL	Cakiroluk	1.75	347	iP	Pg	02 05 21.6	-0.3
DNZL				iS	Sg	02 05 45.3	+0.7
DAT	Datca	1.75	296	ePN	Pb	02 05 20.9	-0.1
DAT	Datca	1.75	296	ePn	Pb	02 05 20.9	-0.2
DENT	Denizli	1.81	347	ePN	Pb	02 05 21.6	-0.6
DENT	Denizli	1.81	347	ePn	Pb	02 05 21.6	-0.6
SUTC	Sutluce-Ispart	1.90	38	ePN	Pb	02 05 23.7	+0.1
SUTC	Sutluce-Ispart	1.90	38	ePn	Pb	02 05 23.7	+0.1
MLSB	Milas	1.93	313	ePN	Pb	02 05 23.5	-0.6
MLSB	Milas	1.93	313	ePn	Pb	02 05 23.5	-0.7
ISP	Isparta	2.00	23	ePN	Pb	02 05 24.9	-0.4
ISP	Isparta	2.00	23	ePn	Pn	02 05 22.1	-0.9
ISP				ePg	Pg	02 05 26.0	-0.7
BDRM	Kayabasi	2.00	303	iP	Pn	02 05 23.8	+0.8
BDRM				iS	Sb	02 05 50.0	-0.8
BDRM	Kayabasi	2.00	303	iP	Pn	02 05 23.8	+0.8
BDRM				iS	Sb	02 05 50.0	-0.7
AYDN	Tasoluk	2.14	322	iP	Pb	02 05 26.3	-1.5
AYDN				iS	Sg	02 05 55.9	-1.3
AYDN	Tasoluk	2.14	322	iP	Pb	02 05 26.3	-1.4
AYDN				iS	Sg	02 05 55.9	-1.3
GAZI	Gazipasa	2.26	83	iP	Pn	02 05 26.0	-0.5
GAZI				iS	Sn	02 05 52.7	-2.2
GAZI	Gazipasa	2.26	83	iP	Pn	02 05 26.0	-0.6
GAZI				iS	Sn	02 05 52.7	-2.2
KHL	Karahalli	2.34	360	ePN	Pb	02 05 28.6	-2.5
KHL	Karahalli	2.34	360	ePn	Pb	02 05 28.6	-2.5
KHAL	Karahalli	2.38	359	iP	Pb	02 05 29.6	-2.2
KHAL	Karahalli	2.38	359	iP	Pb	02 05 29.6	-2.3
HDMB	Hadim	2.57	67	ePN	Pn	02 05 33.0	+2.2
HDMB	Hadim	2.57	67	ePn	Pn	02 05 33.0	+2.2
KULA	Kula-Manisa	2.62	345	ePN	Pn	02 05 32.9	+1.4
KULA	Kula-Manisa	2.62	345	ePn	Pn	02 05 32.9	+1.4
KONT	Konya--Tatoy	2.99	48	ePN	Pn	02 05 38.7	+2.2
KONT	Konya--Tatoy	2.99	48	ePn	Pn	02 05 38.7	+2.1
IDI	Anoyia	3.85	261	Pn	Pn	02 05 48.3	-0.1
	1.0nm,0.3s,baz=89,slow=16,SNR=9.5						
IDI				Sn	Sn	02 06 35.0	+0.9
	0.3nm,0.3s,baz=299,slow=19,SNR=2.0						
IDI	Anoyia	3.85	261	Pn	Pn	02 05 48.3	-0.1
IDI				Sn	Sn	02 06 35.0	+0.9
BRTR	Keskin Array B	4.95	40	Pn	Pn	02 06 05.7	+2.2
	0.3nm,0.3s,baz=220,slow=16,SNR=10						
BRTR				Sn	Sn	02 07 04.5	+3.4
	0.3nm,0.3s,baz=217,slow=25,SNR=8.2						
BRTR	Keskin Array B	4.95	40	Pn	Pn	02 06 05.7	+2.2
BRTR				Sn	Sn	02 07 04.6	+3.5
BR131	Keskin Array S	4.95	40	ePn	Pn	02 06 02.7	-0.8
BR131	Keskin Array S	4.95	40	ePn	Pn	02 06 02.7	-0.8
MMAI	Mount Meron Ar	5.67	120	Pn	Pn	02 06 13.4	0.0
	1.9nm,0.3s,baz=306,slow=11,SNR=7.1						
TORD	Torodi Ar. Bea	33.82	235	P	P	02 11 31.5	-0.3
	0.6nm,1.1s,baz=27,slow=8.0,SNR=4.0						

NEIC 13 02:07:13.9, 37°.60S×177°.12E, h5km, ML4.0(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	White Island	0.09	37	P	Pg	02 07 16.4	+0.6
WIZ				S	Sg	02 07 18.3	+1.2
MARZ	Manawahe	0.52	222	P	Pg	02 07 24.6	+0.6
URZ	Urewera	0.66	181	P	Pg	02 07 26.7	+0.1
TGRZ	Tauranga	0.69	259	P	Pg	02 07 27.6	+0.4
OUZ	Omahuta	3.70	309	ePn	Pn	02 08 09.8	-1.9

GUC 13 02:08:27.0±0.7, 22°.49S×68°.96W, h98km±8km, ML3.7, 1C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	Plate Boundary	0.53	295	⇑iP	Pn	02 08 49.0	+6.2
PB04				iS	Sn	02 09 06.0	+11
PB04				AML	AML	02 09 07.5	
	comp=N,2μm,0.2s						
PECH	Pedro de Valdi	0.67	261	iP	Pn	02 08 44.7	+0.8
PECH				iS	Sn	02 08 57.9	+1.4
PECH				AML	AML	02 08 58.4	
	comp=N,7μm,0.3s						
MACH	Maria Elena	0.79	292	iP	Pn	02 08 45.8	+0.7
MACH				iS	Sn	02 08 59.9	+1.2
MECH	Mejillones	1.50	246	⇓iP	Pn	02 08 53.7	+0.6
MECH				iS	Sn	02 09 14.3	+1.3
MECH				AML	AML	02 09 19.9	
	comp=N,904nm,0.3s						
PB01	Plate Boundary	1.52	341	⇓iP	Pn	02 08 53.9	+0.4
PB01				iS	Sn	02 09 15.0	+1.6
PB01				AML	AML	02 09 15.6	
	comp=E,1μm,0.2s						

NIED 13 02:21:00, 35°.90N×137°.70E, h20km, Mw4.3 Best double couple: M0=3.60000×10^15 NP1:φs=85.00000°, δ90.00000°, λ-175.00000°. NP2:φs=355.00000°, δ85.00000°, λ0.00000°.
ISCJB 13 02:21:32.0±0.6, 35°.91N±0°.03×137°.70E±0°.04, h13km±4km, mb4.0/26, MS3.3/10, Error ellipse: s-maj=5.4km s-min=4.8km az=151.2
NEIC 13 02:21:32.6, 35°.91N×137°.70E, h13km, mb4.3/11, After JMA.
NEIC Felt at Nagano. Recorded [4 JMA] in Nagano; [2 JMA] in Aichi, Gifu, Kanagawa, Saitama, Shizuoka and Yamanashi; [1 JMA] in Gumma, Ibaraki, Niigata, Shiga and Tokyo.
IDC 13 02:21:32.5±0.7, 35°.79N×138°.02E, h0km, mb3.9/15, mb1 4.1/16, mb1mx3.9/29, mbtmp3.9/16, ML3.6/1, MS3.3/14, Ms1 3.3/14, ms1mx3.1/55, Error ellipse: s-maj=20.8km s-min=9.4km az=104.0
JMA 13 02:21:32.6, 35°.91N×137°.70E, h13km±1km, M4.7 Broadband fault plane solution: P waves. NP1: φs=357.00000°, δ69.00000°, λ2.00000°. NP2:φs=267.00000°, δ88.00000°, λ159.00000°. Principal axes: T Plg16.0000°, Azm220.0000°; N Plg69.0000°, Azm81.0000°; P Plg13.0000°, Azm314.0000°;
JMA Felt IV J1.

ISC 13 02:21:32.6±0.5, 35°.91N±0°.03×137°.71E±0°.04, h5km±4km, n54, σ1°23/51, mb4.0/26, MS3.3/10, 2C-4D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNT	Takato	0.35	95	⇓P	Pg	02 21 39.8	+0.5
JNT				S	Sg	02 21 44.4	+0.6
JGF	Kuroka	0.42	224	⇑P	Pg	02 21 40.7	+0.1
JGF				S	Sg	02 21 46.3	+0.2
MAJO	Matsushiro	0.75	32	ePn	Pn	02 21 46.1	-3.7
MAJO				eSn	Sg	02 21 55.9	-0.8
MAT	Matsushiro	0.75	32	P	Pg	02 21 46.7	-0.3
MAT				S	Sg	02 21 56.4	-0.4
MJAR	Matsushiro Arr	0.75	32	Pg	Pg	02 21 46.5	-0.5
	1μm,0.3s,baz=220,slow=18,SNR=4497						
MJAR				Lg		02 21 56.4	
	1μm,0.3s,baz=214,slow=39,SNR=48						
MJAR	Matsushiro Arr	0.75	32	Pg	Pg	02 21 46.5	-0.5
MJAR				Lg		02 21 56.4	
JTT	Ttatey	0.76	336	⇓P	Pg	02 21 47.3	+0.1
JYN	Shimob	0.79	121	⇓P	Pg	02 21 48.0	+0.3
JYN				S	Sg	02 21 58.8	+0.9
JGM	Miyama	0.83	256	⇑P	Pg	02 21 48.4	-0.2
SHZ3	Shizuoka 3	0.93	154	⇓P	Pg	02 21 49.8	-0.6
SHZ3				S	Sg	02 22 02.1	-0.4
JHJ	Hachijo jima 2	3.26	148	Pn	Pn	02 22 20.3	-4.1
	21nm,0.3s,baz=71,slow=20,SNR=3.7						
JHJ				LR	LR	02 22 55.6	
	comp=Z,262nm,20.3s,baz=128,slow=27						
ERM	Erimo	7.43	33	ePn	Pn	02 23 22.1	+0.6
	32nm,0.8s						
KSRS	Korea Array	8.02	284	Pn	Pn	02 23 30.9	+1.2
	0.9nm,0.3s,baz=98,slow=14,SNR=12						
KSRS				LR	LR	02 26 26.3	
	comp=Z,169nm,18.4s,baz=100,slow=35						
ASAJ	Asahikawa	9.02	23	LR	LR	02 27 03.4	
	comp=Z,102nm,18.6s,baz=238,slow=37						
CBIJ	Chichi jima	9.57	155	LR	LR	02 27 07.7	
	comp=Z,200nm,18.6s,baz=121,slow=36						
PETK	Petropavlovsk-	22.21	33	P	P	02 26 30.6	+0.9
	9.0nm,0.9s,mb4.2,baz=243,slow=9.8,SNR=9.8						
PETK				LR	LR	02 36 02.6	
	comp=Z,62nm,18.3s,MS3.1,baz=44,slow=39						
GUMO	Guam	23.13	162	LR	LR	02 34 24.9	
	comp=Z,66nm,18.7s,MS3.1,slow=34						
SONM	Songino Array	26.01	307	P	P	02 27 09.1	+2.8
	0.7nm,0.7s,mb3.3,baz=105,slow=9.5,SNR=2.9						
CMAR	Chiang Mai Arr	38.32	253	LR	LR	02 45 52.9	
	comp=Z,50nm,19.6s,MS3.3,baz=35,slow=38						
ZALV	Zalesovo Beam	40.50	313	LR	LR	02 47 35.9	
	comp=Z,14nm,20.1s,MS2.8,baz=61,slow=38						
MK31	Makanchi Array	42.20	303	eP	P	02 29 24.5	-1.8
MKAR	Makanchi Array	42.20	303	LR	LR	02 47 40.1	
	comp=Z,35nm,18.6s,MS3.3,baz=353,slow=37						
KURK	Kurchatov	44.29	309	eP	P	02 29 38.9	-4.2
	2.3nm,0.9s,mb3.9						
AAK	Ala-Archa	48.40	298	LR	LR	02 50 29.1	
	comp=Z,34nm,20.6s,MS3.3,baz=246,slow=36						
UCH	Uchtor	48.48	298	eP	P	02 30 16.0	-0.2
	1.0nm,0.7s,mb4.0						
AML	Almayashu	49.10	298	eP	P	02 30 20.9	0.0
	120nm,0.6s						
BRVK	Borovoye	49.19	313	eP	P	02 30 18.9	-2.5
	2.7nm,0.8s,mb4.3						
ARU	Arti	55.23	318	eP	P	02 31 05.7	-0.6
	3.1nm,0.8s,mb4.4						
WRAB	Tennant Creek	55.62	184	eP	P	02 31 08.2	-1.2
	7.9nm,1.2s,mb4.6						
WRA	Warramunga Arr	55.63	184	P	P	02 31 08.2	-1.2
	1.1nm,0.7s,mb4.0,baz=1.1,slow=7.8,SNR=5.9						
ABKAR	Akbulak array	56.38	310	eP	P	02 31 12.6	-2.0
	0.8nm,0.6s,mb3.9						
AKTK	Aktyubinsk	57.20	312	P	P	02 31 21.2	+0.7
AKTK				LR	LR	02 56 48.7	
AKTO	Aktyubinsk	57.20	312	P	P	02 31 21.2	+0.7
	0.6nm,0.5s,mb3.9,baz=67,slow=15,SNR=3.2						
AKTO				LR	LR	02 56 48.7	
	comp=Z,24nm,19.1s,MS3.3,baz=256,slow=37						
ASAR	Alice Springs	59.35	184	P	P	02 31 34.6	-1.0
	1.0nm,0.7s,mb4.0,baz=18,slow=12,SNR=6.5						
RES	Resolute Bay	64.42	14	LR	LR	03 05 00.6	
	comp=Z,35nm,19.1s,MS3.6,baz=16,slow=40						
YKA	Yellowknife Ar	66.26	29	P	P	02 32 21.6	+0.3
	0.5nm,0.8s,mb3.6,baz=303,slow=6.8,SNR=6.1						
FINES	FINESS Array B	68.40	331	P	P	02 32 37.9	+3.0
	1.1nm,0.7s,mb4.0,baz=72,slow=4.5,SNR=2.7						
AKASG	Malin Array Be	73.33	321	P	P	02 33 07.7	+2.6
	0.2nm,0.3s,mb3.5,baz=48,slow=6.8,SNR=3.1						
HFS	Hagfors	73.85	334	P	P	02 33 11.0	+3.1
	1.4nm,0.8s,mb4.0,baz=35,slow=5.4,SNR=5.4						
HFS				LR	LR	03 09 35.1	
	comp=Z,31nm,20.2s,MS3.6,baz=52,slow=39						
NB2	NORSAR Subarra	74.04	336	P	P	02 33 11.6	+2.6
	comp=Z,2.6nm,0.9s,mb4.2,baz=42,slow=5.9						
NOA	NORSAR Array B	74.04	336	P	P	02 33 11.2	+2.1
	comp=Z,1.9nm,0.9s,mb4.0,baz=42,slow=5.9,SNR=4.2						
EGMT	Eagleton	77.06	40	eP	P	02 33 24.5	-2.1
	comp=Z,3.2nm,0.8s,mb4.3						
HLID	Hailey	77.30	45	eP	P	02 33 26.5	-1.5
	1.1nm,0.9s,mb3.9						
BRTR	Keskin Array B	77.33	310	P	P	02 33 31.9	+3.7
	comp=Z,1.6nm,1.0s,mb3.9,baz=129,slow=3.8,SNR=7.2						
NVAR	Mina Array Bea	78.04	51	P	P	02 33 34.5	+2.3
	comp=Z,0.3nm,0.5s,mb3.5,baz=270,slow=4.5,SNR=5.3						
TPAW	Teton Pass	79.32	44	eP	P	02 33 38.2	-1.0
	comp=Z,1.3nm,0.6s,mb4.0						
SNOW	Snow King Moun	79.44	44	eP	P	02 33 39.3	-0.5
	comp=Z,9.3nm,0.7s,mb4.8						
VRAC	Vranov	80.40	325	LR	LR	03 10 32.2	
	comp=Z,29nm,19.9s,MS3.6,baz=265,slow=36						
PDAR	Pinedale Array	80.56	44	P	P	02 33 47.4	+1.4
	comp=Z,0.9nm,0.7s,mb3.8,baz=253,slow=1.5,SNR=6.1						
SRU	San Rafael	82.38	47	eP	P	02 33 54.7	-1.0
	comp=Z,3.3nm,0.8s,mb4.3						
SCHQ	Schefferville	87.20	14	P	P	02 34 19.5	-0.1
	comp=Z,5.4nm,1.2s,mb4.7,baz=13,slow=15,SNR=2.3						
SCHQ	Schefferville	87.20	14	P	P	02 34 19.5	-0.1
TXAR	Lajitas Array	93.15	50	P	P	02 34 49.1	+1.0
	comp=Z,0.2nm,0.8s,mb3.6,baz=341,slow=11,SNR=3.4						
TXAR	Lajitas Array	93.15	50	P	P	02 34 49.1	+1.0

TIF 13 02:24:30.6, 41°.33N×43°.98E, h18km±1km
DDA 13 02:24:37.1, 42°.19N×42°.54E, h7km, Md2.9

ISC 13 02:24:31.9±1.3, 41°.36N±0°.06×43°.94E±0°.05, h9km±10km, n8, σ0°87/16, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOR	Gori	0.64	11	P	Pg	02 24 44.1	-0.1
GOR				S	Sg	02 24 54.1	+1.6
TBLG	Delisi	0.71	58	P	Pg	02 24 44.9	-0.5
TBLG				S	Sg	02 24 55.2	+0.6
KEH	Kehvi	0.95	360	P	Pb	02 24 48.2	-2.3
KEH				S	Sg	02 25 01.8	-0.7
DGRG	David-gareji	1.08	85	P	Pb	02 24 51.5	-1.2
DGRG				S	Sb	02 25 07.9	+0.9
ONI	Oni	1.28	344	P	Pn	02 24 55.4	-0.5
ONI				S	Sb	02 25 13.4	+0.6
ARTV	Artvin	1.53	264	iP	Pn	02 24 59.2	-0.1
ARTV				iS	Sn	02 25 18.5	-0.7
DDEM	Demirkent	1.72	255	iP	Pn	02 25 02.6	+0.7
DDEM				iS	Sn	02 25 24.4	+0.4
DBAD	Bademkaya	1.73	259	iP	Pn	02 25 02.5	+0.4
DBAD				iS	Sn	02 25 24.6	+0.5

IDC 13 02:32:40.5±4.3, 5°.77S×150°.35E, h0km, mb3.3/2, mb1 3.7/2, mb1mx3.4/15, mbtmp3.4/2, Error ellipse: s-maj=198.9km s-min=46.4km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.00	226	P	P	02 37 25.2	-0.5
	0.6nm,0.3s,baz=52,slow=11,SNR=4.6						
ASAR	Alice Springs	23.82	220	P	P	02 37 55.8	+0.4
	0.3nm,0.3s,baz=56,slow=9.1,SNR=5.3						
TORD	Torodi Ar. Bea	148.25	286	PKPbc	PKPbc	02 52 29.1	-0.6
	0.3nm,0.4s,baz=88,slow=2.5,SNR=15						

ISCJB 13 02:40:17.5±1.3, 11°.10N±0°.04×124°.80E±0°.06, h7km±8km, mb4.1/17, MS3.7/8, Error ellipse: s-maj=10.3km s-min=6.3km az=23.2
IDC 13 02:40:18.4±0.9, 10°.99N×124°.56E, h0km, mb4.0/11, mb1 4.1/11, mb1mx3.9/22, mbtmp3.9/11, MS3.7/9, Ms1 3.7/9, ms1mx3.3/30, Error ellipse: s-maj=71.8km s-min=17.5km az=71.0
MAN 13 02:40:19, 11°.12N×124°.52E, h1km, mb5.0, ML3.9, MS4.0
MAN INTENSITY III - ORMOC CITY; TONGONAN LEYTE; INTENSITY II - MERAIDA; KANANGA LEYTE.
BJI 13 02:40:22.1, 11°.10N×124°.90E, h54km, mB4.9/3, mb3.9/6, Ms4.2/2, Ms7 4.1/2
NEIC 13 02:40:25.1±6.6, 11°.08N×124°.91E, h54km±63km, mb4.2/4, Error ellipse: s-maj=40.2km s-min=11.2km az=69.0
NEIC Felt [III PIVS] at Ormoc and [II PIVS] at Kananga and Merida.

ISC 13 02:40:19.4±1.2, 11°.10N±0°.04×124°.70E±0°.06, h6km±7km, n35, σ1°08/34, mb4.1/17, MS3.7/8, 3C, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	Ormoc	0.10	242	eP	Pg	02 40 21.7	+0.2
MSLP	Maasin	0.97	171	eP	Pg	02 40 40.9	+2.8
LLP	Lapu-Lapu	1.06	223⇑	eP	Pg	02 40 38.1	-1.6
LLP				eS	Sg	02 40 53.9	+0.4
CNP	Catarman	1.40	359	eP	Pn	02 40 42.7	-2.8
TBP	Tagbilaran	1.62	211	eP	Pn	02 40 47.7	-0.8
TBP				eS	Sn	02 41 09.7	-0.1
RCP	Roxas	1.97	284⇑	eP	Pn	02 40 52.3	-1.0
RCP				eS	Sn	02 41 19.2	+0.9
GUIM	Jordan	2.12	257	eP	Pn	02 40 54.9	-0.5
SNPH	Sibulan	2.26	220⇑	eP	Pn	02 41 02.3	+5.0
SNPH				eS	Sn	02 41 34.1	+8.5
PVCP	Virac	2.54	348	eP	Pn	02 41 01.1	-0.1
BUKP	Musuan	3.22	174	eP	Pn	02 41 12.8	+2.3
KAPI	Kappang	16.75	197	LR	LR	02 51 40.0	
	comp=Z,152nm,19.1s,baz=229,slow=41						
KSRS	Korea Array	26.40	6	P	P	02 45 58.0	+1.3
	0.8nm,0.7s,mb3.4,baz=189,slow=14,SNR=4.5						
KSRS				LR	LR	02 55 38.9	
	comp=Z,135nm,20.7s,MS3.5,baz=176,slow=35						
MJAR	Matsushiro Arr	28.12	24	LR	LR	02 56 05.4	
	comp=Z,123nm,18.7s,MS3.5,baz=225,slow=34						
LZH	Lanzhou	31.23	326	eP	P	02 46 40.0	+0.3
LZH				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.7						
WRAB	Tennant Creek	32.27	163	eP	P	02 46 47.6	-1.4
	comp=Z,1.9nm,0.5s,mb4.2						
WRA	Warramunga Arr	32.27	163	P	P	02 46 48.8	-0.2
	comp=Z,1.3nm,1.1s,mb3.7,baz=335,slow=8.6,SNR=3.5						
ASAR	Alice Springs	35.70	165	P	P	02 47 18.0	-0.8
	comp=Z,2.1nm,0.9s,mb4.1,baz=348,slow=8.5,SNR=13						
GTA	Gaotai	35.83	326	eP	P	02 47 20.7	+0.9
GTA				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb4.0						
ULN	Ulaanbaatar	39.54	341	eP	P	02 47 52.6	+1.6
	comp=Z,6.1nm,1.2s,mb4.2	

LAKA				S	Sg	02 52 49.0	+0.3
KFL	**Anninata**	**0.56**	**288**	P	Pb	02 52 42.9	0.0
KFL				S	Sb	02 52 52.1	+1.5
EFP	**Efpalio**	**0.60**	**35**	P	Pb	02 52 42.7	-0.9
EFP				S	Sb	02 52 51.7	0.0
EFP	**Efpalio**	**0.60**	**35**	*e*PB	Pb	02 52 43.0	-0.6
EFP				*e*SN	Sb	02 52 52.8	+1.1
EFP	**Efpalio**	**0.60**	**35**	P	Pb	02 52 42.7	-0.9
EFP	**Efpalio**	**0.60**	**35**	*e*Pb	Pb	02 52 43.0	-0.6
EFP				S	Sb	02 52 51.7	0.0
TRIZ	**Trizonia**	**0.64**	**48**	P	Pb	02 52 43.9	-0.4
TRIZ				S	Sb	02 52 52.5	-0.4
TRIZ	**Trizonia**	**0.64**	**48**	P	Pb	02 52 43.9	-0.4
TRIZ				S	Sb	02 52 52.5	-0.4
GUR	**Goura**	**0.69**	**90**	P	Pb	02 52 44.0	-1.1
GUR				S	Sb	02 52 54.6	+0.3
GUR	**Goura**	**0.69**	**90**	*e*PB	Pb	02 52 44.1	-1.0
GUR				*e*SN	Sn	02 52 54.8	-1.9
GUR	**Goura**	**0.69**	**90**	P	Pb	02 52 44.0	-1.1
GUR				S	Sb	02 52 54.6	+0.3
KALE	**Kalithea**	**0.70**	**49**	P	Pb	02 52 44.5	-0.8
KALE				S	Sb	02 52 54.9	+0.3
KALE	**Kalithea**	**0.70**	**49**	P	Pb	02 52 44.5	-0.8
KALE				S	Sb	02 52 54.9	+0.3
VLS	**Valsamata**	**0.73**	**290**	P	Pb	02 52 45.5	-0.3
VLS				S	Sb	02 52 56.9	+1.4
VLS	**Valsamata**	**0.73**	**290**	*e*PN	Pn	02 52 45.4	-1.6
VLS				*e*SN	Sn	02 52 57.0	-0.7
VLS	**Valsamata**	**0.73**	**290**	P	Pb	02 52 45.5	-0.3
VLS				*e*Sn	Sn	02 52 57.0	-0.7
ITM	**Ithomi**	**0.84**	**154**	P	Pb	02 52 47.3	-0.3
ITM				S	Sb	02 52 59.6	+1.1
ITM	**Ithomi**	**0.84**	**154**	*e*PN	Pb	02 52 47.3	-0.3
ITM	**Ithomi**	**0.84**	**154**	P	Pb	02 52 47.3	-0.3
ITM				S	Sb	02 52 59.6	+1.1
VLX	**Vlachokerasia**	**0.92**	**128**	P	Pb	02 52 48.9	-0.1
VLX				S	Sb	02 53 01.8	+1.0
VLX	**Vlachokerasia**	**0.92**	**128**	P	Pb	02 52 48.9	-0.1
VLX				S	Sb	02 53 01.8	+1.0
DSF	**Desfina**	**0.96**	**60**	P	Pb	02 52 48.9	-0.8
DSF				S	Sb	02 53 03.3	+1.2
DSF	**Desfina**	**0.96**	**60**	P	Pb	02 52 48.9	-0.8
DSF				S	Sb	02 53 03.3	+1.2
PYL	**PYLOS**	**1.06**	**168**	P	Pb	02 52 50.8	-0.6
PYL	**PYLOS**	**1.06**	**168**	*e*PN	Pn	02 52 51.7	+0.2
PYL	**PYLOS**	**1.06**	**168**	P	Pb	02 52 50.8	-0.6
PYL	**PYLOS**	**1.06**	**168**	*e*Pn	Pn	02 52 51.7	+0.2
LTK	**Loutraki**	**1.19**	**85**	P	Pn	02 52 53.5	+0.2
LTK				S	Sb	02 53 09.8	+1.2
LTK	**Loutraki**	**1.19**	**85**	*e*PN	Pn	02 52 53.7	+0.4
LTK	**Loutraki**	**1.19**	**85**	P	Pn	02 52 53.5	+0.2
LTK				S	Sb	02 53 09.8	+1.2
LKR	**Lokris**	**1.40**	**59**	P	Pn	02 52 55.8	-0.4
LKR				S	Sn	02 53 15.0	+0.7
LKR	**Lokris**	**1.40**	**59**	P	Pn	02 52 55.8	-0.4
LKR				S	Sn	02 53 15.0	+0.7

TEH ***13*** *02:53:15.0, 39°.14N×48°.82E, h7km*
CSEM ***13*** *02:53:16.1±0.2, 39°.04N×48°.74E, h20km, ML3.5, Error ellipse: s-maj=7.0km s-min=5.7km az=70.0*
ISCJB ***13*** *02:53:16.5±0.4, 39°.12N±0°.04×48°.84E±0°.05, h70km±10km, Error ellipse: s-maj=7.8km s-min=4.4km az=141.4*
ISC 13 02:53:17.9±0.4, 39°.12N±0°.03×48°.82E±0.05, h57km±10km, n25, σ0°.86/37, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLBA	**Ciilabad**	**0.35**	**290**	P	**Pn**	**02 53 27.2**	**-1.0**
	SNR=39						
GLBA				S	**Sn**	02 53 35.2	-0.4
ALIB	**Äli-Bayra**	**0.84**	**10**	P	**Pn**	**02 53 35.1**	**+1.2**
	SNR=7.4						
ISRB	**Sarab**	**1.58**	**215**	*e*Pg	**Pn**	02 53 43.9	+0.2
ISRB				*e*Sg	**Sn**	02 54 04.8	+1.8
ISRB				*e*		02 54 06.8	
	comp=Z,2μm,0.1s						
ISRB	**Sarab**	**1.58**	**215**	*e*Pg	**Pn**	02 53 43.9	+0.2
ISRB				*e*Sg	**Sn**	02 54 04.8	+1.8
IHRS	**Heris**	**1.61**	**241**	*e*Pg	**Pn**	02 53 43.9	-0.1
IHRS				*e*	**Sn**	02 54 07.0	+3.3
	comp=Z,6μm,0.1s						
PQL	**Pirkuli**	**1.67**	**354**	P	**Pn**	**02 53 45.4**	**+0.5**
	SNR=31						
PQL				S	**Sn**	02 54 06.8	+1.6
BRDA	**Brd**	**1.70**	**312**	P	**Pn**	**02 53 45.7**	**+0.4**
	SNR=3.9						
IML	**Ismayilli**	**1.74**	**344**	P	**Pn**	**02 53 45.6**	**-0.2**
	SNR=23						
SIZA	**Siyzn**	**1.95**	**2**	P	**Pn**	**02 53 49.6**	**+0.9**
	SNR=3.3						
ITBZ	**Tabriz**	**2.27**	**248**	*e*Pn	**Pn**	**02 53 53.0**	**-0.1**
ITBZ				*e*		02 54 04.3	
	comp=Z,576nm,0.1s						
SEKA	**Sheki**	**2.42**	**330**	P	**Pn**	**02 53 54.6**	**-0.5**
	SNR=23						
SEKA				S	**Sn**	02 54 23.3	-0.3
GANJ	**Ganja**	**2.45**	**309**	P	**Pn**	**02 53 54.5**	**-1.0**
	SNR=3.8						
GANJ				S	**Sn**	02 54 22.4	-1.8
ISHB	**Shabestar**	**2.64**	**252**	*e*Pn	**Pn**	**02 53 58.2**	**+0.1**
ISHB				*e*		02 54 07.9	
	comp=Z,292nm,0.2s						
DGRG	**David-gareji**	**3.51**	**312**	P	**Pn**	**02 54 10.6**	**+0.6**
DGRG				S	**Sn**	**02 54 51.2**	**+0.9**
IPRN	**Peran**	**4.01**	**135**	*e*Pn	**Pn**	**02 54 15.7**	**-1.1**
IPRN				*e*		02 55 02.1	
	comp=Z,4μm,0.1s						
IPRN	**Peran**	**4.01**	**135**	*e*Pn	**Pn**	**02 54 15.7**	**-1.1**
IGLO	**Ghaloghah**	**4.75**	**122**	*e*Pn	**Pn**	02 54 26.4	-0.6
IGLO				*e*	**Sn**	**02 55 25.2**	**+4.5**
	comp=Z,1μm,0.1s						
IGLO	**Ghaloghah**	**4.75**	**122**	*e*Pn	**Pn**	02 54 26.4	-0.6
IKIA	**Kiasar**	**4.83**	**126**	*e*Pn	**Pn**	02 54 27.9	-0.2
IKIA				*e*	**Sn**	**02 55 22.8**	**0.0**
	comp=Z,485nm,0.1s						
IKIA	**Kiasar**	**4.83**	**126**	*e*Pn	**Pn**	02 54 27.9	-0.2
ISHM	**Shahmirzad**	**4.86**	**132**	*e*Pn	**Pn**	02 54 28.6	+0.1
ISHM				*e*	**Sn**	**02 55 23.4**	**0.0**
	comp=Z,1μm,0.1s						
ISHM	**Shahmirzad**	**4.86**	**132**	*e*Pn	**Pn**	02 54 28.6	+0.1
KEH	**Kehvi**	**4.89**	**312**	P	**Pn**	02 54 28.6	-0.3
KEH				S	**Sn**	02 55 23.0	-1.1
ILAS	**Lasjerd**	**4.99**	**137**	*e*Pn	**Pn**	02 54 29.7	-0.5
ILAS				*e*		02 54 32.9	
	comp=Z,199nm,0.1s						
ILAS	**Lasjerd**	**4.99**	**137**	*e*Pn	**Pn**	02 54 29.7	-0.5

CASC ***13*** *03:00:47.9, 14°.29N×91°.72W, h84km, MD4.8, ML4.6, mb4.7(NEIC)*
MEX ***13*** *03:00:48.7±0.6, 14°.19N×91°.80W, h83km±7km, MD4.9*
NEIC ***13*** *03:00:48.8±0.3, 14°.39N×91°.47W, mb4.7/64, MD4.6(SNET), Error ellipse: s-maj=7.2km s-min=4.6km az=48.0*
NEIC Felt at Quetzaltenango, Retalhuleu, Salcaja, San Pedro La Laguna, Santa Cruz La Laguna and Solalá. Also felt at Tapachula, Mexico and [II] at San Salvador, El Salvador.
ISCJB ***13*** *03:00:48.8±0.2, 14°.46N±0°.03×91°.52W±0°.02, h92km, mb4.5/76, Error ellipse: s-maj=5.2km s-min=1.8km az=35.4*
IDC ***13*** *03:00:49.5±0.7, 14°.66N×91°.16W, h92km±5km, mb4.1/31, mb1 4.2/33, mb1mx4.2/38, mbtmp4.1/33, MS3.8/21, Ms1 3.8/21, ms1mx3.6/33, Error ellipse: s-maj=16.5km s-min=7.7km az=59.0*
GCMT ***13*** *03:00:50.3±0.4, 14°.63N×91°.72W, h96km±4km, MW5.0, Moment Tensor Solution. s33,c36; s71,c96; Moment tensor: Scale 10^16 Nm; Mrr 1.19±.17; Mθθ -0.06±.17; Mφφ -1.13±.20; Mrθ 1.35±.09; Mrφ -1.75±.20; Mθφ -3.07±.10; Best double couple: M0 3.90000×10^16 NP1:φ66.00000°, δ32.00000°, λ162.00000°. NP2:φ172.00000°, δ81.00000°, λ60.00000°. Principal axes: T 4.3300, Plg46.0000°, Azm51.0000°; N -0.9200, Plg30.0000°, Azm177.0000°; P -3.4200, Plg29.0000°, Azm286.0000°; Data Used: II IU G CN IC.*
ISC 13 03:00:50.8±0.2, 14°.53N±0°.03×91°.43W±0°.03, h94km, h94km±1.8km: pP-P, n450, σ0°.99/417, mb4.5/76, 109C-102D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.29**	**223**	*e*P	**Pn**	**03 00 59.9**	**-4.8**
TP2	**Tecpan 2**	**0.47**	**57**	*e*P	**Pn**	**03 01 06.4**	**+0.6**
FG6		**0.53**	**87**	*e*P	**Pn**	**03 01 06.1**	**-0.1**
FUG	**Fuego 3**	**0.58**	**98**	*e*P	**Pn**	**03 01 05.7**	**-0.8**
PCG	**Pacaya**	**0.81**	**99**	*e*P	**Pn**	**03 01 08.9**	**+0.1**
GCG	**Guatemala City**	**0.87**	**86**	*e*P	**Pn**	**03 01 09.5**	**+0.2**
GCG				*e*S	**Sn**	**03 01 27.8**	**+4.5**
THIG		**0.89**	**295**	*i* P	**Pn**	**03 01 04.9**	**-4.7**
THIG				*e*S	**Sn**	**03 01 17.7**	**-6.0**
APG	**El Apazote**	**1.05**	**63**	P	**Pn**	**03 01 12.2**	**+0.9**
	1μm,0.3s,baz=240,slow=4.6,SNR=7591						
APG				S	**Sn**	**03 01 31.6**	**+4.8**
	912nm,0.3s,baz=144,slow=18,SNR=34						
NBG	**Las Nubes**	**1.05**	**87**	*e*P	**Pn**	**03 01 12.9**	**+1.6**
NBG				*e*S	**Sn**	**03 01 32.2**	**+5.4**
RBDL	**Robledal**	**1.74**	**104**	⦚*e*P	**Pn**	**03 01 19.5**	**-0.3**
MRL	**Marmol**	**1.77**	**72**	*e*P	**Pn**	**03 01 22.5**	**+2.4**
SONS	**Sonsonate**	**1.84**	**115**	*e*P	**Pn**	**03 01 20.4**	**-0.7**
SONS				*e*S	**Sn**	**03 01 43.9**	**-0.2**
SONS				AML	AML	03 01 46.8	
	comp=Z,17μm,0.2s						
RTR	**El Retiro**	**1.84**	**110**	⦚*e*P	**Pn**	**03 01 21.0**	**0.0**
SBLS	**San Blas**	**1.88**	**111**	*e*P	**Pn**	**03 01 21.4**	**-0.2**
SNJE	**San Jose**	**1.89**	**110**	⦚*e*P	**Pn**	**03 01 21.4**	**-0.2**
MTO2	**Montecristo 2**	**2.01**	**93**	*e*P	**Pn**	**03 01 23.4**	**+0.2**
PCIG		**2.08**	**304**	*i* P	**Pn**	**03 01 20.3**	**-3.9**
PCIG				*e*S	**Sn**	**03 01 44.0**	**-5.8**
BOQS	**Boqueron**	**2.23**	**110**	*e*P	**Pn**	**03 01 26.0**	**-0.1**
BOQS				*e*S	**Sn**	**03 01 56.2**	**+3.0**
SNET	**Serv Nac Est T**	**2.29**	**111**	*e*P	**Pn**	**03 01 26.6**	**-0.3**
SNET				*e*S	**Sn**	**03 01 57.8**	**+3.1**
LFRS	**El Faro**	**2.47**	**111**	⦚*e*P	**Pn**	**03 01 28.9**	**-0.4**
TGIG		**2.77**	**324**	*i* P	**Pn**	**03 01 30.8**	**-2.5**
TGIG				*e*S	**Sn**	**03 02 05.3**	**-0.7**
CAHU	**Cacacuatique**	**3.21**	**103**	*e*P	**Pn**	**03 01 39.2**	**-0.1**
VSM	**San Miguel**	**3.25**	**109**	*e*P	**Pn**	**03 01 40.9**	**+1.1**
BLLM	**Bellamira**	**3.28**	**109**	*e*P	**Pn**	**03 01 40.8**	**+0.6**
CNCH	**Conchagua**	**3.71**	**109**	*e*P	**Pn**	**03 01 46.3**	**+0.4**
TGUH	**Tegucigalpa,Un**	**4.06**	**96**	*e*Pn	**Pn**	**03 01 51.0**	**+0.4**
TGUH	**Tegucigalpa,Un**	**4.06**	**96**	⦚*e*P	**Pn**	**03 01 50.9**	**+0.2**
TGUH				AML	AML	03 03 08.3	
	comp=E,3μm,1.1s						
CMIG	**Matias Romero**	**4.19**	**308**	P	**Pn**	**03 01 48.7**	**-3.7**
	comp=E,81nm,0.3s,baz=121,slow=11,SNR=588						
CMIG				S	**Sn**	**03 02 37.6**	**-2.6**
	comp=E,232nm,0.3s,baz=263,slow=10,SNR=8.4						
CMIG	**Matias Romero**	**4.19**	**308**	P	**Pn**	**03 01 48.7**	**-3.7**
CMIG				S	**Sn**	**03 02 37.6**	**-2.6**
TUIG	**Tuzandepetl**	**4.52**	**321**	*i* P	**Pn**	**03 01 55.5**	**-1.4**
TUIG				*i* S	**Sn**	**03 02 47.1**	**-1.1**
CRIN	**San Cristobal**	**4.63**	**113**	*e*P	**Pn**	**03 01 59.2**	**+0.8**
HUIG	**Huatulco**	**4.68**	**286**	*i* P	**Pn**	**03 01 52.5**	**-6.6**
HUIG				*e*S	**Sn**	**03 02 44.0**	**-8.3**
CNGN	**Cerro Negro**	**5.03**	**113**	*e*P	**Pn**	**03 02 03.9**	**+0.1**
MOMN	**Momotombo**	**5.20**	**113**	*e*P	**Pn**	**03 02 06.9**	**+0.7**
COPN	**Copaltepe**	**5.26**	**116**	*e*P	**Pn**	**03 02 06.3**	**-0.7**
CSAN		**5.40**	**115**	*e*P	**Pn**	**03 02 09.2**	**+0.2**
XAVN	**Gruta Xavier**	**5.50**	**115**	*e*P	**Pn**	**03 02 10.1**	**-0.2**
HUEN		**5.56**	**112**	*e*P	**Pn**	**03 02 11.3**	**+0.2**
MGAN	**Managua**	**5.57**	**115**	*e*P	**Pn**	**03 02 11.1**	**-0.2**
MGAN				AML	AML	03 03 22.2	
	comp=E,815nm,0.6s						
VHO	**Vista Hermosa**	**5.70**	**297**	*i* P	**Pn**	**03 02 09.0**	**-3.9**
VHO				*e*S	**Sn**	**03 03 12.1**	**-4.8**
APON	**Apoyo**	**5.83**	**116**	*e*P	**Pn**	**03 02 16.3**	**+1.5**
BOAB	**BOACO BROADBAN**	**5.98**	**110**	*e*P	**Pn**	**03 02 17.0**	**+0.2**
BOAB				AML	AML	03 03 46.1	
	comp=N,55nm,0.8s						
CONN	**Concepcion**	**6.38**	**117**	*e*P	**Pn**	**03 02 23.7**	**+1.5**
TEIG	**Tepich**	**6.42**	**28**	*e*Pn	**Pn**	**03 02 23.7**	**+1.0**
TEIG				*e*Sn	**Sn**	**03 03 37.2**	**+2.7**
TEIG	**Tepich**	**6.42**	**28**	*e*P	**Pn**	**03 02 23.9**	**+1.2**
TEIG				AMb	AMB	03 02 27.6	
	comp=Z,2μm,0.6s						
PNIG	**Pinotepa**	**6.72**	**287**	*i* P	**Pn**	**03 02 21.6**	**-5.2**
PNIG				*e*S	**Sn**	**03 03 33.4**	**-8.4**
TPIG	**Tehuac#an**	**6.88**	**305**	*i* P	**Pn**	**03 02 26.1**	**-3.0**
TPIG				*e*S	**Sn**	**03 03 40.3**	**-5.5**
VCR	**Vista de Mar**	**7.16**	**127**	⦚*e*P	**Pn**	**03 02 33.4**	**+0.5**
JTS	**JuntasAbangare**	**7.60**	**123**	P	**Pn**	**03 02 39.3**	**+0.4**
	comp=Z,44nm,0.3s,baz=318,slow=16,SNR=65						
JTS				S	**Sn**	**03 04 03.4**	**-0.1**
	comp=Z,7.6nm,0.3s,baz=322,slow=19,SNR=2.7						
JTS	**JuntasAbangare**	**7.60**	**123**	*e*Pn	**Pn**	**03 02 39.0**	**+0.1**
JTS				*e*Sn	**Sn**	**03 04 03.0**	**-0.5**
JTS	**JuntasAbangare**	**7.60**	**123**	*e*P	**Pn**	**03 02 39.6**	**+0.7**
JCR	**Jicaral**	**7.73**	**126**	*e*P	**Pn**	**03 02 41.4**	**+0.8**
CGA2	**Cerro Gallo 2**	**8.15**	**123**	⦚*e*P	**Pn**	**03 02 48.2**	**+1.9**
PRS1	**Puriscal**	**8.30**	**122**	*e*P	**Pn**	**03 02 50.3**	**+2.0**
LAJ	**Bijagual**	**8.52**	**122**	*e*P	**Pn**	**03 02 48.5**	**-2.9**
QCR	**Quepos**	**8.73**	**125**	⦚*e*P	**Pn**	**03 02 55.0**	**+0.7**
URSC	**Urasca**	**8.82**	**121**	⦚*e*P	**Pn**	**03 02 56.2**	**+0.7**
BUS	**Buena Vista**	**8.99**	**123**	*e*P	**Pn**	**03 02 59.1**	**+1.4**
BAR1		**9.53**	**123**	⦚*e*P	**Pn**	**03 03 05.6**	**+0.5**
BCIP	**Isla Barro Col**	**12.53**	**114**	*e*Pn	**Pn**	**03 03 45.5**	**-0.3**
MTDJ	**Mount Denham**	**13.83**	**73**	*e*Pn	**Pn**	**03 04 03.1**	**+0.3**
MTDJ	**Mount Denham**	**13.83**	**73**	*e*P	**Pn**	**03 04 09.5**	**+6.7**
MTDJ				AMb	AMB	03 04 11.3	
	comp=Z,679nm,1.4s						
HKT	**Hockley**	**15.88**	**346**	*e*P	**Pn**	**03 04 29.5**	**+0.7**
	comp=Z,32nm,1.6s						
DWPF	**Disney**	**16.40**	**33**	*e*P	**Pn**	**03 04 37.2**	**+1.9**
	comp=Z,70nm,0.8s						
GTBY	**Guantanamo Bay**	**16.48**	**69**	*e*P	**Pn**	**03 04 36.9**	**+0.5**
BRAL	**Brewton**	**16.89**	**13**	*e*P	**Pn**	**03 04 43.6**	**+2.3**
	comp=Z,51nm,0.6s						
JCT	**Junction City**	**17.64**	**336**	*e*P	**Pn**	**03 04 52.3**	**+1.8**
	comp=Z,36nm,1.4s						
628A	**Black Gap, Mar**	**18.27**	**326**	⦚P	**Pn**	**03 04 58.5**	**+0.5**
	baz=18,SNR=13						
627A	**Terlingua Ranc**	**18.51**	**325**	⦚P	**Pn**	**03 05 01.1**	**+0.2**
	baz=19,SNR=11						
TXAR	**Lajitas Array**	**18.57**	**324**	P	**Pn**	**03 05 00.3**	**-1.4**
	comp=Z,0.5nm,0.3s,baz=153,slow=11,SNR=33						
TXAR				PcP	PcP	03 09 25.7	-0.3
	comp=Z,0.4nm,0.3s,baz=153,slow=3.3,SNR=11						
TXAR				ScP	ScP	03 12 52.5	-0.7
	comp=Z,0.1nm,0.3s,baz=141,slow=5.8,SNR=2.5						
TXAR	**Lajitas Array**	**18.57**	**324**	P	**Pn**	**03 05 00.3**	**-1.4**
TXAR				PcP	PcP	03 09 25.7	-0.3
TXAR				ScP	ScP	03 12 52.5	-0.7
528A	**Cox Ranch, San**	**18.75**	**328**	⇑P	**Pn**	**03 05 04.1**	**+0.3**
	baz=19,SNR=7.6						
LRAL	**Lakeview Retre**	**18.86**	**12**	*e*P	**Pn**	**03 05 04.6**	**-0.5**
	comp=Z,121nm,1.8s						
626A	**Big Bend Ranch**	**19.00**	**324**	⦚P	**Pn**	**03 05 06.6**	**-0.2**
	baz=19,SNR=7.1						
OTAV	**Otavalo**	**19.14**	**137**	*e*Pn	**Pn**	**03 05 07.8**	**-0.8**
428A	**Kincaid Ranch,**	**19.15**	**329**	⇑P	**Pn**	**03 05 08.6**	**+0.1**
	baz=19,SNR=5.9						
527A	**Woodward Ranch**	**19.17**	**326**	⇑P	**Pn**	**03 05 08.1**	**-0.7**
	baz=19,SNR=12						
526A	**Mary Lane Ranc**	**19.37**	**325**	⦚P	**Pn**	**03 05 10.8**	**-0.3**
	baz=20,SNR=7.6						
ROSC	**El Rosal**	**19.39**	**118**	P	**Pn**	**03 05 08.4**	**-3.0**
	comp=Z,1.4nm,0.3s,baz=271,slow=6.0,SNR=16						
427A	**Hayter Ranch,**	**19.61**	**328**	⇑P	**Pn**	**03 05 12.7**	**-1.2**
	baz=20						
328A	**Wristen Ranch,**	**19.75**	**330**	⦚P	**Pn**	**03 05 13.4**	**-2.1**
	baz=20,SNR=9.4						
SDDR	**Presa de Saban**	**19.79**	**74**	*e*P	**Pn**	**03 05 14.1**	**-2.0**
	comp=Z,27nm,0.9s						
426A	**McDonald Obser**	**19.80**	**326**	⦚P	**Pn**	**03 05 14.5**	**-1.7**
	baz=20,SNR=10						
OXF	**Oxford**	**19.98**	**5**	*e*P	**Pn**	**03 05 15.5**	**-2.7**
	comp=Z,68nm,1.0s						
MIAR	**Mount Ida**	**20.02**	**355**	*e*P	**P**	**03 05 15.3**	**-0.8**
	comp=Z,31nm,1.2s						
MIAR				*e*S	**S**	**03 08 52.5**	**-3.6**
GOGA	**Godfrey**	**20.14**	**20**	*e*P	**P**	**03 05 18.3**	**+0.9**
	comp=Z,74nm,1.2s						
UALR	**University of**	**20.18**	**358**	*e*P	**P**	**03 05 17.4**	**-0.4**
	comp=Z,24nm,0.4s						
326A	**Caldwell Ranch**	**20.29**	**328**	⦚P	**P**	**03 05 19.2**	**+0.3**
	baz=20,SNR=25						
425A	**Indio Mountain**	**20.42**	**325**	⦚P	**P**	**03 05 21.2**	**+0.8**
	baz=21,SNR=17						
227A	**Bennet, Jal**	**20.50**	**330**	⇑P	**P**	**03 05 21.7**	**+0.4**
	baz=21						
GRTK	**Grand Turk**	**20.50**	**67**	*e*P	**P**	**03 05 18.0**	**-3.4**
	comp=Z,185nm,1.1s						
325A	**Bean Ranch, Si**	**20.86**	**326**	⦚P	**P**	**03 05 24.9**	**-0.2**
	baz=21,SNR=9.2						
226A	**Malaga, Loving**	**20.94**	**329**	⦚P	**P**	**03 05 26.8**	**+0.8**
	baz=21,SNR=6.4						
127A	**Arkansas Junct**	**21.08**	**331**	⦚P	**P**	**03 05 26.9**	**-0.6**
	baz=21						
SDV	**Santo Domingo**	**21.12**	**103**	P	**P**	**03 05 25.8**	**-2.2**
	comp=Z,17nm,0.3s,mb4.8,baz=328,slow=7.3,SNR=31						
SDV				PcP	PcP	03 09 29.9	-1.0
	comp=Z,5.8nm,0.9s,baz=299,slow=4.8,SNR=4.1						
SDV	**Santo Domingo**	**21.12**	**103**	*e*P	**P**	**03 05 25.8**	**-2.2**
	comp=Z,26nm,0.5s,mb4.8						
NHSC	**New Hope**	**21.14**	**27**	*e*P	**P**	**03 05 29.0**	**+0.9**
	comp=Z,50nm,1.0s,mb4.8						
SWET	**Sewanee**	**21.18**	**13**	*e*P	**P**	**03 05 29.2**	**+0.6**
GDL2	**Guadalupe Moun**	**21.19**	**328**	*e*P	**P**	**03 05 28.7**	**+0.1**
WMOK	**Wichita Mounta**	**21.19**	**343**	*e*P	**P**	**03 05 27.4**	**-1.2**
	comp=Z,27nm,1.4s,mb4.4						
WMOK				*e*S	**S**	**03 09 18.6**	**-0.3**
324A	**Moseley Ranch,**	**21.19**	**325**	⇑P	**P**	**03 05 28.6**	**-0.1**
	baz=21,SNR=17						
MNTX	**Cornudas Mount**	**21.33**	**326**	*e*P	**P**	**03 05 29.5**	**-0.7**
	comp=Z,8.3nm,0.9s,mb4.1						
MNTX				*e*PcP	PcP	03 09 29.9	-1.1
225A	**Deer Hill, Car**	**21.35**	**327**	⇑P	**P**	**03 05 30.5**	**+0.1**
	baz=22,SNR=22						
126A	**Clayton Basin,**	**21.37**	**330**	⇑P	**P**	**03 05 30.1**	**-0.5**
	baz=22						
Z27A	**Tatum**	**21.55**	**332**	⇑P	**P**	**03 05 31.3**	**-1.2**
	baz=22,SNR=10						
CPRX	**Cap Rock**	**21.61**	**331**	*e*P	**P**	**03 05 32.5**	**-0.7**
	comp=Z,3.3nm,0.5s,mb3.9						
224A	**Cornudas Mount**	**21.70**	**326**	⇑P	**P**	**03 05 33.7**	**-0.4**
	baz=22,SNR=27						
125A	**Gardner Draw,**	**21.70**	**329**	⇑P	**P**	**03 05 33.2**	**-0.9**
	baz=22						
JSC	**Jenkinsville**	**21.71**	**23**	*e*P	**P**	**03 05 34.8**	**+0.6**
CPCT	**Cooper Cave**	**21.74**	**15**	*e*P	**P**	**03 05 35.2**	**+0.8**
WVT	**Waverly**	**21.75**	**8**	*e*P	**P**	**03 05 32.8**	**-1.8**
	comp=Z,16nm,0.5s,mb4.6						
WVT				*e*pP		03 05 53.6	
Z26A	**Caprock**	**21.87**	**331**	⦚P	**P**	**03 05 34.4**	**-1.5**
	baz=22,SNR=11						
MSTX	**Muleshoe**	**21.91**	**334**	⦚P	**P**	**03 05 34.8**	**-1.5**
	baz=22,SNR=8.5						
Y27A	**Causey**	**22.01**	**333**	⦚P	**P**	**03 05 36.3**	**-1.0**
	baz=22						
PARMO	**Parma**	**22.09**	**4**	*e*P	**P**	**03 05 38.3**	**0.0**
TKL	**Tuckaleechee C**	**22.14**	**17**	P	**P**	**03 05 36.6**	**-2.1**
	comp=Z,18nm,0.8s,mb4.5,baz=187,slow=7.9,SNR=26						
TKL				LR	LR	03 15 13.4	
	comp=Z,354nm,22.0s,baz=219,slow=39						
TKL	**Tuckaleechee C**	**22.14**	**17**	*e*P	**P**	**03 05 39.5**	**+0.8**
124A	**Stringfield Ra**	**22.14**	**327**	⦚P	**P**	**03 05 39.1**	**+0.2**
	baz=22,SNR=33						
Z25A	**Roswell**	**22.23**	**329**	⇑P	**P**	**03 05 38.8**	**-0.9**
	baz=22,SNR=6.3						
AMTX	**Amarillo**	**22.27**	**337**	*e*P	**P**	**03 05 39.0**	**-1.2**
Y26A	**Elida**	**22.33**	**332**	⇑P	**P**	**03 05 39.6**	**-1.2**
	baz=22,SNR=5.3						
Z24A	**Sheeppen Canyo**	**22.59**	**328**	⦚P	**P**	**03 05 43.7**	**+0.2**
	baz=23						
222A	**Williams Famil**	**22.60**	**323**	⇑P	**P**	**03 05 44.2**	**+0.6**
	baz=23						
X27A	**F and S Farms,**	**22.63**	**334**	⦚P	**P**	**03 05 42.8**	**-1.1**
	baz=23						
Y25A	**Mesa, Roswell**	**22.74**	**330**	⦚P	**P**	**03 05 44.2**	**-0.9**
	baz=23,SNR=9.1						
X26A	**CR and CF Fran**	**22.85**	**333**	⇑P	**P

216A **Three Points,** 25.24 317 ⇑P P 03 06 08.8 +0.7
baz=25
T25A **Trinidad** 25.31 335 ⇓P P 03 06 08.9 +0.3
baz=26
U23A **El Rito** 25.41 331 ⇓P P 03 06 10.3 +0.8
baz=26
Y18A **Canyon Day Jun** 25.52 322 ⇓P P 03 06 11.6 +1.0
baz=26
X19A **St. Johns** 25.55 324 ⇓P P 03 06 12.0 +1.2
baz=26
W20A **Ramah** 25.62 326 ⇑P P 03 06 12.8 +1.3
baz=26,SNR=7.1
HDIL **Hopedale** 26.00 4 eP P 03 06 13.5 -1.2
HDIL ePcP PcP 03 09 39.2 -1.5
Z16A **Peralta Trail,** 26.08 319 ⇓P P 03 06 16.1 +0.4
baz=26
214A **Organ Pipe Nat** 26.12 315 ⇑P P 03 06 15.9 -0.1
baz=26,SNR=5.7
115A **Sonoran Desert** 26.18 317 ⇑P P 03 06 17.4 +0.9
baz=26
PCRV **Puerto La Cruz** 26.52 96 LR LR 03 17 18.8
comp=Z,200nm,20.8s,baz=286,slow=38
114A **Black Gap (USA** 26.65 317 ⇑P P 03 06 20.8 +0.1
baz=27
X16A **Lo Mia Camp, P** 26.81 321 ⇑P P 03 06 23.0 +0.9
baz=27
U19A **Dine' College,** 26.88 327 ⇑P P 03 06 22.8 0.0
baz=27
Y15A **Casa Rosa Ranc** 27.05 319 ⇑P P 03 06 24.8 +0.4
baz=27,SNR=5.8
MVCO **Mesa Verde** 27.22 329 ⇑P P 03 06 26.5 +0.7
baz=27
V17A **Tonalea, Kykot** 27.26 324 ⇑P P 03 06 26.6 +0.4
baz=27,SNR=5.7
W16A **Flagstaff** 27.32 322 ⇑P P 03 06 27.3 +0.5
baz=27
X15A **Humboldt** 27.34 320 ⇓P P 03 06 27.0 +0.1
baz=28
Z13A **Yuma Proving G** 27.44 317 ⇓P P 03 06 28.0 +0.2
baz=28
Y14A **Wickenburg** 27.47 318 ⇑P P 03 06 28.3 +0.3
baz=28
WUAZ **Wupatki** 27.52 323 ⇑P P 03 06 28.5 0.0
baz=28
WUAZ **Wupatki** 27.52 323 eP P 03 06 29.8 +1.2
X14A **Yava** 27.74 319 ⇑P P 03 06 30.8 +0.3
baz=28
T18A **Mexican Hat** 27.87 327 ⇑P P 03 06 32.2 +0.6
baz=28
S19A **Harvey Farm, M** 27.96 329 ⇑P P 03 06 32.9 +0.6
baz=28
V15A **Kaibab Nationa** 28.20 322 ⇓P P 03 06 35.1 +0.6
baz=28,SNR=5.4
T17A **Navajo Res., N** 28.26 326 ⇑P P 03 06 35.8 +0.7
baz=28
W14A **Seligman** 28.34 320 ⇓P P 03 06 36.4 +0.6
baz=28
S18A **Hurst Farm, Bl** 28.35 328 ⇓P P 03 06 36.5 +0.6
baz=28
PDMCI **Parker Dam,Lak** 28.43 318 ⇓P P 03 06 37.5 +0.9
baz=28
SSPA **Standing Stone** 28.57 22 eP P 03 06 36.9 -0.9
comp=Z,7.8nm,0.6s,mb4.5
MVL **Millersville** 28.61 25 eP P 03 06 38.4 +0.2
V14A **Boquillas Ranc** 28.63 321 ⇓P P 03 06 39.4 +1.0
baz=29
U15A **North Rim** 28.69 323 ⇑P P 03 06 39.9 +1.0
baz=29,SNR=6.6
S17A **Black Ridge (B** 28.73 327 ⇑P P 03 06 39.8 +0.6
baz=29
BC3 **Big Chuckawall** 28.92 315 ⇓P P 03 06 41.5 +0.5
baz=29
IRM **Iron Mountain** 29.01 317 ⇓P P 03 06 42.5 +0.8
baz=29
U14A **Mt Trumbull** 29.20 322 ⇑P P 03 06 44.3 +0.8
baz=29
R17A **Hanksville Air** 29.27 328 ⇑P P 03 06 45.0 +1.0
baz=29
V13A **Grand Canyon W** 29.31 320 ⇓P P 03 06 44.8 +0.3
baz=29,SNR=6.8
BELC **Belle Mtn. Jos** 29.49 315 ⇑P P 03 06 46.6 +0.6
baz=30
LDFC **Landfair** 29.54 318 eP P 03 06 48.5 +2.1
R16A **Teasdale** 29.57 327 ⇓P P 03 06 47.5 +0.8
baz=30
U13A **Pakoon Wash** 29.67 321 ⇓P P 03 06 48.5 +0.9
baz=30,SNR=6.7
V12A **Nelson** 29.77 319 ⇓P P 03 06 49.7 +1.2
baz=30,SNR=7.2
Q16A **Castle Valley** 29.88 328 ⇓P P 03 06 50.6 +1.1
baz=30
U12A **Valley of Fire** 30.03 321 ⇑P P 03 06 51.5 +0.7
baz=30
N20A **Spence Gulch,** 30.03 334 ⇑P P 03 06 51.6 +0.8
baz=30
T13A **Saint George** 30.04 322 ⇓P P 03 06 51.5 +0.7
baz=30
CCUT **Cedar City** 30.08 324 eP P 03 06 53.1 +1.8
MURC **Murrieta** 30.09 314 ⇓P P 03 06 52.0 +0.6
baz=30
MSU **Marysvale** 30.11 326 eP P 03 06 51.3 -0.2
MSU comp=Z,6.6nm,1.3s,mb4.1 ePcP PcP 03 09 50.7 -0.2
S14A **Cedar City** 30.12 324 ⇓P P 03 06 52.9 +1.4
baz=30
BBSR **BB Station** 30.15 49 eP P 03 06 51.3 -0.6
S13A **Holt Ranch, En** 30.39 323 ⇑P P 03 06 55.5 +1.6
baz=30,SNR=9.2
L21A **Rawlins** 30.62 336 ⇑P P 03 06 55.8 -0.1
baz=31
BINY **Binghamton** 30.63 23 eP P 03 06 55.5 -0.6
comp=Z,18nm,0.7s,mb4.9
BINY eP pP 03 07 16.6 -0.7
O17A **Robinson Place** 30.64 330 ⇑P P 03 06 56.4 +0.2
baz=31
R13A **O'Grain Ranch,** 30.86 324 ⇑P P 03 06 58.8 +0.7
baz=31
T11A **Corn Creek, Al** 30.97 321 ⇑P P 03 06 59.7 +0.6
baz=31
Q14A **Sevier Lake (B** 31.05 326 ⇑P P 03 07 00.7 +1.0
baz=31,SNR=5.4
U10A **Ash Meadows, A** 31.14 319 ⇑P P 03 07 01.5 +0.9
baz=31
R12A **Pony Springs,** 31.33 323 ⇓P P 03 07 03.3 +1.0
baz=32,SNR=5.3
P14A **Drum Mountains** 31.37 327 ⇑P P 03 07 03.2 +0.7
baz=32,SNR=7.2
Q13A **Wheeler Ranch,** 31.43 325 ⇓P P 03 07 04.1 +1.0
baz=32
FURC **Furnace Creek,** 31.51 319 ⇑P P 03 07 04.2 +0.3
baz=32
S11A **Rachel** 31.55 321 ⇑P P 03 07 04.5 +0.3
baz=32
MPMC **Manual Prospec** 31.68 317 ⇑P P 03 07 05.7 +0.4
baz=32
P13A **Bates Ranch, G** 31.78 326 ⇓P P 03 07 07.0 +0.9
baz=32,SNR=8.2
R11A **Troy Canyon, C** 31.92 323 ⇑P P 03 07 08.1 +0.7
baz=32
TRY **Troy** 32.00 25 eP P 03 07 08.0 0.0
PDAR **Pinedale Array** 32.18 335 P P 03 07 08.6 -1.0
comp=Z,0.5nm,0.4s,mb3.6,baz=132,slow=12,SNR=7.5
PDAR PcP PcP 03 09 55.5 -0.9
comp=Z,2.6nm,0.9s,baz=146,slow=2.9,SNR=11
PDAR ScP ScP 03 13 31.4 -0.1
comp=Z,1.0nm,1.0s,baz=152,slow=4.1,SNR=3.1
PDAR LR LR 03 23 03.3
comp=Z,68nm,18.9s,baz=155,slow=42
L17A **Cokeville** 32.20 332 ⇑P P 03 07 10.2 +0.4
baz=32
S10A **Tonopah Range,** 32.25 321 ⇓P P 03 07 10.8 +0.5
baz=32,SNR=5.3
P12A **McGill** 32.29 325 ⇑P P 03 07 11.1 +0.5
baz=32,SNR=5.4
Q11A **Duckwater** 32.29 323 ⇑P P 03 07 11.1 +0.5
baz=32,SNR=6.3
N14A **Grayback Hills** 32.35 328 ⇑P P 03 07 11.0 -0.2
baz=32,SNR=5.1
L16A **Fish Haven** 32.39 332 ⇑P P 03 07 10.7 -0.8
baz=33
M15A **Larsen Ranch,** 32.45 330 ⇑P P 03 07 12.0 0.0
baz=33
J18A **Kendall Valley** 32.73 334 ⇓P P 03 07 14.3 -0.2
baz=33
O12A **Currie** 32.75 326 ⇑P P 03 07 15.1 +0.5
baz=33,SNR=8.0
L15A **Malad City** 32.83 331 ⇓P P 03 07 14.7 -0.6
baz=33
HVU **Hansel Valley** 32.85 330 eP P 03 07 16.2 +0.8
comp=Z,5.5nm,1.1s,mb4.3
M14A **Sheep Mountain** 32.92 329 ⇑P P 03 07 17.2 +1.1
baz=33,SNR=15
J17A **Brown Place, J** 33.15 334 ⇓P P 03 07 18.0 -0.1
baz=33
O11A **Cowboy Ranch,** 33.16 325 ⇓P P 03 07 18.9 +0.7
baz=33
REDW **Red Top Meadow** 33.21 334 eP P 03 07 17.7 -0.9
comp=Z,10nm,1.1s,mb4.6
M13A **Montello** 33.23 328 ⇑P P 03 07 19.2 +0.4
baz=33,SNR=12
M13A **Montello** 33.23 328 eP P 03 07 19.3 +0.5
comp=Z,5.5nm,0.6s,mb4.6
M13A eP PcP 03 09 59.1 -0.2
SNOW **Snow King Moun** 33.25 334 eP P 03 07 18.3 -0.7
LOHW **Long Hollow** 33.31 334 eP P 03 07 18.8 -0.7
comp=Z,1.4nm,0.4s,mb4.1
N12A **Clover Valley,** 33.32 326 ⇑P P 03 07 20.6 +1.0
baz=34
ELK **Elko** 33.35 326 P P 03 07 20.2 +0.4
comp=Z,1.8nm,0.6s,mb4.1,baz=126,slow=7.2,SNR=11
ELK PcP PcP 03 09 59.4 -0.2
comp=Z,2.4nm,0.5s,baz=126,slow=3.2,SNR=14
ELK ScP ScP 03 13 36.6 +0.9
comp=Z,0.4nm,0.3s,baz=128,slow=4.3,SNR=3.3
ELK LR LR 03 23 17.0
comp=Z,188nm,18.5s,baz=346,slow=40
ELK **Elko** 33.35 326 P P 03 07 20.2 +0.4
ELK PcP PcP 03 09 59.4 -0.2
ELK ScP ScP 03 13 36.6 +0.9
ELK LR LR 03 23 17.0
TPAW **Teton Pass** 33.35 334 eP P 03 07 19.6 -0.3
comp=Z,2.0nm,0.4s,mb4.3
TPAW eP pP 03 07 43.0 +1.7
TPAW eS P sP 03 07 51.8 -0.4
TPAW eP PcP PcP 03 09 59.6 0.0
NVAR **Mina Array Bea** 33.61 320 P P 03 07 23.2 +1.0
comp=Z,2.6nm,0.6s,mb4.2,baz=129,slow=7.9,SNR=30
NVAR pP pP 03 07 44.1 +0.5
comp=Z,2.6nm,0.6s,baz=32,slow=23,SNR=7.2
NVAR PcP PcP 03 10 00.8 +0.3
comp=Z,1.5nm,0.5s,baz=134,slow=5.2,SNR=14
NVAR ScP ScP 03 13 36.8 +0.1
comp=Z,0.9nm,0.8s,baz=156,slow=5.4,SNR=5.4
NVAR **Mina Array Bea** 33.61 320 P P 03 07 23.2 +1.0
NVAR pP pP 03 07 44.1 +0.5
NVAR PcP PcP 03 10 00.8 +0.3
NVAR ScP ScP 03 13 36.8 +0.1
K14A **Jones Ranch, D** 33.62 330 ⇓P P 03 07 21.6 -0.6
baz=34
L13A **Double Diamond** 33.66 329 ⇓P P 03 07 22.9 +0.5
baz=34
M12A **Wells** 33.66 327 ⇓P P 03 07 23.0 +0.5
baz=34,SNR=11
N11A **Elko Archery C** 33.67 326 ⇓P P 03 07 23.6 +0.9
baz=34
J15A **Blackfoot** 33.94 332 ⇓P P 03 07 25.7 +0.8
baz=34
M11A **Holland Ranch,** 34.13 326 ⇑P P 03 07 27.4 +0.7
baz=34,SNR=6.3
L12A **House Creek Ra** 34.24 328 ⇓P P 03 07 28.1 +0.5
baz=34
G18A **Lazy EL Ranch,** 34.31 337 ⇑P P 03 07 28.3 +0.2
baz=34
J14A **Carey** 34.38 331 ⇓P P 03 07 29.0 +0.3
baz=34
K12A **Draper Farm, C** 34.54 329 ⇑P P 03 07 30.4 +0.3
baz=35
L11A **Cat Creek Ranc** 34.63 327 ⇓P P 03 07 31.3 +0.4
baz=35,SNR=9.1
J13A **Cove Ranch, Pi** 34.75 330 ⇓P P 03 07 32.4 +0.5
baz=35
I14A **Mackay** 34.81 332 ⇓P P 03 07 33.5 +1.0
baz=35
F18A **Big Timber** 34.86 337 ⇓P P 03 07 32.8 0.0
baz=35
L10A **Juniper Basin** 34.95 327 ⇑P P 03 07 34.0 +0.3
baz=35,SNR=7.4
HLID **Hailey** 34.98 330 ⇑P P 03 07 34.4 +0.5
baz=35,SNR=7.7
HLID **Hailey** 34.98 330 eP P 03 07 34.9 +1.0
comp=Z,8.8nm,1.2s,mb4.5
HLID eP cP PcP 03 10 04.5 +0.3
J12A **Stokes Ranch,** 35.09 329 ⇑P P 03 07 35.0 +0.2
baz=35
I13A **Wildhorse Cree** 35.11 331 ⇓P P 03 07 35.5 +0.5
baz=35,SNR=6.1
G16A **Moss Hill, Enn** 35.12 335 ⇑P P 03 07 36.2 +1.1
baz=35
K11A **Parker Ranch,** 35.21 328 ⇑P P 03 07 35.9 0.0
baz=35
H14A **Leadore** 35.31 333 ⇑P P 03 07 37.4 +0.7
baz=36
G15A **Dillon** 35.36 334 ⇓P P 03 07 37.7 +0.6
baz=36
BOZ **Bozeman (W)** 35.39 335 ⇓P P 03 07 37.4 0.0
baz=36
BOZ **Bozeman (W)** 35.39 335 eP P 03 07 36.6 -0.8
comp=Z,1.0nm,0.6s,mb3.8
I12A **Atlanta** 35.51 330 ⇓P P 03 07 38.5 +0.1
baz=36,SNR=12
MFID **Camas Ranch** 35.57 329 ⇑P P 03 07 39.5 +0.5
baz=36
K10A **MacKenzie Ranc** 35.65 327 ⇓P P 03 07 40.2 +0.6
baz=36
H13A **Challis** 35.67 332 ⇑P P 03 07 40.1 +0.3
baz=36,SNR=8.7
BEKR **Beckworth** 35.76 320 ⇓P P 03 07 41.3 +0.7
baz=36
ULM **Lac du Bonnet** 35.81 355 LR LR 03 24 49.8
comp=Z,98nm,19.1s,baz=88,slow=40
F15A **Butte** 35.90 335 ⇓P P 03 07 42.2 +0.5
baz=36
H12A **Diamond D Ranc** 35.94 331 ⇑P P 03 07 42.4 +0.4
baz=36,SNR=8.4
I11A **Placerville** 36.00 329 ⇓P P 03 07 43.1 +0.5
baz=36,SNR=22
D17A **Six Diamond Ra** 36.27 338 ⇓P P 03 07 45.0 +0.1
baz=36
WVOR **Wild Horse Val** 36.37 325 eP P 03 07 46.0 +0.2
comp=Z,6.1nm,1.0s,mb4.5
WVOR eP cP PcP 03 10 08.5 +0.1
E15A **Deer Lodge** 36.43 335 ⇑P P 03 07 46.8 +0.5
baz=37
J09A **Fry Pan Ranch,** 36.51 327 ⇓P P 03 07 47.3 +0.3
baz=37,SNR=12
I10A **Payette** 36.54 329 ⇓P P 03 07 47.4 +0.1
baz=37
G12A **Big Creek, Yel** 36.59 331 ⇑P P 03 07 47.6 0.0
baz=37
H11A **Donnelly** 36.60 330 ⇓P P 03 07 47.7 -0.1
baz=37,SNR=10.0
F13A **Darby** 36.65 333 ⇑P P 03 07 48.3 +0.2
baz=37
EGMT **Eagleton** 36.69 339 ⇑P P 03 07 48.3 -0.1
baz=37
H10A **Noah's Angus R** 36.88 329 ⇑P P 03 07 50.2 +0.1
baz=37
J08A **Circle Bar Ran** 36.90 326 ⇑P P 03 07 50.7 +0.4
baz=37,SNR=20
I09A **Lost Marbles R** 36.94 328 ⇓P P 03 07 51.0 +0.3
baz=37,SNR=35
MOD **Modoc** 36.97 323 eP P 03 07 50.4 -0.5
comp=Z,4.1nm,0.6s,mb4.5
MOD eP cP PcP 03 10 09.5 -0.7
F12A **Elk City** 37.04 332 ⇑P P 03 07 51.0 -0.4
baz=37,SNR=11
E13A **Victor** 37.09 334 ⇓P P 03 07 52.3 +0.4
baz=37
G11A **Walters Elk Ra** 37.24 331 ⇓P P 03 07 53.6 +0.4
baz=37
BMO **Blue Mountains** 37.34 329 eP P 03 07 53.2 -0.8
comp=Z,5.7nm,1.4s,mb4.3
BMO eP cP PcP 03 10 11.2 -0.2
H09A **Durkee** 37.39 329 ⇑P P 03 07 54.4 0.0
baz=38
LASM **Arnica Sink** 37.53 322 P P 03 07 56.3 +0.6
G10A **Bishop Farm, J** 37.57 330 ⇓P P 03 07 55.8 -0.1
baz=38
E12A **Beaver Dam Sad** 37.68 332 ⇑P P 03 07 56.8 0.0
baz=38
D13A **Huson** 37.72 334 ⇓P P 03 07 57.7 +0.5
baz=38
H08A **Prairie City** 37.80 328 ⇑P P 03 07 58.1 +0.2
baz=38,SNR=7.8
I07A **Izee** 37.94 327 ⇑P P 03 07 58.1 -1.0
baz=38,SNR=5.2
B15A **Bradely Ranch,** 37.94 337 ⇑P P 03 07 59.4 +0.4
baz=38
D12A **Red Ives Fores** 38.07 333 ⇓P P 03 07 59.8 -0.4
baz=38
F10A **Beach Ranch, E** 38.12 331 ⇑P P 03 08 00.2 -0.3
baz=38,SNR=9.1
YBH **Yreka Blue Hor** 38.30 321 P P 03 08 00.4 -1.7
comp=Z,1.1nm,0.5s,mb4.0,baz=236,slow=2.2,SNR=5.2
YBH LR LR 03 25 10.5
comp=Z,140nm,19.4s,baz=138,slow=38
LPAZ **La Paz** 38.31 142 P P 03 08 01.6 -0.8
comp=Z,5.0nm,0.9s,mb4.3,baz=342,slow=11,SNR=16
LPAZ PcP PcP 03 10 14.3 -0.4
comp=Z,1.8nm,0.5s,baz=6.7,slow=4.5,SNR=6.6
LPAZ LR LR 03 24 07.4
comp=Z,93nm,20.7s,baz=131,slow=36
LPAZ **La Paz** 38.31 142 eP P 03 08 01.7 -0.7
comp=Z,5.6nm,0.9s,mb4.4
LPAZ eP cP PcP 03 10 14.6 -0.1
A15A **Johnson Ranch,** 38.55 337 ⇓P P 03 08 03.2 -1.0
baz=39
A14A **Double T Ranch** 38.81 337 ⇑P P 03 08 05.8 -0.5
baz=39
H04A **Detroit Lake** 39.79 325 ⇑P P 03 08 13.8 -0.7
baz=40,SNR=5.9
HOOD **Mount Hood Mea** 39.91 326 eP P 03 08 16.0 +0.5
comp=Z,67nm,1.0s,mb5.4
A07A **Ashnola River,** 41.82 331 ⇑P P 03 08 31.3 +0.2
baz=42
CMW **Cultus Mountai** 42.21 330 P P 03 08 33.5 -0.8
NLWA **Neilton Lookou** 42.42 327 ⇑P P 03 08 36.1 0.0
baz=42
SIV **San Ignacio** 42.66 134 P P 03 08 36.9 -1.4
comp=Z,26nm,0.8s,mb5.0,baz=311,slow=8.6,SNR=127
SIV pP pP 03 08 57.4 -3.1
comp=Z,4.7nm,0.6s,baz=324,slow=6.9,SNR=3.5
SIV PcP PcP 03 10 28.0 -0.8
comp=Z,4.4nm,0.6s,baz=324,slow=1.7,SNR=6.5
FCC **Fort Churchill** 44.20 358 eP P 03 08 48.5 -1.7
comp=Z,0.2nm,0.4s
SCHQ **Schefferville** 44.54 20 P P 03 08 50.8 -2.1
comp=Z,10nm,0.6s,mb4.7,baz=222,slow=6.8,SNR=37
SCHQ LR LR 03 28 30.4
comp=Z,321nm,20.7s,baz=40,slow=38
SCHQ **Schefferville** 44.54 20 eP P 03 08 51.0 -1.9
comp=Z,11nm,0.7s,mb4.7
LCO **Las Campanas** 47.70 155 eP P 03 09 16.7 -1.3
comp=Z,24nm,1.0s,mb5.0
YKA **Yellowknife Ar** 50.64 346 P P 03 09 38.1 -1.9
comp=Z,2.4nm,0.5s,mb4.5,baz=150,slow=7.2,SNR=44
YKA PcP PcP 03 10 54.2 -2.0
comp=Z,1.3nm,0.5s,baz=152,slow=3.9,SNR=10
YKA **Yellowknife Ar** 50.64 346 P P 03 09 38.1 -1.9
YKA PcP PcP 03 10 54.2 -2.0
CFAA **Coronel Fontan** 50.98 154 P P 03 09 42.0 -1.0
comp=Z,1.6nm,0.6s,mb4.2,baz=330,slow=6.6,SNR=38
FRB **Frobisher Bay** 51.68 13 P P 03 09 45.1 -2.6
comp=Z,1.9nm,0.5s,mb4.4,baz=213,slow=12,SNR=3.3
FRB pP pP 03 10 07.0 -3.6
comp=Z,4.3nm,0.8s,baz=194,slow=6.9,SNR=3.1
FRB LR LR 03 32 22.9
comp=Z,135nm,19.5s,baz=210,slow=37
DLBC **Dease Lake** 52.40 336 P P 03 09 52.1 -1.1
comp=Z,3.2nm,0.5s,mb4.6,baz=123,slow=3.6,SNR=9.6
DLBC LR LR 03 36 02.4
comp=Z,58nm,21.1s,baz=160,slow=40
CPUP **Villa Florida** 52.43 141 P P 03 09 51.6 -2.3
comp=Z,6.9nm,0.8s,mb4.7,baz=317,slow=8.3,SNR=17
CPUP LR LR 03 30 53.4
comp=Z,84nm,19.8s,baz=135,slow=34
CPUP **Villa Florida** 52.43 141 eP P 03 09 51.1 -2.8
comp=Z,32nm,0.9s,mb5.3
CPUP eP cP PcP 03 11 02.1 -1.4
TAOE **Nuku Hiva Isla** 53.61 247 eLR LR 03 25 13.5
comp=Z,251nm,30.0s
RKT **Rikitea** 56.70 229 eT 04 10 38.0
comp=Z,8.6nm,0.3s
PLCA **Paso Flores** 58.29 161 P P 03 10 34.3 -1.4
comp=Z,4.2nm,0.8s,mb4.5,baz=352,slow=7.6,SNR=6.8
PLCA **Paso Flores** 58.29 161 eP P 03 10 33.6 -2.1
comp=Z,11nm,1.2s,mb4.8
RCBR **Riachuelo** 58.66 106 eP P 03 10 37.7 -1.1
comp=Z,38nm,1.2s,mb5.3
TRQA **Tornquist** 59.16 153 eP P 03 10 39.4 -2.4
comp=Z,8.9nm,1.0s,mb4.8
INK **Inuvik** 60.09 343 P P 03 10 46.2 -1.5
comp=Z,2.3nm,0.4s,mb4.6,baz=148,slow=7.8,SNR=11
INK **Inuvik** 60.09 343 eP P 03 10 45.9 -1.9
comp=Z,2.8nm,0.5s,mb4.5
RES **Resolute Bay** 60.18 359 P P 03 10 45.7 -2.5
comp=Z,1.7nm,0.4s,mb4.4,baz=269,slow=7.2,SNR=22
RES **Resolute Bay** 60.18 359 eP P 03 10 45.6 -2.6
comp=Z,2.3nm,0.6s,mb4.4
RC01 **Rabbit Creek A** 62.28 332 eP P 03 11 01.7 -0.9
comp=Z,6.9nm,0.6s,mb4.9
KDAK **Kodiak Island** 62.56 328 P P 03 11 02.9 -1.7
comp=Z,9.8nm,0.4s,mb5.1,baz=176,slow=1.7,SNR=21
OHAK **Old Harbor** 62.76 327 eP P 03 11 05.3 -0.6
comp=Z,11nm,0.6s,mb5.0
MCK **McKinley** 62.95 335 eP P 03 11 06.1 -1.0
comp=Z,6.0nm,0.9s,mb4.5
PMOR **Pomariorio Ree** 63.07 245 eT 04 18 38.7
comp=Z,2.6nm,0.3s
TRF **Thorofare Moun** 63.40 335 eP P 03 11 09.2 -0.8
comp=Z,7.3nm,0.6s,mb4.8
BPAW **Bear Paw Mtn.** 63.93 335 eP P 03 11 11.6 -1.9
comp=Z,7.6nm,1.0s,mb4.5
PPLA **Purkeypile** 64.00 334 eP P 03 11 12.4 -1.5
comp=Z,6.7nm,0.4s,mb4.8
PPLA eP pP 03 11 37.5 -0.2
COLD **Coldfoot** 64.84 338 eP P 03 11 18.4 -1.0
comp=Z,13nm,1.3s,mb4.6
PPT **Papeete** 65.62 243 eLR LR 03 31 08.0
comp=Z,225nm,26.2s
PPT **Papeete** 65.62 243 LR LR 03 32 39.1
comp=Z,157nm,21.4s,baz=314,slow=29
TTA **Tatalina** 65.68 333 eP P 03 11 23.2 -1.6
comp=Z,38nm,1.6s,mb5.0
ESK **Eskdalemuir** 77.19 36 eP P 03 12 30.9 -3.3
comp=Z,5.6nm,0.6s,mb4.5
EKA **Eskdalemuir Ar** 77.22 36 P P 03 12 31.3 -3.1
comp=Z,3.0nm,0.5s,mb4.3,baz=274,slow=6.2,SNR=26
EKA pP pP 03 12 55.0 -3.7
comp=Z,3.3nm,0.7s,baz=274,slow=6.0,SNR=3.5
ESDC **Sonseca Array** 78.96 52 P P 03 12 41.9 -2.5
comp=Z,0.7nm,0.4s,mb3.8,baz=283,slow=5.0,SNR=10
ESDC pP pP 03 13 05.3 -3.5
comp=Z,0.5nm,0.5s,baz=284,slow=6.1,SNR=3.2
SPITS **Spitsbergen Ar** 79.46 12 P P 03 12 44.2 -2.1
comp=Z,5.6nm,0.9s,mb4.4,baz=208,slow=3.4,SNR=6.6
MDT **Midelt** 79.65 59 P P 03 12 46.6 -1.6
comp=Z,1.7nm,0.9s,mb3.9,baz=257,slow=8.5,SNR=4.6
GRR **Gorron** 79.67 43 eP P 03 12 44.8 -3.2
comp=Z,9.9nm,0.5s,mb4.6
GRR **Gorron** 79.67 43 eP P 03 12 44.8 -3.2
comp=Z,4.9nm,0.5s,mb4.6
FLN **La Foliniere** 79.85 42 eP P 03 12 45.8 -3.2
comp=Z,7.4nm,0.4s,mb4.5
FLN **La Foliniere** 79.85 42 eP P 03 12 45.8 -3.2
comp=Z,3.7nm,0.4s,mb4.6
LDF **La Druitiere** 80.11 42 eP P 03 12 47.0 -3.4
BILL **Bilibino** 81.18 338 eP P 03 12 54.5 -1.2
comp=Z,4.6nm,0.4s,mb4.7
FX1 **Attu Island--F** 81.78 322 P P 03 12 58.7 -0.5
comp=Z,5.9nm,0.8s,mb4.5,baz=218,slow=9.5,SNR=4.2
FX1 **Attu Island--F** 81.78 322 P P 03 12 58.7 -0.5
TCF **Toulx Ste Croi** 82.13 44 eP P 03 12 57.4 -3.7
comp=Z,4.9nm,0.8s,mb4.1
TCF **Toulx Ste Croi** 82.13 44 eP P 03 12 57.4 -3.7
comp=Z,2.5nm,0.8s,mb4.1
AVF **Avril sur Loir** 82.78 44 eP P 03 13 00.6 -3.9
LOR **Lormes** 83.01 43 eP P 03 13 03.8 -1.9
comp=Z,4.5nm,0.5s,mb4.2
LOR **Lormes** 83.01 43 eP P 03 13 03.8 -1.9
comp=Z,2.3nm,0.5s,mb4.3
NB2 **NORSAR Subarra** 83.42 29 P P 03 13 07.4 -0.1
comp=Z,1.6nm,0.7s,mb4.0,baz=291,slow=4.8
NOA **NORSAR Array B** 83.42 29 P P 03 13 05.8 -1.7
comp=Z,2.0nm,0.9s,mb3.9,baz=290,slow=4.9,SNR=4.2
NOA LR LR 03 48 49.6
comp=Z,40nm,19.8s,baz=275,slow=35
HAU **Haudompre** 84.45 42 eP P 03 13 09.5 -3.5
HFS **Hagfors** 84.87 29 P P 03 13 12.6 -2.3
comp=Z,1.6nm,0.5s,mb4.2,baz=85,slow=1.6,SNR=11
DBIC **Dimbokro** 85.05 84 P P 03 13 12.5 -4.3
comp=Z,4.2nm,0.9s,mb4.3,baz=321,slow=5.2,SNR=7.7
DBIC LR LR 03 44 12.6

comp=Z,72nm,19.1s,baz=262,slow=31
DBIC Dimbokro 85.05 84 *e*P **P 03 13 12.3 -4.5**
comp=Z,8.1nm,1.1s,mb4.6
ARCES ARCESS Array B 85.47 18 P **P 03 13 14.2 -3.5**
comp=Z,1.1nm,0.6s,mb4.0,baz=299,slow=4.9,SNR=11
ARCES LR LR 03 49 51.8
comp=Z,88nm,21.4s,baz=97,slow=34
ARCES ARCESS Array B 85.47 18 P **P 03 13 14.2 -3.5**
ARCES LR LR 03 49 51.8
GERES GERESS Array B 88.85 40 LR LR 03 49 56.7
comp=Z,68nm,19.4s,baz=302,slow=33
FINES FINESS Array B 89.79 25 P **P 03 13 37.2 -1.3**
comp=Z,1.6nm,0.8s,mb4.2,baz=318,slow=3.9,SNR=3.2
FINES pP pP 03 14 02.6 -0.9
comp=Z,1.5nm,0.9s,baz=318,slow=2.6,SNR=1.8
FINES LR LR 03 57 38.7
comp=Z,31nm,18.1s,baz=148,slow=38
KEST Kesra 90.14 53 LR LR 03 49 32.4
comp=Z,22nm,18.7s,baz=289,slow=32
PETK Petropavlovsk- 90.52 326 P **P 03 13 40.9 -1.2**
comp=Z,7.9nm,1.1s,mb4.8,baz=72,slow=9.7,SNR=6.0
AKASG Malin Array Be 96.98 33 LR LR 03 57 02.4
comp=Z,38nm,20.0s,baz=325,slow=35
ABKAR Akbulak array 111.63 20 *e*PKP PKiKP 03 19 12.7 -1.7
CN2 Changchun 112.89 332 *e*PKP PKiKP 03 19 15.0 -1.9
KURK Kurchatov 114.45 7 PKP PKiKP 03 19 17.6 -2.1
comp=Z,14nm,0.4s,baz=341,slow=1.3,SNR=7.5
KURK Kurchatov 114.45 7 *e*PKP PKiKP 03 19 18.1 -1.7
SONM Songino Array 115.91 347 PKP PKPdf 03 19 21.0 -1.7
comp=Z,0.8nm,0.4s,baz=258,slow=3.9,SNR=5.1
KSRS Korea Array 116.42 326 PKP PKPdf 03 19 21.9 -2.0
comp=Z,1.4nm,0.7s,baz=357,slow=1.4,SNR=7.2
MK31 Makanchi Array 118.70 5 *e*PKPdf PKPdf 03 19 25.6 -2.4
MKAR Makanchi Array 118.70 5 PKP PKPdf 03 19 25.5 -2.5
comp=Z,0.8nm,0.5s,baz=352,slow=3.2,SNR=8.4
BJI Beijing 119.94 336 PKP PKPdf 03 19 25.5 -5.1
BJI PP PP 03 20 54.6 -0.1
BJI LR LR
comp=Z,38nm,31.8s
BOSA Boshof 120.08 115 PKP PKPdf 03 19 30.4 -0.7
comp=Z,3.3nm,0.4s,baz=255,slow=5.3,SNR=18
BOSA Boshof 120.08 115 *e*PKPdf PKPdf 03 19 29.8 -1.4
LBTB Lobatse 120.27 111 PKP PKPdf 03 19 30.5 -1.1
comp=Z,4.6nm,0.9s,baz=300,slow=1.9,SNR=5.9
LBTB Lobatse 120.27 111 *e*PKPdf PKPdf 03 19 30.5 -1.1
HHC Hu-ho-hao-te 120.92 340 *e*PKP PKPdf 03 19 30.0 -2.5
HHC sPKP 03 20 07.5
HHC PP PP 03 21 03.1 +1.8
HHC PKS 03 23 05.3
HHC SKS SKSdf 03 26 30.4 -5.8
HHC SKKS SKKSac 03 27 45.3 -7.9
HHC SS SS 03 37 23.3 -1.6
HHC AMB AMB
comp=Z,45nm,6.2s
HHC LR LR
comp=N,130nm,21.4s
HHC LR LR
comp=E,180nm,21.4s
HHC LR LR
comp=Z,170nm,22.6s
IEMG Emamgholi 121.17 28 *e*P 03 23 09.7
IKRD Kardeh 121.63 28 *e*P SKSac 03 26 03.1 -22
LSZ Lusaka 121.82 99 *e*PKPdf PKPdf 03 19 34.0 -0.7
WMQ Urumqi 121.93 1 *e*PKP PKPdf 03 19 32.0 -2.3
MAW Mawson 124.38 168 PKP PKPdf 03 19 36.8 -1.4
comp=Z,1.7nm,0.5s,baz=252,slow=2.4,SNR=15
ITEG Tejag 124.90 31 *e*P PKPdf 03 19 37.4 -3.0
GTA Gaotai 125.33 349 *e*PKP PKPdf 03 19 40.3 -0.7
GTA sPKP 03 20 17.9
GTA PP PP 03 21 36.1 +5.3
GTA PKS 03 23 15.3
GTA SKS SKSdf 03 26 40.8 -3.7
GTA SKKS SKKSac 03 28 16.4 -5.1
GTA SS SS 03 38 19.9 -0.4
GTA AMB AMB
comp=Z,58nm,6.2s
GTA LR LR
comp=N,170nm,24.7s
GTA LR LR
comp=E,200nm,22.6s
GTA LR LR
comp=Z,230nm,17.2s
LZH Lanzhou 127.63 344 *e*PKP PKPdf 03 19 44.0 -1.5
STKA Stephens Creek 128.80 241 PKP PKPdf 03 19 46.1 -1.6
comp=Z,2.1nm,0.8s,baz=303,slow=11,SNR=3.4
CD2 Chengdu 132.52 342 *e*PKP PKPdf 03 19 51.9 -3.0
CD2 sPKP 03 20 29.3
CD2 PP PP 03 22 20.1 +2.2
CD2 SKS SKSdf 03 26 51.6 -6.5
CD2 SKKS SKKSac 03 29 00.1 -6.6
CD2 SS SS 03 39 48.5 -0.9
CD2 AMB AMB
comp=Z,80nm,10.2s
CD2 LR LR
comp=N,120nm,18.6s
CD2 LR LR
comp=Z,100nm,18.2s
GYA Guiyang 135.62 337 *e*Pdif Pdif 03 17 01.0 -2.6
GYA PKP PKPdf 03 19 58.4 -2.5
GYA sPKP 03 20 36.9
GYA PP PP 03 22 40.4 +2.6
GYA AMB AMB
comp=Z,120nm,8.0s
WRAB Tennant Creek 136.05 256 *e*PKPdf PKPdf 03 20 00.5 -1.2
WRA Warramunga Arr 136.06 256 PKP PKPdf 03 20 00.7 -1.0
comp=Z,1.1nm,0.4s,baz=89,slow=3.5,SNR=9.2
ASAR Alice Springs 136.36 251 PKhKP 03 19 51.5
comp=Z,0.2nm,0.4s,baz=105,slow=3.9,SNR=4.2
ASAR PKP PKPdf 03 20 00.3 -1.9
comp=Z,0.9nm,0.5s,baz=95,slow=2.1,SNR=9.1
GUN Gumba 137.73 4 *e*P PKPdf 03 20 03.2 -1.5
comp=Z,14nm,0.5s
KKN Kakani 137.81 4 *e*P PKPdf 03 20 03.0 -1.9
comp=Z,18nm,0.5s
DMN Daman 137.98 5 *e*P PKPdf 03 20 02.4 -2.8
PKIN Phulchoki 138.03 4 *e*P PKPdf 03 20 02.5 -2.8
comp=Z,11nm,0.5s
PKI Pulchoki 138.04 4 *e*P PKPdf 03 20 03.2 -2.1
comp=Z,11nm,0.5s
KMI Kunming 138.24 341 PKP PKPdf 03 20 05.1 -0.6
KMI PP PP 03 22 56.6 +2.6
KMI LR LR
comp=Z,60nm,24.0s
RAMN Ramite 138.73 3 *e*P PKPdf 03 20 03.7 -2.9
comp=Z,12nm,0.5s
ODAN Odare 138.84 2 *e*P PKPdf 03 20 03.4 -3.4
comp=Z,11nm,0.8s
FITZ Fitzroy Crossi 144.28 259 PKP PKPdf 03 20 14.4 -2.3
comp=Z,2.8nm,0.5s,baz=141,slow=5.0,SNR=12
FITZ Fitzroy Crossi 144.28 259 *e*PKPdf PKPdf 03 20 13.8 -2.9
CHTO Chiang Mai 145.33 343 *e*PKPbc PKPbc 03 20 16.2 -2.3
CM31 Chiang Mai Arr 145.66 342 *e*PKPbc PKPbc 03 20 17.3 -2.2
CMAR Chiang Mai Arr 145.66 342 PKPbc PKPbc 03 20 18.1 -1.3
comp=Z,18nm,0.5s,baz=336,slow=3.5,SNR=50
MBWA Marble Bar 149.65 253 *e*PKPbc PKPbc 03 20 28.3 -2.0
PSI Prapat 159.96 328 PKP PKPdf 03 20 37.9 -2.1
comp=Z,2.9nm,0.6s,baz=302,slow=21,SNR=4.0

ISCJB ***13*** *03:00:56.5±0.4, 59.°97N±0.°04×152.°65W±0.°08, h103km±5km, mb4.0/5, Error ellipse: s-maj=7.2km s-min=5.5km az=33.6*
IDC ***13*** *03:00:57.6±3.0, 59.°88N×152.°73W, h93km±48km, mb3.6/5, mb1 3.7/9, mb1mx3.4/29, mbtmp3.7/9, Error ellipse: s-maj=46.2km s-min=17.9km az=138.0*
NEIC ***13*** *03:00:58.9, 59.°97N×152.°63W, h89km, MG3.3(AEIC), After AEIC.*
ISC 13 03:00:57.8±0.4, 59.°96N±0.°04×152.°64W±0.°08, h95km±5km, n42, σ0°79/48, mb4.0/5, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUL	**Augustine Lava**	**0.70**	**215**	P	**Pn**	**03 01 15.1**	**+0.4**
AUL				S	**Sn**	**03 01 28.3**	**+0.9**
SLKM	**Skilak Lake**	**1.33**	**64**	P	**Pn**	**03 01 22.2**	**+0.6**
SEW	**Seward**	**1.61**	**83**	P	**Pn**	**03 01 24.9**	**-0.2**
SEW				S	**Sn**	**03 01 45.4**	**-0.4**
FIB	**Fire Island**	**1.72**	**44**	P	**Pn**	**03 01 28.0**	**+1.6**
FIB				S	**Sn**	**03 01 51.6**	**+3.3**
RC01	**Rabbit Creek A**	**1.83**	**50**	P	**Pn**	**03 01 28.0**	**+0.1**
RC01				S	**Sn**	**03 01 50.6**	**-0.2**
SVW2	**Sparrevohn**	**1.85**	**309**	*e*P	**Pn**	**03 01 27.3**	**-0.8**
SKT	**Skwentna**	**2.10**	**15**	P	**Pn**	**03 01 31.2**	**-0.1**
KDAK	**Kodiak Island**	**2.18**	**179**	P	**Pn**	**03 01 31.4**	**-1.1**
	22nm,0.3s,baz=16,slow=9.8,SNR=68						
KDAK				S	**Sn**	**03 01 57.0**	**-2.0**
	12nm,0.3s,baz=57,slow=8.9,SNR=4.3						
KDAK	**Kodiak Island**	**2.18**	**179**	P	**Pn**	**03 01 32.2**	**-0.3**
KDAK				S	**Sn**	**03 01 58.6**	**-0.4**
PMR	**Palmer**	**2.38**	**45**	P	**Pn**	**03 01 34.7**	**-0.3**
OHAK	**Old Harbor**	**2.77**	**187**	*e*P	**Pn**	**03 01 40.4**	**+0.2**
SML	**Sawmill**	**2.81**	**47**	P	**Pn**	**03 01 40.4**	**-0.3**
PPLA	**Purkeypile**	**2.96**	**4**	P	**Pn**	**03 01 43.8**	**+1.1**
MID	**Middleton Isla**	**3.24**	**97**	*e*P	**Pn**	**03 01 47.0**	**+0.5**
TT01	**Tatalina**	**3.37**	**333**	P	**Pn**	**03 01 47.8**	**-0.5**
TTA	**Tatalina**	**3.39**	**333**	*e*P	**Pn**	**03 01 48.3**	**-0.2**
EYAK	**Cordova Ski Ar**	**3.49**	**77**	P	**Pn**	**03 01 48.9**	**-1.0**
DIV	**Divide**	**3.59**	**68**	P	**Pn**	**03 01 50.7**	**-0.6**
TRF	**Thorofare Moun**	**3.68**	**17**	P	**Pn**	**03 01 52.1**	**-0.3**
KTH	**Kantishna Hill**	**3.70**	**12**	P	**Pn**	**03 01 53.0**	**+0.3**
CHUM	**Lake Minchumin**	**3.94**	**2**	P	**Pn**	**03 01 56.1**	**+0.1**
BMRM	**Bremner River**	**4.11**	**72**	P	**Pn**	**03 01 57.2**	**-1.0**
MCK	**McKinley**	**4.17**	**23**	P	**Pn**	**03 01 59.6**	**+0.6**
BPAW	**Bear Paw Mtn.**	**4.23**	**10**	P	**Pn**	**03 01 59.0**	**-0.8**
PAX	**Paxson**	**4.58**	**46**	P	**Pn**	**03 02 04.9**	**+0.4**
COLA	**College**	**5.41**	**22**	P	**Pn**	**03 02 15.8**	**-0.1**
DOT	**Dot Lake**	**5.50**	**44**	P	**Pn**	**03 02 17.4**	**+0.4**
IL1	**Eielson Array**	**5.52**	**27**	P	**Pn**	**03 02 16.8**	**-0.5**
IM3	**Indian Mountai**	**6.07**	**356**	P	**Pn**	**03 02 24.9**	**+0.1**
PNL	**Peninsula**	**6.69**	**87**	P	**Pn**	**03 02 33.6**	**+0.4**
EGAK	**Eagle**	**7.20**	**43**	*e*Pn	**Pn**	**03 02 39.2**	**-0.9**
	6.0nm,0.5s						
COLD	**Coldfoot**	**7.38**	**7**	P	**Pn**	**03 02 42.0**	**-0.5**
BM3	**Burnt Mountain**	**8.29**	**22**	P	**Pn**	**03 02 53.5**	**-1.4**
DLBC	**Dease Lake**	**11.68**	**88**	P	**Pn**	**03 03 43.4**	**+2.4**
	1.7nm,0.3s,baz=289,slow=7.0,SNR=17						
INK	**Inuvik**	**11.76**	**37**	P	**Pn**	**03 03 43.0**	**+0.9**
	0.2nm,0.3s,baz=217,slow=16,SNR=3.2						
YKA	**Yellowknife Ar**	**18.30**	**66**	P	**Pn**	**03 05 04.7**	**-0.3**
	0.3nm,0.3s,baz=277,slow=9.9,SNR=24						
YKA	**Yellowknife Ar**	**18.30**	**66**	P	**Pn**	**03 05 04.7**	**-0.3**
PETK	**Petropavlovsk-**	**27.64**	**278**	P	**P**	**03 06 36.0**	**-0.1**
	2.8nm,0.9s,mb3.8,baz=67,slow=15,SNR=5.5						
KSRS	**Korea Array**	**53.36**	**283**	P	**P**	**03 10 07.9**	**+0.8**
	0.9nm,0.5s,mb4.0,baz=42,slow=10,SNR=4.6						
SONM	**Songino Array**	**54.96**	**306**	P	**P**	**03 10 20.0**	**+1.5**
	1.9nm,0.6s,mb4.3,baz=47,slow=6.7,SNR=9.6						
ZALV	**Zalesovo Beam**	**57.51**	**324**	P	**P**	**03 10 36.1**	**-0.5**
	0.7nm,0.4s,mb4.1,baz=12,slow=7.5,SNR=3.4						
BVAR	**Borovoye Array**	**62.19**	**332**	P	**P**	**03 11 07.8**	**-0.7**
	0.3nm,0.4s,mb3.7,baz=30,slow=15,SNR=4.1						

IDC ***13*** *03:11:19.8±1.6, 52.°63N×171.°58W, h0km, mb3.5/4, mb1 3.9/5, mb1mx3.5/29, mbtmp3.6/5, ML2.9/1, MS3.5/1, Ms1 3.5/1, ms1mx2.6/21, Error ellipse: s-maj=58.3km s-min=15.9km az=176.0*
ISCJB ***13*** *03:11:25.8±0.9, 52.°4N±0.°3×172.°4W±0.°1, h97km±11km, mb3.4/4, Error ellipse: s-maj=49.2km s-min=10.0km az=168.4*
NEIC ***13*** *03:11:27.0, 51.°83N×172.°27W, h47km, ML3.3(AEIC), After AEIC.*
ISC 13 03:11:26.9±0.8, 52.°5N±0.°3×172.°5W±0.°2, h93km±11km, n11, σ1°03/13, mb3.4/4, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**1.12**	**254**	P	**Pn**	**03 11 47.2**	**-0.8**
ATKA				S	**Sn**	**03 12 02.7**	**-1.3**
NIKO	**Nikolski**	**2.23**	**77**	P	**Pn**	**03 12 01.6**	**-0.6**
ADK	**Adak**	**2.68**	**258**	P	**Pn**	**03 12 08.7**	**+0.5**
ADK				S	**Sn**	**03 12 41.0**	**+1.1**
OKFG	**Magazine Ridge**	**2.89**	**70**	P	**Pn**	**03 12 13.0**	**+2.1**
FX1	**Attu Island--F**	**8.75**	**278**	Pn	**Pn**	**03 13 34.2**	**+3.8**
	0.4nm,0.3s,baz=74,slow=20,SNR=1.9						
FX1	**Attu Island--F**	**8.75**	**278**	Pn	**Pn**	**03 13 34.2**	**+3.8**
INK	**Inuvik**	**24.28**	**35**	P	**P**	**03 16 34.7**	**-0.3**
	2.9nm,0.5s,mb3.9,baz=236,slow=4.5,SNR=6.8						
YKA	**Yellowknife Ar**	**31.56**	**49**	P	**P**	**03 17 38.7**	**-1.3**
	0.1nm,0.3s,mb3.0,baz=278,slow=9.6,SNR=5.2						
YKA	**Yellowknife Ar**	**31.56**	**49**	P	**P**	**03 17 38.7**	**-1.3**
PDAR	**Pinedale Array**	**42.22**	**77**	P	**P**	**03 19 10.6**	**+0.2**
	0.2nm,0.5s,mb3.1,baz=303,slow=8.3,SNR=2.5						
TXAR	**Lajitas Array**	**54.63**	**87**	P	**P**	**03 20 45.9**	**+0.1**
	0.3nm,0.4s,mb3.6,baz=307,slow=5.3,SNR=5.3						
TXAR				LR	LR	03 45 11.5	
	comp=Z,44nm,18.2s,baz=305,slow=38						

ISCJB ***13*** *03:18:59.7±2.8, 7.°89S±0.°06×118.°71E±0.°07, h16km±22km, mb4.1/9, Error ellipse: s-maj=12.0km s-min=8.6km az=147.4*
IDC ***13*** *03:19:04.9±0.9, 7.°67S×119.°07E, h32km±6km, mb3.8/7, mb1 3.9/10, mb1mx3.7/23, mbtmp3.8/10, ML3.7/3, Error ellipse: s-maj=38.3km s-min=12.6km az=65.0*
NEIC ***13*** *03:19:04.7±0.4, 7.°69S×118.°99E, mb4.2/3, Error ellipse: s-maj=17.9km s-min=6.9km az=60.0*
DJA ***13*** *03:19:16, 7.°07S×120.°07E, h20km, MLv4.3/7*
ISC 13 03:18:59.3±5.7, 7.°87S±0.°06×118.°69E±0.°10, h0km±37km, n29, σ1°00/31, mb4.2/9, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**2.40**	**138**	P	Px	03 19 55.7	
BKSI	**Bulukumba**	**2.90**	**29**	P	**Pn**	**03 19 45.7**	**-1.1**
KAPI	**Kappang**	**3.03**	**21**	Pn	**Pn**	**03 19 46.6**	**-1.9**
	5.6nm,0.3s,baz=196,slow=7.1,SNR=46						
KAPI				Sn	**Sn**	**03 20 19.3**	**-6.2**
	23nm,0.3s,baz=85,slow=20,SNR=8.1						
KAPI	**Kappang**	**3.03**	**21**	P	**Pn**	**03 19 47.0**	**-1.5**
KHKI	**Kahang-Kahang**	**3.09**	**261**	P	**Sn**	**03 20 26.0**	**-1.0**
SRBI	**Singaraja**	**3.45**	**266**	P	**Sn**	**03 20 29.4**	**-6.5**
DNP	**Denpasar**	**3.53**	**257**	P	**Sn**	**03 20 32.0**	**-6.0**
MMRI	**Maumere**	**3.60**	**102**	P	**Pn**	**03 19 57.0**	**+0.7**
MMRI				S	**Sn**	**03 20 32.6**	**-6.9**
BNSI	**Bone**	**3.72**	**22**	P	**Pn**	**03 19 57.7**	**-0.4**
BNSI				S	**Sn**	**03 20 32.2**	**-10**
SPSI	**Sidrap Palu**	**4.03**	**16**	P	**Pn**	**03 20 03.0**	**+0.8**
TTSI	**Tana Toraja**	**4.92**	**13**	P	**Pn**	**03 20 16.1**	**+1.5**
FITZ	**Fitzroy Crossi**	**12.22**	**147**	Pn	**Pn**	**03 21 55.8**	**+1.1**
	0.1nm,0.3s,baz=270,slow=20,SNR=3.6						
FITZ				Sn	**Sn**	**03 24 05.2**	**-6.5**
	0.5nm,0.3s,baz=188,slow=22,SNR=7.6						
WRA	**Warramunga Arr**	**19.34**	**130**	P	**Pn**	**03 23 26.0**	**-1.4**
	1.1nm,0.3s,baz=306,slow=12,SNR=18						
WRA	**Warramunga Arr**	**19.34**	**130**	P	**Pn**	**03 23 26.0**	**-1.4**
WRAB	**Tennant Creek**	**19.34**	**130**	*e*P	**Pn**	**03 23 26.7**	**-0.7**
	4.8nm,0.6s						
ASAR	**Alice Springs**	**21.44**	**139**	P	**P**	**03 23 50.1**	**+0.9**
	5.0nm,0.4s,mb4.2,baz=318,slow=10,SNR=48						
ASAR				pP		03 23 59.0	
	7.3nm,0.7s,baz=319,slow=9.7,SNR=13						
COEN	**Coen**	**24.78**	**106**	*e*P	**P**	**03 24 22.1**	**-1.0**
STKA	**Stephens Creek**	**32.02**	**141**	P	**P**	**03 25 26.4**	**-1.2**
	1.3nm,0.4s,mb4.2,baz=312,slow=12,SNR=2.9						
STKA				pP		03 25 37.2	
	4.6nm,0.8s,baz=294,slow=5.3,SNR=3.8						
STKA	**Stephens Creek**	**32.02**	**141**	P	**P**	**03 25 26.4**	**-1.2**
STKA				pP		03 25 37.2	
SONM	**Songino Array**	**56.52**	**350**	P	**P**	**03 28 43.6**	**+0.3**
	0.3nm,0.4s,mb3.6,baz=184,slow=8.7,SNR=2.4						
KBL	**Kabul**	**63.08**	**315**	*e*P	**P**	**03 29 28.9**	**+0.2**
	4.1nm,0.5s,mb4.8						
MK31	**Makanchi Array**	**63.31**	**333**	*e*P	**P**	**03 29 30.2**	**+0.2**
MKAR	**Makanchi Array**	**63.31**	**333**	P	**P**	**03 29 31.2**	**+1.2**
	1.2nm,0.5s,mb4.3,baz=115,slow=8.3,SNR=14						
MKAR				pP		03 29 40.4	
	1.9nm,0.8s,baz=97,slow=9.9,SNR=6.9						
MKAR	**Makanchi Array**	**63.31**	**333**	P	**P**	**03 29 31.2**	**+1.2**
MKAR				pP		03 29 40.4	
ZALV	**Zalesovo Beam**	**67.88**	**339**	P	**P**	**03 29 59.5**	**+0.1**
	0.8nm,0.5s,mb4.2,baz=124,slow=8.1,SNR=3.7						
BVAR	**Borovoye Array**	**73.16**	**332**	P	**P**	**03 30 31.0**	**-0.6**
	0.4nm,0.6s,mb3.7,baz=125,slow=9.3,SNR=4.3						
ABKAR	**Akbulak array**	**76.46**	**325**	*e*P	**P**	**03 30 51.0**	**+0.1**
	1.7nm,0.8s,mb4.2						
ABKAR				*e*pP		03 31 00.6	
QSPA	**South Pole Qui**	**82.12**	**180**	P	**P**	**03 31 23.5**	**+2.2**
	1.5nm,1.1s,mb4.0,baz=9.5,slow=2.4,SNR=5.9						
CPUP	**Villa Florida**	**145.79**	**186**	PKPbc	PKPbc	03 38 43.0	+1.9
	1.1nm,0.7s,baz=173,slow=3.7,SNR=3.8						

NEIC 13 03:34:12.2, 37.°59S×177.°15E, h5km, ML4.1(WEL)**, After WEL., Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	**White Island**	**0.07**	**27**	P	Pg	03 34 14.3	+0.5
WIZ				S	Sg	03 34 16.1	+1.3
MARZ	**Manawahe**	**0.55**	**223**	P	Pg	03 34 22.8	+0.1
URZ	**Urewera**	**0.67**	**183**	P	Pg	03 34 24.6	-0.5
LIRZ	**Lichensteins R**	**0.73**	**235**	P	Pg	03 34 26.5	+0.2
MKRZ	**Makatiti**	**0.77**	**224**	P	Pg	03 34 27.6	+0.6
MWZ	**Matawai**	**0.80**	**158**	P	Pg	03 34 27.3	-0.3
KARZ	**Kaharoa**	**0.84**	**239**	P	Pg	03 34 27.9	-0.4
OUZ	**Omahuta**	**3.71**	**308**	P	Pn	03 35 08.1	-2.1

TRN ***13*** *03:38:13.8, 19.°37N×64.°32W, h3km*
NEIC ***13*** *03:38:15.8, 19.°56N×64.°10W, h72km, MD3.6(RSPR), After RSPR.*
RSPR 13 03:38:15.8, 19.°56N×64.°10W, h72km±20km, MD3.6/11, MD3.6/11, 16C-6D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**1.24**	**203**	*i*P	Pn	03 38 36.8	-0.7
TBVI	**Tortola**	**1.24**	**203**	*i*P	Pn	03 38 36.8	-0.7
STVI	**Saint Thomas**	**1.45**	**214**	*e*P	Pn	03 38 39.9	-0.4
STVI				*e*S	Sn	03 38 57.7	-0.9
STVI	**Saint Thomas**	**1.45**	**214**	*e*P	Pn	03 38 39.9	-0.4
STVI				*e*S	Sn	03 38 57.7	-0.9
MTP	**Monte Pirata**	**2.00**	**224**	*e*P	Pn	03 38 47.4	-0.2
MTP	**Monte Pirata**	**2.00**	**224**	*e*P	Pn	03 38 47.4	-0.2
CBYP	**Canovanas**	**2.10**	**233**	*e*P	Pn	03 38 47.7	-1.2
CBYP				*e*S	Sn	03 39 13.3	-0.8
CBYP	**Canovanas**	**2.10**	**233**	*e*P	Pn	03 38 47.7	-1.2
CBYP				*e*S	Sn	03 39 13.3	-0.8
HUMP	**Col San Antoni**	**2.18**	**230**	*e*P	Pn	03 38 49.6	-0.4
HUMP	**Col San Antoni**	**2.18**	**230**	*e*P	Pn	03 38 49.6	-0.4
CPD	**Cerro la Pandu**	**2.29**	**229**	*e*P	Pn	03 38 51.0	-0.5
CPD				*e*S	Sn	03 39 18.9	+0.1
CPD	**Cerro la Pandu**	**2.29**	**229**	*e*P	Pn	03 38 51.4	-0.1
CPD				*e*S	Sn	03 39 18.9	+0.1
SJG	**San Juan**	**2.42**	**234**	*e*P	Pn	03 38 53.3	+0.1
SJG	**San Juan**	**2.42**	**234**	*e*P	Pn	03 38 53.4	+0.2
SJG	**San Juan**	**2.42**	**234**	*e*P	Pn	03 38 53.3	+0.1
SJG	**San Juan**	**2.42**	**234**	*e*P	Pn	03 38 53.4	+0.2
CELP	**Cerrillos**	**2.78**	**238**	*i*P	Pn	03 38 57.1	-0.9
CELP	**Cerrillos**	**2.78**	**238**	*i*P	Pn	03 38 57.1	-0.9
AOPR	**Arecibo Observ**	**2.79**	**245**	*e*P	Pn	03 38 58.1	-0.1
AOPR	**Arecibo Observ**	**2.79**	**245**	*e*P	Pn	03 38 58.7	+0.5
ICM	**Isla Caja Muer**	**2.83**	**235**	*e*Pn	Pn	03 38 59.1	+0.3
LRS	**Lares**	**2.89**	**245**	*e*P	Pn	03 38 59.4	-0.2
LRS	**Lares**	**2.89**	**245**	*e*P	Pn	03 38 59.4	-0.2
CRPR	**Cabo Rojo, PR**	**3.25**	**242**	*e*P	Pn	03 39 04.2	-0.2
CRPR				*e*S	Sn	03 39 42.0	0.0
CRPR	**Cabo Rojo, PR**	**3.25**	**242**	*e*P	Pn	03 39 04.2	-0.2
CRPR				*e*S	Sn	03 39 42.0	0.0
SDDR	**Presa de Saban**	**6.82**	**266**	*e*Pn	Pn	03 39 52.7	-0.5
	41nm,0.7s						
SDDR				*e*Sn	Sn	03 41 05.1	-4.3

ISCJB ***13*** *03:44:36.8±0.6, 37.°88N±0.°04×21.°47E±0.°03, h12km±6km, Error ellipse: s-maj=6.1km s-min=4.2km az=179.6*
ATH ***13*** *03:44:37.0, 37.°91N×21.°45E, h25km±5km, MD2.6/6*
CSEM ***13*** *03:44:37.2±0.2, 37.°93N×21.°47E, h30km, MD2.6, Error ellipse: s-maj=4.4km s-min=3.7km az=161.0*
THE ***13*** *03:44:37.3, 37.°91N×21.°47E, h11km±1km, ML2.6/5, Error ellipse: s-maj=1.9km s-min=0.6km az=46.0*
ISC 13 03:44:37.3±0.5, 37.°88N±0.°04×21.°47E±0.°03, h22km±6km, n34, σ0°78/61, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.18**	**359**	*e*PB	**Pb**	**03 44 41.9**	**-0.4**
RLS				*e*SB	**Sb**	**03 44 45.4**	**-0.3**
RLS	**Riolos of Patr**	**0.18**	**359**	*e*Pb	**Pb**	**03 44 41.9**	**-0.4**
RLS				*e*Sb	**Sb**	**03 44 45.4**	**-0.3**
UPR	**University Cam**	**0.47**	**32**	P	**Pb**	**03 44 46.2**	**-0.7**
UPR				S	**Sb**	**03 44 53.0**	**-0.5**
UPR	**University Cam**	**0.47**	**32**	*e*PB	**Pb**	**03 44 47.0**	**+0.1**
UPR				*e*SB	**Sb**	**03 44 54.3**	**+0.8**
UPR	**University Cam**	**0.47**	**32**	P	**Pb**	**03 44 46.2**	**-0.7**
UPR	**University Cam**	**0.47**	**32**	*e*Pb	**Pb**	**03 44 47.0**	**+0.1**
UPR				S	**Sb**	**03 44 53.0**	**-0.5**
UPR				*e*Sb	**Sb**	**03 44 54.3**	**+0.8**
LAKA	**Lakka**	**0.54**	**48**	P	**Pb**	**03 44 47.3**	**-0.7**
LAKA				S	**Sb**	**03 44 55.0**	**-0.3**
LAKA	**Lakka**	**0.54**	**48**	P	**Pb**	**03 44 47.3**	**-0.7**
LAKA				S	**Sb**	**03 44 55.0**	**-0.3**
KFL	**Anninata**	**0.59**	**293**	P	**Pb**	**03 44 48.6**	**-0.3**
EFP	**Efpalio**	**0.64**	**32**	P	**Pb**	**03 44 49.2**	**-0.6**
EFP				S	**Sb**	**03 44 58.0**	**-0.4**
EFP	**Efpalio**	**0.64**	**32**	*e*PN	**Pb**	**03 44 49.5**	**-0.3**
EFP				*e*SN	**Sb**	**03 44 59.3**	**+0.9**
EFP	**Efpalio**	**0.64**	**32**	P	**Pb**	**03 44 49.2**	**-0.6**
EFP	**Efpalio**	**0.64**	**32**	*e*Pn	**Pb**	**03 44 49.5**	**-0.3**
EFP				S	**Sb**	**03 44 58.0**	**-0.4**
EFP				*e*Sn	**Sb**	**03 44 59.3**	**+0.9**
TRIZ	**Trizonia**	**0.68**	**44**	P	**Pb**	**03 44 49.6**	**-0.8**
TRIZ				S	**Sb**	**03 44 59.4**	**+0.1**
TRIZ	**Trizonia**	**0.68**	**44**	P	**Pb**	**03 44 49.6**	**-0.8**
TRIZ				S	**Sb**	**03 44 59.4**	**+0.1**
GUR	**Goura**	**0.69**	**85**	P	**Pb**	**03 44 50.1**	**-0.5**
GUR				S	**Sb**	**03 45 01.0**	**+1.3**
GUR	**Goura**	**0.69**	**85**	*e*PB	**Pb**	**03 44 50.1**	**-0.5**
GUR				*e*SN	**Sn**	**03 45 01.3**	**-0.5**

comp=N,400nm,0.4s
SKR pmax pmax
comp=E,490nm,0.4s
SKR pmax pmax
comp=Z,640nm,0.4s
SKR pmax pmax
comp=N,1µm,2.0s
SKR pmax pmax
comp=Z,2µm,2.0s
SKR smax
comp=N,9µm,0.3s
SKR smax
comp=E,11µm,0.3s
SKR smax
comp=N,9µm,2.0s
SKR smax
comp=E,15µm,2.0s
ALID Alaid 1.33 1 *e*P **Pn 03 48 09.1 +1.1**
ALID *i* S **Sn 03 48 28.5 +3.8**
MIPR Malaya Ipel'ka 2.85 16 *e*P **Pn 03 48 28.8 +0.1**
GRL Gorelyy 3.42 27 *e*P **Pn 03 48 37.1 +0.6**
GRL *i* S **Sn 03 49 16.5 +0.7**
PETK Petropavlovsk- 3.83 20 P **Pn 03 48 41.6 -0.4**
comp=E,15nm,0.3s,baz=185,slow=12,SNR=297
PETK LR LR 03 50 32.3
comp=E,650nm,21.0s,baz=201,slow=44
PETK Petropavlovsk- 3.83 20 PN **Pn 03 48 41.6 -0.4**
PETK pmax pmax
comp=Z,15nm,0.3s
PETK MLR MLR
comp=Z,650nm,21.0s
PET Petropavlovsk 4.01 28 *e*PN **Pn 03 48 43.8 -0.7**
PET *e*S **Sn 03 49 29.4 -0.7**
PET pmax pmax
comp=Z,69nm,0.3s
PET smax
comp=E,1µm,1.5s
PET smax
comp=E,888nm,0.8s
PET MLR MLR
comp=Z,600nm,20.0s
PET Petropavlovsk 4.01 28 *e*P **Pn 03 48 44.4 -0.1**
PET *i* S **Sn 03 49 29.0 -1.1**
PET Petropavlovsk 4.01 28 *e*Pn **Pn 03 48 42.8 -1.7**
PET *e*Sn **Sn 03 49 32.0 +1.9**
INSR Institute 4.03 28 *e*P **Pn 03 48 44.3 -0.5**
INSR *i* S **Sn 03 49 29.8 -0.8**
AVH Avacha 4.24 27 *e*P **Pn 03 48 48.7 +1.0**
NLC Nalytchevo 4.36 32 *e*P **Pn 03 48 46.8 -2.5**
NLC *i* S **Sn 03 49 33.5 -5.2**
GNL Ganaly 4.43 19 *e*P **Pn 03 48 52.0 +1.8**
KII Karymskiy 5.12 27 *e*P **Pn 03 48 59.3 -0.4**
KII *i* S **Sn 03 49 54.9 -2.6**
MKZ Mys Kozlova 6.32 35 *e*P **Pn 03 49 13.2 -2.9**
MKZ *i* S **Sn 03 50 19.6 -7.2**
KMNR Kamenistaya 6.86 23 *e*P **Pn 03 49 25.1 +1.7**
KPT Kopyto 7.04 22 *e*P **Pn 03 49 27.2 +1.2**
KIRR Kirishev 7.06 23 *e*P **Pn 03 49 27.2 +1.0**
BZMR Bezymyannaya 7.08 23 *e*P **Pn 03 49 28.0 +1.5**
ZLN Zelenaya 7.24 24 *e*P **Pn 03 49 30.5 +1.9**
SRDR Sredinnyy 7.25 19 *e*P **Pn 03 49 30.2 +1.4**
CIRR Tsirk 7.31 24 P **Pn 03 49 30.8 +1.2**
BDR Baidarnaya 7.83 24 P **Pn 03 49 37.5 +0.8**
SRKR Sorokina 7.90 23 *e*P **Pn 03 49 37.7 +0.1**
SMKR Semkarok 7.91 25 *e*P **Pn 03 49 38.5 +0.6**
KBTR Krutoberegovo 8.01 31 *e*P **Pn 03 49 37.3 -1.9**
KBTR *i* S **Sn 03 51 02.9 -5.3**
BKI Bering 8.55 44 *e*P **Pn 03 49 43.0 -3.6**
BKI *i* S **Sn 03 51 09.4 -12**
YSS Yuzh-Sakhalins 8.89 258 *e*PN **Pn 03 49 57.0 +5.7**
YSS Yuzh-Sakhalins 8.89 258 *e*Pn **Pn 03 49 49.9 -1.4**
ASAJ Asahikawa 10.37 243 P **Pn 03 50 14.7 +3.1**
comp=Z,11nm,0.3s,baz=78,slow=16,SNR=61
ASAJ LR LR 03 53 44.2
comp=Z,340nm,21.6s,baz=167,slow=35
ASAJ Asahikawa 10.37 243 PN **Pn 03 50 14.7 +3.2**
ASAJ pmax pmax
comp=Z,11nm,0.3s
ASAJ MLR MLR
comp=Z,340nm,21.6s
ERM Erimo 11.43 234 *d i* PN **Pn 03 50 25.2 -0.8**
ERM Erimo 11.43 234 *e*Pn **Pn 03 50 25.5 -0.5**
FX1 Attu Island--F 11.57 66 P **Pn 03 50 22.8 -5.0**
comp=Z,2.8nm,0.3s,baz=79,slow=16,SNR=14
FX1 S **Sn 03 52 20.6 -15**
comp=Z,15nm,0.3s,baz=51,slow=22,SNR=9.0
FX1 LR LR 03 54 38.7
comp=Z,149nm,18.6s,baz=95,slow=36
HABR Khabarovsk 13.47 273 *e*PN **Pn 03 50 50.3 -3.4**
HABR pmax pmax
comp=E,58nm,2.0s
HABR pmax pmax
comp=N,27nm,2.3s
HABR pmax pmax
comp=Z,26nm,1.6s
HABR MLR MLR
comp=Z,228nm,16.0s
SEY Seymchan 13.54 354 ⇓*e*P **Pn 03 50 56.6 +2.1**
KLR Kul'dur 15.46 278 *e*P **Pn 03 51 20.2 +0.3**
MAJO Matsushiro 18.07 231 *e*P **Pn 03 51 51.1 -1.3**
MJAR Matsushiro Arr 18.07 231 P **Pn 03 51 50.6 -1.8**
comp=Z,1.4nm,0.3s,baz=19,slow=14,SNR=13
MJAR LR LR 03 59 34.0
comp=Z,130nm,19.3s,baz=45,slow=39
MJAR Matsushiro Arr 18.07 231 P **Pn 03 51 50.6 -1.8**
MJAR pmax pmax
comp=Z,1.0nm,0.3s
MJAR MLR MLR
comp=Z,130nm,19.3s
MDJ Mudanjiang 18.28 264 P **Pn 03 51 56.3 +1.4**
MDJ pP pP 03 52 06.1 -0.9
MDJ sP sP 03 52 11.5 -2.9
MDJ S **S 03 55 15.6 -3.7**
MDJ PcP PcP 03 56 27.3 +3.3
MDJ pmax pmax
comp=Z,9.0nm,1.3s
MDJ pmax pmax
comp=Z,59nm,4.7s
MDJ LR LR
comp=N,190nm,22.2s
MDJ LR LR
comp=E,160nm,22.2s
MDJ LR LR
comp=Z,220nm,23.4s
BILL Bilibino 19.32 12 ⇑*i*P **Pn 03 52 04.4 -2.7**
BILL *e*S **S 03 55 43.3 +2.5**
BILL pmax pmax
comp=Z,6.0nm,0.7s
BILL MLR MLR
comp=Z,300nm,18.0s
BILL Bilibino 19.32 12 *e*P **Pn 03 52 04.2 -3.0**
comp=Z,6.4nm,0.4s
CN2 Changchun 21.32 266 *e*P **P 03 52 27.8 +0.3**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.3
KSRS Korea Array 23.23 249 P **P 03 52 48.4 +0.7**
comp=Z,2.1nm,0.5s,mb3.9,baz=54,slow=10,SNR=11
KSRS LR LR 04 01 18.5
comp=Z,131nm,19.8s,MS3.4,baz=252,slow=35
KSRS Korea Array 23.23 249 P **P 03 52 48.4 +0.7**
KSRS pmax pmax
comp=Z,2.0nm,0.5s,mb3.8
KSRS MLR MLR
comp=Z,131nm,19.8s,MS3.4
CBIJ Chichi jima 24.65 210 LR LR 04 01 00.3
comp=Z,75nm,21.1s,MS3.2,baz=132,slow=32
TIXI Tiksi 25.30 341 *e*P **P 03 53 04.3 -1.9**
TIXI pmax pmax
comp=Z,31nm,2.0s,mb4.5
TIXI Tiksi 25.30 341 *e*P **P 03 53 04.3 -1.9**
comp=Z,31nm,2.0s,mb4.5
BJI Beijing 29.19 266 P **P 03 53 38.9 -2.5**
BJI pmax pmax
comp=Z,7.0nm,0.7s,mb4.5
BJI pmax pmax
comp=Z,100nm,5.1s
BJI LR LR
comp=N,190nm,21.4s,MS3.7
BJI LR LR
comp=E,97nm,23.8s,MS3.7
BJI LR LR
comp=Z,87nm,28.6s,MS3.2
BPAW Bear Paw Mtn. 31.60 42 *e*P **P 03 54 01.5 -0.8**
comp=Z,2.3nm,0.9s,mb4.0
HHC Hu-ho-hao-te 31.77 271 *e*P **P 03 54 04.8 +0.7**
HHC pP pP 03 54 16.8 -1.8
HHC sP sP 03 54 22.1 -3.4
HHC PP PP 03 55 10.0 -6.6
HHC PcP PcP 03 56 57.5 +3.4
HHC S **S 03 59 09.9 0.0**
HHC ScP ScP 04 00 35.0 +2.8
HHC PcS PcS 04 00 39.8 +1.2
HHC ScS ScS 04 04 31.0 +0.6
HHC pmax pmax
comp=Z,7.0nm,0.7s,mb4.6
HHC pmax pmax
comp=Z,120nm,5.2s
HHC LR LR
comp=N,180nm,16.7s,MS3.9
HHC LR LR
comp=E,120nm,17.8s,MS3.9
HHC LR LR
comp=Z,170nm,22.6s,MS3.7
SONM Songino Array 32.01 286 LR LR 04 08 36.7
comp=Z,124nm,18.1s,MS3.6,baz=82,slow=39
COLD Coldfoot 32.13 36 *e*P **P 03 54 06.0 -0.9**
comp=Z,2.1nm,0.5s,mb4.2
MCK McKinley 32.50 43 *e*P **P 03 54 10.0 -0.3**
MCK pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
MCK McKinley 32.50 43 *e*P **P 03 54 10.0 -0.3**
comp=Z,4.8nm,0.9s,mb4.4
COLA College 32.97 41 *e*P **P 03 54 14.0 -0.3**
COLA pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
COLA College 32.97 41 *e*P **P 03 54 14.0 -0.3**
comp=Z,5.4nm,0.6s,mb4.7
EGAK Eagle 35.83 41 *e*P **P 03 54 37.7 -1.4**
comp=Z,7.8nm,1.0s,mb4.6
WHN Wuhan 36.22 254 ⇓P **P 03 54 42.6 -0.1**
INK Inuvik 38.44 34 P **P 03 55 01.5 +0.4**
comp=Z,2.2nm,0.5s,mb4.1,baz=294,slow=7.6,SNR=13
INK Inuvik 38.44 34 P **P 03 55 01.5 +0.4**
INK pmax pmax
comp=Z,2.0nm,0.5s
INK Inuvik 38.44 34 *e*P **P 03 55 01.3 +0.1**
comp=Z,8.1nm,1.3s,mb4.3
LZH Lanzhou 39.45 270 *e*P **P 03 55 10.5 +0.6**
LZH pP pP 03 55 20.5 -4.2
LZH sP sP 03 55 28.5 -3.0
LZH pmax pmax
comp=Z,13nm,1.0s,mb4.6
ZALV Zalesovo Beam 42.33 304 PcP PcP 03 57 26.5 +0.7
comp=Z,1.2nm,0.4s,baz=29,slow=3.4,SNR=5.2
CD2 Chengdu 42.74 264 *e*P **P 03 55 37.1 +0.1**
CD2 pP pP 03 55 49.4 -2.5
CD2 sP sP 03 55 54.4 -4.3
CD2 pmax pmax
comp=Z,20nm,0.6s,mb5.0
CD2 pmax pmax
comp=Z,120nm,8.2s
GYA Guiyang 43.90 257 P **P 03 55 46.3 -0.1**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
WMQ Urumqi 45.45 290 *e*P **P 03 56 00.0 +1.5**
MK31 Makanchi Array 47.12 296 *e*P **P 03 56 11.6 0.0**
MKAR Makanchi Array 47.12 296 P **P 03 56 10.7 -0.9**
comp=Z,0.7nm,0.7s,mb3.7,baz=50,slow=10,SNR=4.2
MKAR PcP PcP 03 57 42.3 -0.2
comp=Z,0.3nm,0.4s,baz=50,slow=11,SNR=4.0
MKAR LR LR 04 17 15.1
comp=Z,220nm,19.6s,MS4.1,baz=356,slow=38
MKAR Makanchi Array 47.12 296 P **P 03 56 10.7 -0.9**
MKAR 03 57 42.3
MKAR pmax pmax
comp=Z,1.0nm,0.7s
MKAR MLR MLR
comp=Z,220nm,19.6s
KURK Kurchatov 47.19 302 P **P 03 56 12.2 +0.1**
comp=Z,1.1nm,0.4s,mb4.1,baz=66,slow=8.0,SNR=13
KURK pP pP 03 56 24.1 -3.1
comp=Z,0.9nm,0.5s,baz=67,slow=8.1,SNR=4.4
KURK PcP PcP 03 57 43.2 +0.6
comp=Z,0.8nm,0.5s,baz=63,slow=3.7,SNR=5.5
KURK Kurchatov 47.19 302 ⇑*e*P **P 03 56 11.8 -0.3**
KURK pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
KURK MLR MLR
comp=Z,83nm,16.0s,MS3.8
KURK Kurchatov 47.19 302 *e*P **P 03 56 11.6 -0.5**
comp=Z,3.7nm,1.1s,mb4.2
KMI Kunming 47.34 259 P **P 03 56 14.1 +0.5**
KMI pP pP 03 56 27.3 -1.4
KMI sP sP 03 56 32.4 -3.0
KMI PP PP 03 58 05.0 0.0
KMI S **S 04 03 03.0 0.0**
KMI sS sS 04 03 25.3 -3.3
KMI SS SS 04 06 23.4 -7.5
KMI pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
KMI pmax pmax
comp=Z,60nm,4.3s
KMI LR LR
comp=N,100nm,14.9s,MS4.0
KMI LR LR
comp=E,71nm,12.5s,MS4.0
KMI LR LR
comp=Z,100nm,16.7s,MS3.9
RES Resolute Bay 47.67 20 P **P 03 56 15.6 0.0**
comp=Z,1.2nm,0.4s,mb4.3,baz=316,slow=4.4,SNR=24
RES Resolute Bay 47.67 20 P **P 03 56 15.6 +0.1**
RES pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
RES Resolute Bay 47.67 20 *e*P **P 03 56 15.1 -0.4**
comp=Z,1.3nm,0.4s,mb4.3
YKA Yellowknife Ar 47.74 39 P **P 03 56 15.6 -0.5**
comp=Z,1.5nm,0.9s,mb4.0,baz=298,slow=7.4,SNR=13
YKA pP pP 03 56 27.2 -4.1
comp=Z,2.3nm,1.0s,baz=299,slow=7.2,SNR=8.6
YKA Yellowknife Ar 47.74 39 P **P 03 56 15.7 -0.5**
YKA pP pP 03 56 27.2 -4.1
SPITS Spitsbergen Ar 50.15 350 LR LR 04 19 33.6
comp=Z,54nm,18.9s,MS3.6,baz=335,slow=38
BVAR Borovoye Array 50.35 309 P **P 03 56 36.6 +0.3**
comp=Z,1.7nm,0.4s,mb4.5,baz=54,slow=7.7,SNR=13
BVAR PcP PcP 03 57 53.9 -0.2
comp=Z,0.9nm,0.4s,baz=92,slow=3.6,SNR=4.1
BVAR LR LR 04 19 45.6
comp=Z,96nm,19.6s,MS3.8,baz=326,slow=38
BVAR Borovoye Array 50.35 309 P **P 03 56 36.6 +0.3**
BVAR 03 57 53.9
BVAR pmax pmax
comp=Z,2.0nm,0.4s
BVAR MLR MLR
comp=Z,96nm,19.6s
A07A Ashnola River, 52.02 56 ⇓P **P 03 56 48.1 -0.8**
baz=52
B08A Colville Reser 52.99 56 ⇑P **P 03 56 55.5 -0.5**
baz=53
EDM Edmonton 53.25 49 *e*P **P 03 56 57.6 -0.2**
EDM *e*PP pP 03 57 09.9 -3.3
ARU Arti 54.05 317 *d i*P **P 03 57 03.2 -0.4**
ARU S **S 04 04 36.1 +0.9**
ARU pmax pmax
comp=Z,16nm,1.7s,mb4.7
ARU Arti 54.05 317 *e*P **P 03 57 02.9 -0.8**
comp=Z,13nm,0.3s,mb5.3
NEW Newport 54.24 55 *e*P **P 03 57 04.9 -0.2**
NEW pmax pmax
comp=Z,3.0nm,0.8s
NEW Newport 54.24 55 *e*P **P 03 57 04.9 -0.3**
comp=Z,2.8nm,0.8s,mb4.2
CHTO Chiang Mai 54.32 257 *e*P **P 03 57 07.8 +1.7**
CHTO pmax pmax
comp=Z,39nm,2.0s,mb5.0
CHTO Chiang Mai 54.32 257 *e*P **P 03 57 07.8 +1.7**
comp=Z,39nm,2.0s,mb5.0
CMAR Chiang Mai Arr 54.59 256 P **P 03 57 09.2 +1.2**
comp=Z,3.4nm,0.6s,mb4.5,baz=30,slow=7.6,SNR=11
CMAR LR LR 04 19 21.3
comp=Z,59nm,19.4s,MS3.7,baz=21,slow=35
K05A Summer Lake 55.50 63 ⇓P **P 03 57 14.6 +0.3**
baz=55
B13A Whitefish 55.58 54 ⇓P **P 03 57 14.9 +0.1**
baz=55
BSMT Bassoo Peak 55.73 55 *e*P **P 03 57 15.7 -0.2**
ARCES ARCESS Array B 55.74 341 P **P 03 57 14.4 -1.2**
comp=Z,2.6nm,0.9s,mb4.3,baz=44,slow=7.2,SNR=7.1
ARCES LR LR 04 24 42.3
comp=Z,71nm,19.8s,MS3.8,baz=251,slow=40
ARCES ARCESS Array B 55.74 341 P **P 03 57 14.5 -1.2**
ARCES pmax pmax
comp=Z,3.0nm,0.9s
ARCES MLR MLR
comp=Z,71nm,19.8s
C13A Hot Springs 55.95 55 ⇓P **P 03 57 17.6 +0.1**
baz=56
G10A Bishop Farm, J 56.05 58 ⇑P **P 03 57 18.5 +0.3**
baz=56
A15A Johnson Ranch, 56.12 52 ⇓P **P 03 57 17.6 -1.1**
baz=56
E12A Beaver Dam Sad 56.20 56 ⇓P **P 03 57 19.2 -0.1**
baz=56
B14A Marquette Ranc 56.22 53 ⇑P **P 03 57 19.3 -0.1**
baz=56
BMO Blue Mountains 56.22 59 *e*P **P 03 57 19.8 +0.3**
comp=Z,6.4nm,1.5s,mb4.4
C14A Swan Lake 56.34 54 ⇓P **P 03 57 20.4 +0.2**
baz=56
J08A Circle Bar Ran 56.49 61 ⇓P **P 03 57 22.0 +0.6**
baz=56
I09A Lost Marbles R 56.52 60 ⇑P **P 03 57 21.7 +0.1**
baz=56
B15A Bradely Ranch, 56.62 53 ⇓P **P 03 57 21.8 -0.5**
baz=56
F12A Elk City 56.78 57 ⇓P **P 03 57 23.5 0.0**
baz=57
SLMT Seeley Lake 56.80 55 *e*P **P 03 57 23.1 -0.4**
comp=Z,2.2nm,0.7s,mb4.3
MSO Missoula 56.82 55 *e*P **P 03 57 23.7 0.0**
comp=Z,3.5nm,1.1s,mb4.3
D14A Greenough 56.89 55 ⇓P **P 03 57 23.9 -0.3**
baz=57,SNR=6.5
J09A Fry Pan Ranch, 56.91 60 ⇑P **P 03 57 24.8 +0.5**
baz=57,SNR=5.8
C15A Salmond Ranch, 56.93 54 ⇓P **P 03 57 24.5 +0.1**
baz=57,SNR=7.1
E13A Victor 56.93 56 ⇓P **P 03 57 24.2 -0.3**
baz=57
WVOR Wild Horse Val 56.98 62 *e*P **P 03 57 24.9 0.0**
WVOR pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
WVOR Wild Horse Val 56.98 62 *e*P **P 03 57 24.9 0.0**
comp=Z,3.6nm,1.0s,mb4.4
H11A Donnelly 57.03 58 ⇓P **P 03 57 25.0 -0.2**
baz=57,SNR=7.1
G12A Big Creek, Yel 57.14 57 ⇑P **P 03 57 25.5 -0.5**
baz=57,SNR=6.0
E14A Clinton 57.32 55 ⇑P **P 03 57 27.2 0.0**
baz=57
B17A L&G Farms, Che 57.54 52 ⇓P **P 03 57 28.4 -0.3**
baz=57
FFC Flin Flon 57.58 42 *i* P **P 03 57 30.3 +1.4**
FFC Flin Flon 57.58 42 *e*P **P 03 57 29.0 +0.1**
comp=Z,3.5nm,1.0s,mb4.3
G13A Cobalt 57.76 57 ⇓P **P 03 57 29.7 -0.6**
baz=58,SNR=5.0
E15A Deer Lodge 57.77 55 ⇓P **P 03 57 30.1 -0.3**
baz=58
K10A MacKenzie Ranc 57.77 60 ⇓P **P 03 57 30.2 -0.3**
baz=58
SUMG Summit 57.80 5 *e*P **P 03 57 30.2 0.0**
comp=Z,11nm,1.1s,mb4.8
ABKAR Akbulak array 57.88 310 *e*P **P 03 57 30.9 -0.2**
comp=Z,1.7nm,0.4s,mb4.4
MFID Camas Ranch 57.95 59 ⇓P **P 03 57 31.8 +0.1**
baz=58
D16A Dana Ranch, Ca 57.96 54 ⇓P **P 03 57 31.4 -0.3**
baz=58
C17A Wharram Farm, 57.98 53 ⇓P **P 03 57 31.7 -0.2**
baz=58
B18A Beardsley Farm 58.00 52 ⇓P **P 03 57 31.5 -0.5**
baz=58
AKTO Aktyubinsk 58.06 312 LR LR 04 23 34.6
comp=Z,35nm,19.1s,MS3.5,baz=251,slow=37
H13A Challis 58.09 57 ⇓P **P 03 57 32.2 -0.5**
baz=58,SNR=5.5
I12A Atlanta 58.10 59 ⇓P **P 03 57 32.5 -0.2**
baz=58
F15A Butte 58.22 55 ⇓P **P 03 57 33.5 0.0**
baz=58
K11A Parker Ranch, 58.25 60 ⇓P **P 03 57 33.8 0.0**
baz=58
D17A Six Diamond Ra 58.33 53 ⇓P **P 03 57 34.2 -0.1**
baz=58
L10A Juniper Basin 58.45 61 ⇓P **P 03 57 35.3 +0.1**
baz=58
J12A Stokes Ranch, 58.47 59 ⇑P **P 03 57 35.6 +0.3**
baz=58
H14A Leadore 58.54 57 ⇑P **P 03 57 36.2 +0.4**
baz=58
I13A Wildhorse Cree 58.58 58 ⇓P **P 03 57 36.1 0.0**
baz=58,SNR=8.2
HLID Hailey 58.65 58 ⇑P **P 03 57 36.6 +0.1**
baz=58,SNR=5.6
HLID Hailey 58.65 58 *e*P **P 03 57 37.0 +0.4**
comp=Z,3.5nm,1.1s,mb4.3
E17A Martinsdale 58.69 54 ⇑P **P 03 57 37.0 +0.2**
baz=58
L11A Cat Creek Ranc 58.80 60 ⇑P **P 03 57 38.2 +0.6**
baz=59
BOZ Bozeman (W) 58.81 55 ⇑P **P 03 57 38.0 +0.3**
baz=59,SNR=6.8
BOZ Bozeman (W) 58.81 55 *e*P **P 03 57 37.5 -0.2**
BOZ pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
BOZ Bozeman (W) 58.81 55 *e*P **P 03 57 37.5 -0.2**
comp=Z,3.7nm,0.9s,mb4.4
HNR Honiara 58.85 175 LR LR 04 20 05.9
comp=Z,58nm,18.3s,MS3.7,baz=114,slow=33
J13A Cove Ranch, Pi 58.88 58 ⇑P **P 03 57 38.5 +0.3**
baz=59
I14A Mackay 58.94 57 ⇓P **P 03 57 39.1 +0.5**
baz=59,SNR=5.9
K12A Draper Farm, C 58.97 59 ⇓P **P 03 57 38.9 +0.1**
baz=59
G16A Moss Hill, Enn 58.99 55 ⇓P **P 03 57 39.0 +0.1**
baz=59,SNR=6.1
E18A Harlowton 59.12 53 ⇑P **P 03 57 40.1 +0.3**
baz=59
F17A Fitzpatrick Pl 59.16 54 ⇓P **P 03 57 40.1 +0.1**
baz=59
L12A House Creek Ra 59.23 60 ⇑P **P 03 57 41.1 +0.5**
baz=59
J14A Carey 59.30 58 ⇑P **P 03 57 41.7 +0.7**
baz=59
G17A Pierce Place, 59.50 55 ⇓P **P 03 57 42.9 +0.5**
baz=59
JOF Joensuu 59.54 334 *e*P **P 03 57 40.1 -2.3**
JOF pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
JOF Joensuu 59.54 334 *ep* **P 03 57 40.1 -2.3**
comp=Z,0.5nm,0.4s,mb3.9
H16A Russell Place, 59.63 56 ⇑P **P 03 57 43.8 +0.5**
baz=59,SNR=6.8
F18A Big Timber 59.66 54 ⇓P **P 03 57 43.8 +0.3**
baz=59
NVAR Mina Array Bea 59.76 65 P **P 03 57 44.3 0.0**
comp=Z,0.6nm,0.4s,mb4.0,baz=284,slow=7.2,SNR=7.9
M12A Wells 59.76 61 ⇓P **P 03 57 44.8 +0.5**
baz=60
K14A Jones Ranch, D 60.00 59 ⇑P **P 03 57 46.1 +0.2**
baz=60
I16A Newdale 60.05 56 ⇓P **P 03 57 46.6 +0.4**
baz=60
G18A Lazy EL Ranch, 60.12 54 ⇓P **P 03 57 46.8 +0.1**
baz=60
M13A Montello 60.22 60 ⇑P **P 03 57 47.7 +0.2**
baz=60
IMW Indian Meadow 60.33 56 *e*P **P 03 57 49.5 +1.3**
comp=Z,12nm,1.5s,mb4.7
RLMT Red Lodge 60.41 54 ⇑P **P 03 57 49.1 +0.5**
baz=60,SNR=5.9
RLMT Red Lodge 60.41 54 *e*P **P 03 57 49.4 +0.7**
comp=Z,12nm,1.4s,mb4.7
M14A Sheep Mountain 60.59 60 ⇑P **P 03 57 50.4 +0.5**
baz=60
TPAW Teton Pass 60.59 56 *e*P **P 03 57 51.3 +1.4**
comp=Z,9.3nm,1.3s,mb4.8
O12A Currie 60.62 61 ⇓P **P 03 57 50.4 +0.3**
baz=60
K16A Soda Springs 60.68 57 ⇑P **P 03 57 50.7 +0.2**
baz=60
LOHW Long Hollow 60.70 56 *e*P **P 03 57 51.4 +0.8**
comp=Z,1.4nm,0.8s,mb4.1
REDW Red Top Meadow 60.73 57 *e*P **P 03 57 52.2 +1.3**
comp=Z,14nm,1.5s,mb4.9
S10A Tonopah Range, 61.10 65 ⇓P **P 03 57 53.5 0.0**
baz=61

N14A **Grayback Hills** 61.11 60 ⇓P P 03 57 53.1 -0.4
baz=61
M15A **Larsen Ranch,** 61.12 59 ⇓P P 03 57 53.5 0.0
baz=61
J18A **Kendall Valley** 61.28 56 ⇓P P 03 57 54.7 0.0
baz=61
L16A **Fish Haven** 61.32 58 ⇓P P 03 57 54.9 +0.1
baz=61
R11A **Troy Canyon, C** 61.41 64 ⇑P P 03 57 55.0 -0.5
baz=61,SNR=5.5
N15A **Stansbury Isla** 61.46 60 ⇑P P 03 57 55.9 0.0
baz=61
L17A **Cokeville** 61.57 58 ⇓P P 03 57 56.6 +0.1
baz=61
P13A **Bates Ranch, G** 61.58 62 ⇓P P 03 57 56.7 0.0
baz=61
K18A **Toltan Ranch,** 61.66 57 ⇓P P 03 57 57.5 +0.3
baz=61
M16A **Huntsville** 61.68 59 ⇓P P 03 57 57.3 0.0
baz=61
DUG **Dugway** 61.77 60 ⇓P P 03 57 57.9 0.0
baz=62,SNR=5.0
DUG **Dugway** 61.77 60 eP P 03 57 58.3 +0.4
DUG pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
DUG **Dugway** 61.77 60 eP P 03 57 58.2 +0.3
comp=Z,3.4nm,0.8s,mb4.5
S11A **Rachel** 61.79 64 ⇑P P 03 57 58.5 +0.4
baz=62
MPMC **Manual Prospec** 61.82 67 ⇑P P 03 57 58.3 0.0
baz=62
BW06 **Boulder Array** 61.84 56 ⇓P P 03 57 58.4 0.0
baz=62,SNR=8.9
BW06 **Boulder Array** 61.84 56 eP P 03 57 58.5 +0.2
comp=Z,5.5nm,0.9s,mb4.7
PDAR **Pinedale Array** 61.84 56 P P 03 57 58.6 +0.3
comp=Z,4.2nm,0.9s,mb4.6,baz=336,slow=3.3,SNR=29
PDAR pP pP 03 58 12.8 -1.2
comp=Z,1.1nm,0.8s,baz=11,slow=1.5,SNR=4.2
Q13A **Wheeler Ranch,** 61.91 62 ⇑P P 03 57 58.8 -0.1
baz=62,SNR=5.3
FURC **Furnace Creek,** 61.92 66 ⇓P P 03 57 59.1 0.0
baz=62
R12A **Pony Springs,** 61.99 63 ⇓P P 03 57 59.4 0.0
baz=62
P14A **Drum Mountains** 62.03 61 ⇑P P 03 58 00.1 +0.4
baz=62
LRMC **Laurel Mountai** 62.10 67 ⇑P P 03 57 59.8 -0.4
baz=62
L18A **Fontenelle, Gr** 62.15 57 ⇓P P 03 58 00.6 +0.2
baz=62
K19A **Absolon Red Bu** 62.18 56 ⇓P P 03 58 00.7 0.0
baz=62
FINES **FINESS Array B** 62.19 335 P P 03 58 00.1 -0.4
comp=Z,0.9nm,0.4s,mb4.3,baz=38,slow=7.8,SNR=9.5
FINES LR LR 04 28 12.1
comp=Z,117nm,18.2s,MS4.1,baz=135,slow=39
FINES **FINESS Array B** 62.19 335 P P 03 58 00.1 -0.3
FINES pmax pmax
comp=Z,1.0nm,0.4s
FINES MLR MLR
comp=Z,117nm,18.2s
U10A **Ash Meadows, A** 62.27 66 ⇓P P 03 58 02.0 +0.7
baz=62
Q14A **Sevier Lake (B** 62.31 62 ⇑P P 03 58 01.7 +0.1
baz=62,SNR=6.2
EDW2 **Edwards Air Fo** 62.32 68 ⇑P P 03 58 01.5 -0.2
baz=62
T11A **Corn Creek, Al** 62.37 64 ⇑P P 03 58 01.8 -0.2
baz=62,SNR=5.5
M18A **Lyman** 62.47 58 ⇓P P 03 58 02.8 +0.2
baz=62
K20A **Yellowstone Ra** 62.57 56 ⇓P P 03 58 02.8 -0.5
baz=62
O17A **Robinson Place** 62.93 59 ⇓P P 03 58 05.3 -0.4
baz=63
S13A **Holt Ranch, En** 62.93 63 ⇑P P 03 58 05.9 +0.1
baz=63
L20A **Wamsutter** 63.01 56 ⇑P P 03 58 06.3 +0.1
baz=63
T13A **Saint George** 63.29 64 ⇑P P 03 58 08.6 +0.5
baz=63
O18A **Roosevelt** 63.29 59 ⇓P P 03 58 08.7 +0.6
baz=63
HEC **Hector,Ludlow** 63.35 67 ⇓P P 03 58 07.9 -0.7
baz=63
ULM **Lac du Bonnet** 63.37 43 LR LR 04 28 40.0
comp=Z,53nm,22.0s,MS3.7,baz=28,slow=39
ULM **Lac du Bonnet** 63.37 43 eP P 03 58 08.0 -0.5
comp=Z,2.0nm,0.6s,mb4.4
P17A **Butcher Ranch,** 63.43 60 ⇑P P 03 58 08.9 -0.1
baz=63
M20A **Sweetwater, Wa** 63.45 57 ⇓P P 03 58 09.2 +0.1
baz=63
Q16A **Castle Valley** 63.56 60 ⇓P P 03 58 10.2 +0.3
baz=63
L21A **Rawlins** 63.57 56 ⇑P P 03 58 09.8 -0.1
baz=63
P18A **Preston Nutter** 63.60 59 ⇑P P 03 58 09.4 -0.7
baz=63
V12A **Nelson** 63.62 65 ⇓P P 03 58 10.4 +0.1
baz=63
U13A **Pakoon Wash** 63.67 64 ⇑P P 03 58 10.5 -0.1
baz=64,SNR=6.0
O19A **Miners Draw (B** 63.76 58 ⇑P P 03 58 11.3 +0.1
baz=64
SRU **San Rafael** 63.80 60 ⇑P P 03 58 11.3 -0.1
baz=64,SNR=7.8
SRU **San Rafael** 63.80 60 eP P 03 58 11.9 +0.5
SRU pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
SRU **San Rafael** 63.80 60 eP P 03 58 11.9 +0.5
comp=Z,9.9nm,1.1s,mb4.8
M21A **Separation Pea** 63.82 56 ⇓P P 03 58 11.5 -0.1
baz=64
RSSD **Black Hills** 63.82 52 eP P 03 58 11.5 0.0
RSSD pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
RSSD **Black Hills** 63.82 52 eP P 03 58 11.5 0.0
comp=Z,6.2nm,0.7s,mb4.8
R16A **Teasdale** 63.82 61 ⇓P P 03 58 11.9 +0.3
baz=64
N20A **Spence Gulch,** 63.86 57 ⇑P P 03 58 12.1 +0.2
baz=64,SNR=5.7
L22A **Ellis Ranch, M** 64.02 55 ⇑P P 03 58 13.2 +0.3
baz=64
Q18A **Rafter H Ranch** 64.02 60 ⇑P P 03 58 12.9 0.0
baz=64
V13A **Grand Canyon W** 64.04 65 ⇓P P 03 58 13.2 0.0
baz=64,SNR=6.1
U14A **Mt Trumbull** 64.12 64 ⇑P P 03 58 13.8 +0.1
baz=64,SNR=5.1
R17A **Hanksville Air** 64.17 61 ⇓P P 03 58 13.4 -0.4
baz=64,SNR=5.2
N21A **Black Mountain** 64.32 57 ⇓P P 03 58 14.7 -0.2
baz=64
O20A **White River Ci** 64.36 58 ⇓P P 03 58 15.0 -0.1
baz=64
IRM **Iron Mountain** 64.52 67 ⇓P P 03 58 15.8 -0.5
baz=64
Q19A **Hogan Spring (** 64.61 59 ⇑P P 03 58 16.2 -0.6
baz=64,SNR=8.5
U15A **North Rim** 64.64 63 ⇓P P 03 58 17.4 +0.4
baz=64
R18A **Canyonlands Na** 64.65 60 ⇑P P 03 58 16.4 -0.7
baz=64,SNR=6.7
S17A **Black Ridge (B** 64.66 61 ⇓P P 03 58 17.1 0.0
baz=64
V14A **Boquillas Ranc** 64.71 64 ⇓P P 03 58 17.5 0.0
baz=64,SNR=5.7
N22A **Wattenberg Ran** 64.87 56 ⇑P P 03 58 18.8 +0.3
baz=65
X13A **Yucca** 65.00 66 ⇓P P 03 58 19.0 -0.4
baz=65
W14A **Seligman** 65.02 65 ⇓P P 03 58 19.1 -0.3
baz=65,SNR=5.3
R19A **Curley Farm, L** 65.08 60 ⇓P P 03 58 19.5 -0.3
baz=65
S18A **Hurst Farm, Bl** 65.08 61 ⇑P P 03 58 19.5 -0.3
baz=65,SNR=6.4
V15A **Kaibab Nationa** 65.13 64 ⇑P P 03 58 20.6 +0.4
baz=65
Q20A **Ridgley Place,** 65.15 59 ⇑P P 03 58 20.2 -0.1
baz=65
PV04 **Paradox Valley** 65.20 59 eP P 03 58 21.5 +0.9
S19A **Harvey Farm, M** 65.53 60 ⇓P P 03 58 22.5 -0.2
baz=65
T18A **Mexican Hat** 65.53 61 ⇓P P 03 58 22.4 -0.4
baz=65
Q21A **Lamborn Mesa,** 65.64 58 ⇑P P 03 58 23.4 0.0
baz=65,SNR=6.1
R20A **Redvale** 65.64 59 ⇑P P 03 58 23.5 0.0
baz=65
X14A **Yava** 65.65 65 ⇓P P 03 58 24.0 +0.5
baz=65
SMCO **Snowmass** 65.73 58 eP P 03 58 24.0 0.0
comp=Z,6.6nm,0.8s,mb4.7
WUAZ **Wupatki** 65.80 63 ⇑P P 03 58 25.0 +0.4
baz=66
Y14A **Wickenburg** 65.95 66 ⇑P P 03 58 25.2 -0.3
baz=66
R21A **Cimarron** 65.98 59 ⇓P P 03 58 25.9 +0.3
baz=66,SNR=5.1
Q22A **Crested Butte,** 65.99 58 ⇑P P 03 58 25.9 +0.3
baz=66
W16A **Flagstaff** 66.01 64 ⇑P P 03 58 26.0 +0.2
baz=66
X15A **Humboldt** 66.02 65 ⇑P P 03 58 25.9 -0.1
baz=66,SNR=5.7
ISCO **Idaho Springs** 66.03 56 eP P 03 58 26.6 +0.7
ISCO pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
ISCO **Idaho Springs** 66.03 56 eP P 03 58 26.6 +0.7
comp=Z,7.3nm,1.0s,mb4.7
U18A **Rough Rock, Ch** 66.04 62 ⇑P P 03 58 26.3 +0.2
baz=66
V17A **Tonalea, Kykot** 66.07 63 ⇓P P 03 58 26.4 +0.1
baz=66,SNR=15
Z13A **Yuma Proving G** 66.08 67 ⇑P P 03 58 26.2 -0.1
baz=66
NB2 **NORSAR Subarra** 66.09 342 P P 03 58 24.7 -1.3
comp=Z,0.6nm,0.4s,mb4.0,baz=30,slow=6.5
NOA **NORSAR Array B** 66.09 342 P P 03 58 25.1 -0.8
comp=Z,0.7nm,0.4s,mb4.1,baz=35,slow=8.7,SNR=15
NOA LR LR 04 31 45.0
comp=Z,76nm,18.2s,MS3.9,baz=15,slow=40
NOA **NORSAR Array B** 66.09 342 P P 03 58 25.2 -0.8
NOA pmax pmax
comp=Z,1.0nm,0.4s
NOA MLR MLR
comp=Z,76nm,18.2s
T19A **Beclabito** 66.23 61 ⇑P P 03 58 27.0 -0.3
baz=66
MVCO **Mesa Verde** 66.26 60 ⇓P P 03 58 27.4 0.0
baz=66
Y15A **Casa Rosa Ranc** 66.34 65 ⇑P P 03 58 28.2 +0.2
baz=66
S21A **Coal Bank Pass** 66.34 59 ⇑P P 03 58 28.4 +0.4
baz=66
HFS **Hagfors** 66.39 340 LR LR 04 31 47.9
comp=Z,28nm,21.2s,MS3.4,baz=50,slow=40
V18A **Ganado** 66.50 62 ⇓P P 03 58 29.2 +0.1
baz=66
R22A **Saguache, Gunn** 66.52 58 ⇑P P 03 58 29.6 +0.5
baz=66
X16A **Lo Mia Camp, P** 66.54 64 ⇑P P 03 58 29.6 +0.3
baz=66
U20A **Newcomb** 66.84 61 ⇓P P 03 58 31.4 +0.2
baz=67
114A **Black Gap (USA** 66.86 66 ⇓P P 03 58 31.6 +0.3
baz=67
X17A **Forest Lakes** 66.96 64 ⇑P P 03 58 32.4 +0.4
baz=67
OGNE **Ogallala** 67.12 53 eP P 03 58 33.5 +0.6
comp=Z,19nm,0.9s,mb5.1
W19A **Sanders** 67.24 62 ⇓P P 03 58 34.1 +0.4
baz=67
115A **Sonoran Desert** 67.28 66 ⇓P P 03 58 34.3 +0.3
baz=67
U21A **Nageezi** 67.29 60 ⇑P P 03 58 34.2 +0.1
baz=67
T22A **Edith** 67.30 59 ⇑P P 03 58 34.4 +0.3
baz=67
X18A **Snowflake** 67.33 63 ⇓P P 03 58 34.5 +0.2
baz=67
Y17A **Roosevelt** 67.40 64 ⇓P P 03 58 34.7 0.0
baz=67
214A **Organ Pipe Nat** 67.46 67 ⇑P P 03 58 35.2 0.0
baz=67
SDCO **Great Sand Dun** 67.56 58 eP P 03 58 35.5 -0.2
comp=Z,2.8nm,1.1s,mb4.2
X19A **St. Johns** 67.78 63 ⇓P P 03 58 37.6 +0.4
baz=68
ECSD **EROS Data Cent** 67.81 48 eP P 03 58 36.5 -0.7
comp=Z,4.9nm,0.9s,mb4.5
Y18A **Canyon Day Jun** 67.81 64 ⇓P P 03 58 37.2 -0.2
baz=68
V22A **San Miguel Ran** 68.08 60 ⇑P P 03 58 38.9 -0.1
baz=68
X20A **Quemado** 68.16 62 ⇑P P 03 58 40.0 +0.5
baz=68
U23A **El Rito** 68.19 59 ⇑P P 03 58 40.0 +0.3
baz=68,SNR=9.9
117A **Oracle** 68.26 65 ⇑P P 03 58 39.9 -0.2
baz=68
TUC **Tucson** 68.42 65 eP P 03 58 41.1 -0.1
TUC pmax pmax
comp=Z,1.0nm,0.9s,mb3.9
TUC **Tucson** 68.42 65 eP P 03 58 41.1 -0.1
comp=Z,1.4nm,0.9s,mb4.0
T25A **Trinidad** 68.60 58 ⇓P P 03 58 42.2 0.0
baz=68
V23A **Ortiz Mt. (NFS** 68.61 60 ⇑P P 03 58 42.8 +0.5
baz=68
X21A **Alamocita Cree** 68.64 62 ⇑P P 03 58 43.0 +0.5
baz=68,SNR=6.4
U24A **Moreno Valley** 68.64 59 ⇓P P 03 58 43.1 +0.6
baz=68
118A **Homack Ranch,** 68.66 65 ⇓P P 03 58 43.2 +0.5
baz=68
Y20A **Horse Springs,** 68.68 63 ⇓P P 03 58 43.2 +0.4
baz=68
ANMO **Albuquerque** 69.03 61 eP P 03 58 45.1 +0.2
comp=Z,0.2nm,0.9s
Z20A **Nine Sixteen R** 69.13 63 ⇑P P 03 58 45.4 -0.2
baz=69
U25A **Circle Dot Ran** 69.13 58 ⇓P P 03 58 45.2 -0.3
baz=69,SNR=5.3
V25A **Rancho No Teng** 69.42 59 ⇓P P 03 58 47.2 -0.2
baz=69
W24A **Lazy 6 Ranch,** 69.44 60 ⇓P P 03 58 47.9 +0.5
baz=69
Y22A **Socorro** 69.47 62 ⇑P P 03 58 48.0 +0.3
baz=69
318A **Bisbee** 69.51 65 ⇑P P 03 58 48.2 +0.3
baz=69
120A **U Bar Ranch, L** 69.51 64 ⇓P P 03 58 48.3 +0.4
baz=69
219A **White Tail Can** 69.54 65 ⇑P P 03 58 48.4 +0.3
baz=69
X24A **Lazy VL Ranch,** 69.89 60 ⇓P P 03 58 50.5 +0.3
baz=70
V26A **Tequesquite Ra** 69.92 58 ⇓P P 03 58 50.5 +0.1
baz=70
W25A **X Bar L Ranch,** 69.96 59 ⇑P P 03 58 50.7 0.0
baz=70,SNR=5.5
319A **Douglas** 69.97 65 ⇓P P 03 58 51.1 +0.3
baz=70
Y23A **Lovelace Mesa,** 70.00 61 ⇑P P 03 58 51.1 +0.2
baz=70
220A **Playas Peak, P** 70.04 64 ⇓P P 03 58 51.2 0.0
baz=70
AKASG **Malin Array Be** 70.10 327 P P 03 58 50.0 -1.3
comp=Z,1.6nm,0.4s,mb4.3,baz=32,slow=6.6,SNR=7.3
AKASG LR LR 04 31 22.6
comp=Z,90nm,22.0s,MS4.0,baz=300,slow=37
AKASG **Malin Array Be** 70.10 327 P P 03 58 50.0 -1.3
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKASG MLR MLR
comp=Z,90nm,22.0s
SCHQ **Schefferville** 70.11 24 P P 03 58 50.5 -0.8
comp=Z,2.9nm,0.4s,mb4.5,baz=299,slow=6.5,SNR=14
SCHQ **Schefferville** 70.11 24 P P 03 58 50.5 -0.8
Y24A **Capitan** 70.36 61 ⇑P P 03 58 52.9 -0.2
baz=70,SNR=5.4
222A **Williams Famil** 70.72 63 ⇓P P 03 58 55.5 +0.1
baz=70
Y25A **Mesa, Roswell** 70.78 60 ⇑P P 03 58 55.5 -0.2
baz=70
X26A **CR and CF Fran** 70.81 59 ⇑P P 03 58 55.5 -0.4
baz=71
Z24A **Sheppen Canyo** 70.83 61 ⇓P P 03 58 56.3 +0.3
baz=71
X27A **F and S Farms,** 71.14 59 ⇓P P 03 58 57.5 -0.4
baz=71
Z25A **Roswell** 71.23 61 ⇓P P 03 58 58.4 -0.1
baz=71
124A **Stringfield Ra** 71.24 62 ⇓P P 03 58 58.2 -0.3
baz=71
224A **Cornudas Mount** 71.66 62 ⇑P P 03 59 00.7 -0.3
baz=71
Y27A **Causey** 71.67 59 ⇑P P 03 59 00.9 -0.1
baz=71
WRAB **Tennant Creek** 71.67 201 eP P 03 59 01.2 +0.2
WRAB pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
WRAB **Tennant Creek** 71.67 201 eP P 03 59 01.2 +0.2
comp=Z,2.1nm,0.5s,mb4.3
WRA **Warramunga Arr** 71.68 201 P P 03 59 00.7 -0.4
comp=Z,1.6nm,0.5s,mb4.2,baz=17,slow=6.4,SNR=9.3
WRA **Warramunga Arr** 71.68 201 P P 03 59 00.7 -0.4
WRA pmax pmax
comp=Z,2.0nm,0.5s
125A **Gardner Draw,** 71.72 61 ⇑P P 03 59 00.7 -0.7
baz=72
MSTX **Muleshoe** 71.82 59 ⇓P P 03 59 02.0 0.0
baz=72
GNI **Garni** 71.93 311 LR LR 04 33 46.3
comp=Z,56nm,21.2s,MS3.8,baz=64,slow=38
MNTX **Cornudas Mount** 72.02 62 eP P 03 59 02.7 -0.4
comp=Z,1.5nm,1.2s,mb3.8
225A **Deer Hill, Car** 72.03 62 ⇓P P 03 59 03.4 +0.1
baz=72
Z27A **Tatum** 72.06 60 ⇓P P 03 59 02.8 -0.6
baz=72
324A **Moseley Ranch,** 72.14 62 ⇓P P 03 59 03.6 -0.4
baz=72
GDL2 **Guadalupe Moun** 72.23 61 eP P 03 59 04.5 +0.1
226A **Malaga, Loving** 72.48 61 ⇑P P 03 59 05.9 0.0
baz=72
325A **Bean Ranch, Si** 72.49 62 ⇑P P 03 59 05.5 -0.5
baz=72,SNR=5.1
326A **Caldwell Ranch** 73.10 62 ⇓P P 03 59 09.4 -0.3
baz=73
WMOK **Wichita Mounta** 73.44 56 eP P 03 59 11.2 -0.4
WMOK pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
WMOK **Wichita Mounta** 73.44 56 eP P 03 59 11.2 -0.3
comp=Z,4.3nm,0.9s,mb4.4
426A **McDonald Obser** 73.55 62 ⇑P P 03 59 11.7 -0.6
baz=73
328A **Wristen Ranch,** 73.72 61 ⇓P P 03 59 12.7 -0.5
baz=74,SNR=7.0
427A **Hayter Ranch,** 73.78 62 ⇑P P 03 59 13.2 -0.4
baz=74
526A **Mary Lane Ranc** 73.97 63 ⇑P P 03 59 14.5 -0.2
baz=74
BUR08 **Bucovina Ar. S** 74.10 328 eP P 03 59 14.8 -0.4
527A **Woodward Ranch** 74.18 62 ⇑P P 03 59 15.6 -0.4
baz=74,SNR=5.1
428A **Kincaid Ranch,** 74.28 61 ⇑P P 03 59 16.4 -0.1
baz=74
626A **Big Bend Ranch** 74.32 63 ⇓P P 03 59 16.1 -0.7
baz=74,SNR=5.4
528A **Cox Ranch, San** 74.64 62 ⇑P P 03 59 18.6 -0.1
baz=74
MORC **Moravsky Berou** 74.69 333 eP P 03 59 18.6 0.0
MORC pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
MORC **Moravsky Berou** 74.69 333 eP P 03 59 18.6 0.0
comp=Z,3.2nm,1.0s,mb4.2
TXAR **Lajitas Array** 74.76 63 P P 03 59 18.5 -0.8
comp=Z,2.3nm,0.4s,mb4.5,baz=296,slow=5.2,SNR=93
TXAR **Lajitas Array** 74.76 63 P P 03 59 18.5 -0.8
TXAR pmax pmax
comp=Z,2.0nm,0.4s
TXAR **Lajitas Array** 74.76 63 P P 03 59 18.5 -0.8
627A **Terlingua Ranc** 74.83 62 ⇓P P 03 59 19.3 -0.5
baz=75,SNR=5.5
628A **Black Gap, Mar** 75.09 62 ⇑P P 03 59 21.0 -0.2
baz=75
ASAR **Alice Springs** 75.37 200 P P 03 59 23.1 +0.4
comp=Z,1.6nm,0.5s,mb4.2,baz=15,slow=5.3,SNR=25
ASAR **Alice Springs** 75.37 200 P P 03 59 23.1 +0.4
ASAR pmax pmax
comp=Z,2.0nm,0.5s
VRAC **Vranov** 75.39 334 LR LR 04 35 43.8
comp=Z,102nm,21.2s,MS4.1,baz=15,slow=38
MLR **Muntele Rosu** 75.68 326 LR LR 04 35 19.9
comp=Z,52nm,19.1s,MS3.9,baz=82,slow=38
MIAR **Mount Ida** 76.34 53 eP P 03 59 27.7 -0.6
MIAR pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
MIAR **Mount Ida** 76.34 53 eP P 03 59 27.7 -0.5
comp=Z,6.6nm,1.0s,mb4.5
GERES **GERESS Array B** 76.62 335 P P 03 59 30.3 +0.6
comp=Z,0.3nm,0.4s,mb3.5,baz=38,slow=6.8,SNR=5.6
GERES LR LR 04 37 23.0
comp=Z,144nm,19.6s,MS4.3,baz=1.6,slow=39
WCI **Wyandotte Cave** 76.99 45 eP P 03 59 31.3 -0.6
BRTR **Keskin Array B** 77.43 318 P P 03 59 35.1 +0.8
comp=Z,1.0nm,0.8s,mb3.8,baz=61,slow=3.1,SNR=5.9
BRTR LR LR 04 40 31.9
comp=Z,28nm,18.2s,MS3.6,baz=212,slow=41
BAIF **Baives** 77.78 342 eP P 03 59 36.3 +0.2
WVT **Waverly** 77.95 48 eP P 03 59 36.8 -0.5
WVT pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
WVT **Waverly** 77.95 48 eP P 03 59 36.8 -0.6
comp=Z,1.6nm,0.6s,mb4.1
SOKA **Soboth** 78.22 333 ⇑iP P 03 59 39.0 +0.4
comp=Z,1.2nm,0.5s,mb4.1
KBA **Koelnbreinsper** 78.33 335 ⇓iP P 03 59 40.5 +1.3
comp=Z,5.3nm,0.5s,mb4.7
CDF **Champ du Feu** 78.65 339 eP P 03 59 42.7 +1.7
FLN **La Foliniere** 79.92 344 eP P 03 59 46.1 -1.7
comp=Z,4.4nm,0.4s,mb4.4
FLN **La Foliniere** 79.92 344 eP P 03 59 46.1 -1.7
FLN pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
FLN **La Foliniere** 79.92 344 eP P 03 59 46.1 -1.7
comp=Z,2.2nm,0.4s,mb4.4
LDF **La Druitiere** 80.02 344 eP P 03 59 47.5 -0.9
comp=Z,7.5nm,0.4s,mb4.7
LDF **La Druitiere** 80.02 344 eP P 03 59 47.5 -0.9
LDF pmax pmax
comp=Z,4.0nm,0.4s,mb4.7
LDF **La Druitiere** 80.02 344 eP P 03 59 47.5 -0.9
comp=Z,3.8nm,0.4s,mb4.7
GRR **Gorron** 80.34 344 eP P 03 59 49.7 -0.5
LOR **Lormes** 80.50 341 eP P 03 59 50.0 -1.0
comp=Z,4.0nm,0.5s,mb4.3
LOR eMLR MLR
comp=Z,78nm,22.5s,MS3.7
LOR **Lormes** 80.50 341 eP P 03 59 50.0 -1.0
LOR pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
LOR MLR MLR
comp=Z,80nm,22.5s,MS4.0
LOR **Lormes** 80.50 341 eP P 03 59 50.0 -1.0
comp=Z,2.0nm,0.5s,mb4.3
LOR LR LR
comp=Z,80nm,22.5s,MS4.0
CABF **La Chapelle** 80.62 339 eP P 03 59 52.8 +1.1
SGMF **Saint Gilles** 80.77 345 eP P 03 59 52.0 -0.4
comp=Z,14nm,0.7s,mb4.7
SGMF **Saint Gilles** 80.77 345 eP P 03 59 52.0 -0.4
SGMF pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
SGMF **Saint Gilles** 80.77 345 eP P 03 59 52.0 -0.4
comp=Z,7.1nm,0.7s,mb4.7
ROSF **Rostrenen** 80.80 346 eP P 03 59 52.3 -0.3
comp=Z,9.1nm,0.6s,mb4.6
ROSF **Rostrenen** 80.80 346 eP P 03 59 52.3 -0.3
ROSF pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
ROSF **Rostrenen** 80.80 346 eP P 03 59 52.3 -0.3
comp=Z,4.6nm,0.6s,mb4.6
AVF **Avril sur Loir** 81.06 341 eP P 03 59 53.5 -0.5
comp=Z,4.7nm,0.5s,mb4.4
AVF **Avril sur Loir** 81.06 341 eP P 03 59 53.5 -0.5
AVF pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
AVF **Avril sur Loir** 81.06 341 eP P 03 59 53.5 -0.5
comp=Z,2.3nm,0.5s,mb4.4
SMF **Signal de Mont** 81.09 341 eP P 03 59 53.4 -0.8
LPL **La Plagne** 81.50 338 eP P 03 59 56.5 +0.1
comp=Z,6.5nm,0.4s,mb4.6
LPL **La Plagne** 81.50 338 eP P 03 59 56.5 +0.1
LPL pmax pmax
comp=Z,3.0nm,0.4s,mb4.6
LPL **La Plagne** 81.50 338 eP P 03 59 56.5 +0.1

comp=Z,3.3nm,0.4s,mb4.6
LPG La Plagne 81.51 338 *e*P **P 03 59 56.7 +0.3**
comp=Z,5.8nm,0.4s,mb4.6
LPG La Plagne 81.51 338 *e*P **P 03 59 56.7 +0.3**
LPG pmax pmax
comp=Z,3.0nm,0.4s,mb4.6
LPG La Plagne 81.51 338 *e*P **P 03 59 56.7 +0.3**
comp=Z,2.9nm,0.4s,mb4.6
TCF Toulx Ste Croi 81.78 342 *e*P **P 03 59 57.4 -0.4**
MFF Saint Martin d 81.94 343 *e*P **P 03 59 57.7 -0.9**
ASF Jabal al Asfar 82.10 311 LR LR 04 40 27.9
comp=Z,36nm,20.0s,MS3.7,baz=240,slow=38
MMAI Mount Meron Ar 82.13 313 P **P 04 00 01.0 +1.1**
comp=Z,5.0nm,0.5s,mb4.7,baz=32,slow=7.9,SNR=7.1
ORIF Oris-en-Rattie 82.27 339 *e*P **P 04 00 00.3 -0.1**
comp=Z,6.7nm,0.6s,mb4.4
ORIF Oris-en-Rattie 82.27 339 *e*P **P 04 00 00.3 -0.1**
ORIF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
ORIF Oris-en-Rattie 82.27 339 *e*P **P 04 00 00.3 -0.1**
comp=Z,3.3nm,0.6s,mb4.4
RJF Les Rejaudoux 82.86 342 *e*P **P 04 00 03.1 -0.4**
CAF Calviac 83.11 341 *e*P **P 04 00 05.0 +0.2**
IDI Anoyia 84.87 321 P **P 04 00 14.2 +0.3**
comp=Z,1.8nm,0.4s,mb4.6,baz=29,slow=14,SNR=5.2
EIL Elat 85.10 311 LR LR 04 40 54.6
comp=Z,41nm,19.1s,MS3.8,baz=279,slow=38
OTAV Otavalo 112.34 61 *e*PKP PKiKP 04 06 15.4 +0.3
CPUP Villa Florida 145.68 60 PKPbc PKPbc 04 07 16.8 -0.9
comp=Z,1.2nm,0.5s,baz=75,slow=1.3,SNR=7.8
CPUP Villa Florida 145.68 60 PKP2 PKPbc 04 07 16.8 -0.8
CPUP pmax pmax
comp=Z,1.0nm,0.5s
CPUP Villa Florida 145.68 60 *e*PKPbc PKPbc 04 07 16.8 -0.8
PLCA Paso Flores 146.79 92 PKPbc PKPbc 04 07 19.1 -1.4
comp=Z,1.9nm,0.9s,baz=66,slow=22,SNR=4.0
PLCA Paso Flores 146.79 92 PKP2 PKPbc 04 07 19.1 -1.4
PLCA pmax pmax
comp=Z,2.0nm,0.9s

GRAL ***13*** *04:12:13.7±0.3, 33°.32N×35°.44E, h4km±17km, MD2.7*
GII ***13*** *04:12:13.4±1.0, 33°.28N×35°.47E, h1km±2km, Md2.2/9*
ISCJB ***13*** *04:12:13.2±0.6, 33°.32N±0°.03×35°.44E±0°.04, h7km±6km, Error ellipse: s-maj=6.3km s-min=3.9km az=31.3*
ISC 13 04:12:13.5±0.6, 33°.34N±0°.03×35°.45E±0°.04, h7km±7km, n12, σ0§61/23, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.18**	**327**	*e*P	**Pg**	**04 12 17.3**	**+0.1**
KSDI	**Kefar Szold**	**0.23**	**129**	Pg	**Pg**	**04 12 17.6**	**-0.5**
KSDI				Sg	**Sg**	**04 12 21.0**	**-0.2**
HRI	**Mount Hermon**	**0.25**	**106**	Pg	**Pg**	**04 12 18.0**	**-0.5**
HRI				Sg	**Sg**	**04 12 22.4**	**+0.5**
MMA0	**Mount Meron ar**	**0.32**	**186**	Pg	**Pg**	**04 12 19.3**	**-0.5**
MMA0				Sg	**Sg**	**04 12 24.2**	**+0.1**
HNTI	**Hanita**	**0.34**	**222**	Pg	**Pg**	**04 12 21.4**	**+1.2**
HNTI				Sg	**Sg**	**04 12 25.4**	**+0.8**
RCY	**Rachaya**	**0.34**	**65**	*e*P	**Pg**	**04 12 20.4**	**+0.2**
RCY				*e*S	**Sg**	**04 12 25.6**	**+0.8**
KSHT	**Keshet**	**0.47**	**139**	Pg	**Pg**	**04 12 21.8**	**-0.8**
KSHT				Sg	**Sg**	**04 12 29.6**	**+0.9**
MMLI	**Mount Malkishu**	**0.90**	**181**	Pg	**Pg**	**04 12 29.9**	**-0.9**
MMLI				Sg	**Sg**	**04 12 42.9**	**+0.5**
HWQ	**Hawqa**	**1.03**	**24**	*e*P	**Pg**	**04 12 33.1**	**-0.1**
HWQ				*e*S	**Sg**	**04 12 46.5**	**-0.1**
HMDT	**Nahal Hemdat**	**1.08**	**176**	Pg	**Pg**	**04 12 33.4**	**-0.9**
HMDT				Sg	**Sg**	**04 12 48.3**	**-0.1**
SLTI	**Sal'it**	**1.15**	**197**	Pg	**Pg**	**04 12 34.6**	**-0.9**
SLTI				Sg	**Sg**	**04 12 50.4**	**0.0**
DSI	**Dead Sea**	**1.76**	**182**	Pn	**Pn**	**04 12 44.1**	**-0.4**
DSI				Sn	**Sn**	**04 13 07.9**	**+0.7**

BJI ***13*** *04:13:27.6, 51°.71N×15°.29E, h17km, mB4.9/13, mb4.8/15, Ms4.8/9, Ms7 4.6/9*
LDG ***13*** *04:13:28.9±0.1, 51°.52N×16°.14E, h1km, Ml4.6/12, Error ellipse: s-maj=3.1km s-min=2.2km az=168.0, Suspected Mining induced.*
ISCJB ***13*** *04:13:29.3±0.1, 51°.411N±0°.009×16°.08E±0°.02, h0km, mb4.5/53, MS4.3/4, Error ellipse: s-maj=1.4km s-min=1.3km az=3.7*
CSEM ***13*** *04:13:29.7±0.1, 51°.53N×16°.11E, h0km, mb4.4/41, ML4.6/16, Ms4.4, Error ellipse: s-maj=1.7km s-min=1.6km az=157.0*
MOS ***13*** *04:13:29.0±1.1, 51°.55N×16°.00E, h10km, mb4.5/27, Error ellipse: s-maj=5.0km s-min=3.2km az=75.9*
STR ***13*** *04:13:29.1±0.0, 51°.63N×16°.24E, h5km, Ml4.6, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
BGR ***13*** *04:13:30.9±0.4, 51°.46N×16°.10E, h1km, ML4.2, Error ellipse: s-maj=6.7km s-min=3.3km az=15.0*
IPEC ***13*** *04:13:30.7±0.2, 51°.53N×16°.15E, h9km±1km, ML4.0/4, Error ellipse: s-maj=1.3km s-min=0.5km az=43.0*
NEIC ***13*** *04:13:30.4±0.2, 51°.54N×16°.07E, h5km, mb4.6/28, ML4.5(STR), ML4.2(SZGRF), ML4.0(BRA), Error ellipse: s-maj=3.8km s-min=3.2km az=165.0*
IDC ***13*** *04:13:30.2±0.4, 51°.51N×16°.10E, h0km, mb4.1/14, mb1 4.2/24, mb1mx4.1/32, mbtmp4.0/24, ML3.8/9, Error ellipse: s-maj=8.6km s-min=6.1km az=110.0*
WAR ***13*** *04:13:31.3, 51°.52N×16°.11E, ML3.7, Mining Induced*
PRU ***13*** *04:13:31.1, 51°.49N×16°.11E, h0km*
BNS ***13*** *04:13:31.1±0.9, 51°.20N×16°.25E, h10km, ML4.2*
VIE ***13*** *04:13:33.8±0.7, 51°.21N×16°.12E, h1km±3km, mb3.7/17, ML3.8/17, Ms4.4/2, Error ellipse: s-maj=3.9km s-min=2.3km az=177.0 63 km WNW of Wroclaw Suspected Mining induced.*
UPP ***13*** *04:13:39.7, 52°.16N×15°.49E, h0km, ML3.4, Suspected Mining explosion.*
ISC 13 04:13:30.8±0.1, 51°.472N±0°.008×16°.12E±0°.01, h0km, n715, σ1§01/903, mb4.5/53, MS4.3/4, 119C-133D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.64**	**170**	*e*Pg	**Pg**	**04 13 43.8**	**+0.8**
KSP				*e*Sg	**Sg**	**04 13 53.5**	**+2.2**
KSP	**Ksiaz**	**0.64**	**170**	*i* Pg	**Pg**	**04 13 43.8**	**+0.8**
KSP				i		04 13 51.1	
KSP				*i* Sg	**Sg**	**04 13 53.3**	**+2.0**
KSP				*e*L		04 13 56.3	
KSP	**Ksiaz**	**0.64**	**170**	*e*Pg	**Pg**	**04 13 43.8**	**+0.8**
KSP	**Ksiaz**	**0.64**	**170**	⇓*i*P	**Pg**	**04 13 43.8**	**+0.8**
KSP				*i*		04 13 53.3	
KSP	**Ksiaz**	**0.64**	**170**	*e*Pg	**Pg**	**04 13 43.7**	**+0.7**
baz=352							
KSP				*e*Sg	**Sg**	**04 13 52.0**	**+0.7**
baz=352							
KSP				*i* S	**Sg**	**04 13 53.3**	**+2.0**
UPC	**Upice**	**0.97**	**184**	*e*P	**Pg**	**04 13 49.9**	**+0.6**
UPC	**Upice**	**0.97**	**184**	*e*PG	**Pg**	**04 13 49.9**	**+0.6**
UPC	**Upice**	**0.97**	**184**	*e*Pg	**Pg**	**04 13 49.7**	**+0.4**
baz=4.6							
UPC				*e*Sg	**Sg**	**04 14 03.2**	**+1.4**
baz=4.6							
DPC	**Dobruska-Polom**	**1.13**	**173**	*e*Pn	**Pn**	**04 13 52.7**	**-1.1**
DPC				*e*Sg	**Sg**	**04 14 08.6**	**+1.5**
DPC	**Dobruska-Polom**	**1.13**	**173**	*e*P	**Pg**	**04 13 52.7**	**+0.3**
DPC				*e*		04 14 07.3	
DPC				smax			
comp=N,2μm,0.8s							
DPC				MLR	MLR		
comp=Z,5μm,2.7s							
DPC	**Dobruska-Polom**	**1.13**	**173**	*e*PG	**Pg**	**04 13 52.7**	**+0.3**
DPC				*e*SG	**Sg**	**04 14 07.3**	**+0.2**
comp=Z,2μm,0.8s							
DPC				AMS	AMS	04 14 20.0	
comp=Z,5μm,2.7s							
DPC	**Dobruska-Polom**	**1.13**	**173**	*e*Pg	**Pg**	**04 13 52.6**	**+0.2**
baz=355							
DPC				Sg	**Sg**	**04 14 07.3**	**+0.2**
comp=Z,2μm,0.8s							
PVCC	**Panska Ves**	**1.36**	**227**	*e*P	**Pg**	**04 13 56.4**	**-0.4**
PVCC				*e*		04 14 15.2	
PVCC				smax			
comp=N,4μm,0.9s							
PVCC	**Panska Ves**	**1.36**	**227**	*e*PG	**Pg**	**04 13 56.4**	**-0.4**
PVCC				*e*SG	**Sg**	**04 14 15.2**	**+0.8**
comp=Z,4μm,0.9s							
PVCC	**Panska Ves**	**1.36**	**227**	*e*P	**Pg**	**04 13 56.4**	**-0.4**
comp=Z,4μm,0.9s							
PVCC				Sg	**Sg**	**04 14 15.2**	**+0.8**
comp=Z,4μm,0.9s							
BRG	**Berggiesshubel**	**1.49**	**247**	PN	**Pn**	**04 13 57.5**	**-1.3**
BRG				PG	**Pg**	**04 13 59.6**	**+0.2**
BRG				SG	**Sg**	**04 14 19.5**	**+0.8**
comp=Z,2μm,0.9s							
BRG							
comp=Z,3μm,2.9s							
BRG							
comp=N,3μm,2.3s							
BRG							
comp=E,2μm,2.3s							
BRG	**Berggiesshubel**	**1.49**	**247**	P	**Pn**	**04 13 57.5**	**-1.3**
BRG						04 14 19.5	
BRG				smax			
comp=N,1μm,1.0s							
BRG				MLR	MLR		
comp=Z,2μm,2.9s							
BRG				MLR	MLR		
comp=N,2μm,2.3s							
BRG				MLR	MLR		
comp=E,900nm,2.3s							
BRG	**Berggiesshubel**	**1.49**	**247**	P	**Pn**	**04 13 57.5**	**-1.3**
BRG				S	**Sg**	**04 14 19.5**	**+0.8**
comp=E,2μm,2.9s							
RUE	**Ruedersdorf**	**1.76**	**306**	*e*Pn	**Pn**	**04 14 00.3**	**-2.2**
RUE				*e*Pg	**Pg**	**04 14 04.8**	**+0.3**
RUE				*e*Sg	**Sg**	**04 14 27.4**	**0.0**
RUE	**Ruedersdorf**	**1.76**	**306**	*e*Pn	**Pn**	**04 14 00.3**	**-2.2**
baz=122							
RUE	**Ruedersdorf**	**1.76**	**306**	*e*Pg	**Pg**	**04 14 04.8**	**+0.3**
RUE				*e*Sg	**Sg**	**04 14 23.6**	**-3.8**
baz=122							
PRA	**Prague**	**1.76**	**218**	PN	**Pn**	**04 14 02.0**	**-0.5**
PRA				SN	**Sn**	**04 14 26.0**	**+0.4**
PRU	**Pruhonice**	**1.79**	**215**	*e*P	**Pn**	**04 14 02.8**	**-0.1**
PRU				*e*		04 14 28.8	
PRU				smax			
comp=N,426nm,0.3s							
PRU				MLR	MLR		
comp=Z,2μm,4.9s							
PRU	**Pruhonice**	**1.79**	**215**	*e*PN	**Pn**	**04 14 02.8**	**-0.1**
PRU				*e*PG	**Pg**	**04 14 04.6**	**-0.5**
PRU				*e*SG	**Sg**	**04 14 28.8**	**+0.5**
comp=Z,426nm,0.3s							
PRU				AMS	AMS	04 14 40.0	
comp=Z,2μm,4.9s							
PRU	**Pruhonice**	**1.79**	**215**	*e*Pn	**Pn**	**04 14 02.7**	**-0.2**
baz=33							
PRU	**Pruhonice**	**1.79**	**215**	Pg	**Pg**	**04 14 04.6**	**-0.5**
PRU				Sg	**Sg**	**04 14 28.8**	**+0.5**
comp=Z,426nm,0.3s							
RAC	**Raciborz**	**1.92**	**136**	*e*Pn	**Pn**	**04 14 03.4**	**-1.2**
RAC				*e*Pg	**Pg**	**04 14 07.4**	**-0.1**
RAC				*e*Sg	**Sg**	**04 14 33.4**	**+1.1**
RAC	**Raciborz**	**1.92**	**136**	*e*P	**Pn**	**04 14 03.4**	**-1.2**
RAC	**Raciborz**	**1.92**	**136**	*e*Pg	**Pg**	**04 14 07.4**	**-0.1**
RAC				*e*S	**Sg**	**04 14 33.4**	**+1.1**
MORC	**Moravsky Berou**	**1.93**	**151**	*e*Pn	**Pn**	**04 14 04.1**	**-0.6**
MORC				*e*Sg	**Sg**	**04 14 32.7**	**+0.1**
MORC	**Moravsky Berou**	**1.93**	**151**	*e*Pn	**Pn**	**04 14 03.9**	**-0.8**
MORC				*e*Sg	**Sg**	**04 14 32.2**	**-0.4**
MORC	**Moravsky Berou**	**1.93**	**151**	⇓*i*P	**Pn**	**04 14 04.1**	**-0.6**
MORC	**Moravsky Berou**	**1.93**	**151**	Pn	**Pn**	**04 14 04.1**	**-0.6**
MORC				*e*S	**Sn**	**04 14 32.2**	**+2.6**
MORC				Sg	**Sg**	**04 14 32.7**	**+0.1**
GKP	**Gorka Klasztor**	**1.93**	**20**	*e*Pn	**Pn**	**04 14 03.9**	**-0.9**
GKP				*e*Pg	**Pg**	**04 14 08.2**	**+0.5**
GKP				*e*Sn	**Sn**	**04 14 33.4**	**+3.7**
GKP				*e*Sg	**Sg**	**04 14 37.7**	**+5.1**
GKP	**Gorka Klasztor**	**1.93**	**20**	*e*P	**Pn**	**04 14 03.9**	**-0.9**
GKP				*e*		04 14 33.4	
GKP	**Gorka Klasztor**	**1.93**	**20**	*e*P	**Pn**	**04 14 03.9**	**-0.9**
CLL	**Collm**	**1.96**	**266**	*e*Pn	**Pn**	**04 14 03.6**	**-1.6**
CLL				*e*Sg	**Sg**	**04 14 33.3**	**-0.3**
CLL	**Collm**	**1.96**	**266**	*e*Pn	**Pn**	**04 14 03.0**	**-2.2**
CLL				*e*Pg	**Pg**	**04 14 07.0**	**-1.3**
CLL				*i* Sg	**Sg**	**04 14 33.4**	**-0.2**
CLL	**Collm**	**1.96**	**266**	*e*Pn	**Pn**	**04 14 03.0**	**-2.2**
CLL				*e*Pg	**Pg**	**04 14 07.0**	**-1.3**
CLL				*i*		04 14 10.8	
CLL				*i* Sg	**Sg**	**04 14 33.4**	**-0.2**
comp=Z,986nm,0.7s							
CLL	**Collm**	**1.96**	**266**	*e*P	**Pn**	**04 14 03.0**	**-2.2**
CLL	**Collm**	**1.96**	**266**	Pn	**Pn**	**04 14 03.6**	**-1.6**
CLL	**Collm**	**1.96**	**266**	*e*Pg	**Pg**	**04 14 07.0**	**-1.3**
CLL				*e*Sg	**Sg**	**04 14 32.5**	**-1.1**
baz=82							
CLL				*i* S	**Sg**	**04 14 33.4**	**-0.2**
OKC	**Ostrava-Krasne**	**2.09**	**141**	*e*Pn	**Pn**	**04 14 05.6**	**-1.4**
OKC				*e*Sg	**Sg**	**04 14 38.0**	**+0.3**
OKC	**Ostrava-Krasne**	**2.09**	**141**	*e*P	**Pn**	**04 14 05.6**	**-1.3**
OKC				*e*		04 14 36.5	
OKC				smax			
comp=N,2μm,0.8s							
OKC				MLR	MLR		
comp=Z,1μm,3.7s							
OKC	**Ostrava-Krasne**	**2.09**	**141**	*e*PN	**Pn**	**04 14 05.6**	**-1.3**
OKC				*e*PG	**Pg**	**04 14 10.1**	**-0.6**
OKC				*e*SG	**Sg**	**04 14 36.5**	**-1.2**
comp=Z,2μm,0.8s							
OKC				AMS	AMS	04 14 50.0	
comp=Z,1μm,3.7s							
OKC	**Ostrava-Krasne**	**2.09**	**141**	*e*P	**Pn**	**04 14 05.6**	**-1.3**
OKC	**Ostrava-Krasne**	**2.09**	**141**	Pg	**Pg**	**04 14 10.1**	**-0.6**
OKC				Sg	**Sg**	**04 14 38.0**	**+0.3**
VRAC	**Vranov**	**2.19**	**172**	Pn	**Pn**	**04 14 08.3**	**-0.1**
comp=Z,15nm,0.3s,baz=342,slow=13,SNR=53							
VRAC				Lg		04 14 40.5	
comp=Z,90nm,0.3s,baz=271,slow=23,SNR=11							
VRAC	**Vranov**	**2.19**	**172**	⇓P	**Pn**	**04 14 08.9**	**+0.6**
VRAC	**Vranov**	**2.19**	**172**	⇓*i*P	**Pn**	**04 14 08.9**	**+0.6**
VRAC	**Vranov**	**2.19**	**172**	*e*Pn	**Pn**	**04 14 08.2**	**-0.1**
baz=353							
VRAC	**Vranov**	**2.19**	**172**	P	**Pn**	**04 14 08.9**	**+0.6**
VRAC				*e*Sg	**Sg**	**04 14 40.0**	**-1.0**
comp=Z,646nm,0.5s,baz=353							
TREC	**Trest**	**2.22**	**191**	*e*P	**Pn**	**04 14 08.5**	**-0.2**
TREC				MLR	MLR		
comp=Z,1μm,4.2s							
TREC	**Trest**	**2.22**	**191**	*e*PN	**Pn**	**04 14 08.5**	**-0.2**
TREC				*e*PG	**Pg**	**04 14 12.7**	**-0.5**
TREC				AMS	AMS	04 15 00.0	
comp=Z,1μm,4.2s							
TREC	**Trest**	**2.22**	**191**	Pn	**Pn**	**04 14 08.5**	**-0.2**
TREC	**Trest**	**2.22**	**191**	Pg	**Pg**	**04 14 12.7**	**-0.5**
TREC				*e*Sg	**Sg**	**04 14 41.9**	**0.0**
baz=10							
KRUC	**Moravsky**	**2.42**	**176**	*e*Pn	**Pn**	**04 14 11.6**	**+0.1**
baz=356							
KRUC	**Moravsky**	**2.42**	**176**	*e*Pg	**Pg**	**04 14 16.0**	**-1.1**
baz=356							
KRUC				*e*Sg	**Sg**	**04 14 46.8**	**-1.7**
comp=Z,634nm,0.8s,baz=356							
TANN	**Tannenbergstha**	**2.54**	**247**	*e*Pn	**Pn**	**04 14 12.5**	**-0.7**
TANN				*e*Sg	**Sg**	**04 14 50.5**	**-1.9**
TANN	**Tannenbergstha**	**2.54**	**247**	Pn	**Pn**	**04 14 12.5**	**-0.7**
TANN				Sg	**Sg**	**04 14 50.5**	**-1.9**
WERD	**Werda**	**2.62**	**248**	*e*Pn	**Pn**	**04 14 13.6**	**-0.7**
WERD				*e*Sg	**Sg**	**04 14 54.0**	**-0.8**
WERD	**Werda**	**2.62**	**248**	Pn	**Pn**	**04 14 13.6**	**-0.7**
WERD				Sg	**Sg**	**04 14 54.0**	**-0.8**
NKC	**Novy Kostel**	**2.63**	**243**	*e*P	**Pn**	**04 14 14.1**	**-0.4**
NKC	**Novy Kostel**	**2.63**	**243**	*e*PN	**Pn**	**04 14 14.1**	**-0.4**
NKC				*e*PG	**Pg**	**04 14 20.6**	**-0.6**
NKC				*e*SG	**Sg**	**04 14 55.5**	**+0.1**
comp=Z,911nm,0.5s							
NKC	**Novy Kostel**	**2.63**	**243**	*e*Pn	**Pn**	**04 14 14.0**	**-0.5**
baz=60							
OJC	**Ojcow**	**2.65**	**117**	*e*Pn	**Pn**	**04 14 11.1**	**-3.6**
OJC				*i* Pg	**Pg**	**04 14 20.6**	**-0.9**
OJC				*i* Sg	**Sg**	**04 14 55.2**	**-0.6**
OJC	**Ojcow**	**2.65**	**117**	*e*Pn	**Pn**	**04 14 11.1**	**-3.6**
OJC				*e*Sg	**Sg**	**04 14 55.1**	**-0.8**
OJC	**Ojcow**	**2.65**	**117**	*e*Pn	**Pn**	**04 14 11.1**	**-3.6**
JAVC	**Velka Javorina**	**2.80**	**158**	*e*Pn	**Pn**	**04 14 17.7**	**+0.9**
baz=340							
JAVC	**Velka Javorina**	**2.80**	**158**	*e*Pg	**Pg**	**04 14 24.4**	**0.0**
baz=340							
JAVC				*e*Sg	**Sg**	**04 15 01.6**	**+0.9**
comp=Z,795nm,0.8s,baz=340							
KHC	**Kasperske Hory**	**2.85**	**216**	*e*P	**Pn**	**04 14 16.8**	**-0.7**
KHC				*e*		04 14 52.1	
KHC				smax			
comp=N,501nm,1.0s							
KHC				MLR	MLR		
comp=Z,700nm,5.5s							
KHC	**Kasperske Hory**	**2.85**	**216**	*e*Pn	**Pn**	**04 14 16.8**	**-0.7**
KHC				*e*Pg	**Pg**	**04 14 23.6**	**-1.8**
KHC				*e*Sn	**Sn**	**04 14 51.9**	**-0.6**
KHC				*e*Sg	**Sg**	**04 15 01.6**	**-0.8**
KHC	**Kasperske Hory**	**2.85**	**216**	*e*PN	**Pn**	**04 14 16.8**	**-0.7**
KHC				*e*PG	**Pg**	**04 14 23.5**	**-1.9**
KHC				*e*SN	**Sn**	**04 14 52.1**	**-0.4**
KHC				*e*SG	**Sg**	**04 15 01.3**	**-1.1**
comp=Z,501nm,1.0s							
KHC				AMS	AMS	04 15 20.0	
comp=Z,700nm,5.5s							
KHC	**Kasperske Hory**	**2.85**	**216**	*e*Pn	**Pn**	**04 14 17.1**	**-0.4**
baz=33							
MGBB	**Grossbuechelbe**	**2.90**	**240**	⇓*i*Pn	**Pn**	**04 14 17.8**	**-0.3**
MGBB	**Grossbuechelbe**	**2.90**	**240**	Pn	**Pn**	**04 14 17.8**	**-0.3**
MOX	**Moxa**	**2.96**	**255**	*e*PN	**Pn**	**04 14 17.8**	**-1.1**
MOX				*e*PG	**Pg**	**04 14 26.3**	**-1.1**
MOX				*i* SG	**Sg**	**04 15 05.9**	**+0.2**
MOX	**Moxa**	**2.96**	**255**	*e*Pn	**Pn**	**04 14 17.8**	**-1.1**
MOX				*e*Pg	**Pg**	**04 14 26.3**	**-1.1**
MOX				*e*Sg	**Sg**	**04 15 02.9**	**-2.9**
MOX	**Moxa**	**2.96**	**255**	Pn	**Pn**	**04 14 17.8**	**-1.1**
MOX	**Moxa**	**2.96**	**255**	Pg	**Pg**	**04 14 26.3**	**-1.1**
MOX				*e*Sg	**Sg**	**04 15 04.6**	**-1.1**
baz=71							
ROTZ	**Rotzenmuhle**	**3.02**	**237**	*e*Pn	**Pn**	**04 14 19.5**	**-0.3**
ROTZ				*e*Sg	**Sg**	**04 15 05.8**	**-1.9**
GEC2	**GERESS Array S**	**3.05**	**211**	*e*Pn	**Pn**	**04 14 20.1**	**-0.2**
GEC2				*e*Sg	**Sg**	**04 15 07.6**	**-1.2**
GEC2	**GERESS Array S**	**3.05**	**211**	*e*Pn	**Pn**	**04 14 20.1**	**-0.1**
GEC2				*e*Sg	**Sg**	**04 15 07.6**	**-1.2**
GEC2	**GERESS Array S**	**3.05**	**211**	Pn	**Pn**	**04 14 20.1**	**-0.1**
GEC2				Sg	**Sg**	**04 15 07.6**	**-1.2**
GERES	**GERESS Array B**	**3.05**	**211**	Pn	**Pn**	**04 14 19.9**	**-0.4**
comp=Z,13nm,0.3s,baz=32,slow=11,SNR=215							
GERES				Pg	**Pg**	**04 14 27.9**	**-1.4**
comp=Z,22nm,0.3s,baz=26,slow=16,SNR=66							
GERES				Lg		04 15 07.1	
comp=Z,33nm,0.3s,baz=32,slow=28,SNR=11							
GERES	**GERESS Array B**	**3.05**	**211**	P	**Pn**	**04 14 19.9**	**-0.3**
comp=Z,13nm,0.3s							
GERES	**GERESS Array B**	**3.05**	**211**	Pg	**Pg**	**04 14 27.9**	**-1.4**
SMOL	**Smolenice**	**3.08**	**164**	*e*Pn	**Pn**	**04 14 22.4**	**+1.8**
SMOL				*e*		04 14 29.3	
SMOL				*e*Sg	**Sg**	**04 15 09.7**	**0.0**
SMOL	**Smolenice**	**3.08**	**164**	*e*PN	**Pn**	**04 14 22.4**	**+1.8**
SMOL				*e*		04 14 29.3	
SMOL	**Smolenice**	**3.08**	**164**	*e*SG	**Sg**	**04 15 09.7**	**0.0**
SMOL	**Smolenice**	**3.08**	**164**	*e*P	**Pn**	**04 14 22.4**	**+1.8**
SMOL				*e*Sg	**Sg**	**04 15 09.7**	**0.0**
LIKS	**Likavka**	**3.09**	**140**	*e*P	**Pn**	**04 14 21.7**	**+0.9**
LIKS				*e*		04 15 01.2	
LIKS				pmax	pmax		
comp=N,520nm,0.6s							
LIKS	**Likavka**	**3.09**	**140**	*e*Pn	**Pn**	**04 14 21.7**	**+0.9**
LIKS				*e*		04 14 31.8	
LIKS				*e*Sn	**Sn**	**04 15 01.2**	**+2.8**
LIKS				*e*Sg	**Sg**	**04 15 11.4**	**+1.4**
LIKS	**Likavka**	**3.09**	**140**	*e*PN	**Pn**	**04 14 21.7**	**+0.9**
LIKS				*e*		04 14 31.8	
LIKS	**Likavka**	**3.09**	**140**	*e*SN	**Sn**	**04 15 01.2**	**+2.8**
LIKS	**Likavka**	**3.09**	**140**	*e*SG	**Sg**	**04 15 11.4**	**+1.4**
LIKS	**Likavka**	**3.09**	**140**	*e*P	**Pn**	**04 14 21.7**	**+0.9**
LIKS				*e*S	**Sn**	**04 15 01.2**	**+2.8**
comp=N,520nm,0.6s							
LIKS				*e*Sg	**Sg**	**04 15 11.4**	**+1.4**
WET	**Wettzell**	**3.12**	**223**	*e*Pn	**Pn**	**04 14 21.1**	**-0.1**
WET				*e*Sg	**Sg**	**04 15 10.6**	**-0.3**
WET	**Wettzell**	**3.12**	**223**	*e*Pn	**Pn**	**04 14 21.1**	**-0.1**
WET				*e*Sg	**Sg**	**04 15 10.6**	**-0.4**
WET	**Wettzell**	**3.12**	**223**	*e*Pn	**Pn**	**04 14 20.7**	**-0.5**
baz=40							
WET				Sg	**Sg**	**04 15 10.6**	**-0.4**
WAR	**Warsaw**	**3.14**	**74**	*e*Pg	**Pg**	**04 14 38.2**	**+7.3**
WAR				*e*Sn	**Sg**	**04 15 18.3**	**+6.8**
ZST	**Bratislava**	**3.34**	**169**	*e*P	**Pn**	**04 14 24.1**	**-0.1**
ZST				pmax	pmax		
comp=N,241nm,0.8s							
ZST	**Bratislava**	**3.34**	**169**	*e*Pn	**Pn**	**04 14 24.1**	**-0.1**
ZST				*e*		04 14 34.3	
ZST				*e*Sg	**Sg**	**04 15 17.9**	**-0.2**
ZST	**Bratislava**	**3.34**	**169**	*e*PN	**Pn**	**04 14 24.1**	**-0.1**
ZST				*e*		04 14 34.2	
ZST	**Bratislava**	**3.34**	**169**	*e*SG	**Sg**	**04 15 17.9**	**-0.2**
ZST	**Bratislava**	**3.34**	**169**	*e*P	**Pn**	**04 14 24.1**	**-0.1**
comp=N,241nm,0.8s							
ZST				*e*Sg	**Sg**	**04 15 17.9**	**-0.2**
NIE	**Niedzica**	**3.38**	**126**	*e*Pn	**Pn**	**04 14 24.1**	**-0.6**
NIE				*e*Pg	**Pg**	**04 14 34.5**	**-1.0**
NIE				*e*Sg	**Sg**	**04 15 19.2**	**-0.1**
NIE				i		04 15 20.6	
NIE	**Niedzica**	**3.38**	**126**	*e*P	**Pn**	**04 14 24.1**	**-0.6**
VYHS	**Vyhne**	**3.46**	**148**	*e*P	**Pn**	**04 14 25.2**	**-0.6**
VYHS				*e*		04 15 07.8	
VYHS				pmax	pmax		
comp=N,118nm,1.1s							
VYHS	**V

STHS e 04 14 44.9
STHS eSn Sn 04 15 16.8 -0.8
STHS e 04 15 31.8
STHS Stebnicka Huta 3.87 120 ePN Pn 04 14 31.2 -0.3
STHS e 04 14 44.9
STHS Stebnicka Huta 3.87 120 eSN Sn 04 15 16.8 -0.8
STHS e 04 15 31.8
STHS Stebnicka Huta 3.87 120 eP Pn 04 14 31.2 -0.3
STHS eS Sn 04 15 16.8 -0.8
comp=N,273nm,0.7s
HROE Hohe Rhon--Fla 3.88 258⇓iPn Pn 04 14 30.8 -0.8
HROE Hohe Rhon--Fla 3.88 258 Pn Pn 04 14 30.8 -0.8
KECS Kecovo 4.11 135 eP Pn 04 14 34.3 -0.5
KECS e 04 15 24.2
KECS pmax pmax
comp=N,59nm,0.8s
KECS Kecovo 4.11 135 ePn Pn 04 14 34.3 -0.5
KECS e 04 14 49.8
KECS eSn Sn 04 15 24.2 +0.7
KECS eSg Sg 04 15 42.4 -0.4
KECS Kecovo 4.11 135 ePN Pn 04 14 34.3 -0.5
KECS e 04 14 49.8
KECS Kecovo 4.11 135 eSN Sn 04 15 24.2 +0.7
KECS eSG Sg 04 15 42.4 -0.4
ARSA Arzberg 4.24 185 i Pn Pn 04 14 37.5 +1.0
SNR=17
ARSA ⇑iSg Sg 04 15 44.8 -2.3
comp=N,408nm,0.7s
ARSA Arzberg 4.24 185 Pn Pn 04 14 37.5 +0.9
SNR=17
ARSA Sg Sg 04 15 44.8 -2.2
comp=N,408nm,0.7s
CRVS Cervenica-Dubn 4.29 125 eP Pn 04 14 37.0 -0.2
CRVS pmax pmax
comp=N,149nm,1.0s
CRVS Cervenica-Dubn 4.29 125 ePn Pn 04 14 37.0 -0.2
CRVS e 04 14 53.2
CRVS eSg Sg 04 15 49.5 +1.0
CRVS Cervenica-Dubn 4.29 125 ePN Pn 04 14 37.0 -0.2
CRVS e 04 14 53.2
CRVS Cervenica-Dubn 4.29 125 eSG Sg 04 15 49.5 +1.0
CRVS Cervenica-Dubn 4.29 125 eP Pn 04 14 37.0 -0.2
comp=N,149nm,1.0s
CRVS eSg Sg 04 15 49.5 +1.0
PSZ Piszkesteto 4.32 144⇑P Pn 04 14 38.3 +0.7
PSZ Piszkesteto 4.32 144 ePn Pn 04 14 37.5 -0.1
PSZ Piszkesteto 4.32 144⇑ePn Pn 04 14 38.0 +0.3
PSZ e 04 15 55.2
PSZ Piszkesteto 4.32 144⇑iP Pn 04 14 38.3 +0.7
PSZ Piszkesteto 4.32 144 ePn Pn 04 14 37.5 -0.1
PSZ Piszkesteto 4.32 144 P Pn 04 14 38.3 +0.7
BGLD Berchtesgaden 4.32 209⇓iPn Pn 04 14 37.5 -0.2
BGLD Berchtesgaden 4.32 209 Pn Pn 04 14 37.5 -0.2
KWP Kalwaria Pacla 4.59 111 ePn Pn 04 14 40.1 -1.3
KWP ePg Pg 04 14 54.7 -4.0
KWP Kalwaria Pacla 4.59 111⇓P Pn 04 14 40.2 -1.1
KWP Kalwaria Pacla 4.59 111 ePn Pn 04 14 39.5 -1.8
KWP ePg Pg 04 14 55.0 -3.7
KWP Kalwaria Pacla 4.59 111⇓iP Pn 04 14 40.2 -1.1
KWP Kalwaria Pacla 4.59 111 ePn Pn 04 14 39.5 -1.8
KWP Kalwaria Pacla 4.59 111 P Pn 04 14 40.2 -1.1
KOLS Kolonicke sedl 4.70 120 eP Pn 04 14 42.3 -0.6
KOLS pmax pmax
comp=N,258nm,1.1s
KOLS Kolonicke sedl 4.70 120 ePn Pn 04 14 42.3 -0.6
KOLS e 04 15 00.8
KOLS eSg Sg 04 16 02.0 +0.3
KOLS Kolonicke sedl 4.70 120 ePN Pn 04 14 42.3 -0.6
KOLS e 04 15 00.8
KOLS Kolonicke sedl 4.70 120 eSG Sg 04 16 02.0 +0.3
KOLS Kolonicke sedl 4.70 120 eP Pn 04 14 42.3 -0.6
comp=N,258nm,1.1s
KOLS eSg Sg 04 16 02.0 +0.3
COP Copenhagen 4.76 334 i P Pg 04 15 03.2 +1.3
COP i S Sg 04 16 01.9 -1.6
KBA Koelnbreinsper 4.76 203 i Pn Pn 04 14 44.2 +0.5
SNR=34
KBA ⇑iSg Sg 04 16 03.1 -0.4
comp=N,155nm,0.6s
KBA Koelnbreinsper 4.76 203 Pn Pn 04 14 44.2 +0.6
SNR=34
KBA Sg Sg 04 16 03.1 -0.4
comp=N,155nm,0.6s
SOKA Soboth 4.85 189⇑iPn Pn 04 14 45.2 +0.3
SOKA ⇓iSg Sg 04 16 04.7 -1.9
comp=N,114nm,1.1s
SOKA Soboth 4.85 189 Pn Pn 04 14 45.2 +0.3
SOKA Sg Sg 04 16 04.7 -1.8
comp=N,114nm,1.1s
UZH Uzhgorod 4.89 123 eP Pn 04 14 45.0 -0.5
UZH eS Sn 04 15 42.0 -0.7
UZH pmax pmax
comp=N,260nm,1.2s
UZH pmax pmax
comp=E,340nm,1.2s
UZH pmax pmax
comp=Z,160nm,1.2s
UZH Uzhgorod 4.89 123 eP Pn 04 14 45.0 -0.5
UZH eS Sn 04 15 42.0 -0.7
SUW Suwalki 4.99 57 ePn Pn 04 14 45.8 -1.0
SUW ePg Pg 04 15 04.8 -1.5
SUW eSn Sn 04 15 42.3 -2.8
SUW eSg Sg 04 16 01.3 -10
SUW Suwalki 4.99 57 eP Pn 04 14 45.8 -1.0
SUW e 04 15 42.3
SUW Suwalki 4.99 57 ePn Pn 04 14 45.0 -1.8
SUW ePg Pg 04 15 03.5 -2.8
SUW Suwalki 4.99 57 ePn Pn 04 14 45.0 -1.8
SUW Suwalki 4.99 57 eP Pn 04 14 45.8 -1.0
SUW Suwalki 4.99 57 ePg Pg 04 15 03.5 -2.8
SUW eS Sn 04 15 42.3 -2.8
TOD Tromm 5.02 251 P Pn 04 14 45.1 -2.2
TOD Tromm 5.02 251 P Pn 04 14 45.1 -2.2
OBKA Obir 5.07 192⇑iPn Pn 04 14 48.5 +0.5
OBKA ⇑iSg Sg 04 16 15.7 +2.1
comp=Z,282nm,1.0s
OBKA Obir 5.07 192 Pn Pn 04 14 48.5 +0.5
OBKA Sg Sg 04 16 15.7 +2.0
comp=Z,282nm,1.0s
WATA Walderalm 5.09 217⇑iPn Pn 04 14 48.5 +0.3
SNR=26
WATA ⇑iPg Pg 04 15 07.8 -0.5
WATA ⇑iSg Sg 04 16 15.6 +1.4
comp=Z,115nm,0.6s
WATA Walderalm 5.09 217 Pn Pn 04 14 48.5 +0.3
SNR=26
WTTA Wattenberg 5.13 217 i Pn Pn 04 14 49.6 +0.9
SNR=27
WTTA ⇑iSg Sg 04 16 16.5 +1.1
comp=Z,150nm,0.7s
WTTA Wattenberg 5.13 217 Pn Pn 04 14 49.6 +0.9
SNR=27
WTTA Sg Sg 04 16 16.5 +1.1
comp=Z,150nm,0.7s
STU Stuttgart 5.21 241 eP Pn 04 14 47.5 -2.3
STU pmax pmax
comp=Z,61nm,0.9s
STU Stuttgart 5.21 241 ePn Pn 04 14 47.5 -2.3
comp=Z,61nm,0.9s
STU ePg Pg 04 15 10.1 -0.4
STU eSg Sg 04 16 17.3 -0.7
STU Stuttgart 5.21 241 eP Pn 04 14 47.5 -2.3
comp=Z,61nm,0.9s
MOTA Moosalm 5.27 220⇓iPn Pn 04 14 50.6 -0.1
SNR=26
MOTA ⇑iSn Sn 04 15 50.1 -1.9
MOTA ⇑iSg Sg 04 16 21.5 +1.6
comp=Z,195nm,0.9s
MOTA Moosalm 5.27 220 Pn Pn 04 14 50.6 -0.1
SNR=26
MOTA Sn Sn 04 15 50.1 -1.9
MOTA Sg Sg 04 16 21.5 +1.6
comp=Z,195nm,0.9s
ABTA Abfaltersbach 5.29 208⇓iPn Pn 04 14 51.6 +0.7
SNR=38
ABTA ⇑iSg Sg 04 16 20.9 +0.4
comp=Z,119nm,0.6s
ABTA Abfaltersbach 5.29 208 Pn Pn 04 14 51.6 +0.7
SNR=38
ABTA Sg Sg 04 16 20.9 +0.4
comp=Z,119nm,0.6s
RETA Reutte 5.30 223⇑iPn Pn 04 14 50.6 -0.5
SNR=20
RETA Reutte 5.30 223 Pn Pn 04 14 50.6 -0.5
SNR=20
LVV L'vov 5.30 105 eP Pn 04 14 51.6 +0.5
LVV i S Sn 04 15 51.4 -1.4
LVV MLR MLR
comp=Z,300nm,2.0s
LVV L'vov 5.30 105 eP Pn 04 14 51.6 +0.5
comp=Z,300nm,2.0s
LVV i S Sn 04 15 51.4 -1.4
FVI Forni Avoltri 5.35 205 P Pn 04 14 52.6 +0.8
FVI Forni Avoltri 5.35 205 P Pn 04 14 52.6 +0.8
PTCC Patocco-Chiusa 5.39 201 Pn Pn 04 14 52.7 +0.4
comp=Z,141nm,0.8s
PTCC Patocco-Chiusa 5.39 201 Pn Pn 04 14 52.7 +0.4
comp=Z,141nm,0.8s
KOE Koeppel 5.40 262 ePn Pn 04 14 50.8 -1.7
KOE Koeppel 5.40 262 Pn Pn 04 14 50.8 -1.7
PDKS Podkum 5.47 188 i Pn Pn 04 14 54.4 +1.0
PDKS i Sn Sb 04 16 16.3 +3.2
PDKS
comp=Z,382nm,1.4s
PDKS Podkum 5.47 188 i Pn Pn 04 14 54.4 +1.0
PDKS i Sn Sb 04 16 16.3 +3.2
CADS Cadrg 5.48 198 i Pn Pn 04 14 53.5 -0.1
CADS e 04 15 17.6
CADS eSn Sg 04 16 12.0 -15
CADS
comp=Z,248nm,0.9s
CADS Cadrg 5.48 198 i Pn Pn 04 14 53.5 -0.1
CADS e 04 15 17.6
CADS eSn Sg 04 16 12.0 -15
CADS Cadrg 5.48 198 i Pn Pn 04 14 53.5 -0.1
PKSM Moragy 5.52 161 P Pn 04 14 54.6 +0.4
PKSM Moragy 5.52 161⇓P Pn 04 14 54.9 +0.8
PKSM Moragy 5.52 161⇓iP Pn 04 14 54.9 +0.7
PKSM Moragy 5.52 161 P Pn 04 14 54.6 +0.4
PKSM Moragy 5.52 161⇓ePn Pn 04 14 55.1 +0.9
LJU Ljubljana 5.53 192 ePn Pn 04 14 55.2 +0.9
LJU eSn Sg 04 16 20.5 -7.9
HOBG Hohbusch 5.54 268 ePn Pn 04 14 53.5 -0.9
HOBG Hohbusch 5.54 268 Pn Pn 04 14 53.5 -0.9
KTD Kalmit 5.57 250 P Pn 04 14 55.2 +0.4
KTD Kalmit 5.57 250 P Pn 04 14 55.2 +0.4
VOY Vojsko 5.64 196 ePn Pn 04 14 55.7 -0.1
VOY e 04 15 21.5
VOY e 04 16 33.8
VOY e 04 16 38.2
VOY Vojsko 5.64 196 ePn Pn 04 14 55.7 -0.1
BNS Bensberg 5.64 268 ePn Pn 04 14 55.3 -0.5
BNS Bensberg 5.64 268 Pn Pn 04 14 55.3 -0.5
ABH Alteburg 5.68 257 P Pn 04 14 55.5 -0.8
ABH Alteburg 5.68 257 P Pn 04 14 55.5 -0.8
FETA Feichten 5.68 220⇓iPn Pn 04 14 56.9 +0.6
SNR=22
FETA Feichten 5.68 220 Pn Pn 04 14 56.9 +0.6
SNR=22
BGG Burgeitz 5.71 261 ePn Pn 04 14 55.5 -1.2
BGG Burgeitz 5.71 261 Pn Pn 04 14 55.5 -1.2
DAVA Damuels 5.84 227⇑iPn Pn 04 14 57.9 -0.7
DAVA ⇑iSg Sg 04 16 41.6 +3.3
comp=Z,121nm,0.6s
DAVA Damuels 5.84 227 Pn Pn 04 14 57.9 -0.6
LANF Langenberg 5.89 248 P Pn 04 14 58.1 -1.1
LANF Langenberg 5.89 248 P Pn 04 14 58.1 -1.1
STB Steinbach 5.92 265 ePn Pn 04 14 59.1 -0.5
STB eSn Sn 04 16 04.8 -3.2
comp=Z,42nm,0.6s
STB Steinbach 5.92 265 Pn Pn 04 14 59.1 -0.5
STB Sn Sn 04 16 04.8 -3.2
comp=Z,42nm,0.6s
BFO Black Forest 5.93 241 eP Pn 04 14 58.2 -1.6
BFO pmax pmax
comp=Z,51nm,0.8s
BFO Black Forest 5.93 241 ePn Pn 04 14 58.2 -1.6
comp=Z,51nm,0.8s
BFO ePg Pg 04 15 25.2 +0.9
BFO eSg Sg 04 16 41.4 +0.2
BFO Black Forest 5.93 241 eP Pn 04 14 58.2 -1.6
comp=Z,51nm,0.8s
APPI Appiano 5.94 215 Pn Pn 04 15 00.8 +0.9
APPI Appiano 5.94 215 Pn Pn 04 15 00.8 +0.9
BOJS Bojanci 6.00 186 i Pn Pn 04 15 01.4 +0.7
BOJS Bojanci 6.00 186 i Pn Pn 04 15 01.4 +0.7
RUP Ruppelstein 6.04 256 P Pn 04 15 00.1 -1.1
RUP Ruppelstein 6.04 256 P Pn 04 15 00.1 -1.1
CTI Castel Tesino 6.18 210 P Pn 04 15 04.3 +1.1
CTI Castel Tesino 6.18 210 P Pn 04 15 04.3 +1.1
DAVOX Davos/Dischmat 6.23 223 Pn Pn 04 15 03.1 -0.7
comp=Z,2.0nm,0.3s,baz=6.6,slow=13,SNR=24
DAVOX Pg Pg 04 15 23.9 -6.1
comp=Z,0.7nm,0.3s,baz=280,slow=20,SNR=3.3
DAVOX Lg 04 16 49.0
comp=Z,3.0nm,0.3s,baz=196,slow=22,SNR=4.5
DAVOX Davos/Dischmat 6.23 223 P Pn 04 15 03.1 -0.7
KLL Kalltalsperre 6.24 266 ePn Pn 04 15 03.3 -0.7
KLL Kalltalsperre 6.24 266 Pn Pn 04 15 03.3 -0.7
DREG Dreilaegerbach 6.28 266 ePn Pn 04 15 02.8 -1.8
DREG Dreilaegerbach 6.28 266 Pn Pn 04 15 02.8 -1.8
DRGR 6.38 135 P Pn 04 15 06.1 +0.2
DRGR 6.38 135⇑P Pn 04 15 05.8 -0.1
DRGR 6.38 135⇑iP Pn 04 15 05.8 -0.1
DRGR 6.38 135⇑P Pn 04 15 05.8 -0.1
MEM Membach 6.43 266 P Pn 04 15 05.2 -1.4
MUD Monsted U'grnd 6.46 323 i P Pg 04 15 35.5 +1.1
CDF Champ du Feu 6.47 245 ePn Pn 04 15 04.1 -3.1
CDF eSg Sg 04 16 51.5 -7.1
MABI Malga Bissina 6.56 216 Pn Pn 04 15 10.0 +1.5
MABI Malga Bissina 6.56 216 Pn Pn 04 15 10.0 +1.5
WLF Walferdange 6.60 258 P Pn 04 15 07.8 -1.1
WLF Walferdange 6.60 258 eP Pn 04 15 08.8 -0.1
WLF pmax pmax
comp=Z,43nm,1.1s
WLF Walferdange 6.60 258 ePn Pn 04 15 08.8 -0.2
comp=Z,43nm,1.1s
WLF eSg Sg 04 17 01.4 -1.2
WLF Walferdange 6.60 258 eP Pn 04 15 08.8 -0.1
comp=Z,43nm,1.1s
WLF eSg Sg 04 17 01.4 -1.2
ECH Echery 6.65 244 eP Pn 04 15 07.4 -2.2
ECH pmax pmax
comp=Z,17nm,0.8s
ECH Echery 6.65 244 ePn Pn 04 15 07.4 -2.2
comp=Z,17nm,0.8s
ECH ePg Pg 04 15 39.6 +1.5
ECH eSg Sg 04 17 06.0 +1.9
ECH Echery 6.65 244 ePn Pn 04 15 07.4 -2.2
comp=Z,17nm,0.8s
ECH Echery 6.65 244 P Pn 04 15 09.4 -0.2
ECH Echery 6.65 244 ePg Pg 04 15 39.6 +1.6
MOF Molkenrain 6.86 242 P Pn 04 15 12.2 -0.4
MOF Molkenrain 6.86 242 P Pn 04 15 12.2 -0.4
BZS Buzias 6.90 146 P Pn 04 15 14.1 +1.0
BZS Buzias 6.90 146⇑P Pn 04 15 13.6 +0.5
BZS Buzias 6.90 146⇑iP Pn 04 15 13.6 +0.5
BZS Buzias 6.90 146⇑P Pn 04 15 13.6 +0.5
BCLA Clavier 6.92 265 P Pn 04 15 11.8 -1.5
NVLJ Novalja 6.96 187 ePn Pn 04 15 13.8 -0.2
NVLJ Novalja 6.96 187 ePn Pn 04 15 13.7 -0.2
HINF Hinteralfeld 7.04 242 ePn Pn 04 15 11.5 -3.5
HINF eSg Sg 04 17 10.8 -5.9
comp=Z,254nm,1.0s
BUR08 Bucovina Ar. S 7.04 119 ePn Pn 04 15 15.0 0.0
BUR08 Bucovina Ar. S 7.04 119 ePn Pn 04 15 15.0 0.0
VIKU Vikbolandet 7.05 2 P Pn 04 15 12.8 -2.3
BUR01 Bucovina Ar. S 7.07 120 P Pn 04 15 15.5 +0.2
BUR01 Bucovina Ar. S 7.07 120 P Pn 04 15 15.3 +0.1
BURAR Bucovina Array 7.07 120 P Pn 04 15 15.3 -0.1
BURAR Bucovina Array 7.07 120⇑P Pn 04 15 15.0 -0.4
BURAR Bucovina Array 7.07 120⇑iP Pn 04 15 15.0 -0.4
BURAR Bucovina Array 7.07 120⇑P Pn 04 15 15.0 -0.4
IIGN Ignalina 7.18 53 eP Pg 04 15 44.8 -3.5
IIGN Ignalina 7.18 53 eP Pg 04 15 44.8 -3.4
SNR=40
HAU Haudompre 7.22 245 ePn Pn 04 15 14.1 -3.3
HAU eSg Sg 04 17 15.4 -7.0
comp=Z,280nm,1.1s
ISAL Salakas 7.24 52 eP Pg 04 15 46.6 -2.8
ISAL Salakas 7.24 52 eP Pg 04 15 46.6 -2.8
SNR=40
NACGM Naroch 7.27 58 e Pn 04 15 16.0 -2.1
GIVF Givet 7.29 264 ePn Pn 04 15 13.9 -4.5
GIVF eSg Sg 04 17 18.0 -6.7
comp=Z,182nm,0.9s
THEF They Montfort 7.31 248 P Pn 04 15 17.7 -1.0
THEF They Montfort 7.31 248 P Pn 04 15 17.7 -1.0
IZAR Zarasai 7.39 51 eP Pg 04 15 49.5 -2.8
IZAR Zarasai 7.39 51 eP Pg 04 15 49.5 -2.8
SNR=40
IDID Didziasalis 7.42 55 eP Pb 04 15 44.1 +3.8
IDID Didziasalis 7.42 55 eP Pb 04 15 44.1 +3.8
SNR=40
DOU Dourbes 7.43 264 P Pn 04 15 21.3 +0.9
GZR Gura Zlata 7.52 141 P Pn 04 15 22.9 +1.3
GZR Gura Zlata 7.52 141⇑P Pn 04 15 22.8 +1.2
GZR Gura Zlata 7.52 141⇑iP Pn 04 15 22.8 +1.2
GZR Gura Zlata 7.52 141⇑P Pn 04 15 22.8 +1.2
NYNU Nynaeshamn 7.63 7 P Pn 04 15 20.5 -2.5
NASU Vaermlandsnaes 7.66 349 P Pn 04 15 20.7 -2.7
BAIF Baives 7.68 264 ePn Pn 04 15 19.7 -4.1
BAIF eSg Sg 04 17 30.1 -7.3
comp=Z,220nm,1.2s
MICGM Minsk 7.72 62⇓eP Pg 04 15 50.0 -8.6
SFTF Sexfontaines 7.87 250 eSg Sg 04 17 36.0 -7.4
comp=Z,482nm,1.3s
BOB Bobbio (Coli) 8.05 216 P Pn 04 15 29.4 +0.5
BOB Bobbio (Coli) 8.05 216 P Pn 04 15 29.4 +0.5
STRU Stroemstad 8.08 342 P Pn 04 15 25.7 -3.6
CABF La Chapelle 8.19 237 ePn Pn 04 15 27.6 -3.1
CABF eSg Sg 04 17 45.5 -8.0
comp=Z,228nm,1.0s
KIEV Kiev 8.28 90 eP Pn 04 15 29.2 -2.8
KIEV pmax pmax
comp=Z,35nm,0.7s
KIEV Kiev 8.28 90 ePn Pn 04 15 29.2 -2.8
comp=Z,35nm,0.7s
KIEV ePg Pg 04 16 05.9 -3.4
KIEV Kiev 8.28 90 eP Pn 04 15 29.2 -2.8
comp=Z,35nm,0.7s
AKASG Malin Array Be 8.29 90 Pn Pn 04 15 28.5 -3.6
comp=Z,4.1nm,0.3s,baz=281,slow=12,SNR=19
AKASG Sn Sn 04 16 57.9 -8.5
comp=Z,3.7nm,0.3s,baz=273,slow=23,SNR=6.8
AKASG Lg 04 17 54.3
comp=Z,0.8nm,0.3s,baz=272,slow=26,SNR=3.9
AKASG Malin Array Be 8.29 90 Pn Pn 04 15 28.5 -3.6
AKASG Sn Sn 04 16 57.9 -8.5
AKASG Lg 04 17 54.3
AKBB Malin Array Si 8.29 90 eP Pn 04 15 29.4 -2.7
AKBB e 04 17 02.0
AKBB Malin Array Si 8.29 90 ePn Pn 04 15 29.4 -2.7
AKBB ePg Pg 04 16 05.8 -3.8
AKBB eSn Sn 04 17 02.0 -4.4
AKBB eSg Sg 04 18 03.8 +6.9
AKBB Malin Array Si 8.29 90 eP Pn 04 15 29.4 -2.7
NRTU Norrtaelje 8.35 9 P Pn 04 15 29.9 -2.9
SNTG Esanatoglia 8.50 196 Pn Pn 04 15 34.2 -0.8
comp=Z,2.1nm,0.5s
SNTG Esanatoglia 8.50 196 Pn Pn 04 15 34.2 -0.8
comp=Z,2.1nm,0.5s
LPL La Plagne 8.62 230 ePg Pg 04 16 09.7 -6.0
LPL eSg Sg 04 17 59.0 -8.3
comp=Z,138nm,1.3s
LPL La Plagne 8.62 230 eP Pn 04 15 36.8 +0.2
LPL ePg Pg 04 16 09.7 -6.0
LPL eSg Sg 04 17 59.0 -8.3
LPL La Plagne 8.62 230 eP Pn 04 15 36.8 +0.2
LPG La Plagne 8.62 230 eP Pn 04 15 37.4 +0.7
LPG eSg Sg 04 17 59.7 -7.8
comp=Z,201nm,1.2s
LPG La Plagne 8.62 230 eP Pn 04 15 37.4 +0.7
HFS Hagfors 8.79 352 Pn Pn 04 15 35.4 -3.5
comp=Z,0.4nm,0.3s,baz=174,slow=15,SNR=11
HFS Lg 04 18 02.6
comp=Z,0.4nm,0.3s,baz=163,slow=26,SNR=4.3
HFS Hagfors 8.79 352 P Pn 04 15 35.4 -3.5
QLNO Quiliano 8.85 219 Pn Pn 04 15 40.8 +1.0
QLNO Quiliano 8.85 219 Pn Pn 04 15 40.8 +1.0
MLR Muntele Rosu 8.85 129 Pn Pn 04 15 35.6 -4.2
comp=Z,0.1nm,0.3s,baz=13,slow=23,SNR=2.2
NRCA Norcia 8.88 194 Pn Pn 04 15 39.6 -0.6
comp=Z,5.2nm,0.7s
NRCA Norcia 8.88 194 Pn Pn 04 15 39.6 -0.6
comp=Z,5.2nm,0.7s
VRI Vrincioaia 8.98 125⇓iP Pn 04 15 49.8 +8.2
BNI Bardonecchia 8.99 228 eP Pn 04 15 42.2 +0.5
BNI pmax pmax
comp=Z,9.0nm,0.8s
BNI Bardonecchia 8.99 228 ePn Pn 04 15 42.2 +0.5
comp=Z,8.8nm,0.8s
BNI Bardonecchia 8.99 228 eP Pn 04 15 42.2 +0.5
comp=Z,9.0nm,0.8s
LOR Lormes 9.03 247 ePn Pn 04 15 39.5 -2.8
baz=66
LOR eSg Sg 04 18 11.9 -8.7
comp=Z,80nm,1.0s
LOR Lormes 9.03 247 ePn Pn 04 15 39.5 -2.8
baz=66
LOR eSg Sg 04 18 11.9 -8.7
comp=Z,40nm,1.0s
MBDF Montbardon 9.19 226 eP Pn 04 15 46.3 +1.8
MBDF eSg Sx 04 18 17.6
comp=Z,146nm,1.4s
MBDF Montbardon 9.19 226 eP Pn 04 15 46.3 +1.8
VSU Vasula 9.28 37c iP Pn 04 15 44.3 -1.4
VSU pmax pmax
comp=Z,54nm,1.1s
VSU Vasula 9.28 37 i P Pn 04 15 44.3 -1.4
comp=Z,54nm,1.1s
SSF Saint Saulge 9.35 247 ePn Pn 04 15 43.4 -3.2
SSF eSg Sx 04 18 22.6
comp=Z,56nm,1.0s
KIS Kishinev 9.44 113 eP Pn 04 15 53.0 +5.2
SAOF Saorge 9.45 221 P Pn 04 15 47.3 -0.7
SAOF Saorge 9.45 221 P Pn 04 15 47.3 -0.7
AUTN L'Aution 9.49 221 P Pn 04 15 48.8 +0.2
AUTN L'Aution 9.49 221 P Pn 04 15 48.8 +0.2
AVF Avril sur Loir 9.59 246 ePn Pn 04 15 46.4 -3.5
LUCF Luceram 9.61 221 P Pn 04 15 49.1 -1.1
LUCF Luceram 9.61 221 P Pn 04 15 49.1 -1.1
MVIF Mont Vial 9.69 222 P Pn 04 15 50.4 -0.9
MVIF Mont Vial 9.69 222 P Pn 04 15 50.4 -0.9
CALN Calern 9.92 222 P Pn 04 15 54.5 +0.1
CALN Calern 9.92 222 P Pn 04 15 54.5 +0.1
NB2 NORSAR Subarra 9.97 346 Pn Pn 04 15 51.0 -4.0
comp=Z,3.7nm,1.2s,baz=162,slow=14
NB2 NORSAR Subarra 9.97 346 Pn Pn 04 15 51.0 -4.0
comp=Z,3.7nm,1.2s,SNR=6.9
NOA NORSAR Array B 9.97 346 Pn Pn 04 15 51.0 -4.0
comp=Z,0.4nm,0.3s,baz=163,slow=12,SNR=6.8
NOA Lg 04 18 39.0
comp=Z,0.6nm,0.3s,baz=122,slow=7.7,SNR=5.2
BGF Bois d'Agland 10.01 246 ePn Pn 04 15 51.9 -3.7
FRF La Foret Royal 10.17 223 eP Pn 04 15 59.0 +1.1
FRF La Foret Royal 10.17 223 eP Pn 04 15 59.0 +1.1
ARNU Arnoeviken 10.27 3 P Pn 04 15 56.3 -2.9
HASU Hassela 10.71 1 P Pn 04 16 02.1 -3.1
FINES FINESS Array B 11.40 25 Pn Pn 04 16 10.7 -3.9
comp=Z,1.1nm,0.3s,baz=190,slow=9.7,SNR=18
FINES FINESS Array B 11.40 25 P Pn 04 16 10.7 -3.9
KAF Kangasniemi 12.02 24 eP Pn 04 16 17.7 -5.4
KAF pmax pmax
comp=Z,4.0nm,0.6s
KAF Kangasniemi 12.02 24 ep Pn 04 16 17.7 -5.4
comp=Z,4.1nm,0.6s
KAF Kangasniemi 12.02 24 ep Pn 04 16 17.7 -5.4
comp=Z,4.1nm,0.6s
EKA Eskdalemuir Ar 12.13 296 Pn Pn 04 16 20.2 -4.4
baz=99,slow=13,SNR=14
OBN Obninsk 12.76 65⇑eP Pn 04 16 28.0 -5.2
OBN eS Sn 04 18 49.1 -6.7
OBN pmax pmax
comp=Z,23nm,1.3s
MOS Moscow 13.45 63 eP Pn 04 16 36.1 -6.5
MOS pmax pmax
comp=Z,33nm,1.0s
MOS pmax pmax
comp=Z,148nm,1.8s
JOF Joensuu 14.07 30 eP Pn 04 16 44.8 -6.3
JOF pmax pmax
comp=Z,4.0nm,0.6s
JOF Joensuu 14.07 30 ep Pn 04 16 44.8 -6.3
comp=Z,3.8nm,0.6s
JOF Joensuu 14.07 30 ep Pn 04 16 44.8 -6.3
comp=Z,3.8nm,0.6s
VOR Voronezh 14.34 80 P Pn 04 16 50.0 -4.8
VOR pmax pmax
comp=Z,200nm,1.2s

VSR Storozhevoye 14.40 82 *eP* **Pn 04 16 48.7 -6.9**
VSR *eS* **Sn 04 19 30.5 -5.4**
VSR pmax pmax
comp=N,7.0nm,0.5s
VSR pmax pmax
comp=E,6.0nm,0.5s
VSR pmax pmax
comp=Z,10.0nm,0.5s
VSR smax
comp=N,30nm,1.0s
VSR smax
comp=E,40nm,1.0s
VSR smax
comp=Z,10.0nm,1.0s
VORD Divnogorie 14.53 83 *eP* **Pn 04 16 56.0 -1.3**
VORD pmax pmax
comp=N,20nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.6s
VORD pmax pmax
comp=Z,9.0nm,0.6s
VRHR Novokhopersk 15.94 81 *eP* **Pn 04 17 15.0 -1.2**
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.6s
VRHR pmax pmax
comp=Z,30nm,0.6s
BRTR Keskin Array B 16.93 127 Pn **Pn 04 17 29.1 +0.2**
comp=Z,0.1nm,0.3s,baz=322,slow=7.8,SNR=5.9
BRTR Keskin Array B 16.93 127 P **Pn 04 17 29.1 +0.2**
APA Apatity 18.25 21⇓*eP* **Pn 04 17 39.5 -5.6**
APA pmax pmax
comp=Z,13nm,0.9s
ESDC Sonseca Array 18.28 238 Pn **Pn 04 17 45.1 -0.6**
comp=Z,0.1nm,0.3s,baz=50,slow=11,SNR=7.2
ESDC Sonseca Array 18.28 238 Pn **Pn 04 17 45.1 -0.6**
ARCES ARCESS Array B 18.66 10 Pn **Pn 04 17 43.8 -6.3**
comp=Z,0.7nm,0.3s,baz=191,slow=12,SNR=25
ARCES ARCESS Array B 18.66 10 P **Pn 04 17 43.8 -6.3**
ARCES pmax pmax
comp=Z,1.0nm,0.3s
KEV Kevo 19.05 12 *eP* **Pn 04 17 50.2 -4.6**
KEV pmax pmax
comp=Z,8.0nm,0.6s
KEV Kevo 19.05 12 *ep* **Pn 04 17 50.2 -4.6**
comp=Z,8.4nm,0.6s
KEV Kevo 19.05 12 *ep* **Pn 04 17 50.2 -4.6**
comp=Z,8.4nm,0.6s
KIV Kislovodsk 19.32 102⇓*eP* **Pn 04 17 51.9 -6.3**
KIV *eS* **Sn 04 21 30.3 -5.0**
KIV pmax pmax
comp=Z,9.0nm,1.8s
ZEI Tsey 20.71 104 *eP* **P 04 18 11.7 -0.7**
ZEI pmax pmax
comp=Z,5.0nm,0.5s
ZEI Tsey 20.71 104 *eP* **P 04 18 11.7 -0.7**
comp=Z,5.0nm,0.5s
GNI Garni 22.79 109 *eP* **P 04 18 34.1 -0.6**
GNI pmax pmax
comp=Z,31nm,1.3s
GNI Garni 22.79 109 *eP* **P 04 18 34.1 -0.7**
comp=Z,31nm,1.3s,mb4.7
GNI Garni 22.79 109 *eP* **P 04 18 34.1 -0.6**
comp=Z,31nm,1.3s,mb4.7
ASF Jabal al Asfar 24.58 134 P **P 04 18 50.8 -1.5**
comp=Z,0.7nm,0.5s,mb3.6,baz=185,slow=19,SNR=3.6
ASF Jabal al Asfar 24.58 134 P **P 04 18 50.8 -1.5**
ASF pmax pmax
comp=Z,1.0nm,0.5s
ARU Arti 25.15 62 *d iP* **P 04 18 55.6 -1.7**
ARU *e* 04 19 26.6
ARU S **S 04 23 21.5 -1.4**
ARU pmax pmax
comp=Z,13nm,1.0s,mb4.6
ARU Arti 25.15 62 *eP* **P 04 18 55.4 -1.9**
comp=Z,13nm,0.9s,mb4.7
ARU Arti 25.15 62 *i P* **P 04 18 55.6 -1.7**
comp=Z,13nm,1.0s,mb4.6
ARU S **S 04 23 21.5 -1.4**
AKTK Aktyubinsk 26.16 76 P **P 04 19 05.2 -1.2**
AKTK Aktyubinsk 26.16 76 P **P 04 19 05.2 -1.3**
comp=Z,5.0nm,0.7s,mb4.2
AKTO Aktyubinsk 26.16 76 P **P 04 19 05.2 -1.2**
comp=Z,5.3nm,0.7s,mb4.3,baz=289,slow=10,SNR=20
AKTO Aktyubinsk 26.16 76 P **P 04 19 05.2 -1.3**
AKTO pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
SVE Sverdlovsk 26.24 61⇑*eP* **P 04 19 06.1 -1.0**
SVE pmax pmax
comp=Z,19nm,1.4s,mb4.5
SVE Sverdlovsk 26.24 61 *eP* **P 04 19 06.1 -1.0**
comp=Z,19nm,1.4s,mb4.5
ABKAR Akbulak array 27.74 77 *eP* **P 04 19 19.6 -1.1**
comp=Z,0.8nm,0.6s,mb3.7
ABKAR Akbulak array 27.74 77 *eP* **P 04 19 19.6 -1.1**
comp=Z,0.8nm,0.6s,mb3.7
TAM Tamanrasset 29.79 200 *eP* **P 04 19 39.2 +0.1**
TAM pmax pmax
comp=Z,6.0nm,1.3s,mb4.3
TAM Tamanrasset 29.79 200 *eP* **P 04 19 39.2 +0.2**
comp=Z,5.5nm,1.3s,mb4.2
TAM Tamanrasset 29.79 200 *eP* **P 04 19 39.2 +0.1**
comp=Z,5.5nm,1.3s,mb4.2
BRVK Borovoye 32.53 66 *eP* **P 04 20 03.0 0.0**
BRVK pmax pmax
comp=Z,19nm,1.4s,mb4.8
BRVK Borovoye 32.53 66 *eP* **P 04 20 03.0 0.0**
comp=Z,19nm,1.4s,mb4.8
BRVK Borovoye 32.53 66 *eP* **P 04 20 03.0 0.0**
comp=Z,19nm,1.4s,mb4.8
BVAR Borovoye Array 32.60 66 P **P 04 20 03.5 -0.1**
comp=Z,2.3nm,0.6s,mb4.3,baz=305,slow=5.2,SNR=14
BVAR Borovoye Array 32.60 66 P **P 04 20 03.5 -0.1**
BVAR pmax pmax
comp=Z,2.0nm,0.6s
BVAR Borovoye Array 32.60 66 P **P 04 20 03.5 -0.1**
comp=Z,2.0nm,0.6s,mb4.2
KURK Kurchatov 38.20 66 *eP* **P 04 20 50.6 -1.2**
KURK pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
KURK Kurchatov 38.20 66 *eP* **P 04 20 50.6 -1.1**
comp=Z,2.9nm,0.8s,mb4.1
KURK Kurchatov 38.20 66 *eP* **P 04 20 50.6 -1.2**
comp=Z,2.9nm,0.8s,mb4.1
AAK Ala-Archa 39.78 79 *eP* **P 04 21 05.2 +0.1**
AAK pmax pmax
comp=Z,7.0nm,0.9s,mb4.3
AAK Ala-Archa 39.78 79 *eP* **P 04 21 05.2 +0.2**
comp=Z,6.7nm,0.9s,mb4.3
AAK Ala-Archa 39.78 79 *eP* **P 04 21 05.2 +0.1**
comp=Z,6.7nm,0.9s,mb4.3
ZALV Zalesovo Beam 40.22 59 P **P 04 21 06.7 -1.9**
comp=Z,1.9nm,0.8s,mb3.8,baz=302,slow=8.5,SNR=8.4
ZALV Zalesovo Beam 40.22 59 P **P 04 21 06.7 -1.9**
ZALV pmax pmax
comp=Z,2.0nm,0.8s,mb3.8
MK31 Makanchi Array 42.23 69 *eP* **P 04 21 24.7 -0.5**
MK31 Makanchi Array 42.23 69 *eP* **P 04 21 24.6 -0.6**
MKAR Makanchi Array 42.23 69 P **P 04 21 24.4 -0.8**
comp=Z,1.2nm,0.8s,mb3.7,baz=342,slow=6.8,SNR=10
MKAR Makanchi Array 42.23 69 P **P 04 21 24.4 -0.8**
MKAR pmax pmax
comp=Z,1.0nm,0.8s
KSH Kashi 42.49 82 *eP* **P 04 21 28.4 +1.0**
KSH pP 04 21 33.0
KSH sP 04 21 35.4
KSH PP PP 04 23 10.1 +4.5
KSH PcP PcP 04 23 21.1 +0.9
KSH ScP ScP 04 27 10.3 -1.6
KSH PcS PcS 04 27 12.0 -0.1
KSH S **S 04 27 50.3 +0.1**
KSH SS SS 04 30 54.4 -4.6
KSH ScS ScS 04 31 27.3 -2.9
KSH pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
KSH pmax pmax
comp=Z,130nm,5.7s
KSH LR LR
comp=N,80nm,4.1s
KSH LR LR
comp=E,79nm,4.9s
KSH LR LR
comp=Z,130nm,5.6s
WMQ Urumqi 47.05 70 *eP* **P 04 22 05.0 +1.3**
SCHQ Schefferville 47.09 308 P **P 04 22 02.0 -1.9**
comp=Z,1.6nm,0.5s,mb4.4,baz=33,slow=12,SNR=3.4
SCHQ Schefferville 47.09 308 P **P 04 22 02.0 -1.9**
ZAK Zakamensk 51.74 55 *eP* **P 04 22 39.9 +0.4**
ZAK pmax pmax
comp=Z,2.0nm,1.4s,mb3.9
ZAK Zakamensk 51.74 55 *eP* **P 04 22 39.9 +0.4**
comp=Z,2.0nm,1.4s,mb3.9
SONM Songino Array 54.93 55 P **P 04 23 03.5 +0.5**
comp=Z,2.4nm,0.9s,mb4.2,baz=292,slow=8.1,SNR=12
SONM Songino Array 54.93 55 P **P 04 23 03.5 +0.5**
SONM pmax pmax
comp=Z,2.0nm,0.9s
SONM Songino Array 54.93 55 P **P 04 23 03.5 +0.5**
comp=Z,2.0nm,0.9s,mb4.2
BILL Bilibino 58.74 13⇓*eP* **P 04 23 28.0 -1.7**
BILL *e* 04 25 36.6
BILL *eS* **S 04 31 30.7 -4.4**
BILL pmax pmax
comp=Z,5.0nm,1.5s,mb4.3
BILL Bilibino 58.74 13 *eP* **P 04 23 28.0 -1.7**
comp=Z,5.0nm,1.5s,mb4.3
YKA Yellowknife Ar 59.89 336 P **P 04 23 37.1 -0.7**
comp=Z,2.4nm,0.7s,mb4.4,baz=30,slow=6.7,SNR=24
YKA Yellowknife Ar 59.89 336 P **P 04 23 37.1 -0.7**
YKA pmax pmax
comp=Z,2.0nm,0.7s
YKA Yellowknife Ar 59.89 336 P **P 04 23 37.1 -0.7**
comp=Z,2.0nm,0.7s,mb4.3
LZH Lanzhou 61.47 67 *eP* **P 04 23 50.3 +1.4**
LZH pP 04 23 55.0
LZH sP 04 23 57.5
LZH PP PP 04 26 07.3 +3.5
LZH pmax pmax
comp=Z,13nm,1.0s,mb5.0
LZH pmax pmax
comp=Z,59nm,4.3s
LZH LR LR
comp=N,130nm,12.6s
LZH LR LR
comp=Z,230nm,14.7s,MS4.5
HHC Hu-ho-hao-te 62.40 58 *eP* **P 04 23 52.4 -2.7**
HHC pP 04 23 56.9
HHC PcP PcP 04 24 32.1 -2.5
HHC PP PP 04 26 11.8 -0.1
HHC ScP ScP 04 28 32.8 -4.8
HHC PcS PcS 04 28 34.5 -3.3
HHC S **S 04 32 14.4 -8.3**
HHC ScS ScS 04 33 41.1 -7.3
HHC pmax pmax
comp=Z,16nm,0.8s,mb5.3
HHC pmax pmax
comp=Z,91nm,6.5s
HHC LR LR
comp=N,49nm,19.2s,MS3.9
HHC LR LR
comp=E,53nm,19.2s,MS3.9
HHC LR LR
comp=Z,87nm,21.6s,MS3.9
CD2 Chengdu 65.11 71 *eP* **P 04 24 12.9 -0.2**
CD2 pmax pmax
comp=Z,20nm,0.6s,mb5.5
CD2 pmax pmax
comp=Z,80nm,4.2s
BJI Beijing 65.41 56 P **P 04 24 12.1 -2.9**
BJI pmax pmax
comp=Z,6.0nm,0.5s,mb5.1
BJI pmax pmax
comp=Z,62nm,5.3s
CN2 Changchun 67.16 48 *eP* **P 04 24 26.5 +0.4**
KMI Kunming 68.73 76 P **P 04 24 35.6 -0.6**
KMI PP PP 04 27 09.8 +2.2
KMI S S 04 33 38.0 -2.5
KMI SS SS 04 38 03.6 -0.9
KMI pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
KMI pmax pmax
comp=Z,50nm,4.3s
KMI LR LR
comp=N,60nm,13.2s,MS4.3
KMI LR LR
comp=E,88nm,11.1s,MS4.3
KMI LR LR
comp=Z,52nm,11.1s,MS4.0
A18A Metzger Ranch, 69.87 325 ⇑P **P 04 24 42.4 -0.5**
baz=72
GYA Guiyang 70.10 72 P **P 04 24 45.0 +0.3**
GYA PP PP 04 27 21.0 +1.6
GYA S S 04 33 54.0 -2.7
GYA SS SS 04 38 24.6 -1.0
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
GYA pmax pmax
comp=Z,70nm,5.4s
GYA LR LR
comp=N,330nm,18.9s,MS4.7
GYA LR LR
comp=E,310nm,19.0s,MS4.7
GYA LR LR
comp=Z,410nm,19.3s,MS4.7
B18A Beardsley Farm 70.29 325 ⇓P **P 04 24 45.1 -0.4**
baz=70
B17A L&G Farms, Che 70.74 326 ⇓P **P 04 24 47.6 -0.7**
baz=70
A15A Johnson Ranch, 70.83 327 ⇓P **P 04 24 48.0 -0.8**
baz=70
A14A Double T Ranch 71.06 328 ⇑P **P 04 24 50.0 -0.2**
baz=71,SNR=7.4
CHTO Chiang Mai 71.09 83 *eP* **P 04 24 50.1 -0.7**
CHTO pmax pmax
comp=Z,3.0nm,0.7s,mb4.5
CHTO Chiang Mai 71.09 83 *eP* **P 04 24 50.1 -0.7**
comp=Z,2.9nm,0.7s,mb4.5
CHTO Chiang Mai 71.09 83 *eP* **P 04 24 50.1 -0.7**
comp=Z,2.9nm,0.7s,mb4.5
C17A Wharram Farm, 71.29 325 ⇓P **P 04 24 51.9 +0.3**
baz=71
D18A Linhart Farms, 71.31 324 ⇑P **P 04 24 52.3 +0.6**
baz=71
B15A Bradely Ranch, 71.34 327 ⇑P **P 04 24 51.4 -0.6**
baz=71
CMAR Chiang Mai Arr 71.36 84 P **P 04 24 52.1 -0.3**
comp=Z,1.1nm,0.3s,mb4.4,baz=313,slow=7.8,SNR=7.3
CMAR Chiang Mai Arr 71.36 84 P **P 04 24 52.2 -0.3**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR Chiang Mai Arr 71.36 84 P **P 04 24 52.2 -0.3**
comp=Z,1.0nm,0.3s,mb4.4
WHN Wuhan 71.50 64 *eP* **P 04 24 48.1 -5.1**
D17A Six Diamond Ra 71.67 325 ⇑P **P 04 24 53.5 -0.4**
baz=71
C15A Salmond Ranch, 71.81 326 ⇓P **P 04 24 53.9 -0.9**
baz=71
E18A Harlowton 71.88 324 ⇓P **P 04 24 55.8 +0.6**
baz=72
B13A Whitefish 71.93 328 ⇓P **P 04 24 55.2 -0.3**
baz=72
E17A Martinsdale 72.32 325 ⇑P **P 04 24 57.8 0.0**
baz=72
F18A Big Timber 72.37 324 ⇑P **P 04 24 58.1 0.0**
baz=72
SWMT Swartz Lake 72.52 327 *eP* **P 04 24 58.7 -0.3**
comp=Z,10.0nm,1.3s,mb4.8
SWMT Swartz Lake 72.52 327 *eP* **P 04 24 58.7 -0.3**
comp=Z,10.0nm,1.3s,mb4.8
C13A Hot Springs 72.57 328 ⇑P **P 04 25 00.7 +1.4**
baz=72
SLMT Seeley Lake 72.58 327 *eP* **P 04 24 58.6 -0.8**
comp=Z,8.6nm,1.2s,mb4.8
SLMT Seeley Lake 72.58 327 *eP* **P 04 24 58.6 -0.8**
comp=Z,8.6nm,1.2s,mb4.8
F17A Fitzpatrick Pl 72.72 324 ⇑P **P 04 25 00.6 +0.3**
baz=72
NJ2 Nanjing 72.84 60 *eP* **P 04 25 02.0 +0.8**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.2
RLMT Red Lodge 72.86 323 *eP* **P 04 25 01.2 +0.1**
comp=Z,7.8nm,1.2s,mb4.7
RLMT Red Lodge 72.86 323 *eP* **P 04 25 01.2 +0.1**
comp=Z,7.8nm,1.2s,mb4.7
E15A Deer Lodge 72.99 326 ⇓P **P 04 25 01.6 -0.2**
baz=73,SNR=6.3
D13A Huson 73.04 327 ⇓P **P 04 25 02.0 -0.1**
baz=73,SNR=8.6
KSRS Korea Array 73.29 50 P **P 04 25 04.0 +0.2**
comp=Z,0.5nm,0.3s,mb4.2,baz=28,slow=19,SNR=4.2
KSRS Korea Array 73.29 50 P **P 04 25 04.0 +0.2**
KSRS pmax pmax
comp=Z,1.0nm,0.3s,mb4.4
KSRS Korea Array 73.29 50 P **P 04 25 04.0 +0.2**
comp=Z,1.0nm,0.3s,mb4.4
BOZ Bozeman (W) 73.29 325 ⇓P **P 04 25 03.9 +0.2**
baz=73
BOZ Bozeman (W) 73.29 325 *eP* **P 04 25 03.6 0.0**
BOZ pmax pmax
comp=Z,4.0nm,1.1s,mb4.5
BOZ Bozeman (W) 73.29 325 *eP* **P 04 25 03.6 0.0**
comp=Z,4.1nm,1.1s,mb4.5
BOZ Bozeman (W) 73.29 325 *eP* **P 04 25 03.6 0.0**
comp=Z,4.1nm,1.1s,mb4.5
E14A Clinton 73.29 326 ⇓P **P 04 25 03.6 0.0**
baz=73
D12A Red Ives Fores 73.37 328 ⇓P **P 04 25 03.7 -0.4**
baz=73
F15A Butte 73.44 325 ⇓P **P 04 25 05.4 +1.0**
baz=73
E13A Victor 73.51 327 ⇓P **P 04 25 05.0 +0.1**
baz=73
G16A Moss Hill, Enn 73.71 324 ⇓P **P 04 25 06.3 +0.2**
baz=73
DLMT Dillon 73.89 325 *eP* **P 04 25 07.0 -0.2**
comp=Z,9.8nm,1.4s,mb4.7
DLMT Dillon 73.89 325 *eP* **P 04 25 07.0 -0.1**
comp=Z,9.8nm,1.4s,mb4.7
H17A Grant Village 73.97 323 ⇑P **P 04 25 10.4 +2.7**
baz=74
E12A Beaver Dam Sad 74.00 327 ⇓P **P 04 25 07.3 -0.6**
baz=74
G15A Dillon 74.02 325 ⇑P **P 04 25 07.9 0.0**
baz=74
F13A Darby 74.13 326 ⇓P **P 04 25 08.2 -0.3**
baz=74
F12A Elk City 74.47 327 ⇑P **P 04 25 10.1 -0.4**
baz=74
H15A Lima 74.54 325 ⇓P **P 04 25 11.3 +0.3**
baz=74
K19A Absolon Red Bu 74.65 321 ⇓P **P 04 25 10.6 -1.0**
baz=74
LOHW Long Hollow 74.65 323 *eP* **P 04 25 12.4 +0.7**
comp=Z,7.7nm,1.3s,mb4.6
LOHW Long Hollow 74.65 323 *eP* **P 04 25 12.4 +0.8**
comp=Z,7.7nm,1.3s,mb4.6
F11A Grangeville 74.66 328 ⇓P **P 04 25 10.6 -1.0**
baz=74
G13A Cobalt 74.70 326 ⇓P **P 04 25 11.5 -0.4**
baz=74
I16A Newdale 74.76 324 ⇓P **P 04 25 13.5 +1.2**
baz=74
E09A Wood Farm, Sta 74.76 329 ⇑P **P 04 25 11.5 -0.7**
baz=74
J18A Kendall Valley 74.77 322 ⇓P **P 04 25 13.0 +0.6**
baz=74,SNR=6.4
L21A Rawlins 74.79 320 ⇑P **P 04 25 11.8 -0.6**
baz=74
H14A Leadore 74.81 325 ⇓P **P 04 25 12.1 -0.4**
baz=74
SNOW Snow King Moun 74.84 323 *eP* **P 04 25 12.1 -0.6**
comp=Z,10.0nm,0.9s,mb4.8
SNOW Snow King Moun 74.84 323 *eP* **P 04 25 12.1 -0.6**
comp=Z,10.0nm,0.9s,mb4.8
TPAW Teton Pass 74.89 323 *eP* **P 04 25 14.1 +1.1**
comp=Z,5.0nm,1.3s,mb4.4
TPAW Teton Pass 74.89 323 *eP* **P 04 25 14.1 +1.1**
comp=Z,5.0nm,1.3s,mb4.4
BW06 Boulder Array 74.97 322 ⇓P **P 04 25 12.9 -0.6**
baz=75
BW06 Boulder Array 74.97 322 *eP* **P 04 25 12.8 -0.7**
comp=Z,1.0nm,0.6s,mb4.0
BW06 Boulder Array 74.97 322 *eP* **P 04 25 12.8 -0.7**
comp=Z,1.0nm,0.6s,mb4.0
PDAR Pinedale Array 74.97 322 P **P 04 25 12.8 -0.7**
comp=Z,0.9nm,0.6s,mb4.0,baz=61,slow=7.0,SNR=7.6
PDAR Pinedale Array 74.97 322 P **P 04 25 12.9 -0.6**
H13A Challis 75.17 326 ⇓P **P 04 25 14.7 +0.1**
baz=75,SNR=5.5
K18A Toltan Ranch, 75.27 322 ⇓P **P 04 25 16.3 +1.1**
baz=75
H12A Diamond D Ranc 75.39 326 ⇓P **P 04 25 15.8 0.0**
baz=75
L19A Farson 75.46 321 ⇑P **P 04 25 16.0 -0.4**
baz=75
G10A Bishop Farm, J 75.51 328 ⇑P **P 04 25 16.2 -0.3**
baz=75
M20A Sweetwater, Wa 75.51 320 ⇓P **P 04 25 17.8 +1.1**
baz=75
J15A Blackfoot 75.52 324 ⇑P **P 04 25 18.0 +1.4**
baz=75,SNR=6.0
I13A Wildhorse Cree 75.68 325 ⇑P **P 04 25 18.9 +1.3**
baz=75
N21A Black Mountain 75.86 319 ⇓P **P 04 25 19.9 +1.3**
baz=76
L18A Fontenelle, Gr 75.88 322 ⇓P **P 04 25 19.7 +1.0**
baz=76
BMO Blue Mountains 75.96 328 *eP* **P 04 25 18.1 -1.0**
comp=Z,12nm,1.4s,mb4.8
BMO Blue Mountains 75.96 328 *eP* **P 04 25 18.1 -1.0**
comp=Z,12nm,1.4s,mb4.8
J14A Carey 75.98 325 ⇑P **P 04 25 19.4 +0.1**
baz=76
H10A Noah's Angus R 76.00 327 ⇓P **P 04 25 18.8 -0.5**
baz=76
HLID Hailey 76.09 325 ⇓P **P 04 25 20.4 +0.5**
baz=76,SNR=6.5
HLID Hailey 76.09 325 *eP* **P 04 25 20.1 +0.2**
comp=Z,9.1nm,1.4s,mb4.7
HLID Hailey 76.09 325 *eP* **P 04 25 20.1 +0.2**
comp=Z,9.1nm,1.4s,mb4.7
N20A Spence Gulch, 76.10 320 ⇑P **P 04 25 20.7 +0.7**
baz=76
I12A Atlanta 76.14 326 ⇓P **P 04 25 19.8 -0.4**
baz=76
J13A Cove Ranch, Pi 76.15 325 ⇑P **P 04 25 20.7 +0.5**
baz=76
K15A Arbon 76.17 324 ⇑P **P 04 25 21.5 +1.1**
baz=76
N19A John Jarvie Ra 76.42 320 ⇓P **P 04 25 21.7 -0.1**
baz=76
M17A Scullys Gap (B 76.51 322 ⇑P **P 04 25 22.6 +0.3**
baz=76
K14A Jones Ranch, D 76.53 324 ⇓P **P 04 25 22.9 +0.5**
baz=76
N18A Larsen Ranch, 76.54 321 ⇑P **P 04 25 22.3 -0.2**
baz=76
J12A Stokes Ranch, 76.61 326 ⇓P **P 04 25 23.0 +0.1**
baz=76
O20A White River Ci 76.68 319 ⇓P **P 04 25 23.0 -0.3**
baz=76
MFID Camas Ranch 76.72 326 ⇑P **P 04 25 23.2 -0.3**
baz=76
HWUT Hardware Ranch 76.74 322 *eP* **P 04 25 23.7 +0.1**
comp=Z,9.8nm,1.4s,mb4.8
HWUT Hardware Ranch 76.74 322 *eP* **P 04 25 23.7 +0.1**
comp=Z,9.8nm,1.4s,mb4.8
K13A Stover Farm, H 76.77 325 ⇓P **P 04 25 24.4 +0.6**
baz=76
I09A Lost Marbles R 76.88 328 ⇓P **P 04 25 24.2 -0.2**
baz=76
L14A Malta 77.00 324 ⇑P **P 04 25 26.1 +1.0**
baz=77
M16A Huntsville 77.01 322 ⇑P **P 04 25 25.8 +0.6**
baz=77
Q22A Crested Butte, 77.21 318 ⇓P **P 04 25 27.1 +0.8**
baz=77
L13A Double Diamond 77.21 324 ⇓P **P 04 25 27.5 +1.2**
baz=77
K11A Parker Ranch, 77.36 326 ⇓P **P 04 25 28.2 +1.1**
baz=77,SNR=8.3
J09A Fry Pan Ranch, 77.44 327 ⇑P **P 04 25 27.9 +0.3**
baz=77
M14A Sheep Mountain 77.50 324 ⇑P **P 04 25 29.2 +1.4**
baz=77,SNR=7.2
Q21A Lamborn Mesa, 77.51 318 ⇓P **P 04 25 29.4 +1.4**
baz=77
SDCO Great Sand Dun 77.54 316 *eP* **P 04 25 28.5 +0.3**
comp=Z,4.8nm,1.3s,mb4.5
SDCO Great Sand Dun 77.54 316 *eP* **P 04 25 28.5 +0.3**
comp=Z,4.8nm,1.3s,mb4.5
L12A House Creek Ra 77.55 325 ⇑P **P 04 25 29.0 +0.9**
baz=77
T25A Trinidad 77.57 315 ⇑P **P 04 25 28.7 +0.3**
baz=77
O17A Robinson Place 77.63 321 ⇓P **P 04 25 29.2 +0.5**
baz=77,SNR=5.2
K10A MacKenzie Ranc 77.64 327 ⇓P **P 04 25 29.1 +0.5**
baz=77

R22A	Saguache, Gunn	77.67 317	⇓P	P	04 25 31.0 +2.1
	baz=77				
Q20A	Ridgley Place,	77.70 319	⇓P	P	04 25 28.9 -0.2
	baz=77				
L11A	Cat Creek Ranc	77.79 325	⇓P	P	04 25 30.5 +1.0
	baz=77,SNR=9.6				
U26A	Atchley Ranch,	77.90 314	⇓P	P	04 25 30.7 +0.5
	baz=78				
O16A	Springville	77.92 322	⇑P	P	04 25 30.5 +0.3
	baz=78				
P18A	Preston Nutter	77.92 321	⇑P	P	04 25 30.6 +0.3
	baz=78				
M13A	Montello	77.92 324	⇓P	P	04 25 30.5 +0.2
	baz=78				
N14A	Grayback Hills	78.00 323	⇓P	P	04 25 31.7 +1.0
	baz=78,SNR=13				
L10A	Juniper Basin	78.12 326	⇑P	P	04 25 32.3 +1.0
	baz=78				
M12A	Wells	78.15 325	⇑P	P	04 25 33.4 +1.9
	baz=78				
U25A	Circle Dot Ran	78.19 315	⇑P	P	04 25 32.9 +1.1
	baz=78				
Q18A	Rafter H Ranch	78.33 320	⇑P	P	04 25 32.3 -0.2
	baz=78				
R20A	Redvale	78.39 318	⇑P	P	04 25 33.7 +0.8
	baz=78				
V26A	Tequesquite Ra	78.41 314	⇓P	P	04 25 32.9 -0.1
	baz=78				
DUG	Dugway	78.43 323	⇓P	P	04 25 33.6 +0.5
	baz=78,SNR=8.0				
DUG	Dugway	78.43 323	eP	P	04 25 33.7 +0.6
DUG			pmax	pmax	
	comp=Z,6.0nm,1.0s,mb4.7				
DUG	Dugway	78.43 323	eP	P	04 25 33.7 +0.6
	comp=Z,6.1nm,1.0s,mb4.7				
DUG	Dugway	78.43 323	eP	P	04 25 33.7 +0.6
	comp=Z,6.1nm,1.0s,mb4.7				
M11A	Holland Ranch,	78.45 325	⇑P	P	04 25 34.8 +1.6
	baz=78				
SRU	San Rafael	78.47 320	⇓P	P	04 25 33.4 0.0
	baz=78				
SRU	San Rafael	78.47 320	eP	P	04 25 32.9 -0.5
SRU			pmax	pmax	
	comp=Z,11nm,1.3s,mb4.8				
SRU	San Rafael	78.47 320	eP	P	04 25 32.9 -0.5
	comp=Z,11nm,1.3s,mb4.8				
SRU	San Rafael	78.47 320	eP	P	04 25 32.9 -0.5
	comp=Z,11nm,1.3s,mb4.8				
R19A	Curley Farm, L	78.67 319	⇑P	P	04 25 35.2 +0.8
	baz=78				
N12A	Clover Valley,	78.69 324	⇑P	P	04 25 35.6 +1.1
	baz=78,SNR=5.8				
T22A	Edith	78.76 317	⇓P	P	04 25 35.7 +0.7
	baz=78				
R18A	Canyonlands Na	78.84 320	⇓P	P	04 25 35.8 +0.4
	baz=78,SNR=5.1				
K05A	Summer Lake	79.03 329	⇑P	P	04 25 37.8 +1.4
	baz=79				
U23A	El Rito	79.03 316	⇑P	P	04 25 37.3 +0.8
	baz=79				
P14A	Drum Mountains	79.05 322	⇓P	P	04 25 37.5 +1.0
	baz=79,SNR=5.5				
S19A	Harvey Farm, M	79.08 319	⇑P	P	04 25 36.8 +0.1
	baz=79				
R17A	Hanksville Air	79.14 320	⇑P	P	04 25 36.8 -0.2
	baz=79				
W25A	X Bar L Ranch,	79.20 314	⇑P	P	04 25 37.3 -0.1
	baz=79				
U22A	Llaves	79.28 316	⇑P	P	04 25 38.9 +1.1
	baz=79				
Q15A	Fillmore	79.30 322	⇓P	P	04 25 38.4 +0.5
	baz=79				
P13A	Bates Ranch, G	79.53 323	⇓P	P	04 25 40.0 +0.9
	baz=79,SNR=8.6				
O11A	Cowboy Ranch,	79.55 324	⇓P	P	04 25 40.1 +0.9
	baz=79				
U21A	Nageezi	79.58 317	⇓P	P	04 25 40.1 +0.6
	baz=79				
W24A	Lazy 6 Ranch,	79.63 315	⇑P	P	04 25 40.5 +0.7
	baz=79				
MSU	Marysvale	79.64 321	eP	P	04 25 40.5 +0.7
MSU			pmax	pmax	
	comp=Z,3.0nm,1.3s,mb4.1				
MSU	Marysvale	79.64 321	eP	P	04 25 40.5 +0.7
	comp=Z,3.2nm,1.3s,mb4.1				
MSU	Marysvale	79.64 321	eP	P	04 25 40.5 +0.7
	comp=Z,3.2nm,1.3s,mb4.1				
Q14A	Sevier Lake (B	79.66 322	⇑P	P	04 25 40.7 +0.9
	baz=79,SNR=5.9				
V22A	San Miguel Ran	79.69 316	⇑P	P	04 25 41.2 +1.1
	baz=79				
T19A	Beclabito	79.81 318	⇓P	P	04 25 41.3 +0.6
	baz=79				
P12A	McGill	79.85 324	⇓P	P	04 25 41.2 +0.4
	baz=80				
X25A	Clemmons Ranch	79.86 314	⇓P	P	04 25 40.8 -0.3
	baz=80				
T18A	Mexican Hat	79.90 319	⇓P	P	04 25 41.6 +0.4
	baz=80				
Q13A	Wheeler Ranch,	79.97 323	⇑P	P	04 25 41.8 +0.3
	baz=80,SNR=5.3				
BOSA	Boshof	80.14 172	P	P	04 25 41.0 -1.3
	comp=Z,3.0nm,0.9s,mb4.2,baz=279,slow=21,SNR=3.5				
BOSA	Boshof	80.14 172	P	P	04 25 41.0 -1.3
BOSA			pmax	pmax	
	comp=Z,3.0nm,0.9s,mb4.2				
BOSA	Boshof	80.14 172	P	P	04 25 41.0 -1.3
	comp=Z,3.0nm,0.9s,mb4.2				
Q12A	Willow Creek R	80.20 323	⇑P	P	04 25 43.8 +1.0
	baz=80				
ANMO	Albuquerque	80.31 315	eP	P	04 25 44.2 +0.8
ANMO			pmax	pmax	
	comp=Z,1.0nm,1.5s				
ANMO	Albuquerque	80.31 315	eP	P	04 25 44.1 +0.7
	comp=Z,1.4nm,1.5s,mb3.7				
ANMO	Albuquerque	80.31 315	eP	P	04 25 44.2 +0.8
	comp=Z,1.4nm,1.5s,mb3.7				
Y25A	Mesa, Roswell	80.38 314	⇑P	P	04 25 44.5 +0.6
	baz=80				
T17A	Navajo Res., N	80.40 320	⇓P	P	04 25 44.5 +0.5
	baz=80				
U18A	Rough Rock, Ch	80.52 319	⇑P	P	04 25 44.5 -0.1
	baz=80				
Z26A	Caprock	80.60 313	⇓P	P	04 25 45.2 +0.1
	baz=80				
S14A	Cedar City	80.68 322	⇓P	P	04 25 45.9 +0.5
	baz=80				
Z25A	Roswell	80.93 313	⇑P	P	04 25 47.2 +0.4
	baz=81				
Q10A	Clear Creek Ra	80.97 324	⇑P	P	04 25 48.3 +1.4
	baz=81				
T15A	Red Dirt Ranch	81.02 321	⇓P	P	04 25 47.4 +0.2
	baz=81				
W20A	Ramah	81.05 317	⇑P	P	04 25 48.0 +0.6
	baz=81				
R11A	Troy Canyon, C	81.09 324	⇓P	P	04 25 48.0 +0.5
	baz=81				
S13A	Holt Ranch, En	81.11 322	⇓P	P	04 25 48.4 +0.8
	baz=81				
X21A	Alamocita Cree	81.31 316	⇓P	P	04 25 49.7 +0.8
	baz=81				
R10A	Warm Springs	81.41 324	⇓P	P	04 25 50.4 +1.1
	baz=81				
125A	Gardner Draw,	81.42 313	⇓P	P	04 25 49.5 0.0
	baz=81				
S12A	Delamar Landin	81.46 323	⇓P	P	04 25 51.7 +2.1
	baz=81				
U15A	North Rim	81.49 320	⇑P	P	04 25 49.9 +0.2
	baz=81,SNR=6.1				
X20A	Quemado	81.54 317	⇑P	P	04 25 50.6 +0.6
	baz=81				
V17A	Tonalea, Kykot	81.58 319	⇓P	P	04 25 50.5 +0.3
	baz=81				
T13A	Saint George	81.61 322	⇑P	P	04 25 51.6 +1.3
	baz=81				
Y21A	Point of Rocks	81.64 316	⇓P	P	04 25 51.5 +1.0
	baz=81				
226A	Malaga, Loving	81.67 312	⇓P	P	04 25 51.5 +0.8
	baz=81				
U14A	Mt Trumbull	81.86 321	⇓P	P	04 25 52.4 +0.8
	baz=82				
WUAZ	Wupatki	81.91 319	⇑P	P	04 25 52.4 +0.4
	baz=82				
T11A	Corn Creek, Al	81.92 323	⇓P	P	04 25 53.4 +1.4
	baz=82,SNR=6.4				
Z22A	Elephant Butte	81.96 315	⇑P	P	04 25 52.6 +0.4
	baz=82				
V15A	Kaibab Nationa	81.97 320	⇓P	P	04 25 52.7 +0.4
	baz=82				
NVAR	Mina Array Bea	82.00 325	P	P	04 25 53.3 +0.9
	comp=Z,1.2nm,1.0s,mb4.0,baz=50,slow=4.6,SNR=4.3				
NVAR	Mina Array Bea	82.00 325	P	P	04 25 53.3 +0.9
U13A	Pakoon Wash	82.17 321	⇑P	P	04 25 54.4 +1.1
	baz=82				
Z21A	St. Cloud Mine	82.23 315	⇓P	P	04 25 55.3 +1.6
	baz=82				
Y19A	Nutrioso	82.36 317	⇑P	P	04 25 56.1 +1.7
	baz=82				
V14A	Boquillas Ranc	82.51 320	⇑P	P	04 25 56.4 +1.3
	baz=82				
MNTX	Cornudas Mount	82.56 313	eP	P	04 25 54.6 -0.9
	comp=Z,3.6nm,1.4s,mb4.4				
MNTX	Cornudas Mount	82.56 313	eP	P	04 25 54.6 -0.8
	comp=Z,3.6nm,1.4s,mb4.4				
V13A	Grand Canyon W	82.67 321	⇑P	P	04 25 55.9 0.0
	baz=82				
426A	McDonald Obser	82.80 311	⇓P	P	04 25 56.7 0.0
	baz=82				
Z20A	Nine Sixteen R	82.80 316	⇑P	P	04 25 57.7 +1.1
	baz=82,SNR=5.3				
324A	Moseley Ranch,	82.83 313	⇑P	P	04 25 56.6 -0.2
	baz=82				
Y18A	Canyon Day Jun	82.85 317	⇓P	P	04 25 56.7 -0.2
	baz=82				
W14A	Seligman	82.87 320	⇓P	P	04 25 57.6 +0.7
	baz=82				
X16A	Lo Mia Camp, P	82.89 319	⇓P	P	04 25 58.1 +1.1
	baz=82				
222A	Williams Famil	83.00 314	⇑P	P	04 25 58.0 +0.2
	baz=83				
527A	Woodward Ranch	83.04 311	⇑P	P	04 25 57.2 -0.7
	baz=83				
U10A	Ash Meadows, A	83.07 323	⇑P	P	04 25 58.7 +0.8
	baz=83				
V12A	Nelson	83.11 322	⇑P	P	04 25 58.6 +0.4
	baz=83				
X15A	Humboldt	83.16 319	⇓P	P	04 25 59.2 +0.7
	baz=83,SNR=6.3				
V11A	Goodsprings	83.24 322	⇓P	P	04 25 59.3 +0.4
	baz=83				
628A	Black Gap, Mar	83.24 310	⇑P	P	04 25 58.7 -0.3
	baz=83				
Y17A	Roosevelt	83.26 318	⇓P	P	04 25 59.1 +0.1
	baz=83				
W13A	Hualapai Mount	83.28 321	⇓P	P	04 25 59.2 0.0
	baz=83				
120A	U Bar Ranch, L	83.30 316	⇓P	P	04 25 59.2 0.0
	baz=83				
526A	Mary Lane Ranc	83.33 311	⇑P	P	04 25 59.0 -0.4
	baz=83				
Y16A	Circle Bar Ran	83.37 318	⇓P	P	04 25 59.5 -0.1
	baz=83				
X14A	Yava	83.44 320	⇓P	P	04 26 00.7 +0.8
	baz=83				
SHOC	Shoshone	83.51 323	⇓P	P	04 26 02.1 +1.9
	baz=83				
627A	Terlingua Ranc	83.51 310	⇑P	P	04 26 00.7 +0.3
	baz=83				
Y15A	Casa Rosa Ranc	83.66 319	⇓P	P	04 26 01.3 +0.2
	baz=83				
X13A	Yucca	83.70 320	⇑P	P	04 26 02.3 +1.0
	baz=83				
TXAR	Lajitas Array	83.74 310	P	P	04 26 00.9 -0.7
	comp=Z,3.3nm,1.3s,mb4.4,baz=354,slow=2.5,SNR=9.3				
TXAR	Lajitas Array	83.74 310	P	P	04 26 00.9 -0.7
TXAR			pmax	pmax	
	comp=Z,3.0nm,1.3s				
TXAR	Lajitas Array	83.74 310	P	P	04 26 00.9 -0.7
	comp=Z,3.0nm,1.3s,mb4.4				
626A	Big Bend Ranch	83.78 311	⇓P	P	04 26 01.4 -0.3
	baz=84				
220A	Playas Peak, P	83.80 315	⇑P	P	04 26 01.5 -0.4
	baz=84				
Z16A	Peralta Trail,	83.81 318	⇑P	P	04 26 02.7 +0.8
	baz=84				
MPMC	Manual Prospec	83.82 324	⇑P	P	04 26 03.2 +1.4
	baz=83				
219A	White Tail Can	84.04 316	⇓P	P	04 26 03.8 +0.7
	baz=84				
PDMCI	Parker Dam,Lak	84.08 321	⇓P	P	04 26 04.0 +0.8
	baz=84				
117A	Oracle	84.19 317	⇓P	P	04 26 04.5 +0.7
	baz=84				
GSC	Goldstone	84.23 323	⇑P	P	04 26 04.8 +0.8
	baz=84				
GMRC	Granite Mounta	84.26 322	⇓P	P	04 26 04.5 +0.4
	baz=84				
320A	Kipp Ranch, An	84.29 315	⇓P	P	04 26 05.2 +0.9
	baz=84				
218A	Dragoon	84.41 316	⇑P	P	04 26 06.3 +1.3
	baz=84				
LRMC	Laurel Mountai	84.41 324	⇑P	P	04 26 05.7 +0.9
	baz=84				
TUC	Tucson	84.43 317	eP	P	04 26 05.2 +0.2
TUC			pmax	pmax	
	comp=Z,9.0nm,1.4s,mb4.8				
TUC	Tucson	84.43 317	eP	P	04 26 05.2 +0.2
	comp=Z,9.1nm,1.4s,mb4.8				
TUC	Tucson	84.43 317	eP	P	04 26 05.2 +0.2
	comp=Z,9.1nm,1.4s,mb4.8				
HEC	Hector,Ludlow	84.47 322	⇑P	P	04 26 06.4 +1.2
	baz=84				
ISA	Isabella	84.53 324	⇑P	P	04 26 06.5 +1.0
	baz=84				
319A	Douglas	84.58 316	⇓P	P	04 26 07.1 +1.2
	baz=84				
IRM	Iron Mountain	84.61 321	⇓P	P	04 26 07.3 +1.4
	baz=84				
115A	Sonoran Desert	84.70 318	⇑P	P	04 26 07.7 +1.3
	baz=85				
318A	Bisbee	84.84 316	⇑P	P	04 26 08.1 +1.0
	baz=84				
Z13A	Yuma Proving G	84.85 320	⇓P	P	04 26 08.0 +0.8
	baz=84				
217A	Green Valley	84.91 317	⇓P	P	04 26 08.3 +0.8
	baz=85				
EDW2	Edwards Air Fo	85.05 324	⇓P	P	04 26 08.8 +0.6
	baz=85				
ASAR	Alice Springs	125.37 84	PKP	PKPdf	04 32 32.0 -1.4
	comp=Z,0.4nm,0.9s,baz=210,slow=30,SNR=4.3				

*CSEM **13** 04:13:43.9±0.6,36°.26N×21°.60E,h15km,ML3.5/1,Error ellipse: s-maj=15.0km s-min=5.2km az=61.0*
*THE **13** 04:13:45.9,36°.31N×21°.86E,h13km±2km,ML3.5/1,Error ellipse: s-maj=5.0km s-min=1.0km az=249.0*

ATH 13 04:13:41.7,36°.20N×21°.43E,h23km±3km,1D,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.74	20	P	Pb	04 13 56.4	+0.5
PYL				S	Sb	04 14 06.4	+0.9
PYL	PYLOS	0.74	20	ePN	Pn	04 13 56.5	-0.2
PYL	PYLOS	0.74	20	ePn	Pn	04 13 56.5	-0.2
PYL				S	Sb	04 14 06.4	+0.9
ITM	Ithomi	1.06	22	P	Pn	04 14 01.4	+0.3
ITM	Ithomi	1.06	22	ePN	Pn	04 14 01.4	+0.3
ITM	Ithomi	1.06	22	ePn	Pn	04 14 01.4	+0.3
KYTH	Kithira	1.30	86	ePN	Pn	04 14 06.5	+2.1
KYTH	Kithira	1.30	86	ePn	Pn	04 14 06.5	+2.1
VLI	Veliai	1.32	66	ePN	Pn	04 14 06.8	+2.1
VLI	Veliai	1.32	66	ePn	Pn	04 14 06.8	+2.1
VLX	Vlachokerasia	1.40	33	P	Pn	04 14 07.1	+1.4
VLX				S	Sn	04 14 22.0	-1.4
VLX	Vlachokerasia	1.40	33	ePN	Pn	04 14 08.1	+2.4
VLX	Vlachokerasia	1.40	33	P	Pn	04 14 07.1	+1.4
VLX	Vlachokerasia	1.40	33	ePn	Pn	04 14 08.1	+2.4
VLX				S	Sn	04 14 22.0	-1.4
RLS	Riolos of Patr	1.85	1	ePN	Pn	04 14 14.0	+1.9
RLS	Riolos of Patr	1.85	1	ePn	Pn	04 14 14.0	+1.9
GUR	Goura	1.88	23	P	Pn	04 14 14.6	+2.2
GUR				S	Sn	04 14 36.1	+0.7
GUR	Goura	1.88	23	ePN	Pn	04 14 14.6	+2.2
GUR	Goura	1.88	23	ePn	Pn	04 14 14.6	+2.2
GUR				S	Sn	04 14 36.1	+0.7
LAKA	Lakka	2.08	12	P	Pn	04 14 17.3	+2.1
LAKA	Lakka	2.08	12	P	Pn	04 14 17.3	+2.1
KARN	Karanos	2.17	111	P	Pn	04 14 18.1	+1.7
KARN				S	Sn	04 14 41.7	-0.9
KARN	Karanos	2.17	111	P	Pn	04 14 18.1	+1.7
KARN				S	Sn	04 14 41.7	-0.9
LTK	Loutraki	2.20	34	P	Pn	04 14 17.5	+0.8
LTK	Loutraki	2.20	34	P	Pn	04 14 17.5	+0.8
TRIZ	Trizonia	2.22	13	P	Pn	04 14 19.6	+2.5
TRIZ	Trizonia	2.22	13	P	Pn	04 14 19.6	+2.5
EFP	Efpalio	2.25	10	P	Pn	04 14 20.0	+2.4
EFP	Efpalio	2.25	10	ePB	Pb	04 14 20.7	-1.0
EFP	Efpalio	2.25	10	P	Pn	04 14 20.0	+2.4
EFP	Efpalio	2.25	10	ePb	Pb	04 14 20.7	-1.0
KALE	Kalithea	2.26	14	P	Pn	04 14 19.9	+2.3
KALE	Kalithea	2.26	14	P	Pn	04 14 19.9	+2.3
NAIG	Nisos Aigina	2.27	46	ePN	Pn	04 14 19.2	+1.5
NAIG	Nisos Aigina	2.27	46	ePn	Pn	04 14 19.2	+1.5
VAM	Vamos	2.39	109	ePN	Pn	04 14 21.6	+2.2
VAM	Vamos	2.39	109	ePn	Pn	04 14 21.6	+2.2
AGG	Agios Georgios	2.91	14	P	Pn	04 14 29.3	+2.8
AGG	Agios Georgios	2.91	14	P	Pn	04 14 29.3	+2.8
THL	Klokotos Trika	3.39	8	P	Pn	04 14 34.6	+1.4
THL	Klokotos Trika	3.39	8	P	Pn	04 14 34.6	+1.4
APE	Apeiranthos	3.41	74	P	Pn	04 14 33.7	+0.3
APE	Apeiranthos	3.41	74	P	Pn	04 14 33.7	+0.3
LAST	Lasithi	3.46	106	P	Pn	04 14 34.7	+0.6
LAST	Lasithi	3.46	106	P	Pn	04 14 34.7	+0.6
BIA	Bitola	4.81	359	ePn	Pn	04 14 52.1	-0.6
KRUS	Krusevo	5.16	358	ePn	Pn	04 14 57.1	-0.4
KRUS				eSg	Sn	04 16 04.7	+8.3
VAY	Valandovo	5.19	10	ePn	Pn	04 14 58.2	+0.4
VAY				ePg	Pb	04 15 09.5	-2.2
MLR	Muntele Rosu	9.89	19	⇓iP	Pn	04 15 56.6	-5.7

*NEIC **13** 04:13:53.4,36°.17N×21°.54E,h15km,MD3.7(ATH),After ATH.*
*CSEM **13** 04:13:54.2±1.0,36°.22N×21°.47E,h2km,ML4.1/1,Error ellipse: s-maj=25.3km s-min=11.1km az=70.0*
*THE **13** 04:13:58.8,36°.35N×21°.69E,h0km±6km,ML4.1/1,Error ellipse: s-maj=7.7km s-min=1.6km az=249.0*

ATH 13 04:13:53.4,36°.17N×21°.54E,h15km±3km,MD3.7/13, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.74	13	P	Pg	04 14 08.5	+0.6
PYL				S	Sg	04 14 18.1	+0.4
PYL	PYLOS	0.74	13	ePN	Pn	04 14 07.6	-1.7
PYL				eSN	Sn	04 14 18.3	-2.1
PYL	PYLOS	0.74	13	ePn	Pn	04 14 07.6	-1.7
PYL	PYLOS	0.74	13	P	Pg	04 14 08.5	+0.6
PYL				S	Sg	04 14 18.1	+0.4
ITM	Ithomi	1.05	17	ePn	Pn	04 14 13.3	-0.3
ITM	Ithomi	1.05	17	P	Pb	04 14 15.6	+2.2
ITM				S	Sb	04 14 27.3	+0.3
ITM	Ithomi	1.05	17	ePN	Pn	04 14 13.3	-0.3
ITM	Ithomi	1.05	17	ePn	Pn	04 14 13.3	-0.3
ITM	Ithomi	1.05	17	P	Pb	04 14 15.6	+2.2
ITM				S	Sb	04 14 27.3	+0.3
ITM	Ithomi	1.05	17	S	Pb	04 14 15.2	+1.9
ITM	Ithomi	1.05	17	S	Pb	04 14 15.2	+1.9
VLI	Veliai	1.25	64	ePn	Pn	04 14 16.9	+0.6
VLI	Veliai	1.25	64	ePN	Pn	04 14 16.9	+0.6
VLI	Veliai	1.25	64	ePn	Pn	04 14 16.9	+0.6
VLX	Vlachokerasia	1.38	29	P	Pn	04 14 20.8	+2.8
VLX				S	Sn	04 14 37.5	+1.5
VLX	Vlachokerasia	1.38	29	ePN	Pn	04 14 19.5	+1.5
VLX	Vlachokerasia	1.38	29	ePn	Pn	04 14 19.5	+1.5
VLX	Vlachokerasia	1.38	29	P	Pn	04 14 20.8	+2.8
VLX				S	Sn	04 14 37.5	+1.5
GUR	Goura	1.88	20	ePB	Pb	04 14 26.0	-1.4
GUR	Goura	1.88	20	ePb	Pb	04 14 26.0	-1.4
RLS	Riolos of Patr	1.89	358	ePb	Pb	04 14 26.5	-1.0
RLS	Riolos of Patr	1.89	358	ePB	Pb	04 14 26.5	-1.0
RLS	Riolos of Patr	1.89	358	ePb	Pb	04 14 26.5	-1.0
KARN	Karanos	2.08	111	P	Pn	04 14 33.8	+6.1
KARN	Karanos	2.08	111	ePN	Pn	04 14 30.4	+2.7
KARN	Karanos	2.08	111	ePn	Pn	04 14 30.4	+2.7
KARN	Karanos	2.08	111	P	Pn	04 14 33.8	+6.1
VLS	Valsamata	2.14	340	ePn	Pn	04 14 30.8	+2.2
VLS	Valsamata	2.14	340	ePN	Pn	04 14 30.8	+2.2
VLS	Valsamata	2.14	340	ePn	Pn	04 14 30.8	+2.2
NAIG	Nisos Aigina	2.23	44	ePb	Pb	04 14 31.0	-2.3
NAIG	Nisos Aigina	2.23	44	ePB	Pb	04 14 31.0	-2.3
NAIG	Nisos Aigina	2.23	44	ePb	Pb	04 14 31.0	-2.3
NAIG	Nisos Aigina	2.23	44	ePb	Pb	04 14 31.0	-2.3
EFP	Efpalio	2.27	7	ePN	Pn	04 14 32.8	+2.4
EFP	Efpalio	2.27	7	ePn	Pn	04 14 32.8	+2.4
VAM	Vamos	2.29	109	ePn	Pn	04 14 33.0	+2.4
VAM	Vamos	2.29	109	ePN	Pn	04 14 33.0	+2.4
VAM	Vamos	2.29	109	ePn	Pn	04 14 33.0	+2.4
VLY	Voula,Athens	2.46	46	ePn	Pn	04 14 35.8	+2.8
VLY	Voula,Athens	2.46	46	ePN	Pn	04 14 35.8	+2.8
VLY	Voula,Athens	2.46	46	ePn	Pn	04 14 35.8	+2.8
LKR	Lokris	2.73	25	ePb	Pb	04 14 39.7	-2.3
LKR	Lokris	2.73	25	ePB	Pb	04 14 39.7	-2.3
LKR	Lokris	2.73	25	ePb	Pb	04 14 39.7	-2.3
LKR	Lokris	2.73	25	ePb	Pb	04 14 39.7	-2.3
EVR	Evrytania	2.75	4	ePb	Pb	04 14 40.0	-2.2
EVR	Evrytania	2.75	4	ePB	Pb	04 14 40.0	-2.2
EVR	Evrytania	2.75	4	ePb	Pb	04 14 40.0	-2.2
EVR	Evrytania	2.75	4	ePb	Pb	04 14 40.0	-2.2

*NEIC **13** 04:17:18.3,35°.69N×0°.54W,h32km,MG3.6(MDD),After MDD.*
*CSEM **13** 04:17:18.3,35°.69N×0°.54W,h32km,mb3.6/8,After MDD*

MDD 13 04:17:18.4±2.3,35°.69N×0°.53W,h32km±47km,mb3.6/4, Error ellipse: s-maj=32.9km s-min=12.9km az=151.0, PRIMO SOLUCI POBRE,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENIJ	Nijar	1.86	314	S	Sn	04 18 05.7	-4.6
	4.8nm,0.2s,SNR=7.9						
ENIJ	Nijar	1.86	314	S	Sn	04 18 05.7	-4.6
	4.8nm,0.2s,SNR=7.9						
ENIJ	Nijar	1.86	314	S	Sn	04 18 05.7	-4.6
	4.8nm,0.2s,SNR=7.9						
EALB	Alboran	2.05	278	P	Pn	04 17 49.7	-0.9
EALB				S	Sn	04 18 13.0	-2.0
EALB	Alboran	2.05	278	P	Pn	04 17 49.7	-0.9
	1.2nm,0.1s,SNR=7.9						
EALB				S	Sn	04 18 13.0	-2.0
	1.2nm,0.2s,SNR=7.9						
EALB	Alboran	2.05	278	P	Pn	04 17 49.7	-0.9
	1.2nm,0.1s,SNR=7.9						
EALB				S	Sn	04 18 13.0	-2.0
	1.2nm,0.2s,SNR=7.9						
EALB	Alboran	2.05	278	P	Pn	04 17 49.7	-0.8
	1.2nm,0.1s,SNR=7.9						
EALB				S	Sn	04 18 13.0	-2.0
	1.2nm,0.2s,SNR=7.9						
EBER	Berja	2.25	303	P	Pn	04 17 51.7	-1.6
EBER				S	Sn	04 18 17.8	-2.2
EBER	Berja	2.25	303	P	Pn	04 17 51.7	-1.6
	1.2nm,0.2s,SNR=6.8						
EBER				S	Sn	04 18 17.8	-2.3
	0.9nm,0.1s,SNR=7.9						
EBER	Berja	2.25	303	P	Pn	04 17 51.7	-1.6
	1.2nm,0.2s,SNR=6.8						
EBER				S	Sn	04 18 17.8	-2.3
	0.9nm,0.1s,SNR=7.9						
EBER	Berja	2.25	303	P	Pn	04 17 51.7	-1.6
	1.2nm,0.2s,SNR=6.8						
EBER				S	Sn	04 18 17.8	-2.2

EGUA			S	Sn	04 18 29.1	-2.0
	0.8nm,0.1s,SNR=7.9					
EGUA	**Guajares**	**2.70 296**	P	Pn	04 17 58.8	-0.7
	2.5nm,0.2s,SNR=7.9					
EGUA			S	Sn	04 18 29.1	-2.0
	0.8nm,0.1s,SNR=7.9					
EGUA	**Guajares**	**2.70 296**	P	Pn	04 17 58.8	-0.7
	2.5nm,0.2s,SNR=7.9					
EGUA			S	Sn	04 18 29.1	-2.0
	0.8nm,0.1s,SNR=7.9					
EQUE	**Quentar**	**2.79 304**	P	Pn	04 18 00.7	0.0
	0.5nm,0.2s,SNR=4.5					
EQUE			S	Sn	04 18 30.9	-2.3
	0.7nm,0.3

MMC6	Mount Meron ar	0.32	187	Pg	Pg	05 28 59.7	-0.2
MMC6				Sg	Sg	05 29 05.5	+1.3
HNTI	Hanita	0.33	222	Pg	Pg	05 28 59.9	-0.2
HNTI	Hanita	0.33	222	Pg	Pg	05 28 59.9	-0.2
HNTI	Hanita	0.33	222	Pg	Pg	05 28 59.9	-0.2
RCY	Rachaya	0.35	64	*e*P	Pg	05 29 00.7	+0.2
RCY				*e*S	Sg	05 29 05.9	+0.8
RCY	Rachaya	0.35	64	*e*P	Pg	05 29 00.7	+0.2
RCY				*e*S	Sg	05 29 05.9	+0.8
BRBR	Barbar	0.43	80	⇓P	Pg	05 29 01.0	-1.1
BRBR				⇑S	Sg	05 29 08.0	+0.2
BRBR	Barbar	0.43	80	⇓*i*P	Pg	05 29 01.8	-0.2
BRBR				⇑*i*S	Sg	05 29 08.9	+1.1
KSHT	Keshet	0.47	138	Pg	Pg	05 29 02.8	+0.1
KSHT	Keshet	0.47	138	Pg	Pg	05 29 02.8	+0.1
KSHT	Keshet	0.47	138	Pg	Pg	05 29 02.8	+0.1
BEYL	Beirut	0.54	5	*e*P	Pg	05 29 04.5	+0.4
BHL	Bhannes	0.60	17	*e*P	Pg	05 29 04.8	-0.3
BHL				*e*S	Sg	05 29 13.0	+0.1
BHL	Bhannes	0.60	17	*e*P	Pg	05 29 04.8	-0.4
BHL				*e*S	Sg	05 29 13.2	+0.2
BHL	Bhannes	0.60	17	*e*P	Pg	05 29 04.8	-0.3
BHL				*e*S	Sg	05 29 13.0	+0.1
BLGI	Bet Lehem HaGe	0.63	199	Pg	Pg	05 29 05.8	0.0
QASN	Qassioun	0.73	74	⇓P	Pg	05 29 07.0	-0.6
QASN				⇑S	Sg	05 29 18.0	+0.9
QASN	Qassioun	0.73	74	⇓*i*P	Pg	05 29 07.7	+0.1
QASN				⇑*i*S	Sg	05 29 18.7	+1.6
TCHB	Talchebab	0.80	146	⇑P	Pg	05 29 08.0	-0.9
TCHB				⇑S	Sg	05 29 19.0	-0.3
TCHB	Talchebab	0.80	146	⇑*i*P	Pg	05 29 08.9	0.0
TCHB				⇑*i*S	Sg	05 29 19.3	0.0
OFRI	'Ofer	0.81	208	Pg	Pg	05 29 08.9	-0.2
OFRI	'Ofer	0.81	208	Pg	Pg	05 29 08.9	-0.2
OFRI	'Ofer	0.81	208	Pg	Pg	05 29 08.9	-0.2
TOTH	TOTAH	0.83	88	⇓P	Pg	05 29 09.0	-0.5
TOTH				⇑S	Sg	05 29 21.0	+0.7
TOTH	TOTAH	0.83	88	⇓*i*P	Pg	05 29 09.4	-0.1
TOTH				⇑*i*S	Sg	05 29 21.1	+0.8
MMLI	Mount Malkishu	0.89	181	Pg	Pg	05 29 10.1	-0.7
MMLI				Sg	Sg	05 29 24.4	+2.1
MMLI	Mount Malkishu	0.89	181	Pg	Pg	05 29 10.1	-0.7
MMLI				Sg	Sg	05 29 24.4	+2.1
MMLI	Mount Malkishu	0.89	181	Pg	Pg	05 29 10.1	-0.7
MMLI				Sg	Sg	05 29 24.4	+2.1
HWQ	Hawqa	1.03	24	*e*P	Pg	05 29 12.8	-0.6
HWQ				*e*S	Sg	05 29 26.6	-0.3
HWQ	Hawqa	1.03	24	*e*P	Pg	05 29 13.0	-0.5
HWQ				*e*S	Sg	05 29 25.7	-1.1
HWQ	Hawqa	1.03	24	*e*P	Pg	05 29 13.0	-0.5
HWQ				*e*S	Sg	05 29 26.6	-0.3
HMDT	Nahal Hemdat	1.08	176	Pg	Pg	05 29 13.3	-1.0
HMDT				Sg	Sg	05 29 29.5	+1.2
HMDT	Nahal Hemdat	1.08	176	Pg	Pg	05 29 13.3	-1.0
HMDT				Sg	Sg	05 29 29.5	+1.2
HMDT	Nahal Hemdat	1.08	176	Pg	Pg	05 29 13.3	-1.0
HMDT				Sg	Sg	05 29 29.5	+1.2
MARH	Ras Al Marh	1.11	51	⇓P	Pg	05 29 14.0	-0.9
MARH	Ras Al Marh	1.11	51	⇓*i*P	Pg	05 29 14.4	-0.5
SLTI	Sal'it	1.14	197	Pg	Pg	05 29 14.2	-1.3
SLTI	Sal'it	1.14	197	Pg	Pg	05 29 14.2	-1.3
SLTI	Sal'it	1.14	197	Pg	Pg	05 29 14.2	-1.3
FKH	Fakeheh	1.21	41	*e*P	Pg	05 29 16.1	-0.6
FKH				*e*S	Sg	05 29 32.3	-0.1
FKH	Fakeheh	1.21	41	*e*P	Pg	05 29 16.1	-0.7
FKH				*e*S	Sg	05 29 32.3	-0.1
SALA	Sala	1.25	119	⇓P	Pn	05 29 16.0	-1.5
SALA				⇓S	Sg	05 29 33.0	-0.9
SALA	Sala	1.25	119	⇓*i*P	Pn	05 29 16.7	-0.8
SALA				⇓*i*S	Sg	05 29 33.3	-0.6
HAWK	Haweek	1.43	34	⇓P	Pn	05 29 20.0	0.0
HAWK	Haweek	1.43	34	⇓*i*P	Pn	05 29 20.0	0.0
ZALF	Zalf	1.64	104	⇓P	Pn	05 29 22.0	-0.9
ZALF				⇑S	Sn	05 29 43.0	-1.3
ZALF	Zalf	1.64	104	⇓*i*P	Pn	05 29 23.0	+0.1
ZALF				⇑*i*S	Sn	05 29 43.8	-0.5
ROOS	tl_alroos	1.75	61	⇑P	Pn	05 29 24.0	-0.4
ROOS				⇓S	Sn	05 29 46.0	-1.0
ROOS	tl_alroos	1.75	61	⇑*i*P	Pn	05 29 24.7	+0.3
ROOS				⇓*i*S	Sn	05 29 46.6	-0.4
DSI	Dead Sea	1.76	182	Pn	Pn	05 29 24.4	-0.1
DSI	Dead Sea	1.76	182	Pn	Pn	05 29 24.4	-0.1
DSI	Dead Sea	1.76	182	Pn	Pn	05 29 24.4	-0.1
BIDA	Albida	1.83	23	⇓P	Pn	05 29 25.0	-0.5
BIDA	Albida	1.83	23	⇓*i*P	Pn	05 29 26.0	+0.5
YTIR	Yattir	1.98	188	Pn	Pn	05 29 28.3	+0.7
YTIR	Yattir	1.98	188	Pn	Pn	05 29 28.3	+0.7
YTIR	Yattir	1.98	188	Pn	Pn	05 29 28.3	+0.7
MZDA	Masada	2.02	182	Pn	Pn	05 29 28.5	+0.4
MZDA				S	Sn	05 29 55.2	+1.7
MZDA	Masada	2.02	182	Pn	Pn	05 29 28.5	+0.4
MZDA				S	Sn	05 29 55.2	+1.7
MZDA	Masada	2.02	182	Pn	Pn	05 29 28.5	+0.4
MZDA				Sn	Sn	05 29 55.2	+1.7
SLNF	Slenfeh	2.35	16	⇑P	Pn	05 29 32.0	-0.6
SLNF	Slenfeh	2.35	16	⇑*i*P	Pn	05 29 32.6	0.0
RTMI	Retamim	2.36	196	Pn	Pn	05 29 33.5	+0.8
RTMI	Retamim	2.36	196	Pn	Pn	05 29 33.5	+0.8
RTMI	Retamim	2.36	196	Pn	Pn	05 29 33.5	+0.8
YAYL	Yayladag	2.75	11	*i*P	Pn	05 29 38.0	-0.1
YAYL	Yayladag	2.75	11	*i*P	Pn	05 29 38.0	-0.1
RSH		2.78	212	P	Pn	05 29 38.1	-0.4
RSH				S	Sn	05 30 10.0	-2.3
BTCH	Batrach	2.83	17	⇑P	Pn	05 29 39.0	-0.2
BTCH	Batrach	2.83	17	⇑*i*P	Pn	05 29 39.6	+0.4
PRNI	Paran	3.00	187	Pn	Pn	05 29 41.8	+0.3
PRNI	Paran	3.00	187	Pn	Pn	05 29 41.8	+0.3
PRNI	Paran	3.00	187	Pn	Pn	05 29 41.8	+0.3
AMAG	Maghara baz=218	3.28	216	P	Pn	05 29 45.4	-0.1
AMAG				S	Sn	05 30 21.9	-2.8
AMAG	Maghara baz=218	3.28	216	P	Pn	05 29 45.4	-0.1
AMAG				S	Sn	05 30 21.9	-2.9
HRFI	Mount Harif	3.30	186	Pn	Pn	05 29 45.8	0.0
HRFI	Mount Harif	3.30	186	Pn	Pn	05 29 45.8	0.0
HRFI	Mount Harif	3.30	186	Pn	Pn	05 29 45.8	0.0
MBRI	Mt Berech	3.56	187	Pn	Pn	05 29 49.3	+0.1
HNKL	Nakhl baz=202	3.61	201	P	Pn	05 29 49.8	-0.2
HNKL				AMP		05 30 00.0	
	comp=N,160μm,0.5s,logA/T=5.5,baz=202						
HNKL	Nakhl	3.61	201	P	Pn	05 29 49.8	-0.2
KUZU	Kuzuini	3.69	21	*i*P	Pn	05 30 00.7	+10
GULE	Gulek	3.98	352	*i*S	Sn	05 30 40.6	-1.3
HAQS	Haql	4.29	186	S	Sg	05 31 05.5	-6.0
HAQS	Haql	4.29	186	P	Pn	05 29 59.1	-0.2
HAQS	Haql	4.29	186	P	Pn	05 29 59.2	-0.1
GZT	Gaziantep	4.37	23	*i*P	Pg	05 30 14.6	-2.8
HHAG	Hagoal baz=223	4.41	221	P	Pn	05 30 01.1	+0.1
HHAG	Hagoal	4.41	221	P	Pn	05 30 01.1	+0.1
ZNM		4.51	210	P	Pn	05 30 01.9	-0.4
ZNM	baz=212	4.51	210	P	Pn	05 30 01.9	-0.5
KOT	Kottamia baz=225	4.58	223	P	Pn	05 30 03.5	+0.2
KOT				AMP		05 31 00.0	
	comp=N,30μm,0.5s,logA/T=4.8,baz=225						
KOT	Kottamia	4.58	223	P	Pn	05 30 03.6	+0.3
JLOS		4.58	179	P	Pn	05 30 10.6	+7.2
ZAF		4.74	212	P	Pn	05 30 05.7	+0.2
ZAF	baz=214	4.74	212	P	Pn	05 30 05.7	+0.3
GLL	Jalalah baz=223	4.92	221	P	Pn	05 30 08.3	+0.4
GLL	Jalalah	4.92	221	P	Pn	05 30 08.4	+0.5
HKAT	Jabal Katrina baz=196	4.95	195	P	Pn	05 30 07.9	-0.5
HKAT	Jabal Katrina	4.95	195	P	Pn	05 30 07.9	-0.5
TBKS	Tabuk	5.18	169	P	Pn	05 30 12.2	+0.6
TBKS	Tabuk	5.18	169	P	Pn	05 30 12.2	+0.6
AKCD	Akcadag	5.35	21	*i*P	Pn	05 30 15.1	+1.3
AKCD	Akcadag	5.35	21	*i*P	Pn	05 30 15.1	+1.3
AVNT	Avonos	5.46	355	*i*P	Pn	05 30 16.5	+1.2
AVNT	Avonos	5.46	355	*i*P	Pn	05 30 16.5	+1.2
GRB	Gharib baz=207	5.54	205	P	Pn	05 30 15.9	-0.6
GRB	Gharib	5.54	205	P	Pn	05 30 15.9	-0.6
DBAS	Duba	6.12	176	P	Pn	05 30 24.7	+0.2
DBAS	Duba	6.12	176	P	Pn	05 30 24.7	+0.2
GOLH	Golhisar	6.19	311	*i*P	Pn	05 30 27.4	+2.1
GOLH	Golhisar	6.19	311	*i*P	Pn	05 30 27.4	+2.1
GOLH				*i*S	Sn	05 31 36.6	+0.3
BR131	Keskin Array S comp=N,1.1nm,0.6s	6.54	348	*e*Pn	Pn	05 30 32.6	+2.4
BR131	Keskin Array S comp=N,1.1nm,0.6s	6.54	348	*e*Pn	Pn	05 30 32.7	+2.5
BEST	Besiri	6.58	45	*i*P	Pn	05 30 33.5	+2.8

NEIC 13 05:35:14.6, 37°.62S×177°.11E, h5km, ML4.0(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	White Island	0.11	34	P	Pg	05 35 17.4	+0.5
WIZ				S	Sg	05 35 19.9	+1.5
MARZ	Manawahe	0.50	223	P	Pg	05 35 24.8	+0.5
EDRZ	Edgecumbe	0.57	211	P	Pg	05 35 26.4	+0.9
URZ	Urewera	0.64	180	P	Pg	05 35 27.2	+0.3
TGRZ	Tauranga	0.68	260	P	Pg	05 35 28.1	+0.4
MKAZ	Moumakai	1.63	288	P	Pn	05 35 41.7	-2.2

*CSEM **13** 05:45:17.7±0.2, 38°.37N×22°.27E, h30km, ML2.5/8, Error ellipse: s-maj=5.9km s-min=5.0km az=65.0*
*ATH **13** 05:45:18.6, 38°.36N×22°.26E, h24km±2km, MD3.1/10*
*THE **13** 05:45:18.6, 38°.37N×22°.29E, h16km±1km, ML2.5/8, Error ellipse: s-maj=1.0km s-min=0.5km az=323.0*
*NEIC **13** 05:45:18.6, 38°.36N×22°.26E, h24km, MD3.1(ATH), After ATH.*
*ISCJB **13** 05:45:18.4±0.4, 38°.37N±0°.03×22°.30E±0°.03, h15km±4km, Error ellipse: s-maj=4.5km s-min=3.7km az=4.7*

ISC 13 05:45:18.9±0.5, 38°.37N±0°.03×22°.29E±0°.03, h16km±4km, n44, σ0.9=71/70, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KALE	Kalithea	0.12	282	P	Pg	05 45 22.3	-0.2
KALE				S	Sg	05 45 24.7	-0.2
KALE	Kalithea	0.12	282	P	Pg	05 45 22.3	-0.2
TRIZ	Trizonia	0.17	270	P	Pg	05 45 23.0	-0.1
TRIZ				S	Sg	05 45 26.1	+0.1
TRIZ	Trizonia	0.17	270	P	Pg	05 45 23.0	-0.1
TRIZ				S	Sg	05 45 26.1	+0.1
DSF	Desfina	0.19	76	P	Pg	05 45 23.1	-0.4
DSF				S	Sg	05 45 26.3	-0.3
DSF	Desfina	0.19	76	P	Pg	05 45 23.1	-0.4
LAKA	Lakka	0.28	243	P	Pg	05 45 25.0	+0.2
LAKA				S	Sg	05 45 28.9	+0.1
LAKA	Lakka	0.28	243	P	Pg	05 45 25.0	+0.2
LAKA				S	Sg	05 45 28.9	+0.1
EFP	Efpalio	0.31	281	P	Pg	05 45 25.3	-0.1
EFP				S	Sg	05 45 30.0	+0.2
EFP	Efpalio	0.31	281	*e*PB	Pg	05 45 25.3	-0.1
EFP				*e*SB	Sg	05 45 30.7	+0.9
EFP	Efpalio	0.31	281	P	Pg	05 45 25.3	-0.1
EFP				S	Sg	05 45 30.0	+0.2
EFP				*e*Sb	Sg	05 45 30.7	+0.9
GUR	Goura	0.43	175	P	Pg	05 45 27.3	-0.3
GUR				S	Sg	05 45 33.5	+0.1
GUR	Goura	0.43	175	*e*PB	Pg	05 45 27.6	0.0
GUR				*e*SB	Sg	05 45 34.1	+0.7
GUR	Goura	0.43	175	P	Pg	05 45 27.3	-0.3
GUR	Goura	0.43	175	*e*Pb	Pg	05 45 27.6	0.0
GUR				S	Sg	05 45 33.5	+0.1
GUR				*e*Sb	Sg	05 45 34.1	+0.7
LKR	Lokris	0.62	63	P	Pg	05 45 30.7	-0.5
LKR				S	Sg	05 45 39.2	-0.3
LKR	Lokris	0.62	63	P	Pg	05 45 30.7	-0.5
LKR				S	Sg	05 45 39.2	-0.3
LTK	Loutraki	0.63	123	P	Pg	05 45 31.5	+0.2
LTK				S	Sg	05 45 40.4	+0.6
LTK	Loutraki	0.63	123	*e*PN	Pg	05 45 31.4	+0.1
LTK				*e*SN	Sg	05 45 41.6	+1.8
LTK	Loutraki	0.63	123	*e*Pn	Pg	05 45 31.4	+0.1
LTK				S	Sg	05 45 40.4	+0.6
LTK				*e*Sn	Sg	05 45 41.6	+1.8
AGG	Agios Georgios	0.66	3	*e*Pn	Pg	05 45 31.4	-0.4
AGG				*e*Sn	Sg	05 45 41.4	+0.9
AGG	Agios Georgios	0.66	3	P	Pg	05 45 31.0	-0.8
AGG	Agios Georgios	0.66	3	*e*PN	Pg	05 45 31.4	-0.4
AGG				*e*SN	Sg	05 45 41.4	+0.9
AGG	Agios Georgios	0.66	3	P	Pg	05 45 31.0	-0.8
AGG	Agios Georgios	0.66	3	*e*Pn	Pg	05 45 31.4	-0.4
AGG				*e*Sn	Sg	05 45 41.4	+0.9
EVR	Evrytania	0.67	326	*e*Pn	Pg	05 45 31.6	-0.4
EVR				*e*Sn	Sg	05 45 41.7	+0.9
EVR	Evrytania	0.67	326	*e*PN	Pg	05 45 31.6	-0.4
EVR				*e*SN	Sg	05 45 41.7	+0.9
EVR	Evrytania	0.67	326	*e*Pn	Pg	05 45 31.6	-0.4
EVR				*e*Sn	Sg	05 45 41.7	+0.9
RLS	Riolos of Patr	0.72	245	*e*Pn	Pg	05 45 32.7	-0.2
RLS	Riolos of Patr	0.72	245	*e*PN	Pg	05 45 32.7	-0.2
RLS	Riolos of Patr	0.72	245	*e*Pn	Pg	05 45 32.7	-0.2
VLX	Vlachokerasia	1.00	176	*e*PB	Pg	05 45 36.8	-1.4
VLX	Vlachokerasia	1.00	176	*e*Pb	Pg	05 45 36.8	-1.4
KFL	Aninnata	1.21	258	P	Pn	05 45 39.4	-1.8
ITM	Ithomi	1.22	194	*e*Pn	Pn	05 45 42.2	+0.9
ITM	Ithomi	1.22	194	*e*PN	Pn	05 45 42.2	+0.9
ITM	Ithomi	1.22	194	*e*Pn	Pn	05 45 42.2	+0.9
VLS	Valsamata	1.35	262	*e*Pn	Pn	05 45 43.6	+0.5
VLS	Valsamata	1.35	262	P	Pn	05 45 41.9	-1.2
VLS	Valsamata	1.35	262	*e*PN	Pn	05 45 43.6	+0.5
VLS	Valsamata	1.35	262	P	Pn	05 45 41.9	-1.2
VLS	Valsamata	1.35	262	*e*Pn	Pn	05 45 43.6	+0.5
PYL	PYLOS	1.53	197	*e*PN	Pn	05 45 46.9	+1.3
PYL	PYLOS	1.53	197	*e*Pn	Pn	05 45 46.9	+1.3

IDC 13 05:49:10.1±2.2, 37°.59S×177°.25E, h0km, mb4.0/4, mb1 4.2/4, mb1mx4.0/15, mbtmp4.0/4, MS3.7/7, Ms1 3.8/7, ms1mx3.6/19, Error ellipse: s-maj=49.8km s-min=11.1km az=86.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera 325nm,0.3s,baz=314,slow=6.2,SNR=44	0.68	189	Pg	Pg	05 49 23.6	+0.5
URZ				Lg		05 49 32.3	
	417nm,0.3s,baz=104,slow=21,SNR=32						
ASAR	Alice Springs 1.7nm,0.9s,baz=114,slow=7.4,SNR=10.0	39.45	278	P	P	05 56 41.7	-0.4
WRA	Warramunga Arr 1.2nm,0.4s,baz=128,slow=7.3,SNR=6.0	41.12	283	P	P	05 56 56.2	+0.3
QSPA	South Pole Qui 2.3nm,1.1s,baz=39,slow=1.1,SNR=4.0	52.54	180	P	P	05 58 24.8	+0.3
GUMO	Guam comp=Z,27nm,18.9s,slow=34	59.30	323	LR	LR	06 22 55.9	
MAW	Mawson 2.1nm,1.0s,baz=117,slow=11,SNR=3.9	64.19	203	P	P	05 59 45.6	-0.4
MAW				LR	LR	06 26 03.3	
	comp=Z,89nm,21.9s,baz=304,slow=34						
CBIJ	Chichi jima comp=Z,32nm,18.8s,baz=122,slow=33	72.27	327	LR	LR	06 28 28.3	
PLCA	Paso Flores comp=Z,109nm,19.4s,baz=111,slow=29	80.40	134	LR	LR	06 28 30.1	
KSRS	Korea Array comp=Z,31nm,21.0s,baz=143,slow=31	87.47	323	LR	LR	06 34 50.5	
CMAR	Chiang Mai Arr comp=Z,44nm,18.5s,baz=286,slow=38	92.19	292	LR	LR	06 47 57.5	
LPAZ	La Paz comp=Z,45nm,19.8s,baz=76,slow=29	98.54	118	LR	LR	06 36 31.7	

NEIC 13 05:51:05.2, 37°.62S×177°.11E, h5km, ML4.2(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	White Island	0.11	34	P	Pg	05 51 08.1	+0.6
WIZ				S	Sg	05 51 10.2	+1.2
MARZ	Manawahe	0.50	223	P	Pg	05 51 15.4	+0.5
URZ	Urewera	0.64	180	P	Pg	05 51 17.8	+0.3
TGRZ	Tauranga	0.68	260	P	Pg	05 51 19.2	+0.9
LIRZ	Lichensteins R	0.69	236	P	Pg	05 51 19.4	+0.9
LIRZ				S	Sg	05 51 28.8	+1.3
MKRZ	Makatiti	0.73	224	P	Pg	05 51 20.3	+1.1
MWZ	Matawai	0.79	155	P	Pg	05 51 20.9	+0.6
MWZ				S	Sg	05 51 32.2	+1.7
UTU	Utuhina	0.92	232	P	Pg	05 51 24.1	+1.3
TOZ	Tahuroa Road	1.28	265	P	Pn	05 51 28.8	-0.9
KUZ	Kuaotunu	1.41	308	P	Pn	05 51 29.5	-2.0
BKZ	Black Stump Fm	1.62	197	P	Pn	05 51 36.7	+2.3
TSZ	Takapari Road	2.60	200	P	Pn	05 51 48.6	+0.8

CASC 13 05:56:21.5±2.4, 8°.40N×83°.06W, h18km±11km, MD3.7, 1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	Volcan	0.53	43	⇓*i*P	Pg	05 56 32.1	0.0
BRU2				*e*S	Sg	05 56 40.7	+1.4
CTCR	Cotoan	0.57	31	*i*P	Pg	05 56 32.7	-0.2
CTCR				*e*S	Sg	05 56 40.2	-0.3
BAR1		0.87	343	*e*P	Pb	05 56 38.0	-0.1
BAR1				*e*S	Sb	05 56 54.0	+4.5
CNI	Changuinola	1.14	28	*e*P	Pn	05 56 41.7	-0.9
CNI				*e*S	Sb	05 56 56.4	-0.8
BUS	Buena Vista	1.34	329	*e*P	Pn	05 56 46.2	+0.9
BUS				*e*S	Sn	05 57 04.8	+2.0
URSC	Urasca	1.59	333	*e*P	Pn	05 56 48.5	-0.4
URSC				*e*S	Sn	05 57 10.2	+1.2
PRS1	Puriscal	2.00	322	*e*P	Pn	05 56 54.7	+0.2

*CSEM **13** 06:16:21.4±0.2, 33°.34N×35°.44E, h5km, ML3.4, Error ellipse: s-maj=4.6km s-min=2.6km az=122.0*
*NEIC **13** 06:16:21.0, 33°.31N×35°.45E, h1km, MD2.5(GII), After GII.*
*GII **13** 06:16:21.3±0.8, 33°.30N×35°.45E, h1km±3km, Md2.8/7, Mm2.1/3*
*ISCJB **13** 06:16:21.2±0.4, 33°.34N±0°.02×35°.44E±0°.03, h5km±4km, Error ellipse: s-maj=4.4km s-min=2.7km az=30.9*
*GRAL **13** 06:16:22.2±0.3, 33°.34N×35°.46E, h4km±2km, MD3.4*
*NSSC **13** 06:16:23, 33°.29N×35°.56E, h5km±2km*

ISC 13 06:16:21.7±0.4, 33°.35N±0°.02×35°.45E±0°.03, h4km±4km, n65, σ0.9=65/104, 8D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	Matarih	0.17	325	*e*P	Pg	06 16 25.7	+0.6
MATL	Matarih	0.17	325	*e*P	Pg	06 16 25.7	+0.6
KSDI	Kefar Szold	0.24	131	Pg	Pg	06 16 25.8	-0.5
KSDI	Kefar Szold	0.24	131	Pg	Pg	06 16 25.8	-0.5
KSDI	Kefar Szold	0.24	131	Pg	Pg	06 16 26.3	0.0
KSDI				Sg	Sg	06 16 30.0	+0.5
HRI	Mount Hermon	0.26	109	Pg	Pg	06 16 26.4	-0.3
HRI	Mount Hermon	0.26	109	Pg	Pg	06 16 26.4	-0.3
HRI	Mount Hermon	0.26	109	Pg	Pg	06 16 26.5	-0.1
MMA0	Mount Meron ar	0.33	186	Pg	Pg	06 16 27.8	-0.4
MMA0				Sg	Sg	06 16 33.4	+0.9
RCY	Rachaya	0.34	66	*e*P	Pg	06 16 28.6	+0.3
RCY				*e*S	Sg	06 16 33.5	+0.7
RCY	Rachaya	0.34	66	*e*P	Pg	06 16 28.6	+0.3
RCY				*e*S	Sg	06 16 33.5	+0.7
HNTI	Hanita	0.35	221	Pg	Pg	06 16 28.2	-0.3
HNTI				Sg	Sg	06 16 33.8	+0.8
HNTI	Hanita	0.35	221	Pg	Pg	06 16 28.2	-0.3
HNTI				Sg	Sg	06 16 33.8	+0.8
HNTI	Hanita	0.35	221	Pg	Pg	06 16 28.2	-0.3
HNTI				Sg	Sg	06 16 33.8	+0.8
BRBR	Barbar	0.43	81	⇓P	Pg	06 16 29.0	-1.0
BRBR				⇑S	Sg	06 16 36.0	+0.5
BRBR	Barbar	0.43	81	⇓*i*P	Pg	06 16 30.0	0.0
BRBR				⇑*i*S	Sg	06 16 36.1	+0.6
KSHT	Keshet	0.48	140	Pg	Pg	06 16 31.1	+0.2
KSHT	Keshet	0.48	140	Pg	Pg	06 16 31.1	+0.2
KSHT	Keshet	0.48	140	Pg	Pg	06 16 31.1	+0.2
BEYL	Beirut	0.52	4	*e*P	Pg	06 16 31.9	0.0
BHL	Bhannes	0.58	17	*e*P	Pg	06 16 32.8	-0.1
BHL				*e*S	Sg	06 16 40.7	+0.2
BHL	Bhannes	0.58	17	*e*P	Pg	06 16 32.8	-0.1
BHL				*e*S	Sg	06 16 40.3	-0.2
BHL	Bhannes	0.58	17	*e*P	Pg	06 16 32.8	-0.1
BHL				*e*S	Sg	06 16 40.3	-0.2
BLGI	Bet Lehem HaGe	0.65	199	Pg	Pg	06 16 34.1	-0.1
QASN	Qassioun	0.72	75	⇓P	Pg	06 16 35.0	-0.5
QASN				⇑S	Sg	06 16 46.0	+1.1
QASN	Qassioun	0.72	75	⇓*i*P	Pg	06 16 35.9	+0.4
QASN				⇑*i*S	Sg	06 16 46.0	+1.1
TCHB	Talchebab	0.81	147	⇑P	Pg	06 16 37.0	-0.2
TCHB				⇑S	Sg	06 16 47.0	-0.7
TCHB	Talchebab	0.81	147	⇑*i*P	Pg	06 16 37.1	-0.1
TCHB				⇑*i*S	Sg	06 16 47.2	-0.5
OFRI	'Ofer	0.82	208	Pg	Pg	06 16 37.1	-0.4
OFRI	'Ofer	0.82	208	Pg	Pg	06 16 37.1	-0.4
OFRI	'Ofer	0.82	208	Pg	Pg	06 16 37.3	-0.2
TOTH	TOTAH	0.82	89	⇑P	Pg	06 16 37

JAI	**Aioi**	**0.25**	**255**	⇑P	**Pn**	**06 16 52.7 +0.1**
JAI				S	**Sn**	**06 16 57.8 0.0**
JWM	**Minabe**	**0.51**	**91**	⇑P	**Pn**	**06 16 55.7 -0.1**
JWM				S	**Sn**	**06 17 03.1 -0.2**
JAJ2	**Tsuna**	**0.57**	**12**	⇓P	**Pn**	**06 16 57.0 +0.3**
JAJ2				S	**Sn**	**06 17 04.9 0.0**
JMN	**Monobe**	**0.73**	**260**	⇑P	**Pn**	**06 16 58.9 0.0**
JMN				S	**Sn**	**06 17 08.9 +0.1**
JWY	**Kouya**	**0.79**	**63**	⇑P	**Pn**	**06 16 59.7 +0.1**
JWY				S	**Sn**	**06 17 10.0 -0.2**
JJS	**Sakaide**	**0.85**	**307**	⇑P	**Pn**	**06 17 00.4 -0.1**
JJS				S	**Sn**	**06 17 11.1 -0.6**
JWZ	**Kozaga**	**0.87**	**112**	⇑P	**Pn**	**06 17 00.5 -0.3**
JWZ				S	**Sn**	**06 17 12.2 0.0**
MAT	**Matsushiro**	**3.90**	**46**	P	**Pn**	**06 17 43.4 +1.0**
MAT				S	**Sn**	**06 18 26.6 -0.3**

*GII **13** 06:17:09.3±0.3, 33°.30N×35°.46E, h1km±1km, Md2.7/5, Mm2.4*
*CSEM **13** 06:17:09.2±0.2, 33°.32N×35°.40E, h10km, ML3.5, Error ellipse: s-maj=3.1km s-min=2.1km az=78.0*
*ISCJB **13** 06:17:09.7±0.4, 33°.34N±0°.02×35°.44E±0°.03, h9km±3km, Error ellipse: s-maj=4.6km s-min=2.7km az=30.9*
*GRAL **13** 06:17:10.3±0.3, 33°.32N×35°.45E, h4km±2km, MD3.5*
*NSSC **13** 06:17:11, 33°.29N×35°.51E, h12km±2km*

ISC 13 06:17:10.0±0.4, 33°.35N±0°.02×35°.44E±0°.03, h11km±4km, n32, σ0s63/62, 10D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.17**	**326**	*e*P	**Pg**	**06 17 13.9**	**+0.1**
MATL	**Matarih**	**0.17**	**326**	*e*P	**Pg**	**06 17 13.9**	**+0.1**
KSDI	**Kefar Szold**	**0.24**	**130**	Pg	**Pg**	**06 17 14.3**	**-0.6**
KSDI				Sg	**Sg**	**06 17 18.0**	**-0.2**
HRI	**Mount Hermon**	**0.26**	**108**	Pg	**Pg**	**06 17 14.7**	**-0.5**
HRI				Sg	**Sg**	**06 17 19.0**	**+0.2**
MMA0B	**Mount Meron ar**	**0.33**	**186**	Pg	**Pg**	**06 17 16.0**	**-0.6**
MMA0B				Sg	**Sg**	**06 17 21.3**	**+0.2**
RCY	**Rachaya**	**0.34**	**66**	*e*P	**Pg**	**06 17 16.9**	**+0.1**
RCY				*e*S	**Sg**	**06 17 21.9**	**+0.5**
RCY	**Rachaya**	**0.34**	**66**	*e*P	**Pg**	**06 17 16.9**	**+0.1**
RCY				*e*S	**Sg**	**06 17 21.9**	**+0.4**
HNTI	**Hanita**	**0.35**	**221**	Pg	**Pg**	**06 17 16.6**	**-0.3**
HNTI				Sg	**Sg**	**06 17 22.1**	**+0.6**
BRBR	**Barbar**	**0.43**	**81**	⇑P	**Pg**	**06 17 18.0**	**-0.4**
BRBR				⇓S	**Sg**	**06 17 25.0**	**+0.8**
BRBR	**Barbar**	**0.43**	**81**	⇑*i*P	**Pg**	**06 17 18.4**	**0.0**
BRBR				⇓*i*S	**Sg**	**06 17 25.3**	**+1.1**
KSHT	**Keshet**	**0.48**	**140**	Pg	**Pg**	**06 17 18.8**	**-0.5**
KSHT				Sg	**Sg**	**06 17 26.1**	**+0.5**
BHL	**Bhannes**	**0.58**	**17**	*e*P	**Pg**	**06 17 21.3**	**-0.1**
BHL				*e*S	**Sg**	**06 17 29.3**	**+0.3**
BHL	**Bhannes**	**0.58**	**17**	*e*P	**Pg**	**06 17 21.3**	**-0.1**
BHL				*e*S	**Sg**	**06 17 29.3**	**+0.2**
BLGI	**Bet Lehem HaGe**	**0.65**	**199**	Pg	**Pg**	**06 17 22.3**	**-0.2**
BLGI				Sg	**Sg**	**06 17 31.6**	**+0.6**
QASN	**Qassioun**	**0.72**	**75**	⇑P	**Pg**	**06 17 24.0**	**0.0**
QASN				⇓S	**Sg**	**06 17 33.0**	**-0.4**
QASN	**Qassioun**	**0.72**	**75**	⇑*i*P	**Pg**	**06 17 24.3**	**+0.3**
QASN				⇓*i*S	**Sg**	**06 17 33.8**	**+0.4**
TCHB	**Talchebab**	**0.81**	**147**	⇓P	**Pg**	**06 17 25.0**	**-0.6**
TCHB				⇑S	**Sg**	**06 17 35.0**	**-1.1**
TCHB	**Talchebab**	**0.81**	**147**	⇓*i*P	**Pg**	**06 17 25.0**	**-0.6**
TCHB				⇑*i*S	**Sg**	**06 17 35.6**	**-0.5**
OFRI	**'Ofer**	**0.82**	**208**	Pg	**Pg**	**06 17 25.3**	**-0.5**
OFRI				Sg	**Sg**	**06 17 37.8**	**+1.3**
TOTH	**TOTAH**	**0.82**	**89**	⇑P	**Pg**	**06 17 25.0**	**-0.9**
TOTH				⇓S	**Sg**	**06 17 37.0**	**+0.3**
TOTH	**TOTAH**	**0.82**	**89**	⇑*i*P	**Pg**	**06 17 26.0**	**+0.1**
TOTH				⇓*i*S	**Sg**	**06 17 37.6**	**+0.9**
MMLI	**Mount Malkishu**	**0.91**	**181**	Pg	**Pg**	**06 17 26.6**	**-0.9**
MMLI				Sg	**Sg**	**06 17 40.1**	**+0.8**
HWQ	**Hawqa**	**1.02**	**24**	*e*P	**Pg**	**06 17 29.2**	**-0.5**
HWQ				*e*S	**Sg**	**06 17 42.8**	**-0.2**
HMDT	**Nahal Hemdat**	**1.09**	**176**	Pg	**Pg**	**06 17 30.0**	**-1.0**
HMDT				Sg	**Sg**	**06 17 45.9**	**+0.7**
MARH	**Ras Al Marh**	**1.10**	**52**	⇑P	**Pb**	**06 17 32.0**	**+0.9**
MARH				⇑S	**Sg**	**06 17 46.0**	**+0.5**
MARH	**Ras Al Marh**	**1.10**	**52**	⇑*i*P	**Pb**	**06 17 32.0**	**+0.9**
MARH				⇑*i*S	**Sg**	**06 17 46.6**	**+1.1**
SLTI	**Sal'it**	**1.15**	**197**	Pg	**Pg**	**06 17 31.4**	**-0.8**
SLTI				Sg	**Sg**	**06 17 47.4**	**+0.2**
SALA	**Sala**	**1.25**	**120**	⇑P	**Pn**	**06 17 32.0**	**-1.5**
SALA				⇑S	**Sb**	**06 17 49.0**	**-0.9**
SALA	**Sala**	**1.25**	**120**	⇑*i*P	**Pn**	**06 17 32.9**	**-0.6**
SALA				⇑*i*S	**Sb**	**06 17 49.8**	**-0.1**
ZALF	**Zalf**	**1.64**	**104**	⇑P	**Pn**	**06 17 38.0**	**-0.8**
ZALF				⇓S	**Sn**	**06 18 00.0**	**0.0**
ZALF	**Zalf**	**1.64**	**104**	⇑*i*P	**Pn**	**06 17 38.1**	**-0.7**
ZALF				⇓*i*S	**Sn**	**06 18 00.4**	**+0.4**
DSI	**Dead Sea**	**1.77**	**182**	Pn	**Pn**	**06 17 40.9**	**+0.3**
DSI				Sn	**Sn**	**06 18 04.4**	**+1.2**

*GII **13** 06:42:12.0±0.5, 33°.28N×35°.46E, h1km±1km, Md2.1/9*
*GRAL **13** 06:42:12.9±0.3, 33°.32N×35°.46E, h5km±2km, MD3.0*
*CSEM **13** 06:42:12.9, 33°.32N×35°.46E, h4km, ML3.0, After GRAL*
*ISCJB **13** 06:42:12.0±0.5, 33°.34N±0°.02×35°.44E±0°.04, h5km±4km, Error ellipse: s-maj=5.4km s-min=3.0km az=24.6*

ISC 13 06:42:12.6±0.5, 33°.34N±0°.02×35°.44E±0°.04, h2km±5km, n20, σ0s61/37, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.17**	**328**	*e*P	**Pg**	**06 42 16.6**	**+0.6**
MATL	**Matarih**	**0.17**	**328**	*e*P	**Pg**	**06 42 16.6**	**+0.7**
KSDI	**Kefar Szold**	**0.24**	**129**	Pg	**Pg**	**06 42 16.6**	**-0.5**
KSDI				Sg	**Sg**	**06 42 22.3**	**+0.2**
HRI	**Mount Hermon**	**0.26**	**107**	Pg	**Pg**	**06 42 16.9**	**-0.6**
HRI				Sg	**Sg**	**06 42 21.8**	**+1.0**
MMA0	**Mount Meron ar**	**0.33**	**186**	Pg	**Pg**	**06 42 18.2**	**-0.6**
MMA0				Sg	**Sg**	**06 42 23.3**	**+0.2**
HNTI	**Hanita**	**0.34**	**221**	Pg	**Pg**	**06 42 19.1**	**0.0**
HNTI				Sg	**Sg**	**06 42 24.6**	**+1.1**
RCY	**Rachaya**	**0.35**	**66**	*e*P	**Pg**	**06 42 19.4**	**+0.2**
RCY				*e*S	**Sg**	**06 42 24.3**	**+0.5**
RCY	**Rachaya**	**0.35**	**66**	*e*P	**Pg**	**06 42 19.4**	**+0.2**
RCY				*e*S	**Sg**	**06 42 24.3**	**+0.6**
KSHT	**Keshet**	**0.47**	**139**	Pg	**Pg**	**06 42 21.6**	**0.0**
KSHT				Sg	**Sg**	**06 42 28.3**	**+0.5**
BHL	**Bhannes**	**0.59**	**17**	*e*P	**Pg**	**06 42 23.7**	**-0.1**
BHL				*e*S	**Sg**	**06 42 31.9**	**+0.4**
BHL	**Bhannes**	**0.59**	**17**	*e*P	**Pg**	**06 42 23.7**	**-0.2**
BHL				*e*S	**Sg**	**06 42 31.9**	**+0.4**
BLGI	**Bet Lehem HaGe**	**0.64**	**199**	Pg	**Pg**	**06 42 24.5**	**-0.3**
BLGI				Sg	**Sg**	**06 42 33.6**	**+0.4**
OFRI	**'Ofer**	**0.81**	**208**	Pg	**Pg**	**06 42 27.7**	**-0.5**
OFRI				Sg	**Sg**	**06 42 39.6**	**+0.9**
MMLI	**Mount Malkishu**	**0.90**	**181**	Pg	**Pg**	**06 42 28.8**	**-1.0**
MMLI				Sg	**Sg**	**06 42 41.2**	**-0.3**
HWQ	**Hawqa**	**1.02**	**24**	*e*P	**Pg**	**06 42 32.0**	**-0.2**
HWQ				*e*S	**Sg**	**06 42 45.3**	**-0.2**
HMDT	**Nahal Hemdat**	**1.09**	**176**	Pg	**Pg**	**06 42 32.1**	**-1.3**
HMDT				Sg	**Sg**	**06 42 47.5**	**0.0**
SLTI	**Sal'it**	**1.15**	**197**	Pg	**Pg**	**06 42 33.5**	**-1.1**
SLTI				Sg	**Sg**	**06 42 50.1**	**+0.7**
DSI	**Dead Sea**	**1.77**	**182**	Pn	**Pn**	**06 42 43.1**	**-1.0**
DSI				Sn	**Sn**	**06 43 06.8**	**-0.3**
MZDA	**Masada**	**2.03**	**182**	Sn	**Sn**	**06 43 13.8**	**+0.3**
PRNI	**Paran**	**3.00**	**187**	Pn	**Pn**	**06 43 01.2**	**+0.1**
PRNI				Sn	**Sn**	**06 43 38.5**	**+0.9**

*ISCJB **13** 06:48:07.4±0.4, 37°.91N±0°.02×21°.54E±0°.02, h2km±3km, Error ellipse: s-maj=3.6km s-min=3.0km az=29.7*
*NEIC **13** 06:48:08.4, 37°.96N×21°.54E, h13km, ML3.4(ATH), After ATH.*
*ATH **13** 06:48:08.4, 37°.96N×21°.54E, h13km±1km, MD3.6/21, ML3.4*
*THE **13** 06:48:08.1, 37°.94N×21°.53E, h6km, ML4.0/15, Error ellipse: s-maj=1.0km s-min=0.5km az=229.0*
*CSEM **13** 06:48:08.0±0.2, 37°.93N×21°.54E, h8km, ML3.4, Error ellipse: s-maj=3.6km s-min=2.9km az=52.0*

ISC 13 06:48:08.4±0.4, 37°.94N±0°.02×21°.54E±0°.02, h7km±3km, n111, σ0s91/154, 3C, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.13**	**336**	⇑*i*Pg	**Pg**	**06 48 11.7**	**+0.5**
RLS				*e*Sg	**Sg**	**06 48 14.6**	**+1.4**
RLS	**Riolos of Patr**	**0.13**	**336**	⇑*i*PG	**Pg**	**06 48 11.7**	**+0.5**
RLS				*e*SG	**Sg**	**06 48 14.6**	**+1.4**
RLS	**Riolos of Patr**	**0.13**	**336**	⇑*i*Pg	**Pg**	**06 48 11.7**	**+0.5**
RLS				*e*Sg	**Sg**	**06 48 14.6**	**+1.4**
UPR	**University Cam**	**0.40**	**30**	P	**Pg**	**06 48 16.2**	**0.0**
UPR	**University Cam**	**0.40**	**30**	*e*PB	**Pg**	**06 48 16.3**	**+0.1**
UPR				*e*SB	**Sg**	**06 48 21.8**	**+0.4**
UPR	**University Cam**	**0.40**	**30**	P	**Pg**	**06 48 16.2**	**0.0**
UPR				*e*Sb	**Sg**	**06 48 21.8**	**+0.4**
LAKA	**Lakka**	**0.46**	**49**	P	**Pg**	**06 48 16.7**	**-0.7**
LAKA				S	**Sg**	**06 48 23.5**	**0.0**
LAKA	**Lakka**	**0.46**	**49**	P	**Pg**	**06 48 16.7**	**-0.7**
LAKA				S	**Sg**	**06 48 23.5**	**0.0**
EFP	**Efpalio**	**0.57**	**31**	P	**Pg**	**06 48 18.9**	**-0.5**
EFP				S	**Sg**	**06 48 27.8**	**+0.9**
EFP	**Efpalio**	**0.57**	**31**	*e*PB	**Pg**	**06 48 19.1**	**-0.3**
EFP				*e*SB	**Sg**	**06 48 26.9**	**0.0**
EFP	**Efpalio**	**0.57**	**31**	*e*Pb	**Pg**	**06 48 19.1**	**-0.3**
EFP				*e*Sb	**Sg**	**06 48 26.9**	**0.0**
EFP				S	**Sg**	**06 48 27.8**	**+0.9**
TRIZ	**Trizonia**	**0.60**	**45**	P	**Pg**	**06 48 19.3**	**-0.7**
TRIZ				S	**Sg**	**06 48 28.3**	**+0.4**
TRIZ	**Trizonia**	**0.60**	**45**	P	**Pg**	**06 48 19.3**	**-0.7**
TRIZ				S	**Sg**	**06 48 28.3**	**+0.4**
KFL	**Anninata**	**0.61**	**287**	P	**Pg**	**06 48 19.9**	**-0.3**
GUR	**Goura**	**0.64**	**90**	P	**Pg**	**06 48 19.7**	**-1.0**
GUR				S	**Sg**	**06 48 30.1**	**+1.1**
GUR	**Goura**	**0.64**	**90**	*e*PG	**Pg**	**06 48 20.4**	**-0.3**
GUR				*e*SB	**Sg**	**06 48 30.0**	**+1.0**
GUR	**Goura**	**0.64**	**90**	P	**Pg**	**06 48 19.7**	**-1.0**
GUR	**Goura**	**0.64**	**90**	*e*Pg	**Pg**	**06 48 20.4**	**-0.3**
GUR				*e*Sb	**Sg**	**06 48 30.0**	**+1.0**
KALE	**Kalithea**	**0.66**	**46**	P	**Pg**	**06 48 20.3**	**-0.8**
KALE				S	**Sg**	**06 48 30.7**	**+1.0**
KALE	**Kalithea**	**0.66**	**46**	P	**Pg**	**06 48 20.3**	**-0.8**
KALE				S	**Sg**	**06 48 30.7**	**+1.0**
VLS	**Valsamata**	**0.78**	**288**	*e*Pb	**Pg**	**06 48 22.6**	**-0.9**
VLS				*e*Sb	**Sb**	**06 48 35.2**	**+0.1**
VLS	**Valsamata**	**0.78**	**288**	P	**Pg**	**06 48 22.1**	**-1.4**
VLS				S	**Sg**	**06 48 34.4**	**+0.7**
VLS	**Valsamata**	**0.78**	**288**	*e*PB	**Pg**	**06 48 22.6**	**-0.9**
VLS				*e*SB	**Sb**	**06 48 35.2**	**+0.1**
VLS	**Valsamata**	**0.78**	**288**	P	**Pg**	**06 48 22.1**	**-1.4**
VLS	**Valsamata**	**0.78**	**288**	*e*Pb	**Pg**	**06 48 22.6**	**-0.9**
VLS				S	**Sg**	**06 48 34.4**	**+0.7**
VLS				*e*Sb	**Sb**	**06 48 35.2**	**+0.1**
ITM	**Ithomi**	**0.82**	**157**	*e*Pg	**Pg**	**06 48 24.0**	**-0.1**
ITM				*e*Sb	**Sg**	**06 48 36.5**	**+1.8**
ITM	**Ithomi**	**0.82**	**157**	P	**Pg**	**06 48 23.2**	**-0.9**
ITM	**Ithomi**	**0.82**	**157**	*e*PG	**Pg**	**06 48 24.0**	**-0.1**
ITM				*e*SB	**Sg**	**06 48 36.5**	**+1.8**
ITM	**Ithomi**	**0.82**	**157**	P	**Pg**	**06 48 23.2**	**-0.9**
ITM	**Ithomi**	**0.82**	**157**	*e*Pg	**Pg**	**06 48 24.0**	**-0.1**
VLX	**Vlachokerasia**	**0.88**	**130**	P	**Pg**	**06 48 24.7**	**-0.5**
VLX				S	**Sg**	**06 48 37.4**	**+0.8**
VLX	**Vlachokerasia**	**0.88**	**130**	*e*PG	**Pg**	**06 48 24.8**	**-0.4**
VLX				*e*SB	**Sg**	**06 48 38.5**	**+1.9**
VLX	**Vlachokerasia**	**0.88**	**130**	P	**Pg**	**06 48 24.7**	**-0.5**
VLX				S	**Sg**	**06 48 37.4**	**+0.8**
DSF	**Desfina**	**0.92**	**58**	P	**Pg**	**06 48 25.0**	**-1.0**
DSF				S	**Sg**	**06 48 38.2**	**+0.3**
DSF	**Desfina**	**0.92**	**58**	P	**Pg**	**06 48 25.0**	**-1.0**
DSF				S	**Sg**	**06 48 38.2**	**+0.3**
EVR	**Evrytania**	**1.00**	**12**	*e*Pb	**Pg**	**06 48 27.1**	**-0.6**
EVR	**Evrytania**	**1.00**	**12**	*e*PB	**Pg**	**06 48 27.1**	**-0.6**
EVR	**Evrytania**	**1.00**	**12**	*e*Pb	**Pg**	**06 48 27.1**	**-0.6**
PYL	**PYLOS**	**1.05**	**171**	P	**Pg**	**06 48 27.5**	**-1.1**
PYL	**PYLOS**	**1.05**	**171**	*e*PG	**Pg**	**06 48 28.5**	**-0.1**
PYL	**PYLOS**	**1.05**	**171**	P	**Pg**	**06 48 27.5**	**-1.1**
PYL	**PYLOS**	**1.05**	**171**	*e*Pg	**Pg**	**06 48 28.5**	**-0.1**
LKD2	**Lefkada island**	**1.10**	**321**	P	**Pg**	**06 48 28.0**	**-1.4**
LKD2				S	**Sg**	**06 48 44.9**	**+1.2**
LKD2	**Lefkada island**	**1.10**	**321**	P	**Pg**	**06 48 28.0**	**-1.4**
LKD2				S	**Sg**	**06 48 44.9**	**+1.2**
LTK	**Loutraki**	**1.14**	**85**	P	**Pg**	**06 48 28.9**	**-1.3**
LTK				S	**Sg**	**06 48 46.1**	**+1.2**
LTK	**Loutraki**	**1.14**	**85**	*e*PG	**Pg**	**06 48 29.3**	**-0.9**
LTK	**Loutraki**	**1.14**	**85**	P	**Pg**	**06 48 28.9**	**-1.3**
LTK	**Loutraki**	**1.14**	**85**	*e*Pg	**Pg**	**06 48 29.3**	**-0.9**
LTK				S	**Sg**	**06 48 46.1**	**+1.2**
AGG	**Agios Georgios**	**1.25**	**30**	*e*Pb	**Pb**	**06 48 31.8**	**-0.5**
AGG				*e*Sb	**Sb**	**06 48 48.7**	**+0.1**
AGG	**Agios Georgios**	**1.25**	**30**	P	**Pn**	**06 48 31.0**	**-1.3**
AGG				S	**Sb**	**06 48 48.5**	**-0.1**
AGG	**Agios Georgios**	**1.25**	**30**	*e*PB	**Pb**	**06 48 31.8**	**-0.5**
AGG				*e*SB	**Sb**	**06 48 48.7**	**+0.1**
AGG	**Agios Georgios**	**1.25**	**30**	P	**Pn**	**06 48 31.0**	**-1.3**
AGG	**Agios Georgios**	**1.25**	**30**	*e*Pb	**Pb**	**06 48 31.8**	**-0.5**
AGG				S	**Sb**	**06 48 48.5**	**-0.1**
LKR	**Lokris**	**1.36**	**58**	*e*Pn	**Pn**	**06 48 32.8**	**-0.9**
LKR	**Lokris**	**1.36**	**58**	P	**Pn**	**06 48 32.3**	**-1.4**
LKR				S	**Sb**	**06 48 51.3**	**-0.3**
LKR	**Lokris**	**1.36**	**58**	*e*PN	**Pn**	**06 48 32.8**	**-0.9**
LKR	**Lokris**	**1.36**	**58**	P	**Pn**	**06 48 32.3**	**-1.4**
LKR	**Lokris**	**1.36**	**58**	*e*Pn	**Pn**	**06 48 32.8**	**-0.9**
LKR				S	**Sb**	**06 48 51.3**	**-0.3**
ATAL	**Atalanti**	**1.39**	**57**	P	**Pn**	**06 48 32.8**	**-1.4**
ATAL				S	**Sb**	**06 48 53.1**	**+0.4**
ATAL	**Atalanti**	**1.39**	**57**	P	**Pn**	**06 48 32.8**	**-1.4**
ATAL				S	**Sb**	**06 48 53.1**	**+0.4**
NAIG	**Nisos Aigina**	**1.56**	**96**	*e*Pg	**Pg**	**06 48 37.5**	**-0.7**
NAIG	**Nisos Aigina**	**1.56**	**96**	*e*PG	**Pg**	**06 48 37.5**	**-0.7**
NAIG	**Nisos Aigina**	**1.56**	**96**	*e*Pg	**Pg**	**06 48 37.5**	**-0.7**
VLI	**Veliai**	**1.65**	**137**	*e*Pg	**Pg**	**06 48 40.1**	**+0.1**
VLI	**Veliai**	**1.65**	**137**	*e*PG	**Pg**	**06 48 40.1**	**+0.1**
VLI	**Veliai**	**1.65**	**137**	*e*Pg	**Pg**	**06 48 40.1**	**+0.1**
THL	**Klokotos Trika**	**1.67**	**13**	P	**Pn**	**06 48 38.4**	**+0.4**
THL	**Klokotos Trika**	**1.67**	**13**	*e*PB	**Pb**	**06 48 39.2**	**-0.2**
THL	**Klokotos Trika**	**1.67**	**13**	P	**Pn**	**06 48 38.4**	**+0.4**
THL	**Klokotos Trika**	**1.67**	**13**	*e*Pb	**Pb**	**06 48 39.2**	**-0.2**
ATH	**Athens Observa**	**1.73**	**88**	*e*Pg	**Pg**	**06 48 40.9**	**-0.6**
ATH	**Athens Observa**	**1.73**	**88**	*e*PG	**Pg**	**06 48 40.9**	**-0.6**
ATH	**Athens Observa**	**1.73**	**88**	*e*Pg	**Pg**	**06 48 40.9**	**-0.6**
ATHU	**Athens Univers**	**1.78**	**88**	P	**Pn**	**06 48 39.2**	**-0.3**
ATHU	**Athens Univers**	**1.78**	**88**	P	**Pn**	**06 48 39.2**	**-0.3**
VLY	**Voula,Athens**	**1.79**	**92**	*e*Pg	**Pg**	**06 48 41.9**	**-0.8**
VLY	**Voula,Athens**	**1.79**	**92**	*e*PG	**Pg**	**06 48 41.9**	**-0.8**
VLY	**Voula,Athens**	**1.79**	**92**	*e*Pg	**Pg**	**06 48 41.9**	**-0.8**
JAN	**Janina**	**1.80**	**343**	*e*Pg	**Pg**	**06 48 41.5**	**-1.4**
JAN	**Janina**	**1.80**	**343**	*e*PG	**Pg**	**06 48 41.5**	**-1.4**
JAN	**Janina**	**1.80**	**343**	*e*Pg	**Pg**	**06 48 41.5**	**-1.4**
PTL	**Penteli**	**1.84**	**86**	*e*Pn	**Pn**	**06 48 41.0**	**+0.6**
PTL	**Penteli**	**1.84**	**86**	*e*PN	**Pn**	**06 48 41.0**	**+0.6**
PTL	**Penteli**	**1.84**	**86**	*e*Pn	**Pn**	**06 48 41.0**	**+0.6**
MEV	**Metsovon**	**1.86**	**353**	P	**Pn**	**06 48 42.3**	**+1.6**
MEV	**Metsovon**	**1.86**	**353**	P	**Pn**	**06 48 42.3**	**+1.6**
NEO	**Neokhori**	**1.90**	**44**	*e*Pn	**Pn**	**06 48 41.6**	**+0.4**
NEO	**Neokhori**	**1.90**	**44**	*e*PN	**Pn**	**06 48 41.6**	**+0.4**
NEO	**Neokhori**	**1.90**	**44**	*e*Pn	**Pn**	**06 48 41.6**	**+0.4**
XOR	**Xorichti**	**1.93**	**42**	P	**Pn**	**06 48 41.2**	**-0.4**
XOR	**Xorichti**	**1.93**	**42**	P	**Pn**	**06 48 41.2**	**-0.4**
AOS	**Alonnisos**	**2.21**	**55**	P	**Pn**	**06 48 44.6**	**-0.9**
AOS	**Alonnisos**	**2.21**	**55**	P	**Pn**	**06 48 44.6**	**-0.9**
KZN	**Kozani**	**2.38**	**4**	*e*Pn	**Pn**	**06 48 49.7**	**+2.0**
KZN	**Kozani**	**2.38**	**4**	*e*PN	**Pn**	**06 48 49.7**	**+2.0**
KZN	**Kozani**	**2.38**	**4**	*e*Pn	**Pn**	**06 48 49.7**	**+2.0**
FNA	**Florina**	**2.85**	**358**	P	**Pn**	**06 48 54.8**	**+0.6**
FNA	**Florina**	**2.85**	**358**	P	**Pn**	**06 48 54.8**	**+0.6**
BIA	**Bitola**	**3.08**	**357**	*e*Pn	**Pn**	**06 48 56.2**	**-1.3**
SOH	**Sokhos**	**3.21**	**26**	*e*Pn	**Pn**	**06 49 01.3**	**+2.1**
SOH	**Sokhos**	**3.21**	**26**	*e*PN	**Pn**	**06 49 01.3**	**+2.1**
SOH	**Sokhos**	**3.21**	**26**	*e*Pn	**Pn**	**06 49 01.3**	**+2.1**
APE	**Apeiranthos**	**3.29**	**104**	P	**Pn**	**06 49 00.4**	**+0.1**
APE	**Apeiranthos**	**3.29**	**104**	P	**Pn**	**06 49 00.4**	**+0.1**
KRUS	**Krusevo**	**3.44**	**356**	*e*Pn	**Pn**	**06 49 02.8**	**+0.5**
KRUS				*e*Sn	**Sn**	**06 49 47.8**	**+4.5**
KRUS				*e*Lg		06 49 48.5	
KRUS	comp=E,0.0nm,0.7s comp=N,0.0nm,0.5s			*e*Lg		06 49 49.7	
CHOS	**Chios island**	**3.59**	**81**	P	**Pn**	**06 49 04.5**	**+0.1**
CHOS	**Chios island**	**3.59**	**81**	*e*Pn	**Pn**	**06 49 03.9**	**-0.5**
CHOS	**Chios island**	**3.59**	**81**	P	**Pn**	**06 49 04.5**	**+0.1**
LAST	**Lasithi**	**4.21**	**130**	*e*Pn	**Pn**	**06 49 14.6**	**+1.6**
LAST	**Lasithi**	**4.21**	**130**	*e*PN	**Pn**	**06 49 14.6**	**+1.6**
LAST	**Lasithi**	**4.21**	**130**	*e*Pn	**Pn**	**06 49 14.6**	**+1.6**

IDC 13 06:56:09.4±2.5, 9°.09S×156°.17E, h0km, mb4.1/5, mb1 4.2/5, mb1mx3.9/16, mbtmp4.1/5, MS3.4/4, Ms1 3.4/4, ms1mx3.1/19, Error ellipse: s-maj=72.1km s-min=26.5km az=108.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**14.54**	**220**	LR	LR	07 02 57.4	
	comp=Z,55nm,21.9s,baz=49,slow=28						
WRA	**Warramunga Arr**	**23.70**	**241**	P	P	07 01 23.5	+0.3
	5.8nm,0.6s,baz=66,slow=9.8,SNR=24						
ASAR	**Alice Springs**	**25.76**	**233**	P	P	07 01 41.4	-0.6
	2.3nm,0.8s,baz=65,slow=9.1,SNR=20						
STKA	**Stephens Creek**	**26.41**	**209**	P	P	07 01 47.9	+0.2
	4.8nm,1.0s,baz=44,slow=16,SNR=4.3						
STKA				LR	LR	07 10 47.1	
	comp=Z,208nm,18.2s,baz=25,slow=33						
URZ	**Urewera**	**34.63**	**150**	LR	LR	07 14 22.5	
	comp=Z,62nm,18.8s,baz=327,slow=32						
PETK	**Petropavlovsk-**	**61.96**	**1**	LR	LR	07 27 58.3	
	comp=Z,26nm,20.5s,baz=323,slow=31						
SONM	**Songino Array**	**71.71**	**327**	P	P	07 07 34.1	+0.9
	1.1nm,0.8s,baz=128,slow=5.9,SNR=6.6						
MKAR	**Makanchi Array**	**85.73**	**319**	P	P	07 08 49.8	-0.6
	0.5nm,0.6s,baz=94,slow=10,SNR=5.1						

IDC 13 07:03:38.2±6.2, 17°.40S×174°.90W, h277km±150km, mb3.8/4, mb1 3.9/5, mb1mx3.4/18, mbtmp3.8/5, Error ellipse: s-maj=159.4km s-min=100.6km az=97.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.59**	**41**	P	Pn	07 04 51.6	+1.4
	15nm,0.3s,baz=29,slow=24,SNR=29						
AFI				S	S	07 05 47.5	-0.2
	16nm,0.3s,baz=235,slow=17,SNR=9.1						
CTA	**Charters Tower**	**36.83**	**260**	P	P	07 10 20.4	-0.1
	2.4nm,0.6s,baz=92,slow=12,SNR=3.0						
STKA	**Stephens Creek**	**41.81**	**241**	P	P	07 11 00.9	-0.3
	1.1nm,0.4s,baz=99,slow=13,SNR=4.5						
WRA	**Warramunga Arr**	**48.01**	**259**	P	P	07 11 50.3	+0.1
	2.6nm,0.4s,baz=97,slow=7.7,SNR=17						
ASAR	**Alice Springs**	**48.15**	**254**	P	P	07 11 51.0	-0.1
	18nm,0.6s,baz=91,slow=7.8,SNR=247						

*SKO **13** 07:10:29.2, 38°.31N×20°.08E, h0km*
*ISCJB **13** 07:10:31.6±0.4, 38°

PYL				eS	Sn	07 11 10.9	+1.5
PYL	**PYLOS**	**1.25**	**192**	P	**Pn**	**07 10 53.9**	**+0.3**
PYL				S	**Sn**	**07 11 08.9**	**-0.5**
LKD2	**Lefkada island**	**1.29**	**301**	P	**Pn**	**07 10 53.8**	**-0.2**
LKD2	**Lefkada island**	**1.29**	**301**	P	**Pn**	**07 10 53.8**	**-0.2**
ATH	**Athens Observa**	**1.31**	**96**	eP	**Pn**	**07 10 54.5**	**+0.1**
ATH	**Athens Observa**	**1.31**	**96**	eP	**Pn**	**07 10 54.5**	**+0.1**
ATHU	**Athens Univers**	**1.37**	**96**	P	**Pn**	**07 10 54.7**	**-0.4**
ATHU				S	**Sn**	**07 11 11.9**	**-0.3**
ATHU	**Athens Univers**	**1.37**	**96**	P	**Pn**	**07 10 54.7**	**-0.4**
ATHU				S	**Sn**	**07 11 11.9**	**-0.3**
VLY	**Voula,Athens**	**1.40**	**101**	eP	**Pn**	**07 10 55.4**	**-0.1**
VLY	**Voula,Athens**	**1.40**	**101**	eP	**Pn**	**07 10 55.4**	**-0.1**
PTL	**Penteli**	**1.42**	**92**	eP	**Pn**	**07 10 56.0**	**+0.1**
PTL	**Penteli**	**1.42**	**92**	eP	**Pn**	**07 10 56.0**	**+0.1**
PTL	**Penteli**	**1.42**	**92**	eP	**Pn**	**07 10 56.0**	**+0.1**
THL	**Klokotos Trika**	**1.44**	**359**	P	**Pn**	**07 10 56.3**	**+0.2**
THL				S	**Sn**	**07 11 15.0**	**+1.1**
THL	**Klokotos Trika**	**1.44**	**359**	eP	**Pn**	**07 10 56.5**	**+0.4**
THL	**Klokotos Trika**	**1.44**	**359**	P	**Pn**	**07 10 56.3**	**+0.2**
THL				S	**Sn**	**07 11 15.0**	**+1.1**
NEO	**Neokhori**	**1.49**	**37**	eP	**Pn**	**07 10 56.8**	**0.0**
NEO	**Neokhori**	**1.49**	**37**	eP	**Pn**	**07 10 56.8**	**0.0**
NEO	**Neokhori**	**1.49**	**37**	eP	**Pn**	**07 10 56.8**	**0.0**
XOR	**Xorichti**	**1.52**	**35**	P	**Pn**	**07 10 57.1**	**-0.1**
XOR				S	**Sn**	**07 11 16.3**	**+0.4**
XOR	**Xorichti**	**1.52**	**35**	P	**Pn**	**07 10 57.1**	**-0.1**
XOR				S	**Sn**	**07 11 16.3**	**+0.4**
VLI	**Veliai**	**1.57**	**153**	eP	**Pn**	**07 10 57.5**	**-0.3**
VLI	**Veliai**	**1.57**	**153**	eP	**Pn**	**07 10 57.5**	**-0.3**
VLI	**Veliai**	**1.57**	**153**	eP	**Pn**	**07 10 57.5**	**-0.3**
AOS	**Alonnisos**	**1.77**	**53**	P	**Pn**	**07 11 00.2**	**-0.3**
AOS				S	**Sn**	**07 11 21.5**	**-0.3**
AOS	**Alonnisos**	**1.77**	**53**	P	**Pn**	**07 11 00.2**	**-0.3**
AOS				S	**Sn**	**07 11 21.5**	**-0.3**
KZN	**Kozani**	**2.19**	**354**	eP	**Pn**	**07 11 07.9**	**+1.6**
KZN	**Kozani**	**2.19**	**354**	P	**Pn**	**07 11 07.3**	**+1.0**
KZN	**Kozani**	**2.19**	**354**	eP	**Pn**	**07 11 07.9**	**+1.6**
KZN	**Kozani**	**2.19**	**354**	P	**Pn**	**07 11 07.3**	**+1.0**
PAIG	**Paliouri**	**2.20**	**34**	P	**Pn**	**07 11 05.8**	**-0.6**
PAIG	**Paliouri**	**2.20**	**34**	P	**Pn**	**07 11 05.8**	**-0.6**
PLG	**Polygyros**	**2.49**	**25**	P	**Pn**	**07 11 09.8**	**-0.6**
PLG	**Polygyros**	**2.49**	**25**	P	**Pn**	**07 11 09.8**	**-0.6**
HORT	**Hortiatis**	**2.60**	**18**	P	**Pn**	**07 11 11.5**	**-0.4**
HORT	**Hortiatis**	**2.60**	**18**	P	**Pn**	**07 11 11.5**	**-0.4**
OUR	**Ouranopolis**	**2.66**	**33**	P	**Pn**	**07 11 12.3**	**-0.5**
OUR	**Ouranopolis**	**2.66**	**33**	P	**Pn**	**07 11 12.3**	**-0.5**
FNA	**Florina**	**2.71**	**349**	P	**Pn**	**07 11 13.7**	**+0.3**
FNA	**Florina**	**2.71**	**349**	P	**Pn**	**07 11 13.7**	**+0.3**
SOH	**Sokhos**	**2.87**	**20**	P	**Pn**	**07 11 16.2**	**+0.6**
SOH	**Sokhos**	**2.87**	**20**	P	**Pn**	**07 11 16.2**	**+0.6**
BIA	**Bitola**	**2.95**	**349**	eSn	**Sn**	**07 11 50.9**	**+0.1**
BIA				eLg		07 11 50.9	
	comp=N,11nm,0.2s						
BIA				eLg		07 11 51.6	
	comp=E,13nm,0.3s						
APE	**Apeiranthos**	**2.95**	**110**	P	**Pn**	**07 11 16.9**	**+0.2**
APE	**Apeiranthos**	**2.95**	**110**	P	**Pn**	**07 11 16.9**	**+0.2**
CHOS	**Chios island**	**3.15**	**84**	P	**Pn**	**07 11 20.2**	**+0.7**
CHOS	**Chios island**	**3.15**	**84**	eP	**Pn**	**07 11 20.1**	**+0.6**
CHOS	**Chios island**	**3.15**	**84**	eP	**Pn**	**07 11 20.1**	**+0.6**
SRS	**Serrai**	**3.21**	**21**	P	**Pn**	**07 11 20.6**	**+0.3**
SRS	**Serrai**	**3.21**	**21**	P	**Pn**	**07 11 20.6**	**+0.3**
KRUS	**Krusevo**	**3.30**	**349**	ePn	**Pn**	**07 11 19.9**	**-1.6**
KRUS				eSn	**Sn**	**07 11 59.2**	**-0.2**
STON	**Ston**	**5.79**	**326**	ePn	**Pn**	**07 11 51.4**	**-4.2**
STON				Sn	**Sn**	**07 12 53.0**	**-7.6**

NEIC 13 07:35:08.4, 37°.60S×177°.15E, h5km, ML4.4(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	**White Island**	**0.08**	**23**	P	Pg	07 35 10.7	+0.6
WIZ				S	Sg	07 35 12.5	+1.2
MARZ	**Manawahe**	**0.54**	**224**	P	Pg	07 35 19.2	+0.4
EDRZ	**Edgecumbe**	**0.60**	**213**	P	Pg	07 35 20.7	+0.7
URZ	**Urewera**	**0.66**	**183**	P	Pg	07 35 21.2	+0.1
TGRZ	**Tauranga**	**0.72**	**259**	P	Pg	07 35 22.3	+0.1
OUZ	**Omahuta**	**3.72**	**309**	ePn	Pn	07 36 04.5	-2.0

*CSEM **13** 07:36:07.1±0.8, 35°.91N×21°.86E, h2km, ML3.2/1, Error ellipse: s-maj=14.9km s-min=6.7km az=54.0*
*ATH **13** 07:36:09.6, 36°.00N×21°.89E, h5km, MD3.3/8*
*THE **13** 07:36:09.5, 36°.01N×21°.73E, h2km±2km, ML3.2/1, Error ellipse: s-maj=7.2km s-min=1.2km az=260.0*

ISC 13 07:36:06.5±1.8, 35°.90N±0°.07×21°.8E±0°.1, h1km±8km, n21, σ0°.73/34, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**1.00**	**359**	P	**Pg**	**07 36 26.5**	**+0.8**
PYL				S	**Sg**	**07 36 38.4**	**-0.2**
PYL	**PYLOS**	**1.00**	**359**	ePG	**Pg**	**07 36 26.6**	**+0.9**
PYL				eSB	**Sb**	**07 36 40.3**	**+0.1**
PYL	**PYLOS**	**1.00**	**359**	P	**Pg**	**07 36 26.5**	**+0.8**
PYL				S	**Sg**	**07 36 38.4**	**-0.2**
PYL				eSb	**Sb**	**07 36 40.3**	**+0.1**
KYTH	**Kithira**	**1.10**	**69**	ePN	**Pg**	**07 36 28.8**	**+1.2**
KYTH	**Kithira**	**1.10**	**69**	ePn	**Pg**	**07 36 28.8**	**+1.2**
VLI	**Veliai**	**1.25**	**49**	ePN	**Pn**	**07 36 30.8**	**-0.3**
VLI				eSB	**Sb**	**07 36 46.6**	**-1.0**
VLI	**Veliai**	**1.25**	**49**	ePn	**Pn**	**07 36 30.8**	**-0.3**
VLI				eSb	**Sb**	**07 36 46.6**	**-1.0**
ITM	**Ithomi**	**1.29**	**6**	P	**Pg**	**07 36 31.6**	**+0.4**
ITM				S	**Sg**	**07 36 48.8**	**+0.9**
ITM	**Ithomi**	**1.29**	**6**	ePG	**Pg**	**07 36 31.8**	**+0.6**
ITM				eSB	**Sb**	**07 36 49.1**	**+0.5**
ITM	**Ithomi**	**1.29**	**6**	P	**Pg**	**07 36 31.6**	**+0.4**
ITM				S	**Sg**	**07 36 48.8**	**+0.9**
ITM				eSb	**Sb**	**07 36 49.1**	**+0.5**
VLX	**Vlachokerasia**	**1.55**	**18**	P	**Pn**	**07 36 35.5**	**+0.2**
VLX				S	**Sb**	**07 36 56.7**	**+0.5**
VLX	**Vlachokerasia**	**1.55**	**18**	ePG	**Pg**	**07 36 35.9**	**-0.4**
VLX				eSB	**Sb**	**07 36 56.7**	**+0.5**
VLX	**Vlachokerasia**	**1.55**	**18**	P	**Pn**	**07 36 35.5**	**+0.2**
VLX	**Vlachokerasia**	**1.55**	**18**	ePg	**Pg**	**07 36 35.9**	**-0.4**
VLX				S	**Sb**	**07 36 56.7**	**+0.5**
KARN	**Karanos**	**1.82**	**105**	P	**Pg**	**07 36 41.8**	**+0.3**
GUR	**Goura**	**2.09**	**13**	ePG	**Pg**	**07 36 45.7**	**-0.9**
GUR	**Goura**	**2.09**	**13**	ePg	**Pg**	**07 36 45.7**	**-0.9**
LTK	**Loutraki**	**2.33**	**24**	ePG	**Pg**	**07 36 50.5**	**-0.7**
LTK	**Loutraki**	**2.33**	**24**	ePg	**Pg**	**07 36 50.5**	**-0.7**
EFP	**Efpalio**	**2.53**	**3**	ePN	**Pg**	**07 36 53.5**	**-1.5**
EFP	**Efpalio**	**2.53**	**3**	ePn	**Pg**	**07 36 53.5**	**-1.5**

MEX 13 07:49:19.7±1.1, 16°.67N×90°.52W, h80km±49km, MD3.9, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCX	**San Cristobal**	**2.03**	**272**	*i* P	Pn	07 49 51.4	-0.5
SCX				*i* S	Sn	07 50 16.1	-0.5
THIG		**2.43**	**224**	*i* P	Pn	07 49 57.1	-0.2
THIG				*i* S	Sn	07 50 24.6	-1.5
TGIG		**2.50**	**273**	*i* P	Pn	07 49 57.2	-1.1
TGIG				*i* S	Sn	07 50 24.7	-3.1
PCIG		**2.77**	**250**	*i* P	Pn	07 49 59.2	-2.6
PCIG				*i* S	Sn	07 50 31.2	-3.1
HUIG	**Huatulco**	**5.44**	**261**	*i* P	Pn	07 50 37.4	-0.9
HUIG				*i* S	Sn	07 51 39.1	-0.5
VHO	**Vista Hermosa**	**5.96**	**275**	*i* P	Pn	07 50 46.6	+1.2
VHO				*i* S	Sn	07 51 51.0	-1.4
PNIG	**Pinotepa**	**7.30**	**269**	*i* P	Pn	07 51 03.1	-0.6

*IDC **13** 07:51:51.7±0.5, 9°.62S×159°.44E, h0km, mb4.4/19, mb1 4.4/20, mb1mx4.4/21, mbtmp4.3/20, ML4.5/1, MS3.9/17, Ms1 3.9/17, ms1mx3.8/24, Error ellipse: s-maj=16.9km s-min=12.4km az=148.0*
*BJI **13** 07:51:54.7, 9°.04S×159°.82E, h21km, mB4.9/23, mb4.9/34, Ms4.9/22, Ms7 4.3/22*
*ISCJB **13** 07:51:55.2±0.9, 9°.58S±0°.05×159°.46E±0°.05, h30km±7km, mb4.7/46, MS4.1/23, Error ellipse: s-maj=9.9km s-min=6.7km az=141.1*
*NEIC **13** 07:51:56.3±1.2, 9°.52S×159°.44E, h26km±9km, mb4.7/22, Error ellipse: s-maj=9.4km s-min=5.8km az=130.0*
NEIC Felt [IV] at Honiara.
*GCMT **13** 07:51:58.5±0.5, 9°.70S×159°.44E, h35km±1km, MW5.0, Moment Tensor Solution. s29,c33; s58,c72; Moment tensor: Scale 10^{16}Nm; M_{rr}=0.75±.19; $M_{\theta\theta}$=1.93±.14; $M_{\phi\phi}$=-1.17±.14; $M_{r\theta}$=1.54±.17; $M_{r\phi}$=-2.54±.11; $M_{\theta\phi}$=0.75±.18; Best double couple: M_0=3.50000×10^{16} NP1:ϕ_s162.00000°, δ59.00000°, λ-12.00000°. NP2:ϕ_s258.00000°, δ80.00000°, λ-149.00000°. Principal axes: T 3.5900, Plg14.0000°, Azm26.0000°; N -0.2000, Plg57.0000°, Azm274.0000°; P -3.3900, Plg29.0000°, Azm124.0000°; Data Used: II IC IU G CN.*

ISC 13 07:51:56.5±1.1, 9°.57S±0°.05×159°.49E±0°.06, h26km±8km, h27km±2.3km: pP-P, n78, σ1°.00/77, mb4.7/46, MS4.1/23, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**0.47**	**73**	Pn	**Pb**	**07 52 06.5**	**+0.2**
	7μm,0.3s,baz=230,slow=3.1,SNR=2034						
HNR				Sn	**Sb**	**07 52 13.2**	**+0.2**
	43μm,0.3s,baz=192,slow=4.0,SNR=87						
HNR	**Honiara**	**0.47**	**73**	ePg	**Pb**	**07 52 06.4**	**+0.1**
HNR				eSg	**Sb**	**07 52 12.9**	**-0.1**
DZM	**Mont Dzumac**	**14.11**	**153**	ePn	**Pn**	**07 55 16.1**	**+1.4**
	12nm,0.3s						
DZM				eSn	**Sn**	**07 57 44.7**	**-5.8**
	4.5nm,0.3s						
DZM				eLR	LR	07 58 30.0	
	2μm,26.8s						
DZM	**Mont Dzumac**	**14.11**	**153**	eP	**Pn**	**07 55 16.7**	**+2.0**
DZM	**Mont Dzumac**	**14.11**	**153**	ePn	**Pn**	**07 55 16.4**	**+1.7**
	25nm,0.7s						
CTA	**Charters Tower**	**16.51**	**229**	eP	**Pn**	**07 55 45.4**	**-1.0**
	9.6nm,0.9s						
CTA	**Charters Tower**	**16.51**	**229**	Pn	**Pn**	**07 55 44.5**	**-1.9**
	1.0nm,0.3s,baz=44,slow=13,SNR=8.6						
CTA				LR	LR	08 01 25.8	
	comp=Z,448nm,18.6s,baz=50,slow=35						
CTAO	**Charters Tower**	**16.51**	**229**	eP	**Pn**	**07 55 45.8**	**-0.6**
	17nm,0.9s						
COEN	**Coen**	**16.55**	**253**	eP	**Pn**	**07 55 47.9**	**+0.9**
	156nm,1.2s						
EIDS	**Eidsvold**	**17.62**	**206**	eP	**Pn**	**07 55 59.2**	**-1.1**
EIDS	**Eidsvold**	**17.62**	**206**	eP	**Pn**	**07 55 60.0**	**-0.4**
	45nm,1.3s						
ARMA	**Armidale**	**22.00**	**198**	eP	**P**	**07 56 50.3**	**+1.5**
ARMA	**Armidale**	**22.00**	**198**	eP	**P**	**07 56 50.1**	**+1.3**
	27nm,1.0s,mb4.6						
WRAB	**Tennant Creek**	**26.36**	**244**	eP	**P**	**07 57 31.4**	**+0.6**
	14nm,0.7s,mb4.6						
WRA	**Warramunga Arr**	**26.38**	**244**	P	**P**	**07 57 30.0**	**-0.9**
	4.4nm,0.8s,mb4.0,baz=71,slow=9.6,SNR=6.9						
WRA				PcP	PcP	08 00 56.2	-0.2
	2.0nm,0.7s,baz=80,slow=2.6,SNR=7.7						
WRA				LR	LR	08 07 28.1	
	comp=Z,125nm,18.9s,MS3.5,baz=40,slow=36						
STKA	**Stephens Creek**	**27.71**	**214**	eP	**P**	**07 57 43.5**	**+0.8**
	7.6nm,0.8s,mb4.4						
STKA	**Stephens Creek**	**27.71**	**214**	P	**P**	**07 57 41.7**	**-1.1**
	2.3nm,0.5s,mb4.0,baz=345,slow=18,SNR=3.2						
STKA				PcP	PcP	08 00 58.2	-1.1
	3.3nm,0.8s,baz=301,slow=20,SNR=2.9						
STKA				LR	LR	08 09 01.0	
	comp=Z,515nm,19.5s,MS4.1,baz=29,slow=37						
STKA	**Stephens Creek**	**27.71**	**214**	eP	**P**	**07 57 43.8**	**+1.0**
	2.9nm,0.9s,mb3.9						
ASAR	**Alice Springs**	**28.17**	**237**	P	**P**	**07 57 45.5**	**-1.5**
	0.7nm,0.4s,mb3.6,baz=64,slow=10.0,SNR=11						
ASAR				PcP	PcP	08 00 59.6	-1.1
	1.4nm,0.6s,baz=66,slow=2.8,SNR=6.1						
AFI	**Afiamalu**	**28.45**	**101**	LR	LR	08 07 30.0	
	comp=Z,428nm,18.8s,MS4.1,baz=47,slow=33						
URZ	**Urewera**	**32.66**	**154**	LR	LR	08 09 34.6	
	comp=Z,390nm,19.9s,MS4.1,baz=141,slow=33						
FITZ	**Fitzroy Crossi**	**33.89**	**252**	eP	**P**	**07 58 34.6**	**-2.9**
	3.4nm,0.4s,mb4.6						
FITZ	**Fitzroy Crossi**	**33.89**	**252**	P	**P**	**07 58 34.6**	**-2.9**
	2.1nm,0.9s,mb4.1,baz=72,slow=12,SNR=2.7						
FITZ	**Fitzroy Crossi**	**33.89**	**252**	P	**P**	**07 58 37.6**	**+0.1**
	3.7nm,0.8s,mb4.4						
RPZ	**Rata Peaks**	**35.47**	**165**	P	**P**	**07 58 50.1**	**-0.7**
	8.3nm,0.6s,mb4.9,baz=52,slow=17,SNR=8.6						
RPZ				LR	LR	08 10 49.6	
	comp=Z,402nm,20.9s,MS4.2,baz=329,slow=32						
RPZ	**Rata Peaks**	**35.47**	**165**	eP	**P**	**07 58 50.2**	**-0.5**
	9.2nm,0.6s,mb4.9						
CBIJ	**Chichi jima**	**40.13**	**336**	LR	LR	08 12 56.3	
	comp=Z,203nm,21.2s,MS3.9,baz=125,slow=32						
KKM	**Kota Kinabalu**	**45.83**	**288**	eP	**P**	**08 00 16.8**	**+0.1**
	18nm,0.9s,mb5.0						
PPT	**Papeete**	**50.02**	**105**	eLR	LR	08 15 27.2	
	211nm,23.0s						
MJAR	**Matsushiro Arr**	**50.05**	**338**	P	**P**	**08 00 47.7**	**-1.3**
	1.9nm,0.6s,mb4.3,baz=174,slow=9.5,SNR=5.7						
MJAR				LR	LR	08 20 54.1	
	comp=Z,136nm,19.5s,MS4.0,baz=135,slow=35						
KSRS	**Korea Array**	**55.34**	**330**	P	**P**	**08 01 28.5**	**+0.3**
	8.3nm,1.0s,mb4.7,baz=149,slow=7.9,SNR=30						
KSRS				LR	LR	08 25 22.3	
	comp=Z,118nm,18.3s,MS4.0,baz=306,slow=36						
ASAJ	**Asahikawa**	**55.59**	**345**	P	**P**	**08 01 29.8**	**-0.1**
	3.3nm,0.3s,mb4.8,baz=174,slow=11,SNR=5.8						
QIZ	**Qiongzhong**	**56.59**	**300**	P	**P**	**08 01 39.9**	**+2.4**
QIZ				S	**S**	**08 09 29.8**	**+1.6**
QIZ				pmax	pmax		
	comp=Z,19nm,1.5s,mb4.9						
QIZ				LR	LR		
	comp=Z,230nm,20.8s,MS4.2						
NJ2	**Nanjing**	**56.75**	**319**	eP	**P**	**08 01 38.5**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.4						
TAOE	**Nuku Hiva Isla**	**59.52**	**95**	eLR	LR	08 19 59.9	
	comp=Z,172nm,26.3s						
MDJ	**Mudanjiang**	**60.33**	**336**	P	**P**	**08 02 03.0**	**-0.1**
MDJ				pP	pP	08 02 09.6	-1.7
MDJ				sP	sP	08 02 12.3	-2.1
MDJ				PcP	PcP	08 02 47.8	-0.2
MDJ				PP	PP	08 04 14.4	-2.0
MDJ				ScP	ScP	08 06 48.1	+0.4
MDJ				PcS	PcS	08 06 50.8	+0.5
MDJ				S	**S**	**08 10 16.6**	**+0.6**
MDJ				SS	SS	08 14 14.5	+0.3
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.7						
MDJ				pmax	pmax		
	comp=Z,66nm,4.2s						
MDJ				LR	LR		
	comp=N,170nm,19.4s,MS4.3						
MDJ				LR	LR		
	comp=E,100nm,16.6s,MS4.3						
MDJ				LR	LR		
	comp=Z,210nm,18.5s,MS4.3						
CN2	**Changchun**	**61.46**	**333**	eP	**P**	**08 02 11.1**	**+0.3**
CN2				pmax	pmax		
	comp=Z,30nm,0.6s,mb5.6						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
ENH	**Enshi**	**62.26**	**312**	eP	**P**	**08 02 15.4**	**-1.0**
	comp=Z,5.5nm,0.5s,mb4.9						
PETK	**Petropavlovsk-**	**62.45**	**359**	P	**P**	**08 02 17.1**	**-0.1**
	comp=Z,7.0nm,0.5s,mb5.0,baz=162,slow=6.1,SNR=11						
PETK				LR	LR	08 24 51.9	
	comp=Z,150nm,20.9s,MS4.1,baz=74,slow=32						
GYA	**Guiyang**	**62.55**	**306**	P	**P**	**08 02 21.8**	**+3.4**
GYA				pP	pP	08 02 28.9	+2.2
GYA				PcP	PcP	08 02 59.4	+2.0
GYA				PP	PP	08 04 41.3	+4.9
GYA				ScP	ScP	08 06 57.8	-0.2
GYA				S	**S**	**08 10 45.0**	**+0.2**
GYA				SKS		08 12 06.9	
GYA				SS	SS	08 14 51.3	+1.7
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9						
GYA				pmax	pmax		
	comp=Z,90nm,5.4s						
GYA				LR	LR		
	comp=N,430nm,18.6s,MS4.8						
GYA				LR	LR		
	comp=E,380nm,19.3s,MS4.8						
GYA				LR	LR		
	comp=Z,460nm,19.9s,MS4.7						
BJI	**Beijing**	**63.57**	**324**	P	**P**	**08 02 24.9**	**-0.1**
BJI				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
BJI				pmax	pmax		
	comp=Z,76nm,5.6s						
BJI				LR	LR		
	comp=N,110nm,16.2s,MS4.3						
BJI				LR	LR		
	comp=E,110nm,16.6s,MS4.3						
BJI				LR	LR		
	comp=Z,110nm,26.6s						
KMI	**Kunming**	**65.14**	**303**	P	**P**	**08 02 36.5**	**+1.0**
KMI				pP	pP	08 02 44.5	+0.7
KMI				sP	sP	08 02 48.9	+1.9
KMI				PcP	PcP	08 03 10.0	+1.9
KMI				PP	PP	08 05 03.5	+4.3
KMI				S	S	08 11 16.8	-0.3
KMI				sS	sS	08 11 32.5	+1.8
KMI				SS	SS	08 15 32.0	+1.9
KMI				pmax	pmax		
	comp=Z,12nm,1.9s,mb4.6						
KMI				pmax	pmax		
	comp=Z,100nm,4.0s						
KMI				LR	LR		
	comp=N,120nm,11.0s,MS4.4						
KMI				LR	LR		
	comp=E,130nm,15.8s,MS4.4						
KMI				LR	LR		
	comp=Z,190nm,20.0s,MS4.3						
CMAR	**Chiang Mai Arr**	**65.90**	**295**	P	**P**	**08 02 41.0**	**+0.4**
	comp=Z,3.6nm,0.7s,mb4.5,baz=125,slow=4.8,SNR=9.1						
CMAR				LR	LR	08 29 27.6	
	comp=Z,55nm,18.2s,MS3.8,baz=0.2,slow=34						
CMAR	**Chiang Mai Arr**	**65.90**	**295**	P	**P**	**08 02 41.0**	**+0.4**
CMAR				LR	LR	08 29 27.6	
HHC	**Hu-ho-hao-te**	**66.81**	**322**	eP	**P**	**08 02 46.4**	**+0.4**
HHC				pP	pP	08 02 56.8	+2.5
HHC				sP	sP	08 03 00.6	+3.2
HHC				PcP	PcP	08 03 14.6	-0.1
HHC				PP	PP	08 05 15.5	+2.0
HHC				ScP		08 07 14.6	
HHC				PcS		08 07 19.0	
HHC				S	S	08 11 35.6	-1.3
HHC				sS	sS	08 11 53.4	+2.8
HHC				ScS	ScS	08 12 37.8	-3.8
HHC				SS	SS	08 15 56.9	+1.3
HHC				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
HHC				pmax	pmax		
	comp=Z,74nm,6.3s						
HHC				LR	LR		
	comp=N,120nm,16.8s,MS4.8						
HHC				LR	LR		
	comp=E,420nm,13.2s,MS4.8						
HHC				LR	LR		
	comp=Z,160nm,15.6s,MS4.3						
CD2	**Chengdu**	**66.87**	**309**	eP	**P**	**08 02 47.5**	**+0.9**
CD2				sP	sP	08 03 01.8	+3.8
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
CD2				pmax	pmax		
	comp=Z,30nm,5.2s						
SBA	**Scott Base**	**68.36**	**178**	eP	**P**	**08 02 56.0**	**+0.8**
	comp=Z,3.9nm,0.9s,mb4.4						
LZH	**Lanzhou**	**69.27**	**314**	eP	**P**	**08 03 03.0**	**+1.4**
LZH				pP	pP	08 03 14.0	+4.1
LZH				sP	sP	08 03 17.5	+4.5
LZH				PP	PP	08 05 41.0	+6.0
LZH				pmax	pmax		
	comp=Z,38nm,1.0s,mb5.3						
LZH				pmax	pmax		
	comp=Z,130nm,5.6s						
LZH				LR	LR		
	comp=N,120nm,12.5s						
LZH				LR	LR		
	comp=Z,220nm,14.0s,MS4.5						
ULN	**Ulaanbaatar**	**73.58**	**326**	eP	**P**	**08 03 27.3**	**0.0**
	comp=Z,14nm,1.0s,mb4.8						
GTA	**Gaotai**	**73.66**	**316**	P	**P**	**08 03 28.8**	**+0.8**
GTA				pP	pP	08 03 35.0	-1.4
GTA				sP	sP	08 03 38.3	-1.2
GTA				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
SONM	**Songino Array**	**73.92**	**326**	P	**P**	**08 03 29.7**	**+0.4**
	comp=Z,9.1nm,0.6s,mb4.9,baz=144,slow=6.3,SNR=44						
SONM				LR	LR	08 37 54.4	
	comp=Z,92nm,18.8s,MS4.1,baz=179,slow=37						
TLY	**Talaya**	**77.56**	**328**	eP	**P**	**08 03 49.5**	**-0.5**
	comp=Z,5.2nm,1.0s,mb4.4						
BILL	**Biilibino**	**77.57**	**3**	eP	**P**	**08 03 49.5**	**-0.2**
	comp=Z,19nm,0.9s,mb5.0						
SVW2	**Sparrevohn**	**78.77**	**20**	eP	**P**	**08 03 57.3**	**+0.8**
QSPA	**South Pole Qui**	**80.42**	**180**	eP	**P**	**08 04 04.9**	**-0.4**
	comp=Z,13nm,1.3s,mb4.7						
PMR	**Palmer**	**81.42**	**22**	eP	**P**	**08 04 09.9**	**-0.9**
	comp=Z,4.1nm,0.6s,mb4.5						
TRF	**Thorofare Moun**	**82.19**	**20**	eP	**P**	**08 04 13.2**	**-1.6**
	comp=Z,4.1nm,0.7s,mb4.5						
MCK	**McKinley**	**82.83**	**21**	eP	**P**	**08 04 17.8**	**-0.4**
	comp=Z,24nm,1.0s,mb5.2						
MAW	**Mawson**	**83.74**	**203**	P	**P**	**08 04 22.4**	**-0.6**
	comp=Z,1.4nm,0.8s,mb4.1,baz=139,slow=19,SNR=5.8						
MAW	**Mawson**	**83.74**	**203**	eP	**P**	**08 04 22.3**	**-0.6**
	comp=Z,0.9nm,1.1s,mb3.8						
WMQ	**Urumqi**	**83.74**	**316**	eP	**P**	**08 04 24.0**	**+0.7**
COLA	**College**	**83.92**	**20**	eP	**P**	**08 04 22.8**	**-0.9**
	comp=Z,6.8nm,0.8s,mb4.8						
MENT	**Mentasta**	**84.25**	**23**	eP	**P**	**08 04 25.2**	**-0.3**
HYT	**Haines Junctio**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	3.04	359	P	Pn	07 53 26.7	+0.3
CBIJ	Chichi jima	3.57	145	P	Pn	07 53 32.1	+0.6
CBIJ				S	S	07 54 21.1	-2.2
JHHJ	Haha-jima-NKT	3.96	149	P	Pn	07 53 36.0	+0.5
BSO1	Boso 1	4.67	11	P	Pn	07 53 43.1	+0.4
BSO1				S	S	07 54 41.1	-2.8
BSO3	Boso 3	4.75	6	P	Pn	07 53 44.1	+0.4
BSO3				S	S	07 54 42.0	-3.6
BSO4	Boso 4	4.93	4	P	Pn	07 53 46.2	+0.6
BSO4				S	S	07 54 47.6	-1.4
JIE	Ise	5.10	329	P	Pn	07 53 47.7	+0.2
HMMJ	Hamamatsu 2	5.13	339	P	Pn	07 53 48.7	+0.9
JKN2	Miekihoku	5.18	324	P	Pn	07 53 48.7	+0.3
JOD2	Odawara 2	5.23	353	P	Pn	07 53 49.7	+0.8
MAT	Matsushiro	6.62	348	P	Pn	07 54 05.0	+0.2

NEIC 13 08:03:52.9, 37°.60S×177°.10E, h5km, ML4.3(WEL), **After WELL, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	White Island	0.10	45	P	Pg	08 03 55.3	+0.3
WIZ				S	Sg	08 03 57.0	+0.6
MARZ	Manawahe	0.51	221	P	Pg	08 04 02.4	-0.4
MARZ				S	Sg	08 04 09.1	-0.3
URZ	Urewera	0.66	179	P	Pg	08 04 04.8	-0.8
LIRZ	Lichensteins R	0.70	234	P	Pg	08 04 06.4	+0.1
MKRZ	Makatiti	0.74	223	P	Pg	08 04 07.2	+0.2
KARZ	Kaharoa	0.80	238	P	Pg	08 04 08.1	-0.1
MWZ	Matawai	0.81	155	P	Pg	08 04 08.3	-0.1
MXZ	Matakaoa Point	0.96	88	P	Pg	08 04 13.3	+2.0

CSEM 13 08:09:46.7±0.3, 37°.99N×21°.42E, h30km±3km, MD3.0, Error ellipse: s-maj=8.1km s-min=5.7km az=146.0
ATH 13 08:09:46.1, 37°.96N×21°.45E, h27km±3km, MD3.0/7
THE 13 08:09:47.5, 37°.93N×21°.50E, h16km±1km, ML2.4/5, Error ellipse: s-maj=1.6km s-min=0.6km az=343.0
ISCJB 13 08:09:47.2±0.7, 37°.95N±0°.05×21°.47E±0°.04, h28km±7km, Error ellipse: s-maj=9.3km s-min=5.6km az=168.5
ISC 13 08:09:47.3±0.7, 37°.94N±0°.05×21°.47E±0°.04, h27km±7km, **n23,** σ0°.82/40, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.12	360	*e*PB	Pb	08 09 51.7	-0.6
RLS				*e*SB	Sb	08 09 55.3	-0.3
RLS	Riolos of Patr	0.12	360	*e*Pb	Pb	08 09 51.7	-0.6
RLS				*e*Sb	Sb	08 09 55.3	-0.3
LAKA	Lakka	0.50	53	P	Pb	08 09 57.0	-0.5
LAKA				S	Sb	08 10 04.5	0.0
LAKA	Lakka	0.50	53	P	Pb	08 09 57.0	-0.5
LAKA				S	Sb	08 10 04.5	0.0
KFL	Anninata	0.56	287	P	Pb	08 09 58.5	0.0
KFL				S	Sb	08 10 08.0	+1.8
EFP	Efpalio	0.59	35	P	Pb	08 09 58.6	-0.5
EFP				S	Sb	08 10 07.8	+0.6
EFP	Efpalio	0.59	35	*e*PN	Pb	08 09 58.6	-0.5
EFP				*e*SN	Sb	08 10 07.4	+0.2
EFP	Efpalio	0.59	35	P	Pb	08 09 58.6	-0.5
EFP				*e*Sn	Sb	08 10 07.4	+0.2
EFP				S	Sb	08 10 07.8	+0.6
TRIZ	Trizonia	0.64	48	P	Pb	08 09 59.3	-0.5
TRIZ				S	Sb	08 10 08.9	+0.5
TRIZ	Trizonia	0.64	48	P	Pb	08 09 59.3	-0.5
TRIZ				S	Sb	08 10 08.9	+0.5
GUR	Goura	0.69	90	P	Pb	08 09 59.8	-0.9
GUR				S	Sb	08 10 10.8	+0.9
GUR	Goura	0.69	90	*e*PN	Pb	08 09 59.8	-0.9
GUR				*e*SN	Sb	08 10 10.1	+0.2
GUR	Goura	0.69	90	P	Pb	08 09 59.8	-0.9
GUR				*e*Sn	Sb	08 10 10.1	+0.2
GUR				S	Sb	08 10 10.8	+0.9
KALE	Kalithea	0.69	50	P	Pb	08 10 00.5	-0.3
KALE				S	Sb	08 10 11.0	+1.0
KALE	Kalithea	0.69	50	P	Pb	08 10 00.5	-0.3
KALE				S	Sb	08 10 11.0	+1.0
VLS	Valsamata	0.73	289	*e*PN	Pn	08 10 00.4	-1.4
VLS	Valsamata	0.73	289	*e*PN	Pn	08 09 59.9	-1.9
VLS	Valsamata	0.73	289	*e*Pn	Pn	08 09 59.9	-1.9
ITM	Ithomi	0.84	154	P	Pb	08 10 03.2	-0.1
ITM	Ithomi	0.84	154	*e*PN	Pb	08 10 03.2	-0.1
ITM	Ithomi	0.84	154	P	Pb	08 10 03.2	-0.1
PYL	PYLOS	1.07	168	*e*PN	Pn	08 10 07.7	+1.3
PYL	PYLOS	1.07	168	*e*Pn	Pn	08 10 07.7	+1.3

ISCJB 13 08:12:58.1±0.5, 32°.20S±0°.05×179°.81E±0°.10, h331km±6km, mb4.0/15, Error ellipse: s-maj=14.0km s-min=6.3km az=22.7
NEIC 13 08:12:59.8±0.8, 32°.30S×179°.84E, h332km±9km, mb4.2/7, Error ellipse: s-maj=18.9km s-min=10.3km az=106.0
IDC 13 08:13:00.2±1.1, 32°.00S×179°.91E, h343km±11km, mb3.7/10, mb1 3.9/12, mb1mx3.9/17, mbtmp3.8/12, Error ellipse: s-maj=13.6km s-min=11.9km az=23.0
ISC 13 08:12:58.8±0.5, 32°.22S±0°.05×179°.9E±0°.1, h326km±5km, **n71,** σ1°.27/59, **mb4.0**/15, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	3.51	33	P	Pn	08 14 03.1	+1.7
	93nm,0.3s,baz=270,slow=20,SNR=3.6						
RAO				S	S	08 14 49.7	-1.9
	175nm,0.3s,baz=87,slow=23,SNR=4.0						
MXZ	Matakaoa Point	5.49	193	P	Pn	08 14 25.4	+2.6
MXZ				S	S	08 15 32.0	+1.4
PUZ	Puketiti	5.99	192	P	Pn	08 14 30.6	+2.0
OUZ	Omahuta	6.04	239	*e*Pn	Pn	08 14 36.1	+6.9
MWZ	Matawai	6.40	197	P	Pn	08 14 35.5	+2.1
URZ	Urewera	6.44	200	P	Pn	08 14 34.9	+1.0
	69nm,0.3s,baz=305,slow=2.2,SNR=66						
URZ				S	S	08 15 51.5	+0.6
	13nm,0.3s,baz=93,slow=21,SNR=7.7						
URZ	Urewera	6.44	200	P	Pn	08 14 35.3	+1.4
BKZ	Black Stump Fm	7.46	201	P	Pn	08 14 46.4	+0.4
HIZ	Hauiti	7.51	212	P	Pn	08 14 50.7	+4.2
TUVZ	Tukino	7.83	205	P	Pn	08 14 51.8	+1.4
WNVZ	Wahianoa	7.91	205	P	Pn	08 14 52.3	+1.0
TSZ	Takapari Road	8.45	201	P	Pn	08 14 56.9	-0.9
MRZ	Mangatainoka R	9.11	201	P	Pn	08 15 04.8	-1.1
KIW	Kapiti Island	9.51	203	P	Pn	08 15 10.3	-0.4
MTW	Mount Morrison	9.59	200	P	Pn	08 15 11.4	-0.2
CAW	Cannon Point	9.68	202	P	Pn	08 15 11.8	-0.9
MRW	Makara Radio	9.91	203	P	Pn	08 15 15.4	-0.1
WEL	Wellington	9.94	203	P	Pn	08 15 16.8	+1.0
SNZO	South Karori	9.98	203	P	Pn	08 15 16.0	-0.3
TCW	Tory Channel	10.04	205	P	Pn	08 15 15.2	-1.9
NNZ	Nelson	10.39	208	P	Pn	08 15 19.2	-2.1
QRZ	Quartz Range	10.43	212	P	Pn	08 15 20.0	-1.8
BSWZ	Blackbirch Sta	10.63	205	P	Pn	08 15 23.4	-0.7
THZ	Tophouse	11.04	208	P	Pn	08 15 27.5	-1.6
KHZ	Kahutara	11.36	205	P	Pn	08 15 31.1	-1.9
LTZ	Lake Taylor	12.15	208	P	Pn	08 15 40.4	-2.1
MQZ	McQueen's Vall	12.81	204	P	Pn	08 15 48.3	-2.0
WVZ	Waitaha Valley	13.03	211	P	Pn	08 15 52.2	-0.8
RPZ	Rata Peaks	13.42	209	P	Pn	08 15 55.8	-1.7
	2.5nm,0.3s,baz=357,slow=1.9,SNR=16						
RPZ				S	S	08 18 16.4	-8.2
	3.0nm,0.3s,baz=286,slow=23,SNR=12						
RPZ	Rata Peaks	13.42	209	P	Pn	08 15 55.8	-1.7
ODZ	Otahua Downs	14.69	207	*e*Pn	Pn	08 16 12.9	+0.4
	14nm,0.9s						
ODZ				*e*S	S	08 18 51.2	+0.9
AFI	Afiamalu	19.75	25	P	P	08 17 04.9	-0.8
	2.9nm,0.3s,baz=129,slow=13,SNR=3.3						
AFI	Afiamalu	19.75	25	*e*P	P	08 17 06.1	+0.4
	65nm,0.9s						
HNR	Honiara	29.24	316	P	P	08 18 31.7	+0.1
	125nm,1.0s,mb5.1,baz=149,slow=19,SNR=2.6						
STKA	Stephens Creek	32.35	260	P	P	08 19 00.4	+1.9
	4.2nm,0.7s,mb3.8,baz=80,slow=8.5,SNR=8.7						
STKA	Stephens Creek	32.35	260	*e*P	P	08 19 01.3	+2.7
	0.8nm,0.7s,mb3.1						
CTAO	Charters Tower	32.38	284	*e*P	P	08 19 01.1	+2.2
	5.7nm,0.5s,mb4.1						
ASAR	Alice Springs	41.25	270	P	P	08 20 13.4	+0.3
	4.6nm,0.6s,mb3.9,baz=104,slow=7.5,SNR=59						
ASAR				PcP	PcP	08 22 03.6	-1.3
	0.6nm,0.5s,baz=121,slow=3.9,SNR=4.8						
ASAR				S	S	08 26 00.5	-1.7
	0.6nm,0.9s,baz=111,slow=15,SNR=4.4						
WRAB	Tennant Creek	42.41	275	*e*P	P	08 20 22.8	+0.4
	5.9nm,0.6s,mb3.9						
WRA	Warramunga Arr	42.41	275	P	P	08 20 22.9	+0.5
	5.8nm,0.5s,mb4.0,baz=114,slow=7.7,SNR=47						
WRA				PcP	PcP	08 22 07.0	-1.8
	1.5nm,0.8s,baz=121,slow=3.0,SNR=5.5						
WRA				S	S	08 26 15.5	-3.6
	0.8nm,0.8s,baz=110,slow=14,SNR=5.4						
KAKA	Kakadu	47.52	283	*e*P	P	08 21 03.5	+1.2
FITZ	Fitzroy Crossi	50.59	272	*e*P	P	08 21 25.2	-0.2
	5.4nm,1.2s,mb3.6						
QSPA	South Pole Qui	57.90	180	P	P	08 22 19.4	+2.6
	19nm,0.7s,mb4.5,baz=29,slow=1.5,SNR=100						
QSPA				PcP	PcP	08 23 06.4	+1.4
	3.7nm,0.7s,baz=327,slow=2.0,SNR=5.2						
QSPA	South Pole Qui	57.90	180	*e*P	P	08 22 19.6	+2.9
	20nm,0.8s,mb4.5						
MAW	Mawson	69.97	201	P	P	08 23 35.3	+0.3
	2.5nm,0.8s,mb4.0,baz=125,slow=8.2,SNR=5.3						
VNA1	Neumayer--Stat	77.26	177	*e*	P	08 24 17.9	+0.9
MJAR	Matsushiro Arr	78.74	327	P	P	08 24 24.3	-1.1
	0.8nm,0.5s,mb3.7,baz=169,slow=6.4,SNR=4.4						
PLCA	Paso Flores	82.58	134	P	P	08 24 46.2	+0.4
	2.3nm,0.8s,mb4.1,baz=188,slow=19,SNR=6.8						
KSRS	Korea Array	84.59	321	P	P	08 24 55.8	+0.1
	1.5nm,0.6s,mb4.0,baz=138,slow=5.7,SNR=8.1						
PETK	Petropavlovsk-	87.14	347	P	P	08 25 07.9	+0.2
	3.5nm,0.7s,mb4.3,baz=116,slow=5.6,SNR=6.7						
CFAA	Coronel Fontan	89.59	128	P	P	08 25 18.9	-1.2
	0.3nm,0.8s,mb3.2,baz=231,slow=5.5,SNR=5.3						
NVAR	Mina Array Bea	90.80	44	P	P	08 25 24.9	-0.3
	0.3nm,0.5s,mb3.5,baz=222,slow=6.0,SNR=3.9						
ZALV	Zalesovo Beam	118.18	318	PKP	PKPdf	08 31 05.3	-1.3
	0.8nm,0.5s,baz=110,slow=2.1,SNR=2.8						
BVAR	Borovoye Array	126.42	315	PKP	PKPdf	08 31 20.7	-1.7
	1.3nm,0.4s,baz=90,slow=1.5,SNR=6.7						
KEV	Kevo	139.46	346	*e*p	PKiKP	08 31 49.5	+0.6
	0.6nm,0.3s						
KEV	Kevo	139.46	346	*e*p	PKiKP	08 31 49.5	+0.6
	0.6nm,0.3s						
ARCES	ARCESS Array B	139.95	346	PKhKP		08 31 40.4	
	1.7nm,0.9s,baz=81,slow=1.5,SNR=6.4						
ARCES				PKP	PKPdf	08 31 48.6	+1.3
	2.1nm,0.8s,baz=72,slow=1.5,SNR=5.7						
JOF	Joensuu	143.40	336	*e*p	PKPdf	08 31 49.2	-4.5
	2.4nm,0.6s						
JOF	Joensuu	143.40	336	*e*p	PKPdf	08 31 49.2	-4.5
	2.4nm,0.6s						
KAF	Kangasniemi	145.61	338	*e*p	PKPdf	08 31 56.3	-1.2
	9.0nm,0.6s						
KAF	Kangasniemi	145.61	338	*e*p	PKPdf	08 31 56.3	-1.2
	9.0nm,0.6s						
FINES	FINESS Array B	146.18	338	PKPbc	PKPbc	08 31 59.0	-1.1
	9.9nm,0.5s,baz=38,slow=5.3,SNR=36						
MMAI	Mount Meron Ar	150.16	281	PKPbc	PKPbc	08 32 11.4	0.0
	2.1nm,0.3s,baz=88,slow=4.8,SNR=7.1						
NOA	NORSAR Array B	150.23	349	PKPbc	PKPbc	08 32 09.4	-1.2
	2.2nm,0.7s,baz=16,slow=4.1,SNR=10.0						
NOA				PKPab	PKPab	08 32 16.6	-1.5
	1.4nm,0.8s,baz=20,slow=2.8,SNR=4.7						
AKASG	Malin Array Be	151.57	319	PKPbc	PKPbc	08 32 12.9	-1.1
	1.9nm,0.4s,baz=50,slow=2.5,SNR=8.4						
BRTR	Keskin Array B	151.80	295	PKPbc	PKPbc	08 32 14.2	-0.7
	2.1nm,0.5s,baz=153,slow=4.0,SNR=13						
BRTR				PKPab	PKPab	08 32 24.7	-0.7
	1.7nm,0.8s,baz=93,slow=4.2,SNR=6.0						
LIC	Lamto	153.74	169	*e*PKP2	PKPab	08 32 34.6	+0.6
	38nm,1.4s						
KIC	Kosan Boka	153.91	169	*e*PKP2	PKPab	08 32 35.4	+0.6
	16nm,0.9s						
TIC	Toumodi	154.15	169	*e*PKP2	PKPab	08 32 36.4	+0.6
	3.8nm,0.2s						
DBIC	Dimbokro	154.20	169	PKPbc	PKPbc	08 32 20.7	-0.2
	3.0nm,0.8s,baz=0.0,slow=0.0,SNR=4.9						
TORD	Torodi Ar. Bea	160.95	185	PKP	PKPdf	08 32 18.3	-2.4
	0.6nm,0.9s,baz=41,slow=1.0,SNR=2.6						
TORD				PKPab	PKPab	08 33 05.0	-0.1
	2.3nm,0.6s,baz=164,slow=4.2,SNR=16						

MAN 13 08:22:35, 15°.55N×120°.61E, h191km, mb5.4, ML4.3, MS4.6
ISCJB 13 08:22:35.6±0.3, 15°.46N±0°.04×120°.79E±0°.07, h203km±4km, mb4.2/22, Error ellipse: s-maj=11.4km s-min=5.8km az=172.3
NEIC 13 08:22:36.4±0.5, 15°.42N×120°.85E, h199km±6km, mb4.6/10, Error ellipse: s-maj=11.8km s-min=5.2km az=75.0
IDC 13 08:22:37.1±0.7, 15°.40N×120°.88E, h205km±6km, mb3.7/13, mb1 3.8/13, mb1mx3.6/24, mbtmp3.7/13, Error ellipse: s-maj=25.3km s-min=9.7km az=66.0
ISC 13 08:22:36.5±0.3, 15°.47N±0°.04×120°.79E±0°.07, h195km±3km, **n60,** σ0°.93/62, **mb4.2**/22, **2D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALP	Baler	0.80	70	*e*P	Pn	08 23 04.8	+0.3
BCPH	Baguio City Da	0.93	347	‖*e*P	Pn	08 23 03.8	-1.5
BCPH				*e*S	Sn	08 23 24.8	-2.9
BOLP	Bolinao	1.24	317	*e*P	Pn	08 23 05.9	-1.7
BOLP				*e*S		08 23 17.2	
POLP	Polilio Island	1.33	124	*e*P	Pn	08 23 09.1	+0.8
TGY	Tagaytay City	1.37	174	P	Pn	08 23 09.4	+0.7
	118nm,0.3s,baz=279,slow=4.2,SNR=34						
TGY				S	Sn	08 23 35.2	+1.6
	57nm,0.3s,baz=254,slow=23,SNR=8.3						
CAUP	Cauayan	1.77	34	*e*P	Pn	08 23 12.7	+0.4
PALP	Palanan	2.23	45	*e*P	Pn	08 23 17.2	+0.1
GQP	Guinayangan	2.23	134	‖*e*P	Pn	08 23 17.7	+0.6
BOAC	Boac	2.25	153	*e*P	Pn	08 23 18.4	+1.1
APYP	Conner	2.41	10	*e*P	Pn	08 23 18.3	-0.8
SJMP	San Jose	3.01	174	*e*P	Pn	08 23 26.4	+0.3
BUSP	Coron	3.50	190	*e*P	Pn	08 23 31.7	-0.3
PVCP	Virac	3.75	119	*e*P	Pn	08 23 35.9	+0.9
ENPP	El Nido	4.45	198	*e*P	Pn	08 23 43.5	-0.2
BBP	Basco	5.07	13	*e*P	Pn	08 23 49.6	-2.0
TWG	Pinlang	7.31	2	*e*Pn	Pn	08 24 19.0	-1.8
TPUB	Ta-pu	7.79	359	*e*Pn	Pn	08 24 27.3	+0.3
YULB	Yu-li	7.89	3	*e*Pn	Pn	08 24 28.7	+0.4
	21nm,0.6s						
SSLB	Suanglung	8.27	1	*e*Pn	Pn	08 24 34.9	+1.6
	17nm,0.8s						
YHNB	Yeheng	9.17	3	*e*Pn	Pn	08 24 46.0	+1.1
	11nm,0.5s						
KAPI	Kappang	20.38	183	P	P	08 26 57.2	-1.2
	9.0nm,0.7s,baz=119,slow=17,SNR=4.1						
CMAR	Chiang Mai Arr	21.11	281	P	P	08 27 06.7	+0.6
	3.4nm,0.7s,mb4.0,baz=93,slow=8.2,SNR=11						
KSRS	Korea Array	22.79	15	P	P	08 27 21.8	-0.4
	0.6nm,0.5s,mb3.4,baz=188,slow=9.7,SNR=3.9						
KAKA	Kakadu	30.28	157	*e*P	P	08 28 28.6	-0.9
TAPN	Taplejung	32.88	297	*e*P	P	08 28 52.4	+0.2
	12nm,0.7s,mb4.5						
ODAN	Odare	33.05	296	*e*P	P	08 28 54.1	+0.5
	16nm,0.7s,mb4.7						
ODAN	Odare	33.05	296	*e*P	P	08 28 54.0	+0.4
	12nm,0.6s,mb4.6						
ODAN	Odare	33.05	296	*e*P	P	08 28 54.0	+0.4
	12nm,0.6s,mb4.6						
RAMN	Ramite	33.75	295	*e*P	P	08 29 00.0	+0.2
	17nm,0.7s,mb4.7						
RAMN	Ramite	33.75	295	*e*P	P	08 29 00.0	+0.2
	17nm,0.7s,mb4.7						
JIRN	Jiri	34.27	297	*e*P	P	08 29 05.1	+0.9
	12nm,0.4s,mb4.8						
JIRN	Jiri	34.27	297	*e*P	P	08 29 04.6	+0.4
	12nm,0.4s,mb4.8						
SONM	Songino Array	34.40	343	P	P	08 29 05.7	+0.8
	1.4nm,0.6s,mb3.6,baz=164,slow=9.4,SNR=6.6						
GUN	Gumba	34.60	297	*e*P	P	08 29 06.9	-0.1
	20nm,0.6s,mb4.8						
GUN	Gumba	34.60	297	*e*P	P	08 29 06.9	-0.1
	20nm,0.6s,mb4.8						
PKI	Pulchoki	34.92	296	*e*P	P	08 29 09.6	-0.2
PKI	Pulchoki	34.92	296	*e*P	P	08 29 09.6	-0.2
PKI	Pulchoki	34.92	296	*e*P	P	08 29 09.9	+0.1
PKIN	Phulchoki	34.94	296	*e*P	P	08 29 09.9	0.0
PKIN	Phulchoki	34.94	296	*e*P	P	08 29 09.9	0.0
KKN	Kakani	35.09	296	*e*P	P	08 29 11.7	+0.5
KKN	Kakani	35.09	296	*e*P	P	08 29 10.2	-1.0
	6.4nm,0.3s,mb4.6						
DMN	Daman	35.20	296	*e*P	P	08 29 11.1	-1.0
	9.7nm,0.4s,mb4.7						
WRAB	Tennant Creek	37.62	159	*e*P	P	08 29 31.7	-1.0
	8.4nm,0.7s,mb4.4						
WRA	Warramunga Arr	37.63	159	P	P	08 29 31.1	-1.6
	6.3nm,0.7s,mb4.3,baz=341,slow=9.1,SNR=11						
TLY	Talaya	38.64	343	*e*P	P	08 29 42.0	+1.2
	4.6nm,0.7s,mb4.1						
ASAR	Alice Springs	40.96	162	P	P	08 29 59.5	-0.6
	6.0nm,0.6s,mb4.2,baz=340,slow=6.9,SNR=76						
MK31	Makanchi Array	44.68	323	*e*P	P	08 30 31.0	+1.2
MKAR	Makanchi Array	44.68	323	P	P	08 30 31.1	+1.2
	4.5nm,0.7s,mb3.9,baz=104,slow=10,SNR=32						
ZALV	Zalesovo Beam	47.54	332	P	P	08 30 52.4	+0.4
	2.5nm,0.6s,mb3.8,baz=124,slow=7.4,SNR=9.4						
ZALV	Zalesovo Beam	47.54	332	P	P	08 30 52.4	+0.4
KURK	Kurchatov	48.78	325	*e*P	P	08 31 02.6	+1.1
	21nm,0.8s,mb4.5						
STKA	Stephens Creek	51.13	157	P	P	08 31 18.5	-1.0
	2.8nm,0.6s,mb3.9,baz=287,slow=17,SNR=7.7						
BVAR	Borovoye Array	54.37	325	P	P	08 31 43.1	+0.1
	0.9nm,0.5s,mb3.6,baz=130,slow=13,SNR=2.7						
ARCES	ARCESS Array B	77.47	339	P	P	08 34 09.8	-0.1
	1.0nm,0.6s,mb3.6,baz=72,slow=7.8,SNR=11						
ARCES	ARCESS Array B	77.47	339	P	P	08 34 09.8	-0.1
FINES	FINESS Array B	78.79	331	P	P	08 34 16.6	-0.6
	1.3nm,0.5s,mb3.8,baz=45,slow=5.0,SNR=4.7						
NB2	NORSAR Subarra	85.74	333	P	P	08 34 53.1	-0.2
	comp=Z,1.9nm,0.6s,mb4.0,baz=67,slow=4.8						
NOA	NORSAR Array B	85.74	333	P	P	08 34 53.2	-0.1
	comp=Z,2.8nm,0.7s,mb4.1,baz=66,slow=4.9,SNR=9.5						
NOA	NORSAR Array B	85.74	333	P	P	08 34 53.2	-0.1

IDC 13 08:33:02.4±1.6, 2°.90S×129°.40E, h0km, mb4.0/3, mb1 4.3/5, mb1mx3.9/20, mbtmp4.1/5, ML3.9/2, MS4.7/1, Ms1 4.7/1, ms1mx3.1/22, Error ellipse: s-maj=53.9km s-min=23.6km az=63.0
DJA 13 08:33:06, 2°.83S×129°.18E, h9km, MLv4.5/10
NEIC 13 08:33:07.1±3.2, 2°.95S×129°.35E, h35km, mb4.0/2, Error ellipse: s-maj=50.5km s-min=14.3km az=206.0
ISCJB 13 08:33:07.2±0.5, 2°.99S±0°.04×129°.14E±0°.04, h51km±6km, mb4.0/3, Error ellipse: s-maj=7.2km s-min=5.5km az=44.0
ISC 13 08:33:08.4±0.6, 3°.02S±0°.04×129°.20E±0°.04, h39km±10km, **n27,** σ1°.13/36, **mb4.0**/3, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	Masohi	0.43	220	P	Pn	08 33 16.5	-1.6
MSAI				S	Sn	08 33 24.1	-0.9
AAI	Ambon	1.21	236	P	Pn	08 33 30.1	+1.3
NLAI	Namlea	2.11	264	P	Pn	08 33 42.3	+1.1
NLAI				S	Sn	08 34 10.3	+4.0
LBMI	Labuha	2.91	324	P	Pn	08 33 51.6	-0.6
LBMI				S	Sn	08 34 24.5	-1.5
SWI	Sorong	2.97	44	P	Pn	08 33 53.5	+0.5
SWI				S	Sn	08 34 27.9	+0.6
TLE	Tual	4.38	127	P	Pn	08 34 16.3	+3.9
TLE				S	Sn	08 35 07.7	+5.4
KDI	Kendari	6.64	262	P	Pn	08 34 44.7	+1.2
	0.1nm31nm,0.8s						
LUWI	Luwuk	6.72	287	P	Pn	08 34 43.3	-1.3
	0.4nm2μm121nm,0.8s						
LUWI				S	Sn	08 35 59.4	-0.5
	0.4nm2μm121nm,0.8s						
APSI	Ampana	7.83	285	P	Pn	08 35 00.5	+0.6
	0.9nm6μm225nm,0.9s						
APSI				S	Sn	08 36 26.7	-0.7
	0.9nm6μm225nm,0.9s						
MRSI	Marisa	8.05	295	P	Pn	08 35 02.6	-0.2
BKSI	Bulukumba	9.34	256	P	Pn	08 35 25.1	+4.5
TTSI	Tana Toraja	9.37	270	P	Pn	08 35 26.1	+5.1
SPSI	Sidrap Palu	9.46	264	P	Pn	08 35 24.4	+2.2
KAPI	Kappang	9.63	258	Pn	Pn	08 35 25.5	+1.0
	0.6nm,0.3s,baz=76,slow=17,SNR=3.6						
KAPI	Kappang	9.63	258	P	Pn	08 35 26.1	+1.5
KAKA	Kakadu	10.15	162	*e*Pn	Pn	08 35 30.9	-0.7
	32nm,0.6s						
KAKA				*e*Sn	Sn	08 37 23.2	-1.1
KAKA	Kakadu	10.15	162	P	Pn	08 35 34.8	+3.2
KNA	Kununurra	12.66	182	P	Pn	08 36 08.1	+2.1
MYLDM	Lahad Datu	13.44	307	P	Pn	08 36 16.2	-0.4
FITZ	Fitzroy Crossi	15.39	193	*e*P	Pn	08 36 43.1	+0.2
	14nm,1.1s						
WRAB	Tennant Creek	17.55	164	*e*P	Pn	08 37 09.5	-0.6
	5.0nm,0.6s	

PNIG				*i* S	Sn	08 47 17.0	-4.8
PCIG		**2.86**	**81**	*e*P	Pn	08 47 01.4	-2.3
PCIG				*i* S	Sn	08 47 32.8	-5.0
UTMO	**Huajuapan**	**3.00**	**328**	*i* P	Pn	08 47 03.3	-2.4
UTMO				*i* S	Sn	08 47 38.4	-3.0
TGIG		**3.28**	**62**	*e*P	Pn	08 47 06.1	-3.4
TGIG				*i* S	Sn	08 47 45.3	-2.9
TPIG	**Tehuac#an**	**3.34**	**340**	*e*P	Pn	08 47 07.9	-2.5
TPIG				*i* S	Sn	08 47 46.3	-3.5

IDC ***13*** *08:47:03.0±0.5, 60.°97S×22.°69W, h0km, mb4.4/14, mb1 4.4/14, mb1mx4.4/18, mbtmp4.4/14, MS3.9/9, Ms1 3.9/9, ms1mx3.7/19, Error ellipse: s-maj=18.6km s-min=15.8km az=13.0*
ISCJB ***13*** *08:47:03.0±0.5, 60.°94S±0.°09×22.°5W±0.°2, h10km, mb4.4/18, MS3.9/9, Error ellipse: s-maj=13.4km s-min=11.0km az=21.5*
NEIC ***13*** *08:47:04.7±0.3, 60.°87S×22.°61W, h10km, mb4.7/9, Error ellipse: s-maj=13.3km s-min=11.2km az=191.0*
ISC 13 08:47:04.7±0.5**, 60.°99S**±0.°09×**22.°6W**±0.°2**, h10**km**, n53,** σ1§**22**/26**, mb4.4**/18**, MS3.9**/9**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAIT	**Maitri**	**16.81**	**140**	*e*P	**Pn**	**08 50 57.0**	**-2.8**
MAIT				*e*S	Sn	08 53 44.8	-21
PMSA	**Palmer Station**	**19.02**	**241**	P	**Pn**	**08 51 32.1**	**+5.0**
	3.4nm,0.3s,baz=122,slow=7.1,SNR=29						
USHA	**Ushuaia**	**24.70**	**264**	P	**P**	**08 52 26.1**	**+0.6**
	8.5nm,0.7s,mb4.4,baz=107,slow=5.5,SNR=7.8						
USHA				LR	LR	08 59 16.9	
	comp=Z,144nm,20.9s,MS3.5,baz=28,slow=30						
QSPA	**South Pole Qui**	**29.24**	**180**	P	**P**	**08 53 06.6**	**+0.5**
	2.9nm,0.7s,mb4.1,baz=221,slow=5.9,SNR=17						
QSPA				LR	LR	09 04 20.4	
	comp=Z,98nm,19.4s,MS3.4,baz=204,slow=36						
QSPA	**South Pole Qui**	**29.24**	**180**	*e*P	**P**	**08 53 08.1**	**+2.0**
	9.6nm,0.5s,mb4.8						
TRQA	**Tornquist**	**33.57**	**295**	*e*P	**P**	**08 53 45.0**	**+0.5**
	9.8nm,0.9s,mb4.7						
MAW	**Mawson**	**34.78**	**138**	P	**P**	**08 53 54.3**	**-0.4**
	6.0nm,1.0s,mb4.5,baz=266,slow=10,SNR=8.5						
MAW				LR	LR	09 06 03.8	
	comp=Z,210nm,18.2s,MS3.9,baz=246,slow=33						
MAW	**Mawson**	**34.78**	**138**	*e*P	**P**	**08 53 56.7**	**+2.0**
	2.4nm,1.1s,mb4.0						
PLCA	**Paso Flores**	**35.37**	**283**	P	**P**	**08 53 58.7**	**-1.4**
	4.0nm,0.8s,mb4.4,baz=167,slow=7.9,SNR=11						
PLCA				LR	LR	09 07 59.4	
	comp=Z,135nm,19.7s,MS3.7,baz=17,slow=36						
PLCA	**Paso Flores**	**35.37**	**283**	*e*P	**P**	**08 53 59.4**	**-0.7**
	23nm,1.5s,mb4.9						
SBA	**Scott Base**	**41.28**	**183**	*e*P	**P**	**08 54 52.2**	**+2.7**
	5.2nm,1.1s,mb4.1						
CFAA	**Coronel Fontan**	**41.76**	**294**	P	**P**	**08 54 53.3**	**-0.5**
	0.8nm,0.6s,mb3.5,baz=171,slow=7.2,SNR=24						
BOSA	**Boshof**	**45.27**	**66**	P	**P**	**08 55 22.4**	**+0.3**
	3.3nm,0.7s,mb4.3,baz=220,slow=12,SNR=5.8						
BOSA				LR	LR	09 11 08.0	
	comp=Z,83nm,18.4s,MS3.7,baz=340,slow=32						
BOSA	**Boshof**	**45.27**	**66**	P	**P**	**08 55 22.4**	**+0.3**
BOSA				LR	LR	09 11 08.0	
LBTB	**Lobatse**	**48.53**	**64**	P	**P**	**08 55 48.7**	**+1.0**
	6.1nm,0.9s,mb4.6,baz=247,slow=6.1,SNR=4.6						
LBTB	**Lobatse**	**48.53**	**64**	*e*P	**P**	**08 55 49.1**	**+1.4**
	18nm,1.5s,mb4.9						
TSUM	**Tsumeb**	**50.39**	**52**	P	**P**	**08 56 01.9**	**0.0**
	1.6nm,0.8s,mb4.1,baz=179,slow=8.3,SNR=4.1						
LPAZ	**La Paz**	**55.18**	**303**	P	**P**	**08 56 35.8**	**-1.5**
	2.6nm,0.8s,mb4.3,baz=155,slow=4.7,SNR=9.0						
LPAZ				LR	LR	09 19 44.4	
	comp=Z,65nm,18.4s,MS3.7,baz=45,slow=36						
LPAZ	**La Paz**	**55.18**	**303**	*e*P	**P**	**08 56 35.8**	**-1.6**
	3.6nm,0.7s,mb4.5						
LSZ	**Lusaka**	**58.24**	**62**	*e*P	**P**	**08 56 59.7**	**+0.6**
	10.0nm,1.1s,mb4.8						
DBIC	**Dimbokro**	**68.87**	**19**	P	**P**	**08 58 08.3**	**-0.9**
	2.8nm,0.5s,mb4.5,baz=180,slow=6.8,SNR=8.7						
OTAV	**Otavalo**	**74.35**	**301**	*e*P	**P**	**08 58 44.8**	**+2.4**
	13nm,1.1s,mb4.8						
TORD	**Torodi Ar. Bea**	**76.37**	**24**	P	**P**	**08 58 53.7**	**-0.2**
	4.9nm,0.7s,mb4.6,baz=194,slow=6.1,SNR=30						
STKA	**Stephens Creek**	**86.56**	**167**	P	**P**	**08 59 46.2**	**-1.5**
	4.3nm,1.0s,mb4.6,baz=192,slow=6.5,SNR=3.9						
STKA				LR	LR	09 36 50.9	
	comp=Z,154nm,18.6s,MS4.4,baz=205,slow=34						
ASAR	**Alice Springs**	**93.51**	**158**	P	**P**	**09 00 20.4**	**-0.2**
	1.4nm,0.6s,mb4.5,baz=187,slow=4.1,SNR=24						
WRA	**Warramunga Arr**	**97.22**	**158**	P	**P**	**09 00 36.6**	**-0.8**
	0.4nm,0.6s,mb4.0,baz=198,slow=4.6,SNR=4.6						
WRA				LR	LR	09 42 17.3	
	comp=Z,161nm,18.6s,MS4.5,baz=65,slow=34						
CTA	**Charters Towr**	**98.70**	**169**	LR	LR	09 43 44.3	
	comp=Z,135nm,18.9s,MS4.5,baz=216,slow=34						
NB2	**NORSAR Subarra**	**124.44**	**19**	PKP	PKPdf	09 06 01.7	-0.6
	comp=Z,1.1nm,0.7s,baz=188,slow=1.9						
NOA	**NORSAR Array B**	**124.44**	**19**	PKP	PKPdf	09 06 02.0	-0.3
	comp=Z,1.2nm,0.7s,baz=183,slow=1.7,SNR=5.1						
PDAR	**Pinedale Array**	**124.89**	**296**	PKP	PKPdf	09 06 03.0	-0.7
	comp=Z,0.3nm,0.7s,baz=130,slow=6.0,SNR=3.8						
NVAR	**Mina Array Bea**	**125.37**	**287**	PKP	PKPdf	09 06 06.5	+1.7
	comp=Z,0.5nm,0.6s,baz=20,slow=27,SNR=6.8						
FINES	**FINESS Array B**	**127.66**	**27**	PKP	PKPdf	09 06 08.2	-0.2
	comp=Z,3.1nm,0.6s,baz=132,slow=2.8,SNR=9.3						
ABKAR	**Akbulak array**	**128.16**	**56**	*e*PKPdf	PKPdf	09 06 09.6	-0.2
KAF	**Kangasniemi**	**128.30**	**27**	*ep*	PKPdf	09 06 08.2	-1.5
	comp=Z,3.4nm,0.8s						
AAK	**Ala-Archa**	**129.30**	**71**	PKP	PKPdf	09 06 12.2	0.0
	baz=192,slow=14						
JOF	**Joensuu**	**130.15**	**29**	*ep*	PKPdf	09 06 12.4	-0.7
	comp=Z,1.5nm,0.6s						
ARCES	**ARCESS Array B**	**134.65**	**22**	PKP	PKPdf	09 06 21.4	-0.1
	comp=Z,1.6nm,0.6s,baz=203,slow=1.8,SNR=12						
BVAR	**Borovoye Array**	**135.31**	**59**	PKP	PKPdf	09 06 23.1	-0.1
	comp=Z,1.0nm,0.5s,baz=228,slow=1.8,SNR=6.4						
MKAR	**Makanchi Array**	**136.07**	**73**	PKP	PKPdf	09 06 24.8	0.0
	comp=Z,0.5nm,0.8s,baz=285,slow=2.2,SNR=3.3						
KURK	**Kurchatov**	**137.23**	**67**	PKP	PKPdf	09 06 28.1	+1.3
	comp=Z,0.5nm,0.3s,baz=206,slow=3.9,SNR=3.7						
YKA	**Yellowknife Ar**	**141.39**	**312**	PKhKP		09 06 26.4	
	comp=Z,0.4nm,0.6s,baz=119,slow=2.4,SNR=3.7						
YKA				PKP	PKPdf	09 06 33.7	-0.3
	comp=Z,1.5nm,0.8s,baz=122,slow=2.2,SNR=8.5						
ZALV	**Zalesovo Beam**	**142.22**	**67**	PKhKP		09 06 29.8	
	comp=Z,0.9nm,0.7s,baz=170,slow=4.4,SNR=2.8						
RES	**Resolute Bay**	**143.37**	**335**	*e*PKPdf	PKPdf	09 06 34.3	-3.0
DLBC	**Dease Lake**	**145.04**	**299**	PKP	PKPdf	09 06 40.5	-0.1
	comp=Z,12nm,0.9s,baz=147,slow=2.3,SNR=17						
DLBC	**Dease Lake**	**145.04**	**299**	*e*PKPdf	PKPdf	09 06 40.9	+0.3
SONM	**Songino Array**	**148.40**	**91**	PKPbc	PKPbc	09 06 50.5	+0.3
	comp=Z,5.0nm,0.7s,baz=224,slow=3.0,SNR=29						
TLY	**Talaya**	**149.60**	**83**	*e*PKPbc	PKPbc	09 06 53.4	+0.3
KSRS	**Korea Array**	**150.03**	**128**	PKPbc	PKPbc	09 06 55.0	+0.4
	comp=Z,1.6nm,0.8s,baz=215,slow=2.0,SNR=8.2						
INK	**Inuvik**	**151.09**	**314**	PKPbc	PKPbc	09 06 56.0	-0.1
	comp=Z,7.4nm,0.8s,baz=35,slow=3.1,SNR=14						
INK	**Inuvik**	**151.09**	**314**	*e*PKPbc	PKPbc	09 06 55.9	-0.2
EGAK	**Eagle**	**152.74**	**305**	*e*PKPbc	PKPbc	09 06 59.2	-0.7
EGAK				*e*SKPdf	SKPdf	09 10 22.9	-2.8
MENT	**Mentasta**	**153.10**	**300**	*e*PKPbc	PKPbc	09 07 01.5	+0.7
ERM	**Erimo**	**159.11**	**149**	*e*PKPdf	PKPdf	09 07 02.1	+0.1

ISCJB ***13*** *08:58:12.6±1.3, 59.°29N×0.°03×27.°7E±0.°2, h0km, Error ellipse: s-maj=13.8km s-min=4.5km az=177.0*
CSEM ***13*** *08:58:17.6±0.7, 59.°31N×27.°50E, h2km, ML2.4, Error ellipse: s-maj=19.3km s-min=6.9km az=93.0*
NAO ***13*** *08:58:19.0±1.0, 59.°30N×26.°83E, ML2.4*
ISC 13 08:58:17.1±1.**, 59.°31N**±0.°03×**27.°4E**±0.°2**, h0**km**, n23,** σ1§**31**/28**, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSU	**Vasula**	**0.92**	**203**	Pg	**Pg**	**08 58 35.1**	**+0.4**
VSU				Lg		08 58 46.7	
VSU	**Vasula**	**0.92**	**203**	Pg	**Pg**	**08 58 35.1**	**+0.4**
VSU	**Vasula**	**0.92**	**203**	*e*P	**Pg**	**08 58 35.8**	**+1.1**
	SNR=90						
VSU				*e*S	**Sg**	**08 58 46.3**	**-0.3**
	SNR=90						
MEF	**Metsahovi**	**1.79**	**302**	*e*P	**Pn**	**08 58 49.8**	**+0.7**
	SNR=50						
MEF				*e*S	**Sn**	**08 59 10.9**	**-1.6**
	28nm,0.5s,SNR=50						
FIA0	**FINESS Array S**	**2.25**	**343**	Pn	**Pn**	**08 58 56.8**	**+1.3**
	baz=164,slow=18						
FIA0				Pg	**Pg**	**08 58 58.1**	**-2.0**
FIA0				Lg		08 59 27.9	
	baz=168,slow=37						
FIA0				Rg		08 59 38.4	
	baz=174,slow=37						
FIA0	**FINESS Array S**	**2.25**	**343**	Pn	**Pn**	**08 58 56.8**	**+1.3**
	baz=164,slow=16,SNR=2.2						
SLIT	**Slitere, Latvi**	**3.18**	**240**	*e*P	**Pn**	**08 59 10.5**	**+2.2**
	SNR=50						
SLIT				*e*S	**Sn**	**08 59 52.0**	**+5.1**
	SNR=50						
RAF	**Rauma**	**3.31**	**304**	*e*P	**Pn**	**08 59 11.8**	**+1.7**
	SNR=50						
RAF				*e*S	**Sn**	**08 59 50.0**	**-0.1**
	SNR=50						
IZAR	**Zarasai**	**3.62**	**191**	*e*P	**Sg**	**09 00 14.2**	**+0.8**
IZAR	**Zarasai**	**3.62**	**191**	*e*P	**Sg**	**09 00 14.2**	**+0.9**
IZAR	**Zarasai**	**3.62**	**191**	*e*P	**Sg**	**09 00 14.2**	**+0.8**
ISAL	**Salakas**	**3.81**	**191**	*e*P	**Sg**	**09 00 18.2**	**-1.2**
ISAL	**Salakas**	**3.81**	**191**	*e*P	**Sg**	**09 00 18.1**	**-1.3**
ISAL	**Salakas**	**3.81**	**191**	*e*P	**Sg**	**09 00 18.1**	**-1.3**
IDID	**Didziasalis**	**4.02**	**186**	*e*P	**Sg**	**09 00 23.5**	**-2.6**
IDID	**Didziasalis**	**4.02**	**186**	*e*P	**Sg**	**09 00 18.3**	**-7.8**
IDID	**Didziasalis**	**4.02**	**186**	*e*P	**Sg**	**09 00 18.3**	**-7.8**
IIGN	**Ignalina**	**4.02**	**190**	*e*P	**Sg**	**09 00 22.8**	**-3.3**
IIGN	**Ignalina**	**4.02**	**190**	*e*P	**Sg**	**09 00 17.4**	**-8.7**
IIGN	**Ignalina**	**4.02**	**190**	*e*P	**Sg**	**09 00 17.5**	**-8.6**
HFS	**Hagfors**	**7.00**	**283**	Sn	**Sn**	**09 01 11.4**	**-9.4**
	baz=112,slow=37						
HFS				Lg		09 01 48.2	
	baz=101,slow=22						
ARA0	**ARCESS Array S**	**10.30**	**356**	Pn	**Pn**	**09 00 45.2**	**-0.7**
	baz=176,slow=14						
ARA0	**ARCESS Array S**	**10.30**	**356**	Pn	**Pn**	**09 00 45.2**	**-0.7**
	baz=176,slow=14,SNR=7.5						

HLW ***13*** *09:02:29.8, 33.°89N×35.°99E, h9km±10km, Md3.2, Ml2.8*
GII ***13*** *09:02:37.7±0.7, 33.°29N×35.°46E, h1km±2km, Md3.0/7*
ISCJB ***13*** *09:02:38.0±0.4, 33.°32N±0.°02×35.°45E±0.°03, h10km±3km, Error ellipse: s-maj=4.4km s-min=2.7km az=34.4*
GRAL ***13*** *09:02:38.5±0.3, 33.°32N×35.°46E, h12km±2km, MD3.4*
CSEM ***13*** *09:02:38.3±0.2, 33.°33N×35.°47E, h2km, ML3.4, Error ellipse: s-maj=4.5km s-min=2.4km az=116.0*
NSSC ***13*** *09:02:39, 33.°28N×35.°52E, h6km±2km*
ISC 13 09:02:38.4±0.4**, 33.°33N**±0.°02×**35.°46E**±0.°03**, h9**km±3km**,**
n47, σ0§**72**/69**, 12D, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.19**	**324**	*e*P	**Pg**	**09 02 42.6**	**+0.2**
MATL	**Matarih**	**0.19**	**324**	*e*P	**Pg**	**09 02 42.6**	**+0.2**
KSDI	**Kefar Szold**	**0.22**	**131**	Pg	**Pg**	**09 02 42.3**	**-0.6**
KSDI				Sg	**Sg**	**09 02 46.3**	**+0.5**
HRI	**Mount Hermon**	**0.24**	**106**	Pg	**Pg**	**09 02 42.8**	**-0.4**
HRI				Sg	**Sg**	**09 02 47.5**	**+1.1**
MMA0	**Mount Meron ar**	**0.32**	**189**	Pg	**Pg**	**09 02 43.9**	**-0.9**
MMA0				Sg	**Sg**	**09 02 49.6**	**+0.6**
RCY	**Rachaya**	**0.33**	**63**	*e*P	**Pg**	**09 02 45.2**	**+0.2**
RCY				*e*S	**Sg**	**09 02 50.4**	**+0.9**
RCY	**Rachaya**	**0.33**	**63**	*e*P	**Pg**	**09 02 45.2**	**+0.2**
RCY				*e*S	**Sg**	**09 02 50.4**	**+0.9**
HNTI	**Hanita**	**0.35**	**224**	Pg	**Pg**	**09 02 44.7**	**-0.6**
HNTI				Sg	**Sg**	**09 02 50.5**	**+0.6**
BRBR	**Barbar**	**0.42**	**79**	⇓P	**Pg**	**09 02 46.0**	**-0.6**
BRBR				⇓S	**Sg**	**09 02 53.0**	**+0.9**
BRBR	**Barbar**	**0.42**	**79**	⇓*i*P	**Pg**	**09 02 46.5**	**-0.1**
KSHT	**Keshet**	**0.46**	**140**	Pg	**Pg**	**09 02 47.2**	**-0.1**
BEYL	**Beirut**	**0.54**	**3**	*e*P	**Pg**	**09 02 48.5**	**-0.4**
BHL	**Bhannes**	**0.59**	**16**	*e*P	**Pg**	**09 02 49.5**	**-0.4**
BHL				*e*S	**Sg**	**09 02 57.8**	**+0.2**
BHL	**Bhannes**	**0.59**	**16**	*e*P	**Pg**	**09 02 49.5**	**-0.4**
BHL				*e*S	**Sg**	**09 02 57.8**	**+0.2**
BLGI	**Bet Lehem HaGe**	**0.64**	**201**	Pg	**Pg**	**09 02 50.5**	**-0.3**
QASN	**Qassioun**	**0.71**	**73**	⇑P	**Pg**	**09 02 52.0**	**-0.1**
QASN				⇑S	**Sg**	**09 03 02.0**	**+0.6**
QASN	**Qassioun**	**0.71**	**73**	⇑*i*P	**Pg**	**09 02 52.6**	**+0.5**
TCHB	**Talchebab**	**0.79**	**147**	⇓P	**Pg**	**09 02 53.0**	**-0.6**
TCHB				⇓S	**Sg**	**09 03 03.0**	**-0.8**
TCHB	**Talchebab**	**0.79**	**147**	⇓*i*P	**Pg**	**09 02 53.4**	**-0.2**
TOTH	**TOTAH**	**0.81**	**88**	⇓P	**Pg**	**09 02 54.0**	**0.0**
TOTH				⇓S	**Sg**	**09 03 05.0**	**+0.4**
TOTH	**TOTAH**	**0.81**	**88**	⇓*i*P	**Pg**	**09 02 54.1**	**+0.1**
OFRI	**'Ofer**	**0.82**	**210**	Pg	**Pg**	**09 02 53.7**	**-0.4**
MMLI	**Mount Malkishu**	**0.89**	**182**	Pg	**Pg**	**09 02 54.5**	**-1.1**
MMLI				Sg	**Sg**	**09 03 07.4**	**+0.2**
HWQ	**Hawqa**	**1.02**	**23**	*e*P	**Pg**	**09 02 57.5**	**-0.6**
HWQ				*e*S	**Sg**	**09 03 10.1**	**-1.3**
HMDT	**Nahal Hemdat**	**1.08**	**177**	Pg	**Pg**	**09 02 58.1**	**-1.1**
HMDT				Sg	**Sg**	**09 03 14.2**	**+1.0**
MARH	**Ras Al Marh**	**1.09**	**51**	⇑P	**Pg**	**09 02 59.0**	**-0.5**
MARH				⇑S	**Sg**	**09 03 14.0**	**+0.3**
MARH	**Ras Al Marh**	**1.09**	**51**	⇑*i*P	**Pg**	**09 02 59.7**	**+0.2**
MARH				⇑*i*S	**Sg**	**09 03 14.6**	**+0.9**
SLTI	**Sal'it**	**1.15**	**198**	Pg	**Pg**	**09 02 59.4**	**-1.1**
SLTI				Sg	**Sg**	**09 03 16.0**	**+0.7**
SALA	**Sala**	**1.23**	**120**	⇑P	**Pn**	**09 03 01.0**	**-0.9**
SALA				⇑S	**Sb**	**09 03 16.0**	**-2.0**
SALA	**Sala**	**1.23**	**120**	⇑*i*P	**Pn**	**09 03 01.1**	**-0.8**
ZALF	**Zalf**	**1.62**	**104**	⇓P	**Pn**	**09 03 07.0**	**-0.2**
ZALF				⇓S	**Sn**	**09 03 27.0**	**-1.3**
ZALF	**Zalf**	**1.62**	**104**	⇓*i*P	**Pn**	**09 03 07.0**	**-0.2**
ROOS	**tl_alroos**	**1.73**	**61**	⇑P	**Pn**	**09 03 10.0**	**+1.2**
ROOS				⇑S	**Sn**	**09 03 31.0**	**-0.1**
ROOS	**tl_alroos**	**1.73**	**61**	⇑*i*P	**Pn**	**09 03 10.4**	**+1.6**
ROOS				⇑*i*S	**Sn**	**09 03 31.2**	**+0.1**
DSI	**Dead Sea**	**1.76**	**182**	Pn	**Pn**	**09 03 09.0**	**-0.1**
YTIR	**Yattir**	**1.99**	**189**	Pn	**Pn**	**09 03 13.1**	**+0.9**
RTMI	**Retamim**	**2.37**	**196**	Pn	**Pn**	**09 03 17.7**	**+0.3**
ZFRI	**Zfri**	**2.78**	**185**	Pn	**Pn**	**09 03 23.9**	**+0.7**
PRNI	**Paran**	**3.00**	**188**	Pn	**Pn**	**09 03 26.7**	**+0.5**
AMAG	**Maghara**	**3.30**	**216**	P	**Pn**	**09 03 31.0**	**+0.8**
	baz=217						
AMAG	**Maghara**	**3.30**	**216**	P	**Pn**	**09 03 31.0**	**+0.8**
HNKL	**Nakhl**	**3.62**	**201**	P	**Pn**	**09 03 35.1**	**+0.4**
	baz=204						
HNKL				AMP		09 04 00.0	
	comp=N,20μm,0.5s,logA/T=4.6,baz=204						
HNKL	**Nakhl**	**3.62**	**201**	P	**Pn**	**09 03 35.2**	**+0.5**
SUZ		**4.14**	**213**	P	**Pn**	**09 03 42.6**	**+0.7**
	baz=215						
SUZ		**4.14**	**213**	P	**Pn**	**09 03 42.6**	**+0.7**
HKAT	**Jabal Katrina**	**4.96**	**195**	P	**Pn**	**09 03 53.4**	**+0.3**
	baz=199						
HKAT	**Jabal Katrina**	**4.96**	**195**	P	**Pn**	**09 03 53.4**	**+0.3**

MAN 13 09:02:57.7°09N×125°83E, h59km**, mb4.6, ML3.4, MS3.4, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMPH	**Davao City--Mi**	**0.32**	**268**	*e*P	Pn	09 03 08.7	+1.6
DMPH				*e*S	Sn	09 03 18.0	+3.5
MATI	**Mati**	**0.45**	**109**	*e*P	Pn	09 03 10.3	+1.9
BUKP	**Musuan**	**1.09**	**316**	*e*P	Pn	09 03 18.4	+2.3
BUKP				*e*S	Sn	09 03 31.7	+1.3

NIED ***13*** *09:02:00, 46.°80N×153.°10E, h20km, Mw4.1 Best double couple: M0 1.61000×10^15 NP1:φ=310.00000°, δ=86.00000°, λ=38.00000°. NP2:φ=217.00000°, δ=52.00000°, λ=175.00000°.*
ISCJB ***13*** *09:02:59.6±0.7, 46.°86N±0.°06×152.°84E±0.°08, h49km±7km, mb4.1/25, MS3.4/6, Error ellipse: s-maj=13.4km s-min=4.7km az=140.7*
MOS ***13*** *09:02:59.6±1.3, 46.°91N×152.°82E, h50km, mb4.2/11, Error ellipse: s-maj=14.2km s-min=8.0km az=65.9*
IDC ***13*** *09:02:59.2±0.8, 46.°83N×152.°82E, h31km±5km, mb3.9/20, mb1 4.1/23, mb1mx4.0/29, mbtmp3.9/23, ML4.0/3, MS3.3/7, Ms1 3.3/7, ms1mx2.9/34, Error ellipse: s-maj=17.1km s-min=12.4km az=156.0*
BJI ***13*** *09:03:00.1, 47.°70N×153.°75E, h62km, mB4.6/6, mb4.3/6, Ms4.3/1, Ms7 4.5/1*
NEIC ***13*** *09:03:03.4±1.1, 46.°82N×152.°86E, h71km±9km, mb4.4/3, Error ellipse: s-maj=13.8km s-min=8.1km az=141.0*
ISC 13 09:03:02.1±0.7**, 46.°87N**±0.°07×**152.°84E**±0.°09**, h53**km±6km**,**
h30km±1.3km**: pP-P, n80,** σ1§**13**/84**, mb4.1**/25**, MS3.4**/6**, 1C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.83**	**247**	*e*PN	**Pn**	**09 03 58.0**	**-0.4**
KUR				*e*S	**Sn**	**09 04 42.0**	**-0.1**
KUR				pmax	pmax		
	comp=Z,230nm,0.5s						
KUR				smax			
	comp=N,530nm,0.6s						
SKR	**Severo-Kuril's**	**4.39**	**28**	*e*PN	**Pn**	**09 04 06.4**	**+0.3**
SKR				*e*S	**Sn**	**09 04 54.1**	**-1.8**
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
SKR				smax			
	comp=N,230nm,0.5s						
SKR				smax			
	comp=E,220nm,0.5s						
SKR				smax			
	comp=Z,80nm,0.5s						
NEM2	**Nemuro 2**	**6.12**	**238**	P	**Pn**	**09 04 28.1**	**-1.7**
NEM2				*e*S	**Sn**	**09 05 34.2**	**-4.2**
JRA	**Rausu**	**6.17**	**244**	P	**Pn**	**09 04 31.8**	**+1.3**
JNK	**Nakash**	**6.60**	**243**	P	**Pn**	**09 04 37.3**	**+0.8**
JNK				*e*S	**Sn**	**09 05 50.2**	**-0.1**
YSS	**Yuzh-Sakhalins**	**6.91**	**274**	*e*PN	**Pn**	**09 04 44.6**	**+4.0**
YSS				*e*		09 04 52.9	
YSS				*e*S	**Sn**	**09 06 00.0**	**+2.2**
YSS				pmax	pmax		
	comp=E,30nm,1.0s						
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				MLR	MLR		
	comp=Z,200nm,15.0s						
YSS	**Yuzh-Sakhalins**	**6.91**	**274**	*e*P	**Pn**	**09 04 45.0**	**+4.4**
	comp=Z,35nm,1.0s						
JTKR	**Abashiri--Toko**	**6.92**	**248**	P	**Pn**	**09 04 42.6**	**+1.8**
JAK	**Akkeshi**	**6.95**	**239**	P	**Pn**	**09 04 39.6**	**-1.6**
JAK				*e*S	**Sn**	**09 05 54.3**	**-4.6**
PEA0B	**Petropavlovsk-**	**6.99**	**25**	*e*Pn	**Pn**	**09 04 43.6**	**+1.9**
PETK	**Petropavlovsk-**	**6.99**	**25**	Pn	**Pn**	**09 04 41.5**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=182,slow=12,SNR=18						
PETK	**Petropavlovsk-**	**6.99**	**25**	PN	**Pn**	**09 04 41.5**	**-0.2**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PET	**Petropavlovsk**	**7.21**	**29**	*e*PN	**Pn**	**09 04 42.6**	**-2.2**
PET				MLR	MLR		
	comp=Z,100nm,19.0s						
JMP	**Maruseppu**	**7.25**	**250**	P	**Pn**	**09 04 47.6**	**+2.2**
JAR	**Ashorobuto**	**7.34**	**244**	P	**Pn**	**09 04 47.3**	**+0.7**
JAR				*e*S	**Sn**	**09 06 08.4**	**-0.1**
JOB	**Onbets**	**7.52**	**241**	P	**Pn**	**09 04 49.1**	**+0.1**
JOB				*e*S	**Sn**	**09 06 10.3**	**-2.5**
ASAJ	**Asahikawa**	**7.70**	**253**	Pn	**Pn**	**09 04 53.6**	**+2.1**
	comp=Z,2.7nm,0.3s,baz=87,slow=15,SNR=24						
ASAJ				LR	LR	09 07 40.6	
	comp=Z,157nm,20.5s,baz=338,slow=37						
ASAJ	**Asahikawa**	**7.70**	**253**	PN	**Pn**	**09 04 53.7**	**+2.2**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,157nm,20.5s						
JCH	**Churui**	**7.97**	**241**	P	**Pn**	**09 04 53.8**	**-1.4**
JCH				*e*S	**Sn**	**09 06 19.0**	**-4.9**
ERM	**Erimo**	**8.45**	**238**	*e*PN	**Pn**	**09 05 02.1**	**+0.3**
ERM				pmax	pmax		
	comp=Z,37nm,0.6s						
ERM	**Erimo**	**8.45**	**238**	*e*Pn	**Pn**	**09 05 02.1**	**+0.3**
	comp=Z,37nm,0.6s						
HABR	**Khabarovsk**	**12.10**	**284**	PN	**Pn**	**09 05 47.4**	**-4.2**
HABR				MLR	MLR		

ARCES pmax pmax
comp=Z,2.0nm,0.9s
SUMG Summit 60.60 4 *e*P **P** 09 13 07.7 +1.2
comp=Z,11nm,0.9s,mb5.0
FFC Flin Flon 60.77 40 *i* P **P** 09 13 09.6 +1.6
JOF Joensuu 61.15 334 *e*P **P** 09 13 08.7 -1.7
JOF pmax pmax
comp=Z,2.0nm,0.6s,mb4.4
JOF Joensuu 61.15 334 *e*p **P** 09 13 08.7 -1.7
comp=Z,1.7nm,0.6s,mb4.3
NVAR Mina Array Bea 62.55 62 P **P** 09 13 21.1 +0.9
comp=Z,0.6nm,0.7s,mb3.8,baz=303,slow=6.3,SNR=6.0
NVAR pP pP 09 13 29.8 -5.0
comp=Z,0.3nm,0.5s,baz=285,slow=6.5,SNR=3.0
KAF Kangasniemi 63.26 335 *e*P **P** 09 13 23.3 -1.2
KAF pmax pmax
comp=Z,3.0nm,0.5s,mb4.7
KAF Kangasniemi 63.26 335 *e*p **P** 09 13 23.3 -1.2
comp=Z,2.6nm,0.5s,mb4.6
REDW Red Top Meadow 63.73 54 *e*P **P** 09 13 29.8 +1.9
comp=Z,2.1nm,1.0s,mb4.1
FINES FINESS Array B 63.85 335 P **P** 09 13 28.2 -0.2
comp=Z,4.7nm,0.6s,mb4.7,baz=31,slow=7.1,SNR=17
FINES FINESS Array B 63.85 335 P **P** 09 13 28.3 -0.2
FINES pmax pmax
comp=Z,5.0nm,0.6s
PDAR Pinedale Array 64.83 54 P **P** 09 13 35.9 +0.7
comp=Z,1.5nm,0.8s,mb4.1,baz=312,slow=2.9,SNR=11
NB2 NORSAR Subarra 68.06 341 P **P** 09 13 55.4 0.0
comp=Z,5.0nm,0.7s,mb4.7,baz=29,slow=6.5
NOA NORSAR Array B 68.06 341 P **P** 09 13 54.4 -1.1
comp=Z,4.3nm,0.6s,mb4.6,baz=27,slow=6.3,SNR=16
NOA NORSAR Array B 68.06 341 P **P** 09 13 54.4 -1.0
NOA pmax pmax
comp=Z,4.0nm,0.6s
WRA Warramunga Arr 68.56 199 P **P** 09 13 57.5 -1.4
comp=Z,1.2nm,1.1s,mb3.7,baz=22,slow=7.0,SNR=5.6
WRA Warramunga Arr 68.56 199 P **P** 09 13 57.6 -1.4
WRA pmax pmax
comp=Z,1.0nm,1.1s
AKASG Malin Array Be 71.34 326 P **P** 09 14 15.6 -0.2
comp=Z,4.6nm,0.4s,mb4.7,baz=34,slow=6.3,SNR=11
AKASG Malin Array Be 71.34 326 *e*P **P** 09 14 15.6 -0.2
AKASG pmax pmax
comp=Z,5.0nm,0.4s
ASAR Alice Springs 72.26 198 P **P** 09 14 21.9 +0.4
comp=Z,0.8nm,0.7s,mb3.8,baz=12,slow=5.5,SNR=17
ASAR Alice Springs 72.26 198 *e*P **P** 09 14 21.9 +0.4
ASAR pmax pmax
comp=Z,1.0nm,0.7s
BUR08 Bucovina Ar. S 75.37 326 *e*P **P** 09 14 40.2 +0.6
CLL Collm 76.28 335 *i* P **P** 09 14 44.6 -0.1
CLL pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
CLL Collm 76.28 335 *i* P **P** 09 14 44.6 -0.1
comp=Z,6.0nm,0.7s,mb4.6
TXAR Lajitas Array 77.60 60 P **P** 09 14 52.9 +0.4
comp=Z,1.0nm,0.5s,mb4.0,baz=297,slow=4.7,SNR=33
TXAR pP pP 09 15 02.0 -5.5
comp=Z,1.3nm,0.5s,baz=300,slow=4.8,SNR=12
TXAR Lajitas Array 77.60 60 P **P** 09 14 52.9 +0.4
TXAR *PP pP 09 15 02.1 -5.5
TXAR pmax pmax
comp=Z,1.0nm,0.5s
TXAR Lajitas Array 77.60 60 P **P** 09 14 52.9 +0.4
TXAR pP pP 09 15 02.0 -5.5
GERES GERESS Array B 78.27 334 P **P** 09 14 55.3 -0.6
comp=Z,0.3nm,0.3s,mb3.7,baz=31,slow=3.1,SNR=3.9
MMAI Mount Meron Ar 82.60 311 P **P** 09 15 19.1 -0.3
comp=Z,3.5nm,0.6s,mb4.6,baz=37,slow=7.3,SNR=5.5
TORD Torodi Ar. Bea 114.90 329 PKP PKiKP 09 21 35.6 -1.5
comp=Z,0.4nm,0.8s,baz=5.7,slow=1.4,SNR=2.3
CFAA Coronel Fontan 145.16 79 PKPbc PKPbc 09 22 31.7 -1.3
comp=Z,0.2nm,0.5s,baz=261,slow=4.8,SNR=5.7
PLCA Paso Flores 148.41 95 PKPbc PKPdf 09 22 39.2 +0.8
comp=Z,2.9nm,0.9s,baz=236,slow=6.3,SNR=4.5
PLCA Paso Flores 148.41 95 PKIKP PKPdf 09 22 39.2 +0.8
PLCA pmax pmax
comp=Z,3.0nm,1.0s
PLCA Paso Flores 148.41 95 PKPbc PKPdf 09 22 39.2 +0.8

*ISCJB **13** 09:19:42.4±0.5, 6°.35S±0°.04×130°.06E±0°.06, h174km±6km, mb4.2/12, Error ellipse: s-maj=10.9km s-min=5.0km az=159.5*
*IDC **13** 09:19:43.3±0.8, 6°.20S×129°.97E, h161km±8km, mb3.9/10, mb1 3.9/10, mb1mx3.8/16, mbtmp3.9/10, MS3.2/1, Ms1 3.2/1, ms1mx2.2/25, Error ellipse: s-maj=24.3km s-min=11.2km az=76.0*
*NEIC **13** 09:19:43.8±0.4, 6°.26S×129°.93E, mb4.5/2, Error ellipse: s-maj=14.6km s-min=8.1km az=73.0*
*DJA **13** 09:19:44, 6°.29S×130°.08E, h153km, mb5.0/14*
ISC 13 09:19:43.3±0.5, 6°.35S±0°.04×130°.05E±0°.06, h165km±6km, h169km±.8km:pP-P,n52,σ1°.42/56, mb4.2/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
TLE	**Tual**	**2.76**	**75**	P		**Pn**	**09 20 30.7**	**+2.3**
MSAI	**Masohi**	**3.18**	**339**	P		**Pn**	**09 20 33.7**	**+0.1**
AAI	**Ambon**	**3.23**	**325**	P		**Pn**	**09 20 33.7**	**-0.4**
NLAI	**Namlea**	**4.26**	**316**	P		**Pn**	**09 20 47.8**	**+0.4**
SWI	**Sorong**	**5.58**	**13**	P		**Pn**	**09 21 02.2**	**-2.5**
	3.3nm278nm,0.5s							
LBMI	**Labuha**	**6.21**	**336**	P		**Pn**	**09 21 12.1**	**-1.0**
	2.1nm5um663nm,0.9s							
KAKA	**Kakadu**	**6.75**	**160**	*e*P		**Pn**	**09 21 21.6**	**+1.5**
	84nm,0.2s							
KAKA				*e*S		**Sn**	**09 22 34.4**	**-1.8**
KAKA	**Kakadu**	**6.75**	**160**	*e*Pn		**Pn**	**09 21 22.0**	**+1.9**
	373nm,0.6s							
KAKA				*e*Sn		**Sn**	**09 22 34.6**	**-1.6**
KAKA	**Kakadu**	**6.75**	**160**	P		**Pn**	**09 21 22.5**	**+2.4**
	3.5nm309nm,0.6s							
TNTI	**Ternate**	**7.56**	**339**	P		**Pn**	**09 21 29.0**	**-1.9**
	0.4nm99nm,0.5s							
KDI	**Kendari**	**7.77**	**287**	P		**Pn**	**09 21 35.4**	**+1.7**
	0.2nm898nm74nm,1.1s							
KNA	**Kununurra**	**9.43**	**188**	P		**Pn**	**09 21 55.2**	**-0.4**
	7μm325nm,0.8s							
SMPI	**Sarmi**	**9.66**	**64**	P		**Pn**	**09 21 59.2**	**+0.5**
	20nm,1.1s							
BKSI	**Bulukumba**	**9.93**	**275**	P		**Pn**	**09 22 07.4**	**+5.2**
	15nm,1.0s							
APSI	**Ampana**	**9.97**	**302**	P		**Pn**	**09 22 05.0**	**+2.2**
	7μm54nm,1.1s							
BNSI	**Bone**	**10.09**	**281**	P		Px	09 22 18.0	
MRSI	**Marisa**	**10.56**	**310**	P		**Pn**	**09 22 11.1**	**+0.6**
	34nm,1.1s							
FITZ	**Fitzroy Crossi**	**12.45**	**200**	*e*P		**Pn**	**09 22 32.8**	**-2.2**
	48nm,0.6s							
FITZ				*e*S		**Sn**	**09 24 41.9**	**-11**
FITZ	**Fitzroy Crossi**	**12.45**	**200**	P		**Pn**	**09 22 31.5**	**-3.5**
	3.9nm,0.3s,baz=30,slow=11,SNR=117							
FITZ				S		**Sn**	**09 24 42.1**	**-11**
	5.1nm,0.3s,baz=96,slow=20,SNR=9.1							
FITZ				LR		LR	09 28 34.4	
	comp=Z,97nm,18.4s,baz=99,slow=42							
FITZ	**Fitzroy Crossi**	**12.45**	**200**	*e*Pn		**Pn**	**09 22 33.5**	**-1.6**
FITZ				S		**Sn**	**09 24 42.1**	**-11**
FITZ				*e*Sn		**Sn**	**09 24 45.4**	**-7.7**
FITZ				LR		LR	09 28 34.4	
FITZ	**Fitzroy Crossi**	**12.45**	**200**	P		**Pn**	**09 22 33.5**	**-1.5**
	108nm,0.9s							
WRAB	**Tennant Creek**	**14.14**	**163**	*e*Pn		**Pn**	**09 22 54.4**	**-2.0**
	75nm,0.8s							
WRAB				*e*Sn		**Sn**	**09 25 27.1**	**-6.4**
WRAB	**Tennant Creek**	**14.14**	**163**	P		**Pn**	**09 22 55.5**	**-0.9**
	82nm,0.8s							
WRA	**Warramunga Arr**	**14.14**	**163**	P		**Pn**	**09 22 54.9**	**-1.6**
	2.7nm,0.3s,baz=345,slow=13,SNR=86							
WRA				S		**Sn**	**09 25 26.6**	**-7.1**
	4.8nm,0.3s,baz=345,slow=22,SNR=12							
COEN	**Coen**	**14.96**	**121**	*e*Pn		**Pn**	**09 23 09.2**	**+2.5**
	218nm,0.6s							
COEN	**Coen**	**14.96**	**121**	P		**Pn**	**09 23 09.2**	**+2.5**
	171nm,0.7s							
ASAR	**Alice Springs**	**17.61**	**168**	P		**Pn**	**09 23 39.7**	**+0.9**
	9.2nm,0.3s,baz=345,slow=9.9,SNR=565							
ASAR				S		**S**	**09 26 49.9**	**-2.0**
	1.3nm,0.3s,baz=345,slow=21,SNR=9.7							
MBWA	**Marble Bar**	**17.80**	**213**	*e*P		**Pn**	**09 23 40.4**	**-0.5**
	34nm,0.6s							
MBWA	**Marble Bar**	**17.80**	**213**	P		**Pn**	**09 23 40.4**	**-0.6**
CTA	**Charters Tower**	**20.84**	**132**	*e*P		**P**	**09 24 15.5**	**+3.3**
	5.6nm,1.0s							
CTA	**Charters Tower**	**20.84**	**132**	P		**P**	**09 24 13.0**	**+0.8**
	3.0nm,0.5s,baz=295,slow=13,SNR=5.4							
FORT	**Forrest**	**24.38**	**184**	*e*P		**P**	**09 24 48.0**	**+1.7**
	39nm,0.6s,mb5.1							
FORT	**Forrest**	**24.38**	**184**	*e*P		**P**	**09 24 48.1**	**+1.8**
	27nm,0.5s,mb5.0							
STKA	**Stephens Creek**	**27.60**	**158**	*e*P		**P**	**09 25 17.2**	**+2.0**
	4.7nm,1.0s,mb4.2							
STKA	**Stephens Creek**	**27.60**	**158**	P		**P**	**09 25 16.8**	**+1.6**
	4.0nm,0.6s,mb4.3,baz=277,slow=9.0,SNR=17							
STKA				pP		pP	09 25 51.3	+1.8
	5.5nm,0.7s,baz=335,slow=14,SNR=3.3							
KLBR	**Kellerberrin**	**27.63**	**203**	*e*P		**P**	**09 25 16.4**	**+0.9**
	15nm,0.5s,mb5.0							
NWAO	**Narrogin (SRO)**	**29.01**	**203**	P		**P**	**09 25 28.1**	**+0.4**
	5.7nm,0.4s,mb4.7,baz=41,slow=8.8,SNR=16							
CMAR	**Chiang Mai Arr**	**39.36**	**309**	P		**P**	**09 26 55.8**	**-1.1**
	0.9nm,0.3s,mb3.9,baz=144,slow=7.8,SNR=4.0							
MJAR	**Matsushiro Arr**	**43.34**	**10**	P		**P**	**09 27 27.2**	**-1.8**
	2.7nm,0.6s,mb4.0,baz=189,slow=9.7,SNR=9.3							
PETK	**Petropavlovsk-**	**63.69**	**18**	P		**P**	**09 29 57.1**	**+0.2**
	3.2nm,0.7s,mb4.3,baz=194,slow=4.2,SNR=6.5							
MK31	**Makanchi Array**	**67.71**	**327**	*e*P		**P**	**09 30 23.2**	**+0.4**
MKAR	**Makanchi Array**	**67.71**	**327**	P		**P**	**09 30 23.2**	**+0.4**
	2.7nm,0.6s,mb4.2,baz=94,slow=10.0,SNR=20							
AML	**Almayashu**	**70.35**	**319**	*e*P		**P**	**09 30 40.6**	**+1.4**
	1.2nm,0.4s,mb4.0							
ZALV	**Zalesovo Beam**	**71.02**	**334**	P		**P**	**09 30 41.5**	**-1.5**
	0.7nm,0.4s,mb3.8,baz=136,slow=3.5,SNR=3.6							
ZALV				pP		pP	09 31 21.9	-0.8
	0.6nm,0.4s,baz=106,slow=4.8,SNR=1.8							
ZALV	**Zalesovo Beam**	**71.02**	**334**	P		**P**	**09 30 41.5**	**-1.5**
ZALV				pP		pP	09 31 21.9	-0.8
MAW	**Mawson**	**75.57**	**201**	*e*P		**P**	**09 31 11.2**	**+1.7**
	3.9nm,1.2s,mb3.9							
MAW	**Mawson**	**75.57**	**201**	P		**P**	**09 31 10.5**	**+1.0**
	5.8nm,1.0s,mb4.2,baz=71,slow=6.7,SNR=11							
BVAR	**Borovoye Array**	**77.54**	**328**	P		**P**	**09 31 18.8**	**-1.9**
	0.7nm,0.4s,mb3.6,baz=128,slow=11,SNR=2.7							
BVAR				pP		pP	09 31 59.4	-1.7
	0.5nm,0.4s,baz=138,slow=6.9,SNR=1.8							
TORD	**Torodi Ar. Bea**	**128.73**	**282**	PKP		PKPdf	09 38 32.4	+0.4
	0.4nm,0.7s,baz=354,slow=2.9,SNR=3.5							
CPUP	**Villa Florida**	**146.74**	**168**	PKPbc		PKPbc	09 39 07.8	+1.2
	2.0nm,0.6s,baz=159,slow=2.8,SNR=11							
LPAZ	**La Paz**	**151.20**	**142**	PKPbc		PKPbc	09 39 20.4	+2.3
	0.3nm,0.3s,baz=175,slow=2.7,SNR=7.6							
LPAZ	**La Paz**	**151.20**	**142**	PKPbc		PKPbc	09 39 20.4	+2.3

NEIC 13 09:27:20.9, 37°.59S×177°.09E, h5km, ML3.8(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
WIZ	**White Island**	**0.10**	**52**	P		Pg	09 27 22.8	-0.2
WIZ				S		Sg	09 27 25.6	+1.2
MARZ	**Manawahe**	**0.52**	**220**	P		Pg	09 27 30.4	-0.4
URZ	**Urewera**	**0.67**	**179**	P		Pg	09 27 32.9	-0.9
LIRZ	**Lichensteins R**	**0.70**	**233**	P		Pg	09 27 34.4	+0.1
MKRZ	**Makatiti**	**0.74**	**222**	P		Pg	09 27 35.3	+0.2
KARZ	**Kaharoa**	**0.80**	**237**	P		Pg	09 27 35.8	-0.4
MWZ	**Matawai**	**0.82**	**155**	P		Pg	09 27 36.0	-0.7
MXZ	**Matakaoa Point**	**0.97**	**89**	P		Pg	09 27 38.4	-1.0
PUZ	**Puketiti**	**1.04**	**118**	P		Pg	09 27 41.0	+0.1
TOZ	**Tahuroa Road**	**1.27**	**263**	P		Pg	09 27 43.3	-1.9
KUZ	**Kuaotunu**	**1.38**	**307**	P		Pn	09 27 43.8	-3.0
MKAZ	**Moumakai**	**1.60**	**287**	P		Pn	09 27 47.6	-2.3
WCZ	**Waipu Caves**	**2.75**	**306**	P		Pn	09 28 03.3	-2.4

*ATH **13** 09:33:36.8, 38°.14N×21°.63E, h21km±1km, MD3.4/19*
*NEIC **13** 09:33:36.8, 38°.14N×21°.63E, h21km, MD3.4(ATH), After ATH.*
*THE **13** 09:33:37.0, 38°.16N×21°.63E, h13km, ML3.5/12, Error ellipse: s-maj=0.9km s-min=0.5km az=357.0*
*CSEM **13** 09:33:37.3±0.2, 38°.18N×21°.63E, h20km, MD3.4, Error ellipse: s-maj=4.6km s-min=4.2km az=127.0*
*ISCJB **13** 09:33:37.4±0.3, 38°.17N±0°.02×21°.63E±0°.02, h19km±3km, Error ellipse: s-maj=3.4km s-min=2.9km az=161.1*
ISC 13 09:33:37.2±0.3, 38°.17N±0°.02×21°.63E±0°.02, h16km±2km, n79, σ0°.98/130, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
RLS	**Riolos of Patr**	**0.17**	**228**	*e*Pb		**Pg**	**09 33 41.6**	**+0.2**
RLS				*e*Sb		**Sg**	**09 33 45.2**	**+1.0**
RLS	**Riolos of Patr**	**0.17**	**228**	*e*PB		**Pg**	**09 33 41.6**	**+0.2**
RLS				*e*SB		**Sg**	**09 33 45.2**	**+1.0**
RLS	**Riolos of Patr**	**0.17**	**228**	*e*Pb		**Pg**	**09 33 41.6**	**+0.2**
RLS				*e*Sb		**Sg**	**09 33 45.2**	**+1.0**
UPR	**University Cam**	**0.17**	**48**	P		**Pg**	**09 33 41.8**	**+0.3**
UPR				S		**Sg**	**09 33 44.5**	**+0.1**
UPR	**University Cam**	**0.17**	**48**	*e*PB		**Pg**	**09 33 42.0**	**+0.5**
UPR				*e*SB		**Sg**	**09 33 45.8**	**+1.4**
UPR	**University Cam**	**0.17**	**48**	P		**Pg**	**09 33 41.8**	**+0.3**
UPR				S		**Sg**	**09 33 44.5**	**+0.1**
UPR				*e*Sb		**Sg**	**09 33 45.8**	**+1.4**
LAKA	**Lakka**	**0.29**	**76**	P		**Pg**	**09 33 43.2**	**-0.2**
LAKA				S		**Sg**	**09 33 47.3**	**-0.2**
LAKA	**Lakka**	**0.29**	**76**	P		**Pg**	**09 33 43.2**	**-0.2**
LAKA				S		**Sg**	**09 33 47.3**	**-0.2**
EFP	**Efpalio**	**0.34**	**41**	P		**Pg**	**09 33 44.1**	**-0.2**
EFP				S		**Sg**	**09 33 49.8**	**+0.8**
EFP	**Efpalio**	**0.34**	**41**	*e*PB		**Pg**	**09 33 44.1**	**-0.2**
EFP				*e*SB		**Sg**	**09 33 49.8**	**+0.8**
EFP	**Efpalio**	**0.34**	**41**	P		**Pg**	**09 33 44.1**	**-0.2**
EFP				S		**Sg**	**09 33 49.8**	**+0.8**
TRIZ	**Trizonia**	**0.40**	**61**	P		**Pg**	**09 33 45.1**	**-0.3**
TRIZ				S		**Sg**	**09 33 51.5**	**+0.6**
TRIZ	**Trizonia**	**0.40**	**61**	P		**Pg**	**09 33 45.1**	**-0.3**
TRIZ				S		**Sg**	**09 33 51.5**	**+0.6**
KALE	**Kalithea**	**0.46**	**61**	P		**Pg**	**09 33 46.0**	**-0.5**
KALE				S		**Sg**	**09 33 52.5**	**-0.2**
KALE	**Kalithea**	**0.46**	**61**	P		**Pg**	**09 33 46.0**	**-0.5**
KALE				S		**Sg**	**09 33 52.5**	**-0.2**
GUR	**Goura**	**0.61**	**112**	P		**Pg**	**09 33 48.2**	**-1.0**
GUR				S		**Sg**	**09 33 57.5**	**+0.1**
GUR	**Goura**	**0.61**	**112**	*e*PB		**Pb**	**09 33 48.3**	**-1.2**
GUR				*e*SN		**Sg**	**09 33 58.0**	**+0.6**
GUR	**Goura**	**0.61**	**112**	*e*Pb		**Pb**	**09 33 48.3**	**-1.2**
GUR				S		**Sg**	**09 33 57.5**	**+0.1**
KFL	**Anninata**	**0.66**	**265**	P		**Pg**	**09 33 49.5**	**-0.7**
KFL				S		**Sg**	**09 33 59.3**	**+0.3**
DSF	**Desfina**	**0.75**	**71**	P		**Pg**	**09 33 50.5**	**-1.3**
DSF				S		**Sg**	**09 34 01.5**	**-0.3**
DSF	**Desfina**	**0.75**	**71**	P		**Pg**	**09 33 50.5**	**-1.3**
DSF				S		**Sg**	**09 34 01.5**	**-0.3**
EVR	**Evrytania**	**0.76**	**11**	*e*Pn		**Pn**	**09 33 51.5**	**-1.8**
EVR				*e*Sn		**Sn**	**09 34 04.0**	**-0.5**
EVR	**Evrytania**	**0.76**	**11**	*e*PN		**Pn**	**09 33 51.5**	**-1.8**
EVR				*e*SN		**Sn**	**09 34 04.0**	**-0.5**
EVR	**Evrytania**	**0.76**	**11**	*e*Pn		**Pn**	**09 33 51.5**	**-1.8**
EVR				*e*Sn		**Sn**	**09 34 04.0**	**-0.5**
VLS	**Valsamata**	**0.82**	**271**	*e*Pn		**Pb**	**09 33 51.8**	**-1.2**
VLS				*e*Sn		**Sn**	**09 34 05.3**	**-0.5**
VLS	**Valsamata**	**0.82**	**271**	P		**Pb**	**09 33 51.8**	**-1.2**
VLS				S		**Sb**	**09 34 05.0**	**+1.2**
VLS	**Valsamata**	**0.82**	**271**	*e*PN		**Pb**	**09 33 51.8**	**-1.2**
VLS				*e*SN		**Sn**	**09 34 05.3**	**-0.5**
VLS	**Valsamata**	**0.82**	**271**	P		**Pb**	**09 33 51.8**	**-1.2**
VLS				S		**Sb**	**09 34 05.0**	**+1.2**
LKD2	**Lefkada island**	**0.98**	**310**	P		**Pb**	**09 33 54.7**	**-1.1**
LKD2				S		**Sb**	**09 34 10.2**	**+1.7**
LKD2	**Lefkada island**	**0.98**	**310**	P		**Pb**	**09 33 54.7**	**-1.1**
LKD2				S		**Sb**	**09 34 10.2**	**+1.7**
VLX	**Vlachokerasia**	**1.00**	**143**	P		**Pb**	**09 33 55.3**	**-0.8**
VLX				S		**Sb**	**09 34 09.7**	**+0.7**
VLX	**Vlachokerasia**	**1.00**	**143**	*e*PN		**Pb**	**09 33 55.3**	**-0.8**
VLX				*e*SN		**Sn**	**09 34 08.7**	**-1.5**
VLX	**Vlachokerasia**	**1.00**	**143**	P		**Pb**	**09 33 55.3**	**-0.8**
VLX				*e*Sn		**Sn**	**09 34 08.7**	**-1.5**
VLX				S		**Sb**	**09 34 09.7**	**+0.7**
AGG	**Agios Georgios**	**1.02**	**33**	*e*Pn		**Pn**	**09 33 56.5**	**-0.3**
AGG	**Agios Georgios**	**1.02**	**33**	P		**Pb**	**09 33 55.6**	**-0.8**
AGG				S		**Sb**	**09 34 10.6**	**+1.1**
AGG	**Agios Georgios**	**1.02**	**33**	*e*PN		**Pn**	**09 33 56.5**	**-0.3**
AGG	**Agios Georgios**	**1.02**	**33**	P		**Pb**	**09 33 55.6**	**-0.8**
AGG	**Agios Georgios**	**1.02**	**33**	*e*Pn		**Pn**	**09 33 56.5**	**-0.3**
AGG				S		**Sb**	**09 34 10.6**	**+1.1**
ITM	**Ithomi**	**1.02**	**166**	*e*Pn		**Pb**	**09 33 55.4**	**-1.0**
ITM				*e*Sn		**Sn**	**09 34 10.3**	**-0.4**
ITM	**Ithomi**	**1.02**	**166**	P		**Pb**	**09 33 55.4**	**-1.0**
ITM				S		**Sb**	**09 34 10.7**	**+1.2**
ITM	**Ithomi**	**1.02**	**166**	*e*PN		**Pb**	**09 33 55.4**	**-1.0**
ITM				*e*SN		**Sn**	**09 34 10.3**	**-0.4**
ITM	**Ithomi**	**1.02**	**166**	P		**Pb**	**09 33 55.4**	**-1.0**
ITM				*e*Sn		**Sn**	**09 34 10.3**	**-0.4**
ITM				S		**Sb**	**09 34 10.7**	**+1.2**
LTK	**Loutraki**	**1.07**	**97**	P		**Pb**	**09 33 56.9**	**-0.4**
LTK				S		**Sb**	**09 34 12.0**	**+0.9**
LTK	**Loutraki**	**1.07**	**97**	*e*PN		**Pn**	**09 33 57.3**	**-0.2**
LTK	**Loutraki**	**1.07**	**97**	P		**Pb**	**09 33 56.9**	**-0.4**
LTK	**Loutraki**	**1.07**	**97**	*e*Pn		**Pn**	**09 33 57.3**	**-0.2**
LTK				S		**Sb**	**09 34 12.0**	**+0.9**
LKR	**Lokris**	**1.18**	**66**	*e*Pb		**Pb**	**09 33 58.2**	**-1.1**
LKR	**Lokris**	**1.18**	**66**	P		**Pn**	**09 33 58.0**	**-1.1**
LKR				S		**Sb**	**09 34 15.6**	**+1.3**
LKR	**Lokris**	**1.18**	**66**	*e*PB		**Pb**	**09 33 58.2**	**-1.1**
LKR	**Lokris**	**1.18**	**66**	P		**Pn**	**09 33 58.0**	**-1.1**
LKR				S		**Sb**	**09 34 15.6**	**+1.3**
ATAL	**Atalanti**	**1.22**	**64**	P		**Pn**	**09 33 58.5**	**-1.0**
ATAL				S		**Sb**	**09 34 15.8**	**+0.5**
ATAL	**Atalanti**	**1.22**	**64**	P		**Pn**	**09 33 58.5**	**-1.0**
ATAL				S		**Sb**	**09 34 15.8**	**+0.5**
PYL	**PYLOS**	**1.27**	**176**	P		**Pn**	**09 34 00.0**	**-0.4**
PYL				S		**Sb**	**09 34 17.7**	**+0.7**
PYL	**PYLOS**	**1.27**	**176**	*e*PN		**Pn**	**09 34 00.3**	**-0.1**
PYL	**PYLOS**	**1.27**	**176**	P		**Pn**	**09 34 00.0**	**-0.4**
PYL	**PYLOS**	**1.27**	**176**	*e*Pn		**Pn**	**09 34 00.3**	**-0.1**
PYL				S		**Sb**	**09 34 17.7**	**+0.7**
THL	**Klokotos Trika**	**1.43**	**12**	*e*PN		**Pn**	**09 34 04.2**	**+1.7**
THL	**Klokotos Trika**	**1.43**	**12**	*e*Pn		**Pn**	**09 34 04.2**	**+1.7**
NAIG	**Nisos Aigina**	**1.53**	**105**	*e*Pn		**Pn**	**09 34 05.7**	**+1.8**
NAIG	**Nisos Aigina**	**1.53**	**105**	*e*PN		**Pn**	**09 34 05.7**	**+1.8**
NAIG	**Nisos Aigina**	**1.53**	**105**	*e*Pn		**Pn**	**09 34 05.7**	**+1.8**
JAN	**Janina**	**1.60**	**338**	*e*Pn		**Pn**	**09 34 06.5**	**+1.6**
JAN	**Janina**	**1.60**	**338**	*e*PN		**Pn**	**09 34 06.5**	**+1.6**
JAN	**Janina**	**1.60**	**338**	*e*Pn		**Pn**	**09 34 06.5**	**+1.6**
NEO	**Neokhori**	**1.69**	**47**	*e*Pn		**Pn**	**09 34 07.2**	**+1.1**
NEO	**Neokhori**	**1.69**	**47**	*e*PN		**Pn**	**09 34 07.2**	**+1.1**
NEO	**Neokhori**	**1.69**	**47**	*e*Pn		**Pn**	**09 34 07.2**	**+1.1**
XOR	**Xorichti**	**1.71**	**45**	P		**Pn**	**09 34 06.2**	**-0.2**
XOR	**Xorichti**	**1.71**	**45**	P		**Pn**	**09 34 06.2**	**-0.2**
VLY	**Voula,Athens**	**1.74**	**100**	*e*Pn		**Pn**	**09 34 07.9**	**+1.1**
VLY	**Voula,Athens**	**1.74**	**100**	*e*PN		**Pn**	**09 34 07.9**	**+1.1**
VLY	**Voula,Athens**	**1.74**	**100**	*e*Pn		**Pn**	**09 34 07.9**	**+1.1**
VLI	**Veliai**	**1.79**	**144**	*e*Pn		**Pn**	**09 34 09.3**	**+1.9**
VLI	**Veliai**	**1.79**	**144**	*e*PN		**Pn**	**09 34 09.3**	**+1.9**
VLI	**Veliai**	**1.79**	**144**	*e*Pn		**Pn**	**09 34 09.3**	**+1.9**
AOS	**Alonnisos**	**2.03**	**60**	P		**Pn**	**09 34 10.5**	**-0.2**
AOS	**Alonnisos**	**2.03**	**60**	P		**Pn**	**09 34 10.5**	**-0.2**
KEK	**Kerkira**	**2.10**	**318**	*e*Pb		**Pb**	**09 34 12.9**	**-2.0**
KEK	**Kerkira**	**2.10**	**318**	*e*PB		**Pb**	**09 34 12.9**	**-2.0**

*IDC **13** 09:46:35.8±2.3, 8°.16S×122°.96E, h178km±27km, mb3.4/3, mb1 3.5/7, mb1mx3.3/19, mbtmp3.4/7, Error ellipse: s-maj=59.3km s-min=11.4km az=62.0*
*ISCJB **13** 09:46:35.0±1.3, 8°.1S±0°.1×122°.9E±0°.2, h185km±19km, mb3.7/3, Error ellipse: s-maj=42.5km s-min=9.8km az=148.6*
*NEIC **13** 09:46:36.4±1.3, 8°.07S×122°.99E, h180km±20km, mb3.8/1, Error ellipse: s-maj=48.4km s-min=8.7km az=60.0*
ISC 13 09:46:36.4±1.3, 8°.2S±0°.2×122°.9E±0°.3, h183km±19km, n11, σ0°.61/15, mb3.7/3, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
KAPI	**Kappang**	**4.42**	**315**	P		**Pn**	**09 47 42.8**	**-0.2**
	0.9nm,0.3s,baz=129,slow=3.2,SNR=5.6							
KAPI	**Kappang**	**4.42**	**315**	*e*Pn		**Pn**	**09 47 43.0**	**0.0**
FITZ	**Fitzroy

*GII **13** 10:13:13.0±0.5, 33°.29N×35°.47E, h1km±1km, Md2.0/8*
*GRAL **13** 10:13:13.5±0.5, 33°.30N×35°.43E, h13km±2km, MD3.1*
*ISCJB **13** 10:13:13.3±0.5, 33°.34N±0°.02×35°.43E±0°.03, h5km±4km, Error ellipse: s-maj=4.9km s-min=2.8km az=32.4*
*CSEM **13** 10:13:14.7±0.4, 33°.39N×35°.46E, h2km, ML3.1, Error ellipse: s-maj=7.9km s-min=5.9km az=38.0*
*NSSC **13** 10:13:16, 33°.41N×35°.56E, h8km±16km*
ISC 13 10:13:13.8±0.5,**33°.34N**±0°.02×**35°.43E**±0°.03, **h3**km±5km, **n25**, σ0s**72**/47, **Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.17**	**329**	*e*P	**Pg**	**10 13 17.8**	**+0.7**
MATL	**Matarih**	**0.17**	**329**	*e*P	**Pg**	**10 13 17.8**	**+0.7**
KSDI	**Kefar Szold**	**0.24**	**129**	Pg	**Pg**	**10 13 17.7**	**-0.8**
KSDI				Sg	**Sg**	**10 13 21.3**	**-0.3**
HRI	**Mount Hermon**	**0.26**	**107**	Pg	**Pg**	**10 13 18.1**	**-0.8**
HRI				Sg	**Sg**	**10 13 22.6**	**+0.3**
MMA0B	**Mount Meron ar**	**0.33**	**185**	Pg	**Pg**	**10 13 19.5**	**-0.6**
MMA0B				Sg	**Sg**	**10 13 24.6**	**+0.2**
HNTI	**Hanita**	**0.34**	**220**	Sg	**Sg**	**10 13 25.7**	**+1.0**
RCY	**Rachaya**	**0.35**	**66**	*e*P	**Pg**	**10 13 20.6**	**0.0**
RCY				*e*S	**Sg**	**10 13 26.4**	**+1.3**
RCY	**Rachaya**	**0.35**	**66**	*e*P	**Pg**	**10 13 20.6**	**0.0**
RCY				*e*S	**Sg**	**10 13 26.4**	**+1.3**
BRBR	**Barbar**	**0.44**	**81**	⇑P	**Pg**	**10 13 22.0**	**-0.2**
BRBR				⇑S	**Sg**	**10 13 28.0**	**+0.1**
BRBR	**Barbar**	**0.44**	**81**	⇑*i*P	**Pg**	**10 13 22.3**	**+0.1**
BRBR				⇑*i*S	**Sg**	**10 13 28.7**	**+0.8**
KSHT	**Keshet**	**0.48**	**139**	Pg	**Pg**	**10 13 22.6**	**-0.4**
KSHT				Sg	**Sg**	**10 13 29.8**	**+0.6**
BHL	**Bhannes**	**0.59**	**18**	*e*P	**Pg**	**10 13 24.9**	**-0.2**
BHL				*e*S	**Sg**	**10 13 33.2**	**+0.5**
BHL	**Bhannes**	**0.59**	**18**	*e*P	**Pg**	**10 13 24.9**	**-0.2**
BHL				*e*S	**Sg**	**10 13 33.2**	**+0.5**
BLGI	**Bet Lehem HaGe**	**0.64**	**199**	Pg	**Pg**	**10 13 25.8**	**-0.3**
BLGI				Sg	**Sg**	**10 13 35.6**	**+1.2**
QASN	**Qassioun**	**0.73**	**75**	⇑P	**Pg**	**10 13 28.0**	**+0.2**
QASN				⇑S	**Sg**	**10 13 37.0**	**-0.2**
QASN	**Qassioun**	**0.73**	**75**	⇑*i*P	**Pg**	**10 13 28.3**	**+0.5**
QASN				⇑*i*S	**Sg**	**10 13 37.7**	**+0.5**
OFRI	**'Ofer**	**0.81**	**208**	Pg	**Pg**	**10 13 29.0**	**-0.4**
OFRI				Sg	**Sg**	**10 13 41.3**	**+1.4**
MMLI	**Mount Malkishu**	**0.90**	**181**	Pg	**Pg**	**10 13 30.1**	**-1.0**
MMLI				Sg	**Sg**	**10 13 42.8**	**0.0**
HWQ	**Hawqa**	**1.02**	**24**	*e*P	**Pg**	**10 13 33.2**	**-0.3**
HWQ				*e*S	**Sg**	**10 13 45.6**	**-1.1**
HMDT	**Nahal Hemdat**	**1.09**	**176**	Pg	**Pg**	**10 13 33.4**	**-1.3**
HMDT				Sg	**Sg**	**10 13 49.0**	**+0.2**
SLTI	**Sal'it**	**1.15**	**197**	Pg	**Pg**	**10 13 35.1**	**-0.7**
SLTI				Sg	**Sg**	**10 13 50.5**	**-0.2**
ZALF	**Zalf**	**1.65**	**104**	⇑P	**Pn**	**10 13 45.0**	**+1.4**
ZALF				⇑S	**Sn**	**10 14 05.0**	**-0.2**
ZALF	**Zalf**	**1.65**	**104**	⇑*i*P	**Pn**	**10 13 45.6**	**+2.0**
ZALF				⇑*i*S	**Sn**	**10 14 05.1**	**-0.1**
DSI	**Dead Sea**	**1.77**	**181**	Pn	**Pn**	**10 13 44.5**	**-0.7**
DSI				Sn	**Sn**	**10 14 07.8**	**-0.4**
MZDA	**Masada**	**2.03**	**182**	Pn	**Pn**	**10 13 48.1**	**-0.7**
MZDA				Sn	**Sn**	**10 14 15.5**	**+0.9**

*CSEM **13** 10:18:04.4, 12°.13N×44°.29E, h6km, ML3.8, After DHMR*
DHMR 13 10:18:04.4±1.5,**12°.13N**×**44°.29E**, **h6**km±8km, **ML3.8**, **2C-2D**, **Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADEN	**Aden**	**0.93**	**46**	⇓*i*P	Pg	10 18 22.0	-0.4
ADEN				*i* S	Sg	10 18 35.2	+0.7
ADEN				AML	AML	10 18 42.3	
	comp=E,3μm,0.3s						
ADEN	**Aden**	**0.93**	**46**	⇓*i*P	Pg	10 18 22.0	-0.4
ADEN				*i* S	Sg	10 18 35.2	+0.7
	comp=E,1μm,0.3s						
TRBA	**At Turbah**	**1.11**	**351**	⇑*i*P	Pg	10 18 25.9	+0.2
TRBA				*i* S	Sg	10 18 41.0	+0.8
TRBA				AML	AML	10 18 48.2	
	comp=Z,1μm,0.3s						
UDYN	**Al 'Udayn**	**1.86**	**350**	*i* P	Pn	10 18 37.2	+0.4
UDYN				*i* S	Sn	10 19 04.0	+3.5
UDYN				AML	AML	10 19 11.4	
	comp=E,1μm,0.5s						
UDYN	**Al 'Udayn**	**1.86**	**350**	*i* P	Pn	10 18 37.2	+0.5
UDYN				*i* S	Sn	10 19 04.0	+3.5
	comp=E,601nm,0.5s						
LBOS		**1.97**	**28**	⇑*i*P	Pn	10 18 39.6	+1.4
LBOS				*i* S	Sn	10 19 07.4	+4.1
BDHA	**Al Bayda'**	**2.22**	**34**	*i* P	Pn	10 18 42.7	+1.0
BDHA				AML	AML	10 18 53.2	
	comp=N,942nm,0.4s						
BDHA				*i* S	Sn	10 19 14.2	+4.8
BDHA	**Al Bayda'**	**2.22**	**34**	*i* P	Pn	10 18 42.7	+1.0
	comp=N,471nm,0.4s						
BDHA				*i* S	Sn	10 19 14.2	+4.8
DHBB	**Dhamar BB**	**2.43**	**2**	*i* P	Pn	10 18 47.1	+2.5
DHBB				*i* S	Sn	10 19 19.3	+4.6
HAJJ	**Hajjah**	**3.62**	**349**	*i* P	Pn	10 19 03.4	+2.4
HAJJ				*i* S	Sn	10 19 50.4	+6.4
HAJJ				AML	AML	10 20 06.4	
	comp=N,396nm,0.6s						
HAJJ	**Hajjah**	**3.62**	**349**	*i* P	Pn	10 19 03.3	+2.4
HAJJ				*i* S	Sn	10 19 50.4	+6.5
	comp=N,198nm,0.6s						

*CSEM **13** 10:26:35.5±0.1, 47°.68N×8°.90E, h15km, ML2.8/15, Error ellipse: s-maj=1.7km s-min=1.6km az=171.0*
*ZUR **13** 10:26:35.8, 47°.68N×8°.90E, h10km, ML2.1/10*
*ISCJB **13** 10:26:35.0±0.2, 47°.70N±0°.01×8°.91E±0°.02, h5km±3km, Error ellipse: s-maj=2.5km s-min=2.0km az=13.0*
*NEIC **13** 10:26:35.8, 47°.68N×8°.90E, h10km, ML2.6(LDG), ML2.1(ZUR), ML2.3(STR), After ZUR.*
*LDG **13** 10:26:36.3±0.0, 47°.67N×8°.90E, h10km, Md2.5/1, Ml2.6/10, Error ellipse: s-maj=0.9km s-min=0.7km az=125.0*
*BGR **13** 10:26:37.7±1.3, 47°.76N×8°.94E, h10km, ML2.3/8, Error ellipse: s-maj=12.2km s-min=5.6km az=8.0*
*STR **13** 10:26:37.2±0.3, 47°.71N×8°.84E, h5km, Ml2.3, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*VIE **13** 10:26:38.3±0.3, 47°.65N×9°.09E, h10km±1km, mb1.6/2, ML1.9/4, Error ellipse: s-maj=2.0km s-min=1.5km az=132.0 6 km WSW of Konstanz*
ISC 13 10:26:35.7±0.2,**47°.69N**±0°.01×**8°.90E**±0°.02, **h14**km±2km, **n108**, σ0s**76**/171, **21C-9D**, **Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STEIN	**Stein am Rhein**	**0.03**	**234**	⇑*i*Pg	**Pg**	**10 26 37.8**	**-0.3**
	1μm,0.1s						
STEIN	**Stein am Rhein**	**0.03**	**234**	⇑*i*Pg	**Pg**	**10 26 37.8**	**-0.3**
	1μm,0.1s						
SISB	**Singen-Schiene**	**0.04**	**90**	⇑*i*P*	**Pg**	**10 26 37.9**	**-0.3**
SISB				S*	**Sg**	**10 26 39.3**	**-0.7**
SISB	**Singen-Schiene**	**0.04**	**90**	Pb	**Pg**	**10 26 37.9**	**-0.3**
SISB				Sb	**Sg**	**10 26 39.3**	**-0.7**
TRULL	**Truellikon**	**0.15**	**256**	⇑*i*Pg	**Pg**	**10 26 39.6**	**+0.2**
	471nm,0.3s						
TRULL				*i* Sg	**Sg**	**10 26 42.1**	**0.0**
	471nm,0.3s						
TRULL	**Truellikon**	**0.15**	**256**	⇑*i*Pg	**Pg**	**10 26 39.6**	**+0.2**
	471nm,0.3s						
TRULL				*i* Sg	**Sg**	**10 26 42.1**	**0.0**
	471nm,0.3s						
WEIN	**Weingarten**	**0.17**	**160**	⇓*i*Pg	**Pg**	**10 26 39.8**	**+0.2**
	1μm,0.1s						
WEIN				*i* Sg	**Sg**	**10 26 42.6**	**+0.2**
	1μm,0.1s						
WEIN	**Weingarten**	**0.17**	**160**	⇓*i*Pg	**Pg**	**10 26 39.8**	**+0.2**
	1μm,0.1s						
WEIN				*i* Sg	**Sg**	**10 26 42.6**	**+0.2**
	1μm,0.1s						
FLACH	**Flaach**	**0.25**	**243**	⇑*i*Pg	**Pg**	**10 26 41.4**	**+0.3**
	299nm,0.2s						
FLACH				*e*Sg	**Sg**	**10 26 45.3**	**+0.6**
	299nm,0.2s						
FLACH	**Flaach**	**0.25**	**243**	⇑*i*Pg	**Pg**	**10 26 41.4**	**+0.3**
	299nm,0.2s						
FLACH				*e*Sg	**Sg**	**10 26 45.3**	**+0.6**
	299nm,0.2s						
WILA	**Wila**	**0.27**	**179**	⇓*i*Pg	**Pg**	**10 26 41.7**	**+0.3**
	446nm,0.2s						
WILA				*i* Sg	**Sg**	**10 26 45.9**	**+0.7**
	446nm,0.2s						
WILA	**Wila**	**0.27**	**179**	⇓*i*Pg	**Pg**	**10 26 41.7**	**+0.3**
	446nm,0.2s						
WILA				*i* Sg	**Sg**	**10 26 45.9**	**+0.7**
	446nm,0.2s						
ZUR	**Degenried**	**0.39**	**215**	*e*Pg	**Pg**	**10 26 43.9**	**+0.5**
	406nm,0.2s						
ZUR				*i* Sg	**Sg**	**10 26 49.3**	**+0.7**
	406nm,0.2s						
ZUR	**Degenried**	**0.39**	**215**	*e*Pg	**Pg**	**10 26 43.9**	**+0.5**
	406nm,0.2s						
ZUR				*i* Sg	**Sg**	**10 26 49.3**	**+0.7**
	406nm,0.2s						
GUT	**Gutenstein**	**0.41**	**20**	⇓*i*P*	**Pg**	**10 26 44.3**	**+0.4**
GUT				S*	**Sg**	**10 26 50.2**	**+0.8**
GUT	**Gutenstein**	**0.41**	**20**	Pb	**Pg**	**10 26 44.3**	**+0.4**
SPAK	**Spaichingen-Ko**	**0.42**	**349**	⇑*i*P*	**Pg**	**10 26 44.7**	**+0.6**
SPAK	**Spaichingen-Ko**	**0.42**	**349**	Pg	**Pg**	**10 26 44.7**	**+0.6**
SPAK				Sg	**Sg**	**10 26 51.2**	**+1.4**
SPAK	**Spaichingen-Ko**	**0.42**	**349**	Pb	**Pg**	**10 26 44.7**	**+0.6**
SPAK				Sg	**Sg**	**10 26 51.2**	**+1.4**
SULZ	**Cheisacher**	**0.56**	**254**	⇑*i*Pg	**Pg**	**10 26 47.0**	**+0.4**
	126nm,0.2s						
SULZ				*e*Sg	**Sg**	**10 26 54.4**	**+0.4**
	126nm,0.2s						
SULZ	**Cheisacher**	**0.56**	**254**	⇑*i*Pg	**Pg**	**10 26 47.0**	**+0.4**
	126nm,0.2s						
SULZ				*e*Sg	**Sg**	**10 26 54.4**	**+0.4**
	126nm,0.2s						
FELD	**Feldberg im Sc**	**0.64**	**288**	⇑*i*P*	**Pb**	**10 26 48.4**	**-0.1**
FELD				*i* PmP		10 26 50.0	
FELD				S*	**Sb**	**10 26 56.9**	**-0.3**
FELD				SmS		10 26 59.8	
FELD	**Feldberg im Sc**	**0.64**	**288**	Pg	**Pb**	**10 26 48.4**	**-0.1**
FELD	**Feldberg im Sc**	**0.64**	**288**	Pb	**Pb**	**10 26 48.4**	**-0.1**
FELD				Sb	**Sb**	**10 26 56.9**	**-0.4**
PLONS	**Plons/SG**	**0.71**	**153**	*i* Pn	**Pn**	**10 26 50.1**	**-1.2**
	223nm,0.2s						
PLONS	**Plons/SG**	**0.71**	**153**	*i* Pn	**Pn**	**10 26 50.1**	**-1.2**
KIZ	**Kirchzarten**	**0.72**	**293**	⇑*i*P*	**Pb**	**10 26 49.7**	**-0.2**
KIZ				S*	**Sb**	**10 26 59.6**	**0.0**
KIZ	**Kirchzarten**	**0.72**	**293**	Pb	**Pb**	**10 26 49.7**	**-0.2**
KIZ				Sb	**Sb**	**10 26 59.6**	**0.0**
MUO	**Muotathal**	**0.74**	**194**	⇓*i*P	**Pg**	**10 26 50.5**	**+0.5**
	165nm,0.4s						
MUO	**Muotathal**	**0.74**	**194**	⇓*i*P	**Pg**	**10 26 50.5**	**+0.5**
	165nm,0.4s						
BFO	**Black Forest**	**0.75**	**329**	P*	**Pb**	**10 26 50.5**	**0.0**
BFO				PmP		10 26 51.3	
BFO				S*	**Sb**	**10 27 00.2**	**-0.4**
BFO	**Black Forest**	**0.75**	**329**	*e*Pg	**Pg**	**10 26 51.2**	**+1.0**
BFO				*e*Sg	**Sg**	**10 27 00.3**	**+0.2**
BFO	**Black Forest**	**0.75**	**329**	Pb	**Pb**	**10 26 50.5**	**0.0**
BFO				Sb	**Sb**	**10 27 00.2**	**-0.4**
DAVA	**Damuels**	**0.77**	**121**	⇓*i*Pg	**Pg**	**10 26 51.4**	**+0.7**
DAVA				⇓*i*Sg	**Sg**	**10 27 00.5**	**-0.4**
	45nm,0.2s						
DAVA	**Damuels**	**0.77**	**121**	Pg	**Pg**	**10 26 51.4**	**+0.7**
DAVA				Sg	**Sg**	**10 27 00.5**	**-0.3**
	45nm,0.2s						
UBR	**Ueberruh**	**0.81**	**90**	PmP		10 26 53.5	
UBR				SmS		10 27 05.9	
BUCH	**Bad Urach**	**0.82**	**21**	P*	**Pb**	**10 26 52.1**	**+0.4**
BUCH				S*	**Sb**	**10 27 03.5**	**+0.8**
BUCH				SmS		10 27 04.5	
BUCH	**Bad Urach**	**0.82**	**21**	Pb	**Pb**	**10 26 52.1**	**+0.4**
BUCH				Sb	**Sb**	**10 27 03.5**	**+0.8**
LLS	**Linth-Limmern**	**0.84**	**175**	⇑*i*Pn	**Pn**	**10 26 52.1**	**-1.0**
	67nm,0.1s						
TUBL	**Tuebingen-Lenn**	**0.85**	**8**	P*	**Pb**	**10 26 52.5**	**+0.4**
TUBL	**Tuebingen-Lenn**	**0.85**	**8**	Pb	**Pb**	**10 26 52.5**	**+0.4**
BBS	**Basel-Blauen**	**0.97**	**257**	P*	**Pb**	**10 26 54.6**	**+0.4**
BBS				S*	**Sb**	**10 27 07.9**	**+1.1**
BBS	**Basel-Blauen**	**0.97**	**257**	Pg	**Pg**	**10 26 54.7**	**+0.3**
BBS				Sg	**Sg**	**10 27 08.1**	**+1.1**
BBS	**Basel-Blauen**	**0.97**	**257**	Pb	**Pb**	**10 26 54.6**	**+0.4**
BBS				Sg	**Sg**	**10 27 08.1**	**+1.1**
LBG	**Lerchenberg**	**0.98**	**356**	P	**Pb**	**10 26 54.8**	**+0.4**
LBG				PmP		10 26 55.2	
LBG				S	**Sb**	**10 27 08.0**	**+0.7**
LBG	**Lerchenberg**	**0.98**	**356**	S	**Sb**	**10 27 08.0**	**+0.8**
LIBD	**Limburg**	**0.99**	**298**	P	**Pb**	**10 26 55.6**	**+1.0**
LIBD	**Limburg**	**0.99**	**298**	Pg	**Pg**	**10 26 55.5**	**+0.7**
LIBD				Sg	**Sg**	**10 27 08.5**	**+0.8**
LIBD	**Limburg**	**0.99**	**298**	P	**Pb**	**10 26 55.6**	**+1.0**
LIBD				Sg	**Sg**	**10 27 08.5**	**+0.8**
STU	**Stuttgart**	**1.10**	**10**	Sg	**Sg**	**10 27 12.4**	**+1.1**
STU	**Stuttgart**	**1.10**	**10**	Sg	**Sg**	**10 27 12.4**	**+1.1**
MOF	**Molkenrain**	**1.21**	**279**	Pg	**Pg**	**10 26 59.0**	**+0.1**
MOF				Sg	**Sg**	**10 27 15.0**	**+0.5**
HDH	**Heidenheim-Cha**	**1.25**	**44**	Pg	**Pg**	**10 27 00.2**	**+0.4**
HDH				Sg	**Sg**	**10 27 16.7**	**+0.6**
HDH	**Heidenheim-Cha**	**1.25**	**44**	Pg	**Pg**	**10 27 00.2**	**+0.4**
HDH				Sg	**Sg**	**10 27 16.7**	**+0.6**
RETA	**Reutte**	**1.27**	**98**	⇑*i*Pg	**Pg**	**10 27 00.3**	**+0.2**
RETA				⇑*i*Sg	**Sg**	**10 27 16.4**	**-0.4**
	2.9nm,0.1s						
RETA	**Reutte**	**1.27**	**98**	Pg	**Pg**	**10 27 00.3**	**+0.1**
RETA				Sg	**Sg**	**10 27 16.4**	**-0.4**
	2.9nm,0.1s						
ECH	**Echery**	**1.29**	**295**	Pg	**Pg**	**10 27 00.5**	**+0.1**
ECH				Sg	**Sg**	**10 27 17.2**	**+0.1**
ECH	**Echery**	**1.29**	**295**	Pg	**Pg**	**10 27 00.2**	**-0.2**
ECH				Sg	**Sg**	**10 27 17.2**	**0.0**
ECH	**Echery**	**1.29**	**295**	Pg	**Pg**	**10 27 00.5**	**+0.1**
ECH				Sg	**Sg**	**10 27 17.2**	**+0.1**
CDF	**Champ du Feu**	**1.31**	**304**	*e*Pg	**Pg**	**10 27 00.6**	**-0.3**
CDF				*e*Sg	**Sg**	**10 27 17.9**	**0.0**
	30nm,0.2s						
CDF	**Champ du Feu**	**1.31**	**304**	*e*Pn	**Pn**	**10 26 59.3**	**-0.2**
CDF				*e*Pg	**Pg**	**10 27 00.6**	**-0.3**
CDF				*e*Sg	**Sg**	**10 27 17.9**	**0.0**
CDF	**Champ du Feu**	**1.31**	**304**	*e*Sg	**Sg**	**10 27 17.9**	**0.0**
	15nm,0.2s						
HINF	**Hinteralfeld**	**1.39**	**276**	*e*Pg	**Pg**	**10 27 02.5**	**+0.1**
HINF				*e*Sg	**Sg**	**10 27 20.1**	**-0.3**
	13nm,0.3s						
HINF	**Hinteralfeld**	**1.39**	**276**	*e*Pn	**Pn**	**10 26 59.8**	**-0.8**
HINF				*e*Pg	**Pg**	**10 27 02.5**	**+0.1**
HINF				*e*Sg	**Sg**	**10 27 20.1**	**-0.3**
HINF	**Hinteralfeld**	**1.39**	**276**	*e*Sg	**Sg**	**10 27 20.1**	**-0.3**
	6.7nm,0.3s						
FETA	**Feichten**	**1.41**	**118**	⇑*i*Pg	**Pg**	**10 27 03.1**	**+0.4**
FETA				⇑*i*Sg	**Sg**	**10 27 20.8**	**-0.3**
	3.6nm,0.2s						
FETA	**Feichten**	**1.41**	**118**	Pg	**Pg**	**10 27 03.1**	**+0.4**
FETA				Sg	**Sg**	**10 27 20.8**	**-0.2**
	3.6nm,0.2s						
LOMF	**Lomont**	**1.45**	**257**	Pg	**Pg**	**10 27 03.7**	**+0.3**
LOMF	**Lomont**	**1.45**	**257**	Pg	**Pg**	**10 27 03.7**	**+0.3**
LANF	**Langenberg**	**1.49**	**331**	Pg	**Pg**	**10 27 03.7**	**-0.5**
LANF				Sg	**Sg**	**10 27 24.1**	**+0.5**
LANF	**Langenberg**	**1.49**	**331**	Sg	**Sg**	**10 27 24.2**	**+0.6**
LANF	**Langenberg**	**1.49**	**331**	Pg	**Pg**	**10 27 03.7**	**-0.5**
LANF				Sg	**Sg**	**10 27 24.1**	**+0.5**
MOTA	**Moosalm**	**1.53**	**102**	⇑*i*Pn	**Pn**	**10 27 04.1**	**+1.5**
MOTA				⇑*i*Pg	**Pg**	**10 27 05.1**	**+0.1**
MOTA				⇑*i*Sn	**Sn**	**10 27 23.7**	**+1.5**
MOTA				⇑*i*Sg	**Sg**	**10 27 24.8**	**-0.2**
	3.5nm,0.1s						
MOTA	**Moosalm**	**1.53**	**102**	Pn	**Pn**	**10 27 04.1**	**+1.5**
FUR	**Furstenfeldbru**	**1.67**	**72**	*e*Sg	**Sg**	**10 27 30.0**	**+0.7**
	SNR=1.9						
FUR	**Furstenfeldbru**	**1.67**	**72**	Sg	**Sg**	**10 27 30.0**	**+0.7**
	SNR=1.9						
SIND	**Sindeldorf**	**1.73**	**15**	Pg	**Pg**	**10 27 08.9**	**+0.1**
SIND				Sg	**Sg**	**10 27 31.2**	**0.0**
SIND	**Sindeldorf**	**1.73**	**15**	Pg	**Pg**	**10 27 08.9**	**+0.1**
SIND				Sg	**Sg**	**10 27 31.2**	**-0.1**
HAU	**Haudompre**	**1.75**	**281**	*e*Pg	**Pg**	**10 27 08.6**	**-0.6**
HAU				*e*Sg	**Sg**	**10 27 31.4**	**-0.5**
	12nm,0.2s						
HAU	**Haudompre**	**1.75**	**281**	*e*Pg	**Pg**	**10 27 08.6**	**-0.6**
HAU				*e*Sg	**Sg**	**10 27 31.4**	**-0.5**
	5.8nm,0.2s						
SWS	**Schriesheim-Wi**	**1.81**	**356**	Pg	**Pg**	**10 27 10.5**	**+0.3**
SWS	**Schriesheim-Wi**	**1.81**	**356**	Pg	**Pg**	**10 27 10.5**	**+0.2**
THEF	**They Montfort**	**2.03**	**287**	Pg	**Pg**	**10 27 14.3**	**-0.3**
THEF	**They Montfort**	**2.03**	**287**	Pg	**Pg**	**10 27 14.4**	**-0.2**
THEF				Sg	**Sg**	**10 27 40.5**	**-0.5**
THEF	**They Montfort**	**2.03**	**287**	Pg	**Pg**	**10 27 14.3**	**-0.3**
THEF				Sg	**Sg**	**10 27 40.5**	**-0.5**
CABF	**La Chapelle**	**2.20**	**242**	*e*Pg	**Pg**	**10 27 17.5**	**-0.4**
CABF				*e*Sg	**Sg**	**10 27 45.9**	**-0.5**
	4.7nm,0.3s						
CABF	**La Chapelle**	**2.20**	**242**	*e*Pg	**Pg**	**10 27 17.5**	**-0.4**
RFYF	**Reffroy**	**2.48**	**294**	*e*Sg	**Sg**	**10 27 54.4**	**-1.0**
	7.5nm,0.2s						
RFYF	**Reffroy**	**2.48**	**294**	*e*Sg	**Sg**	**10 27 54.4**	**-1.0**
	3.8nm,0.2s						
GRA1	**Grafenberg Arr**	**2.53**	**37**	Sg	**Sg**	**10 27 55.4**	**-1.5**
	SNR=3.2						
GRF	**Grafenberg Arr**	**2.53**	**37**	*e*Sg	**Sg**	**10 27 55.4**	**-1.5**
	SNR=3.2						
LPL	**La Plagne**	**2.64**	**215**	*e*Pg	**Pg**	**10 27 25.1**	**-1.1**
LPL	**La Plagne**	**2.64**	**215**	*e*Pg	**Pg**	**10 27 25.1**	**-1.1**
LPG	**La Plagne**	**2.64**	**215**	*e*Pg	**Pg**	**10 27 25.2**	**-1.1**
LPG				*e*Sg	**Sg**	**10 27 59.3**	**-1.3**
	1.7nm,0.3s						
LPG	**La Plagne**	**2.64**	**215**	*e*Pg	**Pg**	**10 27 25.2**	**-1.1**
LPG				*e*Sg	**Sg**	**10 27 59.3**	**-1.3**
	0.9nm,0.3s						
SFTF	**Sexfontaines**	**2.65**	**283**	*e*Sg	**Sg**	**10 27 59.9**	**-0.8**
	2.9nm,0.2s						
WLF	**Walferdange**	**2.69**	**318**	*e*Sg	**Sg**	**10 28 00.8**	**-1.2**
WLF	**Walferdange**	**2.69**	**318**	Sg	**Sg**	**10 28 00.8**	**-1.3**
WET	**Wettzell**	**3.02**	**60**	*e*Sg	**Sg**	**10 28 11.7**	**-1.1**
	SNR=5.4						
WET	**Wettzell**	**3.02**	**60**	Sg	**Sg**	**10 28 11.7**	**-1.0**
	SNR=5.4						
LOR	**Lormes**	**3.45**	**265**	*e*Sg	**Sg**	**10 28 23.5**	**-2.8**
	3.5nm,0.2s						
LOR	**Lormes**	**3.45**	**265**	*e*Sg	**Sg**	**10 28 23.5**	**-2.8**
	1.8nm,0.2s						
MOX	**Moxa**	**3.46**	**30**	*e*Sg	**Sg**	**10 28 25.0**	**-1.6**
	SNR=2.6						
MOX	**Moxa**	**3.46**	**30**	Sg	**Sg**	**10 28 25.0**	**-1.6**
	SNR=2.6						
GUNZ	**Gunzen**	**3.50**	**39**	*e*Sg	**Sg**	**10 28 26.0**	**-2.1**
	SNR=3.2						
GUNZ	**Gunzen**	**3.50**	**39**	Sg	**Sg**	**10 28 26.0**	**-2.1**
	SNR=3.2						
WERD	**Werda**	**3.56**	**38**	*e*Sg	**Sg**	**10 28 27.3**	**-2.5**
	SNR=2.8						
WERD	**Werda**	**3.56**	**38**	Sg	**Sg**	**10 28 27.3**	**-2.5**
	SNR=2.8						

IDC 13 10:45:51.2±1.8,**23°.34S**×**178°.36W**, **h0**km, **mb3.8**/3, **mb1 4.2**/4, **mb1mx3.9**/16, **mbtmp3.9**/4, **ML4.1**/1, **MS3.7**/1, **Ms1 3.7**/1, **ms1mx2.5**/24, **Error ellipse: s-maj=68.4km s-min=32.9km az=151.0**, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**15.37**	**194**	Pn	Pn	10 49 29.1	-0.3
	0.7nm,0.3s,baz=3.5,slow=19,SNR=4.1						
ASAR	**Alice Springs**	**43.61**	**260**	P	P	10 53 56.9	-0.7
	0.9nm,0.4s,baz=91,slow=7.5,SNR=36						
WRA	**Warramunga Arr**	**43.95**	**265**	P	P	10 54 01.1	+0.8
	0.3nm,0.3s,baz=101,slow=8.5,SNR=4.5						
WRA				LR	LR	11 08 45.2	
	comp=Z,100nm,20.3s,baz=170,slow=31						
NVAR	**Mina Array Bea**	**83.31**	**43**	P	P	10 58 20.3	+0.4
	0.4nm,0.6s,baz=228,slow=9.3,SNR=5.1						

*ISK **13** 10:50:10.9, 37°.00N×29°.16E, h5km, MD3.1*
*DDA **13** 10:50:12.4, 36°.97N×29°.21E, h5km±4km, Md3.1*
*CSEM **13** 10:50:12.6±0.1, 37°.03N×29°.12E, h5km, MD3.1, Error ellipse: s-maj=2.3km s-min=1.7km az=166.0*
*ISCJB **13** 10:50:12.5±0.5, 36°.98N±0°.03×29°.19E±0°.03, h2km±5km, Error ellipse: s-maj=5.1km s-min=3.6km az=42.6*
ISC 13 10:50:13.1±0.5,**36°.99N**±0°.03×**29°.19E**±0°.03, **h5**km±4km, **n52**, σ1s**04**/66, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**55**	*e*PG	**Pg**	**10 50 18.3**	**-0.6**
GLHS				*e*SG	**Sg**	**10 50 23.6**	**+0.8**
GLHS

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNT	**Bandirma**	**0.06**	**265**	PG	**Pg**	**11 02 26.0**	**+0.7**
EDC	**Edincik**	**0.11**	**262**	PG	**Pg**	**11 02 26.4**	**+0.5**
EDC	**Edincik**	**0.11**	**262**	*i* Pg	**Pg**	**11 02 26.4**	**+0.6**
KCT	**Karacabey**	**0.29**	**109**	PG	**Pg**	**11 02 28.7**	**-0.3**
KCT				*e*SG	**Sg**	**11 02 32.7**	**-0.2**
KCT	**Karacabey**	**0.29**	**109**	*i* Pg	**Pg**	**11 02 28.7**	**-0.3**
KCT				*e*Sg	**Sg**	**11 02 32.7**	**-0.2**
BALY	**Balya**	**0.69**	**205**	*i* P	**Pg**	**11 02 36.2**	**-0.3**
BALY				*i* S	**Sg**	**11 02 45.7**	**+0.2**
BALY	**Balya**	**0.69**	**205**	*i* P	**Pg**	**11 02 36.2**	**-0.3**
BALY				*i* S	**Sg**	**11 02 45.7**	**+0.2**
ARMT	**Armutlu**	**0.69**	**72**	*e*PG	**Pg**	**11 02 36.0**	**-0.5**
ARMT				*e*SG	**Sg**	**11 02 45.9**	**+0.4**
ARMT	**Armutlu**	**0.69**	**72**	*e*Pg	**Pg**	**11 02 36.0**	**-0.6**
ARMT				*e*Sg	**Sg**	**11 02 45.9**	**+0.4**
MFT	**Murefte**	**0.69**	**308**	*e*PG	**Pg**	**11 02 36.5**	**-0.2**
MFT	**Murefte**	**0.69**	**308**	*e*Pg	**Pg**	**11 02 36.5**	**-0.2**
SART	**Tekirdag**	**0.71**	**298**	*i* P	**Pg**	**11 02 36.9**	**-0.1**
SART				*i* S	**Sg**	**11 02 47.0**	**+0.9**
SART	**Tekirdag**	**0.71**	**298**	*i* P	**Pg**	**11 02 36.8**	**-0.1**
SART				*i* S	**Sg**	**11 02 47.0**	**+0.8**
RKY	**Sarkoy-Tekirda**	**0.71**	**298**	*e*PG	**Pg**	**11 02 36.8**	**-0.1**
RKY				*e*SG	**Sg**	**11 02 46.6**	**+0.4**
RKY	**Sarkoy-Tekirda**	**0.71**	**298**	*e*Pg	**Pg**	**11 02 36.8**	**-0.2**
RKY				*e*Sg	**Sg**	**11 02 46.6**	**+0.4**
BALB	**Balikesir**	**0.73**	**187**	*e*PG	**Pg**	**11 02 36.9**	**-0.4**
BALB	**Balikesir**	**0.73**	**187**	*e*Pg	**Pg**	**11 02 36.9**	**-0.4**
DURS	**Dursunbey**	**0.84**	**154**	*i* P	**Pg**	**11 02 39.3**	**-0.2**
DURS				*i* S	**Sg**	**11 02 51.2**	**+0.8**
DURS	**Dursunbey**	**0.84**	**154**	*i* P	**Pg**	**11 02 39.3**	**-0.2**
DURS				*i* S	**Sg**	**11 02 51.2**	**+0.8**
ELBA	**Catalca**	**0.85**	**22**	*i* P	**Pg**	**11 02 39.5**	**-0.1**
ELBA				*i* S	**Sg**	**11 02 51.8**	**+1.1**
ELBA	**Catalca**	**0.85**	**22**	*i* P	**Pg**	**11 02 39.5**	**-0.2**
ELBA				*i* S	**Sg**	**11 02 51.8**	**+1.1**
SLVT	**Silivri**	**0.88**	**10**	*e*PG	**Pg**	**11 02 39.6**	**-0.7**
SLVT	**Silivri**	**0.88**	**10**	*e*Pg	**Pg**	**11 02 39.6**	**-0.7**
GEMT	**Gemlik**	**0.91**	**85**	*e*PG	**Pg**	**11 02 40.3**	**-0.5**
GEMT				*e*SG	**Sg**	**11 02 53.4**	**+0.8**
GEMT	**Gemlik**	**0.91**	**85**	*e*Pg	**Pg**	**11 02 40.3**	**-0.5**
GEMT				*e*Sg	**Sg**	**11 02 53.4**	**+0.8**
LPK	**Lapseki**	**0.95**	**271**	*e*PG	**Pg**	**11 02 40.8**	**-0.7**
LPK				*e*SG	**Sg**	**11 02 54.6**	**+0.8**
LPK	**Lapseki**	**0.95**	**271**	*e*Pg	**Pg**	**11 02 40.8**	**-0.7**
LPK				*e*Sg	**Sg**	**11 02 54.7**	**+0.8**
CTKS	**Kestanelik-??a**	**0.95**	**24**	*e*PG	**Pg**	**11 02 40.9**	**-0.7**
CTKS	**Kestanelik-??a**	**0.95**	**24**	*e*Pg	**Pg**	**11 02 40.9**	**-0.8**
YLV	**Yalova**	**1.07**	**78**	*e*PG	**Pg**	**11 02 42.9**	**-0.8**
YLV	**Yalova**	**1.07**	**78**	*e*Pg	**Pg**	**11 02 42.9**	**-0.9**
ISK	**Istanbul-Kandi**	**1.07**	**48**	*e*PG	**Pg**	**11 02 42.6**	**-1.2**
ISK	**Istanbul-Kandi**	**1.07**	**48**	*e*Pg	**Pg**	**11 02 42.6**	**-1.2**
CTYL	**Yal??k??y-??at**	**1.13**	**11**	*e*PN	**Pn**	**11 02 44.3**	**-1.1**
CTYL	**Yal??k??y-??at**	**1.13**	**11**	*e*Pn	**Pn**	**11 02 44.3**	**-1.1**
KLYT	**Kilyos**	**1.19**	**41**	*e*PN	**Pn**	**11 02 45.4**	**-0.8**
KLYT	**Kilyos**	**1.19**	**41**	*e*Pn	**Pn**	**11 02 45.4**	**-0.7**
EZN	**Ezine**	**1.39**	**248**	*e*PN	**Pn**	**11 02 48.6**	**-0.3**
EZN	**Ezine**	**1.39**	**248**	*e*Pn	**Pn**	**11 02 48.6**	**-0.3**
DEMI	**Demirci**	**1.43**	**157**	*i* P	**Pn**	**11 02 49.3**	**-0.1**
DEMI				*i* S	**Sn**	**11 03 08.9**	**+0.7**
DEMI	**Demirci**	**1.43**	**157**	*i* P	**Pn**	**11 02 49.3**	**-0.1**
DEMI				*i* S	**Sn**	**11 03 08.9**	**+0.6**
AYVA	**Ayvalik**	**1.46**	**224**	*i* P	**Pn**	**11 02 49.8**	**0.0**
AYVA				*i* S	**Sn**	**11 03 09.4**	**+0.4**
AYVA	**Ayvalik**	**1.46**	**224**	*i* P	**Pn**	**11 02 49.8**	**0.0**
AYVA				*i* S	**Sn**	**11 03 09.4**	**+0.4**
ENEZ	**Enez**	**1.46**	**285**	*e*PN	**Pn**	**11 02 49.8**	**0.0**
ENEZ	**Enez**	**1.46**	**285**	*e*Pn	**Pn**	**11 02 49.8**	**0.0**
SILT	**Sile**	**1.48**	**57**	*e*PN	**Pn**	**11 02 50.1**	**+0.1**
SILT	**Sile**	**1.48**	**57**	*e*Pn	**Pn**	**11 02 50.1**	**0.0**
AKS	**Akhisar**	**1.49**	**186**	*e*PN	**Pn**	**11 02 50.4**	**+0.2**
AKS	**Akhisar**	**1.49**	**186**	*e*Pn	**Pn**	**11 02 50.4**	**+0.2**
AKHS	**Akhisar**	**1.49**	**186**	*i* P	**Pn**	**11 02 49.9**	**-0.3**
AKHS	**Akhisar**	**1.49**	**186**	*i* P	**Pn**	**11 02 49.9**	**-0.3**
ALN	**Alexandroupoli**	**1.58**	**290**	⇑*i*Pg	**Pn**	**11 02 50.9**	**-0.6**
ALN				*e*Sb	**Sn**	**11 03 10.1**	**-2.0**
ALN	**Alexandroupoli**	**1.58**	**290**	P	**Pn**	**11 02 51.0**	**-0.5**
ALN				S	**Sn**	**11 03 13.0**	**+0.9**
ALN	**Alexandroupoli**	**1.58**	**290**	⇑*i*PG	**Pn**	**11 02 50.9**	**-0.6**
ALN				*e*SB	**Sn**	**11 03 10.1**	**-2.0**
ALN	**Alexandroupoli**	**1.58**	**290**	P	**Pn**	**11 02 51.0**	**-0.5**
ALN				*e*Sb	**Sn**	**11 03 10.1**	**-2.0**
ALN				S	**Sn**	**11 03 13.0**	**+0.9**
GADA	**Gvkgeada**	**1.62**	**265**	*e*PN	**Pn**	**11 02 52.2**	**+0.2**
GADA	**Gvkgeada**	**1.62**	**265**	*e*Pn	**Pn**	**11 02 52.2**	**+0.2**
PRK	**Paraskevi**	**1.74**	**231**	⇑*i*Pn	**Pn**	**11 02 53.6**	**0.0**
PRK				*e*Sb	**Sb**	**11 03 17.1**	**-0.1**
PRK	**Paraskevi**	**1.74**	**231**	P	**Pn**	**11 02 53.5**	**-0.1**
PRK				S	**Sn**	**11 03 15.5**	**-0.4**
PRK	**Paraskevi**	**1.74**	**231**	⇑*i*PN	**Pn**	**11 02 53.6**	**0.0**
PRK				*e*SB	**Sb**	**11 03 17.1**	**-0.1**
PRK	**Paraskevi**	**1.74**	**231**	⇑*i*Pn	**Pn**	**11 02 53.6**	**0.0**
PRK				S	**Sn**	**11 03 15.5**	**-0.4**
PRK				*e*Sb	**Sb**	**11 03 17.1**	**-0.1**
EDRB	**Edirne**	**1.76**	**328**	*e*PN	**Pn**	**11 02 54.2**	**+0.2**
EDRB	**Edirne**	**1.76**	**328**	*e*Pn	**Pn**	**11 02 54.2**	**+0.2**
GPA	**Golpazari**	**1.77**	**92**	*e*PN	**Pn**	**11 02 54.4**	**+0.3**
GPA	**Golpazari**	**1.77**	**92**	*e*Pn	**Pn**	**11 02 54.4**	**+0.4**
KULA	**Kula-Manisa**	**1.91**	**164**	*e*PN	**Pn**	**11 02 55.7**	**-0.4**
KULA	**Kula-Manisa**	**1.91**	**164**	*e*Pn	**Pn**	**11 02 55.7**	**-0.4**
GULT	**Gulveren**	**1.92**	**87**	*e*PN	**Pn**	**11 02 56.5**	**+0.4**
GULT	**Gulveren**	**1.92**	**87**	*e*Pn	**Pn**	**11 02 56.5**	**+0.3**
SIGR	**SIGRI**	**2.01**	**236**	P	**Pn**	**11 02 56.9**	**-0.5**
SIGR				S	**Sn**	**11 03 22.0**	**-0.7**
SIGR	**SIGRI**	**2.01**	**236**	P	**Pn**	**11 02 56.9**	**-0.5**
SIGR				S	**Sn**	**11 03 22.0**	**-0.7**
IZM	**Izmir**	**2.04**	**197**	*e*PN	**Pn**	**11 02 58.4**	**+0.6**
BLCB	**Balcova**	**2.11**	**201**	*e*PN	**Pn**	**11 02 59.4**	**+0.7**
BLCB	**Balcova**	**2.11**	**201**	P	**Pn**	**11 02 58.6**	**-0.1**
BLCB	**Balcova**	**2.11**	**201**	P	**Pn**	**11 02 58.6**	**-0.1**
BLCB	**Balcova**	**2.11**	**201**	*e*Pn	**Pn**	**11 02 59.4**	**+0.7**
LIA	**Limnos Island**	**2.21**	**259**	*e*Pn	**Pn**	**11 03 02.8**	**+2.7**
LIA	**Limnos Island**	**2.21**	**259**	P	**Pn**	**11 03 00.1**	**0.0**
LIA				S	**Sn**	**11 03 27.1**	**-0.5**
LIA	**Limnos Island**	**2.21**	**259**	*e*PN	**Pn**	**11 03 02.8**	**+2.7**
LIA	**Limnos Island**	**2.21**	**259**	P	**Pn**	**11 03 00.1**	**0.0**
LIA	**Limnos Island**	**2.21**	**259**	*e*Pn	**Pn**	**11 03 02.8**	**+2.7**
LIA				S	**Sn**	**11 03 27.1**	**-0.5**
ESKT	**Eskisehir**	**2.34**	**110**	*e*PN	**Pn**	**11 03 02.5**	**+0.5**
ESKT	**Eskisehir**	**2.34**	**110**	*e*Pn	**Pn**	**11 03 02.5**	**+0.5**
KHL	**Karahalli**	**2.35**	**149**	*e*PN	**Pn**	**11 03 02.8**	**+0.7**
KHL	**Karahalli**	**2.35**	**149**	*e*Pn	**Pn**	**11 03 02.8**	**+0.7**
JMB	**Yambol**	**2.36**	**334**	P	**Pn**	**11 03 03.8**	**+1.6**
JMB	**Yambol**	**2.36**	**334**	P	**Pn**	**11 03 04.1**	**+1.9**
JMB	**Yambol**	**2.36**	**334**	P	**Pn**	**11 03 04.1**	**+1.9**
MDU	**Mudurnu**	**2.46**	**87**	*e*PN	**Pn**	**11 03 04.1**	**+0.6**
MDU	**Mudurnu**	**2.46**	**87**	*e*Pn	**Pn**	**11 03 04.1**	**+0.6**
CHOS	**Chios island**	**2.48**	**218**	P	**Pn**	**11 03 03.6**	**-0.3**
CHOS	**Chios island**	**2.48**	**218**	*e*PN	**Pg**	**11 03 08.6**	**-2.3**
CHOS	**Chios island**	**2.48**	**218**	P	**Pn**	**11 03 03.6**	**-0.3**
CHOS	**Chios island**	**2.48**	**218**	*e*Pn	**Pg**	**11 03 08.6**	**-2.3**
DIM	**Dimitrovgrad**	**2.51**	**313**	P	**Pn**	**11 03 04.7**	**+0.4**
DIM	**Dimitrovgrad**	**2.51**	**313**	P	**Pn**	**11 03 04.7**	**+0.4**
KAVA	**Kavala**	**2.73**	**285**	P	**Pn**	**11 03 07.0**	**-0.3**
KAVA	**Kavala**	**2.73**	**285**	P	**Pn**	**11 03 07.0**	**-0.3**
SMG	**Samos**	**2.80**	**199**	*e*Pn	**Pb**	**11 03 14.4**	**+0.9**
SMG	**Samos**	**2.80**	**199**	*e*PN	**Pb**	**11 03 14.4**	**+0.9**
RZN	**Rozhen**	**2.82**	**299**	P	**Pn**	**11 03 08.7**	**+0.2**
RZN	**Rozhen**	**2.82**	**299**	P	**Pn**	**11 03 08.7**	**+0.2**
PLD	**Plovdiv**	**3.04**	**306**	P	**Pn**	**11 03 11.9**	**+0.4**
AOS	**Alonnisos**	**3.39**	**251**	P	**Pn**	**11 03 15.8**	**-0.6**
AOS	**Alonnisos**	**3.39**	**251**	P	**Pn**	**11 03 15.8**	**-0.6**
MMB	**Musomiste**	**3.46**	**292**	P	**Pn**	**11 03 17.0**	**-0.3**
KKB	**Krupnik**	**4.01**	**294**	P	**Pn**	**11 03 25.3**	**+0.4**
KKB	**Krupnik**	**4.01**	**294**	P	**Pn**	**11 03 25.3**	**+0.4**
VTS	**Vitosha**	**4.24**	**303**	P	**Pn**	**11 03 28.8**	**+0.8**
VTS	**Vitosha**	**4.24**	**303**	P	**Pn**	**11 03 28.8**	**+0.8**
MPEP	**Malo Peshtene**	**4.37**	**315**	P	**Pn**	**11 03 29.5**	**-0.3**

NEIC ***13*** *11:09:59.3±1.4, 6°.30N×95°.44E, h206km±13km, mb4.1/2, Error ellipse: s-maj=20.1km s-min=9.2km az=65.0*
ISCJB ***13*** *11:09:59.2±0.5, 6°.26N±0°.07×95°.48E±0°.08, h220km±5km, mb3.6/16, Error ellipse: s-maj=15.9km s-min=7.8km az=143.7*
IDC ***13*** *11:10:01.1±0.9, 6°.43N×95°.55E, h220km±8km, mb3.5/14, mb1 3.6/15, mb1mx3.4/28, mbtmp3.5/15, Error ellipse: s-maj=20.6km s-min=11.4km az=62.0*
DJA ***13*** *11:10:12.5°.86N×96°.46E, h30km, MLv4.6/6*

ISC 13 11:10:00.2±0.5, **6°.28N**±0°.07×**95°.49E**±0°.08, **h212**km±5km, **n35**, σ0§**90**/**37**, **mb3.6**/16, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**0.80**	**194**	P	**Pn**	**11 10 31.1**	**+1.0**
BSI				S	**S**	**11 10 53.3**	**-0.1**
PSI	**Prapat**	**4.87**	**135**	P	**Pn**	**11 11 12.6**	**-0.7**
PSI	0.5nm,0.3s,baz=318,slow=13,SNR=6.5			S	**S**	**11 12 11.6**	**+0.6**
PSI	**Prapat**	**4.87**	**135**	P	**Pn**	**11 11 12.6**	**-0.7**
PSI	9.3nm,0.3s,baz=235,slow=23,SNR=15			S	**S**	**11 12 11.6**	**+0.6**
KULM	**Kulim**	**5.23**	**101**	*e*Pn	**Pn**	**11 11 17.6**	**-0.2**
KULM	30nm,0.6s **Kulim**	**5.23**	**101**	P	**Pn**	**11 11 17.7**	**-0.1**
IPM	**Ipoh**	**5.80**	**108**	P	**Pn**	**11 11 24.3**	**-0.8**
MNSI	**Mandailing Nat**	**6.81**	**143**	P	**Pn**	**11 11 37.6**	**-0.5**
MNSI	1.0nm5μm89nm,0.6s			S	**S**	**11 12 48.3**	**-7.7**
SISI	1.0nm5μm89nm,0.6s **Saibi**	**8.37**	**154**	P	**Pn**	**11 11 57.7**	**-0.6**
PDSI	0.3nm38nm,0.8s **Padang**	**8.70**	**145**	P	**Pn**	**11 12 02.2**	**-0.4**
PDSI	1.3nm212nm,0.4s			S	**S**	**11 13 36.0**	**-4.7**
CMAR	1.3nm212nm,0.4s **Chiang Mai Arr**	**12.56**	**15**	P	**Pn**	**11 12 52.6**	**+0.7**
MNAI	2.7nm,0.3s,baz=201,slow=12,SNR=31 **Manna**	**12.94**	**145**	P	**Pn**	**11 13 00.7**	**+4.1**
LSA	**Lhasa**	**23.65**	**351**	P	**P**	**11 14 54.6**	**+2.2**
GTA	**Gaotai**	**33.21**	**6**	*e*P	**P**	**11 16 18.1**	**+1.0**
GTA	comp=Z,4.0nm,1.0s,mb3.9			pmax	pmax		
FITZ	**Fitzroy Crossi**	**38.37**	**130**	P	**P**	**11 17 02.5**	**+1.3**
	comp=Z,3.1nm,0.9s,mb3.8,baz=325,slow=12,SNR=2.9						
MK31	**Makanchi Array**	**41.93**	**346**	*e*P	**P**	**11 17 30.1**	**+0.1**
MKAR	**Makanchi Array**	**41.93**	**346**	P	**P**	**11 17 29.2**	**-0.8**
	comp=Z,1.5nm,0.7s,mb3.6,baz=138,slow=7.5,SNR=16						
SONM	**Songino Array**	**42.44**	**11**	P	**P**	**11 17 34.3**	**+0.2**
	comp=Z,1.1nm,0.6s,mb3.5,baz=200,slow=7.6,SNR=6.0						
WRA	**Warramunga Arr**	**46.25**	**125**	P	**P**	**11 18 04.3**	**-0.4**
	comp=Z,0.3nm,0.3s,mb3.1,baz=305,slow=9.0,SNR=5.1						
WRA				pP	pP	11 18 52.6	+2.0
	comp=Z,1.2nm,0.7s,baz=302,slow=9.1,SNR=3.9						
WRA	**Warramunga Arr**	**46.25**	**125**	P	**P**	**11 18 04.3**	**-0.4**
WRA				pP	pP	11 18 52.6	+2.0
WRAB	**Tennant Creek**	**46.26**	**125**	P	**P**	**11 18 05.6**	**+0.9**
	comp=Z,2.0nm,0.8s,mb3.5						
KURK	**Kurchatov**	**46.48**	**345**	P	**P**	**11 18 05.1**	**-0.8**
	comp=Z,0.7nm,0.6s,mb3.2,baz=161,slow=7.1,SNR=1.8						
ASAR	**Alice Springs**	**47.87**	**130**	P	**P**	**11 18 17.1**	**0.0**
	comp=Z,0.5nm,0.6s,mb3.0,baz=303,slow=7.7,SNR=14						
ASAR				sP	sP	11 19 30.0	+3.0
	comp=Z,0.6nm,0.6s,baz=298,slow=7.9,SNR=2.5						
ZALV	**Zalesovo Beam**	**48.31**	**352**	P	**P**	**11 18 18.6**	**-1.3**
	comp=Z,1.0nm,0.5s,mb3.4,baz=176,slow=5.3,SNR=5.3						
ZALV				pP	pP	11 19 06.2	0.0
	comp=Z,0.6nm,0.5s,baz=141,slow=5.5,SNR=1.4						
ZALV	**Zalesovo Beam**	**48.31**	**352**	P	**P**	**11 18 18.6**	**-1.3**
ZALV				pP	pP	11 19 06.2	0.0
BRTR	**Keskin Array B**	**64.48**	**311**	P	**P**	**11 20 13.2**	**-1.1**
	comp=Z,1.2nm,0.6s,mb3.7						
BRTR	**Keskin Array B**	**64.48**	**311**	P	**P**	**11 20 13.2**	**-1.1**
IDI	**Anoyia**	**70.57**	**305**	P	**P**	**11 20 51.6**	**-0.9**
	comp=Z,2.8nm,0.5s,mb4.2,baz=27,slow=11,SNR=4.0						
FINES	**FINESS Array B**	**74.73**	**332**	P	**P**	**11 21 15.4**	**-1.1**
	comp=Z,0.6nm,0.4s,mb3.6,baz=108,slow=6.6,SNR=6.3						
BOSA	**Boshof**	**75.89**	**239**	P	**P**	**11 21 25.7**	**+2.0**
	comp=Z,4.5nm,0.6s,mb4.3,baz=134,slow=2.5,SNR=13						
ARCES	**ARCESS Array B**	**77.21**	**340**	P	**P**	**11 21 29.7**	**-0.6**
	comp=Z,1.4nm,0.8s,mb3.6,baz=81,slow=6.5,SNR=6.3						
GERES	**GERESS Array B**	**79.90**	**318**	P	**P**	**11 21 46.1**	**+0.7**
	comp=Z,0.3nm,0.5s,mb3.2,baz=192,slow=1.2,SNR=3.7						
TORD	**Torodi Ar. Bea**	**92.27**	**283**	P	**P**	**11 22 46.9**	**0.0**
	comp=Z,0.9nm,0.8s,mb3.8,baz=89,slow=4.6,SNR=6.0						
TXAR	**Lajitas Array**	**140.08**	**27**	PKP	PKPdf	11 29 02.7	-1.4
	comp=Z,0.2nm,0.8s,baz=73,slow=3.0,SNR=2.9						
PLCA	**Paso Flores**	**143.49**	**198**	PKP	PKPdf	11 29 08.9	-0.9
	comp=Z,2.2nm,0.7s,baz=164,slow=5.5,SNR=5.2						
CPUP	**Villa Florida**	**147.30**	**229**	PKPbc	PKPbc	11 29 19.9	+0.5
	comp=Z,2.4nm,0.5s,baz=39,slow=1.8,SNR=9.0						

IDC ***13*** *11:13:06.9±0.7, 25°.53N×141°.36E, h0km, mb3.9/11, mb1 4.1/11, mb1mx3.9/24, mbtmp3.9/11, MS3.1/2, Ms1 3.1/2, ms1mx2.5/31, Error ellipse: s-maj=23.8km s-min=15.1km az=94.0*
NEIC ***13*** *11:13:08.9±0.4, 25°.52N×141°.28E, h10km, mb4.5/3, Error ellipse: s-maj=17.6km s-min=11.6km az=81.0*
ISCJB ***13*** *11:13:10.6±0.5, 25°.46N±0°.06×141°.3E±0°.1, h33km, mb4.1/16, Error ellipse: s-maj=14.2km s-min=8.4km az=19.4*

ISC 13 11:13:11.5±4.9, **25°.49N**±0°.07×**141°.4E**±0°.1, **h26**km±35km, **n21**, σ0§**97**/**21**, **mb4.1**/16, **Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.76**	**24**	Pn	**Pn**	**11 13 39.1**	**-1.2**
CBIJ	78nm,0.3s,baz=211,slow=12,SNR=27			Sn	**Sn**	**11 14 02.1**	**+0.3**
KSRS	**Korea Array**	**16.52**	**319**	Pn	**Pn**	**11 17 03.4**	**+2.0**
KSRS	0.2nm,0.3s,baz=131,slow=12,SNR=21			LR	LR	11 22 45.6	
SONM	**Songino Array**	**35.39**	**318**	P	**P**	**11 20 04.5**	**-0.5**
SONM	0.6nm,0.5s,mb3.8,baz=123,slow=7.1,SNR=4.0			LR	LR	11 34 26.8	
GTA	**Gaotai**	**37.38**	**302**	*e*P	**P**	**11 20 22.4**	**+0.3**
GTA				pP	pP	11 20 29.8	-0.2
GTA				sP	sP	11 20 33.1	-0.1
GTA	comp=Z,4.0nm,1.7s,mb4.0			pmax	pmax		
WRAB	**Tennant Creek**	**45.66**	**189**	*e*P	**P**	**11 21 30.6**	**+0.6**
	comp=Z,3nm,0.7s,mb5.0						
WRA	**Warramunga Arr**	**45.67**	**189**	P	**P**	**11 21 29.8**	**-0.3**
	comp=Z,12nm,0.7s,mb5.0,baz=9.2,slow=8.6,SNR=61						
ASAR	**Alice Springs**	**49.40**	**189**	P	**P**	**11 21 58.9**	**-0.1**
	comp=Z,1.1nm,0.7s,mb4.0,baz=16,slow=13,SNR=17						
MKAR	**Makanchi Array**	**50.95**	**311**	P	**P**	**11 22 10.1**	**-0.5**
	comp=Z,0.9nm,0.6s,mb3.9,baz=109,slow=9.5,SNR=3.6						
KURK	**Kurchatov**	**53.60**	**315**	P	**P**	**11 22 30.1**	**-0.1**
	comp=Z,1.4nm,0.8s,mb3.9,baz=93,slow=8.0,SNR=5.6						
STKA	**Stephens Creek**	**57.04**	**180**	P	**P**	**11 22 54.9**	**-0.3**
	comp=Z,1.9nm,0.7s,mb4.3,baz=70,slow=16,SNR=5.2						
BVAR	**Borovoye Array**	**58.73**	**318**	P	**P**	**11 23 06.1**	**-0.8**
	comp=Z,0.8nm,0.5s,mb4.0,baz=90,slow=7.2,SNR=3.1						
AKTK	**Aktyubinsk**	**66.67**	**316**	P	**P**	**11 24 00.1**	**+0.2**
AKTO	**Aktyubinsk**	**66.67**	**316**	P	**P**	**11 24 00.1**	**+0.2**
	comp=Z,0.7nm,0.4s,mb4.0,baz=91,slow=10,SNR=2.9						
YKA	**Yellowknife Ar**	**73.90**	**28**	P	**P**	**11 24 43.3**	**-0.5**
	comp=Z,1.3nm,0.9s,mb3.9,baz=293,slow=5.5,SNR=6.7						
FINES	**FINESS Array B**	**79.06**	**334**	P	**P**	**11 25 10.9**	**-2.2**
	comp=Z,1.2nm,0.5s,mb4.1,baz=76,slow=5.5,SNR=10						
NVAR	**Mina Array Bea**	**82.09**	**51**	P	**P**	**11 25 29.5**	**-0.3**
	comp=Z,0.5nm,0.7s,mb3.5,baz=272,slow=6.4,SNR=6.1						
NVAR	**Mina Array Bea**	**82.09**	**51**	P	**P**	**11 25 29.5**	**-0.3**
IMW	**Indian Meadow**	**84.43**	**44**	*e*P	**P**	**11 25 43.9**	**+2.2**
	comp=Z,2.8nm,0.9s,mb4.4						
LOHW	**Long Hollow**	**84.78**	**44**	*e*P	**P**	**11 25 45.6**	**+2.0**
	comp=Z,0.7nm,0.5s,mb4.0						
PDAR	**Pinedale Array**	**85.87**	**44**	P	**P**	**11 25 48.5**	**-0.6**
	comp=Z,0.9nm,0.9s,mb4.0,baz=282,slow=13,SNR=3.8						
LPAZ	**La Paz**	**151.01**	**77**	PKPbc	PKPbc	11 33 04.0	+1.3
	comp=Z,0.8nm,0.5s,baz=186,slow=2.4,SNR=4.6						

IDC ***13*** *11:16:02.9±0.7, 28°.38N×95°.12E, h0km, mb3.8/15, mb1 4.0/16, mb1mx3.9/29, mbtmp3.9/16, ML4.5/1, Error ellipse: s-maj=38.0km s-min=15.1km az=54.0*
ISCJB ***13*** *11:16:02.7±0.5, 28°.29N±0°.07×94°.89E±0°.04, h10km, mb3.9/16, Error ellipse: s-maj=9.8km s-min=4.5km az=171.1*
NEIC ***13*** *11:16:04.1±0.5, 28°.38N×95°.25E, h10km, mb4.1/1, ML4.6(DMN), Error ellipse: s-maj=8.7km s-min=7.2km az=165.0*
BJI ***13*** *11:16:06.9, 28°.52N×94°.80E, h21km, mB4.3/1, mb3.7/2, ML4.1/4, Ms3.5/1, Ms7 3.4/1*

ISC 13 11:16:05.0±0.5, **28°.35N**±0°.06×**94°.97E**±0°.04, **h10**km, **n33**, σ1§**47**/**45**, **mb3.9**/16, **Eastern Xizang-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.61**	**293**	Pg	**Pb**	**11 17 05.9**	**-3.0**
LSA				Sg	**Sg**	**11 18 00.3**	**-0.6**
LSA	comp=E,60nm,0.7s			smax			
LSA	**Lhasa**	**3.61**	**293**	*e*Pn	**Pb**	**11 17 06.7**	**-2.2**
LSA				*e*Sg	**Sg**	**11 18 02.1**	**+1.2**
TAPN	**Taplejung**	**6.51**	**263**	*e*Pn	**Pn**	**11 17 43.5**	**+2.7**
TAPN	comp=E,44nm,0.3s			*e*Sn	**Sn**	**11 18 54.3**	**-0.8**
ODAN	**Odare**	**6.89**	**259**	*e*Pn	**Pn**	**11 17 48.7**	**+2.7**
ODAN	comp=E,116nm,0.4s			*e*Sn	**Sn**	**11 19 03.3**	**-1.2**
RAMN	**Ramite**	**7.56**	**261**	*e*Pn	**Pn**	**11 17 57.3**	**+2.1**
RAMN				*e*Sn	**Sn**	**11 19 20.2**	**-0.7**
JIRN	**Jiri**	**7.79**	**267**	*e*Pn	**Pn**	**11 18 01.2**	**+2.7**
JIRN	comp=E,72nm,0.3s			*e*Sn	**Sn**	**11 19 26.1**	**-0.7**
GUN	**Gumba**	**8.04**	**269**	*e*Pn	**Pn**	**11 18 04.3**	**+2.4**
GUN	comp=E,59nm,0.4s			*e*Sn	**Sn**	**11 19 30.5**	**-2.4**
PKI	**Pulchoki**	**8.49**	**267**	*e*Pn	**Pn**	**11 18 10.0**	**+1.9**
PKI	comp=E,22nm,0.3s			*e*Sn	**Sn**	**11 19 41.5**	**-2.5**
PKI	**Pulchoki**	**8.49**	**267**	*e*Pn	**Pn**	**11 18 10.7**	**+2.6**
PKI				*e*Sn	**Sn**	**11 19 42.7**	**-1.3**
PKIN	**Phulchoki**	**8.50**	**267**	*e*Pn	**Pn**	**11 18 10.7**	**+2.5**
PKIN	comp=E,49nm,0.5s			*e*Sn	**Sn**	**11 19 42.7**	**-1.6**
KKN	**Kakani**	**8.58**	**269**	*e*Pn	**Pn**	**11 18 12.1**	**+2.8**
KKN	comp=E,31nm,0.2s			*e*Sn	**Sn**	**11 19 44.4**	**-1.8**
DMN	**Daman**	**8.76**	**268**	*e*Pn	**Pn**	**11 18 14.0**	**+2.3**
DMN	comp=E,21nm,0.3s			*e*Sn	**Sn**	**11 19 47.9**	**-2.5**
CMAR	**Chiang Mai Arr**	**10.49**	**159**	Pn	**Pn**	**11 18 33.0**	**-2.6**
	comp=E,1.0nm,0.3s,baz=206,slow=29,SNR=6.1						
MK31	**Makanchi Array**	**20.93**	**335**	*e*P	**P**	**11 20 48.0**	**+0.3**
MKAR	**Makanchi Array**	**20.93**	**335**	P	**P**	**11

*MDD **13** 11:27:42.7±0.3,34.°84N×4.°60W,h47km±15km,mb4.8/30, Error ellipse: s-maj=3.8km s-min=3.0km az=118.0,PRIMO*
*LDG **13** 11:27:42.0±0.3,34.°94N×4.°81W,h90km,Ml3.9/4,Error ellipse: s-maj=7.1km s-min=3.0km az=176.0*
*CNRM **13** 11:27:42.3,34.°78N×4.°63W,h17km,MD4.3*
*INMG **13** 11:27:43.5±1.3,35.°08N×4.°82W,h10km,MD3.6,ML3.6, Error ellipse: s-maj=5.1km s-min=3.3km az=179.0*
ISC 13 11:27:39.3±0.2,34.°90N±0.°02×4.73W±0.°02,h10km,n371, σ1§48/601**,mb3.9**/17**,8C-40D,Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPAL	**Palemas**	**0.72**	**63**	*i* P	**Pg**	**11 27 56.5**	**+3.2**
DKH	**Dar Kharkhour**	**0.78**	**319**	P	**Pg**	**11 28 00.0**	**+5.6**
DKH				S	**Sg**	**11 28 11.0**	**+6.5**
DKH	**Dar Kharkhour**	**0.78**	**319**	P	**Pg**	**11 28 00.0**	**+5.6**
DKH				S	**Sg**	**11 28 11.0**	**+6.5**
DKH	**Dar Kharkhour**	**0.78**	**319**	*i* P	**Pg**	**11 28 00.0**	**+5.6**
DKH				*i* S	**Sg**	**11 28 11.0**	**+6.5**
TOU	**Touzarine**	**0.80**	**86**	P	**Pg**	**11 27 56.0**	**+1.2**
TOU				S	**Sg**	**11 28 05.0**	**-0.3**
TOU	**Touzarine**	**0.80**	**86**	P	**Pg**	**11 27 56.0**	**+1.2**
TOU				S	**Sg**	**11 28 05.0**	**-0.3**
TOU	**Touzarine**	**0.80**	**86**	*i* P	**Pg**	**11 27 56.0**	**+1.2**
RSA	**Sarsar**	**0.90**	**269**	P	**Pg**	**11 28 01.0**	**+4.3**
RSA				S	**Sg**	**11 28 14.0**	**+5.5**
RSA	**Sarsar**	**0.90**	**269**	P	**Pg**	**11 28 01.0**	**+4.3**
RSA				S	**Sg**	**11 28 14.0**	**+5.5**
RSA	**Sarsar**	**0.90**	**269**	*i* P	**Pg**	**11 28 01.0**	**+4.3**
RSA				*i* S	**Sg**	**11 28 14.0**	**+5.5**
TZK	**Tazeka**	**0.93**	**151**	P	**Pg**	**11 27 58.0**	**+0.8**
TZK				S	**Sg**	**11 28 07.0**	**-2.3**
TZK	**Tazeka**	**0.93**	**151**	P	**Pg**	**11 27 58.0**	**+0.8**
TZK				S	**Sg**	**11 28 07.0**	**-2.3**
TZK	**Tazeka**	**0.93**	**151**	*i* P	**Pg**	**11 27 58.0**	**+0.8**
MELI	**Melilla**	**1.52**	**75**	P	**Pn**	**11 28 05.4**	**-1.2**
MELI				S	**Sn**	**11 28 22.1**	**-4.3**
MELI	**Melilla**	**1.52**	**75**	P	**Pn**	**11 28 05.4**	**-1.2**
MELI				S	**Sn**	**11 28 22.1**	**-4.3**
MELI	**Melilla**	**1.52**	**75**	*e*P	**Pn**	**11 28 05.4**	**-1.2**
MELI				*e*S	**Sn**	**11 28 22.1**	**-4.4**
MIF	**Mishlifen**	**1.55**	**196**	P	**Pn**	**11 28 07.0**	**+0.1**
MIF				S	**Sn**	**11 28 24.0**	**-3.1**
MIF	**Mishlifen**	**1.55**	**196**	P	**Pn**	**11 28 07.0**	**+0.1**
MIF				S	**Sn**	**11 28 24.0**	**-3.1**
MIF	**Mishlifen**	**1.55**	**196**	*i* P	**Pn**	**11 28 07.0**	**+0.1**
MIF				*i* S	**Sn**	**11 28 24.0**	**-3.1**
ZAI	**Zaio**	**1.63**	**87**	P	**Pn**	**11 28 07.0**	**-1.1**
ZAI				S	**Sn**	**11 28 25.0**	**-4.1**
ZAI	**Zaio**	**1.63**	**87**	P	**Pn**	**11 28 07.0**	**-1.1**
ZAI				S	**Sn**	**11 28 25.0**	**-4.1**
ZAI	**Zaio**	**1.63**	**87**	*i* P	**Pn**	**11 28 07.0**	**-1.1**
EJIF	**Jimena Fronter**	**1.66**	**339**	P	**Pn**	**11 28 11.3**	**+2.8**
EJIF				S	**Sn**	**11 28 32.5**	**+2.8**
EJIF	**Jimena Fronter**	**1.66**	**339**	P	**Pn**	**11 28 11.3**	**+2.8**
178nm,0.7s,SNR=7.9							
EJIF				S	**Sn**	**11 28 32.5**	**+2.8**
121nm,0.5s,SNR=4.0							
EJIF	**Jimena Fronter**	**1.66**	**339**	P	**Pn**	**11 28 11.3**	**+2.8**
178nm,0.7s,SNR=7.9							
EJIF				S	**Sn**	**11 28 32.5**	**+2.8**
121nm,0.5s,SNR=4.0							
EJIF	**Jimena Fronter**	**1.66**	**339**	P	**Pn**	**11 28 11.3**	**+2.9**
178nm,0.7s,SNR=7.9							
EJIF				S	**Sn**	**11 28 32.5**	**+2.7**
121nm,0.5s,SNR=4.0							
EMIJ	**Mijas**	**1.66**	**359**	⇓P	**Pn**	**11 28 07.4**	**-1.1**
EMIJ				S	**Sn**	**11 28 26.3**	**-3.5**
EMIJ	**Mijas**	**1.66**	**359**	⇓P	**Pn**	**11 28 07.4**	**-1.1**
86nm,0.1s,SNR=18							
EMIJ				S	**Sn**	**11 28 26.3**	**-3.5**
335nm,0.2s,SNR=7.9							
EMIJ	**Mijas**	**1.66**	**359**	⇓P	**Pn**	**11 28 07.4**	**-1.1**
86nm,0.1s,SNR=18							
EMIJ				S	**Sn**	**11 28 26.3**	**-3.5**
335nm,0.2s,SNR=7.9							
EMIJ	**Mijas**	**1.66**	**359**	P	**Pn**	**11 28 07.4**	**-1.1**
86nm,0.1s,SNR=18							
EMIJ				S	**Sn**	**11 28 26.3**	**-3.5**
335nm,0.2s,SNR=7.9							
EALB	**Alboran**	**1.73**	**53**	P	**Pn**	**11 28 08.5**	**-0.9**
EALB				S	**Sn**	**11 28 27.6**	**-3.9**
EALB	**Alboran**	**1.73**	**53**	P	**Pn**	**11 28 08.5**	**-1.0**
35nm,0.3s,SNR=34							
EALB				S	**Sn**	**11 28 27.7**	**-3.9**
467nm,0.2s,SNR=5.3							
EALB	**Alboran**	**1.73**	**53**	P	**Pn**	**11 28 08.5**	**-1.0**
35nm,0.3s,SNR=34							
EALB				S	**Sn**	**11 28 27.7**	**-3.9**
467nm,0.2s,SNR=5.3							
EALB	**Alboran**	**1.73**	**53**	P	**Pn**	**11 28 08.5**	**-0.9**
35nm,0.3s,SNR=34							
EALB				S	**Sn**	**11 28 27.6**	**-3.9**
CNIL	**Conil**	**1.82**	**324**	P	**Pn**	**11 28 13.7**	**+3.0**
CNIL	**Conil**	**1.82**	**324**	P	**Pn**	**11 28 13.7**	**+3.0**
CNIL	**Conil**	**1.82**	**324**	*i* P	**Pn**	**11 28 13.7**	**+3.0**
EMAL	**Malaga-Limoner**	**1.87**	**7**	⇓P	**Pn**	**11 28 10.9**	**-0.4**
EMAL				S	**Sn**	**11 28 32.1**	**-3.0**
EMAL	**Malaga-Limoner**	**1.87**	**7**	⇓P	**Pn**	**11 28 10.9**	**-0.4**
EMAL				S	**Sn**	**11 28 32.1**	**-3.0**
EMAL	**Malaga-Limoner**	**1.87**	**7**	*i* P	**Pn**	**11 28 10.9**	**-0.5**
EMAL				*e*S	**Sn**	**11 28 32.1**	**-2.9**
CZD	**Col de Zad**	**1.88**	**188**	P	**Pn**	**11 28 11.5**	**-0.1**
CZD				S	**Sn**	**11 28 31.0**	**-4.4**
CZD	**Col de Zad**	**1.88**	**188**	P	**Pn**	**11 28 11.5**	**-0.1**
CZD				S	**Sn**	**11 28 31.0**	**-4.4**
CZD	**Col de Zad**	**1.88**	**188**	*i* P	**Pn**	**11 28 11.5**	**-0.1**
SFS	**San Fernando**	**1.97**	**323**	*e*P	**Pn**	**11 28 15.9**	**+3.2**
RTC	**Rabat Centre**	**1.98**	**243**	P	**Pn**	**11 28 14.0**	**+1.1**
RTC				S	**Sn**	**11 28 37.0**	**-0.8**
RTC	**Rabat Centre**	**1.98**	**243**	P	**Pn**	**11 28 14.0**	**+1.1**
RTC				S	**Sn**	**11 28 37.0**	**-0.8**
RTC	**Rabat Centre**	**1.98**	**243**	*i* P	**Pn**	**11 28 14.0**	**+1.1**
RTC				*i* S	**Sn**	**11 28 37.0**	**-0.8**
LIJA	**Lijar**	**2.07**	**345**	*i* P	**Pn**	**11 28 16.8**	**+2.7**
MDT	**Midelt**	**2.08**	**177**	Pn	**Pn**	**11 28 14.4**	**+0.1**
40nm,0.3s,baz=17,slow=11,SNR=2667							
MDT				Sn	**Sn**	**11 28 37.8**	**-2.5**
522nm,0.3s,baz=175,slow=17,SNR=83							
MDT	**Midelt**	**2.08**	**177**	Pn	**Pn**	**11 28 14.4**	**+0.1**
MDT				Sn	**Sn**	**11 28 37.8**	**-2.5**
EGUA	**Guajares**	**2.15**	**26**	⇓P	**Pn**	**11 28 14.4**	**-0.7**
EGUA				S	**Sn**	**11 28 38.0**	**-3.9**
EGUA	**Guajares**	**2.15**	**26**	⇓P	**Pn**	**11 28 14.4**	**-0.7**
116nm,0.2s,SNR=18							
EGUA				S	**Sn**	**11 28 38.0**	**-3.9**
SNR=7.9							
EGUA	**Guajares**	**2.15**	**26**	⇓P	**Pn**	**11 28 14.4**	**-0.7**
116nm,0.2s,SNR=18							
EGUA				S	**Sn**	**11 28 38.0**	**-3.9**
SNR=7.9							
EGUA	**Guajares**	**2.15**	**26**	P	**Pn**	**11 28 14.4**	**-0.8**
116nm,0.2s,SNR=18							
EGUA				S	**Sn**	**11 28 38.0**	**-3.8**
SNR=7.9							
ESPR	**Espera**	**2.16**	**335**	⇓P	**Pn**	**11 28 17.2**	**+1.8**
ESPR				S	**Sn**	**11 28 43.4**	**+1.1**
ESPR	**Espera**	**2.16**	**335**	⇓P	**Pn**	**11 28 17.2**	**+1.8**
27nm,0.3s,SNR=18							
ESPR				S	**Sn**	**11 28 43.4**	**+1.1**
164nm,0.3s,SNR=4.7							
ESPR	**Espera**	**2.16**	**335**	⇓P	**Pn**	**11 28 17.2**	**+1.8**
27nm,0.3s,SNR=18							
ESPR				S	**Sn**	**11 28 43.4**	**+1.1**
164nm,0.3s,SNR=4.7							
ESPR	**Espera**	**2.16**	**335**	P	**Pn**	**11 28 17.2**	**+1.8**
27nm,0.3s,SNR=18							
ESPR				S	**Sn**	**11 28 43.4**	**+1.1**
164nm,0.3s,SNR=4.7							
GIBL	**Gibalbin**	**2.17**	**333**	P	**Pn**	**11 28 17.1**	**+1.6**
GIBL				S	**Sn**	**11 28 35.5**	**-6.9**
GIBL	**Gibalbin**	**2.17**	**333**	P	**Pn**	**11 28 17.1**	**+1.6**
GIBL				S	**Sn**	**11 28 35.5**	**-6.9**
GIBL	**Gibalbin**	**2.17**	**333**	*i* P	**Pn**	**11 28 17.1**	**+1.6**
ERON	**Agron**	**2.24**	**19**	P	**Pn**	**11 28 15.9**	**-0.6**
ERON				S	**Sn**	**11 28 38.2**	**-5.9**
ERON	**Agron**	**2.24**	**19**	P	**Pn**	**11 28 15.9**	**-0.6**
SNR=7.9							
ERON				S	**Sn**	**11 28 42.4**	**-1.7**
SNR=7.9							
ERON	**Agron**	**2.24**	**19**	P	**Pn**	**11 28 15.9**	**-0.6**
SNR=7.9							
ERON				S	**Sn**	**11 28 42.4**	**-1.7**
SNR=7.9							
ERON	**Agron**	**2.24**	**19**	P	**Pn**	**11 28 15.9**	**-0.6**
SNR=7.9							
ELOJ	**Sierra Loja**	**2.29**	**12**	P	**Pn**	**11 28 17.8**	**+0.7**
ELOJ				S	**Sn**	**11 28 40.8**	**-4.5**
ELOJ	**Sierra Loja**	**2.29**	**12**	P	**Pn**	**11 28 17.8**	**+0.7**
7.1nm,0.1s,SNR=11							
ELOJ				S	**Sn**	**11 28 44.5**	**-0.9**
126nm,0.4s,SNR=7.8							
ELOJ	**Sierra Loja**	**2.29**	**12**	P	**Pn**	**11 28 17.8**	**+0.7**
7.1nm,0.1s,SNR=11							
ELOJ				S	**Sn**	**11 28 44.5**	**-0.9**
126nm,0.4s,SNR=7.8							
ELOJ	**Sierra Loja**	**2.29**	**12**	P	**Pn**	**11 28 17.8**	**+0.7**
7.1nm,0.1s,SNR=11							
ELOJ				S	**Sn**	**11 28 40.8**	**-4.5**
126nm,0.4s,SNR=7.8							
EBER	**Berja**	**2.49**	**36**	P	**Pn**	**11 28 19.6**	**-0.3**
EBER				S	**Sn**	**11 28 44.1**	**-6.2**
EBER	**Berja**	**2.49**	**36**	P	**Pn**	**11 28 19.6**	**-0.3**
16nm,0.3s,SNR=42							
EBER				S	**Sn**	**11 28 47.8**	**-2.5**
422nm,0.3s,SNR=4.9							
EBER	**Berja**	**2.49**	**36**	P	**Pn**	**11 28 19.6**	**-0.3**
16nm,0.3s,SNR=42							
EBER				S	**Sn**	**11 28 47.8**	**-2.5**
422nm,0.3s,SNR=4.9							
EBER	**Berja**	**2.49**	**36**	P	**Pn**	**11 28 19.6**	**-0.3**
16nm,0.3s,SNR=42							
EQUE	**Quentar**	**2.52**	**24**	P	**Pn**	**11 28 21.3**	**+1.0**
12nm,0.2s,SNR=48							
EQUE				S	**Sn**	**11 28 49.7**	**-1.5**
110nm,0.3s,SNR=5.9							
EQUE	**Quentar**	**2.52**	**24**	P	**Pn**	**11 28 21.3**	**+1.0**
12nm,0.2s,SNR=48							
EQUE				S	**Sn**	**11 28 49.7**	**-1.5**
110nm,0.3s,SNR=5.9							
EQUE	**Quentar**	**2.52**	**24**	P	**Pn**	**11 28 21.3**	**+0.9**
12nm,0.2s,SNR=48							
ECOG	**Cogollos-Vega**	**2.55**	**21**	P	**Pn**	**11 28 22.5**	**+1.8**
ECOG				S	**Sn**	**11 28 52.3**	**+0.5**
ECOG	**Cogollos-Vega**	**2.55**	**21**	P	**Pn**	**11 28 22.5**	**+1.8**
81nm,0.5s,SNR=37							
ECOG				S	**Sn**	**11 28 52.3**	**+0.5**
180nm,0.4s						

PESTR *e*Sn **Sn** **11 29 38.1 -3.6**
PESTR A 11 29 42.9
70nm,0.5s
PESTR Estremoz 4.57 331 *e*Pn **Pn** **11 28 49.4 +0.9**
PESTR *e*Sn **Sn** **11 29 38.1 -3.6**
70nm,0.5s
MOE Montemor 4.64 322 *e*Pn **Pn** **11 28 50.6 +1.2**
MOE *e*Sn **Sn** **11 29 40.0 -3.3**
MOE Montemor 4.64 322 *e*Pn **Pn** **11 28 50.6 +1.2**
MOE *e*Sn **Sn** **11 29 40.0 -3.3**
PAB San Pablo 4.64 4 *e*Pn **Pn** **11 28 50.0 +0.5**
PAB *e*Sn **Sn** **11 29 40.1 -3.4**
PAB San Pablo 4.64 4 *e*Pn **Pn** **11 28 50.0 +0.5**
PAB *e*Sn **Sn** **11 29 40.1 -3.3**
CIA Chichaoua 4.74 227 P **Pn** **11 28 51.0 +0.1**
CIA S **Sn** **11 29 42.0 -3.9**
CIA Chichaoua 4.74 227 P **Pn** **11 28 51.0 +0.1**
CIA S **Sn** **11 29 42.0 -3.9**
CIA Chichaoua 4.74 227 *i* P **Pn** **11 28 51.0 +0.1**
CIA *i* S **Sn** **11 29 42.0 -3.9**
ESDC Sonseca Array 4.80 7 Sn **Sn** **11 29 43.0 -4.3**
baz=189,slow=22
ESDC Sonseca Array 4.80 7 P **Pn** **11 28 52.2 +0.6**
ESDC S **Sn** **11 29 42.9 -4.5**
ESDC Sonseca Array 4.80 7 P **Pn** **11 28 52.2 +0.6**
0.4nm,0.1s,baz=189,slow=12,SNR=23
ESDC S **Sn** **11 29 42.9 -4.5**
4.2nm,0.3s,baz=192,slow=22,SNR=9.7
ESDC Sonseca Array 4.80 7 P **Pn** **11 28 52.2 +0.6**
0.4nm,0.1s,baz=189,slow=12,SNR=23
ESDC S **Sn** **11 29 42.9 -4.5**
4.2nm,0.3s,baz=192,slow=22,SNR=9.7
ESDC Sonseca Array 4.80 7 P **Pn** **11 28 52.2 +0.5**
0.4nm,0.1s,baz=189,slow=12,SNR=23
ESDC S **Sn** **11 29 42.9 -4.4**
4.2nm,0.3s,slow=22,SNR=9.7
ESLA Sonseca Array 4.80 7 *e*Pn **Pn** **11 28 53.0 +1.3**
ESLA *e*Sn **Sn** **11 29 47.1 -0.2**
ESLA Sonseca Array 4.80 7 *e*Pn **Pn** **11 28 53.0 +1.3**
ESLA *e*Sn **Sn** **11 29 47.1 -0.2**
PLML Palmela 4.95 319 *e*Pn **Pn** **11 28 55.2 +1.5**
PLML Palmela 4.95 319 *e*Pn **Pn** **11 28 55.2 +1.5**
PMRV Marv??o 4.99 336 *e*Pn **Pn** **11 28 55.3 +1.0**
PMRV *e*Sn **Sn** **11 29 47.6 -4.4**
PMRV A 11 29 49.7
51nm,0.3s
JHA Jbel Lahdid 5.06 233 P **Pn** **11 28 56.0 +0.7**
JHA S **Sn** **11 29 51.0 -2.8**
JHA Jbel Lahdid 5.06 233 P **Pn** **11 28 56.0 +0.7**
JHA S **Sn** **11 29 51.0 -2.8**
JHA Jbel Lahdid 5.06 233 *i* P **Pn** **11 28 56.0 +0.7**
JHA *i* S **Sn** **11 29 51.0 -2.8**
LIS Lisbon 5.20 318 *e*P **Pn** **11 28 57.5 +0.3**
LIS AML AML 11 29 52.9
comp=N,46nm,0.4s
LIS Lisbon 5.20 318 P **Pn** **11 28 57.5 +0.3**
LIS Lisbon 5.20 318 P **Pn** **11 28 57.5 +0.3**
INMG Instituto de M 5.23 319 *e*Pn **Pn** **11 28 59.0 +1.5**
INMG Instituto de M 5.23 319 *e*Pn **Pn** **11 28 59.0 +1.5**
EBEN Beniarda 5.24 42 P **Pn** **11 28 57.9 +0.2**
EBEN S **Sn** **11 29 53.3 -4.8**
EBEN Beniarda 5.24 42 P **Pn** **11 28 57.9 +0.2**
comp=N,0.2nm,0.2s,SNR=9.6
EBEN S **Sn** **11 29 53.3 -4.8**
comp=N,2.4nm,0.3s,SNR=7.9
EBEN Beniarda 5.24 42 P **Pn** **11 28 57.9 +0.2**
comp=N,0.2nm,0.2s,SNR=9.6
EBEN S **Sn** **11 29 53.3 -4.8**
comp=N,2.4nm,0.3s,SNR=7.9
EBEN Beniarda 5.24 42 P **Pn** **11 28 57.9 +0.2**
comp=N,0.2nm,0.2s,SNR=9.6
EBEN S **Sn** **11 29 53.3 -4.8**
comp=N,2.4nm,0.3s,SNR=7.9
ALMR Almeirim 5.24 325 *e*P **Pn** **11 28 58.4 +0.7**
ALMR *e*S **Sn** **11 29 54.3 -3.9**
ALMR *e*S **Sn** **11 29 54.3 -3.9**
ALMR AML AML 11 29 54.4
comp=N,38nm,0.2s
ALMR Almeirim 5.24 325 P **Pn** **11 28 58.4 +0.7**
ALMR S **Sn** **11 29 54.3 -3.9**
ALMR Almeirim 5.24 325 P **Pn** **11 28 58.4 +0.7**
ALMR S **Sn** **11 29 54.3 -3.9**
PCBR Castelo Branco 5.39 337 *e*Pn **Pn** **11 29 00.6 +0.8**
PCBR *e*Sn **Sn** **11 29 56.8 -5.1**
PCBR A 11 29 59.5
comp=N,39nm,0.1s
PCBR Castelo Branco 5.39 337 *e*Pn **Pn** **11 29 00.6 +0.8**
PMAFR Mafra 5.44 319 ⇓P **Pn** **11 29 01.3 +0.8**
comp=N,88nm,0.2s,SNR=18
PMAFR S **Sn** **11 29 59.9 -3.3**
comp=N,38nm,0.2s,SNR=7.9
PMAFR Mafra 5.44 319 ⇓P **Pn** **11 29 01.3 +0.8**
comp=N,88nm,0.2s,SNR=18
PMAFR S **Sn** **11 29 59.9 -3.3**
comp=N,38nm,0.2s,SNR=7.9
PMAFR Mafra 5.44 319 *e*Pn **Pn** **11 29 01.4 +0.9**
PMAFR *e*Sn **Sn** **11 30 00.1 -3.1**
PMAFR A 11 30 08.9
comp=N,40nm,0.3s
PMAFR Mafra 5.44 319 P **Pn** **11 29 01.3 +0.8**
comp=N,88nm,0.2s,SNR=18
PTOM Tomar 5.54 329 *e*Pn **Pn** **11 29 02.8 +0.9**
PTOM *e*Sn **Sn** **11 30 00.9 -4.8**
PTOM A 11 30 06.2
comp=N,53nm,0.3s
PTOM Tomar 5.54 329 *e*Pn **Pn** **11 29 02.8 +0.9**
GUD Guadarrama 5.75 4 P **Pn** **11 29 05.9 +1.2**
GUD S **Sn** **11 30 08.2 -2.4**
GUD Guadarrama 5.75 4 P **Pn** **11 29 05.9 +1.2**
comp=N,7.7nm,0.2s,SNR=18
GUD S **Sn** **11 30 08.2 -2.4**
comp=N,20nm,0.3s,SNR=7.9
GUD Guadarrama 5.75 4 P **Pn** **11 29 05.9 +1.2**
comp=N,7.7nm,0.2s,SNR=18
GUD S **Sn** **11 30 08.2 -2.4**
comp=N,20nm,0.3s,SNR=7.9
GUD Guadarrama 5.75 4 P **Pn** **11 29 05.9 +1.2**
comp=N,7.7nm,0.2s,SNR=18
GUD S **Sn** **11 30 08.2 -2.4**
comp=N,20nm,0.3s,SNR=7.9
MTE Manteigas 5.92 339 *e*Pn **Pb** **11 29 23.6 +1.0**
MTE *e*Sn **Sb** **11 30 27.2 -6.4**
MTE A 11 30 31.2
comp=N,48nm,0.4s
ETOR Torete 6.27 19 P **Pn** **11 29 12.3 +0.4**
ETOR S **Sn** **11 30 19.2 -4.4**
ETOR Torete 6.27 19 P **Pn** **11 29 12.3 +0.4**
comp=N,32nm,0.3s,SNR=7.9
ETOR S **Sn** **11 30 19.2 -4.4**
comp=N,30nm,0.3s,SNR=7.9
ETOR Torete 6.27 19 P **Pn** **11 29 12.3 +0.4**
comp=N,32nm,0.3s,SNR=7.9
ETOR S **Sn** **11 30 19.2 -4.4**
comp=N,30nm,0.3s,SNR=7.9
ETOR Torete 6.27 19 P **Pn** **11 29 12.3 +0.4**
comp=N,32nm,0.3s,SNR=7.9
PVIS Viseu 6.32 338 *e*Pn **Pn** **11 29 13.6 +1.1**
PVIS *e*Sn **Sn** **11 30 21.0 -3.7**
PVIS A 11 30 22.4
comp=N,40nm,0.2s
PVIS Viseu 6.32 338 *e*Pn **Pn** **11 29 13.6 +1.1**
EIBI Ibiza 6.37 48 P **Pn** **11 29 13.4 +0.2**
EIBI S **Sn** **11 30 20.0 -6.0**
EIBI Ibiza 6.37 48 P **Pn** **11 29 13.4 +0.2**
comp=N,3.9nm,0.2s,SNR=7.7
EIBI S **Sn** **11 30 20.0 -6.0**
comp=N,12nm,0.3s,SNR=7.9
EIBI Ibiza 6.37 48 P **Pn** **11 29 13.4 +0.2**
comp=N,3.9nm,0.2s,SNR=7.7
EIBI S **Sn** **11 30 20.0 -6.0**
comp=N,12nm,0.3s,SNR=7.9
EIBI Ibiza 6.37 48 P **Pn** **11 29 13.4 +0.2**
comp=N,3.9nm,0.2s,SNR=7.7
EMOS Mosqueruela 6.41 31 P **Pn** **11 29 15.1 +1.4**
EMOS S **Sn** **11 30 22.9 -4.1**
EMOS Mosqueruela 6.41 31 P **Pn** **11 29 15.1 +1.4**
comp=N,1.1nm,0.2s,SNR=7.8
EMOS S **Sn** **11 30 22.9 -4.1**
comp=N,1.5nm,0.2s,SNR=7.9
EMOS Mosqueruela 6.41 31 P **Pn** **11 29 15.1 +1.4**
comp=N,1.1nm,0.2s,SNR=7.8
EMOS S **Sn** **11 30 22.9 -4.1**
comp=N,1.5nm,0.2s,SNR=7.9
EMOS Mosqueruela 6.41 31 P **Pn** **11 29 15.1 +1.3**
comp=N,1.1nm,0.2s,SNR=7.8

YBT Youssef Ben Ta 6.46 220 P **Pn** **11 29 15.0 +0.6**
YBT S **Sn** **11 30 23.5 -4.7**
YBT Youssef Ben Ta 6.46 220 P **Pn** **11 29 15.0 +0.6**
YBT S **Sn** **11 30 23.5 -4.7**
MVO Moncorvo 6.51 345 ⇓P **Pn** **11 29 15.6 +0.5**
MVO S **Sn** **11 30 23.0 -6.4**
MVO Moncorvo 6.51 345 ⇓P **Pn** **11 29 15.6 +0.5**
comp=N,27nm,0.1s,SNR=18
MVO S **Sn** **11 30 23.0 -6.4**
comp=N,27nm,0.3s,SNR=5.8
MVO Moncorvo 6.51 345 ⇓P **Pn** **11 29 15.6 +0.5**
comp=N,27nm,0.1s,SNR=18
MVO S **Sn** **11 30 23.0 -6.4**
comp=N,27nm,0.3s,SNR=5.8
MVO Moncorvo 6.51 345 *e*Pn **Pn** **11 29 15.7 +0.6**
MVO *e*Sn **Sn** **11 30 22.9 -6.5**
MVO A 11 30 26.7
comp=N,37nm,0.5s
MVO Moncorvo 6.51 345 *e*Pn **Pn** **11 29 15.7 +0.6**
PVRL Vila Real 6.78 341 *e*Pn **Pn** **11 29 19.4 +0.5**
PVRL *e*Sn **Sn** **11 30 30.9 -5.2**
PVRL A 11 30 33.8
comp=N,82nm,0.2s
PVRL Vila Real 6.78 341 *e*Pn **Pn** **11 29 19.4 +0.5**
PTO Porto 6.93 335 *e*Pn **Pn** **11 29 21.9 +1.0**
PTO *e*Sn **Sn** **11 30 34.4 -5.4**
PTO Porto 6.93 335 *e*Pn **Pn** **11 29 21.9 +1.0**
PBRG Braganca 7.07 348 *e*Pn **Pn** **11 29 23.6 +0.8**
PBRG *e*Sn **Sn** **11 30 37.4 -5.8**
PBRG A 11 30 39.2
comp=N,19nm,0.2s
PBRG Braganca 7.07 348 *e*Pn **Pn** **11 29 23.6 +0.8**
ECAL Calabor 7.20 348 P **Pn** **11 29 25.3 +0.7**
ECAL S **Sn** **11 30 41.2 -5.2**
ECAL Calabor 7.20 348 P **Pn** **11 29 25.3 +0.7**
comp=N,20nm,0.2s,SNR=30
ECAL S **Sn** **11 30 41.2 -5.2**
comp=N,33nm,0.6s,SNR=8.8
ECAL Calabor 7.20 348 P **Pn** **11 29 25.3 +0.7**
comp=N,20nm,0.2s,SNR=30
ECAL S **Sn** **11 30 41.2 -5.2**
comp=N,33nm,0.6s,SNR=8.8
ECAL Calabor 7.20 348 P **Pn** **11 29 25.3 +0.7**
comp=N,20nm,0.2s,SNR=30
ERTA Horta de San J 7.25 32 P **Pn** **11 29 26.5 +1.3**
ERTA S **Sn** **11 30 43.9 -3.6**
ERTA Horta de San J 7.25 32 P **Pn** **11 29 26.5 +1.3**
comp=N,1.3nm,0.3s,SNR=6.7
ERTA S **Sn** **11 30 43.9 -3.6**
comp=N,13nm,0.5s,SNR=7.9
ERTA Horta de San J 7.25 32 P **Pn** **11 29 26.5 +1.3**
comp=N,1.3nm,0.3s,SNR=6.7
ERTA S **Sn** **11 30 43.9 -3.6**
comp=N,13nm,0.5s,SNR=7.9
ERTA Horta de San J 7.25 32 P **Pn** **11 29 26.5 +1.3**
comp=N,1.3nm,0.3s,SNR=6.7
PCAB Cabril 7.27 340 *e*Pn **Pn** **11 29 26.3 +0.7**
PCAB *e*Sn **Sn** **11 30 41.7 -6.5**
PCAB A 11 30 43.8
comp=N,29nm,0.8s
PCAB Cabril 7.27 340 *e*Pn **Pn** **11 29 26.3 +0.7**
ELOB Lobios 7.43 340 P **Pn** **11 29 28.5 +0.8**
ELOB S **Sn** **11 30 46.4 -5.6**
ELOB Lobios 7.43 340 P **Pn** **11 29 28.5 +0.8**
comp=N,22nm,0.2s,SNR=58
ELOB S **Sn** **11 30 46.4 -5.6**
comp=N,25nm,0.5s,SNR=8.4
ELOB Lobios 7.43 340 P **Pn** **11 29 28.5 +0.8**
comp=N,22nm,0.2s,SNR=58
ELOB S **Sn** **11 30 46.4 -5.6**
comp=N,25nm,0.5s,SNR=8.4
ELOB Lobios 7.43 340 P **Pn** **11 29 28.5 +0.8**
comp=N,22nm,0.2s,SNR=58
ETOS Mallorca 7.72 49 P **Pn** **11 29 32.2 +0.4**
ETOS S **Sn** **11 30 51.0 -8.3**
ETOS Mallorca 7.72 49 P **Pn** **11 29 32.2 +0.4**
comp=N,9.3nm,0.6s,SNR=9.1
ETOS S **Sn** **11 30 51.0 -8.3**
comp=N,3.0nm,0.4s,SNR=7.9
ETOS Mallorca 7.72 49 P **Pn** **11 29 32.2 +0.4**
comp=N,9.3nm,0.6s,SNR=9.1
ETOS S **Sn** **11 30 51.0 -8.3**
comp=N,3.0nm,0.4s,SNR=7.9
ETOS Mallorca 7.72 49 P **Pn** **11 29 32.2 +0.4**
comp=N,9.3nm,0.6s,SNR=9.1
IZUN Zunzarren 8.34 17 P **Pn** **11 29 41.2 +0.9**
comp=N,0.3nm,0.1s,SNR=7.9
IZUN S **Sn** **11 31 09.4 -5.1**
comp=N,2.2nm,0.3s,SNR=7.9
IZUN Zunzarren 8.34 17 P **Pn** **11 29 41.2 +0.9**
comp=N,0.3nm,0.1s,SNR=7.9
IZUN S **Sn** **11 31 09.4 -5.1**
comp=N,2.2nm,0.3s,SNR=7.9
IZUN Zunzarren 8.34 17 P **Pn** **11 29 41.2 +0.9**
comp=N,0.3nm,0.1s,SNR=7.9
ELAN Lanestosa 8.38 7 P **Pn** **11 29 42.7 +1.9**
ELAN S **Sn** **11 31 09.2 -6.2**
ELAN Lanestosa 8.38 7 P **Pn** **11 29 42.7 +1.9**
comp=N,1.8nm,0.1s,SNR=20
ELAN S **Sn** **11 31 09.2 -6.2**
comp=N,10nm,0.4s,SNR=7.9
ELAN Lanestosa 8.38 7 P **Pn** **11 29 42.7 +1.9**
comp=N,1.8nm,0.1s,SNR=20
ELAN S **Sn** **11 31 09.2 -6.2**
comp=N,10nm,0.4s,SNR=7.9
ELAN Lanestosa 8.38 7 P **Pn** **11 29 42.7 +2.0**
comp=N,1.8nm,0.1s,SNR=20
IUSE Utxeti 8.40 16 P **Pn** **11 29 43.1 +2.0**
comp=N,1.4nm,0.2s,SNR=7.9
IUSE Utxeti 8.40 16 P **Pn** **11 29 43.1 +2.0**
comp=N,1.4nm,0.2s,SNR=7.9
IUSE Utxeti 8.40 16 P **Pn** **11 29 43.1 +2.0**
comp=N,1.4nm,0.2s,SNR=7.9
STS Santiago 8.51 341 P **Pn** **11 29 43.5 +0.9**
STS Santiago 8.51 341 P **Pn** **11 29 43.5 +0.9**
comp=N,4.9nm,0.1s,SNR=8.2
STS Santiago 8.51 341 P **Pn** **11 29 43.5 +0.9**
comp=N,4.9nm,0.1s,SNR=8.2
STS Santiago 8.51 341 P **Pn** **11 29 43.5 +1.0**
comp=N,4.9nm,0.1s,SNR=8.2
ELIZ Elizondo 8.62 16 P **Pn** **11 29 46.2 +2.2**
ELIZ Elizondo 8.62 16 P **Pn** **11 29 46.2 +2.2**
comp=N,9.7nm,0.4s,SNR=9.6
ELIZ Elizondo 8.62 16 P **Pn** **11 29 46.2 +2.2**
comp=N,9.7nm,0.4s,SNR=9.6
ELIZ Elizondo 8.62 16 P **Pn** **11 29 46.2 +2.2**
comp=N,9.7nm,0.4s,SNR=9.6
EPON Pontenova 8.62 348 P **Pn** **11 29 44.5 +0.5**
EPON S **Sn** **11 31 13.5 -7.7**
EPON Pontenova 8.62 348 P **Pn** **11 29 44.5 +0.5**
comp=N,7.6nm,0.2s,SNR=7.9
EPON S **Sn** **11 31 13.5 -7.7**
SNR=7.9
EPON Pontenova 8.62 348 P **Pn** **11 29 44.5 +0.5**
comp=N,7.6nm,0.2s,SNR=7.9
EPON S **Sn** **11 31 13.5 -7.7**
SNR=7.9
EPON Pontenova 8.62 348 P **Pn** **11 29 44.5 +0.5**
comp=N,7.6nm,0.2s,SNR=7.9
ETSF Etsaut 8.62 21 *e*P **Pn** **11 29 45.4 +1.4**
ETSF *e*Sn **Sn** **11 31 14.6 -6.7**
comp=N,4.8nm,0.4s
ETSF Etsaut 8.62 21 *e*P **Pn** **11 29 45.4 +1.4**
SJPF Ste Jean 8.64 17 *e*P **Pn** **11 29 46.1 +1.8**
SJPF *e*Sn **Sn** **11 31 15.5 -6.3**
comp=N,12nm,0.5s
SJPF Ste Jean 8.64 17 *e*P **Pn** **11 29 46.1 +1.8**
EBIE Bielsa 8.65 25 P **Pn** **11 29 45.1 +0.6**
EBIE S **Sn** **11 31 16.1 -6.0**
EBIE Bielsa 8.65 25 P **Pn** **11 29 45.1 +0.6**
comp=N,0.5nm,0.1s,SNR=6.6
EBIE S **Sn** **11 31 16.1 -6.0**
comp=N,4.4nm,0.7s,SNR=7.9
EBIE Bielsa 8.65 25 P **Pn** **11 29 45.1 +0.6**
comp=N,0.5nm,0.1s,SNR=6.6
EBIE S **Sn** **11 31 16.1 -6.0**
comp=N,4.4nm,0.7s,SNR=7.9
EBIE Bielsa 8.65 25 P **Pn** **11 29 45.1 +0.6**
comp=N,0.5nm,0.1s,SNR=6.6
EALK Alkurruntz 8.67 16 P **Pn** **11 29 46.8 +2.0**
EALK S **Sn** **11 31 16.6 -6.0**
EALK Alkurruntz 8.67 16 P **Pn** **11 29 46.8 +2.0**
comp=N,3.1nm,0.3s,SNR=16
EALK S **Sn** **11 31 16.6 -6.0**
comp=N,23nm,0.4s,SNR=7.9
EALK Alkurruntz 8.67 16 P **Pn** **11 29 46.8 +2.0**
comp=N,3.1nm,0.3s,SNR=16
EALK S **Sn** **11 31 16.6 -6.0**
comp=N,23nm,0.4s,SNR=7.9
EALK Alkurruntz 8.67 16 P **Pn** **11 29 46.8 +2.0**
comp=N,3.1nm,0.3s,SNR=16
EALK S **Sn** **11 31 16.6 -6.0**
comp=N,23nm,0.4s,SNR=7.9
EMAZ Mazaricos 8.69 339 P **Pn** **11 29 45.7 +0.7**
EMAZ Mazaricos 8.69 339 P **Pn** **11 29 45.7 +0.7**
comp=N,5.3nm,0.1s,SNR=8.8
EMAZ Mazaricos 8.69 339 P **Pn** **11 29 45.7 +0.7**
comp=N,5.3nm,0.1s,SNR=8.8
EMAZ Mazaricos 8.69 339 P **Pn** **11 29 45.7 +0.7**
comp=N,5.3nm,0.1s,SNR=8.8
CSOR Sort 8.76 30 P **Pn** **11 29 47.7 +1.7**
CSOR S **Sn** **11 31 18.4 -6.2**
CSOR Sort 8.76 30 P **Pn** **11 29 47.7 +1.7**
comp=N,0.7nm,0.2s,SNR=5.9
CSOR S **Sn** **11 31 18.4 -6.2**
comp=N,7.7nm,0.4s,SNR=7.9
CSOR Sort 8.76 30 P **Pn** **11 29 47.7 +1.7**
comp=N,0.7nm,0.2s,SNR=5.9
CSOR S **Sn** **11 31 18.4 -6.2**
comp=N,7.7nm,0.4s,SNR=7.9
CSOR Sort 8.76 30 P **Pn** **11 29 47.7 +1.8**
comp=N,0.7nm,0.2s,SNR=5.9
EPF Esparros 9.02 24 *e*P **Pn** **11 29 50.5 +0.9**
EPF *e*Sn **Sn** **11 31 23.7 -7.5**
comp=N,3.8nm,0.3s
EPF Esparros 9.02 24 *e*P **Pn** **11 29 50.5 +0.9**
LFF La Frestale 10.86 21 *e*P **Pn** **11 30 16.7 +1.9**
LFF La Frestale 10.86 21 *e*P **Pn** **11 30 16.7 +1.9**
CAF Calviac 11.28 25 *e*P **Pn** **11 30 21.5 +1.0**
CAF Calviac 11.28 25 *e*P **Pn** **11 30 21.5 +1.0**
KEST Kesra 11.53 82 Pn **Pn** **11 30 19.6 -4.4**
comp=N,0.1nm,0.3s,baz=30,slow=9.9,SNR=1.7
QUIF Quistinic 13.05 5 *e*P **Pn** **11 30 45.5 +0.8**
QUIF Quistinic 13.05 5 *e*P **Pn** **11 30 45.5 +0.8**
SGMF Saint Gilles 13.44 6 *e*P **Pn** **11 30 50.7 +0.7**
ROSF Rostrenen 13.46 4 *e*P **Pn** **11 30 50.7 +0.4**
GERES GERESS Array B 19.48 39 P **Pn** **11 32 02.8 -4.7**
comp=N,2.2nm,0.3s,baz=221,slow=11,SNR=32
GERES GERESS Array B 19.48 39 P **Pn** **11 32 02.8 -4.7**
KHC Kasperske Hory 19.60 38 *e*P **Pn** **11 32 03.9 -5.0**
comp=N,2.0nm,0.5s
KHC Kasperske Hory 19.60 38 *e*P **Pn** **11 32 03.9 -5.0**
comp=N,2.0nm,0.5s
EKA Eskdalemuir Ar 20.46 3 P **P** **11 32 13.0 -3.8**
comp=N,1.4nm,0.9s,baz=176,slow=12,SNR=3.1
EKA Eskdalemuir Ar 20.46 3 P **P** **11 32 13.0 -3.8**
PKSM Moragy 20.96 50 ⇓P **P** **11 32 21.6 -0.8**
PKSM Moragy 20.96 50 ⇓*i*P **P** **11 32 21.6 -0.8**
PKSM Moragy 20.96 50 ⇓P **P** **11 32 21.6 -0.8**
TORD Torodi Ar. Bea 22.43 163 P **P** **11 32 35.0 -3.3**
comp=N,2.6nm,0.9s,mb3.7,baz=342,slow=9.2,SNR=12
GZR Gura Zlata 23.39 55 ⇑P **P** **11 32 44.8 -3.4**
GZR Gura Zlata 23.39 55 ⇑*i*P **P** **11 32 44.8 -3.4**
DRGR 23.79 52 ⇓P **P** **11 32 48.7 -3.4**
DRGR 23.79 52 ⇓*i*P **P** **11 32 48.7 -3.4**
DRGR 23.79 52 ⇓P **P** **11 32 48.7 -3.4**
IDI Anoyia 24.20 81 P **P** **11 32 52.8 -3.2**
comp=N,13nm,0.4s,mb4.7,baz=306,slow=13,SNR=23
IDI Anoyia 24.20 81 P **P** **11 32 52.8 -3.2**
MLR Muntele Rosu 25.56 56 P **P** **11 33 04.7 -3.6**
comp=N,2.4nm,0.6s,mb3.9,baz=300,slow=15,SNR=3.6
MLR Muntele Rosu 25.56 56 ⇑P **P** **11 33 05.3 -3.0**
MLR Muntele Rosu 25.56 56 ⇑*i*P **P** **11 33 05.3 -3.0**
MLR Muntele Rosu 25.56 56 ⇑P **P** **11 33 05.3 -3.0**
BUR08 Bucovina Ar. S 25.67 51 *e*P **P** **11 33 06.0 -3.3**
BUR08 Bucovina Ar. S 25.67 51 *e*P **P** **11 33 05.9 -3.3**
VRI Vrincioaia 26.18 56 ⇑P **P** **11 33 11.8 -2.1**
VRI Vrincioaia 26.18 56 ⇑*i*P **P** **11 33 11.8 -2.1**
VRI Vrincioaia 26.18 56 ⇑P **P** **11 33 11.8 -2.1**
HFS Hagfors 27.94 20 P **P** **11 33 25.3 -4.2**
comp=N,2.2nm,0.9s,mb3.8,baz=204,slow=8.7,SNR=9.8
AKASG Malin Array Be 29.17 47 P **P** **11 33 34.1 -6.5**
comp=N,1.0nm,0.4s,mb3.9,baz=247,slow=10.0,SNR=5.2
FINES FINESS Array B 32.99 27 P **P** **11 34 08.5 -5.6**
comp=N,0.8nm,0.4s,mb4.0,baz=214,slow=9.1,SNR=5.2
MMAI Mount Meron Ar 33.19 82 P **P** **11 34 13.5 -2.7**
comp=N,1.2nm,0.4s,mb4.2,baz=305,slow=10,SNR=1.3
JMIC Jan Mayen 36.20 358 P **P** **11 34 37.7 -4.1**
comp=N,20nm,0.3s,baz=147,slow=7.0,SNR=6.2
ARCES ARCESS Array B 38.47 17 P **P** **11 34 56.1 -4.8**
comp=N,0.5nm,0.5s,mb3.5,baz=218,slow=9.2,SNR=5.1
AKTK Aktyubinsk 47.27 51 P **P** **11 36 07.8 -4.7**
AKTO Aktyubinsk 47.27 51 P **P** **11 36 07.8 -4.7**
comp=N,0.6nm,0.5s,mb3.8,baz=315,slow=4.3,SNR=3.3
BVAR Borovoye Array 54.45 46 P **P** **11 37 02.1 -4.5**
comp=N,0.5nm,0.3s,mb3.9,baz=280,slow=8.6,SNR=2.0
RES Resolute Bay 56.74 341 P **P** **11 37 19.4 -3.4**
comp=N,1.5nm,0.8s,mb4.1,baz=14,slow=4.2,SNR=3.2
KURK Kurchatov 59.99 47 P **P** **11 37 40.8 -5.0**
comp=N,2.7nm,0.3s,mb4.7,baz=99,slow=18,SNR=15
ZALV Zalesovo Beam 62.40 42 P **P** **11 37 57.4 -4.7**
comp=N,1.4nm,0.4s,mb4.4,baz=299,slow=6.5,SNR=7.0
ZALV Zalesovo Beam 62.40 42 P **P** **11 37 57.4 -4.7**
MKAR Makanchi Array 63.69 50 P **P** **11 38 05.4 -5.4**
comp=N,0.1nm,0.4s,mb3.2,baz=311,slow=6.0,SNR=3.8
YKA Yellowknife Ar 67.99 332 P **P** **11 38 34.3 -3.9**
comp=N,0.5nm,0.5s,mb3.8,baz=62,slow=6.2,SNR=5.2
PDAR Pinedale Array 76.67 313 P **P** **11 39 27.6 -2.8**
comp=N,0.5nm,0.6s,mb3.6,baz=40,slow=6.2,SNR=6.6
SONM Songino Array 77.21 40 P **P** **11 39 29.1 -4.2**
comp=N,0.8nm,0.8s,mb3.7,baz=304,slow=7.3,SNR=3.4
ASAR Alice Springs 142.46 84 PKhKP 11 47 02.6
comp=N,0.2nm,0.6s,baz=305,slow=3.3,SNR=3.7
ASAR PKP PKPdf 11 47 09.3 -3.4
comp=N,0.2nm,0.6s,baz=292,slow=2.1,SNR=3.8
ASAR Alice Springs 142.46 84 PKP PKPdf 11 47 09.3 -3.4

*GRAL **13** 11:33:00.6±0.5, 33°.33N×35°.43E, h15km±8km, MD3.0*
*GII **13** 11:33:00.0±0.4, 33°.30N×35°.46E, h1km±1km, Md2.0/10*
*CSEM **13** 11:33:00.6, 33°.33N×35°.43E, h15km, ML3.0, After GRAL*
*ISCJB **13** 11:33:00.2±0.5, 33°.35N±0°.02×35°.43E±0°.04, h9km±5km,*
Error ellipse: s-maj=5.7km s-min=3.2km az=24.8
ISC 13 11:33:00.6±0.5, 33°.37N±0°.02×35°.44E±0°.04, h8km±7km,
n19, σ0=62/34, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.15**	**324**	*e*P	**Pg**	**11 33 04.5**	**+0.7**
MATL	**Matarih**	**0.15**	**324**	*e*P	**Pg**	**11 33 04.6**	**+0.7**
KSDI	**Kefar Szold**	**0.25**	**133**	Pg	**Pg**	**11 33 05.1**	**-0.6**
KSDI				Sg	**Sg**	**11 33 08.9**	**-0.2**
HRI	**Mount Hermon**	**0.27**	**112**	Pg	**Pg**	**11 33 05.4**	**-0.5**
HRI				Sg	**Sg**	**11 33 09.9**	**+0.4**
RCY	**Rachaya**	**0.34**	**69**	*e*P	**Pg**	**11 33 07.7**	**+0.3**
RCY				*e*S	**Sg**	**11 33 13.1**	**+1.2**
RCY	**Rachaya**	**0.34**	**69**	*e*P	**Pg**	**11 33 07.7**	**+0.4**
RCY				*e*S	**Sg**	**11 33 13.1**	**+1.3**
MMA0	**Mount Meron ar**	**0.35**	**185**	Pg	**Pg**	**11 33 06.8**	**-0.7**
MMA0				Sg	**Sg**	**11 33 12.0**	**-0.1**
HNTI	**Hanita**	**0.36**	**218**	Pg	**Pg**	**11 33 07.4**	**-0.2**
HNTI				Sg	**Sg**	**11 33 13.1**	**+0.8**
KSHT	**Keshet**	**0.49**	**140**	Pg	**Pg**	**11 33 09.6**	**-0.6**
KSHT				Sg	**Sg**	**11 33 17.3**	**+0.6**
BHL	**Bhannes**	**0.57**	**18**	*e*P	**Pg**	**11 33 11.4**	**-0.2**
BHL				*e*S	**Sg**	**11 33 19.5**	**+0.5**
BHL	**Bhannes**	**0.57**	**18**	*e*P	**Pg**	**11 33 11.4**	**-0.2**
BHL				*e*S	**Sg**	**11 33 19.5**	**+0.5**
BLGI	**Bet Lehem HaGe**	**0.66**	**198**	Pg	**Pg**	**11 33 13.1**	**-0.3**
BLGI				Sg	**Sg**	**11 33 22.5**	**+0.5**
OFRI	**'Ofer**	**0.83**	**207**	Pg	**Pg**	**11 33 16.1**	**-0.5**
OFRI				Sg	**Sg**	**11 33 28.3**	**+0.8**
MMLI	**Mount Malkishu**	**0.93**	**181**	Pg	**Pg**	**11 33 17.4**	**-1.0**
MMLI				Sg	**Sg**	**11 33 31.1**	**+0.7**
HWQ	**Hawqa**	**1.00**	**25**	*e*P	**Pg**	**11 33 20.1**	**+0.2**
HWQ				*e*S	**Sg**	**11 33 31.9**	**-1.0**
HWQ	**Hawqa**	**1.00**	**25**	*e*S	**Sg**	**11 33 32.0**	**-1.0**
HMDT	**Nahal Hemdat**	**1.11**	**176**	Pg	**Pg**	**11 33 20.7**	**-1.2**
HMDT				Sg	**Sg**	**11 33 36.3**	**-0.1**
SLTI	**Sal'it**	**1.17**	**197**	Sg	**Sg**	**11 33 38.1**	**-0.2**
DSI	**Dead Sea**	**1.79**	**182**	Pn	**Pn**	**11 33 31.5**	**-0.2**
DSI				Sn	**Sn**	**11 33 55.4**	**+0.8**

*CSEM **13** 11:33:12.7±0.2, 38°.12N×21°.61E, h23km±2km, MD3.1,*
Error ellipse: s-maj=5.6km s-min=4.0km az=157.0
*ATH **13** 11:33:12.5, 38°.13N×21°.56E, h24km±2km, MD3.1/6*
*THE **13** 11:33:13.5, 38°.13N×21°.62E, h18km±1km, ML2.6/5, Error ellipse: s-maj=2.5km s-min=0.5km az=16.0*
*ISCJB **13** 11:33:13.1±0.4, 38°.14N±0°.04×21°.61E±0°.03, h25km±4km,*

Error ellipse: s-maj=6.8km s-min=3.7km az=172.8

ISC 13 11:33:13.1±0.4, 38°.14N±0°.04×21°.61E±0°.03, h24km±4km, n33, σ0°89/57, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.14**	**235**	*e*PB	**Pb**	**11 33 17.0**	**-1.0**
RLS				*e*SB	**Sb**	**11 33 20.9**	**-0.3**
RLS	**Riolos of Patr**	**0.14**	**235**	*e*Pb	**Pb**	**11 33 17.0**	**-1.0**
RLS				*e*Sb	**Sb**	**11 33 20.9**	**-0.3**
UPR	**University Cam**	**0.20**	**44**	P	**Pb**	**11 33 17.8**	**-1.0**
UPR				S	**Sb**	**11 33 22.4**	**-0.2**
UPR	**University Cam**	**0.20**	**44**	*e*PB	**Pb**	**11 33 18.8**	**0.0**
UPR				*e*SB	**Sb**	**11 33 22.4**	**-0.2**
UPR	**University Cam**	**0.20**	**44**	P	**Pb**	**11 33 17.8**	**-1.0**
UPR	**University Cam**	**0.20**	**44**	*e*Pb	**Pb**	**11 33 18.8**	**0.0**
UPR				S	**Sb**	**11 33 22.4**	**-0.2**
LAKA	**Lakka**	**0.31**	**70**	P	**Pb**	**11 33 19.9**	**-0.4**
LAKA				S	**Sb**	**11 33 24.9**	**-0.2**
LAKA	**Lakka**	**0.31**	**70**	P	**Pb**	**11 33 19.9**	**-0.4**
LAKA				S	**Sb**	**11 33 24.9**	**-0.2**
EFP	**Efpalio**	**0.38**	**39**	P	**Pb**	**11 33 21.4**	**+0.1**
EFP				S	**Sb**	**11 33 27.4**	**+0.6**
EFP	**Efpalio**	**0.38**	**39**	*e*PB	**Pb**	**11 33 21.1**	**-0.2**
EFP				*e*SB	**Sb**	**11 33 27.7**	**+0.9**
EFP	**Efpalio**	**0.38**	**39**	*e*Pb	**Pb**	**11 33 21.1**	**-0.2**
EFP	**Efpalio**	**0.38**	**39**	P	**Pb**	**11 33 21.4**	**+0.1**
EFP				S	**Sb**	**11 33 27.4**	**+0.6**
EFP				*e*Sb	**Sb**	**11 33 27.7**	**+0.9**
TRIZ	**Trizonia**	**0.43**	**58**	P	**Pb**	**11 33 21.9**	**-0.3**
TRIZ				S	**Sb**	**11 33 29.0**	**+0.6**
TRIZ	**Trizonia**	**0.43**	**58**	P	**Pb**	**11 33 21.9**	**-0.3**
TRIZ				S	**Sb**	**11 33 29.0**	**+0.6**
KALE	**Kalithea**	**0.49**	**58**	P	**Pb**	**11 33 22.9**	**-0.3**
KALE				S	**Sb**	**11 33 31.0**	**+1.0**
KALE	**Kalithea**	**0.49**	**58**	P	**Pb**	**11 33 22.9**	**-0.3**
KALE				S	**Sb**	**11 33 31.0**	**+1.0**
GUR	**Goura**	**0.61**	**109**	P	**Pb**	**11 33 24.8**	**-0.4**
GUR				S	**Sb**	**11 33 34.3**	**+0.8**
GUR	**Goura**	**0.61**	**109**	*e*PN	**Pn**	**11 33 24.9**	**-1.4**
GUR				*e*SN	**Sn**	**11 33 34.4**	**-1.0**
GUR	**Goura**	**0.61**	**109**	*e*Pn	**Pn**	**11 33 24.9**	**-1.4**
GUR				S	**Sb**	**11 33 34.3**	**+0.8**
KFL	**Anninata**	**0.65**	**268**	P	**Pb**	**11 33 25.7**	**-0.1**
KFL				S	**Sb**	**11 33 35.8**	**+1.4**
DSF	**Desfina**	**0.78**	**69**	P	**Pb**	**11 33 27.4**	**-0.6**
DSF	**Desfina**	**0.78**	**69**	P	**Pb**	**11 33 27.4**	**-0.6**
VLS	**Valsamata**	**0.80**	**273**	P	**Pb**	**11 33 27.9**	**-0.5**
VLS				S	**Sb**	**11 33 41.0**	**+2.1**
VLS	**Valsamata**	**0.80**	**273**	*e*PN	**Pn**	**11 33 28.0**	**-0.9**
VLS				*e*SN	**Sn**	**11 33 38.6**	**-1.5**
VLS	**Valsamata**	**0.80**	**273**	P	**Pb**	**11 33 27.9**	**-0.5**
VLS				*e*Sn	**Sn**	**11 33 38.6**	**-1.5**
VLS				S	**Sb**	**11 33 41.0**	**+2.1**
ITM	**Ithomi**	**0.99**	**165**	P	**Pn**	**11 33 31.9**	**+0.5**
ITM	**Ithomi**	**0.99**	**165**	*e*PB	**Pb**	**11 33 30.8**	**-0.7**
ITM				*e*SN	**Sn**	**11 33 45.3**	**+0.7**
ITM	**Ithomi**	**0.99**	**165**	*e*Pb	**Pb**	**11 33 30.8**	**-0.7**
ITM	**Ithomi**	**0.99**	**165**	P	**Pn**	**11 33 31.9**	**+0.5**
LKD2	**Lefkada island**	**0.99**	**312**	P	**Pn**	**11 33 31.3**	**-0.2**
LKD2	**Lefkada island**	**0.99**	**312**	P	**Pn**	**11 33 31.3**	**-0.2**
LTK	**Loutraki**	**1.08**	**96**	*e*PN	**Pn**	**11 33 34.4**	**+1.7**
PYL	**PYLOS**	**1.24**	**175**	*e*PN	**Pn**	**11 33 36.4**	**+1.5**

NEIC 13 11:41:41.2, 37°.52S×177°.14E, h7km, ML4.1(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	**White Island**	**0.04**	**102**	P	Pg	11 41 43.0	+0.4
WIZ				S	Sg	11 41 44.5	+0.8
MARZ	**Manawahe**	**0.59**	**218**	P	Pg	11 41 54.1	+1.4
URZ	**Urewera**	**0.74**	**182**	*e*Pg	Pg	11 41 55.0	-0.4
KARZ	**Kaharoa**	**0.87**	**235**	P	Pg	11 41 57.6	-0.3
MWZ	**Matawai**	**0.87**	**159**	P	Pg	11 41 57.1	-0.8
KUZ	**Kuaotunu**	**1.37**	**304**	P	Pn	11 42 05.6	-1.1

*ISCJB **13** 12:11:00.9±0.6, 27°.01S±0°.03×26°.79E±0°.03, h1km±4km, Error ellipse: s-maj=5.4km s-min=3.9km az=163.2*
*PRE **13** 12:11:01.1±1.0, 27°.00S×26°.78E, h2km, ML3.2*
*NEIC **13** 12:11:01.1±1.7, 27°.04S×26°.93E, h5km, Error ellipse: s-maj=41.4km s-min=10.9km az=108.0*
*IDC **13** 12:11:02.5±2.4, 26°.95S×26°.55E, h0km, mb3.5/1, mb1 3.5/2, mb1mx3.3/24, mbtmp3.5/2, Error ellipse: s-maj=58.6km s-min=16.2km az=112.0*

ISC 13 12:11:01.5±0.5, 27°.00S±0°.03×26°.77E±0°.02, h1km±4km, n20, σ0°93/34, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOAB	**Moab Khotsong**	**0.03**	**63**	*e*P	**Pg**	**12 11 01.6**	**-0.4**
MOAB				*e*S	**Sg**	**12 11 02.3**	**-0.1**
MOAB				AML	AML	12 11 04.6	
	comp=Z,44μm,0.2s						
BFSD	**Buffelsfontein**	**0.14**	**6**	*e*P	**Pg**	**12 11 03.7**	**-0.3**
BFSD				*e*S	**Sg**	**12 11 05.3**	**-0.5**
BFSD				AML	AML	12 11 08.7	
	comp=Z,6μm,0.2s						
TAUL	**Tau Lekoa**	**0.14**	**271**	*e*P	**Pg**	**12 11 04.3**	**+0.1**
TAUL				*e*S	**Sg**	**12 11 06.7**	**+0.5**
TAUL				AML	AML	12 11 09.0	
	comp=Z,1μm,0.4s						
PRYS	**Parys**	**0.53**	**82**	*e*P	**Pg**	**12 11 11.0**	**-0.7**
PRYS				*e*S	**Sg**	**12 11 18.1**	**-0.4**
PRYS				AML	AML	12 11 27.6	
	comp=Z,213nm,0.2s						
KSR	**Koster**	**1.15**	**6**	*e*P	**Pg**	**12 11 23.1**	**-0.4**
KSR				*e*S	**Sg**	**12 11 39.2**	**+0.8**
KSR				AML	AML	12 11 43.6	
	comp=Z,603nm,0.2s						
SWZ	**Schweizer**	**1.30**	**262**	*e*P	**Pg**	**12 11 26.5**	**+0.2**
SWZ				*e*S	**Sg**	**12 11 44.1**	**+0.9**
SWZ				AML	AML	12 11 51.5	
	comp=Z,577nm,0.8s						
ERPM	**east rand prop**	**1.47**	**64**	*e*P	**Pn**	**12 11 29.9**	**+0.9**
ERPM				*e*S	**Sg**	**12 11 50.2**	**+1.5**
ERPM				AML	AML	12 11 52.0	
	comp=Z,143nm,0.2s						
SEK	**Senekal**	**1.52**	**150**	*e*P	**Pn**	**12 11 30.1**	**+0.4**
SEK				*e*S	**Sn**	**12 11 51.3**	**+1.1**
SEK				AML	AML	12 11 52.8	
	comp=Z,248nm,0.4s						
SLR	**Silverton**	**1.85**	**47**	*e*P	**Pn**	**12 11 34.6**	**+0.3**
SLR				*e*S	**Sn**	**12 11 58.3**	**0.0**
SLR				AML	AML	12 12 01.8	
	comp=Z,644nm,0.2s						
BOSA	**Boshof**	**2.10**	**220**	Pn	**Pn**	**12 11 37.8**	**+0.1**
	comp=Z,11nm,0.3s,baz=37,slow=18,SNR=102						
BOSA				Pg	**Pg**	**12 11 39.6**	**-2.0**
	comp=Z,11nm,0.3s,baz=38,slow=17,SNR=103						
BOSA				Lg		12 12 06.1	
	comp=Z,19nm,0.3s,baz=321,slow=16,SNR=16						
BOSA	**Boshof**	**2.10**	**220**	*e*Pn	**Pn**	**12 11 37.8**	**+0.1**
LBTB	**Lobatse**	**2.24**	**332**	*e*P	**Pn**	**12 11 40.9**	**+1.2**
LBTB				*e*Sn	**Sn**	**12 12 11.3**	**+3.4**
POGA	**Pongola**	**4.33**	**96**	*e*P	**Pn**	**12 12 09.5**	**+1.1**
POGA				*e*S	**Sn**	**12 12 59.3**	**-0.2**
POGA				AML	AML	12 13 24.5	
	comp=Z,66nm,0.7s						
UPI	**Upington**	**5.08**	**253**	*e*P	**Pn**	**12 12 19.1**	**+0.4**
UPI				*e*S	**Sn**	**12 13 15.8**	**-2.2**
UPI				AML	AML	12 13 41.1	
	comp=Z,28nm,0.5s						
MOPA	**Mopani**	**5.44**	**51**	*e*P	**Pn**	**12 12 23.3**	**-0.3**
MOPA				*e*S	**Sn**	**12 13 24.7**	**-2.1**
MOPA				AML	AML	12 14 00.7	
	comp=Z,185nm,0.5s						
SUR	**Sutherland**	**7.46**	**223**	*e*Pn	**Pn**	**12 12 51.3**	**0.0**
LSZ	**Lusaka**	**11.74**	**7**	*e*Pn	**Pn**	**12 13 49.1**	**-1.1**
	comp=Z,2.2nm,0.4s						
LSZ				*e*Sn	**Sn**	**12 15 55.6**	**-6.2**
TORD	**Torodi Ar. Bea**	**46.75**	**325**	P	**P**	**12 19 31.9**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=153,slow=7.6,SNR=4.9						
TORD	**Torodi Ar. Bea**	**46.75**	**325**	P	**P**	**12 19 31.9**	**-0.5**
NVAR	**Mina Array Bea**	**148.66**	**300**	PKPbc	PKPbc	12 30 51.3	+0.9
	comp=Z,0.3nm,0.5s,baz=130,slow=2.7,SNR=4.6						

*ATH **13** 12:15:37.6, 38°.28N×21°.88E, h5km±2km, MD3.1/9*
*THE **13** 12:15:37.9, 38°.28N×21°.87E, h5km±2km, ML2.5/6, Error ellipse: s-maj=2.5km s-min=0.5km az=207.0*
*NEIC **13** 12:15:37.6, 38°.28N×21°.88E, h5km, MD3.1(ATH), After ATH.*
*CSEM **13** 12:15:37.4±0.1, 38°.29N×21°.87E, h5km, ML2.5/6, Error ellipse: s-maj=2.6km s-min=2.4km az=142.0*
*ISCJB **13** 12:15:37.7±0.4, 38°.28N±0°.03×21°.87E±0°.03, h6km±4km, Error ellipse: s-maj=4.6km s-min=3.8km az=165.9*

ISC 13 12:15:37.9±0.4, 38°.29N±0°.03×21°.88E±0°.03, h9km±4km, n39, σ0°73/68, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.07**	**268**	P	**Pg**	**12 15 38.9**	**-1.0**
UPR				S	**Sg**	**12 15 40.4**	**-0.9**
UPR	**University Cam**	**0.07**	**268**	*e*PG	**Pg**	**12 15 38.9**	**-1.0**
UPR				*e*SG	**Sg**	**12 15 40.5**	**-0.8**
UPR	**University Cam**	**0.07**	**268**	P	**Pg**	**12 15 38.9**	**-1.0**
UPR				*e*Sg	**Sg**	**12 15 40.5**	**-0.8**
LAKA	**Lakka**	**0.09**	**119**	P	**Pg**	**12 15 39.8**	**-0.4**
LAKA				S	**Sg**	**12 15 41.8**	**0.0**
LAKA	**Lakka**	**0.09**	**119**	P	**Pg**	**12 15 39.8**	**-0.4**
LAKA				S	**Sg**	**12 15 41.8**	**0.0**
EFP	**Efpalio**	**0.14**	**10**	P	**Pg**	**12 15 40.7**	**-0.3**
EFP				S	**Sg**	**12 15 43.8**	**+0.7**
EFP	**Efpalio**	**0.14**	**10**	*e*PG	**Pg**	**12 15 40.7**	**-0.3**
EFP				*e*SG	**Sg**	**12 15 43.4**	**+0.3**
EFP	**Efpalio**	**0.14**	**10**	P	**Pg**	**12 15 40.7**	**-0.3**
EFP				*e*Sg	**Sg**	**12 15 43.4**	**+0.3**
EFP				S	**Sg**	**12 15 43.8**	**+0.7**
TRIZ	**Trizonia**	**0.17**	**63**	P	**Pg**	**12 15 41.4**	**-0.1**
TRIZ				S	**Sg**	**12 15 44.8**	**+0.8**
TRIZ	**Trizonia**	**0.17**	**63**	P	**Pg**	**12 15 41.4**	**-0.1**
TRIZ				S	**Sg**	**12 15 44.8**	**+0.8**
KALE	**Kalithea**	**0.23**	**63**	P	**Pg**	**12 15 42.5**	**-0.1**
KALE				S	**Sg**	**12 15 46.3**	**+0.5**
KALE	**Kalithea**	**0.23**	**63**	P	**Pg**	**12 15 42.5**	**-0.1**
KALE				S	**Sg**	**12 15 46.3**	**+0.5**
RLS	**Riolos of Patr**	**0.39**	**235**	*e*Pg	**Pg**	**12 15 44.9**	**-0.7**
RLS				*e*Sb	**Sg**	**12 15 51.4**	**+0.6**
RLS	**Riolos of Patr**	**0.39**	**235**	*e*PG	**Pg**	**12 15 44.9**	**-0.7**
RLS				*e*SB	**Sg**	**12 15 51.4**	**+0.6**
RLS	**Riolos of Patr**	**0.39**	**235**	*e*Pg	**Pg**	**12 15 44.9**	**-0.7**
RLS				*e*Sb	**Sg**	**12 15 51.4**	**+0.6**
GUR	**Goura**	**0.51**	**133**	P	**Pg**	**12 15 47.0**	**-0.7**
GUR				S	**Sg**	**12 15 55.1**	**+0.7**
GUR	**Goura**	**0.51**	**133**	*e*PG	**Pg**	**12 15 47.1**	**-0.6**
GUR				*e*SB	**Sg**	**12 15 55.1**	**+0.7**
GUR	**Goura**	**0.51**	**133**	*e*Pg	**Pg**	**12 15 47.1**	**-0.6**
GUR				S	**Sg**	**12 15 55.1**	**+0.7**
DSF	**Desfina**	**0.53**	**76**	P	**Pg**	**12 15 47.6**	**-0.5**
DSF				S	**Sg**	**12 15 55.9**	**+0.9**
DSF	**Desfina**	**0.53**	**76**	P	**Pg**	**12 15 47.6**	**-0.5**
DSF				S	**Sg**	**12 15 55.9**	**+0.9**
EVR	**Evrytania**	**0.63**	**355**	*e*Pb	**Pb**	**12 15 49.3**	**-1.8**
EVR	**Evrytania**	**0.63**	**355**	*e*PB	**Pb**	**12 15 49.3**	**-1.8**
EVR	**Evrytania**	**0.63**	**355**	*e*Pb	**Pb**	**12 15 49.3**	**-1.8**
AGG	**Agios Georgios**	**0.82**	**26**	*e*Pb	**Pb**	**12 15 53.7**	**-0.6**
AGG	**Agios Georgios**	**0.82**	**26**	P	**Pg**	**12 15 52.7**	**-0.9**
AGG				S	**Sg**	**12 16 05.4**	**+1.1**
AGG	**Agios Georgios**	**0.82**	**26**	*e*PB	**Pb**	**12 15 53.7**	**-0.6**
AGG	**Agios Georgios**	**0.82**	**26**	P	**Pg**	**12 15 52.7**	**-0.9**
AGG	**Agios Georgios**	**0.82**	**26**	*e*Pb	**Pb**	**12 15 53.7**	**-0.6**
AGG				S	**Sg**	**12 16 05.4**	**+1.1**
KFL	**Anninata**	**0.88**	**259**	P	**Pg**	**12 15 55.1**	**+0.4**
KFL				S	**Sg**	**12 16 07.2**	**+1.1**
VLS	**Valsamata**	**1.02**	**264**	*e*Pb	**Pb**	**12 15 57.4**	**-0.3**
VLS				*e*Sb	**Sb**	**12 16 12.3**	**+1.1**
VLS	**Valsamata**	**1.02**	**264**	*e*PB	**Pb**	**12 15 57.4**	**-0.3**
VLS				*e*SB	**Sb**	**12 16 12.3**	**+1.1**
VLS	**Valsamata**	**1.02**	**264**	*e*Pb	**Pb**	**12 15 57.4**	**-0.3**
VLS				*e*Sb	**Sb**	**12 16 12.3**	**+1.1**
LKD2	**Lefkada island**	**1.08**	**298**	P	**Pg**	**12 15 58.2**	**-0.4**
LKD2				S	**Sg**	**12 16 13.4**	**+0.8**
LKD2	**Lefkada island**	**1.08**	**298**	P	**Pg**	**12 15 58.2**	**-0.4**
LKD2				S	**Sg**	**12 16 13.4**	**+0.8**
ITM	**Ithomi**	**1.10**	**178**	*e*Pb	**Pb**	**12 15 58.9**	**-0.3**
ITM	**Ithomi**	**1.10**	**178**	*e*PB	**Pb**	**12 15 58.9**	**-0.3**
ITM	**Ithomi**	**1.10**	**178**	*e*Pb	**Pb**	**12 15 58.9**	**-0.3**
PYL	**PYLOS**	**1.39**	**184**	*e*PB	**Pb**	**12 16 04.2**	**+0.1**
PYL	**PYLOS**	**1.39**	**184**	*e*Pb	**Pb**	**12 16 04.2**	**+0.1**

DJA 13 12:25:28, 9°.09S×112°.12E, h33km, MLv3.7/10, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRKI	**Karangkates**	**0.98**	**20**	P	Pn	12 25 45.9	+0.4
PWJI	**Pagerwojo**	**1.11**	**344**	P	Pn	12 25 47.2	0.0
PCJI	**Pacitan**	**1.29**	**314**	P	Pn	12 25 50.2	+0.5
SJI	**Sawahan**	**1.39**	**345**	P	Pn	12 25 51.5	+0.4
GMJI	**Gumukmas**	**1.54**	**58**	P	Pn	12 25 52.6	-0.6
GMJI				S	Sn	12 26 13.1	+1.1
NGJI	**Ngawi**	**1.83**	**339**	P	Pn	12 26 01.7	+4.5
UGM	**Wanagama**	**1.97**	**306**	P	Pn	12 25 59.1	+0.1
UGM				S	Sn	12 26 23.7	+1.2
GRJI	**Gresik**	**2.19**	**9**	P	Pn	12 26 02.8	+0.7
BYJI	**Banyuwangi**	**2.38**	**69**	P	Pn	12 26 05.3	+0.6
NBBI	**Negara**	**2.57**	**74**	P	Pn	12 26 07.6	+0.2
NBBI				S	Sn	12 26 40.3	+2.8
KMMI	**Kalianget**	**2.73**	**42**	P	Pn	12 26 09.7	+0.2
IGBI	**Denpasar**	**3.00**	**85**	P	Pn	12 26 13.9	+0.6
SRBI	**Singaraja**	**3.22**	**72**	P	Pn	12 26 16.8	+0.6
KHKI	**Kahang-Kahang**	**3.52**	**78**	P	Pn	12 26 20.4	0.0
CGJI	**Cibinong**	**6.83**	**291**	P	Pn	12 27 06.3	+0.4

*IDC **13** 12:57:49.5±1.0, 9°.51N×138°.28E, h0km, mb3.8/9, mb1 4.0/9, mb1mx3.8/23, mbtmp3.8/9, MS3.2/2, Ms1 3.2/2, ms1mx2.6/34, Error ellipse: s-maj=39.5km s-min=20.4km az=79.0*
*NEIC **13** 12:57:51.3±0.7, 9°.51N×138°.26E, h10km, Error ellipse: s-maj=24.5km s-min=14.6km az=80.0*
*ISCJB **13** 12:57:53.0±0.8, 9°.5N±0°.1×138°.1E±0°.2, h33km, mb3.7/9, MS3.2/2, Error ellipse: s-maj=30.0km s-min=16.5km az=171.7*

ISC 13 12:57:55.1±0.8, 9°.5N±0°.1×138°.2E±0°.2, h35km, n11, σ0°62/10, mb3.7/9, MS3.2/2, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**29.34**	**343**	P	**P**	**13 03 53.9**	**-0.7**
	0.5nm,0.6s,mb3.4,baz=158,slow=14,SNR=4.2						
KSRS				LR	LR	13 15 18.3	
	comp=Z,19nm,18.4s,MS2.8,baz=90,slow=36						
WRA	**Warramunga Arr**	**29.51**	**187**	P	**P**	**13 03 57.1**	**+0.8**
	0.8nm,0.8s,mb3.5,baz=7.9,slow=11,SNR=3.6						
ASAR	**Alice Springs**	**33.23**	**187**	P	**P**	**13 04 27.9**	**-1.1**
	0.6nm,0.7s,mb3.6,baz=14,slow=12,SNR=8.9						
ASAR				PcP	PcP	13 07 10.4	-0.7
	0.8nm,1.0s,baz=354,slow=4.9,SNR=4.8						
CMAR	**Chiang Mai Arr**	**39.06**	**288**	P	**P**	**13 05 19.1**	**+0.1**
	0.7nm,0.7s,mb3.5,baz=104,slow=7.5,SNR=4.5						
MKAR	**Makanchi Array**	**60.07**	**319**	P	**P**	**13 07 59.2**	**+0.5**
	0.5nm,0.6s,mb3.7,baz=84,slow=12,SNR=4.8						
MKAR	**Makanchi Array**	**60.07**	**319**	P	**P**	**13 07 59.2**	**+0.5**
KURK	**Kurchatov**	**63.64**	**322**	P	**P**	**13 08 22.8**	**+0.2**
	0.7nm,0.5s,mb3.9,baz=106,slow=6.3,SNR=4.5						
BVAR	**Borovoye Array**	**69.17**	**323**	P	**P**	**13 08 58.0**	**0.0**
	1.6nm,0.7s,mb4.1,baz=108,slow=9.5,SNR=6.6						
SPITS	**Spitsbergen Ar**	**86.95**	**350**	LR	LR	13 51 01.7	
	comp=Z,31nm,19.0s,MS3.7,baz=320,slow=37						
YKA	**Yellowknife Ar**	**89.43**	**26**	P	**P**	**13 10 47.6**	**-0.5**
	0.3nm,0.7s,mb3.7,baz=288,slow=5.2,SNR=3.4						
NVAR	**Mina Array Bea**	**94.54**	**50**	P	**P**	**13 11 13.1**	**+0.8**
	0.3nm,0.6s,mb3.9,baz=274,slow=4.2,SNR=3.8						

*ISK **13** 13:11:10.7, 39°.67N×30°.85E, h19km, MD2.8*
*DDA **13** 13:11:11.5, 39°.77N×30°.65E, h7km±1km, Md2.8*
*CSEM **13** 13:11:11.1±0.3, 39°.69N×30°.70E, h1km±4km, MD2.8, Error ellipse: s-maj=8.8km s-min=5.8km az=47.0*
*ISCJB **13** 13:11:11.1±0.5, 39°.68N±0°.04×30°.73E±0°.06, h10km, Error ellipse: s-maj=7.6km s-min=4.0km az=139.7*

ISC 13 13:11:11.4±0.6, 39°.67N±0°.04×30°.65E±0°.05, h4km±7km, n25, σ1°19/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESKT	**Eskisehir**	**0.21**	**134**	*e*PG	**Pg**	**13 11 15.2**	**-0.3**
ESKT				*e*SG	**Sg**	**13 11 18.8**	**+0.5**
ESKT	**Eskisehir**	**0.21**	**134**	*i* P	**Pg**	**13 11 15.1**	**-0.4**
ESKT				*i* S	**Sg**	**13 11 18.6**	**+0.4**
ESKT	**Eskisehir**	**0.21**	**134**	*e*Pg	**Pg**	**13 11 15.2**	**-0.3**
ESKT				*e*Sg	**Sg**	**13 11 18.8**	**+0.5**
SEYT	**Eskypehyr**	**0.21**	**134**	*i* P	**Pg**	**13 11 15.1**	**-0.4**
SEYT				*i* S	**Sg**	**13 11 18.6**	**+0.3**
BORA	**Eskisehir**	**0.26**	**324**	*i* P	**Pg**	**13 11 15.7**	**-0.8**
BORA				*i* S	**Sg**	**13 11 18.8**	**-1.1**
BORA	**Eskisehir**	**0.26**	**324**	*i* P	**Pg**	**13 11 15.7**	**-0.8**
BORA				*i* S	**Sg**	**13 11 18.8**	**-1.1**
SVRH	**Sivrihisar-ESK**	**0.71**	**108**	*e*PG	**Pg**	**13 11 22.2**	**-2.8**
SVRH	**Sivrihisar-ESK**	**0.71**	**108**	*e*Pg	**Pg**	**13 11 22.2**	**-2.8**
GULT	**Gulveren**	**0.77**	**352**	*e*PG	**Pg**	**13 11 26.9**	**+0.6**
GULT				*e*SG	**Sg**	**13 11 38.7**	**+2.5**
GULT	**Gulveren**	**0.77**	**352**	*e*Pg	**Pg**	**13 11 26.9**	**+0.7**
GULT				*e*Sg	**Sg**	**13 11 38.7**	**+2.5**
MDU	**Mudurnu**	**0.91**	**28**	*e*PG	**Pg**	**13 11 27.8**	**-1.0**
MDU	**Mudurnu**	**0.91**	**28**	*e*Pg	**Pg**	**13 11 27.8**	**-1.0**
BOLV	**Bolvadin**	**0.97**	**166**	*i* P	**Pg**	**13 11 32.1**	**+2.0**
BOLV				*i* S	**Sg**	**13 11 48.3**	**+5.6**
BOLV	**Bolvadin**	**0.97**	**166**	*i* P	**Pg**	**13 11 32.1**	**+2.0**
KIZT	**Kizilcal**	**1.23**	**129**	*e*PN	**Pn**	**13 11 32.2**	**-3.2**
ULDT	**Uludag**	**1.26**	**293**	*i* P	**Pg**	**13 11 36.2**	**+0.7**
ULDT				*i* S	**Sg**	**13 11 52.0**	**+0.1**
ULDT	**Uludag**	**1.26**	**293**	*i* P	**Pg**	**13 11 36.2**	**+0.7**
ULDT				*i* S	**Sg**	**13 11 52.0**	**+0.1**
YLV	**Yalova**	**1.33**	**313**	*e*PN	**Pn**	**13 11 36.2**	**-0.5**
YLV	**Yalova**	**1.33**	**313**	*e*Pn	**Pn**	**13 11 36.2**	**-0.5**
GEMT	**Gemlik**	**1.36**	**305**	*e*PN	**Pn**	**13 11 37.1**	**0.0**
GEMT	**Gemlik**	**1.36**	**305**	*e*Pn	**Pn**	**13 11 37.1**	**0.0**
SGKT	**Sivrigoynuk**	**1.41**	**49**	*i* P	**Pn**	**13 11 37.1**	**-0.7**
SGKT				*i* S	**Sb**	**13 11 57.9**	**+1.4**
SGKT	**Sivrigoynuk**	**1.41**	**49**	*i* P	**Pn**	**13 11 37.1**	**-0.7**
SGKT				*i* S	**Sb**	**13 11 57.8**	**+1.3**
ARMT	**Armutlu**	**1.64**	**304**	*e*PN	**Pn**	**13 11 41.2**	**+0.2**
ARMT	**Armutlu**	**1.64**	**304**	*e*Pn	**Pn**	**13 11 41.2**	**+0.2**

*IDC **13** 13:20:11.3±23.0, 2°.24N×123°.16E, h399km±103km, mb3.1/4, mb1 3.2/5, mb1mx2.9/23, mbtmp3.1/5, Error ellipse: s-maj=395.8km s-min=119.7km az=155.0*
*NEIC **13** 13:20:14.9±1.6, 2°.04N×122°.69E, h453km±26km, mb4.1/3, Error ellipse: s-maj=35.6km s-min=16.0km az=50.0*
*ISCJB **13** 13:20:14.5±2.1, 2°.0N±0°.2×122°.6E±0°.3, h464km±32km, mb3.4/3, Error ellipse: s-maj=48.6km s-min=21.6km az=139.7*

ISC 13 13:20:14.9±2.2, 2°.0N±0°.2×122°.7E±0°.3, h449km±34km, n10, σ0°47/10, mb3.4/3, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**7.60**	**203**	P	**P**	**13 22 06.1**	**+0.1**
	1.2nm,0.3s,baz=24,slow=15,SNR=5.0						
KKM	**Kota Kinabalu**	**7.60**	**302**	*e*Pn	**P**	**13 22 06.3**	**+0.3**
	6.8nm,0.3s						
KSM	**Kuching**	**12.41**	**268**	*e*P	**P**	**13 22 57.8**	**-0.5**
	10.0nm,1.0s						
KAKA	**Kakadu**	**17.55**	**147**	*e*P	**P**	**13 23 52.9**	**-0.2**
FITZ	**Fitzroy Crossi**	**20.22**	**172**	P	**P**	**13 24 19.1**	**+0.7**
	1.0nm,0.5s,baz=11,slow=11,SNR=10						
WRA	**Warramunga Arr**	**24.65**	**153**	P	**P**	**13 24 57.4**	**-0.9**
	1.0nm,0.5s,mb3.5,baz=335,slow=8.7,SNR=5.3						
WRA	**Warramunga Arr**	**24.65**	**153**	P	**P**	**13 24 57.4**	**-0.9**
ASAR	**Alice Springs**	**27.77**	**158**	P	**P**	**13 25 25.9**	**0.0**
	0.5nm,0.5s,mb3.2,baz=341,slow=9.2,SNR=18						
STKA	**Stephens Creek**	**38.20**	**154**	P	**P**	**13 26 55.2**	**+0.6**
	2.6nm,0.7s,mb3.8,baz=323,slow=9.2,SNR=5.2						
STKA	**Stephens Creek**	**38.20**	**154**	*e*P	**P**	**13 26 54.9**	**+0.3**
	0.6nm,0.6s,mb3.2						

*IDC **13** 13:20:54.1±0.8, 38°.41N×70°.27E, h0km, mb4.0/13, mb1 4.2/19, mb1mx4.0/32, mbtmp4.1/19, ML3

KLP eS Sn 13 25 03.5 -4.5
KLP AML AML 13 25 07.8
comp=N,132nnm,0.9s
JOSI Joshimath 11.26 134 eS Sn **13 25 39.3 -4.7**
JOSI AML AML 13 25 51.1
comp=E,209nnm,1.0s
JOSI AML AML 13 25 52.8
comp=N,165nnm,0.3s
NDI New Delhi 11.64 148 ePKP Pn **13 23 44.0 -0.9**
NDI ex x 13 25 44.0
KHET Khetri 11.66 155 ePKP Pn **13 23 45.4 +0.3**
AYAN Aya Nagar 11.78 149 ePKP Pn **13 23 46.0 -0.8**
AYAN eS Sn **13 25 49.4 -7.4**
AYAN AML AML 13 26 07.3
comp=Z,21nm,0.5s
MK31 Makanchi Array 11.96 44 ⇑Pn Pn **13 23 48.3 -0.8**
comp=Z,3.1nm,0.6s,baz=223,slow=9.1,SNR=40
MK31 Makanchi Array 11.96 44 ePn Pn **13 23 48.5 -0.6**
MKAR Makanchi Array 11.96 44 Pn Pn **13 23 48.9 -0.2**
comp=Z,0.3nm,0.3s,baz=224,slow=8.5,SNR=21
MKAR Lg 13 27 21.0
comp=Z,0.1nm,0.3s,baz=221,slow=26,SNR=3.4
SONA Sohna 11.97 149 ePKP Pn **13 23 49.3 -0.1**
SONA eS Sn **13 25 54.7 -6.7**
SONA AML AML 13 25 56.7
comp=N,10.0nm,0.3s
AB31 Akbulak array 12.79 328 ⇓Pn Pn **13 23 59.0 -1.4**
comp=N,26nm,0.7s,baz=142,slow=13,SNR=256
AB31 ⇓Sn Sn **13 26 20.5 -0.8**
comp=N,11nm,0.8s,baz=153,slow=22,SNR=6.5
ABKAR Akbulak array 12.79 328 ePn Pn **13 23 58.4 -2.1**
comp=N,27nm,0.6s
AGRA Agra 13.22 148 ex x 13 24 03.0
AGRA eS Sn **13 26 24.6 -7.5**
AGRA AML AML 13 26 29.6
comp=N,55nm,0.2s
KURK Kurchatov 13.34 24 Pn Pn **13 24 03.1 -4.9**
comp=N,0.1nm,0.3s,baz=212,slow=12,SNR=19
KURK Sn Sn **13 26 31.9 -2.8**
comp=N,0.0nm,0.3s,baz=186,slow=25,SNR=4.2
KURK Lg 13 28 03.3
comp=N,0.1nm,0.3s,baz=206,slow=30,SNR=4.7
KURK LR LR 13 29 50.7
comp=N,87nm,21.2s,baz=215,slow=40
KURK Kurchatov 13.34 24 ceP Pn **13 24 07.2 -0.8**
KURK pmax pmax
comp=Z,2.0nm,1.0s
KURK Kurchatov 13.34 24 ePn Pn **13 24 05.3 -2.7**
comp=Z,8.5nm,1.1s
VOSK Vostochnaya 13.96 2 ⇑Pn Pn **13 24 15.4 -0.9**
comp=Z,6.8nm,1.1s
VOSK ⇑Sn Sn **13 26 48.9 -0.7**
comp=Z,8.7nm,1.3s
ZRNK Zerenda 14.20 357 ⇓Pn Pn **13 24 18.8 -0.8**
comp=Z,2.9nm,0.7s
ZRNK ⇑Sn Sn **13 26 54.8 -0.7**
comp=Z,9.5nm,1.2s
BVA0 Borovoye Array 14.25 1 ⇑Pn Pn **13 24 19.3 -1.0**
comp=Z,1.1nm,0.8s,baz=170,slow=14,SNR=21
BVAR Borovoye Array 14.25 1 Pn Pn **13 24 19.7 -0.6**
comp=Z,0.9nm,0.3s,baz=169,slow=12,SNR=14
BVAR Sn Sn **13 26 56.1 -0.6**
comp=Z,0.1nm,0.3s,baz=156,slow=22,SNR=4.9
BVAR Lg 13 28 29.0
comp=Z,0.2nm,0.3s,baz=186,slow=26,SNR=3.8
BRVK Borovoye 14.28 0 ceP Pn **13 24 20.9 +0.2**
BRVK pmax pmax
comp=Z,13nm,1.7s
BRVK Borovoye 14.28 0 ePn Pn **13 24 18.5 -2.2**
comp=Z,5.7nm,0.8s
BRVK eSn Sn **13 26 56.0 -1.6**
AKTK Aktyubinsk 14.50 327 Pn Pn **13 24 23.0 -0.6**
AKTK LR LR 13 30 23.3
AKTO Aktyubinsk 14.50 327 ⇓Pn Pn **13 24 21.5 -2.2**
comp=Z,4.8nm,0.7s
AKTO ⇓Sn Sn **13 27 01.5 -1.3**
comp=Z,2.4nm,0.8s
AKTO Aktyubinsk 14.50 327 Pn Pn **13 24 23.0 -0.6**
comp=Z,1.0nm,0.3s,baz=138,slow=14,SNR=42
AKTO LR LR 13 30 23.3
comp=Z,156nm,18.5s,baz=240,slow=38
AKTO Aktyubinsk 14.50 327 P Pn **13 24 23.0 -0.6**
AKTO pmax pmax
comp=Z,1.0nm,0.3s
AKTO MLR MLR
comp=Z,156nm,18.5s
ZAA0 Zalesovo Array 18.17 29 ePn Pn **13 25 07.4 -2.5**
ZALV Zalesovo Beam 18.17 29 P Pn **13 25 07.6 -2.4**
comp=Z,0.3nm,0.3s,baz=225,slow=12,SNR=24
ZALV LR LR 13 32 36.6
comp=Z,99nm,19.6s,baz=250,slow=38
SVE Sverdlovsk 19.13 344 eP Pn **13 25 21.7 +0.2**
SVE eS S **13 28 50.3 -4.3**
SVE pmax pmax
comp=Z,10.0nm,0.9s
SVE MLR MLR
comp=Z,232nm,10.0s
ARU Arti 19.27 340 dP Pn **13 25 24.7 +1.4**
ARU S S **13 29 00.8 +3.4**
ARU pmax pmax
comp=Z,14nm,1.2s
ARU MLR MLR
comp=Z,196nm,14.0s
ARU Arti 19.27 340 eP Pn **13 25 18.6 -4.6**
comp=Z,11nm,1.0s
LSA Lhasa 19.52 111 P Pn **13 25 25.0 -1.5**
LSA Lhasa 19.52 111 eP Pn **13 25 22.2 -4.3**
LSA pmax pmax
comp=Z,8.0nm,0.7s
LSA Lhasa 19.52 111 eP Pn **13 25 22.1 -4.3**
comp=Z,7.6nm,0.7s
GNI Garni 19.68 282 P Pn **13 25 28.1 -0.2**
comp=Z,1.0nm,0.3s,baz=34,slow=6.9,SNR=9.3
GNI LR LR 13 34 39.0
comp=Z,104nm,18.7s,baz=159,slow=42
GNI Garni 19.68 282 ceP Pn **13 25 31.5 +3.3**
GNI pmax pmax
comp=Z,32nm,1.2s
GNI Garni 19.68 282 eP Pn **13 25 25.0 -3.2**
comp=Z,25nm,0.9s
ZEI Tsey 20.27 290 eP P **13 25 33.4 +0.5**
ZEI pmax pmax
comp=Z,13nm,0.6s
UMR Umm Al-Rimmam 20.70 250 eP P **13 25 38.1 +0.5**
UMR AMb AMB 13 25 43.4
comp=Z,60nm,0.7s
RDF Al-Radifah 21.16 249 eP P **13 25 43.3 +0.6**
RDF AMb AMB 13 25 46.6
comp=Z,74nm,1.1s,mb4.9
NAY Al-Naaiem 21.21 250 eP P **13 25 43.3 +0.1**
NAY AMb AMB 13 25 44.4
comp=Z,39nm,0.7s,mb4.8
KIV Kislovodsk 21.23 293 ⇑eP P **13 25 45.1 +1.9**
KIV eS S **13 29 36.7 +0.2**
KIV pmax pmax
comp=Z,9.0nm,0.7s,mb4.2
KIV MLR MLR
comp=Z,200nm,16.0s,MS3.6
KIV Kislovodsk 21.23 293 eP P **13 25 42.9 -0.3**
comp=Z,13nm,0.7s,mb4.4
SOKR Solikamsk 22.49 342 eP P **13 25 58.5 +2.0**
SOKR pmax pmax
comp=Z,6.0nm,0.8s,mb4.1
SOKR MLR MLR
comp=Z,130nm,14.0s,MS3.5
GTA Gaotai 22.96 79 eP P **13 26 00.9 -0.8**
GTA pP 13 26 05.3
GTA sP sP 13 26 08.5 -10
GTA pmax pmax
comp=Z,5.0nm,0.6s,mb4.1
GTA pmax pmax
comp=Z,98nm,4.5s
GTA LR LR
comp=N,130nm,14.1s,MS3.7
GTA LR LR
comp=E,140nm,13.8s,MS3.7
GTA LR LR
comp=Z,91nm,13.2s,MS3.4
VRHR Novokhopersk 23.51 311 eP P **13 26 13.6 +6.6**
VRHR pmax pmax
comp=N,30nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.7s
VRHR pmax pmax
comp=Z,20nm,0.7s,mb4.7
VORD Divnogorie 24.86 309 eP P **13 26 20.5 +1.2**
VORD pmax pmax
comp=E,30nm,1.2s
VORD pmax pmax
comp=Z,10.0nm,1.2s,mb4.2
VORD pmax pmax
comp=N,10.0nm,0.6s
VSR Storozhevoye 25.01 310 eP P **13 26 21.5 +0.8**
VSR pmax pmax
comp=E,8.0nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.5
VSR pmax pmax
comp=N,3.0nm,0.3s
MOY Mondy 25.03 49 eP P **13 26 22.3 +1.4**
ZAK Zakamensk 26.05 53 eP P **13 26 30.2 0.0**
ZAK pmax pmax
comp=Z,3.0nm,0.9s,mb3.8
SONM Songino Array 27.65 59 P P **13 26 43.5 -1.0**
comp=Z,1.4nm,0.9s,mb3.6,baz=270,slow=8.5,SNR=7.7
SONM LR LR 13 39 52.7
comp=Z,20nm,20.3s,MS2.7,baz=253,slow=41
SONM Songino Array 27.65 59 P P **13 26 43.5 -1.0**
SONM pmax pmax
comp=Z,1.0nm,0.9s
SONM MLR MLR
comp=Z,20nm,20.3s
OBN Obninsk 27.81 317 ⇑iP P **13 26 47.4 +1.5**
OBN eS S **13 31 21.1 -4.4**
OBN pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
OBN MLR MLR
comp=Z,100nm,13.0s,MS3.6
AKASG Malin Array Be 31.05 306 P P **13 27 15.0 +0.4**
comp=Z,2.9nm,0.6s,mb4.3,baz=78,slow=7.7,SNR=11
AKASG Malin Array Be 31.05 306 P P **13 27 15.0 +0.3**
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AKASG Malin Array Be 31.05 306 P P **13 27 15.0 +0.4**
MLR Muntele Rosu 33.15 296 LR LR 13 43 40.5
comp=Z,68nm,19.4s,MS3.4,baz=141,slow=41
ENH Enshi 33.27 93 eP P **13 27 31.9 -2.5**
comp=Z,4.2nm,0.4s,mb4.7
JOF Joensuu 33.58 329 eP P **13 27 36.7 0.0**
JOF pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
JOF Joensuu 33.58 329 ep P **13 27 36.7 0.0**
comp=Z,1.3nm,0.5s,mb4.1
FINES FINESS Array B 35.24 325 P P **13 27 52.0 +0.9**
comp=Z,3.6nm,0.8s,mb4.3,baz=106,slow=11,SNR=9.5
FINES LR LR 13 43 05.9
comp=Z,82nm,21.1s,MS3.5,baz=337,slow=37
FINES FINESS Array B 35.24 325 P P **13 27 52.0 +0.9**
FINES pmax pmax
comp=Z,4.0nm,0.8s
FINES MLR MLR
comp=Z,82nm,21.1s
KAF Kangasniemi 35.37 326 ep P **13 27 51.7 -0.5**
WHN Wuhan 36.95 89 eP P **13 28 05.6 -0.5**
KEV Kevo 38.45 337 ep P **13 28 17.5 -0.7**
comp=Z,0.4nm,0.3s,mb3.6
ARCES ARCESS Array B 38.80 337 P P **13 28 22.0 +0.9**
comp=Z,0.7nm,0.5s,mb3.7,baz=108,slow=7.8,SNR=13
ARCES LR LR 13 45 42.3
comp=Z,90nm,19.8s,MS3.6,baz=324,slow=38
GERES GERESS Array B 41.12 303 P P **13 28 41.3 +0.7**
comp=Z,0.5nm,0.6s,mb3.4,baz=73,slow=6.4,SNR=4.0
GERES GERESS Array B 41.12 303 P P **13 28 41.3 +0.7**
GERES pmax pmax
comp=Z,1.0nm,0.6s
NB2 NORSAR Subarra 42.18 322 P P **13 28 49.7 +0.5**
comp=Z,5.9nm,0.8s,mb4.3,baz=94,slow=8.6
NOA NORSAR Array B 42.18 322 P P **13 28 50.0 +0.8**
comp=Z,4.5nm,0.8s,mb4.1,baz=94,slow=8.2,SNR=12
NOA LR LR 13 47 21.2
comp=Z,50nm,18.7s,MS3.4,baz=90,slow=37
NOA NORSAR Array B 42.18 322 P P **13 28 50.0 +0.8**
NOA pmax pmax
comp=Z,5.0nm,0.9s
NOA MLR MLR
comp=Z,50nm,18.7s
KSRS Korea Array 44.79 73 P P **13 29 09.7 -0.8**
comp=Z,1.3nm,0.6s,mb3.9,baz=297,slow=3.1,SNR=5.6
KSRS Korea Array 44.79 73 P P **13 29 09.7 -0.8**
KSRS pmax pmax
comp=Z,1.0nm,0.6s,mb3.8
EKA Eskdalemuir Ar 50.22 315 P P **13 29 53.1 +0.8**
comp=Z,2.3nm,0.8s,mb4.3,baz=84,slow=7.6,SNR=4.3
EKA Eskdalemuir Ar 50.22 315 P P **13 29 53.2 +0.9**
EKA pmax pmax
comp=Z,2.0nm,0.8s
JMIC Jan Mayen 50.25 335 LR LR 13 53 45.2
comp=Z,31nm,19.0s,MS3.3,baz=111,slow=39
ESDC Sonseca Array 55.85 296 P P **13 30 35.4 +1.3**
comp=Z,2.3nm,0.6s,mb4.4,baz=61,slow=7.7,SNR=5.3
TORD Torodi Ar. Bea 65.16 267 P P **13 31 37.8 -0.1**
comp=Z,2.2nm,0.6s,mb4.4,baz=51,slow=5.6,SNR=26
COLD Coldfoot 69.95 16 eP P **13 32 05.7 -1.7**
comp=Z,1.7nm,0.7s,mb4.1
DBIC Dimbokro 74.19 266 LR LR 14 12 28.5
comp=Z,79nm,18.4s,MS4.0,baz=133,slow=42
YKA Yellowknife Ar 79.00 2 P P **13 33 00.5 +0.6**
comp=Z,0.5nm,0.7s,mb3.6,baz=351,slow=5.6,SNR=3.9
YKA Yellowknife Ar 79.00 2 P P **13 33 00.5 +0.6**
YKA pmax pmax
comp=Z,1.0nm,0.7s
WRA Warramunga Arr 83.74 122 P P **13 33 24.5 -1.1**
comp=Z,0.7nm,0.6s,mb4.0,baz=324,slow=4.9,SNR=3.2
WRA Warramunga Arr 83.74 122 P P **13 33 24.5 -1.1**
WRA pmax pmax
comp=Z,1.0nm,0.6s
ASAR Alice Springs 86.08 125 P P **13 33 36.9 -0.4**
comp=Z,0.5nm,0.8s,mb3.8,baz=319,slow=4.8,SNR=6.1
ASAR Alice Springs 86.08 125 P P **13 33 36.9 -0.4**
ASAR pmax pmax
comp=Z,1.0nm,0.8s

MEX 13 13:21:34.9±0.9, 17°.68N×99°.67W, h6km±5km, MD3.8, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEIG	**Mezcala**	**0.25**	**12**	*i* P	Pg	13 21 38.8	-1.2
MEIG				*i* S	Sg	13 21 44.0	+0.7
PLIG	**Platanillo**	**0.73**	**13**	*i* P	Pg	13 21 48.1	-0.8
PLIG				*i* S	Sg	13 21 57.9	-0.6
ACX	**Acapulco**	**0.84**	**196**	*i* P	Pg	13 21 49.1	-1.9
ACX				*i* S	Sg	13 22 00.2	-1.7
CAIG	**El Cayaco**	**0.84**	**222**	*i* P	Pg	13 21 49.8	-1.3
CAIG				*i* S	Sg	13 21 59.9	-2.1
MZVM		**1.56**	**16**	*i* P	Pn	13 22 03.1	-0.1
MZVM				*i* S	Sn	13 22 21.8	-1.9
ZIIG	**Zihuatanejo**	**1.71**	**268**	*e*P	Pn	13 22 02.1	-3.0
ZIIG				*i* S	Sn	13 22 21.8	-5.5
UTMO	**Huajuapan**	**1.79**	**85**	*e*P	Pn	13 22 03.8	-2.5
UTMO				*i* S	Sn	13 22 23.9	-5.4
PBVM	**Pinon**	**1.84**	**18**	*i* P	Pn	13 22 03.6	-3.5
PBVM				*i* S	Sn	13 22 25.4	-5.2
PNIG	**Pinotepa**	**1.95**	**131**	*i* P	Pn	13 22 05.6	-2.9
PNIG				*i* S	Sn	13 22 28.7	-4.7
PTVM	**Pico Tres Padr**	**1.98**	**16**	*i* P	Pn	13 22 05.7	-3.2
PTVM				*i* S	Sn	13 22 29.4	-4.6
IIO	**Organos**	**2.11**	**25**	*i* P	Pn	13 22 07.4	-3.3
IIO				*i* S	Sn	13 22 32.1	-5.0
TPIG	**Tehuac#an**	**2.32**	**71**	*i* P	Pn	13 22 11.6	-2.0
TPIG				*i* S	Sn	13 22 36.6	-5.9
MOIG	**Morelia**	**2.46**	**324**	*e*P	Pn	13 22 12.0	-3.5
MOIG				*i* S	Sn	13 22 40.5	-5.2
VHO	**Vista Hermosa**	**2.87**	**102**	*i* P	Pn	13 22 19.1	-2.0
VHO				*i* S	Sn	13 22 51.2	-4.8
HUIG	**Huatulco**	**3.91**	**119**	*i* P	Pn	13 22 32.5	-3.0
HUIG				*i* S	Sn	13 23 25.9	+4.3

IDC ***13*** *13:21:58.1±5.7, 36°.12N×70°.23E, h135km±51km, mb3.6/9, mb1 3.7/13, mb1mx3.5/30, mbtmp3.7/13, MS3.3/2, Ms1 3.3/2, ms1mx2.5/39, Error ellipse: s-maj=38.3km s-min=20.3km az=27.0*
NEIC ***13*** *13:22:02.0±2.8, 36°.28N×70°.36E, h170km±25km, mb4.4/1, Error ellipse: s-maj=22.6km s-min=13.1km az=190.0*
ISCJB ***13*** *13:22:05.5±0.7, 36°.56N±0°.05×70°.4E±0°.1, h211km±10km, mb3.7/8, Error ellipse: s-maj=15.3km s-min=8.3km az=4.3*
ISC 13 13:22:06.6±0.6, 36°.55N±0°.05×70°.4E±0°.1, h208km±10km**, n23,** σ1§**09**/24**, mb3.7**/8**, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.97**	**156**	P	Pn	**13 22 57.3**	**+0.9**
CEP				S	Sn	**13 23 35.0**	**-0.3**
CHCP	**Chirah Chowk**	**3.70**	**140**	P	Pn	**13 23 06.3**	**+1.3**
SARP	**Sargodha**	**4.97**	**158**	P	Pn	**13 23 20.5**	**-0.4**
KSH	**Kashi**	**5.28**	**54**	*e*Pn	Pn	**13 23 21.4**	**-3.2**
KSH				Sn	Sn	**13 24 18.8**	**-7.6**
KSH				smax			
	comp=N,190nm,0.4s						
KSH				smax			
	comp=E,120nm,0.4s						
AAK	**Ala-Archa**	**6.83**	**26**	P	Pn	**13 23 43.1**	**-1.6**
	comp=E,0.1nm,0.3s,baz=328,slow=16,SNR=5.2						
AAK				S	Sn	**13 25 02.4**	**-0.2**
	comp=E,0.2nm,0.3s,baz=327,slow=21,SNR=6.5						
MKAR	**Makanchi Array**	**13.52**	**37**	P	Pn	**13 25 11.2**	**+1.1**
	comp=E,0.4nm,0.3s,baz=212,slow=6.8,SNR=7.0						
KURK	**Kurchatov**	**15.33**	**20**	P	Pn	**13 25 31.3**	**-1.1**
	comp=E,0.2nm,0.3s,baz=211,slow=11,SNR=5.6						
AKTK	**Aktyubinsk**	**16.52**	**331**	P	P	**13 25 45.5**	**0.0**
AKTO	**Aktyubinsk**	**16.52**	**331**	P	P	**13 25 45.5**	**0.0**
	comp=E,0.9nm,0.3s,baz=132,slow=10,SNR=2.2						
ZAA0	**Zalesovo Array**	**20.06**	**25**	*e*P	P	**13 26 25.1**	**+1.2**
ZALV	**Zalesovo Beam**	**20.06**	**25**	P	P	**13 26 25.6**	**+1.7**
	comp=E,5.3nm,0.4s,baz=216,slow=11,SNR=7.3						
GNI	**Garni**	**20.45**	**288**	*e*P	P	**13 26 28.4**	**+0.2**
	comp=E,11nm,0.8s						
MMAI	**Mount Meron Ar**	**28.90**	**273**	LR	LR	13 40 43.9	
	comp=E,41nm,19.0s,baz=75,slow=39						
AKASG	**Malin Array Be**	**32.57**	**309**	P	P	**13 28 16.5**	**-1.6**
	comp=E,3.3nm,0.7s,mb4.0,baz=78,slow=8.1,SNR=5.5						
FINES	**FINESS Array B**	**37.19**	**326**	P	P	**13 28 58.4**	**+0.9**
	comp=E,2.6nm,0.6s,mb3.9,baz=111,slow=10,SNR=5.5						
ARCES	**ARCESS Array B**	**40.93**	**338**	P	P	**13 29 29.6**	**+1.3**
	comp=E,1.9nm,0.5s,mb3.8,baz=121,slow=4.7,SNR=9.3						
GERES	**GERESS Array B**	**42.54**	**305**	LR	LR	13 49 48.0	
	comp=E,45nm,18.1s,baz=341,slow=39						
HFS	**Hagfors**	**42.75**	**322**	P	P	**13 29 43.9**	**+0.7**
	comp=E,3.2nm,0.6s,mb3.9,baz=99,slow=9.1,SNR=3.2						
NB2	**NORSAR Subarra**	**44.07**	**323**	P	P	**13 29 54.0**	**+0.3**
	comp=Z,0.8nm,0.5s,mb3.3,baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.07**	**323**	P	P	**13 29 54.0**	**+0.3**
	comp=Z,2.0nm,0.8s,mb3.5,baz=97,slow=7.8,SNR=3.8						
TORD	**Torodi Ar. Bea**	**65.27**	**268**	P	P	**13 32 24.6**	**-1.9**
	comp=Z,1.2nm,0.5s,mb3.8,baz=43,slow=5.7,SNR=5.9						
WRA	**Warramunga Arr**	**82.40**	**122**	P	P	**13 34 04.6**	**-1.0**
	comp=Z,0.4nm,0.3s,mb3.5,baz=324,slow=4.7,SNR=2.8						
ASAR	**Alice Springs**	**84.65**	**125**	P	P	**13 34 16.4**	**-0.6**
	comp=Z,0.4nm,0.8s,mb3.2,baz=323,slow=5.5,SNR=3.4						

NNC ***13*** *13:31:20.2±2.1, 38°.70N×69°.95E, h0km, mb4.1, mpv4.1, Error ellipse: s-maj=16.1km s-min=14.4km az=7.0*
ISC 13 13:31:26.6±2.3, 38°.7N±0°.2×69°.86E±0°.09, h35km, n12, σ0§**91**/16**, 6C, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**4.40**	**6**	Pn	Pn	**13 32 31.2**	**+0.3**
	8.4nm,0.5s,baz=195,slow=16,SNR=77						
KK31				⇑Sn	Sn	**13 33 27.5**	**+6.5**
	14nm,0.6s						
KK31				⇑Lg		13 33 40.9	
	23nm,0.7s,baz=184,slow=32,SNR=4.8						
AML	**Almayashu**	**4.49**	**40**	P	Pn	**13 32 29.7**	**-2.4**
	SNR=24						
EKS2	**Erkin-Say**	**4.93**	**36**	P	Pn	**13 32 38.2**	**0.0**
	SNR=6.7						
UCH	**Uchtor**	**4.99**	**44**	P	Pn	**13 32 39.3**	**+0.4**
	SNR=14						
AAK	**Ala-Archa**	**5.26**	**41**	P	Pn	**13 32 42.5**	**-0.2**
	SNR=7.2						
KZA	**Kyzart**	**5.31**	**49**	P	Pn	**13 32 44.4**	**+1.1**
	SNR=9.9						
KBK	**Karagaybulak**	**5.51**	**43**	P	Pn	**13 32 47.1**	**+1.0**
	SNR=7.9						
CHMS	**Chumysh**	**5.66**	**39**	P	Pn	**13 32 48.3**	**+0.2**
	SNR=7.2						
TKM2	**Tokmak 2**	**6.04**	**44**	⇑Pn	Pn	**13 32 50.4**	**-3.0**
	18nm,0.6s						
TKM2				⇑Sn	Sn	**13 34 01.2**	**-0.2**
	8.8nm,0.6s						
TKM2	**Tokmak 2**	**6.04**	**44**	P	Pn	**13 32 53.5**	**0.0**
	SNR=26						
AB31	**Akbulak array**	**12.71**	**329**	Pn	Pn	**13 34 23.3**	**-1.4**
	1.5nm,0.7s,baz=78,slow=37,SNR=39						
AB31				Sn	Sn	**13 36 45.1**	**+0.4**
	4.9nm,0.7s,baz=154,slow=22,SNR=12						
AKTO	**Aktyubinsk**	**14.41**	**328**	⇑Pn	Pn	**13 34 48.7**	**+0.8**
	0.4nm,0.5s						
AKTO				⇑Sn	Sn	**13 37 26.1**	**-0.1**
	0.7nm,1.1s						

NIED ***13*** *13:32:00, 46°.50N×151°.50E, h68km, Mw4.0 Best double couple: M0§9.53000×10^14 NP1:φ§=213.00000°, δ86.00000°, λ74.00000°. NP2:φ§=110.00000°, δ16.00000°, λ167.00000°.*
ISCJB ***13*** *13:32:48.6±0.6, 46°.59N±0°.07×151°.43E±0°.09, h100km±5km, mb4.2/42, Error ellipse: s-maj=14.3km s-min=4.9km az=140.3*
JMA ***13*** *13:32:49.7±0.7, 46°.47N×151°.55E, h30km, M4.4*
MOS ***13*** *13:32:50.4±1.1, 46°.78N×151°.34E, h108km, mb4.7/11, Error ellipse: s-maj=10.9km s-min=8.0km az=83.7*
NEIC ***13*** *13:32:51.7±0.9, 46°.69N×151°.44E, h114km±8km, mb4.7/21, Error ellipse: s-maj=10.7km s-min=5.7km az=147.0*
IDC ***13*** *13:32:51.8±2.3, 46°.79N×151°.38E, h109km±20km, mb3.6/25, mb1 3.7/30, mb1mx3.7/34, mbtmp3.6/30, Error ellipse: s-maj=18.6km s-min=11.9km az=152.0*
ISC 13 13:32:50.5±0.5, 46°.64N±0°.07×151°.43E±0°.08, h102km±4km**, n115,** σ1§**04**/128**, mb4.2**/42**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.86**	**242**	*e*PN	Pn	**13 33 34.5**	**+0.2**
KUR				*e*S	Sn	**13 34 10.0**	**+2.0**
KUR				pmax	pmax		
	comp=Z,460nm,0.6s						
KUR				smax			
	comp=N,610nm,0.5s						
KUR				smax			
	comp=E,380nm,0.5s						
SKR	**Severo-Kuril's**	**5.10**	**36**	*e*PN	Pn	**13 34 04.5**	**+0.1**
SKR				*e*S	Sn	**13 35 02.6**	**+0.6**
SKR				pmax	pmax		
	comp=N,50nm,0.5s						
SKR				pmax	pmax		
	comp=E,60nm,0.5s						
SKR				pmax	pmax		
	comp=Z,90nm,0.5s						
SKR				smax			
	comp=N,60nm,0.5s						
SKR				smax			
	comp=E,80nm,0.5s						
NEM2	**Nemuro 2**	**5.19**	**233**	P	Pn	**13 34 04.2**	**-1.6**
NEM2				*e*S	Sn	**13 34 59.1**	**-5.3**
JRA	**Rausu**	**5.21**	**241**	P	Pn	**13 34 07.5**	**+1.6**
JNK	**Nakash**	**5.65**	**240**	P	Pn	**13 34 12.4**	**+0.5**
JNK				*e*S	Sn	**13 35 15.0**	**-0.4**
YSS	**Yuzh-Sakhalins**	**5.96**	**276**	*e*PN	Pn	**13 34 20.0**	**+3.8**
YSS				pmax	pmax		
	comp=E,70nm,1.0s						
YSS				pmax	pmax		
	comp=Z,60nm,1.0s						
YSS				pmax	pmax		
	comp=N,30nm,0.9s						
YSS	**Yuzh-Sakhalins**	**5.96**	**276**	*e*Pn	Pn	**13 34 19.2**	**+3.0**
	comp=N,57nm,0.8s						
JAK	**Akkeshi**	**6.02**	**235**	P	Pn	**13 34 15.3**	**-1.6**
JAK				*e*S	Sn	**13 35 19.7**	**-4.7**
JMP	**Maruseppu**	**6.27**	**248**	P	Pn	**13 34 22.6**	**+2.3**
JAR	**Ashorobuto**	**6.38**	**241**	P	Pn	**13 34 22.6**	**+0.8**
JAR				*e*S	Sn	**13 35 33.5**	**+0.3**
JOB	**Onbets**	**6.57**	**238**	P	Pn	**13 34 24.1**	**-0.3**
JOB				*e*S	Sn	**13 35 34.2**	**-3.6**
ASAJ	**Asahikawa**	**6.71**	**251**	P	Pn	**13 34 30.2**	**+3.8**
ASAJ	**Asahikawa**	**6.71**	**251**	P	Pn	**13 34 27.9**	**+1.6**
	comp=N,0.9nm,0.3s,baz=79,slow=14,SNR=9.3						
ASAJ	**Asahikawa**	**6.71**	**251**	PN	Pn	**13 34 28.0**	**+1.6**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
JKK2	**Kamakawa 2**	**6.72**	**249**	P	Pn	**13 34 28.8**	**+2.3**
JCH	**Churui**	**7.02**	**238**	P	Pn	**13 34 29.3**	**-1.3**
JCH				*e*S	Sn	**13 35 43.2**	**-5.6**

JEM Erimo 7.52 235 P Pn 13 34 37.0 -0.3
JEM eS Sn 13 35 55.3 -5.6
JBT2 Biratori 2 7.52 242 P Pn 13 34 37.5 +0.1
JNBK Urakawa-nobuka 7.58 238 P Pn 13 34 36.5 -1.7
JNBK eS Sn 13 35 55.3 -7.2
PETK Petropavlovsk- 7.63 30 P Pn 13 34 38.6 -0.2
comp=Z,0.8nm,0.3s,baz=200,slow=9.5,SNR=28
JNB Noboribetsu 8.51 244 P Pn 13 34 50.7 -0.1
JNB eS Sn 13 36 20.5 -4.5
JKB Kayabe 8.84 241 P Pn 13 34 53.3 -2.0
JKB eS Sn 13 36 25.0 -8.1
JTM Tenmabayashi 9.51 236 P Pn 13 35 01.4 -3.0
JTM eS Sn 13 36 39.1 -10
JANG Nango 9.54 233 P Pn 13 35 00.5 -4.3
JANG eS Sn 13 36 38.4 -12
JTH Tanohata 9.66 230 eS **Sn 13 36 41.1 -12**
JIO Ouri 11.05 226 eS **Sn 13 37 13.8 -13**
KLR Kul'dur 13.44 288 ePN **Pn 13 35 55.3 -1.6**
MJAR Matsushiro Arr 14.11 229 P Pn 13 36 07.8 +2.1
comp=Z,0.2nm,0.3s,baz=32,slow=12,SNR=3.6
FX1 Attu Island--F 15.34 58 P Pn 13 36 21.3 +0.1
comp=Z,1.7nm,0.3s,baz=198,slow=17,SNR=6.4
FX1 Attu Island--F 15.34 58 P Pn 13 36 21.3 +0.1
KSRS Korea Array 19.66 251 P P 13 37 12.8 +1.6
comp=Z,0.2nm,0.3s,baz=57,slow=10,SNR=18
KS15 Wonju Array Si 19.69 251 eP **P 13 37 11.0 -0.6**
YAK Yakutsk 19.80 329 eP **P 13 37 17.2 +4.7**
YAK pmax pmax
comp=Z,11nm,0.8s
YAK Yakutsk 19.80 329 eP **P 13 37 17.2 +4.7**
comp=Z,11nm,0.8s
SONM Songino Array 30.27 289 P P 13 38 51.4 -0.2
comp=Z,0.3nm,0.5s,mb3.1,baz=100,slow=7.7,SNR=2.5
ENH Enshi 36.21 258 eP **P 13 39 42.8 -0.5**
comp=Z,4.7nm,0.4s,mb4.8
ZALV Zalesovo Beam 41.73 305 PcP PcP 13 42 23.6 +0.1
comp=Z,1.1nm,0.5s,baz=61,slow=3.3,SNR=4.3
QIZ Qiongzhong 43.74 245 eP **P 13 40 42.1 -3.6**
comp=Z,39nm,1.3s,mb5.0
MKAR Makanchi Array 45.96 297 P P 13 41 01.8 -1.1
comp=Z,0.7nm,0.6s,mb3.6,baz=64,slow=12,SNR=5.8
MKAR PcP PcP 13 42 38.1 +0.1
comp=Z,0.8nm,0.5s,baz=70,slow=3.7,SNR=6.9
DLBC Dease Lake 46.50 45 P P 13 41 06.2 -0.8
comp=Z,1.7nm,0.8s,mb3.8,baz=267,slow=17,SNR=3.0
DLBC Dease Lake 46.50 45 P P 13 41 06.2 -0.8
LSA Lhasa 49.12 272 P P 13 41 29.5 +1.8
LSA Lhasa 49.12 272 eP **P 13 41 29.0 +1.3**
LSA pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
LSA Lhasa 49.12 272 eP **P 13 41 29.0 +1.3**
comp=Z,4.7nm,0.5s,mb4.7
BVAR Borovoye Array 50.03 309 P P 13 41 33.6 -0.7
comp=Z,0.5nm,0.4s,mb3.8,baz=74,slow=6.8,SNR=3.0
BVAR PcP PcP 13 42 52.7 +0.2
comp=Z,0.6nm,0.4s,baz=17,slow=1.5,SNR=3.8
CMAR Chiang Mai Arr 51.22 255 P P 13 41 44.9 +1.3
comp=Z,1.5nm,0.7s,mb4.1,baz=37,slow=7.0,SNR=8.0
YKA Yellowknife Ar 51.70 36 P P 13 41 47.2 +0.6
comp=Z,0.3nm,0.6s,mb3.5,baz=300,slow=7.0,SNR=3.8
SPITS Spitsbergen Ar 52.51 349 P P 13 41 52.5 +0.1
comp=Z,4.0nm,0.9s,mb4.5,baz=250,slow=11,SNR=3.1
TAPN Taplejung 52.95 272 eP **P 13 41 55.7 -0.6**
comp=Z,17nm,0.5s,mb5.3
ODAN Odare 53.48 272 eP **P 13 42 00.5 +0.3**
JIRN Jiri 53.80 273 eP **P 13 42 02.7 +0.2**
comp=Z,31nm,0.6s
GUN Gumba 53.85 274 eP **P 13 42 03.1 +0.2**
comp=Z,12nm,0.6s,mb5.1
RAMN Ramite 53.96 273 eP **P 13 42 03.5 -0.3**
comp=Z,45nm,0.4s
KKN Kakani 54.34 274 eP **P 13 42 06.8 +0.3**
comp=Z,21nm,0.6s
PKI Pulchoki 54.39 274 eP **P 13 42 06.8 0.0**
DMN Daman 54.57 274 eP **P 13 42 08.2 0.0**
comp=Z,35nm,0.9s
HOOD Mount Hood Mea 57.33 57 eP **P 13 42 25.9 -1.7**
comp=Z,273nm,1.1s
ARCES ARCESS Array B 57.57 340 P P 13 42 28.5 -0.4
comp=Z,1.4nm,0.9s,mb4.0,baz=21,slow=7.7,SNR=2.9
JOF Joensuu 60.91 333 ep **P 13 42 49.1 -2.9**
comp=Z,0.7nm,0.5s,mb4.0
NVAR Mina Array Bea 63.51 61 P P 13 43 10.2 +0.5
comp=Z,0.9nm,0.7s,mb3.7,baz=298,slow=7.6,SNR=6.9
FINES FINESS Array B 63.64 334 P P 13 43 08.7 -1.5
comp=Z,0.9nm,0.4s,mb4.0,baz=34,slow=7.1,SNR=13
PDAR Pinedale Array 65.74 53 P P 13 43 24.8 +0.6
comp=Z,0.5nm,0.7s,mb3.5,baz=233,slow=0.5,SNR=5.1
NB2 NORSAR Subarra 67.95 340 P P 13 43 37.7 -0.1
comp=Z,1.7nm,0.6s,mb4.0,baz=29,slow=6.5
NOA NORSAR Array B 67.95 340 P P 13 43 37.5 -0.3
comp=Z,0.8nm,0.5s,mb3.8,baz=27,slow=6.3,SNR=5.5
WRAB Tennant Creek 68.04 197 eP **P 13 43 37.3 -1.5**
WRAB pmax pmax
comp=Z,1.0nm,0.5s,mb3.9
WRAB Tennant Creek 68.04 197 eP **P 13 43 37.3 -1.5**
comp=Z,1.1nm,0.5s,mb3.9
WRA Warramunga Arr 68.05 197 P P 13 43 40.2 +1.3
comp=Z,0.4nm,0.8s,mb3.3,baz=22,slow=7.0,SNR=3.0
HFS Hagfors 68.15 339 P P 13 43 38.6 -0.5
comp=Z,1.6nm,0.5s,mb4.2,baz=54,slow=5.8,SNR=9.7
AKASG Malin Array Be 70.98 325 P P 13 43 55.5 -1.2
comp=Z,0.6nm,0.5s,mb3.8,baz=32,slow=5.7,SNR=4.8
ASAR Alice Springs 71.75 197 P P 13 44 01.9 +0.5
comp=Z,0.4nm,1.0s,mb3.2,baz=23,slow=5.0,SNR=3.0
ASAR pP pP 13 44 26.1 -1.2
comp=Z,0.4nm,0.9s,baz=13,slow=5.5,SNR=2.5
SCHQ Schefferville 73.85 22 P P 13 44 13.7 0.0
comp=Z,1.3nm,0.4s,mb4.0,baz=275,slow=11,SNR=6.3
EKA Eskdalemuir Ar 76.16 345 P P 13 44 26.7 -0.2
comp=Z,0.6nm,0.4s,mb3.6,baz=18,slow=4.5,SNR=6.6
BRTR Keskin Array B 77.67 316 P P 13 44 36.4 +0.7
comp=Z,1.1nm,0.6s,mb3.7,baz=77,slow=7.7,SNR=2.4
KHC Kasperske Hory 77.82 333 eP **P 13 44 41.0 +4.7**
KHC Kasperske Hory 77.82 333 eP **P 13 44 41.0 +4.7**
GERES GERESS Array B 78.04 333 P P 13 44 37.5 0.0
comp=Z,0.7nm,0.6s,mb3.6,baz=37,slow=6.7,SNR=2.6
TXAR Lajitas Array 78.55 59 P P 13 44 40.8 +0.1
comp=Z,0.7nm,0.5s,mb3.8,baz=296,slow=4.2,SNR=14
TXAR pP pP 13 45 04.0 -2.8
comp=Z,0.3nm,0.6s,baz=290,slow=4.1,SNR=3.7
ASF Jabal al Asfar 81.87 309 P P 13 44 58.3 -0.2
comp=Z,1.7nm,0.8s,mb3.9,baz=80,slow=12,SNR=3.6
MMAI Mount Meron Ar 82.01 310 P P 13 44 59.5 +0.3
comp=Z,2.5nm,0.5s,mb4.3,baz=48,slow=8.7,SNR=6.4
GRR Gorron 82.32 342 eP **P 13 45 00.3 -0.2**
comp=Z,17nm,0.7s,mb4.7
GRR Gorron 82.32 342 eP **P 13 45 00.3 -0.2**
GRR pmax pmax
comp=Z,9.0nm,0.7s,mb4.7
GRR Gorron 82.32 342 eP **P 13 45 00.3 -0.2**
comp=Z,8.6nm,0.7s,mb4.7
SGMF Saint Gilles 82.80 343 eP **P 13 45 03.0 0.0**
comp=Z,14nm,0.7s,mb4.6
SGMF Saint Gilles 82.80 343 eP **P 13 45 03.0 0.0**
SGMF pmax pmax
comp=Z,7.0nm,0.7s,mb4.6
SGMF Saint Gilles 82.80 343 eP **P 13 45 03.0 0.0**
comp=Z,7.3nm,0.7s,mb4.6
AVF Avril sur Loir 82.83 339 eP **P 13 45 03.0 -0.2**
SMF Signal de Mont 82.84 338 eP **P 13 45 03.2 -0.1**
comp=Z,7.5nm,0.7s,mb4.3
SMF Signal de Mont 82.84 338 eP **P 13 45 03.2 -0.1**
SMF pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
SMF Signal de Mont 82.84 338 eP **P 13 45 03.2 -0.1**
comp=Z,3.8nm,0.7s,mb4.3
ROSF Rostrenen 82.87 343 eP **P 13 45 03.2 -0.1**
comp=Z,21nm,1.0s,mb4.6
ROSF Rostrenen 82.87 343 eP **P 13 45 03.2 -0.1**
ROSF pmax pmax
comp=Z,11nm,1.0s,mb4.6
ROSF Rostrenen 82.87 343 eP **P 13 45 03.2 -0.1**
comp=Z,10nm,1.0s,mb4.6
LPL La Plagne 83.11 336 eP **P 13 45 06.2 +1.6**
comp=Z,7.9nm,0.6s,mb4.5
LPL La Plagne 83.11 336 eP **P 13 45 06.2 +1.6**
LPL pmax pmax
comp=Z,4.0nm,0.6s,mb4.4
LPL La Plagne 83.11 336 eP **P 13 45 06.2 +1.6**
comp=Z,4.0nm,0.6s,mb4.4
LPG La Plagne 83.12 336 eP **P 13 45 06.4 +1.7**
comp=Z,21nm,1.0s,mb4.6
LPG La Plagne 83.12 336 eP **P 13 45 06.4 +1.7**
LPG pmax pmax
comp=Z,11nm,1.0s,mb4.6
LPG La Plagne 83.12 336 eP **P 13 45 06.4 +1.7**
comp=Z,10nm,1.0s,mb4.6
TCF Toulx Ste Croi 83.59 339 eP **P 13 45 07.3 +0.2**
comp=Z,16nm,1.0s,mb4.5
TCF Toulx Ste Croi 83.59 339 eP **P 13 45 07.3 +0.2**
TCF pmax pmax
comp=Z,8.0nm,1.0s,mb4.5
TCF Toulx Ste Croi 83.59 339 eP **P 13 45 07.3 +0.2**
comp=Z,7.9nm,1.0s,mb4.5
MBDF Montbardon 83.82 335 eP **P 13 45 08.8 +0.5**
MFF Saint Martin d 83.85 341 eP **P 13 45 08.5 +0.1**
comp=Z,5.7nm,0.6s,mb4.3
MFF Saint Martin d 83.85 341 eP **P 13 45 08.5 +0.1**
MFF pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
MFF Saint Martin d 83.85 341 eP **P 13 45 08.5 +0.1**
comp=Z,2.8nm,0.6s,mb4.3
ORIF Oris-en-Rattie 83.89 336 eP **P 13 45 09.8 +1.1**
comp=Z,14nm,0.7s,mb4.6
ORIF Oris-en-Rattie 83.89 336 eP **P 13 45 09.8 +1.1**
ORIF pmax pmax
comp=Z,7.0nm,0.7s,mb4.6
ORIF Oris-en-Rattie 83.89 336 eP **P 13 45 09.8 +1.1**
comp=Z,6.8nm,0.7s,mb4.6
VIVF Saint-Julien-I 84.28 337 eP **P 13 45 11.2 +0.5**
EIL Elat 84.86 309 P P 13 45 14.3 +0.4
comp=Z,4.9nm,0.7s,mb4.6,baz=333,slow=6.8,SNR=6.2
EIL Elat 84.86 309 P P 13 45 14.3 +0.4
CAF Calviac 84.90 339 eP **P 13 45 14.4 +0.7**
comp=Z,8.9nm,0.8s,mb4.5
CAF Calviac 84.90 339 eP **P 13 45 14.4 +0.7**
CAF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
CAF Calviac 84.90 339 eP **P 13 45 14.4 +0.7**
comp=Z,4.4nm,0.8s,mb4.4
IDI Anoyia 85.34 319 P P 13 45 14.6 -1.6
comp=Z,4.6nm,0.6s,mb4.6,baz=16,slow=9.3,SNR=7.6

MAN 13 13:42:41, 13°.86N×122°.57E, h24km, mb4.8, ML3.7, MS3.7, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GQP	**Guinayangan**	**0.13**	**291**	eP		Pb	13 42 43.3	-2.4
GQP				eS		Sb	13 42 46.9	-2.1
AUQP	**San Andres**	**0.54**	**169**	eP		Pb	13 42 53.1	+1.3
AUQP				eS		Sb	13 43 02.9	+3.6
BOAC	**Boac**	**0.81**	**241**	eP		Pb	13 42 57.5	+1.1
BOAC				eS		Sb	13 43 08.8	+1.9
POLP	**Polilio Island**	**1.06**	**325**	eP		Pn	13 42 59.2	-1.2
POLP				eS		Sb	13 43 12.6	-1.6
PVCP	**Virac**	**1.56**	**99**	eP		Pn	13 43 07.2	0.0
SJMP	**San Jose**	**1.98**	**226**	eP		Pn	13 43 17.3	+4.2
BALP	**Baler**	**2.11**	**333**	eP		Pn	13 43 16.3	+1.5

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*BJI **13** 13:47:42.2, 5°.72S×128°.47E, h25km, mB5.1/31, mb5.0/49, Ms5.0/42, Ms7 4.6/41*
*ISCJB **13** 13:47:49.8±0.8, 4°.80S±0°.03×128°.21E±0°.03, h28km±5km, mb5.2/101, MS4.7/37, Error ellipse: s-maj=4.8km s-min=4.2km az=142.8*
*NEIC **13** 13:47:50.7±1.8, 4°.84S×128°.12E, h26km±13km, mb5.3/46, Error ellipse: s-maj=7.6km s-min=4.4km az=53.0*
*MOS **13** 13:47:50.5±1.0, 4°.79S×128°.08E, h33km, mb5.5/28, MS4.6/5, Error ellipse: s-maj=12.2km s-min=6.4km az=115.5*
*GCMT **13** 13:47:52.2±0.1, 4°.77S×128°.07E, h15km, MW5.4, Moment Tensor Solution. s77,c124; s99,c209; Moment tensor: Scale 10^17^Nm; M_{rr}0.15±.02; $M_{\theta\theta}$-0.91±.02; $M_{\phi\phi}$0.76±.03; $M_{r\theta}$0.02±.04; $M_{\theta\phi}$1.54±.03; $M_{\phi r}$0.53±.09; Best double couple: $M_0$1.80000×10^17^ NP1:ϕ_s77.00000°, δ73.00000°, λ6.00000°. NP2:ϕ_s345.00000°, δ84.00000°, λ163.00000°. Principal axes: T 1.8100, Plg16.0000°, Azm300.0000°; N 0.0500, Plg72.0000°, Azm146.0000°; P -1.8600, Plg7.0000°, Azm32.0000°; Data Used: II IU IC G CN. Surface waves from 106 sta.*
*DJA **13** 13:47:52, 4°.74S×128°.25E, h30km, Mw5.5/30*
*TEH **13** 13:47:53.0, 4°.80S×128°.08E, h35km*
*IDC **13** 13:47:53.2±2.6, 4°.77S×128°.15E, h41km±24km, mb4.8/21, mb1 4.8/23, mb1mx4.7/27, mbtmp4.8/23, MS4.6/21, Ms1 4.6/21, ms1mx4.5/27, Error ellipse: s-maj=18.2km s-min=11.1km az=69.0*

ISC 13 13:47:53.0±0.4, 4°.79S±0°.03×128°.23E±0°.03, h38km±3km, h35km±1.4km: pP-P, n295, σ1°.21/298, mb5.2/100, MS4.7/37, 12C-4D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**1.10**	**358**	P		**Pn**	**13 48 08.0**	**-3.9**
MSAI	**Masohi**	**1.60**	**26**	P		**Pn**	**13 48 16.8**	**-2.0**
NLAI	**Namlea**	**1.91**	**324**	P		**Pn**	**13 48 20.0**	**-3.1**
LBMI	**Labuha**	**4.19**	**350**	P		**Pn**	**13 48 53.1**	**-1.4**
TLE	**Tual**	**4.57**	**101**	P		**Pn**	**13 49 01.8**	**+2.2**
TNTI	**Ternate**	**5.59**	**351**	P		**Pn**	**13 49 13.4**	**-0.4**
	2.4nm9μm720nm,0.8s							
KDI	**Kendari**	**5.66**	**278**	P		**Pn**	**13 49 11.6**	**-3.0**
	1.7nm9μm138nm,1.1s							
LUWI	**Luwuk**	**6.60**	**304**	P		**Pn**	**13 49 26.1**	**-1.5**
	1.8nm6μm370nm,0.8s							
MNI	**Manado**	**7.06**	**331**	P		**Pn**	**13 49 34.0**	**+0.1**
	2.0nm6μm547nm,0.6s							
MMRI	**Maumere**	**7.07**	**237**	P		**Pn**	**13 49 34.0**	**0.0**
	0.9nm3μm228nm,1.1s							
APSI	**Ampana**	**7.62**	**300**	P		**Pn**	**13 49 40.2**	**-1.4**
	2.8nm501nm,1.0s							
BKSI	**Bulukumba**	**8.09**	**266**	P		**Pn**	**13 49 47.3**	**-0.8**
	2μm177nm,0.6s							
BNSI	**Bone**	**8.11**	**272**	P		**Pn**	**13 49 47.8**	**-0.5**
	2μm94nm,1.1s							
MRSI	**Marisa**	**8.18**	**310**	P		**Pn**	**13 49 48.8**	**-0.4**
	3μm298nm,0.6s							
KAPI	**Kappang**	**8.45**	**268**	Pn		**Pn**	**13 49 51.6**	**-1.4**
	834nm,0.5s,SNR=16							
KAPI	**Kappang**	**8.45**	**268**	P		**Pn**	**13 49 50.9**	**-2.1**
KAPI	**Kappang**	**8.45**	**268**	ePn		**Pn**	**13 49 50.4**	**-2.6**
SPSI	**Sidrap Palu**	**8.48**	**275**	P		**Pn**	**13 49 53.9**	**+0.6**
	119nm,1.0s							
TTSI	**Tana Toraja**	**8.57**	**281**	P		**Pn**	**13 49 55.0**	**+0.4**
	1μm88nm,0.9s							
SGSI	**Sangihe**	**8.84**	**342**	P		**Pn**	**13 49 59.1**	**+0.7**
	516nm,0.7s							
KAKA	**Kakadu**	**8.90**	**152**	eP		**Pn**	**13 49 57.9**	**-1.2**
	56nm,0.3s							
KAKA	**Kakadu**	**8.90**	**152**	ePn		**Pn**	**13 49 57.9**	**-1.3**
	321nm,0.6s							
KAKA	**Kakadu**	**8.90**	**152**	P		**Pn**	**13 49 59.1**	**0.0**
	2μm271nm,0.6s							
WSI	**Waingapu**	**9.24**	**238**	P		**Pn**	**13 50 05.2**	**+1.4**
	937nm,0.4s							
SMPI	**Sarmi**	**10.82**	**75**	P		**Pn**	**13 50 29.2**	**+3.7**
	88nm,1.0s							
KNA	**Kununurra**	**10.90**	**177**	P		**Pn**	**13 50 23.6**	**-3.0**
	6μm577nm,1.0s							
DAV	**Davao City (W)**	**12.08**	**347**	P		**Pn**	**13 50 42.5**	**-0.2**
	39nm,0.3s,baz=236,slow=11,SNR=3.1							
MMPI	**Merauke**	**12.61**	**107**	P		**Pn**	**13 50 50.3**	**+0.3**
JAY	**Jayapura**	**12.65**	**80**	P		**Pn**	**13 50 51.3**	**+0.7**
	7μm31nm,1.1s							
KHKI	**Kahang-Kahang**	**13.03**	**254**	P		**Pn**	**13 50 57.1**	**+1.4**
	2μm78nm,1.2s							
FITZ	**Fitzroy Crossi**	**13.47**	**191**	eP		**Pn**	**13 50 55.7**	**-6.0**
	39nm,0.4s							
FITZ				eS		**Sn**	**13 53 29.2**	**-0.9**
FITZ	**Fitzroy Crossi**	**13.47**	**191**	P		**Pn**	**13 50 56.7**	**-4.9**
	1.3nm,0.3s,baz=27,slow=11,SNR=30							
FITZ				S		**Sn**	**13 53 23.1**	**-7.0**
	1.5nm,0.3s,baz=66,slow=19,SNR=3.5							
FITZ				LR		LR	13 57 03.2	
	comp=Z,4μm,19.0s,baz=11,slow=41							
FITZ	**Fitzroy Crossi**	**13.47**	**191**	P		**Pn**	**13 50 57.4**	**-4.2**
	80nm,1.0s							
TSM	**Tawau**	**13.73**	**311**	P		**Pn**	**13 51 07.2**	**+1.9**
MYLDM	**Lahad Datu**	**13.88**	**315**	P		**Pn**	**13 51 08.5**	**+1.2**
MYLDM	**Lahad Datu**	**13.88**	**315**	P		**Pn**	**13 51 09.7**	**+2.4**
	2μm102nm,2.2s							
TBP	**Tagbilaran**	**15.03**	**343**	eP		**Pn**	**13 51 29.3**	**+6.5**
SDKM	**Sandakan**	**15.13**	**313**	P		**Pn**	**13 51 25.4**	**+1.3**
KKM	**Kota Kinabalu**	**16.12**	**312**	P		**Pn**	**13 51 37.5**	**+0.6**
KKM	**Kota Kinabalu**	**16.12**	**312**	ePn		**Pn**	**13 51 35.6**	**-1.3**
	804nm,2.4s							
KKM	**Kota Kinabalu**	**16.12**	**312**	P		**Pn**	**13 51 35.3**	**-1.6**
	2μm93nm,1.9s							
WRAB	**Tennant Creek**	**16.19**	**159**	Pn		**Pn**	**13 51 34.1**	**-3.6**
	1μm,1.1s,SNR=9.8							
WRAB	**Tennant Creek**	**16.19**	**159**	eP		**Pn**	**13 51 33.5**	**-4.2**
WRAB				pmax		pmax		
	comp=Z,312nm,1.3s							
WRAB	**Tennant Creek**	**16.19**	**159**	ePn		**Pn**	**13 51 33.5**	**-4.3**
	comp=Z,312nm,1.3s							
WRAB	**Tennant Creek**	**16.19**	**159**	P		**Pn**	**13 51 34.7**	**-3.0**
	comp=Z,2μmcomp=Z,194nm,1.3s							
WRA	**Warramunga Arr**	**16.19**	**159**	P		**Pn**	**13 51 33.8**	**-4.0**
	comp=Z,3.6nm,0.3s,baz=342,slow=12,SNR=38							
WRA				S		**Sn**	**13 54 28.5**	**-7.9**
	comp=Z,0.7nm,0.3s,baz=341,slow=22,SNR=4.9							
WRA				LR		LR	13 58 35.2	
	comp=Z,2μm,18.1s,baz=340,slow=40							
WRA	**Warramunga Arr**	**16.19**	**159**	P		**Pn**	**13 51 33.8**	**-4.0**
WRA				S		**Sn**	**13 54 28.5**	**-7.9**
KDM	**Kudat**	**16.27**	**316**	P		**Pn**	**13 51 39.2**	**+0.4**
SJI	**Sawahan**	**16.62**	**259**	P		**Pn**	**13 51 45.9**	**+2.6**
	comp=Z,164nm,2.3s							
PWJI	**Pagerwojo**	**16.63**	**258**	P		**Pn**	**13 51 45.9**	**+2.4**
	comp=Z,86nm,1.7s							
NGJI	**Ngawi**	**16.87**	**260**	P		**Pn**	**13 51 49.6**	**+3.2**
	comp=Z,168nm,1.3s							
BTM	**Bintulu**	**17.09**	**297**	P		**Pn**	**13 51 50.9**	**+1.8**
COEN	**Coen**	**17.32**	**123**	eP		**Pn**	**13 51 50.7**	**-1.3**
	comp=Z,646nm,0.8s							
COEN	**Coen**	**17.32**	**123**	P		**Pn**	**13 51 51.4**	**-0.6**
	comp=Z,5μmcomp=Z,458nm,1.4s							
STKI	**Sintang**	**17.41**	**286**	P		**Pn**	**13 51 52.9**	**-0.3**
SBUM	**Sibu**	**17.54**	**294**	P		**Pn**	**13 51 56.1**	**+1.4**
SBUM	**Sibu**	**17.54**	**294**	P		**Pn**	**13 51 56.1**	**+1.3**
	comp=Z,2μmcomp=Z,173nm,1.0s							
ENPP	**El Nido**	**18.15**	**331**	eP		**Pn**	**13 52 03.3**	**+1.1**
MBWA	**Marble Bar**	**18.24**	**206**	ePn		**Pn**	**13 52 01.3**	**-2.0**
	comp=Z,68nm,1.1s							
MBWA	**Marble Bar**	**18.24**	**206**	P		**Pn**	**13 52 02.2**	**-1.1**
	comp=Z,62nm,1.4s							
SJMP	**San Jose**	**18.54**	**338**	eP		**Pn**	**13 52 07.8**	**+0.8**
KSM	**Kuching**	**18.96**	**289**	P		**Pn**	**13 52 12.2**	**+0.2**
KSM	**Kuching**	**18.96**	**289**	ePn		**Pn**	**13 52 10.2**	**-1.8**
	comp=Z,167nm,1.1s							
KSM	**Kuching**	**18.96**	**289**	P		**Pn**	**13 52 11.0**	**-1.0**
	comp=Z,2μmcomp=Z,150nm,1.0s							
BOAC	**Boac**	**19.21**	**341**	eP		**Pn**	**13 52 16.0**	**+1.0**
ASAR	**Alice Springs**	**19.55**	**164**	P		**Pn**	**13 52 18.0**	**-1.0**
	comp=Z,9.9nm,0.3s,baz=346,slow=11,SNR=564							
LUBP	**Lubang**	**20.04**	**337**	eP		**P**	**13 52 24.7**	**+1.8**
TGY	**Tagaytay City**	**20.12**	**339**	P		**P**	**13 52 24.0**	**+0.2**
	comp=Z,95nm,0.3s,baz=228,slow=12,SNR=4.0							
LEM	**Lembang**	**20.61**	**263**	P		**P**	**13 52 29.1**	**0.0**
	comp=Z,5μmcomp=Z,360nm,1.0s							
TPI	**Tanjungpandan**	**20.63**	**275**	P		**P**	**13 52 30.8**	**+1.4**
	comp=Z,1μmcomp=Z,81nm,1.1s							
CBJI	**Citeko**	**21.34**	**265**	P		**P**	**13 52 36.3**	**-0.7**
	comp=Z,860nm,1.0s,mb6.0							
BALP	**Baler**	**21.44**	**342**	eP		**P**	**13 52 38.1**	**+0.1**
BCPH	**Baguio City Da**	**22.36**	**340**	eP		**P**	**13 52 47.4**	**-0.5**
RBSI	**Rajabasa**	**22.41**	**266**	P		**P**	**13 52 48.4**	**-0.2**
	comp=Z,2μmcomp=Z,112nm,1.6s,mb5.0							
CGJI	**Cibinong**	**22.50**	**264**	P		**P**	**13 52 49.8**	**+0.4**
	comp=Z,1μmcomp=Z,93nm,0.9s,mb5.2							
CAUP	**Cauayan**	**22.51**	**344**	eP		**P**	**13 52 51.2**	**+1.7**
BOLP	**Bolinao**	**22.59**	**339**	eP		**P**	**13 52 47.0**	**-3.4**
CTA	**Charters Tower**	**23.21**	**132**	eP		**P**	**13 52 57.8**	**+0.9**
	comp=Z,39nm,1.1s,mb4.8							
CTA				eS		**S**	**13 57 17.2**	**+11**
CTA	**Charters Tower**	**23.21**	**132**	P		**P**	**13 52 57.5**	**+0.6**
	comp=Z,23nm,0.8s,mb4.7,baz=314,slow=10,SNR=14							
CTA				LR		LR	14 03 08.4	
	comp=Z,3μm,18.6s,MS4.8,baz=319,slow=39							
CTAO	**Charters Tower**	**23.21**	**132**	eP		**P**	**13 52 57.0**	**+0.1**
CTAO				pmax		pmax		
	comp=Z,62nm,0.9s,mb5.0							
CTAO	**Charters Tower**	**23.21**	**132**	eP		**P**	**13 52 57.0**	**+0.1**
	comp=Z,62nm,0.9s,mb5.0							
CTAO	**Charters Tower**	**23.21**	**132**	P		**P**	**13 52 58.4**	**+1.5**
	comp=Z,85nm,1.1s,mb5.1							
KLI	**Kotabumi**	**23.29**	**269**	P		**P**	**13 52 59.7**	**+1.9**
	comp=Z,114nm,1.3s,mb5.2							
APYP	**Conner**	**23.54**	**343**	eP		**P**	**13 53 00.4**	**+0.3**
KASI	**Kota Agung**	**23.65**	**267**	P		**P**	**13 52 59.9**	**-1.3**
	comp=Z,100nm,1.3s,mb5.1							
MDSI	**Maura Dua**	**23.97**	**270**	P		**P**	**13 53 04.3**	**+0.1**
	comp=Z,1μmcomp=Z,48nm,1.6s,mb4.7							
JMBI	**JAMBI**	**24.75**	**276**	P		**P**	**13 53 13.5**	**+2.3**
	comp=Z,7μmcomp=Z,341nm,0.9s,mb5.9							
MYKOM	**Kota Tinggi**	**25.22**	**284**	P		**P**	**13 53 16.2**	**+0.7**
MYKOM	**Kota Tinggi**	**25.22**	**284**	P		**P**	**13 53 16.9**	**+1.4**
	comp=Z,2μmcomp=Z,139nm,1.2s,mb5.4							
KGM	**Kluang**	**25.79**	**285**	P		**P**	**13 53 21.3**	**+0.6**
FORT	**Forrest**	**25.85**	**180**	eP		**P**	**13 53 23.2**	**+2.2**
	comp=Z,55nm,0.7s,mb5.2							
FORT	**Forrest**	**25.85**	**180**	eP		**P**	**13 53 22.5**	**+1.5**
	comp=Z,92nm,1.0s,mb5.3							
KTGM	**Kuala Trenggan**	**27.00**	**292**	P		**P**	**13 53 31.8**	**+0.1**
SDSI	**Sungai Dareh**	**27.04**	**277**	P		**P**	**13 53 33.9**	**+1.9**
	comp=Z,834nmcomp=Z,39nm,1.5s,mb4.7							
FRIM	**Kepong**	**27.75**	**286**	P		**P**	**13 53 39.0**	**+0.6**
PDSI	**Padang**	**28.00**	**277**	P		**P**	**13 53 43.0**	**+2.4**
PPI	**P Padang Panjang**	**28.13**	**278**	P		**P**	**13 53 42.8**	**+1.1**
	comp=Z,43nm,1.1s,mb5.0							
KLBR	**Kellerberrin**	**28.41**	**199**	eP		**P**	**13 53 47.1**	**+3.0**
	comp=Z,30nm,1.2s,mb4.8							
IPM	**Ipoh**	**28.69**	**288**	P		**P**	**13 53 46.8**	**0.0**
IPM	**Ipoh**	**28.69**	**288**	P		**P**	**13 53 47.0**	**+0.2**
	comp=Z,45nm,1.2s,mb5.1							
TPUB	**Ta-pu**	**28.89**	**345**	eP		**P**	**13 53 48.7**	**+0.3**
	comp=Z,65nm,0.8s,mb5.4							
KULM	**Kulim**	**29.31**	**290**	P		**P**	**13 53 52.4**	**+0.2**
KULM	**Kulim**	**

comp=Z,1μm,20.0s,MS4.7,baz=143,slow=38
CHTO Chiang Mai 37.18 310 *e*P **P 13 54 59.2 -1.5**
CHTO pmax pmax
comp=Z,34nm,0.9s,mb5.2
CHTO Chiang Mai 37.18 310 *e*P **P 13 54 59.2 -1.5**
comp=Z,34nm,0.9s,mb5.2
CHTO Chiang Mai 37.18 310 P **P 13 55 00.0 -0.7**
comp=Z,49nm,0.9s,mb5.3
GYA Guiyang 37.44 327⇑*i*P **P 13 55 03.6 +0.8**
GYA pP pP 13 55 13.3 -0.3
GYA PP PP 13 56 31.8 +3.1
GYA S **S 14 00 49.8 +1.0**
GYA sS sS 14 01 05.3 -1.4
GYA pmax pmax
comp=Z,30nm,0.9s,mb5.1
GYA pmax pmax
comp=Z,120nm,3.1s
GYA LR LR
comp=N,2μm,22.3s,MS5.0
GYA LR LR
comp=E,2μm,19.8s,MS5.0
GYA LR LR
comp=Z,2μm,16.7s,MS5.0
WHN Wuhan 37.56 340⇓P **P 13 55 05.5 +1.7**
WHN S **S 14 00 51.9 +1.3**
WHN SS SS 14 03 36.8 +0.2
WHN LR LR
comp=N,1μm,14.3s,MS4.9
WHN LR LR
comp=E,330nm,12.4s,MS4.9
WHN LR LR
comp=Z,1μm,17.6s
NJ2 Nanjing 37.71 347 *e*P **P 13 55 06.1 +1.1**
NJ2 pP pP 13 55 17.3 +1.5
NJ2 sP sP 13 55 21.3 +0.9
NJ2 PP PP 13 56 36.3 +4.6
NJ2 S **S 14 00 53.0 +0.2**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
NJ2 pmax pmax
comp=Z,400nm,4.0s
KMI Kunming 38.70 321⇑P **P 13 55 15.3 +1.8**
KMI pP pP 13 55 25.8 +1.5
KMI sP sP 13 55 29.9 +1.0
KMI PP PP 13 56 46.3 +3.6
KMI S **S 14 01 10.3 +2.3**
KMI sS sS 14 01 27.5 +1.5
KMI ScS ScS 14 05 20.8 -0.3
KMI pmax pmax
comp=Z,27nm,1.2s,mb4.8
KMI pmax pmax
comp=Z,150nm,3.1s
KMI LR LR
comp=N,910nm,14.5s,MS4.8
KMI LR LR
comp=E,810nm,19.1s,MS4.8
KMI LR LR
comp=Z,670nm,23.9s,MS4.4
ENH Enshi 39.21 334 *e*P **P 13 55 17.9 +0.3**
comp=Z,32nm,0.9s,mb5.1
DZM Mont Dzumac 40.77 119 *e*S **S 14 01 45.3 +6.1**
comp=Z,650nm,27.6s
DZM *e*LR LR 14 06 54.9
comp=Z,3μm,32.3s
KSRS Korea Array 42.03 360 P **P 13 55 40.8 0.0**
comp=Z,13nm,0.9s,mb4.6,baz=178,slow=9.4,SNR=48
KSRS LR LR 14 12 12.1
comp=Z,715nm,19.9s,MS4.5,baz=180,slow=35
MAJO Matsushiro 42.16 12 *e*P **P 13 55 41.5 -0.4**
MAJO pmax pmax
comp=Z,23nm,0.8s,mb4.9
MAJO Matsushiro 42.16 12 *e*P **P 13 55 41.5 -0.4**
comp=Z,23nm,0.8s,mb4.9
MAT Matsushiro 42.16 12 P **P 13 55 42.0 +0.1**
MAT S **S 14 01 54.0 -5.3**
MJAR Matsushiro Arr 42.16 12 P **P 13 55 41.8 -0.1**
comp=Z,13nm,1.0s,mb4.5,baz=187,slow=9.9,SNR=19
MJAR LR LR 14 12 31.5
comp=Z,578nm,19.6s,MS4.5,baz=205,slow=35
CD2 Chengdu 42.51 328⇑*i*P **P 13 55 44.8 0.0**
CD2 pP pP 13 55 54.6 -1.2
CD2 sP sP 13 55 58.8 -1.5
CD2 PP PP 13 57 26.6 +2.7
CD2 PcS PcS 14 01 28.0 -1.2
CD2 S **S 14 02 04.9 +0.3**
CD2 sS sS 14 02 21.3 -1.4
CD2 ScS ScS 14 05 41.1 -2.5
CD2 pmax pmax
comp=Z,30nm,1.0s,mb5.0
CD2 pmax pmax
comp=Z,120nm,5.2s
CD2 LR LR
comp=N,1μm,21.4s,MS4.8
CD2 LR LR
comp=E,770nm,16.7s,MS4.8
CD2 LR LR
comp=Z,750nm,20.2s,MS4.6
XAN Xi'an 42.71 336 P **P 13 55 45.9 -0.5**
XAN pmax pmax
comp=Z,5.0nm,1.2s,mb4.1
BJI Beijing 45.97 347 P **P 13 56 12.8 +0.4**
BJI S **S 14 02 51.1 -3.6**
BJI SS SS 14 06 24.1 +4.0
BJI pmax pmax
comp=Z,24nm,0.9s,mb5.1
BJI pmax pmax
comp=Z,170nm,5.4s
BJI LR LR
comp=N,410nm,22.7s,MS4.4
BJI LR LR
comp=E,230nm,17.7s,MS4.4
BJI LR LR
comp=Z,460nm,19.1s,MS4.4
BJI LR LR
comp=Z,260nm,19.8s
SHL Shillong 46.42 312 *e*x pP 13 56 23.0 -4.2
LZH Lanzhou 46.64 333⇑P **P 13 56 19.0 +1.3**
LZH pP pP 13 56 30.0 +1.2
LZH sP sP 13 56 34.0 +0.7
LZH S **S 14 03 06.1 +1.6**
LZH sS sS 14 03 22.8 0.0
LZH pmax pmax
comp=Z,38nm,1.0s,mb5.3
LZH pmax pmax
comp=Z,190nm,4.3s
LZH LR LR
comp=E,870nm,15.2s
LZH LR LR
comp=Z,980nm,15.5s,MS4.9
VLA Vladivostok 47.80 4 *e*P **P 13 56 25.6 -1.0**
VLA pmax pmax
comp=Z,28nm,1.2s,mb5.2
VLA MLR MLR
comp=Z,600nm,15.5s,MS4.7
HHC Hu-ho-hao-te 47.92 343 *e*P **P 13 56 30.8 +3.2**
HHC pP pP 13 56 40.6 +1.9
HHC sP sP 13 56 44.5 +1.3
HHC PcP PcP 13 57 57.9 +2.3
HHC PP PP 13 58 23.0 +3.1
HHC ScP ScP 14 01 49.5 +2.3
HHC S **S 14 03 25.9 +3.4**
HHC sS sS 14 03 43.6 +2.8
HHC ScS ScS 14 06 17.8 -0.1
HHC SS SS 14 06 51.4 -0.4
HHC pmax pmax
comp=Z,15nm,1.1s,mb4.9
HHC pmax pmax
comp=Z,220nm,5.1s
HHC LR LR
comp=N,430nm,15.6s,MS4.6
HHC LR LR
comp=E,350nm,16.8s,MS4.6
HHC LR LR
comp=Z,580nm,16.8s,MS4.6
CN2 Changchun 48.43 357 *e*P **P 13 56 25.8 -5.7**
CN2 *e*pP pP 13 56 26.8 -16
CN2 *e*S **S 14 03 24.0 -5.6**
CN2 SS SS 14 06 47.4 -13
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
CN2 pmax pmax
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,500nm,19.0s,MS4.6
CN2 LR LR
comp=E,400nm,19.0s,MS4.6
CN2 LR LR
comp=Z,500nm,19.0s,MS4.5
MDJ Mudanjiang 49.20 1 P **P 13 56 39.0 +1.6**
MDJ pP pP 13 56 47.9 -0.6
MDJ sP sP 13 56 52.0 -1.0
MDJ PcP PcP 13 58 00.8 +0.7
MDJ PP PP 13 58 33.3 +1.8
MDJ ScP ScP 14 01 54.3 +1.8
MDJ S **S 14 03 45.8 +5.4**
MDJ ScS ScS 14 06 26.6 +0.3
MDJ SS SS 14 07 17.8 +5.5
MDJ pmax pmax
comp=Z,13nm,1.2s,mb4.8
MDJ pmax pmax
comp=Z,120nm,4.7s
MDJ LR LR
comp=N,210nm,26.4s,MS4.6
MDJ LR LR
comp=E,880nm,31.2s,MS4.6
MDJ LR LR
comp=Z,820nm,30.0s,MS4.5
MDJ Mudanjiang 49.20 1 *e*P **P 13 56 37.6 +0.2**
comp=Z,17nm,0.9s,mb5.1
LSA Lhasa 49.40 316 P **P 13 56 39.3 +0.1**
LSA LR LR
comp=Z,1μm,37.9s,MS4.6
LSA Lhasa 49.40 316 *e*P **P 13 56 40.0 +0.8**
LSA pmax pmax
comp=Z,35nm,0.9s,mb5.4
LSA Lhasa 49.40 316 *e*P **P 13 56 40.0 +0.8**
comp=Z,35nm,0.9s,mb5.4
ODAN Odare 50.49 311 *e*P **P 13 56 46.2 -1.3**
comp=Z,86nm,0.8s,mb5.8
TAPN Taplejung 50.51 312 *e*P **P 13 56 47.4 -0.3**
comp=Z,122nm,1.1s,mb5.7
RAMN Ramite 51.13 310 *e*P **P 13 56 51.4 -1.0**
comp=Z,221nm,1.0s,mb6.0
GTA Gaotai 51.20 332 *e*P **P 13 56 52.8 +0.1**
GTA pP pP 13 57 02.1 -1.7
GTA sP sP 13 57 06.0 -2.3
GTA PP PP 13 58 49.3 -0.6
GTA S **S 14 04 07.3 -1.2**
GTA pmax pmax
comp=Z,16nm,1.3s,mb4.8
GTA pmax pmax
comp=Z,82nm,5.4s
GTA LR LR
comp=N,330nm,17.4s,MS4.6
GTA LR LR
comp=E,470nm,20.1s,MS4.6
GTA LR LR
comp=Z,480nm,20.4s,MS4.5
JIRN Jiri 51.82 311 *e*P **P 13 56 57.1 -0.4**
comp=Z,93nm,0.8s,mb5.8
GUN Gumba 52.18 311 *e*P **P 13 56 59.8 -0.4**
comp=Z,162nm,0.8s,mb6.0
PKI Pulchoki 52.36 310 *e*P **P 13 57 00.8 -0.7**
comp=Z,84nm,1.1s,mb5.6
PKI Pulchoki 52.36 310 *e*P **P 13 57 00.8 -0.7**
PKI pmax pmax
comp=Z,84nm,1.1s,mb5.6
PKIN Phulchoki 52.38 310 *e*P **P 13 57 00.7 -0.9**
KKN Kakani 52.57 311 *e*P **P 13 57 01.5 -1.6**
comp=Z,71nm,1.0s,mb5.5
KKN Kakani 52.57 311 *e*P **P 13 57 01.5 -1.6**
KKN pmax pmax
comp=Z,71nm,1.0s,mb5.5
DMN Daman 52.61 310 *e*P **P 13 57 02.2 -1.2**
comp=Z,90nm,0.9s,mb5.7
YSS Yuzh-Sakhalins 53.10 12 *e*P **P 13 57 12.2 +5.6**
YSS *e*S **S 14 04 35.0 +0.8**
YSS *e*SS SS 14 08 09.0 -5.2
HABR Khabarovsk 53.38 6 *de*P **P 13 57 07.9 -0.7**
HABR *e**PP pP 13 57 17.7 -2.1
HABR *e**SP sP 13 57 21.6 -2.7
HABR *e* 13 58 13.6
HABR *e*S **S 14 04 39.5 +1.6**
HABR *e**SS sS 14 04 56.0 -0.5
HABR *e* 14 06 53.8
HABR *e*SS SS 14 08 21.2 +2.7
HABR pmax pmax
comp=E,20nm,1.4s
HABR pmax pmax
comp=Z,20nm,0.7s,mb5.2
HABR pmax pmax
comp=N,12nm,1.1s
HABR MLR MLR
comp=Z,356nm,17.0s,MS4.5
HYB Hyderabad 53.77 296 *e*P **P 13 57 13.0 +0.9**
HYB Hyderabad 53.77 296 *i* P **P 13 57 13.0 +0.9**
KLR Kul'dur 53.89 3 *e*P **P 13 57 09.7 -2.6**
KLR *e*S **S 14 04 38.0 -6.8**
KLR MLR MLR
comp=Z,800nm,16.0s,MS4.9
NGP Nagpur 54.67 300 *e*x x 13 58 44.1
URZ Urewera 55.45 134 *e*P **P 13 57 24.0 +0.1**
comp=Z,23nm,1.0s,mb5.2
ULN Ulaanbaatar 55.64 343⇑*e*P **P 13 57 25.6 +0.5**
ULN Ulaanbaatar 55.64 343 *e*P **P 13 57 25.2 +0.2**
comp=Z,20nm,1.1s,mb5.1
ULN Ulaanbaatar 55.64 343 P **P 13 57 26.4 +1.3**
comp=Z,19nm,1.1s,mb5.1
SONM Songino Array 55.81 342 P **P 13 57 26.0 -0.3**
comp=Z,12nm,1.0s,mb4.9,baz=159,slow=8.4,SNR=38
SONM LR LR 14 21 14.2
comp=Z,471nm,21.4s,MS4.5,baz=159,slow=36
AKL Akola 56.27 299 *e*PKP **P 13 57 28.9 -1.2**
AKL AMb AMB 13 57 35.1
comp=Z,50nm,2.4s,mb5.1
AGRA Agra 58.05 306 *e*x **P 13 57 39.1 -3.4**
AGRA AMb AMB 13 57 42.1
comp=Z,45nm,0.3s,mb5.9
JOSI Joshimath 58.28 310 *e*PKP **P 13 57 43.6 -0.5**
JOSI AMb AMB 13 57 47.9
comp=Z,452nm,0.2s
ZAK Zakamensk 59.02 342 *e*P **P 13 57 48.8 -0.1**
ZAK *e* 13 58 41.1
ZAK pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
BISR Bishrakh 59.03 307 *e*PKP **P 13 57 48.3 -1.1**
BISR AMb AMB 13 57 50.1
comp=Z,95nm,0.7s,mb6.0
SONA Sohna 59.17 307 *e*PKP **P 13 57 48.6 -1.8**
AYAN Aya Nagar 59.24 307 *e*PKP **P 13 57 48.7 -2.1**
AYAN AMb AMB 13 57 53.6
comp=Z,24nm,1.1s,mb5.2
KLP Kalpa 59.73 311 *e*PKP **P 13 57 54.1 -0.1**
TLY Talaya 60.05 343 *e*P **P 13 57 58.1 +2.2**
TLY *e*S **S 14 06 13.3 +7.3**
TLY pmax pmax
comp=Z,16nm,1.0s,mb5.0
KKR Kurukshetra 60.12 309 *e*PKP **P 13 57 55.9 -0.9**
KHET Khetri 60.12 306 *e*x **P 13 57 53.9 -3.0**
IRK Irkutsk 60.36 343 *e*P **P 13 57 59.1 +1.1**
IRK *e*S **S 14 06 24.5 +15**
IRK pmax pmax
comp=Z,34nm,2.0s,mb5.0
WMQ Urumqi 60.60 327 P **P 13 58 00.0 +0.2**
WMQ pP pP 13 58 10.0 -1.2
WMQ sP sP 13 58 14.0 -1.7
WMQ PP PP 14 00 15.0 +1.2
WMQ S **S 14 06 11.0 -2.3**
WMQ ScS ScS 14 07 44.0 -3.7
WMQ pmax pmax
comp=Z,54nm,1.0s,mb5.6
WMQ pmax pmax
comp=Z,150nm,6.0s
WMQ LR LR
comp=N,1μm,16.0s,MS5.2
WMQ LR LR
comp=E,580nm,16.0s,MS5.2
WMQ LR LR
comp=Z,500nm,16.0s,MS4.8
MOY Mondy 60.86 341 *e*P **P 13 58 03.5 +2.0**
MOY pmax pmax
comp=Z,24nm,2.2s,mb4.9
PETK Petropavlovsk- 62.81 19 P **P 13 58 15.6 +1.0**
comp=Z,11nm,0.8s,mb5.0,baz=207,slow=9.5,SNR=7.7
PETK LR LR 14 20 21.7
comp=Z,295nm,21.4s,MS4.4,baz=195,slow=31
PETK Petropavlovsk- 62.81 19 P **P 13 58 15.6 +1.0**
PETK LR LR 14 20 21.7
PET Petropavlovsk 63.07 20 *e*P **P 13 58 18.3 +2.0**
PET *e*S **S 14 06 47.7 +3.5**
PET *e*SSS 14 13 36.9
PET pmax pmax
comp=Z,21nm,1.4s,mb5.1
PET pmax pmax
comp=Z,400nm,6.7s
JASL Jaisalmer 63.71 303 *e*PKP **P 13 58 20.0 -1.0**
KSH Kashi 65.21 318 *e*P **P 13 58 30.6 0.0**
KSH pP pP 13 58 40.8 -1.3
KSH sP sP 13 58 44.8 -1.7
KSH PcP PcP 13 59 03.8 +0.9
KSH PP PP 14 00 59.3 +4.8
KSH ScP 14 03 02.5
KSH PcS 14 03 06.4
KSH S S 14 07 06.4 -4.9
KSH ScS ScS 14 08 18.8 -4.2
KSH pmax pmax
comp=Z,22nm,1.0s,mb5.1
KSH pmax pmax
comp=Z,69nm,3.4s
KSH LR LR
comp=N,120nm,5.1s
KSH LR LR
comp=E,180nm,5.8s
KSH LR LR
comp=Z,92nm,5.6s
MK31 Makanchi Array 65.43 327 *e*P **P 13 58 30.8 -1.1**
MKAR Makanchi Array 65.43 327 P **P 13 58 31.5 -0.4**
comp=Z,23nm,0.6s,mb5.3,baz=134,slow=7.4,SNR=67
MKAR LR LR 14 26 05.4
comp=Z,266nm,21.8s,MS4.4,baz=119,slow=35
ULHL Ulahol 66.42 320 P **P 13 58 39.1 +0.7**
SNR=7.4
YAK Yakutsk 66.64 1 *e*P **P 13 58 39.4 +0.1**
YAK *e**PP pP 13 58 47.8 -3.1
YAK *e* 14 01 04.7
YAK *e*S S 14 07 26.8 -1.1
YAK *e* 14 08 26.0
YAK pmax pmax
comp=Z,77nm,0.9s,mb5.7
YAK pmax pmax
comp=E,2.0nm,0.6s
YAK pmax pmax
comp=N,14nm,0.9s
YAK pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
YAK pmax pmax
comp=N,2.0nm,0.6s
YAK pmax pmax
comp=E,8.0nm,0.9s
YAK smax
comp=N,134nm,4.1s
YAK smax
comp=E,29nm,2.3s
YAK MLR MLR
comp=Z,613nm,25.0s,MS4.7
YAK MLR MLR
comp=E,128nm,20.0s,MS4.6
YAK MLR MLR
comp=N,412nm,22.0s,MS4.6
YAK Yakutsk 66.64 1 *e*P **P 13 58 39.1 -0.2**
comp=N,89nm,0.7s,mb5.9
KZA Kyzart 66.97 320 P **P 13 58 42.3 +0.4**
SNR=20
TKM2 Tokmak 2 67.17 321 P **P 13 58 42.8 -0.4**
SNR=19
TKM2 Tokmak 2 67.17 321 *e*P **P 13 58 42.5 -0.6**
TKM2 pmax pmax
comp=Z,28nm,1.1s,mb5.2
TKM2 Tokmak 2 67.17 321 *e*P **P 13 58 42.5 -0.6**
comp=Z,28nm,1.1s,mb5.2
KBK Karagaybulak 67.45 320 P **P 13 58 48.7 +3.8**
SNR=5.2
UCH Uchtor 67.51 320 P **P 13 58 46.0 +0.7**
SNR=19
UCH Uchtor 67.51 320 *e*P **P 13 58 45.0 -0.4**
comp=Z,15nm,1.0s,mb5.0
AAK Ala-Archa 67.73 320 P **P 13 58 49.8 +3.2**
SNR=7.0
AAK Ala-Archa 67.73 320 *e*P **P 13 58 46.5 -0.1**
AAK Ala-Archa 67.73 320 P **P 13 58 46.8 +0.1**
AML Almayashu 68.00 319 P **P 13 58 48.5 +0.1**
SNR=26
AML Almayashu 68.00 319 *e*P **P 13 58 48.1 -0.2**
comp=Z,43nm,1.2s,mb5.3
KBL Kabul 68.00 310 *e*P **P 13 58 47.4 -1.2**
KBL pmax pmax
comp=Z,21nm,0.9s,mb5.2
KBL Kabul 68.00 310 *e*P **P 13 58 47.4 -1.1**
comp=Z,21nm,0.9s,mb5.2
USP Ospenovka 68.04 321 P **P 13 58 48.4 -0.2**
SNR=7.2
EKS2 Erkin-Say 68.20 320 P **P 13 58 50.0 +0.3**
SNR=28
EKS2 Erkin-Say 68.20 320 *e*P **P 13 58 49.5 -0.1**
comp=Z,25nm,0.9s,mb5.2
ZAA0 Zalesovo Array 68.84 334 *e*P **P 13 58 52.0 -1.3**
ZALV Zalesovo Beam 68.84 334 P **P 13 58 52.1 -1.2**
comp=Z,55nm,1.1s,mb5.4,baz=122,slow=4.9,SNR=28
ZALV LR LR 14 32 04.7
comp=Z,189nm,21.0s,MS4.3,baz=279,slow=39
KURK Kurchatov 69.73 329 *ce*P **P 13 58 58.3 -0.6**
KURK pmax pmax
comp=Z,71nm,1.0s,mb5.5
KURK Kurchatov 69.73 329 *e*P **P 13 58 57.9 -1.1**
comp=Z,52nm,0.8s,mb5.5
SEY Seymchan 69.99 11 *ce*P **P 13 59 01.7 +1.4**
SEY Seymchan 69.99 11⇑*e*P **P 13 59 01.8 +1.5**
NVS Novosibirsk 70.13 334 *e*P **P 13 58 59.6 -1.7**
NVS *e*S S 14 08 06.8 -2.8
NVS pmax pmax
comp=N,22nm,1.1s
NVS pmax pmax
comp=E,26nm,1.1s
NVS pmax pmax
comp=Z,36nm,1.1s,mb5.2
NVS smax
comp=N,17nm,1.9s
NVS smax
comp=E,20nm,1.9s
IDAH Dahanechah 74.63 306 *e*P **P 13 59 28.3 -0.4**
BVAR Borovoye Array 75.27 328 P **P 13 59 31.1 -0.8**
comp=E,9.4nm,0.8s,mb4.8,baz=132,slow=7.6,SNR=24
BRVK Borovoye 75.34 328 P **P 13 59 31.8 -0.5**
comp=E,125nm,0.9s,mb5.8,SNR=13
BRVK Borovoye 75.34 328 *ce*P **P 13 59 31.9 -0.4**
BRVK pmax pmax
comp=Z,24nm,1.0s,mb5.1
BRVK Borovoye 75.34 328 *e*P **P 13 59 31.7 -0.6**
comp=Z,22nm,1.0s,mb5.0
TIXI Tiksi 76.30 0 *e*P **P 13 59 36.8 -0.6**
MAW Mawson 76.36 201 P **P 13 59 38.5 +0.6**
comp=Z,7.4nm,1.1s,mb4.5,baz=71,slow=5.9,SNR=5.7
MAW LR LR 14 32 55.8
comp=Z,499nm,18.4s,MS4.9,baz=61,slow=35
IAKL Akhelmad 76.59 309 *e*P **P 13 59 39.5 -0.3**
IEMG Emamgholi 76.90 310 *e*P **P 13 59 41.7 +0.2**
BILL Bilibino 77.39 14⇑*e*P **P 13 59 44.0 +0.4**
BILL pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
BILL Bilibino 77.39 14 *e*P **P 13 59 43.4 -0.2**
comp=Z,3.9nm,0.7s,mb4.5
IBAF Bafgh 77.87 304 *e*P **P 13 59 46.0 -1.1**
NIKO Nikolski 77.98 33 *e*P **P 13 59 47.0 -0.3**
comp=Z,7.1nm,0.5s,mb4.8
ISRV Sarvestan 79.46 301 *e*P **P 13 59 59.4 +3.5**
IPAR Pars 79.61 301 *e*P **P 13 59 55.9 -0.8**
ABKAR Akbulak array 79.70 322 *e*P **P 13 59 55.2 -1.6**
comp=Z,25nm,1.1s,mb5.1
IANJ Anjilo 80.10 307 *e*P **P 13 59 59.1 -0.1**
IGAR Gharneh 80.97 304 *e*P **P 14 00 05.7 +1.7**
PPT Papeete 81.14 107 *e*S S 14 10 13.1 +0.3
comp=Z,129nm,23.5s
PPT *e*LR LR 14 25 31.4
comp=Z,1μm,34.8s
PPT Papeete 81.14 107 LR LR 14 31 04.1
comp=Z,484nm,18.9s,MS4.9,baz=164,slow=32
AKTK Aktyubinsk 81.26 322 P **P 14 00 04.3 -0.8**
AKTK LR LR 14 41 55.6
AKTO Aktyubinsk 81.26 322 P **P 14 00 04.3 -0.8**
comp=Z,24nm,0.9s,mb5.1,baz=107,slow=6.4,SNR=38
AKTO LR LR 14 41 55.6
comp=Z,309nm,20.1s,MS4.7,baz=261,slow=40
IKLH Kolahrood 81.53 305 *e*P **P 14 00 06.5 -0.4**
IDMV Damavand 81.62 307 *e*P **P 14 00 06.8 -0.6**
IPIR Pirpir 81.97 304 *e*P **P 14 00 08.9 -0.4**
SVE Sverdlovsk 81.98 329⇑*e*P **P 14 00 08.3 -0.5**

SVE				*e*		pP	14 00 21.0 +0.5
SVE				*e*PPP			14 05 03.5
SVE				*e*S		S	14 10 11.1 -8.9
SVE				pmax		pmax	
	comp=Z,61nm,1.0s,mb5.5						
ARU	**Arti**	**82.91**	**328**	P		**P**	**14 00 12.5 -1.1**
	comp=Z,245nm,1.1s,mb6.2,SNR=9.1						
ARU	**Arti**	**82.91**	**328**	*d* P		**P**	**14 00 12.6 -1.0**
ARU				*e*			14 03 25.5
ARU				S		S	14 10 29.2 -0.3
ARU				SS		SS	14 15 57.3 +3.9
ARU				pmax		pmax	
	comp=Z,51nm,1.2s,mb5.4						
ARU	**Arti**	**82.91**	**328**	*e*P		**P**	**14 00 12.2 -1.4**
SOKR	**Solikamsk**	**84.83**	**331**	*c* P		**P**	**14 00 23.4 0.0**
SOKR				S		S	14 10 41.3 -7.4
SOKR				SS		SS	14 16 17.8 -3.8
SOKR				pmax		pmax	
	comp=Z,20nm,0.9s,mb5.2						
IGHG	**Ghaleghazi**	**85.81**	**305**	*e*P		**P**	**14 00 31.5 +2.6**
MAK	**Makhachkala**	**86.47**	**313**	*e*P		**P**	**14 00 31.7 -0.2**
MAK				*e*			14 03 57.4
MAK				*e*PPP			14 05 50.2
MAK				*e*S		S	14 10 54.9 -11
MAK				*e*			14 12 21.6
MAK				pmax		pmax	
	comp=Z,140nm,1.0s,mb6.2						
ISHB	**Shabestar**	**87.16**	**309**	*e*P		**P**	**14 00 33.6 -1.8**
SVW2	**Sparrevohn**	**87.53**	**28**	*e*P		**P**	**14 00 38.8 +2.1**
TTA	**Tatalina**	**87.80**	**26**	*e*P		**P**	**14 00 38.3 +0.4**
TTA				pmax		pmax	
	comp=Z,11nm,0.8s,mb5.1						
TTA	**Tatalina**	**87.80**	**26**	*e*P		**P**	**14 00 38.2 +0.4**
	comp=Z,11nm,0.8s,mb5.2						
GNI	**Garni**	**88.09**	**310**	*e*P		**P**	**14 00 44.0 +4.2**
GNI				pmax		pmax	
	comp=Z,14nm,0.8s						
GNI	**Garni**	**88.09**	**310**	*e*P		**P**	**14 00 44.0 +4.2**
	comp=Z,14nm,0.8s,mb5.2						
KDAK	**Kodiak Island**	**88.28**	**32**	*e*P		**P**	**14 00 39.1 -1.1**
KDAK				pmax		pmax	
	comp=Z,23nm,1.0s,mb5.4						
KDAK	**Kodiak Island**	**88.28**	**32**	*e*P		**P**	**14 00 39.1 -1.2**
	comp=Z,23nm,1.0s,mb5.3						
ZEI	**Tsey**	**89.06**	**313**	*e*P		**P**	**14 00 48.9 +4.6**
ZEI				pmax		pmax	
	comp=Z,10.0nm,0.5s,mb5.4						
GOF	**Gofitskoye**	**89.97**	**315**	*e*P		**P**	**14 00 45.4 -3.1**
PMR	**Palmer**	**90.68**	**28**	*e*P		**P**	**14 00 53.0 +1.6**
TAOE	**Nuku Hiva Isla**	**90.87**	**99**	*e*LR		LR	14 30 12.7
	comp=Z,321nm,21.3s						
MCK	**McKinley**	**91.09**	**26**	*e*P		**P**	**14 00 53.7 +0.4**
MCK				pmax		pmax	
	comp=Z,13nm,1.2s,mb5.1						
MCK	**McKinley**	**91.09**	**26**	*e*P		**P**	**14 00 53.7 +0.4**
	comp=Z,13nm,1.2s,mb5.1						
COLD	**Coldfoot**	**91.12**	**23**	*e*P		**P**	**14 00 52.4 -0.9**
	comp=Z,3.7nm,0.9s,mb4.7						
PAX	**Paxson**	**92.55**	**27**	*e*P		**P**	**14 00 59.8 -0.3**
PAX				pmax		pmax	
	comp=Z,13nm,1.2s,mb5.2						
PAX	**Paxson**	**92.55**	**27**	*e*P		**P**	**14 00 59.8 -0.3**
	comp=Z,13nm,1.2s,mb5.2						
BMRM	**Bremner River**	**92.78**	**29**	*e*P		**P**	**14 00 59.7 -1.5**
VSR	**Storozhevoye**	**93.11**	**321**	*e*P		**P**	**14 01 03.9 +1.0**
VSR				pmax		pmax	
	comp=N,8.0nm,0.4s						
VSR				pmax		pmax	
	comp=E,6.0nm,0.4s						
VSR				pmax		pmax	
	comp=Z,6.0nm,0.4s,mb5.4						
RKT	**Rikitea**	**94.37**	**114**	*e*LR		LR	14 31 45.3
	comp=Z,377nm,34.8s						
EGAK	**Eagle**	**94.56**	**25**	*e*P		**P**	**14 01 07.5 -1.8**
	comp=Z,4.7nm,0.8s,mb5.0						
MMAI	**Mount Meron Ar**	**94.95**	**303**	LR		LR	14 50 38.5
	comp=Z,360nm,18.5s,MS4.9,baz=65,slow=40						
BRTR	**Keskin Array B**	**96.57**	**309**	P		**P**	**14 01 18.8 -0.2**
	comp=Z,0.2nm,0.3s,mb4.0,baz=70,slow=4.7,SNR=2.4						
INK	**Inuvik**	**97.48**	**22**	LR		LR	14 41 22.1
	comp=Z,116nm,21.0s,MS4.3,baz=261,slow=33						
ARCES	**ARCESS Array B**	**98.91**	**340**	P		**P**	**14 01 27.3 -1.6**
	comp=Z,3.8nm,0.9s,mb4.9,baz=77,slow=8.5,SNR=7.4						
ARCES				LR		LR	14 53 40.6
	comp=Z,246nm,18.4s,MS4.7,baz=31,slow=40						
ARCES	**ARCESS Array B**	**98.91**	**340**	P		**P**	**14 01 27.3 -1.6**
ARCES				LR		LR	14 53 40.6
BOSA	**Boshof**	**99.04**	**240**	LR		LR	14 39 00.4
	comp=Z,296nm,20.5s,MS4.8,baz=115,slow=31						
SPITS	**Spitsbergen Ar**	**99.08**	**349**	LR		LR	14 50 44.6
	comp=Z,206nm,18.9s,MS4.7,baz=30,slow=38						
AKASG	**Malin Array Be**	**99.39**	**320**	P		**P**	**14 01 30.8 -0.6**
	comp=Z,0.2nm,0.3s,mb4.1,baz=75,slow=3.8,SNR=2.7						
AKASG				LR		LR	14 53 00.9
	comp=Z,255nm,21.8s,MS4.7,baz=290,slow=39						
FINES	**FINESS Array B**	**100.00**	**332**	P		Pdif	14 01 34.6 +0.5
	comp=Z,7.5nm,1.3s,baz=73,slow=4.8,SNR=2.9						
CRVS	**Cervenica-Dubn**	**104.60**	**319**	*e*P		Pdif	14 01 53.1 -1.4
CRVS	**Cervenica-Dubn**	**104.60**	**319**	PDIF		Pdif	14 01 53.1 -1.4
YKA	**Yellowknife Ar**	**106.54**	**26**	Pdiff		Pdif	14 02 05.8 +2.6
	comp=Z,0.1nm,0.4s,baz=296,slow=4.5,SNR=3.3						
YKA				PKiKP		PKiKP	14 06 14.9 +1.3
	comp=Z,0.7nm,0.9s,baz=298,slow=1.3,SNR=3.8						
CLL	**Collm**	**109.34**	**323**	*e*Pdif			14 02 26.0
CLL				*e*PP		PP	14 07 08.0 +19
CLL				*e*Sdif		Sdif	14 14 34.0 +10
CLL				LR		LR	
	comp=Z,200nm,23.3s,MS4.6						
CLL	**Collm**	**109.34**	**323**	*e*sPdif			14 02 26.0
CLL				*e*(PP)			14 07 08.0
CLL				*e*Sdif		Sdif	14 14 34.0 +10
CLL				*e*			14 15 51.0
CLL				*e*			14 16 51.0
CLL				*e*PPS			14 17 14.0
CLL				*e*SS		SS	14 22 30.0 +23
CLL				*e*SSS			14 26 00.0
CLL				*e*SSSS			14 30 00.0
CLL				*e*			14 32 42.0
PDAR	**Pinedale Array**	**116.57**	**44**	PKP		PKPdf	14 06 31.9 -1.4
	comp=Z,0.2nm,0.5s,baz=318,slow=2.0,SNR=4.0						
PDAR				PKKPbc		PKKPbc	14 17 01.0 -1.1
	comp=Z,0.5nm,0.8s,baz=90,slow=3.2,SNR=3.2						
TXAR	**Lajitas Array**	**125.27**	**57**	PKP		PKPdf	14 06 50.1 -0.3
	comp=Z,0.2nm,0.5s,baz=343,slow=3.9,SNR=4.7						
TORD	**Torodi Ar. Bea**	**126.63**	**283**	PKP		PKPdf	14 06 52.4 -0.9
	comp=Z,1.7nm,0.8s,baz=65,slow=1.9,SNR=8.6						
CBN	**Corbin**	**139.39**	**32**	*e*P		PKPdf	14 07 16.8 +0.1
CPUP	**Villa Florida**	**148.60**	**170**	PKPbc		PKPbc	14 07 36.1 -0.6
	comp=Z,2.3nm,0.5s,baz=204,slow=1.8,SNR=13						
LPAZ	**La Paz**	**153.53**	**143**	PKPbc		PKPbc	14 07 48.7 +0.2
	comp=Z,1.0nm,0.5s,baz=165,slow=3.3,SNR=4.7						
LPAZ				PKPab		PKPab	14 08 01.2 +0.4
	comp=Z,4.6nm,0.9s,baz=221,slow=1.1,SNR=9.2						

NEIC ***13*** *13:48:11.8, 37.°87N×21.°40E, h26km, MD3.2(ATH), After ATH.*
ATH ***13*** *13:48:11.8, 37.°87N×21.°40E, h26km±1km, MD3.2/12*
THE ***13*** *13:48:12.6, 37.°86N×21.°43E, h0km±2km, ML3.1/7, Error ellipse: s-maj=2.2km s-min=0.7km az=225.0*
CSEM ***13*** *13:48:12.4±0.2, 37.°86N×21.°40E, h20km, MD3.2, Error ellipse: s-maj=4.6km s-min=4.1km az=91.0*
ISCJB ***13*** *13:48:12.2±1.4, 37.°84N±0.°03×21.°37E±0.°04, h15km±11km, Error ellipse: s-maj=4.9km s-min=4.9km az=171.4*

ISC 13 13:48:12.7±0.5, 37.°87N±0.°03×21.°40E±0.°04, h26km±5km, n46, σ0=94/79, 3C, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.20**	**16**	*i* Pb	**Pb**	**13 48 17.7**	**-0.8**
RLS				*e*Sb	**Sb**	**13 48 21.8**	**-0.6**
RLS	**Riolos of Patr**	**0.20**	**16**	*i* PB	**Pb**	**13 48 17.7**	**-0.8**
RLS				*e*SB	**Sb**	**13 48 21.8**	**-0.6**
RLS	**Riolos of Patr**	**0.20**	**16**	*i* Pb	**Pb**	**13 48 17.7**	**-0.8**
RLS				*e*Sb	**Sb**	**13 48 21.8**	**-0.6**
UPR	**University Cam**	**0.52**	**36**	*e*PN	**Pb**	**13 48 22.4**	**-0.9**
UPR				*e*SN	**Sb**	**13 48 30.8**	**+0.4**
UPR	**University Cam**	**0.52**	**36**	*e*Pn	**Pb**	**13 48 22.4**	**-0.9**
LAKA	**Lakka**	**0.59**	**51**	P	**Pb**	**13 48 23.6**	**-0.9**
LAKA				S	**Sb**	**13 48 32.5**	**0.0**
LAKA	**Lakka**	**0.59**	**51**	P	**Pb**	**13 48 23.6**	**-0.9**
LAKA				S	**Sb**	**13 48 32.5**	**0.0**
EFP	**Efpalio**	**0.69**	**35**	P	**Pb**	**13 48 25.3**	**-0.8**
EFP				S	**Sb**	**13 48 36.1**	**+0.8**
EFP	**Efpalio**	**0.69**	**35**	*e*PN	**Pn**	**13 48 25.4**	**-1.4**
EFP				*e*SN	**Sn**	**13 48 35.7**	**-0.9**
EFP	**Efpalio**	**0.69**	**35**	P	**Pb**	**13 48 25.3**	**-0.8**
EFP				*e*Sn	**Sn**	**13 48 35.7**	**-0.9**
EFP				S	**Sb**	**13 48 36.1**	**+0.8**
VLS	**Valsamata**	**0.71**	**296**	*e*Pn	**Pn**	**13 48 26.2**	**-0.8**
VLS				*e*Sn	**Sn**	**13 48 36.6**	**-0.5**
VLS	**Valsamata**	**0.71**	**296**	P	**Pb**	**13 48 26.1**	**-0.4**
VLS				S	**Sb**	**13 48 38.0**	**+2.1**
VLS	**Valsamata**	**0.71**	**296**	*e*PN	**Pn**	**13 48 26.2**	**-0.8**
VLS				*e*SN	**Sn**	**13 48 36.6**	**-0.5**
VLS	**Valsamata**	**0.71**	**296**	P	**Pb**	**13 48 26.1**	**-0.4**
VLS				*e*Sn	**Sn**	**13 48 36.6**	**-0.5**
VLS				S	**Sb**	**13 48 38.0**	**+2.1**
TRIZ	**Trizonia**	**0.73**	**47**	P	**Pb**	**13 48 25.9**	**-0.9**
TRIZ				S	**Sb**	**13 48 37.1**	**+0.7**
TRIZ	**Trizonia**	**0.73**	**47**	P	**Pb**	**13 48 25.9**	**-0.9**
TRIZ				S	**Sb**	**13 48 37.1**	**+0.7**
GUR	**Goura**	**0.75**	**84**	P	**Pb**	**13 48 26.0**	**-1.2**
GUR				S	**Sb**	**13 48 37.2**	**+0.2**
GUR	**Goura**	**0.75**	**84**	*e*PN	**Pn**	**13 48 26.1**	**-1.5**
GUR				*e*SN	**Sn**	**13 48 37.8**	**-0.3**
GUR	**Goura**	**0.75**	**84**	P	**Pb**	**13 48 26.0**	**-1.2**
GUR				S	**Sb**	**13 48 37.2**	**+0.2**
GUR				*e*Sn	**Sn**	**13 48 37.8**	**-0.3**
KALE	**Kalithea**	**0.79**	**48**	P	**Pb**	**13 48 26.9**	**-0.9**
KALE				S	**Sb**	**13 48 38.9**	**+0.9**
KALE	**Kalithea**	**0.79**	**48**	P	**Pb**	**13 48 26.9**	**-0.9**
KALE				S	**Sb**	**13 48 38.9**	**+0.9**
ITM	**Ithomi**	**0.80**	**148**	*e*Pn	**Pb**	**13 48 27.9**	**-0.2**
ITM	**Ithomi**	**0.80**	**148**	P	**Pb**	**13 48 27.9**	**-0.2**
ITM				S	**Sb**	**13 48 39.0**	**+0.5**
ITM	**Ithomi**	**0.80**	**148**	*e*PN	**Pb**	**13 48 27.9**	**-0.2**
ITM	**Ithomi**	**0.80**	**148**	P	**Pb**	**13 48 27.9**	**-0.2**
ITM				S	**Sb**	**13 48 39.0**	**+0.5**
VLX	**Vlachokerasia**	**0.92**	**122**	*e*PN	**Pn**	**13 48 29.3**	**-0.7**
VLX	**Vlachokerasia**	**0.92**	**122**	*e*Pn	**Pn**	**13 48 29.3**	**-0.7**
PYL	**PYLOS**	**1.01**	**164**	P	**Pb**	**13 48 31.1**	**-0.4**
PYL				S	**Sb**	**13 48 46.2**	**+1.9**
PYL	**PYLOS**	**1.01**	**164**	*e*PN	**Pn**	**13 48 31.2**	**+0.1**
PYL	**PYLOS**	**1.01**	**164**	*e*Pn	**Pn**	**13 48 31.2**	**+0.1**
PYL				S	**Sb**	**13 48 46.2**	**+1.9**
DSF	**Desfina**	**1.04**	**58**	P	**Pb**	**13 48 31.2**	**-0.9**
DSF				S	**Sb**	**13 48 46.2**	**+0.8**
DSF	**Desfina**	**1.04**	**58**	P	**Pb**	**13 48 31.2**	**-0.9**
DSF				S	**Sb**	**13 48 46.2**	**+0.8**
LKD2	**Lefkada island**	**1.09**	**328**	P	**Pn**	**13 48 32.6**	**+0.3**
LKD2				S	**Sb**	**13 48 50.4**	**+3.7**
LKD2	**Lefkada island**	**1.09**	**328**	P	**Pn**	**13 48 32.6**	**+0.3**
LKD2				S	**Sb**	**13 48 50.4**	**+3.7**
EVR	**Evrytania**	**1.10**	**17**	*e*Pn	**Pn**	**13 48 32.9**	**+0.5**
EVR	**Evrytania**	**1.10**	**17**	*e*PN	**Pn**	**13 48 32.9**	**+0.5**
EVR	**Evrytania**	**1.10**	**17**	*e*Pn	**Pn**	**13 48 32.9**	**+0.5**
LTK	**Loutraki**	**1.25**	**82**	*e*PN	**Pn**	**13 48 34.9**	**+0.4**
LTK	**Loutraki**	**1.25**	**82**	*e*Pn	**Pn**	**13 48 34.9**	**+0.4**
AGG	**Agios Georgios**	**1.37**	**32**	*e*Pn	**Pn**	**13 48 38.0**	**+1.9**
AGG	**Agios Georgios**	**1.37**	**32**	P	**Pn**	**13 48 38.2**	**+2.1**
AGG				S	**Sn**	**13 48 57.7**	**+4.4**
AGG	**Agios Georgios**	**1.37**	**32**	*e*PN	**Pn**	**13 48 38.0**	**+1.9**
AGG	**Agios Georgios**	**1.37**	**32**	*e*Pn	**Pn**	**13 48 38.0**	**+1.9**
AGG				S	**Sn**	**13 48 57.7**	**+4.4**
LKR	**Lokris**	**1.48**	**58**	*e*Pn	**Pn**	**13 48 39.0**	**+1.3**
LKR	**Lokris**	**1.48**	**58**	*e*PN	**Pn**	**13 48 39.0**	**+1.3**
LKR	**Lokris**	**1.48**	**58**	*e*Pn	**Pn**	**13 48 39.0**	**+1.3**

MEX 13 14:12:57.7±1.1, 18.°30N×103.°42W, h7km±5km, MD4.2, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.07**	**96**	*i* P	Pg	14 12 58.2	-1.3
MMIG				*i* S	Sg	14 13 00.7	-0.1
CJM	**Chamela**	**1.95**	**308**	*i* P	Pn	14 13 28.0	-3.2
CJM				*i* S	Sn	14 13 50.7	-5.2
ZIIG	**Zihuatanejo**	**1.98**	**110**	*i* P	Pn	14 13 28.9	-2.8
ZIIG				*i* S	Sn	14 13 53.0	-3.9
SFJM	**Santa Fe**	**2.21**	**9**	*i* P	Pn	14 13 32.2	-2.6
SFJM				*i* S	Sn	14 13 58.7	-3.7
MOIG	**Morelia**	**2.52**	**57**	*i* P	Pn	14 13 36.6	-2.5
MOIG				*i* S	Sn	14 14 04.2	-5.9
ANIG	**Ahuacatlan**	**2.93**	**340**	*i* P	Pn	14 13 41.9	-2.8
ANIG				*i* S	Sn	14 14 18.0	-2.3
CAIG	**El Cayaco**	**3.25**	**112**	*i* P	Pn	14 13 46.6	-2.5
CAIG				*i* S	Sn	14 14 23.3	-4.9
ACX	**Acapulco**	**3.63**	**112**	*e*P	Pn	14 13 51.5	-2.9
ACX				*i* S	Sn	14 14 32.6	-5.0
MEIG	**Mezcala**	**3.63**	**95**	*e*P	Pn	14 13 53.8	-0.6
MEIG				*i* S	Sn	14 14 33.8	-3.8
PLIG	**Platanillo**	**3.72**	**88**	*e*P	Pn	14 13 54.1	-1.5
PLIG				*i* S	Sn	14 14 36.6	-3.2
MZVM		**4.07**	**77**	*i* P	Pn	14 13 58.7	-1.8
MZVM				*i* S	Sn	14 14 43.1	-5.2
PTVM	**Pico Tres Padr**	**4.28**	**72**	*e*P	Pn	14 13 59.9	-3.4
PTVM				*i* S	Sn	14 14 47.7	-5.8
IIO	**Organos**	**4.63**	**73**	*e*P	Pn	14 14 04.1	-4.0
IIO				*i* S	Sn	14 14 59.6	-2.6
UTMO	**Huajuapan**	**5.37**	**94**	*i* P	Pn	14 14 14.6	-3.6
UTMO				*i* S	Sn	14 15 18.1	-2.2
PNIG	**Pinotepa**	**5.40**	**110**	*i* P	Pn	14 14 13.7	-5.0
PNIG				*i* S	Sn	14 15 18.9	-2.3
LNIG	**Linares**	**7.53**	**29**	*e*P	Pn	14 14 47.5	-0.4
LNIG				*i* S	Sn	14 16 18.2	+4.6

IDC ***13*** *14:20:17.5±1.1, 12.°51N×87.°80W, h0km, mb3.9/9, mb1 4.2/10, mb1mx3.9/23, mbtmp3.9/10, ML3.1/2, MS3.3/4, Ms1 3.3/4, ms1mx3.0/32, Error ellipse: s-maj=38.8km s-min=21.2km az=56.0*
CASC ***13*** *14:20:21.5±2.5, 12.°21N×88.°31W, h14km±11km, MD4.6, ML2.8, mb4.5(NEIC)*
NEIC ***13*** *14:20:22.8±0.8, 12.°37N×88.°22W, h35km, mb4.5/7, Error ellipse: s-maj=19.2km s-min=11.2km az=46.0*
ISCJB ***13*** *14:20:22.9±0.5, 12.°26N±0.°06×88.°25W±0.°05, h68km±5km, mb4.1/16, Error ellipse: s-maj=12.9km s-min=3.8km az=40.0*

ISC 13 14:20:24.1±0.5, 12.°34N±0.°06×88.°23W±0.°05, h55km±5km, n60, σ1=20/67, mb4.2/15, MS3.3/2, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**1.01**	**22**	*e*P	**Pn**	**14 20 42.6**	**+0.4**
VSM	**San Miguel**	**1.08**	**358**	*e*P	**Pn**	**14 20 43.1**	**+0.5**
BLLM	**Bellamira**	**1.10**	**360**	*e*P	**Pn**	**14 20 43.6**	**+0.2**
CAHU	**Cacacuatique**	**1.43**	**1**	*e*P	**Pn**	**14 20 49.1**	**+1.4**
CNGN	**Cerro Negro**	**1.50**	**84**	*e*P	**Pn**	**14 20 47.9**	**-0.9**
LFRS	**El Faro**	**1.51**	**328**	*e*P	**Pn**	**14 20 47.8**	**-1.2**
LFRS				*e*S	**Sn**	**14 21 11.4**	**+3.8**
LBRS	**Las Brisas**	**1.60**	**330**	*e*P	**Pn**	**14 20 49.7**	**-0.5**
COPN	**Copaltepe**	**1.61**	**95**	*e*P	**Pn**	**14 20 49.2**	**-1.0**
MOMN	**Momotombo**	**1.65**	**87**	*e*P	**Pn**	**14 20 50.0**	**-0.8**
BOQS	**Boqueron**	**1.73**	**324**	*e*P	**Pn**	**14 20 51.1**	**-0.7**
BOQS				*e*S	**Sn**	**14 21 16.4**	**+3.7**
CSAN		**1.77**	**95**	*e*P	**Pn**	**14 20 52.6**	**+0.1**
XAVN	**Gruta Xavier**	**1.87**	**96**	*e*P	**Pn**	**14 20 53.8**	**0.0**
XAVN				*e*S	**Sn**	**14 21 17.6**	**+1.3**
TGUH	**Tegucigalpa,Un**	**1.95**	**29**	*e*Pn	**Pn**	**14 20 55.8**	**+1.0**
TGUH	**Tegucigalpa,Un**	**1.95**	**29**	*e*P	**Pn**	**14 20 56.3**	**+1.5**
MGAN	**Managua**	**1.95**	**95**	*e*P	**Pn**	**14 20 54.0**	**-0.8**
SBLS	**San Blas**	**2.02**	**318**	*e*P	**Pn**	**14 20 54.2**	**-1.5**
SBLS				*e*S	**Sn**	**14 21 23.1**	**+3.3**
SNJE	**San Jose**	**2.03**	**319**	*e*P	**Pn**	**14 20 54.4**	**-1.5**
RTR	**El Retiro**	**2.08**	**319**	*e*P	**Pn**	**14 20 55.2**	**-1.3**
RTR				*e*S	**Sn**	**14 21 23.4**	**+2.1**
APON	**Apoyo**	**2.16**	**101**	*e*P	**Pn**	**14 20 57.6**	**-0.1**
APON				AML	AML	14 21 31.1	
	comp=Z,79nm,0.3s						
RBDL	**Robledal**	**2.26**	**321**	*e*P	**Pn**	**14 20 58.8**	**-0.3**
RBDL				*e*S	**Sn**	**14 21 30.0**	**+4.1**
BOAB	**BOACO BROADBAN**	**2.51**	**87**	*e*P	**Pn**	**14 21 03.1**	**+0.6**
SSN	**San Juan del S**	**2.54**	**114**	*e*P	**Pn**	**14 21 03.2**	**+0.2**
VCR	**Vista de Mar**	**3.37**	**130**	*e*P	**Pn**	**14 21 15.8**	**+1.5**
APG	**El Apazote**	**3.43**	**321**	Pn	**Pn**	**14 21 14.8**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=146,slow=9.8,SNR=4.9						
APG				Pg	**Pn**	**14 21 22.0**	**+6.9**
	comp=Z,1.1nm,0.3s,baz=129,slow=13,SNR=7.7						
APG				LR	LR	14 22 49.8	
	comp=Z,234nm,21.1s,baz=155,slow=42						
JTS	**JuntasAbangare**	**3.80**	**122**	Pn	**Pn**	**14 21 19.5**	**-0.8**
	comp=Z,2.8nm,0.3s,baz=319,slow=18,SNR=11						
JTS				Sn	**Sn**	**14 22 00.9**	**-2.9**
	comp=Z,7.0nm,0.3s,baz=308,slow=21,SNR=6.8						
JTS				LR	LR	14 22 59.0	
	comp=Z,412nm,22.0s,baz=297,slow=45						
JTS	**JuntasAbangare**	**3.80**	**122**	Pn	**Pn**	**14 21 19.4**	**-0.8**
JTS				Sn	**Sn**	**14 22 00.9**	**-2.9**
JTS				LR	LR	14 22 59.0	
JCR	**Jicaral**	**3.93**	**129**	*e*P	**Pn**	**14 21 21.6**	**-0.4**
CGA2	**Cerro Gallo 2**	**4.36**	**122**	*e*P	**Pn**	**14 21 30.6**	**+2.7**
PRS1	**Puriscal**	**4.50**	**121**	*e*P	**Pn**	**14 21 30.9**	**+1.1**
LAJ	**Bijagual**	**4.72**	**121**	*e*P	**Pn**	**14 21 29.0**	**-3.9**
QCR	**Quepos**	**4.93**	**126**	*e*P	**Pn**	**14 21 34.9**	**-0.8**
URSC	**Urasca**	**5.03**	**119**	*e*P	**Pn**	**14 21 38.1**	**+1.1**
BUS	**Buena Vista**	**5.19**	**122**	*e*P	**Pn**	**14 21 39.5**	**+0.2**
BUS				*e*S	**Sn**	**14 22 33.2**	**-4.6**
BAR1		**5.73**	**122**	*e*P	**Pn**	**14 21 46.6**	**-0.1**
BAR1				*e*S	**Sn**	**14 22 44.1**	**-7.0**
TEIG	**Tepich**	**7.84**	**360**	*e*Pn	**Pn**	**14 22 14.5**	**-1.1**
	comp=Z,15nm,1.0s						
CMIG	**Matias Romero**	**7.99**	**307**	Pn	**Pn**	**14 22 16.9**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=132,slow=13,SNR=9.6						
SDV	**Santo Domingo**	**17.63**	**100**	P	**Pn**	**14 24 26.9**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=338,slow=11,SNR=3.0						
JCT	**Junction City**	**20.99**	**331**	*e*P	**P**	**14 25 02.5**	**-0.4**
	comp=Z,18nm,1.0s						
TXAR	**Lajitas Array**	**22.18**	**322**	P	**P**	**14 25 17.2**	**+1.5**
	comp=Z,3.0nm,0.7s,mb3.9,baz=144,slow=11,SNR=34						
TXAR				LR	LR	14 35 40.3	
	comp=Z,90nm,19.0s,MS3.2,baz=145,slow=41						
MIAR	**Mount Ida**	**22.64**	**348**	*e*P	**P**	**14 25 21.8**	**+1.3**
	comp=Z,17nm,1.0s,mb4.4						
TKL	**Tuckaleechee C**	**23.57**	**9**	LR	LR	14 36 25.0	
	comp=Z,103nm,19.0s,MS3.3,baz=266,slow=42						
ACSO	**Alum Creek Sta**	**28.17**	**9**	*e*P	**P**	**14 26 09.2**	**-2.1**
	comp=Z,16nm,0.8s,mb4.7						
MCWV	**Mont Chateau**	**28.20**	**14**	*e*P	**P**	**14 26 10.4**	**-1.2**
	comp=Z,14nm,0.6s,mb4.8						
SDCO	**Great Sand Dun**	**29.64**	**332**	*e*P	**P**	**14 26 26.3**	**+1.9**
	comp=Z,5.3nm,1.2s,mb4.2						
PDAR	**Pinedale Array**	**35.52**	**333**	P	**P**	**14 27 18.4**	**+2.7**
	comp=Z,0.3nm,0.7s,mb3.3,baz=123,slow=6.6,SNR=3.2						
PDAR				PcP	PcP	14 29 46.0	+2.0
	comp=Z,0.1nm,0.4s,baz=111,slow=3.3,SNR=4.2						
AGMN	**Agassiz Nation**	**36.41**	**351**	*e*P	**P**	**14 27 22.5**	**-0.8**
	comp=Z,5.4nm,0.5s,mb4.7						
LOHW	**Long Hollow**	**36.65**	**332**	*e*P	**P**	**14 27 23.9**	**-1.5**
	comp=Z,1.7nm,0.6s,mb4.0						
NVAR	**Mina Array Bea**	**37.29**	**319**	P	**P**	**14 27 33.3**	**+2.4**
	comp=Z,0.1nm,0.4s,mb3.0,baz=138,slow=7.2,SNR=2.8						
NVAR				PcP	PcP	14 29 51.6	+2.3
	comp=Z,0.7nm,0.9s,baz=160,slow=4.7,SNR=3.6						
ULM	**Lac du Bonnet**	**38.32**	**352**	P	**P**	**14 27 38.4**	**-0.9**
	comp=Z,7.5nm,0.6s,mb4.6,baz=162,slow=8.6,SNR=7.4						
ULM	**Lac du Bonnet**	**38.32**	**352**	P	**P**	**14 27 38.4**	**-0.9**
SCHQ	**Schefferville**	**45.61**	**17**	P	**P**	**14 28 37.5**	**-1.2**
	comp=Z,2.1nm,0.5s,mb4.3,baz=222,slow=8.3,SNR=4.7						
YKA	**Yellowknife Ar**	**53.52**	**345**	P	**P**	**14 29 38.8**	**-0.1**
	comp=Z,1.1nm,0.7s,mb3.9,baz=142,slow=7.4,SNR=13						
YKA				PcP	PcP	14 30 46.2	+1.2
	comp=Z,0.3nm,0.5s,baz=150,slow=3.4

comp=Z,297nm,0.4s,baz=297,slow=18,SNR=3.1
NJ2 Nanjing 23.90 301 eP **P 14 53 56.1 +1.8**
NJ2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.2
CN2 Changchun 26.53 331 eP **P 14 54 18.8 +1.2**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.4
WHN Wuhan 27.19 295 ⇑P **P 14 54 23.4 -0.3**
BJI Beijing 29.32 315 P **P 14 54 40.8 -1.6**
BJI sP sP 14 56 14.0 -3.8
BJI S **S 14 59 20.8 +8.5**
BJI pmax pmax
comp=Z,7.0nm,0.6s,mb4.3
BJI pmax pmax
comp=Z,120nm,4.5s
ENH Enshi 31.28 293 eP **P 14 54 59.3 -0.4**
comp=Z,2.2nm,0.4s,mb4.0
HHC Hu-ho-hao-te 32.80 313 eP **P 14 55 13.8 +1.1**
HHC pP pP 14 56 15.9 +3.3
HHC PP PP 14 56 39.3 +5.1
HHC sP sP 14 56 51.8 +3.2
HHC PcP PcP 14 57 51.6 +2.0
HHC S **S 15 00 07.3 +1.1**
HHC ScP ScP 15 01 03.8 +0.1
HHC PcS PcS 15 01 36.3 +1.1
HHC sS sS 15 01 56.8 +1.9
HHC SS SS 15 02 34.6 -8.1
HHC ScS ScS 15 05 01.8 -2.5
HHC pmax pmax
comp=Z,6.0nm,0.9s,mb4.1
HHC pmax pmax
comp=Z,75nm,5.0s
HHC LR LR
comp=N,130nm,15.6s
HHC LR LR
comp=E,68nm,14.4s
HHC LR LR
comp=Z,67nm,16.8s
GYA Guiyang 33.48 286 P **P 14 55 18.8 0.0**
GYA pP pP 14 56 20.8 +1.9
GYA sP sP 14 56 56.8 +2.0
GYA PcP PcP 14 57 52.4 +0.5
GYA S **S 15 00 18.0 +0.8**
GYA ScP ScP 15 01 07.9 +1.5
GYA PcS PcS 15 01 38.6 +0.4
GYA sS sS 15 02 05.4 -0.7
GYA ScS ScS 15 05 06.8 -1.6
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.3
KAKA Kakadu 35.63 198 eP **P 14 55 36.1 -1.0**
comp=Z,28nm,0.6s,mb5.0
CD2 Chengdu 36.26 293 eP **P 14 55 42.3 0.0**
CD2 pP pP 14 56 45.3 +2.1
CD2 sP sP 14 57 21.3 +2.4
CD2 pmax pmax
comp=Z,20nm,0.7s,mb4.8
CD2 pmax pmax
comp=Z,40nm,5.2s
LZH Lanzhou 36.97 302 eP **P 14 55 47.3 -0.9**
LZH pP pP 14 56 50.0 +0.7
LZH sP sP 14 57 26.5 +1.5
LZH pmax pmax
comp=Z,15nm,1.1s,mb4.3
KMI Kunming 37.05 283 P **P 14 55 49.8 +0.8**
KMI pP pP 14 56 52.0 +1.9
KMI sP sP 14 57 27.1 +1.3
KMI S **S 15 01 12.0 +0.6**
KMI sS sS 15 03 01.5 -0.1
KMI pmax pmax
comp=Z,5.0nm,1.0s,mb3.9
KMI pmax pmax
comp=Z,67nm,4.5s
KMI LR LR
comp=N,84nm,18.5s
KMI LR LR
comp=E,97nm,17.5s
KMI LR LR
comp=Z,89nm,14.5s
SONM Songino Array 39.33 321 P **P 14 56 08.3 +0.8**
comp=Z,1.0nm,0.4s,mb3.6,baz=126,slow=6.9,SNR=10
CHTO Chiang Mai 41.35 274 eP **P 14 56 24.7 +0.2**
CHTO pmax pmax
comp=Z,11nm,1.2s,mb4.0
CHTO Chiang Mai 41.35 274 eP **P 14 56 24.7 +0.2**
comp=Z,10nm,1.2s,mb3.9
CM31 Chiang Mai Arr 41.43 274 eP **P 14 56 26.0 +1.0**
CMAR Chiang Mai Arr 41.43 274 P **P 14 56 26.1 +1.1**
comp=Z,5.0nm,0.5s,mb4.0,baz=95,slow=6.0,SNR=48
YAK Yakutsk 41.45 351 eP **P 14 56 23.9 -0.7**
YAK pmax pmax
comp=Z,8.0nm,0.4s,mb4.3
YAK Yakutsk 41.45 351 eP **P 14 56 23.9 -0.7**
comp=Z,7.6nm,0.4s,mb4.3
CTA Charters Tower 41.54 175 P **P 14 56 25.2 -0.6**
comp=Z,1.8nm,0.6s,mb3.5,baz=348,slow=12,SNR=5.6
CTAO Charters Tower 41.54 175 eP **P 14 56 24.6 -1.2**
CTAO pmax pmax
comp=Z,2.0nm,0.4s,mb3.7
CTAO Charters Tower 41.54 175 eP **P 14 56 24.6 -1.2**
comp=Z,2.0nm,0.4s,mb3.7
WRAB Tennant Creek 42.12 192 eP **P 14 56 29.6 -0.9**
WRAB pmax pmax
comp=Z,19nm,0.7s,mb4.4
WRAB Tennant Creek 42.12 192 eP **P 14 56 29.6 -0.9**
comp=Z,19nm,0.7s,mb4.4
WRA Warramunga Arr 42.13 192 P **P 14 56 29.7 -0.9**
comp=Z,14nm,0.6s,mb4.4,baz=16,slow=8.7,SNR=110
FITZ Fitzroy Crossi 42.96 205 eP **P 14 56 36.4 -0.8**
comp=Z,12nm,0.3s,mb4.6
FITZ Fitzroy Crossi 42.96 205 P **P 14 56 36.4 -0.7**
comp=Z,9.2nm,0.5s,mb4.2,baz=23,slow=8.6,SNR=43
KULM Kulim 44.09 255 eP **P 14 56 47.3 +1.0**
comp=Z,19nm,0.6s,mb4.5
ASAR Alice Springs 45.84 192 P **P 14 56 58.5 -1.2**
comp=Z,3.0nm,0.5s,mb3.9,baz=17,slow=12,SNR=92
ASAR S **S 15 03 17.9 -2.0**
comp=Z,0.7nm,0.7s,baz=18,slow=21,SNR=8.7
PSI Prapat 46.73 253 P **P 14 57 07.6 +0.7**
comp=Z,10nm,0.4s,mb4.5,baz=100,slow=2.1,SNR=11
LSA Lhasa 47.13 291 P **P 14 57 11.8 +2.0**
LSA Lhasa 47.13 291 eP **P 14 57 11.2 +1.4**
LSA pmax pmax
comp=Z,5.0nm,0.6s,mb4.0
LSA Lhasa 47.13 291 eP **P 14 57 11.2 +1.4**
comp=Z,5.3nm,0.6s,mb4.0
BILL Biiibino 48.66 11⇑eP **P 14 57 21.1 +0.3**
BILL eS **S 15 03 57.0 -1.4**
BILL pmax pmax
comp=Z,7.0nm,0.5s,mb4.2
BILL Biiibino 48.66 11 eP **P 14 57 20.5 -0.3**
comp=Z,8.3nm,0.6s,mb4.2
TAPN Taplejung 50.33 288 eP **P 14 57 34.8 +0.8**
comp=Z,11nm,0.4s,mb4.6
WMQ Urumqi 50.53 310 eP **P 14 57 36.0 +0.8**
WMQ pmax pmax
comp=Z,17nm,1.0s,mb4.3
ODAN Odare 50.67 288 eP **P 14 57 36.7 +0.2**
comp=Z,11nm,0.6s,mb4.3
TIXI Tiksi 50.74 354 eP **P 14 57 34.9 -1.4**
TIXI pmax pmax
comp=Z,4.0nm,0.6s,mb3.9
TIXI Tiksi 50.74 354 eP **P 14 57 34.9 -1.5**
comp=Z,3.8nm,0.6s,mb3.9
RAMN Ramite 51.36 288 eP **P 14 57 41.9 +0.3**
JIRN Jiri 51.64 289 eP **P 14 57 44.7 +1.0**
comp=Z,11nm,0.4s,mb4.5
GUN Gumba 51.88 289 eP **P 14 57 46.3 +0.8**
comp=Z,10nm,0.4s,mb4.5
PKI Pulchoki 52.34 289 eP **P 14 57 48.8 0.0**
KKN Kakani 52.43 289 eP **P 14 57 49.7 +0.3**
comp=Z,4.9nm,0.3s,mb4.3
KKN Kakani 52.43 289 eP **P 14 57 49.7 +0.3**
KKN pmax pmax
comp=Z,5.0nm,0.3s,mb4.3
DMN Daman 52.60 289 eP **P 14 57 51.0 +0.3**
comp=Z,8.4nm,0.4s,mb4.4
STKA Stephens Creek 53.17 182 eP **P 14 57 53.5 -1.1**
comp=Z,3.0nm,0.4s,mb4.0
STKA Stephens Creek 53.17 182 P **P 14 57 53.4 -1.2**
comp=Z,4.2nm,0.6s,mb4.0,baz=4.2,slow=5.9,SNR=18
STKA Stephens Creek 53.17 182 eP **P 14 57 52.8 -1.8**
comp=Z,1.0nm,0.7s,mb3.2
FORT Forrest 54.01 196 eP **P 14 57 59.9 -0.8**
comp=Z,14nm,0.5s,mb4.6
ZALV Zalesovo Beam 54.20 322 P **P 14 58 01.6 -0.2**
comp=Z,3.9nm,0.4s,mb4.0,baz=107,slow=7.9,SNR=19
ZALV PcP PcP 14 59 00.8 -1.0
comp=Z,6.0nm,0.4s,baz=120,slow=3.8,SNR=20
MK31 Makanchi Array 54.66 313 eP **P 14 58 05.3 +0.1**
MKAR Makanchi Array 54.66 313 P **P 14 58 05.5 +0.2**
comp=Z,2.0nm,0.5s,mb3.8,baz=77,slow=13,SNR=20
MKAR PcP PcP 14 59 03.3 -0.5
comp=Z,1.3nm,0.4s,baz=114,slow=2.0,SNR=9.4
KURK Kurchatov 57.45 317 P **P 14 58 25.1 +0.4**
comp=Z,9.1nm,0.3s,mb4.6,baz=95,slow=7.6,SNR=16
KURK Kurchatov 57.45 317 ceP **P 14 58 24.8 0.0**
KURK pmax pmax
comp=Z,4.0nm,0.8s,mb3.9
KURK Kurchatov 57.45 317 eP **P 14 58 24.6 -0.2**
comp=Z,7.0nm,0.9s,mb4.1
KLBR Kellerberrin 58.15 205 eP **P 14 58 28.6 -1.2**
comp=Z,18nm,1.2s,mb4.4
KDAK Kodiak Island 58.38 35 P **P 14 58 30.8 -0.3**
comp=Z,3.6nm,0.4s,mb4.2,baz=267,slow=17,SNR=8.1
KDAK Kodiak Island 58.38 35 iP **P 14 58 30.7 -0.3**
KDAK Kodiak Island 58.38 35 P **P 14 58 30.8 -0.3**
KSH Kashi 59.16 304 eP **P 14 58 40.1 +3.4**
KSH PcP PcP 14 59 24.3 +2.6
KSH pP pP 14 59 49.8 +5.6
KSH sP sP 15 00 23.8 +5.7
KSH PP PP 15 00 57.8 +6.4
KSH ScP ScP 15 02 52.8 +0.8
KSH PcS PcS 15 03 25.1 +1.1
KSH S **S 15 06 18.6 -0.7**
KSH ScS ScS 15 07 54.5 -0.6
KSH sS sS 15 08 23.8 +5.0
KSH SS SS 15 10 25.1 +5.9
KSH pmax pmax
comp=Z,2.0nm,0.6s,mb3.7
KSH pmax pmax
comp=Z,92nm,5.7s
KSH LR LR
comp=N,52nm,4.0s
KSH LR LR
comp=E,71nm,5.2s
KSH LR LR
comp=Z,72nm,5.5s
TKM2 Tokmak 2 59.29 308 eP **P 14 58 37.6 +0.1**
TKM2 pmax pmax
comp=Z,2.0nm,0.7s,mb3.7
TKM2 Tokmak 2 59.29 308 eP **P 14 58 37.6 +0.1**
comp=Z,2.4nm,0.7s,mb3.7
UCH Uchtor 60.12 307 eP **P 14 58 44.4 +1.2**
BPAW Bear Paw Mtn. 60.34 27 eP **P 14 58 44.2 -0.1**
comp=Z,8.1nm,0.5s,mb4.5
RC01 Rabbit Creek A 60.36 31 eP **P 14 58 43.4 -1.0**
comp=Z,5.7nm,0.4s,mb4.5
TRF Thorofare Moun 60.52 28 eP **P 14 58 44.7 -0.8**
comp=Z,7.5nm,0.8s,mb4.3
COLD Coldfoot 61.33 24 eP **P 14 58 50.9 0.0**
comp=Z,5.3nm,0.9s,mb4.1
BVAR Borovoye Array 62.66 320 P **P 14 59 00.0 +0.2**
comp=Z,19nm,0.4s,mb5.1,baz=97,slow=7.7,SNR=157
BVAR PcP PcP 14 59 34.8 -0.7
comp=Z,2.7nm,0.5s,baz=101,slow=4.4,SNR=5.4
BRVK Borovoye 62.72 320 ceP **P 14 59 00.5 +0.3**
BRVK pmax pmax
comp=Z,5.0nm,0.8s,mb4.2
BRVK Borovoye 62.72 320 eP **P 14 59 00.6 +0.3**
comp=Z,13nm,0.5s,mb4.8
BMRM Bremner River 62.83 32 eP **P 14 59 00.9 +0.1**
comp=Z,6.0nm,0.5s,mb4.5
EGAK Eagle 64.65 27 eP **P 14 59 12.1 -0.5**
comp=Z,59nm,3.0s
KBL Kabul 65.26 299 eP **P 14 59 17.1 +0.1**
KBL pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
KBL Kabul 65.26 299 eP **P 14 59 17.1 0.0**
comp=Z,9.9nm,1.0s,mb4.4
HYT Haines Junctio 66.29 32 eP **P 14 59 23.6 +0.5**
ARU Arti 69.26 324 ciP **P 14 59 41.2 -0.4**
ARU e 15 02 15.1
ARU S S 15 08 26.1 +4.2
ARU SS SS 15 12 56.8 +1.8
ARU pmax pmax
comp=Z,11nm,1.2s,mb4.5
ARU Arti 69.26 324 eP **P 14 59 40.5 -1.1**
comp=Z,8.6nm,0.9s,mb4.5
ABKAR Akbulak array 69.52 316⇑iP **P 14 59 43.0 -0.3**
comp=Z,1.5nm,0.4s,mb4.1
NLWA Neilton Lookou 76.47 44⇓P **P 15 00 24.4 +0.6**
baz=76
YKA Yellowknife Ar 76.63 28 P **P 15 00 23.9 -0.4**
comp=Z,9.6nm,0.6s,mb4.7,baz=291,slow=5.8,SNR=72
YKA Yellowknife Ar 76.63 28 P **P 15 00 23.9 -0.4**
F03A Seaside 77.11 46⇑P **P 15 00 27.6 +0.2**
baz=77
RES Resolute Bay 77.22 13 eP **P 15 00 26.7 -0.8**
RES pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
RES Resolute Bay 77.22 13 eP **P 15 00 26.7 -0.8**
comp=Z,3.7nm,0.6s,mb4.3
JCW Jim Creek 77.47 43 eP **P 15 00 29.8 +0.5**
F04A Amboy 77.86 45⇓P **P 15 00 31.2 -0.4**
baz=78
A07A Ashnola River, 78.17 42⇓P **P 15 00 33.1 -0.1**
baz=78
KEV Kevo 78.42 341 eP **P 15 00 33.1 -1.0**
KEV pmax pmax
comp=Z,6.0nm,0.4s,mb4.7
KEV Kevo 78.42 341 ep **P 15 00 33.1 -1.0**
comp=Z,5.6nm,0.4s,mb4.7
KEV Kevo 78.42 341 ep **P 15 00 33.1 -1.0**
comp=Z,5.6nm,0.4s,mb4.7
H04A Detroit Lake 78.42 47⇓P **P 15 00 34.2 -0.4**
baz=78
ARCES ARCESS Array B 78.98 341 P **P 15 00 37.1 -0.1**
comp=Z,7.8nm,0.5s,mb4.7,baz=76,slow=9.2,SNR=141
B08A Colville Reser 79.06 42⇑P **P 15 00 38.0 +0.1**
baz=79
G06A Carlson Farm, 79.28 46⇑P **P 15 00 38.4 -0.8**
baz=79
F07A Phinny Hill Vi 79.52 45⇓P **P 15 00 40.5 0.0**
baz=79
D08A Wollman Farm, 79.77 43⇑P **P 15 00 41.5 -0.3**
baz=80
B09A Rice 79.77 42⇑P **P 15 00 41.5 -0.3**
baz=80
C09A Chrisman Ranch 79.92 43⇓P **P 15 00 42.6 0.0**
baz=80
K05A Summer Lake 79.95 48⇓P **P 15 00 42.7 -0.2**
baz=80
JOF Joensuu 80.35 334 eP **P 15 00 43.6 -1.0**
JOF pmax pmax
comp=Z,12nm,0.4s,mb5.0
JOF Joensuu 80.35 334 ep **P 15 00 43.6 -1.0**
comp=Z,12nm,0.4s,mb5.0
JOF Joensuu 80.35 334 ep **P 15 00 43.6 -1.0**
comp=Z,12nm,0.4s,mb5.0
G08A Pilot Rock 80.37 45⇑P **P 15 00 45.9 +0.8**
baz=80
I07A Izee 80.43 46⇓P **P 15 00 44.7 -0.7**
baz=80
E09A Wood Farm, Sta 80.46 44⇑P **P 15 00 45.4 -0.1**
baz=80
NEW Newport 80.47 42 eP **P 15 00 45.5 0.0**
NEW pmax pmax
comp=Z,6.0nm,0.6s
NEW Newport 80.47 42 eP **P 15 00 45.5 0.0**
comp=Z,6.4nm,0.6s,mb4.5
H08A Prairie City 80.83 46⇑P **P 15 00 47.7 +0.1**
baz=81
E10A Myers Farm, Un 81.14 44⇓P **P 15 00 49.1 0.0**
baz=81
C11A Tepee Creek (N 81.17 42⇓P **P 15 00 49.1 -0.1**
baz=81
F10A Beach Ranch, E 81.25 44⇑P **P 15 00 49.6 -0.1**
baz=81
BEKR Beckworth 81.32 51⇑P **P 15 00 49.9 -0.3**
baz=81
J08A Circle Bar Ran 81.39 47⇓P **P 15 00 50.0 -0.5**
baz=81
H09A Durkee 81.45 45⇑P **P 15 00 50.6 -0.1**
baz=81
OBN Obninsk 81.49 326⇓eP **P 15 00 50.6 -0.1**
OBN e*PP pP 15 01 57.6 -5.4
OBN eS S 15 10 37.1 +1.5
OBN pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
G10A Bishop Farm, J 81.58 45⇓P **P 15 00 51.3 -0.1**
baz=81
I09A Lost Marbles R 81.66 46⇓P **P 15 00 52.0 +0.2**
baz=82
VSR Storozhevoye 81.71 322 eP **P 15 00 51.4 -0.5**
VSR pmax pmax
comp=Z,20nm,0.5s,mb5.1
VSR pmax pmax
comp=N,2.0nm,0.3s
VSR pmax pmax
comp=E,3.0nm,0.3s
A13A Flathead Natio 81.87 41⇓P **P 15 00 52.8 -0.1**
baz=82
J09A Fry Pan Ranch, 81.88 47⇑P **P 15 00 52.7 -0.3**
baz=82
CMB Columbia Colle 81.95 52 eP **P 15 00 53.4 -0.1**
CMB pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
CMB Columbia Colle 81.95 52 eP **P 15 00 53.4 -0.1**
comp=Z,5.6nm,0.7s,mb4.4
F11A Grangeville 81.98 44⇑P **P 15 00 53.4 -0.1**
baz=82
ZEI Tsey 82.02 313 eP **P 15 00 52.6 -1.1**
ZEI pmax pmax
comp=Z,6.0nm,0.5s,mb4.6
B13A Whitefish 82.06 41⇓P **P 15 00 54.0 +0.2**
baz=82
BSMT Bassoo Peak 82.07 42 eP **P 15 00 54.2 +0.3**
H10A Noah's Angus R 82.09 45⇓P **P 15 00 53.9 -0.1**
baz=82
G11A Walters Elk Ra 82.09 44⇑P **P 15 00 53.9 -0.2**
baz=82
E12A Beaver Dam Sad 82.15 43⇓P **P 15 00 54.3 -0.1**
baz=82
I10A Payette 82.24 46⇑P **P 15 00 54.4 -0.5**
baz=82
C13A Hot Springs 82.28 42⇑P **P 15 00 55.1 +0.2**
baz=82
KIV Kislovodsk 82.39 314⇓eP **P 15 00 53.6 -2.0**
KIV e*PP pP 15 02 01.8 -6.2
KIV e 15 04 12.6
KIV eS S 15 10 47.0 +1.9
KIV pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
A14A Double T Ranch 82.46 40⇑P **P 15 00 56.2 +0.3**
baz=82,SNR=5.4
H11A Donnelly 82.53 45⇓P **P 15 00 55.9 -0.4**
baz=82,SNR=5.3
D13A Huson 82.58 42⇓P **P 15 00 56.1 -0.5**
baz=82
F12A Elk City 82.61 44⇓P **P 15 00 56.5 -0.2**
baz=82
K10A MacKenzie Ranc 82.69 47⇑P **P 15 00 56.9 -0.3**
baz=82
C14A Swan Lake 82.75 41⇑P **P 15 00 57.2 -0.2**
baz=83,SNR=8.4
KAF Kangasniemi 82.76 335 eP **P 15 00 54.9 -2.2**
KAF pmax pmax
comp=Z,6.0nm,0.6s,mb4.6
KAF Kangasniemi 82.76 335 ep **P 15 00 54.9 -2.2**
comp=Z,6.0nm,0.6s,mb4.6
KAF Kangasniemi 82.76 335 ep **P 15 00 54.9 -2.2**
comp=Z,6.0nm,0.6s,mb4.6
A15A Johnson Ranch, 82.87 40⇑P **P 15 00 57.8 -0.1**
baz=83,SNR=7.6
MFID Camas Ranch 83.15 46⇓P **P 15 00 59.4 -0.1**
baz=83
D14A Greenough 83.18 42⇑P **P 15 00 59.5 -0.1**
baz=83
F13A Darby 83.19 43⇓P **P 15 00 59.1 -0.5**
baz=83
FINES FINESS Array B 83.22 334 P **P 15 00 58.1 -1.4**
comp=Z,10nm,0.5s,mb5.0,baz=66,slow=4.8,SNR=89
L10A Juniper Basin 83.24 47⇑P **P 15 01 00.2 +0.2**
baz=83
B15A Bradely Ranch, 83.25 41⇑P **P 15 00 59.7 -0.2**
baz=83,SNR=7.6
K11A Parker Ranch, 83.27 47⇓P **P 15 01 00.1 0.0**
baz=83
NVAR Mina Array Bea 83.33 51 P **P 15 01 00.8 +0.2**
comp=Z,2.9nm,0.7s,mb4.2,baz=276,slow=5.4,SNR=26
H12A Diamond D Ranc 83.35 45⇓P **P 15 01 00.7 +0.2**
baz=83
C15A Salmond Ranch, 83.45 41⇑P **P 15 01 00.7 -0.2**
baz=83,SNR=5.2
E14A Clinton 83.46 43⇑P **P 15 01 01.4 +0.3**
baz=83
I12A Atlanta 83.47 46⇓P **P 15 01 00.9 -0.2**
baz=83
PKM Peak Mountain 83.52 55⇑P **P 15 00 60.0 -1.6**
baz=83
G13A Cobalt 83.53 44⇓P **P 15 01 00.8 -0.6**
baz=83,SNR=9.0
L11A Cat Creek Ranc 83.69 47⇓P **P 15 01 02.3 0.0**
baz=84,SNR=5.6
J12A Stokes Ranch, 83.71 46⇑P **P 15 01 01.9 -0.5**
baz=84
B16A M & M Farms, S 83.72 40⇓P **P 15 01 02.0 -0.3**
baz=84,SNR=6.6
H13A Challis 83.73 45⇑P **P 15 01 02.5 0.0**
baz=84
M11A Holland Ranch, 83.96 48⇑P **P 15 01 04.0 +0.3**
baz=84
E15A Deer Lodge 83.99 42⇓P **P 15 01 03.5 -0.2**
baz=84,SNR=7.9
HLID Hailey 84.04 46⇑P **P 15 01 04.5 +0.5**
baz=84
HLID Hailey 84.04 46 eP **P 15 01 04.2 +0.2**
comp=Z,3.6nm,1.1s,mb4.1
K12A Draper Farm, C 84.08 47⇓P **P 15 01 04.3 +0.1**
baz=84
I13A Wildhorse Cree 84.09 45⇓P **P 15 01 04.4 +0.1**
baz=84
P10A Eureka 84.20 50⇑P **P 15 01 05.1 +0.2**
baz=84
L12A House Creek Ra 84.20 47⇑P **P 15 01 05.3 +0.4**
baz=84,SNR=11
CWC Cottonwood Cre 84.25 53⇑P **P 15 01 05.5 +0.3**
baz=84
J13A Cove Ranch, Pi 84.26 46⇑P **P 15 01 05.1 0.0**
baz=84
H14A Leadore 84.29 44⇓P **P 15 01 05.1 -0.1**
baz=84
B17A L&G Farms, Che 84.32 40⇓P **P 15 01 05.2 -0.1**
baz=84,SNR=12
F15A Butte 84.33 43⇑P **P 15 01 05.5 0.0**
baz=84,SNR=8.4
LRM Limekiln Ridge 84.37 43 eP **P 15 01 05.8 +0.1**
HRY Holter Researc 84.38 42 eP **P 15 01 05.5 -0.2**
DLMT Dillon 84.47 43 eP **P 15 01 05.6 -0.6**
comp=Z,2.4nm,0.7s,mb4.1
I14A Mackay 84.52 45⇑P **P 15 01 06.7 +0.3**
baz=84
E16A East Helena 84.55 42⇑P **P 15 01 06.4 -0.1**
baz=84,SNR=5.9
Q10A Clear Creek Ra 84.56 50⇑P **P 15 01 06.5 -0.2**
baz=84
M12A Wells 84.57 48⇑P **P 15 01 07.0 +0.3**
baz=84,SNR=8.9
O11A Cowboy Ranch, 84.57 49⇓P **P 15 01 06.9 +0.1**
baz=84
A18A Metzger Ranch, 84.61 39⇑P **P 15 01 06.6 -0.2**
baz=84,SNR=9.0
G15A Dillon 84.62 43⇓P **P 15 01 07.6 +0.8**
baz=84
K13A Stover Farm, H 84.63 46⇓P **P 15 01 07.0 0.0**
baz=84
C17A Wharram Farm, 84.63 41⇓P **P 15 01 06.4 -0.5**
baz=84
N12A Clover Valley, 84.71 48⇑P **P 15 01 07.5 +0.1**
baz=84
J14A Carey 84.73 45⇑P **P 15 01 08.0 +0.6**
baz=84,SNR=11
P11A Circle Ranch, 84.73 50⇓P **P 15 01 08.0 +0.5**
baz=85
S10A Tonopah Range, 84.77 51⇑P **P 15 01 07.7 -0.1**
baz=85,SNR=7.4
MPMC Manual Prospec 84.84 53⇑P **P 15 01 08.1 0.0**
baz=85,SNR=6.3
B18A Beardsley Farm 84.89 40⇓P **P 15 01 08.0 -0.1**
baz=85,SNR=5.8
D17A Six Diamond Ra 84.89 41⇑P **P 15 01 08.5 +0.3**
baz=85
F16A Kennard Place, 84.91 43⇑P **P 15 01 08.2 0.0**
baz=85,SNR=7.3
LRMC Laurel Mountai 84.92 54⇑P **P 15 01 08.2 -0.3**
baz=85
L13A Double Diamond 84.96 47⇑P **P 15 01 09.0 +0.4**
baz=85
BOZ Bozeman (W) 84.96 43⇑P **P 15 01 08.4 -0.1**
baz=85
BOZ Bozeman (W) 84.96 43 eP **P 15 01 08.2 -0.4**

BOZ e*PP pP 15 02 21.0 -0.4
BOZ pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
BOZ Bozeman (W) 84.96 43 *e*P **P 15 01 08.2 -0.3**
comp=Z,7.3nm,0.8s,mb4.6
BOZ epP pP 15 02 21.0 -0.4
G16A Moss Hill, Enn 85.03 43 ⇑P **P 15 01 09.0 +0.1**
baz=85,SNR=8.9
EGMT Eagleton 85.07 40 *e*pP pP 15 02 22.0 +0.1
Q11A Duckwater 85.08 50 ⇓P **P 15 01 09.2 -0.1**
baz=85
E17A Martinsdale 85.09 42 ⇓P **P 15 01 09.4 +0.2**
baz=85
M13A Montello 85.11 47 ⇑P **P 15 01 09.2 -0.2**
baz=85
M13A Montello 85.11 47 *e*P **P 15 01 09.7 +0.3**
comp=Z,6.0nm,0.9s,mb4.4
Q12A Currie 85.15 49 ⇓P **P 15 01 09.7 +0.1**
baz=85,SNR=5.3
K14A Jones Ranch, D 85.28 46 ⇑P **P 15 01 10.7 +0.5**
baz=85
R11A Troy Canyon, C 85.33 51 ⇓P **P 15 01 10.5 0.0**
baz=85,SNR=5.5
J15A Blackfoot 85.41 45 ⇓P **P 15 01 11.4 +0.5**
baz=85
L14A Malta 85.45 47 ⇑P **P 15 01 11.5 +0.5**
baz=85
F17A Fitzpatrick Pl 85.46 42 ⇑P **P 15 01 11.2 +0.2**
baz=85
U10A Ash Meadows, A 85.56 53 ⇑P **P 15 01 12.2 +0.5**
baz=85
Q12A Willow Creek R 85.59 50 ⇓P **P 15 01 12.0 +0.2**
baz=85
M14A Sheep Mountain 85.61 47 ⇓P **P 15 01 12.1 +0.3**
baz=85,SNR=6.4
H16A Russell Place, 85.62 44 ⇓P **P 15 01 12.3 +0.5**
baz=85
E18A Harlowton 85.63 41 ⇑P **P 15 01 12.4 +0.6**
baz=85,SNR=7.8
GSC Goldstone 85.65 54 ⇑P **P 15 01 12.1 -0.1**
baz=86
G17A Pierce Place, 85.67 43 ⇓P **P 15 01 12.9 +0.9**
baz=86
I16A Newdale 85.83 44 ⇓P **P 15 01 13.8 +0.9**
baz=86
N14A Grayback Hills 85.99 48 ⇑P **P 15 01 13.9 +0.2**
baz=86
P13A Bates Ranch, G 86.00 49 ⇓P **P 15 01 14.3 +0.5**
baz=86
FFC Flin Flon 86.00 32 *i* P **P 15 01 13.7 +0.2**
FFC Flin Flon 86.00 32 *e*P **P 15 01 12.6 -0.9**
comp=Z,6.0nm,0.6s,mb4.6
L15A Malad City 86.04 46 ⇓P **P 15 01 14.4 +0.4**
baz=86
R12A Pony Springs, 86.05 50 ⇓P **P 15 01 14.2 +0.2**
baz=86
F18A Big Timber 86.05 42 ⇓P **P 15 01 14.3 +0.4**
baz=86
SUMG Summit 86.08 0 *e*P **P 15 01 14.1 +0.6**
SUMG pmax pmax
comp=Z,8.0nm,0.8s
SUMG Summit 86.08 0 *e*P **P 15 01 14.1 +0.6**
comp=Z,7.9nm,0.8s,mb4.6
SUMG Summit 86.08 0 *i* P **P 15 01 13.9 +0.4**
comp=Z,6.6nm,0.8s,mb4.5
S12A Delamar Landin 86.17 51 ⇑P **P 15 01 15.1 +0.5**
baz=86
H17A Grant Village 86.19 44 ⇑P **P 15 01 14.7 +0.1**
baz=86
Q13A Wheeler Ranch, 86.20 50 ⇑P **P 15 01 15.6 +0.8**
baz=86
K16A Soda Springs 86.22 45 ⇓P **P 15 01 15.5 +0.7**
baz=86
M15A Larsen Ranch, 86.23 47 ⇑P **P 15 01 15.3 +0.4**
baz=86
TUQ Turquoise Moun 86.26 53 ⇓P **P 15 01 15.4 +0.3**
baz=86
DUG Dugway 86.53 48 ⇓P **P 15 01 16.6 +0.2**
baz=86
DUG Dugway 86.53 48 *e*P **P 15 01 16.4 +0.1**
DUG pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
DUG Dugway 86.53 48 *e*P **P 15 01 16.4 +0.1**
comp=Z,2.8nm,0.7s,mb4.2
R13A O'Grain Ranch, 86.56 50 ⇑P **P 15 01 16.6 0.0**
baz=86
PFO Pinyon Flat Ob 86.58 55 ⇓P **P 15 01 16.3 -0.4**
baz=86
P14A Drum Mountains 86.61 49 ⇓P **P 15 01 16.6 -0.1**
baz=86,SNR=5.3
L16A Fish Haven 86.68 46 ⇓P **P 15 01 17.4 +0.3**
baz=86
RLMT Red Lodge 86.69 42 ⇓P **P 15 01 18.1 +1.1**
baz=86
RLMT Red Lodge 86.69 42 *e*P **P 15 01 18.3 +1.3**
comp=Z,3.9nm,0.6s,mb4.4
RLMT epP pP 15 02 24.8 -5.3
Q14A Sevier Lake (B 86.72 49 ⇑P **P 15 01 17.3 +0.1**
baz=86
GMRC Granite Mounta 86.72 54 ⇑P **P 15 01 17.5 +0.2**
baz=86
BELC Belle Mtn. Jos 86.78 55 ⇑P **P 15 01 17.5 -0.2**
baz=87
MONP Monument Peak 86.90 56 ⇓P **P 15 01 18.3 0.0**
baz=87
V12A Nelson 86.94 53 ⇓P **P 15 01 18.6 +0.2**
baz=87
T13A Saint George 87.09 51 ⇑P **P 15 01 19.3 +0.2**
baz=87
U13A Pakoon Wash 87.30 52 ⇑P **P 15 01 20.9 +0.8**
baz=87
BC3 Big Chuckawall 87.33 55 ⇓P **P 15 01 20.4 +0.1**
baz=87
IRM Iron Mountain 87.36 54 ⇓P **P 15 01 20.5 +0.1**
baz=87
AKASG Malin Array Be 87.51 324 P **P 15 01 19.0 -1.8**
comp=Z,1.0nm,0.4s,mb4.0,baz=50,slow=5.3,SNR=8.2
V13A Grand Canyon W 87.53 52 ⇓P **P 15 01 21.0 -0.2**
baz=87
PDAR Pinedale Array 87.58 45 P **P 15 01 20.8 -0.5**
comp=Z,0.6nm,0.6s,mb3.6,baz=155,slow=2.0,SNR=8.7
T14A Hurricane 87.67 51 ⇑P **P 15 01 21.9 0.0**
baz=88
U14A Mt Trumbull 87.88 52 ⇓P **P 15 01 22.5 -0.3**
baz=88
W13A Hualapai Mount 87.92 53 ⇓P **P 15 01 23.1 +0.1**
baz=88
Y12C Blythe 88.00 54 ⇑P **P 15 01 23.7 +0.3**
baz=88
K19A Absolon Red Bu 88.02 44 ⇑P **P 15 01 22.9 -0.4**
baz=88
L19A Farson 88.02 45 ⇑P **P 15 01 24.1 +0.8**
baz=88
PDMCI Parker Dam,Lak 88.06 54 ⇓P **P 15 01 23.4 -0.3**
baz=88
V14A Boquillas Ranc 88.27 52 ⇓P **P 15 01 25.5 +0.9**
baz=88
R16A Teasdale 88.29 49 ⇑P **P 15 01 25.3 +0.6**
baz=88
U15A North Rim 88.52 51 ⇑P **P 15 01 26.3 +0.5**
baz=88
P18A Preston Nutter 88.55 48 ⇓P **P 15 01 26.3 +0.4**
baz=88
SRU San Rafael 88.59 48 ⇑P **P 15 01 26.0 -0.1**
baz=88
R17A Hanksville Air 88.77 49 ⇓P **P 15 01 26.8 -0.1**
baz=89
Q18A Rafter H Ranch 88.86 48 ⇓P **P 15 01 27.0 -0.4**
baz=89
Z13A Yuma Proving G 88.89 55 ⇓P **P 15 01 28.4 +0.8**
baz=89
X14A Yava 88.92 53 ⇑P **P 15 01 28.2 +0.5**
baz=89
NB2 NORSAR Subarra 88.99 339 P **P 15 01 25.6 -1.9**
comp=Z,1.1nm,0.6s,mb3.9,baz=55,slow=4.8
NOA NORSAR Array B 88.99 339 P **P 15 01 26.0 -1.5**
comp=Z,1.0nm,0.5s,mb3.9,baz=46,slow=4.5,SNR=7.1
Y14A Wickenburg 89.06 54 ⇓P **P 15 01 29.3 +0.9**
baz=89
N20A Spence Gulch, 89.34 46 ⇓P **P 15 01 29.9 +0.3**
baz=89
T17A Navajo Res., N 89.34 50 ⇑P **P 15 01 30.5 +0.8**
baz=89
R18A Canyonlands Na 89.36 49 ⇓P **P 15 01 28.9 -0.8**
baz=89
L21A Rawlins 89.39 45 ⇑P **P 15 01 29.3 -0.5**
baz=89
X15A Humboldt 89.40 53 ⇑P **P 15 01 30.6 +0.6**
baz=89
Q19A Hogan Spring (89.53 48 ⇑P **P 15 01 30.9 +0.4**
baz=89
Y15A Casa Rosa Ranc 89.56 54 ⇑P **P 15 01 30.9 +0.1**
baz=89
S18A Hurst Farm, Bl 89.60 49 ⇑P **P 15 01 30.7 -0.2**
baz=89
N21A Black Mountain 89.87 46 ⇓P **P 15 01 32.4 +0.3**
baz=90
Q20A Ridgley Place, 90.20 48 ⇓P **P 15 01 34.0 +0.4**
baz=90
BRTR Keskin Array B 90.31 313 P **P 15 01 32.5 -1.6**
comp=Z,1.2nm,0.7s,mb3.9,baz=66,slow=3.6,SNR=8.5
RSSD Black Hills 90.44 42 *e*P **P 15 01 33.6 -1.0**
RSSD pmax pmax
comp=Z,3.0nm,0.5s,mb4.4
RSSD Black Hills 90.44 42 *e*P **P 15 01 33.6 -1.0**
comp=Z,3.2nm,0.5s,mb4.4
Y17A Roosevelt 90.79 53 ⇑P **P 15 01 36.4 0.0**
baz=91
R21A Cimarron 90.99 48 ⇑P **P 15 01 38.0 +0.7**
baz=91
Q22A Crested Butte, 91.19 47 ⇑P **P 15 01 38.5 +0.3**
baz=91
217A Green Valley 91.67 55 ⇑P **P 15 01 41.3 +0.7**
baz=92
U21A Nageezi 91.84 50 ⇑P **P 15 01 41.8 +0.6**
baz=92
X20A Quemado 92.13 52 ⇓P **P 15 01 43.2 +0.6**
baz=92
Y20A Horse Springs, 92.52 52 ⇓P **P 15 01 44.9 +0.4**
baz=92
Z20A Nine Sixteen R 92.73 53 ⇑P **P 15 01 46.4 +1.0**
baz=92
GDL2 Guadalupe Moun 96.29 52 *e*PKKPbc PKKPbc 15 18 42.0 -4.2
GERES GERESS Array B 96.60 329 P **P 15 02 01.0 -1.7**
comp=Z,0.3nm,0.5s,mb3.8,baz=35,slow=8.7,SNR=3.3
ESK Eskdalemuir 98.17 341 *i* P **P 15 02 01.3 -8.3**
GVD Gavdhos 99.34 313 *e*PKKPbc PKKPbc 15 18 30.3 -7.7
SWET Sewanee 106.89 40 *e*PKKPbc PKKPbc 15 18 08.0 -8.1
LRAL Lakeview Retre 107.70 42 *e*Pdif Pdif 15 02 55.4 +3.3
TORD Torodi Ar. Bea 128.69 309 PKP PKPdf 15 07 37.5 -1.6
comp=Z,0.2nm,0.3s,baz=161,slow=1.3,SNR=8.2
PLCA Paso Flores 145.80 132 PKPbc PKPbc 15 08 10.8 -0.1
comp=Z,10nm,0.6s,baz=232,slow=2.9,SNR=31
PLCA Paso Flores 145.80 132 PKPbc PKPbc 15 08 10.8 -0.1
LPAZ La Paz 150.10 85 PKP PKPdf 15 08 18.6 +1.2
comp=Z,9.0nm,0.5s,baz=297,slow=5.0,SNR=5.6
LPAZ PKPbc PKPbc 15 08 23.4 +0.6
comp=Z,9.0nm,0.5s,baz=352,slow=3.3,SNR=38
LPAZ PKPab PKPab 15 08 30.3 +0.4
comp=Z,4.5nm,0.5s,baz=26,slow=2.4,SNR=8.4

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*IDC **13** 14:50:44.8±1.2, 13°.49N×119°.90E, h0km, mb4.0/4, mb1 4.3/4, mb1mx3.6/23, mbtmp4.0/4, Error ellipse: s-maj=23.9km s-min=14.1km az=136.0*
*MAN **13** 14:50:51, 13°.53N×120°.13E, h32km, mb4.6, ML3.5, MS3.4*
*ISCJB **13** 14:50:51.4±0.7, 13°.56N±0°.04×120°.18E±0°.07, h66km±9km, mb4.0/4, Error ellipse: s-maj=11.4km s-min=6.2km az=6.9*
ISC 13 14:50:52.4±0.7,**13°.55N**±0°.04×**120°.19E**±0°.07,**h59**km±10km,
n19,σ1§**16**/26,**mb4.1**/4,**3C-1D**,**Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.91**	**53**	Pg	**Pn**	**14 51 08.6**	**-0.5**
	562nm,0.3s,baz=231,slow=5.9,SNR=44						
TGY				Lg		14 51 22.5	
	809nm,0.3s,baz=339,slow=18,SNR=33						
TGY	**Tagaytay City**	**0.91**	**53**	⇑*e*P	**Pn**	**14 51 08.7**	**-0.5**
TGY				*i* S	**Sn**	**14 51 23.9**	**+2.4**
SJMP	**San Jose**	**1.41**	**140**	*e*P	**Pn**	**14 51 16.0**	**+0.2**
SJMP				*e*S	**Sn**	**14 51 29.9**	**-3.6**
BUSP	**Coron**	**1.54**	**180**	*e*P	**Pn**	**14 51 17.0**	**-0.6**
BUSP				*e*S	**Sn**	**14 51 28.7**	**-7.9**
BOAC	**Boac**	**1.61**	**93**	*e*P	**Pn**	**14 51 18.7**	**+0.2**
BOAC				*e*S	**Sn**	**14 51 38.0**	**-0.3**
PCPH	**Palayan**	**2.18**	**24**	⇑*e*P	**Pn**	**14 51 25.1**	**-1.2**
PCPH				*e*S	**Sn**	**14 51 50.9**	**-1.3**
GQP	**Guinayangan**	**2.22**	**81**	⇑*e*P	**Pn**	**14 51 27.0**	**+0.2**
GQP				*e*S	**Sn**	**14 51 51.3**	**-1.8**
AUQP	**San Andres**	**2.43**	**95**	*e*P	**Pn**	**14 51 31.9**	**+2.3**
ENPP	**El Nido**	**2.45**	**198**	*e*P	**Pn**	**14 51 29.2**	**-0.7**
BALP	**Baler**	**2.56**	**31**	*e*P	**Pn**	**14 51 31.8**	**+0.4**
BALP				*e*S	**Sn**	**14 52 00.5**	**-0.9**
CUYO	**Cuyo Island**	**2.81**	**163**	*e*P	**Pn**	**14 51 34.4**	**-0.5**
BCPH	**Baguio City Da**	**2.84**	**8**	⇓*e*P	**Pn**	**14 51 34.1**	**-1.1**
CAUP	**Cauayan**	**3.72**	**25**	*e*P	**Pn**	**14 51 49.1**	**+1.8**
GUIM	**Jordan**	**3.74**	**141**	*e*P	**Pn**	**14 51 49.1**	**+1.5**
APYP	**Conner**	**4.40**	**13**	*e*P	**Pn**	**14 51 58.8**	**+2.0**
SONM	**Songino Array**	**36.06**	**344**	P	**P**	**14 57 48.7**	**+0.5**
	1.4nm,0.8s,mb4.0,baz=161,slow=9.2,SNR=6.1						
WRA	**Warramunga Arr**	**36.08**	**157**	P	**P**	**14 57 48.2**	**-0.4**
	2.6nm,0.6s,mb4.3,baz=337,slow=9.6,SNR=6.7						
ASAR	**Alice Springs**	**39.35**	**160**	P	**P**	**14 58 16.9**	**+0.8**
	2.2nm,0.6s,mb4.1,baz=339,slow=7.1,SNR=16						
NOA	**NORSAR Array B**	**87.16**	**333**	P	**P**	**15 03 31.1**	**-0.8**
	0.7nm,0.9s,mb3.9,baz=67,slow=4.7,SNR=3.5						

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*ISCJB **13** 16:01:22.0±0.6, 59°.93N±0°.04×153°.6W±0°.1, h155km±5km, mb3.1/2, Error ellipse: s-maj=9.1km s-min=6.4km az=1.1*
*NEIC **13** 16:01:23.9, 59°.93N×153°.52W, h156km, mb4.0/1, After AEIC.*
*IDC **13** 16:01:24.6±6.2, 59°.90N×153°.06W, h128km±36km, mb2.9/2, mb1 3.4/4, mb1mx3.0/27, mbtmp3.0/4, MS2.8/1, Ms1 2.8/1, ms1mx2.3/13, Error ellipse: s-maj=118.7km s-min=39.3km az=96.0*
ISC 13 16:01:23.0±0.6,**59°.93N**±0°.04×**153°.6W**±0°.1,**h152**km±5km,
n35,σ1§**01**/42,**mb3.1**/2,**Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUL	**Augustine Lava**	**0.55**	**173**	P	**Pn**	**16 01 45.7**	**+1.0**
AUL				S	**Sn**	**16 02 02.6**	**+1.4**
RSO	**Redoubt South**	**0.67**	**37**	*e*P	**Pn**	**16 01 45.9**	**+0.6**
RSO				*e*S	**Sn**	**16 02 03.3**	**+0.8**
SVW2	**Sparrevohn**	**1.54**	**321**	P	**Pn**	**16 01 53.1**	**+0.1**
SLKM	**Skilak Lake**	**1.77**	**69**	P	**Pn**	**16 01 55.7**	**+0.3**
SEW	**Seward**	**2.08**	**83**	P	**Pn**	**16 01 59.2**	**+0.2**
SEW				S	**Sn**	**16 02 25.5**	**-1.1**
FIB	**Fire Island**	**2.09**	**52**	P	**Pn**	**16 01 59.8**	**+0.7**
FIB				S	**Sn**	**16 02 28.4**	**+1.5**
KDAK	**Kodiak Island**	**2.21**	**166**	P	**Pn**	**16 01 59.8**	**-0.8**
	3.3nm,0.3s,baz=0.0,slow=9.1,SNR=19						
KDAK				S	**Sn**	**16 02 27.8**	**-1.7**
	14nm,0.3s,baz=21,slow=17,SNR=23						
KDAK	**Kodiak Island**	**2.21**	**166**	P	**Pn**	**16 01 59.9**	**-0.7**
KDAK				S	**Sn**	**16 02 28.6**	**-0.9**
RC01	**Rabbit Creek A**	**2.23**	**57**	P	**Pn**	**16 01 58.8**	**-1.9**
SKT	**Skwentna**	**2.29**	**25**	P	**Pn**	**16 02 01.7**	**+0.2**
SKT				S	**Sn**	**16 02 31.2**	**0.0**
OHAK	**Old Harbor**	**2.72**	**177**	*e*P	**Pn**	**16 02 05.5**	**-1.3**
PMR	**Palmer**	**2.74**	**51**	*e*P	**Pn**	**16 02 06.1**	**-0.9**
PPLA	**Purkeypile**	**3.05**	**12**	P	**Pn**	**16 02 12.0**	**+1.1**
SML	**Sawmill**	**3.18**	**51**	P	**Pn**	**16 02 11.2**	**-1.3**
TT01	**Tatalina**	**3.21**	**340**	P	**Pn**	**16 02 12.8**	**-0.1**
TTA	**Tatalina**	**3.23**	**340**	*e*P	**Pn**	**16 02 12.7**	**-0.5**
KTH	**Kantishna Hill**	**3.85**	**18**	P	**Pn**	**16 02 20.9**	**-0.2**
TRF	**Thorofare Moun**	**3.87**	**22**	P	**Pn**	**16 02 21.1**	**-0.2**
EYAK	**Cordova Ski Ar**	**3.95**	**78**	P	**Pn**	**16 02 22.3**	**-0.2**
DIV	**Divide**	**4.04**	**69**	P	**Pn**	**16 02 23.8**	**+0.2**
BPAW	**Bear Paw Mtn.**	**4.36**	**15**	P	**Pn**	**16 02 27.2**	**-0.6**
MCK	**McKinley**	**4.40**	**28**	*e*Pn	**Pn**	**16 02 25.0**	**-3.3**
BMRM	**Bremner River**	**4.56**	**73**	P	**Pn**	**16 02 30.8**	**+0.4**
PAX	**Paxson**	**4.94**	**48**	P	**Pn**	**16 02 35.8**	**+0.4**
MENT	**Mentasta**	**5.61**	**53**	*e*P	**Pn**	**16 02 46.0**	**+1.8**
IL1	**Eielson Array**	**5.77**	**30**	P	**Pn**	**16 02 45.5**	**-0.9**
IM3	**Indian Mountai**	**6.08**	**359**	P	**Pn**	**16 02 50.9**	**+0.4**
BCA3	**Beaver Creek A**	**6.46**	**56**	P	**Pn**	**16 02 55.1**	**-0.4**
PNL	**Peninsula**	**7.16**	**86**	P	**Pn**	**16 03 04.8**	**0.0**
EGAK	**Eagle**	**7.54**	**45**	*e*Pn	**Pn**	**16 03 08.8**	**-1.2**
	2.3nm,0.4s						
BM3	**Burnt Mountain**	**8.50**	**24**	P	**Pn**	**16 03 21.1**	**-1.5**
DLBC	**Dease Lake**	**12.15**	**87**	S	**Sn**	**16 06 18.3**	**-6.6**
	0.4nm,0.3s,baz=100,slow=11,SNR=4.2						
DLBC				LR	LR	16 08 10.2	
	comp=Z,53nm,21.1s,baz=161,slow=34						
YKA	**Yellowknife Ar**	**18.74**	**65**	P	**P**	**16 05 30.7**	**+1.0**
	0.3nm,0.3s,baz=277,slow=10,SNR=19						
NVAR	**Mina Array Bea**	**30.94**	**118**	P	**P**	**16 07 27.8**	**+2.6**
	0.5nm,0.8s,mb3.3,baz=314,slow=5.5,SNR=4.0						
TXAR	**Lajitas Array**	**45.23**	**110**	P	**P**	**16 09 26.4**	**+1.7**
	0.1nm,0.4s,mb2.8,baz=325,slow=6.7,SNR=3.8						

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*NEIC **13** 16:03:55.6±0.9, 17°.35S×179°.08W, h35km, mb3.5/2, Error ellipse: s-maj=111.0km s-min=12.4km az=158.0*
IDC 13 16:03:52.0±52.0,**17°.27S**×**179°.27W**,**h0**km,**mb4.1**/3,
mb1 4.2/3,**mb1mx3.8**/16,**mbtmp4.1**/3,**Error ellipse:**
s-maj=947.3km s-min=161.2km az=78.0,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.96**	**66**	Pn	Pn	16 05 47.0	-2.0
STKA	**Stephens Creek**	**38.22**	**240**	P	P	16 11 14.1	+0.3
	2.6nm,1.0s,baz=80,slow=11,SNR=3.0						
STKA	**Stephens Creek**	**38.22**	**240**	*e*P	P	16 11 13.3	-0.5
	0.1nm,0.3s						
WRAB	**Tennant Creek**	**43.93**	**259**	*e*P	P	16 12 00.7	-0.3
	0.7nm,0.4s						
WRA	**Warramunga Arr**	**43.94**	**259**	P	P	16 12 01.0	-0.1
	0.6nm,0.4s,baz=95,slow=7.4,SNR=13						
ASAR	**Alice Springs**	**44.18**	**254**	P	P	16 12 02.6	-0.3
	2.7nm,0.5s,baz=86,slow=8.7,SNR=70						

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*IDC **13** 16:09:20.6±2.8, 35°.02N×80°.88E, h0km, mb3.5/2, mb1 3.6/7, mb1mx3.4/29, mbtmp3.5/7, ML3.3/4, Error ellipse: s-maj=60.3km s-min=24.4km az=57.0*
*NEIC **13** 16:09:23.5±1.1, 35°.11N×81°.18E, h10km, mb3.4/1, Error ellipse: s-maj=20.7km s-min=11.1km az=222.0*
*ISCJB **13** 16:09:23.8±1.0, 35°.48N±0°.08×81°.4E±0°.1, h10km, mb3.4/2, Error ellipse: s-maj=14.3km s-min=8.6km az=136.9*
*BJI **13** 16:09:25.8, 35°.29N×81°.20E, h14km, mb3.8/2, ML3.8/6, Ms3.7/1*
*NNC **13** 16:09:28.5±5.9, 35°.86N×81°.80E, h0km, mb4.0, mpv3.9, Error ellipse: s-maj=58.1km s-min=50.8km az=175.0*
ISC 13 16:09:27.3±1.0,**35°.49N**±0°.08×**81°.37E**±0°.09,**h10**km,**n22**,
σ1§**44**/27,**mb3.4**/2,**6C**,**Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**5.88**	**315**	*e*Pn	**Pn**	**16 10 57.0**	**+2.6**
KSH				*e*Sn	**Sn**	**16 12 02.8**	**+1.0**
KSH				smax			
	comp=N,53nm,0.9s						
KSH				smax			
	comp=E,95nm,1.1s						
UCH	**Uchtor**	**8.59**	**324**	*e*Pn	**Pn**	**16 11 31.3**	**-0.3**
	comp=E,7.2nm,0.8s						
TKM2	**Tokmak 2**	**8.66**	**331**	⇑Pn	**Pn**	**16 11 33.8**	**+1.2**
	comp=E,3.6nm,0.9s						
TKM2				⇑Pg	Pn	16 12 03.5	+31
	comp=E,12nm,1.6s						
TKM2				⇑Lg		16 14 00.3	
	comp=E,16nm,1.3s						
TKM2	**Tokmak 2**	**8.66**	**331**	*e*Pn	**Pn**	**16 11 34.0**	**+1.3**
	comp=E,4.3nm,0.9s						
AAK	**Ala-Archa**	**8.91**	**325**	Pn	**Pn**	**16 11 36.5**	**+0.5**
	comp=E,0.0nm,0.3s,baz=153,slow=17,SNR=2.5						
AAK				Lg		16 14 05.5	
	comp=E,0.0nm,0.3s,baz=192,slow=9.3,SNR=2.4						
AAK	**Ala-Archa**	**8.91**	**325**	Pn	**Pn**	**16 11 36.5**	**+0.5**
AAK				Lg		16 14 05.5	
AML	**Almayashu**	**8.93**	**320**	*e*Pn	**Pn**	**16 11 35.7**	**-0.6**
	comp=E,11nm,0.9s						
LSA	**Lhasa**	**10.07**	**122**	P	**Pn**	**16 11 51.8**	**-0.1**
MK31	**Makanchi Array**	**11.31**	**3**	Pn	**Pn**	**16 12 10.0**	**+1.1**
	comp=E,2.5nm,0.8s,baz=190,slow=14,SNR=8.9						
MK31				⇑Sn	**Sn**	**16 14 15.4**	**+0.1**
	comp=E,5.9nm,1.1s,baz=185,slow=22,SNR=4.3						
MK31	**Makanchi Array**	**11.31**	**3**	*e*Pn	**Pn**	**16 12 09.5**	**+0.6**
MK31				*e*Sn	**Sn**	**16 14 15.9**	**+0.6**
MKAR	**Makanchi Array**	**11.31**	**3**	Pn	**Pn**	**16 12 09.8**	**+0.9**
	comp=E,0.3nm,0.3s,baz=183,slow=10,SNR=8.3						
MKAR				Sn	**Sn**	**16 14 12.6**	**-2.7**
	comp=E,0.1nm,0.3s,baz=193,slow=25,SNR=2.6						
MKAR	**Makanchi Array**	**11.31**	**3**	Pn	**Pn**	**16 12 09.8**	**+0.9**
MKAR				Sn	**Sn**	**16 14 12.6**	**-2.7**
GTA	**Gaotai**	**15.16**	**70**	*e*P	**Pn**	**16 13 08.8**	**+7.3**
GTA				pP	pP	16 13 13.1	+3.7
GTA				sP	sP	16 13 16.1	+5.4
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURBB	**Kurchatov Arra**	**15.26**	**353**	⇑Pn	**Pn**	**16 13 00.5**	**-2.2**
	comp=Z,0.8nm,1.2s						
KURK	**Kurchatov**	**15.35**	**353**	⇑Pn	**Pn**	**16 12 59.9**	**-3.9**
	comp=Z,5.7nm,1.4s						
KURK	**Kurchatov**	**15.35**	**353**	Pn	**Pn**	**16 12 59.9**	**-3.9**
	baz=178,slow=13,SNR=7.9						
KURK				Lg		16 17 44.6	
	comp=Z,0.0nm,0.3s,baz=176,slow=28,SNR=3.9						
ZALV	**Zalesovo Beam**	**18.61**	**6**	P	**Pn**	**16 13 44.5**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=195,slow=10,SNR=3.3						
ZALV	**Zalesovo Beam**	**18.61**	**6**	P	**Pn**	**16 13 44.5**	**-0.4**
BVAR	**Borovoye Array**	**19.17**	**339**	P	**Pn**	**16 13 49.5**	**-2.2**
	comp=Z,0.3nm,0.3s,baz=150,slow=12,SNR=8.9						
ABKAR	**Akbulak array**	**20.87**	**318**	*e*P	**P**	**16 14 07.0**	**-2.3**
	comp=Z,1.6nm,0.8s						
SONM	**Songino Array**	**22.29**	**49**	P	**P**	**16 14 26.6**	**+2.0**
	comp=Z,2.2nm,1.3s,mb3.4,baz=248,slow=10,SNR=2.8						
CMAR	**Chiang Mai Arr**	**23.03**	**133**	P	**P**	**16 14 27.0**	**-5.6**
	comp=Z,1.5nm,0.9s,mb3.4,baz=311,slow=11,SNR=3.5						

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*ISCJB **13** 16:12:31.6±0.9, 4°.97S±0°.10×129°.5E±0°.1, h33km, Error ellipse: s-maj=19.2km s-min=10.4km az=142.7*
*IDC **13** 16:12:32.4±13.0, 5°.20S×129°.55E, h0km, mb4.0/1, mb1 4.1/4, mb1mx3.8/19, mbtmp3.9/4, ML3.3/3, Error ellipse: s-maj=190.4km s-min=88.1km az=150.0*
*DJA **13** 16:12:32, 4°.71S×129°.56E, h30km, MLv3.5/4*
ISC 13 16:12:33.1±1.0,**4°.9S**±0°.1×**129°.5E**±0°.1,**h35**km,**n8**,σ1§**50**/8,
Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**1.75**	**313**	P	**Pn**	**16 12 59.1**	**-1.8**
NLAI	**Namlea**	**2.88**	**305**	P	**Pn**	**16 13 18.0**	**+1.5**
TLE	**Tual**	**3.33**	**103**	P	**Pn**	**16 13 22.5**	**-0.2**
KNA	**Kununurra**	**10.81**	**184**	P	**Pn**	**16 15 07.3**	**+1.8**
FITZ	**Fitzroy Crossi**	**13.65**	**196**	Pn	**Pn**	**16 15 42.5**	**-1.9**
	0.1nm,0.3s,baz=27,slow=14,SNR=3.6						
WRA	**Warramunga Arr**	**15.69**	**163**	Pn	**Pn**	**16 16 09.8**	**-1.9**
	0.1nm,0.3s,baz=347,slow=13,SNR=5.7						
ASAR	**Alice Springs**	**19.15**	**168**	P	**Pn**	**16 16 55.2**	**+0.7**
	0.2nm,0.3s,baz=348,slow=11,SNR=50						
STKA	**Stephens Creek**	**29.15**	**158**	P	**P**	**16 18 32.4**	**+1.4**
	1.0nm,0.6s,baz=328,slow=9.5,SNR=3.8						

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*IDC **13** 16:13:20.7±0.5, 0°.77N×97°.47E, h0km, mb4.4/26, mb1 4.5/28, mb1mx4.4/31, mbtmp4.4/28, ML4.5/2, MS4.6/22, Ms1 4.7/22, ms1mx4.5/31, Error ellipse: s-maj=15.5km s-min=10.1km az=45.0*
*BJI **13** 16:13:22.3, 0°.61N×97°.56E, h33km, mB5.3/36, mb4.9/49, Ms5.2/50, Ms7 5.0/46*
*NEIC **13** 16:13:24.6±1.9, 0°.82N×97°.48E, h24km±13km, mb5.0/45, Error ellipse: s-maj=6.7km s-min=4.5km az=61.0*
NEIC Felt [III] at Gunungsitoli.
*DJA **13** 16:13:24, 0°.82N×97°.33E, h16km, Mw5.4/18*
*MOS **13** 16:13:24.2±1.0, 0°.84N×97°.49E, h33km, mb5.2/34, MS4.8/14, Error ellipse: s-maj=11.6km s-min=5.8km az=96.6*
*ISCJB **13** 16:13:25.4±0.5, 0°.85N±0°.03×97°.45E±0°.03, h42km±4km, mb4.8/106, MS4.9/53, Error ellipse: s-maj=6.2km s-min=4.5km az=144.2*
*GCMT **13** 16:13:25.1±0.3, 0°.37N×97°.28E, h39km±1km, MW5.1, Moment Tensor Solution. s52,c81; s64,c97; Moment tensor: Scale 10^{16}Nm; M_{rr}4.02±.20; $M_{\theta\theta}$-3.10±.14; $M_{\phi\phi}$-0.

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.47**	**14**	P	**Pn**	**16 13 36.6**	**-1.1**
TRSI	**Tarutung**	**1.91**	**52**	P	**Pn**	**16 13 57.2**	**0.0**
MNSI	**Mandailing Nat**	**2.12**	**91**	P	**Pn**	**16 14 00.4**	**+0.2**
PSI	**Prapat**	**2.44**	**37**	Pn	**Pn**	**16 14 02.6**	**-1.9**
	31nm,0.3s,baz=206,slow=8.0,SNR=81						
SISI	**Saibi**	**2.70**	**143**	P	**Pn**	**16 14 07.8**	**-0.4**
PPI	**Padang Panjang**	**3.21**	**114**	P	**Pn**	**16 14 15.7**	**+0.6**
PDSI	**Padang**	**3.47**	**120**	P	**Pn**	**16 14 19.8**	**+1.0**
BKNI	**Bangkinang**	**3.62**	**98**	P	**Pn**	**16 14 21.1**	**+0.3**
SDSI	**Sungai Dareh**	**4.34**	**114**	P	**Pn**	**16 14 30.9**	**+0.2**
PPSI	**Pulau Pagai**	**4.40**	**145**	P	**Pn**	**16 14 36.3**	**+4.8**
FRIM	**Kepong**	**4.79**	**60**	P	**Pn**	**16 14 37.8**	**+0.9**
IPM	**Ipoh**	**5.07**	**45**	P	**Pn**	**16 14 41.6**	**+0.8**
IPM	**Ipoh**	**5.07**	**45**	P	**Pn**	**16 14 41.7**	**+0.9**
	3.2nm4μm231nm,1.0s						
BSI	**Banda Aceh**	**5.10**	**335**	P	**Pn**	**16 14 38.0**	**-3.2**
	2.4nm7μm206nm,1.2s						
KULM	**Kulim**	**5.45**	**36**	P	**Pn**	**16 14 45.7**	**-0.3**
KULM	**Kulim**	**5.45**	**36**	⇑*i*Pn	**Pn**	**16 14 45.2**	**-0.7**
	131nm,0.6s						
KULM	**Kulim**	**5.45**	**36**	P	**Pn**	**16 14 45.3**	**-0.6**
	2.6nm4μm267nm,1.4s						
KGM	**Kluang**	**5.97**	**79**	P	**Pn**	**16 14 54.0**	**+0.9**
MYKOM	**Kota Tinggi**	**6.46**	**82**	P	**Pn**	**16 15 00.8**	**+0.9**
MYKOM	**Kota Tinggi**	**6.46**	**82**	P	**Pn**	**16 14 59.7**	**-0.1**
	2.4nm2μm61nm,1.3s						
KSI	**Kapahiang**	**6.80**	**131**	P	**Pn**	**16 15 05.1**	**+0.6**
	1.9nm5μm437nm,0.8s						
KTGM	**Kuala Trenggan**	**7.21**	**52**	P	**Pn**	**16 15 10.7**	**+0.6**
MNAI	**Manna**	**7.54**	**133**	P	**Pn**	**16 15 14.2**	**-0.5**
	2.0nm7μm425nm,0.7s						
PMBI	**Palembang**	**8.21**	**117**	P	**Pn**	**16 15 23.3**	**-0.6**
	159nm,0.5s						
MDSI	**Maura Dua**	**8.55**	**128**	P	**Pn**	**16 15 27.5**	**-1.0**
	1μm132nm,0.8s						
LWLI	**Liwa**	**8.79**	**132**	P	**Pn**	**16 15 38.5**	**+6.6**
KASI	**Kota Agung**	**9.45**	**132**	P	**Pn**	**16 15 38.7**	**-2.2**
	98nm,1.2s						
TPI	**Tanjungpandan**	**10.80**	**109**	P	**Pn**	**16 16 00.7**	**+1.3**
	1μm52nm,1.4s						
CGJI	**Cibinong**	**11.06**	**132**	P	**Pn**	**16 16 00.5**	**-2.5**
KSM	**Kuching**	**12.86**	**87**	P	**Pn**	**16 16 29.5**	**+2.0**
KSM	**Kuching**	**12.86**	**87**	*e*Pn	**Pn**	**16 16 27.0**	**-0.6**
	30nm,1.3s						
COCO	**West Island**	**12.96**	**183**	*e*P	**Pn**	**16 16 26.3**	**-2.6**
COCO				pmax	pmax		
	comp=Z,35nm,0.5s						
COCO	**West Island**	**12.96**	**183**	*e*Pn	**Pn**	**16 16 26.3**	**-2.6**
	comp=Z,35nm,0.5s						
STKI	**Sintang**	**14.04**	**93**	P	**Pn**	**16 16 48.7**	**+5.1**
	comp=Z,7μmcomp=Z,50nm,1.1s						
SBUM	**Sibu**	**14.84**	**84**	P	**Pn**	**16 16 55.8**	**+1.4**
SBUM	**Sibu**	**14.84**	**84**	P	**Pn**	**16 16 55.6**	**+1.2**
	comp=Z,1μmcomp=Z,51nm,1.7s						
NST	**Nakhon Sawan**	**14.97**	**10**	P	pP	16 17 07.0	-4.0
BTM	**Bintulu**	**15.79**	**81**	P	**Pn**	**16 17 08.9**	**+2.2**
UBT	**Ubonrachathani**	**16.14**	**27**	⇓P	**Pn**	**16 17 14.0**	**+2.8**
BDT	**Bhumibol Dam**	**16.37**	**5**	P	**Pn**	**16 17 15.0**	**+0.9**
	comp=Z,1.8nm,1.0s						
CM31	**Chiang Mai Arr**	**17.57**	**5**	*e*Pn	**Pn**	**16 17 27.5**	**-1.5**
CMAR	**Chiang Mai Arr**	**17.57**	**5**	P	**Pn**	**16 17 27.0**	**-2.0**
	comp=Z,1.4nm,0.3s,baz=194,slow=12,SNR=46						
CMAR				LR	LR	16 25 00.9	
	comp=Z,4μm,19.7s,baz=194,slow=40						
CHG	**Chiang Mai**	**17.92**	**5**	⇑P	**Pn**	**16 17 30.5**	**-2.9**
	comp=Z,22nm,0.9s						
CHTO	**Chiang Mai**	**17.92**	**5**	*e*P	**Pn**	**16 17 31.4**	**-2.0**
CHTO				pmax	pmax		
	comp=Z,46nm,1.5s						
CHTO	**Chiang Mai**	**17.92**	**5**	*e*P	**Pn**	**16 17 31.4**	**-2.0**
	comp=Z,46nm,1.5s						
CHTO	**Chiang Mai**	**17.92**	**5**	P	**Pn**	**16 17 32.2**	**-1.2**
	comp=Z,867nmcomp=Z,29nm,0.7s						
KKM	**Kota Kinabalu**	**19.42**	**74**	P	**Pn**	**16 17 51.0**	**-0.6**
KKM	**Kota Kinabalu**	**19.42**	**74**	*e*Pn	**Pn**	**16 17 50.8**	**-0.8**
	comp=Z,186nm,1.4s						
KKM	**Kota Kinabalu**	**19.42**	**74**	P	**Pn**	**16 17 51.3**	**-0.3**
	comp=Z,1μmcomp=Z,90nm,1.4s						
KDM	**Kudat**	**20.24**	**72**	P	**P**	**16 17 59.7**	**+0.6**
SDKM	**Sandakan**	**20.27**	**76**	P	**P**	**16 18 00.0**	**+0.6**
TSM	**Tawau**	**20.68**	**80**	P	**P**	**16 18 04.3**	**+0.5**
MYLDM	**Lahad Datu**	**21.44**	**78**	P	**P**	**16 18 13.3**	**+1.2**
MYLDM	**Lahad Datu**	**21.44**	**78**	P	**P**	**16 18 12.6**	**+0.5**
	comp=Z,2μmcomp=Z,102nm,1.8s,mb4.8						
QIZ	**Qiongzhong**	**21.77**	**33**	P	**P**	**16 18 15.1**	**-0.5**
QIZ				pP		16 18 23.6	
QIZ				sP	sP	16 18 27.4	-3.8
QIZ				S	**S**	**16 22 18.9**	**+4.7**
QIZ				sS	sS	16 22 28.3	-2.6
QIZ				pmax	pmax		
	comp=Z,38nm,1.7s,mb4.5						
QIZ				LR	LR		
	comp=N,2μm,17.0s						
QIZ				LR	LR		
	comp=Z,3μm,13.4s,MS4.8						
QIZ	**Qiongzhong**	**21.77**	**33**	*e*P	**P**	**16 18 14.2**	**-1.3**
	comp=Z,63nm,1.3s,mb4.9						
TTSI	**Tana Toraja**	**22.68**	**100**	P	**P**	**16 18 27.4**	**+2.1**
	comp=Z,1μmcomp=Z,54nm,1.9s,mb4.6						
KAPI	**Kappang**	**23.02**	**105**	P	**P**	**16 18 27.1**	**-1.8**
	comp=Z,4.9nm,0.4s,mb4.3,baz=294,slow=11,SNR=4.1						
KAPI				LR	LR	16 27 20.1	
	comp=Z,2μm,19.8s,MS4.6,baz=129,slow=36						
BNSI	**Bone**	**23.22**	**103**	P	**P**	**16 18 31.3**	**+0.3**
	comp=Z,1μmcomp=Z,55nm,1.9s,mb4.7						
APSI	**Ampana**	**24.25**	**94**	P	**P**	**16 18 40.8**	**+0.2**
	comp=Z,7μmcomp=Z,144nm,1.4s,mb5.2						
MRSI	**Marisa**	**24.48**	**91**	P	**P**	**16 18 42.9**	**+0.2**
	comp=Z,2μmcomp=Z,61nm,0.9s,mb5.0						
KMI	**Kunming**	**24.67**	**12**	⇑P	**P**	**16 18 45.0**	**+0.7**
KMI				pP		16 18 55.6	
KMI				sP	sP	16 19 00.1	-0.4
KMI				PP		16 19 23.4	
KMI				PcP	PcP	16 22 24.0	+3.0
KMI				S	**S**	**16 23 02.6**	**-0.6**
KMI				sS	sS	16 23 18.8	-3.1
KMI				SS		16 24 00.6	
KMI				PcS	PcS	16 26 02.6	+1.4
KMI				pmax	pmax		
	comp=Z,66nm,2.0s,mb4.8						
KMI				pmax	pmax		
	comp=Z,760nm,4.0s						
KMI				LR	LR		
	comp=N,4μm,10.9s,MS5.3						
KMI				LR	LR		
	comp=E,4μm,13.7s,MS5.3						
KMI				LR	LR		
	comp=Z,5μm,12.3s,MS5.3						
HYB	**Hyderabad**	**24.84**	**313**	*e*P	**P**	**16 18 49.0**	**+3.1**
HYB	**Hyderabad**	**24.84**	**313**	*i*P	**P**	**16 18 47.0**	**+1.1**
SHL	**Shillong**	**25.16**	**348**	⇑*i*P	**P**	**16 18 56.0**	**+7.3**
SHL				*i*S	**S**	**16 23 19.0**	**+7.9**
LUWI	**Luwuk**	**25.38**	**94**	P	**P**	**16 18 52.8**	**+1.9**
	comp=Z,2μmcomp=Z,171nm,1.2s,mb5.5						
KMSI	**Cibinong**	**26.52**	**90**	P	**P**	**16 19 04.7**	**+3.5**
	comp=Z,103nm,1.2s,mb5.2						
GYA	**Guiyang**	**26.96**	**18**	⇑*i*P	**P**	**16 19 04.3**	**-0.7**
GYA				pP	pP	16 19 13.6	-2.7
GYA				sP	sP	16 19 17.6	-3.7
GYA				PP		16 19 48.5	
GYA				PcP	PcP	16 22 28.3	+2.1
GYA				S	**S**	**16 23 37.6**	**-2.0**
GYA				sS	sS	16 23 50.5	-7.9
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.6						
GYA				pmax	pmax		
	comp=Z,260nm,7.1s						
GYA				LR	LR		
	comp=N,2μm,13.7s,MS5.1						
GYA				LR	LR		
	comp=E,3μm,14.9s,MS5.1						
GYA				LR	LR		
	comp=Z,3μm,13.0s,MS5.0						
ODAN	**Odare**	**27.62**	**340**	*e*P	**P**	**16 19 11.4**	**+0.5**
	comp=Z,49nm,0.8s,mb5.2						
TAPN	**Taplejung**	**27.97**	**341**	*e*P	**P**	**16 19 14.9**	**+0.9**
RAMN	**Ramite**	**27.98**	**339**	*e*P	**P**	**16 19 14.9**	**+0.8**
DAV	**Davao City (W)**	**28.71**	**77**	P	**P**	**16 19 21.3**	**+0.4**
	comp=Z,124nm,0.4s,mb6.0,baz=309,slow=16,SNR=7.3						
DAV				LR	LR	16 32 09.3	
	comp=Z,2μm,19.7s,MS4.7,baz=344,slow=39						
JIRN	**Jiri**	**28.77**	**339**	*e*P	**P**	**16 19 21.8**	**+0.7**
	comp=Z,61nm,0.7s,mb5.4						
PKI	**Pulchoki**	**28.98**	**338**	*e*P	**P**	**16 19 24.1**	**+1.1**
	comp=Z,162nm,1.3s,mb5.6						
PKI	**Pulchoki**	**28.98**	**338**	*e*P	**P**	**16 19 24.3**	**+1.3**
PKI				pmax	pmax		
	comp=Z,155nm,1.4s,mb5.5						
PKI	**Pulchoki**	**28.98**	**338**	*e*P	**P**	**16 19 24.3**	**+1.3**
	comp=Z,155nm,1.4s,mb5.5						
PKIN	**Phulchoki**	**28.99**	**337**	*e*P	**P**	**16 19 24.3**	**+1.2**
	comp=Z,155nm,1.4s,mb5.5						
GUN	**Gumba**	**29.11**	**339**	*e*P	**P**	**16 19 24.9**	**+0.7**
	comp=Z,60nm,0.5s,mb5.6						
DMN	**Daman**	**29.13**	**337**	*e*P	**P**	**16 19 24.8**	**+0.4**
	comp=Z,27nm,0.8s,mb5.0						
KKN	**Kakani**	**29.23**	**337**	*e*P	**P**	**16 19 25.6**	**+0.4**
LSA	**Lhasa**	**29.32**	**349**	P	**P**	**16 19 26.3**	**+0.3**
LSA				S	**S**	**16 24 14.4**	**-2.2**
LSA				LR	LR		
	comp=N,920nm,24.5s,MS4.5						
LSA				LR	LR		
	comp=E,1μm,26.0s,MS4.5						
LSA				LR	LR		
	comp=Z,2μm,21.6s,MS4.6						
LSA	**Lhasa**	**29.32**	**349**	*e*P	**P**	**16 19 26.9**	**+0.9**
LSA				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.0						
LSA	**Lhasa**	**29.32**	**349**	*e*P	**P**	**16 19 26.9**	**+0.9**
	comp=Z,32nm,1.0s,mb5.0						
CD2	**Chengdu**	**30.49**	**11**	⇓*i*P	**P**	**16 19 36.0**	**-0.4**
CD2				pP	pP	16 19 45.5	-2.2
CD2				sP	sP	16 19 49.5	-3.2
CD2				PP	PP	16 20 36.5	-9.3
CD2				S	**S**	**16 24 34.6**	**-0.4**
CD2				sS	sS	16 24 50.5	-3.4
CD2				SS	SS	16 26 16.8	-30
CD2				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.7						
CD2				pmax	pmax		
	comp=Z,60nm,5.8s						
CD2				LR	LR		
	comp=N,6μm,15.4s,MS5.5						
CD2				LR	LR		
	comp=E,4μm,14.2s,MS5.5						
CD2				LR	LR		
	comp=Z,7μm,14.2s,MS5.5						
MBWA	**Marble Bar**	**30.86**	**136**	*e*P	**P**	**16 19 39.0**	**-0.8**
	comp=Z,54nm,1.6s,mb5.1						
ENH	**Enshi**	**31.42**	**20**	*e*P	**P**	**16 19 42.8**	**-1.7**
	comp=Z,18nm,0.6s,mb5.1						
QZH	**Quanzhou**	**31.48**	**39**	P	**P**	**16 19 44.6**	**-0.6**
QZH				LR	LR		
	comp=N,3μm,13.0s,MS5.4						
QZH				LR	LR		
	comp=E,4μm,13.3s,MS5.4						
QZH				LR	LR		
	comp=Z,7μm,13.8s,MS5.5						
TPUB	**Ta-pu**	**31.69**	**44**	*e*P	**P**	**16 19 46.8**	**-0.2**
	comp=Z,120nm,1.4s,mb5.5						
YULB	**Yu-li**	**32.21**	**44**	*e*P	**P**	**16 19 51.2**	**-0.4**
	comp=Z,75nm,1.3s,mb5.4						
SSLB	**Suanglung**	**32.23**	**43**	*e*P	**P**	**16 19 50.1**	**-1.7**
	comp=Z,114nm,1.4s,mb5.5						
NACB	**Ninganchiao**	**32.93**	**43**	*e*P	**P**	**16 19 58.4**	**+0.5**
	comp=Z,23nm,0.9s,mb5.1						
PTH	**Pithoragarh**	**32.94**	**332**	*e*PKP	**P**	**16 19 58.6**	**+0.7**
FITZ	**Fitzroy Crossi**	**33.51**	**126**	P	**P**	**16 20 01.9**	**-1.1**
	comp=Z,4.7nm,0.9s,mb4.4,baz=324,slow=7.2,SNR=7.2						
XAN	**Xi'an**	**34.73**	**17**	P	**P**	**16 20 11.9**	**-1.5**
XAN				pP	pP	16 20 27.5	+2.7
XAN				pmax	pmax		
	comp=Z,13nm,0.6s,mb5.0						
LZH	**Lanzhou**	**35.56**	**9**	⇑P	**P**	**16 20 20.3**	**-0.2**
LZH				pP	pP	16 20 28.5	-3.5
LZH				sP	sP	16 20 34.0	-2.9
LZH				PP	PP	16 21 41.3	-0.6
LZH				S	**S**	**16 25 53.3**	**-0.3**
LZH				sS	sS	16 26 09.4	-3.2
LZH				SS	SS	16 28 13.8	-16
LZH				pmax	pmax		
	comp=Z,57nm,1.6s,mb5.2						
LZH				pmax	pmax		
	comp=Z,260nm,4.0s						
LZH				LR	LR		
	comp=E,2μm,16.1s						
LZH				LR	LR		
	comp=Z,3μm,17.1s,MS5.1						
NJ2	**Nanjing**	**37.03**	**31**	*e*P	**P**	**16 20 33.3**	**+0.1**
NJ2				pP	pP	16 20 43.3	-1.3
NJ2				sP	sP	16 20 47.5	-2.1
NJ2				PP	PP	16 22 03.3	+5.1
NJ2				S	**S**	**16 26 14.3**	**-1.9**
NJ2				sS	sS	16 26 31.6	-3.7
NJ2				pmax	pmax		
	comp=Z,160nm,1.2s,mb5.7						
NJ2				pmax	pmax		
	comp=Z,270nm,4.2s						
NJ2				LR	LR		
	comp=N,1μm,13.0s,MS4.9						
NJ2				LR	LR		
	comp=E,780nm,14.9s,MS4.9						
NWAO	**Narrogin (SRO)**	**38.42**	**153**	*e*P	pP	16 20 53.9	-2.5
	comp=E,68nm,0.8s						
NWAO	**Narrogin (SRO)**	**38.42**	**153**	*e*P	**P**	**16 20 49.5**	**+4.6**
NWAO				pmax	pmax		
	comp=Z,14nm,1.0s						
NWAO	**Narrogin (SRO)**	**38.42**	**153**	*e*P	**P**	**16 20 49.5**	**+4.6**
	comp=Z,14nm,1.0s,mb4.6						
GTA	**Gaotai**	**38.45**	**3**	P	**P**	**16 20 44.8**	**-0.2**
GTA				pP	pP	16 20 53.8	-2.7
GTA				sP	sP	16 20 58.0	-3.4
GTA				PP	PP	16 22 14.3	+0.7
GTA				S	**S**	**16 26 36.0**	**-1.3**
GTA				sS	sS	16 26 52.3	-4.2
GTA				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.6						
GTA				pmax	pmax		
	comp=Z,320nm,6.6s						
GTA				LR	LR		
	comp=N,1μm,12.6s,MS4.9						
GTA				LR	LR		
	comp=E,720nm,16.5s,MS4.9						
GTA				LR	LR		
	comp=Z,1μm,13.2s,MS4.9						
TIY	**Taiyuan**	**39.20**	**19**	*e*P	**P**	**16 20 50.8**	**-0.5**
TIY				LR	LR		
	comp=N,3μm,12.5s,MS5.4						
TIY				LR	LR		
	comp=E,2μm,13.6s,MS5.4						
TIY				LR	LR		
	comp=Z,4μm,12.6s,MS5.4						
KMBL	**Kambalda**	**39.54**	**146**	*e*P	pP	16 21 03.7	-2.1
	comp=Z,55nm,0.7s						
WRA	**Warramunga Arr**	**41.63**	**122**	P	**P**	**16 21 10.9**	**-0.8**
	comp=Z,3.9nm,0.5s,mb4.3,baz=303,slow=8.9,SNR=49						
WRA				LR	LR	16 42 25.0	
	comp=Z,1μm,19.6s,MS4.8,baz=295,slow=42						
WRAB	**Tennant Creek**	**41.63**	**122**	P	**P**	**16 21 11.0**	**-0.7**
	comp=Z,72nm,0.8s,mb5.3,SNR=7.7						
WRAB	**Tennant Creek**	**41.63**	**122**	*e*P	**P**	**16 21 11.5**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,22nm,1.2s,mb4.7						
WRAB	**Tennant Creek**	**41.63**	**122**	*e*P	**P**	**16 21 11.5**	**-0.3**
	comp=Z,22nm,1.2s,mb4.7						
WRAB	**Tennant Creek**	**41.63**	**122**	P	**P**	**16 21 11.6**	**-0.1**
	comp=Z,18nm,1.3s,mb4.5						
BJT	**Baijiatuau**	**42.55**	**21**	*e*P	**P**	**16 21 18.7**	**-0.2**
BJT				pmax	pmax		
	comp=Z,46nm,0.5s						
BJT	**Baijiatuau**	**42.55**	**21**	*e*P	**P**	**16 21 18.7**	**-0.2**
	comp=Z,46nm,0.5s,mb5.5						
BJI	**Beijing**	**42.57**	**21**	P	**P**	**16 21 19.8**	**+0.7**
BJI				PP	PP	16 23 04.3	+5.9
BJI				S	**S**	**16 27 41.8**	**+2.9**
BJI				pmax	pmax		
	comp=Z,60nm,0.6s,mb5.5						
BJI				pmax	pmax		
	comp=Z,460nm,3.6s						
BJI				LR	LR		
	comp=N,670nm,16.1s,MS5.0						
BJI				LR	LR		
	comp=E,2μm,19.5s,MS5.0						
BJI				LR	LR		
	comp=Z,700nm,19.3s,MS4.6						
FORT	**Forrest**	**42.84**	**140**	*e*P	**P**	**16 21 27.2**	**+5.8**
	comp=Z,23nm,0.6s,mb5.1						
FORT	**Forrest**	**42.84**	**140**	*e*P	**P**	**16 21 24.0**	**+2.6**
	comp=Z,29nm,0.7s,mb5.1						
ASAR	**Alice Springs**	**42.97**	**127**	P	**P**	**16 21 22.4**	**-0.2**
	comp=Z,1.6nm,0.4s,mb4.1,baz=296,slow=7.7,SNR=48						
ASAR				S	**S**	**16 27 44.4**	**-0.9**
	comp=Z,1.5nm,1.1s,baz=299,slow=13,SNR=6.2						
KSH	**Kashi**	**43.20**	**336**	*e*P	**P**	**16 21 23.1**	**-1.1**
KSH				pP	pP	16 21 32.9	-2.9
KSH				sP	sP	16 21 36.8	-3.9
KSH				PP	PP	16 23 05.3	+0.1
KSH				PcP	PcP	16 23 14.5	+1.4
KSH				ScP	ScP	16 27 01.6	+0.4
KSH				PcS	PcS	16 27 05.4	-0.1
KSH				S	**S**	**16 27 43.8**	**-4.3**
KSH				sS	sS	16 28 08.0	+0.5
KSH				ScS	ScS	16 31 19.1	-2.0
KSH				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.5						
KSH				pmax	pmax		
	comp=Z,72nm,4.5s						
KSH				LR	LR		
	comp=N,300nm,13.5s,MS4.7						
KSH				LR	LR		
	comp=E,610nm,16.9s,MS4.7						
KSH				LR	LR		
	comp=Z,330nm,12.3s,MS4.4						
WMQ	**Urumqi**	**43.67**	**350**	P	**P**	**16 21 29.0**	**+1.1**
WMQ				pP	pP	16 21 39.0	-0.5
WMQ				sP	sP	16 21 43.0	-1.4
WMQ				PP	PP	16 23 12.0	+1.9
WMQ				S	**S**	**16 27 57.0**	**+2.2**
WMQ				SS	SS	16 31 02.0	-9.4
WMQ				pmax	pmax		
	comp=Z,35nm,1.0s,mb5.0						
WMQ				pmax	pmax		
	comp=Z,160nm,4.0s						
WMQ				LR	LR		
	comp=N,780nm,16.0s,MS4.9						
WMQ				LR	LR		
	comp=E,840nm,16.0s,MS4.9						
WMQ				LR	LR		
	comp=Z,760nm,16.0s,MS4.7						
DL2	**Dalian**	**43.87**	**27**	P	**P**	**16 21 29.8**	**+0.2**
DL2				S	**S**	**16 27 58.5**	**+0.5**
DL2				sS	sS	16 28 12.9	-4.5
DL2				pmax	pmax		
	comp=Z,30nm,1.2s,mb4.9						
DL2				pmax	pmax		
	comp=Z,240nm,4.4s						
DL2				LR	LR		
	comp=N,820nm,14.4s						
DL2				LR	LR		
	comp=Z,820nm,14.4s,MS4.8						
KZA	**Kyzart**	**45.66**	**337**	P	**P**	**16 21 45.1**	**+1.3**
	SNR=6.5						
KSRS	**Korea Array**	**45.99**	**34**	P	**P**	**16 21 46.1**	**-0.4**
	comp=Z,9.9nm,0.8s,mb4.8,baz=219,slow=8.4,SNR=48						
KSRS				LR	LR	16 43 52.0	
	comp=Z,1μm,18.0s,MS4.9,baz=223,slow=40						
UCH	**Uchtor**	**46.08**	**336**	P	**P**	**16 21 48.5**	**+1.4**
	SNR=11						
UCH	**Uchtor**	**46.08**	**336**	*e*P	**P**	**16 21 47.9**	**+0.8**
	comp=Z,7.2nm,0.7s,mb4.7						
TKM2	**Tokmak 2**	**46.24**	**338**	P	**P**	**16 21 49.3**	**+0.9**
	SNR=8.2						
TKM2	**Tokmak 2**	**46.24**	**338**	*e*P	**P**	**16 21 48.8**	**+0.4**
TKM2				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.8						
TKM2	**Tokmak 2**	**46.24**	**338**	*e*P	**P**	**16 21 48.8**	**+0.4**
	comp=Z,17nm,1.2s,mb4.9						
KBK	**Karagaybulak**	**46.27**	**337**	P	**P**	**16 21 50.2**	**+1.6**
	SNR=7.4						
AML	**Almayashu**	**46.33**	**336**	P	**P**	**16 21 50.5**	**+1.5**
	SNR=13						
AML	**Almayashu**	**46.33**	**336**	*e*P	**P**	**16 21 50.2**	**+1.1**
	comp=Z,8.3nm,0.6s,mb4.8						
AAK	**Ala-Archa**	**46.43**	**337**	P	**P**	**16 21 50.3**	**+0.5**
	comp=Z,1.7nm,0.4s,mb4.3,baz=49,slow=1.9,SNR=5.1						
AAK	**Ala-Archa**	**46.43**	**337**	*e*P	**P**	**16 21 51.7**	**+1.9**
AAK				pmax	pmax		
	comp=Z,22nm,1.4s,mb4.9						
AAK	**Ala-Archa**	**46.43**	**337**	*e*P	**P**	**16 21 51.7**	**+1.9**
	comp=Z,22nm,1.4s,mb4.9						
AAK	**Ala-Archa**	**46.43**	**337**	P	**P**	**16 21 51.8**	**+2.0**
	comp=Z,2.3nm,1.8s,mb3.8						
EKS2	**Erkin-Say**	**46.74**	**336**	P	**P**	**16 21 53.6**	**+1.4**
	SNR=8.4						
EKS2	**Erkin-Say**	**46.74**	**336**	*e*P	**P**	**16 21 53.3**	**+1.0**
	comp=Z,5.1nm,0.6s,mb4.6						
SNY	**Shenyang**	**47.10**	**27**	⇑P	**P**	**16 21 54.4**	**-0.7**
SNY				S	**S**	**16 28 50.3**	**+5.8**
SNY				pmax	pmax		
	comp=Z,33nm,1.6s,mb5.0						
SNY				LR	LR		
	comp=N,2μm,14.1s,MS5.3						
SNY				LR	LR		
	comp=E,2μm,14.1s,MS5.3						
SNY				LR	LR		
	comp=Z,2μm,14.1s,MS5.3						
SONM	**Songino Array**	**47.45**	**8**	P	**P**	**16 21 58.1**	**+0.4**
	comp=Z,2.7nm,0.4s,mb4.5,baz=190,slow=10.0,SNR=30						
SONM				LR	LR	16 44 19.1	
	comp=Z,3μm,19.2s,MS5.2,baz=195,slow=39						
ULN	**Ulaanbaatar**	**47.57**	**9**	*e*P	**P**	**16 21 58.8**	**+0.1**
ULN				pmax	pmax		
	comp=Z,60nm,2.1s,mb5.3						
ULN	**Ulaanbaatar**	**47.57**	**9**	*e*P	**P**	**16 21 58.8**	**+0.1**
	comp=Z,60nm,2.1s,mb5.2						
ULN	**Ulaanbaatar**	**47.57**	**9**	P	**P**	**16 21 59.1**	**+0.4**
MK31	**Makanchi Array**	**47.65**	**346**	*e*P	**P**	**16 21 59.5**	**+0.2**
MKAR	**Makanchi Array**	**47.65**	**346**	P	**P**	**16 21 59.5**	**+0.2**
	comp=Z,14nm,0.5s,mb5.3,baz=133,slow=8.3,SNR=208						
MKAR				LR	LR	16 45 46.6	
	comp=Z,600nm,19.8s,MS4.6,baz=159,slow=41						
MKAR	**Makanchi Array**	**47.65**	**346**	P	**P**	**16 21 59.5**	**+0.2**
MKAR				LR	LR	16 45 46.6	
CN2	**Changchun**	**49.51**	**27**	⇑P	**P**	**16 22 13.3**	**-0.3**
CN2				*e*pP	pP	16 22 23.4	-2.0

comp=N,930nm,14.6s,MS5.2
MDJ LR LR
comp=E,1μm,14.2s,MS5.2
MDJ LR LR
comp=Z,2μm,15.5s,MS5.3
VLA Vladivostok 52.13 32 *e*P **P 16 22 33.0 -0.4**
VLA *e*S **S 16 29 58.3 +3.5**
VLA pmax pmax
comp=Z,75nm,2.2s,mb5.2
VLA MLR MLR
comp=Z,1μm,12.7s,MS5.1
KURK Kurchatov 52.20 345 P **P 16 22 34.3 +0.5**
comp=Z,90nm,0.7s,mb5.8,SNR=8.1
KURK Kurchatov 52.20 345 P **P 16 22 33.5 -0.3**
comp=Z,6.1nm,0.5s,mb4.8,baz=165,slow=6.8,SNR=58
KURK Kurchatov 52.20 345 *e*P **P 16 22 34.0 +0.2**
KURK pmax pmax
comp=Z,134nm,2.1s,mb5.5
KURK Kurchatov 52.20 345 *e*P **P 16 22 34.0 +0.2**
comp=Z,134nm,2.1s,mb5.5
CIT Chita 52.76 12 *e*P **P 16 22 38.7 +0.8**
CIT *e* 16 22 46.4
CIT *e* 16 22 56.2
CIT pmax pmax
comp=Z,99nm,2.1s,mb5.4
STKA Stephens Creek 52.93 132 *e*P **P 16 22 40.7 +1.2**
comp=Z,4.0nm,0.8s,mb4.4
STKA Stephens Creek 52.93 132 P **P 16 22 39.8 +0.3**
comp=Z,2.6nm,0.5s,mb4.4,baz=279,slow=8.0,SNR=11
STKA LR LR 16 47 13.7
comp=Z,1μm,21.7s,MS4.9,baz=305,slow=38
STKA Stephens Creek 52.93 132 *e*P **P 16 22 40.3 +0.8**
comp=Z,12nm,1.7s,mb4.5
OPO Ambohidratompo 53.02 246 P **P 16 22 40.0 -0.3**
comp=Z,3.3nm,0.8s,mb4.3,baz=51,slow=14,SNR=2.7
ZAA0 Zalesovo Array 53.95 351 *e*P **P 16 22 46.3 -0.3**
ZALV Zalesovo Beam 53.95 351 P **P 16 22 46.6 0.0**
comp=Z,18nm,0.5s,mb5.3,baz=170,slow=7.0,SNR=130
ZALV LR LR 16 51 29.9
comp=Z,489nm,19.4s,MS4.6,baz=14,slow=42
NVS Novosibirsk 55.07 350 *e*P **P 16 22 53.7 -1.0**
NVS *i* S **S 16 30 25.2 -9.0**
NVS pmax pmax
comp=N,35nm,1.7s
NVS pmax pmax
comp=Z,40nm,1.7s,mb5.2
NVS pmax pmax
comp=E,14nm,1.5s
NVS smax
comp=N,6.0nm,0.9s
NVS smax
comp=E,22nm,1.6s
CMSA Cobar Meteorol 55.87 130 *e*P **P 16 23 02.0 +1.1**
KLR Kul'dur 56.46 26 *e*P **P 16 23 00.0 -4.8**
KLR *e*S **S 16 30 50.0 -2.9**
KLR MLR MLR
comp=N,2μm,13.5s,MS5.4
KLR MLR MLR
comp=E,1μm,13.5s,MS5.4
KLR MLR MLR
comp=Z,4μm,13.5s,MS5.6
BVAR Borovoye Array 56.67 341 P **P 16 23 05.5 -0.7**
comp=Z,2.3nm,0.5s,mb4.5,baz=142,slow=8.9,SNR=18
BRVK Borovoye 56.73 341 *ce*P **P 16 23 13.3 +6.7**
BRVK pmax pmax
comp=Z,13nm,1.7s,mb4.7
BRVK Borovoye 56.73 341 *e*P **P 16 23 05.7 -1.0**
comp=Z,4.7nm,0.6s,mb4.7
ABKAR Akbulak array 57.95 332 *e*P **P 16 23 14.6 -0.7**
comp=Z,4.9nm,0.6s,mb4.7
EIDS Eidsvold 57.98 121 *e*P **P 16 23 13.1 -2.9**
AKTK Aktyubinsk 59.67 332 P **P 16 23 26.0 -1.2**
AKTO Aktyubinsk 59.67 332 P **P 16 23 26.0 -1.2**
comp=Z,1.0nm,0.5s,mb4.1,baz=131,slow=8.3,SNR=6.3
ARMA Armidale 60.12 126 *e*P pP 16 23 40.9 -1.9
KMBO Kilima Mbogo 60.23 268 P **P 16 23 30.7 -1.1**
comp=Z,0.6nm,0.4s,mb4.0,baz=108,slow=20,SNR=2.3
KMBO LR LR 16 46 09.6
comp=Z,500nm,20.4s,MS4.6,baz=94,slow=33
YSS Yuzh-Sakhalins 60.50 34 *e*P **P 16 23 33.0 0.0**
YSS *e**PP pP 16 23 44.0 -1.1
YSS *e*S **S 16 31 54.0 +8.4**
YSS MLR MLR
comp=Z,1μm,14.0s,MS5.1
YSS MLR MLR
comp=N,800nm,16.0s,MS5.2
YSS MLR MLR
comp=E,1μm,13.0s,MS5.2
MAK Makhachkala 61.17 320 *e*P pP 16 23 50.1 +0.3
MAK *e*S **S 16 32 04.6 +10**
MAK pmax pmax
comp=Z,145nm,1.4s,mb5.9
GNI Garni 61.73 316 *ce*P sP 16 23 58.2 -0.2
GNI pmax pmax
comp=Z,15nm,1.2s
SVE Sverdlovsk 63.11 338⇑ *e*P **P 16 23 50.2 -0.2**
SVE *e*PPP 16 27 47.8
SVE *e*S **S 16 32 17.9 -0.4**
SVE *e* 16 33 42.8
SVE pmax pmax
comp=Z,18nm,1.1s,mb5.1
SVE MLR MLR
comp=Z,659nm,19.0s,MS4.8
ZEI Tsey 63.44 319 *e*P **P 16 23 52.7 -0.1**
ZEI pmax pmax
comp=Z,9.0nm,0.7s,mb5.0
ARU Arti 63.61 337 *c i*P **P 16 23 53.0 -0.7**
ARU pmax pmax
comp=Z,13nm,1.7s,mb4.7
ARU MLR MLR
comp=Z,855nm,18.0s,MS5.0
ARU Arti 63.61 337 *e*P **P 16 23 53.1 -0.5**
comp=Z,70nm,2.2s,mb5.3
KIV Kislovodsk 64.75 319⇓ *e*P sP 16 24 15.8 -2.6
KIV *e*S **S 16 32 40.6 +1.6**
KIV *e*SS SS 16 36 56.2 +5.4
KIV pmax pmax
comp=Z,12nm,1.2s,mb4.8
YAK Yakutsk 65.69 16 *e*P **P 16 24 06.3 -0.8**
YAK *e**PP pP 16 24 17.0 -2.3
YAK *e* 16 24 38.1
YAK *e*S S 16 32 47.6 -2.3
YAK *e* 16 33 51.7
YAK *e*SS SS 16 37 00.1 -4.7
YAK pmax pmax
comp=Z,14nm,1.2s,mb4.9
YAK pmax pmax
comp=N,9.0nm,1.5s
YAK pmax pmax
comp=E,10.0nm,1.5s
YAK smax
comp=N,277nm,11.7s
YAK smax
comp=E,115nm,4.1s
YAK MLR MLR
comp=N,805nm,13.0s,MS5.3
YAK MLR MLR
comp=Z,2μm,14.0s,MS5.4
YAK MLR MLR
comp=E,925nm,15.0s,MS5.3
YAK Yakutsk 65.69 16 *e*P **P 16 24 06.2 -1.0**
comp=E,40nm,1.2s,mb5.3
MMAI Mount Meron Ar 66.32 306 P **P 16 24 10.6 -1.2**
comp=E,0.9nm,0.5s,mb4.1,baz=100,slow=6.3,SNR=2.2
MMAI LR LR 16 53 56.9
comp=E,367nm,18.6s,MS4.6,baz=100,slow=37
SOKR Solíkamsk 66.51 339 *c i*P **P 16 24 12.4 0.0**
SOKR pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
VRHR Novokhopersk 68.57 326 *e*P **P 16 24 32.4 +6.8**
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,20nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VRHR MLR MLR
comp=Z,500nm,23.0s,MS4.7
BR131 Keskin Array S 69.54 312 *e*P **P 16 24 31.4 -0.5**
comp=Z,2.3nm,0.6s,mb4.3
BRTR Keskin Array B 69.54 312 P **P 16 24 31.3 -0.6**
comp=Z,2.2nm,0.6s,mb4.2,baz=135,slow=6.0,SNR=16
BRTR LR LR 16 55 32.5
comp=Z,158nm,21.9s,MS4.2,baz=258,slow=36
VORD Divnogorie 69.83 325 *e*P pP 16 24 43.5 -2.2
VORD pmax pmax
comp=N,9.0nm,0.5s
VORD pmax pmax
comp=E,10.0nm,0.5s
VORD pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
VORD MLR MLR
comp=E,400nm,23.0s
VORD MLR MLR
comp=Z,410nm,23.0s,MS4.6
VORD MLR MLR
comp=N,90nm,11.0s
SKR Severo-Kuril's 69.99 35 *e*P **P 16 24 38.0 +3.5**
SKR *e* 16 33 40.0
SKR MLR MLR
comp=E,1μm,16.0s
SKR MLR MLR
comp=Z,1μm,16.0s,MS5.2
VSR Storozhevoye 70.01 325 *e*P **P 16 24 41.2 +6.7**
VSR pmax pmax
comp=N,10.0nm,0.6s
VSR pmax pmax
comp=E,7.0nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VSR MLR MLR
comp=N,110nm,23.0s,MS4.5
VSR MLR MLR
comp=E,330nm,23.0s,MS4.5
VSR MLR MLR
comp=Z,570nm,23.0s,MS4.8
DZM Mont Dzumac 70.90 114 *e*S S 16 33 57.7 +4.2
comp=Z,789nm,28.1s
DZM LR LR 16 46 21.0
comp=Z,632nm,22.9s
PETK Petropavlovsk- 71.89 33 LR LR 17 00 20.3
comp=Z,344nm,18.1s,MS4.7,baz=248,slow=39
PET Petropavlovsk 72.38 34 *e*P **P 16 24 48.0 -0.9**
PET pmax pmax
comp=Z,400nm,2.8s,mb5.8
PET pmax pmax
comp=Z,32nm,1.6s,mb5.0
PET pmax pmax
comp=Z,300nm,17.4s
PET pmax pmax
comp=Z,100nm,12.8s
MAW Mawson 72.42 193 P **P 16 24 49.1 +0.3**
comp=Z,2.0nm,0.8s,mb4.1,baz=81,slow=18,SNR=3.1
MAW LR LR 16 53 17.6
comp=Z,550nm,19.4s,MS4.8,baz=320,slow=33
MOS Moscow 72.77 329 *e*P **P 16 24 57.9 +6.8**
OBN Obninsk 73.06 328⇑ *e*P pP 16 25 03.5 -1.7
OBN *e*S S 16 34 18.5 +1.5
OBN *e*SS SS 16 38 54.1 -4.5
OBN pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
OBN MLR MLR
comp=Z,300nm,21.0s,MS4.5
TIXI Tiksi 73.49 10 *e*P **P 16 24 53.0 -2.1**
TIXI pmax pmax
comp=Z,95nm,2.2s,mb5.3
TIXI Tiksi 73.49 10 *e*P **P 16 24 53.0 -2.1**
comp=Z,95nm,2.2s,mb5.3
SEY Seymchan 73.99 23 *ce*P **P 16 24 58.6 +0.5**
BOSA Boshof 74.83 240 P **P 16 25 05.0 +1.2**
comp=Z,1.3nm,0.5s,mb4.1,baz=79,slow=3.5,SNR=5.3
BOSA LR LR 16 54 14.3
comp=Z,500nm,18.3s,MS4.8,baz=138,slow=33
BOSA Boshof 74.83 240 P **P 16 25 05.0 +1.2**
BOSA LR LR 16 54 14.3
KIS Kishinev 74.94 319 *e*P **P 16 25 13.0 +9.0**
KIS MLR MLR
comp=Z,400nm,19.0s,MS4.7
KIS MLR MLR
comp=Z,500nm,18.0s
AKASG Malin Array Be 75.70 322 P **P 16 25 07.7 -0.6**
comp=Z,3.4nm,0.5s,mb4.5,baz=93,slow=5.0,SNR=8.6
AKASG LR LR 17 03 20.9
comp=Z,194nm,20.2s,MS4.4,baz=105,slow=40
BUR08 Bucovina Ar. S 77.48 319 *e*P **P 16 25 19.3 +0.8**
JOF Joensuu 78.58 335 *e*P **P 16 25 22.5 -1.7**
JOF pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
JOF Joensuu 78.58 335 *ep* **P 16 25 22.5 -1.7**
comp=Z,2.1nm,0.5s,mb4.3
JOF Joensuu 78.58 335 *ep* **P 16 25 22.5 -1.7**
comp=Z,2.1nm,0.5s,mb4.3
LVV L'vov 78.70 321 *e*P pP 16 25 36.0 -1.7
APA Apatity 79.55 339⇑ *e*P **P 16 25 36.5 +7.1**
APA pmax pmax
comp=Z,27nm,1.4s,mb5.0
APA MLR MLR
comp=Z,600nm,18.0s,MS5.0
KOLS Kolonicke sedl 79.66 320 *e*P **P 16 25 31.4 +1.0**
KOLS pmax pmax
comp=Z,29nm,1.9s,mb4.9
KOLS Kolonicke sedl 79.66 320 *e*P **P 16 25 31.4 +1.0**
comp=Z,29nm,1.9s,mb4.9
KOLS *e*PcP pP 16 25 38.5 -4.4
KOLS Kolonicke sedl 79.66 320 *e*P **P 16 25 31.4 +1.0**
KOLS *ep*P pP 16 25 38.4 -4.5
CRVS Cervenica-Dubn 80.18 319 *e*P **P 16 25 34.5 +1.3**
CRVS pmax pmax
comp=Z,87nm,3.4s
CRVS Cervenica-Dubn 80.18 319 *e*P **P 16 25 34.5 +1.3**
comp=Z,87nm,3.4s
CRVS Cervenica-Dubn 80.18 319 *e*P **P 16 25 34.5 +1.3**
STHS Stebnicka Huta 80.41 320 *ep*P pP 16 25 43.8 -3.1
FINES FINESS Array B 80.43 332 P **P 16 25 34.1 -0.2**
comp=Z,3.3nm,0.5s,mb4.5,baz=101,slow=4.9,SNR=23
FINES LR LR 17 08 15.3
comp=Z,336nm,19.6s,MS4.7,baz=112,slow=41
KAF Kangasniemi 80.52 333 *e*P **P 16 25 34.5 -0.2**
KAF pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
KAF Kangasniemi 80.52 333 *ep* **P 16 25 34.5 -0.2**
comp=Z,5.8nm,0.6s,mb4.7
KAF Kangasniemi 80.52 333 *ep* **P 16 25 34.5 -0.2**
comp=Z,5.8nm,0.6s,mb4.7
KECS Kecovo 80.74 319 *e*P **P 16 25 37.2 +0.9**
KECS Kecovo 80.74 319 *e*P **P 16 25 37.2 +0.9**
PSZ Piszkesteto 81.05 318 *e*P **P 16 25 36.4 -1.5**
PSZ pmax pmax
comp=Z,30nm,1.6s,mb5.0
PSZ Piszkesteto 81.05 318 *e*P **P 16 25 36.4 -1.5**
comp=Z,30nm,1.6s,mb5.0
PSZ Piszkesteto 81.05 318⇓ *e*P **P 16 25 39.1 +1.2**
BILL Bilibino 81.40 21⇑ *e*P **P 16 25 39.6 +0.2**
BILL pmax pmax
comp=Z,6.0nm,1.7s,mb4.2
BILL Bilibino 81.40 21 *e*P **P 16 25 39.0 -0.4**
comp=Z,1.6nm,0.8s,mb4.0
VYHS Vyhne 81.83 319 *e*P **P 16 25 41.0 -1.0**
VYHS pmax pmax
comp=Z,24nm,2.7s,mb4.7
VYHS Vyhne 81.83 319 *e*P **P 16 25 41.0 -1.0**
comp=Z,24nm,2.7s,mb4.6
VYHS *e*PP pP 16 25 50.8 -3.8
VYHS Vyhne 81.83 319 *e*P **P 16 25 41.0 -1.0**
VYHS *ep*P pP 16 25 50.8 -3.8
MORC Moravsky Berou 82.84 320 *e*P **P 16 25 47.7 +0.4**
ARCES ARCESS Array B 82.96 340 P **P 16 25 48.0 +0.5**
comp=Z,1.9nm,0.5s,mb4.4,baz=97,slow=4.6,SNR=41
ARCES LR LR 17 06 42.8
comp=Z,516nm,20.8s,MS4.9,baz=128,slow=39
ARE0 ARCESS Array S 82.96 340 *e*P **P 16 25 47.4 0.0**
BRG Berggiesshubel 85.25 321 *e*P **P 16 26 08.4 +8.9**
comp=Z,3.2nm,0.7s,mb4.5
BRG Berggiesshubel 85.25 321 *e*P **P 16 26 08.4 +8.9**
BRG pmax pmax
comp=Z,1.0nm,0.7s,mb4.0
GEC2 GERESS Array S 85.25 319 *e*P **P 16 25 59.6 +0.1**
comp=Z,318nm,0.7s
GERES GERESS Array B 85.25 319 P **P 16 26 00.1 +0.6**
comp=Z,1.2nm,0.7s,mb4.1,baz=96,slow=4.0,SNR=12
CLL Collm 85.87 321 *e*P sP 16 26 17.0 -2.9
CLL *e*S S 16 36 37.0 +4.1
CLL MLR MLR
comp=Z,200nm,19.3s,MS4.5
CLL Collm 85.87 321 *ep*P pP 16 26 10.0 -5.2
CLL LmV 16 14 00.0
comp=Z,200nm,19.3s
CLL *e*S S 16 36 37.0 +4.1
CLL *e* 16 38 36.0
CLL *e*SSS 16 45 51.0
CLL *e*SSSS 16 48 51.0
MOX Moxa 86.71 321 *e*P **P 16 26 07.7 +1.0**
MOX
comp=Z,200nm,21.0s
GRA1 Grafenberg Arr 86.92 320 *e*P **P 16 26 08.3 +0.5**
comp=Z,2.0nm,0.7s,mb4.5
GRF Grafenberg Arr 86.92 320 *e*P **P 16 26 08.3 +0.5**
comp=Z,2.0nm,0.7s,mb4.5
GRF Grafenberg Arr 86.92 320 *e*P **P 16 26 08.3 +0.5**
GRF pmax pmax
comp=Z,2.0nm,0.7s,mb4.5
GRF Grafenberg Arr 86.92 320 *e*P **P 16 26 08.3 +0.5**
GRF pmax pmax
comp=Z,2.0nm,0.7s,mb4.5
NOA NORSAR Array B 87.44 331 P **P 16 26 10.0 0.0**
comp=Z,1.5nm,0.7s,mb4.3,baz=94,slow=4.9,SNR=9.2
KEST Kesra 87.98 306 P **P 16 26 13.8 +0.6**
comp=Z,0.9nm,0.7s,mb4.1,baz=108,slow=3.2,SNR=3.4
KEST LR LR 17 05 50.1
comp=Z,149nm,20.8s,MS4.4,baz=335,slow=36
NVL N'lazarevskaya 89.34 199 *e*P **P 16 26 27.1 +8.2**
MAIT Maitri 89.37 199 *e*P **P 16 26 19.1 +0.1**
MBDF Montbardon 89.90 315 *e*P **P 16 26 16.4 -5.7**
LPL La Plagne 89.92 315 *e*P **P 16 26 17.3 -4.8**
HAU Haudompre 90.13 318 *e*P **P 16 26 17.8 -5.2**
comp=Z,13nm,0.9s,mb5.0
HAU Haudompre 90.13 318 *e*P **P 16 26 17.8 -5.2**
HAU pmax pmax
comp=Z,6.0nm,0.9s,mb4.9
HAU Haudompre 90.13 318 *e*P **P 16 26 17.8 -5.2**
comp=Z,6.4nm,0.9s,mb5.0
VIVF Saint-Julien-l 91.39 315 *e*P **P 16 26 24.0 -5.0**
LOR Lormes 91.84 317 *e*P **P 16 26 26.0 -5.0**
comp=Z,29nm,1.2s,mb5.2
LOR Lormes 91.84 317 *e*P **P 16 26 26.0 -5.0**
LOR pmax pmax
comp=Z,14nm,1.2s,mb5.2
LOR Lormes 91.84 317 *e*P **P 16 26 26.0 -5.0**
comp=Z,14nm,1.2s,mb5.2
SMF Signal de Mont 91.88 317 *e*P **P 16 26 26.0 -5.2**
comp=Z,11nm,0.9s,mb4.9
SMF Signal de Mont 91.88 317 *e*P **P 16 26 26.0 -5.2**
SMF pmax pmax
comp=Z,6.0nm,0.9s,mb4.9
SMF Signal de Mont 91.88 317 *e*P **P 16 26 26.0 -5.2**
comp=Z,5.7nm,0.9s,mb4.9
AVF Avril sur Loir 92.21 317 *e*P **P 16 26 27.6 -5.1**
comp=Z,23nm,1.4s,mb5.0
AVF Avril sur Loir 92.21 317 *e*P **P 16 26 27.6 -5.1**
AVF pmax pmax
comp=Z,12nm,1.4s,mb5.0
AVF Avril sur Loir 92.21 317 *e*P **P 16 26 27.6 -5.1**
comp=Z,12nm,1.4s,mb5.0
LDF La Druitiere 94.40 319 *e*P **P 16 26 35.9 -6.9**
GRR Gorron 94.91 319 *e*P **P 16 26 38.3 -6.8**
TORD Torodi Ar. Bea 95.42 283 LR LR 17 07 45.4
comp=Z,295nm,20.2s,MS4.8,baz=115,slow=34
ESDC Sonseca Array 98.25 310 LR LR 17 18 51.5
comp=Z,115nm,18.1s,MS4.4,baz=80,slow=40
PPT Papeete 112.12 109 *e*LR LR 17 05 29.0
comp=Z,339nm,24.8s
TAOE Nuku Hiva Isla 122.11 100 *e*LR LR 17 09 55.3
comp=Z,215nm,23.3s
RKT Rikitea 124.54 118 *e*LR LR 17 11 13.6
comp=Z,389nm,33.0s
NVAR Mina Array Bea 128.92 36 PKP PKPdf 16 32 31.0 +0.2
comp=Z,0.2nm,0.4s,baz=294,slow=0.9,SNR=3.5
ELK Elko 129.04 32 PKP PKPdf 16 32 33.1 +2.1
comp=Z,0.4nm,0.5s,baz=52,slow=16,SNR=3.0
PDAR Pinedale Array 130.25 26 PKP PKPdf 16 32 34.5 +1.2
comp=Z,0.2nm,0.3s,baz=309,slow=3.0,SNR=3.2
COWI Conover 132.90 6 PKPdf PKPdf 16 32 38.0 -0.2
TXAR Lajitas Array 143.83 32 PKP PKPdf 16 32 57.2 -1.5
comp=Z,0.4nm,0.5s,baz=277,slow=0.7,SNR=8.7
JCT Junction City 144.78 26 *e*PKIKP PKPdf 16 32 59.1 -1.2
CPUP Villa Florida 144.91 222 PKP PKPdf 16 33 00.2 -0.5
comp=Z,2.1nm,0.6s,baz=121,slow=0.4,SNR=8.4
CPUP Villa Florida 144.91 222 PKP PKPdf 16 33 00.2 -0.5
NATX Nacogdoches 145.60 18 *e*PKP PKPdf 16 33 02.6 +0.9
GOGA Godfrey 145.92 1 *e*PKP2 PKPab 16 33 02.7 -0.6
LRAL Lakeview Retre 146.04 7 *e*PKPdf PKPdf 16 33 02.2 -0.2

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*IDC **13** 16:30:55.3±55.0, 17.°70S×175.°88E, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.7/15, mbtmp4.0/3, Error ellipse: s-maj=969.4km s-min=142.2km az=76.0*
*NOU **13** 16:32:02.4±0.3, 20.°14S×168.°40E, h10km, MD2.6, ML3.2*
ISC 13 16:32:03.6±4.1, 20.°3S±0.°2×168.°0E±0.°8, h8km±49km, n8, σ0°48/9, mb3.9/3, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.15**	**210**	*e*S	**Sn**	**16 33 06.5**	**-0.1**
DZM	**Mont Dzumac**	**2.32**	**220**	*e*P	**Pn**	**16 32 41.9**	**-0.1**
DZM				AMP		16 33 13.6	
PLUM	**Mont Dore**	**2.37**	**213**	*e*P	**Pn**	**16 32 42.4**	**-0.4**
NORM	**Noumea**	**2.42**	**217**	*e*P	**Pn**	**16 32 43.1**	**-0.3**
NORM				*e*S	**Sn**	**16 33 13.3**	**+0.1**
NOUC	**Port Laguerre**	**2.43**	**222**	*e*P	**Pn**	**16 32 44.3**	**+0.8**
NOUC				AMP		16 33 30.7	
STKA	**Stephens Creek**	**26.34**	**239**	P	**P**	**16 37 40.9**	**+0.8**
WRA	**Warramunga Arr**	**31.62**	**265**	P	**P**	**16 38 26.4**	**-0.8**
ASAR	**Alice Springs**	**31.79**	**258**	P	**P**	**16 38 28.8**	**+0.1**

comp=Z,6.6nm,0.8s,mb5.3,baz=289,slow=9.2,SNR=3.4
comp=Z,1.3nm,1.1s,mb3.7,baz=92,slow=8.5,SNR=10
comp=Z,3.0nm,0.7s,mb4.2,baz=85,slow=9.0,SNR=59

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*IDC **13** 16:38:52.8±1.8, 3.°60N×92.°99E, h0km, mb3.4/6, mb1 3.6/8, mb1mx3.5/26, mbtmp3.5/8, ML3.6/2, MS3.2/1, Ms1 3.2/1, ms1mx2.6/20, Error ellipse: s-maj=52.9km s-min=18.8km az=52.0*
*NEIC **13** 16:38:57.5±1.3, 3.°52N×92.°89E, h35km, mb3.8/1, Error ellipse: s-maj=25.6km s-min=14.2km az=50.0*
*ISCJB **13** 16:39:00.7±3.5, 3.°8N±0.°1×93.°2E±0.°1, h71km±30km, mb3.4/6, Error ellipse: s-maj=29.8km s-min=15.5km az=139.3*
ISC 13 16:39:02.0±3.3, 3.°7N±0.°1×93.°2E±0.°2, h66km±28km, n11, σ1°09/13, mb3.4/6, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**5.81**	**99**	Pn	**Pn**	**16 40 24.5**	**-1.2**
	4.1nm,0.3s,baz=300,slow=11,SNR=11						
PSI				Sn	**Sn**	**16 41 32.6**	**+1.6**
	2.8nm,0.3s,baz=300,slow=15,SNR=3.2						
PSI				LR	LR	16 41 56.4	
	comp=Z,203nm,21.0s,baz=197,slow=31						
KULM	**Kulim**	**7.61**	**78**	*e*Pn	**Pn**	**16 40 51.1**	**+0.9**
	9.7nm,0.5s						
KULM				*e*Sn	**Sn**	**16 42 13.8**	**-1.3**
CM31	**Chiang Mai Arr**	**15.68**	**21**	*e*Pn	**Pn**	**16 42 42.1**	**+3.1**
	7.6nm,0.9s						
CMAR	**Chiang Mai Arr**	**15.68**	**21**	Pn	**Pn**	**16 42 37.4**	**-1.6**
	0.1nm,0.3s,baz=217,slow=13,SNR=5.4						
MKAR	**Makanchi Array**	**43.91**	**349**	P	**P**	**16 47 01.6**	**-0.5**
	0.4nm,0.6s,mb3.4,baz=169,slow=8.7,SNR=4.9						
SONM	**Songino Array**	**45.38**	**12**	P	**P**	**16 47 14.1**	**+0.3**
	0.2nm,0.4s,mb3.2,baz=194,slow=8.0,SNR=2.6						
WRA	**Warramunga Arr**	**46.78**	**122**	P	**P**	**16 47 24.8**	**-0.5**
	0.2nm,0.5s,mb3.1,baz=299,slow=8.9,SNR=3.7						
WRA	**Warramunga Arr**	**46.78**	**122**	P	**P**	**16 47 24.8**	**-0.5**
ASAR	**Alice Springs**	**48.12**	**127**	P	**P**	**16 47 35.4**	**-0.2**
	0.4nm,0.9s,mb3.2,baz=291,slow=7.8,SNR=3.2						
ZALV	**Zalesovo Beam**	**50.52**	**354**	P	**P**	**16 47 54.3**	**+0.9**
	0.6nm,0.4s,mb4.0,baz=164,slow=5.8,SNR=3.1						
BVAR	**Borovoye Array**	**52.60**	**343**	P	**P**	**16 48 09.0**	**+0.1**
	0.2nm,0.5s,mb3.4,baz=138,slow=7.6,SNR=2.8						

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*ISCJB **13** 16:54:48.9±0.5, 19.°63S±0.°05×69.°2W±0.°1, h106km±6km, mb4.0/5, Error ellipse: s-maj=16.9km s-min=7.6km az=6.1*
*GUC **13** 16:54:50.2±0.5, 19.°68S×69.°38W, h98km±5km, ML4.2*
*NEIC **13** 16:54:50.4±1.1, 19.°67S×69.°14W, h110km±10km, mb4.6/3, Error ellipse: s-maj=17.1km s-min=9.3km az=99.0*
*IDC **13** 16:54:50.0±0.9, 19.°67S×69.°15W, h105km±7km, mb3.7/4, mb1 3.8/7, mb1mx3.6/19, mbtmp3.7/7, Error ellipse: s-maj=27.9km s-min=21.3km az=88.0*
ISC 13 16:54:50.0±0.5, 19.°64S±0.°05×69.°2W±0.°1, h101km±7km, n20, σ0°99/21, mb4.0/5, 2C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNMC	**Miæe Miæ**	**0.63**	**324**	*i*P	**Pn**	**16 55 07.1**	**+0.2**

MNMC				*i* S	Sn	16 55 19.8	+0.3
MNMC				AML	AML	16 55 24.1	
comp=E,18μm,0.3s							
HMBC	**Humberston**	**0.90**	**226**⇑	*i*P	**Pn**	**16 55 08.4**	**-1.0**
HMBC				*i* S	**Sn**	**16 55 22.4**	**-1.7**
HMBC				AML	AML	16 55 23.1	
comp=N,8μm,0.5s							
PB01	**Plate Boundary**	**1.42**	**191**⇑	*i*P	**Pn**	**16 55 15.0**	**-0.3**
PB01				*i* S	**Sn**	**16 55 34.2**	**-0.2**
PB01				AML	AML	16 55 37.4	
comp=N,4μm,0.3s							
MACH	**Maria Elena**	**2.59**	**191**	*e*P	**Pn**	**16 55 31.6**	**+1.2**
PB04	**Plate Boundary**	**2.62**	**186**	*e*P	**Pn**	**16 55 32.8**	**+2.0**
PB04				AML	AML	16 56 17.5	
comp=E,504nm,0.7s							
PECH	**Pedro de Valdi**	**2.97**	**188**	*e*P	**Pn**	**16 55 36.2**	**+0.9**
PECH				AML	AML	16 56 18.2	
comp=E,1μm,0.3s							
LPAZ	**La Paz**	**3.49**	**17**	P	**Pn**	**16 55 44.6**	**+2.2**
comp=E,7.0nm,0.3s,baz=189,slow=8.3,SNR=157							
SIV	**San Ignacio**	**8.55**	**66**	P	**Pn**	**16 56 49.5**	**-1.5**
comp=E,1.9nm,0.3s,baz=264,slow=11,SNR=71							
LCO	**Las Campanas**	**9.43**	**188**	*e*Pn	**Pn**	**16 57 03.2**	**+0.4**
comp=E,5.2nm,0.4s							
LCO				*e*Sn	**Sn**	**16 58 51.4**	**+4.5**
CPUP	**Villa Florida**	**12.80**	**124**	P	**Pn**	**16 57 47.4**	**-0.8**
comp=E,0.3nm,0.3s,baz=286,slow=11,SNR=4.9							
TRQA	**Tornquist**	**19.39**	**163**	*e*P	**P**	**16 59 07.6**	**-0.4**
comp=E,5.4nm,0.7s							
PLCA	**Paso Flores**	**21.05**	**183**	P	**P**	**16 59 25.9**	**0.0**
comp=E,2.5nm,0.8s,mb3.6,baz=349,slow=13,SNR=4.0							
SDV	**Santo Domingo**	**28.38**	**357**	P	**P**	**17 00 34.3**	**-0.6**
comp=E,1.8nm,0.4s,mb4.0,baz=186,slow=19,SNR=3.9							
RCBR	**Riachuelo**	**35.17**	**71**	*e*P	**P**	**17 01 35.3**	**+0.8**
comp=E,24nm,1.3s,mb4.9							
TORD	**Torodi Ar. Bea**	**77.00**	**71**	P	**P**	**17 06 31.7**	**-0.6**
comp=E,0.8nm,0.4s,mb3.8,baz=253,slow=5.5,SNR=10							
TORD				pP	pP	17 06 58.2	+0.1
comp=E,1.0nm,0.9s,baz=266,slow=5.6,SNR=2.9							
TORD	**Torodi Ar. Bea**	**77.00**	**71**	P	**P**	**17 06 31.7**	**-0.6**
TORD				pP	pP	17 06 58.2	+0.1
YKA	**Yellowknife Ar**	**89.35**	**341**	P	**P**	**17 07 34.3**	**-0.3**
comp=E,0.7nm,0.6s,mb3.9,baz=133,slow=4.7,SNR=7.2							
YKA				pP	pP	17 08 00.4	-0.8
comp=E,0.4nm,0.6s,baz=134,slow=4.6,SNR=3.2							
ASAR	**Alice Springs**	**131.41**	**209**	PKP	PKPdf	17 13 49.4	-1.9
comp=E,0.3nm,0.5s,baz=130,slow=1.6,SNR=4.6							
WRA	**Warramunga Arr**	**134.39**	**212**	PKP	PKPdf	17 13 55.7	-1.3
comp=E,0.4nm,0.5s,baz=167,slow=1.4,SNR=3.3							
SONM	**Songino Array**	**151.65**	**6**	PKPbc	PKPbc	17 14 33.0	+0.5
comp=E,0.6nm,0.4s,baz=329,slow=1.6,SNR=7.1							
SONM				pPKPbc	pPKPbc	17 15 01.4	+1.3
comp=E,1.0nm,0.8s,baz=247,slow=1.0,SNR=5.7							

*IDC **13** 17:01:27.1±2.0, 0.°69N×97.°32E, h0km, mb3.5/4, mb1 3.5/6, mb1mx3.3/25, mbtmp3.4/6, ML3.1/2, Error ellipse: s-maj=57.7km s-min=23.3km az=63.0*
*ISCJB **13** 17:01:30.3±6.3, 0.°7N±0.°3×97.°3E±0.°4, h35km±45km, mb3.4/4, Error ellipse: s-maj=81.7km s-min=16.9km az=146.2*
*DJA **13** 17:01:35, 1.°00N×97.°55E, h10km, MLv3.7/4*
ISC 13 17:01:32.6±1.8, 0.°83N±0.°08×97.°4E±0.°2, h32km±11km, n12, σ0°64/12, mb3.4/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.50**	**18**	P	**Pb**	**17 01 42.3**	**-0.8**
TRSI	**Tarutung**	**1.94**	**52**	P	**Pn**	**17 02 04.2**	**+0.8**
MNSI	**Mandailing Nat**	**2.16**	**91**	P	**Pn**	**17 02 06.1**	**-0.2**
PSI	**Prapat**	**2.47**	**37**	Pn	**Pn**	**17 02 10.1**	**-0.6**
1.2nm,0.3s,baz=200,slow=16,SNR=3.6							
SISI	**Saibi**	**2.71**	**142**	P	**Pb**	**17 02 21.3**	**+0.9**
IPM	**Ipoh**	**5.11**	**45**	P	**Pn**	**17 02 51.9**	**+4.9**
KULM	**Kulim**	**5.48**	**36**	P	**Pn**	**17 02 52.6**	**+0.5**
CMAR	**Chiang Mai Arr**	**17.59**	**5**	P	**Pn**	**17 05 35.9**	**+0.6**
0.1nm,0.3s,baz=199,slow=13,SNR=4.0							
WRA	**Warramunga Arr**	**41.65**	**122**	P	**P**	**17 09 17.3**	**-1.0**
0.3nm,0.6s,mb3.1,baz=304,slow=8.7,SNR=2.4							
ASAR	**Alice Springs**	**42.99**	**127**	P	**P**	**17 09 28.6**	**-0.6**
0.2nm,0.6s,mb3.0,baz=296,slow=8.0,SNR=6.6							
MKAR	**Makanchi Array**	**47.66**	**346**	P	**P**	**17 10 06.1**	**+0.3**
0.6nm,0.7s,mb3.7,baz=132,slow=9.3,SNR=5.8							
ZALV	**Zalesovo Beam**	**53.96**	**351**	P	**P**	**17 10 53.1**	**0.0**
0.6nm,0.4s,mb3.9,baz=181,slow=7.2,SNR=4.3							

*DDA **13** 17:04:11.9, 40.°35N×27.°99E, h22km±1km, Md3.1*
*ISK **13** 17:04:12.2, 40.°36N×28.°03E, h5km, ML2.5*
*CSEM **13** 17:04:12.8±0.1, 40.°37N×28.°02E, h8km, ML2.5, Error ellipse: s-maj=2.0km s-min=1.7km az=10.0*
*ISCJB **13** 17:04:12.5±0.3, 40.°37N±0.°02×28.°03E±0.°02, h4km±4km, Error ellipse: s-maj=3.5km s-min=3.0km az=2.4*
ISC 13 17:04:13.0±0.3, 40.°37N±0.°02×28.°01E±0.°02, h8km±3km, n68, σ0°78/97, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNT	**Bandirma**	**0.07**	**262**	PG	**Pg**	**17 04 14.8**	**-0.1**
BNT				SG	**Sg**	**17 04 17.0**	**+0.7**
EDC	**Edincik**	**0.12**	**260**	PG	**Pg**	**17 04 15.7**	**+0.1**
EDC	**Edincik**	**0.12**	**260**	*i* Pg	**Pg**	**17 04 15.7**	**+0.1**
ARMT	**Armutlu**	**0.68**	**73**	*e*PG	**Pg**	**17 04 26.1**	**0.0**
ARMT				*e*SG	**Sg**	**17 04 35.5**	**+0.6**
ARMT	**Armutlu**	**0.68**	**73**	*e*Pg	**Pg**	**17 04 26.1**	**0.0**
ARMT				*e*Sg	**Sg**	**17 04 35.5**	**+0.6**
BALY	**Balya**	**0.69**	**206**	*i* P	**Pg**	**17 04 25.6**	**-0.7**
BALY				*i* S	**Sg**	**17 04 40.0**	**+4.6**
BALY	**Balya**	**0.69**	**206**	*i* P	**Pg**	**17 04 25.6**	**-0.8**
BALY				*i* S	**Sg**	**17 04 40.0**	**+4.6**
MFT	**Murefte**	**0.70**	**307**	*e*PG	**Pg**	**17 04 26.8**	**+0.3**
MFT	**Murefte**	**0.70**	**307**	*e*Pg	**Pg**	**17 04 26.8**	**+0.3**
SART	**Tekirdag**	**0.71**	**297**	*i* P	**Pg**	**17 04 26.5**	**-0.2**
SART				*i* S	**Sg**	**17 04 36.2**	**+0.2**
SART	**Tekirdag**	**0.71**	**297**	*i* P	**Pg**	**17 04 26.5**	**-0.2**
SART				*i* S	**Sg**	**17 04 36.2**	**+0.2**
RKY	**Sarkoy-Tekirda**	**0.71**	**297**	*e*PG	**Pg**	**17 04 26.9**	**+0.1**
RKY				*e*SG	**Sg**	**17 04 37.2**	**+1.1**
RKY	**Sarkoy-Tekirda**	**0.71**	**297**	*e*Pg	**Pg**	**17 04 26.9**	**+0.1**
RKY				*e*Sg	**Sg**	**17 04 37.2**	**+1.1**
TKR	**Tekirdag**	**0.72**	**330**	*e*PG	**Pg**	**17 04 26.9**	**0.0**
TKR	**Tekirdag**	**0.72**	**330**	*e*Pg	**Pg**	**17 04 26.9**	**0.0**
BALB	**Balikesir**	**0.73**	**188**	*e*PG	**Pg**	**17 04 26.6**	**-0.6**
BALB				*e*SG	**Sg**	**17 04 36.4**	**-0.3**
BALB	**Balikesir**	**0.73**	**188**	*e*Pg	**Pg**	**17 04 26.6**	**-0.5**
BALB				*e*Sg	**Sg**	**17 04 36.4**	**-0.2**
CRLT	**Corlu**	**0.79**	**345**	*e*PG	**Pg**	**17 04 28.2**	**-0.1**
CRLT	**Corlu**	**0.79**	**345**	*e*Pg	**Pg**	**17 04 28.2**	**0.0**
DURS	**Dursunbey**	**0.84**	**155**	*i* P	**Pg**	**17 04 28.9**	**-0.3**
DURS				*i* S	**Sg**	**17 04 40.1**	**0.0**
DURS	**Dursunbey**	**0.84**	**155**	*i* P	**Pg**	**17 04 28.9**	**-0.3**
DURS				*i* S	**Sg**	**17 04 40.1**	**0.0**
ELBA	**Catalca**	**0.84**	**22**	*i* P	**Pg**	**17 04 29.0**	**-0.2**
ELBA				*i* S	**Sg**	**17 04 40.6**	**+0.4**
ELBA	**Catalca**	**0.84**	**22**	*i* P	**Pg**	**17 04 29.0**	**-0.2**
ELBA				*i* S	**Sg**	**17 04 40.6**	**+0.4**
ULDT	**Uludag**	**0.89**	**104**	*i* P	**Pg**	**17 04 29.6**	**-0.4**
ULDT				*i* S	**Sg**	**17 04 43.2**	**+1.6**
ULDT	**Uludag**	**0.89**	**104**	*i* P	**Pg**	**17 04 29.6**	**-0.5**
ULDT				*i* S	**Sg**	**17 04 43.2**	**+1.6**
GEMT	**Gemlik**	**0.90**	**85**	*e*PG	**Pg**	**17 04 29.6**	**-0.7**
GEMT				*e*SG	**Sg**	**17 04 42.9**	**+0.8**
GEMT	**Gemlik**	**0.90**	**85**	*e*Pg	**Pg**	**17 04 29.7**	**-0.6**
GEMT				*e*Sg	**Sg**	**17 04 42.9**	**+0.9**
CTKS	**Kestanelik-??a**	**0.95**	**23**	*e*PG	**Pg**	**17 04 30.5**	**-0.7**
CTKS	**Kestanelik-??a**	**0.95**	**23**	*e*Pg	**Pg**	**17 04 30.5**	**-0.7**
LPK	**Lapseki**	**0.96**	**271**	*e*PG	**Pg**	**17 04 31.0**	**-0.4**
LPK	**Lapseki**	**0.96**	**271**	*e*Pg	**Pg**	**17 04 31.0**	**-0.4**
YLV	**Yalova**	**1.06**	**79**	*e*PG	**Pg**	**17 04 32.8**	**-0.5**
YLV	**Yalova**	**1.06**	**79**	*e*Pg	**Pg**	**17 04 32.8**	**-0.5**
ISK	**Istanbul-Kandi**	**1.06**	**48**	*e*PG	**Pg**	**17 04 32.6**	**-0.7**
ISK	**Istanbul-Kandi**	**1.06**	**48**	*e*Pg	**Pg**	**17 04 32.6**	**-0.7**
CTYL	**Yal??k??y-??at**	**1.13**	**11**	*e*PN	**Pn**	**17 04 34.2**	**-0.9**
CTYL	**Yal??k??y-??at**	**1.13**	**11**	*e*Pn	**Pn**	**17 04 34.2**	**-0.9**
KLYT	**Kilyos**	**1.18**	**41**	*e*PN	**Pn**	**17 04 35.0**	**-0.9**
KLYT	**Kilyos**	**1.18**	**41**	*e*Pn	**Pn**	**17 04 35.0**	**-0.8**
ADVT	**Abdulvahap**	**1.32**	**87**	*e*PN	**Pn**	**17 04 36.8**	**-0.9**
ADVT	**Abdulvahap**	**1.32**	**87**	*e*Pn	**Pn**	**17 04 36.8**	**-0.9**
EZN	**Ezine**	**1.40**	**248**	*e*PN	**Pn**	**17 04 39.2**	**+0.3**
EZN	**Ezine**	**1.40**	**248**	*e*Pn	**Pn**	**17 04 39.2**	**+0.3**
DEMI	**Demirci**	**1.43**	**157**	*i* P	**Pn**	**17 04 39.8**	**+0.6**
DEMI				*i* S	**Sn**	**17 04 57.9**	**-0.3**
DEMI	**Demirci**	**1.43**	**157**	*i* P	**Pn**	**17 04 39.8**	**+0.6**
DEMI				*i* S	**Sn**	**17 04 57.9**	**-0.3**
ENEZ	**Enez**	**1.47**	**285**	*e*PN	**Pn**	**17 04 39.9**	**+0.1**
ENEZ	**Enez**	**1.47**	**285**	*e*Pn	**Pn**	**17 04 39.9**	**+0.2**
SILT	**Sile**	**1.47**	**57**	*e*PN	**Pn**	**17 04 39.7**	**-0.1**
SILT	**Sile**	**1.47**	**57**	*e*Pn	**Pn**	**17 04 39.7**	**-0.1**
AYVA	**Ayvalik**	**1.47**	**224**	*i* P	**Pn**	**17 04 37.5**	**-2.3**
AYVA				*i* S	**Sn**	**17 05 00.9**	**+1.7**
AYVA	**Ayvalik**	**1.47**	**224**	*i* P	**Pn**	**17 04 37.5**	**-2.3**
AYVA				*i* S	**Sn**	**17 05 00.9**	**+1.7**
AKHS	**Akhisar**	**1.49**	**186**	*i* P	**Pn**	**17 04 39.0**	**-1.2**
AKHS				*i* S	**Sn**	**17 04 56.3**	**-3.5**
AKHS	**Akhisar**	**1.49**	**186**	*i* P	**Pn**	**17 04 39.0**	**-1.1**
AKHS				*i* S	**Sn**	**17 04 56.3**	**-3.5**
GADA	**Gvkgeada**	**1.63**	**265**	*e*PN	**Pn**	**17 04 42.4**	**+0.4**
GADA	**Gvkgeada**	**1.63**	**265**	*e*Pn	**Pn**	**17 04 42.4**	**+0.4**
GDZ	**Gediz**	**1.71**	**138**	*i* P	**Pn**	**17 04 43.1**	**0.0**
GDZ				*i* S	**Sn**	**17 05 07.5**	**+2.4**
GDZ	**Gediz**	**1.71**	**138**	*i* P	**Pn**	**17 04 43.1**	**0.0**
GDZ				*i* S	**Sn**	**17 05 07.5**	**+2.5**
EDRB	**Edirne**	**1.76**	**327**	*e*PN	**Pn**	**17 04 44.5**	**+0.7**
EDRB	**Edirne**	**1.76**	**327**	*e*Pn	**Pn**	**17 04 44.5**	**+0.6**
GULT	**Gulveren**	**1.91**	**87**	*e*PN	**Pn**	**17 04 46.5**	**+0.6**
GULT	**Gulveren**	**1.91**	**87**	*e*Pn	**Pn**	**17 04 46.5**	**+0.6**
KULA	**Kula-Manisa**	**1.92**	**165**	*e*PN	**Pn**	**17 04 46.1**	**+0.1**
KULA	**Kula-Manisa**	**1.92**	**165**	*e*Pn	**Pn**	**17 04 46.1**	**+0.2**
BORA	**Eskisehir**	**1.93**	**104**	*i* P	**Pn**	**17 04 45.8**	**-0.3**
BORA				*i* S	**Sn**	**17 05 15.2**	**+4.5**
BORA	**Eskisehir**	**1.93**	**104**	*i* P	**Pn**	**17 04 45.8**	**-0.4**
ALT	**Altintas**	**2.08**	**128**	*e*PN	**Pn**	**17 04 48.8**	**+0.6**
ALT	**Altintas**	**2.08**	**128**	*e*Pn	**Pn**	**17 04 48.8**	**+0.6**
KHAL	**Karahalli**	**2.30**	**150**	*i* P	**Pn**	**17 04 55.9**	**+4.7**
KHAL				*i* S	**Sn**	**17 05 24.9**	**+5.3**

*NEIC **13** 17:04:25.7±0.9, 23.°48S×179.°90W, h536km±9km, mb4.2/14, Error ellipse: s-maj=11.5km s-min=9.1km az=119.0*
*ISCJB **13** 17:04:25.5±1.1, 23.°50S±0.°07×179.°99E±0.°09, h538km±13km, mb4.1/20, Error ellipse: s-maj=13.3km s-min=10.4km az=13.7*
*IDC **13** 17:04:26.4±1.5, 23.°46S×179.°94E, h532km±14km, mb3.4/9, mb1 3.6/10, mb1mx3.4/18, mbtmp3.4/10, Error ellipse: s-maj=22.0km s-min=12.1km az=164.0*
ISC 13 17:04:26.0±1.1, 23.°48S±0.°09×179.°96W±0.°09, h532km±13km, n39, σ0°96/29, mb4.1/20, 2C, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.01**	**342**	*e*Pn	**P**	**17 06 04.6**	**+0.6**
24nm,0.9s							
URZ	**Urewera**	**14.95**	**189**	P	**P**	**17 07 33.3**	**-1.7**
0.4nm,0.3s,baz=279,slow=22,SNR=7.2							
URZ				S	**S**	**17 10 04.7**	**-5.9**
0.3nm,0.3s,baz=0.0,slow=20,SNR=2.5							
SNZO	**South Karori**	**18.34**	**193**	P	**P**	**17 08 06.9**	**-0.7**
RPZ	**Rata Peaks**	**21.50**	**198**	P	**P**	**17 08 36.2**	**-0.1**
2.4nm,0.4s,mb4.2,baz=353,slow=13,SNR=6.3							
RPZ	**Rata Peaks**	**21.50**	**198**	*e*P	**P**	**17 08 36.1**	**-0.2**
7.0nm,0.8s,mb4.3							
HNR	**Honiara**	**23.75**	**303**	P	**P**	**17 08 55.9**	**-1.0**
26nm,0.6s,mb5.0							
EIDS	**Eidsvold**	**26.41**	**260**	*e*P	**P**	**17 09 20.9**	**+0.6**
3.5nm,0.4s,mb4.3							
CTAO	**Charters Tower**	**31.51**	**270**	*e*P	**P**	**17 10 05.6**	**+1.0**
17nm,0.4s,mb4.9							
STKA	**Stephens Creek**	**34.91**	**248**	P	**P**	**17 10 32.9**	**-0.3**
1.0nm,0.4s,mb3.7,baz=212,slow=11,SNR=4.2							
ASAR	**Alice Springs**	**42.14**	**260**	P	**P**	**17 11 32.4**	**+0.4**
2.4nm,0.6s,mb3.9,baz=90,slow=7.5,SNR=87							
ASAR				ScP	ScP	17 16 16.2	+2.2
1.7nm,1.0s,baz=100,slow=4.2,SNR=7.0							
ASAR				S	**S**	**17 17 12.1**	**-1.3**
0.9nm,0.7s,baz=99,slow=14,SNR=13							
WRAB	**Tennant Creek**	**42.46**	**266**	*e*P	**P**	**17 11 33.9**	**-0.6**
4.2nm,0.6s,mb4.2							
WRA	**Warramunga Arr**	**42.47**	**266**	P	**P**	**17 11 34.4**	**-0.2**
2.7nm,0.3s,mb4.3,baz=90,slow=5.8,SNR=197							
WRA				ScP	ScP	17 16 17.6	+2.1
1.3nm,1.0s,baz=108,slow=4.3,SNR=4.3							
WRA				S	**S**	**17 17 14.5**	**-3.7**
0.7nm,0.8s,baz=99,slow=14,SNR=4.7							
KAKA	**Kakadu**	**46.31**	**275**	*e*P	**P**	**17 12 04.5**	**+0.3**
26nm,0.7s,mb4.9							
FITZ	**Fitzroy Crossi**	**50.90**	**265**	P	**P**	**17 12 39.0**	**+0.7**
1.7nm,0.8s,mb3.5,baz=94,slow=14,SNR=6.9							
SBA	**Scott Base**	**54.80**	**183**	*e*P	**P**	**17 13 07.8**	**+2.6**
8.0nm,1.0s,mb3.9							
CASY	**Casey**	**60.51**	**206**	*e*P	**P**	**17 13 43.6**	**-0.5**
4.1nm,0.5s,mb4.0							
QSPA	**South Pole Qui**	**66.60**	**180**	*e*P	**P**	**17 14 24.2**	**+1.3**
11nm,0.7s,mb4.5							
MAW	**Mawson**	**78.16**	**200**	P	**P**	**17 15 30.6**	**+0.8**
3.2nm,0.6s,mb3.9,baz=137,slow=9.5,SNR=10.0							
MAW	**Mawson**	**78.16**	**200**	*e*P	**P**	**17 15 30.4**	**+0.5**
0.8nm,0.6s,mb3.2							
ISA	**Isabella**	**82.70**	**46**	*e*P	**P**	**17 15 53.8**	**-0.1**
4.1nm,0.8s,mb4.0							
CMB	**Columbia Colle**	**82.87**	**43**	P	**P**	**17 15 52.3**	**-2.4**
3.1nm,0.7s,mb4.0							
NVAR	**Mina Array Bea**	**84.42**	**44**	P	**P**	**17 16 02.9**	**+0.5**
1.0nm,0.8s,mb3.4,baz=218,slow=8.8,SNR=6.3							
NVAR	**Mina Array Bea**	**84.42**	**44**	P	**P**	**17 16 02.9**	**+0.5**
TMUT	**Trail Mountain**	**89.52**	**46**	*e*P	**P**	**17 16 25.8**	**-0.8**
4.1nm,0.9s,mb4.3							
TXAR	**Lajitas Array**	**90.18**	**58**	P	**P**	**17 16 30.6**	**+0.8**
1.6nm,0.7s,mb4.0,baz=209,slow=6.9,SNR=22							
PDAR	**Pinedale Array**	**92.36**	**44**	P	**P**	**17 16 39.5**	**-0.1**
0.7nm,0.6s,mb3.9,baz=212,slow=4.0,SNR=7.4							
MKAR	**Makanchi Array**	**111.89**	**313**	PKiKP	PKiKP	17 21 59.1	-1.3
0.3nm,0.6s,baz=59,slow=1.7,SNR=4.5							
BVAR	**Borovoye Array**	**120.15**	**319**	PKP	PKPdf	17 22 15.2	-0.9
0.9nm,0.5s,baz=90,slow=1.4,SNR=6.0							
ARCES	**ARCESS Array B**	**131.48**	**348**	PKP	PKPdf	17 22 36.3	-1.0
2.6nm,0.9s,baz=2.9,slow=2.4,SNR=7.9							
FINES	**FINESS Array B**	**138.06**	**342**	PKP	PKPdf	17 22 48.9	-0.8
0.9nm,0.7s,baz=129,slow=2.7,SNR=4.3							
FINES				SKPbc	SKPbc	17 25 33.0	-0.9
1.3nm,0.9s,baz=72,slow=0.4,SNR=5.0							
FINES	**FINESS Array B**	**138.06**	**342**	PKP	PKPdf	17 22 48.9	-0.8
FINES				SKPbc	SKPbc	17 25 33.0	-0.9
NOA	**NORSAR Array B**	**141.67**	**351**	PKhKP		17 22 51.2	
0.8nm,0.7s,baz=16,slow=4.9,SNR=4.0							
NOA	**NORSAR Array B**	**141.67**	**351**	PKP		17 22 51.2	
AKASG	**Malin Array Be**	**144.64**	**328**	PKP	PKPdf	17 23 00.9	-0.9
1.5nm,0.4s,baz=44,slow=3.9,SNR=12							
AKASG				SKPbc	SKPbc	17 25 50.6	-0.3
0.2nm,0.3s,baz=37,slow=2.5,SNR=5.4							
BRTR	**Keskin Array B**	**147.35**	**308**	PKPbc	PKPbc	17 23 09.6	-0.4
0.9nm,0.5s,baz=94,slow=4.3,SNR=6.1							
MMAI	**Mount Meron Ar**	**147.56**	**295**	PKPbc	PKPbc	17 23 11.6	+0.8
3.5nm,0.5s,baz=76,slow=7.0,SNR=14							
CLL	**Collm**	**150.46**	**343**⇑	*i*PKP	PKPbc	17 23 16.9	-0.3
CLL				*ep*PKP	pPKPab	17 25 27.0	+1.4
CLL	**Collm**	**150.46**	**343**⇑	*i*PKPbc	PKPbc	17 23 16.9	-0.3
comp=Z,9.0nm,0.8s							
CLL				*ep*PKPab	pPKPab	17 25 27.0	+1.4
TORD	**Torodi Ar. Bea**	**169.61**	**189**	PKP	PKPdf	17 23 31.7	-1.5
comp=Z,0.9nm,1.0s,baz=209,slow=2.7,SNR=4.1							
TORD				PKPab	PKPab	17 24 49.9	-0.4
comp=Z,1.0nm,0.6s,baz=172,slow=4.6,SNR=6.4							

MAN 13 17:12:48, 8.°95N×122.°75E, h34km, mb5.3, ML4.3, MS4.6, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPIL	**Ipil**	**1.17**	**189**	*e*P	Pn	17 13 09.0	+1.1
IPIL				*e*S	Sn	17 13 20.1	-2.6
PAGZ	**Pagadian**	**1.26**	**150**	*e*P	Pn	17 13 10.7	+1.4
PAGZ				*e*S	Sn	17 13 25.3	+0.2
GUIM	**Jordan**	**1.67**	**355**	*e*P	Pn	17 13 16.1	+1.2
GUIM				*e*S	Sn	17 13 31.2	-4.0
CUYO	**Cuyo Island**	**2.54**	**318**	*e*P	Pn	17 13 28.0	+1.2

*RSPR **13** 17:41:23.1, 20.°02N×64.°75W, h122km±11km*
*NEIC **13** 17:41:23.1, 20.°02N×64.°75W, h122km, MD3.6(RSPR), After RSPR.*
ISC 13 17:41:20.6±2.3, 20.°1N±0.°1×64.°7W±0.°2, h10km, n10, σ0°56/18, 8C-2D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STVI	**Saint Thomas**	**1.80**	**187**⇑	*e*P	**Pn**	**17 41 50.5**	**-1.2**
STVI				*e*S	**Sn**	**17 42 15.2**	**+0.7**
STVI	**Saint Thomas**	**1.80**	**187**⇑	*e*P	**Pn**	**17 41 50.5**	**-1.2**
STVI				*e*S	**Sn**	**17 42 15.2**	**+0.7**
CBYP	**Canovanas**	**2.15**	**210**⇑	*e*P	**Pn**	**17 41 56.6**	**+0.2**
CBYP				*e*S	**Sn**	**17 42 23.2**	**0.0**
CBYP	**Canovanas**	**2.15**	**210**⇑	*e*P	**Pn**	**17 41 56.6**	**+0.2**
CBYP				*e*S	**Sn**	**17 42 23.2**	**0.0**
MTP	**Monte Pirata**	**2.18**	**201**⇓	*e*P	**Pn**	**17 41 57.4**	**+0.5**
MTP				*e*S	**Sn**	**17 42 23.7**	**-0.3**
MTP	**Monte Pirata**	**2.18**	**201**⇓	*e*P	**Pn**	**17 41 57.4**	**+0.5**
MTP				*e*S	**Sn**	**17 42 23.7**	**-0.3**
HUMP	**Col San Antoni**	**2.25**	**208**⇑	*e*P	**Pn**	**17 41 57.8**	**-0.1**
HUMP				*e*S	**Sn**	**17 42 25.5**	**-0.4**
HUMP	**Col San Antoni**	**2.25**	**208**⇑	*e*P	**Pn**	**17 41 57.8**	**-0.1**
HUMP				*e*S	**Sn**	**17 42 25.5**	**-0.4**
CPD	**Cerro la Pandu**	**2.38**	**208**⇑	*e*P	**Pn**	**17 42 00.1**	**+0.4**
CPD	**Cerro la Pandu**	**2.38**	**208**⇑	*e*P	**Pn**	**17 42 00.5**	**+0.8**

*NIED **13** 17:54:00, 30.°80N×142.°00E, h5km, Mw4.1 Best double couple: M0:1.64000×1015 NP1:φ0=27.00000°, δ54.00000°, λ111.00000°. NP2:φ0=174.00000°, δ41.00000°, λ64.00000°.*
*IDC **13** 17:54:15.3±0.7, 30.°87N×142.°13E, h0km, mb4.0/12, mb1 4.1/15, mb1mx4.0/26, mbtmp4.0/15, ML3.7/4, MS3.4/5, Ms1 3.5/5, ms1mx3.1/44, Error ellipse: s-maj=28.0km s-min=15.2km az=73.0*
*ISCJB **13** 17:54:16.7±1.5, 30.°83N±0.°03×141.°94E±0.°08, h21km±11km, mb4.3/27, MS3.5/3, Error ellipse: s-maj=12.2km s-min=4.7km az=168.3*
*JMA **13** 17:54:17.5±0.1, 30.°80N×141.°96E, h33km, M4.2*
*MOS **13** 17:54:17.7±1.0, 30.°91N×142.°21E, h33km, mb4.5/19, Error ellipse: s-maj=17.7km s-min=7.3km az=117.2*
*BJI **13** 17:54:18.3, 31.°10N×141.°74E, h7km, mB4.8/5, mb4.2/8, Ms4.0/3, Ms7 3.8/3*
*NEIC **13** 17:54:20.4±0.5, 30.°83N×141.°97E, h35km, mb4.5/17, MW4.1(NIED), Error ellipse: s-maj=11.5km s-min=8.4km az=95.0*
ISC 13 17:54:18.2±1.8, 30.°81N±0.°03×141.°99E±0.°09, h19km±11km, n85, σ1°06/90, mb4.3/27, MS3.5/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**2.97**	**321**	Pn	**Pn**	**17 55 03.9**	**-0.4**
5.2nm,0.3s,baz=90,slow=20,SNR=4.9							
JHJ				Sn	**Sn**	**17 55 35.2**	**-4.2**
14nm,0.3s,baz=67,slow=22,SNR=4.1							
CBIJ	**Chichi jima**	**3.71**	**177**	P	**Pn**	**17 55 14.7**	**+0.3**
CBIJ	**Chichi jima**	**3.71**	**177**	Pn	**Pn**	**17 55 14.3**	**0.0**
16nm,0.3s,baz=305,slow=13,SNR=7.

comp=Z,29nm,20.5s,MS3.2
NVS Novosibirsk 47.63 318 *eP* **P 18 02 52.8 0.0**
MK31 Makanchi Array 48.05 307 *eP* **P 18 02 56.5 +0.4**
MK31 *e* 18 03 08.6
MKAR Makanchi Array 48.05 307 P **P 18 02 56.1 -0.1**
comp=Z,3.2nm,0.7s,mb4.5,baz=79,slow=14,SNR=30
MKAR Makanchi Array 48.05 307 P **P 18 02 56.1 0.0**
MKAR pmax pmax
comp=Z,3.0nm,0.7s
KURK Kurchatov 50.31 312 *eP* **P 18 03 12.9 -0.5**
KURK *e* 18 03 24.5
KURK pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
KURK Kurchatov 50.31 312 *eP* **P 18 03 12.9 -0.5**
comp=Z,7.3nm,0.9s,mb4.7
KURK *e* 18 03 24.5
WRAB Tennant Creek 50.98 189 *eP* **P 18 03 19.0 +0.3**
WRAB pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
WRAB Tennant Creek 50.98 189 *eP* **P 18 03 19.0 +0.3**
comp=Z,6.2nm,0.9s,mb4.5
WRA Warramunga Arr 50.99 189 P **P 18 03 19.1 +0.4**
comp=Z,1.7nm,0.4s,mb4.3,baz=5.5,slow=7.6,SNR=34
WRA Warramunga Arr 50.99 189 P **P 18 03 19.2 +0.4**
WRA pmax pmax
comp=Z,2.0nm,0.4s
TKM2 Tokmak 2 53.21 303 *eP* **P 18 03 36.9 +1.7**
TKM2 pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
TKM2 Tokmak 2 53.21 303 *eP* **P 18 03 36.9 +1.7**
comp=Z,5.9nm,1.2s,mb4.4
UCH Uchtor 54.12 302 *eP* **P 18 03 42.6 +0.7**
comp=Z,2.3nm,1.0s,mb4.1
ASAR Alice Springs 54.72 189 P **P 18 03 46.8 +0.5**
comp=Z,0.6nm,0.6s,mb3.8,baz=352,slow=4.1,SNR=23
ASAR Alice Springs 54.72 189 P **P 18 03 46.8 +0.6**
ASAR pmax pmax
comp=Z,1.0nm,0.6s
AML Almayashu 54.74 302 *eP* **P 18 03 47.4 +1.0**
comp=Z,2.1nm,0.7s,mb4.3
BVAR Borovoye Array 55.24 316 P **P 18 03 50.2 +0.4**
comp=Z,1.5nm,0.6s,mb4.2,baz=98,slow=8.6,SNR=11
BVAR Borovoye Array 55.24 316 P **P 18 03 50.2 +0.4**
BVAR pmax pmax
comp=Z,2.0nm,0.6s
BRVK Borovoye 55.30 316 *eP* **P 18 03 49.6 -0.6**
MBWA Marble Bar 55.92 205 P **P 18 03 54.4 -0.6**
KBL Kabul 60.27 295 P **P 18 04 25.9 +0.4**
KBL pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
KBL Kabul 60.27 295 P **P 18 04 25.9 +0.4**
comp=Z,5.4nm,1.1s,mb4.5
ARU Arti 61.41 321 P **P 18 04 33.0 +0.1**
ARU Arti 61.41 321 *eP* **P 18 04 32.9 +0.1**
comp=Z,11nm,1.0s,mb4.9
ABKAR Akbulak array 62.42 313 *eP* **P 18 04 39.9 +0.1**
comp=Z,3.7nm,0.8s,mb4.6
RES Resolute Bay 68.50 14 P **P 18 05 22.2 +3.5**
YKA Yellowknife Ar 68.97 29 P **P 18 05 19.8 -2.0**
comp=Z,0.4nm,0.8s,mb3.4,baz=305,slow=6.7,SNR=3.1
YKA Yellowknife Ar 68.97 29 P **P 18 05 19.8 -2.0**
FINES FINESS Array B 74.56 333 P **P 18 05 55.5 +0.2**
comp=Z,1.2nm,0.8s,mb3.9,baz=35,slow=7.0,SNR=4.7
FINES FINESS Array B 74.56 333 P **P 18 05 55.6 +0.2**
FINES pmax pmax
comp=Z,1.0nm,0.8s
AKASG Malin Array Be 79.54 323 P **P 18 06 23.7 +0.1**
comp=Z,1.0nm,0.5s,mb4.0,baz=48,slow=5.9,SNR=10
AKASG Malin Array Be 79.54 323 P **P 18 06 23.7 +0.1**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
NOA NORSAR Array B 80.11 338 P **P 18 06 28.5 +2.0**
comp=Z,0.4nm,0.7s,mb3.5,baz=38,slow=4.6,SNR=3.5
BRTR Keskin Array B 83.37 313 P **P 18 06 44.9 +0.7**
comp=Z,1.3nm,0.9s,mb4.0,baz=88,slow=4.2,SNR=7.5
BRTR Keskin Array B 83.37 313 P **P 18 06 44.9 +0.8**
BRTR pmax pmax
comp=Z,1.0nm,0.9s
TXAR Lajitas Array 93.51 53 P **P 18 07 34.0 +1.0**
comp=Z,0.6nm,0.8s,mb4.1,baz=298,slow=2.7,SNR=5.9
TXAR LR LR 18 42 12.2
comp=Z,74nm,20.6s,MS4.1,baz=180,slow=31
TXAR Lajitas Array 93.51 53 P **P 18 07 34.0 +1.0**
TXAR pmax pmax
comp=Z,1.0nm,0.8s
TXAR MLR MLR
comp=Z,74nm,20.6s
LPAZ La Paz 148.96 69 PKPbc PKPbc 18 14 06.7 +1.3
comp=Z,0.7nm,0.4s,baz=333,slow=4.5,SNR=5.3
LPAZ La Paz 148.96 69 PKP2 PKPbc 18 14 06.7 +1.3
LPAZ pmax pmax
comp=Z,1.0nm,0.4s

*NEIC **13** 17:55:47.6, 38°70N×23°54E, h17km, ML2.8(ATH), After ATH.*
*ATH **13** 17:55:47.6, 38°70N×23°54E, h17km±2km, MD2.9/10, ML2.8*
*THE **13** 17:55:47.7, 38°71N×23°56E, h5km±1km, ML2.9/6, Error ellipse: s-maj=1.9km s-min=0.6km az=230.0*
*CSEM **13** 17:55:47.4±0.2, 38°70N×23°57E, h20km, ML2.9/6, Error ellipse: s-maj=4.7km s-min=3.6km az=83.0*
*ISCJB **13** 17:55:47.6±0.5, 38°71N±0°02×23°58E±0°04, h24km±5km, Error ellipse: s-maj=5.6km s-min=3.8km az=0.0*
ISC 13 17:55:47.3±0.5, 38°69N±0°02×23°58E±0°04, h17km±4km, n47, σ0°98/77, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAL	**Atalanti**	**0.44**	**270**	P	**Pg**	**17 55 55.7**	**-0.4**
ATAL				S	**Sg**	**17 56 01.6**	**-0.5**
ATAL	**Atalanti**	**0.44**	**270**	P	**Pg**	**17 55 55.7**	**-0.4**
ATAL				S	**Sg**	**17 56 01.6**	**-0.5**
LKR	**Lokris**	**0.46**	**265**	*e*Pb	**Pb**	**17 55 55.9**	**-1.0**
LKR				*e*Sb	**Sb**	**17 56 02.4**	**-1.0**
LKR	**Lokris**	**0.46**	**265**	P	**Pg**	**17 55 56.3**	**-0.2**
LKR				S	**Sg**	**17 56 02.8**	**+0.1**
LKR	**Lokris**	**0.46**	**265**	*e*PB	**Pb**	**17 55 55.9**	**-1.0**
LKR				*e*SB	**Sb**	**17 56 02.4**	**-1.0**
LKR	**Lokris**	**0.46**	**265**	*e*Pb	**Pb**	**17 55 55.9**	**-1.0**
LKR	**Lokris**	**0.46**	**265**	P	**Pg**	**17 55 56.3**	**-0.2**
LKR				*e*Sb	**Sb**	**17 56 02.4**	**-1.0**
LKR				S	**Sg**	**17 56 02.8**	**+0.1**
AOS	**Alonnisos**	**0.53**	**26**	P	**Pg**	**17 55 58.1**	**+0.2**
AOS				S	**Sg**	**17 56 04.8**	**-0.2**
AOS	**Alonnisos**	**0.53**	**26**	P	**Pg**	**17 55 58.1**	**+0.2**
AOS				S	**Sg**	**17 56 04.8**	**-0.2**
NEO	**Neokhori**	**0.67**	**336**	*e*Pn	**Pn**	**17 56 00.4**	**-1.7**
NEO				*e*Sn	**Sg**	**17 56 09.4**	**-0.1**
NEO	**Neokhori**	**0.67**	**336**	*e*PN	**Pn**	**17 56 00.4**	**-1.7**
NEO				*e*SN	**Sg**	**17 56 09.4**	**-0.1**
NEO	**Neokhori**	**0.67**	**336**	*e*Pn	**Pn**	**17 56 00.4**	**-1.7**
NEO				*e*Sn	**Sg**	**17 56 09.4**	**-0.1**
PTL	**Penteli**	**0.68**	**161**	*e*Pn	**Pn**	**17 56 00.9**	**-1.2**
PTL	**Penteli**	**0.68**	**161**	*e*PN	**Pn**	**17 56 00.9**	**-1.2**
PTL	**Penteli**	**0.68**	**161**	*e*Pn	**Pn**	**17 56 00.9**	**-1.2**
ATH	**Athens Observa**	**0.73**	**171**	*e*Pn	**Pn**	**17 56 01.6**	**-1.2**
ATH				*e*Sn	**Sn**	**17 56 13.0**	**-0.5**
ATH	**Athens Observa**	**0.73**	**171**	*e*PN	**Pn**	**17 56 01.6**	**-1.2**
ATH				*e*SN	**Sn**	**17 56 13.0**	**-0.5**
ATH	**Athens Observa**	**0.73**	**171**	*e*Pn	**Pn**	**17 56 01.6**	**-1.2**
ATH				*e*Sn	**Sn**	**17 56 13.0**	**-0.5**
XOR	**Xorichti**	**0.74**	**336**	P	**Pb**	**17 56 01.4**	**-0.3**
XOR				S	**Sg**	**17 56 10.9**	**-0.6**
XOR	**Xorichti**	**0.74**	**336**	P	**Pb**	**17 56 01.4**	**-0.3**
XOR				S	**Sg**	**17 56 10.9**	**-0.6**
ATHU	**Athens Univers**	**0.74**	**167**	P	**Pb**	**17 56 01.9**	**+0.1**
ATHU				S	**Sg**	**17 56 13.2**	**+1.6**
ATHU	**Athens Univers**	**0.74**	**167**	P	**Pb**	**17 56 01.9**	**+0.1**
ATHU				S	**Sg**	**17 56 13.2**	**+1.6**
LTK	**Loutraki**	**0.82**	**216**	P	**Pb**	**17 56 02.9**	**-0.2**
LTK				S	**Sb**	**17 56 16.3**	**+2.3**
LTK	**Loutraki**	**0.82**	**216**	*e*PN	**Pn**	**17 56 03.9**	**-0.2**
LTK				*e*SN	**Sn**	**17 56 14.5**	**-1.4**
LTK	**Loutraki**	**0.82**	**216**	P	**Pb**	**17 56 02.9**	**-0.2**
LTK	**Loutraki**	**0.82**	**216**	*e*Pn	**Pn**	**17 56 03.9**	**-0.2**
LTK				*e*Sn	**Sn**	**17 56 14.5**	**-1.4**
VLY	**Voula,Athens**	**0.85**	**169**	*e*Pb	**Pb**	**17 56 03.9**	**+0.2**
VLY				*e*Sn	**Sn**	**17 56 15.8**	**-0.9**
VLY	**Voula,Athens**	**0.85**	**169**	*e*PB	**Pb**	**17 56 03.9**	**+0.2**
VLY				*e*SN	**Sn**	**17 56 15.8**	**-0.9**
VLY	**Voula,Athens**	**0.85**	**169**	*e*Pb	**Pb**	**17 56 03.9**	**+0.2**
VLY				*e*Sn	**Sn**	**17 56 15.8**	**-0.9**
DSF	**Desfina**	**0.87**	**252**	P	**Pb**	**17 56 03.4**	**-0.6**
DSF				S	**Sb**	**17 56 16.4**	**+1.1**
DSF	**Desfina**	**0.87**	**252**	P	**Pb**	**17 56 03.4**	**-0.6**
DSF				S	**Sb**	**17 56 16.4**	**+1.1**
NAIG	**Nisos Aigina**	**0.94**	**184**	*e*Pn	**Pn**	**17 56 05.7**	**+0.1**
NAIG	**Nisos Aigina**	**0.94**	**184**	*e*PN	**Pn**	**17 56 05.7**	**+0.1**
NAIG	**Nisos Aigina**	**0.94**	**184**	*e*Pn	**Pn**	**17 56 05.7**	**+0.1**
AGG	**Agios Georgios**	**1.03**	**289**	*e*Pn	**Pn**	**17 56 06.8**	**-0.2**
AGG	**Agios Georgios**	**1.03**	**289**	P	**Pb**	**17 56 06.5**	**-0.2**
AGG				S	**Sb**	**17 56 21.5**	**+1.6**
AGG	**Agios Georgios**	**1.03**	**289**	*e*PN	**Pn**	**17 56 06.8**	**-0.2**
AGG	**Agios Georgios**	**1.03**	**289**	P	**Pb**	**17 56 06.5**	**-0.2**
AGG	**Agios Georgios**	**1.03**	**289**	*e*Pn	**Pn**	**17 56 06.8**	**-0.2**
AGG				S	**Sb**	**17 56 21.5**	**+1.6**
GUR	**Goura**	**1.23**	**233**	*e*PN	**Pn**	**17 56 11.0**	**+1.3**
GUR	**Goura**	**1.23**	**233**	*e*Pn	**Pn**	**17 56 11.0**	**+1.3**
PAIG	**Paliouri**	**1.24**	**4**	P	**Pn**	**17 56 10.3**	**+0.5**
PAIG				S	**Sb**	**17 56 28.5**	**+2.7**
PAIG	**Paliouri**	**1.24**	**4**	P	**Pn**	**17 56 10.3**	**+0.5**
VLX	**Vlachokerasia**	**1.62**	**216**	*e*PN	**Pn**	**17 56 17.1**	**+2.0**
VLX	**Vlachokerasia**	**1.62**	**216**	*e*Pn	**Pn**	**17 56 17.1**	**+2.0**
OUR	**Ouranopolis**	**1.67**	**11**	P	**Pn**	**17 56 16.4**	**+0.6**
OUR	**Ouranopolis**	**1.67**	**11**	P	**Pn**	**17 56 16.4**	**+0.6**

*PGC **13** 18:04:06.7±30.0, 62°71N×141°71W, h5km, ML3.0/4, 188km Wsw of Dawson, Yt Central Alaska*
NEIC 13 18:04:00.3, 62°54N×142°86W, h1km, ML2.9(AEIC), **10D, After AEIC., Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MENT	**Mentasta**	**0.56**	**316**	P	Pg	18 04 11.7	+0.6
BCA3	**Beaver Creek A**	**0.73**	**42**	P	Pg	18 04 13.9	-0.3
BCA3				S	Sg	18 04 23.8	+0.2
DOT	**Dot Lake**	**1.24**	**334**	P	Pg	18 04 23.7	-0.4
PAX	**Paxson**	**1.28**	**291**	P	Pg	18 04 23.5	-1.2
PAX				S	Sg	18 04 41.4	+0.1
BMRM	**Bremner River**	**1.78**	**209**	P	Pn	18 04 31.8	-0.2
DIV	**Divide**	**1.98**	**226**	P	Pn	18 04 34.5	-0.2
DAWY	**Dawson**	**2.19**	**44**	⇑Pn	Pn	18 04 37.1	-0.7
EGAK	**Eagle**	**2.38**	**18**	P	Pn	18 04 40.5	+0.2
EYAK	**Cordova Ski Ar**	**2.43**	**216**	P	Pn	18 04 42.5	+1.6
SML	**Sawmill**	**2.67**	**257**	P	Pn	18 04 45.4	+1.1
IL1	**Eielson Array**	**2.87**	**323**	P	Pn	18 04 47.7	+0.6
MCK	**McKinley**	**3.01**	**296**	*e*Pn	Pn	18 04 52.8	+3.8
HYT	**Haines Junctio**	**3.08**	**122**	⇑Pn	Pn	18 04 49.1	-0.8
HYT				⇑Sg	Sg	18 05 37.5	-1.4
PMR	**Palmer**	**3.10**	**255**	*e*Pn	Pn	18 04 53.7	+3.5
COLA	**College**	**3.23**	**319**	*e*Pg	Pg	18 05 03.8	+1.7
COLA				*e*Sg	Sg	18 05 43.2	-0.7
PNL	**Peninsula**	**3.33**	**148**	*e*Pn	Pn	18 04 54.5	+1.1
PNL				*e*Sn	Sn	18 05 32.4	-1.2
TRF	**Thorofare Moun**	**3.51**	**288**	*e*Pn	Pn	18 04 57.9	+2.0
TRF				*e*Sn	Sn	18 05 40.9	+2.9
RC01	**Rabbit Creek A**	**3.57**	**249**	*e*Pn	Pn	18 04 59.5	+2.8
RC01				*e*Sn	Sn	18 05 44.8	+5.3
FIB	**Fire Island**	**3.73**	**252**	*e*Pn	Pn	18 05 00.6	+1.7
KTH	**Kantishna Hill**	**3.81**	**289**	*e*Pn	Pn	18 05 02.9	+3.0
KTH				*e*Sn	Sn	18 05 52.5	+7.1
BPAW	**Bear Paw Mtn.**	**3.99**	**297**	*e*Pn	Pn	18 05 03.4	+1.0
WHY	**Whitehorse**	**4.25**	**113**	⇑Pn	Pn	18 05 05.5	-0.5
WHY				⇑Pg	Pg	18 05 16.4	-5.2
WHY				⇑Sg	Sg	18 06 11.9	-4.8
PPLA	**Purkeypile**	**4.31**	**279**	*e*Pn	Pn	18 05 09.6	+2.7
PLBC	**Pleasant Camp**	**4.42**	**131**	⇓Pn	Pn	18 05 08.5	+0.1
PLBC				⇓Pg	Pg	18 05 23.7	-1.2
PLBC				⇓Sg	Sg	18 06 20.8	-1.3
CHUM	**Lake Minchumin**	**4.49**	**292**	Pn	Pn	18 05 11.0	+1.7
BM3	**Burnt Mountain**	**4.96**	**352**	P	Pn	18 05 16.0	+0.2
RSO	**Redoubt South**	**5.17**	**251**	*e*Pn	Pn	18 05 22.0	+3.3
COLD	**Coldfoot**	**5.65**	**330**	*e*Pn	Pn	18 05 24.4	-0.8
COLD				*e*Sg	Sg	18 07 00.8	-0.8
TTA	**Tatalina**	**6.06**	**280**	*e*Pn	Pn	18 05 31.7	+0.9
TTA				*e*S	Sn	18 07 02.8	+22
INK	**Inuvik**	**6.97**	**30**	⇓Pn	Pn	18 05 42.6	-0.7
INK				⇓Sn	Sn	18 06 57.5	-5.7

*ISCJB **13** 18:05:59.9±0.4, 36°84N±0°04×139°13E±0°08, h149km±3km, mb3.6/7, Error ellipse: s-maj=11.2km s-min=6.8km az=6.8*
*NEIC **13** 18:06:00.7±0.6, 36°88N×139°14E, h140km±5km, mb4.1/2, Error ellipse: s-maj=16.6km s-min=9.0km az=108.0*
*IDC **13** 18:06:00.2±1.3, 36°90N×139°26E, h135km±8km, mb3.2/5, mb1 3.4/8, mb1mx3.1/28, mbtmp3.3/8, Error ellipse: s-maj=28.0km s-min=12.1km az=70.0*
*JMA **13** 18:06:01.6±0.1, 36°81N×139°07E, h140km±1km, M3.2*
ISC 13 18:06:01.2±0.4, 36°84N±0°04×139°13E±0°08, h144km±3km, n24, σ0°80/37, mb3.6/7, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKT	**Katashina**	**0.12**	**129**	P	**Pn**	**18 06 20.8**	**+0.2**
JKT				*e*S	**Sn**	**18 06 35.8**	**+0.5**
JHK	**Hiroka**	**0.41**	**347**	P	**Pn**	**18 06 21.3**	**-0.1**
JHK				S	**Sn**	**18 06 36.3**	**-0.6**
JAG	**Ashikaga**	**0.49**	**148**	P	**Pn**	**18 06 21.9**	**+0.1**
JAG				*e*S	**Sn**	**18 06 36.7**	**-0.7**
JFY	**Yanaizu**	**0.73**	**39**	P	**Pn**	**18 06 23.8**	**+0.6**
JFY				S	**Sn**	**18 06 40.9**	**+0.9**
JIZZ	**Izumozaki**	**0.77**	**334**	P	**Pn**	**18 06 24.4**	**+0.9**
JIZZ				S	**Sn**	**18 06 42.0**	**+1.5**
MJAR	**Matsushiro Arr**	**0.80**	**248**	P	**Pn**	**18 06 23.0**	**-0.7**
37nm,0.3s,baz=58,slow=6.4,SNR=425							
MJAR				S	**Sn**	**18 06 40.3**	**-0.6**
17nm,0.3s,baz=60,slow=20,SNR=28							
MAJO	**Matsushiro**	**0.80**	**248**	*e*Pn	**Pn**	**18 06 23.2**	**-0.5**
MAJO				*e*Sn	**Sn**	**18 06 40.2**	**-0.6**
MAT	**Matsushiro**	**0.80**	**248**	P	**Pn**	**18 06 23.3**	**-0.4**
MAT				S	**Sn**	**18 06 40.0**	**-0.9**
MAT	**Matsushiro**	**0.80**	**248**	P	**Pn**	**18 06 23.4**	**-0.3**
MAT				S	**Sn**	**18 06 40.0**	**-0.9**
JRY	**Ryogami san**	**0.84**	**193**	P	**Pn**	**18 06 24.2**	**+0.1**
JRY				S	**Sn**	**18 06 41.5**	**0.0**
JNS	**Sasagawa**	**0.98**	**9**	P	**Pn**	**18 06 25.7**	**+0.5**
JNS				S	**Sn**	**18 06 44.0**	**+0.4**
JHJ	**Hachijo jima 2**	**3.75**	**172**	P	**Pn**	**18 06 58.2**	**+0.2**
57nm,0.3s,baz=349,slow=17,SNR=22							
JHJ				S	**Sn**	**18 07 42.5**	**+0.3**
3.9nm,0.3s,baz=73,slow=19,SNR=2.4							
ERM	**Erimo**	**6.03**	**30**	*e*Pn	**Pn**	**18 07 28.1**	**-0.1**
ERM				*e*Sn	**Sn**	**18 08 32.1**	**-4.0**
ASAJ	**Asahikawa**	**7.73**	**19**	P	**Pn**	**18 07 48.6**	**-2.2**
0.9nm,0.3s,baz=239,slow=9.7,SNR=12							
KSRS	**Korea Array**	**8.97**	**277**	P	**Pn**	**18 08 09.7**	**+2.2**
0.0nm,0.3s,baz=104,slow=13,SNR=3.2							
YSS	**Yuzh-Sakhalins**	**10.46**	**14**	Pn	**Pn**	**18 08 25.2**	**-1.9**
MKAR	**Makanchi Array**	**42.67**	**302**	P	**P**	**18 13 43.6**	**+0.2**
0.3nm,0.7s,mb3.0,baz=82,slow=11,SNR=3.0							
KURK	**Kurchatov**	**44.61**	**308**	*e*P	**P**	**18 13 58.3**	**-0.5**
2.1nm,0.5s,mb4.0							
BVAR	**Borovoye Array**	**49.35**	**312**	P	**P**	**18 14 35.6**	**+0.1**
0.3nm,0.4s,mb3.3,baz=90,slow=9.0,SNR=4.5							
WRAB	**Tennant Creek**	**56.65**	**185**	*e*P	**P**	**18 15 29.3**	**0.0**
2.4nm,0.8s,mb4.1							
WRA	**Warramunga Arr**	**56.66**	**185**	P	**P**	**18 15 29.4**	**+0.1**
1.2nm,0.3s,mb4.2,baz=1.6,slow=7.5,SNR=17							
WRA	**Warramunga Arr**	**56.66**	**185**	P	**P**	**18 15 29.4**	**+0.1**
ASAR	**Alice Springs**	**60.38**	**186**	P	**P**	**18 15 55.5**	**+0.4**
0.3nm,0.4s,mb3.4,baz=358,slow=4.8,SNR=12							
NOA	**NORSAR Array B**	**73.64**	**336**	P	**P**	**18 17 18.7**	**+0.4**
0.4nm,0.6s,mb3.3,baz=47,slow=6.7,SNR=2.4							

*IDC **13** 18:11:02.4±1.3, 16°37N×122°03E, h0km, mb3.4/5, mb1 3.7/5, mb1mx3.4/24, mbtmp3.5/5, ML4.9/1, MS3.3/1, Ms1 3.3/1, ms1mx2.6/40, Error ellipse: s-maj=35.9km s-min=20.9km az=79.0*
*MAN **13** 18:11:07, 16°12N×121°64E, h12km, mb4.7, ML3.6, MS3.6 MAN INTENSITY III - MARIA AURORA AURORA; INTENSITY II - BALERA AURORA.*
*ISCJB **13** 18:11:07.7±1.1, 16°13N±0°03×121°58E±0°05, h14km±8km, mb3.5/5, Error ellipse: s-maj=7.6km s-min=4.5km az=7.4*
ISC 13 18:11:07.3±0.7, 16°15N±0°03×121°59E±0°04, h6km±5km, n26, σ1°18/33, mb3.5/5, 3C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALP	**Baler**	**0.41**	**181**	*e*P	**Pg**	**18 11 15.2**	**+0.1**
PCPH	**Palayan**	**0.75**	**219**	⇑*i*P	**Pg**	**18 11 21.1**	**-0.6**
PCPH				*i* S	**Sg**	**18 11 29.4**	**-2.1**
CAUP	**Cauayan**	**0.82**	**16**	*e*P	**Pg**	**18 11 23.8**	**+0.7**
BCPH	**Baguio City Da**	**0.99**	**284**	⇑*i*P	**Pg**	**18 11 26.1**	**-0.3**
PALP	**Palanan**	**1.21**	**41**	*e*P	**Pg**	**18 11 31.4**	**+0.8**
PALP				*e*S	**Sg**	**18 11 46.8**	**+0.4**
POLP	**Polilio Island**	**1.45**	**166**	*e*P	**Pn**	**18 11 33.4**	**-0.6**
POLP				*e*S	**Sn**	**18 11 48.5**	**-5.0**
CVP	**Callao Caves**	**1.56**	**8**	⇓*e*P	**Pn**	**18 11 34.4**	**-1.2**
CVP				*e*S	**Sn**	**18 11 55.3**	**-0.8**
BOLP	**Bolinao**	**1.62**	**278**	*e*P	**Pn**	**18 11 37.2**	**+0.8**
ABRA	**Dolores**	**1.71**	**331**	*e*P	**Pn**	**18 11 38.7**	**+1.1**
ABRA				*e*S	**Sn**	**18 11 60.0**	**+0.2**
APYP	**Conner**	**1.73**	**349**	*e*P	**Pn**	**18 11 37.3**	**-0.7**
SGCP	**Mt. Cagua**	**2.13**	**12**	*e*P	**Pn**	**18 11 43.4**	**+0.1**
TGY	**Tagaytay City**	**2.13**	**197**	Pn	**Pn**	**18 11 44.9**	**+1.5**
247nm,0.3s,baz=10,slow=3.3,SNR=18							
TGY				Sn	**Sn**	**18 12 13.1**	**+2.9**
233nm,0.3s,baz=41,slow=19,SNR=11							
TGY	**Tagaytay City**	**2.13**	**197**	⇑*e*P	**Pn**	**18 11 47.0**	**+3.6**
TGY				*e*S	**Sn**	**18 12 14.1**	**+4.0**
GQP	**Guinayangan**	**2.38**	**159**	⇓*e*P	**Pn**	**18 11 46.5**	**-0.3**
GQP				*e*S	**Sn**	**18 12 15.8**	**-0.6**
BOAC	**Boac**	**2.69**	**175**	*e*P	**Pn**	**18 11 52.9**	**+1.9**
LUBP	**Lubang**	**2.73**	**209**	*e*P	**Pn**	**18 11 54.0**	**+2.4**
PVCP	**Virac**	**3.55**	**135**	*e*P	**Pn**	**18 12 01.9**	**-1.1**
SJMP	**San Jose**	**3.69**	**187**	*e*P	**Pn**	**18 12 10.3**	**+5.4**
BBP	**Basco**	**4.28**	**5**	*e*P	**Pn**	**18 12 12.0**	**-1.0**
BUSP	**Coron**	**4.33**	**198**	*e*P	**Pn**	**18 12 15.3**	**+1.6**
CMAR	**Chiang Mai Arr**	**21.74**	**279**	P	**P**	**18 15 59.7**	**+0.2**
1.0nm,0.9s,mb3.2,baz=96,slow=8.7,SNR=4.1							
KSRS	**Korea Array**	**21.95**	**14**	P	**P**	**18 15 54.5**	**-7.1**
0.3nm,0.4s,mb3.1,baz=193,slow=9.9,SNR=3.1							
SONM	**Songino Array**	**33.99**	**342**	LR	LR	18 32 33.5	
comp=Z,46nm,19.2s,baz=7.1,slow=38							
WRA	**Warramunga Arr**	**37.99**	**160**	P	**P**	**18 18 22.4**	**-3.7**
1.6nm,0.6s,mb3.9,baz=343,slow=9.3,SNR=2.1							
ASAR	**Alice Springs**	**41.36**	**163**	P	**P**	**18 18 51.2**	**-3.0**
0.7nm,0.6s,mb3.5,baz=341,slow=6.8,SNR=6.2							
KURK	**Kurchatov**	**48.67**	**325**	P	**P**	**18 19 48.4**	**-3.7**
0.2nm,0.3s,mb3.6,baz=117,slow=9.0,SNR=5.4							

*IDC **13** 18:12:31.7±1.4, 6°60S×150°38E, h0km, mb4.1/7, mb1 4.4/7, mb1mx4.0/16, mbtmp4.1/7, Error ellipse: s-maj=46.7km s-min=21.4km az=110.0*
*NEIC **13** 18:12:33.3±0.7, 6°65S×150°39E, h10km, mb4.5/2, Error ellipse: s-maj=23.9km s-min=12.0km az=131.0*
*ISCJB **13** 18:12:34.9±0.8, 6°66S±0°09×150°36E±0°09, h33km, mb4.1/7, Error ellipse: s-maj=13.9km s-min=13.0km az=39.7*
ISC 13 18:12:36.9±0.8, 6°67S±0°09×150°38E±0°09, h35km, n21, σ0°95/18, mb4.1/7, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EIDS	**Eidsvold**	**18.61**	**178**	*e*P	**Pn**	**18 16 53.0**	**+1.2**
KAKA	**Kakadu**	**18.67**	**250**	*e*P	**Pn**	**18 16 52.2**	**-0.5**
22nm,0.6s							
RMQ	**Roma**	**19.77**	**184**	*e*P	**Pn**	**18 17 03.3**	**-2.4**
9.7nm,0.7s							
WRAB	**Tennant Creek**	**20.40**	**228**	*e*P	**P**	**18 17 10.8**	**-0.1**
20nm,0.8s							
WRA	**Warramunga Arr**	**20.41**	**228**	P	**P**	**18 17 11.6**	**+0.5**
9.6nm,0.6s,baz=52,slow=11,SNR=61							
DZM	**Mont Dzumac**	**21.80**	**136**	*e*S	**P**	**18 17 26.3**	**+0.3**
LASL	**Noumea**	**21.97**	**136**	*e*S	**P**	**18 17 26.7**	**-1.2**
BAYA	**Yate Dam**	**22.16**	**136**	*e*S	**P**	**18 17 22.4**	**-7.4**
KNA	**Kununurra**	**23.02**	**245**	*e*P	**P**	**18 17 38.9**	**-0.2**
7.1nm,0.5s,mb4.3							
ASAR	**Alice Springs**	**23.16**	**221**	P	**P**	**18 17 40.7**	**+0.2**
4.3nm,0.7s,mb4.0,baz=56,slow=8.2,SNR=59							
CMSA	**Cobar Meteorol**	**25.13**	**189**	*e*P	**P**	**18 17 59.3**	**+0.6**
STKA	**Stephens Creek**	**26.39**	**197**	*e*P	**P**	**18 18 10.8**	**+0.7**
4.3nm,0.6s,mb4.2							
STKA	**Stephens Creek**	**26.39**	**197**	P	**P**	**18 18 10.1**	**0.0**
4.7nm,0.6s,mb4.2,baz=22,slow=12,SNR=20							
FITZ	**Fitzroy Crossi**	**26.66**	**243**	*e*P	**P**	**18 18 12.8**	**+0.1**
17nm,0.9s,mb4.6							
FITZ	**Fitzroy Crossi**	**26.66**	**243**	P	**P**	**18 18 12.7**	**0.0**
6.1nm,0.6s,mb4.3,baz=82,slow=7.1,SNR=18							
KSRS	**Korea Array**	**48.64**	**336**	P	**P**	**18 21 15.7**	**-1.7**
0.5nm,0.6s,mb3.8,baz=155,slow=7.6,SNR=4.2							
SONM	**Songino Array**	**66.65**	**329**	P	**P**	**18 23 25.2**	**+1.3**
0.3nm,0.4s,mb3.7,baz=131,slow=4.4,SNR=2.5			

baz=2.9
O11A Cowboy Ranch, 3.19 95 ⇑Sb Sb 18 32 40.4 0.0
baz=3.0
M11A Holland Ranch, 3.19 71 ⇑P Pn 18 31 52.7 -2.3
baz=3.0
M11A ⇓Sb **Sb 18 32 40.7 +0.3**
baz=3.0
HUMO Hull Mountain 3.19 313 *e*Pn **Pn 18 31 58.5 +3.5**
HUMO *e*Sg **Sg 18 32 46.8 -0.5**
K10A MacKenzie Ranc 3.19 43 ⇓P Pn 18 31 53.8 -1.2
baz=3.1
P11A Circle Ranch, 3.24 105 ⇑Sb Sb 18 32 42.6 +0.7
baz=3.1
R10A Warm Springs 3.48 128 ⇑P Pn 18 31 58.3 -0.6
baz=3.3,SNR=9.6
R10A ⇑Sb **Sb 18 32 50.8 +2.2**
baz=3.3
ELK Elko 3.49 84 Pn **Pn 18 31 57.1 -2.0**
1.5nm,0.3s,baz=269,slow=15,SNR=26
ELK Lg 18 32 48.2
84nm,0.3s,baz=210,slow=20,SNR=16
ELK LR LR 18 33 13.5
comp=Z,141nm,19.3s,baz=301,slow=39
ELK Elko 3.49 84 *e*Pn **Pn 18 31 57.3 -1.8**
L11A Cat Creek Ranc 3.49 60 ⇑P Pn 18 31 57.1 -2.1
baz=3.3
S10A Tonopah Range, 3.56 134 ⇑P Pn 18 31 59.6 -0.4
baz=3.4,SNR=9.3
S10A ⇓Sb **Sb 18 32 52.6 +1.6**
baz=3.4
Q11A Duckwater 3.59 115 ⇓P Pn 18 31 59.9 -0.6
baz=3.4,SNR=12
Q11A ⇑Sb **Sb 18 32 53.6 +1.7**
baz=3.4
N12A Clover Valley, 3.65 82 ⇓P Pn 18 31 59.4 -1.9
baz=3.5
N12A ⇑Sb **Sb 18 32 54.5 +1.0**
baz=3.5
N12A Clover Valley, 3.65 82 *e*Pn **Pn 18 31 59.3 -1.9**
N12A *e*Pg **Pg 18 32 09.7 -5.0**
N12A *e*Sg **Sg 18 32 54.0 -7.8**
K11A Parker Ranch, 3.65 50 ⇑P Pn 18 31 59.6 -1.6
baz=3.5
J10A Berg Farm, Mel 3.73 36 ⇑P Pn 18 32 00.7 -1.7
baz=3.6
J10A ⇓Sb **Sb 18 32 56.4 +0.4**
baz=3.6
M12A Wells 3.82 74 ⇓P Pn 18 32 01.2 -2.5
baz=3.7
M12A ⇑Sb **Sb 18 33 00.2 +1.6**
baz=3.7
P12A McGill 3.89 103 ⇓P Pn 18 32 03.5 -1.1
baz=3.7
R11A Troy Canyon, C 3.89 122 ⇓P Pn 18 32 03.6 -1.0
baz=3.7,SNR=16
R11A ⇑Sb **Sb 18 33 01.6 +1.0**
baz=3.7
Q12A Willow Creek R 4.09 109 P **Pn 18 32 06.9 -0.4**
baz=3.9,SNR=13
Q12A ⇑Sb **Sb 18 33 07.8 +1.4**
baz=3.9
MFID Camas Ranch 4.18 44 ⇓P Pn 18 32 07.2 -1.5
baz=4.1
MFID ⇑Sb **Sb 18 33 10.4 +1.4**
baz=4.1
S11A Rachel 4.23 130 ⇑Sb Sb 18 33 14.2 +3.8
baz=4.1
K12A Draper Farm, C 4.27 58 ⇓P Pn 18 32 08.0 -1.8
baz=4.1
N13A Wendover, West 4.28 83 ⇑Sb Sb 18 33 12.6 +0.9
baz=4.1
M13A Montello 4.37 76 ⇓P Pn 18 32 08.3 -2.9
baz=4.2
M13A ⇑Sb **Sb 18 33 15.9 +1.7**
baz=4.2
M13A Montello 4.37 76 *e*Pn **Pn 18 32 08.3 -2.8**
O13A Hicks Ranch, I 4.46 92 ⇓Sb Sb 18 33 19.2 +2.1
baz=4.3
J12A Stokes Ranch, 4.48 50 ⇓P Pn 18 32 10.7 -2.0
baz=4.4
R12A Pony Springs, 4.56 116 ⇑Sb Sb 18 33 22.7 +3.0
baz=4.4
P13A Bates Ranch, G 4.56 101 ⇓P Pn 18 32 13.1 -0.8
baz=4.4
P13A ⇓Sb **Sb 18 33 21.4 +1.5**
baz=4.4
Q13A Wheeler Ranch, 4.71 107 ⇓P Pn 18 32 15.3 -0.6
baz=4.5,SNR=20
Q13A ⇓Sb **Sb 18 33 26.5 +2.3**
baz=4.5
BMO Blue Mountains 4.76 22 *e*Pn **Pn 18 32 17.6 +1.1**
S12A Delamar Landin 4.80 125 ⇓Sb Sb 18 33 31.2 +4.6
baz=4.6
T11A Corn Creek, Al 4.81 131 ⇓P Pn 18 32 17.3 0.0
baz=4.7,SNR=21
T11A ⇓Sb **Sb 18 33 32.1 +4.9**
baz=4.7
ISA Isabella 4.91 167 *e*Pn **Pn 18 32 17.4 -1.1**
ISA *e*Sg **Sg 18 33 36.7 -5.6**
M14A Sheep Mountain 5.00 76 ⇓P Pn 18 32 17.0 -2.8
baz=4.8
M14A ⇑Sb **Sb 18 33 34.3 +1.9**
baz=4.8
N14A Grayback Hills 5.05 83 ⇑P Pn 18 32 19.1 -1.5
baz=4.9
N14A ⇑Sb **Sb 18 33 35.7 +1.8**
baz=4.9
R13A O'Grain Ranch, 5.07 115 ⇓P Pn 18 32 20.7 -0.1
baz=4.9,SNR=71
HLID Hailey 5.07 51 ⇓Sb Sb 18 33 35.5 +0.9
baz=4.9
HLID Hailey 5.07 51 *e*Pn **Pn 18 32 20.1 -0.7**
BGU Big Grassy Mou 5.17 83 *e*Pn **Pn 18 32 20.5 -1.7**
BGU *e*Pg **Pg 18 32 38.3 -5.5**
L14A Malta 5.19 70 ⇑P Pn 18 32 20.8 -1.7
baz=5.0
P14A Drum Mountains 5.24 97 ⇓P Pn 18 32 22.3 -0.9
baz=5.1
Q14A Sevier Lake (B 5.24 104 ⇓P Pn 18 32 23.1 -0.1
baz=5.1,SNR=32
Q14A ⇑Sb **Sb 18 33 42.2 +2.6**
baz=5.1
DUG Dugway 5.35 91 ⇓Sb Sb 18 33 45.6 +3.0
baz=5.2
DUG Dugway 5.35 91 *e*Pn **Pn 18 32 24.1 -0.6**
DUG *e*Sg **Sg 18 33 48.0 -8.6**
K14A Jones Ranch, D 5.39 65 ⇑Sb Sb 18 33 46.1 +2.3
baz=5.2
HVU Hansel Valley 5.47 74 *e*Pn **Pn 18 32 24.1 -2.2**
LNOR Lincton Mounta 5.52 11 *e*Pn **Pn 18 32 31.5 +4.5**
ARUT Antelope Range 5.62 116 *e*Pn **Pn 18 32 27.8 -0.7**
SPUT South Promonto 5.64 79 *e*Pn **Pn 18 32 25.9 -2.8**
GSC Goldstone 5.67 154 Pn **Pn 18 32 24.7 -4.4**
CCUT Cedar City 5.80 118 *e*Pn **Pn 18 32 30.9 +0.1**
NOQ North Oquirrh 5.86 86 *e*Pg **Pg 18 32 47.8 -9.1**
HAWA Hanford 5.93 2 *e*Pn **Pn 18 32 33.5 +0.9**
NLU North Lily Min 5.94 92 *e*Pn **Pn 18 32 33.3 +0.6**
MSU Marysvale 6.21 106 *e*Pn **Pn 18 32 36.5 0.0**
R15A Junction 6.25 109 ⇓P Pn 18 32 36.6 -0.4
baz=6.1,SNR=6.5
MPU Maple Canyon 6.27 91 *e*Pg **Pg 18 32 59.3 -5.5**
HWUT Hardware Ranch 6.33 77 *e*Pn **Pn 18 32 37.0 -1.2**
JLU Jordanelle 6.37 86 *e*Pn **Pn 18 32 38.3 -0.3**
JLU *e*Sg **Sg 18 34 20.5 -8.6**
LON Longmire 6.45 348 *e*Pn **Pn 18 32 41.3 +1.6**
DAU Daniels Canyon 6.52 88 *e*Pg **Pg 18 33 02.0 -7.6**
TMUT Trail Mountain 6.71 97 Pn **Pn 18 32 41.5 -2.0**
MCMT McKenzie Canyo 6.73 47 *e*Pn **Pn 18 32 44.2 +0.6**
RRI2 Red Ridge 6.95 63 Pn **Pn 18 32 48.4 +1.7**
DLMT Dillon 7.21 45 *e*Pn **Pn 18 32 52.1 +2.0**
TPAW Teton Pass 7.26 62 Pn **Pn 18 32 50.6 -0.2**
SRU San Rafael 7.27 98 *e*Pn **Pn 18 32 47.7 -3.4**
REDW Red Top Meadow 7.28 64 Pn **Pn 18 32 53.1 +2.0**
IMW Indian Meadow 7.42 60 Pn **Pn 18 32 52.8 -0.3**
LOHW Long Hollow 7.54 62 Pn **Pn 18 32 53.2 -1.4**
LRM Limekiln Ridge 7.59 43 Pn **Pn 18 32 55.2 -0.2**
MSO Missoula 7.65 32 *e*Pn **Pn 18 32 57.0 +0.7**
YMR Madison River 7.76 54 *e*Pn **Pn 18 33 02.9 +5.1**
BOZ Bozeman (W) 7.91 46 *e*Pn **Pn 18 33 00.4 +0.6**
CHMT Chamberlain Mo 8.01 34 *e*Pn **Pn 18 33 01.5 +0.4**
PDAR Pinedale Array 8.01 70 Pn **Pn 18 33 00.0 -1.2**
0.3nm,0.3s,baz=230,slow=12,SNR=11
PDAR Lg 18 35 13.6
0.3nm,0.3s,baz=245,slow=25,SNR=3.3
PDAR Pinedale Array 8.01 70 Pn **Pn 18 33 00.0 -1.2**
PDAR Lg 18 35 13.6

WUAZ Wupatki 8.29 124 Pn **Pn 18 33 09.3 +4.3**
WUAZ *e*Lg 18 35 19.4
PV04 Paradox Valley 8.69 100 *e*Pn **Pn 18 33 13.1 +2.7**
PV01 Paradox Valley 9.02 101 *e*Pn **Pn 18 33 12.9 -2.0**
MVCO Mesa Verde 9.40 107 *e*Pn **Pn 18 33 21.3 +1.1**
ANMO Albuquerque 11.91 113 LR LR 18 39 09.9
comp=Z,74nm,21.0s,baz=332,slow=41
TXAR Lajitas Array 17.25 125 P **Pn 18 35 04.4 -1.4**
0.0nm,0.3s,baz=309,slow=9.1,SNR=2.6
DLBC Dease Lake 19.14 343 LR LR 18 43 36.7
comp=Z,94nm,18.7s,baz=121,slow=39
ULM Lac du Bonnet 19.38 52 LR LR 18 43 11.0
comp=Z,64nm,21.4s,baz=235,slow=38
YKA Yellowknife Ar 22.28 6 P **P 18 36 03.1 +1.3**
1.8nm,0.8s,mb3.6,baz=190,slow=10.0,SNR=12
YKA Yellowknife Ar 22.28 6 P **P 18 36 03.1 +1.3**
TKL Tuckaleechee C 28.64 88 P **P 18 37 02.0 +0.5**
1.9nm,0.6s,mb4.0,baz=205,slow=2.8,SNR=3.6
INK Inuvik 28.88 349 LR LR 18 49 36.6
comp=Z,114nm,18.1s,baz=56,slow=38
RES Resolute Bay 36.19 11 P **P 18 38 08.4 +1.4**
2.0nm,0.8s,mb4.1,baz=249,slow=16,SNR=5.1
PETK Petropavlovsk- 54.84 313 P **P 18 40 37.7 +2.8**
2.4nm,0.7s,mb4.3,baz=80,slow=11,SNR=4.4
NOA NORSAR Array B 71.28 23 P **P 18 42 24.9 +1.0**
1.1nm,0.9s,mb3.8,baz=323,slow=5.9,SNR=3.6
LPAZ La Paz 74.08 128 P **P 18 42 41.7 +0.5**
1.4nm,0.7s,mb4.0,baz=330,slow=4.9,SNR=7.2
LPAZ La Paz 74.08 128 P **P 18 42 41.7 +0.5**
FINES FINESS Array B 74.73 16 P **P 18 42 45.2 +0.9**
0.9nm,0.9s,mb3.7,baz=319,slow=7.6,SNR=3.9
ESDC Sonseca Array 81.12 45 P **P 18 43 21.5 +1.2**
0.5nm,0.5s,mb3.7,baz=308,slow=6.3,SNR=6.4
SONM Songino Array 83.00 331 P **P 18 43 30.9 +0.8**
0.3nm,0.5s,mb3.6,baz=25,slow=4.8,SNR=2.6
ZALV Zalesovo Beam 83.60 346 P **P 18 43 34.5 +1.5**
0.8nm,0.5s,mb4.1,baz=35,slow=5.4,SNR=4.6
ZALV Zalesovo Beam 83.60 346 P **P 18 43 34.5 +1.5**
AKASG Malin Array Be 85.25 19 P **P 18 43 41.8 +0.4**
0.7nm,0.4s,mb4.1,baz=317,slow=3.7,SNR=6.1
BVAR Borovoye Array 86.47 354 P **P 18 43 48.5 +1.1**
0.7nm,0.6s,mb4.0,baz=341,slow=3.1,SNR=7.2
HHC Hu-ho-hao-te 86.57 324 *e*P **P 18 43 47.3 -0.9**
HHC pP pP 18 43 52.1 +0.6
HHC sP sP 18 43 54.3 +1.6
HHC PP PP 18 47 10.3 +1.2
HHC SKS 18 54 11.0
HHC S S 18 54 21.4 -3.4
HHC sS sS 18 54 29.3 -1.0
HHC SS SS 19 00 04.4 +0.4
HHC pmax pmax
comp=Z,14nm,0.8s
HHC pmax pmax
comp=Z,36nm,5.8s
HHC LR LR
comp=N,86nm,18.0s
HHC LR LR
comp=E,77nm,16.8s
HHC LR LR
comp=Z,99nm,16.8s
MKAR Makanchi Array 90.92 345 P **P 18 44 10.0 +1.4**
comp=Z,0.4nm,0.7s,mb3.8,baz=25,slow=8.3,SNR=3.1
MKAR Makanchi Array 90.92 345 P **P 18 44 10.0 +1.4**
WMQ Urumqi 92.51 340 *e*P **P 18 44 19.0 +2.9**
CD2 Chengdu 98.32 323 *e*P **P 18 44 43.9 +1.1**

GII ***13*** *18:53:44.1±0.8, 33°.30N×35°.46E, h1km±2km, Md2.4/5*
HLW ***13*** *18:53:44.3, 33°.59N×35°.23E, h10km±19km, Md2.8*
ISCJB ***13*** *18:53:44.4±0.5, 33°.34N±0°.02×35°.42E±0°.04, h6km±3km, Error ellipse: s-maj=5.4km s-min=2.8km az=25.2*
GRAL ***13*** *18:53:45.3±0.3, 33°.32N×35°.45E, h1km±2km, MD3.2*
CSEM ***13*** *18:53:45.1±0.2, 33°.38N×35°.43E, h10km, ML3.2, Error ellipse: s-maj=12.9km s-min=4.2km az=122.0*
ISC 13 18:53:44.9±0.4, 33°.35N±0°.02×35°.43E±0°.04, h5km±4km, n32, σ0°76/54, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.16**	**329**	*e*P	**Pg**	**18 53 48.8**	**+0.8**
MATL	**Matarih**	**0.16**	**329**	*e*P	**Pg**	**18 53 48.8**	**+0.7**
KSDI	**Kefar Szold**	**0.25**	**129**	Pg	**Pg**	**18 53 48.9**	**-0.8**
KSDI				Sg	**Sg**	**18 53 53.0**	**0.0**
HRI	**Mount Hermon**	**0.27**	**108**	Pg	**Pg**	**18 53 49.5**	**-0.6**
HRI				Sg	**Sg**	**18 53 53.8**	**+0.2**
MMA0	**Mount Meron ar**	**0.34**	**184**	Pg	**Pg**	**18 53 50.8**	**-0.5**
MMA0				Sg	**Sg**	**18 53 56.2**	**+0.5**
HNTI	**Hanita**	**0.34**	**219**	Pg	**Pg**	**18 53 51.4**	**-0.1**
HNTI				Sg	**Sg**	**18 53 57.0**	**+1.1**
RCY	**Rachaya**	**0.35**	**68**	*e*P	**Pg**	**18 53 52.0**	**+0.3**
RCY				*e*S	**Sg**	**18 53 56.9**	**+0.6**
RCY	**Rachaya**	**0.35**	**68**	*e*P	**Pg**	**18 53 52.0**	**+0.3**
RCY				*e*S	**Sg**	**18 53 56.8**	**+0.5**
KSHT	**Keshet**	**0.49**	**139**	Pg	**Pg**	**18 53 53.8**	**-0.4**
KSHT				Sg	**Sg**	**18 54 01.3**	**+0.7**
BHL	**Bhannes**	**0.58**	**19**	*e*P	**Pg**	**18 53 56.0**	**0.0**
BHL				*e*S	**Sg**	**18 54 04.2**	**+0.6**
BHL	**Bhannes**	**0.58**	**19**	*e*P	**Pg**	**18 53 56.0**	**-0.1**
BHL				*e*S	**Sg**	**18 54 04.2**	**+0.6**
BLGI	**Bet Lehem HaGe**	**0.65**	**198**	Pg	**Pg**	**18 53 57.0**	**-0.3**
BLGI				Sg	**Sg**	**18 54 06.3**	**+0.6**
OFRI	**'Ofer**	**0.82**	**207**	Pg	**Pg**	**18 54 00.1**	**-0.4**
MMLI	**Mount Malkishu**	**0.91**	**180**	Pg	**Pg**	**18 54 01.3**	**-1.0**
MMLI				Sg	**Sg**	**18 54 15.8**	**+1.7**
HWQ	**Hawqa**	**1.02**	**25**	*e*P	**Pg**	**18 54 04.2**	**-0.2**
HWQ				*e*S	**Sg**	**18 54 17.7**	**0.0**
HMDT	**Nahal Hemdat**	**1.10**	**176**	Pg	**Pg**	**18 54 04.6**	**-1.3**
HMDT				Sg	**Sg**	**18 54 19.6**	**-0.6**
SLTI	**Sal'it**	**1.16**	**197**	Pg	**Pg**	**18 54 05.9**	**-1.1**
SLTI				Sg	**Sg**	**18 54 22.1**	**+0.1**
FKH	**Fakeheh**	**1.20**	**42**	*e*P	**Pg**	**18 54 07.2**	**-0.7**
FKH				*e*S	**Sg**	**18 54 23.3**	**-0.1**
FKH	**Fakeheh**	**1.20**	**42**	*e*P	**Pg**	**18 54 07.2**	**-0.6**
FKH				*e*S	**Sg**	**18 54 23.3**	**-0.1**
DSI	**Dead Sea**	**1.78**	**181**	Pn	**Pn**	**18 54 15.6**	**-0.6**
DSI				Sn	**Sn**	**18 54 39.8**	**+0.7**
YTIR	**Yattir**	**2.00**	**188**	Pn	**Pn**	**18 54 19.6**	**+0.3**
MZDA	**Masada**	**2.04**	**182**	Pn	**Pn**	**18 54 19.7**	**-0.1**
MZDA				Sn	**Sn**	**18 54 46.8**	**+1.2**
RTMI	**Retamim**	**2.37**	**195**	Pn	**Pn**	**18 54 24.8**	**+0.4**
PRNI	**Paran**	**3.01**	**187**	Pn	**Pn**	**18 54 33.4**	**+0.2**
AMAG	**Maghara**	**3.29**	**216**	P	**Pn**	**18 54 36.9**	**-0.2**
baz=211							
AMAG	**Maghara**	**3.29**	**216**	P	**Pn**	**18 54 36.9**	**-0.2**
HNKL	**Nakhl**	**3.63**	**200**	P	**Pn**	**18 54 42.1**	**+0.4**
baz=197							
HNKL				S	**Sn**	**18 55 23.7**	**-1.1**
baz=197							
HNKL	**Nakhl**	**3.63**	**200**	P	**Pn**	**18 54 42.1**	**+0.4**
HNKL				S	**Sn**	**18 55 23.7**	**-1.2**
SUZ		**4.14**	**213**	P	**Pn**	**18 54 48.8**	**0.0**
baz=210							
SUZ				S	**Sn**	**18 55 34.8**	**-2.7**
baz=210							
SUZ		**4.14**	**213**	P	**Pn**	**18 54 48.8**	**+0.1**
SUZ				S	**Sn**	**18 55 34.8**	**-2.7**
TR2		**5.16**	**197**	P	**Pn**	**18 55 04.5**	**+1.7**
baz=195							
TR2		**5.16**	**197**	P	**Pn**	**18 55 04.4**	**+1.6**

CSEM ***13*** *19:03:08.8±0.8, 34°.37N×32°.06E, h0km±6km, Mw2.7, Error ellipse: s-maj=13.3km s-min=8.8km az=94.0*
NEIC ***13*** *19:03:10.2, 34°.48N×31°.93E, h21km, ML2.8(NIC), After NIC.*
ISCJB ***13*** *19:03:10.1±0.8, 34°.40N±0°.05×32°.0E±0°.1, h33km, Error ellipse: s-maj=13.2km s-min=4.8km az=23.5*
NIC ***13*** *19:03:10.2±0.2, 34°.48N×31°.93E, h21km, ML2.8, MW2.7*
ISK ***13*** *19:03:11.1, 34°.30N×32°.31E, h30km, MD3.2*
HLW ***13*** *19:03:15.9, 34°.03N×31°.85E, h30km±13km, Md2.7*
ISC 13 19:03:11.1±0.8, 34°.48N±0°.05×32°.0E±0°.1, h35km, n31, σ0°73/39, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPCY	**Paphos**	**0.51**	**38**	P	**Pn**	**19 03 20.7**	**-1.2**
PPCY	**Paphos**	**0.51**	**38**	P	**Pn**	**19 03 20.7**	**-1.2**
ALFC	**Alevga**	**0.85**	**37**	P	**Pn**	**19 03 26.2**	**-0.4**
4.8nm,0.2s							
ALFC				S	**Sn**	**19 03 38.4**	**+0.5**
ALFC	**Alevga**	**0.85**	**37**	P	**Pn**	**19 03 26.2**	**-0.4**
4.8nm,0.2s							
ALFC				S	**Sn**	**19 03 38.4**	**+0.5**
LEF	**Lefka**	**0.99**	**50**	*e*PG	**Pn**	**19 03 27.9**	**-0.7**
LEF				*e*SG	**Sn**	**19 03 40.9**	**-0.5**
LEF	**Lefka**	**0.99**	**50**	*e*Pg	**Pn**	**19 03 27.9**	**-0.7**
LEF				*e*Sg	**Sn**	**19 03 40.9**	**-0.5**
CSS	**Prodhromos**	**1.22**	**66**	P	**Pn**	**19 03 31.0**	**-0.7**
CSS				S	**Sn**	**19 03 47.7**	**+0.7**
CSS	**Prodhromos**	**1.22**	**66**	P	**Pn**	**19 03 31.0**	**-0.7**
CSS				S	**Sn**	**19 03 47.7**	**+0.7**
MAMC	**Mammari**	**1.24**	**56**	P	**Pn**	**19 03 31.8**	**-0.1**
MAMC	**Mammari**	**1.24**	**56**	P	**Pn**	**19 03 31.8**	**-0.1**
LFK	**Lefkose**	**1.52**	**58**	*e*PN	**Pn**	**19 03 35.9**	**+0.2**
LFK	**Lefkose**	**1.52**	**58**	*e*Pn	**Pn**	**19 03 35.9**	**+0.2**
PHNC	**Paralimni**	**1.78**	**72**	P	**Pn**	**19 03 42.3**	**+2.9**
PHNC				S	**Sn**	**19 04 07.1**	**+6.3**
PHNC	**Paralimni**	**1.78**	**72**	P	**Pn**	**19 03 42.3**	**+2.9**
IKL	**Isikli**	**2.25**	**38**	*e*PN	**Pn**	**19 03 46.5**	**+0.7**
IKL	**Isikli**	**2.25**	**38**	*e*Pn	**Pn**	**19 03 46.5**	**+0.7**
HDMB	**Hadim**	**2.52**	**10**	*e*PN	**Pn**	**19 03 53.6**	**+4.1**
HDMB	**Hadim**	**2.52**	**10**	*e*Pn	**Pn**	**19 03 53.6**	**+4.1**
RSH		**3.81**	**157**	P	**Pn**	**19 04 07.5**	**+0.2**
AMAG	**Maghara**	**3.97**	**164**	P	**Pn**	**19 04 09.6**	**+0.1**
baz=160							
AMAG	**Maghara**	**3.97**	**164**	P	**Pn**	**19 04 09.6**	**+0.1**
SUZ		**4.68**	**171**	P	**Pn**	**19 04 19.1**	**-0.2**
baz=168							
SUZ		**4.68**	**171**	P	**Pn**	**19 04 19.1**	**-0.2**
HNKL	**Nakhl**	**4.85**	**159**	P	**Pn**	**19 04 21.6**	**0.0**
baz=155							
HNKL				S	**Sn**	**19 05 11.7**	**-4.8**
baz=155							
HNKL	**Nakhl**	**4.85**	**159**	P	**Pn**	**19 04 21.6**	**0.0**
HMAT	**Matruh**	**5.31**	**232**	P	**Pn**	**19 04 28.6**	**+0.6**
baz=236							
HMAT	**Matruh**	**5.31**	**232**	P	**Pn**	**19 04 28.6**	**+0.7**
HKAT	**Jabal Katrina**	**6.18**	**163**	P	**Pn**	**19 04 39.6**	**-0.4**
baz=160							
HKAT	**Jabal Katrina**	**6.18**	**163**	P	**Pn**	**19 04 39.6**	**-0.4**
TR2		**6.26**	**166**	P	**Pn**	**19 04 40.6**	**-0.4**
baz=163							
TR2		**6.26**	**166**	P	**Pn**	**19 04 40.6**	**-0.4**

BJI ***13*** *19:08:47.4, 51°.26N×178°.74W, h27km, mB5.0/14, mb4.6/21, Ms4.5/16, Ms7 4.2/16*
ISCJB ***13*** *19:08:49.0±0.9, 51°.84N±0°.04×179°.12W±0°.03, h23km±6km, mb4.4/79, MS3.9/28, Error ellipse: s-maj=6.4km s-min=3.2km az=1.0*
MOS ***13*** *19:08:51.1±1.0, 51°.99N×179°.22W, h33km, mb4.6/46, Error ellipse: s-maj=10.9km s-min=7.3km az=78.5*
SZGRF ***13*** *19:08:52.6, 51°.69N×176°.46E, h32km, mb4.4, Rat Islands, Aleutian Islands, United States*
NEIC ***13*** *19:08:52.4±0.2, 51°.86N×179°.20W, h35km, mb4.5/47, ML4.7(AEIC), Error ellipse: s-maj=6.8km s-min=3.7km az=169.0*
IDC ***13*** *19:08:54.0±2.0, 51°.99N×179°.19W, h44km±18km, mb4.0/29, mb1 4.2/31, mb1mx4.1/39, mbtmp4.0/31, ML3.9/1, MS3.8/23, Ms1 3.8/23, ms1mx3.7/40, Error ellipse: s-maj=15.9km s-min=10.2km az=164.0*
ISC 13 19:08:53.7±0.7, 51°.91N±0°.05×179°.09W±0°.04, h43km±5km, h23km±5.5km: pP-P, n348, σ0°74/348, mb4.4/79, MS3.9/28, 83C-70D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**1.13**	**243**	*e*P	**Pn**	**19 09 08.4**	**-4.7**
AMKA				S	**Sn**	**19 09 22.1**	**-5.3**
GSTR	**Great Sitkin T**	**1.88**	**83**	*e*Pn	**Pn**	**19 09 16.7**	**-6.7**
GSTR				*e*Sn	**Sn**	**19 09 46.9**	**+1.0**
FX1	**Attu Island--F**	**4.84**	**285**	P	**Pn**	**19 10 02.6**	**-1.3**
18nm,0.3s,baz=155,slow=3.7,SNR=70							
FX1				LR	LR	19 11 50.7	
comp=Z,803nm,21.3s,baz=98,slow=37							
FX1	**Attu Island--F**	**4.84**	**285**	P	**Pn**	**19 10 02.7**	**-1.3**
FX1				pmax	pmax		
comp=Z,18nm,0.3s							
FX1				MLR	MLR		
comp=Z,803nm,21.3s							
FX1	**Attu Island--F**	**4.84**	**285**	P	**Pn**	**19 10 02.7**	**-1.3**
FX1				S	**Sn**	**19 10 59.9**	**+1.1**
NIKO	**Nikolski**	**6.35**	**76**	P	**Pn**	**19 10 24.4**	**-0.3**
OKFG	**Magazine Ridge**	**6.97**	**73**	P	**Pn**	**19 10 33.3**	**+0.2**
SPIA	**Saint Paul Isl**	**7.37**	**41**	P	**Pn**	**19 10 38.3**	**-0.3**
UNV	**Unalaska Valle**	**7.86**	**71**	*e*Pn	**Pn**	**19 10 44.1**	**-1.2**
comp=Z,42nm,0.6s							
AKGG	**Akutan Green G**	**8.22**	**69**	P	**Pn**	**19 10 50.0**	**-0.2**
AKUT	**Akutan**	**8.34**	**69**	*e*Pn	**Pn**	**19 10 51.1**	**-0.8**
comp=Z,74nm,0.8s							
PET	**Petropavlovsk**	**13.61**	**283**	*e*P	Px	19 12 18.1	
PET				MLR	MLR		
comp=Z,300nm,19.0s							
PETK	**Petropavlovsk-**	**14.18**	**284**	LR	LR	19 17 23.0	
comp=Z,269nm,21.1s,baz=93,slow=36							
TNA	**Tin City**	**14.83**	**18**	*e*Pn	**Pn**	**19 12 21.1**	**+0.8**
comp=Z,23nm,1.0s							
SVW2	**Sparrevohn**	**15.82**	**45**	*e*P	**Pn**	**19 12 34.1**	**+0.9**
OHAK	**Old Harbor**	**15.83**	**60**	*e*P	**Pn**	**19 12 32.4**	**-0.9**
comp=Z,23nm,1.0s							
KDAK	**Kodiak Island**	**16.29**	**58**	P	**Pn**	**19 12 37.7**	**-1.5**
baz=266,slow=9.6,SNR=1.8							
KDAK				LR	LR	19 19 10.7	
comp=Z,422nm,19.4s,baz=245,slow=38							
KDAK	**Kodiak Island**	**16.29**	**58**	*ce*P	**Pn**	**19 12 40.0**	**+0.8**
KDAK	**Kodiak Island**	**16.29**	**58**	P	**Pn**	**19 12 37.7**	**-1.5**
KDAK				LR	LR	19 19 10.7	
TTA	**Tatalina**	**16.51**	**39**	*e*P	**Pn**	**19 12 42.6**	**+0.7**
RSO	**Redoubt South**	**16.87**	**49**	*e*Pn	**Pn**	**19 12 49.9**	**+3.5**
BILL	**Bilibino**	**17.67**	**342**	⇓*e*P	**Pn**	**19 12 58.9**	**+2.6**
BILL				*e*S	**S**	**19 16 10.6**	**-7.1**
BILL				pmax	pmax		
comp=Z,25nm,1.0s							
BILL				MLR	MLR		
comp=Z,400nm,17.0s							
BILL	**Bilibino**	**17.67**	**342**	*e*Pn	**Pn**	**19 12 57.1**	**+0.8**
comp=Z,14nm,0.8s							
PPLA	**Purkeypile**	**18.04**	**42**	*e*Pn	**Pn**	**19 13 01.6**	**+0.8**
comp=Z,135nm,1.4s							
CHUM	**Lake Minchumin**	**18.43**	**39**	*e*P	**Pn**	**19 13 06.6**	**+1.1**
comp=Z,22nm,0.9s							
RC01	**Rabbit Creek A**	**18.47**	**49**	*e*P	**Pn**	**19 13 06.4**	**+0.3**
comp=Z,11nm,0.8s							
SEY	**Seymchan**	**18.73**	**317**	*ce*P	**Pn**	**19 13 13.4**	**+4.2**
KTH	**Kantishna Hill**	**18.84**	**41**	*e*P	**Pn**	**19 13 11.8**	**+1.3**
comp=Z,72nm,0.9s							
BPAW	**Bear Paw Mtn.**	**19.05**	**39**	*e*P	**Pn**	**19 13 12.4**	**-0.6**
comp=Z,33nm,0.9s							
TRF	**Thorofare Moun**	**19.05**	**42**	*e*P	**Pn**	**19 13 13.3**	**+0.2**
comp=Z,44nm,0.9s							
MCK	**McKinley**	**19.72**	**41**	*e*P	**Pn**	**19 13 19.9**	**-1.1**
MCK				pmax	pmax		
comp=Z,49nm,1.1s							
MCK	**McKinley**	**19.72**	**41**	*e*P	**Pn**	**19 13 19.9**	**-1.1**
comp=Z,49nm,1.1s							
DIV	**Divide**	**20.35**	**50**	*e*P	**P**	**19 13 25.6**	**-0.5**
comp=Z,26nm,0.8s							
COLA	**College**	**20.61**	**39**	*e*P	**P**	**19 13 29.3**	**+0.4**
COLA				pmax	pmax		
comp=Z,66nm,1.1s							
COLA	**College**	**20.61**	**39**	*e*P	**P**	**19 13 29.3**	**+0.4**
comp=Z,66nm,1.1s							
BMRM	**Bremner River**	**20.88**	**51**	*e*P	**P**	**19 13 31.3**	**-0.5**
comp=Z,39nm,1.0s							
COLD	**Coldfoot**	**20.90**	**32**	*e*P	**P**	**19 13 32.5**	**+0.5**
comp=Z,28nm,0.9s							
PAX	**Paxson**

INK Inuvik 27.13 36 P **P** 19 14 32.2 -0.1
comp=Z,6.6nm,0.6s,mb4.3,baz=229,slow=9.3,SNR=12
INK LR LR 19 26 48.9
comp=Z,272nm,18.2s,MS3.9,baz=48,slow=40
INK Inuvik 27.13 36 P **P** 19 14 32.2 -0.1
INK pmax pmax
comp=Z,7.0nm,0.6s
INK MLR MLR
comp=Z,272nm,18.2s
DLBC Dease Lake 28.22 57 LR LR 19 27 13.5
comp=Z,402nm,18.8s,MS4.0,baz=244,slow=39
HABR Khabarovsk 29.18 282 P pP 19 15 02.3 +0.1
HABR *e* 19 15 46.4
HABR *e* 19 17 59.2
HABR *e*SS SS 19 21 12.3 -32
HABR *e* 19 25 32.1
HABR MLR MLR
comp=Z,159nm,18.0s,MS3.7
TIXI Tiksi 30.09 330 *e*P **P** 19 14 58.5 0.0
TIXI pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
TIXI Tiksi 30.09 330 *e*P **P** 19 14 58.5 -0.1
comp=Z,3.4nm,0.8s,mb4.1
KLR Kul'dur 30.87 285 *e*P **P** 19 15 03.2 -2.4
MJAR Matsushiro Arr 33.69 260 P **P** 19 15 30.7 +0.2
comp=Z,1.5nm,0.5s,mb4.1,baz=44,slow=8.1,SNR=6.3
MJAR LR LR 19 26 43.6
comp=Z,83nm,20.4s,MS3.4,baz=75,slow=32
MJAR Matsushiro Arr 33.69 260 P **P** 19 15 30.7 +0.2
MJAR pmax pmax
comp=Z,2.0nm,0.5s
MJAR MLR MLR
comp=Z,83nm,20.4s
MJAR Matsushiro Arr 33.69 260 P **P** 19 15 30.7 +0.1
MJAR LR LR 19 26 43.6
MAJO Matsushiro 33.70 260 *e*P **P** 19 15 30.0 -0.5
MAJO pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
MAJO Matsushiro 33.70 260 *e*P **P** 19 15 30.0 -0.5
comp=Z,9.9nm,1.0s,mb4.7
YKA Yellowknife Ar 35.00 47 P **P** 19 15 41.2 -0.3
comp=Z,4.7nm,0.6s,mb4.6,baz=283,slow=8.3,SNR=26
YKA LR LR 19 31 06.9
comp=Z,46nm,18.3s,MS3.3,baz=350,slow=38
YKA Yellowknife Ar 35.00 47 P **P** 19 15 41.2 -0.3
YKA pmax pmax
comp=Z,5.0nm,0.6s
YKA MLR MLR
comp=Z,46nm,18.3s
YKA Yellowknife Ar 35.00 47 P **P** 19 15 41.2 -0.3
YKA LR LR 19 31 06.9
JHJ Hachijo jima 2 35.06 254 P **P** 19 15 44.7 +2.3
comp=Z,75nm,1.1s,mb5.5,baz=357,slow=12,SNR=3.5
LON Longmire 36.85 75 *e*P **P** 19 15 57.3 -0.2
LON pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
LON Longmire 36.85 75 *e*P **P** 19 15 57.3 -0.3
comp=Z,2.1nm,0.6s,mb4.1
CN2 Changchun 37.27 280 *e*P **P** 19 16 00.5 -0.7
CN2 *e*S **S** 19 21 45.0 -0.3
CN2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.9
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,20.0s,MS4.1
CN2 LR LR
comp=E,200nm,20.0s,MS4.1
CN2 LR LR
comp=Z,200nm,20.0s,MS3.9
YBH Yreka Blue Hor 38.99 82 P **P** 19 16 17.7 +2.0
comp=Z,10nm,0.8s,mb4.6,baz=289,slow=5.2,SNR=5.0
YBH Yreka Blue Hor 38.99 82 P **P** 19 16 17.7 +2.1
YBH pmax pmax
comp=Z,10.0nm,0.9s
YBH Yreka Blue Hor 38.99 82 *e*P **P** 19 16 16.5 +0.9
RES Resolute Bay 39.34 25 P **P** 19 16 18.6 +0.4
comp=Z,1.3nm,0.5s,mb3.9,baz=283,slow=10,SNR=7.9
RES Resolute Bay 39.34 25 P **P** 19 16 18.6 +0.4
RES pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
KSRS Korea Array 39.45 270 P **P** 19 16 19.7 +0.1
comp=Z,3.6nm,0.8s,mb4.1,baz=55,slow=8.2,SNR=13
KSRS LR LR 19 30 26.3
comp=Z,39nm,19.3s,MS3.3,baz=247,slow=33
KSRS Korea Array 39.45 270 P **P** 19 16 19.7 +0.1
KSRS pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
KSRS MLR MLR
comp=Z,39nm,19.3s,MS3.3
WDC Whiskeytown Da 39.76 84 *e*P **P** 19 16 21.4 -0.7
WDC pmax pmax
comp=Z,7.0nm,0.9s,mb4.4
WDC Whiskeytown Da 39.76 84 *e*P **P** 19 16 21.4 -0.6
comp=Z,7.4nm,0.9s,mb4.4
BSMT Bassoo Peak 40.43 69 *e*P **P** 19 16 30.1 +2.5
G11A Walters Elk Ra 40.85 73 ⇑P **P** 19 16 30.2 -0.8
baz=41
WVOR Wild Horse Val 41.07 79 *e*P **P** 19 16 33.7 +0.8
WVOR pmax pmax
comp=Z,7.0nm,0.9s,mb4.3
WVOR Wild Horse Val 41.07 79 *e*P **P** 19 16 33.7 +0.8
comp=Z,6.9nm,0.9s,mb4.3
F12A Elk City 41.26 72 ⇓P **P** 19 16 33.9 -0.5
baz=41
BEKR Beckworth 41.52 83 ⇑P **P** 19 16 36.9 +0.3
baz=42
C15A Salmond Ranch, 41.73 68 ⇑P **P** 19 16 38.1 -0.1
baz=42
WCN Washoe City 42.24 83 ⇑P **P** 19 16 41.6 -0.8
baz=42
I13A Wildhorse Cree 42.95 74 ⇑P **P** 19 16 48.9 +0.8
baz=43
HLID Hailey 42.97 75 ⇓P **P** 19 16 48.4 0.0
baz=43
HLID Hailey 42.97 75 *e*P **P** 19 16 50.1 +1.7
comp=Z,3.2nm,0.8s,mb4.1
L11A Cat Creek Ranc 42.97 77 ⇓P **P** 19 16 48.7 +0.3
baz=43
H14A Leadore 43.00 73 ⇑P **P** 19 16 48.7 +0.2
baz=43
MCMT McKenzie Canyo 43.19 72 *e*P **P** 19 16 49.1 -1.0
comp=Z,1.6nm,0.7s,mb3.9
J13A Cove Ranch, Pi 43.21 75 ⇓P **P** 19 16 50.2 -0.1
baz=43
O10A Cortez Mining, 43.63 80 ⇑P **P** 19 16 53.2 -0.6
baz=44
NVAR Mina Array Bea 43.67 83 P **P** 19 16 55.0 +0.9
comp=Z,5.9nm,0.8s,mb4.4,baz=286,slow=7.3,SNR=24
ELK Elko 44.13 78 P **P** 19 16 58.0 +0.4
comp=Z,3.0nm,0.8s,mb4.1,baz=285,slow=8.9,SNR=4.1
ELK Elko 44.13 78 P **P** 19 16 58.1 +0.4
ELK pmax pmax
comp=Z,3.0nm,0.8s
N12A Clover Valley, 44.18 78 ⇓P **P** 19 16 58.0 -0.2
baz=44
N12A Clover Valley, 44.18 78 *e*P **P** 19 16 58.4 +0.2
comp=Z,7.3nm,0.8s,mb4.5
O11A Cowboy Ranch, 44.24 79 ⇑P **P** 19 16 58.6 -0.1
baz=44
M13A Montello 44.41 77 *e*P **P** 19 17 02.0 +2.1
Q10A Clear Creek Ra 44.59 81 ⇑P **P** 19 17 01.2 -0.3
baz=44,SNR=6.8
O12A Currie 44.71 79 ⇑P **P** 19 17 02.1 -0.3
baz=45
VES Vestal, Richgr 44.83 87 ⇑P **P** 19 17 03.5 +0.1
baz=45
R10A Warm Springs 44.98 82 ⇑P **P** 19 17 04.6 0.0
baz=45,SNR=7.1
PKM Peak Mountain 44.99 88 ⇑P **P** 19 17 04.7 +0.1
baz=45
Q11A Duckwater 45.03 81 ⇑P **P** 19 17 04.6 -0.3
baz=45,SNR=13
S10A Tonopah Range, 45.03 82 ⇑P **P** 19 17 05.1 +0.2
baz=45,SNR=7.6
BJI Beijing 45.09 281 P **P** 19 17 03.9 -1.5
BJI PP PP 19 18 55.6 +4.5
BJI S **S** **19 23 46.9 +5.6**
BJI SS SS 19 27 04.0 -0.2
BJI pmax pmax
comp=Z,4.0nm,0.4s,mb4.6
BJI LR LR
comp=N,150nm,20.2s,MS4.0
BJI LR LR
comp=E,140nm,23.6s,MS4.0
BJI LR LR
comp=Z,110nm,25.5s,MS3.7

P12A McGill 45.10 80 ⇑P **P** 19 17 05.3 -0.2
baz=45
RLMT Red Lodge 45.12 70 *e*P **P** 19 17 06.2 +0.7
comp=Z,1.9nm,0.5s,mb4.2
GRAC Grapevine Rang 45.14 84 ⇑P **P** 19 17 06.5 +0.7
baz=45
ISA Isabella 45.32 86 ⇑P **P** 19 17 06.5 -0.7
baz=45
R11A Troy Canyon, C 45.39 81 ⇑P **P** 19 17 07.9 +0.2
baz=45,SNR=8.9
Q12A Willow Creek R 45.42 80 ⇓P **P** 19 17 07.6 -0.4
baz=45
P13A Bates Ranch, G 45.66 79 ⇑P **P** 19 17 10.1 +0.2
baz=46
MPMC Manual Prospec 45.67 85 ⇑P **P** 19 17 10.1 0.0
baz=46,SNR=5.7
FURC Furnace Creek, 45.80 84 ⇓P **P** 19 17 11.0 0.0
baz=46,SNR=7.2
ULN Ulaanbaatar 45.87 296 *e*P **P** 19 17 14.9 +3.5
ULN pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
ULN Ulaanbaatar 45.87 296 *e*P **P** 19 17 14.9 +3.5
comp=Z,2.9nm,0.8s,mb4.3
LRMC Laurel Mountai 45.93 86 ⇓P **P** 19 17 11.6 -0.5
baz=46
DUG Dugway 45.93 77 ⇓P **P** 19 17 12.1 +0.1
baz=46
Q13A Wheeler Ranch, 45.96 80 ⇓P **P** 19 17 12.1 -0.2
baz=46,SNR=6.5
R12A Pony Springs, 46.00 81 ⇑P **P** 19 17 12.8 +0.2
baz=46
P14A Drum Mountains 46.15 78 ⇓P **P** 19 17 13.6 -0.2
baz=46
SONM Songino Array 46.25 296 P **P** 19 17 14.8 +0.4
comp=Z,1.7nm,1.0s,mb4.0,baz=40,slow=9.7,SNR=4.4
SONM ScP ScP 19 22 38.1 -0.7
comp=Z,0.4nm,0.4s,baz=75,slow=6.1,SNR=3.1
SONM LR LR 19 37 18.8
comp=Z,109nm,18.2s,MS3.8,baz=247,slow=37
T11A Corn Creek, Al 46.31 82 ⇑P **P** 19 17 15.3 +0.3
baz=46,SNR=8.1
BW06 Boulder Array 46.32 73 ⇓P **P** 19 17 15.2 +0.2
baz=46
PDAR Pinedale Array 46.32 73 P **P** 19 17 15.4 +0.4
comp=Z,4.5nm,0.9s,mb4.4,baz=318,slow=4.7,SNR=6.6
PDAR ScP ScP 19 22 40.5 +1.3
comp=Z,0.4nm,0.7s,baz=56,slow=3.7,SNR=3.7
PDAR LR LR 19 33 29.0
comp=Z,92nm,21.1s,MS3.7,baz=115,slow=32
PDAR Pinedale Array 46.32 73 P **P** 19 17 15.4 +0.4
PDAR ScP ScP 19 22 40.5 +1.3
PDAR LR LR 19 33 29.0
Q14A Sevier Lake (B 46.40 79 ⇑P **P** 19 17 15.9 +0.2
baz=46,SNR=12
R13A O'Grain Ranch, 46.48 80 ⇓P **P** 19 17 16.7 +0.3
baz=46
ZAK Zakamensk 46.53 300 *e*P **P** 19 17 19.8 +3.2
ZAK pmax pmax
comp=Z,2.0nm,1.3s,mb3.9
GSC Goldstone 46.59 85 ⇓P **P** 19 17 17.5 +0.3
baz=46,SNR=7.9
GSC Goldstone 46.59 85 *e*P **P** 19 17 17.0 -0.2
GSC pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
GSC Goldstone 46.59 85 *e*P **P** 19 17 17.0 -0.2
comp=Z,9.0nm,0.7s,mb4.8
P15A Leamington 46.64 78 ⇓P **P** 19 17 17.6 0.0
baz=47
DAU Daniels Canyon 46.73 76 *e*P **P** 19 17 19.8 +1.5
BFSC Mount Baldy Ra 46.76 87 ⇑P **P** 19 17 19.0 +0.4
baz=47
S13A Holt Ranch, En 46.93 81 ⇑P **P** 19 17 20.2 +0.3
baz=47,SNR=5.6
CCUT Cedar City 47.25 81 *e*P **P** 19 17 23.1 +0.7
comp=Z,3.2nm,0.7s,mb4.4
T13A Saint George 47.26 82 ⇓P **P** 19 17 22.9 +0.4
baz=47
MSU Marysvale 47.36 79 *e*P **P** 19 17 23.9 +0.6
MSU pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
MSU Marysvale 47.36 79 *e*P **P** 19 17 23.9 +0.6
comp=Z,2.6nm,0.6s,mb4.3
U13A Pakoon Wash 47.61 82 ⇑P **P** 19 17 24.9 -0.3
baz=48,SNR=8.8
GMRC Granite Mounta 47.64 85 ⇓P **P** 19 17 25.1 -0.3
baz=48,SNR=6.1
T14A Hurricane 47.73 81 ⇓P **P** 19 17 26.5 +0.3
baz=48
P18A Preston Nutter 47.83 76 ⇓P **P** 19 17 27.1 +0.2
baz=48
R16A Teasdale 47.93 79 ⇑P **P** 19 17 27.1 -0.5
baz=48,SNR=5.9
BELC Belle Mtn. Jos 47.95 86 ⇓P **P** 19 17 27.7 -0.1
baz=48
V13A Grand Canyon W 47.97 83 ⇑P **P** 19 17 28.0 +0.1
baz=48
SRU San Rafael 47.99 77 ⇓P **P** 19 17 28.2 +0.1
baz=48
SRU San Rafael 47.99 77 *e*P **P** 19 17 27.5 -0.5
O19A Miners Draw (B 48.09 75 ⇑P **P** 19 17 28.5 -0.4
baz=48
U14A Mt Trumbull 48.09 82 ⇑P **P** 19 17 28.5 -0.4
baz=48,SNR=5.9
T15A Red Dirt Ranch 48.19 81 ⇑P **P** 19 17 29.0 -0.7
baz=48,SNR=7.5
Q18A Rafter H Ranch 48.23 77 ⇑P **P** 19 17 29.4 -0.5
baz=48
R17A Hanksville Air 48.31 78 ⇓P **P** 19 17 30.1 -0.5
baz=48
IRM Iron Mountain 48.36 85 ⇓P **P** 19 17 30.5 -0.5
baz=48
MONP Monument Peak 48.43 88 ⇑P **P** 19 17 30.5 -1.1
baz=48
BC3 Big Chuckawall 48.51 86 ⇑P **P** 19 17 32.1 -0.1
baz=48
W13A Hualapai Mount 48.52 84 ⇑P **P** 19 17 31.7 -0.6
baz=48
P19A Cripple Cowboy 48.59 76 ⇑P **P** 19 17 32.5 -0.2
baz=48
L22A Ellis Ranch, M 48.61 71 ⇑P **P** 19 17 32.0 -0.8
baz=48
NJ2 Nanjing 48.62 271 *e*P **P** 19 17 33.5 +0.5
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
U15A North Rim 48.63 81 ⇓P **P** 19 17 33.3 +0.2
baz=49,SNR=22
V14A Boquillas Ranc 48.65 82 ⇓P **P** 19 17 33.1 -0.2
baz=49
O20A White River Ci 48.72 75 ⇓P **P** 19 17 33.9 +0.3
baz=49
S17A Black Ridge (B 48.76 79 ⇓P **P** 19 17 33.5 -0.5
baz=49
R18A Canyonlands Na 48.83 77 ⇑P **P** 19 17 33.7 -0.9
baz=49
PDMCI Parker Dam,Lak 48.89 84 ⇓P **P** 19 17 34.9 -0.2
baz=49
W14A Seligman 48.94 83 ⇑P **P** 19 17 35.2 -0.3
baz=49
Y12C Blythe 49.02 85 ⇓P **P** 19 17 35.7 -0.4
baz=49
V15A Kaibab Nationa 49.10 82 ⇓P **P** 19 17 36.9 +0.2
baz=49,SNR=9.1
T17A Navajo Res., N 49.17 79 ⇓P **P** 19 17 36.9 -0.3
baz=49
S18A Hurst Farm, Bl 49.21 78 ⇓P **P** 19 17 37.3 -0.2
baz=49,SNR=15
GLA Glamis 49.30 86 ⇓P **P** 19 17 38.1 -0.2
baz=49
GLA Glamis 49.30 86 P **P** 19 17 34.0 -4.3
GLA pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
GLA Glamis 49.30 86 P **P** 19 17 34.0 -4.2
comp=Z,8.0nm,0.8s,mb4.8
Q20A Ridgley Place, 49.43 76 ⇓P **P** 19 17 39.4 +0.3
baz=49
ULM Lac du Bonnet 49.55 57 LR LR 19 40 08.1
comp=Z,206nm,18.1s,MS4.2,baz=345,slow=38
T18A Mexican Hat 49.64 79 ⇑P **P** 19 17 40.4 -0.4
baz=50,SNR=7.2
S19A Harvey Farm, M 49.70 78 ⇑P **P** 19 17 41.2 0.0
baz=50
WUAZ Wupatki 49.79 81 ⇑P **P** 19 17 42.3 +0.4
baz=50,SNR=8.1
WUAZ Wupatki 49.79 81 *e*P **P** 19 17 42.5 +0.5
comp=Z,12nm,0.9s,mb4.9
PV01 Paradox Valley 49.79 77 *e*P **P** 19 17 41.5 -0.4
comp=Z,522nm,0.8s
SPITS Spitsbergen Ar 49.83 356 P **P** 19 17 42.0 +0.3
comp=Z,6.0nm,0.4s,mb5.0,baz=25,slow=6.4,SNR=37
SPITS Spitsbergen Ar 49.83 356 P **P** 19 17 42.0 +0.3
SPITS pmax pmax
comp=Z,6.0nm,0.4s
Z13A Yuma Proving G 49.93 85 ⇑P **P** 19 17 42.9 -0.2
baz=50,SNR=6.0
X15A Humboldt 49.94 83 ⇓P **P** 19 17 42.7 -0.4
baz=50
V17A Tonalea, Kykot 50.07 81 ⇓P **P** 19 17 44.2 +0.1
baz=50,SNR=6.6
U18A Rough Rock, Ch 50.11 79 ⇓P **P** 19 17 44.0 -0.4
baz=50
113A Mohawk Valley, 50.15 86 ⇑P **P** 19 17 44.7 0.0
baz=50
Y15A Casa Rosa Ranc 50.24 84 ⇓P **P** 19 17 45.5 +0.1
baz=50
R21A Cimarron 50.25 76 ⇑P **P** 19 17 45.7 +0.3
baz=50
T19A Beclabito 50.36 78 ⇑P **P** 19 17 46.1 -0.1
baz=50,SNR=21
X16A Lo Mia Camp, P 50.48 82 ⇓P **P** 19 17 47.3 +0.1
baz=50
S21A Coal Bank Pass 50.56 77 ⇓P **P** 19 17 47.9 +0.2
baz=50
114A Black Gap (USA 50.71 85 ⇓P **P** 19 17 49.0 +0.1
baz=51,SNR=5.6
115A Sonoran Desert 51.15 85 ⇓P **P** 19 17 52.5 +0.2
baz=51,SNR=5.9
214A Organ Pipe Nat 51.30 86 ⇓P **P** 19 17 53.6 +0.2
baz=51
X18A Snowflake 51.31 81 ⇑P **P** 19 17 54.0 +0.5
baz=51
Y17A Roosevelt 51.33 83 ⇓P **P** 19 17 53.8 +0.2
baz=51,SNR=5.6
V20A Brimhall 51.38 79 ⇑P **P** 19 17 54.0 +0.1
baz=51
U21A Nageezi 51.45 78 ⇑P **P** 19 17 54.8 +0.3
baz=51,SNR=6.1
T22A Edith 51.52 77 ⇑P **P** 19 17 55.3 +0.3
baz=51
Y18A Canyon Day Jun 51.77 82 ⇑P **P** 19 17 57.1 +0.3
baz=52,SNR=5.2
X19A St. Johns 51.79 81 ⇓P **P** 19 17 57.1 +0.1
baz=52
U22A Llaves 51.97 77 ⇑P **P** 19 17 58.4 0.0
baz=52
117A Oracle 52.15 84 ⇓P **P** 19 17 59.5 -0.2
baz=52
X20A Quemado 52.19 80 ⇓P **P** 19 18 00.3 +0.3
baz=52
V22A San Miguel Ran 52.24 78 ⇑P **P** 19 18 00.5 +0.2
baz=52
TUC Tucson 52.30 84 *e*P **P** 19 18 04.1 +3.2
TUC pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
TUC Tucson 52.30 84 *e*P **P** 19 18 04.1 +3.3
comp=Z,5.3nm,0.8s,mb4.5
U23A El Rito 52.40 77 ⇓P **P** 19 18 01.5 -0.1
baz=52,SNR=15
217A Green Valley 52.65 84 ⇓P **P** 19 18 03.7 +0.3
baz=53
FRB Frobisher Bay 52.67 32 P **P** 19 18 03.3 +0.2
comp=Z,7.3nm,0.3s,mb5.0,baz=310,slow=8.1,SNR=13
FRB Frobisher Bay 52.67 32 P **P** 19 18 03.3 +0.2
FRB pmax pmax
comp=Z,7.0nm,0.3s
X21A Alamocita Cree 52.69 80 ⇓P **P** 19 18 04.0 +0.3
baz=53,SNR=11
Y20A Horse Springs, 52.70 81 ⇑P **P** 19 18 04.1 +0.4
baz=53,SNR=6.5
SUMG Summit 52.83 14 *e*P **P** 19 18 04.0 -0.2
comp=Z,9.3nm,0.8s,mb4.8
119A Ashpeak Ranch, 52.90 82 ⇓P **P** 19 18 05.3 0.0
baz=53
218A Dragoon 52.99 84 ⇑P **P** 19 18 05.8 -0.1
baz=53,SNR=5.7
Y21A Point of Rocks 53.06 80 ⇑P **P** 19 18 06.2 -0.2
baz=53
Z20A Nine Sixteen R 53.10 82 ⇑P **P** 19 18 07.0 +0.3
baz=53,SNR=8.1
LAZ Ladron 53.12 79 *e*P **P** 19 18 06.0 -0.8
comp=Z,3.7nm,0.9s,mb4.3
ANMO Albuquerque 53.16 78 P **P** 19 18 10.1 +2.9
comp=Z,1.8nm,0.8s,mb4.0,baz=311,slow=9.4,SNR=3.5
ANMO Albuquerque 53.16 78 P **P** 19 18 10.1 +3.0
ANMO pmax pmax
comp=Z,2.0nm,0.8s
318A Bisbee 53.39 84 ⇑P **P** 19 18 09.1 +0.2
baz=53
U25A Circle Dot Ran 53.43 76 ⇓P **P** 19 18 09.2 +0.1
baz=53
219A White Tail Can 53.46 83 ⇑P **P** 19 18 08.8 -0.6
baz=53
120A U Bar Ranch, L 53.47 82 ⇓P **P** 19 18 09.3 -0.1
baz=53
Y22A Socorro 53.54 80 ⇑P **P** 19 18 09.9 -0.1
baz=54
BNM Barren Site 53.60 79 *e*P **P** 19 18 10.2 -0.2
comp=Z,2.5nm,0.7s,mb4.2
W24A Lazy 6 Ranch, 53.62 77 ⇑P **P** 19 18 10.7 +0.2
baz=54
V25A Rancho No Teng 53.68 76 ⇓P **P** 19 18 10.9 -0.1
baz=54
U26A Atchley Ranch, 53.83 75 ⇑P **P** 19 18 12.2 +0.2
baz=54
319A Douglas 53.87 84 ⇑P **P** 19 18 12.2 -0.2
baz=54
220A Playas Peak, P 53.97 83 ⇑P **P** 19 18 13.4 +0.3
baz=54,SNR=6.9
Z22A Elephant Butte 54.00 80 ⇓P **P** 19 18 13.6 +0.3
baz=54
Y23A Lovelace Mesa, 54.10 79 ⇑P **P** 19 18 14.3 +0.3
baz=54,SNR=5.4
W25A X Bar L Ranch, 54.19 77 ⇑P **P** 19 18 14.8 +0.1
baz=54
122A Conniff Cattle 54.36 81 ⇑P **P** 19 18 16.1 +0.2
baz=54
Y24A Capitan 54.48 79 ⇓P **P** 19 18 17.1 +0.3
baz=54,SNR=17
X25A Clemmons Ranch 54.54 78 ⇑P **P** 19 18 16.8 -0.4
baz=54
Z24A Sheeppen Canyo 54.93 79 ⇑P **P** 19 18 20.0 0.0
baz=55
Y25A Mesa, Roswell 54.93 78 ⇓P **P** 19 18 20.0 0.0
baz=55
X26A CR and CF Fran 55.03 77 ⇓P **P** 19 18 20.5 -0.3
baz=55
LZH Lanzhou 55.06 286 *e*P **P** 19 18 18.0 -3.0
LZH PP PP 19 20 23.0 -1.2
LZH pmax pmax
comp=Z,13nm,1.2s,mb4.8
LZH pmax pmax
comp=Z,55nm,4.6s
LZH LR LR
comp=E,350nm,15.4s
LZH LR LR
comp=Z,380nm,16.5s,MS4.5
GTA Gaotai 55.20 291 *e*P **P** 19 18 23.6 +1.6
GTA pP pP 19 18 27.9 -6.2
GTA sP sP 19 18 31.4 -7.6
GTA pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
124A Stringfield Ra 55.30 80 ⇑P **P** 19 18 22.6 -0.2
baz=55
Y26A Elida 55.45 78 ⇓P **P** 19 18 23.6 -0.3
baz=55
224A Cornudas Mount 55.69 80 ⇑P **P** 19 18 25.4 -0.2
baz=56,SNR=5.1
Z26A Caprock 55.81 78 ⇓P **P** 19 18 26.0 -0.4
baz=56
125A Gardner Draw, 55.82 79 ⇑P **P** 19 18 26.3 -0.2
baz=56
Y27A Causey 55.88 77 ⇑P **P** 19 18 26.1 -0.8
baz=56,SNR=5.3
MNTX Cornudas Mount 56.04 81 *e*P **P** 19 18 28.0 -0.1
comp=Z,4.6nm,0.9s,mb4.5
CPRX Cap Rock 56.04 78 *e*P **P** 19 18 31.2 +3.2
comp=Z,1.6nm,0.5s,mb4.3
MSTX Muleshoe 56.06 77 ⇑P **P** 19 18 28.0 -0.1
baz=56
325A Bean Ranch, Si 56.52 81 ⇓P **P** 19 18 31.5 0.0
baz=56
226A Malaga, Loving 56.57 79 ⇓P **P** 19 18 31.5 -0.4
baz=56
425A Indio Mountain 56.92 81 ⇓P **P** 19 18 34.5 +0.1
baz=57
KEV Kevo 57.16 350 *e*p **P** 19 18 35.5 0.0
comp=Z,0.4nm,0.3s,mb3.9

326A Caldwell Ranch 57.16 80 ⇓P **P 19 18 36.0 -0.1**
baz=57
ARCES ARCESS Array B 57.54 350 P **P 19 18 38.0 -0.1**
comp=Z,1.7nm,0.6s,mb4.3,baz=27,slow=8.9,SNR=33
ARCES LR LR 19 44 22.1
comp=Z,60nm,19.0s,MS3.7,baz=263,slow=37
ARCES ARCESS Array B 57.54 350 P **P 19 18 38.1 0.0**
ARCES pmax pmax
comp=Z,2.0nm,0.6s
ARCES MLR MLR
comp=Z,60nm,19.0s
426A McDonald Obser 57.59 80 ⇓P **P 19 18 38.9 -0.1**
baz=58
328A Wristen Ranch, 57.83 79 ⇓P **P 19 18 40.6 -0.1**
baz=58
526A Mary Lane Ranc 57.98 81 ⇑P **P 19 18 42.0 +0.1**
baz=58
527A Woodward Ranch 58.21 81 ⇓P **P 19 18 43.5 0.0**
baz=58
626A Big Bend Ranch 58.31 81 ⇑P **P 19 18 44.2 0.0**
baz=58
428A Kincaid Ranch, 58.37 79 ⇑P **P 19 18 44.7 +0.2**
baz=58
KURK Kurchatov 58.53 313 LR LR 19 46 21.1
comp=Z,99nm,18.8s,MS4.0,baz=50,slow=38
KURK Kurchatov 58.53 313 *e*P **P 19 18 44.4 -0.9**
KURK pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
KURK Kurchatov 58.53 313 *e*P **P 19 18 44.4 -0.9**
comp=Z,3.5nm,1.0s,mb4.3
528A Cox Ranch, San 58.70 80 ⇑P **P 19 18 46.9 0.0**
baz=59
TXAR Lajitas Array 58.75 81 P **P 19 18 46.7 -0.5**
comp=Z,2.6nm,0.7s,mb4.3,baz=305,slow=4.4,SNR=13
TXAR LR LR 19 45 03.8
comp=Z,142nm,18.3s,MS4.1,baz=30,slow=37
TXAR Lajitas Array 58.75 81 P **P 19 18 46.7 -0.5**
TXAR pmax pmax
comp=Z,3.0nm,0.7s
TXAR MLR MLR
comp=Z,142nm,18.3s
627A Terlingua Ranc 58.84 81 ⇑P **P 19 18 48.0 +0.2**
baz=59
MKAR Makanchi Array 59.56 308 P **P 19 18 50.8 -1.8**
comp=Z,0.3nm,0.4s,mb3.6,baz=54,slow=6.9,SNR=7.0
MKAR LR LR 19 44 23.8
comp=Z,60nm,20.9s,MS3.7,baz=195,slow=36
SCHQ Schefferville 59.70 38 LR LR 19 48 46.6
comp=Z,119nm,18.9s,MS4.0,baz=316,slow=40
GYA Guiyang 60.09 276 P **P 19 18 56.4 -0.1**
GYA PP PP 19 21 10.8 +1.7
GYA ScP ScP 19 23 41.4 +2.1
GYA S **S 19 27 07.6 +1.2**
GYA SS SS 19 31 05.0 +1.7
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
GYA pmax pmax
comp=Z,90nm,4.9s
GYA LR LR
comp=N,490nm,18.7s,MS4.8
GYA LR LR
comp=E,430nm,19.9s,MS4.8
GYA LR LR
comp=Z,470nm,18.0s,MS4.7
BVAR Borovoye Array 60.37 319 P **P 19 18 57.2 -0.8**
comp=Z,0.7nm,0.4s,mb4.0,baz=51,slow=6.2,SNR=7.7
BVAR LR LR 19 49 49.1
comp=Z,101nm,18.6s,MS4.0,baz=210,slow=41
BVAR Borovoye Array 60.37 319 P **P 19 18 57.2 -0.8**
BVAR pmax pmax
comp=Z,1.0nm,0.4s
BVAR MLR MLR
comp=Z,101nm,18.6s
ARU Arti 62.06 328*c i*P **P 19 19 11.3 +1.9**
ARU *e* 19 21 21.5
ARU S **S 19 27 32.9 +2.3**
ARU SS SS 19 31 40.2 +7.5
ARU pmax pmax
comp=Z,5.0nm,1.2s,mb4.5
JOF Joensuu 63.04 345 *e*P **P 19 19 14.8 -1.0**
JOF pmax pmax
comp=Z,2.0nm,0.6s,mb4.4
JOF Joensuu 63.04 345 *e*p **P 19 19 14.8 -1.0**
comp=Z,2.1nm,0.6s,mb4.4
KMI Kunming 63.48 277 P **P 19 19 19.8 +0.5**
KMI PP PP 19 21 41.1 +2.2
KMI S **S 19 27 50.8 +1.6**
KMI SS SS 19 31 58.8 +2.5
KMI pmax pmax
comp=Z,6.0nm,1.1s,mb4.6
KMI pmax pmax
comp=Z,80nm,3.1s
KMI LR LR
comp=N,79nm,14.1s,MS4.2
KMI LR LR
comp=E,100nm,15.5s,MS4.2
KMI LR LR
comp=Z,87nm,28.9s
KAF Kangasniemi 64.55 347 *e*P **P 19 19 24.5 -1.3**
KAF pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
KAF Kangasniemi 64.55 347 *e*p **P 19 19 24.5 -1.3**
comp=Z,2.2nm,0.6s,mb4.4
KAF Kangasniemi 64.55 347 *e*p **P 19 19 24.5 -1.3**
comp=Z,2.2nm,0.6s,mb4.4
FINES FINESS Array B 65.23 347 P **P 19 19 29.8 -0.4**
comp=Z,1.4nm,0.5s,mb4.2,baz=11,slow=8.0,SNR=16
FINES LR LR 19 51 15.6
comp=Z,70nm,18.4s,MS3.9,baz=309,slow=39
FINES FINESS Array B 65.23 347 P **P 19 19 29.8 -0.4**
FINES pmax pmax
comp=Z,1.0nm,0.5s
FINES MLR MLR
comp=Z,71nm,18.4s
LSA Lhasa 67.09 289 P **P 19 19 45.0 +2.4**
LSA Lhasa 67.09 289 *e*P **P 19 19 46.8 +4.2**
LSA pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
LSA Lhasa 67.09 289 *e*P **P 19 19 46.8 +4.2**
comp=Z,7.2nm,0.8s,mb4.8
NB2 NORSAR Subarra 67.10 355 P **P 19 19 41.3 -0.9**
comp=Z,2.0nm,0.8s,mb4.2,baz=7.5,slow=6.5
NOA NORSAR Array B 67.10 355 P **P 19 19 41.7 -0.5**
comp=Z,0.7nm,0.6s,mb3.9,baz=338,slow=4.8,SNR=5.5
NOA LR LR 19 53 08.3
comp=Z,34nm,18.4s,MS3.6,baz=355,slow=40
NOA NORSAR Array B 67.10 355 P **P 19 19 41.7 -0.5**
NOA pmax pmax
comp=Z,1.0nm,0.6s
NOA MLR MLR
comp=Z,35nm,18.5s
NOA NORSAR Array B 67.10 355 P **P 19 19 41.7 -0.5**
NOA LR LR 19 53 08.3
AKTK Aktyubinsk 67.15 324 P **P 19 19 42.1 -0.6**
AKTO Aktyubinsk 67.15 324 P **P 19 19 42.1 -0.6**
comp=Z,1.8nm,0.5s,mb4.3,baz=50,slow=6.5,SNR=8.0
AKTO Aktyubinsk 67.15 324 P **P 19 19 42.1 -0.6**
AKTO pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
HFS Hagfors 67.84 353 P **P 19 19 46.4 -0.5**
comp=Z,1.3nm,0.5s,mb4.2,baz=42,slow=6.9,SNR=9.8
HFS Hagfors 67.84 353 P **P 19 19 46.4 -0.4**
HFS pmax pmax
comp=Z,1.0nm,0.5s
KSH Kashi 68.04 306 P **P 19 19 54.0 +5.5**
KSH pP pP 19 19 58.8 -2.1
KSH PcP PcP 19 20 18.8 +4.4
KSH PP PP 19 22 28.3 +10
KSH ScP 19 24 20.6
KSH PcS 19 24 22.3
KSH S S 19 28 55.5 +11
KSH ScS ScS 19 29 50.3 +6.5
KSH SS SS 19 33 22.6 +16
KSH pmax pmax
comp=Z,1.0nm,0.7s,mb4.0
KSH pmax pmax
comp=Z,91nm,4.8s
KSH LR LR
comp=N,54nm,5.7s
KSH LR LR
comp=E,44nm,4.3s
KSH LR LR
comp=Z,75nm,4.2s
OBN Obninsk 69.31 339⇓*e*P **P 19 19 57.4 +1.3**
OBN pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
OBN MLR MLR
comp=Z,100nm,17.0s,MS4.1
CMAR Chiang Mai Arr 70.78 276 P **P 19 20 05.3 -0.4**
comp=Z,1.6nm,0.7s,mb4.0,baz=31,slow=6.7,SNR=9.1
CMAR Chiang Mai Arr 70.78 276 P **P 19 20 05.3 -0.4**
CMAR pmax pmax
comp=Z,2.0nm,0.7s
TAPN Taplejung 70.85 290 *e*P **P 19 20 11.5 +5.5**
comp=Z,28nm,1.1s,mb5.1
ODAN Odare 71.41 290 *e*P **P 19 20 10.9 +1.5**
GUN Gumba 71.49 292 *e*P **P 19 20 13.2 +3.3**
JIRN Jiri 71.50 291 *e*P **P 19 20 13.0 +3.1**
comp=Z,31nm,0.8s,mb5.3
RAMN Ramite 71.80 290 *e*P **P 19 20 11.2 -0.5**
comp=Z,27nm,0.9s,mb5.2
KKN Kakani 71.93 292 *e*P **P 19 20 13.3 +0.8**
comp=Z,11nm,0.7s,mb4.9
KKN Kakani 71.93 292 *e*P **P 19 20 13.3 +0.8**
KKN pmax pmax
comp=Z,11nm,0.7s,mb4.9
DMN Daman 72.17 292 *e*P **P 19 20 12.5 -1.4**
EKA Eskdalemuir Ar 73.08 2 P **P 19 20 18.8 -0.1**
comp=Z,1.6nm,0.6s,mb4.1,baz=355,slow=5.3,SNR=7.2
EKA Eskdalemuir Ar 73.08 2 P **P 19 20 18.8 0.0**
EKA pmax pmax
comp=Z,2.0nm,0.6s
AKASG Malin Array Be 74.99 342 P **P 19 20 29.1 -1.1**
comp=Z,1.5nm,0.4s,mb4.3,baz=18,slow=6.3,SNR=5.7
AKASG LR LR 19 57 05.8
comp=Z,62nm,20.6s,MS3.9,baz=305,slow=39
AKASG Malin Array Be 74.99 342 P **P 19 20 29.1 -1.0**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKASG MLR MLR
comp=Z,62nm,20.6s
CLL Collm 76.65 352 *e*P **P 19 20 40.0 +0.4**
CLL Collm 76.65 352 *e*P **P 19 20 40.0 +0.4**
KIV Kislovodsk 77.92 331⇓*e*P **P 19 20 49.0 +2.2**
KIV pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
KIV MLR MLR
comp=Z,100nm,21.0s,MS4.1
BAIF Baives 78.37 358 *e*P **P 19 20 49.0 -0.2**
GRA1 Grafenberg Arr 78.40 353 *e*P **P 19 20 47.3 -2.1**
comp=Z,3.0nm,0.9s,mb4.2
GRA1 *e*pP pP 19 20 56.4 -5.6
GRF Grafenberg Arr 78.40 353 *e*P **P 19 20 47.3 -2.1**
comp=Z,3.0nm,0.9s,mb4.2
GRF *e*pP pP 19 20 56.4 -5.6
GRF Grafenberg Arr 78.40 353 *e*P **P 19 20 47.3 -2.1**
GRF *e**PP pP 19 20 56.4 -5.6
GRF pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
GRF Grafenberg Arr 78.40 353 *e*P **P 19 20 47.3 -2.1**
comp=Z,3.0nm,0.9s,mb4.2
GRF *e*pP pP 19 20 56.4 -5.6
ZEI Tsey 78.61 329 *e*P **P 19 20 51.1 +0.4**
ZEI pmax pmax
comp=Z,3.0nm,0.4s,mb4.6
GERES GERESS Array B 79.03 351 P **P 19 20 50.8 -2.1**
comp=Z,0.4nm,0.7s,mb3.5,baz=28,slow=6.0,SNR=3.6
GERES LR LR 19 58 29.7
comp=Z,72nm,19.2s,MS4.0,baz=148,slow=38
GERES GERESS Array B 79.03 351 P **P 19 20 50.8 -2.1**
GERES LR LR 19 58 29.7
LDF La Druitiere 79.87 1 *e*P **P 19 20 56.4 -1.0**
comp=Z,5.7nm,0.6s,mb4.4
LDF La Druitiere 79.87 1 *e*P **P 19 20 56.4 -1.0**
LDF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
LDF La Druitiere 79.87 1 *e*P **P 19 20 56.4 -1.0**
comp=Z,2.8nm,0.6s,mb4.4
MEZF Maizieres J'vi 79.91 357 *e*P **P 19 20 57.3 -0.3**
GRR Gorron 80.07 1 *e*P **P 19 20 57.7 -0.8**
SGMF Saint Gilles 80.17 2 *e*P **P 19 20 58.5 -0.6**
comp=Z,6.8nm,0.7s,mb4.4
SGMF Saint Gilles 80.17 2 *e*P **P 19 20 58.5 -0.6**
SGMF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
SGMF Saint Gilles 80.17 2 *e*P **P 19 20 58.5 -0.6**
comp=Z,3.4nm,0.7s,mb4.4
LOR Lormes 81.17 358 *e*P **P 19 21 03.8 -0.6**
SSF Saint Saulge 81.39 358 *e*P **P 19 21 04.8 -0.8**
SMF Signal de Mont 81.80 358 *e*P **P 19 21 07.0 -0.7**
TCF Toulx Ste Croi 82.18 359 *e*P **P 19 21 09.0 -0.7**
WRA Warramunga Arr 82.27 224 P **P 19 21 10.1 -0.4**
comp=Z,2.4nm,1.0s,mb4.1,baz=35,slow=6.1,SNR=61
WRA Warramunga Arr 82.27 224 P **P 19 21 10.1 -0.3**
WRA pmax pmax
comp=Z,2.0nm,1.0s
BRTR Keskin Array B 84.39 335 P **P 19 21 20.8 -0.5**
comp=Z,0.7nm,0.7s,mb3.9,baz=51,slow=4.9,SNR=4.9
BRTR LR LR 20 03 41.2
comp=Z,36nm,21.1s,MS3.7,baz=193,slow=39
BRTR Keskin Array B 84.39 335 P **P 19 21 20.8 -0.5**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
BRTR MLR MLR
comp=Z,36nm,21.1s
ASAR Alice Springs 85.75 222 P **P 19 21 28.2 +0.2**
comp=Z,1.5nm,0.7s,mb4.3,baz=24,slow=5.1,SNR=20
ASAR Alice Springs 85.75 222 P **P 19 21 28.3 +0.2**
ASAR pmax pmax
comp=Z,2.0nm,0.7s
STKA Stephens Creek 90.27 213 P **P 19 21 50.2 +0.8**
comp=Z,3.0nm,0.8s,mb4.7,baz=350,slow=9.7,SNR=7.2
STKA Stephens Creek 90.27 213 P **P 19 21 50.2 +0.8**
MAW Mawson 146.79 218 PKPbc PKPbc 19 28 29.7 +0.1
comp=Z,3.7nm,0.8s,baz=162,slow=3.2,SNR=5.0
BOSA Boshof 150.49 313 PKPbc PKPbc 19 28 38.4 -2.0
comp=Z,1.3nm,0.6s,baz=333,slow=2.3,SNR=3.0

*IDC **13** 19:10:04.9±2.9, 43.°08N×105.°04W, h0km, mb3.9/2, mb1 4.0/4, mb1mx3.5/27, mbtmp3.9/4, ML3.7/2, Error ellipse: s-maj=73.1km s-min=8.4km az=160.0*
*ISCJB **13** 19:10:06.8±0.5, 43.°74N±0.°04×105.°11W±0.°07, h0km, mb4.1/2, Error ellipse: s-maj=7.1km s-min=6.2km az=11.4*
*NEIC **13** 19:10:09.0±0.4, 43.°71N×105.°17W, h0km, ML3.2, Error ellipse: s-maj=6.0km s-min=5.0km az=130.0, Suspected Mining explosion.*
NEIC 70 km [45 miles] SSE of Gillette.
ISC 13 19:10:09.1±0.5, 43.°71N±0.°04×105.°17W±0.°06, h0km, n36, σ1ᵒ00/37, mb4.1/2, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.92**	**63**	*e*Pg	**Pg**	**19 10 28.3**	**+1.7**
PHWY	**Pilot Hill**	**2.42**	**185**	*e*Pn	**Pn**	**19 10 50.8**	**+1.0**
RWWY	**Rawlins**	**2.52**	**217**	*e*Pn	**Pn**	**19 10 52.1**	**+0.9**
LAO	**LASA Array**	**3.07**	**346**	*e*Pn	**Pn**	**19 11 00.3**	**+1.4**
RLMT	**Red Lodge**	**3.26**	**297**	*e*Pn	**Pn**	**19 11 01.1**	**-0.3**
BW06	**Boulder Array**	**3.34**	**255**	*e*Pn	**Pn**	**19 11 01.8**	**-0.8**
PDAR	**Pinedale Array**	**3.34**	**255**	Pn	**Pn**	**19 11 02.2**	**-0.3**
	5.7nm,0.3s,baz=82,slow=16,SNR=57						
PDAR				Pg	**Pg**	**19 11 07.5**	**-5.7**
	23nm,0.3s,baz=73,slow=17,SNR=121						
PDAR				Lg		19 11 49.0	
	30nm,0.3s,baz=65,slow=33,SNR=21						
OGNE	**Ogallala**	**3.61**	**139**	*e*Pn	**Pn**	**19 11 07.2**	**+1.0**
ISCO	**Idaho Springs**	**3.92**	**185**	*e*Pn	**Pn**	**19 11 11.0**	**+0.5**
LOHW	**Long Hollow**	**3.95**	**270**	*e*Pn	**Pn**	**19 11 10.6**	**-0.3**
SNOW	**Snow King Moun**	**4.07**	**268**	*e*Pn	**Pn**	**19 11 13.0**	**+0.4**
REDW	**Red Top Meadow**	**4.15**	**267**	*e*Pn	**Pn**	**19 11 14.6**	**+0.9**
IMW	**Indian Meadow**	**4.18**	**275**	*e*Pn	**Pn**	**19 11 14.9**	**+0.8**
TPAW	**Teton Pass**	**4.21**	**269**	*e*Pn	**Pn**	**19 11 14.4**	**-0.1**
DCID1	**Drake Creek**	**4.37**	**271**	*e*Pn	**Pn**	**19 11 12.3**	**-4.3**
RRI2	**Red Ridge**	**4.49**	**268**	*e*Pn	**Pn**	**19 11 18.8**	**+0.5**
SMCO	**Snowmass**	**4.73**	**197**	*e*Pn	**Pn**	**19 11 20.5**	**-1.0**
DGMT	**Dagmar**	**4.81**	**8**	*e*Pn	**Pn**	**19 11 20.2**	**-2.5**
BOZ	**Bozeman (W)**	**5.00**	**295**	*e*Pn	**Pn**	**19 11 16.9**	**-8.4**
HWUT	**Hardware Ranch**	**5.17**	**248**	*e*Pn	**Pn**	**19 11 27.7**	**+0.1**
	7.3nm,0.3s						
LRM	**Limekiln Ridge**	**5.60**	**295**	*e*Pn	**Pn**	**19 11 34.2**	**+0.6**
	18nm,0.3s						
DAU	**Daniels Canyon**	**5.60**	**236**	*e*Pn	**Pn**	**19 11 35.4**	**+1.8**
	8.1nm,0.3s						
MCMT	**McKenzie Canyo**	**5.63**	**284**	*e*Pn	**Pn**	**19 11 37.4**	**+3.4**
	1.5nm,0.3s						
SPUT	**South Promonto**	**5.89**	**248**	*e*Pn	**Pn**	**19 11 38.2**	**+0.6**
	5.8nm,0.3s						
HVU	**Hansel Valley**	**5.93**	**254**	*e*Pn	**Pn**	**19 11 37.5**	**-0.6**
SDCO	**Great Sand Dun**	**5.96**	**183**	Pn	**Pn**	**19 11 36.4**	**-2.2**
	1.5nm,0.3s						
PV04	**Paradox Valley**	**6.01**	**209**	*e*Pn	**Pn**	**19 11 39.1**	**-0.2**
SRU	**San Rafael**	**6.11**	**223**	*e*Pn	**Pn**	**19 11 39.3**	**-1.3**
	9.4nm,0.3s						
TMUT	**Trail Mountain**	**6.32**	**228**	*e*Pn	**Pn**	**19 11 43.8**	**+0.2**
	7.9nm,0.7s						
BGU	**Big Grassy Mou**	**6.46**	**247**	*e*Pn	**Pn**	**19 11 43.9**	**-1.4**
	1.4nm,0.3s						
CHMT	**Chamberlain Mo**	**6.54**	**302**	*e*Pn	**Pn**	**19 11 46.6**	**+0.1**
	1.5nm,0.3s						
SWMT	**Swartz Lake**	**7.27**	**305**	*e*Pn	**Pn**	**19 11 55.8**	**-0.6**
MSU	**Marysvale**	**7.41**	**228**	*e*Pn	**Pn**	**19 11 58.0**	**-0.4**
	1.2nm,0.3s						
ULM	**Lac du Bonnet**	**9.11**	**41**	Pn	**Pn**	**19 12 20.6**	**-1.2**
	1.7nm,0.3s,baz=247,slow=12,SNR=8.7						
ARCES	**ARCESS Array B**	**61.42**	**18**	P	**P**	**19 20 25.8**	**-0.7**
	1.8nm,0.9s,mb4.2,baz=335,slow=8.3,SNR=5.2						
FINES	**FINESS Array B**	**68.03**	**23**	P	**P**	**19 21 09.4**	**-0.4**
	0.6nm,0.5s,mb4.1,baz=340,slow=7.8,SNR=2.7						

IDC 13 19:20:17.4±1.4, 31.°68N×103.°88E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.4/27, mbtmp3.6/5, Error ellipse: s-maj=48.1km s-min=23.6km az=47.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.60**	**67**	P	P	19 24 58.0	0.0
	2.2nm,0.7s,baz=254,slow=10,SNR=11						
ZALV	**Zalesovo Beam**	**26.12**	**334**	P	P	19 25 51.0	-1.8
	0.3nm,0.3s,baz=154,slow=8.0,SNR=3.7						
KURK	**Kurchatov**	**26.67**	**323**	P	P	19 25 59.0	+1.2
	0.5nm,0.6s,baz=129,slow=9.6,SNR=5.3						
FINES	**FINESS Array B**	**56.98**	**326**	P	P	19 30 04.6	+0.2
	0.4nm,0.5s,baz=107,slow=8.9,SNR=5.0						
WRA	**Warramunga Arr**	**59.06**	**146**	P	P	19 30 19.2	-0.1
	0.3nm,0.6s,baz=338,slow=7.7,SNR=4.4						

*ISCJB **13** 19:40:35.1±0.2, 10.°81S±0.°04×165.°80E±0.°03, h47km, mb4.8/57, MS4.2/14, Error ellipse: s-maj=5.9km s-min=4.6km az=152.7*
*NEIC **13** 19:40:35.9±0.2, 10.°79S×165.°94E, mb4.9/35, Error ellipse: s-maj=8.3km s-min=6.1km az=125.0*
*IDC **13** 19:40:36.0±0.8, 10.°85S×165.°99E, h46km±6km, mb4.2/14, mb1 4.4/15, mb1mx4.4/17, mbtmp4.2/15, ML5.6/1, MS4.2/8, Ms1 4.2/8, ms1mx3.9/21, Error ellipse: s-maj=20.0km s-min=15.7km az=112.0*
*NOU **13** 19:40:36.7±1.1, 10.°70S×165.°74E, h30km, MD4.4, MS1.9*
*GCMT **13** 19:40:38.1±0.2, 10.°99S×165.°77E, h46km, MW5.1, Moment Tensor Solution. s61,c84; s59,c84; Moment tensor: Scale 10^{16}Nm; M_{rr}5.53±.16; $M_{\theta\theta}$-1.57±.14; $M_{\phi\phi}$-3.96±.13; $M_{r\theta}$-1.08±.11; $M_{\theta\phi}$2.66±.11; $M_{\phi r}$-0.32±.10; Best double couple: $M_0$5.70000×10^{16} NP1:ϕ_s158.00000°, δ44.00000°, λ106.00000°. NP2:ϕ_s316.00000°, δ48.00000°, λ75.00000°. Principal axes: T 5.7500, Plg79.0000°, Azm155.0000°; N -0.0600, Plg11.0000°, Azm326.0000°; P -5.6900, Plg2.0000°, Azm57.0000°; Data Used: IU II IC G CN.*
*BJI **13** 19:40:39.0, 10.°53S×165.°93E, h75km, mB4.9/23, mb4.7/33, Ms4.9/18, Ms7 4.4/19*
ISC 13 19:40:37.0±0.2, 10.°77S±0.°04×165.°87E±0.°03, h49km, h49km±1.3km: pP-P, n284, σ0ᵒ70/252, mb4.8/58, MS4.3/14, 71C-74D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.99**	**282**	P	**Pn**	**19 42 05.7**	**+2.6**
	131nm,0.3s,baz=151,slow=3.2,SNR=53						
HNR				S	**Sn**	**19 43 08.2**	**-2.2**
	baz=126,slow=19,SNR=1.1						
HNR	**Honiara**	**5.99**	**282**⇓*i*Pn		**Pn**	**19 42 05.7**	**+2.6**
	456nm,0.6s						
HNR				*e*Sn	**Sn**	**19 43 13.1**	**+2.7**
DZM	**Mont Dzumac**	**11.25**	**177**	*e*Pn	**Pn**	**19 43 14.9**	**-0.3**
	132nm,1.1s						
DZM				*e*Sn	**Sn**	**19 45 07.7**	**-12**
	11nm,0.3s						
DZM				*e*LR	LR	19 45 49.5	
	3μm,24.6s						
DZM	**Mont Dzumac**	**11.25**	**177**	*e*P	**Pn**	**19 43 15.0**	**-0.2**
DZM				*e*S	**Sn**	**19 45 12.3**	**-7.3**
DZM				AMP		19 45 16.9	
	comp=Z,196nm,5.1s						
DZM	**Mont Dzumac**	**11.25**	**177**	*e*Pn	**Pn**	**19 43 14.8**	**-0.4**
	comp=Z,74nm,0.9s						
DZM				*e*Sn	**Sn**	**19 45 10.8**	**-8.7**
NOUC	**Port Laguerre**	**11.27**	**178**	*e*P	**Pn**	**19 43 15.5**	**0.0**
NOUC				*e*S	**Sn**	**19 45 12.5**	**-7.6**
NOUC				AMP		19 45 21.8	
	comp=Z,11nm,15.9s						
LASL	**Noumea**	**11.41**	**177**	*e*S	**Sn**	**19 45 17.8**	**-5.8**
PLUM	**Mont Dore**	**11.46**	**176**	*e*P	**Pn**	**19 43 18.4**	**+0.3**
ONTRN	**Noumea**	**11.48**	**177**	*e*P	**Pn**	**19 43 19.0**	**+0.6**
MSVF	**Nonsavu**	**13.68**	**122**	*e*Pn	**Pn**	**19 43 55.3**	**+6.9**
	comp=Z,71nm,1.1s						
EIDS	**Eidsvold**	**20.18**	**222**	*e*P	**P**	**19 45 08.7**	**+1.1**
	comp=Z,47nm,1.0s						
EIDS				*e*		19 45 21.9	
CTA	**Charters Tower**	**21.04**	**242**	P	**P**	**19 45 21.6**	**+4.6**
	comp=Z,20nm,1.0s,mb4.4,baz=76,slow=13,SNR=8.5						
CTA				LR	LR	19 51 56.0	
	comp=Z,1μm,21.9s,MS4.2,baz=65,slow=32						
CTAO	**Charters Tower**	**21.04**	**242**	*e*P	**P**	**19 45 19.4**	**+2.4**
	comp=Z,90nm,1.4s,mb4.9						
AFI	**Afiamalu**	**22.05**	**100**	LR	LR	19 52 13.0	
	comp=Z,872nm,21.7s,MS4.1,baz=258,slow=32						
ARMA	**Armidale**	**23.61**	**212**	*e*P	**P**	**19 45 44.2**	**+0.4**
ARMA				*e*S	**S**	**19 49 57.0**	**+2.2**
ARMA	**Armidale**	**23.61**	**212**	*e*P	**P**	**19 45 43.8**	**0.0**
	comp=Z,97nm,1.4s,mb5.0						
ARMA				*e*		19 46 03.8	
URZ	**Urewera**	**29.17**	**162**	LR	LR	19 56 23.1	
	comp=Z,634nm,21.2s,MS4.2,baz=324,slow=33						
STKA	**Stephens Creek**	**30.73**	**223**	P	**P**	**19 46 48.1**	**+0.5**
	comp=Z,2.2nm,0.9s,mb4.0,baz=66,slow=13,SNR=4.8						
STKA				PcP	PcP	19 49 43.7	-0.8
	comp=Z,2.6nm,1.0s,baz=90,slow=9.1,SNR=2.9						
STKA				LR	LR	19 58 41.4	
	comp=Z,852nm,19.1s,MS4.4,baz=128,slow=35						
STKA	**Stephens Creek**	**30.73**	**223**	*e*P	**P**	**19 46 47.7**	**+0.1**
	comp=Z,2.3nm,0.8s,mb4.1						
STKA				*e*	pP	19 46 58.6	-1.7
WRAB	**Tennant Creek**	**31.68**	**249**	*e*P	**P**	**19 46 55.6**	**-0.6**
	comp=Z,27nm,1.1s,mb5.0						
WRAB				*e*	pP	19 47 07.6	-1.3
WRA	**Warramunga Arr**	**31.70**	**249**	P	**P**	**19 46 55.7**	**-0.6**
	comp=Z,11nm,0.9s,mb4.7,baz=79,slow=9.1,SNR=25						
WRA				PcP	PcP	19 49 46.1	-1.2
	comp=Z,0.8nm,0.9s,baz=71,slow=2.5,SNR=6.1						
WRA				pPcP		19 50 01.9	
	comp=Z,1.3nm,0.8s,baz=76,slow=3.3,SNR=4.6						
WRA	**Warramunga Arr**	**31.70**	**249**	P	**P**	**19 46 55.7**	**-0.6**
WRA				PcP	PcP	19 49 46.1	-1.2
WRA				pPcP		19 50 01.9	
KAKA	**Kakadu**	**32.78**	**263**	*e*P	**P**	**19 47 05.7**	**-0.2**
ASAR	**Alice Springs**	**33.03**	**243**	P	**P**	**19 47 07.0**	**-0.9**
	comp=Z,4.0nm,0.8s,mb4.4,baz=65,slow=10,SNR=50						
ASAR				PcP	PcP	19 49 50.2	-0.7
	comp=Z,2.4nm,0.8s,baz=74,slow=2.8,SNR=8.5						
ASAR				pPcP		19 50 05.0	
	comp=Z,2.0nm,0.9s,baz=89,slow=2.5,SNR=4.8						
RPZ	**Rata Peaks**	**33.13**	**173**	P	**P**	**19 47 07.2**	**-1.3**
	comp=Z,120nm,0.8s,mb5.9,baz=322,slow=1.0,SNR=36						
ODZ	**Otahua Downs**	**34.40**	**174**	*e*P	**P**	**19 47 17.3**	**-2.3**
	comp=Z,32nm,0.9s,mb5.2						
FITZ	**Fitzroy Crossi**	**39.57**	**255**	*e*P	**P**	**19 48 03.9**	**0.0**
	comp=Z,20nm,0.8s,mb4.9						
FITZ	**Fitzroy Crossi**	**39.57**	**255**	*e*P	**P**	**19 48 03.3**	**-0.6**
	comp=Z,18nm,1.0s,mb4.8						
FITZ				*e*	pP	19 48 18.0	+1.2
PPT	**Papeete**	**43.64**	**104**	*e*S	**S**	**19 55 19.9**	**+16**
	comp=Z,204nm,25.8s						
PPT				*e*LR	LR	20 01 03.2	
	comp=Z,688nm,24.5s,baz=280						
PPT	**Papeete**	**43.64**	**104**	LR	LR	20 02 09.2	
	comp=Z,496nm,20.6s,MS4.4,baz=170,slow=30						
MBWA	**Marble Bar**	**45.40**	**251**	*e*P	**P**	**19 48 51.7**	**+0.5**
MBWA	**Marble Bar**	**45.40**	**251**	*e*P	**P**	**19 48 50.5**	**-0.7**
	comp=Z,63nm,1.6s,mb5.2						

NWAO Narrogin (SRO) 49.72 236 *eP* pP 19 49 34.9 -3.0
comp=Z,73nm,0.9s
NWAO Narrogin (SRO) 49.72 236 P **P** **19 49 27.4 +2.8**
TAOE Nuku Hiva Isla 53.17 93 *eS* **S** **19 57 35.0 +17**
comp=Z,147nm,26.9s
TAOE *eLR* LR 20 05 16.4
comp=Z,570nm,26.7s
MJAR Matsushiro Arr 53.79 332 P **P** **19 49 54.3 -0.5**
comp=Z,4.2nm,1.0s,mb4.3,baz=166,slow=7.9,SNR=7.5
MJAR pP pP 19 50 07.5 -0.7
comp=Z,12nm,1.1s,baz=165,slow=6.9,SNR=11
MAJO Matsushiro 53.79 332 *eP* **P** **19 49 54.2 -0.6**
comp=Z,25nm,1.4s,mb5.0
MAJO *e* pP 19 50 08.1 -0.1
KSM Kuching 56.58 279 *eP* **P** **19 50 15.6 +0.2**
RKT Rikitea 57.57 111 *eLR* LR 20 07 34.8
comp=Z,646nm,28.5s
KSRS Korea Array 59.72 325 P **P** **19 50 37.4 +0.5**
comp=Z,1.6nm,0.9s,mb4.1,baz=145,slow=6.7,SNR=6.0
KSRS pP pP 19 50 50.5 +0.1
comp=Z,3.6nm,1.1s,baz=148,slow=6.9,SNR=6.8
KSRS LR LR 20 16 05.6
comp=Z,75nm,18.8s,MS3.9,baz=145,slow=36
YSS Yuzh-Sakhalins 61.06 342 P **P** **19 50 42.9 -2.9**
comp=Z,76nm,1.6s,mb5.6
YSS *e* pP 19 50 59.2 -0.2
NJ2 Nanjing 61.91 315 *eP* **P** **19 50 52.6 +0.7**
NJ2 pmax pmax
comp=Z,20nm,1.0s,mb5.2
QIZ Qiongzhong 62.66 298 P **P** **19 50 56.9 -0.2**
QIZ S **S** **19 59 18.5 -3.8**
QIZ pmax pmax
comp=Z,14nm,1.8s,mb4.8
QIZ LR LR
comp=Z,320nm,24.3s,MS4.4
PETK Petropavlovsk- 64.01 355 LR LR 20 13 13.1
comp=Z,98nm,21.9s,MS4.0,baz=176,slow=30
MDJ Mudanjiang 64.17 332 P **P** **19 51 07.3 +0.8**
MDJ pP pP 19 51 28.1 +7.8
MDJ sP sP 19 51 37.3 +12
MDJ PcP PcP 19 51 41.4 +0.2
MDJ PP PP 19 53 27.8 -0.5
MDJ S **S** **19 59 38.8 -1.4**
MDJ SS SS 20 03 51.3 +0.8
MDJ pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
MDJ pmax pmax
comp=Z,69nm,5.5s
MDJ LR LR
comp=N,130nm,22.8s
MDJ LR LR
comp=E,40nm,28.7s
MDJ LR LR
comp=Z,130nm,25.8s,MS4.0
MDJ Mudanjiang 64.17 332 *eP* **P** **19 51 07.0 +0.5**
comp=Z,14nm,1.3s,mb4.8
MDJ *e* pP 19 51 20.4 +0.2
CN2 Changchun 65.57 329 *eP* **P** **19 51 16.3 +0.6**
CN2 *es*P sP 19 51 40.9 +5.9
CN2 *eS* S 19 59 53.6 -3.9
CN2 pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
CN2 pmax pmax
comp=Z,200nm,3.0s
CASY Casey 66.68 201 *eP* **P** **19 51 21.2 -1.3**
CASY Casey 66.68 201 *eP* **P** **19 51 21.1 -1.4**
comp=Z,37nm,1.2s,mb5.3
CASY *e* pP 19 51 33.9 -2.4
SBA Scott Base 67.07 180 *eP* **P** **19 51 24.3 -0.6**
comp=Z,24nm,1.0s,mb5.2
ENH Enshi 67.82 309 *eP* **P** **19 51 29.8 -0.6**
comp=Z,8.6nm,1.1s,mb4.7
ENH *e* pP 19 51 42.5 -1.7
BJI Beijing 68.35 321 P **P** **19 51 34.0 +0.6**
BJI sP sP 19 52 00.3 +7.5
BJI S S 20 00 30.8 -0.3
BJI pmax pmax
comp=Z,10.0nm,1.3s,mb4.7
BJI pmax pmax
comp=Z,130nm,4.3s
BJI LR LR
comp=N,110nm,20.7s
BJI LR LR
comp=E,140nm,26.6s
BJI LR LR
comp=Z,160nm,29.5s
GYA Guiyang 68.37 304 *eP* **P** **19 51 34.6 +0.7**
GYA pP pP 19 51 59.0 +11
GYA sP sP 19 52 08.4 +15
GYA PP PP 19 54 09.8 +4.4
GYA ScP 19 55 53.6
GYA PcS 19 56 02.8
GYA S S 20 00 28.0 -3.9
GYA SKS 20 01 22.4
GYA SS SS 20 04 55.3 -1.1
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
GYA pmax pmax
comp=Z,90nm,4.9s
GYA LR LR
comp=N,480nm,19.7s,MS4.9
GYA LR LR
comp=E,470nm,18.9s,MS4.9
GYA LR LR
comp=Z,490nm,19.0s,MS4.8
FALS False Pass 70.31 18 *eP* **P** **19 51 44.9 -0.3**
comp=Z,107nm,0.5s,mb6.0
KMI Kunming 71.09 301 P **P** **19 51 52.3 +1.7**
KMI PcP PcP 19 52 11.8 +1.2
KMI pP pP 19 52 15.6 +11
KMI sP sP 19 52 25.4 +15
KMI PP PP 19 54 32.5 +3.6
KMI S S 20 01 00.0 -3.9
KMI sS sS 20 01 40.4 +13
KMI SS SS 20 05 37.8 -0.5
KMI pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
KMI pmax pmax
comp=Z,81nm,3.1s
KMI LR LR
comp=N,130nm,8.8s
KMI LR LR
comp=E,150nm,15.9s
KMI LR LR
comp=Z,180nm,18.1s,MS4.4
HHC Hu-ho-hao-te 71.70 320 *eP* **P** **19 51 56.6 +2.6**
HHC PcP PcP 19 52 14.8 +1.9
HHC PP PP 19 54 39.8 +5.9
HHC S S 20 01 09.8 -0.6
HHC SKS 20 01 46.8
HHC ScS ScS 20 01 50.4 -5.1
HHC pmax pmax
comp=Z,11nm,0.7s,mb4.9
HHC pmax pmax
comp=Z,92nm,5.2s
HHC LR LR
comp=N,110nm,19.0s,MS4.4
HHC LR LR
comp=E,150nm,19.2s,MS4.4
HHC LR LR
comp=Z,180nm,18.2s,MS4.4
CM31 Chiang Mai Arr 72.12 293 *eP* **P** **19 51 54.6 -2.3**
comp=Z,4.9nm,1.0s,mb4.4
CMAR Chiang Mai Arr 72.12 293 P **P** **19 51 58.1 +1.2**
comp=Z,5.3nm,0.9s,mb4.5,baz=113,slow=4.3,SNR=19
CMAR LR LR 20 20 26.2
comp=Z,79nm,19.4s,MS4.0,baz=267,slow=33
CHTO Chiang Mai 72.23 294 *eP* **P** **19 51 57.5 -0.1**
comp=Z,42nm,2.1s,mb5.0
CHTO *e* pP 19 52 10.8 -0.7
CD2 Chengdu 72.54 307 *eP* **P** **19 51 58.8 -0.4**
CD2 pP pP 19 52 23.9 +11
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
CD2 pmax pmax
comp=Z,60nm,8.2s
CD2 LR LR
comp=N,390nm,17.8s
CD2 LR LR
comp=Z,220nm,19.0s,MS4.5
LZH Lanzhou 74.67 312 *eP* **P** **19 52 12.0 +0.4**
LZH pP pP 19 52 35.5 +10
LZH PP PP 19 55 02.0 +2.7
LZH pmax pmax
comp=Z,17nm,1.5s,mb4.8

SVW2 Sparrevohn 77.81 18 *eP* **P** **19 52 28.9 0.0**
YAK Yakutsk 77.87 343 *eP* **P** **19 52 28.7 -0.5**
comp=Z,4.8nm,0.5s,mb4.7
ULN Ulaanbaatar 78.15 324 *eP* **P** **19 52 31.7 +0.6**
comp=Z,9.7nm,1.1s,mb4.7
ULN *e* pP 19 52 45.3 +0.1
SONM Songino Array 78.52 324 P **P** **19 52 34.1 +1.0**
comp=Z,2.4nm,0.8s,mb4.2,baz=141,slow=7.6,SNR=11
SONM pP pP 19 52 46.7 -0.5
comp=Z,1.1nm,0.7s,baz=132,slow=4.2,SNR=3.1
BILL Bilibino 78.61 0 *eP* **P** **19 52 33.1 -0.1**
comp=Z,16nm,1.0s,mb4.9
GTA Gaotai 78.96 314 *eP* **P** **19 52 36.9 +1.2**
GTA pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
TTA Tatalina 79.13 17 *eP* **P** **19 52 36.3 +0.2**
QSPA South Pole Qui 79.23 180 *eP* **P** **19 52 35.2 -1.4**
comp=Z,20nm,1.0s,mb5.0
QSPA *e* pP 19 52 47.6 -3.0
PMR Palmer 80.26 20 P **P** **19 52 41.4 -0.8**
TRF Thorofare Moun 81.22 18 *eP* **P** **19 52 44.7 -2.7**
comp=Z,5.2nm,1.1s,mb4.4
BPAW Bear Paw Mtn. 81.48 18 P **P** **19 52 47.8 -1.0**
MCK McKinley 81.84 19 *eP* **P** **19 52 50.3 -0.3**
comp=Z,30nm,1.6s,mb5.0
TLY Talaya 81.97 326 *eP* **P** **19 52 50.5 -1.0**
comp=Z,4.8nm,0.8s,mb4.5
LSA Lhasa 82.31 302 P **P** **19 52 55.0 +1.0**
PKM Peak Mountain 83.53 53 ⇑P **P** **19 53 00.7 +0.6**
baz=84
COLD Coldfoot 84.00 16 *eP* **P** **19 53 02.3 +0.5**
comp=Z,6.6nm,1.1s,mb4.7
HYT Haines Junctio 84.09 24 *eP* **P** **19 53 02.2 -0.1**
BEKR Beckworth 84.67 48 ⇑P **P** **19 53 05.7 -0.1**
baz=85
ISA Isabella 84.81 52 ⇓P **P** **19 53 06.8 +0.2**
baz=85
ISA Isabella 84.81 52 *eP* **P** **19 53 06.7 +0.1**
comp=Z,6.3nm,1.0s,mb4.7
WAKR Walker 84.92 49 *eP* **P** **19 53 07.2 +0.1**
WCN Washoe City 84.94 49 ⇓P **P** **19 53 07.6 +0.5**
baz=85
EDW2 Edwards Air Fo 84.96 53 ⇑P **P** **19 53 06.8 -0.6**
baz=85
MAW Mawson 85.02 202 P **P** **19 53 06.7 -0.4**
comp=Z,24nm,1.0s,mb5.3,baz=103,slow=6.7,SNR=31
MAW Mawson 85.02 202 *eP* **P** **19 53 07.1 0.0**
comp=Z,9.2nm,1.1s,mb4.8
BFSC Mount Baldy Ra 85.04 54 ⇑P **P** **19 53 07.9 +0.1**
baz=85
EGAK Eagle 85.08 20 *eP* **P** **19 53 07.7 +0.5**
comp=Z,17nm,1.0s,mb5.1
K05A Summer Lake 85.22 45 ⇓P **P** **19 53 08.5 0.0**
baz=85
MOD Modoc 85.36 46 *eP* **P** **19 53 08.2 -1.0**
comp=Z,4.0nm,0.8s,mb4.6
LRMC Laurel Mountai 85.37 53 ⇓P **P** **19 53 09.5 +0.1**
baz=85
MONP Monument Peak 85.66 56 ⇓P **P** **19 53 11.5 +0.6**
baz=86
MPMC Manual Prospec 85.69 52 ⇓P **P** **19 53 11.0 +0.1**
baz=86
NVAR Mina Array Bea 85.75 50 P **P** **19 53 11.6 +0.3**
comp=Z,3.7nm,1.0s,mb4.6,baz=226,slow=7.9,SNR=15
NVAR Mina Array Bea 85.75 50 P **P** **19 53 11.6 +0.3**
TIXI Tiksi 85.85 349 *eP* **P** **19 53 10.4 -0.5**
comp=Z,16nm,1.3s,mb5.1
D05A Enumclaw 86.00 41 ⇓P **P** **19 53 12.9 +0.7**
baz=86
GSC Goldstone 86.01 53 ⇓P **P** **19 53 12.7 +0.1**
baz=86
SWSC Sam W. Stewart 86.18 56 ⇑P **P** **19 53 13.5 0.0**
baz=86
G06A Carlson Farm, 86.22 43 ⇑P **P** **19 53 12.8 -0.6**
baz=86
HEC Hector,Ludlow 86.26 54 ⇑P **P** **19 53 13.2 -0.6**
baz=86
FURC Furnace Creek, 86.29 52 ⇑P **P** **19 53 13.9 -0.1**
baz=86
BELC Belle Mtn. Jos 86.30 55 ⇑P **P** **19 53 13.9 -0.1**
baz=86
I07A Izee 86.61 44 ⇓P **P** **19 53 14.9 -0.4**
baz=87
BC3 Big Chuckawall 86.64 55 ⇓P **P** **19 53 15.8 +0.1**
baz=87
RPW Rockport 86.73 40 *eP* **P** **19 53 13.4 -2.4**
TUQ Turquoise Moun 86.74 53 ⇓P **P** **19 53 16.1 -0.1**
baz=87
GMRC Granite Mounta 86.77 54 ⇑P **P** **19 53 16.2 -0.2**
baz=87
S10A Tonopah Range, 86.90 51 ⇓P **P** **19 53 16.3 -0.6**
baz=87,SNR=6.5
GLA Glamis 86.99 56 ⇑P **P** **19 53 17.7 +0.3**
baz=87
IRM Iron Mountain 87.02 55 ⇑P **P** **19 53 17.3 -0.2**
baz=87
J08A Circle Bar Ran 87.10 45 ⇑P **P** **19 53 17.5 -0.2**
baz=87,SNR=5.2
V11A Goodsprings 87.23 53 ⇑P **P** **19 53 18.6 0.0**
baz=87
Q10A Clear Creek Ra 87.29 50 ⇓P **P** **19 53 18.8 +0.1**
baz=87
G08A Pilot Rock 87.36 43 ⇓P **P** **19 53 18.5 -0.4**
baz=87
Y12C Blythe 87.42 55 ⇓P **P** **19 53 19.8 +0.3**
baz=88
J09A Fry Pan Ranch, 87.60 45 ⇑P **P** **19 53 20.2 +0.1**
baz=88,SNR=6.0
A07A Ashnola River, 87.64 39 ⇓P **P** **19 53 20.0 -0.2**
baz=88
V12A Nelson 87.66 53 ⇑P **P** **19 53 20.8 +0.2**
baz=88
T11A Corn Creek, Al 87.77 52 ⇓P **P** **19 53 21.4 +0.3**
baz=88
R11A Troy Canyon, C 87.78 50 ⇓P **P** **19 53 20.7 -0.4**
baz=88,SNR=5.6
113A Mohawk Valley, 87.79 56 ⇓P **P** **19 53 21.5 +0.2**
baz=88
Q11A Duckwater 87.86 50 ⇑P **P** **19 53 21.4 -0.1**
baz=88,SNR=5.7
PDMCI Parker Dam,Lak 87.86 55 ⇑P **P** **19 53 21.9 +0.3**
baz=88
Z13A Yuma Proving G 87.98 56 ⇑P **P** **19 53 22.2 0.0**
baz=88,SNR=8.0
K10A MacKenzie Ranc 88.05 46 ⇑P **P** **19 53 22.3 0.0**
baz=88
S12A Delamar Landin 88.15 51 ⇑P **P** **19 53 23.2 +0.4**
baz=88,SNR=6.3
X13A Yucca 88.18 54 ⇓P **P** **19 53 23.5 +0.3**
baz=88
O11A Cowboy Ranch, 88.20 49 ⇓P **P** **19 53 23.2 +0.1**
baz=88
W13A Hualapai Mount 88.26 54 ⇓P **P** **19 53 23.8 +0.3**
baz=88
BMO Blue Mountains 88.35 44 *eP* **P** **19 53 23.5 -0.1**
comp=Z,11nm,1.8s,mb4.8
V13A Grand Canyon W 88.37 53 ⇓P **P** **19 53 23.6 -0.4**
baz=88,SNR=6.4
214A Organ Pipe Nat 88.38 57 ⇓P **P** **19 53 24.5 +0.3**
baz=88
M11A Holland Ranch, 88.45 47 ⇑P **P** **19 53 24.3 +0.1**
baz=88
114A Black Gap (USA 88.50 56 ⇑P **P** **19 53 25.1 +0.4**
baz=88
R12A Pony Springs, 88.52 51 ⇓P **P** **19 53 24.7 +0.1**
baz=89,SNR=6.8
U13A Pakoon Wash 88.53 53 ⇓P **P** **19 53 24.5 -0.3**
baz=89,SNR=5.9
Q12A Willow Creek R 88.53 50 ⇓P **P** **19 53 24.7 0.0**
baz=89
P12A McGill 88.58 50 ⇓P **P** **19 53 25.2 +0.3**
baz=89
Z14A Wintersburg 88.60 56 ⇓P **P** **19 53 25.2 0.0**
baz=89
G10A Bishop Farm, J 88.60 43 ⇑P **P** **19 53 24.6 -0.3**
baz=89
K11A Parker Ranch, 88.64 46 ⇓P **P** **19 53 24.9 -0.2**
baz=89
H10A Noah's Angus R 88.65 44 ⇑P **P** **19 53 25.1 0.0**
baz=89
Y14A Wickenburg 88.69 55 ⇑P **P** **19 53 25.7 +0.1**
baz=89
T13A Saint George 88.72 52 ⇓P **P** **19 53 26.3 +0.6**
baz=89
F10A Beach Ranch, E 88.72 43 ⇑P **P** **19 53 24.5 -0.9**
baz=89
N12A Clover Valley, 88.85 48 ⇓P **P** **19 53 26.4 +0.3**
baz=89

S13A Holt Ranch, En 88.90 52 ⇓P **P** **19 53 26.7 +0.2**
baz=89
X14A Yava 88.91 55 ⇓P **P** **19 53 26.9 +0.4**
baz=89,SNR=6.8
O12A Currie 88.91 49 ⇑P **P** **19 53 26.5 0.0**
baz=89
W14A Seligman 88.93 54 ⇑P **P** **19 53 27.0 +0.3**
baz=89
R13A O'Grain Ranch, 88.96 51 ⇓P **P** **19 53 27.2 +0.5**
baz=89
MFID Camas Ranch 88.97 46 ⇓P **P** **19 53 26.7 +0.1**
baz=89
WMQ Urumqi 88.99 315 *eP* **P** **19 53 26.0 -0.7**
D10A Wagner Farm, O 89.01 42 ⇓P **P** **19 53 26.3 -0.4**
baz=89
V14A Boquillas Ranc 89.01 54 ⇓P **P** **19 53 27.3 +0.3**
baz=89,SNR=6.0
M12A Wells 89.08 48 ⇑P **P** **19 53 27.6 +0.4**
baz=89
Q13A Wheeler Ranch, 89.12 50 ⇑P **P** **19 53 27.9 +0.5**
baz=89
U14A Mt Trumbull 89.14 53 ⇑P **P** **19 53 27.7 +0.1**
baz=89,SNR=13
H11A Donnelly 89.19 44 ⇑P **P** **19 53 27.9 +0.3**
baz=89
G11A Walters Elk Ra 89.21 44 ⇑P **P** **19 53 27.3 -0.4**
baz=89
Y15A Casa Rosa Ranc 89.23 55 ⇑P **P** **19 53 28.3 +0.2**
baz=89,SNR=6.1
P13A Bates Ranch, G 89.25 50 ⇓P **P** **19 53 28.2 +0.2**
baz=89,SNR=12
CCUT Cedar City 89.27 52 *eP* **P** **19 53 28.6 +0.4**
comp=Z,6.9nm,1.0s,mb4.9
T14A Hurricane 89.37 52 ⇑P **P** **19 53 29.3 +0.7**
baz=89
K12A Draper Farm, C 89.41 46 ⇓P **P** **19 53 29.1 +0.3**
baz=90
J12A Stokes Ranch, 89.43 46 ⇓P **P** **19 53 29.2 +0.4**
baz=90,SNR=8.3
X15A Humboldt 89.44 55 ⇓P **P** **19 53 29.1 +0.1**
baz=90,SNR=5.6
216A Three Points, 89.51 57 ⇑P **P** **19 53 30.2 +0.8**
baz=90
I12A Atlanta 89.55 45 ⇓P **P** **19 53 29.8 +0.4**
baz=90
W15A Williams 89.57 54 ⇑P **P** **19 53 30.1 +0.5**
baz=90
M13A Montello 89.61 48 ⇑P **P** **19 53 30.1 +0.4**
baz=90
Q14A Sevier Lake (B 89.69 50 ⇓P **P** **19 53 30.1 0.0**
baz=90,SNR=14
V15A Kaibab Nationa 89.79 54 ⇑P **P** **19 53 31.0 +0.3**
baz=90,SNR=7.7
U15A North Rim 89.84 53 ⇓P **P** **19 53 31.5 +0.6**
baz=90,SNR=14
T15A Red Dirt Ranch 89.91 52 ⇓P **P** **19 53 31.6 +0.4**
baz=90
Y16A Circle Bar Ran 89.91 56 ⇓P **P** **19 53 32.0 +0.7**
baz=90
H12A Diamond D Ranc 89.94 45 ⇓P **P** **19 53 31.3 +0.2**
baz=90
217A Green Valley 89.99 58 ⇓P **P** **19 53 31.7 0.0**
baz=90,SNR=6.8
F12A Elk City 89.99 43 ⇓P **P** **19 53 31.0 -0.3**
baz=90
P14A Drum Mountains 89.99 50 ⇓P **P** **19 53 31.6 +0.1**
baz=90,SNR=5.9
HLID Hailey 90.00 46 ⇓P **P** **19 53 32.0 +0.6**
baz=90
HLID Hailey 90.00 46 *eP* **P** **19 53 32.1 +0.6**
comp=Z,4.4nm,1.1s,mb4.7
X16A Lo Mia Camp, P 90.06 55 ⇑P **P** **19 53 32.0 +0.1**
baz=90,SNR=5.7
S15A Panguitch 90.08 52 ⇓P **P** **19 53 32.3 +0.4**
baz=90
J13A Cove Ranch, Pi 90.12 46 ⇓P **P** **19 53 32.1 +0.1**
baz=90
W16A Flagstaff 90.14 54 ⇑P **P** **19 53 32.8 +0.5**
baz=90
117A Oracle 90.23 57 ⇑P **P** **19 53 32.7 -0.1**
baz=90,SNR=5.9
M14A Sheep Mountain 90.25 48 ⇑P **P** **19 53 32.5 -0.1**
baz=90,SNR=6.7
I13A Wildhorse Cree 90.29 45 ⇓P **P** **19 53 33.1 +0.3**
baz=90
DUG Dugway 90.33 49 ⇓P **P** **19 53 33.2 +0.2**
baz=90
WUAZ Wupatki 90.36 54 ⇓P **P** **19 53 33.6 +0.3**
baz=90,SNR=5.2
WUAZ Wupatki 90.36 54 *eP* **P** **19 53 33.5 +0.2**
comp=Z,6.1nm,0.8s,mb5.0
H13A Challis 90.36 45 ⇓P **P** **19 53 33.2 +0.1**
baz=90
Y17A Roosevelt 90.38 56 ⇑P **P** **19 53 33.7 +0.2**
baz=90
MSU Marysvale 90.41 51 *eP* **P** **19 53 34.1 +0.6**
L14A Malta 90.45 47 ⇓P **P** **19 53 33.9 +0.3**
baz=90
G13A Cobalt 90.51 44 ⇑P **P** **19 53 33.1 -0.7**
baz=91
X17A Forest Lakes 90.55 55 ⇑P **P** **19 53 34.3 +0.1**
baz=91,SNR=5.1
318A Bisbee 90.61 58 ⇑P **P** **19 53 35.0 +0.4**
baz=91
F13A Darby 90.62 44 ⇓P **P** **19 53 34.3 0.0**
baz=91
K14A Jones Ranch, D 90.62 47 ⇑P **P** **19 53 34.4 0.0**
baz=91
N15A Stansbury Isla 90.71 49 ⇓P **P** **19 53 35.0 +0.2**
baz=91
HVU Hansel Valley 90.73 48 *eP* **P** **19 53 34.7 -0.2**
comp=Z,8.3nm,1.0s,mb5.0
I14A Mackay 90.76 45 ⇑P **P** **19 53 35.2 +0.2**
baz=91
V17A Tonalea, Kykot 90.84 54 ⇑P **P** **19 53 35.8 +0.2**
baz=91,SNR=6.6
BSMT Bassoo Peak 90.85 41 *eP* **P** **19 53 34.8 -0.5**
E13A Victor 90.88 43 ⇑P **P** **19 53 35.1 -0.3**
baz=91
R16A Teasdale 90.89 51 ⇑P **P** **19 53 36.6 +0.9**
baz=91
M15A Larsen Ranch, 90.89 48 ⇑P **P** **19 53 35.6 -0.1**
baz=91
H14A Leadore 90.99 45 ⇑P **P** **19 53 36.4 +0.3**
baz=91
K15A Arbon 91.12 47 ⇑P **P** **19 53 37.3 +0.6**
baz=91
T17A Navajo Res., N 91.13 53 ⇑P **P** **19 53 37.1 +0.2**
baz=91
319A Douglas 91.19 58 ⇓P **P** **19 53 38.0 +0.7**
baz=91
219A White Tail Can 91.33 58 ⇑P **P** **19 53 37.8 -0.1**
baz=91,SNR=8.0
E14A Clinton 91.34 43 ⇓P **P** **19 53 37.5 -0.1**
baz=91
J15A Blackfoot 91.36 46 ⇓P **P** **19 53 38.2 +0.5**
baz=91
119A Ashpeak Ranch, 91.45 57 ⇓P **P** **19 53 38.9 +0.4**
baz=92
H15A Lima 91.49 45 ⇓P **P** **19 53 38.9 +0.6**
baz=92
R17A Hanksville Air 91.51 51 ⇑P **P** **19 53 38.8 +0.2**
baz=92
Y19A Nutrioso 91.73 56 ⇑P **P** **19 53 40.1 +0.3**
baz=92
F15A Butte 91.88 44 ⇑P **P** **19 53 39.9 -0.2**
baz=92
T18A Mexican Hat 91.89 53 ⇑P **P** **19 53 40.6 +0.2**
baz=92
LRM Limekiln Ridge 91.91 44 *eP* **P** **19 53 40.5 +0.3**
S18A Hurst Farm, Bl 91.91 52 ⇑P **P** **19 53 40.8 +0.3**
baz=92
E15A Deer Lodge 91.92 43 ⇑P **P** **19 53 40.1 -0.2**
baz=92
Z20A Nine Sixteen R 92.11 57 ⇓P **P** **19 53 41.8 +0.3**
baz=92
R18A Canyonlands Na 92.13 51 ⇑P **P** **19 53 41.4 -0.1**
baz=92
G16A Moss Hill, Enn 92.21 44 ⇑P **P** **19 53 41.6 0.0**
baz=92
U19A Dine' College, 92.24 54 ⇑P **P** **19 53 41.8 -0.2**
baz=92
C15A Salmond Ranch, 92.25 42 ⇓P **P** **19 53 41.0 -0.8**
baz=92
Y20A Horse Springs, 92.44 56 ⇓P **P** **19 53 43.2 +0.2**
baz=92
F16A Kennard Place, 92.46 44 ⇑P **P** **19 53 42.5 -0.3**
baz=92

E16A	East Helena	92.59	43	⇓P	P	19 53 43.2	-0.2
	baz=93						
121A	Cookes Peak, D	92.66	58	⇑P	P	19 53 44.0	-0.1
	baz=93						
N18A	Larsen Ranch,	92.83	49	⇓P	P	19 53 44.2	-0.4
	baz=93						
LKWY	Lake	93.04	45	eP	P	19 53 43.4	-2.1
	comp=Z,536nm,1.4s						
E17A	Martinsdale	93.13	43	⇑P	P	19 53 45.8	0.0
	baz=93						
F17A	Fitzpatrick Pl	93.14	44	⇓P	P	19 53 45.4	-0.6
	baz=93						
PDAR	Pinedale Array	93.28	47	P	P	19 53 46.8	+0.1
	comp=Z,1.0nm,0.7s,mb4.3,baz=241,slow=2.7,SNR=5.1						
MK31	Makanchi Array	93.41	317	eP	P	19 53 46.6	-0.5
MK31				e	pP	19 54 00.6	-0.9
MK31				e		19 54 06.7	
MKAR	Makanchi Array	93.41	317	P	P	19 53 46.6	-0.5
	comp=Z,4.8nm,0.9s,mb4.9,baz=81,slow=8.7,SNR=26						
MKAR				pP	pP	19 54 00.2	-1.3
	comp=Z,1.4nm,0.8s,baz=112,slow=8.2,SNR=4.7						
MKAR				PKKPbc	PKKPbc	20 10 51.8	-3.8
	comp=Z,1.0nm,0.8s,baz=329,slow=1.7,SNR=5.9						
ZAA0	Zalesovo Array	93.41	324	eP	P	19 53 45.1	-1.9
ZALV	Zalesovo Beam	93.41	324	P	P	19 53 45.2	-1.8
	comp=Z,5.0nm,1.1s,mb4.9,baz=113,slow=3.9,SNR=14						
U21A	Nageezi	93.50	54	⇓P	P	19 53 47.7	-0.2
	baz=94						
224A	Cornudas Mount	94.46	58	⇑P	P	19 53 51.7	-0.7
	baz=94						
YKA	Yellowknife Ar	94.67	27	P	P	19 53 50.3	-2.3
	comp=Z,0.8nm,0.8s,mb4.2,baz=248,slow=5.0,SNR=5.3						
TXAR	Lajitas Array	95.59	61	P	P	19 53 57.2	-0.4
	comp=Z,0.3nm,0.7s,mb3.8,baz=224,slow=5.2,SNR=4.3						
KURK	Kurchatov	96.51	320	PKKPbc	PKKPbc	20 10 43.5	-4.0
	comp=Z,0.7nm,0.7s,baz=278,slow=3.1,SNR=4.3						
KURK	Kurchatov	96.51	320	eP	P	19 53 58.4	-2.8
	comp=Z,8.2nm,1.5s,mb4.9						
BVAR	Borovoye Array	101.81	322	P	Pdif	19 54 24.2	-0.8
	comp=Z,0.7nm,0.7s,baz=76,slow=7.6,SNR=4.8						
ARCES	ARCESS Array B	116.10	346	PKP	PKPdf	19 59 13.2	-1.0
	comp=Z,2.2nm,0.6s,baz=69,slow=1.1,SNR=24						
ARCES				pPKP	pPKPdf	19 59 27.7	-1.3
	comp=Z,0.6nm,0.5s,baz=70,slow=1.2,SNR=2.1						
ARCES	ARCESS Array B	116.10	346	PKP	PKPdf	19 59 13.2	-1.0
ARCES				pPKP	pPKPdf	19 59 27.7	-1.3
FINES	FINESS Array B	121.56	339	PKP	PKPdf	19 59 23.4	-1.5
	comp=Z,2.4nm,0.8s,baz=27,slow=4.7,SNR=7.0						
BOSA	Boshof	125.40	223	PKP	PKPdf	19 59 31.6	-1.7
	comp=Z,1.6nm,0.8s,baz=136,slow=1.3,SNR=3.6						
NB2	NORSAR Subarra	126.47	345	PKPdf	PKPdf	19 59 33.0	-1.3
	comp=Z,0.7nm,0.6s,baz=31,slow=1.9						
NOA	NORSAR Array B	126.47	345	PKP	PKPdf	19 59 32.2	-2.1
	comp=Z,1.5nm,0.7s,baz=32,slow=1.9,SNR=6.8						
AKASG	Malin Array Be	126.70	327	PKP	PKPdf	19 59 33.7	-1.4
	comp=Z,0.2nm,0.3s,baz=74,slow=1.6,SNR=7.2						
BRTR	Keskin Array B	128.87	313	PKP	PKPdf	19 59 39.3	-0.3
	comp=Z,0.9nm,0.9s,baz=46,slow=3.6,SNR=5.6						
LSZ	Lusaka	130.74	239	ePKPdf	PKPdf	19 59 43.3	-0.5
KOLS	Kolonicke sedl	131.39	329	ePKP	PKPdf	19 59 44.1	0.0
VYHS	Vyhne	133.40	330	ePKP	PKPdf	19 59 48.8	+0.9
GERES	GERESS Array B	135.52	334	PKP	PKPdf	19 59 51.9	+0.1
	comp=Z,0.9nm,0.8s,baz=47,slow=2.5,SNR=8.5						
RESF	Ens	145.68	341	PKP	PKPdf	20 00 11.4	+1.1
VIEF	Viey	145.71	341	PKP	PKPdf	20 00 11.5	+1.1
KEST	Kesra	147.27	323	PKPbc	PKPbc	20 00 15.7	+0.1
	comp=Z,5.4nm,0.9s,baz=257,slow=1.2,SNR=11						
KEST	Kesra	147.27	323	ePKPbc	PKPbc	20 00 15.5	-0.1
PCAB	Cabril	148.72	351	ePKPbc	PKPbc	20 00 18.7	-0.6
MVO	Moncorvo	149.09	350	ePKPbc	PKPbc	20 00 19.5	-0.7
PVRL	Vila Real	149.09	351	ePKPbc	PKPbc	20 00 19.8	-0.4
PVIS	Viseu	149.67	351	ePKPbc	PKPbc	20 00 21.2	-0.5
ESDC	Sonseca Array	149.83	344	PKPbc	PKPbc	20 00 21.8	-0.3
	comp=Z,2.9nm,0.8s,baz=16,slow=2.2,SNR=18						
ESDC				PKPab	PKPab	20 00 28.4	+0.8
	comp=Z,2.0nm,0.6s,baz=14,slow=4.1,SNR=11						
ESDC	Sonseca Array	149.83	344	PKPbc	PKPbc	20 00 21.8	-0.3
ESDC				PKPab	PKPab	20 00 28.4	+0.8
ESLA	Sonseca Array	149.83	344	ePKPbc	PKPbc	20 00 21.3	-0.8
ESLA				ePKPab	PKPab	20 00 28.4	+0.8
MTE	Manteigas	149.92	350	ePKPab	PKPbc	20 00 24.9	+2.6
PCBR	Castelo Branco	150.45	350	ePKPbc	PKPbc	20 00 23.3	-0.3
PTOM	Tomar	150.82	351	ePKPbc	PKPbc	20 00 24.5	0.0
PMRV	Marv??o	150.84	349	ePKPbc	PKPbc	20 00 24.5	0.0
PESTR	Estremoz	151.42	349	ePKPab	PKPab	20 00 35.5	+1.4
PBEJ	Beja	152.29	349	ePKPab	PKPab	20 00 38.9	+1.2
PCVE	Castro Verde	152.70	349	ePKPdf	PKPdf	20 00 19.7	-2.0
TOA0	Torodi Ar. Sit	164.34	280	ePKPdf	PKPdf	20 00 34.8	-1.5
TORD	Torodi Ar. Bea	164.34	280	PKP	PKPdf	20 00 34.8	-1.4
	comp=Z,1.7nm,0.9s,baz=1.0,slow=1.2,SNR=9.8						
TORD				PKPab	PKPab	20 01 30.2	-0.5
	comp=Z,2.2nm,1.0s,baz=48,slow=4.6,SNR=5.3						
DBIC	Dimbokro	169.97	247	PKP	PKPdf	20 00 39.6	-0.8
	comp=Z,3.3nm,0.8s,baz=124,slow=6.4,SNR=3.3						

NIED ***13*** *19:45:00, 40.°40N×142.°30E, h53km, Mw3.5 Best double couple: M0=2.36000×10^14 NP1:φs=79.00000°, δ=71.00000°, λ=93.00000°. NP2:φs=250.00000°, δ=19.00000°, λ=81.00000°.*

JMA 13 19:45:17.1±0.1, 40.°37N×142.°27E, h41km±1km, M3.7, 3C-3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	Tanohata	0.53	216	⇑P	Pn	19 45 28.2	-0.1
JTH				eS	Sn	19 45 36.1	-0.1
JANG	Nango	0.58	271	⇓P	Pn	19 45 28.8	-0.1
JANG				S	Sn	19 45 37.0	-0.2
JKZ	Kuzumaki	0.82	242	⇑P	Pn	19 45 32.4	+0.3
JKZ				S	Sn	19 45 43.0	0.0
JTM	Tenmabayashi	1.01	295	⇓P	Pn	19 45 34.3	-0.4
JTM				eS	Sn	19 45 47.1	-0.6
JOM	Ohasama	1.17	220	⇑P	Pn	19 45 37.3	+0.3
JOM				eS	Sn	19 45 51.6	-0.1
JAH	Hinai	1.26	262	⇓P	Pn	19 45 38.4	+0.2
JAH				eS	Sn	19 45 54.2	+0.2
JOT	Ohata	1.37	318	P	Pn	19 45 39.1	-0.6

NOU ***13*** *19:51:51.7±0.7, 24.°52S×167.°98E, h10km, MD2.9*
IDC ***13*** *19:51:53.3±0.9, 20.°14S×168.°15E, h0km, mb4.4/8, mb1 4.6/10, mb1mx4.4/17, mbtmp4.5/10, ML5.4/1, MS3.4/2, Ms1 3.4/2, ms1mx3.1/17, Error ellipse: s-maj=25.3km s-min=21.7km az=71.0*
ISCJB ***13*** *19:51:53.5±3.3, 20.°17S±0.°06×168.°14E±0.°09, h13km±20km, mb4.4/15, MS3.2/2, Error ellipse: s-maj=14.8km s-min=8.3km az=29.8*
NEIC ***13*** *19:51:55.4±4.7, 20.°07S×168.°18E, h14km±28km, mb4.6/11, Error ellipse: s-maj=11.5km s-min=9.4km az=77.0*

ISC 13 19:51:54.2±3.7, 20.°20S±0.°06×168.°15E±0.°08, h7km±23km, n44, σ1.108/30, mb4.4/15, MS3.2/2, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	Yate Dam	2.27	211	eS	Sn	19 52 58.3	-2.1
DZM	Mont Dzumac	2.45	220	eP	Pn	19 52 33.2	-1.4
DZM				AMP		19 53 15.0	
	comp=Z,3μm,7.7s						
NOUC	Port Laguerre	2.56	222	eP	Pn	19 52 35.8	-0.3
NOUC				eS	Sn	19 53 07.6	+0.1
NOUC				AMP		19 53 20.6	
	comp=Z,181nm,5.4s						
HNR	Honiara	13.31	322	Pn	Pn	19 55 01.9	-1.8
	comp=Z,21nm,0.3s,baz=136,slow=2.5,SNR=8.3						
EIDS	Eidsvold	16.55	249	P	Pn	19 55 49.2	+2.3
URZ	Urewera	19.60	159	P	Pn	19 56 24.8	+0.5
	baz=349,slow=6.3,SNR=6.3						
URZ	Urewera	19.60	159	P	Pn	19 56 24.8	+0.5
CTA	Charters Tower	20.55	267	P	P	19 56 36.8	+3.2
	comp=Z,7.9nm,0.8s,baz=92,slow=9.4,SNR=7.7						
CTA				LR	LR	20 03 27.3	
	comp=Z,86nm,21.5s,MS3.1,baz=314,slow=34						
CTAO	Charters Tower	20.55	267	eP	P	19 56 35.7	+2.1
	comp=Z,40nm,1.5s						
STKA	Stephens Creek	26.47	239	P	P	19 57 33.9	+1.9
	comp=Z,6.4nm,0.6s,mb4.3,baz=72,slow=9.4,SNR=17						
STKA				LR	LR	20 08 17.5	
	comp=Z,103nm,19.3s,MS3.4,baz=26,slow=37						
STKA	Stephens Creek	26.47	239	eP	P	19 57 33.3	+1.3
	comp=Z,5.5nm,1.4s,mb3.9						
STKA				LR	LR	20 08 17.5	
WRAB	Tennant Creek	31.72	265	eP	P	19 58 18.2	-0.7
	comp=Z,12nm,1.2s,mb4.6						
WRA	Warramunga Arr	31.73	265	P	P	19 58 18.5	-0.5
	comp=Z,1.6nm,0.6s,mb4.0,baz=91,slow=8.5,SNR=18						
ASAR	Alice Springs	31.91	257	P	P	19 58 20.6	+0.1
	comp=Z,9.4nm,0.8s,mb4.7,baz=87,slow=8.9,SNR=124						
MBWA	Marble Bar	45.17	260	P	P	20 00 11.9	0.0
	comp=Z,8.6nm,0.9s,mb4.6						
SBA	Scott Base	57.70	180	eP	P	20 01 45.6	+0.6
	comp=Z,7.9nm,0.9s,mb4.7						
KSM	Kuching	60.59	284	eP	P	20 02 06.5	+0.5
	comp=Z,9.2nm,0.9s,mb4.9						
MJAR	Matsushiro Arr	63.13	333	P	P	20 02 21.5	-1.1
	comp=Z,1.8nm,1.0s,mb4.2,baz=169,slow=6.3,SNR=3.9						
QSPA	South Pole Qui	69.86	180	P	P	20 03 05.7	+0.6
	comp=Z,4.7nm,1.0s,mb4.4,baz=342,slow=2.5,SNR=9.3						
QSPA	South Pole Qui	69.86	180	eP	P	20 03 05.2	+0.1
	comp=Z,4.4nm,0.8s,mb4.4						
MAW	Mawson	77.16	202	P	P	20 03 48.3	0.0
	comp=Z,2.7nm,0.8s,mb4.2,baz=95,slow=10,SNR=5.7						
MAW	Mawson	77.16	202	eP	P	20 03 48.0	-0.2
	comp=Z,0.9nm,0.9s,mb3.7						
CMAR	Chiang Mai Arr	77.96	295	P	P	20 03 55.8	+2.2
	comp=Z,2.2nm,0.9s,mb4.1,baz=133,slow=3.9,SNR=8.6						
CHTO	Chiang Mai	78.12	295	eP	P	20 03 54.3	-0.2
	comp=Z,3.6nm,0.8s,mb4.3						
ULN	Ulaanbaatar	87.02	324	eP	P	20 04 40.5	+0.3
	comp=Z,2.1nm,1.0s,mb4.3						
BILL	Bilibino	87.99	359	P	P	20 04 44.2	-0.1
CMB	Columbia Colle	88.56	48	P	P	20 04 46.7	-1.1
	comp=Z,5.0nm,1.1s,mb4.8						
ISA	Isabella	88.88	51	P	P	20 04 48.6	-0.8
NVAR	Mina Array Bea	90.20	49	P	P	20 04 56.3	+0.8
	comp=Z,1.5nm,0.8s,mb4.4,baz=226,slow=8.5,SNR=10						
GERES	GERESS Array B	144.83	330	PKP	PKPdf	20 11 31.8	0.0
	comp=Z,0.6nm,0.6s,baz=354,slow=1.3,SNR=8.8						
GVD	Gavdhos	145.16	302	eP	PKPbc	20 11 32.8	+0.4
GRA1	Grafenberg Arr	145.30	333	ePKP	PKPdf	20 11 32.7	0.0
GRF	Grafenberg Arr	145.30	333	ePKP	PKPdf	20 11 32.7	0.0
BAIF	Baives	147.59	341	ePKIKP	PKPbc	20 11 39.3	+0.2
CABF	La Chapelle	149.84	335	ePKIKP	PKPbc	20 11 45.5	+0.4
	comp=Z,8.0nm,0.7s						
FLN	La Foliniere	150.07	345	ePKIKP	PKPbc	20 11 45.3	-0.2
LOR	Lormes	150.12	338	ePKIKP	PKPbc	20 11 45.7	0.0
	comp=Z,22nm,1.3s						
LDF	La Druitiere	150.14	344	ePKIKP	PKPbc	20 11 46.0	+0.3
SSF	Saint Saulge	150.42	338	ePKIKP	PKPbc	20 11 46.4	0.0
	comp=Z,9.3nm,1.0s						
GRR	Gorron	150.51	345	ePKIKP	PKPbc	20 11 46.3	-0.3
SGMF	Saint Gilles	151.02	347	ePKIKP	PKPbc	20 11 47.5	-0.3
TCF	Toulx Ste Croi	151.54	339	ePKIKP	PKPbc	20 11 47.9	-1.2
	comp=Z,7.8nm,1.1s						
TORD	Torodi Ar. Bea	165.25	244	PKP	PKPdf	20 12 00.3	0.0
	comp=Z,0.7nm,0.9s,baz=124,slow=0.5,SNR=3.1						
TORD				PKPab	PKPab	20 12 56.2	-1.5
	comp=Z,1.0nm,1.0s,baz=134,slow=4.3,SNR=3.8						
TORD	Torodi Ar. Bea	165.25	244	PKP	PKPdf	20 12 00.3	0.0
TORD				PKPab	PKPab	20 12 56.2	-1.5

IDC ***13*** *19:57:01.0±0.9, 36.°16S×100.°03W, h0km, mb4.2/10, mb1 4.4/10, mb1mx4.3/19, mbtmp4.2/10, MS3.8/7, Ms1 3.8/7, ms1mx3.7/17, Error ellipse: s-maj=24.2km s-min=20.2km az=89.0*
ISCJB ***13*** *19:57:00.8±0.7, 36.°1S±0.°1×100.°1W±0.°2, h10km, mb4.2/14, MS3.8/7, Error ellipse: s-maj=17.9km s-min=14.5km az=7.5*
NEIC ***13*** *19:57:02.5±0.6, 36.°15S×100.°04W, h10km, mb4.7/5, Error ellipse: s-maj=15.1km s-min=13.6km az=117.0*
GCMT ***13*** *19:57:04.8±0.4, 36.°24S×99.°95W, h23km±1km, MW5.0, Moment Tensor Solution. s25,c33; s59,c77; Moment tensor: Scale 10^16Nm; Mrr=0.90±.26; Mθθ=0.32±.21; Mφφ=0.58±.21; Mrθ=0.39±.31; Mrφ=-3.77±.16; Mθφ=0.37±.29; Best double couple: M0=3.80000×10^16 NP1:φs=180.00000°, δ=81.00000°, λ=-9.00000°. NP2:φs=272.00000°, δ=82.00000°, λ=-171.00000°. Principal axes: T 4.2200, Plg=0.0000°, Azm=46.0000°; N -0.7900, Plg=78.0000°, Azm=316.0000°; P -3.4400, Plg=12.0000°, Azm=136.0000°; Data Used: IU IC II G CN.*

ISC 13 19:57:02.9±0.7, 36.°15S±0.°10×100.°0W±0.°2, h10km, n22, σ0.978/16, mb4.2/14, MS3.7/7, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	Paso Flores	23.46	110	P	P	20 02 12.8	+0.2
	9.4nm,0.9s,mb4.2,baz=277,slow=9.4,SNR=9.5						
PLCA				LR	LR	20 09 12.2	
	comp=Z,61nm,19.5s,MS3.1,baz=99,slow=31						
PLCA	Paso Flores	23.46	110	P	P	20 02 12.8	+0.2
	4.9nm,0.9s,mb3.9						
PLCA				LR	LR	20 09 12.2	
LCO	Las Campanas	25.63	82	eP	P	20 02 32.2	-0.4
	18nm,0.9s,mb4.6						
CFAA	Coronel Fontan	26.69	89	P	P	20 02 41.6	-0.6
	0.9nm,0.8s,mb3.3,baz=253,slow=8.4,SNR=9.5						
CFAA				LR	LR	20 10 16.4	
	comp=Z,38nm,18.9s,MS3.0,baz=258,slow=30						
USHA	Ushuaia	28.60	141	LR	LR	20 12 00.3	
	comp=Z,864nm,19.3s,MS4.4,baz=270,slow=31						
TRQA	Tornquist	30.25	105	eP	P	20 03 14.8	+1.0
	16nm,1.2s,mb4.6						
LPAZ	La Paz	34.53	63	P	P	20 03 52.9	+1.3
	9.1nm,0.9s,mb4.7,baz=232,slow=5.5,SNR=30						
LPAZ				LR	LR	20 14 48.5	
	comp=Z,124nm,21.3s,MS3.6,baz=263,slow=31						
ATAH	Atahualpa	35.00	40	P	P	20 03 55.9	+0.3
	9.2nm,0.8s,mb4.8,baz=270,slow=6.2,SNR=5.7						
ATAH				LR	LR	20 13 00.4	
	comp=Z,58nm,20.5s,MS3.3,baz=209,slow=27						
PMSA	Palmer Station	35.76	154	LR	LR	20 15 16.0	
	comp=Z,421nm,18.3s,MS4.2,baz=96,slow=31						
CPUP	Villa Florida	37.52	87	P	P	20 04 15.1	-2.0
	1.4nm,0.7s,mb3.8,baz=238,slow=8.3,SNR=3.4						
CPUP	Villa Florida	37.52	87	P	P	20 04 15.1	-2.0
OTAV	Otavalo	41.38	34	eP	P	20 04 49.4	+0.1
	18nm,1.5s,mb4.5						
CMIG	Matias Romero	53.17	6	P	P	20 06 20.4	-0.7
	0.6nm,0.4s,mb3.8,baz=124,slow=10,SNR=2.7						
QSPA	South Pole Qui	54.06	180	P	P	20 06 27.5	+0.5
	4.2nm,1.0s,mb4.3,baz=118,slow=5.3,SNR=5.7						
SBA	Scott Base	55.65	195	eP	P	20 06 37.8	-0.7
	7.8nm,1.0s,mb4.7						
TXAR	Lajitas Array	65.23	356	P	P	20 07 44.9	+0.5
	1.0nm,0.9s,mb3.9,baz=171,slow=8.9,SNR=8.1						
MAW	Mawson	75.75	173	P	P	20 08 48.5	+0.3
	1.6nm,0.7s,mb4.1,baz=193,slow=2.9,SNR=4.3						
PDAR	Pinedale Array	79.03	353	P	P	20 09 06.6	-0.1
	1.5nm,0.9s,mb3.9,baz=145,slow=5.4,SNR=5.1						
BOSA	Boshof	97.53	134	LR	LR	20 46 20.7	
	comp=Z,211nm,20.1s,MS4.6,baz=65,slow=30						
BRTR	Keskin Array B	143.58	70	PKP	PKPdf	20 16 40.9	+3.2
	0.9nm,0.9s,baz=219,slow=1.6,SNR=4.1						
ASF	Jabal al Asfar	144.33	84	PKP	PKPdf	20 16 40.5	+1.3
	1.4nm,0.4s,baz=156,slow=3.1,SNR=4.6						
CMAR	Chiang Mai Arr	155.70	229	PKPab	PKPab	20 17 21.4	-2.2
	1.6nm,0.9s,baz=168,slow=4.5,SNR=4.7						

ISCJB ***13*** *20:06:44.9±0.3, 17.°75S±0.°04×13.°54W±0.°06, h10km, mb4.8/162, MS4.7/55, Error ellipse: s-maj=7.7km s-min=6.0km az=13.9*
MOS ***13*** *20:06:45.4±0.9, 17.°69S×13.°34W, h10km, mb5.1/78, MS4.7/23, Error ellipse: s-maj=12.7km s-min=4.2km az=73.1*
IDC ***13*** *20:06:45.4±0.5, 17.°80S×13.°53W, h0km, mb4.7/26, mb1 4.7/26, mb1mx4.7/30, mbtmp4.7/26, MS4.6/24, Ms1 4.6/24, ms1mx4.6/24, Error ellipse: s-maj=14.1km s-min=12.5km az=115.0*
NEIC ***13*** *20:06:46.5±0.2, 17.°84S×13.°49W, h10km, mb5.0/107, MS4.7/5, Error ellipse: s-maj=6.1km s-min=5.0km az=116.0*
SZGRF ***13*** *20:06:46.2, 18.°45S×12.°27W, h24km, mb5.0, MS4.7, Southern Mid-Atlantic Ridge*
TEH ***13*** *20:06:47.0, 17.°81S×13.°48W, h10km*
GCMT ***13*** *20:06:51.1±0.2, 17.°84S×13.°59W, h12km, MW5.3, Moment Tensor Solution. s67,c106; s96,c190; Moment tensor: Scale 10^17Nm; Mrr=0.09±.02; Mθθ=0.37±.02; Mφφ=-0.28±.02; Mrθ=0.15±.04; Mrφ=-1.13±.01; Mθφ=0.17±.04; Best double couple: M0=1.20000×10^17 NP1:φs=262.00000°, δ=81.00000°, λ=175.00000°. NP2:φs=352.00000°, δ=85.00000°, λ=9.00000°. Principal axes: T 1.2600, Plg=9.0000°, Azm=217.0000°; N -0.1300, Plg=80.0000°, Azm=20.0000°; P -1.1300, Plg=3.0000°, Azm=127.0000°; Data Used: II IU IC G CN.*

ISC 13 20:06:46.9±0.3, 17.°80S±0.°04×13.°50W±0.°05, h10km, (h26km±1.3km:pP-P), n435, σ0.982/390, mb4.8/162, MS4.7/55, 9C-6D, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHEL	Horse Pasture	7.65	77	Pn	Pn	20 08 38.6	+0.2
	2μm,0.5s,SNR=13						
SHEL	Horse Pasture	7.65	77	eP	Pn	20 08 36.4	-2.0
SHEL				pmax	pmax		
	comp=Z,138nm,0.6s						
SHEL	Horse Pasture	7.65	77	ePn	Pn	20 08 36.4	-2.0
	comp=Z,138nm,0.6s						
RCBR	Riachuelo	24.91	296	P	P	20 12 10.8	+0.6
	comp=Z,22nm,0.9s,mb4.7						
LIC	Lamto	25.29	20	eP	P	20 12 12.8	-0.9
	comp=Z,155nm,1.3s,mb5.4						
LIC	Lamto	25.29	20	⇑iP	P	20 12 12.7	-1.0
	comp=Z,150nm,1.3s,mb5.1,baz=210						
LIC				eMLR	MLR		
	comp=Z,3μm,19.0s,MS4.5						
KIC	Kosan Boka	25.51	21	eP	P	20 12 14.8	-0.9
	comp=Z,108nm,1.1s,mb5.3						
TIC	Toumodi	25.69	20	eP	P	20 12 16.1	-1.2
	comp=Z,16nm,0.2s,mb5.1						
TIC	Toumodi	25.69	20	eP	P	20 12 16.1	-1.2
TIC				pmax	pmax		
	comp=Z,16nm,0.2s,mb5.2						
DBIC	Dimbokro	25.76	20	P	P	20 12 16.9	-1.1
	comp=Z,14nm,0.8s,mb4.5,baz=189,slow=10,SNR=12						
DBIC				LR	LR	20 19 55.2	
	comp=Z,2μm,20.4s,MS4.7,baz=165,slow=31						
DBIC	Dimbokro	25.76	20	eP	P	20 12 17.0	-1.0
DBIC				pmax	pmax		
	comp=Z,88nm,1.4s						
DBIC	Dimbokro	25.76	20	eP	P	20 12 17.0	-1.0
	comp=Z,88nm,1.4s,mb5.1						
TSUM	Tsumeb	29.49	98	P	P	20 12 51.2	-0.3
	comp=Z,13nm,0.9s,mb4.7,baz=271,slow=10,SNR=22						
TSUM				LR	LR	20 22 27.6	
	comp=Z,1μm,19.4s,MS4.5,baz=258,slow=32						
TSUM	Tsumeb	29.49	98	eP	P	20 12 50.2	-1.2
	comp=Z,15nm,1.0s,mb4.7						
BBTS	Babate	32.39	355	P	P	20 13 17.4	+0.5
	comp=Z,42nm,0.8s,mb5.3,baz=172,slow=4.1,SNR=9.0						
BBTS				LR	LR	20 23 01.9	
	comp=Z,596nm,20.1s,MS4.3,baz=182,slow=30						
BBTS	Babate	32.39	355	P	P	20 13 17.4	+0.5
BBTS				LR	LR	20 23 01.9	
SUR	Sutherland	34.13	122	P	P	20 13 32.7	+0.6
	comp=Z,16nm,1.0s,mb4.9,baz=256,slow=4.2,SNR=9.3						
SUR	Sutherland	34.13	122	eP	P	20 13 32.4	+0.3
	comp=Z,27nm,0.9s,mb5.2						
TOA0	Torodi Ar. Sit	34.21	27	eP	P	20 13 31.8	-1.0
TORD	Torodi Ar. Bea	34.21	27	P	P	20 13 32.0	-0.8
	comp=Z,17nm,0.8s,mb5.0,baz=205,slow=9.3,SNR=30						
TORD				LR	LR	20 24 51.7	
	comp=Z,3μm,20.7s,MS4.9,baz=200,slow=32						
LBTB	Lobatse	37.01	108	P	P	20 13 56.5	-0.4
	comp=Z,10nm,0.7s,mb4.8,baz=283,slow=9.3,SNR=18						
LBTB	Lobatse	37.01	108	eP	P	20 13 56.2	-0.7
LBTB				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.8						
LBTB	Lobatse	37.01	108	eP	P	20 13 56.2	-0.7
	comp=Z,14nm,0.9s,mb4.8						
BOSA	Boshof	37.07	114	P	P	20 13 56.9	-0.5
	comp=Z,13nm,1.0s,mb4.7,baz=284,slow=5.2,SNR=12						
BOSA				LR	LR	20 26 36.3	
	comp=Z,1μm,18.9s,MS4.8,baz=279,slow=32						
BOSA	Boshof	37.07	114	eP	P	20 13 55.7	-1.7
BOSA				pmax	pmax		
	comp=Z,64nm,1.6s,mb5.2						
BOSA	Boshof	37.07	114	eP	P	20 13 55.7	-1.7
	comp=Z,64nm,1.6s,mb5.2						
BOSA				LR	LR	20 26 36.2	
LSZ	Lusaka	39.99	93	P	P	20 14 23.5	+1.4
	comp=Z,36nm,0.7s,mb5.2,baz=254,slow=7.3,SNR=88						
LSZ	Lusaka	39.99	93	eP	P	20 14 23.2	+1.1
LSZ				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.2						
LSZ	Lusaka	39.99	93	eP	P	20 14 23.2	+1.1
	comp=Z,40nm,0.8s,mb5.2						
TAM	Tamanrasset	44.42	25	eP	P	20

comp=Z,8.4nm,0.5s,mb5.0
ECOG Cogollos-Vega 55.57 10 P **P 20 16 22.7 +0.2**
ECOG pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
ECOG Cogollos-Vega 55.57 10 P **P 20 16 22.7 +0.2**
comp=Z,8.3nm,0.8s,mb4.8
EMIN Mina Concepcio 55.64 7 P **P 20 16 23.8 +0.8**
comp=Z,11nm,0.9s,mb4.9
ELUQ Luque 55.74 9 P **P 20 16 23.8 +0.1**
ELUQ pmax pmax
comp=Z,13nm,0.8s,mb5.0
ELUQ Luque 55.74 9 P **P 20 16 23.8 0.0**
comp=Z,13nm,0.8s,mb5.0
PBEJ Beja 55.77 5 *e*P **P 20 16 24.9 +0.9**
comp=Z,19nm,1.5s,mb4.9
PBAR Barrancos 56.00 6 *e*P **P 20 16 26.8 +1.2**
comp=Z,23nm,2.0s,mb4.9
PBAR *e*S **S 20 24 19.1 +5.2**
PBAR *e*LR LR 20 32 38.4
ECAB El Cabril 56.09 8 P **P 20 16 26.5 +0.3**
comp=Z,7.4nm,1.0s,mb4.7
EHUE Huescar 56.26 10 P **P 20 16 27.3 -0.1**
EHUE pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
EHUE Huescar 56.26 10 P **P 20 16 27.3 -0.1**
comp=Z,4.2nm,0.9s,mb4.5
EVO Evora 56.26 5 *e*P **P 20 16 28.0 +0.5**
comp=Z,30nm,1.2s,mb4.9
EVO *e*MLR MLR
comp=Z,855nm,19.8s,MS4.5
EVO Evora 56.26 5 *e*P **P 20 16 28.7 +1.2**
comp=Z,34nm,2.0s,mb5.0
EADA Adamuz 56.29 8 P **P 20 16 27.7 0.0**
comp=Z,4.1nm,1.0s,mb4.4
CART Cartagena 56.33 12 *e*P **P 20 16 28.4 +0.4**
comp=Z,31nm,1.1s,mb5.2
EBAN Banos Encina 56.40 9 P **P 20 16 28.1 -0.4**
EBAN pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
EBAN Banos Encina 56.40 9 P **P 20 16 28.1 -0.4**
comp=Z,7.5nm,0.8s,mb4.8
EBAD Badajoz 56.58 6 P **P 20 16 30.7 +1.0**
comp=Z,5.0nm,0.8s,mb4.6
PMAFR Mafra 56.59 4 *e*S **S 20 24 25.6 +4.0**
PMAFR *e*LR LR 20 33 34.7
comp=Z,632nm,20.0s
PESTR Estremoz 56.63 6 *e*P **P 20 16 30.8 +0.7**
comp=Z,41nm,1.8s,mb5.2
PESTR *e*S **S 20 24 29.1 +6.9**
PESTR *e*LR LR 20 28 52.5
EVIA Vianos 57.07 10 P **P 20 16 34.6 +1.4**
EVIA pmax pmax
comp=Z,14nm,1.0s,mb5.0
EVIA Vianos 57.07 10 P **P 20 16 34.6 +1.4**
comp=Z,14nm,1.0s,mb5.0
PMRV Marv??o 57.21 6 *e*S **S 20 24 39.0 +9.2**
PMRV Marv??o 57.21 6 *e*LR LR 20 35 26.3
ETOB Tobarra 57.25 11 P **P 20 16 35.5 +1.0**
comp=Z,9.4nm,0.8s,mb4.9
ABPO Ambohimpanom 57.38 102 P **P 20 16 34.5 -1.4**
ABPO pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
ABPO Ambohimpanom 57.38 102 P **P 20 16 34.5 -1.4**
comp=Z,6.1nm,0.9s,mb4.6
KEST Kesra 57.47 22 P **P 20 16 37.3 +1.2**
comp=Z,6.8nm,1.0s,mb4.7,baz=174,slow=3.0,SNR=12
KEST LR LR 20 39 44.3
comp=Z,395nm,20.5s,MS4.5,baz=22,slow=34
KEST Kesra 57.47 22 *e*P **P 20 16 37.2 +1.2**
PCBR Castelo Branco 57.61 5 *e*P **P 20 16 37.4 +0.4**
comp=Z,18nm,1.5s,mb4.9
ESDC Sonseca Array 57.86 9 P **P 20 16 39.2 +0.5**
comp=Z,3.7nm,0.8s,mb4.5,baz=186,slow=7.3,SNR=23
ESDC LR LR 20 39 49.3
comp=Z,633nm,20.9s,MS4.7,baz=175,slow=34
ESDC Sonseca Array 57.86 9 P **P 20 16 39.0 +0.2**
comp=Z,3.7nm,0.8s,mb4.5
ESLA Sonseca Array 57.86 9 *e*P **P 20 16 38.0 -0.8**
comp=Z,1.4nm,0.9s,mb4.0
ESBB Sonseca Array 57.86 9 P **P 20 16 38.8 +0.1**
comp=Z,3.6nm,0.8s,mb4.5
MTE Manteigas 58.16 5 *e*LR LR 20 33 42.7
comp=Z,672nm,22.0s
PVIS Viseu 58.44 5 *e*P **P 20 16 43.7 +0.9**
comp=Z,22nm,1.6s,mb4.9
GUD Guadarrama 58.78 8 P **P 20 16 45.4 +0.2**
GUD pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
GUD Guadarrama 58.78 8 P **P 20 16 45.4 +0.2**
comp=Z,5.9nm,0.8s,mb4.7
MVO Moncorvo 58.96 6 P **P 20 16 47.1 +0.7**
MVO Moncorvo 58.96 6 *e*P **P 20 16 46.9 +0.5**
comp=Z,30nm,1.5s,mb5.1
MVO *e*S **S 20 25 01.5 +8.8**
MVO *e*LR LR 20 34 54.7
comp=Z,613nm,22.0s
EMOS Mosqueruela 59.12 12 P **P 20 16 48.7 +1.2**
comp=Z,11nm,0.8s,mb5.0
ETOR Torete 59.27 10 P **P 20 16 49.2 +0.6**
ETOR pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
ETOR Torete 59.27 10 P **P 20 16 49.2 +0.6**
comp=Z,7.5nm,0.8s,mb4.8
ELOB Lobios 59.57 5 P **P 20 16 51.0 +0.4**
comp=Z,7.7nm,0.9s,mb4.7
ECAL Calabor 59.76 6 P **P 20 16 53.3 +1.4**
comp=Z,5.4nm,0.7s,mb4.7
ERTA Horta de San J 59.85 12 P **P 20 16 53.1 +0.5**
comp=Z,9.1nm,0.8s,mb4.9
EPOB Poblet 60.38 13 P **P 20 16 54.7 -1.5**
comp=Z,10nm,1.1s,mb4.8
NNA Nana 61.25 266 P **P 20 17 03.2 +0.5**
EARI Arriondas 61.27 7 P **P 20 17 02.0 -0.2**
comp=Z,8.6nm,1.0s,mb4.8
ELAN Lanestosa 61.42 8 P **P 20 17 03.9 +0.7**
comp=Z,7.8nm,1.0s,mb4.8
EBIE Bielsa 61.48 11 P **P 20 17 07.8 +4.1**
comp=Z,4.2nm,0.7s,mb4.7
ETSF Etsaut 61.55 11 *e*P **P 20 17 04.6 +0.5**
comp=Z,17nm,0.8s,mb4.9
ETSF Etsaut 61.55 11 *e*P **P 20 17 04.6 +0.5**
ETSF pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
ETSF Etsaut 61.55 11 *e*P **P 20 17 04.6 +0.5**
comp=Z,8.6nm,0.8s,mb4.9
SJPF Ste Jean 61.65 10 *e*P **P 20 17 05.4 +0.6**
comp=Z,52nm,1.3s,mb5.2
SJPF Ste Jean 61.65 10 *e*P **P 20 17 05.4 +0.6**
SJPF pmax pmax
comp=Z,26nm,1.3s,mb5.2
SJPF Ste Jean 61.65 10 *e*P **P 20 17 05.4 +0.6**
comp=Z,26nm,1.3s,mb5.2
EPF Esparros 61.85 11 *e*P **P 20 17 05.3 -0.8**
CEL Celeste 62.21 26 *e*P **P 20 17 08.1 -0.6**
comp=Z,34nm,1.0s,mb5.4
SDV Santo Domingo 62.33 290 *e*P **P 20 17 10.2 +0.2**
comp=Z,33nm,1.1s,mb5.4
SDV *e* 20 17 18.1
MTLF Montolieu 62.52 13 *e*P **P 20 17 09.1 -1.6**
comp=Z,12nm,1.1s,mb4.6
MTLF Montolieu 62.52 13 *e*P **P 20 17 09.1 -1.6**
MTLF pmax pmax
comp=Z,6.0nm,1.1s,mb4.6
MTLF Montolieu 62.52 13 *e*P **P 20 17 09.1 -1.6**
comp=Z,5.8nm,1.1s,mb4.6
PGF Pioggiola 63.52 18 *e*P **P 20 17 17.2 -0.1**
comp=Z,48nm,1.0s,mb5.2
PGF Pioggiola 63.52 18 *e*P **P 20 17 17.2 -0.1**
PGF pmax pmax
comp=Z,24nm,1.0s,mb5.2
PGF Pioggiola 63.52 18 *e*P **P 20 17 17.2 -0.1**
comp=Z,24nm,1.0s,mb5.2
LMR La Mourre 63.54 16 *e*P **P 20 17 17.2 -0.2**
comp=Z,111nm,1.6s,mb5.3
LMR La Mourre 63.54 16 *e*P **P 20 17 17.2 -0.2**
LMR pmax pmax
comp=Z,56nm,1.6s,mb5.3
LMR La Mourre 63.54 16 *e*P **P 20 17 17.2 -0.2**
comp=Z,56nm,1.6s,mb5.3
LASF Ste Croix 63.59 14 *e*P **P 20 17 16.8 -0.9**
LFF La Frestale 63.77 11 *e*P **P 20 17 19.0 +0.1**
comp=Z,36nm,0.9s,mb5.1
LFF La Frestale 63.77 11 *e*P **P 20 17 19.0 +0.1**
LFF pmax pmax
comp=Z,18nm,0.9s,mb5.1
LFF La Frestale 63.77 11 *e*P **P 20 17 19.0 +0.1**
comp=Z,18nm,0.9s,mb5.1
FRF La Foret Royal 63.79 16 *e*P **P 20 17 18.9 -0.2**
comp=Z,55nm,1.3s,mb5.1
FRF La Foret Royal 63.79 16 *e*P **P 20 17 18.9 -0.2**
FRF pmax pmax
comp=Z,27nm,1.3s,mb5.1
FRF La Foret Royal 63.79 16 *e*P **P 20 17 18.9 -0.2**
comp=Z,28nm,1.3s,mb5.1
SMRF Simiane la Rot 63.90 15 *e*P **P 20 17 19.5 -0.3**
comp=Z,43nm,1.2s,mb5.0
SMRF Simiane la Rot 63.90 15 *e*P **P 20 17 19.5 -0.3**
comp=Z,43nm,1.2s,mb5.3
CAF Calviac 64.01 12 *e*P **P 20 17 20.3 -0.2**
comp=Z,19nm,1.1s,mb4.7
CAF Calviac 64.01 12 *e*P **P 20 17 20.3 -0.2**
CAF pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
CAF Calviac 64.01 12 *e*P **P 20 17 20.3 -0.2**
comp=Z,9.4nm,1.1s,mb4.7
ROSC El Rosal 64.07 285 LR LR 20 42 27.0
comp=Z,1µm,19.0s,MS5.1,baz=162,slow=33
RJF Les Rejaudoux 64.26 12 *e*P **P 20 17 22.0 -0.1**
comp=Z,21nm,1.1s,mb4.8
RJF *e*MLR MLR
comp=Z,1µm,23.0s,MS4.7
RJF Les Rejaudoux 64.26 12 *e*P **P 20 17 22.0 -0.1**
RJF pmax pmax
comp=Z,11nm,1.0s,mb4.8
RJF MLR MLR
comp=Z,1µm,23.0s,MS5.0
RJF Les Rejaudoux 64.26 12 *e*P **P 20 17 22.0 -0.1**
comp=Z,11nm,1.0s,mb4.8
RJF LR LR
comp=Z,1µm,23.0s,MS5.0
VIVF Saint-Julien-l 64.51 14 *e*P **P 20 17 24.1 +0.3**
comp=Z,34nm,1.2s,mb4.9
VIVF Saint-Julien-l 64.51 14 *e*P **P 20 17 24.1 +0.3**
VIVF pmax pmax
comp=Z,17nm,1.2s,mb5.0
VIVF Saint-Julien-l 64.51 14 *e*P **P 20 17 24.1 +0.3**
comp=Z,17nm,1.2s,mb5.0
LBL Lubilhac 64.55 13 *e*P **P 20 17 24.9 +0.9**
ORIF Oris-en-Rattie 64.86 15 *e*P **P 20 17 26.7 +0.6**
comp=Z,43nm,1.3s,mb5.0
ORIF *e*MLR MLR
comp=Z,1µm,18.8s,MS4.8
ORIF Oris-en-Rattie 64.86 15 *e*P **P 20 17 26.7 +0.6**
ORIF pmax pmax
comp=Z,22nm,1.3s,mb5.0
ORIF Oris-en-Rattie 64.86 15 *e*P **P 20 17 26.7 +0.6**
comp=Z,22nm,1.3s,mb5.0
MBDF Montbardon 64.91 16 *e*P **P 20 17 27.2 +0.8**
comp=Z,64nm,1.3s,mb5.2
MBDF Montbardon 64.91 16 *e*P **P 20 17 27.2 +0.8**
MBDF pmax pmax
comp=Z,32nm,1.3s,mb5.2
MBDF Montbardon 64.91 16 *e*P **P 20 17 27.2 +0.8**
comp=Z,32nm,1.3s,mb5.2
MFF Saint Martin d 65.22 10 *e*P **P 20 17 28.2 -0.1**
comp=Z,44nm,1.4s,mb5.0
MFF Saint Martin d 65.22 10 *e*P **P 20 17 28.2 -0.1**
MFF pmax pmax
comp=Z,22nm,1.4s,mb5.0
MFF Saint Martin d 65.22 10 *e*P **P 20 17 28.2 -0.1**
comp=Z,22nm,1.4s,mb5.0
PLDF La Plantade 65.33 13 *e*P **P 20 17 30.0 +0.9**
TCF Toulx Ste Croi 65.34 12 *e*P **P 20 17 29.4 +0.2**
comp=Z,24nm,1.1s,mb4.8
TCF Toulx Ste Croi 65.34 12 *e*P **P 20 17 29.4 +0.2**
TCF pmax pmax
comp=Z,12nm,1.1s,mb4.8
TCF Toulx Ste Croi 65.34 12 *e*P **P 20 17 29.4 +0.2**
comp=Z,12nm,1.1s,mb4.8
LPG La Plagne 65.62 16 *e*P **P 20 17 31.8 +0.8**
comp=Z,39nm,1.1s,mb5.0
LPG La Plagne 65.62 16 *e*P **P 20 17 31.8 +0.8**
LPG pmax pmax
comp=Z,19nm,1.1s,mb5.0
LPG La Plagne 65.62 16 *e*P **P 20 17 31.8 +0.8**
comp=Z,19nm,1.1s,mb5.0
LPL La Plagne 65.64 15 *e*P **P 20 17 31.7 +0.6**
comp=Z,47nm,1.1s,mb5.1
LPL La Plagne 65.64 15 *e*P **P 20 17 31.7 +0.6**
LPL pmax pmax
comp=Z,23nm,1.1s,mb5.1
LPL La Plagne 65.64 15 *e*P **P 20 17 31.7 +0.6**
comp=Z,23nm,1.1s,mb5.1
BGF Bois d'Agland 65.73 12 *e*P **P 20 17 30.8 -0.8**
SMF Signal de Mont 66.02 13 *e*P **P 20 17 33.4 -0.1**
AVF Avril sur Loir 66.06 13 *e*P **P 20 17 33.8 +0.1**
comp=Z,12nm,1.0s,mb4.6
AVF Avril sur Loir 66.06 13 *e*P **P 20 17 33.8 +0.1**
AVF pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
AVF Avril sur Loir 66.06 13 *e*P **P 20 17 33.8 +0.1**
comp=Z,5.8nm,1.0s,mb4.6
QUIF Quistinic 66.06 8 *e*P **P 20 17 33.6 -0.2**
OTAV Otavalo 66.29 278 *e*P **P 20 17 35.4 -0.6**
comp=Z,11nm,1.1s,mb4.8
SSF Saint Saulge 66.35 13 *e*P **P 20 17 35.6 0.0**
comp=Z,68nm,1.7s,mb5.1
SSF Saint Saulge 66.35 13 *e*P **P 20 17 35.6 0.0**
SSF pmax pmax
comp=Z,34nm,1.7s,mb5.1
SSF Saint Saulge 66.35 13 *e*P **P 20 17 35.6 0.0**
comp=Z,34nm,1.7s,mb5.1
ROSF Rostrenen 66.46 7 *e*P **P 20 17 36.2 -0.1**
SGMF Saint Gilles 66.47 8 *e*P **P 20 17 36.0 -0.4**
comp=Z,91nm,1.5s,mb5.3
SGMF Saint Gilles 66.47 8 *e*P **P 20 17 36.0 -0.4**
SGMF pmax pmax
comp=Z,46nm,1.5s,mb5.3
SGMF Saint Gilles 66.47 8 *e*P **P 20 17 36.0 -0.4**
comp=Z,46nm,1.5s,mb5.3
CABF La Chapelle 66.50 15 *e*P **P 20 17 36.4 -0.2**
comp=Z,33nm,1.0s,mb5.0
CABF La Chapelle 66.50 15 *e*P **P 20 17 36.4 -0.2**
CABF pmax pmax
comp=Z,17nm,1.0s,mb5.0
CABF La Chapelle 66.50 15 *e*P **P 20 17 36.4 -0.2**
comp=Z,17nm,1.0s,mb5.0
LOR Lormes 66.62 13 *e*P **P 20 17 36.2 -1.1**
LOR *e*MLR MLR
comp=Z,638nm,21.0s,MS4.5
LOR Lormes 66.62 13 *e*P **P 20 17 36.2 -1.1**
LOR LR LR
comp=Z,640nm,21.0s,MS4.8
GRR Gorron 66.84 9 *e*P **P 20 17 38.6 -0.1**
comp=Z,65nm,1.5s,mb5.1
GRR Gorron 66.84 9 *e*P **P 20 17 38.6 -0.1**
GRR pmax pmax
comp=Z,32nm,1.5s,mb5.1
GRR Gorron 66.84 9 *e*P **P 20 17 38.6 -0.1**
comp=Z,32nm,1.5s,mb5.1
LDF La Druitiere 67.16 10 *e*P **P 20 17 40.4 -0.3**
comp=Z,48nm,1.5s,mb5.0
LDF La Druitiere 67.16 10 *e*P **P 20 17 40.4 -0.3**
LDF pmax pmax
comp=Z,24nm,1.5s,mb5.0
LDF La Druitiere 67.16 10 *e*P **P 20 17 40.4 -0.3**
comp=Z,24nm,1.5s,mb5.0
FLN La Foliniere 67.26 9 *e*P **P 20 17 41.1 -0.3**
comp=Z,49nm,1.3s,mb5.1
FLN *e*MLR MLR
comp=Z,1µm,21.0s,MS4.7
FLN La Foliniere 67.26 9 *e*P **P 20 17 41.1 -0.3**
FLN pmax pmax
comp=Z,24nm,1.3s,mb5.1
FLN MLR MLR
comp=Z,1µm,21.0s,MS5.0
FLN La Foliniere 67.26 9 *e*P **P 20 17 41.1 -0.3**
comp=Z,24nm,1.3s,mb5.1
FLN LR LR
comp=Z,1µm,21.0s,MS5.0
BBS Basel-Blauen 67.64 15 *e*P **P 20 17 43.2 -0.7**
DAVOX Davos/Dischmat 67.64 17 LR LR 20 45 42.6
comp=Z,693nm,21.4s,MS4.8,baz=218,slow=34
SKDS Skadanscina 67.81 21 *e*P **P 20 17 46.9 +2.0**
HINF Hinteralfeld 67.81 15 *e*P **P 20 17 44.1 -0.8**
HAU Haudompre 67.87 14 *e*P **P 20 17 44.8 -0.5**
HAU *e*MLR MLR
comp=Z,478nm,17.8s,MS4.5
HAU Haudompre 67.87 14 *e*P **P 20 17 44.8 -0.5**
HAU LR LR
comp=Z,480nm,17.8s,MS4.8
THEF They Montfort 67.99 14 *e*P **P 20 17 45.7 -0.3**
MEZF Maizieres J'vi 68.04 13 *e*P **P 20 17 46.3 0.0**
comp=Z,38nm,1.1s,mb5.0
MEZF Maizieres J'vi 68.04 13 *e*P **P 20 17 46.3 0.0**
comp=Z,38nm,1.1s,mb5.3
FETA Feichten 68.11 18⇑ *i*P **P 20 17 46.1 -0.7**
comp=Z,19nm,1.1s,mb5.0
DAVA Damuels 68.11 17⇑ *i*P **P 20 17 45.3 -1.5**
comp=Z,19nm,1.1s,mb5.1
FELD Feldberg im Sc 68.15 15 *e*P **P 20 17 46.6 -0.4**
ECH Echery 68.26 15 *e*P **P 20 17 47.1 -0.6**
ECH Echery 68.26 15 *e*P **P 20 17 45.7 -2.0**
ECH pmax pmax
comp=Z,11nm,1.2s,mb4.8
ECH Echery 68.26 15 *e*P **P 20 17 45.7 -2.0**
comp=Z,11nm,1.2s,mb4.8
CRNS Crni Vrh 68.36 20 *i*P **P 20 17 48.7 +0.3**
ABTA Abfaltersbach 68.39 19⇓ *i*P **P 20 17 48.4 -0.1**
comp=Z,7.2nm,1.0s,mb4.7
LJU Ljubljana 68.42 21 *e*P **P 20 17 49.2 +0.5**
CDF Champ du Feu 68.47 15 *e*P **P 20 17 48.7 -0.3**
comp=Z,8.3nm,0.8s,mb4.5
CDF Champ du Feu 68.47 15 *e*P **P 20 17 48.7 -0.3**
CDF pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
CDF Champ du Feu 68.47 15 *e*P **P 20 17 48.7 -0.3**
comp=Z,4.2nm,0.8s,mb4.5
MAW Mawson 68.50 156 *e*P **P 20 17 49.4 +0.4**
comp=Z,4.4nm,0.8s,mb4.5
MAW Mawson 68.50 156 P **P 20 17 49.8 +0.8**
comp=Z,11nm,1.1s,mb4.8,baz=286,slow=8.7,SNR=11
MAW LR LR 20 39 37.9
comp=Z,541nm,21.2s,MS4.8,baz=285,slow=29
MAW Mawson 68.50 156 *e*P **P 20 17 49.0 0.0**
MAW pmax pmax
comp=Z,4.0nm,1.4s
MAW Mawson 68.50 156 *e*P **P 20 17 49.0 -0.1**
comp=Z,4.3nm,1.4s,mb4.3
MAW LR LR 20 39 37.9
SPAK Spaichingen-Ko 68.56 16 *e*P **P 20 17 49.0 -0.6**
WTTA Wattenberg 68.59 18⇑ *i*P **P 20 17 49.4 -0.4**
comp=Z,21nm,1.1s,mb5.0
GCIS Gornji Cirnik 68.64 21 *i*P **P 20 17 50.8 +0.6**
BFO Black Forest 68.66 15 P **P 20 17 49.4 -0.8**
comp=Z,63nm,1.1s,mb5.5,SNR=6.9
BFO Black Forest 68.66 15 *e*P **P 20 17 49.2 -1.0**
comp=Z,14nm,1.3s,mb4.7
BFO Black Forest 68.66 15 *e*P **P 20 17 49.2 -1.0**
BFO pmax pmax
comp=Z,14nm,1.3s,mb4.7
BFO Black Forest 68.66 15 *e*P **P 20 17 47.9 -2.3**
comp=Z,18nm,1.2s,mb4.9
MMAI Mount Meron Ar 68.81 43 P **P 20 17 53.2 +1.7**
comp=Z,3.3nm,0.6s,mb4.4,baz=241,slow=17,SNR=10
MMAI LR LR 20 46 34.3
comp=Z,314nm,18.5s,MS4.6,baz=185,slow=35
LANF Langenberg 69.13 15 *e*P **P 20 17 52.5 -0.6**
PERS Pernice 69.13 21 *e*P **P 20 17 53.4 +0.2**
SOKA Soboth 69.14 21⇑ *i*P **P 20 17 53.7 +0.4**
comp=Z,15nm,1.0s,mb4.9
ASF Jabal al Asfar 69.26 44 P **P 20 17 54.4 0.0**
comp=Z,2.0nm,0.6s,mb4.2,baz=123,slow=5.7,SNR=3.3
FUR Furstenfeldbru 69.30 17 *e*P **P 20 17 53.5 -0.7**
comp=Z,37nm,1.7s,mb5.0
FUR Furstenfeldbru 69.30 17 *e*P **P 20 17 53.5 -0.7**
FUR pmax pmax
comp=Z,37nm,1.7s,mb5.0
BAIF Baives 69.34 12 *e*P **P 20 17 53.9 -0.5**
comp=Z,44nm,1.3s,mb4.9
BAIF Baives 69.34 12 *e*P **P 20 17 53.9 -0.5**
BAIF pmax pmax
comp=Z,22nm,1.3s,mb4.9
BAIF Baives 69.34 12 *e*P **P 20 17 53.9 -0.5**
comp=Z,22nm,1.3s,mb4.9
RJOB Jochberg 69.36 19 *e*P **P 20 17 53.4 -1.2**
comp=Z,6.0nm,0.9s,mb4.5
WLF Walferdange 69.38 14 P **P 20 17 55.0 +0.3**
comp=Z,14nm,1.6s,mb4.6
WLF Walferdange 69.38 14 *e*P **P 20 17 54.5 -0.2**
comp=Z,69nm,1.9s,mb5.3
WLF *e*pP pP 20 18 01.6 +3.7
WLF Walferdange 69.38 14 *e*P **P 20 17 53.8 -0.8**
ARSA Arzberg 69.81 21⇑ *i*P **P 20 17 57.6 +0.3**
comp=Z,17nm,1.0s,mb4.9
ABH Alteburg 69.90 14 *e*P **P 20 17 56.3 -1.6**
MOA Molln 69.92 20⇑ *i*P **P 20 17 57.1 -0.9**
comp=Z,15nm,1.3s,mb4.8
TOD Tromm 69.95 15 *e*P **P 20 17 57.5 -0.7**
PKSM Moragy 70.02 23 P **P 20 17 59.0 +0.3**
MEM Membach 70.24 13 P **P 20 18 00.7 +0.7**
TNS Taunus Mts 70.44 15 *e*P **P 20 18 01.9 +0.8**
comp=Z,11nm,1.1s,mb4.7
TNS Taunus Mts 70.44 15 *e*P **P 20 18 01.9 +0.8**
TNS pmax pmax
comp=Z,11nm,1.1s,mb4.7
CONA Conrad Observa 70.51 20⇓ *i*P **P 20 18 01.7 +0.1**
comp=Z,15nm,1.1s,mb4.8
GEC2 GERESS Array S 70.62 19 *e*P **P 20 18 01.7 -0.6**
comp=Z,7.0nm,1.2s,mb4.5
GEC2 *e*pP pP 20 18 08.9 +3.3
GEC2 GERESS Array S 70.62 19 *e*P **P 20 18 01.7 -0.6**
GEC2 *e**PP pP 20 18 09.0 +3.4
GEC2 pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
GEC2 GERESS Array S 70.62 19 *e*P **P 20 18 01.7 -0.6**
comp=Z,7.0nm,1.2s,mb4.5
GEC2 *e*pP pP 20 18 09.0 +3.4
GERES GERESS Array B 70.62 19 P **P 20 18 01.8 -0.5**
comp=Z,3.2nm,1.0s,mb4.2,baz=193,slow=4.1,SNR=16
GERES PP PP 20 20 40.7 +1.6
comp=Z,2.2nm,1.0s,baz=194,slow=8.3,SNR=3.9
GERES LR LR 20 48 06.8
comp=Z,502nm,20.7s,MS4.8,baz=214,slow=35
GERES GERESS Array B 70.62 19 P **P 20 18 01.8 -0.5**
GERES 20 20 40.7
WET Wettzell 70.64 18 *e*P **P 20 18 01.7 -0.7**
comp=Z,12nm,1.1s,mb4.7
WET *e*pP pP 20 18 07.8 +2.1
WET Wettzell 70.64 18 *e*P **P 20 18 01.7 -0.7**
WET *e**PP pP 20 18 07.8 +2.1
WET pmax pmax
comp=Z,12nm,1.1s,mb4.7
GRA1 Grafenberg Arr 70.67 17 *e*P **P 20 18 02.0 -0.6**
comp=Z,16nm,1.3s,mb4.8
GRA1 LR LR
comp=Z,400nm,19.9s,MS4.7
GRF Grafenberg Arr 70.67 17 *e*P **P 20 18 02.0 -0.6**
comp=Z,16nm,1.3s,mb4.8
GRF *e*L 20 47 34.5
comp=Z,442nm,19.9s
GRF Grafenberg Arr 70.67 17 *e*P **P 20 18 02.0 -0.6**
GRF pmax pmax
comp=Z,16nm,1.3s,mb4.8
GRF MLR MLR
comp=Z,400nm,19.9s,MS4.7
GRF Grafenberg Arr 70.67 17 *e*P **P 20 18 02.0 -0.6**
GRF pmax pmax
comp=Z,16nm,1.3s,mb4.8
GRF MLR MLR
comp=Z,400nm,19.9s,MS4.7
BZS Buzias 70.69 25 P **P 20 18 03.1 +0.3**
KHC Kasperske Hory 70.84 18 *e*P **P 20 18 02.6 -1.0**
KHC *e* 20 18 11.1
KHC *e*S S 20 27 16.6 -2.0
KHC Kasperske Hory 70.84 18 *e*P **P 20 18 02.3 -1.4**
comp=Z,7.6nm,1.3s,mb4.5
KHC Kasperske Hory 70.84 18 *e*P **P 20 18 02.6 -1.0**
KHC *e*pP pP 20 18 11.1 +4.2
KHC *e*S S 20 27 16.6 -2.0
KHC AMS AMS 20 45 50.0
comp=Z,600nm,25.8s
ROTZ Rotzenmuhle 71.01 17 *e*P **P 20 18 04.2 -0.5**
comp=Z,14nm,1.2s,mb4.8
ROTZ *e*pP pP 20 18 11.1 +3.2
ZST Bratislava 71.16 21 *e*P **P 20 18 06.2 +0.6**
ZST pmax pmax
comp=Z,12nm,1.1s,mb4.7
ZST Bratislava 71.16 21 *e*P **P 20 18 06.2 +0.6**
comp=Z,12nm,1.1s,mb4.7
ZST Bratislava 71.16 21 *e*P **P 20 18 06.2 +0.6**
BUG Bochum--Univer 71.30 14 *e*P **P 20 18 05.2 -1.1**
comp=Z,15nm,1.3s,mb4.8
NKC Novy Kostel 71.50 17 *e*P **P 20 18 07.3 -0.3**
NKC *e* 20 18 16.2
NKC *e*S S 20 27 29.9 +3.7
NKC Novy Kostel 71.50 17 *e*P **P 20 18 07.3 -0.3**
NKC *e*pP pP 20 18 16.2 +5.3
NKC *e*XS sS 20 27 29.9 -1.7
WERN Wernitzgruen 71.53 17 *e*P **P 20 18 07.3 -0.5**

comp=Z,13nm,1.1s,mb4.8
SMOL Smolenice 71.55 21 *e*P **P 20 18 08.7 +0.8**
SMOL Smolenice 71.55 21 *e*P **P 20 18 08.7 +0.8**
TREC Trest 71.58 20 *e*P **P 20 18 07.9 -0.2**
TREC MLR MLR
comp=Z,900nm,20.6s,MS5.0
TREC Trest 71.58 20 *e*P **P 20 18 07.9 -0.2**
TREC AMS AMS 20 48 10.0
comp=Z,900nm,20.6s
MOX Moxa 71.64 17 *e*P **P 20 18 08.0 -0.4**
comp=Z,17nm,1.4s,mb4.8
MOX *e* 20 18 16.7
MOX *e*S S 20 27 35.0 +7.2
MOX pmax pmax
comp=Z,400nm,21.0s
MOX Moxa 71.64 17 *e*P **P 20 18 07.9 -0.5**
comp=Z,11nm,1.1s,mb4.7
MOX Moxa 71.64 17 *e*P **P 20 18 08.0 -0.4**
MOX *e* 20 18 16.7
MOX *e*S S 20 27 35.0 +7.2
MOX pmax pmax
comp=Z,17nm,1.4s,mb4.8
MOX MLR MLR
comp=Z,400nm,21.0s,MS4.7
WERD Werda 71.65 17 *e*P **P 20 18 08.0 -0.5**
comp=Z,10.0nm,1.2s,mb4.6
TANN Tannenbergstha 71.67 17 *e*P **P 20 18 08.2 -0.4**
comp=Z,9.0nm,1.1s,mb4.6
TANN *e*pP pP 20 18 15.1 +3.2
PRU Pruhonice 71.89 19 *e*P **P 20 18 09.6 -0.4**
PRU *e* 20 18 17.3
PRU *e*S S 20 27 29.5 -1.3
PRU MLR MLR
comp=Z,300nm,23.0s,MS4.5
PRU Pruhonice 71.89 19 *e*P **P 20 18 09.6 -0.4**
PRU *e*pP pP 20 18 17.3 +4.0
PRU *e*S S 20 27 29.5 -1.3
PRU AMS AMS 20 45 30.0
comp=Z,300nm,23.0s
PSZ Piszkesteto 71.92 23 *e*P **P 20 18 10.6 +0.4**
PSZ pmax pmax
comp=Z,16nm,1.0s,mb4.9
PSZ Piszkesteto 71.92 23 *e*P **P 20 18 10.6 +0.4**
comp=Z,16nm,1.0s,mb4.9
VRAC Vranov 71.95 20 P **P 20 18 10.6 +0.3**
VYHS Vyhne 72.02 22 *e*P **P 20 18 10.7 -0.1**
VYHS pmax pmax
comp=Z,11nm,1.1s,mb4.7
VYHS Vyhne 72.02 22 *e*P **P 20 18 10.7 -0.1**
comp=Z,11nm,1.1s,mb4.7
VYHS Vyhne 72.02 22 *e*P **P 20 18 10.7 -0.1**
DRGR 72.09 25 P **P 20 18 11.5 +0.2**
BRTR Keskin Array B 72.15 36 P **P 20 18 12.8 +0.9**
comp=Z,9.2nm,0.9s,mb4.7,baz=201,slow=6.4,SNR=40
BRTR LR LR 20 51 33.0
comp=Z,140nm,20.4s,MS4.2,baz=50,slow=37
IBBN Ibbenburen 72.22 14 *e*P **P 20 18 12.2 +0.3**
comp=Z,17nm,1.0s,mb4.9
PVCC Panska Ves 72.38 18 *e*P **P 20 18 12.9 0.0**
PVCC Panska Ves 72.38 18 *e*P **P 20 18 12.9 0.0**
QSPA South Pole Qui 72.39 180 P **P 20 18 13.8 +1.1**
comp=Z,12nm,1.0s,mb4.8,baz=214,slow=3.0,SNR=29
QSPA South Pole Qui 72.39 180 P **P 20 18 13.8 +1.1**
CLZ Clausthal 72.40 15 *e*P **P 20 18 12.8 -0.2**
comp=Z,10.0nm,1.4s,mb4.5
CLZ Clausthal 72.40 15 *e*P **P 20 18 12.8 -0.2**
CLZ pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
MLR Muntele Rosu 72.44 28 LR LR 20 50 53.8
comp=Z,739nm,20.3s,MS5.0,baz=239,slow=36
MLR Muntele Rosu 72.44 28 P **P 20 18 13.4 0.0**
BRG Berggiesshubel 72.50 18 *i* P **P 20 18 13.1 -0.5**
comp=Z,12nm,1.3s,mb4.7
BRG *e* 20 18 22.1
comp=Z,9.2nm,1.3s
BRG S S 20 27 43.0 +5.3
BRG pmax pmax
comp=Z,728nm,20.2s
BRG MLR MLR
comp=N,534nm,21.3s
BRG MLR MLR
comp=E,235nm,21.3s
KECS Kecovo 72.61 23 *e*P **P 20 18 14.6 +0.3**
KECS pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
KECS Kecovo 72.61 23 *e*P **P 20 18 14.6 +0.3**
comp=Z,7.3nm,1.0s,mb4.6
KECS Kecovo 72.61 23 *e*P **P 20 18 14.5 +0.2**
CLL Collm 72.62 17 *e*P **P 20 18 14.0 -0.3**
comp=Z,7.0nm,1.2s,mb4.5
CLL *e*pP pP 20 18 20.3 +2.7
CLL Collm 72.62 17 *e*P **P 20 18 13.0 -1.3**
CLL *e* 20 18 20.0
CLL *e*S S 20 27 43.0 +4.0
CLL pmax pmax
comp=Z,14nm,1.7s,mb4.6
CLL MLR MLR
comp=Z,400nm,22.1s,MS4.7
CLL Collm 72.62 17 *e*P **P 20 18 13.0 -1.3**
comp=Z,14nm,1.7s,mb4.6
CLL *e* 20 18 20.0
CLL *e*S S 20 27 43.0 +4.0
CLL LR LR
comp=Z,400nm,22.1s,MS4.7
CLL Collm 72.62 17 *e*P **P 20 18 13.0 -1.3**
comp=Z,14nm,1.7s,mb4.6
CLL *e*sP sP 20 18 20.0 +1.2
CLL *e*PP PP 20 20 54.0 -2.1
CLL *e*S S 20 27 43.0 +4.0
CLL *e*PPS 20 28 12.0
CLL *e*(SS) 20 32 00.0
CLL *e*SSS 20 35 36.0
CLL *e* 20 36 54.0
CLL *e*SSSS 20 37 18.0
MORC Moravsky Berou 72.67 21 *e*P **P 20 18 14.2 -0.4**
MORC pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
MORC Moravsky Berou 72.67 21 *e*P **P 20 18 14.2 -0.5**
comp=Z,10.0nm,1.3s,mb4.6
DPC Dobruska-Polom 72.76 19 *e*P **P 20 18 14.7 -0.5**
DPC *e* 20 18 21.9
DPC *e*S S 20 27 40.9 +0.2
DPC MLR MLR
comp=Z,500nm,23.7s,MS4.7
DPC Dobruska-Polom 72.76 19 *e*P **P 20 18 14.7 -0.5**
DPC *e*pP pP 20 18 21.9 +3.4
DPC *e*XS sS 20 27 40.9 -5.3
DPC AMS AMS 20 47 30.0
comp=Z,500nm,23.7s
UPC Upice 72.80 19 *e*P **P 20 18 15.6 +0.2**
UPC Upice 72.80 19 *e*P **P 20 18 15.6 +0.2**
OKC Ostrava-Krasne 72.92 21 *e*P **P 20 18 15.1 -1.0**
OKC *e*S S 20 27 44.9 +2.3
OKC MLR MLR
comp=Z,500nm,20.2s,MS4.8
OKC Ostrava-Krasne 72.92 21 *e*P **P 20 18 15.1 -1.0**
OKC *e*pP pP 20 18 24.5 +5.1
OKC *e*XS sS 20 27 44.9 -3.1
OKC AMS AMS 20 49 30.0
comp=Z,500nm,20.2s
NRDL Niedersach Rie 72.94 15 *e*P **P 20 18 16.4 +0.2**
comp=Z,25nm,1.3s,mb5.0
VRI Vrincioaia 73.08 28 P **P 20 18 16.6 -0.6**
CRVS Cervenica-Dubn 73.32 23 *e*P **P 20 18 19.1 +0.6**
CRVS pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
CRVS Cervenica-Dubn 73.32 23 *e*P **P 20 18 19.1 +0.6**
comp=Z,8.2nm,1.0s,mb4.6
CRVS Cervenica-Dubn 73.32 23 *e*P **P 20 18 19.0 +0.5**
UZH Uzhgorod 73.42 24 *e*P **P 20 18 19.0 -0.1**
UZH *e* 20 18 24.7
UZH *e* 20 18 34.4
UZH *e* 20 22 44.7
UZH *e*S S 20 27 46.5 -1.7
UZH *e* 20 28 24.0
UZH *e* 20 32 34.0
UZH MLR MLR
comp=N,200nm,16.0s,MS4.7
UZH MLR MLR
comp=E,250nm,16.0s,MS4.7
UZH MLR MLR
comp=Z,150nm,16.0s,MS4.4
KOLS Kolonicke sedl 73.66 24 *e*P **P 20 18 21.1 +0.6**
KOLS pmax pmax
comp=Z,7.0nm,1.4s,mb4.4
KOLS Kolonicke sedl 73.66 24 *e*P **P 20 18 21.1 +0.6**
comp=Z,7.3nm,1.4s,mb4.4
KOLS Kolonicke sedl 73.66 24 *e*P **P 20 18 21.1 +0.6**
STHS Stebnicka Huta 73.67 23 *e*P **P 20 18 21.1 +0.6**
STHS pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
STHS Stebnicka Huta 73.67 23 *e*P **P 20 18 21.1 +0.6**
comp=Z,2.4nm,1.0s,mb4.1
STHS Stebnicka Huta 73.67 23 *e*P **P 20 18 21.1 +0.6**
BUR08 Bucovina Ar. S 73.80 26 *e*P **P 20 18 20.3 -1.1**
OJC Ojcow 73.81 22 *e*P **P 20 18 19.7 -1.7**
OJC *e*sP sP 20 18 34.0 +8.1
OJC *e*S S 20 27 44.6 -8.1
OJC L 20 50 38.6
comp=Z,0.4nm,20.3s
BSEG Bad Segeberg 74.31 14 *e*P **P 20 18 24.5 +0.3**
comp=Z,33nm,1.4s,mb5.1
BSEG Bad Segeberg 74.31 14 *e*P **P 20 18 24.5 +0.3**
BSEG pmax pmax
comp=Z,33nm,1.4s,mb5.1
KWP Kalwaria Pacla 74.39 24 *e*P **P 20 18 24.7 0.0**
KWP LMZ 20 51 52.0
comp=Z,400nm,22.3s
KWP Kalwaria Pacla 74.39 24 *e*P **P 20 18 24.5 -0.3**
comp=Z,25nm,1.4s,mb5.0
KIS Kishinev 74.89 29 *e*P **P 20 18 26.0 -1.7**
KIS LRM 20 51 50.0
comp=Z,300nm,16.0s
KIS Kishinev 74.89 29 *e*P **P 20 18 26.0 -1.7**
KIS *e* 20 18 32.0
KIS *e* 20 28 06.0
KIS *e* 20 28 44.0
KIS MLR MLR
comp=Z,500nm,17.0s,MS4.9
KIS MLR MLR
comp=Z,300nm,16.0s
LVV L'vov 75.05 24 *e*P **P 20 18 26.8 -1.8**
LVV MLR MLR
comp=N,200nm,19.0s,MS4.7
LVV MLR MLR
comp=E,300nm,19.0s,MS4.7
LVV MLR MLR
comp=Z,400nm,19.0s,MS4.7
JTS JuntasAbangare 75.86 286 *e*P **P 20 18 37.1 +3.1**
ANN Anapa 77.63 34 *e*P **P 20 18 36.9 -6.5**
ANN *e**PP pP 20 18 52.0 +5.3
ANN pmax pmax
comp=Z,81nm,2.0s,mb5.3
KIEV Kiev 77.83 26 *e*P **P 20 18 43.3 -1.0**
KIEV pmax pmax
comp=Z,18nm,0.8s,mb5.0
KIEV Kiev 77.83 26 *e*P **P 20 18 43.3 -1.0**
comp=Z,18nm,0.8s,mb5.0
AKASG Malin Array Be 77.84 26 P **P 20 18 43.5 -0.9**
comp=Z,11nm,0.7s,mb4.9,baz=218,slow=5.2,SNR=44
AKASG LR LR 20 50 36.8
comp=Z,196nm,21.6s,MS4.4,baz=215,slow=34
AKBB Malin Array Si 77.84 26 *e*P **P 20 18 43.0 -1.4**
SOC Sochi 78.12 36 *e*P **P 20 18 45.6 -0.5**
SOC *e**PP pP 20 18 55.3 +5.9
SOC *e*PPP 20 23 25.8
SOC *e*S S 20 28 34.4 -6.0
SOC *e* 20 29 06.1
SOC *e*SS SS 20 33 39.5 -3.2
SOC pmax pmax
comp=Z,22nm,1.0s,mb5.0
SOC MLR MLR
comp=Z,151nm,17.0s,MS4.4
SUW Suwalki 78.13 21 *e*P **P 20 18 46.0 0.0**
SUW LMZ 20 50 18.4
comp=Z,400nm,24.6s
SUW Suwalki 78.13 21 *e*P **P 20 18 45.9 0.0**
SUW MLR MLR
comp=Z,400nm,24.6s,MS4.7
SUW Suwalki 78.13 21 *e*P **P 20 18 44.1 -1.8**
IMOK Mouk 79.06 55 *e*P **P 20 18 52.4 +0.7**
GNI Garni 79.09 42 P **P 20 18 53.2 +1.6**
comp=Z,12nm,1.0s,mb4.8,baz=343,slow=2.7,SNR=10.0
GNI Garni 79.09 42 *ce*P **P 20 18 53.6 +2.0**
GNI pmax pmax
comp=Z,18nm,1.0s
GNI Garni 79.09 42 *e*P **P 20 18 52.3 +0.8**
comp=Z,45nm,1.3s,mb5.2
IPIR Pirpir 79.40 51 *e*P **P 20 18 54.9 +1.5**
IHRS Heris 79.57 44 *e*P **P 20 18 54.9 +0.7**
KIV Kislovodsk 80.05 38 P **P 20 18 57.5 +0.8**
comp=Z,106nm,1.4s,mb5.6,SNR=7.2
KIV Kislovodsk 80.05 38‖ *e*P **P 20 18 58.0 +1.3**
KIV *e* 20 21 59.7
KIV *e*S S 20 29 03.7 +2.7
KIV *e*SS SS 20 34 14.8 +3.1
KIV pmax pmax
comp=Z,19nm,1.0s,mb5.0
KIV MLR MLR
comp=Z,100nm,19.0s,MS4.2
KIV Kislovodsk 80.05 38 *e*P **P 20 18 57.6 +0.9**
comp=Z,29nm,1.2s,mb5.1
ZEI Tsey 80.07 39 *e*P **P 20 18 56.6 -0.2**
ZEI pmax pmax
comp=Z,28nm,1.7s,mb4.9
IKLH Kolahrood 80.21 50 *e*P **P 20 18 58.9 +1.1**
MIR Mirnyy 80.21 157 *e*P **P 20 18 58.0 +0.7**
MIR pmax pmax
comp=Z,29nm,1.4s,mb5.0
IIGN Ignalina 80.26 22 *e*P **P 20 18 57.7 +0.1**
IIGN AMB AMB 20 18 59.3
comp=Z,6.1nm,1.2s,mb4.4
ISAL Salakas 80.40 22 *e*P **P 20 18 58.4 +0.1**
ISAL AMB AMB 20 18 58.6
comp=Z,4.0nm,1.5s,mb4.1
IDID Didziasalis 80.41 22 *e*P **P 20 18 58.4 +0.1**
IDID AMB AMB 20 18 58.7
comp=Z,4.4nm,1.3s,mb4.2
IZAR Zarasai 80.58 21 *e*P **P 20 18 59.5 +0.2**
IZAR AMB AMB 20 19 00.8
comp=Z,4.9nm,1.2s,mb4.3
NB2 NORSAR Subarra 81.03 12 P **P 20 19 01.7 +0.1**
comp=Z,1.8nm,0.8s,mb4.0,baz=204,slow=6.2
NOA NORSAR Array B 81.03 12 P **P 20 19 02.2 +0.6**
comp=Z,3.5nm,0.8s,mb4.3,baz=204,slow=5.8,SNR=9.3
NOA LR LR 20 55 42.5
comp=Z,284nm,20.7s,MS4.6,baz=195,slow=36
NOA NORSAR Array B 81.03 12 P **P 20 19 02.2 +0.6**
NOA LR LR 20 55 42.5
IMEH Mehriz 81.59 53 *e*P **P 20 19 06.1 +0.9**
IDMV Damavand 81.62 49 *e*P **P 20 19 06.0 +0.7**
IBAF Bafgh 82.41 54 *e*P **P 20 19 09.6 +0.1**
VSR Storozhevoye 82.69 30 *e*P **P 20 19 10.8 +0.3**
VSR pmax pmax
comp=E,6.0nm,0.5s
VSR pmax pmax
comp=Z,9.0nm,0.5s,mb5.1
VSR pmax pmax
comp=N,2.0nm,0.3s
VSR MLR MLR
comp=N,170nm,21.0s,MS4.6
VSR MLR MLR
comp=E,200nm,21.0s,MS4.6
VSR MLR MLR
comp=Z,450nm,21.0s,MS4.8
IGLO Ghaloghah 83.34 48 *e*P **P 20 19 16.2 +1.9**
VRHR Novokhopersk 83.81 31 *e*P **P 20 19 16.5 +0.2**
VRHR pmax pmax
comp=Z,20nm,1.0s,mb5.2
VRHR pmax pmax
comp=N,8.0nm,0.5s
VRHR pmax pmax
comp=E,4.0nm,0.3s
OBN Obninsk 84.10 26‖ *e*P **P 20 19 17.6 -0.1**
OBN *e* 20 22 28.2
OBN *e*S S 20 29 45.4 +3.2
OBN *e*SS SS 20 35 13.5 +2.0
OBN pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
OBN MLR MLR
comp=Z,400nm,19.0s,MS4.8
OBN Obninsk 84.10 26 P **P 20 19 17.1 -0.6**
comp=Z,26nm,1.4s,mb5.2
SBA Scott Base 84.55 180 *e*P **P 20 19 21.0 +1.2**
SBA pmax pmax
comp=Z,38nm,1.3s,mb5.4
SBA Scott Base 84.55 180 *e*P **P 20 19 21.0 +1.2**
comp=Z,38nm,1.3s,mb5.4
MOS Moscow 84.97 26 *e*P **P 20 19 27.7 +5.6**
FINES FINESS Array B 85.04 18 P **P 20 19 22.6 +0.3**
comp=Z,5.2nm,0.8s,mb4.7,baz=191,slow=3.1,SNR=15
FINES LR LR 20 57 36.8
comp=Z,492nm,19.1s,MS4.9,baz=4.6,slow=36
KAF Kangasniemi 85.64 18 *e*P **P 20 19 24.1 -1.2**
KAF pmax pmax
comp=Z,3.0nm,0.7s,mb4.6
KAF Kangasniemi 85.64 18 *ep* **P 20 19 24.1 -1.2**
comp=Z,2.6nm,0.7s,mb4.6
KAF Kangasniemi 85.64 18 *ep* **P 20 19 24.1 -1.2**
comp=Z,2.6nm,0.7s,mb4.6
JOF Joensuu 87.75 19 *e*P **P 20 19 34.1 -1.5**
JOF pmax pmax
comp=Z,3.0nm,0.8s,mb4.6
JOF Joensuu 87.75 19 *ep* **P 20 19 34.1 -1.5**
comp=Z,2.6nm,0.8s,mb4.5
JOF Joensuu 87.75 19 *ep* **P 20 19 34.1 -1.5**
comp=Z,2.6nm,0.8s,mb4.5
SFJD Kangerlussuaq 88.89 346 LR LR 20 49 13.6
comp=Z,694nm,21.1s,MS5.0,baz=148,slow=29
ARCES ARCESS Array B 91.37 13 P **P 20 19 53.2 +0.8**
comp=Z,3.7nm,0.9s,mb4.7,baz=216,slow=3.9,SNR=11
ARCES LR LR 21 00 08.4
comp=Z,441nm,21.6s,MS4.9,baz=204,slow=35
ARCES ARCESS Array B 91.37 13 P **P 20 19 53.2 +0.8**
ARCES LR LR 21 00 08.4
AKTK Aktyubinsk 92.31 37 P **P 20 19 57.1 -0.1**
AKTO Aktyubinsk 92.31 37 P **P 20 19 57.1 -0.1**
comp=Z,3.7nm,0.9s,mb4.7,baz=252,slow=4.5,SNR=7.5
ARU Arti 95.14 32*d i*P **P 20 20 10.7 +0.6**
ARU 20 23 56.3
ARU S SKSac 20 30 42.3 -3.4
ARU pmax pmax
comp=Z,6.0nm,1.1s,mb4.9
ARU MLR MLR
comp=Z,283nm,23.0s,MS4.7
TXAR Lajitas Array 98.65 298 LR LR 21 06 01.9
comp=Z,139nm,20.2s,MS4.5,baz=170,slow=36
ULM Lac du Bonnet 98.73 320 LR LR 20 57 17.7
comp=Z,245nm,20.4s,MS4.7,baz=206,slow=31
WMQ Urumqi 110.09 49 *e*Pdif Pdif 20 21 19.0 +1.9
WMQ PP PP 20 25 57.0 +4.4
WMQ SKS SKSdf 20 32 30.0 -1.0
WMQ SS SS 20 41 22.0 +3.3
WMQ LR LR
comp=N,190nm,18.0s,MS4.9
WMQ LR LR
comp=E,190nm,18.0s,MS4.9
WMQ LR LR
comp=Z,140nm,18.0s,MS4.6
GTA Gaotai 118.96 54 *e*PKP PKPdf 20 25 39.4 +3.4
GTA PP PP 20 27 04.1 +8.6
GTA PKS 20 29 14.9
GTA SKS SKSdf 20 32 49.9 +1.6
GTA AMB AMB
comp=Z,92nm,6.6s
GTA LR LR
comp=N,150nm,22.2s,MS4.8
GTA LR LR
comp=E,180nm,24.3s,MS4.8
GTA LR LR
comp=Z,290nm,22.2s,MS4.9
ZAK Zakamensk 120.54 42 *e*PKIKP PKPdf 20 25 39.5 +0.8
ZAK pmax pmax
comp=Z,1.0nm,1.0s
KMI Kunming 120.67 71 PKP PKPdf 20 25 39.4 -0.3
KMI sPKP 20 25 42.8
KMI PP PP 20 27 12.6 +4.9
KMI PKS 20 29 14.9
KMI SKS SKSdf 20 32 49.3 -2.9
KMI SKKS SKKSac 20 34 02.9 -4.8
KMI S Sdif 20 34 56.9 -2.5
KMI SS SS 20 43 42.0 +3.4
KMI AMB AMB
comp=Z,65nm,4.6s
KMI LR LR
comp=N,160nm,22.8s
KMI LR LR
comp=E,110nm,14.1s
KMI LR LR
comp=Z,170nm,24.4s,MS4.6
TAOE Nuku Hiva Isla 121.03 248 *e*LR LR 21 02 51.6
comp=Z,299nm,26.3s
CD2 Chengdu 122.03 64 *e*PKP PKPdf 20 25 40.8 -1.4
CD2 sPKP 20 25 45.8
CD2 PP PP 20 27 19.5 +2.7
CD2 PKS 20 29 19.5
CD2 SKS SKSdf 20 32 47.6 -6.9
CD2 SKKS SKKSac 20 34 07.5 -8.8
CD2 SS SS 20 43 52.5 -3.2
CD2 AMB AMB
comp=Z,120nm,10.2s
CD2 LR LR
comp=N,120nm,16.8s
CD2 LR LR
comp=Z,210nm,18.5s,MS4.8
LZH Lanzhou 122.18 58 *e*PKP PKPdf 20 25 41.0 -1.3
LZH PP PP 20 27 20.0 +2.4
LZH SKKS SKKSac 20 34 08.0 -9.0
LZH SS SS 20 43 55.0 -2.4
LZH AMB AMB
comp=Z,140nm,4.8s
LZH LR LR
comp=Z,760nm,17.5s,MS5.4
SONM Songino Array 122.98 44 PKP PKPdf 20 25 44.5 +1.0
comp=Z,1.9nm,0.9s,baz=241,slow=2.8,SNR=5.4
PPT Papeete 124.30 233 *e*LR LR 21 04 23.7
comp=Z,428nm,23.8s
GYA Guiyang 124.32 70 *e*Pdif Pdif 20 22 20.0 -0.4
GYA PKP PKPdf 20 25 45.8 -0.9
GYA PP PP 20 27 36.4 +4.0
GYA PKS 20 29 22.0
GYA SKKS SKKSac 20 34 27.6 -3.6
GYA SS SS 20 44 25.9 +0.9
GYA AMB AMB
comp=Z,120nm,7.6s
GYA LR LR
comp=N,180nm,20.7s,MS4.8
GYA LR LR
comp=E,110nm,21.9s,MS4.8
GYA LR LR
comp=Z,160nm,22.0s,MS4.6
HHC Hu-ho-hao-te 127.82 52 *e*PKP PKPdf 20 25 51.9 -1.1
HHC PP PP 20 27 55.8 +0.7
HHC PKS 20 29 26.9
HHC SKS SKSdf 20 33 01.9 -3.0
HHC SKKS SKKSac 20 34 50.3 -2.4
HHC SS SS 20 45 05.4 -2.4
HHC AMB AMB
comp=Z,32nm,5.2s
HHC LR LR
comp=N,100nm,16.6s,MS4.8
HHC LR LR
comp=E,130nm,17.8s,MS4.8
HHC LR LR
comp=Z,250nm,19.0s,MS4.9
ASAR Alice Springs 127.93 141 PKP PKPdf 20 25 53.9 +0.1
comp=Z,0.5nm,0.8s,baz=191,slow=4.3,SNR=3.7
BILL Bilibino 129.78 0‖ *i*PKIKP PKiKP 20 25 59.6 +3.0
BILL *e* 20 28 06.3
BILL pmax pmax
comp=Z,3.0nm,1.2s
WRA Warramunga Arr 130.98 138 PKP PKPdf 20 25 57.3 -2.3
comp=Z,0.5nm,0.6s,baz=239,slow=2.6,SNR=3.1
WHN Wuhan 131.15 65 PKPbc PKPdf 20 25 49.8 -10
BJI Beijing 131.42 52 PKP PKPdf 20 25 59.3 -0.5
BJI SS SS 20 45 52.9 +0.6
BJI LR LR
comp=N,200nm,19.8s,MS5.0
BJI LR LR
comp=E,210nm,17.2s,MS5.0
BJI LR LR
comp=Z,160nm,25.8s
SEY Seymchan 133.85 9*c i*PKIKP PKiKP 20 26 08.1 +3.1
NJ2 Nanjing 134.87 62 *e*PKP PKPdf 20 26 03.6 -3.0
CN2 Changchun 136.87 44 *e*PKP PKPdf 20 26 11.8 +1.9
MDJ Mudanjiang 139.18 41 PKP PKPdf 20 26 13.6 -0.5
MDJ AMB AMB
comp=Z,34nm,4.8s
DZM Mont Dzumac 140.38 180 *e*LR LR 21 11 48.0
comp=Z,324nm,25.2s
KSRS Korea Array 140.96 52 PKP PKPdf 20 26 19.0 +1.4
comp=Z,2.1nm,0.9s,baz=300,slow=3.7,SNR=6.8
JNU Nakatsue 144.60 58 P PKPdf 20 26 24.4 +0.2
JSU Suzuyama 144.68 60 P PKPdf 20 26 28.0 +3.6
YSS Yuzh-Sakhalins 144.96 29 *e*PKIKP PKPdf 20 26 21.9 -2.5

JHS	**Saijyo**	**145.75**	**53**	P	PKPdf	20 26 33.7	+7.6
JSH	**Shimam**	**146.55**	**37**	P	PKPdf	20 26 31.1	+3.9
JAD	**Aida**	**146.57**	**53**	P	PKPdf	20 26 36.9	+9.4
JMN	**Monobe**	**146.79**	**55**	P	PKPdf	20 26 34.6	+6.7
JEW	**Eniwo**	**147.21**	**35**	P	PKPdf	20 26 32.7	+4.4
JWT	**Wachi**	**147.37**	**52**	P	PKPdf	20 26 32.5	+3.7
JWZ	**Kozaga**	**148.29**	**54**	P	PKPdf	20 26 33.9	+3.5
MAJO	**Matsushiro**	**148.84**	**48**	*e*PKP2	PKPbc	20 26 35.0	-0.1
MAT	**Matsushiro**	**148.84**	**48**	*e*PKP	PKPdf	20 26 30.5	-0.7
MAT	**Matsushiro**	**148.84**	**48**	P	PKPdf	20 26 40.6	+9.4
MJAR	**Matsushiro Arr**	**148.84**	**48**	PKPbc	PKPbc	20 26 35.2	+0.1
comp=Z,4.9nm,0.8s,baz=318,slow=1.7,SNR=13							
MJAR	**Matsushiro Arr**	**148.84**	**48**	PKPbc	PKPbc	20 26 35.2	+0.1
JRY	**Ryogami san**	**149.58**	**48**	P	PKPdf	20 26 44.1	+12
JOD2	**Odawara 2**	**150.08**	**49**	P	PKPdf	20 26 46.0	+13

NEIC 13 20:11:32.9, 38°91S×178°39E, h43km, ML3.7(WEL), After WELL, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNZ	**Kokohu**	**0.57**	**259**	P	Pn	20 11 44.3	-0.3
PUZ	**Puketiti**	**0.84**	**353**	P	Pn	20 11 47.9	-0.4
MWZ	**Matawai**	**0.89**	**310**	P	Pn	20 11 48.7	-0.2
URZ	**Urewera**	**1.20**	**302**	P	Pn	20 11 53.0	-0.1

IDC 13 20:48:22.2±4.0, 30°51N×141°18E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.4/24, mbtmp3.5/4, ML3.3/1, Error ellipse: s-maj=164.4km s-min=26.1km az=73.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**6.51**	**338**	Pn	Pn	20 49 57.5	-1.6
0.6nm,0.3s,baz=158,slow=11,SNR=6.5							
MKAR	**Makanchi Array**	**47.67**	**307**	P	P	20 57 00.9	+0.7
0.5nm,0.8s,baz=77,slow=9.7,SNR=4.4							
WRA	**Warramunga Arr**	**50.59**	**188**	P	P	20 57 22.3	-0.5
0.6nm,0.4s,baz=5.2,slow=7.8,SNR=14							
ASAR	**Alice Springs**	**54.32**	**188**	P	P	20 57 50.8	+0.4
0.1nm,0.3s,baz=354,slow=6.1,SNR=4.2							

IDC 13 20:53:12.0±3.9, 6°50S×154°62E, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.4/16, mbtmp3.4/2, Error ellipse: s-maj=207.8km s-min=49.4km az=128.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.80**	**234**	P	P	20 58 25.1	-1.6
0.8nm,0.6s,baz=59,slow=9.1,SNR=8.4							
ASAR	**Alice Springs**	**26.23**	**227**	P	P	20 58 49.9	+1.1
0.4nm,0.5s,baz=61,slow=8.8,SNR=8.3							
TORD	**Torodi Ar. Bea**	**152.54**	**286**	PKPbc	PKPbc	21 13 11.7	+0.2
0.3nm,0.7s,baz=78,slow=2.4,SNR=6.1							

*DDA **13** 21:10:12.1, 36°79N×29°25E, h7km±6km, Md2.7*
*ISK **13** 21:10:14.3, 36°91N×29°30E, h3km, MD2.3*
*CSEM **13** 21:10:14.6±0.4, 36°95N×29°33E, h15km, MD2.3, Error ellipse: s-maj=9.1km s-min=7.4km az=139.0*
*ISCJB **13** 21:10:14.7±0.7, 36°90N±0°05×29°32E±0°06, h12km±6km, Error ellipse: s-maj=9.8km s-min=4.9km az=44.8*
ISC 13 21:10:15.3±0.6, 36°93N±0°04×29°26E±0°06, h6km±7km, n24, σ1°01/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**40**	*e*PG	**Pg**	**21 10 20.6**	**-0.5**
GLHS				*e*SG	**Sg**	**21 10 25.6**	**+0.6**
GLHS	**Glhisar (BURDU**	**0.30**	**40**	*e*Pg	**Pg**	**21 10 20.6**	**-0.5**
GLHS				*e*Sg	**Sg**	**21 10 25.6**	**+0.5**
FETY	**Fethiye**	**0.33**	**206**	*e*PG	**Pg**	**21 10 21.3**	**-0.3**
FETY				*e*SG	**Sg**	**21 10 26.7**	**+0.8**
FETY	**Fethiye**	**0.33**	**206**	*e*Pg	**Pg**	**21 10 21.3**	**-0.3**
FETY				*e*Sg	**Sg**	**21 10 26.7**	**+0.8**
GOLH	**Golhisar**	**0.39**	**38**	*i* P	**Pg**	**21 10 22.6**	**-0.4**
GOLH				*i* S	**Sg**	**21 10 30.2**	**+2.2**
GOLH	**Golhisar**	**0.39**	**38**	*i* P	**Pg**	**21 10 22.5**	**-0.4**
GOLH				*i* S	**Sg**	**21 10 30.2**	**+2.1**
TURN	**Turunc**	**0.53**	**264**	*i* P	**Pg**	**21 10 21.6**	**-3.9**
TURN	**Turunc**	**0.53**	**264**	*i* P	**Pg**	**21 10 21.6**	**-3.9**
ELL	**Elmali**	**0.55**	**109**	*e*PG	**Pg**	**21 10 25.4**	**-0.6**
ELL	**Elmali**	**0.55**	**109**	*e*Pg	**Pg**	**21 10 25.4**	**-0.6**
AKAS	**Kas**	**0.75**	**158**	*i* P	**Pg**	**21 10 24.3**	**-5.4**
AKAS				*i* S	**Sg**	**21 10 44.9**	**+5.5**
AKAS	**Kas**	**0.75**	**158**	*i* P	**Pg**	**21 10 24.3**	**-5.4**
AKAS				*i* S	**Sg**	**21 10 44.9**	**+5.5**
DNZL	**Cakiroluk**	**0.78**	**348**	*i* P	**Pg**	**21 10 29.2**	**-1.1**
DNZL				*i* S	**Sg**	**21 10 40.1**	**-0.3**
DNZL	**Cakiroluk**	**0.78**	**348**	*i* P	**Pg**	**21 10 29.2**	**-1.1**
DNZL				*i* S	**Sg**	**21 10 40.1**	**-0.3**
YER	**Yerkesik**	**0.81**	**285**	*e*PG	**Pg**	**21 10 31.5**	**+0.6**
YER	**Yerkesik**	**0.81**	**285**	*e*Pg	**Pg**	**21 10 31.5**	**+0.7**
AYDN	**Tasoluk**	**1.32**	**304**	*i* P	**Pn**	**21 10 39.9**	**-0.4**
AYDN				*i* S	**Sb**	**21 10 57.7**	**0.0**
AYDN	**Tasoluk**	**1.32**	**304**	*i* P	**Pn**	**21 10 39.9**	**-0.4**
AYDN				*i* S	**Sb**	**21 10 57.7**	**0.0**
DAT	**Datca**	**1.36**	**262**	*e*PN	**Pn**	**21 10 41.5**	**+0.6**
DAT	**Datca**	**1.36**	**262**	*e*Pn	**Pn**	**21 10 41.5**	**+0.6**
KHAL	**Karahalli**	**1.45**	**7**	*i* P	**Pn**	**21 10 38.2**	**-3.9**
KHAL				*i* S	**Sn**	**21 11 01.6**	**+0.2**
KHAL	**Karahalli**	**1.45**	**7**	*i* P	**Pn**	**21 10 38.2**	**-3.9**
KHAL				*i* S	**Sn**	**21 11 01.6**	**+0.2**
BDRM	**Kayabasi**	**1.46**	**276**	*i* P	**Pn**	**21 10 39.7**	**-2.5**
BDRM				*i* S	**Sn**	**21 11 03.1**	**+1.5**
BDRM	**Kayabasi**	**1.46**	**276**	*i* P	**Pn**	**21 10 39.7**	**-2.5**
BDRM				*i* S	**Sn**	**21 11 03.1**	**+1.5**

IDC 13 21:12:20.3±2.3, 13°08N×93°55E, h0km, mb3.7/3, mb1 3.7/4, mb1mx3.3/25, mbtmp3.5/4, ML3.2/1, Error ellipse: s-maj=70.2km s-min=28.2km az=72.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**7.45**	**43**	Pn	Pn	21 14 09.2	-1.1
0.1nm,0.3s,baz=240,slow=15,SNR=4.1							
ZALV	**Zalesovo Beam**	**41.35**	**352**	P	P	21 20 07.7	-0.1
0.4nm,0.4s,baz=178,slow=11,SNR=3.7							
WRA	**Warramunga Arr**	**51.85**	**129**	P	P	21 21 30.6	0.0
0.7nm,0.5s,baz=302,slow=10.0,SNR=22							
ASAR	**Alice Springs**	**53.77**	**133**	P	P	21 21 45.0	+0.2
0.5nm,0.5s,baz=306,slow=6.6,SNR=12							

*IDC **13** 21:23:57.3±0.9, 33°02N×91°95E, h0km, mb3.5/7, mb1 3.7/9, mb1mx3.5/27, mbtmp3.5/9, ML3.2/2, MS3.6/1, Ms1 3.6/1, ms1mx2.7/24, Error ellipse: s-maj=39.6km s-min=17.8km az=56.0*
*NEIC **13** 21:23:59.9±0.8, 33°27N×92°16E, h10km, mb3.2/2, Error ellipse: s-maj=17.5km s-min=9.7km az=107.0*
*DMN **13** 21:25:23.7±2.5, 28°30N×87°67E, h33km, Error ellipse: s-maj=67.7km s-min=9.3km az=45.0*
ISC 13 21:24:01.8±2.4, 33°26N±0°05×92°1E±0°1, h25km±18km, n24, σ1°24/25, mb3.5/6, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.65**	**194**	Pg	**Pn**	**21 24 58.4**	**+1.8**
LSA				Sg	**Sb**	**21 25 48.4**	**-0.9**
LSA				smax			
comp=E,60nm,1.1s							
LSA	**Lhasa**	**3.65**	**194**	*e*Pn	**Pn**	**21 24 58.5**	**+1.9**
LSA				*e*Sn	**Sn**	**21 25 40.3**	**+1.5**
JIRN	**Jiri**	**7.58**	**224**	*e*P	**Pn**	**21 25 48.7**	**-2.0**
GUN	**Gumba**	**7.58**	**227**	*e*P	**Pn**	**21 25 50.8**	**+0.1**
ODAN	**Odare**	**7.59**	**214**	*e*P	**Pn**	**21 25 48.2**	**-2.6**
RAMN	**Ramite**	**7.90**	**219**	*e*P	**Pn**	**21 25 50.9**	**-4.2**
KKN	**Kakani**	**8.04**	**229**	*e*P	**Pn**	**21 25 58.8**	**+1.8**
comp=E,7.3nm,0.5s							
PKI	**Pulchoki**	**8.11**	**227**	*e*P	**Pn**	**21 25 57.4**	**-0.6**
comp=E,7.8nm,0.5s							
PKI	**Pulchoki**	**8.11**	**227**	*e*P	**Pn**	**21 25 58.5**	**+0.5**
comp=E,6.0nm,0.4s							
PKIN	**Phulchoki**	**8.12**	**228**	*e*P	**Pn**	**21 25 58.5**	**+0.5**
comp=E,6.0nm,0.4s							
DMN	**Daman**	**8.28**	**229**	*e*P	**Pn**	**21 26 01.1**	**+0.9**
comp=E,3.5nm,0.5s							
MKAR	**Makanchi Array**	**15.46**	**334**	Pn	**Pn**	**21 27 37.8**	**-0.2**
comp=E,0.0nm,0.3s,baz=149,slow=12,SNR=3.3							
UCH	**Uchtor**	**16.54**	**308**	*e*P	**Pn**	**21 27 57.3**	**+5.3**
comp=E,1.8nm,0.7s							
AML	**Almayashu**	**17.05**	**307**	*e*P	**Pn**	**21 28 04.0**	**+5.6**
comp=E,1.3nm,0.8s							
SONM	**Songino Array**	**18.11**	**32**	P	**Pn**	**21 28 13.9**	**+2.5**
comp=E,0.3nm,0.3s,baz=210,slow=12,SNR=5.6							
KURK	**Kurchatov**	**20.07**	**334**	P	**P**	**21 28 33.1**	**0.0**
comp=E,0.7nm,0.7s,baz=145,slow=11,SNR=5.5							
ZALV	**Zalesovo Beam**	**21.33**	**348**	P	**P**	**21 28 46.9**	**+0.3**
comp=E,0.5nm,0.5s,mb3.1,baz=145,slow=10,SNR=3.1							
BVAR	**Borovoye Array**	**25.16**	**328**	P	**P**	**21 29 25.3**	**+0.5**
comp=E,0.3nm,0.5s,mb3.1,baz=138,slow=11,SNR=3.1							
ASAJ	**Asahikawa**	**40.29**	**59**	LR	LR	21 49 35.0	
comp=E,85nm,21.1s,baz=156,slow=38							
BRTR	**Keskin Array B**	**46.75**	**295**	P	**P**	**21 32 28.4**	**-0.5**
comp=E,0.4nm,0.7s,mb3.5,baz=41,slow=12,SNR=3.6							
WRA	**Warramunga Arr**	**66.50**	**136**	P	**P**	**21 34 47.9**	**-1.5**
comp=E,0.9nm,0.9s,mb3.8,baz=333,slow=6.0,SNR=3.9							
ASAR	**Alice Springs**	**69.20**	**139**	P	**P**	**21 35 06.1**	**-0.3**
comp=E,1.0nm,0.6s,mb3.9,baz=328,slow=6.8,SNR=15							
TORD	**Torodi Ar. Bea**	**83.27**	**281**	P	**P**	**21 36 25.3**	**-1.4**
comp=E,0.3nm,0.6s,mb3.5,baz=64,slow=3.4,SNR=4.1							
TORD	**Torodi Ar. Bea**	**83.27**	**281**	P	**P**	**21 36 25.3**	**-1.4**

*DDA **13** 21:25:57.9, 38°00N×36°30E, h7km±8km, Md2.7*
*CSEM **13** 21:25:59.8±0.7, 37°83N×36°24E, h23km±7km, MD2.7, Error ellipse: s-maj=19.9km s-min=10.0km az=18.0*
*ISCJB **13** 21:26:00.7±1.3, 37°62N±0°06×36°01E±0°08, h57km±14km, Error ellipse: s-maj=13.5km s-min=7.0km az=136.3*
*ISK **13** 21:26:02.6, 37°40N×36°27E, h19km, MD2.7*
ISC 13 21:26:01.1±1.2, 37°62N±0°07×36°01E±0°09, h55km±14km, n13, σ1°15/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.20**	**227**	*e*PG	**Pn**	**21 26 10.8**	**+0.8**
KOZT				*e*SG	**Sn**	**21 26 16.2**	**-0.1**
KMRS	**Kahramanmaras**	**0.71**	**99**	*e*PG	**Pn**	**21 26 13.4**	**-1.9**
KMRS	**Kahramanmaras**	**0.71**	**99**	*e*Pg	**Pn**	**21 26 13.4**	**-1.9**
KARA	**Karaisali**	**0.84**	**245**	*e*PG	**Pn**	**21 26 21.6**	**+4.8**
KARA	**Karaisali**	**0.84**	**245**	*e*Pg	**Pn**	**21 26 21.6**	**+4.7**
GAZ	**Gaziantep**	**1.05**	**114**	*e*PG	**Pn**	**21 26 18.5**	**-1.2**
GAZ				*e*SG	**Sn**	**21 26 29.8**	**-3.6**
GAZ	**Gaziantep**	**1.05**	**114**	*e*Pg	**Pn**	**21 26 18.5**	**-1.2**
GAZ				*e*Sg	**Sn**	**21 26 29.8**	**-3.6**
SARI	**SarD1z-Kayseri**	**1.19**	**27**	*e*PG	**Pn**	**21 26 22.6**	**+1.1**
SARI				*e*SG	**Sn**	**21 26 36.6**	**-0.1**
KUZU	**Kuzuini**	**1.20**	**134**	*i* P	**Pn**	**21 26 23.0**	**+1.4**
KUZU				*i* S	**Sn**	**21 26 36.3**	**-0.5**
KUZU	**Kuzuini**	**1.20**	**134**	*i* P	**Pn**	**21 26 23.0**	**+1.4**
KUZU				*i* S	**Sn**	**21 26 36.3**	**-0.5**
GZT	**Gaziantep**	**1.26**	**101**	*i* P	**Pn**	**21 26 24.2**	**+1.7**
GZT				*i* S	**Sn**	**21 26 38.9**	**+0.4**
AVNT	**Avonos**	**1.48**	**322**	*i* P	**Pn**	**21 26 23.8**	**-1.6**
AVNT				*i* S	**Sn**	**21 26 43.8**	**+0.2**
AVNT	**Avonos**	**1.48**	**322**	*i* P	**Pn**	**21 26 23.8**	**-1.6**
AVNT				*i* S	**Sn**	**21 26 43.8**	**+0.2**

*NEIC **13** 21:30:38.7±1.3, 25°93S×177°42W, h151km±12km, mb4.5/3, Error ellipse: s-maj=17.7km s-min=11.4km az=137.0*
*IDC **13** 21:30:41.0±2.5, 26°12S×177°48W, h165km±22km, mb3.8/9, mb1 4.1/10, mb1mx4.0/16, mbtmp3.9/10, Error ellipse: s-maj=25.8km s-min=17.7km az=175.0*
*ISCJB **13** 21:30:40.7±2.5, 26°1S±0°2×177°6W±0°1, h171km±24km, mb4.2/12, Error ellipse: s-maj=32.4km s-min=20.5km az=170.7*
ISC 13 21:30:41.6±2.4, 26°1S±0°2×177°6W±0°1, h168km±23km, n47, σ0°85/18, mb4.2/12, 3C-1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.12**	**186**	P	**Pn**	**21 31 31.0**	**-0.1**
323nm,0.3s,baz=80,slow=22,SNR=12							
RAO				S	**Sn**	**21 32 09.6**	**0.0**
783nm,0.3s,baz=267,slow=23,SNR=14							
URZ	**Urewera**	**12.90**	**199**	P	**Pn**	**21 33 39.2**	**+0.4**
2.7nm,0.3s,baz=344,slow=15,SNR=7.0							
URZ				S	**Sn**	**21 35 49.4**	**-12**
1.4nm,0.3s,baz=315,slow=20,SNR=6.0							
AFI	**Afiamalu**	**13.32**	**25**	P	**Pn**	**21 33 38.0**	**-6.3**
13nm,0.3s,baz=5.3,slow=7.3,SNR=13							
CTA	**Charters Tower**	**33.75**	**273**	P	**P**	**21 37 08.6**	**+1.2**
6.6nm,0.5s,mb4.6,baz=108,slow=12,SNR=7.4							
CTAO	**Charters Tower**	**33.75**	**273**	*e*P	**P**	**21 37 07.9**	**+0.5**
7.1nm,0.6s,mb4.6							
STKA	**Stephens Creek**	**36.02**	**251**	P	**P**	**21 37 27.6**	**+0.8**
1.2nm,0.5s,mb3.8,baz=94,slow=14,SNR=7.6							
COEN	**Coen**	**38.68**	**281**	*e*P	**P**	**21 37 50.0**	**+0.7**
49nm,0.7s,mb5.2							
ASAR	**Alice Springs**	**43.90**	**262**	P	**P**	**21 38 31.2**	**-0.5**
2.5nm,0.4s,mb4.2,baz=92,slow=7.3,SNR=46							
ASAR				PcP	PcP	21 40 13.9	-1.0
0.8nm,0.8s,baz=116,slow=4.3,SNR=4.1							
WRAB	**Tennant Creek**	**44.49**	**268**	*e*P	**P**	**21 38 35.5**	**-1.0**
7.0nm,0.6s,mb4.5							
WRA	**Warramunga Arr**	**44.50**	**268**	P	**P**	**21 38 35.7**	**-0.9**
6.2nm,0.4s,mb4.6,baz=102,slow=7.7,SNR=57							
WRA				PcP	PcP	21 40 16.6	-0.4
1.1nm,1.1s,baz=116,slow=3.4,SNR=4.7							
FORT	**Forrest**	**47.65**	**251**	*e*P	**P**	**21 38 59.1**	**-2.0**
6.3nm,0.4s,mb4.6							
MAW	**Mawson**	**76.42**	**200**	P	**P**	**21 42 12.5**	**+0.4**
1.9nm,0.5s,mb4.0,baz=121,slow=2.4,SNR=13							
KSRS	**Korea Array**	**81.38**	**319**	P	**P**	**21 42 40.0**	**+0.4**
1.0nm,0.6s,mb3.6,baz=131,slow=6.3,SNR=6.1							
NVAR	**Mina Array Bea**	**84.85**	**43**	P	**P**	**21 42 56.4**	**-0.9**
0.8nm,0.8s,mb3.5,baz=216,slow=8.5,SNR=6.6							
TXAR	**Lajitas Array**	**89.76**	**57**	P	**P**	**21 43 21.3**	**+0.2**
0.3nm,0.7s,mb3.3,baz=193,slow=3.7,SNR=3.6							
CMAR	**Chiang Mai Arr**	**92.37**	**289**	P	**P**	**21 43 34.8**	**+1.4**
1.2nm,0.8s,mb4.0,baz=155,slow=3.8,SNR=6.9							
ZALV	**Zalesovo Beam**	**115.08**	**320**	PKP	PKiKP	21 49 00.9	-1.4
0.3nm,0.2s,baz=119,slow=1.8,SNR=2.8							
MKAR	**Makanchi Array**	**115.30**	**312**	PKP	PKPdf	21 49 01.6	-1.4
0.3nm,0.7s,baz=85,slow=1.2,SNR=5.3							
KURK	**Kurchatov**	**118.35**	**315**	PKP	PKPdf	21 49 07.4	-1.2
0.9nm,0.6s,baz=98,slow=1.5,SNR=8.2							
KBL	**Kabul**	**122.82**	**296**	*e*PKPdf	PKPdf	21 49 17.4	-0.3
BVAR	**Borovoye Array**	**123.58**	**318**	PKP	PKPdf	21 49 18.1	-0.5
1.5nm,0.6s,baz=107,slow=1.3,SNR=11							
ARU	**Arti**	**130.00**	**323**	*e*PKPdf	PKPdf	21 49 30.0	-0.7
ARCES	**ARCESS Array B**	**134.51**	**349**	PKhKP		21 49 35.2	
0.9nm,0.5s,baz=321,slow=1.2,SNR=4.4							
ARCES				PKP	PKPdf	21 49 39.5	+0.5
0.9nm,0.5s,baz=25,slow=1.6,SNR=12							
JOF	**Joensuu**	**138.58**	**340**	*ep*		21 49 36.1	
0.6nm,0.6s							
JOF	**Joensuu**	**138.58**	**340**	*ep*		21 49 36.1	
0.6nm,0.6s							
FINES	**FINESS Array B**	**141.26**	**342**	PKhKP		21 49 44.8	
1.2nm,0.6s,baz=61,slow=4.0,SNR=14							
NOA	**NORSAR Array B**	**144.60**	**353**	PKP	PKPdf	21 49 56.0	-1.5
6.3nm,0.8s,baz=18,slow=2.4,SNR=24							
NOA	**NORSAR Array B**	**144.60**	**353**	PKP	PKPdf	21 49 56.0	-1.5
NAO01	**NORSAR Array S**	**144.83**	**353**	*e*PKPdf	PKPdf	21 49 56.7	-1.2
IZAR	**Zarasai**	**145.74**	**336**	*e*P	PKPdf	21 49 59.7	+0.1
IZAR				AMB	AMB	21 50 01.6	
comp=Z,8.5nm,1.1s							
IDID	**Didziasalis**	**145.88**	**335**	*e*P	PKPdf	21 49 59.3	-0.5
IDID				AMB	AMB	21 50 01.9	
comp=Z,4.4nm,1.0s							
ISAL	**Salakas**	**145.91**	**336**	*e*P	PKPdf	21 50 00.1	+0.2
ISAL				AMB	AMB	21 50 04.5	
comp=Z,5.1nm,1.1s							
IIGN	**Ignalina**	**146.05**	**336**	*e*P	PKPdf	21 50 00.0	-0.1
IIGN				AMB	AMB	21 50 01.6	
comp=Z,5.6nm,0.8s							
AKASG	**Malin Array Be**	**148.05**	**327**	PKPbc	PKPbc	21 50 05.8	-1.1
comp=Z,2.9nm,0.5s,baz=44,slow=3.9,SNR=16							
AKASG	**Malin Array Be**	**148.05**	**327**	PKPbc	PKPbc	21 50 05.8	-1.2
AKBB	**Malin Array Si**	**148.05**	**327**	*e*PKPbc	PKPbc	21 50 04.3	-2.7
KIEV	**Kiev**	**148.06**	**327**	*e*PKPbc	PKPbc	21 50 05.4	-1.6
KIS	**Kishinev**	**150.54**	**322**	⇓*i*P	PKPdf	21 50 05.3	-2.4
MMAI	**Mount Meron Ar**	**150.61**	**291**	PKPbc	PKPbc	21 50 14.6	+0.7
comp=Z,2.9nm,0.5s,baz=76,slow=8.1,SNR=12							
BR131	**Keskin Array S**	**150.69**	**305**	*e*PKPbc	PKPbc	21 50 12.9	-0.9
BR131				*e*PKPab	PKPab	21 50 21.5	+0.1
BRTR	**Keskin Array B**	**150.69**	**305**	PKPbc	PKPbc	21 50 13.2	-0.7
comp=Z,1.8nm,0.6s,baz=146,slow=4.2,SNR=12							
BRTR				PKPab	PKPab	21 50 21.8	+0.4
comp=Z,2.2nm,0.6s,baz=107,slow=3.8,SNR=14							
TLCR		**151.56**	**319**	⇑*i*P	PKPbc	21 50 14.6	-1.1
KWP	**Kalwaria Pacla**	**151.79**	**332**	⇑*i*P	PKPbc	21 50 17.3	+1.2
BUR08	**Bucovina Ar. S**	**152.05**	**326**	*e*PKPbc	PKPbc	21 50 16.9	+0.2
BURAR	**Bucovina Array**	**152.06**	**326**	⇑*i*P	PKPbc	21 50 17.6	+0.9
GERES	**GERESS Array B**	**155.69**	**342**	PKP	PKPdf	21 50 15.8	+0.7
comp=Z,0.3nm,0.5s,baz=292,slow=4.2,SNR=4.6							
GERES				PKPab	PKPab	21 50 42.1	-0.1
comp=Z,0.4nm,0.6s,baz=35,slow=4.9,SNR=4.6							
TORD	**Torodi Ar. Bea**	**167.05**	**177**	PKP	PKPdf	21 50 26.9	-1.1
comp=Z,0.4nm,0.7s,baz=339,slow=1.9,SNR=4.3							

*BYKL **13** 21:36:11.4±0.3, 53°31N×108°44E*
MOS 13 21:36:10.0±2.0, 53°19N×108°44E, h13km, mb4.4/1, 9C-9D, Error ellipse: s-maj=19.3km s-min=10.5km az=54.7, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KELR	**Kotokel**	**0.48**	**207**	⇑*i*Pg	Pg	21 36 22.3	+2.8
KELR				*e*Sg	Sg	21 36 30.3	+4.4
KELR				Pmax			
681nm,0.2s							
KELR				Smax			
6μm,0.3s							
OGRR	**Ongureny**	**0.68**	**312**	⇑*i*PG	Pg	21 36 23.5	+0.3
OGRR				*e*		21 36 32.5	
OGRR				pmax	pmax		
comp=Z,609nm,0.3s							
OGRR				smax			
comp=E,913nm,0.4s							
OGRR	**Ongureny**	**0.68**	**312**	⇑*i*Pg	Pg	21 36 23.6	+0.4
comp=E,423nm,0.4s							
OGRR				⇑*i*Pg	Pg	21 36 23.6	+0.4
comp=E,466nm,0.4s							
OGRR				⇑*i*Pg	Pg	21 36 23.6	+0.4
comp=E,620nm,0.4s							
OGRR				*e*Sg	Sg	21 36 32.3	+0.1
OGRR				Pmax			
comp=E,614nm,0.2s							
OGRR				Smax			
comp=E,931nm,0.3s							
ZRHB	**Zarechye**	**1.01**	**231**	*e*Pg	Pg	21 36 32.2	+2.8
ZRHB				*e*Sg	Sg	21 36 48.1	+5.6
ZRHB				Pmax			
comp=E,676nm,0.3s							
ZRHB				Smax			
comp=E,2μm,0.6s							
SYVR	**Suvo**	**1.04**	**63**	⇓*i*Pg	Pg	21 36 28.8	-1.3
SYVR				*e*Sg	Sg	21 36 41.7	-2.0
SYVR				Pmax			
comp=E,102nm,0.6s							
SYVR				Smax			
comp=E,368nm,0.4s							
TRG	**Tyrgan**	**1.34**	**252**	*e*PG	Pg	21 36 36.2	+0.5
TRG				*e*		21 36 54.7	
TRG				pmax	pmax		
comp=Z,329nm,0.3s							
TRG				smax			
comp=N,1μm,0.3s							
TRG	**Tyrgan**	**1.34**	**252**	⇓*i*Pg	Pg	21 36 36.2	+0.5
TRG				*e*		21 36 37.2	
TRG				*e*Sg	Sg	21 36 55.6	+2.6
TRG				max			
comp=N,349nm,0.3s							
TRG				Smax			
comp=N,1μm,0.4s							
UUDB	**Ulan-Yde**	**1.41**	**200**	⇑*i*Pg	Pg	21 36 38.6	+1.6
comp=N,180nm,0.4s							
UUDB				⇑*i*Pg	Pg	21 36 38.6	+1.6
comp=N,54nm,0.4s							
UUDB				⇓*i*Pg	Pg	21 36 38.6	+1.6
comp=N,196nm,0.4s							
UUDB				*e*Sg	Sg	21 36 59.0	+3.7
UUDB				Pmax			
comp=N,323nm,0.4s							
UUDB				Smax			
comp=N,1μm,0.5s							
FFNB	**Fofonovo**	**1.54**	**222**	*e*Pg	Pg	21 36 41.1	+1.7
FFNB				*e*Sg	Sg	21 37 03.3	+4.0
FFNB				Pmax			
comp=N,624nm,0.1s							
FFNB				Smax			
comp=N,2μm,0.5s							
KAB	**Kabansk**	**1.58**	**224**	*e*Pg	Pg	21 36 41.9	+1.6
KAB				*e*Sg	Sg	21 37 04.8	+4.1

TLY				pmax	pmax		
	comp=Z,22nm,0.3s						
TLY				smax			
	comp=E,152nm,0.5s						
TLY	**Talaya**	**3.30**	**245**	*e*Pg	Pg	21 37 11.6	-1.6
TLY				*e*Sg	Sg	21 37 54.9	-1.1
TLY				Pmax			
	comp=E,22nm,0.3s						
TLY				Smax			
	comp=E,149nm,0.4s						
CIT	**Chita**	**3.33**	**109**	*e*Pn	Pn	21 37 05.2	+3.5
CIT				*e*Pg	Pg	21 37 11.4	-2.3
CIT				*e*Sg	Sg	21 37 54.2	-2.6
CIT				Pmax			
	comp=E,76nm,1.0s						
CIT				Smax			
	comp=E,373nm,1.1s						
YOA	**Uoyan**	**3.51**	**32**	*e*PN	Pn	21 37 04.3	+0.1
YOA				*e*		21 37 12.3	
YOA				*i*		21 37 58.2	
YOA				pmax	pmax		
	comp=Z,77nm,0.4s						
YOA				smax			
	comp=N,626nm,1.3s						
UKT	**Uakit**	**3.81**	**51**	*e*Pn	Pn	21 37 09.4	+1.1
UKT				*e*Pg	Pg	21 37 18.3	-4.6
UKT				*e*Sg	Sg	21 38 06.5	-5.8
UKT				Pmax			
	comp=N,45nm,1.6s						
UKT				Smax			
	comp=N,76nm,1.0s						
ARS	**Arshan**	**3.89**	**253**	*e*PN	Pn	21 37 20.9	+12
ARS				*e*		21 38 11.7	
ARS				pmax	pmax		
	comp=Z,56nm,0.3s						
ARS				smax			
	comp=E,636nm,0.7s						
ARS	**Arshan**	**3.89**	**253**	*e*Pn	Pn	21 37 11.7	+2.4
ARS				*e*Pg	Pg	21 37 21.0	-3.4
ARS				*e*Sg	Sg	21 38 11.9	-2.8
ARS				Pmax			
	comp=E,73nm,0.6s						
ARS				Smax			
	comp=E,636nm,0.6s						
ZAK	**Zakamensk**	**4.26**	**231**	↓*i*	Pn	21 37 28.7	+14
ZAK				*e*Pg	Pg	21 37 31.0	-0.6
ZAK				*e*Sg	Sg	21 38 28.0	+1.3
ZAK				Pmax			
	comp=E,19nm,0.7s						
ZAK				Smax			
	comp=E,56nm,0.8s						
KPC	**Khapcheranga**	**4.27**	**143**	*e*Pn	Pn	21 37 16.2	+1.6
KPC				*e*Pg	Pg	21 37 29.0	-2.8
KPC				*e*Sn	Sn	21 38 06.4	+2.1
KPC				*e*Sg	Sg	21 38 24.3	-2.8
KPC				Pmax			
	comp=E,24nm,0.8s						
KPC				Smax			
	comp=E,821nm,0.6s						
MOY	**Mondy**	**4.81**	**254**	*e*PN	Pn	21 37 39.6	+18
MOY				*e*		21 38 39.8	
MOY				pmax	pmax		
	comp=Z,27nm,0.6s						
MOY				smax			
	comp=N,152nm,1.1s						
MOY	**Mondy**	**4.81**	**254**	*e*	Pn	21 37 26.8	+4.8
MOY				*e*Pg	Pg	21 37 38.3	-3.7
MOY				*e*Sn	Sn	21 38 21.3	+3.9
MOY				*e*Sg	Sg	21 38 40.7	-3.5
MOY				Pmax			
	comp=N,20nm,0.7s						
MOY				Smax			
	comp=N,151nm,1.3s						
ORL	**Orlik**	**5.27**	**266**	*e*PN	Pn	21 37 32.4	+4.1
ORL				*e*		21 37 47.5	
ORL				*e*		21 38 54.3	
ORL				pmax	pmax		
	comp=Z,14nm,0.6s						
ORL				smax			
	comp=N,213nm,0.9s						
ORL	**Orlik**	**5.27**	**266**	*e*Pn	Pn	21 37 31.4	+3.1
ORL				*e*		21 37 40.4	
ORL				*e*Sn	Sn	21 38 31.6	+2.7
ORL				*e*Sg	Sg	21 38 53.6	-5.4
ORL				max			
	comp=N,16nm,0.6s						
ORL				Smax			
	comp=N,213nm,1.5s						
NLYR	**Nelyaty**	**5.34**	**49**	*e*PN	Pn	21 37 29.4	+0.1
NLYR				*e*S	Sn	21 38 54.1	+23
NLYR				smax			
	comp=N,112nm,1.3s						
NLYR	**Nelyaty**	**5.34**	**49**	*e*	Pn	21 37 44.9	+16
NLYR				*e*Sg	Sg	21 38 55.9	-5.4
NLYR				max			
	comp=N,14nm,0.8s						
NLYR				Smax			
	comp=N,112nm,1.2s						
BOD	**Bodaibo**	**5.61**	**32**	*e*Sg	Sg	21 39 00.3	-10
BOD				Smax			
	comp=N,49nm,1.3s						
TUP	**Tupik**	**6.93**	**75**	*e*PN	Pn	21 37 54.1	+3.0
TUP				*e*		21 38 15.8	
TUP				*e*		21 39 43.7	
TUP				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TUP				smax			
	comp=N,185nm,1.3s						
TUP	**Tupik**	**6.93**	**75**	*e*Pn	Pn	21 37 51.7	+0.6
TUP				*e*Pg	Pg	21 38 14.5	-8.1
TUP				*e*		21 39 24.3	
TUP				*e*Sg	Sg	21 39 43.7	-8.5
TUP				Pmax			
	comp=N,3.0nm,1.0s						
TUP				Smax			
	comp=N,206nm,1.3s						

IDC 13 22:10:45.7±1.3, 13°.16N×142°.67E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.6/24, mbtmp3.9/4, Error ellipse: s-maj=65.1km s-min=25.5km az=97.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**33.90**	**194**	P	P	22 17 30.3	-0.1
	0.4nm,0.5s,baz=14,slow=9.3,SNR=5.0						
ASAR	**Alice Springs**	**37.59**	**193**	P	P	22 18 02.2	+0.1
	0.6nm,0.5s,baz=19,slow=13,SNR=10.0						
BVAR	**Borovoye Array**	**68.94**	**322**	P	P	22 21 52.9	+0.3
	0.6nm,0.5s,baz=94,slow=6.4,SNR=5.7						
DLBC	**Dease Lake**	**77.50**	**33**	P	P	22 22 43.0	0.0
	0.8nm,0.4s,baz=201,slow=5.4,SNR=4.4						

*DDA **13** 22:26:37.9, 37°.17N×34°.59E, h27km, Md2.8*
*ISK **13** 22:26:38.2, 37°.13N×34°.51E, h7km, MD2.9, ML2.3*
*CSEM **13** 22:26:38.6±0.1, 37°.14N×34°.49E, h8km, MD2.9, Error ellipse: s-maj=2.7km s-min=1.9km az=146.0*
*ISCJB **13** 22:26:38.9±0.8, 37°.12N±0°.05×34°.51E±0°.06, h8km±6km, Error ellipse: s-maj=9.4km s-min=5.4km az=138.6*

ISC 13 22:26:39.2±0.8, 37°.12N±0°.05×34°.52E±0°.07, h12km±7km, n18, σ0°83/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MERS	**Mersin**	**0.25**	**180**	PG	**Pg**	**22 26 44.0**	**-0.6**
MERS				SG	**Sg**	**22 26 47.9**	**-0.2**
MERS	**Mersin**	**0.25**	**180**	*i* Pg	**Pg**	**22 26 44.0**	**-0.5**
MERS				*i* Sg	**Sg**	**22 26 47.9**	**-0.2**
GULE	**Gulek**	**0.26**	**51**	*i* P	**Pg**	**22 26 44.6**	**-0.1**
GULE				*i* S	**Sg**	**22 26 48.7**	**+0.4**
GULE	**Gulek**	**0.26**	**51**	*i* P	**Pg**	**22 26 44.6**	**-0.1**
GULE				*i* S	**Sg**	**22 26 48.7**	**+0.4**
KARA	**Karaisali**	**0.45**	**72**	PG	**Pg**	**22 26 47.3**	**-0.8**
KARA				SG	**Sg**	**22 26 54.4**	**+0.3**
KARA	**Karaisali**	**0.45**	**72**	*i* Pg	**Pg**	**22 26 47.3**	**-0.8**
KARA				*i* Sg	**Sg**	**22 26 54.4**	**+0.3**
KRTS	**Karatas**	**0.88**	**128**	*e*PG	**Pg**	**22 26 56.0**	**-0.1**
KRTS	**Karatas**	**0.88**	**128**	*e*Pg	**Pg**	**22 26 56.0**	**-0.1**
YURE	**YUREGIR**	**0.94**	**108**	*i* P	**Pg**	**22 26 57.3**	**0.0**
YURE				*i* S	**Sg**	**22 27 10.5**	**+1.0**
YURE	**YUREGIR**	**0.94**	**108**	*i* P	**Pg**	**22 26 57.3**	**0.0**
YURE				*i* S	**Sg**	**22 27 10.5**	**+1.0**
KOZT	**Kozan**	**1.10**	**71**	*e*PN	**Pn**	**22 27 00.2**	**-0.2**
IKL	**Isikli**	**1.11**	**218**	*e*PN	**Pn**	**22 26 59.7**	**-0.8**
IKL				*e*SN	**Sn**	**22 27 15.7**	**+0.1**
IKL	**Isikli**	**1.11**	**218**	*e*Pn	**Pn**	**22 26 59.7**	**-0.8**
IKL				*e*Sn	**Sn**	**22 27 15.7**	**+0.1**
ERMK	**Ermenek**	**1.38**	**250**	*i* P	**Pn**	**22 27 06.5**	**+2.3**
ERMK	**Ermenek**	**1.38**	**250**	*i* P	**Pn**	**22 27 06.5**	**+2.3**
HDMB	**Hadim**	**1.64**	**265**	*e*PN	**Pn**	**22 27 07.9**	**+0.2**
HDMB	**Hadim**	**1.64**	**265**	*e*Pn	**Pn**	**22 27 07.9**	**+0.1**
SARI	**SarD1z-Kayseri**	**2.32**	**47**	*e*PN	**Pn**	**22 27 13.9**	**-3.3**

IGQ 13 22:41:08.7, 2°.20S×79°.59W, h5km±3km, Mb4.0, Ms3.8, 2C-2D, Error ellipse: s-maj=7.4km s-min=2.2km az=128.2, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIOE	**Riobamba**	**1.05**	**65**	P	Pg	22 41 29.8	+0.9
IGUA	**Igualata**	**1.18**	**53**	↑↑P	Pg	22 41 31.6	+0.3
ARRY	**Arrayan**	**1.32**	**59**	P	Pn	22 41 33.3	-0.6
JUI6	**Juive**	**1.36**	**55**	P	Pn	22 41 35.6	+1.3
MACE	**Macas**	**1.39**	**92**	S	Sb	22 41 53.2	+0.1
MACE	**Macas**	**1.39**	**92**	P	Pn	22 41 34.5	-0.2
ULBA	**Ulba**	**1.40**	**58**	S	Sb	22 41 56.0	+2.6
ULBA	**Ulba**	**1.40**	**58**	P	Pn	22 41 35.7	+0.9
CHIS	**Cerro-Chispas-**	**1.61**	**315**	P	Pn	22 41 34.1	-3.8
PISA	**Pisayambo**	**1.65**	**47**	S	Sn	22 42 04.0	+4.0
PISA	**Pisayambo**	**1.65**	**47**	P	Pn	22 41 39.7	+1.3
TAMB	**Tambo**	**1.93**	**39**	↓↓P	Pn	22 41 44.8	+2.6
VC1	**Cotopaxi 1**	**1.95**	**37**	S	Sn	22 42 13.9	+6.6
VC1	**Cotopaxi 1**	**1.95**	**37**	P	Pn	22 41 44.7	+2.3
COV1	**Cotopaxi Volc**	**1.97**	**39**	P	Pn	22 41 46.5	+3.7
PITA	**Cotopaxi Volc**	**2.00**	**35**	↑↑P	Pn	22 41 46.4	+3.3
JAMA	**Jama**	**2.02**	**342**	P	Pn	22 41 40.4	-3.1
TERV	**Terraza Guagua**	**2.24**	**26**	S	Sn	22 42 19.8	+5.3
TERV	**Terraza Guagua**	**2.24**	**26**	P	Pn	22 41 49.8	+3.3
GGP	**Refugio Guagua**	**2.24**	**26**	P	Pn	22 41 49.5	+3.0
ANTI	**Antisana**	**2.25**	**39**	↓↓P	Pn	22 41 49.9	+3.3
PINO	**Pino**	**2.25**	**26**	P	Pn	22 41 49.6	+3.0
YANA	**Yana**	**2.30**	**26**	S	Sn	22 42 21.3	+5.2
YANA	**Yana**	**2.30**	**26**	P	Pn	22 41 49.9	+2.5
OTAV	**Otavalo**	**2.67**	**25**	P	Pn	22 41 54.3	+1.8
CAYR	**Refugio Cayamb**	**2.71**	**36**	P	Pn	22 41 57.3	+4.4
CAYA	**Cayambe**	**2.76**	**35**	P	Pn	22 42 00.2	+6.5
COTA	**Cotacachi**	**2.81**	**26**	P	Pn	22 41 58.3	+4.0

*IDC **13** 23:00:15.7±2.3, 8°.96S×113°.22E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.5/20, mbtmp3.6/4, Error ellipse: s-maj=144.6km s-min=23.9km az=50.0*
*ISCJB **13** 23:00:21.5±1.2, 9°.4S±0°.1×112°.79E±0°.06, h72km±16km, mb3.5/4, Error ellipse: s-maj=24.5km s-min=8.3km az=11.2*
*DJA **13** 23:00:22, 9°.45S×112°.82E, h30km, MLv4.0/13*

ISC 13 23:00:22.4±1.2, 9°.4S±0°.1×112°.80E±0°.06, h66km±16km, n20, σ0°82/20, mb3.5/4, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRKI	**Karangkates**	**1.32**	**345**	P	**Pn**	**23 00 44.3**	**-0.6**
GMJI	**Gumukmas**	**1.32**	**29**	P	**Pn**	**23 00 43.4**	**-1.5**
PWJI	**Pagerwojo**	**1.72**	**325**	P	**Pn**	**23 00 49.4**	**-0.8**
BYJI	**Banyuwangi**	**1.96**	**52**	P	**Pn**	**23 00 53.0**	**-0.4**
PCJI	**Pacitan**	**2.03**	**308**	P	**Pn**	**23 00 54.2**	**-0.1**
NBBI	**Negara**	**2.09**	**59**	P	**Pn**	**23 00 56.0**	**+0.9**
ABJI	**Asem Bagus**	**2.16**	**41**	P	**Pn**	**23 00 57.1**	**+0.9**
IGBI	**Denpasar**	**2.40**	**75**	P	**Pn**	**23 00 59.1**	**-0.2**
NGJI	**Ngawi**	**2.45**	**327**	P	**Pn**	**23 01 03.9**	**+3.8**
DNP	**Denpasar**	**2.50**	**72**	P	**Pn**	**23 01 00.7**	**0.0**
GRJI	**Gresik**	**2.53**	**353**	P	**Pn**	**23 01 00.6**	**-0.6**
KMMI	**Kalianget**	**2.64**	**26**	P	**Pn**	**23 01 03.8**	**+1.1**
UGM	**Wanagama**	**2.72**	**304**	P	**Pn**	**23 01 04.1**	**+0.4**
SRBI	**Singaraja**	**2.74**	**61**	P	**Pn**	**23 01 04.2**	**+0.2**
KHKI	**Kahang-Kahang**	**2.97**	**69**	P	**Pn**	**23 01 07.3**	**+0.1**
CGJI	**Cibinong**	**7.58**	**291**	P	**Pn**	**23 02 10.9**	**+0.7**
WRA	**Warramunga Arr**	**23.27**	**119**	P	**P**	**23 05 23.1**	**-1.4**
	0.7nm,0.6s,mb3.2,baz=292,slow=11,SNR=5.9						
ASAR	**Alice Springs**	**24.63**	**128**	P	**P**	**23 05 36.6**	**-0.2**
	0.8nm,0.6s,mb3.4,baz=304,slow=8.8,SNR=13						
STKA	**Stephens Creek**	**34.79**	**134**	P	**P**	**23 07 10.3**	**+3.5**
	0.6nm,0.5s,mb3.7,baz=284,slow=12,SNR=2.4						
MKAR	**Makanchi Array**	**62.25**	**337**	P	**P**	**23 10 37.5**	**+0.2**
	0.3nm,0.4s,mb3.6,baz=126,slow=7.3,SNR=7.3						

*IDC **13** 23:15:12.0±1.1, 34°.03S×179°.62W, h0km, mb4.2/4, mb1 4.3/5, mb1mx4.1/16, mbtmp4.2/5, ML4.5/1, MS2.7/1, Ms1 2.7/1, ms1mx2.6/33, Error ellipse: s-maj=38.0km s-min=25.7km az=67.0*
*NEIC **13** 23:15:17.1±0.8, 34°.11S×179°.61W, h35km, Error ellipse: s-maj=20.7km s-min=18.0km az=120.0*

ISC 13 23:15:22.1±4.4, 34°.4S±0°.2×180°.0E±0°.3, h55km±30km, n13, σ1°16/7, mb4.1/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**4.52**	**210**	Pn	**Pn**	**23 16 26.8**	**-1.1**
	17nm,0.3s,baz=285,slow=3.1,SNR=97						
URZ				Sn	**Sn**	**23 17 19.4**	**+0.2**
	3.2nm,0.3s,baz=171,slow=19,SNR=2.8						
URZ				LR	LR	23 17 49.8	
	comp=Z,71nm,18.5s,baz=310,slow=32						
OUZ	**Omahuta**	**5.33**	**259**	*e*Pn	**Pn**	**23 16 40.0**	**+1.0**
	46nm,0.6s						
ASAR	**Alice Springs**	**41.39**	**272**	P	**P**	**23 23 02.6**	**-0.4**
	0.8nm,0.3s,mb3.8,baz=113,slow=6.8,SNR=16						
WRA	**Warramunga Arr**	**42.74**	**278**	P	**P**	**23 23 13.8**	**-0.3**
	1.0nm,0.3s,mb4.0,baz=119,slow=7.6,SNR=6.4						
QSPA	**South Pole Qui**	**55.74**	**180**	P	**P**	**23 24 53.9**	**+1.4**
	3.8nm,0.8s,mb4.5,baz=67,slow=1.6,SNR=16						
MAW	**Mawson**	**68.00**	**202**	P	**P**	**23 26 14.4**	**-0.6**
	0.7nm,0.4s,mb4.1,baz=127,slow=10,SNR=6.6						
ARCES	**ARCESS Array B**	**142.06**	**346**	PKP	PKPdf	23 34 42.5	-4.3
	1.3nm,0.9s,baz=57,slow=3.3,SNR=3.3						
FINES	**FINESS Array B**	**148.20**	**336**	PKPbc	PKPbc	23 34 57.4	-3.6
	1.2nm,0.6s,baz=54,slow=2.4,SNR=8.5						
MMAI	**Mount Meron Ar**	**150.60**	**277**	PKPbc	PKPbc	23 35 05.7	-2.2
	0.6nm,0.4s,baz=97,slow=5.8,SNR=3.4						
MMAI				PKPab	PKPab	23 35 14.3	-0.6
	0.7nm,0.4s,baz=132,slow=6.0,SNR=2.7						
DBIC	**Dimbokro**	**152.07**	**170**	PKPbc	PKPbc	23 35 10.3	-1.6
	5.5nm,1.2s,baz=164,slow=1.0,SNR=2.9						
DBIC	**Dimbokro**	**152.07**	**170**	PKPbc	PKPbc	23 35 10.3	-1.6
BRTR	**Keskin Array B**	**152.73**	**291**	PKPab	PKPab	23 35 22.2	-1.4
	0.2nm,0.5s,baz=54,slow=3.5,SNR=2.6						
AKASG	**Malin Array Be**	**153.22**	**316**	PKPab	PKPab	23 35 23.2	-2.1
	0.3nm,0.3s,baz=69,slow=4.7,SNR=2.9						

GUC 13 23:34:40.0±0.5, 20°.51S×69°.42W, h73km±4km, ML3.6, 1C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**0.54**	**187**	↑*i*P	Pn	23 34 53.7	+0.3
PB01				*i* S	Sn	23 35 03.7	+0.5
PB01				AML	AML	23 35 04.4	
	comp=N,3μm,0.2s						
MNMC	**Miæe Miæ**	**1.38**	**353**	↓*i*P	Pn	23 35 04.2	+0.7
MNMC				*i* S	Sn	23 35 23.0	+1.9
MNMC				AML	AML	23 35 27.3	
	comp=E,2μm,0.2s						
MACH	**Maria Elena**	**1.71**	**191**	*e*P	Pn	23 35 08.6	+0.8
MACH				*e*S	Sn	23 35 30.8	+2.0
PB04	**Plate Boundary**	**1.75**	**182**	*e*P	Pn	23 35 11.1	+2.8
PB04				*i* S	Sn	23 35 34.2	+4.4
PB04				AML	AML	23 35 43.2	
	comp=N,544nm,0.5s						
PECH	**Pedro de Valdi**	**2.09**	**187**	*e*P	Pn	23 35 14.1	+1.2
PECH				*i* S	Sn	23 35 40.2	+2.2
PECH				AML	AML	23 35 46.8	
	comp=E,673nm,0.2s						

NEIC 13 23:41:12.5, 37°.64S×177°.11E, h5km, ML3.9(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	**White Island**	**0.13**	**29**	P	Pg	23 41 15.6	+0.5
WIZ				S	Sg	23 41 18.1	+1.3
MARZ	**Manawahe**	**0.49**	**225**	P	Pg	23 41 22.4	+0.5
URZ	**Urewera**	**0.62**	**180**	P	Pg	23 41 24.9	+0.5
TGRZ	**Tauranga**	**0.68**	**262**	P	Pg	23 41 25.9	+0.3

*NIED **13** 23:43:00, 39°.00N×140°.90E, h5km, Mw6.9 Best double couple: M0 2.72000×10^19 NP1:φ=209.00000°, δ51.00000°, λ104.00000°. NP2:φ=8.00000°, δ41.00000°, λ74.00000°.*
*BJI **13** 23:43:38.9, 38°.91N×141°.29E, h7km, mB7.0/49, mb6.0/45, Ms7.3/78, Ms7 7.3/62*
*IDC **13** 23:43:44.6±0.2, 39°.07N×140°.68E, h0km, mb5.9/62, mb1 6.0/65, mb1mx6.0/65, mbtmp5.9/65, ML5.1/3, MS7.0/34, Ms1 7.0/34, ms1mx6.9/37, Error ellipse: s-maj=7.0km s-min=5.5km az=105.0*
*NEIC **13** 23:43:45.4, 39°.03N×140°.88E, h8km, mb6.5/274, ME6.7, MS7.0/203, MW6.8, MW6.8, MW6.9(NIED), Moment Tensor Solution. s120 Moment tensor: Scale 10^19Nm; Mrr 1.53; Mθθ 0.24; Mφφ -1.77; Mrθ -0.13; Mθφ -0.70; Mφr 0.50; Best double couple: M0 1.90000×10^19 NP1:φs=5.00000°, δ53.00000°, λ74.00000°. NP2:φs=211.00000°, δ40.00000°, λ110.00000°. Principal axes: T 1.6500, Plg75.0000°, Azm225.0000°; N 0.4000, Plg12.0000°, Azm14.0000°; P -2.0400, Plg7.0000°, Azm106.0000°; Two events about 3 seconds apart. Depth from synthetics of broadband displacement seismograms based on first event. Energy computed from CMT mechanism. After JMA.*
NEIC At least 13 people killed, 357 injured, 614 buildings damaged and landslides occurred in the Furukawa-Kurihara-Morioka area. Felt [VII] at Furukawa; [VI] at Sendai; [IV] at Misawa and Tsukuba; [III] at Tokyo. Felt as far north as Hirosaki and as far south as Yokohama. Recorded [6U JMA] in Iwate and Miyagi; [5U JMA] in Akita; [5L JMA] in Fukushima and Yamagata; [4 JMA] throughout northern Honshu. Recorded [1 JMA] as far south as Aichi. Recorded [3 JMA] in southwestern Hokkaido, [2 JMA] in the Tomakomai-Shizunai area and [1 JMA] throughout southern Hokkaido.
*BGS **13** 23:43:45.0±1.4, 38°.56N×139°.60E, h10km, mb6.4, MS7.2*
*JMA **13** 23:43:45.3, 39°.03N×140°.88E, h8km±1km, M7.2 Broadband fault plane solution: P waves. NP1: φs=209.00000°, δ39.00000°, λ101.00000°. NP2: φs=15.00000°, δ51.00000°, λ81.00000°. Principal axes: T Plg81.0000°, Azm242.0000°; N Plg7.0000°, Azm20.0000°; P Plg6.0000°, Azm111.0000°;*
*ISCJB **13** 23:43:46.2±0.3, 39°.11N±0°.01×140°.76E±0°.01, h18km±2km, mb6.3/524, MS7.1/296 Error ellipse: s-maj=2.3km s-min=1.6km az=149.5*
*MOS **13** 23:43:48.1±0.9, 39°.13N×140°.69E, h33km, mb6.6/156, MS7.0/96, Error ellipse: s-maj=5.7km s-min=3.8km az=101.0*
*SZGRF **13** 23:43:50.3, 39°.49N×141°.99E, h33km, mb6.7, MS7.6, Eastern Honshu, Japan*
*DJA **13** 23:43:51, 39°.01N×140°.39E, h23km, Mw7.3/72*
*GCMT **13** 23:43:53.2±0.0, 39°.03N×140°.85E, h12km, MW6.9, Moment Tensor Solution. s110,c269; s99,c269; Moment tensor: Scale 10^19Nm; Mrr 2.46±.01; Mθθ -0.10±.01; Mφφ -2.37±.01; Mrθ -0.16±.03; Mθφ -0.88±.01; Mφr -0.26±.03; Best double couple: M0 2.60000×10^19 NP1:φs17.00000°, δ42.00000°, λ87.00000°. NP2: φs201.00000°, δ48.00000°, λ92.00000°. Principal axes: T 2.4800, Plg86.0000°, Azm137.0000°; N 0.2000, Plg2.0000°, Azm19.0000°; P -2.6900, Plg3.0000°, Azm289.0000°; Data Used: II IU IC G CN. LP body wave period 50 sec. Mantle waves from 115 sta. Surface waves: sta=121, comp=321, per= 50.*

ISC 13 23:43:46.8±0.4, 39°.15N±0°.01×140°.74E±0°.01, h12km±2km, h16km±1.1km: pP-P, n2356, σ0°86/2106, mb6.3/524, MS7.1/296, 1036C-417D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRG	**Rokugo**	**0.26**	**342**	P	**Pg**	**23 43 53.5**	**+1.4**
JRG				*e*S	**Sg**	**23 43 59.7**	**+4.0**
JYK	**Kaneyama**	**0.38**	**232**	↓↓P	**Pg**	**23 43 53.7**	**-0.5**
JMK	**Ichinoseki**	**0.43**	**118**	↓↓P	**Pg**	**23 43 50.7**	**-4.5**
JMK				*e*S	**Sg**	**23 43 55.0**	**-5.9**
JOM	**Ohasama**	**0.54**	**53**	↓↓P	**Pg**	**23 43 55.7**	**-1.6**
JOM				*e*S	**Sg**	**23 44 03.6**	**-0.8**
JYW	**Yuwa**	**0.56**	**314**	↓↓P	**Pg**	**23 43 59.5**	**+1.7**
OFUJ	**Ofunato**	**0.73**	**95**	↓↓P	**Pg**	**23 43 56.9**	**-4.0**
JOU	**Okura**	**0.79**	**184**	P	**Pg**	**23 43 58.5**	**-3.5**
JIO	**Ouri**	**0.84**	**145**	↓↓P	**Pg**	**23 43 58.1**	**-5.0**
JIO				*e*S	**Sg**	**23 44 08.3**	**-5.8**
JTB	**Tobi-shima**	**0.92**	**273**	↓↓P	**Pg**	**23 44 04.9**	**+0.4**
MIYJ	**Miyakonagasawa**	**0.94**	**63**	↓↓P	**Pg**	**23 44 02.3**	**-2.6**
JKZ	**Kuzumaki**	**0.95**	**29**	↑↑P	**Pg**	**23 44 04.2**	**-0.9**
JAH	**Hinai**	**1.04**	**356**	P	**Pb**	**23 44 07.3**	**+0.6**
JOG2	**Oga 2**	**1.05**	**317**	P	**Pb**	**23 44 07.9**	**+0.9**
JYS	**Shiratake**	**1.07**	**210**	↑↑P	**Pb**	**23 44 04.7**	**-2.5**
JTH	**Tanohata**	**1.17**	**48**	↓↓P	**Pb**	**23 44 07.1**	**-1.9**
JMM	**Marumori**	**1.28**	**178**	↑↑P	**Pn**	**23 44 06.2**	**-4.4**
JAW	**Awa shima**	**1.35**	**240**	↑↑P	**Pn**	**23 44 11.2**	**-0.3**
JANG	**Nango**	**1.36**	**26**	↑↑P	**Pn**	**23 44 11.0**	**-0.6**
JIW	**Iwasaki**	**1.54**	**339**	↑↑P	**Pn**	**23 44 15.4**	**+1.2**
JTM	**Tenmabayashi**	**1.65**	**9**	P	**Pn**	**23 44 16.4**	**+0.7**
JFT	**Otama**	**1.66**	**191**	↑↑P	**Pn**	**23 44 13.3**	**-2.4**
JNS	**Sasagawa**	**1.74**	**220**	↑↑P	**Pn**	**23 44 16.1**	**-0.7**
JSI2	**Shiura 2**	**1.92**	**353**	↑↑P	**Pn**	**23 44 20.7**	**+1.4**
JSD	**Sado**	**2.24**	**241**	P	**Pn**	**23 44 23.3**	**-0.4**
JOT	**Ohata**	**2.24**	**6**	↑↑P	**Pn**	**23 44 25.5**	**+1.8**
JIZZ	**Izumozaki**	**2.27**	**225**	↑↑P	**Pn**	**23 44 24.7**	**+0.6**
JSB	**Shiboa**	**2.27**	**197**	P	**Pn**	**23 44 24.3**	**+0.1**
JHK	**Hiroka**	**2.33**	**216**	↑↑P	**Pn**	**23 44 24.4**	**-0.6**
JHO	**Hitachi**	**2.54**	**183**	P	**Pn**	**23 44 25.9**	**-1.9**
JKT	**Katashina**	**2.66**	**207**	P	**Pn**	**23 44 29.7**	**+0.3**
JJN	**Nakama**	**2.88**	**226**	↑↑P	**Pn**	**23 44 33.1**	**+0.6**
JAG	**Ashikaga**	**2.91**	**201**	↑↑P	**Pn**	**23 44 32.6**	**-0.3**
JGK	**Kuni**	**3.07**	**213**	↑↑P	**Pn**	**23 44 36.0**	**+0.8**
JSZ	**Suzu**	**3.15**	**238**	↑↑P	**Pn**	**23 44 36.5**	**+0.2**
JHG	**Hegura jima**	**3.27**	**248**	↑↑P	**Pn**	**23 44 38.3**	**+0.5**
MAJO	**Matsushiro**	**3.29**	**218**	*e*P	**Pn**	**23 44 38.5**	**+0.4**
MAT	**Matsushiro**	**3.29**	**218**	P	**Pn**	**23 44 38.1**	**0.0**
MAT				S	**Sn**	**23 45 21.0**	**+3.9**
MJAR	**Matsushiro Arr**	**3.29**	**218**	Pn	**Pn**	**23 44 37.9**	**-0.2**
	170nm,0.3s,baz=29,slow

JKY	**Yasaka**	**5.70 234**	P	**Pn**	**23 45 12.9 +1.6**
JIE	**Ise**	**5.75 215**	P	**Pn**	**23 45 13.8 +1.9**
JWT	**Wachi**	**5.75 229**	P	**Pn**	**23 45 14.2 +2.3**
JKSM	**Kasumi**	**6.00 236**	P	**Pn**	**23 45 17.1 +1.7**
JHJ	**Hachijo jima 2**	**6.07 188**	Pn	**Pn**	**23 45 14.6 -1.8**
	comp=N,184nm,0.3s,baz=30,slow=9.1,SNR=57				
JHJ			Sn	**Sn**	**23 46 22.9 -2.8**
	comp=N,1μm,0.3s,baz=271,slow=23,SNR=7.9				
JHJ2	**Mitsune**	**6.07 187**	P	**Pn**	**23 45 15.1 -1.3**
JKN2	**Miekihoku**	**6.07 218**	P	**Pn**	**23 45 17.2 +0.8**
YUK	**Yuzh-Kuril'sk**	**6.21 37**	*i* P	**Pn**	**23 45 18.6 +0.4**
YUK			*i* S	**Sn**	**23 46 32.4 +3.3**
YUK			pmax	pmax	
	comp=N,100μm,6.0s				
YUK			pmax	pmax	
	comp=E,62μm,6.0s				
YUK			pmax	pmax	
	comp=Z,75μm,6.0s				
YUK			pmax	pmax	
	comp=N,5μm,0.5s				
YUK			pmax	pmax	
	comp=E,3μm,0.5s				
YUK			pmax	pmax	
	comp=Z,5μm,0.5s				
YUK			smax		
	comp=N,583μm,15.0s				
YUK			smax		
	comp=E,393μm,15.0s				
YUK			MLR	MLR	
	comp=N,982μm,14.8s				
YUK			MLR	MLR	
	comp=E,228μm,14.8s				
YUK			MLR	MLR	
	comp=Z,635μm,14.8s				
YUK	**Yuzh-Kuril'sk**	**6.21 37**	*e*P	**Pn**	**23 45 19.0 +0.8**
JAD	**Aida**	**6.73 233**	P	**Pn**	**23 45 27.9 +2.5**
JJS	**Sakaide**	**7.25 231**	P	**Pn**	**23 45 34.9 +2.3**
VLA	**Vladivostok**	**7.76 304***c* *i*P		**Pn**	**23 45 41.4 +1.8**
VLA			*e*		23 47 15.8
VLA			pmax	pmax	
	comp=Z,158nm,0.9s				
VLA	**Vladivostok**	**7.76 304**⇑*i*P		**Pn**	**23 45 42.2 +2.6**
YSS	**Yuzh-Sakhalins**	**7.94 10***oe*P		**Pn**	**23 45 43.8 +1.9**
YSS			*i* S	**Sn**	**23 47 16.0 +4.4**
YSS			pmax	pmax	
	comp=Z,1μm,0.8s				
YSS			pmax	pmax	
	comp=Z,23μm,6.0s				
YSS			MLR	MLR	
	comp=Z,688μm,14.0s				
YSS	**Yuzh-Sakhalins**	**7.94 10** *e*Pn		**Pn**	**23 45 44.2 +2.3**
KUR	**Kuril'sk**	**8.06 39**	P	**Pn**	**23 45 42.0 -1.6**
KUR			*i* S	**Sn**	**23 47 16.0 +1.4**
KUR			pmax	pmax	
	comp=N,2μm,1.0s				
KUR			pmax	pmax	
	comp=E,1μm,1.0s				
KUR			pmax	pmax	
	comp=Z,6μm,1.0s				
KUR			pmax	pmax	
	comp=N,96μm,6.0s				
KUR			pmax	pmax	
	comp=E,89μm,6.0s				
KUR			pmax	pmax	
	comp=Z,109μm,6.0s				
KUR			smax		
	comp=N,110μm,10.0s				
KUR			smax		
	comp=E,290μm,10.0s				
KUR			MLR	MLR	
	comp=E,129μm,13.0s				
KUR			MLR	MLR	
	comp=Z,285μm,13.0s				
KUR	**Kuril'sk**	**8.06 39**	*e*P	**Pn**	**23 45 42.5 -1.1**
JHIK	**Hikimi**	**8.43 240**	P	**Pn**	**23 45 51.7 +2.9**
JKU	**Kubokawa**	**8.51 229**	P	**Pn**	**23 45 51.9 +2.1**
JTO	**Tosashimizu**	**8.98 228**	P	**Pn**	**23 45 58.0 +1.7**
JTY	**Toyota**	**9.17 241**	P	**Pn**	**23 46 02.7 +3.8**
JFA	**Akaike**	**9.67 239**	P	**Pn**	**23 46 09.1 +3.3**
MDJ	**Mudanjiang**	**9.94 307**	P	**Pn**	**23 46 11.6 +2.2**
MDJ			S	**Sn**	**23 48 01.8 +0.9**
MDJ			PcP	PcP	23 52 19.1 -1.8
MDJ			ScP	ScP	23 55 48.6 -4.4
MDJ			PcS	PcS	23 55 53.1 -1.1
MDJ			ScS	ScS	23 59 27.0 -0.5
MDJ			LR	LR	
	comp=N,1503μm,23.9s				
MDJ			LR	LR	
	comp=E,1089μm,32.9s				
MDJ			LR	LR	
	comp=Z,1726μm,25.4s				
MDJ	**Mudanjiang**	**9.94 307**⇓ *e*Pn		**Pn**	**23 46 12.8 +3.4**
	comp=Z,7.8nm,1.9s				
JKIT	**Kitakata**	**9.95 232**	P	**Pn**	**23 46 13.2 +3.6**
JNU	**Nakatsue**	**9.98 236**	P	**Pn**	**23 46 12.9 +2.8**
HABR	**Khabarovsk**	**10.18 338***c* *i*P		**Pn**	**23 46 16.1 +3.4**
HABR			*e*		23 48 13.2
HABR			pmax	pmax	
	comp=Z,1μm,1.3s				
HABR			pmax	pmax	
	comp=E,556nm,1.6s				
HABR			pmax	pmax	
	comp=N,876nm,1.4s				
KSRS	**Korea Array**	**10.21 264**	Pn	**Pn**	**23 46 15.8 +2.6**
	comp=N,60nm,0.3s,baz=78,slow=13,SNR=229				
KSRS			Sn	**Sn**	**23 48 14.0 +6.4**
	comp=N,27nm,0.3s,baz=75,slow=23,SNR=4.7				
KSRS			LR	LR	23 49 53.6
	comp=N,1344μm,19.5s,baz=72,slow=36				
KSRS	**Korea Array**	**10.21 264**	P	**Pn**	**23 46 15.8 +2.6**
KSRS					23 48 14.0
KSRS			pmax	pmax	
	comp=Z,60nm,0.3s				
KSRS			smax		
	comp=N,27nm,0.3s				
KSRS			MLR	MLR	
	comp=Z,344μm,19.5s				
JUR	**Ureshino**	**10.61 239**	P	**Pn**	**23 46 22.5 +3.9**
NGSJ	**Nagasakinomoza**	**10.99 237**	P	**Pn**	**23 46 27.2 +3.3**
INCN	**Inchon**	**11.21 266** *e*Pn		**Pn**	**23 46 31.1 +4.3**
INCN		*e*Sn		**Sn**	**23 48 33.4 +1.4**
KLR	**Kul'dur**	**11.95 330**	*e*P	**Pn**	**23 46 36.0 -0.9**
CBIJ	**Chichi jima**	**12.08 174**	Pn	**Pn**	**23 46 32.2 -6.6**
	comp=Z,212nm,0.3s,baz=340,slow=15,SNR=36				
CBIJ			Sn	**Sn**	**23 48 40.1 -13**
	comp=Z,127nm,0.3s,baz=121,slow=24,SNR=6.1				
CN2	**Changchun**	**12.37 297**	⇑P	**Pn**	**23 46 46.8 +4.2**
CN2			pmax	pmax	
	comp=Z,69μm,6.0s				
SNY	**Shenyang**	**13.33 287**	⇓P	**Pn**	**23 47 01.0 +5.2**
SNY			S	**Sn**	**23 49 37.0 +13**
SNY			pmax	pmax	
	comp=Z,79μm,5.9s				
SNY			LR	LR	
	comp=N,626μm,15.3s				
SNY			LR	LR	
	comp=E,976μm,22.0s				
SNY			LR	LR	
	comp=Z,1547μm,25.7s				
DL2	**Dalian**	**14.86 275**⇑*i*P		**Pn**	**23 47 19.3 +2.7**
DL2			S	**Sn**	**23 50 04.8 +3.6**
DL2			pmax	pmax	
	comp=Z,880nm,2.5s				
DL2			pmax	pmax	
	comp=Z,66μm,9.9s				
DL2			LR	LR	
	comp=E,478μm,20.0s				
DL2			LR	LR	
	comp=Z,596μm,24.2s				
SKR	**Severo-Kuril's**	**15.82 38**⇓*i*P		**Pn**	**23 47 27.0 -2.3**
SKR			pmax	pmax	
	comp=N,15μm,10.0s				
SKR			pmax	pmax	
	comp=E,19μm,10.0s				
SKR			pmax	pmax	
	comp=Z,25μm,10.0s				
SKR			pmax	pmax	
	comp=Z,4μm,3.0s				
SKR			pmax	pmax	
	comp=N,850nm,2.0s				
SKR			pmax	pmax	
	comp=E,720nm,2.0s				
SKR			MLR	MLR	
	comp=E,217μm,16.0s				
SKR			MLR	MLR	
	comp=Z,418μm,16.0s				
SKR			MLR	MLR	
	comp=N,237μm,14.0s				
JOW	**Kunigami**	**16.11 224**	P	**Pn**	**23 47 31.9 -1.2**
SSE	**Sheshan**	**17.88 249**	P	**Pn**	**23 47 53.1 -2.2**
SSE			sP	sP	23 47 58.3 -2.4
SSE			S	**Sn**	**23 51 11.6 -2.9**
SSE			sS	sS	23 51 23.4 -2.9
SSE			pmax	pmax	
	comp=Z,1μm,1.0s				
SSE			pmax	pmax	
	comp=Z,127μm,12.0s				
SSE			LR	LR	
	comp=N,606μm,23.1s				
SSE			LR	LR	
	comp=E,487μm,23.1s				
SSE			LR	LR	
	comp=Z,559μm,19.5s				
HIA	**Hailar**	**18.07 311** *e*P		**Pn**	**23 47 56.6 -1.0**
HIA			pmax	pmax	
	comp=Z,742nm,1.3s				
HIA	**Hailar**	**18.07 311** *e*P		**Pn**	**23 47 56.6 -1.1**
	comp=Z,742nm,1.3s				
PEA0B	**Petropavlovsk-**	**18.18 34** *e*P		**Pn**	**23 47 54.8 -4.1**
PETK	**Petropavlovsk-**	**18.18 34** P		**Pn**	**23 47 55.4 -3.5**
	comp=Z,2.4nm,0.3s,baz=206,slow=6.6,SNR=25				
PETK			PcP	PcP	23 52 33.0 +1.3
	comp=Z,1.0nm,0.3s,baz=238,slow=4.9,SNR=5.1				
PETK			LR	LR	23 55 52.5
	comp=Z,189μm,18.2s,baz=226,slow=40				
PET	**Petropavlovsk**	**18.55 36** *de*P		**Pn**	**23 48 02.8 -0.6**
PET			*e*S	**Sn**	**23 51 30.5 0.0**
PET			pmax	pmax	
	comp=Z,51μm,8.7s				
PET			pmax	pmax	
	comp=Z,68μm,7.5s				
PET			pmax	pmax	
	comp=Z,526nm,1.0s				
PET			MLR	MLR	
	comp=Z,286μm,21.0s				
PET			MLR	MLR	
	comp=Z,236μm,22.0s				
PET	**Petropavlovsk**	**18.55 36** *e*P		**Pn**	**23 48 03.4 0.0**
	comp=Z,1μm,1.4s				
TIA	**Tai'an**	**18.91 268**	P	**Pn**	**23 48 07.0 -0.9**
TIA			pP	pP	23 48 14.0 +3.4
TIA			sP	sP	23 48 18.0 +5.9
TIA			PP		23 48 26.0
TIA			S	**Sn**	**23 51 44.6 +5.2**
TIA			LR	LR	
	comp=N,430μm,13.1s				
TIA			LR	LR	
	comp=E,333μm,13.1s				
BJI	**Beijing**	**18.94 281**	P	**Pn**	**23 48 07.3 -0.9**
BJI			S	**Sn**	**23 51 46.5 +6.4**
BJI			pmax	pmax	
	comp=Z,840nm,1.5s				
BJI			LR	LR	
	comp=N,243μm,16.0s				
BJI			LR	LR	
	comp=E,820μm,14.4s				
BJI			LR	LR	
	comp=Z,765μm,30.3s				
BJT	**Baijiatuau**	**18.95 280**⇑*i*P		**Pn**	**23 48 07.2 -1.1**
BJT			pmax	pmax	
	comp=Z,2μm,1.3s				
BJT	**Baijiatuau**	**18.95 280**⇑*i*P		**Pn**	**23 48 07.2 -1.1**
	comp=Z,2μm,1.3s				
NJ2	**Nanjing**	**19.13 255** *e*P		**Pn**	**23 48 09.0 -1.6**
NJ2			pP	pP	23 48 12.8 -0.2
NJ2			sP	sP	23 48 17.0 +2.5
NJ2			PP		23 48 27.0
NJ2			S	**Sn**	**23 51 38.0 -6.8**
NJ2			pmax	pmax	
	comp=Z,830nm,1.1s				
NJ2			pmax	pmax	
	comp=Z,81μm,8.0s				
NJ2			LR	LR	
	comp=N,366μm,11.4s				
NJ2			LR	LR	
	comp=E,271μm,10.8s				
CLNS	**Chul'man**	**20.54 335***c* *i*P		**P**	**23 48 25.0 +0.1**
CLNS			*e*		23 48 39.9
CLNS			*e*		23 52 39.6
CLNS			*e*		23 59 51.2
CLNS			pmax	pmax	
	comp=Z,1μm,2.2s				
CLNS			pmax	pmax	
	comp=N,1μm,2.2s				
CLNS			pmax	pmax	
	comp=E,379nm,2.3s				
CLNS			MLR	MLR	
	comp=E,142μm,13.0s,MS6.7				
CLNS			MLR	MLR	
	comp=Z,287μm,19.0s				
CLNS			MLR	MLR	
	comp=N,214μm,15.0s,MS6.7				
TATO	**Taipei**	**21.52 235**⇑*i*P		**P**	**23 48 33.3 -2.5**
	comp=N,1μm,1.2s,mb6.2				
TATO			LR	LR	
	comp=Z,732μm,20.0s,MS7.1				
TATO	**Taipei**	**21.52 235**	P	**P**	**23 48 36.8 +1.0**
	SNR=16				
TATO			P		23 48 36.8
	SNR=16				
YHNB	**Yeheng**	**21.81 234**⇑*i*P		**P**	**23 48 35.4 -3.5**
	comp=Z,662nm,1.0s,mb6.0				
NACB	**Ninganchiao**	**22.03 233**⇑*i*P		**P**	**23 48 34.6 -6.7**
	comp=Z,617nm,0.9s,mb6.0				
TIY	**Taiyuan**	**22.18 275** ⇑P		**P**	**23 48 40.4 -2.4**
TIY			S	**S**	**23 52 39.3 -7.7**
TIY			pmax	pmax	
	comp=Z,32μm,7.5s				
TIY			LR	LR	
	comp=N,466μm,13.0s,MS7.2				
TIY			LR	LR	
	comp=E,522μm,14.6s,MS7.2				
TIY			LR	LR	
	comp=Z,725μm,15.8s,MS7.2				
HHC	**Hu-ho-hao-te**	**22.37 284** *e*P		**P**	**23 48 43.3 -1.4**
HHC			pP		23 48 47.5
HHC			sP	sP	23 48 50.3 +0.7
HHC			PP		23 49 11.5
HHC			PcP	PcP	23 52 39.5 -0.1
HHC			S	**S**	**23 52 41.3 -9.2**
HHC			ScP	ScP	23 56 14.8 -2.1
HHC			PcS	PcS	23 56 16.6 -1.6
HHC			pmax	pmax	
	comp=Z,20μm,5.3s				
HHC			LR	LR	
	comp=N,238μm,12.7s,MS7.5				
HHC			LR	LR	
	comp=E,1059μm,14.1s,MS7.5				
HHC			LR	LR	
	comp=Z,1229μm,14.3s,MS7.5				
SSLB	**Suanglung**	**22.71 233**⇑*i*P		**P**	**23 48 43.3 -5.2**
	comp=Z,2μm,1.1s,mb6.3				
YULB	**Yu-li**	**22.79 232**⇑*i*P		**P**	**23 48 43.8 -5.5**
	comp=Z,842nm,0.9s,mb6.2				
CIT	**Chita**	**22.81 313** *e*P		**P**	**23 48 46.9 -2.4**
CIT			pmax	pmax	
	comp=Z,2μm,2.3s,mb6.2				
WHN	**Wuhan**	**23.23 256** P		**P**	**23 48 50.8 -3.2**
WHN			S	**S**	**23 53 03.5 -2.2**
WHN			LR	LR	
	comp=N,2141μm,15.2s,MS7.8				
WHN			LR	LR	
	comp=E,852μm,14.8s,MS7.8				
WHN			LR	LR	
	comp=Z,1559μm,17.5s,MS7.5				
TPUB	**Ta-pu**	**23.27 233**⇑*i*P		**P**	**23 48 49.4 -5.0**
	comp=Z,2μm,0.9s,mb6.4				
TWG	**Pinlang**	**23.36 232**⇑*i*P		**P**	**23 48 50.4 -4.9**
	comp=Z,2μm,1.0s,mb6.5				
QZH	**Quanzhou**	**23.43 239**⇑*i*P		**P**	**23 48 52.3 -3.8**
QZH			S	**S**	**23 53 01.6 -7.4**
QZH			pmax	pmax	
	comp=Z,2μm,1.4s,mb6.3				
QZH			pmax	pmax	
	comp=Z,48μm,7.9s				
QZH			LR	LR	
	comp=N,1046μm,16.8s,MS7.4				
QZH			LR	LR	
	comp=E,555μm,16.2s,MS7.4				
QZH			LR	LR	
	comp=Z,1038μm,17.4s,MS7.3				
BTO	**Baotou**	**23.56 283** *e*P		**P**	**23 48 54.8 -2.5**
BTO			S	**S**	**23 53 03.8 -7.0**
BTO			LR	LR	
	comp=N,85μm,11.8s,MS7.0				
BTO			LR	LR	
	comp=E,320μm,13.7s,MS7.0				
YAK	**Yakutsk**	**23.89 347** *e*P		**P**	**23 48 58.5 -1.6**
YAK		*e**PP			23 49 08.2
YAK		*e*			23 49 26.4
YAK		*e*S		**S**	**23 53 14.0 -1.7**
YAK		*e*SS			23 53 56.8
YAK		*e*SSS			23 54 15.5
YAK		pmax	pmax		
	comp=Z,3μm,1.1s,mb6.7				
YAK		pmax	pmax		
	comp=N,2μm,1.2s				
YAK		pmax	pmax		
	comp=E,840nm,1.2s				
YAK		pmax	pmax		
	comp=Z,824nm,0.8s,mb6.2				
YAK		smax			
	comp=E,21μm,3.0s				
YAK		smax			
	comp=N,125μm,6.6s				
YAK		MLR	MLR		
	comp=N,288μm,14.0s,MS7.0				
YAK		MLR	MLR		
	comp=Z,233μm,13.0s,MS6.8				
YAK		MLR	MLR		
	comp=E,306μm,16.0s,MS7.0				
YAK	**Yakutsk**	**23.89 347**⇑*i*P		**P**	**23 48 57.6 -2.4**
	comp=E,4μm,1.2s,mb6.7				
YAK		LR	LR		
	comp=Z,254μm,20.0s,MS6.7				
BBP	**Basco**	**24.67 226** *e*P		**P**	**23 49 07.2 -0.3**
SEY	**Seymchan**	**24.83 13***ce*P		**P**	**23 49 09.0 +0.4**
BOD	**Bodaibo**	**25.47 326** *e*P		**P**	**23 49 13.4 -1.1**
BOD			pmax	pmax	
	comp=Z,585nm,0.9s,mb6.1				
GUMO	**Guam**	**25.72 171**⇑*i*P		**P**	**23 49 13.4 -3.7**
GUMO			pmax	pmax	
	comp=Z,2μm,1.2s,mb6.5				
GUMO			MLR	MLR	
	comp=Z,173μm,22.0s,MS6.5				
GUMO	**Guam**	**25.72 171**⇑*i*P		**P**	**23 49 13.4 -3.7**
	comp=Z,2μm,1.2s,mb6.5				
GUMO			LR	LR	
	comp=Z,173μm,22.0s,MS6.5				
ULN	**Ulaanbaatar**	**25.77 301**⇑*i*P		**P**	**23 49 16.2 -1.1**
ULN			pmax	pmax	
	comp=Z,3μm,2.0s,mb6.5				
ULN			MLR	MLR	
	comp=Z,451μm,20.0s,MS7.0				
ULN	**Ulaanbaatar**	**25.77 301**⇑*i*P		**P**	**23 49 16.1 -1.1**
	comp=Z,3μm,2.0s,mb6.5				
ULN			LR	LR	
	comp=Z,451μm,20.0s,MS7.0				
ULN	**Ulaanbaatar**	**25.77 301** P		**P**	**23 49 16.7 -0.6**
	SNR=710				
ULN			P		23 49 16.7
	SNR=710				
XAN	**Xi'an**	**25.97 269**	P	**P**	**23 49 17.3 -2.0**
XAN			pP	pP	23 49 19.4 -3.4
XAN			PP		23 49 58.6
XAN			S	**S**	**23 53 43.5 -6.0**
XAN			pmax	pmax	
	comp=Z,6μm,10.8s				
XAN			LR	LR	
	comp=N,453μm,17.8s,MS7.0				
XAN			LR	LR	
	comp=E,127μm,20.1s,MS7.0				
XAN			LR	LR	
	comp=Z,147μm,19.7s,MS6.5				
FX1	**Attu Island--F**	**26.11 48** P		**P**	**23 49 20.9 +0.5**
	comp=Z,527nm,0.9s,mb6.0,baz=263,slow=16,SNR=65				
FX1			PcP	PcP	23 52 47.4 -0.1
	comp=Z,20nm,0.5s,baz=263,slow=8.1,SNR=5.1				
FX1			LR	LR	23 59 28.4
	comp=Z,96μm,18.2s,MS6.4,baz=270,slow=36				
FX1	**Attu Island--F**	**26.11 48** P		**P**	**23 49 20.9 +0.5**
FX1					23 52 47.4
FX1			pmax	pmax	
	comp=Z,527nm,1.0s				
FX1			MLR	MLR	
	comp=Z,96μm,18.2s				
SONM	**Songino Array**	**26.20 301** P		**P**	**23 49 20.2 -1.0**
	comp=Z,57nm,1.1s,baz=94,slow=8.0,SNR=69				
SONM			PcP	PcP	23 52 49.0 +1.2
	comp=Z,21nm,0.8s,baz=119,slow=2.2,SNR=3.8				
SONM			LR	LR	00 00 15.2
	comp=Z,505μm,19.3s,MS7.1,baz=124,slow=38				
SGCP	**Mt. Cagua**	**26.41 223** *e*P		**P**	**23 49 24.9 +1.5**
SMY	**Shemya**	**26.61 48** *e*P		**P**	**23 49 27.2 +2.4**
SMY			pmax	pmax	
	comp=Z,4μm,1.9s,mb6.6				
SMY	**Shemya**	**26.61 48** *e*P		**P**	**23 49 27.2 +2.4**
	comp=Z,4μm,1.9s,mb6.6				
CVP	**Callao Caves**	**26.97 223**⇑*e*P		**P**	**23 49 26.8 -1.6**
APYP	**Conner**	**27.15 224** *e*P		**P**	**23 49 28.8 -1.2**
PALP	**Palanan**	**27.19 221** *e*P		**P**	**23 49 32.9 +2.5**
ABRA	**Dolores**	**27.62 225** *e*P		**P**	**23 49 34.4 +0.2**
HKC	**Hong Kong Obse**	**28.20 241**⇑*i*P		**P**	**23 49 38.0 -1.4**
GZH	**Guangzhou**	**28.25 244** P		**P**	**23 49 34.3 -5.5**
GZH			S	**S**	**23 54 16.1 -10**
GZH			LR	LR	
	comp=N,721μm,15.1s,MS7.5				
GZH			LR	LR	
	comp=E,496μm,14.4s,MS7.5				
GZH			LR	LR	
	comp=Z,836μm,19.3s,MS7.3				
IRK	**Irkutsk**	**28.31 310** *e*P		**P**	**23 49 40.6 +0.5**
IRK			pmax	pmax	
	comp=Z,873nm,2.6s,mb5.9				
TLY	**Talaya**	**28.57 308** P		**P**	**23 49 43.2 +0.8**
	comp=Z,594nm,1.3s,mb6.2,SNR=36				
TLY	**Talaya**	**28.57 308***c* *i*P		**P**	**23 49 41.5 -0.9**
TLY		*e*			23 50 36.5
TLY		*e*S		**S**	**23 54 31.5 +1.3**
TLY		*e*SS		SS	23 56 07.9 -23
TLY		pmax	pmax		
	comp=Z,165nm,1.1s,mb5.7				
TLY		MLR	MLR		
	comp=Z,696μm,17.0s,MS7.3				
TLY	**Talaya**	**28.57 308**⇑*i*P		**P**	**23 49 41.3 -1.1**
	comp=Z,218nm,1.3s,mb5.7				
TLY		LR	LR		
	comp=Z,662μm,19.0s,MS7.3				
TLY	**Talaya**	**28.57 308** P		**P**	**23 49 42.0 -0.4**
	SNR=68				
TLY		P			23 49 42.0
	SNR=68				
ZAK	**Zakamensk**	**28.57 306** *e*P		**P**	**23 49 41.6 -0.9**
ZAK		*e*			23 52 48.1
ZAK		pmax	pmax		
	comp=Z,147nm,1.2s,mb5.6				
BALP	**Baler**	**28.74 221** *e*P		**P**	**23 49 43.9 -0.3**
BOLP	**Bolinao**	**29.09 225** *e*P		**P**	**23 49 46.3 -1.0**
PCPH	**Palayan**	**29.14 222**⇓*e*P		**P**	**23 49 46.9 -0.8**
LZH	**Lanzhou**	**29.25 276** ⇑P		**P**	**23 49 47.1 -1.6**
LZH			pP	pP	23 49 52.0 -0.2
LZH			sP	sP	23 49 54.1 +0.4
LZH			PP	PP	23 50 41.1 -14
LZH			S	**S**	**23 54 38.0 -3.3**
LZH		pmax	pmax		
	comp=Z,980nm,1.0s,mb6.5				
LZH		pmax	pmax		
	comp=Z,5μm,5.4s				
LZH		LR	LR		
	comp=E,298μm,14.4s				
LZH		LR	LR		
	comp=Z,520μm,15.6s,MS7.3				
PVCP	**Virac**	**29.37 214** *e*P		**P**	**23 49 50.0 +0.2**
POLP	**Polilio Island**	**29.42 219** *e*P		**P**	**23 49 50.5 +0.3**
GQP	**Guinayangan**	**29.88 218**⇓*e*P		**P**	**23 49 54.1 -0.2**
WAKE	**Wake Island**	**29.89 124**⇑*i*P		**P**	**23 49 53.1 -1.3**
	comp=Z,8μm,2.7s,mb7.0				
WAKE		LR	LR		
	comp=Z,332μm,20.0s,MS7.0				
CNP	**Catarman**	**30.12 213** *e*P		**P**	**23 49 56.7 +0.3**
MOY	**Mondy**	**30.19 308** *e*P		**P**	**23 49 57.3 +0.5**
MOY		pmax	pmax		
	comp=Z,1μm,4.1s				
AUQP	**San Andres**	**30.28 217** *e*P		**P**	**23 49 59.8 +1.9**
TGY	**Tagaytay City**	**30.45 220** P		**P**	**23 49 59.2 -0.2**
	comp=Z,1μm,1.1s,mb6.6,baz=69,slow=8.6,SNR=3.8				
LUBP	**Lubang**	**31.11 221** *e*P		**P**	**23 50 03.9 -1.3**
GYA	**Guiyang**	**31.13 256**⇑*i*P		**P**	**23 50 03.6 -1.7**

GYA				PP	PP	23 51 07.8 -7.7
GYA				PcP	PcP	23 52 56.1 -4.3
GYA				S	**S**	**23 55 11.8 +1.0**
GYA				ScP	ScP	23 56 39.4 -3.7
GYA				SS	SS	23 57 00.4 -23
GYA				ScS	ScS	00 00 35.8 -4.6
GYA				pmax	pmax	
	comp=Z,2μm,1.0s,mb6.9					
GYA				pmax	pmax	
	comp=Z,20μm,13.5s					
GYA				LR	LR	
	comp=N,298μm,30.4s					
GYA				LR	LR	
	comp=E,134μm,38.8s					
GYA				LR	LR	
	comp=Z,231μm,32.9s,MS6.6					
CD2	**Chengdu**	**31.21**	**266**	*i* P	**P**	**23 50 04.3 -1.7**
CD2				pP	pP	23 50 08.8 -0.8
CD2				sP	sP	23 50 12.1 +1.1
CD2				PP	PP	23 51 06.5 -10
CD2				PcP	PcP	23 53 00.3 -0.3
CD2				S	**S**	**23 55 06.0 -6.0**
CD2				PcS	PcS	23 56 43.0 -1.8
CD2				ScS	ScS	00 00 36.8 -3.9
CD2				pmax	pmax	
	comp=Z,270nm,0.8s,mb6.1					
CD2				pmax	pmax	
	comp=Z,25μm,10.2s					
CD2				LR	LR	
	comp=N,572μm,15.5s,MS7.4					
CD2				LR	LR	
	comp=E,526μm,20.2s,MS7.4					
CD2				LR	LR	
	comp=Z,489μm,19.0s,MS7.2					
OTRP	**Odiongan**	**31.42**	**217**	*e* P	**P**	**23 50 08.9 +1.0**
GTA	**Gaotai**	**31.49**	**284**	⇑P	**P**	**23 50 07.3 -1.1**
GTA				pP	pP	23 50 11.8 -0.1
GTA				sP	sP	23 50 15.1 +1.7
GTA				PP	PP	23 51 12.8 -6.6
GTA				PcP	PcP	23 53 02.0 +0.8
GTA				S	**S**	**23 55 14.5 -1.7**
GTA				PcS	PcS	23 56 44.5 -1.0
GTA				ScS	ScS	00 00 40.3 -1.5
GTA				pmax	pmax	
	comp=Z,7μm,4.8s					
GTA				LR	LR	
	comp=N,321μm,21.3s,MS7.3					
GTA				LR	LR	
	comp=E,562μm,22.5s,MS7.3					
GTA				LR	LR	
	comp=Z,1075μm,20.7s,MS7.5					
RCP	**Roxas**	**31.80**	**215**	⇑*e* P	**P**	**23 50 10.3 -1.0**
KALP	**Kalibo**	**31.88**	**216**	*e* P	**P**	**23 50 13.6 +1.6**
BILL	**Bilibino**	**32.16**	**18**	⇑*i* P	**P**	**23 50 13.4 -0.6**
BILL				*e*		23 51 17.2
BILL				*i* S	**S**	**23 55 25.5 -0.6**
BILL				pmax	pmax	
	comp=Z,827nm,1.2s,mb6.4					
BILL				MLR	MLR	
	comp=Z,279μm,19.0s,MS7.0					
BILL	**Bilibino**	**32.16**	**18**	⇑*i* P	**P**	**23 50 13.0 -1.0**
	comp=Z,1μm,1.3s,mb6.5					
BILL				LR	LR	
	comp=Z,293μm,21.0s,MS7.0					
MSLP	**Maasin**	**32.19**	**210**	*e* P	**P**	**23 50 14.1 -0.6**
LLP	**Lapu-Lapu**	**32.38**	**212**	⇑*e* P	**P**	**23 50 15.5 -0.9**
BUSP	**Coron**	**32.61**	**220**	*e* P	**P**	**23 50 18.2 -0.2**
GUIM	**Jordan**	**32.69**	**215**	*e* P	**P**	**23 50 20.0 +0.9**
TBP	**Tagbilaran**	**32.99**	**212**	*e* P	**P**	**23 50 19.3 -2.4**
TIXI	**Tiksi**	**33.13**	**353**	⇑*i* P	**P**	**23 50 21.7 -0.7**
TIXI				MLR	MLR	
	comp=Z,198μm,22.0s,MS6.8					
CUYO	**Cuyo Island**	**33.21**	**217**	*e* P	**P**	**23 50 24.5 +0.8**
QIZ	**Qiongzhong**	**33.38**	**242**	P	**P**	**23 50 26.0 +0.9**
QIZ				sP	sP	23 50 28.3 -1.9
QIZ				S	**S**	**23 55 47.6 +1.6**
QIZ				pmax	pmax	
	comp=Z,21μm,12.8s					
QIZ				LR	LR	
	comp=N,453μm,17.5s					
QIZ				LR	LR	
	comp=Z,403μm,17.0s,MS7.2					
BIPH	**Bislig**	**33.43**	**206**	⇑*e* P	**P**	**23 50 23.3 -2.2**
CGP	**Cagayan de Oro**	**33.79**	**209**	*e* P	**P**	**23 50 26.7 -2.0**
BUKP	**Musuan**	**34.18**	**208**	*e* P	**P**	**23 50 31.4 -0.7**
MATI	**Mati**	**34.62**	**206**	*e* P	**P**	**23 50 36.2 +0.3**
DAV	**Davao City (W)**	**34.74**	**207**	P	**P**	**23 50 35.6 -1.3**
	comp=Z,123nm,0.3s,mb6.3,baz=45,slow=7.1,SNR=7.7					
DAV				LR	LR	00 03 26.5
	comp=Z,208μm,21.3s,MS6.8,baz=54,slow=34					
DAV	**Davao City (W)**	**34.74**	**207**	P	**P**	**23 50 35.6 -1.3**
DAV				LR	LR	00 03 26.5
DAV	**Davao City (W)**	**34.74**	**207**	P	**P**	**23 50 36.2 -0.7**
	SNR=26					
DAV				P		23 50 36.2
	SNR=26					
DAV	**Davao City (W)**	**34.74**	**207**	⇑*e* P	**P**	**23 50 34.4 -2.5**
KMI	**Kunming**	**34.82**	**258**	P	**P**	**23 50 36.9 -0.7**
KMI				pP	pP	23 50 40.6 -0.6
KMI				sP	sP	23 50 41.8 -0.8
KMI				PP	PP	23 51 54.3 -2.2
KMI				PcP	PcP	23 53 11.9 +1.2
KMI				S	**S**	**23 56 06.3 -1.9**
KMI				SS	SS	23 58 18.0 -21
KMI				ScS	ScS	00 00 54.8 -4.6
KMI				pmax	pmax	
	comp=Z,280nm,1.5s,mb6.0					
KMI				pmax	pmax	
	comp=Z,11μm,4.9s					
KMI				LR	LR	
	comp=N,352μm,14.0s,MS7.4					
KMI				LR	LR	
	comp=E,383μm,15.2s,MS7.4					
KMI				LR	LR	
	comp=Z,506μm,16.1s,MS7.4					
PAGZ	**Pagadian**	**34.85**	**211**	*e* P	**P**	**23 50 36.7 -1.2**
CTBH	**Cotabato--PC H**	**35.09**	**209**	⇑*i* P	**P**	**23 50 40.1 +0.1**
MIDW	**Midway**	**36.24**	**95**	*e* P	**P**	**23 50 49.0 -0.8**
	comp=Z,513nm,1.1s,mb6.4					
MIDW				LR	LR	
	comp=Z,347μm,22.0s,MS7.1					
SPIA	**Saint Paul Isl**	**36.38**	**44**	*e* P	**P**	**23 50 51.8 +1.2**
	comp=Z,1μm,1.1s,mb6.7					
BATP	**Bataraza**	**36.55**	**220**	*e* P	**P**	**23 50 54.2 +1.7**
NIKO	**Nikolski**	**36.83**	**51**	*e* P	**P**	**23 50 51.2 -3.2**
	comp=Z,16μm,1.5s					
UNV	**Unalaska Valle**	**38.25**	**50**	*e* P	**P**	**23 51 04.7 -1.8**
	comp=Z,90nm,1.0s,mb5.5					
KWAJ	**Kwajalein Atol**	**38.64**	**134**	*e* P	**P**	**23 51 10.1 -0.1**
	comp=Z,527nm,1.2s,mb6.1					
KDM	**Kudat**	**38.65**	**220**	P	**P**	**23 51 10.4 +0.1**
AKUT	**Akutan**	**38.68**	**49**	*e* P	**P**	**23 51 08.8 -1.4**
	comp=Z,84nm,1.0s,mb5.4					
TNA	**Tin City**	**39.30**	**31**	⇑*i* P	**P**	**23 51 15.6 +0.4**
	comp=Z,1μm,1.4s,mb6.4					
UBT	**Ubonrachathani**	**39.31**	**243**	P	**P**	**23 51 18.5 +2.6**
	comp=Z,521nm,1.0s,mb6.2					
MYLDM	**Lahad Datu**	**39.36**	**216**	P	**P**	**23 51 17.1 +0.9**
WMQ	**Urumqi**	**39.44**	**294**	P	**P**	**23 51 18.0 +1.3**
WMQ				sP	sP	23 51 25.0 +3.3
WMQ				PP	PP	23 52 53.0 +5.9
WMQ				S	**S**	**23 57 18.0 -0.2**
WMQ				pmax	pmax	
	comp=Z,140nm,1.0s,mb5.7					
WMQ				pmax	pmax	
	comp=Z,8μm,4.0s					
WMQ				LR	LR	
	comp=N,199μm,15.0s,MS7.3					
WMQ				LR	LR	
	comp=E,303μm,15.0s,MS7.3					
WMQ				LR	LR	
	comp=Z,393μm,15.0s,MS7.4					
SDKM	**Sandakan**	**39.57**	**219**	P	**P**	**23 51 18.1 +0.1**
KKM	**Kota Kinabalu**	**39.71**	**220**	P	**P**	**23 51 19.8 +0.7**
KKM	**Kota Kinabalu**	**39.71**	**220**	⇑*i* P	**P**	**23 51 19.2 +0.1**
KKM				LR	LR	
	comp=Z,155μm,20.0s,MS6.8					
ZAA0	**Zalesovo Array**	**40.12**	**311**	⇑*i* P	**P**	**23 51 21.5 -0.6**
ZAA0				*e* PcP	PcP	23 53 27.9 +1.4
ZALV	**Zalesovo Beam**	**40.12**	**311**	P	**P**	**23 51 21.6 -0.5**
	comp=Z,315nm,0.9s,mb6.0,baz=93,slow=7.3,SNR=182					
ZALV				PcP	PcP	23 53 26.2 -0.2
	comp=Z,131nm,0.9s,baz=110,slow=3.1,SNR=5.3					
ZALV				PKiKP	PKiKP	00 00 36.2 -0.4
	comp=Z,5.0nm,0.8s,baz=189,slow=0.4,SNR=4.5					
ZALV				LR	LR	00 08 50.1
	comp=Z,387μm,18.2s,MS7.3,baz=84,slow=38					
TSM	**Tawau**	**40.43**	**217**	P	**P**	**23 51 25.5 +0.4**
NVS	**Novosibirsk**	**41.01**	**312**	*i* P	**P**	**23 51 29.6 +0.1**
NVS				*i* PPP		23 53 31.8
NVS				pmax	pmax	
	comp=Z,2μm,1.6s,mb6.5					
NVS				pmax	pmax	
	comp=N,936nm,2.4s					
NVS				pmax	pmax	
	comp=E,2μm,1.5s					
CHG	**Chiang Mai**	**41.35**	**253**	⇑P	**P**	**23 51 32.5 -0.2**
	comp=E,292nm,1.3s,mb5.8					
CHTO	**Chiang Mai**	**41.35**	**253**	⇑*i* P	**P**	**23 51 32.2 -0.5**
CHTO				MLR	MLR	
	comp=Z,201μm,19.0s,MS7.0					
CHTO	**Chiang Mai**	**41.35**	**253**	P	**P**	**23 51 32.9 +0.2**
	SNR=57					
CHTO				P		23 51 32.9
	SNR=57					
LSA	**Lhasa**	**41.53**	**272**	P	**P**	**23 51 34.1 0.0**
LSA				PP	PP	23 53 16.9 +6.9
LSA				S	**S**	**23 57 47.6 -2.1**
LSA				LR	LR	
	comp=N,163μm,23.5s					
LSA				LR	LR	
	comp=E,391μm,28.6s					
LSA				LR	LR	
	comp=Z,596μm,26.6s,MS7.3					
CM31	**Chiang Mai Arr**	**41.57**	**252**	⇑*i* P	**P**	**23 51 34.3 -0.2**
	comp=Z,67nm,0.8s,mb5.3					
CM31				LR	LR	
	comp=Z,181μm,19.0s,MS7.0					
CMAR	**Chiang Mai Arr**	**41.57**	**252**	P	**P**	**23 51 34.2 -0.3**
	comp=Z,14nm,0.8s,baz=44,slow=7.1,SNR=55					
CMAR				PcP	PcP	23 53 32.5 +0.8
	comp=Z,35nm,0.7s,baz=26,slow=1.5,SNR=12					
CMAR				LR	LR	00 09 40.7
	comp=Z,140μm,18.1s,MS6.9,baz=58,slow=38					
CMAR	**Chiang Mai Arr**	**41.57**	**252**	P	**P**	**23 51 34.3 -0.2**
CMAR						23 53 32.6
SDPT	**Sand Point**	**41.73**	**47**	*e* P	**P**	**23 51 34.1 -1.3**
	comp=Z,259nm,0.7s,mb6.0					
BDT	**Bhumibol Dam**	**42.29**	**251**	P	**P**	**23 51 40.0 -0.4**
	comp=Z,120nm,1.0s,mb5.5					
NST	**Nakhon Sawan**	**42.48**	**248**	P	**P**	**23 51 35.0 -7.0**
	comp=Z,241nm,1.2s,mb5.7					
MK31	**Makanchi Array**	**42.57**	**300**	*e* P	**P**	**23 51 41.8 -0.6**
MKAR	**Makanchi Array**	**42.57**	**300**	P	**P**	**23 51 41.9 -0.5**
	comp=Z,99nm,0.9s,mb5.5,baz=76,slow=13,SNR=162					
MKAR				S	**S**	**23 58 06.7 +2.1**
	comp=Z,4.8nm,0.8s,baz=45,slow=6.3,SNR=2.0					
MKAR				LR	LR	00 10 03.4
	comp=Z,283μm,20.3s,MS7.2,baz=74,slow=37					
MKAR	**Makanchi Array**	**42.57**	**300**	P	**P**	**23 51 41.9 -0.5**
MKAR				S	**S**	**23 58 06.7 +2.1**
MKAR				smax		
	comp=N,5.0nm,0.8s					
MKAR				MLR	MLR	
	comp=Z,283μm,20.3s					
MKAR	**Makanchi Array**	**42.57**	**300**	P	**P**	**23 51 41.9 -0.5**
MKAR				S	**S**	**23 58 06.8 +2.1**
MKAR				LR	LR	00 10 03.4
CHGN	**Chignik**	**42.85**	**46**	*e* P	**P**	**23 51 43.9 -0.6**
SHL	**Shillong**	**42.95**	**267**	*i* x	x	23 58 21.0
	comp=E,71nm,0.9s					
TTA	**Tatalina**	**44.01**	**36**	*e* P	**P**	**23 51 53.8 0.0**
SVW2	**Sparrevohn**	**44.19**	**39**	*e* P	**P**	**23 51 56.1 +0.9**
KURK	**Kurchatov**	**44.23**	**306**	P	**P**	**23 51 55.8 +0.1**
	comp=E,12μm,0.9s					
KURK	**Kurchatov**	**44.23**	**306**	P	**P**	**23 51 55.9 +0.2**
	comp=E,460nm,1.0s,mb6.2,baz=81,slow=7.8,SNR=16					
KURK				S	**S**	**23 58 31.5 +2.7**
	comp=E,6.8nm,0.9s,baz=315,slow=19,SNR=2.6					
KURK				LR	LR	00 11 15.0
	comp=E,458μm,18.2s,MS7.4,baz=80,slow=37					
KURK				PKP2ab		00 24 46.3
	comp=E,2.3nm,1.0s,baz=277,slow=4.5,SNR=3.9					
KURK	**Kurchatov**	**44.23**	**306**	*ce* P	**P**	**23 51 55.1 -0.6**
KURK				pmax	pmax	
	comp=Z,865nm,1.2s,mb6.4					
KURK	**Kurchatov**	**44.23**	**306**	⇑*i* P	**P**	**23 51 55.3 -0.4**
	comp=Z,2μm,1.0s,mb6.9					
KURK				LR	LR	
	comp=Z,328μm,21.0s,MS7.2					
KURK	**Kurchatov**	**44.23**	**306**	P	**P**	**23 51 55.6 -0.1**
	SNR=1042					
KURK				P		23 51 55.6
	SNR=1042					
SBUM	**Sibu**	**44.82**	**223**	P	**P**	**23 52 01.0 +0.1**
SLGI	**Shiliguri**	**45.07**	**270**	*ex*	**P**	**23 52 05.0 +2.2**
TAPN	**Taplejung**	**45.30**	**272**	*e* P	**P**	**23 52 04.7 +0.1**
	comp=Z,568nm,1.0s,mb6.4					
OHAK	**Old Harbor**	**45.59**	**44**	*e* P	**P**	**23 52 05.6 -0.8**
	comp=Z,750nm,1.2s,mb6.5					
RSO	**Redoubt South**	**45.59**	**40**	*e* P	**P**	**23 52 07.0 +0.6**
CHUM	**Lake Minchumin**	**45.68**	**35**	⇑*i* P	**P**	**23 52 08.3 +1.2**
	comp=Z,610nm,1.1s,mb6.4					
CHUM				*e* PcP	PcP	23 53 46.4 +1.5
PPLA	**Purkeypile**	**45.76**	**36**	⇑*i* P	**P**	**23 52 09.0 +1.3**
	comp=Z,2μm,1.3s,mb6.8					
ODAN	**Odare**	**45.79**	**271**	*e* P	**P**	**23 52 07.8 -0.7**
	comp=Z,1μm,1.0s,mb6.8					
KDAK	**Kodiak Island**	**45.90**	**43**	P	**P**	**23 52 09.6 +0.7**
	comp=Z,4μm,0.8s,mb7.4,SNR=24					
KDAK	**Kodiak Island**	**45.90**	**43**	P	**P**	**23 52 08.5 -0.4**
	comp=Z,303nm,0.7s,mb6.3,baz=281,slow=7.6,SNR=73					
KDAK				LR	LR	00 11 49.9
	comp=Z,169μm,21.1s,MS7.0,baz=252,slow=37					
KDAK	**Kodiak Island**	**45.90**	**43**	*i* P	**P**	**23 52 09.3 +0.4**
BPAW	**Bear Paw Mtn.**	**46.27**	**34**	⇑*i* P	**P**	**23 52 12.4 +0.7**
	comp=Z,1μm,1.6s,mb6.5					
KTH	**Kantishna Hill**	**46.31**	**35**	*e* P	**P**	**23 52 12.5 +0.5**
	comp=Z,26nm,1.0s					
JIRN	**Jiri**	**46.34**	**273**	*e* P	**P**	**23 52 12.5 -0.2**
	comp=Z,606nm,0.7s,mb6.7					
RAMN	**Ramite**	**46.36**	**272**	*e* P	**P**	**23 52 12.3 -0.7**
	comp=Z,2μm,1.0s,mb6.9					
GUN	**Gumba**	**46.46**	**273**	*e* P	**P**	**23 52 13.9 +0.2**
	comp=Z,2μm,1.0s,mb7.1					
COLD	**Coldfoot**	**46.58**	**30**	⇑*i* P	**P**	**23 52 14.6 +0.5**
	comp=Z,876nm,1.3s,mb6.5					
TRF	**Thorofare Moun**	**46.60**	**35**	*e* P	**P**	**23 52 15.4 +1.1**
	comp=Z,207nm,1.0s,mb6.0					
KSM	**Kuching**	**46.66**	**224**	P	**P**	**23 52 15.6 +0.2**
KSM	**Kuching**	**46.66**	**224**	⇑*i* P	**P**	**23 52 14.7 -0.7**
	comp=Z,487nm,1.1s,mb6.3					
KSM				LR	LR	
	comp=Z,114μm,19.0s,MS6.8					
FIB	**Fire Island**	**46.80**	**38**	*e* P	**P**	**23 52 15.8 -0.1**
FIB				pmax	pmax	
	comp=Z,824nm,0.8s,mb6.7					
FIB	**Fire Island**	**46.80**	**38**	*e* P	**P**	**23 52 15.8 -0.1**
	comp=Z,824nm,0.8s,mb6.7					
KKN	**Kakani**	**46.98**	**274**	*e* P	**P**	**23 52 17.3 -0.5**
	comp=Z,1μm,0.7s,mb6.9					
KKN	**Kakani**	**46.98**	**274**	*e* P	**P**	**23 52 17.3 -0.5**
KKN				pmax	pmax	
	comp=Z,1μm,0.7s,mb6.9					
PKI	**Pulchoki**	**46.99**	**273**	*e* P	**P**	**23 52 17.2 -0.6**
	comp=Z,359nm,0.7s,mb6.4					
PKI	**Pulchoki**	**46.99**	**273**	*e* P	**P**	**23 52 17.4 -0.4**
PKI				pmax	pmax	
	comp=Z,327nm,0.7s,mb6.4					
PKI	**Pulchoki**	**46.99**	**273**	*e* P	**P**	**23 52 17.4 -0.4**
	comp=Z,327nm,0.7s,mb6.4					
PKIN	**Phulchoki**	**46.99**	**273**	*e* P	**P**	**23 52 17.4 -0.5**
	comp=Z,327nm,0.7s,mb6.3					
AAA	**Alma-Ata**	**47.13**	**297**	*i* P	**P**	**23 52 20.2 +1.4**
AAA				*i* S	**S**	**23 59 12.9 +2.1**
AAA				pmax	pmax	
	comp=Z,34μm,8.0s					
AAA				smax		
	comp=E,81μm,22.2s					
AAA				MLR	MLR	
	comp=Z,245μm,15.0s,MS7.3					
MCK	**McKinley**	**47.19**	**35**	⇑*i* P	**P**	**23 52 18.7 -0.2**
MCK				pmax	pmax	
	comp=Z,585nm,1.1s,mb6.4					
MCK	**McKinley**	**47.19**	**35**	⇑*i* P	**P**	**23 52 18.7 -0.2**
	comp=Z,585nm,1.1s,mb6.4					
DMN	**Daman**	**47.20**	**273**	*e* P	**P**	**23 52 18.7 -0.8**
	comp=Z,1μm,1.0s,mb6.8					
SEW	**Seward**	**47.26**	**40**	*e* P	**P**	**23 52 19.2 -0.3**
	comp=Z,851nm,1.1s,mb6.6					
PMR	**Palmer**	**47.27**	**38**	*e* P	**P**	**23 52 18.7 -0.8**
PMR				pmax	pmax	
	comp=Z,444nm,1.0s,mb6.3					
PMR	**Palmer**	**47.27**	**38**	*e* P	**P**	**23 52 18.7 -0.8**
	comp=Z,444nm,1.0s,mb6.3					
COLA	**College**	**47.59**	**33**	⇑*i* P	**P**	**23 52 22.5 +0.5**
COLA				pmax	pmax	
	comp=Z,439nm,1.1s,mb6.4					
COLA				MLR	MLR	
	comp=Z,90μm,20.0s,MS6.7					
COLA	**College**	**47.59**	**33**	⇑*i* P	**P**	**23 52 22.5 +0.5**
	comp=Z,439nm,1.1s,mb6.4					
COLA				LR	LR	
	comp=Z,90μm,20.0s,MS6.7					
KTGM	**Kuala Trenggan**	**47.82**	**235**	P	**P**	**23 52 24.9 +0.4**
ULHL	**Ulahol**	**47.95**	**296**	P	**P**	**23 52 25.4 +0.3**
	SNR=119					
KAPI	**Kappang**	**48.04**	**209**	P	**P**	**23 52 24.8 -1.2**
	comp=Z,6μm,1.2s					
KAPI	**Kappang**	**48.04**	**209**	P	**P**	**23 52 24.4 -1.7**
	comp=Z,762nm,1.2s,mb6.6,baz=31,slow=6.4,SNR=8.5					
KAPI				S	**S**	**23 59 26.1 +2.0**
	comp=Z,3.3nm,0.5s,baz=120,slow=20,SNR=7.7					
KAPI	**Kappang**	**48.04**	**209**	⇑*i* P	**P**	**23 52 23.8 -2.2**
	comp=Z,2μm,1.3s,mb7.0					
KAPI				LR	LR	
	comp=Z,49μm,21.0s,MS6.5					
KAPI	**Kappang**	**48.04**	**209**	P	**P**	**23 52 24.5 -1.6**
	SNR=123					
KAPI				P		23 52 24.5
	SNR=123					
TKM2	**Tokmak 2**	**48.18**	**297**	P	**P**	**23 52 27.8 +0.9**
	SNR=582					
TKM2	**Tokmak 2**	**48.18**	**297**	⇑*i* P	**P**	**23 52 27.7 +0.8**
TKM2				pmax	pmax	
	comp=Z,6.0nm,0.1s,mb5.6					
TKM2				MLR	MLR	
	comp=Z,78μm,20.0s,MS6.7					
TKM2	**Tokmak 2**	**48.18**	**297**	⇑*i* P	**P**	**23 52 27.6 +0.7**
	comp=Z,6.2nm,0.1s,mb5.6					
TKM2				LR	LR	
	comp=Z,78μm,20.0s,MS6.7					
JOHN	**Johnston Islan**	**48.59**	**103**	*e* P	**P**	**23 52 31.5 +1.2**
	comp=Z,445nm,1.1s,mb6.4					
JOHN				LR	LR	
	comp=Z,399μm,22.0s,MS7.4					
KZA	**Kyzart**	**48.70**	**296**	P	**P**	**23 52 32.6 +1.7**
	SNR=180					
KBK	**Karagaybulak**	**48.72**	**296**	P	**P**	**23 52 31.8 +0.7**
	SNR=336					
CHMS	**Chumysh**	**48.74**	**297**	P	**P**	**23 52 31.4 +0.1**
	SNR=137					
BVAR	**Borovoye Array**	**48.77**	**311**	P	**P**	**23 52 31.2 -0.1**
	comp=Z,61nm,0.8s,mb5.7,baz=83,slow=8.1,SNR=86					
BVAR				PcP	PcP	23 53 57.0 +1.0
	comp=Z,134nm,0.8s,baz=90,slow=1.6,SNR=4.8					
BVAR				S	**S**	**23 59 33.5 -0.3**
	comp=Z,4.7nm,0.9s,baz=103,slow=6.4,SNR=2.0					
BVAR				LR	LR	00 14 17.8
	comp=Z,368μm,18.5s,MS7.4,baz=80,slow=38					
BVAR	**Borovoye Array**	**48.77**	**311**	P	**P**	**23 52 31.2 -0.1**
BVAR						23 53 57.0
BVAR				S	**S**	**23 59 33.5 -0.3**
BVAR				smax		
	comp=N,5.0nm,0.9s					
BVAR				MLR	MLR	
	comp=Z,368μm,18.5s					
BRVK	**Borovoye**	**48.83**	**311**	P	**P**	**23 52 31.3 -0.4**
	comp=Z,3μm,1.1s,mb7.2					
BRVK	**Borovoye**	**48.83**	**311**	*ce* P	**P**	**23 52 31.8 +0.1**
BRVK				pmax	pmax	
	comp=Z,727nm,2.5s,mb6.3					
BRVK	**Borovoye**	**48.83**	**311**	⇑*i* P	**P**	**23 52 31.7 0.0**
	comp=Z,29μm,5.0s					
BRVK				LR	LR	
	comp=Z,334μm,21.0s,MS7.3					
BRVK	**Borovoye**	**48.83**	**311**	P	**P**	**23 52 32.1 +0.3**
	SNR=326					
BRVK				P		23 52 32.1
	SNR=326					
USP	**Ospenovka**	**48.83**	**297**	P	**P**	**23 52 32.0 +0.1**
	SNR=125					
FRU	**Bishkek**	**48.89**	**297**	⇑*i* P	**P**	**23 52 32.0 -0.4**
FRU				*i*		23 53 56.0
FRU				*i* S	**S**	**23 59 42.0 +6.2**
FRU				*e*		00 02 22.0
FRU				pmax	pmax	
	comp=Z,3μm,2.2s,mb6.9					
FRU				smax		
	comp=E,4.0nm,4.0s					
FRU				MLR	MLR	
	comp=Z,116μm,11.0s,MS7.1					
MID	**Middleton Isla**	**48.92**	**40**	*e* P	**P**	**23 52 32.7 +0.4**
MID				pmax	pmax	
	comp=Z,453nm,1.3s,mb6.3					
MID	**Middleton Isla**	**48.92**	**40**	*e* P	**P**	**23 52 32.7 +0.4**
	comp=Z,453nm,1.3s,mb6.3					
AAK	**Ala-Archa**	**49.04**	**297**	P	**P**	**23 52 34.6 +1.1**
	comp=Z,2μm,1.0s,mb7.2					
AAK	**Ala-Archa**	**49.04**	**297**	P	**P**	**23 52 33.9 +0.4**
	SNR=90					
AAK	**Ala-Archa**	**49.04**	**297**	P	**P**	**23 52 33.8 +0.2**
	comp=Z,109nm,1.0s,mb5.8,baz=85,slow=5.0,SNR=11					
AAK				LR	LR	00 15 16.8
	comp=Z,178μm,18.1s,MS7.1,baz=64,slow=39					
AAK	**Ala-Archa**	**49.04**	**297**	⇑*i* P	**P**	**23 52 33.6 +0.1**
AAK				pmax	pmax	
	comp=Z,409nm,0.9s,mb6.5					
AAK				MLR	MLR	
	comp=Z,154μm,19.0s,MS7.0					
AAK	**Ala-Archa**	**49.04**	**297**	⇑*i* P	**P**	**23 52 33.6 +0.1**
	comp=Z,409nm,0.9s,mb6.5					
AAK				LR	LR	
	comp=Z,154μm,19.0s,MS7.0					
AAK	**Ala-Archa**	**49.04**	**297**	P	**P**	**23 52 34.1 +0.5**
	SNR=494					
AAK				P		23 52 34.1
	SNR=494					
KSH	**Kashi**	**49.08**	**292**	⇑*i* P	**P**	**23 52 38.0 +4.1**
KSH				pP	pP	23 52 42.5 +4.9
KSH				sP	sP	23 52 45.1 +6.1
KSH				PcP	PcP	23 53 59.8 +2.3
KSH				PP	PP	23 54 33.1 +5.7
KSH				ScP	ScP	23 57 53.3 +0.9
KSH				PcS	PcS	23 57 55.0 +1.2
KSH				S	**S**	**23 59 43.8 +5.2**
KSH				sS	sS	23 59 52.3 +7.7
KSH				ScS	ScS	00 02 26.3 +0.3
KSH				SS	SS	00 03 13.0 +3.6
KSH				pmax	pmax	
	comp=Z,230nm,1.2s,mb6.1					
KSH				pmax	pmax	
	comp=Z,2μm,3.7s					
KSH				LR	LR	
	comp=N,108μm,12.8s,MS7.0					
KSH				LR	LR	
	comp=E,36μm,13.4s,MS7.0					
KSH				LR	LR	
	comp=Z,56μm,11.1s,MS6.8					
UCH	**Uchtor**	**49.16**	**296**	P	**P**	**23 52 35.6 +1.1**
	SNR=129					
UCH	**Uchtor**	**49.16**	**296**	⇑*i* P	**P**	**23 52 35.4 +0.9**
	comp=Z,1μm,1.5s,mb6.7					
U

KGM	**Kluang**	**50.27**	**232**	P	**P**	**23 52 43.6 +0.4**
FRIM	**Kepong**	**50.38**	**235**	P	**P**	**23 52 44.5 +0.4**
EGAK	**Eagle**	**50.44**	**33⇑**	*i*P	**P**	**23 52 43.5 -0.4**
	comp=Z,7μm,1.0s					
EGAK				LR	LR	
	comp=Z,113μm,22.0s,MS6.8					
KLP	**Kalpa**	**50.66**	**282**	*e*PKP	**P**	**23 52 46.3 +0.4**
KLP				AMb	AMB	23 52 52.3
	comp=Z,1μm,1.3s,mb6.6					
DDI	**Dehra Dun**	**51.36**	**280**	*ex*	**P**	**23 52 49.0 -2.3**
DDI				*ex*	x	23 58 42.0
HNR	**Honiara**	**51.53**	**156**	P	**P**	**23 52 51.3 -1.3**
	comp=Z,69nm,0.8s,mb5.7,baz=341,slow=12,SNR=9.4					
HNR				LR	LR	00 11 55.8
	comp=Z,206μm,21.9s,MS7.1,baz=325,slow=33					
HNR	**Honiara**	**51.53**	**156⇑**	*i*P	**P**	**23 52 51.1 -1.5**
HNR				pmax	pmax	
	comp=Z,927nm,1.1s,mb6.6					
HNR				MLR	MLR	
	comp=Z,185μm,20.0s,MS7.1					
HNR	**Honiara**	**51.53**	**156⇑**	*i*P	**P**	**23 52 51.1 -1.5**
	comp=Z,927nm,1.1s,mb6.6					
HNR				LR	LR	
	comp=Z,185μm,20.0s,MS7.1					
SDNR	**Sundarnagar**	**51.65**	**282**	*e*PKP	**P**	**23 52 53.5 +0.1**
DLH	**Dalhousie**	**51.93**	**284**	*ex*	x	23 52 58.0
BHK	**Bhakra**	**52.10**	**282**	*e*PKP	**P**	**23 52 55.0 -1.8**
THN	**Thein Dam**	**52.17**	**284**	*e*PKP	**P**	**23 52 56.0 -1.3**
PNL	**Peninsula**	**52.32**	**39⇑**	*i*P	**P**	**23 52 58.4 +0.4**
	comp=Z,3.2nm,1.2s					
PSI	**Prapat**	**52.45**	**237**	P	**P**	**23 52 59.3 -0.3**
	comp=Z,185nm,1.1s,mb5.9,baz=31,slow=9.8,SNR=8.5					
PSI				S	**S**	**00 00 28.2 +2.4**
	comp=Z,4.5nm,0.4s,baz=317,slow=19,SNR=3.6					
PSI	**Prapat**	**52.45**	**237**	P	**P**	**23 52 59.3 -0.3**
PSI				S	**S**	**00 00 28.3 +2.5**
PSI				pmax	pmax	
	comp=Z,185nm,1.1s,mb5.9					
PSI				smax		
	comp=N,5.0nm,0.4s					
KKR	**Kurukshetra**	**52.47**	**281**	*e*PKP	**P**	**23 53 00.7 +1.1**
KKR				AMb	AMB	23 53 06.1
	comp=Z,701nm,1.2s,mb6.5					
BISR	**Bishrakh**	**52.66**	**279**	*e*PKP	**P**	**23 53 01.2 +0.2**
BISR				AMb	AMB	23 53 09.7
	comp=Z,1μm,0.8s,mb6.8					
INK	**Inuvik**	**52.76**	**28**	P	**P**	**23 53 01.5 +0.4**
	comp=Z,113nm,0.5s,mb6.1,baz=299,slow=6.7,SNR=125					
INK				S	**S**	**00 00 32.8 +4.1**
	comp=Z,4.5nm,1.0s,baz=225,slow=19,SNR=1.8					
INK				LR	LR	00 17 40.0
	comp=Z,49μm,20.0s,MS6.5,baz=116,slow=38					
INK				PKPPKP		00 23 10.5
	comp=Z,4.3nm,1.1s,baz=130,slow=3.5,SNR=4.5					
INK	**Inuvik**	**52.76**	**28⇑**	*i*P	**P**	**23 53 01.4 +0.3**
INK				pmax	pmax	
	comp=Z,618nm,1.0s					
INK	**Inuvik**	**52.76**	**28⇑**	*i*P	**P**	**23 53 01.4 +0.2**
	comp=Z,618nm,1.0s,mb6.5					
AGRA	**Agra**	**52.93**	**277**	*e*PKP	**P**	**23 53 03.3 +0.3**
AGRA				AMb	AMB	23 53 11.8
	comp=Z,558nm,1.1s,mb6.4					
AYAN	**Aya Nagar**	**52.95**	**279**	*e*PKP	**P**	**23 53 03.0 -0.1**
AYAN				AMb	AMB	23 53 11.8
	comp=Z,471nm,1.0s,mb6.4					
SONA	**Sohna**	**53.09**	**279**	*e*PKP	**P**	**23 53 04.3 0.0**
SONA				AMb	AMB	23 53 13.1
	comp=Z,448nm,1.1s,mb6.3					
SVE	**Sverdlovsk**	**53.22**	**317⇓**	*e*P	**P**	**23 53 05.1 +0.4**
SVE				*e*PPP		23 56 07.3
SVE				*e*S	**S**	**00 00 40.3 +5.0**
SVE				*e*		00 02 49.0
SVE				*e*SS	SS	00 04 15.5 +1.2
SVE				pmax	pmax	
	comp=Z,2μm,1.1s,mb6.9					
SVE				pmax	pmax	
	comp=Z,15μm,12.2s					
SVE				MLR	MLR	
	comp=Z,307μm,17.0s,MS7.4					
JBP	**Jabalpur**	**53.45**	**272⇑**	*e*PKP	**P**	**23 53 06.4 -0.4**
JBP				*i* x	x	00 00 40.8
VIS	**Vishakhapatnam**	**53.88**	**264**	*e*PKP	**P**	**23 53 09.6 -0.5**
VIS				AMb	AMB	23 53 15.8
	comp=Z,534nm,1.1s,mb6.4					
VIS				*i* x	x	00 00 49.7
KHET	**Khetri**	**54.16**	**279**	*e*PKP	**P**	**23 53 11.7 -0.4**
KHET				AMb	AMB	23 53 23.4
	comp=Z,464nm,1.5s,mb6.2					
SOKR	**Solikamsk**	**54.34**	**321**	*c i*P	**P**	**23 53 13.1 +0.2**
SOKR						23 55 12.9
SOKR				S	**S**	**00 00 54.6 +4.3**
SOKR				SSS		00 06 20.9
SOKR				pmax	pmax	
	comp=Z,860nm,1.2s,mb6.6					
SOKR				MLR	MLR	
	comp=Z,123μm,18.0s,MS7.0					
SKAG	**Skagway**	**54.37**	**39**	*e*P	**P**	**23 53 13.3 +0.2**
	comp=Z,434nm,1.5s,mb6.2					
ARU	**Arti**	**54.43**	**317**	PFAKE		23 53 30.0 +16
ARU				LR	LR	
	comp=Z,465μm,21.0s,MS7.5					
KIP	**Kipapa**	**54.77**	**90**	*d i*P	**P**	**23 53 17.8 +1.2**
KIP	**Kipapa**	**54.77**	**90**	*e*P	**P**	**23 53 17.1 +0.6**
	comp=Z,348nm,1.2s,mb6.3					
KIP				LR	LR	
	comp=Z,78μm,21.0s,MS6.8					
SIT	**Sitka**	**55.14**	**41**	*e*P	**P**	**23 53 20.2 +1.5**
SIT				pmax	pmax	
	comp=Z,725nm,1.5s,mb6.5					
SIT	**Sitka**	**55.14**	**41**	*e*P	**P**	**23 53 20.2 +1.5**
	comp=Z,725nm,1.5s,mb6.5					
BHPL	**Bhopal**	**55.39**	**273**	*e*PKP	**P**	**23 53 20.0 -1.0**
BHPL				AMb	AMB	23 53 31.3
	comp=Z,552nm,1.4s,mb6.4					
AJM	**Ajmer**	**55.86**	**278**	*e*PKP	**P**	**23 53 23.9 -0.4**
AJM				AMb	AMB	23 53 33.1
	comp=Z,286nm,1.1s,mb6.2					
ABKAR	**Akbulak array**	**56.18**	**309⇑**	*i*P	**P**	**23 53 25.9 -0.4**
	comp=Z,1μm,1.0s,mb6.9					
KBL	**Kabul**	**56.19**	**289⇑**	*i*P	**P**	**23 53 26.1 -0.5**
KBL				pmax	pmax	
	comp=Z,25nm,0.4s,mb5.6					
KBL	**Kabul**	**56.19**	**289⇑**	*i*P	**P**	**23 53 26.1 -0.5**
	comp=Z,25nm,0.4s,mb5.6					
CRAG	**Craig**	**56.86**	**43**	*e*P	**P**	**23 53 32.4 +1.4**
	comp=Z,1μm,2.0s,mb6.5					
AKTK	**Aktyubinsk**	**56.88**	**311**	P	**P**	**23 53 31.1 -0.1**
AKTK				S	**S**	**00 01 26.0 +1.5**
AKTK				LR	LR	00 19 08.1
AKTK				P'P'		00 23 03.5
AKTO	**Aktyubinsk**	**56.88**	**311**	P	**P**	**23 53 31.1 -0.1**
	comp=Z,86nm,0.8s,mb5.8,baz=68,slow=7.9,SNR=6.0					
AKTO				S	**S**	**00 01 26.0 +1.5**
	comp=Z,2.6nm,0.8s,baz=211,slow=5.9,SNR=1.9					
AKTO				LR	LR	00 19 08.1
	comp=Z,149μm,21.6s,MS7.0,baz=66,slow=37					
AKTO				PKPPKP		00 23 03.5
	comp=Z,1.0nm,0.6s,baz=46,slow=4.5,SNR=2.3					
AKTO	**Aktyubinsk**	**56.88**	**311**	P	**P**	**23 53 31.2 0.0**
AKTO				S	**S**	**00 01 26.0 +1.5**
AKTO				pmax	pmax	
	comp=Z,86nm,0.8s,mb5.8					
AKTO				smax		
	comp=N,3.0nm,0.8s					
AKTO				MLR	MLR	
	comp=Z,149μm,21.6s,MS7.0					
AKL	**Akola**	**57.09**	**271⇑**	*i*P	**P**	**23 53 32.6 -0.6**
AKL				*ex*	x	23 53 38.6
	comp=Z,820nm,1.2s					
AKL				*i* x	x	00 01 22.8
DLBC	**Dease Lake**	**57.30**	**39**	P	**P**	**23 53 35.5 +1.3**
	comp=Z,179nm,1.1s,mb6.0,baz=291,slow=7.3,SNR=38					
DLBC				S	**S**	**00 01 34.8 +5.0**
	comp=Z,0.8nm,0.3s,baz=156,slow=20,SNR=1.7					
DLBC				LR	LR	00 20 57.8
	comp=Z,56μm,18.2s,MS6.7,baz=301,slow=39					
DLBC				PKPPKP		00 23 05.5
	comp=Z,2.3nm,0.7s,baz=135,slow=2.9,SNR=3.6					
DLBC	**Dease Lake**	**57.30**	**39⇑**	*i*P	**P**	**23 53 35.2 +1.1**
POHA	**Pohakuloa**	**57.63**	**90**	PFAKE		23 53 50.0 +13
POHA				LR	LR	
	comp=Z,65μm,19.0s,MS6.8					
HYB	**Hyderabad**	**57.76**	**267**	*e*P	**P**	**23 53 37.0 -0.9**
HYB				*e*S	**S**	**00 01 36.0 -0.9**
HYB				pmax	pmax	
	comp=Z,500nm,1.0s,mb6.5					
HYB	**Hyderabad**	**57.76**	**267**	*e*P	**P**	**23 53 37.0 -0.9**
	comp=Z,500nm,1.0s,mb6.5					
HYB				*e*PcS	PcS	23 58 30.0 -2.2
HYB				*e*S	**S**	**00 01 36.0 -0.9**
HYB				*e*		00 10 52.0
HYB	**Hyderabad**	**57.76**	**267⇑**	*i*P	**P**	**23 53 37.0 -0.9**
	comp=Z,250nm,1.0s,mb6.2					
HYB				*e*PP	PP	23 55 45.0 -0.9
HYB				*e*PPP		23 57 02.0
HYB				*e*PcS	PcS	23 58 30.0 -2.2
HYB				*e*S	**S**	**00 01 38.0 +1.1**
HYB				LR	LR	00 10 52.0
	comp=Z,122nm,28.0s					
KHU	**Kahuku**	**57.85**	**91⇑**	*i*P	**P**	**23 53 38.9 +0.4**
HOPEN	**Hopen**	**57.86**	**346⇑**	*i*P	**P**	**23 53 37.1 -0.7**
HOPEN				AMb	AMB	23 53 44.7
	comp=Z,1μm,1.3s,mb6.8					
ALE	**Alert**	**58.03**	**3**	P	**P**	**23 53 39.0 0.0**
	comp=Z,6μm,1.0s					
PUH	**Pauahi**	**58.09**	**90⇓**	*i*P	**P**	**23 53 42.4 +2.2**
STCH	**Steam Cracks**	**58.15**	**90**	*e*P	**P**	**23 53 41.4 +0.7**
SPITS	**Spitsbergen Ar**	**58.35**	**348**	P	**P**	**23 53 41.2 0.0**
	comp=Z,48nm,0.6s,mb5.7,baz=86,slow=6.4,SNR=4.9					
SPITS				LR	LR	00 20 26.1
	comp=Z,145μm,20.7s,MS7.1,baz=35,slow=38					
KBS	**Kingsbay**	**58.48**	**350⇑**	*i*P	**P**	**23 53 41.9 -0.3**
KBS				*e*S	**S**	**00 01 47.1 +2.3**
KBS				*e*SS	SS	00 05 46.2 +10
KBS	**Kingsbay**	**58.48**	**350**	*ce*P	**P**	**23 53 43.2 +1.0**
KBS				pmax	pmax	
	comp=Z,758nm,1.2s,mb6.6					
KBS	**Kingsbay**	**58.48**	**350⇑**	*i*P	**P**	**23 53 42.4 +0.3**
	comp=Z,585nm,0.9s,mb6.6					
KBS				LR	LR	
	comp=Z,72μm,19.0s,MS6.8					
JASL	**Jaisalmer**	**58.50**	**281**	*e*PKP	**P**	**23 53 42.9 -0.1**
JASL				AMb	AMB	23 53 50.5
	comp=Z,641nm,1.1s,mb6.6					
FITZ	**Fitzroy Crossi**	**58.68**	**197**	P	**P**	**23 53 43.4 -0.7**
	comp=Z,223nm,1.1s,mb6.1,baz=15,slow=6.7,SNR=6.3					
FITZ				S	**S**	**00 01 48.9 +0.3**
	comp=Z,5.0nm,0.9s,baz=94,slow=19,SNR=3.1					
MDRS	**Chennai**	**59.04**	**261**	*ex*	x	23 54 13.8
MDRS				AMb	AMB	23 54 20.7
	comp=Z,351nm,0.7s,mb6.5					
WRAB	**Tennant Creek**	**59.08**	**187**	P	**P**	**23 53 44.0 -2.9**
	comp=Z,5μm,1.1s					
WRAB	**Tennant Creek**	**59.08**	**187⇑**	*i*P	**P**	**23 53 44.6 -2.3**
WRAB				pmax	pmax	
	comp=Z,730nm,2.8s,mb6.2					
WRAB				MLR	MLR	
	comp=Z,48μm,20.0s,MS6.6					
WRAB	**Tennant Creek**	**59.08**	**187⇑**	*i*P	**P**	**23 53 44.5 -2.3**
	comp=Z,73nm,2.8s,mb5.2					
WRAB				LR	LR	
	comp=Z,48μm,20.0s,MS6.6					
WRA	**Warramunga Arr**	**59.09**	**187**	P	**P**	**23 53 44.8 -2.1**
	comp=Z,323nm,0.9s,mb6.3,baz=5.5,slow=6.4,SNR=332					
WRA				S	**S**	**00 01 53.8 0.0**
	comp=Z,9.6nm,1.1s,baz=7.8,slow=13,SNR=6.2					
WRA				PKPPKP		00 23 09.0
	comp=Z,3.9nm,1.1s,baz=149,slow=2.7,SNR=5.7					
WRA				PKP2bc		00 23 31.9
	comp=Z,33nm,1.2s,baz=195,slow=1.9,SNR=12					
WRA	**Warramunga Arr**	**59.09**	**187**	P	**P**	**23 53 44.8 -2.2**
WRA				S	**S**	**00 01 53.8 0.0**
WRA				P'P'		00 23 09.0
WRA				⇑*e*		00 23 31.9
CTAO	**Charters Tower**	**59.15**	**174**	PFAKE		23 54 00.0 +13
CTAO				LR	LR	
	comp=Z,46μm,20.0s,MS6.6					
HSP	**Hornsund**	**59.26**	**348**	*e*P	**P**	**23 53 48.1 +0.5**
FUNA	**Funafuti**	**59.36**	**134**	*e*P	**P**	**23 53 50.5 +1.4**
	comp=Z,859nm,1.5s,mb6.6					
FUNA				LR	LR	
	comp=Z,276μm,22.0s,MS7.3					
QUE	**Quetta**	**59.83**	**286⇑**	*i*P	**P**	**23 53 49.0 -3.2**
QUE				*e*S	**S**	**00 02 07.0 +3.4**
LVZ	**Lovozero**	**59.97**	**335**	P	**P**	**23 53 52.8 +0.3**
	comp=Z,2μm,1.5s,mb6.8,SNR=21					
LVZ	**Lovozero**	**59.97**	**335**	PFAKE		23 54 10.0 +17
LVZ				LR	LR	
	comp=Z,218μm,19.0s,MS7.3					
BJO	**Bjornoya**	**60.24**	**345⇑**	*i*P	**P**	**23 53 55.3 +1.0**
BJO				AMb	AMB	23 54 03.6
	comp=Z,645nm,2.7s,mb6.2					
BJO				*e*S	**S**	**00 02 10.5 +2.8**
BJO				*e*SS	SS	00 06 11.8 +7.7
BJO				AMS	AMS	00 23 17.6
	comp=Z,152μm,19.5s,MS7.2					
BJO1	**Bjornoya**	**60.29**	**345⇑**	*i*P	**P**	**23 53 55.3 +0.7**
	comp=Z,645nm,2.7s,mb6.2					
BJO1				LR	LR	
	comp=Z,152μm,19.5s,MS7.2					
BHV	**Bhavnagar**	**60.30**	**275**	*e*PKP	**P**	**23 53 56.0 +0.5**
APA	**Apatity**	**60.54**	**335⇓**	*i*P	**P**	**23 53 56.0 -0.5**
APA				*i* S	**S**	**00 02 08.0 -3.7**
APA				*i*		00 03 38.0
APA				pmax	pmax	
	comp=Z,429nm,1.0s,mb6.5					
APA				MLR	MLR	
	comp=Z,266μm,17.0s,MS7.5					
RES	**Resolute Bay**	**60.69**	**15**	P	**P**	**23 53 56.6 -0.8**
	comp=Z,292nm,0.8s,mb6.5,baz=302,slow=7.0,SNR=29					
RES				S	**S**	**00 02 16.4 +3.0**
	comp=Z,7.6nm,1.1s,baz=210,slow=20,SNR=1.9					
RES				PKPPKP		00 23 06.2
	comp=Z,3.7nm,1.0s,baz=78,slow=5.4,SNR=3.8					
RES				LR	LR	00 27 03.2
	comp=Z,37μm,18.1s,MS6.6,baz=316,slow=43					
RES	**Resolute Bay**	**60.69**	**15⇑**	*i*P	**P**	**23 53 56.7 -0.7**
	comp=Z,1μm,1.0s,mb6.9					
POO	**Poona**	**60.78**	**271**	*e*PKP	**P**	**23 53 56.7 -2.1**
POO				AMb	AMB	23 54 03.8
	comp=Z,394nm,0.7s,mb6.7					
KAD	**Karad**	**61.22**	**269**	*e*PKP	**P**	**23 54 00.0 -1.8**
KAD				AMb	AMB	23 54 06.5
	comp=Z,374nm,0.5s,mb6.8					
KEV	**Kevo**	**61.28**	**339**	*e*P	**P**	**23 54 01.1 -0.3**
KEV				pmax	pmax	
	comp=Z,144nm,0.7s,mb6.2					
KEV	**Kevo**	**61.28**	**339**	*ep*	**P**	**23 54 01.1 -0.3**
	comp=Z,144nm,0.7s,mb6.2					
KEV	**Kevo**	**61.28**	**339**	*ep*	**P**	**23 54 01.1 -0.3**
	comp=Z,144nm,0.7s,mb6.2					
BHJ	**Bhuj**	**61.40**	**278**	*e*PKP	**P**	**23 54 02.8 -0.2**
BHJ				AMb	AMB	23 54 08.7
	comp=Z,392nm,0.9s,mb6.5					
ARCES	**ARCESS Array B**	**61.83**	**339**	P	**P**	**23 54 04.9 -0.3**
	comp=Z,30nm,0.5s,mb5.7,baz=56,slow=3.9,SNR=190					
ARCES				S	**S**	**00 02 29.6 +1.6**
	comp=Z,4.7nm,1.0s,baz=125,slow=12,SNR=2.1					
ARCES				PKPPKP		00 23 14.0
	comp=Z,2.8nm,0.9s,baz=238,slow=1.7,SNR=4.4					
ARCES				LR	LR	00 25 37.9
	comp=Z,163μm,18.7s,MS7.2,baz=16,slow=41					
ARCES	**ARCESS Array B**	**61.83**	**339**	P	**P**	**23 54 04.9 -0.3**
ARCES				S	**S**	**00 02 29.6 +1.6**
ARCES				pmax	pmax	
	comp=Z,300nm,0.5s					
ARCES				smax		
	comp=N,5.0nm,1.0s					
ARCES				MLR	MLR	
	comp=Z,163μm,18.7s					
ARE0	**ARCESS Array S**	**61.83**	**339⇑**	*i*P	**P**	**23 54 05.1 -0.1**
ASH	**Ashkhabad**	**62.19**	**298**	*e*P	**P**	**23 54 08.0 -0.1**
YKA	**Yellowknife Ar**	**62.25**	**31**	P	**P**	**23 54 07.4 -0.7**
	comp=Z,44nm,0.8s,mb5.6,baz=298,slow=6.5,SNR=72					
YKA				PKPPKP		00 23 06.3
	comp=Z,2.8nm,1.0s,baz=147,slow=2.8,SNR=4.7					
YKA				LR	LR	00 25 29.1
	comp=Z,7μm,18.2s,baz=25,slow=40					
YKA	**Yellowknife Ar**	**62.25**	**31**	P	**P**	**23 54 07.4 -0.7**
YKA				P'P'		00 23 06.3
YKA				LR	LR	00 25 29.1
PALK	**Pallekele**	**62.33**	**256**	P	**P**	**23 54 09.2 -0.1**
	comp=Z,1μm,0.8s,mb7.1,SNR=16					
VAN	**Vannovskaya**	**62.36**	**298**	*e*P	**P**	**23 54 10.0 +0.8**
ABKT	**Ailbek**	**62.36**	**298**	P	**P**	**23 54 09.9 +0.6**
	comp=Z,9μm,1.0s					
GOA	**Goa**	**62.56**	**268⇓**	*i*P	**P**	**23 54 09.6 -1.2**
KTK1	**Kautokeino**	**62.79**	**339**	*e*P	**P**	**23 54 12.3 +0.7**
KTK1				*e*S	**S**	**00 02 41.5 +1.4**
KTK1				*e*SS	SS	00 06 49.1 +5.0
ASAR	**Alice Springs**	**62.81**	**187**	P	**P**	**23 54 10.5 -1.8**
	comp=Z,134nm,0.8s,mb6.1,baz=9.2,slow=5.3,SNR=364					
ASAR				S	**S**	**00 02 45.6 +4.4**
	comp=Z,3.3nm,1.1s,baz=18,slow=18,SNR=4.0					
ASAR				PKPPKP		00 23 03.3
	comp=Z,5.8nm,0.9s,baz=164,slow=2.5,SNR=11					
ASAR				PKP2bc		00 23 23.3
	comp=Z,34nm,0.9s,baz=173,slow=2.3,SNR=9.0					
ASAR	**Alice Springs**	**62.81**	**187**	P	**P**	**23 54 10.5 -1.8**
ASAR				S	**S**	**00 02 45.6 +4.4**
ASAR				P'P'		00 23 03.3
ASAR				⇑*e*		00 23 23.3
MBWA	**Marble Bar**	**63.13**	**202**	*e*P	**P**	**23 54 13.5 -0.9**
	comp=Z,617nm,1.1s,mb6.7					
MBWA				LR	LR	
	comp=Z,27μm,21.0s,MS6.4					
TRO	**Tromso**	**63.54**	**341⇑**	*i*P	**P**	**23 54 17.0 +0.4**
TRO				AMb	AMB	23 54 25.8
	comp=Z,724nm,1.0s,mb6.7					
TRO				*e*S	**S**	**00 02 50.9 +1.4**
TRO				*e*SS	SS	00 07 00.1 +4.3
TRO				AMS	AMS	00 26 49.6
	comp=Z,136μm,17.3s,MS7.2					
TRO	**Tromso**	**63.54**	**341⇑**	*i*P	**P**	**23 54 17.0 +0.4**
TRO				pmax	pmax	
	comp=Z,724nm,1.0s,mb6.7					
TRO				MLR	MLR	
	comp=Z,136μm,17.3s,MS7.2					
TRO	**Tromso**	**63.54**	**341⇑**	*i*P	**P**	**23 54 17.0 +0.4**
	comp=Z,724nm,1.0s,mb6.7					
TRO				LR	LR	
	comp=Z,136μm,17.3s,MS7.2					
DAG	**Danmarks Havn**	**63.62**	**355**	*i* P	**P**	**23 54 14.0 -3.0**
JOF	**Joensuu**	**63.85**	**331**	*e*P	**P**	**23 54 18.2 -0.5**
JOF				pmax	pmax	
	comp=Z,263nm,0.8s,mb6.3					
JOF	**Joensuu**	**63.85**	**331**	*ep*	**P**	**23 54 18.2 -0.5**
	comp=Z,263nm,0.8s,mb6.3					
JOF	**Joensuu**	**63.85**	**331**	*ep*	**P**	**23 54 18.2 -0.5**
	comp=Z,263nm,0.8s,mb6.3					
TRD	**Trivandrum**	**64.39**	**260⇑**	*ex*	**P**	**23 54 26.0 +3.0**
KRF	**Krasnovodsk**	**64.77**	**302⇓**	*i*P	**P**	**23 54 23.2 -1.9**
OTR	**Olympics--Tyee**	**65.05**	**47**	P	**P**	**23 54 28.9 +2.1**
MOS	**Moscow**	**65.24**	**323**	*cx i*P	**P**	**23 54 27.9 0.0**
MOS				*e*		23 55 02.1
MOS				*e*		23 56 55.5
MOS				*e*PPP		23 58 33.2
MOS				*i* S	S	00 03 11.8 +1.0
MOS				*i*		00 04 19.0
MOS				*i* SS	SS	00 07 27.8 +5.1
MOS				*e*SSS		00 10 18.1
MOS				pmax	pmax	
	comp=Z,2μm,1.4s,mb6.9					
MOS				pmax	pmax	
	comp=N,927nm,1.2s					
MOS				pmax	pmax	
	comp=E,793nm,1.3s					
MOS				pmax	pmax	
	comp=Z,10μm,3.3s					
MOS				smax		
	comp=N,20μm,6.0s					
MOS				smax		
	comp=E,21μm,10.0s					
MOS				MLR	MLR	
	comp=Z,180μm,15.0s,MS7.4					
MOS				MLR	MLR	
	comp=N,160μm,16.0s					
PGC	**Sidney**	**65.27**	**47⇑**	*i*P	**P**	**23 54 28.4 +0.2**
	comp=N,14nm,0.9s					
COCO	**West Island**	**65.43**	**228**	P	**P**	**23 54 30.1 +0.5**
	comp=N,3μm,1.7s,mb7.0,SNR=11					
COCO	**West Island**	**65.43**	**228**	*i* P	**P**	**23 54 31.0 +1.4**
COCO	**West Island**	**65.43**	**228⇑**	*i*P	**P**	**23 54 29.5 -0.1**
	comp=N,7μm,2.3s,mb7.3					
COCO				LR	LR	
	comp=Z,36μm,20.0s,MS6.6					
COCO	**West Island**	**65.43**	**228**	P	**P**	**23 54 31.7 +2.1**
	SNR=11					
COCO				P		23 54 31.7
	SNR=11					
DZM	**Mont Dzumac**	**65.48**	**154**	*e*P	**P**	**23 54 29.9 +0.1**
	comp=Z,2μm,1.2s,mb6.9					
DZM				*e*S	S	00 03 13.7 -0.7
	comp=Z,234μm,29.5s					
DZM				*e*LQ		00 11 18.2
	comp=Z,236μm,30.6s					
DZM				*e*LR	LR	00 14 07.7
DZM	**Mont Dzumac**	**65.48**	**154⇑**	*i*P	**P**	**23 54 30.2 +0.5**
	comp=Z,1μm,1.4s,mb6.7					
NLWA	**Neilton Lookou**	**65.69**	**48**	⇑P	**P**	**23 54 31.6 +0.6**
	baz=66,SNR=139					
NLWA				⇓S	S	00 03 20.1 +3.5
	baz=66					
NLWA	**Neilton Lookou**	**65.69**	**48⇑**	*i*P	**P**	**23 54 31.8 +0.8**
	comp=Z,740nm,1.0s,mb6.7					
NLWA				LR	LR	
	comp=Z,50μm,22.0s,MS6.7					
STEI	**Steigen**	**65.70**	**340**	*e*P	**P**	**23 54 30.5 -0.2**
RMQ	**Roma**	**65.72**	**172**	*e*PKPPKP		00 23 06.8
	comp=Z,100nm,1.1s					
VRHR	**Novokhopersk**	**65.77**	**317**	*c i*P	**P**	**23 54 30.4 -1.0**
VRHR				*e*		23 56 55.9
VRHR				*e*S	S	00 03 15.8 -1.7
VRHR				*e*SS	SS	00 07 28.4 -2.8
VRHR				pmax	pmax	
	comp=N,280nm,0.9s					
VRHR				pmax	pmax	
	comp=E,240nm,0.9s					
VRHR				pmax	pmax	
	comp=Z,780nm,0.9s,mb6.7					
VRHR				pmax	pmax	
	comp=N,2μm,3.0s					
VRHR				pmax	pmax	
	comp=E,2μm,3.0s					
VRHR				pmax	pmax	
	comp=Z,4μm,3.0s					
VRHR				smax		
	comp=N,12μm,10.7s					
VRHR				smax		
	comp=E,14μm,10.7s					
VRHR				smax		
	comp=Z,7μm,10.7s					
VRHR				MLR	MLR	
	comp=N,132μm,20.0s,MS7.2					
VRHR				MLR	MLR	
	comp=E,106μm,20.0s,MS7.2					
VRHR				MLR	MLR	
	comp=Z,141μm,20.0s,MS7.2					
A05A	**Maple Falls**	**65.85**	**46**	⇑P	**P**	**23 54 31.6 -0.4**
	baz=66,SNR=35					
A05A				⇓S	S	00 03 18.7 +0.2
	baz=66					
LOF	**Lofoten**	**65.99**	**341**	*e*P	**P**	**23 54 35.5 +2.9**
LOF				*e*		23 54 36.4
OBN	**Obninsk**	**66.09**	**322**	P	**P**	**23 54 33.6 +0.2**
	comp=Z,4μm,1.6s,mb7.2,S

baz=66
RPW Rockport 66.46 46 *e*P **P 23 54 36.4 +0.5**
comp=Z,216nm,1.0s,mb6.1
MSVF Nonsavu 66.48 141 P **P 23 54 37.0 +0.7**
comp=Z,1μm,1.1s,mb6.9,SNR=20
MSVF Nonsavu 66.48 141⇑*i*P **P 23 54 36.6 +0.3**
comp=Z,616nm,1.4s,mb6.4
MSVF LR LR
comp=Z,168μm,20.0s,MS7.2
MSVF Nonsavu 66.48 141 P **P 23 54 35.2 -1.1**
comp=Z,2μm,1.0s,mb7.2,SNR=20
F03A Seaside 66.65 49⇑P **P 23 54 37.7 +0.5**
baz=66,SNR=21
F03A ⇓S S 00 03 32.5 +4.2
baz=66
HTW Haystack Looko 66.67 47 P **P 23 54 38.8 +1.6**
VOR Voronezh 66.69 318⇑*i*P **P 23 54 36.0 -1.3**
VOR pmax pmax
comp=Z,2μm,1.2s,mb6.9
FINES FINESS Array B 66.70 332 P **P 23 54 36.6 -0.6**
comp=Z,216nm,1.0s,mb6.2,baz=46,slow=5.5,SNR=161
FINES PKPPKP 00 22 57.9
comp=Z,4.8nm,1.1s,baz=182,slow=8.8,SNR=4.0
FINES LR LR 00 25 24.0
comp=Z,140μm,20.2s,MS7.2,baz=52,slow=37
MAK Makhachkala 66.75 307*c i*P **P 23 54 38.8 +1.0**
MAK *e* 23 55 13.6
MAK *e* 23 57 08.3
MAK *i* S S 00 03 33.9 +4.3
MAK pmax pmax
comp=N,183nm,1.2s
MAK pmax pmax
comp=Z,802nm,1.2s,mb6.6
MAK pmax pmax
comp=E,3μm,3.2s
MAK pmax pmax
comp=Z,13μm,5.6s
MAK pmax pmax
comp=N,6μm,5.2s
MAK pmax pmax
comp=E,4μm,3.2s
MAK smax
comp=E,19μm,10.4s
MAK smax
comp=N,24μm,17.6s
MAK MLR MLR
comp=E,189μm,18.0s,MS7.6
MAK MLR MLR
comp=Z,223μm,15.0s,MS7.5
MAK MLR MLR
comp=N,264μm,18.0s,MS7.6
A07A Ashnola River, 66.76 45⇓P **P 23 54 37.8 0.0**
baz=66,SNR=149
A07A ⇓S S 00 03 32.0 +2.4
baz=66
RMW Rattlesnake Mo 66.83 47 P **P 23 54 40.3 +2.0**
D05A Enumclaw 66.88 47⇑P **P 23 54 38.6 0.0**
baz=67,SNR=101
D05A ⇓S S 00 03 34.6 +3.5
baz=67
HEBO Mount Hebo 66.92 50⇑*i*P **P 23 54 40.7 +1.8**
comp=N,1μm,1.3s,mb6.8
VSR Storozhevoye 67.00 318*c i*P **P 23 54 38.7 -0.6**
VSR *e**PP pP 23 54 46.2 +3.1
VSR *e* 23 57 05.0
VSR *e*S S 00 03 27.0 -5.4
VSR *e*SS SS 00 07 48.0 -2.2
VSR pmax pmax
comp=N,200nm,1.1s
VSR pmax pmax
comp=E,270nm,1.1s
VSR pmax pmax
comp=Z,390nm,1.1s,mb6.3
VSR pmax pmax
comp=N,1μm,2.8s
VSR pmax pmax
comp=E,2μm,2.8s
VSR pmax pmax
comp=Z,5μm,2.8s,mb7.0
VSR pmax pmax
comp=Z,5μm,4.0s
VSR pmax pmax
comp=N,380nm,1.0s
VSR pmax pmax
comp=E,860nm,1.3s
VSR smax
comp=N,12μm,10.0s
VSR smax
comp=E,21μm,10.0s
VSR smax
comp=Z,12μm,10.0s
VSR MLR MLR
comp=N,128μm,20.0s,MS7.3
VSR MLR MLR
comp=E,134μm,20.0s,MS7.3
VSR MLR MLR
comp=Z,165μm,20.0s,MS7.2
VORD Divnogorie 67.07 318 *e*P **P 23 54 39.3 -0.5**
VORD *e* 23 57 04.2
VORD *e*S S 00 03 31.9 -1.4
VORD *e*SS SS 00 07 50.1 -1.2
VORD pmax pmax
comp=N,1μm,2.8s
VORD pmax pmax
comp=E,2μm,2.8s
VORD pmax pmax
comp=Z,4μm,2.8s,mb7.0
VORD pmax pmax
comp=N,550nm,1.3s
VORD pmax pmax
comp=E,810nm,1.3s
VORD pmax pmax
comp=Z,1μm,1.3s,mb6.7
VORD pmax pmax
comp=N,3μm,4.1s
VORD pmax pmax
comp=E,5μm,4.1s
VORD pmax pmax
comp=Z,6μm,4.1s
VORD smax
comp=N,16μm,11.8s
VORD smax
comp=E,26μm,11.8s
VORD smax
comp=Z,14μm,11.8s
VORD MLR MLR
comp=N,76μm,21.0s,MS7.1
VORD MLR MLR
comp=E,98μm,21.0s,MS7.1
VORD MLR MLR
comp=Z,86μm,21.0s,MS6.9
XMAS Kiritimati 67.09 107⇑*i*P **P 23 54 41.2 +0.8**
comp=Z,1μm,1.6s,mb6.7
XMAS LR LR
comp=Z,359μm,21.0s,MS7.6
MOR8 Moi Rana 67.20 339 *e*P **P 23 54 38.5 -1.8**
MOR8 AMb AMB 23 54 46.0
comp=Z,704nm,1.5s,mb6.5
MOR8 Moi Rana 67.20 339 *e*P **P 23 54 38.5 -1.8**
comp=Z,704nm,1.5s,mb6.5
RCS Mount Rainier- 67.20 48 P **P 23 54 42.8 +2.1**
TDL Tradedollar La 67.20 48 P **P 23 54 42.6 +1.9**
LON Longmire 67.22 48⇑*i*P **P 23 54 40.8 0.0**
LON pmax pmax
comp=Z,330nm,1.2s,mb6.2
LON Longmire 67.22 48⇑*i*P **P 23 54 40.8 0.0**
comp=Z,330nm,1.2s,mb6.2
LVP Lakeview Peak 67.25 49 P **P 23 54 42.7 +1.8**
KONS Konsvik 67.31 340 *e*P **P 23 54 41.4 +0.4**
KONS AMb AMB 23 54 47.1
comp=Z,103nm,0.6s,mb6.1
F04A Amboy 67.31 49⇓P **P 23 54 41.7 +0.3**
baz=67,SNR=28
F04A ⇓S S 00 03 39.1 +2.8
baz=67
FLOS Flostrand 67.37 340 *e*P **P 23 54 41.0 -0.4**
STOK Stokkvaagen 67.47 340 *e*P **P 23 54 42.1 +0.1**
STOK *e*S S 00 03 41.2 +3.7
STOK *e*SS SS 00 08 01.3 +4.5
COR Corvallis 67.53 50⇑*i*P **P 23 54 43.8 +1.0**
COR pmax pmax
comp=Z,513nm,0.9s,mb6.6
COR MLR MLR
comp=Z,49μm,22.0s,MS6.7
COR Corvallis 67.53 50⇑*i*P **P 23 54 43.8 +1.0**
comp=Z,513nm,0.9s,mb6.6
COR LR LR
comp=Z,49μm,22.0s,MS6.7
TWW Teanaway 67.54 47 P **P 23 54 44.9 +2.1**
MNCY Minicoy 67.56 262 *e*PKP **P 23 54 44.0 +0.6**
MNCY *ex* x 23 56 30.0
ETW Entiat 67.59 46 *e*P **P 23 54 43.5 +0.4**
comp=Z,279nm,0.8s,mb6.3
G04A Mulino 67.68 49⇓P **P 23 54 44.0 +0.3**
baz=67,SNR=21
G04A ⇑S S 00 03 44.2 +3.5
baz=67
B08A Colville Reser 67.72 45⇑P **P 23 54 43.9 0.0**
baz=68,SNR=101
B08A ⇑S S 00 03 39.9 -1.2
baz=68
WTV Waterville 67.75 46 P **P 23 54 45.1 +1.0**
JMIC Jan Mayen 67.97 350 *e*P **P 23 54 45.2 +0.1**
JMIC *e*S S 00 03 47.1 +3.7
JMIC Jan Mayen 67.97 350 P **P 23 54 45.2 0.0**
comp=Z,190nm,1.1s,mb6.0,baz=12,slow=10,SNR=3.6
VLL Laurance Lake 68.01 49 P **P 23 54 47.7 +1.9**
EDM Edmonton 68.02 39⇑*i*P **P 23 54 45.2 -0.5**
HOOD Mount Hood Mea 68.10 49⇑*i*P **P 23 54 47.0 +0.6**
comp=Z,957nm,0.9s,mb6.8
H04A Detroit Lake 68.14 50⇓P **P 23 54 46.8 +0.1**
baz=68,SNR=74
H04A ⇑S S 00 03 47.4 +1.1
baz=68
A10A Northport 68.34 44⇑P **P 23 54 47.9 +0.1**
baz=68,SNR=6.7
A10A ⇑S S 00 03 48.4 -0.1
baz=68
VSU Vasula 68.36 329*c i*P **P 23 54 47.4 -0.4**
VSU pmax pmax
comp=Z,484nm,1.2s,mb6.4
E07A Sunnyside 68.44 47⇑P **P 23 54 48.9 +0.4**
baz=68,SNR=16
E07A ⇑S S 00 03 50.3 +0.4
baz=68
SUMG Summit 68.57 360⇑*i*P **P 23 54 49.6 +0.7**
comp=Z,775nm,0.8s,mb6.7
SUMG *e*PP PP 23 57 22.1 +2.5
SUMG Summit 68.57 360⇑*i*P **P 23 54 49.7 +0.8**
comp=Z,835nm,0.9s,mb6.7
OD2 Odessa Site #2 68.62 46 *e*P **P 23 54 49.4 -0.2**
comp=Z,366nm,1.1s,mb6.2
C09A Chrisman Ranch 68.62 45⇑P **P 23 54 49.6 0.0**
baz=68,SNR=112
C09A ⇑S S 00 03 53.2 +1.3
baz=68
RSW Rattlesnake Hi 68.69 47 *e*P **P 23 54 51.2 +1.1**
comp=Z,846nm,1.7s,mb6.4
D08A Wollman Farm, 68.69 46⇓P **P 23 54 50.1 0.0**
baz=68,SNR=77
D08A ⇓S S 00 03 53.4 +0.6
baz=68
HAWA Hanford 68.72 47⇑*i*P **P 23 54 50.2 0.0**
comp=Z,591nm,1.7s,mb6.2
HAWA LR LR
comp=Z,41μm,20.0s,MS6.7
G06A Carlson Farm, 68.74 49⇓P **P 23 54 50.3 0.0**
baz=68,SNR=43
G06A ⇓S S 00 03 49.9 -3.6
baz=68
F07A Phinny Hill Vi 68.78 48⇑P **P 23 54 50.4 -0.2**
baz=68,SNR=26
F07A ⇓S S 00 03 53.9 +0.1
baz=68
HUMO Hull Mountain 68.83 52⇑*i*P **P 23 54 51.2 +0.2**
comp=Z,858nm,1.8s,mb6.4
HUMO LR LR
comp=Z,68μm,22.0s,MS6.8
AFI Afiamalu 68.90 130 *e*P **P 23 54 54.0 +2.4**
AFI pmax pmax
comp=Z,319nm,1.2s,mb6.1
AFI MLR MLR
comp=Z,126μm,22.0s,MS7.1
AFI Afiamalu 68.90 130 *e*P **P 23 54 54.0 +2.3**
comp=Z,319nm,1.2s,mb6.1
AFI LR LR
comp=Z,126μm,22.0s,MS7.1
E08A Dider Farm, El 68.94 47⇓P **P 23 54 51.6 0.0**
baz=69,SNR=28
E08A ⇓S S 00 03 56.7 +1.0
baz=69
NEW Newport 68.99 44⇑*i*P **P 23 54 51.6 -0.3**
NEW pmax pmax
comp=Z,438nm,1.1s
NEW MLR MLR
comp=Z,38μm,19.0s
NEW Newport 68.99 44⇑*i*P **P 23 54 51.6 -0.2**
comp=Z,438nm,1.1s,mb6.3
NEW LR LR
comp=Z,38μm,19.0s,MS6.7
ZEI Tsey 69.07 308 *e*P **P 23 54 51.3 -1.1**
ZEI *e* 23 55 12.9
ZEI *e* 23 57 25.4
ZEI *e*S S 00 04 01.4 +4.0
ZEI pmax pmax
comp=Z,912nm,1.1s,mb6.6
ZEI pmax pmax
comp=N,701nm,1.4s
ZEI pmax pmax
comp=E,1μm,1.2s
ZEI MLR MLR
comp=Z,154μm,16.0s,MS7.3
ZEI MLR MLR
comp=E,34μm,13.0s,MS7.2
ZEI MLR MLR
comp=N,111μm,18.0s,MS7.2
NSS Namsos 69.12 339⇑*i*P **P 23 54 52.0 -0.4**
NSS AMb AMB 23 55 00.3
comp=Z,448nm,3.0s,mb5.9
NSS *e*S S 00 03 57.1 -0.1
NSS *e*SS SS 00 08 37.4 +15
NSS AMS AMS 00 28 27.9
comp=Z,113μm,17.7s,MS7.2
NSS Namsos 69.12 339⇑*i*P **P 23 54 52.0 -0.4**
comp=Z,448nm,3.0s
NSS LR LR
comp=Z,113μm,17.7s,MS7.2
MTA Mtatsminda 69.12 307 P **P 23 54 52.3 -0.5**
KIV Kislovodsk 69.13 310 P **P 23 54 53.4 +0.6**
comp=Z,30μm,1.0s
KIV Kislovodsk 69.13 310⇑*i*P **P 23 54 53.2 +0.4**
KIV *i* S S 00 04 00.0 +1.9
KIV pmax pmax
comp=Z,2μm,1.2s,mb6.9
KIV MLR MLR
comp=Z,125μm,20.0s,MS7.2
KIV Kislovodsk 69.13 310⇑*i*P **P 23 54 52.9 +0.1**
comp=Z,6μm,1.0s
KIV LR LR
comp=Z,124μm,20.0s,MS7.2
KIV Kislovodsk 69.13 310 P **P 23 54 53.6 +0.8**
SNR=1693
KIV P 23 54 53.6
SNR=1693
TBLG Delisi 69.14 307 *e*P **P 23 54 53.0 +0.1**
TBLG Delisi 69.14 307 P **P 23 54 53.0 +0.1**
KEH Kehvi 69.31 308 P **P 23 54 53.1 -0.8**
GOR Gori 69.38 308 P **P 23 54 54.9 +0.4**
A12A Yaak River Ran 69.39 43⇓P **P 23 54 54.5 +0.2**
baz=69,SNR=22
A12A ⇓S S 00 04 02.3 +1.3
baz=69
E09A Wood Farm, Sta 69.44 46⇓P **P 23 54 54.6 -0.1**
baz=69,SNR=63
E09A ⇓S S 00 04 02.6 +1.0
baz=69
ONI Oni 69.44 309 P **P 23 54 55.3 +0.5**
YBH Yreka Blue Hor 69.48 53 P **P 23 54 56.4 +1.4**
comp=Z,151nm,1.1s,mb5.8,baz=333,slow=2.3,SNR=10.0
YBH LR LR 00 21 52.1
comp=Z,46μm,21.1s,MS6.7,baz=305,slow=33
YBH PKP2bc 00 23 02.5
comp=Z,4.2nm,1.1s,baz=155,slow=4.5,SNR=4.4
YBH Yreka Blue Hor 69.48 53⇑*i*P **P 23 54 54.0 -1.0**
YBH pmax pmax
comp=Z,310nm,1.2s
YBH MLR MLR
comp=Z,38μm,21.0s
YBH Yreka Blue Hor 69.48 53⇑*i*P **P 23 54 54.0 -1.0**
comp=Z,310nm,1.2s,mb6.1
YBH LR LR
comp=Z,38μm,21.0s,MS6.6
D10A Wagner Farm, O 69.61 46⇓P **P 23 54 55.3 -0.4**
baz=69,SNR=63
D10A ⇑S S 00 04 03.1 -0.5
baz=69
G08A Pilot Rock 69.68 48⇓P **P 23 54 56.1 -0.1**
baz=69,SNR=39
G08A ⇓S S 00 04 01.8 -2.7
baz=69
B12A Libby 69.70 44⇓P **P 23 54 56.3 +0.1**
baz=70,SNR=13
B12A ⇑S S 00 04 04.7 +0.1
baz=70
C11A Tepee Creek (N 69.71 44⇑S S 00 04 02.8 -2.0
baz=70
LNOR Lincton Mounta 69.73 47 *e*P **P 23 54 56.4 -0.1**
LNOR pmax pmax
comp=Z,277nm,1.4s,mb6.0
LNOR Lincton Mounta 69.73 47 *e*P **P 23 54 56.4 -0.1**
comp=Z,277nm,1.4s,mb6.0
WBK Wadi Bani Khal 69.92 283 P **P 23 54 59.0 +1.0**
SNR=79
SCO Scoresbysund 69.96 354⇑*i*P **P 23 54 57.7 +0.2**
comp=Z,358nm,0.9s,mb6.3
K05A Summer Lake 70.02 51⇑P **P 23 54 58.9 +0.5**
baz=70,SNR=158
K05A ⇓S S 00 04 03.8 -4.8
baz=70
GNI Garni 70.03 306 *e*P **P 23 54 59.3 +0.9**
GNI Garni 70.03 306 P **P 23 54 59.3 +0.8**
comp=Z,156nm,1.0s,mb5.9,baz=14,slow=5.1,SNR=22
GNI Garni 70.03 306*c e*P **P 23 54 59.3 +0.9**
GNI pmax pmax
comp=Z,519nm,1.2s
GNI MLR MLR
comp=Z,228μm,21.0s
GNI Garni 70.03 306⇑*i*P **P 23 54 59.4 +0.9**
comp=Z,60nm,0.8s,mb5.6
GNI LR LR
comp=Z,214μm,20.0s,MS7.4
E10A Myers Farm, Un 70.04 46⇓P **P 23 54 58.3 0.0**
baz=70,SNR=52
E10A ⇓S S 00 04 07.6 -1.1
baz=70
F09A S2 Ranch, Elgi 70.04 47⇑P **P 23 54 58.5 +0.1**
baz=70,SNR=19
F09A ⇓S S 00 04 09.0 +0.2
baz=70
A13A Flathead Natio 70.05 43⇑S S 00 04 08.1 -0.6
baz=70
BANOM Banah 70.05 288 P **P 23 55 00.5 +1.7**
SNR=15
I07A Izee 70.07 49⇑P **P 23 54 58.6 +0.1**
baz=70,SNR=72
I07A ⇑S S 00 04 10.5 +1.4
baz=70
C12B Naegeli Ranch, 70.21 44⇑P **P 23 54 59.5 +0.1**
baz=70,SNR=59
C12B ⇓S S 00 04 10.0 -0.6
baz=70
WALA Waterton Lakes 70.23 42⇑*i*P **P 23 54 59.3 -0.2**
comp=Z,12nm,1.1s
WALA *e*PP PP 23 57 37.5 +3.0
WDC Whiskeytown Da 70.24 53⇑*i*P **P 23 54 59.7 0.0**
WDC pmax pmax
comp=Z,233nm,1.0s,mb6.1
WDC MLR MLR
comp=Z,52μm,20.0s,MS6.8
WDC Whiskeytown Da 70.24 53⇑*i*P **P 23 54 59.7 0.0**
comp=Z,233nm,1.0s,mb6.1
WDC LR LR
comp=Z,52μm,20.0s,MS6.8
F10A Beach Ranch, E 70.27 46⇓P **P 23 54 59.9 +0.1**
baz=70,SNR=26
F10A ⇓S S 00 04 12.7 +1.3
baz=70
H08A Prairie City 70.30 48⇑P **P 23 55 00.1 0.0**
baz=70,SNR=84
H08A ⇑S S 00 04 12.4 +0.6
baz=70
IZAR Zarasai 70.34 327 *e*P **P 23 55 00.2 +0.1**
IZAR AMB AMB 23 55 08.0
comp=Z,288nm,1.2s,mb6.1
B13A Whitefish 70.35 43⇓P **P 23 55 00.4 +0.2**
baz=70,SNR=338
B13A ⇓S S 00 04 10.4 -1.9
baz=70
SMDO Samad 70.36 284 P **P 23 55 01.8 +1.0**
SNR=49
G09A Cove 70.37 47⇓P **P 23 55 00.4 0.0**
baz=70,SNR=47
G09A ⇑S S 00 04 09.6 -3.0
baz=70
IDID Didziasalis 70.42 326 *e*P **P 23 55 00.7 +0.2**
IDID AMB AMB 23 55 08.5
comp=Z,401nm,1.1s,mb6.2
MICGM Minsk 70.45 325⇑*i*P **P 23 55 00.0 -0.8**
MNK Minsk 70.47 325⇑*i*P **P 23 55 00.0 -0.9**
MNK *e* 23 55 24.0
MNK *e* 23 57 40.0
MNK *e*PPP 23 59 24.0
MNK *e*S S 00 04 12.0 -1.5
MNK pmax pmax
comp=Z,3μm,1.0s,mb7.1
MNK pmax pmax
comp=Z,14μm,10.0s
MNK smax
comp=E,6μm,10.0s
MNK smax
comp=N,3μm,10.0s
BSMT Bassoo Peak 70.50 44 *e*P **P 23 55 01.6 +0.4**
comp=N,553nm,1.9s,mb6.2
ISAL Salakas 70.51 327 *e*P **P 23 55 01.5 +0.4**
ISAL AMB AMB 23 55 09.2
comp=Z,738nm,1.2s,mb6.5
A14A Double T Ranch 70.54 42⇓P **P 23 55 01.1 -0.3**
baz=70,SNR=158
A14A ⇑S S 00 04 15.3 +0.8
baz=70
IIGN Ignalina 70.62 327 *e*P **P 23 55 02.1 +0.4**
IIGN AMB AMB 23 55 09.8
comp=Z,515nm,1.1s,mb6.4
HOQ Hoqain 70.62 285 P **P 23 55 02.6 +0.3**
SNR=62
D12A Red Ives Fores 70.67 45⇑S S 00 04 14.2 -1.8
baz=70
STKA Stephens Creek 70.67 179 *e*PKPPKP 00 22 58.1
comp=Z,14nm,1.5s
STKA Stephens Creek 70.67 179 P **P 23 55 01.5 -0.7**
comp=Z,60nm,0.8s,mb5.6,baz=344,slow=7.1,SNR=86
STKA S S 00 04 15.4 -0.6
comp=Z,3.0nm,0.9s,baz=210,slow=16,SNR=1.9
STKA PKP2ab 00 22 58.6
comp=Z,14nm,1.1s,baz=89,slow=4.6,SNR=7.6
STKA LR LR 00 25 07.5
comp=Z,69μm,19.8s,MS6.9,baz=8,6,slow=35
STKA Stephens Creek 70.67 179⇑*i*P **P 23 55 01.4 -0.8**
comp=Z,0.5nm,0.4s
NACGM Naroch 70.67 326 *e*P **P 23 55 01.0 -1.1**
C13A Hot Springs 70.72 44⇓P **P 23 55 02.3 -0.2**
baz=70,SNR=184
C13A ⇓S S 00 04 12.7 -3.9
baz=70
JMDO Jabal Madar 70.72 283 P **P 23 55 03.6 +0.7**
SNR=45
G10A Bishop Farm, J 70.73 47⇓P **P 23 55 02.5 -0.1**
baz=70,SNR=105
G10A ⇓S S 00 04 16.9 +0.1
baz=70
HATD Hatta, Dubai 70.79 287 P **P 23 55 04.0 +0.6**
SNR=29
KARS Kars 70.79 307 *e*P **P 23 55 04.3 +1.2**
H09A Durkee 70.80 48⇑P **P 23 55 03.2 +0.2**
baz=71,SNR=12
H09A ⇑S S 00 04 18.7 +1.1
baz=71
HOPS Hopland 70.81 55⇑*i*P **P 23 55 03.7 +0.5**
comp=Z,412nm,1.3s,mb6.2
HOPS LR LR
comp=Z,58μm,22.0s,MS6.8
JTMT Jette 70.83 44 *e*P **P 23 55 03.6 +0.5**
comp=Z,275nm,1.1s,mb6.1
MOD Modoc 70.85 51⇓*i*P **P 23 55 03.3 -0.2**
comp=Z,3μm,1.2s,mb7.1
MOD LR LR
comp=Z,42μm,22.0s,MS6.7
BMO Blue Mountains 70.89 47⇑*i*P **P 23 55 03.7 +0.1**
BMO pmax pmax
comp=Z,109nm,0.9s,mb5.8
BMO MLR MLR

comp=Z,32µm,19.0s,MS6.6
BMO Blue Mountains 70.89 47⇑*i*P P 23 55 03.7 +0.1
comp=Z,109nm,0.9s,mb5.8
BMO LR LR

comp=Z,32µm,19.0s,MS6.6
A15A Johnson Ranch, 70.90 42 ⇑P P 23 55 02.8 -0.8
baz=71,SNR=194
A15A ⇓S S 00 04 14.2 -4.4

baz=71
YBMT Yellow Bay 70.91 43 *e*P P 23 55 04.6 +1.0
comp=Z,173nm,1.0s,mb5.9
F11A Grangeville 70.92 46 ⇓P P 23 55 03.5 -0.3
baz=71,SNR=150
F11A ⇓S S 00 04 14.9 -4.2

baz=71
ASHO Ashiyiah 70.93 287 P P 23 55 04.7 +0.5
SNR=35
E12A Beaver Dam Sad 70.93 45 ⇓S S 00 04 15.8 -3.3
baz=71
B14A Marquette Ranc 70.99 43 ⇓P P 23 55 03.9 -0.3
baz=71,SNR=24
B14A ⇑S S 00 04 19.0 -0.8

baz=71
DYDN Diyadin 71.04 306⇑*i*P P 23 55 05.8 +1.3
NAZ Nazwa, Dubai 71.05 287 P P 23 55 05.5 +0.6
SNR=22
J08A Circle Bar Ran 71.09 49 ⇓P P 23 55 05.2 +0.4
baz=71,SNR=171
J08A ⇓S S 00 04 21.5 +0.3

baz=71
SOC Sochi 71.10 311*c i*P P 23 55 04.6 -0.3
SOC *e**PP pP 23 55 15.3 +6.6
SOC *e**SP sP 23 55 18.0 +7.9
SOC *e* 23 57 43.1
SOC *e*PPP 23 59 27.6
SOC *i* S S 00 04 20.3 -0.8
SOC *e* 00 05 04.0
SOC *e*SS SS 00 08 53.2 -0.5
SOC pmax pmax

comp=Z,1µm,0.9s,mb6.8
SOC pmax pmax

comp=Z,19µm,5.4s
SOC MLR MLR

comp=Z,259µm,18.0s,MS7.5
SOC Sochi 71.10 311 *i* P P 23 55 04.8 -0.1
C14A Swan Lake 71.10 43 ⇓S S 00 04 18.7 -2.3
baz=71
CLDR Caldiran 71.12 305 *e*P P 23 55 05.0 -0.2
SWMT Swartz Lake 71.13 44 *e*P P 23 55 05.5 +0.5
comp=Z,355nm,1.2s,mb6.2
D13A Huson 71.13 44 ⇑P P 23 55 04.7 -0.4
baz=71,SNR=162
D13A ⇑S S 00 04 20.8 -0.7

baz=71
G11A Walters Elk Ra 71.15 47 ⇑P P 23 55 05.0 -0.2
baz=71,SNR=340
G11A ⇑S S 00 04 23.7 +1.9

baz=71
I09A Lost Marbles R 71.16 48 ⇑P P 23 55 05.2 0.0
baz=71,SNR=60
I09A ⇓S S 00 04 21.9 0.0

baz=71
ARTV Artvin 71.18 308⇑*i*P P 23 55 06.5 +1.1
BSY Bisya 71.19 284 P P 23 55 06.6 +0.9
SNR=40
BCA Borcka 71.21 308 *e*P P 23 55 05.9 +0.2
ARQ Araqi 71.35 285 P P 23 55 07.2 +0.5
SNR=73
H10A Noah's Angus R 71.37 47 ⇓P P 23 55 06.2 -0.3
baz=71,SNR=157
H10A ⇑S S 00 04 26.8 +2.6

baz=71
B15A Bradely Ranch, 71.40 42 ⇑P P 23 55 06.3 -0.3
baz=71,SNR=372
B15A ⇑S S 00 04 26.5 +2.1

baz=71
DBAD Bademkaya 71.42 308⇑*i*P P 23 55 07.7 +0.8
MCCM Marconi Confer 71.42 56⇑*i*P P 23 55 07.2 +0.2
comp=Z,314nm,1.0s,mb6.2
MCCM LR LR

comp=Z,55µm,22.0s,MS6.8
AGRB Hanur-Agry 71.46 306 *e*P P 23 55 08.4 +1.2
DDEM Demirkent 71.46 308⇑*i*P P 23 55 08.3 +1.2
A16A West Butte Ran 71.50 41 ⇓P P 23 55 06.9 -0.4
baz=71,SNR=36
A16A ⇓S S 00 04 23.0 -2.6

baz=71
F12A Elk City 71.51 46 ⇑P P 23 55 07.4 +0.1
baz=71,SNR=198
F12A ⇓S S 00 04 25.3 -0.5

baz=71
J09A Fry Pan Ranch, 71.52 49 ⇓P P 23 55 07.6 +0.1
baz=71
J09A ⇑S S 00 04 28.7 +2.6

baz=71
WVOR Wild Horse Val 71.54 50⇑*i*P P 23 55 07.6 0.0
WVOR pmax pmax

comp=Z,430nm,0.5s,mb6.6
WVOR MLR MLR

comp=Z,36µm,19.0s,MS6.7
WVOR Wild Horse Val 71.54 50⇑*i*P P 23 55 07.6 0.0
comp=Z,430nm,0.5s,mb6.6
WVOR LR LR

comp=Z,36µm,19.0s,MS6.7
SLMT Seeley Lake 71.56 44 *e*P P 23 55 07.3 -0.4
comp=Z,127nm,0.6s,mb6.0
MSO Missoula 71.58 44⇑*i*P P 23 55 07.2 -0.5
comp=Z,126nm,1.1s,mb5.8
MSO LR LR

comp=Z,31µm,19.0s,MS6.6
I10A Payette 71.64 48 ⇓P P 23 55 07.9 -0.3
baz=71,SNR=30
I10A ⇓S S 00 04 24.7 -2.6

baz=71
D14A Greenough 71.66 44 ⇑P P 23 55 07.8 -0.4
baz=71,SNR=126
D14A ⇓S S 00 04 28.6 +1.1

baz=71
E13A Victor 71.68 45 ⇑P P 23 55 07.8 -0.6
baz=71,SNR=29
E13A ⇑S S 00 04 28.2 +0.5

baz=71
ANN Anapa 71.69 313*c i*P P 23 55 07.6 -0.8
ANN *i* *PP pP 23 55 17.5 +5.3
ANN *i* PPP 23 59 36.4
ANN *i* S S 00 04 27.5 -0.4
ANN *i* SS SS 00 09 06.4 +3.7
ANN pmax pmax

comp=Z,2µm,1.2s,mb6.9
ANN MLR MLR

comp=Z,131µm,19.0s,MS7.2
ANN Anapa 71.69 313 *i* P P 23 55 07.4 -1.0
C15A Salmond Ranch, 71.71 43 ⇑P P 23 55 08.7 +0.2
baz=72,SNR=296
C15A ⇑S S 00 04 30.3 +2.2

baz=72
H11A Donnelly 71.72 47 ⇓P P 23 55 08.0 -0.6
baz=72,SNR=82
H11A ⇓S S 00 04 29.9 +1.6

baz=72
VANB Van 71.78 305 *e*P P 23 55 10.1 +1.0
B16A M & M Farms, S 71.78 42 ⇑P P 23 55 08.3 -0.6
baz=72,SNR=52
B16A ⇓S S 00 04 28.4 -0.5

baz=72
TVAN Van 71.81 305⇑*i*P P 23 55 10.1 +0.8
PZAR Pazar-Rize 71.81 308 *e*P P 23 55 10.0 +0.7
G12A Big Creek, Yel 71.85 46 ⇓S S 00 04 30.6 +0.9
baz=72
HOMI Horasan 71.86 307⇑*i*P P 23 55 10.8 +1.2
MOL Molde 71.89 339⇑*i*P P 23 55 10.3 +1.0
MOL AMb AMB 23 55 19.1

comp=Z,577nm,1.8s,mb6.2
MOL *e*S S 00 04 32.3 +2.6
MOL *e*SS SS 00 09 14.7 +10
MOL AMS AMS 00 29 56.4

comp=Z,121µm,17.9s,MS7.2
MOL Molde 71.89 339⇑*i*P P 23 55 10.3 +1.0
comp=Z,577nm,1.8s,mb6.2
MOL LR LR

comp=Z,121µm,17.9s,MS7.2
CHMT Chamberlain Mo 71.89 44 *e*P P 23 55 09.4 -0.2
comp=Z,84nm,1.1s,mb5.6
HFS Hagfors 71.94 335 P P 23 55 09.3 -0.4
comp=Z,55nm,0.4s,mb5.9,baz=53,slow=5.7,SNR=8.8
HFS Hagfors 71.94 335 P P 23 55 09.3 -0.4
HFS pmax pmax

comp=Z,55nm,0.4s
F13A Darby 72.00 45 ⇓P P 23 55 09.5 -0.8
baz=72,SNR=84
F13A ⇓S S 00 04 32.5 +1.0

baz=72
BEKR Beckworth 72.01 53 ⇓P P 23 55 09.9 -0.6
baz=72,SNR=259
BEKR ⇓S S 00 04 33.0 +1.2

baz=72
NB2 NORSAR Subarra 72.03 337 P P 23 55 10.0 -0.2
comp=Z,1µm,1.1s,mb6.7,baz=38,slow=6.2
NOA NORSAR Array B 72.03 337 P P 23 55 09.8 -0.4
comp=Z,382nm,1.1s,mb6.2,baz=39,slow=6.0,SNR=216
NOA LR LR 00 29 14.2

comp=Z,164µm,21.4s,MS7.3,baz=40,slow=38
NOA NORSAR Array B 72.03 337 P P 23 55 09.9 -0.3
NOA pmax pmax

comp=Z,382nm,1.2s
NOA MLR MLR

comp=Z,164µm,21.4s
J10A Berg Farm, Mel 72.05 48 ⇑P P 23 55 10.0 -0.7
baz=72,SNR=16
J10A ⇓S S 00 04 31.9 -0.3

baz=72
E14A Clinton 72.07 44 ⇑P P 23 55 10.2 -0.5
baz=72
E14A ⇓S S 00 04 32.0 -0.3

baz=72
C16A Fuhringer Ranc 72.14 42 ⇓S S 00 04 34.3 +1.2
baz=72
HKR Hakkari 72.14 304 *e*P P 23 55 11.8 +0.5
HAKT HAKKARI 72.18 304⇑*i*P P 23 55 11.4 -0.1
D15A Lincoln 72.21 43 ⇑P P 23 55 10.9 -0.6
baz=72,SNR=50
D15A ⇓S S 00 04 34.7 +0.8

baz=72
FFC Flin Flon 72.22 33 *i* P P 23 55 12.1 +0.7
comp=Z,2µm,1.0s,mb7.0,SNR=48
FFC Flin Flon 72.22 33 *i* P P 23 55 10.7 -0.7
FFC Flin Flon 72.22 33⇑*i*P P 23 55 10.5 -1.0
comp=Z,448nm,1.1s,mb6.3
FFC LR LR

comp=Z,50µm,20.0s,MS6.8
I11A Placerville 72.23 48 ⇑P P 23 55 11.2 -0.5
baz=72
I11A ⇑S S 00 04 34.8 +0.6

baz=72
ERZM Erzurum 72.28 307⇑*i*P P 23 55 13.8 +1.7
EZM Erzurum 72.28 307 *e*P P 23 55 13.4 +1.3
NAO01 NORSAR Array S 72.29 337 *e*P P 23 55 11.1 -0.7
comp=Z,613nm,1.0s,mb6.5
NAO01 LR LR

comp=Z,202µm,22.0s,MS7.3
AKASG Malin Array Be 72.30 322 P P 23 55 11.4 -0.6
comp=Z,46nm,0.5s,mb5.6,baz=45,slow=6.0,SNR=202
AKASG LR LR 00 29 46.0

comp=Z,289µm,18.4s,MS7.6,baz=50,slow=38
AKASG Malin Array Be 72.30 322 P P 23 55 11.4 -0.6
AKASG pmax pmax

comp=Z,46nm,0.5s
AKASG MLR MLR

comp=Z,289µm,18.4s
AKBB Malin Array Si 72.30 322⇑*i*P P 23 55 11.3 -0.7
KIEV Kiev 72.32 322⇑*i*P P 23 55 11.3 -0.8
KIEV pmax pmax

comp=Z,10µm,2.5s,mb7.3
KIEV MLR MLR

comp=Z,157µm,22.0s,MS7.2
KIEV Kiev 72.32 322⇑*i*P P 23 55 11.2 -0.8
comp=Z,19µm,2.5s
KIEV LR LR

comp=Z,157µm,22.0s,MS7.2
B17A L&G Farms, Che 72.33 42 ⇓P P 23 55 11.9 -0.3
baz=72,SNR=81
B17A ⇑S S 00 04 36.3 +1.2

baz=72
FCC Fort Churchill 72.35 27⇑*i*P P 23 55 11.2 -0.9
comp=Z,20nm,1.2s
K10A MacKenzie Ranc 72.38 49 ⇓P P 23 55 12.5 -0.1
baz=72,SNR=257
K10A ⇓S S 00 04 36.7 +0.7

baz=72
A18A Metzger Ranch, 72.42 41 ⇓P P 23 55 12.1 -0.6
baz=72,SNR=27
A18A ⇑S S 00 04 37.8 +1.6

baz=72
CUKT Cukurca 72.42 304 *e*P P 23 55 13.1 +0.1
H12A Diamond D Ranc 72.47 47 ⇑P P 23 55 12.6 -0.5
baz=72
H12A ⇑S S 00 04 37.1 +0.3

baz=72
G13A Cobalt 72.48 46 ⇓P P 23 55 12.5 -0.7
baz=72,SNR=105
G13A ⇑S S 00 04 38.2 +1.1

baz=72
F14A Wisdom 72.51 45 ⇓P P 23 55 12.8 -0.5
baz=72
F14A ⇓S S 00 04 38.8 +1.4

baz=72
E15A Deer Lodge 72.53 44 ⇑P P 23 55 13.1 -0.3
baz=72,SNR=171
E15A ⇓S S 00 04 32.4 -5.1

baz=72
MFID Camas Ranch 72.60 48 ⇑P P 23 55 13.7 -0.2
baz=72,SNR=128
MFID ⇓S S 00 04 39.4 +0.9

baz=72
KTUT Trabzon 72.61 309 *e*P P 23 55 13.8 -0.2
MACK Trabzon 72.64 309⇑*i*P P 23 55 14.9 +0.7
WCN Washoe City 72.72 53 ⇓P P 23 55 14.7 0.0
baz=72
WCN ⇓S S 00 04 38.7 -1.3

baz=72
D16A Dana Ranch, Ca 72.73 43 ⇓P P 23 55 14.4 -0.3
baz=72,SNR=50
D16A ⇑S S 00 04 38.7 -1.1

baz=72
KOPT Kop Dagi 72.75 308⇑*i*P P 23 55 16.1 +1.3
C17A Wharram Farm, 72.77 42 ⇓P P 23 55 14.3 -0.5
baz=72,SNR=69
C17A ⇑S S 00 04 40.3 +0.1

baz=72
I12A Atlanta 72.77 47 ⇑P P 23 55 14.9 0.0
baz=72,SNR=349
I12A ⇓S S 00 04 40.8 +0.4

baz=72
HRY Holter Researc 72.78 43 *e*P P 23 55 15.3 +0.3
comp=Z,307nm,0.8s,mb6.3
B18A Beardsley Farm 72.79 41 ⇓P P 23 55 14.8 -0.1
baz=72,SNR=147
B18A ⇓S S 00 04 41.4 +1.0

baz=72
H13A Challis 72.80 46 ⇓P P 23 55 14.7 -0.4
baz=72,SNR=250
H13A ⇑S S 00 04 41.9 +1.3

baz=72
G14A Jackson 72.82 45 ⇑P P 23 55 15.1 -0.1
baz=73
G14A ⇑S S 00 04 41.5 +0.7

baz=73
SUW Suwalki 72.82 327⇑*e*P P 23 55 14.3 -0.8
SUW *e* 23 55 24.3
SUW pmax pmax

comp=Z,6µm,3.6s
SUW Suwalki 72.82 327⇑*i*P P 23 55 14.4 -0.7
comp=Z,1µm,1.1s,mb6.8
K11A Parker Ranch, 72.88 49 ⇑P P 23 55 15.5 -0.1
baz=73,SNR=157
K11A ⇑S S 00 04 40.1 -1.6

baz=73
F15A Butte 72.97 44 ⇓P P 23 55 15.8 -0.3
baz=73,SNR=341
F15A ⇑S S 00 04 43.9 +1.2

baz=73
E16A East Helena 72.98 43 ⇓P P 23 55 16.1 0.0
baz=73
E16A ⇓S S 00 04 43.0 +0.3

baz=73
LRM Limekiln Ridge 73.01 44 *e*P P 23 55 16.4 +0.1
comp=Z,1µm,0.8s,mb6.8
EGMT Eagleton 73.04 41 ⇓P P 23 55 16.1 -0.3
baz=73
EGMT ⇓S S 00 04 44.7 +1.4

baz=73
EGMT Eagleton 73.04 41⇑*i*P P 23 55 16.0 -0.5
comp=Z,630nm,1.3s,mb6.4
EGMT LR LR

comp=Z,55µm,19.0s,MS6.9
L10A Juniper Basin 73.04 49 ⇓P P 23 55 16.9 +0.3
baz=73
L10A ⇑S S 00 04 46.6 +3.1

baz=73
OSL Oslo 73.05 336 *e*P P 23 55 16.1 -0.2
CMB Columbia Colle 73.08 55⇑*i*P P 23 55 16.6 -0.3
CMB pmax pmax

comp=Z,570nm,1.3s,mb6.3
CMB MLR MLR

comp=Z,68µm,22.0s,MS6.9
CMB Columbia Colle 73.08 55⇑*i*P P 23 55 16.6 -0.3
comp=Z,570nm,1.3s,mb6.3
CMB LR LR

comp=Z,68µm,22.0s,MS6.9
GUMT Gumushane 73.10 309 *e*P P 23 55 17.8 +0.8
D17A Six Diamond Ra 73.11 43 ⇑P P 23 55 16.8 -0.1
baz=73
D17A ⇑S S 00 04 41.9 -2.2

baz=73
J12A Stokes Ranch, 73.13 48 ⇓P P 23 55 16.9 -0.1
baz=73
J12A ⇑S S 00 04 40.1 -4.3

baz=73
BTMT Batman 73.22 306 *e*P P 23 55 18.0 +0.3
DLMT Dillon 73.22 45⇑*i*P P 23 55 17.4 -0.2
comp=Z,245nm,0.8s,mb6.2
MSL Mosul 73.25 303 *e*P P 23 55 20.5 +2.6
MSL *e*S S 00 04 45.0 -1.0
H14A Leadore 73.26 46 ⇓P P 23 55 17.2 -0.6
baz=73,SNR=66
H14A ⇑S S 00 04 43.2 -2.7

baz=73
I13A Wildhorse Cree 73.28 47 ⇑P P 23 55 18.2 +0.3
baz=73
I13A ⇑S S 00 04 43.8 -2.3

baz=73
ESPY Espiye-Giresun 73.28 309 *e*P P 23 55 18.4 +0.3
HLID Hailey 73.33 47 ⇓P P 23 55 18.3 +0.1
baz=73
HLID ⇑S S 00 04 43.6 -3.0

baz=73
HLID Hailey 73.33 47⇑*i*P P 23 55 18.4 +0.1
comp=Z,7µm,1.0s
HLID LR LR

comp=Z,56µm,22.0s,MS6.8
M10A I.L. Ranch, Tu 73.34 50 ⇓P P 23 55 18.5 +0.2
baz=73
M10A ⇓S S 00 04 50.7 +3.8

baz=73
FOO Floro 73.37 340⇑*i*P P 23 55 17.7 -0.4
FOO AMb AMB 23 55 26.3

comp=Z,522nm,2.6s,mb6.0
FOO *e*S S 00 04 49.4 +2.8
FOO *e*SS SS 00 09 32.2 +4.8
FOO AMS AMS 00 31 02.5

comp=Z,127µm,19.9s,MS7.2
FOO Floro 73.37 340⇑*i*P P 23 55 17.7 -0.4
comp=Z,522nm,2.6s,mb6.0
FOO LR LR

comp=Z,127µm,19.9s,MS7.2
G15A Dillon 73.40 45 ⇓P P 23 55 18.3 -0.3
baz=73,SNR=425
G15A ⇓S S 00 04 48.7 +1.2

baz=73
HYA Hoyanger 73.41 339 *e*P P 23 55 18.9 +0.6
HYA AMb AMB 23 55 26.4

comp=Z,608nm,1.3s,mb6.4
HYA Hoyanger 73.41 339 *e*P P 23 55 18.9 +0.6
comp=Z,608nm,1.3s,mb6.4
L11A Cat Creek Ranc 73.41 49 ⇓P P 23 55 19.1 +0.4
baz=73,SNR=257
L11A ⇓S S 00 04 45.5 -2.2

baz=73
MCMT McKenzie Canyo 73.42 45 *e*P P 23 55 18.7 -0.1
comp=Z,28nm,0.8s,mb5.2
BINT Bingol 73.44 307 *e*P P 23 55 22.1 +3.1
SIM Simferopol' 73.45 315*c i*P P 23 55 20.5 +1.6
SIM *i* S S 00 04 52.0 +3.9
SIM *i* PS 00 05 38.0
SIM pmax pmax

comp=Z,835nm,0.9s,mb6.7
SIM MLR MLR

comp=Z,128µm,20.3s,MS7.2
E17A Martinsdale 73.46 43 ⇓P P 23 55 19.1 +0.1
baz=73,SNR=218
E17A ⇓S S 00 04 49.1 +0.9

baz=73
F16A Kennard Place, 73.48 44 ⇑P P 23 55 19.0 -0.1
baz=73,SNR=123
F16A ⇑S S 00 04 49.2 +0.8

baz=73
BEST Besiri 73.54 306⇑*i*P P 23 55 20.4 +0.8
D18A Linhart Farms, 73.55 42 ⇓P P 23 55 19.5 0.0
baz=73
D18A ⇑S S 00 04 51.4 +2.4

baz=73
GRSN GIRESUNGRSN 73.55 310⇑*i*P P 23 55 19.1 -0.5
J13A Cove Ranch, Pi 73.56 47 ⇑P P 23 55 19.8 +0.2
baz=73,SNR=188
J13A ⇑S S 00 04 52.5 +3.1

baz=73
BOZ Bozeman (W) 73.57 44 ⇑S S 00 04 50.6 +1.3
baz=73
BOZ Bozeman (W) 73.57 44 PFAKE 23 55 30.0 +10
BOZ LR LR

comp=Z,38µm,19.0s,MS6.7
BMN Battle Mountai 73.60 51⇑*i*P P 23 55 20.5 +0.6
BMN pmax pmax

comp=Z,180nm,0.8s,mb6.0
BMN MLR MLR

comp=Z,44µm,22.0s,MS6.7
BMN Battle Mountai 73.60 51⇑*i*P P 23 55 20.5 +0.6
comp=Z,180nm,0.8s,mb6.0
BMN LR LR

comp=Z,44µm,22.0s,MS6.7
K12A Draper Farm, C 73.62 48 ⇓P P 23 55 20.0 +0.1
baz=73
K12A ⇓S S 00 04 52.8 +2.8

baz=73
KONO Kongsberg 73.63 337⇑*i*P P 23 55 19.1 -0.6
KONO *e*S S 00 04 51.6 +2.1
KONO *e*SS SS 00 09 36.2 +4.8
KONO AMS AMS 00 27 01.3

comp=Z,166µm,27.8s,MS7.2
KONO Kongsberg 73.63 337⇑*i*P P 23 55 19.3 -0.4
KONO pmax pmax

comp=Z,515nm,1.0s,mb6.4
KONO MLR MLR

comp=Z,194µm,21.0s,MS7.4
KONO Kongsberg 73.63 337⇑*i*P P 23 55 19.3 -0.3
comp=Z,515nm,1.0s,mb6.4
KONO LR LR

comp=Z,194µm,21.0s,MS7.4
I14A Mackay 73.64 46 ⇑P P 23 55 20.4 +0.4
baz=73,SNR=230
I14A ⇓S S 00 04 51.5 +1.3

baz=73
H15A Lima 73.66 45 ⇓P P 23 55 20.2 0.0
baz=73,SNR=18
H15A ⇑S S 00 04 50.7 +0.3

baz=73
G16A Moss Hill, Enn 73.74 45 ⇓P P 23 55 20.4 -0.2
baz=74,SNR=185
G16A ⇑S S 00 04 50.7 -0.6

baz=74
SFJD Kangerlussuaq 73.82 5 P P 23 55 19.9 -0.8
comp=Z,126nm,0.7s,mb5.9,baz=338,slow=5.9,SNR=4.8
SFJD Kangerlussuaq 73.82 5 P P 23 55 19.9 -0.8
SFJD LR LR

comp=Z,107µm,22.0s,MS7.1
SFJD Kangerlussuaq 73.82 5⇑*i*P P 23 55 19.9 -0.8
comp=Z,419nm,1.0s,mb6.3
SFJD *i* S S 00 04 53.1 +1.5
SFJD

comp=Z,88µm,21.0s
M11A Holland Ranch, 73.84 50 ⇑P P 23 55 21.9 +0.6
baz=74
M11A ⇓S S 00 04 47.1 -5.4

baz=74
N10A Dunphy 73.85 51 ⇓P P 23 55 21.9 +0.6
baz=74
N10A ⇓S S 00 04 53.7 +1.0

baz=74
L12A House Creek Ra 73.86 49 ⇑P P 23 55 21.8 +0.4
baz=74
L12A ⇑S S 00 04 52.3 -0.4

baz=74

SUE Sulen 73.89 339 *e*P **P 23 55 21.3 +0.1**
E18A Harlowton 73.89 43 ⇓P **P 23 55 21.9 +0.4**
baz=74
E18A ⇓S S 00 04 54.4 +1.4
baz=74
F17A Fitzpatrick Pl 73.92 44 ⇓P **P 23 55 22.0 +0.3**
baz=74
F17A ⇑S S 00 04 51.8 -1.6
baz=74
J14A Carey 73.98 47 ⇑P **P 23 55 22.8 +0.7**
baz=74,SNR=240
J14A ⇑S S 00 04 54.5 +0.3
baz=74
K13A Stover Farm, H 74.08 48 ⇑P **P 23 55 23.2 +0.5**
baz=74
K13A ⇓S S 00 04 56.9 +1.6
baz=74
PTK Pertek 74.11 307 *e*P **P 23 55 23.8 +0.8**
O10A Cortez Mining, 74.12 51 ⇓P **P 23 55 23.5 +0.6**
baz=74
O10A ⇑S S 00 04 58.1 +2.3
baz=74
I15A Monteview 74.14 46 ⇓P **P 23 55 23.4 +0.4**
baz=74
I15A ⇓S S 00 04 59.1 +3.2
baz=74
NVAR Mina Array Bea 74.15 53 P **P 23 55 23.6 +0.4**
comp=Z,86nm,0.9s,mb5.7,baz=288,slow=5.3,SNR=261
NVAR S S 00 04 59.7 +3.5
comp=Z,2.0nm,1.0s,baz=204,slow=4.0,SNR=2.1
UMR Umm Al-Rimmam 74.17 295 *e*P **P 23 55 21.9 -1.5**
UMR AMb AMB 23 55 29.9
comp=Z,923nm,1.2s,mb6.6
DIY Diyarbakir 74.19 306 *e*P **P 23 55 24.2 +0.8**
QLMT Earthquake Lak 74.19 45 *e*P **P 23 55 24.8 +1.5**
comp=Z,102nm,1.0s,mb5.7
MARD Mardin 74.20 305⇑*i*P **P 23 55 25.1 +1.7**
DIYA Diyarbakir 74.24 306⇑*i*P **P 23 55 24.9 +1.2**
ASK Askoy 74.25 339 *e*P **P 23 55 22.7 -0.6**
N11A Elko Archery C 74.25 50 ⇑P **P 23 55 24.4 +0.7**
baz=74
N11A ⇑S S 00 04 59.8 +2.5
baz=74
G17A Pierce Place, 74.26 44 ⇑P **P 23 55 24.1 +0.4**
baz=74
G17A ⇑S S 00 04 55.1 -2.0
baz=74
BHD Baghdad 74.26 300 *i*P **P 23 55 23.9 0.0**
BHD *i*S S 00 04 56.0 -1.6
BHD *i*sS sS 00 05 12.0 +8.1
MIB Mutribah 74.28 296 *e*P **P 23 55 23.1 -1.0**
MIB AMb AMB 23 55 33.6
comp=Z,2μm,0.9s,mb7.0
BER Bergen 74.29 339 *e*P **P 23 55 22.8 -0.8**
BER ⇑*i*P 23 55 23.7
BER AMb AMB 23 55 31.2
comp=Z,548nm,1.7s,mb6.2
BER *e*S S 00 04 59.5 +2.6
BER *e*SS SS 00 09 44.9 +3.4
BER AMS AMS 00 31 26.6
comp=Z,149μm,18.6s,MS7.3
BER Bergen 74.29 339⇑*i*P **P 23 55 23.7 +0.1**
BER pmax pmax
comp=Z,548nm,1.7s,mb6.2
BER MLR MLR
comp=Z,149μm,18.6s,MS7.3
BER Bergen 74.29 339⇑*i*P **P 23 55 23.7 +0.1**
comp=Z,548nm,1.7s,mb6.2
BER LR LR
comp=Z,149μm,18.6s,MS7.3
MLAC Mammoth Lakes 74.30 54 ⇑P **P 23 55 24.8 +0.7**
baz=74
MLAC ⇑S S 00 05 02.9 +5.0
baz=74
ODD1 Odda 74.31 338 *e*P **P 23 55 23.9 +0.2**
M12A Wells 74.37 49 ⇓P **P 23 55 24.9 +0.5**
baz=74
M12A ⇑S S 00 04 58.1 -0.4
baz=74
H16A Russell Place, 74.38 45 ⇓P **P 23 55 25.0 +0.6**
baz=74
H16A ⇓S S 00 04 57.2 -1.3
baz=74
KBD Kabd 74.40 295 *e*P **P 23 55 23.7 -1.1**
KBD AMb AMB 23 55 31.6
comp=Z,856nm,1.1s,mb6.6
EGD Espegrend 74.42 339 *e*P **P 23 55 25.0 +0.7**
F18A Big Timber 74.43 43 ⇑P **P 23 55 24.9 +0.2**
baz=74,SNR=160
F18A ⇓S S 00 05 01.2 +2.2
baz=74
KEMA Kemaliye 74.43 308⇑*i*P **P 23 55 25.9 +1.1**
SVRC Sivrice-ELAZID 74.47 307 *e*P **P 23 55 26.4 +1.4**
CAN Canberra 74.49 173⇑*i*P **P 23 55 24.9 0.0**
CAN pmax pmax
comp=Z,660nm,1.6s,mb6.3
CAN MLR MLR
comp=Z,46μm,21.0s,MS6.8
CAN Canberra 74.49 173⇑*i*P **P 23 55 24.9 0.0**
comp=Z,660nm,1.6s,mb6.3
CAN LR LR
comp=Z,46μm,21.0s,MS6.8
QRN Al-Qurain 74.50 294 *e*P **P 23 55 24.5 -0.9**
QRN AMb AMB 23 55 35.2
comp=Z,2μm,0.9s,mb7.0
L13A Double Diamond 74.51 48 ⇓P **P 23 55 25.9 +0.7**
baz=74
L13A ⇓S S 00 05 02.2 +2.1
baz=74
GCMT Greycliff 74.53 43 *e*P **P 23 55 25.5 +0.3**
comp=Z,229nm,0.9s,mb6.1
J15A Blackfoot 74.55 46 ⇑P **P 23 55 26.0 +0.6**
baz=74,SNR=110
J15A ⇑S S 00 05 01.9 +1.5
baz=74
YMR Madison River 74.55 45⇑*i*P **P 23 55 25.9 +0.5**
comp=Z,210nm,0.8s,mb6.1
P10A Eureka 74.55 51 ⇑P **P 23 55 26.2 +0.7**
baz=74
P10A ⇑S S 00 05 03.9 +3.2
baz=74
ELK Elko 74.59 50 P **P 23 55 26.8 +1.1**
comp=Z,56nm,1.0s,mb5.5,baz=297,slow=4.5,SNR=8.2
ELK Elko 74.59 50⇑*i*P **P 23 55 26.2 +0.5**
ELK pmax pmax
comp=Z,126nm,1.0s
ELK MLR MLR
comp=Z,48μm,20.0s
ELK Elko 74.59 50⇑*i*P **P 23 55 26.2 +0.5**
comp=Z,126nm,1.0s,mb5.8
ELK LR LR
comp=Z,48μm,20.0s,MS6.8
ELZG Elazig 74.60 307⇑*i*P **P 23 55 27.4 +1.6**
ERBA Erbaa 74.61 310⇑*i*P **P 23 55 26.8 +1.0**
N12A Clover Valley, 74.65 50 ⇓P **P 23 55 26.7 +0.7**
baz=74
N12A ⇓S S 00 04 58.8 -2.8
baz=74
N12A Clover Valley, 74.65 50⇑*i*P **P 23 55 26.7 +0.7**
comp=Z,172nm,0.8s,mb6.0
RDF Al-Radifah 74.65 295 *e*P **P 23 55 25.9 -0.3**
RDF AMb AMB 23 55 36.3
comp=Z,2μm,1.0s,mb7.0
K14A Jones Ranch, D 74.67 47 ⇑P **P 23 55 26.8 +0.7**
baz=74
K14A ⇓S S 00 05 02.6 +0.8
baz=74
NAY Al-Naaiem 74.68 295 *e*P **P 23 55 25.3 -1.1**
NAY AMb AMB 23 55 35.9
comp=Z,966nm,1.1s,mb6.7
YNR Norris Junctio 74.68 44 *e*P **P 23 55 28.4 +2.3**
comp=Z,231nm,1.1s,mb6.0
O11A Cowboy Ranch, 74.72 51 ⇑P **P 23 55 27.1 +0.6**
baz=74
O11A ⇑S S 00 05 05.8 +3.2
baz=74
BLS5 Blasjo 74.76 338 *e*P **P 23 55 27.0 +0.7**
BLS5 AMb AMB 23 55 33.9
comp=Z,206nm,1.3s,mb5.9
BLS5 Blasjo 74.76 338 *e*P **P 23 55 27.0 +0.7**
comp=Z,206nm,1.3s,mb5.9
YFT Old Faithful 74.76 45⇑*i*P **P 23 55 28.2 +1.6**
comp=Z,362nm,0.9s,mb6.3
I16A Newdale 74.78 46 ⇓P **P 23 55 26.7 0.0**
baz=74
I16A ⇑S S 00 05 04.2 +1.2
baz=74
KVT Kavak 74.78 311 *e*P **P 23 55 27.6 +0.8**
FRB Frobisher Bay 74.84 13 P **P 23 55 26.2 -0.5**
comp=Z,545nm,1.1s,mb6.4,baz=338,slow=8.0,SNR=7.2
FRB Frobisher Bay 74.84 13 P **P 23 55 26.2 -0.5**
FRB pmax pmax
comp=Z,545nm,1.1s
M13A Montello 74.84 49 ⇓P **P 23 55 27.2 +0.1**
baz=75
M13A ⇓S S 00 05 05.5 +1.7
baz=75
M13A Montello 74.84 49⇑*i*P **P 23 55 27.2 +0.1**
comp=Z,433nm,0.9s,mb6.4
RCTC Rector, Farmer 74.85 55 ⇑P **P 23 55 27.6 +0.4**
baz=75
RCTC ⇓S S 00 05 03.7 -0.3
baz=75
DIKM Dikmen 74.88 312 *e*P **P 23 55 27.5 +0.1**
G18A Lazy EL Ranch, 74.89 43 ⇓P **P 23 55 27.5 +0.1**
baz=75
G18A ⇑S S 00 05 05.3 +1.1
baz=75
LKWY Lake 74.93 44⇑*i*P **P 23 55 28.7 +1.1**
LKWY pmax pmax
comp=Z,257nm,0.9s,mb6.2
LKWY MLR MLR
comp=Z,71μm,20.0s,MS7.0
LKWY Lake 74.93 44⇑*i*P **P 23 55 28.7 +1.1**
comp=Z,258nm,0.9s,mb6.2
LKWY LR LR
comp=Z,71μm,20.0s,MS7.0
SVSK Karacayir 74.94 309 *e*P **P 23 55 28.9 +1.1**
H17A Grant Village 74.94 45 ⇓P **P 23 55 28.2 +0.5**
baz=75
H17A ⇑S S 00 05 04.7 -0.1
baz=75
KIS Kishinev 74.94 319⇑*i*P **P 23 55 25.0 -2.6**
comp=Z,3μm,3.0s
KIS Kishinev 74.94 319 *i* PcP PcP 23 55 42.0 +0.6
KIS Kishinev 74.94 319 *i* PP PP 23 58 16.0 +1.3
comp=Z,7μm,10.0s
KIS Kishinev 74.94 319 *i* PPP 00 00 07.0
KIS *i*S S 00 05 03.0 -1.8
comp=Z,7μm,9.0s
KIS Kishinev 74.94 319 *i* PS 00 05 30.0
KIS *i*SS SS 00 09 37.0 -15
KIS LRM 00 30 52.0
comp=Z,205μm,16.0s
KIS Kishinev 74.94 319α *i*P **P 23 55 25.0 -2.6**
KIS *i* 23 55 42.0
KIS *i* 23 58 16.0
KIS *i* PPP 00 00 07.0
KIS *i*S S 00 05 03.0 -1.8
KIS *i* PS 00 05 30.0
KIS pmax pmax
comp=Z,3μm,3.0s
KIS pmax pmax
comp=N,800nm,2.5s
KIS pmax pmax
comp=E,800nm,2.5s
KIS pmax pmax
comp=N,4μm,4.0s
KIS pmax pmax
comp=E,2μm,4.0s
KIS pmax pmax
comp=Z,7μm,4.0s
KIS pmax pmax
comp=Z,13μm,16.0s
KIS smax
comp=E,7μm,9.0s
KIS smax
comp=E,22μm,13.0s
KIS MLR MLR
comp=Z,205μm,16.0s,MS7.5
KIS Kishinev 74.94 319 ⇓P **P 23 55 28.7 +1.1**
KIS Kishinev 74.94 319 ⇓*i*P **P 23 55 28.7 +1.1**
K15A Arbon 74.95 47 ⇑P **P 23 55 28.4 +0.7**
baz=75
K15A ⇓S S 00 05 06.1 +1.2
baz=75
L14A Malta 74.96 48 ⇓P **P 23 55 28.2 +0.5**
baz=75
L14A ⇑S S 00 05 04.3 -0.7
baz=75
NWAO Narrogin (SRO) 74.96 200 P **P 23 55 26.4 -1.2**
comp=Z,98nm,1.0s,mb5.7,baz=30,slow=6.7,SNR=6.1
NWAO Narrogin (SRO) 74.96 200 P **P 23 55 26.4 -1.2**
NWAO LR LR
comp=Z,22μm,21.0s,MS6.4
TOKT Tokat 74.96 310 *e*P **P 23 55 28.3 +0.4**
SMMC Simmler 74.96 57 ⇓P **P 23 55 28.5 +0.6**
baz=75
SMMC ⇓S S 00 05 07.7 +2.3
baz=75
TOKA Tokat 75.00 310⇑*i*P **P 23 55 28.8 +0.7**
WAR Warsaw 75.00 326⇑*e*P **P 23 55 29.5 +1.7**
WAR *e* 23 55 37.8
P11A Circle Ranch, 75.03 51 ⇓P **P 23 55 28.6 +0.4**
baz=75
P11A ⇓S S 00 05 08.0 +2.1
baz=75
TIN Tinemaha 75.04 54 ⇓P **P 23 55 28.7 +0.3**
baz=75
TIN ⇑S S 00 05 08.5 +2.4
baz=75
TPH Tonopah 75.04 53 PFAKE 23 55 40.0 +12
TPH LR LR
comp=Z,38μm,20.0s,MS6.7
DARE Darende-Malaty 75.05 308 *e*P **P 23 55 31.7 +3.4**
MYA Malataya 75.05 307 *e*P **P 23 55 30.3 +1.9**
IMW Indian Meadow 75.06 45⇑*i*P **P 23 55 29.3 +0.9**
comp=Z,218nm,0.8s,mb6.1
Q10A Clear Creek Ra 75.08 52 ⇑P **P 23 55 28.7 +0.1**
baz=75
Q10A ⇓S S 00 05 09.3 +2.6
baz=75
DCID1 Drake Creek 75.12 46⇑*i*P **P 23 55 29.3 +0.6**
comp=Z,416nm,0.9s,mb6.4
N13A Wendover, West 75.14 49 ⇑P **P 23 55 29.1 +0.3**
baz=75
N13A ⇑S S 00 05 10.0 +2.9
baz=75
N13A Wendover, West 75.14 49⇑*i*P **P 23 55 28.8 0.0**
comp=Z,60nm,0.5s,mb5.8
RLMT Red Lodge 75.18 43 ⇓P **P 23 55 29.4 +0.4**
baz=75
RLMT ⇑S S 00 05 07.0 -0.4
baz=75
RLMT Red Lodge 75.18 43⇑*i*P **P 23 55 29.3 +0.3**
comp=Z,165nm,0.8s,mb6.0
RLMT LR LR
comp=Z,49μm,21.0s,MS6.8
O12A Currie 75.19 50 ⇑P **P 23 55 29.6 +0.4**
baz=75
O12A ⇓S S 00 05 03.8 -3.9
baz=75
RRI2 Red Ridge 75.21 46⇑*i*P **P 23 55 30.0 +0.8**
comp=Z,416nm,1.2s,mb6.2
M14A Sheep Mountain 75.23 48 ⇓P **P 23 55 29.9 +0.6**
baz=75
M14A ⇑S S 00 05 08.7 +0.6
baz=75
VES Vestal, Richgr 75.23 56 ⇓P **P 23 55 29.2 -0.2**
baz=75
VES ⇓S S 00 05 08.7 +0.4
baz=75
BOYT Boyabat 75.23 312⇑*i*P **P 23 55 31.7 +2.4**
I17A Pilgrim Ck. 75.25 45 ⇓P **P 23 55 30.4 +1.0**
baz=75
BYBT Boyabat 75.28 312 *e*P **P 23 55 30.5 +0.9**
TPAW Teton Pass 75.32 46⇑*i*P **P 23 55 30.6 +0.8**
comp=Z,408nm,1.2s,mb6.2
PKM Peak Mountain 75.33 57 ⇓P **P 23 55 30.2 +0.1**
baz=75
PKM ⇓S S 00 05 12.2 +2.7
baz=75
BSD Bornholm Skovb 75.33 331⇑*i*P **P 23 55 29.2 -0.5**
comp=Z,555nm,1.0s,mb6.4
BSD *i* 23 58 25.1
BSD *i*S S 00 05 09.1 +0.3
BSD
comp=Z,131μm,21.0s
URFA Urfa 75.35 306 *e*P **P 23 55 31.2 +1.1**
LVV L'vov 75.36 323 *d*i*P **P 23 55 30.5 +0.5**
LVV *e* 23 58 27.3
LVV *e*S S 00 05 11.1 +1.8
LVV pmax pmax
comp=N,2μm,4.0s
LVV pmax pmax
comp=E,2μm,4.0s
LVV pmax pmax
comp=Z,6μm,4.0s
AKCD Akcadag 75.38 308⇑*i*P **P 23 55 31.5 +1.2**
HVU Hansel Valley 75.39 48⇑*i*P **P 23 55 30.5 +0.3**
HVU pmax pmax
comp=Z,214nm,0.9s,mb6.1
HVU Hansel Valley 75.39 48⇑*i*P **P 23 55 30.5 +0.3**
comp=Z,214nm,0.9s,mb6.1
K16A Soda Springs 75.39 46 ⇑P **P 23 55 30.2 -0.1**
baz=75
K16A ⇑S S 00 05 10.2 +0.3
baz=75
SNART Snartemo 75.42 337 *e*P **P 23 55 26.1 -4.0**
SNART AMb AMB 23 55 33.7
comp=Z,434nm,1.0s,mb6.3
LOHW Long Hollow 75.43 45⇑*i*P **P 23 55 30.9 +0.4**
comp=Z,130nm,1.0s,mb5.8
SNOW Snow King Moun 75.45 46⇑*i*P **P 23 55 31.3 +0.7**
comp=Z,183nm,0.9s,mb6.0
REDW Red Top Meadow 75.46 46⇑*i*P **P 23 55 31.2 +0.6**
comp=Z,163nm,1.0s,mb5.9
L15A Malad City 75.47 47 ⇑P **P 23 55 31.2 +0.5**
baz=75
L15A ⇑S S 00 05 11.9 +1.2
baz=75
R10A Warm Springs 75.48 52 ⇑P **P 23 55 31.1 +0.3**
baz=75
R10A ⇑S S 00 05 11.5 +0.5
baz=75
BORG Borgarnes 75.48 352 P **P 23 55 33.0 +2.6**
comp=Z,5μm,0.9s,SNR=34
BORG Borgarnes 75.48 352 P **P 23 55 31.6 +1.2**
comp=Z,290nm,1.1s,mb6.1,baz=27,slow=4.5,SNR=5.1
BORG Borgarnes 75.48 352 P **P 23 55 31.6 +1.2**
BORG pmax pmax
comp=Z,290nm,1.1s
BORG Borgarnes 75.48 352 *e*P **P 23 55 31.3 +0.9**
comp=Z,815nm,0.9s,mb6.7
BORG LR LR
comp=Z,51μm,21.0s,MS6.8
CWC Cottonwood Cre 75.51 55 ⇑P **P 23 55 31.5 +0.5**
baz=75
DGMT Dagmar 75.52 39 ⇑P **P 23 55 30.8 -0.1**
baz=75
DGMT ⇑S S 00 05 11.2 +0.2
baz=75
DGMT Dagmar 75.52 39⇑*i*P **P 23 55 30.1 -0.8**
comp=Z,207nm,1.0s,mb6.0
DGMT LR LR
comp=Z,50μm,19.0s,MS6.8
S10A Tonopah Range, 75.52 53 ⇓P **P 23 55 31.4 +0.3**
baz=75
S10A ⇓S S 00 05 10.9 -0.6
baz=75
Q11A Duckwater 75.53 52 ⇓P **P 23 55 31.4 +0.2**
baz=75
Q11A ⇓S S 00 05 13.2 +1.7
baz=75
J17A Brown Place, J 75.53 46 ⇓P **P 23 55 31.7 +0.6**
baz=75
J17A ⇓S S 00 05 14.1 +2.7
baz=75
P12A McGill 75.59 51 ⇑S S 00 05 14.0 +1.8
baz=75
GRAC Grapevine Rang 75.61 54 ⇑P **P 23 55 32.0 +0.4**
baz=75
GRAC ⇑S S 00 05 15.1 +2.6
baz=75
ATAB Bozova 75.66 307⇑*i*P **P 23 55 33.5 +1.6**
SBC Santa Barbara 75.68 57 ⇑P **P 23 55 32.4 +0.4**
baz=75
SBC ⇑S S 00 05 15.5 +2.2
baz=75
AHID Auburn Hatcher 75.70 46⇑*i*P **P 23 55 32.1 +0.1**
comp=Z,124nm,1.0s,mb5.8
AHID LR LR
comp=Z,34μm,21.0s,MS6.6
LAO LASA Array 75.72 41⇑*i*P **P 23 55 31.6 -0.5**
comp=Z,411nm,1.1s,mb6.3
LAO LR LR
comp=Z,48μm,20.0s,MS6.8
O13A Hicks Ranch, I 75.73 50 ⇓P **P 23 55 32.6 +0.4**
baz=76
O13A ⇓S S 00 05 13.4 -0.3
baz=76
ISA Isabella 75.73 56 ⇑P **P 23 55 32.4 +0.1**
baz=76
ISA ⇓S S 00 05 13.5 -0.4
baz=76
ISA Isabella 75.73 56⇑*i*P **P 23 55 32.5 +0.1**
ISA pmax pmax
comp=Z,190nm,1.2s,mb5.9
ISA Isabella 75.73 56⇑*i*P **P 23 55 32.5 +0.1**
comp=Z,190nm,1.2s,mb5.9
N14A Grayback Hills 75.74 49 ⇓P **P 23 55 32.7 +0.4**
baz=76
N14A ⇓S S 00 05 16.2 +2.5
baz=76
M15A Larsen Ranch, 75.78 48 ⇑P **P 23 55 32.8 +0.3**
baz=76
M15A ⇑S S 00 05 15.5 +1.4
baz=76
BGU Big Grassy Mou 75.78 49⇑*i*P **P 23 55 32.5 0.0**
comp=Z,275nm,1.3s,mb6.0
COP Copenhagen 75.80 333⇑*i*P **P 23 55 32.2 -0.2**
comp=Z,322nm,1.0s,mb6.2
COP *i* 23 58 27.6
COP *i*S S 00 05 17.1 +3.2
COP
comp=Z,67μm,22.0s
SOFL Sornfelli, Far 75.80 345⇑*e*P **P 23 55 33.3 +1.0**
SOFL AMb AMB 23 55 42.4
comp=Z,1μm,1.3s,mb6.6
SOFL AMS AMS 00 24 44.9
comp=Z,87μm,27.2s,MS6.9
SOFL Sornfelli, Far 75.80 345 P **P 23 55 33.3 +1.0**
SOFL AMb AMB 23 55 42.4
comp=Z,1μm,1.3s,mb6.6
SOFL AMS AMS 00 24 44.9
comp=Z,87μm,27.2s
CTKT Corum 75.81 311⇑*i*P **P 23 55 33.8 +1.1**
I18A Diamond G Ranc 75.81 45 ⇓P **P 23 55 33.3 +0.7**
baz=76
I18A ⇓S S 00 05 14.3 -0.1
baz=76
K17A Gardner Place, 75.82 46 ⇑P **P 23 55 32.8 +0.1**
baz=76
K17A ⇑S S 00 05 16.2 +1.6
baz=76
GKP Gorka Klasztor 75.82 329⇑*e*P **P 23 55 33.7 +1.2**
GKP *e*PP pP 23 55 39.0 +2.7
GKP *e* 23 55 42.2
GKP pmax pmax
comp=Z,6μm,3.6s
ARVC Arvin 75.83 56 ⇑P **P 23 55 33.1 +0.2**
baz=76
ARVC ⇑S S 00 05 12.2 -2.8
baz=76
SPUT South Promonto 75.87 48⇑*i*P **P 23 55 33.2 +0.1**
comp=Z,224nm,1.2s,mb6.0
R11A Troy Canyon, C 75.88 52 ⇑P **P 23 55 33.4 +0.2**
baz=76
R11A ⇓S S 00 05 12.9 -2.5
baz=76
SARI SarD1z-Kayseri 75.89 308 *e*P **P 23 55 36.3 +3.1**
Q12A Willow Creek R 75.91 51 ⇓P **P 23 55 33.8 +0.5**
baz=76
Q12A ⇑S S 00 05 12.1 -3.6
baz=76
DAC Darwin (Calif) 75.92 55 PFAKE 23 55 40.0 +6.6
DAC LR LR
comp=Z,43μm,22.0s,MS6.7
TOS Tosya 75.99 312 *e*P **P 23 55 34.6 +0.9**
BSC Santa Cruz Isl 76.00 58 ⇓P **P 23 55 33.7 -0.2**
baz=76
BSC ⇓S S 00 05 16.9 0.0
baz=76
L16A Fish Haven 76.00 47 ⇑P **P 23 55 34.0 +0.2**
baz=76
L16A ⇑S S 00 05 17.8 +1.1
baz=76
J18A Kendall Valley 76.02 45 ⇓P **P 23 55 34.0 +0.2**
baz=76
J18A ⇓S S 00 05 15.1 -1.7
baz=76

BALT Daday 76.04 312⇑iP P 23 55 35.5 +1.5
PINB Pinarbasi 76.07 309⇑iP P 23 55 35.6 +1.3
N15A Stansbury Isla 76.10 48 ⇓P P 23 55 34.5 +0.2
baz=76
N15A ⇑S S 00 05 12.3 -5.5
baz=76
KWP Kalwaria Pacla 76.11 324⇑eP P 23 55 35.0 +0.8
KWP e 23 55 43.4
KWP e 23 58 22.8
KWP pmax pmax
comp=Z,9μm,3.6s
KWP Kalwaria Pacla 76.11 324⇑iP P 23 55 34.5 +0.3
comp=Z,2μm,1.1s,mb7.0
KWP LR LR
comp=Z,140μm,20.0s,MS7.3
KWP Kalwaria Pacla 76.11 324⇑iP P 23 55 34.8 +0.6
MPMC Manual Prospec 76.12 55 ⇓P P 23 55 34.6 0.0
baz=76
MPMC ⇑S S 00 05 17.1 -1.0
baz=76
YOZ Yozgat 76.12 310 eP P 23 55 34.6 +0.1
P13A Bates Ranch, G 76.13 50 ⇑P P 23 55 34.5 0.0
baz=76
P13A ⇓S S 00 05 15.7 -2.5
baz=76
TLCR 76.16 317 ⇑P P 23 55 34.5 -0.1
TLCR 76.16 317⇑iP P 23 55 34.5 -0.1
ILGA Ilgaz 76.16 312⇑iP P 23 55 36.1 +1.5
CORM Corum 76.18 311 eP P 23 55 36.0 +1.1
GZT Gaziantep 76.19 307⇑iP P 23 55 36.1 +1.2
HWUT Hardware Ranch 76.19 47⇑iP P 23 55 35.1 +0.3
comp=Z,562nm,1.2s,mb6.4
HWUT LR LR
comp=Z,29μm,20.0s,MS6.6
OSI Osito Adit 76.22 57 ⇓P P 23 55 35.2 +0.1
baz=76
OSI ⇓S S 00 05 16.3 -3.0
baz=76
OSI Osito Adit 76.22 57⇑iP P 23 55 34.9 -0.2
comp=Z,1μm,1.6s,mb6.5
S11A Rachel 76.22 53 ⇑P P 23 55 35.4 +0.3
baz=76
LRW Lerwick 76.23 341⇑eP P 23 55 34.5 -0.2
LRW AMb AMB 23 55 45.0
comp=Z,434nm,1.9s,mb6.0
LRW e 00 05 14.2
LRW AMS AMS 00 26 23.6
comp=Z,74μm,27.6s,MS6.8
LRW Lerwick 76.23 341 P P 23 55 34.5 -0.2
LRW AMb AMB 23 55 45.0
comp=Z,434nm,1.9s,mb6.0
LRW 00 05 14.2
LRW AMS AMS 00 26 23.6
comp=Z,74μm,27.6s
WAL1 Walls 76.23 342 eP P 23 55 34.8 +0.1
WAL1 Walls 76.23 342 P P 23 55 34.8 +0.1
FURC Furnace Creek, 76.26 54 ⇓P P 23 55 35.3 0.0
baz=76
L17A Cokeville 76.27 47 ⇓P P 23 55 35.1 -0.1
baz=76
L17A ⇑S S 00 05 20.6 +1.1
baz=76
BLG Laguna Peak 76.31 57 ⇑P P 23 55 35.4 -0.3
baz=76
BLG ⇑S S 00 05 20.9 +0.7
baz=76
MUD Monsted U'grnd 76.31 335⇑iP P 23 55 35.1 -0.2
comp=Z,266nm,0.9s,mb6.2
MUD i S S 00 05 23.9 +4.3
MUD
comp=Z,233μm,20.0s
BUR08 Bucovina Ar. S 76.31 321⇑iP P 23 55 35.6 +0.2
BURAR Bucovina Array 76.33 321 ⇑P P 23 55 35.8 +0.3
BURAR Bucovina Array 76.33 321⇑iP P 23 55 35.8 +0.3
M16A Huntsville 76.34 48 ⇑P P 23 55 35.8 +0.1
baz=76
M16A ⇓S S 00 05 20.6 +0.2
baz=76
LRMC Laurel Mountai 76.35 55 ⇑P P 23 55 36.0 +0.1
baz=76
LRMC ⇑P 23 55 36.2
baz=76
LRMC ⇓S S 00 05 21.7 +1.0
baz=76
RGN Rugen 76.36 332 eP P 23 55 37.0 +1.4
comp=Z,1μm,1.1s,mb6.8
RGN Rugen 76.36 332⇑iP P 23 55 35.5 0.0
comp=Z,1μm,1.0s,mb6.7
DUG Dugway 76.38 49 ⇑P P 23 55 36.3 +0.4
baz=76
DUG ⇓S S 00 05 24.5 +3.7
baz=76
DUG Dugway 76.38 49⇑iP P 23 55 36.3 +0.4
DUG MLR MLR
comp=Z,38μm,22.0s,MS6.7
DUG Dugway 76.38 49⇑iP P 23 55 36.3 +0.4
comp=Z,7μm,1.0s
DUG LR LR
comp=Z,38μm,22.0s,MS6.7
K18A Toltan Ranch, 76.38 46 ⇑P P 23 55 36.1 +0.2
baz=76
K18A ⇓S S 00 05 20.8 0.0
baz=76
Q13A Wheeler Ranch, 76.45 51 ⇑P P 23 55 36.6 +0.3
baz=76
Q13A ⇓S S 00 05 24.9 +3.3
baz=76
NOQ North Oquirrh 76.49 48⇑iP P 23 55 36.8 +0.2
comp=Z,621nm,1.2s,mb6.4
R12A Pony Springs, 76.49 51 ⇑P P 23 55 36.8 +0.2
baz=76
R12A ⇓S S 00 05 24.3 +2.1
baz=76
CANT Cankiri 76.50 312 eP P 23 55 37.8 +1.2
KMRS Kahramanmaras 76.51 307 eP P 23 55 37.6 +0.9
CFR Carcaliu 76.52 318 ⇑P P 23 55 35.5 -1.1
CFR Carcaliu 76.52 318⇑iP P 23 55 35.5 -1.1
O15A The Old Anders 76.52 49 ⇓P P 23 55 37.1 +0.4
baz=76
O15A ⇑S S 00 05 24.4 +2.0
baz=76
GAZ Gaziantep 76.52 307 eP P 23 55 37.9 +1.0
EDW2 Edwards Air Fo 76.53 56 ⇑P P 23 55 37.0 +0.1
baz=76
EDW2 ⇓S S 00 05 20.3 -2.3
baz=76
RBK Rabkut 76.53 282 P P 23 55 36.9 -0.3
SNR=20
BW06 Boulder Array 76.56 45 ⇓P P 23 55 36.8 -0.1
baz=76
BW06 ⇑S S 00 05 22.8 0.0
baz=76
BW06 Boulder Array 76.56 45⇑iP P 23 55 36.7 -0.2
comp=Z,3μm,0.6s,mb7.3
BW06 LR LR
comp=Z,34μm,20.0s,MS6.7
PDAR Pinedale Array 76.56 45 P P 23 55 36.6 -0.4
comp=Z,62nm,0.8s,mb5.6,baz=275,slow=1.3,SNR=228
PDAR PKKPbc PKKPbc 00 14 47.1 +0.1
comp=Z,1.3nm,0.9s,baz=120,slow=1.5,SNR=3.7
PDAR PKPPKP 00 22 51.5
comp=Z,1.5nm,0.9s,baz=129,slow=2.9,SNR=3.8
PDAR LR LR 00 25 17.3
comp=Z,28μm,21.1s,MS6.5,baz=110,slow=32
P14A Drum Mountains 76.61 50 ⇑P P 23 55 37.5 +0.3
baz=76
P14A ⇓S S 00 05 26.8 +3.4
baz=76
WHFO Wadi Hawf 76.62 282 P P 23 55 37.1 -0.5
SNR=34
U10A Ash Meadows, A 76.63 54 ⇓P P 23 55 37.6 +0.2
baz=76
U10A ⇑S S 00 05 23.7 0.0
baz=76
SAFT Safranbolu 76.63 313 eP P 23 55 37.4 0.0
CTU Camp Tracy 76.67 48⇑iP P 23 55 38.8 +1.2
comp=Z,301nm,1.3s,mb6.1
ELDT Eldivan 76.69 312⇑iP P 23 55 39.0 +1.3
ELDT Eldivan 76.69 312⇓iP S 00 05 25.9 +1.6
CDAG Cicekdag 76.69 310⇑iP P 23 55 38.4 +0.6
CDAG Cicekdag 76.69 310⇑iP S 00 05 23.7 -0.6
DECC Green Verdugo 76.70 57 ⇑P P 23 55 38.3 +0.4
baz=76
DECC ⇑S S 00 05 18.5 -6.1
baz=76
N16A Rees Ranch, Co 76.73 48 ⇓P P 23 55 38.1 +0.2
baz=76
N16A ⇓S S 00 05 27.5 +2.8
baz=76
VRI Vrincioaia 76.78 319 ⇑P P 23 55 38.8 +0.7
VRI Vrincioaia 76.78 319⇑iP P 23 55 38.8 +0.7
M17A Scullys Gap (B 76.79 47 ⇓P P 23 55 38.2 0.0
baz=76
M17A ⇓S S 00 05 26.4 +1.1
baz=76
S12A Delamar Landin 76.80 52 ⇑P P 23 55 38.9 +0.5
baz=76
S12A ⇑S S 00 05 24.6 -0.9
baz=76
T11A Corn Creek, Al 76.80 53 ⇑P P 23 55 38.6 +0.2
baz=77
T11A ⇑S S 00 05 22.8 -2.8
baz=77
KOLS Kolonicke sedl 76.80 323 iP P 23 55 38.4 +0.2
KOLS pmax pmax
comp=Z,345nm,1.1s,mb6.2
KOLS Kolonicke sedl 76.80 323 iP P 23 55 38.4 +0.2
comp=Z,345nm,1.1s,mb6.2
KOLS ePP pP 23 55 43.7 +1.7
KOLS ePP PP 23 58 37.3 +7.0
PLOR Plostina 76.83 319 ⇑P P 23 55 39.8 +1.4
PLOR Plostina 76.83 319⇑iP P 23 55 39.8 +1.4
PASC Pasadena Art C 76.84 57⇑iP P 23 55 37.9 -0.7
comp=Z,896nm,1.2s,mb6.6
L18A Fontenelle, Gr 76.85 46 ⇑P P 23 55 38.7 +0.1
baz=77
L18A ⇑S S 00 05 23.5 -2.5
baz=77
TIRR Tirgusor 76.86 317⇑iP P 23 55 38.2 -0.4
TIRR pmax pmax
comp=Z,740nm,1.4s,mb6.4
TIRR Tirgusor 76.86 317⇑iP P 23 55 38.2 -0.3
comp=Z,740nm,1.4s,mb6.4
TIRR Tirgusor 76.86 317⇓iP P 23 55 38.7 +0.1
KUZU Kuzuini 76.86 307⇑iP P 23 55 40.0 +1.3
Q14A Sevier Lake (B 76.87 50 ⇑P P 23 55 39.0 +0.3
baz=77
Q14A ⇓S S 00 05 28.7 +2.4
baz=77
MWC Mount Wilson 76.89 57⇑iP P 23 55 39.7 +0.7
MWC pmax pmax
comp=Z,411nm,1.3s,mb6.2
MWC Mount Wilson 76.89 57⇑iP P 23 55 39.6 +0.7
comp=Z,411nm,1.3s,mb6.2
JLU Jordanelle 76.91 48⇑iP P 23 55 38.9 -0.1
comp=Z,316nm,1.3s,mb6.1
K19A Absolon Red Bu 76.92 45 ⇑P P 23 55 38.7 -0.2
baz=77
K19A ⇑S S 00 05 21.6 -5.1
baz=77
STHS Stebnicka Huta 76.93 324 eP P 23 55 39.6 +0.7
STHS pmax pmax
comp=Z,488nm,1.0s,mb6.4
STHS Stebnicka Huta 76.93 324 eP P 23 55 39.6 +0.7
comp=Z,488nm,1.0s,mb6.4
STHS ePP pP 23 55 44.6 +1.9
STHS Stebnicka Huta 76.93 324 eP P 23 55 39.6 +0.7
STHS epP pP 23 55 44.6 +1.9
AVNT Avonos 76.94 309⇑iP P 23 55 39.7 +0.6
HARR Harsova 76.95 318 ⇑P P 23 55 39.7 +0.6
NLU North Lily Min 76.96 49⇑iP P 23 55 39.5 +0.2
comp=Z,243nm,1.0s,mb6.1
R13A O'Grain Ranch, 76.97 51 ⇓P P 23 55 39.6 +0.2
baz=77
R13A ⇑S S 00 05 26.1 -1.4
baz=77
SHOC Shoshone 76.98 54 ⇓P P 23 55 39.4 -0.1
baz=77
SHOC ⇓S S 00 05 29.9 +2.3
baz=77
OJC Ojcow 76.99 326 eP P 23 55 38.3 -0.9
OJC epP pP 23 55 41.1 -1.9
OJC eS S 00 05 28.9 +1.7
OJC eSKSac SKSac 00 05 49.5 -1.8
OJC eSS SS 00 10 20.4 -2.5
OJC L 00 32 33.6
comp=Z,324nm,18.0s
OJC Ojcow 76.99 326 eP P 23 55 38.3 -0.9
OJC eS S 00 05 28.9 +1.7
OJC e 00 05 49.5
OJC eSS SS 00 10 20.4 -2.5
OJC MLR MLR
comp=Z,324μm,18.0s,MS7.7
UZH Uzhgorod 77.01 323 eP P 23 55 40.0 +0.7
UZH e 23 55 49.0
UZH eS S 00 05 25.0 -2.4
UZH i 00 06 23.0
UZH e 00 13 34.0
UZH MLR MLR
comp=N,90μm,15.0s,MS7.5
UZH MLR MLR
comp=E,140μm,15.0s,MS7.5
UZH MLR MLR
comp=Z,105μm,15.0s,MS7.3
GSC Goldstone 77.02 55 ⇑P P 23 55 39.7 0.0
baz=77
GSC ⇑S S 00 05 30.1 +2.0
baz=77
GSC Goldstone 77.02 55⇓iP P 23 55 39.6 -0.1
GSC pmax pmax
comp=Z,452nm,1.4s,mb6.2
GSC Goldstone 77.02 55⇓iP P 23 55 39.6 -0.1
comp=Z,452nm,1.4s,mb6.2
N17A Moffit Pass 77.04 48 ⇓P P 23 55 39.7 0.0
baz=77
FMP Fort Macarthur 77.05 57 ⇑P P 23 55 39.9 0.0
baz=77
FMP ⇑S S 00 05 29.4 +0.9
baz=77
BR131 Keskin Array S 77.06 311⇑iP P 23 55 39.8 0.0
comp=Z,391nm,1.2s,mb6.2
BR131 LR LR
comp=Z,76μm,20.0s,MS7.0
BRTR Keskin Array B 77.06 311 P P 23 55 39.9 +0.1
comp=Z,200nm,1.1s,mb6.0,baz=72,slow=4.0,SNR=246
BRTR S S 00 05 29.9 +1.6
comp=Z,0.6nm,0.8s,baz=132,slow=2.1,SNR=2.2
BRTR PKKPbc PKKPbc 00 14 46.4 +0.5
comp=Z,1.4nm,0.9s,baz=150,slow=3.2,SNR=3.3
BRTR LR LR 00 34 15.9
comp=Z,87μm,21.3s,MS7.0,baz=228,slow=39
BRTR Keskin Array B 77.06 311 P P 23 55 39.9 +0.1
BRTR S S 00 05 29.9 +1.6
BRTR pmax pmax
comp=Z,200nm,1.1s
BRTR smax
comp=N,1.0nm,0.8s
BRTR MLR MLR
comp=Z,87μm,21.3s
P15A Leamington 77.09 49 ⇑P P 23 55 40.1 +0.2
baz=77
P15A ⇓S S 00 05 26.3 -2.4
baz=77
L19A Farson 77.11 46 ⇓P P 23 55 40.0 0.0
baz=77
L19A ⇓S S 00 05 27.8 -1.1
baz=77
BMR Baia Mare 77.12 322⇑iP P 23 55 40.3 +0.3
O16A Springville 77.13 48 ⇑P P 23 55 40.6 +0.4
baz=77
O16A ⇑S S 00 05 30.7 +1.6
baz=77
BFSC Mount Baldy Ra 77.14 56 ⇑P P 23 55 40.3 0.0
baz=77
BFSC ⇑S S 00 05 30.3 +0.9
baz=77
DAU Daniels Canyon 77.14 48 eP P 23 55 41.2 +0.9
DAU pmax pmax
comp=Z,324nm,1.2s,mb6.1
DAU Daniels Canyon 77.14 48 eP P 23 55 41.2 +0.9
comp=Z,324nm,1.2s,mb6.1
M18A Lyman 77.16 47 ⇓P P 23 55 40.5 +0.1
baz=77
M18A ⇓S S 00 05 29.7 +0.3
baz=77
RRX Edison Barstow 77.16 55 ⇓P P 23 55 40.5 0.0
baz=77
RRX ⇓S S 00 05 28.4 -1.2
baz=77
CIS Catalina Islan 77.17 57 ⇑P P 23 55 40.6 0.0
baz=77
CIS ⇑S S 00 05 30.3 +0.5
baz=77
MPU Maple Canyon 77.18 49⇑iP P 23 55 39.6 -0.9
comp=Z,2μm,0.9s,mb7.1
KOZT Kozan 77.18 308 eP P 23 55 40.8 +0.2
CRVS Cervenica-Dubn 77.20 324 iP P 23 55 40.8 +0.4
comp=Z,486nm,1.2s,mb6.3
CRVS ePP pP 23 55 46.1 +1.9
CRVS eS S 00 05 33.2 +3.7
CRVS eSS SS 00 10 29.3 +3.2
CRVS LR LR
comp=Z,99μm,18.5s,MS7.2
U11A Corn Creek 77.22 53 ⇓P P 23 55 41.1 +0.3
baz=77
U11A ⇑S S 00 05 29.1 -1.0
baz=77
KDZE Karadeniz Ereo 77.29 313 eP P 23 55 39.7 -1.3
K20A Yellowstone Ra 77.31 45 ⇓P P 23 55 40.5 -0.7
baz=77
K20A ⇓S S 00 05 31.0 +0.1
baz=77
ABTO Aybut 77.32 282 P P 23 55 40.6 -0.9
SNR=26
AMRR Amara 77.32 318 ⇑P P 23 55 42.9 +1.7
AMRR Amara 77.32 318⇑iP P 23 55 42.8 +1.6
SCI San Clemente I 77.34 58 ⇓P P 23 55 41.1 -0.4
baz=77
SCI ⇑S S 00 05 31.7 +0.1
baz=77
NIE Niedzica 77.35 325 eP P 23 55 42.0 +0.8
NIE e pP 23 55 47.1 +2.0
NIE Niedzica 77.35 325⇑eP P 23 55 42.0 +0.8
NIE e pP 23 55 47.1 +2.0
Q15A Fillmore 77.40 50 ⇓P P 23 55 41.7 -0.1
baz=77
Q15A ⇓S S 00 05 37.0 +4.9
baz=77
S13A Holt Ranch, En 77.42 52 ⇑P P 23 55 42.2 +0.3
baz=77
S13A ⇓S S 00 05 32.6 +0.2
baz=77
SGKT Sivrigoynuk 77.43 312⇑iP P 23 55 42.6 +0.7
P16A Fountain Green 77.43 49 ⇑P P 23 55 41.8 -0.1
baz=77
P16A ⇑S S 00 05 32.6 +0.2
baz=77
MLR Muntele Rosu 77.43 319 P P 23 55 42.1 +0.3
comp=Z,142nm,1.0s,mb5.8,baz=32,slow=5.7,SNR=5.7
MLR Muntele Rosu 77.43 319 P P 23 55 42.1 +0.3
MLR pmax pmax
comp=Z,142nm,1.0s
MLR Muntele Rosu 77.43 319 ⇑P P 23 55 42.2 +0.4
MLR Muntele Rosu 77.43 319⇑iP P 23 55 42.2 +0.4
T12A Moapa 77.44 53 ⇑P P 23 55 42.1 +0.1
baz=77
T12A ⇓S S 00 05 32.7 +0.1
baz=77
LOD Lodumlu 77.46 311 eP P 23 55 42.7 +0.6
R14A James Farms, M 77.47 51 ⇑P P 23 55 42.3 +0.2
baz=77
BBAL Bala 77.48 311⇑iP P 23 55 43.0 +0.8
BBAL Bala 77.48 311⇓iP S 00 05 33.5 +0.7
TUQ Turquoise Moun 77.50 54 ⇓P P 23 55 42.6 +0.2
baz=77
TUQ ⇑S S 00 05 35.8 +2.5
baz=77
PSN Preselentsi 77.50 317 P P 23 55 42.3 +0.1
COBT Iskenderun 77.53 307⇑iP P 23 55 43.4 +0.9
ARUT Antelope Range 77.54 51 eP P 23 55 43.3 +0.7
ARUT pmax pmax
comp=Z,325nm,1.2s,mb6.1
ARUT Antelope Range 77.54 51 eP P 23 55 43.3 +0.7
comp=Z,326nm,1.2s,mb6.1
V11A Goodsprings 77.56 54 ⇑P P 23 55 42.6 -0.1
baz=77
V11A ⇑S S 00 05 37.4 +3.6
baz=77
O17A Robinson Place 77.58 48 ⇑P P 23 55 42.9 +0.2
baz=77
O17A ⇑S S 00 05 30.3 -3.7
baz=77
BBRC Big Bear Solar 77.60 56 ⇓P P 23 55 42.9 0.0
baz=77
BBRC ⇑S S 00 05 34.5 +0.1
baz=77
HEC Hector,Ludlow 77.62 55 ⇑P P 23 55 43.2 +0.1
baz=77
HEC ⇓S S 00 05 31.9 -2.7
baz=77
M19A Rock Springs 77.62 46 ⇑P P 23 55 42.8 -0.1
baz=77
M19A ⇑S S 00 05 32.3 -2.1
baz=77
N18A Larsen Ranch, 77.68 47 ⇑S S 00 05 35.4 +0.3
baz=77
YURE YUREGIR 77.72 308⇑iP P 23 55 44.7 +1.2
S14A Cedar City 77.73 51 ⇓P P 23 55 43.9 +0.3
baz=78
S14A ⇑S S 00 05 29.7 -5.9
baz=78
U12A Valley of Fire 77.74 53 ⇓P P 23 55 43.9 +0.2
baz=78
U12A ⇓S S 00 05 30.2 -5.5
baz=78
CCUT Cedar City 77.74 51⇑iP P 23 55 43.7 0.0
comp=Z,332nm,1.2s,mb6.1
L20A Wamsutter 77.74 45 ⇑P P 23 55 43.6 0.0
baz=78
L20A ⇓S S 00 05 33.4 -2.2
baz=78
T13A Saint George 77.75 52 ⇑P P 23 55 44.3 +0.5
baz=78
T13A ⇑S S 00 05 35.8 -0.1
baz=78
MDB Medias 77.77 320 ⇑P P 23 55 50.7 +7.1
MDB Medias 77.77 320⇓iP P 23 55 44.7 +1.1
RUE Ruedersdorf 77.79 330 eP P 23 55 44.8 +1.2
comp=Z,1μm,1.2s,mb6.7
RUE Ruedersdorf 77.79 330⇑iP P 23 55 43.6 -0.1
comp=Z,973nm,1.2s,mb6.6
RAC Raciborz 77.79 326 eP P 23 55 44.3 +0.6
RAC e 23 58 38.9
KARA Karaisali 77.80 308 eP P 23 55 44.7 +0.7
MVU Marysvale 77.82 50 PFAKE 23 56 00.0 +16
MVU LR LR
comp=Z,47μm,22.0s,MS6.8
MURC Murrieta 77.84 57 ⇓P P 23 55 44.4 +0.1
baz=78
MURC ⇓S S 00 05 38.1 +1.2
baz=78
MSU Marysvale 77.84 50 eP P 23 55 44.7 +0.5
MSU pmax pmax
comp=Z,276nm,1.1s,mb6.1
MSU Marysvale 77.84 50 eP P 23 55 44.7 +0.5
comp=Z,276nm,1.1s,mb6.1
HTY Hatay 77.86 307 eP P 23 55 45.0 +0.6
TMUT Trail Mountain 77.90 49⇑iP P 23 55 45.0 +0.4
comp=Z,250nm,1.2s,mb6.0
VOIR 77.92 320 ⇓P P 23 55 45.4 +0.9
VOIR 77.92 320⇓iP P 23 55 45.4 +0.9
YAYL Yayladag 77.93 307⇑iP P 23 55 45.8 +1.0
BSEG Bad Segeberg 77.94 333 eP P 23 55 44.4 0.0
comp=Z,1μm,1.1s,mb6.7
BSEG Bad Segeberg 77.94 333 eS S 00 05 43.7 +6.4
BSEG Bad Segeberg 77.94 333 eP P 23 55 44.4 0.0
BSEG pmax pmax
comp=Z,1μm,1.1s,mb6.7
KECS Kecovo 77.95 324 eP P 23 55 45.0 +0.4
KECS pmax pmax
comp=Z,109nm,1.0s,mb5.7
KECS Kecovo 77.95 324 eP P 23 55 45.0 +0.4
comp=Z,109nm,1.0s,mb5.7
KECS Kecovo 77.95 324 eP P 23 55 45.0 +0.4
KECS epP pP 23 55 50.0 +1.6
GULE Gulek 77.95 308⇑iP P 23 55 46.0 +1.2
GULE Gulek 77.95 308⇑iP S 00 05 30.3 -7.8
O18A Roosevelt 77.96 48 ⇑P P 23 55 45.3 +0.4
baz=78
O18A ⇓S S 00 05 35.1 -3.0
baz=78
R15A Junction 77.97 50 ⇓P P 23 55 45.6 +0.7
baz=78
R15A ⇑S S 00 05 38.4 +0.1
baz=78
MDU Mudurnu 77.98 313 eP P 23 55 44.7 -0.3
V12A Nelson 77.99 54 ⇑P P 23 55 45.3 +0.2
baz=78
V12A ⇑S S 00 05 37.6 -1.0

baz=78
OKC Ostrava-Krasne 77.99 326⇑*iP* P 23 55 45.1 +0.3
OKC *e* 23 58 48.6
OKC *eS* S 00 05 42.4 +4.3
OKC MLR MLR
comp=Z,174μm,16.3s,MS7.5
OKC Ostrava-Krasne 77.99 326⇑*iP* P 23 55 45.1 +0.3
OKC *e*PP PP 23 58 48.6 +8.4
OKC *eS* S 00 05 42.4 +4.3
OKC *eSS* SS 00 10 48.1 +10
OKC AMS AMS 00 32 50.0
comp=Z,174μm,16.3s
N19A John Jarvie Ra 78.02 47 ⇓P P 23 55 45.3 +0.1
baz=78
N19A ⇓S S 00 05 35.4 -3.2
baz=78
KSP Ksiaz 78.03 328⇑*eP* P 23 55 45.0 0.0
KSP *e* 23 58 48.7
ULM Lac du Bonnet 78.03 33 P P 23 55 44.2 -0.8
comp=Z,142nm,0.8s,mb5.9,baz=317,slow=6.7,SNR=43
ULM S S 00 05 41.7 +3.3
comp=Z,4.7nm,0.9s,baz=333,slow=16,SNR=2.5
ULM PKPPKP 00 22 46.5
comp=Z,1.6nm,0.4s,baz=74,slow=3.8,SNR=3.5
ULM LR LR 00 36 01.6
comp=Z,52μm,19.6s,MS6.9,baz=337,slow=40
ULM Lac du Bonnet 78.03 33⇑*iP* P 23 55 43.7 -1.3
comp=Z,842nm,1.0s,mb6.6
ULM LR LR
comp=Z,66μm,20.0s,MS7.0
KRTS Karatas 78.04 307 *eP* P 23 55 46.5 +1.2
P17A Butcher Ranch, 78.06 49 ⇑P P 23 55 45.8 +0.4
baz=78
P17A ⇑S S 00 05 37.0 -2.1
baz=78
GMRC Granite Mounta 78.08 55 ⇓P P 23 55 45.9 +0.3
baz=78
GMRC ⇓S S 00 05 40.8 +1.3
baz=78
U13A Pakoon Wash 78.10 53 ⇑P P 23 55 46.2 +0.5
baz=78
U13A ⇓S S 00 05 43.7 +3.9
baz=78
SULT Sultanhani-AKS 78.12 310 *eP* P 23 55 46.6 +0.8
DRGR 78.12 322 ⇓P P 23 55 46.2 +0.6
DRGR 78.12 322⇓*iP* P 23 55 46.2 +0.6
LIKS Likavka 78.16 325 *eP* P 23 55 48.1 +2.4
LIKS pmax pmax
comp=Z,628nm,1.0s,mb6.5
LIKS Likavka 78.16 325 *eP* P 23 55 48.1 +2.4
comp=Z,628nm,1.0s,mb6.5
LIKS *e*PP pP 23 55 51.7 +2.1
LIKS Likavka 78.16 325 *eP* P 23 55 48.1 +2.4
LIKS *e*pP pP 23 55 51.7 +2.1
Q16A Castle Valley 78.17 49 ⇑P P 23 55 46.4 +0.4
baz=78
Q16A ⇓S S 00 05 39.5 -0.9
baz=78
M20A Sweetwater, Wa 78.17 46 ⇓P P 23 55 46.3 +0.3
baz=78
M20A ⇑S S 00 05 40.8 +0.5
baz=78
DGAR Diego Garcia 78.19 250 P P 23 55 45.8 -0.6
comp=Z,3μm,1.4s,mb7.0,SNR=6.8
DGAR Diego Garcia 78.19 250*c iP* P 23 55 45.9 -0.5
DGAR Diego Garcia 78.19 250⇑*iP* P 23 55 45.9 -0.5
comp=Z,1μm,1.0s,mb6.8
DGAR LR LR
comp=Z,47μm,21.0s,MS6.8
RAO Raoul Island 78.20 144 PFAKE 23 56 00.0 +14
RAO LR LR
comp=Z,127μm,20.0s,MS7.2
T14A Hurricane 78.23 52 ⇑P P 23 55 46.6 +0.2
baz=78
T14A ⇓S S 00 05 42.1 +1.0
baz=78
LDFC Landfair 78.24 54⇑*iP* P 23 55 46.1 -0.4
P18A Preston Nutter 78.24 48 ⇓P P 23 55 46.7 +0.2
baz=78
P18A ⇑S S 00 05 41.7 +0.6
baz=78
PRD Provadia 78.25 317 P P 23 55 46.4 0.0
W12A Cal Nev Ari 78.25 54 ⇓P P 23 55 46.6 +0.1
baz=78
W12A ⇑S S 00 05 41.8 +0.4
baz=78
ORE Reay 78.26 342 *eP* P 23 55 46.9 +0.8
ORE Reay 78.26 342 P P 23 55 46.9 +0.8
S15A Panguitch 78.27 51 ⇑P P 23 55 47.5 +0.9
baz=78
S15A ⇓S S 00 05 44.1 +2.6
baz=78
MORC Moravsky Berou 78.30 326⇑*iP* P 23 55 46.8 +0.3
MORC pmax pmax
comp=Z,840nm,1.0s,mb6.6
MORC Moravsky Berou 78.30 326⇑*iP* P 23 55 46.8 +0.2
comp=Z,840nm,1.0s,mb6.6
L21A Rawlins 78.31 45 ⇑P P 23 55 46.5 -0.2
baz=78
L21A ⇓S S 00 05 42.0 +0.3
baz=78
PFO Pinyon Flat Ob 78.31 56 P P 23 55 47.6 +0.7
comp=Z,1μm,1.1s,mb6.7,SNR=43
PFO Pinyon Flat Ob 78.31 56 ⇓P P 23 55 46.8 -0.1
baz=78
PFO ⇑S S 00 05 42.1 0.0
baz=78
PFO Pinyon Flat Ob 78.31 56⇑*iP* P 23 55 46.2 -0.7
PFO pmax pmax
comp=Z,274nm,1.0s,mb6.1
PFO MLR MLR
comp=Z,48μm,21.0s,MS6.8
PFO Pinyon Flat Ob 78.31 56⇑*iP* P 23 55 46.2 -0.7
comp=Z,274nm,1.0s,mb6.1
PFO LR LR
comp=Z,48μm,21.0s,MS6.8
109C Camp Elliot, M 78.34 57 ⇑P P 23 55 47.1 0.0
baz=78
109C ⇓S S 00 05 43.7 +1.2
baz=78
BELC Belle Mtn. Jos 78.36 56 ⇓P P 23 55 47.1 0.0
baz=78
BELC ⇓S S 00 05 44.2 +1.6
baz=78
MERS Mersin 78.37 308 *eP* P 23 55 46.6 -0.6
DPC Dobruska-Polom 78.39 327⇑*iP* P 23 55 47.5 +0.5
DPC *e* 23 58 51.8
DPC *eS* S 00 05 48.2 +5.9
DPC MLR MLR
comp=Z,164μm,17.2s,MS7.4
DPC Dobruska-Polom 78.39 327⇑*iP* P 23 55 47.5 +0.5
DPC *e*PP PP 23 58 51.8 +8.3
DPC *eS* S 00 05 48.2 +5.9
DPC *ex* x 00 22 36.7
DPC *e*PKPPKP 00 22 44.5
DPC AMS AMS 00 33 10.0
comp=Z,164μm,17.2s
UPC Upice 78.40 328⇑*iP* P 23 55 47.3 +0.2
UPC Upice 78.40 328⇑*iP* P 23 55 47.3 +0.2
UPC *e*PP PP 23 58 37.1 -6.5
UPC *e*PKPPKP 00 22 44.3
R16A Teasdale 78.40 50 ⇓P P 23 55 48.3 +1.0
baz=78
R16A ⇓S S 00 05 45.7 +2.9
baz=78
GULT Gulveren 78.40 313 *eP* P 23 55 48.3 +1.0
SILT Sile 78.41 314 *eP* P 23 55 47.6 +0.3
SRU San Rafael 78.42 49 ⇑P P 23 55 47.4 0.0
baz=78
SRU ⇓S S 00 05 41.3 -1.8
baz=78
SRU San Rafael 78.42 49⇑*iP* P 23 55 47.1 -0.3
SRU pmax pmax
comp=Z,302nm,0.9s,mb6.2
SRU San Rafael 78.42 49⇑*iP* P 23 55 47.1 -0.3
comp=Z,302nm,0.9s,mb6.2
O19A Miners Draw (B 78.44 47 ⇓P P 23 55 47.3 -0.2
baz=78
O19A ⇓S S 00 05 41.0 -2.3
baz=78
V13A Grand Canyon W 78.45 53 ⇓P P 23 55 47.6 0.0
baz=78
V13A ⇓S S 00 05 47.0 +3.5
baz=78
SVRH Sivrihisar-ESK 78.48 312 *eP* P 23 55 47.7 0.0
M21A Separation Pea 78.55 45 ⇑P P 23 55 47.9 -0.2
baz=78
M21A ⇑S S 00 05 42.5 -1.9
baz=78
N20A Spence Gulch, 78.57 46 ⇑P P 23 55 48.4 +0.2
baz=78
N20A ⇓S S 00 05 44.4 -0.2
baz=78
RWWY Rawlins 78.58 45⇑*iP* P 23 55 48.0 -0.3
comp=Z,359nm,1.1s,mb6.2
U14A Mt Trumbull 78.58 52 ⇓P P 23 55 48.5 +0.1
baz=78
U14A ⇓S S 00 05 45.9 +1.0
baz=78
HLG Helgoland 78.59 334 *eP* P 23 55 48.2 +0.2
comp=Z,1μm,1.1s,mb6.7
RSSD Black Hills 78.61 42⇑*iP* P 23 55 47.6 -0.7
RSSD pmax pmax
comp=Z,485nm,1.0s,mb6.4
RSSD MLR MLR
comp=Z,46μm,22.0s,MS6.8
RSSD Black Hills 78.61 42⇑*iP* P 23 55 47.6 -0.7
comp=Z,485nm,1.0s,mb6.4
RSSD LR LR
comp=Z,46μm,22.0s,MS6.8
GPA Golpazari 78.61 313 *eP* P 23 55 48.4 -0.1
PSZ Piszkesteto 78.63 324⇑P P 23 55 49.0 +0.6
PSZ Piszkesteto 78.63 324⇑*iP* P 23 55 48.2 -0.2
comp=Z,1μm,1.3s,mb6.7
PSZ LR LR
comp=Z,181μm,21.0s,MS7.4
PSZ Piszkesteto 78.63 324⇑*eP* P 23 55 48.8 +0.4
PSZ Piszkesteto 78.63 324⇑*iP* P 23 55 49.0 +0.6
KIZT Kizilcal 78.64 311 *eP* P 23 55 48.6 -0.1
Q18A Rafter H Ranch 78.66 49 ⇓P P 23 55 48.4 -0.3
baz=78
Q18A ⇑S S 00 05 46.2 +0.7
baz=78
KLYT Kilyos 78.68 314 *eP* P 23 55 48.4 -0.4
T15A Red Dirt Ranch 78.68 51 ⇑P P 23 55 49.1 +0.2
baz=78
T15A ⇑S S 00 05 47.3 +1.4
baz=78
VYHS Vyhne 78.69 325 *i P* P 23 55 49.1 +0.4
comp=Z,282nm,1.2s,mb6.1
VYHS *e*PP pP 23 55 54.4 +1.9
VYHS *eS* S 00 05 45.7 +0.1
VYHS *eSS* SS 00 10 56.6 +8.1
VYHS LR LR
comp=Z,184μm,16.3s,MS7.5
KDHN Kadinhani 78.74 311⇑*iP* P 23 55 49.4 +0.2
KDHN Kadinhani 78.74 311⇓*iP* S 00 05 47.8 +1.3
NEE2 Needles Airpor 78.75 54 ⇓P P 23 55 49.0 -0.3
baz=78
NEE2 ⇑S S 00 05 48.6 +1.9
baz=78
BAR Barrett 78.76 57⇑*iP* P 23 55 48.8 -0.6
comp=Z,154nm,1.0s,mb5.9
R17A Hanksville Air 78.77 49 ⇑P P 23 55 49.3 -0.1
baz=78
R17A ⇑S S 00 05 48.7 +1.9
baz=78
RSC Scourie 78.77 342⇑*iP* P 23 55 49.7 +0.8
RSC Scourie 78.77 342 P P 23 55 49.7 +0.8
L22A Ellis Ranch, M 78.77 44 ⇓P P 23 55 49.3 0.0
baz=78
L22A ⇓S S 00 05 46.4 -0.3
baz=78
MONP Monument Peak 78.79 57 ⇓P P 23 55 49.1 -0.4
baz=78
MONP ⇑S S 00 05 48.4 +1.2
baz=78
ISK Istanbul-Kandi 78.80 314 *eP* P 23 55 48.1 -1.4
IRM Iron Mountain 78.80 55 ⇓P P 23 55 49.5 -0.1
baz=79
IRM ⇓S S 00 05 49.4 +2.1
baz=79
BORA Eskisehir 78.80 313⇑*iP* P 23 55 49.8 +0.3
BORA Eskisehir 78.80 313⇑*iP* S 00 05 41.2 -5.9
LADK Ladik-KONYA 78.81 310 *eP* P 23 55 49.2 -0.4
ESKT Eskisehir 78.82 312 *eP* P 23 55 49.5 -0.1
ESKT Eskisehir 78.82 312⇑*iP* P 23 55 49.5 0.0
ADVT Abdulvahap 78.84 313 *eP* P 23 55 49.6 -0.1
FKH Fakeheh 78.89 305 *eP* P 23 55 50.3 +0.2
MVH1 Achvaich 78.92 342⇑*eP* P 23 55 49.8 0.0
MVH1 Achvaich 78.92 342 P P 23 55 49.8 0.0
BC3 Big Chuckawall 78.93 56 ⇑P P 23 55 50.0 -0.3
baz=79
BC3 ⇓S S 00 05 48.3 -0.4
baz=79
CTYL Yal??k??y-??at 78.94 315 *eP* P 23 55 50.4 +0.1
YLV Yalova 78.96 314 *eP* P 23 55 50.1 -0.3
BRG Berggiesshubel 78.97 329⇑*iP* P 23 55 50.1 -0.1
comp=Z,242nm,1.4s,mb6.0
BRG *e* pP 23 55 55.2 +1.2
comp=Z,444nm,1.1s
BRG S S 00 05 56.0 +7.6
BRG SS SS 00 11 05.0 +12
BRG PKKP PKKPbc 00 14 46.7 +4.7
comp=Z,12nm,1.4s
BRG PKPPKP 00 22 39.2
comp=Z,67nm,2.3s
BRG
comp=Z,321μm,18.2s
BRG
comp=N,245μm,17.0s
BRG
comp=E,157μm,17.0s
P19A Cripple Cowboy 78.97 48 ⇑P P 23 55 50.3 -0.1
baz=79
P19A ⇑S S 00 05 50.2 +1.3
baz=79
KONT Konya--Tatoy 78.97 310 *eP* P 23 55 50.5 0.0
PVCC Panska Ves 78.98 328⇑*iP* P 23 55 50.7 +0.5
PVCC *e* 23 58 55.8
PVCC *eS* S 00 05 53.7 +5.1
PVCC MLR MLR
comp=Z,261μm,20.9s,MS7.5
PVCC Panska Ves 78.98 328⇑*iP* P 23 55 50.7 +0.5
PVCC *e*PP PP 23 58 55.8 +7.4
PVCC *eS* S 00 05 53.7 +5.1
PVCC *e*PKPPKP 00 22 43.2
PVCC AMS AMS 00 32 50.0
comp=Z,261μm,20.9s
SZH Strazhica 78.98 318 P P 23 55 49.9 -0.5
MCD Coleburn Disti 78.99 341 *eP* P 23 55 49.2 -1.0
MCD Coleburn Disti 78.99 341 P P 23 55 49.2 -1.0
W13A Hualapai Mount 79.00 54 ⇑P P 23 55 50.7 0.0
baz=79
W13A ⇑S S 00 05 51.4 +2.0
baz=79
CLL Collm 79.00 330 *eP* P 23 55 49.9 -0.5
comp=Z,833nm,1.1s,mb6.6
CLL Collm 79.00 330 *eS* S 00 05 54.2 +5.4
CLL Collm 79.00 330 *eP* P 23 55 50.0 -0.4
CLL *i* pP 23 55 54.9 +0.7
CLL *eS* S 00 05 48.0 -0.8
CLL pmax pmax
comp=Z,291nm,1.1s,mb6.1
CLL MLR MLR
comp=Z,198μm,17.9s,MS7.5
CLL Collm 79.00 330 *eP* P 23 55 50.0 -0.4
comp=Z,291nm,1.1s,mb6.1
CLL *i* pP 23 55 54.9 +0.7
CLL *eS* S 00 05 48.0 -0.8
CLL *eP'P'* 00 22 44.0
CLL LR LR
comp=Z,198μm,17.9s,MS7.5
CLL Collm 79.00 330 *eP* P 23 55 50.0 -0.4
comp=Z,291nm,1.1s,mb6.1
CLL *i* sP sP 23 55 54.9 -0.7
comp=Z,836nm,1.1s
CLL *i* PcP PcP 23 55 59.4 +0.5
CLL *i* 23 56 14.2
CLL *e*PP PP 23 58 52.0 +3.4
CLL *e*PPP 00 00 42.0
CLL *eS* S 00 05 48.0 -0.8
comp=N,7μm,17.8s
CLL *eS* S 00 05 48.0 -0.8
comp=E,32μm,29.0s
CLL *e*PS 00 06 24.0
CLL *e*PPS 00 06 41.0
CLL *e* 00 07 49.0
CLL *eSS* SS 00 10 50.0 -3.0
CLL *e* 00 11 49.0
CLL *eSSS* 00 14 18.0
CLL *e*(PKKPbc) 00 14 47.0
CLL *eSSSS* 00 16 42.0
CLL *e* 00 22 23.0
CLL *e*PKPPKPdf 00 22 44.0
comp=Z,151nm,2.7s
CLL Lmax 00 33 00.0
N21A Black Mountain 79.04 46 ⇑P P 23 55 50.6 -0.2
baz=79
N21A ⇓S S 00 05 52.0 +2.4
baz=79
O20A White River Ci 79.05 47 ⇑P P 23 55 50.7 -0.2
baz=79
O20A ⇓S S 00 05 49.3 -0.5
baz=79
VRAC Vranov 79.06 327 P P 23 55 51.3 +0.6
comp=Z,396nm,1.2s,mb6.2,baz=42,slow=6.7,SNR=5.8
VRAC Vranov 79.06 327 P P 23 55 51.3 +0.6
VRAC pmax pmax
comp=Z,396nm,1.2s
VRAC Vranov 79.06 327⇑P P 23 55 51.4 +0.7
VRAC Vranov 79.06 327⇑*iP* P 23 55 51.4 +0.7
GZR Gura Zlata 79.09 321⇑P P 23 55 51.6 +0.6
GZR Gura Zlata 79.09 321⇑*iP* P 23 55 51.6 +0.6
ELBA Catalca 79.09 315⇑*iP* P 23 55 50.7 -0.4
U15A North Rim 79.12 52 ⇓P P 23 55 51.8 +0.5
baz=79
U15A ⇑S S 00 05 52.0 +1.4
baz=79
V14A Boquillas Ranc 79.14 53 ⇑P P 23 55 51.3 -0.1
baz=79
V14A ⇓S S 00 05 54.4 +3.6
baz=79
DVTC Desert V Tower 79.14 57 ⇑P P 23 55 51.3 -0.2
baz=79
DVTC ⇓S S 00 05 53.5 +2.6
baz=79
GEMT Gemlik 79.15 314 *eP* P 23 55 50.4 -0.9
HWQ Hawqa 79.16 305 *eP* P 23 55 51.6 0.0
MME1 Meikle Cairn 79.16 341⇑*eP* P 23 55 50.7 -0.4
MME1 Meikle Cairn 79.16 341 P P 23 55 50.7 -0.4
SWSC Sam W. Stewart 79.16 56 ⇓P P 23 55 51.5 -0.1
baz=79
SWSC ⇑S S 00 05 53.2 +2.0
baz=79
NRDL Niedersach Rie 79.16 332 *eP* P 23 55 51.0 -0.2
comp=Z,470nm,1.2s,mb6.3
NRDL Niedersach Rie 79.16 332 *eS* S 00 05 56.2 +5.7
JMB Yambol 79.19 317 P P 23 55 52.4 +0.8
JMB Yambol 79.19 317 P P 23 55 52.0 +0.4
S17A Black Ridge (B 79.23 50 ⇑P P 23 55 51.7 -0.2
baz=79
S17A ⇑S S 00 05 53.1 +1.3
baz=79
T16A Glen Canyon Da 79.24 51 ⇓P P 23 55 51.6 -0.3
baz=79
T16A ⇓S S 00 05 48.7 -3.2
baz=79
ARMT Armutlu 79.24 314 *eP* P 23 55 51.7 -0.2
Q19A Hogan Spring (79.26 48 ⇓P P 23 55 51.8 -0.2
baz=79
Q19A ⇑S S 00 05 50.5 -1.5
baz=79
R18A Canyonlands Na 79.27 49 ⇑P P 23 55 51.7 -0.4
baz=79
R18A ⇓S S 00 05 51.4 -0.7
baz=79
BOLV Bolvadin 79.29 311⇑*iP* P 23 55 52.6 +0.4
BOLV Bolvadin 79.29 311⇑*iP* S 00 05 53.2 +0.8
IKL Isikli 79.30 308 *eP* P 23 55 51.6 -0.7
SMOL Smolenice 79.30 326 *eP* P 23 55 53.0 +1.0
SMOL Smolenice 79.30 326 *eP* P 23 55 53.0 +1.0
PVL Pavlikeni 79.33 318 P P 23 55 52.0 -0.3
BUD Budapest 79.35 324⇑*eP* P 23 55 52.9 +0.6
PDMCI Parker Dam,Lak 79.35 54 ⇑P P 23 55 52.3 -0.3
baz=79
PDMCI ⇓S S 00 05 56.0 +2.9
baz=79
X13A Yucca 79.36 54 ⇑P P 23 55 52.5 -0.2
baz=79
X13A ⇑S S 00 05 55.2 +1.9
baz=79
RRR Rubha Reidh 79.36 343⇑*iP* P 23 55 53.0 +0.8
RRR Rubha Reidh 79.36 343 P P 23 55 53.0 +0.8
ULDT Uludag 79.38 314⇑*iP* P 23 55 53.3 +0.6
PRA Prague 79.39 328 ⇑P P 23 55 53.0 +0.5
PRA S S 00 05 59.0 +6.0
PRA SS SS 00 10 57.0 -1.9
PRA AMS AMS 00 32 50.0
MDO Dochfour 79.39 342⇑*eP* P 23 55 51.8 -0.6
MDO Dochfour 79.39 342 P P 23 55 51.8 -0.6
P20A De Beque 79.40 47 ⇑P P 23 55 52.3 -0.4
baz=79
P20A ⇑S S 00 05 51.2 -2.2
baz=79
PRU Pruhonice 79.40 328⇑*iP* P 23 55 53.1 +0.5
PRU *e* 23 58 52.4
PRU *eS* S 00 05 59.7 +6.5
PRU Pruhonice 79.40 328⇑*iP* P 23 55 53.1 +0.5
PRU *e*PP PP 23 58 52.4 +0.4
PRU *eS* S 00 05 59.7 +6.5
PRU *eSS* SS 00 11 08.1 +9.0
PRU *e*PKPPKP 00 22 42.8
W14A Seligman 79.42 53 ⇓P P 23 55 53.1 +0.1
baz=79
W14A ⇓S S 00 05 54.8 +0.9
baz=79
O21A Pagoda 79.44 46 ⇓P P 23 55 52.9 -0.1
baz=79
O21A ⇑S S 00 05 54.6 +0.8
baz=79
EREN Erenkoy 79.46 307 *eP* P 23 55 52.9 -0.3
Y12C Blythe 79.46 55 ⇓P P 23 55 53.2 -0.1
baz=79
Y12C ⇓S S 00 05 56.6 +2.3
baz=79
CRLT Corlu 79.48 315 *eP* P 23 55 54.1 +0.9
BZS Buzias 79.49 321 ⇓P P 23 55 54.3 +1.1
BZS Buzias 79.49 321⇓*iP* P 23 55 54.3 +1.1
AGMN Agassiz Nation 79.50 35⇑*iP* P 23 55 52.8 -0.4
comp=Z,7μm,1.0s
AGMN LR LR
comp=Z,53μm,20.0s,MS6.9
RRH Rhenigidale 79.51 343⇑*eP* P 23 55 53.0 0.0
RRH Rhenigidale 79.51 343 P P 23 55 53.0 0.0
EDRB Edirne 79.53 316 *eP* P 23 55 53.8 +0.4
TREC Trest 79.54 327⇑*iP* P 23 55 53.6 +0.2
TREC *e* 23 59 00.9
TREC *eS* S 00 06 00.6 +6.0
TREC MLR MLR
comp=Z,161μm,17.5s,MS7.4
TREC Trest 79.54 327⇑*iP* P 23 55 53.6 +0.2
TREC *e*PP PP 23 59 00.9 +7.8
TREC *eS* S 00 06 00.6 +6.0
TREC *eSS* SS 00 11 10.4 +9.2
TREC *ex* x 00 22 35.4
TREC AMS AMS 00 33 30.0
comp=Z,161μm,17.5s
HDMB Hadim 79.55 309 *eP* P 23 55 52.9 -0.8
ALT Altintas 79.55 312 *eP* P 23 55 53.4 -0.2
KAC Achnashellach 79.56 342 *eP* P 23 55 53.1 -0.2
KAC Achnashellach 79.56 342 P P 23 55 53.1 -0.2
BHL Bhannes 79.58 305 *eP* P 23 55 53.9 0.0
CLZ Clausthal 79.59 331 *eP* P 23 55 53.7 +0.1
comp=Z,1μm,1.2s,mb6.7
CLZ Clausthal 79.59 331 *eS* S 00 06 01.1 +6.1
CLZ Clausthal 79.59 331 *eP* P 23 55 53.7 +0.1
CLZ pmax pmax
comp=Z,1μm,1.2s,mb6.7
V15A Kaibab Nationa 79.59 52 ⇓P P 23 55 53.5 -0.4
baz=79
V15A ⇓S S 00 06 00.1 +4.4
baz=79
N22A Wattenberg Ran 79.60 45 ⇓P P 23 55 53.8 -0.1
baz=79
N22A ⇓S S 00 05 56.9 +1.3
baz=79
SHUT Suhut-Afyon 79.64 312 *eP* P 23 55 54.6 +0.5
T17A Navajo Res., N 79.65 51 ⇓P P 23 55 54.0 -0.2
baz=79
T17A ⇑S S 00 05 56.7 +0.5
baz=79
S18A Hurst Farm, Bl 79.67 50 ⇓P P 23 55 54.0 -0.3
baz=79
S18A ⇑S S 00 05 56.4 -0.1
baz=79

ZST Bratislava 79.68 326 *e*P P **23 55 55.0 +0.9**
comp=Z,185nm,1.0s,mb6.0
ZST *e*PP pP 23 56 00.1 +2.1
ZST *e*S S 00 06 01.5 +5.4
ZST *e*SS SS 00 11 08.2 +4.9
ZST LR LR
comp=Z,396µm,17.0s,MS7.8
TKR Tekirdag 79.69 315 *e*P P **23 55 54.6 +0.3**
R19A Curley Farm, L 79.70 49 ⇑P P **23 55 54.2 -0.3**
baz=79
R19A ⇑S S 00 05 54.7 -2.0
baz=79
GLA Glamis 79.72 56 ⇓P P **23 55 54.5 -0.2**
baz=80
GLA ⇓S S 00 05 58.5 +1.4
baz=80
GLA Glamis 79.72 56⇑*i*P P **23 55 54.5 -0.1**
GLA pmax pmax
comp=Z,224nm,0.7s,mb6.2
GLA Glamis 79.72 56⇑*i*P P **23 55 54.5 -0.1**
comp=Z,224nm,0.7s,mb6.2
RCY Rachaya 79.75 305 *e*P P **23 55 54.8 +0.1**
KPL Plockton 79.79 342⇑*i*P P **23 55 54.0 -0.6**
KPL AMb AMB 23 56 01.4
comp=Z,1µm,1.4s,mb6.6
KPL *e* 00 05 40.7
KPL AMS AMS 00 27 60.0
comp=Z,54µm,26.5s,MS6.8
KPL Plockton 79.79 342 P P **23 55 54.0 -0.6**
KPL AMb AMB 23 56 01.4
comp=Z,1µm,1.4s,mb6.6
KPL 00 05 40.7
KPL AMS AMS 00 27 60.0
comp=Z,54µm,26.5s
PHWY Pilot Hill 79.81 44⇑*i*P P **23 55 54.7 -0.2**
comp=Z,268nm,1.4s,mb6.0
Q20A Ridgley Place, 79.82 48 ⇑P P **23 55 54.9 -0.2**
baz=80
Q20A ⇑S S 00 05 58.1 +0.1
baz=80
PV04 Paradox Valley 79.84 48⇑*i*P P **23 55 54.9 -0.3**
KSB Sheil Bridge 79.86 342⇑*e*P P **23 55 54.6 -0.3**
KSB Sheil Bridge 79.86 342 P P **23 55 54.6 -0.3**
PHNC Paralimni 79.89 307 P P **23 55 58.2 +2.7**
comp=Z,5.4nm,1.0s
GDZ Gediz 79.89 313⇑*i*P P **23 55 55.9 +0.4**
GDZ Gediz 79.89 313⇓*i*P S 00 05 53.2 -5.5
ASF Jabal al Asfar 79.89 303 P P **23 55 56.1 +0.5**
comp=Z,94nm,1.0s,mb5.7,baz=296,slow=2.7,SNR=5.3
ASF PP PP 23 58 57.9 +1.2
comp=Z,36nm,1.2s,baz=57,slow=11,SNR=1.9
ASF Jabal al Asfar 79.89 303 P P **23 55 56.1 +0.5**
ASF 23 58 57.9
ASF pmax pmax
comp=Z,94nm,1.0s
ASF pmax pmax
comp=Z,36nm,1.2s
BNT Bandirma 79.91 314 *e*P P **23 55 55.7 +0.1**
TANN Tannenbergstha 79.91 329 *e*P P **23 55 55.1 -0.3**
comp=Z,322nm,1.2s,mb6.1
TANN Tannenbergstha 79.91 329 *e*S S 00 06 05.2 +6.7
KSK Scoval 79.92 343 *e*P P **23 55 55.3 0.0**
KSK Scoval 79.92 343 P P **23 55 55.3 0.0**
HRI Mount Hermon 79.94 305 P P **23 55 56.2 +0.4**
WERD Werda 79.95 329 *e*P P **23 55 55.4 -0.1**
comp=Z,496nm,1.2s,mb6.3
EDC Edincik 79.95 314 *e*P P **23 55 54.9 -0.8**
W15A Williams 79.95 53 ⇓P P **23 55 56.2 +0.4**
baz=80
W15A ⇑S S 00 06 03.8 +4.4
baz=80
MFT Murefte 79.97 315 *e*P P **23 55 56.1 +0.2**
OUZ Omahuta 79.99 153⇓*i*P P **23 55 55.8 0.0**
comp=Z,513nm,1.5s,mb6.2
U17A Shonto 80.00 51 ⇓P P **23 55 56.3 +0.2**
baz=80
U17A ⇓S S 00 05 57.7 -2.2
baz=80
GUNZ Gunzen 80.01 329 *e*P P **23 55 55.9 +0.1**
comp=Z,572nm,1.1s,mb6.4
LFK Lefkose 80.02 307 *e*P P **23 55 55.8 -0.4**
X14A Yava 80.03 54 ⇓P P **23 55 56.8 +0.5**
baz=80
X14A ⇓S S 00 06 03.4 +3.0
baz=80
KSDI Kefar Szold 80.04 305 ⇑Pn P **23 55 56.7 +0.3**
DIM Dimitrovgrad 80.04 317 P P **23 55 56.6 +0.4**
WERN Wernitzgruen 80.05 329 *e*P P **23 55 56.2 +0.1**
comp=Z,552nm,1.2s,mb6.4
NKC Novy Kostel 80.06 329⇑*i*P P **23 55 56.1 -0.1**
NKC *e* 23 59 03.3
NKC *e*S S 00 06 05.4 +5.3
NKC MLR MLR
comp=Z,149µm,16.7s,MS7.4
NKC Novy Kostel 80.06 329⇑*i*P P **23 55 56.1 -0.1**
NKC *e*PP PP 23 59 03.3 +5.9
NKC *e*S S 00 06 05.4 +5.3
NKC AMS AMS 00 34 10.0
comp=Z,149µm,16.7s
MOX Moxa 80.06 330*ce*P P **23 55 55.8 -0.4**
comp=Z,478nm,1.2s,mb6.3
MOX *e*S S 00 06 08.0 +7.9
MOX Moxa 80.06 330 *e*P P **23 55 55.9 -0.3**
comp=Z,490nm,1.1s,mb6.3
MOX Moxa 80.06 330 *e*S S 00 06 06.3 +6.2
MOX Moxa 80.06 330*ce*P P **23 55 55.8 -0.4**
MOX *e*S S 00 06 08.0 +7.9
MOX pmax pmax
comp=Z,478nm,1.2s,mb6.3
MOX Moxa 80.06 330 *e*Pu 23 55 55.8
comp=Z,478nm,1.2s
MOX *e*S S 00 06 08.0 +7.9
KSHT Keshet 80.08 304 ⇑Pn P **23 55 57.1 +0.5**
SUTC Sutluce-Ispart 80.09 311 *e*P P **23 55 56.6 +0.1**
SART Tekirdag 80.09 315⇑*i*P P **23 55 56.9 +0.4**
RKY Sarkoy-Tekirda 80.09 315 *e*P P **23 55 57.2 +0.7**
T18A Mexican Hat 80.11 50 ⇓P P **23 55 56.3 -0.4**
baz=80
T18A ⇓S S 00 06 01.5 +0.4
baz=80
DURS Dursunbey 80.12 313⇑*i*P P **23 55 56.5 -0.1**
DURS Dursunbey 80.12 313⇑*i*P S 00 05 49.9 -11
GAZI Gazipasa 80.13 309⇑*i*P P **23 55 56.8 0.0**
GAZI Gazipasa 80.13 309⇑*i*P S 00 05 53.2 -8.1
ISP Isparta 80.14 311 *e*P P **23 55 56.3 -0.5**
ISP Isparta 80.14 311 ⇑Pn P **23 55 56.1 -0.7**
ISP Isparta 80.14 311 P P **23 55 56.3 -0.5**
ISP Isparta 80.14 311⇓*i*P P **23 55 57.0 +0.2**
S19A Harvey Farm, M 80.14 49 ⇑S S 00 06 01.2 -0.2
baz=80
IBBN Ibbenburen 80.16 333 *e*P P **23 55 56.5 -0.2**
comp=Z,1µm,1.1s,mb6.7
IBBN Ibbenburen 80.16 333 *e*S S 00 06 05.7 +4.6
112A Yuma 80.21 56 ⇑P P **23 55 57.3 +0.1**
baz=80
112A ⇑S S 00 06 03.4 +1.2
baz=80
PV01 Paradox Valley 80.21 48 *e*P P **23 55 57.7 +0.5**
comp=Z,39µm,1.5s
KAR1 Arisaig 80.22 342⇑*e*P P **23 55 56.9 0.0**
KAR1 Arisaig 80.22 342 P P **23 55 56.9 0.0**
EBH Black Hill 80.24 341⇑*e*P P **23 55 56.8 -0.2**
EBH Black Hill 80.24 341 P P **23 55 56.8 -0.2**
MAMC Mammari 80.28 308 P P **23 55 57.0 -0.6**
WUAZ Wupatki 80.28 52 ⇓P P **23 55 58.0 +0.4**
baz=80
WUAZ ⇑S S 00 06 07.4 +4.5
baz=80
WUAZ Wupatki 80.28 52⇑*i*P P **23 55 58.1 +0.5**
comp=Z,430nm,0.5s,mb6.6
WUAZ LR LR
comp=Z,42µm,22.0s,MS6.7
R20A Redvale 80.29 48 ⇑P P **23 55 58.1 +0.5**
baz=80
R20A ⇑S S 00 06 05.2 +2.3
baz=80
ESY Stoneypath 80.30 340⇑*e*P P **23 55 56.7 -0.6**
ESY Stoneypath 80.30 340 P P **23 55 56.7 -0.6**
Y14A Wickenburg 80.30 54 ⇑P P **23 55 57.7 -0.1**
baz=80
Y14A ⇑S S 00 06 05.3 +2.1
baz=80
SOP Sopron 80.31 325⇑*e*P P **23 55 58.5 +1.0**
Q21A Lamborn Mesa, 80.31 47 ⇑P P **23 55 58.0 +0.3**
baz=80
Q21A ⇑S S 00 06 03.9 +0.8
baz=80
MMAI Mount Meron Ar 80.31 305 P P **23 55 57.2 -0.6**
comp=Z,191nm,1.0s,mb6.0,baz=46,slow=6.3,SNR=117
MMAI S S 00 06 05.8 +2.5
comp=Z,2.9nm,0.9s,baz=225,slow=55,SNR=3.5
MMAI LR LR 00 35 14.0
comp=Z,111µm,20.4s,MS7.2,baz=50,slow=38
BCK Bucak 80.34 311 *e*P P **23 55 55.7 -2.3**
CSS Prodhromos 80.35 307 P P **23 55 58.8 +0.8**
CSS Prodhromos 80.35 307 P P **23 55 57.0 -1.0**
DEMI Demirci 80.36 313⇑*i*P P **23 55 57.7 -0.3**
DEMI Demirci 80.36 313⇑*i*P S 00 06 04.2 +0.5
Z13A Yuma Proving G 80.37 55 ⇑P P **23 55 58.1 0.0**
baz=80
Z13A ⇓S S 00 06 01.6 -2.4
baz=80
KHAL Karahalli 80.37 312⇑*i*P P **23 55 58.4 +0.3**
KHAL Karahalli 80.37 312⇑*i*P S 00 05 58.7 -5.1
KDZ Kurdzhali 80.38 317 P P **23 55 58.4 +0.4**
PGB Panagyurishte 80.41 318 P P **23 55 57.5 -0.7**
HNTI Hanita 80.42 305 Pn P **23 55 58.8 +0.4**
SMCO Snowmass 80.42 47⇑*i*P P **23 55 58.5 +0.2**
comp=Z,164nm,1.0s,mb5.9
BALB Balikesir 80.42 314 *e*P P **23 55 57.8 -0.6**
CONA Conrad Observa 80.42 326⇑*i*P P **23 55 59.0 +0.8**
comp=Z,580nm,1.1s,mb6.4
X15A Humboldt 80.42 53 ⇑P P **23 55 58.9 +0.4**
baz=80
EDI Edinburgh 80.45 340⇑*i*P P **23 55 57.0 -1.2**
EDI AMb AMB 23 56 07.3
comp=Z,434nm,2.9s,mb5.9
EDI *e* 00 05 51.6
EDI AMS AMS 00 29 51.6
comp=Z,86µm,26.9s,MS7.0
EDI Edinburgh 80.45 340 P P **23 55 57.0 -1.2**
EDI AMb AMB 23 56 07.3
comp=Z,434nm,2.9s,mb5.9
EDI 00 05 51.6
EDI AMS AMS 00 29 51.6
comp=Z,86µm,26.9s
W16A Flagstaff 80.46 52 ⇓P P **23 55 59.1 +0.5**
baz=80
W16A ⇑S S 00 06 03.9 -1.0
baz=80
KHC Kasperske Hory 80.47 328⇑*i*P P **23 55 58.5 +0.1**
KHC *e* 23 59 05.7
KHC *e*S S 00 06 08.2 +3.8
KHC Kasperske Hory 80.47 328⇑*i*P P **23 55 58.5 +0.1**
comp=Z,58nm,1.1s,mb5.4
KHC Kasperske Hory 80.47 328⇑*i*P P **23 55 58.5 +0.1**
KHC *e*pP pP 23 56 01.5 -0.7
KHC *e*PP PP 23 59 05.7 +4.9
KHC *e*S S 00 06 08.2 +3.8
KHC *e*SS SS 00 11 24.1 +9.1
KHC *e*PKPPKP 00 22 40.7
KHC *e*x x 00 22 46.9
KHC AMS AMS 00 33 40.0
comp=Z,192µm,20.3s
PKSM Moragy 80.47 323 ⇑P P **23 55 58.6 +0.2**
PKSM Moragy 80.47 323⇑*i*P P **23 55 58.6 +0.2**
BALY Balya 80.50 314⇑*i*P P **23 55 59.2 +0.4**
BALY Balya 80.50 314⇓*i*P S 00 06 02.0 -3.1
EAB Aberfoyle 80.51 341⇑*e*P P **23 55 57.7 -0.8**
EAB Aberfoyle 80.51 341 P P **23 55 57.7 -0.8**
LEF Lefka 80.52 308 *e*P P **23 55 58.6 -0.3**
EBL Broad Law 80.54 340⇑*e*P P **23 55 57.9 -0.8**
EBL Broad Law 80.54 340 P P **23 55 57.9 -0.8**
UBBA Unterbreizbach 80.55 331 *e*P P **23 55 58.2 -0.6**
comp=Z,601nm,1.7s,mb6.2
UBBA Unterbreizbach 80.55 331 *e*S S 00 06 11.1 +5.9
V17A Tonalea, Kykot 80.57 52 ⇑S S 00 06 05.3 -0.6
baz=80
ALN Alexandroupoli 80.57 316 P P **23 55 59.0 -0.1**
ALN Alexandroupoli 80.57 316 *e*P P **23 55 58.9 -0.2**
113A Mohawk Valley, 80.58 55 ⇑P P **23 55 59.4 +0.1**
baz=80
113A ⇑S S 00 06 07.3 +1.1
baz=80
EAU Auchinoon 80.58 340⇑*e*P P **23 55 58.5 -0.3**
EAU Auchinoon 80.58 340 P P **23 55 58.5 -0.3**
U18A Rough Rock, Ch 80.59 50 ⇑P P **23 55 59.6 +0.3**
baz=80
U18A ⇑S S 00 06 08.2 +2.0
baz=80
ENEZ Enez 80.62 316 *e*P P **23 55 58.9 -0.5**
GEC2 GERESS Array S 80.64 328 *e*P P **23 55 59.1 -0.2**
comp=Z,316nm,1.2s,mb6.1
GEC2 GERESS Array S 80.64 328 *e*S S 00 06 13.2 +7.0
GEC2 GERESS Array S 80.64 328 *e*P P **23 55 59.1 -0.2**
GEC2 pmax pmax
comp=Z,316nm,1.2s,mb6.1
GERES GERESS Array B 80.64 328 P P **23 55 59.1 -0.2**
comp=Z,37nm,0.8s,mb5.4,baz=41,slow=4.3,SNR=172
GERES PP PP 23 59 02.0 -0.2
comp=Z,10nm,0.8s,baz=61,slow=8.2,SNR=3.0
GERES S S 00 06 09.3 +3.1
comp=Z,0.4nm,0.7s,baz=51,slow=14,SNR=2.0
GERES PKKPbc PKKPbc 00 14 36.9 -1.4
comp=Z,2.6nm,1.0s,baz=207,slow=4.1,SNR=7.0
GERES PKPPKP 00 22 39.9
comp=Z,2.9nm,1.1s,baz=192,slow=1.9,SNR=8.7
GERES LR LR 00 33 34.8
comp=Z,226µm,21.7s,MS7.5,baz=31,slow=37
R21A Cimarron 80.64 48 ⇑P P **23 55 59.9 +0.4**
baz=80
R21A ⇓S S 00 06 06.2 -0.5
baz=80
RDO Rodhopi 80.67 316 P P **23 55 59.6 0.0**
RDO Rodhopi 80.67 316 *e*P P **23 56 00.6 +1.0**
ALFC Alevga 80.67 308 P P **23 55 58.1 -1.6**
comp=Z,6.9nm,0.8s
Q22A Crested Butte, 80.67 47 ⇑P P **23 56 00.1 +0.5**
baz=80
Q22A ⇓S S 00 06 10.4 +3.5
baz=80
MMLI Mount Malkishu 80.68 304 ⇑Pn P **23 56 00.3 +0.5**
ANTB Antalya 80.68 310 *e*P P **23 55 57.2 -2.5**
Y15A Casa Rosa Ranc 80.72 54 ⇑P P **23 56 00.1 +0.1**
baz=80
Y15A ⇑S S 00 06 06.6 -0.9
baz=80
Z14A Wintersburg 80.72 54 ⇑P P **23 55 59.9 -0.1**
baz=80
Z14A ⇑S S 00 06 08.9 +1.3
baz=80
HMDT Nahal Hemdat 80.73 304 ⇑Pn P **23 56 00.3 +0.2**
WET Wettzell 80.74 328 *e*P P **23 55 59.9 +0.1**
comp=Z,635nm,1.3s,mb6.4
WET Wettzell 80.74 328 *e*S S 00 06 14.5 +7.2
WET Wettzell 80.74 328 *e*P P **23 55 59.9 +0.1**
WET pmax pmax
comp=Z,635nm,1.3s,mb6.4
KULA Kula-Manisa 80.75 313 *e*P P **23 56 00.2 +0.1**
ISCO Idaho Springs 80.76 46⇑*i*P P **23 55 60.0 -0.2**
comp=Z,7µm,1.0s
ISCO LR LR
comp=Z,54µm,22.0s,MS6.9
KORT Korkueli 80.80 311⇑*i*P P **23 56 00.1 -0.2**
T19A Beclabito 80.82 50 ⇓P P **23 56 00.7 +0.2**
baz=81
T19A ⇑S S 00 06 11.2 +2.7
baz=81
OFRI 'Ofer 80.84 305 ⇑Pn P **23 56 00.5 -0.2**
VTS Vitosha 80.87 318 P P **23 56 01.1 +0.4**
VTS Vitosha 80.87 318 P P **23 56 01.3 +0.6**
MVCO Mesa Verde 80.88 49 ⇓P P **23 56 01.2 +0.4**
baz=81
MVCO ⇓S S 00 06 11.1 +2.0
baz=81
MVCO Mesa Verde 80.88 49⇑*i*P P **23 56 00.6 -0.2**
comp=Z,7µm,1.0s
MVCO LR LR
comp=Z,42µm,22.0s,MS6.8
PGBU Glenifferbraes 80.88 341⇑*e*P P **23 55 59.9 -0.6**
PGBU AMb AMB 23 56 09.5
comp=Z,862nm,3.1s
PGBU *e* 00 05 58.7
PGBU AMS AMS 00 27 33.4
comp=Z,74µm,30.2s,MS6.9
PGBU Glenifferbraes 80.88 341 P P **23 55 59.9 -0.6**
PGBU AMb AMB 23 56 09.5
comp=Z,862nm,3.1s
PGBU 00 05 58.7
PGBU AMS AMS 00 27 33.4
comp=Z,74µm,30.2s
EKA Eskdalemuir Ar 80.96 340 P P **23 56 00.5 -0.4**
comp=Z,38nm,0.8s,mb5.4,baz=27,slow=4.9,SNR=5.0
X16A Lo Mia Camp, P 80.97 53 ⇓P P **23 56 01.5 +0.2**
baz=81
X16A ⇑S S 00 06 13.8 +3.7
baz=81
GRA1 Grafenberg Arr 80.98 330 *e*P P **23 56 01.4 +0.3**
comp=Z,1µm,1.1s,mb6.8
GRF Grafenberg Arr 80.98 330 *e*S S 00 06 16.5 +6.8
GRF *e*PKKPbc PKKPbc 00 14 36.4 -1.2
GRF *e*PKPPKP 00 22 32.5
GRF *e*L 00 35 02.6
comp=Z,229µm,18.7s
GRF Grafenberg Arr 80.98 330 *e*P P **23 56 01.4 +0.3**
GRF pmax pmax
comp=Z,1µm,1.1s,mb6.8
GRF Grafenberg Arr 80.98 330 *e*P P **23 56 01.4 +0.3**
GRF *e*S S 00 06 16.5 +6.8
GRF pmax pmax
comp=Z,1µm,1.1s,mb6.8
GRF Grafenberg Arr 80.98 330 *e*P P **23 56 01.4 +0.3**
comp=Z,1µm,1.1s,mb6.8
GRF *e*S S 00 06 16.5 +6.8
GRF PKKPbc PKKPbc 00 14 36.4 -1.2
W17A Winslow 80.98 52 ⇑P P **23 56 01.7 +0.3**
baz=81
W17A ⇑S S 00 06 14.4 +4.1
baz=81
AKHS Akhisar 80.98 313⇑*i*P P **23 56 01.5 +0.1**
AKHS Akhisar 80.98 313⇑*i*P S 00 06 05.2 -4.9
S21A Coal Bank Pass 80.98 48 ⇓P P **23 56 01.5 +0.1**
baz=81
S21A ⇑S S 00 06 13.9 +3.7
baz=81
AKS Akhisar 80.99 313 *e*P P **23 56 00.7 -0.7**
ESK Eskdalemuir 80.99 340 P P **23 56 02.1 +1.1**
comp=Z,1µm,0.9s,mb6.9,SNR=13
ESK Eskdalemuir 80.99 340⇑*i*P P **23 56 00.3 -0.8**
ESK AMb AMB 23 56 10.3
comp=Z,483nm,2.8s,mb5.9
ESK *e* 00 05 56.5
ESK AMS AMS 00 30 49.1
comp=Z,93µm,23.1s,MS7.1
ESK Eskdalemuir 80.99 340 P P **23 56 00.3 -0.8**
ESK AMb AMB 23 56 10.3
comp=Z,483nm,2.8s,mb5.9
ESK 00 05 56.5
ESK AMS AMS 00 30 49.1
comp=Z,93µm,23.1s
ESK Eskdalemuir 80.99 340 *i*P P **23 56 02.6 +1.6**
ESK Eskdalemuir 80.99 340⇑*i*P P **23 56 01.4 +0.4**
comp=Z,552nm,1.4s,mb6.3
ESK LR LR
comp=Z,91µm,19.0s,MS7.2
PPCY Paphos 81.01 308 ⇑P P **23 56 00.8 -0.7**
V18A Ganado 81.03 51 ⇑P P **23 56 01.9 +0.3**
baz=81
V18A ⇑S S 00 06 14.6 +3.9
baz=81
BUG Bochum--Univer 81.05 333 *e*P P **23 56 00.8 -0.6**
comp=Z,790nm,1.3s,mb6.5
BUG Bochum--Univer 81.05 333 *e*S S 00 06 15.9 +5.5
SLTI Sal'it 81.05 304 ⇑Pn P **23 56 02.0 +0.2**
DENT Denizli 81.06 312 *e*P P **23 56 01.7 0.0**
U19A Dine' College, 81.08 50 ⇑P P **23 56 02.2 +0.3**
baz=81
U19A ⇑S S 00 06 14.0 +2.7
baz=81
ECK Cauldkaine Hil 81.09 340⇑*e*P P **23 56 01.2 -0.4**
ECK Cauldkaine Hil 81.09 340 P P **23 56 01.2 -0.4**
ARSA Arzberg 81.09 326⇑*i*P P **23 56 02.2 +0.4**
comp=Z,491nm,1.6s,mb6.2
DNZL Cakiroluk 81.09 312⇑*i*P P **23 56 02.4 +0.4**
DNZL Cakiroluk 81.09 312⇑*i*P S 00 06 05.2 -6.1
GOLH Golhisar 81.10 311⇑*i*P P **23 56 02.5 +0.6**
GOLH Golhisar 81.10 311⇑*i*P S 00 06 03.1 -8.4
XAL Allendale 81.12 339⇑*e*P P **23 56 01.0 -0.8**
XAL Allendale 81.12 339 P P **23 56 01.0 -0.8**
GADA Gvkgeada 81.14 315 *e*P P **23 56 00.2 -2.0**
114A Black Gap (USA 81.15 55 ⇓P P **23 56 02.3 0.0**
baz=81
114A ⇓S S 00 06 13.5 +1.4
baz=81
EZN Ezine 81.16 315 *e*P P **23 56 01.5 -0.7**
MOA Molln 81.17 327⇑*i*P P **23 56 02.3 +0.1**
comp=Z,377nm,1.2s,mb6.2
GLHS Glhisar (BURDU 81.19 311 *e*P P **23 56 02.0 -0.5**
R22A Saguache, Gunn 81.19 47 ⇑P P **23 56 02.6 +0.1**
baz=81
R22A ⇑S S 00 06 16.9 +4.5
baz=81
ELL Elmali 81.23 311 *e*P P **23 56 02.6 -0.1**
Z15A Gila River Ind 81.26 54 ⇓P P **23 56 03.2 +0.3**
baz=81
Z15A ⇑S S 00 06 15.4 +2.2
baz=81
DSI Dead Sea 81.27 304 ⇑Pn P **23 56 03.0 0.0**
Y16A Circle Bar Ran 81.30 53 ⇓P P **23 56 03.4 +0.3**
baz=81
Y16A ⇓S S 00 06 16.5 +2.9
baz=81
MMB Musomiste 81.32 317 P P **23 56 03.3 +0.2**
AYVA Ayvalik 81.32 314⇓*i*P P **23 56 03.5 +0.3**
KAVA Kavala 81.32 317 P P **23 56 03.2 +0.1**
P24A Kohler Place, 81.35 45 ⇓S S 00 06 14.0 +0.1
baz=81
KOGS Kog 81.38 325 *i*P P **23 56 02.8 -0.5**
DIVS Divibare 81.39 321 P P **23 56 03.2 -0.2**
X17A Forest Lakes 81.41 53 ⇑P P **23 56 03.9 +0.2**
baz=81
X17A ⇓S S 00 06 19.9 +5.1
baz=81
NVR Nevrokopi 81.42 317 *e*P P **23 56 04.0 +0.4**
U20A Newcomb 81.43 50 ⇓P P **23 56 03.9 +0.2**
baz=81
U20A ⇓S S 00 06 16.8 +1.9
baz=81
MZDA Masada 81.45 303 Pn P **23 56 04.1 +0.2**
KKB Krupnik 81.46 318 P P **23 56 03.6 -0.2**
W18A Petrified Fore 81.55 51 ⇓S S 00 06 20.1 +4.0
baz=81
V19A Window Rock 81.56 51 ⇑P P **23 56 04.7 +0.3**
baz=81
V19A ⇓S S 00 06 20.6 +4.4
baz=81
GCD Castle Douglas 81.59 340⇑*e*P P **23 56 03.8 -0.4**
GCD Castle Douglas 81.59 340 P P **23 56 03.8 -0.4**
T21A Navajo Lake 81.59 49 ⇓P P **23 56 04.7 +0.1**
baz=81
T21A ⇑S S 00 06 18.1 +1.5
baz=81
PRK Paraskevi 81.60 314 P P **23 56 04.2 -0.4**
PRK Paraskevi 81.60 314 *e*P P **23 56 05.5 +0.9**
115A Sonoran Desert 81.60 55 ⇑P P **23 56 04.6 -0.1**
baz=81
115A ⇓S S 00 06 19.5 +2.7
baz=81
TNS Taunus Mts 81.61 331 *e*P P **23 56 04.0 -0.5**
comp=Z,959nm,1.3s,mb6.6
TNS Taunus Mts 81.61 331 *e*S S 00 06 22.9 +6.6
TNS Taunus Mts 81.61 331 *e*P P **23 56 04.0 -0.5**
TNS pmax pmax
comp=Z,959nm,1.3s,mb6.6
KDAG Bornova 81.62 313⇓*i*P P **23 56 05.3 +0.5**
IZM Izmir 81.63 313 *e*P P **23 56 07.1 +2.3**
EYMN Ely 81.64 32⇑*i*P P **23 56 03.1 -1.5**
comp=Z,430nm,0.5s,mb6.6
EYMN LR LR
comp=Z,47µm,21.0s,MS6.8
Z16A Peralta Trail, 81.69 54 ⇓P P **23 56 05.0 -0.2**
baz=81
Z16A ⇑S S 00 06 21.3 +3.7
baz=81
GROS Grobnik 81.71 325 *e*P P **23 56 04.8 -0.2**
GROS *e*PP PP 23 59 15.0 +3.9
214A Organ Pipe Nat 81.72 55 ⇓P P **23 56 05.1 -0.2**
baz=82
214A ⇑S S 00 06 20.2 +2.1
baz=82
SRS Serrai 81.73 317 P P **23 56 05.0 -0.2**
BISS Bistriski jare 81.73 326 *i*P P **23 56 05.6 +0.5**
LIA Limnos Island 81.74 315 P P **23 56 04.7 -0.6**
LIA Limnos Island 81.74 315 *e*P P **23 56 05.2 -0.1**
SOKA Soboth 81.75 326⇑*i*P P **23 56 05.3 +0.1**

comp=Z,983nm,1.2s,mb6.6
AKAS Kas 81.75 310⇑*i*P P 23 56 04.7 -0.8
AKAS Kas 81.75 310⇓*i*P S 00 06 18.9 +0.6
HPK Haverah Park 81.76 339⇑*i*P P 23 56 03.9 -1.2
HPK AMb AMB 23 56 11.7
comp=Z,634nm,1.7s,mb6.3
HPK *e* 00 06 07.1
HPK AMS AMS 00 35 41.8
comp=Z,131μm,20.0s,MS7.3
HPK Haverah Park 81.76 339 P **P 23 56 03.9 -1.2**
HPK AMb AMB 23 56 11.7
comp=Z,634nm,1.7s,mb6.3
HPK 00 06 07.1
HPK AMS AMS 00 35 41.8
P25A Willow Gulch B 81.76 45⇑S S 00 06 15.7 -2.5
baz=82
W19A Sanders 81.76 51⇑P P 23 56 05.7 +0.2
baz=82
W19A ⇓S S 00 06 19.9 +1.5
baz=82
BLCB Balcova 81.76 313 *e*P P 23 56 05.3 -0.2
BLCB Balcova 81.76 313 P **P 23 56 05.0 -0.5**
GAL1 Galloway 81.78 341⇑*e*P P 23 56 05.0 -0.2
GAL1 AMb AMB 23 56 11.7
comp=Z,604nm,1.6s,mb6.3
GAL1 AMS AMS 00 28 15.5
comp=Z,83μm,30.7s,MS6.9
GAL1 Galloway 81.78 341 P **P 23 56 05.0 -0.2**
GAL1 AMb AMB 23 56 11.7
comp=Z,604nm,1.6s,mb6.3
GAL1 AMS AMS 00 28 15.5
comp=Z,83μm,30.7s
AYDN Tasoluk 81.79 312⇑*i*P P 23 56 06.5 +0.9
AYDN Tasoluk 81.79 312⇑*i*P S 00 06 08.5 -10
XDE Dent Fell 81.79 340⇑*e*P P 23 56 05.1 -0.2
XDE Dent Fell 81.79 340 P **P 23 56 05.1 -0.2**
FETY Fethiye 81.79 311 *e*P P 23 56 05.5 -0.1
X18A Snowflake 81.81 52⇑P P 23 56 05.9 +0.1
baz=82
X18A ⇓S S 00 06 22.9 +4.0
baz=82
Y17A Roosevelt 81.81 53⇓S S 00 06 22.0 +3.0
baz=82
AWI1 Witton 81.82 336 *e*P P 23 56 05.4 -0.1
AWI1 Witton 81.82 336 P **P 23 56 05.4 -0.1**
KSL Kastellorizon 81.83 310 *e*P P 23 56 06.5 +0.7
RAR Rarotonga 81.83 126 PFAKE 23 56 20.0 +14
RAR LR LR
comp=Z,125μm,22.0s,MS7.2
SIGR SIGRI 81.85 315 P **P 23 56 05.7 -0.2**
V20A Brimhall 81.85 50⇓S S 00 06 22.2 +2.9
baz=82
ABA1 Baconsthorpe 81.87 337⇑*e*P P 23 56 05.8 0.0
ABA1 Baconsthorpe 81.87 337 P **P 23 56 05.8 0.0**
LDU Leeds Universi 81.87 339 *e*P P 23 56 05.9 +0.2
LDU Leeds Universi 81.87 339 P **P 23 56 05.9 +0.2**
RJOB Jochberg 81.88 327 *e*P P 23 56 06.1 +0.2
comp=Z,882nm,1.2s,mb6.6
RJOB Jochberg 81.88 327 *e*S S 00 06 27.0 +7.8
OGNE Ogallala 81.90 43⇑*i*P P 23 56 04.8 -1.3
comp=Z,471nm,1.2s,mb6.3
OGNE LR LR
comp=Z,42μm,19.0s,MS6.8
TAU Tasmania Unive 81.90 175 P **P 23 56 06.8 +1.1**
comp=Z,2μm,1.3s,mb6.8,SNR=8.3
TAU Tasmania Unive 81.90 175 PFAKE 23 56 20.0 +14
TAU LR LR
comp=Z,56μm,22.0s,MS6.9
U21A Nageezi 81.90 49⇓S S 00 06 22.9 +3.1
baz=82
TURN Turunc 81.91 311⇑*i*P P 23 56 08.8 +2.6
YER Yerkesik 81.92 312 *e*P P 23 56 06.9 +0.6
T22A Edith 81.94 48⇓S S 00 06 23.1 +2.9
baz=82
TOD Tromm 81.98 331 *e*P P 23 56 06.6 +0.2
S23A Nye Farm, Mont 81.99 47⇓S S 00 06 18.8 -1.8
baz=82
116A Eloy 82.03 54⇓S S 00 06 24.1 +2.9
baz=82
URLA Izmir 82.03 314⇑*i*P P 23 56 06.4 -0.5
RTMI Retamim 82.05 304⇑Pn P 23 56 06.9 -0.2
ZFRI Zfri 82.06 303⇑Pn P 23 56 07.3 +0.1
SOH Sokhos 82.06 317 P **P 23 56 06.5 -0.5**
SOH Sokhos 82.06 317 *e*P P 23 56 06.8 -0.2
SISC Sisak 82.07 324 P **P 23 56 07.0 0.0**
SISC Sisak 82.07 324 *i*P P 23 56 07.0 0.0
AEU East Anglia Un 82.07 336⇑*e*P P 23 56 05.8 -1.0
AEU East Anglia Un 82.07 336 P **P 23 56 05.8 -1.0**
OUR Ouranopolis 82.08 316 P **P 23 56 06.4 -0.7**
OBKA Obir 82.09 326⇑*i*P P 23 56 07.0 0.0
comp=Z,290nm,1.0s,mb6.2
MLSB Milas 82.10 312 *e*P P 23 56 07.8 +0.6
VAY Valandovo 82.12 318 *i*P P 23 56 05.9 -1.4
comp=Z,340nm,0.3s,mb6.8
VAY Valandovo 82.12 318 P **P 23 56 06.8 -0.5**
GCAM G?zelcaml? 82.13 313 *i*P P 23 56 07.6 +0.2
GCAM G?zelcaml? 82.13 313⇑*i*P S 00 06 19.5 -2.6
R24A Sanders Place, 82.13 47⇑S S 00 06 22.7 +0.6
baz=82
Q25A Bedland, Calha 82.13 46⇑S S 00 06 22.7 +0.6
baz=82
BEBN Eben Emael 82.15 333 P **P 23 56 06.7 -0.6**
comp=Z,234nm,1.3s,mb6.0
KBA Koelnbreinsper 82.17 327⇑*i*P P 23 56 07.4 0.0
comp=Z,809nm,1.0s,mb6.6
FUR Furstenfeldbru 82.17 329 *e*P P 23 56 07.7 +0.3
comp=Z,1μm,1.1s,mb6.7
FUR Furstenfeldbru 82.17 329 *e*S S 00 06 29.1 +7.0
FUR Furstenfeldbru 82.17 329 *e*P P 23 56 07.7 +0.3
FUR pmax pmax
comp=Z,1μm,1.1s,mb6.7
MEM Membach 82.19 333 P **P 23 56 06.8 -0.6**
comp=Z,400nm,1.3s,mb6.2
LHO Holmfirth 82.19 339⇑*i*P P 23 56 07.1 -0.3
LHO Holmfirth 82.19 339 P **P 23 56 07.1 -0.3**
ABH Alteburg 82.23 332 *e*P P 23 56 07.7 0.0
SKO Skopje 82.23 319 *i*P P 23 56 06.7 -1.2
comp=Z,6μm,2.5s,mb7.1
SKO Skopje 82.23 319 P **P 23 56 09.1 +1.2**
GIM North Isle of 82.24 340⇑*e*P P 23 56 07.3 -0.4
GIM North Isle of 82.24 340 P **P 23 56 07.3 -0.4**
PDKS Podkum 82.24 325 *i*P P 23 56 07.4 -0.4
BLY Banja Luka 82.25 323 P **P 23 56 08.0 +0.1**
SDCO Great Sand Dun 82.25 47⇑*i*P P 23 56 08.2 +0.2
comp=Z,57nm,0.6s,mb5.7
SDCO LR LR
comp=Z,41μm,19.0s,MS6.8
PLE Pljevlja 82.25 321⇑*i*P P 23 56 08.4 +0.5
PLE Pljevlja 82.25 321 P **P 23 56 08.0 +0.1**
Y18A Canyon Day Jun 82.26 53⇓S S 00 06 27.1 +3.5
baz=82
X19A St. Johns 82.28 52⇑S S 00 06 23.1 -0.7
baz=82
W20A Ramah 82.29 51⇓S S 00 06 23.6 -0.2
baz=82
RMNI Mount Ramon 82.30 303⇑Pn P 23 56 08.7 +0.2
PRNI Paran 82.31 303⇑P P 23 56 08.8 +0.3
MUKL Al Mukalla 82.31 282⇑*e*P P 23 56 08.4 -0.3
Z17A San Carlos Hig 82.31 53⇑S S 00 06 24.6 +0.5
baz=82
CHOS Chios island 82.32 314 P **P 23 56 08.2 -0.2**
CHOS Chios island 82.32 314 *e*P P 23 56 08.1 -0.3
KZIT Kziot 82.34 304⇑Pn P 23 56 08.8 +0.2
PLG Polygyros 82.34 317 P **P 23 56 08.0 -0.5**
PLG Polygyros 82.34 317 *e*P P 23 56 08.3 -0.1
V21A Milan 82.34 50⇑S S 00 06 27.0 +2.7
baz=82
IVA Berane 82.34 320⇑*i*P P 23 56 08.8 +0.4
IVA Berane 82.34 320 P **P 23 56 09.0 +0.6**
KBI1 Birley Grange 82.35 338⇑*e*P P 23 56 07.5 -0.7
KBI1 Birley Grange 82.35 338 P **P 23 56 07.5 -0.7**
SMG Samos 82.35 313 *e*P P 23 56 09.4 +0.8
HORT Hortiatis 82.36 317 P **P 23 56 07.8 -0.8**
MYKA Terra Mystica 82.39 326⇑*i*P P 23 56 08.1 -0.5
comp=Z,738nm,1.4s,mb6.4
THE Thessaloniki 82.41 317 P **P 23 56 07.9 -0.9**
U22A Llaves 82.41 49⇓S S 00 06 29.7 +4.7
baz=82
T23A Casias Ranch, 82.43 48⇓S S 00 06 21.1 -4.1
baz=82
BDRM Kayabasi 82.45 312⇑*i*P P 23 56 09.4 +0.3
LJU Ljubljana 82.46 325 *i*P P 23 56 08.4 -0.6
LJU *e* 00 01 12.9
LJU *e*S S 00 06 28.2 +3.0
LJU *e*SS SS 00 11 53.0 +8.2
LJU Ljubljana 82.46 325 *i*P P 23 56 08.3 -0.6
LJU *e* 00 01 12.9
LJU *e*S S 00 06 28.2 +3.0
LJU *e*SS SS 00 11 53.0 +8.2
GORS Gorjuse 82.48 326 *i*P P 23 56 08.3 -0.8
S24A Houchin Ranch, 82.48 47⇓S S 00 06 25.9 +0.2
baz=82
KTD Kalmit 82.49 331 *e*P P 23 56 09.0 -0.1
HRFI Mount Harif 82.49 303 Pn **P 23 56 09.6 +0.2**
STU Stuttgart 82.51 330 *e*P P 23 56 08.9 -0.3
comp=Z,478nm,0.9s,mb6.5
STU Stuttgart 82.51 330 *e*S S 00 06 32.0 +6.5
STU Stuttgart 82.51 330⇑*i*P P 23 56 08.4 -0.8
STU pmax pmax
comp=Z,431nm,0.8s,mb6.5
STU Stuttgart 82.51 330⇑*i*P P 23 56 08.4 -0.8
comp=Z,431nm,0.8s,mb6.5
PVY Plav 82.51 320⇑*i*P P 23 56 08.7 -0.6
PVY Plav 82.51 320 P **P 23 56 10.0 +0.7**
PAIG Paliouri 82.53 316 P **P 23 56 08.8 -0.7**
216A Three Points, 82.55 55⇓S S 00 06 28.2 +1.6
baz=82
BOJS Bojanci 82.55 325 *i*P P 23 56 09.1 -0.4
BOJS *e*PP PP 23 59 21.4 +3.3
ECSD EROS Data Cent 82.58 38⇑*i*P P 23 56 08.5 -1.1
comp=Z,511nm,1.0s,mb6.5
ECSD LR LR
comp=Z,65μm,22.0s,MS7.0
UPM Unac-Piva 82.58 321⇑*i*P P 23 56 08.3 -1.4
UPM Unac-Piva 82.58 321 P **P 23 56 09.0 -0.7**
BCLA Clavier 82.59 333 P **P 23 56 08.8 -0.8**
comp=Z,289nm,1.6s,mb6.1
UCC Uccle 82.60 334 P **P 23 56 08.9 -0.7**
DAT Datca 82.60 312 *e*P P 23 56 09.3 -0.6
Y19A Nutrioso 82.62 52⇑S S 00 06 29.9 +2.6
baz=82
117A Oracle 82.63 54⇓S S 00 06 29.5 +2.1
baz=82
BCI Bajram Curri 82.63 320 *e*PN P 23 56 10.6 +0.6
ARG Arkhangelos 82.64 311 P **P 23 56 09.9 -0.2**
ARG Arkhangelos 82.64 311 *e*P P 23 56 10.2 +0.1
KRMI Paran Flat 82.64 303⇑Pn P 23 56 10.0 -0.2
KWE Weaver Farm 82.65 338⇑*e*P P 23 56 10.0 +0.2
KWE Weaver Farm 82.65 338 P **P 23 56 10.0 +0.2**
R25A Fountain Ranch 82.65 46⇓S S 00 06 25.9 -1.5
baz=82
GMM Mts of Mourne 82.67 341⇑*e*P P 23 56 09.5 -0.4
GMM Mts of Mourne 82.67 341 P **P 23 56 09.5 -0.4**
X20A Quemado 82.68 51⇓S S 00 06 26.6 -1.3
baz=82
STNC Stoke 82.69 339⇑*i*P P 23 56 09.0 -1.0
STNC Stoke 82.69 339 P **P 23 56 09.0 -1.0**
V22A San Miguel Ran 82.70 49⇑S S 00 06 30.7 +2.8
baz=82
WATA Walderalm 82.70 328⇑*i*P P 23 56 10.2 -0.1
comp=Z,260nm,0.9s,mb6.3
Z18A Geronimo 82.72 53⇑S S 00 06 31.3 +3.0
baz=82
CWF Charnwood Fore 82.74 338 *e*P P 23 56 09.9 -0.4
CWF AMb AMB 23 56 16.6
comp=Z,556nm,1.3s,mb6.4
CWF *e* 00 06 13.7
CWF AMS AMS 00 35 37.5
comp=Z,149μm,21.0s,MS7.3
CWF Charnwood Fore 82.74 338 P **P 23 56 09.9 -0.4**
CWF AMb AMB 23 56 16.6
comp=Z,556nm,1.3s,mb6.4
CWF 00 06 13.7
CWF AMS AMS 00 35 37.5
WTTA Wattenberg 82.74 328⇑*i*P P 23 56 10.6 +0.2
comp=Z,392nm,1.0s,mb6.4
CEY Cerknica 82.74 325 P **P 23 56 10.0 -0.4**
VOY Vojsko 82.75 326 *e*P P 23 56 08.4 -2.1
VOY *e* 23 58 36.0
VOY *e* 23 59 08.3
VOY *e* 23 59 15.3
VOY *e* 23 59 43.9
KRUS Krusevo 82.77 319 *i*P P 23 56 09.5 -1.2
TUC Tucson 82.77 54⇑*i*P P 23 56 10.9 0.0
TUC pmax pmax
comp=Z,149nm,0.8s,mb6.1
TUC MLR MLR
comp=Z,42μm,20.0s,MS6.8
TUC Tucson 82.77 54⇑*i*P P 23 56 10.9 +0.1
comp=Z,149nm,0.8s,mb6.1
TUC LR LR
comp=Z,42μm,20.0s,MS6.8
ABTA Abfaltersbach 82.78 327⇑*i*P P 23 56 09.5 -1.1
comp=Z,312nm,0.9s,mb6.3
EIL Elat 82.78 302 P **P 23 56 10.9 -0.1**
comp=Z,192nm,1.1s,mb6.0,baz=31,slow=3.9,SNR=3.9
EIL PP PP 23 59 22.7 +2.1
comp=Z,49nm,1.1s,baz=79,slow=4.9,SNR=2.1
EIL Elat 82.78 302⇑Pn P 23 56 11.0 0.0
W21A San Fidel 82.80 50⇓S S 00 06 32.2 +3.1
baz=82
U23A El Rito 82.83 48⇑S S 00 06 32.8 +3.5
baz=83
NKY Niksic 82.83 321⇑*i*P P 23 56 09.6 -1.4
NKY Niksic 82.83 321⇑*i*P P 23 56 09.7 -1.3
GMNA Gemona 82.84 326 P **P 23 56 10.1 -0.9**
LANF Langenberg 82.87 331 *e*P P 23 56 10.9 -0.2
SNF Seneffe 82.87 334 P **P 23 56 10.6 -0.5**
comp=Z,224nm,1.2s,mb6.1
MOTA Monosalm 82.89 328⇑*i*P P 23 56 11.2 0.0
comp=Z,507nm,1.0s,mb6.5
S25A Robets Cordova 82.91 47⇓S S 00 06 27.2 -2.8
baz=83
WLF Walferdange 82.92 332 P **P 23 56 10.9 -0.3**
comp=Z,239nm,1.8s,mb5.9
WLF Walferdange 82.92 332 *e*P P 23 56 10.9 -0.4
comp=Z,382nm,1.2s,mb6.3
WLF Walferdange 82.92 332 *e*S S 00 06 36.3 +6.6
WLF Walferdange 82.92 332⇑*i*P P 23 56 10.8 -0.5
WLF pmax pmax
comp=Z,189nm,1.0s,mb6.1
WLF MLR MLR
comp=Z,111μm,20.0s,MS7.2
WLF Walferdange 82.92 332⇑*i*P P 23 56 10.8 -0.5
comp=Z,189nm,1.0s,mb6.1
WLF LR LR
comp=Z,111μm,20.0s,MS7.2
RETA Reutte 82.92 328⇑*i*P P 23 56 11.6 +0.2
comp=Z,1μm,1.0s,mb6.8
NIS1 Nisyros Isl. 82.92 312 P **P 23 56 10.5 -1.1**
PHP Peshkopia 82.95 319 *e*PN P 23 56 12.3 +0.7
PUK Puka 82.96 320 *e*PN P 23 56 12.6 +0.9
AOS Alonnisos 82.96 316 P **P 23 56 11.1 -0.6**
BIA Bitola 82.98 318 *e*P P 23 56 10.3 -1.5
BIA Bitola 82.98 318 P **P 23 56 10.6 -1.2**
BRY Bratogost 82.99 321⇑*i*P P 23 56 09.7 -2.1
BRY Bratogost 82.99 321 P **P 23 56 11.0 -0.8**
TTG Podgorica 82.99 320⇑*i*P P 23 56 10.5 -1.3
TTG Podgorica 82.99 320 P **P 23 56 11.0 -0.8**
GIVF Givet 83.03 333⇑*i*P P 23 56 11.0 -0.8
comp=Z,990nm,1.5s,mb6.3
GIVF Givet 83.03 333⇑*i*P P 23 56 11.0 -0.8
GIVF pmax pmax
comp=Z,495nm,1.5s,mb6.3
GIVF Givet 83.03 333⇑*i*P P 23 56 11.0 -0.8
comp=Z,495nm,1.5s,mb6.3
TRI Trieste 83.05 326⇑*i*P P 23 56 11.1 -1.0
TRI pmax pmax
comp=Z,805nm,1.2s,mb6.6
TRI MLR MLR
comp=Z,132μm,20.0s,MS7.3
TRI Trieste 83.05 326⇑*i*P P 23 56 11.1 -1.0
comp=Z,806nm,1.2s,mb6.6
TRI LR LR
comp=Z,132μm,20.0s,MS7.3
Z19A T-Link Ranch, 83.06 52⇑S S 00 06 34.5 +2.7
baz=83
118A Homack Ranch, 83.06 53⇑S S 00 06 34.5 +2.7
baz=83
SKDS Skadanscina 83.07 325 *e*P P 23 56 11.3 -0.9
217A Green Valley 83.11 54⇓S S 00 06 36.1 +3.8
baz=83
DOU Dourbes 83.11 333 P **P 23 56 11.4 -0.9**
comp=Z,160nm,1.6s,mb5.8
WLF1 Llynfaes 83.12 340⇑*i*P P 23 56 11.8 -0.4
WLF1 AMb AMB 23 56 18.6
comp=Z,2μm,1.4s,mb6.9
WLF1 AMS AMS 00 35 54.4
WLF1 Llynfaes 83.12 340 P **P 23 56 11.8 -0.4**
WLF1 AMb AMB 23 56 18.6
comp=Z,2μm,1.4s,mb6.9
WLF1 AMS AMS 00 35 54.4
FNA Florina 83.13 318 P **P 23 56 11.8 -0.8**
X21A Alamocita Cree 83.18 51⇓S S 00 06 31.0 -2.0
baz=83
OHR Ohrid 83.19 319 *i*P P 23 56 11.8 -1.0
comp=Z,2μm,1.2s,mb7.1
OHR Ohrid 83.19 319 P **P 23 56 12.1 -0.7**
Y20A Horse Springs, 83.19 51⇓S S 00 06 35.6 +2.5
baz=83
XOR Xorichti 83.19 316 P **P 23 56 11.9 -1.0**
BFO Black Forest 83.20 330 P **P 23 56 12.9 +0.1**
comp=Z,4μm,1.4s,mb7.2
BFO Black Forest 83.20 330 *e*P P 23 56 12.4 -0.4
comp=Z,1μm,1.4s,mb6.8
BFO Black Forest 83.20 330 *e*S S 00 06 39.1 +6.5
BFO Black Forest 83.20 330 *e*P P 23 56 12.4 -0.4
BFO pmax pmax
comp=Z,1μm,1.4s,mb6.8
SPAK Spaichingen-Ko 83.21 330 *e*P P 23 56 12.7 -0.1
DMUB Kingscourt 83.21 341 *e*P P 23 56 10.2 -2.5
TREB Trebinje 83.22 321 P **P 23 56 12.0 -1.0**
V23A Ortiz Mt. (NFS 83.24 49⇑S S 00 06 32.6 -0.9
baz=83
BUM Brajici-Budva 83.26 321⇑*i*P P 23 56 12.3 -0.9
BUM Brajici-Budva 83.26 321 P **P 23 56 14.0 +0.8**
KZN Kozani 83.27 318 P **P 23 56 12.2 -1.1**
BAIF Baives 83.28 333⇑*i*P P 23 56 12.5 -0.6
comp=Z,867nm,1.3s,mb6.3
BAIF Baives 83.28 333⇑*i*P P 23 56 12.5 -0.6
BAIF pmax pmax
comp=Z,433nm,1.3s,mb6.3
BAIF Baives 83.28 333⇑*i*P P 23 56 12.5 -0.6
comp=Z,433nm,1.3s,mb6.3
T25A Trinidad 83.29 47⇑S S 00 06 31.5 -2.4
baz=83
W22A Albuquerque 83.30 50⇓S S 00 06 34.8 +0.6
baz=83
U24A Moreno Valley 83.30 48⇑S S 00 06 38.9 +4.8
baz=83
FETA Feichten 83.31 328⇑*i*P P 23 56 13.4 +0.1
comp=Z,429nm,0.9s,mb6.5
ULC Ulcinj 83.34 320⇑*i*P P 23 56 12.8 -0.8
ULC Ulcinj 83.34 320 P **P 23 56 14.0 +0.4**
HCY Herceg Novi 83.35 321⇑*i*P P 23 56 12.7 -1.0
HCY Herceg Novi 83.35 321 P **P 23 56 13.0 -0.7**
HLM1 Long Mynd 83.39 339⇑*i*P P 23 56 13.4 -0.2
HLM1 Long Mynd 83.39 339 P **P 23 56 13.4 -0.2**
119A Ashpeak Ranch, 83.39 53⇓S S 00 06 38.0 +2.9
baz=83
TFO1 Folkestone 83.40 336⇑*i*P P 23 56 13.3 -0.4
TFO1 AMb AMB 23 56 19.9
comp=Z,1μm,1.1s,mb6.8
TFO1 AMS AMS 00 37 14.2
comp=Z,241μm,18.6s,MS7.6
TFO1 Folkestone 83.40 336 P **P 23 56 13.3 -0.4**
TFO1 AMb AMB 23 56 19.9
comp=Z,1μm,1.1s,mb6.8
TFO1 AMS AMS 00 37 14.2
STON Ston 83.42 322 P **P 23 56 12.5 -1.5**
STON Ston 83.42 322 *i*P P 23 56 12.5 -1.5
DAVA Damuels 83.44 329⇑*i*P P 23 56 14.1 +0.1
comp=Z,842nm,1.0s,mb6.7
SCHQ Schefferville 83.45 16 P **P 23 56 13.3 -0.6**
comp=Z,61nm,0.7s,mb5.7,baz=358,slow=5.9,SNR=57
SCHQ PP PP 23 59 26.6 +1.4
comp=Z,28nm,0.9s,baz=338,slow=7.5,SNR=3.3
SCHQ S S 00 06 35.0 +0.1
comp=Z,7.0nm,1.0s,baz=210,slow=20,SNR=1.9
SCHQ PKKPbc PKKPbc 00 14 29.6 -2.5
comp=Z,5.9nm,0.9s,baz=63,slow=2.3,SNR=3.7
SCHQ PKPPKP 00 22 38.7
comp=Z,6.1nm,0.9s,baz=142,slow=5.8,SNR=4.9
SCHQ LR LR 00 35 51.9
comp=Z,84μm,21.1s,MS7.1,baz=347,slow=37
SCHQ Schefferville 83.45 16⇑*i*P P 23 56 13.8 -0.1
comp=Z,1μm,1.0s,mb6.8
SCHQ LR LR
comp=Z,109μm,22.0s,MS7.2
NVLJ Novalja 83.45 324 P **P 23 56 12.9 -1.2**
NVLJ Novalja 83.45 324 *i*P P 23 56 12.9 -1.2
218A Dragoon 83.46 54⇑S S 00 06 38.4 +2.5
baz=83
TIR Tirane 83.49 319⇑*i*P P 23 56 14.3 -0.1
TIR pmax pmax
comp=Z,829nm,1.0s,mb6.7
TIR MLR MLR
comp=Z,406μm,20.0s,MS7.8
TIR Tirane 83.49 319⇑*i*P P 23 56 14.3 -0.1
comp=Z,829nm,1.0s,mb6.7
TIR LR LR
comp=Z,406μm,20.0s,MS7.8
TIR Tirane 83.49 319 P **P 23 56 14.4 0.0**
APPI Appiano 83.53 328 P **P 23 56 13.8 -0.7**
CDF Champ du Feu 83.54 331⇑*i*P P 23 56 14.1 -0.4
comp=Z,1μm,1.2s,mb6.6
CDF Champ du Feu 83.54 331⇑*i*P P 23 56 14.1 -0.4
CDF pmax pmax
comp=Z,559nm,1.2s,mb6.6
CDF Champ du Feu 83.54 331⇑*i*P P 23 56 14.1 -0.4
comp=Z,559nm,1.2s,mb6.6
APE Apeiranthos 83.54 313⇑P P 23 56 14.1 -0.6
APE Apeiranthos 83.54 313 P **P 23 56 13.4 -1.3**
APE Apeiranthos 83.54 313⇑*i*P P 23 56 14.1 -0.6
APE Apeiranthos 83.54 313 *e*P P 23 56 13.4 -1.3
APE Apeiranthos 83.54 313 *e*P P 23 56 14.6 -0.1
Y21A Point of Rocks 83.55 51⇓S S 00 06 36.5 -0.1
baz=83
KBN Korca 83.55 318 *e*PN P 23 56 15.6 +0.9
MENF Mencas 83.55 335 *e*P P 23 56 14.0 -0.5
Z20A Nine Sixteen R 83.60 52⇓S S 00 06 36.3 -0.9
baz=83
LAZ Ladron 83.60 50 *e*P P 23 56 15.6 +0.5
comp=Z,92nm,1.1s,mb5.8
X22A Bernardo 83.60 50⇓S S 00 06 38.1 +0.9
baz=83
ANMO Albuquerque 83.62 50 P **P 23 56 16.1 +0.8**
comp=Z,181nm,1.2s,mb6.1,baz=309,slow=8.0,SNR=5.8
ANMO Albuquerque 83.62 50⇑*i*P P 23 56 15.4 +0.2
comp=Z,7.9nm,0.5s
ANMO LR LR
comp=Z,34μm,19.0s,MS6.8
LIBD Limburg 83.63 331 *e*P P 23 56 15.1 +0.1
W23A Werner Place, 83.66 49⇓S S 00 06 39.4 +1.6
baz=83
KARP Karpathos 83.67 311 *e*P P 23 56 14.3 -1.1
DSB Dublin 83.67 341⇑*i*P P 23 56 14.9 -0.3
comp=Z,5μm,2.4s,mb7.2
THL Klokotos Trika 83.68 317 P **P 23 56 13.7 -1.7**
THL Klokotos Trika 83.68 317 *e*P P 23 56 13.8 -1.6
CTI Castel Tesino 83.70 327 P **P 23 56 14.3 -1.1**
FELD Feldberg im Sc 83.70 330 *e*P P 23 56 15.2 -0.2
ECH Echery 83.74 331 *e*P P 23 56 15.3 -0.3
ECH Echery 83.74 331⇑*i*P P 23 56 15.0 -0.6
ECH pmax pmax
comp=Z,5μm,3.0s
ECH MLR MLR
comp=Z,107μm,20.0s,MS7.2
ECH Echery 83.74 331⇑*i*P P 23 56 14.9 -0.6
comp=Z,5μm,3.0s
ECH LR LR
comp=Z,107μm,20.0s,MS7.2
ATAL Atalanti 83.77 316 P **P 23 56 14.6 -1.3**
PTL Penteli 83.77 315 *e*P P 23 56 14.6 -1.3
PTL Penteli 83.77 315 *e*P P 23 56 15.8 -0.1
V24A Rampart Ranch, 83.78 48⇓S S 00 06 36.8 -2.2
baz=84
U25A Circle Dot Ran 83.81 47⇓S S 00 06 35.5 -3.7
baz=84
LKR Lokris 83.81 316 P **P 23 56 14.6 -1.5**
DAVOX Davos/Dischmat 83.85 328 P **P 23 56 16.0 -0.1**
comp=Z,218nm,1.1s,mb6.2,baz=34,slow=6.7,SNR=4.5
DAVOX PP PP 23 59 29.3 +0.7
comp=Z,76nm,1.2s,baz=8.5,slow=8.7,SNR=3.9
318A Bisbee 83.86 54⇑S S 00 06 36.8 -3.1
baz=84
LENM Lemitar 83.86 51 *e*P P 23 56 16.5 +0.1
comp=Z,121nm,1.1s,mb5.9
ATHU Athens Univers 83.88 315 P **P 23 56 14.9 -1.6**
HTR Trewern Hill 83.89 339⇑*e*P P 23 56 15.3 -0.9
HTR Trewern Hill 83.89 339 P **P 23 56 15.3 -0.9**
BRMO Bormio 83.89 328 P **P 23 56 16.6 +0.2**
AGG Agios Georgios 83.91 316 P **P 23 56 15.0 -1.6**

AGG Agios Georgios 83.91 316 *eP* **P 23 56 15.1 -1.5**
ATH Athens Observa 83.91 315 *eP* **P 23 56 16.3 -0.3**
MEV Metsovon 83.94 318 P **P 23 56 17.7 +1.0**
219A White Tail Can 83.94 53 ⇑S S 00 06 40.8 +0.1
baz=84
VLY Voula,Athens 83.95 315 *eP* **P 23 56 15.2 -1.7**
VLY Voula,Athens 83.95 315 *eP* **P 23 56 16.4 -0.5**
Y22D IRIS PASSCAL I 83.95 51 ⇑S S 00 06 40.9 +0.1
baz=84
120A U Bar Ranch, L 83.96 53 ⇑S S 00 06 40.4 -0.4
baz=84
SWN1 Swindon 83.96 338⇑*eP* **P 23 56 16.5 -0.1**
SWN1 AMb AMB 23 56 24.0
comp=Z,1μm,1.3s,mb7.0
SWN1 AMS AMS 00 35 17.6
comp=Z,162μm,22.2s,MS7.4
SWN1 Swindon 83.96 338 P **P 23 56 16.5 -0.1**
SWN1 AMb AMB 23 56 24.0
comp=Z,1μm,1.3s,mb7.0
SWN1 AMS AMS 00 35 17.6
WOL Wolverton 83.96 337⇑*iP* **P 23 56 15.3 -1.3**
WOL AMb AMB 23 56 25.8
comp=Z,663nm,1.9s,mb6.5
WOL Wolverton 83.96 337 P **P 23 56 15.3 -1.3**
WOL AMb AMB 23 56 25.8
comp=Z,663nm,1.9s,mb6.5
URZ Urewera 83.97 152 P **P 23 56 14.7 -1.8**
comp=Z,97nm,0.9s,mb6.0,baz=349,slow=2.8,SNR=55
URZ PP PP 23 59 30.3 -0.6
comp=Z,14nm,1.0s,baz=34,slow=3.6,SNR=2.7
URZ Urewera 83.97 152⇑*iP* **P 23 56 14.2 -2.4**
comp=Z,237nm,0.9s,mb6.3
Y22A Socorro 84.02 51 ⇑S S 00 06 42.1 +0.7
baz=84
Z21A St. Cloud Mine 84.03 52 ⇓S S 00 06 43.1 +1.6
baz=84
X23A Hourglass Bar 84.04 50 ⇓S S 00 06 41.3 -0.3
baz=84
MOF Molkenrain 84.05 331 *eP* **P 23 56 16.9 -0.3**
W24A Lazy 6 Ranch, 84.06 49 ⇓S S 00 06 40.9 -0.9
baz=84
THR1 Thera Island 84.07 313 P **P 23 56 16.4 -1.1**
BNM Barren Site 84.08 50 *eP* **P 23 56 17.6 0.0**
comp=Z,71nm,0.7s,mb5.9
THR3 Thira Island, 84.08 313 P **P 23 56 16.7 -0.8**
V25A Rancho No Teng 84.08 48 ⇓S S 00 06 38.8 -3.2
baz=84
COWI Conover 84.09 32⇑*iP* **P 23 56 17.4 -0.1**
comp=Z,7μm,1.0s
COWI LR LR
comp=Z,38μm,20.0s,MS6.8
HGH Gray Hill 84.14 338⇑*eP* **P 23 56 16.9 -0.7**
HGH Gray Hill 84.14 338 P **P 23 56 16.9 -0.7**
MABI Malga Bissina 84.17 328 P **P 23 56 17.0 -0.8**
THEF They Montfort 84.17 331 *eP* **P 23 56 17.4 -0.4**
NAIG Nisos Aigina 84.19 315 *eP* **P 23 56 17.2 -0.9**
HINF Hinteralfeld 84.19 331⇑*iP* **P 23 56 17.1 -0.8**
comp=Z,391nm,1.1s,mb6.2
HINF Hinteralfeld 84.19 331⇑*iP* **P 23 56 17.1 -0.8**
HINF pmax pmax
comp=Z,195nm,1.1s,mb6.2
HINF Hinteralfeld 84.19 331⇑*iP* **P 23 56 17.1 -0.8**
comp=Z,195nm,1.1s,mb6.2
U26A Atchley Ranch, 84.19 47 ⇑S S 00 06 42.0 -1.0
baz=84
HAU Haudompre 84.22 331⇑*iP* **P 23 56 17.2 -0.8**
comp=Z,458nm,1.0s,mb6.2
HAU *e*MLR MLR
comp=Z,152μm,20.5s,MS7.1
HAU Haudompre 84.22 331⇑*iP* **P 23 56 17.2 -0.8**
HAU pmax pmax
comp=Z,229nm,1.0s,mb6.3
HAU MLR MLR
comp=Z,152μm,20.5s,MS7.4
HAU Haudompre 84.22 331⇑*iP* **P 23 56 17.2 -0.8**
comp=Z,229nm,1.0s,mb6.3
HAU LR LR
comp=Z,152μm,20.5s,MS7.4
JAN Janina 84.23 318 *eP* **P 23 56 18.2 0.0**
BBS Basel-Blauen 84.23 330 *eP* **P 23 56 17.9 -0.2**
DSF Desfina 84.24 316 P **P 23 56 16.3 -2.0**
EVR Evrytania 84.26 317 *eP* **P 23 56 20.1 +1.7**
LTK Loutraki 84.28 315 P **P 23 56 17.2 -1.3**
LTK Loutraki 84.28 315 *eP* **P 23 56 17.3 -1.2**
MEZF Maizieres J'vi 84.29 332⇑*iP* **P 23 56 18.1 -0.2**
comp=Z,2μm,1.2s,mb6.7,baz=27
MEZF Maizieres J'vi 84.29 332⇑*iP* **P 23 56 18.1 -0.2**
comp=Z,2μm,1.2s,mb7.0
319A Douglas 84.35 54 ⇑S S 00 06 44.7 -0.1
baz=84
220A Playas Peak, P 84.46 53 ⇑S S 00 06 45.7 -0.1
baz=84
KALE Kalithea 84.47 316 P **P 23 56 17.7 -1.8**
121A Cookes Peak, D 84.49 52 ⇑S S 00 06 45.4 -0.7
baz=84
Z22A Elephant Butte 84.49 51 ⇓S S 00 06 46.8 +0.6
baz=84
X24A Lazy VL Ranch, 84.50 49 ⇓S S 00 06 44.5 -1.7
baz=84
SRN Sarande 84.50 318 *e*PN **P 23 56 20.0 +0.4**
ZKR Zakros 84.52 311 P **P 23 56 19.4 -0.4**
ZKR Zakros 84.52 311 *eP* **P 23 56 19.9 +0.1**
EFP Efpalio 84.57 316 P **P 23 56 19.0 -1.0**
EFP Efpalio 84.57 316 *eP* **P 23 56 20.5 +0.5**
Y23A Lovelace Mesa, 84.57 50 ⇑S S 00 06 44.5 -2.5
baz=84
LOMF Lomont 84.58 331 *eP* **P 23 56 19.7 -0.2**
IGT Igoumenitsa 84.59 318 P **P 23 56 19.4 -0.7**
V26A Tequesquite Ra 84.59 47 ⇓S S 00 06 44.5 -2.5
baz=84
W25A X Bar L Ranch, 84.61 48 ⇓S S 00 06 46.0 -1.3
baz=84
CBKS Cedar Bluff 84.66 43⇑*iP* **P 23 56 20.0 -0.4**
CBKS pmax pmax
comp=Z,354nm,1.1s,mb6.4
CBKS MLR MLR
comp=Z,39μm,21.0s,MS6.8
CBKS Cedar Bluff 84.66 43⇑*iP* **P 23 56 20.0 -0.4**
comp=Z,354nm,1.1s,mb6.4
CBKS LR LR
comp=Z,39μm,21.0s,MS6.8
LAKA Lakka 84.66 316 P **P 23 56 19.5 -1.0**
GUR Goura 84.69 316 P **P 23 56 18.8 -1.8**
GUR Goura 84.69 316 *eP* **P 23 56 18.8 -1.8**
KEK Kerkira 84.73 318 P **P 23 56 20.0 -0.8**
KEK Kerkira 84.73 318 *eP* **P 23 56 19.9 -0.9**
UPR University Cam 84.73 316 P **P 23 56 27.7 +6.9**
UPR University Cam 84.73 316 *eP* **P 23 56 21.5 +0.7**
NPS Neapolis 84.77 312 *eP* **P 23 56 21.0 0.0**
320A Kipp Ranch, An 84.84 53 ⇑S S 00 06 46.8 -3.0
baz=85
221A Mesquite Ranch 84.85 53 ⇓S S 00 06 49.5 -0.2
baz=85
122A Conniff Cattle 84.85 52 ⇓S S 00 06 48.2 -1.6
baz=85
LAST Lasithi 84.92 312 P **P 23 56 21.3 -0.5**
Z23A Rita Site, Whi 84.93 51 ⇑S S 00 06 49.0 -1.5
baz=85
Y24A Capitan 84.94 50 ⇓S S 00 06 47.7 -2.9
baz=85
LKD2 Lefkada island 84.97 317 P **P 23 56 21.0 -1.0**
X25A Clemmons Ranch 84.98 49 ⇑S S 00 06 47.9 -3.1
baz=85
RLS Riolos of Patr 85.07 316 *eP* **P 23 56 22.1 -0.4**
VLX Vlachokerasia 85.08 315 P **P 23 56 21.1 -1.5**
VLX Vlachokerasia 85.08 315 *eP* **P 23 56 22.2 -0.4**
W26A Owens Ranch, T 85.11 48 ⇓S S 00 06 47.6 -4.6
baz=85
CING Cingoli 85.13 325 P **P 23 56 22.5 -0.2**
IDI Anoyia 85.16 312 P **P 23 56 21.8 -1.2**
comp=Z,372nm,1.1s,mb6.4,baz=46,slow=7.1,SNR=6.6
IDI PP PP 23 59 41.6 +1.9
comp=Z,36nm,1.0s,baz=24,slow=12,SNR=3.3
IDI Anoyia 85.16 312 *eP* **P 23 56 21.7 -1.3**
HTL Hartland 85.20 339⇑*iP* **P 23 56 22.8 -0.1**
HTL AMb AMB 23 56 28.6
comp=Z,898nm,3.4s
HTL *e* 00 06 44.1
HTL AMS AMS 00 37 48.0
comp=Z,110μm,20.1s,MS7.2
HTL Hartland 85.20 339 P **P 23 56 22.8 -0.1**
HTL AMb AMB 23 56 28.6
comp=Z,898nm,3.4s
HTL 00 06 44.1
HTL AMS AMS 00 37 48.0

222A Williams Famil 85.20 52 ⇑S S 00 06 52.2 -1.1
baz=85
VLI Veliai 85.24 315 *eP* **P 23 56 22.1 -1.3**
BDHA Al Bayda' 85.25 284⇑*eP* **P 23 56 23.7 0.0**
RGNG Rignano Grg 85.34 322 P **P 23 56 23.2 -0.6**
Y25A Mesa, Roswell 85.39 49 ⇑S S 00 06 49.9 -5.1
baz=85
KFL Anninata 85.40 317 P **P 23 56 22.7 -1.4**
SIVA Sivas 85.40 312 P **P 23 56 23.7 -0.5**
Z24A Sheeppen Canyo 85.40 50 ⇓S S 00 06 49.1 -6.1
baz=85
FNVD Fontana Vidola 85.42 326 P **P 23 56 24.7 +0.6**
VLS Valsamata 85.45 317 P **P 23 56 23.4 -1.0**
VLS Valsamata 85.45 317 *eP* **P 23 56 23.5 -0.9**
X26A CR and CF Fran 85.46 48 ⇑S S 00 06 56.2 +0.5
baz=85
ITM Ithomi 85.46 315 P **P 23 56 23.1 -1.4**
ITM Ithomi 85.46 315 *eP* **P 23 56 23.4 -1.1**
VAM Vamos 85.47 313 *eP* **P 23 56 24.7 +0.1**
CABF La Chapelle 85.48 331⇑*iP* **P 23 56 23.8 -0.6**
comp=Z,595nm,1.1s,mb6.3
CABF La Chapelle 85.48 331⇑*iP* **P 23 56 23.8 -0.6**
CABF pmax pmax
comp=Z,298nm,1.1s,mb6.3
CABF La Chapelle 85.48 331⇑*iP* **P 23 56 23.8 -0.6**
comp=Z,298nm,1.1s,mb6.3
CRE Caprese Michel 85.50 325 P **P 23 56 24.2 -0.3**
PMOR Pomariorio Ree 85.51 113 *eP* **P 23 56 26.9 +2.0**
comp=Z,704nm,1.4s,mb6.7
MURB Monte Urbino 85.52 325 P **P 23 56 25.0 +0.3**
W27A Bowe Ranch, En 85.53 48 ⇑S S 00 06 55.2 -1.2
baz=85
DYA Yadsworthy 85.54 338⇑*iP* **P 23 56 24.2 -0.4**
DYA AMb AMB 23 56 34.8
comp=Z,608nm,1.7s,mb6.5
DYA AMS AMS 00 36 39.1
comp=Z,129μm,20.8s,MS7.3
DYA Yadsworthy 85.54 338 P **P 23 56 24.2 -0.4**
DYA AMb AMB 23 56 34.8
comp=Z,608nm,1.7s,mb6.5
DYA AMS AMS 00 36 39.1
LBOS 85.55 284 *eP* **P 23 56 25.3 0.0**
LBOS AMb AMB 23 56 28.4
comp=Z,5μm,1.4s
SCIA State Center 85.59 37⇑*iP* **P 23 56 24.5 -0.5**
comp=Z,434nm,0.9s,mb6.7
SCIA LR LR
comp=Z,60μm,22.0s,MS7.0
KARN Karanos 85.64 313 P **P 23 56 24.5 -0.9**
HAJJ Hajjah 85.64 287 *eP* **P 23 56 25.6 0.0**
223A Chaparral, Ant 85.68 52 ⇑S S 00 06 55.1 -2.9
baz=85
VLC Villacollemand 85.75 327 P **P 23 56 25.3 -0.5**
VLC LR LR
comp=Z,148μm,20.0s,MS7.4
DHBB Dhamar BB 85.76 285⇑*eP* **P 23 56 26.3 +0.1**
DHBB AMb AMB 23 56 27.4
comp=Z,890nm,2.1s,mb6.6
LOR Lormes 85.76 332 *eP* **P 23 56 25.1 -0.7**
comp=Z,2μm,1.2s,mb7.0,baz=37
LOR *e*MLR MLR
comp=Z,136μm,22.0s,MS7.0
LOR Lormes 85.76 332 *eP* **P 23 56 25.1 -0.7**
LOR pmax pmax
comp=Z,1μm,1.2s,mb7.0
LOR MLR MLR
comp=Z,136μm,22.0s,MS7.3
LOR Lormes 85.76 332 *eP* **P 23 56 25.1 -0.7**
comp=Z,1μm,1.2s,mb7.0
LOR LR LR
comp=Z,136μm,22.0s,MS7.3
PYL PYLOS 85.77 315 P **P 23 56 24.1 -1.9**
PYL PYLOS 85.77 315 *eP* **P 23 56 24.4 -1.6**
124A Stringfield Ra 85.79 51 ⇓S S 00 06 55.1 -3.9
baz=86
FG5 Orsara di Pugl 85.80 322 P **P 23 56 26.6 +0.5**
FG5 pmax pmax
comp=Z,1μm,1.2s,mb7.0
FG5 Orsara di Pugl 85.80 322 P **P 23 56 26.6 +0.5**
comp=Z,1μm,1.2s,mb7.0
X27A F and S Farms, 85.80 48 ⇓S S 00 06 56.5 -2.6
baz=86
VAL Valentia 85.82 342 *eP* **P 23 56 24.0 -2.0**
VAL *e*S S 00 06 55.9 -2.7
VAL *e*SS SS 00 12 50.4 +16
Z25A Roswell 85.82 50 ⇓S S 00 06 57.1 -2.2
baz=86
AQU L'Aquila 85.84 324⇑*iP* **P 23 56 26.0 -0.3**
AQU pmax pmax
comp=Z,864nm,1.1s,mb6.9
AQU MLR MLR
comp=Z,289μm,19.0s,MS7.7
AQU L'Aquila 85.84 324⇑*iP* **P 23 56 26.0 -0.2**
comp=Z,864nm,1.1s,mb6.9
AQU LR LR
comp=Z,289μm,19.0s,MS7.7
AQU L'Aquila 85.84 324⇑*iP* **P 23 56 27.4 +1.1**
SNZO South Karori 85.85 155 *eP* **P 23 56 24.8 -1.2**
comp=Z,326nm,1.3s,mb6.4
SNZO LR LR
comp=Z,150μm,22.0s,MS7.3
Y26A Elida 85.90 49 ⇓S S 00 06 58.4 -1.7
baz=86
GVD Gavdhos 85.94 313⇑*iP* **P 23 56 25.7 -1.2**
comp=Z,2μm,0.9s,mb7.3
GVD Gavdhos 85.94 313 P **P 23 56 26.0 -0.9**
FLN La Foliniere 85.96 335⇑*iP* **P 23 56 26.0 -0.7**
comp=Z,1μm,1.2s,mb6.7,baz=29
FLN *e*MLR MLR
comp=Z,249μm,20.0s,MS7.3
FLN La Foliniere 85.96 335⇑*iP* **P 23 56 26.0 -0.7**
FLN pmax pmax
comp=Z,685nm,1.2s,mb6.8
FLN MLR MLR
comp=Z,249μm,20.0s,MS7.6
FLN La Foliniere 85.96 335⇑*iP* **P 23 56 26.0 -0.7**
comp=Z,684nm,1.2s,mb6.8
FLN LR LR
comp=Z,249μm,20.0s,MS7.6
LDF La Druitiere 85.99 335⇑*iP* **P 23 56 26.1 -0.8**
comp=Z,1μm,1.2s,mb6.7
LDF La Druitiere 85.99 335⇑*iP* **P 23 56 26.1 -0.8**
LDF pmax pmax
comp=Z,654nm,1.2s,mb6.7
LDF La Druitiere 85.99 335⇑*iP* **P 23 56 26.1 -0.8**
comp=Z,654nm,1.2s,mb6.7
MIDA Miranda 86.00 323 P **P 23 56 27.1 0.0**
PII Pisa 86.04 326 P **P 23 56 26.5 -0.7**
PII pmax pmax
comp=Z,368nm,1.3s,mb6.5
PII Pisa 86.04 326 P **P 23 56 26.5 -0.7**
comp=Z,368nm,1.3s,mb6.5
PPT Papeete 86.05 116 *e*PP PP 23 59 46.0 -2.0
comp=Z,6μm,26.2s
PPT *e*S S 00 07 02.6 +0.9
comp=Z,236μm,36.5s
PPT *e*SS SS 00 12 39.1 -1.3
comp=Z,29μm,23.8s
PPT *e*LR LR 00 23 26.8
comp=Z,460μm,24.5s,baz=318
PPT Papeete 86.05 116 P **P 23 56 26.2 -1.3**
comp=Z,32nm,0.3s,mb6.1,baz=355,slow=4.3,SNR=2.4
PPT LR LR 00 27 24.4
comp=Z,71μm,21.6s,MS7.0,baz=284,slow=30
PPT Papeete 86.05 116 *eP* **P 23 56 29.7 +2.2**
comp=Z,366nm,1.4s,mb6.4
PPT *e*PP PP 23 59 46.0 -2.0
PPT *e*S S 00 07 02.6 +0.9
PPT *e*SS SS 00 12 39.1 -1.3
PPT LR LR 00 27 24.4
SSF Saint Saulge 86.06 332⇑*iP* **P 23 56 26.7 -0.6**
comp=Z,1μm,1.1s,mb6.8
SSF Saint Saulge 86.06 332⇑*iP* **P 23 56 26.7 -0.6**
SSF pmax pmax
comp=Z,636nm,1.1s,mb6.8
SSF Saint Saulge 86.06 332⇑*iP* **P 23 56 26.7 -0.6**
comp=Z,636nm,1.1s,mb6.8
KSU1 Kansas State U 86.07 41⇑*iP* **P 23 56 26.0 -1.5**
comp=Z,276nm,0.8s,mb6.5
KSU1 LR LR
comp=Z,47μm,22.0s,MS6.8
PAE Paea 86.11 116 *eP* **P 23 56 29.6 +1.8**
comp=Z,129nm,1.5s,mb5.9
PAE Paea 86.11 116 *eP* **P 23 56 29.6 +1.8**
PAE pmax pmax
comp=Z,129nm,1.5s,mb5.9

JSA Saint Aubin 86.12 337 AMS AMS 00 36 57.4
comp=Z,142μm,21.6s,MS7.3
CCA1 Carnmenellis 86.13 339⇑*iP* **P 23 56 27.0 -0.6**
CCA1 AMb AMB 23 56 37.9
comp=Z,659nm,1.7s,mb6.6
CCA1 AMS AMS 00 40 05.0
comp=Z,106μm,16.3s,MS7.3
CCA1 Carnmenellis 86.13 339 P **P 23 56 27.0 -0.6**
CCA1 AMb AMB 23 56 37.9
comp=Z,659nm,1.7s,mb6.6
CCA1 AMS AMS 00 40 05.0
LPL La Plagne 86.14 330⇑*iP* **P 23 56 27.4 -0.3**
comp=Z,674nm,0.9s,mb6.6
LPL La Plagne 86.14 330⇑*iP* **P 23 56 27.4 -0.3**
LPL pmax pmax
comp=Z,337nm,0.9s,mb6.6
LPL La Plagne 86.14 330⇑*iP* **P 23 56 27.4 -0.3**
comp=Z,337nm,0.9s,mb6.6
LPG La Plagne 86.15 330⇑*iP* **P 23 56 27.5 -0.2**
comp=Z,843nm,0.9s,mb6.7
LPG La Plagne 86.15 330⇑*iP* **P 23 56 27.5 -0.2**
LPG pmax pmax
comp=Z,422nm,0.9s,mb6.7
LPG La Plagne 86.15 330⇑*iP* **P 23 56 27.5 -0.2**
comp=Z,422nm,0.9s,mb6.7
JFWS Jewell Farm 86.16 35⇑*iP* **P 23 56 26.5 -1.3**
JFWS pmax pmax
comp=Z,591nm,1.7s,mb6.5
JFWS MLR MLR
comp=Z,50μm,21.0s,MS6.9
JFWS Jewell Farm 86.16 35⇑*iP* **P 23 56 26.5 -1.4**
comp=Z,591nm,1.7s,mb6.5
JFWS LR LR
comp=Z,50μm,21.0s,MS6.9
224A Cornudas Mount 86.18 51 ⇑S S 00 06 58.0 -4.9
baz=86
HYF Humbligny 86.20 333⇑*iP* **P 23 56 27.8 -0.1**
TIAR Tiarei 86.21 116 *eP* **P 23 56 30.2 +1.9**
comp=Z,310nm,1.0s,mb6.5
SMF Signal de Mont 86.29 332⇑*iP* **P 23 56 27.8 -0.6**
comp=Z,2μm,1.2s,mb6.8
SMF Signal de Mont 86.29 332⇑*iP* **P 23 56 27.8 -0.6**
SMF pmax pmax
comp=Z,819nm,1.2s,mb6.8
SMF Signal de Mont 86.29 332⇑*iP* **P 23 56 27.8 -0.6**
comp=Z,819nm,1.2s,mb6.8
125A Gardner Draw, 86.30 50 ⇓S S 00 07 02.6 -1.3
baz=86
Y27A Causey 86.31 48 ⇑S S 00 07 01.8 -2.3
baz=86
AVF Avril sur Loir 86.35 332⇑*iP* **P 23 56 28.1 -0.6**
comp=Z,2μm,0.9s,mb7.0
AVF Avril sur Loir 86.35 332⇑*iP* **P 23 56 28.1 -0.6**
AVF pmax pmax
comp=Z,855nm,0.9s,mb7.0
AVF Avril sur Loir 86.35 332⇑*iP* **P 23 56 28.1 -0.6**
comp=Z,854nm,0.9s,mb7.0
MTCE Montecelio 86.40 324 P **P 23 56 28.2 -0.9**
GRR Gorron 86.41 335⇑*iP* **P 23 56 28.5 -0.5**
comp=Z,2μm,1.2s,mb7.0
GRR Gorron 86.41 335⇑*iP* **P 23 56 28.5 -0.5**
GRR pmax pmax
comp=Z,1μm,1.2s,mb7.0
GRR Gorron 86.41 335⇑*iP* **P 23 56 28.5 -0.5**
comp=Z,1μm,1.2s,mb7.0
AMTX Amarillo 86.44 47⇑*iP* **P 23 56 28.9 -0.5**
comp=Z,765nm,1.0s,mb6.9
AMTX LR LR
comp=Z,28μm,20.0s,MS6.7
QLNO Quiliano 86.47 328 P **P 23 56 27.5 -1.8**
MSTX Muleshoe 86.48 48 ⇓S S 00 07 03.1 -2.6
baz=86
KHZ Kahutara 86.48 156⇓*iP* **P 23 56 27.7 -1.4**
comp=Z,205nm,1.2s,mb6.2
CPRX Cap Rock 86.50 49 *eP* **P 23 56 30.1 +0.3**
comp=Z,67nm,1.0s,mb5.8
MNTX Cornudas Mount 86.53 51⇑*iP* **P 23 56 29.3 -0.6**
MNTX LR LR
comp=Z,23μm,19.0s,MS6.6
BNI Bardonecchia 86.55 329⇑*iP* **P 23 56 29.0 -0.7**
BNI pmax pmax
comp=Z,143nm,1.0s,mb6.2
BNI MLR MLR
comp=Z,145μm,20.0s,MS7.4
BNI Bardonecchia 86.55 329⇑*iP* **P 23 56 29.0 -0.7**
comp=Z,143nm,1.0s,mb6.2
BNI LR LR
comp=Z,145μm,20.0s,MS7.4
225A Deer Hill, Car 86.58 51 ⇑S S 00 06 60.0 -6.8
baz=86
GDM Grand'Maison 86.64 330 *eP* **P 23 56 30.7 +0.6**
324A Moseley Ranch, 86.65 52 ⇑S SKSac 00 06 57.1 -0.1
baz=86
TIP Timpagrande 86.68 320⇑*iP* **P 23 56 30.2 -0.3**
comp=Z,371nm,1.2s,mb6.5
TIP LR LR
comp=Z,213μm,20.0s,MS7.5
126A Clayton Basin, 86.69 50 ⇓S SKSac 00 06 58.6 +1.2
baz=86
Z27A Tatum 86.69 49 ⇓S SKSac 00 06 56.3 -1.0
baz=86
TOLF Tolfa 86.71 324 P **P 23 56 30.5 0.0**
BGF Bois d'Agland 86.73 332⇑*iP* **P 23 56 30.0 -0.6**
comp=Z,724nm,1.3s,mb6.5
BGF Bois d'Agland 86.73 332⇑*iP* **P 23 56 30.0 -0.6**
BGF pmax pmax
comp=Z,362nm,1.3s,mb6.4
BGF Bois d'Agland 86.73 332⇑*iP* **P 23 56 30.0 -0.6**
comp=Z,362nm,1.3s,mb6.4
GRN Grenoble 86.75 330 *eP* **P 23 56 30.7 0.0**
MBDF Montbardon 86.78 329⇑*iP* **P 23 56 29.7 -1.1**
comp=Z,293nm,0.9s,mb6.2
MBDF Montbardon 86.78 329⇑*iP* **P 23 56 29.7 -1.1**
MBDF pmax pmax
comp=Z,147nm,0.9s,mb6.2
MBDF Montbardon 86.78 329⇑*iP* **P 23 56 29.7 -1.1**
comp=Z,147nm,0.9s,mb6.2
GDL2 Guadalupe Moun 86.80 50 *eP* **P 23 56 30.9 -0.3**
comp=Z,122nm,0.9s,mb6.1
TRBA At Turbah 86.81 284⇑*eP* **P 23 56 31.5 0.0**
RPZ Rata Peaks 86.92 158 P **P 23 56 29.0 -2.1**
comp=Z,56nm,1.0s,mb5.8,baz=335,slow=7.6,SNR=6.7
RPZ PP PP 23 59 55.7 +1.0
comp=Z,34nm,1.1s,baz=342,slow=9.6,SNR=2.8
RPZ S S 00 06 58.8 -10
comp=Z,3.5nm,0.4s,baz=327,slow=17,SNR=2.7
RPZ Rata Peaks 86.92 158 *eP* **P 23 56 30.8 -0.4**
comp=Z,190nm,1.1s,mb6.2
PLDF La Plantade 86.95 332 *eP* **P 23 56 31.6 0.0**
SURF Saint Ours 86.97 329 *eP* **P 23 56 31.2 -0.5**
ORIF Oris-en-Rattie 86.97 330⇑*iP* **P 23 56 31.2 -0.6**
comp=Z,181nm,0.9s,mb6.0
ORIF *e*MLR MLR
comp=Z,178μm,20.0s,MS7.2
ORIF Oris-en-Rattie 86.97 330⇑*iP* **P 23 56 31.2 -0.6**
ORIF pmax pmax
comp=Z,90nm,0.9s,mb6.0
ORIF Oris-en-Rattie 86.97 330⇑*iP* **P 23 56 31.2 -0.6**
comp=Z,90nm,0.9s,mb6.0
IMI Imperia 87.00 328 P **P 23 56 30.5 -1.4**
325A Bean Ranch, Si 87.01 51 ⇑S SKSac 00 06 56.2 -3.3
baz=87
CLNB Carlsbad 87.04 50 *eP* **P 23 56 32.2 -0.2**
comp=Z,14nm,0.3s,mb5.7
226A Malaga, Loving 87.05 50 ⇓S SKSac 00 06 55.9 -3.8
baz=87
VENT Ventotene 87.06 323 P **P 23 56 33.1 +0.8**
127A Arkansas Junct 87.06 49 ⇓S SKSac 00 06 56.8 -2.9
baz=87
AGO Saint Agoulin 87.06 332 *eP* **P 23 56 32.3 +0.1**
SGMF Saint Gilles 87.07 336⇑*iP* **P 23 56 31.9 -0.3**
comp=Z,2μm,1.2s,mb6.9
SGMF Saint Gilles 87.07 336⇑*iP* **P 23 56 31.9 -0.3**
SGMF pmax pmax
comp=Z,1μm,1.2s,mb6.9
SGMF Saint Gilles 87.07 336⇑*iP* **P 23 56 31.9 -0.3**
comp=Z,1μm,1.2s,mb6.9
SAOF Saorge 87.07 328 *eP* **P 23 56 32.2 -0.1**
AUTN L'Aution 87.12 328 *eP* **P 23 56 33.9 +1.4**
TOUF Mont Tournerai 87.17 328 *eP* **P 23 56 32.9 +0.1**
SSB Saint Sauveur 87.19 331 PFAKE 23 56 40.0 +7.2
SSB LR LR
comp=Z,122μm,20.0s,MS7.3
TCF Toulx Ste Croi 87.19 333⇑*iP* **P 23 56 32.5 -0.3**
comp=Z,1μm,1.2s,mb6.7
TCF Toulx Ste Croi 87.19 333⇑*iP* **P 23 56 32.5 -0.3**
TCF pmax pmax

comp=Z,581nm,1.2s,mb6.7
TCF Toulx Ste Croi 87.19 333⇑*i*P P 23 56 32.5 -0.3
comp=Z,581nm,1.2s,mb6.7
TAOE Nuku Hiva Isla 87.19 104 *e*PP PP 23 59 56.0 -1.3
comp=Z,6μm,25.7s
TAOE *e*S S 00 07 11.5 -1.6
comp=Z,101μm,32.5s
TAOE *e*LR LR 00 23 53.1
comp=Z,339μm,22.4s,baz=317
ROSF Rostrenen 87.22 337⇑*i*P P 23 56 32.7 -0.2
comp=Z,1μm,1.0s,mb6.8
ROSF Rostrenen 87.22 337⇑*i*P P 23 56 32.7 -0.2
ROSF pmax pmax
comp=Z,641nm,1.0s,mb6.8
ROSF Rostrenen 87.22 337⇑*i*P P 23 56 32.7 -0.2
comp=Z,641nm,1.0s,mb6.8
LUCF Luceram 87.23 328 *e*P P 23 56 32.9 -0.2
MVIF Mont Vial 87.31 328 *e*P P 23 56 33.5 +0.1
PYM Petit Puy Mans 87.36 332 *e*P P 23 56 33.8 +0.2
425A Indio Mountain 87.41 52 ⇑S SKSac 00 07 03.6 +1.6
baz=87
BST Brest 87.49 337 *e*P P 23 56 34.2 0.0
VIVF Saint-Julien-I 87.49 330⇑*i*P P 23 56 33.6 -0.7
comp=Z,672nm,1.3s,mb6.4
VIVF Saint-Julien-I 87.49 330⇑*i*P P 23 56 33.6 -0.7
VIVF pmax pmax
comp=Z,336nm,1.3s,mb6.4
VIVF Saint-Julien-I 87.49 330⇑*i*P P 23 56 33.6 -0.7
comp=Z,336nm,1.3s,mb6.4
CALN Calern 87.54 328 *e*P P 23 56 34.5 0.0
QUIF Quistinic 87.56 337⇑*i*P P 23 56 34.1 -0.4
comp=Z,816nm,1.2s,mb6.5
QUIF Quistinic 87.56 337⇑*i*P P 23 56 34.1 -0.4
QUIF pmax pmax
comp=Z,408nm,1.2s,mb6.5
QUIF Quistinic 87.56 337⇑*i*P P 23 56 34.1 -0.4
comp=Z,408nm,1.2s,mb6.5
227A Bennet, Jal 87.57 50 ⇑S SKSac 00 06 59.7 -3.1
baz=87
PGF Pioggiola 87.64 327⇑*i*P P 23 56 33.9 -1.2
comp=Z,280nm,1.0s,mb6.2
PGF Pioggiola 87.64 327⇑*i*P P 23 56 33.9 -1.2
PGF pmax pmax
comp=Z,140nm,1.0s,mb6.2
PGF Pioggiola 87.64 327⇑*i*P P 23 56 33.9 -1.2
comp=Z,140nm,1.0s,mb6.2
326A Caldwell Ranch 87.65 51 ⇑S SKSac 00 07 02.4 -0.9
baz=87
LBL Lubilhac 87.71 331 *e*P P 23 56 35.5 +0.2
MFF Saint Martin d 87.74 334⇑*i*P P 23 56 35.2 -0.2
comp=Z,2μm,1.1s,mb6.8
MFF Saint Martin d 87.74 334⇑*i*P P 23 56 35.2 -0.2
MFF pmax pmax
comp=Z,812nm,1.1s,mb6.9
MFF Saint Martin d 87.74 334⇑*i*P P 23 56 35.2 -0.2
comp=Z,812nm,1.1s,mb6.9
FRF La Foret Royal 87.79 328⇑*i*P P 23 56 35.5 -0.3
comp=Z,658nm,1.7s,mb6.3
FRF La Foret Royal 87.79 328⇑*i*P P 23 56 35.5 -0.3
FRF pmax pmax
comp=Z,329nm,1.7s,mb6.3
FRF La Foret Royal 87.79 328⇑*i*P P 23 56 35.5 -0.3
comp=Z,329nm,1.7s,mb6.3
CEL Celeste 87.82 320⇑*i*P P 23 56 34.3 -1.7
CEL comp=Z,541nm,1.0s,mb6.7 LR LR
comp=Z,224μm,20.0s,MS7.6
SMRF Simiane la Rot 87.88 329⇑*i*P P 23 56 35.4 -0.8
comp=Z,126nm,1.0s,mb5.8
SMRF Simiane la Rot 87.88 329⇑*i*P P 23 56 35.4 -0.8
comp=Z,126nm,1.0s,mb6.1
327A Balmorhea Ranc 87.91 50 ⇑S SKSac 00 07 01.8 -3.1
baz=88
ODZ Otahua Downs 88.03 159⇓*i*P P 23 56 37.0 +0.5
comp=Z,238nm,1.2s,mb6.3
LMR La Mourre 88.04 328⇑*i*P P 23 56 35.6 -1.3
comp=Z,445nm,1.1s,mb6.3
LMR La Mourre 88.04 328⇑*i*P P 23 56 35.6 -1.3
LMR pmax pmax
comp=Z,222nm,1.1s,mb6.3
LMR La Mourre 88.04 328⇑*i*P P 23 56 35.6 -1.3
comp=Z,222nm,1.1s,mb6.3
426A McDonald Obser 88.08 51 ⇓S SKSac 00 06 59.5 -6.5
baz=88
SLNA Salina 88.11 321 P P 23 56 37.3 -0.1
comp=Z,314nm,0.8s,mb6.6
WMOK Wichita Mounta 88.18 45⇑*i*P P 23 56 36.8 -1.0
WMOK pmax pmax
comp=Z,430nm,0.5s,mb6.9
WMOK MLR MLR
comp=Z,37μm,20.0s,MS6.8
WMOK Wichita Mounta 88.18 45⇑*i*P P 23 56 36.8 -1.0
comp=Z,430nm,0.5s,mb6.9
WMOK LR LR
comp=Z,37μm,20.0s,MS6.8
RJF Les Rejaudoux 88.28 333⇑*i*P P 23 56 37.8 -0.3
comp=Z,933nm,1.2s,mb6.6
RJF *e*MLR MLR
comp=Z,180μm,22.5s,MS7.1
RJF Les Rejaudoux 88.28 333⇑*i*P P 23 56 37.8 -0.3
RJF pmax pmax
comp=Z,466nm,1.2s,mb6.6
RJF MLR MLR
comp=Z,180μm,22.5s,MS7.4
RJF Les Rejaudoux 88.28 333⇑*i*P P 23 56 37.8 -0.3
comp=Z,466nm,1.2s,mb6.6
RJF LR LR
comp=Z,180μm,22.5s,MS7.4
328A Wristen Ranch, 88.31 50 ⇑S SKSac 00 07 07.8 +0.5
baz=88
427A Hayter Ranch, 88.33 51 ⇑S SKSac 00 06 58.4 -9.1
baz=88
CAF Calviac 88.41 332⇑*i*P P 23 56 38.8 +0.1
comp=Z,940nm,1.3s,mb6.6
CAF Calviac 88.41 332⇑*i*P P 23 56 38.8 +0.1
CAF pmax pmax
comp=Z,470nm,1.3s,mb6.6
CAF Calviac 88.41 332⇑*i*P P 23 56 38.8 +0.1
comp=Z,470nm,1.3s,mb6.6
LASF Ste Croix 88.46 330⇑*i*P P 23 56 38.4 -0.5
comp=Z,624nm,1.5s,mb6.3
HDIL Hopedale 88.47 36⇑*i*P P 23 56 37.9 -1.1
comp=Z,510nm,1.0s,mb6.7
HDIL LR LR
comp=Z,59μm,20.0s,MS7.0
LPIG La Paz 88.59 60 P P 23 56 40.8 +0.9
comp=Z,38nm,0.3s,mb6.2,baz=320,slow=3.7,SNR=4.6
626A Big Bend Ranch 88.81 52 ⇑S SKSac 00 07 11.1 +0.8
baz=89
USI Ustica 88.81 322 P P 23 56 40.2 -0.5
ATD Arta Tunnel 88.84 284 P P 23 56 41.8 +0.6
comp=Z,199nm,1.1s,mb6.3,baz=60,slow=4.3,SNR=8.6
LFF La Frestale 88.88 333⇑*i*P P 23 56 40.8 -0.1
comp=Z,705nm,1.1s,mb6.6
LFF La Frestale 88.88 333⇑*i*P P 23 56 40.8 -0.1
LFF pmax pmax
comp=Z,353nm,1.1s,mb6.6
LFF La Frestale 88.88 333⇑*i*P P 23 56 40.8 -0.1
comp=Z,353nm,1.1s,mb6.6
CSLB Castelbuono 88.98 321 P P 23 56 40.7 -0.8
comp=Z,67nm,1.0s,mb5.9
SADO Sadowa 89.07 27 P P 23 56 40.8 -1.0
comp=Z,83nm,1.1s,mb6.0,baz=344,slow=7.2,SNR=4.5
SADO PP PP 00 00 12.8 +2.0
comp=Z,39nm,1.1s,baz=320,slow=7.9,SNR=4.3
SADO Sadowa 89.07 27 P P 23 56 40.8 -1.0
SADO PP PP 00 00 12.8 +2.0
VAE Valguarnera 89.17 320 P P 23 56 42.6 +0.2
comp=Z,16nm,0.9s,mb5.3,baz=48,slow=7.7,SNR=2.2
VAE PP PP 00 00 16.5 +4.6
comp=Z,13nm,0.9s,baz=238,slow=23,SNR=1.8
VAE Valguarnera 89.17 320 P P 23 56 42.6 +0.2
VAE PP PP 00 00 16.5 +4.6
528A Cox Ranch, San 89.19 51 ⇓S SKSac 00 07 12.0 -0.6
baz=89
MSEY Mahe Island 89.25 263 P P 23 56 43.2 +0.1
comp=Z,639nm,1.8s,mb6.7,SNR=6.5
MSEY Mahe Island 89.25 263 *e*P P 23 56 43.7 +0.6
MSEY pmax pmax
comp=Z,1μm,2.1s,mb6.8
MSEY MLR MLR
comp=Z,55μm,19.0s,MS7.0
MSEY Mahe Island 89.25 263 *e*P P 23 56 43.7 +0.6
comp=Z,1μm,2.1s,mb6.8
MSEY LR LR
comp=Z,55μm,19.0s,MS7.0
TXAR Lajitas Array 89.25 52 P P 23 56 42.5 -0.5
comp=Z,30nm,0.8s,mb5.7,baz=293,slow=3.0,SNR=171
TXAR S S 00 07 16.1 -16
comp=Z,1.5nm,1.1s,baz=303,slow=5.3,SNR=2.6
TXAR PKKPbc PKKPbc 00 14 17.2 -0.7
comp=Z,1.1nm,0.9s,baz=141,slow=3.3,SNR=3.3
TXAR PKPPKP 00 22 24.4
comp=Z,0.8nm,0.9s,baz=251,slow=1.6,SNR=4.3
TXAR LR LR 00 31 20.1
comp=Z,35μm,21.3s,MS6.8,baz=320,slow=32
627A Terlingua Ranc 89.33 52 ⇑S SKSac 00 07 14.5 +1.0
baz=89
HMDC Modica 89.39 320 P P 23 56 44.2 +0.8
AAM Ann Arbor 89.46 31⇑*i*P P 23 56 43.0 -0.7
AAM pmax pmax
comp=Z,295nm,1.1s,mb6.5
AAM MLR MLR
comp=Z,39μm,19.0s,MS6.8
AAM Ann Arbor 89.46 31⇑*i*P P 23 56 43.0 -0.6
comp=Z,295nm,1.1s,mb6.5
AAM LR LR
comp=Z,39μm,19.0s,MS6.8
MTLF Montolieu 89.71 331⇑*i*P P 23 56 44.6 -0.2
comp=Z,447nm,1.2s,mb6.4
MTLF Montolieu 89.71 331⇑*i*P P 23 56 44.6 -0.2
MTLF pmax pmax
comp=Z,223nm,1.2s,mb6.4
MTLF Montolieu 89.71 331⇑*i*P P 23 56 44.6 -0.2
comp=Z,223nm,1.2s,mb6.4
LRDF Laroque-de-Fa 89.94 331 *e*P P 23 56 46.0 +0.1
VSL Villasalto 89.95 324 *e*P P 23 56 45.2 -0.8
comp=Z,141nm,1.2s,mb6.2
VSL LR LR
comp=Z,137μm,21.0s,MS7.4
SJAF Saint Jean de 90.19 330 *e*P P 23 56 47.0 -0.1
EJON La Jonquera 90.22 330 P P 23 56 47.2 0.0
comp=Z,162nm,1.2s,mb6.2
FILF Fillols 90.25 330 *e*P P 23 56 48.1 +0.8
CARF Carcanieres 90.29 331 *e*P P 23 56 48.3 +0.8
WDD Wield Dalam 90.36 319 *e*P P 23 56 47.6 -0.4
comp=Z,571nm,1.0s,mb6.9
WDD LR LR
comp=Z,134μm,20.0s,MS7.4
OLIL Olney 90.48 36⇑*i*P P 23 56 48.2 -0.4
comp=Z,417nm,1.0s,mb6.7
VALF Valcebollere 90.59 331 *e*P P 23 56 50.0 +1.1
MELF Melles 90.66 332 *e*P P 23 56 49.7 +0.5
EPF Esparros 90.67 332⇑*i*P P 23 56 48.5 -0.8
comp=Z,179nm,1.0s,mb6.0
EPF Esparros 90.67 332⇑*i*P P 23 56 48.5 -0.8
EPF pmax pmax
comp=Z,89nm,1.0s,mb6.0
EPF Esparros 90.67 332⇑*i*P P 23 56 48.5 -0.8
comp=Z,89nm,1.0s,mb6.0
JCT Junction City 90.73 49⇑*i*P P 23 56 49.0 -0.8
JCT pmax pmax
comp=Z,258nm,0.8s,mb6.6
JCT MLR MLR
comp=Z,51μm,22.0s,MS6.9
JCT Junction City 90.73 49⇑*i*P P 23 56 49.0 -0.8
comp=Z,258nm,0.8s,mb6.6
JCT LR LR
comp=Z,51μm,22.0s,MS6.9
LONY Lake Ozonia 90.74 24⇑*i*P P 23 56 49.0 -0.6
comp=Z,591nm,1.7s,mb6.6
LONY LR LR
comp=Z,71μm,22.0s,MS7.1
LABF Labassere 90.76 332 *e*P P 23 56 50.1 +0.4
SIUC Southern Illin 90.79 37 *e*P P 23 56 49.8 -0.1
comp=Z,543nm,1.0s,mb6.8
BLO Bloomington 90.84 35⇑*i*P P 23 56 49.4 -0.8
BLO pmax pmax
comp=Z,208nm,1.1s,mb6.4
BLO Bloomington 90.84 35⇑*i*P P 23 56 49.4 -0.8
comp=Z,208nm,1.1s,mb6.4
RESF Ens 90.87 332 *e*P P 23 56 50.9 +0.7
REYF Montagne du Re 90.90 333 *e*P P 23 56 50.9 +0.5
VIEF Viey 90.92 332 *e*P P 23 56 50.9 +0.5
ORDF Ordiarp 90.97 333 *e*P P 23 56 50.3 -0.4
ATE Arette 91.00 333 *e*P P 23 56 51.2 +0.4
EBIE Bielsa 91.05 332 P P 23 56 49.0 -2.1
comp=Z,293nm,1.3s,mb6.5
ERPA Erie 91.05 29 PFAKE 23 57 00.0 +8.9
ERPA LR LR
comp=Z,62μm,19.0s,MS7.1
OSSF Osses 91.05 333 *e*P P 23 56 50.5 -0.5
ETSF Etsaut 91.11 333⇑*i*P P 23 56 51.6 +0.3
comp=Z,462nm,1.1s,mb6.4
ETSF Etsaut 91.11 333⇑*i*P P 23 56 51.6 +0.3
ETSF pmax pmax
comp=Z,231nm,1.1s,mb6.4
ETSF Etsaut 91.11 333⇑*i*P P 23 56 51.6 +0.3
comp=Z,231nm,1.1s,mb6.4
MIAR Mount Ida 91.12 42⇑*i*P P 23 56 50.8 -0.7
comp=Z,7μm,1.0s
MIAR LR LR
comp=Z,55μm,21.0s,MS7.0
SJPF Ste Jean 91.16 333⇑*i*P P 23 56 52.4 +0.8
comp=Z,164nm,1.0s,mb6.0
SJPF Ste Jean 91.16 333⇑*i*P P 23 56 52.4 +0.8
SJPF pmax pmax
comp=Z,82nm,1.0s,mb6.0
SJPF Ste Jean 91.16 333⇑*i*P P 23 56 52.4 +0.8
comp=Z,82nm,1.0s,mb6.0
EALK Alkurruntz 91.17 333 P P 23 56 50.8 -0.8
comp=Z,275nm,1.1s,mb6.5
ELIZ Elizondo 91.22 333 P P 23 56 49.9 -2.0
ELIZ pmax pmax
comp=Z,126nm,1.0s,mb6.2
ELIZ Elizondo 91.22 333 P P 23 56 49.9 -1.9
comp=Z,126nm,1.0s,mb6.2
PARMO Parma 91.37 38 *e*P P 23 56 53.4 +0.7
NCB Newcomb 91.44 24⇑*i*P P 23 56 52.2 -0.7
comp=Z,230nm,1.0s,mb6.5
NCB LR LR
comp=Z,72μm,22.0s,MS7.1
ACSO Alum Creek Sta 91.47 32⇑*i*P P 23 56 52.9 -0.2
comp=Z,7μm,1.0s
ACSO LR LR
comp=Z,52μm,20.0s,MS7.0
DESE Dese 91.52 286 *e*P P 23 56 54.9 +1.3
UALR University of 91.58 41⇑*i*P P 23 56 52.6 -1.1
comp=Z,131nm,1.2s,mb6.1
WCI Wyandotte Cave 91.71 35⇑*i*P P 23 56 53.5 -0.7
WCI pmax pmax
comp=Z,124nm,0.8s,mb6.3
WCI MLR MLR
comp=Z,36μm,21.0s,MS6.8
WCI Wyandotte Cave 91.71 35⇑*i*P P 23 56 53.5 -0.8
comp=Z,124nm,0.8s,mb6.3
WCI LR LR
comp=Z,36μm,21.0s,MS6.8
ELAN Lanestosa 91.81 335 P P 23 56 53.2 -1.4
comp=Z,400nm,1.1s,mb6.7
HBAR Harrisburg 91.81 40 *e*P P 23 56 55.2 +0.5
EPOB Poblet 91.85 331 P P 23 56 54.3 -0.5
comp=Z,320nm,1.3s,mb6.5
LBNH Lisbon 91.91 23 PFAKE 23 57 10.0 +15
LBNH LR LR
comp=Z,67μm,20.0s,MS7.1
GLAT Glass 91.91 38 *e*P P 23 56 55.5 +0.4
ECRI Cripan 92.05 334 P P 23 56 55.6 -0.1
UTMT University of 92.06 38 *e*P P 23 56 56.4 +0.6
comp=Z,640nm,1.1s,mb6.9
ESAC San Caprasio 92.11 332 P P 23 56 54.7 -1.2
comp=Z,753nm,1.6s,mb6.8
HALT Halls 92.17 39 *e*P P 23 56 56.5 +0.1
EARI Arriondas 92.33 336 P P 23 56 55.1 -1.9
comp=Z,389nm,1.2s,mb6.6
BINY Binghamton 92.42 26 PFAKE 23 57 10.0 +13
BINY LR LR
comp=Z,75μm,19.0s,MS7.2
ERTA Horta de San J 92.48 331 P P 23 56 56.5 -1.2
comp=Z,261nm,1.2s,mb6.4
ETOS Mallorca 92.53 329 P P 23 56 57.0 -1.0
comp=Z,405nm,1.4s,mb6.7
NATX Nacogdoches 92.68 45 *e*P P 23 56 59.0 +0.1
NATX LR LR
comp=Z,53μm,20.0s,MS7.0
WVT Waverly 92.72 37⇑*i*P P 23 56 57.5 -1.4
WVT pmax pmax
comp=Z,138nm,0.8s,mb6.4
WVT MLR MLR
comp=Z,48μm,20.0s,MS7.0
WVT Waverly 92.72 37⇑*i*P P 23 56 57.5 -1.5
comp=Z,138nm,0.8s,mb6.4
WVT LR LR
comp=Z,48μm,20.0s,MS7.0
EPON Pontenova 92.91 337 P P 23 56 59.3 -0.3
comp=Z,523nm,1.3s,mb6.8
KEST Kesra 93.02 322 P P 23 56 59.4 -0.9
comp=Z,17nm,1.2s,mb5.4,baz=290,slow=2.4,SNR=22
KEST S SKSac 00 07 36.7 +2.4
comp=Z,0.6nm,0.8s,baz=315,slow=20,SNR=2.0
KEST LR LR 00 43 55.0
comp=Z,76μm,18.5s,MS7.2,baz=345,slow=39
KEST Kesra 93.02 322⇑*i*P P 23 56 59.5 -0.8
SSPA Standing Stone 93.12 28⇑*i*P P 23 56 60.0 -0.7
comp=Z,528nm,1.0s,mb6.9
SSPA LR LR
comp=Z,51μm,19.0s,MS7.0
CMAH Djebel Manchou 93.19 324 P P 23 57 03.1 +2.0
MCWV Mont Chateau 93.22 30 PFAKE 23 57 10.0 +8.8
MCWV LR LR
comp=Z,80μm,19.0s,MS7.2
OXF Oxford 93.26 39 PFAKE 23 57 10.0 +8.6
OXF LR LR
comp=Z,47μm,22.0s,MS6.9
EMOS Mosqueruela 93.29 331 P P 23 57 01.2 -0.3
CAEH 'Ain El Ouahch 93.32 325 P P 23 57 05.0 +3.3
HKT Hockley 93.41 47⇑*i*P P 23 57 01.5 -0.7
HKT pmax pmax
comp=Z,161nm,1.6s,mb6.2
HKT MLR MLR
comp=Z,52μm,19.0s,MS7.0
HKT Hockley 93.41 47⇑*i*P P 23 57 01.5 -0.7
comp=Z,161nm,1.6s,mb6.2
HKT LR LR
comp=Z,52μm,19.0s,MS7.0
ETOR Torete 93.47 333 P P 23 57 02.3 0.0
ETOR pmax pmax
comp=Z,78nm,1.1s,mb6.0
ETOR Torete 93.47 333 P P 23 57 02.3 0.0
comp=Z,78nm,1.1s,mb6.0
CKFL Kef-Lekhel 93.69 324 P P 23 57 03.1 -0.3
STS Santiago 93.72 338 P P 23 57 01.0 -2.4
ERUA La Rua 93.75 337 P P 23 57 02.0 -1.6
EMAZ Mazaricos 93.79 338 P P 23 57 02.2 -1.5
comp=Z,196nm,1.3s,mb6.4
CASM Ain Smara 93.91 325 P P 23 57 04.0 -0.4
DFRA Djebel Bou Aff 93.95 325 P P 23 57 04.2 -0.4
KVTX Kingsville 94.02 49 *e*P P 23 57 05.0 -0.1
comp=Z,221nm,1.0s,mb6.5
KVTX LR LR
comp=Z,28μm,20.0s,MS6.7
ECAL Calabor 94.04 336 P P 23 57 02.6 -2.2
comp=Z,213nm,1.2s,mb6.5
CTEI Djebel Teioual 94.11 324 P P 23 57 06.8 +1.5
PBRG Braganca 94.16 336 *e*P P 23 57 05.7 +0.3
comp=Z,252nm,1.9s,mb6.3
PBRG Braganca 94.16 336 *e*PP PP 00 00 54.8 +3.8
SWET Sewanee 94.35 37⇑*i*P P 23 57 05.1 -1.4
GUD Guadarrama 94.36 334 P P 23 57 06.1 -0.3
EZAM Zamans 94.44 338 P P 23 57 04.9 -1.8
SET Setif 94.45 325 P P 23 57 07.0 +0.1
AKF Akfadou 94.45 326 P P 23 57 09.4 +2.5
ELOB Lobios 94.51 337 P P 23 57 04.7 -2.4
comp=Z,169nm,1.3s,mb6.3
VBMS Vicksburg 94.52 42 PFAKE 23 57 20.0 +13
VBMS LR LR
comp=Z,53μm,22.0s,MS7.0
CKHR Kef el Ahmar 94.55 325 P P 23 57 07.4 0.0
EBEN Beniarda 94.64 330 P P 23 57 07.4 -0.3
comp=Z,129nm,1.7s,mb6.1
PCAB Cabril 94.64 337 *e*P P 23 57 08.0 +0.3
comp=Z,238nm,1.9s,mb6.3
PCAB Cabril 94.64 337 *e*PP PP 00 00 57.0 +2.3
CPCT Cooper Cave 94.81 36⇑*i*P P 23 57 07.7 -0.9
MVO Moncorvo 94.83 336 P P 23 57 07.5 -1.0
MVO Moncorvo 94.83 336 *e*P P 23 57 08.8 +0.3
comp=Z,233nm,1.5s,mb6.4
MVO Moncorvo 94.83 336 *e*PP PP 00 01 00.1 +3.9
MVO Moncorvo 94.83 336 *e*SS SS 00 14 54.7 +10
WNDE Wendo Genet 94.85 283 *e*P P 23 57 10.3 +1.3
WNDE S 00 00 55.6
PVRL Vila Real 94.95 337 *e*P P 23 57 09.3 +0.2
comp=Z,193nm,1.2s,mb6.4
ABA Alger-Bouzarea 94.97 327 P P 23 57 11.0 +1.8
TKL Tuckaleechee C 94.97 35 P P 23 57 08.8 -0.5
comp=Z,54nm,0.9s,mb6.0,baz=331,slow=6.2,SNR=6.4
TKL PP PP 00 00 58.9 +1.4
comp=Z,14nm,1.1s,baz=335,slow=2.9,SNR=3.8
TKL Tuckaleechee C 94.97 35⇑*i*P P 23 57 08.4 -0.9
BLA Blacksburg 95.09 32 *e*P P 23 57 09.5 -0.3
BLA pmax pmax
comp=Z,73nm,0.9s,mb6.1
BLA Blacksburg 95.09 32 *e*P P 23 57 09.5 -0.3
comp=Z,73nm,0.9s,mb6.1
ESDC Sonseca Array 95.16 333 P P 23 57 09.2 -0.9
comp=Z,12nm,0.9s,mb5.3,baz=24,slow=3.9,SNR=60
ESDC S SKSac 00 07 47.4 +1.6
comp=Z,0.3nm,0.7s,baz=356,slow=4.2,SNR=2.4
ESDC PKKPbc PKKPbc 00 14 02.5 -0.6
comp=Z,3.5nm,1.1s,baz=241,slow=2.6,SNR=5.1
ESDC LR LR 00 44 33.7
comp=Z,162μm,20.5s,MS7.5,baz=30,slow=38
ESDC Sonseca Array 95.16 333 P P 23 57 08.8 -1.2
comp=Z,54nm,1.0s,mb5.9
ESLA Sonseca Array 95.16 333⇑*i*P P 23 57 10.2 +0.1
comp=Z,391nm,1.2s,mb6.7
ESLA LR LR
comp=Z,1079μm,20.0s
ETOB Tobarra 95.20 331 P P 23 57 09.3 -1.0
AKET Djebel Ketaf 95.24 326 P P 23 57 13.6 +3.1
PTO Porto 95.34 337 *e*P P 23 57 11.9 +1.0
comp=Z,185nm,1.7s,mb6.2
PAB San Pablo 95.41 334 *e*P P 23 57 10.8 -0.4
PAB pmax pmax
comp=Z,90nm,1.1s,mb6.1
PAB MLR MLR
comp=Z,186μm,22.0s,MS7.5
PAB San Pablo 95.41 334 *e*P P 23 57 10.8 -0.4
comp=Z,90nm,1.1s,mb6.1
PAB LR LR
comp=Z,186μm,22.0s,MS7.5
CBN Corbin 95.44 29 PFAKE 23 57 20.0 +8.7
CBN LR LR
comp=Z,54μm,19.0s,MS7.0
EMHD Djebel Mahouad 95.51 327 P P 23 57 14.0 +2.3
PVIS Viseu 95.51 337 *e*P P 23 57 12.0 +0.4
comp=Z,193nm,1.6s,mb6.3
PVIS Viseu 95.51 337 *e*PP PP 00 01 05.9 +4.4
EVIA Vianos 95.56 332 P P 23 57 11.7 -0.2
LRAL Lakeview Retre 95.63 39 *e*P P 23 57 12.2 -0.1
comp=Z,374nm,1.2s,mb6.7
LRAL LR LR
comp=Z,28μm,19.0s,MS6.8
MTE Manteigas 95.69 336 PFAKE 23 57 20.0 +7.5
MTE LR LR
comp=Z,180μm,19.0s,MS7.6
MTE Manteigas 95.69 336 *e*P P 23 57 29.1 +17
comp=Z,174nm,2.0s,mb6.1
MTE Manteigas 95.69 336 *e*PP PP 00 01 27.7 +25
CART Cartagena 95.92 330⇑*i*P P 23 57 12.5 -1.1
comp=Z,21nm,0.8s,mb5.6
EBNR Beni Rached 96.03 328 P P 23 57 15.5 +1.4
PCBR Castelo Branco 96.18 336 *e*P P 23 57 14.9 +0.2
comp=Z,131nm,1.6s,mb6.1
PCBR Castelo Branco 96.18 336 *e*PP PP 00 01 12.3 +5.6
ECHA Ech Chlef 96.22 328 P P 23 57 15.8 +0.8
EHUE Huescar 96.32 332 P P 23 57 14.3 -1.1
EBAN Banos Encina 96.44 333 P P 23 57 15.7 -0.2
EANR 'Ain N'Sour 96.50 328 P P 23 57 16.5 +0.3
EQES Quesada 96.50 332 P P 23 57 16.8 +0.6
comp=Z,39nm,1.1s,mb5.8
PMRV Marv??o 96.53 336 *e*P P 23 57 16.1 -0.2
comp=Z,155nm,1.7s,mb6.2
PMRV Marv??o 96.53 336 *e*PP PP 00 01 10.6 +1.2
PMRV Marv??o 96.53 336 *e*SS SS 00 15 15.4 +6.8
PTOM Tomar 96.68 336 *e*P P 23 57 17.3 +0.3
comp=Z,104nm,1.4s,mb6.1
PTOM Tomar 96.68 336 *e*PP PP 00 01 21.4 +11
EADA Adamuz 96.72 333 P P 23 57 17.8 +0.6
comp=Z,50nm,1.1s,mb5.9
ETRT Tiaret 96.90 328 P P 23 57 18.0 -0.1
ENIJ Nijar 96.92 331 P P 23 57 16.0 -2.1
GOGA Godfrey 96.99 36⇑*i*P P 23 57 18.3 -0.2
GOGA pmax pmax
comp=Z,514nm,1.0s,mb6.9
GOGA MLR MLR
comp=Z,46μm,20.0s,MS7.0
GOGA Godfrey 96.99 36⇑*i*P P 23 57 18.3 -0.2
comp=Z,514nm,1.0s,mb6.9

GOGA LR LR
comp=Z,46µm,20.0s,MS7.0
EBAD Badajoz 97.02 335 P **P 23 57 17.0 -1.5**
ECAB El Cabril 97.09 334 P **P 23 57 17.3 -1.5**
PESTR Estremoz 97.10 336 *e*P **P 23 57 18.1 -0.8**
comp=Z,120nm,1.4s,mb6.1
PESTR Estremoz 97.10 336 *e*PP PP 00 01 14.6 +0.8
PESTR Estremoz 97.10 336 *e*SS SS 00 15 24.5 +7.7
ECOG Cogollos-Vega 97.15 332 P **P 23 57 18.6 -0.6**
ELUQ Luque 97.15 333 P **P 23 57 18.6 -0.6**
EBER Berja 97.24 331 P **P 23 57 18.3 -1.3**
BRAL Brewton 97.25 40 *e*P **P 23 57 20.6 +0.9**
comp=Z,99nm,1.1s,mb6.2
BRAL LR LR
comp=Z,55µm,19.0s,MS7.1
ERON Agron 97.47 332 P **P 23 57 19.2 -1.4**
comp=Z,17nm,0.8s,mb5.5
ELOJ Sierra Loja 97.48 332 P **P 23 57 20.8 +0.2**
ELOJ pmax pmax
comp=Z,57nm,1.4s,mb5.8
ELOJ Sierra Loja 97.48 332 P **P 23 57 20.8 +0.1**
comp=Z,57nm,1.4s,mb5.8
EVO Evora 97.54 336 *e*P **P 23 57 21.0 +0.1**
comp=Z,240nm,1.7s,mb6.2
EVO *e*MLR MLR
comp=Z,263µm,22.8s,MS7.4
EVO Evora 97.54 336 *e*P **P 23 57 20.1 -0.8**
comp=Z,83nm,1.3s,mb6.1
EVO Evora 97.54 336 *e*PP PP 00 01 18.2 +1.0
EGUA Guajares 97.54 332 P **P 23 57 19.9 -1.0**
EGUA pmax pmax
comp=Z,565nm,1.2s,mb7.0
EGUA Guajares 97.54 332 P **P 23 57 19.9 -1.1**
comp=Z,564nm,1.2s,mb7.0
PBAR Barrancos 97.55 335 *e*P **P 23 57 20.9 0.0**
comp=Z,96nm,1.4s,mb6.1
PBAR Barrancos 97.55 335 *e*PP PP 00 01 18.2 +0.9
PBAR Barrancos 97.55 335 *e*SS SS 00 15 34.3 +11
PMAFR Mafra 97.55 337 *e*P **P 23 57 20.9 0.0**
comp=Z,148nm,1.8s,mb6.2
PMAFR Mafra 97.55 337 *e*PP PP 00 01 19.3 +2.1
PMAFR Mafra 97.55 337 *e*SS SS 00 15 31.9 +8.8
EVOP Sao Brissos 97.58 336 *e*P **P 23 57 20.5 -0.6**
EVOP *e*PP PP 00 01 18.7 +1.2
EVOP *e*S SKSac 00 07 58.0 -0.5
EVOP *e*S SKSac 00 07 58.3 -0.2
EVOP *e*SS SS 00 15 27.0 +3.5
EVOP *e*SS SS 00 15 27.3 +3.7
EVOP AMS AMS 00 44 10.9
comp=Z,151µm,29.0s,MS7.3
LIS Lisbon 97.73 337 *e*P **P 23 57 20.9 -0.8**
LIS *e*PP PP 00 01 19.2 +0.6
LIS AMS AMS 00 44 16.0
comp=Z,127µm,21.2s,MS7.4
LIS Lisbon 97.73 337 *e*P **P 23 57 20.9 -0.8**
LIS *e* 00 01 19.2
EMIN Mina Concepcio 97.80 334 P **P 23 57 18.9 -3.1**
comp=Z,143nm,1.2s,mb6.4
CNNC Cliffs of the 97.82 31 *e*P **P 23 57 23.1 +0.9**
comp=Z,36nm,0.4s,mb6.2
CNNC LR LR
comp=Z,57µm,19.0s,MS7.1
PBEJ Beja 97.96 335 *e*P **P 23 57 23.1 +0.3**
comp=Z,90nm,1.2s,mb6.2
PBEJ Beja 97.96 335 *e*PP PP 00 01 23.3 +2.9
EMIJ Mijas 98.22 333 P **P 23 57 21.4 -2.6**
comp=Z,55nm,1.2s,mb6.0
EGRO El Granado 98.28 335 P **P 23 57 22.5 -1.8**
comp=Z,99nm,1.2s,mb6.2
ESPR Espera 98.33 333 P **P 23 57 23.0 -1.5**
comp=Z,126nm,1.2s,mb6.3
PCVE Castro Verde 98.37 335 *e*P **P 23 57 16.1 -8.5**
comp=Z,94nm,1.2s,mb6.2
PCVE Castro Verde 98.37 335 *e*PP PP 00 01 17.2 -6.4
PCVE Castro Verde 98.37 335 *e*SS SS 00 15 40.1 +5.4
PVAQ Vaqueiros 98.47 335 *e*P **P 23 57 24.7 -0.4**
comp=Z,66nm,1.2s,mb6.0
PVAQ Vaqueiros 98.47 335 *e*PP PP 00 01 25.5 +1.1
PVAQ Vaqueiros 98.47 335 *e*SS SS 00 15 43.7 +7.6
EJIF Jimena Fronter 98.57 333 P **P 23 57 25.0 -0.6**
EJIF pmax pmax
comp=Z,25nm,0.9s,mb5.7
EJIF Jimena Fronter 98.57 333 P **P 23 57 25.0 -0.5**
comp=Z,25nm,0.9s,mb5.8
PTEO Sao Teotonio 98.67 336 *e*P **P 23 57 27.0 +1.0**
comp=Z,160nm,1.4s,mb6.4
PTEO Sao Teotonio 98.67 336 *e*PP PP 00 01 27.7 +1.9
PBDV Barranco-do-Ve 98.69 335 *e*P **P 23 57 26.1 0.0**
comp=Z,69nm,1.9s,mb5.9
PBDV Barranco-do-Ve 98.69 335 *e*PP PP 00 01 27.1 +1.1
PBDV Barranco-do-Ve 98.69 335 *e*SS SS 00 15 49.4 +10
NHSC New Hope 98.71 34 *e*P **P 23 57 26.4 +0.1**
comp=Z,68nm,1.1s,mb6.1
NHSC LR LR
comp=Z,83µm,22.0s,MS7.2
SFS San Fernando 98.81 334 PFAKE 23 57 40.0 +13
SFS LR LR
comp=Z,354µm,20.0s,MS7.9
MORF Marmelete 98.86 336 *e*P **P 23 57 25.9 -1.0**
MORF *e* 00 01 28.0
MORF *e*S SKSac 00 08 04.3 -0.7
MORF *e*SS SS 00 15 44.8 +3.2
MORF Marmelete 98.86 336 *e*P **P 23 57 26.1 -0.8**
comp=Z,89nm,1.4s,mb6.1
MORF Marmelete 98.86 336 *e*PP PP 00 01 28.8 +1.5
MORF Marmelete 98.86 336 *e*SS SS 00 15 49.5 +7.9
PFVI Vila Bisbo 99.08 336 *e*P **P 23 57 27.8 0.0**
comp=Z,132nm,1.4s,mb6.3
PFVI Vila Bisbo 99.08 336 *e*PP PP 00 01 30.7 +1.7
PFVI Vila Bisbo 99.08 336 *e*SS SS 00 15 52.7 +8.1
RER Riviere de l'E 99.34 250 PFAKE 23 57 40.0 +11
RER LR LR
comp=Z,22µm,20.0s,MS6.7
RKT Rikitea 100.04 112 *e*PP PP 00 01 41.2 +3.4
comp=Z,5µm,28.8s
RKT *e*SKSac SKSac 00 08 08.0 -2.9
comp=Z,14µm,29.2s
RKT Rikitea 100.04 112 *e*PS PS 00 10 37.3 +0.6
comp=Z,29µm,33.2s
RKT *e*SS SS 00 16 03.1 +2.3
comp=Z,56µm,28.0s
RKT *e*LR LR 00 29 45.6
comp=Z,291µm,27.0s,baz=307
KMBO Kilima Mbogo 101.16 278 Pdiff Pdif 23 57 37.5 +0.4
comp=Z,14nm,1.0s,baz=38,slow=7.0,SNR=13
KMBO PP PP 00 01 46.6 +0.4
comp=Z,11nm,1.2s,baz=38,slow=9.9,SNR=5.0
KMBO PKKPbc PKKPbc 00 13 47.1 +1.0
comp=Z,3.5nm,0.9s,baz=243,slow=2.3,SNR=6.1
KMBO Kilima Mbogo 101.16 278 P Pdif 23 57 37.5 +0.5
KMBO 00 01 46.6
KMBO pmax pmax
comp=Z,14nm,1.0s
KMBO pmax pmax
comp=Z,11nm,1.2s
KMBO Kilima Mbogo 101.16 278 *e*Pdif Pdif 23 57 37.0 -0.1
comp=Z,151nm,1.9s
KMBO LR LR
comp=Z,60µm,21.0s,MS7.1
KMBO Kilima Mbogo 101.16 278 P Pdif 23 57 38.4 +1.3
SNR=10
KMBO P 23 57 38.4
SNR=10
MDT Midelt 101.51 331 Pdiff Pdif 23 57 38.1 -0.5
comp=Z,10nm,0.9s,baz=16,slow=5.2,SNR=3.5
MDT PP PP 00 01 49.1 +1.6
comp=Z,17nm,1.1s,baz=60,slow=9.1,SNR=4.3
MDT PKKP PKKPbc 00 13 51.3 +5.8
comp=Z,6.8nm,1.0s,baz=213,slow=4.4,SNR=7.2
DWPF Disney 102.38 37 PFAKE 23 57 50.0 +7.5
DWPF LR LR
comp=Z,42µm,19.0s,MS7.0
CMLA Cha da Macela 102.42 349 PFAKE 23 57 50.0 +7.3
CMLA LR LR
comp=Z,29µm,20.0s,MS6.8
PDA Ponta Delgada 102.46 349 *e*PP PP 00 02 06.0 +12
PDA *e*SS SS 00 16 44.0 +13
PDA *e*LQ 00 27 00.0
PDA *e*LR LR 00 32 56.0
PDA Ponta Delgada 102.46 349 *e*P Pdif 23 57 52.0 +9.2
CMIG Matias Romero 103.67 54 Pdiff Pdif 23 57 48.6 +0.4
comp=Z,7.7nm,0.9s,baz=311,slow=8.3,SNR=4.8
CMIG PP PP 00 02 01.6 -2.8
comp=Z,6.8nm,1.2s,baz=316,slow=6.1,SNR=2.3
CMIG PKKPbc PKKPbc 00 13 37.0 -2.0
comp=Z,1.9nm,0.8s,baz=173,slow=4.2,SNR=2.5
OPO Ambohidratompo 104.16 258 Pdiff Pdif 23 57 50.5 +0.1
comp=Z,6.8nm,1.0s,baz=41,slow=7.7,SNR=2.8
OPO PP PP 00 02 10.4 +1.5
comp=Z,8.1nm,1.0s,baz=108,slow=9.6,SNR=3.6
ABPO Ambohimpanom 104.40 257 PFAKE 23 58 00.0 +8.5
ABPO LR LR
comp=Z,45µm,19.0s,MS7.0
BBSR BB Station 105.02 22 PFAKE 00 02 20.0 +11
BBSR LR LR
comp=Z,28µm,20.0s,MS6.8
PMPS Porto Santo 105.07 340 *e*P Pdif 23 57 54.9 +0.5
PMPS Porto Santo 105.07 340 *e*PP PP 00 02 20.5 +6.5
TEIG Tepich 105.24 47 PFAKE 00 02 20.0 +10
TEIG LR LR
comp=Z,26µm,20.0s,MS6.8
DRV Dumont d'Urvil 105.49 180 PP PP 00 02 13.0 -4.9
DRV SP SP 00 11 30.0 -1.2
DRV SS SS 00 17 20.0 +5.4
DRV L 00 27 00.0
DRV R 00 34 00.0
TAM Tamanrasset 105.49 318 *e*P Pdif 23 57 57.0 +0.7
TAM pmax pmax
comp=Z,18nm,1.1s
TAM MLR MLR
comp=Z,89µm,22.0s,MS7.3
TAM Tamanrasset 105.49 318 *e*Pdif Pdif 23 57 57.0 +0.7
comp=Z,18nm,1.1s
TAM LR LR
comp=Z,89µm,22.0s,MS7.3
PMAR Madeira 105.54 341 *e*P Pdif 23 57 57.2 +0.7
FUL Funchal 105.62 341 *e*P Pdif 23 57 58.0 +1.1
FUL Funchal 105.62 341 *e*PP PP 00 02 21.4 +3.3
CASY Casey 107.65 192 PFAKE 00 02 20.0 +7.4
CASY LR LR
comp=Z,25µm,22.0s,MS6.7
PAF Port-aux-Franc 107.83 220 PFAKE 00 02 20.0 +6.5
PAF LR LR
comp=Z,18µm,20.0s,MS6.6
TGUH Tegucigalpa,Un 110.67 50 *e*Pdif Pdif 23 58 17.7 -1.6
TGUH LR LR
comp=Z,40µm,22.0s,MS7.0
MIR Mirnyy 111.53 199 *e*PKIKP PKiKP 00 02 10.0 -10
MIR *i* 00 03 01.0
MIR *e*PS PS 00 12 26.0 -7.4
MIR *e*PS PS 00 12 27.0 -6.4
MIR *e*SS SS 00 18 32.0 -4.1
GTBY Guantanamo Bay 112.33 37 PFAKE 00 02 30.0 +7.0
GTBY LR LR
comp=Z,37µm,20.0s,MS7.0
MASC Masc 112.52 36 *e* PP 00 03 09.4 +0.8
MTDJ Mount Denham 112.63 40 PFAKE 00 02 30.0 +6.4
MTDJ LR LR
comp=Z,37µm,21.0s,MS7.0
GRTK Grand Turk 112.69 32 PFAKE 00 02 30.0 +6.3
GRTK LR LR
comp=Z,56µm,20.0s,MS7.2
SDDR Presa de Saban 114.87 34 PFAKE 00 02 40.0 +12
SDDR LR LR
comp=Z,89µm,21.0s,MS7.3
JTS JuntasAbangare 115.02 51 *i* PKIKP PKiKP 00 02 28.1 -0.2
JTS JuntasAbangare 115.02 51 PFAKE 00 02 40.0 +12
JTS LR LR
comp=Z,27µm,20.0s,MS6.9
LSZ Lusaka 116.90 272 PKP PKPdf 00 02 31.2 -0.5
comp=Z,7.5nm,0.5s,baz=23,slow=2.2,SNR=5.2
LSZ PP PP 00 03 40.6 -0.2
comp=Z,10nm,0.8s,baz=50,slow=7.8,SNR=5.6
LSZ Lusaka 116.90 272 *e*PKPdf PKPdf 00 02 30.6 -1.1
LSZ LR LR
comp=Z,43µm,21.0s,MS7.0
SJG San Juan 117.73 29 PKP PKPdf 00 02 34.8 +1.4
comp=Z,16nm,0.6s,baz=312,slow=2.9,SNR=3.6
SJG PP PP 00 03 45.3 +0.1
comp=Z,7.3nm,0.3s,baz=348,slow=7.7,SNR=2.0
SJG San Juan 117.73 29 PKIKP PKPdf 00 02 34.8 +1.4
SJG 00 03 45.3
SJG pmax pmax
comp=Z,16nm,0.6s
SJG pmax pmax
comp=Z,7.0nm,0.3s
SJG San Juan 117.73 29 PKP PKPdf 00 02 34.8 +1.4
SJG PP PP 00 03 45.3 +0.1
SJG LR LR
comp=Z,27µm,20.0s,MS6.9
SBA Scott Base 117.81 174 PFAKE 00 02 40.0 +8.3
SBA LR LR
comp=Z,13µm,20.0s,MS6.5
BCIP Isla Barro Col 118.92 47 PFAKE 00 02 50.0 +14
BCIP LR LR
comp=Z,23µm,21.0s,MS6.8
ANWB Willy Bob 119.68 25 PFAKE 00 02 50.0 +13
ANWB LR LR
comp=Z,26µm,21.0s,MS6.8
PAYG Puerto Ayora 119.76 64 PFAKE 00 02 50.0 +13
PAYG LR LR
comp=Z,46µm,22.0s,MS7.1
MAW Mawson 121.21 206 *e*P PKPdf 00 02 38.4 0.0
comp=Z,26nm,0.8s
MAW Mawson 121.21 206 PKP PKPdf 00 02 38.1 -0.3
comp=Z,14nm,0.8s,baz=303,slow=2.7,SNR=19
MAW PP PP 00 04 09.0 -0.6
comp=Z,7.7nm,0.9s,baz=89,slow=5.1,SNR=1.4
MAW PKKPbc PKKPbc 00 12 41.4 0.0
comp=Z,22nm,0.9s,baz=245,slow=6.0,SNR=14
MAW SKKPbc 00 16 32.8
comp=Z,5.6nm,0.9s,baz=288,slow=3.2,SNR=3.2
MAW Mawson 121.21 206 *e*PKPdf PKPdf 00 02 38.2 -0.3
MAW LR LR
comp=Z,39µm,21.0s,MS7.0
RPN Rapa Nui 121.43 101 PFAKE 00 02 50.0 +10
RPN LR LR
comp=Z,123µm,22.0s,MS7.5
BBTS Babate 122.41 334 PKP PKPdf 00 02 41.8 -0.7
comp=Z,46nm,0.8s,baz=351,slow=2.3,SNR=5.6
BBTS PP PP 00 04 18.6 +1.3
comp=Z,28nm,0.8s,baz=253,slow=2.0,SNR=2.8
FDF Fort de France 122.63 25 PFAKE 00 02 50.0 +7.1
FDF LR LR
comp=Z,28µm,22.0s,MS6.9
FDF Fort de France 122.63 25 *e*P PKPdf 00 02 42.6 -0.3
SDV Santo Domingo 124.02 38 PKP PKPdf 00 02 45.7 +0.1
comp=Z,64nm,0.8s,baz=325,slow=1.8,SNR=63
SDV PP PP 00 04 31.4 +2.9
comp=Z,8.8nm,0.8s,baz=278,slow=7.1,SNR=1.5
SDV Santo Domingo 124.02 38 PKP PKPdf 00 02 45.7 +0.1
SDV PP PP 00 04 31.4 +2.9
SDV LR LR
comp=Z,14µm,21.0s,MS6.6
SACV Santiago Islan 124.21 342 PFAKE 00 03 00.0 +14
SACV LR LR
comp=Z,49µm,21.0s,MS7.2
LBTB Lobatse 124.34 264 PKP PKPdf 00 02 45.6 -0.2
comp=Z,55nm,0.9s,baz=102,slow=0.7,SNR=10
LBTB PP PP 00 04 32.1 +0.3
comp=Z,38nm,1.1s,baz=52,slow=5.6,SNR=2.5
LBTB Lobatse 124.34 264 PKIKP PKPdf 00 02 45.6 -0.2
LBTB 00 04 32.1
LBTB pmax pmax
comp=Z,55nm,0.9s
LBTB pmax pmax
comp=Z,38nm,1.1s
LBTB Lobatse 124.34 264 PKP PKPdf 00 02 45.6 -0.2
LBTB PP PP 00 04 32.1 +0.3
LBTB LR LR
comp=Z,59µm,21.0s,MS7.2
DBIC Dimbokro 124.38 317 PKP PKPdf 00 02 45.2 -1.1
comp=Z,77nm,0.8s,baz=40,slow=1.6,SNR=34
DBIC PP PP 00 04 30.8 -0.3
comp=Z,35nm,1.0s,baz=18,slow=9.1,SNR=4.8
DBIC PKKPab 00 12 28.6
comp=Z,6.4nm,0.8s,baz=170,slow=7.1,SNR=4.8
DBIC Dimbokro 124.38 317 *e*PKPdf PKPdf 00 02 45.0 -1.3
DBIC *e*PP PP 00 04 30.5 -0.5
DBIC LR LR
comp=Z,72µm,20.0s,MS7.3
TIC Toumodi 124.49 317 *e*P PKPdf 00 02 44.9 -1.6
comp=Z,425nm,1.2s
KIC Kosan Boka 124.58 317 *e*P PKPdf 00 02 45.0 -1.7
comp=Z,297nm,1.0s
BBGH Gun Hill 124.64 24 PFAKE 00 03 00.0 +13
BBGH LR LR
comp=Z,36µm,20.0s,MS7.0
LIC Lamto 124.85 317 *e*P PKPdf 00 02 46.6 -0.6
comp=Z,403nm,1.1s
LIC Lamto 124.85 317 *e*PKIKP PKPdf 00 02 46.6 -0.6
comp=Z,329nm,1.1s
LIC *e*MLR MLR
comp=Z,154µm,22.5s,MS7.3
LIC Lamto 124.85 317 *e*PKPdf PKPdf 00 02 46.6 -0.6
LIC LR LR
comp=Z,77µm,22.5s,MS7.3
GRGR Grenville 124.88 27 PFAKE 00 03 00.0 +13
GRGR LR LR
comp=Z,33µm,22.0s,MS7.0
PCRV Puerto La Cruz 125.54 31 PKP PKPdf 00 02 47.1 -1.4
comp=Z,36nm,0.9s,baz=2.9,slow=3.6,SNR=10
PCRV PP PP 00 04 38.6 +0.1
comp=Z,19nm,1.1s,baz=341,slow=5.2,SNR=3.3
ROSC El Rosal 125.54 45 PKP PKPdf 00 02 49.5 +0.9
comp=Z,50nm,1.1s,baz=313,slow=2.6,SNR=20
ROSC PP PP 00 04 42.8 +3.9
comp=Z,8.8nm,0.7s,baz=314,slow=5.3,SNR=2.4
ROSC El Rosal 125.54 45 *e*PKPdf PKPdf 00 02 49.3 +0.7
BOSA Boshof 126.42 261 PKP PKPdf 00 02 48.9 -0.8
comp=Z,26nm,0.8s,baz=39,slow=1.0,SNR=22
BOSA PP PP 00 04 44.9 -0.7
comp=Z,31nm,1.1s,baz=76,slow=8.9,SNR=2.2
BOSA Boshof 126.42 261 *e*PKPdf PKPdf 00 02 48.4 -1.3
BOSA LR LR
comp=Z,33µm,20.0s,MS7.0
OTAV Otavalo 126.88 52 *e*PKPdf PKPdf 00 02 51.7 +0.6
OTAV LR LR
comp=Z,24µm,22.0s,MS6.8
TSUM Tsumeb 127.40 275 PKP PKPdf 00 02 52.3 +0.5
comp=Z,24nm,1.0s,baz=72,slow=2.7,SNR=6.7
TSUM PP PP 00 04 51.8 -0.3
comp=Z,5.4nm,0.9s,baz=42,slow=6.9,SNR=1.8
TSUM Tsumeb 127.40 275 PKP PKPdf 00 02 52.3 +0.5
TSUM PP PP 00 04 51.8 -0.3
QSPA South Pole Qui 128.89 180 PKP PKPdf 00 02 51.9 -1.0
comp=Z,42nm,1.0s,baz=314,slow=1.3,SNR=4.2
QSPA PP PP 00 04 58.6 -2.0
comp=Z,57nm,1.2s,baz=336,slow=4.2,SNR=3.4
QSPA South Pole Qui 128.89 180 PKP PKPdf 00 02 51.9 -1.0
QSPA PP PP 00 04 58.6 -2.0
QSPA LR LR
comp=Z,32µm,22.0s,MS7.0
SUR Sutherland 131.56 259 PKP PKPdf 00 02 58.9 -0.4
comp=Z,13nm,0.8s,baz=133,slow=2.9,SNR=3.0
SUR PP PP 00 05 19.3 +0.1
comp=Z,15nm,1.1s,baz=75,slow=3.4,SNR=1.7
SUR SKPab 00 06 29.1
comp=Z,44nm,1.2s,baz=62,slow=4.5,SNR=4.2
SUR Sutherland 131.56 259 PKP PKPdf 00 02 58.9 -0.4
SUR PP PP 00 05 19.3 +0.1
SUR SKPab 00 06 29.1
SUR LR LR
comp=Z,46µm,20.0s,MS7.2
ATAH Atahualpa 132.54 58 PKP PKPdf 00 03 03.6 +1.8
comp=Z,44nm,0.9s,baz=348,slow=2.8,SNR=19
ATAH PP PP 00 05 27.4 +2.3
comp=Z,16nm,1.1s,baz=323,slow=5.5,SNR=1.7
ATAH SKPab 00 06 31.9
comp=Z,4.8nm,0.5s,baz=93,slow=19,SNR=2.4
NNA Nana 137.12 61 PKP PKPdf 00 03 10.6 +0.3
comp=Z,43nm,0.9s,baz=288,slow=4.3,SNR=8.3
NNA Nana 137.12 61 *e*PKPdf PKPdf 00 03 10.2 -0.1
NNA LR LR
comp=Z,33µm,21.0s,MS7.0
NVL N'lazarevskaya 139.03 203 *e*PKHKP PKPpre 00 03 00.1
NVL *e* 00 06 01.6
NVL *e*PPP 00 09 16.3
NVL *e* 00 10 18.2
NVL *e* 00 18 16.3
NVL *e*SS SS 00 24 50.7 +30
MAIT Maitri 139.06 203 *e*PKPdif PKPpre 00 03 01.5
ASCN Ascension 141.70 318 *e*PKPdf PKPdf 00 03 18.4 -0.3
ASCN LR LR
comp=Z,30µm,21.0s,MS7.0
SHEL Horse Pasture 142.69 299 PFAKE 00 03 30.0 +10
SHEL LR LR
comp=Z,32µm,21.0s,MS7.1
LPAZ La Paz 146.02 56 PKPbc PKPbc 00 03 27.0 +0.1
comp=Z,228nm,0.9s,baz=349,slow=4.3,SNR=234
LPAZ La Paz 146.02 56 *e*PKPdf PKPdf 00 03 26.3 +0.2
LPAZ *e*PKPbc PKPbc 00 03 27.5 +0.6
LPAZ LR LR
comp=Z,48µm,22.0s,MS7.2
RCBR Riachuelo 146.69 354 *e*PKPbc PKPbc 00 03 27.8 -1.2
RCBR LR LR
comp=Z,31µm,21.0s,MS7.1
SIV San Ignacio 150.05 46 PKP PKPdf 00 03 32.9 +0.2
comp=Z,76nm,0.9s,baz=339,slow=0.5,SNR=87
SIV PKPbc PKPbc 00 03 38.4 +0.7
comp=Z,226nm,0.8s,baz=318,slow=2.6,SNR=192
PMSA Palmer Station 150.54 159 PKPbc PKPbc 00 03 37.5 +0.2
comp=Z,72nm,1.1s,baz=241,slow=3.4,SNR=5.3
PMSA Palmer Station 150.54 159 *e*PKPbc PKPbc 00 03 36.8 -0.6
PMSA *e*PKPab PKPab 00 03 43.3 -0.9
PMSA LR LR
comp=Z,33µm,22.0s,MS7.1
LCO Las Campanas 152.19 78 *e*PKPdf PKPdf 00 03 36.0 +0.3
LCO *e*PKPbc PKPbc 00 03 42.4 +0.1
LCO LR LR
comp=Z,77µm,21.0s,MS7.5
LCO Las Campanas 152.19 78 ⇑*i*P PKPdf 00 03 35.0 -0.7
TLL Tololo Astrono 152.66 81 *e*PKIKP PKPdf 00 03 37.0 +0.6
TLL Tololo Astrono 152.66 81 *e*P PKPdf 00 03 37.0 +0.6
CCHI Chillan 154.05 95 *e*P PKPdf 00 03 36.4 -1.7
CCHI Chillan 154.05 95 *e*P PKPdf 00 03 36.4 -1.7
FCH Farellones 154.38 87 *e*P PKPdf 00 03 40.9 +2.2
ILCA Isla Las Cabra 154.66 107 ⇑*i*P PKPdf 00 03 37.3 -1.5
USHA Ushuaia 154.92 138 PKP PKPdf 00 03 38.8 0.0
comp=Z,14nm,1.1s,baz=256,slow=4.2,SNR=3.5
USHA PKPbc PKPbc 00 03 48.0 +0.6
comp=Z,26nm,0.9s,baz=268,slow=3.0,SNR=7.7
USHA PKPab PKPab 00 04 01.5 -1.4
comp=Z,80nm,1.0s,baz=252,slow=2.9,SNR=8.4
USHA PP PP 00 07 39.7 +0.6
comp=Z,11nm,1.1s,baz=255,slow=5.0,SNR=2.0
CFAA Coronel Fontan 155.28 81 PKP PKPdf 00 03 39.6 -0.4
comp=Z,1.5nm,1.0s,baz=278,slow=1.2,SNR=15
CFAA PKPab PKPab 00 04 05.6 +0.4
comp=Z,6.6nm,0.8s,baz=305,slow=5.2,SNR=9.0
CFAA PP PP 00 07 43.1 +1.2
comp=Z,0.7nm,1.0s,baz=298,slow=7.3,SNR=1.9
PLCA Paso Flores 156.02 104 PKP PKPdf 00 03 40.8 +0.1
comp=Z,9.2nm,0.9s,baz=255,slow=2.2,SNR=6.4
PLCA PKPab PKPab 00 04 09.4 +1.3
comp=Z,33nm,0.9s,baz=267,slow=6.2,SNR=5.6
PLCA PP PP 00 07 47.2 +1.2
comp=Z,8.5nm,1.1s,baz=274,slow=6.5,SNR=2.9
PLCA Paso Flores 156.02 104 *e*PKPdf PKPdf 00 03 39.9 -0.8
PLCA LR LR
comp=Z,46µm,19.0s,MS7.3
TRIS Tristan da Cun 158.72 267 PFAKE 00 03 50.0 +5.8
TRIS LR LR
comp=Z,32µm,21.0s,MS7.1
CPUP Villa Florida 160.19 55 PKP PKPdf 00 03 46.3 +0.1
comp=Z,7.9nm,1.0s,baz=3.1,slow=1.5,SNR=8.9
CPUP PKPab PKPab 00 04 26.6 +0.1
comp=Z,13nm,0.6s,baz=322,slow=3.3,SNR=7.0
CPUP PP PP 00 08 09.6 +1.1
comp=Z,4.3nm,0.8s,baz=332,slow=9.1,SNR=2.6
CPUP Villa Florida 160.19 55 PKP PKPdf 00 03 46.3 +0.1
CPUP PKPab PKPab 00 04 26.6 +0.1
CPUP PP PP 00 08 09.6 +1.1
CPUP LR LR
comp=Z,7µm,21.0s
TRQA Tornquist 162.21 94 *e*PKPdf PKPdf 00 03 47.1 -1.0
TRQA *e*PKPab PKPab 00 04 35.1 0.0
TRQA LR LR
comp=Z,68µm,21.0s
SPB Sao Paulo 163.01 26 PFAKE 00 04 00.0 +11
SPB LR LR
comp=Z,61µm,22.0s
CAM4 Nova Friburgo 163.02 11 ⇑*i*P PKPdf 00 03 47.7 -1.6
CAM4 *i* 00 03 50.1
CAM4 *i* 00 03 55.8
CAM4 *i* 00 03 58.7
CAM4 *i* 00 04 07.2
CAM4 *i* 00 04 11.5
CAM4 *i* 00 04 26.9
CAM4 *i* 00 04 36.5
CAM4 *i* 00 04 39.3
CAM4 *i* 00 04 42.6
CAM4 *i* 00 04 47.9
CAM4 *i* 00 04 52.0
CAM4 *i* 00 05 04.4

CAM4				*i*			00 05 13.3
CAM4				*i*			00 08 21.1
CAM4				*i*			00 08 27.4
CAM4				*i*			00 08 30.4
CAM4				*i*			00 09 19.3
CAM4	**Nova Friburgo**	**163.02**	**11**	*i*P	PKPdf		00 03 47.6 -1.7
CAM4				*i*			00 03 50.1
CAM4				*i*			00 03 52.0
CAM4				*i*			00 03 55.8
CAM4				*i*			00 03 58.6
CAM4				*i*			00 04 01.8
CAM4				*i*			00 04 07.2
CAM4				*i*			00 04 13.4
CAM4				*i*			00 04 19.4
CAM4				*i*			00 04 27.7
CAM4				*i*			00 04 36.4
CAM4				*i*			00 04 39.2
CAM4				*i*			00 04 42.5
CAM4				*i*			00 04 47.7
CAM4				*i*			00 04 51.7
CAM4				*i*			00 05 04.7
CAM4				*i*			00 08 20.6
CAM4				*i*			00 08 26.9
CAM4				*i*			00 08 39.0

JMA 13 23:46:34.9, 39°.11N×140°.87E, h12km±1km, M4.5, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.32**	**120**	P		Pg	23 46 41.2	-0.1
JMK				S		Sg	23 46 45.3	-0.2
JRG	**Rokugo**	**0.34**	**327**	P		Pg	23 46 41.6	-0.1
JRG				S		Sg	23 46 47.0	+0.7
JYK	**Kaneyama**	**0.44**	**244**	P		Pg	23 46 43.5	-0.1
JYK				S		Sg	23 46 49.3	-0.2
JOM	**Ohasama**	**0.49**	**42**	S		Sg	23 46 51.0	0.0
JIO	**Ouri**	**0.75**	**150**	P		Pg	23 46 49.0	-0.5
JIO				S		Sg	23 46 58.8	-0.6
JOU	**Okura**	**0.76**	**192**	S		Sg	23 46 59.6	0.0

JMA 13 23:47:51.2, 39°.07N×140°.94E, h9km±1km, M3.8, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.25**	**118**	P		Pg	23 47 56.1	-0.1
JMK				S		Sg	23 47 59.7	+0.2
JRG	**Rokugo**	**0.40**	**324**	P		Pg	23 47 59.6	+0.5
JRG				*e*S		Sg	23 48 05.1	+0.7
JYK	**Kaneyama**	**0.48**	**252**	P		Pg	23 48 00.6	+0.1
JOM	**Ohasama**	**0.49**	**34**	*e*S		Sg	23 48 07.1	0.0
OFUJ	**Ofunato**	**0.57**	**89**	P		Pg	23 48 02.0	-0.2
OFUJ				*e*S		Sg	23 48 10.1	+0.5
JIO	**Ouri**	**0.69**	**152**	P		Pg	23 48 03.9	-0.7
JIO				*e*S		Sg	23 48 13.3	-0.3
MIYJ	**Miyakonagasawa**	**0.85**	**53**	S		Sg	23 48 18.3	-0.3
JKZ	**Kuzumaki**	**0.96**	**18**	*e*S		Sg	23 48 21.8	-0.4

JMA 13 23:48:42.9±0.1, 38°.87N×140°.75E, h3km±1km, M3.8, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.31**	**279**	P		Pg	23 48 49.0	+0.2
JYK				S		Sg	23 48 53.2	+0.3
JMK	**Ichinoseki**	**0.38**	**77**	P		Pg	23 48 50.3	+0.2
JMK				S		Sg	23 48 55.5	+0.5
JOU	**Okura**	**0.51**	**188**	P		Pg	23 48 53.0	+0.4
JIO	**Ouri**	**0.63**	**131**	*e*S		Sg	23 49 02.7	-0.3
JOM	**Ohasama**	**0.73**	**35**	*e*S		Sg	23 49 07.0	+0.5
JYS	**Shiratake**	**0.84**	**220**	P		Pg	23 48 59.1	+0.1
JYA	**Atsumi**	**0.86**	**251**	P		Pg	23 48 59.1	-0.2

*IDC **13** 23:49:04.1±0.6, 39°.12N×140°.99E, h0km, mb4.7/19, mb1 4.8/21, mb1mx4.7/33, mbtmp4.7/21, ML3.8/2, Error ellipse: s-maj=19.2km s-min=14.5km az=120.0*
*JMA **13** 23:49:05.6, 39°.11N×140°.94E, h10km±1km, M4.4*
JMA Felt III J1.
*NEIC **13** 23:49:05.7, 39°.11N×140°.94E, h12km, mb5.1/4, After JMA.*
*ISCJB **13** 23:49:05.4±0.6, 39°.12N±0°.02×140°.95E±0°.04, h14km±4km, mb4.7/22, Error ellipse: s-maj=4.7km s-min=3.9km az=13.6*

ISC 13 23:49:05.7±0.4, 39°.11N±0°.02×140°.96E±0°.04, h8km±3km, n39, σ0°91/48, mb4.7/22, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.26**	**127**	P		**Pg**	**23 49 11.0**	**+0.1**
JMK				S		**Sg**	**23 49 14.8**	**+0.5**
JRG	**Rokugo**	**0.38**	**319**	P		**Pg**	**23 49 13.1**	**-0.1**
JRG				S		**Sg**	**23 49 18.5**	**+0.2**
JOM	**Ohasama**	**0.45**	**35**	P		**Pg**	**23 49 14.4**	**-0.1**
JOM				S		**Sg**	**23 49 20.6**	**+0.1**
JYK	**Kaneyama**	**0.50**	**248**	*e*S		**Sg**	**23 49 21.9**	**-0.1**
OFUJ	**Ofunato**	**0.56**	**92**	P		**Pg**	**23 49 16.7**	**+0.2**
JIO	**Ouri**	**0.72**	**155**	P		**Pg**	**23 49 19.9**	**+0.3**
JIO				S		**Sg**	**23 49 29.3**	**+0.3**
JOU	**Okura**	**0.77**	**197**	P		**Pg**	**23 49 20.6**	**0.0**
JOU				S		**Sg**	**23 49 30.9**	**+0.2**
MIYJ	**Miyakonagasawa**	**0.82**	**55**	P		**Pg**	**23 49 21.4**	**-0.1**
MIYJ				S		**Sg**	**23 49 32.0**	**-0.2**
JMM	**Marumori**	**1.24**	**186**	P		**Pn**	**23 49 29.0**	**-0.4**
JMM				*e*S		**Sb**	**23 49 44.7**	**-0.9**
JANG	**Nango**	**1.34**	**19**	*e*S		**Sb**	**23 49 47.5**	**-0.8**
MJAR	**Matsushiro Arr**	**3.36**	**221**	Pn		**Pn**	**23 49 59.9**	**+1.4**
	12nm, 0.3s, baz=21, slow=27, SNR=6.0							
MJAR				Pg		**Pg**	**23 50 07.7**	**-2.4**
	12nm, 0.3s, baz=16, slow=17, SNR=5.0							
ASAJ	**Asahikawa**	**5.16**	**13**	Pn		**Pn**	**23 50 23.2**	**+0.1**
	3.0nm, 0.3s, baz=232, slow=11, SNR=2.6							
KSRS	**Korea Array**	**10.38**	**265**	Pn		**Pn**	**23 51 38.4**	**+3.6**
	4.2nm, 0.3s, baz=77, slow=14, SNR=8.1							
KSRS				Sn		**Sn**	**23 53 34.8**	**+3.6**
	2.4nm, 0.3s, baz=76, slow=24, SNR=7.4							
ZALV	**Zalesovo Beam**	**40.27**	**311**	P		**P**	**23 56 43.1**	**+0.2**
	14nm, 0.9s, mb4.7, baz=101, slow=4.6, SNR=3.4							
ZALV				PcP		PcP	23 58 45.6	-0.8
	4.3nm, 0.7s, baz=60, slow=5.7, SNR=2.0							
KURK	**Kurchatov**	**44.39**	**306**	P		**P**	**23 57 17.0**	**+0.5**
	18nm, 0.7s, mb4.9, baz=81, slow=8.3, SNR=5.1							
KURK				PcP		PcP	23 58 59.4	-0.8
	5.0nm, 0.9s, baz=99, slow=4.0, SNR=2.7							
KURK	**Kurchatov**	**44.39**	**306**	*e*P		**P**	**23 57 18.0**	**+1.5**
	31nm, 0.8s, mb5.1							
KURK				PcP		PcP	23 58 59.4	-0.8
KDAK	**Kodiak Island**	**45.82**	**43**	P		**P**	**23 57 26.5**	**-1.3**
	13nm, 0.7s, mb5.0, baz=291, slow=7.7, SNR=3.0							
TKM2	**Tokmak 2**	**48.35**	**297**	*e*P		**P**	**23 57 48.3**	**+0.6**
	25nm, 0.9s, mb5.2							
BVAR	**Borovoye Array**	**48.93**	**311**	P		**P**	**23 57 51.6**	**-0.4**
	9.8nm, 0.8s, mb4.9, baz=65, slow=6.8, SNR=4.9							
INK	**Inuvik**	**52.72**	**28**	P		**P**	**23 58 19.2**	**-1.2**
	11nm, 0.8s, mb4.8, baz=308, slow=3.9, SNR=2.5							
INK	**Inuvik**	**52.72**	**28**	*e*P		**P**	**23 58 22.5**	**+2.1**
	16nm, 0.9s, mb4.9							
ABKAR	**Akbulak array**	**56.34**	**309**	*e*P		**P**	**23 58 46.6**	**-0.3**
	7.9nm, 0.7s, mb4.8							
WRA	**Warramunga Arr**	**59.06**	**187**	P		**P**	**23 59 06.0**	**-0.2**
	9.9nm, 1.1s, mb4.8, baz=4.1, slow=7.0, SNR=4.9							
YKA	**Yellowknife Ar**	**62.21**	**31**	P		**P**	**23 59 26.9**	**-0.4**
	2.4nm, 0.7s, mb4.4, baz=304, slow=6.8, SNR=2.9							
ASAR	**Alice Springs**	**62.79**	**187**	P		**P**	**23 59 29.9**	**-1.6**
	3.1nm, 0.8s, mb4.5, baz=0.4, slow=4.7, SNR=2.6							
FINES	**FINESS Array B**	**66.82**	**332**	P		**P**	**23 59 57.1**	**-0.4**
	7.4nm, 0.7s, mb4.8, baz=46, slow=6.4, SNR=3.2							
HFS	**Hagfors**	**72.06**	**335**	P		**P**	**00 00 29.2**	**-0.7**
	9.4nm, 0.7s, mb4.8, baz=56, slow=6.3, SNR=6.9							
NOA	**NORSAR Array B**	**72.14**	**337**	P		**P**	**00 00 29.6**	**-0.8**
	5.2nm, 0.7s, mb4.5, baz=38, slow=6.1, SNR=2.5							
AKASG	**Malin Array Be**	**72.44**	**322**	P		**P**	**00 00 30.7**	**-1.7**
	2.5nm, 0.5s, mb4.4, baz=45, slow=6.7, SNR=4.1							
AKASG	**Malin Array Be**	**72.44**	**322**	P		**P**	**00 00 30.7**	**-1.7**
NVAR	**Mina Array Bea**	**74.04**	**53**	P		**P**	**00 00 43.0**	**+1.0**
	3.0nm, 0.8s, mb4.3, baz=308, slow=4.5, SNR=3.0							
FRB	**Frobisher Bay**	**74.84**	**13**	P		**P**	**00 00 45.5**	**-0.7**
	15nm, 0.8s, mb5.0, baz=339, slow=8.6, SNR=3.3							
BORG	**Borgarnes**	**75.55**	**352**	P		**P**	**00 00 50.2**	**0.0**
	16nm, 0.9s, mb5.0, baz=37, slow=2.9, SNR=2.9							
PDAR	**Pinedale Array**	**76.48**	**46**	P		**P**	**00 00 56.6**	**+0.6**
	3.2nm, 0.8s, mb4.3, baz=278, slow=1.4, SNR=3.1							
BRTR	**Keskin Array B**	**77.22**	**311**	P		**P**	**00 01 01.9**	**+1.8**
	10nm, 1.1s, mb4.7, baz=37, slow=3.6, SNR=3.1							
EKA	**Eskdalemuir Ar**	**81.06**	**340**	P		**P**	**00 01 23.2**	**+2.3**
	3.6nm, 0.9s, mb4.3, baz=34, slow=7.8, SNR=2.4							
DAVOX	**Davos/Dischmat**	**83.97**	**329**	P		**P**	**00 01 36.3**	**0.0**
	6.2nm, 0.8s, mb4.8, baz=38, slow=12, SNR=3.6							
TXAR	**Lajitas Array**	**89.14**	**52**	P		**P**	**00 02 02.9**	**+1.0**
	6.1nm, 1.1s, mb4.9, baz=322, slow=5.7, SNR=2.9							
TXAR	**Lajitas Array**	**89.14**	**52**	P		**P**	**00 02 02.9**	**+1.0**

JMA 13 23:49:42.0, 39°.07N×140°.94E, h8km±1km, M3.8, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.25**	**118**	P		Pg	23 49 46.9	0.0
JMK				S		Sg	23 49 50.3	0.0
JRG	**Rokugo**	**0.40**	**324**	P		Pg	23 49 50.2	+0.3
JYK	**Kaneyama**	**0.48**	**252**	P		Pg	23 49 51.5	+0.3
JYK				*e*S		Sg	23 49 58.0	+0.5
JOM	**Ohasama**	**0.49**	**34**	S		Sg	23 49 57.9	+0.1
OFUJ	**Ofunato**	**0.57**	**89**	P		Pg	23 49 53.0	0.0
OFUJ				S		Sg	23 50 00.8	+0.4
JIO	**Ouri**	**0.69**	**152**	*e*S		Sg	23 50 04.6	+0.2
MIYJ	**Miyakonagasawa**	**0.85**	**53**	P		Pg	23 49 57.9	-0.4
MIYJ				S		Sg	23 50 09.1	-0.3

JMA 13 23:50:09.4, 39°.11N×140°.91E, h10km±1km, M3.8, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.29**	**123**	P		Pg	23 50 15.1	-0.1
JMK				*e*S		Sg	23 50 19.1	0.0
JRG	**Rokugo**	**0.36**	**323**	S		Sg	23 50 21.4	+0.1
JOM	**Ohasama**	**0.47**	**39**	S		Sg	23 50 24.7	-0.1
JYK	**Kaneyama**	**0.47**	**246**	P		Pg	23 50 18.7	+0.1
JYK				S		Sg	23 50 24.5	-0.3
OFUJ	**Ofunato**	**0.59**	**93**	P		Pg	23 50 20.9	0.0
OFUJ				S		Sg	23 50 29.1	+0.5
JIO	**Ouri**	**0.74**	**152**	P		Pg	23 50 23.7	0.0
JIO				S		Sg	23 50 33.4	+0.1
JOU	**Okura**	**0.77**	**195**	S		Sg	23 50 34.6	+0.4
MIYJ	**Miyakonagasawa**	**0.84**	**56**	P		Pg	23 50 25.4	-0.3
MIYJ				S		Sg	23 50 36.7	0.0

JMA 13 23:50:47.9, 39°.16N×140°.96E, h11km±1km, M3.6, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.29**	**136**	S		Sg	23 50 57.7	0.0
JRG	**Rokugo**	**0.35**	**313**	*e*S		Sg	23 51 00.3	+0.8
JOM	**Ohasama**	**0.41**	**39**	*e*S		Sg	23 51 01.8	+0.5
JIO	**Ouri**	**0.77**	**157**	*e*S		Sg	23 51 12.8	+0.1
JOU	**Okura**	**0.83**	**196**	S		Sg	23 51 14.4	-0.2

JMA 13 23:51:05.2, 39°.04N×140°.89E, h6km±1km, M3.6, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.27**	**109**	S		Sg	23 51 14.1	0.0
JRG	**Rokugo**	**0.41**	**331**	*e*S		Sg	23 51 19.5	+1.1
JIO	**Ouri**	**0.69**	**148**	*e*S		Sg	23 51 26.8	-0.5

JMA 13 23:52:21.4, 39°.04N×140°.87E, h10km±1km, M4.0, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.29**	**108**	P		Pg	23 52 27.1	0.0
JMK				S		Sg	23 52 30.9	-0.1
JRG	**Rokugo**	**0.40**	**333**	P		Pg	23 52 28.4	+0.1
JRG				S		Sg	23 52 35.0	+0.4
JYK	**Kaneyama**	**0.42**	**253**	P		Pg	23 52 29.8	+0.2
JYK				S		Sg	23 52 34.9	-0.2
JOM	**Ohasama**	**0.54**	**37**	*e*S		Sg	23 52 39.3	+0.2
JOU	**Okura**	**0.69**	**194**	S		Sg	23 52 44.2	+0.4
JIO	**Ouri**	**0.69**	**147**	P		Pg	23 52 34.8	0.0
JIO				*e*S		Sg	23 52 44.1	+0.2

JMA 13 23:52:45.7, 38°.78N×140°.71E, h2km±1km, M3.7, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.31**	**297**	P		Pg	23 52 51.9	+0.3
JYK				*e*S		Sg	23 52 55.9	+0.3
JIO	**Ouri**	**0.60**	**123**	*e*S		Sg	23 53 04.8	-0.1
JYS	**Shiratake**	**0.75**	**222**	P		Pg	23 53 00.4	+0.3
JYS				*e*S		Sg	23 53 10.2	+0.3
JYA	**Atsumi**	**0.80**	**257**	P		Pg	23 53 01.0	-0.1
JYA				*e*S		Sg	23 53 11.8	+0.3

CASC 13 23:53:05.7±0.9, 12°.17N×87°.94W, h26km±5km, MD3.5, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**1.01**	**59**	*e*P		Pn	23 53 24.1	-0.2
CRIN				*e*S		Sb	23 53 38.6	+1.0
CNCH	**Conchagua**	**1.10**	**5**	*e*P		P	23 53 25.1	
CNCH				*e*S		S	23 53 41.3	
BLLM	**Bellamira**	**1.30**	**347**	*e*P		P	23 53 27.6	
COPN	**Copaltepe**	**1.32**	**89**	*e*P		Pn	23 53 28.0	-0.4
COPN				*e*S		Sn	23 53 45.7	+0.6
MOMN	**Momotombo**	**1.39**	**80**	*e*P		Pn	23 53 29.1	-0.2
CSAN		**1.48**	**89**	*e*P		Pn	23 53 31.2	+0.6
LFRS	**El Faro**	**1.81**	**323**	*e*P		P	23 53 35.9	
LFRS				*e*S		S	23 53 58.9	
BOQS	**Boqueron**	**2.03**	**320**	*e*P		P	23 53 38.4	
RBDL	**Robledal**	**2.58**	**319**	*e*P		P	23 53 46.1	

*IDC **13** 23:53:09.6±0.8, 39°.09N×140°.90E, h0km, mb4.3/12, mb1 4.5/13, mb1mx4.3/27, mbtmp4.3/13, ML3.3/1, Error ellipse: s-maj=23.1km s-min=19.4km az=95.0*
*NEIC **13** 23:53:10.8, 39°.09N×140°.97E, h10km, mb4.5/1, After JMA.*
*JMA **13** 23:53:10.7, 39°.09N×140°.97E, h10km±1km, M4.1*
JMA Felt IV J1.
*ISCJB **13** 23:53:10.4±0.9, 39°.10N±0°.04×141°.01E±0°.06, h15km±6km, mb4.3/13, Error ellipse: s-maj=7.4km s-min=5.8km az=19.1*

ISC 13 23:53:11.0±0.6, 39°.08N±0°.03×140°.98E±0°.05, h8km±4km, n22, σ0°60/25, mb4.3/13, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.23**	**125**	P		**Pg**	**23 53 15.5**	**-0.1**
JMK				*e*S		**Sg**	**23 53 18.8**	**+0.2**
JRG	**Rokugo**	**0.41**	**319**	*e*S		**Sg**	**23 53 24.8**	**+0.3**
JOM	**Ohasama**	**0.46**	**32**	*e*S		**Sg**	**23 53 25.7**	**-0.3**
JYK	**Kaneyama**	**0.51**	**252**	*e*S		**Sg**	**23 53 27.4**	**-0.2**
JIO	**Ouri**	**0.69**	**155**	*e*S		**Sg**	**23 53 33.1**	**-0.1**
JOU	**Okura**	**0.76**	**199**	P		**Pg**	**23 53 25.5**	**-0.1**
JOU				S		**Sg**	**23 53 35.4**	**0.0**
MJAR	**Matsushiro Arr**	**3.35**	**222**	Pn		**Pn**	**23 54 03.8**	**+0.1**
	3.4nm, 0.3s, baz=78, slow=15, SNR=3.9							
MAJO	**Matsushiro**	**3.35**	**222**	*e*Pn		**Pn**	**23 54 03.8**	**+0.1**
KSRS	**Korea Array**	**10.40**	**265**	Pn		**Pn**	**23 55 43.6**	**+3.4**
	1.0nm, 0.3s, baz=80, slow=14, SNR=14							
KSRS				Sn		**Sn**	**23 57 42.6**	**+5.7**
	0.9nm, 0.3s, baz=81, slow=26, SNR=6.7							
KURK	**Kurchatov**	**44.42**	**306**	P		**P**	**00 01 21.6**	**-0.3**
	5.0nm, 0.8s, mb4.3, baz=82, slow=8.2, SNR=3.1							
KDAK	**Kodiak Island**	**45.82**	**43**	P		**P**	**00 01 33.0**	**0.0**
	6.7nm, 0.8s, mb4.6, baz=270, slow=8.7, SNR=4.1							
BVAR	**Borovoye Array**	**48.96**	**311**	P		**P**	**00 01 57.6**	**+0.2**
	3.5nm, 1.0s, mb4.3, baz=72, slow=4.7, SNR=2.6							
ABKAR	**Akbulak array**	**56.38**	**309**	*e*P		**P**	**00 02 52.0**	**-0.4**
	3.7nm, 0.7s, mb4.5							
WRA	**Warramunga Arr**	**59.04**	**187**	P		**P**	**00 03 10.9**	**-0.5**
	4.2nm, 0.6s, mb4.6, baz=5.0, slow=7.2, SNR=5.7							
ASAR	**Alice Springs**	**62.77**	**187**	P		**P**	**00 03 36.7**	**+0.1**
	3.3nm, 0.7s, mb4.6, baz=13, slow=6.0, SNR=5.8							
FINES	**FINESS Array B**	**66.85**	**332**	P		**P**	**00 04 02.9**	**0.0**
	4.1nm, 0.7s, mb4.5, baz=46, slow=9.9, SNR=3.1							
NOA	**NORSAR Array B**	**72.17**	**337**	P		**P**	**00 04 36.0**	**+0.3**
	4.1nm, 1.0s, mb4.3, baz=38, slow=6.0, SNR=3.0							
AKASG	**Malin Array Be**	**72.48**	**322**	P		**P**	**00 04 36.7**	**-1.0**
	2.2nm, 0.7s, mb4.2, baz=47, slow=5.8, SNR=4.0							
NVAR	**Mina Array Bea**	**74.04**	**53**	P		**P**	**00 04 49.2**	**+1.9**
	2.5nm, 1.0s, mb4.1, baz=298, slow=6.1, SNR=3.4							
PDAR	**Pinedale Array**	**76.48**	**46**	P		**P**	**00 05 00.9**	**-0.3**
	1.1nm, 0.7s, mb3.9, baz=284, slow=3.6, SNR=3.0							
BRTR	**Keskin Array B**	**77.25**	**311**	P		**P**	**00 05 05.9**	**+0.3**
	2.1nm, 1.0s, mb4.0, baz=67, slow=4.6, SNR=4.2							
GERES	**GERESS Array B**	**80.80**	**328**	P		**P**	**00 05 24.2**	**-0.7**
	1.0nm, 0.7s, mb3.9, baz=37, slow=5.4, SNR=3.3							

JMA 13 23:53:42.0, 39°.03N×140°.85E, h5km±1km, M3.7, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.30**	**105**	*e*S		Sg	23 53 51.5	-0.2
JYK	**Kaneyama**	**0.40**	**254**	P		Pg	23 53 50.1	+0.4
JYK				*e*S		Sg	23 53 55.5	+0.6
JRG	**Rokugo**	**0.40**	**335**	*e*S		Sg	23 53 55.6	+0.6
JOM	**Ohasama**	**0.56**	**38**	*e*S		Sg	23 53 59.7	-0.4
JOU	**Okura**	**0.68**	**192**	S		Sg	23 54 04.0	+0.2

JMA 13 23:54:37.4, 39°.10N×140°.84E, h10km±1km, M3.8, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.33**	**116**	P		Pg	23 54 43.9	-0.1
JMK				*e*S		Sg	23 54 48.0	-0.4
JRG	**Rokugo**	**0.34**	**332**	P		Pg	23 54 44.3	+0.2
JRG				S		Sg	23 54 49.3	+0.7
JYK	**Kaneyama**	**0.42**	**244**	P		Pg	23 54 45.5	-0.1
JYK				S		Sg	23 54 51.0	-0.1
JOM	**Ohasama**	**0.51**	**43**	S		Sg	23 54 53.9	-0.2
JOU	**Okura**	**0.75**	**191**	*e*S		Sg	23 55 01.5	0.0
JIO	**Ouri**	**0.76**	**148**	S		Sg	23 55 01.3	-0.6
JYA	**Atsumi**	**1.01**	**240**	P		Pg	23 54 56.5	-0.4

JMA 13 23:54:54.5, 38°.90N×140°.76E, h4km±2km, M3.9, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.31**	**273**	P		Pg	23 55 00.7	+0.2
JYK				S		Sg	23 55 04.9	+0.3
JMK	**Ichinoseki**	**0.36**	**82**	P		Pg	23 55 01.4	-0.1
JMK				S		Sg	23 55 06.4	+0.2
JOM	**Ohasama**	**0.71**	**36**	*e*S		Sg	23 55 17.5	+0.3
JYS	**Shiratake**	**0.87**	**219**	P		Pg	23 55 11.0	-0.2
JYS				*e*S		Sg	23 55 22.6	+0.2
JYA	**Atsumi**	**0.87**	**250**	P		Pg	23 55 10.8	-0.4
JYA				S		Sg	23 55 22.5	-0.1

JMA 13 23:55:11.8, 38°.78N×140°.80E, h3km±1km, M3.8, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.37**	**62**	*e*S		Sg	23 55 24.2	+0.5

JMA 13 23:55:30.9, 39°.05N×140°.85E, h11km±1km, M3.7, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.30**	**109**	P		Pg	23 55 36.9	-0.1
JMK				*e*S		Sg	23 55 41.0	-0.1
JRG	**Rokugo**	**0.38**	**334**	*e*S		Sg	23 55 44.2	+0.5
JOM	**Ohasama**	**0.54**	**39**	*e*S		Sg	23 55 48.4	-0.3
JIO	**Ouri**	**0.71**	**147**	*e*S		Sg	23 55 54.0	0.0

JMA 13 23:55:33.6, 39°.04N×140°.84E, h6km±1km, M3.9, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.31**	**106**	S		Sg	23 55 43.5	-0.2
JRG	**Rokugo**	**0.39**	**336**	P		Pg	23 55 41.5	+0.3
JRG				S		Sg	23 55 47.3	+1.0
JOM	**Ohasama**	**0.56**	**39**	P		Pg	23 55 44.3	0.0
JOM				*e*S		Sg	23 55 51.7	+0.1
JOU	**Okura**	**0.69**	**192**	P		Pg	23 55 46.8	0.0
JOU				S		Sg	23 55 55.8	+0.1

JMA 13 23:56:26.8, 38°.97N×140°.89E, h7km±1km, M3.5, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.26**	**94**	S		Sg	23 56 35.5	+0.2
OFUJ	**Ofunato**	**0.62**	**79**	*e*S		Sg	23 56 46.7	0.0
JOU	**Okura**	**0.63**	**196**	S		Sg	23 56 47.0	-0.1

*IDC **13** 23:56:44.0±0.5, 39°.09N×140°.88E, h0km, mb4.5/24, mb1 4.7/25, mb1mx4.6/29, mbtmp4.5/25, ML3.9/1, Error ellipse: s-maj=15.9km s-min=14.3km az=102.0*
*ISCJB **13** 23:56:44.3±0.7, 39°.10N±0°.03×140°.91E±0°.04, h9km±4km, mb4.8/94, Error ellipse: s-maj=5.0km s-min=4.3km az=154.6*
*NEIC **13** 23:56:45.2, 39°.11N×140°.97E, h12km, mb4.9/68, After JMA.*
NEIC Recorded [4 JMA] in Iwate and Miyagi; [2 JMA] in Akita and Aomori; [1 JMA] in Yamagata.
*MOS **13** 23:56:45.2±2.8, 39°.10N×140°.90E, h33km, mb5.0/62, Error ellipse: s-maj=9.2km s-min=5.3km az=102.0*
*JMA **13** 23:56:45.1,

comp=Z,0.7nm,0.3s,baz=78,slow=15,SNR=3.0
KSRS Korea Array 10.37 265 P **Pn 23 59 19.2 +4.7**
KSRS 00 01 10.5
KSRS pmax pmax
comp=Z,3.0nm,0.3s
KSRS smax
comp=N,1.0nm,0.3s
KLR Kul'dur 12.06 330 *eP* **Pn 23 59 38.6 +0.9**
YAK Yakutsk 23.96 347 *eP* **P 00 01 58.6 -1.5**
YAK pmax pmax
comp=Z,35nm,0.7s,mb4.9
YAK Yakutsk 23.96 347 *eP* **P 00 01 58.6 -1.5**
comp=Z,35nm,0.7s,mb4.9
SEY Seymchan 24.83 12*ceP* **P 00 02 07.3 -0.8**
ZALV Zalesovo Beam 40.26 311 P **P 00 04 22.3 -0.4**
comp=Z,9.9nm,0.9s,mb4.5,baz=78,slow=6.3,SNR=9.0
ZALV PcP PcP 00 06 25.7 -0.7
comp=Z,2.4nm,0.6s,baz=84,slow=3.7,SNR=3.7
ZALV ScP ScP 00 10 15.3 -0.7
comp=Z,1.1nm,0.5s,baz=94,slow=3.8,SNR=3.1
ZALV Zalesovo Beam 40.26 311 P **P 00 04 22.3 -0.4**
ZALV 00 06 25.7
ZALV 00 10 15.3
ZALV pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
CMAR Chiang Mai Arr 41.71 253 P **P 00 04 34.3 -0.8**
comp=Z,0.9nm,0.3s,mb3.8,baz=36,slow=7.8,SNR=3.0
CMAR Chiang Mai Arr 41.71 253 P **P 00 04 34.3 -0.8**
CMAR pmax pmax
comp=Z,1.0nm,0.4s
MK31 Makanchi Array 42.72 300 *eP* **P 00 04 42.5 -0.6**
MKAR Makanchi Array 42.72 300 P **P 00 04 42.2 -0.9**
comp=Z,8.1nm,0.9s,mb4.5,baz=80,slow=6.9,SNR=7.4
MKAR Makanchi Array 42.72 300 P **P 00 04 42.2 -0.9**
MKAR pmax pmax
comp=Z,8.0nm,0.9s
KURK Kurchatov 44.37 306 P **P 00 04 56.2 -0.1**
comp=Z,15nm,0.9s,mb4.7,baz=81,slow=8.5,SNR=10
KURK Kurchatov 44.37 306*ceP* **P 00 04 57.0 +0.7**
KURK pmax pmax
comp=Z,83nm,2.5s,mb5.0
KURK Kurchatov 44.37 306 *eP* **P 00 04 55.4 -1.0**
comp=Z,15nm,0.9s,mb4.7
RSO Redoubt South 45.52 39 *eP* **P 00 05 05.9 +0.6**
KDAK Kodiak Island 45.82 43 P **P 00 05 07.5 -0.3**
comp=Z,6.8nm,0.6s,mb4.7,baz=303,slow=6.1,SNR=5.3
KDAK Kodiak Island 45.82 43 *i P* **P 00 05 09.6 +1.9**
KTH Kantishna Hill 46.25 35 *eP* **P 00 05 10.5 -0.5**
comp=Z,21nm,1.2s,mb5.0
RAMN Ramite 46.52 272 *eP* **P 00 05 14.7 +1.1**
comp=Z,251nm,2.0s,mb5.8
COLD Coldfoot 46.53 30 *eP* **P 00 05 12.7 -0.5**
comp=Z,5.6nm,0.9s,mb4.5
TRF Thorofare Moun 46.54 35 *eP* **P 00 05 13.5 +0.2**
comp=Z,7.9nm,0.9s,mb4.6
GUN Gumba 46.62 273 *eP* **P 00 05 14.6 +0.2**
comp=Z,68nm,0.9s,mb5.6
MCK McKinley 47.13 35 *eP* **P 00 05 18.4 +0.5**
MCK pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
MCK McKinley 47.13 35 *eP* **P 00 05 18.4 +0.5**
comp=Z,6.1nm,0.7s,mb4.6
KKN Kakani 47.14 274 *eP* **P 00 05 18.7 +0.2**
comp=Z,48nm,0.8s,mb5.5
KKN Kakani 47.14 274 *eP* **P 00 05 18.7 +0.2**
KKN pmax pmax
comp=Z,48nm,0.8s,mb5.5
PKI Pulchoki 47.14 273 *eP* **P 00 05 19.3 +0.8**
PKI pmax pmax
comp=Z,20nm,0.8s,mb5.1
PKI Pulchoki 47.14 273 *eP* **P 00 05 19.3 +0.8**
comp=Z,20nm,0.8s,mb5.1
PKIN Phulchoki 47.15 273 *eP* **P 00 05 19.3 +0.7**
comp=Z,20nm,0.8s,mb5.1
DMN Daman 47.36 274 *eP* **P 00 05 21.0 +0.8**
comp=Z,37nm,1.1s,mb5.2
TKM2 Tokmak 2 48.34 297 *eP* **P 00 05 28.2 +0.6**
TKM2 pmax pmax
comp=Z,23nm,1.0s,mb5.2
TKM2 Tokmak 2 48.34 297 *eP* **P 00 05 28.1 +0.6**
comp=Z,23nm,1.0s,mb5.2
BVAR Borovoye Array 48.91 311 P **P 00 05 31.6 -0.3**
comp=Z,3.1nm,0.6s,mb4.5,baz=77,slow=6.8,SNR=8.8
BVAR Borovoye Array 48.91 311 P **P 00 05 31.6 -0.2**
BVAR pmax pmax
comp=Z,3.0nm,0.6s
BRVK Borovoye 48.97 311*ceP* **P 00 05 33.2 +0.9**
BRVK pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
BRVK Borovoye 48.97 311 *eP* **P 00 05 31.2 -1.0**
comp=Z,9.7nm,0.9s,mb4.8
AAK Ala-Archa 49.20 297 *eP* **P 00 05 34.6 +0.4**
AAK pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
AAK Ala-Archa 49.20 297 *eP* **P 00 05 34.6 +0.4**
comp=Z,7.5nm,0.9s,mb4.7
UCH Uchtor 49.32 296 *eP* **P 00 05 35.7 +0.6**
comp=Z,4.8nm,0.9s,mb4.5
EKS2 Erkin-Say 49.69 297 *eP* **P 00 05 38.3 +0.4**
comp=Z,8.4nm,0.9s,mb4.8
INK Inuvik 52.72 28 P **P 00 05 58.2 -2.1**
comp=Z,6.8nm,0.9s,mb4.6,baz=275,slow=10,SNR=5.2
INK Inuvik 52.72 28 P **P 00 05 58.2 -2.1**
INK pmax pmax
comp=Z,7.0nm,0.9s
INK Inuvik 52.72 28 *eP* **P 00 06 01.0 +0.7**
comp=Z,7.0nm,0.9s,mb4.6
SVE Sverdlovsk 53.35 318⇑*eP* **P 00 06 05.6 +0.5**
SVE pmax pmax
comp=Z,22nm,0.9s,mb5.1
ARU Arti 54.56 317*d iP* **P 00 06 14.1 +0.1**
ARU S **S 00 13 51.3 -2.2**
ARU SS SS 00 17 22.8 -13
ARU pmax pmax
comp=Z,18nm,1.0s,mb5.1
ARU Arti 54.56 317 *eP* **P 00 06 13.4 -0.6**
comp=Z,12nm,0.8s,mb5.0
ABKAR Akbulak array 56.33 309 *eP* **P 00 06 25.8 -1.0**
comp=Z,13nm,1.0s,mb4.9
KBL Kabul 56.34 290 *eP* **P 00 06 26.8 -0.4**
KBL pmax pmax
comp=Z,25nm,0.9s,mb5.2
KBL Kabul 56.34 290 *eP* **P 00 06 26.8 -0.4**
comp=Z,25nm,0.9s,mb5.2
WRAB Tennant Creek 59.06 187 *eP* **P 00 06 45.5 -0.7**
WRAB pmax pmax
comp=Z,18nm,1.1s,mb5.0
WRAB Tennant Creek 59.06 187 *eP* **P 00 06 45.5 -0.8**
comp=Z,18nm,1.1s,mb5.0
WRA Warramunga Arr 59.07 187 P **P 00 06 45.1 -1.2**
comp=Z,8.0nm,0.8s,mb4.8,baz=4.6,slow=7.5,SNR=12
WRA Warramunga Arr 59.07 187 P **P 00 06 45.1 -1.2**
WRA pmax pmax
comp=Z,8.0nm,0.9s
CTAO Charters Tower 59.10 174 *eP* **P 00 06 46.2 -0.3**
CTAO pmax pmax
comp=Z,18nm,1.3s,mb4.9
CTAO Charters Tower 59.10 174 *eP* **P 00 06 46.2 -0.3**
comp=Z,18nm,1.3s,mb4.9
RES Resolute Bay 60.68 15 P **P 00 06 56.1 -0.7**
comp=Z,11nm,1.0s,mb5.0,baz=341,slow=6.7,SNR=8.3
RES Resolute Bay 60.68 15 *eP* **P 00 06 55.9 -0.9**
RES pmax pmax
comp=Z,12nm,1.0s,mb5.0
RES Resolute Bay 60.68 15 *eP* **P 00 06 55.9 -0.9**
comp=Z,12nm,1.0s,mb5.0
ARCES ARCESS Array B 61.92 339 P **P 00 07 04.8 -0.4**
comp=Z,4.3nm,1.0s,mb4.5,baz=50,slow=8.4,SNR=4.2
ARCES ARCESS Array B 61.92 339 P **P 00 07 04.9 -0.4**
ARCES pmax pmax
comp=Z,4.0nm,1.0s
YKA Yellowknife Ar 62.20 31 P **P 00 07 07.9 +0.6**
comp=Z,1.1nm,0.7s,mb4.1,baz=327,slow=6.8,SNR=2.8
YKA Yellowknife Ar 62.20 31 P **P 00 07 07.9 +0.6**
YKA pmax pmax
comp=Z,1.0nm,0.7s
ASAR Alice Springs 62.80 187 P **P 00 07 11.4 -0.2**
comp=Z,4.6nm,0.8s,mb4.7,baz=9.6,slow=6.6,SNR=14
ASAR Alice Springs 62.80 187 P **P 00 07 11.4 -0.2**
ASAR pmax pmax
comp=Z,5.0nm,0.8s
JOF Joensuu 63.95 331 *eP* **P 00 07 11.2 -7.7**
JOF pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
JOF Joensuu 63.95 331 *ep* **P 00 07 11.2 -7.7**
comp=Z,7.9nm,1.0s,mb4.7

OBN Obninsk 66.21 323⇑*eP* **P 00 07 33.8 +0.1**
OBN pmax pmax
comp=Z,39nm,1.6s,mb5.2
OBN MLR MLR
comp=Z,40μm,17.0s
KAF Kangasniemi 66.29 332 *eP* **P 00 07 27.8 -6.3**
KAF pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
KAF Kangasniemi 66.29 332 *ep* **P 00 07 27.8 -6.3**
comp=Z,4.6nm,0.6s,mb4.7
FINES FINESS Array B 66.80 332 P **P 00 07 36.6 -0.7**
comp=Z,12nm,0.9s,mb4.9,baz=56,slow=7.1,SNR=14
FINES FINESS Array B 66.80 332 P **P 00 07 36.7 -0.7**
FINES pmax pmax
comp=Z,12nm,0.9s
VSR Storozhevoye 67.13 318 *eP* **P 00 07 38.5 -1.1**
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
VSR pmax pmax
comp=E,9.0nm,0.9s
NEW Newport 68.90 44 *eP* **P 00 07 51.3 +0.5**
NEW pmax pmax
comp=Z,8.0nm,1.0s
NEW Newport 68.90 44 *eP* **P 00 07 51.3 +0.5**
comp=Z,8.3nm,1.0s,mb4.6
ZEI Tsey 69.21 309 *eP* **P 00 07 51.5 -1.3**
ZEI pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
KIV Kislovodsk 69.27 310⇑*eP* **P 00 07 54.6 +1.4**
KIV *e* 00 10 27.3
KIV pmax pmax
comp=Z,52nm,1.0s,mb5.4
KIV MLR MLR
comp=Z,53μm,16.0s
KIV Kislovodsk 69.27 310 *eP* **P 00 07 54.0 +0.8**
comp=Z,55nm,1.0s,mb5.4
GNI Garni 70.17 306 *eP* **P 00 07 58.7 -0.1**
GNI pmax pmax
comp=Z,10.0nm,1.0s
GNI Garni 70.17 306 *eP* **P 00 07 58.7 -0.1**
comp=Z,10nm,1.0s,mb4.7
IZAR Zarasai 70.46 327 *eP* **P 00 08 00.2 -0.1**
IDID Didziasalis 70.53 326 *eP* **P 00 08 00.6 -0.2**
ISAL Salakas 70.63 327 *eP* **P 00 08 01.4 +0.2**
STKA Stephens Creek 70.63 179 P **P 00 08 00.9 -0.5**
comp=Z,5.7nm,1.1s,mb4.4,baz=321,slow=13,SNR=3.3
IIGN Ignalina 70.73 327 *eP* **P 00 08 01.8 -0.1**
NB2 NORSAR Subarra 72.13 337 P **P 00 08 09.8 -0.5**
comp=Z,0.7nm,0.8s,baz=46,slow=6.2
NOA NORSAR Array B 72.13 337 P **P 00 08 10.1 -0.1**
comp=Z,7.2nm,0.9s,mb4.6,baz=38,slow=5.9,SNR=16
NOA NORSAR Array B 72.13 337 P **P 00 08 10.1 -0.2**
NOA pmax pmax
comp=Z,7.0nm,0.9s
FFC Flin Flon 72.16 33 *eP* **P 00 08 11.1 +0.5**
FFC pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
FFC Flin Flon 72.16 33 *eP* **P 00 08 11.1 +0.5**
comp=Z,6.2nm,0.9s,mb4.5
NAO01 NORSAR Array S 72.38 337 *eP* **P 00 08 11.0 -0.8**
comp=Z,9.9nm,0.9s,mb4.7
AKASG Malin Array Be 72.43 322 P **P 00 08 11.7 -0.6**
comp=Z,2.7nm,0.5s,mb4.4,baz=46,slow=6.1,SNR=15
AKASG Malin Array Be 72.43 322 P **P 00 08 11.7 -0.6**
AKASG pmax pmax
comp=Z,3.0nm,0.5s
AKBB Malin Array Si 72.43 322 *eP* **P 00 08 11.7 -0.6**
KIEV Kiev 72.44 322 *eP* **P 00 08 11.5 -0.8**
KIEV pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
KIEV Kiev 72.44 322 *eP* **P 00 08 11.5 -0.9**
comp=Z,8.7nm,0.9s,mb4.7
CMB Columbia Colle 72.97 55 *eP* **P 00 08 16.4 +0.7**
CMB pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
CMB Columbia Colle 72.97 55 *eP* **P 00 08 16.4 +0.7**
comp=Z,7.0nm,1.1s,mb4.5
HLID Hailey 73.23 47 *eP* **P 00 08 18.2 +1.0**
comp=Z,2.0nm,0.7s,mb4.2
NVAR Mina Array Bea 74.05 53 P **P 00 08 23.2 +1.2**
comp=Z,5.9nm,0.9s,mb4.5,baz=280,slow=5.2,SNR=15
N12A Clover Valley, 74.55 50 *eP* **P 00 08 26.4 +1.5**
comp=Z,5.0nm,0.9s,mb4.4
TPAW Teton Pass 75.23 46 *eP* **P 00 08 30.2 +1.3**
comp=Z,3.3nm,0.6s,mb4.4
BORG Borgarnes 75.54 352 *eP* **P 00 08 31.7 +1.5**
BORG pmax pmax
comp=Z,174nm,2.1s
BORG Borgarnes 75.54 352 *eP* **P 00 08 31.7 +1.5**
comp=Z,174nm,2.1s,mb5.6
HWUT Hardware Ranch 76.10 47 *eP* **P 00 08 34.8 +0.9**
comp=Z,6.2nm,1.0s,mb4.5
DUG Dugway 76.28 49 *eP* **P 00 08 35.7 +0.8**
DUG pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
DUG Dugway 76.28 49 *eP* **P 00 08 35.7 +0.8**
comp=Z,7.6nm,1.0s,mb4.6
BW06 Boulder Array 76.48 46 *eP* **P 00 08 36.3 +0.3**
comp=Z,3.4nm,0.8s,mb4.3
PDAR Pinedale Array 76.48 46 P **P 00 08 36.2 +0.3**
comp=Z,2.2nm,0.7s,mb4.2,baz=278,slow=3.0,SNR=7.7
NLU North Lily Min 76.87 49 *eP* **P 00 08 39.5 +1.2**
comp=Z,7.3nm,0.9s,mb4.6
STHS Stebnicka Huta 77.05 324 *eP* **P 00 08 40.3 +1.3**
STHS pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
STHS Stebnicka Huta 77.05 324 *eP* **P 00 08 40.3 +1.3**
comp=Z,5.5nm,0.9s,mb4.5
OJC Ojcow 77.11 326 *eP* **P 00 08 38.3 -1.1**
BR131 Keskin Array E 77.20 311 *eP* **P 00 08 40.5 +0.4**
comp=Z,3.7nm,1.0s,mb4.3
BRTR Keskin Array B 77.20 311 P **P 00 08 40.2 +0.2**
comp=Z,4.6nm,1.1s,mb4.3,baz=101,slow=3.9,SNR=6.0
BRTR Keskin Array B 77.20 311 P **P 00 08 40.3 +0.2**
BRTR pmax pmax
comp=Z,5.0nm,1.1s
CRVS Cervenica-Dubn 77.32 324 *eP* **P 00 08 39.7 -0.9**
MORC Moravsky Berou 78.42 326 *eP* **P 00 08 46.8 +0.1**
MORC pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
MORC Moravsky Berou 78.42 326 *eP* **P 00 08 46.8 +0.2**
comp=Z,5.8nm,0.9s,mb4.5
PSZ Piszkesteto 78.75 324 *eP* **P 00 08 48.5 -0.1**
PSZ pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
PSZ Piszkesteto 78.75 324 *eP* **P 00 08 48.5 -0.1**
comp=Z,8.0nm,0.9s,mb4.7
VYHS Vyhne 78.80 325 *eP* **P 00 08 49.0 +0.2**
CLL Collm 79.11 330 *eP* **P 00 08 50.0 -0.5**
CLL pmax pmax
comp=Z,22nm,1.1s,mb5.0
CLL Collm 79.11 330 *eP* **P 00 08 50.0 -0.5**
comp=Z,22nm,1.1s,mb5.0
PV04 Paradox Valley 79.75 49 *eP* **P 00 08 55.1 +0.9**
WUAZ Wupatki 80.18 52 *eP* **P 00 08 58.1 +1.6**
comp=Z,6.8nm,0.9s,mb4.6
MMAI Mount Meron Ar 80.46 305 P **P 00 08 58.6 +0.4**
comp=Z,4.2nm,0.9s,mb4.4,baz=4.4,slow=5.4,SNR=5.4
KHC Kasperske Hory 80.58 328 *eP* **P 00 08 57.5 -1.0**
KHC Kasperske Hory 80.58 328 *eP* **P 00 08 57.5 -1.0**
GERES GERESS Array B 80.75 328 P **P 00 08 59.4 0.0**
comp=Z,3.0nm,0.8s,mb4.3,baz=35,slow=4.9,SNR=14
GERES GERESS Array B 80.75 328 P **P 00 08 59.4 0.0**
GERES pmax pmax
comp=Z,3.0nm,0.8s
GERES GERESS Array B 80.75 328 P **P 00 08 59.4 0.0**
SDCO Great Sand Dun 82.16 47 *eP* **P 00 09 08.1 +1.0**
comp=Z,2.7nm,1.0s,mb4.1
STU Stuttgart 82.61 330 *eP* **P 00 09 08.5 -0.7**
STU pmax pmax
comp=Z,11nm,0.7s,mb5.0
STU Stuttgart 82.61 330 *eP* **P 00 09 08.5 -0.8**
comp=Z,11nm,0.7s,mb5.0
GIVF Givet 83.13 333 *eP* **P 00 09 11.0 -0.9**
BAIF Baives 83.38 334 *eP* **P 00 09 12.5 -0.7**
SCHQ Schefferville 83.44 16 P **P 00 09 12.7 -0.7**
comp=Z,4.8nm,0.9s,mb4.5,baz=326,slow=11,SNR=3.6
CDF Champ du Feu 83.64 331 *eP* **P 00 09 14.3 -0.3**
HINF Hinteralfeld 84.30 331 *eP* **P 00 09 17.4 -0.5**
HAU Haudompre 84.33 331 *eP* **P 00 09 17.5 -0.6**
comp=Z,13nm,0.9s,mb4.8
HAU Haudompre 84.33 331 *eP* **P 00 09 17.5 -0.6**
HAU pmax pmax
comp=Z,6.0nm,0.9s,mb4.7

HAU Haudompre 84.33 331 *eP* **P 00 09 17.5 -0.6**
comp=Z,6.3nm,0.9s,mb4.8
MEZF Maizieres J'vi 84.39 332 *eP* **P 00 09 18.2 -0.2**
CABF La Chapelle 85.59 331 *eP* **P 00 09 24.0 -0.4**
comp=Z,20nm,1.0s,mb5.0
CABF La Chapelle 85.59 331 *eP* **P 00 09 24.0 -0.4**
CABF pmax pmax
comp=Z,10.0nm,1.0s,mb5.0
CABF La Chapelle 85.59 331 *eP* **P 00 09 24.0 -0.4**
comp=Z,10nm,1.0s,mb5.0
LOR Lormes 85.86 332 *eP* **P 00 09 25.1 -0.7**
comp=Z,36nm,1.1s,mb5.2
LOR Lormes 85.86 332 *eP* **P 00 09 25.1 -0.7**
LOR pmax pmax
comp=Z,18nm,1.1s,mb5.2
LOR Lormes 85.86 332 *eP* **P 00 09 25.1 -0.7**
comp=Z,18nm,1.1s,mb5.2
FLN La Foliniere 86.06 336 *eP* **P 00 09 26.2 -0.5**
comp=Z,11nm,0.8s,mb4.8
FLN La Foliniere 86.06 336 *eP* **P 00 09 26.2 -0.5**
FLN pmax pmax
comp=Z,6.0nm,0.8s,mb4.9
FLN La Foliniere 86.06 336 *eP* **P 00 09 26.2 -0.5**
comp=Z,5.7nm,0.8s,mb4.8
LDF La Druitiere 86.09 335 *eP* **P 00 09 26.2 -0.7**
comp=Z,32nm,1.2s,mb5.1
LDF La Druitiere 86.09 335 *eP* **P 00 09 26.2 -0.7**
LDF pmax pmax
comp=Z,16nm,1.3s,mb5.1
LDF La Druitiere 86.09 335 *eP* **P 00 09 26.2 -0.7**
comp=Z,16nm,1.3s,mb5.1
SSF Saint Saulge 86.17 332 *eP* **P 00 09 26.8 -0.5**
comp=Z,23nm,0.9s,mb5.1
SSF Saint Saulge 86.17 332 *eP* **P 00 09 26.8 -0.5**
SSF pmax pmax
comp=Z,12nm,0.9s,mb5.1
SSF Saint Saulge 86.17 332 *eP* **P 00 09 26.8 -0.5**
comp=Z,12nm,0.9s,mb5.1
LPL La Plagne 86.25 330 *eP* **P 00 09 27.5 -0.2**
comp=Z,25nm,1.0s,mb5.1
LPL La Plagne 86.25 330 *eP* **P 00 09 27.5 -0.2**
LPL pmax pmax
comp=Z,12nm,1.0s,mb5.1
LPL La Plagne 86.25 330 *eP* **P 00 09 27.5 -0.2**
comp=Z,12nm,1.0s,mb5.1
LPG La Plagne 86.26 330 *eP* **P 00 09 27.8 0.0**
comp=Z,28nm,1.1s,mb5.1
LPG La Plagne 86.26 330 *eP* **P 00 09 27.8 0.0**
LPG pmax pmax
comp=Z,14nm,1.1s,mb5.1
LPG La Plagne 86.26 330 *eP* **P 00 09 27.8 0.0**
comp=Z,14nm,1.1s,mb5.1
HYF Humbligny 86.30 333 *eP* **P 00 09 27.9 0.0**
SMF Signal de Mont 86.40 332 *eP* **P 00 09 28.0 -0.4**
comp=Z,13nm,0.9s,mb4.9
SMF Signal de Mont 86.40 332 *eP* **P 00 09 28.0 -0.4**
SMF pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
SMF Signal de Mont 86.40 332 *eP* **P 00 09 28.0 -0.4**
comp=Z,6.3nm,0.9s,mb4.8
AVF Avril sur Loir 86.45 332 *eP* **P 00 09 28.3 -0.4**
comp=Z,44nm,1.0s,mb5.4
AVF Avril sur Loir 86.45 332 *eP* **P 00 09 28.3 -0.4**
AVF pmax pmax
comp=Z,22nm,1.0s,mb5.3
AVF Avril sur Loir 86.45 332 *eP* **P 00 09 28.3 -0.4**
comp=Z,22nm,1.0s,mb5.3
GRR Gorron 86.51 336 *eP* **P 00 09 28.6 -0.3**
comp=Z,35nm,1.0s,mb5.2
GRR Gorron 86.51 336 *eP* **P 00 09 28.6 -0.3**
GRR pmax pmax
comp=Z,17nm,1.0s,mb5.2
GRR Gorron 86.51 336 *eP* **P 00 09 28.6 -0.3**
comp=Z,17nm,1.0s,mb5.2
BGF Bois d'Agland 86.83 333 *eP* **P 00 09 30.2 -0.4**
comp=Z,18nm,1.0s,mb4.9
BGF Bois d'Agland 86.83 333 *eP* **P 00 09 30.2 -0.4**
BGF pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
BGF Bois d'Agland 86.83 333 *eP* **P 00 09 30.2 -0.4**
comp=Z,8.8nm,1.0s,mb4.9
ORIF Oris-en-Rattie 87.08 330 *eP* **P 00 09 31.1 -0.7**
SGMF Saint Gilles 87.16 337 *eP* **P 00 09 32.0 -0.1**
comp=Z,43nm,1.2s,mb5.2
SGMF Saint Gilles 87.16 337 *eP* **P 00 09 32.0 -0.1**
SGMF pmax pmax
comp=Z,22nm,1.2s,mb5.3
SGMF Saint Gilles 87.16 337 *eP* **P 00 09 32.0 -0.1**
comp=Z,22nm,1.2s,mb5.3
TCF Toulx Ste Croi 87.29 333 *eP* **P 00 09 32.5 -0.3**
comp=Z,19nm,1.1s,mb5.0
TCF Toulx Ste Croi 87.29 333 *eP* **P 00 09 32.5 -0.3**
TCF pmax pmax
comp=Z,10.0nm,1.1s,mb5.0
TCF Toulx Ste Croi 87.29 333 *eP* **P 00 09 32.5 -0.3**
comp=Z,9.6nm,1.1s,mb4.9
ROSF Rostrenen 87.31 337 *eP* **P 00 09 32.9 0.0**
comp=Z,42nm,1.1s,mb5.3
ROSF Rostrenen 87.31 337 *eP* **P 00 09 32.9 0.0**
ROSF pmax pmax
comp=Z,21nm,1.1s,mb5.3
ROSF Rostrenen 87.31 337 *eP* **P 00 09 32.9 0.0**
comp=Z,21nm,1.1s,mb5.3
VIVF Saint-Julien-l 87.60 331 *eP* **P 00 09 33.5 -0.8**
QUIF Quistinic 87.65 337 *eP* **P 00 09 34.1 -0.4**
comp=Z,31nm,1.2s,mb5.1
QUIF Quistinic 87.65 337 *eP* **P 00 09 34.1 -0.4**
QUIF pmax pmax
comp=Z,15nm,1.2s,mb5.1
QUIF Quistinic 87.65 337 *eP* **P 00 09 34.1 -0.4**
comp=Z,15nm,1.2s,mb5.1
MFF Saint Martin d 87.84 334 *eP* **P 00 09 35.4 0.0**
comp=Z,22nm,0.9s,mb5.1
MFF Saint Martin d 87.84 334 *eP* **P 00 09 35.4 0.0**
MFF pmax pmax
comp=Z,11nm,0.9s,mb5.1
MFF Saint Martin d 87.84 334 *eP* **P 00 09 35.4 0.0**
comp=Z,11nm,0.9s,mb5.1
FRF La Foret Royal 87.91 329 *eP* **P 00 09 36.3 +0.5**
comp=Z,16nm,0.9s,mb5.0
FRF La Foret Royal 87.91 329 *eP* **P 00 09 36.3 +0.5**
FRF pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
FRF La Foret Royal 87.91 329 *eP* **P 00 09 36.3 +0.5**
comp=Z,8.1nm,0.9s,mb5.0
RJF Les Rejaudoux 88.39 333 *eP* **P 00 09 37.9 -0.1**
CAF Calviac 88.51 332 *eP* **P 00 09 39.0 +0.3**
comp=Z,11nm,1.0s,mb4.8
CAF Calviac 88.51 332 *eP* **P 00 09 39.0 +0.3**
CAF pmax pmax
comp=Z,5.0nm,1.0s,mb4.8
CAF Calviac 88.51 332 *eP* **P 00 09 39.0 +0.3**
comp=Z,5.3nm,1.0s,mb4.8
LASF Ste Croix 88.57 331 *eP* **P 00 09 38.4 -0.5**
LFF La Frestale 88.98 333 *eP* **P 00 09 40.9 +0.1**
comp=Z,8.1nm,0.8s,mb4.8
LFF La Frestale 88.98 333 *eP* **P 00 09 40.9 +0.1**
LFF pmax pmax
comp=Z,4.0nm,0.8s,mb4.8
LFF La Frestale 88.98 333 *eP* **P 00 09 40.9 +0.1**
comp=Z,4.1nm,0.8s,mb4.8
TXAR Lajitas Array 89.14 52 P **P 00 09 41.8 -0.2**
comp=Z,1.2nm,0.9s,mb4.2,baz=291,slow=2.9,SNR=4.0
TXAR Lajitas Array 89.14 52 P **P 00 09 41.8 -0.1**
TXAR pmax pmax
comp=Z,1.0nm,0.9s
MTLF Montolieu 89.82 331 *eP* **P 00 09 45.0 +0.2**
JCT Junction City 90.64 49 *eP* **P 00 09 49.2 +0.3**
EPF Esparros 90.78 332 *eP* **P 00 09 48.7 -0.6**
comp=Z,14nm,1.1s,mb4.9
EPF Esparros 90.78 332 *eP* **P 00 09 48.7 -0.6**
EPF pmax pmax
comp=Z,7.0nm,1.1s,mb4.9
EPF Esparros 90.78 332 *eP* **P 00 09 48.7 -0.6**
comp=Z,6.8nm,1.1s,mb4.9
ETSF Etsaut 91.22 333 *eP* **P 00 09 51.5 +0.2**
SJPF Ste Jean 91.26 333 *eP* **P 00 09 51.8 +0.3**
ESDC Sonseca Array 95.26 334 P **P 00 10 09.9 -0.2**
comp=Z,1.1nm,0.8s,mb4.3,baz=17,slow=6.2,SNR=4.7
SDV Santo Domingo 123.95 39 PKP PKPdf 00 15 44.4 -0.6
comp=Z,6.5nm,1.0s,baz=270,slow=1.0,SNR=4.5
BOSA Boshof 126.57 261 PKhKP PKPpre 00 15 42.0
comp=Z,6.6nm,1.1s,baz=207,slow=2.3,SNR=3.7
LPAZ La Paz 145.91 56 PKPbc PKPbc 00 16 27.1 +1.0
comp=Z,6.8nm,0.8s,baz=5.9,slow=4.5,SNR=9.0
LPAZ La Paz 145.91 56 *e*PKPbc PKPbc 00 16 26.7 +0.6
SIV San Ignacio 149.97 46 PKP PKPdf 00 16 32.2 0.0

comp=Z,6.2nm,1.0s,baz=292,slow=5.4,SNR=2.2
SIV PKPbc PKPbc 00 16 36.8 -0.3
comp=Z,12nm,0.9s,baz=302,slow=1.8,SNR=12
LCO Las Campanas 152.04 79 *e*PKPbc PKPbc 00 16 41.9 +0.3

JMA 13 23:57:11.9, 38°.89N×140°.73E, h6km±1km, M3.5, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYK	**Kaneyama**	**0.29**	**276**	P	Pg	23 57 17.7	+0.1
JYK				S	Sg	23 57 21.7	+0.3

JMA 13 23:57:46.0, 39°.09N×140°.95E, h11km±1km, M3.9, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMK	**Ichinoseki**	**0.25**	**123**	P	Pg	23 57 51.1	-0.1
JMK				S	Sg	23 57 54.6	0.0
JOM	**Ohasama**	**0.47**	**35**	P	Pg	23 57 55.2	+0.1
JOM				S	Sg	23 58 01.3	0.0
JYK	**Kaneyama**	**0.49**	**250**	P	Pg	23 57 55.8	+0.2
JYK				*e*S	Sg	23 58 02.2	+0.1
OFUJ	**Ofunato**	**0.56**	**91**	P	Pg	23 57 56.9	0.0
JIO	**Ouri**	**0.71**	**154**	P	Pg	23 57 59.9	+0.2
JIO				S	Sg	23 58 08.8	-0.1
JOU	**Okura**	**0.76**	**197**	*e*S	Sg	23 58 10.6	+0.1

JMA 13 23:58:33.0, 38°.90N×140°.87E, h9km±1km, M3.5, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMK	**Ichinoseki**	**0.28**	**79**	P	Pg	23 58 38.7	+0.2
JMK				*e*S	Sg	23 58 42.6	+0.3
JYK	**Kaneyama**	**0.40**	**273**	P	Pg	23 58 40.9	+0.1
JYK				*e*S	Sg	23 58 46.1	0.0
JOU	**Okura**	**0.56**	**197**	P	Pg	23 58 44.0	+0.2
JOU				*e*S	Sg	23 58 51.1	0.0
JIO	**Ouri**	**0.58**	**140**	*e*S	Sg	23 58 51.5	-0.4
JMM	**Marumori**	**1.03**	**183**	*e*S	Sg	23 59 05.4	-0.9

JMA 13 23:58:36.7, 39°.08N×140°.94E, h10km±1km, M3.8, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMK	**Ichinoseki**	**0.25**	**120**	P	Pg	23 58 41.8	0.0
JMK				*e*S	Sg	23 58 45.4	+0.1
JRG	**Rokugo**	**0.40**	**323**	*e*S	Sg	23 58 50.4	+0.6
JOM	**Ohasama**	**0.48**	**35**	*e*S	Sg	23 58 52.4	0.0
OFUJ	**Ofunato**	**0.57**	**90**	P	Pg	23 58 47.7	0.0
OFUJ				*e*S	Sg	23 58 55.5	+0.3
JIO	**Ouri**	**0.70**	**153**	S	Sg	23 58 59.4	0.0

JMA 13 23:58:44.0, 38°.78N×140°.71E, h5km±1km, M3.8, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYK	**Kaneyama**	**0.31**	**297**	P	Pg	23 58 50.2	+0.3
JYK				S	Sg	23 58 54.5	+0.5
JMK	**Ichinoseki**	**0.43**	**67**	P	Pg	23 58 52.5	+0.1
JMK				*e*S	Sg	23 58 58.5	+0.5
JYS	**Shirataka**	**0.75**	**222**	P	Pg	23 58 58.9	+0.5
JYS				*e*S	Sg	23 59 08.5	+0.3
JYA	**Atsumi**	**0.80**	**257**	*e*S	Sg	23 59 09.8	0.0

JMA 13 23:59:12.6, 39°.05N×140°.87E, h10km±1km, M3.6, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMK	**Ichinoseki**	**0.29**	**110**	S	Sg	23 59 22.0	-0.3
JRG	**Rokugo**	**0.39**	**332**	S	Sg	23 59 26.1	+0.6
JYK	**Kaneyama**	**0.42**	**252**	*e*S	Sg	23 59 26.8	+0.4
JOU	**Okura**	**0.70**	**193**	S	Sg	23 59 35.4	+0.1
JIO	**Ouri**	**0.70**	**148**	*e*S	Sg	23 59 35.0	-0.3

JMA 13 23:59:48.4, 39°.03N×140°.89E, h7km±1km, M3.6, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMK	**Ichinoseki**	**0.27**	**107**	S	Sg	23 59 57.2	-0.1
JRG	**Rokugo**	**0.42**	**332**	S	Sg	00 00 02.6	+0.6
JOM	**Ohasama**	**0.54**	**35**	*e*S	Sg	00 00 05.9	0.0
JOU	**Okura**	**0.69**	**195**	S	Sg	00 00 10.7	+0.2

JMA ***14*** *00:00:04.7, 38°.77N×140°.74E, h6km±1km, M3.9*
NEIC ***14*** *00:00:04.8, 38°.77N×140°.74E, h6km, mb4.4/5, After JMA.*
ISCJB ***14*** *00:00:04.5±0.5, 38°.78N±0°.04×140°.75E±0°.04, h18km±5km, mb4.0/13, Error ellipse: s-maj=6.6km s-min=4.8km az=159.6*
IDC ***14*** *00:00:05.5±1.3, 39°.31N×140°.75E, h0km, mb4.0/8, mb1 4.2/10, mb1mx3.9/27, mbtmp3.9/10, ML3.5/2, Error ellipse: s-maj=38.0km s-min=23.9km az=166.0*
ISC 14 00:00:04.5±0.5, 38.75N±0°.03×140.74E±0°.04, h8km±4km, n24, σ0°82/28, mb4.0/13, 2D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYK	**Kaneyama**	**0.34**	**299**	||P	**Pg**	**00 00 11.3**	**+0.1**
JYK				S	**Sg**	**00 00 15.8**	**+0.1**
JMK	**Ichinoseki**	**0.42**	**62**	P	**Pg**	**00 00 12.8**	**+0.1**
JMK				S	**Sg**	**00 00 18.5**	**+0.3**
JIO	**Ouri**	**0.56**	**122**	S	**Sg**	**00 00 22.8**	**+0.2**
JYS	**Shirataka**	**0.75**	**225**	P	**Pg**	**00 00 19.3**	**+0.3**
JYS				S	**Sg**	**00 00 29.4**	**+0.7**
JYA	**Atsumi**	**0.82**	**259**	||P	**Pg**	**00 00 20.2**	**-0.1**
JYA				S	**Sg**	**00 00 31.2**	**+0.2**
JOM	**Ohasama**	**0.84**	**31**	S	**Sg**	**00 00 31.1**	**-0.3**
JMM	**Marumori**	**0.89**	**177**	S	**Sg**	**00 00 32.7**	**-0.4**
MAJO	**Matsushiro**	**2.99**	**223**	*e*Pg	**Pg**	**00 00 59.4**	**-2.4**
MJAR	**Matsushiro Arr**	**2.99**	**223**	Pn	**Pn**	**00 01 00.6**	**+8.4**
	3.3nm,0.3s,baz=25,slow=16,SNR=4.3						
KSRS	**Korea Array**	**10.19**	**267**	Pn	**Pn**	**00 02 33.9**	**+2.9**
	0.5nm,0.3s,baz=78,slow=15,SNR=3.3						
KURK	**Kurchatov**	**44.47**	**307**	P	**P**	**00 08 15.9**	**-0.1**
	1.2nm,0.5s,mb3.9,baz=80,slow=7.5,SNR=2.7						
ARU	**Arti**	**54.73**	**318**	*e*P	**P**	**00 09 33.9**	**-0.3**
	2.7nm,0.5s,mb4.5						
ABKAR	**Akbulak array**	**56.44**	**309**	*e*P	**P**	**00 09 46.1**	**-0.4**
	0.9nm,0.6s,mb4.0						
RES	**Resolute Bay**	**61.07**	**15**	*e*P	**P**	**00 10 17.0**	**-1.4**
	6.0nm,1.1s,mb4.6						
FINES	**FINESS Array B**	**67.05**	**332**	P	**P**	**00 10 57.3**	**-0.5**
	2.7nm,0.8s,mb4.3,baz=66,slow=2.3,SNR=4.1						
WVOR	**Wild Horse Val**	**71.80**	**50**	*e*P	**P**	**00 11 28.4**	**+0.9**
	3.4nm,0.7s,mb4.4						
NOA	**NORSAR Array B**	**72.40**	**337**	P	**P**	**00 11 30.4**	**-0.4**
	1.4nm,0.8s,mb3.9,baz=37,slow=6.0,SNR=4.0						
AKASG	**Malin Array Be**	**72.62**	**322**	P	**P**	**00 11 31.6**	**-0.7**
	1.1nm,0.5s,mb4.1,baz=43,slow=5.7,SNR=6.4						
HLID	**Hailey**	**73.59**	**47**	*e*P	**P**	**00 11 38.5**	**+0.4**
	1.1nm,0.9s,mb3.8						
NVAR	**Mina Array Bea**	**74.38**	**53**	P	**P**	**00 11 44.5**	**+1.6**
	0.5nm,0.7s,mb3.6,baz=292,slow=4.8,SNR=3.0						
PDAR	**Pinedale Array**	**76.84**	**45**	P	**P**	**00 11 57.5**	**+0.6**
	0.8nm,0.6s,mb3.8,baz=145,slow=0.8,SNR=3.6						
GERES	**GERESS Array B**	**80.98**	**328**	P	**P**	**00 12 19.8**	**+0.3**
	0.4nm,0.5s,mb3.6,baz=13,slow=6.1,SNR=3.3						
TXAR	**Lajitas Array**	**89.49**	**52**	P	**P**	**00 13 01.5**	**-0.9**
	1.1nm,1.1s,mb4.1,baz=288,slow=9.4,SNR=3.3						
TXAR	**Lajitas Array**	**89.49**	**52**	P	**P**	**00 13 01.5**	**-0.9**

IDC ***14*** *00:00:33.9±0.6, 39°.14N×140°.88E, h0km, mb4.2/22, mb1 4.4/24, mb1mx4.3/30, mbtmp4.2/24, ML3.7/2, Error ellipse: s-maj=17.4km s-min=13.5km az=132.0*
NEIC ***14*** *00:00:35.3, 39°.13N×140°.92E, h11km, mb4.7/24, After JMA.*
JMA ***14*** *00:00:35.3, 39°.13N×140°.92E, h11km±1km, M4.2*
JMA Felt III J1.

ISCJB ***14*** *00:00:35.2±0.4, 39°.13N±0°.03×140°.93E±0°.04, h20km±3km, mb4.4/46, Error ellipse: s-maj=4.8km s-min=4.6km az=146.1*
MOS ***14*** *00:00:36.7±0.9, 39°.08N×140°.96E, h33km, mb4.6/31, Error ellipse: s-maj=11.7km s-min=7.2km az=100.2*
ISC 14 00:00:35.5±0.4, 39.12N±0°.03×140.92E±0°.03, h12km±2km, n154, σ0°81/163, mb4.4/46, 1C-3D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMK	**Ichinoseki**	**0.29**	**126**	P	**Pg**	**00 00 41.3**	**-0.1**
JMK				S	**Sg**	**00 00 45.3**	**-0.1**
JRG	**Rokugo**	**0.35**	**321**	P	**Pg**	**00 00 42.7**	**+0.1**
JRG				S	**Sg**	**00 00 47.7**	**+0.3**
JOM	**Ohasama**	**0.45**	**39**	||P	**Pg**	**00 00 43.9**	**-0.6**
JOM				S	**Sg**	**00 00 50.1**	**-0.4**
JYK	**Kaneyama**	**0.48**	**245**	||P	**Pg**	**00 00 44.8**	**-0.2**
JYK				S	**Sg**	**00 00 51.2**	**-0.2**
OFUJ	**Ofunato**	**0.58**	**94**	P	**Pg**	**00 00 46.7**	**-0.2**
OFUJ				*e*S	**Sg**	**00 00 54.7**	**+0.1**
JIO	**Ouri**	**0.75**	**153**	P	**Pg**	**00 00 49.8**	**-0.2**
JIO				*e*S	**Sg**	**00 00 59.8**	**+0.1**
JOU	**Okura**	**0.78**	**195**	P	**Pg**	**00 00 50.6**	**0.0**
JOU				S	**Sg**	**00 01 00.9**	**0.0**
MAT	**Matsushiro**	**3.35**	**221**	P	**Pn**	**00 01 30.7**	**+3.0**
MAT				*e*S	**Sn**	**00 02 14.9**	**+7.5**
MJAR	**Matsushiro Arr**	**3.35**	**221**	Pn	**Pn**	**00 01 29.4**	**+1.7**
	3.7nm,0.3s,baz=354,slow=11,SNR=3.5						
MJAR				Pg	**Pg**	**00 01 35.1**	**-4.7**
	7.9nm,0.3s,baz=26,slow=15,SNR=5.9						
MJAR	**Matsushiro Arr**	**3.35**	**221**	P	**Pn**	**00 01 29.4**	**+1.7**
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.3s						
MJAR				pmax	pmax		
	comp=Z,8.0nm,0.3s						
MJAR	**Matsushiro Arr**	**3.35**	**221**	Pn	**Pn**	**00 01 29.4**	**+1.7**
MJAR				Pg	**Pg**	**00 01 35.1**	**-4.7**
ASAJ	**Asahikawa**	**5.15**	**14**	Pn	**Pn**	**00 01 53.5**	**+1.2**
	comp=Z,3.6nm,0.3s,baz=216,slow=14,SNR=4.7						
ASAJ				Sn	**Sn**	**00 02 46.2**	**-5.4**
	comp=Z,3.6nm,0.3s,baz=219,slow=14,SNR=2.1						
ASAJ	**Asahikawa**	**5.15**	**14**	P	**Pn**	**00 01 53.6**	**+1.3**
ASAJ						00 02 46.2	
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ASAJ				smax			
	comp=N,4.0nm,0.3s						
YSS	**Yuzh-Sakhalins**	**7.94**	**9**	*e*P	**Pn**	**00 02 34.0**	**+3.3**
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
KSRS	**Korea Array**	**10.35**	**265**	Pn	**Pn**	**00 03 08.2**	**+4.4**
	comp=Z,3.8nm,0.3s,baz=76,slow=14,SNR=18						
KSRS				Sn	**Sn**	**00 05 06.3**	**+6.7**
	comp=Z,0.9nm,0.3s,baz=74,slow=24,SNR=7.2						
KSRS	**Korea Array**	**10.35**	**265**	P	**Pn**	**00 03 08.2**	**+4.4**
KSRS						00 05 06.4	
KSRS				pmax	pmax		
	comp=Z,4.0nm,0.3s						
KSRS				smax			
	comp=N,1.0nm,0.3s						
ZALV	**Zalesovo Beam**	**40.24**	**311**	P	**P**	**00 08 11.2**	**-0.6**
	comp=N,3.7nm,0.8s,mb4.2,baz=86,slow=7.5,SNR=5.9						
ZALV	**Zalesovo Beam**	**40.24**	**311**	P	**P**	**00 08 11.3**	**-0.5**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
ZALV	**Zalesovo Beam**	**40.24**	**311**	P	**P**	**00 08 11.2**	**-0.6**
CHTO	**Chiang Mai**	**41.48**	**253**	*e*P	**P**	**00 08 20.1**	**-2.3**
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.0						
CHTO	**Chiang Mai**	**41.48**	**253**	*e*P	**P**	**00 08 20.1**	**-2.3**
	comp=Z,3.2nm,0.8s,mb4.0						
CMAR	**Chiang Mai Arr**	**41.70**	**253**	P	**P**	**00 08 24.6**	**+0.4**
	comp=Z,0.6nm,0.3s,mb3.7,baz=45,slow=10,SNR=3.1						
CMAR	**Chiang Mai Arr**	**41.70**	**253**	P	**P**	**00 08 24.6**	**+0.4**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**41.70**	**253**	P	**P**	**00 08 24.6**	**+0.4**
MK31	**Makanchi Array**	**42.71**	**300**	*e*P	**P**	**00 08 31.5**	**-0.6**
MKAR	**Makanchi Array**	**42.71**	**300**	P	**P**	**00 08 32.1**	**-0.1**
	comp=Z,1.9nm,0.8s,mb3.9,baz=75,slow=14,SNR=4.7						
MKAR	**Makanchi Array**	**42.71**	**300**	P	**P**	**00 08 32.1**	**0.0**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR	**Makanchi Array**	**42.71**	**300**	P	**P**	**00 08 32.1**	**-0.1**
KURK	**Kurchatov**	**44.36**	**306**	P	**P**	**00 08 45.8**	**+0.4**
	comp=Z,2.8nm,0.4s,mb4.3,baz=81,slow=8.3,SNR=5.7						
KURK	**Kurchatov**	**44.36**	**306**	*ce*P	**P**	**00 08 46.3**	**+0.9**
KURK				pmax	pmax		
	comp=Z,58nm,2.5s,mb4.9						
KURK	**Kurchatov**	**44.36**	**306**	P	**P**	**00 08 45.8**	**+0.4**
KDAK	**Kodiak Island**	**45.83**	**43**	P	**P**	**00 08 57.1**	**+0.1**
	comp=Z,11nm,0.8s,mb4.8,baz=296,slow=5.2,SNR=5.4						
KDAK	**Kodiak Island**	**45.83**	**43**	*i* P	**P**	**00 08 58.7**	**+1.7**
KDAK	**Kodiak Island**	**45.83**	**43**	P	**P**	**00 08 57.1**	**+0.1**
TKM2	**Tokmak 2**	**48.32**	**297**	*e*P	**P**	**00 09 17.3**	**+0.6**
TKM2				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
TKM2	**Tokmak 2**	**48.32**	**297**	*e*P	**P**	**00 09 17.3**	**+0.6**
	comp=Z,9.3nm,1.0s,mb4.8						
BVAR	**Borovoye Array**	**48.90**	**311**	P	**P**	**00 09 21.2**	**+0.3**
	comp=Z,2.1nm,0.6s,mb4.3,baz=74,slow=8.0,SNR=6.7						
BVAR				PcP	PcP	00 10 45.5	+0.3
	comp=Z,1.2nm,0.6s,baz=74,slow=6.2,SNR=4.1						
BVAR	**Borovoye Array**	**48.90**	**311**	P	**P**	**00 09 21.2**	**+0.3**
BVAR						00 10 45.5	
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BVAR	**Borovoye Array**	**48.90**	**311**	P	**P**	**00 09 21.2**	**+0.3**
BVAR				PcP	PcP	00 10 45.5	+0.3
BRVK	**Borovoye**	**48.95**	**311**	*e*P	**P**	**00 09 21.5**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.4						
UCH	**Uchtor**	**49.31**	**296**	*e*P	**P**	**00 09 24.9**	**+0.7**
	comp=Z,3.1nm,1.0s,mb4.3						
BMRM	**Bremner River**	**49.45**	**38**	*e*P	**P**	**00 09 25.9**	**+0.8**
	comp=Z,6.6nm,0.7s,mb4.8						
INK	**Inuvik**	**52.72**	**28**	P	**P**	**00 09 50.5**	**+1.1**
	comp=Z,9.5nm,1.1s,mb4.7,baz=297,slow=8.4,SNR=8.0						
INK	**Inuvik**	**52.72**	**28**	*e*P	**P**	**00 09 50.3**	**+0.8**
INK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
INK	**Inuvik**	**52.72**	**28**	*e*P	**P**	**00 09 50.3**	**+0.8**
	comp=Z,4.6nm,0.6s,mb4.6						
SVE	**Sverdlovsk**	**53.34**	**318**	*e*P	**P**	**00 09 55.0**	**+0.8**
ARU	**Arti**	**54.55**	**317**	*d i*P	**P**	**00 10 03.3**	**+0.2**
ARU				S	**S**	**00 17 41.0**	**-0.9**
ARU				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
ARU	**Arti**	**54.55**	**317**	*e*P	**P**	**00 10 03.0**	**0.0**
	comp=Z,7.1nm,0.7s,mb4.8						
ABKAR	**Akbulak array**	**56.31**	**309**	*e*P	**P**	**00 10 15.3**	**-0.6**
	comp=Z,3.9nm,0.6s,mb4.6						
KBL	**Kabul**	**56.33**	**289**	*e*P	**P**	**00 10 13.6**	**-2.6**
KBL				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
KBL	**Kabul**	**56.33**	**289**	*e*P	**P**	**00 10 13.6**	**-2.6**
	comp=Z,8.4nm,0.8s,mb4.8						
AKTK	**Aktyubinsk**	**57.01**	**311**	P	**P**	**00 10 20.9**	**+0.2**
AKTO	**Aktyubinsk**	**57.01**	**311**	P	**P**	**00 10 20.9**	**+0.2**
	baz=66,slow=13						
AKTO	**Aktyubinsk**	**57.01**	**311**	P	**P**	**00 10 21.0**	**+0.2**
WRAB	**Tennant Creek**	**59.06**	**187**	*e*P	**P**	**00 10 34.6**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
WRAB	**Tennant Creek**	**59.06**	**187**	*e*P	**P**	**00 10 34.6**	**-0.8**
	comp=Z,5.4nm,0.8s,mb4.6						
WRA	**Warramunga Arr**	**59.08**	**187**	P	**P**	**00 10 35.2**	**-0.3**
	comp=Z,1.5nm,0.6s,mb4.2,baz=4.6,slow=7.3,SNR=5.5						
WRA	**Warramunga Arr**	**59.08**	**187**	P	**P**	**00 10 35.2**	**-0.3**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
WRA	**Warramunga Arr**	**59.08**	**187**	P	**P**	**00 10 35.2**	**-0.3**
RES	**Resolute Bay**	**60.68**	**15**	P	**P**	**00 10 46.2**	**+0.2**
	comp=Z,4.8nm,0.7s,mb4.7,baz=307,slow=7.6,SNR=8.1						
RES	**Resolute Bay**	**60.68**	**15**	*e*P	**P**	**00 10 45.7**	**-0.3**
RES				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.8						
RES	**Resolute Bay**	**60.68**	**15**	*e*P	**P**	**00 10 45.7**	**-0.3**
	comp=Z,4.7nm,0.7s,mb4.7						
ARCES	**ARCESS Array B**	**61.91**	**339**	P	**P**	**00 10 54.5**	**+0.2**
	comp=Z,1.6nm,0.8s,mb4.2,baz=64,slow=5.5,SNR=5.6						
ARCES	**ARCESS Array B**	**61.91**	**339**	P	**P**	**00 10 54.6**	**+0.2**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	**ARCESS Array B**	**61.91**	**339**	P	**P**	**00 10 54.5**	**+0.2**
YKA	**Yellowknife Ar**	**62.21**	**31**	P	**P**	**00 10 55.5**	**-1.0**
	comp=Z,0.4nm,0.6s,mb3.7,baz=329,slow=4.7,SNR=3.1						
YKA	**Yellowknife Ar**	**62.21**	**31**	P	**P**	**00 10 55.5**	**-0.9**
YKA	**Yellowknife Ar**	**62.21**	**31**	P	**P**	**00 10 55.5**	**-1.0**
ASAR	**Alice Springs**	**62.80**	**187**	P	**P**	**00 11 01.0**	**+0.2**
	comp=Z,2.0nm,0.8s,mb4.3,baz=12,slow=6.3,SNR=6.9						
ASAR	**Alice Springs**	**62.80**	**187**	P	**P**	**00 11 01.0**	**+0.2**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ASAR	**Alice Springs**	**62.80**	**187**	P	**P**	**00 11 01.0**	**+0.2**
JOF	**Joensuu**	**63.94**	**331**	*e*P	**P**	**00 11 06.8**	**-1.2**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
JOF	**Joensuu**	**63.94**	**331**	*e*p	**P**	**00 11 06.8**	**-1.2**
	comp=Z,3.1nm,0.7s,mb4.5						
JOF	**Joensuu**	**63.94**	**331**	*e*p	**P**	**00 11 06.8**	**-1.2**
	comp=Z,3.1nm,0.7s,mb4.5						
OBN	**Obninsk**	**66.20**	**323**	*e*P	**P**	**00 11 25.1**	**+2.3**
OBN				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.4						
KAF	**Kangasniemi**	**66.28**	**332**	*e*P	**P**	**00 11 18.9**	**-4.3**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
KAF	**Kangasniemi**	**66.28**	**332**	*e*p	**P**	**00 11 18.9**	**-4.3**
	comp=Z,3.5nm,0.6s,mb4.6						
KAF	**Kangasniemi**	**66.28**	**332**	*e*p	**P**	**00 11 18.9**	**-4.3**
	comp=Z,3.5nm,0.6s,mb4.6						
FINES	**FINESS Array B**	**66.79**	**332**	P	**P**	**00 11 26.4**	**-0.1**
	comp=Z,4.5nm,0.7s,mb4.6,baz=54,slow=9.7,SNR=9.6						
FINES	**FINESS Array B**	**66.79**	**332**	P	**P**	**00 11 26.4**	**0.0**
FINES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
FINES	**FINESS Array B**	**66.79**	**332**	P	**P**	**00 11 26.4**	**-0.1**
SUMG	**Summit**	**68.60**	**360**	*e*P	**P**	**00 11 39.0**	**+1.3**
	comp=Z,7.0nm,0.8s,mb4.6						
KIV	**Kislovodsk**	**69.26**	**310**	*e*P	**P**	**00 11 44.0**	**+1.8**
KIV				*e*		00 12 10.4	
KIV				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
KIV	**Kislovodsk**	**69.26**	**310**	*e*P	**P**	**00 11 41.7**	**-0.6**
	comp=Z,16nm,1.1s,mb4.9						
WVOR	**Wild Horse Val**	**71.45**	**50**	*e*P	**P**	**00 11 54.2**	**-1.5**
WVOR				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
WVOR	**Wild Horse Val**	**71.45**	**50**	*e*P	**P**	**00 11 54.2**	**-1.6**
	comp=Z,2.9nm,0.8s,mb4.3						
NB2	**NORSAR Subarra**	**72.12**	**337**	*e*P	**P**	**00 11 59.3**	**0.0**
	comp=Z,1.8nm,0.6s,mb4.2,baz=39,slow=6.5						
NOA	**NORSAR Array B**	**72.12**	**337**	P	**P**	**00 11 59.4**	**0.0**
	comp=Z,2.9nm,0.7s,mb4.3,baz=40,slow=6.1,SNR=9.0						
NOA	**NORSAR Array B**	**72.12**	**337**	P	**P**	**00 11 59.4**	**+0.1**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NOA	**NORSAR Array B**	**72.12**	**337**	P	**P**	**00 11 59.4**	**0.0**
FFC	**Flin Flon**	**72.16**	**33**	*e*P	**P**	**00 11 58.8**	**-0.9**
FFC				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
FFC	**Flin Flon**	**72.16**	**33**	*e*P	**P**	**00 11 58.8**	**-0.9**
	comp=Z,5.9nm,1.1s,mb4.4						
AKASG	**Malin Array Be**	**72.42**	**322**	P	**P**	**00 12 01.1**	**-0.2**
	comp=Z,1.4nm,0.4s,mb4.2,baz=44,slow=6.8,SNR=7.2						
AKASG	**Malin Array Be**	**72.42**	**322**	P	**P**	**00 12 01.1**	**-0.2**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**72.42**	**322**	P	**P**	**00 12 01.1**	**-0.2**
AKBB	**Malin Array Si**	**72.42**	**322**	*e*P	**P**	**00 12 01.3**	**0.0**
NVAR	**Mina Array Bea**	**74.05**	**53**	P	**P**	**00 12 12.8**	**+1.6**
	comp=Z,1.8nm,0.8s,mb4.0,baz=280,slow=5.7,SNR=8.3						
NVAR	**Mina Array Bea**	**74.05**	**53**	P	**P**	**00 12 12.8**	**+1.6**
IMW	**Indian Meadow**	**74.98**	**45**	*e*P	**P**	**00 12 17.0**	**+0.4**
	comp=Z,3.2nm,0.7s,mb4.4						
DUG	**Dugway**	**76.29**	**49**	*e*P	**P**	**00 12 24.7**	**+0.6**
DUG				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
DUG	**Dugway**	**76.29**	**49**	*e*P	**P**	**00 12 24.6**	**+0.6**
	comp=Z,2.5nm,0.8s,mb4.2						
BUR08	**Bucovina Ar. S**	**76.43**	**321**	*e*P	**P**	**00 12 24.9**	**+0.2**
BW06	**Boulder Array**	**76.48**	**46**	*e*P	**P**	**00 12 25.5**	**+0.3**
PDAR	**Pinedale Array**	**76.48**	**46**	P	**P**	**00 12 25.9**	**+0.8**
	comp=Z,1.3nm,0.6s,mb4.0,baz=260,slow=2.1,SNR=6.3						
PDAR	**Pinedale Array**	**76.48**	**46**	P	**P**	**00 12 25.9**	**+0.8**
BR131	**Keskin Array S**	**77.19**	**311**	*e*P	**P**	**00 12 29.8**	**+0.6**
	comp=Z,0.8nm,0.6s,mb3.8						
BRTR	**Keskin Array B**	**77.19**	**311**	P	**P**	**00 12 29.9**	**+0.7**
	comp=Z,0.8nm,0.5s,mb3.9,baz=82,slow=3.9,SNR=7.6						
BRTR	**Keskin Array B**	**77.19**	**311**	P	**P**	**00 12 29.9**	**+0.7**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRTR	**Keskin Array B**	**77.19**	**311**	P	**P**	**00

comp=Z,2.1nm,0.7s,baz=0.9,slow=3.5,SNR=6.4
LPAZ La Paz 145.92 56 PKPbc PKPbc 00 20 15.7 +0.5
SIV San Ignacio 149.97 46 PKPbc PKPbc 00 20 26.8 +0.6
comp=Z,4.0nm,0.8s,baz=342,slow=2.2,SNR=7.8
SIV San Ignacio 149.97 46 PKPbc PKPbc 00 20 26.8 +0.6

*IDC **14** 00:01:42.1±0.6,38.°88N×140.°72E,h0km,mb4.2/14, mb1 4.3/14,mb1mx4.1/27,mbtmp4.2/14,Error ellipse: s-maj=22.2km s-min=16.5km az=66.0*
*NEIC **14** 00:01:43.3,38.°91N×140.°88E,h8km,mb4.5/18,After JMA.*
*JMA **14** 00:01:43.3,38.°91N×140.°88E,h7km±1km,M4.0*
JMA Felt III J1.
*ISCJB **14** 00:01:43.2±0.4,38.°90N±0.°03×140.°88E±0.°03,h19km±3km, mb4.3/31,Error ellipse: s-maj=5.0km s-min=3.9km az=153.4*
*MOS **14** 00:01:44.9±1.1,38.°87N×140.°77E,h33km,mb4.5/20,Error ellipse: s-maj=18.2km s-min=12.5km az=114.9*

ISC 14 00:01:43.4±0.4,38.°90N±0.°03×140.°87E±0.°03,h8km±3km, n74,σ0°82/81,mb4.3/31,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.28**	**79**	P	**Pg**	**00 01 48.7**	**-0.2**
JMK				S	**Sg**	**00 01 52.6**	**-0.1**
JYK	**Kaneyama**	**0.40**	**273**	P	**Pg**	**00 01 51.3**	**+0.2**
JYK				S	**Sg**	**00 01 56.6**	**+0.2**
JRG	**Rokugo**	**0.53**	**340**	P	**Pg**	**00 01 53.8**	**+0.1**
JRG				*e*S	**Sg**	**00 02 01.4**	**+0.8**
JOU	**Okura**	**0.56**	**197**	P	**Pg**	**00 01 54.2**	**+0.1**
JOU				S	**Sg**	**00 02 01.6**	**+0.2**
JIO	**Ouri**	**0.58**	**139**	P	**Pg**	**00 01 54.5**	**-0.1**
JIO				S	**Sg**	**00 02 01.9**	**-0.3**
OFUJ	**Ofunato**	**0.65**	**74**	P	**Pg**	**00 01 55.5**	**-0.4**
OFUJ				S	**Sg**	**00 02 04.1**	**-0.3**
JOM	**Ohasama**	**0.66**	**30**	*e*S	**Sg**	**00 02 04.4**	**-0.4**
JYS	**Shiratake**	**0.92**	**223**	P	**Pg**	**00 02 01.1**	**0.0**
JYS				S	**Sg**	**00 02 13.4**	**+0.3**
JYA	**Atsumi**	**0.95**	**252**	P	**Pg**	**00 02 01.5**	**-0.2**
JYA				S	**Sg**	**00 02 14.1**	**+0.1**
MAT	**Matsushiro**	**3.16**	**223**	P	**Pn**	**00 02 37.1**	**+3.7**
MAT				*e*S	**Sn**	**00 03 20.2**	**+9.0**
KSRS	**Korea Array**	**10.29**	**266**	Pn	**Pn**	**00 04 14.6**	**+3.2**
	0.7nm,0.3s,baz=81,slow=14,SNR=3.0						
KSRS	**Korea Array**	**10.29**	**266**	P	**Pn**	**00 04 14.6**	**+3.3**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV	**Zalesovo Beam**	**40.36**	**311**	P	**P**	**00 09 20.9**	**-0.4**
	comp=Z,2.9nm,0.8s,mb4.0,baz=83,slow=7.7,SNR=3.3						
ZALV	**Zalesovo Beam**	**40.36**	**311**	P	**P**	**00 09 20.9**	**-0.3**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
KURK	**Kurchatov**	**44.46**	**307**	P	**P**	**00 09 54.6**	**-0.1**
	comp=Z,4.6nm,0.7s,mb4.3,baz=82,slow=8.4,SNR=4.4						
KURK	**Kurchatov**	**44.46**	**307**	*e*P	**P**	**00 09 53.9**	**-0.8**
KURK				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.6						
KURK	**Kurchatov**	**44.46**	**307**	*e*P	**P**	**00 09 53.9**	**-0.8**
	comp=Z,12nm,0.9s,mb4.6						
TKM2	**Tokmak 2**	**48.38**	**297**	*e*P	**P**	**00 10 24.2**	**-1.4**
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
TKM2	**Tokmak 2**	**48.38**	**297**	*e*P	**P**	**00 10 24.2**	**-1.4**
	comp=Z,1.7nm,0.7s,mb4.2						
BVAR	**Borovoye Array**	**49.01**	**311**	P	**P**	**00 10 30.5**	**+0.2**
	comp=Z,1.3nm,0.6s,mb4.1,baz=85,slow=6.5,SNR=2.9						
BVAR				PcP	PcP	00 11 54.8	+0.7
	comp=Z,0.6nm,0.5s,baz=60,slow=3.5,SNR=2.7						
BVAR	**Borovoye Array**	**49.01**	**311**	P	**P**	**00 10 30.5**	**+0.2**
BVAR						00 11 54.8	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR	**Borovoye Array**	**49.01**	**311**	P	**P**	**00 10 30.5**	**+0.2**
BVAR				PcP	PcP	00 11 54.8	+0.7
INK	**Inuvik**	**52.93**	**28**	*e*P	**P**	**00 10 59.2**	**-0.4**
INK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
INK	**Inuvik**	**52.93**	**28**	*e*P	**P**	**00 10 59.2**	**-0.4**
	comp=Z,1.5nm,0.6s,mb4.1						
ARU	**Arti**	**54.69**	**318**	*e*P	**P**	**00 11 11.9**	**-0.7**
ARU				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
ARU	**Arti**	**54.69**	**318**	*e*P	**P**	**00 11 11.9**	**-0.7**
	comp=Z,6.2nm,0.9s,mb4.6						
ABKAR	**Akbulak array**	**56.42**	**309**	*e*P	**P**	**00 11 24.5**	**-0.7**
	comp=Z,4.4nm,0.6s,mb4.7						
AKTK	**Aktyubinsk**	**57.12**	**311**	P	**P**	**00 11 30.2**	**+0.1**
AKTO	**Aktyubinsk**	**57.12**	**311**	P	**P**	**00 11 30.2**	**+0.1**
	comp=Z,2.8nm,0.8s,mb4.4,baz=77,slow=13,SNR=4.0						
AKTO	**Aktyubinsk**	**57.12**	**311**	P	**P**	**00 11 30.2**	**+0.1**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
WRAB	**Tennant Creek**	**58.84**	**187**	*e*P	**P**	**00 11 41.4**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
WRAB	**Tennant Creek**	**58.84**	**187**	*e*P	**P**	**00 11 41.4**	**-0.9**
	comp=Z,7.8nm,0.8s,mb4.8						
WRA	**Warramunga Arr**	**58.85**	**187**	P	**P**	**00 11 42.0**	**-0.5**
	comp=Z,6.2nm,0.7s,mb4.7,baz=5.7,slow=7.1,SNR=12						
WRA	**Warramunga Arr**	**58.85**	**187**	P	**P**	**00 11 42.0**	**-0.4**
WRA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WRA	**Warramunga Arr**	**58.85**	**187**	P	**P**	**00 11 42.0**	**-0.5**
RES	**Resolute Bay**	**60.91**	**15**	*e*P	**P**	**00 11 55.7**	**-0.3**
RES				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.3						
RES	**Resolute Bay**	**60.91**	**15**	*e*P	**P**	**00 11 55.7**	**-0.3**
	comp=Z,2.4nm,0.8s,mb4.4						
ASAR	**Alice Springs**	**62.58**	**187**	P	**P**	**00 12 07.6**	**-0.2**
	comp=Z,3.1nm,0.7s,mb4.5,baz=12,slow=6.7,SNR=12						
ASAR	**Alice Springs**	**62.58**	**187**	P	**P**	**00 12 07.6**	**-0.2**
ASAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
FINES	**FINESS Array B**	**66.97**	**332**	P	**P**	**00 12 35.9**	**-0.2**
	comp=Z,2.2nm,0.9s,mb4.2,baz=77,slow=8.2,SNR=4.0						
FINES	**FINESS Array B**	**66.97**	**332**	P	**P**	**00 12 35.9**	**-0.2**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FINES	**FINESS Array B**	**66.97**	**332**	P	**P**	**00 12 35.9**	**-0.2**
GOF	**Gofitskoye**	**68.55**	**311**	*e*P	**P**	**00 12 43.3**	**-3.0**
KIV	**Kislovodsk**	**69.37**	**310**	*e*P	**P**	**00 12 52.4**	**+0.9**
KIV				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.8						
KIV	**Kislovodsk**	**69.37**	**310**	*e*P	**P**	**00 12 52.1**	**+0.7**
	comp=Z,12nm,1.0s,mb4.8						
YBH	**Yreka Blue Hor**	**69.55**	**53**	P	**P**	**00 12 54.2**	**+1.6**
	comp=Z,2.8nm,0.9s,mb4.2,baz=90,slow=2.0,SNR=3.5						
YBH	**Yreka Blue Hor**	**69.55**	**53**	P	**P**	**00 12 54.2**	**+1.6**
YBH				pmax	pmax		
	comp=Z,3.0nm,0.9s						
STKA	**Stephens Creek**	**70.42**	**179**	P	**P**	**00 12 57.9**	**+0.1**
	comp=Z,1.6nm,0.7s,mb4.1,baz=350,slow=12,SNR=2.6						
WVOR	**Wild Horse Val**	**71.63**	**50**	*e*P	**P**	**00 13 05.9**	**+0.6**
WVOR				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
WVOR	**Wild Horse Val**	**71.63**	**50**	*e*P	**P**	**00 13 05.9**	**+0.6**
	comp=Z,2.6nm,0.9s,mb4.2						
NOA	**NORSAR Array B**	**72.31**	**337**	P	**P**	**00 13 08.1**	**-0.9**
	comp=Z,1.1nm,0.8s,mb3.9,baz=38,slow=6.2,SNR=2.8						
NOA	**NORSAR Array B**	**72.31**	**337**	P	**P**	**00 13 08.1**	**-0.9**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AKASG	**Malin Array Be**	**72.57**	**322**	P	**P**	**00 13 08.7**	**-2.1**
	comp=Z,1.3nm,0.5s,mb4.1,baz=46,slow=5.3,SNR=4.0						
AKASG	**Malin Array Be**	**72.57**	**322**	P	**P**	**00 13 08.7**	**-2.0**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KIEV	**Kiev**	**72.58**	**322**	*e*P	**P**	**00 13 09.2**	**-1.6**
KIEV				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
KIEV	**Kiev**	**72.58**	**322**	*e*P	**P**	**00 13 09.2**	**-1.7**
	comp=Z,2.3nm,0.5s,mb4.4						
HLID	**Hailey**	**73.42**	**47**	*e*P	**P**	**00 13 16.9**	**+0.9**
	comp=Z,2.0nm,1.0s,mb4.0						
NVAR	**Mina Array Bea**	**74.22**	**53**	P	**P**	**00 13 21.7**	**+1.0**
	comp=Z,1.7nm,0.8s,mb4.1,baz=277,slow=6.2,SNR=6.9						
IMW	**Indian Meadow**	**75.17**	**45**	*e*P	**P**	**00 13 27.8**	**+1.7**
	comp=Z,4.1nm,0.8s,mb4.4						
DUG	**Dugway**	**76.46**	**49**	*e*P	**P**	**00 13 34.5**	**+0.9**
DUG				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
DUG	**Dugway**	**76.46**	**49**	*e*P	**P**	**00 13 34.5**	**+0.9**
	comp=Z,2.2nm,0.9s,mb4.1						
BUR08	**Bucovina Ar. S**	**76.58**	**321**	*e*P	**P**	**00 13 33.5**	**-0.6**
PDAR	**Pinedale Array**	**76.67**	**45**	P	**P**	**00 13 35.5**	**+0.8**
	comp=Z,1.1nm,0.7s,mb3.9,baz=257,slow=2.4,SNR=5.0						
BRTR	**Keskin Array B**	**77.30**	**311**	P	**P**	**00 13 38.6**	**+0.3**
	comp=Z,0.6nm,0.8s,mb3.6,baz=90,slow=6.3,SNR=2.8						
BRTR	**Keskin Array B**	**77.30**	**311**	P	**P**	**00 13 38.6**	**+0.3**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
LDFC	**Landfair**	**78.31**	**54**	*e*P	**P**	**00 13 44.6**	**+0.6**
	comp=Z,6.5nm,0.9s,mb4.6						
SRU	**San Rafael**	**78.51**	**49**	*e*P	**P**	**00 13 45.9**	**+0.8**
SRU				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
SRU	**San Rafael**	**78.51**	**49**	*e*P	**P**	**00 13 45.9**	**+0.9**
	comp=Z,4.2nm,1.0s,mb4.3						
MORC	**Moravsky Berou**	**78.57**	**326**	*e*P	**P**	**00 13 44.4**	**-0.8**
MORC				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
MORC	**Moravsky Berou**	**78.57**	**326**	*e*P	**P**	**00 13 44.4**	**-0.8**
	comp=Z,2.6nm,0.9s,mb4.2						
SMCO	**Snowmass**	**80.52**	**47**	*e*P	**P**	**00 13 56.5**	**+0.4**
	comp=Z,4.6nm,1.1s,mb4.3						
SDCO	**Great Sand Dun**	**82.34**	**47**	*e*P	**P**	**00 14 06.7**	**+1.0**
	comp=Z,1.3nm,0.9s,mb3.9						
LPAZ	**La Paz**	**146.07**	**57**	PKPbc	PKPbc	00 21 24.9	+0.6
	comp=Z,5.8nm,0.9s,baz=20,slow=8.2,SNR=11						
SIV	**San Ignacio**	**150.16**	**46**	PKPbc	PKPbc	00 21 35.1	-0.1
	baz=301,slow=2.6						

JMA 14 00:02:46.4,38.°91N×140.°88E,h6km±1km,M3.5,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.27**	**81**	P	Pg	00 02 51.8	+0.2
JMK				S	Sg	00 02 55.5	+0.3
JYK	**Kaneyama**	**0.41**	**271**	*e*S	Sg	00 02 59.5	-0.1
JRG	**Rokugo**	**0.52**	**339**	P	Pg	00 02 56.7	+0.2
JOU	**Okura**	**0.57**	**197**	P	Pg	00 02 57.8	+0.5
JOU				*e*S	Sg	00 03 05.2	+0.5
JIO	**Ouri**	**0.58**	**141**	P	Pg	00 02 57.6	0.0
JIO				*e*S	Sg	00 03 05.3	+0.1
JOM	**Ohasama**	**0.65**	**30**	*e*S	Sg	00 03 06.6	-0.7

JMA 14 00:02:52.5,38.°98N×140.°87E,h4km±1km,M3.6,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.27**	**96**	*e*S	Sg	00 03 01.6	+0.2
JRG	**Rokugo**	**0.45**	**336**	P	Pg	00 03 01.6	+0.4
JRG				*e*S	Sg	00 03 08.1	+0.9
JOU	**Okura**	**0.63**	**195**	*e*S	Sg	00 03 13.7	+0.8
JIO	**Ouri**	**0.65**	**144**	*e*S	Sg	00 03 13.7	+0.5

JMA 14 00:04:08.1,39.°00N×140.°89E,h4km±1km,M3.6,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.26**	**100**	P	Pg	00 04 13.2	0.0
JMK				*e*S	Sg	00 04 17.1	+0.5
JRG	**Rokugo**	**0.44**	**333**	P	Pg	00 04 17.0	+0.4
JRG				*e*S	Sg	00 04 23.4	+1.0
JOM	**Ohasama**	**0.57**	**33**	*e*S	Sg	00 04 26.8	+0.5
JIO	**Ouri**	**0.65**	**146**	*e*S	Sg	00 04 29.2	+0.1
JOU	**Okura**	**0.66**	**196**	P	Pg	00 04 20.7	0.0
JOU				*e*S	Sg	00 04 29.2	0.0

JMA 14 00:05:16.8,39.°04N×140.°85E,h6km±1km,M3.5,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.30**	**107**	S	Sg	00 05 26.7	+0.1
JRG	**Rokugo**	**0.39**	**335**	P	Pg	00 05 24.7	+0.3
JRG				S	Sg	00 05 30.3	+0.7
JYK	**Kaneyama**	**0.40**	**252**	P	Pg	00 05 24.8	+0.2
JYK				*e*S	Sg	00 05 30.1	+0.3
JOM	**Ohasama**	**0.55**	**38**	X		00 05 27.3	
JOU	**Okura**	**0.69**	**192**	P	Pg	00 05 30.5	+0.5
JOU				*e*S	Sg	00 05 39.4	+0.4

*IDC **14** 00:06:21.3±0.8,39.°02N×140.°62E,h0km,mb3.9/13, mb1 4.0/15,mb1mx3.9/29,mbtmp3.9/15,ML3.2/2,Error ellipse: s-maj=24.4km s-min=17.8km az=91.0*
*NEIC **14** 00:06:22.6,39.°02N×140.°86E,h11km,mb4.5/7,After JMA.*
*JMA **14** 00:06:22.6,39.°01N×140.°85E,h6km±1km,M3.9*
JMA Felt II J1.
*ISCJB **14** 00:06:22.3±0.4,39.°03N±0.°03×140.°90E±0.°05,h24km±3km, mb4.1/18,Error ellipse: s-maj=6.5km s-min=4.9km az=6.9*

ISC 14 00:06:22.6±0.4,39.°02N±0.°03×140.°87E±0.°04,h11km±3km, n40,σ0°78/44,mb4.1/18,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.28**	**103**	P	**Pg**	**00 06 28.2**	**-0.1**
JMK				*e*S	**Sg**	**00 06 32.2**	**0.0**
JYK	**Kaneyama**	**0.41**	**256**	P	**Pg**	**00 06 30.4**	**-0.2**
JRG	**Rokugo**	**0.42**	**335**	P	**Pg**	**00 06 30.9**	**+0.1**
JRG				*e*S	**Sg**	**00 06 37.0**	**+0.5**
JOM	**Ohasama**	**0.56**	**36**	P	**Pg**	**00 06 33.5**	**-0.1**
JOM				S	**Sg**	**00 06 41.3**	**+0.3**
JOU	**Okura**	**0.67**	**194**	P	**Pg**	**00 06 35.4**	**-0.1**
JOU				S	**Sg**	**00 06 44.3**	**0.0**
JIO	**Ouri**	**0.68**	**146**	P	**Pg**	**00 06 35.5**	**-0.2**
JIO				S	**Sg**	**00 06 44.3**	**-0.2**
JYA	**Atsumi**	**0.99**	**245**	P	**Pg**	**00 06 41.2**	**-0.5**
JYS	**Shiratake**	**1.01**	**219**	P	**Pg**	**00 06 41.5**	**-0.5**
MJAR	**Matsushiro Arr**	**3.24**	**221**	Pn	**Pn**	**00 07 13.0**	**-0.3**
	1.8nm,0.3s,baz=28,slow=13,SNR=4.2						
MAJO	**Matsushiro**	**3.25**	**221**	*e*Pn	**Pn**	**00 07 15.5**	**+2.2**
MAT	**Matsushiro**	**3.25**	**221**	P	**Pn**	**00 07 15.6**	**+2.3**
MAT				*e*S	**Sn**	**00 07 59.9**	**+8.0**
ASAJ	**Asahikawa**	**5.26**	**14**	Pn	**Pn**	**00 07 41.4**	**+0.3**
	1.0nm,0.3s,baz=231,slow=14,SNR=2.4						
KSRS	**Korea Array**	**10.30**	**265**	Pn	**Pn**	**00 08 54.0**	**+3.8**
	0.9nm,0.3s,baz=75,slow=14,SNR=9.1						
ZALV	**Zalesovo Beam**	**40.28**	**311**	P	**P**	**00 13 58.4**	**-0.9**
	1.0nm,0.6s,mb3.7,baz=66,slow=7.0,SNR=3.8						
MKAR	**Makanchi Array**	**42.72**	**300**	P	**P**	**00 14 17.0**	**-2.4**
	0.5nm,0.7s,mb3.4,baz=81,slow=8.9,SNR=3.3						
KURK	**Kurchatov**	**44.39**	**306**	P	**P**	**00 14 33.6**	**+0.8**
	1.5nm,0.5s,mb4.0,baz=82,slow=8.3,SNR=6.9						
KURK	**Kurchatov**	**44.39**	**306**	*e*P	**P**	**00 14 33.0**	**+0.2**
	4.1nm,0.8s,mb4.2						
BVAR	**Borovoye Array**	**48.93**	**311**	P	**P**	**00 15 08.7**	**+0.4**
	0.7nm,0.6s,mb3.9,baz=97,slow=4.8,SNR=3.2						
INK	**Inuvik**	**52.83**	**28**	P	**P**	**00 15 38.8**	**+1.3**
	0.9nm,0.5s,mb4.0,baz=305,slow=11,SNR=3.5						
ARU	**Arti**	**54.60**	**318**	*e*P	**P**	**00 15 50.5**	**-0.1**
	3.2nm,0.5s,mb4.6						
ABKAR	**Akbulak array**	**56.35**	**309**	*e*P	**P**	**00 16 02.9**	**-0.4**
	1.0nm,0.4s,mb4.2						
WRA	**Warramunga Arr**	**58.96**	**187**	P	**P**	**00 16 22.1**	**+0.2**
	1.2nm,0.5s,mb4.2,baz=2.6,slow=7.4,SNR=5.3						
RES	**Resolute Bay**	**60.79**	**15**	P	**P**	**00 16 34.8**	**+0.8**
	2.5nm,0.7s,mb4.5,baz=339,slow=6.9,SNR=6.3						
RES	**Resolute Bay**	**60.79**	**15**	*e*P	**P**	**00 16 33.9**	**0.0**
	5.1nm,1.0s,mb4.6						
ARCES	**ARCESS Array B**	**61.99**	**339**	P	**P**	**00 16 42.2**	**+0.2**
	2.7nm,1.1s,mb4.3,baz=40,slow=7.1,SNR=3.8						
ASAR	**Alice Springs**	**62.69**	**187**	P	**P**	**00 16 47.5**	**+0.3**
	1.1nm,0.8s,mb4.0,baz=2.1,slow=5.3,SNR=5.1						
JOF	**Joensuu**	**64.02**	**331**	*e*p	**P**	**00 16 54.6**	**-1.0**
JOF	**Joensuu**	**64.02**	**331**	*e*p	**P**	**00 16 54.6**	**-1.0**
DZM	**Mont Dzumac**	**65.32**	**154**	*e*P	**P**	**00 17 04.2**	**-0.3**
	5.4nm,0.9s,mb4.6						
KAF	**Kangasniemi**	**66.35**	**332**	*e*p	**P**	**00 17 09.2**	**-1.6**
	0.9nm,0.4s,mb4.2						
KAF	**Kangasniemi**	**66.35**	**332**	*e*p	**P**	**00 17 09.2**	**-1.6**
	0.9nm,0.4s,mb4.2						
FINES	**FINESS Array B**	**66.86**	**332**	P	**P**	**00 17 14.0**	**-0.1**
	1.5nm,0.7s,mb4.2,baz=35,slow=7.1,SNR=7.6						
KIV	**Kislovodsk**	**69.29**	**310**	*e*P	**P**	**00 17 29.8**	**+0.2**
	9.7nm,1.0s,mb4.7						
NB2	**NORSAR Subarra**	**72.20**	**337**	P	**P**	**00 17 47.1**	**+0.1**
	comp=Z,0.4nm,0.5s,mb3.6,baz=37,slow=6.5						
NOA	**NORSAR Array B**	**72.20**	**337**	P	**P**	**00 17 47.2**	**+0.2**
	comp=Z,0.7nm,0.6s,mb3.8,baz=40,slow=6.1,SNR=3.6						
NOA	**NORSAR Array B**	**72.20**	**337**	P	**P**	**00 17 47.2**	**+0.2**
AKASG	**Malin Array Be**	**72.47**	**322**	P	**P**	**00 17 48.5**	**-0.3**
	comp=Z,0.6nm,0.4s,mb3.9,baz=44,slow=6.8,SNR=4.8						
BRTR	**Keskin Array B**	**77.22**	**311**	P	**P**	**00 18 16.3**	**-0.2**
	comp=Z,0.3nm,0.5s,mb3.5,baz=100,slow=3.5,SNR=3.2						
LPAZ	**La Paz**	**146.01**	**56**	PKPbc	PKPbc	00 26 04.0	+1.3
	comp=Z,1.0nm,0.5s,baz=38,slow=7.3,SNR=7.2						
SIV	**San Ignacio**	**150.07**	**46**	PKPbc	PKPbc	00 26 14.2	+0.6
	comp=Z,0.7nm,0.4s,baz=242,slow=6.1,SNR=6.0						

*ISCJB **14** 00:07:20.3±0.6,39.°11N±0.°03×140.°84E±0.°04,h8km±4km, mb4.7/81,Error ellipse: s-maj=5.0km s-min=4.3km az=14.2*
*NEIC **14** 00:07:20.8,39.°12N×140.°89E,h11km,mb4.8/51,After JMA.*
NEIC Recorded [3 JMA] in Akita, Iwate and Miyagi.
*BJI **14** 00:07:20.3,38.°78N×140.°96E,h24km,mB5.4/1,mb5.0/10, Ms5.2/1,Ms7 5.1/1*
*IDC **14** 00:07:20.5±0.5,39.°11N×140.°77E,h0km,mb4.4/25, mb1 4.5/29,mb1mx4.4/34,mbtmp4.4/29,ML4.0/4,Error ellipse: s-maj=14.5km s-min=13.1km az=141.0*
*JMA **14** 00:07:20.8,39.°11N×140.°89E,h10km±1km,M4.8*
JMA Felt III J1.
*MOS **14** 00:07:24.1±0.9,39.°12N×140.°77E,h33km,mb4.9/40,Error ellipse: s-maj=9.1km s-min=5.5km az=103.6*
*SZGRF **14** 00:07:36.9,41.°02N×139.°12E,h33km,mb5.0,Hokkaido, Japan, region*

ISC 14 00:07:21.0±0.6,39.°11N±0.°03×140.°84E±0.°04,h3km±4km, n231,σ0°92/229,mb4.7/81,4C-2D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRG	**Rokugo**	**0.33**	**331**	P	**Pg**	**00 07 27.9**	**+0.5**
JMK	**Ichinoseki**	**0.33**	**118**	P	**Pg**	**00 07 26.8**	**-0.6**
JMK				S	**Sg**	**00 07 31.0**	**-0.8**
JYK	**Kaneyama**	**0.42**	**243**	P	**Pg**	**00 07 29.6**	**+0.5**
JOM	**Ohasama**	**0.51**	**44**	S	**Sg**	**00 07 36.3**	**-1.0**
OFUJ	**Ofunato**	**0.65**	**92**	P	**Pg**	**00 07 32.6**	**-0.8**
JOU	**Okura**	**0.75**	**191**	P	**Pg**	**00 07 35.7**	**+0.2**
JOU				S	**Sg**	**00 07 45.9**	**+0.7**
JIO	**Ouri**	**0.76**	**148**	P	**Pg**	**00 07 35.1**	**-0.6**
JIO				S	**Sg**	**00 07 45.0**	**-0.6**
MAJO	**Matsushiro**	**3.30**	**220**	*e*P	**Pn**	**00 08 14.7**	**+1.1**
MAT	**Matsushiro**	**3.30**	**220**	P	**Pn**	**00 08 15.1**	**+1.5**
MAT				S	**Sn**	**00 08 57.6**	**+4.3**
MJAR	**Matsushiro Arr**	**3.30**	**220**	Pn	**Pn**	**00 08 14.2**	**+0.6**
	8.7nm,0.3s,baz=26,slow=14,SNR=14						
MJAR	**Matsushiro Arr**	**3.30**	**220**	P	**Pn**	**00 08 14.2**	**+0.6**
MJAR				pmax	pmax		
	comp=Z,9.0nm,0.3s						
ASAJ	**Asahikawa**	**5.17**	**14**	Pn	**Pn**	**00 08 41.0**	**+1.7**
	comp=Z,13nm,0.3s,baz=242,slow=9.3,SNR=19						
ASAJ	**Asahikawa**	**5.17**	**14**	P	**Pn**	**00 08 41.0**	**+1.7**
ASAJ				pmax	pmax		
	comp=Z,13nm,0.3s						
VLA	**Vladivostok**	**7.85**	**304**	*e*P	**Pn**	**00 09 16.0**	**-0.1**
VLA				pmax	pmax		
	comp=Z,27nm,0.7s						
YSS	**Yuzh-Sakhalins**	**7.97**	**10⇓**	*i*P	**Pn**	**00 09 19.0**	**+1.4**
YSS				pmax	pmax		
	comp=Z,50nm,0.8s						
HABR	**Khabarovsk**	**10.25**	**338**	*e*P	**Pn**	**00 09 54.3**	**+5.4**
HABR						00 11 39.2	
KSRS	**Korea Array**	**10.29**	**265**	Pn	**Pn**	**00 09 53.5**	**+3.9**
	comp=Z,5.9nm,0.3s,baz=78,slow=14,SNR=117						
KSRS				Sn	**Sn**	**00 11 51.9**	**+6.5**
	comp=Z,1.0nm,0.3s,baz=75,slow=24,SNR=20						
KSRS	**Korea Array**	**10.29**	**265**	P	**Pn**	**00 09 53.5**	**+4.0**
KSRS						00 11 51.9	
KSRS				pmax	pmax		
	comp=Z,6.0nm,0.3s						
KSRS				smax			
	comp=N,1.0nm,0.3s						
CBIJ	**Chichi jima**	**12.03**	**174**	Pn	**Pn**	**00 10 13.1**	**-0.3**
	comp=N,3.8nm,0.3s,baz=18,slow=20,SNR=2.8						
CN2	**Changchun**	**12.46**	**297**	*e*P	**Pn**	**00 10 25.3**	**+6.1**
CN2				pmax	pmax		
	comp=Z,30nm,1.3s						
PETK	**Petropavlovsk-**	**18.17**	**34**	P	**Pn**	**00 11 34.2**	**0.0**
	comp=Z,0.1nm,0.3s,baz=216,slow=14,SNR=3.3						
PETK	**Petropavlovsk-**	**18.17**	**34**	P	**Pn**	**00 11 34.

comp=Z,22nm,0.7s,mb5.2
PKI Pulchoki 47.07 273 *eP* **P 00 15 53.8 -0.3**
comp=Z,22nm,0.7s,mb5.2
PKIN Phulchoki 47.08 273 *eP* **P 00 15 53.8 -0.3**
comp=Z,22nm,0.7s,mb5.2
PMR Palmer 47.25 38 *eP* **P 00 15 56.3 +1.3**
PMR pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
PMR Palmer 47.25 38 *eP* **P 00 15 56.3 +1.3**
comp=Z,4.2nm,0.6s,mb4.5
DMN Daman 47.29 273 *eP* **P 00 15 55.4 -0.4**
comp=Z,21nm,0.8s,mb5.1
TKM2 Tokmak 2 48.27 297 *eP* **P 00 16 03.7 +0.5**
TKM2 pmax pmax
comp=Z,18nm,0.8s,mb5.2
TKM2 Tokmak 2 48.27 297 *eP* **P 00 16 03.7 +0.5**
comp=Z,18nm,0.8s,mb5.2
BVAR Borovoye Array 48.86 311 P **P 00 16 06.7 -0.9**
comp=Z,2.6nm,0.5s,mb4.5,baz=79,slow=7.5,SNR=15
BVAR PcP PcP 00 17 31.8 -0.2
comp=Z,1.8nm,0.7s,baz=52,slow=2.6,SNR=4.3
BVAR Borovoye Array 48.86 311 P **P 00 16 06.7 -0.9**
BVAR 00 17 31.8
BVAR pmax pmax
comp=Z,3.0nm,0.5s
BRVK Borovoye 48.91 311 *ceP* **P 00 16 09.2 +1.2**
BRVK pmax pmax
comp=Z,70nm,2.5s,mb5.2
BRVK Borovoye 48.91 311 *eP* **P 00 16 07.8 -0.2**
AAK Ala-Archa 49.13 297 P **P 00 16 10.0 +0.2**
comp=Z,2.5nm,0.5s,mb4.5,baz=120,slow=6.5,SNR=7.5
AAK Ala-Archa 49.13 297 P **P 00 16 10.0 +0.1**
AAK pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
AAK Ala-Archa 49.13 297 *eP* **P 00 16 10.0 +0.1**
comp=Z,7.1nm,0.7s,mb4.8
UCH Uchtor 49.26 296 *eP* **P 00 16 11.6 +0.8**
comp=Z,76nm,2.3s,mb5.3
EKS2 Erkin-Say 49.62 297 *eP* **P 00 16 13.6 0.0**
comp=Z,5.2nm,0.8s,mb4.6
AML Almayashu 49.86 296 *eP* **P 00 16 16.2 +0.8**
comp=Z,30nm,1.4s,mb5.1
INK Inuvik 52.76 28 P **P 00 16 37.4 +0.6**
comp=Z,4.0nm,0.8s,mb4.4,baz=336,slow=8.3,SNR=6.2
INK Inuvik 52.76 28 *eP* **P 00 16 37.3 +0.5**
INK pmax pmax
comp=Z,3.0nm,0.6s
INK Inuvik 52.76 28 *eP* **P 00 16 37.3 +0.6**
comp=Z,2.7nm,0.6s,mb4.3
ARU Arti 54.52 317 *diP* **P 00 16 50.8 +1.0**
ARU S **S 00 24 27.9 -1.5**
ARU pmax pmax
comp=Z,44nm,1.7s,mb5.2
ARU Arti 54.52 317 *eP* **P 00 16 49.3 -0.5**
comp=Z,17nm,0.7s,mb5.2
ABKAR Akbulak array 56.27 309 *eP* **P 00 17 01.8 -0.8**
comp=Z,6.7nm,0.6s,mb4.8
KBL Kabul 56.28 289 *eP* **P 00 17 02.8 0.0**
KBL pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
KBL Kabul 56.28 289 *eP* **P 00 17 02.8 -0.1**
comp=Z,10.0nm,0.9s,mb4.8
AKTK Aktyubinsk 56.97 311 P **P 00 17 06.9 -0.6**
AKTO Aktyubinsk 56.97 311 P **P 00 17 06.9 -0.6**
comp=Z,6.5nm,0.7s,mb4.8,baz=69,slow=14,SNR=17
AKTO Aktyubinsk 56.97 311 P **P 00 17 06.9 -0.6**
AKTO pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
WRA Warramunga Arr 59.05 187 P **P 00 17 21.1 -1.2**
comp=Z,4.3nm,0.8s,mb4.5,baz=4.9,slow=7.3,SNR=13
WRA Warramunga Arr 59.05 187 P **P 00 17 21.1 -1.2**
WRA pmax pmax
comp=Z,4.0nm,0.8s
RES Resolute Bay 60.71 15 P **P 00 17 33.0 -0.2**
comp=Z,7.4nm,0.8s,mb4.9,baz=307,slow=8.5,SNR=15
RES Resolute Bay 60.71 15 P **P 00 17 33.0 -0.2**
RES pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
ARCES ARCESS Array B 61.90 339 P **P 00 17 41.5 +0.2**
comp=Z,4.4nm,1.0s,mb4.5,baz=62,slow=7.7,SNR=11
ARCES ARCESS Array B 61.90 339 P **P 00 17 41.5 +0.2**
ARCES pmax pmax
comp=Z,4.0nm,1.0s
ARCES ARCESS Array B 61.90 339 P **P 00 17 41.5 +0.2**
YKA Yellowknife Ar 62.25 31 P **P 00 17 43.7 0.0**
comp=Z,0.4nm,0.5s,mb3.8,baz=297,slow=6.7,SNR=3.0
ASAR Alice Springs 62.78 187 P **P 00 17 47.0 -0.6**
comp=Z,2.2nm,0.7s,mb4.4,baz=2.6,slow=4.4,SNR=12
ASAR Alice Springs 62.78 187 P **P 00 17 47.1 -0.5**
ASAR pmax pmax
comp=Z,2.0nm,0.7s
JOF Joensuu 63.93 331 *ep* **P 00 17 52.4 -2.5**
JOF Joensuu 63.93 331 *ep* **P 00 17 52.4 -2.5**
OBN Obninsk 66.17 323 *eP* **P 00 18 10.1 +0.5**
OBN *e* 00 18 41.8
OBN pmax pmax
comp=Z,35nm,1.6s,mb5.1
KAF Kangasniemi 66.26 332 *eP* **P 00 18 06.4 -3.6**
KAF pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
KAF Kangasniemi 66.26 332 *ep* **P 00 18 06.4 -3.6**
comp=Z,3.5nm,0.6s,mb4.6
FINES FINESS Array B 66.78 332 P **P 00 18 12.5 -0.9**
comp=Z,5.4nm,0.8s,mb4.7,baz=50,slow=6.0,SNR=15
FINES FINESS Array B 66.78 332 P **P 00 18 12.5 -0.8**
FINES pmax pmax
comp=Z,5.0nm,0.8s
SUMG Summit 68.61 360 *eP* **P 00 18 25.9 +1.1**
comp=Z,5.8nm,0.7s,mb4.6
ZEI Tsey 69.16 309 *eP* **P 00 18 26.0 -2.7**
ZEI pmax pmax
comp=Z,19nm,1.6s,mb4.8
KIV Kislovodsk 69.22 310 *eP* **P 00 18 29.8 +0.8**
KIV *i* 00 18 51.9
KIV pmax pmax
comp=Z,66nm,1.6s,mb5.3
KIV Kislovodsk 69.22 310 *eP* **P 00 18 28.2 -0.8**
comp=Z,52nm,1.3s,mb5.3
GNI Garni 70.12 306 *ceP* **P 00 18 37.4 +2.8**
GNI pmax pmax
comp=Z,22nm,1.7s
GNI Garni 70.12 306 *eP* **P 00 18 36.2 +1.6**
comp=Z,18nm,1.4s,mb4.8
IZAR Zarasai 70.42 327 *eP* **P 00 18 35.6 -0.6**
IDID Didziasalis 70.50 326 *eP* **P 00 18 36.3 -0.4**
ISAL Salakas 70.59 327 *eP* **P 00 18 36.9 -0.4**
IIGN Ignalina 70.70 327 *eP* **P 00 18 37.4 -0.5**
ANN Anapa 71.78 313 *eP* **P 00 18 40.9 -3.7**
ANN pmax pmax
comp=Z,64nm,1.6s,mb5.3
NB2 NORSAR Subarra 72.11 337 P **P 00 18 45.4 -0.9**
comp=Z,68nm,2.0s,mb5.2,baz=39,slow=6.5
NB2 NORSAR Subarra 72.11 337 P **P 00 18 45.4 -0.9**
NB2 NORSAR Subarra 72.11 337 P **P 00 18 45.4 -0.9**
NOA NORSAR Array B 72.11 337 P **P 00 18 45.6 -0.6**
comp=Z,4.2nm,1.0s,mb4.3,baz=39,slow=6.0,SNR=9.2
NOA NORSAR Array B 72.11 337 P **P 00 18 45.7 -0.6**
NOA pmax pmax
comp=Z,4.0nm,1.0s
AKASG Malin Array Be 72.39 322 P **P 00 18 46.8 -1.4**
comp=Z,4.4nm,0.7s,mb4.5,baz=46,slow=6.1,SNR=15
AKASG Malin Array Be 72.39 322 P **P 00 18 46.8 -1.4**
AKASG pmax pmax
comp=Z,4.0nm,0.7s
AKBB Malin Array Si 72.39 322 *eP* **P 00 18 47.9 -0.3**
KIEV Kiev 72.40 322 *eP* **P 00 18 47.2 -1.0**
KIEV pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
KIEV Kiev 72.40 322 *eP* **P 00 18 47.2 -1.1**
comp=Z,5.4nm,0.8s,mb4.5
CMB Columbia Colle 73.04 55 *eP* **P 00 18 53.4 +1.1**
CMB pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
CMB Columbia Colle 73.04 55 *eP* **P 00 18 53.4 +1.1**
comp=Z,3.3nm,0.8s,mb4.3
NVAR Mina Array Bea 74.11 53 P **P 00 18 59.7 +1.1**
comp=Z,1.5nm,0.7s,mb4.0,baz=284,slow=6.1,SNR=9.4
NVAR Mina Array Bea 74.11 53 P **P 00 18 59.7 +1.1**
N12A Clover Valley, 74.61 50 *eP* **P 00 19 03.8 +2.3**
comp=Z,2.6nm,0.8s,mb4.2
IMW Indian Meadow 75.04 45 *eP* **P 00 19 05.4 +1.5**
comp=Z,2.7nm,0.6s,mb4.3
DUG Dugway 76.34 49 *eP* **P 00 19 12.5 +1.1**
DUG pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
DUG Dugway 76.34 49 *eP* **P 00 19 12.5 +1.1**

comp=Z,2.6nm,0.8s,mb4.2
BUR08 Bucovina Ar. S 76.40 321 *eP* **P 00 19 11.6 0.0**
PDAR Pinedale Array 76.54 46 P **P 00 19 12.8 +0.4**
comp=Z,1.6nm,0.7s,mb4.0,baz=290,slow=1.9,SNR=7.6
KOLS Kolonicke sedl 76.89 324 *eP* **P 00 19 15.0 +0.7**
STHS Stebnicka Huta 77.01 324 *eP* **P 00 19 15.7 +0.7**
STHS pmax pmax
comp=Z,4.0nm,1.4s,mb4.2
STHS Stebnicka Huta 77.01 324 *eP* **P 00 19 15.7 +0.7**
comp=Z,4.1nm,1.4s,mb4.2
OJC Ojcow 77.07 326 *eP* **P 00 19 14.2 -1.1**
BRTR Keskin Array B 77.15 311 P **P 00 19 15.8 -0.1**
comp=Z,0.7nm,0.6s,mb3.8,baz=116,slow=3.8,SNR=7.8
BRTR Keskin Array B 77.15 311 P **P 00 19 15.9 -0.1**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
CRVS Cervenica-Dubn 77.28 324 *eP* **P 00 19 14.4 -2.1**
CCUT Cedar City 77.71 52 *eP* **P 00 19 20.5 +1.3**
comp=Z,2.0nm,0.9s,mb4.0
KECS Kecovo 78.03 324 *eP* **P 00 19 22.0 +1.3**
KECS pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
KECS Kecovo 78.03 324 *eP* **P 00 19 22.0 +1.3**
comp=Z,1.9nm,1.1s,mb3.9
OKC Ostrava-Krasne 78.08 326 *eP* **P 00 19 21.5 +0.6**
OKC Ostrava-Krasne 78.08 326 *eP* **P 00 19 21.5 +0.6**
MORC Moravsky Berou 78.38 326 *eP* **P 00 19 22.7 +0.1**
MORC pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
MORC Moravsky Berou 78.38 326 *eP* **P 00 19 22.7 0.0**
comp=Z,4.5nm,0.9s,mb4.4
SRU San Rafael 78.39 49 *eP* **P 00 19 26.0 +3.1**
SRU pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
SRU San Rafael 78.39 49 *eP* **P 00 19 26.0 +3.1**
comp=Z,4.8nm,0.9s,mb4.4
DPC Dobruska-Polom 78.47 327 *eP* **P 00 19 24.3 +1.2**
DPC Dobruska-Polom 78.47 327 *eP* **P 00 19 24.3 +1.2**
UPC Upice 78.48 328 *eP* **P 00 19 24.0 +0.8**
UPC Upice 78.48 328 *eP* **P 00 19 24.0 +0.8**
PSZ Piszkesteto 78.71 324 *eP* **P 00 19 24.9 +0.4**
VYHS Vyhne 78.77 325 *eP* **P 00 19 25.3 +0.5**
VYHS pmax pmax
comp=Z,41nm,2.6s,mb4.9
VYHS Vyhne 78.77 325 *eP* **P 00 19 25.3 +0.5**
comp=Z,41nm,2.6s,mb4.9
VYHS *e*PP PP 00 22 33.2 +11
PVCC Panska Ves 79.06 328 *eP* **P 00 19 26.5 +0.2**
PVCC Panska Ves 79.06 328 *eP* **P 00 19 26.5 +0.2**
CLL Collm 79.08 330 *eP* **P 00 19 25.5 -1.0**
comp=Z,16nm,1.7s,mb4.7
CLL Collm 79.08 330 *eP* **P 00 19 26.0 -0.5**
CLL Collm 79.08 330 *eP* **P 00 19 26.0 -0.5**
NRDL Niedersach Rie 79.24 332 *eP* **P 00 19 27.8 +0.5**
comp=Z,63nm,2.2s,mb5.2
PRU Pruhonice 79.48 328 *eP* **P 00 19 30.4 +1.7**
PRU Pruhonice 79.48 328 *eP* **P 00 19 30.4 +1.7**
TREC Trest 79.62 327 *eP* **P 00 19 29.4 -0.1**
TREC Trest 79.62 327 *eP* **P 00 19 29.4 -0.1**
MOX Moxa 80.14 330 *eP* **P 00 19 33.6 +1.3**
comp=Z,16nm,1.6s,mb4.7
MMAI Mount Meron Ar 80.41 305 P **P 00 19 34.1 +0.1**
comp=Z,2.2nm,0.8s,mb4.1,baz=73,slow=5.0,SNR=5.0
KHC Kasperske Hory 80.55 328 *eP* **P 00 19 34.1 -0.4**
KHC pmax pmax
comp=Z,12nm,1.4s,mb4.6
KHC Kasperske Hory 80.55 328 *eP* **P 00 19 34.1 -0.4**
comp=Z,12nm,1.4s,mb4.6
KHC Kasperske Hory 80.55 328 *eP* **P 00 19 34.4 -0.1**
GERES GERESS Array B 80.72 328 P **P 00 19 35.1 -0.2**
comp=Z,1.2nm,0.8s,mb3.9,baz=23,slow=4.4,SNR=6.7
GERES GERESS Array B 80.72 328 P **P 00 19 35.1 -0.3**
GERES pmax pmax
comp=Z,1.0nm,0.8s
WET Wettzell 80.82 328 *eP* **P 00 19 36.5 +0.6**
comp=Z,15nm,1.9s,mb4.6
WET Wettzell 80.82 328 *eP* **P 00 19 36.5 +0.6**
comp=Z,15nm,1.9s,mb4.6
GRA1 Grafenberg Arr 81.05 330 *eP* **P 00 19 36.5 -0.7**
comp=Z,32nm,1.6s,mb5.0
GRF Grafenberg Arr 81.05 330 *eP* **P 00 19 36.5 -0.7**
comp=Z,32nm,1.6s,mb5.0
GRF Grafenberg Arr 81.05 330 *eP* **P 00 19 36.5 -0.7**
GRF pmax pmax
comp=Z,32nm,1.6s,mb5.0
GRF Grafenberg Arr 81.05 330 *eP* **P 00 19 36.5 -0.7**
GRF pmax pmax
comp=Z,32nm,1.6s,mb5.0
GRF Grafenberg Arr 81.05 330 *eP* **P 00 19 36.5 -0.7**
comp=Z,32nm,1.6s,mb5.0
RJOB Jochberg 81.96 328 *eP* **P 00 19 42.2 +0.2**
comp=Z,38nm,2.0s,mb5.0
FUR Furstenfeldbru 82.25 329 *eP* **P 00 19 44.5 +1.0**
comp=Z,80nm,1.9s,mb5.3
FUR Furstenfeldbru 82.25 329 *eP* **P 00 19 44.5 +1.0**
FUR pmax pmax
comp=Z,80nm,1.9s,mb5.3
FUR Furstenfeldbru 82.25 329 *eP* **P 00 19 44.5 +1.0**
comp=Z,80nm,1.9s,mb5.3
BFO Black Forest 83.28 330 *eP* **P 00 19 49.2 +0.3**
comp=Z,31nm,2.0s,mb5.0
BFO Black Forest 83.28 330 *eP* **P 00 19 49.2 +0.3**
BFO pmax pmax
comp=Z,31nm,2.0s,mb5.0
BFO Black Forest 83.28 330 *eP* **P 00 19 49.2 +0.3**
comp=Z,31nm,2.0s,mb5.0
SCHQ Schefferville 83.47 16 P **P 00 19 49.2 -0.5**
comp=Z,2.6nm,0.7s,mb4.4,baz=17,slow=10,SNR=3.6
TIR Tirane 83.57 319 *eP* **P 00 19 51.5 +1.0**
CDF Champ du Feu 83.61 331 *eP* **P 00 19 50.1 -0.5**
LOR Lormes 85.84 332 *eP* **P 00 20 00.8 -1.0**
FLN La Foliniere 86.04 336 *eP* **P 00 20 01.6 -1.2**
LDF La Druitiere 86.07 335 *eP* **P 00 20 02.0 -0.9**
SSF Saint Saulge 86.14 332 *eP* **P 00 20 02.4 -0.9**
comp=Z,16nm,1.2s,mb4.8
SSF Saint Saulge 86.14 332 *eP* **P 00 20 02.4 -0.9**
SSF pmax pmax
comp=Z,8.0nm,1.2s,mb4.8
SSF Saint Saulge 86.14 332 *eP* **P 00 20 02.4 -0.9**
comp=Z,7.9nm,1.2s,mb4.8
LPL La Plagne 86.22 330 *eP* **P 00 20 03.0 -0.7**
LPG La Plagne 86.23 330 *eP* **P 00 20 03.1 -0.7**
comp=Z,6.9nm,0.8s,mb4.6
LPG La Plagne 86.23 330 *eP* **P 00 20 03.1 -0.7**
LPG pmax pmax
comp=Z,3.0nm,0.8s,mb4.6
LPG La Plagne 86.23 330 *eP* **P 00 20 03.1 -0.7**
comp=Z,3.5nm,0.8s,mb4.6
SMF Signal de Mont 86.37 332 *eP* **P 00 20 03.7 -0.8**
AVF Avril sur Loir 86.42 332 *eP* **P 00 20 03.9 -0.8**
comp=Z,12nm,1.0s,mb4.8
AVF Avril sur Loir 86.42 332 *eP* **P 00 20 03.9 -0.8**
AVF pmax pmax
comp=Z,6.0nm,1.0s,mb4.8
AVF Avril sur Loir 86.42 332 *eP* **P 00 20 03.9 -0.8**
comp=Z,5.9nm,1.0s,mb4.8
GRR Gorron 86.49 336 *eP* **P 00 20 04.3 -0.7**
BGF Bois d'Agland 86.81 332 *eP* **P 00 20 05.8 -0.8**
MBDF Montbardon 86.86 329 *eP* **P 00 20 05.3 -1.6**
SGMF Saint Gilles 87.14 336 *eP* **P 00 20 08.0 -0.2**
TCF Toulx Ste Croi 87.27 333 *eP* **P 00 20 08.0 -0.8**
VIVF Saint-Julien-l 87.57 330 *eP* **P 00 20 09.8 -0.6**
QUIF Quistinic 87.63 337 *eP* **P 00 20 09.8 -0.8**
MFF Saint Martin d 87.81 334 *eP* **P 00 20 11.3 -0.2**
FRF La Foret Royal 87.87 329 *eP* **P 00 20 11.2 -0.6**
SMRF Simiane la Rot 87.96 329 *eP* **P 00 20 11.2 -1.0**
comp=Z,24nm,1.2s,mb5.0
SMRF Simiane la Rot 87.96 329 *eP* **P 00 20 11.2 -1.0**
comp=Z,24nm,1.2s,mb5.3
LMR La Mourre 88.12 329 *eP* **P 00 20 11.3 -1.7**
RJF Les Rejaudoux 88.36 333 *eP* **P 00 20 13.8 -0.3**
LASF Ste Croix 88.54 331 *eP* **P 00 20 14.1 -0.9**
TXAR Lajitas Array 89.21 52 P **P 00 20 18.5 +0.1**
comp=Z,0.8nm,0.8s,mb4.1,baz=284,slow=3.5,SNR=5.2
TXAR Lajitas Array 89.21 52 P **P 00 20 18.5 +0.1**
TXAR pmax pmax
comp=Z,1.0nm,0.8s
MTLF Montolieu 89.79 331 *eP* **P 00 20 20.4 -0.5**
SDV Santo Domingo 124.01 38 PKP PKPdf 00 26 21.7 +0.4
comp=Z,1.1nm,0.6s,baz=240,slow=6.3,SNR=4.1
DBIC Dimbokro 124.47 317 PKhKP 00 26 19.4
comp=Z,6.6nm,1.0s,baz=333,slow=4.5,SNR=2.9
DBIC Dimbokro 124.47 317 *i* PKIKP 00 26 19.4
DBIC pmax pmax
comp=Z,7.0nm,1.0s

DBIC Dimbokro 124.47 317 PKP 00 26 19.4
LPAZ La Paz 145.98 56 PKPbc PKPbc 00 27 03.4 +0.9
comp=Z,4.3nm,0.9s,baz=1.3,slow=7.6,SNR=8.2
LPAZ La Paz 145.98 56 *e*PKPbc PKPbc 00 27 03.0 +0.5
SIV San Ignacio 150.03 46 PKPbc PKPbc 00 27 13.8 +0.5
comp=Z,4.6nm,0.8s,baz=320,slow=2.1,SNR=16
SIV PKPab PKPab 00 27 19.4 +0.4
comp=Z,6.0nm,1.1s,baz=7.9,slow=2.4,SNR=8.9
LCO Las Campanas 152.12 78 *e*PKPbc PKPbc 00 27 18.8 +0.9

JMA ***14*** *00:08:01.9, 38°.83N×140°.81E, h5km±1km, M4.1*
NEIC ***14*** *00:08:01.9, 38°.83N×140°.81E, h5km, mb4.5/8, After JMA.*
ISCJB ***14*** *00:08:01.6±0.5, 38°.84N±0°.03×140°.81E±0°.04, h20km±4km, mb4.2/17, Error ellipse: s-maj=6.5km s-min=4.9km az=41.9*
IDC ***14*** *00:08:02.1±1.0, 39°.20N×140°.79E, h0km, mb4.1/10, mb1 4.2/10, mb1mx4.0/25, mbtmp4.1/10, MS5.3/1, Ms1 5.3/1, ms1mx4.2/35, Error ellipse: s-maj=39.2km s-min=25.0km az=60.0*

ISC 14 00:08:01.9±0.5, 38°.83N±0°.03×140°.82E±0°.04, h10km±3km, n31, σ0°.62/33, mb4.2/17, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
JMK	**Ichinoseki**	**0.34**	**68**	P		**Pg**	**00 08 08.6**	**0.0**
JMK				*e*S		**Sg**	**00 08 13.6**	**+0.4**
JYK	**Kaneyama**	**0.37**	**285**	P		**Pg**	**00 08 09.1**	**0.0**
JYK				*e*S		**Sg**	**00 08 13.9**	**-0.1**
JOU	**Okura**	**0.47**	**194**	P		**Pg**	**00 08 11.2**	**+0.1**
JOU				S		**Sg**	**00 08 17.8**	**+0.5**
JIO	**Ouri**	**0.56**	**131**	S		**Sg**	**00 08 19.9**	**-0.1**
JOM	**Ohasama**	**0.75**	**30**	P		**Pg**	**00 08 16.0**	**-0.3**
JOM				S		**Sg**	**00 08 26.0**	**0.0**
JYS	**Shiratake**	**0.84**	**225**	P		**Pg**	**00 08 18.1**	**0.0**
JYS				*e*S		**Sg**	**00 08 29.2**	**+0.2**
JMM	**Marumori**	**0.96**	**181**	S		**Sg**	**00 08 31.9**	**-0.8**
MJAR	**Matsushiro Arr**	**3.08**	**223**	LR		LR	00 10 31.4	
	comp=Z,42μm,18.4s,baz=175,slow=45							
MK31	**Makanchi Array**	**42.79**	**300**	*e*P		**P**	**00 15 59.9**	**+0.5**
MKAR	**Makanchi Array**	**42.79**	**300**	P		**P**	**00 15 59.6**	**+0.1**
	1.3nm,0.7s,mb3.8,baz=74,slow=11,SNR=2.8							
KURK	**Kurchatov**	**44.47**	**307**	P		**P**	**00 16 14.7**	**+1.8**
	3.5nm,0.6s,mb4.3,baz=81,slow=8.3,SNR=2.9							
KURK	**Kurchatov**	**44.47**	**307**	*e*P		**P**	**00 16 12.5**	**-0.4**
	6.0nm,0.8s,mb4.4							
TKM2	**Tokmak 2**	**48.38**	**297**	*e*P		**P**	**00 16 43.8**	**0.0**
	2.9nm,0.5s,mb4.6							
BVAR	**Borovoye Array**	**49.03**	**311**	P		**P**	**00 16 47.1**	**-1.5**
	1.5nm,0.8s,mb4.1,baz=52,slow=5.7,SNR=2.9							
AAK	**Ala-Archa**	**49.24**	**297**	*e*P		**P**	**00 16 52.2**	**+1.8**
	3.4nm,0.5s,mb4.6							
INK	**Inuvik**	**53.02**	**28**	*e*P		**P**	**00 17 18.3**	**0.0**
	3.3nm,0.9s,mb4.3							
ARU	**Arti**	**54.71**	**318**	*e*P		**P**	**00 17 30.9**	**0.0**
	7.6nm,0.7s,mb4.8							
ABKAR	**Akbulak array**	**56.44**	**309**	*e*P		**P**	**00 17 42.8**	**-0.6**
	2.7nm,0.6s,mb4.5							
ARCES	**ARCESS Array B**	**62.16**	**339**	P		**P**	**00 18 22.7**	**+0.1**
	1.3nm,0.9s,mb4.1,baz=58,slow=7.5,SNR=4.3							
ASAR	**Alice Springs**	**62.50**	**187**	P		**P**	**00 18 29.9**	**+4.5**
	0.7nm,0.7s,mb3.9,baz=11,slow=5.3,SNR=3.1							
FINES	**FINESS Array B**	**67.02**	**332**	P		**P**	**00 18 54.7**	**+0.2**
	3.0nm,0.8s,mb4.4,baz=36,slow=7.5,SNR=3.6							
FINES	**FINESS Array B**	**67.02**	**332**	P		**P**	**00 18 54.7**	**+0.2**
WVOR	**Wild Horse Val**	**71.71**	**50**	*e*P		**P**	**00 19 23.5**	**-0.4**
	1.1nm,0.6s,mb4.0							
NOA	**NORSAR Array B**	**72.36**	**337**	P		**P**	**00 19 27.5**	**0.0**
	1.7nm,0.8s,mb4.1,baz=38,slow=6.0,SNR=3.2							
AKASG	**Malin Array Be**	**72.60**	**322**	P		**P**	**00 19 28.8**	**-0.2**
	1.7nm,0.4s,mb4.3,baz=45,slow=6.3,SNR=6.1							
NAO01	**NORSAR Array S**	**72.61**	**337**	*e*P		**P**	**00 19 27.8**	**-1.1**
	4.7nm,0.9s,mb4.4							
CLL	**Collm**	**79.31**	**330**	*e*P		**P**	**00 20 07.0**	**-0.4**
GERES	**GERESS Array B**	**80.95**	**328**	P		**P**	**00 20 16.2**	**-0.1**
	0.9nm,0.8s,mb3.8,baz=35,slow=5.4,SNR=4.4							
TXAR	**Lajitas Array**	**89.40**	**52**	P		**P**	**00 21 00.1**	**+1.2**
	0.8nm,0.8s,mb4.1,baz=285,slow=2.8,SNR=4.0							
LPAZ	**La Paz**	**146.15**	**57**	PKPbc		PKPbc	00 27 43.9	+1.3
	2.4nm,0.7s,baz=360,slow=6.2,SNR=3.7							
LPAZ	**La Paz**	**146.15**	**57**	PKPbc		PKPbc	00 27 43.9	+1.3

MEX 14 00:08:20.8±0.3, 16°.93N×100°.39W, h4km±2km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
CAIG	**El Cayaco**	**0.16**	**45**	*i* P		Pg	00 08 23.6	-0.3
CAIG				*i* S		Sg	00 08 26.2	+0.1
ACX	**Acapulco**	**0.51**	**97**	*i* P		Pg	00 08 29.2	-1.4
ACX				*i* S		Sg	00 08 35.9	-1.3
MEIG	**Mezcala**	**1.23**	**36**	*e*P		Pg	00 08 41.0	-3.4
MEIG				*i* S		Sg	00 08 56.9	-3.4
ZIIG	**Zihuatanejo**	**1.23**	**303**	*i* P		Pg	00 08 41.0	-3.4
ZIIG				*e*S		Sg	00 08 56.3	-4.1
PLIG	**Platanillo**	**1.68**	**30**	*e*P		Pn	00 08 47.8	-3.1
PLIG				*i* S		Sn	00 09 07.9	-5.0
PNIG	**Pinotepa**	**2.23**	**104**	*i* P		Pn	00 08 55.6	-2.9
PNIG				*i* S		Sn	00 09 22.0	-4.5
UTMO	**Huajuapan**	**2.62**	**70**	*i* P		Pn	00 09 01.0	-2.9
UTMO				*i* S		Sn	00 09 32.8	-3.4
PPM	**Popocatepetl**	**2.70**	**38**	*e*P		Pn	00 09 02.3	-2.8
PPM				*i* S		Sn	00 09 35.3	-2.9

JMA 14 00:09:19.1, 38°.99N×140°.86E, h4km±1km, M3.6, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
JMK	**Ichinoseki**	**0.28**	**98**	P		Pg	00 09 24.6	0.0
JMK				S		Sg	00 09 28.4	+0.1
JRG	**Rokugo**	**0.44**	**337**	P		Pg	00 09 27.9	+0.3
JRG				S		Sg	00 09 34.0	+0.6
JOM	**Ohasama**	**0.59**	**35**	S		Sg	00 09 38.1	+0.1
JOU	**Okura**	**0.64**	**194**	P		Pg	00 09 31.6	+0.2
JOU				S		Sg	00 09 40.1	+0.4
JIO	**Ouri**	**0.66**	**144**	P		Pg	00 09 31.5	-0.2
JIO				*e*S		Sg	00 09 40.3	+0.1
JYS	**Shiratake**	**0.99**	**219**	P		Pg	00 09 38.2	+0.2

JMA 14 00:09:47.7, 39°.04N×140°.85E, h5km±1km, M3.5, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
JMK	**Ichinoseki**	**0.30**	**107**	*e*S		Sg	00 09 57.5	0.0
JRG	**Rokugo**	**0.39**	**335**	P		Pg	00 09 55.6	+0.3
JRG				*e*S		Sg	00 10 01.1	+0.7
JYK	**Kaneyama**	**0.40**	**252**	*e*S		Sg	00 10 01.2	+0.5
JOM	**Ohasama**	**0.55**	**38**	*e*S		Sg	00 10 05.5	0.0
JOU	**Okura**	**0.69**	**192**	P		Pg	00 10 01.0	+0.1
JOU				*e*S		Sg	00 10 10.2	+0.3
JIO	**Ouri**	**0.70**	**146**	*e*S		Sg	00 10 10.3	0.0

IDC ***14*** *00:14:15.7±2.1, 39°.35N×141°.79E, h0km, mb4.1/3, mb1 4.1/5, mb1mx3.6/27, mbtmp3.9/5, ML3.3/2, Error ellipse: s-maj=39.9km s-min=25.9km az=87.0*
JMA ***14*** *00:14:19.6, 39°.11N×140°.91E, h11km±1km, M3.3*
NEIC ***14*** *00:14:33.5, 38°.77N×140°.71E, h4km, MG3.5(JMA), After JMA.*

ISC 14 00:14:18.4±1.6, 39°.4N±0°.1×141°.6E±0°.2, h10km, n14, σ19°.19/19, mb4.0/3, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
JOM	**Ohasama**	**0.29**	**294**	*e*S		**Sg**	**00 14 34.9**	**+6.6**
JMK	**Ichinoseki**	**0.52**	**219**	*e*S		**Sg**	**00 14 29.2**	**-6.1**
JRG	**Rokugo**	**0.78**	**273**	*e*S		**Sg**	**00 14 32.1**	**-12**
MAJO	**Matsushiro**	**3.90**	**225**	*e*Pn		**Pn**	**00 15 20.3**	**+1.9**
MJAR	**Matsushiro Arr**	**3.90**	**225**	Pn		**Pn**	**00 15 19.2**	**+0.8**
	1.2nm,0.3s,baz=24,slow=15,SNR=4.5							
MJAR					Pg	**Pg**	**00 15 28.1**	**-5.1**
	1.5nm,0.3s,baz=24,slow=16,SNR=9.3							
MJAR					Sn	**Sn**	**00 16 05.3**	**+1.1**

MAT *eS* **Sn** **00 16 03.0 -1.3**
KSRS Korea Array 10.93 264 Pn **Pn** **00 16 53.7 -1.2**
0.3nm,0.3s,baz=81,slow=14,SNR=5.9
SONM Songino Array 26.71 300 P **P** **00 19 59.1 +1.5**
0.7nm,0.3s,mb3.6,baz=98,slow=7.4,SNR=2.4
SONM Songino Array 26.71 300 P **P** **00 19 59.1 +1.5**
KURK Kurchatov 44.67 306 P **P** **00 22 30.1 -1.1**
0.7nm,0.5s,mb3.8,baz=81,slow=8.2,SNR=3.5
KURK Kurchatov 44.67 306 P **P** **00 22 30.1 -1.1**
WRA Warramunga Arr 59.38 188 P **P** **00 24 19.7 -1.2**
8.2nm,1.3s,mb4.6,baz=4.2,slow=7.0,SNR=1.9
WRA Warramunga Arr 59.38 188 P **P** **00 24 19.7 -1.2**

JMA 14 00:14:33.5,38.77N×140.72E,h4km±1km,M3.6,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.32**	**298**	P	Pg	00 14 39.9	+0.3
JYK				S	Sg	00 14 44.2	+0.4
JOU	**Okura**	**0.41**	**186**	P	Pg	00 14 41.6	+0.3
JMK	**Ichinoseki**	**0.43**	**65**	*eS*	Sg	00 14 47.8	+0.4
JIO	**Ouri**	**0.58**	**122**	*eS*	Sg	00 14 52.3	0.0
JYS	**Shirataka**	**0.75**	**223**	P	Pg	00 14 47.8	-0.1
JYS				*eS*	Sg	00 14 57.3	-0.3
JYA	**Atsumi**	**0.81**	**258**	S	Sg	00 14 59.2	-0.2

IDC ***14*** *00:18:12.4±0.6,39.°14N×140.°80E,h0km,mb4.2/23, mb1 4.4/25,mb1mx4.3/32,mbtmp4.2/25,ML3.8/2,Error ellipse: s-maj=16.3km s-min=14.3km az=140.0*
ISCJB ***14*** *00:18:12.9±0.7,39.°16N±0.°03×140.°93E±0.°04,h14km±4km, mb4.4/51,Error ellipse: s-maj=5.4km s-min=4.3km az=27.4*
NEIC ***14*** *00:18:13.3,39.°14N×140.°93E,h11km,mb4.7/29,After JMA.*
JMA ***14*** *00:18:13.2,39.°14N×140.°93E,h10km±1km,M4.3*
JMA Felt II J1.
BJI ***14*** *00:18:14.1,39.°06N×141.°08E,h16km,mB4.8/4,mb4.8/5, Ms5.1/1,Ms7 5.0/1*
MOS ***14*** *00:18:15.6±1.1,39.°17N×140.°86E,h33km,mb4.6/29,Error ellipse: s-maj=11.3km s-min=7.3km az=91.8*
ISC 14 00:18:13.4±0.5,39.°14N±0.°03×140.°92E±0.°04,h8km±3km, n130,σ0.°88/134,mb4.4/51,3C-3D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.30**	**129**	P	**Pg**	**00 18 19.0**	**-0.3**
JMK				S	**Sg**	**00 18 23.1**	**-0.2**
JRG	**Rokugo**	**0.34**	**319**	⇓P	**Pg**	**00 18 20.3**	**+0.3**
JOM	**Ohasama**	**0.44**	**41**	⇓P	**Pg**	**00 18 21.7**	**-0.2**
JOM				S	**Sg**	**00 18 27.7**	**0.0**
JYK	**Kaneyama**	**0.49**	**243**	⇓P	**Pg**	**00 18 22.9**	**0.0**
JYK				S	**Sg**	**00 18 29.4**	**0.0**
OFUJ	**Ofunato**	**0.58**	**96**	P	**Pg**	**00 18 24.4**	**-0.3**
JIO	**Ouri**	**0.76**	**154**	P	**Pg**	**00 18 27.7**	**-0.4**
JIO				S	**Sg**	**00 18 38.1**	**+0.1**
JOU	**Okura**	**0.80**	**195**	⇑P	**Pg**	**00 18 28.6**	**-0.2**
JOU				S	**Sg**	**00 18 39.1**	**-0.1**
MAJO	**Matsushiro**	**3.37**	**220**	*eP*	**Pn**	**00 19 07.2**	**+0.8**
MAT	**Matsushiro**	**3.37**	**220**	P	**Pn**	**00 19 07.7**	**+1.3**
MAT				*eS*	**Sn**	**00 19 50.1**	**+3.6**
MJAR	**Matsushiro Arr**	**3.37**	**220**	Pn	**Pn**	**00 19 07.6**	**+1.2**
4.2nm,0.3s,baz=27,slow=14,SNR=14
MJAR	**Matsushiro Arr**	**3.37**	**220**	P	**Pn**	**00 19 07.6**	**+1.2**
MJAR				pmax	pmax		
comp=Z,4.0nm,0.3s
MJAR	**Matsushiro Arr**	**3.37**	**220**	Pn	**Pn**	**00 19 07.6**	**+1.2**
ASAJ	**Asahikawa**	**5.13**	**14**	Pn	**Pn**	**00 19 32.5**	**+2.1**
comp=Z,4.2nm,0.3s,baz=243,slow=12,SNR=11
ASAJ	**Asahikawa**	**5.13**	**14**	P	**Pn**	**00 19 32.6**	**+2.1**
ASAJ				pmax	pmax		
comp=Z,4.0nm,0.3s
YSS	**Yuzh-Sakhalins**	**7.92**	**9**	*eP*	**Pn**	**00 20 09.8**	**+0.9**
YSS	**Yuzh-Sakhalins**	**7.92**	**9**	*ePn*	**Pn**	**00 20 09.9**	**+1.1**
KSRS	**Korea Array**	**10.36**	**265**	Pn	**Pn**	**00 20 46.4**	**+4.1**
comp=Z,2.7nm,0.3s,baz=80,slow=14,SNR=47
KSRS	**Korea Array**	**10.36**	**265**	P	**Pn**	**00 20 46.4**	**+4.1**
KSRS				pmax	pmax		
comp=Z,3.0nm,0.3s
CN2	**Changchun**	**12.50**	**297**	*eP*	**Pn**	**00 21 18.1**	**+6.5**
YAK	**Yakutsk**	**23.93**	**347**	*eP*	**P**	**00 23 27.2**	**-0.5**
comp=Z,15nm,0.6s,mb4.6
SEY	**Seymchan**	**24.81**	**13**	*ceP*	**P**	**00 23 39.8**	**+4.1**
CD2	**Chengdu**	**31.35**	**266**	P	**P**	**00 24 38.0**	**+3.5**
BILL	**Bilibino**	**32.13**	**18**	*eP*	**P**	**00 24 43.9**	**+3.0**
BILL				pmax	pmax		
comp=Z,7.0nm,1.2s,mb4.4
TIXI	**Tiksi**	**33.15**	**353**	*eP*	**P**	**00 24 49.1**	**-0.8**
ZALV	**Zalesovo Beam**	**40.23**	**311**	P	**P**	**00 25 49.9**	**-0.5**
comp=Z,4.5nm,0.9s,mb4.2,baz=74,slow=8.0,SNR=9.6
ZALV	**Zalesovo Beam**	**40.23**	**311**	P	**P**	**00 25 49.9**	**-0.4**
ZALV				pmax	pmax		
comp=Z,5.0nm,0.9s,mb4.2
CMAR	**Chiang Mai Arr**	**41.70**	**253**	P	**P**	**00 26 03.7**	**+0.8**
comp=Z,0.7nm,0.3s,mb3.7,baz=42,slow=5.5,SNR=2.7
CMAR	**Chiang Mai Arr**	**41.70**	**253**	P	**P**	**00 26 03.7**	**+0.8**
CMAR				pmax	pmax		
comp=Z,1.0nm,0.4s
MK31	**Makanchi Array**	**42.70**	**300**	*eP*	**P**	**00 26 10.2**	**-0.5**
MKAR	**Makanchi Array**	**42.70**	**300**	P	**P**	**00 26 10.2**	**-0.5**
comp=Z,3.1nm,0.8s,mb4.1,baz=75,slow=14,SNR=12
MKAR	**Makanchi Array**	**42.70**	**300**	P	**P**	**00 26 10.2**	**-0.5**
MKAR				pmax	pmax		
comp=Z,3.0nm,0.8s
KURK	**Kurchatov**	**44.35**	**306**	P	**P**	**00 26 24.1**	**+0.2**
comp=Z,22nm,1.2s,mb4.8,baz=83,slow=8.3,SNR=20
KURK	**Kurchatov**	**44.35**	**306**	*ceP*	**P**	**00 26 23.9**	**0.0**
KURK				pmax	pmax		
comp=Z,30nm,1.7s,mb4.8
KURK	**Kurchatov**	**44.35**	**306**	*eP*	**P**	**00 26 22.9**	**-1.0**
comp=Z,14nm,0.9s,mb4.7
KDAK	**Kodiak Island**	**45.81**	**43**	P	**P**	**00 26 36.5**	**+1.1**
comp=Z,4.0nm,0.4s,mb4.7,baz=224,slow=8.6,SNR=4.8
KDAK	**Kodiak Island**	**45.81**	**43**	*i* P	**P**	**00 26 38.5**	**+3.0**
KTH	**Kantishna Hill**	**46.24**	**35**	*eP*	**P**	**00 26 38.6**	**-0.1**
comp=Z,8.2nm,1.2s,mb4.5
TKM2	**Tokmak 2**	**48.31**	**297**	*eP*	**P**	**00 26 55.9**	**+0.7**
TKM2				pmax	pmax		
comp=Z,30nm,1.2s,mb5.2
TKM2	**Tokmak 2**	**48.31**	**297**	*eP*	**P**	**00 26 55.9**	**+0.7**
comp=Z,30nm,1.2s,mb5.2
BVAR	**Borovoye Array**	**48.88**	**311**	P	**P**	**00 26 58.8**	**-0.7**
comp=Z,1.6nm,0.6s,mb4.3,baz=90,slow=7.8,SNR=8.4
BVAR				PcP	PcP	00 28 23.6	-0.2
comp=Z,1.3nm,0.8s,baz=81,slow=4.5,SNR=3.6
BVAR	**Borovoye Array**	**48.88**	**311**	P	**P**	**00 26 58.8**	**-0.7**
BVAR						00 28 23.6	
BVAR				pmax	pmax		
comp=Z,2.0nm,0.6s
AAK	**Ala-Archa**	**49.17**	**297**	P	**P**	**00 27 02.5**	**+0.7**
comp=Z,2.8nm,0.6s,mb4.4,baz=90,slow=4.1,SNR=7.1
AAK	**Ala-Archa**	**49.17**	**297**	P	**P**	**00 27 02.5**	**+0.7**
AAK				pmax	pmax		
comp=Z,3.0nm,0.6s,mb4.5
UCH	**Uchtor**	**49.30**	**296**	*eP*	**P**	**00 27 02.5**	**-0.3**
comp=Z,3.6nm,1.0s,mb4.4
EKS2	**Erkin-Say**	**49.66**	**297**	*eP*	**P**	**00 27 05.0**	**-0.6**
comp=Z,6.2nm,1.0s,mb4.6
AML	**Almayashu**	**49.90**	**296**	*eP*	**P**	**00 27 08.2**	**+0.8**
comp=Z,16nm,1.1s,mb5.0
INK	**Inuvik**	**52.70**	**28**	P	**P**	**00 27 29.1**	**+1.2**
comp=Z,3.8nm,0.7s,mb4.4,baz=260,slow=4.4,SNR=6.7
INK	**Inuvik**	**52.70**	**28**	*eP*	**P**	**00 27 27.5**	**-0.5**
INK				pmax	pmax		
comp=Z,3.0nm,0.6s
INK	**Inuvik**	**52.70**	**28**	*eP*	**P**	**00 27 27.5**	**-0.5**
comp=Z,2.9nm,0.6s,mb4.4
ARU	**Arti**	**54.54**	**317**	P	**P**	**00 27 41.1**	**-0.5**
ARU	**Arti**	**54.54**	**317**	*eP*	**P**	**00 27 40.8**	**-0.8**
comp=Z,20nm,1.2s,mb5.0
ABKAR	**Akbulak array**	**56.30**	**309**	*eP*	**P**	**00 27 54.0**	**-0.4**
comp=Z,4.4nm,0.8s,mb4.5
KBL	**Kabul**	**56.32**	**289**	*eP*	**P**	**00 27 54.8**	**0.0**
KBL				pmax	pmax		
comp=Z,11nm,0.9s,mb4.9
KBL	**Kabul**	**56.32**	**289**	*eP*	**P**	**00 27 54.8**	**0.0**
comp=Z,11nm,0.9s,mb4.9
AKTK	**Aktyubinsk**	**56.99**	**311**	P	**P**	**00 27 58.9**	**-0.4**
AKTO	**Aktyubinsk**	**56.99**	**311**	P	**P**	**00 27 58.9**	**-0.4**
comp=Z,2.1nm,0.7s,mb4.2,baz=72,slow=14,SNR=6.5
AKTO	**Aktyubinsk**	**56.99**	**311**	P	**P**	**00 27 58.9**	**-0.4**
AKTO				pmax	pmax		
comp=Z,2.0nm,0.7s,mb4.3
WRAB	**Tennant Creek**	**59.09**	**187**	*eP*	**P**	**00 28 13.4**	**-0.8**
WRAB				pmax	pmax		
comp=Z,11nm,1.1s,mb4.8
WRAB	**Tennant Creek**	**59.09**	**187**	*eP*	**P**	**00 28 13.4**	**-0.9**
comp=Z,11nm,1.1s,mb4.8
WRA	**Warramunga Arr**	**59.09**	**187**	P	**P**	**00 28 13.3**	**-1.0**
comp=Z,3.2nm,0.8s,mb4.4,baz=5.4,slow=7.1,SNR=9.5
WRA	**Warramunga Arr**	**59.09**	**187**	P	**P**	**00 28 13.3**	**-1.0**
WRA				pmax	pmax		
comp=Z,3.0nm,0.8s
RES	**Resolute Bay**	**60.66**	**15**	P	**P**	**00 28 24.0**	**-0.5**
comp=Z,6.0nm,0.9s,mb4.7,baz=302,slow=7.9,SNR=10.0
RES	**Resolute Bay**	**60.66**	**15**	*eP*	**P**	**00 28 23.7**	**-0.8**
RES				pmax	pmax		
comp=Z,4.0nm,0.7s,mb4.7
RES	**Resolute Bay**	**60.66**	**15**	*eP*	**P**	**00 28 23.7**	**-0.8**
comp=Z,4.0nm,0.7s,mb4.7
ARCES	**ARCESS Array B**	**61.89**	**339**	P	**P**	**00 28 32.9**	**0.0**
comp=Z,1.9nm,0.9s,mb4.2,baz=51,slow=7.9,SNR=5.5
ARCES	**ARCESS Array B**	**61.89**	**339**	P	**P**	**00 28 32.9**	**0.0**
ARCES				pmax	pmax		
comp=Z,2.0nm,0.9s
ARCES	**ARCESS Array B**	**61.89**	**339**	P	**P**	**00 28 32.9**	**0.0**
YKA	**Yellowknife Ar**	**62.19**	**31**	P	**P**	**00 28 35.7**	**+0.8**
comp=Z,0.6nm,0.7s,mb3.9,baz=306,slow=6.5,SNR=4.8
YKA	**Yellowknife Ar**	**62.19**	**31**	P	**P**	**00 28 35.7**	**+0.7**
YKA				pmax	pmax		
comp=Z,1.0nm,0.7s
YKA	**Yellowknife Ar**	**62.19**	**31**	P	**P**	**00 28 35.7**	**+0.8**
ASAR	**Alice Springs**	**62.82**	**187**	P	**P**	**00 28 39.6**	**0.0**
comp=Z,1.5nm,0.8s,mb4.2,baz=9.5,slow=4.3,SNR=11
ASAR	**Alice Springs**	**62.82**	**187**	P	**P**	**00 28 39.6**	**0.0**
ASAR				pmax	pmax		
comp=Z,2.0nm,0.8s
OBN	**Obninsk**	**66.18**	**323**	*eP*	**P**	**00 29 03.5**	**+2.2**
OBN				*e*		00 29 33.5	
OBN				pmax	pmax		
comp=Z,33nm,1.6s,mb5.1
KAF	**Kangasniemi**	**66.26**	**332**	*eP*	**P**	**00 28 57.9**	**-3.8**
KAF				pmax	pmax		
comp=Z,4.0nm,0.6s,mb4.6
KAF	**Kangasniemi**	**66.26**	**332**	*ep*	**P**	**00 28 57.9**	**-3.8**
comp=Z,3.7nm,0.6s,mb4.6
FINES	**FINESS Array B**	**66.77**	**332**	P	**P**	**00 29 04.5**	**-0.5**
comp=Z,3.6nm,0.8s,mb4.5,baz=48,slow=8.5,SNR=11
FINES	**FINESS Array B**	**66.77**	**332**	P	**P**	**00 29 04.5**	**-0.5**
FINES				pmax	pmax		
comp=Z,4.0nm,0.8s
SUMG	**Summit**	**68.58**	**360**	*eP*	**P**	**00 29 17.2**	**+1.0**
comp=Z,8.1nm,0.9s,mb4.7
NEW	**Newport**	**68.89**	**44**	*eP*	**P**	**00 29 18.1**	**-0.5**
NEW				pmax	pmax		
comp=Z,5.0nm,0.9s
NEW	**Newport**	**68.89**	**44**	*eP*	**P**	**00 29 18.1**	**-0.5**
comp=Z,4.9nm,0.9s,mb4.4
ZEI	**Tsey**	**69.19**	**309**	*eP*	**P**	**00 29 19.0**	**-1.5**
ZEI				pmax	pmax		
comp=Z,20nm,1.5s,mb4.8
KIV	**Kislovodsk**	**69.24**	**310**	*eP*	**P**	**00 29 22.1**	**+1.3**
KIV				*i*		00 29 46.8	
KIV				pmax	pmax		
comp=Z,32nm,1.2s,mb5.1
KIV	**Kislovodsk**	**69.24**	**310**	*eP*	**P**	**00 29 20.8**	**-0.1**
comp=Z,52nm,1.3s,mb5.3
WVOR	**Wild Horse Val**	**71.44**	**50**	*eP*	**P**	**00 29 34.3**	**0.0**
WVOR				pmax	pmax		
comp=Z,2.0nm,0.6s,mb4.2
WVOR	**Wild Horse Val**	**71.44**	**50**	*eP*	**P**	**00 29 34.2**	**0.0**
comp=Z,1.5nm,0.6s,mb4.1
NB2	**NORSAR Subarra**	**72.10**	**337**	P	**P**	**00 29 37.4**	**-0.5**
comp=Z,0.8nm,0.6s,mb3.8,baz=38,slow=6.5
NOA	**NORSAR Array B**	**72.10**	**337**	P	**P**	**00 29 37.7**	**-0.2**
comp=Z,1.7nm,0.8s,mb4.0,baz=38,slow=6.1,SNR=6.5
NOA	**NORSAR Array B**	**72.10**	**337**	P	**P**	**00 29 37.7**	**-0.2**
NOA				pmax	pmax		
comp=Z,2.0nm,0.8s
NOA	**NORSAR Array B**	**72.10**	**337**	P	**P**	**00 29 37.7**	**-0.2**
AKASG	**Malin Array Be**	**72.40**	**322**	P	**P**	**00 29 39.4**	**-0.5**
comp=Z,1.2nm,0.4s,mb4.1,baz=44,slow=6.3,SNR=8.2
AKASG	**Malin Array Be**	**72.40**	**322**	P	**P**	**00 29 39.4**	**-0.5**
AKASG				pmax	pmax		
comp=Z,1.0nm,0.4s
AKBB	**Malin Array Si**	**72.40**	**322**	*eP*	**P**	**00 29 38.6**	**-1.3**
HLID	**Hailey**	**73.23**	**47**	*eP*	**P**	**00 29 44.8**	**-0.1**
comp=Z,2.0nm,0.9s,mb4.0
NVAR	**Mina Array Bea**	**74.04**	**53**	P	**P**	**00 29 51.6**	**+1.8**
comp=Z,1.6nm,0.9s,mb4.0,baz=288,slow=6.2,SNR=9.2
N12A	**Clover Valley,**	**74.54**	**50**	*eP*	**P**	**00 29 53.9**	**+1.2**
comp=Z,8.7nm,0.9s,mb4.7
DUG	**Dugway**	**76.27**	**49**	*eP*	**P**	**00 30 03.6**	**+0.9**
DUG				pmax	pmax		
comp=Z,12nm,1.7s,mb4.5
DUG	**Dugway**	**76.27**	**49**	*eP*	**P**	**00 30 03.6**	**+1.0**
comp=Z,12nm,1.7s,mb4.6
BUR08	**Bucovina Ar. S**	**76.41**	**321**	*eP*	**P**	**00 30 03.4**	**+0.1**
BW06	**Boulder Array**	**76.47**	**46**	*eP*	**P**	**00 30 03.3**	**-0.4**
comp=Z,2.1nm,0.8s,mb4.1
PDAR	**Pinedale Array**	**76.47**	**46**	P	**P**	**00 30 04.5**	**+0.7**
comp=Z,1.8nm,0.7s,mb4.1,baz=304,slow=2.4,SNR=11
BR131	**Keskin Array S**	**77.17**	**311**	*eP*	**P**	**00 30 07.2**	**-0.5**
comp=Z,0.7nm,0.6s,mb3.8
BRTR	**Keskin Array B**	**77.17**	**311**	P	**P**	**00 30 07.8**	**+0.1**
comp=Z,1.1nm,0.7s,mb3.9,baz=72,slow=3.8,SNR=9.1
BRTR	**Keskin Array B**	**77.17**	**311**	P	**P**	**00 30 07.8**	**+0.1**
BRTR				pmax	pmax		
comp=Z,1.0nm,0.7s
LDFC	**Landfair**	**78.13**	**54**	*eP*	**P**	**00 30 12.0**	**-1.2**
MORC	**Moravsky Berou**	**78.39**	**326**	*eP*	**P**	**00 30 13.1**	**-1.2**
MORC				pmax	pmax		
comp=Z,3.0nm,0.8s,mb4.3
MORC	**Moravsky Berou**	**78.39**	**326**	*eP*	**P**	**00 30 13.1**	**-1.2**
comp=Z,2.9nm,0.8s,mb4.3
CLL	**Collm**	**79.08**	**330**	*eP*	**P**	**00 30 19.0**	**+0.9**
KHC	**Kasperske Hory**	**80.55**	**328**	*eP*	**P**	**00 30 25.7**	**-0.4**
KHC				pmax	pmax		
comp=Z,2.0nm,0.7s,mb4.2
KHC	**Kasperske Hory**	**80.55**	**328**	*eP*	**P**	**00 30 25.7**	**-0.4**
comp=Z,2.1nm,0.7s,mb4.2
GERES	**GERESS Array B**	**80.72**	**328**	P	**P**	**00 30 26.3**	**-0.8**
comp=Z,0.9nm,0.8s,mb3.8,baz=47,slow=5.9,SNR=7.1
GERES	**GERESS Array B**	**80.72**	**328**	P	**P**	**00 30 26.3**	**-0.7**
GERES				pmax	pmax		
comp=Z,1.0nm,0.8s
SCHQ	**Schefferville**	**83.42**	**16**	P	**P**	**00 30 42.7**	**+1.6**
comp=Z,2.8nm,0.7s,mb4.4,baz=281,slow=3.9,SNR=4.2
LOR	**Lormes**	**85.83**	**332**	*eP*	**P**	**00 30 52.5**	**-0.9**
LDF	**La Druitiere**	**86.06**	**335**	*eP*	**P**	**00 30 53.5**	**-1.0**
comp=Z,16nm,1.2s,mb4.8
LDF	**La Druitiere**	**86.06**	**335**	*eP*	**P**	**00 30 53.5**	**-1.0**
LDF				pmax	pmax		
comp=Z,8.0nm,1.2s,mb4.8
LDF	**La Druitiere**	**86.06**	**335**	*eP*	**P**	**00 30 53.5**	**-1.0**
comp=Z,8.1nm,1.2s,mb4.8
SSF	**Saint Saulge**	**86.14**	**332**	*eP*	**P**	**00 30 54.1**	**-0.8**
SMF	**Signal de Mont**	**86.37**	**332**	*eP*	**P**	**00 30 55.1**	**-1.0**
comp=Z,6.6nm,0.8s,mb4.6
SMF	**Signal de Mont**	**86.37**	**332**	*eP*	**P**	**00 30 55.1**	**-1.0**
SMF				pmax	pmax		
comp=Z,3.0nm,0.8s,mb4.6
SMF	**Signal de Mont**	**86.37**	**332**	*eP*	**P**	**00 30 55.1**	**-1.0**
comp=Z,3.3nm,0.8s,mb4.6
AVF	**Avril sur Loir**	**86.42**	**332**	*eP*	**P**	**00 30 55.6**	**-0.8**
comp=Z,9.7nm,0.8s,mb4.8
AVF	**Avril sur Loir**	**86.42**	**332**	*eP*	**P**	**00 30 55.6**	**-0.8**
AVF				pmax	pmax		
comp=Z,5.0nm,0.8s,mb4.8
AVF	**Avril sur Loir**	**86.42**	**332**	*eP*	**P**	**00 30 55.6**	**-0.8**
comp=Z,4.8nm,0.8s,mb4.8
TCF	**Toulx Ste Croi**	**87.26**	**333**	*eP*	**P**	**00 31 00.0**	**-0.5**
comp=Z,19nm,1.3s,mb4.9
TCF	**Toulx Ste Croi**	**87.26**	**333**	*eP*	**P**	**00 31 00.0**	**-0.5**
TCF				pmax	pmax		
comp=Z,10.0nm,1.3s,mb4.9
TCF	**Toulx Ste Croi**	**87.26**	**333**	*eP*	**P**	**00 31 00.0**	**-0.5**
comp=Z,9.6nm,1.3s,mb4.9
TXAR	**Lajitas Array**	**89.14**	**52**	P	**P**	**00 31 10.1**	**+0.4**
comp=Z,0.5nm,0.8s,mb3.9,baz=318,slow=1.7,SNR=4.5
TXAR	**Lajitas Array**	**89.14**	**52**	P	**P**	**00 31 10.1**	**+0.4**
TXAR				pmax	pmax		
comp=Z,1.0nm,0.8s
LPAZ	**La Paz**	**145.91**	**56**	PKPbc	PKPbc	00 37 55.0	+1.1
comp=Z,2.8nm,0.8s,baz=12,slow=6.1,SNR=10.0
SIV	**San Ignacio**	**149.96**	**46**	PKPbc	PKPbc	00 38 04.6	-0.2
comp=Z,5.1nm,1.1s,baz=0.5,slow=0.4,SNR=14

JMA 14 00:18:39.8,39.°03N×140.°86E,h6km±1km,M3.9,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.29**	**105**	*eS*	Sg	00 18 49.1	-0.2
JRG	**Rokugo**	**0.41**	**334**	P	Pg	00 18 47.9	+0.2
JRG				*eS*	Sg	00 18 53.8	+0.8
JOU	**Okura**	**0.68**	**193**	*eS*	Sg	00 19 01.7	0.0

JMA 14 00:19:13.6,38.°85N×140.°84E,h6km±1km,M3.1,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.31**	**71**	P	Pg	00 19 19.9	+0.2
JYK	**Kaneyama**	**0.38**	**280**	S	Sg	00 19 26.3	+0.3
JOU	**Okura**	**0.50**	**196**	*eS*	Sg	00 19 30.0	+0.2

NIED ***14*** *00:20:00,39.°00N×140.°90E,h5km,Mw5.5 Best double couple: M0:2.09000×10^17 NP1:φs16.00000°,δ72.00000°, λ111.00000°. NP2:φs145.00000°,δ27.00000°,λ42.00000°.*
BJI ***14*** *00:20:06.2,38.°74N×141.°12E,h10km,mB6.2/10,mb5.2/48, Ms6.0/29,Ms7 5.8/29*
IDC ***14*** *00:20:10.6±0.4,38.°93N×140.°54E,h0km,mb5.2/30, mb1 5.2/34,mb1mx5.2/35,mbtmp5.1/34,ML4.4/4,Error ellipse: s-maj=12.4km s-min=9.1km az=125.0*
NEIC ***14*** *00:20:11.9,38.°88N×140.°68E,h6km,mb5.5/220, MW5.5(NIED),After JMA.*
NEIC Felt [IV] at Misawa. Recorded [5L JMA] in Miyagi; [4 JMA] in Iwate and Yamagata; [3 JMA] in Akita; [2 JMA] in Aomori, Fukushima and Niigata; [1 JMA] in Gumma.
JMA ***14*** *00:20:11.8,38.°89N×140.°67E,h7km±1km,M5.7 Broadband fault plane solution: P waves. NP1: φs187.00000°,δ19.00000°,λ92.00000°. NP2:φs4.00000°, δ71.00000°,λ89.00000°. Principal axes: T Plg64.0000°, Azm273.0000°; N Plg1.0000°, Azm5.0000°; P Plg26.0000°, Azm95.0000°;*
ISCJB ***14*** *00:20:11.8±0.3,38.°92N±0.°02×140.°59E±0.°02,h16km±2km, mb5.4/310,MS5.9/10 Error ellipse: s-maj=3.0km s-min=2.1km az=160.6*
MOS ***14*** *00:20:14.2±0.9,39.°00N×140.°50E,h33km,mb5.7/132, MS5.4/4,Error ellipse: s-maj=8.3km s-min=5.7km az=83.9*
DJA ***14*** *00:20:17,38.°93N×140.°81E,h52km,mb5.6/38*
SZGRF ***14*** *00:20:20.9,40.°17N×140.°47E,h33km,mb5.5,Eastern Honshu, Japan*
ISC 14 00:20:12.2±0.4,38.°93N±0.°02×140.°58E±0.°02,h10km±2km, h12km±1.5km:pP-P,n1313,σ0.°79/1308,mb5.4/310, MS5.9/10,366C-195D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.17**	**266**	⇓P	**Pg**	**00 20 16.6**	**+0.7**
JYK				*eS*	**Sg**	**00 20 20.6**	**+2.2**
JRG	**Rokugo**	**0.47**	**5**	P	**Pg**	**00 20 22.1**	**+0.7**
JMK	**Ichinoseki**	**0.50**	**87**	⇓P	**Pg**	**00 20 19.8**	**-2.2**
JMK				*eS*	**Sg**	**00 20 26.0**	**-2.6**
JOU	**Okura**	**0.57**	**173**	P	**Pg**	**00 20 21.9**	**-1.3**
JYA	**Atsumi**	**0.75**	**244**	P	**Pg**	**00 20 26.8**	**0.0**
JYA				S	**Sg**	**00 20 38.1**	**+1.5**
JIO	**Ouri**	**0.77**	**128**	⇓P	**Pg**	**00 20 24.2**	**-2.8**
JIO				S	**Sg**	**00 20 33.6**	**-3.4**
JOM	**Ohasama**	**0.78**	**45**	P	**Pg**	**00 20 26.1**	**-1.1**
JOM				S	**Sg**	**00 20 36.9**	**-0.5**
JYS	**Shiratake**	**0.81**	**210**	⇑P	**Pg**	**00 20 27.2**	**-0.7**
JYS				S	**Sg**	**00 20 38.6**	**+0.1**
JMM	**Marumori**	**1.07**	**171**	P	**Pb**	**00 20 30.4**	**-2.5**
JMM				S	**Sg**	**00 20 44.2**	**-2.6**
JAW	**Awa shima**	**1.14**	**246**	P	**Pb**	**00 20 34.2**	**+0.1**
JOG2	**Oga 2**	**1.16**	**329**	P	**Pb**	**00 20 33.8**	**-0.5**
MIYJ	**Miyakonagasawa**	**1.16**	**56**	⇓P	**Pb**	**00 20 32.6**	**-1.8**
JNS	**Sasagawa**	**1.49**	**222**	⇑P	**Pn**	**00 20 39.1**	**+0.1**
JSD	**Sado**	**2.02**	**245**	P	**Pn**	**00 20 46.7**	**+0.3**
JHO	**Hitachi**	**2.31**	**180**	P	**Pn**	**00 20 50.0**	**-0.4**
MAJO	**Matsushiro**	**3.03**	**219**	*eP*	**Pn**	**00 21 00.7**	**+0.4**
MAJO	**Matsushiro**	**3.03**	**219**	*ePn*	**Pn**	**00 21 00.7**	**+0.4**
MAT	**Matsushiro**	**3.03**	**219**	P	**Pn**	**00 21 01.0**	**+0.7**
MAT				S	**Sn**	**00 21 47.4**	**+11**
MJAR	**Matsushiro Arr**	**3.03**	**219**	Pn	**Pn**	**00 21 01.3**	**+1.0**
21nm,0.3s,baz=43,slow=20,SNR=23
MJAR				Lg		00 21 46.2	
84nm,0.3s,baz=23,slow=29,SNR=5.8
MJAR	**Matsushiro Arr**	**3.03**	**219**	P	**Pn**	**00 21 01.3**	**+1.0**
MJAR						00 21 46.3	
MJAR				pmax	pmax		
comp=Z,21nm,0.3s
MJAR	**Matsushiro Arr**	**3.03**	**219**	Pn	**Pn**	**00 21 01.3**	**+1.0**
MJAR				Lg		00 21 46.2	
ERM	**Erimo**	**3.66**	**32**	Pn	**Pn**	**00 21 11.7**	**+2.8**
comp=Z,7μm,0.6s,SNR=11
JOD2	**Odawara 2**	**3.85**	**198**	P	**Pn**	**00 21 13.2**	**+1.7**
JIM2	**Oshima 3**	**4.30**	**193**	P	**Pn**	**00 21 18.5**	**+0.7**
ASAJ	**Asahikawa**	**5.40**	**16**	Pn	**Pn**	**00 21 34.1**	**+1.3**
comp=Z,14nm,0.3s,baz=209,slow=16,SNR=14
ASAJ				Sn	**Sn**	**00 22 34.6**	**-0.3**
baz=211,slow=19,SNR=1.9
ASAJ	**Asahikawa**	**5.40**	**16**	P	**Pn**	**00 21 34.1**	**+1.3**
ASAJ						00 22 34.7	
ASAJ				pmax	pmax		
comp=Z,14nm,0.3s
JHJ	**Hachijo jima 2**	**5.83**	**187**	Pn	**Pn**	**00 21 39.2**	**+0.4**
comp=Z,84nm,0.3s,ba

comp=Z,16μm,19.3s
KSRS Korea Array 10.07 266 Pn **Pn 00 22 40.6 +3.7**
comp=Z,6.0nm,0.3s,baz=81,slow=14,SNR=38
KSRS Sn **Sn 00 24 36.6 +6.7**
comp=Z,10nm,0.3s,baz=73,slow=24,SNR=16
KSRS Korea Array 10.07 266 P **Pn 00 22 40.6 +3.7**
KSRS 00 24 36.7
KSRS pmax pmax
comp=Z,6.0nm,0.3s
KSRS smax
comp=N,10.0nm,0.3s
HABR Khabarovsk 10.34 339 *e*P **Pn 00 22 44.3 +3.7**
HABR *e* 00 24 39.5
HABR pmax pmax
comp=Z,355nm,1.5s
HABR pmax pmax
comp=E,159nm,1.5s
HABR pmax pmax
comp=N,230nm,1.4s
HABR MLR MLR
comp=Z,20μm,15.0s
INCN Inchon 11.07 267 *e*Pn **Pn 00 22 50.0 -0.6**
INCN Inchon 11.07 267 Pn **Pn 00 22 56.2 +5.7**
SNR=9.8
INCN Pn **Pn 00 22 56.2 +5.7**
SNR=9.8
CBIJ Chichi jima 11.88 173 Pn **Pn 00 22 58.4 -3.3**
comp=Z,21nm,0.3s,baz=304,slow=12,SNR=7.4
CBIJ Sn **Sn 00 25 11.2 -3.1**
comp=Z,11nm,0.3s,baz=282,slow=19,SNR=2.9
KLR Kul'dur 12.09 331 *e*P **Pn 00 23 06.0 +1.6**
CN2 Changchun 12.36 298 ⇓P **Pn 00 23 13.3 +5.1**
CN2 *es*P 00 23 19.6
CN2 *e*S **Sn 00 25 30.3 +4.3**
CN2 pmax pmax
comp=Z,80nm,1.3s
CN2 LR LR
comp=N,32μm,13.0s
CN2 LR LR
comp=E,27μm,13.0s
CN2 LR LR
comp=Z,32μm,15.0s
SNY Shenyang 13.28 288 ⇑P **Pn 00 23 26.1 +5.3**
SNY pmax pmax
comp=Z,190nm,2.4s
SNY LR LR
comp=N,19μm,11.7s
SNY LR LR
comp=E,30μm,12.9s
SNY LR LR
comp=Z,27μm,12.3s
DL2 Dalian 14.76 276 P **Pn 00 23 36.9 -4.0**
DL2 *e*S **Sn 00 26 17.4 -7.1**
DL2 pmax pmax
comp=Z,140nm,1.2s
DL2 pmax pmax
comp=Z,20μm,12.9s
DL2 LR LR
comp=N,9μm,13.2s
DL2 LR LR
comp=E,10μm,14.4s
DL2 LR LR
comp=Z,13μm,14.5s
SKR Severo-Kuril's 16.08 38 *e*P **Pn 00 23 58.8 +0.6**
SKR pmax pmax
comp=E,180nm,1.0s
SKR pmax pmax
comp=Z,180nm,1.0s
SKR pmax pmax
comp=N,50nm,0.6s
PETK Petropavlovsk- 18.43 34 P **Pn 00 24 26.4 -1.3**
comp=N,0.4nm,0.3s,baz=210,slow=8.6,SNR=7.9
PETK Petropavlovsk- 18.43 34 P **Pn 00 24 26.4 -1.3**
PET Petropavlovsk 18.80 36 *e*P **Pn 00 24 32.4 +0.2**
PET pmax pmax
comp=Z,108nm,1.1s
PET Petropavlovsk 18.80 36 *e*Pn **Pn 00 24 32.3 +0.1**
comp=Z,134nm,1.2s
BJI Beijing 18.86 281 P **Pn 00 24 32.3 -0.7**
BJI pmax pmax
comp=Z,110nm,2.0s
BJI pmax pmax
comp=Z,12μm,8.8s
NJ2 Nanjing 18.95 255 *e*P **Pn 00 24 34.9 +0.8**
NJ2 pP pP 00 24 37.6 +1.3
NJ2 sP sP 00 24 40.0 +2.5
NJ2 PP 00 24 48.0
NJ2 S **Sn 00 28 00.5 -5.8**
NJ2 pmax pmax
comp=Z,100nm,1.0s
NJ2 pmax pmax
comp=Z,4μm,4.0s
NJ2 LR LR
comp=N,34μm,12.5s
NJ2 LR LR
comp=E,18μm,13.6s
NJ2 LR LR
comp=Z,29μm,13.3s
CLNS Chul'man 20.69 335 *e*P **P 00 24 46.7 -5.5**
CLNS *e* 00 24 56.0
CLNS *e*S **S 00 28 31.7 -11**
CLNS *e* 00 28 56.4
CLNS *e*SS 00 29 09.1
CLNS pmax pmax
comp=N,82nm,1.7s
CLNS pmax pmax
comp=Z,132nm,2.0s
CLNS pmax pmax
comp=E,61nm,1.6s
CLNS smax
comp=N,24nm,1.1s
CLNS smax
comp=E,22nm,0.9s
CLNS MLR MLR
comp=N,13μm,13.0s,MS5.6
CLNS MLR MLR
comp=Z,28μm,14.0s,MS5.8
CLNS MLR MLR
comp=E,13μm,12.0s,MS5.6
NACB Ninganchiao 21.80 233 *e*Pn **P 00 25 03.7 -0.8**
comp=E,55nm,0.9s,mb5.0
HHC Hu-ho-hao-te 22.30 284 *e*P **P 00 25 09.1 -0.6**
HHC pmax pmax
comp=Z,51nm,1.2s,mb4.8
SSLB Suanglung 22.48 234 *e*P **P 00 25 10.4 -1.3**
comp=Z,104nm,1.1s,mb5.2
YULB Yu-li 22.56 232 *e*P **P 00 25 14.3 +1.8**
comp=Z,93nm,0.9s,mb5.2
CIT Chita 22.87 314 *e*P **P 00 25 13.0 -2.7**
CIT *e* 00 25 27.4
TPUB Ta-pu 23.04 233 *e*P **P 00 25 16.3 -1.4**
comp=Z,210nm,1.0s,mb5.5
WHN Wuhan 23.06 257 P **P 00 25 15.5 -2.4**
TWG Pinlang 23.12 232 *e*P **P 00 25 17.8 -0.7**
comp=Z,265nm,1.0s,mb5.6
YAK Yakutsk 24.08 347 *e*P **P 00 25 25.3 -2.2**
YAK *e**PP 00 25 33.7
YAK *e*S **S 00 29 42.3 -2.4**
YAK *e* 00 36 32.7
YAK pmax pmax
comp=N,97nm,1.0s
YAK pmax pmax
comp=Z,266nm,0.9s,mb5.7
YAK pmax pmax
comp=E,35nm,0.9s
YAK smax
comp=N,20μm,14.6s
YAK Yakutsk 24.08 347 *e*P **P 00 25 25.3 -2.2**
comp=N,283nm,0.8s,mb5.8
SEY Seymchan 25.08 13 *ce*P **P 00 25 38.0 +1.4**
SEY Seymchan 25.08 13 ⇑*e*P **P 00 25 38.1 +1.5**
BOD Bodaibo 25.58 326 *e*P **P 00 25 40.3 -0.9**
BOD pmax pmax
comp=Z,53nm,1.4s,mb4.9
ULN Ulaanbaatar 25.78 301 *e*P **P 00 25 43.2 +0.1**
ULN pmax pmax
comp=Z,118nm,1.4s,mb5.2
ULN Ulaanbaatar 25.78 301 *e*P **P 00 25 43.2 +0.1**
comp=Z,118nm,1.4s,mb5.2
ULN Ulaanbaatar 25.78 301 P **P 00 25 43.3 +0.2**
SNR=31
ULN P 00 25 43.3
SNR=31
SONM Songino Array 26.21 301 P **P 00 25 47.2 +0.2**
comp=Z,11nm,0.7s,mb4.5,baz=84,slow=9.9,SNR=14
SONM Songino Array 26.21 301 P **P 00 25 47.2 +0.2**
SONM pmax pmax
comp=Z,11nm,0.7s
SONM Songino Array 26.21 301 P **P 00 25 47.2 +0.2**
FX1 Attu Island--F 26.35 47 P **P 00 25 50.1 +1.8**
comp=Z,138nm,0.9s,mb5.5,baz=5.9,slow=4.6,SNR=22
FX1 Attu Island--F 26.35 47 P **P 00 25 50.1 +1.8**
FX1 pmax pmax
comp=Z,138nm,0.9s
FX1 Attu Island--F 26.35 47 P **P 00 25 50.1 +1.8**
IRK Irkutsk 28.36 310 *e*P **P 00 25 57.5 -8.7**
IRK pmax pmax
comp=Z,54nm,3.4s
ZAK Zakamensk 28.60 306 *e*P **P 00 26 05.5 -2.9**
ZAK *e* 00 27 20.5
ZAK *e* 00 29 19.7
ZAK *e* 00 32 40.4
ZAK pmax pmax
comp=Z,16nm,1.0s,mb4.7
TLY Talaya 28.61 309 *e*P **P 00 26 09.0 +0.5**
TLY *e*S **S 00 30 45.7 -11**
TLY pmax pmax
comp=Z,17nm,0.9s,mb4.8
TLY MLR MLR
comp=Z,11μm,14.0s,MS5.6
LZH Lanzhou 29.15 276 *e*P **P 00 26 13.1 -0.4**
LZH pP pP 00 26 17.0 +0.5
LZH PP PP 00 27 06.1 -13
LZH S **S 00 31 01.1 -4.5**
LZH pmax pmax
comp=Z,74nm,1.0s,mb5.4
LZH pmax pmax
comp=Z,330nm,4.5s
LZH LR LR
comp=E,23μm,14.2s
LZH LR LR
comp=Z,31μm,15.6s,MS6.0
TGY Tagaytay City 30.20 220 P **P 00 26 23.4 +0.5**
comp=Z,159nm,0.3s,mb6.2,baz=175,slow=7.2,SNR=14
TGY Tagaytay City 30.20 220 P **P 00 26 23.4 +0.5**
MOY Mondy 30.23 308 *e*P **P 00 26 22.9 0.0**
GYA Guiyang 30.95 257 ⇓*i*P **P 00 26 29.5 0.0**
GYA PP PP 00 27 31.4 -7.9
GYA PcP PcP 00 29 28.0 +2.2
GYA S **S 00 31 30.9 -3.1**
GYA ScP ScP 00 33 07.8 -0.7
GYA pmax pmax
comp=Z,70nm,0.8s,mb5.5
GYA LR LR
comp=N,12μm,16.3s,MS5.9
GYA LR LR
comp=E,16μm,14.9s,MS5.9
GYA LR LR
comp=Z,21μm,15.9s,MS5.9
CD2 Chengdu 31.07 266 *e*P **P 00 26 31.5 +1.0**
CD2 pP pP 00 26 35.9 +2.4
CD2 sP sP 00 26 39.0 +4.3
CD2 PP PP 00 27 33.5 -7.1
CD2 S **S 00 31 34.8 -0.9**
CD2 pmax pmax
comp=Z,30nm,0.8s,mb5.2
CD2 LR LR
comp=N,31μm,15.4s
CD2 LR LR
comp=Z,27μm,14.2s,MS6.0
GTA Gaotai 31.42 284 ⇓P **P 00 26 33.8 +0.3**
GTA pP pP 00 26 36.8 +0.3
GTA sP sP 00 26 39.9 +2.2
GTA PcP PcP 00 29 28.3 +1.5
GTA S **S 00 31 40.8 -0.3**
GTA PcS PcS 00 33 12.6 +1.6
GTA SS SS 00 33 29.8 -25
GTA pmax pmax
comp=Z,30nm,0.8s,mb5.2
GTA LR LR
comp=N,15μm,13.7s,MS6.1
GTA LR LR
comp=E,21μm,14.0s,MS6.1
GTA LR LR
comp=Z,18μm,14.0s,MS5.9
BILL Bilibino 32.41 18 *e*P **P 00 26 42.1 +0.2**
BILL *i* 00 27 54.4
BILL *i* 00 29 30.4
BILL pmax pmax
comp=Z,115nm,1.2s,mb5.6
BILL Bilibino 32.41 18 *e*P **P 00 26 41.2 -0.7**
comp=Z,109nm,1.1s,mb5.6
QIZ Qiongzhong 33.17 242 P **P 00 26 48.6 -0.4**
QIZ S **S 00 32 08.3 -0.3**
QIZ LR LR
comp=Z,16μm,17.1s,MS5.8
TIXI Tiksi 33.33 353 *e*P **P 00 26 48.7 -1.2**
TIXI pmax pmax
comp=Z,43nm,1.1s,mb5.3
TIXI Tiksi 33.33 353 *e*P **P 00 26 48.7 -1.2**
comp=Z,43nm,1.1s,mb5.3
KMI Kunming 34.65 258 P **P 00 27 02.3 +0.4**
KMI pP pP 00 27 05.3 +0.4
KMI PP PP 00 28 19.1 -1.3
KMI S **S 00 32 30.6 -0.9**
KMI pmax pmax
comp=Z,24nm,0.8s,mb5.2
KMI LR LR
comp=N,9μm,15.4s,MS5.9
KMI LR LR
comp=E,16μm,16.0s,MS5.9
KMI LR LR
comp=Z,20μm,14.7s,MS6.0
KDM Kudat 38.40 220 P **P 00 27 36.0 +2.1**
MYLDM Lahad Datu 39.10 216 P **P 00 27 42.2 +2.4**
MYLDM Lahad Datu 39.10 216 P **P 00 27 42.8 +3.0**
SDKM Sandakan 39.32 219 P **P 00 27 42.2 +0.5**
WMQ Urumqi 39.42 295 P **P 00 27 43.0 +0.8**
WMQ sP sP 00 27 50.0 +3.5
WMQ PP PP 00 29 18.0 +5.5
WMQ S **S 00 33 43.0 -0.8**
WMQ pmax pmax
comp=Z,68nm,1.0s,mb5.3
WMQ pmax pmax
comp=Z,2μm,4.0s
WMQ LR LR
comp=N,24μm,15.0s,MS6.2
WMQ LR LR
comp=E,18μm,15.0s,MS6.2
WMQ LR LR
comp=Z,15μm,15.0s,MS5.9
KKM Kota Kinabalu 39.46 220 *e*P **P 00 27 44.8 +2.0**
comp=Z,38nm,0.9s,mb5.1
TNA Tin City 39.55 31 *e*P **P 00 27 44.1 +1.1**
comp=Z,98nm,0.9s,mb5.5
ZALV Zalesovo Beam 40.17 311 P **P 00 27 48.0 -0.3**
comp=Z,105nm,0.8s,mb5.7,baz=81,slow=7.5,SNR=188
ZALV PcP PcP 00 29 52.2 -0.1
comp=Z,15nm,0.9s,baz=104,slow=2.8,SNR=7.1
ZALV Zalesovo Beam 40.17 311 P **P 00 27 48.0 -0.3**
ZALV 00 29 52.2
ZALV pmax pmax
comp=Z,105nm,0.8s,mb5.6
ZALV Zalesovo Beam 40.17 311 P **P 00 27 48.0 -0.3**
ZALV PcP PcP 00 29 52.2 -0.1
TSM Tawau 40.17 217 P **P 00 27 49.9 +1.2**
NVS Novosibirsk 41.07 312 *i* P **P 00 27 55.0 -0.7**
NVS pmax pmax
comp=Z,202nm,1.7s,mb5.5
NVS pmax pmax
comp=N,57nm,1.9s
NVS pmax pmax
comp=E,176nm,1.9s
CHG Chiang Mai 41.17 253 ⇑P **P 00 27 57.8 +0.9**
comp=E,26nm,1.0s,mb4.8
CHTO Chiang Mai 41.17 253 *e*P **P 00 27 57.2 +0.3**
CHTO pmax pmax
comp=Z,120nm,2.0s,mb5.2
CHTO Chiang Mai 41.17 253 *e*P **P 00 27 57.2 +0.3**
comp=Z,120nm,2.0s,mb5.2
CHTO Chiang Mai 41.17 253 P **P 00 27 58.1 +1.2**
SNR=6.0
CHTO P 00 27 58.1
SNR=6.0
CMAR Chiang Mai Arr 41.39 253 P **P 00 27 59.2 +0.5**
comp=Z,5.6nm,0.7s,mb4.3,baz=44,slow=8.1,SNR=10
CMAR PcP PcP 00 29 58.0 +1.2
comp=Z,2.4nm,0.4s,baz=38,slow=2.3,SNR=4.6
CMAR Chiang Mai Arr 41.39 253 P **P 00 27 59.2 +0.5**
CMAR 00 29 58.1
CMAR pmax pmax
comp=Z,6.0nm,0.7s
CMAR Chiang Mai Arr 41.39 253 P **P 00 27 59.2 +0.5**
CMAR PcP PcP 00 29 58.0 +1.2
LSA Lhasa 41.42 273 P **P 00 27 59.9 +1.0**
NST Nakhon Sawan 42.28 248 P **P 00 28 06.0 -0.1**
MK31 Makanchi Array 42.58 300 *e*P **P 00 28 08.1 -0.1**
MK31 Makanchi Array 42.58 300 *e*P **P 00 28 08.1 0.0**
MKAR Makanchi Array 42.58 300 P **P 00 28 08.3 +0.1**
comp=Z,18nm,0.9s,mb4.8,baz=76,slow=13,SNR=32
MKAR Makanchi Array 42.58 300 P **P 00 28 08.3 +0.1**
MKAR pmax pmax
comp=Z,18nm,0.9s
MKAR Makanchi Array 42.58 300 P **P 00 28 08.3 +0.1**
SHL Shillong 42.81 267 *e*PKP **P 00 28 17.0 +6.7**
TTA Tatalina 44.26 36 *e*P **P 00 28 23.3 +1.8**
TTA Tatalina 44.26 36 *e*P **P 00 28 23.3 +1.8**
KURK Kurchatov 44.26 306 P **P 00 28 21.7 0.0**
comp=Z,2μm,0.8s,mb6.8
KURK Kurchatov 44.26 306 P **P 00 28 21.6 -0.1**
comp=Z,188nm,0.8s,mb5.9,baz=82,slow=8.6,SNR=174
KURK Kurchatov 44.26 306 *ce*P **P 00 28 21.3 -0.4**
KURK pmax pmax
comp=Z,249nm,0.8s,mb6.0
KURK Kurchatov 44.26 306 *e*P **P 00 28 21.1 -0.6**
comp=Z,237nm,0.9s,mb5.9
KURK Kurchatov 44.26 306 P **P 00 28 21.3 -0.4**
SNR=46
KURK P 00 28 21.3
SNR=46
SVW2 Sparrevohn 44.44 39 *e*P **P 00 28 24.2 +1.2**
SBUM Sibu 44.57 223 P **P 00 28 25.1 +0.6**
NNT Nongplab 44.64 245 P **P 00 28 27.0 +1.9**
TAPN Taplejung 45.19 272 *e*P **P 00 28 29.2 -0.2**
comp=Z,51nm,0.9s,mb5.3
TAPN Taplejung 45.19 272 *e*P **P 00 28 29.2 -0.2**
comp=Z,51nm,0.9s,mb5.3
ODAN Odare 45.67 271 *e*P **P 00 28 33.0 -0.3**
comp=Z,120nm,0.9s,mb5.8
ODAN Odare 45.67 271 *e*P **P 00 28 33.0 -0.3**
comp=Z,120nm,0.9s,mb5.8
OHAK Old Harbor 45.83 44 *e*P **P 00 28 36.7 +2.6**
RSO Redoubt South 45.84 39 *e*P **P 00 28 35.8 +1.6**
KDAK Kodiak Island 46.15 43 P **P 00 28 36.0 -0.6**
comp=Z,607nm,0.9s,mb6.5,SNR=8.9
KDAK Kodiak Island 46.15 43 P **P 00 28 36.6 0.0**
comp=Z,79nm,0.8s,mb5.7,baz=300,slow=3.9,SNR=33
KDAK Kodiak Island 46.15 43 *i* P **P 00 28 37.3 +0.7**
KDAK Kodiak Island 46.15 43 P **P 00 28 36.6 0.0**
JIRN Jiri 46.22 273 *e*P **P 00 28 37.4 -0.2**
comp=Z,144nm,1.4s,mb5.7
JIRN Jiri 46.22 273 *e*P **P 00 28 37.4 -0.2**
comp=Z,144nm,1.4s,mb5.7
RAMN Ramite 46.25 272 *e*P **P 00 28 37.3 -0.5**
comp=Z,165nm,1.0s,mb5.9
RAMN Ramite 46.25 272 *e*P **P 00 28 37.3 -0.5**
comp=Z,165nm,1.0s,mb5.9
GUN Gumba 46.35 273 *e*P **P 00 28 38.3 -0.3**
comp=Z,203nm,0.8s,mb6.1
GUN Gumba 46.35 273 *e*P **P 00 28 38.3 -0.3**
comp=Z,203nm,0.8s,mb6.1
KSM Kuching 46.42 224 P **P 00 28 39.6 +0.4**
KSM Kuching 46.42 224 *e*P **P 00 28 39.5 +0.3**
comp=Z,50nm,1.1s,mb5.4
BPAW Bear Paw Mtn. 46.52 34 *e*P **P 00 28 40.7 +1.3**
comp=Z,68nm,1.0s,mb5.5
KKN Kakani 46.87 274 *e*P **P 00 28 42.1 -0.6**
comp=Z,152nm,0.8s,mb6.0
KKN Kakani 46.87 274 *e*P **P 00 28 42.1 -0.6**
KKN pmax pmax
comp=Z,152nm,0.8s,mb6.0
KKN Kakani 46.87 274 *e*P **P 00 28 42.1 -0.6**
comp=Z,152nm,0.8s,mb6.0
PKI Pulchoki 46.88 273 *e*P **P 00 28 42.2 -0.5**
comp=Z,132nm,1.4s,mb5.7
PKI Pulchoki 46.88 273 *e*P **P 00 28 42.4 -0.3**
PKI pmax pmax
comp=Z,50nm,0.7s,mb5.5
PKI Pulchoki 46.88 273 *e*P **P 00 28 42.4 -0.3**
comp=Z,50nm,0.7s,mb5.6
PKIN Phulchoki 46.88 273 *e*P **P 00 28 42.4 -0.4**
comp=Z,50nm,0.7s,mb5.5
DMN Daman 47.09 274 *e*P **P 00 28 43.9 -0.5**
comp=Z,84nm,1.0s,mb5.6
DMN Daman 47.09 274 *e*P **P 00 28 43.9 -0.5**
comp=Z,84nm,1.0s,mb5.6
MCK McKinley 47.44 35 *e*P **P 00 28 47.7 +1.1**
MCK McKinley 47.44 35 *e*P **P 00 28 47.7 +1.1**
PMR Palmer 47.52 38 *e*P **P 00 28 49.2 +2.0**
PMR pmax pmax
comp=Z,72nm,0.9s,mb5.7
PMR Palmer 47.52 38 *e*P **P 00 28 49.2 +2.0**
comp=Z,72nm,0.9s,mb5.7
KAPI Kappang 47.78 209 P **P 00 28 48.8 -1.0**
comp=Z,670nm,1.3s,mb6.5,SNR=9.2
KAPI Kappang 47.78 209 *e*P **P 00 28 48.8 -1.0**
comp=Z,212nm,1.3s,mb6.0
ULHL Ulahol 47.93 296 P **P 00 28 52.1 +1.4**
SNR=9.1
TKM2 Tokmak 2 48.17 297 P **P 00 28 52.8 +0.2**
SNR=42
TKM2 Tokmak 2 48.17 297 *e*P **P 00 28 52.5 -0.1**
TKM2 pmax pmax
comp=Z,70nm,0.9s,mb5.7
TKM2 Tokmak 2 48.17 297 *e*P **P 00 28 52.5 0.0**
comp=Z,70nm,0.9s,mb5.7
KZA Kyzart 48.69 296 P **P 00 28 59.3 +2.7**
SNR=34
KBK Karagaybulak 48.71 297 P **P 00 28 57.7 +1.0**
SNR=49
CHMS Chumysh 48.73 297 P **P 00 28 58.1 +1.2**
SNR=10
USP Ospenovka 48.82 297 P **P 00 28 58.1 +0.5**
SNR=12
BVAR Borovoye Array 48.82 311 P **P 00 28 57.0 -0.5**
comp=Z,13nm,0.7s,mb5.1,baz=82,slow=8.2,SNR=42
BVAR PcP PcP 00 30 22.3 +0.3
comp=Z,16nm,0.8s,baz=96,slow=2.1,SNR=4.9
BVAR Borovoye Array 48.82 311 P **P 00 28 57.0 -0.4**
BVAR 00 30 22.3
BVAR pmax pmax
comp=Z,13nm,0.7s
BVAR Borovoye Array 48.82 311 P **P 00 28 57.0 -0.5**
BVAR PcP PcP 00 30 22.3 +0.3
BRVK Borovoye 48.88 311 P **P 00 28 57.7 -0.2**
comp=Z,205nm,1.0s,mb6.1,SNR=7.3
BRVK Borovoye 48.88 311 *ce*P **P 00 28 58.1 +0.2**
BRVK pmax pmax
comp=Z,114nm,2.5s,mb5.5
BRVK Borovoye 48.88 311 *e*P **P 00 28 57.5 -0.3**
comp=Z,20nm,0.8s,mb5.2
BRVK Borovoye 48.88 311 P **P 00 28 58.3 +0.4**
SNR=17
BRVK P 00 28 58.3
SNR=17
AAK Ala-Archa 49.03 297 P **P 00 28 59.7 +0.5**
comp=Z,183nm,0.9s,mb6.1,SNR=9.7
AAK Ala-Archa 49.03 297 P **P 00 29 00.6 +1.4**
SNR=14
AAK Ala-Archa 49.03 297 *e*P **P 00 28 59.6 +0.4**
AAK pmax pmax
comp=Z,231nm,1.9s,mb5.9
AAK Ala-Archa 49.03 297 *e*P **P 00 28 59.6 +0.4**
comp=Z,231nm,1.9s,mb5.9
AAK Ala-Archa 49.03 297 P **P 00 29 00.2 +1.0**
SNR=14
AAK P 00 29 00.2
SNR=14
KSH Kashi 49.05 292 ⇓*i*P **P 00 29 03.8 +4.4**
KSH pP pP 00 29 08.3 +5.8
KSH sP sP 00 29 10.8 +7.1
KSH PcP PcP 00 30 26.4 +3.3
KSH PP PP 00 30 58.4 +5.6
KSH ScP ScP 00 34 19.8 +1.6
KSH PcS PcS 00 34 21.4 +2.0
KSH S **S 00 36 08.6 +4.5**
KSH ScS ScS 00 38 52.4 +0.7
KSH pmax pmax
comp=Z,46nm,1.1s,mb5.4
KSH LR LR
comp=N,3μm,11.4s,MS5.7
KSH LR LR
comp=E,3μm,10.8s,MS5.7
KSH LR LR
comp=Z,11μm,13.6s,MS6.0
PAX Paxson 49.07 36 *e*P **P 00 29 00.2 +1.0**
PAX pmax pmax

comp=Z,39nm,1.3s,mb5.3
PAX Paxson 49.07 36 *e*P **P 00 29 00.2 +1.0**
comp=Z,39nm,1.3s,mb5.3
UCH Uchtor 49.15 296 P **P 00 29 02.4 +2.2**
SNR=11
UCH Uchtor 49.15 296 *e*P **P 00 29 01.5 +1.4**
comp=Z,21nm,1.0s,mb5.1
KULM Kulim 49.24 238 P **P 00 29 01.3 +0.2**
KULM Kulim 49.24 238 *e*P **P 00 29 01.2 +0.1**
comp=Z,68nm,1.4s,mb5.5
EKS2 Erkin-Say 49.52 297 P **P 00 29 04.3 +1.4**
SNR=15
EKS2 Erkin-Say 49.52 297 *e*P **P 00 29 02.7 -0.3**
comp=Z,32nm,1.0s,mb5.3
IPM Ipoh 49.60 236 P **P 00 29 04.7 +0.9**
AML Almayashu 49.76 296 P **P 00 29 05.7 +0.9**
SNR=36
AML Almayashu 49.76 296 *e*P **P 00 29 05.2 +0.4**
comp=Z,106nm,1.3s,mb5.7
MENT Mentasta 49.87 35 *e*P **P 00 29 05.8 +0.6**
KGM Kluang 50.04 232 P **P 00 29 08.4 +1.3**
EGAK Eagle 50.70 33 *e*P **P 00 29 11.1 -0.4**
comp=Z,40nm,0.4s,mb5.7
KAKA Kakadu 51.93 190 *e*P **P 00 29 21.7 +0.4**
comp=Z,142nm,1.2s,mb5.8
BHK Bhakra 52.03 283 *e*PKP **P 00 29 21.0 -1.0**
NDI New Delhi 52.69 279 *e*PKP **P 00 29 25.0 -2.0**
INK Inuvik 53.01 28 P **P 00 29 29.4 +0.6**
comp=Z,68nm,0.9s,mb5.6,baz=285,slow=8.5,SNR=20
INK Inuvik 53.01 28 *e*P **P 00 29 28.2 -0.6**
INK pmax pmax
comp=Z,90nm,1.0s
INK Inuvik 53.01 28 *e*P **P 00 29 28.2 -0.5**
comp=Z,90nm,1.0s,mb5.7
SVE Sverdlovsk 53.30 318 *e*P **P 00 29 31.3 +0.3**
SVE pmax pmax
comp=Z,166nm,1.2s,mb5.8
SOKR Solikamsk 54.44 322 *e*P **P 00 29 38.9 -0.4**
SOKR pmax pmax
comp=Z,90nm,1.5s,mb5.5
ARU Arti 54.51 317 P **P 00 29 39.7 -0.2**
comp=Z,601nm,1.1s,mb6.5,SNR=49
ARU Arti 54.51 317 *c i*P **P 00 29 40.1 +0.2**
ARU S **S 00 37 18.6 -0.1**
ARU SS SS 00 40 51.6 -9.0
ARU pmax pmax
comp=Z,182nm,1.2s,mb6.0
ARU Arti 54.51 317 *e*P **P 00 29 39.6 -0.3**
comp=Z,183nm,1.3s,mb6.0
SKAG Skagway 54.62 39 *e*P **P 00 29 42.5 +1.9**
comp=Z,62nm,1.4s,mb5.5
SIT Sitka 55.39 41 *e*P **P 00 29 47.2 +0.9**
SIT pmax pmax
comp=Z,51nm,1.1s,mb5.5
SIT Sitka 55.39 41 *e*P **P 00 29 47.2 +0.9**
comp=Z,51nm,1.1s,mb5.5
KNA Kununurra 55.50 194 *e*P **P 00 29 47.1 -0.3**
comp=Z,146nm,1.0s,mb6.0
KBL Kabul 56.14 289 *e*P **P 00 29 51.4 -0.6**
KBL pmax pmax
comp=Z,63nm,0.9s,mb5.7
KBL Kabul 56.14 289 *e*P **P 00 29 51.4 -0.6**
comp=Z,64nm,0.9s,mb5.7
ABKAR Akbulak array 56.23 309 *e*P **P 00 29 51.6 -0.8**
comp=Z,44nm,0.7s,mb5.6
CRAG Craig 57.11 43 *e*P **P 00 30 00.5 +2.0**
comp=Z,82nm,1.2s,mb5.6
DLBC Dease Lake 57.55 39 P **P 00 30 03.5 +1.8**
comp=Z,33nm,1.2s,mb5.2,baz=289,slow=8.2,SNR=16
DLBC Dease Lake 57.55 39 *e*P **P 00 30 03.0 +1.4**
HYB Hyderabad 57.62 267 *e*P **P 00 30 04.0 +1.3**
HYB Hyderabad 57.62 267 *e*P **P 00 30 04.0 +1.3**
HYB Hyderabad 57.62 267 *i*P **P 00 30 02.0 -0.7**
ALE Alert 58.26 3 P **P 00 30 06.0 -0.3**
comp=Z,548nm,1.0s,mb6.5,SNR=39
FITZ Fitzroy Crossi 58.43 197 *e*P **P 00 30 07.5 -0.7**
comp=Z,109nm,1.3s,mb5.7
KBS Kingsbay 58.68 350 *c e*P **P 00 30 10.9 +1.6**
KBS pmax pmax
comp=Z,70nm,0.8s,mb5.7
KBS Kingsbay 58.68 350 *e*P **P 00 30 09.8 +0.5**
comp=Z,68nm,0.9s,mb5.7
WRAB Tennant Creek 58.84 187 P **P 00 30 10.0 -1.0**
comp=Z,597nm,1.1s,mb6.5,SNR=25
WRAB Tennant Creek 58.84 187 *e*P **P 00 30 09.8 -1.2**
WRAB pmax pmax
comp=Z,34nm,0.8s,mb5.4
WRAB Tennant Creek 58.84 187 *e*P **P 00 30 09.8 -1.2**
comp=Z,34nm,0.8s,mb5.4
WRA Warramunga Arr 58.85 187 P **P 00 30 09.7 -1.4**
comp=Z,53nm,0.9s,mb5.6,baz=5.6,slow=7.2,SNR=84
WRA PKP2bc 00 59 57.3
comp=Z,1.9nm,1.0s,baz=212,slow=2.5,SNR=7.4
WRA Warramunga Arr 58.85 187 P **P 00 30 09.7 -1.4**
WRA ⇑*e* 00 59 57.3
CTAO Charters Tower 58.95 174 *e*P **P 00 30 10.5 -1.2**
CTAO pmax pmax
comp=Z,56nm,1.4s,mb5.4
CTAO Charters Tower 58.95 174 *e*P **P 00 30 10.5 -1.2**
comp=Z,56nm,1.4s,mb5.4
APA Apatity 60.69 335 ⇓*i*P **P 00 30 23.5 +0.3**
APA pmax pmax
comp=Z,22nm,0.7s,mb5.4
RES Resolute Bay 60.94 15 P **P 00 30 24.4 -0.4**
comp=Z,55nm,0.8s,mb5.7,baz=318,slow=5.7,SNR=34
RES Resolute Bay 60.94 15 *e*P **P 00 30 24.1 -0.7**
RES pmax pmax
comp=Z,104nm,1.1s,mb5.9
RES Resolute Bay 60.94 15 *e*P **P 00 30 24.1 -0.8**
comp=Z,104nm,1.1s,mb5.9
KEV Kevo 61.44 339 *e*P **P 00 30 27.3 -1.0**
KEV pmax pmax
comp=Z,13nm,0.7s,mb5.2
KEV Kevo 61.44 339 *e*P **P 00 30 27.3 -1.0**
comp=Z,13nm,0.7s,mb5.2
KEV Kevo 61.44 339 *e*p **P 00 30 27.3 -1.0**
comp=Z,13nm,0.7s,mb5.2
KEV Kevo 61.44 339 *e*p **P 00 30 27.3 -1.0**
comp=Z,13nm,0.7s,mb5.2
ARCES ARCESS Array B 61.99 339 P **P 00 30 31.8 -0.2**
comp=Z,8.9nm,0.8s,mb5.0,baz=58,slow=9.3,SNR=19
ARCES ARCESS Array B 61.99 339 P **P 00 30 31.8 -0.2**
ARCES pmax pmax
comp=Z,9.0nm,0.8s
ARCES ARCESS Array B 61.99 339 P **P 00 30 31.8 -0.2**
ABKT Ailbek 62.35 298 P **P 00 30 35.6 +0.6**
comp=Z,337nm,0.9s,mb6.5,SNR=13
YKA Yellowknife Ar 62.51 30 P **P 00 30 34.8 -0.7**
comp=Z,8.5nm,0.8s,mb5.0,baz=297,slow=6.6,SNR=16
YKA Yellowknife Ar 62.51 30 P **P 00 30 34.8 -0.8**
YKA pmax pmax
comp=Z,9.0nm,0.8s
YKA Yellowknife Ar 62.51 30 P **P 00 30 34.9 -0.7**
ASAR Alice Springs 62.58 187 P **P 00 30 35.4 -1.0**
comp=Z,17nm,0.8s,mb5.2,baz=10,slow=6.8,SNR=71
ASAR PKP2bc 00 59 48.6
comp=Z,1.4nm,0.8s,baz=179,slow=1.8,SNR=6.5
ASAR Alice Springs 62.58 187 P **P 00 30 35.4 -1.0**
ASAR ⇑*e* 00 59 48.6
MBWA Marble Bar 62.88 202 *e*P **P 00 30 37.7 -0.8**
comp=Z,95nm,1.2s,mb5.8
DAG Danmarks Havn 63.83 355 ⇓*i*P **P 00 30 42.8 -1.4**
comp=Z,64nm,0.9s,mb5.7
JOF Joensuu 63.98 331 *e*P **P 00 30 44.1 -1.2**
JOF pmax pmax
comp=Z,46nm,1.0s,mb5.5
JOF Joensuu 63.98 331 *e*p **P 00 30 44.1 -1.2**
comp=Z,46nm,1.0s,mb5.5
JOF Joensuu 63.98 331 *e*p **P 00 30 44.1 -1.2**
comp=Z,46nm,1.0s,mb5.5
EIDS Eidsvold 64.71 169 *e*P **P 00 30 50.5 0.0**
DZM Mont Dzumac 65.34 154 *e*P **P 00 30 55.6 +1.0**
comp=Z,91nm,1.4s,mb5.6
MOS Moscow 65.34 323 *e*P **P 00 30 51.0 -3.3**
MOS *e*S S 00 39 37.1 -0.9
MOS pmax pmax
comp=Z,189nm,1.5s,mb5.9
RMQ Roma 65.52 172 *e*P **P 00 30 55.6 -0.1**
comp=Z,353nm,1.5s,mb6.2
VRHR Novokhopersk 65.85 317 *e*P **P 00 30 56.9 -0.8**
VRHR pmax pmax
comp=N,20nm,0.8s
VRHR pmax pmax
comp=E,30nm,0.8s
VRHR pmax pmax
comp=Z,90nm,0.8s,mb5.8

NLWA Neilton Lookou 65.93 48 ⇑P **P 00 30 57.7 -0.5**
baz=66
NLWA Neilton Lookou 65.93 48 *e*P **P 00 30 59.4 +1.1**
comp=Z,104nm,1.2s,mb5.7
OBN Obninsk 66.19 322 P **P 00 30 59.9 +0.1**
comp=Z,454nm,0.9s,mb6.5,SNR=5.8
OBN Obninsk 66.19 322 *e*P **P 00 30 59.5 -0.3**
OBN *i* 00 33 25.6
OBN pmax pmax
comp=Z,176nm,1.6s,mb5.8
OBN Obninsk 66.19 322 *e*P **P 00 30 59.2 -0.6**
comp=Z,71nm,0.9s,mb5.7
KAF Kangasniemi 66.33 332 *e*P **P 00 30 59.2 -1.4**
KAF pmax pmax
comp=Z,22nm,0.7s,mb5.3
KAF Kangasniemi 66.33 332 *e*p **P 00 30 59.2 -1.4**
comp=Z,22nm,0.7s,mb5.3,baz=49,slow=6.1
KAF Kangasniemi 66.33 332 *e*p **P 00 30 59.2 -1.4**
comp=Z,22nm,0.7s,mb5.3,baz=49,slow=6.1
CMW Cultus Mountai 66.38 46 P **P 00 31 02.1 +1.0**
MSVF Nonsavu 66.39 141 *e*P **P 00 31 03.6 +2.1**
comp=Z,78nm,1.4s,mb5.5
GNW Green Mountain 66.44 47 *e*P **P 00 31 02.3 +0.8**
comp=Z,31nm,1.3s,mb5.2
JCW Jim Creek 66.61 46 *e*P **P 00 31 02.9 +0.2**
comp=Z,96nm,1.0s,mb5.8
B06A Marblemount 66.68 46 ⇓P **P 00 31 03.4 +0.3**
baz=66,SNR=5.9
RPW Rockport 66.70 46 *e*P **P 00 31 03.5 +0.3**
comp=Z,25nm,1.0s,mb5.2
MAK Makhachkala 66.78 307 *e*P **P 00 31 02.4 -1.4**
MAK *e* 00 31 27.0
MAK *i* 00 33 29.3
MAK *e*PPP 00 35 07.0
MAK *e*S S 00 39 52.7 -3.3
MAK pmax pmax
comp=Z,60nm,0.9s,mb5.6
MAK Makhachkala 66.78 307 *e*P PcP 00 31 27.0 -5.7
FINES FINESS Array B 66.83 332 P **P 00 31 03.0 -0.8**
comp=Z,35nm,0.7s,mb5.5,baz=52,slow=7.5,SNR=82
FINES FINESS Array B 66.83 332 P **P 00 31 03.0 -0.8**
FINES pmax pmax
comp=Z,35nm,0.7s
FINES FINESS Array B 66.83 332 P **P 00 31 03.0 -0.8**
HTW Haystack Looko 66.91 47 P **P 00 31 05.8 +1.3**
A07A Ashnola River, 67.01 45 ⇑P **P 00 31 05.2 0.0**
baz=67,SNR=9.9
VSR Storozhevoye 67.08 318 *e*P **P 00 31 04.7 -0.9**
VSR pmax pmax
comp=N,40nm,0.9s
VSR pmax pmax
comp=E,40nm,0.9s
VSR pmax pmax
comp=Z,110nm,0.9s,mb5.9
D05A Enumclaw 67.12 47 ⇓P **P 00 31 06.3 +0.5**
baz=67
LON Longmire 67.46 48 *e*P **P 00 31 09.0 +0.9**
LON pmax pmax
comp=Z,28nm,1.3s,mb5.1
LON Longmire 67.46 48 *e*P **P 00 31 09.0 +0.9**
comp=Z,28nm,1.3s,mb5.1
F04A Amboy 67.56 49 ⇓P **P 00 31 08.7 0.0**
baz=67
MTMW Mount Mitchell 67.62 48 P **P 00 31 10.8 +1.7**
ETW Entiat 67.83 46 *e*P **P 00 31 10.9 +0.6**
comp=Z,105nm,1.2s,mb5.7
B08A Colville Reser 67.97 45 ⇑P **P 00 31 11.1 -0.1**
baz=68,SNR=15
EDM Edmonton 68.27 38 *e*P **P 00 31 12.6 -0.5**
EDM Edmonton 68.27 38 *e*P **P 00 31 12.6 -0.5**
H04A Detroit Lake 68.38 50 ⇓P **P 00 31 13.9 0.0**
baz=68
MEEK Meekatharra 68.38 201 *e*P **P 00 31 13.5 -0.4**
SUMG Summit 68.79 360 *e*P **P 00 31 16.3 +0.3**
comp=Z,96nm,1.0s,mb5.7
SUMG Summit 68.79 360 *i*P **P 00 31 16.4 +0.4**
comp=Z,69nm,1.0s,mb5.5
OD2 Odessa Site #2 68.86 46 *e*P **P 00 31 16.3 -0.5**
comp=Z,61nm,1.2s,mb5.4
C09A Chrisman Ranch 68.87 45 ⇓P **P 00 31 17.0 +0.1**
baz=69,SNR=6.9
CROR Criterion Ridg 68.92 49 P **P 00 31 18.7 +1.5**
RSW Rattlesnake Hi 68.93 47 *e*P **P 00 31 17.7 +0.5**
comp=Z,30nm,1.0s,mb5.2
D08A Wollman Farm, 68.93 46 ⇑P **P 00 31 17.3 +0.1**
baz=69,SNR=5.2
HAWA Hanford 68.97 47 *e*P **P 00 31 16.9 -0.6**
comp=Z,46nm,1.4s,mb5.2
G06A Carlson Farm, 68.98 48 ⇓P **P 00 31 17.4 -0.2**
baz=69
BBOR Butler Butte 69.08 51 P **P 00 31 19.9 +1.6**
ZEI Tsey 69.11 308 *e*P **P 00 31 16.3 -2.2**
ZEI pmax pmax
comp=Z,85nm,1.4s,mb5.5
ZEI pmax pmax
comp=N,52nm,0.9s
ZEI pmax pmax
comp=E,50nm,0.9s
KIV Kislovodsk 69.18 310 P **P 00 31 20.6 +1.7**
comp=E,2μm,1.0s,mb6.9,SNR=42
KIV Kislovodsk 69.18 310 *e*P **P 00 31 19.6 +0.7**
KIV *e* 00 31 42.3
KIV pmax pmax
comp=Z,311nm,1.2s,mb6.1
KIV Kislovodsk 69.18 310 *e*P **P 00 31 19.9 +1.0**
KIV Kislovodsk 69.18 310 P **P 00 31 19.5 +0.7**
SNR=76
KIV P 00 31 19.5
SNR=76
NEW Newport 69.23 44 *e*P **P 00 31 19.3 +0.2**
NEW pmax pmax
comp=Z,71nm,1.2s
NEW Newport 69.23 44 *e*P **P 00 31 19.3 +0.2**
comp=Z,71nm,1.2s,mb5.5
YBH Yreka Blue Hor 69.71 52 P **P 00 31 22.5 +0.3**
comp=Z,25nm,1.1s,mb5.0,baz=127,slow=1.6,SNR=11
YBH Yreka Blue Hor 69.71 52 P **P 00 31 22.5 +0.3**
YBH pmax pmax
comp=Z,25nm,1.1s
YBH Yreka Blue Hor 69.71 52 P **P 00 31 22.5 +0.3**
ARMA Armidale 69.75 170 *e*P **P 00 31 23.4 +1.0**
D10A Wagner Farm, O 69.85 45 ⇑P **P 00 31 23.1 +0.1**
baz=70,SNR=9.8
G08A Pilot Rock 69.92 48 ⇓P **P 00 31 23.4 -0.1**
baz=70
C11A Tepee Creek (N 69.95 44 ⇑P **P 00 31 23.7 +0.1**
baz=70
LNOR Lincton Mounta 69.97 47 *e*P **P 00 31 24.0 +0.3**
LNOR pmax pmax
comp=Z,16nm,1.0s,mb4.9
LNOR Lincton Mounta 69.97 47 *e*P **P 00 31 24.0 +0.2**
comp=Z,16nm,1.0s,mb4.9
GNI Garni 70.06 306 *e*P **P 00 31 25.0 +0.7**
GNI Garni 70.06 306 *e*P **P 00 31 25.0 +0.7**
GNI Garni 70.06 306 P **P 00 31 26.0 +1.7**
SNR=14
GNI P 00 31 26.0
SNR=14
SCO Scoresbysund 70.16 354 *i*P **P 00 31 24.3 -0.2**
comp=Z,30nm,0.9s,mb5.2
K05A Summer Lake 70.26 51 ⇑P **P 00 31 26.1 +0.6**
baz=70,SNR=24
E10A Myers Farm, Un 70.28 46 ⇓P **P 00 31 25.2 -0.4**
baz=70
A13A Flathead Natio 70.29 43 ⇑P **P 00 31 25.7 +0.1**
baz=70
I07A Izee 70.31 49 ⇓P **P 00 31 25.9 +0.1**
baz=70,SNR=12
FORT Forrest 70.32 191 *e*P **P 00 31 25.7 -0.1**
comp=Z,37nm,0.7s,mb5.4
STKA Stephens Creek 70.45 179 *e*P **P 00 31 26.6 0.0**
comp=Z,13nm,0.8s,mb4.9
STKA Stephens Creek 70.45 179 P **P 00 31 26.4 -0.2**
comp=Z,14nm,0.8s,mb4.9,baz=0.9,slow=10,SNR=11
STKA Stephens Creek 70.45 179 *e*P **P 00 31 26.1 -0.5**
comp=Z,11nm,1.4s,mb4.6
C12B Naegeli Ranch, 70.46 44 ⇑P **P 00 31 26.6 -0.1**
baz=70,SNR=7.0
IZAR Zarasai 70.46 327 *e*P **P 00 31 26.6 +0.1**
F10A Beach Ranch, E 70.51 46 ⇑P **P 00 31 27.0 -0.1**
baz=70
IDID Didziasalis 70.53 326 *e*P **P 00 31 27.1 +0.1**
H08A Prairie City 70.54 48 ⇑P **P 00 31 27.4 +0.2**
baz=70,SNR=15
MICGM Minsk 70.56 325 ⇑*e*P **P 00 31 37.0 +10**
MNK Minsk 70.58 325 ⇑*e*P **P 00 31 37.0 +10**

MNK pmax pmax
comp=N,130nm,1.0s
MNK pmax pmax
comp=E,180nm,1.0s
MNK pmax pmax
comp=Z,480nm,1.0s,mb6.4
B13A Whitefish 70.60 43 ⇑P **P 00 31 27.8 +0.3**
baz=70,SNR=40
G09A Cove 70.61 47 ⇑P **P 00 31 27.4 -0.2**
baz=70,SNR=6.5
ISAL Salakas 70.63 327 *e*P **P 00 31 27.8 +0.2**
IIGN Ignalina 70.73 327 *e*P **P 00 31 28.4 +0.1**
BSMT Bassoo Peak 70.74 44 *e*P **P 00 31 29.3 +0.9**
comp=Z,11nm,0.9s,mb4.8
LTIM Timbered Crate 70.78 52 P **P 00 31 29.9 +1.1**
A14A Double T Ranch 70.79 42 ⇓P **P 00 31 28.4 -0.3**
baz=70,SNR=29
NACGM Naroch 70.79 326 *e*P **P 00 31 26.0 -2.6**
D12A Red Ives Fores 70.92 45 ⇑P **P 00 31 29.2 -0.3**
baz=71
C13A Hot Springs 70.96 44 ⇓P **P 00 31 29.4 -0.3**
baz=71,SNR=25
G10A Bishop Farm, J 70.98 47 ⇑P **P 00 31 29.3 -0.6**
baz=71,SNR=5.5
H09A Durkee 71.04 48 ⇑P **P 00 31 30.1 -0.2**
baz=71
JTMT Jette 71.08 44 *e*P **P 00 31 30.7 +0.2**
comp=Z,43nm,1.0s,mb5.3
A15A Johnson Ranch, 71.15 42 ⇓P **P 00 31 30.1 -0.7**
baz=71,SNR=22
SOC Sochi 71.15 311 *e*P **P 00 31 29.8 -1.2**
SOC *e*S S 00 40 37.4 -10
SOC pmax pmax
comp=Z,177nm,1.9s,mb5.7
YBMT Yellow Bay 71.15 43 *e*P **P 00 31 31.6 +0.7**
comp=Z,26nm,1.0s,mb5.1
F11A Grangeville 71.17 46 ⇓P **P 00 31 30.5 -0.5**
baz=71,SNR=22
E12A Beaver Dam Sad 71.18 45 ⇑P **P 00 31 30.9 -0.2**
baz=71
ARTV Artvin 71.22 308 ⇓*i*P **P 00 31 32.1 +0.6**
B14A Marquette Ranc 71.24 43 ⇓P **P 00 31 31.3 -0.1**
baz=71,SNR=11
J08A Circle Bar Ran 71.33 49 ⇓P **P 00 31 30.7 -1.4**
baz=71,SNR=8.9
C14A Swan Lake 71.35 43 ⇑P **P 00 31 31.1 -1.0**
baz=71
SWMT Swartz Lake 71.37 44 *e*P **P 00 31 32.4 +0.1**
comp=Z,40nm,1.0s,mb5.3
D13A Huson 71.38 44 ⇓P **P 00 31 31.9 -0.3**
baz=71,SNR=25
G11A Walters Elk Ra 71.40 46 ⇑P **P 00 31 32.1 -0.3**
baz=71,SNR=50
I09A Lost Marbles R 71.40 48 ⇑P **P 00 31 32.3 -0.1**
baz=71,SNR=12
MORW Morawa 71.42 203 *e*P **P 00 31 32.3 -0.2**
DDEM Demirkent 71.50 308 ⇓*i*P **P 00 31 34.5 +1.4**
H10A Noah's Angus R 71.61 47 ⇓P **P 00 31 33.0 -0.7**
baz=71,SNR=24
B15A Bradely Ranch, 71.64 42 ⇓P **P 00 31 33.6 -0.2**
baz=71,SNR=64
ANN Anapa 71.75 313 *e*P **P 00 31 33.0 -1.6**
ANN pmax pmax
comp=Z,155nm,1.4s,mb5.7
F12A Elk City 71.75 46 ⇑P **P 00 31 34.5 0.0**
baz=72,SNR=46
A16A West Butte Ran 71.75 41 ⇓P **P 00 31 34.2 -0.3**
baz=72,SNR=5.7
J09A Fry Pan Ranch, 71.76 49 ⇑P **P 00 31 34.7 0.0**
baz=72,SNR=18
WVOR Wild Horse Val 71.78 50 *e*P **P 00 31 35.5 +0.7**
WVOR pmax pmax
comp=Z,30nm,1.1s,mb5.1
WVOR Wild Horse Val 71.78 50 *e*P **P 00 31 35.5 +0.7**
comp=Z,30nm,1.1s,mb5.1
SLMT Seeley Lake 71.81 44 *e*P **P 00 31 35.2 +0.3**
comp=Z,37nm,0.7s,mb5.4
I10A Payette 71.88 48 ⇓P **P 00 31 35.1 -0.2**
baz=72
HOMI Horasan 71.90 307 ⇑*i*P **P 00 31 36.4 +0.9**
D14A Greenough 71.90 44 ⇓P **P 00 31 35.0 -0.4**
baz=72,SNR=19
E13A Victor 71.92 45 ⇓P **P 00 31 35.2 -0.3**
baz=72
C15A Salmond Ranch, 71.95 43 ⇑P **P 00 31 36.0 +0.3**
baz=72,SNR=62
H11A Donnelly 71.96 47 ⇓P **P 00 31 35.0 -0.9**
baz=72,SNR=17
B16A M & M Farms, S 72.03 42 ⇓P **P 00 31 35.6 -0.5**
baz=72,SNR=6.1
CHMT Chamberlain Mo 72.14 44 *e*P **P 00 31 36.9 +0.1**
comp=Z,9.9nm,0.9s,mb4.7
NB2 NORSAR Subarra 72.19 337 P **P 00 31 36.4 -0.5**
comp=Z,52nm,0.9s,mb5.5,baz=40,slow=6.2
NB2 NORSAR Subarra 72.19 337 P **P 00 31 36.4 -0.5**
NOA NORSAR Array B 72.19 337 P **P 00 31 36.3 -0.6**
comp=Z,28nm,0.8s,mb5.3,baz=39,slow=6.0,SNR=94
NOA NORSAR Array B 72.19 337 P **P 00 31 36.3 -0.6**
NOA pmax pmax
comp=Z,28nm,0.8s
NOA NORSAR Array B 72.19 337 P **P 00 31 36.3 -0.6**
HAKT HAKKARI 72.20 304 ⇓*i*P **P 00 31 36.8 -0.6**
F13A Darby 72.24 45 ⇑P **P 00 31 36.7 -0.8**
baz=72,SNR=15
BEKR Beckworth 72.24 53 ⇑P **P 00 31 37.1 -0.5**
baz=72,SNR=22
ERZM Erzurum 72.31 307 ⇑*i*P **P 00 31 39.8 +1.8**
E14A Clinton 72.32 44 ⇑P **P 00 31 37.0 -0.9**
baz=72,SNR=6.7
C16A Fuhringer Ranc 72.39 42 ⇓P **P 00 31 37.9 -0.4**
baz=72
AKASG Malin Array Be 72.40 322 P **P 00 31 37.6 -0.7**
comp=Z,24nm,0.6s,mb5.3,baz=45,slow=6.0,SNR=101
AKASG Malin Array Be 72.40 322 P **P 00 31 37.6 -0.8**
AKASG pmax pmax
comp=Z,24nm,0.6s
AKASG Malin Array Be 72.40 322 P **P 00 31 37.6 -0.7**
AKBB Malin Array Si 72.40 322 *e*P **P 00 31 37.6 -0.8**
AKBB Malin Array Si 72.40 322 *e*P **P 00 31 37.6 -0.7**
NAO01 NORSAR Array S 72.44 337 *e*P **P 00 31 38.1 -0.3**
comp=Z,19nm,0.8s,mb5.1
D15A Lincoln 72.45 43 ⇓P **P 00 31 37.8 -1.0**
baz=72
I11A Placerville 72.47 47 ⇓P **P 00 31 38.1 -0.8**
baz=72,SNR=6.0
FFC Flin Flon 72.47 33 P **P 00 31 39.5 +0.8**
comp=Z,277nm,0.9s,mb6.2,SNR=17
FFC Flin Flon 72.47 33 *i*P **P 00 31 39.1 +0.4**
FFC Flin Flon 72.47 33 *e*P **P 00 31 38.1 -0.6**
comp=Z,56nm,1.0s,mb5.5
B17A L&G Farms, Che 72.58 42 ⇑P **P 00 31 39.5 +0.1**
baz=72
FCC Fort Churchill 72.60 26 *e*P **P 00 31 38.4 -1.0**
FCC pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
FCC Fort Churchill 72.60 26 *e*P **P 00 31 38.4 -1.0**
comp=Z,3.1nm,1.1s,mb4.2
K10A MacKenzie Ranc 72.62 49 ⇓P **P 00 31 40.4 +0.5**
baz=72,SNR=28
A18A Metzger Ranch, 72.67 41 ⇓P **P 00 31 39.6 -0.4**
baz=72
H12A Diamond D Ranc 72.71 46 ⇑P **P 00 31 39.8 -0.5**
baz=72,SNR=24
G13A Cobalt 72.72 46 ⇑P **P 00 31 39.8 -0.6**
baz=72,SNR=16
E15A Deer Lodge 72.78 44 ⇓P **P 00 31 40.3 -0.4**
baz=72,SNR=34
KOPT Kop Dagi 72.78 308 ⇑*i*P **P 00 31 43.2 +2.3**
MFID Camas Ranch 72.84 48 ⇑P **P 00 31 40.2 -1.0**
baz=73,SNR=22
SUW Suwalki 72.94 327 *e*P **P 00 31 41.5 0.0**
SUW pmax pmax
comp=Z,90nm,1.2s,mb5.6
SUW Suwalki 72.94 327 *e*P **P 00 31 41.5 0.0**
comp=Z,90nm,1.2s,mb5.6
D16A Dana Ranch, Ca 72.98 43 ⇓P **P 00 31 41.5 -0.4**
baz=73,SNR=7.3
C17A Wharram Farm, 73.01 42 ⇑P **P 00 31 39.8 -2.2**
baz=73,SNR=8.7
I12A Atlanta 73.01 47 ⇓P **P 00 31 42.3 +0.2**
baz=73,SNR=34
B18A Beardsley Farm 73.04 41 ⇑P **P 00 31 42.3 +0.1**
baz=73,SNR=37
H13A Challis 73.04 46 ⇑P **P 00 31 42.4 +0.1**
baz=73,SNR=35
K11A Parker Ranch, 73.12 48 ⇑P **P 00 31 42.9 +0.2**
baz=73,SNR=15

F15A **Butte** 73.22 44 P P 00 31 43.7 +0.4
baz=73,SNR=64
E16A **East Helena** 73.23 43 ⇑P P 00 31 43.5 +0.2
baz=73,SNR=7.0
LRM **Limekiln Ridge** 73.25 44 eP P 00 31 43.6 +0.1
comp=Z,399nm,1.0s,mb6.3
L10A **Juniper Basin** 73.28 49 ⇓P P 00 31 44.2 +0.4
baz=73,SNR=15
EGMT **Eagleton** 73.29 41 ⇓P P 00 31 43.6 -0.1
baz=73,SNR=6.4
EGMT **Eagleton** 73.29 41 eP P 00 31 44.2 +0.6
comp=Z,69nm,0.8s,mb5.6
J12A **Stokes Ranch,** 73.37 48 ⇑P P 00 31 44.2 0.0
baz=73,SNR=6.8
DLMT **Dillon** 73.46 45 eP P 00 31 43.7 -1.0
comp=Z,103nm,1.1s,mb5.7
H14A **Leadore** 73.50 46 ⇑P P 00 31 42.7 -2.3
baz=73
I13A **Wildhorse Cree** 73.52 47 ⇓P P 00 31 44.8 -0.3
baz=73,SNR=38
SIM **Simferopol'** 73.52 315 eP P 00 31 47.0 +1.9
SIM pmax pmax
comp=Z,71nm,0.8s,mb5.7
BEST **Besiri** 73.57 306 ⇑iP P 00 31 40.5 -5.0
HLID **Hailey** 73.57 47 ⇑P P 00 31 45.6 +0.2
baz=73,SNR=20
HLID **Hailey** 73.57 47 eP P 00 31 46.1 +0.7
comp=Z,18nm,1.0s,mb5.0
M10A **I.L. Ranch, Tu** 73.58 50 ⇑P P 00 31 45.1 -0.4
baz=73
GRSN **GIRESUNGRSN** 73.60 309 ⇑iP P 00 31 44.6 -1.0
G15A **Dillon** 73.65 45 ⇓P P 00 31 45.9 +0.1
baz=73,SNR=70
L11A **Cat Creek Ranc** 73.65 49 ⇓P P 00 31 46.4 +0.5
baz=73,SNR=42
MCMT **McKenzie Canyo** 73.66 45 eP P 00 31 46.5 +0.6
comp=Z,3.7nm,0.8s,mb4.4
E17A **Martinsdale** 73.71 43 ⇓P P 00 31 46.5 +0.3
baz=73,SNR=40
F16A **Kennard Place,** 73.73 44 ⇑P P 00 31 46.5 +0.2
baz=73,SNR=37
KONO **Kongsberg** 73.78 336 eP P 00 31 46.0 -0.3
KONO pmax pmax
comp=Z,17nm,0.8s,mb5.0
KONO **Kongsberg** 73.78 336 eP P 00 31 46.0 -0.4
comp=Z,17nm,0.8s,mb5.0
D18A **Linhart Farms,** 73.79 42 ⇓P P 00 31 45.4 -1.2
baz=74,SNR=9.4
J13A **Cove Ranch, Pi** 73.81 47 ⇓P P 00 31 46.8 0.0
baz=74,SNR=28
BOZ **Bozeman (W)** 73.81 44 ⇑P P 00 31 47.0 +0.2
baz=74,SNR=57
BMN **Battle Mountai** 73.83 51 eP P 00 31 47.6 +0.6
BMN pmax pmax
comp=Z,46nm,1.2s,mb5.3
BMN **Battle Mountai** 73.83 51 eP P 00 31 47.6 +0.6
comp=Z,46nm,1.2s,mb5.3
K12A **Draper Farm, C** 73.86 48 ⇑P P 00 31 47.5 +0.4
baz=74,SNR=18
I14A **Mackay** 73.89 46 ⇑P P 00 31 48.1 +0.8
baz=74,SNR=32
G16A **Moss Hill, Enn** 73.98 44 ⇓P P 00 31 48.3 +0.5
baz=74,SNR=28
SFJD **Kangerlussuaq** 74.06 5 eP P 00 31 47.2 -0.6
SFJD pmax pmax
comp=Z,55nm,1.1s,mb5.4
SFJD **Kangerlussuaq** 74.06 5 eP P 00 31 47.2 -0.6
comp=Z,55nm,1.1s,mb5.4
SFJD **Kangerlussuaq** 74.06 5 iP P 00 31 47.9 +0.1
comp=Z,28nm,1.0s,mb5.1
M11A **Holland Ranch,** 74.08 49 ⇑P P 00 31 48.7 +0.3
baz=74,SNR=16
N10A **Dunphy** 74.09 50 ⇑P P 00 31 49.1 +0.6
baz=74
L12A **House Creek Ra** 74.09 49 ⇓P P 00 31 48.9 +0.4
baz=74,SNR=19
E18A **Harlowton** 74.14 43 ⇑P P 00 31 48.3 -0.4
baz=74,SNR=25
F17A **Fitzpatrick Pl** 74.17 43 ⇓P P 00 31 48.5 -0.3
baz=74,SNR=29
J14A **Carey** 74.23 47 ⇑P P 00 31 49.7 +0.4
baz=74,SNR=36
K13A **Stover Farm, H** 74.32 48 ⇑P P 00 31 50.1 +0.2
baz=74,SNR=6.5
O10A **Cortez Mining,** 74.36 51 ⇑P P 00 31 49.9 -0.1
baz=74,SNR=17
NVAR **Mina Array Bea** 74.38 53 P P 00 31 50.9 +0.6
comp=Z,8.4nm,0.7s,mb4.8,baz=284,slow=5.7,SNR=29
NVAR **Mina Array Bea** 74.38 53 P P 00 31 50.9 +0.6
QLMT **Earthquake Lak** 74.44 45 eP P 00 31 52.6 +2.1
comp=Z,25nm,1.1s,mb5.0
KEMA **Kemaliye** 74.47 308 ⇑iP P 00 31 51.3 +0.5
G17A **Pierce Place,** 74.50 44 ⇑P P 00 31 50.7 -0.1
baz=74
MLAC **Mammoth Lakes** 74.53 54 ⇑P P 00 31 51.5 +0.4
baz=74
M12A **Wells** 74.61 49 ⇓P P 00 31 51.5 0.0
baz=74,SNR=38
H16A **Russell Place,** 74.62 45 ⇑P P 00 31 52.0 +0.5
baz=74,SNR=6.5
ERBA **Erbaa** 74.66 310 ⇑iP P 00 31 52.7 +0.9
F18A **Big Timber** 74.67 43 ⇓P P 00 31 51.9 +0.1
baz=74,SNR=40
NWAO **Narrogin (SRO)** 74.71 200 eP P 00 31 51.9 0.0
comp=Z,102nm,0.9s,mb5.8
L13A **Double Diamond** 74.75 48 ⇓P P 00 31 52.4 +0.1
baz=74,SNR=6.5
J15A **Blackfoot** 74.79 46 ⇓P P 00 31 53.1 +0.6
baz=74
ELK **Elko** 74.83 50 eP P 00 31 55.1 +2.3
ELK pmax pmax
comp=Z,22nm,1.0s
ELK **Elko** 74.83 50 eP P 00 31 55.1 +2.3
comp=Z,22nm,1.0s,mb5.0
N12A **Clover Valley,** 74.88 50 ⇑P P 00 31 53.2 +0.1
baz=75,SNR=8.5
N12A **Clover Valley,** 74.88 50 eP P 00 31 53.8 +0.6
comp=Z,64nm,1.2s,mb5.4
K14A **Jones Ranch, D** 74.91 47 ⇑P P 00 31 53.1 -0.1
baz=75,SNR=22
O11A **Cowboy Ranch,** 74.96 50 ⇓P P 00 31 53.6 0.0
baz=75,SNR=7.8
YFT **Old Faithful** 75.01 45 eP P 00 31 56.4 +2.6
comp=Z,36nm,0.8s,mb5.3
I16A **Newdale** 75.02 45 ⇓P P 00 31 54.5 +0.7
baz=75,SNR=27
RCTC **Rector, Farmer** 75.07 55 ⇑P P 00 31 54.2 -0.1
baz=75
M13A **Montello** 75.08 49 ⇓P P 00 31 54.6 +0.3
baz=75
M13A **Montello** 75.08 49 eP P 00 31 53.3 -1.0
comp=Z,28nm,1.2s,mb5.1
G18A **Lazy EL Ranch,** 75.14 43 ⇑P P 00 31 55.7 +1.2
baz=75
H17A **Grant Village** 75.19 45 ⇑P P 00 31 55.2 +0.4
baz=75,SNR=6.7
SMMC **Simmler** 75.19 57 ⇓P P 00 31 55.4 +0.4
baz=75
L14A **Malta** 75.20 48 ⇑P P 00 31 55.7 +0.8
baz=75,SNR=7.0
P11A **Circle Ranch,** 75.26 51 ⇓P P 00 31 55.3 -0.1
baz=75
IMW **Indian Meadow** 75.31 45 eP P 00 31 56.9 +1.4
comp=Z,30nm,0.9s,mb5.2
Q10A **Clear Creek Ra** 75.32 52 P P 00 31 56.5 +0.8
baz=75,SNR=24
DCID1 **Drake Creek** 75.37 45 eP P 00 31 58.1 +2.2
comp=Z,113nm,1.2s,mb5.7
N13A **Wendover, West** 75.38 49 eP P 00 31 57.6 +1.7
AKCD **Akcadag** 75.42 308 ⇓iP P 00 31 57.2 +1.0
O12A **Currie** 75.42 50 ⇑P P 00 31 55.4 -0.9
baz=75,SNR=26
RLMT **Red Lodge** 75.42 43 ⇑P P 00 31 56.9 +0.8
baz=75
RLMT **Red Lodge** 75.42 43 eP P 00 31 57.1 +1.0
comp=Z,19nm,0.6s,mb5.2
RRI2 **Red Ridge** 75.45 46 eP P 00 31 56.8 +0.4
comp=Z,86nm,1.2s,mb5.5
VES **Vestal, Richgr** 75.46 56 ⇓P P 00 31 56.0 -0.6
baz=75,SNR=8.2
BSD **Bornholm Skovb** 75.47 331 iP P 00 31 55.2 -1.0
comp=Z,41nm,0.9s,mb5.4
M14A **Sheep Mountain** 75.47 48 ⇓P P 00 31 56.0 -0.5
baz=75,SNR=34
I17A **Pilgrim Ck.** 75.49 45 ⇑P P 00 31 57.1 +0.5
baz=75
IAS **Iasi** 75.54 320 ⇓P P 00 31 56.6 -0.2
IAS **Iasi** 75.54 320 ⇓P P 00 31 56.6 -0.2

IAS **Iasi** 75.54 320 ⇓iP P 00 31 56.6 -0.2
PKM **Peak Mountain** 75.56 57 ⇓P P 00 31 57.5 +0.4
baz=75,SNR=11
TPAW **Teton Pass** 75.56 45 eP P 00 31 57.1 +0.1
comp=Z,62nm,1.3s,mb5.4
K16A **Soda Springs** 75.63 46 ⇑P P 00 31 58.3 +0.9
baz=75,SNR=26
LOHW **Long Hollow** 75.68 45 eP P 00 31 58.4 +0.8
comp=Z,80nm,1.7s,mb5.4
BORG **Boarnes** 75.69 352 P P 00 31 59.0 +1.7
comp=Z,337nm,0.9s,mb6.3,SNR=6.2
SNOW **Snow King Moun** 75.69 45 eP P 00 31 58.6 +0.9
comp=Z,46nm,1.1s,mb5.3
REDW **Red Top Meadow** 75.70 46 eP P 00 31 59.7 +1.9
comp=Z,76nm,1.4s,mb5.4
L15A **Malad City** 75.71 47 ⇓P P 00 31 57.6 -0.3
baz=75,SNR=9.0
R10A **Warm Springs** 75.71 52 ⇑P P 00 31 58.2 +0.3
baz=75
S10A **Tonopah Range,** 75.76 53 ⇑P P 00 31 58.5 +0.3
baz=76,SNR=52
Q11A **Duckwater** 75.76 51 ⇓P P 00 31 58.6 +0.4
baz=76,SNR=19
DGMT **Dagmar** 75.77 38 ⇑P P 00 31 57.7 -0.4
baz=76
DGMT **Dagmar** 75.77 38 eP P 00 31 58.0 -0.1
comp=Z,78nm,1.3s,mb5.5
J17A **Brown Place, J** 75.78 45 ⇑P P 00 31 57.2 -1.0
baz=76,SNR=9.5
P12A **McGill** 75.82 51 ⇑P P 00 31 58.9 +0.3
baz=76
GRAC **Grapevine Rang** 75.84 54 ⇑P P 00 31 59.0 +0.3
baz=76
COP **Copenhagen** 75.94 333 iP P 00 31 58.4 -0.5
comp=Z,30nm,0.8s,mb5.3
ISA **Isabella** 75.96 55 ⇓P P 00 31 58.8 -0.6
baz=76
ISA **Isabella** 75.96 55 eP P 00 31 58.6 -0.8
ISA pmax pmax
comp=Z,25nm,1.4s,mb5.0
ISA **Isabella** 75.96 55 eP P 00 31 58.6 -0.8
comp=Z,25nm,1.4s,mb5.0
O13A **Hicks Ranch, I** 75.96 50 ⇑P P 00 31 59.9 +0.6
baz=76
N14A **Grayback Hills** 75.98 49 ⇓P P 00 31 58.9 -0.5
baz=76,SNR=23
M15A **Larsen Ranch,** 76.02 48 ⇓P P 00 31 59.7 +0.1
baz=76,SNR=45
BGU **Big Grassy Mou** 76.02 49 eP P 00 32 00.4 +0.8
comp=Z,36nm,1.4s,mb5.1
BALT **Daday** 76.10 312 ⇑iP P 00 32 01.6 +1.5
R11A **Troy Canyon, C** 76.11 52 ⇓P P 00 32 00.4 +0.1
baz=76,SNR=43
SPUT **South Promonto** 76.11 48 eP P 00 32 00.7 +0.5
comp=Z,54nm,1.4s,mb5.3
Q12A **Willow Creek R** 76.14 51 ⇓P P 00 32 01.5 +1.1
baz=76,SNR=15
KWP **Kalwaria Pacla** 76.21 324 eP P 00 32 00.8 +0.2
KWP pmax pmax
comp=Z,313nm,1.5s,mb6.0
KWP **Kalwaria Pacla** 76.21 324 eP P 00 32 00.8 +0.2
comp=Z,313nm,1.5s,mb6.0
KWP **Kalwaria Pacla** 76.21 324 ⇑iP P 00 32 01.7 +1.1
ILGA **Ilgaz** 76.21 312 ⇓iP P 00 32 02.3 +1.5
TLCR 76.24 317 ⇑P P 00 32 00.9 +0.1
TLCR 76.24 317 ⇑P P 00 32 00.9 +0.1
TLCR 76.24 317 ⇑iP P 00 32 00.9 +0.1
L16A **Fish Haven** 76.25 47 ⇓P P 00 32 00.2 -0.7
baz=76,SNR=14
J18A **Kendall Valley** 76.26 45 ⇓P P 00 32 01.5 +0.5
baz=76,SNR=30
N15A **Stansbury Isla** 76.34 48 ⇓P P 00 32 02.1 +0.6
baz=76,SNR=20
MPMC **Manual Prospec** 76.35 55 ⇑P P 00 32 00.5 -1.1
baz=76,SNR=32
MPMC ⇓pP pP 00 32 02.2 -2.6
baz=76
P13A **Bates Ranch, G** 76.37 50 ⇑P P 00 32 01.5 -0.2
baz=76,SNR=17
BUR01 **Bucovina Ar. S** 76.42 321 P P 00 32 02.4 +0.6
BURAR **Bucovina Array** 76.42 321 ⇓P P 00 32 02.3 +0.5
BURAR **Bucovina Array** 76.42 321 ⇓P P 00 32 02.3 +0.5
BURAR **Bucovina Array** 76.42 321 ⇓iP P 00 32 02.3 +0.5
HWUT **Hardware Ranch** 76.43 47 eP P 00 32 02.7 +0.8
comp=Z,100nm,1.3s,mb5.6
S11A **Rachel** 76.45 53 ⇑P P 00 32 02.5 +0.3
baz=76,SNR=11
MUD **Monsted U'grnd** 76.46 335 iP P 00 32 02.2 +0.3
comp=Z,22nm,0.8s,mb5.1
FURC **Furnace Creek,** 76.49 54 ⇓P P 00 32 02.5 +0.1
baz=76,SNR=34
LRMC **Laurel Mountai** 76.58 55 ⇑P P 00 32 02.6 -0.3
baz=76,SNR=8.9
M16A **Huntsville** 76.58 48 ⇑P P 00 32 02.5 -0.4
baz=76,SNR=6.7
CFR **Carcaliu** 76.60 318 ⇑P P 00 32 03.0 +0.2
CFR **Carcaliu** 76.60 318 ⇑P P 00 32 03.0 +0.2
CFR **Carcaliu** 76.60 318 ⇑iP P 00 32 03.0 +0.2
DUG **Dugway** 76.61 49 ⇓P P 00 32 03.8 +0.7
baz=76,SNR=37
DUG **Dugway** 76.61 49 eP P 00 32 03.7 +0.7
DUG pmax pmax
comp=Z,49nm,1.1s,mb5.3
DUG **Dugway** 76.61 49 eP P 00 32 03.7 +0.7
comp=Z,49nm,1.1s,mb5.3
K18A **Toltan Ranch,** 76.62 46 ⇓P P 00 32 03.7 +0.7
baz=76
Q13A **Wheeler Ranch,** 76.69 51 ⇑P P 00 32 03.8 +0.3
baz=76,SNR=34
R12A **Pony Springs,** 76.72 51 ⇑P P 00 32 03.6 -0.1
baz=76,SNR=33
CDAG **Cicekdag** 76.74 310 ⇑iP P 00 32 03.8 0.0
EDW2 **Edwards Air Fo** 76.75 56 ⇑P P 00 32 03.7 -0.2
baz=76,SNR=14
BW06 **Boulder Array** 76.81 45 ⇓P P 00 32 03.4 -0.7
baz=76,SNR=42
BW06 **Boulder Array** 76.81 45 eP P 00 32 04.2 +0.1
comp=Z,43nm,1.1s,mb5.3
PDAR **Pinedale Array** 76.81 45 P P 00 32 04.3 +0.3
comp=Z,18nm,0.9s,mb5.0,baz=272,slow=2.2,SNR=32
PDAR **Pinedale Array** 76.81 45 P P 00 32 04.3 +0.3
P14A **Drum Mountains** 76.85 50 ⇓P P 00 32 04.5 +0.1
baz=77,SNR=32
U10A **Ash Meadows, A** 76.86 54 ⇓P P 00 32 04.2 -0.3
baz=77,SNR=6.9
VRI **Vrincioaia** 76.86 319 ⇓P P 00 32 05.0 +0.7
VRI **Vrincioaia** 76.86 319 ⇓P P 00 32 05.0 +0.7
VRI **Vrincioaia** 76.86 319 ⇓iP P 00 32 05.0 +0.7
KUZU **Kuzuini** 76.89 307 ⇑iP P 00 32 05.4 +0.7
KOLS **Kolonicke sedl** 76.91 323 eP P 00 32 05.3 +0.8
KOLS pmax pmax
comp=Z,47nm,1.4s,mb5.2
KOLS **Kolonicke sedl** 76.91 323 eP P 00 32 05.3 +0.8
comp=Z,46nm,1.4s,mb5.2
KOLS **Kolonicke sedl** 76.91 323 eP P 00 32 05.3 +0.8
PLOR **Plostina** 76.91 319 ⇑P P 00 32 05.5 +0.9
PLOR **Plostina** 76.91 319 ⇑iP P 00 32 05.5 +0.9
TIRR **Tirgusor** 76.94 317 ⇓P P 00 32 04.8 0.0
TIRR **Tirgusor** 76.94 317 ⇓P P 00 32 04.8 0.0
TIRR **Tirgusor** 76.94 317 ⇓iP P 00 32 04.8 0.0
AVNT **Avonos** 76.99 309 ⇑iP P 00 32 05.6 +0.4
S12A **Delamar Landin** 77.03 52 ⇑P P 00 32 06.3 +0.9
baz=77,SNR=24
M17A **Scullys Gap (B** 77.03 47 ⇓P P 00 32 05.5 +0.1
baz=77,SNR=7.3
HARR **Harsova** 77.03 318 ⇓P P 00 32 05.6 +0.3
HARR **Harsova** 77.03 318 ⇓P P 00 32 05.6 +0.3
HARR **Harsova** 77.03 318 ⇓iP P 00 32 05.6 +0.3
T11A **Corn Creek, Al** 77.03 53 ⇑P P 00 32 05.7 +0.2
baz=77,SNR=35
STHS **Stebnicka Huta** 77.04 324 eP P 00 32 06.6 +1.4
STHS pmax pmax
comp=Z,34nm,1.0s,mb5.2
STHS **Stebnicka Huta** 77.04 324 eP P 00 32 06.6 +1.4
comp=Z,34nm,1.0s,mb5.2
STHS **Stebnicka Huta** 77.04 324 eP P 00 32 06.6 +1.4
STHS epP pP 00 32 12.2 +3.7
L18A **Fontenelle, Gr** 77.09 46 ⇑P P 00 32 06.9 +1.2
baz=77,SNR=21
OJC **Ojcow** 77.10 326 eP P 00 32 05.2 -0.4
BR131 **Keskin Array S** 77.11 311 eP P 00 32 05.7 -0.1
comp=Z,26nm,1.0s,mb5.1
BRTR **Keskin Array B** 77.11 311 P P 00 32 05.8 0.0
comp=Z,14nm,0.9s,mb4.9,baz=36,slow=4.6,SNR=53
BRTR **Keskin Array B** 77.11 311 P P 00 32 05.9 +0.1
BRTR pmax pmax

comp=Z,14nm,0.9s
BRTR **Keskin Array B** 77.11 311 P P 00 32 05.8 0.0
Q14A **Sevier Lake (B** 77.11 50 ⇓P P 00 32 06.3 +0.4
baz=77,SNR=49
UZH **Uzhgorod** 77.11 323 ⇑iP P 00 32 06.4 +0.7
UZH e 00 32 16.0
MWC **Mount Wilson** 77.12 56 eP P 00 32 07.1 +1.1
MWC pmax pmax
comp=Z,57nm,1.4s,mb5.3
MWC **Mount Wilson** 77.12 56 eP P 00 32 07.1 +1.1
comp=Z,57nm,1.4s,mb5.3
JLU **Jordanelle** 77.15 48 eP P 00 32 07.2 +1.1
comp=Z,57nm,1.5s,mb5.3
K19A **Absolon Red Bu** 77.16 45 ⇑P P 00 32 05.0 -1.1
baz=77,SNR=8.2
NLU **North Lily Min** 77.20 49 eP P 00 32 07.2 +0.8
comp=Z,37nm,1.1s,mb5.2
R13A **O'Grain Ranch,** 77.21 51 ⇑P P 00 32 06.0 -0.4
baz=77,SNR=25
SHOC **Shoshone** 77.21 54 ⇓P P 00 32 05.5 -1.0
baz=77
BMR **Baia Mare** 77.22 322 ⇑P P 00 32 06.9 +0.6
BMR **Baia Mare** 77.22 322 ⇑P P 00 32 06.9 +0.6
BMR **Baia Mare** 77.22 322 ⇑iP P 00 32 06.9 +0.6
GSC **Goldstone** 77.25 55 ⇑P P 00 32 06.9 +0.1
baz=77,SNR=19
CRVS **Cervenica-Dubn** 77.30 324 eP P 00 32 07.7 +0.9
CRVS pmax pmax
comp=Z,106nm,1.9s,mb5.5
CRVS **Cervenica-Dubn** 77.30 324 eP P 00 32 07.7 +0.9
comp=Z,106nm,1.9s,mb5.5
CRVS **Cervenica-Dubn** 77.30 324 eP P 00 32 07.7 +0.9
P15A **Leamington** 77.33 49 ⇑P P 00 32 07.3 +0.2
baz=77,SNR=17
L19A **Farson** 77.36 46 ⇑P P 00 32 07.1 -0.1
baz=77,SNR=24
BFSC **Mount Baldy Ra** 77.37 56 ⇓P P 00 32 07.8 +0.4
baz=77
O16A **Springville** 77.37 48 ⇑P P 00 32 07.4 +0.1
baz=77,SNR=12
DAU **Daniels Canyon** 77.38 48 eP P 00 32 08.5 +1.1
DAU pmax pmax
comp=Z,49nm,1.2s,mb5.3
DAU **Daniels Canyon** 77.38 48 eP P 00 32 08.5 +1.1
comp=Z,50nm,1.2s,mb5.3
AMRR **Amara** 77.40 318 P P 00 32 09.3 +1.9
M18A **Lyman** 77.40 47 ⇓P P 00 32 07.3 -0.1
baz=77,SNR=9.3
MPU **Maple Canyon** 77.42 49 eP P 00 32 08.2 +0.7
comp=Z,52nm,1.1s,mb5.4
NIE **Niedzica** 77.46 325 eP P 00 32 08.6 +1.0
MLR **Muntele Rosu** 77.52 319 ⇓P P 00 32 08.5 +0.5
MLR **Muntele Rosu** 77.52 319 ⇓P P 00 32 08.5 +0.5
MLR **Muntele Rosu** 77.52 319 ⇓iP P 00 32 08.5 +0.5
BBAL **Bala** 77.53 311 ⇑iP P 00 32 08.6 +0.4
K20A **Yellowstone Ra** 77.55 45 ⇑P P 00 32 07.9 -0.3
baz=77,SNR=7.3
Q15A **Fillmore** 77.64 50 ⇓P P 00 32 08.7 -0.1
baz=77,SNR=13
S13A **Holt Ranch, En** 77.66 52 ⇓P P 00 32 09.8 +0.9
baz=77,SNR=14
TUQ **Turquoise Moun** 77.73 54 ⇑P P 00 32 09.0 -0.4
baz=78,SNR=39
YURE **YUREGIR** 77.76 308 ⇑iP P 00 32 10.5 +1.0
ARUT **Antelope Range** 77.78 51 eP P 00 32 09.9 +0.3
ARUT pmax pmax
comp=Z,31nm,1.2s,mb5.1
ARUT **Antelope Range** 77.78 51 eP P 00 32 09.8 +0.2
comp=Z,31nm,1.2s,mb5.1
V11A **Goodsprings** 77.79 54 ⇓P P 00 32 08.1 -1.7
baz=78
O17A **Robinson Place** 77.83 48 ⇑P P 00 32 10.1 +0.2
baz=78,SNR=8.8
HEC **Hector,Ludlow** 77.85 55 ⇑P P 00 32 10.3 +0.2
baz=78,SNR=26
RUE **Ruedersdorf** 77.92 330 eP P 00 32 09.9 -0.2
comp=Z,42nm,0.9s,mb5.4
CCUT **Cedar City** 77.98 51 eP P 00 32 11.3 +0.6
comp=Z,31nm,1.2s,mb5.1
T13A **Saint George** 77.98 52 ⇑P P 00 32 11.4 +0.6
baz=78,SNR=34
L20A **Wamsutter** 77.99 45 ⇓P P 00 32 11.0 +0.3
baz=78,SNR=21
GULE **Gulek** 77.99 308 ⇑iP P 00 32 10.8 0.0
VOIR 78.01 319 ⇑P P 00 32 12.0 +1.2
VOIR 78.01 319 ⇑P P 00 32 12.0 +1.3
VOIR 78.01 319 ⇑iP P 00 32 12.0 +1.2
KECS **Kecovo** 78.06 324 eP P 00 32 11.1 +0.1
KECS pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
KECS **Kecovo** 78.06 324 eP P 00 32 11.1 +0.1
comp=Z,8.4nm,1.0s,mb4.6
KECS **Kecovo** 78.06 324 eP P 00 32 11.1 +0.1
KECS epP pP 00 32 16.9 +2.7
MSU **Marysvale** 78.07 50 eP P 00 32 12.2 +0.9
MSU pmax pmax
comp=Z,64nm,1.3s,mb5.4
MSU **Marysvale** 78.07 50 eP P 00 32 12.2 +0.9
comp=Z,64nm,1.3s,mb5.4
BSEG **Bad Segeberg** 78.08 333 eP P 00 32 11.0 0.0
comp=Z,62nm,1.1s,mb5.5
BSEG **Bad Segeberg** 78.08 333 eP P 00 32 11.0 0.0
BSEG pmax pmax
comp=Z,62nm,1.1s,mb5.5
BSEG **Bad Segeberg** 78.08 333 eP P 00 32 11.0 0.0
OKC **Ostrava-Krasne** 78.11 326 eP P 00 32 11.0 -0.2
OKC **Ostrava-Krasne** 78.11 326 eP P 00 32 11.0 -0.2
KSP **Ksiaz** 78.15 328 eP P 00 32 11.7 +0.3
O18A **Roosevelt** 78.20 48 ⇑P P 00 32 12.1 +0.2
baz=78,SNR=7.2
DRGR 78.22 322 ⇓P P 00 32 12.3 +0.4
DRGR 78.22 322 ⇓P P 00 32 12.3 +0.4
DRGR 78.22 322 ⇓iP P 00 32 12.3 +0.4
V12A **Nelson** 78.22 54 ⇓P P 00 32 12.1 0.0
baz=78,SNR=22
N19A **John Jarvie Ra** 78.26 47 ⇓P P 00 32 11.6 -0.7
baz=78,SNR=7.7
LIKS **Likavka** 78.27 325 eP P 00 32 13.5 +1.4
LIKS pmax pmax
comp=Z,47nm,1.2s,mb5.3
LIKS **Likavka** 78.27 325 eP P 00 32 13.5 +1.4
comp=Z,47nm,1.2s,mb5.3
LIKS **Likavka** 78.27 325 eP P 00 32 13.5 +1.4
ULM **Lac du Bonnet** 78.28 33 P P 00 32 11.6 -0.6
comp=Z,27nm,0.9s,mb5.2,baz=320,slow=6.5,SNR=9.3
ULM **Lac du Bonnet** 78.28 33 eP P 00 32 11.0 -1.2
comp=Z,37nm,1.0s,mb5.3
P17A **Butcher Ranch,** 78.30 48 ⇓P P 00 32 12.7 +0.2
baz=78,SNR=18
GMRC **Granite Mounta** 78.31 55 ⇑P P 00 32 12.9 +0.2
baz=78,SNR=10
U13A **Pakoon Wash** 78.34 53 ⇑P P 00 32 12.8 +0.1
baz=78,SNR=40
Q16A **Castle Valley** 78.41 49 ⇑P P 00 32 13.0 -0.1
baz=78,SNR=17
MORC **Moravsky Berou** 78.42 326 P P 00 32 13.6 +0.7
MORC **Moravsky Berou** 78.42 326 eP P 00 32 12.9 0.0
comp=Z,54nm,1.0s,mb5.4
MORC **Moravsky Berou** 78.42 326 ⇓iP P 00 32 13.4 +0.5
M20A **Sweetwater, Wa** 78.42 46 ⇓P P 00 32 12.7 -0.4
baz=78
LDFC **Landfair** 78.47 54 eP P 00 32 13.8 +0.3
comp=Z,91nm,1.5s,mb5.5
P18A **Preston Nutter** 78.48 48 ⇓P P 00 32 14.0 +0.5
baz=78,SNR=39
S15A **Panguitch** 78.50 51 ⇓P P 00 32 13.6 0.0
baz=78
DPC **Dobruska-Polom** 78.51 327 eP P 00 32 13.9 +0.5
DPC **Dobruska-Polom** 78.51 327 eP P 00 32 13.9 +0.5
UPC **Upice** 78.52 328 eP P 00 32 13.6 +0.1
UPC **Upice** 78.52 328 eP P 00 32 13.6 +0.1
PFO **Pinyon Flat Ob** 78.54 56 P P 00 32 14.0 +0.1
comp=Z,84nm,1.6s,mb5.4,SNR=6.3
PFO **Pinyon Flat Ob** 78.54 56 ⇓P P 00 32 13.8 -0.1
baz=78
PFO **Pinyon Flat Ob** 78.54 56 eP P 00 32 15.0 +1.1
PFO pmax pmax
comp=Z,38nm,1.4s,mb5.1
PFO **Pinyon Flat Ob** 78.54 56 eP P 00 32 15.0 +1.1
comp=Z,38nm,1.4s,mb5.1
L21A **Rawlins** 78.55 45 ⇑P P 00 32 13.5 -0.3
baz=78,SNR=44
BELC **Belle Mtn. Jos** 78.59 56 ⇓P P 00 32 14.1 -0.1
baz=78,SNR=12
R16A **Teasdale** 78.64 50 ⇑P P 00 32 14.7 +0.3
baz=78,SNR=42

SRU **San Rafael** 78.66 49 ⇊P P 00 32 14.5 0.0
baz=78,SNR=39
SRU **San Rafael** 78.66 49 *eP* P 00 32 15.0 +0.5
SRU pmax pmax
comp=Z,42nm,1.0s,mb5.3
SRU **San Rafael** 78.66 49 *eP* P 00 32 15.0 +0.5
comp=Z,42nm,1.0s,mb5.3
V13A **Grand Canyon W** 78.68 53 ⇑P P 00 32 15.0 +0.3
baz=78,SNR=29
O19A **Miners Draw (B** 78.69 47 ⇑P P 00 32 14.8 +0.2
baz=78,SNR=9.9
PSZ **Piszkesteto** 78.74 324 P P 00 32 15.7 +1.0
PSZ **Piszkesteto** 78.74 324 *eP* P 00 32 15.4 +0.6
comp=Z,198nm,1.6s,mb5.8
PSZ **Piszkesteto** 78.74 324⇑*iP* P 00 32 15.6 +0.9
KDHN **Kadinhani** 78.79 311⇑*iP* P 00 32 15.0 -0.2
M21A **Separation Pea** 78.80 45 ⇑P P 00 32 14.6 -0.6
baz=78,SNR=6.2
VYHS **Vyhne** 78.80 325 *eP* P 00 32 15.3 +0.3
VYHS pmax pmax
comp=Z,110nm,2.1s,mb5.4
VYHS **Vyhne** 78.80 325 *eP* P 00 32 15.3 +0.3
comp=Z,110nm,2.1s,mb5.4
VYHS **Vyhne** 78.80 325 *eP* P 00 32 15.3 +0.3
N20A **Spence Gulch,** 78.82 46 ⇑P P 00 32 15.7 +0.4
baz=78,SNR=43
U14A **Mt Trumbull** 78.82 52 ⇊P P 00 32 15.4 0.0
baz=78,SNR=26
RWWY **Rawlins** 78.83 45 *eP* P 00 32 15.4 +0.1
comp=Z,79nm,1.3s,mb5.5
RSSD **Black Hills** 78.85 42 *eP* P 00 32 14.8 -0.7
RSSD pmax pmax
comp=Z,9.0nm,0.4s,mb5.0
RSSD **Black Hills** 78.85 42 *eP* P 00 32 14.8 -0.6
comp=Z,9.5nm,0.4s,mb5.1
BORA **Eskisehir** 78.86 313⇑*iP* P 00 32 16.0 +0.4
T15A **Red Dirt Ranch** 78.92 51 ⇑P P 00 32 16.1 +0.2
baz=79,SNR=15
BAR **Barrett** 78.98 57 *eP* P 00 32 17.4 +1.0
comp=Z,12nm,0.9s,mb4.8
R17A **Hanksville Air** 79.01 49 ⇑P P 00 32 16.7 +0.3
baz=79,SNR=23
MONP **Monument Peak** 79.02 57 ⇊P P 00 32 17.5 +1.0
baz=79
IRM **Iron Mountain** 79.03 55 ⇑P P 00 32 16.8 +0.2
baz=79,SNR=22
BRG **Berggiesshubel** 79.09 329 *iP* P 00 32 16.6 0.0
comp=Z,35nm,1.1s,mb5.2
PVCC **Panska Ves** 79.10 328 *eP* P 00 32 16.9 +0.2
PVCC **Panska Ves** 79.10 328 *eP* P 00 32 16.9 +0.2
CLL **Collm** 79.13 330 *eP* P 00 32 16.5 -0.3
comp=Z,73nm,1.3s,mb5.5
CLL **Collm** 79.13 330 *iP* P 00 32 16.8 0.0
CLL *i* pP 00 32 20.7 +0.6
CLL pmax pmax
comp=Z,72nm,1.3s,mb5.4
CLL **Collm** 79.13 330 *iP* P 00 32 16.8 0.0
comp=Z,72nm,1.3s,mb5.4
CLL *i* pP 00 32 20.7 +0.6
CLL **Collm** 79.13 330 *iP* P 00 32 16.8 0.0
comp=Z,72nm,1.3s,mb5.4
CLL *i*sP sP 00 32 20.7 -0.5
CLL *e*(PcP) PcP 00 32 24.0 -1.2
CLL *e*PP PP 00 35 17.0 +1.6
BC3 **Big Chuckawall** 79.16 56 ⇑P P 00 32 17.4 +0.1
baz=79,SNR=16
VRAC **Vranov** 79.18 326 P P 00 32 17.9 +0.8
VRAC **Vranov** 79.18 326 ⇑P P 00 32 18.2 +1.1
VRAC **Vranov** 79.18 326⇑*iP* P 00 32 18.2 +1.1
GZR **Gura Zlata** 79.18 321 ⇑P P 00 32 17.9 +0.7
GZR **Gura Zlata** 79.18 321 ⇑P P 00 32 17.9 +0.6
GZR **Gura Zlata** 79.18 321⇑*iP* P 00 32 17.9 +0.7
P19A **Cripple Cowboy** 79.21 47 ⇑P P 00 32 17.0 -0.5
baz=79,SNR=6.2
W13A **Hualapai Mount** 79.23 54 ⇑P P 00 32 17.8 +0.1
baz=79,SNR=14
JMB **Yambol** 79.27 317 P P 00 32 17.9 +0.2
N21A **Black Mountain** 79.28 46 ⇑P P 00 32 17.6 -0.3
baz=79,SNR=17
O20A **White River Ci** 79.30 47 ⇊P P 00 32 17.3 -0.7
baz=79,SNR=8.2
NRDL **Niedersach Rie** 79.30 332 *eP* P 00 32 17.7 0.0
comp=Z,30nm,1.0s,mb5.2
U15A **North Rim** 79.36 52 ⇊P P 00 32 18.7 +0.3
baz=79,SNR=46
DVTC **Desert V Tower** 79.37 57 ⇊P P 00 32 18.5 0.0
baz=79
V14A **Boquillas Ranc** 79.37 53 ⇑P P 00 32 18.8 +0.3
baz=79,SNR=39
S17A **Black Ridge (B** 79.47 50 ⇑P P 00 32 18.9 -0.1
baz=79,SNR=12
Q19A **Hogan Spring (** 79.50 48 ⇑P P 00 32 18.9 -0.2
baz=79,SNR=32
PRA **Prague** 79.51 328 P P 00 32 19.0 +0.1
R18A **Canyonlands Na** 79.51 49 ⇊P P 00 32 18.5 -0.7
baz=79,SNR=23
PRU **Pruhonice** 79.53 328 *eP* P 00 32 19.6 +0.6
PRU **Pruhonice** 79.53 328 *eP* P 00 32 19.6 +0.6
PDMCI **Parker Dam,Lak** 79.58 54 ⇊P P 00 32 19.4 -0.2
baz=79
X13A **Yucca** 79.59 54 ⇊P P 00 32 19.4 -0.3
baz=79,SNR=34
BZS **Buzias** 79.59 321 P P 00 32 19.1 -0.3
BZS **Buzias** 79.59 321 ⇊P P 00 32 19.4 0.0
BZS **Buzias** 79.59 321⇊*iP* P 00 32 19.4 0.0
P20A **De Beque** 79.64 47 ⇊P P 00 32 19.8 0.0
baz=79,SNR=14
W14A **Seligman** 79.66 53 ⇑P P 00 32 20.0 0.0
baz=79,SNR=33
TREC **Trest** 79.66 327 *eP* P 00 32 19.6 -0.2
TREC **Trest** 79.66 327 *eP* P 00 32 19.6 -0.2
Y12C **Blythe** 79.69 55 ⇑P P 00 32 20.0 -0.2
baz=79
TIM **Timisoara** 79.70 322 P P 00 32 21.6 +1.6
TIM **Timisoara** 79.70 322 P P 00 32 21.6 +1.5
CLZ **Clausthal** 79.72 331 *eP* P 00 32 20.2 +0.2
comp=Z,128nm,1.6s,mb5.6
CLZ **Clausthal** 79.72 331 *eP* P 00 32 20.2 +0.2
CLZ pmax pmax
comp=Z,128nm,1.6s,mb5.6
CLZ **Clausthal** 79.72 331 *eP* P 00 32 20.2 +0.2
comp=Z,128nm,1.6s,mb5.6
AGMN **Agassiz Nation** 79.75 34 *eP* P 00 32 18.8 -1.5
comp=Z,44nm,1.2s,mb5.3
ZST **Bratislava** 79.79 325 *eP* P 00 32 21.5 +1.0
ZST pmax pmax
comp=Z,14nm,1.0s,mb4.8
ZST **Bratislava** 79.79 325 *eP* P 00 32 21.5 +1.0
comp=Z,14nm,1.0s,mb4.8
ZST **Bratislava** 79.79 325 *eP* P 00 32 21.5 +1.0
V15A **Kaibab Nationa** 79.83 52 ⇊P P 00 32 21.5 +0.6
baz=80,SNR=16
N22A **Wattenberg Ran** 79.85 45 ⇑P P 00 32 21.0 0.0
baz=80
T17A **Navajo Res., N** 79.89 50 ⇊P P 00 32 21.3 +0.1
baz=80
S18A **Hurst Farm, Bl** 79.91 49 ⇑P P 00 32 21.5 +0.2
baz=80,SNR=34
GLA **Glamis** 79.94 56 ⇊P P 00 32 21.3 -0.3
baz=80
GLA **Glamis** 79.94 56 *eP* P 00 32 21.3 -0.3
GLA pmax pmax
comp=Z,41nm,1.2s,mb5.2
GLA **Glamis** 79.94 56 *eP* P 00 32 21.3 -0.3
comp=Z,41nm,1.2s,mb5.2
R19A **Curley Farm, L** 79.94 49 ⇑P P 00 32 21.8 +0.3
baz=80
GDZ **Gediz** 79.95 312⇑*iP* P 00 32 21.2 -0.4
TANN **Tannenbergstha** 80.04 329 *eP* P 00 32 22.3 +0.5
comp=Z,23nm,1.2s,mb5.0
Q20A **Ridgley Place,** 80.06 48 ⇊P P 00 32 21.9 -0.2
baz=80,SNR=26
PV04 **Paradox Valley** 80.08 48 *eP* P 00 32 23.0 +0.7
DIM **Dimitrovgrad** 80.12 317 P P 00 32 23.7 +1.3
P21A **Newcastle** 80.16 47 P P 00 32 23.5 +0.8
baz=80
DURS **Dursunbey** 80.18 313⇑*iP* P 00 32 22.3 -0.4
NKC **Novy Kostel** 80.19 329 *eP* P 00 32 22.0 -0.6
NKC **Novy Kostel** 80.19 329 *eP* P 00 32 22.0 -0.6
ISP **Isparta** 80.19 311 P P 00 32 23.2 +0.3
ISP **Isparta** 80.19 311 P P 00 32 23.2 +0.3
MOX **Moxa** 80.19 330 *eP* P 00 32 22.1 -0.5
comp=Z,95nm,2.0s,mb5.4
MOX **Moxa** 80.19 330 *eP* P 00 32 22.6 0.0
comp=Z,85nm,1.7s,mb5.4
MOX **Moxa** 80.19 330 *eP* P 00 32 22.1 -0.5
MOX pmax pmax
comp=Z,95nm,2.0s,mb5.4
MOX **Moxa** 80.19 330 *eP* P 00 32 22.1 -0.5
comp=Z,95nm,2.0s,mb5.4
X14A **Yava** 80.26 53 ⇊P P 00 32 23.1 -0.2
baz=80,SNR=27
IBBN **Ibbenburen** 80.31 333 *eP* P 00 32 23.1 -0.1
comp=Z,56nm,0.9s,mb5.5
MMAI **Mount Meron Ar** 80.34 305 P P 00 32 24.5 +0.7
comp=Z,23nm,0.9s,mb5.1,baz=46,slow=7.1,SNR=26
T18A **Mexican Hat** 80.35 50 ⇑P P 00 32 23.1 -0.6
baz=80,SNR=38
S19A **Harvey Farm, M** 80.38 49 ⇊P P 00 32 23.6 -0.3
baz=80
DEMI **Demirci** 80.42 313⇑*iP* P 00 32 23.5 -0.6
KHAL **Karahalli** 80.43 312⇑*iP* P 00 32 24.0 -0.1
PV01 **Paradox Valley** 80.45 48 *eP* P 00 32 24.9 +0.6
comp=Z,3μm,1.2s
WUAZ **Wupatki** 80.52 52 ⇑P P 00 32 24.6 0.0
baz=80,SNR=17
WUAZ **Wupatki** 80.52 52 *eP* P 00 32 25.6 +0.9
comp=Z,67nm,1.4s,mb5.4
R20A **Redvale** 80.53 48 ⇑P P 00 32 24.7 +0.1
baz=80,SNR=18
Y14A **Wickenburg** 80.53 54 ⇑P P 00 32 24.6 -0.2
baz=80,SNR=22
CONA **Conrad Observa** 80.54 326 *iP* P 00 32 25.2 +0.7
comp=Z,57nm,1.3s,mb5.3,SNR=26
Q21A **Lamborn Mesa,** 80.56 47 ⇑P P 00 32 24.5 -0.3
baz=80
BALY **Balya** 80.57 314⇑*iP* P 00 32 24.4 -0.5
PKSM **Moragy** 80.57 323 ⇑P P 00 32 24.5 -0.2
PKSM **Moragy** 80.57 323 ⇑P P 00 32 24.5 -0.3
PKSM **Moragy** 80.57 323⇑*iP* P 00 32 24.5 -0.2
KHC **Kasperske Hory** 80.59 328 *eP* P 00 32 24.7 -0.1
KHC **Kasperske Hory** 80.59 328 *eP* P 00 32 24.5 -0.2
comp=Z,38nm,0.9s,mb5.3
KHC **Kasperske Hory** 80.59 328 *eP* P 00 32 24.7 -0.1
KHC *ex* x 00 33 02.5
Z13A **Yuma Proving G** 80.60 55 ⇑P P 00 32 25.5 +0.4
baz=80,SNR=27
ALN **Alexandroupoli** 80.64 316 *eP* P 00 32 24.8 -0.4
X15A **Humboldt** 80.66 53 P P 00 32 26.3 +0.9
baz=80,SNR=34
SMCO **Snowmass** 80.66 47 *eP* P 00 32 26.2 +0.8
comp=Z,30nm,1.2s,mb5.1
UBBA **Unterbreizbach** 80.68 331 *eP* P 00 32 25.2 0.0
comp=Z,48nm,1.5s,mb5.2
W16A **Flagstaff** 80.70 52 ⇑P P 00 32 26.1 +0.5
baz=80
RDO **Rodhopi** 80.74 316 P P 00 32 26.0 +0.2
RDO **Rodhopi** 80.74 316 *eP* P 00 32 25.8 0.0
RDO **Rodhopi** 80.74 316 P P 00 32 26.0 +0.2
GEC2 **GERESS Array S** 80.76 328 *eP* P 00 32 25.6 -0.1
comp=Z,30nm,1.2s,mb5.1
GEC2 **GERESS Array S** 80.76 328 *eP* P 00 32 25.6 -0.1
GEC2 pmax pmax
comp=Z,30nm,1.2s,mb5.1
GEC2 **GERESS Array S** 80.76 328 *eP* P 00 32 25.6 -0.1
comp=Z,30nm,1.2s,mb5.1
GERES **GERESS Array B** 80.76 328 P P 00 32 25.7 +0.1
comp=Z,10nm,0.8s,mb4.8,baz=35,slow=4.9,SNR=75
GERES PP PP 00 35 25.0 -4.0
comp=Z,1.9nm,0.9s,baz=87,slow=7.0,SNR=3.6
GERES PKKPbc PKKPbc 00 51 03.1 -0.8
comp=Z,0.5nm,0.7s,baz=261,slow=2.6,SNR=2.8
GERES **GERESS Array B** 80.76 328 P P 00 32 25.7 0.0
GERES 00 35 25.0
GERES 00 51 03.1
GERES pmax pmax
comp=Z,10.0nm,0.8s
GERES **GERESS Array B** 80.76 328 P P 00 32 25.7 +0.1
GERES PP PP 00 35 25.0 -4.0
GERES PKKPbc PKKPbc 00 51 03.1 -0.8
V17A **Tonalea, Kykot** 80.80 51 P P 00 32 26.9 +0.8
baz=80,SNR=54
113A **Mohawk Valley,** 80.81 55 ⇊P P 00 32 26.2 -0.1
baz=80
U18A **Rough Rock, Ch** 80.83 50 ⇊P P 00 32 26.4 +0.1
baz=81,SNR=40
WET **Wettzell** 80.87 328 *eP* P 00 32 26.5 +0.2
comp=Z,70nm,1.5s,mb5.4
WET **Wettzell** 80.87 328 *eP* P 00 32 26.5 +0.2
WET pmax pmax
comp=Z,70nm,1.5s,mb5.4
WET **Wettzell** 80.87 328 *eP* P 00 32 26.5 +0.2
comp=Z,70nm,1.5s,mb5.4
R21A **Cimarron** 80.89 48 ⇊P P 00 32 26.6 +0.1
baz=81,SNR=9.1
Q22A **Crested Butte,** 80.92 47 ⇑P P 00 32 26.8 +0.1
baz=81,SNR=22
Y15A **Casa Rosa Ranc** 80.95 54 ⇑P P 00 32 27.1 +0.1
baz=81,SNR=18
VTS **Vitosha** 80.96 318 P P 00 32 27.4 +0.5
VTS **Vitosha** 80.96 318 P P 00 32 28.3 +1.4
VTS **Vitosha** 80.96 318 P P 00 32 27.4 +0.5
ISCO **Idaho Springs** 81.00 46 *eP* P 00 32 27.7 +0.5
ISCO pmax pmax
comp=Z,52nm,1.4s,mb5.3
ISCO **Idaho Springs** 81.00 46 *eP* P 00 32 27.6 +0.5
comp=Z,52nm,1.4s,mb5.3
T19A **Beclabito** 81.06 50 ⇑P P 00 32 27.8 +0.3
baz=81,SNR=28
GRA1 **Grafenberg Arr** 81.10 329 *eP* P 00 32 27.8 +0.3
comp=Z,145nm,1.3s,mb5.8
GRF **Grafenberg Arr** 81.10 329 *eP* P 00 32 27.8 +0.3
comp=Z,145nm,1.3s,mb5.8
GRF **Grafenberg Arr** 81.10 329 *eP* P 00 32 27.8 +0.3
GRF pmax pmax
comp=Z,145nm,1.3s,mb5.8
GRF **Grafenberg Arr** 81.10 329 *eP* P 00 32 27.8 +0.3
GRF pmax pmax
comp=Z,145nm,1.3s,mb5.8
GRF **Grafenberg Arr** 81.10 329 *eP* P 00 32 27.8 +0.3
comp=Z,145nm,1.3s,mb5.8
MVCO **Mesa Verde** 81.12 49 ⇊P P 00 32 28.3 +0.5
baz=81,SNR=15
MVCO **Mesa Verde** 81.12 49 *eP* P 00 32 28.6 +0.7
comp=Z,77nm,1.5s,mb5.4
GOLH **Golhisar** 81.15 311⇊*iP* P 00 32 27.8 -0.2
ESK **Eskdalemuir** 81.16 340 *eP* P 00 32 27.4 -0.3
ESK pmax pmax
comp=Z,32nm,1.3s,mb5.1
ESK **Eskdalemuir** 81.16 340 *eP* P 00 32 27.4 -0.3
comp=Z,32nm,1.3s,mb5.1
BUG **Bochum--Univer** 81.19 333 *eP* P 00 32 27.3 -0.6
comp=Z,33nm,1.0s,mb5.2
X16A **Lo Mia Camp, P** 81.20 53 ⇊P P 00 32 28.7 +0.4
baz=81,SNR=22
ARSA **Arzberg** 81.20 326⇊*iP* P 00 32 28.6 +0.5
comp=Z,41nm,1.7s,mb5.1
S21A **Coal Bank Pass** 81.22 48 ⇑P P 00 32 29.6 +1.2
baz=81,SNR=16
V18A **Ganado** 81.27 51 ⇊P P 00 32 28.4 -0.2
baz=81,SNR=16
MOA **Molln** 81.29 327⇑*iP* P 00 32 28.8 +0.3
comp=Z,42nm,1.4s,mb5.2,SNR=12
U19A **Dine' College,** 81.31 50 ⇊P P 00 32 28.9 0.0
baz=81,SNR=20
114A **Black Gap (USA** 81.38 55 ⇊P P 00 32 28.7 -0.6
baz=81
MMB **Musomiste** 81.40 317 P P 00 32 28.3 -0.9
R22A **Saguache, Gunn** 81.44 47 ⇊P P 00 32 29.5 0.0
baz=81,SNR=16
DIVS **Divibare** 81.49 321 P P 00 32 29.6 -0.1
NVR **Nevrokopi** 81.50 317 *eP* P 00 32 29.1 -0.7
BARS **Barje** 81.51 319⇑*iP* P 00 32 29.5 -0.3
Y16A **Circle Bar Ran** 81.53 53 ⇑P P 00 32 29.9 -0.2
baz=81,SNR=5.2
X17A **Forest Lakes** 81.64 52 ⇊P P 00 32 30.7 0.0
baz=81
PRK **Paraskevi** 81.66 314 *eP* P 00 32 29.3 -1.4
U20A **Newcomb** 81.67 50 ⇑P P 00 32 30.7 -0.1
baz=81
TNS **Taunus Mts** 81.75 331 *eP* P 00 32 31.3 +0.4
comp=Z,96nm,1.6s,mb5.5
TNS **Taunus Mts** 81.75 331 *eP* P 00 32 31.3 +0.4
TNS pmax pmax
comp=Z,96nm,1.6s,mb5.5
TNS **Taunus Mts** 81.75 331 *eP* P 00 32 31.3 +0.4
comp=Z,96nm,1.6s,mb5.5
AKAS **Kas** 81.80 310 *iP* P 00 32 29.6 -1.9
LIA **Limnos Island** 81.81 315 P P 00 32 32.2 +0.8
LIA **Limnos Island** 81.81 315 *eP* P 00 32 31.3 -0.1
BLCB **Balcova** 81.83 313 P P 00 32 31.8 +0.2
115A **Sonoran Desert** 81.83 54 ⇑P P 00 32 31.5 -0.2
baz=82
AYDN **Tasoluk** 81.84 312⇊*iP* P 00 32 32.4 +0.8
AYDN **Tasoluk** 81.84 312 *iP* P 00 32 32.4 +0.7
PERS **Pernice** 81.86 325 *iP* P 00 32 31.9 +0.4
PERS *i* 00 32 36.9
SOKA **Soboth** 81.86 326⇑*iP* P 00 32 31.7 +0.2
comp=Z,68nm,1.1s,mb5.5
EYMN **Ely** 81.90 32 *eP* P 00 32 31.3 -0.4
comp=Z,44nm,1.0s,mb5.3
Z16A **Peralta Trail,** 81.92 54 ⇑P P 00 32 31.8 -0.4
baz=82
214A **Organ Pipe Nat** 81.95 55 ⇊P P 00 32 32.3 0.0
baz=82,SNR=17
W19A **Sanders** 82.00 51 ⇑P P 00 32 33.0 +0.5
baz=82
RJOB **Jochberg** 82.00 327 *eP* P 00 32 32.9 +0.6
comp=Z,67nm,1.0s,mb5.5
X18A **Snowflake** 82.04 52 ⇑P P 00 32 33.0 +0.2
baz=82
Y17A **Roosevelt** 82.05 53 ⇑P P 00 32 32.7 -0.1
baz=82,SNR=15
V20A **Brimhall** 82.09 50 ⇑P P 00 32 33.2 +0.2
baz=82,SNR=14
URLA **Izmir** 82.10 314⇑*iP* P 00 32 32.6 -0.3
TOD **Tromm** 82.11 331 *eP* P 00 32 32.6 -0.3
TOD **Tromm** 82.11 331 *eP* P 00 32 32.6 -0.3
U21A **Nageezi** 82.14 49 ⇑P P 00 32 33.5 +0.2
baz=82,SNR=15
SOH **Sokhos** 82.14 317 *eP* P 00 32 32.7 -0.5
T22A **Edith** 82.18 48 ⇑P P 00 32 33.7 +0.2
baz=82,SNR=28
VAY **Valandovo** 82.20 318 *iP* P 00 32 32.4 -1.0
comp=Z,85nm,1.1s,mb5.6
VAY **Valandovo** 82.20 318 P P 00 32 33.0 -0.5
OBKA **Obir** 82.20 326⇑*iP* P 00 32 33.7 +0.3
comp=Z,18nm,0.8s,mb5.1,SNR=6.5
116A **Eloy** 82.26 54 ⇑P P 00 32 34.3 +0.4
baz=82
KBA **Koelnbreinsper** 82.28 327⇑*iP* P 00 32 33.8 0.0
comp=Z,46nm,1.0s,mb5.4,SNR=15
FUR **Furstenfeldbru** 82.29 328 *eP* P 00 32 34.0 +0.2
comp=Z,99nm,1.1s,mb5.7
FUR **Furstenfeldbru** 82.29 328 *eP* P 00 32 34.0 +0.2
FUR pmax pmax
comp=Z,99nm,1.1s,mb5.7
FUR **Furstenfeldbru** 82.29 328 *eP* P 00 32 34.0 +0.2
comp=Z,99nm,1.1s,mb5.7
SKO **Skopje** 82.31 319 *iP* P 00 32 33.0 -1.0
MEM **Membach** 82.33 333 P P 00 32 33.9 -0.1
PLE **Pljevlja** 82.35 321⇑*iP* P 00 32 35.0 +0.8
PLE **Pljevlja** 82.35 321⇑*iP* P 00 32 35.0 +0.8
ABH **Altenburg** 82.36 332 *eP* P 00 32 34.0 -0.2
SMG **Samos** 82.41 313 *eP* P 00 32 34.0 -0.6
PLG **Polygyros** 82.41 317 P P 00 32 34.5 -0.1
PLG **Polygyros** 82.41 317 *eP* P 00 32 34.3 -0.3
IVA **Berane** 82.44 320⇑*iP* P 00 32 35.0 +0.3
IVA **Berane** 82.44 320⇑*iP* P 00 32 35.0 +0.4
SDCO **Great Sand Dun** 82.49 47 *eP* P 00 32 35.3 +0.3
comp=Z,49nm,1.8s,mb5.1
Y18A **Canyon Day Jun** 82.49 52 ⇊P P 00 32 35.1 0.0
baz=82,SNR=18
BDRM **Kayabasi** 82.50 312⇑*iP* P 00 32 35.5 +0.3
BDRM **Kayabasi** 82.50 312 *iP* P 00 32 35.5 +0.4
X19A **St. Johns** 82.52 52 ⇑P P 00 32 35.4 +0.1
baz=82,SNR=29
W20A **Ramah** 82.52 51 ⇑P P 00 32 35.3 0.0
baz=82,SNR=6.6
Z17A **San Carlos Hig** 82.54 53 ⇑P P 00 32 35.6 +0.2
baz=82
LJU **Ljubljana** 82.57 325 *iP* P 00 32 35.0 -0.3
LJU *i* 00 32 40.0
V21A **Milan** 82.58 50 ⇑P P 00 32 35.3 -0.2
baz=82
PVY **Plav** 82.60 320⇑*iP* P 00 32 35.2 -0.3
PVY **Plav** 82.60 320⇑*iP* P 00 32 35.2 -0.3
STU **Stuttgart** 82.64 330 *eP* P 00 32 35.7 +0.1
comp=Z,53nm,0.8s,mb5.6
STU **Stuttgart** 82.64 330 *eP* P 00 32 35.4 -0.2
STU pmax pmax
comp=Z,45nm,0.8s,mb5.5
STU **Stuttgart** 82.64 330 *eP* P 00 32 35.4 -0.2
comp=Z,45nm,0.8s,mb5.5
U22A **Llaves** 82.65 49 ⇊P P 00 32 35.9 -0.1
baz=82
BOJS **Bojanci** 82.66 325 *iP* P 00 32 35.9 +0.1
UPM **Unac-Piva** 82.68 321 *eP* P 00 32 35.1 -0.8
UPM **Unac-Piva** 82.68 321 *eP* P 00 32 35.1 -0.8
ARG **Arkhangelos** 82.69 311 P P 00 32 36.5 +0.4
ARG **Arkhangelos** 82.69 311 *eP* P 00 32 36.0 -0.1
BCLA **Clavier** 82.73 333 P P 00 32 35.6 -0.5
216A **Three Points,** 82.78 55 ⇑P P 00 32 36.9 +0.2
baz=82
WATA **Walderalm** 82.83 328⇊*iP* P 00 32 36.9 +0.3
comp=Z,19nm,0.8s,mb5.2,SNR=12
ECSD **EROS Data Cent** 82.83 38 *eP* P 00 32 35.6 -1.2
comp=Z,46nm,1.0s,mb5.5
KRUS **Krusevo** 82.85 319 *iP* P 00 32 36.1 -0.8
comp=Z,26nm,0.9s,mb5.3
117A **Oracle** 82.86 54 ⇑P P 00 32 37.1 +0.1
baz=83,SNR=6.0
WTTA **Wattenberg** 82.86 328⇑*iP* P 00 32 36.9 +0.1
comp=Z,31nm,0.9s,mb5.3,SNR=13
JAVS **Javornik** 82.89 326 *iP* P 00 32 35.9 -1.1
JAVS *i* 00 32 41.2
X20A **Quemado** 82.92 51 ⇑P P 00 32 38.2 +0.8
baz=83,SNR=26
NKY **Niksic** 82.92 321⇑*iP* P 00 32 37.0 -0.2
NKY **Niksic** 82.92 321⇑*iP* P 00 32 37.0 -0.2
NKY **Niksic** 82.92 321⇑*iP* P 00 32 37.0 -0.2
V22A **San Miguel Ran** 82.94 49 ⇑P P 00 32 37.5 +0.1
baz=83,SNR=13
NIS1 **Nisyros Isl.** 82.98 312 P P 00 32 37.6 0.0
LANF **Langenberg** 83.00 331 *eP* P 00 32 37.9 +0.4
LANF **Langenberg** 83.00 331 *eP* P 00 32 37.9 +0.4
TUC **Tucson** 83.00 54 *eP* P 00 32 37.9 +0.1
TUC pmax pmax
comp=Z,36nm,1.5s,mb5.2
TUC **Tucson** 83.00 54 *eP* P 00 32 37.9 +0.1
comp=Z,36nm,1.5s,mb5.2
MOTA **Moosalm** 83.02 328⇑*iP* P 00 32 37.4 -0.2
comp=Z,44nm,0.9s,mb5.5,SNR=19
SNF **Seneffe** 83.02 334 P P 00 32 37.2 -0.3
W21A **San Fidel** 83.04 50 ⇑P P 00 32 38.5 +0.5
baz=83
RETA **Reutte** 83.04 328 *iP* P 00 32 38.0 +0.3
comp=Z,83nm,1.1s,mb5.7,SNR=45
WLF **Walferdange** 83.06 332 P P 00 32 37.5 -0.2
WLF **Walferdange** 83.06 332 *eP* P 00 32 38.3 +0.5
comp=Z,21nm,1.0s,mb5.1
WLF **Walferdange** 83.06 332 *eP* P 00 32 37.9 +0.1
WLF pmax pmax
comp=Z,82nm,1.6s,mb5.5
WLF **Walferdange** 83.06 332 *eP* P 00 32 37.9 +0.1
comp=Z,82nm,1.6s,mb5.5
BIA **Bitola** 83.07 318 *iP* P 00 32 36.9 -1.1
U23A **El Rito** 83.07 48 ⇊P P 00 32 38.5 +0.4
baz=83,SNR=23
TTG **Podgorica** 83.08 320⇑*iP* P 00 32 37.1 -0.9
TTG **Podgorica** 83.08 320⇑*iP* P 00 32 37.1 -0.9
TTG **Podgorica** 83.08 320⇑*iP* P 00 32 37.1 -0.9
BRY **Bratogost** 83.08 321⇑*iP* P 00 32 37.1 -0.9
BRY **Bratogost** 83.08 321⇑*iP* P 00 32 37.1 -0.9
BRY **Bratogost** 83.08 321⇑*iP* P 00 32 37.1 -0.9
TRI **Trieste** 83.17 326 *eP* P 00 32 37.3 -1.1
TRI pmax pmax
comp=Z,65nm,1.3s,mb5.5
TRI **Trieste** 83.17 326 *eP* P 00 32 37.3 -1.1
comp=Z,65nm,1.3s,mb5.5
GIVF **Givet** 83.17 333⇑*iP* P 00 32 37.3 -1.0
comp=Z,42nm,1.0s,mb5.1
GIVF **Givet** 83.17 333⇑*iP* P 00 32 37.3 -1.0
GIVF pmax pmax
comp=Z,21nm,1.0s,mb5.1
GIVF **Givet** 83.17 333⇑*iP* P 00 32 37.3 -1.0
comp=Z,21nm,1.0s,mb5.1
DOU **Dourbes** 83.25 333 P P 00 32 38.4 -0.4
comp=Z,13nm,1.8s,mb4.7
OHR **Ohrid** 83.27 319 *iP* P 00 32 37.9 -1.1
comp=Z,100nm,1.1s,mb5.8
OHR **Ohrid** 83.27 319 P P 00 32 38.3 -0.7
NEO **Neokhori** 83.30 316 *eP* P 00 32 39.5 +0.3
118A **Homack Ranch,** 83.30 53 ⇑P P 00 32 39.4 +0.1
baz=83,SNR=19
BFO **Black Forest** 83.33 330 P P 00 32 39.4 +0.2
comp=Z,353nm,1.0s,mb6.3,SNR=12

BFO Black Forest 83.33 330 eP P 00 32 39.2 0.0
comp=Z,318nm,2.1s,mb6.0
BFO Black Forest 83.33 330 eP P 00 32 39.2 0.0
BFO pmax pmax
comp=Z,318nm,2.1s,mb6.0
BFO Black Forest 83.33 330 eP P 00 32 39.2 0.0
comp=Z,318nm,2.1s,mb6.0
217A Green Valley 83.34 54 ⇑P P 00 32 39.5 -0.1
baz=83,SNR=15
SPAK Spaichingen-Ko 83.34 330 eP P 00 32 38.9 -0.4
KZN Kozani 83.35 318 P P 00 32 39.1 -0.4
KZN Kozani 83.35 318 eP P 00 32 38.9 -0.6
BUM Brajici-Budva 83.36 321⇑iP P 00 32 39.0 -0.5
BUM Brajici-Budva 83.36 321⇑iP P 00 32 39.1 -0.4
DMUB Kingscourt 83.39 341 eP P 00 32 37.8 -1.6
X21A Alamocita Cree 83.42 51 ⇑P P 00 32 40.0 +0.1
baz=83,SNR=23
BAIF Baives 83.42 333⇑iP P 00 32 38.7 -0.9
comp=Z,28nm,0.9s,mb5.0
BAIF Baives 83.42 333⇑iP P 00 32 38.7 -0.9
BAIF pmax pmax
comp=Z,14nm,0.9s,mb5.0
BAIF Baives 83.42 333⇑iP P 00 32 38.7 -0.9
comp=Z,14nm,0.9s,mb5.0
Y20A Horse Springs, 83.42 51 ⇑P P 00 32 40.2 +0.2
baz=83,SNR=40
FETA Feichten 83.43 328 iP P 00 32 40.0 +0.2
comp=Z,46nm,1.1s,mb5.4,SNR=24
ULC Ulcinj 83.43 320⇑iP P 00 32 39.8 0.0
ULC Ulcinj 83.43 320⇑iP P 00 32 39.8 0.0
HCY Herceg Novi 83.44 321⇓iP P 00 32 39.3 -0.6
HCY Herceg Novi 83.44 321⇓iP P 00 32 39.3 -0.6
HCY Herceg Novi 83.44 321⇓iP P 00 32 39.3 -0.6
V23A Ortiz Mt. (NFS 83.48 49 ⇑P P 00 32 41.4 +1.1
baz=83,SNR=14
T25A Trinidad 83.53 47 ⇓P P 00 32 40.3 -0.2
baz=83,SNR=20
U24A Moreno Valley 83.54 48 ⇑pP pP 00 32 41.3 -2.5
baz=83
DAVA Damuels 83.56 329 iP P 00 32 40.6 +0.1
comp=Z,78nm,1.1s,mb5.8,SNR=25
TIR Tirane 83.58 319 eP P 00 32 41.0 +0.4
TIR pmax pmax
comp=Z,70nm,0.9s,mb5.8
TIR Tirane 83.58 319 eP P 00 32 41.0 +0.3
comp=Z,70nm,0.9s,mb5.8
TIR Tirane 83.58 319 P P 00 32 41.0 +0.4
119A Ashpeak Ranch, 83.63 53 ⇓P P 00 32 41.8 +0.8
baz=83
CDF Champ du Feu 83.67 331⇑iP P 00 32 40.3 -0.7
comp=Z,174nm,1.5s,mb5.7
CDF Champ du Feu 83.67 331⇑iP P 00 32 40.3 -0.7
CDF pmax pmax
comp=Z,87nm,1.5s,mb5.7
CDF Champ du Feu 83.67 331⇑iP P 00 32 40.3 -0.7
comp=Z,87nm,1.5s,mb5.7
218A Dragoon 83.69 54 ⇓P P 00 32 41.5 +0.1
baz=83
SCHQ Schefferville 83.70 16 P P 00 32 39.8 -1.1
comp=Z,21nm,0.9s,mb5.2,baz=322,slow=6.2,SNR=9.8
SCHQ Schefferville 83.70 16 P P 00 32 39.8 -1.1
KARP Karpathos 83.72 311 eP P 00 32 41.6 +0.1
THL Klokotos Trika 83.76 317 P P 00 32 40.2 -1.4
THL Klokotos Trika 83.76 317 eP P 00 32 39.6 -2.0
Y21A Point of Rocks 83.78 51 ⇓P P 00 32 42.5 +0.6
baz=84,SNR=26
FELD Feldberg im Sc 83.83 330 eP P 00 32 41.4 -0.4
Z20A Nine Sixteen R 83.83 52 ⇑P P 00 32 42.6 +0.5
baz=84,SNR=33
LAZ Ladron 83.83 50 eP P 00 32 43.2 +1.1
comp=Z,20nm,1.4s,mb5.0
PTL Penteli 83.84 315 eP P 00 32 39.5 -2.5
ATAL Atalanti 83.84 316 P P 00 32 40.5 -1.5
ANMO Albuquerque 83.86 50 eP P 00 32 43.1 +0.9
ANMO pmax pmax
comp=Z,11nm,1.4s
ANMO Albuquerque 83.86 50 eP P 00 32 43.1 +0.9
comp=Z,11nm,1.4s,mb4.8
ECH Echery 83.88 331 eP P 00 32 41.5 -0.5
ECH Echery 83.88 331 eP P 00 32 41.5 -0.5
LKR Lokris 83.89 316 P P 00 32 41.2 -1.1
LKR Lokris 83.89 316 eP P 00 32 40.8 -1.5
W23A Werner Place, 83.90 49 ⇓P P 00 32 42.8 +0.4
baz=84,SNR=15
AGG Agios Georgios 83.98 316 P P 00 32 41.2 -1.5
AGG Agios Georgios 83.98 316 eP P 00 32 41.4 -1.3
MEV Metsovon 84.02 318 P P 00 32 43.4 +0.5
VLY Voula,Athens 84.02 315 eP P 00 32 40.8 -2.2
318A Bisbee 84.09 54 ⇓pP pP 00 32 44.1 -2.6
baz=84,SNR=27
219A White Tail Can 84.17 53 ⇓P P 00 32 42.8 -1.0
baz=84,SNR=38
219A ⇓pP pP 00 32 44.6 -2.5
baz=84
MOF Molkenrain 84.19 331 eP P 00 32 43.8 +0.2
MOF Molkenrain 84.19 331 eP P 00 32 43.8 +0.2
120A U Bar Ranch, L 84.19 53 ⇓P P 00 32 42.7 -1.2
baz=84,SNR=12
120A ⇑pP pP 00 32 44.6 -2.6
baz=84
Y22A Socorro 84.26 51 ⇑P P 00 32 43.5 -0.7
baz=84
Z21A St. Cloud Mine 84.26 51 ⇓P P 00 32 44.6 +0.4
baz=84,SNR=37
W24A Lazy 6 Ranch, 84.30 49 ⇑P P 00 32 45.0 +0.6
baz=84,SNR=29
JAN Janina 84.31 318 eP P 00 32 44.1 -0.3
THEF They Montfort 84.31 331 eP P 00 32 43.8 -0.4
THEF They Montfort 84.31 331 eP P 00 32 43.8 -0.4
BNM Barren Site 84.31 50 eP P 00 32 45.1 +0.6
comp=Z,10nm,0.7s,mb5.1
HINF Hinteralfeld 84.32 331⇑iP P 00 32 43.5 -0.8
comp=Z,52nm,1.1s,mb5.3
HINF Hinteralfeld 84.32 331⇑iP P 00 32 43.5 -0.8
HINF pmax pmax
comp=Z,26nm,1.1s,mb5.3
HINF Hinteralfeld 84.32 331⇑iP P 00 32 43.5 -0.8
comp=Z,26nm,1.1s,mb5.3
V25A Rancho No Teng 84.33 48 ⇑P P 00 32 44.5 -0.1
baz=84,SNR=25
EVR Evrytania 84.34 317 eP P 00 32 43.8 -0.8
COWI Conover 84.35 32 eP P 00 32 43.7 -0.7
comp=Z,52nm,1.4s,mb5.5
HAU Haudompre 84.36 331⇑iP P 00 32 43.6 -0.9
comp=Z,44nm,0.8s,mb5.3
HAU Haudompre 84.36 331⇑iP P 00 32 43.6 -0.9
HAU pmax pmax
comp=Z,22nm,0.8s,mb5.3
HAU Haudompre 84.36 331⇑iP P 00 32 43.6 -0.9
comp=Z,22nm,0.8s,mb5.3
BBS Basel-Blauen 84.36 330 eP P 00 32 43.9 -0.6
MEZF Maizieres J'vi 84.43 332⇑iP P 00 32 44.3 -0.5
comp=Z,271nm,1.6s,mb5.8
MEZF Maizieres J'vi 84.43 332⇑iP P 00 32 44.3 -0.5
comp=Z,271nm,1.6s,mb6.1
U26A Atchley Ranch, 84.44 47 ⇓P P 00 32 45.0 0.0
baz=84
KALE Kalithea 84.54 316 P P 00 32 44.6 -1.0
ZKR Zakros 84.57 311 P P 00 32 46.0 +0.2
ZKR Zakros 84.57 311 eP P 00 32 46.0 +0.2
319A Douglas 84.58 54 ⇓P P 00 32 45.4 -0.5
baz=84,SNR=16
EFP Efpalio 84.64 316 P P 00 32 45.3 -0.8
EFP Efpalio 84.64 316 eP P 00 32 45.1 -1.0
220A Playas Peak, P 84.69 53 ⇓P P 00 32 46.4 0.0
baz=84,SNR=18
LOMF Lomont 84.72 330 eP P 00 32 46.1 -0.2
LOMF Lomont 84.72 330 eP P 00 32 46.1 -0.2
121A Cookes Peak, D 84.72 52 ⇑P P 00 32 46.8 +0.2
baz=84,SNR=17
Z22A Elephant Butte 84.73 51 ⇓P P 00 32 46.5 -0.1
baz=84,SNR=26
LAKA Lakka 84.74 316 P P 00 32 46.2 -0.4
GUR Goura 84.76 316 P P 00 32 45.9 -0.8
GUR Goura 84.76 316 eP P 00 32 46.0 -0.7
Y23A Lovelace Mesa, 84.81 50 ⇑P P 00 32 46.0 -1.0
baz=84,SNR=31
KEK Kerkira 84.82 318 eP P 00 32 45.9 -1.1
NPS Neapolis 84.82 312 eP P 00 32 46.0 -1.1
V26A Tequesquite Ra 84.83 47 ⇑P P 00 32 45.9 -1.2
baz=84,SNR=6.0
W25A X Bar L Ranch, 84.85 48 ⇑P P 00 32 47.4 +0.2
baz=85,SNR=47
CBKS Cedar Bluff 84.90 43 eP P 00 32 46.7 -0.7
CBKS pmax pmax
comp=Z,90nm,1.3s,mb5.7
CBKS Cedar Bluff 84.90 43 eP P 00 32 46.7 -0.7
comp=Z,90nm,1.3s,mb5.7
LAST Lasithi 84.97 312 P P 00 32 48.2 +0.4
LAST Lasithi 84.97 312 eP P 00 32 48.0 +0.2
LKD2 Lefkada island 85.05 317 P P 00 32 47.8 -0.3
320A Kipp Ranch, An 85.08 53 ⇑P P 00 32 48.8 +0.4
baz=85
221A Mesquite Ranch 85.08 52 ⇑P P 00 32 48.7 +0.2
baz=85
122A Conniff Cattle 85.09 51 ⇓P P 00 32 49.3 +0.9
baz=85
RLS Riolos of Patr 85.15 316 eP P 00 32 48.0 -0.6
VLX Vlachokerasia 85.15 315 eP P 00 32 47.7 -1.0
Z23A Rita Site, Whi 85.17 51 ⇑pP pP 00 32 49.5 -2.6
baz=85
Y24A Capitan 85.18 50 ⇑P P 00 32 48.5 -0.4
baz=85,SNR=17
IDI Anoyia 85.22 312 eP P 00 32 47.3 -1.8
VLI Veliai 85.31 314 eP P 00 32 44.4 -5.1
W26A Owens Ranch, T 85.34 48 ⇑P P 00 32 49.3 -0.4
baz=85
222A Williams Famil 85.44 52 ⇓P P 00 32 49.9 -0.3
baz=85
SIVA Sivas 85.46 312 P P 00 32 50.4 +0.1
SIVA Sivas 85.46 312 eP P 00 32 50.1 -0.2
KFL Anninata 85.47 317 P P 00 32 49.8 -0.5
VLS Valsamata 85.53 317 P P 00 32 49.4 -1.2
VLS Valsamata 85.53 317 eP P 00 32 49.5 -1.1
ITM Ithomi 85.53 315 P P 00 32 49.8 -0.8
ITM Ithomi 85.53 315 eP P 00 32 49.4 -1.2
VAM Vamos 85.53 313 eP P 00 32 50.5 -0.1
CABF La Chapelle 85.61 330⇑iP P 00 32 50.1 -0.7
comp=Z,48nm,0.9s,mb5.4
CABF La Chapelle 85.61 330⇑iP P 00 32 50.1 -0.7
CABF pmax pmax
comp=Z,24nm,0.9s,mb5.4
CABF La Chapelle 85.61 330⇑iP P 00 32 50.1 -0.7
comp=Z,24nm,0.9s,mb5.4
Y25A Mesa, Roswell 85.62 49 ⇓P P 00 32 50.4 -0.7
baz=85,SNR=18
Z24A Sheeppen Canyo 85.64 50 ⇓P P 00 32 50.5 -0.7
baz=85
KARN Karanos 85.70 313 P P 00 32 51.2 -0.3
KARN Karanos 85.70 313 eP P 00 32 51.0 -0.5
X26A CR and CF Fran 85.70 48 ⇑P P 00 32 50.8 -0.7
baz=85,SNR=22
W27A Bowe Ranch, En 85.77 47 ⇓P P 00 32 51.0 -0.8
baz=86,SNR=25
PYL PYLOS 85.84 315 P P 00 32 51.3 -0.8
PYL PYLOS 85.84 315 eP P 00 32 51.1 -1.0
SCIA State Center 85.84 37 eP P 00 32 52.0 0.0
comp=Z,87nm,1.1s,mb5.9
LOR Lormes 85.90 332⇑iP P 00 32 51.4 -0.8
comp=Z,138nm,1.1s,mb5.8
LOR Lormes 85.90 332⇑iP P 00 32 51.4 -0.8
LOR pmax pmax
comp=Z,69nm,1.1s,mb5.8
LOR Lormes 85.90 332⇑iP P 00 32 51.4 -0.8
comp=Z,69nm,1.1s,mb5.8
223A Chaparral, Ant 85.92 52 ⇓P P 00 32 53.2 +0.6
baz=86
AQU L'Aquila 85.95 324 P P 00 32 53.5 +1.0
AQU L'Aquila 85.95 324 eP P 00 32 53.0 +0.4
comp=Z,45nm,1.0s,mb5.7
AQU L'Aquila 85.95 324⇑iP P 00 32 53.4 +0.9
GVD Gavdhos 86.00 312 eP P 00 32 53.2 +0.3
comp=Z,199nm,1.0s,mb6.3
124A Stringfield Ra 86.03 51 ⇓P P 00 32 52.8 -0.3
baz=86,SNR=19
X27A F and S Farms, 86.05 48 ⇓P P 00 32 52.8 -0.3
baz=86
Z25A Roswell 86.06 50 ⇑P P 00 32 53.0 -0.2
baz=86,SNR=22
FLN La Foliniere 86.11 335⇑iP P 00 32 52.3 -0.9
comp=Z,65nm,0.9s,mb5.5
FLN La Foliniere 86.11 335⇑iP P 00 32 52.3 -0.9
FLN pmax pmax
comp=Z,33nm,0.9s,mb5.6
FLN La Foliniere 86.11 335⇑iP P 00 32 52.3 -0.9
comp=Z,33nm,0.9s,mb5.6
Y26A Elida 86.14 49 ⇑P P 00 32 53.2 -0.4
baz=86,SNR=24
LDF La Druitiere 86.14 335⇑iP P 00 32 52.4 -1.0
comp=Z,60nm,0.9s,mb5.5
LDF La Druitiere 86.14 335⇑iP P 00 32 52.4 -1.0
LDF pmax pmax
comp=Z,30nm,0.9s,mb5.5
LDF La Druitiere 86.14 335⇑iP P 00 32 52.4 -1.0
comp=Z,30nm,0.9s,mb5.5
RSL Roselend 86.17 330 eP P 00 32 52.3 -1.3
RSL Roselend 86.17 330 eP P 00 32 52.3 -1.3
SSF Saint Saulge 86.20 332⇑iP P 00 32 52.9 -0.8
comp=Z,73nm,0.9s,mb5.6
SSF Saint Saulge 86.20 332⇑iP P 00 32 52.9 -0.8
SSF pmax pmax
comp=Z,36nm,0.9s,mb5.6
SSF Saint Saulge 86.20 332⇑iP P 00 32 52.9 -0.8
comp=Z,36nm,0.9s,mb5.6
LPL La Plagne 86.27 329⇑iP P 00 32 53.7 -0.4
comp=Z,60nm,0.9s,mb5.5
LPL La Plagne 86.27 329⇑iP P 00 32 53.7 -0.4
LPL pmax pmax
comp=Z,30nm,0.9s,mb5.5
LPL La Plagne 86.27 329⇑iP P 00 32 53.7 -0.4
comp=Z,30nm,0.9s,mb5.5
LPG La Plagne 86.28 329⇑iP P 00 32 53.9 -0.2
comp=Z,77nm,0.9s,mb5.7
LPG La Plagne 86.28 329⇑iP P 00 32 53.9 -0.2
LPG pmax pmax
comp=Z,38nm,0.9s,mb5.6
LPG La Plagne 86.28 329⇑iP P 00 32 53.9 -0.2
comp=Z,38nm,0.9s,mb5.6
KSU1 Kansas State U 86.32 41 eP P 00 32 54.5 0.0
comp=Z,57nm,1.0s,mb5.8
HYF Humbligny 86.34 333⇑iP P 00 32 54.1 -0.3
HYF Humbligny 86.34 333⇑iP P 00 32 54.1 -0.3
JFWS Jewell Farm 86.41 35 eP P 00 32 54.0 -0.8
JFWS pmax pmax
comp=Z,34nm,1.2s,mb5.5
JFWS Jewell Farm 86.41 35 eP P 00 32 54.0 -0.8
comp=Z,34nm,1.2s,mb5.5
224A Cornudas Mount 86.42 51 ⇑P P 00 32 54.2 -0.9
baz=86,SNR=21
SMF Signal de Mont 86.43 332⇑iP P 00 32 54.2 -0.6
comp=Z,198nm,1.5s,mb5.8
SMF Signal de Mont 86.43 332⇑iP P 00 32 54.2 -0.6
SMF pmax pmax
comp=Z,99nm,1.5s,mb5.8
SMF Signal de Mont 86.43 332⇑iP P 00 32 54.2 -0.6
comp=Z,99nm,1.5s,mb5.8
AVF Avril sur Loir 86.49 332⇑iP P 00 32 54.5 -0.6
comp=Z,169nm,0.9s,mb6.0
AVF Avril sur Loir 86.49 332⇑iP P 00 32 54.5 -0.6
AVF pmax pmax
comp=Z,84nm,0.9s,mb6.0
AVF Avril sur Loir 86.49 332⇑iP P 00 32 54.5 -0.6
comp=Z,84nm,0.9s,mb6.0
Z26A Caprock 86.50 49 ⇑P P 00 32 55.0 -0.4
baz=86,SNR=26
125A Gardner Draw, 86.53 50 ⇑P P 00 32 56.2 +0.6
baz=86,SNR=26
Y27A Causey 86.55 48 ⇓P P 00 32 54.5 -1.2
baz=86,SNR=16
GRR Gorron 86.56 335⇑iP P 00 32 54.8 -0.7
comp=Z,151nm,1.1s,mb5.8
GRR Gorron 86.56 335⇑iP P 00 32 54.8 -0.7
GRR pmax pmax
comp=Z,75nm,1.1s,mb5.8
GRR Gorron 86.56 335⇑iP P 00 32 54.8 -0.7
comp=Z,75nm,1.1s,mb5.8
BNI Bardonecchia 86.67 329 eP P 00 32 56.0 -0.1
BNI pmax pmax
comp=Z,13nm,0.9s,mb5.2
BNI Bardonecchia 86.67 329 eP P 00 32 56.0 -0.1
comp=Z,14nm,0.9s,mb5.2
AMTX Amarillo 86.69 47 eP P 00 32 56.2 -0.1
comp=Z,47nm,1.3s,mb5.6
MSTX Muleshoe 86.72 48 ⇑P P 00 32 56.9 +0.4
baz=86
MNTX Cornudas Mount 86.77 51 eP P 00 32 56.1 -0.7
comp=Z,21nm,1.4s,mb5.2
TIP Timpagrande 86.77 320 eP P 00 32 56.6 0.0
comp=Z,74nm,1.6s,mb5.7
225A Deer Hill, Car 86.82 51 ⇑P P 00 32 57.7 +0.7
baz=86
BGF Bois d'Agland 86.87 332 eP P 00 32 56.4 -0.6
comp=Z,42nm,0.9s,mb5.3
BGF Bois d'Agland 86.87 332 eP P 00 32 56.4 -0.6
BGF pmax pmax
comp=Z,21nm,0.9s,mb5.4
BGF Bois d'Agland 86.87 332 eP P 00 32 56.4 -0.6
comp=Z,21nm,0.9s,mb5.4
324A Moseley Ranch, 86.89 51 ⇑P P 00 32 56.8 -0.6
baz=87
MBDF Montbardon 86.90 329⇑iP P 00 32 55.9 -1.3
comp=Z,17nm,0.7s,mb5.1
MBDF Montbardon 86.90 329⇑iP P 00 32 55.9 -1.3
MBDF pmax pmax
comp=Z,8.0nm,0.7s,mb5.1
MBDF Montbardon 86.90 329⇑iP P 00 32 55.9 -1.3
comp=Z,8.4nm,0.7s,mb5.1
126A Clayton Basin, 86.92 50 ⇓P P 00 32 57.2 -0.4
baz=87
Z27A Tatum 86.92 49 ⇓P P 00 32 56.9 -0.6
baz=87
ORIF Oris-en-Rattie 87.10 330⇑iP P 00 32 57.3 -0.9
comp=Z,39nm,1.2s,mb5.2
ORIF Oris-en-Rattie 87.10 330⇑iP P 00 32 57.3 -0.9
ORIF pmax pmax
comp=Z,20nm,1.2s,mb5.2
ORIF Oris-en-Rattie 87.10 330⇑iP P 00 32 57.3 -0.9
comp=Z,20nm,1.2s,mb5.2
SGMF Saint Gilles 87.22 336⇑iP P 00 32 58.3 -0.4
comp=Z,114nm,1.0s,mb5.7
SGMF Saint Gilles 87.22 336⇑iP P 00 32 58.3 -0.4
SGMF pmax pmax
comp=Z,57nm,1.0s,mb5.8
SGMF Saint Gilles 87.22 336⇑iP P 00 32 58.3 -0.4
comp=Z,57nm,1.0s,mb5.8
325A Bean Ranch, Si 87.25 51 ⇑P P 00 32 58.4 -0.7
baz=87,SNR=5.5
CLNB Carlsbad 87.28 50 eP P 00 32 59.9 +0.6
comp=Z,4.9nm,1.1s,mb4.7
226A Malaga, Loving 87.29 50 ⇑P P 00 32 58.4 -0.9
baz=87
TCF Toulx Ste Croi 87.33 333⇑iP P 00 32 58.8 -0.4
comp=Z,66nm,1.1s,mb5.5
TCF Toulx Ste Croi 87.33 333⇑iP P 00 32 58.8 -0.4
TCF pmax pmax
comp=Z,33nm,1.1s,mb5.5
TCF Toulx Ste Croi 87.33 333⇑iP P 00 32 58.8 -0.4
comp=Z,33nm,1.1s,mb5.5
ROSF Rostrenen 87.37 337⇑iP P 00 32 59.1 -0.3
comp=Z,162nm,1.1s,mb5.9
ROSF Rostrenen 87.37 337⇑iP P 00 32 59.1 -0.3
ROSF pmax pmax
comp=Z,81nm,1.1s,mb5.9
ROSF Rostrenen 87.37 337⇑iP P 00 32 59.1 -0.3
comp=Z,81nm,1.1s,mb5.9
PYM Petit Puy Mans 87.50 332 eP P 00 33 00.6 +0.5
PYM Petit Puy Mans 87.50 332 eP P 00 33 00.6 +0.5
VIVF Saint-Julien-l 87.62 330 eP P 00 32 59.8 -0.9
comp=Z,65nm,1.5s,mb5.3
VIVF Saint-Julien-l 87.62 330 eP P 00 32 59.8 -0.9
VIVF pmax pmax
comp=Z,32nm,1.5s,mb5.3
VIVF Saint-Julien-l 87.62 330 eP P 00 32 59.8 -0.9
comp=Z,32nm,1.5s,mb5.3
425A Indio Mountain 87.65 52 ⇑P P 00 33 00.6 -0.5
baz=87,SNR=19
QUIF Quistinic 87.71 337⇑iP P 00 33 00.4 -0.6
comp=Z,52nm,1.0s,mb5.4
QUIF Quistinic 87.71 337⇑iP P 00 33 00.4 -0.6
QUIF pmax pmax
comp=Z,26nm,1.0s,mb5.4
QUIF Quistinic 87.71 337⇑iP P 00 33 00.4 -0.6
comp=Z,26nm,1.0s,mb5.4
PGF Pioggiola 87.76 326 eP P 00 33 00.1 -1.3
comp=Z,47nm,1.1s,mb5.3
PGF Pioggiola 87.76 326 eP P 00 33 00.1 -1.3
PGF pmax pmax
comp=Z,24nm,1.1s,mb5.3
PGF Pioggiola 87.76 326 eP P 00 33 00.1 -1.3
comp=Z,24nm,1.1s,mb5.3
MFF Saint Martin d 87.88 334⇑iP P 00 33 01.5 -0.4
comp=Z,75nm,0.9s,mb5.6
MFF Saint Martin d 87.88 334⇑iP P 00 33 01.5 -0.4
MFF pmax pmax
comp=Z,38nm,0.9s,mb5.6
MFF Saint Martin d 87.88 334⇑iP P 00 33 01.5 -0.4
comp=Z,38nm,0.9s,mb5.6
CEL Celeste 87.91 320 eP P 00 33 01.8 -0.4
comp=Z,52nm,1.1s,mb5.7
FRF La Foret Royal 87.92 328 eP P 00 33 00.5 -1.6
comp=Z,21nm,0.9s,mb5.1
FRF La Foret Royal 87.92 328 eP P 00 33 00.5 -1.6
FRF pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
FRF La Foret Royal 87.92 328 eP P 00 33 00.5 -1.6
comp=Z,10nm,0.9s,mb5.1
SMRF Simiane la Rot 88.01 329⇑iP P 00 33 01.6 -0.9
comp=Z,68nm,1.4s,mb5.4
SMRF Simiane la Rot 88.01 329⇑iP P 00 33 01.6 -0.9
comp=Z,68nm,1.4s,mb5.7
LMR La Mourre 88.16 328⇑iP P 00 33 01.7 -1.6
comp=Z,33nm,0.9s,mb5.3
LMR La Mourre 88.16 328⇑iP P 00 33 01.7 -1.6
LMR pmax pmax
comp=Z,17nm,0.9s,mb5.3
LMR La Mourre 88.16 328⇑iP P 00 33 01.7 -1.6
comp=Z,16nm,0.9s,mb5.3
426A McDonald Obser 88.31 51 ⇓P P 00 33 03.6 -0.7
baz=88
WMOK Wichita Mounta 88.42 45 eP P 00 33 05.1 +0.4
WMOK pmax pmax
comp=Z,33nm,1.3s,mb5.4
WMOK Wichita Mounta 88.42 45 eP P 00 33 05.1 +0.4
comp=Z,33nm,1.3s,mb5.4
RJF Les Rejaudoux 88.42 332⇑iP P 00 33 04.1 -0.4
comp=Z,58nm,1.0s,mb5.5
RJF Les Rejaudoux 88.42 332⇑iP P 00 33 04.1 -0.4
RJF pmax pmax
comp=Z,29nm,1.0s,mb5.5
RJF Les Rejaudoux 88.42 332⇑iP P 00 33 04.1 -0.4
comp=Z,29nm,1.0s,mb5.5
328A Wristen Ranch, 88.54 50 ⇑P P 00 33 04.7 -0.6
baz=88
CAF Calviac 88.55 332 eP P 00 33 05.2 +0.1
comp=Z,80nm,1.2s,mb5.6
CAF Calviac 88.55 332 eP P 00 33 05.2 +0.1
CAF pmax pmax
comp=Z,40nm,1.2s,mb5.6
CAF Calviac 88.55 332 eP P 00 33 05.2 +0.1
comp=Z,40nm,1.2s,mb5.6
427A Hayter Ranch, 88.57 51 ⇓P P 00 33 05.5 +0.1
baz=88
LASF Ste Croix 88.60 330⇑iP P 00 33 04.7 -0.6
comp=Z,46nm,1.3s,mb5.3
LASF Ste Croix 88.60 330⇑iP P 00 33 04.7 -0.6
526A Mary Lane Ranc 88.71 52 ⇑P P 00 33 06.1 0.0
baz=88
HDIL Hopedale 88.72 36 eP P 00 33 05.9 -0.1
comp=Z,125nm,1.3s,mb6.1
527A Woodward Ranch 88.94 51 ⇑P P 00 33 07.1 -0.1
baz=89
LFF La Frestale 89.02 333⇑iP P 00 33 07.1 -0.2
comp=Z,72nm,1.0s,mb5.6
LFF La Frestale 89.02 333⇑iP P 00 33 07.1 -0.2
LFF pmax pmax
comp=Z,36nm,1.0s,mb5.7
LFF La Frestale 89.02 333⇑iP P 00 33 07.1 -0.2
comp=Z,36nm,1.0s,mb5.7
626A Big Bend Ranch 89.04 52 ⇓P P 00 33 08.3 +0.6
baz=89
428A Kincaid Ranch, 89.09 50 ⇓P P 00 33 08.0 +0.1
baz=89,SNR=15
528A Cox Ranch, San 89.43 51 ⇓P P 00 33 09.9 +0.4
baz=89
TXAR Lajitas Array 89.48 52 P P 00 33 09.5 -0.3
comp=Z,4.5nm,0.7s,mb4.9,baz=288,slow=3.5,SNR=28
TXAR Lajitas Array 89.48 52 P P 00 33 09.5 -0.3
TXAR pmax pmax
comp=Z,5.0nm,0.7s
TXAR Lajitas Array 89.48 52 P P 00 33 09.5 -0.3
627A Terlingua Ranc 89.57 52 ⇑P P 00 33 10.0 -0.1
baz=89
SLM Saint Louis 89.82 37 eP P 00 33 11.4 +0.2
SLM pmax pmax
comp=Z,47nm,0.9s,mb5.8
SLM Saint Louis 89.82 37 eP P 00 33 11.4 +0.3
comp=Z,47nm,0.9s,mb5.8
MTLF Montolieu 89.85 331⇑iP P 00 33 10.8 -0.4

comp=Z,55nm,1.5s,mb5.4
MTLF Montolieu 89.85 331⇑*iP* P 00 33 10.8 -0.4
MTLF pmax pmax
comp=Z,28nm,1.5s,mb5.4
MTLF Montolieu 89.85 331⇑*iP* P 00 33 10.8 -0.4
comp=Z,28nm,1.5s,mb5.4
628A Black Gap, Mar 89.85 51 ⇑P P 00 33 11.4 -0.1
baz=90
FVM French Village 90.25 38 *eP* P 00 33 12.7 -0.5
FVM pmax pmax
comp=Z,76nm,1.4s,mb5.8
FVM French Village 90.25 38 *eP* P 00 33 12.7 -0.5
comp=Z,76nm,1.4s,mb5.8
EPF Esparros 90.81 332 *eP* P 00 33 14.7 -1.0
comp=Z,18nm,1.1s,mb5.0
EPF Esparros 90.81 332 *eP* P 00 33 14.7 -1.0
EPF pmax pmax
comp=Z,9.0nm,1.1s,mb5.0
EPF Esparros 90.81 332 *eP* P 00 33 14.7 -1.0
comp=Z,8.9nm,1.1s,mb5.0
JCT Junction City 90.97 49 *eP* P 00 33 16.2 -0.5
JCT pmax pmax
comp=Z,27nm,0.8s,mb5.6
JCT Junction City 90.97 49 *eP* P 00 33 16.2 -0.5
comp=Z,27nm,0.8s,mb5.6
LONY Lake Ozonia 90.99 24 *eP* P 00 33 16.3 -0.2
comp=Z,16nm,1.1s,mb5.3
SIUC Southern Illin 91.04 37 *eP* P 00 33 16.2 -0.6
comp=Z,77nm,1.0s,mb6.0
ETSF Etsaut 91.25 333⇑*iP* P 00 33 17.8 0.0
comp=Z,32nm,0.9s,mb5.3
ETSF Etsaut 91.25 333⇑*iP* P 00 33 17.8 0.0
ETSF pmax pmax
comp=Z,16nm,0.9s,mb5.3
ETSF Etsaut 91.25 333⇑*iP* P 00 33 17.8 0.0
comp=Z,16nm,0.9s,mb5.3
SJPF Ste Jean 91.30 333⇑*iP* P 00 33 17.9 -0.1
comp=Z,15nm,1.0s,mb5.0
SJPF Ste Jean 91.30 333⇑*iP* P 00 33 17.9 -0.1
SJPF pmax pmax
comp=Z,8.0nm,1.0s,mb5.0
SJPF Ste Jean 91.30 333⇑*iP* P 00 33 17.9 -0.1
comp=Z,7.6nm,1.0s,mb5.0
MIAR Mount Ida 91.37 42 *eP* P 00 33 18.2 -0.2
MIAR pmax pmax
comp=Z,45nm,1.0s,mb5.8
MIAR Mount Ida 91.37 42 *eP* P 00 33 18.2 -0.2
comp=Z,44nm,1.0s,mb5.8
WCI Wyandotte Cave 91.97 35 *eP* P 00 33 21.5 +0.3
WCI pmax pmax
comp=Z,49nm,1.3s,mb5.7
WCI Wyandotte Cave 91.97 35 *eP* P 00 33 21.5 +0.4
comp=Z,49nm,1.3s,mb5.7
WVT Waverly 92.97 37 *eP* P 00 33 25.4 -0.4
WVT pmax pmax
comp=Z,11nm,1.1s,mb5.2
WVT Waverly 92.97 37 *eP* P 00 33 25.4 -0.5
comp=Z,11nm,1.1s,mb5.2
KEST Kesra 93.12 322 P P 00 33 26.1 -0.5
comp=Z,2.1nm,1.0s,mb4.5,baz=328,slow=4.4,SNR=5.0
KEST Kesra 93.12 322 *eP* P 00 33 26.4 -0.1
SSPA Standing Stone 93.37 28 *eP* P 00 33 28.3 +0.7
comp=Z,13nm,1.3s,mb5.2
OXF Oxford 93.51 39 *eP* P 00 33 27.0 -1.3
OXF pmax pmax
comp=Z,61nm,1.2s,mb5.9
OXF Oxford 93.51 39 *eP* P 00 33 27.0 -1.3
comp=Z,60nm,1.2s,mb5.9
PBRG Braganca 94.32 336 *eP* P 00 33 31.9 0.0
MVO Moncorvo 94.99 336 *eP* P 00 33 35.2 +0.2
PVRL Vila Real 95.10 337 *eP* P 00 33 35.7 +0.2
ESDC Sonseca Array 95.30 333 P P 00 33 35.5 -0.9
comp=Z,1.3nm,0.7s,mb4.5,baz=24,slow=4.1,SNR=11
ESDC PP PP 00 37 20.1 -5.5
comp=Z,0.6nm,0.8s,baz=26,slow=7.2,SNR=4.5
ESDC Sonseca Array 95.30 333 P P 00 33 35.5 -0.9
ESDC PP PP 00 37 20.1 -5.5
LRAL Lakeview Retre 95.88 39 *eP* P 00 33 40.8 +1.6
comp=Z,6.0nm,1.1s,mb4.9
PMRV Marv??o 96.68 336 *eP* P 00 33 43.5 +0.8
PESTR Estremoz 97.25 335 *eP* P 00 33 45.2 -0.1
KMBO Kilima Mbogo 101.07 278 P Pdif 00 34 03.5 +1.1
comp=Z,3.1nm,1.0s,baz=12,slow=11,SNR=5.2
KMBO Kilima Mbogo 101.07 278 P Pdif 00 34 03.5 +1.1
KMBO pmax pmax
comp=Z,3.0nm,1.0s
KMBO Kilima Mbogo 101.07 278 P Pdif 00 34 03.5 +1.1
LSZ Lusaka 116.78 272 *e*PKIKP PKPdf 00 38 58.7 +1.4
LSZ Lusaka 116.78 272 *e*PKPdf PKPdf 00 38 58.7 +1.5
MAW Mawson 120.96 206 PKP PKPdf 00 39 02.1 -1.6
comp=Z,2.7nm,0.8s,baz=292,slow=5.4,SNR=3.2
MAW Mawson 120.96 206 PKIKP PKPdf 00 39 02.1 -1.6
MAW pmax pmax
comp=Z,3.0nm,0.9s
MAW Mawson 120.96 206 PKP PKPdf 00 39 02.1 -1.6
LBTB Lobatse 124.19 264 *e*PKIKP PKPdf 00 39 11.5 +0.2
LBTB Lobatse 124.19 264 *e*PKPdf PKPdf 00 39 11.5 +0.2
SDV Santo Domingo 124.28 38 PKP PKPdf 00 39 11.7 -0.2
comp=Z,8.6nm,0.6s,baz=305,slow=1.8,SNR=17
SDV Santo Domingo 124.28 38 *e*PKPdf PKPdf 00 39 11.6 -0.3
DBIC Dimbokro 124.46 317 PKP PKPdf 00 39 11.4 -0.8
comp=Z,8.4nm,0.9s,baz=17,slow=0.8,SNR=7.5
DBIC Dimbokro 124.46 317 PKIKP PKPdf 00 39 11.4 -0.8
DBIC pmax pmax
comp=Z,8.0nm,0.9s
DBIC Dimbokro 124.46 317 *e*PKPdf PKPdf 00 39 12.7 +0.5
ROSC El Rosal 125.79 45 PKP PKPdf 00 39 16.5 +1.8
comp=Z,2.8nm,0.4s,baz=84,slow=21,SNR=7.0
ROSC El Rosal 125.79 45 *e*PKPdf PKPdf 00 39 16.5 +1.7
BOSA Boshof 126.26 260 PKP PKPdf 00 39 15.8 +0.7
comp=Z,6.8nm,0.9s,baz=9.0,slow=1.2,SNR=9.4
BOSA Boshof 126.26 260 *e*PKPdf PKPdf 00 39 15.4 +0.2
ATAH Atahualpa 132.76 58 PKP PKPdf 00 39 30.4 +2.5
comp=Z,4.1nm,0.8s,baz=296,slow=1.7,SNR=5.4
VNA1 Neumayer--Stat 144.34 197 *e*PKPdf PKPdf 00 39 44.8 -2.6
LPAZ La Paz 146.25 56 PKPbc PKPbc 00 39 53.4 0.0
comp=Z,20nm,0.9s,baz=1.3,slow=5.1,SNR=37
LPAZ La Paz 146.25 56 *e*PKPbc PKPbc 00 39 53.2 -0.2
RCBR Riachuelo 146.90 354 *e*PKPbc PKPbc 00 39 55.1 -0.3
SIV San Ignacio 150.30 46 PKP PKPdf 00 40 00.0 +1.1
comp=Z,16nm,0.8s,baz=122,slow=1.3,SNR=7.8
SIV PKPbc PKPbc 00 40 04.2 +0.1
comp=Z,17nm,0.9s,baz=325,slow=2.1,SNR=33
SIV San Ignacio 150.30 46 PKP PKPdf 00 40 00.0 +1.1
SIV PKPbc PKPbc 00 40 04.2 +0.1
LCO Las Campanas 152.35 79 *e*PKPbc PKPbc 00 40 08.6 +0.1
CFAA Coronel Fontan 155.43 82 PKPbc PKPdf 00 40 14.2 +8.3
comp=Z,0.3nm,0.6s,baz=269,slow=1.0,SNR=5.9
CFAA PKPab PKPab 00 40 31.9 +0.3
comp=Z,1.0nm,0.8s,baz=284,slow=5.2,SNR=6.2
CFAA Coronel Fontan 155.43 82 PKPbc PKPdf 00 40 14.2 +8.3
CFAA PKPab PKPab 00 40 31.9 +0.3
PLCA Paso Flores 156.09 104 *e*PKP2 PKPab 00 40 34.7 +0.5
PLCA Paso Flores 156.09 104 *e*PKPab PKPab 00 40 34.7 +0.6
CPUP Villa Florida 160.42 55 PKPab PKPab 00 40 52.4 -0.8
comp=Z,3.2nm,0.7s,baz=314,slow=5.0,SNR=9.0
CPUP Villa Florida 160.42 55 PKPab PKPab 00 40 52.4 -0.8

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*IDC **14** 00:20:46.3±0.7, 38°.98N×140°.64E, h0km, mb4.9/14, mb1 5.1/14, mb1mx4.8/26, mbtmp4.9/14, Error ellipse: s-maj=25.7km s-min=18.3km az=68.0*
*NEIC **14** 00:20:47.7, 39°.03N×140°.85E, h10km, mb5.4/8, After JMA.*
*JMA **14** 00:20:47.7, 39°.03N×140°.85E, h7km±1km, M4.9*
*ISCJB **14** 00:20:47.2±0.6, 39°.02N±0°.03×140°.86E±0°.06, h20km±4km, mb5.0/21, Error ellipse: s-maj=8.6km s-min=5.3km az=166.7*
*MOS **14** 00:20:48.8±1.2, 38°.93N×140°.69E, h33km, mb5.3/17, Error ellipse: s-maj=35.8km s-min=14.8km az=101.3*
ISC 14 00:20:47.6±0.6, 39°.02N±0°.03×140°.85E±0°.06, h10km±4km, n54, σ0°78/56, mb5.0/21, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.29**	**103**	P	**Pg**	**00 20 53.3**	**-0.2**
JMK				*e*S	**Sg**	**00 20 57.3**	**-0.1**
JRG	**Rokugo**	**0.42**	**336**	P	**Pg**	**00 20 55.9**	**+0.1**
JRG				*e*S	**Sg**	**00 21 01.7**	**+0.4**
JOM	**Ohasama**	**0.57**	**37**	P	**Pg**	**00 20 58.5**	**-0.2**
JOM				*e*S	**Sg**	**00 21 05.8**	**-0.4**
JOU	**Okura**	**0.67**	**193**	S	**Sg**	**00 21 09.8**	**+0.6**
JIO	**Ouri**	**0.68**	**145**	P	**Pg**	**00 21 00.7**	**-0.1**
JIO				*e*S	**Sg**	**00 21 09.7**	**0.0**

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ZALV	**Zalesovo Beam**	**40.27**	**311**	P	**P**	**00 28 24.0**	**-0.4**
	19nm,0.9s,mb4.8,baz=101,slow=7.5,SNR=3.5						
ZALV				PcP	PcP	00 30 28.6	+0.6
	5.3nm,0.7s,baz=78,slow=2.6,SNR=2.8						
MKAR	**Makanchi Array**	**42.72**	**300**	P	**P**	**00 28 43.5**	**-1.1**
	20nm,0.9s,mb4.8,baz=90,slow=11,SNR=6.8						
MKAR	**Makanchi Array**	**42.72**	**300**	P	**P**	**00 28 43.6**	**-1.0**
MKAR				pmax	pmax		
	comp=Z,20nm,0.9s						
KURK	**Kurchatov**	**44.38**	**306**	P	**P**	**00 28 58.3**	**+0.3**
	comp=Z,21nm,0.8s,mb4.9,baz=96,slow=11,SNR=12						
KURK	**Kurchatov**	**44.38**	**306**	P	**P**	**00 28 58.3**	**+0.3**
KURK				pmax	pmax		
	comp=Z,21nm,0.8s,mb4.9						
TKM2	**Tokmak 2**	**48.32**	**297**	*e*P	**P**	**00 29 29.8**	**+0.7**
TKM2				pmax	pmax		
	comp=Z,39nm,0.9s,mb5.4						
TKM2	**Tokmak 2**	**48.32**	**297**	*e*P	**P**	**00 29 29.8**	**+0.7**
	comp=Z,39nm,0.9s,mb5.4						
BVAR	**Borovoye Array**	**48.93**	**311**	P	**P**	**00 29 32.0**	**-1.5**
	comp=Z,5.0nm,0.7s,mb4.7,baz=23,slow=8.0,SNR=5.2						
BVAR				PcP	PcP	00 30 58.5	+0.8
	comp=Z,6.0nm,0.8s,baz=90,slow=5.8,SNR=3.2						
BVAR	**Borovoye Array**	**48.93**	**311**	P	**P**	**00 29 32.0**	**-1.6**
BVAR						00 30 58.5	
BVAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
INK	**Inuvik**	**52.84**	**28**	P	**P**	**00 30 03.9**	**+1.1**
	comp=Z,25nm,0.8s,mb5.2,baz=275,slow=6.0,SNR=6.1						
INK	**Inuvik**	**52.84**	**28**	P	**P**	**00 30 03.9**	**+1.1**
INK				pmax	pmax		
	comp=Z,25nm,0.8s						
ARU	**Arti**	**54.59**	**318**	*e*P	**P**	**00 30 15.5**	**-0.3**
ARU				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.4						
ARU	**Arti**	**54.59**	**318**	*e*P	**P**	**00 30 15.5**	**-0.3**
	comp=Z,30nm,0.7s,mb5.4						
WRAB	**Tennant Creek**	**58.95**	**187**	*e*P	**P**	**00 30 45.9**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.2						
WRAB	**Tennant Creek**	**58.95**	**187**	*e*P	**P**	**00 30 45.9**	**-1.2**
	comp=Z,22nm,0.8s,mb5.2						
WRA	**Warramunga Arr**	**58.96**	**187**	P	**P**	**00 30 46.5**	**-0.7**
	comp=Z,9.9nm,0.6s,mb5.0,baz=22,slow=7.2,SNR=6.6						
WRA	**Warramunga Arr**	**58.96**	**187**	P	**P**	**00 30 46.5**	**-0.6**
WRA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
RES	**Resolute Bay**	**60.80**	**15**	*e*P	**P**	**00 30 59.3**	**+0.1**
RES				pmax	pmax		
	comp=Z,39nm,0.8s,mb5.6						
RES	**Resolute Bay**	**60.80**	**15**	*e*P	**P**	**00 30 59.3**	**+0.1**
	comp=Z,39nm,0.8s,mb5.6						
ARCES	**ARCESS Array B**	**61.99**	**339**	P	**P**	**00 31 06.8**	**-0.5**
	comp=Z,4.7nm,0.7s,mb4.7,baz=68,slow=8.0,SNR=4.6						
ARCES	**ARCESS Array B**	**61.99**	**339**	P	**P**	**00 31 06.8**	**-0.5**
ARCES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ASAR	**Alice Springs**	**62.69**	**187**	P	**P**	**00 31 12.7**	**+0.2**
	comp=Z,11nm,0.8s,mb5.0,baz=358,slow=5.7,SNR=19						
ASAR	**Alice Springs**	**62.69**	**187**	P	**P**	**00 31 12.7**	**+0.2**
ASAR				pmax	pmax		
	comp=Z,11nm,0.8s						
OBN	**Obninsk**	**66.25**	**323**	*e*P	**P**	**00 31 32.5**	**-3.0**
FINES	**FINESS Array B**	**66.86**	**332**	P	**P**	**00 31 39.4**	**+0.1**
	comp=Z,16nm,0.8s,mb5.1,baz=36,slow=8.0,SNR=13						
FINES	**FINESS Array B**	**66.86**	**332**	P	**P**	**00 31 39.4**	**+0.1**
FINES				pmax	pmax		
	comp=Z,16nm,0.8s						
FINES	**FINESS Array B**	**66.86**	**332**	P	**P**	**00 31 39.4**	**+0.1**
GOF	**Gofitskoye**	**68.46**	**311**	*e*P	**P**	**00 31 53.4**	**+3.7**
SUMG	**Summit**	**68.71**	**360**	*e*P	**P**	**00 31 51.2**	**+0.4**
	comp=Z,38nm,1.0s,mb5.3						
KIV	**Kislovodsk**	**69.28**	**310**	*e*P	**P**	**00 31 56.1**	**+1.3**
KIV				pmax	pmax		
	comp=Z,98nm,1.0s,mb5.7						
KIV	**Kislovodsk**	**69.28**	**310**	*e*P	**P**	**00 31 56.1**	**+1.2**
	comp=Z,98nm,1.0s,mb5.7						
NOA	**NORSAR Array B**	**72.19**	**337**	P	**P**	**00 32 12.3**	**+0.1**
	comp=Z,13nm,0.8s,mb4.9,baz=39,slow=6.0,SNR=5.3						
NOA	**NORSAR Array B**	**72.19**	**337**	P	**P**	**00 32 12.3**	**+0.1**
NOA				pmax	pmax		
	comp=Z,13nm,0.8s						
NOA	**NORSAR Array B**	**72.19**	**337**	P	**P**	**00 32 12.3**	**0.0**
AKASG	**Malin Array Be**	**72.47**	**322**	P	**P**	**00 32 13.8**	**-0.2**
	comp=Z,4.4nm,0.3s,mb4.8,baz=44,slow=6.8,SNR=5.4						
AKASG	**Malin Array Be**	**72.47**	**322**	P	**P**	**00 32 13.8**	**-0.2**
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.3s						
AKASG	**Malin Array Be**	**72.47**	**322**	P	**P**	**00 32 13.8**	**-0.2**
AKBB	**Malin Array Si**	**72.47**	**322**	*e*P	**P**	**00 32 13.2**	**-0.8**
DUG	**Dugway**	**76.39**	**49**	*e*P	**P**	**00 32 38.4**	**+1.3**
DUG				pmax	pmax		
	comp=Z,22nm,1.0s,mb5.0						
DUG	**Dugway**	**76.39**	**49**	*e*P	**P**	**00 32 38.4**	**+1.3**
	comp=Z,22nm,1.0s,mb5.0						
PDAR	**Pinedale Array**	**76.59**	**45**	P	**P**	**00 32 39.5**	**+1.4**
	comp=Z,8.0nm,0.8s,mb4.7,baz=301,slow=1.8,SNR=5.9						
BR131	**Keskin Array S**	**77.22**	**311**	*e*P	**P**	**00 32 42.0**	**+0.2**
	comp=Z,7.2nm,0.8s,mb4.7						
BRTR	**Keskin Array B**	**77.22**	**311**	P	**P**	**00 32 42.4**	**+0.7**
	comp=Z,6.0nm,0.7s,mb4.6,baz=105,slow=3.2,SNR=6.7						
BRTR	**Keskin Array B**	**77.22**	**311**	P	**P**	**00 32 42.4**	**+0.7**
BRTR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CLL	**Collm**	**79.16**	**330**	*e*P	**P**	**00 32 52.0**	**-0.3**
GERES	**GERESS Array B**	**80.80**	**328**	P	**P**	**00 33 01.6**	**+0.3**
	comp=Z,3.9nm,0.8s,mb4.4,baz=38,slow=5.6,SNR=4.8						
GERES	**GERESS Array B**	**80.80**	**328**	P	**P**	**00 33 01.6**	**+0.4**
GERES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LPAZ	**La Paz**	**146.02**	**56**	PKPbc	PKPbc	00 40 29.1	+1.1
	comp=Z,15nm,0.9s,baz=327,slow=6.4,SNR=2.9						
SIV	**San Ignacio**	**150.08**	**46**	PKPbc	PKPbc	00 40 39.7	+0.9
	comp=Z,18nm,0.9s,baz=3.6,slow=0.7,SNR=3.4						

JMA 14 00:23:05.8, 38°.98N×140°.85E, h5km±1km, M3.6, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.29**	**95**	P	Pg	00 23 11.5	+0.1
JMK				*e*S	Sg	00 23 15.2	0.0
JRG	**Rokugo**	**0.45**	**338**	P	Pg	00 23 14.9	+0.5
JRG				*e*S	Sg	00 23 21.2	+0.9
JOM	**Ohasama**	**0.60**	**35**	*e*S	Sg	00 23 25.1	-0.1
JOU	**Okura**	**0.63**	**193**	P	Pg	00 23 18.1	+0.2
JOU				*e*S	Sg	00 23 26.5	+0.4
OFUJ	**Ofunato**	**0.65**	**81**	*e*S	Sg	00 23 26.6	0.0
JIO	**Ouri**	**0.65**	**143**	P	Pg	00 23 18.1	-0.2
JIO				*e*S	Sg	00 23 26.7	-0.1

JMA 14 00:23:46.7, 38°.82N×140°.81E, h5km±1km, M3.6, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.35**	**68**	P	Pg	00 23 53.5	+0.1
JMK				*e*S	Sg	00 23 58.3	+0.4
JYK	**Kaneyama**	**0.36**	**286**	S	Sg	00 23 59.1	+0.6
JOU	**Okura**	**0.47**	**194**	*e*S	Sg	00 24 02.2	+0.4
JIO	**Ouri**	**0.56**	**131**	*e*S	Sg	00 24 04.8	+0.1
JYS	**Shirataka**	**0.84**	**225**	P	Pg	00 24 02.8	+0.1
JYS				*e*S	Sg	00 24 13.9	+0.3

JMA 14 00:29:23.3, 38°.87N×140°.68E, h6km, M2.7, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.26**	**281**	P	Pg	00 29 28.5	+0.2
JYK				*e*S	Sg	00 29 32.1	+0.4

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*IDC **14** 00:29:25.6±2.0, 39°.25N×141°.41E, h0km, mb3.9/3, mb1 4.1/5, mb1mx3.6/26, mbtmp4.1/5, ML4.0/2, Error ellipse: s-maj=59.2km s-min=26.8km az=76.0*
*ISCJB **14** 00:29:27.9±1.1, 39°.14N±0°.04×140°.91E±0°.05, h14km±8km, mb4.0/5, Error ellipse: s-maj=8.6km s-min=5.3km az=140.7*
*JMA **14** 00:29:28.3, 39°.13N×140°.91E, h11km±1km, M3.6*
JMA Felt II J1.

*NEIC **14** 00:29:28.4, 39°.13N×140°.92E, h11km, mb4.1/3, After JMA.*
ISC 14 00:29:28.5±0.6, 39°.13N±0°.04×140°.91E±0°.05, h8km±6km, n18, σ0°68/23, mb4.0/5, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.30**	**127**	P	**Pg**	**00 29 34.2**	**-0.2**
JMK				S	**Sg**	**00 29 38.1**	**-0.3**
JOM	**Ohasama**	**0.45**	**41**	P	**Pg**	**00 29 37.1**	**-0.1**
JOM				S	**Sg**	**00 29 43.2**	**+0.1**
JYK	**Kaneyama**	**0.48**	**244**	P	**Pg**	**00 29 37.9**	**+0.1**
JYK				S	**Sg**	**00 29 44.2**	**+0.1**
OFUJ	**Ofunato**	**0.59**	**95**	P	**Pg**	**00 29 39.7**	**-0.2**
OFUJ				S	**Sg**	**00 29 48.0**	**+0.3**
JIO	**Ouri**	**0.76**	**153**	P	**Pg**	**00 29 42.8**	**-0.3**
JOU	**Okura**	**0.79**	**194**	P	**Pg**	**00 29 43.6**	**-0.1**
JOU				S	**Sg**	**00 29 53.9**	**-0.1**
ERM	**Erimo**	**3.35**	**30**	*e*Pn	**Pn**	**00 30 22.7**	**+1.6**
MAJO	**Matsushiro**	**3.36**	**220**	*e*Pn	**Pn**	**00 30 21.9**	**+0.6**
JHJ	**Hachijo jima 2**	**6.07**	**189**	Pn	**Pn**	**00 31 00.2**	**+1.6**
	24nm,0.3s,baz=67,slow=18,SNR=8.9						
KSRS	**Korea Array**	**10.35**	**265**	Pn	**Pn**	**00 32 01.5**	**+4.3**
	0.6nm,0.3s,baz=79,slow=14,SNR=10						
KURK	**Kurchatov**	**44.35**	**306**	P	**P**	**00 37 39.1**	**+0.2**
	0.9nm,0.4s,mb3.8,baz=80,slow=7.9,SNR=4.2						
KURK	**Kurchatov**	**44.35**	**306**	*e*P	**P**	**00 37 38.3**	**-0.7**
	2.4nm,0.8s,mb4.0						
TKM2	**Tokmak 2**	**48.31**	**297**	*e*P	**P**	**00 38 10.2**	**0.0**
	1.6nm,0.7s,mb4.2						
ABKAR	**Akbulak array**	**56.30**	**309**	*e*P	**P**	**00 39 08.1**	**-1.4**
	0.6nm,0.5s,mb3.9						
WRA	**Warramunga Arr**	**59.09**	**187**	P	**P**	**00 39 28.5**	**-0.8**
	0.5nm,0.3s,mb4.0,baz=5.9,slow=7.4,SNR=4.6						
WRA	**Warramunga Arr**	**59.09**	**187**	P	**P**	**00 39 28.5**	**-0.8**
FINES	**FINESS Array B**	**66.78**	**332**	P	**P**	**00 40 19.5**	**-0.5**
	1.0nm,0.8s,mb3.9,baz=60,slow=9.1,SNR=3.5						
FINES	**FINESS Array B**	**66.78**	**332**	P	**P**	**00 40 19.5**	**-0.5**

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*IDC **14** 00:30:47.1±0.6, 38°.91N×140°.67E, h0km, mb4.0/15, mb1 4.2/15, mb1mx4.1/25, mbtmp4.0/15, ML3.0/1, Error ellipse: s-maj=19.5km s-min=12.9km az=116.0*
*NEIC **14** 00:30:48.6, 38°.91N×140°.73E, h7km, mb4.5/14, After JMA.*
NEIC Recorded [2 JMA] in Iwate and Miyagi; [1 JMA] in Akita and Yamagata.
*JMA **14** 00:30:48.7, 38°.91N×140°.73E, h6km±1km, M4.0*
JMA Felt II J1.
*ISCJB **14** 00:30:48.6±0.8, 38°.92N±0°.04×140°.71E±0°.04, h15km±5km, mb4.2/27, Error ellipse: s-maj=6.8km s-min=5.6km az=16.0*
*MOS **14** 00:30:50.7±1.2, 38°.96N×140°.65E, h33km, mb4.3/14, Error ellipse: s-maj=15.6km s-min=10.3km az=82.9*
ISC 14 00:30:48.8±0.5, 38°.91N±0°.04×140°.73E±0°.04, h8km±3km, n74, σ0°84/75, mb4.2/27, 1C-1D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.29**	**271**	⇓P	**Pg**	**00 30 54.5**	**+0.1**
JYK				S	**Sg**	**00 30 58.4**	**+0.1**
JMK	**Ichinoseki**	**0.39**	**84**	P	**Pg**	**00 30 56.0**	**-0.3**
JMK				S	**Sg**	**00 31 01.2**	**-0.2**
JRG	**Rokugo**	**0.49**	**351**	P	**Pg**	**00 30 58.4**	**+0.1**
JOU	**Okura**	**0.55**	**185**	⇑P	**Pg**	**00 30 59.3**	**0.0**
JIO	**Ouri**	**0.67**	**133**	P	**Pg**	**00 31 01.2**	**-0.4**
JIO				S	**Sg**	**00 31 10.1**	**-0.2**
JOM	**Ohasama**	**0.71**	**38**	P	**Pg**	**00 31 02.3**	**-0.2**
MAJO	**Matsushiro**	**3.10**	**221**	*e*P	**Pn**	**00 31 39.3**	**+1.4**
MAT	**Matsushiro**	**3.10**	**221**	P	**Pn**	**00 31 38.5**	**+0.6**
MAT				S	**Sn**	**00 32 23.6**	**+8.5**
MJAR	**Matsushiro Arr**	**3.10**	**221**	Pn	**Pn**	**00 31 38.5**	**+0.6**
	2.1nm,0.3s,baz=28,slow=14,SNR=4.2						
MJAR				Pg	**Pg**	**00 31 44.1**	**-4.0**
	7.3nm,0.3s,baz=26,slow=15,SNR=6.8						
MJAR				Lg		00 32 24.1	
	6.1nm,0.3s,baz=315,slow=2.4,SNR=5.0						
MJAR	**Matsushiro Arr**	**3.10**	**221**	P	**Pn**	**00 31 38.5**	**+0.6**
MJAR						00 32 24.2	
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ	**Asahikawa**	**5.39**	**14**	Pn	**Pn**	**00 32 12.0**	**+2.6**
	comp=Z,3.3nm,0.3s,baz=251,slow=11,SNR=5.9						
ASAJ	**Asahikawa**	**5.39**	**14**	P	**Pn**	**00 32 12.0**	**+2.6**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
KSRS	**Korea Array**	**10.19**	**266**	Pn	**Pn**	**00 33 18.1**	**+2.9**
	comp=Z,0.7nm,0.3s,baz=78,slow=14,SNR=6.4						
KSRS	**Korea Array**	**10.19**	**266**	P	**Pn**	**00 33 18.2**	**+2.9**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BILL	**Bilibino**	**32.39**	**18**	*e*P	**P**	**00 37 18.4**	**-0.1**
BILL	**Bilibino**	**32.39**	**18**	*e*P	**P**	**00 37 18.4**	**-0.1**
ZALV	**Zalesovo Beam**	**40.27**	**311**	PcP	PcP	00 40 29.0	-0.5
	comp=Z,0.7nm,0.4s,baz=111,slow=3.3,SNR=4.1						
MK31	**Makanchi Array**	**42.69**	**300**	*e*P	**P**	**00 38 45.2**	**-0.7**
MKAR	**Makanchi Array**	**42.69**	**300**	P	**P**	**00 38 45.2**	**-0.7**
	comp=Z,0.7nm,0.8s,mb3.5,baz=75,slow=13,SNR=3.1						
MKAR	**Makanchi Array**	**42.69**	**300**	P	**P**	**00 38 45.2**	**-0.7**
MKAR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KURK	**Kurchatov**	**44.37**	**307**	P	**P**	**00 38 59.3**	**-0.1**
	comp=Z,5.6nm,0.6s,mb4.5,baz=81,slow=8.4,SNR=17						
KURK	**Kurchatov**	**44.37**	**307**	*e*P	**P**	**00 38 58.1**	**-1.3**
KURK				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.7						
KURK	**Kurchatov**	**44.37**	**307**	*e*P	**P**	**00 38 58.1**	**-1.3**
	comp=Z,18nm,1.1s,mb4.7						
KTH	**Kantishna Hill**	**46.51**	**35**	*e*P	**P**	**00 39 17.4**	**+1.2**
	comp=Z,8.8nm,1.4s,mb4.5						
COLD	**Coldfoot**	**46.79**	**30**	*e*P	**P**	**00 39 18.4**	**+0.1**
	comp=Z,1.5nm,0.8s,mb4.0						
BVAR	**Borovoye Array**	**48.92**	**311**	P	**P**	**00 39 33.5**	**-1.6**
	comp=Z,0.6nm,0.5s,mb3.9,baz=71,slow=9.9,SNR=4.0						
BVAR				PcP	PcP	00 40 59.0	-0.2
	comp=Z,0.7nm,0.5s,baz=109,slow=2.8,SNR=5.3						

comp=Z,8.8nm,1.0s,mb4.6
NB2 NORSAR Subarra 72.25 337 P **P** **00 42 13.2 -0.9**
comp=Z,2.8nm,1.0s,mb4.2,baz=38,slow=6.2
NOA NORSAR Array B 72.25 337 P **P** **00 42 13.0 -1.1**
comp=Z,1.1nm,0.8s,mb3.8,baz=38,slow=6.1,SNR=4.3
NOA NORSAR Array B 72.25 337 P **P** **00 42 13.0 -1.1**
NOA pmax pmax
comp=Z,1.0nm,0.8s
AKASG Malin Array Be 72.49 322 P **P** **00 42 14.9 -0.8**
comp=Z,0.5nm,0.3s,mb3.9,baz=46,slow=5.7,SNR=5.4
AKASG Malin Array Be 72.49 322 P **P** **00 42 14.9 -0.8**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
LRM Limekiln Ridge 73.19 44 *e*P **P** **00 42 20.7 +0.7**
comp=Z,11nm,0.6s,mb5.0
CMB Columbia Colle 73.22 55 *e*P **P** **00 42 21.2 +0.9**
CMB pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
CMB Columbia Colle 73.22 55 *e*P **P** **00 42 21.1 +0.8**
comp=Z,1.3nm,0.5s,mb4.1
NVAR Mina Array Bea 74.30 53 P **P** **00 42 27.7 +1.1**
comp=Z,0.6nm,0.5s,mb3.8,baz=297,slow=6.0,SNR=9.4
BUR08 Bucovina Ar. S 76.50 321 *e*P **P** **00 42 39.0 -0.1**
DUG Dugway 76.54 49 *e*P **P** **00 42 40.5 +1.1**
DUG pmax pmax
comp=Z,42nm,2.1s,mb5.0
DUG Dugway 76.54 49 *e*P **P** **00 42 40.5 +1.1**
comp=Z,42nm,2.1s,mb5.0
PDAR Pinedale Array 76.74 45 P **P** **00 42 40.8 +0.3**
comp=Z,0.9nm,0.6s,mb3.9,baz=275,slow=2.0,SNR=8.6
BRTR Keskin Array B 77.21 311 P **P** **00 42 44.4 +1.1**
comp=Z,0.7nm,0.6s,mb3.8,baz=58,slow=4.7,SNR=4.5
BRTR Keskin Array B 77.21 311 P **P** **00 42 44.4 +1.1**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
LDFC Landfair 78.39 54 *e*P **P** **00 42 49.8 -0.1**
SRU San Rafael 78.58 49 *e*P **P** **00 42 51.5 +0.6**
SRU pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
SRU San Rafael 78.58 49 *e*P **P** **00 42 51.5 +0.6**
comp=Z,1.9nm,0.6s,mb4.2
CLL Collm 79.20 330 *e*P **P** **00 42 55.0 +0.9**
CLL Collm 79.20 330 *e*P **P** **00 42 55.0 +0.9**
GERES GERESS Array B 80.84 328 P **P** **00 43 02.1 -0.8**
comp=Z,0.5nm,0.6s,mb3.7,baz=36,slow=5.6,SNR=5.8
GERES GERESS Array B 80.84 328 P **P** **00 43 02.1 -0.9**
GERES pmax pmax
comp=Z,1.0nm,0.6s
ECSD EROS Data Cent 82.78 38 *e*P **P** **00 43 12.7 -0.6**
comp=Z,34nm,1.9s,mb5.0
TXAR Lajitas Array 89.40 52 P **P** **00 43 46.2 0.0**
comp=Z,0.1nm,0.5s,mb3.4,baz=299,slow=3.7,SNR=5.0
LPAZ La Paz 146.16 56 PKPbc PKPbc 00 50 29.1 -0.9
comp=Z,2.2nm,0.9s,baz=347,slow=3.5,SNR=6.9
LPAZ La Paz 146.16 56 PKP2 PKPbc 00 50 29.1 -0.8
LPAZ pmax pmax
comp=Z,2.0nm,0.9s
LPAZ La Paz 146.16 56 *e*PKPbc PKPbc 00 50 30.4 +0.4

JMA 14 00:38:55.8, 39°.02N×140°.80E, h5km±1km, M3.5, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.33**	**102**	P	Pg	00 39 02.2	-0.1
JMK				S	Sg	00 39 06.9	+0.3
JYK	**Kaneyama**	**0.36**	**254**	P	Pg	00 39 02.9	+0.2
JYK				S	Sg	00 39 07.9	+0.5
JRG	**Rokugo**	**0.40**	**341**	P	Pg	00 39 03.8	+0.3
JRG				S	Sg	00 39 09.4	+0.7

*JMA **14** 00:40:13.9, 39°.13N×140°.98E, h10km±1km, M3.4*
JMA Felt II J1.
*NEIC **14** 00:40:14.0, 39°.13N×140°.97E, h9km, mb4.4/5, After JMA.*
*IDC **14** 00:40:15.8±1.1, 39°.59N×140°.73E, h0km, mb3.7/6, mb1 3.8/7, mb1mx3.6/26, mbtmp3.6/7, ML3.2/1, Error ellipse: s-maj=30.3km s-min=24.3km az=66.0*
ISC 14 00:40:14.0±1.1, 39°.12N±0°.06×140°.97E±0°.08, h10km±6km, n20, σ0s87/21, mb3.9/11, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRG	**Rokugo**	**0.38**	**316**	S	**Sg**	**00 40 27.1**	**+0.6**
JOM	**Ohasama**	**0.43**	**36**	*e*S	**Sg**	**00 40 28.0**	**-0.2**
JYK	**Kaneyama**	**0.52**	**247**	S	**Sg**	**00 40 30.9**	**0.0**
MJAR	**Matsushiro Arr**	**3.38**	**221**	Pn	**Pn**	**00 41 13.8**	**+7.0**
	1.9nm,0.3s,baz=25,slow=18,SNR=5.9						
MJAR	**Matsushiro Arr**	**3.38**	**221**	Pn	**Pn**	**00 41 13.8**	**+7.0**
MAJO	**Matsushiro**	**3.38**	**221**	*e*Pg	**Pg**	**00 41 17.6**	**-1.2**
MAT	**Matsushiro**	**3.38**	**221**	P	**Pn**	**00 41 08.7**	**+1.9**
MAT				*e*S	**Sn**	**00 41 52.3**	**+5.4**
KSRS	**Korea Array**	**10.39**	**265**	Pn	**Pn**	**00 42 47.8**	**+4.7**
	1.1nm,0.3s,baz=77,slow=14,SNR=16						
ZALV	**Zalesovo Beam**	**40.27**	**311**	P	**P**	**00 47 50.5**	**-0.3**
	0.5nm,0.4s,mb3.6,baz=71,slow=9.8,SNR=5.2						
MK31	**Makanchi Array**	**42.74**	**300**	*e*P	**P**	**00 48 10.5**	**-0.7**
MKAR	**Makanchi Array**	**42.74**	**300**	P	**P**	**00 48 11.6**	**+0.4**
	0.7nm,0.7s,mb3.5,baz=80,slow=10,SNR=4.7						
KURK	**Kurchatov**	**44.39**	**306**	P	**P**	**00 48 24.6**	**+0.2**
	1.9nm,0.8s,mb3.9,baz=83,slow=8.6,SNR=9.5						
TKM2	**Tokmak 2**	**48.35**	**297**	*e*P	**P**	**00 48 55.6**	**-0.1**
	3.5nm,1.0s,mb4.3						
BVAR	**Borovoye Array**	**48.92**	**311**	P	**P**	**00 48 59.8**	**-0.1**
	0.5nm,0.6s,mb3.7,baz=52,slow=7.5,SNR=3.8						
ARU	**Arti**	**54.57**	**317**	*e*P	**P**	**00 49 41.8**	**-0.3**
	2.3nm,0.6s,mb4.4						
ABKAR	**Akbulak array**	**56.34**	**309**	*e*P	**P**	**00 49 55.2**	**+0.3**
	0.9nm,0.6s,mb4.0						
WRA	**Warramunga Arr**	**59.08**	**187**	P	**P**	**00 50 20.7**	**+6.3**
	1.0nm,0.8s,mb3.9,baz=5.5,slow=7.3,SNR=3.9						
KIV	**Kislovodsk**	**69.28**	**310**	*e*P	**P**	**00 51 20.2**	**-1.0**
	6.2nm,1.0s,mb4.5						
KIEV	**Kiev**	**72.45**	**322**	*e*P	**P**	**00 51 39.2**	**-1.1**
	1.4nm,0.5s,mb4.2						
NVAR	**Mina Array Bea**	**74.02**	**53**	P	**P**	**00 51 53.0**	**+3.2**
	0.5nm,0.9s,mb3.4,baz=297,slow=8.0,SNR=3.2						

*IDC **14** 00:49:02.8±4.3, 38°.97N×141°.10E, h0km, mb3.8/1, mb1 3.7/3, mb1mx3.3/26, mbtmp3.5/3, ML3.1/2, Error ellipse: s-maj=74.2km s-min=43.4km az=174.0*
*NEIC **14** 00:49:03.4, 39°.09N×140°.91E, h11km, mb4.1/2, After JMA.*
*JMA **14** 00:49:03.4, 39°.09N×140°.91E, h9km±1km, M3.2*
JMA Felt I J1.
*ISCJB **14** 00:49:03.0±0.5, 39°.10N±0°.04×140°.92E±0°.04, h21km±5km, mb3.9/3, Error ellipse: s-maj=6.2km s-min=5.4km az=154.9*
ISC 14 00:49:03.4±0.5, 39°.09N±0°.03×140°.92E±0°.04, h12km±4km, n15, σ0s84/22, mb3.9/3, 1D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.27**	**120**	P	**Pg**	**00 49 09.1**	**+0.1**
JMK				S	**Sg**	**00 49 12.6**	**-0.1**
JRG	**Rokugo**	**0.38**	**324**	P	**Pg**	**00 49 11.0**	**0.0**
JRG				S	**Sg**	**00 49 16.3**	**+0.2**
JYK	**Kaneyama**	**0.47**	**249**	⇓P	**Pg**	**00 49 12.4**	**-0.2**
JYK				S	**Sg**	**00 49 18.3**	**-0.6**
JOM	**Ohasama**	**0.48**	**37**	S	**Sg**	**00 49 19.0**	**-0.3**
OFUJ	**Ofunato**	**0.58**	**91**	P	**Pg**	**00 49 14.7**	**-0.1**
OFUJ				S	**Sg**	**00 49 23.1**	**+0.6**
JOU	**Okura**	**0.75**	**196**	P	**Pg**	**00 49 18.0**	**+0.1**
JOU				S	**Sg**	**00 49 27.9**	**+0.1**
MAJO	**Matsushiro**	**3.33**	**221**	*e*Pn	**Pn**	**00 49 54.1**	**-1.2**
MAT	**Matsushiro**	**3.33**	**221**	P	**Pn**	**00 49 56.0**	**+0.7**
MAT				*e*S	**Sn**	**00 50 40.4**	**+5.6**
MJAR	**Matsushiro Arr**	**3.33**	**221**	Pn	**Pn**	**00 49 56.6**	**+1.2**
	0.7nm,0.3s,baz=26,slow=13,SNR=5.3						
MJAR				Pg	**Pg**	**00 50 03.3**	**-3.9**
	1.3nm,0.3s,baz=25,slow=15,SNR=8.4						
ERM	**Erimo**	**3.38**	**30**	*e*Pn	**Pn**	**00 49 55.5**	**-0.6**
KSRS	**Korea Array**	**10.35**	**265**	Pn	**Pn**	**00 51 34.6**	**+2.9**
	0.4nm,0.3s,baz=90,slow=13,SNR=7.5						
MK31	**Makanchi Array**	**42.72**	**300**	*e*P	**P**	**00 56 60.0**	**-0.3**
KURK	**Kurchatov**	**44.38**	**306**	*e*P	**P**	**00 57 13.9**	**+0.3**
	1.3nm,0.6s,mb3.8						
WRAB	**Tennant Creek**	**59.03**	**187**	*e*P	**P**	**00 59 01.1**	**-2.1**
	0.9nm,0.4s,mb4.2						
WRA	**Warramunga Arr**	**59.04**	**187**	P	**P**	**00 59 03.8**	**+0.5**
	0.5nm,0.5s,mb3.8,baz=5.4,slow=7.3,SNR=3.6						

JMA 14 00:51:25.3, 38°.80N×140°.78E, h2km±1km, M1.9, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.38**	**66**	P	Pg	00 51 32.9	+0.4
JMK				*e*S	Sg	00 51 38.1	+0.7

JMA 14 00:51:38.3, 38°.97N×140°.84E, h10km±2km, M2.6, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRG	**Rokugo**	**0.46**	**339**	P	Pg	00 51 47.4	+0.2
JRG				*e*S	Sg	00 51 54.3	+1.1
JOM	**Ohasama**	**0.61**	**35**	S	Sg	00 51 58.4	+0.2
JOU	**Okura**	**0.62**	**193**	S	Sg	00 51 58.6	+0.2

JMA 14 00:51:56.9±0.1, 39°.06N×140°.93E, h11km±3km, M2.7, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOM	**Ohasama**	**0.50**	**34**	S	Sg	00 52 12.7	-0.6

JMA 14 00:52:28.3, 38°.87N×140°.69E, h7km±1km, M2.6, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.26**	**281**	P	Pg	00 52 33.7	+0.2
JYK				S	Sg	00 52 37.4	+0.4
JMK	**Ichinoseki**	**0.42**	**79**	P	Pg	00 52 36.3	-0.2
JMK				S	Sg	00 52 41.9	-0.1

*BJI **14** 00:52:37.5, 38°.91N×141°.33E, h12km, mB5.4/5, mb4.8/27, Ms5.3/16, Ms7 5.2/16*
*IDC **14** 00:52:41.5±0.5, 39°.14N×140°.90E, h0km, mb4.5/24, mb1 4.6/26, mb1mx4.6/28, mbtmp4.5/26, ML3.8/2, Error ellipse: s-maj=15.0km s-min=11.2km az=115.0*
*ISCJB **14** 00:52:42.2±0.5, 39°.09N±0°.02×140°.86E±0°.02, h14km±2km, mb4.7/148, MS5.3/5, Error ellipse: s-maj=3.6km s-min=2.8km az=169.7*
*JMA **14** 00:52:42.4, 39°.09N×140°.90E, h11km±1km, M4.7*
JMA Felt III J1.
*NEIC **14** 00:52:42.3, 39°.09N×140°.91E, h13km, mb4.8/97, After JMA.*
NEIC Recorded [3 JMA] in Iwate; [2 JMA] in Akita and Miyagi; [1 JMA] in Aomori.
*MOS **14** 00:52:45.4±0.8, 39°.13N×140°.79E, h33km, mb5.0/77, Error ellipse: s-maj=7.7km s-min=4.8km az=102.3*
*SZGRF **14** 00:52:47.7, 39°.84N×141°.55E, h33km, mb5.0, Eastern Honshu, Japan*
ISC 14 00:52:42.6±0.4, 39°.10N±0°.02×140°.88E±0°.02, h7km±2km, h16km±1.2km: pP-P, n591, σ0s77/600, mb4.7/148, MS5.3/5, 109C-124D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.30**	**119**	⇓P	**Pg**	**00 52 47.9**	**-0.7**
JMK				S	**Sg**	**00 52 51.8**	**-0.8**
JRG	**Rokugo**	**0.35**	**328**	⇓P	**Pg**	**00 52 49.9**	**+0.4**
JRG				S	**Sg**	**00 52 55.9**	**+1.8**
JYK	**Kaneyama**	**0.44**	**246**	P	**Pg**	**00 52 51.4**	**+0.2**
JYK				S	**Sg**	**00 52 57.4**	**+0.5**
JOM	**Ohasama**	**0.49**	**41**	P	**Pg**	**00 52 51.7**	**-0.4**
JOM				*e*S	**Sg**	**00 52 58.5**	**-0.1**
OFUJ	**Ofunato**	**0.62**	**91**	⇓P	**Pg**	**00 52 53.8**	**-0.7**
JIO	**Ouri**	**0.74**	**150**	P	**Pg**	**00 52 55.9**	**-1.0**
JIO				S	**Sg**	**00 53 05.9**	**-0.6**
JOU	**Okura**	**0.75**	**193**	P	**Pg**	**00 52 56.9**	**-0.1**
JOU				S	**Sg**	**00 53 06.8**	**0.0**
MJAR	**Matsushiro Arr**	**3.31**	**220**	Pn	**Pn**	**00 53 36.2**	**+1.4**
	4.8nm,0.3s,baz=55,slow=28,SNR=23						
MJAR				Lg		00 54 29.0	
	6.0nm,0.3s,baz=36,slow=17,SNR=8.6						
MJAR	**Matsushiro Arr**	**3.31**	**220**	Pn	**Pn**	**00 53 36.2**	**+1.4**
MJAR				Lg		00 54 29.0	
MAJO	**Matsushiro**	**3.31**	**220**	*e*P	**Pn**	**00 53 36.6**	**+1.7**
MAT	**Matsushiro**	**3.31**	**220**	P	**Pn**	**00 53 36.4**	**+1.5**
MAT				*e*S	**Sn**	**00 54 19.7**	**+5.2**
ERM	**Erimo**	**3.39**	**30**	*e*P	**Pn**	**00 53 36.5**	**+0.6**
ASAJ	**Asahikawa**	**5.18**	**14**	Pn	**Pn**	**00 54 02.5**	**+2.0**
	4.9nm,0.3s,baz=249,slow=14,SNR=9.3						
ASAJ	**Asahikawa**	**5.18**	**14**	P	**Pn**	**00 54 02.5**	**+2.0**
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
JHJ	**Hachijo jima 2**	**6.03**	**189**	Pn	**Pn**	**00 54 13.9**	**+1.7**
	comp=Z,14nm,0.3s,baz=110,slow=23,SNR=4.6						
JHJ				Sn	**Sn**	**00 55 22.7**	**+1.1**
	comp=Z,40nm,0.3s,baz=87,slow=23,SNR=9.0						
VLA	**Vladivostok**	**7.88**	**304**	*e*P	**Pn**	**00 54 46.5**	**+8.9**
VLA				*e*		00 56 14.1	
VLA				pmax	pmax		
	comp=Z,37nm,1.5s						
YSS	**Yuzh-Sakhalins**	**7.97**	**9**	⇓*e*P	**Pn**	**00 54 40.0**	**+1.2**
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
YSS	**Yuzh-Sakhalins**	**7.97**	**9**	*e*Pn	**Pn**	**00 54 40.1**	**+1.3**
MDJ	**Mudanjiang**	**10.06**	**307**	P	**Pn**	**00 55 06.3**	**-1.1**
MDJ				S	**Sn**	**00 56 59.3**	**-1.2**
MDJ				PcP	PcP	01 01 18.3	+0.6
MDJ				pmax	pmax		
	comp=Z,13nm,1.4s						
MDJ				LR	LR		
	comp=N,8μm,15.3s						
MDJ				LR	LR		
	comp=E,9μm,18.2s						
MDJ				LR	LR		
	comp=Z,9μm,15.7s						
HABR	**Khabarovsk**	**10.27**	**338**	*e*P	**Pn**	**00 55 15.8**	**+5.5**
KSRS	**Korea Array**	**10.32**	**265**	Pn	**Pn**	**00 55 14.1**	**+3.1**
	comp=Z,2.3nm,0.3s,baz=80,slow=14,SNR=52						
KSRS				Sn	**Sn**	**00 57 13.2**	**+6.3**
	comp=Z,1.4nm,0.3s,baz=77,slow=24,SNR=18						
KSRS	**Korea Array**	**10.32**	**265**	P	**Pn**	**00 55 14.1**	**+3.1**
KSRS						00 57 13.2	
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KSRS				smax			
	comp=N,1.0nm,0.3s						
KLR	**Kul'dur**	**12.05**	**330**	*e*P	**Pn**	**00 55 33.0**	**-1.7**
CN2	**Changchun**	**12.49**	**297**	*e*P	**Pn**	**00 55 45.8**	**+5.1**
CN2				*e*sP		00 55 52.3	
CN2				*e*S	**Sn**	**00 58 02.8**	**+2.8**
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,6.0s						
BJI	**Beijing**	**19.06**	**281**	P	**Pn**	**00 57 04.6**	**-1.5**
BJI				pmax	pmax		
	comp=Z,14nm,0.7s						
BJT	**Baijiatuau**	**19.06**	**281**	*e*P	**Pn**	**00 57 04.9**	**-1.3**
NJ2	**Nanjing**	**19.22**	**255**	*e*P	**Pn**	**00 57 07.3**	**-0.8**
NJ2				pP	pP	00 57 10.3	+1.2
NJ2				PP		00 57 23.3	
NJ2				S	**Sn**	**01 00 37.3**	**-6.4**
NJ2				pmax	pmax		
	comp=Z,210nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,860nm,4.2s						
NJ2				LR	LR		
	comp=N,240nm,14.2s						
NJ2				LR	LR		
	comp=E,2μm,15.6s						
NJ2				LR	LR		
	comp=Z,2μm,13.4s						
CLNS	**Chul'man**	**20.63**	**335**	*e*P	**P**	**00 57 19.7**	**-2.7**
CLNS				pmax	pmax		
	comp=Z,18nm,0.9s						
CLNS				pmax	pmax		
	comp=N,13nm,0.9s						
HHC	**Hu-ho-hao-te**	**22.49**	**284**	*e*P	**P**	**00 57 41.9**	**-0.6**
HHC				pmax	pmax		
	comp=Z,21nm,0.6s,mb4.7						
YAK	**Yakutsk**	**23.96**	**347**	*e*P	**P**	**00 57 54.3**	**-3.0**
YAK				*e*		01 02 10.2	
YAK				pmax	pmax		
	comp=Z,52nm,1.0s,mb4.9						
YAK				pmax	pmax		
	comp=E,6.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,16nm,1.0s						
YAK	**Yakutsk**	**23.96**	**347**	*e*P	**P**	**00 57 57.0**	**-0.3**
	comp=N,43nm,0.6s,mb5.0						
SEY	**Seymchan**	**24.86**	**13**	*c*eP	**P**	**00 58 06.5**	**+1.1**
ULN	**Ulaanbaatar**	**25.89**	**301**	*e*P	**P**	**00 58 14.0**	**-0.9**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.8						
ULN	**Ulaanbaatar**	**25.89**	**301**	*e*P	**P**	**00 58 14.0**	**-0.9**
	comp=Z,1.5nm,0.6s,mb3.7						
SONM	**Songino Array**	**26.32**	**301**	P	**P**	**00 58 19.6**	**+0.7**
	comp=Z,1.5nm,0.4s,mb3.9,baz=94,slow=12,SNR=4.0						
SONM	**Songino Array**	**26.32**	**301**	P	**P**	**00 58 19.6**	**+0.7**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ENH	**Enshi**	**27.17**	**261**	*e*P	**P**	**00 58 26.3**	**-0.3**
	comp=Z,20nm,0.9s,mb4.7						
ZAK	**Zakamensk**	**28.69**	**306**	*e*P	**P**	**00 58 37.5**	**-2.6**
LZH	**Lanzhou**	**29.37**	**276**	*e*P	**P**	**00 58 46.1**	**-0.1**
LZH				pP	pP	00 58 50.0	+1.7
LZH				PP	PP	00 59 40.0	-12
LZH				*e*S	**S**	**01 03 36.0**	**-4.1**
LZH				LR	LR		
	comp=N,10μm,12.5s						
LZH				LR	LR		
	comp=Z,11μm,13.3s,MS5.7						
GYA	**Guiyang**	**31.22**	**257**	⇑*i*P	**P**	**00 59 02.6**	**-0.1**
GYA				PP	PP	01 00 04.8	-8.3
GYA				PcP	PcP	01 01 59.4	+2.1
GYA				S	**S**	**01 04 04.6**	**-4.7**
GYA				SS	SS	01 05 52.8	-30
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
GYA				pmax	pmax		
	comp=Z,160nm,13.2s						
GYA				LR	LR		
	comp=N,470nm,16.8s,MS4.5						
GYA				LR	LR		
	comp=E,560nm,14.6s,MS4.5						
GYA				LR	LR		
	comp=Z,980nm,13.7s,MS4.6						
CD2	**Chengdu**	**31.31**	**266**	*e*P	**P**	**00 59 04.3**	**+0.8**
CD2				pP	pP	00 59 08.9	+3.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
BILL	**Bilibino**	**32.18**	**18**	*e*P	**P**	**00 59 11.0**	**+0.3**
BILL				*e*		01 01 59.6	
BILL				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.7						
BILL	**Bilibino**	**32.18**	**18**	*e*P	**P**	**00 59 09.9**	**-0.8**
	comp=Z,14nm,1.2s,mb4.7						
TIXI	**Tiksi**	**33.19**	**353**	*e*P	**P**	**00 59 18.6**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
TIXI	**Tiksi**	**33.19**	**353**	*e*P	**P**	**00 59 18.6**	**-0.9**
	comp=Z,8.8nm,1.2s,mb4.6						
QIZ	**Qiongzhong**	**33.45**	**242**	P	**P**	**00 59 21.3**	**-1.0**
QIZ				sP	sP	00 59 33.1	+7.8
QIZ				S	**S**	**01 04 41.4**	**-2.8**
QIZ				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.5						
QIZ				LR	LR		
	comp=N,5μm,18.7s						
QIZ				LR	LR		
	comp=Z,9μm,16.8s,MS5.5						
KMI	**Kunming**	**34.91**	**258**	P	**P**	**00 59 36.0**	**+1.0**
KMI				pP	pP	00 59 38.8	+1.7
KMI				PP	PP	01 00 53.3	-0.7
KMI				S	**S**	**01 05 05.8**	**-0.9**
KMI				SS	SS	01 07 18.4	-20
KMI				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
KMI				LR	LR		
	comp=N,6μm,19.0s,MS5.5						
KMI				LR	LR		
	comp=E,3μm,16.6s,MS5.5						
KMI				LR	LR		
	comp=Z,7μm,15.8s,MS5.5						
WMQ	**Urumqi**	**39.56**	**295**	*e*P	**P**	**01 00 14.0**	**-0.2**
KKM	**Kota Kinabalu**	**39.74**	**220**	*e*P	**P**	**01 00 16.7**	**+0.7**
	comp=Z,6.4nm,0.5s,mb4.6						
ZALV	**Zalesovo Beam**	**40.23**	**311**	P	**P**	**01 00 19.2**	**-0.5**
	comp=Z,7.4nm,0.8s,mb4.5,baz=79,slow=7.7,SNR=29						
ZALV				PcP	PcP	01 02 23.2	-0.2
	comp=Z,2.0nm,0.6s,baz=91,slow=3.0,SNR=6.3						
ZALV	**Zalesovo Beam**	**40.23**	**311**	P	**P**	**01 00 19.2**	**-0.4**
ZALV						01 02 23.2	
ZALV				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
ZALV	**Zalesovo Beam**	**40.23**	**311**	P	**P**	**01 00 19.2**	**-0.5**
ZALV				PcP	PcP	01 02 23.2	-0.2
NVS	**Novosibirsk**	**41.13**	**312**	*i*P	**P**	**01 00 26.6**	**-0.4**
CHTO	**Chiang Mai**	**41.44**	**253**	*e*P	**P**	**01 00 29.9**	**-0.1**
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.0						
CHTO	**Chiang Mai**	**41.44**	**253**	*e*P	**P**	**01 00 29.9**	**-0.1**
	comp=Z,3.4nm,0.7s,mb4.1						
CMAR	**Chiang Mai Arr**	**41.66**	**253**	P	**P**	**01 00 32.8**	**+1.0**
	comp=Z,1.2nm,0.4s,mb3.9,baz=54,slow=6.8,SNR=5.1						
CMAR				PcP	PcP	01 02 29.4	+0.7
	comp=Z,1.3nm,0.4s,baz=19,slow=2.0,SNR=4.9						
CMAR	**Chiang Mai Arr**	**41.66**	**253**	P	**P**	**01 00 32.8**	**+1.0**
CMAR						01 02 29.4	
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MK31	**Makanchi Array**	**42.69**	**300**	*e*P	**P**	**01 00 39.7**	**-0.2**
MKAR	**Makanchi Array**	**42.69**	**300**	P	**P**	**01 00 39.5**	**-0.4**
	comp=Z,6.3nm,0.7s,mb4.4,baz=75,slow=14,SNR=46						
MKAR	**Makanchi Array**	**42.69**	**300**	P	**P**	**01 00 39.6**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TTA	**Tatalina**	**43.99**	**36**	*e*P	**P**	**01 00 50.7**	**+0.6**
KURK	**Kurchatov**	**44.35**	**306**	*c*eP	**P**	**01 00 52.7**	**-0.5**
KURK				pmax	pmax		
	comp=Z,24nm,1.0s,mb4.9						
KURK	**Kurchatov**	**44.35**	**306**	*e*P	**P**	**01 00 51.6**	**-1.6**
	comp=Z,16nm,0.7s,mb4.9						
KDAK	**Kodiak Island**	**45.87**	**43**	P	**P**	**01 01 04.5**	**-0.7**
	comp=Z,9.2nm,0.8s,mb4.8,baz=329,slow=2.7,SNR=4.4						
KDAK	**Kodiak Island**	**45.87**	**43**	*c*eP	**P**	**01 01 06.0**	**+0.8**
KDAK	**Kodiak Island**	**45.87**	**43**	P	**P**	**01 01 04.5**	**-0.7**
ODAN	**Odare**	**45.90**	**271**	*e*P	**P**	**01 01 05.9**	**0.0**
	comp=Z,16nm,0.8s,mb5.0						
RAMN	**Ramite**	**46.47**	**272**	*e*P	**P**	**01 01 10.3**	**-0.1**
	comp=Z,32nm,0.9s,mb5.2						
COLD	**Coldfoot**	**46.57**	**30**	*e*P	**P**	**01 01 11.2**	**+0.6**
	comp=Z,2.3nm,0.5s,mb4.4						
GUN	**Gumba**	**46.57**	**273**	*e*P	**P**	**01 01 11.4**	**+0.3**
	comp=Z,72nm,0.8s,mb5.6						
KKN	**Kakani**	**47.09**	**274**	*e*P	**P**	**01 01 14.9**	**-0.3**
	comp=Z,42nm,0.7s,mb5.5						
KKN	**Kakani**	**47.09**	**274**	*e*P	**P**	**01 01 14.9**	**-0.3**
KKN	

BVAR Borovoye Array 48.89 311 P **P** **01 01 28.8 0.0**
BVAR 01 02 53.2
BVAR pmax pmax
comp=Z,4.0nm,0.6s
BRVK Borovoye 48.94 311 *ceP* **P** **01 01 29.2 0.0**
BRVK pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
BRVK Borovoye 48.94 311 *eP* **P** **01 01 29.4 +0.2**
comp=Z,5.1nm,0.8s,mb4.6
USP Ospenovka 48.95 297 P **P** **01 01 28.4 -1.0**
SNR=5.8
AAK Ala-Archa 49.16 297 *eP* **P** **01 01 30.8 -0.2**
AAK pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
AAK Ala-Archa 49.16 297 *eP* **P** **01 01 30.8 -0.3**
comp=Z,5.7nm,0.9s,mb4.6
KSH Kashi 49.20 292 P **P** **01 01 35.1 +3.7**
KSH pP pP 01 01 39.5 +5.9
KSH sP sP 01 01 42.0 +7.6
KSH PcP PcP 01 02 57.9 +3.4
KSH PP PP 01 03 29.6 +4.6
KSH ScP ScP 01 06 51.1 +1.0
KSH PcS PcS 01 06 52.6 +1.7
KSH S **S** **01 08 40.1 +2.7**
KSH ScS ScS 01 11 23.5 -0.5
KSH SS SS 01 12 08.1 -0.2
KSH pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
KSH pmax pmax
comp=Z,270nm,5.9s
KSH LR LR
comp=N,570nm,10.9s,MS5.1
KSH LR LR
comp=E,1μm,13.1s,MS5.1
KSH LR LR
comp=Z,2μm,13.4s,MS5.3
UCH Uchtor 49.29 296 *eP* **P** **01 01 33.2 +1.2**
comp=Z,16nm,1.6s,mb4.8
EKS2 Erkin-Say 49.65 297 P **P** **01 01 35.3 +0.5**
SNR=5.8
EKS2 Erkin-Say 49.65 297 *eP* **P** **01 01 34.8 0.0**
comp=Z,4.2nm,0.8s,mb4.5
AML Almayashu 49.89 296 P **P** **01 01 37.3 +0.7**
SNR=12
AML Almayashu 49.89 296 *eP* **P** **01 01 37.2 +0.6**
comp=Z,17nm,1.0s,mb5.0
EGAK Eagle 50.43 33 *eP* **P** **01 01 40.7 +0.4**
comp=Z,7.0nm,1.1s,mb4.6
INK Inuvik 52.75 28 P **P** **01 01 58.3 +0.6**
comp=Z,8.8nm,0.8s,mb4.7,baz=285,slow=7.6,SNR=15
INK Inuvik 52.75 28 P **P** **01 01 58.3 +0.6**
INK pmax pmax
comp=Z,9.0nm,0.8s
HYT Haines Junctio 52.91 37 *eP* **P** **01 02 01.0 +2.1**
SVE Sverdlovsk 53.33 318⇓ *eP* **P** **01 02 02.3 +0.2**
SVE pmax pmax
comp=Z,27nm,1.0s,mb5.1
ARU Arti 54.55 317 *c iP* **P** **01 02 10.8 -0.2**
ARU S **S** **01 09 50.0 -0.3**
ARU SS SS 01 13 31.4 -0.8
ARU pmax pmax
comp=Z,42nm,1.7s,mb5.2
ARU Arti 54.55 317 *eP* **P** **01 02 10.6 -0.4**
comp=Z,17nm,0.7s,mb5.2
ABKAR Akbulak array 56.30 309 *eP* **P** **01 02 22.9 -0.9**
comp=Z,7.8nm,0.6s,mb4.9
KBL Kabul 56.30 289 *eP* **P** **01 02 24.0 0.0**
WRAB Tennant Creek 59.04 187 *eP* **P** **01 02 42.6 -0.6**
WRAB pmax pmax
comp=Z,13nm,0.9s,mb5.0
WRAB Tennant Creek 59.04 187 *eP* **P** **01 02 42.6 -0.6**
comp=Z,13nm,0.9s,mb5.0
WRA Warramunga Arr 59.05 187 P **P** **01 02 42.6 -0.7**
comp=Z,7.6nm,0.5s,mb5.0,baz=5.6,slow=7.3,SNR=35
WRA Warramunga Arr 59.05 187 P **P** **01 02 42.6 -0.7**
WRA pmax pmax
comp=Z,8.0nm,0.5s
RES Resolute Bay 60.71 15 *eP* **P** **01 02 54.0 -0.1**
ARCES ARCESS Array B 61.92 339 P **P** **01 03 02.2 -0.1**
comp=Z,1.6nm,0.5s,mb4.4,baz=60,slow=7.9,SNR=41
ARCES ARCESS Array B 61.92 339 P **P** **01 03 02.3 -0.1**
ARCES pmax pmax
comp=Z,2.0nm,0.5s
YKA Yellowknife Ar 62.24 31 P **P** **01 03 04.1 -0.5**
comp=Z,1.6nm,0.8s,mb4.2,baz=298,slow=6.8,SNR=6.2
YKA Yellowknife Ar 62.24 31 P **P** **01 03 04.1 -0.5**
YKA pmax pmax
comp=Z,2.0nm,0.8s
YKA Yellowknife Ar 62.24 31 P **P** **01 03 04.1 -0.5**
ASAR Alice Springs 62.77 187 P **P** **01 03 08.0 -0.6**
comp=Z,4.8nm,0.7s,mb4.7,baz=10.0,slow=6.4,SNR=47
ASAR Alice Springs 62.77 187 P **P** **01 03 08.0 -0.6**
ASAR pmax pmax
comp=Z,5.0nm,0.7s
JOF Joensuu 63.95 331 *eP* **P** **01 03 13.6 -2.4**
JOF pmax pmax
comp=Z,5.0nm,0.4s,mb4.9
JOF Joensuu 63.95 331 *ep* **P** **01 03 13.6 -2.4**
comp=Z,4.8nm,0.4s,mb4.9
JOF Joensuu 63.95 331 *ep* **P** **01 03 13.6 -2.4**
comp=Z,4.8nm,0.4s,mb4.9
NLWA Neilton Lookou 65.64 48 ⇑P **P** **01 03 28.4 +1.2**
baz=65
A05A Maple Falls 65.81 46 ⇓P **P** **01 03 27.5 -0.8**
baz=66
OBN Obninsk 66.20 323 *eP* **P** **01 03 30.7 0.0**
OBN *e* 01 03 59.9
OBN pmax pmax
comp=Z,35nm,2.5s,mb5.0
KAF Kangasniemi 66.28 332 *eP* **P** **01 03 29.6 -1.5**
KAF pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
KAF Kangasniemi 66.28 332 *ep* **P** **01 03 29.6 -1.5**
comp=Z,6.4nm,0.5s,mb4.9
KAF Kangasniemi 66.28 332 *ep* **P** **01 03 29.6 -1.5**
comp=Z,6.4nm,0.5s,mb4.9
JCW Jim Creek 66.32 46 *eP* **P** **01 03 32.9 +1.3**
FINES FINESS Array B 66.80 332 P **P** **01 03 34.0 -0.4**
comp=Z,13nm,0.8s,mb5.0,baz=36,slow=9.2,SNR=50
FINES FINESS Array B 66.80 332 P **P** **01 03 34.0 -0.4**
FINES pmax pmax
comp=Z,13nm,0.8s
VSR Storozhevoye 67.11 318 *eP* **P** **01 03 35.9 -0.7**
VSR pmax pmax
comp=E,2.0nm,0.6s
VSR pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
VSR pmax pmax
comp=N,1.0nm,0.3s
B08A Colville Reser 67.68 45 ⇑P **P** **01 03 39.6 -0.6**
baz=67
EDM Edmonton 68.00 39 *eP* **P** **01 03 43.0 +0.8**
GOF Gofitskoye 68.42 311 *eP* **P** **01 03 40.1 -4.9**
GOF pmax pmax
comp=Z,40nm,1.3s,mb5.3
SUMG Summit 68.62 360 *i* P **P** **01 03 46.2 +0.4**
comp=Z,13nm,0.9s,mb4.9
NEW Newport 68.95 44 *eP* **P** **01 03 48.6 +0.4**
NEW pmax pmax
comp=Z,9.0nm,1.1s
NEW Newport 68.95 44 *eP* **P** **01 03 48.6 +0.4**
comp=Z,9.3nm,1.1s,mb4.6
ZEI Tsey 69.19 309 *eP* **P** **01 03 48.5 -1.3**
ZEI pmax pmax
comp=Z,13nm,1.1s,mb4.8
KIV Kislovodsk 69.25 310 *eP* **P** **01 03 51.0 +0.9**
KIV *i* 01 04 01.9
KIV *e* 01 06 19.7
KIV pmax pmax
comp=Z,54nm,1.0s,mb5.4
KIV Kislovodsk 69.25 310 *eP* **P** **01 03 50.8 +0.6**
comp=Z,42nm,1.0s,mb5.3
E09A Wood Farm, Sta 69.39 46 ⇓P **P** **01 03 50.9 -0.1**
baz=69
C11A Tepee Creek (N 69.67 44 ⇑P **P** **01 03 52.9 +0.2**
baz=69
K05A Summer Lake 69.97 51 ⇑P **P** **01 03 55.7 +1.0**
baz=70
A13A Flathead Natio 70.01 43 ⇓P **P** **01 03 55.3 +0.6**
baz=70
I07A Izee 70.02 49 ⇓P **P** **01 03 55.1 +0.2**
baz=70
SCO Scoresbysund 70.02 354 *i* P **P** **01 03 53.7 -0.8**
comp=Z,5.3nm,1.0s,mb4.4
GNI Garni 70.14 306 *ceP* **P** **01 03 57.4 +1.7**
GNI pmax pmax
comp=Z,12nm,1.2s
GNI Garni 70.14 306 *eP* **P** **01 03 56.3 +0.5**
comp=Z,16nm,1.1s,mb4.9
B13A Whitefish 70.32 43 ⇓P **P** **01 03 56.6 0.0**
baz=70,SNR=8.6
G09A Cove 70.32 47 ⇑P **P** **01 03 55.9 -0.9**
baz=70
IZAR Zarasai 70.45 327 *eP* **P** **01 03 57.2 -0.1**
IZAR AMB AMB 01 03 58.3
comp=Z,5.5nm,1.2s,mb4.4
A14A Double T Ranch 70.51 42 ⇓P **P** **01 03 57.0 -0.8**
baz=70
IDID Didziasalis 70.52 326 *eP* **P** **01 03 57.7 0.0**
IDID AMB AMB 01 03 58.3
comp=Z,6.9nm,1.1s,mb4.5
ISAL Salakas 70.61 327 *eP* **P** **01 03 58.4 0.0**
ISAL AMB AMB 01 03 60.0
comp=Z,9.5nm,1.1s,mb4.6
STKA Stephens Creek 70.62 179 P **P** **01 03 58.4 -0.1**
comp=Z,1.7nm,0.7s,mb4.1,baz=358,slow=7.5,SNR=5.3
C13A Hot Springs 70.68 44 ⇓P **P** **01 03 57.8 -1.0**
baz=70
IIGN Ignalina 70.72 327 *eP* **P** **01 03 58.9 -0.1**
IIGN AMB AMB 01 04 00.6
comp=Z,7.6nm,1.1s,mb4.5
BMO Blue Mountains 70.84 47 *eP* **P** **01 04 00.8 +0.9**
A15A Johnson Ranch, 70.86 42 ⇓P **P** **01 03 59.7 -0.3**
baz=71
F11A Grangeville 70.88 46 ⇑P **P** **01 04 00.3 +0.1**
baz=71
E12A Beaver Dam Sad 70.89 45 ⇓P **P** **01 04 00.6 +0.4**
baz=71,SNR=7.0
J08A Circle Bar Ran 71.05 49 ⇑P **P** **01 04 01.3 +0.2**
baz=71
C14A Swan Lake 71.07 43 ⇑P **P** **01 04 01.4 +0.2**
baz=71
SWMT Swartz Lake 71.09 44 *eP* **P** **01 04 01.6 +0.3**
D13A Huson 71.09 44 ⇓P **P** **01 04 01.6 +0.2**
baz=71
G11A Walters Elk Ra 71.11 47 ⇓P **P** **01 04 00.7 -0.9**
baz=71,SNR=12
H10A Noah's Angus R 71.32 47 ⇑P **P** **01 04 02.1 -0.7**
baz=71
B15A Bradely Ranch, 71.36 42 ⇓P **P** **01 04 03.3 +0.3**
baz=71,SNR=8.2
F12A Elk City 71.46 46 ⇓P **P** **01 04 03.2 -0.5**
baz=71,SNR=6.0
A16A West Butte Ran 71.47 42 ⇑P **P** **01 04 03.7 +0.1**
baz=71
J09A Fry Pan Ranch, 71.48 49 ⇓P **P** **01 04 02.8 -1.0**
baz=71
WVOR Wild Horse Val 71.49 50 *eP* **P** **01 04 04.3 +0.4**
WVOR pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
WVOR Wild Horse Val 71.49 50 *eP* **P** **01 04 04.3 +0.4**
comp=Z,2.8nm,0.9s,mb4.2
SLMT Seeley Lake 71.53 44 *eP* **P** **01 04 04.2 +0.2**
D14A Greenough 71.62 44 ⇓P **P** **01 04 04.4 -0.2**
baz=71
E13A Victor 71.64 45 ⇑P **P** **01 04 04.7 0.0**
baz=71
C15A Salmond Ranch, 71.67 43 ⇑P **P** **01 04 05.3 +0.5**
baz=71,SNR=6.8
H11A Donnelly 71.67 47 ⇓P **P** **01 04 04.5 -0.5**
baz=71
ANN Anapa 71.80 313 *eP* **P** **01 04 02.3 -3.4**
ANN pmax pmax
comp=Z,35nm,0.9s,mb5.3
BEKR Beckworth 71.96 53 ⇓P **P** **01 04 07.1 +0.3**
baz=72
NB2 NORSAR Subarra 72.12 337 P **P** **01 04 06.8 -0.6**
comp=Z,43nm,1.4s,mb5.2,baz=39,slow=6.5
NB2 NORSAR Subarra 72.12 337 P **P** **01 04 06.8 -0.6**
NB2 NORSAR Subarra 72.12 337 P **P** **01 04 06.8 -0.6**
NOA NORSAR Array B 72.12 337 P **P** **01 04 06.7 -0.6**
comp=Z,8.4nm,0.8s,mb4.7,baz=39,slow=6.1,SNR=14
NOA NORSAR Array B 72.12 337 P **P** **01 04 06.7 -0.7**
NOA pmax pmax
comp=Z,8.0nm,0.8s
NOA NORSAR Array B 72.12 337 P **P** **01 04 06.7 -0.6**
FFC Flin Flon 72.20 33 *ceP* **P** **01 04 08.3 +0.4**
FFC Flin Flon 72.20 33 *eP* **P** **01 04 07.2 -0.8**
comp=Z,34nm,1.8s,mb5.0
K10A MacKenzie Ranc 72.34 49 ⇓P **P** **01 04 09.5 +0.5**
baz=72,SNR=5.1
NAO01 NORSAR Array S 72.38 337 *eP* **P** **01 04 08.1 -0.8**
comp=Z,3.7nm,0.6s,mb4.5
AKASG Malin Array Be 72.41 322 P **P** **01 04 08.8 -0.5**
comp=Z,3.6nm,0.4s,mb4.6,baz=45,slow=5.9,SNR=24
AKASG Malin Array Be 72.41 322 P **P** **01 04 08.8 -0.5**
AKASG pmax pmax
comp=Z,4.0nm,0.4s
AKBB Malin Array Si 72.41 322 *eP* **P** **01 04 08.8 -0.5**
H12A Diamond D Ranc 72.42 47 ⇑P **P** **01 04 08.7 -0.7**
baz=72
KIEV Kiev 72.42 322 *eP* **P** **01 04 08.5 -0.8**
KIEV pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
KIEV Kiev 72.42 322 *eP* **P** **01 04 08.5 -0.9**
comp=Z,4.9nm,0.6s,mb4.6
G13A Cobalt 72.44 46 ⇑P **P** **01 04 08.8 -0.8**
baz=72
E15A Deer Lodge 72.49 44 ⇓P **P** **01 04 10.0 +0.2**
baz=72,SNR=6.2
PAHR Pah Rah Range 72.66 53 *eP* **P** **01 04 12.2 +1.3**
I12A Atlanta 72.73 47 ⇑P **P** **01 04 11.6 +0.4**
baz=72,SNR=5.6
H13A Challis 72.75 46 ⇑P **P** **01 04 10.8 -0.6**
baz=72,SNR=5.4
K11A Parker Ranch, 72.83 49 ⇑P **P** **01 04 12.2 +0.3**
baz=73
F15A Butte 72.94 44 ⇓P **P** **01 04 11.4 -1.0**
baz=73,SNR=13
LRM Limekiln Ridge 72.97 44 *eP* **P** **01 04 13.3 +0.6**
CMB Columbia Colle 73.02 55 *eP* **P** **01 04 14.2 +1.1**
I13A Wildhorse Cree 73.23 47 ⇑P **P** **01 04 14.0 -0.3**
baz=73
HLID Hailey 73.28 47 ⇓P **P** **01 04 14.4 -0.1**
baz=73,SNR=5.4
HLID Hailey 73.28 47 *eP* **P** **01 04 15.4 +0.9**
comp=Z,2.2nm,0.9s,mb4.1
G15A Dillon 73.36 45 ⇓P **P** **01 04 14.7 -0.3**
baz=73,SNR=10.0
L11A Cat Creek Ranc 73.36 49 ⇑P **P** **01 04 15.6 +0.5**
baz=73,SNR=6.3
E17A Martinsdale 73.42 43 ⇓P **P** **01 04 15.3 -0.1**
baz=73,SNR=6.3
F16A Kennard Place, 73.44 44 ⇓P **P** **01 04 16.2 +0.7**
baz=73
D18A Linhart Farms, 73.51 42 ⇑P **P** **01 04 15.5 -0.3**
baz=73
J13A Cove Ranch, Pi 73.52 47 ⇑P **P** **01 04 15.5 -0.5**
baz=73
BOZ Bozeman (W) 73.53 44 ⇑P **P** **01 04 16.6 +0.6**
baz=73,SNR=11
BOZ Bozeman (W) 73.53 44 *eP* **P** **01 04 16.4 +0.4**
BOZ pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
BOZ Bozeman (W) 73.53 44 *eP* **P** **01 04 16.4 +0.4**
comp=Z,4.5nm,0.7s,mb4.5
K12A Draper Farm, C 73.57 48 ⇓P **P** **01 04 17.2 +0.9**
baz=73
I14A Mackay 73.60 46 ⇓P **P** **01 04 16.0 -0.4**
baz=73,SNR=5.3
G16A Moss Hill, Enn 73.70 45 ⇑P **P** **01 04 16.2 -0.8**
baz=73
M11A Holland Ranch, 73.79 50 ⇓P **P** **01 04 18.4 +0.8**
baz=74,SNR=7.3
L12A House Creek Ra 73.81 49 ⇓P **P** **01 04 18.3 +0.6**
baz=74
SFJD Kangerlussuaq 73.87 5 *i* P **P** **01 04 17.3 -0.3**
comp=Z,14nm,0.8s,mb4.9
F17A Fitzpatrick Pl 73.89 44 ⇑P **P** **01 04 18.4 +0.3**
baz=74
J14A Carey 73.94 47 ⇑P **P** **01 04 19.4 +0.9**
baz=74
K13A Stover Farm, H 74.04 48 ⇑P **P** **01 04 21.0 +2.0**
baz=74
NVAR Mina Array Bea 74.09 53 P **P** **01 04 20.8 +1.4**
comp=Z,4.6nm,0.9s,mb4.4,baz=281,slow=6.1,SNR=29
G17A Pierce Place, 74.22 44 ⇓P **P** **01 04 20.6 +0.6**
baz=74
M12A Wells 74.32 49 ⇓P **P** **01 04 20.6 -0.1**
baz=74,SNR=5.9
F18A Big Timber 74.39 43 ⇓P **P** **01 04 21.2 +0.2**
baz=74,SNR=8.9
MIB Mutribah 74.40 296 *eP* **P** **01 04 20.7 -0.7**
MIB AMb AMB 01 04 21.6
comp=Z,40nm,0.9s,mb5.4
J15A Blackfoot 74.51 46 ⇑P **P** **01 04 21.6 -0.1**
baz=74
K14A Jones Ranch, D 74.62 47 ⇓P **P** **01 04 22.9 +0.5**
baz=74
O11A Cowboy Ranch, 74.67 51 ⇓P **P** **01 04 23.6 +0.8**
baz=74
I16A Newdale 74.73 46 ⇑P **P** **01 04 23.8 +0.8**
baz=74
RDF Al-Radifah 74.77 295 *eP* **P** **01 04 23.0 -0.5**
RDF AMb AMB 01 04 28.5
comp=Z,52nm,1.5s,mb5.2
M13A Montello 74.80 49 ⇓P **P** **01 04 23.3 -0.1**
baz=74
M13A Montello 74.80 49 *eP* **P** **01 04 23.9 +0.5**
comp=Z,1.9nm,0.7s,mb4.1
NAY Al-Naaiem 74.80 295 *eP* **P** **01 04 22.8 -0.9**
NAY AMb AMB 01 04 32.5
comp=Z,28nm,1.6s,mb4.9
IMW Indian Meadow 75.02 45 *eP* **P** **01 04 26.8 +2.0**
comp=Z,4.7nm,0.7s,mb4.5
Q10A Clear Creek Ra 75.03 52 ⇓P **P** **01 04 25.1 +0.2**
baz=75,SNR=6.0
N13A Wendover, West 75.09 49 ⇑P **P** **01 04 24.9 -0.2**
baz=75
O12A Currie 75.14 50 ⇑P **P** **01 04 24.9 -0.6**
baz=75,SNR=5.8
RLMT Red Lodge 75.14 44 ⇓P **P** **01 04 25.8 +0.4**
baz=75
RRI2 Red Ridge 75.17 46 *eP* **P** **01 04 26.9 +1.3**
comp=Z,3.9nm,0.7s,mb4.5
TPAW Teton Pass 75.28 46 *eP* **P** **01 04 27.7 +1.5**
comp=Z,6.3nm,1.0s,mb4.5
SNOW Snow King Moun 75.41 46 *eP* **P** **01 04 26.6 -0.4**
comp=Z,7.2nm,0.7s,mb4.7
L15A Malad City 75.42 48 ⇑P **P** **01 04 27.8 +0.8**
baz=75
S10A Tonopah Range, 75.47 53 ⇑P **P** **01 04 28.2 +0.8**
baz=75,SNR=13
LVV L'vov 75.47 323 *eP* **P** **01 04 27.1 -0.1**
Q11A Duckwater 75.47 52 ⇑P **P** **01 04 27.8 +0.4**
baz=75
J17A Brown Place, J 75.49 46 ⇓P **P** **01 04 27.2 -0.3**
baz=75
P12A McGill 75.54 51 ⇑P **P** **01 04 27.7 -0.1**
baz=75
BORG Borgarnes 75.55 352 *eP* **P** **01 04 28.6 +1.2**
BORG pmax pmax
comp=Z,12nm,0.8s
BORG Borgarnes 75.55 352 *eP* **P** **01 04 28.6 +1.2**
comp=Z,12nm,0.8s,mb4.9
N14A Grayback Hills 75.69 49 ⇑P **P** **01 04 28.9 +0.3**
baz=75
M15A Larsen Ranch, 75.73 48 ⇑P **P** **01 04 29.1 +0.3**
baz=76,SNR=9.1
R11A Troy Canyon, C 75.83 52 ⇓P **P** **01 04 30.0 +0.6**
baz=76,SNR=14
Q12A Willow Creek R 75.85 51 ⇓P **P** **01 04 29.9 +0.3**
baz=76
L16A Fish Haven 75.96 47 ⇓P **P** **01 04 29.3 -0.9**
baz=76
J18A Kendall Valley 75.98 45 ⇑P **P** **01 04 29.6 -0.6**
baz=76
N15A Stansbury Isla 76.05 48 ⇓P **P** **01 04 31.6 +0.9**
baz=76,SNR=5.2
MPMC Manual Prospec 76.06 55 ⇓P **P** **01 04 30.7 -0.1**
baz=76,SNR=5.4
P13A Bates Ranch, G 76.08 50 ⇓P **P** **01 04 29.9 -0.9**
baz=76
HWUT Hardware Ranch 76.15 47 *eP* **P** **01 04 31.9 +0.7**
comp=Z,8.4nm,1.3s,mb4.5
S11A Rachel 76.17 53 ⇑P **P** **01 04 31.2 -0.2**
baz=76
FURC Furnace Creek, 76.20 54 ⇓P **P** **01 04 31.5 -0.1**
baz=76,SNR=7.9
DUG Dugway 76.33 49 ⇓P **P** **01 04 32.5 +0.3**
baz=76,SNR=7.7
DUG Dugway 76.33 49 *eP* **P** **01 04 33.0 +0.7**
DUG pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
DUG Dugway 76.33 49 *eP* **P** **01 04 33.0 +0.7**
comp=Z,6.2nm,0.9s,mb4.5
Q13A Wheeler Ranch, 76.40 51 ⇑P **P** **01 04 33.4 +0.7**
baz=76,SNR=7.3
BUR08 Bucovina Ar. S 76.42 321 *eP* **P** **01 04 32.4 -0.2**
BURAR Bucovina Array 76.44 321 ⇓P **P** **01 04 33.0 +0.3**
BURAR Bucovina Array 76.44 321 ⇓ *iP* **P** **01 04 33.0 +0.3**
R12A Pony Springs, 76.44 52 ⇓P **P** **01 04 33.0 +0.1**
baz=76,SNR=6.1
BW06 Boulder Array 76.52 46 ⇑P **P** **01 04 33.3 0.0**
baz=76
BW06 Boulder Array 76.52 46 *eP* **P** **01 04 33.5 +0.2**
comp=Z,3.4nm,0.8s,mb4.3
PDAR Pinedale Array 76.52 46 P **P** **01 04 33.6 +0.3**
comp=Z,2.6nm,0.7s,mb4.3,baz=283,slow=2.6,SNR=22
P14A Drum Mountains 76.56 50 ⇑P **P** **01 04 34.4 +0.8**
baz=76,SNR=5.5
U10A Ash Meadows, A 76.57 54 ⇓P **P** **01 04 34.3 +0.6**
baz=76,SNR=5.2
CFR Carcaliu 76.63 318 ⇑P **P** **01 04 34.6 +0.7**
CFR Carcaliu 76.63 318 ⇑ *iP* **P** **01 04 34.6 +0.7**
S12A Delamar Landin 76.74 52 ⇑P **P** **01 04 34.4 -0.3**
baz=76
M17A Scullys Gap (B 76.75 47 ⇑P **P** **01 04 35.2 +0.6**
baz=76
T11A Corn Creek, Al 76.75 53 ⇓P **P** **01 04 34.5 -0.2**
baz=76,SNR=11
Q14A Sevier Lake (B 76.82 50 ⇑P **P** **01 04 35.7 +0.7**
baz=77,SNR=12
K19A Absolon Red Bu 76.88 45 ⇓P **P** **01 04 35.5 +0.2**
baz=77
VRI Vrincioaia 76.89 319 ⇓P **P** **01 04 36.0 +0.7**
VRI Vrincioaia 76.89 319 ⇓ *iP* **P** **01 04 36.0 +0.7**
KOLS Kolonicke sedl 76.91 324 *eP* **P** **01 04 35.6 +0.2**
KOLS pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
KOLS Kolonicke sedl 76.91 324 *eP* **P** **01 04 35.6 +0.2**
comp=Z,4.8nm,1.1s,mb4.3
KOLS Kolonicke sedl 76.91 324 *eP* **P** **01 04 35.6 +0.2**
NLU North Lily Min 76.92 49 *eP* **P** **01 04 35.5 -0.1**
comp=Z,6.8nm,1.1s,mb4.5
PLOR Plostina 76.94 319 ⇑ *iP* **P** **01 04 37.2 +1.6**
GSC Goldstone 76.96 55 ⇓P **P** **01 04 36.3 +0.4**
baz=77
TIRR Tirgusor 76.97 317 *eP* **P** **01 04 32.0 -3.8**
TIRR pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
TIRR Tirgusor 76.97 317 *eP* **P** **01 04 31.9 -3.9**
comp=Z,7.9nm,0.9s,mb4.6
TIRR Tirgusor 76.97 317 ⇑ *iP* **P** **01 04 34.7 -1.1**
STHS Stebnicka Huta 77.03 324 *eP* **P** **01 04 37.1 +1.0**
STHS pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
STHS Stebnicka Huta 77.03 324 *eP* **P** **01 04 37.1 +1.0**
comp=Z,6.2nm,1.0s,mb4.5
STHS Stebnicka Huta 77.03 324 *eP* **P** **01 04 37.1 +1.0**
OJC Ojcow 77.10 326 *eP* **P** **01 04 35.1 -1.3**
BR131 Keskin Array S 77.17 311 *eP* **P** **01 04 37.0 0.0**
comp=Z,1.8nm,0.6s,mb4.2
BRTR Keskin Array B 77.17 311 P **P** **01 04 37.4 +0.3**
comp=Z,2.3nm,0.5s,mb4.3,baz=90,slow=4.1,SNR=24
BRTR Keskin Array B 77.17 311 P **P** **01 04 37.4 +0.3**
BRTR pmax pmax
comp=Z,2.0nm,0.5s
CRVS Cervenica-Dubn 77.31 324 *eP* **P** **01 04 40.0 +2.4**
CRVS pmax pmax
comp=Z,18nm,1.9s,mb4.7
CRVS Cervenica-Dubn 77.31 324 *eP* **P** **01 04 40.0 +2.4**
comp=Z,18nm,1.9s,mb4.7
CRVS Cervenica-Dubn 77.31 324 *eP* **P** **01 04 40.0 +2.4**
S13A Holt Ranch, En 77.37 52 ⇑P **P** **01 04 37.2 -0.9**
baz=77
NIE Niedzica 77.45 325 *eP* **P** **01 04 39.5 +1.1**
MLR Muntele Rosu 77.54 319 ⇓P **P** **01 04 39.6 +0.6**
MLR Muntele Rosu 77.54 319 ⇓ *iP* **P** **01 04 39.6 +0.6**
HEC Hector,Ludlow 77.56 55 ⇓P **P** **01 04 39.1 -0.3**
baz=77
CCUT Cedar City 77.69 52 *eP* **P** **01 04 41.2 +1.2**
comp=Z,20nm,1.8s,mb4.8
T13A Saint George 77.70 52 ⇑P **P** **01 04 39.5 -0.6**
baz=78,SNR=6.9
MSU Marysvale 77.79 50 *eP* **P** **01 04 42.3 +1.8**
V12A Nelson 77.93 54 ⇓P **P** **01 04 42.1 +0.7**
baz=78
N19A John Jarvie Ra 77.97 47 ⇓P **P** **01 04 40.9 -0.6**
baz=78

P17A **Butcher Ranch,** 78.01 49 ⇊P P 01 04 41.2 -0.5
baz=78
ULM **Lac du Bonnet** 78.01 33 P P 01 04 40.0 -1.6
comp=Z,1.9nm,0.5s,mb4.3,baz=327,slow=7.0,SNR=2.9
ULM **Lac du Bonnet** 78.01 33 *e*P P 01 04 40.1 -1.4
comp=Z,4.2nm,0.9s,mb4.4
GMRC **Granite Mounta** 78.02 55 ⇊P P 01 04 41.9 0.0
baz=78
BSEG **Bad Segeberg** 78.03 333 *e*P P 01 04 41.7 +0.1
comp=Z,52nm,1.9s,mb5.1
BSEG **Bad Segeberg** 78.03 333 *e*P P 01 04 41.7 +0.1
BSEG pmax pmax
comp=Z,52nm,1.9s,mb5.1
VOIR 78.03 320 ⇑P P 01 04 42.9 +1.2
VOIR 78.03 320 ⇑*i*P P 01 04 42.9 +1.2
U13A **Pakoon Wash** 78.05 53 ⇑P P 01 04 42.7 +0.7
baz=78,SNR=10
KECS **Kecovo** 78.06 324 *e*P P 01 04 42.5 +0.7
KECS pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
KECS **Kecovo** 78.06 324 *e*P P 01 04 42.5 +0.7
comp=Z,1.6nm,0.8s,mb4.0
KECS **Kecovo** 78.06 324 *e*P P 01 04 42.5 +0.7
OKC **Ostrava-Krasne** 78.10 326 *e*P P 01 04 41.2 -0.8
OKC **Ostrava-Krasne** 78.10 326 *e*P P 01 04 41.2 -0.8
Q16A **Castle Valley** 78.12 49 ⇑P P 01 04 42.1 -0.2
baz=78
KSP **Ksiaz** 78.13 328 *e*P P 01 04 42.3 +0.1
T14A **Hurricane** 78.17 52 ⇊P P 01 04 43.6 +0.9
baz=78
LDFC **Landfair** 78.18 54 *e*P P 01 04 43.2 +0.5
comp=Z,12nm,1.2s,mb4.7
P18A **Preston Nutter** 78.20 48 ⇊P P 01 04 42.6 -0.1
baz=78,SNR=5.8
DRGR 78.23 322 ⇊P P 01 04 43.2 +0.4
DRGR 78.23 322 ⇊*i*P P 01 04 43.2 +0.4
BELC **Belle Mtn. Jos** 78.30 56 ⇑P P 01 04 42.4 -1.0
baz=78
R16A **Teasdale** 78.35 50 ⇊P P 01 04 44.2 +0.5
baz=78,SNR=6.1
SRU **San Rafael** 78.37 49 ⇑P P 01 04 44.1 +0.4
baz=78,SNR=8.2
SRU **San Rafael** 78.37 49 *e*P P 01 04 44.1 +0.3
SRU pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
SRU **San Rafael** 78.37 49 *e*P P 01 04 44.1 +0.3
comp=Z,7.4nm,0.9s,mb4.6
V13A **Grand Canyon W** 78.40 53 ⇑P P 01 04 43.9 0.0
baz=78,SNR=6.2
MORC **Moravsky Berou** 78.40 326 *e*P P 01 04 44.2 +0.5
MORC pmax pmax
comp=Z,14nm,1.1s,mb4.8
MORC **Moravsky Berou** 78.40 326 *e*P P 01 04 44.2 +0.4
comp=Z,14nm,1.1s,mb4.8
MORC **Moravsky Berou** 78.40 326 ⇊*i*P P 01 04 44.3 +0.6
DPC **Dobruska-Polom** 78.49 327 *e*P P 01 04 44.5 +0.3
DPC **Dobruska-Polom** 78.49 327 *e*P P 01 04 44.5 +0.3
UPC **Upice** 78.50 328 *e*P P 01 04 44.9 +0.7
UPC *e* 01 04 50.8
UPC **Upice** 78.50 328 *e*P P 01 04 44.9 +0.7
UPC *e*pP pP 01 04 50.8 +4.3
M21A **Separation Pea** 78.51 45 ⇊P P 01 04 43.9 -0.5
baz=78
N20A **Spence Gulch,** 78.53 46 ⇑P P 01 04 44.7 +0.1
baz=78,SNR=7.2
U14A **Mt Trumbull** 78.53 52 ⇑P P 01 04 44.1 -0.6
baz=78,SNR=6.8
RSSD **Black Hills** 78.57 42 *e*P P 01 04 44.8 0.0
RSSD pmax pmax
comp=Z,17nm,1.6s,mb4.7
RSSD **Black Hills** 78.57 42 *e*P P 01 04 44.8 0.0
comp=Z,17nm,1.6s,mb4.7
T15A **Red Dirt Ranch** 78.63 51 ⇊P P 01 04 44.3 -0.9
baz=78,SNR=5.8
R17A **Hanksville Air** 78.72 49 ⇑P P 01 04 44.5 -1.2
baz=78,SNR=5.6
PSZ **Piszkesteto** 78.74 324 *e*P P 01 04 45.9 +0.3
PSZ pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
PSZ **Piszkesteto** 78.74 324 *e*P P 01 04 45.9 +0.3
comp=Z,9.5nm,1.1s,mb4.6
IRM **Iron Mountain** 78.74 55 ⇊P P 01 04 45.5 -0.4
baz=78
VYHS **Vyhne** 78.79 325 *e*P P 01 04 46.1 +0.2
VYHS pmax pmax
comp=Z,7.0nm,1.5s,mb4.4
VYHS **Vyhne** 78.79 325 *e*P P 01 04 46.1 +0.2
comp=Z,6.5nm,1.5s,mb4.3
VYHS **Vyhne** 78.79 325 *e*P P 01 04 46.1 +0.2
BC3 **Big Chuckawall** 78.87 56 ⇊P P 01 04 45.8 -0.7
baz=79
W13A **Hualapai Mount** 78.94 54 ⇊P P 01 04 45.9 -1.0
baz=79
N21A **Black Mountain** 79.00 46 ⇊P P 01 04 46.3 -0.9
baz=79
BRG **Berggiesshubel** 79.07 329 *e*P P 01 04 47.5 +0.2
comp=Z,5.0nm,1.1s,mb4.4
U15A **North Rim** 79.07 52 ⇊P P 01 04 47.1 -0.6
baz=79,SNR=14
PVCC **Panska Ves** 79.08 328 *e*P P 01 04 48.0 +0.6
PVCC **Panska Ves** 79.08 328 *e*P P 01 04 48.0 +0.6
V14A **Boquillas Ranc** 79.08 53 ⇊P P 01 04 47.4 -0.3
baz=79,SNR=12
CLL **Collm** 79.10 330 *e*P P 01 04 47.3 -0.2
comp=Z,12nm,1.1s,mb4.7
CLL **Collm** 79.10 330 ⇊*i*P P 01 04 47.4 -0.1
CLL *e* 01 04 52.0
CLL pmax pmax
comp=Z,12nm,1.1s,mb4.7
CLL **Collm** 79.10 330 ⇊*i*P P 01 04 47.4 -0.1
comp=Z,12nm,1.1s,mb4.7
CLL *e* 01 04 52.0
CLL **Collm** 79.10 330 ⇊*i*P P 01 04 47.4 -0.1
comp=Z,12nm,1.1s,mb4.7
CLL *e*sP sP 01 04 52.0 +1.4
VRAC **Vranov** 79.16 327 ⇑P P 01 04 48.6 +0.7
VRAC **Vranov** 79.16 327 ⇑*i*P P 01 04 48.6 +0.7
GZR **Gura Zlata** 79.20 321 ⇑P P 01 04 48.7 +0.5
GZR **Gura Zlata** 79.20 321 ⇑*i*P P 01 04 48.7 +0.5
R18A **Canyonlands Na** 79.22 49 ⇊P P 01 04 47.9 -0.5
baz=79
X13A **Yucca** 79.30 54 ⇊P P 01 04 48.0 -0.9
baz=79,SNR=8.4
W14A **Seligman** 79.37 53 ⇑P P 01 04 49.5 +0.2
baz=79,SNR=7.1
SMOL **Smolenice** 79.40 326 *e*P P 01 04 50.3 +1.1
SMOL **Smolenice** 79.40 326 *e*P P 01 04 50.3 +1.1
PRU **Pruhonice** 79.51 328 *e*P P 01 04 50.6 +0.8
PRU *e* 01 04 55.8
PRU **Pruhonice** 79.51 328 *e*P P 01 04 50.6 +0.8
PRU *e*pP pP 01 04 55.8 +3.8
V15A **Kaibab Nationa** 79.54 52 ⇊P P 01 04 49.5 -0.7
baz=79,SNR=5.2
BZS **Buzias** 79.60 321 ⇊P P 01 04 50.3 -0.1
BZS **Buzias** 79.60 321 ⇊*i*P P 01 04 50.3 -0.1
S18A **Hurst Farm, Bl** 79.62 50 ⇑P P 01 04 50.0 -0.6
baz=79,SNR=9.1
TREC **Trest** 79.64 327 *e*P P 01 04 50.5 0.0
TREC **Trest** 79.64 327 *e*P P 01 04 50.5 0.0
GLA **Glamis** 79.66 56 ⇑P P 01 04 50.1 -0.7
baz=79
GLA **Glamis** 79.66 56 *e*P P 01 04 50.9 0.0
GLA pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
GLA **Glamis** 79.66 56 *e*P P 01 04 50.9 0.0
comp=Z,1.6nm,0.4s,mb4.3
R19A **Curley Farm, L** 79.66 49 ⇊P P 01 04 49.9 -0.9
baz=79
Q20A **Ridgley Place,** 79.77 48 ⇑P P 01 04 50.8 -0.6
baz=80
ZST **Bratislava** 79.78 326 *e*P P 01 04 52.2 +0.9
ZST pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
ZST **Bratislava** 79.78 326 *e*P P 01 04 52.2 +0.9
comp=Z,3.4nm,0.7s,mb4.4
ZST **Bratislava** 79.78 326 *e*P P 01 04 52.2 +0.9
PV04 **Paradox Valley** 79.80 49 *e*P P 01 04 52.5 +0.9
X14A **Yava** 79.97 54 ⇑P P 01 04 52.9 +0.3
baz=80
TANN **Tannenbergstha** 80.01 329 *e*P P 01 04 52.6 +0.1
comp=Z,25nm,2.3s,mb4.7
T18A **Mexican Hat** 80.06 50 ⇑P P 01 04 52.3 -0.7
baz=80,SNR=8.1
NKC **Novy Kostel** 80.16 329 *e*P P 01 04 52.4 -0.9
NKC **Novy Kostel** 80.16 329 *e*P P 01 04 52.4 -0.9
MOX **Moxa** 80.17 330 *e*P P 01 04 52.9 -0.4
comp=Z,31nm,2.0s,mb4.9
MOX **Moxa** 80.17 330 *e*P P 01 04 52.7 -0.6
comp=Z,8.0nm,1.0s,mb4.6
MOX **Moxa** 80.17 330 *e*P P 01 04 52.9 -0.4
MOX pmax pmax
comp=Z,31nm,2.0s,mb4.9
PV01 **Paradox Valley** 80.17 49 *e*P P 01 04 54.0 +0.5
comp=Z,243nm,1.0s
WUAZ **Wupatki** 80.23 52 ⇊P P 01 04 54.7 +0.8
baz=80,SNR=5.4
R20A **Redvale** 80.24 48 ⇑P P 01 04 54.4 +0.5
baz=80,SNR=5.6
Y14A **Wickenburg** 80.25 54 ⇑P P 01 04 54.6 +0.6
baz=80
Z13A **Yuma Proving G** 80.31 55 ⇊P P 01 04 55.2 +0.7
baz=80,SNR=7.3
X15A **Humboldt** 80.37 53 ⇑P P 01 04 55.5 +0.8
baz=80,SNR=6.7
SMCO **Snowmass** 80.38 47 *e*P P 01 04 55.0 +0.3
comp=Z,4.0nm,1.0s,mb4.3
MMAI **Mount Meron Ar** 80.43 305 P P 01 04 55.5 +0.3
comp=Z,4.0nm,0.7s,mb4.5,baz=44,slow=6.3,SNR=7.5
V17A **Tonalea, Kykot** 80.51 52 ⇊P P 01 04 55.9 +0.4
baz=80,SNR=13
U18A **Rough Rock, Ch** 80.54 51 ⇑P P 01 04 56.7 +1.0
baz=80
KHC **Kasperske Hory** 80.57 328 *e*P P 01 04 55.6 +0.1
KHC pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
KHC **Kasperske Hory** 80.57 328 *e*P P 01 04 55.5 0.0
comp=Z,5.3nm,0.7s,mb4.6
KHC **Kasperske Hory** 80.57 328 *e*P P 01 04 55.9 +0.4
KHC *e*pP pP 01 05 01.6 +3.8
PKSM **Moragy** 80.58 323 ⇊P P 01 04 55.3 -0.3
PKSM **Moragy** 80.58 323 ⇊*i*P P 01 04 55.3 -0.3
R21A **Cimarron** 80.60 48 ⇑P P 01 04 56.6 +0.7
baz=80
UBBA **Unterbreizbach** 80.65 331 *e*P P 01 04 55.4 -0.5
comp=Z,59nm,2.4s,mb5.1
Y15A **Casa Rosa Ranc** 80.66 54 ⇊P P 01 04 56.7 +0.4
baz=80,SNR=6.4
ISCO **Idaho Springs** 80.72 46 *e*P P 01 04 57.5 +1.0
ISCO pmax pmax
comp=Z,7.0nm,1.4s,mb4.4
ISCO **Idaho Springs** 80.72 46 *e*P P 01 04 57.5 +1.0
comp=Z,7.2nm,1.4s,mb4.4
GERES **GERESS Array B** 80.74 328 P P 01 04 56.5 +0.1
comp=Z,2.0nm,0.6s,mb4.2,baz=35,slow=4.9,SNR=22
GERES **GERESS Array B** 80.74 328 P P 01 04 56.5 +0.1
GERES pmax pmax
comp=Z,2.0nm,0.6s
T19A **Beclabito** 80.77 50 ⇑P P 01 04 57.8 +1.0
baz=80,SNR=6.4
MVCO **Mesa Verde** 80.83 49 ⇊P P 01 04 57.0 -0.1
baz=81
MVCO **Mesa Verde** 80.83 49 *e*P P 01 04 57.5 +0.3
comp=Z,5.6nm,1.0s,mb4.5
WET **Wettzell** 80.84 328 *e*P P 01 04 57.1 +0.1
comp=Z,96nm,3.2s
WET **Wettzell** 80.84 328 *e*P P 01 04 57.1 +0.1
WET pmax pmax
comp=Z,96nm,3.2s
X16A **Lo Mia Camp, P** 80.91 53 ⇊P P 01 04 58.7 +1.0
baz=81,SNR=5.4
W17A **Winslow** 80.92 52 ⇊P P 01 04 58.5 +0.8
baz=81
S21A **Coal Bank Pass** 80.94 48 ⇊P P 01 04 58.0 +0.2
baz=81
V18A **Ganado** 80.98 51 ⇑P P 01 04 58.7 +0.8
baz=81
U19A **Dine' College,** 81.03 50 ⇑P P 01 04 59.0 +0.8
baz=81,SNR=7.4
GRA1 **Grafenberg Arr** 81.08 330 *e*P P 01 04 58.5 +0.3
comp=Z,20nm,0.9s,mb5.0
GRF **Grafenberg Arr** 81.08 330 *e*P P 01 04 58.5 +0.3
comp=Z,20nm,0.9s,mb5.0
GRF **Grafenberg Arr** 81.08 330 *e*P P 01 04 58.5 +0.3
GRF pmax pmax
comp=Z,20nm,0.9s,mb5.0
GRF **Grafenberg Arr** 81.08 330 *e*P P 01 04 58.5 +0.3
GRF pmax pmax
comp=Z,20nm,0.9s,mb5.0
X17A **Forest Lakes** 81.36 53 ⇑P P 01 04 59.8 -0.2
baz=81
115A **Sonoran Desert** 81.55 55 ⇊P P 01 05 00.4 -0.7
baz=81
Y17A **Roosevelt** 81.76 53 ⇊P P 01 05 01.0 -1.2
baz=82
U21A **Nageezi** 81.86 49 ⇊P P 01 05 02.0 -0.6
baz=82,SNR=5.0
T22A **Edith** 81.90 48 ⇊P P 01 05 03.2 +0.3
baz=82
RJOB **Jochberg** 81.98 328 *e*P P 01 05 03.4 +0.3
comp=Z,14nm,1.3s,mb4.7
SDCO **Great Sand Dun** 82.20 47 *e*P P 01 05 05.0 +0.6
comp=Z,1.2nm,0.8s,mb3.9
Y18A **Canyon Day Jun** 82.21 53 ⇊P P 01 05 04.4 -0.1
baz=82
W20A **Ramah** 82.24 51 ⇊P P 01 05 04.8 +0.1
baz=82
MEM **Membach** 82.28 333 P P 01 05 04.5 0.0
comp=Z,7.4nm,1.2s,mb4.5
ECSD **EROS Data Cent** 82.56 38 *e*P P 01 05 05.6 -0.5
comp=Z,10nm,1.4s,mb4.7
V22A **San Miguel Ran** 82.65 49 ⇊P P 01 05 06.8 0.0
baz=82
BCLA **Clavier** 82.69 333 P P 01 05 06.5 -0.2
TUC **Tucson** 82.72 54 *e*P P 01 05 08.1 +0.9
TUC pmax pmax
comp=Z,5.0nm,1.4s,mb4.3
TUC **Tucson** 82.72 54 *e*P P 01 05 08.1 +0.9
comp=Z,5.1nm,1.4s,mb4.4
U23A **El Rito** 82.78 49 ⇊P P 01 05 07.8 +0.3
baz=82
118A **Homack Ranch,** 83.01 53 ⇊P P 01 05 08.5 -0.2
baz=83
217A **Green Valley** 83.05 55 ⇊P P 01 05 08.7 -0.3
baz=83
X21A **Alamocita Cree** 83.13 51 ⇊P P 01 05 09.9 +0.6
baz=83,SNR=5.9
Y20A **Horse Springs,** 83.14 52 ⇑P P 01 05 10.2 +0.9
baz=83,SNR=5.0
DOU **Dourbes** 83.21 333 P P 01 05 08.9 -0.4
comp=Z,9.3nm,3.0s
T25A **Trinidad** 83.25 47 ⇊P P 01 05 10.0 +0.2
baz=83
BFO **Black Forest** 83.30 330 *e*P P 01 05 09.8 -0.1
comp=Z,36nm,1.8s,mb5.1
BFO **Black Forest** 83.30 330 *e*P P 01 05 09.8 -0.1
BFO pmax pmax
comp=Z,36nm,1.8s,mb5.1
BAIF **Baives** 83.37 334 *e*P P 01 05 09.5 -0.7
218A **Dragoon** 83.41 54 ⇑P P 01 05 10.6 -0.2
baz=83
SCHQ **Schefferville** 83.47 16 P P 01 05 10.7 +0.1
comp=Z,2.8nm,0.6s,mb4.4,baz=20,slow=8.7,SNR=6.4
Z20A **Nine Sixteen R** 83.54 52 ⇊P P 01 05 12.2 +0.8
baz=83,SNR=7.6
LAZ **Ladron** 83.55 50 *e*P P 01 05 12.4 +0.9
comp=Z,3.0nm,1.4s,mb4.2
ANMO **Albuquerque** 83.58 50 *e*P P 01 05 12.6 +1.0
ANMO pmax pmax
comp=Z,1.0nm,1.1s
ANMO **Albuquerque** 83.58 50 *e*P P 01 05 12.6 +1.0
comp=Z,1.1nm,1.1s,mb3.9
CDF **Champ du Feu** 83.64 331 *e*P P 01 05 11.1 -0.5
comp=Z,6.8nm,0.8s,mb4.5
CDF **Champ du Feu** 83.64 331 *e*P P 01 05 11.1 -0.5
CDF pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
CDF **Champ du Feu** 83.64 331 *e*P P 01 05 11.1 -0.5
comp=Z,3.4nm,0.8s,mb4.5
318A **Bisbee** 83.80 54 ⇑P P 01 05 13.2 +0.4
baz=84,SNR=6.5
219A **White Tail Can** 83.88 53 ⇑P P 01 05 13.6 +0.4
baz=84,SNR=8.8
120A **U Bar Ranch, L** 83.90 53 ⇊P P 01 05 13.8 +0.5
baz=84
Z21A **St. Cloud Mine** 83.97 52 ⇑P P 01 05 13.7 0.0
baz=84
W24A **Lazy 6 Ranch,** 84.02 49 ⇊P P 01 05 13.2 -0.6
baz=84
V25A **Rancho No Teng** 84.04 48 ⇑P P 01 05 14.0 0.0
baz=84
HINF **Hinteralfeld** 84.29 331 *e*P P 01 05 14.1 -0.9
319A **Douglas** 84.29 54 ⇑P P 01 05 15.4 +0.1
baz=84
HAU **Haudompre** 84.32 331 *e*P P 01 05 14.3 -0.8
comp=Z,10nm,0.7s,mb4.8
HAU **Haudompre** 84.32 331 *e*P P 01 05 14.3 -0.8
HAU pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
HAU **Haudompre** 84.32 331 *e*P P 01 05 14.3 -0.8
comp=Z,5.1nm,0.7s,mb4.8
MEZF **Maizieres J'vi** 84.39 332 *e*P P 01 05 15.2 -0.2
220A **Playas Peak, P** 84.40 53 ⇑P P 01 05 15.4 -0.5
baz=84
121A **Cookes Peak, D** 84.44 52 ⇑P P 01 05 15.4 -0.6
baz=84
Z22A **Elephant Butte** 84.44 51 ⇑P P 01 05 15.8 -0.2
baz=84
Y23A **Lovelace Mesa,** 84.52 50 ⇊P P 01 05 16.7 +0.2
baz=84
V26A **Tequesquite Ra** 84.55 48 ⇊P P 01 05 16.6 +0.1
baz=84
W25A **X Bar L Ranch,** 84.56 48 ⇑P P 01 05 16.6 0.0
baz=84
Y24A **Capitan** 84.89 50 ⇑P P 01 05 17.1 -1.3
baz=85
Y25A **Mesa, Roswell** 85.34 49 ⇊P P 01 05 19.4 -1.1
baz=85
X26A **CR and CF Fran** 85.41 48 ⇑P P 01 05 19.7 -1.2
baz=85
W27A **Bowe Ranch, En** 85.48 48 ⇑P P 01 05 20.3 -0.9
baz=85
CABF **La Chapelle** 85.58 331 *e*P P 01 05 21.0 -0.5
124A **Stringfield Ra** 85.74 51 ⇑P P 01 05 21.9 -0.6
baz=86
X27A **F and S Farms,** 85.76 48 ⇊P P 01 05 21.7 -0.9
baz=86
Z25A **Roswell** 85.77 50 ⇑P P 01 05 22.0 -0.8
baz=86
Y26A **Elida** 85.85 49 ⇊P P 01 05 21.9 -1.2
baz=86
LOR **Lormes** 85.86 332 *e*P P 01 05 22.2 -0.7
comp=Z,30nm,1.0s,mb5.2
LOR **Lormes** 85.86 332 *e*P P 01 05 22.2 -0.7
LOR pmax pmax
comp=Z,15nm,1.0s,mb5.2
LOR **Lormes** 85.86 332 *e*P P 01 05 22.2 -0.7
comp=Z,15nm,1.0s,mb5.2
FLN **La Foliniere** 86.06 336 *e*P P 01 05 23.1 -0.7
comp=Z,11nm,0.8s,mb4.8
FLN **La Foliniere** 86.06 336 *e*P P 01 05 23.1 -0.7
FLN pmax pmax
comp=Z,6.0nm,0.8s,mb4.9
FLN **La Foliniere** 86.06 336 *e*P P 01 05 23.1 -0.7
comp=Z,5.7nm,0.8s,mb4.8
LDF **La Druitiere** 86.09 335 *e*P P 01 05 23.3 -0.7
comp=Z,7.4nm,0.7s,mb4.7
LDF **La Druitiere** 86.09 335 *e*P P 01 05 23.3 -0.7
LDF pmax pmax
comp=Z,4.0nm,0.7s,mb4.8
LDF **La Druitiere** 86.09 335 *e*P P 01 05 23.3 -0.7
comp=Z,3.7nm,0.7s,mb4.7
224A **Cornudas Mount** 86.13 51 ⇑P P 01 05 23.2 -1.4
baz=86
SSF **Saint Saulge** 86.16 332 *e*P P 01 05 23.7 -0.7
comp=Z,17nm,0.9s,mb5.0
SSF **Saint Saulge** 86.16 332 *e*P P 01 05 23.7 -0.7
SSF pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
SSF **Saint Saulge** 86.16 332 *e*P P 01 05 23.7 -0.7
comp=Z,8.4nm,0.9s,mb5.0
Z26A **Caprock** 86.22 49 ⇑P P 01 05 23.5 -1.4
baz=86
LPL **La Plagne** 86.24 330 *e*P P 01 05 24.5 -0.3
comp=Z,20nm,0.9s,mb5.0
LPL **La Plagne** 86.24 330 *e*P P 01 05 24.5 -0.3
LPL pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
LPL **La Plagne** 86.24 330 *e*P P 01 05 24.5 -0.3
comp=Z,9.9nm,0.9s,mb5.0
125A **Gardner Draw,** 86.25 50 ⇊P P 01 05 24.0 -1.1
baz=86
LPG **La Plagne** 86.25 330 *e*P P 01 05 24.6 -0.2
comp=Z,18nm,0.8s,mb5.0
LPG **La Plagne** 86.25 330 *e*P P 01 05 24.6 -0.2
LPG pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
LPG **La Plagne** 86.25 330 *e*P P 01 05 24.6 -0.2
comp=Z,9.1nm,0.8s,mb5.1
Y27A **Causey** 86.26 49 ⇑P P 01 05 23.6 -1.5
baz=86
HYF **Humbligny** 86.29 333 *e*P P 01 05 24.9 -0.1
SMF **Signal de Mont** 86.39 332 *e*P P 01 05 24.9 -0.6
comp=Z,14nm,0.9s,mb4.9
SMF **Signal de Mont** 86.39 332 *e*P P 01 05 24.9 -0.6
SMF pmax pmax
comp=Z,7.0nm,0.9s,mb4.9
SMF **Signal de Mont** 86.39 332 *e*P P 01 05 24.9 -0.6
comp=Z,7.1nm,0.9s,mb4.9
AVF **Avril sur Loir** 86.45 332 *e*P P 01 05 25.3 -0.5
comp=Z,36nm,0.9s,mb5.3
AVF **Avril sur Loir** 86.45 332 *e*P P 01 05 25.3 -0.5
AVF pmax pmax
comp=Z,18nm,0.9s,mb5.3
AVF **Avril sur Loir** 86.45 332 *e*P P 01 05 25.3 -0.5
comp=Z,18nm,0.9s,mb5.3
MNTX **Cornudas Mount** 86.48 51 *e*P P 01 05 26.2 -0.1
comp=Z,1.3nm,1.0s,mb4.1
GRR **Gorron** 86.51 336 *e*P P 01 05 25.6 -0.4
comp=Z,29nm,1.0s,mb5.2
GRR **Gorron** 86.51 336 *e*P P 01 05 25.6 -0.4
GRR pmax pmax
comp=Z,15nm,1.0s,mb5.2
GRR **Gorron** 86.51 336 *e*P P 01 05 25.6 -0.4
comp=Z,14nm,1.0s,mb5.2
324A **Moseley Ranch,** 86.60 52 ⇑P P 01 05 25.6 -1.2
baz=86
Z27A **Tatum** 86.64 49 ⇊P P 01 05 24.4 -2.5
baz=86
BGF **Bois d'Agland** 86.83 332 *e*P P 01 05 27.0 -0.6
comp=Z,17nm,1.0s,mb4.9
BGF **Bois d'Agland** 86.83 332 *e*P P 01 05 27.0 -0.6
BGF pmax pmax
comp=Z,8.0nm,1.0s,mb4.9
BGF **Bois d'Agland** 86.83 332 *e*P P 01 05 27.0 -0.6
comp=Z,8.3nm,1.0s,mb4.9
325A **Bean Ranch, Si** 86.96 51 ⇑P P 01 05 28.6 0.0
baz=87
ORIF **Oris-en-Rattie** 87.07 330 *e*P P 01 05 28.1 -0.8
SGMF **Saint Gilles** 87.16 337 *e*P P 01 05 28.9 -0.3
comp=Z,39nm,1.1s,mb5.3
SGMF **Saint Gilles** 87.16 337 *e*P P 01 05 28.9 -0.3
SGMF pmax pmax
comp=Z,20nm,1.1s,mb5.3
SGMF **Saint Gilles** 87.16 337 *e*P P 01 05 28.9 -0.3
comp=Z,20nm,1.1s,mb5.2
TCF **Toulx Ste Croi** 87.29 333 *e*P P 01 05 29.6 -0.3
comp=Z,12nm,1.0s,mb4.8
TCF **Toulx Ste Croi** 87.29 333 *e*P P 01 05 29.6 -0.3
TCF pmax pmax
comp=Z,6.0nm,1.0s,mb4.8
TCF **Toulx Ste Croi** 87.29 333 *e*P P 01 05 29.6 -0.3
comp=Z,6.0nm,1.0s,mb4.8
ROSF **Rostrenen** 87.31 337 *e*P P 01 05 29.8 -0.1
comp=Z,25nm,0.9s,mb5.1
ROSF **Rostrenen** 87.31 337 *e*P P 01 05 29.8 -0.1
ROSF pmax pmax
comp=Z,12nm,0.9s,mb5.1
ROSF **Rostrenen** 87.31 337 *e*P P 01 05 29.8 -0.1
comp=Z,12nm,0.9s,mb5.1
QUIF **Quistinic** 87.65 337 *e*P P 01 05 30.9 -0.7
MFF **Saint Martin d** 87.83 334 *e*P P 01 05 32.3 -0.2
comp=Z,28nm,1.2s,mb5.1
MFF **Saint Martin d** 87.83 334 *e*P P 01 05 32.3 -0.2
MFF pmax pmax
comp=Z,14nm,1.2s,mb5.1
MFF **Saint Martin d** 87.83 334 *e*P P 01 05 32.3 -0.2
comp=Z,14nm,1.2s,mb5.1
426A **McDonald Obser** 88.03 51 ⇊P P 01 05 33.0 -0.8
baz=88
RJF **Les Rejaudoux** 88.38 333 *e*P P 01 05 35.0 -0.1
comp=Z,5.9nm,0.8s,mb4.6
RJF **Les Rejaudoux** 88.38 333 *e*P P 01 05 35.0 -0.1
RJF pmax pmax
comp=Z,3.0nm,0.8s,mb4.6
RJF **Les Rejaudoux** 88.38 333 *e*P P 01 05 35.0 -0.1
comp=Z,3.0nm,0.8s,mb4.6
526A **Mary Lane Ranc** 88.42 52 ⇊P P 01 05 34.9 -0.7
baz=88
CAF **Calviac** 88.51 332 *e*P P 01 05 35.8 +0.1
comp=Z,17nm,1.1s,mb5.0

CAF	**Calvac**	**88.51**	**332**	*e*P	**P**	**01 05 35.8**	**+0.1**
CAF				pmax	pmax		
comp=Z,9.0nm,1.1s,mb5.0							
CAF	**Calvac**	**88.51**	**332**	*e*P	**P**	**01 05 35.8**	**+0.1**
comp=Z,8.6nm,1.1s,mb5.0							
428A	**Kincaid Ranch,**	**88.80**	**50**	⇑P	**P**	**01 05 37.6**	**+0.2**
baz=88							
LFF	**La Frestale**	**88.97**	**333**	*e*P	**P**	**01 05 37.8**	**-0.1**
comp=Z,10nm,0.8s,mb4.9							
LFF	**La Frestale**	**88.97**	**333**	*e*P	**P**	**01 05 37.8**	**-0.1**
LFF				pmax	pmax		
comp=Z,5.0nm,0.8s,mb4.9							
LFF	**La Frestale**	**88.97**	**333**	*e*P	**P**	**01 05 37.8**	**-0.1**
comp=Z,5.3nm,0.8s,mb4.9							
528A	**Cox Ranch, San**	**89.14**	**51**	⇓P	**P**	**01 05 38.2**	**-0.8**
baz=89							
TXAR	**Lajitas Array**	**89.19**	**52**	P	**P**	**01 05 39.6**	**+0.4**
comp=Z,1.1nm,0.8s,mb4.2,baz=313,slow=2.4,SNR=13							
TXAR	**Lajitas Array**	**89.19**	**52**	P	**P**	**01 05 39.7**	**+0.4**
TXAR				pmax	pmax		
comp=Z,1.0nm,0.8s							
MTLF	**Montolieu**	**89.81**	**331**	*e*P	**P**	**01 05 41.8**	**-0.1**
JCT	**Junction City**	**90.69**	**49**	*e*P	**P**	**01 05 45.9**	**-0.3**
JCT				pmax	pmax		
comp=Z,5.0nm,0.8s,mb4.9							
JCT	**Junction City**	**90.69**	**49**	*e*P	**P**	**01 05 45.9**	**-0.3**
comp=Z,5.3nm,0.8s,mb4.9							
EPF	**Esparros**	**90.77**	**332**	*e*P	**P**	**01 05 45.8**	**-0.6**
comp=Z,6.7nm,0.9s,mb4.7							
EPF	**Esparros**	**90.77**	**332**	*e*P	**P**	**01 05 45.8**	**-0.6**
EPF				pmax	pmax		
comp=Z,3.0nm,0.9s,mb4.6							
EPF	**Esparros**	**90.77**	**332**	*e*P	**P**	**01 05 45.8**	**-0.6**
comp=Z,3.3nm,0.9s,mb4.7							
ETSF	**Etsaut**	**91.21**	**333**	*e*P	**P**	**01 05 48.4**	**0.0**
ESDC	**Sonseca Array**	**95.26**	**333**	P	**P**	**01 06 06.7**	**-0.4**
comp=Z,0.5nm,0.7s,mb4.0,baz=2.8,slow=7.5,SNR=3.9							
MAW	**Mawson**	**121.21**	**206**	PKP	PKPdf	01 11 35.7	+0.7
comp=Z,1.4nm,0.9s,baz=51,slow=6.5,SNR=2.9							
LBTB	**Lobatse**	**124.44**	**264**	*e*PKIKP	PKPdf	01 11 43.0	+0.4
DBIC	**Dimbokro**	**124.49**	**317**	PKP	PKPdf	01 11 42.5	-0.6
comp=Z,4.0nm,0.8s,baz=17,slow=2.0,SNR=4.6							
DBIC	**Dimbokro**	**124.49**	**317**	*e*PKPdf	PKPdf	01 11 42.4	-0.7
ROSC	**El Rosal**	**125.50**	**45**	*e*PKPdf	PKPdf	01 11 45.5	+0.4
VNA1	**Neumayer--Stat**	**144.57**	**197**	*e*PKPdf	PKPdf	01 12 16.9	-1.7
LPAZ	**La Paz**	**145.96**	**56**	PKPbc	PKPbc	01 12 23.6	+0.3
comp=Z,8.0nm,0.9s,baz=1.6,slow=4.7,SNR=20							
LPAZ	**La Paz**	**145.96**	**56**	*e*PKPbc	PKPbc	01 12 23.5	+0.2
LCO	**Las Campanas**	**152.09**	**79**	*e*PKPdf	PKPdf	01 12 32.5	+0.4
LCO				*e*PKPbc	PKPbc	01 12 39.4	+0.6
LCO				*e*PKPab	PKPab	01 12 48.1	-0.2

JMA 14 00:53:50.5, 38°.96N×140°.88E, h7km±1km, M3.5, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.27**	**92**	P	Pg	00 53 55.8	+0.1
OFUJ	**Ofunato**	**0.63**	**79**	P	Pg	00 54 02.3	-0.3

JMA 14 00:55:10.4, 38°.83N×140°.80E, h4km±1km, M3.5, 1C-1D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.35**	**69**	P	Pg	00 55 17.2	+0.1
JMK				S	Sg	00 55 22.1	+0.4
JYK	**Kaneyama**	**0.35**	**284**	⇓P	Pg	00 55 17.5	+0.3
JYK				*e*S	Sg	00 55 22.3	+0.4
JOU	**Okura**	**0.48**	**193**	⇑P	Pg	00 55 19.8	+0.3
JOU				S	Sg	00 55 26.1	+0.4
JIO	**Ouri**	**0.57**	**131**	P	Pg	00 55 21.2	-0.1
JIO				*e*S	Sg	00 55 28.7	0.0
JOM	**Ohasama**	**0.75**	**31**	P	Pg	00 55 24.5	-0.3
JOM				S	Sg	00 55 34.2	-0.3

IDC ***14*** *00:58:15.7±0.9, 39°.14N×140°.80E, h0km, mb3.7/10, mb1 3.9/11, mb1mx3.7/25, mbtmp3.7/11, ML3.3/2, Error ellipse: s-maj=28.7km s-min=16.7km az=95.0*
NEIC ***14*** *00:58:16.7, 39°.12N×140°.95E, h10km, mb4.1/3, After JMA.*
JMA ***14*** *00:58:16.7, 39°.11N×140°.95E, h10km±1km, M3.4*
JMA Felt II J1.
ISCJB ***14*** *00:58:16.7±0.5, 39°.14N±0°.04×140°.97E±0°.06, h23km±4km, mb3.8/13, Error ellipse: s-maj=7.7km s-min=6.1km az=168.4*
ISC 14 00:58:16.9±0.6, 39°.12N±0°.03×140°.96E±0°.05, h11km±4km, n27, σ0°99/32, mb3.8/13, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRG	**Rokugo**	**0.37**	**318**	P	**Pg**	**00 58 24.5**	**+0.2**
JRG				*e*S	**Sg**	**00 58 29.6**	**+0.3**
JOM	**Ohasama**	**0.44**	**36**	P	**Pg**	**00 58 25.4**	**-0.2**
JOM				S	**Sg**	**00 58 31.4**	**0.0**
JYK	**Kaneyama**	**0.51**	**247**	P	**Pg**	**00 58 26.7**	**-0.1**
OFUJ	**Ofunato**	**0.56**	**94**	P	**Pg**	**00 58 27.4**	**-0.3**
JIO	**Ouri**	**0.73**	**155**	P	**Pg**	**00 58 30.6**	**-0.5**
JIO				*e*S	**Sg**	**00 58 40.4**	**-0.2**
ERM	**Erimo**	**3.34**	**29**	*e*Pn	**Pn**	**00 59 14.1**	**+4.9**
MAJO	**Matsushiro**	**3.37**	**221**	*e*Pn	**Pn**	**00 59 10.4**	**+0.9**
MAT	**Matsushiro**	**3.37**	**221**	P	**Pn**	**00 59 11.2**	**+1.7**
MAT				*e*S	**Sn**	**00 59 55.0**	**+5.5**
MJAR	**Matsushiro Arr**	**3.37**	**221**	Pn	**Pn**	**00 59 10.1**	**+0.6**
1.5nm,0.3s,baz=310,slow=31,SNR=4.9							
MJAR				Pg	**Pg**	**00 59 17.7**	**-3.7**
1.9nm,0.3s,baz=98,slow=7.5,SNR=8.6							
ASAJ	**Asahikawa**	**5.14**	**13**	Pn	**Pn**	**00 59 36.0**	**+2.1**
1.4nm,0.3s,baz=212,slow=9.5,SNR=3.4							
KSRS	**Korea Array**	**10.38**	**265**	Pn	**Pn**	**01 00 50.4**	**+4.7**
0.7nm,0.3s,baz=77,slow=14,SNR=15							
ZALV	**Zalesovo Beam**	**40.27**	**311**	P	**P**	**01 05 52.9**	**-0.8**
0.4nm,0.4s,mb3.5,baz=88,slow=7.8,SNR=2.8							
MKAR	**Makanchi Array**	**42.73**	**300**	P	**P**	**01 06 13.9**	**-0.1**
0.3nm,0.4s,mb3.4,baz=70,slow=13,SNR=2.9							
KURK	**Kurchatov**	**44.38**	**306**	*e*P	**P**	**01 06 24.9**	**-2.4**
0.8nm,0.5s,mb3.7							
TKM2	**Tokmak 2**	**48.35**	**297**	*e*P	**P**	**01 06 56.2**	**-2.3**
1.8nm,0.6s,mb4.3							
BVAR	**Borovoye Array**	**48.92**	**311**	P	**P**	**01 07 02.9**	**+0.2**
0.7nm,0.5s,mb4.0,baz=78,slow=7.9,SNR=4.4							
ARU	**Arti**	**54.57**	**317**	*e*P	**P**	**01 07 44.9**	**0.0**
1.5nm,0.6s,mb4.2							
ABKAR	**Akbulak array**	**56.34**	**309**	*e*P	**P**	**01 07 57.5**	**-0.2**
WRA	**Warramunga Arr**	**59.08**	**187**	P	**P**	**01 08 16.7**	**-0.5**
1.0nm,0.8s,mb3.9,baz=3.7,slow=7.3,SNR=3.9							
ARCES	**ARCESS Array B**	**61.92**	**339**	P	**P**	**01 08 36.4**	**+0.3**
1.5nm,1.0s,mb4.1,baz=34,slow=9.0,SNR=4.2							
ASAR	**Alice Springs**	**62.80**	**187**	P	**P**	**01 08 43.0**	**+0.6**
0.5nm,0.7s,mb3.7,baz=353,slow=3.8,SNR=4.2							
FINES	**FINESS Array B**	**66.81**	**332**	P	**P**	**01 09 07.8**	**-0.4**
0.5nm,0.4s,mb3.9,baz=40,slow=10.0,SNR=5.7							
FINES	**FINESS Array B**	**66.81**	**332**	P	**P**	**01 09 07.8**	**-0.4**
NOA	**NORSAR Array B**	**72.13**	**337**	P	**P**	**01 09 40.8**	**-0.3**
0.6nm,0.6s,mb3.7,baz=39,slow=6.2,SNR=2.9							
AKASG	**Malin Array Be**	**72.44**	**322**	P	**P**	**01 09 42.1**	**-1.0**
0.5nm,0.4s,mb3.8,baz=44,slow=7.5,SNR=3.4							
NVAR	**Mina Array Bea**	**74.03**	**53**	P	**P**	**01 09 55.2**	**+2.5**
0.2nm,0.4s,mb3.4,baz=285,slow=4.6,SNR=3.6							
NVAR	**Mina Array Bea**	**74.03**	**53**	P	**P**	**01 09 55.2**	**+2.5**

BJI ***14*** *01:00:08.8, 38°.78N×141°.66E, h10km, mB5.5/1, mb4.6/24, Ms5.0/12, Ms7 5.0/14*
IDC ***14*** *01:00:14.7±0.5, 39°.06N×140°.79E, h0km, mb4.5/29, mb1 4.6/33, mb1mx4.5/37, mbtmp4.5/33, ML4.2/4, Error ellipse: s-maj=13.8km s-min=11.8km az=121.0*
ISCJB ***14*** *01:00:15.5±0.7, 39°.06N±0°.02×140°.85E±0°.02, h13km±4km, mb4.6/122, MS5.2/4, Error ellipse: s-maj=3.7km s-min=3.0km az=155.9*
NEIC ***14*** *01:00:16.1, 39°.04N×140°.91E, h12km, mb4.7/76, After JMA.*
NEIC Recorded [4 JMA] in Iwate, [3 JMA] in Miyagi, [2 JMA] in Akita and [1 JMA] in Aomori and Fukushima.
JMA ***14*** *01:00:16.1, 39°.04N×140°.90E, h8km±1km, M4.5 Broadband fault plane solution: P waves. NP1: ϕ_s80.00000°, δ53.00000°, λ159.00000°. NP2: ϕ_s183.00000°, δ73.00000°, λ39.00000°. Principal axes: T*

Plg39.0000°, Azm48.0000°; N Plg48.0000°, Azm202.0000°; P Plg13.0000°, Azm307.0000°;
JMA Felt IV J1.
MOS ***14*** *01:00:18.7±0.7, 39°.15N×140°.72E, h33km, mb4.9/76 Error ellipse: s-maj=11.0km s-min=7.1km az=81.5*
SZGRF ***14*** *01:00:24.2, 39°.62N×140°.06E, h33km, mb4.8, Eastern Honshu, Japan*
ISC 14 01:00:16.2±0.4, 39°.04N±0°.02×140°.87E±0°.02, h8km±2km, h14km±.9km:pP-P, n483, σ0s72/495, mb4.6/122, MS5.2/4, 115C-69D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.29**	**108**	P	**Pg**	**01 00 21.3**	**-0.6**
JMK				S	**Sg**	**01 00 25.0**	**-0.8**
JRG	**Rokugo**	**0.40**	**333**	⇓P	**Pg**	**01 00 24.4**	**+0.5**
JRG				*e*S	**Sg**	**01 00 30.6**	**+1.4**
JYK	**Kaneyama**	**0.41**	**253**	P	**Pg**	**01 00 25.0**	**+0.8**
JOM	**Ohasama**	**0.54**	**37**	⇑P	**Pg**	**01 00 26.2**	**-0.5**
JOM				S	**Sg**	**01 00 33.5**	**-0.3**
OFUJ	**Ofunato**	**0.63**	**86**	P	**Pg**	**01 00 27.5**	**-0.8**
OFUJ				S	**Sg**	**01 00 35.6**	**-0.8**
JOU	**Okura**	**0.69**	**193**	⇑P	**Pg**	**01 00 29.4**	**-0.1**
JOU				S	**Sg**	**01 00 38.7**	**+0.1**
JIO	**Ouri**	**0.70**	**147**	⇓P	**Pg**	**01 00 28.9**	**-0.7**
JIO				S	**Sg**	**01 00 38.1**	**-0.6**
JYA	**Atsumi**	**1.01**	**244**	⇓P	**Pg**	**01 00 35.5**	**0.0**
JYS	**Shirataka**	**1.03**	**218**	⇑P	**Pg**	**01 00 35.9**	**-0.1**
JYS				*e*S	**Sg**	**01 00 49.1**	**-0.3**
MJAR	**Matsushiro Arr**	**3.27**	**221**	Pn	**Pn**	**01 01 08.8**	**+1.2**
8.0nm,0.3s,baz=33,slow=13,SNR=71							
MJAR	**Matsushiro Arr**	**3.27**	**221**	P	**Pn**	**01 01 08.8**	**+1.1**
MJAR				pmax	pmax		
comp=Z,8.0nm,0.3s							
MJAR	**Matsushiro Arr**	**3.27**	**221**	Pn	**Pn**	**01 01 08.8**	**+1.2**
MAJO	**Matsushiro**	**3.27**	**221**	*e*P	**Pn**	**01 01 09.5**	**+1.8**
MAT	**Matsushiro**	**3.27**	**221**	P	**Pn**	**01 01 10.2**	**+2.5**
MAT				*e*S	**Sn**	**01 01 54.8**	**+8.1**
ERM	**Erimo**	**3.44**	**30**	*e*P	**Pn**	**01 01 11.9**	**+1.8**
ASAJ	**Asahikawa**	**5.23**	**14**	Pn	**Pn**	**01 01 36.3**	**+1.6**
comp=Z,12nm,0.3s,baz=276,slow=8.5,SNR=16							
ASAJ	**Asahikawa**	**5.23**	**14**	P	**Pn**	**01 01 36.3**	**+1.6**
ASAJ				pmax	pmax		
comp=Z,12nm,0.3s							
JHJ	**Hachijo jima 2**	**5.97**	**189**	Pn	**Pn**	**01 01 45.2**	**+0.3**
comp=Z,32nm,0.3s,baz=107,slow=19,SNR=3.1							
JHJ				Sn	**Sn**	**01 02 55.1**	**+1.5**
comp=Z,29nm,0.3s,baz=98,slow=22,SNR=5.7							
YSS	**Yuzh-Sakhalins**	**8.03**	**9**	⇑*e*P	**Pn**	**01 02 14.0**	**+1.0**
YSS				pmax	pmax		
comp=Z,50nm,0.9s							
YSS	**Yuzh-Sakhalins**	**8.03**	**9**	*e*Pn	**Pn**	**01 02 14.1**	**+1.0**
comp=Z,34nm,0.8s							
MDJ	**Mudanjiang**	**10.09**	**307**	P	**Pn**	**01 02 45.9**	**+4.6**
MDJ				pmax	pmax		
comp=Z,13nm,1.6s							
MDJ				pmax	pmax		
comp=Z,13μm,13.1s							
MDJ				LR	LR		
comp=N,9μm,20.2s							
MDJ				LR	LR		
comp=E,7μm,21.4s							
MDJ				LR	LR		
comp=Z,9μm,22.5s							
KSRS	**Korea Array**	**10.30**	**265**	Pn	**Pn**	**01 02 47.0**	**+2.7**
comp=Z,3.6nm,0.3s,baz=79,slow=14,SNR=24							
KSRS				Sn	**Sn**	**01 04 46.2**	**+6.2**
comp=Z,1.3nm,0.3s,baz=71,slow=23,SNR=8.2							
KSRS	**Korea Array**	**10.30**	**265**	P	**Pn**	**01 02 47.0**	**+2.7**
KSRS						01 04 46.2	
KSRS				pmax	pmax		
comp=Z,4.0nm,0.3s							
KSRS				smax			
comp=N,1.0nm,0.3s							
HABR	**Khabarovsk**	**10.32**	**338**	P	**Pn**	**01 02 44.8**	**+0.4**
HABR						01 04 37.3	
CBIJ	**Chichi jima**	**11.96**	**174**	Pn	**Pn**	**01 03 03.5**	**-3.5**
comp=N,20nm,0.3s,baz=320,slow=17,SNR=7.5							
CBIJ				Sn	**Sn**	**01 05 12.8**	**-8.0**
comp=N,2.4nm,0.3s,baz=90,slow=20,SNR=2.5							
KLR	**Kul'dur**	**12.10**	**330**	*e*P	**Pn**	**01 03 09.2**	**+0.5**
CN2	**Changchun**	**12.51**	**297**	*e*P	**Pn**	**01 03 20.3**	**+5.9**
CN2				*es*P		01 03 26.8	
CN2				*e*S	**Sn**	**01 05 39.3**	**+5.4**
CN2				LR	LR		
comp=N,9μm,13.0s							
CN2				LR	LR		
comp=E,13μm,13.0s							
CN2				LR	LR		
comp=Z,14μm,14.0s							
PETK	**Petropavlovsk-**	**18.21**	**34**	P	**Pn**	**01 04 29.5**	**+0.3**
comp=Z,0.4nm,0.3s,baz=213,slow=9.4,SNR=4.4							
BJI	**Beijing**	**19.06**	**281**	P	**Pn**	**01 04 39.0**	**-0.6**
BJI				pmax	pmax		
comp=Z,10.0nm,0.8s							
CLNS	**Chul'man**	**20.68**	**335**	*e*P	**P**	**01 04 55.4**	**-0.9**
CLNS				pmax	pmax		
comp=Z,12nm,1.1s							
CLNS				pmax	pmax		
comp=N,6.0nm,0.8s							
HHC	**Hu-ho-hao-te**	**22.50**	**284**	*e*P	**P**	**01 05 15.8**	**-0.2**
HHC				pP		01 05 20.0	
HHC				sP	sP	01 05 22.8	+3.5
HHC				PP		01 05 41.5	
HHC				S	**S**	**01 09 15.8**	**-7.4**
HHC				pmax	pmax		
comp=Z,26nm,0.6s,mb4.8							
HHC				LR	LR		
comp=Z,7μm,12.7s,MS5.3							
YAK	**Yakutsk**	**24.02**	**347**	*e*P	**P**	**01 05 27.8**	**-3.4**
YAK				pmax	pmax		
comp=Z,36nm,0.9s,mb4.8							
YAK	**Yakutsk**	**24.02**	**347**	*e*P	**P**	**01 05 29.9**	**-1.3**
comp=Z,47nm,0.6s,mb5.1							
SEY	**Seymchan**	**24.92**	**13**	*ce*P	**P**	**01 05 40.3**	**+0.9**
FX1	**Attu Island--F**	**26.11**	**47**	P	**P**	**01 05 51.5**	**+1.2**
comp=Z,6.8nm,0.6s,mb4.4,baz=300,slow=1.6,SNR=6.0							
FX1	**Attu Island--F**	**26.11**	**47**	P	**P**	**01 05 51.5**	**+1.2**
FX1				pmax	pmax		
comp=Z,7.0nm,0.6s							
SONM	**Songino Array**	**26.35**	**301**	P	**P**	**01 05 51.8**	**-0.7**
comp=Z,0.8nm,0.3s,mb3.7,baz=88,slow=7.5,SNR=2.3							
SONM	**Songino Array**	**26.35**	**301**	P	**P**	**01 05 51.8**	**-0.7**
SONM				pmax	pmax		
comp=Z,1.0nm,0.3s							
ENH	**Enshi**	**27.15**	**261**	*e*P	**P**	**01 05 59.5**	**-0.4**
comp=Z,12nm,0.3s,mb4.9							
LZH	**Lanzhou**	**29.37**	**276**	*e*P	**P**	**01 06 20.1**	**+0.5**
LZH				pP	pP	01 06 23.5	+1.5
LZH				sP	sP	01 06 25.0	+2.0
LZH				PP	PP	01 07 14.0	-12
LZH				S	**S**	**01 11 10.0**	**-3.4**
GYA	**Guiyang**	**31.20**	**257**	P	**P**	**01 06 35.6**	**-0.3**
GYA				PP	PP	01 07 39.6	-6.7
GYA				S	**S**	**01 11 37.6**	**-4.6**
GYA				ScP	ScP	01 13 13.4	-0.4
GYA				pmax	pmax		
comp=Z,10.0nm,0.7s,mb4.8							
GYA				pmax	pmax		
comp=Z,150nm,14.0s							
GYA				LR	LR		
comp=N,450nm,14.6s,MS4.5							
GYA				LR	LR		
comp=E,550nm,15.4s,MS4.5							
GYA				LR	LR		
comp=Z,940nm,13.7s,MS4.6							
CD2	**Chengdu**	**31.30**	**266**	*e*P	**P**	**01 06 38.3**	**+1.5**
CD2				pP	pP	01 06 42.8	+3.6
CD2				sP	sP	01 06 46.3	+6.1
CD2				pmax	pmax		
comp=Z,10.0nm,0.6s,mb4.8							
GTA	**Gaotai**	**31.61**	**284**	*e*P	**P**	**01 06 42.8**	**+3.4**
GTA				pP	pP	01 06 46.0	+4.2
GTA				sP	sP	01 06 48.9	+6.1
GTA				pmax	pmax		
comp=Z,3.0nm,0.8s,mb4.2							
BILL	**Bilibino**	**32.24**	**18**	*e*P	**P**	**01 06 44.3**	**-0.3**
BILL				*e*		01 07 50.7	
BILL				*e*		01 09 34.0	
BILL				pmax	pmax		
comp=Z,11nm,1.2s,mb4.6							
BILL	**Bilibino**	**32.24**	**18**	*e*P	**P**	**01 06 43.9**	**-0.7**
comp=Z,6.2nm,0.8s,mb4.5							
TIXI	**Tiksi**	**33.25**	**353**	*e*P	**P**	**01 06 52.4**	**-1.0**
TIXI				pmax	pmax		
comp=Z,7.0nm,1.0s,mb4.5							
TIXI	**Tiksi**	**33.25**	**353**	*e*P	**P**	**01 06 52.4**	**-1.0**
comp=Z,7.3nm,1.0s,mb4.6							
KMI	**Kunming**	**34.90**	**258**	P	**P**	**01 07 09.1**	**+0.9**
KMI				pP	pP	01 07 12.6	+1.9
KMI				sP	sP	01 07 13.8	+2.2
KMI				PP	PP	01 08 26.8	-0.5
KMI				S	**S**	**01 12 39.3**	**-0.4**
KMI				pmax	pmax		
comp=Z,8.0nm,0.6s,mb4.8							
KMI				LR	LR		
comp=Z,5μm,15.4s,MS5.4							
WMQ	**Urumqi**	**39.58**	**295**	*e*P	**P**	**01 07 48.0**	**+0.2**
ZALV	**Zalesovo Beam**	**40.26**	**311**	P	**P**	**01 07 52.9**	**-0.5**
comp=Z,2.0nm,0.4s,mb4.2,baz=88,slow=7.6,SNR=13							
ZALV				PcP	PcP	01 09 56.3	-0.6
comp=Z,1.7nm,0.5s,baz=96,slow=3.3,SNR=5.0							
ZALV	**Zalesovo Beam**	**40.26**	**311**	P	**P**	**01 07 52.9**	**-0.4**
ZALV						01 09 56.3	
ZALV				pmax	pmax		
comp=Z,2.0nm,0.4s,mb4.2							
CHTO	**Chiang Mai**	**41.41**	**253**	*e*P	**P**	**01 08 03.3**	**+0.1**
CHTO				pmax	pmax		
comp=Z,4.0nm,0.8s,mb4.1							
CHTO	**Chiang Mai**	**41.41**	**253**	*e*P	**P**	**01 08 03.3**	**0.0**
comp=Z,3.6nm,0.8s,mb4.0							
MK31	**Makanchi Array**	**42.71**	**300**	*e*P	**P**	**01 08 13.3**	**-0.2**
MKAR	**Makanchi Array**	**42.71**	**300**	P	**P**	**01 08 13.2**	**-0.3**
comp=Z,3.4nm,0.7s,mb4.2,baz=75,slow=14,SNR=18							
MKAR	**Makanchi Array**	**42.71**	**300**	P	**P**	**01 08 13.2**	**-0.3**
MKAR				pmax	pmax		
comp=Z,3.0nm,0.7s							
SVW2	**Sparrevohn**	**44.21**	**39**	*e*P	**P**	**01 08 26.6**	**+1.3**
KURK	**Kurchatov**	**44.37**	**306**	*ce*P	**P**	**01 08 26.4**	**-0.4**
KURK				pmax	pmax		
comp=Z,15nm,1.2s,mb4.6							
KURK	**Kurchatov**	**44.37**	**306**	*e*P	**P**	**01 08 26.1**	**-0.7**
comp=Z,8.6nm,0.6s,mb4.7							
RSO	**Redoubt South**	**45.61**	**39**	*e*P	**P**	**01 08 37.7**	**+1.1**
ODAN	**Odare**	**45.90**	**271**	*e*P	**P**	**01 08 37.8**	**-1.5**
KDAK	**Kodiak Island**	**45.91**	**43**	P	**P**	**01 08 37.9**	**-1.1**
comp=Z,11nm,0.8s,mb4.9,baz=272,slow=3.7,SNR=8.0							
KDAK	**Kodiak Island**	**45.91**	**43**	*i* P	**P**	**01 08 39.1**	**+0.1**
RAMN	**Ramite**	**46.47**	**272**	*e*P	**P**	**01 08 43.8**	**0.0**
comp=Z,27nm,0.9s,mb5.2							
GUN	**Gumba**	**46.56**	**273**	*e*P	**P**	**01 08 43.7**	**-0.8**
comp=Z,39nm,0.6s,mb5.5							
KKN	**Kakani**	**47.09**	**274**	*e*P	**P**	**01 08 48.9**	**+0.3**
comp=Z,37nm,0.7s,mb5.5							
KKN	**Kakani**	**47.09**	**274**	*e*P	**P**	**01 08 48.9**	**+0.3**
KKN				pmax	pmax		
comp=Z,37nm,0.7s,mb5.4							
MCK	**McKinley**	**47.22**	**35**	*e*P	**P**	**01 08 49.9**	**+0.8**
MCK				pmax	pmax		
comp=Z,7.0nm,0.8s,mb4.6							
MCK	**McKinley**	**47.22**	**35**	*e*P	**P**	**01 08 49.9**	**+0.7**
comp=Z,7.2nm,0.8s,mb4.7							
COLA	**College**	**47.62**	**33**	*e*P	**P**	**01 08 52.8**	**+0.5**
COLA				pmax	pmax		
comp=Z,6.0nm,0.6s,mb4.8							
COLA	**College**	**47.62**	**33**	*e*P	**P**	**01 08 52.8**	**+0.5**
comp=Z,5.9nm,0.6s,mb4.8							
TKM2	**Tokmak 2**	**48.32**	**297**	*e*P	**P**	**01 08 58.3**	**+0.3**
TKM2				pmax	pmax		
comp=Z,8.0nm,0.8s,mb4.8							
TKM2	**Tokmak 2**	**48.32**	**297**	*e*P	**P**	**01 08 58.3**	**+0.3**
comp=Z,7.5nm,0.8s,mb4.8							
BVAR	**Borovoye Array**	**48.92**	**311**	P	**P**	**01 09 02.1**	**-0.3**
comp=Z,2.8nm,0.6s,mb4.5,baz=76,slow=7.6,SNR=12							
BVAR				PcP	PcP	01 10 26.7	+0.1
comp=Z,2.5nm,0.7s,baz=81,slow=4.7,SNR=5.4							
BVAR	**Borovoye Array**	**48.92**	**311**	P	**P**	**01 09 02.1**	**-0.3**
BVAR						01 10 26.7	
BVAR				pmax	pmax		
comp=Z,3.0nm,0.6s							
BRVK	**Borovoye**	**48.97**	**311**	*ce*P	**P**	**01 09 03.7**	**+0.9**
BRVK				pmax	pmax		
comp=Z,4.0nm,1.0s,mb4.4							
BRVK	**Borovoye**	**48.97**	**311**	*e*P	**P**	**01 09 02.2**	**-0.6**
comp=Z,4.0nm,0.8s,mb4.5							
AAK	**Ala-Archa**	**49.18**	**297**	P	**P**	**01 09 04.8**	**+0.2**
comp=Z,1.4nm,0.3s,mb4.4,baz=44,slow=3.6,SNR=4.2							
AAK	**Ala-Archa**	**49.18**	**297**	P	**P**	**01 09 04.8**	**+0.2**
AAK				pmax	pmax		
comp=Z,1.0nm,0.3s,mb4.3							
AAK	**Ala-Archa**	**49.18**	**297**	*e*P	**P**	**01 09 04.7**	**+0.1**
comp=Z,2.1nm,0.5s,mb4.4							
KSH	**Kashi**	**49.22**	**292**	*e*P	**P**	**01 09 07.0**	**+2.1**
KSH				pP	pP	01 09 11.5	+4.1
KSH				sP	sP	01 09 14.0	+5.6
KSH				PcP	PcP	01 10 30.4	+2.4
KSH				PP	PP	01 11 01.1	+2.6
KSH				ScP	ScP	01 14 23.8	+0.4
KSH				PcS	PcS	01 14 25.5	+1.1
KSH				S	**S**	**01 16 11.3**	**+0.5**
KSH				ScS	ScS	01 18 55.8	-1.5
KSH				pmax	pmax		
comp=Z,3.0nm,0.7s,mb4.4							
KSH				LR	LR		
comp=N,960nm,

ARCES **ARCESS Array B** 61.97 339 P P 01 10 35.6 -0.5
comp=Z,1.9nm,0.6s,mb4.4,baz=55,slow=7.8,SNR=28
ARCES **ARCESS Array B** 61.97 339 P P 01 10 35.6 -0.5
ARCES pmax pmax
comp=Z,2.0nm,0.6s
YKA **Yellowknife Ar** 62.30 31 P P 01 10 38.2 -0.2
comp=Z,0.9nm,0.5s,mb4.1,baz=299,slow=5.9,SNR=5.4
YKA **Yellowknife Ar** 62.30 31 P P 01 10 38.2 -0.2
YKA pmax pmax
comp=Z,1.0nm,0.5s
YKA **Yellowknife Ar** 62.30 31 P P 01 10 38.2 -0.2
ASAR **Alice Springs** 62.72 187 P P 01 10 41.3 -0.3
comp=Z,4.9nm,0.9s,mb4.6,baz=4.3,slow=5.7,SNR=21
ASAR **Alice Springs** 62.72 187 P P 01 10 41.3 -0.3
ASAR pmax pmax
comp=Z,5.0nm,0.9s
JOF **Joensuu** 63.99 331 *e*P P 01 10 48.1 -1.6
JOF pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
JOF **Joensuu** 63.99 331 *e*p P 01 10 48.1 -1.6
comp=Z,2.0nm,0.4s,mb4.5
KAF **Kangasniemi** 66.33 332 *e*P P 01 11 03.0 -1.8
KAF pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
KAF **Kangasniemi** 66.33 332 *e*p P 01 11 03.0 -1.8
comp=Z,6.6nm,0.6s,mb4.8
FINES **FINESS Array B** 66.84 332 P P 01 11 07.7 -0.4
comp=Z,11nm,0.7s,mb5.0,baz=48,slow=8.5,SNR=40
FINES **FINESS Array B** 66.84 332 P P 01 11 07.7 -0.4
FINES pmax pmax
comp=Z,11nm,0.7s
VSR **Storozhevoye** 67.14 318 *e*P P 01 11 09.3 -0.9
VSR pmax pmax
comp=N,3.0nm,0.5s
VSR pmax pmax
comp=E,2.0nm,0.5s
VSR pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
GOF **Gofitskoye** 68.45 311 *e*P P 01 11 13.8 -4.8
SUMG **Summit** 68.68 360 *e*P P 01 11 20.4 +0.9
comp=Z,18nm,1.0s,mb5.0
NEW **Newport** 69.00 44 *e*P P 01 11 22.1 +0.2
NEW pmax pmax
comp=Z,5.0nm,1.0s
NEW **Newport** 69.00 44 *e*P P 01 11 22.1 +0.2
comp=Z,5.2nm,1.0s,mb4.4
ZEI **Tsey** 69.21 309 *e*P P 01 11 21.9 -1.5
ZEI pmax pmax
comp=Z,3.0nm,0.3s,mb4.7
KIV **Kislovodsk** 69.28 310 *e*P P 01 11 24.9 +1.2
KIV *e* 01 11 48.0
KIV pmax pmax
comp=Z,46nm,1.2s,mb5.3
KIV **Kislovodsk** 69.28 310 *e*P P 01 11 24.5 +0.8
C11A **Tepee Creek (N** 69.72 44 ⇑P P 01 11 25.8 -0.6
baz=70
SCO **Scoresbysund** 70.08 354 *i* P P 01 11 28.0 -0.2
comp=Z,4.0nm,0.7s,mb4.5
GNI **Garni** 70.17 306 P P 01 11 28.2 -1.1
comp=Z,1.3nm,0.4s,mb4.3,baz=168,slow=14,SNR=3.7
GNI **Garni** 70.17 306 *e*P P 01 11 31.0 +1.7
GNI pmax pmax
comp=Z,12nm,1.2s
GNI **Garni** 70.17 306 *e*P P 01 11 28.9 -0.4
comp=Z,15nm,1.2s,mb4.8
B13A **Whitefish** 70.36 43 ⇑P P 01 11 29.7 -0.6
baz=70
IZAR **Zarasai** 70.49 327 *e*P P 01 11 30.9 -0.1
IZAR AMB AMB 01 11 31.4
comp=Z,1.2nm,0.6s,mb4.0
A14A **Double T Ranch** 70.55 42 ⇓P P 01 11 31.4 -0.1
baz=70
STKA **Stephens Creek** 70.56 179 P P 01 11 31.8 +0.2
comp=Z,1.8nm,0.7s,mb4.1,baz=351,slow=13,SNR=3.7
IDID **Didziasalis** 70.56 326 *e*P P 01 11 31.6 +0.1
IDID AMB AMB 01 11 32.9
comp=Z,3.8nm,0.9s,mb4.3
ISAL **Salakas** 70.66 327 *e*P P 01 11 32.1 +0.1
ISAL AMB AMB 01 11 33.6
comp=Z,6.8nm,1.1s,mb4.5
C13A **Hot Springs** 70.72 44 ⇑P P 01 11 32.7 +0.1
baz=70
G10A **Bishop Farm, J** 70.73 47 ⇑P P 01 11 31.8 -0.9
baz=70
IIGN **Ignalina** 70.76 327 *e*P P 01 11 32.7 0.0
IIGN AMB AMB 01 11 33.3
comp=Z,4.8nm,0.7s,mb4.5
A15A **Johnson Ranch,** 70.91 42 ⇑P P 01 11 33.2 -0.4
baz=71
F11A **Grangeville** 70.93 46 ⇑P P 01 11 33.2 -0.6
baz=71
E12A **Beaver Dam Sad** 70.94 45 ⇓P P 01 11 33.9 0.0
baz=71
B14A **Marquette Ranc** 71.00 43 ⇓P P 01 11 33.8 -0.4
baz=71
D13A **Huson** 71.14 44 ⇓P P 01 11 34.8 -0.3
baz=71
G11A **Walters Elk Ra** 71.16 47 ⇓P P 01 11 35.1 -0.1
baz=71
H10A **Noah's Angus R** 71.37 47 ⇓P P 01 11 36.6 +0.1
baz=71
B15A **Bradely Ranch,** 71.41 42 ⇓P P 01 11 36.9 +0.2
baz=71
F12A **Elk City** 71.51 46 ⇑P P 01 11 37.2 -0.1
baz=71
SLMT **Seeley Lake** 71.57 44 *e*P P 01 11 38.4 +0.7
I10A **Payette** 71.63 48 ⇑P P 01 11 38.6 +0.5
baz=71
D14A **Greenough** 71.66 44 ⇓P P 01 11 38.0 -0.2
baz=71
H11A **Donnelly** 71.72 47 ⇑P P 01 11 38.1 -0.6
baz=72
BEKR **Beckworth** 72.00 53 ⇑P P 01 11 40.1 -0.2
baz=72
NB2 **NORSAR Subarra** 72.17 337 P P 01 11 40.4 -0.6
comp=Z,12nm,0.9s,mb4.8,baz=39,slow=6.2
NOA **NORSAR Array B** 72.17 337 P P 01 11 39.0 -2.1
comp=Z,6.4nm,0.7s,mb4.7,baz=39,slow=6.0,SNR=36
NOA **NORSAR Array B** 72.17 337 P P 01 11 39.0 -2.0
NOA pmax pmax
comp=Z,6.0nm,0.7s
FFC **Flin Flon** 72.25 33 *i* P P 01 11 42.0 +0.4
FFC **Flin Flon** 72.25 33 *e*P P 01 11 41.0 -0.7
comp=Z,5.3nm,0.9s,mb4.5
K10A **MacKenzie Ranc** 72.38 49 ⇑P P 01 11 42.7 +0.1
baz=72
FCC **Fort Churchill** 72.40 27 *e*P P 01 11 42.0 -0.4
comp=Z,0.2nm,0.4s,mb3.4
NAO01 **NORSAR Array S** 72.43 337 *e*P P 01 11 41.5 -1.1
comp=Z,4.9nm,0.7s,mb4.5
AKASG **Malin Array Be** 72.45 322 P P 01 11 42.2 -0.7
comp=Z,4.1nm,0.5s,mb4.6,baz=46,slow=5.6,SNR=20
AKASG **Malin Array Be** 72.45 322 P P 01 11 42.2 -0.7
AKASG pmax pmax
comp=Z,4.0nm,0.5s
AKBB **Malin Array Si** 72.45 322 *e*P P 01 11 41.8 -1.1
KIEV **Kiev** 72.46 322 *e*P P 01 11 41.9 -1.1
KIEV pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
KIEV **Kiev** 72.46 322 *e*P P 01 11 41.9 -1.1
comp=Z,5.7nm,0.7s,mb4.6
H12A **Diamond D Ranc** 72.47 47 ⇑P P 01 11 43.0 -0.1
baz=72
G13A **Cobalt** 72.48 46 ⇑P P 01 11 43.0 -0.2
baz=72
E15A **Deer Lodge** 72.54 44 ⇓P P 01 11 43.6 +0.1
baz=72,SNR=6.9
I12A **Atlanta** 72.77 47 ⇑P P 01 11 45.0 0.0
baz=72
H13A **Challis** 72.80 46 ⇑P P 01 11 45.4 +0.3
baz=72
F15A **Butte** 72.98 44 ⇓P P 01 11 46.6 +0.5
baz=73,SNR=13
LRM **Limekiln Ridge** 73.02 44 *e*P P 01 11 47.2 +0.8
CMB **Columbia Colle** 73.06 55 *e*P P 01 11 47.8 +1.0
DLMT **Dillon** 73.22 45 *e*P P 01 11 48.6 +1.0
I13A **Wildhorse Cree** 73.28 47 ⇓P P 01 11 47.0 -0.9
baz=73
HLID **Hailey** 73.33 47 ⇑P P 01 11 48.5 +0.3
baz=73
HLID **Hailey** 73.33 47 *e*P P 01 11 48.7 +0.5
L11A **Cat Creek Ranc** 73.41 49 ⇓P P 01 11 49.6 +0.8
baz=73,SNR=5.0
G15A **Dillon** 73.41 45 ⇑P P 01 11 49.0 +0.3
baz=73,SNR=7.5
E17A **Martinsdale** 73.47 43 ⇓P P 01 11 49.4 +0.4
baz=73,SNR=6.0

J13A **Cove Ranch, Pi** 73.56 47 ⇑P P 01 11 49.5 -0.1
baz=73
BOZ **Bozeman (W)** 73.57 44 ⇑P P 01 11 49.8 +0.1
baz=73,SNR=12
BOZ **Bozeman (W)** 73.57 44 *e*P P 01 11 50.6 +0.9
I14A **Mackay** 73.64 46 ⇑P P 01 11 50.2 +0.1
baz=73
G16A **Moss Hill, Enn** 73.74 45 ⇑P P 01 11 50.6 0.0
baz=74,SNR=5.4
M11A **Holland Ranch,** 73.83 50 ⇑P P 01 11 51.7 +0.5
baz=74,SNR=5.8
L12A **House Creek Ra** 73.85 49 ⇓P P 01 11 51.7 +0.3
baz=74
E18A **Harlowton** 73.91 43 ⇑P P 01 11 51.0 -0.6
baz=74
SFJD **Kangerlussuaq** 73.92 5 *i* P P 01 11 43.5 -7.8
comp=Z,9.2nm,0.9s,mb4.7
F17A **Fitzpatrick Pl** 73.93 44 ⇓P P 01 11 51.9 +0.2
baz=74
NVAR **Mina Array Bea** 74.14 53 P P 01 11 54.2 +1.1
comp=Z,4.1nm,0.9s,mb4.4,baz=282,slow=5.8,SNR=15
M12A **Wells** 74.36 49 ⇓P P 01 11 54.7 +0.4
baz=74
H16A **Russell Place,** 74.38 45 ⇑P P 01 11 54.4 0.0
baz=74
F18A **Big Timber** 74.44 43 ⇓P P 01 11 55.1 +0.4
baz=74,SNR=9.3
K14A **Jones Ranch, D** 74.67 47 ⇓P P 01 11 56.5 +0.4
baz=74
O11A **Cowboy Ranch,** 74.72 51 ⇑P P 01 11 56.6 +0.1
baz=74
M13A **Montello** 74.84 49 ⇑P P 01 11 58.0 +0.9
baz=75
M13A **Montello** 74.84 49 *e*P P 01 11 57.9 +0.8
comp=Z,1.4nm,0.5s,mb4.2
L14A **Malta** 74.95 48 ⇓P P 01 11 57.7 -0.1
baz=75
IMW **Indian Meadow** 75.07 45 *e*P P 01 12 00.4 +2.0
Q10A **Clear Creek Ra** 75.07 52 ⇑P P 01 11 59.2 +0.7
baz=75
O12A **Currie** 75.18 50 ⇑P P 01 11 58.7 -0.4
baz=75,SNR=5.2
TPAW **Teton Pass** 75.32 46 *e*P P 01 12 00.9 +1.0
comp=Z,3.1nm,0.7s,mb4.3
LOHW **Long Hollow** 75.44 45 *e*P P 01 12 01.7 +1.2
comp=Z,1.6nm,0.8s,mb4.0
S10A **Tonopah Range,** 75.51 53 ⇑P P 01 12 01.0 0.0
baz=75,SNR=7.2
Q11A **Duckwater** 75.52 52 ⇓P P 01 12 00.9 -0.2
baz=75
P12A **McGill** 75.58 51 ⇑P P 01 12 01.1 -0.3
baz=75
BORG **Borgarnes** 75.60 352 *e*P P 01 12 02.3 +1.2
BORG pmax pmax
comp=Z,10.0nm,0.8s
BORG **Borgarnes** 75.60 352 *e*P P 01 12 02.3 +1.2
comp=Z,9.6nm,0.8s,mb4.8
M15A **Larsen Ranch,** 75.77 48 ⇑P P 01 12 02.9 +0.4
baz=76,SNR=8.7
R11A **Troy Canyon, C** 75.87 52 ⇓P P 01 12 03.4 +0.3
baz=76,SNR=6.8
MPMC **Manual Prospec** 76.10 55 ⇓P P 01 12 04.5 +0.1
baz=76,SNR=6.0
HWUT **Hardware Ranch** 76.19 47 *e*P P 01 12 06.1 +1.2
comp=Z,1.8nm,0.4s,mb4.3
S11A **Rachel** 76.21 53 ⇑P P 01 12 05.6 +0.6
baz=76
DUG **Dugway** 76.37 49 ⇓P P 01 12 06.5 +0.5
baz=76,SNR=5.3
DUG **Dugway** 76.37 49 *e*P P 01 12 07.1 +1.2
DUG pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
DUG **Dugway** 76.37 49 *e*P P 01 12 07.0 +1.1
comp=Z,4.7nm,0.8s,mb4.5
K18A **Tolan Ranch,** 76.38 46 ⇑P P 01 12 05.3 -0.7
baz=76
Q13A **Wheeler Ranch,** 76.44 51 ⇑P P 01 12 06.0 -0.3
baz=76,SNR=8.1
BUR08 **Bucovina Ar. S** 76.46 321 *e*P P 01 12 06.3 0.0
BURAR **Bucovina Array** 76.47 321 ⇓P P 01 12 06.4 0.0
BURAR **Bucovina Array** 76.47 321 ⇓/*i*P P 01 12 06.4 0.0
R12A **Pony Springs,** 76.48 52 ⇓P P 01 12 06.9 +0.3
baz=76,SNR=5.7
EDW2 **Edwards Air Fo** 76.50 56 ⇓P P 01 12 07.3 +0.5
baz=76
BW06 **Boulder Array** 76.57 46 ⇑P P 01 12 06.8 -0.2
baz=76
BW06 **Boulder Array** 76.57 46 *e*P P 01 12 06.7 -0.3
comp=Z,3.3nm,0.9s,mb4.3
PDAR **Pinedale Array** 76.57 46 P P 01 12 07.2 +0.2
comp=Z,2.7nm,0.7s,mb4.3,baz=275,slow=2.5,SNR=19
P14A **Drum Mountains** 76.61 50 ⇑P P 01 12 07.4 +0.2
baz=76,SNR=5.2
T11A **Corn Creek, Al** 76.79 53 ⇑P P 01 12 08.8 +0.5
baz=76,SNR=8.0
Q14A **Sevier Lake (B** 76.86 50 ⇑P P 01 12 09.2 +0.4
baz=77,SNR=8.3
VRI **Vrincioaia** 76.92 319 ⇑P P 01 12 09.9 +1.0
VRI **Vrincioaia** 76.92 319 ⇑/*i*P P 01 12 09.9 +1.0
KOLS **Kolonicke sedl** 76.95 324 *e*P P 01 12 09.1 +0.1
KOLS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
KOLS **Kolonicke sedl** 76.95 324 *e*P P 01 12 09.1 +0.1
comp=Z,4.1nm,1.0s,mb4.3
KOLS **Kolonicke sedl** 76.95 324 *e*P P 01 12 09.1 +0.1
GSC **Goldstone** 77.00 55 ⇑P P 01 12 09.7 +0.2
baz=77
TIRR **Tirgusor** 77.00 317 ⇑P P 01 12 19.3 +10
TIRR **Tirgusor** 77.00 317 ⇑/*i*P P 01 12 19.3 +10
STHS **Stebnicka Huta** 77.08 324 *e*P P 01 12 11.0 +1.3
STHS pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
STHS **Stebnicka Huta** 77.08 324 *e*P P 01 12 11.0 +1.3
comp=Z,5.0nm,0.9s,mb4.4
STHS **Stebnicka Huta** 77.08 324 *e*P P 01 12 11.0 +1.3
OJC **Ojcow** 77.14 326 *e*P P 01 12 09.3 -0.8
BR131 **Keskin Array S** 77.20 311 *e*P P 01 12 11.0 +0.4
comp=Z,0.9nm,0.5s,mb4.0
BRTR **Keskin Array B** 77.21 311 P P 01 12 10.6 -0.1
comp=Z,2.2nm,0.7s,mb4.2,baz=121,slow=3.3,SNR=15
BRTR **Keskin Array B** 77.21 311 P P 01 12 10.6 0.0
BRTR pmax pmax
comp=Z,2.0nm,0.7s
CRVS **Cervenica-Dubn** 77.35 324 *e*P P 01 12 11.7 +0.5
CRVS pmax pmax
comp=Z,5.0nm,1.4s,mb4.2
CRVS **Cervenica-Dubn** 77.35 324 *e*P P 01 12 11.7 +0.5
comp=Z,5.4nm,1.4s,mb4.3
CRVS **Cervenica-Dubn** 77.35 324 *e*P P 01 12 11.7 +0.5
S13A **Holt Ranch, En** 77.41 52 ⇓P P 01 12 12.0 +0.2
baz=77
TUQ **Turquoise Moun** 77.48 55 ⇑P P 01 12 11.9 -0.4
baz=77
MLR **Muntele Rosu** 77.58 319 ⇓P P 01 12 10.0 -2.6
MLR **Muntele Rosu** 77.58 319 ⇓/*i*P P 01 12 10.0 -2.6
HEC **Hector,Ludlow** 77.60 55 ⇑P P 01 12 13.4 +0.4
baz=77
T13A **Saint George** 77.74 52 ⇑P P 01 12 14.6 +1.0
baz=78,SNR=5.8
MSU **Marysvale** 77.83 50 *e*P P 01 12 14.9 +0.8
MSU pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
MSU **Marysvale** 77.83 50 *e*P P 01 12 14.9 +0.7
comp=Z,1.9nm,0.7s,mb4.1
V12A **Nelson** 77.97 54 ⇓P P 01 12 15.6 +0.6
baz=78
P17A **Butcher Ranch,** 78.05 49 ⇓P P 01 12 15.2 -0.2
baz=78
ULM **Lac du Bonnet** 78.06 33 P P 01 12 14.5 -0.7
comp=Z,2.5nm,0.7s,mb4.3,baz=308,slow=9.0,SNR=2.8
VOIR 78.07 320 ⇓P P 01 12 16.3 +0.9
VOIR 78.07 320 ⇓/*i*P P 01 12 16.3 +0.9
BSEG **Bad Segeberg** 78.08 333 *e*P P 01 12 15.4 +0.2
comp=Z,8.0nm,0.9s,mb4.7
BSEG **Bad Segeberg** 78.08 333 *e*P P 01 12 15.4 +0.2
BSEG pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
U13A **Pakoon Wash** 78.09 53 ⇓P P 01 12 15.8 +0.2
baz=78,SNR=5.5
KSP **Ksiaz** 78.17 328 *e*P P 01 12 16.1 +0.3
M20A **Sweetwater, Wa** 78.18 46 ⇑P P 01 12 15.4 -0.7
baz=78
P18A **Preston Nutter** 78.24 48 ⇑P P 01 12 16.6 +0.2
baz=78
DRGR 78.27 322 ⇑P P 01 12 16.5 +0.1
DRGR 78.27 322 ⇑/*i*P P 01 12 16.5 +0.1
PFO **Pinyon Flat Ob** 78.29 56 ⇓P P 01 12 16.7 -0.1

baz=78
L21A **Rawlins** 78.31 45 ⇓P P 01 12 16.4 -0.4
baz=78
BELC **Belle Mtn. Jos** 78.34 56 ⇑P P 01 12 16.9 -0.2
baz=78
R16A **Teasdale** 78.39 50 ⇓P P 01 12 18.2 +0.9
baz=78,SNR=5.8
SRU **San Rafael** 78.42 49 ⇓P P 01 12 17.7 +0.3
baz=78,SNR=6.1
SRU **San Rafael** 78.42 49 *e*P P 01 12 18.0 +0.6
SRU pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
SRU **San Rafael** 78.42 49 *e*P P 01 12 18.0 +0.6
comp=Z,5.8nm,0.8s,mb4.6
V13A **Grand Canyon W** 78.44 53 ⇑P P 01 12 18.0 +0.5
baz=78
MORC **Moravsky Berou** 78.45 326 *e*P P 01 12 17.6 +0.2
MORC pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
MORC **Moravsky Berou** 78.45 326 *e*P P 01 12 17.6 +0.2
comp=Z,4.9nm,0.8s,mb4.5
MORC **Moravsky Berou** 78.45 326 ⇑/*i*P P 01 12 17.7 +0.3
DPC **Dobruska-Polom** 78.53 327 *e*P P 01 12 18.4 +0.6
DPC **Dobruska-Polom** 78.53 327 *e*P P 01 12 18.4 +0.6
UPC **Upice** 78.54 328 *e*P P 01 12 18.1 +0.2
UPC **Upice** 78.54 328 *e*P P 01 12 18.1 +0.2
N20A **Spence Gulch,** 78.58 46 ⇑P P 01 12 18.0 -0.2
baz=78
RSSD **Black Hills** 78.62 42 *e*P P 01 12 18.4 0.0
RSSD pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
RSSD **Black Hills** 78.62 42 *e*P P 01 12 18.4 -0.1
comp=Z,3.2nm,0.9s,mb4.2
T15A **Red Dirt Ranch** 78.67 51 ⇑P P 01 12 18.8 0.0
baz=78
R17A **Hanksville Air** 78.76 49 ⇓P P 01 12 18.8 -0.5
baz=78
PSZ **Piszkesteto** 78.78 324 *e*P P 01 12 20.0 +0.8
PSZ pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
PSZ **Piszkesteto** 78.78 324 *e*P P 01 12 20.0 +0.7
comp=Z,3.9nm,0.8s,mb4.4
IRM **Iron Mountain** 78.78 55 ⇑P P 01 12 19.7 +0.2
baz=78
VYHS **Vyhne** 78.83 325 *e*P P 01 12 20.0 +0.5
VYHS pmax pmax
comp=Z,4.0nm,1.3s,mb4.2
VYHS **Vyhne** 78.83 325 *e*P P 01 12 20.0 +0.5
comp=Z,3.7nm,1.3s,mb4.2
VYHS **Vyhne** 78.83 325 *e*P P 01 12 20.0 +0.5
W13A **Hualapai Mount** 78.98 54 ⇓P P 01 12 20.4 -0.2
baz=79
N21A **Black Mountain** 79.04 46 ⇓P P 01 12 20.4 -0.4
baz=79
O20A **White River Ci** 79.06 47 ⇑P P 01 12 21.2 +0.3
baz=79
BRG **Berggiesshubel** 79.11 329 *i* P P 01 12 20.7 -0.2
comp=Z,4.2nm,0.8s,mb4.4
U15A **North Rim** 79.11 52 ⇑P P 01 12 21.6 +0.3
baz=79,SNR=6.5
PVCC **Panska Ves** 79.12 328 *e*P P 01 12 21.4 +0.3
PVCC **Panska Ves** 79.12 328 *e*P P 01 12 21.4 +0.3
CLL **Collm** 79.15 330 *e*P P 01 12 20.7 -0.5
comp=Z,8.0nm,0.8s,mb4.7
CLL **Collm** 79.15 330 ⇑/*i*P P 01 12 20.7 -0.5
CLL pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
CLL **Collm** 79.15 330 ⇑/*i*P P 01 12 20.7 -0.5
comp=Z,8.0nm,0.8s,mb4.7
CLL **Collm** 79.15 330 ⇑/*i*P P 01 12 20.7 -0.5
comp=Z,8.0nm,0.8s,mb4.7
VRAC **Vranov** 79.21 327 ⇓P P 01 12 22.0 +0.5
VRAC **Vranov** 79.21 327 ⇓/*i*P P 01 12 22.0 +0.5
GZR **Gura Zlata** 79.24 321 ⇑P P 01 12 22.4 +0.6
GZR **Gura Zlata** 79.24 321 ⇑/*i*P P 01 12 22.4 +0.6
Q19A **Hogan Spring (** 79.26 48 ⇑P P 01 12 21.2 -0.8
baz=79
R18A **Canyonlands Na** 79.27 49 ⇑P P 01 12 21.3 -0.8
baz=79
X13A **Yucca** 79.34 54 ⇑P P 01 12 22.8 +0.3
baz=79,SNR=5.2
Y12C **Blythe** 79.44 55 ⇓P P 01 12 22.6 -0.6
baz=79
PRU **Pruhonice** 79.55 328 *e*P P 01 12 23.9 +0.5
PRU **Pruhonice** 79.55 328 *e*P P 01 12 23.9 +0.5
BZS **Buzias** 79.64 322 ⇑P P 01 12 23.8 -0.2
BZS **Buzias** 79.64 322 ⇑/*i*P P 01 12 23.8 -0.2
S18A **Hurst Farm, Bl** 79.67 50 ⇑P P 01 12 24.0 -0.3
baz=79
TREC **Trest** 79.69 327 *e*P P 01 12 24.3 +0.1
TREC **Trest** 79.69 327 *e*P P 01 12 24.3 +0.1
GLA **Glamis** 79.69 56 ⇑P P 01 12 24.6 +0.1
baz=80
CLZ **Clausthal** 79.73 331 *e*P P 01 12 24.4 +0.1
comp=Z,8.0nm,0.9s,mb4.7
CLZ **Clausthal** 79.73 331 *e*P P 01 12 24.4 +0.1
CLZ pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
PV04 **Paradox Valley** 79.84 49 *e*P P 01 12 25.7 +0.5
X14A **Yava** 80.01 54 ⇑P P 01 12 27.2 +1.0
baz=80
ASF **Jabal al Asfar** 80.04 303 P P 01 12 26.1 -0.2
comp=Z,2.3nm,0.9s,mb4.1,baz=320,slow=2.4,SNR=6.1
ASF **Jabal al Asfar** 80.04 303 P P 01 12 26.1 -0.3
ASF pmax pmax
comp=Z,2.0nm,0.9s
T18A **Mexican Hat** 80.11 50 ⇓P P 01 12 26.3 -0.4
baz=80
S19A **Harvey Farm, M** 80.14 49 ⇓P P 01 12 26.2 -0.6
baz=80
MOX **Moxa** 80.21 330 *e*P P 01 12 26.1 -0.9
comp=Z,29nm,2.0s,mb4.9
WUAZ **Wupatki** 80.27 52 *e*P P 01 12 29.1 +1.5
R20A **Redvale** 80.28 48 ⇓P P 01 12 27.8 +0.1
baz=80
Z13A **Yuma Proving G** 80.35 55 ⇑P P 01 12 27.9 -0.1
baz=80
X15A **Humboldt** 80.41 53 ⇑P P 01 12 28.2 -0.2
baz=80
MMAI **Mount Meron Ar** 80.46 305 P P 01 12 29.3 +0.6
comp=Z,4.4nm,0.9s,mb4.4,baz=53,slow=8.5,SNR=4.9
V17A **Tonalea, Kykot** 80.56 52 ⇑P P 01 12 29.3 +0.2
baz=80
KHC **Kasperske Hory** 80.61 328 *e*P P 01 12 29.0 -0.1
KHC pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
KHC **Kasperske Hory** 80.61 328 *e*P P 01 12 29.0 -0.2
comp=Z,5.1nm,0.8s,mb4.5
KHC **Kasperske Hory** 80.61 328 *e*P P 01 12 29.2 +0.1
PKSM **Moragy** 80.62 323 ⇓P PcP 01 12 47.0 +11
PKSM **Moragy** 80.62 323 ⇓/*i*P P 01 12 47.0 +18
Y15A **Casa Rosa Ranc** 80.70 54 ⇓P P 01 12 29.9 0.0
baz=80
GEC2 **GERESS Array S** 80.78 328 *e*P P 01 12 29.7 -0.4
comp=Z,4.0nm,1.1s,mb4.3
GEC2 **GERESS Array S** 80.78 328 *e*P P 01 12 29.7 -0.4
GEC2 pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
GERES **GERESS Array B** 80.78 328 P P 01 12 29.9 -0.2
comp=Z,1.4nm,0.6s,mb4.0,baz=33,slow=5.1,SNR=19
GERES **GERESS Array B** 80.78 328 P P 01 12 29.9 -0.2
GERES pmax pmax
comp=Z,1.0nm,0.6s
T19A **Beclabito** 80.82 50 ⇑P P 01 12 30.4 -0.1
baz=81
MVCO **Mesa Verde** 80.87 49 ⇑P P 01 12 30.5 -0.3
baz=81
MVCO **Mesa Verde** 80.87 49 *e*P P 01 12 31.2 +0.5
comp=Z,6.6nm,1.0s,mb4.5
S21A **Coal Bank Pass** 80.98 48 ⇓P P 01 12 31.5 +0.1
baz=81
V18A **Ganado** 81.02 51 ⇑P P 01 12 31.4 -0.2
baz=81
U19A **Dine' College,** 81.07 50 ⇓P P 01 12 32.0 +0.2
baz=81
GRA1 **Grafenberg Arr** 81.12 330 *e*P P 01 12 32.2 +0.3
comp=Z,12nm,0.9s,mb4.8
GRF **Grafenberg Arr** 81.12 330 *e*P P 01 12 32.2 +0.3
comp=Z,12nm,0.9s,mb4.8
GRF **Grafenberg Arr** 81.12 330 *e*P P 01 12 32.2 +0.3
GRF pmax pmax
comp=Z,12nm,0.9s,mb4.8
GRF **Grafenberg Arr** 81.12 330 *e*P P 01 12 32.2 +0.3
GRF pmax pmax
comp=Z,12nm,0.9s,mb4.8
U21A **Nageezi** 81.90 49 ⇓P P 01 12 36.6 +0.3

baz=82
SDCO Great Sand Dun 82.25 47 *e*P **P 01 12 38.7 +0.6**
comp=Z,1.5nm,0.9s,mb3.9
Y18A Canyon Day Jun 82.25 53 ⇓P **P 01 12 37.4 -0.7**
baz=82
X19A St. Johns 82.27 52 ⇓P **P 01 12 38.9 +0.6**
baz=82
MEM Membach 82.33 333 P **P 01 12 38.2 0.0**
comp=Z,7.6nm,1.2s,mb4.5
V21A Milan 82.33 50 ⇓P **P 01 12 38.7 +0.2**
baz=82
ECSD EROS Data Cent 82.61 38 *e*P **P 01 12 39.0 -0.8**
comp=Z,1.5nm,0.7s,mb4.1
117A Oracle 82.61 54 ⇑P **P 01 12 40.5 +0.5**
baz=82
118A Homack Ranch, 83.05 53 ⇑P **P 01 12 41.7 -0.6**
baz=83
WLF Walferdange 83.06 332 P **P 01 12 41.4 -0.6**
comp=Z,11nm,2.2s,mb4.5
WLF Walferdange 83.06 332 *e*P **P 01 12 41.4 -0.6**
comp=Z,12nm,1.2s,mb4.8
WLF Walferdange 83.06 332 *e*P **P 01 12 41.8 -0.2**
WLF pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
WLF Walferdange 83.06 332 *e*P **P 01 12 41.8 -0.2**
comp=Z,4.5nm,0.8s,mb4.5
217A Green Valley 83.09 55 ⇑P **P 01 12 42.4 -0.2**
baz=83
X21A Alamocita Cree 83.17 51 ⇑P **P 01 12 42.5 -0.4**
baz=83
Y20A Horse Springs, 83.18 52 ⇑P **P 01 12 42.8 -0.2**
baz=83
V23A Ortiz Mt. (NFS 83.23 49 ⇓P **P 01 12 43.4 +0.2**
baz=83
BFO Black Forest 83.35 330 *e*P **P 01 12 44.2 +0.7**
comp=Z,6.0nm,0.8s,mb4.7
BFO Black Forest 83.35 330 *e*P **P 01 12 44.2 +0.7**
BFO pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
BAIF Baives 83.42 334 *e*P **P 01 12 42.5 -1.4**
comp=Z,5.6nm,0.8s,mb4.3
BAIF Baives 83.42 334 *e*P **P 01 12 42.5 -1.4**
BAIF pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
BAIF Baives 83.42 334 *e*P **P 01 12 42.5 -1.4**
comp=Z,2.8nm,0.8s,mb4.3
218A Dragoon 83.45 54 ⇑P **P 01 12 44.8 +0.4**
baz=83
SCHQ Schefferville 83.53 16 P **P 01 12 43.8 -0.6**
comp=Z,4.6nm,0.5s,mb4.8,baz=342,slow=5.2,SNR=14
Z20A Nine Sixteen R 83.58 52 ⇑P **P 01 12 45.4 +0.3**
baz=83
ANMO Albuquerque 83.62 50 *e*P **P 01 12 45.7 +0.5**
ANMO pmax pmax
comp=Z,1.0nm,1.0s
ANMO Albuquerque 83.62 50 *e*P **P 01 12 45.7 +0.5**
comp=Z,0.9nm,1.0s,mb3.9
CDF Champ du Feu 83.68 331 *e*P **P 01 12 44.1 -1.2**
318A Bisbee 83.84 54 ⇑P **P 01 12 47.0 +0.6**
baz=84
219A White Tail Can 83.92 53 ⇑P **P 01 12 47.3 +0.4**
baz=84
Y22A Socorro 84.01 51 ⇓P **P 01 12 47.9 +0.7**
baz=84
Z21A St. Cloud Mine 84.02 52 ⇑P **P 01 12 47.7 +0.5**
baz=84
W24A Lazy 6 Ranch, 84.06 49 ⇑P **P 01 12 47.9 +0.4**
baz=84
V25A Rancho No Teng 84.08 48 ⇑P **P 01 12 47.5 -0.1**
baz=84
319A Douglas 84.33 54 ⇓P **P 01 12 49.0 +0.1**
baz=84
HAU Haudompre 84.37 331 *e*P **P 01 12 47.5 -1.3**
MEZF Maizieres J'vi 84.43 332 *e*P **P 01 12 48.1 -1.0**
220A Playas Peak, P 84.44 53 ⇑P **P 01 12 50.0 +0.5**
baz=84
121A Cookes Peak, D 84.48 52 ⇓P **P 01 12 49.9 +0.3**
baz=84
Y23A Lovelace Mesa, 84.56 50 ⇑P **P 01 12 50.1 +0.1**
baz=84
W25A X Bar L Ranch, 84.61 48 ⇑P **P 01 12 50.0 -0.2**
baz=84
Y24A Capitan 84.94 50 ⇑P **P 01 12 51.7 -0.2**
baz=85
Z24A Sheeppen Canyo 85.39 50 ⇑P **P 01 12 54.6 +0.4**
baz=85
X26A CR and CF Fran 85.46 48 ⇓P **P 01 12 54.6 +0.1**
baz=85
W27A Bowe Ranch, En 85.53 48 ⇑P **P 01 12 55.2 +0.3**
baz=85
CABF La Chapelle 85.62 331 *e*P **P 01 12 53.9 -1.2**
comp=Z,9.9nm,0.9s,mb4.8
CABF La Chapelle 85.62 331 *e*P **P 01 12 53.9 -1.2**
CABF pmax pmax
comp=Z,5.0nm,0.9s,mb4.7
CABF La Chapelle 85.62 331 *e*P **P 01 12 53.9 -1.2**
comp=Z,4.9nm,0.9s,mb4.7
124A Stringfield Ra 85.78 51 ⇓P **P 01 12 55.7 -0.4**
baz=86
X27A F and S Farms, 85.80 48 ⇑P **P 01 12 55.4 -0.8**
baz=86
Z25A Roswell 85.82 50 ⇑P **P 01 12 55.6 -0.7**
baz=86
Y26A Elida 85.89 49 ⇑P **P 01 12 55.9 -0.8**
baz=86
LOR Lormes 85.90 332 *e*P **P 01 12 55.1 -1.4**
comp=Z,14nm,1.0s,mb4.9
LOR Lormes 85.90 332 *e*P **P 01 12 55.1 -1.4**
LOR pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
LOR Lormes 85.90 332 *e*P **P 01 12 55.1 -1.4**
comp=Z,7.1nm,1.0s,mb4.8
AQU L'Aquila 85.99 324 *e*P **P 01 12 56.9 -0.1**
AQU pmax pmax
comp=Z,25nm,1.3s,mb5.3
AQU L'Aquila 85.99 324 *e*P **P 01 12 56.9 -0.1**
comp=Z,25nm,1.3s,mb5.3
FLN La Foliniere 86.11 336 *e*P **P 01 12 56.1 -1.4**
comp=Z,12nm,0.9s,mb4.8
FLN La Foliniere 86.11 336 *e*P **P 01 12 56.1 -1.4**
FLN pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
FLN La Foliniere 86.11 336 *e*P **P 01 12 56.1 -1.4**
comp=Z,5.8nm,0.9s,mb4.8
LDF La Druitiere 86.14 335 *e*P **P 01 12 56.2 -1.4**
comp=Z,8.2nm,0.8s,mb4.7
LDF La Druitiere 86.14 335 *e*P **P 01 12 56.2 -1.4**
LDF pmax pmax
comp=Z,4.0nm,0.8s,mb4.7
LDF La Druitiere 86.14 335 *e*P **P 01 12 56.2 -1.4**
comp=Z,4.1nm,0.8s,mb4.7
224A Cornudas Mount 86.17 51 ⇑P **P 01 12 57.6 -0.5**
baz=86
SSF Saint Saulge 86.21 332 *e*P **P 01 12 56.8 -1.2**
comp=Z,9.6nm,0.8s,mb4.8
SSF Saint Saulge 86.21 332 *e*P **P 01 12 56.8 -1.2**
SSF pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
SSF Saint Saulge 86.21 332 *e*P **P 01 12 56.8 -1.2**
comp=Z,4.8nm,0.8s,mb4.8
Z26A Caprock 86.26 49 ⇑P **P 01 12 58.5 0.0**
baz=86
LPL La Plagne 86.28 330 *e*P **P 01 12 57.4 -1.0**
comp=Z,16nm,1.0s,mb4.9
LPL La Plagne 86.28 330 *e*P **P 01 12 57.4 -1.0**
LPL pmax pmax
comp=Z,8.0nm,1.0s,mb4.9
LPL La Plagne 86.28 330 *e*P **P 01 12 57.4 -1.0**
comp=Z,7.9nm,1.0s,mb4.9
125A Gardner Draw, 86.29 50 ⇓P **P 01 12 58.6 -0.1**
baz=86
LPG La Plagne 86.29 330 *e*P **P 01 12 57.5 -0.9**
comp=Z,21nm,1.0s,mb5.0
LPG La Plagne 86.29 330 *e*P **P 01 12 57.5 -0.9**
LPG pmax pmax
comp=Z,11nm,1.0s,mb5.0
LPG La Plagne 86.29 330 *e*P **P 01 12 57.5 -0.9**
comp=Z,11nm,1.0s,mb5.0
Y27A Causey 86.31 49 ⇑P **P 01 12 58.5 -0.2**
baz=86
SMF Signal de Mont 86.44 332 *e*P **P 01 12 58.0 -1.1**
comp=Z,32nm,1.4s,mb5.1
SMF Signal de Mont 86.44 332 *e*P **P 01 12 58.0 -1.1**
SMF pmax pmax
comp=Z,16nm,1.4s,mb5.1
SMF Signal de Mont 86.44 332 *e*P **P 01 12 58.0 -1.1**
comp=Z,16nm,1.4s,mb5.1
AMTX Amarillo 86.45 47 *e*P **P 01 12 59.9 +0.5**
comp=Z,3.4nm,0.7s,mb4.7
AVF Avril sur Loir 86.49 332 *e*P **P 01 12 58.3 -1.1**
comp=Z,24nm,0.9s,mb5.1
AVF Avril sur Loir 86.49 332 *e*P **P 01 12 58.3 -1.1**
AVF pmax pmax
comp=Z,12nm,0.9s,mb5.1
AVF Avril sur Loir 86.49 332 *e*P **P 01 12 58.3 -1.1**
comp=Z,12nm,0.9s,mb5.1
GRR Gorron 86.55 336 *e*P **P 01 12 58.5 -1.2**
comp=Z,18nm,0.9s,mb5.0
GRR Gorron 86.55 336 *e*P **P 01 12 58.5 -1.2**
GRR pmax pmax
comp=Z,9.0nm,0.9s,mb5.0
GRR Gorron 86.55 336 *e*P **P 01 12 58.5 -1.2**
comp=Z,8.9nm,0.9s,mb5.0
225A Deer Hill, Car 86.57 51 ⇑P **P 01 12 59.5 -0.6**
baz=86
324A Moseley Ranch, 86.64 52 ⇑P **P 01 13 00.2 -0.2**
baz=86
Z27A Tatum 86.68 49 ⇑P **P 01 13 00.5 -0.1**
baz=86
GDL2 Guadalupe Moun 86.79 50 *e*P **P 01 13 01.9 +0.8**
325A Bean Ranch, Si 87.00 51 ⇓P **P 01 13 02.2 0.0**
baz=87
226A Malaga, Loving 87.04 50 ⇑P **P 01 13 01.9 -0.5**
baz=87
SGMF Saint Gilles 87.21 337 *e*P **P 01 13 01.9 -1.0**
comp=Z,20nm,0.9s,mb5.0
SGMF Saint Gilles 87.21 337 *e*P **P 01 13 01.9 -1.0**
SGMF pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
SGMF Saint Gilles 87.21 337 *e*P **P 01 13 01.9 -1.0**
comp=Z,9.9nm,0.9s,mb5.0
TCF Toulx Ste Croi 87.33 333 *e*P **P 01 13 02.5 -1.0**
comp=Z,11nm,1.0s,mb4.7
TCF Toulx Ste Croi 87.33 333 *e*P **P 01 13 02.5 -1.0**
TCF pmax pmax
comp=Z,6.0nm,1.0s,mb4.8
TCF Toulx Ste Croi 87.33 333 *e*P **P 01 13 02.5 -1.0**
comp=Z,5.6nm,1.0s,mb4.8
ROSF Rostrenen 87.36 337 *e*P **P 01 13 02.8 -0.8**
425A Indio Mountain 87.40 52 ⇑P **P 01 13 03.2 -1.0**
baz=87
QUIF Quistinic 87.70 337 *e*P **P 01 13 04.9 -0.3**
MFF Saint Martin d 87.88 334 *e*P **P 01 13 05.2 -0.9**
comp=Z,9.1nm,0.9s,mb4.7
MFF Saint Martin d 87.88 334 *e*P **P 01 13 05.2 -0.9**
MFF pmax pmax
comp=Z,5.0nm,0.9s,mb4.7
MFF Saint Martin d 87.88 334 *e*P **P 01 13 05.2 -0.9**
comp=Z,4.6nm,0.9s,mb4.7
RJF Les Rejaudoux 88.43 333 *e*P **P 01 13 07.9 -0.8**
CAF Calviac 88.55 332 *e*P **P 01 13 08.8 -0.6**
comp=Z,14nm,1.1s,mb4.9
CAF Calviac 88.55 332 *e*P **P 01 13 08.8 -0.6**
CAF pmax pmax
comp=Z,7.0nm,1.1s,mb4.9
CAF Calviac 88.55 332 *e*P **P 01 13 08.8 -0.6**
comp=Z,6.8nm,1.1s,mb4.9
428A Kincaid Ranch, 88.84 50 ⇓P **P 01 13 11.1 +0.1**
baz=89
ATD Arta Tunnel 88.96 284 P **P 01 13 11.9 +0.1**
comp=Z,19nm,1.2s,mb5.3,baz=270,slow=21,SNR=3.6
LFF La Frestale 89.02 333 *e*P **P 01 13 10.6 -0.9**
TXAR Lajitas Array 89.23 52 P **P 01 13 13.3 +0.4**
comp=Z,1.4nm,0.8s,mb4.3,baz=291,slow=3.5,SNR=13
TXAR Lajitas Array 89.23 52 P **P 01 13 13.3 +0.4**
TXAR pmax pmax
comp=Z,1.0nm,0.8s
TXAR Lajitas Array 89.23 52 P **P 01 13 13.3 +0.4**
JCT Junction City 90.73 49 *e*P **P 01 13 20.0 +0.2**
MIAR Mount Ida 91.13 42 *e*P **P 01 13 21.9 +0.3**
ETSF Etsaut 91.26 333 *e*P **P 01 13 21.6 -0.4**
DBIC Dimbokro 124.53 317 PKP PKPdf 01 19 15.3 -1.3
comp=Z,3.8nm,0.7s,baz=157,slow=7.5,SNR=6.5
DBIC Dimbokro 124.53 317 PKIKP PKPdf 01 19 15.3 -1.3
DBIC pmax pmax
comp=Z,4.0nm,0.7s
DBIC Dimbokro 124.53 317 PKP PKPdf 01 19 15.3 -1.3
LPAZ La Paz 146.00 56 PKPbc PKPbc 01 19 57.3 +0.4
comp=Z,5.4nm,0.5s,baz=335,slow=3.0,SNR=36
LPAZ La Paz 146.00 56 *e*PKPbc PKPbc 01 19 57.0 +0.1

JMA 14 01:03:15.4, 39°.13N×140°.92E, h11$^{km}_{\pm1km}$, M3.5, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.29**	**127**	P	Pg	01 03 21.3	0.0
JMK				S	Sg	01 03 25.2	-0.1
JRG	**Rokugo**	**0.35**	**320**	P	Pg	01 03 22.4	+0.1
JRG				*e*S	Sg	01 03 27.8	+0.8
JOM	**Ohasama**	**0.45**	**40**	S	Sg	01 03 30.4	+0.2
JYK	**Kaneyama**	**0.49**	**244**	P	Pg	01 03 24.9	0.0
JYK				S	Sg	01 03 31.1	-0.2
JIO	**Ouri**	**0.75**	**153**	S	Sg	01 03 39.7	-0.1
JOU	**Okura**	**0.79**	**195**	P	Pg	01 03 30.7	+0.1
JOU				S	Sg	01 03 41.0	+0.1

JMA 14 01:04:48.5, 39°.10N×140°.94E, h10$^{km}_{\pm1km}$, M3.5, 1D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.26**	**124**	P	Pg	01 04 53.7	-0.1
JMK				S	Sg	01 04 57.3	-0.1
JRG	**Rokugo**	**0.38**	**321**	P	Pg	01 04 56.3	+0.3
JOM	**Ohasama**	**0.46**	**36**	⇓P	Pg	01 04 57.4	-0.1
JOM				S	Sg	01 05 03.5	-0.2
JYK	**Kaneyama**	**0.49**	**248**	P	Pg	01 04 58.1	+0.1
JYK				S	Sg	01 05 04.5	+0.1
OFUJ	**Ofunato**	**0.57**	**92**	P	Pg	01 04 59.1	-0.4
JIO	**Ouri**	**0.72**	**154**	P	Pg	01 05 02.2	-0.2
JIO				S	Sg	01 05 11.8	0.0
JOU	**Okura**	**0.77**	**196**	P	Pg	01 05 03.3	+0.1
JOU				S	Sg	01 05 13.5	+0.3

IDC 14 01:07:25.2±2.9, 13°.73S×177°.34W, h0^{km}, mb4.3/3, mb1 4.5/3, mb1mx4.0/16, mbtmp4.3/3, Error ellipse: s-maj=206.4km s-min=38.2km az=145.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.64**	**237**	P	P	01 15 15.4	-0.1
0.8nm,0.3s,baz=68,slow=10,SNR=4.7							
WRA	**Warramunga Arr**	**46.53**	**255**	P	P	01 15 54.9	-0.1
0.3nm,0.3s,baz=90,slow=8.2,SNR=4.5							
ASAR	**Alice Springs**	**47.03**	**250**	P	P	01 15 58.8	0.0
10nm,0.5s,baz=85,slow=8.4,SNR=174							
ARCES	**ARCESS Array B**	**122.40**	**351**	PKP	PKPdf	01 26 21.9	0.0
0.5nm,0.5s,baz=22,slow=1.3,SNR=11							
BRTR	**Keskin Array B**	**142.44**	**319**	PKhKP		01 26 56.8	
0.9nm,0.9s,baz=27,slow=6.8,SNR=4.4							
ASF	**Jabal al Asfar**	**143.74**	**306**	PKP	PKPdf	01 27 00.2	-2.6
1.0nm,0.7s,baz=43,slow=5.1,SNR=4.3							
GERES	**GERESS Array B**	**143.82**	**348**	PKP	PKPdf	01 27 02.8	+0.4
0.4nm,0.6s,baz=44,slow=4.1,SNR=4.6							
MMAI	**Mount Meron Ar**	**144.55**	**308**	PKP	PKPdf	01 27 04.0	-0.3
1.9nm,0.6s,baz=60,slow=5.3,SNR=6.8							

ISCJB 14 01:10:54.0±0.7, 36°.62N±0°.06×70°.89E±0°.10, h140$^{km}_{\pm10km}$, mb3.5/3, Error ellipse: s-maj=14.8km s-min=6.2km az=34.7
NEIC 14 01:10:55.3±1.1, 36°.71N×70°.72E, h132$^{km}_{\pm14km}$, mb3.7/2, Error ellipse: s-maj=26.0km s-min=11.0km az=130.0
NNC 14 01:10:57.7±3.2, 37°.23N×70°.45E, h0^{km}, mb3.8, mpv3.9, Error ellipse: s-maj=26.2km s-min=24.0km az=91.0
IDC 14 01:10:57.1±8.9, 36°.85N×70°.67E, h132$^{km}_{\pm61km}$, mb3.4/3, mb1 3.3/9, mb1mx3.1/29, mbtmp3.2/9, Error ellipse: s-maj=81.2km s-min=46.1km az=168.0
ISC 14 01:10:55.8±0.7, 36°.70N±0°.05×70°.69E±0°.09, h133$^{km}_{\pm9km}$, n30, σ0^{s}97/40, mb3.5/3, 4C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.54**	**212**	*e*Pn	**Pn**	**01 11 36.1**	**-0.4**
KBL				*e*Sn	**Sn**	**01 12 07.8**	**-0.1**
KSH	**Kashi**	**5.03**	**54**	Pn	**Pn**	**01 12 04.3**	**-4.9**
KSH				Sn	**Sn**	**01 12 55.3**	**-11**
KSH				smax			
comp=N,270nm,1.0s							
KSH				smax			
comp=E,250nm,1.1s							
AML Almayashu 5.90 22 P **Pn 01 12 21.7 +0.7**							
SNR=78							
AML Almayashu 5.90 22 *e*Pn **Pn 01 12 21.2 +0.3**							
comp=E,46nm,0.5s							
AML				*e*Sn	**Sn**	**01 13 26.6**	**-0.7**
UCH Uchtor 6.26 27 P **Pn 01 12 26.1 +0.3**							
SNR=14							
UCH Uchtor 6.26 27 *e*Pn **Pn 01 12 25.8 0.0**							
comp=E,5.7nm,0.4s							
UCH				*e*Sn	**Sn**	**01 13 35.8**	**-0.3**
KK31 Karatay Array 6.40 359 Pn **Pn 01 12 29.4 +1.8**							
comp=E,3.2nm,0.3s,baz=184,slow=13,SNR=73							
KK31				⇑Sn	**Sn**	**01 13 40.7**	**+1.4**
comp=E,14nm,0.6s,baz=194,slow=18,SNR=21							
EKS2 Erkin-Say 6.41 21 P **Pn 01 12 28.8 +1.0**							
SNR=11							
EKS2 Erkin-Say 6.41 21 *e*Pn **Pn 01 12 28.1 +0.3**							
comp=E,7.3nm,0.4s							
EKS2				*e*Sn	**Sn**	**01 13 35.0**	**-4.7**
KZA Kyzart 6.43 32 P **Pn 01 12 27.4 -0.6**							
SNR=7.0							
AAK Ala-Archa 6.61 25 P **Pn 01 12 30.8 +0.3**							
comp=E,0.0nm,0.3s,baz=170,slow=6.6,SNR=6.7							
AAK				S	**Sn**	**01 13 44.2**	**-0.2**
comp=E,0.1nm,0.3s,baz=331,slow=21,SNR=17							
TKM2 Tokmak 2 7.27 30 ⇓Pn **Pn 01 12 38.9 -0.4**							
comp=E,7.2nm,0.7s							
TKM2				⇑Sn	**Sn**	**01 14 00.6**	**+0.2**
comp=E,4.7nm,0.6s							
TKM2 Tokmak 2 7.27 30 P **Pn 01 12 39.0 -0.3**							
SNR=8.3							
TKM2 Tokmak 2 7.27 30 *e*Pn **Pn 01 12 38.8 -0.5**							
comp=E,7.2nm,0.6s							
MKAR Makanchi Array 13.28 37 P **Pn 01 13 58.9 -0.1**							
comp=E,0.1nm,0.3s,baz=230,slow=5.7,SNR=4.2							
AB31 Akbulak array 14.79 331 Pn **Pn 01 14 19.5 +1.4**							
comp=E,0.3nm,0.4s,baz=155,slow=12,SNR=2.9							
AB31				⇑Sn	**Sn**	**01 16 55.7**	**-6.1**
comp=E,1.6nm,0.8s,baz=141,slow=24,SNR=2.9							
ABKAR Akbulak array 14.79 331 *e*P **Pn 01 14 18.6 +0.4**							
comp=E,0.9nm,0.6s							
KURK Kurchatov 15.12 20 P **Pn 01 14 18.8 -3.5**							
comp=E,0.0nm,0.3s,baz=207,slow=10,SNR=4.5							
KURK Kurchatov 15.12 20 P **Pn 01 14 18.8 -3.5**							
BVAR Borovoye Array 16.33 359 P **Pn 01 14 35.0 -2.1**							
comp=E,0.0nm,0.3s,baz=162,slow=9.6,SNR=2.9							
AKTK Aktyubinsk 16.49 330 P **Pn 01 14 38.0 -1.0**							
AKTO Aktyubinsk 16.49 330 ⇓Pn **Pn 01 14 42.0 +3.0**							
comp=E,0.5nm,0.9s							
AKTO				⇑Sn	**Sn**	**01 17 40.7**	**-1.8**
comp=E,0.3nm,0.8s							
AKTO Aktyubinsk 16.49 330 P **Pn 01 14 38.0 -1.0**							
comp=E,0.1nm,0.3s,baz=132,slow=11,SNR=1.9							
ZALV Zalesovo Beam 19.84 25 P **P 01 15 15.8 -0.1**							
comp=E,0.5nm,0.3s,baz=218,slow=12,SNR=8.6							
ZALV Zalesovo Beam 19.84 25 P **P 01 15 15.8 -0.1**							
FINES FINESS Array B 37.18 326 P **P 01 17 54.7 +1.1**							
comp=E,0.9nm,0.5s,mb3.6,baz=133,slow=10,SNR=4.9							
ARCES ARCESS Array B 40.87 338 P **P 01 18 24.2 +0.1**							
comp=E,0.9nm,0.8s,mb3.5,baz=102,slow=8.9,SNR=4.2							
ARCES ARCESS Array B 40.87 338 P **P 01 18 24.2 +0.1**							
NB2 NORSAR Subarra 44.08 323 P **P 01 18 50.6 +0.5**							
comp=Z,0.8nm,0.5s,mb3.6,baz=96,slow=7.9							
NOA NORSAR Array B 44.08 323 P **P 01 18 50.1 0.0**							
comp=Z,0.9nm,0.6s,mb3.5,baz=97,slow=7.7,SNR=5.1							

IDC 14 01:10:59.6±0.8, 38°.95N×140°.99E, h0^{km}, mb3.7/8, mb1 3.9/8, mb1mx3.7/25, mbtmp3.7/8, ML2.8/1, Error ellipse: s-maj=26.2km s-min=18.3km az=96.0
NEIC 14 01:11:01.7, 38°.91N×140°.87E, h8^{km}, mb4.2/4, After JMA.
JMA 14 01:11:01.6, 38°.91N×140°.87E, h8$^{km}_{\pm1km}$, M3.4
JMA Felt I J1.
ISCJB 14 01:11:01.4±0.4, 38°.91N±0°.03×140°.89E±0°.03, h20$^{km}_{\pm4km}$, mb3.8/11, Error ellipse: s-maj=4.9km s-min=3.8km az=42.6
ISC 14 01:11:01.5±0.4, 38°.90N±0°.02×140°.87E±0°.03, h8$^{km}_{\pm3km}$, n31, σ0^{s}63/43, mb3.8/11, 5D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.28**	**79**	⇓P	**Pg**	**01 11 07.2**	**+0.2**
JMK				S	**Sg**	**01 11 11.1**	**+0.4**
JYK	**Kaneyama**	**0.40**	**273**	⇓P	**Pg**	**01 11 09.5**	**+0.3**
JYK				S	**Sg**	**01 11 14.5**	**0.0**
JRG	**Rokugo**	**0.53**	**340**	⇓P	**Pg**	**01 11 11.7**	**0.0**
JRG				S	**Sg**	**01 11 18.9**	**+0.2**
JOU	**Okura**	**0.56**	**197**	⇓P	**Pg**	**01 11 12.7**	**+0.5**
JOU				S	**Sg**	**01 11 20.0**	**+0.5**
JIO	**Ouri**	**0.58**	**140**	⇓P	**Pg**	**01 11 12.8**	**+0.1**
JIO				S	**Sg**	**01 11 20.3**	**0.0**
OFUJ	**Ofunato**	**0.65**	**74**	P	**Pg**	**01 11 14.1**	**+0.1**
OFUJ				S	**Sg**	**01 11 22.4**	**-0.1**
JOM	**Ohasama**	**0.66**	**30**	P	**Pg**	**01 11 14.0**	**-0.2**
JOM				S	**Sg**	**01 11 22.6**	**-0.2**
JYS	**Shiratake**	**0.93**	**223**	P	**Pg**	**01 11 19.4**	**+0.1**
JYS				S	**Sg**	**01 11 31.7**	**+0.4**
JYA	**Atsumi**	**0.95**	**252**	P	**Pg**	**01 11 19.6**	**-0.2**
JYA				S	**Sg**	**01 11 32.0**	**-0.2**
JMM	**Marumori**	**1.03**	**183**	P	**Pg**	**01 11 20.4**	**-0.9**
JMM				S	**Sg**	**01 11 34.3**	**-0.5**
MAJO	**Matsushiro**	**3.16**	**223**	*e*Pn	**Pn**	**01 11 52.0**	**+0.5**
MAT	**Matsushiro**	**3.16**	**223**	P	**Pn**	**01 11 52.8**	**+1.3**
MAT				*e*S	**Sn**	**01 12 35.8**	**+6.5**
MJAR	**Matsushiro Arr**	**3.16**	**223**	Pn	**Pn**	**01 11 52.7**	**+1.3**
1.1nm,0.3s,baz=204,slow=20,SNR=4.8							
MJAR				Pg	**Pg**	**01 11 59.5**	**-2.6**
1.7nm,0.3s,baz=26,slow=15,SNR=4.6							
MJAR	**Matsushiro Arr**	**3.16**	**223**	Pn	**Pn**	**01 11 52.7**	**+1.3**
MJAR				Pg	**Pg**	**01 11 59.5**	**-2.5**
ERM	**Erimo**	**3.57**	**29**	*e*Pn	**Pn**	**01 11 57.5**	**+0.4**
KSRS	**Korea Array**	**10.30**	**266**	Pn	**Pn**	**01 13 33.2**	**+3.8**
0.4nm,0.3s,baz=79,slow=14,SNR=4.2							
MKAR	**Makanchi Array**	**42.79**	**300**	P	**P**	**01 18 59.8**	**+0.4**
0.3nm,0.7s,mb3.1,baz=81,slow=12,SNR=2.8							
KURK	**Kurchatov**	**44.46**	**307**	P	**P**	**01 19 12.6**	**-0.1**
1.6nm,0.7s,mb3.9,baz=82,slow=8.5,SNR=6.5							
KURK	**Kurchatov**	**44.46**	**307**	*e*P	**P**	**01 19 12.4**	**-0.4**
1.6nm,0.6s,mb3.9							
BRVK	**Borovoye**	**49.07**	**311**	*e*P	**P**	**01 19 48.4**	**-0.4**
1.8nm,0.9s,mb4.1							
ABKAR	**Akbulak array**	**56.42**	**309**	*e*P	**P**	**01 20 42.6**	**-0.6**
1.9nm,0.6s,mb4.3							
WRAB	**Tennant Creek**	**58.84**	**187**	*e*P	**P**	**01 20 59.6**	**-0.8**
1.2nm,0.5s,mb4.2							
WRA	**Warramunga Arr**	**58.85**	**187**	P	**P**	**01 20 59.9**	**-0.6**
1.6nm,0.7s,mb4.1,baz=2.0,slow=7.1,SNR=8.5							
ARCES	**ARCESS Array B**	**62.10**	**339**	P	**P**	**01 21 21.8**	**-0.5**
1.2nm,1.0s,mb4.0,baz=52,slow=7.9,SNR=3.8							
ARCES	**ARCESS Array B**	**62.10**	**339**	P	**P**	**01 21 21.8**	**-0.5**
ASAR	**Alice Springs**	**62.58**	**187**	P	**P**	**01 21 26.1**	**+0.2**
0.8nm,0.6s,mb4.0,baz=8.0,slow=4.7,SNR=10							
KIV	**Kislovodsk**	**69.37**	**310**	*e*P	**P**	**01 22 10.0**	**+0.4**
AKASG	**Malin Array Be**	**72.56**	**322**	P	**P**	**01 22 28.1**	**-0.7**
0.3nm,0.5s,mb3.5,baz=52,slow=4.8,SNR=3.4							
PDAR	**Pinedale Array**	**76.67**	**45**	P	**P**	**01 22 53.4**	**+0.6**
0.4nm,0.7s,mb3.5,baz=323,slow=1.4,SNR=3.0							
BRTR	**Keskin Array B**	**77.30**	**311**	P	**P**	**01 22 56.2**	**-0.2**
0.4nm,0.6s,mb3.5,baz=22,slow=4.7,SNR=3.5							
LPAZ	**La Paz**	**146.07**	**57**	PKPbc	PKPbc	01 30 39.9	-2.4
0.8nm,0.6s,baz=270,slow=1.0,SNR=2.8							

NEIC 14 01:15:20.4, 37°.94N×21°.48E, h17^{km}, MD3.3(ATH), After ATH.
ATH 14 01:15:20.4, 37°.94N×21°.48E, h17$^{km}_{\pm1km}$, MD3.3/20
THE 14 01:15:20.6, 37°.92N×21°.50E, h10$^{km}_{\pm1km}$, ML3.2/10, Error ellipse: s-maj=1.2km s-min=0.8km az=195.0
CSEM 14 01:15:20.1±0.2, 37°.91N×21°.44E, h15^{km}, MD3.3, Error ellipse: s-maj=5.2km s-min=4.3km az=61.0
ISCJB 14 01:15:21.0±0.4, 37°.94N±0°.02×21°.46E±0°.03, h19$^{km}_{\pm4km}$, Error ellipse: s-maj=3.9km s-min=3.6km az=158.0
ISC 14 01:15:20.6±0.5, 37°.92N±0°.02×21°.47E±0°.03, h15$^{km}_{\pm3km}$, n83, σ1^{s}14/129, Southern Greece

| Code | Station Name | Δ° | AZ° |

RLS	**Riolos of Patr**	**0.14**	**359**	*e*PB	**Pg**	**01 15 24.4**	**+0.1**
RLS				*e*SB	**Sg**	**01 15 28.2**	**+1.4**
RLS	**Riolos of Patr**	**0.14**	**359**	*e*Pb	**Pg**	**01 15 24.4**	**+0.1**
RLS				*e*Sb	**Sg**	**01 15 28.3**	**+1.5**
UPR	**University Cam**	**0.44**	**35**	P	**Pg**	**01 15 29.3**	**-0.1**
UPR				S	**Sg**	**01 15 36.8**	**+1.4**
UPR	**University Cam**	**0.44**	**35**	*e*PB	**Pg**	**01 15 29.3**	**-0.1**
UPR				*e*SB	**Sg**	**01 15 35.7**	**+0.3**
UPR	**University Cam**	**0.44**	**35**	P	**Pg**	**01 15 29.3**	**-0.1**
UPR				*e*Sb	**Sg**	**01 15 35.7**	**+0.3**
UPR				S	**Sg**	**01 15 36.8**	**+1.4**
LAKA	**Lakka**	**0.51**	**52**	P	**Pg**	**01 15 30.3**	**-0.4**
LAKA				S	**Sg**	**01 15 37.5**	**-0.1**
LAKA	**Lakka**	**0.51**	**52**	P	**Pg**	**01 15 30.3**	**-0.4**
LAKA				S	**Sg**	**01 15 37.5**	**-0.1**
KFL	**Anninata**	**0.57**	**289**	P	**Pg**	**01 15 31.8**	**0.0**
EFP	**Efpalio**	**0.61**	**34**	P	**Pg**	**01 15 31.7**	**-0.9**
EFP				S	**Sg**	**01 15 41.0**	**+0.3**
EFP	**Efpalio**	**0.61**	**34**	*e*PN	**Pg**	**01 15 31.7**	**-0.9**
EFP				*e*SN	**Sg**	**01 15 40.4**	**-0.3**
EFP	**Efpalio**	**0.61**	**34**	P	**Pg**	**01 15 31.7**	**-0.9**
EFP				S	**Sg**	**01 15 41.0**	**+0.3**
GUR	**Goura**	**0.69**	**89**	P	**Pg**	**01 15 33.1**	**-1.0**
GUR				S	**Sg**	**01 15 43.4**	**+0.2**
GUR	**Goura**	**0.69**	**89**	*e*PB	**Pb**	**01 15 33.0**	**-1.3**
GUR				*e*SN	**Sg**	**01 15 43.4**	**+0.2**
GUR	**Goura**	**0.69**	**89**	P	**Pg**	**01 15 33.1**	**-1.0**
GUR				S	**Sg**	**01 15 43.4**	**+0.2**
KALE	**Kalithea**	**0.71**	**48**	P	**Pg**	**01 15 33.4**	**-1.0**
KALE				S	**Sg**	**01 15 43.1**	**-0.6**
KALE	**Kalithea**	**0.71**	**48**	P	**Pg**	**01 15 33.4**	**-1.0**
KALE				S	**Sg**	**01 15 43.1**	**-0.6**
VLS	**Valsamata**	**0.74**	**290**	*e*Pb	**Pg**	**01 15 34.0**	**-1.0**
VLS				*e*Sn	**Sn**	**01 15 46.2**	**-1.2**
VLS	**Valsamata**	**0.74**	**290**	P	**Pg**	**01 15 34.0**	**-1.0**
VLS				S	**Sg**	**01 15 46.3**	**+1.6**
VLS	**Valsamata**	**0.74**	**290**	*e*PB	**Pg**	**01 15 34.0**	**-1.0**
VLS				*e*SN	**Sn**	**01 15 46.2**	**-1.2**
VLS	**Valsamata**	**0.74**	**290**	P	**Pg**	**01 15 34.0**	**-1.0**
VLS				S	**Sg**	**01 15 46.3**	**+1.6**
ITM	**Ithomi**	**0.83**	**154**	*e*Pn	**Pb**	**01 15 36.4**	**-0.2**
ITM				*e*Sn	**Sn**	**01 15 48.2**	**-1.4**
ITM	**Ithomi**	**0.83**	**154**	P	**Pb**	**01 15 36.4**	**-0.2**
ITM	**Ithomi**	**0.83**	**154**	*e*PN	**Pb**	**01 15 36.4**	**-0.2**
ITM				*e*SN	**Sn**	**01 15 48.2**	**-1.4**
ITM	**Ithomi**	**0.83**	**154**	P	**Pb**	**01 15 36.4**	**-0.2**
ITM				*e*Sn	**Sn**	**01 15 48.2**	**-1.4**
VLX	**Vlachokerasia**	**0.91**	**127**	P	**Pb**	**01 15 37.2**	**-0.8**
VLX				S	**Sb**	**01 15 50.8**	**+0.9**
VLX	**Vlachokerasia**	**0.91**	**127**	*e*PN	**Pn**	**01 15 38.1**	**-0.7**
VLX				*e*SN	**Sn**	**01 15 50.4**	**-1.2**
VLX	**Vlachokerasia**	**0.91**	**127**	P	**Pb**	**01 15 37.2**	**-0.8**
VLX	**Vlachokerasia**	**0.91**	**127**	*e*Pn	**Pn**	**01 15 38.1**	**-0.7**
VLX				*e*Sn	**Sn**	**01 15 50.4**	**-1.2**
VLX				S	**Sb**	**01 15 50.8**	**+0.9**
DSF	**Desfina**	**0.97**	**59**	P	**Pb**	**01 15 37.6**	**-1.4**
DSF				S	**Sb**	**01 15 51.8**	**+0.2**
DSF	**Desfina**	**0.97**	**59**	P	**Pb**	**01 15 37.6**	**-1.4**
DSF				S	**Sb**	**01 15 51.8**	**+0.2**
EVR	**Evrytania**	**1.03**	**15**	*e*Pn	**Pn**	**01 15 39.5**	**-1.0**
EVR				*e*Sn	**Sn**	**01 15 54.0**	**-0.6**
EVR	**Evrytania**	**1.03**	**15**	*e*PN	**Pn**	**01 15 39.5**	**-1.0**
EVR				*e*SN	**Sn**	**01 15 54.0**	**-0.6**
EVR	**Evrytania**	**1.03**	**15**	*e*Pn	**Pn**	**01 15 39.5**	**-1.0**
EVR				*e*Sn	**Sn**	**01 15 54.0**	**-0.6**
PYL	**PYLOS**	**1.05**	**168**	P	**Pb**	**01 15 40.0**	**-0.4**
PYL				S	**Sb**	**01 15 55.6**	**+1.7**
PYL	**PYLOS**	**1.05**	**168**	*e*PN	**Pn**	**01 15 40.1**	**-0.6**
PYL	**PYLOS**	**1.05**	**168**	*e*Pn	**Pn**	**01 15 40.1**	**-0.6**
PYL				S	**Sb**	**01 15 55.6**	**+1.7**
LKD2	**Lefkada island**	**1.07**	**324**	P	**Pb**	**01 15 40.1**	**-0.8**
LKD2				S	**Sb**	**01 15 57.9**	**+3.2**
LKD2	**Lefkada island**	**1.07**	**324**	P	**Pb**	**01 15 40.1**	**-0.8**
LKD2				S	**Sb**	**01 15 57.9**	**+3.2**
LTK	**Loutraki**	**1.19**	**85**	P	**Pn**	**01 15 42.0**	**-0.7**
LTK				S	**Sb**	**01 15 58.7**	**+0.7**
LTK	**Loutraki**	**1.19**	**85**	*e*PB	**Pn**	**01 15 42.0**	**-0.7**
LTK	**Loutraki**	**1.19**	**85**	P	**Pn**	**01 15 42.0**	**-0.7**
LTK				S	**Sb**	**01 15 58.7**	**+0.7**
AGG	**Agios Georgios**	**1.29**	**31**	*e*Pn	**Pn**	**01 15 44.0**	**-0.1**
AGG	**Agios Georgios**	**1.29**	**31**	P	**Pn**	**01 15 43.6**	**-0.5**
AGG				S	**Sb**	**01 16 01.1**	**+0.2**
AGG	**Agios Georgios**	**1.29**	**31**	*e*PN	**Pn**	**01 15 44.0**	**-0.1**
AGG	**Agios Georgios**	**1.29**	**31**	P	**Pn**	**01 15 43.6**	**-0.5**
AGG	**Agios Georgios**	**1.29**	**31**	*e*Pn	**Pn**	**01 15 44.0**	**-0.1**
AGG				S	**Sb**	**01 16 01.1**	**+0.2**
LKR	**Lokris**	**1.41**	**58**	*e*Pn	**Pn**	**01 15 46.0**	**+0.3**
LKR	**Lokris**	**1.41**	**58**	P	**Pn**	**01 15 45.6**	**-0.1**
LKR				S	**Sn**	**01 16 05.1**	**+1.2**
LKR	**Lokris**	**1.41**	**58**	*e*PN	**Pn**	**01 15 46.0**	**+0.3**
LKR	**Lokris**	**1.41**	**58**	P	**Pn**	**01 15 45.6**	**-0.1**
LKR	**Lokris**	**1.41**	**58**	*e*Pn	**Pn**	**01 15 46.0**	**+0.3**
LKR				S	**Sn**	**01 16 05.1**	**+1.2**
ATAL	**Atalanti**	**1.44**	**57**	P	**Pn**	**01 15 46.2**	**0.0**
ATAL				S	**Sn**	**01 16 05.8**	**+1.0**
ATAL	**Atalanti**	**1.44**	**57**	P	**Pn**	**01 15 46.2**	**0.0**
ATAL				S	**Sn**	**01 16 05.8**	**+1.0**
NAIG	**Nisos Aigina**	**1.61**	**95**	*e*Pn	**Pn**	**01 15 50.1**	**+1.7**
NAIG	**Nisos Aigina**	**1.61**	**95**	*e*PN	**Pn**	**01 15 50.1**	**+1.7**
NAIG	**Nisos Aigina**	**1.61**	**95**	*e*Pn	**Pn**	**01 15 50.1**	**+1.7**
VLI	**Veliai**	**1.68**	**135**	*e*Pn	**Pn**	**01 15 51.8**	**+2.4**
VLI	**Veliai**	**1.68**	**135**	*e*PN	**Pn**	**01 15 51.8**	**+2.4**
THL	**Klokotos Trika**	**1.69**	**14**	P	**Pn**	**01 15 51.6**	**+2.0**
THL	**Klokotos Trika**	**1.69**	**14**	*e*PN	**Pn**	**01 15 51.4**	**+1.8**
THL	**Klokotos Trika**	**1.69**	**14**	*e*Pn	**Pn**	**01 15 51.4**	**+1.8**
JAN	**Janina**	**1.80**	**345**	*e*Pn	**Pn**	**01 15 52.5**	**+1.5**
JAN	**Janina**	**1.80**	**345**	*e*PN	**Pn**	**01 15 52.5**	**+1.5**
JAN	**Janina**	**1.80**	**345**	*e*Pn	**Pn**	**01 15 52.5**	**+1.5**
VLY	**Voula,Athens**	**1.84**	**91**	*e*Pn	**Pn**	**01 15 53.8**	**+2.2**
VLY	**Voula,Athens**	**1.84**	**91**	*e*PN	**Pn**	**01 15 53.8**	**+2.2**
VLY	**Voula,Athens**	**1.84**	**91**	*e*Pn	**Pn**	**01 15 53.8**	**+2.2**
MEV	**Metsovon**	**1.87**	**354**	P	**Pn**	**01 15 55.3**	**+3.3**
MEV	**Metsovon**	**1.87**	**354**	P	**Pn**	**01 15 55.3**	**+3.3**
PTL	**Penteli**	**1.90**	**85**	*e*Pn	**Pn**	**01 15 53.6**	**+1.2**
PTL	**Penteli**	**1.90**	**85**	*e*PN	**Pn**	**01 15 53.6**	**+1.2**
PTL	**Penteli**	**1.90**	**85**	*e*Pn	**Pn**	**01 15 53.6**	**+1.2**
NEO	**Neokhori**	**1.95**	**44**	*e*Pb	**Pb**	**01 15 53.6**	**-2.2**
NEO	**Neokhori**	**1.95**	**44**	*e*PB	**Pb**	**01 15 53.6**	**-2.2**
XOR	**Xorichti**	**1.98**	**43**	P	**Pn**	**01 15 52.9**	**-0.6**
XOR	**Xorichti**	**1.98**	**43**	P	**Pn**	**01 15 52.9**	**-0.6**
KYTH	**Kithira**	**2.06**	**142**	*e*Pn	**Pn**	**01 15 57.7**	**+3.0**
KYTH	**Kithira**	**2.06**	**142**	*e*PN	**Pn**	**01 15 57.7**	**+3.0**
AOS	**Alonnisos**	**2.27**	**56**	P	**Pn**	**01 15 57.0**	**-0.5**
AOS	**Alonnisos**	**2.27**	**56**	P	**Pn**	**01 15 57.0**	**-0.5**
STON	**Ston**	**5.72**	**331**	*e*Pn	**Pn**	**01 16 43.1**	**-1.8**
STON				Sn	**Sn**	**01 17 46.2**	**-4.1**
STON	**Ston**	**5.72**	**331**	*e*Pn	**Pn**	**01 16 43.2**	**-1.7**

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*IDC **14** 01:16:33.8±2.3,39°.21N×141°.44E, h0km, mb3.8/3, mb1 3.8/5, mb1mx3.5/27, mbtmp3.7/5, ML3.1/2, Error ellipse: s-maj=54.8km s-min=30.7km az=59.0*
*ISCJB **14** 01:16:36.8±0.6, 39°.08N±0°.04×140°.98E±0°.05, h18km±6km, mb3.8/4, Error ellipse: s-maj=7.4km s-min=6.5km az=3.4*
*JMA **14** 01:16:37.0, 39°.07N×140°.94E, h10km±1km, M3.4*
JMA Felt II J1.
*NEIC **14** 01:16:37.0, 39°.08N×140°.94E, h11km, mb3.9/2, After JMA.*
ISC 14 01:16:37.3±0.6,**39°.08N**±0°.04×**140°.96E**±0°.04,**h10**km±5km, **n15**,σ0**81**/18,**mb3.8**/4,**3D**,**Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.24**	**123**	⇓P	**Pg**	**01 16 42.0**	**-0.2**
JMK				S	**Sg**	**01 16 45.5**	**0.0**
JRG	**Rokugo**	**0.40**	**321**	⇓P	**Pg**	**01 16 45.0**	**-0.2**
JRG				S	**Sg**	**01 16 50.9**	**+0.4**
JOM	**Ohasama**	**0.47**	**34**	S	**Sg**	**01 16 52.9**	**+0.3**
JYK	**Kaneyama**	**0.50**	**251**	P	**Pg**	**01 16 46.5**	**-0.4**
JYK				S	**Sg**	**01 16 52.9**	**-0.6**
OFUJ	**Ofunato**	**0.55**	**90**	⇓P	**Pg**	**01 16 48.0**	**0.0**
MJAR	**Matsushiro Arr**	**3.34**	**221**	Pn	**Pn**	**01 17 31.5**	**+1.9**
	0.6nm,0.3s,baz=26,slow=13,SNR=3.9						
MJAR	**Matsushiro Arr**	**3.34**	**221**	Pn	**Pn**	**01 17 31.5**	**+1.9**
MAJO	**Matsushiro**	**3.34**	**222**	*e*Pn	**Pn**	**01 17 30.9**	**+1.2**
ERM	**Erimo**	**3.37**	**29**	*e*Pn	**Pn**	**01 17 29.9**	**-0.2**
KSRS	**Korea Array**	**10.38**	**265**	Pn	**Pn**	**01 19 10.3**	**+4.1**
	0.3nm,0.3s,baz=78,slow=14,SNR=6.5						
KURK	**Kurchatov**	**44.41**	**306**	P	**P**	**01 24 48.0**	**+0.1**
	0.6nm,0.4s,mb3.7,baz=80,slow=8.5,SNR=5.7						
KURK	**Kurchatov**	**44.41**	**306**	*e*P	**P**	**01 24 46.8**	**-1.1**
	0.9nm,0.4s,mb3.9						
ABKAR	**Akbulak array**	**56.36**	**309**	*e*P	**P**	**01 26 18.0**	**-0.4**
	0.5nm,0.5s,mb3.8						
WRA	**Warramunga Arr**	**59.04**	**187**	P	**P**	**01 26 35.7**	**-1.8**
	0.8nm,0.5s,mb4.0,baz=7.9,slow=6.8,SNR=3.9						
ASAR	**Alice Springs**	**62.77**	**187**	P	**P**	**01 27 03.0**	**+0.3**
	0.5nm,0.8s,mb3.7,baz=358,slow=7.4,SNR=3.0						

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*IDC **14** 01:19:57.2±1.3,3°.13S×147°.78E, h0km, mb4.1/8, mb1 4.4/8, mb1mx4.0/17, mbtmp4.1/8, Error ellipse: s-maj=43.9km s-min=22.6km az=118.0*
*ISCJB **14** 01:20:00.7±1.1,3°.2S±0°.2×147°.7E±0°.2, h33km, mb4.0/9, Error ellipse: s-maj=37.9km s-min=16.2km az=25.2*
*NEIC **14** 01:20:02.5±0.9,3°.22S×147°.80E, h35km, mb4.1/2, Error ellipse: s-maj=35.2km s-min=15.3km az=118.0*
ISC 14 01:20:02.2±1.1,**3°.2S**±0°.2×**147°.9E**±0°.3,**h35**km,**n11**, σ1**90**/**11**,**mb4.0**/**9**,**Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRAB	**Tennant Creek**	**21.20**	**217**	*e*P	**P**	**01 24 44.5**	**-0.4**
	4.6nm,0.6s,mb4.0						
WRA	**Warramunga Arr**	**21.22**	**217**	P	**P**	**01 24 44.8**	**-0.2**
	4.3nm,0.7s,mb3.9,baz=41,slow=10,SNR=9.9						
ASAR	**Alice Springs**	**24.39**	**212**	P	**P**	**01 25 17.6**	**+0.3**
	2.1nm,0.6s,mb3.7,baz=34,slow=7.6,SNR=24						
FITZ	**Fitzroy Crossi**	**26.32**	**234**	P	**P**	**01 25 35.1**	**+0.2**
	5.5nm,0.8s,mb4.1,baz=49,slow=7.1,SNR=5.8						
CMAR	**Chiang Mai Arr**	**52.76**	**296**	P	**P**	**01 29 15.3**	**+1.2**
	1.0nm,0.3s,mb4.2,baz=116,slow=6.5,SNR=5.4						
KURK	**Kurchatov**	**79.53**	**323**	P	**P**	**01 32 04.0**	**-1.3**
	0.3nm,0.3s,mb3.7,baz=98,slow=5.5,SNR=3.5						
KURK	**Kurchatov**	**79.53**	**323**	*e*P	**P**	**01 32 04.4**	**-0.9**
	1.7nm,0.6s,mb4.2						
BVAR	**Borovoye Array**	**85.06**	**324**	P	**P**	**01 32 34.1**	**-0.1**
	0.3nm,0.4s,mb3.7,baz=90,slow=5.8,SNR=3.8						
NVAR	**Mina Array Bea**	**95.00**	**52**	P	**P**	**01 33 24.1**	**+2.7**
	0.3nm,0.6s,mb3.9,baz=267,slow=7.2,SNR=3.1						
NVAR	**Mina Array Bea**	**95.00**	**52**	P	**P**	**01 33 24.1**	**+2.7**
YKA	**Yellowknife Ar**	**96.33**	**28**	P	**P**	**01 33 25.8**	**-1.2**
	1.1nm,0.8s,mb4.3,baz=276,slow=5.0,SNR=4.8						

JMA 14 01:25:26.9,39°.10N×140°.85E, h11km±1km, **M3.5, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.32**	**117**	P	Pg	01 25 33.4	0.0
JMK				*e*S	Sg	01 25 37.7	0.0
JRG	**Rokugo**	**0.34**	**331**	P	Pg	01 25 34.1	+0.4
JRG				*e*S	Sg	01 25 38.7	+0.4
JYK	**Kaneyama**	**0.42**	**245**	P	Pg	01 25 35.4	+0.2
JYK				*e*S	Sg	01 25 40.9	0.0
JOM	**Ohasama**	**0.51**	**43**	P	Pg	01 25 36.6	-0.2
JOM				*e*S	Sg	01 25 43.2	-0.3
JOU	**Okura**	**0.75**	**191**	*e*S	Sg	01 25 51.3	+0.2
JIO	**Ouri**	**0.75**	**149**	*e*S	Sg	01 25 51.0	-0.3
JYA	**Atsumi**	**1.02**	**241**	P	Pg	01 25 46.3	-0.3

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*DDA **14** 01:25:41.9, 38°.60N×26°.84E, h7km±6km, Md2.7*
*THE **14** 01:25:42.6, 38°.62N×26°.82E, h2km±2km, ML3.0/4, Error ellipse: s-maj=2.2km s-min=0.6km az=174.0*
*ATH **14** 01:25:42.3, 38°.62N×26°.81E, h18km±2km, MD3.0/7*
*CSEM **14** 01:25:42.3±0.2, 38°.58N×26°.87E, h9km, ML3.0/4, Error ellipse: s-maj=4.8km s-min=4.1km az=66.0*
*NEIC **14** 01:25:42.3, 38°.62N×26°.81E, h18km, MD3.0(ATH), After ATH.*
*ISCJB **14** 01:25:42.3±0.5, 38°.62N±0°.02×26°.83E±0°.03, h6km±5km, Error ellipse: s-maj=4.5km s-min=3.5km az=144.3*
ISC 14 01:25:42.8±0.4,**38°.61N**±0°.02×**26°.85E**±0°.03,**h8**km±5km, **n44**,σ0**90**/**75**,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLCB	**Balcova**	**0.27**	**145**	P	**Pg**	**01 25 48.6**	**+0.4**
BLCB				S	**Sg**	**01 25 52.6**	**+0.8**
BLCB	**Balcova**	**0.27**	**145**	P	**Pg**	**01 25 48.6**	**+0.4**
BLCB				S	**Sg**	**01 25 52.6**	**+0.8**
URLA	**Izmir**	**0.32**	**218**	*i* P	**Pg**	**01 25 48.7**	**-0.3**
URLA				*i* S	**Sg**	**01 25 54.0**	**+0.8**
URLA	**Izmir**	**0.32**	**218**	*i* P	**Pg**	**01 25 48.7**	**-0.3**
URLA				*i* S	**Sg**	**01 25 54.0**	**+0.8**
CHOS	**Chios island**	**0.66**	**251**	P	**Pg**	**01 25 55.3**	**-0.2**
CHOS				S	**Sg**	**01 26 04.7**	**+0.6**
CHOS	**Chios island**	**0.66**	**251**	*e*PN	**Pg**	**01 25 55.2**	**-0.3**
CHOS				*e*SN	**Sg**	**01 26 03.4**	**-0.7**
CHOS	**Chios island**	**0.66**	**251**	P	**Pg**	**01 25 55.3**	**-0.2**
CHOS				S	**Sg**	**01 26 04.7**	**+0.6**
AYVA	**Ayvalik**	**0.71**	**350**	*i* P	**Pg**	**01 25 55.7**	**-0.8**
AYVA				*i* S	**Sg**	**01 26 07.3**	**+1.6**
AYVA	**Ayvalik**	**0.71**	**350**	*i* P	**Pg**	**01 25 55.7**	**-0.8**
AYVA				*i* S	**Sg**	**01 26 07.3**	**+1.6**
PRK	**Paraskevi**	**0.78**	**325**	*e*Pn	**Pg**	**01 25 56.9**	**-0.9**
PRK				*e*Sn	**Sg**	**01 26 07.5**	**-0.4**
PRK	**Paraskevi**	**0.78**	**325**	P	**Pg**	**01 25 57.4**	**-0.4**
PRK				S	**Sg**	**01 26 07.9**	**0.0**
PRK	**Paraskevi**	**0.78**	**325**	*e*PN	**Pg**	**01 25 56.9**	**-0.9**
PRK				*e*SN	**Sg**	**01 26 07.5**	**-0.4**
PRK	**Paraskevi**	**0.78**	**325**	*e*Pn	**Pg**	**01 25 56.9**	**-0.9**
PRK	**Paraskevi**	**0.78**	**325**	P	**Pg**	**01 25 57.4**	**-0.4**
PRK				*e*Sn	**Sg**	**01 26 07.5**	**-0.4**
PRK				S	**Sg**	**01 26 07.9**	**0.0**
AKHS	**Akhisar**	**0.80**	**70**	*i* P	**Pg**	**01 25 57.7**	**-0.6**
AKHS				*i* S	**Sg**	**01 26 09.5**	**+0.8**
AKHS	**Akhisar**	**0.80**	**70**	*i* P	**Pg**	**01 25 57.7**	**-0.6**
AKHS				*i* S	**Sg**	**01 26 09.5**	**+0.8**
SMG	**Samos**	**0.90**	**180**	*e*Pn	**Pg**	**01 25 59.3**	**-0.8**
SMG				*e*Sn	**Sg**	**01 26 12.5**	**+0.8**
SMG	**Samos**	**0.90**	**180**	*e*PN	**Pg**	**01 25 59.3**	**-0.8**
SMG				*e*SN	**Sg**	**01 26 12.5**	**+0.8**
SMG	**Samos**	**0.90**	**180**	*e*Pn	**Pg**	**01 25 59.3**	**-0.8**
SMG				*e*Sn	**Sg**	**01 26 12.5**	**+0.8**
GCAM	**G?zelcaml?**	**0.96**	**161**	*i* P	**Pg**	**01 25 58.1**	**-3.0**
GCAM	**G?zelcaml?**	**0.96**	**161**	*i* P	**Pg**	**01 25 58.1**	**-3.1**
SIGR	**SIGRI**	**0.98**	**308**	P	**Pg**	**01 26 01.0**	**-0.6**
SIGR				S	**Sg**	**01 26 14.9**	**+0.6**
SIGR	**SIGRI**	**0.98**	**308**	P	**Pg**	**01 26 01.0**	**-0.6**
SIGR				S	**Sg**	**01 26 14.9**	**+0.6**
AYDN	**Tasoluk**	**1.25**	**139**	*i* P	**Pn**	**01 26 05.4**	**-1.1**
AYDN				*i* S	**Sg**	**01 26 22.2**	**-0.8**
AYDN	**Tasoluk**	**1.25**	**139**	*i* P	**Pn**	**01 26 05.4**	**-1.1**
AYDN				*i* S	**Sg**	**01 26 22.2**	**-0.8**
BALY	**Balya**	**1.28**	**28**	*i* P	**Pn**	**01 26 05.6**	**-1.4**
BALY				*i* S	**Sb**	**01 26 23.9**	**+0.1**
BALY	**Balya**	**1.28**	**28**	*i* P	**Pn**	**01 26 05.6**	**-1.4**
BALY				*i* S	**Sb**	**01 26 23.9**	**+0.2**
DEMI	**Demirci**	**1.52**	**73**	*i* P	**Pn**	**01 26 10.4**	**+0.1**
DEMI				*i* S	**Sn**	**01 26 32.4**	**+2.0**
DEMI	**Demirci**	**1.52**	**73**	*i* P	**Pn**	**01 26 10.4**	**+0.1**
DEMI				*i* S	**Sn**	**01 26 32.4**	**+2.1**
DURS	**Dursunbey**	**1.61**	**51**	*i* P	**Pn**	**01 26 07.1**	**-4.3**
DURS				*i* S	**Sn**	**01 26 31.7**	**-0.7**
DURS	**Dursunbey**	**1.61**	**51**	*i* P	**Pn**	**01 26 07.1**	**-4.4**
DURS				*i* S	**Sn**	**01 26 31.7**	**-0.7**
LIA	**Limnos Island**	**1.82**	**315**	*e*Pb	**Pn**	**01 26 13.7**	**-0.7**
LIA	**Limnos Island**	**1.82**	**315**	P	**Pn**	**01 26 13.7**	**-0.7**
LIA				S	**Sn**	**01 26 37.8**	**+0.1**
LIA	**Limnos Island**	**1.82**	**315**	*e*PB	**Pn**	**01 26 13.7**	**-0.7**
LIA	**Limnos Island**	**1.82**	**315**	*e*Pb	**Pn**	**01 26 13.7**	**-0.7**
LIA				S	**Sn**	**01 26 37.8**	**+0.1**
APE	**Apeiranthos**	**1.86**	**215**	*e*Pn	**Pn**	**01 26 16.1**	**+1.2**
APE	**Apeiranthos**	**1.86**	**215**	*e*PN	**Pn**	**01 26 16.1**	**+1.2**
APE	**Apeiranthos**	**1.86**	**215**	*e*Pn	**Pn**	**01 26 16.1**	**+1.2**
ALN	**Alexandroupoli**	**2.37**	**345**	*e*Pn	**Pn**	**01 26 22.5**	**+0.6**
ALN	**Alexandroupoli**	**2.37**	**345**	*e*PN	**Pn**	**01 26 22.5**	**+0.6**
ALN	**Alexandroupoli**	**2.37**	**345**	*e*Pn	**Pn**	**01 26 22.5**	**+0.6**
RDO	**Rodhopi**	**2.73**	**339**	*e*Pn	**Pn**	**01 26 27.0**	**+0.2**
RDO	**Rodhopi**	**2.73**	**339**	*e*PN	**Pn**	**01 26 27.0**	**+0.2**
RDO	**Rodhopi**	**2.73**	**339**	*e*Pn	**Pn**	**01 26 27.0**	**+0.2**

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*DDA **14** 01:36:21.2, 34°.39N×32°.19E, h5km±1km, Md3.2*
*ISK **14** 01:36:24.4, 34°.43N×32°.09E, h2km, MD3.5*
*ISCJB **14** 01:36:25.2±0.9, 34°.37N±0°.03×32°.05E±0°.04, h15km±8km, Error ellipse: s-maj=6.1km s-min=5.1km az=166.8*
*CSEM **14** 01:36:25.8±0.2, 34°.41N×32°.11E, h5km, Mw3.1, Error ellipse: s-maj=5.1km s-min=4.2km az=103.0*
*NIC **14** 01:36:27.5±0.3, 34°.47N×32°.07E, h21km, ML3.2, MW3.1*
*NEIC **14** 01:36:27.5, 34°.47N×32°.07E, h21km, MD3.3(ISK), ML3.2(NIC), After NIC.*
*HLW **14** 01:36:28.1, 34°.44N×32°.01E, h30km±13km, Ml2.6*
ISC 14 01:36:25.1±0.9,**34°.39N**±0°.03×**32°.08E**±0°.04,**h0**km±6km, **n56**,σ1**90**/**80**,**6C**,**Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPCY	**Paphos**	**0.54**	**24**	⇑P	**Pg**	**01 36 36.8**	**+1.3**
PPCY	**Paphos**	**0.54**	**24**	⇑*i*P	**Pg**	**01 36 36.8**	**+1.3**
PPCY	**Paphos**	**0.54**	**24**	⇑*i*P	**Pg**	**01 36 36.8**	**+1.3**
ALFC	**Alevga**	**0.87**	**29**	P	**Pg**	**01 36 42.3**	**+0.4**
	12nm,0.2s						
ALFC				S	**Sg**	**01 36 54.0**	**+0.7**
ALFC	**Alevga**	**0.87**	**29**	P	**Pg**	**01 36 42.3**	**+0.4**
	12nm,0.2s						
ALFC				S	**Sg**	**01 36 54.0**	**+0.7**
LEF	**Lefka**	**0.98**	**42**	*e*PG	**Pg**	**01 36 43.4**	**-0.6**
LEF				*e*SG	**Sg**	**01 36 56.6**	**-0.2**
LEF	**Lefka**	**0.98**	**42**	*e*Pg	**Pg**	**01 36 43.4**	**-0.6**
LEF				*e*Sg	**Sg**	**01 36 56.6**	**-0.2**
CSS	**Prodhromos**	**1.18**	**61**	P	**Pg**	**01 36 47.0**	**-0.7**
CSS				S	**Sg**	**01 37 01.9**	**-1.0**
CSS	**Prodhromos**	**1.18**	**61**	P	**Pg**	**01 36 47.0**	**-0.7**
CSS				S	**Sg**	**01 37 01.9**	**-1.0**
MAMC	**Mammari**	**1.22**	**50**	⇑P	**Pg**	**01 36 47.9**	**-0.6**
MAMC	**Mammari**	**1.22**	**50**	⇑P	**Pg**	**01 36 47.9**	**-0.6**
LFK	**Lefkose**	**1.48**	**53**	*e*PN	**Pn**	**01 36 52.6**	**-0.5**
LFK				*e*SN	**Sn**	**01 37 13.5**	**+0.3**
LFK	**Lefkose**	**1.48**	**53**	*e*Pn	**Pn**	**01 36 52.6**	**-0.5**
LFK				*e*Sn	**Sn**	**01 37 13.5**	**+0.3**
PHNC	**Paralimni**	**1.72**	**69**	⇑P	**Pn**	**01 36 59.6**	**+3.3**
PHNC				S	**Sn**	**01 37 20.2**	**+1.3**
GAZI	**Gazipasa**	**1.85**	**6**	*i* P	**Pn**	**01 36 55.8**	**-2.3**
GAZI				*i* S	**Sn**	**01 37 16.4**	**-5.7**
GAZI	**Gazipasa**	**1.85**	**6**	*i* P	**Pn**	**01 36 55.8**	**-2.3**
GAZI				*i* S	**Sn**	**01 37 16.5**	**-5.7**
IKL	**Isikli**	**2.26**	**35**	*e*PN	**Pn**	**01 37 03.2**	**-0.6**
IKL	**Isikli**	**2.26**	**35**	*e*Pn	**Pn**	**01 37 03.2**	**-0.6**
ERMK	**Ermenek**	**2.35**	**17**	*i* P	**Pn**	**01 37 04.3**	**-0.6**
ERMK				*i* S	**Sn**	**01 37 35.8**	**+1.3**
ERMK	**Ermenek**	**2.35**	**17**	*i* P	**Pn**	**01 37 04.3**	**-0.6**
ER

JOM	**Ohasama**	0.48	36	⇑P	Pg	01 39 56.9 -0.3
JOM				eS	Sg	01 40 03.5 -0.1
OFUJ	**Ofunato**	0.57	90	⇓P	Pg	01 39 58.5 -0.5
OFUJ				eS	Sg	01 40 06.1 -0.4
JIO	**Ouri**	0.71	152	⇑P	Pg	01 40 00.8 -0.7
JIO				S	Sg	01 40 09.9 -0.7
JOU	**Okura**	0.74	196	⇑P	Pg	01 40 02.0 -0.2
MJAR	**Matsushiro Arr**	3.33	221	Pn	Pn	01 40 42.0 +1.6
	4.0nm,0.3s,baz=29,slow=14,SNR=28					
MJAR	**Matsushiro Arr**	3.33	221	P	Pn	01 40 42.0 +1.7
MJAR				pmax	pmax	
	comp=Z,4.0nm,0.3s					
MJAR	**Matsushiro Arr**	3.33	221	Pn	Pn	01 40 42.0 +1.6
MAJO	**Matsushiro**	3.33	221	eP	Pn	01 40 41.8 +1.5
MAT	**Matsushiro**	3.33	221	P	Pn	01 40 41.4 +1.1
MAT				eS	Sn	01 41 27.6 +7.5
ERM	**Erimo**	3.39	29	eP	Pn	01 40 42.7 +1.5
ASAJ	**Asahikawa**	5.18	13	Pn	Pn	01 41 07.0 +1.1
	comp=Z,3.7nm,0.3s,baz=229,slow=11,SNR=9.3					
ASAJ	**Asahikawa**	5.18	13	P	Pn	01 41 07.0 +1.1
ASAJ				pmax	pmax	
	comp=Z,4.0nm,0.3s					
JHJ	**Hachijo jima 2**	6.02	189	Pn	Pn	01 41 18.5 +1.1
	comp=Z,19nm,0.3s,baz=224,slow=16,SNR=5.1					
JHJ				Sn	Sn	01 42 28.0 +1.5
	comp=Z,5.4nm,0.3s,baz=66,slow=19,SNR=3.2					
VLA	**Vladivostok**	7.93	303	eP	Pn	01 41 43.7 +0.2
VLA				pmax	pmax	
	comp=Z,36nm,1.7s					
YSS	**Yuzh-Sakhalins**	7.98	9	eP	Pn	01 41 46.0 +1.7
YSS				pmax	pmax	
	comp=Z,30nm,1.0s					
YSS	**Yuzh-Sakhalins**	7.98	9	ePn	Pn	01 41 44.1 -0.2
MDJ	**Mudanjiang**	10.10	307	P	Pn	01 42 18.3 +5.0
MDJ				pmax	pmax	
	comp=Z,19nm,1.6s					
MDJ				pmax	pmax	
	comp=Z,5μm,12.3s					
HABR	**Khabarovsk**	10.30	338	P	Pn	01 42 17.7 +1.7
HABR						01 44 12.8
KSRS	**Korea Array**	10.36	265	Pn	Pn	01 42 19.4 +2.5
	comp=Z,2.1nm,0.3s,baz=80,slow=14,SNR=92					
KSRS				Sn	Sn	01 44 19.2 +6.0
	comp=Z,1.0nm,0.3s,baz=76,slow=24,SNR=6.9					
KSRS	**Korea Array**	10.36	265	P	Pn	01 42 19.4 +2.6
KSRS						01 44 19.2
KSRS				pmax	pmax	
	comp=Z,2.0nm,0.3s					
KSRS				smax		
	comp=N,1.0nm,0.3s					
KLR	**Kul'dur**	12.09	330	eP	Pn	01 42 40.0 -0.5
KLR				pmax	pmax	
	comp=N,54nm,2.0s					
KLR				pmax	pmax	
	comp=E,100nm,2.0s					
KLR				pmax	pmax	
	comp=Z,110nm,2.0s					
CN2	**Changchun**	12.54	297	eP	Pn	01 42 51.1 +4.5
CN2				esP		01 42 57.8
CN2				eS	Sn	01 45 10.3 +3.9
CN2				pmax	pmax	
	comp=Z,20nm,1.5s					
CN2				LR	LR	
	comp=N,5μm,14.0s					
CN2				LR	LR	
	comp=E,3μm,14.0s					
CN2				LR	LR	
	comp=Z,4μm,16.0s					
BJI	**Beijing**	19.10	281	P	Pn	01 44 10.0 -1.9
BJI				pmax	pmax	
	comp=Z,17nm,1.9s					
BJT	**Baijiatuau**	19.11	281	eP	Pn	01 44 10.8 -1.2
BJT				pmax	pmax	
	comp=Z,17nm,0.7s					
BJT	**Baijiatuau**	19.11	281	eP	Pn	01 44 10.8 -1.3
	comp=Z,17nm,0.7s					
NJ2	**Nanjing**	19.25	255	eP	Pn	01 44 13.3 -0.6
NJ2				pmax	pmax	
	comp=Z,200nm,1.0s					
CLNS	**Chul'man**	20.67	335	eP	P	01 44 18.8 -9.3
CLNS				e		01 44 48.0
CLNS				e		01 48 13.0
CLNS				eS	S	01 48 24.8 +5.8
CLNS				pmax	pmax	
	comp=Z,8.0nm,0.9s					
CLNS				pmax	pmax	
	comp=N,2.0nm,0.9s					
CLNS				pmax	pmax	
	comp=E,7.0nm,0.8s					
CLNS				pmax	pmax	
	comp=Z,32nm,1.7s					
CLNS				pmax	pmax	
	comp=N,30nm,1.5s					
CLNS				pmax	pmax	
	comp=E,17nm,1.6s					
CLNS				MLR	MLR	
	comp=Z,3μm,13.0s,MS4.8					
CLNS				MLR	MLR	
	comp=N,1μm,14.0s,MS4.6					
CLNS				MLR	MLR	
	comp=E,860nm,13.0s,MS4.6					
HHC	**Hu-ho-hao-te**	22.53	284	eP	P	01 44 47.9 -0.4
HHC				pP		01 44 52.1
HHC				sP	sP	01 44 55.0 +3.9
HHC				PP		01 45 15.3
HHC				PcP	PcP	01 48 44.5 +2.6
HHC				S	S	01 48 48.3 -7.6
HHC				ScP	ScP	01 52 19.4 -0.4
HHC				PcS	PcS	01 52 21.0 +0.4
HHC				ScS	ScS	01 56 03.3 -1.7
HHC				pmax	pmax	
	comp=Z,25nm,0.7s,mb4.8					
HHC				LR	LR	
	comp=N,2μm,11.6s,MS5.0					
HHC				LR	LR	
	comp=E,3μm,12.3s,MS5.0					
HHC				LR	LR	
	comp=Z,2μm,13.3s,MS4.7					
YAK	**Yakutsk**	23.99	347	eP	P	01 45 01.6 -1.2
YAK				e		01 49 17.7
YAK				pmax	pmax	
	comp=Z,36nm,1.1s,mb4.7					
YAK				pmax	pmax	
	comp=E,8.0nm,1.1s					
YAK				pmax	pmax	
	comp=N,16nm,1.0s					
YAK	**Yakutsk**	23.99	347	eP	P	01 45 03.3 +0.5
SEY	**Seymchan**	24.87	12	ceP	P	01 45 12.2 +1.4
ULN	**Ulaanbaatar**	25.93	301	eP	P	01 45 20.8 +0.2
ULN				pmax	pmax	
	comp=Z,5.0nm,0.9s,mb4.0					
ULN	**Ulaanbaatar**	25.93	301	eP	P	01 45 20.8 +0.2
	comp=Z,5.2nm,0.9s,mb4.1					
SONM	**Songino Array**	26.37	301	P	P	01 45 24.9 +0.3
	comp=Z,1.5nm,0.6s,mb3.7,baz=119,slow=12,SNR=3.7					
SONM	**Songino Array**	26.37	301	P	P	01 45 24.9 +0.3
SONM				pmax	pmax	
	comp=Z,2.0nm,0.6s					
ENH	**Enshi**	27.20	261	eP	P	01 45 31.7 -0.6
	comp=Z,10nm,0.7s,mb4.5					
ZAK	**Zakamensk**	28.73	306	eP	P	01 45 48.3 +2.5
ZAK				pmax	pmax	
	comp=Z,2.0nm,1.2s,mb3.7					
LZH	**Lanzhou**	29.41	276	eP	P	01 45 50.1 -1.8
LZH				PP	PP	01 46 44.0 -14
LZH				eS	S	01 50 40.0 -6.1
LZH				pmax	pmax	
	comp=Z,34nm,1.0s,mb5.0					
LZH				pmax	pmax	
	comp=Z,160nm,5.7s					
LZH				LR	LR	
	comp=N,3μm,12.0s					
LZH				LR	LR	
	comp=Z,3μm,15.2s,MS5.0					
TGY	**Tagaytay City**	30.49	221	P	P	01 46 02.8 +1.2
	comp=Z,163nm,0.3s,baz=7.1,slow=8.1,SNR=3.2					
GYA	**Guiyang**	31.25	257	⇓iP	P	01 46 07.8 -0.5
GYA				PP	PP	01 47 11.5 -7.3
GYA				PcP	PcP	01 49 04.6 +1.9
GYA				S	S	01 51 09.9 -5.2
GYA				ScP	ScP	01 52 47.0 +0.9
GYA				SS	SS	01 52 58.6 -30
GYA				pmax	pmax	
	comp=Z,10.0nm,0.8s,mb4.7					
GYA				pmax	pmax	
	comp=Z,130nm,12.9s					
GYA				LR	LR	
	comp=N,360nm,16.2s,MS4.4					
GYA				LR	LR	
	comp=E,590nm,15.6s,MS4.4					
GYA				LR	LR	
	comp=Z,960nm,14.0s,MS4.6					
CD2	**Chengdu**	31.35	266	eP	P	01 46 10.3 +1.2
CD2				pP	pP	01 46 14.8 +3.6
CD2				sP	sP	01 46 17.9 +5.9
CD2				pmax	pmax	
	comp=Z,10.0nm,0.9s,mb4.7					
GTA	**Gaotai**	31.65	284	eP	P	01 46 12.9 +1.3
GTA				pP	pP	01 46 16.3 +2.6
GTA				sP	sP	01 46 19.0 +4.4
GTA				PcP	PcP	01 49 04.6 +1.0
GTA				pmax	pmax	
	comp=Z,2.0nm,0.6s,mb4.1					
BILL	**Bilibino**	32.19	18	eP	P	01 46 16.6 +0.6
BILL				e		01 49 04.5
BILL				pmax	pmax	
	comp=Z,11nm,1.6s,mb4.4					
BILL	**Bilibino**	32.19	18	eP	P	01 46 16.2 +0.2
	comp=Z,3.2nm,0.4s,mb4.5					
TIXI	**Tiksi**	33.22	353	eP	P	01 46 23.8 -1.2
TIXI				pmax	pmax	
	comp=Z,6.0nm,1.2s,mb4.4					
TIXI	**Tiksi**	33.22	353	eP	P	01 46 23.8 -1.2
	comp=Z,6.1nm,1.2s,mb4.4					
KMI	**Kunming**	34.95	258	P	P	01 46 42.5 +1.9
KMI				pP	pP	01 46 44.8 +2.1
KMI				sP	sP	01 46 45.9 +2.4
KMI				PP	PP	01 47 59.4 -0.3
KMI				S	S	01 52 11.9 -0.7
KMI				SS	SS	01 54 24.8 -19
KMI				pmax	pmax	
	comp=Z,8.0nm,0.5s,mb4.9					
KMI				LR	LR	
	comp=N,2μm,19.8s,MS4.9					
KMI				LR	LR	
	comp=E,1μm,19.8s,MS4.9					
KMI				LR	LR	
	comp=Z,1μm,21.2s,MS4.7					
WMQ	**Urumqi**	39.61	295	eP	P	01 47 20.0 +0.1
ZALV	**Zalesovo Beam**	40.27	311	P	P	01 47 24.7 -0.6
	comp=Z,6.4nm,0.8s,mb4.4,baz=81,slow=8.2,SNR=20					
ZALV				PcP	PcP	01 49 28.7 -0.1
	comp=Z,1.5nm,0.5s,baz=96,slow=2.2,SNR=4.0					
ZALV	**Zalesovo Beam**	40.27	311	P	P	01 47 24.7 -0.6
ZALV						01 49 28.7
ZALV				pmax	pmax	
	comp=Z,6.0nm,0.8s,mb4.4					
ZALV	**Zalesovo Beam**	40.27	311	P	P	01 47 24.7 -0.6
ZALV				PcP	PcP	01 49 28.7 -0.1
NVS	**Novosibirsk**	41.17	312	iP	P	01 47 32.0 -0.7
CHTO	**Chiang Mai**	41.47	253	eP	P	01 47 36.4 +0.8
CHTO				pmax	pmax	
	comp=Z,4.0nm,0.8s,mb4.1					
CHTO	**Chiang Mai**	41.47	253	eP	P	01 47 36.4 +0.8
	comp=Z,3.8nm,0.8s,mb4.1					
CMAR	**Chiang Mai Arr**	41.69	253	P	P	01 47 37.1 -0.2
	comp=Z,0.9nm,0.3s,mb3.8,baz=51,slow=7.1,SNR=3.3					
CMAR	**Chiang Mai Arr**	41.69	253	P	P	01 47 37.2 -0.2
CMAR				pmax	pmax	
	comp=Z,1.0nm,0.3s					
MK31	**Makanchi Array**	42.73	300	eP	P	01 47 45.2 -0.4
MKAR	**Makanchi Array**	42.73	300	P	P	01 47 45.2 -0.3
	comp=Z,2.9nm,0.6s,mb4.2,baz=76,slow=13,SNR=22					
MKAR	**Makanchi Array**	42.73	300	P	P	01 47 45.3 -0.3
MKAR				pmax	pmax	
	comp=Z,3.0nm,0.6s					
KURK	**Kurchatov**	44.39	306	P	P	01 47 58.7 -0.1
	comp=Z,8.7nm,0.6s,mb4.7,baz=83,slow=8.5,SNR=29					
KURK	**Kurchatov**	44.39	306	ceP	P	01 47 58.5 -0.4
KURK				pmax	pmax	
	comp=Z,16nm,1.0s,mb4.7					
KURK	**Kurchatov**	44.39	306	eP	P	01 47 58.2 -0.6
	comp=Z,21nm,1.0s,mb4.8					
TAPN	**Taplejung**	45.46	272	eP	P	01 48 06.0 -1.7
	comp=Z,4.1nm,0.2s,mb5.0					
TAPN	**Taplejung**	45.46	272	eP	P	01 48 06.0 -1.7
	comp=Z,4.1nm,0.2s,mb4.9					
KDAK	**Kodiak Island**	45.85	43	P	P	01 48 10.6 +0.2
	comp=Z,8.8nm,0.9s,mb4.7,baz=228,slow=7.3,SNR=7.3					
KDAK	**Kodiak Island**	45.85	43	P	P	01 48 10.6 +0.2
KDAK				pmax	pmax	
	comp=Z,9.0nm,0.9s,mb4.7					
KDAK	**Kodiak Island**	45.85	43	P	P	01 48 10.6 +0.2
ODAN	**Odare**	45.95	271	eP	P	01 48 09.8 -1.7
	comp=Z,4.3nm,0.2s,mb5.0					
ODAN	**Odare**	45.95	271	eP	P	01 48 09.8 -1.7
	comp=Z,4.3nm,0.2s,mb5.0					
RAMN	**Ramite**	46.52	272	eP	P	01 48 14.8 -1.2
	comp=Z,38nm,1.1s,mb5.2					
RAMN	**Ramite**	46.52	272	eP	P	01 48 14.8 -1.2
	comp=Z,38nm,1.1s,mb5.2					
GUN	**Gumba**	46.61	273	eP	P	01 48 16.4 -0.4
	comp=Z,64nm,0.9s,mb5.5					
GUN	**Gumba**	46.61	273	eP	P	01 48 16.4 -0.4
	comp=Z,64nm,0.9s,mb5.5					
KKN	**Kakani**	47.13	274	eP	P	01 48 20.8 -0.1
	comp=Z,30nm,0.8s,mb5.3					
KKN	**Kakani**	47.13	274	eP	P	01 48 20.8 -0.1
KKN				pmax	pmax	
	comp=Z,30nm,0.8s,mb5.3					
KKN	**Kakani**	47.13	274	eP	P	01 48 20.8 -0.1
	comp=Z,30nm,0.8s,mb5.3					
PKI	**Pulchoki**	47.14	273	eP	P	01 48 20.6 -0.3
PKI	**Pulchoki**	47.14	273	eP	P	01 48 20.7 -0.2
PKI				pmax	pmax	
	comp=Z,26nm,0.7s,mb5.3					
PKI	**Pulchoki**	47.14	273	eP	P	01 48 20.7 -0.2
	comp=Z,26nm,0.7s,mb5.3					
PKIN	**Phulchoki**	47.15	273	eP	P	01 48 20.7 -0.3
	comp=Z,26nm,0.7s,mb5.3					
MCK	**McKinley**	47.16	35	eP	P	01 48 21.2 +0.6
MCK				pmax	pmax	
	comp=Z,10.0nm,1.1s,mb4.7					
MCK	**McKinley**	47.16	35	eP	P	01 48 21.2 +0.7
	comp=Z,9.9nm,1.1s,mb4.7					
COLA	**College**	47.57	33	eP	P	01 48 24.2 +0.5
COLA				pmax	pmax	
	comp=Z,4.0nm,0.6s,mb4.6					
COLA	**College**	47.57	33	eP	P	01 48 24.2 +0.5
	comp=Z,4.1nm,0.6s,mb4.6					
TKM2	**Tokmak 2**	48.35	297	eP	P	01 48 30.7 +0.6
TKM2				pmax	pmax	
	comp=Z,15nm,0.9s,mb5.0					
TKM2	**Tokmak 2**	48.35	297	eP	P	01 48 30.7 +0.6
	comp=Z,15nm,0.9s,mb5.0					
BVAR	**Borovoye Array**	48.93	311	P	P	01 48 34.1 -0.3
	comp=Z,2.9nm,0.7s,mb4.5,baz=78,slow=8.9,SNR=13					
BVAR				PcP	PcP	01 49 58.3 -0.3
	comp=Z,2.4nm,0.7s,baz=71,slow=5.3,SNR=3.6					
BVAR	**Borovoye Array**	48.93	311	P	P	01 48 34.1 -0.3
BVAR						01 49 58.3
BVAR				pmax	pmax	
	comp=Z,3.0nm,0.7s					
BRVK	**Borovoye**	48.98	311	ceP	P	01 48 35.2 +0.4
BRVK				pmax	pmax	
	comp=Z,4.0nm,1.0s,mb4.4					
BRVK	**Borovoye**	48.98	311	eP	P	01 48 34.9 +0.1
	comp=Z,9.6nm,1.2s,mb4.7					
FRU	**Bishkek**	49.06	297	eP	P	01 48 34.0 -1.5
FRU				e		01 48 46.0
FRU				pmax	pmax	
	comp=Z,40nm,1.6s,mb5.2					
AAK	**Ala-Archa**	49.21	297	P	P	01 48 36.2 -0.5
	comp=Z,1.6nm,0.4s,mb4.4,baz=106,slow=6.8,SNR=7.8					
AAK	**Ala-Archa**	49.21	297	P	P	01 48 36.2 -0.5
AAK				pmax	pmax	
	comp=Z,2.0nm,0.4s,mb4.5					
AAK	**Ala-Archa**	49.21	297	eP	P	01 48 37.3 +0.6
	comp=Z,34nm,1.9s,mb5.0					
KSH	**Kashi**	49.25	292	eP	P	01 48 41.1 +4.0
KSH				pP	pP	01 48 45.5 +6.3
KSH				sP	sP	01 48 48.1 +8.1
KSH				PcP	PcP	01 50 02.9 +2.9
KSH				PP	PP	01 50 35.9 +5.2
KSH				ScP	ScP	01 53 56.3 +0.7
KSH				PcS	PcS	01 53 58.1 +1.7
KSH				S	S	01 55 47.8 +4.5
KSH				ScS	ScS	01 58 29.3 -0.3
KSH				SS	SS	01 59 15.8 +1.5
KSH				pmax	pmax	
	comp=Z,6.0nm,1.0s,mb4.6					
KSH				pmax	pmax	
	comp=Z,160nm,3.2s					
KSH				LR	LR	
	comp=N,310nm,9.5s					
KSH				LR	LR	
	comp=E,620nm,11.5s					
KSH				LR	LR	
	comp=Z,2μm,17.1s					
UCH	**Uchtor**	49.33	296	eP	P	01 48 39.0 +1.4
	comp=Z,4.7nm,1.1s,mb4.4					
MENT	**Mentasta**	49.58	36	eP	P	01 48 40.1 +0.9
INK	**Inuvik**	52.75	28	P	P	01 49 03.6 +0.6
	comp=Z,5.3nm,0.9s,mb4.5,baz=274,slow=6.7,SNR=7.4					
INK	**Inuvik**	52.75	28	P	P	01 49 03.6 +0.6
INK				pmax	pmax	
	comp=Z,5.0nm,0.9s					
INK	**Inuvik**	52.75	28	eP	P	01 49 03.6 +0.6
	comp=Z,5.3nm,0.8s,mb4.5					
COEN	**Coen**	52.80	177	eP	P	01 49 04.3 +0.4
	comp=Z,63nm,0.8s,mb5.6					
HYT	**Haines Junctio**	52.90	37	eP	P	01 49 05.7 +1.5
SVE	**Sverdlovsk**	53.37	318	⇑eP	P	01 49 08.2 +0.5
SVE				eS	S	01 56 34.6 -5.1
SVE				pmax	pmax	
	comp=Z,20nm,1.1s,mb5.0					
ARU	**Arti**	54.59	317	diP	P	01 49 16.4 -0.2
ARU				S	S	01 56 55.7 -0.4
ARU				SS	SS	02 00 31.0 -7.2
ARU				pmax	pmax	
	comp=Z,26nm,1.7s,mb5.0					
ARU	**Arti**	54.59	317	eP	P	01 49 16.3 -0.3
	comp=Z,8.3nm,0.6s,mb4.9					
ABKAR	**Akbulak array**	56.34	309	eP	P	01 49 28.5 -0.8
	comp=Z,7.5nm,0.6s,mb4.9					
KBL	**Kabul**	56.35	290	eP	P	01 49 30.1 +0.5
AKTK	**Aktyubinsk**	57.04	311	P	P	01 49 34.2 0.0
AKTO	**Aktyubinsk**	57.04	311	P	P	01 49 34.2 0.0
	comp=Z,6.8nm,0.7s,mb4.8,baz=67,slow=12,SNR=18					
AKTO	**Aktyubinsk**	57.04	311	P	P	01 49 34.2 -0.1
AKTO				pmax	pmax	
	comp=Z,7.0nm,0.7s,mb4.8					
DLBC	**Dease Lake**	57.26	39	P	P	01 49 38.0 +2.3
	comp=Z,1.7nm,0.9s,mb4.1,baz=304,slow=12,SNR=3.8					
WRAB	**Tennant Creek**	59.02	187	eP	P	01 49 47.2 -1.2
WRAB				pmax	pmax	
	comp=Z,9.0nm,0.8s,mb4.8					
WRAB	**Tennant Creek**	59.02	187	eP	P	01 49 47.2 -1.2
	comp=Z,9.5nm,0.8s,mb4.9					
WRA	**Warramunga Arr**	59.03	187	P	P	01 49 47.4 -1.1
	comp=Z,8.3nm,0.8s,mb4.8,baz=5.0,slow=7.2,SNR=49					
WRA	**Warramunga Arr**	59.03	187	P	P	01 49 47.4 -1.1
WRA				pmax	pmax	
	comp=Z,8.0nm,0.8s					
APA	**Apatity**	60.67	335	⇓eP	P	01 49 59.0 -0.2
APA				MLR	MLR	
	comp=Z,7μm,21.0s,MS5.8					
RES	**Resolute Bay**	60.72	15	eP	P	01 49 59.1 -0.4
RES				pmax	pmax	
	comp=Z,9.0nm,0.9s,mb4.9					
RES	**Resolute Bay**	60.72	15	eP	P	01 49 59.1 -0.4
	comp=Z,8.7nm,0.9s,mb4.9					
ARCES	**ARCESS Array B**	61.95	339	P	P	01 50 07.3 -0.5
	comp=Z,2.0nm,0.8s,mb4.3,baz=47,slow=7.1,SNR=10.0					
ARCES	**ARCESS Array B**	61.95	339	P	P	01 50 07.4 -0.5
ARCES				pmax	pmax	
	comp=Z,2.0nm,0.8s					
YKA	**Yellowknife Ar**	62.24	31	P	P	01 50 09.3 -0.6
	comp=Z,0.9nm,0.8s,mb4.0,baz=302,slow=7.1,SNR=2.9					
YKA	**Yellowknife Ar**	62.24	31	P	P	01 50 09.3 -0.6
YKA				pmax	pmax	
	comp=Z,1.0nm,0.8s					
ASAR	**Alice Springs**	62.76	187	P	P	01 50 13.4 -0.3
	comp=Z,6.0nm,0.7s,mb4.8,baz=11,slow=6.8,SNR=52					
ASAR	**Alice Springs**	62.76	187	P	P	01 50 13.5 -0.3
ASAR				pmax	pmax	
	comp=Z,6.0nm,0.7s					
JOF	**Joensuu**	63.98	331	eP	P	01 50 18.9 -2.6
JOF				pmax	pmax	
	comp=Z,3.0nm,0.6s,mb4.5					
JOF	**Joensuu**	63.98	331	ep	P	01 50 18.9 -2.6
	comp=Z,2.6nm,0.6s,mb4.4					
JOF	**Joensuu**	63.98	331	ep	P	01 50 18.9 -2.6
	comp=Z,2.6nm,0.6s,mb4.4					
DZM	**Mont Dzumac**	65.35	154	eP	P	01 50 30.7 -0.1
	comp=Z,12nm,0.5s,mb5.2					
MOS	**Moscow**	65.39	323	eP	P	01 50 29.6 -1.2
MOS				pmax	pmax	
	comp=Z,35nm,1.1s,mb5.3					
OBN	**Obninsk**	66.24	323	eP	P	01 50 36.5 +0.2
OBN				e		01 51 10.5
OBN				pmax	pmax	
	comp=Z,25nm,1.6s,mb5.0					
KAF	**Kangasniemi**	66.32	332	eP	P	01 50 35.5 -1.2
KAF				pmax	pmax	
	comp=Z,5.0nm,0.5s,mb4.8					
KAF	**Kangasniemi**	66.32	332	ep	P	01 50 35.5 -1.2
	comp=Z,5.2nm,0.5s,mb4.8					
KAF	**Kangasniemi**	66.32	332	ep	P	01 50 35.5 -1.2
	comp=Z,5.2nm,0.5s,mb4.8					
FINES	**FINESS Array B**	66.83	332	P	P	01 50 39.2 -0.7
	comp=Z,8.8nm,0.8s,mb4.8,baz=39,slow=7.3,SNR=30					
FINES	**FINESS Array B**	66.83	332	P	P	01 50 39.2 -0.8
FINES				pmax	pmax	
	comp=Z,9.0nm,0.8s					
FINES	**FINESS Array B**	66.83	332	P	P	01 50 39.2 -0.7
VSR	**Storozhevoye**	67.15	318	eP	P	01 50 41.4 -0.8
VSR				pmax	pmax	
	comp=N,2.0nm,0.6s					
VSR				pmax	pmax	
	comp=E,7.0nm,0.6s					
VSR				pmax	pmax	
	comp=Z,6.0nm,0.6s,mb4.8					
GOF	**Gofitskoye**	68.46	311	eP	P	01 50 45.9 -4.6
GOF				pmax	pmax	
	comp=Z,40nm,1.4s,mb5.3					
SUMG	**Summit**	68.64	360	eP	P	01 50 51.9 +0.7
	comp=Z,15nm,1.0s,mb4.9					
SUMG	**Summit**	68.64	360	iP	P	01 50 52.9 +1.7
	comp=Z,9.4nm,0.9s,mb4.7					
NEW	**Newport**	68.93	44	eP	P	01 50 54.7 +1.3
NEW				pmax	pmax	
	comp=Z,4.0nm,0.7s					
NEW	**Newport**	68.93	44	eP	P	01 50 54.7 +1.3
	comp=Z,3.6nm,0.7s,mb4.4					
ZEI	**Tsey**	69.23	309	eP	P	01 50 53.8 -1.6
ZEI				pmax	pmax	
	comp=Z,30nm,2.0s,mb4.9					
KIV	**Kislovodsk**	69.29	310	eP	P	01 50 57.0 +1.3
KIV				i		01 51 05.1
KIV				i		01 51 14.8
KIV				pmax	pmax	
	comp=Z,52nm,1.6s,mb5.2					
KIV	**Kislovodsk**	69.29	310	eP	P	01 50 55.6 -0.1
	comp=Z,29nm,0.8s,mb5.3					
C11A	**Tepee Creek (N**	69.65	44	⇑P	P	01 50 58.1 +0.3
	baz=69					
SCO	**Scoresbysund**	70.04	354	iP	P	01 51 01.0 +1.1
	comp=Z,3.8nm,0.8s,mb4.4					
GNI	**Garni**	70.19	306	eP	P	01 51 01.1 -0.2
GNI				pmax	pmax	
	comp=Z,18nm,1.3s					
GNI	**Garni**	70.19	306	eP	P	01 51 01.1 -0.3
	comp=Z,18nm,1.3s,mb4.8					
H08A	**Prairie City**	70.23	48	⇓P	P	01 51 00.3 -1.2
	baz=70					
B13A	**Whitefish**	70.30	43	⇑P	P	01 51 00.9 -1.0
	baz=70					
IZAR	**Zarasai**	70.48	327	eP	P	01 51 02.6 -0.3
IZAR				AMB	AMB	01 51 03.3
	comp=Z,3.1nm,0.9s,mb4.2					
IDID	**Didziasalis**	70.56	326	eP	P	01 51 03.0 -0.3
IDID				AMB	AMB	01 51 03.9
	comp=Z,4.0nm,0.9s,mb4.3					
STKA	**Stephens Creek**	70.60	179	P	P	01 51 03.0 -0.6
	comp=Z,2.7nm,0.9s,mb4.2,baz=329,slow=10,SNR=5.0					

baz=71
J08A Circle Bar Ran 71.03 49 ⇑P P 01 51 06.1 -0.3
baz=71
C14A Swan Lake 71.05 43 ⇓P P 01 51 06.1 -0.4
baz=71
SWMT Swartz Lake 71.08 44 eP P 01 51 07.0 +0.4
D13A Huson 71.08 44 ⇑P P 01 51 06.5 -0.1
baz=71
G11A Walters Elk Ra 71.09 47 ⇑P P 01 51 07.0 +0.3
baz=71
SOC Sochi 71.26 311 eP P 01 51 06.5 -1.3
SOC e*PP pP 01 51 15.9 +5.9
SOC e*SP sP 01 51 19.2 +8.4
SOC pmax pmax
comp=Z,18nm,0.9s,mb5.0
B15A Bradely Ranch, 71.35 42 ⇑P P 01 51 07.8 -0.4
baz=71,SNR=9.7
F12A Elk City 71.45 46 ⇑P P 01 51 08.6 -0.2
baz=71
J09A Fry Pan Ranch, 71.46 49 ⇑P P 01 51 08.8 -0.2
baz=71
WVOR Wild Horse Val 71.47 50 eP P 01 51 10.6 +1.5
SLMT Seeley Lake 71.51 44 eP P 01 51 10.0 +0.8
C15A Salmond Ranch, 71.66 43 ⇑P P 01 51 10.0 -0.1
baz=71,SNR=5.4
NB2 NORSAR Subarra 72.16 337 P P 01 51 12.4 -0.5
comp=Z,27nm,1.4s,mb5.0,baz=40,slow=6.2
NB2 NORSAR Subarra 72.16 337 P P 01 51 12.4 -0.5
NB2 NORSAR Subarra 72.16 337 P P 01 51 12.4 -0.5
NOA NORSAR Array B 72.16 337 P P 01 51 12.4 -0.5
comp=Z,3.2nm,0.7s,mb4.4,baz=39,slow=6.0,SNR=5060
NOA NORSAR Array B 72.16 337 P P 01 51 12.4 -0.5
NOA pmax pmax
comp=Z,3.0nm,0.7s
FFC Flin Flon 72.19 33 iP P 01 51 15.4 +2.2
FFC Flin Flon 72.19 33 eP P 01 51 14.4 +1.2
comp=Z,8.3nm,1.1s,mb4.6
H12A Diamond D Ranc 72.41 47 ⇓P P 01 51 14.5 -0.1
baz=72
NAO01 NORSAR Array S 72.41 337 eP P 01 51 14.0 -0.3
comp=Z,3.5nm,0.7s,mb4.4
G13A Cobalt 72.42 46 ⇑P P 01 51 13.9 -0.9
baz=72
AKASG Malin Array Be 72.45 322 P P 01 51 13.9 -0.9
comp=Z,5.0nm,0.7s,mb4.6,baz=46,slow=7.0,SNR=4.3
AKASG Malin Array Be 72.45 322 P P 01 51 13.9 -0.9
AKASG pmax pmax
comp=Z,5.0nm,0.7s
AKBB Malin Array Si 72.45 322 eP P 01 51 14.3 -0.5
KIEV Kiev 72.47 322 eP P 01 51 13.8 -1.1
KIEV pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
KIEV Kiev 72.47 322 eP P 01 51 13.8 -1.1
comp=Z,7.5nm,0.8s,mb4.7
E15A Deer Lodge 72.47 44 ⇓P P 01 51 14.7 -0.4
baz=72
I12A Atlanta 72.71 47 ⇓P P 01 51 16.1 -0.3
baz=72
H13A Challis 72.74 46 ⇓P P 01 51 16.4 -0.2
baz=72
K11A Parker Ranch, 72.81 49 ⇓P P 01 51 17.3 +0.2
baz=73
F15A Butte 72.92 45 ⇑P P 01 51 18.2 +0.5
baz=73,SNR=6.1
LRM Limekiln Ridge 72.95 44 eP P 01 51 19.0 +1.1
D17A Six Diamond Ra 73.06 43 ⇓P P 01 51 17.7 -0.8
baz=73
I13A Wildhorse Cree 73.21 47 ⇑P P 01 51 19.6 +0.2
baz=73
HLID Hailey 73.26 47 ⇑P P 01 51 19.5 -0.2
baz=73
HLID Hailey 73.26 47 eP P 01 51 20.2 +0.4
comp=Z,1.1nm,0.8s,mb3.8
M10A I.L. Ranch, Tu 73.27 50 ⇓P P 01 51 19.8 -0.1
baz=73
L11A Cat Creek Ranc 73.34 49 ⇑P P 01 51 21.1 +0.8
baz=73
G15A Dillon 73.34 45 ⇓P P 01 51 20.7 +0.5
baz=73,SNR=6.6
J13A Cove Ranch, Pi 73.50 47 ⇑P P 01 51 21.3 +0.2
baz=73
BOZ Bozeman (W) 73.51 44 ⇑P P 01 51 21.8 +0.6
baz=73,SNR=5.2
BOZ Bozeman (W) 73.51 44 eP P 01 51 21.9 +0.7
BOZ pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
BOZ Bozeman (W) 73.51 44 eP P 01 51 21.9 +0.7
comp=Z,4.5nm,0.9s,mb4.4
I14A Mackay 73.58 47 ⇓P P 01 51 21.7 +0.1
baz=73
G16A Moss Hill, Enn 73.68 45 ⇑P P 01 51 22.5 +0.3
baz=74
M11A Holland Ranch, 73.77 50 ⇓P P 01 51 23.9 +1.1
baz=74
SFJD Kangerlussuaq 73.88 5 iP P 01 51 23.2 +0.2
comp=Z,7.9nm,0.8s,mb4.7
J14A Carey 73.92 47 ⇑P P 01 51 23.7 +0.1
baz=74
NVAR Mina Array Bea 74.07 53 P P 01 51 25.5 +0.9
comp=Z,3.2nm,1.0s,mb4.2,baz=281,slow=5.7,SNR=15
NVAR Mina Array Bea 74.07 53 P P 01 51 25.5 +0.9
M12A Wells 74.30 49 ⇑P P 01 51 26.2 +0.3
baz=74
F18A Big Timber 74.38 43 ⇓P P 01 51 26.3 +0.1
baz=74
K14A Jones Ranch, D 74.61 47 ⇑P P 01 51 27.9 +0.3
baz=74
M13A Montello 74.78 49 eP P 01 51 29.1 +0.5
comp=Z,1.8nm,0.8s,mb4.0
IMW Indian Meadow 75.01 45 eP P 01 51 31.3 +1.3
comp=Z,2.7nm,0.6s,mb4.3
Q10A Clear Creek Ra 75.01 52 ⇓P P 01 51 29.7 -0.4
baz=75
O12A Currie 75.12 50 ⇓P P 01 51 31.0 +0.4
baz=75
LOHW Long Hollow 75.38 45 eP P 01 51 33.3 +1.2
S10A Tonopah Range, 75.45 53 ⇑P P 01 51 32.7 +0.1
baz=75,SNR=9.8
Q11A Duckwater 75.45 52 ⇓P P 01 51 32.5 -0.1
baz=75
P12A McGill 75.52 51 ⇓P P 01 51 32.0 -0.9
baz=75
BORG Borgarnes 75.57 352 eP P 01 51 33.1 +0.3
BORG pmax pmax
comp=Z,10.0nm,0.8s
BORG Borgarnes 75.57 352 eP P 01 51 33.1 +0.3
comp=Z,10nm,0.8s,mb4.8
N14A Grayback Hills 75.67 49 ⇓P P 01 51 32.3 -1.5
baz=76
M15A Larsen Ranch, 75.71 48 ⇓P P 01 51 34.2 +0.2
baz=76,SNR=6.2
R11A Troy Canyon, C 75.81 52 ⇓P P 01 51 35.2 +0.5
baz=76,SNR=8.5
Q12A Willow Creek R 75.83 51 ⇓P P 01 51 34.7 -0.1
baz=76
L16A Fish Haven 75.94 47 ⇑P P 01 51 35.0 -0.4
baz=76
MPMC Manual Prospec 76.03 55 ⇑P P 01 51 35.9 -0.1
baz=76
P13A Bates Ranch, G 76.06 50 ⇓P P 01 51 36.2 +0.1
baz=76
HWUT Hardware Ranch 76.13 47 eP P 01 51 37.6 +1.2
S11A Rachel 76.14 53 ⇑P P 01 51 36.7 +0.1
baz=76
KWP Kalwaria Pacla 76.25 324 eP P 01 51 37.7 +0.7
KWP Kalwaria Pacla 76.25 324 eP P 01 51 37.0 0.0
KWP pmax pmax
comp=Z,75nm,1.7s,mb5.3
KWP Kalwaria Pacla 76.25 324 eP P 01 51 37.0 0.0
comp=Z,75nm,1.7s,mb5.3
DUG Dugway 76.31 49 ⇑P P 01 51 37.7 +0.3
baz=76
DUG Dugway 76.31 49 eP P 01 51 38.6 +1.1
DUG pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
DUG Dugway 76.31 49 eP P 01 51 38.6 +1.1
comp=Z,9.4nm,1.3s,mb4.6
Q13A Wheeler Ranch, 76.38 51 ⇓P P 01 51 38.0 +0.1
baz=76
R12A Pony Springs, 76.42 52 ⇓P P 01 51 38.7 +0.6
baz=76
EDW2 Edwards Air Fo 76.44 56 ⇑P P 01 51 37.8 -0.5
baz=76
BUR08 Bucovina Ar. S 76.46 321 eP P 01 51 38.1 -0.1
BW06 Boulder Array 76.51 46 ⇓P P 01 51 38.0 -0.6
baz=76
BW06 Boulder Array 76.51 46 eP P 01 51 38.8 +0.3
comp=Z,5.0nm,1.0s,mb4.4
PDAR Pinedale Array 76.51 46 P P 01 51 39.2 +0.7
comp=Z,1.9nm,0.7s,mb4.1,baz=288,slow=2.4,SNR=16
P14A Drum Mountains 76.54 50 ⇓P P 01 51 38.6 -0.2
baz=76
U10A Ash Meadows, A 76.55 54 ⇓P P 01 51 39.4 +0.6
baz=76
S12A Delamar Landin 76.72 52 ⇓P P 01 51 39.8 -0.1
baz=76
T11A Corn Creek, Al 76.72 53 ⇑P P 01 51 39.9 0.0
baz=76,SNR=9.4
Q14A Sevier Lake (B 76.80 50 ⇓P P 01 51 40.6 +0.3
baz=77,SNR=6.1
K19A Absolon Red Bu 76.86 45 ⇓P P 01 51 40.9 +0.3
baz=77
KOLS Kolonicke sedl 76.95 324 eP P 01 51 41.3 +0.4
KOLS pmax pmax
comp=Z,5.0nm,1.3s,mb4.3
KOLS Kolonicke sedl 76.95 324 eP P 01 51 41.3 +0.4
comp=Z,4.7nm,1.3s,mb4.3
KOLS Kolonicke sedl 76.95 324 eP P 01 51 41.3 +0.4
L19A Farson 77.06 46 ⇓P P 01 51 40.5 -1.2
baz=77
STHS Stebnicka Huta 77.07 324 eP P 01 51 42.9 +1.3
STHS pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
STHS Stebnicka Huta 77.07 324 eP P 01 51 42.9 +1.3
comp=Z,4.0nm,0.8s,mb4.4
STHS Stebnicka Huta 77.07 324 eP P 01 51 42.9 +1.3
OJC Ojcow 77.13 326 eP P 01 51 41.0 -0.9
BR131 Keskin Array S 77.22 311 eP P 01 51 42.6 0.0
comp=Z,1.7nm,0.8s,mb4.0
BRTR Keskin Array B 77.22 311 P P 01 51 42.5 -0.1
comp=Z,1.5nm,0.7s,mb4.0,baz=90,slow=3.7,SNR=12
BRTR Keskin Array B 77.22 311 P P 01 51 42.5 -0.1
BRTR pmax pmax
comp=Z,2.0nm,0.7s
CRVS Cervenica-Dubn 77.34 324 eP P 01 51 43.2 +0.1
CRVS pmax pmax
comp=Z,21nm,2.3s,mb4.7
CRVS Cervenica-Dubn 77.34 324 eP P 01 51 43.2 +0.1
comp=Z,21nm,2.3s,mb4.7
CRVS Cervenica-Dubn 77.34 324 eP P 01 51 43.2 +0.1
T13A Saint George 77.68 52 ⇓P P 01 51 44.4 -0.8
baz=78
MSU Marysvale 77.77 50 eP P 01 51 47.2 +1.5
MSU pmax pmax
comp=Z,17nm,1.7s,mb4.7
MSU Marysvale 77.77 50 eP P 01 51 47.2 +1.5
comp=Z,17nm,1.7s,mb4.7
ULM Lac du Bonnet 78.01 33 P P 01 51 45.3 -1.5
comp=Z,2.3nm,0.6s,mb4.3,baz=333,slow=4.5,SNR=2.9
U13A Pakoon Wash 78.03 53 ⇓P P 01 51 47.2 0.0
baz=78
BSEG Bad Segeberg 78.07 333 eP P 01 51 47.2 +0.1
comp=Z,16nm,1.2s,mb4.8
BSEG Bad Segeberg 78.07 333 eP P 01 51 47.2 +0.1
BSEG pmax pmax
comp=Z,16nm,1.2s,mb4.8
KECS Kecovo 78.09 324 eP P 01 51 49.8 +2.5
KECS pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
KECS Kecovo 78.09 324 eP P 01 51 49.8 +2.5
comp=Z,1.9nm,0.8s,mb4.1
KECS Kecovo 78.09 324 eP P 01 51 49.8 +2.5
Q16A Castle Valley 78.10 49 ⇓P P 01 51 46.3 -1.2
baz=78
OKC Ostrava-Krasne 78.14 326 eP P 01 51 48.1 +0.6
OKC Ostrava-Krasne 78.14 326 eP P 01 51 48.1 +0.6
LDFC Landnir 78.16 54 eP P 01 51 49.2 +1.3
comp=Z,2.0nm,0.6s,mb4.2
P18A Preston Nutter 78.18 48 ⇑P P 01 51 47.4 -0.5
baz=78
L21A Rawlins 78.25 45 ⇑P P 01 51 48.1 -0.2
baz=78
BELC Belle Mtn. Jos 78.28 56 ⇓P P 01 51 48.1 -0.5
baz=78
R16A Teasdale 78.33 50 ⇑P P 01 51 48.3 -0.5
baz=78
SRU San Rafael 78.36 49 ⇑P P 01 51 48.3 -0.6
baz=78
SRU San Rafael 78.36 49 eP P 01 51 50.0 +1.0
SRU pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
SRU San Rafael 78.36 49 eP P 01 51 50.0 +1.0
comp=Z,4.3nm,0.7s,mb4.5
V13A Grand Canyon W 78.37 53 ⇑P P 01 51 48.4 -0.7
baz=78
MORC Moravsky Berou 78.44 326 eP P 01 51 49.4 +0.2
MORC pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
MORC Moravsky Berou 78.44 326 eP P 01 51 49.4 +0.1
comp=Z,5.2nm,0.9s,mb4.5
U14A Mt Trumbull 78.51 52 ⇓P P 01 51 49.0 -0.9
baz=78
N20A Spence Gulch, 78.51 46 ⇑P P 01 51 48.5 -1.3
baz=78
DPC Dobruska-Polom 78.53 327 eP P 01 51 50.2 +0.5
DPC Dobruska-Polom 78.53 327 eP P 01 51 50.2 +0.5
UPC Upice 78.54 328 eP P 01 51 50.4 +0.7
UPC Upice 78.54 328 eP P 01 51 50.4 +0.7
T15A Red Dirt Ranch 78.61 51 ⇑P P 01 51 49.8 -0.6
baz=78
R17A Hanksville Air 78.70 49 ⇑P P 01 51 49.6 -1.2
baz=78
PSZ Piszkesteto 78.78 324 eP P 01 51 51.9 +0.8
PSZ pmax pmax
comp=Z,14nm,1.4s,mb4.7
PSZ Piszkesteto 78.78 324 eP P 01 51 51.9 +0.8
comp=Z,14nm,1.4s,mb4.7
PSZ Piszkesteto 78.78 324‖eP P 01 51 52.1 +1.0
VYHS Vyhne 78.83 325 eP P 01 51 51.7 +0.3
VYHS pmax pmax
comp=Z,16nm,2.1s,mb4.6
VYHS Vyhne 78.83 325 eP P 01 51 51.7 +0.3
comp=Z,16nm,2.1s,mb4.6
VYHS Vyhne 78.83 325 eP P 01 51 51.7 +0.3
U15A North Rim 79.05 52 ⇑P P 01 51 52.0 -0.8
baz=79
V14A Boquillas Ranc 79.06 53 ⇑P P 01 51 52.7 -0.2
baz=79
BRG Berggiesshubel 79.10 329 eP P 01 51 53.1 +0.3
comp=Z,12nm,1.5s,mb4.6
PVCC Panska Ves 79.12 328 eP P 01 51 53.6 +0.7
PVCC Panska Ves 79.12 328 eP P 01 51 53.6 +0.7
CLL Collm 79.14 330 eP P 01 51 52.5 -0.5
comp=Z,7.0nm,1.0s,mb4.5
CLL Collm 79.14 330⇑iP P 01 51 52.2 -0.8
CLL pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
CLL Collm 79.14 330⇑iP P 01 51 52.2 -0.8
comp=Z,7.0nm,1.0s,mb4.5
CLL i pP 01 51 54.2 -1.1
CLL Collm 79.14 330⇑iP P 01 51 52.2 -0.8
comp=Z,7.0nm,1.0s,mb4.5
CLL iP(2) pP 01 51 54.2 -1.1
CLL iPcP PcP 01 52 01.5 +0.1
CLL iPcP(2) 01 52 04.2
Q19A Hogan Spring (79.19 48 ⇑P P 01 51 52.4 -1.2
baz=79
R18A Canyonlands Na 79.20 49 ⇑P P 01 51 53.2 -0.4
baz=79
X13A Yucca 79.28 54 ⇓P P 01 51 54.1 -0.1
baz=79
NRDL Niedersach Rie 79.30 332 eP P 01 51 55.0 +1.1
comp=Z,8.0nm,1.1s,mb4.6
PRU Pruhonice 79.54 328 eP P 01 51 55.5 +0.2
PRU Pruhonice 79.54 328 eP P 01 51 55.5 +0.2
TREC Trest 79.68 327 eP P 01 51 56.1 +0.1
TREC Trest 79.68 327 eP P 01 51 56.1 +0.1
CLZ Clausthal 79.72 331 eP P 01 51 56.4 +0.2
comp=Z,8.0nm,1.0s,mb4.6
CLZ Clausthal 79.72 331 eP P 01 51 56.4 +0.2
CLZ pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
P21A Newcastle 79.86 47 P P 01 51 57.6 +0.4
baz=80
T18A Mexican Hat 80.04 50 ⇓P P 01 51 56.8 -1.4
baz=80
S19A Harvey Farm, M 80.08 49 ⇑P P 01 51 58.1 -0.2
baz=80
MOX Moxa 80.20 330 eP P 01 51 59.1 +0.3
comp=Z,28nm,2.1s,mb4.8
MOX Moxa 80.20 330 eP P 01 51 59.1 +0.3
MOX pmax pmax
comp=Z,28nm,2.1s,mb4.8
WUAZ Wupatki 80.21 52 ⇑P P 01 51 58.7 -0.4
baz=80
Y14A Wickenburg 80.22 54 ⇓P P 01 51 59.0 -0.3
baz=80
Z13A Yuma Proving G 80.29 55 ⇑P P 01 51 59.1 -0.6
baz=80
X15A Humboldt 80.35 53 ⇓P P 01 51 59.0 -0.9
baz=80
SMCO Snowmass 80.36 47 eP P 01 52 01.1 +1.2
comp=Z,2.8nm,1.0s,mb4.2
SOP Sopron 80.45 326⇑eP P 01 52 00.9 +0.7
MMAI Mount Meron Ar 80.48 305 P P 01 52 01.5 +0.8
comp=Z,2.9nm,0.7s,mb4.3,baz=32,slow=8.0,SNR=5.7
V17A Tonalea, Kykot 80.49 52 ⇑P P 01 52 01.0 +0.3
baz=80
U18A Rough Rock, Ch 80.52 51 ⇑P P 01 52 01.1 +0.3
baz=80
KHC Kasperske Hory 80.61 328 eP P 01 52 01.0 0.0
comp=Z,5.7nm,0.8s,mb4.5
KHC Kasperske Hory 80.61 328 eP P 01 52 01.0 0.0
T19A Beclabito 80.75 50 ⇑P P 01 52 02.4 +0.4
baz=81
GEC2 GERESS Array S 80.78 328 eP P 01 52 01.6 -0.3
comp=Z,5.0nm,1.1s,mb4.4
GEC2 GERESS Array S 80.78 328 eP P 01 52 01.6 -0.3
GEC2 pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
GERES GERESS Array B 80.78 328 P P 01 52 02.0 +0.1
comp=Z,1.9nm,0.7s,mb4.2,baz=32,slow=5.3,SNR=21
GERES GERESS Array B 80.78 328 P P 01 52 02.0 +0.1
GERES pmax pmax
comp=Z,2.0nm,0.7s
WET Wettzell 80.88 328 eP P 01 52 02.8 +0.3
comp=Z,14nm,1.5s,mb4.7
WET Wettzell 80.88 328 eP P 01 52 02.8 +0.3
WET pmax pmax
comp=Z,14nm,1.5s,mb4.7
GRA1 Grafenberg Arr 81.11 330 eP P 01 52 03.9 +0.2
comp=Z,17nm,1.0s,mb4.9
GRF Grafenberg Arr 81.11 330 eP P 01 52 03.9 +0.2
comp=Z,17nm,1.0s,mb4.9
GRF Grafenberg Arr 81.11 330 eP P 01 52 03.9 +0.2
GRF pmax pmax
comp=Z,17nm,1.0s,mb4.9
GRF Grafenberg Arr 81.11 330 eP P 01 52 03.9 +0.2
GRF pmax pmax
comp=Z,17nm,1.0s,mb4.9
214A Organ Pipe Nat 81.64 56 ⇓P P 01 52 06.4 -0.5
baz=82
RJOB Jochberg 82.02 328 eP P 01 52 08.8 +0.2
comp=Z,7.0nm,1.0s,mb4.5
SDCO Great Sand Dun 82.18 47 eP P 01 52 10.8 +1.2
comp=Z,0.8nm,0.6s,mb3.8
Y18A Canyon Day Jun 82.19 53 ⇓P P 01 52 09.7 0.0
baz=82
FUR Furstenfeldbru 82.31 329 eP P 01 52 10.0 -0.1
comp=Z,21nm,1.1s,mb5.0
FUR Furstenfeldbru 82.31 329 eP P 01 52 10.0 -0.1
FUR pmax pmax
comp=Z,21nm,1.1s,mb5.0
MEM Membach 82.32 333 P P 01 52 10.4 +0.3
STU Stuttgart 82.64 330 eP P 01 52 11.7 -0.1
comp=Z,7.0nm,0.7s,mb4.8
STU Stuttgart 82.64 330 eP P 01 52 11.6 -0.2
STU pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
STU Stuttgart 82.64 330 eP P 01 52 11.6 -0.2
comp=Z,10nm,0.8s,mb4.9
TUC Tucson 82.69 54 eP P 01 52 13.9 +1.5
TUC pmax pmax
comp=Z,5.0nm,1.4s,mb4.3
TUC Tucson 82.69 54 eP P 01 52 13.9 +1.5
comp=Z,5.3nm,1.4s,mb4.4
U23A El Rito 82.76 49 ⇓P P 01 52 13.9 +1.2
baz=83
118A Homack Ranch, 82.98 53 ⇑P P 01 52 13.9 0.0
baz=83
SNF Seneffe 83.00 334 P P 01 52 13.4 -0.2
X21A Alamocita Cree 83.11 51 ⇑P P 01 52 13.9 -0.5
baz=83
Y20A Horse Springs, 83.11 52 ⇑P P 01 52 14.3 -0.2
baz=83
BFO Black Forest 83.34 330 eP P 01 52 15.2 -0.2
comp=Z,12nm,1.2s,mb4.8
BFO Black Forest 83.34 330 eP P 01 52 15.2 -0.2
BFO pmax pmax
comp=Z,12nm,1.2s,mb4.8
BAIF Baives 83.41 334 eP P 01 52 15.0 -0.7
comp=Z,5.6nm,0.8s,mb4.4
BAIF Baives 83.41 334 eP P 01 52 15.0 -0.7
BAIF pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
BAIF Baives 83.41 334 eP P 01 52 15.0 -0.7
comp=Z,2.8nm,0.8s,mb4.3
SCHQ Schefferville 83.48 16 P P 01 52 14.9 -1.1
comp=Z,4.0nm,0.9s,mb4.4,baz=306,slow=8.7,SNR=3.3
Z20A Nine Sixteen R 83.52 52 ⇓P P 01 52 16.5 -0.1
baz=83
LAZ Ladron 83.53 51 eP P 01 52 19.3 +2.7
comp=Z,0.5nm,1.0s,mb3.6
ANMO Albuquerque 83.56 50 eP P 01 52 17.6 +0.8
ANMO pmax pmax
comp=Z,2.0nm,1.4s
ANMO Albuquerque 83.56 50 eP P 01 52 17.6 +0.8
comp=Z,2.4nm,1.4s,mb4.1
CDF Champ du Feu 83.67 331⇑iP P 01 52 16.8 -0.3
CDF Champ du Feu 83.67 331⇑iP P 01 52 16.8 -0.3
CDF Champ du Feu 83.67 331⇑iP P 01 52 16.8 -0.3
318A Bisbee 83.78 54 ⇑P P 01 52 16.8 -1.2
baz=84
219A White Tail Can 83.86 54 ⇓P P 01 52 18.7 +0.3
baz=84
Z21A St. Cloud Mine 83.95 52 ⇑P P 01 52 19.3 +0.5
baz=84
W24A Lazy 6 Ranch, 84.00 49 ⇓P P 01 52 19.2 +0.1
baz=84
BNM Barren Site 84.01 50 eP P 01 52 20.5 +1.4
comp=Z,1.8nm,1.0s,mb4.2
319A Douglas 84.27 54 ⇓P P 01 52 19.9 -0.6
baz=84
HAU Haudompre 84.36 331⇑iP P 01 52 19.9 -0.7
comp=Z,12nm,0.9s,mb4.7
HAU Haudompre 84.36 331⇑iP P 01 52 19.9 -0.7
HAU pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
HAU Haudompre 84.36 331⇑iP P 01 52 19.9 -0.7
comp=Z,5.8nm,0.9s,mb4.7
MEZF Maizieres J'vi 84.42 332 eP P 01 52 20.6 -0.3
MEZF Maizieres J'vi 84.42 332 eP P 01 52 20.6 -0.3
Z22A Elephant Butte 84.42 51 ⇑P P 01 52 21.3 +0.1
baz=84
Y23A Lovelace Mesa, 84.50 50 ⇑P P 01 52 22.3 +0.6
baz=84
W25A X Bar L Ranch, 84.55 48 ⇑P P 01 52 21.2 -0.6
baz=84
X26A CR and CF Fran 85.39 48 ⇑P P 01 52 26.4 +0.3
baz=85
W27A Bowe Ranch, En 85.46 48 ⇓P P 01 52 26.6 +0.2
baz=85
CABF La Chapelle 85.62 331 eP P 01 52 26.5 -0.5
comp=Z,11nm,0.9s,mb4.8
CABF La Chapelle 85.62 331 eP P 01 52 26.5 -0.5
CABF pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
CABF La Chapelle 85.62 331 eP P 01 52 26.5 -0.5
comp=Z,5.6nm,0.9s,mb4.8
124A Stringfield Ra 85.72 51 ⇑P P 01 52 27.7 -0.1
baz=86
Z25A Roswell 85.75 50 ⇓P P 01 52 27.6 -0.3
baz=86
Y26A Elida 85.83 49 ⇓P P 01 52 28.0 -0.3
baz=86
LOR Lormes 85.89 332⇑iP P 01 52 27.7 -0.6
comp=Z,19nm,1.0s,mb5.0
LOR Lormes 85.89 332⇑iP P 01 52 27.7 -0.6
LOR pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
LOR Lormes 85.89 332⇑iP P 01 52 27.7 -0.6
comp=Z,9.3nm,1.0s,mb5.0
AQU L'Aquila 85.99 324 eP P 01 52 29.2 +0.3
AQU pmax pmax
comp=Z,13nm,1.0s,mb5.1
AQU L'Aquila 85.99 324 eP P 01 52 29.2 +0.3
comp=Z,13nm,1.0s,mb5.1
FLN La Foliniere 86.09 336 eP P 01 52 28.6 -0.7
comp=Z,23nm,1.2s,mb5.0
FLN La Foliniere 86.09 336 eP P 01 52 28.6 -0.7

FLN pmax pmax
comp=Z,12nm,1.2s,mb5.0
FLN La Foliniere 86.09 336 *eP* **P 01 52 28.6 -0.7**
comp=Z,12nm,1.2s,mb5.0
224A Cornudas Mount 86.11 51 ⇑P **P 01 52 30.1 +0.3**
baz=86
LDF La Druitiere 86.12 335 *eP* **P 01 52 28.7 -0.7**
comp=Z,7.0nm,0.7s,mb4.7
LDF La Druitiere 86.12 335 *eP* **P 01 52 28.7 -0.7**
LDF pmax pmax
comp=Z,4.0nm,0.7s,mb4.8
LDF La Druitiere 86.12 335 *eP* **P 01 52 28.7 -0.7**
comp=Z,3.5nm,0.7s,mb4.7
SSF Saint Saulge 86.20 332⇑*iP* **P 01 52 29.2 -0.6**
comp=Z,12nm,1.0s,mb4.8
SSF Saint Saulge 86.20 332⇑*iP* **P 01 52 29.2 -0.6**
SSF pmax pmax
comp=Z,6.0nm,1.0s,mb4.8
SSF Saint Saulge 86.20 332⇑*iP* **P 01 52 29.2 -0.6**
comp=Z,6.2nm,1.0s,mb4.8
Z26A Caprock 86.20 49 ⇑P **P 01 52 30.6 +0.5**
baz=86
125A Gardner Draw, 86.23 50 ⇓P **P 01 52 30.1 -0.2**
baz=86
LPL La Plagne 86.28 330 *eP* **P 01 52 30.0 -0.3**
comp=Z,13nm,0.9s,mb4.8
LPL La Plagne 86.28 330 *eP* **P 01 52 30.0 -0.3**
LPL pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
LPL La Plagne 86.28 330 *eP* **P 01 52 30.0 -0.3**
comp=Z,6.3nm,0.9s,mb4.8
LPG La Plagne 86.28 330 *eP* **P 01 52 30.2 -0.1**
comp=Z,13nm,0.8s,mb4.9
LPG La Plagne 86.28 330 *eP* **P 01 52 30.2 -0.1**
LPG pmax pmax
comp=Z,7.0nm,0.8s,mb4.9
LPG La Plagne 86.28 330 *eP* **P 01 52 30.2 -0.1**
comp=Z,6.7nm,0.8s,mb4.9
SMF Signal de Mont 86.43 332 *eP* **P 01 52 30.4 -0.6**
SMF Signal de Mont 86.43 332 *eP* **P 01 52 30.4 -0.6**
SMF Signal de Mont 86.43 332 *eP* **P 01 52 30.4 -0.6**
MNTX Cornudas Mount 86.46 51 *eP* **P 01 52 32.7 +1.2**
comp=Z,2.7nm,1.2s,mb4.3
AVF Avril sur Loir 86.48 332⇑*iP* **P 01 52 30.9 -0.3**
comp=Z,25nm,0.8s,mb5.2
AVF Avril sur Loir 86.48 332⇑*iP* **P 01 52 30.9 -0.3**
AVF pmax pmax
comp=Z,13nm,0.8s,mb5.2
AVF Avril sur Loir 86.48 332⇑*iP* **P 01 52 30.9 -0.3**
comp=Z,12nm,0.8s,mb5.2
GRR Gorron 86.54 336 *eP* **P 01 52 31.1 -0.4**
comp=Z,34nm,1.3s,mb5.1
GRR Gorron 86.54 336 *eP* **P 01 52 31.1 -0.4**
GRR pmax pmax
comp=Z,17nm,1.3s,mb5.1
GRR Gorron 86.54 336 *eP* **P 01 52 31.1 -0.4**
comp=Z,17nm,1.3s,mb5.1
Z27A Tatum 86.62 49 ⇑P **P 01 52 32.2 0.0**
baz=86
MBDF Montbardon 86.92 329 *eP* **P 01 52 32.3 -1.1**
comp=Z,9.3nm,0.8s,mb4.8
MBDF Montbardon 86.92 329 *eP* **P 01 52 32.3 -1.1**
MBDF pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
MBDF Montbardon 86.92 329 *eP* **P 01 52 32.3 -1.1**
comp=Z,4.7nm,0.8s,mb4.8
ORIF Oris-en-Rattie 87.11 330 *eP* **P 01 52 33.9 -0.5**
ORIF Oris-en-Rattie 87.11 330 *eP* **P 01 52 33.9 -0.5**
ORIF Oris-en-Rattie 87.11 330 *eP* **P 01 52 33.9 -0.5**
SGMF Saint Gilles 87.19 337 *eP* **P 01 52 34.5 -0.2**
comp=Z,29nm,1.2s,mb5.1
SGMF Saint Gilles 87.19 337 *eP* **P 01 52 34.5 -0.2**
SGMF pmax pmax
comp=Z,14nm,1.2s,mb5.1
SGMF Saint Gilles 87.19 337 *eP* **P 01 52 34.5 -0.2**
comp=Z,14nm,1.2s,mb5.1
TCF Toulx Ste Croi 87.32 333⇑*iP* **P 01 52 35.2 -0.2**
TCF Toulx Ste Croi 87.32 333⇑*iP* **P 01 52 35.2 -0.2**
TCF Toulx Ste Croi 87.32 333⇑*iP* **P 01 52 35.2 -0.2**
ROSF Rostrenen 87.34 337 *eP* **P 01 52 35.4 0.0**
comp=Z,43nm,1.2s,mb5.3
ROSF Rostrenen 87.34 337 *eP* **P 01 52 35.4 0.0**
ROSF pmax pmax
comp=Z,21nm,1.2s,mb5.2
ROSF Rostrenen 87.34 337 *eP* **P 01 52 35.4 0.0**
comp=Z,21nm,1.2s,mb5.2
VIVF Saint-Julien-l 87.63 331 *eP* **P 01 52 36.4 -0.5**
VIVF Saint-Julien-l 87.63 331 *eP* **P 01 52 36.4 -0.5**
VIVF Saint-Julien-l 87.63 331 *eP* **P 01 52 36.4 -0.5**
MFF Saint Martin d 87.87 334 *eP* **P 01 52 37.8 -0.2**
MFF Saint Martin d 87.87 334 *eP* **P 01 52 37.8 -0.2**
MFF Saint Martin d 87.87 334 *eP* **P 01 52 37.8 -0.2**
FRF La Foret Royal 87.93 329 *eP* **P 01 52 38.0 -0.3**
comp=Z,28nm,1.1s,mb5.3
FRF La Foret Royal 87.93 329 *eP* **P 01 52 38.0 -0.3**
FRF pmax pmax
comp=Z,14nm,1.1s,mb5.1
FRF La Foret Royal 87.93 329 *eP* **P 01 52 38.0 -0.3**
comp=Z,14nm,1.1s,mb5.1
SMRF Simiane la Rot 88.02 329 *eP* **P 01 52 37.9 -0.8**
SMRF Simiane la Rot 88.02 329 *eP* **P 01 52 37.9 -0.8**
RJF Les Rejaudoux 88.42 333 *eP* **P 01 52 40.6 0.0**
comp=Z,6.8nm,1.0s,mb4.5
RJF Les Rejaudoux 88.42 333 *eP* **P 01 52 40.6 0.0**
RJF pmax pmax
comp=Z,3.0nm,1.0s,mb4.5
RJF Les Rejaudoux 88.42 333 *eP* **P 01 52 40.6 0.0**
comp=Z,3.4nm,1.0s,mb4.5
CAF Calviac 88.54 332 *eP* **P 01 52 41.5 +0.3**
comp=Z,9.1nm,0.9s,mb4.8
CAF Calviac 88.54 332 *eP* **P 01 52 41.5 +0.3**
CAF pmax pmax
comp=Z,5.0nm,0.9s,mb4.8
CAF Calviac 88.54 332 *eP* **P 01 52 41.5 +0.3**
comp=Z,4.6nm,0.9s,mb4.8
LASF Ste Croix 88.60 331 *eP* **P 01 52 41.3 -0.2**
LASF Ste Croix 88.60 331 *eP* **P 01 52 41.3 -0.2**
LFF La Frestale 89.01 333 *eP* **P 01 52 43.5 +0.1**
LFF La Frestale 89.01 333 *eP* **P 01 52 43.5 +0.1**
LFF La Frestale 89.01 333 *eP* **P 01 52 43.5 +0.1**
TXAR Lajitas Array 89.17 52 P **P 01 52 44.9 +0.4**
comp=Z,0.6nm,0.7s,mb4.0,baz=302,slow=3.3,SNR=8.2
TXAR Lajitas Array 89.17 52 P **P 01 52 44.9 +0.4**
TXAR pmax pmax
comp=Z,1.0nm,0.7s
MTLF Montolieu 89.85 331 *eP* **P 01 52 47.2 -0.2**
MTLF Montolieu 89.85 331 *eP* **P 01 52 47.2 -0.2**
MTLF Montolieu 89.85 331 *eP* **P 01 52 47.2 -0.2**
EPF Esparros 90.81 332 *eP* **P 01 52 51.2 -0.6**
EPF Esparros 90.81 332 *eP* **P 01 52 51.2 -0.6**
EPF Esparros 90.81 332 *eP* **P 01 52 51.2 -0.6**
ETSF Etsaut 91.25 333 *eP* **P 01 52 54.2 +0.3**
comp=Z,13nm,0.9s,mb4.9
ETSF Etsaut 91.25 333 *eP* **P 01 52 54.2 +0.3**
ETSF pmax pmax
comp=Z,6.0nm,0.9s,mb4.9
ETSF Etsaut 91.25 333 *eP* **P 01 52 54.2 +0.3**
comp=Z,6.3nm,0.9s,mb5.0
ESDC Sonseca Array 95.29 334 P **P 01 53 12.4 -0.2**
comp=Z,0.1nm,0.2s,mb3.8,baz=357,slow=4.4,SNR=4.4
LPAZ La Paz 145.93 56 PKPbc PKPbc 01 59 29.1 +0.5
comp=Z,4.3nm,0.8s,baz=7.4,slow=6.3,SNR=16
LPAZ La Paz 145.93 56 *e*PKPbc PKPbc 01 59 28.6 0.0

JMA 14 01:40:00.0, 38.94N×140.88E, h7km±1km, M4.8, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.27**	**87**	P	Pg	01 40 05.1	-0.1
JMK				S	Sg	01 40 08.8	0.0
JYK	**Kaneyama**	**0.41**	**267**	P	Pg	01 40 08.1	+0.2
JYK				S	Sg	01 40 13.4	+0.2
JRG	**Rokugo**	**0.49**	**337**	P	Pg	01 40 10.1	+0.5
JRG				*e*S	Sg	01 40 16.9	+0.9
JOU	**Okura**	**0.60**	**196**	P	Pg	01 40 11.3	-0.2
JOU				S	Sg	01 40 19.2	-0.1
JIO	**Ouri**	**0.61**	**143**	P	Pg	01 40 11.3	-0.4
JIO				*e*S	Sg	01 40 19.1	-0.5
JOM	**Ohasama**	**0.62**	**31**	P	Pg	01 40 12.0	0.0
JOM				*e*S	Sg	01 40 20.3	+0.2
OFUJ	**Ofunato**	**0.63**	**77**	*e*S	Sg	01 40 20.5	+0.1
JYS	**Shiratake**	**0.96**	**222**	P	Pg	01 40 18.2	-0.2
JYS				S	Sg	01 40 30.8	-0.1
JYA	**Atsumi**	**0.97**	**250**	P	Pg	01 40 18.3	-0.4
JYA				*e*S	Sg	01 40 31.0	-0.4

*IDC **14** 01:49:41.7±0.8, 39.11N×140.74E, h0km, mb3.8/13, mb1 3.9/15, mb1mx3.8/28, mbtmp3.8/15, ML3.1/2, Error ellipse: s-maj=23.8km s-min=17.9km az=83.0*
*ISCJB **14** 01:49:41.9±0.7, 39.12N±0.03×140.91E±0.05, h14km±4km, mb3.9/16, Error ellipse: s-maj=6.4km s-min=4.4km az=167.4*
*NEIC **14** 01:49:42.1, 39.09N×140.88E, h10km, mb4.4/4, After JMA.*
*JMA **14** 01:49:42.1, 39.09N×140.88E, h9km±1km, M3.9*
JMA Felt I J1.

ISC 14 01:49:42.4±0.6, 39.10N±0.03×140.89E±0.05, h5km±4km, n36, σ0.85/40, mb3.9/16, 1D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.30**	**121**	⇓P	Pg	01 49 47.9	-0.2
JMK				S	Sg	01 49 52.1	+0.1
JRG	**Rokugo**	**0.35**	**326**	P	Pg	01 49 49.5	+0.2
JRG				*e*S	Sg	01 49 54.7	+0.8
JYK	**Kaneyama**	**0.46**	**246**	P	Pg	01 49 50.7	-0.5
JOM	**Ohasama**	**0.48**	**40**	S	Sg	01 49 58.6	+0.6
JIO	**Ouri**	**0.74**	**151**	P	Pg	01 49 55.9	-0.7
JIO				S	Sg	01 50 05.9	-0.3
JOU	**Okura**	**0.76**	**194**	P	Pg	01 49 56.5	-0.4
JOU				S	Sg	01 50 06.5	-0.3
MAJO	**Matsushiro**	**3.33**	**221**	*e*Pn	Pn	01 50 35.6	+0.6
MAT	**Matsushiro**	**3.33**	**221**	P	Pn	01 50 35.9	+0.9
MAT				*e*S	Sn	01 51 22.9	+8.1
MJAR	**Matsushiro Arr**	**3.33**	**221**	Pn	Pn	01 50 36.0	+1.0
2.1nm,0.3s,baz=321,slow=16,SNR=12							
MJAR	**Matsushiro Arr**	**3.33**	**221**	Pn	Pn	01 50 36.0	+1.0
ERM	**Erimo**	**3.38**	**30**	*e*Pn	Pn	01 50 36.5	+0.7
ASAJ	**Asahikawa**	**5.17**	**14**	Pn	Pn	01 50 59.8	-0.5
0.6nm,0.3s,baz=252,slow=20,SNR=2.5							
JHJ	**Hachijo jima 2**	**6.04**	**189**	Sn	Sn	01 52 23.8	+2.0
8.2nm,0.3s,baz=77,slow=23,SNR=6.0							
KSRS	**Korea Array**	**10.33**	**265**	Pn	Pn	01 52 14.6	+3.5
1.0nm,0.3s,baz=76,slow=14,SNR=13							
ZALV	**Zalesovo Beam**	**40.24**	**311**	P	P	01 57 19.0	-0.7
1.3nm,0.6s,mb3.8,baz=92,slow=6.7,SNR=7.2							
ZALV	**Zalesovo Beam**	**40.24**	**311**	P	P	01 57 19.0	-0.7
MK31	**Makanchi Array**	**42.70**	**300**	*e*P	P	01 57 39.1	-0.9
MKAR	**Makanchi Array**	**42.70**	**300**	P	P	01 57 39.4	-0.6
0.4nm,0.5s,mb3.4,baz=78,slow=12,SNR=4.0							
KURK	**Kurchatov**	**44.35**	**306**	P	P	01 57 52.8	-0.5
2.6nm,0.7s,mb4.1,baz=82,slow=8.4,SNR=12							
KURK	**Kurchatov**	**44.35**	**306**	*e*P	P	01 57 51.9	-1.4
7.6nm,1.1s,mb4.3							
TKM2	**Tokmak 2**	**48.31**	**297**	*e*P	P	01 58 24.3	-0.2
3.8nm,1.0s,mb4.4							
ABKAR	**Akbulak array**	**56.31**	**309**	*e*P	P	01 59 22.8	-1.1
1.9nm,0.5s,mb4.4							
AKTK	**Aktyubinsk**	**57.00**	**311**	P	P	01 59 29.6	+0.8
AKTO	**Aktyubinsk**	**57.00**	**311**	P	P	01 59 29.6	+0.8
0.5nm,0.4s,mb3.9,baz=59,slow=12,SNR=2.8							
WRA	**Warramunga Arr**	**59.05**	**187**	P	P	01 59 42.5	-0.8
1.0nm,0.4s,mb4.2,baz=6.2,slow=7.6,SNR=5.7							
ARCES	**ARCESS Array B**	**61.92**	**339**	P	P	02 00 01.9	-0.5
1.0nm,0.9s,mb3.9,baz=63,slow=8.2,SNR=4.1							
ASAR	**Alice Springs**	**62.78**	**187**	P	P	02 00 08.4	-0.2
0.8nm,0.7s,mb4.0,baz=11,slow=4.9,SNR=7.7							
FINES	**FINESS Array B**	**66.80**	**332**	P	P	02 00 33.9	-0.6
1.6nm,0.7s,mb4.2,baz=45,slow=8.9,SNR=5.4							
SUMG	**Summit**	**68.62**	**360**	*e*P	P	02 00 44.4	-1.4
8.4nm,1.1s,mb4.6							
NB2	**NORSAR Subarra**	**72.12**	**337**	P	P	02 01 06.6	-0.8
comp=Z,0.5nm,0.6s,mb3.6,baz=39,slow=6.2							
NOA	**NORSAR Array B**	**72.12**	**337**	P	P	02 01 06.9	-0.5
comp=Z,0.5nm,0.5s,mb3.7,baz=39,slow=6.1,SNR=3.9							
AKASG	**Malin Array Be**	**72.42**	**322**	P	P	02 01 09.7	+0.4
comp=Z,0.7nm,0.4s,mb3.9,baz=44,slow=7.5,SNR=5.6							
NVAR	**Mina Array Bea**	**74.08**	**53**	P	P	02 01 21.1	+1.7
comp=Z,0.4nm,0.9s,mb3.3,baz=268,slow=8.1,SNR=3.5							
PDAR	**Pinedale Array**	**76.51**	**46**	P	P	02 01 34.6	+1.3
comp=Z,0.2nm,0.5s,mb3.3,baz=292,slow=3.7,SNR=3.7							
BRTR	**Keskin Array B**	**77.18**	**311**	P	P	02 01 36.4	-0.8
comp=Z,0.4nm,0.6s,mb3.5,baz=80,slow=3.2,SNR=3.2							
LPAZ	**La Paz**	**145.94**	**56**	PKPbc	PKPbc	02 09 24.8	+1.4
comp=Z,0.7nm,0.6s,baz=2.3,slow=3.3,SNR=3.8							

JMA 14 01:51:25.6, 38.98N×140.83E, h7km±1km, M3.8, 3C-3D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.30**	**95**	⇓P	Pg	01 51 31.5	-0.1
JMK				S	Sg	01 51 35.7	+0.1
JYK	**Kaneyama**	**0.37**	**261**	P	Pg	01 51 33.0	+0.2
JYK				*e*S	Sg	01 51 38.1	+0.4
JRG	**Rokugo**	**0.44**	**340**	P	Pg	01 51 34.3	+0.1
JRG				S	Sg	01 51 40.9	+0.9
JOM	**Ohasama**	**0.61**	**36**	⇑P	Pg	01 51 37.1	-0.2
JOM				S	Sg	01 51 45.5	+0.2
JOU	**Okura**	**0.63**	**192**	⇑P	Pg	01 51 37.7	0.0
JOU				*e*S	Sg	01 51 45.8	0.0
OFUJ	**Ofunato**	**0.66**	**81**	⇓P	Pg	01 51 38.1	-0.2
OFUJ				S	Sg	01 51 47.1	+0.2
JIO	**Ouri**	**0.66**	**142**	⇓P	Pg	01 51 37.9	-0.5
JIO				*e*S	Sg	01 51 46.9	-0.1
JYA	**Atsumi**	**0.95**	**246**	⇑P	Pg	01 51 43.7	-0.2
JYS	**Shiratake**	**0.97**	**219**	P	Pg	01 51 43.9	-0.2
JYS				*e*S	Sg	01 51 56.6	-0.1
MAT	**Matsushiro**	**3.20**	**221**	P	Pn	01 52 18.9	+2.6
MAT				*e*S	Sn	01 53 02.2	+7.5

*IDC **14** 01:56:27.6±0.6, 39.06N×140.88E, h0km, mb4.1/16, mb1 4.3/16, mb1mx4.2/24, mbtmp4.1/16, ML2.9/1, MS4.1/1, Ms1 4.1/1, ms1mx3.2/31, Error ellipse: s-maj=21.2km s-min=15.5km az=74.0*
*ISCJB **14** 01:56:27.8±0.5, 39.09N±0.02×140.97E±0.03, h12km±3km, mb4.3/46, Error ellipse: s-maj=4.4km s-min=3.8km az=33.3*
*NEIC **14** 01:56:28.4, 39.09N×140.98E, h8km, mb4.4/28, After JMA.*
NEIC Recorded [3 JMA] in Iwate, [2 JMA] in Miyagi and [1 JMA] in Akita.
*JMA **14** 01:56:28.4, 39.08N×140.98E, h9km±1km, M4.3*
JMA Felt III J1.
*MOS **14** 01:56:30.7±0.8, 39.05N×140.91E, h33km, mb4.5/32, Error ellipse: s-maj=11.7km s-min=6.8km az=99.1*

ISC 14 01:56:28.3±0.5, 39.09N±0.02×140.96E±0.03, h5km±3km, n128, σ0.88/136, mb4.3/46, 3C, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.24**	**125**	P	Pg	01 56 33.0	-0.1
JMK				*e*S	Sg	01 56 36.2	-0.1
JRG	**Rokugo**	**0.40**	**320**	P	Pg	01 56 36.6	+0.6
JOM	**Ohasama**	**0.46**	**34**	P	Pg	01 56 37.3	+0.1
JOM				*e*S	Sg	01 56 44.0	+0.8
JYK	**Kaneyama**	**0.50**	**250**	P	Pg	01 56 38.3	+0.3
JYK				S	Sg	01 56 43.5	-1.0
OFUJ	**Ofunato**	**0.55**	**91**	P	Pg	01 56 38.9	0.0
OFUJ				*e*S	Sg	01 56 46.5	+0.5
JIO	**Ouri**	**0.70**	**155**	P	Pg	01 56 41.5	-0.4
JIO				S	Sg	01 56 50.8	-0.2
JOU	**Okura**	**0.76**	**198**	P	Pg	01 56 43.0	0.0
JOU				S	Sg	01 56 53.0	+0.1
MJAR	**Matsushiro Arr**	**3.35**	**221**	Pn	Pn	01 57 21.9	+0.6
1.1nm,0.3s,baz=31,slow=13,SNR=15							
MJAR	**Matsushiro Arr**	**3.35**	**221**	P	Pn	01 57 21.9	+0.5
MJAR				pmax	pmax		
comp=Z,1.0nm,0.3s							
MAJO	**Matsushiro**	**3.35**	**221**	*e*P	Pn	01 57 22.1	+0.7
MAT	**Matsushiro**	**3.35**	**221**	P	Pn	01 57 22.2	+0.8
MAT				*e*S	Sn	01 58 05.2	+3.6
ERM	**Erimo**	**3.36**	**29**	*e*Pn	Pn	01 57 19.3	-2.2
ERM				*e*Pg	Pg	01 57 30.6	-2.2
ERM				*e*Sn	Sn	01 58 03.6	+1.8
ASAJ	**Asahikawa**	**5.17**	**13**	Pn	Pn	01 57 50.2	+3.9
comp=Z,1.9nm,0.3s,baz=241,slow=13,SNR=4.1							
ASAJ				LR	LR	02 00 12.6	
comp=Z,2μm,19.8s,baz=205,slow=43							
ASAJ	**Asahikawa**	**5.17**	**13**	P	Pn	01 57 50.2	+3.9
ASAJ				pmax	pmax		
comp=Z,2.0nm,0.3s							
ASAJ				MLR	MLR		
comp=Z,2μm,19.8s							
JHJ	**Hachijo jima 2**	**6.04**	**189**	Sn	Sn	01 59 09.1	+1.3
comp=Z,30nm,0.3s,baz=248,slow=23,SNR=5.3							
HABR	**Khabarovsk**	**10.30**	**337**	*e*P	Pn	01 58 59.5	+2.8
KSRS	**Korea Array**	**10.38**	**265**	Pn	Pn	01 59 01.6	+3.7
comp=Z,1.1nm,0.3s,baz=80,slow=14,SNR=27							
KSRS				Sn	Sn	02 00 59.2	+4.6
comp=Z,0.7nm,0.3s,baz=75,slow=24,SNR=8.2							
KSRS	**Korea Array**	**10.38**	**265**	P	Pn	01 59 01.6	+3.7
KSRS						02 00 59.2	
KSRS				pmax	pmax		
comp=Z,1.0nm,0.3s							
KSRS				smax			
comp=N,1.0nm,0.3s							
KLR	**Kul'dur**	**12.09**	**330**	*e*P	Pn	01 59 21.9	+0.7
KLR				pmax	pmax		
comp=Z,45nm,2.0s							
SEY	**Seymchan**	**24.85**	**12**	*c*eP	P	02 01 52.9	+1.5
BILL	**Bilibino**	**32.17**	**18**	*e*P	P	02 03 01.4	+4.8
BILL				pmax	pmax		
comp=Z,4.0nm,1.2s,mb4.1							
ZALV	**Zalesovo Beam**	**40.29**	**311**	P	P	02 04 05.7	-0.4
comp=Z,2.9nm,0.8s,mb4.0,baz=81,slow=9.2,SNR=12							
ZALV				PcP	PcP	02 06 08.4	-1.3
comp=Z,0.4nm,0.4s,baz=67,slow=3.7,SNR=2.8							
ZALV	**Zalesovo Beam**	**40.29**	**311**	P	P	02 04 05.7	-0.4
ZALV						02 06 08.4	
ZALV				pmax	pmax		
comp=Z,3.0nm,0.8s,mb4.1							
CMAR	**Chiang Mai Arr**	**41.72**	**253**	P	P	02 04 21.0	+2.7
comp=Z,0.6nm,0.3s,mb3.7,baz=61,slow=4.2,SNR=3.3							
CMAR	**Chiang Mai Arr**	**41.72**	**253**	P	P	02 04 21.0	+2.6
CMAR				pmax	pmax		
comp=Z,1.0nm,0.3s							
CMAR	**Chiang Mai Arr**	**41.72**	**253**	P	P	02 04 21.0	+2.7
MK31	**Makanchi Array**	**42.75**	**300**	*e*P	P	02 04 26.1	-0.4
MKAR	**Makanchi Array**	**42.75**	**300**	P	P	02 04 26.1	-0.4
comp=Z,1.6nm,0.8s,mb3.8,baz=79,slow=12,SNR=14							
MKAR	**Makanchi Array**	**42.75**	**300**	P	P	02 04 26.1	-0.4
MKAR				pmax	pmax		
comp=Z,2.0nm,0.8s							
TTA	**Tatalina**	**43.95**	**36**	*e*P	P	02 04 36.3	+0.4
KURK	**Kurchatov**	**44.41**	**306**	P	P	02 04 40.0	+0.2
comp=Z,5.1nm,0.9s,mb4.3,baz=84,slow=8.3,SNR=15							
KURK	**Kurchatov**	**44.41**	**306**	*c*eP	P	02 04 39.7	0.0
KURK				pmax	pmax		
comp=Z,5.0nm,0.8s,mb4.3							
KURK	**Kurchatov**	**44.41**	**306**	*e*P	P	02 04 39.1	-0.6
comp=Z,5.4nm,0.8s,mb4.3							
MCK	**McKinley**	**47.14**	**35**	*e*P	P	02 05 01.3	+0.2
MCK				pmax	pmax		
comp=Z,3.0nm,0.7s,mb4.3							
MCK	**McKinley**	**47.14**	**35**	*e*P	P	02 05 01.3	+0.2
comp=Z,2.9nm,0.7s,mb4.3							
BVAR	**Borovoye Array**	**48.94**	**311**	P	P	02 05 15.1	-0.1
comp=Z,1.0nm,0.6s,mb4.0,baz=80,slow=8.1,SNR=4.2							
BVAR				PcP	PcP	02 06 38.7	-0.6
comp=Z,0.7nm,0.6s,baz=72,slow=4.7,SNR=3.6							
BVAR	**Borovoye Array**	**48.94**	**311**	P	P	02 05 15.1	-0.1
BVAR						02 06 38.7	
BVAR				pmax	pmax		
comp=Z,1.0nm,0.6s							
AAK	**Ala-Archa**	**49.23**	**297**	*e*P	P	02 05 17.6	0.0
AAK				pmax	pmax		
comp=Z,3.0nm,0.7s,mb4.4							
AAK	**Ala-Archa**	**49.23**	**297**	*e*P	P	02 05 17.6	0.0
comp=Z,3.0nm,0.7s,mb4.4							
UCH	**Uchtor**	**49.35**	**296**	*e*P	P	02 05 19.9	+1.3
comp=Z,2.4nm,1.0s,mb4.2							
EKS2	**Erkin-Say**	**49.71**	**297**	*e*P	P	02 05 21.5	+0.2
comp=Z,2.5nm,0.9s,mb4.2							
AML	**Almayashu**	**49.95**	**296**	*e*P	P	02 05 24.4	+1.3
comp=Z,4.0nm,0.9s,mb4.5							
INK	**Inuvik**	**52.73**	**28**	*e*P	P	02 05 43.3	-0.2
INK				pmax	pmax		
comp=Z,3.0nm,0.9s							
INK	**Inuvik**	**52.73**	**28**	*e*P	P	02 05 43.3	-0.2
comp=Z,2.9nm,0.9s,mb4.2							
SVE	**Sverdlovsk**	**53.38**	**318**	*e*P	P	02 05 49.5	+1.0
ARU	**Arti**	**54.59**	**318**	*c iP*	P	02 05 57.4	0.0
ARU				S	S	02 13 33.4	-3.8
ARU				SS	SS	02 17 15.4	-3.8
ARU				pmax	pmax		
comp=Z,6.0nm,2.5s,mb4.2							
ARU	**Arti**	**54.59**	**318**	*e*P	P	02 05 57.4	0.0
comp=Z,2.5nm,0.6s,mb4.4							
ABKAR	**Akbulak array**	**56.36**	**309**	*e*P	P	02 06 09.2	-1.0
comp=Z,1.6nm,0.6s,mb4.2							
KBL	**Kabul**	**56.37**	**290**	*e*P	P	02 06 10.1	-0.4
KBL				pmax	pmax		
comp=Z,7.0nm,0.8s,mb4.7							
KBL	**Kabul**	**56.37**	**290**	*e*P	P	02 06 10.1	-0.4
comp=Z,7.2nm,0.8s,mb4.8							
WRAB	**Tennant Creek**	**59.04**	**187**	*e*P	P	02 06 27.9	-1.4
WRAB				pmax	pmax		
comp=Z,3.0nm,0.8s,mb4.4							
WRAB	**Tennant Creek**	**59.04**	**187**	*e*P	P	02 06 27.9	-1.4
comp=Z,3.4nm,0.8s,mb4.4							
WRA	**Warramunga Arr**	**59.05**	**187**	P	P	02 06 28.7	-0.6
comp=Z,3.6nm,0.8s,mb4.4,baz=7.3,slow=7.2,SNR=18							
WRA	**Warramunga Arr**	**59.05**	**187**	P	P	02 06 28.7	-0.6
WRA				pmax	pmax		
comp=Z,4.0nm,0.8s							
RES	**Resolute Bay**	**60.70**	**15**	*e*P	P	02 06 40.1	0.0
RES				pmax	pmax		
comp=Z,3.0nm,0.8s,mb4.5							
RES	**Resolute Bay**	**60.70**	**15**	*e*P	P	02 06 40.1	-0.1
comp=Z,3.4nm,0.8s,mb4.5							
ARCES	**ARCESS Array B**	**61.95**	**339**	P	P	02 06 50.5	+1.9
comp=Z,1.8nm,0.9s,mb4.2,baz=34,slow=6.6,SNR=4.0							
ARCES	**ARCESS Array B**	**61.95**	**339**	P	P	02 06 50.5	+1.9
ARCES				pmax	pmax		
comp=Z,2.0nm,0.9s							
ASAR	**Alice Springs**	**62.78**	**187**	P	P	02 06 54.7	+0.1
comp=Z,2.5nm,0.8s,mb4.4,baz=10,slow=7.0,SNR=23							
ASAR	**Alice Springs**	**62.78**	**187**	P	P	02 06 54.7	+0.1
ASAR				pmax	pmax		
comp=Z,3.0nm,0.8s							
OBN	**Obninsk**	**66.24**	**323**	*e*P	P	02 07 16.9	-0.1
OBN				pmax	pmax		
comp=Z,4.0nm,1.3s,mb4.3							
FINES	**FINESS Array B**	**66.83**	**332**	P	P	02 07 20.6	-0.1

BRTR	**Keskin Array B**	**77.23**	**311**	P	**P**	**02 08 23.7**	**+0.3**
	comp=Z,0.5nm,0.7s,mb3.6,baz=90,slow=4.9,SNR=4.5						
BRTR	**Keskin Array B**	**77.23**	**311**	P	**P**	**02 08 23.7**	**+0.3**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SRU	**San Rafael**	**78.33**	**49**	*e*P	**P**	**02 08 30.7**	**+1.1**
SRU				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
SRU	**San Rafael**	**78.33**	**49**	*e*P	**P**	**02 08 30.7**	**+1.2**
	comp=Z,3.9nm,1.0s,mb4.3						
MORC	**Moravsky Berou**	**78.45**	**326**	*e*P	**P**	**02 08 29.2**	**-0.8**
MORC				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
MORC	**Moravsky Berou**	**78.45**	**326**	*e*P	**P**	**02 08 29.2**	**-0.8**
	comp=Z,2.5nm,0.8s,mb4.2						
CLL	**Collm**	**79.14**	**330**	*e*P	**P**	**02 08 33.0**	**-0.8**
CLL				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
CLL	**Collm**	**79.14**	**330**	*e*P	**P**	**02 08 33.0**	**-0.8**
	comp=Z,4.0nm,1.0s,mb4.3						
PV04	**Paradox Valley**	**79.75**	**49**	*e*P	**P**	**02 08 36.2**	**-1.2**
SMCO	**Snowmass**	**80.33**	**47**	*e*P	**P**	**02 08 40.4**	**-0.1**
KHC	**Kasperske Hory**	**80.61**	**328**	*e*P	**P**	**02 08 41.5**	**-0.3**
KHC				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
KHC	**Kasperske Hory**	**80.61**	**328**	*e*P	**P**	**02 08 41.5**	**-0.3**
	comp=Z,2.0nm,0.8s,mb4.1						
KHC	**Kasperske Hory**	**80.61**	**328**	*e*P	**P**	**02 08 41.9**	**+0.1**
ISCO	**Idaho Springs**	**80.67**	**46**	*e*P	**P**	**02 08 43.4**	**+1.1**
ISCO				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.8						
ISCO	**Idaho Springs**	**80.67**	**46**	*e*P	**P**	**02 08 43.4**	**+1.1**
	comp=Z,1.4nm,0.8s,mb3.9						
GERES	**GERESS Array B**	**80.78**	**328**	P	**P**	**02 08 42.8**	**+0.1**
	comp=Z,1.0nm,0.8s,mb3.8,baz=28,slow=6.0,SNR=8.8						
GERES	**GERESS Array B**	**80.78**	**328**	P	**P**	**02 08 42.8**	**+0.1**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ECSD	**EROS Data Cent**	**82.52**	**38**	*e*P	**P**	**02 08 51.9**	**-0.1**
	comp=Z,2.5nm,0.9s,mb4.2						
CDF	**Champ du Feu**	**83.67**	**331**	*e*P	**P**	**02 08 57.1**	**-0.8**
HINF	**Hinteralfeld**	**84.33**	**331**	*e*P	**P**	**02 09 00.4**	**-0.8**
HAU	**Haudompre**	**84.36**	**331**	*e*P	**P**	**02 09 00.4**	**-1.0**
	comp=Z,8.2nm,0.9s,mb4.6						
HAU	**Haudompre**	**84.36**	**331**	*e*P	**P**	**02 09 00.4**	**-1.0**
HAU				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
HAU	**Haudompre**	**84.36**	**331**	*e*P	**P**	**02 09 00.4**	**-1.0**
	comp=Z,4.1nm,0.9s,mb4.6						
MEZF	**Maizieres J'vi**	**84.42**	**332**	*e*P	**P**	**02 09 01.0**	**-0.7**
CABF	**La Chapelle**	**85.62**	**331**	*e*P	**P**	**02 09 07.3**	**-0.4**
LOR	**Lormes**	**85.89**	**332**	*e*P	**P**	**02 09 08.2**	**-0.9**
	comp=Z,6.6nm,0.9s,mb4.6						
LOR	**Lormes**	**85.89**	**332**	*e*P	**P**	**02 09 08.2**	**-0.9**
LOR				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.5						
LOR	**Lormes**	**85.89**	**332**	*e*P	**P**	**02 09 08.2**	**-0.9**
	comp=Z,3.3nm,0.9s,mb4.6						
SSF	**Saint Saulge**	**86.20**	**332**	*e*P	**P**	**02 09 09.8**	**-0.8**
	comp=Z,5.6nm,0.9s,mb4.5						
SSF	**Saint Saulge**	**86.20**	**332**	*e*P	**P**	**02 09 09.8**	**-0.8**
SSF				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.5						
SSF	**Saint Saulge**	**86.20**	**332**	*e*P	**P**	**02 09 09.8**	**-0.8**
	comp=Z,2.8nm,0.9s,mb4.5						
LPL	**La Plagne**	**86.28**	**330**	*e*P	**P**	**02 09 10.6**	**-0.4**
LPG	**La Plagne**	**86.29**	**330**	*e*P	**P**	**02 09 10.6**	**-0.5**
	comp=Z,15nm,1.1s,mb4.8						
LPG	**La Plagne**	**86.29**	**330**	*e*P	**P**	**02 09 10.6**	**-0.5**
LPG				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.9						
LPG	**La Plagne**	**86.29**	**330**	*e*P	**P**	**02 09 10.6**	**-0.5**
	comp=Z,7.7nm,1.1s,mb4.8						
AVF	**Avril sur Loir**	**86.48**	**332**	*e*P	**P**	**02 09 11.3**	**-0.7**
	comp=Z,17nm,1.0s,mb4.9						
AVF	**Avril sur Loir**	**86.48**	**332**	*e*P	**P**	**02 09 11.3**	**-0.7**
AVF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.9						
AVF	**Avril sur Loir**	**86.48**	**332**	*e*P	**P**	**02 09 11.3**	**-0.7**
	comp=Z,8.4nm,1.0s,mb4.9						
BGF	**Bois d'Agland**	**86.86**	**333**	*e*P	**P**	**02 09 13.3**	**-0.6**
ORIF	**Oris-en-Rattie**	**87.11**	**330**	*e*P	**P**	**02 09 14.0**	**-1.1**
SGMF	**Saint Gilles**	**87.19**	**337**	*e*P	**P**	**02 09 14.8**	**-0.7**
	comp=Z,29nm,1.1s,mb5.1						
SGMF	**Saint Gilles**	**87.19**	**337**	*e*P	**P**	**02 09 14.8**	**-0.7**
SGMF				pmax	pmax		
	comp=Z,15nm,1.1s,mb5.1						
SGMF	**Saint Gilles**	**87.19**	**337**	*e*P	**P**	**02 09 14.8**	**-0.7**
	comp=Z,14nm,1.1s,mb5.1						
TCF	**Toulx Ste Croi**	**87.32**	**333**	*e*P	**P**	**02 09 15.6**	**-0.5**
TXAR	**Lajitas Array**	**89.14**	**52**	P	**P**	**02 09 25.2**	**+0.1**
	comp=Z,0.4nm,0.8s,mb3.8,baz=290,slow=3.6,SNR=3.9						
LPAZ	**La Paz**	**145.91**	**56**	PKPbc	PKPbc	02 16 10.0	+0.8
	comp=Z,2.0nm,0.8s,baz=352,slow=5.6,SNR=8.9						
LPAZ	**La Paz**	**145.91**	**56**	PKP2	PKPbc	02 16 10.0	+0.8
LPAZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
LPAZ	**La Paz**	**145.91**	**56**	*e*PKPbc	PKPbc	02 16 09.8	+0.5

*IDC **14** 02:05:55.3±0.8, 31°.18N×103°.81E, h0km, mb3.9/8, mb1 4.1/9, mb1mx3.8/25, mbtmp3.9/9, ML4.4/1, MS4.3/1, Ms1 4.3/1, ms1mx3.1/32, Error ellipse: s-maj=36.3km s-min=16.0km az=58.0*
*NEIC **14** 02:05:57.2±0.5, 31°.20N×103°.85E, h10km, mb3.9/2, Error ellipse: s-maj=16.1km s-min=9.2km az=58.0*
*ISCJB **14** 02:05:58.0±0.8, 31°.15N±0°.05×103°.86E±0°.07, h29km±7km, mb3.9/8, Error ellipse: s-maj=10.7km s-min=8.0km az=145.4*
*BJI **14** 02:05:58.1, 31°.18N×103°.87E, h24km, ML3.8/16, Ms4.0/2, Ms7 4.1/2*

ISC 14 02:05:57.4±0.7, 31°.26N±0°.03×103°.87E±0°.04, h9km±5km, n21, σ1°13/30, mb3.9/8, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.37**	**196**	⇑*i*Pg	**Pg**	**02 06 04.1**	**-0.4**
CD2				Sg	**Sg**	**02 06 09.3**	**-0.1**
CD2				smax			
	comp=N,31μm,0.7s						
CD2				smax			
	comp=E,30μm,0.6s						
LZH	**Lanzhou**	**4.81**	**360**	Pg	**Pg**	**02 07 27.3**	**-2.2**
LZH				Sn	**Sn**	**02 08 10.3**	**+4.5**
LZH				Sg	**Sg**	**02 08 33.4**	**+1.6**
LZH				smax			
	comp=N,110nm,1.0s						
LZH				smax			
	comp=E,100nm,0.9s						
LZH				LR	LR		
	comp=N,2μm,7.2s						
LZH				LR	LR		
	comp=Z,2μm,8.0s						
ENH	**Enshi**	**4.93**	**100**	*e*Pn	**Pn**	**02 07 13.0**	**+1.4**
ENH				*e*Pg	**Pg**	**02 07 31.4**	**-0.4**
ENH				*e*Sn	**Sn**	**02 08 09.0**	**+0.2**
ENH				*e*Sg	**Sg**	**02 08 36.9**	**+1.2**
XAN	**Xi'an**	**5.08**	**56**	Pn	**Pn**	**02 07 14.3**	**+0.7**
XAN				Pg	**Pg**	**02 07 33.5**	**-1.1**
XAN				Sn	**Sn**	**02 08 09.8**	**-2.6**
XAN				Sg	**Sg**	**02 08 35.8**	**-4.6**
XAN				smax			
	comp=N,130nm,0.7s						
XAN				smax			
	comp=E,81nm,0.8s						
GYA	**Guiyang**	**5.38**	**152**	Pn	**Pn**	**02 07 19.8**	**+2.1**
GYA				Sg	**Sg**	**02 08 43.8**	**-6.2**
GYA				smax			
	comp=N,270nm,0.8s						
GYA				smax			
	comp=E,230nm,0.8s						
KMI	**Kunming**	**6.20**	**190**	Pn	**Pn**	**02 07 29.4**	**+0.4**
GTA	**Gaotai**	**8.78**	**339**	*e*P	Px	02 08 15.3	
GTA				pP		02 08 18.4	
GTA				sP		02 08 20.3	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**13.51**	**200**	Pn	**Pn**	**02 09 08.2**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=17,slow=15,SNR=4.1						
TLY	**Talaya**	**20.40**	**360**	*e*P	**P**	**02 10 33.4**	**-1.1**
	comp=Z,3.7nm,0.6s						
KSRS	**Korea Array**	**20.77**	**66**	P	**P**	**02 10 39.0**	**+0.4**
	comp=Z,3.9nm,0.7s,baz=262,slow=10,SNR=15						
KSRS				LR	LR	02 18 01.5	

	comp=Z,767nm,19.3s,baz=40,slow=35						
MK31	**Makanchi Array**	**22.73**	**319**	*e*P	**P**	**02 11 01.2**	**+1.7**
MKAR	**Makanchi Array**	**22.73**	**319**	P	**P**	**02 10 59.8**	**+0.3**
	comp=Z,1.5nm,0.7s,mb3.5,baz=102,slow=14,SNR=13						
TKM2	**Tokmak 2**	**25.26**	**305**	*e*P	**P**	**02 11 24.8**	**+1.0**
	comp=Z,1.6nm,0.7s,mb3.7						
ZAA0	**Zalesovo Array**	**26.49**	**334**	*e*P	**P**	**02 11 36.0**	**+1.2**
ZALV	**Zalesovo Beam**	**26.49**	**334**	P	**P**	**02 11 34.6**	**-0.1**
	comp=Z,1.1nm,0.6s,mb3.6,baz=131,slow=10,SNR=6.4						
KURK	**Kurchatov**	**27.00**	**323**	P	**P**	**02 11 38.9**	**-0.5**
	comp=Z,1.1nm,0.7s,mb3.5,baz=126,slow=9.4,SNR=7.2						
KURK	**Kurchatov**	**27.00**	**323**	P	**P**	**02 11 38.9**	**-0.5**
ARCES	**ARCESS Array B**	**57.03**	**336**	P	**P**	**02 15 42.4**	**-0.7**
	comp=Z,0.8nm,0.9s,mb3.8,baz=88,slow=8.3,SNR=6.9						
WRA	**Warramunga Arr**	**58.71**	**146**	P	**P**	**02 15 55.1**	**-0.4**
	comp=Z,4.5nm,0.7s,mb4.6,baz=339,slow=7.6,SNR=16						
ASAR	**Alice Springs**	**61.73**	**149**	P	**P**	**02 16 15.6**	**-0.5**
	comp=Z,0.8nm,0.6s,mb4.0,baz=335,slow=6.5,SNR=8.4						
STKA	**Stephens Creek**	**72.25**	**147**	P	**P**	**02 17 21.0**	**-1.9**
	comp=Z,1.4nm,0.5s,mb4.2,baz=345,slow=7.1,SNR=5.1						

*IDC **14** 02:19:30.1±0.8, 39°.10N×140°.72E, h0km, mb3.7/10, mb1 3.8/12, mb1mx3.7/27, mbtmp3.7/12, ML3.3/2, Error ellipse: s-maj=22.9km s-min=14.0km az=111.0*
*NEIC **14** 02:19:31.2, 39°.11N×140°.87E, h10km, mb4.0/2, After JMA.*
*JMA **14** 02:19:31.2, 39°.11N×140°.86E, h10km±1km, M4.0*
JMA Felt II J1.
*ISCJB **14** 02:19:31.1±0.6, 39°.10N±0°.03×140°.87E±0°.04, h19km±5km, mb3.7/11, Error ellipse: s-maj=5.7km s-min=5.5km az=176.9*

ISC 14 02:19:31.5±0.5, 39°.09N±0°.03×140°.87E±0°.04, h8km±4km, n30, σ0°73/36, mb3.7/11, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.31**	**117**	P	**Pg**	**02 19 37.5**	**0.0**
JMK				*e*S	**Sg**	**02 19 41.5**	**-0.1**
JRG	**Rokugo**	**0.35**	**329**	P	**Pg**	**02 19 38.3**	**-0.1**
JRG				*e*S	**Sg**	**02 19 43.5**	**+0.3**
JYK	**Kaneyama**	**0.43**	**246**	P	**Pg**	**02 19 39.6**	**-0.3**
JYK				*e*S	**Sg**	**02 19 45.9**	**+0.2**
JOM	**Ohasama**	**0.50**	**41**	P	**Pg**	**02 19 40.8**	**-0.4**
JOM				S	**Sg**	**02 19 47.5**	**-0.3**
JIO	**Ouri**	**0.74**	**149**	*e*S	**Sg**	**02 19 55.6**	**+0.3**
JOU	**Okura**	**0.74**	**193**	P	**Pg**	**02 19 45.6**	**-0.2**
MAJO	**Matsushiro**	**3.31**	**220**	*e*Pn	**Pn**	**02 20 23.2**	**-0.2**
MAT	**Matsushiro**	**3.31**	**220**	P	**Pn**	**02 20 24.6**	**+1.2**
MAT				*e*S	**Sn**	**02 21 07.8**	**+4.9**
MJAR	**Matsushiro Arr**	**3.31**	**220**	Pn	**Pn**	**02 20 22.9**	**-0.5**
	1.0nm,0.3s,baz=32,slow=12,SNR=7.8						
MJAR				Pg	**Pg**	**02 20 30.4**	**-4.5**
	1.3nm,0.3s,baz=26,slow=14,SNR=10						
MJAR				Lg		02 21 12.4	
	0.7nm,0.3s,baz=143,slow=16,SNR=4.6						
MJAR	**Matsushiro Arr**	**3.31**	**220**	Pn	**Pn**	**02 20 22.9**	**-0.5**
MJAR				Pg	**Pg**	**02 20 30.4**	**-4.5**
MJAR				Lg		02 21 12.4	
ERM	**Erimo**	**3.40**	**30**	*e*Pn	**Pn**	**02 20 28.2**	**+3.5**
ASAJ	**Asahikawa**	**5.18**	**14**	Pn	**Pn**	**02 20 50.5**	**+1.2**
	1.7nm,0.3s,baz=210,slow=10,SNR=4.2						
KSRS	**Korea Array**	**10.31**	**265**	Pn	**Pn**	**02 22 01.4**	**+1.8**
	0.4nm,0.3s,baz=78,slow=14,SNR=11						
ZALV	**Zalesovo Beam**	**40.23**	**311**	P	**P**	**02 27 07.7**	**-0.6**
	0.6nm,0.4s,mb3.6,baz=129,slow=11,SNR=2.9						
MK31	**Makanchi Array**	**42.69**	**300**	*e*P	**P**	**02 27 28.1**	**-0.4**
MKAR	**Makanchi Array**	**42.69**	**300**	P	**P**	**02 27 27.8**	**-0.7**
	0.6nm,0.7s,mb3.4,baz=76,slow=13,SNR=7.7						
KURK	**Kurchatov**	**44.35**	**306**	P	**P**	**02 27 40.9**	**-1.0**
	1.2nm,0.7s,mb3.8,baz=82,slow=8.5,SNR=6.0						
KURK	**Kurchatov**	**44.35**	**306**	*e*P	**P**	**02 27 41.4**	**-0.5**
	1.3nm,0.6s,mb3.8						
ABKAR	**Akbulak array**	**56.30**	**309**	*e*P	**P**	**02 29 11.9**	**-0.5**
	1.3nm,0.6s,mb4.1						
WRA	**Warramunga Arr**	**59.04**	**187**	P	**P**	**02 29 31.6**	**-0.2**
	1.4nm,0.9s,mb4.0,baz=4.2,slow=7.2,SNR=4.9						
ASAR	**Alice Springs**	**62.77**	**187**	P	**P**	**02 29 56.6**	**-0.5**
	0.6nm,0.7s,mb3.8,baz=9.6,slow=7.8,SNR=5.3						
FINES	**FINESS Array B**	**66.80**	**332**	P	**P**	**02 30 22.0**	**-1.0**
	1.2nm,0.7s,mb4.0,baz=54,slow=9.8,SNR=5.3						
FINES	**FINESS Array B**	**66.80**	**332**	P	**P**	**02 30 22.0**	**-1.0**
NOA	**NORSAR Array B**	**72.13**	**337**	P	**P**	**02 30 56.0**	**0.0**
	0.8nm,0.8s,mb3.7,baz=38,slow=5.8,SNR=3.9						
NOA	**NORSAR Array B**	**72.13**	**337**	P	**P**	**02 30 56.0**	**0.0**
AKASG	**Malin Array Be**	**72.42**	**322**	P	**P**	**02 30 57.7**	**-0.2**
	0.3nm,0.3s,mb3.7,baz=50,slow=6.1,SNR=5.3						
NVAR	**Mina Array Bea**	**74.10**	**53**	P	**P**	**02 31 09.5**	**+1.4**
	0.3nm,0.6s,mb3.4,baz=316,slow=4.1,SNR=3.9						
NVAR	**Mina Array Bea**	**74.10**	**53**	P	**P**	**02 31 09.5**	**+1.4**
PDAR	**Pinedale Array**	**76.53**	**46**	P	**P**	**02 31 22.4**	**+0.5**
	0.3nm,0.7s,mb3.4,baz=355,slow=1.8,SNR=3.6						
LPAZ	**La Paz**	**145.97**	**56**	PKPbc	PKPbc	02 39 12.9	+1.0
	0.8nm,0.8s,baz=63,slow=6.2,SNR=3.9						

*IDC **14** 02:22:41.2±1.8, 39°.11N×141°.23E, h0km, mb3.6/5, mb1 3.7/7, mb1mx3.5/27, mbtmp3.6/7, ML2.9/2, Error ellipse: s-maj=35.2km s-min=18.8km az=103.0*
*NEIC **14** 02:22:43.6, 39°.12N×140°.92E, h11km, mb3.9/2, After JMA.*
*JMA **14** 02:22:43.8, 39°.14N×140°.91E, h11km±1km, M3.2*
JMA Felt I J1.
*ISCJB **14** 02:22:43.7±0.7, 39°.13N±0°.05×140°.94E±0°.06, h18km±6km, mb3.6/6, Error ellipse: s-maj=8.0km s-min=7.2km az=139.3*

ISC 14 02:22:44.4±0.7, 39°.13N±0°.04×140°.93E±0°.05, h10km±5km, n17, σ0°86/19, mb3.6/6, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.29**	**128**	*e*S	**Sg**	**02 22 54.0**	**-0.1**
JRG	**Rokugo**	**0.35**	**319**	*e*S	**Sg**	**02 22 55.9**	**0.0**
JOM	**Ohasama**	**0.44**	**40**	S	**Sg**	**02 22 58.8**	**-0.1**
JYK	**Kaneyama**	**0.49**	**244**	*e*S	**Sg**	**02 22 59.9**	**-0.5**
ERM	**Erimo**	**3.34**	**30**	*e*Pn	**Pn**	**02 23 37.8**	**+1.1**
MAJO	**Matsushiro**	**3.37**	**221**	*e*Pn	**Pn**	**02 23 36.7**	**-0.3**
MAT	**Matsushiro**	**3.37**	**221**	P	**Pn**	**02 23 37.6**	**+0.6**
MAT				*e*S	**Sn**	**02 24 23.1**	**+6.1**
MJAR	**Matsushiro Arr**	**3.37**	**221**	Pn	**Pn**	**02 23 38.6**	**+1.6**
	0.3nm,0.3s,baz=31,slow=14,SNR=3.6						
MJAR				Pg	**Pg**	**02 23 44.2**	**-4.6**
	0.6nm,0.3s,baz=24,slow=14,SNR=6.0						
MJAR				Lg		02 24 31.3	
	0.1nm,0.3s,baz=21,slow=25,SNR=5.7						
KSRS	**Korea Array**	**10.36**	**265**	Pn	**Pn**	**02 25 16.1**	**+3.1**
	0.4nm,0.3s,baz=79,slow=14,SNR=8.2						
ZALV	**Zalesovo Beam**	**40.24**	**311**	P	**P**	**02 30 21.0**	**0.0**
	0.6nm,0.5s,mb3.6,baz=69,slow=8.1,SNR=4.0						
MK31	**Makanchi Array**	**42.71**	**300**	*e*P	**P**	**02 30 40.9**	**-0.5**
MKAR	**Makanchi Array**	**42.71**	**300**	P	**P**	**02 30 41.2**	**-0.2**
	0.5nm,0.8s,mb3.3,baz=83,slow=12,SNR=4.2						
KURK	**Kurchatov**	**44.36**	**306**	P	**P**	**02 30 54.8**	**+0.2**
	1.2nm,0.8s,mb3.7,baz=82,slow=8.3,SNR=5.9						
KURK	**Kurchatov**	**44.36**	**306**	*e*P	**P**	**02 30 53.9**	**-0.7**
	2.5nm,1.0s,mb3.9						
BVAR	**Borovoye Array**	**48.90**	**311**	P	**P**	**02 31 29.8**	**-0.4**
	0.2nm,0.3s,mb3.6,baz=96,slow=4.3,SNR=2.8						
ABKAR	**Akbulak array**	**56.31**	**309**	*e*P	**P**	**02 32 24.5**	**-0.6**
	0.4nm,0.4s,mb3.8						
WRA	**Warramunga Arr**	**59.09**	**187**	P	**P**	**02 32 43.2**	**-1.6**
	0.5nm,0.7s,mb3.6,baz=4.7,slow=7.5,SNR=2.7						

JMA 14 02:30:13.6, 39°.07N×140°.96E, h10km±1km, M3.5, 1C-5D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.23**	**120**	⇓P	Pg	02 30 18.3	-0.1
JMK				S	Sg	02 30 21.5	-0.1
JRG	**Rokugo**	**0.41**	**322**	⇓P	Pg	02 30 21.8	+0.1
JOM	**Ohasama**	**0.48**	**33**	P	Pg	02 30 23.0	+0.1
JOM				*e*S	Sg	02 30 29.3	0.0
JYK	**Kaneyama**	**0.49**	**252**	⇓P	Pg	02 30 23.4	+0.2
JYK				*e*S	Sg	02 30 29.9	+0.2
OFUJ	**Ofunato**	**0.55**	**89**	⇓P	Pg	02 30 24.2	-0.1
OFUJ				*e*S	Sg	02 30 31.8	+0.2
JIO	**Ouri**	**0.69**	**154**	⇓P	Pg	02 30 26.5	-0.3
JIO				*e*S	Sg	02 30 35.5	-0.3
JOU	**Okura**	**0.74**	**198**	⇑P	Pg	02 30 27.8	-0.1
JOU				S	Sg	02 30 37.7	+0.2
MAT	**Matsushiro**	**3.33**	**222**	P	Pn	02 31 07.1	+1.3
MAT				*e*S	Sn	02 31 52.2	+6.8

JMA 14 02:31:26.9, 38°.78N×140°.73E, h5km±1km, M3.6, 1C-1D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.32**	**296**	P	Pg	02 31 33.2	+0.1
JYK				S	Sg	02 31 37.6	+0.3
JOU	**Okura**	**0.42**	**187**	⇑P	Pg	02 31 35.1	+0.2
JMK	**Ichinoseki**	**0.42**	**66**	P	Pg	02 31 34.9	-0.1
JMK				S	Sg	02 31 40.8	+0.4
JIO	**Ouri**	**0.58**	**124**	P	Pg	02 31 37.8	-0.3
JIO				S	Sg	02 31 45.6	-0.1
JRG	**Rokugo**	**0.62**	**353**	P	Pg	02 31 39.1	+0.3
JYS	**Shiratake**	**0.76**	**223**	P	Pg	02 31 41.4	-0.1
JYS				S	Sg	02 31 51.7	+0.2
JYA	**Atsumi**	**0.82**	**257**	⇓P	Pg	02 31 42.1	-0.5
JYA				S	Sg	02 31 53.3	+0.1
JOM	**Ohasama**	**0.82**	**32**	P	Pg	02 31 42.4	-0.2
JOM				S	Sg	02 31 53.0	-0.3
MAT	**Matsushiro**	**3.00**	**223**	P	Pn	02 32 16.0	+0.9
MAT				S	Sn	02 32 57.6	+6.2

*BJI **14** 02:35:11.9, 38°.77N×141°.28E, h10km, mB5.4/7, mb4.5/28, Ms4.8/13, Ms7 4.6/14*
*IDC **14** 02:35:15.7±0.5, 39°.04N×140°.81E, h0km, mb4.4/24, mb1 4.5/25, mb1mx4.4/31, mbtmp4.3/25, ML3.7/1, Error ellipse: s-maj=15.0km s-min=11.4km az=120.0*
*ISCJB **14** 02:35:16.4±0.7, 39°.05N±0°.02×140°.86E±0°.03, h13km±4km, mb4.5/94, MS4.7/5, Error ellipse: s-maj=4.0km s-min=3.3km az=43.9*
*JMA **14** 02:35:16.8, 39°.02N×140°.89E, h7km±1km, M4.5*
Broadband fault plane solution: P waves. NP1: φs266.00000°, δ45.00000°, λ151.00000°. NP2: φs17.00000°, δ70.00000°, λ49.00000°. Principal axes: T Plg48.0000°, Azm243.0000°; N Plg38.0000°, Azm34.0000°; P Plg15.0000°, Azm136.0000°;
JMA Felt III J1.
*NEIC **14** 02:35:16.9, 39°.02N×140°.89E, h10km, mb4.6/56, After JMA.*
NEIC Recorded [3 JMA] in Iwate and Miyagi; [2 JMA] in Akita; [1 JMA] in Fukushima.
*MOS **14** 02:35:19.5±0.9, 39°.04N×140°.67E, h33km, mb4.8/64, Error ellipse: s-maj=8.7km s-min=5.0km az=104.2*
*SZGRF **14** 02:35:24.7, 39°.95N×141°.65E, h33km, mb4.6, Eastern Honshu, Japan*

ISC 14 02:35:17.1±0.4, 39°.02N±0°.02×140°.86E±0°.03, h8km±2km, h13km±1.0km: pP-P, n264, σ0°99/278, mb4.5/94, MS4.7/5, 8C-6D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.29**	**104**	⇓P	**Pg**	**02 35 22.1**	**-0.7**
JMK				S	**Sg**	**02 35 25.9**	**-0.8**
JYK	**Kaneyama**	**0.41**	**255**	⇑P	**Pg**	**02 35 25.4**	**+0.3**
JYK				*e*S	**Sg**	**02 35 30.9**	**+0.5**
JRG	**Rokugo**	**0.41**	**335**	⇓P	**Pg**	**02 35 25.2**	**0.0**
JRG				S	**Sg**	**02 35 31.4**	**+0.8**
JOM	**Ohasama**	**0.56**	**36**	⇑P	**Pg**	**02 35 27.3**	**-0.7**
JOM				S	**Sg**	**02 35 34.7**	**-0.6**
OFUJ	**Ofunato**	**0.63**	**85**	⇓P	**Pg**	**02 35 28.5**	**-0.8**
OFUJ				*e*S	**Sg**	**02 35 36.4**	**-1.1**
JOU	**Okura**	**0.68**	**193**	⇓P	**Pg**	**02 35 30.0**	**-0.1**
JOU				S	**Sg**	**02 35 38.9**	**0.0**
JIO	**Ouri**	**0.68**	**146**	⇓P	**Pg**	**02 35 29.5**	**-0.8**
JIO				S	**Sg**	**02 35 38.7**	**-0.5**
JYA	**Atsumi**	**0.99**	**245**	⇑P	**Pg**	**02 35 36.0**	**-0.2**
JYA				*e*S	**Sg**	**02 35 50.9**	**+1.7**
JYS	**Shiratake**	**1.02**	**218**	⇑P	**Pg**	**02 35 36.3**	**-0.3**
JYS				S	**Sg**	**02 35 50.2**	**+0.4**
MAJO	**Matsushiro**	**3.25**	**221**	*e*P	**Pn**	**02 36 09.3**	**+1.0**
MAT	**Matsushiro**	**3.25**	**221**	P	**Pn**	**02 36 09.6**	**+1.3**
MAT				*e*S	**Sn**	**02 36 51.6**	**+4.5**
MJAR	**Matsushiro Arr**	**3.25**	**221**	Pn	**Pn**	**02 36 09.4**	**+1.1**
	8.5nm,0.3s,baz=28,slow=13,SNR=35						
MJAR				Pg	**Pg**	**02 36 15.9**	**-3.5**
	14nm,0.3s,baz=26,slow=14,SNR=28						
MJAR				Lg		02 36 57.4	
	6.6nm,0.3s,baz=6.8,slow=24,SNR=4.7						
ERM	**Erimo**	**3.46**	**30**	*e*P	**Pn**	**02 36 14.0**	**+2.8**
ERM	**Erimo**	**3.46**	**30**	*e*Pn	**Pn**	**02 36 14.1**	**+2.8**

SEY Seymchan 24.94 13*c*eP P 02 40 41.5 +1.1
ULN Ulaanbaatar 25.92 301 *e*P **P 02 40 49.2 -0.3**
ULN pmax pmax
comp=Z,2.0nm,0.6s,mb3.8
ULN Ulaanbaatar 25.92 301 *e*P **P 02 40 49.2 -0.3**
comp=Z,2.1nm,0.6s,mb3.8
ENH Enshi 27.14 261 *e*P **P 02 41 00.3 -0.4**
comp=Z,8.8nm,0.6s,mb4.5
ZAK Zakamensk 28.73 306 *e*P **P 02 41 12.1 -2.6**
ZAK pmax pmax
comp=Z,2.0nm,1.2s,mb3.7
LZH Lanzhou 29.36 276 *e*P **P 02 41 27.5 +7.0**
LZH pP pP 02 41 31.0 +7.9
LZH sP sP 02 41 33.5 +9.4
LZH pmax pmax
comp=Z,25nm,1.0s,mb4.9
LZH pmax pmax
comp=Z,130nm,5.1s
GYA Guiyang 31.19 257 P **P 02 41 36.5 -0.2**
GYA PP PP 02 42 39.8 -7.3
GYA PcP PcP 02 44 32.6 +1.1
GYA S **S 02 46 38.8 -4.2**
GYA SS SS 02 48 25.0 -31
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
GYA pmax pmax
comp=Z,150nm,13.2s
GYA LR LR
comp=N,400nm,16.5s,MS4.4
GYA LR LR
comp=E,610nm,15.7s,MS4.4
GYA LR LR
comp=Z,970nm,14.1s,MS4.6
CD2 Chengdu 31.30 267 *e*P **P 02 41 38.6 +1.0**
CD2 pP pP 02 41 43.0 +2.8
CD2 sP sP 02 41 45.8 +4.6
CD2 PP PP 02 42 40.6 -7.6
CD2 S **S 02 46 43.1 -1.5**
CD2 SS SS 02 48 28.8 -29
CD2 pmax pmax
comp=Z,20nm,0.6s,mb5.1
CD2 pmax pmax
comp=Z,40nm,5.2s
CD2 LR LR
comp=N,2µm,19.0s
CD2 LR LR
comp=Z,3µm,16.6s,MS5.1
GTA Gaotai 31.61 284 *e*P **P 02 41 39.1 -1.2**
GTA pmax pmax
comp=Z,3.0nm,1.1s,mb4.0
BILL Bilibino 32.26 18 *e*P **P 02 41 46.7 +1.1**
BILL pmax pmax
comp=Z,8.0nm,1.2s,mb4.4
BILL Bilibino 32.26 18 *e*P **P 02 41 47.5 +1.9**
comp=Z,3.7nm,0.8s,mb4.3
TIXI Tiksi 33.27 353 *e*P **P 02 41 53.7 -0.7**
TIXI pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
TIXI Tiksi 33.27 353 *e*P **P 02 41 53.7 -0.7**
comp=Z,2.8nm,0.7s,mb4.3
KMI Kunming 34.89 258 P **P 02 42 09.9 +0.9**
KMI pP pP 02 42 13.0 +1.4
KMI PP PP 02 43 27.0 -1.1
KMI S **S 02 47 39.3 -1.1**
KMI SS SS 02 49 51.3 -20
KMI pmax pmax
comp=Z,18nm,0.7s,mb5.1
KMI LR LR
comp=N,1µm,20.9s,MS4.7
KMI LR LR
comp=E,450nm,20.4s,MS4.7
KMI LR LR
comp=Z,890nm,22.4s,MS4.5
WMQ Urumqi 39.59 295 *e*P **P 02 42 48.0 -0.7**
ZALV Zalesovo Beam 40.27 311 P **P 02 42 53.5 -0.8**
comp=Z,4.1nm,0.7s,mb4.2,baz=85,slow=7.6,SNR=17
ZALV PcP PcP 02 44 57.5 -0.3
comp=Z,1.1nm,0.4s,baz=79,slow=4.0,SNR=3.9
ZALV Zalesovo Beam 40.27 311 P **P 02 42 53.5 -0.8**
ZALV 02 44 57.5
ZALV pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
ZALV Zalesovo Beam 40.27 311 P **P 02 42 53.5 -0.8**
ZALV PcP PcP 02 44 57.5 -0.3
NVS Novosibirsk 41.17 312 *i*P **P 02 42 59.7 -2.0**
MK31 Makanchi Array 42.72 300 *e*P **P 02 43 13.9 -0.5**
MKAR Makanchi Array 42.72 300 P **P 02 43 14.0 -0.4**
comp=Z,4.1nm,0.7s,mb4.3,baz=76,slow=13,SNR=45
MKAR Makanchi Array 42.72 300 P **P 02 43 14.0 -0.4**
MKAR pmax pmax
comp=Z,4.0nm,0.7s
KURK Kurchatov 44.38 306 P **P 02 43 27.8 0.0**
comp=Z,9.0nm,0.7s,mb4.6,baz=82,slow=8.4,SNR=29
KURK Kurchatov 44.38 306*c*eP **P 02 43 27.3 -0.5**
KURK pmax pmax
comp=Z,21nm,1.2s,mb4.7
KURK Kurchatov 44.38 306 *e*P **P 02 43 26.9 -0.8**
comp=Z,12nm,0.8s,mb4.7
KDAK Kodiak Island 45.93 43 P **P 02 43 39.9 -0.1**
comp=Z,9.2nm,0.8s,mb4.7,baz=20,slow=3.8,SNR=6.3
KDAK Kodiak Island 45.93 43 P **P 02 43 39.9 -0.1**
KDAK pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
MCK McKinley 47.24 35 *e*P **P 02 43 51.9 +1.8**
MCK pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
MCK McKinley 47.24 35 *e*P **P 02 43 51.9 +1.7**
comp=Z,4.3nm,0.6s,mb4.6
TKM2 Tokmak 2 48.33 297 *e*P **P 02 43 59.3 +0.4**
TKM2 pmax pmax
comp=Z,17nm,1.1s,mb5.0
TKM2 Tokmak 2 48.33 297 *e*P **P 02 43 59.2 +0.4**
comp=Z,17nm,1.1s,mb5.0
BVAR Borovoye Array 48.93 311 P **P 02 44 03.1 -0.3**
comp=Z,2.5nm,0.6s,mb4.4,baz=76,slow=6.9,SNR=13
BVAR PcP PcP 02 45 27.3 -0.2
comp=Z,1.3nm,0.6s,baz=98,slow=5.1,SNR=3.8
BVAR Borovoye Array 48.93 311 P **P 02 44 03.1 -0.3**
BVAR 02 45 27.3
BVAR pmax pmax
comp=Z,3.0nm,0.6s
BRVK Borovoye 48.98 311 *e*P **P 02 44 03.1 -0.7**
BRVK pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
BRVK Borovoye 48.98 311 *e*P **P 02 44 03.1 -0.6**
comp=Z,3.2nm,0.6s,mb4.5
AAK Ala-Archa 49.19 297 P **P 02 44 06.5 +1.0**
comp=Z,1.5nm,0.4s,mb4.4,baz=188,slow=3.1,SNR=7.5
AAK Ala-Archa 49.19 297 *e*P **P 02 44 06.0 +0.5**
AAK pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
AAK Ala-Archa 49.19 297 *e*P **P 02 44 06.0 +0.5**
comp=Z,5.7nm,0.9s,mb4.6
KSH Kashi 49.22 292 *e*P **P 02 44 10.0 +4.2**
KSH pP pP 02 44 14.5 +6.0
KSH sP sP 02 44 17.0 +7.5
KSH PcP PcP 02 45 31.9 +3.0
KSH PP PP 02 46 05.0 +5.5
KSH ScP ScP 02 49 25.3 +1.0
KSH PcS PcS 02 49 27.0 +1.7
KSH S **S 02 51 15.9 +4.2**
KSH ScS ScS 02 53 58.3 +0.1
KSH SS SS 02 54 45.0 +2.3
KSH pmax pmax
comp=Z,11nm,1.5s,mb4.7
KSH pmax pmax
comp=Z,420nm,6.3s
KSH LR LR
comp=N,460nm,13.8s,MS4.8
KSH LR LR
comp=E,290nm,10.8s,MS4.8
KSH LR LR
comp=Z,370nm,12.3s,MS4.6
UCH Uchtor 49.31 296 *e*P **P 02 44 07.6 +1.1**
comp=Z,2.9nm,0.9s,mb4.3
MENT Mentasta 49.66 36 *e*P **P 02 44 10.0 +1.2**
EKS2 Erkin-Say 49.67 297 *e*P **P 02 44 09.4 +0.2**
comp=Z,3.9nm,0.9s,mb4.4
PSI Prapat 52.47 237 P **P 02 44 31.0 +0.4**
comp=Z,5.1nm,0.7s,mb4.6,baz=78,slow=12,SNR=4.7
PSI Prapat 52.47 237 P **P 02 44 31.0 +0.4**
PSI pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
INK Inuvik 52.83 28 P **P 02 44 33.1 +0.6**
comp=Z,3.4nm,0.5s,mb4.6,baz=286,slow=10.0,SNR=9.2
INK Inuvik 52.83 28 P **P 02 44 33.1 +0.6**
INK pmax pmax
comp=Z,3.0nm,0.5s
HYT Haines Junctio 52.97 37 *e*P **P 02 44 35.8 +2.1**
SVE Sverdlovsk 53.38 318⇑ *e*P **P 02 44 37.1 +0.4**
SVE pmax pmax
comp=Z,12nm,0.9s,mb4.8
ARU Arti 54.59 318*c i*P **P 02 44 45.2 -0.4**
ARU *e* 02 46 44.5
ARU PPP 02 47 54.2
ARU S **S 02 52 23.0 -2.0**
ARU pmax pmax
comp=Z,16nm,1.2s,mb4.9
ARU Arti 54.59 318 *e*P **P 02 44 45.3 -0.3**
comp=Z,25nm,1.4s,mb5.1
KBL Kabul 56.32 290 *e*P **P 02 44 58.2 -0.2**
KBL pmax pmax
comp=Z,13nm,1.0s,mb4.9
KBL Kabul 56.32 290 *e*P **P 02 44 58.2 -0.2**
comp=Z,12nm,1.0s,mb4.9
ABKAR Akbulak array 56.34 309 *e*P **P 02 44 57.6 -0.7**
comp=Z,4.4nm,0.5s,mb4.7
AKTK Aktyubinsk 57.03 311 P **P 02 45 02.8 -0.4**
AKTK PcP PcP 02 45 58.2 0.0
AKTO Aktyubinsk 57.03 311 P **P 02 45 02.8 -0.4**
comp=Z,3.1nm,0.7s,mb4.4,baz=69,slow=14,SNR=13
AKTO PcP PcP 02 45 58.2 0.0
comp=Z,1.5nm,0.6s,baz=149,slow=3.2,SNR=3.6
AKTO Aktyubinsk 57.03 311 P **P 02 45 02.8 -0.4**
AKTO 02 45 58.2
AKTO pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
WRAB Tennant Creek 58.96 187 *e*P **P 02 45 16.5 -0.4**
WRAB pmax pmax
comp=Z,28nm,1.4s,mb5.1
WRAB Tennant Creek 58.96 187 *e*P **P 02 45 16.5 -0.5**
comp=Z,28nm,1.4s,mb5.1
WRA Warramunga Arr 58.97 187 P **P 02 45 16.3 -0.7**
comp=Z,7.2nm,0.8s,mb4.7,baz=4.5,slow=7.2,SNR=23
WRA Warramunga Arr 58.97 187 P **P 02 45 16.3 -0.7**
WRA pmax pmax
comp=Z,7.0nm,0.8s
WRA Warramunga Arr 58.97 187 P **P 02 45 16.3 -0.7**
APA Apatity 60.70 335⇓ *e*P **P 02 45 18.5 -10**
APA *e*SS SS 02 57 36.0 -6.6
APA pmax pmax
comp=Z,18nm,1.2s,mb5.1
RES Resolute Bay 60.79 15 *e*P **P 02 45 28.8 -0.1**
RES pmax pmax
comp=Z,7.0nm,0.7s,mb4.9
RES Resolute Bay 60.79 15 *e*P **P 02 45 28.8 -0.1**
comp=Z,7.4nm,0.7s,mb4.9
ARCES ARCESS Array B 61.99 339 P **P 02 45 36.8 -0.3**
comp=Z,1.1nm,0.5s,mb4.3,baz=62,slow=7.8,SNR=29
ARCES ARCESS Array B 61.99 339 P **P 02 45 36.8 -0.3**
ARCES pmax pmax
comp=Z,1.0nm,0.5s
YKA Yellowknife Ar 62.31 31 P **P 02 45 38.9 -0.5**
comp=Z,0.7nm,0.7s,mb3.9,baz=305,slow=6.7,SNR=3.7
YKA Yellowknife Ar 62.31 31 P **P 02 45 38.9 -0.5**
YKA pmax pmax
comp=Z,1.0nm,0.7s
ASAR Alice Springs 62.70 187 P **P 02 45 42.2 -0.1**
comp=Z,3.0nm,0.7s,mb4.5,baz=2.2,slow=5.0,SNR=31
ASAR Alice Springs 62.70 187 P **P 02 45 42.2 -0.1**
ASAR pmax pmax
comp=Z,3.0nm,0.7s
JOF Joensuu 64.01 331 *e*P **P 02 45 48.6 -2.0**
JOF pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
JOF Joensuu 64.01 331 *e*p **P 02 45 48.6 -2.0**
comp=Z,2.1nm,0.4s,mb4.5
JOF Joensuu 64.01 331 *e*p **P 02 45 48.6 -2.0**
comp=Z,2.1nm,0.4s,mb4.5
OBN Obninsk 66.25 323 *e*P **P 02 46 05.9 +0.6**
OBN pmax pmax
comp=Z,22nm,2.5s,mb4.7
KAF Kangasniemi 66.35 332 *e*P **P 02 46 00.2 -5.6**
KAF pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
KAF Kangasniemi 66.35 332 *e*p **P 02 46 00.2 -5.6**
comp=Z,3.4nm,0.6s,mb4.5
KAF Kangasniemi 66.35 332 *e*p **P 02 46 00.2 -5.6**
comp=Z,3.4nm,0.6s,mb4.5
FINES FINESS Array B 66.86 332 P **P 02 46 08.1 -1.0**
comp=Z,6.3nm,0.7s,mb4.8,baz=47,slow=8.4,SNR=24
FINES FINESS Array B 66.86 332 P **P 02 46 08.1 -1.0**
FINES pmax pmax
comp=Z,6.0nm,0.7s
VSR Storozhevoye 67.16 318 *e*P **P 02 46 10.7 -0.5**
VSR pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
VSR pmax pmax
comp=N,4.0nm,0.4s
VSR pmax pmax
comp=E,3.0nm,0.3s
GOF Gofitskoye 68.46 311 *e*P **P 02 46 14.7 -4.8**
GOF pmax pmax
comp=Z,30nm,1.2s,mb5.2
SUMG Summit 68.70 360 *e*P **P 02 46 21.1 +0.5**
SUMG Summit 68.70 360 *i*P **P 02 46 21.3 +0.8**
comp=Z,9.6nm,0.7s,mb4.8
NEW Newport 69.01 44 *e*P **P 02 46 24.5 +1.6**
NEW pmax pmax
comp=Z,10.0nm,1.2s
NEW Newport 69.01 44 *e*P **P 02 46 24.5 +1.6**
comp=Z,9.9nm,1.2s,mb4.6
ZEI Tsey 69.22 309 *e*P **P 02 46 22.6 -1.7**
ZEI pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
KIV Kislovodsk 69.28 310 *e*P **P 02 46 25.8 +1.1**
KIV *i* 02 46 45.7
KIV pmax pmax
comp=Z,49nm,1.2s,mb5.3
KIV Kislovodsk 69.28 310 *e*P **P 02 46 25.6 +1.0**
comp=Z,36nm,0.9s,mb5.3
SCO Scoresbysund 70.09 354 *i*P **P 02 46 28.8 -0.4**
comp=Z,4.6nm,0.8s,mb4.5
GNI Garni 70.18 306 *e*P **P 02 46 29.9 -0.3**
GNI pmax pmax
comp=Z,5.0nm,0.7s
GNI Garni 70.18 306 *e*P **P 02 46 29.9 -0.4**
comp=Z,5.1nm,0.7s,mb4.6
STKA Stephens Creek 70.54 179 P **P 02 46 31.9 -0.4**
comp=Z,1.4nm,0.7s,mb4.0,baz=133,slow=11,SNR=3.2
SLMT Seeley Lake 71.59 44 *e*P **P 02 46 39.8 +1.1**
NB2 NORSAR Subarra 72.19 337 P **P 02 46 41.2 -0.8**
comp=Z,4.3nm,0.7s,mb4.5,baz=40,slow=6.2
NOA NORSAR Array B 72.19 337 P **P 02 46 41.2 -0.8**
comp=Z,5.4nm,0.9s,mb4.5,baz=38,slow=6.0,SNR=17
NOA NORSAR Array B 72.19 337 P **P 02 46 41.2 -0.8**
NOA pmax pmax
comp=Z,5.0nm,0.9s
NOA NORSAR Array B 72.19 337 P **P 02 46 41.2 -0.8**
FFC Flin Flon 72.27 33 *e*P **P 02 46 42.7 +0.1**
FFC pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
FFC Flin Flon 72.27 33 *e*P **P 02 46 42.7 +0.1**
comp=Z,3.7nm,0.9s,mb4.3
NAO01 NORSAR Array S 72.44 337 *e*P **P 02 46 43.2 -0.3**
AKASG Malin Array Be 72.47 322 P **P 02 46 43.1 -0.8**
comp=Z,2.2nm,0.5s,mb4.4,baz=45,slow=5.8,SNR=15
AKASG Malin Array Be 72.47 322 P **P 02 46 43.1 -0.8**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKBB Malin Array Si 72.47 322 *e*P **P 02 46 43.2 -0.7**
KIEV Kiev 72.48 322 *e*P **P 02 46 43.0 -0.9**
KIEV pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
KIEV Kiev 72.48 322 *e*P **P 02 46 43.0 -1.0**
comp=Z,5.3nm,0.8s,mb4.5
LRM Limekiln Ridge 73.03 44 *e*P **P 02 46 48.4 +1.1**
CMB Columbia Colle 73.07 55 *e*P **P 02 46 48.7 +1.0**
CMB pmax pmax
comp=Z,4.0nm,1.3s,mb4.2
CMB Columbia Colle 73.07 55 *e*P **P 02 46 48.7 +1.0**
comp=Z,4.5nm,1.3s,mb4.2
DLMT Dillon 73.24 45 *e*P **P 02 46 49.8 +1.2**
HLID Hailey 73.34 47 *e*P **P 02 46 50.1 +0.9**
comp=Z,1.8nm,1.0s,mb4.0
BOZ Bozeman (W) 73.59 44 *e*P **P 02 46 51.9 +1.3**
NVAR Mina Array Bea 74.15 53 P **P 02 46 54.9 +0.8**
comp=Z,0.9nm,0.7s,mb3.8,baz=284,slow=4.4,SNR=17
TPAW Teton Pass 75.34 46 *e*P **P 02 47 02.1 +1.3**
comp=Z,1.8nm,0.6s,mb4.2
LOHW Long Hollow 75.45 45 *e*P **P 02 47 03.2 +1.7**
comp=Z,1.0nm,0.5s,mb4.0
KWP Kalwaria Pacla 76.27 324 *e*P **P 02 47 06.7 +0.7**
KWP Kalwaria Pacla 76.27 324 *e*P **P 02 47 06.6 +0.6**
KWP pmax pmax
comp=Z,12nm,0.9s,mb4.8
KWP Kalwaria Pacla 76.27 324 *e*P **P 02 47 06.6 +0.6**
comp=Z,12nm,0.9s,mb4.8
DUG Dugway 76.39 49 *e*P **P 02 47 07.9 +1.0**
DUG pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
DUG Dugway 76.39 49 *e*P **P 02 47 07.9 +1.0**
comp=Z,3.9nm,0.9s,mb4.3
BUR08 Bucovina Ar. S 76.48 321 *e*P **P 02 47 07.0 -0.2**
BW06 Boulder Array 76.58 46 *e*P **P 02 47 09.3 +1.4**
comp=Z,1.5nm,0.6s,mb4.1
PDAR Pinedale Array 76.58 46 P **P 02 47 08.5 +0.6**
comp=Z,2.1nm,0.7s,mb4.2,baz=309,slow=1.8,SNR=18
KOLS Kolonicke sedl 76.96 324 *e*P **P 02 47 10.8 +0.8**
KOLS pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
KOLS Kolonicke sedl 76.96 324 *e*P **P 02 47 10.8 +0.8**
comp=Z,2.3nm,0.9s,mb4.1
KOLS Kolonicke sedl 76.96 324 *e*P **P 02 47 10.8 +0.8**
STHS Stebnicka Huta 77.09 324 *e*P **P 02 47 11.8 +1.1**
STHS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
STHS Stebnicka Huta 77.09 324 *e*P **P 02 47 11.8 +1.1**
comp=Z,4.3nm,1.0s,mb4.3
STHS Stebnicka Huta 77.09 324 *e*P **P 02 47 11.8 +1.1**
OJC Ojcow 77.15 326 *e*P **P 02 47 09.9 -1.1**
BR131 Keskin Array S 77.22 311 *e*P **P 02 47 11.9 +0.4**
BRTR Keskin Array B 77.22 311 P **P 02 47 11.6 0.0**
comp=Z,1.5nm,0.5s,mb4.2,baz=94,slow=5.2,SNR=10
BRTR Keskin Array B 77.22 311 P **P 02 47 11.6 0.0**
BRTR pmax pmax
comp=Z,2.0nm,0.5s
CRVS Cervenica-Dubn 77.36 324 *e*P **P 02 47 11.2 -1.0**
CRVS pmax pmax
comp=Z,5.0nm,1.5s,mb4.2
CRVS Cervenica-Dubn 77.36 324 *e*P **P 02 47 11.2 -1.0**
comp=Z,5.4nm,1.5s,mb4.3
CRVS Cervenica-Dubn 77.36 324 *e*P **P 02 47 11.2 -1.0**
OKC Ostrava-Krasne 78.15 326 *e*P **P 02 47 17.3 +0.7**
OKC Ostrava-Krasne 78.15 326 *e*P **P 02 47 17.3 +0.7**
MORC Moravsky Berou 78.46 326 *e*P **P 02 47 18.3 0.0**
MORC pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
MORC Moravsky Berou 78.46 326 *e*P **P 02 47 18.3 0.0**
comp=Z,4.2nm,0.8s,mb4.4
DPC Dobruska-Polom 78.55 327 *e*P **P 02 47 19.2 +0.4**
DPC Dobruska-Polom 78.55 327 *e*P **P 02 47 19.2 +0.4**
UPC Upice 78.56 328 *e*P **P 02 47 19.2 +0.4**
UPC Upice 78.56 328 *e*P **P 02 47 19.2 +0.4**
PSZ Piszkesteto 78.79 324 *e*P **P 02 47 20.8 +0.6**
PSZ pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
PSZ Piszkesteto 78.79 324 *e*P **P 02 47 20.8 +0.6**
comp=Z,6.2nm,1.0s,mb4.5
VYHS Vyhne 78.85 325 *e*P **P 02 47 20.3 -0.2**
VYHS pmax pmax
comp=Z,3.0nm,1.6s,mb4.0
VYHS Vyhne 78.85 325 *e*P **P 02 47 20.3 -0.2**
comp=Z,3.4nm,1.6s,mb4.0
VYHS Vyhne 78.85 325 *e*P **P 02 47 20.3 -0.2**
BRG Berggiesshubel 79.12 329 *e*P **P 02 47 22.1 +0.1**
comp=Z,3.7nm,0.9s,mb4.3
PVCC Panska Ves 79.14 328 *e*P **P 02 47 22.1 +0.1**
PVCC Panska Ves 79.14 328 *e*P **P 02 47 22.1 +0.1**
CLL Collm 79.16 330 *i*P **P 02 47 21.7 -0.4**
CLL *e* pP 02 47 26.0 +1.1
CLL pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
CLL Collm 79.16 330 *i*P **P 02 47 21.7 -0.4**
comp=Z,9.0nm,1.3s,mb4.5
CLL *e* pP 02 47 26.0 +1.1
CLL Collm 79.16 330 *i*P **P 02 47 21.7 -0.4**
comp=Z,9.0nm,1.3s,mb4.5
CLL *es*P sP 02 47 26.0 +0.1
CLL *e*(PP) 02 50 32.0
PRU Pruhonice 79.56 328 *e*P **P 02 47 24.9 +0.6**
PRU Pruhonice 79.56 328 *e*P **P 02 47 24.9 +0.6**
TREC Trest 79.70 327 *e*P **P 02 47 25.3 +0.2**
TREC Trest 79.70 327 *e*P **P 02 47 25.3 +0.2**
SMCO Snowmass 80.44 47 *e*P **P 02 47 30.4 +1.2**
MMAI Mount Meron Ar 80.47 305 P **P 02 47 30.2 +0.7**
comp=Z,2.7nm,0.8s,mb4.2,baz=50,slow=11,SNR=4.6
KHC Kasperske Hory 80.63 328 *e*P **P 02 47 30.3 +0.2**
KHC Kasperske Hory 80.63 328 *e*P **P 02 47 30.3 +0.2**
GERES GERESS Array B 80.80 328 P **P 02 47 30.8 -0.3**
comp=Z,0.8nm,0.6s,mb3.9,baz=40,slow=6.3,SNR=10
GERES GERESS Array B 80.80 328 P **P 02 47 30.8 -0.2**
GERES pmax pmax
comp=Z,1.0nm,0.6s
GRA1 Grafenberg Arr 81.14 330 *e*P **P 02 47 32.9 +0.1**
comp=Z,5.0nm,0.9s,mb4.4
GRF Grafenberg Arr 81.14 330 *e*P **P 02 47 32.9 +0.1**
comp=Z,5.0nm,0.9s,mb4.4
GRF Grafenberg Arr 81.14 330 *e*P **P 02 47 32.9 +0.1**
GRF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
GRF Grafenberg Arr 81.14 330 *e*P **P 02 47 32.9 +0.1**
GRF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
SDCO Great Sand Dun 82.26 47 *e*P **P 02 47 39.6 +0.6**
comp=Z,1.4nm,0.9s,mb3.9
DOU Dourbes 83.27 333 P **P 02 47 43.4 -0.5**
DOU AP pP 02 47 46.4 -0.3
BAIF Baives 83.44 334 *e*P **P 02 47 43.9 -0.9**
SCHQ Schefferville 83.55 16 P **P 02 47 45.4 +0.1**
comp=Z,2.0nm,0.7s,mb4.4,baz=21,slow=17,SNR=4.3
ANMO Albuquerque 83.63 50 *e*P **P 02 47 47.9 +1.7**
ANMO pmax pmax
comp=Z,1.0nm,1.0s
ANMO Albuquerque 83.63 50 *e*P **P 02 47 47.9 +1.7**
comp=Z,0.5nm,1.0s,mb3.6
CDF Champ du Feu 83.70 331 *e*P **P 02 47 45.4 -0.8**
comp=Z,4.9nm,0.8s,mb4.4
CDF Champ du Feu 83.70 331 *e*P **P 02 47 45.4 -0.8**
CDF pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
CDF Champ du Feu 83.70 331 *e*P **P 02 47 45.4 -0.8**
comp=Z,2.5nm,0.8s,mb4.4
HINF Hinteralfeld 84.35 331 *e*P **P 02 47 48.3 -1.2**
HAU Haudompre 84.38 331 *e*P **P 02 47 48.5 -1.2**
CABF La Chapelle 85.64 331 *e*P **P 02 47 54.5 -1.6**
comp=Z,9.4nm,0.9s,mb4.7
CABF La Chapelle 85.64 331 *e*P **P 02 47 54.5 -1.6**
CABF pmax pmax
comp=Z,5.0nm,0.9s,mb4.7
CABF La Chapelle 85.64 331 *e*P **P 02 47 54.5 -1.6**
comp=Z,4.7nm,0.9s,mb4.7
LOR Lormes 85.92 332 *e*P **P 02 47 56.4 -1.0**
comp=Z,13nm,1.0s,mb4.8
LOR Lormes 85.92 332 *e*P **P 02 47 56.4 -1.0**
LOR pmax pmax
comp=Z,6.0nm,1.0s,mb4.8
LOR Lormes 85.92 332 *e*P **P 02 47 56.4 -1.0**
comp=Z,6.4nm,1.0s,mb4.8
FLN La Foliniere 86.12 336 *e*P **P 02 47 57.3 -1.1**
comp=Z,23nm,1.0s,mb5.0
FLN La Foliniere 86.12 336 *e*P **P 02 47 57.3 -1.1**
FLN pmax pmax
comp=Z,12nm,1.0s,mb5.1
FLN La Foliniere 86.12 336 *e*P **P 02 47 57.3 -1.1**
comp=Z,12nm,1.0s,mb5.1
LDF La Druitiere 86.15 335 *e*P **P 02 47 57.5 -1.1**
comp=Z,8.0nm,0.9s,mb4.7
LDF La Druitiere 86.15 335 *e*P **P 02 47 57.5 -1.1**
LDF pmax pmax
comp=Z,4.0nm,0.9s,mb4.7
LDF La Druitiere 86.15 335 *e*P **P 02 47 57.5 -1.1**
comp=Z,4.0nm,0.9s,mb4.7
SSF Saint Saulge 86.22 332 *e*P **P 02 47 57.9 -1.0**
comp=Z,18nm,1.1s,mb4.9
SSF Saint Saulge 86.22 332 *e*P **P 02 47 57.9 -1.0**
SSF pmax pmax
comp=Z,9.0nm,1.1s,mb4.9
SSF Saint Saulge 86.22 332 *e*P **P 02 47 57.9 -1.0**
comp=Z,8.9nm,1.1s,mb4.9
LPL La Plagne 86.30 330 *e*P **P 02 47 58.8 -0.5**
comp=Z,8.3nm,0.8s,mb4.7
LPL La Plagne 86.30 330 *e*P **P 02 47 58.8 -0.5**
LPL pmax pmax
comp=Z,4.0nm,0.8s,mb4.7
LPL La Plagne 86.30 330 *e*P **P 02 47 58.8 -0.5**

comp=Z,4.2nm,0.8s,mb4.7
LPG La Plagne 86.31 330 *eP* **P 02 47 58.9 -0.5**
comp=Z,7.3nm,0.8s,mb4.7
LPG La Plagne 86.31 330 *eP* **P 02 47 58.9 -0.5**
LPG pmax pmax
comp=Z,4.0nm,0.8s,mb4.7
LPG La Plagne 86.31 330 *eP* **P 02 47 58.9 -0.5**
comp=Z,3.7nm,0.8s,mb4.7
SMF Signal de Mont 86.45 332 *eP* **P 02 47 59.1 -1.0**
comp=Z,21nm,1.3s,mb4.9
SMF Signal de Mont 86.45 332 *eP* **P 02 47 59.1 -1.0**
SMF pmax pmax
comp=Z,10.0nm,1.3s,mb4.9
SMF Signal de Mont 86.45 332 *eP* **P 02 47 59.1 -1.0**
comp=Z,10nm,1.3s,mb4.9
AVF Avril sur Loir 86.51 332 *eP* **P 02 47 59.6 -0.7**
comp=Z,17nm,0.9s,mb5.0
AVF Avril sur Loir 86.51 332 *eP* **P 02 47 59.6 -0.7**
AVF pmax pmax
comp=Z,9.0nm,0.9s,mb5.0
AVF Avril sur Loir 86.51 332 *eP* **P 02 47 59.6 -0.7**
comp=Z,8.7nm,0.9s,mb5.0
GRR Gorron 86.57 336 *eP* **P 02 47 59.8 -0.8**
comp=Z,11nm,0.9s,mb4.8
GRR Gorron 86.57 336 *eP* **P 02 47 59.8 -0.8**
GRR pmax pmax
comp=Z,5.0nm,0.9s,mb4.7
GRR Gorron 86.57 336 *eP* **P 02 47 59.8 -0.8**
comp=Z,5.4nm,0.9s,mb4.8
BGF Bois d'Agland 86.89 332 *eP* **P 02 48 01.5 -0.7**
SGMF Saint Gilles 87.22 336 *eP* **P 02 48 03.2 -0.6**
TCF Toulx Ste Croi 87.35 333 *eP* **P 02 48 03.8 -0.7**
comp=Z,2.5nm,0.8s,mb4.2
TCF Toulx Ste Croi 87.35 333 *eP* **P 02 48 03.8 -0.7**
TCF pmax pmax
comp=Z,1.0nm,0.8s,mb4.1
TCF Toulx Ste Croi 87.35 333 *eP* **P 02 48 03.8 -0.7**
comp=Z,1.3nm,0.8s,mb4.2
VIVF Saint-Julien-l 87.65 330 *eP* **P 02 48 05.1 -0.8**
MFF Saint Martin d 87.89 334 *eP* **P 02 48 06.6 -0.5**
comp=Z,18nm,1.2s,mb4.9
MFF Saint Martin d 87.89 334 *eP* **P 02 48 06.6 -0.5**
MFF pmax pmax
comp=Z,9.0nm,1.2s,mb4.9
MFF Saint Martin d 87.89 334 *eP* **P 02 48 06.6 -0.5**
comp=Z,9.1nm,1.2s,mb4.9
LMR La Mourre 88.20 329 *eP* **P 02 48 06.7 -1.9**
RJF Les Rejaudoux 88.44 333 *eP* **P 02 48 09.0 -0.7**
comp=Z,17nm,1.2s,mb4.8
RJF Les Rejaudoux 88.44 333 *eP* **P 02 48 09.0 -0.7**
RJF pmax pmax
comp=Z,9.0nm,1.2s,mb4.9
RJF Les Rejaudoux 88.44 333 *eP* **P 02 48 09.0 -0.7**
comp=Z,8.6nm,1.2s,mb4.9
LASF Ste Croix 88.62 331 *eP* **P 02 48 10.0 -0.6**
LFF La Frestale 89.03 333 *eP* **P 02 48 12.0 -0.5**
TXAR Lajitas Array 89.25 52 P **P 02 48 14.3 +0.5**
comp=Z,1.0nm,0.9s,mb4.2,baz=242,slow=2.7,SNR=7.6
TXAR Lajitas Array 89.25 52 P **P 02 48 14.3 +0.5**
TXAR pmax pmax
comp=Z,1.0nm,0.9s
JCT Junction City 90.74 49 *eP* **P 02 48 22.5 +1.7**
DBIC Dimbokro 124.54 317 PKP PKPdf 02 54 17.0 -0.5
comp=Z,10nm,1.0s,baz=321,slow=5.4,SNR=4.3
DBIC Dimbokro 124.54 317 PKIKP PKPdf 02 54 17.0 -0.5
DBIC pmax pmax
comp=Z,10.0nm,1.0s
DBIC Dimbokro 124.54 317 PKP PKPdf 02 54 17.0 -0.5
LPAZ La Paz 146.01 56 PKPbc PKPbc 02 54 58.1 +0.4
comp=Z,4.4nm,0.7s,baz=339,slow=4.6,SNR=18
LPAZ La Paz 146.01 56 *e*PKPbc PKPbc 02 54 57.9 +0.2

JMA 14 02:36:28.0, 38°.99N×140°.82E, h4km±1km, M3.5, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.31**	**97**	*e*S	Sg	02 36 38.3	+0.2
JRG	**Rokugo**	**0.43**	**340**	P	Pg	02 36 36.7	+0.4
JRG				S	Sg	02 36 42.8	+0.9
JOM	**Ohasama**	**0.61**	**37**	P	Pg	02 36 39.8	+0.2
JOM				S	Sg	02 36 47.6	+0.1
JOU	**Okura**	**0.64**	**191**	P	Pg	02 36 40.3	+0.1
JOU				S	Sg	02 36 48.7	+0.3
JIO	**Ouri**	**0.68**	**142**	P	Pg	02 36 41.1	+0.1
JIO				*e*S	Sg	02 36 49.5	-0.2

BJI 14 02:40:26.0, 23°.33N×103°.01E, h26km, ML3.5/5, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**1.80**	**352**	Pg	Pn	02 41 00.4	+5.0
KMI				Sg	Sn	02 41 27.8	+10
KMI				smax			
	comp=N,170nm,0.7s						
KMI				smax			
	comp=E,200nm,0.8s						
CD2	**Chengdu**	**7.58**	**5**	*e*Pn	Pn	02 42 16.8	+2.0

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*IDC **14** 02:40:38.1±1.6, 39°.06N×141°.47E, h0km, mb4.0/5, mb1 4.0/6, mb1mx3.7/26, mbtmp3.9/6, ML3.3/2, Error ellipse: s-maj=44.6km s-min=22.3km az=76.0*
*NEIC **14** 02:40:41.8, 38°.88N×140°.85E, h9km, mb4.1/2, After JMA.*
*JMA **14** 02:40:41.8, 38°.88N×140°.85E, h8km±1km, M3.4*
JMA Felt II J1.
*ISCJB **14** 02:40:41.4±0.4, 38°.89N±0°.03×140°.87E±0°.04, h24km±4km, mb3.9/6, Error ellipse: s-maj=5.7km s-min=4.7km az=38.7*
ISC 14 02:40:41.7±0.4, 38°.88N±0°.03×140°.85E±0°.04, h12km±4km, n20, σ0°49/29, mb3.9/6, 5D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.30**	**76**	⇓P	**Pg**	**02 40 47.6**	**-0.1**
JMK				S	**Sg**	**02 40 51.9**	**+0.1**
JYK	**Kaneyama**	**0.38**	**276**	⇓P	**Pg**	**02 40 49.4**	**+0.1**
JYK				S	**Sg**	**02 40 54.3**	**-0.1**
JOU	**Okura**	**0.54**	**196**	⇓P	**Pg**	**02 40 52.1**	**0.0**
JOU				S	**Sg**	**02 40 59.2**	**0.0**
JRG	**Rokugo**	**0.54**	**342**	P	**Pg**	**02 40 52.7**	**+0.5**
JRG				*e*S	**Sg**	**02 40 59.4**	**0.0**
JIO	**Ouri**	**0.58**	**137**	P	**Pg**	**02 40 52.8**	**-0.1**
JIO				*e*S	**Sg**	**02 41 00.5**	**-0.1**
JOM	**Ohasama**	**0.68**	**30**	P	**Pg**	**02 40 54.7**	**-0.2**
JOM				S	**Sg**	**02 41 04.1**	**+0.2**
JYS	**Shirataka**	**0.90**	**223**	⇓P	**Pg**	**02 40 58.9**	**-0.1**
JYS				S	**Sg**	**02 41 11.0**	**+0.2**
JYA	**Atsumi**	**0.93**	**252**	⇓P	**Pg**	**02 40 59.3**	**-0.3**
JYA				S	**Sg**	**02 41 11.5**	**-0.3**
MJAR	**Matsushiro Arr**	**3.14**	**223**	Pn	**Pn**	**02 41 36.8**	**+5.9**
	1.3nm,0.3s,baz=19,slow=19,SNR=6.1						
MAJO	**Matsushiro**	**3.14**	**223**	*e*Pn	**Pn**	**02 41 32.5**	**+1.6**
MAT	**Matsushiro**	**3.14**	**223**	P	**Pn**	**02 41 35.8**	**+4.9**
MAT				*e*S	**Sn**	**02 42 16.2**	**+7.9**
KSRS	**Korea Array**	**10.28**	**266**	Pn	**Pn**	**02 43 15.2**	**+6.2**
	0.4nm,0.3s,baz=82,slow=14,SNR=4.2						
ZALV	**Zalesovo Beam**	**40.36**	**311**	P	**P**	**02 48 18.8**	**-0.2**
	0.3nm,0.4s,mb3.3,baz=97,slow=9.3,SNR=2.7						
MK31	**Makanchi Array**	**42.78**	**300**	*e*P	**P**	**02 48 38.0**	**-1.0**
KURK	**Kurchatov**	**44.46**	**307**	P	**P**	**02 48 51.9**	**-0.5**
	1.1nm,0.2s,mb4.2,baz=84,slow=8.1,SNR=2.1						
KURK	**Kurchatov**	**44.46**	**307**	*e*P	**P**	**02 48 53.5**	**+1.1**
	2.2nm,0.8s,mb3.9						
ABKAR	**Abkulak array**	**56.42**	**309**	*e*P	**P**	**02 50 23.0**	**+0.1**
	1.2nm,0.6s,mb4.1						
WRA	**Warramunga Arr**	**58.83**	**187**	P	**P**	**02 50 39.2**	**-0.8**
	1.0nm,0.5s,mb4.2,baz=5.3,slow=7.2,SNR=4.5						
ARCES	**ARCESS Array B**	**62.11**	**339**	P	**P**	**02 51 01.9**	**0.0**
	0.9nm,0.8s,mb4.0,baz=54,slow=9.2,SNR=5.3						
ASAR	**Alice Springs**	**62.56**	**187**	P	**P**	**02 51 05.8**	**+0.4**
	0.6nm,0.7s,mb3.8,baz=13,slow=4.8,SNR=4.2						

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*DDA **14** 02:41:02.6, 36°.97N×29°.22E, h21km±3km, Md2.8*
*ISK **14** 02:41:02.9, 36°.99N×29°.20E, h7km, MD3.1*
*CSEM **14** 02:41:03.3±0.1, 36°.99N×29°.20E, h5km, MD3.1, Error ellipse: s-maj=2.7km s-min=2.4km az=175.0*
*ISCJB **14** 02:41:03.2±0.5, 36°.99N±0°.03×29°.20E±0°.03, h2km±6km, Error ellipse: s-maj=4.4km s-min=3.9km az=163.5*
ISC 14 02:41:03.7±0.4, 36°.99N±0°.03×29°.21E±0°.03, h7km±5km, n41, σ0°84/60, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.29**	**54**	*e*PG	**Pg**	**02 41 08.9**	**-0.4**
GLHS				*e*SG	**Sg**	**02 41 14.2**	**+1.0**
GLHS	**Glhisar (BURDU**	**0.29**	**54**	*e*Pg	**Pg**	**02 41 08.9**	**-0.4**
GLHS				*e*Sg	**Sg**	**02 41 14.2**	**+1.1**
FETY	**Fethiye**	**0.36**	**196**	*e*PG	**Pg**	**02 41 10.2**	**-0.6**
FETY				*e*SG	**Sg**	**02 41 16.1**	**+0.5**
FETY	**Fethiye**	**0.36**	**196**	*e*Pg	**Pg**	**02 41 10.2**	**-0.5**
FETY				*e*Sg	**Sg**	**02 41 16.1**	**+0.6**
GOLH	**Golhisar**	**0.38**	**49**	*i* P	**Pg**	**02 41 10.8**	**-0.2**
GOLH				*i* S	**Sg**	**02 41 17.2**	**+1.2**
GOLH	**Golhisar**	**0.38**	**49**	*i* P	**Pg**	**02 41 10.8**	**-0.2**
GOLH				*i* S	**Sg**	**02 41 17.2**	**+1.2**
TURN	**Turunc**	**0.50**	**257**	*i* P	**Pg**	**02 41 17.5**	**+4.3**
TURN	**Turunc**	**0.50**	**257**	*i* P	**Pg**	**02 41 17.5**	**+4.3**
ELL	**Elmali**	**0.61**	**113**	*e*PG	**Pg**	**02 41 14.8**	**-0.6**
ELL				*e*SG	**Sg**	**02 41 24.4**	**+1.0**
ELL	**Elmali**	**0.61**	**113**	*e*Pg	**Pg**	**02 41 14.9**	**-0.6**
ELL				*e*Sg	**Sg**	**02 41 24.5**	**+1.1**
DNZL	**Cakiroluk**	**0.71**	**350**	*i* P	**Pg**	**02 41 15.9**	**-1.5**
DNZL				*i* S	**Sg**	**02 41 25.6**	**-1.0**
DNZL	**Cakiroluk**	**0.71**	**350**	*i* P	**Pg**	**02 41 15.9**	**-1.5**
DNZL				*i* S	**Sg**	**02 41 25.6**	**-1.0**
YER	**Yerkesik**	**0.75**	**282**	*e*PG	**Pg**	**02 41 17.6**	**-0.5**
YER				*e*SG	**Sg**	**02 41 29.0**	**+1.1**
YER	**Yerkesik**	**0.75**	**282**	*e*Pg	**Pg**	**02 41 17.6**	**-0.5**
YER				*e*Sg	**Sg**	**02 41 29.0**	**+1.1**
DENT	**Denizli**	**0.78**	**350**	*e*PG	**Pg**	**02 41 18.0**	**-0.6**
DENT	**Denizli**	**0.78**	**350**	*e*Pg	**Pg**	**02 41 18.0**	**-0.6**
AKAS	**Kas**	**0.82**	**157**	*i* P	**Pg**	**02 41 19.1**	**-0.3**
AKAS				*i* S	**Sg**	**02 41 34.1**	**+4.1**
AKAS	**Kas**	**0.82**	**157**	*i* P	**Pg**	**02 41 19.1**	**-0.3**
AKAS				*i* S	**Sg**	**02 41 34.1**	**+4.1**
KORT	**Korkueli**	**0.92**	**89**	*i* P	**Pg**	**02 41 19.2**	**-2.0**
KORT	**Korkueli**	**0.92**	**89**	*i* P	**Pg**	**02 41 19.2**	**-2.1**
MLSB	**Milas**	**1.18**	**285**	*e*PN	**Pn**	**02 41 25.8**	**-0.8**
MLSB	**Milas**	**1.18**	**285**	*e*Pn	**Pn**	**02 41 25.8**	**-0.8**
BCK	**Bucak**	**1.20**	**66**	*e*PN	**Pn**	**02 41 26.3**	**-0.6**
BCK	**Bucak**	**1.20**	**66**	*e*Pn	**Pn**	**02 41 26.3**	**-0.6**
AYDN	**Tasoluk**	**1.25**	**303**	*i* P	**Pn**	**02 41 27.4**	**-0.2**
AYDN				*i* S	**Sg**	**02 41 45.4**	**+1.5**
AYDN	**Tasoluk**	**1.25**	**303**	*i* P	**Pn**	**02 41 27.4**	**-0.2**
AYDN				*i* S	**Sg**	**02 41 45.4**	**+1.5**
DAT	**Datca**	**1.33**	**259**	*e*PN	**Pn**	**02 41 29.0**	**+0.4**
DAT	**Datca**	**1.33**	**259**	*e*Pn	**Pn**	**02 41 29.0**	**+0.3**
KHL	**Karahalli**	**1.36**	**11**	*e*PN	**Pn**	**02 41 28.6**	**-0.4**
KHL	**Karahalli**	**1.36**	**11**	*e*Pn	**Pn**	**02 41 28.6**	**-0.4**
KHAL	**Karahalli**	**1.40**	**9**	*i* P	**Pn**	**02 41 29.8**	**+0.2**
KHAL				*i* S	**Sb**	**02 41 49.3**	**+1.2**
KHAL	**Karahalli**	**1.40**	**9**	*i* P	**Pn**	**02 41 29.8**	**+0.2**
KHAL				*i* S	**Sb**	**02 41 49.3**	**+1.1**
BDRM	**Kayabasi**	**1.41**	**274**	*i* P	**Pn**	**02 41 30.0**	**+0.2**
BDRM				*i* S	**Sb**	**02 41 48.4**	**-0.2**
BDRM	**Kayabasi**	**1.41**	**274**	*i* P	**Pn**	**02 41 30.0**	**+0.2**
BDRM				*i* S	**Sb**	**02 41 48.4**	**-0.1**
SUTC	**Sutluce-Ispart**	**1.51**	**71**	*e*PN	**Pn**	**02 41 31.8**	**+0.6**
SUTC	**Sutluce-Ispart**	**1.51**	**71**	*e*Pn	**Pn**	**02 41 31.8**	**+0.6**
KULA	**Kula-Manisa**	**1.58**	**344**	*e*PN	**Pn**	**02 41 32.0**	**-0.2**
KULA	**Kula-Manisa**	**1.58**	**344**	*e*Pn	**Pn**	**02 41 32.0**	**-0.1**
MANT	**Manisa**	**1.58**	**341**	*i* P	Px	02 41 42.0	
HDMB	**Hadim**	**2.63**	**90**	*e*PN	**Pn**	**02 41 46.9**	**+0.4**
HDMB	**Hadim**	**2.63**	**90**	*e*Pn	**Pn**	**02 41 46.9**	**+0.4**

CASC 14 02:43:05.5±1.0, 12°.47N×87°.86W, h36km±547km, MD3.7, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.80**	**2**	*e*P	Pn	02 43 20.7	+0.4
CNCH				*e*S	Sn	02 43 32.0	+1.0
BLLM	**Bellamira**	**1.03**	**339**	*e*P	Pn	02 43 23.6	0.0
VSM	**San Miguel**	**1.03**	**337**	*e*P	Pn	02 43 24.4	+0.9
COPN	**Copaltepe**	**1.27**	**103**	*e*P	Pn	02 43 26.8	0.0
COPN				*e*S	Sn	02 43 42.5	-0.2
MOMN	**Momotombo**	**1.29**	**93**	*e*P	Pn	02 43 27.6	+0.5
CAHU	**Cacacuatique**	**1.34**	**345**	*e*P	Pn	02 43 28.1	+0.5
CAHU				*e*S	Sn	02 43 45.7	+1.4
CSAN		**1.43**	**101**	*e*P	Pn	02 43 28.6	-0.4
XAVN	**Gruta Xavier**	**1.53**	**102**	*e*P	Pn	02 43 30.5	+0.1
MGAN	**Managua**	**1.61**	**101**	*e*P	Pn	02 43 31.6	+0.2
LFRS	**El Faro**	**1.64**	**314**	*e*P	Pn	02 43 32.0	+0.1
LFRS				*e*S	Sn	02 43 52.3	+0.6
HUEN		**1.65**	**94**	*e*P	Pn	02 43 32.1	+0.1
TGUH	**Tegucigalpa,Un**	**1.68**	**20**	*e*P	Pn	02 43 32.8	+0.4
BOQS	**Boqueron**	**1.87**	**312**	*e*P	Pn	02 43 35.9	+0.9
BOQS				*e*S	Sn	02 43 57.9	+0.5
BOAB	**BOACO BROADBAN**	**2.14**	**90**	*e*P	Pn	02 43 38.3	-0.5
SBLS	**San Blas**	**2.19**	**309**	*e*P	Pn	02 43 40.5	+1.1

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*NEIC **14** 02:45:42.1±2.2, 8°.63S×121°.82E, h140km±16km, mb4.1/1, Error ellipse: s-maj=163.2km s-min=10.2km az=53.0*
IDC 14 02:45:41.5±3.2, 8°.86S×121°.71E, h143km±26km, mb3.5/2, mb1 3.5/5, mb1mx3.3/19, mbtmp3.4/5, Error ellipse: s-maj=174.6km s-min=13.2km az=55.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**4.29**	**333**	P	Pn	02 46 44.0	-1.4
	2.7nm,0.3s,baz=176,slow=10,SNR=13						
WRA	**Warramunga Arr**	**16.45**	**133**	P	Pn	02 49 24.9	+0.7
	0.7nm,0.3s,baz=306,slow=14,SNR=9.5						
WRA				S	S	02 52 19.0	-8.5
	0.2nm,0.3s,baz=306,slow=24,SNR=2.7						
WRAB	**Tennant Creek**	**16.45**	**133**	*e*P	Pn	02 49 27.1	+2.9
	4.8nm,0.5s						
ASAR	**Alice Springs**	**18.79**	**143**	P	P	02 49 51.9	+2.0
	0.2nm,0.3s,baz=330,slow=14,SNR=14						
ASAR				S	S	02 53 15.9	-0.3
	0.1nm,0.3s,baz=318,slow=22,SNR=7.3						
MK31	**Makanchi Array**	**65.58**	**331**	*e*P	P	02 56 09.7	-0.2
MKAR	**Makanchi Array**	**65.58**	**331**	P	P	02 56 10.7	+0.8
	0.5nm,0.5s,baz=119,slow=7.1,SNR=6.9						
ZALV	**Zalesovo Beam**	**69.89**	**338**	P	P	02 56 36.2	-0.6
	1.2nm,0.5s,baz=128,slow=3.8,SNR=4.8						
ZALV	**Zalesovo Beam**	**69.89**	**338**	P	P	02 56 36.2	-0.6

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*IDC **14** 02:48:18.2±1.3, 39°.21N×141°.27E, h0km, mb3.8/6, mb1 3.8/8, mb1mx3.6/27, mbtmp3.7/8, ML3.3/2, Error ellipse: s-maj=31.1km s-min=17.4km az=102.0*
*NEIC **14** 02:48:20.7, 39°.10N×140°.93E, h12km, mb4.2/6, After JMA.*
*JMA **14** 02:48:20.8, 39°.10N×140°.93E, h10km±1km, M3.7*
JMA Felt II J1.
*ISCJB **14** 02:48:20.6±0.5, 39°.12N±0°.03×140°.96E±0°.04, h18km±4km, mb4.0/12, Error ellipse: s-maj=5.8km s-min=5.0km az=2.5*
ISC 14 02:48:20.8±0.5, 39°.11N±0°.03×140°.94E±0°.04, h8km±4km, n25, σ0°92/33, mb4.0/12, 4D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.27**	**125**	⇓P	**Pg**	**02 48 26.2**	**+0.1**
JMK				*e*S	**Sg**	**02 48 41.1**	**+0.5**
JRG	**Rokugo**	**0.38**	**321**	P	**Pg**	**02 48 28.2**	**0.0**
JRG				*e*S	**Sg**	**02 48 33.8**	**+0.7**
JOM	**Ohasama**	**0.46**	**37**	P	**Pg**	**02 48 29.6**	**-0.1**
JOM				*e*S	**Sg**	**02 48 36.1**	**+0.3**
JYK	**Kaneyama**	**0.49**	**248**	⇓P	**Pg**	**02 48 30.2**	**-0.1**
JYK				*e*S	**Sg**	**02 48 36.6**	**-0.1**
OFUJ	**Ofunato**	**0.57**	**92**	⇓P	**Pg**	**02 48 31.9**	**+0.1**
JIO	**Ouri**	**0.72**	**154**	⇓P	**Pg**	**02 48 34.5**	**-0.2**
JIO				*e*S	**Sg**	**02 48 43.9**	**-0.3**
JOU	**Okura**	**0.77**	**196**	P	**Pg**	**02 48 34.6**	**-1.0**
JOU				S	**Sg**	**02 48 45.7**	**+0.1**
MAJO	**Matsushiro**	**3.35**	**221**	*e*Pn	**Pn**	**02 49 15.4**	**+2.0**
MAT	**Matsushiro**	**3.35**	**221**	P	**Pn**	**02 49 15.2**	**+1.7**
MAT				*e*S	**Sn**	**02 50 00.5**	**+7.0**
MJAR	**Matsushiro Arr**	**3.35**	**221**	Pn	**Pn**	**02 49 15.2**	**+1.7**
	1.3nm,0.3s,baz=20,slow=27,SNR=5.7						
MJAR				Pg	**Pg**	**02 49 22.2**	**-2.8**
	1.3nm,0.3s,baz=30,slow=13,SNR=11						
MJAR				Lg		02 50 12.6	
	0.8nm,0.3s,baz=21,slow=25,SNR=5.5						
ERM	**Erimo**	**3.36**	**29**	*e*Pn	**Pn**	**02 49 13.4**	**-0.2**
KSRS	**Korea Array**	**10.37**	**265**	Pn	**Pn**	**02 50 54.1**	**+4.3**
	0.4nm,0.3s,baz=82,slow=14,SNR=5.8						
ULN	**Ulaanbaatar**	**25.93**	**301**	*e*P	**P**	**02 53 52.3**	**-1.0**
	1.0nm,0.5s,mb3.6						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**40.27**	**311**	P	**P**	**02 55 57.6**	**-0.4**
	1.2nm,0.7s,mb3.8,baz=96,slow=7.4,SNR=6.6						
KURK	**Kurchatov**	**44.38**	**306**	P	**P**	**02 56 32.0**	**+0.5**
	0.9nm,0.5s,mb3.8,baz=83,slow=8.6,SNR=5.9						
TKM2	**Tokmak 2**	**48.34**	**297**	*e*P	**P**	**02 57 03.5**	**+0.7**
	4.4nm,1.1s,mb4.4						
BRVK	**Borovoye**	**48.98**	**311**	*e*P	**P**	**02 57 08.3**	**+0.7**
	0.9nm,0.4s,mb4.2						
ARU	**Arti**	**54.57**	**317**	*e*P	**P**	**02 57 48.0**	**-1.3**
	1.9nm,0.3s,mb4.6						
ABKAR	**Abkulak array**	**56.34**	**309**	*e*P	**P**	**02 58 01.6**	**-0.5**
	0.4nm,0.5s,mb3.7						
WRA	**Warramunga Arr**	**59.06**	**187**	P	**P**	**02 58 20.7**	**-0.8**
	1.2nm,0.9s,mb3.9,baz=3.7,slow=7.0,SNR=4.3						
ASAR	**Alice Springs**	**62.79**	**187**	P	**P**	**02 58 47.2**	**+0.5**
	0.4nm,0.7s,mb3.6,baz=345,slow=4.4,SNR=4.5						
FINES	**FINESS Array B**	**66.81**	**332**	P	**P**	**02 59 11.6**	**-1.0**
	0.9nm,0.8s,mb3.9,baz=8.9,slow=9.8,SNR=3.3						
FINES	**FINESS Array B**	**66.81**	**332**	P	**P**	**02 59 11.6**	**-1.0**
SUMG	**Summit**	**68.62**	**360**	*e*P	**P**	**02 59 24.7**	**+0.9**
	5.3nm,1.0s,mb4.4						
BRTR	**Keskin Array B**	**77.21**	**311**	P	**P**	**03 00 13.7**	**-1.7**
	0.9nm,1.0s,mb3.6,baz=133,slow=5.2,SNR=3.8						

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*IDC **14** 02:55:37.7±0.6, 38°.98N×140°.81E, h0km, mb3.9/13, mb1 4.0/15, mb1mx3.9/27, mbtmp3.8/15, ML3.7/2, MS4.4/1, Ms1 4.4/1, ms1mx3.2/41, Error ellipse: s-maj=19.1km s-min=13.3km az=111.0*
*NEIC **14** 02:55:39.4, 38°.95N×140°.89E, h9km, mb4.2/4, After JMA.*
NEIC Recorded [2 JMA] in Iwate and Miyagi; [1 JMA] in Akita and Yamagata.
*JMA **14** 02:55:39.4, 38°.95N×140°.88E, h8km±1km, M3.8*
Broadband fault plane solution: P waves. NP1: ϕ_0=241.00000°, δ40.00000°, λ144.00000°. NP2:ϕ_0=1.00000°, δ68.00000°, λ56.00000°. Principal axes: T Plg54.0000°, Azm228.0000°; N Plg31.0000°, Azm15.0000°; P Plg16.0000°, Azm115.0000°;
JMA Felt II J1.
*ISCJB **14** 02:55:39.2±0.4, 38°.94N±0°.03×140°.89E±0°.03, h21km±3km, mb3.8/16 Error ellipse: s-maj=5.1km s-min=3.9km az=142.2*
ISC 14 02:55:39.4±0.4, 38°.94N±0°.03×140°.88E±0°.03, h9km±3km, n36, σ0°71/46, mb3.8/16, 3C-5D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.27**	**86**	⇓P	**Pg**	**02 55 44.6**	**-0.1**
JMK				S	**Sg**	**02 55 48.3**	**0.0**
JYK	**Kaneyama**	**0.41**	**268**	⇓P	**Pg**	**02 55 47.5**	**+0.2**
JYK				S	**Sg**	**02 55 53.0**	**+0.3**
JRG	**Rokugo**	**0.50**	**337**	⇓P	**Pg**	**02 55 49.0**	**-0.1**
JRG				S	**Sg**	**02 55 55.9**	**+0.2**
JOU	**Okura**	**0.59**	**197**	⇑P	**Pg**	**02 55 51.0**	**+0.1**
JOU				S	**Sg**	**02 55 58.9**	**+0.3**
JIO	**Ouri**	**0.60**	**143**	⇓P	**Pg**	**02 55 50.7**	**-0.3**
JIO				S	**Sg**	**02 55 58.7**	**-0.2**
JOM	**Ohasama**	**0.62**	**31**	P	**Pg**	**02 55 51.1**	**-0.4**
JOM				*e*S	**Sg**	**02 55 59.6**	**-0.1**
OFUJ	**Ofunato**	**0.63**	**76**	⇓P	**Pg**	**02 55 51.3**	**-0.3**
OFUJ				S	**Sg**	**02 55 59.7**	**-0.1**
JYS	**Shirataka**	**0.96**	**222**	⇑P	**Pg**	**02 55 57.5**	**-0.3**
JYS				S	**Sg**	**02 56 10.4**	**+0.2**
JYA	**Atsumi**	**0.97**	**250**	⇑P	**Pg**	**02 55 57.7**	**-0.4**
JYA				S	**Sg**	**02 56 10.6**	**-0.2**
MAJO	**Matsushiro**	**3.19**	**222**	*e*Pn	**Pn**	**02 56 31.0**	**+1.3**
MAT	**Matsushiro**	**3.19**	**222**	P	**Pn**	**02 56 30.9**	**+1.2**
MAT				S	**Sn**	**02 57 16.8**	**+8.9**
MJAR	**Matsushiro Arr**	**3.19**	**222**	Pn	**Pn**	**02 56 30.4**	**+0.6**
	4.9nm,0.3s,baz=17,slow=15,SNR=22						
MJAR				Pg	**Pg**	**02 56 37.0**	**-3.5**
	4.6nm,0.3s,baz=26,slow=14,SNR=25						
MJAR				Lg		02 57 18.3	
	4.5nm,0.3s,baz=356,slow=26,SNR=5.6						
ERM	**Erimo**	**3.53**	**29**	*e*Pn	**Pn**	**02 56 36.1**	**+1.8**
ASAJ	**Asahikawa**	**5.33**	**13**	Pn	**Pn**	**02 57 00.7**	**+1.6**
	1.5nm,0.3s,baz=258,slow=15,SNR=5.2						
ASAJ				LR	LR	02 59 41.0	
	comp=Z,4μm,21.0s,baz=143,slow=46						
KSRS	**Korea Array**	**10.31**	**266**	Pn	**Pn**	**02 58 08.1**	**+0.7**
	1.2nm,0.3s,baz=78,slow=14,SNR=9.2						
ZALV	**Zalesovo Beam**	**40.34**	**311**	P	**P**	**03 03 16.2**	**-0.8**
	0.6nm,0.4s,mb3.6,baz=86,slow=7.6,SNR=4.6						
MK31	**Makanchi Array**	**42.78**	**300**	*e*P	**P**	**03 03 36.5**	**-0.5**
MKAR	**Makanchi Array**	**42.78**	**300**	P	**P**	**03 03 36.1**	**-0.9**
	0.5nm,0.7s,mb3.4,baz=74,slow=13,SNR=5.4						
KURK	**Kurchatov**	**44.45**	**307**	P	**P**	**03 03 50.6**	**+0.2**
	1.5nm,0.5s,mb4.0,baz=82,slow=8.3,SNR=14						
**KUR

1.0nm,0.3s,baz=79,slow=14,SNR=12
KSRS Sn **Sn** 03 02 54.8 +6.4
0.3nm,0.3s,baz=75,slow=24,SNR=9.6
KSRS LR LR 03 04 10.3
comp=Z,1μm,20.1s,baz=55,slow=33
ZALV Zalesovo Beam 40.27 311 P **P** 03 06 00.5 +0.3
0.5nm,0.5s,mb3.5,baz=64,slow=6.8,SNR=3.5
MK31 Makanchi Array 42.73 300 *e*P **P** 03 06 19.9 -0.6
MKAR Makanchi Array 42.73 300 P **P** 03 06 20.6 0.0
0.5nm,0.7s,mb3.4,baz=70,slow=14,SNR=3.8
KURK Kurchatov 44.39 306 P **P** 03 06 34.5 +0.7
1.2nm,0.4s,mb4.0,baz=82,slow=8.4,SNR=6.7
KURK Kurchatov 44.39 306 *e*P **P** 03 06 33.6 -0.2
1.4nm,0.5s,mb4.0
TKM2 Tokmak 2 48.35 297 *e*P **P** 03 07 04.8 -0.2
2.1nm,0.7s,mb4.3
BVAR Borovoye Array 48.92 311 P **P** 03 07 09.7 +0.4
0.6nm,0.5s,mb3.9,baz=78,slow=10,SNR=3.0
ARU Arti 54.58 317 *e*P **P** 03 07 50.9 -0.5
2.8nm,0.7s,mb4.4
ABKAR Akbulak array 56.34 309 *e*P **P** 03 08 04.0 -0.2
1.0nm,0.6s,mb4.0
WRA Warramunga Arr 59.06 187 P **P** 03 08 23.4 -0.3
1.0nm,0.6s,mb4.0,baz=5.5,slow=7.2,SNR=4.7
ASAR Alice Springs 62.79 187 P **P** 03 08 49.1 +0.3
0.6nm,0.7s,mb3.8,baz=5.8,slow=4.7,SNR=7.6
FINES FINESS Array B 66.81 332 P **P** 03 09 13.8 -0.9
1.7nm,0.7s,mb4.2,baz=90,slow=1.9,SNR=6.5
HFS Hagfors 72.05 335 P **P** 03 09 47.2 0.0
0.7nm,0.5s,mb3.9,baz=50,slow=6.9,SNR=7.0
NB2 NORSAR Subarra 72.14 337 P **P** 03 09 48.0 +0.3
comp=Z,0.5nm,0.6s,mb3.6,baz=39,slow=6.2
NOA NORSAR Array B 72.14 337 P **P** 03 09 46.9 -0.8
comp=Z,0.8nm,0.7s,mb3.8,baz=40,slow=6.0,SNR=3.6
AKASG Malin Array Be 72.44 322 P **P** 03 09 49.7 0.0
comp=Z,0.3nm,0.3s,mb3.7,baz=46,slow=5.5,SNR=4.1
NVAR Mina Array Bea 74.05 53 P **P** 03 09 58.4 -1.0
comp=Z,0.3nm,0.4s,mb3.5,baz=320,slow=2.4,SNR=5.3
PDAR Pinedale Array 76.48 46 P **P** 03 10 14.1 +0.8
comp=Z,0.5nm,0.8s,mb3.5,baz=4.6,slow=4.5,SNR=3.3
BRTR Keskin Array B 77.21 311 P **P** 03 10 18.1 +0.6
comp=Z,0.1nm,0.5s,mb3.0,baz=141,slow=6.1,SNR=4.0
LPAZ La Paz 145.91 56 PKPbc PKPbc 03 18 03.8 +0.3
comp=Z,0.5nm,0.5s,baz=359,slow=5.2,SNR=3.5

*SKO **14** 03:06:44.4, 41°.88N×23°.25E, h10km, M1.6, ML2.0*
*CSEM **14** 03:06:44.8±0.2, 41°.89N×23°.17E, h2km, ML1.8, Error ellipse: s-maj=5.2km s-min=2.6km az=73.0*
*THE **14** 03:06:46.9, 41°.78N×23°.21E, h0km±3km, ML2.6/5, Error ellipse: s-maj=3.5km s-min=1.3km az=332.0*
*BEO **14** 03:06:46.9±1.3, 41°.95N×23°.23E, h0km, ML1.8/2*
ISC 14 03:06:45.0±0.7,**41°.88N**±0°.02×**23°.21E**±0°.04,**h0**km±5km,
n26,σ0°83/52,3C,Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VTS	**Vitosha**	**0.72**	**0**	↑*i*Pg	**Pg**	**03 06 58.4**	**-0.3**
VTS				*i* Sg	**Sg**	**03 07 07.2**	**-0.8**
VTS	**Vitosha**	**0.72**	**0**	↑*i*Pg	**Pg**	**03 06 58.4**	**-0.3**
VTS				*i* Sg	**Sg**	**03 07 07.2**	**-0.8**
VAY	**Valandovo**	**0.73**	**221**	*i* Pg	**Pg**	**03 06 59.3**	**+0.3**
VAY				*i* Sg	**Sg**	**03 07 09.5**	**+1.1**
VAY				*e*Lg		03 07 09.7	
	comp=E,40nm,0.5s						
VAY				*e*Lg		03 07 09.9	
	comp=N,51nm,0.5s						
VAY	**Valandovo**	**0.73**	**221**	P	**Pg**	**03 06 58.9**	**-0.1**
VAY				S	**Sg**	**03 07 08.8**	**+0.4**
VAY	**Valandovo**	**0.73**	**221**	P	**Pg**	**03 06 58.9**	**-0.1**
VAY				S	**Sg**	**03 07 08.8**	**+0.4**
SRS	**Serrai**	**0.81**	**159**	P	**Pg**	**03 07 00.5**	**0.0**
SRS				S	**Sg**	**03 07 10.7**	**-0.3**
SRS	**Serrai**	**0.81**	**159**	P	**Pg**	**03 07 00.5**	**0.0**
SRS				S	**Sg**	**03 07 10.7**	**-0.3**
SOH	**Sokhos**	**1.06**	**174**	P	**Pg**	**03 07 05.0**	**-0.2**
SOH				S	**Sg**	**03 07 19.7**	**+0.8**
SOH	**Sokhos**	**1.06**	**174**	P	**Pg**	**03 07 05.0**	**-0.2**
SOH				S	**Sg**	**03 07 19.7**	**+0.8**
THE	**Thessaloniki**	**1.25**	**188**	P	**Pn**	**03 07 08.9**	**-0.8**
THE				S	**Sn**	**03 07 26.5**	**-0.7**
THE	**Thessaloniki**	**1.25**	**188**	P	**Pn**	**03 07 08.9**	**-0.8**
THE				S	**Sn**	**03 07 26.5**	**-0.7**
HORT	**Hortiatis**	**1.28**	**184**	P	**Pn**	**03 07 09.4**	**-0.6**
HORT				S	**Sn**	**03 07 25.6**	**-2.2**
HORT	**Hortiatis**	**1.28**	**184**	P	**Pn**	**03 07 09.4**	**-0.6**
HORT				S	**Sn**	**03 07 25.6**	**-2.2**
KAVA	**Kavala**	**1.32**	**131**	P	**Pn**	**03 07 09.8**	**-0.8**
KAVA				S	**Sn**	**03 07 28.0**	**-0.8**
KAVA	**Kavala**	**1.32**	**131**	P	**Pn**	**03 07 09.8**	**-0.8**
KAVA				S	**Sn**	**03 07 28.0**	**-0.8**
BARS	**Barje**	**1.40**	**313**	*e*Pg	**Pn**	**03 07 11.0**	**-0.7**
BARS				*i* Sg	**Sn**	**03 07 30.5**	**-0.3**
BARS	**Barje**	**1.40**	**313**	*e*Pg	**Pn**	**03 07 11.0**	**-0.7**
BARS				*i* Sg	**Sn**	**03 07 30.5**	**-0.3**
ZAPS	**Zavoj**	**1.46**	**343**	↑*i*Pg	**Pn**	**03 07 12.9**	**+0.3**
ZAPS				*i* Sg	**Sn**	**03 07 31.7**	**-0.7**
PLG	**Polygyros**	**1.51**	**173**	P	**Pn**	**03 07 13.0**	**-0.2**
PLG				S	**Sn**	**03 07 34.3**	**+0.7**
PLG	**Polygyros**	**1.51**	**173**	P	**Pn**	**03 07 13.0**	**-0.2**
PLG				S	**Sn**	**03 07 34.3**	**+0.7**
KRUS	**Krusevo**	**1.55**	**252**	*e*Pg	**Pn**	**03 07 14.1**	**+0.3**
KRUS				*e*Sg	**Sn**	**03 07 34.2**	**-0.4**
KRUS				*e*Lg		03 07 34.4	
	comp=E,1.8nm,0.2s						
KRUS				*e*Lg		03 07 35.1	
	comp=N,1.5nm,0.2s						
BIA	**Bitola**	**1.65**	**239**	*e*Pg	**Pn**	**03 07 16.2**	**+1.1**
BIA				*e*Sg	**Sn**	**03 07 37.8**	**+0.7**
BIA				*e*Lg		03 07 38.1	
	comp=N,3.7nm,0.3s						
BIA				*e*Lg		03 07 38.2	
	comp=E,5.0nm,0.3s						
NISS		**1.79**	**329**	*e*Pg	**Pn**	**03 07 17.7**	**+0.6**
NISS				*i* Sg	**Sn**	**03 07 41.6**	**+1.2**
NISS		**1.79**	**329**	*e*Pg	**Pn**	**03 07 17.7**	**+0.6**
NISS				*i* Sg	**Sn**	**03 07 41.6**	**+1.2**
RDO	**Rodhopi**	**1.90**	**112**	P	**Pn**	**03 07 20.1**	**+1.6**
RDO				S	**Sn**	**03 07 44.8**	**+1.7**
RDO	**Rodhopi**	**1.90**	**112**	P	**Pn**	**03 07 20.1**	**+1.6**
RDO				S	**Sn**	**03 07 44.8**	**+1.7**

*IDC **14** 03:09:18.6±0.6, 38°.89N×140°.75E, h0km, mb4.1/21, mb1 4.3/22, mb1mx4.2/30, mbtmp4.1/22, ML3.7/2, MS3.7/1, Ms1 3.7/1, ms1mx2.7/40, Error ellipse: s-maj=17.6km s-min=13.7km az=79.0*
*BJI **14** 03:09:19.0, 38°.82N×141°.19E, h18km, mB5.0/5, mb4.4/6, Ms4.4/1, Ms7 4.3/1*
*NEIC **14** 03:09:20.3, 38°.88N×140°.86E, h9km, mb4.4/20, After JMA.*
*JMA **14** 03:09:20.2, 38°.88N×140°.86E, h8km±1km, M4.1 Broadband fault plane solution: P waves. NP1: φs=208.00000°, δ41.00000°, λ116.00000°. NP2: φs=356.00000°, δ54.00000°, λ69.00000°. Principal axes: T Plg72.0000°, Azm212.0000°; N Plg17.0000°, Azm8.0000°; P Plg7.0000°, Azm100.0000°;*
JMA Felt III J1.
*ISCJB **14** 03:09:20.1±0.4, 38°.88N±0°.02×140°.87E±0°.03, h21km±3km, mb4.2/39 Error ellipse: s-maj=4.8km s-min=3.8km az=31.1*
ISC 14 03:09:20.2±0.4,**38°.87N**±0°.02×**140°.85E**±0°.03,**h9**km±2km,
n62,σ0°81/72,mb4.2/39,**3C-5D,Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.30**	**74**	↓P	**Pg**	**03 09 25.9**	**-0.2**
JMK				*e*S	**Sg**	**03 09 30.0**	**-0.1**
JYK	**Kaneyama**	**0.39**	**278**	↓P	**Pg**	**03 09 28.0**	**+0.2**
JYK				*e*S	**Sg**	**03 09 33.3**	**+0.4**
JOU	**Okura**	**0.52**	**197**	↑P	**Pg**	**03 09 30.6**	**+0.3**
JOU				S	**Sg**	**03 09 37.8**	**+0.7**
JRG	**Rokugo**	**0.56**	**342**	↓P	**Pg**	**03 09 30.9**	**0.0**
JRG				S	**Sg**	**03 09 39.0**	**+0.8**
JIO	**Ouri**	**0.57**	**137**	↓P	**Pg**	**03 09 30.8**	**-0.3**
JIO				S	**Sg**	**03 09 38.6**	**+0.1**
JOM	**Ohasama**	**0.69**	**29**	P	**Pg**	**03 09 33.1**	**-0.5**
JOM				S	**Sg**	**03 09 42.3**	**-0.3**
JYS	**Shiratake**	**0.89**	**224**	↑P	**Pg**	**03 09 37.3**	**-0.1**
JYS				S	**Sg**	**03 09 49.6**	**+0.6**
JYA	**Atsumi**	**0.93**	**253**	↓P	**Pg**	**03 09 38.0**	**-0.1**
JYA				S	**Sg**	**03 09 50.5**	**+0.3**
JMM	**Marumori**	**1.00**	**183**	↑P	**Pg**	**03 09 38.4**	**-1.0**
JMM				S	**Sg**	**03 09 51.7**	**-0.7**
MAJO	**Matsushiro**	**3.13**	**223**	*e*Pn	**Pn**	**03 10 10.4**	**+0.8**
MAT	**Matsushiro**	**3.13**	**223**	P	**Pn**	**03 10 10.8**	**+1.1**
MAT				S	**Sn**	**03 10 56.2**	**+9.1**
MJAR	**Matsushiro Arr**	**3.13**	**223**	Pn	**Pn**	**03 10 09.8**	**+0.2**
	2.7nm,0.3s,baz=90,slow=30,SNR=21						
MJAR				Pg	**Pg**	**03 10 17.8**	**-2.3**
	5.1nm,0.3s,baz=19,slow=14,SNR=31						
MJAR				LR	LR	03 11 06.0	
	comp=Z,1μm,21.1s,baz=50,slow=35						
ASAJ	**Asahikawa**	**5.41**	**13**	Pn	**Pn**	**03 10 43.5**	**+2.6**
	1.5nm,0.3s,baz=277,slow=18,SNR=7.2						
JHJ	**Hachijo jima 2**	**5.80**	**189**	Pn	**Pn**	**03 10 48.0**	**+1.6**
	21nm,0.3s,baz=260,slow=17,SNR=5.9						
KSRS	**Korea Array**	**10.28**	**266**	Pn	**Pn**	**03 11 50.8**	**+3.0**
	0.7nm,0.3s,baz=79,slow=14,SNR=18						
SONM	**Songino Array**	**26.43**	**301**	P	**P**	**03 14 56.2**	**-0.9**
	1.1nm,0.3s,mb3.8,baz=44,slow=8.5,SNR=2.5						
ENH	**Enshi**	**27.11**	**261**	*e*P	**P**	**03 15 03.4**	**0.0**
	4.6nm,0.5s,mb4.3						
BILL	**Bilibino**	**32.41**	**18**	*e*P	**P**	**03 15 49.2**	**-0.7**
	1.2nm,0.6s,mb3.9						
ZALV	**Zalesovo Beam**	**40.37**	**311**	P	**P**	**03 16 57.7**	**-0.3**
	3.1nm,0.8s,mb4.1,baz=86,slow=7.6,SNR=12						
ZALV	**Zalesovo Beam**	**40.37**	**311**	P	**P**	**03 16 57.7**	**-0.4**
MKAR	**Makanchi Array**	**42.79**	**300**	P	**P**	**03 17 17.5**	**-0.5**
	0.7nm,0.8s,mb3.5,baz=78,slow=12,SNR=4.6						
KURK	**Kurchatov**	**44.47**	**307**	P	**P**	**03 17 31.2**	**-0.2**
	5.4nm,0.9s,mb4.3,baz=82,slow=8.3,SNR=29						
KURK	**Kurchatov**	**44.47**	**307**	*e*P	**P**	**03 17 30.3**	**-1.1**
	8.8nm,1.0s,mb4.4						
MCK	**McKinley**	**47.37**	**35**	*e*P	**P**	**03 17 54.5**	**+0.4**
	2.0nm,0.5s,mb4.3						
BVAR	**Borovoye Array**	**49.02**	**311**	P	**P**	**03 18 07.0**	**-0.1**
	0.6nm,0.4s,mb4.0,baz=88,slow=10,SNR=4.8						
BRVK	**Borovoye**	**49.08**	**311**	*e*P	**P**	**03 18 07.2**	**-0.3**
	3.3nm,0.9s,mb4.4						
INK	**Inuvik**	**52.97**	**28**	P	**P**	**03 18 36.6**	**+0.1**
	1.2nm,0.6s,mb4.0,baz=301,slow=4.3,SNR=3.4						
INK	**Inuvik**	**52.97**	**28**	*e*P	**P**	**03 18 36.6**	**+0.1**
	1.5nm,0.7s,mb4.0						
ARU	**Arti**	**54.70**	**318**	*e*P	**P**	**03 18 48.5**	**-0.8**
	9.0nm,1.2s,mb4.7						
ABKAR	**Akbulak array**	**56.43**	**309**	*e*P	**P**	**03 19 01.4**	**-0.6**
	4.4nm,0.6s,mb4.7						
AKTK	**Aktyubinsk**	**57.13**	**311**	P	**P**	**03 19 06.2**	**-0.7**
AKTO	**Aktyubinsk**	**57.13**	**311**	P	**P**	**03 19 06.2**	**-0.7**
	2.7nm,0.8s,mb4.3,baz=77,slow=14,SNR=9.2						
WRAB	**Tennant Creek**	**58.81**	**187**	*e*P	**P**	**03 19 18.1**	**-0.8**
	6.1nm,0.8s,mb4.7						
WRA	**Warramunga Arr**	**58.82**	**187**	P	**P**	**03 19 18.4**	**-0.5**
	7.0nm,0.7s,mb4.8,baz=5.1,slow=7.2,SNR=32						
RES	**Resolute Bay**	**60.94**	**15**	P	**P**	**03 19 31.9**	**-1.1**
	1.4nm,0.8s,mb4.2,baz=215,slow=23,SNR=4.8						
ARCES	**ARCESS Array B**	**62.13**	**339**	P	**P**	**03 19 39.7**	**-1.3**
	0.6nm,0.5s,mb4.0,baz=46,slow=8.7,SNR=12						
ASAR	**Alice Springs**	**62.54**	**187**	P	**P**	**03 19 44.1**	**-0.1**
	3.6nm,0.7s,mb4.6,baz=10,slow=5.8,SNR=30						
FINES	**FINESS Array B**	**66.99**	**332**	P	**P**	**03 20 12.2**	**-0.6**
	1.9nm,0.7s,mb4.2,baz=35,slow=7.0,SNR=7.4						
SUMG	**Summit**	**68.85**	**360**	*e*P	**P**	**03 20 25.1**	**+0.7**
	2.6nm,0.6s,mb4.3						
KIV	**Kislovodsk**	**69.38**	**310**	*e*P	**P**	**03 20 29.1**	**+0.9**
	11nm,0.8s,mb4.8						
GNI	**Garni**	**70.27**	**306**	*e*P	**P**	**03 20 33.6**	**-0.1**
STKA	**Stephens Creek**	**70.39**	**179**	P	**P**	**03 20 33.8**	**-0.5**
	2.9nm,0.8s,mb4.2,baz=275,slow=4.6,SNR=5.4						
SLMT	**Seeley Lake**	**71.70**	**44**	*e*P	**P**	**03 20 42.7**	**+0.4**
	2.7nm,0.7s,mb4.3						
HFS	**Hagfors**	**72.24**	**335**	P	**P**	**03 20 44.6**	**-0.7**
	0.8nm,0.4s,mb4.0,baz=58,slow=6.1,SNR=9.0						
NB2	**NORSAR Subarra**	**72.33**	**337**	P	**P**	**03 20 45.2**	**-0.6**
	comp=Z,0.6nm,0.6s,mb3.7,baz=40,slow=6.2						
NOA	**NORSAR Array B**	**72.33**	**337**	P	**P**	**03 20 45.5**	**-0.3**
	comp=Z,1.5nm,0.8s,mb4.0,baz=40,slow=5.8,SNR=5.1						
NOA	**NORSAR Array B**	**72.33**	**337**	P	**P**	**03 20 45.5**	**-0.3**
AKASG	**Malin Array Be**	**72.58**	**322**	P	**P**	**03 20 46.9**	**-0.7**
	comp=Z,2.0nm,0.7s,mb4.2,baz=46,slow=5.7,SNR=8.4						
KIEV	**Kiev**	**72.59**	**322**	*e*P	**P**	**03 20 46.5**	**-1.1**
	comp=Z,2.4nm,0.6s,mb4.3						
LRM	**Limekiln Ridge**	**73.15**	**44**	*e*P	**P**	**03 20 52.0**	**+1.1**
	comp=Z,11nm,0.7s,mb4.9						
BOZ	**Bozeman (W)**	**73.71**	**44**	*e*P	**P**	**03 20 55.2**	**+0.9**
	comp=Z,2.3nm,0.7s,mb4.2						
NVAR	**Mina Array Bea**	**74.25**	**53**	P	**P**	**03 20 59.1**	**+1.6**
	comp=Z,1.7nm,0.7s,mb4.1,baz=291,slow=5.5,SNR=16						
IMW	**Indian Meadow**	**75.20**	**45**	*e*P	**P**	**03 21 03.9**	**+0.9**
	comp=Z,1.6nm,0.8s,mb4.0						
DUG	**Dugway**	**76.49**	**49**	*e*P	**P**	**03 21 11.4**	**+0.9**
	comp=Z,1.7nm,0.8s,mb4.0						
PDAR	**Pinedale Array**	**76.70**	**45**	P	**P**	**03 21 12.3**	**+0.8**
	comp=Z,1.3nm,0.6s,mb4.0,baz=291,slow=1.8,SNR=12						
BRTR	**Keskin Array B**	**77.31**	**311**	P	**P**	**03 21 15.1**	**0.0**
	comp=Z,1.8nm,1.0s,mb3.9,baz=87,slow=5.4,SNR=7.3						
SRU	**San Rafael**	**78.54**	**49**	*e*P	**P**	**03 21 22.7**	**+0.8**
	comp=Z,2.5nm,0.8s,mb4.2						
MORC	**Moravsky Berou**	**78.59**	**326**	*e*P	**P**	**03 21 20.9**	**-1.1**
	comp=Z,3.1nm,1.1s,mb4.2						
PSZ	**Piszkesteto**	**78.91**	**324**	*e*P	**P**	**03 21 24.7**	**+0.9**
	comp=Z,3.1nm,1.0s,mb4.2						
GERES	**GERESS Array B**	**80.92**	**328**	P	**P**	**03 21 34.4**	**-0.2**
	comp=Z,0.6nm,0.7s,mb3.6,baz=15,slow=5.5,SNR=6.2						
TXAR	**Lajitas Array**	**89.35**	**52**	P	**P**	**03 22 17.8**	**+0.6**
	comp=Z,0.6nm,0.7s,mb4.0,baz=297,slow=3.2,SNR=8.4						
LPAZ	**La Paz**	**146.10**	**57**	PKPbc	PKPbc	03 29 00.7	-0.3
	comp=Z,2.9nm,0.9s,baz=355,slow=5.1,SNR=11						

*NIED **14** 03:10:00, 39°.10N×140°.90E, h5km, Mw4.7 Best double couple: M0 1.19000×10^16 NP1:φs=224.00000°, δ53.00000°, λ89.00000°. NP2:φs46.00000°, δ37.00000°, λ92.00000°.*
*IDC **14** 03:10:05.7±0.6, 38°.89N×140°.74E, h0km, mb4.2/18, mb1 4.3/19, mb1mx4.1/30, mbtmp4.2/19, ML3.7/1, Error ellipse: s-maj=19.5km s-min=15.5km az=86.0*
*ISCJB **14** 03:10:07.0±0.5, 38°.87N±0°.03×140°.84E±0°.04, h19km±3km, mb4.2/38, Error ellipse: s-maj=5.9km s-min=5.6km az=43.6*
*JMA **14** 03:10:07.3, 38°.88N×140°.86E, h8km±1km, M3.9*
*NEIC **14** 03:10:07.3, 38°.88N×140°.86E, h9km, mb4.3/20, After JMA.*
ISC 14 03:10:07.4±0.5,**38°.87N**±0°.03×**140°.84E**±0°.04,**h10**km±3km,
n54,σ0°80/57,mb4.2/38,**1D,Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.31**	**75**	P	**Pg**	**03 10 12.9**	**-0.7**
JMK				*e*S	**Sg**	**03 10 17.0**	**-0.7**
JYK	**Kaneyama**	**0.38**	**277**	↓P	**Pg**	**03 10 15.1**	**+0.2**
JYK				*e*S	**Sg**	**03 10 20.2**	**+0.2**
JOU	**Okura**	**0.53**	**195**	P	**Pg**	**03 10 17.8**	**+0.1**
JOU				S	**Sg**	**03 10 24.9**	**+0.3**
JRG	**Rokugo**	**0.55**	**343**	P	**Pg**	**03 10 18.3**	**+0.2**
JRG				S	**Sg**	**03 10 25.8**	**+0.5**
JIO	**Ouri**	**0.58**	**136**	P	**Pg**	**03 10 18.3**	**-0.3**
MAJO	**Matsushiro**	**3.13**	**223**	*e*Pn	**Pn**	**03 10 56.5**	**-0.2**
MJAR	**Matsushiro Arr**	**3.13**	**223**	Pn	**Pn**	**03 10 56.8**	**+0.1**
	9.7nm,0.3s,baz=22,slow=5.3,SNR=6.7						
KSRS	**Korea Array**	**10.27**	**266**	Pn	**Pn**	**03 12 37.6**	**+2.8**
	0.6nm,0.3s,baz=82,slow=14,SNR=5.8						
ZALV	**Zalesovo Beam**	**40.36**	**311**	P	**P**	**03 17 44.2**	**-0.7**
	1.6nm,0.6s,mb3.9,baz=86,slow=7.6,SNR=5.7						
ZALV	**Zalesovo Beam**	**40.36**	**311**	P	**P**	**03 17 44.2**	**-0.7**
MK31	**Makanchi Array**	**42.78**	**300**	*e*P	**P**	**03 18 08.8**	**+3.8**
KURK	**Kurchatov**	**44.46**	**307**	P	**P**	**03 18 18.7**	**+0.3**
	4.2nm,0.9s,mb4.2,baz=82,slow=8.3,SNR=8.2						
KDAK	**Kodiak Island**	**46.05**	**43**	P	**P**	**03 18 30.7**	**-0.2**
	3.0nm,0.5s,mb4.5,baz=24,slow=4.8,SNR=4.6						
TKM2	**Tokmak 2**	**48.38**	**297**	*e*P	**P**	**03 18 49.1**	**-0.2**
	1.6nm,0.6s,mb4.2						
BVAR	**Borovoye Array**	**49.01**	**311**	P	**P**	**03 18 53.2**	**-0.8**
	0.7nm,0.4s,mb4.1,baz=79,slow=7.7,SNR=3.7						
COEN	**Coen**	**52.60**	**177**	*e*P	**P**	**03 19 21.8**	**+0.5**
	31nm,0.7s,mb5.3						
INK	**Inuvik**	**52.97**	**28**	*e*P	**P**	**03 19 23.1**	**-0.4**
	1.9nm,0.8s,mb4.1						
ARU	**Arti**	**54.69**	**318**	*e*P	**P**	**03 19 33.8**	**-2.5**
	3.6nm,0.8s,mb4.5						
ABKAR	**Akbulak array**	**56.42**	**309**	*e*P	**P**	**03 19 48.0**	**-0.8**
	3.9nm,0.6s,mb4.6						
AKTK	**Aktyubinsk**	**57.12**	**311**	P	**P**	**03 19 52.7**	**-1.1**
AKTO	**Aktyubinsk**	**57.12**	**311**	P	**P**	**03 19 52.7**	**-1.1**
	1.6nm,0.8s,mb4.1,baz=80,slow=15,SNR=4.1						
WRAB	**Tennant Creek**	**58.81**	**187**	*e*P	**P**	**03 20 04.7**	**-1.1**
	6.1nm,0.8s,mb4.7						
WRA	**Warramunga Arr**	**58.82**	**187**	P	**P**	**03 20 05.6**	**-0.4**
	5.5nm,0.7s,mb4.7,baz=4.8,slow=7.2,SNR=12						
RES	**Resolute Bay**	**60.94**	**15**	P	**P**	**03 20 18.9**	**-1.0**
	2.3nm,0.8s,mb4.3,baz=309,slow=5.8,SNR=4.6						
RES	**Resolute Bay**	**60.94**	**15**	*e*P	**P**	**03 20 19.2**	**-0.7**
	3.6nm,0.9s,mb4.5						
ARCES	**ARCESS Array B**	**62.12**	**339**	P	**P**	**03 20 27.7**	**-0.2**
	3.3nm,1.1s,mb4.4,baz=59,slow=8.1,SNR=9.6						
ASAR	**Alice Springs**	**62.55**	**187**	P	**P**	**03 20 31.4**	**0.0**
	2.7nm,0.7s,mb4.5,baz=9.1,slow=5.7,SNR=10						
FINES	**FINESS Array B**	**66.98**	**332**	P	**P**	**03 20 59.2**	**-0.7**
	3.9nm,1.0s,mb4.4,baz=35,slow=7.5,SNR=5.5						
KIV	**Kislovodsk**	**69.37**	**310**	*e*P	**P**	**03 21 15.6**	**+0.5**
	7.1nm,0.4s,mb5.0						
STKA	**Stephens Creek**	**70.39**	**179**	P	**P**	**03 21 20.8**	**-0.6**
	2.1nm,0.8s,mb4.1,baz=339,slow=18,SNR=4.1						
WVOR	**Wild Horse Val**	**71.66**	**50**	*e*P	**P**	**03 21 30.1**	**+1.0**
	1.5nm,0.8s,mb4.0						
HFS	**Hagfors**	**72.23**	**335**	P	**P**	**03 21 32.3**	**0.0**
	1.3nm,0.4s,mb4.2,baz=49,slow=4.5,SNR=9.4						
NB2	**NORSAR Subarra**	**72.32**	**337**	P	**P**	**03 21 32.2**	**-0.6**
	comp=Z,0.6nm,0.5s,mb3.8,baz=40,slow=6.2						
NOA	**NORSAR Array B**	**72.32**	**337**	P	**P**	**03 21 32.5**	**-0.3**
	comp=Z,1.9nm,0.9s,mb4.0,baz=40,slow=6.0,SNR=3.3						
NOA	**NORSAR Array B**	**72.32**	**337**	P	**P**	**03 21 32.5**	**-0.3**
AKASG	**Malin Array Be**	**72.57**	**322**	P	**P**	**03 21 33.6**	**-0.8**
	comp=Z,0.3nm,0.3s,mb3.7,baz=48,slow=6.2,SNR=5.3						
KIEV	**Kiev**	**72.58**	**322**	*e*P	**P**	**03 21 33.5**	**-1.1**
	comp=Z,2.7nm,0.7s,mb4.3						
LRM	**Limekiln Ridge**	**73.15**	**44**	*e*P	**P**	**03 21 38.8**	**+0.8**
	comp=Z,12nm,0.8s,mb4.9						
LCCM	**Lewis and Clar**	**73.45**	**44**	P	**P**	**03 21 40.8**	**+1.1**
HLID	**Hailey**	**73.45**	**47**	*e*P	**P**	**03 21 41.0**	**+1.1**
	comp=Z,1.5nm,0.9s,mb3.9						
BOZ	**Bozeman (W)**	**73.71**	**44**	*e*P	**P**	**03 21 42.0**	**+0.7**
	comp=Z,2.3nm,0.7s,mb4.2						
NVAR	**Mina Array Bea**	**74.25**	**53**	P	**P**	**03 21 46.0**	**+1.4**
	comp=Z,2.2nm,0.8s,mb4.1,baz=290,slow=5.7,SNR=11						
IMW	**Indian Meadow**	**75.20**	**45**	*e*P	**P**	**03 21 51.2**	**+1.2**
	comp=Z,3.3nm,1.0s,mb4.2						
DUG	**Dugway**	**76.50**	**49**	*e*P	**P**	**03 21 58.2**	**+0.7**
	comp=Z,2.8nm,0.8s,mb4.2						
BW06	**Boulder Array**	**76.70**	**45**	*e*P	**P**	**03 21 58.1**	**-0.5**
	comp=Z,1.3nm,0.6s,mb4.0						
PDAR	**Pinedale Array**	**76.70**	**45**	P	**P**	**03 21 59.4**	**+0.8**
	comp=Z,1.5nm,0.7s,mb4.0,baz=293,slow=2.2,SNR=8.9						
BRTR	**Keskin Array B**	**77.30**	**311**	P	**P**	**03 22 02.6**	**+0.6**
	comp=Z,1.7nm,1.1s,mb3.9,baz=145,slow=4.5,SNR=4.1						
MORC	**Moravsky Berou**	**78.58**	**326**	*e*P	**P**	**03 22 08.8**	**-0.1**
	comp=Z,2.2nm,0.9s,mb4.1						
PSZ	**Piszkesteto**	**78.90**	**324**	*e*P	**P**	**03 22 10.9**	**+0.2**
	comp=Z,3.0nm,0.9s,mb4.2						
SMCO	**Snowmass**	**80.55**	**47**	*e*P	**P**	**03 22 19.8**	**-0.1**
	comp=Z,3.2nm,1.2s,mb4.1						
KHC	**Kasperske Hory**	**80.74**	**328**	*e*P	**P**	**03 22 20.2**	**-0.5**
	comp=Z,1.4nm,0.8s,mb3.9						
ANMO	**Albuquerque**	**83.74**	**50**	*e*P	**P**	**03 22 37.9**	**+1.3**
	comp=Z,0.5nm,1.2s,mb3.5						
TXAR	**Lajitas Array**	**89.35**	**52**	P

comp=E,140nm,2.0s
KLR pmax pmax
comp=Z,160nm,2.0s
DL2 Dalian 14.92 275 P **Pn** **03 14 04.4 +1.0**
DL2 *e*S **Sn** **03 16 48.4 -0.5**
DL2 pmax pmax
comp=Z,20nm,1.4s
DL2 LR LR
comp=N,780nm,18.0s
DL2 LR LR
comp=E,470nm,22.8s
DL2 LR LR
comp=Z,580nm,13.0s
BJI Beijing 19.01 281 P **Pn** **03 14 54.0 -1.0**
BJI pmax pmax
comp=Z,22nm,1.7s
BJI pmax pmax
comp=Z,330nm,10.5s
BJT Baijiatuau 19.02 281 *e*P **Pn** **03 14 54.7 -0.4**
BJT pmax pmax
comp=Z,54nm,1.3s
BJT Baijiatuau 19.02 281 *e*P **Pn** **03 14 54.7 -0.4**
comp=Z,54nm,1.3s
NJ2 Nanjing 19.17 255 *e*P **Pn** **03 14 57.4 +0.4**
NJ2 pmax pmax
comp=Z,30nm,0.8s
CLNS Chul'man 20.62 335 *e*P **P** **03 15 10.7 -1.1**
CLNS *e**PP 03 15 21.7
CLNS *e* 03 15 30.1
CLNS *e*PPP 03 15 40.8
CLNS *e*S **S** **03 19 22.0 +20**
CLNS pmax pmax
comp=Z,82nm,1.3s
CLNS pmax pmax
comp=N,75nm,1.4s
CLNS pmax pmax
comp=E,33nm,1.2s
CLNS pmax pmax
comp=Z,20nm,1.5s
CLNS pmax pmax
comp=N,20nm,1.0s
CLNS pmax pmax
comp=E,21nm,1.2s
CLNS MLR MLR
comp=E,332nm,12.0s,MS4.2
CLNS MLR MLR
comp=N,616nm,14.0s,MS4.2
CLNS MLR MLR
comp=Z,763nm,14.0s,MS4.2
HHC Hu-ho-hao-te 22.44 284 *e*P **P** **03 15 29.8 -1.7**
HHC pP 03 15 34.0
HHC PP 03 15 55.9
HHC PcP PcP 03 19 27.0 +1.1
HHC S **S** **03 19 30.3 -7.9**
HHC ScP ScP 03 23 01.4 -2.2
HHC ScS ScS 03 26 45.3 -3.4
HHC pmax pmax
comp=Z,18nm,0.8s,mb4.5
HHC pmax pmax
comp=Z,1μm,5.6s
HHC LR LR
comp=N,520nm,13.1s,MS4.4
HHC LR LR
comp=E,870nm,17.8s,MS4.4
HHC LR LR
comp=Z,1μm,14.7s,MS4.4
WHN Wuhan 23.28 257 P **P** **03 15 41.5 +1.1**
YAK Yakutsk 23.96 347 *e*P **P** **03 15 43.2 -3.6**
YAK *e**PP 03 15 52.0
YAK *e*S **S** **03 19 56.6 -6.7**
YAK pmax pmax
comp=Z,111nm,1.0s,mb5.2
YAK pmax pmax
comp=N,62nm,1.3s
YAK pmax pmax
comp=E,26nm,1.1s
YAK smax
comp=E,153nm,1.9s
YAK smax
comp=N,276nm,2.3s
YAK Yakutsk 23.96 347 *e*P **P** **03 15 44.4 -2.4**
comp=N,98nm,0.9s,mb5.2
SEY Seymchan 24.88 13 *c e*P **P** **03 15 56.8 +1.7**
BOD Bodaibo 25.55 326 *e*P **P** **03 15 56.2 -5.0**
BOD pmax pmax
comp=Z,24nm,1.2s,mb4.6
ULN Ulaanbaatar 25.85 301 *e*P **P** **03 16 02.4 -1.7**
ULN pmax pmax
comp=Z,10.0nm,1.3s,mb4.2
ULN Ulaanbaatar 25.85 301 *e*P **P** **03 16 02.4 -1.6**
comp=Z,10nm,1.3s,mb4.2
XAN Xi'an 26.03 269 P **P** **03 16 05.5 -0.3**
XAN sP sP 03 16 15.9 +6.8
XAN pmax pmax
comp=Z,3.0nm,1.5s,mb3.6
SONM Songino Array 26.29 301 P **P** **03 16 08.2 +0.2**
comp=Z,3.2nm,0.7s,mb4.0,baz=91,slow=12,SNR=4.8
SONM Songino Array 26.29 301 P **P** **03 16 08.2 +0.2**
SONM pmax pmax
comp=Z,3.0nm,0.7s
ENH Enshi 27.11 261 *e*P **P** **03 16 15.5 -0.2**
comp=Z,12nm,0.7s,mb4.5
ZAK Zakamensk 28.66 306 *e*P **P** **03 16 24.9 -4.3**
LZH Lanzhou 29.32 276 *e*P **P** **03 16 35.1 -0.2**
LZH pP pP 03 16 38.8 +1.2
LZH PP PP 03 17 28.1 -13
LZH *e*S **S** **03 21 25.0 -3.7**
LZH pmax pmax
comp=Z,14nm,1.0s,mb4.7
LZH pmax pmax
comp=Z,170nm,7.2s
LZH LR LR
comp=E,1μm,13.2s
LZH LR LR
comp=Z,1μm,14.5s,MS4.7
GYA Guiyang 31.17 256 ⇓ *i*P **P** **03 16 51.3 -0.4**
GYA PP PP 03 17 55.4 -6.6
GYA PcP PcP 03 19 48.5 +1.8
GYA S **S** **03 21 53.1 -4.7**
GYA ScP ScP 03 23 30.0 +0.2
GYA SS SS 03 23 41.3 -30
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
GYA pmax pmax
comp=Z,160nm,13.5s
GYA LR LR
comp=N,410nm,17.1s,MS4.5
GYA LR LR
comp=E,630nm,14.6s,MS4.5
GYA LR LR
comp=Z,1μm,15.8s,MS4.6
CD2 Chengdu 31.26 266 *e*P **P** **03 16 53.6 +1.1**
CD2 pP pP 03 16 58.0 +3.1
CD2 sP sP 03 17 01.1 +5.3
CD2 PP PP 03 17 55.6 -7.4
CD2 S **S** **03 21 58.5 -0.8**
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
CD2 pmax pmax
comp=Z,30nm,5.2s
CD2 LR LR
comp=E,1μm,15.4s
CD2 LR LR
comp=Z,1μm,19.0s,MS4.6
GTA Gaotai 31.56 284 *e*P **P** **03 16 54.1 -0.9**
GTA PcP PcP 03 19 48.8 +1.3
GTA S **S** **03 22 01.1 -2.6**
GTA PcS PcS 03 23 32.9 +1.1
GTA pmax pmax
comp=Z,5.0nm,1.3s,mb4.2
GTA LR LR
comp=N,710nm,14.3s,MS4.6
GTA LR LR
comp=E,730nm,18.1s,MS4.6
GTA LR LR
comp=Z,1μm,20.2s,MS4.6
BILL Bilibino 32.20 18 *e*P **P** **03 17 00.6 +0.2**
BILL *i* 03 19 49.9
BILL pmax pmax
comp=Z,23nm,1.6s,mb4.8
BILL Bilibino 32.20 18 *e*P **P** **03 17 00.2 -0.2**
comp=Z,21nm,1.4s,mb4.8
TIXI Tiksi 33.20 353 *e*P **P** **03 17 07.5 -1.5**
TIXI pmax pmax
comp=Z,25nm,1.5s,mb4.9
TIXI Tiksi 33.20 353 *e*P **P** **03 17 07.5 -1.5**
comp=Z,25nm,1.5s,mb4.9
KMI Kunming 34.86 258 P **P** **03 17 24.8 +0.8**
KMI pP pP 03 17 27.8 +1.4
KMI PP PP 03 18 41.3 -1.7
KMI S **S** **03 22 53.9 -1.4**
KMI SS SS 03 25 05.8 -21
KMI pmax pmax
comp=Z,17nm,0.8s,mb5.0
KMI LR LR
comp=N,360nm,17.2s,MS4.6
KMI LR LR
comp=E,880nm,15.6s,MS4.6
KMI LR LR
comp=Z,740nm,16.2s,MS4.5
WMQ Urumqi 39.52 295 *e*P **P** **03 18 03.0 -0.4**
ZALV Zalesovo Beam 40.20 311 P **P** **03 18 08.3 -0.5**
comp=Z,9.8nm,0.9s,mb4.5,baz=87,slow=7.6,SNR=18
ZALV PcP PcP 03 20 12.1 -0.7
comp=Z,1.6nm,0.5s,baz=82,slow=3.1,SNR=5.8
ZALV Zalesovo Beam 40.20 311 P **P** **03 18 08.4 -0.5**
ZALV 03 20 12.1
ZALV pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
NVS Novosibirsk 41.10 312 *i* P **P** **03 18 15.3 -1.0**
NVS pmax pmax
comp=N,16nm,1.5s
NVS pmax pmax
comp=E,35nm,1.5s
NVS pmax pmax
comp=Z,34nm,1.5s,mb4.8
CHTO Chiang Mai 41.39 253 *e*P **P** **03 18 19.5 +0.4**
CHTO pmax pmax
comp=Z,8.0nm,1.0s,mb4.3
CHTO Chiang Mai 41.39 253 *e*P **P** **03 18 19.5 +0.5**
comp=Z,8.3nm,1.0s,mb4.3
CMAR Chiang Mai Arr 41.61 253 P **P** **03 18 19.8 -1.1**
comp=Z,0.9nm,0.3s,mb3.8,baz=53,slow=4.9,SNR=4.3
CMAR PcP PcP 03 20 18.2 +0.3
comp=Z,1.2nm,0.4s,baz=23,slow=3.5,SNR=5.6
MK31 Makanchi Array 42.65 300 *e*P **P** **03 18 28.6 -0.5**
MKAR Makanchi Array 42.65 300 P **P** **03 18 28.7 -0.4**
comp=Z,5.9nm,0.8s,mb4.4,baz=74,slow=13,SNR=22
MKAR Makanchi Array 42.65 300 P **P** **03 18 28.7 -0.4**
MKAR pmax pmax
comp=Z,6.0nm,0.8s
MKAR Makanchi Array 42.65 300 P **P** **03 18 28.7 -0.4**
SHL Shillong 43.00 267 *e*PKP **P** **03 18 41.5 +9.3**
TTA Tatalina 44.02 36 *e*P **P** **03 18 41.0 +1.1**
KURK Kurchatov 44.31 306 P **P** **03 18 42.4 -0.1**
comp=Z,22nm,1.0s,mb4.8,baz=83,slow=8.1,SNR=26
KURK PcP PcP 03 20 26.4 -0.1
comp=Z,4.7nm,1.0s,baz=82,slow=3.4,SNR=5.6
KURK Kurchatov 44.31 306 *c e*P **P** **03 18 42.4 0.0**
KURK pmax pmax
comp=Z,50nm,1.2s,mb5.1
KURK Kurchatov 44.31 306 *e*P **P** **03 18 41.0 -1.4**
comp=Z,42nm,1.1s,mb5.1
RSO Redoubt South 45.60 39 *e*P **P** **03 18 53.4 +0.9**
PPLA Purkeypile 45.77 36 *e*P **P** **03 18 54.5 +0.6**
comp=Z,18nm,1.3s,mb4.8
KDAK Kodiak Island 45.91 43 P **P** **03 18 54.7 -0.3**
comp=Z,7.0nm,0.8s,mb4.7,baz=87,slow=3.0,SNR=4.1
KDAK Kodiak Island 45.91 43 P **P** **03 18 54.7 -0.3**
KDAK pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
KDAK Kodiak Island 45.91 43 P **P** **03 18 54.7 -0.3**
BPAW Bear Paw Mtn. 46.29 34 *e*P **P** **03 18 58.2 +0.3**
comp=Z,8.0nm,1.3s,mb4.5
TRF Thorofare Moun 46.62 35 *e*P **P** **03 19 01.7 +1.2**
comp=Z,6.9nm,1.1s,mb4.5
COLA College 47.61 33 *e*P **P** **03 19 09.0 +0.8**
COLA pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
COLA College 47.61 33 *e*P **P** **03 19 09.0 +0.8**
comp=Z,9.0nm,0.9s,mb4.8
KAPI Kappang 48.01 209 *e*P **P** **03 19 11.4 -0.4**
comp=Z,61nm,1.5s,mb5.4
TKM2 Tokmak 2 48.26 297 P **P** **03 19 14.4 +0.8**
SNR=17
TKM2 Tokmak 2 48.26 297 *e*P **P** **03 19 13.9 +0.3**
TKM2 pmax pmax
comp=Z,35nm,1.1s,mb5.3
TKM2 Tokmak 2 48.26 297 *e*P **P** **03 19 13.9 +0.3**
comp=Z,35nm,1.1s,mb5.3
KZA Kyzart 48.78 296 P **P** **03 19 19.5 +1.9**
SNR=9.1
KBK Karagaybulak 48.80 297 P **P** **03 19 18.7 +1.0**
SNR=15
BVAR Borovoye Array 48.85 311 P **P** **03 19 17.7 -0.3**
comp=Z,4.9nm,1.0s,mb4.5,baz=93,slow=6.2,SNR=7.8
BVAR PcP PcP 03 20 42.6 +0.2
comp=Z,4.7nm,0.9s,baz=72,slow=4.8,SNR=7.2
BVAR Borovoye Array 48.85 311 P **P** **03 19 17.7 -0.3**
BVAR 03 20 42.6
BVAR pmax pmax
comp=Z,5.0nm,1.0s
USP Ospenovka 48.91 297 P **P** **03 19 19.1 +0.5**
SNR=6.1
BRVK Borovoye 48.91 311 *c e*P **P** **03 19 19.1 +0.7**
BRVK pmax pmax
comp=Z,24nm,2.5s,mb4.8
BRVK Borovoye 48.91 311 *e*P **P** **03 19 18.2 -0.2**
comp=Z,6.2nm,0.9s,mb4.6
FRU Bishkek 48.97 297 *e*P **P** **03 19 18.0 -1.1**
FRU *e* 03 19 32.0
FRU pmax pmax
comp=Z,60nm,1.6s,mb5.4
AAK Ala-Archa 49.12 297 P **P** **03 19 20.6 +0.4**
comp=Z,3.4nm,0.6s,mb4.6,baz=257,slow=6.6,SNR=4.8
AAK Ala-Archa 49.12 297 *e*P **P** **03 19 20.3 +0.1**
AAK pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
AAK Ala-Archa 49.12 297 *e*P **P** **03 19 20.3 +0.1**
comp=Z,8.8nm,0.9s,mb4.8
KSH Kashi 49.16 292 ⇓ *i*P **P** **03 19 25.1 +4.5**
KSH pP pP 03 19 29.5 +6.5
KSH sP sP 03 19 32.0 +8.0
KSH PcP PcP 03 20 46.9 +3.1
KSH PP PP 03 21 20.1 +6.0
KSH ScP ScP 03 24 40.3 +1.0
KSH PcS PcS 03 24 42.1 +1.9
KSH S **S** **03 26 30.8 +4.7**
KSH ScS ScS 03 29 13.4 +0.4
KSH SS SS 03 30 00.0 +3.0
KSH pmax pmax
comp=Z,15nm,1.2s,mb4.9
KSH LR LR
comp=N,180nm,12.0s,MS4.7
KSH LR LR
comp=E,540nm,16.1s,MS4.7
KSH LR LR
comp=Z,230nm,6.4s
UCH Uchtor 49.24 296 P **P** **03 19 22.5 +1.3**
SNR=6.4
UCH Uchtor 49.24 296 *e*P **P** **03 19 21.3 +0.2**
comp=Z,5.9nm,1.0s,mb4.6
KULM Kulim 49.48 238 *e*P **P** **03 19 24.4 +1.2**
comp=Z,32nm,1.3s,mb5.2
EKS2 Erkin-Say 49.61 297 P **P** **03 19 24.5 +0.5**
SNR=7.3
EKS2 Erkin-Say 49.61 297 *e*P **P** **03 19 24.1 +0.2**
comp=Z,7.7nm,0.9s,mb4.7
MENT Mentasta 49.63 36 *e*P **P** **03 19 24.4 +0.6**
AML Almayashu 49.85 296 P **P** **03 19 27.2 +1.5**
SNR=15
AML Almayashu 49.85 296 *e*P **P** **03 19 27.0 +1.2**
comp=Z,34nm,1.3s,mb5.2
EGAK Eagle 50.47 33 *e*P **P** **03 19 30.3 +0.2**
comp=Z,5.5nm,1.0s,mb4.5
INK Inuvik 52.79 28 P **P** **03 19 47.7 +0.3**
comp=Z,9.5nm,0.9s,mb4.7,baz=284,slow=7.9,SNR=12
INK Inuvik 52.79 28 *e*P **P** **03 19 48.1 +0.7**
INK pmax pmax
comp=Z,15nm,1.1s
INK Inuvik 52.79 28 *e*P **P** **03 19 48.1 +0.7**
comp=Z,15nm,1.1s,mb4.8
SVE Sverdlovsk 53.30 318 ⇑ *e*P **P** **03 19 51.7 +0.3**
SVE pmax pmax
comp=Z,39nm,1.4s,mb5.1
ARU Arti 54.52 317 *c i*P **P** **03 19 59.9 -0.4**
ARU *e* 03 21 58.5
ARU S **S** **03 27 37.4 -1.9**
ARU SS SS 03 31 19.7 -1.5
ARU pmax pmax
comp=Z,58nm,1.7s,mb5.3
ARU Arti 54.52 317 *e*P **P** **03 19 60.0 -0.3**
comp=Z,41nm,1.3s,mb5.3
KBL Kabul 56.26 289 *e*P **P** **03 20 13.0 -0.2**
KBL pmax pmax
comp=Z,29nm,1.0s,mb5.3
KBL Kabul 56.26 289 *e*P **P** **03 20 12.9 -0.2**
comp=Z,30nm,1.0s,mb5.3
ABKAR Akbulak array 56.27 309 *e*P **P** **03 20 12.3 -0.7**
comp=Z,16nm,1.0s,mb5.0
AKTK Aktyubinsk 56.96 311 P **P** **03 20 17.4 -0.6**
AKTK PcP PcP 03 21 12.8 -0.3
AKTO Aktyubinsk 56.96 311 P **P** **03 20 17.4 -0.6**
comp=Z,5.9nm,0.9s,mb4.6,baz=66,slow=10,SNR=9.5
AKTO PcP PcP 03 21 12.8 -0.3
comp=Z,3.9nm,1.0s,baz=73,slow=3.6,SNR=4.0
AKTO Aktyubinsk 56.96 311 P **P** **03 20 17.4 -0.5**
AKTO 03 21 12.8
AKTO pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
AKTO pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
DLBC Dease Lake 57.31 39 P **P** **03 20 20.5 +0.2**
comp=Z,2.5nm,0.8s,mb4.3,baz=280,slow=5.3,SNR=5.1
KBS Kingsbay 58.55 350 *c e*P **P** **03 20 30.5 +1.8**
KBS pmax pmax
comp=Z,27nm,1.2s,mb5.2
WRAB Tennant Creek 59.02 187 *e*P **P** **03 20 32.2 -0.3**
WRAB pmax pmax
comp=Z,28nm,1.2s,mb5.2
WRAB Tennant Creek 59.02 187 *e*P **P** **03 20 32.2 -0.3**
comp=Z,28nm,1.2s,mb5.2
WRA Warramunga Arr 59.03 187 P **P** **03 20 31.8 -0.8**
comp=Z,18nm,1.0s,mb5.0,baz=4.1,slow=7.2,SNR=14
WRA Warramunga Arr 59.03 187 P **P** **03 20 31.8 -0.8**
WRA pmax pmax
comp=Z,18nm,1.0s
APA Apatity 60.62 335 ⇑ *e*P **P** **03 20 41.0 -2.1**
APA MLR MLR
comp=Z,800nm,16.0s,MS5.0
RES Resolute Bay 60.73 15 P **P** **03 20 43.2 -0.6**
comp=Z,14nm,0.9s,mb5.1,baz=309,slow=7.7,SNR=13
RES Resolute Bay 60.73 15 P **P** **03 20 43.2 -0.6**
RES pmax pmax
comp=Z,14nm,0.9s,mb5.1
RES Resolute Bay 60.73 15 *e*P **P** **03 20 42.7 -1.1**
comp=Z,20nm,1.0s,mb5.2
ARCES ARCESS Array B 61.91 339 P **P** **03 20 50.9 -0.9**
comp=Z,3.7nm,0.9s,mb4.5,baz=69,slow=6.6,SNR=8.4
ARCES ARCESS Array B 61.91 339 P **P** **03 20 50.9 -0.9**
ARCES pmax pmax
comp=Z,4.0nm,0.9s
YKA Yellowknife Ar 62.28 31 P **P** **03 20 54.0 -0.3**
comp=Z,3.5nm,1.0s,mb4.4,baz=298,slow=6.9,SNR=7.4
YKA Yellowknife Ar 62.28 31 P **P** **03 20 54.0 -0.3**
YKA pmax pmax
comp=Z,4.0nm,1.0s
YKA Yellowknife Ar 62.28 31 P **P** **03 20 54.0 -0.3**
ASAR Alice Springs 62.76 187 P **P** **03 20 57.8 -0.2**
comp=Z,5.1nm,1.0s,mb4.6,baz=3.2,slow=5.0,SNR=13
ASAR Alice Springs 62.76 187 P **P** **03 20 57.8 -0.1**
ASAR pmax pmax
comp=Z,5.0nm,1.0s
JOF Joensuu 63.93 331 *e*P **P** **03 21 02.5 -2.8**
JOF pmax pmax
comp=Z,13nm,1.0s,mb4.9
JOF Joensuu 63.93 331 *e*p **P** **03 21 02.5 -2.8**
comp=Z,13nm,1.0s,mb4.9
JOF Joensuu 63.93 331 *e*p **P** **03 21 02.5 -2.8**
comp=Z,13nm,1.0s,mb4.9
MOS Moscow 65.33 323 *e*P **P** **03 21 13.9 -0.6**
MOS pmax pmax
comp=Z,43nm,1.2s,mb5.3
NLWA Neilton Lookou 65.69 48 ⇑ P **P** **03 21 18.0 +1.0**
baz=65
NLWA Neilton Lookou 65.69 48 *e*P **P** **03 21 18.5 +1.5**
comp=Z,29nm,1.1s,mb5.2
A05A Maple Falls 65.85 46 ⇑ P **P** **03 21 18.6 +0.6**
baz=66
MBW Mount Baker 66.07 46 P **P** **03 21 20.3 +0.9**
OBN Obninsk 66.17 322 *e*P **P** **03 21 20.1 +0.1**
OBN *e* 03 21 48.4
OBN pmax pmax
comp=Z,45nm,1.6s,mb5.2
KAF Kangasniemi 66.27 332 *e*p **P** **03 21 18.9 -1.6**
KAF Kangasniemi 66.27 332 *e*p **P** **03 21 18.9 -1.6**
JCW Jim Creek 66.37 46 P **P** **03 21 22.4 +1.0**
B06A Marblemount 66.44 46 ⇑ P **P** **03 21 22.5 +0.7**
baz=66
F03A Seaside 66.64 49 ⇑ P **P** **03 21 23.9 +0.7**
baz=66
A07A Ashnola River, 66.77 45 ⇓ P **P** **03 21 23.7 -0.2**
baz=66
FINES FINESS Array B 66.78 332 P **P** **03 21 23.3 -0.5**
comp=Z,12nm,0.9s,mb4.9,baz=61,slow=9.0,SNR=18
FINES FINESS Array B 66.78 332 P **P** **03 21 23.3 -0.5**
FINES pmax pmax
comp=Z,12nm,0.9s
D05A Enumclaw 66.88 47 ⇓ P **P** **03 21 24.7 +0.1**
baz=67
NLW Nelson Butte 67.32 46 P **P** **03 21 28.8 +1.3**
ETW Entiat 67.59 46 P **P** **03 21 29.9 +0.7**
B08A Colville Reser 67.73 45 ⇑ P **P** **03 21 29.2 -0.9**
baz=68
EDM Edmonton 68.04 39 *e*P **P** **03 21 31.3 -0.6**
H04A Detroit Lake 68.14 50 ⇓ P **P** **03 21 31.7 -1.0**
baz=68
GOF Gofitskoye 68.39 311 *e*P **P** **03 21 29.4 -4.8**
GOF pmax pmax
comp=Z,60nm,1.2s,mb5.5
C09A Chrisman Ranch 68.63 45 ⇑ P **P** **03 21 35.7 0.0**
baz=68
SUMG Summit 68.63 360 *e*P **P** **03 21 35.9 +0.5**
comp=Z,32nm,1.1s,mb5.2
SUMG Summit 68.63 360 *i* P **P** **03 21 35.0 -0.3**
comp=Z,17nm,1.0s,mb4.9
NEW Newport 68.99 44 *e*P **P** **03 21 38.3 +0.3**
NEW pmax pmax
comp=Z,11nm,1.1s
NEW Newport 68.99 44 *e*P **P** **03 21 38.3 +0.3**
comp=Z,11nm,1.1s,mb4.7
ZEI Tsey 69.15 309 *e*P **P** **03 21 37.2 -1.8**
ZEI pmax pmax
comp=Z,26nm,1.4s,mb5.0
KIV Kislovodsk 69.21 310 *e*P **P** **03 21 40.7 +1.3**
KIV *i* 03 22 00.5
KIV pmax pmax
comp=Z,90nm,1.0s,mb5.7
KIV Kislovodsk 69.21 310 *e*P **P** **03 21 40.2 +0.8**
comp=Z,98nm,1.1s,mb5.7
E09A Wood Farm, Sta 69.44 46 ⇑ P **P** **03 21 40.7 0.0**
baz=69
C11A Tepee Creek (N 69.71 44 ⇓ P **P** **03 21 42.5 +0.1**
baz=69
K05A Summer Lake 70.02 51 ⇑ P **P** **03 21 45.0 +0.7**
baz=70
SCO Scoresbysund 70.03 354 *i* P **P** **03 21 44.1 +0.1**
comp=Z,6.9nm,1.1s,mb4.5
E10A Myers Farm, Un 70.04 46 ⇑ P **P** **03 21 44.6 +0.2**
baz=70
GNI Garni 70.11 306 P **P** **03 21 45.8 +0.8**
comp=Z,4.3nm,0.6s,mb4.5,baz=322,slow=23,SNR=8.1
GNI Garni 70.11 306 *c e*P **P** **03 21 46.9 +1.9**
GNI pmax pmax
comp=Z,27nm,1.2s
GNI Garni 70.11 306 *e*P **P** **03 21 46.2 +1.2**
comp=Z,62nm,1.7s,mb5.3
B13A Whitefish 70.36 43 ⇓ P **P** **03 21 45.9 -0.5**
baz=70,SNR=9.8
IZAR Zarasai 70.43 327 *e*P **P** **03 21 46.5 -0.2**
IZAR AMB AMB 03 21 48.3
comp=Z,7.2nm,1.3s,mb4.4
IDID Didziasalis 70.50 326 *e*P **P** **03 21 47.0 -0.1**
IDID AMB AMB 03 21 48.8
comp=Z,9.1nm,1.1s,mb4.6
MICGM Minsk 70.54 325 *e* **P** **03 21 45.0 -2.4**
LTIM Timbered Crate 70.54 53 P **P** **03 21 49.2 +1.6**
A14A Double T Ranch 70.55 42 ⇑ P **P** **03 21 47.4 -0.1**
baz=70,SNR=5.5
MNK Minsk 70.56 325 *e*P **P** **03 21 45.0 -2.5**
ISAL Salakas 70.60 327 *e*P **P** **03 21 47.8 +0.1**
ISAL AMB AMB 03 21 49.5
comp=Z,14nm,1.2s,mb4.8
STKA Stephens Creek 70.61 179 P **P** **03 21 47.0 -0.9**
comp=Z,2.3nm,0.9s,mb4.1,baz=22,slow=10,SNR=2.9
IIGN Ignalina 70.70 327 *e*P **P** **03 21 48.1 -0.2**
IIGN AMB AMB 03 21 50.1
comp=Z,9.4nm,1.1s,mb4.7

C13A **Hot Springs** 70.72 44 ⇓P P 03 21 48.6 0.0
baz=70,SNR=5.3
G10A **Bishop Farm, J** 70.73 47 ⇓P P 03 21 48.4 -0.3
baz=70
A15A **Johnson Ranch,** 70.91 42 ⇑P P 03 21 48.9 -0.8
baz=71
F11A **Grangeville** 70.93 46 ⇑P P 03 21 49.7 -0.2
baz=71
E12A **Beaver Dam Sad** 70.94 45 ⇑P P 03 21 50.1 +0.2
baz=71,SNR=7.0
J08A **Circle Bar Ran** 71.09 49 ⇑P P 03 21 50.7 -0.2
baz=71
C14A **Swan Lake** 71.11 43 ⇓P P 03 21 50.8 -0.2
baz=71
SWMT **Swartz Lake** 71.13 44 *e*P P 03 21 51.6 +0.5
comp=Z,13nm,1.3s,mb4.7
G11A **Walters Elk Ra** 71.15 47 ⇑P P 03 21 51.3 0.0
baz=71,SNR=9.2
SOC **Sochi** 71.18 311 *e*P P 03 21 49.5 -2.0
SOC *e*S S 03 31 02.5 -6.1
SOC pmax pmax
comp=Z,38nm,1.4s,mb5.1
H10A **Noah's Angus R** 71.37 47 ⇓P P 03 21 52.3 -0.2
baz=71
B15A **Bradely Ranch,** 71.40 42 ⇓P P 03 21 53.0 +0.2
baz=71,SNR=10
F12A **Elk City** 71.51 46 ⇓P P 03 21 53.2 -0.3
baz=71,SNR=5.6
A16A **West Butte Ran** 71.51 42 ⇑P P 03 21 52.9 -0.5
baz=71
J09A **Fry Pan Ranch,** 71.52 49 ⇓P P 03 21 53.2 -0.4
baz=71,SNR=5.8
WVOR **Wild Horse Val** 71.54 50 *e*P P 03 21 54.1 +0.4
WVOR pmax pmax
comp=Z,7.0nm,1.3s,mb4.4
WVOR **Wild Horse Val** 71.54 50 *e*P P 03 21 54.1 +0.5
comp=Z,6.8nm,1.3s,mb4.4
SLMT **Seeley Lake** 71.57 44 *e*P P 03 21 53.3 -0.4
comp=Z,5.7nm,0.9s,mb4.5
I10A **Payette** 71.64 48 ⇑P P 03 21 53.9 -0.3
baz=71
D14A **Greenough** 71.66 44 ⇑P P 03 21 53.4 -0.9
baz=71
C15A **Salmond Ranch,** 71.71 43 ⇓P P 03 21 53.8 -0.8
baz=71,SNR=6.6
H11A **Donnelly** 71.72 47 ⇓P P 03 21 54.3 -0.4
baz=71
ANN **Anapa** 71.77 313 *e*P P 03 21 55.8 +0.8
ANN pmax pmax
comp=Z,49nm,1.3s,mb5.3
G12A **Big Creek, Yel** 71.85 46 ⇓P P 03 21 54.8 -0.7
baz=72
BEKR **Beckworth** 72.00 53 ⇓P P 03 21 56.0 -0.5
baz=72,SNR=9.6
HFS **Hagfors** 72.03 335 P P 03 21 56.0 -0.2
comp=Z,2.8nm,0.5s,mb4.5,baz=42,slow=7.5,SNR=14
HFS **Hagfors** 72.03 335 P P 03 21 56.0 -0.3
HFS pmax pmax
comp=Z,3.0nm,0.5s
HFS **Hagfors** 72.03 335 P P 03 21 56.0 -0.2
NB2 **NORSAR Subarra** 72.11 337 P P 03 21 56.3 -0.5
comp=Z,26nm,1.1s,mb5.1,baz=40,slow=6.2
NB2 **NORSAR Subarra** 72.11 337 P P 03 21 56.3 -0.5
baz=40,slow=6.2
NB2 **NORSAR Subarra** 72.11 337 P P 03 21 56.3 -0.5
NB2 **NORSAR Subarra** 72.11 337 P P 03 21 56.3 -0.5
NOA **NORSAR Array B** 72.11 337 P P 03 21 56.4 -0.4
comp=Z,19nm,1.1s,mb4.9,baz=40,slow=6.0,SNR=13
NOA **NORSAR Array B** 72.11 337 P P 03 21 56.4 -0.4
NOA pmax pmax
comp=Z,19nm,1.1s
C16A **Fuhringer Ranc** 72.15 43 ⇓P P 03 21 56.8 -0.4
baz=72
D15A **Lincoln** 72.21 43 ⇓P P 03 21 57.1 -0.6
baz=72
I11A **Placerville** 72.23 48 ⇑P P 03 21 57.0 -0.8
baz=72
FFC **Flin Flon** 72.24 33 *e*P P 03 21 57.3 -0.3
FFC pmax pmax
comp=Z,11nm,1.1s,mb4.7
FFC **Flin Flon** 72.24 33 *e*P P 03 21 57.3 -0.3
comp=Z,10nm,1.1s,mb4.7
B17A **L&G Farms, Che** 72.34 42 ⇓P P 03 21 57.6 -0.8
baz=72
NAO01 **NORSAR Array S** 72.37 337 *e*P P 03 21 58.2 0.0
comp=Z,5.5nm,0.9s,mb4.5
K10A **MacKenzie Ranc** 72.38 49 ⇓P P 03 21 58.1 -0.7
baz=72
AKASG **Malin Array Be** 72.39 322 P P 03 21 57.8 -0.9
comp=Z,2.8nm,0.5s,mb4.4,baz=46,slow=5.7,SNR=20
AKASG **Malin Array Be** 72.39 322 P P 03 21 57.8 -0.8
AKASG pmax pmax
comp=Z,3.0nm,0.5s
AKBB **Malin Array Si** 72.39 322 *e*P P 03 21 58.2 -0.4
KIEV **Kiev** 72.40 322 *e*P P 03 21 57.3 -1.4
KIEV pmax pmax
comp=Z,49nm,1.8s,mb5.1
KIEV **Kiev** 72.40 322 *e*P P 03 21 57.3 -1.4
comp=Z,49nm,1.8s,mb5.1
H12A **Diamond D Ranc** 72.47 47 ⇑P P 03 21 58.9 -0.2
baz=72
G13A **Cobalt** 72.48 46 ⇓P P 03 21 58.8 -0.4
baz=72
E15A **Deer Lodge** 72.53 44 ⇓P P 03 21 57.9 -1.6
baz=72,SNR=5.6
D16A **Dana Ranch, Ca** 72.74 43 ⇓P P 03 22 00.5 -0.2
baz=72
I12A **Atlanta** 72.77 47 ⇓P P 03 22 00.4 -0.6
baz=72,SNR=5.5
B18A **Beardsley Farm** 72.80 41 ⇓P P 03 22 00.0 -1.1
baz=72
H13A **Challis** 72.80 46 ⇑P P 03 22 00.3 -0.9
baz=72,SNR=5.4
K11A **Parker Ranch,** 72.88 49 ⇓P P 03 22 01.9 +0.2
baz=73
F15A **Butte** 72.98 44 ⇓P P 03 22 01.7 -0.5
baz=73,SNR=8.9
E16A **East Helena** 72.98 44 ⇑P P 03 22 02.0 -0.2
baz=73
LRM **Limekiln Ridge** 73.01 44 *e*P P 03 22 02.9 +0.5
comp=Z,63nm,1.0s,mb5.5
L10A **Juniper Basin** 73.04 49 ⇑P P 03 22 02.3 -0.3
baz=73
EGMT **Eagleton** 73.05 41 ⇑P P 03 22 02.3 -0.3
baz=73
CMB **Columbia Colle** 73.07 55 *e*P P 03 22 03.1 +0.2
CMB pmax pmax
comp=Z,12nm,1.2s,mb4.7
CMB **Columbia Colle** 73.07 55 *e*P P 03 22 03.1 +0.3
comp=Z,12nm,1.2s,mb4.7
DLMT **Dillon** 73.22 45 *e*P P 03 22 04.2 +0.6
comp=Z,8.3nm,1.0s,mb4.6
I13A **Wildhorse Cree** 73.28 47 ⇓P P 03 22 04.5 +0.5
baz=73
HLID **Hailey** 73.33 47 ⇓P P 03 22 04.3 0.0
baz=73,SNR=5.2
HLID **Hailey** 73.33 47 *e*P P 03 22 05.0 +0.8
comp=Z,4.0nm,1.1s,mb4.3
M10A **I.L. Ranch, Tu** 73.34 50 ⇑P P 03 22 04.7 +0.3
baz=73
G15A **Dillon** 73.41 45 ⇑P P 03 22 04.7 0.0
baz=73,SNR=8.8
L11A **Cat Creek Ranc** 73.41 49 ⇓P P 03 22 05.3 +0.5
baz=73,SNR=7.9
E17A **Martinsdale** 73.47 43 ⇑P P 03 22 05.0 0.0
baz=73,SNR=6.7
F16A **Kennard Place,** 73.49 44 ⇑P P 03 22 05.3 +0.1
baz=73
D18A **Linhart Farms,** 73.55 42 ⇑P P 03 22 05.2 -0.3
baz=73
J13A **Cove Ranch, Pi** 73.56 47 ⇑P P 03 22 05.5 -0.2
baz=73,SNR=6.0
BOZ **Bozeman (W)** 73.57 44 ⇑P P 03 22 05.3 -0.4
baz=73,SNR=9.6
BOZ **Bozeman (W)** 73.57 44 *e*P P 03 22 06.3 +0.6
BOZ pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
BOZ **Bozeman (W)** 73.57 44 *e*P P 03 22 06.3 +0.6
comp=Z,6.7nm,1.0s,mb4.5
K12A **Draper Farm, C** 73.62 48 ⇓P P 03 22 05.9 -0.1
baz=73
I14A **Mackay** 73.64 46 ⇑P P 03 22 06.8 +0.6
baz=73,SNR=5.8
G16A **Moss Hill, Enn** 73.74 45 ⇑P P 03 22 07.3 +0.6
baz=74
M11A **Holland Ranch,** 73.84 50 ⇓P P 03 22 07.5 +0.2
baz=74
L12A **House Creek Ra** 73.85 49 ⇓P P 03 22 07.9 +0.5
baz=74
SFJD **Kangerlussuaq** 73.88 5 P P 03 22 07.0 -0.1
comp=Z,12nm,0.9s,mb4.8,baz=315,slow=9.2,SNR=3.7
SFJD **Kangerlussuaq** 73.88 5 P P 03 22 07.0 -0.1
SFJD pmax pmax
comp=Z,12nm,0.9s,mb4.8
SFJD **Kangerlussuaq** 73.88 5 *i* P P 03 22 06.6 -0.5
comp=Z,12nm,0.9s,mb4.8
E18A **Harlowton** 73.90 43 ⇑P P 03 22 07.5 -0.1
baz=74
F17A **Fitzpatrick Pl** 73.93 44 ⇓P P 03 22 07.9 +0.1
baz=74
J14A **Carey** 73.98 47 ⇓P P 03 22 08.8 +0.6
baz=74,SNR=6.6
K13A **Stover Farm, H** 74.08 48 ⇓P P 03 22 09.4 +0.7
baz=74
NVAR **Mina Array Bea** 74.14 53 P P 03 22 10.4 +1.2
comp=Z,7.6nm,1.0s,mb4.6,baz=283,slow=5.8,SNR=21
G17A **Pierce Place,** 74.26 44 ⇓P P 03 22 10.2 +0.5
baz=74
M12A **Wells** 74.36 49 ⇓P P 03 22 11.2 +0.8
baz=74,SNR=8.7
F18A **Big Timber** 74.43 43 ⇓P P 03 22 11.3 +0.6
baz=74,SNR=6.4
P10A **Eureka** 74.55 51 ⇓P P 03 22 12.2 +0.7
baz=74
J15A **Blackfoot** 74.55 46 ⇑P P 03 22 12.2 +0.7
baz=74
N12A **Clover Valley,** 74.64 50 ⇓P P 03 22 12.8 +0.8
baz=74
K14A **Jones Ranch, D** 74.67 47 ⇓P P 03 22 12.1 -0.1
baz=74
I16A **Newdale** 74.78 46 ⇑P P 03 22 13.1 +0.3
baz=74,SNR=7.0
M13A **Montello** 74.84 49 ⇑P P 03 22 13.9 +0.7
baz=75
H17A **Grant Village** 74.95 45 ⇓P P 03 22 12.9 -0.8
baz=75,SNR=6.6
L14A **Malta** 74.95 48 ⇑P P 03 22 14.0 +0.2
baz=75,SNR=6.8
KIS **Kishinev** 75.03 319 *e*P P 03 22 12.0 -2.2
IMW **Indian Meadow** 75.07 45 *e*P P 03 22 15.5 +1.0
comp=Z,4.0nm,0.8s,mb4.4
Q10A **Clear Creek Ra** 75.08 52 ⇓P P 03 22 15.1 +0.5
baz=75,SNR=5.5
O12A **Currie** 75.18 50 ⇓P P 03 22 15.4 +0.2
baz=75,SNR=6.0
RLMT **Red Lodge** 75.18 44 ⇓P P 03 22 14.3 -0.8
baz=75
RLMT **Red Lodge** 75.18 44 *e*P P 03 22 15.8 +0.7
comp=Z,2.3nm,0.8s,mb4.2
VES **Vestal, Richgr** 75.22 56 ⇓P P 03 22 15.0 -0.4
baz=75
M14A **Sheep Mountain** 75.23 48 ⇓P P 03 22 15.4 -0.1
baz=75
PKM **Peak Mountain** 75.32 57 ⇑P P 03 22 15.8 -0.3
baz=75
TPAW **Teton Pass** 75.32 46 *e*P P 03 22 16.8 +0.9
comp=Z,5.6nm,1.1s,mb4.4
K16A **Soda Springs** 75.39 46 ⇑P P 03 22 15.9 -0.4
baz=75
LOHW **Long Hollow** 75.44 45 *e*P P 03 22 16.3 -0.3
comp=Z,6.7nm,1.4s,mb4.4
LVV **L'vov** 75.45 323 *e*P P 03 22 16.9 +0.4
S10A **Tonopah Range,** 75.52 53 ⇓P P 03 22 16.6 -0.5
baz=75,SNR=12
Q11A **Duckwater** 75.52 52 ⇑P P 03 22 17.3 +0.2
baz=75,SNR=7.0
BORG **Borgarnes** 75.55 352 P P 03 22 17.1 +0.3
comp=Z,18nm,1.0s,mb4.9,baz=8.0,slow=6.8,SNR=4.5
BORG **Borgarnes** 75.55 352 P P 03 22 17.2 +0.3
BORG pmax pmax
comp=Z,18nm,1.0s
BORG **Borgarnes** 75.55 352 *e*P P 03 22 18.0 +1.1
comp=Z,25nm,1.1s,mb5.0
P12A **McGill** 75.58 51 ⇓P P 03 22 17.0 -0.5
baz=75,SNR=6.6
N14A **Grayback Hills** 75.73 49 ⇓P P 03 22 18.7 +0.3
baz=76,SNR=8.6
M15A **Larsen Ranch,** 75.78 48 ⇓P P 03 22 17.2 -1.3
baz=76,SNR=7.0
R11A **Troy Canyon, C** 75.87 52 ⇓P P 03 22 19.3 +0.1
baz=76,SNR=13
Q12A **Willow Creek R** 75.90 51 ⇓P P 03 22 19.8 +0.4
baz=76
L16A **Fish Haven** 76.00 47 ⇑P P 03 22 20.0 +0.1
baz=76
N15A **Stansbury Isla** 76.10 48 ⇑P P 03 22 20.6 +0.2
baz=76,SNR=7.1
MPMC **Manual Prospec** 76.11 55 ⇑P P 03 22 20.8 +0.3
baz=76,SNR=7.4
P13A **Bates Ranch, G** 76.13 50 ⇓P P 03 22 21.0 +0.3
baz=76
HWUT **Hardware Ranch** 76.19 47 *e*P P 03 22 21.9 +1.0
comp=Z,2.4nm,0.5s,mb4.4
KWP **Kalwaria Pacla** 76.19 324 *e*P P 03 22 21.0 +0.2
KWP **Kalwaria Pacla** 76.19 324 ⇑P P 03 22 21.4 +0.6
KWP **Kalwaria Pacla** 76.19 324 *e*P P 03 22 21.2 +0.4
comp=Z,27nm,1.0s,mb5.1
KWP **Kalwaria Pacla** 76.19 324 ⇑*i*P P 03 22 21.4 +0.6
S11A **Rachel** 76.21 53 ⇓P P 03 22 21.2 0.0
baz=76,SNR=6.9
FURC **Furnace Creek,** 76.25 54 ⇓P P 03 22 21.7 +0.3
baz=76,SNR=6.9
M16A **Huntsville** 76.34 48 ⇓P P 03 22 21.7 -0.1
baz=76
DUG **Dugway** 76.37 49 ⇑P P 03 22 22.2 +0.2
baz=76,SNR=8.8
DUG **Dugway** 76.37 49 *e*P P 03 22 22.6 +0.6
DUG pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
DUG **Dugway** 76.37 49 *e*P P 03 22 22.6 +0.6
comp=Z,9.7nm,1.1s,mb4.7
BUR08 **Bucovina Ar. S** 76.40 321 *e*P P 03 22 21.9 -0.1
BURAR **Bucovina Array** 76.41 321 ⇑P P 03 22 22.4 +0.3
BURAR **Bucovina Array** 76.41 321 ⇑*i*P P 03 22 22.4 +0.3
Q13A **Wheeler Ranch,** 76.44 51 ⇑P P 03 22 22.7 +0.3
baz=76
R12A **Pony Springs,** 76.48 52 ⇑P P 03 22 22.9 +0.3
baz=76,SNR=5.4
EDW2 **Edwards Air Fo** 76.51 56 ⇓P P 03 22 22.3 -0.5
baz=76
BW06 **Boulder Array** 76.57 45 ⇑P P 03 22 22.8 -0.2
baz=76,SNR=5.6
BW06 **Boulder Array** 76.57 45 *e*P P 03 22 23.1 0.0
comp=Z,3.7nm,1.0s,mb4.3
PDAR **Pinedale Array** 76.57 45 P P 03 22 23.5 +0.5
comp=Z,2.3nm,0.8s,mb4.2,baz=306,slow=3.5,SNR=12
P14A **Drum Mountains** 76.61 50 ⇑P P 03 22 23.6 +0.2
baz=76,SNR=7.7
U10A **Ash Meadows, A** 76.62 54 ⇑P P 03 22 24.3 +0.9
baz=76,SNR=6.2
M17A **Scullys Gap (B** 76.79 47 ⇑P P 03 22 24.4 +0.1
baz=76
S12A **Delamar Landin** 76.79 52 ⇑P P 03 22 25.3 +0.9
baz=76
T11A **Corn Creek, Al** 76.79 53 ⇑P P 03 22 24.5 0.0
baz=76,SNR=8.7
L18A **Fontenelle, Gr** 76.85 46 ⇓P P 03 22 24.0 -0.6
baz=77,SNR=5.5
VRI **Vrincioaia** 76.86 319 ⇑P P 03 22 26.1 +1.5
VRI **Vrincioaia** 76.86 319 ⇑*i*P P 03 22 26.1 +1.5
Q14A **Sevier Lake (B** 76.87 50 ⇓P P 03 22 25.1 +0.2
baz=77,SNR=11
KOLS **Kolonicke sedl** 76.89 323 *e*P P 03 22 25.2 +0.5
KOLS pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
KOLS **Kolonicke sedl** 76.89 323 *e*P P 03 22 25.2 +0.5
comp=Z,7.3nm,1.2s,mb4.5
KOLS **Kolonicke sedl** 76.89 323 *e*P P 03 22 25.2 +0.5
K19A **Absolon Red Bu** 76.92 45 ⇑P P 03 22 24.6 -0.5
baz=77
GSC **Goldstone** 77.01 55 ⇓P P 03 22 25.9 +0.2
baz=77
STHS **Stebnicka Huta** 77.01 324 *e*P P 03 22 26.1 +0.7
STHS pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
STHS **Stebnicka Huta** 77.01 324 *e*P P 03 22 26.1 +0.7
comp=Z,8.8nm,1.3s,mb4.5
STHS **Stebnicka Huta** 77.01 324 *e*P P 03 22 26.1 +0.7
OJC **Ojcow** 77.08 326 *e*P P 03 22 24.7 -1.1
UZH **Uzhgorod** 77.09 323 *e*P P 03 22 26.6 +0.7
UZH *e* 03 22 38.6
BFSC **Mount Baldy Ra** 77.13 56 ⇓P P 03 22 26.3 -0.1
baz=77
DAU **Daniels Canyon** 77.14 48 *e*P P 03 22 27.6 +1.3
DAU pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
DAU **Daniels Canyon** 77.14 48 *e*P P 03 22 27.6 +1.3
comp=Z,8.7nm,1.3s,mb4.5
BR131 **Keskin Array S** 77.14 311 *e*P P 03 22 26.4 +0.1
comp=Z,9.5nm,1.1s,mb4.6
BRTR **Keskin Array B** 77.14 311 P P 03 22 26.5 +0.1
comp=Z,8.1nm,1.1s,mb4.6,baz=90,slow=3.1,SNR=20
BRTR **Keskin Array B** 77.14 311 P P 03 22 26.5 +0.1
BRTR pmax pmax
comp=Z,8.0nm,1.1s
CRVS **Cervenica-Dubn** 77.28 324 *e*P P 03 22 27.2 +0.2
CRVS pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
CRVS **Cervenica-Dubn** 77.28 324 *e*P P 03 22 27.2 +0.2
comp=Z,8.6nm,1.2s,mb4.6
CRVS **Cervenica-Dubn** 77.28 324 *e*P P 03 22 27.2 +0.2
K20A **Yellowstone Ra** 77.31 45 ⇑P P 03 22 26.9 -0.3
baz=77
Q15A **Fillmore** 77.40 50 ⇑P P 03 22 27.4 -0.4
baz=77,SNR=5.3
NIE **Niedzica** 77.43 325 *e*P P 03 22 28.4 +0.6
TUQ **Turquoise Moun** 77.49 55 ⇓P P 03 22 28.6 +0.2
baz=77,SNR=10.0
MLR **Muntele Rosu** 77.52 319 P P 03 22 28.9 +0.6
comp=Z,1.2nm,0.3s,mb4.2,baz=21,slow=7.3,SNR=6.6
MLR **Muntele Rosu** 77.52 319 ⇑P P 03 22 28.9 +0.5
MLR **Muntele Rosu** 77.52 319 ⇑*i*P P 03 22 28.9 +0.6
V11A **Goodsprings** 77.55 54 ⇑P P 03 22 29.0 +0.3
baz=77
O17A **Robinson Place** 77.58 48 ⇓P P 03 22 27.2 -1.6
baz=77
HEC **Hector,Ludlow** 77.61 55 ⇑P P 03 22 28.5 -0.6
baz=77
S14A **Cedar City** 77.72 51 ⇓P P 03 22 29.2 -0.5
baz=77
U12A **Valley of Fire** 77.73 53 ⇓P P 03 22 29.6 -0.1
baz=78
T13A **Saint George** 77.74 52 ⇓P P 03 22 30.6 +0.8
baz=78,SNR=9.7
L20A **Wamsutter** 77.75 45 ⇑P P 03 22 29.0 -0.7
baz=78
MSU **Marysvale** 77.83 50 *e*P P 03 22 31.4 +1.2
MSU pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
MSU **Marysvale** 77.83 50 *e*P P 03 22 31.4 +1.2
comp=Z,5.6nm,1.2s,mb4.4
V12A **Nelson** 77.98 54 ⇓P P 03 22 31.0 -0.1
baz=78
VOIR 78.01 320 ⇓P P 03 22 31.9 +0.8
VOIR 78.01 320 ⇓*i*P P 03 22 31.9 +0.8
BSEG **Bad Segeberg** 78.02 333 *e*P P 03 22 30.9 -0.1
comp=Z,35nm,1.5s,mb5.1
BSEG **Bad Segeberg** 78.02 333 *e*P P 03 22 30.9 -0.1
BSEG pmax pmax
comp=Z,35nm,1.5s,mb5.1
BSEG **Bad Segeberg** 78.02 333 *e*P P 03 22 30.9 -0.1
KECS **Kecovo** 78.03 324 *e*P P 03 22 30.1 -1.1
KECS pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
KECS **Kecovo** 78.03 324 *e*P P 03 22 30.1 -1.1
comp=Z,2.5nm,1.1s,mb4.1
KECS *e* 03 26 02.1
KECS **Kecovo** 78.03 324 *e*P P 03 22 30.1 -1.1
KECS *e* 03 26 02.1
ULM **Lac du Bonnet** 78.05 33 P P 03 22 30.2 -1.0
comp=Z,4.0nm,0.8s,mb4.4,baz=316,slow=5.3,SNR=4.0
ULM **Lac du Bonnet** 78.05 33 *e*P P 03 22 30.5 -0.7
comp=Z,6.2nm,0.9s,mb4.5
P17A **Butcher Ranch,** 78.06 49 ⇓P P 03 22 31.2 -0.2
baz=78,SNR=5.2
GMRC **Granite Mounta** 78.07 55 ⇓P P 03 22 32.5 +0.9
baz=78
OKC **Ostrava-Krasne** 78.08 326 *e*P P 03 22 31.7 +0.3
OKC **Ostrava-Krasne** 78.08 326 *e*P P 03 22 31.7 +0.3
U13A **Pakoon Wash** 78.09 53 ⇑P P 03 22 32.5 +0.7
baz=78,SNR=9.4
KSP **Ksiaz** 78.11 328 *e*P P 03 22 32.1 +0.6
Q16A **Castle Valley** 78.17 49 ⇓P P 03 22 30.7 -1.4
baz=78
DRGR 78.21 322 ⇑P P 03 22 32.9 +0.7
DRGR 78.21 322 ⇑*i*P P 03 22 32.9 +0.7
T14A **Hurricane** 78.22 52 ⇓P P 03 22 32.6 +0.2
baz=78
P18A **Preston Nutter** 78.24 48 ⇓P P 03 22 31.2 -1.3
baz=78,SNR=6.0
L21A **Rawlins** 78.31 45 P P 03 22 33.4 +0.6
baz=78,SNR=5.9
BELC **Belle Mtn. Jos** 78.35 56 ⇑P P 03 22 33.1 -0.1
baz=78
MORC **Moravsky Berou** 78.39 326 ⇓P P 03 22 31.7 -1.4
MORC **Moravsky Berou** 78.39 326 *e*P P 03 22 33.1 0.0
comp=Z,18nm,1.2s,mb4.9
MORC **Moravsky Berou** 78.39 326 ⇓*i*P P 03 22 31.7 -1.4
R16A **Teasdale** 78.39 50 ⇓P P 03 22 34.4 +1.0
baz=78,SNR=9.3
SRU **San Rafael** 78.42 49 ⇓P P 03 22 33.6 +0.1
baz=78,SNR=6.0
SRU **San Rafael** 78.42 49 *e*P P 03 22 34.2 +0.7
SRU pmax pmax
comp=Z,15nm,1.3s,mb4.8
SRU **San Rafael** 78.42 49 *e*P P 03 22 34.2 +0.7
comp=Z,15nm,1.3s,mb4.8
V13A **Grand Canyon W** 78.44 53 ⇑P P 03 22 33.7 0.0
baz=78,SNR=9.0
O19A **Miners Draw (B** 78.44 47 ⇓P P 03 22 33.1 -0.5
baz=78
DPC **Dobruska-Polom** 78.47 327 *e*P P 03 22 34.1 +0.6
DPC **Dobruska-Polom** 78.47 327 *e*P P 03 22 34.1 +0.6
UPC **Upice** 78.48 328 *e*P P 03 22 33.7 +0.1
UPC **Upice** 78.48 328 *e*P P 03 22 33.7 +0.1
M21A **Separation Pea** 78.56 45 ⇑P P 03 22 34.0 -0.2
baz=78
N20A **Spence Gulch,** 78.57 46 ⇑P P 03 22 34.5 +0.2
baz=78,SNR=8.7
U14A **Mt Trumbull** 78.58 52 ⇑P P 03 22 35.1 +0.7
baz=78,SNR=8.4
RSSD **Black Hills** 78.61 42 *e*P P 03 22 34.7 +0.2
RSSD pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
RSSD **Black Hills** 78.61 42 *e*P P 03 22 34.6 +0.2
comp=Z,1.6nm,0.5s,mb4.2
T15A **Red Dirt Ranch** 78.68 51 ⇑P P 03 22 35.0 +0.1
baz=78
PSZ **Piszkesteto** 78.72 324 *e*P P 03 22 35.3 +0.4
PSZ pmax pmax
comp=Z,25nm,1.5s,mb4.9
PSZ **Piszkesteto** 78.72 324 *e*P P 03 22 35.2 +0.3
comp=Z,25nm,1.5s,mb4.9
PSZ **Piszkesteto** 78.72 324 ⇓*e*P P 03 22 35.9 +1.0
R17A **Hanksville Air** 78.77 49 ⇑P P 03 22 35.6 +0.2
baz=78
VYHS **Vyhne** 78.77 325 *e*P P 03 22 35.4 +0.2
VYHS pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
VYHS **Vyhne** 78.77 325 *e*P P 03 22 35.4 +0.2
comp=Z,4.9nm,1.2s,mb4.3
VYHS **Vyhne** 78.77 325 *e*P P 03 22 35.4 +0.2
IRM **Iron Mountain** 78.79 55 ⇑P P 03 22 36.2 +0.6
baz=78,SNR=5.8
BC3 **Big Chuckawall** 78.92 56 ⇑P P 03 22 36.1 -0.2
baz=79
W13A **Hualapai Mount** 78.99 54 ⇓P P 03 22 36.3 -0.4
baz=79
N21A **Black Mountain** 79.04 46 ⇓P P 03 22 36.7 -0.1
baz=79
BRG **Berggiesshubel** 79.05 329 *i* P P 03 22 36.7 0.0
comp=Z,14nm,1.4s,mb4.7
O20A **White River Ci** 79.06 47 ⇓P P 03 22 37.1 +0.2
baz=79
PVCC **Panska Ves** 79.06 328 *e*P P 03 22 37.4 +0.6
PVCC **Panska Ves** 79.06 328 *e*P P 03 22 37.4 +0.6
CLL **Collm** 79.08 330 *e*P P 03 22 36.1 -0.8
comp=Z,16nm,1.2s,mb4.8
CLL **Collm** 79.08 330 ⇑*i*P P 03 22 36.2 -0.7
CLL *i* *PP pP 03 22 41.7 +2.2
CLL pmax pmax
comp=Z,17nm,1.2s,mb4.8
CLL **Collm** 79.08 330 ⇑*i*P P 03 22 36.2 -0.7
comp=Z,17nm,1.2s,mb4.8
CLL *i* pP pP 03 22 41.7 +2.2
CLL **Collm** 79.08 330 ⇑*i*P P 03 22 36.2 -0.7
comp=Z,17nm,1.2s,mb4.8
CLL *e*pP pP 03 22 40.0 +0.5
CLL *i* sP sP 03 22 41.7 +1.3
CLL *i* PcP PcP 03 22 44.7 -0.7
CLL *e* 03 22 58.0

U15A **North Rim** 79.12 52 ⇑P P 03 22 37.2 -0.2
baz=79,SNR=15
V14A **Boquillas Ranc** 79.13 53 ⇑P P 03 22 37.5 0.0
baz=79,SNR=13
VRAC **Vranov** 79.14 327 P P 03 22 37.1 -0.1
comp=Z,8.6nm,0.9s,mb4.7,baz=65,slow=5.4,SNR=15
VRAC **Vranov** 79.14 327 P P 03 22 37.1 -0.2
VRAC pmax pmax
comp=Z,9.0nm,0.9s
VRAC **Vranov** 79.14 327 ⇑P P 03 22 38.3 +1.0
VRAC **Vranov** 79.14 327⇑i/P P 03 22 38.3 +1.0
GZR **Gura Zlata** 79.17 321 ⇑P P 03 22 38.0 +0.5
GZR **Gura Zlata** 79.17 321⇑i/P P 03 22 38.0 +0.5
S17A **Black Ridge (B** 79.23 50 ⇑P P 03 22 37.9 0.0
baz=79,SNR=9.2
NRDL **Niedersach Rie** 79.25 332 eP P 03 22 37.6 -0.2
comp=Z,56nm,2.0s,mb5.2
Q19A **Hogan Spring (** 79.26 48 ⇓P P 03 22 36.8 -1.2
baz=79,SNR=7.1
R18A **Canyonlands Na** 79.27 49 ⇓P P 03 22 37.8 -0.3
baz=79,SNR=5.1
PDMCI **Parker Dam,Lak** 79.34 54 ⇓P P 03 22 39.0 +0.4
baz=79
X13A **Yucca** 79.35 54 ⇓P P 03 22 39.2 +0.6
baz=79,SNR=9.9
W14A **Seligman** 79.42 53 ⇑P P 03 22 39.2 +0.2
baz=79,SNR=8.3
BUD **Budapest** 79.43 324⇓eP P 03 22 39.7 +0.8
Y12C **Blythe** 79.45 55 ⇑P P 03 22 38.6 -0.7
baz=79
PRU **Pruhonice** 79.49 328 eP P 03 22 39.7 +0.6
PRU **Pruhonice** 79.49 328 eP P 03 22 39.7 +0.6
BZS **Buzias** 79.58 321 ⇑P P 03 22 39.8 +0.1
BZS **Buzias** 79.58 321⇑i/P P 03 22 39.8 +0.1
V15A **Kaibab Nationa** 79.58 52 ⇑P P 03 22 40.7 +0.8
baz=79,SNR=8.7
N22A **Wattenberg Ran** 79.61 45 ⇑P P 03 22 39.5 -0.4
baz=79
TREC **Trest** 79.63 327 eP P 03 22 40.2 +0.3
TREC **Trest** 79.63 327 eP P 03 22 40.2 +0.3
T17A **Navajo Res., N** 79.64 51 ⇑P P 03 22 40.2 0.0
baz=79
S18A **Hurst Farm, Bl** 79.67 50 ⇓P P 03 22 40.2 -0.1
baz=79,SNR=6.3
CLZ **Clausthal** 79.67 331 eP P 03 22 40.4 +0.3
comp=Z,36nm,1.5s,mb5.1
CLZ **Clausthal** 79.67 331 eP P 03 22 40.4 +0.3
CLZ pmax pmax
comp=Z,36nm,1.5s,mb5.1
CLZ **Clausthal** 79.67 331 eP P 03 22 40.4 +0.3
comp=Z,36nm,1.5s,mb5.1
R19A **Curley Farm, L** 79.70 49 ⇑P P 03 22 39.8 -0.7
baz=79
ZST **Bratislava** 79.76 326 eP P 03 22 39.0 -1.7
ZST pmax pmax
comp=Z,10.0nm,1.7s,mb4.5
ZST **Bratislava** 79.76 326 eP P 03 22 39.0 -1.7
comp=Z,10nm,1.7s,mb4.5
ZST **Bratislava** 79.76 326 eP P 03 22 38.9 -1.8
U17A **Shonto** 79.99 51 ⇓P P 03 22 42.2 0.0
baz=80
TANN **Tannenbergstha** 80.00 329 eP P 03 22 41.6 -0.3
comp=Z,13nm,1.6s,mb4.6
X14A **Yava** 80.02 54 ⇑P P 03 22 42.4 +0.1
baz=80
T18A **Mexican Hat** 80.11 50 ⇑P P 03 22 42.4 -0.3
baz=80,SNR=8.7
S19A **Harvey Farm, M** 80.14 49 ⇓P P 03 22 42.7 -0.2
baz=80
NKC **Novy Kostel** 80.15 329 eP P 03 22 42.8 +0.1
NKC **Novy Kostel** 80.15 329 eP P 03 22 42.8 +0.1
MOX **Moxa** 80.15 330 eP P 03 22 43.2 +0.5
comp=Z,30nm,1.8s,mb4.9
MOX **Moxa** 80.15 330 eP P 03 22 42.6 -0.1
comp=Z,16nm,1.3s,mb4.8
MOX **Moxa** 80.15 330 eP P 03 22 43.2 +0.5
MOX pmax pmax
comp=Z,30nm,1.8s,mb4.9
PV01 **Paradox Valley** 80.21 49 eP P 03 22 43.5 +0.2
comp=Z,444nm,1.1s
WUAZ **Wupatki** 80.27 52 ⇓P P 03 22 43.7 0.0
baz=80,SNR=7.2
R20A **Redvale** 80.28 48 ⇓P P 03 22 43.1 -0.5
baz=80,SNR=5.6
Y14A **Wickenburg** 80.29 54 ⇑P P 03 22 42.6 -1.2
baz=80
Z13A **Yuma Proving G** 80.36 55 ⇑P P 03 22 43.8 -0.4
baz=80,SNR=11
SOP **Sopron** 80.39 325⇓eP P 03 22 45.1 +1.0
MMAI **Mount Meron Ar** 80.40 305 P P 03 22 44.4 0.0
comp=Z,20nm,1.2s,mb4.9,baz=46,slow=3.6,SNR=12
X15A **Humboldt** 80.42 53 ⇓P P 03 22 44.8 +0.4
baz=80,SNR=8.3
SMCO **Snowmass** 80.42 47 eP P 03 22 45.2 +0.8
comp=Z,6.5nm,1.2s,mb4.4
W16A **Flagstaff** 80.45 52 ⇑P P 03 22 45.2 +0.5
baz=80
CONA **Conrad Observa** 80.51 326 i P P 03 22 45.6 +0.9
comp=Z,16nm,1.3s,mb4.8,SNR=5.3
KHC **Kasperske Hory** 80.55 328 eP P 03 22 45.3 +0.4
KHC **Kasperske Hory** 80.55 328 eP P 03 22 45.1 +0.2
comp=Z,12nm,1.2s,mb4.7
KHC **Kasperske Hory** 80.55 328 eP P 03 22 45.3 +0.4
PKSM **Moragy** 80.55 323 ⇑P P 03 22 44.6 -0.4
PKSM **Moragy** 80.55 323⇑i/P P 03 22 44.6 -0.4
V17A **Tonalea, Kykot** 80.56 52 ⇓P P 03 22 45.4 +0.2
baz=80,SNR=14
113A **Mohawk Valley,** 80.57 55 ⇑P P 03 22 45.5 +0.2
baz=80,SNR=5.6
U18A **Rough Rock, Ch** 80.59 50 ⇓P P 03 22 45.7 +0.3
baz=80,SNR=8.1
ROTZ **Rotzenmuhle** 80.61 329 eP P 03 22 45.5 +0.3
comp=Z,23nm,1.5s,mb4.9
R21A **Cimarron** 80.64 48 ⇓P P 03 22 45.8 +0.2
baz=80
Q22A **Crested Butte,** 80.67 47 ⇑P P 03 22 45.9 +0.1
baz=80,SNR=5.4
Z14A **Wintersburg** 80.70 55 ⇓P P 03 22 46.1 0.0
baz=80
Y15A **Casa Rosa Ranc** 80.70 54 ⇓P P 03 22 46.6 +0.6
baz=80,SNR=9.0
GEC2 **GERESS Array S** 80.72 328 eP P 03 22 45.7 -0.1
comp=Z,7.0nm,1.2s,mb4.5
GEC2 **GERESS Array S** 80.72 328 eP P 03 22 45.7 -0.1
GEC2 pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
GEC2 **GERESS Array S** 80.72 328 eP P 03 22 45.7 -0.1
comp=Z,7.0nm,1.2s,mb4.5
GERES **GERESS Array B** 80.72 328 P P 03 22 45.9 +0.1
comp=Z,2.4nm,0.9s,mb4.1,baz=44,slow=4.2,SNR=14
GERES **GERESS Array B** 80.72 328 P P 03 22 45.9 +0.1
GERES pmax pmax
comp=Z,2.0nm,0.9s
T19A **Beclabito** 80.82 50 ⇓P P 03 22 46.5 -0.1
baz=80,SNR=7.7
WET **Wettzell** 80.83 328 eP P 03 22 46.5 +0.1
comp=Z,16nm,1.4s,mb4.8
WET **Wettzell** 80.83 328 eP P 03 22 46.5 +0.1
WET pmax pmax
comp=Z,16nm,1.4s,mb4.8
WET **Wettzell** 80.83 328 eP P 03 22 46.5 +0.1
comp=Z,16nm,1.4s,mb4.8
MVCO **Mesa Verde** 80.88 49 ⇓P P 03 22 47.0 +0.2
baz=81
X16A **Lo Mia Camp, P** 80.96 53 ⇑P P 03 22 48.1 +0.7
baz=81,SNR=7.3
V18A **Ganado** 81.02 51 ⇑P P 03 22 47.9 +0.2
baz=81,SNR=6.4
GRA1 **Grafenberg Arr** 81.06 330 eP P 03 22 47.7 +0.1
comp=Z,31nm,1.2s,mb5.1
GRF **Grafenberg Arr** 81.06 330 eP P 03 22 47.7 +0.1
comp=Z,31nm,1.2s,mb5.1
GRF **Grafenberg Arr** 81.06 330 eP P 03 22 47.7 +0.1
GRF pmax pmax
comp=Z,31nm,1.2s,mb5.1
GRF **Grafenberg Arr** 81.06 330 eP P 03 22 47.7 +0.1
GRF pmax pmax
comp=Z,31nm,1.2s,mb5.1
GRF **Grafenberg Arr** 81.06 330 eP P 03 22 47.7 +0.1
comp=Z,31nm,1.2s,mb5.1
U19A **Dine' College,** 81.07 50 ⇓P P 03 22 48.8 +0.8
baz=81,SNR=7.0
BUG **Bochum--Univer** 81.13 333 eP P 03 22 47.6 -0.3
comp=Z,16nm,1.2s,mb4.8
114A **Black Gap (USA** 81.14 55 ⇑P P 03 22 48.6 +0.2
baz=81,SNR=6.4
R22A **Saguache, Gunn** 81.19 47 ⇑P P 03 22 48.4 -0.1
baz=81
Y16A **Circle Bar Ran** 81.29 53 ⇑P P 03 22 50.0 +0.9
baz=81,SNR=5.7
X17A **Forest Lakes** 81.40 53 ⇓P P 03 22 49.6 -0.1
baz=81,SNR=6.7
115A **Sonoran Desert** 81.59 55 ⇓P P 03 22 50.9 +0.1
baz=81
TNS **Taunus Mts** 81.70 331 eP P 03 22 50.9 -0.1
comp=Z,24nm,1.2s,mb5.0
TNS **Taunus Mts** 81.70 331 eP P 03 22 50.9 -0.1
TNS pmax pmax
comp=Z,24nm,1.2s,mb5.0
TNS **Taunus Mts** 81.70 331 eP P 03 22 50.9 -0.1
comp=Z,24nm,1.2s,mb5.0
214A **Organ Pipe Nat** 81.71 56 ⇑P P 03 22 52.0 +0.6
baz=82
W19A **Sanders** 81.75 51 ⇑P P 03 22 52.3 +0.8
baz=82,SNR=5.7
X18A **Snowflake** 81.80 52 ⇓P P 03 22 51.7 -0.1
baz=82
Y17A **Roosevelt** 81.81 53 ⇑P P 03 22 52.0 +0.2
baz=82
U21A **Nageezi** 81.90 49 ⇓P P 03 22 52.2 -0.2
baz=82
T22A **Edith** 81.94 48 ⇓P P 03 22 53.0 +0.4
baz=82
RJOB **Jochberg** 81.97 328 eP P 03 22 53.1 +0.7
comp=Z,22nm,1.2s,mb5.0
SDCO **Great Sand Dun** 82.25 47 eP P 03 22 54.7 +0.6
comp=Z,2.8nm,1.1s,mb4.1
FUR **Furstenfeldbru** 82.25 329 eP P 03 22 54.0 +0.1
comp=Z,28nm,1.3s,mb5.0
FUR **Furstenfeldbru** 82.25 329 eP P 03 22 54.0 +0.1
FUR pmax pmax
comp=Z,28nm,1.3s,mb5.0
FUR **Furstenfeldbru** 82.25 329 eP P 03 22 54.0 +0.1
comp=Z,28nm,1.3s,mb5.0
Y18A **Canyon Day Jun** 82.25 53 ⇑P P 03 22 54.3 +0.1
baz=82,SNR=5.5
MEM **Membach** 82.27 333 P P 03 22 54.1 +0.2
X19A **St. Johns** 82.27 52 ⇓P P 03 22 54.6 +0.3
baz=82,SNR=12
W20A **Ramah** 82.28 51 ⇑P P 03 22 54.1 -0.2
baz=82
117A **Oracle** 82.62 54 ⇓P P 03 22 56.1 0.0
baz=82
BCLA **Clavier** 82.67 333 P P 03 22 55.2 -0.9
comp=Z,7.3nm,1.3s,mb4.5
X20A **Quemado** 82.68 51 ⇓P P 03 22 56.0 -0.4
baz=82,SNR=6.4
UCC **Uccle** 82.68 334 P P 03 22 55.8 -0.3
V22A **San Miguel Ran** 82.69 49 ⇓P P 03 22 56.5 0.0
baz=82
TUC **Tucson** 82.76 54 eP P 03 22 57.5 +0.6
TUC pmax pmax
comp=Z,11nm,1.5s,mb4.7
TUC **Tucson** 82.76 54 eP P 03 22 57.5 +0.6
comp=Z,11nm,1.5s,mb4.7
U23A **El Rito** 82.83 49 ⇑P P 03 22 57.5 +0.3
baz=82,SNR=9.2
WLF **Walferdange** 83.00 332 P P 03 22 57.8 0.0
comp=Z,13nm,2.1s,mb4.6
RETA **Reutte** 83.00 328⇑i/P P 03 22 58.0 +0.1
comp=Z,21nm,1.2s,mb5.0,SNR=7.3
118A **Homack Ranch,** 83.06 53 ⇑P P 03 22 58.2 -0.2
baz=83,SNR=6.2
217A **Green Valley** 83.10 55 ⇑P P 03 22 58.4 -0.3
baz=83,SNR=5.7
GIVF **Givet** 83.11 333 eP P 03 22 57.7 -0.7
X21A **Alamocita Cree** 83.17 51 ⇑P P 03 22 59.3 +0.3
baz=83,SNR=10.0
Y20A **Horse Springs,** 83.18 52 ⇑P P 03 22 58.5 -0.5
baz=83,SNR=8.2
DOU **Dourbes** 83.19 333 P P 03 22 58.4 -0.4
comp=Z,6.8nm,1.8s,mb4.4
BFO **Black Forest** 83.29 330 eP P 03 22 59.9 +0.6
comp=Z,22nm,1.1s,mb5.1
BFO **Black Forest** 83.29 330 eP P 03 22 59.9 +0.6
BFO pmax pmax
comp=Z,22nm,1.1s,mb5.1
BFO **Black Forest** 83.29 330 eP P 03 22 59.9 +0.6
comp=Z,22nm,1.1s,mb5.1
BAIF **Baives** 83.36 334 eP P 03 22 59.0 -0.6
comp=Z,16nm,1.1s,mb4.7
BAIF **Baives** 83.36 334 eP P 03 22 59.0 -0.6
BAIF pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
BAIF **Baives** 83.36 334 eP P 03 22 59.0 -0.6
comp=Z,8.2nm,1.1s,mb4.7
119A **Ashpeak Ranch,** 83.39 53 ⇑P P 03 23 00.8 +0.7
baz=83
SCHQ **Schefferville** 83.49 16 P P 03 22 59.8 -0.5
comp=Z,6.2nm,0.9s,mb4.6,baz=339,slow=6.3,SNR=3.7
Y21A **Point of Rocks** 83.54 51 ⇓P P 03 23 00.6 -0.3
baz=83,SNR=7.0
Z20A **Nine Sixteen R** 83.59 52 ⇓P P 03 23 00.8 -0.3
baz=83,SNR=11
LAZ **Ladron** 83.59 50 eP P 03 23 02.0 +0.8
comp=Z,1.5nm,1.0s,mb4.1
ANMO **Albuquerque** 83.62 50 eP P 03 23 02.4 +1.1
ANMO pmax pmax
comp=Z,2.0nm,1.1s
ANMO **Albuquerque** 83.62 50 eP P 03 23 02.4 +1.1
comp=Z,1.5nm,1.1s,mb4.0
CDF **Champ du Feu** 83.62 331 eP P 03 23 00.6 -0.4
comp=Z,40nm,1.5s,mb5.0
CDF **Champ du Feu** 83.62 331 eP P 03 23 00.6 -0.4
CDF pmax pmax
comp=Z,20nm,1.5s,mb5.0
CDF **Champ du Feu** 83.62 331 eP P 03 23 00.6 -0.4
comp=Z,20nm,1.5s,mb5.0
W23A **Werner Place,** 83.66 49 ⇑P P 03 23 02.4 +0.9
baz=83
318A **Bisbee** 83.85 54 ⇓P P 03 23 02.5 0.0
baz=84,SNR=8.8
219A **White Tail Can** 83.93 53 ⇓P P 03 23 02.9 0.0
baz=84,SNR=7.2
DAVOX **Davos/Dischmat** 83.93 329 P P 03 23 02.2 -0.4
comp=Z,6.7nm,0.8s,mb4.8,baz=267,slow=1.1,SNR=6.4
120A **U Bar Ranch, L** 83.95 53 ⇑P P 03 23 03.6 +0.6
baz=84
Z21A **St. Cloud Mine** 84.02 52 ⇑P P 03 23 03.7 +0.3
baz=84,SNR=9.5
W24A **Lazy 6 Ranch,** 84.06 49 ⇓P P 03 23 04.0 +0.4
baz=84,SNR=8.9
BNM **Barren Site** 84.07 50 eP P 03 23 04.0 +0.4
comp=Z,1.0nm,0.8s,mb4.0
V25A **Rancho No Teng** 84.08 48 ⇑P P 03 23 04.0 +0.3
baz=84,SNR=6.5
HINF **Hinteralfeld** 84.27 331 eP P 03 23 03.6 -0.8
comp=Z,34nm,1.6s,mb4.9
HINF **Hinteralfeld** 84.27 331 eP P 03 23 03.6 -0.8
HINF pmax pmax
comp=Z,17nm,1.6s,mb4.9
HINF **Hinteralfeld** 84.27 331 eP P 03 23 03.6 -0.8
comp=Z,17nm,1.6s,mb4.9
HAU **Haudompre** 84.31 331 eP P 03 23 03.8 -0.7
comp=Z,17nm,1.1s,mb4.8
HAU **Haudompre** 84.31 331 eP P 03 23 03.8 -0.7
HAU pmax pmax
comp=Z,9.0nm,1.1s,mb4.8
HAU **Haudompre** 84.31 331 eP P 03 23 03.8 -0.7
comp=Z,8.7nm,1.1s,mb4.8
MEZF **Maizieres J'vi** 84.37 332 eP P 03 23 04.7 -0.1
comp=Z,38nm,1.3s,mb5.1
MEZF **Maizieres J'vi** 84.37 332 eP P 03 23 04.7 -0.1
comp=Z,38nm,1.3s,mb5.4
220A **Playas Peak, P** 84.45 53 ⇑P P 03 23 06.0 +0.4
baz=84
121A **Cookes Peak, D** 84.48 52 ⇓P P 03 23 05.7 -0.1
baz=84
Z22A **Elephant Butte** 84.49 51 ⇓P P 03 23 05.8 0.0
baz=84,SNR=6.4
Y23A **Lovelace Mesa,** 84.57 50 ⇑P P 03 23 06.0 -0.1
baz=84,SNR=8.5
V26A **Tequesquite Ra** 84.59 48 ⇓P P 03 23 06.0 -0.2
baz=84
W25A **X Bar L Ranch,** 84.61 48 ⇓P P 03 23 06.7 +0.4
baz=84,SNR=13
Y24A **Capitan** 84.94 50 ⇓P P 03 23 07.2 -0.8
baz=85
X25A **Clemmons Ranch** 84.98 49 ⇓P P 03 23 08.0 -0.2
baz=85
W26A **Owens Ranch, T** 85.10 48 ⇓P P 03 23 08.5 -0.3
baz=85
Y25A **Mesa, Roswell** 85.38 49 ⇑P P 03 23 09.9 -0.3
baz=85
X26A **CR and CF Fran** 85.46 48 ⇓P P 03 23 11.1 +0.5
baz=85,SNR=7.7
W27A **Bowe Ranch, En** 85.53 48 ⇑P P 03 23 11.4 +0.5
baz=85
CABF **La Chapelle** 85.56 331 eP P 03 23 10.5 -0.4
124A **Stringfield Ra** 85.78 51 ⇑P P 03 23 12.4 +0.2
baz=86
X27A **F and S Farms,** 85.80 48 ⇓P P 03 23 12.1 -0.2
baz=86
Z25A **Roswell** 85.82 50 ⇑P P 03 23 12.6 +0.1
baz=86,SNR=6.6
LOR **Lormes** 85.84 332 eP P 03 23 11.7 -0.6
comp=Z,73nm,1.3s,mb5.5
LOR **Lormes** 85.84 332 eP P 03 23 11.7 -0.6
LOR pmax pmax
comp=Z,36nm,1.3s,mb5.4
LOR **Lormes** 85.84 332 eP P 03 23 11.7 -0.6
comp=Z,36nm,1.3s,mb5.5
FLN **La Foliniere** 86.05 335 eP P 03 23 12.6 -0.6
comp=Z,30nm,1.2s,mb5.1
FLN **La Foliniere** 86.05 335 eP P 03 23 12.6 -0.6
FLN pmax pmax
comp=Z,15nm,1.2s,mb5.1
FLN **La Foliniere** 86.05 335 eP P 03 23 12.6 -0.6
comp=Z,15nm,1.2s,mb5.1
LDF **La Druitiere** 86.08 335 eP P 03 23 12.7 -0.7
comp=Z,31nm,1.2s,mb5.1
LDF **La Druitiere** 86.08 335 eP P 03 23 12.7 -0.7
LDF pmax pmax
comp=Z,16nm,1.2s,mb5.1
LDF **La Druitiere** 86.08 335 eP P 03 23 12.7 -0.7
comp=Z,16nm,1.2s,mb5.1
SSF **Saint Saulge** 86.15 332 eP P 03 23 13.3 -0.5
comp=Z,41nm,1.2s,mb5.2
SSF **Saint Saulge** 86.15 332 eP P 03 23 13.3 -0.5
SSF pmax pmax
comp=Z,21nm,1.2s,mb5.2
SSF **Saint Saulge** 86.15 332 eP P 03 23 13.3 -0.5
comp=Z,21nm,1.2s,mb5.2
224A **Cornudas Mount** 86.18 51 ⇑P P 03 23 14.2 0.0
baz=86,SNR=5.1
LPL **La Plagne** 86.22 330 eP P 03 23 14.0 -0.2
comp=Z,29nm,1.2s,mb5.1
LPL **La Plagne** 86.22 330 eP P 03 23 14.0 -0.2
LPL pmax pmax
comp=Z,14nm,1.2s,mb5.1
LPL **La Plagne** 86.22 330 eP P 03 23 14.0 -0.2
comp=Z,14nm,1.2s,mb5.1
LPG **La Plagne** 86.23 330 eP P 03 23 14.1 -0.1
comp=Z,22nm,1.1s,mb5.0
LPG **La Plagne** 86.23 330 eP P 03 23 14.1 -0.1
LPG pmax pmax
comp=Z,11nm,1.1s,mb5.0
LPG **La Plagne** 86.23 330 eP P 03 23 14.1 -0.1
comp=Z,11nm,1.1s,mb5.0
Z26A **Caprock** 86.26 49 ⇓P P 03 23 14.0 -0.6
baz=86
HYF **Humbligny** 86.28 333 eP P 03 23 14.5 +0.1
125A **Gardner Draw,** 86.29 50 ⇓P P 03 23 14.3 -0.5
baz=86,SNR=6.5
Y27A **Causey** 86.31 49 ⇓P P 03 23 14.3 -0.5
baz=86
SMF **Signal de Mont** 86.38 332 eP P 03 23 14.4 -0.5
comp=Z,64nm,1.6s,mb5.3
SMF **Signal de Mont** 86.38 332 eP P 03 23 14.4 -0.5
SMF pmax pmax
comp=Z,32nm,1.6s,mb5.3
SMF **Signal de Mont** 86.38 332 eP P 03 23 14.4 -0.5
comp=Z,32nm,1.6s,mb5.3
AVF **Avril sur Loir** 86.43 332 eP P 03 23 14.8 -0.4
comp=Z,65nm,1.2s,mb5.5
AVF **Avril sur Loir** 86.43 332 eP P 03 23 14.8 -0.4
AVF pmax pmax
comp=Z,33nm,1.2s,mb5.4
AVF **Avril sur Loir** 86.43 332 eP P 03 23 14.8 -0.4
comp=Z,33nm,1.2s,mb5.4
AMTX **Amarillo** 86.45 47 eP P 03 23 15.8 +0.3
comp=Z,3.2nm,0.7s,mb4.7
MSTX **Muleshoe** 86.47 48 ⇑P P 03 23 14.9 -0.8
baz=86
GRR **Gorron** 86.49 336 eP P 03 23 15.1 -0.3
comp=Z,46nm,1.1s,mb5.3
GRR **Gorron** 86.49 336 eP P 03 23 15.1 -0.3
GRR pmax pmax
comp=Z,23nm,1.1s,mb5.3
GRR **Gorron** 86.49 336 eP P 03 23 15.1 -0.3
comp=Z,23nm,1.1s,mb5.3
MNTX **Cornudas Mount** 86.53 51 eP P 03 23 15.9 -0.1
comp=Z,2.6nm,1.4s,mb4.3
Z27A **Tatum** 86.68 49 ⇓P P 03 23 16.6 -0.1
baz=86
BGF **Bois d'Agland** 86.81 332 eP P 03 23 16.7 -0.3
comp=Z,33nm,1.3s,mb5.1
BGF **Bois d'Agland** 86.81 332 eP P 03 23 16.7 -0.3
BGF pmax pmax
comp=Z,17nm,1.3s,mb5.1
BGF **Bois d'Agland** 86.81 332 eP P 03 23 16.7 -0.3
comp=Z,17nm,1.3s,mb5.1
325A **Bean Ranch, Si** 87.01 51 ⇑P P 03 23 18.2 -0.1
baz=87
ORIF **Oris-en-Rattie** 87.06 330 eP P 03 23 17.8 -0.5
comp=Z,16nm,1.1s,mb4.9
ORIF **Oris-en-Rattie** 87.06 330 eP P 03 23 17.8 -0.5
ORIF pmax pmax
comp=Z,8.0nm,1.1s,mb4.9
ORIF **Oris-en-Rattie** 87.06 330 eP P 03 23 17.8 -0.5
comp=Z,8.0nm,1.1s,mb4.9
SGMF **Saint Gilles** 87.15 336 eP P 03 23 18.6 -0.1
comp=Z,53nm,1.3s,mb5.3
SGMF **Saint Gilles** 87.15 336 eP P 03 23 18.6 -0.1
SGMF pmax pmax
comp=Z,27nm,1.3s,mb5.3
SGMF **Saint Gilles** 87.15 336 eP P 03 23 18.6 -0.1
comp=Z,26nm,1.3s,mb5.3
TCF **Toulx Ste Croi** 87.27 333 eP P 03 23 19.1 -0.2
comp=Z,42nm,1.4s,mb5.2
TCF **Toulx Ste Croi** 87.27 333 eP P 03 23 19.1 -0.2
TCF pmax pmax
comp=Z,21nm,1.4s,mb5.2
TCF **Toulx Ste Croi** 87.27 333 eP P 03 23 19.1 -0.2
comp=Z,21nm,1.4s,mb5.2
ROSF **Rostrenen** 87.30 337 eP P 03 23 19.4 0.0
comp=Z,58nm,1.2s,mb5.4
ROSF **Rostrenen** 87.30 337 eP P 03 23 19.4 0.0
ROSF pmax pmax
comp=Z,29nm,1.2s,mb5.4
ROSF **Rostrenen** 87.30 337 eP P 03 23 19.4 0.0
comp=Z,29nm,1.2s,mb5.4
VIVF **Saint-Julien-l** 87.58 330 eP P 03 23 20.5 -0.3
comp=Z,27nm,1.4s,mb5.0
VIVF **Saint-Julien-l** 87.58 330 eP P 03 23 20.5 -0.3
VIVF pmax pmax
comp=Z,14nm,1.4s,mb5.0
VIVF **Saint-Julien-l** 87.58 330 eP P 03 23 20.5 -0.3
comp=Z,14nm,1.4s,mb5.0
QUIF **Quistinic** 87.64 337 eP P 03 23 20.7 -0.3
comp=Z,108nm,1.7s,mb5.5
QUIF **Quistinic** 87.64 337 eP P 03 23 20.7 -0.3
QUIF pmax pmax
comp=Z,54nm,1.7s,mb5.5
QUIF **Quistinic** 87.64 337 eP P 03 23 20.7 -0.3
comp=Z,54nm,1.7s,mb5.5
MFF **Saint Martin d** 87.82 334 eP P 03 23 21.9 0.0
comp=Z,40nm,1.2s,mb5.2
MFF **Saint Martin d** 87.82 334 eP P 03 23 21.9 0.0
MFF pmax pmax
comp=Z,20nm,1.2s,mb5.2
MFF **Saint Martin d** 87.82 334 eP P 03 23 21.9 0.0
comp=Z,20nm,1.2s,mb5.2
RJF **Les Rejaudoux** 88.36 333 eP P 03 23 24.5 0.0
comp=Z,27nm,1.2s,mb5.0
RJF **Les Rejaudoux** 88.36 333 eP P 03 23 24.5 0.0
RJF pmax pmax
comp=Z,13nm,1.2s,mb5.0
RJF **Les Rejaudoux** 88.36 333 eP P 03 23 24.5 0.0
comp=Z,13nm,1.2s,mb5.0
526A **Mary Lane Ranc** 88.47 52 ⇑P P 03 23 24.9 -0.4
baz=88
CAF **Calviac** 88.49 332 eP P 03 23 25.5 +0.4
comp=Z,17nm,1.1s,mb4.9
CAF **Calviac** 88.49 332 eP P 03 23 25.5 +0.4
CAF pmax pmax
comp=Z,8.0nm,1.1s,mb4.9
CAF **Calviac** 88.49 332 eP P 03 23 25.5 +0.4
comp=Z,8.4nm,1.1s,mb4.9
LASF **Ste Croix** 88.55 331 eP P 03 23 25.4 0.0
comp=Z,38nm,1.3s,mb5.3
LFF **La Frestale** 88.96 333 eP P 03 23 27.5 +0.2

comp=Z,16nm,1.1s,mb5.0
LFF La Frestale 88.96 333 *e*P **P 03 23 27.5 +0.2**
LFF pmax pmax
comp=Z,8.0nm,1.1s,mb5.0
LFF La Frestale 88.96 333 *e*P **P 03 23 27.5 +0.2**
comp=Z,8.0nm,1.1s,mb5.0
TXAR Lajitas Array 89.24 52 P **P 03 23 29.3 +0.3**
comp=Z,1.4nm,0.8s,mb4.3,baz=301,slow=2.6,SNR=9.5
TXAR Lajitas Array 89.24 52 P **P 03 23 29.3 +0.3**
TXAR pmax pmax
comp=Z,1.0nm,0.8s
TXAR Lajitas Array 89.24 52 P **P 03 23 29.3 +0.3**
JCT Junction City 90.73 49 *e*P **P 03 23 35.8 -0.1**
JCT pmax pmax
comp=Z,9.0nm,1.3s,mb4.9
JCT Junction City 90.73 49 *e*P **P 03 23 35.8 -0.2**
comp=Z,9.2nm,1.3s,mb5.0
ESDC Sonseca Array 95.24 333 P **P 03 23 55.4 -1.1**
comp=Z,0.2nm,0.6s,mb3.8,baz=13,slow=4.0,SNR=5.8
LBTB Lobatse 124.39 264 *e*PKIKP PKPdf 03 29 32.1 +0.1
VNA1 Neumayer--Stat 144.54 197 *e*PKPdf PKPdf 03 30 06.4 -1.6
LPAZ La Paz 146.01 56 PKPbc PKPbc 03 30 13.6 +0.6
comp=Z,9.7nm,0.9s,baz=360,slow=5.9,SNR=14
LPAZ La Paz 146.01 56 PKP2 PKPbc 03 30 13.6 +0.7
LPAZ pmax pmax
comp=Z,10.0nm,0.9s
LPAZ La Paz 146.01 56 *e*PKPbc PKPbc 03 30 13.4 +0.5

NIED ***14*** *03:14:00, 39.°10N×140.°90E, h5km, Mw4.5 Best double couple: M0=5.76000×10^15 NP1:φs=227.00000°, δ50.00000°, λ94.00000°. NP2:φs=42.00000°, δ40.00000°, λ86.00000°.*
BJI ***14*** *03:14:02.5, 38.°93N×141.°04E, h17km, mB5.2/11, mb4.7/26, Ms4.6/16, Ms7 4.5/16*
IDC ***14*** *03:14:03.5±0.6, 39.°14N×140.°81E, h0km, mb4.3/25, mb1 4.4/26, mb1mx4.4/32, mbtmp4.3/26, ML3.8/1, Error ellipse: s-maj=16.0km s-min=12.3km az=120.0*
ISCJB ***14*** *03:14:04.1±0.5, 39.°09N±0.°02×140.°84E±0.°03, h13km±3km, mb4.6/106, MS4.4/7, Error ellipse: s-maj=4.1km s-min=3.3km az=164.6*
JMA ***14*** *03:14:04.4, 39.°09N×140.°86E, h8km±1km, M4.5*
JMA Felt III J1.
NEIC ***14*** *03:14:04.4, 39.°09N×140.°86E, h11km, mb4.7/68, MW4.4(NIED), After JMA.*
NEIC Recorded [3 JMA] in Iwate; [2 JMA] in Akita and Miyagi.
MOS ***14*** *03:14:07.5±0.7, 39.°16N×140.°68E, h33km, mb4.9/62, Error ellipse: s-maj=12.3km s-min=8.2km az=87.0*
SZGRF ***14*** *03:14:17.7, 40.°50N×140.°29E, h33km, mb4.8, Eastern Honshu, Japan*
ISC 14 03:14:04.9±0.5, 39.°07N±0.°03×140.°85E±0.°03, h9km±3km, h13km±1.5km:pP-P, n382, σ0.°85/393, mb4.6/106, MS4.4/7, 52C-57D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.31**	**111**	P	**Pg**	**03 14 10.5**	**-0.5**
JMK				*e*S	**Sg**	**03 14 14.8**	**-0.4**
JRG	**Rokugo**	**0.37**	**333**	⇓P	**Pg**	**03 14 11.5**	**-0.7**
JYK	**Kaneyama**	**0.41**	**249**	P	**Pg**	**03 14 13.0**	**+0.2**
JYK				*e*S	**Sg**	**03 14 18.6**	**+0.4**
JOM	**Ohasama**	**0.53**	**40**	P	**Pg**	**03 14 14.3**	**-0.9**
JOM				S	**Sg**	**03 14 21.3**	**-0.9**
JOU	**Okura**	**0.71**	**192**	P	**Pg**	**03 14 18.8**	**+0.2**
JOU				S	**Sg**	**03 14 28.7**	**+0.8**
JIO	**Ouri**	**0.72**	**147**	P	**Pg**	**03 14 18.3**	**-0.5**
JIO				S	**Sg**	**03 14 28.1**	**-0.2**
MAJO	**Matsushiro**	**3.27**	**221**	*e*P	**Pn**	**03 14 56.9**	**+0.6**
MAT	**Matsushiro**	**3.27**	**221**	P	**Pn**	**03 14 57.9**	**+1.6**
MAT				*e*S	**Sn**	**03 15 42.8**	**+7.4**
MJAR	**Matsushiro Arr**	**3.27**	**221**	Pn	**Pn**	**03 14 58.0**	**+1.7**
	10nm,0.3s,baz=324,slow=28,SNR=24						
MJAR				Pg	**Pg**	**03 15 04.7**	**-2.9**
	14nm,0.3s,baz=26,slow=15,SNR=28						
MJAR				Lg		03 15 51.7	
	4.0nm,0.3s,baz=24,slow=23,SNR=5.3						
ERM	**Erimo**	**3.43**	**30**	*e*P	**Pn**	**03 15 00.6**	**+2.1**
ERM	**Erimo**	**3.43**	**30**	*e*Pn	**Pn**	**03 15 00.9**	**+2.3**
ASAJ	**Asahikawa**	**5.21**	**14**	Pn	**Pn**	**03 15 24.3**	**+1.3**
	3.5nm,0.3s,baz=209,slow=13,SNR=11						
ASAJ	**Asahikawa**	**5.21**	**14**	P	**Pn**	**03 15 24.3**	**+1.3**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
JHJ	**Hachijo jima 2**	**6.00**	**189**	Sn	**Sn**	**03 16 46.5**	**+4.0**
	comp=Z,20nm,0.3s,baz=71,slow=23,SNR=7.4						
VLA	**Vladivostok**	**7.88**	**304**	*e*P	**Pn**	**03 16 08.6**	**+9.0**
VLA				pmax	pmax		
	comp=Z,44nm,1.7s						
YSS	**Yuzh-Sakhalins**	**8.01**	**9**	*e*P	**Pn**	**03 16 02.8**	**+1.5**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS	**Yuzh-Sakhalins**	**8.01**	**9**	*e*Pn	**Pn**	**03 16 02.9**	**+1.6**
MDJ	**Mudanjiang**	**10.06**	**307**	P	**Pn**	**03 16 31.3**	**+1.8**
MDJ				pmax	pmax		
	comp=Z,13nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,2μm,14.0s						
KSRS	**Korea Array**	**10.29**	**265**	Pn	**Pn**	**03 16 35.4**	**+2.7**
	comp=Z,1.8nm,0.3s,baz=74,slow=14,SNR=15						
KSRS				Sn	**Sn**	**03 18 34.5**	**+6.4**
	comp=Z,1.6nm,0.3s,baz=76,slow=24,SNR=11						
KSRS	**Korea Array**	**10.29**	**265**	P	**Pn**	**03 16 35.4**	**+2.7**
KSRS						03 18 34.6	
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KSRS				smax			
	comp=N,2.0nm,0.3s						
HABR	**Khabarovsk**	**10.29**	**338**	P	**Pn**	**03 16 34.0**	**+1.4**
HABR				*e*		03 18 27.0	
CN2	**Changchun**	**12.48**	**297**	*e*P	**Pn**	**03 17 05.9**	**+3.2**
CN2				*e*sP		03 17 12.9	
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BJI	**Beijing**	**19.04**	**281**	P	**Pn**	**03 18 26.9**	**-1.0**
BJI				pmax	pmax		
	comp=Z,14nm,1.2s						
BJI				pmax	pmax		
	comp=Z,380nm,9.9s						
NJ2	**Nanjing**	**19.19**	**255**	*e*P	**Pn**	**03 18 28.6**	**-1.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CLNS	**Chul'man**	**20.65**	**335**	*e*P	**P**	**03 18 40.8**	**-3.8**
CLNS				pmax	pmax		
	comp=Z,16nm,1.0s						
CLNS				pmax	pmax		
	comp=N,7.0nm,0.7s						
HHC	**Hu-ho-hao-te**	**22.48**	**284**	*e*P	**P**	**03 19 03.1**	**-1.2**
HHC				pP		03 19 07.3	
HHC				sP	sP	03 19 10.1	+2.1
HHC				PcP	PcP	03 22 59.4	+1.0
HHC				S	**S**	**03 23 03.3**	**-8.0**
HHC				SS		03 23 45.1	
HHC				ScP	ScP	03 26 34.3	-1.8
HHC				PcS	PcS	03 26 38.6	+1.5
HHC				ScS	ScS	03 30 18.1	-3.1
HHC				pmax	pmax		
	comp=Z,17nm,0.6s,mb4.7						
HHC				pmax	pmax		
	comp=Z,680nm,5.7s						
HHC				LR	LR		
	comp=N,410nm,13.1s,MS4.2						
HHC				LR	LR		
	comp=E,460nm,11.9s,MS4.2						
HHC				LR	LR		
	comp=Z,750nm,15.5s,MS4.2						
SEY	**Seymchan**	**24.90**	**13**	*ce*P	**P**	**03 19 29.2**	**+1.5**
ULN	**Ulaanbaatar**	**25.89**	**301**	*e*P	**P**	**03 19 33.5**	**-3.4**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.0						
ULN	**Ulaanbaatar**	**25.89**	**301**	*e*P	**P**	**03 19 33.5**	**-3.3**
	comp=Z,2.7nm,0.6s,mb4.0						
SONM	**Songino Array**	**26.32**	**301**	P	**P**	**03 19 40.9**	**0.0**
	comp=Z,1.0nm,0.3s,mb3.8,baz=131,slow=7.9,SNR=2.8						
SONM	**Songino Array**	**26.32**	**301**	P	**P**	**03 19 40.9**	**+0.1**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.3s						
LZH	**Lanzhou**	**29.35**	**276**	*e*P	**P**	**03 20 11.5**	**+3.5**
LZH				pP	pP	03 20 15.0	+4.3
LZH				sP	sP	03 20 17.5	+5.7
LZH				PP	PP	03 21 06.0	-8.2
LZH				*e*S	**S**	**03 25 01.5**	**-0.1**
LZH				sS	sS	03 25 08.0	+2.0
LZH				SS	SS	03 26 32.1	-34
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.6						
LZH				pmax	pmax		
	comp=Z,89nm,4.7s						
LZH				LR	LR		
	comp=E,600nm,12.9s						
LZH				LR	LR		
	comp=Z,830nm,14.4s,MS4.5						
GYA	**Guiyang**	**31.19**	**257**	P	**P**	**03 20 24.3**	**-0.1**
GYA				PP	PP	03 21 27.0	-7.7
GYA				PcP	PcP	03 23 19.8	+0.6
GYA				S	**S**	**03 25 27.3**	**-3.3**
GYA				ScP	ScP	03 27 01.6	-0.7
GYA				SS	SS	03 27 13.4	-30
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
GYA				pmax	pmax		
	comp=Z,160nm,12.9s						
GYA				LR	LR		
	comp=N,420nm,16.9s,MS4.5						
GYA				LR	LR		
	comp=E,640nm,14.5s,MS4.5						
GYA				LR	LR		
	comp=Z,1μm,15.7s,MS4.6						
CD2	**Chengdu**	**31.29**	**266**	*e*P	**P**	**03 20 26.3**	**+1.1**
CD2				pP	pP	03 20 30.6	+2.7
CD2				sP	sP	03 20 33.8	+4.8
CD2				PP	PP	03 21 28.8	-7.0
CD2				S	**S**	**03 25 30.3**	**-1.8**
CD2				SS	SS	03 27 13.3	-32
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
CD2				pmax	pmax		
	comp=Z,30nm,4.8s						
CD2				LR	LR		
	comp=N,350nm,12.5s						
CD2				LR	LR		
	comp=Z,210nm,14.2s,MS4.0						
BILL	**Bilibino**	**32.22**	**18**	*e*P	**P**	**03 20 34.0**	**+1.0**
BILL				pmax	pmax		
	comp=Z,26nm,2.5s,mb4.6						
BILL	**Bilibino**	**32.22**	**18**	*e*P	**P**	**03 20 33.3**	**+0.3**
	comp=Z,9.6nm,1.1s,mb4.5						
KMI	**Kunming**	**34.89**	**258**	P	**P**	**03 20 57.4**	**+0.7**
KMI				pP	pP	03 20 59.8	+0.4
KMI				PP	PP	03 22 14.3	-1.4
KMI				S	**S**	**03 26 26.6**	**-1.4**
KMI				SS	SS	03 28 38.8	-20
KMI				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
KMI				LR	LR		
	comp=N,410nm,17.1s,MS4.6						
KMI				LR	LR		
	comp=E,880nm,15.5s,MS4.6						
KMI				LR	LR		
	comp=Z,740nm,16.6s,MS4.5						
WMQ	**Urumqi**	**39.56**	**295**	*e*P	**P**	**03 21 36.0**	**-0.2**
ZALV	**Zalesovo Beam**	**40.24**	**311**	P	**P**	**03 21 39.7**	**-2.0**
	comp=Z,3.1nm,0.7s,mb4.2,baz=91,slow=7.9,SNR=8.1						
ZALV				PcP	PcP	03 23 45.0	-0.4
	comp=Z,1.5nm,0.5s,baz=93,slow=2.6,SNR=5.1						
ZALV	**Zalesovo Beam**	**40.24**	**311**	P	**P**	**03 21 39.7**	**-2.0**
ZALV						03 23 45.0	
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
MK31	**Makanchi Array**	**42.69**	**300**	*e*P	**P**	**03 22 01.6**	**-0.3**
MKAR	**Makanchi Array**	**42.69**	**300**	P	**P**	**03 22 01.4**	**-0.5**
	comp=Z,4.2nm,1.1s,mb4.1,baz=75,slow=14,SNR=6.8						
MKAR	**Makanchi Array**	**42.69**	**300**	P	**P**	**03 22 01.4**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KURK	**Kurchatov**	**44.35**	**306**	P	**P**	**03 22 14.9**	**-0.2**
	comp=Z,6.8nm,0.8s,mb4.4,baz=82,slow=8.2,SNR=12						
KURK				PcP	PcP	03 23 59.0	-0.1
	comp=Z,2.5nm,1.0s,baz=83,slow=3.8,SNR=4.3						
KURK	**Kurchatov**	**44.35**	**306**	*ce*P	**P**	**03 22 15.2**	**0.0**
KURK				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.7						
KURK	**Kurchatov**	**44.35**	**306**	*e*P	**P**	**03 22 14.6**	**-0.6**
	comp=Z,20nm,1.2s,mb4.7						
RSO	**Redoubt South**	**45.60**	**39**	*e*P	**P**	**03 22 25.7**	**+0.7**
RAMN	**Ramite**	**46.45**	**272**	*e*P	**P**	**03 22 30.4**	**-1.8**
	comp=Z,39nm,1.1s,mb5.2						
RAMN	**Ramite**	**46.45**	**272**	*e*P	**P**	**03 22 30.4**	**-1.8**
	comp=Z,39nm,1.1s,mb5.2						
GUN	**Gumba**	**46.55**	**273**	*e*P	**P**	**03 22 32.9**	**0.0**
	comp=Z,32nm,0.9s,mb5.3						
GUN	**Gumba**	**46.55**	**273**	*e*P	**P**	**03 22 32.9**	**0.0**
	comp=Z,32nm,0.9s,mb5.2						
KKN	**Kakani**	**47.07**	**274**	*e*P	**P**	**03 22 36.8**	**-0.2**
	comp=Z,18nm,0.7s,mb5.1						
KKN	**Kakani**	**47.07**	**274**	*e*P	**P**	**03 22 36.8**	**-0.2**
KKN				pmax	pmax		
	comp=Z,18nm,0.7s,mb5.1						
KKN	**Kakani**	**47.07**	**274**	*e*P	**P**	**03 22 36.8**	**-0.2**
	comp=Z,18nm,0.7s,mb5.1						
DMN	**Daman**	**47.30**	**274**	*e*P	**P**	**03 22 38.0**	**-0.8**
DMN	**Daman**	**47.30**	**274**	*e*P	**P**	**03 22 38.0**	**-0.8**
COLA	**College**	**47.61**	**33**	*e*P	**P**	**03 22 41.0**	**+0.3**
COLA				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
COLA	**College**	**47.61**	**33**	*e*P	**P**	**03 22 41.0**	**+0.3**
	comp=Z,3.1nm,0.7s,mb4.5						
TKM2	**Tokmak 2**	**48.30**	**297**	*e*P	**P**	**03 22 46.6**	**+0.3**
TKM2				pmax	pmax		
	comp=Z,18nm,1.2s,mb5.0						
TKM2	**Tokmak 2**	**48.30**	**297**	*e*P	**P**	**03 22 46.6**	**+0.2**
	comp=Z,18nm,1.2s,mb5.0						
BVAR	**Borovoye Array**	**48.89**	**311**	P	**P**	**03 22 50.1**	**-0.6**
	comp=Z,0.9nm,0.6s,mb4.0,baz=89,slow=9.1,SNR=4.5						
BVAR				PcP	PcP	03 24 14.9	-0.1
	comp=Z,1.8nm,0.6s,baz=64,slow=4.1,SNR=6.3						
BVAR	**Borovoye Array**	**48.89**	**311**	P	**P**	**03 22 50.1**	**-0.7**
BVAR						03 24 14.9	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRVK	**Borovoye**	**48.95**	**311**	*ce*P	**P**	**03 22 52.0**	**+0.8**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.7s,mb4.3						
AAK	**Ala-Archa**	**49.16**	**297**	P	**P**	**03 22 53.0**	**0.0**
	comp=Z,1.2nm,0.3s,mb4.4,baz=290,slow=19,SNR=4.7						
AAK	**Ala-Archa**	**49.16**	**297**	P	**P**	**03 22 53.0**	**0.0**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
AAK	**Ala-Archa**	**49.16**	**297**	*e*P	**P**	**03 22 52.8**	**-0.2**
	comp=Z,4.8nm,1.0s,mb4.5						
KSH	**Kashi**	**49.20**	**292**	*e*P	**P**	**03 22 57.6**	**+4.3**
KSH				pP	pP	03 23 02.1	+6.0
KSH				sP	sP	03 23 04.6	+7.4
KSH				PcP	PcP	03 24 19.4	+3.0
KSH				PP	PP	03 24 52.6	+5.7
KSH				ScP	ScP	03 28 13.0	+1.2
KSH				PcS	PcS	03 28 14.8	+2.0
KSH				S	**S**	**03 30 03.8**	**+4.8**
KSH				ScS	ScS	03 32 46.0	+0.4
KSH				SS	SS	03 33 32.6	+2.6
KSH				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb5.0						
KSH				LR	LR		
	comp=N,190nm,10.7s,MS4.6						
KSH				LR	LR		
	comp=E,240nm,10.9s,MS4.6						
KSH				LR	LR		
	comp=Z,430nm,11.7s,MS4.7						
UCH	**Uchtor**	**49.28**	**296**	*e*P	**P**	**03 22 54.4**	**+0.4**
	comp=Z,2.8nm,1.0s,mb4.2						
AML	**Almayashu**	**49.89**	**296**	*e*P	**P**	**03 22 59.8**	**+1.2**
	comp=Z,13nm,1.2s,mb4.8						
COEN	**Coen**	**52.79**	**177**	*e*P	**P**	**03 23 20.5**	**+0.1**
	comp=Z,205nm,1.3s,mb5.9						
INK	**Inuvik**	**52.79**	**28**	P	**P**	**03 23 20.0**	**+0.1**
	comp=Z,6.2nm,0.9s,mb4.5,baz=278,slow=9.3,SNR=8.6						
INK	**Inuvik**	**52.79**	**28**	*e*P	**P**	**03 23 20.9**	**+1.0**
INK				pmax	pmax		
	comp=Z,16nm,1.4s						
INK	**Inuvik**	**52.79**	**28**	*e*P	**P**	**03 23 20.9**	**+0.9**
	comp=Z,16nm,1.4s,mb4.8						
HYT	**Haines Junctio**	**52.95**	**37**	*e*P	**P**	**03 23 23.6**	**+2.4**
SVE	**Sverdlovsk**	**53.34**	**318**	⇑*e*P	**P**	**03 23 24.5**	**+0.4**
SVE				pmax	pmax		
	comp=Z,20nm,1.4s,mb4.8						
ARU	**Arti**	**54.55**	**317**	*c i*P	**P**	**03 23 32.5**	**-0.5**
ARU				S	**S**	**03 31 11.5**	**-0.7**
ARU				SS	SS	03 34 53.3	-0.9
ARU				pmax	pmax		
	comp=Z,27nm,1.7s,mb5.0						
ARU	**Arti**	**54.55**	**317**	*e*P	**P**	**03 23 32.7**	**-0.3**
	comp=Z,20nm,1.2s,mb5.0						
KBL	**Kabul**	**56.30**	**289**	*e*P	**P**	**03 23 47.0**	**+1.1**
KBL				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.9						
KBL	**Kabul**	**56.30**	**289**	*e*P	**P**	**03 23 47.0**	**+1.1**
	comp=Z,15nm,1.1s,mb5.0						
ABKAR	**Akbulak array**	**56.30**	**309**	*e*P	**P**	**03 23 45.1**	**-0.6**
	comp=Z,3.6nm,0.5s,mb4.7						
AKTK	**Aktyubinsk**	**57.00**	**311**	P	**P**	**03 23 50.4**	**-0.3**
AKTK				PcP	PcP	03 24 45.5	-0.2
AKTO	**Aktyubinsk**	**57.00**	**311**	P	**P**	**03 23 50.4**	**-0.3**
	comp=Z,0.9nm,0.5s,mb4.1,baz=56,slow=11,SNR=3.8						
AKTO				PcP	PcP	03 24 45.5	-0.2
	comp=Z,2.1nm,0.8s,baz=80,slow=4.1,SNR=3.6						
AKTO	**Aktyubinsk**	**57.00**	**311**	P	**P**	**03 23 50.4**	**-0.2**
AKTO						03 24 45.5	
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
WRAB	**Tennant Creek**	**59.00**	**187**	*e*P	**P**	**03 24 03.7**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,25nm,1.3s,mb5.1						
WRAB	**Tennant Creek**	**59.00**	**187**	*e*P	**P**	**03 24 03.7**	**-1.2**
	comp=Z,25nm,1.3s,mb5.1						
WRA	**Warramunga Arr**	**59.01**	**187**	P	**P**	**03 24 04.3**	**-0.7**
	comp=Z,4.4nm,0.6s,mb4.6,baz=5.1,slow=7.4,SNR=12						
WRA	**Warramunga Arr**	**59.01**	**187**	P	**P**	**03 24 04.3**	**-0.7**
WRA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
APA	**Apatity**	**60.66**	**335**	⇑*e*P	**P**	**03 24 14.0**	**-1.8**
APA				MLR	MLR		
	comp=Z,400nm,16.0s,MS4.7						
RES	**Resolute Bay**	**60.75**	**15**	P	**P**	**03 24 16.0**	**-0.4**
	comp=Z,11nm,1.0s,mb5.0,baz=312,slow=8.2,SNR=9.5						
RES	**Resolute Bay**	**60.75**	**15**	P	**P**	**03 24 16.0**	**-0.4**
RES				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.9						
RES	**Resolute Bay**	**60.75**	**15**	*e*P	**P**	**03 24 16.3**	**-0.1**
	comp=Z,16nm,1.0s,mb5.1						
ARCES	**ARCESS Array B**	**61.94**	**339**	P	**P**	**03 24 23.3**	**-1.2**
	comp=Z,5.9nm,1.1s,mb4.6,baz=44,slow=5.7,SNR=7.3						
ARCES	**ARCESS Array B**	**61.94**	**339**	P	**P**	**03 24 23.3**	**-1.2**
ARCES				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ARCES	**ARCESS Array B**	**61.94**	**339**	P	**P**	**03 24 23.3**	**-1.2**
YKA	**Yellowknife Ar**	**62.28**	**31**	P	**P**	**03 24 26.5**	**-0.4**
	comp=Z,1.0nm,0.8s,mb4.0,baz=308,slow=6.0,SNR=4.9						
YKA	**Yellowknife Ar**	**62.28**	**31**	P	**P**	**03 24 26.5**	**-0.4**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ASAR	**Alice Springs**	**62.74**	**187**	P	**P**	**03 24 30.2**	**-0.1**
	comp=Z,2.2nm,0.8s,mb4.3,baz=359,slow=4.7,SNR=14						
ASAR	**Alice Springs**	**62.74**	**187**	P	**P**	**03 24 30.2**	**-0.1**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
JOF	**Joensuu**	**63.97**	**331**	*e*p	**P**	**03 24 35.6**	**-2.4**
OBN	**Obninsk**	**66.21**	**323**	*e*P	**P**	**03 24 53.5**	**+0.8**
OBN				*i*		03 25 22.8	
OBN				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.8						
KAF	**Kangasniemi**	**66.30**	**332**	*e*p	**P**	**03 24 50.7**	**-2.5**
FINES	**FINESS Array B**	**66.82**	**332**	P	**P**	**03 24 55.7**	**-0.8**
	comp=Z,4.1nm,0.8s,mb4.5,baz=39,slow=8.1,SNR=15						
FINES	**FINESS Array B**	**66.82**	**332**	P	**P**	**03 24 55.7**	**-0.8**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GOF	**Gofitskoye**	**68.42**	**311**	*e*P	**P**	**03 25 02.2**	**-4.7**
GOF				pmax	pmax		
	comp=Z,40nm,1.4s,mb5.3						
SUMG	**Summit**	**68.66**	**360**	*e*P	**P**	**03 25 09.1**	**+1.2**
	comp=Z,11nm,0.9s,mb4.8						
ZEI	**Tsey**	**69.19**	**309**	*e*P	**P**	**03 25 08.6**	**-3.2**
ZEI				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.8						
KIV	**Kislovodsk**	**69.25**	**310**	*e*P	**P**	**03 25 13.4**	**+1.3**
KIV				*e*		03 25 35.1	
KIV				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.3						
KIV	**Kislovodsk**	**69.25**	**310**	*e*P	**P**	**03 25 13.1**	**+1.0**
GNI	**Garni**	**70.15**	**306**	*ce*P	**P**	**03 25 20.3**	**+2.6**
GNI				pmax	pmax		
	comp=Z,14nm,1.2s						
GNI	**Garni**	**70.15**	**306**	*e*P	**P**	**03 25 17.9**	**+0.2**
	comp=Z,14nm,1.2s,mb4.8						
B13A	**Whitefish**	**70.36**	**43**	⇓P	**P**	**03 25 18.0**	**-0.9**
	baz=70						
IZAR	**Zarasai**	**70.46**	**327**	*e*P	**P**	**03 25 19.1**	**-0.3**
IZAR				AMB	AMB	03 25 19.8	
	comp=Z,3.4nm,0.8s,mb4.3						
IDID	**Didziasalis**	**70.54**	**326**	*e*P	**P**	**03 25 19.6**	**-0.2**
IDID				AMB	AMB	03 25 21.5	
	comp=Z,4.0nm,1.1s,mb4.3						
A14A	**Double T Ranch**	**70.55**	**42**	⇑P	**P**	**03 25 19.6**	**-0.4**
	baz=70						
ISAL	**Salakas**	**70.63**	**327**	*e*P	**P**	**03 25 20.4**	**0.0**
ISAL				AMB	AMB	03 25 22.1	
	comp=Z,7.1nm,1.0s,mb4.5						
C13A	**Hot Springs**	**70.72**	**44**	⇑P	**P**	**03 25 20.4**	**-0.6**
	baz=70						
IIGN	**Ignalina**	**70.74**	**327**	*e*P	**P**	**03 25 20.8**	**-0.3**
IIGN				AMB	AMB	03 25 22.8	
	comp=Z,4.9nm,1.1s,mb4.3						
E12A	**Beaver Dam Sad**	**70.93**	**45**	⇑P	**P**	**03 25 22.1**	**-0.3**
	baz=71						
G11A	**Walters Elk Ra**	**71.15**	**47**	⇑P	**P**	**03 25 23.6**	**-0.2**
	baz=71,SNR=5.1						
B15A	**Bradely Ranch,**	**71.40**	**42**	⇓P	**P**	**03 25 24.8**	**-0.4**
	baz=71,SNR=7.5						
F12A	**Elk City**	**71.50**	**46**	⇑P	**P**	**03 25 25.7**	**-0.2**
	baz=71						
J09A	**Fry Pan Ranch,**	**71.52**	**49**	⇑P	**P**	**03 25 25.6**	**-0.4**
	baz=71						
WVOR	**Wild Horse Val**	**71.53**	**50**	*e*P	**P**	**03 25 27.2**	**+1.1**
WVOR				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
WVOR	**Wild Horse Val**	**71.53**	**50**	*e*P	**P**	**03 25 27.1**	**+1.1**
	comp=Z,2.2nm,0.9s,mb4.1						
SLMT	**Seeley Lake**	**71.57**	**44**	*e*P	**P**	**03 25 27.0**	**+0.8**
C15A	**Salmond Ranch,**	**71.71**	**43**	⇑P	**P**	**03 25 26.0**	**-1.1**
	baz=72						
H11A	**

baz=73,SNR=5.3
L11A Cat Creek Ranc 73.40 49 ⇊P P 03 25 36.6 -0.6
baz=73
BOZ Bozeman (W) 73.57 44 ⇊P P 03 25 38.2 +0.1
baz=73,SNR=7.2
BOZ Bozeman (W) 73.57 44 *e*P P 03 25 38.7 +0.5
BOZ pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
BOZ Bozeman (W) 73.57 44 *e*P P 03 25 38.7 +0.5
comp=Z,3.9nm,1.1s,mb4.2
I14A Mackay 73.64 46 ⇊P P 03 25 39.0 +0.3
baz=74
E18A Harlowton 73.90 43 ⇊P P 03 25 40.1 0.0
baz=74
J14A Carey 73.98 47 ⇊P P 03 25 41.0 +0.3
baz=74,SNR=5.1
O10A Cortez Mining, 74.11 51 ⇊P P 03 25 40.0 -1.5
baz=74
NVAR Mina Array Bea 74.13 53 P P 03 25 42.9 +1.3
comp=Z,3.3nm,0.9s,mb4.2,baz=278,slow=6.0,SNR=12
M12A Wells 74.36 49 ⇑P P 03 25 42.2 -0.7
baz=74
F18A Big Timber 74.43 43 ⇑P P 03 25 42.6 -0.6
baz=74
I16A Newdale 74.77 46 ⇊P P 03 25 45.5 +0.2
baz=75
L14A Malta 74.95 48 ⇊P P 03 25 45.6 -0.7
baz=75
IMW Indian Meadow 75.06 45 *e*P P 03 25 48.6 +1.7
comp=Z,1.9nm,0.7s,mb4.1
Q10A Clear Creek Ra 75.07 52 ⇑P P 03 25 46.6 -0.4
baz=75
TPAW Teton Pass 75.32 46 *e*P P 03 25 49.8 +1.4
REDW Red Top Meadow 75.46 46 *e*P P 03 25 51.0 +1.8
comp=Z,6.6nm,1.3s,mb4.4
S10A Tonopah Range, 75.51 53 ⇊P P 03 25 49.8 +0.2
baz=75,SNR=7.7
Q11A Duckwater 75.51 52 ⇊P P 03 25 49.8 +0.2
baz=75
P12A McGill 75.57 51 ⇊P P 03 25 50.1 +0.2
baz=75
N14A Grayback Hills 75.73 49 ⇊P P 03 25 50.9 +0.1
baz=76
R11A Troy Canyon, C 75.86 52 ⇑P P 03 25 51.9 +0.3
baz=76,SNR=8.4
L16A Fish Haven 76.00 47 ⇊P P 03 25 50.3 -2.0
baz=76
N15A Stansbury Isla 76.09 48 ⇊P P 03 25 52.4 -0.4
baz=76
MPMC Manual Prospec 76.09 55 ⇊P P 03 25 52.6 -0.4
baz=76
S11A Rachel 76.20 53 ⇑P P 03 25 53.4 -0.1
baz=76
KWP Kalwaria Pacla 76.23 324 *e*P P 03 25 54.2 +0.7
KWP pmax pmax
comp=Z,29nm,1.4s,mb5.0
KWP Kalwaria Pacla 76.23 324 *e*P P 03 25 54.2 +0.8
comp=Z,28nm,1.4s,mb5.0
FURC Furnace Creek, 76.24 54 ⇑P P 03 25 53.6 -0.2
baz=76,SNR=5.2
DUG Dugway 76.37 49 ⇊P P 03 25 54.6 +0.2
baz=76
DUG Dugway 76.37 49 *e*P P 03 25 55.2 +0.8
DUG pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
DUG Dugway 76.37 49 *e*P P 03 25 55.2 +0.8
comp=Z,4.7nm,1.0s,mb4.4
Q13A Wheeler Ranch, 76.44 51 ⇑P P 03 25 55.6 +0.7
baz=76
BUR08 Bucovina Ar. S 76.44 321 *e*P P 03 25 55.1 +0.5
R12A Pony Springs, 76.48 52 ⇊P P 03 25 55.3 +0.2
baz=76,SNR=5.2
BW06 Boulder Array 76.56 46 *e*P P 03 25 56.0 +0.5
comp=Z,2.1nm,0.9s,mb4.1
PDAR Pinedale Array 76.56 46 P P 03 25 56.0 +0.5
comp=Z,1.4nm,0.8s,mb3.9,baz=283,slow=2.6,SNR=7.5
P14A Drum Mountains 76.60 50 ⇑P P 03 25 55.4 -0.3
baz=76
U10A Ash Meadows, A 76.61 54 ⇊P P 03 25 56.2 +0.3
baz=76
S12A Delamar Landin 76.78 52 ⇊P P 03 25 56.2 -0.6
baz=77
T11A Corn Creek, Al 76.78 53 ⇊P P 03 25 55.8 -1.0
baz=77,SNR=8.5
Q14A Sevier Lake (B 76.86 50 ⇊P P 03 25 57.8 +0.5
baz=77,SNR=6.8
KOLS Kolonicke sedl 76.92 324 *e*P P 03 25 58.5 +1.1
KOLS pmax pmax
comp=Z,15nm,2.0s,mb4.6
KOLS Kolonicke sedl 76.92 324 *e*P P 03 25 58.5 +1.1
comp=Z,15nm,2.0s,mb4.6
GSC Goldstone 77.00 55 ⇊P P 03 25 58.4 +0.3
baz=77
STHS Stebnicka Huta 77.05 324 *e*P P 03 25 59.3 +1.2
STHS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
STHS Stebnicka Huta 77.05 324 *e*P P 03 25 59.3 +1.2
comp=Z,3.4nm,0.9s,mb4.3
OJC Ojcow 77.11 326 *e*P P 03 25 57.4 -1.0
BR131 Keskin Array S 77.18 311 *e*P P 03 25 60.0 +0.9
BRTR Keskin Array B 77.18 311 P P 03 25 59.4 +0.4
comp=Z,3.5nm,1.0s,mb4.2,baz=94,slow=4.0,SNR=10
BRTR Keskin Array B 77.18 311 P P 03 25 59.4 +0.4
BRTR pmax pmax
comp=Z,4.0nm,1.0s
CRVS Cervenica-Dubn 77.32 324 *e*P P 03 26 00.3 +0.7
CRVS pmax pmax
comp=Z,7.0nm,1.3s,mb4.4
CRVS Cervenica-Dubn 77.32 324 *e*P P 03 26 00.3 +0.7
comp=Z,6.7nm,1.3s,mb4.4
NIE Niedzica 77.47 325 *e*P P 03 26 01.1 +0.6
TUQ Turquoise Moun 77.48 55 ⇊P P 03 26 00.4 -0.4
baz=77,SNR=5.7
U12A Valley of Fire 77.72 53 ⇊P P 03 26 02.9 +0.8
baz=78
CCUT Cedar City 77.73 52 *e*P P 03 26 04.0 +1.8
comp=Z,4.9nm,1.3s,mb4.3
T13A Saint George 77.73 52 ⇊P P 03 26 03.2 +1.0
baz=78
MSU Marysvale 77.83 50 *e*P P 03 26 03.9 +1.2
MSU pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
MSU Marysvale 77.83 50 *e*P P 03 26 03.9 +1.2
comp=Z,3.1nm,1.2s,mb4.1
V12A Nelson 77.97 54 ⇊P P 03 26 04.6 +1.1
baz=78
P17A Butcher Ranch, 78.05 49 ⇊P P 03 26 04.8 +0.9
baz=78
U13A Pakoon Wash 78.09 53 ⇑P P 03 26 03.2 -0.9
baz=78
OKC Ostrava-Krasne 78.11 326 *e*P P 03 26 05.2 +1.1
OKC Ostrava-Krasne 78.11 326 *e*P P 03 26 05.2 +1.1
T14A Hurricane 78.21 52 ⇑P P 03 26 05.4 +0.5
baz=78
L21A Rawlins 78.31 45 ⇑P P 03 26 05.1 -0.1
baz=78
R16A Teasdale 78.39 50 ⇑P P 03 26 06.7 +0.9
baz=78,SNR=7.2
SRU San Rafael 78.41 49 ⇊P P 03 26 04.7 -1.2
baz=78
SRU San Rafael 78.41 49 *e*P P 03 26 07.1 +1.2
SRU pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
SRU San Rafael 78.41 49 *e*P P 03 26 07.1 +1.1
comp=Z,5.7nm,1.1s,mb4.4
MORC Moravsky Berou 78.42 326 *e*P P 03 26 06.2 +0.5
MORC pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
MORC Moravsky Berou 78.42 326 *e*P P 03 26 06.2 +0.4
comp=Z,6.9nm,1.2s,mb4.5
V13A Grand Canyon W 78.43 53 ⇑P P 03 26 05.6 -0.5
baz=78
DPC Dobruska-Polom 78.51 327 *e*P P 03 26 06.6 +0.4
DPC *e* 03 26 19.5
DPC Dobruska-Polom 78.51 327 *e*P P 03 26 06.6 +0.4
DPC *ex* x 03 26 19.5
UPC Upice 78.52 328 *e*P P 03 26 06.7 +0.4
UPC *e* 03 26 19.7
UPC Upice 78.52 328 *e*P P 03 26 06.7 +0.4
UPC *ex* x 03 26 19.7
M21A Separation Pea 78.55 45 ⇊P P 03 26 05.8 -0.8
baz=78
U14A Mt Trumbull 78.57 52 ⇊P P 03 26 06.8 -0.1
baz=78
N20A Spence Gulch, 78.57 46 ⇑P P 03 26 06.2 -0.6
baz=78
PSZ Piszkesteto 78.75 324 *e*P P 03 26 08.1 +0.5
PSZ pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
PSZ Piszkesteto 78.75 324 *e*P P 03 26 08.1 +0.5
comp=Z,5.9nm,0.9s,mb4.5
IRM Iron Mountain 78.78 55 ⇊P P 03 26 07.0 -1.0
baz=79
VYHS Vyhne 78.81 325 *e*P P 03 26 08.6 +0.7
VYHS pmax pmax
comp=Z,4.0nm,1.3s,mb4.2
VYHS Vyhne 78.81 325 *e*P P 03 26 08.6 +0.7
comp=Z,3.8nm,1.3s,mb4.2
U15A North Rim 79.11 52 ⇑P P 03 26 10.1 +0.3
baz=79,SNR=8.1
CLL Collm 79.12 330 *i*P P 03 26 09.1 -0.5
CLL pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
CLL Collm 79.12 330 *i*P P 03 26 09.1 -0.5
comp=Z,5.0nm,0.8s,mb4.5
V14A Boquillas Ranc 79.12 53 ⇊P P 03 26 10.0 +0.1
baz=79,SNR=6.9
VRAC Vranov 79.18 327 P P 03 26 10.3 +0.3
comp=Z,4.8nm,0.8s,mb4.5,baz=56,slow=1.5,SNR=6.6
VRAC Vranov 79.18 327 P P 03 26 10.3 +0.4
VRAC pmax pmax
comp=Z,5.0nm,0.8s
S17A Black Ridge (B 79.22 50 ⇑P P 03 26 09.6 -0.8
baz=79
Q19A Hogan Spring (79.25 48 ⇑P P 03 26 09.9 -0.6
baz=79
R18A Canyonlands Na 79.26 49 ⇑P P 03 26 10.8 +0.2
baz=79
X13A Yucca 79.34 54 ⇊P P 03 26 10.9 -0.1
baz=79
W14A Seligman 79.41 53 ⇊P P 03 26 11.6 +0.1
baz=79
PRU Pruhonice 79.52 328 *e*P P 03 26 10.5 -1.3
PRU Pruhonice 79.52 328 *e*P P 03 26 10.5 -1.3
V15A Kaibab Nationa 79.58 52 ⇊P P 03 26 11.8 -0.5
baz=79
T17A Navajo Res., N 79.64 51 ⇑P P 03 26 12.3 -0.4
baz=80
TREC Trest 79.66 327 *e*P P 03 26 13.0 +0.4
TREC Trest 79.66 327 *e*P P 03 26 13.0 +0.4
S18A Hurst Farm, Bl 79.66 50 ⇑P P 03 26 12.6 -0.2
baz=80
T18A Mexican Hat 80.10 50 ⇑P P 03 26 14.5 -0.7
baz=80
S19A Harvey Farm, M 80.13 49 ⇊P P 03 26 14.6 -0.7
baz=80
PV01 Paradox Valley 80.20 49 *e*P P 03 26 16.8 +1.1
comp=Z,345nm,1.2s
WUAZ Wupatki 80.27 52 *e*P P 03 26 17.9 +1.8
Z13A Yuma Proving G 80.35 55 ⇊P P 03 26 16.8 +0.2
baz=80,SNR=7.3
X15A Humboldt 80.41 53 ⇊P P 03 26 16.5 -0.3
baz=80
SMCO Snowmass 80.42 47 *e*P P 03 26 18.2 +1.4
comp=Z,4.4nm,1.1s,mb4.3
MMAI Mount Meron Ar 80.44 305 P P 03 26 17.1 0.0
comp=Z,5.1nm,0.9s,mb4.4,baz=35,slow=13,SNR=6.5
V17A Tonalea, Kykot 80.55 52 ⇊P P 03 26 17.7 +0.1
baz=80,SNR=10
113A Mohawk Valley, 80.56 55 ⇊P P 03 26 17.5 -0.2
baz=80
U18A Rough Rock, Ch 80.58 51 ⇊P P 03 26 17.1 -0.6
baz=80
KHC Kasperske Hory 80.58 328 *e*P P 03 26 17.6 0.0
KHC pmax pmax
comp=Z,14nm,1.7s,mb4.6
KHC Kasperske Hory 80.58 328 *e*P P 03 26 17.6 0.0
comp=Z,14nm,1.7s,mb4.6
KHC Kasperske Hory 80.58 328 *e*P P 03 26 17.7 +0.1
Y15A Casa Rosa Ranc 80.70 54 ⇊P P 03 26 18.5 +0.1
baz=80,SNR=5.7
GERES GERESS Array B 80.76 328 P P 03 26 18.5 0.0
comp=Z,0.6nm,0.6s,mb3.7,baz=49,slow=4.1,SNR=5.9
GERES GERESS Array B 80.76 328 P P 03 26 18.5 0.0
GERES pmax pmax
comp=Z,1.0nm,0.6s
X16A Lo Mia Camp, P 80.95 53 ⇊P P 03 26 19.7 -0.1
baz=81,SNR=5.6
GRA1 Grafenberg Arr 81.09 330 *e*P P 03 26 20.5 +0.2
comp=Z,21nm,1.7s,mb4.8
GRF Grafenberg Arr 81.09 330 *e*P P 03 26 20.5 +0.2
comp=Z,21nm,1.7s,mb4.8
GRF Grafenberg Arr 81.09 330 *e*P P 03 26 20.5 +0.2
GRF pmax pmax
comp=Z,21nm,1.7s,mb4.8
GRF Grafenberg Arr 81.09 330 *e*P P 03 26 20.5 +0.2
GRF pmax pmax
comp=Z,21nm,1.7s,mb4.8
SDCO Great Sand Dun 82.24 47 *e*P P 03 26 27.5 +0.9
comp=Z,1.9nm,1.1s,mb3.9
X19A St. Johns 82.27 52 ⇊P P 03 26 26.7 0.0
baz=82
ECSD EROS Data Cent 82.60 38 *e*P P 03 26 28.1 -0.2
TUC Tucson 82.75 54 *e*P P 03 26 30.4 +1.1
TUC pmax pmax
comp=Z,1.0nm,1.0s,mb3.8
TUC Tucson 82.75 54 *e*P P 03 26 30.4 +1.0
comp=Z,1.3nm,1.0s,mb3.9
X21A Alamocita Cree 83.17 51 ⇑P P 03 26 31.9 +0.5
baz=83
Y20A Horse Springs, 83.17 52 ⇑P P 03 26 30.9 -0.6
baz=83
SCHQ Schefferville 83.51 16 P P 03 26 33.4 +0.6
comp=Z,3.8nm,1.0s,mb4.5,baz=27,slow=6.7,SNR=3.7
Z20A Nine Sixteen R 83.58 52 ⇊P P 03 26 34.1 +0.5
baz=83
LAZ Ladron 83.59 50 *e*P P 03 26 35.0 +1.4
comp=Z,9.0nm,1.9s,mb4.6
ANMO Albuquerque 83.61 50 *e*P P 03 26 35.3 +1.6
CDF Champ du Feu 83.66 331 *e*P P 03 26 33.5 -0.2
318A Bisbee 83.84 54 ⇑P P 03 26 34.9 0.0
baz=84
219A White Tail Can 83.92 53 ⇑P P 03 26 35.6 +0.2
baz=84
Z21A St. Cloud Mine 84.01 52 ⇊P P 03 26 35.4 -0.4
baz=84
W24A Lazy 6 Ranch, 84.06 49 ⇊P P 03 26 35.6 -0.3
baz=84
V25A Rancho No Teng 84.08 48 ⇑P P 03 26 34.2 -1.8
baz=84
HINF Hinteralfeld 84.31 331 *e*P P 03 26 36.4 -0.6
comp=Z,13nm,1.2s,mb4.7
HINF Hinteralfeld 84.31 331 *e*P P 03 26 36.4 -0.6
HINF pmax pmax
comp=Z,7.0nm,1.2s,mb4.7
HINF Hinteralfeld 84.31 331 *e*P P 03 26 36.4 -0.6
comp=Z,6.7nm,1.2s,mb4.7
HAU Haudompre 84.34 331 *e*P P 03 26 36.5 -0.7
MEZF Maizieres J'vi 84.40 332 *e*P P 03 26 37.4 -0.1
comp=Z,32nm,1.3s,mb5.0
MEZF Maizieres J'vi 84.40 332 *e*P P 03 26 37.4 -0.1
comp=Z,32nm,1.3s,mb5.3
Y23A Lovelace Mesa, 84.56 50 ⇊P P 03 26 38.0 -0.6
baz=84
W25A X Bar L Ranch, 84.60 48 ⇑P P 03 26 38.1 -0.6
baz=84
Y25A Mesa, Roswell 85.38 49 ⇊P P 03 26 42.6 -0.1
baz=85
X26A CR and CF Fran 85.45 48 ⇑P P 03 26 42.5 -0.5
baz=85
W27A Bowe Ranch, En 85.52 48 ⇑P P 03 26 43.0 -0.4
baz=85
CABF La Chapelle 85.60 331 *e*P P 03 26 43.2 -0.3
comp=Z,15nm,1.1s,mb4.8
CABF La Chapelle 85.60 331 *e*P P 03 26 43.2 -0.3
CABF pmax pmax
comp=Z,8.0nm,1.1s,mb4.9
CABF La Chapelle 85.60 331 *e*P P 03 26 43.2 -0.3
comp=Z,7.6nm,1.1s,mb4.8
Z25A Roswell 85.81 50 ⇑P P 03 26 44.9 0.0
baz=86
LOR Lormes 85.88 332 *e*P P 03 26 44.4 -0.5
comp=Z,22nm,1.2s,mb5.0
LOR Lormes 85.88 332 *e*P P 03 26 44.4 -0.5
LOR pmax pmax
comp=Z,11nm,1.2s,mb5.0
LOR Lormes 85.88 332 *e*P P 03 26 44.4 -0.5
comp=Z,11nm,1.2s,mb5.0
FLN La Foliniere 86.08 336 *e*P P 03 26 45.4 -0.5
LDF La Druitiere 86.11 335 *e*P P 03 26 45.6 -0.4
comp=Z,4.9nm,0.7s,mb4.5
LDF La Druitiere 86.11 335 *e*P P 03 26 45.6 -0.4
LDF pmax pmax
comp=Z,2.0nm,0.7s,mb4.5
LDF La Druitiere 86.11 335 *e*P P 03 26 45.6 -0.4
comp=Z,2.5nm,0.7s,mb4.5
224A Cornudas Mount 86.17 51 ⇊P P 03 26 46.1 -0.5
baz=86
SSF Saint Saulge 86.18 332 *e*P P 03 26 45.9 -0.5
comp=Z,18nm,1.2s,mb4.9
SSF Saint Saulge 86.18 332 *e*P P 03 26 45.9 -0.5
SSF pmax pmax
comp=Z,9.0nm,1.2s,mb4.9
SSF Saint Saulge 86.18 332 *e*P P 03 26 45.9 -0.5
comp=Z,8.8nm,1.2s,mb4.9
LPL La Plagne 86.26 330 *e*P P 03 26 46.7 -0.1
comp=Z,20nm,1.1s,mb4.9
LPL La Plagne 86.26 330 *e*P P 03 26 46.7 -0.1
LPL pmax pmax
comp=Z,10.0nm,1.1s,mb5.0
LPL La Plagne 86.26 330 *e*P P 03 26 46.7 -0.1
comp=Z,9.8nm,1.1s,mb5.0
LPG La Plagne 86.27 330 *e*P P 03 26 46.8 -0.1
comp=Z,20nm,1.3s,mb4.9
LPG La Plagne 86.27 330 *e*P P 03 26 46.8 -0.1
LPG pmax pmax
comp=Z,10.0nm,1.3s,mb4.9
LPG La Plagne 86.27 330 *e*P P 03 26 46.8 -0.1
comp=Z,9.9nm,1.3s,mb4.9
125A Gardner Draw, 86.28 50 ⇊P P 03 26 47.1 -0.1
baz=86
HYF Humbligny 86.31 333 *e*P P 03 26 47.1 0.0
SMF Signal de Mont 86.41 332 *e*P P 03 26 47.1 -0.4
comp=Z,44nm,1.5s,mb5.2
SMF Signal de Mont 86.41 332 *e*P P 03 26 47.1 -0.4
SMF pmax pmax
comp=Z,22nm,1.5s,mb5.2
SMF Signal de Mont 86.41 332 *e*P P 03 26 47.1 -0.4
comp=Z,22nm,1.5s,mb5.2
AVF Avril sur Loir 86.47 332 *e*P P 03 26 47.5 -0.3
comp=Z,50nm,1.3s,mb5.3
AVF Avril sur Loir 86.47 332 *e*P P 03 26 47.5 -0.3
AVF pmax pmax
comp=Z,25nm,1.3s,mb5.3
AVF Avril sur Loir 86.47 332 *e*P P 03 26 47.5 -0.3
comp=Z,25nm,1.3s,mb5.3
MSTX Muleshoe 86.47 48 ⇑P P 03 26 46.6 -1.5
baz=86
CPRX Cap Rock 86.49 50 *e*P P 03 26 47.0 -1.3
comp=Z,8.6nm,0.5s,mb5.2
GRR Gorron 86.53 336 *e*P P 03 26 47.7 -0.4
BGF Bois d'Agland 86.85 332 *e*P P 03 26 49.4 -0.3
comp=Z,14nm,1.1s,mb4.8
BGF Bois d'Agland 86.85 332 *e*P P 03 26 49.4 -0.3
BGF pmax pmax
comp=Z,7.0nm,1.1s,mb4.8
BGF Bois d'Agland 86.85 332 *e*P P 03 26 49.4 -0.3
comp=Z,6.8nm,1.1s,mb4.8
ORIF Oris-en-Rattie 87.09 330 *e*P P 03 26 50.1 -0.8
comp=Z,10nm,1.0s,mb4.7
ORIF Oris-en-Rattie 87.09 330 *e*P P 03 26 50.1 -0.8
ORIF pmax pmax
comp=Z,5.0nm,1.0s,mb4.7
ORIF Oris-en-Rattie 87.09 330 *e*P P 03 26 50.1 -0.8
comp=Z,5.2nm,1.0s,mb4.7
SGMF Saint Gilles 87.18 336 *e*P P 03 26 51.3 0.0
comp=Z,63nm,1.5s,mb5.3
SGMF Saint Gilles 87.18 336 *e*P P 03 26 51.3 0.0
SGMF pmax pmax
comp=Z,32nm,1.5s,mb5.3
SGMF Saint Gilles 87.18 336 *e*P P 03 26 51.3 0.0
comp=Z,32nm,1.5s,mb5.3
TCF Toulx Ste Croi 87.31 333 *e*P P 03 26 51.8 -0.1
comp=Z,11nm,1.1s,mb4.7
TCF Toulx Ste Croi 87.31 333 *e*P P 03 26 51.8 -0.1
TCF pmax pmax
comp=Z,6.0nm,1.1s,mb4.7
TCF Toulx Ste Croi 87.31 333 *e*P P 03 26 51.8 -0.1
comp=Z,5.5nm,1.1s,mb4.7
ROSF Rostrenen 87.33 337 *e*P P 03 26 52.0 0.0
comp=Z,30nm,1.1s,mb5.1
ROSF Rostrenen 87.33 337 *e*P P 03 26 52.0 0.0
ROSF pmax pmax
comp=Z,15nm,1.1s,mb5.1
ROSF Rostrenen 87.33 337 *e*P P 03 26 52.0 0.0
comp=Z,15nm,1.1s,mb5.1
QUIF Quistinic 87.67 337 *e*P P 03 26 53.7 +0.1
PGF Pioggiola 87.76 327 *e*P P 03 26 53.4 -0.8
MFF Saint Martin d 87.85 334 *e*P P 03 26 54.6 +0.1
comp=Z,20nm,1.2s,mb4.9
MFF Saint Martin d 87.85 334 *e*P P 03 26 54.6 +0.1
MFF pmax pmax
comp=Z,10.0nm,1.2s,mb4.9
MFF Saint Martin d 87.85 334 *e*P P 03 26 54.6 +0.1
comp=Z,10nm,1.2s,mb4.9
FRF La Foret Royal 87.91 329 *e*P P 03 26 54.1 -0.8
comp=Z,29nm,1.0s,mb5.1
FRF La Foret Royal 87.91 329 *e*P P 03 26 54.1 -0.8
FRF pmax pmax
comp=Z,14nm,1.0s,mb5.2
FRF La Foret Royal 87.91 329 *e*P P 03 26 54.1 -0.8
comp=Z,14nm,1.0s,mb5.2
LMR La Mourre 88.16 329 *e*P P 03 26 55.0 -1.1
RJF Les Rejaudoux 88.40 333 *e*P P 03 26 57.1 -0.1
comp=Z,30nm,1.6s,mb5.0
RJF Les Rejaudoux 88.40 333 *e*P P 03 26 57.1 -0.1
RJF pmax pmax
comp=Z,15nm,1.6s,mb5.0
RJF Les Rejaudoux 88.40 333 *e*P P 03 26 57.1 -0.1
comp=Z,15nm,1.6s,mb5.0
526A Mary Lane Ranc 88.46 52 ⇑P P 03 26 56.2 -1.6
baz=88
CAF Calviac 88.53 332 *e*P P 03 26 58.2 +0.4
comp=Z,11nm,1.1s,mb4.8
CAF Calviac 88.53 332 *e*P P 03 26 58.2 +0.4
CAF pmax pmax
comp=Z,6.0nm,1.1s,mb4.8
CAF Calviac 88.53 332 *e*P P 03 26 58.2 +0.4
comp=Z,5.7nm,1.1s,mb4.8
LASF Ste Croix 88.58 331 *e*P P 03 26 58.1 +0.1
comp=Z,63nm,1.7s,mb5.4
LFF La Frestale 88.99 333 *e*P P 03 26 59.9 -0.1
TXAR Lajitas Array 89.23 52 P P 03 27 01.8 +0.4
comp=Z,0.6nm,0.9s,mb3.9,baz=295,slow=2.9,SNR=3.9
TXAR Lajitas Array 89.23 52 P P 03 27 01.8 +0.4
TXAR pmax pmax
comp=Z,1.0nm,0.9s
MTLF Montolieu 89.83 331 *e*P P 03 27 03.9 0.0
comp=Z,4.5nm,0.8s,mb4.5
MTLF Montolieu 89.83 331 *e*P P 03 27 03.9 0.0
MTLF pmax pmax
comp=Z,2.0nm,0.8s,mb4.5
MTLF Montolieu 89.83 331 *e*P P 03 27 03.9 0.0
comp=Z,2.3nm,0.8s,mb4.6
EPF Esparros 90.79 332 *e*P P 03 27 07.8 -0.6
SJPF Ste Jean 91.28 333 *e*P P 03 27 12.0 +1.3
comp=Z,10nm,0.9s,mb4.9
SJPF Ste Jean 91.28 333 *e*P P 03 27 12.0 +1.3
SJPF pmax pmax
comp=Z,5.0nm,0.9s,mb4.8
SJPF Ste Jean 91.28 333 *e*P P 03 27 12.0 +1.3
comp=Z,5.2nm,0.9s,mb4.9
MIV Mineville/With 91.61 24 *e*P P 03 27 05.8 -6.3
DBIC Dimbokro 124.50 317 *e*PKIKP PKPdf 03 33 05.1 0.0
LPAZ La Paz 146.00 56 PKPbc PKPbc 03 33 44.8 -0.6
comp=Z,6.2nm,1.0s,baz=343,slow=4.6,SNR=12
LPAZ La Paz 146.00 56 PKP2 PKPbc 03 33 44.8 -0.6
LPAZ pmax pmax
comp=Z,6.0nm,1.0s
LPAZ La Paz 146.00 56 *e*PKPbc PKPbc 03 33 46.1 +0.7

JMA 14 03:26:49.7, 39°14N×140°93E, h10km±1km, M1.9, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.29**	**130**	*e*S	Sg	03 26 59.4	-0.1
JRG	**Rokugo**	**0.34**	**318**	P	Pg	03 26 56.6	+0.1
JRG				*e*S	Sg	03 27 01.8	+0.7

JMA 14 03:27:27.2, 38°89N×140°76E, h3km±1km, M1.4, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.31**	**275**	P	Pg	03 27 33.5	+0.3
JYK				S	Sg	03 27 37.8	+0.5

NIED **14** *03:27:00,39.°10N×141.°00E,h5km,Mw4.9 Best double couple: M0=2.70000×10^16 NP1:φ=11.00000°,δ=56.00000°,λ=68.00000°; NP2:φ=227.00000°,δ=40.00000°,λ=120.00000°.*
BJI **14** *03:27:29.7,38.°96N×141.°26E,h19km,mB5.4/23,mb5.0/50,Ms4.9/47,Ms7 4.7/42*
IDC **14** *03:27:31.8±0.4,39.°15N×140.°80E,h0km,mb5.0/31,mb1 5.0/34,mb1mx5.0/36,mbtmp5.0/34,ML4.1/3,MS4.5/11,Ms1 4.5/11,ms1mx4.1/39,Error ellipse: s-maj=12.2km s-min=9.3km az=118.0*
JMA **14** *03:27:32.7,39.°14N×140.°94E,h10km±1km,M5.2*
JMA Felt IV J1.
NEIC **14** *03:27:32.8,39.°14N×140.°94E,h11km,mb5.1/179,MW4.9(NIED),After JMA.*
NEIC Recorded [4 JMA] in Iwate; [3 JMA] in Akita and Miyagi; [2 JMA] in Yamagata; [1 JMA] in Aomori and Fukushima.
ISCJB **14** *03:27:32.7±0.5,39.°16N±0.°02×140.°85E±0.°02,h12km±2km,mb5.0/266,MS4.7/35,Error ellipse: s-maj=3.0km s-min=2.2km az=161.5*
DJA **14** *03:27:33,39.°92N×141.°27E,h50km,mb5.4/15*
MOS **14** *03:27:36.1±0.9,39.°22N×140.°76E,h33km,mb5.3/110,MS4.7/22,Error ellipse: s-maj=6.1km s-min=3.8km az=101.0*
SZGRF **14** *03:27:47.5,40.°86N×140.°35E,h33km,mb5.1,Eastern Honshu, Japan*
ISC 14 03:27:33.0±0.4,39.°15N±0.°02×140.°85E±0.°02,h4km±2km,h6km±2.0km:pP-P,n1070,σ0:75/1062,mb5.0/266,MS4.7/35,203C-188D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRG	**Rokugo**	**0.30**	**326**	⇓P	**Pg**	**03 27 39.9**	**+1.1**
JMK	**Ichinoseki**	**0.35**	**124**	⇓P	**Pg**	**03 27 38.4**	**-1.3**
JMK				*e*S	**Sg**	**03 27 42.8**	**-1.4**
JYK	**Kaneyama**	**0.45**	**239**	P	**Pg**	**03 27 42.6**	**+1.0**
JOM	**Ohasama**	**0.47**	**46**	⇓P	**Pg**	**03 27 41.1**	**-0.9**
JOM				S	**Sg**	**03 27 47.2**	**-1.0**
JYW	**Yuwa**	**0.63**	**308**	⇓P	**Pg**	**03 27 46.5**	**+1.4**
OFUJ	**Ofunato**	**0.64**	**96**	⇓P	**Pg**	**03 27 43.8**	**-1.4**
JIO	**Ouri**	**0.80**	**151**	P	**Pg**	**03 27 47.1**	**-1.1**
JIO				S	**Sg**	**03 27 57.7**	**-0.8**
JOU	**Okura**	**0.80**	**191**	P	**Pg**	**03 27 48.1**	**-0.1**
JOU				S	**Sg**	**03 27 59.2**	**+0.7**
MIYJ	**Miyakonagasawa**	**0.86**	**60**	⇓P	**Pg**	**03 27 48.0**	**-1.5**
JKZ	**Kuzumaki**	**0.91**	**24**	P	**Pg**	**03 27 49.7**	**-0.8**
JTB	**Tobi-shima**	**1.01**	**273**	⇓P	**Pg**	**03 27 53.0**	**+0.7**
JTH	**Tanohata**	**1.11**	**44**	⇓P	**Pg**	**03 27 52.5**	**-1.8**
JOG2	**Oga 2**	**1.12**	**313**	⇓P	**Pg**	**03 27 54.7**	**+0.3**
JIW	**Iwasaki**	**1.58**	**336**	⇓P	**Pn**	**03 28 01.9**	**+0.2**
JTM	**Tenmabayashi**	**1.64**	**6**	⇓P	**Pn**	**03 28 02.3**	**-0.3**
JFY	**Yanaizu**	**1.96**	**208**	⇑P	**Pn**	**03 28 07.7**	**+0.8**
JSD	**Sado**	**2.31**	**242**	⇑P	**Pn**	**03 28 12.1**	**+0.3**
JHK	**Hiroka**	**2.38**	**218**	⇑P	**Pn**	**03 28 13.6**	**+0.8**
JHO	**Hitachi**	**2.54**	**185**	⇑P	**Pn**	**03 28 15.1**	**+0.2**
JAG	**Ashikaga**	**2.94**	**203**	P	**Pn**	**03 28 22.0**	**+1.7**
MAJO	**Matsushiro**	**3.34**	**220**	*e*P	**Pn**	**03 28 27.3**	**+1.4**
MAJO	**Matsushiro**	**3.34**	**220**	*e*Pn	**Pn**	**03 28 27.3**	**+1.4**
MAT	**Matsushiro**	**3.34**	**220**	P	**Pn**	**03 28 27.3**	**+1.4**
MAT				*e*S	**Sn**	**03 29 10.6**	**+4.7**
MJAR	**Matsushiro Arr**	**3.34**	**220**	Pn	**Pn**	**03 28 26.8**	**+0.9**
	17nm,0.3s,baz=30,slow=13,SNR=335						
MJAR				Pg	**Pg**	**03 28 32.6**	**-4.3**
	40nm,0.3s,baz=25,slow=15,SNR=56						
MJAR				Lg		03 29 19.5	
	14nm,0.3s,baz=19,slow=23,SNR=5.6						
MJAR	**Matsushiro Arr**	**3.34**	**220**	P	**Pn**	**03 28 26.8**	**+0.9**
MJAR				pmax	pmax		
	comp=Z,17nm,0.3s						
ERM	**Erimo**	**3.36**	**31**	Pn	**Pn**	**03 28 28.0**	**+1.9**
	comp=Z,4μm,0.8s,SNR=11						
ERM	**Erimo**	**3.36**	**31**	*c i*P	**Pn**	**03 28 27.3**	**+1.2**
ERM	**Erimo**	**3.36**	**31**	*e*Pn	**Pn**	**03 28 27.4**	**+1.3**
JGN	**Niukaw**	**4.05**	**225**	⇑P	**Pn**	**03 28 38.2**	**+2.6**
SHZ3	**Shizuoka 3**	**4.59**	**208**	P	**Pn**	**03 28 46.9**	**+3.8**
JIZS	**Izushimoda**	**4.70**	**200**	P	**Pn**	**03 28 46.5**	**+2.0**
ASAJ	**Asahikawa**	**5.13**	**14**	Pn	**Pn**	**03 28 52.5**	**+1.9**
	comp=Z,6.1nm,0.3s,baz=204,slow=16,SNR=30						
ASAJ	**Asahikawa**	**5.13**	**14**	P	**Pn**	**03 28 52.5**	**+2.0**
ASAJ				pmax	pmax		
	comp=Z,6.0nm,0.3s						
JHJ	**Hachijo jima 2**	**6.08**	**188**	Pn	**Pn**	**03 29 04.3**	**+0.8**
	comp=Z,32nm,0.3s,baz=229,slow=4.8,SNR=12						
JHJ				Sn	**Sn**	**03 30 14.3**	**+0.8**
	comp=Z,60nm,0.3s,baz=78,slow=23,SNR=7.5						
YUK	**Yuzh-Kuril'sk**	**6.16**	**36**	*i* P	**Pn**	**03 29 07.1**	**+2.5**
YUK				*i* S	**Sn**	**03 30 10.1**	**-5.3**
YUK				pmax	pmax		
	comp=N,220nm,0.5s						
YUK				pmax	pmax		
	comp=Z,190nm,0.5s						
YUK				pmax	pmax		
	comp=Z,1μm,0.3s						
YUK				pmax	pmax		
	comp=E,380nm,0.1s						
YUK				pmax	pmax		
	comp=N,570nm,0.2s						
YUK				smax			
	comp=N,760nm,0.5s						
YUK				smax			
	comp=E,380nm,0.5s						
YUK				smax			
	comp=N,390nm,0.6s						
YUK				smax			
	comp=E,730nm,0.6s						
YUK				smax			
	comp=N,5μm,2.0s						
YUK				smax			
	comp=E,3μm,2.0s						
YUK				MLR	MLR		
	comp=N,2μm,16.0s						
YUK				MLR	MLR		
	comp=Z,2μm,16.0s						
YUK				MLR	MLR		
	comp=E,730nm,8.0s						
JMIK	**Miki**	**6.35**	**229**	P	**Pn**	**03 29 11.5**	**+4.3**
VLA	**Vladivostok**	**7.84**	**303**	*e*P	**Pn**	**03 29 28.9**	**+1.3**
VLA				*e*		03 30 53.3	
VLA				pmax	pmax		
	comp=Z,71nm,0.9s						
VLA				MLR	MLR		
	comp=Z,3μm,14.0s						
VLA	**Vladivostok**	**7.84**	**303**	*e*P	**Pn**	**03 29 28.7**	**+1.1**
YSS	**Yuzh-Sakhalins**	**7.92**	**10**	⇓*i*P	**Pn**	**03 29 30.0**	**+1.2**
YSS				*e*S	**Sn**	**03 30 59.0**	**+0.1**
YSS				pmax	pmax		
	comp=Z,140nm,0.9s						
YSS				MLR	MLR		
	comp=E,2μm,12.0s						
YSS				MLR	MLR		
	comp=Z,2μm,12.0s						
YSS				MLR	MLR		
	comp=N,3μm,14.0s						
YSS	**Yuzh-Sakhalins**	**7.92**	**10**	*e*Pn	**Pn**	**03 29 30.1**	**+1.2**
KUR	**Kuril'sk**	**8.00**	**38**	*e*P	**Pn**	**03 29 30.0**	**+0.1**
KUR				*e*S	**Sn**	**03 31 03.0**	**+2.2**
KUR				pmax	pmax		
	comp=Z,530nm,1.0s						
KUR				smax			
	comp=N,570nm,1.0s						
KUR				smax			
	comp=E,380nm,1.0s						
JTY	**Toyota**	**9.25**	**241**	P	**Pn**	**03 29 51.9**	**+4.9**
MDJ	**Mudanjiang**	**10.01**	**307**	P	**Pn**	**03 29 58.9**	**+1.4**
MDJ				S	**Sn**	**03 31 52.8**	**+2.6**
MDJ				pmax	pmax		
	comp=Z,37nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,370nm,3.4s						
MDJ				LR	LR		
	comp=N,2μm,14.1s						
MDJ				LR	LR		
	comp=E,3μm,13.5s						
MDJ				LR	LR		
	comp=Z,4μm,14.7s						
HABR	**Khabarovsk**	**10.22**	**338**	*de*P	**Pn**	**03 30 04.1**	**+3.9**
HABR				*e*		03 31 57.6	
HABR				pmax	pmax		
	comp=Z,316nm,1.4s						
HABR				pmax	pmax		
	comp=E,109nm,1.3s						
HABR				pmax	pmax		
	comp=N,213nm,1.6s						
HABR				MLR	MLR		
	comp=Z,2μm,16.0s						
KSRS	**Korea Array**	**10.30**	**265**	Pn	**Pn**	**03 30 04.5**	**+3.0**
	comp=Z,9.8nm,0.3s,baz=78,slow=14,SNR=226						
KSRS				Sn	**Sn**	**03 32 04.7**	**+7.4**
	comp=Z,3.4nm,0.3s,baz=76,slow=24,SNR=15						
KSRS				LR	LR	03 33 46.2	
	comp=Z,2μm,18.2s,baz=83,slow=36						
KSRS	**Korea Array**	**10.30**	**265**	P	**Pn**	**03 30 04.5**	**+3.0**
KSRS						03 32 04.7	
KSRS				pmax	pmax		
	comp=Z,10.0nm,0.3s						
KSRS				smax			
	comp=N,3.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,2μm,18.2s						
INCN	**Inchon**	**11.30**	**266**	*e*Pn	**Pn**	**03 30 19.5**	**+4.4**
KLR	**Kul'dur**	**12.00**	**330**	*e*P	**Pn**	**03 30 23.2**	**-1.4**
KLR				*e*		03 32 41.5	
KLR				pmax	pmax		
	comp=N,140nm,1.8s						
KLR				pmax	pmax		
	comp=E,400nm,1.8s						
KLR				pmax	pmax		
	comp=Z,460nm,1.8s						
KLR				MLR	MLR		
	comp=N,2μm,13.0s						
KLR				MLR	MLR		
	comp=Z,6μm,13.0s						
CBIJ	**Chichi jima**	**12.07**	**174**	Sn	**Sn**	**03 32 31.8**	**-9.0**
	comp=Z,8.1nm,0.3s,baz=285,slow=20,SNR=3.1						
CBIJ				LR	LR	03 34 29.3	
	comp=Z,1μm,21.8s,baz=116,slow=35						
CN2	**Changchun**	**12.45**	**297**	*e*P	**Pn**	**03 30 34.3**	**+3.5**
CN2				*es*P		03 30 41.0	
CN2				*e*S	**Sn**	**03 32 55.3**	**+5.4**
CN2				pmax	pmax		
	comp=Z,70nm,1.9s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,2μm,13.0s						
CN2				LR	LR		
	comp=E,1μm,13.0s						
CN2				LR	LR		
	comp=Z,2μm,15.0s						
SNY	**Shenyang**	**13.42**	**287**	⇑P	**Pn**	**03 30 50.8**	**+6.8**
SNY				S	**Sn**	**03 33 19.5**	**+5.9**
SNY				pmax	pmax		
	comp=Z,470nm,7.2s						
SNY				LR	LR		
	comp=N,1μm,10.5s						
SNY				LR	LR		
	comp=E,2μm,11.4s						
SNY				LR	LR		
	comp=Z,2μm,12.0s						
DL2	**Dalian**	**14.95**	**275**	P	**Pn**	**03 31 07.8**	**+2.9**
DL2				*e*S	**Sn**	**03 33 57.3**	**+6.4**
DL2				pmax	pmax		
	comp=Z,40nm,1.5s						
DL2				pmax	pmax		
	comp=Z,380nm,3.5s						
DL2				LR	LR		
	comp=N,1μm,11.5s						
DL2				LR	LR		
	comp=E,1μm,13.9s						
DL2				LR	LR		
	comp=Z,1μm,13.3s						
SKR	**Severo-Kuril's**	**15.77**	**38**	*e*P	**Pn**	**03 31 17.9**	**+2.2**
SKR				pmax	pmax		
	comp=Z,130nm,1.0s						
PETK	**Petropavlovsk-**	**18.13**	**34**	P	**Pn**	**03 31 46.0**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=199,slow=7.6,SNR=3.4						
PETK	**Petropavlovsk-**	**18.13**	**34**	P	**Pn**	**03 31 46.0**	**+0.5**
HIA	**Hailar**	**18.14**	**311**	*e*P	**Pn**	**03 31 45.3**	**-0.3**
HIA				pmax	pmax		
	comp=Z,28nm,0.8s						
HIA	**Hailar**	**18.14**	**311**	*e*P	**Pn**	**03 31 45.2**	**-0.4**
	comp=Z,28nm,0.8s						
BJI	**Beijing**	**19.03**	**281**	P	**Pn**	**03 31 55.0**	**-1.4**
BJI				S	**Sn**	**03 35 31.3**	**+1.5**
BJI				pmax	pmax		
	comp=Z,94nm,1.4s						
BJI				pmax	pmax		
	comp=Z,520nm,3.3s						
BJI				LR	LR		
	comp=N,960nm,13.4s						
BJI				LR	LR		
	comp=E,3μm,13.4s						
BJI				LR	LR		
	comp=Z,870nm,12.6s						
BJT	**Baijiatuau**	**19.03**	**280**	*e*P	**Pn**	**03 31 55.1**	**-1.4**
BJT				pmax	pmax		
	comp=Z,122nm,1.1s						
BJT	**Baijiatuau**	**19.03**	**280**	*e*P	**Pn**	**03 31 55.1**	**-1.4**
	comp=Z,122nm,1.1s						
NJ2	**Nanjing**	**19.21**	**255**	*e*P	**Pn**	**03 31 58.6**	**-0.1**
NJ2				pP	pP	03 32 00.8	+1.7
NJ2				sP	sP	03 32 04.4	+4.8
NJ2				PP		03 32 13.3	
NJ2				S	**Sn**	**03 35 30.0**	**-4.4**
NJ2				sS	sS	03 35 36.5	-1.4
NJ2				pmax	pmax		
	comp=Z,50nm,1.2s						
NJ2				pmax	pmax		
	comp=Z,280nm,7.8s						
NJ2				LR	LR		
	comp=N,870nm,17.8s						
NJ2				LR	LR		
	comp=E,2μm,18.4s						
NJ2				LR	LR		
	comp=Z,1μm,18.0s						
CLNS	**Chul'man**	**20.58**	**335**	*e*P	**P**	**03 32 12.9**	**+0.4**
CLNS				*e**PP		03 32 22.2	
CLNS				*e*		03 32 33.0	
CLNS				*e*S	**S**	**03 35 53.3**	**-10**
CLNS				*es*S		03 36 30.2	
CLNS				*es*SS		03 36 46.6	
CLNS				pmax	pmax		
	comp=Z,85nm,1.2s						
CLNS				pmax	pmax		
	comp=E,27nm,1.5s						
CLNS				pmax	pmax		
	comp=N,76nm,1.4s						
CLNS				pmax	pmax		
	comp=Z,50nm,1.4s						
CLNS				pmax	pmax		
	comp=N,56nm,1.2s						
CLNS				pmax	pmax		
	comp=E,33nm,1.4s						
CLNS				smax			
	comp=N,231nm,11.4s						
CLNS				smax			
	comp=E,378nm,15.8s						
CLNS				MLR	MLR		
	comp=N,1μm,17.0s,MS4.5						
CLNS				MLR	MLR		
	comp=Z,1μm,15.0s,MS4.4						
CLNS				MLR	MLR		
	comp=E,621nm,10.0s,MS4.5						
HHC	**Hu-ho-hao-te**	**22.46**	**284**	*e*P	**P**	**03 32 31.3**	**-1.6**
HHC				pP		03 32 35.4	
HHC				sP	sP	03 32 38.3	+3.6
HHC				PP		03 32 58.3	
HHC				PcP	PcP	03 36 27.4	+0.2
HHC				S	**S**	**03 36 31.9**	**-8.2**
HHC				ScP	ScP	03 40 02.3	-3.1
HHC				PcS	PcS	03 40 07.1	+1.2
HHC				pmax	pmax		
	comp=Z,18nm,0.7s,mb4.6						
HHC				pmax	pmax		
	comp=Z,820nm,5.2s						
HHC				LR	LR		
	comp=N,1μm,13.8s,MS4.8						
HHC				LR	LR		
	comp=E,2μm,14.3s,MS4.8						
HHC				LR	LR		
	comp=Z,3μm,16.1s,MS4.8						
CIT	**Chita**	**22.88**	**313**	*e*	**P**	**03 32 38.8**	**+1.6**
CIT				*e*		03 33 07.4	
WHN	**Wuhan**	**23.32**	**257**	⇑P	**P**	**03 32 40.3**	**-1.8**
WHN				LR	LR		
	comp=N,3μm,13.0s,MS4.8						
WHN				LR	LR		
	comp=E,810nm,16.4s,MS4.8						
WHN				LR	LR		
	comp=Z,3μm,16.3s,MS4.9						
TPUB	**Ta-pu**	**23.34**	**233**	*e*P	**P**	**03 32 43.1**	**+0.7**
	comp=Z,51nm,0.8s,mb5.0						
TWG	**Pinlang**	**23.42**	**232**	*e*P	**P**	**03 32 43.0**	**-0.2**
	comp=Z,37nm,0.5s,mb5.1						
BTO	**Baotou**	**23.65**	**283**	*e*P	**P**	**03 32 38.8**	**-6.6**
YAK	**Yakutsk**	**23.91**	**347**	*e*P	**P**	**03 32 45.1**	**-2.4**
YAK				*e**PP		03 32 52.9	
YAK				*e*PPP		03 33 22.3	
YAK				*e*S	**S**	**03 36 58.0**	**-6.1**
YAK				*es*SS		03 37 44.9	
YAK				*e*		03 43 52.5	
YAK				pmax	pmax		
	comp=Z,179nm,1.1s,mb5.4						
YAK				pmax	pmax		
	comp=N,112nm,1.1s						
YAK				pmax	pmax		
	comp=E,32nm,1.0s						
YAK				smax			
	comp=E,227nm,1.7s						
YAK				smax			
	comp=N,371nm,2.2s						
YAK				MLR	MLR		
	comp=N,861nm,13.0s,MS4.5						
YAK				MLR	MLR		
	comp=E,610nm,11.0s,MS4.5						
YAK				MLR	MLR		
	comp=Z,1μm,13.0s,MS4.6						
YAK	**Yakutsk**	**23.91**	**347**	*e*P	**P**	**03 32 45.4**	**-2.2**
	comp=Z,194nm,1.1s,mb5.5						
SEY	**Seymchan**	**24.82**	**13**	*ce*P	**P**	**03 32 56.7**	**+0.9**
SEY	**Seymchan**	**24.82**	**13**	⇑*e*P	**P**	**03 32 56.7**	**+0.9**
ULN	**Ulaanbaatar**	**25.85**	**301**	⇑*e*P	**P**	**03 33 04.5**	**-0.8**
ULN	**Ulaanbaatar**	**25.85**	**301**	*e*P	**P**	**03 33 04.5**	**-0.8**
	comp=Z,32nm,1.1s,mb4.8						
ULN	**Ulaanbaatar**	**25.85**	**301**	P	**P**	**03 33 08.2**	**+2.9**
	SNR=16						
ULN				P	pP	03 33 08.2	+1.6
	SNR=16						
FX1	**Attu Island--F**	**26.05**	**48**	P	**P**	**03 33 08.3**	**+1.2**
	comp=Z,80nm,1.0s,mb5.2,baz=109,slow=18,SNR=10						
FX1	**Attu Island--F**	**26.05**	**48**	P	**P**	**03 33 08.3**	**+1.2**
FX1				pmax	pmax		
	comp=Z,80nm,1.0s						
FX1	**Attu Island--F**	**26.05**	**48**	P	**P**	**03 33 08.3**	**+1.2**
XAN	**Xi'an**	**26.06**	**269**	P	**P**	**03 33 07.3**	**-0.1**
XAN				sP	sP	03 33 18.1	+8.9
XAN				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.1						
SONM	**Songino Array**	**26.28**	**301**	P	**P**	**03 33 08.4**	**-0.8**
	comp=Z,13nm,0.9s,mb4.5,baz=97,slow=8.8,SNR=15						
SONM				LR	LR	03 44 03.8	
	comp=Z,1μm,18.1s,MS4.4,baz=87,slow=38						
SONM	**Songino Array**	**26.28**	**301**	P	**P**	**03 33 08.4**	**-0.8**
SONM				pmax	pmax		
	comp=Z,13nm,0.9s						
SONM				MLR	MLR		
	comp=Z,1μm,18.1s						
ENH	**Enshi**	**27.15**	**261**	*e*P	**P**	**03 33 15.7**	**-1.6**
	comp=Z,52nm,0.8s,mb5.1						
TLY	**Talaya**	**28.64**	**308**	*e*P	**P**	**03 33 31.1**	**+0.7**
TLY				*e*		03 34 30.1	
TLY				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.4						
TLY				MLR	MLR		
	comp=Z,2μm,15.0s,MS4.8						
TLY	**Talaya**	**28.64**	**308**	*e*P	**P**	**03 33 30.3**	**-0.1**
ZAK	**Zakamensk**	**28.65**	**305**	*e*P	**P**	**03 33 29.1**	**-1.3**
ZAK				*e*		03 36 41.5	
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.2						
LZH	**Lanzhou**	**29.34**	**276**	*e*P	**P**	**03 33 35.9**	**-0.8**
LZH				pP	pP	03 33 39.8	+1.7
LZH				PP	PP	03 34 32.0	-11
LZH				*e*S	**S**	**03 38 29.0**	**-1.7**
LZH				SS	SS	03 40 02.1	-33
LZH				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.7						
LZH				pmax	pmax		
	comp=Z,140nm,6.8s						
LZH				LR	LR		
	comp=E,2μm,13.0s						
LZH				LR	LR		
	comp=Z,2μm,14.4s,MS4.9						
MOY	**Mondy**	**30.27**	**308**	*e*P	**P**	**03 33 45.5**	**+0.8**
GYA	**Guiyang**	**31.21**	**256**	⇓*i*P	**P**	**03 33 52.8**	**-0.6**
GYA				PP	PP	03 34 55.8	-7.9
GYA				PcP	PcP	03 36 49.6	+1.5
GYA				S	**S**	**03 38 54.8**	**-5.3**
GYA				ScP	ScP	03 40 31.3	-0.4
GYA				SS	SS	03 40 43.8	-29
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.9						
GYA				pmax	pmax		
	comp=Z,190nm,14.7s						
GYA				LR	LR		
	comp=N,980nm,19.4s,MS4.7						
GYA				LR	LR		
	comp=E,1μm,21.1s,MS4.7						
GYA				LR	LR		
	comp=Z,2μm,19.7s,MS4.7						
CD2	**Chengdu**	**31.30**	**266**	*e*P	**P**	**03 33 53.6**	**-0.5**
CD2				pP	pP	03 33 58.0	+2.6
CD2				sP	sP	03 34 03.0	+7.1
CD2				PP	PP	03 34 55.0	-10
CD2				S	**S**	**03 38 57.3**	**-4.1**
CD2				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.0						
CD2				pmax	pmax		
	comp=Z,40nm,5.8s						
CD2				LR	LR		
	comp=N,2μm,11.8s,MS5.0						
CD2				LR	LR		
	comp=E,1μm,16.7s,MS5.0						
CD2				LR	LR		
	comp=Z,1μm,13.2s,MS4.8						
GTA	**Gaotai**	**31.57**	**284**	*e*P	**P**	**03 33 55.8**	**-0.6**
GTA				pP	pP	03 33 59.0	+1.3
GTA				PcP	PcP	03 36 49.8	+0.9
GTA				S	**S**	**03 39 03.1**	**-2.5**
GTA				PcS	PcS	03 40 33.8	+0.6
GTA				SS	SS	03 40 52.8	-28
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.2						
GTA				LR	LR		
	comp=N,940nm,17.2s,MS4.8						
GTA				LR	LR		
	comp=E,2μm,16.7s,MS4.8						
GTA				LR	LR		
	comp=Z,2μm,17.5s,MS4.9						
BILL	**Bilibino**	**32.14**	**18**	*e*P	**P**	**03 34 00.9**	**-0.1**
BILL				*i*		03 35 04.3	
BILL				*i*		03 36 50.6	
BILL				pmax	pmax		
	comp=Z,30nm,1.2s,mb5.0						
BILL				MLR	MLR		
	comp=Z,800nm,15.0s,MS4.5						
BILL	**Bilibino**	**32.14**	**18**	*e*P	**P**	**03 34 01.0**	**0.0**
	comp=Z,32nm,1.3s,mb5.0						
TIXI	**Tiksi**	**33.14**	**353**	*e*P	**P**	**03 34 08.1**	**-1.7**
TIXI				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
TIXI	**Tiksi**	**33.14**	**353**	*e*P	**P**	**03 34 08.1**	**-1.7**
	comp=Z,20nm,1.1s,mb5.0						
QIZ	**Qiongzhong**	**33.46**	**242**	P	**P**	**03 34 11.8**	**-1.3**
QIZ				S	**S**	**03 39 34.9**	**-0.3**
QIZ				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.5						
QIZ				LR	LR		
	comp=N,860nm,15.6s						
QIZ				LR	LR		
	comp=Z,610nm,16.6s,MS4.4						
KMI	**Kunming**	**34.91**	**258**	P	**P**	**03 34 25.9**	**+0.3**
KMI				pP	pP	03 34 29.6	+2.6
KMI				sP	sP	03 34 31.3	+3.8
KMI				PP	PP	03 35 44.8	+0.1
KMI				S	**S**	**03 39 57.3**	**-0.3**
KMI				SS	SS	03 42 09.5	-19
KMI				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.1						
KMI				pmax	pmax		
	comp=Z,270nm,3.8s						
KMI				LR	LR		
	comp=N,860nm,14.4s,MS4.6						
KMI				LR	LR		
	comp=E,360nm,16.3s,MS4.6						

KMI LR LR
comp=Z,860nm,17.8s,MS4.5
TNA Tin City 39.25 31 *eP* **P 03 35 03.1 +1.0**
comp=Z,17nm,0.9s,mb4.8
WMQ Urumqi 39.53 294 P **P 03 35 06.0 +1.3**
WMQ sP sP 03 35 13.0 +6.5
WMQ PP PP 03 36 41.0 +5.8
WMQ S **S 03 41 06.0 -1.5**
WMQ SS SS 03 43 52.0 -10
WMQ pmax pmax
comp=Z,54nm,1.0s,mb5.2
WMQ pmax pmax
comp=Z,280nm,4.0s
WMQ LR LR
comp=N,520nm,15.0s,MS4.6
WMQ LR LR
comp=E,490nm,15.0s,MS4.6
WMQ LR LR
comp=Z,530nm,15.0s,MS4.5
KKM Kota Kinabalu 39.76 220 *eP* **P 03 35 07.5 +0.6**
comp=Z,22nm,0.9s,mb4.9
ZALV Zalesovo Beam 40.18 311 P **P 03 35 09.4 -0.6**
comp=Z,46nm,0.9s,mb5.2,baz=92,slow=7.6,SNR=81
ZALV PcP PcP 03 37 12.8 -1.3
comp=Z,2.7nm,0.5s,baz=96,slow=3.4,SNR=4.6
ZALV LR LR 03 52 21.1
comp=Z,867nm,20.3s,MS4.6,baz=148,slow=37
ZALV Zalesovo Beam 40.18 311 P **P 03 35 09.4 -0.6**
ZALV 03 37 12.8
ZALV pmax pmax
comp=Z,46nm,0.9s,mb5.2
ZALV MLR MLR
comp=Z,867nm,20.3s,MS4.6
ZALV Zalesovo Beam 40.18 311 P **P 03 35 09.4 -0.6**
ZALV PcP PcP 03 37 12.8 -1.3
NVS Novosibirsk 41.08 312 *eP* **P 03 35 16.9 -0.5**
NVS pmax pmax
comp=Z,73nm,1.1s,mb5.2
NVS pmax pmax
comp=N,18nm,1.6s
NVS pmax pmax
comp=E,97nm,1.4s
CHTO Chiang Mai 41.43 253 *eP* **P 03 35 20.8 +0.1**
CHTO pmax pmax
comp=Z,30nm,1.0s,mb4.9
CHTO Chiang Mai 41.43 253 *eP* **P 03 35 20.8 +0.1**
comp=Z,30nm,1.0s,mb4.9
LSA Lhasa 41.62 273 P **P 03 35 23.3 +1.1**
LSA Lhasa 41.62 273 *eP* **P 03 35 22.8 +0.6**
LSA Lhasa 41.62 273 *eP* **P 03 35 22.8 +0.7**
CMAR Chiang Mai Arr 41.66 253 P **P 03 35 21.1 -1.5**
comp=Z,1.9nm,0.3s,mb4.2,baz=40,slow=7.0,SNR=11
CMAR PcP PcP 03 37 19.1 -0.3
comp=Z,0.9nm,0.3s,baz=2.9,slow=3.6,SNR=4.7
CMAR LR LR 03 54 37.4
comp=Z,341nm,18.6s,MS4.2,baz=35,slow=39
CMAR Chiang Mai Arr 41.66 253 P **P 03 35 21.1 -1.4**
CMAR 03 37 19.1
CMAR pmax pmax
comp=Z,2.0nm,0.3s
CMAR MLR MLR
comp=Z,341nm,18.6s
CMAR Chiang Mai Arr 41.66 253 P **P 03 35 21.1 -1.5**
CMAR PcP PcP 03 37 19.1 -0.3
MK31 Makanchi Array 42.65 300 *eP* **P 03 35 29.9 -0.4**
MK31 Makanchi Array 42.65 300 *eP* **P 03 35 29.9 -0.4**
MKAR Makanchi Array 42.65 300 P **P 03 35 29.2 -1.1**
comp=Z,36nm,0.9s,mb5.1,baz=77,slow=13,SNR=140
MKAR LR LR 03 53 53.7
comp=Z,530nm,18.3s,MS4.5,baz=339,slow=37
MKAR Makanchi Array 42.65 300 P **P 03 35 29.2 -1.1**
MKAR pmax pmax
comp=Z,36nm,0.9s
MKAR MLR MLR
comp=Z,530nm,18.3s
SHL Shillong 43.04 267 *e*PKP **P 03 35 43.0 +9.3**
TTA Tatalina 43.96 36 *eP* **P 03 35 41.5 +0.8**
TTA Tatalina 43.96 36 *eP* **P 03 35 41.5 +0.8**
SVW2 Sparrevohn 44.13 39 *eP* **P 03 35 43.5 +1.4**
KURK Kurchatov 44.30 306 P **P 03 35 43.8 +0.2**
comp=Z,766nm,0.9s,mb6.4,SNR=81
KURK Kurchatov 44.30 306 P **P 03 35 43.0 -0.6**
comp=Z,79nm,0.9s,mb5.5,baz=84,slow=8.6,SNR=125
KURK LR LR 03 54 46.8
comp=Z,704nm,21.0s,MS4.6,baz=65,slow=37
KURK Kurchatov 44.30 306*ce*P **P 03 35 43.1 -0.5**
KURK pmax pmax
comp=Z,191nm,1.2s,mb5.7
KURK Kurchatov 44.30 306 *eP* **P 03 35 42.8 -0.8**
comp=Z,140nm,1.0s,mb5.7
KURK Kurchatov 44.30 306 P **P 03 35 43.2 -0.4**
SNR=71
KURK P pP 03 35 43.2 -1.7
SNR=71
TAPN Taplejung 45.40 272 *eP* **P 03 35 52.4 -0.2**
comp=Z,63nm,1.1s,mb5.4
OHAK Old Harbor 45.53 44 *eP* **P 03 35 53.8 +0.5**
comp=Z,17nm,0.7s,mb5.1
RSO Redoubt South 45.54 40 *eP* **P 03 35 54.6 +1.3**
CHUM Lake Minchumin 45.63 35 *eP* **P 03 35 55.4 +1.3**
comp=Z,13nm,0.8s,mb4.9
CHUM *e*PcP PcP 03 37 32.1 -0.1
PPLA Purkeypile 45.71 36 *eP* **P 03 35 55.3 +0.7**
comp=Z,37nm,1.1s,mb5.2
KDAK Kodiak Island 45.84 43 P **P 03 35 55.3 -0.5**
comp=Z,162nm,0.7s,mb6.1,SNR=6.1
KDAK Kodiak Island 45.84 43 P **P 03 35 55.8 +0.1**
comp=Z,17nm,0.6s,mb5.2,baz=292,slow=3.4,SNR=22
KDAK Kodiak Island 45.84 43 *i* P **P 03 35 55.7 -0.1**
KDAK Kodiak Island 45.84 43 *eP* **P 03 35 55.5 -0.2**
ODAN Odare 45.88 271 *eP* **P 03 35 55.8 -0.7**
comp=Z,93nm,1.0s,mb5.7
BPAW Bear Paw Mtn. 46.22 34 *eP* **P 03 35 59.0 +0.4**
comp=Z,15nm,1.1s,mb4.8
BPAW *e*PcP PcP 03 37 33.9 -0.3
KTH Kantishna Hill 46.26 35 *eP* **P 03 36 00.0 +1.0**
comp=Z,44nm,1.0s,mb5.3
RAMN Ramite 46.45 272 *eP* **P 03 36 00.0 -1.0**
comp=Z,119nm,1.0s,mb5.8
COLD Coldfoot 46.53 30 *eP* **P 03 36 01.9 +0.8**
comp=Z,23nm,1.1s,mb5.0
GUN Gumba 46.55 273 *eP* **P 03 36 01.1 -0.6**
comp=Z,202nm,0.9s,mb6.1
TRF Thorofare Moun 46.55 35 *eP* **P 03 36 01.0 -0.3**
comp=Z,7.8nm,0.8s,mb4.7
KSM Kuching 46.72 224 *eP* **P 03 36 03.2 +0.1**
comp=Z,19nm,0.8s,mb5.1
KKN Kakani 47.07 274 *eP* **P 03 36 05.4 -0.4**
comp=Z,186nm,0.8s,mb6.1
KKN Kakani 47.07 274 *eP* **P 03 36 05.4 -0.4**
KKN pmax pmax
comp=Z,186nm,0.8s,mb6.1
PKI Pulchoki 47.08 273 *eP* **P 03 36 04.8 -1.1**
comp=Z,106nm,1.2s,mb5.6
PKI Pulchoki 47.08 273 *eP* **P 03 36 04.8 -1.1**
PKI pmax pmax
comp=Z,106nm,1.2s,mb5.7
PKI Pulchoki 47.08 273 *eP* **P 03 36 04.8 -1.1**
comp=Z,106nm,1.2s,mb5.6
MCK McKinley 47.14 35 *eP* **P 03 36 06.5 +0.7**
MCK McKinley 47.14 35 *eP* **P 03 36 06.5 +0.7**
SEW Seward 47.21 40 *eP* **P 03 36 06.0 -0.5**
comp=Z,26nm,1.1s,mb5.1
PMR Palmer 47.21 38 *eP* **P 03 36 05.1 -1.3**
PMR pmax pmax
comp=Z,14nm,0.8s,mb4.9
PMR Palmer 47.21 38 *eP* **P 03 36 05.1 -1.4**
comp=Z,14nm,0.8s,mb4.9
DMN Daman 47.29 273 *eP* **P 03 36 06.8 -0.8**
comp=Z,85nm,1.1s,mb5.6
COLA College 47.54 33 *eP* **P 03 36 09.5 +0.5**
COLA pmax pmax
comp=Z,18nm,0.9s,mb5.1
COLA College 47.54 33 *eP* **P 03 36 09.5 +0.6**
comp=Z,18nm,0.9s,mb5.1
ULHL Ulahol 48.03 296 P **P 03 36 13.2 +0.1**
SNR=45
KAPI Kappang 48.08 209 P **P 03 36 13.8 +0.1**
comp=Z,256nm,1.4s,mb6.1,SNR=6.7
KAPI Kappang 48.08 209 P **P 03 36 11.5 -2.2**
comp=Z,38nm,1.1s,mb5.3,baz=63,slow=4.5,SNR=5.3
KAPI Kappang 48.08 209 *eP* **P 03 36 12.9 -0.8**
comp=Z,80nm,1.4s,mb5.6
KAPI Kappang 48.08 209 P **P 03 36 13.6 -0.1**
SNR=5.0
KAPI P pP 03 36 13.6 -1.5
SNR=5.0
TKM2 Tokmak 2 48.26 297 P **P 03 36 15.4 +0.6**
SNR=160
TKM2 Tokmak 2 48.26 297 *eP* **P 03 36 15.4 +0.5**
TKM2 pmax pmax
comp=Z,204nm,1.1s,mb6.1
TKM2 Tokmak 2 48.26 297 *eP* **P 03 36 15.4 +0.6**
comp=Z,204nm,1.1s,mb6.1
KZA Kyzart 48.78 296 P **P 03 36 20.5 +1.6**
SNR=62
KBK Karagaybulak 48.80 296 P **P 03 36 20.1 +1.1**
SNR=110
CHMS Chumysh 48.82 297 P **P 03 36 19.7 +0.5**
SNR=12
BVAR Borovoye Array 48.84 311 P **P 03 36 18.5 -0.6**
comp=Z,17nm,0.9s,mb5.1,baz=86,slow=8.4,SNR=40
BVAR LR LR 03 57 49.1
comp=Z,839nm,19.6s,MS4.7,baz=53,slow=37
BVAR Borovoye Array 48.84 311 P **P 03 36 18.5 -0.7**
BVAR pmax pmax
comp=Z,17nm,0.9s
BVAR MLR MLR
comp=Z,839nm,19.6s
DIV Divide 48.87 38 *eP* **P 03 36 20.5 +1.2**
BRVK Borovoye 48.89 311 P **P 03 36 19.4 -0.2**
comp=Z,186nm,0.9s,mb6.1,SNR=16
BRVK Borovoye 48.89 311*ce*P **P 03 36 19.6 0.0**
BRVK pmax pmax
comp=Z,47nm,1.2s,mb5.4
BRVK Borovoye 48.89 311 *eP* **P 03 36 19.5 -0.1**
BRVK Borovoye 48.89 311 P **P 03 36 19.7 +0.1**
SNR=16
BRVK P pP 03 36 19.7 -1.2
SNR=16
USP Ospenovka 48.91 297 P **P 03 36 20.4 +0.6**
SNR=20
FRU Bishkek 48.97 297 *eP* **P 03 36 20.0 -0.3**
FRU pmax pmax
comp=Z,210nm,1.6s,mb5.9
AAK Ala-Archa 49.12 297 P **P 03 36 22.0 +0.5**
comp=Z,376nm,0.9s,mb6.4,SNR=15
AAK Ala-Archa 49.12 297 P **P 03 36 22.3 +0.8**
SNR=25
AAK Ala-Archa 49.12 297 P **P 03 36 22.2 +0.7**
comp=Z,29nm,0.8s,mb5.3,baz=124,slow=4.4,SNR=46
AAK Ala-Archa 49.12 297 P **P 03 36 22.2 +0.7**
AAK pmax pmax
comp=Z,29nm,0.9s,mb5.3
AAK Ala-Archa 49.12 297 *eP* **P 03 36 22.0 +0.5**
AAK Ala-Archa 49.12 297 P **P 03 36 21.9 +0.4**
SNR=34
AAK P pP 03 36 21.9 -0.9
SNR=34
KSH Kashi 49.17 292⇑ *iP* **P 03 36 26.1 +4.2**
KSH pP pP 03 36 30.5 +7.2
KSH sP sP 03 36 33.0 +9.2
KSH PcP PcP 03 37 48.6 +3.4
KSH PP PP 03 38 20.6 +5.2
KSH ScP ScP 03 41 42.1 +1.1
KSH PcS PcS 03 41 43.8 +2.3
KSH S **S 03 43 31.4 +3.6**
KSH ScS ScS 03 46 14.5 -0.3
KSH SS SS 03 46 59.1 +0.4
KSH pmax pmax
comp=Z,61nm,1.1s,mb5.5
KSH LR LR
comp=N,360nm,10.7s,MS4.8
KSH LR LR
comp=E,340nm,10.0s,MS4.8
KSH LR LR
comp=Z,200nm,9.2s
UCH Uchtor 49.25 296 P **P 03 36 23.9 +1.5**
SNR=33
UCH Uchtor 49.25 296 *eP* **P 03 36 23.6 +1.2**
comp=Z,21nm,0.9s,mb5.2
BMRM Bremner River 49.46 38 *eP* **P 03 36 24.5 +0.7**
comp=Z,28nm,0.9s,mb5.3
KULM Kulim 49.53 238 *eP* **P 03 36 24.8 -0.1**
comp=Z,16nm,1.0s,mb5.0
MENT Mentasta 49.56 36 *eP* **P 03 36 25.3 +0.7**
EKS2 Erkin-Say 49.61 297 P **P 03 36 25.9 +0.6**
SNR=36
EKS2 Erkin-Say 49.61 297 *eP* **P 03 36 25.3 +0.1**
comp=Z,50nm,1.0s,mb5.5
AML Almayashu 49.85 296 P **P 03 36 28.3 +1.2**
SNR=79
AML Almayashu 49.85 296 *eP* **P 03 36 28.2 +1.1**
comp=Z,144nm,1.1s,mb5.9
EGAK Eagle 50.40 33 *eP* **P 03 36 30.7 -0.1**
DDI Dehra Dun 51.45 280 *ex* x 03 36 38.5
KAKA Kakadu 52.18 190 *eP* **P 03 36 45.7 +0.9**
comp=Z,51nm,1.2s,mb5.3
KAKA Kakadu 52.18 190 *eP* **P 03 36 44.9 +0.2**
comp=Z,274nm,1.5s,mb6.0
PSI Prapat 52.53 237 P **P 03 36 46.9 -0.6**
comp=Z,22nm,0.8s,mb5.1,baz=26,slow=9.8,SNR=6.9
PSI Prapat 52.53 237 P **P 03 36 46.9 -0.6**
PSI pmax pmax
comp=Z,22nm,0.8s,mb5.1
INK Inuvik 52.72 28 *eP* **P 03 36 48.1 -0.1**
INK Inuvik 52.72 28 *eP* **P 03 36 48.1 -0.1**
NDI New Delhi 52.87 279 *ex* x 03 36 48.5
HYT Haines Junctio 52.88 37 *eP* **P 03 36 51.1 +1.6**
SVE Sverdlovsk 53.28 317⇑ *eP* **P 03 36 53.0 +0.5**
SVE *e*SSS 03 49 55.2
SVE pmax pmax
comp=Z,122nm,1.0s,mb5.8
SVE MLR MLR
comp=Z,1μm,16.0s,MS5.1
SOKR Solikamsk 54.40 321*c i*P **P 03 37 00.1 -0.5**
SOKR pmax pmax
comp=Z,40nm,1.1s,mb5.3
ARU Arti 54.49 317 P **P 03 37 01.2 -0.2**
comp=Z,605nm,1.0s,mb6.5,SNR=30
ARU Arti 54.49 317*c i*P **P 03 37 00.9 -0.5**
ARU 03 38 03.0
ARU *e* 03 39 00.4
ARU PPP 03 40 11.9
ARU S **S 03 44 39.0 -1.6**
ARU SS SS 03 48 15.9 -6.5
ARU pmax pmax
comp=Z,146nm,1.2s,mb5.8
ARU MLR MLR
comp=Z,1μm,17.0s,MS5.1
ARU Arti 54.49 317 *eP* **P 03 37 00.9 -0.5**
comp=Z,110nm,1.0s,mb5.7
ABKAR Akbulak array 56.25 309 *eP* **P 03 37 13.4 -0.7**
comp=Z,51nm,0.9s,mb5.5
KBL Kabul 56.27 289 *eP* **P 03 37 14.6 +0.1**
KBL Kabul 56.27 289 *eP* **P 03 37 14.6 +0.1**
DLBC Dease Lake 57.25 39 *eP* **P 03 37 22.9 +1.8**
ALE Alert 58.03 3 P **P 03 37 26.0 -0.3**
comp=Z,197nm,0.9s,mb6.1,SNR=14
FITZ Fitzroy Crossi 58.70 197 *eP* **P 03 37 31.8 +0.1**
comp=Z,23nm,1.2s,mb5.1
FITZ Fitzroy Crossi 58.70 197 P **P 03 37 31.5 -0.1**
comp=Z,10nm,1.0s,mb4.8,baz=32,slow=8.5
WRAB Tennant Creek 59.08 187 P **P 03 37 33.0 -1.3**
comp=Z,258nm,1.0s,mb6.2,SNR=9.6
WRAB Tennant Creek 59.08 187 *eP* **P 03 37 32.9 -1.4**
WRAB pmax pmax
comp=Z,39nm,0.9s,mb5.4
WRAB Tennant Creek 59.08 187 *eP* **P 03 37 32.9 -1.3**
comp=Z,39nm,0.9s,mb5.4
WRA Warramunga Arr 59.09 187 P **P 03 37 33.3 -1.0**
comp=Z,24nm,0.7s,mb5.3,baz=5.8,slow=7.1,SNR=61
WRA Warramunga Arr 59.09 187 P **P 03 37 33.3 -1.0**
WRA pmax pmax
comp=Z,24nm,0.7s
APA Apatity 60.58 335⇑ *eP* **P 03 37 43.0 -1.1**
APA pmax pmax
comp=Z,13nm,0.9s,mb5.1
APA MLR MLR
comp=Z,700nm,17.0s,MS4.9
RES Resolute Bay 60.67 15 *eP* **P 03 37 44.3 -0.3**
RES Resolute Bay 60.67 15 *eP* **P 03 37 44.2 -0.4**
KEV Kevo 61.31 339 *eP* **P 03 37 47.4 -1.6**
KEV pmax pmax
comp=Z,21nm,1.0s,mb5.2
KEV Kevo 61.31 339 *ep* **P 03 37 47.4 -1.6**
comp=Z,21nm,1.0s,mb5.2
KEV Kevo 61.31 339 *ep* **P 03 37 47.4 -1.6**
comp=Z,21nm,1.0s,mb5.2
ARCES ARCESS Array B 61.87 339 P **P 03 37 52.5 -0.3**
comp=Z,7.2nm,0.9s,mb4.8,baz=56,slow=7.8,SNR=23
ARCES ARCESS Array B 61.87 339 P **P 03 37 52.5 -0.3**
ARCES pmax pmax
comp=Z,7.0nm,0.9s
ARE0 ARCESS Array S 61.87 339 *eP* **P 03 37 52.4 -0.3**
YKA Yellowknife Ar 62.21 31 P **P 03 37 54.8 -0.4**
comp=Z,4.2nm,0.7s,mb4.7,baz=303,slow=6.4,SNR=15
YKA Yellowknife Ar 62.21 31 P **P 03 37 54.8 -0.4**
YKA pmax pmax
comp=Z,4.0nm,0.7s
YKA Yellowknife Ar 62.21 31 P **P 03 37 54.8 -0.4**
ABKT Ailbek 62.44 298 P **P 03 37 57.5 +0.4**
comp=Z,547nm,1.0s,SNR=16
ASAR Alice Springs 62.82 187 P **P 03 37 59.1 -0.5**
comp=Z,13nm,0.8s,mb5.1,baz=10,slow=6.8,SNR=70
ASAR Alice Springs 62.82 187 P **P 03 37 59.1 -0.5**
ASAR pmax pmax
comp=Z,13nm,0.8s
DAG Danmarks Havn 63.63 355⇑ *iP* **P 03 38 04.0 -0.5**
comp=Z,16nm,1.1s,mb5.0
JOF Joensuu 63.90 331 *eP* **P 03 38 04.7 -1.7**
JOF pmax pmax
comp=Z,15nm,0.8s,mb5.1
JOF Joensuu 63.90 331 *ep* **P 03 38 04.7 -1.7**
comp=Z,15nm,0.8s,mb5.1
JOF Joensuu 63.90 331 *ep* **P 03 38 04.7 -1.7**
comp=Z,15nm,0.8s,mb5.1
MOS Moscow 65.30 323 *eP* **P 03 38 14.8 -0.8**
MOS pmax pmax
comp=Z,64nm,1.2s,mb5.5
DZM Mont Dzumac 65.44 154 *eP* **P 03 38 17.8 +0.9**
comp=Z,29nm,1.1s,mb5.2
NLWA Neilton Lookou 65.62 48 ⇓P **P 03 38 18.1 +0.2**
baz=65
NLWA Neilton Lookou 65.62 48 *eP* **P 03 38 18.7 +0.8**
comp=Z,39nm,1.0s,mb5.4
A05A Maple Falls 65.78 46 ⇓P **P 03 38 19.2 +0.3**
baz=66
HDW Hoodsport 65.96 47 P **P 03 38 21.3 +1.3**
CMW Cultus Mountai 66.07 46 P **P 03 38 21.7 +0.9**
OBN Obninsk 66.14 322 *eP* **P 03 38 21.1 0.0**
OBN *e* 03 38 52.6
OBN pmax pmax
comp=Z,52nm,1.2s,mb5.4
OBN MLR MLR
comp=Z,500nm,14.0s,MS4.9
OBN Obninsk 66.14 322 *eP* **P 03 38 20.4 -0.8**
comp=Z,52nm,1.1s,mb5.5
KAF Kangasniemi 66.23 332 *eP* **P 03 38 19.9 -1.7**
KAF pmax pmax
comp=Z,18nm,0.7s,mb5.2
KAF Kangasniemi 66.23 332 *eP* **P 03 38 19.9 -1.7**
comp=Z,18nm,0.7s,mb5.2
KAF Kangasniemi 66.23 332 *ep* **P 03 38 19.9 -1.7**
comp=Z,18nm,0.7s,mb5.2,baz=49,slow=6.1
KAF Kangasniemi 66.23 332 *ep* **P 03 38 19.9 -1.7**
comp=Z,18nm,0.7s,mb5.2,baz=49,slow=6.1
JCW Jim Creek 66.30 46 P **P 03 38 22.9 +0.7**
B06A Marblemount 66.38 46 ⇑P **P 03 38 22.8 0.0**
baz=66
RPW Rockport 66.40 46 P **P 03 38 22.8 -0.1**
A07A Ashnola River, 66.70 45 ⇓P **P 03 38 24.7 -0.1**
baz=66
FINES FINESS Array B 66.74 332 P **P 03 38 24.4 -0.5**
comp=Z,28nm,0.8s,mb5.3,baz=53,slow=7.6,SNR=43
FINES LR LR 04 07 15.0
comp=Z,438nm,21.4s,MS4.6,baz=91,slow=36
FINES FINESS Array B 66.74 332 P **P 03 38 24.4 -0.4**
FINES pmax pmax
comp=Z,28nm,0.8s
FINES MLR MLR
comp=Z,438nm,21.4s
D05A Enumclaw 66.81 47 ⇓P **P 03 38 26.1 +0.5**
baz=66
VSR Storozhevoye 67.06 318 *eP* **P 03 38 26.4 -0.6**
VSR pmax pmax
comp=Z,30nm,0.8s,mb5.4
VSR pmax pmax
comp=N,10.0nm,0.7s
VSR pmax pmax
comp=E,30nm,1.0s
VORD Divnogorie 67.13 318 *eP* **P 03 38 27.1 -0.4**
VORD pmax pmax
comp=Z,20nm,0.6s,mb5.3
VORD pmax pmax
comp=N,70nm,0.5s
VORD pmax pmax
comp=E,20nm,0.4s
F04A Amboy 67.25 49 ⇓P **P 03 38 28.7 +0.4**
baz=67
ETW Entiat 67.53 46 *eP* **P 03 38 30.1 0.0**
comp=E,22nm,0.9s,mb5.2
G04A Mulino 67.61 49 ⇓P **P 03 38 31.1 +0.5**
baz=67
B08A Colville Reser 67.66 45 P **P 03 38 30.9 0.0**
baz=67,SNR=6.5
EDM Edmonton 67.97 39 *eP* **P 03 38 32.6 -0.2**
EDM Edmonton 67.97 39 *eP* **P 03 38 32.6 -0.1**
H04A Detroit Lake 68.08 50 ⇑P **P 03 38 33.6 0.0**
baz=68
GOF Gofitskoye 68.37 311 *eP* **P 03 38 30.1 -5.3**
GOF pmax pmax
comp=Z,180nm,1.3s,mb5.9
OD2 Odessa Site #2 68.55 46 *eP* **P 03 38 36.5 -0.1**
comp=Z,18nm,1.0s,mb5.0
C09A Chrisman Ranch 68.56 45 ⇓P **P 03 38 36.8 +0.3**
baz=68
SUMG Summit 68.57 360 *eP* **P 03 38 36.8 +0.5**
comp=Z,35nm,0.9s,mb5.3
SUMG Summit 68.57 360 *i* P **P 03 38 36.8 +0.6**
comp=Z,24nm,0.9s,mb5.1
D08A Wollman Farm, 68.63 46 ⇓P **P 03 38 37.5 +0.6**
baz=68
G06A Carlson Farm, 68.68 49 ⇓P **P 03 38 37.7 +0.4**
baz=68
F07A Phinny Hill Vi 68.72 48 ⇑P **P 03 38 37.9 +0.3**
baz=68
AFI Afiamalu 68.83 130 LR LR 04 06 08.8
comp=Z,306nm,20.9s,MS4.5,baz=39,slow=34
NEW Newport 68.93 44 *eP* **P 03 38 39.1 +0.3**
NEW pmax pmax
comp=Z,17nm,1.0s
NEW Newport 68.93 44 *eP* **P 03 38 39.0 +0.2**
comp=Z,18nm,1.0s,mb4.9
ZEI Tsey 69.14 309 *eP* **P 03 38 37.0 -3.3**
ZEI pmax pmax
comp=Z,54nm,1.4s,mb5.3
MTA Mtatsminda 69.19 307 P **P 03 38 40.1 -0.5**
KIV Kislovodsk 69.20 310 P **P 03 38 41.6 +1.0**
comp=Z,904nm,1.0s,SNR=30
KIV Kislovodsk 69.20 310 *eP* **P 03 38 41.2 +0.6**
KIV *i* 03 39 03.7
KIV pmax pmax
comp=Z,237nm,1.2s,mb6.0
KIV Kislovodsk 69.20 310 *eP* **P 03 38 41.3 +0.7**
comp=Z,210nm,1.1s,mb6.0
KIV Kislovodsk 69.20 310 P **P 03 38 41.4 +0.8**
SNR=58
KIV P pP 03 38 41.4 -0.6
SNR=58
TBLG Delisi 69.21 307 *eP* **P 03 38 41.0 +0.3**
TBLG Delisi 69.21 307 P **P 03 38 41.0 +0.3**
E09A Wood Farm, Sta 69.38 46 ⇓P **P 03 38 41.5 -0.1**
baz=69
KEH Kehvi 69.38 308 P **P 03 38 40.9 -0.8**
YBH Yreka Blue Hor 69.41 53 *eP* **P 03 38 43.2 +1.3**
YBH pmax pmax
comp=Z,13nm,1.1s
YBH Yreka Blue Hor 69.41 53 *eP* **P 03 38 43.2 +1.3**
comp=Z,13nm,1.1s,mb4.8
ONI Oni 69.51 309 P **P 03 38 43.6 +1.0**
D10A Wagner Farm, O 69.55 46 ⇑P **P 03 38 42.7 0.0**
baz=69
C11A Tepee Creek (N 69.65 44 ⇑P **P 03 38 43.4 0.0**
baz=69,SNR=7.8
ARMA Armidale 69.93 170 *eP* **P 03 38 45.5 +0.4**
K05A Summer Lake 69.95 51 ⇓P **P 03 38 44.9 -0.4**
baz=70,SNR=7.6
SCO Scoresbysund 69.97 354 *i* P **P 03 38 44.7 -0.2**
comp=Z,6.2nm,0.8s,mb4.6
E10A Myers Farm, Un 69.97 46 ⇑P **P 03 38 45.0 -0.3**
baz=70
A13A Flathead Natio 69.99 43 ⇑P **P 03 38 45.8 +0.4**
baz=70
I07A Izee 70.00 49 ⇓P **P 03 38 45.3 -0.2**
baz=70
WBK Wadi Bani Khal 70.01 283 P **P 03 38 47.5 +1.5**
SNR=6.7
GNI Garni 70.10 306 P **P 03 38 46.8 +0.6**

comp=Z,32nm,1.0s,mb5.2,baz=72,slow=3.2,SNR=20
GNI Garni 70.10 306 *ce*P **P 03 38 47.8 +1.6**
GNI pmax pmax
comp=Z,84nm,1.2s
GNI Garni 70.10 306 *e*P **P 03 38 47.0 +0.7**
comp=Z,102nm,1.3s,mb5.6
GNI Garni 70.10 306 P **P 03 38 47.9 +1.7**
SNR=24
GNI P pP 03 38 47.9 +0.3
SNR=24
C12B Naegeli Ranch, 70.15 44 ⇑P **P 03 38 46.2 -0.2**
baz=70
WDC Whiskeytown Da 70.17 54 *e*P **P 03 38 47.5 +0.9**
WDC pmax pmax
comp=Z,11nm,0.9s,mb4.8
WDC Whiskeytown Da 70.17 54 *e*P **P 03 38 47.5 +0.8**
comp=Z,11nm,0.9s,mb4.8
WALA Waterton Lakes 70.17 42 *e*P **P 03 38 46.7 +0.2**
comp=Z,0.6nm,1.1s
F10A Beach Ranch, E 70.21 46 ⇓P **P 03 38 46.8 0.0**
baz=70
H08A Prairie City 70.23 48 ⇓P **P 03 38 46.9 -0.1**
baz=70
B13A Whitefish 70.29 43 ⇑P **P 03 38 47.2 -0.1**
baz=70,SNR=20
G09A Cove 70.30 47 ⇑P **P 03 38 47.3 0.0**
baz=70
IZAR Zarasai 70.39 327 *e*P **P 03 38 47.7 0.0**
IZAR AMB AMB 03 38 50.7
comp=Z,13nm,1.1s,mb4.8
BSMT Bassoo Peak 70.44 44 *e*P **P 03 38 48.7 +0.5**
comp=Z,5.3nm,1.0s,mb4.4
SMDO Samad 70.45 284 P **P 03 38 50.0 +1.3**
SNR=10
IDID Didziasalis 70.47 326 *e*P **P 03 38 48.2 0.0**
IDID AMB AMB 03 38 51.2
comp=Z,14nm,1.0s,mb4.8
LTIM Timbered Crate 70.48 53 P **P 03 38 49.3 +0.7**
A14A Double T Ranch 70.48 42 ⇑P **P 03 38 48.5 +0.1**
baz=70,SNR=8.1
ISAL Salakas 70.56 327 *e*P **P 03 38 48.7 -0.1**
ISAL AMB AMB 03 38 51.9
comp=Z,21nm,1.0s,mb5.0
FORT Forrest 70.58 192 *e*P **P 03 38 48.7 -0.3**
comp=Z,18nm,0.7s,mb5.1
D12A Red Ives Fores 70.61 45 ⇑P **P 03 38 49.3 +0.1**
baz=70
C13A Hot Springs 70.66 44 ⇑P **P 03 38 49.6 +0.2**
baz=70,SNR=7.3
STKA Stephens Creek 70.67 179 *e*P **P 03 38 49.5 0.0**
comp=Z,7.8nm,0.9s,mb4.6
STKA Stephens Creek 70.67 179 P **P 03 38 49.6 +0.1**
comp=Z,8.9nm,0.8s,mb4.7,baz=333,slow=5.0,SNR=10
STKA Stephens Creek 70.67 179 *e*P **P 03 38 49.0 -0.5**
comp=Z,2.3nm,0.9s,mb4.1
IIGN Ignalina 70.67 327 *e*P **P 03 38 49.6 +0.2**
IIGN AMB AMB 03 38 52.5
comp=Z,15nm,1.0s,mb4.9
G10A Bishop Farm, J 70.67 47 ⇓P **P 03 38 49.3 -0.3**
baz=70,SNR=6.5
HOQ Hoqain 70.71 285 P **P 03 38 51.3 +1.1**
SNR=6.0
LBCM Butte Creek Ri 70.76 53 P **P 03 38 50.9 +0.6**
JTMT Jette 70.77 44 *e*P **P 03 38 51.0 +0.8**
comp=Z,12nm,1.1s,mb4.8
MOD Modoc 70.79 51 *e*P **P 03 38 50.8 +0.4**
comp=Z,6.1nm,0.7s,mb4.6
JMDO Jabal Madar 70.81 284 P **P 03 38 50.9 +0.1**
SNR=6.5
BMO Blue Mountains 70.83 47 *e*P **P 03 38 50.3 -0.3**
comp=Z,3.8nm,0.8s,mb4.4
A15A Johnson Ranch, 70.84 42 ⇓P **P 03 38 50.0 -0.6**
baz=70,SNR=7.0
YBMT Yellow Bay 70.85 43 *e*P **P 03 38 51.0 +0.3**
comp=Z,9.2nm,1.0s,mb4.7
F11A Grangeville 70.86 46 ⇑P **P 03 38 50.3 -0.5**
baz=71,SNR=9.6
E12A Beaver Dam Sad 70.87 45 ⇑P **P 03 38 51.1 +0.3**
baz=71,SNR=15
B14A Marquette Ranc 70.94 43 ⇑P **P 03 38 51.0 -0.1**
baz=71,SNR=11
J08A Circle Bar Ran 71.03 49 ⇓P **P 03 38 52.2 +0.4**
baz=71
C14A Swan Lake 71.05 43 ⇓P **P 03 38 51.7 -0.1**
baz=71,SNR=15
SWMT Swartz Lake 71.07 44 *e*P **P 03 38 51.9 -0.1**
comp=Z,12nm,1.1s,mb4.7
G11A Walters Elk Ra 71.09 47 ⇑P **P 03 38 52.0 -0.2**
baz=71,SNR=15
SOC Sochi 71.17 311 ⇑*i*P **P 03 38 51.1 -1.6**
SOC *e**PP pP 03 39 00.4 +6.3
SOC *e**SP sP 03 39 05.3 +11
SOC *e*S S 03 48 06.7 -3.4
SOC pmax pmax
comp=Z,66nm,1.2s,mb5.4
SOC MLR MLR
comp=Z,575nm,17.0s,MS4.9
H10A Noah's Angus R 71.30 47 ⇓pP pP 03 38 53.4 -1.5
baz=71,SNR=9.2
B15A Bradely Ranch, 71.34 42 ⇓P **P 03 38 53.4 -0.2**
baz=71,SNR=22
ARQ Araqi 71.44 285 P **P 03 38 55.5 +0.9**
SNR=7.0
F12A Elk City 71.44 46 ⇓P **P 03 38 54.3 0.0**
baz=71,SNR=14
J09A Fry Pan Ranch, 71.46 49 ⇓P **P 03 38 54.7 +0.3**
baz=71,SNR=7.8
WVOR Wild Horse Val 71.48 50 *e*P **P 03 38 54.9 +0.3**
WVOR pmax pmax
comp=Z,25nm,1.6s,mb4.9
WVOR Wild Horse Val 71.48 50 *e*P **P 03 38 54.9 +0.3**
comp=Z,26nm,1.6s,mb4.9
SLMT Seeley Lake 71.50 44 *e*P **P 03 38 53.9 -0.8**
comp=Z,12nm,0.8s,mb4.9
MSO Missoula 71.51 44 *e*P **P 03 38 54.4 -0.3**
comp=Z,6.3nm,1.1s,mb4.5
I10A Payette 71.57 48 ⇑P **P 03 38 54.9 -0.2**
baz=71
D14A Greenough 71.59 44 ⇓P **P 03 38 54.5 -0.7**
baz=71,SNR=11
E13A Victor 71.62 45 ⇓P **P 03 38 54.4 -0.9**
baz=71
C15A Salmond Ranch, 71.65 43 ⇑P **P 03 38 54.4 -1.1**
baz=71,SNR=10.0
H11A Donnelly 71.65 47 ⇑P **P 03 38 55.0 -0.6**
baz=71
B16A M & M Farms, S 71.72 42 ⇑P **P 03 38 55.7 -0.2**
baz=71
ANN Anapa 71.75 313 *e*P **P 03 38 55.9 -0.3**
ANN *e*S S 03 48 14.2 -2.6
ANN pmax pmax
comp=Z,87nm,1.3s,mb5.5
ANN MLR MLR
comp=Z,357nm,16.0s,MS4.7
G12A Big Creek, Yel 71.78 46 ⇓P **P 03 38 56.1 -0.3**
baz=72
CHMT Chamberlain Mo 71.83 44 *e*P **P 03 38 55.4 -1.2**
comp=Z,5.1nm,1.2s,mb4.3
F13A Darby 71.94 45 ⇑P **P 03 38 56.9 -0.4**
baz=72
BEKR Beckworth 71.94 53 ⇓P **P 03 38 57.6 +0.1**
baz=72,SNR=19
NB2 NORSAR Subarra 72.07 337 P **P 03 38 57.3 -0.5**
comp=Z,40nm,1.1s,mb5.3,baz=39,slow=6.5
NB2 NORSAR Subarra 72.07 337 P **P 03 38 57.3 -0.5**
NOA NORSAR Array B 72.07 337 P **P 03 38 56.9 -0.9**
comp=Z,8.9nm,0.7s,mb4.8,baz=39,slow=6.0,SNR=25
NOA LR LR 04 13 12.8
comp=Z,354nm,18.0s,MS4.7,baz=10.0,slow=38
NOA NORSAR Array B 72.07 337 P **P 03 38 56.9 -0.9**
NOA pmax pmax
comp=Z,9.0nm,0.7s
NOA MLR MLR
comp=Z,354nm,18.0s
C16A Fuhringer Ranc 72.09 43 ⇑P **P 03 38 57.5 -0.6**
baz=72
D15A Lincoln 72.15 44 ⇑P **P 03 38 58.0 -0.5**
baz=72
I11A Placerville 72.16 48 ⇓P **P 03 38 58.3 -0.4**
baz=72
FFC Flin Flon 72.17 33 P **P 03 38 58.0 -0.5**
comp=Z,64nm,1.0s,mb5.5,SNR=7.1
FFC Flin Flon 72.17 33 *i*P **P 03 38 58.5 0.0**
FFC Flin Flon 72.17 33 *e*P **P 03 38 57.8 -0.7**
comp=Z,14nm,1.1s,mb4.8
HAKT HAKKARI 72.25 304 ⇓*i*P **P 03 38 58.5 -0.9**
B17A L&G Farms, Che 72.27 42 ⇓P **P 03 38 59.2 0.0**
baz=72,SNR=9.3
FCC Fort Churchill 72.31 27 *e*P **P 03 38 59.2 -0.1**
FCC pmax pmax
comp=Z,1.0nm,1.1s,mb3.7
FCC Fort Churchill 72.31 27 *e*P **P 03 38 59.2 0.0**
comp=Z,0.8nm,1.1s,mb3.6
K10A MacKenzie Ranc 72.32 49 ⇑P **P 03 38 59.5 -0.2**
baz=72,SNR=9.7
NAO01 NORSAR Array S 72.32 337 *e*P **P 03 38 58.3 -1.1**
comp=Z,13nm,0.9s,mb4.8
AKASG Malin Array Be 72.36 322 P **P 03 38 58.6 -1.1**
comp=Z,16nm,0.8s,mb5.0,baz=46,slow=6.1,SNR=42
AKASG PP PP 03 41 39.3 -0.6
comp=Z,0.4nm,0.4s,baz=46,slow=8.3,SNR=4.2
AKASG Malin Array Be 72.36 322 P **P 03 38 58.6 -1.1**
AKASG 03 41 39.3
AKASG pmax pmax
comp=Z,16nm,0.8s
AKBB Malin Array Si 72.36 322 *e*P **P 03 38 59.1 -0.6**
AKBB Malin Array Si 72.36 322 *e*P **P 03 38 59.1 -0.7**
KIEV Kiev 72.37 322 *e*P **P 03 38 58.7 -1.1**
KIEV pmax pmax
comp=Z,22nm,0.8s,mb5.1
KIEV Kiev 72.37 322 *e*P **P 03 38 58.7 -1.1**
comp=Z,22nm,0.8s,mb5.1
H12A Diamond D Ranc 72.40 47 ⇓P **P 03 38 59.5 -0.6**
baz=72
G13A Cobalt 72.42 46 ⇑P **P 03 38 59.3 -0.9**
baz=72
E15A Deer Lodge 72.47 44 ⇑P **P 03 38 59.4 -1.1**
baz=72
MFID Camas Ranch 72.54 48 ⇑P **P 03 39 00.5 -0.4**
baz=72,SNR=6.0
WCN Washoe City 72.65 53 ⇑P **P 03 39 02.0 +0.3**
baz=72
D16A Dana Ranch, Ca 72.67 43 ⇑P **P 03 39 01.4 -0.3**
baz=72,SNR=7.4
C17A Wharram Farm, 72.71 42 ⇑P **P 03 39 00.5 -1.3**
baz=72
I12A Atlanta 72.71 47 ⇓P **P 03 39 01.9 0.0**
baz=72,SNR=16
HRY Holter Researc 72.72 43 *e*P **P 03 39 02.6 +0.6**
comp=Z,10nm,0.7s,mb4.9
H13A Challis 72.73 46 P **P 03 39 02.4 +0.4**
baz=72,SNR=11
K11A Parker Ranch, 72.81 49 ⇑P **P 03 39 02.0 -0.6**
baz=72
SUW Suwalki 72.88 327 *e*P **P 03 39 02.4 -0.3**
SUW Suwalki 72.88 327 *e*P **P 03 39 02.4 -0.3**
SUW Suwalki 72.88 327 *e*P **P 03 39 02.4 -0.3**
comp=Z,51nm,1.1s,mb5.4
F15A Butte 72.91 44 ⇓P **P 03 39 03.0 -0.1**
baz=73,SNR=20
E16A East Helena 72.92 44 ⇓P **P 03 39 03.1 0.0**
baz=73,SNR=5.8
LRM Limekiln Ridge 72.95 44 *e*P **P 03 39 03.6 +0.3**
comp=Z,81nm,0.8s,mb5.7
L10A Juniper Basin 72.98 49 ⇓P **P 03 39 02.9 -0.7**
baz=73,SNR=11
CMB Columbia Colle 73.01 55 *e*P **P 03 39 04.2 +0.4**
CMB pmax pmax
comp=Z,13nm,0.9s,mb4.9
CMB Columbia Colle 73.01 55 *e*P **P 03 39 04.2 +0.4**
comp=Z,13nm,0.9s,mb4.9
D17A Six Diamond Ra 73.05 43 ⇑P **P 03 39 03.1 -0.8**
baz=73,SNR=5.2
J12A Stokes Ranch, 73.06 48 ⇑P **P 03 39 03.9 -0.1**
baz=73
DLMT Dillon 73.16 45 *e*P **P 03 39 05.3 +0.7**
comp=Z,15nm,0.8s,mb5.0
I13A Wildhorse Cree 73.21 47 ⇑P **P 03 39 05.0 +0.1**
baz=73,SNR=8.2
HLID Hailey 73.26 47 ⇑P **P 03 39 04.3 -0.9**
baz=73,SNR=11
HLID Hailey 73.26 47 *e*P **P 03 39 04.9 -0.3**
comp=Z,3.8nm,0.8s,mb4.4
M10A I.L. Ranch, Tu 73.28 50 ⇓P **P 03 39 05.2 -0.1**
baz=73,SNR=6.6
G15A Dillon 73.34 45 ⇑P **P 03 39 05.5 -0.2**
baz=73,SNR=18
L11A Cat Creek Ranc 73.34 49 ⇑P **P 03 39 05.8 0.0**
baz=73,SNR=11
MCMT McKenzie Canyo 73.35 45 *e*P **P 03 39 07.3 +1.6**
comp=Z,0.9nm,0.7s,mb3.8
E17A Martinsdale 73.40 43 ⇓P **P 03 39 05.9 -0.1**
baz=73,SNR=13
F16A Kennard Place, 73.42 44 ⇑P **P 03 39 06.1 0.0**
baz=73,SNR=11
D18A Linhart Farms, 73.49 42 ⇑P **P 03 39 06.7 +0.2**
baz=73
J13A Cove Ranch, Pi 73.50 47 ⇑P **P 03 39 06.9 +0.3**
baz=73,SNR=10
BOZ Bozeman (W) 73.51 44 ⇑P **P 03 39 07.0 +0.4**
baz=73,SNR=22
BOZ Bozeman (W) 73.51 44 *e*P **P 03 39 06.7 +0.1**
BOZ pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
BOZ Bozeman (W) 73.51 44 *e*P **P 03 39 06.7 +0.1**
comp=Z,8.0nm,0.8s,mb4.7
SIM Simferopol' 73.52 315 *e*P **P 03 39 07.7 +1.0**
SIM pmax pmax
comp=Z,38nm,0.9s,mb5.3
BMN Battle Mountai 73.53 51 *e*P **P 03 39 08.1 +1.2**
BMN pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
BMN Battle Mountai 73.53 51 *e*P **P 03 39 08.1 +1.3**
comp=Z,7.3nm,0.7s,mb4.7
K12A Draper Farm, C 73.55 48 ⇓P **P 03 39 07.8 +0.8**
baz=73
I14A Mackay 73.58 46 P **P 03 39 07.7 +0.6**
baz=73,SNR=12
G16A Moss Hill, Enn 73.68 45 ⇓P **P 03 39 07.4 -0.2**
baz=73
M11A Holland Ranch, 73.78 50 ⇓P **P 03 39 08.6 +0.3**
baz=74,SNR=8.3
L12A House Creek Ra 73.79 49 ⇓P **P 03 39 08.7 +0.4**
baz=74,SNR=11
SFJD Kangerlussuaq 73.82 5 P **P 03 39 07.3 -0.8**
comp=Z,18nm,0.8s,mb5.1,baz=332,slow=5.6,SNR=4.8
SFJD Kangerlussuaq 73.82 5 P **P 03 39 07.3 -0.8**
SFJD pmax pmax
comp=Z,18nm,0.8s,mb5.0
SFJD Kangerlussuaq 73.82 5 *i*P **P 03 39 07.6 -0.5**
comp=Z,21nm,0.9s,mb5.1
E18A Harlowton 73.84 43 ⇑P **P 03 39 08.0 -0.6**
baz=74,SNR=6.7
F17A Fitzpatrick Pl 73.86 44 ⇓P **P 03 39 08.2 -0.5**
baz=74,SNR=11
J14A Carey 73.92 47 ⇓P **P 03 39 09.0 -0.1**
baz=74,SNR=11
K13A Stover Farm, H 74.02 48 ⇓P **P 03 39 10.5 +0.8**
baz=74
NVAR Mina Array Bea 74.08 53 P **P 03 39 10.1 0.0**
comp=Z,13nm,0.9s,mb4.8,baz=290,slow=5.3,SNR=46
G17A Pierce Place, 74.20 44 ⇑P **P 03 39 10.8 +0.1**
baz=74,SNR=8.8
M12A Wells 74.30 49 ⇑P **P 03 39 11.3 -0.1**
baz=74,SNR=14
MIB Mutribah 74.36 296 *e*P **P 03 39 10.6 -1.3**
MIB AMb AMB 03 39 14.3
comp=Z,131nm,1.0s,mb5.8
F18A Big Timber 74.37 43 ⇓P **P 03 39 11.4 -0.2**
baz=74,SNR=22
GCMT Greycliff 74.47 43 *e*P **P 03 39 12.5 +0.2**
comp=Z,6.9nm,0.8s,mb4.6
J15A Blackfoot 74.49 46 ⇓P **P 03 39 12.2 -0.2**
baz=74,SNR=9.2
P10A Eureka 74.49 51 ⇑P **P 03 39 12.5 0.0**
baz=74,SNR=9.6
KEMA Kemaliye 74.50 308 ⇓*i*P **P 03 39 13.7 +1.1**
N12A Clover Valley, 74.58 50 ⇓P **P 03 39 13.8 +0.8**
baz=74,SNR=5.7
N12A Clover Valley, 74.58 50 *e*P **P 03 39 14.0 +1.0**
comp=Z,8.1nm,0.8s,mb4.7
K14A Jones Ranch, D 74.61 47 ⇑P **P 03 39 13.5 +0.4**
baz=74,SNR=8.2
O11A Cowboy Ranch, 74.66 51 ⇑P **P 03 39 13.5 0.0**
baz=74
YFT Old Faithful 74.70 45 *e*P **P 03 39 16.4 +2.8**
comp=Z,17nm,0.8s,mb5.0
I16A Newdale 74.71 46 ⇑P **P 03 39 13.7 0.0**
baz=74,SNR=17
RDF Al-Radifah 74.73 295 *e*P **P 03 39 13.5 -0.6**
RDF AMb AMB 03 39 17.1
comp=Z,181nm,1.0s,mb6.0
NAY Al-Naaiem 74.76 295 *e*P **P 03 39 13.2 -1.0**
NAY AMb AMB 03 39 16.7
comp=Z,68nm,1.0s,mb5.5
M13A Montello 74.78 49 ⇓P **P 03 39 14.5 +0.4**
baz=74,SNR=8.4
M13A Montello 74.78 49 *e*P **P 03 39 14.9 +0.8**
comp=Z,4.9nm,0.7s,mb4.5
H17A Grant Village 74.88 45 ⇓P **P 03 39 15.1 +0.4**
baz=75,SNR=13
K15A Arbon 74.89 47 ⇑P **P 03 39 14.6 -0.1**
baz=75,SNR=5.3
L14A Malta 74.89 48 ⇓P **P 03 39 14.8 0.0**
baz=75,SNR=7.6
P11A Circle Ranch, 74.96 51 ⇑P **P 03 39 15.5 +0.3**
baz=75
IMW Indian Meadow 75.00 45 *e*P **P 03 39 16.8 +1.4**
comp=Z,10nm,0.7s,mb4.9
KIS Kishinev 75.00 319 *e*P **P 03 39 11.0 -4.3**
Q10A Clear Creek Ra 75.02 52 ⇑P **P 03 39 16.0 +0.5**
baz=75
N13A Wendover, West 75.07 49 *e*P **P 03 39 16.8 +1.0**
comp=Z,10nm,0.7s,mb4.9
RLMT Red Lodge 75.12 44 ⇓P **P 03 39 16.2 +0.2**
baz=75,SNR=13
RLMT Red Lodge 75.12 44 *e*P **P 03 39 16.9 +0.8**
comp=Z,11nm,0.8s,mb4.8
O12A Currie 75.12 50 ⇑P **P 03 39 16.4 +0.3**
baz=75,SNR=16
RRI2 Red Ridge 75.14 46 *e*P **P 03 39 17.3 +1.1**
comp=Z,13nm,1.0s,mb4.8
VES Vestal, Richgr 75.16 56 ⇓P **P 03 39 16.4 -0.1**
baz=75,SNR=7.2
M14A Sheep Mountain 75.17 48 ⇑P **P 03 39 17.0 +0.6**
baz=75,SNR=8.3
PKM Peak Mountain 75.26 57 ⇓P **P 03 39 17.8 +0.8**
baz=75
TPAW Teton Pass 75.26 46 *e*P **P 03 39 17.9 +1.0**
comp=Z,6.5nm,0.7s,mb4.7
K16A Soda Springs 75.33 46 ⇑P **P 03 39 17.3 +0.1**
baz=75,SNR=6.1
LOHW Long Hollow 75.37 45 *e*P **P 03 39 17.6 +0.1**
comp=Z,7.4nm,1.0s,mb4.6
SNOW Snow King Moun 75.39 46 *e*P **P 03 39 18.3 +0.7**
comp=Z,13nm,0.9s,mb4.9
REDW Red Top Meadow 75.40 46 *e*P **P 03 39 18.3 +0.7**
comp=Z,12nm,1.2s,mb4.7
L15A Malad City 75.40 48 ⇑P **P 03 39 18.2 +0.5**
baz=75,SNR=5.6
R10A Warm Springs 75.41 52 ⇓P **P 03 39 17.7 -0.1**
baz=75
LVV L'vov 75.42 323 *e*P **P 03 39 17.9 +0.3**
LVV MLR MLR
comp=Z,300nm,17.0s,MS4.7
LVV MLR MLR
comp=E,100nm,14.0s,MS4.6
LVV MLR MLR
comp=N,200nm,18.0s,MS4.6
S10A Tonopah Range, 75.45 53 ⇓P **P 03 39 18.7 +0.6**
baz=75,SNR=31
Q11A Duckwater 75.46 52 ⇓P **P 03 39 18.1 0.0**
baz=75,SNR=8.3
J17A Brown Place, J 75.47 46 ⇑P **P 03 39 17.9 -0.2**
baz=75
BORG Borgarnes 75.50 352 *e*P **P 03 39 19.2 +1.4**
BORG pmax pmax
comp=Z,26nm,0.8s
BORG Borgarnes 75.50 352 *e*P **P 03 39 19.2 +1.4**
comp=Z,26nm,0.8s,mb5.2
P12A McGill 75.52 51 ⇑P **P 03 39 19.0 +0.6**
baz=75,SNR=15
ISA Isabella 75.66 56 ⇑P **P 03 39 18.3 -1.0**
baz=75,SNR=5.2
ISA Isabella 75.66 56 *e*P **P 03 39 18.4 -0.9**
ISA pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
ISA Isabella 75.66 56 *e*P **P 03 39 18.4 -0.9**
comp=Z,7.8nm,1.0s,mb4.6
LAO LASA Array 75.67 41 *e*P **P 03 39 19.3 +0.2**
comp=Z,18nm,1.2s,mb4.9
N14A Grayback Hills 75.67 49 ⇓P **P 03 39 18.8 -0.4**
baz=75,SNR=14
M15A Larsen Ranch, 75.71 48 ⇓P **P 03 39 18.8 -0.7**
baz=75
BGU Big Grassy Mou 75.72 49 *e*P **P 03 39 19.8 +0.2**
comp=Z,8.4nm,1.2s,mb4.5
ARVC Arvin 75.76 56 ⇑P **P 03 39 20.2 +0.3**
baz=76
R11A Troy Canyon, C 75.81 52 ⇓P **P 03 39 20.2 0.0**
baz=76,SNR=26
Q12A Willow Creek R 75.84 51 ⇓P **P 03 39 21.0 +0.8**
baz=76
L16A Fish Haven 75.94 47 ⇓P **P 03 39 20.6 -0.2**
baz=76,SNR=8.5
J18A Kendall Valley 75.96 45 ⇑P **P 03 39 20.9 0.0**
baz=76,SNR=6.9
N15A Stansbury Isla 76.04 48 ⇑P **P 03 39 21.5 +0.1**
baz=76,SNR=11
MPMC Manual Prospec 76.05 55 ⇓P **P 03 39 21.4 -0.1**
baz=76,SNR=20
P13A Bates Ranch, G 76.07 50 ⇑P **P 03 39 21.7 +0.1**
baz=76
HWUT Hardware Ranch 76.13 47 *e*P **P 03 39 22.6 +0.7**
comp=Z,18nm,1.3s,mb4.8
PINB Pinarbasi 76.14 309 ⇓*i*P **P 03 39 23.1 +1.1**
S11A Rachel 76.15 53 ⇑P **P 03 39 22.3 +0.2**
baz=76,SNR=25
KWP Kalwaria Pacla 76.16 324 *e*P **P 03 39 22.6 +0.7**
KWP Kalwaria Pacla 76.16 324 ⇑P **P 03 39 22.3 +0.4**
KWP Kalwaria Pacla 76.16 324 *e*P **P 03 39 22.3 +0.4**
comp=Z,112nm,1.4s,mb5.6
KWP Kalwaria Pacla 76.16 324 ⇑*i*P **P 03 39 22.3 +0.4**
FURC Furnace Creek, 76.19 54 ⇓P **P 03 39 21.9 -0.4**
baz=76,SNR=26
L17A Cokeville 76.20 47 ⇑P **P 03 39 22.7 +0.4**
baz=76
ILGA Ilgaz 76.23 312 ⇓*i*P **P 03 39 23.9 +1.5**
M16A Huntsville 76.28 48 ⇓P **P 03 39 23.0 +0.2**
baz=76
DUG Dugway 76.31 49 ⇑P **P 03 39 22.4 -0.5**
baz=76,SNR=16
DUG Dugway 76.31 49 *e*P **P 03 39 23.6 +0.7**
DUG pmax pmax
comp=Z,11nm,0.9s,mb4.8
DUG Dugway 76.31 49 *e*P **P 03 39 23.6 +0.7**
comp=Z,11nm,0.9s,mb4.8
K18A Toltan Ranch, 76.32 46 ⇓P **P 03 39 22.0 -0.9**
baz=76
BUR08 Bucovina Ar. S 76.37 321 *e*P **P 03 39 23.2 0.0**
Q13A Wheeler Ranch, 76.38 51 ⇑P **P 03 39 23.2 -0.1**
baz=76,SNR=15
BUR01 Bucovina Ar. S 76.39 321 P **P 03 39 24.0 +0.8**
BURAR Bucovina Array 76.39 321 ⇑P **P 03 39 23.2 0.0**
BURAR Bucovina Array 76.39 321 ⇑P **P 03 39 23.1 -0.1**
BURAR Bucovina Array 76.39 321 ⇑*i*P **P 03 39 23.1 -0.1**
R12A Pony Springs, 76.42 52 ⇓P **P 03 39 23.6 0.0**
baz=76,SNR=16
EDW2 Edwards Air Fo 76.45 56 ⇓P **P 03 39 24.0 +0.1**
baz=76,SNR=8.2
BW06 Boulder Array 76.50 46 ⇑P **P 03 39 24.1 +0.1**
baz=76,SNR=13
BW06 Boulder Array 76.50 46 *e*P **P 03 39 24.0 0.0**
comp=Z,5.1nm,0.7s,mb4.6
PDAR Pinedale Array 76.50 46 P **P 03 39 24.2 +0.2**
comp=Z,7.4nm,0.8s,mb4.7,baz=293,slow=1.4,SNR=33
P14A Drum Mountains 76.55 50 ⇑P **P 03 39 24.3 0.0**
baz=76,SNR=16
U10A Ash Meadows, A 76.56 54 ⇓P **P 03 39 25.0 +0.6**
baz=76,SNR=9.1
T11A Corn Creek, Al 76.73 53 ⇓P **P 03 39 25.4 +0.1**
baz=76,SNR=30
L18A Fontenelle, Gr 76.79 46 ⇑P **P 03 39 25.7 +0.1**
baz=76,SNR=7.1
Q14A Sevier Lake (B 76.81 50 ⇑P **P 03 39 25.9 +0.1**
baz=76,SNR=34
VRI Vrincioaia 76.84 319 P **P 03 39 26.9 +1.1**
VRI Vrincioaia 76.84 319 ⇓P **P 03 39 27.1 +1.3**
VRI Vrincioaia 76.84 319 ⇓*i*P **P 03 39 27.1 +1.3**
KOLS Kolonicke sedl 76.86 324 *e*P **P 03 39 26.1 +0.2**
KOLS pmax pmax
comp=Z,17nm,1.1s,mb4.9
KOLS Kolonicke sedl 76.86 324 *e*P **P 03 39 26.1 +0.2**
comp=Z,17nm,1.1s,mb4.9
KOLS *e*PP PP 03 42 19.6 +1.5
KOLS Kolonicke sedl 76.86 324 *e*P **P 03 39 26.1 +0.2**
KOLS *e*PP PP 03 42 19.6 +1.5
K19A Absolon Red Bu 76.86 45 ⇑P **P 03 39 25.5 -0.5**
baz=76
NLU North Lily Min 76.90 49 *e*P **P 03 39 26.8 +0.5**
comp=Z,11nm,0.9s,mb4.8
R13A O'Grain Ranch, 76.90 51 ⇑P **P 03 39 26.2 -0.1**

baz=77,SNR=6.1
SHOC Shoshone 76.91 54 ⇑P P 03 39 25.7 -0.7
baz=77
GSC Goldstone 76.95 55 ⇑P P 03 39 26.3 -0.4
baz=77,SNR=8.7
GSC Goldstone 76.95 55 *e*P **P 03 39 26.7 0.0**
GSC pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
GSC Goldstone 76.95 55 *e*P **P 03 39 26.7 0.0**
comp=Z,9.4nm,1.0s,mb4.7
STHS Stebnicka Huta 76.98 324 *e*P **P 03 39 27.3 +0.7**
STHS pmax pmax
comp=Z,21nm,1.1s,mb5.0
STHS Stebnicka Huta 76.98 324 *e*P **P 03 39 27.3 +0.7**
comp=Z,21nm,1.1s,mb5.0
STHS Stebnicka Huta 76.98 324 *e*P **P 03 39 27.3 +0.7**
P15A Leamington 77.03 49 ⇓P P 03 39 27.0 0.0
baz=77
OJC Ojcow 77.04 326 *e*P **P 03 39 25.7 -1.2**
L19A Farson 77.05 46 ⇓P P 03 39 26.8 -0.3
baz=77
UZH Uzhgorod 77.06 323 *e*P **P 03 39 28.0 +1.0**
UZH *e* 03 39 36.2
DAU Daniels Canyon 77.08 48 *e*P **P 03 39 28.2 +0.9**
DAU pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
DAU Daniels Canyon 77.08 48 *e*P **P 03 39 28.2 +0.9**
comp=Z,8.6nm,0.9s,mb4.7
M18A Lyman 77.10 47 ⇑P P 03 39 25.8 -1.6
baz=77
MPU Maple Canyon 77.12 49 *e*P **P 03 39 28.1 +0.6**
comp=Z,12nm,0.9s,mb4.8
BR131 Keskin Array S 77.13 311 *e*P **P 03 39 27.6 0.0**
comp=Z,29nm,1.3s,mb5.0
BRTR Keskin Array B 77.13 311 P **P 03 39 27.3 -0.3**
comp=Z,34nm,1.2s,mb5.2,baz=66,slow=3.0,SNR=32
BRTR Keskin Array B 77.13 311 P **P 03 39 27.3 -0.3**
BRTR pmax pmax
comp=Z,34nm,1.2s
K20A Yellowstone Ra 77.25 45 ⇓P P 03 39 26.7 -1.5
baz=77
CRVS Cervenica-Dubn 77.25 324 *e*P **P 03 39 28.1 0.0**
CRVS pmax pmax
comp=Z,26nm,1.4s,mb5.0
CRVS Cervenica-Dubn 77.25 324 *e*P **P 03 39 28.1 0.0**
comp=Z,26nm,1.4s,mb5.0
CRVS *e*PP PP 03 42 23.1 +1.7
CRVS Cervenica-Dubn 77.25 324 *e*P **P 03 39 28.1 0.0**
CRVS *e*PP PP 03 42 23.1 +1.7
Q15A Fillmore 77.33 50 ⇓P P 03 39 29.1 +0.3
baz=77,SNR=10
S13A Holt Ranch, En 77.35 52 ⇑P P 03 39 29.3 +0.4
baz=77,SNR=16
NIE Niedzica 77.40 325 *e*P **P 03 39 29.9 +1.0**
TUQ Turquoise Moun 77.43 55 ⇑P P 03 39 29.4 0.0
baz=77,SNR=20
V11A Goodsprings 77.49 54 ⇓P P 03 39 29.7 0.0
baz=77,SNR=7.3
MLR Muntele Rosu 77.49 319 P **P 03 39 30.0 +0.5**
MLR Muntele Rosu 77.49 319 ⇑P P 03 39 30.2 +0.7
MLR Muntele Rosu 77.49 319 ⇑*i*P **P 03 39 30.2 +0.7**
O17A Robinson Place 77.52 48 ⇓P P 03 39 28.8 -1.0
baz=77,SNR=7.1
HEC Hector,Ludlow 77.55 55 ⇓P P 03 39 30.1 0.0
baz=77,SNR=10
N18A Larsen Ranch, 77.62 47 ⇑P P 03 39 30.0 -0.3
baz=77
S14A Cedar City 77.66 51 ⇑P P 03 39 30.6 0.0
baz=77
U12A Valley of Fire 77.67 53 ⇑P P 03 39 31.1 +0.4
baz=77,SNR=8.4
CCUT Cedar City 77.67 52 *e*P **P 03 39 31.3 +0.7**
comp=Z,8.5nm,0.9s,mb4.7
L20A Wamsutter 77.68 45 ⇓P P 03 39 30.8 +0.2
baz=77
T13A Saint George 77.68 52 ⇓P P 03 39 30.9 +0.2
baz=77,SNR=20
MURC Murrieta 77.76 57 ⇑P P 03 39 31.2 0.0
baz=78
MSU Marysvale 77.77 50 *e*P **P 03 39 32.3 +1.1**
MSU pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
MSU Marysvale 77.77 50 *e*P **P 03 39 32.3 +1.1**
comp=Z,7.3nm,0.8s,mb4.7
YURE YUREGIR 77.79 308 ⇑*i*P **P 03 39 29.9 -1.4**
O18A Roosevelt 77.89 48 ⇓P P 03 39 32.7 +0.8
baz=78,SNR=6.8
R15A Junction 77.91 50 ⇓P P 03 39 32.1 +0.1
baz=78,SNR=7.7
V12A Nelson 77.92 54 ⇓P P 03 39 32.4 +0.3
baz=78,SNR=7.9
N19A John Jarvie Ra 77.95 47 ⇓P P 03 39 32.5 +0.3
baz=78
BSEG Bad Segeberg 77.98 333 *e*P **P 03 39 31.8 -0.2**
comp=Z,38nm,1.3s,mb5.2
BSEG Bad Segeberg 77.98 333 *e*P **P 03 39 31.8 -0.2**
BSEG pmax pmax
comp=Z,38nm,1.3s,mb5.2
ULM Lac du Bonnet 77.98 33 P **P 03 39 31.1 -1.0**
comp=Z,5.4nm,0.7s,mb4.6,baz=311,slow=7.7,SNR=5.4
ULM Lac du Bonnet 77.98 33 *e*P **P 03 39 30.2 -1.9**
comp=Z,6.0nm,0.8s,mb4.6
VOIR 77.98 320 ⇓P P 03 39 33.0 +0.8
VOIR 77.98 320 ⇓P P 03 39 33.0 +0.8
VOIR 77.98 320 ⇓*i*P **P 03 39 33.0 +0.8**
P17A Butcher Ranch, 77.99 49 ⇓P P 03 39 33.0 +0.6
baz=78,SNR=7.1
KECS Kecovo 78.00 324 *e*P **P 03 39 32.8 +0.5**
KECS pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
KECS Kecovo 78.00 324 *e*P **P 03 39 32.8 +0.5**
comp=Z,2.9nm,1.1s,mb4.1
KECS *e*PP PP 03 42 29.6 +1.9
KECS Kecovo 78.00 324 *e*P **P 03 39 32.8 +0.5**
KECS *e*PP PP 03 42 29.6 +1.9
YAYL Yayladag 78.00 307 ⇑*i*P **P 03 39 31.0 -1.5**
GMRC Granite Mounta 78.01 55 ⇑P P 03 39 32.9 +0.3
baz=78,SNR=13
U13A Pakoon Wash 78.03 53 ⇓P P 03 39 33.0 +0.3
baz=78,SNR=32
OKC Ostrava-Krasne 78.05 326 *e*P **P 03 39 32.7 +0.2**
OKC MLR MLR
comp=Z,600nm,15.0s,MS5.0
OKC Ostrava-Krasne 78.05 326 *e*P **P 03 39 32.7 +0.2**
OKC AMS AMS 04 16 40.0
comp=Z,600nm,15.0s
KSP Ksiaz 78.08 328 *e*P **P 03 39 33.3 +0.7**
KSP Ksiaz 78.08 328 *e*P **P 03 39 32.3 -0.3**
Q16A Castle Valley 78.10 49 ⇓P P 03 39 32.7 -0.3
baz=78,SNR=5.5
M20A Sweetwater, Wa 78.11 46 ⇓P P 03 39 33.3 +0.3
baz=78
T14A Hurricane 78.16 52 ⇑P P 03 39 33.3 -0.1
baz=78,SNR=11
LDFC Landfair 78.17 54 *e*P **P 03 39 34.0 +0.5**
comp=Z,21nm,1.0s,mb5.0
P18A Preston Nutter 78.18 48 ⇑P P 03 39 33.2 -0.2
baz=78,SNR=11
DRGR 78.18 322 ⇑P P 03 39 33.2 -0.1
DRGR 78.18 322 ⇑P P 03 39 33.2 -0.1
DRGR 78.18 322 ⇑*i*P **P 03 39 33.2 -0.1**
S15A Panguitch 78.20 51 ⇓P P 03 39 33.5 -0.1
baz=78
PFO Pinyon Flat Ob 78.24 56 ⇓P P 03 39 34.1 +0.3
baz=78
PFO Pinyon Flat Ob 78.24 56 *e*P **P 03 39 33.0 -0.9**
PFO pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
PFO Pinyon Flat Ob 78.24 56 *e*P **P 03 39 33.0 -0.9**
comp=Z,8.0nm,1.0s,mb4.6
L21A Rawlins 78.25 45 ⇑P P 03 39 33.6 -0.2
baz=78,SNR=5.4
BELC Belle Mtn. Jos 78.29 56 ⇓P P 03 39 34.1 0.0
baz=78
R16A Teasdale 78.33 50 ⇓P P 03 39 34.3 0.0
baz=78,SNR=26
MORC Moravsky Berou 78.35 326 ⇑P P 03 39 34.3 +0.1
MORC Moravsky Berou 78.35 326 *e*P **P 03 39 34.3 +0.1**
comp=Z,33nm,1.2s,mb5.1
MORC Moravsky Berou 78.35 326 ⇑*i*P **P 03 39 34.3 +0.1**
SRU San Rafael 78.36 49 ⇑P P 03 39 34.7 +0.3
baz=78,SNR=19
SRU San Rafael 78.36 49 *e*P **P 03 39 34.8 +0.4**
SRU pmax pmax
comp=Z,15nm,0.9s,mb4.9
SRU San Rafael 78.36 49 *e*P **P 03 39 34.8 +0.4**
comp=Z,15nm,0.9s,mb4.9
O19A Miners Draw (B 78.38 47 ⇑P P 03 39 34.9 +0.4
baz=78,SNR=6.2
V13A Grand Canyon W 78.38 53 P **P 03 39 35.2 +0.6**
baz=78,SNR=16
DPC Dobruska-Polom 78.44 327 *e*P **P 03 39 35.2 +0.5**
DPC MLR MLR
comp=Z,500nm,14.2s,MS5.0
DPC Dobruska-Polom 78.44 327 *e*P **P 03 39 35.2 +0.5**
DPC AMS AMS 04 20 00.0
comp=Z,500nm,14.2s
UPC Upice 78.45 328 *e*P **P 03 39 35.0 +0.3**
UPC Upice 78.45 328 *e*P **P 03 39 35.0 +0.3**
M21A Separation Pea 78.49 45 ⇑P P 03 39 34.9 -0.2
baz=78,SNR=6.8
N20A Spence Gulch, 78.51 46 ⇑P P 03 39 34.8 -0.4
baz=78,SNR=13
U14A Mt Trumbull 78.52 52 ⇓P P 03 39 35.3 0.0
baz=78,SNR=18
RSSD Black Hills 78.55 42 *e*P **P 03 39 34.9 -0.5**
RSSD pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
RSSD Black Hills 78.55 42 *e*P **P 03 39 34.9 -0.5**
comp=Z,10nm,1.1s,mb4.7
T15A Red Dirt Ranch 78.61 51 ⇑P P 03 39 36.1 +0.2
baz=78,SNR=8.5
PSZ Piszkesteto 78.69 324 ⇓P P 03 39 36.9 +0.8
PSZ Piszkesteto 78.69 324 *e*P **P 03 39 36.5 +0.4**
comp=Z,28nm,1.2s,mb5.1
PSZ Piszkesteto 78.69 324 ⇑*e*P **P 03 39 36.3 +0.2**
PSZ Piszkesteto 78.69 324 ⇓*i*P **P 03 39 36.9 +0.8**
R17A Hanksville Air 78.70 49 ⇓P P 03 39 36.5 +0.2
baz=78,SNR=16
MONP Monument Peak 78.72 57 ⇓P P 03 39 36.5 -0.1
baz=78
IRM Iron Mountain 78.73 55 ⇑P P 03 39 36.7 +0.1
baz=78,SNR=10
VYHS Vyhne 78.74 325 *e*P **P 03 39 36.3 -0.1**
VYHS pmax pmax
comp=Z,11nm,1.3s,mb4.6
VYHS Vyhne 78.74 325 *e*P **P 03 39 36.3 -0.1**
comp=Z,11nm,1.3s,mb4.6
VYHS Vyhne 78.74 325 *e*P **P 03 39 36.3 -0.1**
BC3 Big Chuckawall 78.86 56 ⇑P P 03 39 37.1 -0.2
baz=79,SNR=9.5
W13A Hualapai Mount 78.93 54 ⇓P P 03 39 37.9 +0.2
baz=79
N21A Black Mountain 78.98 46 ⇓P P 03 39 37.7 -0.1
baz=79,SNR=12
O20A White River Ci 78.99 47 P **P 03 39 38.4 +0.4**
baz=79,SNR=9.9
BRG Berggiesshubel 79.01 329 *i*P **P 03 39 37.4 -0.4**
comp=Z,16nm,1.3s,mb4.8
BRG *e* 03 40 09.7
comp=Z,9.4nm,1.3s
BRG
comp=Z,1μm,22.0s
BRG
comp=N,903nm,24.8s
BRG
comp=E,476nm,24.8s
PVCC Panska Ves 79.03 328 *e*P **P 03 39 38.4 +0.5**
PVCC Panska Ves 79.03 328 *e*P **P 03 39 38.4 +0.5**
CLL Collm 79.05 330 *e*P **P 03 39 37.3 -0.7**
comp=Z,21nm,1.0s,mb5.0
CLL Collm 79.05 330 *e*P **P 03 39 37.0 -1.0**
CLL *i* 03 39 41.8
CLL pmax pmax
comp=Z,14nm,1.1s,mb4.8
CLL MLR MLR
comp=Z,600nm,18.7s,MS5.0
CLL Collm 79.05 330 *e*P **P 03 39 37.0 -1.0**
comp=Z,14nm,1.1s,mb4.8
CLL *i* pP 03 39 39.8 +0.4
CLL *i* 03 39 41.8
CLL Collm 79.05 330 *e*P **P 03 39 37.0 -1.0**
comp=Z,14nm,1.1s,mb4.8
CLL LmV 03 17 00.0
comp=Z,600nm,18.7s
CLL *i* pP pP 03 39 39.8 +0.4
comp=Z,27nm,1.1s
CLL *i* sP sP 03 39 41.8 +1.9
CLL *e*pPcP 03 39 49.0
CLL *e*(PP) 03 42 28.0
U15A North Rim 79.05 52 ⇓P P 03 39 38.5 +0.2
baz=79,SNR=33
V14A Boquillas Ranc 79.07 53 ⇑P P 03 39 38.7 +0.3
baz=79,SNR=20
SWSC Sam W. Stewart 79.09 56 ⇑P P 03 39 38.3 -0.3
baz=79
VRAC Vranov 79.11 327 ⇓P P 03 39 38.6 +0.2
VRAC Vranov 79.11 327 ⇓P P 03 39 38.6 +0.2
VRAC Vranov 79.11 327 ⇓*i*P **P 03 39 38.6 +0.2**
GZR Gura Zlata 79.15 321 P **P 03 39 39.1 +0.4**
GZR Gura Zlata 79.15 321 ⇓P P 03 39 38.9 +0.2
GZR Gura Zlata 79.15 321 ⇓*i*P **P 03 39 38.8 +0.1**
S17A Black Ridge (B 79.16 50 ⇓P P 03 39 38.4 -0.5
baz=79,SNR=21
T16A Glen Canyon Da 79.17 51 ⇑P P 03 39 39.2 +0.2
baz=79
Q19A Hogan Spring (79.19 48 ⇓P P 03 39 38.9 -0.1
baz=79,SNR=13
R18A Canyonlands Na 79.20 49 ⇑P P 03 39 39.2 +0.1
baz=79,SNR=12
NRDL Niedersach Rie 79.21 332 *e*P **P 03 39 38.3 -0.5**
comp=Z,14nm,1.1s,mb4.8
PDMCI Parker Dam,Lak 79.28 54 ⇓P P 03 39 39.5 -0.1
baz=79
X13A Yucca 79.29 54 ⇓P P 03 39 39.7 +0.1
baz=79,SNR=18
SMOL Smolenice 79.35 326 *e*P **P 03 39 40.9 +1.2**
SMOL Smolenice 79.35 326 *e*P **P 03 39 40.9 +1.2**
SMOL Smolenice 79.35 326 *e*P **P 03 39 40.9 +1.2**
W14A Seligman 79.36 53 ⇑P P 03 39 40.5 +0.5
baz=79,SNR=12
Y12C Blythe 79.39 55 ⇑P P 03 39 40.0 -0.2
baz=79,SNR=6.4
PRU Pruhonice 79.45 328 *e*P **P 03 39 40.9 +0.7**
PRU MLR MLR
comp=Z,600nm,15.1s,MS5.0
PRU Pruhonice 79.45 328 *e*P **P 03 39 40.9 +0.7**
PRU AMS AMS 04 17 30.0
comp=Z,600nm,15.1s
V15A Kaibab Nationa 79.52 52 ⇑P P 03 39 41.8 +0.9
baz=79,SNR=18
N22A Wattenberg Ran 79.54 45 ⇑P P 03 39 41.1 +0.2
baz=79
BZS Buzias 79.55 321 ⇑P P 03 39 40.3 -0.6
BZS Buzias 79.55 321 ⇑P P 03 39 40.3 -0.6
BZS Buzias 79.55 321 ⇑*i*P **P 03 39 40.3 -0.6**
T17A Navajo Res., N 79.58 51 P **P 03 39 41.4 +0.2**
baz=79,SNR=9.5
TREC Trest 79.59 327 *e*P **P 03 39 41.3 +0.3**
TREC MLR MLR
comp=Z,500nm,16.1s,MS5.0
TREC Trest 79.59 327 *e*P **P 03 39 41.3 +0.3**
TREC AMS AMS 04 17 00.0
comp=Z,500nm,16.1s
S18A Hurst Farm, Bl 79.61 50 P **P 03 39 41.4 0.0**
baz=79,SNR=20
CLZ Clausthal 79.63 331 *e*P **P 03 39 41.1 -0.1**
comp=Z,42nm,1.3s,mb5.2
CLZ Clausthal 79.63 331 *e*P **P 03 39 41.1 -0.1**
CLZ pmax pmax
comp=Z,42nm,1.3s,mb5.2
R19A Curley Farm, L 79.64 49 ⇑P P 03 39 42.0 +0.5
baz=79,SNR=6.7
GLA Glamis 79.64 56 ⇑P P 03 39 41.8 +0.2
baz=79
ZST Bratislava 79.73 326 *e*P **P 03 39 42.8 +1.0**
ZST pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
ZST Bratislava 79.73 326 *e*P **P 03 39 42.8 +1.0**
comp=Z,5.3nm,0.8s,mb4.5
ZST Bratislava 79.73 326 *e*P **P 03 39 42.8 +1.0**
Q20A Ridgley Place, 79.75 48 ⇑P P 03 39 42.8 +0.7
baz=80
PV04 Paradox Valley 79.78 49 *e*P **P 03 39 42.7 +0.5**
W15A Williams 79.88 53 ⇑P P 03 39 43.1 +0.2
baz=80
U17A Shonto 79.93 51 ⇑P P 03 39 43.8 +0.7
baz=80,SNR=7.8
X14A Yava 79.96 54 ⇓P P 03 39 43.4 +0.1
baz=80,SNR=8.3
TANN Tannenbergstha 79.96 329 *e*P **P 03 39 42.8 -0.2**
comp=Z,15nm,1.5s,mb4.7
T18A Mexican Hat 80.05 50 ⇑P P 03 39 43.4 -0.4
baz=80,SNR=18
S19A Harvey Farm, M 80.08 49 ⇓P P 03 39 43.8 -0.1
baz=80
NKC Novy Kostel 80.11 329 *e*P **P 03 39 44.1 +0.3**
NKC Novy Kostel 80.11 329 *e*P **P 03 39 44.1 +0.3**
MOX Moxa 80.11 330 *e*P **P 03 39 43.4 -0.4**
comp=Z,25nm,1.5s,mb4.9
MOX Moxa 80.11 330 *e*P **P 03 39 43.4 -0.4**
MOX pmax pmax
comp=Z,25nm,1.5s,mb4.9
PV01 Paradox Valley 80.15 49 *e*P **P 03 39 44.6 +0.4**
comp=Z,837nm,1.2s,mb6.5
IBBN Ibbenburen 80.21 333 *e*P **P 03 39 43.6 -0.7**
comp=Z,47nm,1.4s,mb5.2
WUAZ Wupatki 80.21 52 P **P 03 39 45.7 +1.0**
baz=80,SNR=14
WUAZ Wupatki 80.21 52 *e*P **P 03 39 45.6 +1.0**
comp=Z,17nm,1.1s,mb4.9
R20A Redvale 80.22 48 ⇓P P 03 39 44.8 +0.1
baz=80,SNR=6.0
Y14A Wickenburg 80.23 54 ⇓P P 03 39 44.9 +0.1
baz=80,SNR=11
Z13A Yuma Proving G 80.30 55 ⇑P P 03 39 45.4 +0.2
baz=80,SNR=22
X15A Humboldt 80.36 53 ⇑P P 03 39 45.9 +0.5
baz=80,SNR=15
SMCO Snowmass 80.36 47 *e*P **P 03 39 45.5 +0.2**
comp=Z,8.8nm,1.0s,mb4.6
SOP Sopron 80.36 326 ⇑*e*P **P 03 39 45.5 +0.3**
MMAI Mount Meron Ar 80.39 305 P **P 03 39 46.0 +0.4**
comp=Z,30nm,1.1s,mb5.2,baz=58,slow=7.0,SNR=21
W16A Flagstaff 80.39 52 ⇓P P 03 39 46.3 +0.7
baz=80
KHAL Karahalli 80.44 312 ⇑*i*P **P 03 39 45.3 -0.5**
CONA Conrad Observa 80.48 326 *i*P **P 03 39 46.6 +0.7**
comp=Z,25nm,1.4s,mb4.9,SNR=12
V17A Tonalea, Kykot 80.50 52 ⇓P P 03 39 46.3 +0.2
baz=80,SNR=30
113A Mohawk Valley, 80.51 55 ⇑P P 03 39 46.2 0.0
baz=80,SNR=11
KHC Kasperske Hory 80.52 328 *e*P **P 03 39 45.5 -0.5**
KHC pmax pmax
comp=Z,18nm,1.0s,mb5.0
KHC Kasperske Hory 80.52 328 *e*P **P 03 39 45.5 -0.5**
comp=Z,18nm,1.0s,mb5.0
KHC Kasperske Hory 80.52 328 *e*P **P 03 39 45.7 -0.3**
KHC AMS AMS 04 18 00.0
comp=Z,600nm,15.8s
PKSM Moragy 80.52 323 ⇓P P 03 39 45.7 -0.4
PKSM Moragy 80.52 323 ⇓P P 03 39 45.7 -0.4
PKSM Moragy 80.52 323 ⇓*i*P **P 03 39 45.7 -0.4**
U18A Rough Rock, Ch 80.53 51 ⇓P P 03 39 46.3 0.0
baz=80,SNR=15
ROTZ Rotzenmuhle 80.57 329 *e*P **P 03 39 46.5 +0.2**
comp=Z,32nm,1.5s,mb5.0
R21A Cimarron 80.58 48 ⇓P P 03 39 47.3 +0.8
baz=80,SNR=5.8
UBBA Unterbreizbach 80.59 331 *e*P **P 03 39 45.8 -0.6**
comp=Z,15nm,1.3s,mb4.8
Q22A Crested Butte, 80.61 47 ⇓P P 03 39 47.3 +0.6
baz=80
Y15A Casa Rosa Ranc 80.64 54 ⇑P P 03 39 47.2 +0.2
baz=80,SNR=22
GEC2 GERESS Array S 80.69 328 *e*P **P 03 39 46.5 -0.4**
comp=Z,18nm,1.6s,mb4.8
GEC2 GERESS Array S 80.69 328 *e*P **P 03 39 46.5 -0.4**
GEC2 pmax pmax
comp=Z,18nm,1.6s,mb4.8
GERES GERESS Array B 80.69 328 P **P 03 39 46.9 0.0**
comp=Z,4.4nm,0.9s,mb4.4,baz=36,slow=5.3,SNR=26
GERES GERESS Array B 80.69 328 P **P 03 39 46.9 0.0**
GERES pmax pmax
comp=Z,4.0nm,0.9s
ISCO Idaho Springs 80.70 46 *e*P **P 03 39 47.5 +0.3**
ISCO pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
ISCO Idaho Springs 80.70 46 *e*P **P 03 39 47.5 +0.3**
comp=Z,5.4nm,0.8s,mb4.5
RDO Rodhopi 80.73 316 P **P 03 39 44.9 -2.4**
T19A Beclabito 80.76 50 ⇓P P 03 39 47.4 -0.2
baz=80,SNR=10
WET Wettzell 80.79 328 *e*P **P 03 39 47.5 0.0**
comp=Z,19nm,1.3s,mb4.9
WET Wettzell 80.79 328 *e*P **P 03 39 47.5 0.0**
WET pmax pmax
comp=Z,19nm,1.3s,mb4.9
MVCO Mesa Verde 80.81 49 ⇓P P 03 39 48.1 +0.3
baz=80,SNR=7.0
MVCO Mesa Verde 80.81 49 *e*P **P 03 39 48.3 +0.4**
comp=Z,9.3nm,0.9s,mb4.7
X16A Lo Mia Camp, P 80.89 53 ⇑P P 03 39 48.7 +0.4
baz=81,SNR=17
W17A Winslow 80.91 52 ⇓P P 03 39 48.9 +0.5
baz=81
S21A Coal Bank Pass 80.92 48 ⇓P P 03 39 48.4 0.0
baz=81,SNR=5.8
VTS Vitosha 80.94 319 P **P 03 39 48.3 -0.1**
V18A Ganado 80.96 51 ⇓P P 03 39 48.7 0.0
baz=81,SNR=9.7
U19A Dine' College, 81.01 50 ⇓P P 03 39 49.1 +0.2
baz=81,SNR=22
GRA1 Grafenberg Arr 81.02 330 *e*P **P 03 39 48.8 +0.1**
comp=Z,71nm,1.5s,mb5.4
GRF Grafenberg Arr 81.02 330 *e*P **P 03 39 48.8 +0.1**
comp=Z,71nm,1.5s,mb5.4
GRF Grafenberg Arr 81.02 330 *e*P **P 03 39 48.8 +0.1**
GRF pmax pmax
comp=Z,71nm,1.5s,mb5.4
GRF Grafenberg Arr 81.02 330 *e*P **P 03 39 48.8 +0.1**
GRF pmax pmax
comp=Z,71nm,1.5s,mb5.4
114A Black Gap (USA 81.08 55 ⇑P P 03 39 49.8 +0.4
baz=81,SNR=8.3
BUG Bochum--Univer 81.09 333 *e*P **P 03 39 48.6 -0.4**
comp=Z,24nm,1.2s,mb5.0
R22A Saguache, Gunn 81.13 47 ⇓P P 03 39 49.5 0.0
baz=81
ARSA Arzberg 81.14 326 ⇑*i*P **P 03 39 49.5 +0.1**
comp=Z,13nm,1.1s,mb4.8
DNZL Cakiroluk 81.16 312 ⇑*i*P **P 03 39 53.3 +3.6**
GOLH Golhisar 81.17 311 ⇑*i*P **P 03 39 48.8 -1.0**
MOA Molln 81.22 327 ⇑*i*P **P 03 39 50.9 +1.1**
comp=Z,22nm,1.5s,mb4.9
Y16A Circle Bar Ran 81.23 53 ⇑P P 03 39 50.8 +0.7
baz=81,SNR=8.3
X17A Forest Lakes 81.34 53 ⇑P P 03 39 51.2 +0.5
baz=81,SNR=6.7
115A Sonoran Desert 81.53 55 ⇑P P 03 39 51.8 +0.1
baz=81
Z16A Peralta Trail, 81.61 54 ⇓P P 03 39 52.1 -0.1
baz=81
214A Organ Pipe Nat 81.65 56 ⇑P P 03 39 52.4 0.0
baz=81,SNR=6.6
TNS Taunus Mts 81.66 331 *e*P **P 03 39 51.6 -0.5**
comp=Z,31nm,1.1s,mb5.2
TNS Taunus Mts 81.66 331 *e*P **P 03 39 51.6 -0.5**
TNS pmax pmax
comp=Z,31nm,1.1s,mb5.2
X18A Snowflake 81.74 52 ⇓P P 03 39 52.8 -0.1
baz=82
Y17A Roosevelt 81.74 53 ⇑P P 03 39 52.8 0.0
baz=82,SNR=6.2
V20A Brimhall 81.78 50 ⇑P P 03 39 53.1 0.0
baz=82
PERS Pernice 81.79 326 *i*P **P 03 39 52.5 -0.4**
SOKA Soboth 81.80 326 ⇑*i*P **P 03 39 52.4 -0.5**
comp=Z,34nm,1.0s,mb5.2
AKAS Kas 81.82 310 *i*P **P 03 39 49.0 -4.2**
U21A Nageezi 81.84 49 ⇓P P 03 39 53.1 -0.2
baz=82,SNR=9.1
AYDN Tasoluk 81.85 312 ⇑*i*P **P 03 39 53.5 +0.1**
T22A Edith 81.88 48 ⇓P P 03 39 53.9 +0.4
baz=82,SNR=9.1
RJOB Jochberg 81.93 328 *e*P **P 03 39 53.6 0.0**
comp=Z,28nm,1.4s,mb5.0
116A Eloy 81.95 54 ⇑P P 03 39 53.8 -0.2
baz=82
TURN Turunc 81.98 311 ⇑*i*P **P 03 39 55.4 +1.4**
TOD Tromm 82.03 331 *e*P **P 03 39 54.2 +0.2**
TOD Tromm 82.03 331 *e*P **P 03 39 54.2 +0.2**
VAY Valandovo 82.18 318 *e*P **P 03 39 52.0 -3.0**
SDCO Great Sand Dun 82.18 47 *e*P **P 03 39 55.5 +0.4**
comp=Z,6.1nm,1.2s,mb4.4
BEBN Eben Emael 82.19 333 P **P 03 39 54.5 -0.4**
Y18A Canyon Day Jun 82.19 53 ⇓P P 03 39 55.5 +0.3
baz=82,SNR=5.2

X19A St. Johns 82.21 52 ⇓P P 03 39 55.4 +0.1
baz=82,SNR=19
FUR Furstenfeldbru 82.22 329 eP P 03 39 54.9 -0.1
comp=Z,30nm,1.1s,mb5.1
FUR Furstenfeldbru 82.22 329 eP P 03 39 54.9 -0.1
FUR pmax pmax
comp=Z,30nm,1.1s,mb5.1
KBA Koelnbreinsper 82.22 327⇑iP P 03 39 56.1 +1.0
comp=Z,20nm,0.9s,mb5.0
W20A Ramah 82.22 51 ⇓P P 03 39 55.3 0.0
baz=82,SNR=6.9
MEM Membach 82.23 333 P P 03 39 54.5 -0.5
comp=Z,12nm,1.5s,mb4.6
Z17A San Carlos Hig 82.24 53 ⇑P P 03 39 55.4 0.0
baz=82
ABH Alteburg 82.27 332 eP P 03 39 55.1 -0.2
SKO Skopje 82.29 319 eP P 03 39 52.5 -3.0
U22A Llaves 82.34 49 ⇓P P 03 39 56.2 +0.2
baz=82,SNR=5.4
216A Three Points, 82.48 55 ⇓P P 03 39 56.6 -0.1
baz=82
ECSD EROS Data Cent 82.53 38 eP P 03 39 55.7 -1.1
comp=Z,9.7nm,0.9s,mb4.8
Y19A Nutrioso 82.55 52 ⇑P P 03 39 57.3 +0.2
baz=82
STU Stuttgart 82.55 330 eP P 03 39 56.3 -0.5
comp=Z,29nm,1.2s,mb5.2
STU Stuttgart 82.55 330 eP P 03 39 56.6 -0.2
STU pmax pmax
comp=Z,15nm,0.8s,mb5.1
STU Stuttgart 82.55 330 eP P 03 39 56.6 -0.2
comp=Z,15nm,0.8s,mb5.1
117A Oracle 82.56 54 ⇓P P 03 39 57.3 +0.2
baz=82,SNR=5.8
VISS Visnje 82.56 325 iP P 03 39 56.3 -0.6
BOJS Bojanci 82.61 325 iP P 03 39 56.9 -0.2
X20A Quemado 82.62 51 ⇑P P 03 39 57.9 +0.5
baz=82,SNR=12
V22A San Miguel Ran 82.63 49 ⇑P P 03 39 57.5 +0.1
baz=82,SNR=6.2
BCLA Clavier 82.63 333 P P 03 39 55.7 -1.5
comp=Z,18nm,1.9s,mb4.8
TUC Tucson 82.70 54 eP P 03 39 58.1 +0.2
TUC pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
TUC Tucson 82.70 54 eP P 03 39 58.1 +0.2
comp=Z,5.0nm,1.0s,mb4.5
U23A El Rito 82.76 49 ⇓P P 03 39 58.3 +0.2
baz=82,SNR=17
KRUS Krusevo 82.83 319 eP P 03 39 55.5 -2.9
JAVS Javornik 82.83 326 iP P 03 40 02.0 +3.7
LANF Langenberg 82.92 331 eP P 03 39 59.0 +0.3
LANF Langenberg 82.92 331 eP P 03 39 59.0 +0.3
WLF Walferdange 82.96 332 eP P 03 40 00.0 +1.1
comp=Z,35nm,1.7s,mb5.1
WLF Walferdange 82.96 332 eP P 03 39 59.2 +0.3
WLF pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
WLF Walferdange 82.96 332 eP P 03 39 59.2 +0.3
comp=Z,7.5nm,1.0s,mb4.7
RETA Reutte 82.97 328⇑iP P 03 39 59.0 0.0
comp=Z,35nm,1.0s,mb5.3,SNR=15
118A Homack Ranch, 82.99 53 ⇑P P 03 39 59.4 0.0
baz=83,SNR=9.9
217A Green Valley 83.04 55 ⇑P P 03 39 59.9 +0.2
baz=83,SNR=11
GIVF Givet 83.07 333 eP P 03 39 58.8 -0.6
GIVF Givet 83.07 333 eP P 03 39 58.8 -0.6
X21A Alamocita Cree 83.11 51 ⇓P P 03 40 00.4 +0.5
baz=83,SNR=12
Y20A Horse Springs, 83.12 52 ⇓P P 03 40 00.4 +0.4
baz=83,SNR=11
DOU Dourbes 83.15 333 P P 03 40 01.2 +1.3
comp=Z,7.8nm,2.1s,mb4.4
V23A Ortiz Mt. (NFS 83.17 49 ⇑P P 03 40 00.9 +0.6
baz=83,SNR=7.8
T25A Trinidad 83.23 47 ⇓P P 03 40 00.5 0.0
baz=83
OHR Ohrid 83.25 319 eP P 03 39 57.2 -3.3
BFO Black Forest 83.25 330 P P 03 39 59.4 -1.0
comp=Z,151nm,1.0s,mb6.0,SNR=9.1
BFO Black Forest 83.25 330 eP P 03 39 59.8 -0.6
comp=Z,34nm,1.1s,mb5.3
BFO Black Forest 83.25 330 eP P 03 39 59.8 -0.6
BFO pmax pmax
comp=Z,34nm,1.1s,mb5.3
SPAK Spaichingen-Ko 83.26 330 eP P 03 40 00.7 +0.2
XOR Xorichti 83.26 316 P P 03 39 55.9 -4.7
BAIF Baives 83.32 334 eP P 03 40 00.1 -0.6
comp=Z,46nm,1.5s,mb5.0
BAIF Baives 83.32 334 eP P 03 40 00.1 -0.6
BAIF pmax pmax
comp=Z,23nm,1.5s,mb5.0
BAIF Baives 83.32 334 eP P 03 40 00.1 -0.6
comp=Z,23nm,1.5s,mb5.0
119A Ashpeak Ranch, 83.32 53 ⇓P P 03 40 02.0 +0.9
baz=83,SNR=6.9
FETA Feichten 83.35 328 iP P 03 40 01.1 +0.2
comp=Z,21nm,1.0s,mb5.1,SNR=12
218A Dragoon 83.39 54 ⇑P P 03 40 02.3 +0.9
baz=83
SCHQ Schefferville 83.43 16 P P 03 40 00.9 -0.3
comp=Z,10nm,0.8s,mb4.9,baz=337,slow=5.5,SNR=9.2
Y21A Point of Rocks 83.48 51 ⇓P P 03 40 02.7 +0.8
baz=83,SNR=9.0
DAVA Damuels 83.48 329⇑iP P 03 40 01.6 -0.1
comp=Z,35nm,1.1s,mb5.3,SNR=11
Z20A Nine Sixteen R 83.53 52 ⇓P P 03 40 02.8 +0.6
baz=83,SNR=21
LAZ Ladron 83.53 50 eP P 03 40 02.7 +0.6
comp=Z,4.5nm,1.2s,mb4.5
ANMO Albuquerque 83.56 50 eP P 03 40 03.2 +0.9
ANMO pmax pmax
comp=Z,2.0nm,1.0s
ANMO Albuquerque 83.56 50 eP P 03 40 03.2 +0.9
comp=Z,2.1nm,1.0s,mb4.2
CDF Champ du Feu 83.58 331 eP P 03 40 01.8 -0.3
comp=Z,16nm,0.9s,mb4.9
CDF Champ du Feu 83.58 331 eP P 03 40 01.8 -0.3
CDF pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
CDF Champ du Feu 83.58 331 eP P 03 40 01.8 -0.3
comp=Z,8.1nm,0.9s,mb4.8
W23A Werner Place, 83.60 49 ⇓P P 03 40 03.2 +0.8
baz=83,SNR=6.5
FELD Feldberg im Sc 83.75 330 eP P 03 40 01.4 -1.6
U25A Circle Dot Ran 83.75 47 ⇑P P 03 40 02.1 -1.1
baz=83
318A Bisbee 83.79 54 ⇓P P 03 40 03.1 -0.4
baz=84,SNR=18
ECH Echery 83.79 331 eP P 03 40 02.7 -0.5
ECH Echery 83.79 331 eP P 03 40 02.3 -0.9
ECH pmax pmax
comp=Z,14nm,1.1s,mb5.0
ECH Echery 83.79 331 eP P 03 40 02.3 -0.9
comp=Z,14nm,1.1s,mb5.0
219A White Tail Can 83.87 53 ⇓P P 03 40 03.9 0.0
baz=84,SNR=20
LKR Lokris 83.88 316 P P 03 40 01.9 -1.9
120A U Bar Ranch, L 83.89 53 ⇓P P 03 40 04.2 +0.2
baz=84,SNR=6.7
Y22A Socorro 83.95 51 ⇓P P 03 40 04.3 0.0
baz=84,SNR=7.9
Z21A St. Cloud Mine 83.96 52 ⇓P P 03 40 04.4 +0.1
baz=84,SNR=17
W24A Lazy 6 Ranch, 84.00 49 ⇑P P 03 40 04.3 -0.2
baz=84,SNR=18
BNM Barren Site 84.01 50 eP P 03 40 05.2 +0.6
comp=Z,6.9nm,1.1s,mb4.7
V25A Rancho No Teng 84.02 48 ⇓P P 03 40 04.8 +0.2
baz=84,SNR=12
MOF Molkenrain 84.10 331 eP P 03 40 04.6 -0.2
MOF Molkenrain 84.10 331 eP P 03 40 04.6 -0.2
THEF They Montfort 84.22 332 eP P 03 40 03.3 -2.1
THEF They Montfort 84.22 332 eP P 03 40 03.3 -2.1
HINF Hinteralfeld 84.23 331 eP P 03 40 04.7 -0.8
comp=Z,11nm,0.9s,mb4.7
HINF Hinteralfeld 84.23 331 eP P 03 40 04.7 -0.8
HINF pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
HINF Hinteralfeld 84.23 331 eP P 03 40 04.7 -0.8
comp=Z,5.5nm,0.9s,mb4.7
HAU Haudompre 84.27 331 eP P 03 40 05.0 -0.6
comp=Z,17nm,0.9s,mb4.9
HAU Haudompre 84.27 331 eP P 03 40 05.0 -0.6
HAU pmax pmax
comp=Z,9.0nm,0.9s,mb4.9
HAU Haudompre 84.27 331 eP P 03 40 05.0 -0.6
comp=Z,8.6nm,0.9s,mb4.9
BBS Basel-Blauen 84.28 330 eP P 03 40 05.7 0.0
BBS Basel-Blauen 84.28 330 eP P 03 40 05.7 0.0
319A Douglas 84.28 54 ⇓P P 03 40 06.3 +0.3
baz=84,SNR=6.9
MEZF Maizieres J'vi 84.33 332 eP P 03 40 05.8 -0.2
comp=Z,72nm,1.4s,mb5.3
MEZF Maizieres J'vi 84.33 332 eP P 03 40 05.8 -0.2
comp=Z,72nm,1.4s,mb5.6
220A Playas Peak, P 84.39 53 ⇓P P 03 40 06.7 +0.2
baz=84,SNR=9.6
121A Cookes Peak, D 84.42 52 ⇓P P 03 40 06.7 0.0
baz=84,SNR=8.4
Z22A Elephant Butte 84.42 51 ⇑P P 03 40 06.6 -0.2
baz=84,SNR=10
Y23A Lovelace Mesa, 84.50 50 ⇑P P 03 40 07.1 0.0
baz=84,SNR=16
V26A Tequesquite Ra 84.53 48 ⇑P P 03 40 06.6 -0.6
baz=84
W25A X Bar L Ranch, 84.55 48 ⇓P P 03 40 06.7 -0.6
baz=84,SNR=15
ZKR Zakros 84.59 312 P P 03 40 06.5 -1.0
LOMF Lomont 84.63 331 eP P 03 40 05.7 -1.8
LOMF Lomont 84.63 331 eP P 03 40 05.7 -1.8
IGT Igoumenitsa 84.65 318 P P 03 40 06.4 -1.4
320A Kipp Ranch, An 84.77 54 ⇑P P 03 40 07.6 -0.9
baz=84
Z23A Rita Site, Whi 84.86 51 ⇑P P 03 40 08.4 -0.6
baz=85
Y24A Capitan 84.88 50 P P 03 40 09.5 +0.5
baz=85,SNR=7.3
LAST Lasithi 84.98 312 P P 03 40 09.4 -0.1
LKD2 Lefkada island 85.03 317 P P 03 40 11.3 +1.6
W26A Owens Ranch, T 85.04 48 ⇑P P 03 40 10.0 +0.2
baz=85
222A Williams Famil 85.13 52 ⇑P P 03 40 09.3 -1.0
baz=85,SNR=5.7
Y25A Mesa, Roswell 85.32 49 ⇑P P 03 40 11.0 -0.2
baz=85,SNR=7.0
Z24A Sheeppen Canyo 85.34 50 ⇓P P 03 40 11.0 -0.3
baz=85
X26A CR and CF Fran 85.39 48 ⇓P P 03 40 11.4 -0.2
baz=85,SNR=14
W27A Bowe Ranch, En 85.46 48 ⇓P P 03 40 11.9 0.0
baz=85,SNR=11
SIVA Sivas 85.47 312 P P 03 40 09.9 -2.1
CABF La Chapelle 85.53 331 eP P 03 40 11.6 -0.4
comp=Z,35nm,1.2s,mb5.2
CABF La Chapelle 85.53 331 eP P 03 40 11.6 -0.4
CABF pmax pmax
comp=Z,17nm,1.2s,mb5.2
CABF La Chapelle 85.53 331 eP P 03 40 11.6 -0.4
comp=Z,17nm,1.2s,mb5.2
SCIA State Center 85.54 37 eP P 03 40 11.8 -0.3
comp=Z,13nm,0.8s,mb5.2
124A Stringfield Ra 85.72 51 ⇓P P 03 40 13.2 0.0
baz=85,SNR=8.4
X27A F and S Farms, 85.74 48 ⇑P P 03 40 12.7 -0.6
baz=85,SNR=7.2
Z25A Roswell 85.76 50 ⇑P P 03 40 13.5 +0.1
baz=86,SNR=10
LOR Lormes 85.80 332 eP P 03 40 12.8 -0.6
comp=Z,41nm,1.0s,mb5.3
LOR Lormes 85.80 332 eP P 03 40 12.8 -0.6
LOR pmax pmax
comp=Z,20nm,1.0s,mb5.3
LOR Lormes 85.80 332 eP P 03 40 12.8 -0.6
comp=Z,20nm,1.0s,mb5.3
Y26A Elida 85.83 49 ⇓P P 03 40 13.2 -0.6
baz=86
PYL PYLOS 85.84 315 P P 03 40 13.4 -0.3
AQU L'Aquila 85.90 324 eP P 03 40 12.7 -1.2
AQU pmax pmax
comp=Z,13nm,0.9s,mb5.2
AQU L'Aquila 85.90 324 eP P 03 40 12.7 -1.2
comp=Z,13nm,0.9s,mb5.2
FLN La Foliniere 86.00 336 eP P 03 40 13.7 -0.6
comp=Z,48nm,1.3s,mb5.3
FLN La Foliniere 86.00 336 eP P 03 40 13.7 -0.6
FLN pmax pmax
comp=Z,24nm,1.3s,mb5.3
FLN La Foliniere 86.00 336 eP P 03 40 13.7 -0.6
comp=Z,24nm,1.3s,mb5.3
LDF La Druitiere 86.03 335 eP P 03 40 13.9 -0.6
comp=Z,21nm,0.9s,mb5.1
LDF La Druitiere 86.03 335 eP P 03 40 13.9 -0.6
LDF pmax pmax
comp=Z,11nm,0.9s,mb5.1
LDF La Druitiere 86.03 335 eP P 03 40 13.9 -0.6
comp=Z,10nm,0.9s,mb5.1
SSF Saint Saulge 86.11 332 eP P 03 40 14.4 -0.5
comp=Z,33nm,0.9s,mb5.3
SSF Saint Saulge 86.11 332 eP P 03 40 14.4 -0.5
SSF pmax pmax
comp=Z,16nm,0.9s,mb5.2
SSF Saint Saulge 86.11 332 eP P 03 40 14.4 -0.5
comp=Z,16nm,0.9s,mb5.3
224A Cornudas Mount 86.12 51 ⇑P P 03 40 14.3 -0.9
baz=86,SNR=9.2
LPL La Plagne 86.19 330 eP P 03 40 15.1 -0.2
comp=Z,29nm,0.9s,mb5.2
LPL La Plagne 86.19 330 eP P 03 40 15.1 -0.2
LPL pmax pmax
comp=Z,14nm,0.9s,mb5.2
LPL La Plagne 86.19 330 eP P 03 40 15.1 -0.2
comp=Z,14nm,0.9s,mb5.2
LPG La Plagne 86.19 330 eP P 03 40 15.3 0.0
comp=Z,27nm,0.9s,mb5.2
LPG La Plagne 86.19 330 eP P 03 40 15.3 0.0
LPG pmax pmax
comp=Z,13nm,0.9s,mb5.2
LPG La Plagne 86.19 330 eP P 03 40 15.3 0.0
comp=Z,13nm,0.9s,mb5.2
Z26A Caprock 86.20 49 ⇑P P 03 40 14.5 -1.1
baz=86,SNR=8.9
125A Gardner Draw, 86.23 50 ⇑P P 03 40 14.9 -0.9
baz=86,SNR=9.4
HYF Humbligny 86.24 333 eP P 03 40 15.5 0.0
HYF Humbligny 86.24 333 eP P 03 40 15.5 0.0
Y27A Causey 86.25 49 ⇓P P 03 40 14.8 -1.0
baz=86,SNR=7.4
SMF Signal de Mont 86.34 332 eP P 03 40 15.6 -0.4
comp=Z,37nm,1.1s,mb5.2
SMF Signal de Mont 86.34 332 eP P 03 40 15.6 -0.4
SMF pmax pmax
comp=Z,19nm,1.1s,mb5.2
SMF Signal de Mont 86.34 332 eP P 03 40 15.6 -0.4
comp=Z,19nm,1.1s,mb5.2
AMTX Amarillo 86.38 47 eP P 03 40 16.5 +0.1
comp=Z,5.7nm,0.7s,mb4.9
AVF Avril sur Loir 86.39 332 eP P 03 40 16.0 -0.3
comp=Z,52nm,0.8s,mb5.5
AVF Avril sur Loir 86.39 332 eP P 03 40 16.0 -0.3
AVF pmax pmax
comp=Z,26nm,0.8s,mb5.5
AVF Avril sur Loir 86.39 332 eP P 03 40 16.0 -0.3
comp=Z,26nm,0.8s,mb5.5
MSTX Muleshoe 86.41 48 ⇓P P 03 40 15.2 -1.5
baz=86
CPRX Cap Rock 86.44 50 eP P 03 40 18.0 +1.2
comp=Z,3.9nm,0.8s,mb4.7
GRR Gorron 86.45 336 eP P 03 40 16.2 -0.3
comp=Z,42nm,0.9s,mb5.4
GRR Gorron 86.45 336 eP P 03 40 16.2 -0.3
GRR pmax pmax
comp=Z,21nm,0.9s,mb5.4
GRR Gorron 86.45 336 eP P 03 40 16.2 -0.3
comp=Z,21nm,0.9s,mb5.4
MNTX Cornudas Mount 86.47 51 eP P 03 40 16.1 -0.9
comp=Z,2.0nm,0.9s,mb4.3
324A Moseley Ranch, 86.58 52 ⇓P P 03 40 16.3 -1.2
baz=86
BNI Bardonecchia 86.59 329 eP P 03 40 17.7 +0.4
BNI pmax pmax
comp=Z,7.0nm,0.8s,mb4.9
BNI Bardonecchia 86.59 329 eP P 03 40 17.7 +0.4
comp=Z,7.0nm,0.8s,mb4.9
126A Clayton Basin, 86.62 50 ⇑P P 03 40 16.9 -0.8
baz=86
Z27A Tatum 86.62 49 ⇓P P 03 40 16.8 -0.8
baz=86,SNR=14
GDL2 Guadalupe Moun 86.73 50 eP P 03 40 18.5 +0.3
comp=Z,6.7nm,0.9s,mb4.9
BGF Bois d'Agland 86.77 332 eP P 03 40 17.8 -0.4
BGF Bois d'Agland 86.77 332 eP P 03 40 17.8 -0.4
MBDF Montbardon 86.83 329 eP P 03 40 17.5 -1.0
comp=Z,56nm,1.4s,mb5.3
MBDF Montbardon 86.83 329 eP P 03 40 17.5 -1.0
MBDF pmax pmax
comp=Z,28nm,1.4s,mb5.3
MBDF Montbardon 86.83 329 eP P 03 40 17.5 -1.0
comp=Z,28nm,1.4s,mb5.3
325A Bean Ranch, Si 86.94 51 ⇓P P 03 40 19.2 -0.1
baz=87
226A Malaga, Loving 86.98 50 ⇑P P 03 40 19.3 -0.2
baz=87
PLDF La Plantade 86.99 332 eP P 03 40 19.4 +0.2
PLDF La Plantade 86.99 332 eP P 03 40 19.4 +0.2
ORIF Oris-en-Rattie 87.02 330 eP P 03 40 18.9 -0.5
ORIF Oris-en-Rattie 87.02 330 eP P 03 40 18.9 -0.5
AGO Saint Agoulin 87.10 332 eP P 03 40 19.9 +0.1
SGMF Saint Gilles 87.11 336 eP P 03 40 19.6 -0.2
comp=Z,39nm,1.1s,mb5.3
SGMF Saint Gilles 87.11 336 eP P 03 40 19.6 -0.2
SGMF pmax pmax
comp=Z,20nm,1.1s,mb5.3
SGMF Saint Gilles 87.11 336 eP P 03 40 19.6 -0.2
comp=Z,20nm,1.1s,mb5.2
TCF Toulx Ste Croi 87.23 333 eP P 03 40 20.2 -0.2
comp=Z,45nm,1.4s,mb5.2
TCF Toulx Ste Croi 87.23 333 eP P 03 40 20.2 -0.2
TCF pmax pmax
comp=Z,23nm,1.4s,mb5.2
TCF Toulx Ste Croi 87.23 333 eP P 03 40 20.2 -0.2
comp=Z,22nm,1.4s,mb5.2
ROSF Rostrenen 87.25 337 eP P 03 40 20.4 -0.1
comp=Z,32nm,0.9s,mb5.2
ROSF Rostrenen 87.25 337 eP P 03 40 20.4 -0.1
ROSF pmax pmax
comp=Z,16nm,0.9s,mb5.2
ROSF Rostrenen 87.25 337 eP P 03 40 20.4 -0.1
comp=Z,16nm,0.9s,mb5.2
425A Indio Mountain 87.35 52 ⇑P P 03 40 20.5 -0.7
baz=87
VIVF Saint-Julien-l 87.54 330 eP P 03 40 21.3 -0.6
comp=Z,52nm,1.7s,mb5.2
VIVF Saint-Julien-l 87.54 330 eP P 03 40 21.3 -0.6
VIVF pmax pmax
comp=Z,26nm,1.7s,mb5.2
VIVF Saint-Julien-l 87.54 330 eP P 03 40 21.3 -0.6
comp=Z,26nm,1.7s,mb5.2
QUIF Quistinic 87.59 337 eP P 03 40 21.7 -0.4
comp=Z,16nm,0.9s,mb5.0
QUIF Quistinic 87.59 337 eP P 03 40 21.7 -0.4
QUIF pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
QUIF Quistinic 87.59 337 eP P 03 40 21.7 -0.4
comp=Z,7.9nm,0.9s,mb4.9
MFF Saint Martin d 87.78 334 eP P 03 40 23.0 0.0
comp=Z,29nm,1.0s,mb5.2
MFF Saint Martin d 87.78 334 eP P 03 40 23.0 0.0
MFF pmax pmax
comp=Z,15nm,1.0s,mb5.2
MFF Saint Martin d 87.78 334 eP P 03 40 23.0 0.0
comp=Z,15nm,1.0s,mb5.2
FRF La Foret Royal 87.84 329 eP P 03 40 23.3 -0.1
FRF La Foret Royal 87.84 329 eP P 03 40 23.3 -0.1
426A McDonald Obser 88.01 51 ⇑P P 03 40 23.6 -0.9
baz=88
328A Wristen Ranch, 88.24 50 ⇓P P 03 40 24.2 -1.3
baz=88
427A Hayter Ranch, 88.26 51 ⇑P P 03 40 24.9 -0.7
baz=88
RJF Les Rejaudoux 88.33 333 eP P 03 40 25.7 0.0
comp=Z,14nm,0.9s,mb4.9
RJF Les Rejaudoux 88.33 333 eP P 03 40 25.7 0.0
RJF pmax pmax
comp=Z,7.0nm,0.9s,mb4.9
RJF Les Rejaudoux 88.33 333 eP P 03 40 25.7 0.0
comp=Z,6.8nm,0.9s,mb4.9
526A Mary Lane Ranc 88.40 52 ⇑P P 03 40 25.5 -0.8
baz=88,SNR=6.1
HDIL Hopedale 88.42 36 eP P 03 40 26.3 +0.1
comp=Z,16nm,0.8s,mb5.3
CAF Calviac 88.45 332 eP P 03 40 26.6 +0.3
comp=Z,19nm,1.0s,mb5.0
CAF Calviac 88.45 332 eP P 03 40 26.6 +0.3
CAF pmax pmax
comp=Z,10.0nm,1.0s,mb5.0
CAF Calviac 88.45 332 eP P 03 40 26.6 +0.3
comp=Z,9.5nm,1.0s,mb5.0
LASF Ste Croix 88.51 331 eP P 03 40 26.3 -0.2
comp=Z,40nm,1.5s,mb5.2
LASF Ste Croix 88.51 331 eP P 03 40 26.3 -0.2
626A Big Bend Ranch 88.74 52 ⇓P P 03 40 27.3 -0.6
baz=88
428A Kincaid Ranch, 88.78 50 ⇓P P 03 40 27.7 -0.4
baz=88
LFF La Frestale 88.92 333 eP P 03 40 28.6 +0.2
comp=Z,21nm,1.0s,mb5.1
LFF La Frestale 88.92 333 eP P 03 40 28.6 +0.2
LFF pmax pmax
comp=Z,11nm,1.0s,mb5.1
LFF La Frestale 88.92 333 eP P 03 40 28.6 +0.2
comp=Z,11nm,1.0s,mb5.1
528A Cox Ranch, San 89.12 51 ⇑P P 03 40 29.2 -0.5
baz=89
TXAR Lajitas Array 89.18 52 P P 03 40 29.5 -0.5
comp=Z,2.5nm,0.8s,mb4.6,baz=290,slow=3.1,SNR=19
TXAR Lajitas Array 89.18 52 P P 03 40 29.5 -0.5
TXAR pmax pmax
comp=Z,3.0nm,0.9s
627A Terlingua Ranc 89.26 52 ⇑P P 03 40 29.6 -0.8
baz=89
628A Black Gap, Mar 89.55 51 ⇑P P 03 40 30.8 -0.9
baz=89
MTLF Montolieu 89.76 331 eP P 03 40 32.3 -0.1
MTLF Montolieu 89.76 331 eP P 03 40 32.3 -0.1
FVM French Village 89.94 38 eP P 03 40 32.8 -0.6
FVM pmax pmax
comp=Z,8.0nm,0.8s,mb5.1
FVM French Village 89.94 38 eP P 03 40 32.8 -0.6
comp=Z,8.5nm,0.8s,mb5.1
OLIL Olney 90.43 36 eP P 03 40 35.4 -0.3
comp=Z,16nm,0.8s,mb5.4
JCT Junction City 90.67 49 eP P 03 40 36.4 -0.5
JCT pmax pmax
comp=Z,10.0nm,0.7s,mb5.2
JCT Junction City 90.67 49 eP P 03 40 36.4 -0.5
comp=Z,10nm,0.7s,mb5.3
EPF Esparros 90.72 332 eP P 03 40 36.2 -0.7
comp=Z,23nm,1.4s,mb5.0
EPF Esparros 90.72 332 eP P 03 40 36.2 -0.7
EPF pmax pmax
comp=Z,12nm,1.4s,mb5.0
EPF Esparros 90.72 332 eP P 03 40 36.2 -0.7
comp=Z,12nm,1.4s,mb5.0
SIUC Southern Illin 90.73 37 eP P 03 40 36.7 -0.4
comp=Z,17nm,0.7s,mb5.5
MIAR Mount Ida 91.06 42 eP P 03 40 38.2 -0.5
MIAR pmax pmax
comp=Z,6.0nm,0.7s,mb5.0
MIAR Mount Ida 91.06 42 eP P 03 40 38.2 -0.5
comp=Z,6.5nm,0.7s,mb5.1
ETSF Etsaut 91.16 333 eP P 03 40 39.2 +0.3
comp=Z,12nm,0.9s,mb4.9
ETSF Etsaut 91.16 333 eP P 03 40 39.2 +0.3
ETSF pmax pmax
comp=Z,6.0nm,0.9s,mb4.9
ETSF Etsaut 91.16 333 eP P 03 40 39.2 +0.3
comp=Z,5.8nm,0.9s,mb4.9
WCI Wyandotte Cave 91.67 35 eP P 03 40 41.4 0.0
WCI pmax pmax
comp=Z,7.0nm,0.8s,mb5.0
WCI Wyandotte Cave 91.67 35 eP P 03 40 41.4 0.0
comp=Z,7.1nm,0.8s,mb5.0
WVT Waverly 92.67 37 eP P 03 40 46.7 +0.6
WVT pmax pmax
comp=Z,2.0nm,0.6s,mb4.7
WVT Waverly 92.67 37 eP P 03 40 46.7 +0.6
comp=Z,2.1nm,0.6s,mb4.7
SWET Sewanee 94.30 37 eP P 03 40 52.3 -1.3
ESDC Sonseca Array 95.20 333 P P 03 40 56.5 -1.1
comp=Z,1.0nm,0.8s,mb4.3,baz=18,slow=5.3,SNR=4.9
KMBO Kilima Mbogo 101.25 278 P Pdif 03 41 24.7 -0.2
comp=Z,0.4nm,0.3s,baz=16,slow=6.1,SNR=3.2
KMBO Kilima Mbogo 101.25 278 P Pdif 03 41 24.7 -0.1
KMBO Kilima Mbogo 101.25 278 P Pdif 03 41 24.7 -0.2
LSZ Lusaka 116.99 272 ePKIKP PKPdf 03 46 19.2 -0.1
LSZ Lusaka 116.99 272 ePKPdf PKPdf 03 46 19.1 -0.2
MAW Mawson 121.25 206 PKP PKPdf 03 46 26.0 0.0
comp=Z,2.1nm,0.8s,baz=6.1,slow=5.6,SNR=4.4
MAW Mawson 121.25 206 PKIKP PKPdf 03 46 26.0 +0.1

MAW pmax pmax
comp=Z,2.0nm,0.8s
LBTB Lobatse 124.43 264 *e*PKIKP PKPdf 03 46 32.9 -0.5
LBTB Lobatse 124.43 264 *e*PKPdf PKPdf 03 46 32.9 -0.5
DBIC Dimbokro 124.44 317 PKP PKPdf 03 46 32.8 -1.1
comp=Z,5.8nm,0.8s,baz=271,slow=6.9,SNR=5.7
DBIC Dimbokro 124.44 317 PKIKP PKPdf 03 46 32.8 -1.0
DBIC pmax pmax
comp=Z,6.0nm,0.8s
ROSC El Rosal 125.48 45 *e*PKPdf PKPdf 03 46 36.6 +0.8
BOSA Boshof 126.51 261 PKP PKPdf 03 46 35.4 -1.9
comp=Z,2.7nm,0.9s,baz=75,slow=19,SNR=3.2
BOSA Boshof 126.51 261 PKIKP PKPdf 03 46 35.4 -1.9
BOSA pmax pmax
comp=Z,3.0nm,0.9s
BOSA Boshof 126.51 261 *e*PKPdf PKPdf 03 46 37.2 0.0
OTAV Otavalo 126.81 52 *e*PKPdf PKPdf 03 46 39.6 +1.3
TSUM Tsumeb 127.49 275 PKP PKPdf 03 46 38.4 -1.1
comp=Z,2.8nm,1.0s,baz=164,slow=4.0,SNR=5.0
QSPA South Pole Qui 128.89 180 PKP PKPdf 03 46 39.1 -1.2
comp=Z,6.2nm,1.1s,baz=259,slow=3.4,SNR=3.5
SUR Sutherland 131.64 259 PKP PKPdf 03 46 45.6 -1.3
comp=Z,5.2nm,0.6s,baz=282,slow=20,SNR=9.2
VNA1 Neumayer--Stat 144.61 197 *e*PKPdf PKPdf 03 47 07.4 -2.1
LPAZ La Paz 145.95 56 PKPbc PKPbc 03 47 14.3 +0.2
comp=Z,13nm,0.9s,baz=350,slow=5.1,SNR=19
LPAZ La Paz 145.95 56 PKP2 PKPab 03 47 14.3 -0.3
LPAZ pmax pmax
comp=Z,13nm,0.9s
LPAZ La Paz 145.95 56 *e*PKPbc PKPbc 03 47 14.0 0.0
RCBR Riachuelo 146.70 354 *e*PKPbc PKPbc 03 47 16.1 -0.3
SIV San Ignacio 149.99 46 PKP PKPdf 03 47 20.4 +0.3
comp=Z,26nm,1.1s,baz=269,slow=2.3,SNR=4.3
LCO Las Campanas 152.10 78 *e*PKPbc PKPbc 03 47 30.0 +0.4
CFAA Coronel Fontan 155.19 81 PKPbc PKPdf 03 47 35.1 +7.8
comp=Z,0.3nm,0.7s,baz=290,slow=2.1,SNR=3.9
CFAA PKPab PKPab 03 47 51.9 -0.3
comp=Z,0.8nm,1.0s,baz=304,slow=3.4,SNR=4.1
PLCA Paso Flores 155.93 104 PKPab PKPab 03 47 55.5 +0.4
comp=Z,5.6nm,1.0s,baz=329,slow=5.6,SNR=3.8
PLCA Paso Flores 155.93 104 PKP2 PKPab 03 47 55.5 +0.4
PLCA pmax pmax
comp=Z,6.0nm,1.0s
PLCA Paso Flores 155.93 104 *e*PKPab PKPab 03 47 56.4 +1.3
CPUP Villa Florida 160.12 55 PKPab PKPab 03 48 12.4 -1.1
comp=Z,0.7nm,0.5s,baz=203,slow=8.4,SNR=2.8
CPUP Villa Florida 160.12 55 PKP2 PKPab 03 48 12.5 -1.0
CPUP pmax pmax
comp=Z,1.0nm,0.5s
TRQA Tornquist 162.12 94 *e*PKPab PKPab 03 48 22.1 0.0

JMA 14 03:30:58.7, 39.10N×140.87E, h11km±1km, M3.9, 2C-2D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.31**	**118**	⇓P	Pg	03 31 04.7	-0.2
JMK				S	Sg	03 31 09.0	-0.1
JRG	**Rokugo**	**0.35**	**328**	⇓P	Pg	03 31 05.7	+0.1
JRG				S	Sg	03 31 10.7	+0.4
JYK	**Kaneyama**	**0.44**	**246**	⇑P	Pg	03 31 07.3	0.0
JYK				S	Sg	03 31 13.1	0.0
JOM	**Ohasama**	**0.50**	**41**	⇑P	Pg	03 31 08.2	-0.2
JOM				S	Sg	03 31 14.8	-0.2

GUC ***14*** *03:35:14.8±0.8, 33.67S×70.58W, h99km±4km, ML4.9*
NEIC ***14*** *03:35:14.7, 33.67S×70.57W, h96km, mb4.6/61, After GUC.*
NEIC Felt [IV] at Santiago; [III] at San Jose de Maipo; [II] at Rancagua, San Fernando, Valparaiso and Vina del Mar.
ISCJB ***14*** *03:35:14.3±0.3, 33.66S±0.03×70.46W±0.06, h99km±1km, mb4.5/67, Error ellipse: s-maj=8.5km s-min=5.3km az=10.7*
IDC ***14*** *03:35:16.0±1.8, 33.62S×70.39W, h103km±15km, mb4.2/10, mb1 4.2/14, mb1mx4.1/18, mbtmp4.1/14, MS3.9/1, Ms1 3.9/1, ms1mx3.4/23, Error ellipse: s-maj=21.5km s-min=11.6km az=95.0*
ISC 14 03:35:15.3±0.3, 33.67S±0.03×70.45W±0.06, h94km±1km, n427, σ0.68/409, mb4.5/67, 143C-147D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCH	**Pirque**	**0.07**	**312**	⇑*i*P	**Pn**	**03 35 28.5**	**+0.1**
PCH	**Pirque**	**0.07**	**312**	⇑*i*P	**Pn**	**03 35 28.5**	**+0.1**
ANTU	**Antumapu**	**0.18**	**303**	⇓*i*P	**Pn**	**03 35 28.6**	**0.0**
ANTU				*i* S	**Sn**	**03 35 39.0**	**+0.4**
ANTU	**Antumapu**	**0.18**	**303**	⇓*i*P	**Pn**	**03 35 28.6**	**0.0**
ANTU				*i* S	**Sn**	**03 35 39.0**	**+0.4**
ANTU				AML	AML	03 35 39.4	
comp=E,218μm,0.5s							
FSR	**Penalolen**	**0.20**	**341**	⇓*i*P	**Pn**	**03 35 28.8**	**+0.1**
FSR				*i* S	**Sn**	**03 35 39.3**	**+0.6**
FSR	**Penalolen**	**0.20**	**341**	⇓*i*P	**Pn**	**03 35 28.8**	**+0.1**
FSR				*i* S	**Sn**	**03 35 39.3**	**+0.6**
FSR				AML	AML	03 35 40.4	
comp=E,31μm,0.4s							
SAN	**Santiago**	**0.28**	**321**	⇑*i*P	**Pn**	**03 35 28.8**	**-0.2**
SAN				*i* S	**Sn**	**03 35 39.1**	**-0.2**
SAN	**Santiago**	**0.28**	**321**	⇑*i*P	**Pn**	**03 35 28.8**	**-0.2**
SAN				*i* S	**Sn**	**03 35 39.1**	**-0.2**
SAN				AML	AML	03 35 52.7	
comp=E,22μm,0.6s							
CLCH	**Cerro Calan**	**0.28**	**345**	⇓*i*P	**Pn**	**03 35 29.8**	**+0.8**
CLCH				*i* S	**Sn**	**03 35 40.9**	**+1.6**
CLCH	**Cerro Calan**	**0.28**	**345**	⇓*i*P	**Pn**	**03 35 29.8**	**+0.8**
CLCH				*i* S	**Sn**	**03 35 40.9**	**+1.6**
CLCH				AML	AML	03 35 41.8	
comp=E,159μm,0.7s							
CHCH	**Chadas Angostu**	**0.31**	**213**	⇓*i*P	**Pn**	**03 35 28.6**	**-0.6**
CHCH	**Chadas Angostu**	**0.31**	**213**	⇓*i*P	**Pn**	**03 35 28.6**	**-0.6**
FCH	**Farellones**	**0.37**	**21**	⇓*i*P	**Pn**	**03 35 34.7**	**+5.2**
FCH				*i* S	**Sn**	**03 35 46.9**	**+6.8**
FCH				AML	AML	03 35 48.2	
comp=N,70μm,0.3s							
TACH	**Talagante**	**0.41**	**272**	⇓*i*P	**Pn**	**03 35 29.5**	**-0.2**
TACH	**Talagante**	**0.41**	**272**	⇓*i*P	**Pn**	**03 35 29.5**	**-0.2**
CACH	**El Canelo**	**0.46**	**196**	⇓*i*P	**Pn**	**03 35 30.7**	**+0.6**
CACH	**El Canelo**	**0.46**	**196**	⇓*i*P	**Pn**	**03 35 30.7**	**+0.6**
PEL	**Peldehue**	**0.56**	**339**	⇓*i*P	**Pn**	**03 35 30.8**	**-0.1**
PEL				*i* S	**Sn**	**03 35 42.6**	**+0.1**
PEL				AML	AML	03 35 44.8	
comp=N,99μm,0.4s							
ROCH	**El Roble**	**0.84**	**326**	⇓*i*P	**Pn**	**03 35 33.2**	**-0.3**
ROCH	**El Roble**	**0.84**	**326**	⇓*i*P	**Pn**	**03 35 33.2**	**-0.3**
LNV	**Longovilo**	**0.85**	**250**	⇑*i*P	**Pn**	**03 35 32.7**	**-0.9**
LNV	**Longovilo**	**0.85**	**250**	⇑*i*P	**Pn**	**03 35 32.7**	**-0.9**
NICH	**Los Niches**	**1.48**	**206**	⇑*i*P	**Pn**	**03 35 40.9**	**0.0**
TALC	**Talca**	**1.98**	**209**	⇑*i*P	**Pn**	**03 35 46.7**	**-0.7**
TALC				*i* S	**Sn**	**03 36 10.9**	**-0.9**
TALC	**Talca**	**1.98**	**209**	⇑*i*P	**Pn**	**03 35 46.7**	**-0.7**
TALC				*i* S	**Sn**	**03 36 10.9**	**-0.9**
TALC				AML	AML	03 36 14.0	
comp=E,14μm,0.1s							
CNCO	**Chanco**	**2.68**	**219**	⇑*i*P	**Pn**	**03 35 55.3**	**-1.3**
CNCO	**Chanco**	**2.68**	**219**	⇑*i*P	**Pn**	**03 35 55.3**	**-1.3**
CFAA	**Coronel Fontan**	**2.78**	**43**	P	**Pn**	**03 35 58.0**	**+0.1**
comp=E,9.6nm,0.3s,baz=196,slow=19,SNR=862							
CFAA				S	**Sn**	**03 36 30.9**	**+0.2**
comp=E,20nm,0.3s,baz=195,slow=12,SNR=15							
CCHI	**Chillan**	**3.21**	**204**	⇓*i*P	**Pn**	**03 36 03.0**	**-0.7**
CCHI	**Chillan**	**3.21**	**204**	⇓*i*P	**Pn**	**03 36 03.0**	**-0.7**
CCHI				AML	AML	03 37 06.5	
comp=N,1μm,0.4s							
LCO	**Las Campanas**	**4.65**	**357**	*e*Pn	**Pn**	**03 36 21.0**	**-2.1**
PLCA	**Paso Flores**	**7.05**	**181**	P	**Pn**	**03 36 56.5**	**+0.8**
comp=N,0.8nm,0.3s,baz=342,slow=14,SNR=15							
PLCA	**Paso Flores**	**7.05**	**181**	*e*Pn	**Pn**	**03 36 56.0**	**+0.3**
comp=N,22nm,0.9s							
TRQA	**Tornquist**	**8.15**	**125**	*e*Pn	**Pn**	**03 37 10.4**	**-0.3**
CPUP	**Villa Florida**	**13.51**	**61**	P	**Pn**	**03 38 16.7**	**-6.3**
comp=N,0.7nm,0.3s,baz=199,slow=9.1,SNR=6.1							
CPUP	**Villa Florida**	**13.51**	**61**	*e*Pn	**Pn**	**03 38 16.8**	**-6.3**
LPAZ	**La Paz**	**17.43**	**7**	P	**Pn**	**03 39 12.1**	**-0.4**
comp=N,0.2nm,0.3s,baz=178,slow=5.9,SNR=14							
LPAZ	**La Paz**	**17.43**	**7**	*e*P	**Pn**	**03 39 12.8**	**+0.3**
comp=N,16nm,1.3s							
SIV	**San Ignacio**	**19.53**	**28**	P	**Pn**	**03 39 34.3**	**-3.2**
comp=N,0.8nm,0.3s,baz=218,slow=13,SNR=34							
USHA	**Ushuaia**	**21.20**	**177**	P	**P**	**03 39 54.0**	**+1.0**
comp=N,11nm,0.9s,mb4.2,baz=9.5,slow=12,SNR=5.1							
NNA	**Nana**	**22.36**	**343**	P	**P**	**03 40 05.5**	**-0.1**
comp=N,11nm,0.6s,mb4.4,baz=201,slow=10.0,SNR=5.0							
NNA	**Nana**	**22.36**	**343**	*e*P	**P**	**03 40 05.7**	**0.0**
comp=N,19nm,0.7s,mb4.5							
SPB	**Sao Paulo**	**22.52**	**70**	*e*P	**P**	**03 40 07.0**	**-0.2**
ATAH	**Atahualpa**	**27.41**	**343**	LR	LR	03 49 11.3	
comp=N,256nm,21.5s,baz=26,slow=30							
OTAV	**Otavalo**	**34.56**	**346**	*e*P	**P**	**03 41 54.9**	**-0.1**
comp=N,2.0nm,0.7s,mb4.1							
JTS	**JuntasAbangare**	**45.84**	**340**	*e*P	**P**	**03 43 27.5**	**-0.6**
comp=N,7.7nm,0.9s,mb4.4							
TEIG	**Tepich**	**56.23**	**340**	*e*P	**P**	**03 44 45.3**	**-0.5**
comp=N,44nm,1.1s,mb5.4							
QSPA	**South Pole Qui**	**56.57**	**180**	P	**P**	**03 44 48.5**	**+1.1**
comp=N,6.6nm,0.8s,mb4.7,baz=136,slow=2.3,SNR=33							
LRAL	**Lakeview Retre**	**68.15**	**345**	*e*P	**P**	**03 46 04.4**	**-0.8**
comp=N,7.4nm,1.0s,mb4.5							
NATX	**Nacogdoches**	**68.97**	**338**	*e*P	**P**	**03 46 11.0**	**+0.8**
comp=N,26nm,0.9s,mb5.1							
JCT	**Junction City**	**69.57**	**333**	*e*P	**P**	**03 46 14.4**	**+0.3**
comp=N,16nm,0.8s,mb4.9							
628A	**Black Gap, Mar**	**69.91**	**330**	⇓P	**P**	**03 46 16.7**	**+0.6**
baz=70,SNR=9.8							
CPCT	**Cooper Cave**	**70.01**	**348**	*e*P	**P**	**03 46 16.1**	**-0.5**
SWET	**Sewanee**	**70.05**	**347**	*e*P	**P**	**03 46 16.3**	**-0.5**
TKL	**Tuckaleechee C**	**70.09**	**348**	*e*P	**P**	**03 46 15.5**	**-1.5**
627A	**Terlingua Ranc**	**70.09**	**330**	⇓P	**P**	**03 46 16.8**	**-0.4**
baz=70							
TXAR	**Lajitas Array**	**70.11**	**329**	P	**P**	**03 46 17.5**	**+0.2**
comp=N,3.5nm,0.6s,mb4.4,baz=153,slow=8.7,SNR=47							
528A	**Cox Ranch, San**	**70.47**	**331**	⇓P	**P**	**03 46 19.0**	**-0.5**
baz=71,SNR=11							
626A	**Big Bend Ranch**	**70.50**	**329**	⇓P	**P**	**03 46 20.2**	**+0.4**
baz=71,SNR=8.0							
527A	**Woodward Ranch**	**70.79**	**330**	P	**P**	**03 46 21.8**	**+0.3**
baz=71,SNR=9.8							
428A	**Kincaid Ranch,**	**70.92**	**331**	⇓P	**P**	**03 46 22.4**	**+0.2**
baz=71							
526A	**Mary Lane Ranc**	**70.92**	**329**	⇑P	**P**	**03 46 22.5**	**+0.2**
baz=71,SNR=15							
MIAR	**Mount Ida**	**71.24**	**340**	*e*P	**P**	**03 46 23.5**	**-0.6**
comp=N,3.5nm,0.6s,mb4.4							
WVT	**Waverly**	**71.31**	**345**	*e*P	**P**	**03 46 23.7**	**-0.8**
comp=N,47nm,0.7s,mb5.4							
427A	**Hayter Ranch,**	**71.32**	**330**	⇑P	**P**	**03 46 24.8**	**+0.2**
baz=72							
JSRW	**J. Sargeant Re**	**71.34**	**354**	*e*P	**P**	**03 46 24.6**	**0.0**
426A	**McDonald Obser**	**71.42**	**330**	P	**P**	**03 46 25.9**	**+0.6**
baz=72,SNR=12							
328A	**Wristen Ranch,**	**71.55**	**331**	⇑P	**P**	**03 46 25.9**	**-0.1**
baz=72,SNR=7.0							
425A	**Indio Mountain**	**71.93**	**329**	⇑P	**P**	**03 46 27.7**	**-0.6**
baz=72,SNR=6.8							
326A	**Caldwell Ranch**	**71.97**	**330**	⇓P	**P**	**03 46 28.3**	**-0.2**
baz=72,SNR=6.8							
325A	**Bean Ranch, Si**	**72.43**	**329**	⇓P	**P**	**03 46 29.9**	**-1.3**
baz=73,SNR=9.4							
226A	**Malaga, Loving**	**72.67**	**330**	⇓P	**P**	**03 46 31.9**	**-0.8**
baz=73							
324A	**Moseley Ranch,**	**72.71**	**329**	⇓P	**P**	**03 46 31.8**	**-1.2**
baz=73,SNR=7.9							
MNTX	**Cornudas Mount**	**72.89**	**329**	*e*P	**P**	**03 46 32.4**	**-1.6**
comp=N,6.0nm,0.6s,mb4.6							
127A	**Arkansas Junct**	**72.90**	**331**	⇑P	**P**	**03 46 33.7**	**-0.3**
baz=73							
225A	**Deer Hill, Car**	**73.01**	**330**	⇓P	**P**	**03 46 33.6**	**-1.1**
baz=73							
WCI	**Wyandotte Cave**	**73.03**	**347**	*e*P	**P**	**03 46 33.1**	**-1.6**
comp=N,4.9nm,0.5s,mb4.6							
WMOK	**Wichita Mounta**	**73.05**	**336**	*e*P	**P**	**03 46 34.2**	**-0.6**
comp=N,4.6nm,0.8s,mb4.4							
MAW	**Mawson**	**73.11**	**163**	P	**P**	**03 46 34.8**	**-0.2**
comp=N,3.2nm,0.8s,mb4.2,baz=48,slow=3.9,SNR=3.6							
MAW	**Mawson**	**73.11**	**163**	P	**P**	**03 46 34.8**	**-0.2**
SIUC	**Southern Illin**	**73.14**	**345**	*e*P	**P**	**03 46 34.4**	**-1.0**
comp=N,8.8nm,0.8s,mb4.6							
126A	**Clayton Basin,**	**73.14**	**331**	⇓P	**P**	**03 46 35.3**	**-0.2**
baz=73,SNR=8.8							
224A	**Cornudas Mount**	**73.27**	**329**	⇓P	**P**	**03 46 35.3**	**-1.0**
baz=74,SNR=18							
Z27A	**Tatum**	**73.41**	**332**	⇓P	**P**	**03 46 36.3**	**-0.8**
baz=74							
125A	**Gardner Draw,**	**73.42**	**330**	⇑P	**P**	**03 46 35.7**	**-1.4**
baz=74,SNR=12							
FVM	**French Village**	**73.67**	**344**	*e*P	**P**	**03 46 37.7**	**-0.7**
comp=N,19nm,0.9s,mb4.8							
Z26A	**Caprock**	**73.67**	**331**	⇓P	**P**	**03 46 38.3**	**-0.3**
baz=74,SNR=32							
124A	**Stringfield Ra**	**73.78**	**330**	⇓P	**P**	**03 46 39.2**	**-0.1**
baz=74,SNR=7.9							
MSTX	**Muleshoe**	**73.81**	**332**	⇓P	**P**	**03 46 38.6**	**-0.8**
baz=74,SNR=12							
SUR	**Sutherland**	**73.82**	**118**	*e*P	**P**	**03 46 43.5**	**+3.7**
comp=N,7.4nm,0.7s,mb4.5							
Y27A	**Causey**	**73.89**	**332**	⇓P	**P**	**03 46 39.2**	**-0.6**
baz=74							
320A	**Kipp Ranch, An**	**73.97**	**327**	⇓P	**P**	**03 46 40.7**	**+0.3**
baz=74,SNR=6.4							
222A	**Williams Famil**	**73.98**	**328**	⇑P	**P**	**03 46 40.7**	**+0.3**
baz=74							
Z25A	**Roswell**	**73.98**	**331**	⇓P	**P**	**03 46 40.5**	**+0.1**
baz=74,SNR=6.1							
Y26A	**Elida**	**74.18**	**332**	⇑P	**P**	**03 46 41.5**	**0.0**
baz=74							
AMTX	**Amarillo**	**74.21**	**334**	*e*P	**P**	**03 46 41.9**	**+0.2**
comp=N,16nm,0.5s,mb5.0							
Z24A	**Sheeppen Canyo**	**74.29**	**330**	⇑P	**P**	**03 46 42.1**	**-0.1**
baz=74,SNR=17							
319A	**Douglas**	**74.35**	**326**	⇑P	**P**	**03 46 43.2**	**+0.7**
baz=75,SNR=6.0							
220A	**Playas Peak, P**	**74.45**	**327**	⇑P	**P**	**03 46 43.4**	**+0.3**
baz=75,SNR=10							
Y25A	**Mesa, Roswell**	**74.53**	**331**	⇑P	**P**	**03 46 42.8**	**-0.7**
baz=75							
X27A	**F and S Farms,**	**74.54**	**333**	⇑P	**P**	**03 46 43.6**	**+0.1**
baz=75							
Z23A	**Rita Site, Whi**	**74.60**	**329**	⇑P	**P**	**03 46 44.1**	**+0.1**
baz=75,SNR=6.1							
121A	**Cookes Peak, D**	**74.65**	**328**	P	**P**	**03 46 45.5**	**+1.3**
baz=75,SNR=8.7							
X26A	**CR and CF Fran**	**74.73**	**332**	⇓P	**P**	**03 46 44.9**	**+0.3**
baz=75,SNR=9.4							
318A	**Bisbee**	**74.73**	**326**	P	**P**	**03 46 45.6**	**+0.8**
baz=75,SNR=11							
Y24A	**Capitan**	**74.84**	**330**	⇓P	**P**	**03 46 45.2**	**-0.2**
baz=75							
219A	**White Tail Can**	**74.86**	**327**	⇓P	**P**	**03 46 45.7**	**+0.2**
baz=75,SNR=11							
W27A	**Bowe Ranch, En**	**74.89**	**333**	⇓P	**P**	**03 46 45.4**	**-0.2**
baz=75,SNR=14							
Z22A	**Elephant Butte**	**74.90**	**329**	⇑P	**P**	**03 46 46.3**	**+0.6**
baz=75,SNR=6.9							
120A	**U Bar Ranch, L**	**75.04**	**327**	⇑P	**P**	**03 46 46.8**	**+0.3**
baz=75,SNR=9.3							
Y23A	**Lovelace Mesa,**	**75.10**	**330**	⇑P	**P**	**03 46 47.5**	**+0.7**
baz=75							
W26A	**Owens Ranch, T**	**75.18**	**332**	⇑P	**P**	**03 46 47.4**	**+0.1**
baz=75,SNR=5.7							
218A	**Dragoon**	**75.21**	**326**	⇓P	**P**	**03 46 47.8**	**+0.4**
baz=75,SNR=7.1							
Z21A	**St. Cloud Mine**	**75.26**	**328**	⇓P	**P**	**03 46 48.2**	**+0.4**
baz=76,SNR=5.2							
217A	**Green Valley**	**75.40**	**325**	⇓P	**P**	**03 46 49.3**	**+0.7**
baz=76,SNR=9.0							
Y22A	**Socorro**	**75.49**	**329**	⇓P	**P**	**03 46 49.5**	**+0.5**
baz=76							
Z20A	**Nine Sixteen R**	**75.50**	**328**	⇑P	**P**	**03 46 49.8**	**+0.7**
baz=76,SNR=8.5							
119A	**Ashpeak Ranch,**	**75.53**	**327**	⇑P	**P**	**03 46 49.6**	**+0.3**
baz=76							
BNM	**Barren Site**	**75.53**	**330**	*e*P	**P**	**03 46 49.8**	**+0.5**
comp=N,4.1nm,1.0s,mb4.1							
W25A	**X Bar L Ranch,**	**75.57**	**332**	⇓P	**P**	**03 46 49.5**	**0.0**
baz=76							
LPM	**Los Pinos Moun**	**75.67**	**330**	*e*P	**P**	**03 46 51.1**	**+1.0**
118A	**Homack Ranch,**	**75.73**	**326**	⇑P	**P**	**03 46 50.4**	**-0.1**
baz=76,SNR=6.0							
V26A	**Tequesquite Ra**	**75.81**	**333**	⇑P	**P**	**03 46 50.2**	**-0.7**
baz=76,SNR=7.9							
TUC	**Tucson**	**75.83**	**326**	*e*P	**P**	**03 46 51.7**	**+0.6**
comp=N,7.3nm,1.6s,mb4.2							
Y21A	**Point of Rocks**	**75.85**	**329**	⇓P	**P**	**03 46 50.4**	**-0.8**
baz=76,SNR=7.3							
216A	**Three Points,**	**75.90**	**325**	⇑P	**P**	**03 46 52.1**	**+0.6**
baz=76,SNR=9.1							
W24A	**Lazy 6 Ranch,**	**75.94**	**331**	⇓P	**P**	**03 46 51.4**	**-0.2**
baz=76,SNR=14							
117A	**Oracle**	**76.03**	**326**	⇓P	**P**	**03 46 52.0**	**-0.2**
baz=76,SNR=5.6							
Y20A	**Horse Springs,**	**76.08**	**328**	⇓P	**P**	**03 46 52.5**	**+0.1**
baz=76,SNR=8.4							
Z18A	**Geronimo**	**76.13**	**327**	⇓P	**P**	**03 46 53.2**	**+0.4**
baz=76							
ANMO	**Albuquerque**	**76.15**	**330**	*e*P	**P**	**03 46 53.2**	**+0.4**
comp=N,2.3nm,1.3s,mb3.8							
V25A	**Rancho No Teng**	**76.17**	**332**	⇓P	**P**	**03 46 53.0**	**+0.1**
baz=76,SNR=22							
W23A	**Werner Place,**	**76.20**	**331**	⇓P	**P**	**03 46 53.1**	**0.0**
baz=76,SNR=8.3							
X21A	**Alamocita Cree**	**76.27**	**329**	⇓P	**P**	**03 46 54.1**	**+0.6**
baz=76,SNR=9.8							
U26A	**Atchley Ranch,**	**76.32**	**333**	⇑P	**P**	**03 46 54.1**	**+0.3**
baz=77,SNR=5.2							
Y19A	**Nutrioso**	**76.50**	**328**	⇑P	**P**	**03 46 56.0**	**+1.2**
baz=77,SNR=39							
Z17A	**San Carlos Hig**	**76.50**	**326**	⇓P	**P**	**03 46 54.6**	**-0.3**
baz=77							
214A	**Organ Pipe Nat**	**76.52**	**324**	⇑P	**P**	**03 46 54.9**	**0.0**
baz=77,SNR=11							
U25A	**Circle Dot Ran**	**76.58**	**332**	⇑P	**P**	**03 46 55.4**	**+0.2**
baz=77,SNR=21							
X20A	**Quemado**	**76.66**	**328**	⇓P	**P**	**03 46 56.0**	**+0.3**
baz=77,SNR=9.7							
Y18A	**Canyon Day Jun**	**76.70**	**327**	⇑P	**P**	**03 46 56.1**	**+0.1**
baz=77,SNR=5.0							
V23A	**Ortiz Mt. (NFS**	**76.72**	**331**	⇓P	**P**	**03 46 56.2**	**+0.2**
baz=77							
115A	**Sonoran Desert**	**76.84**	**325**	⇓P	**P**	**03 46 57.5**	**+0.8**
baz=77,SNR=9.4							
X19A	**St. Johns**	**76.92**	**328**	⇓P	**P**	**03 46 57.1**	**0.0**
baz=77,SNR=5.1							
U24A	**Moreno Valley**	**76.93**	**332**	⇑P	**P**	**03 46 58.0**	**+0.8**
baz=77,SNR=5.1							
Z16A	**Peralta Trail,**	**76.99**	**326**	⇓P	**P**	**03 46 58.6**	**+1.1**
baz=77							
Y17A	**Roosevelt**	**77.01**	**326**	⇑P	**P**	**03 46 57.7**	**+0.1**
baz=77,SNR=18							
CBKS	**Cedar Bluff**	**77.07**	**337**	*e*P	**P**	**03 46 58.0**	**+0.1**
comp=N,19nm,0.8s,mb4.9							
V22A	**San Miguel Ran**	**77.16**	**330**	⇑P	**P**	**03 46 59.0**	**+0.6**
baz=77,SNR=21							
W20A	**Ramah**	**77.16**	**329**	⇓P	**P**	**03 46 59.1**	**+0.6**
baz=77,SNR=13							
U23A	**El Rito**	**77.23**	**331**	⇑P	**P**	**03 46 59.1**	**+0.3**
baz=78,SNR=13							
T25A	**Trinidad**	**77.23**	**333**	⇑P	**P**	**03 46 59.6**	**+0.7**
baz=78,SNR=15							
X18A	**Snowflake**	**77.30**	**327**	⇑P	**P**	**03 46 59.9**	**+0.7**
baz=78,SNR=7.0							
NCB	**Newcomb**	**77.35**	**357**	*e*P	**P**	**03 46 59.2**	**-0.1**
comp=N,36nm,1.8s,mb4.8							
V21A	**Milan**	**77.37**	**330**	⇓P	**P**	**03 47 00.3**	**+0.7**
baz=78							
Y16A	**Circle Bar Ran**	**77.46**	**326**	⇓P	**P**	**03 47 00.9**	**+0.8**
baz=78,SNR=7.4							
X17A	**Forest Lakes**	**77.52**	**327**	⇑P	**P**	**03 47 01.2**	**+0.7**
baz=78,SNR=14							
113A	**Mohawk Valley,**	**77.65**	**324**	⇓P	**P**	**03 47 02.1**	**+0.8**
baz=78,SNR=5.4							
V20A	**Brimhall**	**77.72**	**329**	⇓P	**P**	**03 47 02.2**	**+0.6**
baz=78,SNR=5.6							
X16A	**Lo Mia Camp, P**	**77.88**	**326**	⇑P	**P**	**03 47 03.3**	**+0.8**
baz=78,SNR=22							
V19A	**Window Rock**	**77.89**	**329**	⇓P	**P**	**03 47 03.5**	**+1.0**
baz=78							
U21A	**Nageezi**	**77.91**	**330**	⇓P	**P**	**03 47 03.0**	**+0.4**
baz=78,SNR=23							
Y15A	**Casa Rosa Ranc**	**77.92**	**325**	⇓P	**P**	**03 47 03.4**	**+0.6**
baz=78,SNR=8.3							
Z13A	**Yuma Proving G**	**77.94**	**324**	⇑P	**P**	**03 47 03.4**	**+0.5**
baz=78,SNR=15							
W17A	**Winslow**	**78.10**	**327**	⇓P	**P**	**03 47 04.3**	**+0.6**
baz=78							
T22A	**Edith**	**78.10**	**331**	⇑P	**P**	**03 47 04.0**	**+0.3**
baz=78,SNR=10							
SDCO	**Great Sand Dun**	**78.18**	**332**	*e*P	**P**	**03 47 04.6**	**+0.5**
comp=N,5.9nm,0.6s,mb4.5							
Y14A	**Wickenburg**	**78.22**	**325**	⇑P	**P**

	baz=80,SNR=9.8						
GMRC	Granite Mounta	80.20	324	⇓P	P	03 47 15.3	+0.1
	baz=80,SNR=13						
V13A	Grand Canyon W	80.25	325	⇓P	P	03 47 16.0	+0.6
	baz=80,SNR=9.7						
S17A	Black Ridge (B	80.27	329	⇑P	P	03 47 15.4	0.0
	baz=80,SNR=5.3						
U14A	Mt Trumbull	80.33	326	⇓P	P	03 47 16.4	+0.5
	baz=81,SNR=12						
CASY	Casey	80.37	180	eP	P	03 47 16.0	+0.2
	comp=N,4.4nm,0.8s,mb4.3						
T15A	Red Dirt Ranch	80.46	327	⇑P	P	03 47 16.4	-0.1
	baz=81,SNR=6.2						
R18A	Canyonlands Na	80.51	330	⇓P	P	03 47 16.6	-0.2
	baz=81						
V12A	Nelson	80.56	325	⇑P	P	03 47 17.3	+0.2
	baz=81,SNR=9.9						
HEC	Hector,Ludlow	80.57	323	⇑P	P	03 47 17.6	+0.5
	baz=81,SNR=9.8						
ECSD	EROS Data Cent	80.65	341	eP	P	03 47 16.7	-0.6
	comp=N,16nm,0.8s,mb4.9						
U13A	Pakoon Wash	80.70	326	⇑P	P	03 47 17.5	-0.2
	baz=81,SNR=7.2						
Q19A	Hogan Spring (	80.73	330	⇑P	P	03 47 18.2	+0.3
	baz=81						
T14A	Hurricane	80.81	327	P	P	03 47 19.4	+1.0
	baz=81,SNR=8.3						
TUQ	Turquoise Moun	80.85	324	⇑P	P	03 47 19.4	+0.8
	baz=81,SNR=11						
R17A	Hanksville Air	80.89	329	⇑P	P	03 47 19.0	+0.2
	baz=81,SNR=17						
V11A	Goodsprings	80.93	324	⇓P	P	03 47 19.6	+0.5
	baz=81,SNR=5.8						
U12A	Valley of Fire	80.98	325	⇓P	P	03 47 19.7	+0.4
	baz=81,SNR=7.8						
S15A	Panguitch	80.99	328	⇑P	P	03 47 20.3	+0.9
	baz=81						
R16A	Teasdale	81.11	328	P	P	03 47 20.6	+0.7
	baz=81,SNR=5.2						
T13A	Saint George	81.16	326	⇓P	P	03 47 21.1	+0.8
	baz=81,SNR=7.5						
GSC	Goldstone	81.18	323	P	P	03 47 21.6	+1.2
	baz=81,SNR=6.1						
P19A	Cripple Cowboy	81.19	331	⇑P	P	03 47 21.1	+0.8
	baz=82						
N22A	Wattenberg Ran	81.20	333	⇓P	P	03 47 21.0	+0.6
	baz=82,SNR=6.2						
Q18A	Rafter H Ranch	81.21	330	P	P	03 47 20.9	+0.5
	baz=82,SNR=5.4						
LBTB	Lobatse	81.24	114	eP	P	03 47 21.8	+0.7
	comp=N,2.7nm,0.7s,mb4.2						
PHWY	Pilot Hill	81.27	334	eP	P	03 47 17.9	-2.8
	comp=N,8.7nm,0.8s,mb4.6						
O20A	White River Ci	81.32	332	⇑P	P	03 47 21.2	+0.2
	baz=82						
CCUT	Cedar City	81.34	327	eP	P	03 47 22.7	+1.5
	comp=N,7.9nm,0.8s,mb4.6						
SRU	San Rafael	81.39	330	⇓P	P	03 47 21.3	-0.1
	baz=82,SNR=12						
SRU	San Rafael	81.39	330	eP	P	03 47 21.7	+0.3
	comp=N,9.0nm,0.7s,mb4.7						
R15A	Junction	81.39	328	⇑P	P	03 47 22.5	+1.1
	baz=82						
S14A	Cedar City	81.42	327	⇑P	P	03 47 22.9	+1.3
	baz=82						
EDW2	Edwards Air Fo	81.45	322	⇑P	P	03 47 22.3	+0.5
	baz=82,SNR=5.5						
Q16A	Castle Valley	81.50	329	P	P	03 47 23.1	+1.1
	baz=82,SNR=6.2						
N21A	Black Mountain	81.57	332	⇓P	P	03 47 23.3	+0.9
	baz=82						
S13A	Holt Ranch, En	81.59	327	⇑P	P	03 47 23.3	+0.8
	baz=82,SNR=9.3						
MSU	Marysvale	81.60	328	eP	P	03 47 23.5	+1.0
P18A	Preston Nutter	81.70	330	⇓P	P	03 47 23.7	+0.7
	baz=82,SNR=15						
P17A	Butcher Ranch,	81.78	330	⇓P	P	03 47 23.6	+0.1
	baz=82						
O19A	Miners Draw (B	81.81	331	⇓P	P	03 47 23.8	+0.2
	baz=82,SNR=8.3						
U10A	Ash Meadows, A	81.83	324	⇑P	P	03 47 24.3	+0.5
	baz=82						
T11A	Corn Creek, Al	81.95	325	⇓P	P	03 47 24.9	+0.4
	baz=82,SNR=16						
S12A	Delamar Landin	82.08	326	⇑P	P	03 47 26.0	+1.0
	baz=82						
Q15A	Fillmore	82.09	328	⇓P	P	03 47 25.7	+0.6
	baz=82						
MPMC	Manual Prospec	82.12	323	⇑P	P	03 47 25.6	+0.2
	baz=82,SNR=6.4						
FURC	Furnace Creek,	82.13	324	⇑P	P	03 47 25.5	+0.1
	baz=82,SNR=6.2						
R13A	O'Grain Ranch,	82.13	327	⇓P	P	03 47 26.5	+1.2
	baz=82						
O18A	Roosevelt	82.14	331	⇑P	P	03 47 26.0	+0.7
	baz=82						
M21A	Separation Pea	82.24	333	⇓P	P	03 47 25.7	-0.1
	baz=82,SNR=5.4						
L22A	Ellis Ranch, M	82.26	334	⇑P	P	03 47 26.6	+0.7
	baz=82						
ISA	Isabella	82.31	322	⇑P	P	03 47 26.3	0.0
	baz=82,SNR=5.4						
ISA	Isabella	82.31	322	eP	P	03 47 27.8	+1.5
	comp=N,6.3nm,0.8s,mb4.5						
N19A	John Jarvie Ra	82.34	331	⇑P	P	03 47 26.5	+0.2
	baz=83						
O17A	Robinson Place	82.38	330	⇓P	P	03 47 25.3	-1.3
	baz=83,SNR=5.5						
PKM	Peak Mountain	82.41	321	⇓P	P	03 47 25.7	-1.2
	baz=83,SNR=6.5						
Q14A	Sevier Lake (B	82.48	328	⇑P	P	03 47 27.0	-0.1
	baz=83,SNR=11						
S11A	Rachel	82.53	325	⇓P	P	03 47 27.1	-0.3
	baz=83						
R12A	Pony Springs,	82.55	326	⇑P	P	03 47 26.7	-0.8
	baz=83,SNR=5.9						
L21A	Rawlins	82.55	333	⇓P	P	03 47 26.8	-0.6
	baz=83,SNR=9.7						
N18A	Larsen Ranch,	82.61	331	⇑P	P	03 47 28.0	+0.3
	baz=83						
O16A	Springville	82.72	330	⇓P	P	03 47 29.0	+0.7
	baz=83						
VES	Vestal, Richgr	82.76	322	⇑P	P	03 47 28.3	-0.3
	baz=83						
DAU	Daniels Canyon	82.78	330	eP	P	03 47 29.6	+1.0
Q13A	Wheeler Ranch,	82.79	327	⇑P	P	03 47 28.8	0.0
	baz=83,SNR=12						
M19A	Rock Springs	82.85	332	⇓P	P	03 47 29.1	+0.1
	baz=83						
P14A	Drum Mountains	82.88	328	⇑P	P	03 47 29.1	-0.1
	baz=83,SNR=10						
L20A	Wamsutter	82.96	333	⇓P	P	03 47 29.4	-0.1
	baz=83						
R11A	Troy Canyon, C	83.02	326	⇓P	P	03 47 29.0	-0.9
	baz=83,SNR=14						
S10A	Tonopah Range,	83.15	325	⇓P	P	03 47 30.5	-0.1
	baz=83,SNR=8.2						
P13A	Bates Ranch, G	83.19	327	⇓P	P	03 47 31.3	+0.5
	baz=83,SNR=6.7						
Q12A	Willow Creek R	83.22	327	⇓P	P	03 47 31.5	+0.5
	baz=84						
RSSD	Black Hills	83.25	336	eP	P	03 47 31.1	+0.1
	comp=N,6.3nm,0.8s,mb4.5						
N16A	Rees Ranch, Co	83.25	330	⇑P	P	03 47 31.2	+0.1
	baz=84						
DUG	Dugway	83.27	329	⇓P	P	03 47 30.2	-1.0
	baz=84,SNR=6.3						
DUG	Dugway	83.27	329	eP	P	03 47 32.0	+0.8
	comp=N,7.3nm,1.1s,mb4.4						
M17A	Scullys Gap (B	83.43	331	⇑P	P	03 47 31.4	-0.6
	baz=84						
L19A	Farson	83.43	332	⇓P	P	03 47 32.0	0.0
	baz=84,SNR=6.8						
Q11A	Duckwater	83.45	326	⇑P	P	03 47 32.2	+0.1
	baz=84						
K20A	Yellowstone Ra	83.52	333	⇑P	P	03 47 31.9	-0.5
	baz=84						
L18A	Fontenelle, Gr	83.55	331	⇑P	P	03 47 32.5	-0.1
	baz=84						
M16A	Huntsville	83.69	330	⇑P	P	03 47 32.5	-0.8
	baz=84						
N15A	Stansbury Isla	83.71	329	⇓P	P	03 47 32.3	-1.1
	baz=84,SNR=5.8						
K19A	Absolon Red Bu	83.85	333	⇑P	P	03 47 33.1	-1.0
	baz=84						
HWUT	Hardware Ranch	83.91	330	eP	P	03 47 34.1	-0.3
	comp=N,7.8nm,0.6s,mb4.7						
N14A	Grayback Hills	83.97	329	⇓P	P	03 47 33.8	-0.9
	baz=84						
BW06	Boulder Array	84.08	332	⇓P	P	03 47 34.1	-1.1
	baz=84,SNR=5.7						
BW06	Boulder Array	84.08	332	eP	P	03 47 35.2	-0.1
PDAR	Pinedale Array	84.08	332	P	P	03 47 34.8	-0.4
	comp=N,2.0nm,0.7s,mb4.0,baz=132,slow=6.1,SNR=15						
K18A	Toltan Ranch,	84.16	332	⇑P	P	03 47 35.1	-0.5
	baz=84,SNR=11						
M15A	Larsen Ranch,	84.16	330	⇑P	P	03 47 35.0	-0.7
	baz=84						
O12A	Currie	84.18	328	⇓P	P	03 47 35.2	-0.6
	baz=84,SNR=6.1						
L16A	Fish Haven	84.19	331	⇓P	P	03 47 35.6	-0.3
	baz=84,SNR=17						
NVAR	Mina Array Bea	84.38	324	P	P	03 47 37.7	+0.8
	comp=N,3.7nm,0.6s,mb4.4,baz=154,slow=6.3,SNR=24						
N13A	Wendover, West	84.42	328	⇓P	P	03 47 37.0	+0.1
	baz=85						
P10A	Eureka	84.44	326	⇓P	P	03 47 37.1	-0.1
	baz=85						
O11A	Cowboy Ranch,	84.48	327	⇑P	P	03 47 37.7	+0.4
	baz=85,SNR=12						
HVU	Hansel Valley	84.56	330	eP	P	03 47 37.5	-0.2
	comp=N,7.8nm,0.8s,mb4.7						
M14A	Sheep Mountain	84.57	329	⇓P	P	03 47 36.8	-0.9
	baz=85,SNR=9.3						
L15A	Malad City	84.58	330	⇑P	P	03 47 36.9	-0.9
	baz=85,SNR=6.1						
K17A	Gardner Place,	84.60	331	⇓P	P	03 47 36.8	-1.1
	baz=85						
J18A	Kendall Valley	84.63	332	⇑P	P	03 47 37.3	-0.7
	baz=85,SNR=8.0						
AGMN	Agassiz Nation	84.71	343	eP	P	03 47 37.4	-0.8
	comp=N,85nm,2.8s,mb5.2						
N12A	Clover Valley,	84.78	328	⇓P	P	03 47 37.0	-1.9
	baz=85						
N12A	Clover Valley,	84.78	328	eP	P	03 47 38.8	0.0
	comp=N,6.4nm,0.7s,mb4.7						
ELK	Elko	84.78	327	eP	P	03 47 39.1	+0.3
	comp=N,5.3nm,0.6s,mb4.7						
M13A	Montello	84.81	329	⇑P	P	03 47 37.7	-1.3
	baz=85						
M13A	Montello	84.81	329	eP	P	03 47 38.7	-0.2
	comp=N,4.0nm,1.1s,mb4.3						
K16A	Soda Springs	84.94	331	⇑P	P	03 47 38.8	-0.8
	baz=85,SNR=5.9						
I18A	Diamond G Ranc	84.97	332	⇓P	P	03 47 39.2	-0.5
	baz=85,SNR=6.2						
REDW	Red Top Meadow	85.09	332	eP	P	03 47 40.4	+0.1
	comp=N,7.4nm,1.1s,mb4.5						
SNOW	Snow King Moun	85.13	332	eP	P	03 47 40.6	+0.1
	comp=N,9.6nm,0.7s,mb4.8						
M12A	Wells	85.18	328	⇓P	P	03 47 40.1	-0.7
	baz=85						
LOHW	Long Hollow	85.20	332	eP	P	03 47 40.7	-0.2
	comp=N,3.5nm,0.8s,mb4.3						
TPAW	Teton Pass	85.23	332	eP	P	03 47 41.5	+0.5
	comp=N,6.9nm,0.8s,mb4.6						
L13A	Double Diamond	85.31	329	⇑P	P	03 47 40.9	-0.6
	baz=86,SNR=5.5						
K14A	Jones Ranch, D	85.36	330	⇓P	P	03 47 40.5	-1.1
	baz=86						
IMW	Indian Meadow	85.57	332	eP	P	03 47 42.6	-0.1
	comp=N,8.6nm,0.9s,mb4.7						
M11A	Holland Ranch,	85.58	328	⇓P	P	03 47 42.0	-0.9
	baz=86,SNR=7.7						
J15A	Blackfoot	85.75	331	⇑P	P	03 47 41.6	-2.1
	baz=86,SNR=6.9						
I16A	Newdale	85.77	332	⇑P	P	03 47 42.3	-1.4
	baz=86,SNR=6.2						
K13A	Stover Farm, H	85.83	329	⇓P	P	03 47 42.8	-1.1
	baz=86						
RLMT	Red Lodge	85.97	334	⇑P	P	03 47 43.6	-1.0
	baz=86,SNR=7.3						
RLMT	Red Lodge	85.97	334	eP	P	03 47 44.7	+0.1
	comp=N,6.1nm,0.7s,mb4.6						
M10A	I.L. Ranch, Tu	85.99	327	⇓P	P	03 47 43.6	-1.2
	baz=86						
J14A	Carey	86.14	330	⇓P	P	03 47 45.3	-0.2
	baz=86						
L11A	Cat Creek Ranc	86.16	328	⇓P	P	03 47 45.4	-0.2
	baz=86,SNR=8.4						
K12A	Draper Farm, C	86.17	329	⇑P	P	03 47 45.0	-0.6
	baz=86,SNR=5.5						
LAO	LASA Array	86.24	336	eP	P	03 47 45.5	-0.4
	comp=N,15nm,1.1s,mb4.8						
G18A	Lazy EL Ranch,	86.24	334	⇑P	P	03 47 45.3	-0.7
	baz=86,SNR=6.8						
L10A	Juniper Basin	86.41	328	⇑P	P	03 47 47.0	+0.1
	baz=87,SNR=12						
J13A	Cove Ranch, Pi	86.47	330	⇑P	P	03 47 47.0	-0.1
	baz=87,SNR=9.4						
BEKR	Beckworth	86.50	324	⇓P	P	03 47 47.6	+0.2
	baz=87						
ULM	Lac du Bonnet	86.53	344	P	P	03 47 46.4	-0.9
	comp=N,2.2nm,0.4s,mb4.4,baz=196,slow=3.5,SNR=3.6						
ULM	Lac du Bonnet	86.53	344	eP	P	03 47 45.8	-1.5
	comp=N,4.1nm,0.7s,mb4.5						
I14A	Mackay	86.61	330	⇓P	P	03 47 48.0	+0.2
	baz=87,SNR=7.1						
HLID	Hailey	86.71	330	⇑P	P	03 47 47.9	-0.4
	baz=87,SNR=9.7						
HLID	Hailey	86.71	330	eP	P	03 47 49.0	+0.7
	comp=N,6.2nm,0.9s,mb4.5						
J12A	Stokes Ranch,	86.75	329	⇑P	P	03 47 48.5	0.0
	baz=87,SNR=15						
K11A	Parker Ranch,	86.77	328	⇓P	P	03 47 47.5	-1.1
	baz=87,SNR=8.1						
F18A	Big Timber	86.80	334	⇓P	P	03 47 48.1	-0.6
	baz=87,SNR=8.6						
H15A	Lima	86.85	331	⇑P	P	03 47 48.5	-0.4
	baz=87						
I13A	Wildhorse Cree	86.87	330	⇓P	P	03 47 48.9	-0.2
	baz=87,SNR=11						
G16A	Moss Hill, Enn	87.02	332	⇓P	P	03 47 49.9	+0.1
	baz=87						
MCMT	McKenzie Canyo	87.10	331	eP	P	03 47 51.0	+0.8
	comp=N,4.6nm,0.9s,mb4.4						
H14A	Leadore	87.14	331	⇑P	P	03 47 50.2	-0.1
	baz=87						
K10A	MacKenzie Ranc	87.14	328	⇓P	P	03 47 50.6	+0.2
	baz=87						
F17A	Fitzpatrick Pl	87.15	333	⇑P	P	03 47 50.4	0.0
	baz=87						
MFID	Camas Ranch	87.19	329	⇑P	P	03 47 50.3	-0.4
	baz=87						
I12A	Atlanta	87.20	329	⇑P	P	03 47 50.3	-0.4
	baz=88,SNR=7.9						
G15A	Dillon	87.24	332	⇑P	P	03 47 50.6	-0.2
	baz=88,SNR=6.3						
BOZ	Bozeman (W)	87.31	332	⇑P	P	03 47 50.7	-0.5
	baz=88						
BOZ	Bozeman (W)	87.31	332	eP	P	03 47 50.1	-1.1
	comp=N,1.2nm,0.6s,mb4.0						
DLMT	Dillon	87.45	332	eP	P	03 47 52.0	+0.2
	comp=N,9.5nm,1.4s,mb4.5						
H13A	Challis	87.46	330	⇓P	P	03 47 51.2	-0.7
	baz=88,SNR=14						
WVOR	Wild Horse Val	87.67	326	eP	P	03 47 53.5	+0.5
	comp=N,3.0nm,1.0s,mb4.3						
H12A	Diamond D Ranc	87.70	330	⇑P	P	03 47 52.6	-0.5
	baz=88						
LRM	Limekiln Ridge	87.77	332	eP	P	03 47 53.7	+0.4
F15A	Butte	87.80	332	⇑P	P	03 47 52.4	-1.1
	baz=88						
G13A	Cobalt	87.88	331	⇑P	P	03 47 52.7	-1.2
	baz=88,SNR=6.0						
D18A	Linhart Farms,	87.93	334	⇓P	P	03 47 53.2	-0.8
	baz=88						
J09A	Fry Pan Ranch,	87.99	328	⇓P	P	03 47 54.2	-0.2
	baz=88,SNR=6.9						
WDC	Whiskeytown Da	88.13	323	eP	P	03 47 54.9	-0.3
	comp=N,10.0nm,0.8s,mb4.9						
I10A	Payette	88.15	329	⇑P	P	03 47 54.5	-0.7
	baz=88,SNR=6.2						
SCHQ	Schefferville	88.20	2	P	P	03 47 53.6	-1.5
	comp=N,1.4nm,0.5s,mb4.3,baz=43,slow=17,SNR=5.5						
D17A	Six Diamond Ra	88.21	334	⇓P	P	03 47 54.6	-0.8
	baz=88,SNR=5.2						
H11A	Donnelly	88.31	329	⇓P	P	03 47 55.1	-0.9
	baz=89,SNR=7.3						
J08A	Circle Bar Ran	88.32	327	⇓P	P	03 47 55.3	-0.7
	baz=89						
I09A	Lost Marbles R	88.48	328	⇓P	P	03 47 55.9	-0.8
	baz=89						
F13A	Darby	88.49	331	⇑P	P	03 47 55.9	-0.9
	baz=89,SNR=5.0						
H10A	Noah's Angus R	88.53	329	P	P	03 47 57.3	+0.3
	baz=89,SNR=7.6						
LSZ	Lusaka	88.65	107	eP	P	03 47 58.9	+0.5
	comp=N,2.3nm,0.7s,mb4.3						
E14A	Clinton	88.67	332	⇓P	P	03 47 58.3	+0.7
	baz=89						
D15A	Lincoln	88.81	333	⇑P	P	03 47 57.5	-0.7
	baz=89						
F12A	Elk City	88.84	330	⇑P	P	03 47 57.7	-0.7
	baz=89						
B18A	Beardsley Farm	88.94	335	⇑P	P	03 47 58.5	-0.2
	baz=89						
E13A	Victor	88.97	331	⇑P	P	03 47 58.5	-0.4
	baz=89,SNR=5.2						
G11A	Walters Elk Ra	88.97	330	⇑P	P	03 47 58.9	-0.1
	baz=89,SNR=7.3						
D14A	Greenough	89.22	332	⇓P	P	03 47 59.8	-0.4
	baz=90						
B15A	Bradely Ranch,	89.88	333	⇑P	P	03 48 02.0	-1.2
	baz=90						
D12A	Red Ives Fores	89.93	331	⇓P	P	03 48 02.6	-0.8
	baz=90						
A16A	West Butte Ran	90.05	334	P	P	03 48 03.8	-0.2
	baz=90,SNR=10						
E10A	Myers Farm, Un	90.20	330	⇓P	P	03 48 04.4	-0.4
	baz=90						
LNOR	Lincton Mounta	90.21	329	eP	P	03 48 05.8	+0.9
FCC	Fort Churchill	94.17	348	eP	P	03 48 21.8	-1.0
	comp=N,0.3nm,0.8s,mb3.7						
WLF	Walferdange	107.09	41	ePKP	PKiKP	03 53 30.0	+0.2
ASAR	Alice Springs	118.45	205	PKP	PKPdf	03 53 50.3	-2.0
	comp=N,0.3nm,0.7s,baz=143,slow=2.1,SNR=4.0						
BRTR	Keskin Array B	120.52	60	PKP	PKPdf	03 53 55.2	-0.5
	comp=N,0.3nm,0.6s,baz=224,slow=6.0,SNR=2.8						
WRA	Warramunga Arr	121.68	208	PKP	PKPdf	03 53 56.5	-2.1
	comp=N,1.0nm,0.6s,baz=159,slow=1.7,SNR=4.8						
ARCES	ARCESS Array B	123.16	25	PKP	PKPdf	03 53 58.6	-1.2
	comp=N,1.2nm,1.0s,baz=270,slow=3.2,SNR=5.0						
ABKAR	Akbulak array	140.44	52	ePKPdf	PKPdf	03 54 32.7	-0.3
BRVK	Borovoye	146.06	43	ePKPbc	PKPbc	03 54 43.5	-0.2
BVAR	Borovoye Array	146.14	43	PKPbc	PKPbc	03 54 43.1	-0.9
	comp=N,2.7nm,0.6s,baz=256,slow=4.2,SNR=13						
YAK	Yakutsk	148.85	342	ePKPbc	PKPbc	03 54 50.3	-0.7
YAK				ePKPab	PKPab	03 54 54.4	-0.8
KULM	Kulim	150.57	162	ePKPbc	PKPbc	03 54 55.5	-1.3
EKS2	Erkin-Say	150.66	62	ePKPbc	PKPbc	03 54 56.0	-0.1
AAK	Ala-Archa	151.18	62	ePKPbc	PKPbc	03 54 57.7	+0.3
UCH	Uchtor	151.24	62	ePKPbc	PKPbc	03 54 58.1	+0.6
KURK	Kurchatov	151.73	44	PKP	PKPdf	03 54 52.0	+0.1
	comp=N,0.4nm,0.5s,baz=309,slow=1.9,SNR=3.8						
KURK				PKPbc	PKPbc	03 54 57.9	-0.5
	comp=N,3.6nm,0.5s,baz=301,slow=3.0,SNR=16						
KURK	Kurchatov	151.73	44	PKP	PKPdf	03 54 52.0	+0.1
KURK				ePKPbc	PKPbc	03 54 57.5	-0.8
KURK				PKPbc	PKPbc	03 54 57.9	-0.5
TKM2	Tokmak 2	151.95	61	ePKPbc	PKPbc	03 54 58.7	-0.4
KSH	Kashi	152.52	68	PKPbc	PKPbc	03 55 00.3	-0.2
KSH				pPKP	pPKPdf	03 55 26.9	+7.4
KSH				sPKP		03 55 37.8	
KSH				PKPab	PKPab	03 55 39.5	+28
KSH				PKS		03 58 32.4	
KSH				PP	PP	03 58 39.5	-5.2
KSH				SKS	SKSdf	04 01 54.3	+2.2
KSH				SKKS	SKKSac	04 05 57.8	+32
KSH				SS	SS	04 19 15.1	+67
KSH				AMB	AMB		
	comp=Z,140nm,7.1s						
KSH				LR	LR		
	comp=N,33nm,4.9s						
KSH				LR	LR		
	comp=E,63nm,4.4s						
KSH				LR	LR		
	comp=Z,84nm,5.5s						
ZALV	Zalesovo Beam	153.23	33	PKPbc	PKPbc	03 55 01.1	-0.5
	comp=Z,4.7nm,0.6s,baz=299,slow=2.8,SNR=24						
ZALV				pPKPbc	pPKPbc	03 55 26.9	-0.6
	comp=Z,1.1nm,0.5s,baz=307,slow=3.5,SNR=3.7						
MK31	Makanchi Array	155.55	49	ePKPdf	PKPdf	03 54 57.5	+0.1
MK31				ePKPab	PKPab	03 55 23.2	-0.6
MKAR	Makanchi Array	155.55	49	PKPbc	PKPdf	03 55 05.4	+7.9
	comp=Z,0.8nm,0.7s,baz=20,slow=3.9,SNR=7.1						
MKAR				PKPab	PKPab	03 55 23.3	-0.6
	comp=Z,1.0nm,0.7s,baz=346,slow=4.0,SNR=8.5						
MKAR	Makanchi Array	155.55	49	PKPbc	PKPdf	03 55 05.4	+8.0
MKAR				PKPab	PKPab	03 55 23.3	-0.6
CN2	Changchun	164.02	314	ePKP	PKPdf	03 55 06.3	-0.9
KSRS	Korea Array	164.58	289	PKPab	PKPab	03 56 04.4	+0.8
	comp=Z,1.8nm,0.7s,baz=66,slow=3.4,SNR=6.3						
KMI	Kunming	169.62	143	PKP	PKPdf	03 55 10.4	-1.6
KMI				pPKP	pPKPdf	03 55 34.4	-3.7
KMI				sPKP		03 55 45.8	
GTA	Gaotai	170.30	51	PKP	PKPdf	03 55 12.3	+0.4
NJ2	Nanjing	172.01	261	eP	PKPdf	03 55 20.6	+7.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GYA	Guiyang	172.39	160	ePKP	PKPdf	03 55 12.4	-1.0
GYA				sPKP		03 55 47.0	
GYA				PKPab	PKPab	03 56 39.4	+1.3
GYA				PKS		03 58 43.8	
GYA				PP	PP	04 00 31.8	+3.2
GYA				AMB	AMB		
	comp=Z,70nm,8.7s						
HHC	Hu-ho-hao-te	172.66	348	ePKP	PKPdf	03 55 10.5	-2.5
HHC				pPKP	pPKPdf	03 55 38.1	-1.1
HHC				sPKP		03 55 47.8	
HHC				PKPab	PKPab	03 56 38.5	-0.4
HHC				PKS		03 58 42.1	
HHC				PP	PP	04 00 27.5	-2.3
HHC				SKS	SKSdf	04 02 01.5	-6.1
HHC				SKKS	SKKSac	04 07 06.0	-2.1
HHC				SS	SS	04 21 28.9	-4.7
HHC				AMB	AMB		
	comp=Z,320nm,10.8

22nm,0.6s,mb4.9
KKN Kakani 26.71 340 *e*P **P 03 41 49.3 -0.2**
35nm,0.9s,mb4.9
LSA Lhasa 27.11 352 P **P 03 41 53.8 +0.7**
LSA Lhasa 27.11 352 *e*P **P 03 41 54.0 +0.9**
8.1nm,0.5s,mb4.5
BJT Baijiatuan 41.62 24 *e*P **P 03 43 58.4 +0.2**
14nm,0.7s,mb4.7
BJT *e*pP pP 03 44 06.5 -1.1
UCH Uchtor 43.52 337 *e*P **P 03 44 14.8 +1.2**
3.7nm,0.7s,mb4.2
UCH *e*pP pP 03 44 22.5 -0.6
TKM2 Tokmak 2 43.72 339 *e*P **P 03 44 14.5 -0.7**
1.7nm,0.5s,mb4.0
AML Almayashu 43.76 337 *e*P **P 03 44 16.9 +1.4**
3.9nm,0.4s,mb4.5
EKS2 Erkin-Say 44.18 337 *e*P **P 03 44 19.5 +0.6**
2.6nm,0.7s,mb4.1
EKS2 *e*pP pP 03 44 28.1 -0.2
WRA Warramunga Arr 44.40 122 P **P 03 44 20.1 -0.9**
2.9nm,0.9s,mb4.0,baz=304,slow=9.2,SNR=8.3
WRAB Tennant Creek 44.40 122 *e*P **P 03 44 20.8 -0.2**
3.5nm,0.8s,mb4.1
MK31 Makanchi Array 45.33 347 *e*P **P 03 44 28.0 +0.1**
MK31 *e*pP pP 03 44 36.0 -1.5
MKAR Makanchi Array 45.33 347 P **P 03 44 28.1 +0.1**
6.2nm,0.6s,mb4.6,baz=133,slow=7.1,SNR=71
KSRS Korea Array 45.67 37 P **P 03 44 30.8 0.0**
2.0nm,0.7s,mb4.1,baz=224,slow=8.8,SNR=6.9
ASAR Alice Springs 45.78 127 P **P 03 44 32.1 +0.2**
1.0nm,0.8s,mb3.8,baz=299,slow=7.6,SNR=6.7
ASAR pP pP 03 44 40.9 -0.6
0.5nm,0.5s,baz=302,slow=8.2,SNR=4.0
SONM Songino Array 45.91 10 P **P 03 44 32.6 0.0**
5.7nm,0.7s,mb4.6,baz=182,slow=9.4,SNR=9.1
ULN Ulaanbaatar 46.07 11 *e*P **P 03 44 33.3 -0.5**
3.0nm,0.8s,mb4.3
KURK Kurchatov 49.85 346 *e*P **P 03 45 03.2 +0.2**
3.6nm,0.8s,mb4.5
KURK *e*pP pP 03 45 11.3 -1.3
ZALV Zalesovo Beam 51.77 352 P **P 03 45 17.6 +0.1**
14nm,0.6s,mb5.1,baz=180,slow=6.9,SNR=69
ZALV pP pP 03 45 25.3 -1.7
8.5nm,0.6s,baz=183,slow=7.4,SNR=14
PMG Port Moresby 52.99 104 *e*P **P 03 45 26.5 -0.7**
39nm,0.8s,mb5.4
BVAR Borovoye Array 54.21 342 P **P 03 45 35.4 0.0**
2.8nm,0.6s,mb4.3,baz=138,slow=9.1,SNR=13
BVAR pP pP 03 45 44.1 -1.0
1.5nm,0.7s,baz=139,slow=7.0,SNR=4.5
BRVK Borovoye 54.27 342 *e*P **P 03 45 35.3 -0.6**
2.6nm,0.8s,mb4.2
BRVK *e*pP pP 03 45 43.5 -2.1
ABKAR Akbulak array 55.30 332 *e*P **P 03 45 43.1 -0.4**
4.1nm,0.8s,mb4.5
ABKAR *e*pP pP 03 45 51.7 -1.5
STKA Stephens Creek 55.74 132 P **P 03 45 47.6 +0.7**
4.9nm,1.1s,mb4.4,baz=305,slow=5.0,SNR=3.5
ARU Arti 61.06 338 *e*P **P 03 46 22.6 -1.0**
3.1nm,0.6s,mb4.6
ARU *e*pP pP 03 46 30.9 -2.5
LBTB Lobatse 72.94 243 *e*P **P 03 47 39.3 -0.5**
2.9nm,0.7s,mb4.3
FINES FINESS Array B 77.80 333 P **P 03 48 06.6 -0.3**
1.4nm,0.6s,mb4.1,baz=92,slow=5.3,SNR=12
FINES pP pP 03 48 15.0 -1.9
1.6nm,0.7s,baz=84,slow=5.9,SNR=4.1
ARCES ARCESS Array B 80.48 340 P **P 03 48 21.8 +0.4**
1.5nm,0.7s,mb4.0,baz=95,slow=5.3,SNR=14
ARCES pP pP 03 48 29.6 -1.9
2.4nm,0.8s,baz=96,slow=4.8,SNR=4.3
GERES GERESS Array B 82.45 319 P **P 03 48 33.4 +1.1**
0.5nm,0.6s,mb3.6,baz=98,slow=7.0,SNR=6.4
NOA NORSAR Array B 84.78 331 pP pP 03 48 51.2 -2.9
0.9nm,0.8s,baz=91,slow=5.9,SNR=2.9
TXAR Lajitas Array 143.25 28 PKhKP 03 55 42.0
0.2nm,0.6s,baz=220,slow=1.6,SNR=4.0
JCT Junction City 143.93 23 *e*PKPdf PKPdf 03 55 44.7 -1.3
CPUP Villa Florida 144.84 226 pPKP pPKPdf 03 55 56.1 -2.0
3.5nm,0.7s,baz=87,slow=3.5,SNR=7.4
CFAA Coronel Fontan 147.40 207 PKPbc PKPbc 03 55 54.6 +0.4
0.1nm,0.4s,baz=169,slow=5.2,SNR=3.1
CFAA pPKPbc pPKPbc 03 56 03.5 -1.2
0.4nm,0.7s,baz=254,slow=3.3,SNR=5.3

JMA 14 03:36:52.3,39.°06N×140.°87E,h11km±1km,M3.7,3D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMK	**Ichinoseki**	**0.29**	**112**	⇓P		Pg	03 36 58.1 -0.1
JMK				S		Sg	03 37 02.1 -0.1
JRG	**Rokugo**	**0.38**	**331**	⇓P		Pg	03 37 00.0 +0.1
JRG				*e*S		Sg	03 37 05.6 +0.6
JYK	**Kaneyama**	**0.42**	**251**	⇓P		Pg	03 37 08.0 +0.2
JYK				S		Sg	03 37 06.4 +0.2

DJA 14 03:46:30,1.°76N×120.°36E,h150km,MLv3.9/6, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MPSI	**Mapaga**	**1.49**	**198**	P		Pn	03 47 00.5 +1.1
MPSI				S		Sn	03 47 29.2 +7.2
MRSI	**Marisa**	**2.03**	**129**	P		Pn	03 47 04.2 -1.3
PCI	**Palu**	**2.70**	**191**	P		Pn	03 47 15.6 +2.0
APSI	**Ampana**	**2.95**	**154**	P		Pn	03 47 19.2 +2.4
APSI				S		Sn	03 47 55.3 +2.4
LUWI	**Luwuk**	**3.68**	**139**	P		Pn	03 47 28.8 +2.7
LUWI				S		Sn	03 48 09.8 +0.1
TTSI	**Tana Toraja**	**4.80**	**186**	P		Pn	03 47 41.3 +0.4
SPSI	**Sidrap Palu**	**5.72**	**186**	P		Pn	03 47 51.7 -1.3

*IDC **14** 03:55:20.4±0.8,39.°03N×140.°97E,h0km,mb3.7/10, mb1 3.9/10,mb1mx3.8/25,mbtmp3.7/10,ML2.7/1,Error ellipse: s-maj=23.4km s-min=18.1km az=93.0*
*NEIC **14** 03:55:22.4,39.°01N×140.°89E,h9km,mb4.1/4,After JMA.*
*JMA **14** 03:55:22.4,39.°01N×140.°89E,h7km±1km,M3.4*
JMA Felt II J1.
*ISCJB **14** 03:55:22.1±0.6,39.°01N±0.°05×140.°95E±0.°06,h22km±4km, mb3.8/14,Error ellipse: s-maj=8.5km s-min=7.6km az=40.1*

ISC 14 03:55:22.4±0.6,39.°00N±0.°04×140.°89E±0.°05,h11km±4km, n26,σ0.°91/29,mb3.8/14,1D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMK	**Ichinoseki**	**0.26**	**100**	P		**Pg**	**03 55 27.6 -0.1**
JMK				*e*S		**Sg**	**03 55 31.3 +0.1**
JYK	**Kaneyama**	**0.42**	**259**	⇓P		**Pg**	**03 55 30.8 0.0**
JRG	**Rokugo**	**0.45**	**333**	P		**Pg**	**03 55 30.9 -0.3**
JRG				*e*S		**Sg**	**03 55 37.4 +0.2**
JOM	**Ohasama**	**0.57**	**33**	P		**Pg**	**03 55 33.1 -0.4**
MAJO	**Matsushiro**	**3.25**	**222**	*e*Pn		**Pn**	**03 56 13.9 +0.6**
MAT	**Matsushiro**	**3.25**	**222**	P		**Pn**	**03 56 14.8 +1.5**
MAT				*e*S		**Sn**	**03 57 00.5 +8.6**
MJAR	**Matsushiro Arr**	**3.25**	**222**	Pn		**Pn**	**03 56 15.1 +1.9**
0.8nm,0.3s,baz=29,slow=13,SNR=8.9							
MJAR				Pg		**Pg**	**03 56 21.9 -2.7**
1.9nm,0.3s,baz=19,slow=16,SNR=12							
ERM	**Erimo**	**3.47**	**29**	*e*Pn		**Pn**	**03 56 19.1 +2.7**
ASAJ	**Asahikawa**	**5.27**	**13**	Pn		**Pn**	**03 56 42.5 +1.3**
1.0nm,0.3s,baz=41,slow=17,SNR=4.3							
KSRS	**Korea Array**	**10.32**	**265**	Pn		**Pn**	**03 57 54.4 +3.9**
0.5nm,0.3s,baz=76,slow=14,SNR=5.9							
ZALV	**Zalesovo Beam**	**40.31**	**311**	P		**P**	**04 02 59.1 -0.4**
0.4nm,0.5s,mb3.4,baz=114,slow=3.6,SNR=3.4							
MK31	**Makanchi Array**	**42.75**	**300**	*e*P		**P**	**04 03 19.0 -0.6**
MKAR	**Makanchi Array**	**42.75**	**300**	P		**P**	**04 03 19.6 -0.1**
0.5nm,0.7s,mb3.4,baz=72,slow=12,SNR=5.8							
KURK	**Kurchatov**	**44.42**	**306**	P		**P**	**04 03 33.0 +0.1**
2.1nm,0.9s,mb3.9,baz=82,slow=8.4,SNR=8.8							
TKM2	**Tokmak 2**	**48.36**	**297**	*e*P		**P**	**04 04 03.7 -0.3**
0.8nm,0.4s,mb4.1							
BVAR	**Borovoye Array**	**48.96**	**311**	P		**P**	**04 04 09.1 +0.5**
0.6nm,0.6s,mb3.8,baz=65,slow=6.8,SNR=3.6							
INK	**Inuvik**	**52.84**	**28**	*e*P		**P**	**04 04 37.3 -0.2**
1.8nm,0.9s,mb4.0							
ABKAR	**Akbulak array**	**56.38**	**309**	*e*P		**P**	**04 05 02.9 -0.6**
0.6nm,0.6s,mb3.8							
WRA	**Warramunga Arr**	**58.95**	**187**	P		**P**	**04 05 21.1 -0.6**
0.6nm,0.3s,mb4.0,baz=7.8,slow=7.7,SNR=7.8							
RES	**Resolute Bay**	**60.81**	**15**	*e*P		**P**	**04 05 33.6 -0.3**
1.4nm,0.6s,mb4.3							
ARCES	**ARCESS Array B**	**62.02**	**339**	P		**P**	**04 05 41.2 -1.0**
1.7nm,1.1s,mb4.1,baz=46,slow=10,SNR=3.6							
ASAR	**Alice Springs**	**62.68**	**187**	P		**P**	**04 05 46.0 -1.0**
0.6nm,0.7s,mb3.8,baz=4.8,slow=4.7,SNR=4.7							
FINES	**FINESS Array B**	**66.89**	**332**	P		**P**	**04 06 13.4 -0.8**
1.0nm,0.7s,mb4.0,baz=59,slow=1.1,SNR=4.4							
PDAR	**Pinedale Array**	**76.59**	**46**	P		**P**	**04 07 12.6 -0.2**
0.4nm,0.7s,mb3.5,baz=153,slow=1.7,SNR=4.0							
TXAR	**Lajitas Array**	**89.25**	**52**	P		**P**	**04 08 19.1 +0.5**
0.3nm,0.8s,mb3.7,baz=29,slow=2.1,SNR=3.4							
LPAZ	**La Paz**	**146.00**	**56**	PKPbc		PKPbc	04 15 03.4 +0.8
1.1nm,0.8s,baz=46,slow=0.9,SNR=5.7							

*TRN **14** 03:59:10.4,19.°24N×64.°51W,h3km*
*NEIC **14** 03:59:11.9,19.°44N×64.°18W,h61km,MD3.5(RSPR), After RSPR.*

RSPR 14 03:59:11.9,19.°44N×64.°18W,h61km±9km,MD3.5/3, MD3.5/3,6C-2D,Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STVI	**Saint Thomas**	**1.31**	**214**	⇓*e*P		Pn	03 59 33.1 -0.9
STVI				*e*S		Sn	03 59 50.0 -0.5
STVI	**Saint Thomas**	**1.31**	**214**	⇓*e*P		Pn	03 59 33.1 -0.9
STVI				*e*S		Sn	03 59 50.0 -0.5
MTP	**Monte Pirata**	**1.86**	**224**	⇑*e*P		Pn	03 59 40.9 -0.6
MTP				*e*S		Sn	04 00 03.2 -0.8
MTP	**Monte Pirata**	**1.86**	**224**	⇑*e*P		Pn	03 59 40.9 -0.6
MTP				*e*S		Sn	04 00 03.2 -0.8
HUMP	**Col San Antoni**	**2.04**	**231**	⇑*e*P		Pn	03 59 43.2 -0.7
HUMP	**Col San Antoni**	**2.04**	**231**	⇑*e*P		Pn	03 59 43.2 -0.7
CPD	**Cerro la Pandu**	**2.15**	**230**	⇑*e*P		Pn	03 59 44.6 -0.9
CPD				*e*S		Sn	04 00 09.6 -1.6
CPD	**Cerro la Pandu**	**2.15**	**230**	⇑*e*P		Pn	03 59 44.6 -0.9
CPD				*e*S		Sn	04 00 09.6 -1.6

IDC 14 04:04:15.9±62.0,15.°73S×165.°94E,h0km,mb4.2/3, mb1 4.3/3,mb1mx3.9/16,mbtmp4.2/3,Error ellipse: s-maj=1049.0km s-min=104.8km az=66.0,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**27.37**	**230**	P		P	04 10 02.4 -0.6
2.4nm,0.4s,baz=50,slow=9.1,SNR=7.8							
WRA	**Warramunga Arr**	**30.34**	**257**	P		P	04 10 29.8 +0.2
0.7nm,0.5s,baz=86,slow=9.2,SNR=2.9							
ASAR	**Alice Springs**	**31.12**	**250**	P		P	04 10 36.8 +0.4
1.5nm,0.4s,baz=76,slow=9.7,SNR=33							

JMA 14 04:09:51.2,39.°03N×140.°85E,h8km±1km,M2.3,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMK	**Ichinoseki**	**0.30**	**105**	S		Sg	04 10 00.9 -0.2
JRG	**Rokugo**	**0.40**	**335**	P		Pg	04 09 59.2 +0.1
JRG				*e*S		Sg	04 10 05.0 +0.6
JOM	**Ohasama**	**0.56**	**38**	*e*S		Sg	04 10 09.3 -0.1
JOU	**Okura**	**0.68**	**192**	P		Pg	04 10 04.5 +0.2
JOU				S		Sg	04 10 13.4 +0.3

*NIED **14** 04:10:00,39.°10N×140.°90E,h5km,Mw4.4 Best double couple: M0 3.86000×1015 NP1:φs40.00000°,δ47.00000°, λ88.00000°. NP2:φs223.00000°,δ43.00000°,λ92.00000°.*
*ISCJB **14** 04:10:47.0±0.5,39.°10N±0.°02×140.°83E±0.°02,h11km±2km, mb4.5/84,MS4.1/10,Error ellipse: s-maj=3.7km s-min=3.0km az=172.9*
*BJI **14** 04:10:46.2,38.°85N×140.°91E,h18km,mB4.7/20,mb4.5/26, Ms4.3/24,Ms7 4.0/23*
*IDC **14** 04:10:46.4±0.6,39.°12N×140.°74E,h0km,mb4.2/19, mb1 4.4/20,mb1mx4.3/27,mbtmp4.2/20,ML3.7/2,MS3.7/2, Ms1 3.7/2,ms1mx3.0/33,Error ellipse: s-maj=17.0km s-min=12.0km az=119.0*
*JMA **14** 04:10:47.4,39.°10N×140.°86E,h8km±1km,M4.4*
JMA Felt III J1.
*NEIC **14** 04:10:47.3,39.°10N×140.°86E,h10km,mb4.5/55, MW4.3(NIED),After JMA.*
NEIC Recorded [3 JMA] in Iwate and [2 JMA] in Akita and Miyagi.
*MOS **14** 04:10:51.6±0.8,39.°34N×140.°66E,h33km,mb4.7/53,Error ellipse: s-maj=9.4km s-min=5.2km az=102.8*
*SZGRF **14** 04:11:01.4,41.°04N×141.°21E,h33km,mb4.5,Hokkaido, Japan, region*

ISC 14 04:10:47.7±0.4,39.°08N±0.°02×140.°82E±0.°02,h7km±2km, h14km±1.1km:pP-P,n323,σ0.°85/341,mb4.5/84,MS4.1/10, 45C-42D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMK	**Ichinoseki**	**0.34**	**113**	P		**Pg**	**04 10 53.4 -0.8**
JMK				*e*S		**Sg**	**04 10 57.8 -0.8**
JRG	**Rokugo**	**0.34**	**335**	P		**Pg**	**04 10 54.4 0.0**
JRG				*e*S		**Sg**	**04 10 59.5 +0.6**
JYK	**Kaneyama**	**0.40**	**245**	P		**Pg**	**04 10 56.0 +0.6**
JYK				*e*S		**Sg**	**04 11 01.8 +1.2**
JOM	**Ohasama**	**0.53**	**43**	P		**Pg**	**04 10 57.1 -0.8**
JOM				*e*S		**Sg**	**04 11 03.7 -1.2**
OFUJ	**Ofunato**	**0.66**	**90**	P		**Pg**	**04 10 59.5 -0.8**
OFUJ				*e*S		**Sg**	**04 11 08.1 -0.8**
JOU	**Okura**	**0.73**	**190**	P		**Pg**	**04 11 01.9 +0.2**
JOU				*e*S		**Sg**	**04 11 11.9 +0.8**
JIO	**Ouri**	**0.75**	**147**	P		**Pg**	**04 11 01.5 -0.6**
JIO				S		**Sg**	**04 11 11.5 -0.4**
MAJO	**Matsushiro**	**3.27**	**220**	*e*P		**Pn**	**04 11 40.7 +1.3**
MAT	**Matsushiro**	**3.27**	**220**	P		**Pn**	**04 11 40.5 +1.1**
MAT				*e*S		**Sn**	**04 12 27.0 +8.3**
MJAR	**Matsushiro Arr**	**3.27**	**220**	Pn		**Pn**	**04 11 40.9 +1.5**
2.8nm,0.3s,baz=30,slow=9.9,SNR=34							
MJAR				Pg		**Pg**	**04 11 46.8 -3.6**
4.2nm,0.3s,baz=28,slow=14,SNR=36							
MJAR				Lg			04 12 29.8
2.6nm,0.3s,baz=238,slow=28,SNR=4.4							
MJAR	**Matsushiro Arr**	**3.27**	**220**	P		**Pn**	**04 11 40.9 +1.5**
MJAR							04 12 29.8
MJAR				pmax	pmax		
comp=Z,3.0nm,0.3s							
ERM	**Erimo**	**3.42**	**31**	*e*P		**Pn**	**04 11 43.4 +1.9**
ERM	**Erimo**	**3.42**	**31**	*e*Pn		**Pn**	**04 11 45.1 +3.7**
ASAJ	**Asahikawa**	**5.20**	**14**	Pn		**Pn**	**04 12 05.7 -0.2**
comp=Z,3.2nm,0.3s,baz=268,slow=8.7,SNR=15							
ASAJ				Sn		**Sn**	**04 13 08.4 +2.3**
comp=Z,0.6nm,0.3s,baz=177,slow=18,SNR=1.9							
ASAJ	**Asahikawa**	**5.20**	**14**	P		**Pn**	**04 12 05.7 -0.2**
ASAJ							04 13 08.4
ASAJ				pmax	pmax		
comp=Z,3.0nm,0.3s							
ASAJ				smax			
comp=N,1.0nm,0.3s							
VLA	**Vladivostok**	**7.85**	**304**	P		**Pn**	**04 12 45.0 +2.7**
VLA				pmax	pmax		
comp=Z,18nm,0.8s							
VLA				MLR	MLR		
comp=Z,500nm,13.7s							
YSS	**Yuzh-Sakhalins**	**7.99**	**10**	*e*P		**Pn**	**04 12 45.0 +0.8**
YSS				pmax	pmax		
comp=Z,30nm,1.0s							
YSS				MLR	MLR		
comp=Z,800nm,13.0s							
YSS	**Yuzh-Sakhalins**	**7.99**	**10**	*e*Pn		**Pn**	**04 12 45.0 +0.8**
MDJ	**Mudanjiang**	**10.03**	**307**	P		**Pn**	**04 13 11.9 -0.3**
MDJ				pP			04 13 16.3
MDJ				S		**Sn**	**04 15 04.1 -0.9**
MDJ				PcS	PcS		04 22 56.8 +0.7
MDJ				pmax	pmax		
comp=Z,4.0nm,1.0s							
MDJ				pmax	pmax		
comp=Z,160nm,14.8s							
MDJ				LR	LR		
comp=N,280nm,17.5s							
MDJ				LR	LR		
comp=E,510nm,15.9s							
MDJ				LR	LR		
comp=Z,820nm,16.4s							
HABR	**Khabarovsk**	**10.27**	**338**	*e*P		**Pn**	**04 13 17.6 +2.2**
HABR							04 15 09.6
HABR				MLR	MLR		
comp=Z,466nm,15.0s							
KSRS	**Korea Array**	**10.27**	**265**	Pn		**Pn**	**04 13 18.4 +2.8**
comp=Z,1.5nm,0.3s,baz=79,slow=14,SNR=29							
KSRS				Sn		**Sn**	**04 15 16.4 +5.5**
comp=Z,0.6nm,0.3s,baz=76,slow=24,SNR=19							
KSRS				LR		LR	04 16 50.2
comp=Z,282nm,19.6s,baz=347,slow=36							
KSRS	**Korea Array**	**10.27**	**265**	P		**Pn**	**04 13 18.4 +2.9**
KSRS							04 15 16.4
KSRS				pmax	pmax		
comp=Z,2.0nm,0.3s							
KSRS				smax			
comp=N,1.0nm,0.3s							
KSRS				MLR	MLR		
comp=Z,282nm,19.6s							
KLR	**Kul'dur**	**12.04**	**330**	*e*P		**Pn**	**04 13 39.8 +0.1**
KLR				MLR	MLR		
comp=Z,1μm,13.0s							
CN2	**Changchun**	**12.46**	**297**	*e*P		**Pn**	**04 13 49.5 +4.1**
CN2				*es*P			04 13 55.9
PET	**Petropavlovsk**	**18.57**	**36**	*e*P		**Pn**	**04 15 07.3 +2.1**
PET				pmax	pmax		
comp=Z,5.0nm,0.3s							
PET	**Petropavlovsk**	**18.57**	**36**	*e*P		**Pn**	**04 15 07.3 +2.2**
comp=Z,4.6nm,0.3s							
BJI	**Beijing**	**19.02**	**281**	P		**Pn**	**04 15 10.1 -0.6**
BJI				S		**Sn**	**04 18 41.4 -2.4**
BJI				pmax	pmax		
comp=Z,8.0nm,1.6s							
BJI				pmax	pmax		
comp=Z,89nm,3.6s							
BJI				LR	LR		
comp=N,220nm,17.1s							
BJI				LR	LR		
comp=E,440nm,15.0s							
BJI				LR	LR		
comp=Z,220nm,21.3s							
NJ2	**Nanjing**	**19.18**	**255**	*e*P		**Pn**	**04 15 14.3 +1.6**
NJ2				pmax	pmax		
comp=Z,20nm,0.5s							
CLNS	**Chul'man**	**20.63**	**335**	*e*P		**P**	**04 15 25.6 -1.8**
CLNS				pmax	pmax		
comp=Z,17nm,0.9s							
CLNS				pmax	pmax		
comp=N,15nm,1.1s							
CLNS				pmax	pmax		
comp=E,9.0nm,1.1s							
CLNS				MLR	MLR		
comp=N,61nm,10.0s							
CLNS				MLR	MLR		
comp=Z,238nm,14.0s,MS3.7							
HHC	**Hu-ho-hao-te**	**22.45**	**284**	*e*P		**P**	**04 15 45.5 -1.7**
HHC				pP			04 15 50.3
HHC				sP		sP	04 15 52.8 +2.9
HHC				PP			04 16 14.3
HHC				*es*S		**S**	**04 19 45.1 -9.0**
HHC				PcS		PcS	04 23 20.0 -0.2
HHC				pmax	pmax		
comp=Z,13nm,0.9s,mb4.4							
HHC				pmax	pmax		
comp=Z,220nm,7.4s							
HHC				LR	LR		
comp=N,180nm,9.4s							
HHC				LR	LR		
comp=E,360nm,13.1s							
HHC				LR	LR		
comp=Z,420nm,15.2s,MS4.0							
YAK	**Yakutsk**	**23.97**	**347**	*e*P		**P**	**04 15 59.6 -2.8**
YAK				*e*S		**S**	**04 20 09.8 -9.4**
YAK				pmax	pmax		
comp=Z,32nm,1.1s,mb4.7							
YAK				pmax	pmax		
comp=N,20nm,1.2s							
YAK				pmax	pmax		
comp=E,9.0nm,1.4s							
YAK				smax			
comp=E,39nm,2.0s							
YAK				smax			
comp=N,128nm,2.4s							
YAK	**Yakutsk**	**23.97**	**347**	*e*P		**P**	**04 16 01.6 -0.8**
SEY	**Seymchan**	**24.88**	**13**	*ce*P		**P**	**04 16 12.1 +1.4**
ULN	**Ulaanbaatar**	**25.86**	**301**	*e*P		**P**	**04 16 19.2 -0.6**
TLY	**Talaya**	**28.66**	**308**	*e*		**S**	**04 21 35.4 +1.6**
TLY				MLR	MLR		
comp=Z,338nm,16.0s,MS4.0							
LZH	**Lanzhou**	**29.33**	**276**	*e*P		**P**	**04 16 51.5 +0.5**
LZH				pP		pP	04 16 54.5 +1.5
LZH				PP		PP	04 17 46.0 -11
LZH				*es*S		**S**	**04 21 41.0 -3.6**
LZH				SS		SS	04 23 11.3 -37
LZH				pmax	pmax		
comp=Z,13nm,1.0s,mb4.6							
LZH				pmax	pmax		
comp=Z,80nm,6.2s							
LZH				LR	LR		
comp=E,600nm,12.7s							
LZH				LR	LR		
comp=Z,750nm,13.4s,MS4.5							
GYA	**Guiyang**	**31.18**	**256**	P		**P**	**04 17 07.4 0.0**
GYA				PP		PP	04 18 10.4 -7.3
GYA				PcP		PcP	04 20 03.8 +1.5
GYA				S		**S**	**04 22 09.4 -4.3**
GYA				ScP		ScP	04 23 45.8 +0.2
GYA				SS		SS	04 23 56.0 -31
GYA				pmax	pmax		
comp=Z,10.0nm,1.0s,mb4.6							
GYA				pmax	pmax		
comp=Z,150nm,14.0s							
GYA				LR	LR		
comp=N,350nm,13.5s,MS4.4							
GYA				LR	LR		
comp=E,420nm,14.7s,MS4.4							
GYA				LR	LR		
comp=Z,560nm,15.1s,MS4.3							
CD2	**Chengdu**	**31.27**	**266**	*e*P		**P**	**04 17 08.6 +0.4**
CD2				pP		pP	04 17 13.0 +2.8
CD2				sP		sP	04 17 15.8 +4.8
CD2				PP		PP	04 18 10.5 -8.2
CD2				S		**S**	**04 22 13.5 -1.6**
CD2				SS		SS	04 23 55.8 -33
CD2				pmax	pmax		
comp=Z,10.0nm,0.6s,mb4.8							
CD2				pmax	pmax		
comp=Z,20nm,4.2s							
CD2				LR	LR		
comp=N,300nm,13.0s,MS4.4							
CD2				LR	LR		
comp=E,420nm,10.7s,MS4.4							
CD2				LR	LR		
comp=Z,530nm,13.1s,MS4.4							
GTA	**Gaotai**	**31.57**	**284**	*e*P		**P**	**04 17 06.9 -3.8**
GTA				PcP		PcP	04 20 03.3 +0.1
GTA				pmax	pmax		
comp=Z,2.0nm,0.6s,mb4.1							
BILL	**Bilibino**	**32.21**	**18**	*e*P		**P**	**04 17 16.3 +0.3**
BILL				pmax	pmax		
comp=Z,13nm,1.6s,mb4.5							
BILL	**Bilibino**	**32.21**	**18**	*e*P		**P**	**04 17 16.2 +0.2**
comp=Z,6.8nm,1.0s,mb4.4							
TIXI	**Tiksi**	**33.20**	**353**	*e*P		**P**	**04 17 23.9 -0.8**
TIXI				pmax	pmax		
comp=Z,5.0nm,0.9s,mb4.4							
TIXI	**Tiksi**	**33.20**	**353**	*e*P		**P**	**04 17 23.9 -0.8**
comp=Z,4.9nm,0.9s,mb4.4							
TIXI				*ep*P		pP	04 17 43.6 +17
QIZ	**Qiongzhong**	**33.41**	**242**	P		**P**	**04 17 26.3 -0.7**
QIZ				S		**S**	**04 22 48.3 -0.3**
QIZ				pmax	pmax		
comp=Z,12nm,1.3s,mb4.7							
QIZ				pmax	pmax		
comp=Z,180nm,6.5s							
QIZ				LR	LR		
comp=N,240nm,4.2s							
QIZ				LR	LR		
comp=Z,240nm,19.1s,MS3.9							
KMI	**Kunming**	**34.87**	**258**	P		**P**	**04 17 40.3 +0.6**
KMI				pP		pP	04 17 43.8 +2.1
KMI				sP		sP	04 17 45.1 +2.6
KMI				PP		PP	04 18 58.1 -0.6
KMI				S		**S**	**04 23 10.4 -0.8**
KMI				SS		SS	04 25 22.5 -

KMI pmax pmax
comp=Z,92nm,4.4s
KMI LR LR
comp=N,170nm,15.6s,MS4.0
KMI LR LR
comp=E,130nm,18.5s,MS4.0
KMI LR LR
comp=Z,240nm,22.6s,MS3.9
WMQ Urumqi 39.53 295 *e*P **P 04 18 19.0 -0.1**
ZAA0 Zalesovo Array 40.21 311 *e*P **P 04 18 23.9 -0.7**
ZALV Zalesovo Beam 40.21 311 P **P 04 18 23.5 -1.1**
comp=Z,1.3nm,0.5s,mb3.9,baz=80,slow=8.8,SNR=9.8
ZALV PcP PcP 04 20 27.9 -0.6
comp=Z,1.0nm,0.5s,baz=59,slow=2.2,SNR=4.3
ZALV Zalesovo Beam 40.21 311 P **P 04 18 23.5 -1.1**
ZALV 04 20 27.9
ZALV pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
NVS Novosibirsk 41.10 312 *e*P **P 04 18 31.4 -0.6**
MK31 Makanchi Array 42.66 300 *e*P **P 04 18 44.5 -0.3**
MKAR Makanchi Array 42.66 300 P **P 04 18 44.1 -0.7**
comp=Z,1.7nm,0.8s,mb3.8,baz=74,slow=14,SNR=15
MKAR Makanchi Array 42.66 300 P **P 04 18 44.1 -0.7**
MKAR pmax pmax
comp=Z,2.0nm,0.8s
KURK Kurchatov 44.32 306 P **P 04 18 58.0 -0.1**
comp=Z,3.8nm,0.7s,mb4.2,baz=82,slow=8.4,SNR=12
KURK PcP PcP 04 20 41.4 -0.8
comp=Z,1.1nm,0.9s,baz=78,slow=4.1,SNR=5.0
KURK Kurchatov 44.32 306*c e*P **P 04 18 57.9 -0.2**
KURK pmax pmax
comp=Z,8.0nm,1.0s,mb4.4
KURK Kurchatov 44.32 306 *e*P **P 04 18 56.8 -1.3**
comp=Z,3.0nm,0.6s,mb4.2
KDAK Kodiak Island 45.91 43 *i* P **P 04 19 12.1 +1.5**
MCK McKinley 47.20 35 *e*P **P 04 19 21.3 +0.6**
MCK pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
MCK McKinley 47.20 35 *e*P **P 04 19 21.3 +0.6**
comp=Z,2.6nm,0.6s,mb4.3
PMR Palmer 47.28 38 *e*P **P 04 19 23.8 +2.5**
PMR pmax pmax
comp=Z,28nm,1.5s,mb5.0
PMR Palmer 47.28 38 *e*P **P 04 19 23.8 +2.5**
comp=Z,28nm,1.5s,mb5.0
COLA College 47.61 33 *e*P **P 04 19 24.5 +0.7**
COLA pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
COLA College 47.61 33 *e*P **P 04 19 24.5 +0.7**
comp=Z,2.7nm,0.7s,mb4.4
TKM2 Tokmak 2 48.27 297 *e*P **P 04 19 29.8 +0.5**
TKM2 pmax pmax
comp=Z,20nm,1.5s,mb4.9
TKM2 Tokmak 2 48.27 297 *e*P **P 04 19 29.8 +0.5**
comp=Z,20nm,1.5s,mb4.9
BVAR Borovoye Array 48.86 311 P **P 04 19 33.0 -0.7**
comp=Z,1.0nm,0.5s,mb4.1,baz=65,slow=8.2,SNR=6.8
BVAR PcP PcP 04 20 58.3 +0.2
comp=Z,1.9nm,0.6s,baz=49,slow=3.2,SNR=7.6
BVAR Borovoye Array 48.86 311 P **P 04 19 33.0 -0.7**
BVAR 04 20 58.3
BVAR pmax pmax
comp=Z,1.0nm,0.5s
BRVK Borovoye 48.92 311 *e*P **P 04 19 34.2 +0.1**
BRVK pmax pmax
comp=Z,1.0nm,0.5s,mb4.1
BRVK Borovoye 48.92 311 *e*P **P 04 19 34.2 +0.1**
comp=Z,1.0nm,0.5s,mb4.1
AAK Ala-Archa 49.13 297 *e*P **P 04 19 35.6 -0.3**
AAK pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
AAK Ala-Archa 49.13 297 *e*P **P 04 19 35.6 -0.3**
comp=Z,2.0nm,0.6s,mb4.3
KSH Kashi 49.17 292 *e*P **P 04 19 41.1 +4.8**
KSH pP pP 04 19 45.5 +7.2
KSH sP sP 04 19 48.1 +9.0
KSH PcP PcP 04 21 02.8 +3.3
KSH PP PP 04 21 35.9 +6.1
KSH ScP ScP 04 24 56.3 +1.2
KSH PcS PcS 04 24 58.1 +2.2
KSH S **S 04 26 47.0 +5.0**
KSH sS sS 04 26 55.3 +10
KSH ScS ScS 04 29 29.3 +0.4
KSH SS SS 04 30 15.9 +3.0
KSH pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
KSH pmax pmax
comp=Z,160nm,4.9s
KSH LR LR
comp=N,82nm,7.1s
KSH LR LR
comp=E,100nm,6.2s
KSH LR LR
comp=Z,120nm,4.6s
UCH Uchtor 49.25 296 *e*P **P 04 19 37.9 +1.0**
comp=Z,6.8nm,1.5s,mb4.5
EKS2 Erkin-Say 49.62 297 *e*P **P 04 19 39.8 +0.1**
comp=Z,1.7nm,0.6s,mb4.2
INK Inuvik 52.79 28 P **P 04 20 03.3 +0.2**
comp=Z,2.5nm,0.6s,mb4.3,baz=297,slow=7.6,SNR=7.3
INK Inuvik 52.79 28 P **P 04 20 03.3 +0.3**
INK pmax pmax
comp=Z,3.0nm,0.6s
INK Inuvik 52.79 28 *e*P **P 04 20 03.8 +0.7**
comp=Z,15nm,1.5s,mb4.7
HYT Haines Junctio 52.95 37 *e*P **P 04 20 06.4 +2.1**
SVE Sverdlovsk 53.31 318⇑ *e*P **P 04 20 07.4 +0.3**
SVE pmax pmax
comp=Z,14nm,1.1s,mb4.8
SVE MLR MLR
comp=Z,339nm,16.0s,MS4.5
ARU Arti 54.53 317*d i*P **P 04 20 15.3 -0.7**
ARU 04 21 16.5
ARU 04 22 14.5
ARU S **S 04 27 51.6 -3.6**
ARU SS SS 04 31 29.3 -7.8
ARU pmax pmax
comp=Z,21nm,1.7s,mb4.9
ARU Arti 54.53 317 *e*P **P 04 20 15.9 -0.1**
comp=Z,21nm,1.4s,mb5.0
KBL Kabul 56.27 289 *e*P **P 04 20 30.0 +1.1**
KBL pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
KBL Kabul 56.27 289 *e*P **P 04 20 30.0 +1.2**
comp=Z,9.7nm,1.0s,mb4.8
ABKAR Akbulak array 56.28 309 *e*P **P 04 20 28.1 -0.6**
comp=Z,2.7nm,0.5s,mb4.5
WRAB Tennant Creek 59.02 187 *e*P **P 04 20 47.5 -0.7**
WRAB pmax pmax
comp=Z,19nm,1.3s,mb5.0
WRAB Tennant Creek 59.02 187 *e*P **P 04 20 47.5 -0.7**
comp=Z,19nm,1.3s,mb5.0
WRA Warramunga Arr 59.03 187 P **P 04 20 47.0 -1.2**
comp=Z,6.7nm,0.9s,mb4.7,baz=4.8,slow=7.4,SNR=23
WRA Warramunga Arr 59.03 187 P **P 04 20 47.0 -1.2**
WRA pmax pmax
comp=Z,7.0nm,0.9s
RES Resolute Bay 60.74 15 *e*P **P 04 20 58.6 -0.8**
RES pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
RES Resolute Bay 60.74 15 *e*P **P 04 20 58.6 -0.8**
comp=Z,8.3nm,0.9s,mb4.9
ARCES ARCESS Array B 61.92 339 P **P 04 21 06.6 -0.9**
comp=Z,1.5nm,0.8s,mb4.2,baz=60,slow=7.2,SNR=11
ARCES ARCESS Array B 61.92 339 P **P 04 21 06.6 -0.9**
ARCES pmax pmax
comp=Z,2.0nm,0.8s
ARCES ARCESS Array B 61.92 339 P **P 04 21 06.6 -0.9**
YKA Yellowknife Ar 62.28 31 P **P 04 21 09.5 -0.4**
comp=Z,0.7nm,0.6s,mb4.0,baz=298,slow=6.9,SNR=3.3
YKA Yellowknife Ar 62.28 31 P **P 04 21 09.5 -0.5**
YKA pmax pmax
comp=Z,1.0nm,0.6s
ASAR Alice Springs 62.76 187 P **P 04 21 13.5 0.0**
comp=Z,2.7nm,0.9s,mb4.4,baz=11,slow=5.9,SNR=15
ASAR Alice Springs 62.76 187 P **P 04 21 13.5 0.0**
ASAR pmax pmax
comp=Z,3.0nm,0.9s
JOF Joensuu 63.94 331 *e*P **P 04 21 18.5 -2.5**
JOF pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
JOF Joensuu 63.94 331 *e*p **P 04 21 18.5 -2.5**
comp=Z,2.9nm,0.7s,mb4.4
OBN Obninsk 66.18 323 *e*P **P 04 21 35.7 0.0**
OBN pmax pmax
comp=Z,8.0nm,1.3s,mb4.6
KAF Kangasniemi 66.28 332 *e*P **P 04 21 33.2 -3.0**
KAF pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
KAF Kangasniemi 66.28 332 *e*p **P 04 21 33.2 -3.0**
comp=Z,3.8nm,0.8s,mb4.5
FINES FINESS Array B 66.79 332 P **P 04 21 39.0 -0.5**
comp=Z,4.6nm,0.7s,mb4.6,baz=56,slow=4.8,SNR=16
FINES FINESS Array B 66.79 332 P **P 04 21 39.0 -0.5**
FINES pmax pmax
comp=Z,5.0nm,0.7s
NEW Newport 68.99 44 *e*P **P 04 21 54.8 +1.2**
ZEI Tsey 69.16 309 *e*P **P 04 21 51.5 -3.2**
ZEI pmax pmax
comp=Z,5.0nm,0.4s,mb4.8
KIV Kislovodsk 69.22 310 *e*P **P 04 21 56.3 +1.2**
KIV *i* 04 22 19.2
KIV pmax pmax
comp=Z,49nm,1.6s,mb5.2
KIV Kislovodsk 69.22 310 *e*P **P 04 21 56.0 +0.9**
comp=Z,27nm,1.0s,mb5.1
GNI Garni 70.12 306*c e*P **P 04 22 03.1 +2.4**
GNI pmax pmax
comp=Z,17nm,1.7s
B13A Whitefish 70.36 43 ⇓P **P 04 22 02.1 +0.1**
baz=70,SNR=6.8
IZAR Zarasai 70.44 327 *e*P **P 04 22 01.3 -1.0**
IDID Didziasalis 70.51 326 *e*P **P 04 22 02.5 -0.3**
IDID AMB AMB 04 22 04.5
comp=Z,3.4nm,1.6s,mb4.0
FORT Forrest 70.51 192 *e*P **P 04 22 02.1 -0.9**
comp=Z,19nm,0.9s,mb5.0
ISAL Salakas 70.60 327 *e*P **P 04 22 02.6 -0.8**
ISAL AMB AMB 04 22 05.0
comp=Z,4.9nm,1.4s,mb4.2
IIGN Ignalina 70.71 327 *e*P **P 04 22 03.3 -0.7**
IIGN AMB AMB 04 22 04.5
comp=Z,4.1nm,1.1s,mb4.3
E12A Beaver Dam Sad 70.93 45 ⇑P **P 04 22 05.9 +0.3**
baz=71
B14A Marquette Ranc 71.00 43 ⇓P **P 04 22 06.0 +0.1**
baz=71
G11A Walters Elk Ra 71.15 47 ⇓P **P 04 22 06.8 -0.1**
baz=71
B15A Bradely Ranch, 71.40 42 ⇓P **P 04 22 08.7 +0.3**
baz=71
F12A Elk City 71.50 46 ⇑P **P 04 22 09.4 +0.4**
baz=71
WVOR Wild Horse Val 71.54 50 *e*P **P 04 22 09.8 +0.5**
WVOR pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
WVOR Wild Horse Val 71.54 50 *e*P **P 04 22 09.8 +0.5**
comp=Z,4.2nm,1.2s,mb4.2
SLMT Seeley Lake 71.56 44 *e*P **P 04 22 10.0 +0.6**
D14A Greenough 71.66 44 ⇑P **P 04 22 10.0 0.0**
baz=71
BEKR Beckworth 72.00 53 ⇑P **P 04 22 12.1 0.0**
baz=72
NB2 NORSAR Subarra 72.12 337 P **P 04 22 11.9 -0.5**
comp=Z,17nm,1.4s,mb4.8,baz=39,slow=6.2
NOA NORSAR Array B 72.12 337 P **P 04 22 11.9 -0.5**
comp=Z,4.2nm,0.9s,mb4.4,baz=39,slow=6.0,SNR=11
NOA LR LR 04 56 53.3
comp=Z,67nm,20.6s,MS3.9,baz=35,slow=38
NOA NORSAR Array B 72.12 337 P **P 04 22 11.9 -0.5**
NOA pmax pmax
comp=Z,4.0nm,0.9s
NOA MLR MLR
comp=Z,67nm,20.6s
FFC Flin Flon 72.24 33 *e*P **P 04 22 13.6 +0.3**
FFC pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
FFC Flin Flon 72.24 33 *e*P **P 04 22 13.6 +0.3**
comp=Z,5.9nm,1.2s,mb4.4
FCC Fort Churchill 72.38 27 *e*P **P 04 22 14.2 +0.2**
comp=Z,0.3nm,0.9s
AKASG Malin Array Be 72.40 322 P **P 04 22 12.9 -1.4**
comp=Z,1.5nm,0.5s,mb4.2,baz=48,slow=5.8,SNR=9.0
AKASG Malin Array Be 72.40 322 P **P 04 22 12.9 -1.4**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKBB Malin Array Si 72.40 322 *e*P **P 04 22 14.0 -0.3**
KIEV Kiev 72.41 322 *e*P **P 04 22 13.7 -0.7**
KIEV pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
KIEV Kiev 72.41 322 *e*P **P 04 22 13.7 -0.7**
comp=Z,3.8nm,0.8s,mb4.4
E15A Deer Lodge 72.53 44 ⇓P **P 04 22 15.3 +0.1**
baz=72
I12A Atlanta 72.77 47 ⇑P **P 04 22 16.7 +0.1**
baz=73
H13A Challis 72.79 46 ⇑P **P 04 22 17.1 +0.3**
baz=73
F15A Butte 72.98 44 ⇓P **P 04 22 18.1 +0.3**
baz=73,SNR=8.3
LRM Limekiln Ridge 73.01 44 *e*P **P 04 22 19.0 +1.0**
D17A Six Diamond Ra 73.11 43 ⇓P **P 04 22 18.1 -0.5**
baz=73
DLMT Dillon 73.22 45 *e*P **P 04 22 20.4 +1.1**
comp=Z,2.9nm,0.5s,mb4.5
HLID Hailey 73.32 47 ⇑P **P 04 22 20.3 +0.4**
baz=73
HLID Hailey 73.32 47 *e*P **P 04 22 20.8 +0.9**
comp=Z,1.8nm,1.0s,mb4.0
G15A Dillon 73.40 45 ⇑P **P 04 22 18.8 -1.5**
baz=73
E17A Martinsdale 73.47 43 ⇑P **P 04 22 20.2 -0.5**
baz=73
BOZ Bozeman (W) 73.57 44 P **P 04 22 22.1 +0.8**
baz=73,SNR=8.0
BOZ Bozeman (W) 73.57 44 *e*P **P 04 22 21.7 +0.4**
BOZ pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
BOZ Bozeman (W) 73.57 44 *e*P **P 04 22 21.7 +0.4**
comp=Z,2.2nm,0.6s,mb4.3
I14A Mackay 73.64 46 ⇑P **P 04 22 21.5 -0.2**
baz=73
G16A Moss Hill, Enn 73.74 45 ⇑P **P 04 22 21.2 -1.1**
baz=74
F17A Fitzpatrick Pl 73.93 44 ⇑P **P 04 22 21.6 -1.8**
baz=74
NVAR Mina Array Bea 74.14 53 P **P 04 22 25.6 +0.9**
comp=Z,2.9nm,1.0s,mb4.2,baz=286,slow=5.8,SNR=13
F18A Big Timber 74.43 43 ⇑P **P 04 22 24.6 -1.8**
baz=74,SNR=5.2
GCMT Greycliff 74.53 43 *e*P **P 04 22 27.6 +0.6**
comp=Z,1.1nm,0.8s,mb3.8
L14A Malta 74.95 48 ⇓P **P 04 22 28.4 -1.0**
baz=75
O12A Currie 75.18 50 ⇑P **P 04 22 30.7 -0.1**
baz=75,SNR=5.1
RLMT Red Lodge 75.18 44 *e*P **P 04 22 31.7 +1.0**
comp=Z,2.6nm,0.7s,mb4.3
TPAW Teton Pass 75.32 46 *e*P **P 04 22 32.9 +1.4**
comp=Z,1.5nm,0.5s,mb4.2
S10A Tonopah Range, 75.51 53 ⇑P **P 04 22 33.2 +0.5**
baz=75,SNR=7.1
Q11A Duckwater 75.52 52 ⇑P **P 04 22 32.3 -0.5**
baz=75
GRAC Grapevine Rang 75.60 54 ⇓P **P 04 22 33.2 -0.1**
baz=75
R11A Troy Canyon, C 75.87 52 ⇑P **P 04 22 34.7 -0.1**
baz=76,SNR=7.4
L16A Fish Haven 76.00 47 ⇓P **P 04 22 35.9 +0.5**
baz=76
J18A Kendall Valley 76.02 45 ⇓P **P 04 22 35.5 0.0**
baz=76
N15A Stansbury Isla 76.09 48 ⇓P **P 04 22 36.4 +0.3**
baz=76
MPMC Manual Prospec 76.10 55 ⇓P **P 04 22 36.1 -0.1**
baz=76,SNR=5.0
P13A Bates Ranch, G 76.12 50 ⇑P **P 04 22 36.5 +0.3**
baz=76
HWUT Hardware Ranch 76.19 47 *e*P **P 04 22 38.4 +1.8**
S11A Rachel 76.21 53 ⇓P **P 04 22 37.1 +0.3**
baz=76
FURC Furnace Creek, 76.25 54 ⇓P **P 04 22 37.3 +0.3**
baz=76,SNR=5.5
DUG Dugway 76.37 49 ⇑P **P 04 22 37.8 +0.2**
baz=76
DUG Dugway 76.37 49 *e*P **P 04 22 38.0 +0.4**
DUG pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
DUG Dugway 76.37 49 *e*P **P 04 22 38.0 +0.4**
comp=Z,4.2nm,1.2s,mb4.2
BUR08 Bucovina Ar. S 76.41 321 *e*P **P 04 22 38.0 +0.3**
Q13A Wheeler Ranch, 76.44 51 ⇑P **P 04 22 39.1 +1.1**
baz=76
R12A Pony Springs, 76.48 52 ⇓P **P 04 22 38.4 +0.1**
baz=76
BW06 Boulder Array 76.56 45 ⇓P **P 04 22 38.8 +0.1**
baz=76
BW06 Boulder Array 76.56 45 *e*P **P 04 22 39.3 +0.6**
PDAR Pinedale Array 76.56 45 P **P 04 22 39.1 +0.4**
comp=Z,1.3nm,0.6s,mb4.1,baz=282,slow=1.8,SNR=16
T11A Corn Creek, Al 76.79 53 ⇓P **P 04 22 40.5 +0.4**
baz=77,SNR=5.9
Q14A Sevier Lake (B 76.86 50 ⇑P **P 04 22 40.6 +0.2**
baz=77,SNR=5.7
KOLS Kolonicke sedl 76.89 324 *e*P **P 04 22 40.5 +0.1**
KOLS pmax pmax
comp=Z,5.0nm,1.5s,mb4.2
KOLS Kolonicke sedl 76.89 324 *e*P **P 04 22 40.5 +0.1**
comp=Z,4.5nm,1.5s,mb4.2
STHS Stebnicka Huta 77.02 324 *e*P **P 04 22 42.3 +1.2**
STHS pmax pmax
comp=Z,4.0nm,1.3s,mb4.2
STHS Stebnicka Huta 77.02 324 *e*P **P 04 22 42.3 +1.2**
comp=Z,4.3nm,1.3s,mb4.2
OJC Ojcow 77.08 326 *e*P **P 04 22 40.3 -1.2**
BR131 Keskin Array S 77.15 311 *e*P **P 04 22 41.9 -0.1**
comp=Z,0.7nm,0.5s,mb3.9
BRTR Keskin Array B 77.15 311 P **P 04 22 42.0 -0.1**
comp=Z,4.0nm,1.2s,mb4.2,baz=105,slow=4.3,SNR=10
BRTR Keskin Array B 77.15 311 P **P 04 22 42.0 0.0**
BRTR pmax pmax
comp=Z,4.0nm,1.2s
CRVS Cervenica-Dubn 77.29 324 *e*P **P 04 22 43.7 +1.1**
CRVS pmax pmax
comp=Z,8.0nm,1.5s,mb4.4
CRVS Cervenica-Dubn 77.29 324 *e*P **P 04 22 43.7 +1.1**
comp=Z,7.5nm,1.5s,mb4.4
S13A Holt Ranch, En 77.41 52 ⇑P **P 04 22 44.0 +0.5**
baz=77,SNR=5.6
TUQ Turquoise Moun 77.48 55 ⇓P **P 04 22 43.9 -0.1**
baz=77
T13A Saint George 77.74 52 ⇑P **P 04 22 46.3 +1.0**
baz=78,SNR=5.7
MSU Marysvale 77.83 50 *e*P **P 04 22 46.9 +1.1**
MSU pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
MSU Marysvale 77.83 50 *e*P **P 04 22 46.9 +1.1**
comp=Z,3.4nm,1.2s,mb4.2
O18A Roosevelt 77.95 48 ⇑P **P 04 22 47.1 +0.6**
baz=78
R15A Junction 77.96 50 ⇑P **P 04 22 47.4 +0.8**
baz=78
ULM Lac du Bonnet 78.05 33 P **P 04 22 46.1 -0.7**
comp=Z,1.2nm,0.4s,mb4.2,baz=274,slow=1.5,SNR=3.2
ULM Lac du Bonnet 78.05 33 *e*P **P 04 22 46.0 -0.8**
comp=Z,2.6nm,0.6s,mb4.3
U13A Pakoon Wash 78.09 53 ⇑P **P 04 22 48.2 +0.9**
baz=78,SNR=5.8
R16A Teasdale 78.39 50 ⇓P **P 04 22 49.9 +0.9**
baz=78,SNR=6.6
MORC Moravsky Berou 78.39 326 *e*P **P 04 22 48.9 +0.1**
MORC pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
MORC Moravsky Berou 78.39 326 *e*P **P 04 22 48.9 +0.1**
comp=Z,6.0nm,1.2s,mb4.4
SRU San Rafael 78.42 49 ⇑P **P 04 22 49.3 +0.2**
baz=78
SRU San Rafael 78.42 49 *e*P **P 04 22 50.1 +1.0**
DPC Dobruska-Polom 78.48 327 *e*P **P 04 22 49.9 +0.7**
DPC Dobruska-Polom 78.48 327 *e*P **P 04 22 49.9 +0.7**
UPC Upice 78.49 328 *e*P **P 04 22 49.6 +0.3**
UPC Upice 78.49 328 *e*P **P 04 22 49.6 +0.3**
U14A Mt Trumbull 78.57 52 ⇑P **P 04 22 49.7 -0.3**
baz=78
PSZ Piszkesteto 78.72 324 *e*P **P 04 22 51.4 +0.8**
PSZ pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
PSZ Piszkesteto 78.72 324 *e*P **P 04 22 51.4 +0.8**
comp=Z,4.6nm,0.9s,mb4.4
R17A Hanksville Air 78.76 49 ⇑P **P 04 22 51.3 +0.3**
baz=79
VYHS Vyhne 78.78 325 *e*P **P 04 22 50.7 -0.2**
VYHS pmax pmax
comp=Z,5.0nm,1.8s,mb4.1
VYHS Vyhne 78.78 325 *e*P **P 04 22 50.7 -0.2**
comp=Z,5.4nm,1.8s,mb4.2
P19A Cripple Cowboy 78.97 48 ⇑P **P 04 22 51.5 -0.6**
baz=79
CLL Collm 79.09 330 *i* P **P 04 22 52.2 -0.4**
CLL *i* 04 22 57.0
CLL pmax pmax
comp=Z,8.0nm,1.4s,mb4.5
CLL Collm 79.09 330 *i* P **P 04 22 52.2 -0.4**
comp=Z,8.0nm,1.4s,mb4.5
CLL *i* 04 22 57.0
U15A North Rim 79.11 52 ⇓P **P 04 22 52.8 -0.2**
baz=79,SNR=6.9
V14A Boquillas Ranc 79.12 53 ⇓P **P 04 22 53.1 +0.1**
baz=79,SNR=6.0
S17A Black Ridge (B 79.22 50 ⇓P **P 04 22 53.4 -0.1**
baz=79,SNR=5.5
Q19A Hogan Spring (79.25 48 ⇓P **P 04 22 53.6 -0.1**
baz=79
X13A Yucca 79.34 54 ⇓P **P 04 22 54.0 -0.3**
baz=79
W14A Seligman 79.41 53 ⇓P **P 04 22 54.6 -0.1**
baz=79
PRU Pruhonice 79.50 328 *e*P **P 04 22 56.0 +1.2**
PRU Pruhonice 79.50 328 *e*P **P 04 22 56.0 +1.2**
V15A Kaibab Nationa 79.58 52 ⇓P **P 04 22 56.2 +0.7**
baz=79
TREC Trest 79.64 327 *e*P **P 04 22 56.1 +0.5**
TREC Trest 79.64 327 *e*P **P 04 22 56.1 +0.5**
T17A Navajo Res., N 79.64 51 ⇓P **P 04 22 56.1 +0.3**
baz=80
S18A Hurst Farm, Bl 79.67 50 ⇓P **P 04 22 55.0 -0.9**
baz=80
S19A Harvey Farm, M 80.14 49 ⇑P **P 04 22 58.3 -0.2**
baz=80
WUAZ Wupatki 80.27 52 ⇓P **P 04 22 59.2 -0.1**
baz=80
Y14A Wickenburg 80.29 54 ⇓P **P 04 22 59.0 -0.4**
baz=80
Z13A Yuma Proving G 80.35 55 ⇓P **P 04 22 59.7 -0.1**
baz=80
X15A Humboldt 80.41 53 ⇑P **P 04 22 59.2 -0.9**
baz=80
SMCO Snowmass 80.42 47 *e*P **P 04 23 01.2 +1.2**
V17A Tonalea, Kykot 80.56 52 ⇓P **P 04 23 00.9 +0.1**
baz=80
KHC Kasperske Hory 80.56 328 *e*P **P 04 23 00.2 -0.4**
KHC Kasperske Hory 80.56 328 *e*P **P 04 23 00.2 -0.4**
GERES GERESS Array B 80.73 328 P **P 04 23 00.9 -0.6**
comp=Z,0.8nm,0.7s,mb3.8,baz=30,slow=6.2,SNR=7.3
GERES GERESS Array B 80.73 328 P **P 04 23 00.9 -0.6**
GERES pmax pmax
comp=Z,1.0nm,0.7s
GRA1 Grafenberg Arr 81.07 330 *e*P **P 04 23 03.6 +0.3**
comp=Z,5.0nm,0.9s,mb4.4
GRF Grafenberg Arr 81.07 330 *e*P **P 04 23 03.6 +0.3**
comp=Z,5.0nm,0.9s,mb4.4
GRF Grafenberg Arr 81.07 330 *e*P **P 04 23 03.6 +0.3**
GRF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
GRF Grafenberg Arr 81.07 330 *e*P **P 04 23 03.6 +0.3**
GRF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
U19A Dine' College, 81.07 50 ⇓P **P 04 23 03.6 0.0**
baz=81
SDCO Great Sand Dun 82.24 47 *e*P **P 04 23 10.7 +1.0**
comp=Z,1.9nm,1.3s,mb3.9
Y18A Canyon Day Jun 82.25 53 ⇓P **P 04 23 08.7 -1.1**
baz=82
TUC Tucson 82.76 54 *e*P **P 04 23 13.7 +1.2**
TUC pmax pmax
comp=Z,2.0nm,1.1s,mb4.1
TUC Tucson 82.76 54 *e*P **P 04 23 13.7 +1.1**
comp=Z,2.2nm,1.1s,mb4.1
X21A Alamocita Cree 83.17 51 ⇑P **P 04 23 14.4 -0.2**
baz=83
BAIF Baives 83.37 334 *e*P **P 04 23 14.6 -0.7**
SCHQ Schefferville 83.50 16 P **P 04 23 15.6 -0.3**
comp=Z,3.1nm,0.8s,mb4.4,baz=351,slow=11,SNR=4.3
Z20A Nine Sixteen R 83.58 52 ⇑P **P 04 23 16.9 +0.1**
baz=83
ANMO Albuquerque 83.62 50 *e*P **P 04 23 18.2 +1.3**
comp=Z,0.1nm,0.7s
CDF Champ du Feu 83.63 331 *e*P **P 04 23 16.2 -0.5**
comp=Z,6.7nm,0.9s,mb4.5
CDF Champ du Feu 83.63 331 *e*P **P 04 23 16.2 -0.5**

CDF pmax pmax
comp=Z,3.0nm,0.9s,mb4.4
CDF Champ du Feu 83.63 331 *eP* **P 04 23 16.2 -0.5**
comp=Z,3.3nm,0.9s,mb4.5
318A Bisbee 83.84 54 ⇑P **P 04 23 18.4 +0.2**
baz=84
219A White Tail Can 83.92 53 ⇑P **P 04 23 18.3 -0.3**
baz=84
Z21A St. Cloud Mine 84.02 52 ⇑P **P 04 23 18.9 -0.1**
baz=84
W24A Lazy 6 Ranch, 84.06 49 ⇓P **P 04 23 19.2 0.0**
baz=84
V25A Rancho No Teng 84.08 48 ⇑P **P 04 23 19.3 0.0**
baz=84
HINF Hinteralfeld 84.28 331 *eP* **P 04 23 19.1 -0.9**
HAU Haudompre 84.31 331 *eP* **P 04 23 19.3 -0.9**
MEZF Maizieres J'vi 84.38 332 *eP* **P 04 23 20.3 -0.2**
Y23A Lovelace Mesa, 84.56 50 ⇓P **P 04 23 20.9 -0.9**
baz=84
W25A X Bar L Ranch, 84.61 48 ⇑P **P 04 23 22.0 +0.1**
baz=84
X25A Clemmons Ranch 84.97 49 ⇑P **P 04 23 23.8 0.0**
baz=85
Y25A Mesa, Roswell 85.38 49 ⇑P **P 04 23 25.1 -0.8**
baz=85
X26A CR and CF Fran 85.45 48 ⇓P **P 04 23 26.2 0.0**
baz=85
CABF La Chapelle 85.57 331 *eP* **P 04 23 25.9 -0.7**
comp=Z,17nm,1.1s,mb4.9
CABF La Chapelle 85.57 331 *eP* **P 04 23 25.9 -0.7**
CABF pmax pmax
comp=Z,9.0nm,1.1s,mb4.9
CABF La Chapelle 85.57 331 *eP* **P 04 23 25.9 -0.7**
comp=Z,8.7nm,1.1s,mb4.9
LOR Lormes 85.85 332 *eP* **P 04 23 27.3 -0.6**
comp=Z,37nm,1.4s,mb5.1
LOR Lormes 85.85 332 *eP* **P 04 23 27.3 -0.6**
LOR pmax pmax
comp=Z,19nm,1.4s,mb5.1
LOR Lormes 85.85 332 *eP* **P 04 23 27.3 -0.6**
comp=Z,19nm,1.4s,mb5.1
FLN La Foliniere 86.05 336 *eP* **P 04 23 28.1 -0.8**
LDF La Druitiere 86.08 335 *eP* **P 04 23 28.3 -0.8**
comp=Z,9.6nm,0.8s,mb4.8
LDF La Druitiere 86.08 335 *eP* **P 04 23 28.3 -0.8**
LDF pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
LDF La Druitiere 86.08 335 *eP* **P 04 23 28.3 -0.8**
comp=Z,4.8nm,0.8s,mb4.8
SSF Saint Saulge 86.15 332 *eP* **P 04 23 28.7 -0.7**
comp=Z,24nm,1.3s,mb5.0
SSF Saint Saulge 86.15 332 *eP* **P 04 23 28.7 -0.7**
SSF pmax pmax
comp=Z,12nm,1.3s,mb5.0
SSF Saint Saulge 86.15 332 *eP* **P 04 23 28.7 -0.7**
comp=Z,12nm,1.3s,mb5.0
224A Cornudas Mount 86.17 51 ⇓P **P 04 23 29.1 -0.7**
baz=86
LPL La Plagne 86.23 330 *eP* **P 04 23 29.6 -0.3**
comp=Z,7.1nm,0.8s,mb4.7
LPL La Plagne 86.23 330 *eP* **P 04 23 29.6 -0.3**
LPL pmax pmax
comp=Z,4.0nm,0.8s,mb4.7
LPL La Plagne 86.23 330 *eP* **P 04 23 29.6 -0.3**
comp=Z,3.5nm,0.8s,mb4.6
LPG La Plagne 86.24 330 *eP* **P 04 23 29.8 -0.1**
125A Gardner Draw, 86.29 50 ⇓P **P 04 23 29.4 -1.0**
baz=86
SMF Signal de Mont 86.38 332 *eP* **P 04 23 30.2 -0.4**
AVF Avril sur Loir 86.44 332 *eP* **P 04 23 30.3 -0.6**
comp=Z,20nm,1.0s,mb5.0
AVF Avril sur Loir 86.44 332 *eP* **P 04 23 30.3 -0.6**
AVF pmax pmax
comp=Z,10.0nm,1.0s,mb5.0
AVF Avril sur Loir 86.44 332 *eP* **P 04 23 30.3 -0.6**
comp=Z,10nm,1.0s,mb5.0
GRR Gorron 86.50 336 *eP* **P 04 23 30.6 -0.5**
Z27A Tatum 86.68 49 ⇓P **P 04 23 32.1 -0.2**
baz=86
BGF Bois d'Agland 86.82 332 *eP* **P 04 23 32.3 -0.4**
SGMF Saint Gilles 87.16 336 *eP* **P 04 23 34.0 -0.3**
TCF Toulx Ste Croi 87.28 333 *eP* **P 04 23 34.6 -0.4**
ROSF Rostrenen 87.31 337 *eP* **P 04 23 34.9 -0.1**
comp=Z,43nm,1.3s,mb5.2
ROSF Rostrenen 87.31 337 *eP* **P 04 23 34.9 -0.1**
ROSF pmax pmax
comp=Z,21nm,1.3s,mb5.2
ROSF Rostrenen 87.31 337 *eP* **P 04 23 34.9 -0.1**
comp=Z,21nm,1.3s,mb5.2
QUIF Quistinic 87.64 337 *eP* **P 04 23 36.1 -0.6**
comp=Z,36nm,1.4s,mb5.1
QUIF Quistinic 87.64 337 *eP* **P 04 23 36.1 -0.6**
QUIF pmax pmax
comp=Z,18nm,1.4s,mb5.1
QUIF Quistinic 87.64 337 *eP* **P 04 23 36.1 -0.6**
comp=Z,18nm,1.4s,mb5.1
MFF Saint Martin d 87.83 334 *eP* **P 04 23 37.3 -0.3**
RJF Les Rejaudoux 88.37 333 *eP* **P 04 23 39.9 -0.3**
CAF Calviac 88.50 332 *eP* **P 04 23 41.0 +0.2**
LFF La Frestale 88.97 333 *eP* **P 04 23 42.9 -0.1**
TXAR Lajitas Array 89.23 52 P **P 04 23 44.6 0.0**
comp=Z,0.6nm,0.7s,mb4.1,baz=286,slow=2.8,SNR=9.0
TXAR Lajitas Array 89.23 52 P **P 04 23 44.6 0.0**
TXAR pmax pmax
comp=Z,1.0nm,0.7s
MTLF Montolieu 89.80 331 *eP* **P 04 23 46.7 -0.3**
JCT Junction City 90.73 49 *eP* **P 04 23 51.7 +0.2**
JCT pmax pmax
comp=Z,2.0nm,0.6s,mb4.6
JCT Junction City 90.73 49 *eP* **P 04 23 51.7 +0.2**
comp=Z,2.3nm,0.6s,mb4.7
ETSF Etsaut 91.20 333 *eP* **P 04 23 53.7 +0.2**
LSZ Lusaka 116.97 272 *e*PKIKP PKPdf 04 29 34.9 +1.3
LPAZ La Paz 146.00 56 PKPbc PKPbc 04 30 29.0 +0.4
comp=Z,4.7nm,0.9s,baz=340,slow=3.4,SNR=15
LPAZ La Paz 146.00 56 *e*PKPbc PKPbc 04 30 29.2 +0.6
LCO Las Campanas 152.14 78 *e*PKPbc PKPbc 04 30 44.8 +0.8

JMA 14 04:29:26.8±0.1, 37.°84N×142.°35E, h30km±2km, M3.2, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**1.00**	**308**	P	Pn	04 29 44.8	0.0
JIO				*e*S	Sn	04 29 57.6	-0.2
JMM	**Marumori**	**1.23**	**272**	P	Pn	04 29 48.3	+0.3
JMM				*e*S	Sn	04 30 03.8	+0.2
JFK	**Kawauchi**	**1.26**	**248**	P	Pn	04 29 48.5	+0.1
JFK				*e*S	Sn	04 30 04.3	0.0
JOU	**Okura**	**1.43**	**292**	P	Pn	04 29 51.8	+1.1
JOU				*e*S	Sn	04 30 09.3	+0.9
JFT	**Otama**	**1.63**	**259**	P	Pn	04 29 55.0	+1.6
JFT				*e*S	Sn	04 30 15.5	+2.1
JYS	**Shiratake**	**1.84**	**283**	P	Pn	04 29 57.9	+1.5
JYS				*e*S	Sn	04 30 20.8	+2.1
MAT	**Matsushiro**	**3.55**	**250**	P	Pn	04 30 24.2	+4.3
MAT				*e*S	Sn	04 31 08.8	+8.0

JMA 14 04:29:43.0, 38.°91N×140.°85E, h9km±1km, M1.8, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.29**	**82**	P	Pg	04 29 48.8	0.0
JMK				S	Sg	04 29 53.0	+0.3
JYK	**Kaneyama**	**0.38**	**271**	P	Pg	04 29 50.7	+0.2
JYK				S	Sg	04 29 55.9	+0.3
JOU	**Okura**	**0.56**	**195**	S	Sg	04 30 01.1	-0.1

JMA 14 04:30:03.1, 39.°22N×140.°85E, h9km±1km, M1.7, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRG	**Rokugo**	**0.24**	**316**	S	Sg	04 30 12.2	+0.9
JMK	**Ichinoseki**	**0.39**	**133**	S	Sg	04 30 15.8	-0.2
JOM	**Ohasama**	**0.43**	**53**	S	Sg	04 30 17.2	+0.1
JYK	**Kaneyama**	**0.49**	**232**	P	Pg	04 30 12.7	+0.1
JYK				S	Sg	04 30 19.0	+0.1

JMA 14 04:30:29.9, 39.°13N×140.°90E, h10km±1km, M2.8, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.31**	**125**	P	Pg	04 30 35.9	-0.1
JMK				S	Sg	04 30 39.9	-0.2
JRG	**Rokugo**	**0.34**	**322**	P	Pg	04 30 36.8	+0.2
JRG				*e*S	Sg	04 30 41.8	+0.7
JOM	**Ohasama**	**0.46**	**42**	P	Pg	04 30 38.7	-0.2
JOM				S	Sg	04 30 44.9	0.0
JYK	**Kaneyama**	**0.47**	**243**	P	Pg	04 30 39.1	0.0
JYK				S	Sg	04 30 45.5	+0.2
OFUJ	**Ofunato**	**0.60**	**95**	P	Pg	04 30 41.4	-0.1
JOU	**Okura**	**0.79**	**194**	P	Pg	04 30 45.2	+0.2
JOU				S	Sg	04 30 55.6	+0.3

NIED ***14*** *04:30:00, 39.°10N×140.°90E, h5km, Mw4.0 Best double couple: M₀9.64000×10¹⁴ NP1:φ₀356.00000°, δ59.00000°, λ80.00000°. NP2:φ₀195.00000°, δ33.00000°, λ106.00000°.*
IDC ***14*** *04:30:49.3±0.6, 39.°05N×140.°67E, h0km, mb4.0/16, mb1 4.2/18, mb1mx4.1/28, mbtmp4.0/18, ML3.6/2, MS2.9/1, Ms1 2.9/1, ms1mx2.6/30, Error ellipse: s-maj=18.6km s-min=12.5km az=112.0*
NEIC ***14*** *04:30:50.5, 39.°06N×140.°86E, h10km, mb4.4/22, After JMA.*
NEIC Recorded [3 JMA] in Akita and [2 JMA] in Iwate and Miyagi.
JMA ***14*** *04:30:50.5, 39.°05N×140.°86E, h7km±1km, M4.2*
JMA Felt III J1.
ISCJB ***14*** *04:30:50.2±0.6, 39.°07N±0.°02×140.°87E±0.°03, h15km±3km, mb4.2/41, Error ellipse: s-maj=4.4km s-min=3.9km az=33.2*
MOS ***14*** *04:30:53.5±0.8, 39.°13N×140.°61E, h33km, mb4.6/29, Error ellipse: s-maj=11.4km s-min=6.8km az=97.1*

ISC 14 04:30:50.7±0.4, 39.°05N±0.°03×140.°86E±0.°03, h10km±3km, n116, σ0.9±91/125, mb4.2/41, 5C-1D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.29**	**108**	P	**Pg**	**04 30 56.2**	**-0.4**
JMK				S	**Sg**	**04 31 00.4**	**-0.2**
JRG	**Rokugo**	**0.39**	**333**	P	**Pg**	**04 30 58.3**	**-0.2**
JRG				S	**Sg**	**04 31 04.0**	**+0.3**
JYK	**Kaneyama**	**0.41**	**252**	⇓P	**Pg**	**04 30 58.7**	**-0.1**
JYK				*e*S	**Sg**	**04 31 04.2**	**0.0**
JOM	**Ohasama**	**0.54**	**38**	S	**Sg**	**04 31 07.9**	**-0.5**
OFUJ	**Ofunato**	**0.63**	**87**	P	**Pg**	**04 31 02.4**	**-0.5**
JOU	**Okura**	**0.70**	**193**	⇑P	**Pg**	**04 31 04.1**	**-0.1**
JOU				S	**Sg**	**04 31 13.5**	**+0.2**
JIO	**Ouri**	**0.70**	**147**	P	**Pg**	**04 31 04.0**	**-0.3**
JIO				S	**Sg**	**04 31 13.2**	**-0.3**
JYA	**Atsumi**	**1.00**	**244**	P	**Pg**	**04 31 09.6**	**-0.4**
JYA				S	**Sg**	**04 31 23.7**	**+0.6**
MAJO	**Matsushiro**	**3.27**	**221**	*e*P	**Pn**	**04 31 41.8**	**-0.2**
MAT	**Matsushiro**	**3.27**	**221**	P	**Pn**	**04 31 43.4**	**+1.4**
MAT				*e*S	**Sn**	**04 32 27.5**	**+6.6**
MJAR	**Matsushiro Arr**	**3.27**	**221**	Pn	**Pn**	**04 31 42.5**	**+0.5**
5.2nm,0.3s,baz=30,slow=13,SNR=12							
MJAR				Pg	**Pg**	**04 31 48.9**	**-4.3**
11nm,0.3s,baz=25,slow=14,SNR=18							
MJAR				LR	LR	04 32 26.8	
comp=Z,161nm,18.5s,baz=35,slow=31							
MJAR				Lg		04 32 29.5	
2.0nm,0.3s,baz=26,slow=26,SNR=2.0							
MJAR	**Matsushiro Arr**	**3.27**	**221**	P	**Pn**	**04 31 42.5**	**+0.5**
MJAR						04 32 29.5	
MJAR				pmax	pmax		
comp=Z,5.0nm,0.3s							
ERM	**Erimo**	**3.44**	**30**	*e*Pn	**Pn**	**04 31 45.3**	**+0.9**
ERM				*e*Sn	**Sn**	**04 32 24.1**	**-1.2**
ASAJ	**Asahikawa**	**5.23**	**14**	Pn	**Pn**	**04 32 11.0**	**+2.0**
comp=Z,2.0nm,0.3s,baz=223,slow=12,SNR=7.9							
ASAJ	**Asahikawa**	**5.23**	**14**	P	**Pn**	**04 32 11.0**	**+2.0**
ASAJ				pmax	pmax		
comp=Z,2.0nm,0.3s							
YSS	**Yuzh-Sakhalins**	**8.03**	**9**	*e*P	**Pn**	**04 32 48.5**	**+1.2**
KSRS	**Korea Array**	**10.30**	**265**	Pn	**Pn**	**04 33 21.3**	**+2.7**
comp=Z,2.1nm,0.3s,baz=88,slow=15,SNR=12							
KSRS				Sn	**Sn**	**04 35 18.2**	**+4.2**
comp=Z,1.5nm,0.3s,baz=71,slow=24,SNR=9.2							
KSRS	**Korea Array**	**10.30**	**265**	P	**Pn**	**04 33 21.3**	**+2.7**
KSRS						04 35 18.2	
KSRS				pmax	pmax		
comp=Z,2.0nm,0.3s							
KSRS				smax			
comp=N,2.0nm,0.3s							
KLR	**Kul'dur**	**12.09**	**330**	*e*P	**Pn**	**04 33 42.9**	**-0.1**
SEY	**Seymchan**	**24.91**	**13**	*c e*P	**P**	**04 36 17.1**	**+3.5**
BILL	**Bilibino**	**32.23**	**18**	*e*P	**P**	**04 37 22.0**	**+3.2**
BILL				pmax	pmax		
comp=Z,3.0nm,1.0s,mb4.1							
ZALV	**Zalesovo Beam**	**40.26**	**311**	P	**P**	**04 38 26.8**	**-0.7**
comp=Z,0.9nm,0.4s,mb3.8,baz=86,slow=7.2,SNR=7.2							
ZALV	**Zalesovo Beam**	**40.26**	**311**	P	**P**	**04 38 26.8**	**-0.7**
ZALV				pmax	pmax		
comp=Z,1.0nm,0.4s,mb3.9							
MK31	**Makanchi Array**	**42.71**	**300**	*e*P	**P**	**04 38 46.8**	**-0.9**
MKAR	**Makanchi Array**	**42.71**	**300**	P	**P**	**04 38 47.2**	**-0.6**
comp=Z,2.0nm,0.7s,mb3.9,baz=77,slow=13,SNR=19							
MKAR	**Makanchi Array**	**42.71**	**300**	P	**P**	**04 38 47.2**	**-0.5**
MKAR				pmax	pmax		
comp=Z,2.0nm,0.7s							
MKAR	**Makanchi Array**	**42.71**	**300**	P	**P**	**04 38 47.2**	**-0.6**
KURK	**Kurchatov**	**44.37**	**306**	P	**P**	**04 39 00.5**	**-0.6**
comp=Z,4.8nm,0.7s,mb4.3,baz=83,slow=8.2,SNR=16							
KURK	**Kurchatov**	**44.37**	**306**	*c e*P	**P**	**04 39 00.9**	**-0.2**
KURK				pmax	pmax		
comp=Z,5.0nm,1.0s,mb4.2							
KURK	**Kurchatov**	**44.37**	**306**	*e*P	**P**	**04 39 00.6**	**-0.5**
comp=Z,3.1nm,0.7s,mb4.2							
TKM2	**Tokmak 2**	**48.31**	**297**	*e*P	**P**	**04 39 32.6**	**+0.4**
TKM2				pmax	pmax		
comp=Z,5.0nm,0.9s,mb4.5							
TKM2	**Tokmak 2**	**48.31**	**297**	*e*P	**P**	**04 39 32.6**	**+0.4**
comp=Z,4.8nm,0.9s,mb4.5							
BVAR	**Borovoye Array**	**48.91**	**311**	P	**P**	**04 39 36.3**	**-0.3**
comp=Z,0.7nm,0.5s,mb4.0,baz=85,slow=8.0,SNR=5.6							
BVAR				PcP	PcP	04 41 00.7	-0.2
comp=Z,0.6nm,0.6s,baz=97,slow=3.7,SNR=3.8							
BVAR	**Borovoye Array**	**48.91**	**311**	P	**P**	**04 39 36.3**	**-0.3**
BVAR						04 41 00.7	
BVAR				pmax	pmax		
comp=Z,1.0nm,0.5s							
BRVK	**Borovoye**	**48.97**	**311**	*c e*P	**P**	**04 39 37.5**	**+0.4**
BRVK				pmax	pmax		
comp=Z,7.0nm,2.5s,mb4.2							
AAK	**Ala-Archa**	**49.17**	**297**	*e*P	**P**	**04 39 39.2**	**+0.4**
AAK				pmax	pmax		
comp=Z,2.0nm,0.3s,mb4.6							
AAK	**Ala-Archa**	**49.17**	**297**	*e*P	**P**	**04 39 39.2**	**+0.4**
comp=Z,1.8nm,0.3s,mb4.6							
EKS2	**Erkin-Say**	**49.66**	**297**	*e*P	**P**	**04 39 42.5**	**-0.1**
comp=Z,1.3nm,0.6s,mb4.1							
INK	**Inuvik**	**52.81**	**28**	P	**P**	**04 40 07.1**	**+1.4**
comp=Z,3.4nm,0.9s,mb4.3,baz=241,slow=4.6,SNR=5.8							
INK	**Inuvik**	**52.81**	**28**	P	**P**	**04 40 07.1**	**+1.4**
INK				pmax	pmax		
comp=Z,3.0nm,0.9s							
INK	**Inuvik**	**52.81**	**28**	*e*P	**P**	**04 40 07.7**	**+2.0**
comp=Z,2.1nm,0.8s,mb4.1							
ARU	**Arti**	**54.58**	**318**	*c i*P	**P**	**04 40 18.5**	**-0.4**
ARU				*e*		04 42 17.6	
ARU				S	**S**	**04 47 57.0**	**-1.1**
ARU				SS	SS	04 51 37.3	-2.8
ARU				pmax	pmax		
comp=Z,6.0nm,1.0s,mb4.6							
ARU	**Arti**	**54.58**	**318**	*e*P	**P**	**04 40 18.2**	**-0.7**
comp=Z,2.8nm,0.4s,mb4.7							
KBL	**Kabul**	**56.31**	**290**	*e*P	**P**	**04 40 31.5**	**-0.2**
KBL				pmax	pmax		
comp=Z,4.0nm,0.5s,mb4.7							
KBL	**Kabul**	**56.31**	**290**	*e*P	**P**	**04 40 31.5**	**-0.3**
comp=Z,3.6nm,0.5s,mb4.7							
ABKAR	**Akbulak array**	**56.33**	**309**	*e*P	**P**	**04 40 31.1**	**-0.5**
comp=Z,2.7nm,0.5s,mb4.5							
WRAB	**Tennant Creek**	**58.98**	**187**	*e*P	**P**	**04 40 49.9**	**-0.6**
WRAB				pmax	pmax		
comp=Z,2.0nm,0.4s,mb4.5							
WRAB	**Tennant Creek**	**58.98**	**187**	*e*P	**P**	**04 40 49.9**	**-0.6**
comp=Z,1.8nm,0.4s,mb4.5							
WRA	**Warramunga Arr**	**58.99**	**187**	P	**P**	**04 40 49.9**	**-0.7**
comp=Z,2.3nm,0.4s,mb4.5,baz=4.5,slow=7.2,SNR=17							
WRA	**Warramunga Arr**	**58.99**	**187**	P	**P**	**04 40 49.9**	**-0.6**
WRA				pmax	pmax		
comp=Z,2.0nm,0.4s							
RES	**Resolute Bay**	**60.77**	**15**	*e*P	**P**	**04 41 03.1**	**+0.9**
RES				pmax	pmax		
comp=Z,5.0nm,0.8s,mb4.7							
RES	**Resolute Bay**	**60.77**	**15**	*e*P	**P**	**04 41 03.1**	**+0.9**
comp=Z,4.7nm,0.8s,mb4.7							
ARCES	**ARCESS Array B**	**61.97**	**339**	P	**P**	**04 41 10.1**	**-0.3**
comp=Z,0.7nm,0.6s,mb4.0,baz=44,slow=8.8,SNR=6.9							
ARCES	**ARCESS Array B**	**61.97**	**339**	P	**P**	**04 41 10.1**	**-0.2**
ARCES				pmax	pmax		
comp=Z,1.0nm,0.6s							
ASAR	**Alice Springs**	**62.72**	**187**	P	**P**	**04 41 15.8**	**-0.1**
comp=Z,1.2nm,0.7s,mb4.1,baz=0.2,slow=5.2,SNR=15							
ASAR	**Alice Springs**	**62.72**	**187**	P	**P**	**04 41 15.8**	**-0.1**
ASAR				pmax	pmax		
comp=Z,1.0nm,0.7s							
OBN	**Obninsk**	**66.23**	**323**	*e*P	**P**	**04 41 40.1**	**+1.5**
OBN				pmax	pmax		
comp=Z,3.0nm,0.8s,mb4.4							
FINES	**FINESS Array B**	**66.84**	**332**	P	**P**	**04 41 41.7**	**-0.6**
comp=Z,2.7nm,0.7s,mb4.4,baz=47,slow=8.4,SNR=11							
FINES	**FINESS Array B**	**66.84**	**332**	P	**P**	**04 41 41.7**	**-0.6**
FINES				pmax	pmax		
comp=Z,3.0nm,0.7s							
ZEI	**Tsey**	**69.21**	**309**	*e*P	**P**	**04 41 55.7**	**-1.9**
ZEI				pmax	pmax		
comp=Z,4.0nm,0.4s,mb4.7							
KIV	**Kislovodsk**	**69.27**	**310**	*e*P	**P**	**04 41 59.7**	**+1.8**
KIV				pmax	pmax		
comp=Z,15nm,1.6s,mb4.7							
NB2	**NORSAR Subarra**	**72.17**	**337**	P	**P**	**04 42 14.8**	**-0.5**
comp=Z,1.0nm,0.6s,mb3.9,baz=38,slow=6.5							
NOA	**NORSAR Array B**	**72.17**	**337**	P	**P**	**04 42 14.4**	**-0.8**
comp=Z,1.9nm,0.8s,mb4.1,baz=39,slow=6.1,SNR=6.5							
NOA	**NORSAR Array B**	**72.17**	**337**	P	**P**	**04 42 14.4**	**-0.9**
NOA				pmax	pmax		
comp=Z,2.0nm,0.8s							
AKASG	**Malin Array Be**	**72.45**	**322**	P	**P**	**04 42 16.4**	**-0.7**
comp=Z,1.0nm,0.4s,mb4.1,baz=48,slow=5.9,SNR=7.6							
AKASG	**Malin Array Be**	**72.45**	**322**	P	**P**	**04 42 16.4**	**-0.7**
AKASG				pmax	pmax		
comp=Z,1.0nm,0.4s							
KIEV	**Kiev**	**72.46**	**322**	*e*P	**P**	**04 42 16.2**	**-1.0**
KIEV				pmax	pmax		
comp=Z,2.0nm,0.6s,mb4.2							
KIEV	**Kiev**	**72.46**	**322**	*e*P	**P**	**04 42 16.2**	**-1.0**
comp=Z,2.0nm,0.6s,mb4.2							
BOZ	**Bozeman (W)**	**73.58**	**44**	*e*P	**P**	**04 42 25.9**	**+2.0**
BOZ				pmax	pmax		
comp=Z,1.0nm,0.7s,mb3.9							
BOZ	**Bozeman (W)**	**73.58**	**44**	*e*P	**P**	**04 42 25.9**	**+2.0**
comp=Z,1.5nm,0.7s,mb4.0							
NVAR	**Mina Array Bea**	**74.14**	**53**	P	**P**	**04 42 29.0**	**+1.7**
comp=Z,1.4nm,0.9s,mb3.9,baz=281,slow=6.4,SNR=7.3							
NVAR	**Mina Array Bea**	**74.14**	**53**	P	**P**	**04 42 29.0**	**+1.7**
IMW	**Indian Meadow**	**75.07**	**45**	*e*P	**P**	**04 42 35.7**	**+3.0**
comp=Z,2.2nm,0.8s,mb4.1							
DUG	**Dugway**	**76.37**	**49**	*e*P	**P**	**04 42 43.0**	**+2.8**
DUG				pmax	pmax		
comp=Z,2.0nm,0.8s,mb4.1							
DUG	**Dugway**	**76.37**	**49**	*e*P	**P**	**04 42 43.0**	**+2.9**
comp=Z,1.8nm,0.8s,mb4.0							
BUR08	**Bucovina Ar. S**	**76.46**	**321**	*e*P	**P**	**04 42 40.5**	**0.0**
BW06	**Boulder Array**	**76.57**	**46**	*e*P	**P**	**04 42 41.1**	**-0.2**
comp=Z,1.0nm,0.8s,mb3.8							
PDAR	**Pinedale Array**	**76.57**	**46**	P	**P**	**04 42 42.5**	**+1.3**
comp=Z,0.6nm,0.6s,mb3.7,baz=323,slow=2.2,SNR=5.7							
BRTR	**Keskin Array B**	**77.20**	**311**	P	**P**	**04 42 45.0**	**+0.1**
comp=Z,0.7nm,0.7s,mb3.7,baz=94,slow=3.7,SNR=5.2							
BRTR	**Keskin Array B**	**77.20**	**311**	P	**P**	**04 42 45.0**	**+0.1**
BRTR				pmax	pmax		
comp=Z,1.0nm,0.7s							
MORC	**Moravsky Berou**	**78.44**	**326**	*e*P	**P**	**04 42 51.4**	**-0.2**
MORC				pmax	pmax		
comp=Z,2.0nm,0.8s,mb4.1							
MORC	**Moravsky Berou**	**78.44**	**326**	*e*P	**P**	**04 42 51.4**	**-0.2**
comp=Z,1.5nm,0.8s,mb4.0							
GERES	**GERESS Array B**	**80.78**	**328**	P	**P**	**04 43 03.9**	**-0.4**
comp=Z,0.3nm,0.5s,mb3.5,baz=38,slow=6.8,SNR=3.9							
ECSD	**EROS Data Cent**	**82.61**	**38**	*e*P	**P**	**04 43 13.8**	**-0.2**
comp=Z,1.6nm,0.9s,mb4.0							
CDF	**Champ du Feu**	**83.68**	**331**	*e*P	**P**	**04 43 18.9**	**-0.6**
CABF	**La Chapelle**	**85.62**	**331**	*e*P	**P**	**04 43 28.3**	**-1.0**
LOR	**Lormes**	**85.90**	**332**	*e*P	**P**	**04 43 30.0**	**-0.7**
FLN	**La Foliniere**	**86.10**	**336**	*e*P	**P**	**04 43 30.4**	**-1.3**
LDF	**La Druitiere**	**86.13**	**335**	*e*P	**P**	**04 43 31.0**	**-0.8**
comp=Z,7.3nm,0.9s,mb4.6							
LDF	**La Druitiere**	**86.13**	**335**	*e*P	**P**	**04 43 31.0**	**-0.8**
LDF				pmax	pmax		
comp=Z,4.0nm,0.9s,mb4.7							
LDF	**La Druitiere**	**86.13**	**335**	*e*P	**P**	**04 43 31.0**	**-0.8**
comp=Z,3.7nm,0.9s,mb4.6							
SSF	**Saint Saulge**	**86.20**	**332**	*e*P	**P**	**04 43 31.6**	**-0.6**
comp=Z,6.5nm,0.9s,mb4.5							
SSF	**Saint Saulge**	**86.20**	**332**	*e*P	**P**	**04 43 31.6**	**-0.6**
SSF				pmax	pmax		
comp=Z,3.0nm,0.9s,mb4.5							
SSF	**Saint Saulge**	**86.20**	**332**	*e*P	**P**	**04 43 31.6**	**-0.6**
comp=Z,3.3nm,0.9s,mb4.6							
LPL	**La Plagne**	**86.28**	**330**	*e*P	**P**	**04 43 32.1**	**-0.5**
LPG	**La Plagne**	**86.29**	**330**	*e*P	**P**	**04 43 32.3**	**-0.4**
comp=Z,8.0nm,0.8s,mb4.7							
LPG	**La Plagne**	**86.29**	**330**	*e*P	**P**	**04 43 32.3**	**-0.4**
LPG				pmax	pmax		
comp=Z,4.0nm,0.8s,mb4.7							
LPG	**La Plagne**	**86.29**	**330**	*e*P	**P**	**04 43 32.3**	**-0.4**
comp=Z,4.0nm,0.8s,mb4.7							
SMF	**Signal de Mont**	**86.43**	**332**	*e*P	**P**	**04 43 32.9**	**-0.5**
AVF	**Avril sur Loir**	**86.49**	**332**	*e*P	**P**	**04 43 33.1**	**-0.5**
comp=Z,10nm,0.9s,mb4.8							
AVF	**Avril sur Loir**	**86.49**	**332**	*e*P	**P**	**04 43 33.1**	**-0.5**
AVF				pmax	pmax		
comp=Z,5.0nm,0.9s,mb4.7							
AVF	**Avril sur Loir**	**86.49**	**332**	*e*P	**P**	**04 43 33.1**	**-0.5**
comp=Z,5.1nm,0.9s,mb4.8							
SGMF	**Saint Gilles**	**87.20**	**336**	*e*P	**P**	**04 43 37.4**	**+0.3**
TCF	**Toulx Ste Croi**	**87.33**	**333**	*e*P	**P**	**04 43 37.4**	**-0.3**
ROSF	**Rostrenen**	**87.35**	**337**	*e*P	**P**	**04 43 37.7**	**-0.1**
comp=Z,16nm,1.1s,mb4.9							
ROSF	**Rostrenen**	**87.35**	**337**	*e*P	**P**	**04 43 37.7**	**-0.1**
ROSF			

MJAR Lg 04 37 26.8
1.5nm,0.3s,baz=30,slow=25,SNR=4.7
MJAR Matsushiro Arr 3.07 220 Pn **Pn 04 36 38.9 -1.7**
MJAR Pg **Pg 04 36 44.4 -6.7**
MJAR Lg 04 37 26.8
ZALV Zalesovo Beam 40.23 311 P **P 04 43 28.3 -0.3**
0.9nm,0.7s,mb3.6,baz=82,slow=8.4,SNR=4.5
ZALV Zalesovo Beam 40.23 311 P **P 04 43 28.3 -0.3**
KURK Kurchatov 44.33 307 P **P 04 44 02.2 +0.2**
0.9nm,0.5s,mb3.8,baz=83,slow=8.1,SNR=5.2
KURK Kurchatov 44.33 307 *e*P **P 04 44 01.7 -0.3**
1.1nm,0.6s,mb3.8
TKM2 Tokmak 2 48.24 297 ⇑Pn **P 04 44 32.0 -0.8**
1.3nm,0.7s,mb4.1
TKM2 ⇓Lg 04 45 03.2
2.3nm,0.5s
TKM2 Tokmak 2 48.24 297 *e*P **P 04 44 32.2 -0.6**
1.4nm,0.5s,mb4.2
ABKAR Akbulak array 56.29 309 *e*P **P 04 45 32.9 +0.3**
0.4nm,0.5s,mb3.7
WRA Warramunga Arr 58.84 187 P **P 04 45 51.1 +0.4**
0.5nm,0.5s,mb3.8,baz=3.3,slow=7.2,SNR=5.8
ASAR Alice Springs 62.57 187 P **P 04 46 16.1 +0.1**
0.4nm,0.6s,mb3.7,baz=11,slow=7.0,SNR=5.7

JMA 14 05:08:50.5, 39°.11N×140°.90E, h10km±1km, M2.0, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.29**	**122**	S	Sg	05 09 00.5	+0.1
JRG	**Rokugo**	**0.35**	**324**	P	Pg	05 08 57.7	+0.2
JRG				S	Sg	05 09 02.4	+0.2
JYK	**Kaneyama**	**0.46**	**246**	P	Pg	05 08 59.5	0.0
JYK				S	Sg	05 09 05.6	-0.1
JOM	**Ohasama**	**0.47**	**40**	P	Pg	05 08 59.5	-0.2
JOM				S	Sg	05 09 05.8	-0.2
JOU	**Okura**	**0.77**	**194**	S	Sg	05 09 15.6	+0.3

NIED ***14*** *05:09:00, 39°.20N×141°.00E, h5km, Mw3.7 Best double couple: M0 4.42000×10^14 NP1:*ϕ_s*30.00000°,* δ*62.00000°,* λ*118.00000°. NP2:*ϕ_s*162.00000°,* δ*39.00000°,* λ*49.00000°.*
IDC ***14*** *05:09:32.0±1.3, 39°.30N×141°.44E, h0km, mb3.7/7, mb1 3.8/10, mb1mx3.7/27, mbtmp3.7/10, ML3.0/3, Error ellipse: s-maj=39.7km s-min=20.8km az=90.0*
ISCJB ***14*** *05:09:34.9±0.6, 39°.19N±0°.04×140°.99E±0°.06, h19km±5km, mb3.7/8, Error ellipse: s-maj=7.2km s-min=6.9km az=166.3*
NEIC ***14*** *05:09:35.1, 39°.17N×140°.96E, h9km, mb3.9/1, After JMA.*
JMA ***14*** *05:09:35.1, 39°.17N×140°.95E, h8km, M3.7*
JMA Felt II J1.
ISC 14 05:09:35.4±0.6, 39°.19N±0°.04×140°.97E±0°.05, h10km±4km, n18, σ**1º10/22, mb3.7/8, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.30**	**140**	P	**Pg**	**05 09 41.0**	**-0.5**
JMK				S	**Sg**	**05 09 45.2**	**-0.4**
JRG	**Rokugo**	**0.34**	**309**	P	**Pg**	**05 09 41.9**	**-0.2**
JRG				S	**Sg**	**05 09 46.8**	**+0.2**
JOM	**Ohasama**	**0.38**	**41**	*e*S	**Sg**	**05 09 48.5**	**+0.5**
JYK	**Kaneyama**	**0.55**	**241**	S	**Sg**	**05 09 52.3**	**-0.9**
ERM	**Erimo**	**3.28**	**30**	*e*Pn	**Pn**	**05 10 28.0**	**+1.2**
ERM				*e*S	**Sn**	**05 11 13.1**	**+7.2**
MAJO	**Matsushiro**	**3.43**	**221**	*e*Pn	**Pn**	**05 10 30.8**	**+1.9**
MAT	**Matsushiro**	**3.43**	**221**	P	**Pn**	**05 10 31.2**	**+2.3**
MAT				*e*S	**Sn**	**05 11 15.8**	**+6.2**
MJAR	**Matsushiro Arr**	**3.43**	**220**	Pn	**Pn**	**05 10 30.5**	**+1.6**
1.1nm,0.3s,baz=29,slow=14,SNR=7.3							
ASAJ	**Asahikawa**	**5.07**	**13**	Pn	**Pn**	**05 10 46.5**	**-5.0**
0.2nm,0.3s,baz=120,slow=24,SNR=2.4							
KSRS	**Korea Array**	**10.40**	**265**	Pn	**Pn**	**05 12 09.3**	**+4.7**
0.7nm,0.3s,baz=79,slow=14,SNR=14							
MKAR	**Makanchi Array**	**42.71**	**300**	P	**P**	**05 17 31.9**	**-0.5**
0.5nm,0.8s,mb3.3,baz=75,slow=12,SNR=4.1							
KURK	**Kurchatov**	**44.35**	**306**	*e*P	**P**	**05 17 45.2**	**-0.4**
1.0nm,0.6s,mb3.7							
BVAR	**Borovoye Array**	**48.88**	**311**	P	**P**	**05 18 21.3**	**+0.2**
0.6nm,0.6s,mb3.8,baz=78,slow=7.5,SNR=2.9							
WRA	**Warramunga Arr**	**59.14**	**187**	P	**P**	**05 19 35.1**	**-1.1**
1.0nm,0.8s,mb3.9,baz=8.0,slow=7.0,SNR=3.0							
ASAR	**Alice Springs**	**62.87**	**187**	P	**P**	**05 20 01.1**	**-0.4**
0.6nm,0.8s,mb3.8,baz=14,slow=7.7,SNR=5.1							
FINES	**FINESS Array B**	**66.75**	**332**	P	**P**	**05 20 25.1**	**-1.3**
1.8nm,0.8s,mb4.2,baz=48,slow=6.6,SNR=4.9							
NOA	**NORSAR Array B**	**72.07**	**337**	P	**P**	**05 20 59.5**	**+0.2**
0.6nm,0.8s,mb3.6,baz=41,slow=5.9,SNR=2.6							
AKASG	**Malin Array Be**	**72.39**	**322**	P	**P**	**05 20 59.0**	**-2.4**
0.2nm,0.3s,mb3.5,baz=50,slow=7.4,SNR=4.0							

NOU ***14*** *05:11:46.6±1.2, 19°.90S×168°.42E, h10km, MD2.7, ML3.6*
NEIC ***14*** *05:11:47.6±1.1, 21°.04S×169°.09E, h35km, mb4.7/2, Error ellipse: s-maj=30.7km s-min=19.6km az=157.0*
IDC ***14*** *05:11:50.9±2.1, 20°.27S×168°.65E, h38km±7km, mb3.8/4, mb1 4.0/4, mb1mx3.7/15, mbtmp3.8/4, Error ellipse: s-maj=77.2km s-min=27.7km az=146.0*
ISC 14 05:11:47.6±2.6, 20°.8S±0°.2×169°.1E±0°.2, h40km±20km, h43km±2.3km:pP-P, n16, σ**1º09/18, mb4.1/6, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.47**	**237**	*e*P	**Pn**	**05 12 26.4**	**+1.2**
BAYA				*e*S	**Sn**	**05 12 55.7**	**+1.5**
DZM	**Mont Dzumac**	**2.79**	**243**	*e*P	**Pn**	**05 12 28.3**	**-1.4**
DZM				*e*S	**Sn**	**05 12 59.3**	**-2.8**
DZM				AMP		05 13 05.9	
comp=Z,2μm,1.1s							
DZM	**Mont Dzumac**	**2.79**	**243**	*e*Pn	**Pn**	**05 12 28.7**	**-1.0**
DZM				*e*Sn	**Sn**	**05 13 02.4**	**+0.3**
NORM	**Noumea**	**2.83**	**240**	*e*P	**Pn**	**05 12 30.6**	**+0.4**
NORM				*e*S	**Sn**	**05 13 02.9**	**-0.1**
NOUC	**Port Laguerre**	**2.92**	**244**	*e*P	**Pn**	**05 12 31.1**	**-0.4**
NOUC				*e*S	**Sn**	**05 13 04.4**	**-0.9**
NOUC				AMP		05 13 17.7	
comp=Z,107nm,4.0s							
CTA	**Charters Tower**	**21.44**	**268**	P	**P**	**05 16 32.5**	**0.0**
comp=Z,3.3nm,0.6s,mb3.8,baz=65,slow=19,SNR=3.9							
COEN	**Coen**	**25.67**	**281**	*e*P	**P**	**05 17 14.8**	**+0.8**
comp=Z,20nm,0.9s,mb4.6							
STKA	**Stephens Creek**	**26.94**	**240**	P	**P**	**05 17 28.2**	**+2.9**
comp=Z,1.7nm,0.6s,mb3.8,baz=80,slow=10,SNR=7.4							
STKA				pP	pP	05 17 38.1	+2.0
comp=Z,2.1nm,0.6s,baz=68,slow=9.5,SNR=3.3							
STKA	**Stephens Creek**	**26.94**	**240**	*e*P	**P**	**05 17 28.3**	**+3.0**
comp=Z,0.5nm,0.7s,mb3.1							
WRA	**Warramunga Arr**	**32.58**	**265**	P	**P**	**05 18 14.2**	**-1.3**
comp=Z,0.3nm,0.3s,mb3.7,baz=86,slow=7.7,SNR=4.3							
WRA				pP	pP	05 18 26.2	-0.2
comp=Z,1.1nm,0.6s,baz=100,slow=7.9,SNR=4.7							
ASAR	**Alice Springs**	**32.67**	**258**	P	**P**	**05 18 16.6**	**+0.4**
comp=Z,2.5nm,0.5s,mb4.4,baz=86,slow=9.3,SNR=50							
ASAR				pP	pP	05 18 27.8	+0.7
comp=Z,4.0nm,0.7s,baz=85,slow=9.1,SNR=14							
ASAR	**Alice Springs**	**32.67**	**258**	P	**P**	**05 18 16.6**	**+0.4**
ASAR				pP	pP	05 18 27.8	+0.7
CASY	**Casey**	**58.63**	**204**	*e*P	**P**	**05 21 39.2**	**-1.1**
comp=Z,3.1nm,0.6s,mb4.5							
ARCES	**ARCESS Array B**	**126.57**	**345**	PKP	PKPdf	05 30 47.7	+2.0
comp=Z,1.0nm,0.9s,baz=35,slow=2.8,SNR=3.8							
ARCES	**ARCESS Array B**	**126.57**	**345**	PKP	PKPdf	05 30 47.7	+2.0
GERES	**GERESS Array B**	**145.83**	**331**	PKPbc	PKPbc	05 31 23.2	+0.8
comp=Z,0.3nm,0.6s,baz=40,slow=3.0,SNR=4.8							
GERES				pPKPbc	pPKPbc	05 31 35.2	+0.2
comp=Z,0.9nm,0.7s,baz=31,slow=3.4,SNR=4.5							

JMA 14 05:12:07.6, 39°.00N×140°.79E, h4km±1km, M1.9, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRG	**Rokugo**	**0.41**	**343**	P	Pg	05 12 16.0	+0.4
JRG				S	Sg	05 12 22.0	+1.0

NIED ***14*** *05:12:00, 39°.10N×140°.90E, h5km, Mw3.8 Best double couple: M0 6.25000×10^14 NP1:*ϕ_s*55.00000°,* δ*67.00000°,* λ*108.00000°. NP2:*ϕ_s*194.00000°,* δ*29.00000°,* λ*53.00000°.*
IDC ***14*** *05:12:49.5±1.1, 39°.16N×141°.05E, h0km, mb3.6/7, mb1 3.8/10, mb1mx3.6/27, mbtmp3.6/10, ML3.2/3, MS2.9/1, Ms1 2.9/1, ms1mx2.3/32, Error ellipse: s-maj=28.0km s-min=20.5km az=98.0*
ISCJB ***14*** *05:12:50.9±0.5, 39°.13N±0°.03×140°.98E±0°.04, h17km±5km, mb3.7/9, Error ellipse: s-maj=5.8km s-min=4.8km az=30.9*
NEIC ***14*** *05:12:51.0, 39°.11N×140°.94E, h11km, mb4.0/2, After JMA.*
JMA ***14*** *05:12:51.0, 39°.11N×140°.94E, h11km±1km, M3.6 Broadband fault plane solution: P waves. NP1:*ϕ_s*218.00000°,* δ*35.00000°,* λ*85.00000°. NP2:*ϕ_s*45.00000°,* δ*55.00000°,* λ*94.00000°. Principal axes: T Plg80.0000°, Azm329.0000°; N Plg3.0000°, Azm223.0000°; P Plg10.0000°, Azm132.0000°;*
JMA Felt I J1.
ISC 14 05:12:51.3±0.5, 39°.11N±0°.03×140°.96E±0°.04, h7km±4km, n23, σ**0º85/30, mb3.7/9, 5D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.26**	**128**	⇓P	**Pg**	**05 12 56.3**	**-0.1**
JMK				S	**Sg**	**05 13 00.2**	**+0.3**
JRG	**Rokugo**	**0.38**	**319**	⇓P	**Pg**	**05 12 58.4**	**-0.2**
JRG				*e*S	**Sg**	**05 13 04.1**	**+0.5**
JOM	**Ohasama**	**0.44**	**36**	P	**Pg**	**05 12 59.8**	**-0.1**
JOM				*e*S	**Sg**	**05 13 06.0**	**+0.3**
JYK	**Kaneyama**	**0.50**	**247**	⇓P	**Pg**	**05 13 00.6**	**-0.4**
JYK				S	**Sg**	**05 13 07.1**	**-0.5**
OFUJ	**Ofunato**	**0.56**	**93**	⇓P	**Pg**	**05 13 02.0**	**0.0**
JIO	**Ouri**	**0.73**	**155**	⇓P	**Pg**	**05 13 04.7**	**-0.5**
JOU	**Okura**	**0.78**	**197**	P	**Pg**	**05 13 05.9**	**-0.4**
JOU				S	**Sg**	**05 13 16.3**	**-0.1**
ERM	**Erimo**	**3.35**	**29**	*e*Pn	**Pn**	**05 13 46.0**	**+2.1**
MJAR	**Matsushiro Arr**	**3.36**	**221**	Pn	**Pn**	**05 13 46.3**	**+2.1**
1.0nm,0.3s,baz=21,slow=27,SNR=4.8							
MAJO	**Matsushiro**	**3.37**	**221**	*e*Pn	**Pn**	**05 13 45.0**	**+0.8**
MAT	**Matsushiro**	**3.37**	**221**	P	**Pn**	**05 13 44.2**	**0.0**
MAT				*e*S	**Sn**	**05 14 25.2**	**+0.8**
ASAJ	**Asahikawa**	**5.15**	**13**	Pn	**Pn**	**05 14 08.4**	**-0.3**
0.8nm,0.3s,baz=261,slow=13,SNR=4.0							
KSRS	**Korea Array**	**10.38**	**265**	Pn	**Pn**	**05 15 23.1**	**+2.6**
0.5nm,0.3s,baz=78,slow=14,SNR=8.0							
KSRS				Sn	**Sn**	**05 17 21.7**	**+4.7**
0.4nm,0.3s,baz=75,slow=23,SNR=10							
KSRS				LR	LR	05 19 29.6	
comp=Z,64nm,18.3s,baz=4.5,slow=38							
ZALV	**Zalesovo Beam**	**40.27**	**311**	P	**P**	**05 20 27.5**	**-1.1**
0.5nm,0.4s,mb3.6,baz=86,slow=7.4,SNR=3.3							
MKAR	**Makanchi Array**	**42.74**	**300**	P	**P**	**05 20 48.3**	**-0.6**
0.3nm,0.6s,mb3.2,baz=75,slow=7.6,SNR=3.5							
KURK	**Kurchatov**	**44.39**	**306**	*e*P	**P**	**05 21 01.3**	**-0.8**
2.0nm,0.8s,mb3.9							
ABKAR	**Akbulak array**	**56.34**	**309**	*e*P	**P**	**05 22 31.9**	**-0.8**
0.9nm,0.6s,mb4.0							
WRA	**Warramunga Arr**	**59.07**	**187**	P	**P**	**05 22 51.5**	**-0.5**
0.6nm,0.5s,mb3.9,baz=4.4,slow=7.2,SNR=3.3							
ASAR	**Alice Springs**	**62.80**	**187**	P	**P**	**05 23 16.6**	**-0.7**
0.4nm,0.6s,mb3.7,baz=9.9,slow=5.7,SNR=5.6							
FINES	**FINESS Array B**	**66.81**	**332**	P	**P**	**05 23 42.0**	**-1.1**
1.0nm,0.6s,mb4.0,baz=48,slow=5.7,SNR=5.5							
NB2	**NORSAR Subarra**	**72.13**	**337**	P	**P**	**05 24 16.2**	**+0.2**
comp=Z,1.5nm,0.9s,mb3.9,baz=36,slow=6.2							
NOA	**NORSAR Array B**	**72.13**	**337**	P	**P**	**05 24 15.2**	**-0.8**
comp=Z,0.6nm,0.6s,mb3.7,baz=39,slow=6.3,SNR=4.3							
PDAR	**Pinedale Array**	**76.47**	**46**	P	**P**	**05 24 42.1**	**+0.5**
comp=Z,0.2nm,0.6s,mb3.2,baz=314,slow=6.2,SNR=2.9							

CSEM ***14*** *05:36:41.7, 36°.07N×21°.91E, h6km, MD3.5, After ATH*
ATH 14 05:36:41.7, 36°.07N×21°.91E, h6km±4km, MD3.5/6, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.83**	**351**	*e*PB	Pb	05 36 58.2	-0.4
PYL	**PYLOS**	**0.83**	**351**	*e*Pb	Pb	05 36 58.2	-0.4
KYTH	**Kithira**	**0.94**	**77**	*e*PG	Pg	05 36 59.2	-0.5
KYTH	**Kithira**	**0.94**	**77**	*e*Pg	Pg	05 36 59.3	-0.4
VLI	**Veliai**	**1.05**	**52**	*e*PN	Pn	05 37 02.0	-1.0
VLI				*e*SB	Sb	05 37 16.3	0.0
VLI	**Veliai**	**1.05**	**52**	*e*Pn	Pn	05 37 02.0	-1.0
VLI				*e*Sb	Sb	05 37 16.3	0.0
ITM	**Ithomi**	**1.11**	**1**	*e*PG	Pg	05 37 02.3	-0.7
ITM				*e*SB	Sb	05 37 17.7	-0.2
ITM	**Ithomi**	**1.11**	**1**	*e*Pg	Pg	05 37 02.3	-0.7
ITM				*e*Sb	Sb	05 37 17.7	-0.2
VLX	**Vlachokerasia**	**1.35**	**16**	*e*PG	Pg	05 37 06.9	-0.7
VLX				*e*SB	Sb	05 37 25.9	+0.9
VLX	**Vlachokerasia**	**1.35**	**16**	*e*Pg	Pg	05 37 06.9	-0.7
VLX				*e*Sb	Sb	05 37 25.9	+0.9
GUR	**Goura**	**1.90**	**10**	*e*PN	Pn	05 37 16.6	+2.0
GUR	**Goura**	**1.90**	**10**	*e*Pn	Pn	05 37 16.6	+2.0

JMA 14 05:38:17.5, 39°.01N×140°.87E, h7km±1km, M2.0, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.28**	**102**	P	Pg	05 38 22.9	-0.1
JMK				S	Sg	05 38 26.8	+0.1
JYK	**Kaneyama**	**0.41**	**257**	P	Pg	05 38 25.7	+0.3
JYK				S	Sg	05 38 31.2	+0.4
JRG	**Rokugo**	**0.43**	**335**	P	Pg	05 38 26.1	+0.3
JRG				S	Sg	05 38 32.5	+1.1
JOU	**Okura**	**0.66**	**194**	P	Pg	05 38 30.1	-0.2
JOU				S	Sg	05 38 38.2	-0.7

JMA 14 05:38:33.0, 39°.10N×140°.84E, h9km±1km, M1.5, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.33**	**116**	*e*S	Sg	05 38 43.9	0.0
JRG	**Rokugo**	**0.34**	**332**	P	Pg	05 38 40.0	+0.4
JRG				*e*S	Sg	05 38 44.8	+0.7
JYK	**Kaneyama**	**0.42**	**244**	P	Pg	05 38 41.4	+0.3
JYK				*e*S	Sg	05 38 46.9	+0.3
JOU	**Okura**	**0.75**	**191**	*e*S	Sg	05 38 57.5	+0.4

NIED ***14*** *05:39:00, 39°.10N×140°.90E, h5km, Mw4.3 Best double couple: M0 2.89000×10^15 NP1:*ϕ_s*5.00000°,* δ*46.00000°,* λ*98.00000°. NP2:*ϕ_s*173.00000°,* δ*45.00000°,* λ*82.00000°.*
BJI ***14*** *05:39:04.5, 39°.00N×140°.95E, h7km, mB4.6/18, mb4.5/29, Ms4.2/24, Ms7 4.1/25*
ISCJB ***14*** *05:39:05.6±0.5, 39°.15N±0°.02×140°.86E±0°.02, h9km±3km, mb4.6/109, MS4.0/10, Error ellipse: s-maj=4.0km s-min=2.9km az=164.3*
IDC ***14*** *05:39:05.2±0.6, 39°.12N×140°.78E, h0km, mb4.3/19, mb1 4.4/22, mb1mx4.3/28, mbtmp4.3/22, ML3.8/3, Error ellipse: s-maj=16.9km s-min=11.5km az=122.0*
JMA ***14*** *05:39:06.5, 39°.11N×140°.93E, h10km±1km, M4.5 Broadband fault plane solution: P waves. NP1:*ϕ_s*193.00000°,* δ*40.00000°,* λ*88.00000°. NP2:*ϕ_s*16.00000°,* δ*50.00000°,* λ*92.00000°. Principal axes: T Plg85.0000°, Azm303.0000°; N Plg2.0000°, Azm195.0000°; P Plg5.0000°, Azm105.0000°;*
JMA Felt III J1.
NEIC ***14*** *05:39:06.5, 39°.12N×140°.93E, h11km, mb4.7/76, MW4.2(NIED), After JMA.*
NEIC Recorded [3 JMA] in Akita and Iwate; [2 JMA] in Miyagi; [1 JMA] in Aomori.
MOS ***14*** *05:39:10.2±1.0, 39°.33N×140°.70E, h33km, mb4.9/61, Error ellipse: s-maj=8.4km s-min=5.0km az=99.0*
ISC 14 05:39:06.4±0.5, 39°.14N±0°.02×140°.87E±0°.02, h4km±3km, h13km±1.8km:pP-P, n438, σ**0º76/454, mb4.6/109, MS4.0/10, 96C-75D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRG	**Rokugo**	**0.32**	**325**	⇓P	**Pg**	**05 39 13.9**	**+1.4**
JMK	**Ichinoseki**	**0.33**	**124**	⇓P	**Pg**	**05 39 12.0**	**-0.7**
JMK				S	**Sg**	**05 39 15.8**	**-1.2**
JYK	**Kaneyama**	**0.46**	**241**	⇓P	**Pg**	**05 39 16.0**	**+0.9**
JYK				*e*S	**Sg**	**05 39 22.7**	**+1.7**
JOM	**Ohasama**	**0.47**	**44**	P	**Pg**	**05 39 15.4**	**0.0**
JOM				S	**Sg**	**05 39 21.6**	**+0.1**
OFUJ	**Ofunato**	**0.62**	**95**	⇓P	**Pg**	**05 39 17.7**	**-0.6**
JIO	**Ouri**	**0.78**	**151**	⇓P	**Pg**	**05 39 20.4**	**-0.9**
JIO				S	**Sg**	**05 39 30.7**	**-0.7**
JOU	**Okura**	**0.79**	**192**	⇓P	**Pg**	**05 39 21.5**	**0.0**
JOU				S	**Sg**	**05 39 31.8**	**+0.1**
MAJO	**Matsushiro**	**3.34**	**220**	*e*P	**Pn**	**05 40 01.1**	**+1.8**
MAT	**Matsushiro**	**3.34**	**220**	P	**Pn**	**05 40 00.3**	**+1.0**
MAT				*e*S	**Sn**	**05 40 47.8**	**+8.4**
MJAR	**Matsushiro Arr**	**3.34**	**220**	Pn	**Pn**	**05 39 59.5**	**+0.1**
4.3nm,0.3s,baz=28,slow=14,SNR=32							
MJAR				Pg	**Pg**	**05 40 05.8**	**-4.5**
7.1nm,0.3s,baz=29,slow=12,SNR=28							
MJAR				Lg		05 40 51.0	
6.3nm,0.3s,baz=15,slow=20,SNR=4.6							
MJAR	**Matsushiro Arr**	**3.34**	**220**	P	**Pn**	**05 39 59.5**	**+0.2**
MJAR						05 40 51.0	
MJAR				pmax	pmax		
comp=Z,4.0nm,0.3s							
ERM	**Erimo**	**3.36**	**30**	*e*Pn	**Pn**	**05 40 00.8**	**+1.3**
ERM				*e*Sn	**Sn**	**05 40 43.1**	**+3.2**
ASAJ	**Asahikawa**	**5.14**	**14**	Pn	**Pn**	**05 40 25.9**	**+1.8**
comp=Z,4.5nm,0.3s,baz=207,slow=12,SNR=22							
ASAJ				Sn	**Sn**	**05 41 28.8**	**+5.0**
comp=Z,4.6nm,0.3s,baz=143,slow=20,SNR=2.6							
ASAJ	**Asahikawa**	**5.14**	**14**	P	**Pn**	**05 40 25.9**	**+1.9**
ASAJ						05 41 28.8	
ASAJ				pmax	pmax		
comp=Z,5.0nm,0.3s							
ASAJ				smax			
comp=N,5.0nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**6.16**	**36**	*e*P	**Pn**	**05 40 38.1**	**+0.1**
YUK				/ S	**Sn**	**05 41 46.8**	**-2.1**
YUK				pmax	pmax		
comp=Z,270nm,0.5s							
YUK				pmax	pmax		
comp=N,190nm,0.5s							
YUK				pmax	pmax		
comp=E,70nm,0.5s							
YUK				smax			
comp=N,380nm,0.5s							
YUK				smax			
comp=E,380nm,0.5s							
YUK				smax			
comp=N,180nm,0.6s							
YUK				smax			
comp=E,380nm,0.6s							
YUK				smax			
comp=E,390nm,1.9s							
YUK				MLR	MLR		
comp=N,410nm,15.2s							
YUK				MLR	MLR		
comp=Z,390nm,15.2s							
YUK				MLR	MLR		
comp=E,60nm,3.8s							
YSS	**Yuzh-Sakhalins**	**7.93**	**9⇑**	*e*P	**Pn**	**05 41 03.5**	**+1.1**
YSS				pmax	pmax		
comp=Z,40nm,0.9s							
YSS				MLR	MLR		
comp=Z,400nm,12.0s							
YSS	**Yuzh-Sakhalins**	**7.93**	**9**	*e*P	**Pn**	**05 41 00.6**	**-1.8**
YSS	**Yuzh-Sakhalins**	**7.93**	**9**	*e*Pn	**Pn**	**05 41 00.6**	**-1.8**
MDJ	**Mudanjiang**	**10.03**	**307**	P	**Pn**	**05 41 30.8**	**-0.3**
MDJ				pP		05 41 35.5	
MDJ				S	**Sn**	**05 43 24.6**	**+0.5**
MDJ				pmax	pmax		
comp=Z,10.0nm,1.0s							
MDJ				pmax	pmax		
comp=Z,77nm,5.1s							
MDJ				LR	LR		
comp=N,290nm,13.1s							
MDJ				LR	LR		
comp=E,420nm,13.1s							
MDJ				LR	LR		
comp=Z,730nm,14.6s							
MDJ	**Mudanjiang**	**10.03**	**307**	Pn	**Pn**	**05 41 30.9**	**-0.2**
HABR	**Khabarovsk**	**10.23**	**338**	*e*P	**Pn**	**05 41 32.6**	**-1.3**
HABR				pmax	pmax		
comp=Z,18nm,1.8s							
HABR				pmax	pmax		
comp=E,12nm,1.5s							
HABR				pmax	pmax		
comp=N,11nm,1.3s							
HABR				MLR	MLR		
comp=Z,243nm,13.0s							
KSRS	**Korea Array**	**10.32**	**265**	Pn	**Pn**	**05 41 39.7**	**+4.6**
comp=Z,2.6nm,0.3s,baz=78,slow=14,SNR=53							
KSRS				Sn	**Sn**	**05 43 36.2**	**+5.0**
comp=Z,2.5nm,0.3s,baz=75,slow=24,SNR=24							
KSRS	**Korea Array**	**10.32**	**265**	P	**Pn**	**05 41 39.7**	**+4.6**
KSRS						05 43 36.2	
KSRS				pmax	pmax		
comp=Z,3.0nm,0.3s							
KSRS				smax			
comp=N,3.0nm,0.3s							
KLR	**Kul'dur**	**12.02**	**330**	*e*P	**Pn**	**05 41 58.0**	**-0.3**
KLR				pmax	pmax		
comp=E,57nm,1.6s							
KLR				pmax	pmax		
comp=Z,57nm,1.6s							
KLR				MLR	MLR		
comp=N,500nm,12.5s							
KLR				MLR	MLR		
comp=Z,1μm,12.5s							
CN2	**Changchun**	**12.47**	**297**	*e*P	**Pn**	**05 42 08.8**	**+4.3**
CN2				*e*sP		05 42 16.3	
CN2				*e*S	**Sn**	**05 44 26.8**	**+3.0**
CN2				pmax	pmax		
comp=Z,10.0nm,1.6s							
CN2				LR	LR		
comp=N,500nm,13.0s							
CN2				LR	LR		
comp=E,300nm,13.0s							
CN2				LR	LR		
comp=Z,300nm,14.0s							
PETK	**Petropavlovsk-**	**18.13**	**34**	P	**Pn**	**05 43 18.6**	**-0.3**
comp=Z,0.3nm,0.3s,baz=224,slow=11,SNR=3.4							
BJI	**Beijing**	**19.04**	**281**	P	**Pn**	**05 43 28.6**	**-1.5**
BJI				S	**Sn**	**05 47 01.9**	**-1.8**
BJI				pmax	pmax		
comp=Z,12nm,1.4s							
BJI				pmax	pmax		
comp=Z,140nm,5.3s							
BJI				LR	LR		
comp=N,270nm,12.0s							
BJI				LR	LR		
comp=E,550nm,10.3s							
BJI				LR	LR		
comp=Z,190nm,14.4s							
BJT	**Baijiatuan**	**19.05**	**281**	*e*P	**Pn**	**05 43 28

CLNS MLR MLR
comp=Z,179nm,15.0s,MS3.6
CLNS MLR MLR
comp=E,199nm,14.0s,MS3.8
HHC Hu-ho-hao-te 22.48 284 *e*P **P 05 44 06.0 -0.5**
HHC sP sP 05 44 13.4 +5.2
HHC PP 05 44 32.4
HHC S **S 05 48 05.1 -8.8**
HHC SS 05 48 45.5
HHC PcS PcS 05 51 36.5 -2.9
HHC pmax pmax
comp=Z,22nm,0.8s,mb4.6
HHC pmax pmax
comp=Z,83nm,3.7s
HHC LR LR
comp=N,140nm,7.7s
HHC LR LR
comp=E,400nm,12.4s
HHC LR LR
comp=Z,460nm,12.6s,MS4.1
WHN Wuhan 23.33 257 P **P 05 44 07.5 -8.2**
WHN S S 05 48 07.9 -21
WHN LR LR
comp=N,870nm,11.3s
WHN LR LR
comp=E,1µm,18.5s
WHN LR LR
comp=Z,650nm,20.2s
YAK Yakutsk 23.93 347 *e*P **P 05 44 17.7 -3.4**
YAK *e**PP 05 44 23.4
YAK *e*PPP 05 45 00.1
YAK *e*S **S 05 48 31.8 -6.0**
YAK *e*SS 05 49 13.0
YAK *e* 05 55 21.7
YAK pmax pmax
comp=Z,16nm,0.9s,mb4.5
YAK pmax pmax
comp=N,11nm,1.3s
YAK pmax pmax
comp=E,5.0nm,1.4s
YAK smax
comp=N,111nm,2.4s
YAK smax
comp=E,47nm,1.8s
YAK MLR MLR
comp=Z,169nm,14.0s,MS3.7
YAK MLR MLR
comp=E,78nm,12.0s,MS3.7
YAK MLR MLR
comp=N,134nm,13.0s,MS3.7
YAK Yakutsk 23.93 347 *e*P **P 05 44 23.4 +2.3**
SEY Seymchan 24.82 13 *c e*P **P 05 44 30.2 +0.9**
ULN Ulaanbaatar 25.86 301 *e*P **P 05 44 37.2 -1.7**
ULN pmax pmax
comp=Z,4.0nm,0.8s,mb4.0
ULN Ulaanbaatar 25.86 301 *e*P **P 05 44 37.2 -1.7**
comp=Z,4.3nm,0.8s,mb4.0
SONM Songino Array 26.30 301 P **P 05 44 40.3 -2.6**
comp=Z,1.8nm,0.5s,mb3.9,baz=98,slow=8.6,SNR=2.6
SONM Songino Array 26.30 301 P **P 05 44 40.3 -2.5**
SONM pmax pmax
comp=Z,2.0nm,0.5s
ENH Enshi 27.17 261 *e*P **P 05 44 50.4 -0.5**
comp=Z,4.0nm,0.5s,mb4.2
ZAK Zakamensk 28.66 305 *e*P **P 05 45 02.9 -1.1**
LZH Lanzhou 29.36 276 *e*P **P 05 45 13.1 +2.8**
LZH pP pP 05 45 18.0 +6.4
LZH sP sP 05 45 20.5 +8.4
LZH pmax pmax
comp=Z,19nm,1.5s,mb4.6
GYA Guiyang 31.22 256⇑ *i*P **P 05 45 26.8 -0.1**
GYA PP PP 05 46 30.8 -6.5
GYA PcP PcP 05 48 23.4 +1.8
GYA S **S 05 50 28.8 -5.0**
GYA ScP ScP 05 52 05.4 +0.2
GYA SS SS 05 52 18.3 -29
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
GYA LR LR
comp=N,290nm,11.2s,MS4.4
GYA LR LR
comp=E,320nm,10.8s,MS4.4
GYA LR LR
comp=Z,500nm,12.1s,MS4.4
CD2 Chengdu 31.31 266 *e*P **P 05 45 29.3 +1.7**
CD2 pP pP 05 45 33.6 +4.7
CD2 sP sP 05 45 36.3 +6.9
CD2 PP PP 05 46 32.1 -6.1
CD2 S **S 05 50 33.8 -1.3**
CD2 sS sS 05 50 41.0 +3.9
CD2 SS SS 05 52 19.3 -29
CD2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
CD2 pmax pmax
comp=Z,30nm,4.8s
CD2 LR LR
comp=N,370nm,12.0s
CD2 LR LR
comp=Z,260nm,12.0s,MS4.1
CD2 LR LR
comp=Z,330nm,9.6s
GTA Gaotai 31.59 284 *e*P **P 05 45 29.6 -0.4**
GTA pP pP 05 45 33.3 +2.0
GTA sP sP 05 45 36.3 +4.5
GTA PcP PcP 05 48 23.5 +1.2
GTA pmax pmax
comp=Z,3.0nm,0.5s,mb4.4
BILL Bilibino 32.14 18 *e*P **P 05 45 34.9 +0.4**
BILL *i* 05 46 41.8
BILL *i* 05 48 25.2
BILL pmax pmax
comp=Z,7.0nm,1.2s,mb4.4
BILL MLR MLR
comp=Z,100nm,15.0s,MS3.6
BILL Bilibino 32.14 18 *e*P **P 05 45 34.6 0.0**
comp=Z,3.9nm,0.7s,mb4.3
TIXI Tiksi 33.15 353 *e*P **P 05 45 42.5 -0.8**
TIXI pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
TIXI Tiksi 33.15 353 *e*P **P 05 45 42.5 -0.9**
comp=Z,3.5nm,0.6s,mb4.5
QIZ Qiongzhong 33.47 242 P **P 05 45 47.3 +0.7**
QIZ S **S 05 51 09.3 +0.5**
QIZ pmax pmax
comp=Z,15nm,2.2s,mb4.5
QIZ pmax pmax
comp=Z,81nm,4.8s
QIZ LR LR
comp=N,240nm,3.7s
QIZ LR LR
comp=E,59nm,4.0s
QIZ LR LR
comp=Z,180nm,11.8s,MS4.0
KMI Kunming 34.92 258 P **P 05 46 01.6 +2.4**
KMI pP pP 05 46 04.8 +4.4
KMI sP sP 05 46 05.9 +4.9
KMI PP PP 05 47 19.1 +0.9
KMI S **S 05 51 32.1 +0.9**
KMI sS sS 05 51 36.4 +3.1
KMI SS SS 05 53 44.3 -18
KMI pmax pmax
comp=Z,11nm,0.9s,mb4.8
KMI pmax pmax
comp=Z,74nm,3.9s
KMI LR LR
comp=N,150nm,14.6s,MS4.1
KMI LR LR
comp=E,170nm,13.5s,MS4.1
KMI LR LR
comp=Z,170nm,12.9s,MS4.0
ZALV Zalesovo Beam 40.20 311 P **P 05 46 43.2 -0.4**
comp=Z,7.7nm,0.7s,mb4.5,baz=81,slow=8.2,SNR=29
ZALV PcP PcP 05 48 46.8 -0.8
comp=Z,1.6nm,0.6s,baz=96,slow=1.8,SNR=4.3
ZALV Zalesovo Beam 40.20 311 P **P 05 46 43.2 -0.4**
ZALV 05 48 46.8
ZALV pmax pmax
comp=Z,8.0nm,0.7s,mb4.6
NVS Novosibirsk 41.10 312 *i* P **P 05 46 50.9 -0.1**
MK31 Makanchi Array 42.67 300 *e*P **P 05 47 03.6 -0.3**
MKAR Makanchi Array 42.67 300 P **P 05 47 02.9 -1.0**
comp=Z,3.3nm,0.8s,mb4.1,baz=75,slow=14,SNR=21
MKAR Makanchi Array 42.67 300 P **P 05 47 02.9 -1.0**
MKAR pmax pmax
comp=Z,3.0nm,0.8s
MKAR Makanchi Array 42.67 300 P **P 05 47 02.9 -1.0**
baz=68
SUMG Summit 68.58 360 *e*P **P 05 50 09.6 -0.2**
comp=Z,14nm,0.9s,mb4.9
SUMG Summit 68.58 360 *i* P **P 05 50 09.2 -0.6**
comp=Z,11nm,1.0s,mb4.8
NEW Newport 68.92 44 *e*P **P 05 50 11.9 -0.4**
NEW pmax pmax
comp=Z,7.0nm,1.2s
NEW Newport 68.92 44 *e*P **P 05 50 11.9 -0.4**
comp=Z,6.5nm,1.2s,mb4.4
ZEI Tsey 69.16 309 *e*P **P 05 50 12.4 -1.4**
ZEI pmax pmax
comp=Z,17nm,1.5s,mb4.8
KIV Kislovodsk 69.22 310 *c i*P **P 05 50 13.7 -0.5**
KIV pmax pmax
comp=Z,34nm,1.2s,mb5.2
KIV Kislovodsk 69.22 310 *e*P **P 05 50 15.1 +0.9**
KIV pmax pmax
comp=Z,39nm,1.1s,mb5.2
KIV Kislovodsk 69.22 310 *e*P **P 05 50 15.1 +0.9**
comp=Z,39nm,1.1s,mb5.2
SCO Scoresbysund 69.98 354 *i* P **P 05 50 17.6 -0.8**
comp=Z,4.4nm,0.8s,mb4.4
B13A Whitefish 70.29 43 ⇓P **P 05 50 20.9 +0.2**
baz=70
G10A Bishop Farm, J 70.67 47 ⇓P **P 05 50 23.1 +0.1**
baz=70
A15A Johnson Ranch, 70.84 42 ⇓P **P 05 50 23.6 -0.5**
baz=71
F11A Grangeville 70.86 46 ⇑P **P 05 50 24.3 +0.1**
baz=71
E12A Beaver Dam Sad 70.87 45 ⇑P **P 05 50 23.8 -0.5**
baz=71
SWMT Swartz Lake 71.06 44 *e*P **P 05 50 26.3 +0.8**
comp=Z,3.6nm,1.0s,mb4.3
G11A Walters Elk Ra 71.09 47 ⇑P **P 05 50 25.0 -0.6**
baz=71
B15A Bradely Ranch, 71.34 42 ⇑P **P 05 50 27.0 0.0**
baz=71,SNR=7.5
F12A Elk City 71.44 46 ⇑P **P 05 50 26.9 -0.9**
baz=71
J09A Fry Pan Ranch, 71.45 49 ⇓P **P 05 50 27.7 -0.2**
baz=71
SLMT Seeley Lake 71.50 44 *e*P **P 05 50 27.9 -0.2**
comp=Z,2.9nm,0.7s,mb4.3
D14A Greenough 71.59 44 ⇑P **P 05 50 28.5 -0.2**
baz=71
C15A Salmond Ranch, 71.64 43 ⇓P **P 05 50 28.7 -0.3**
baz=71
H11A Donnelly 71.65 47 ⇑P **P 05 50 28.4 -0.6**
baz=71
BEKR Beckworth 71.94 53 ⇑P **P 05 50 29.5 -1.3**
baz=72
NB2 NORSAR Subarra 72.09 337 P **P 05 50 30.6 -0.7**
comp=Z,5.5nm,0.7s,mb4.6,baz=39,slow=6.2
NOA NORSAR Array B 72.09 337 P **P 05 50 30.5 -0.8**
comp=Z,4.8nm,0.7s,mb4.5,baz=38,slow=6.1,SNR=19
NOA NORSAR Array B 72.09 337 P **P 05 50 30.5 -0.8**
NOA pmax pmax
comp=Z,5.0nm,0.7s
FFC Flin Flon 72.17 33 *i* P **P 05 50 32.7 +0.7**
B17A L&G Farms, Che 72.27 42 ⇓P **P 05 50 32.6 -0.1**
baz=72
AKASG Malin Array Be 72.38 322 P **P 05 50 32.6 -0.7**
comp=Z,2.3nm,0.5s,mb4.4,baz=46,slow=6.3,SNR=15
AKASG Malin Array Be 72.38 322 P **P 05 50 32.6 -0.7**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
E15A Deer Lodge 72.47 44 ⇑P **P 05 50 32.7 -1.2**
baz=72
I12A Atlanta 72.70 47 ⇑P **P 05 50 35.3 0.0**
baz=72
H13A Challis 72.73 46 ⇑P **P 05 50 35.5 +0.1**
baz=72
F15A Butte 72.91 44 ⇑P **P 05 50 37.0 +0.4**
baz=73
LRM Limekiln Ridge 72.95 44 *e*P **P 05 50 37.4 +0.6**
comp=Z,19nm,0.8s,mb5.1
EGMT Eagleton 72.98 41 ⇑P **P 05 50 36.0 -0.9**
baz=73
CMB Columbia Colle 73.00 55 *e*P **P 05 50 37.8 +0.6**
CMB pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
CMB Columbia Colle 73.00 55 *e*P **P 05 50 37.8 +0.6**
comp=Z,3.9nm,0.9s,mb4.3
DLMT Dillon 73.16 45 *e*P **P 05 50 38.4 +0.4**
comp=Z,7.1nm,1.2s,mb4.5
I13A Wildhorse Cree 73.21 47 ⇓P **P 05 50 37.2 -1.1**
baz=73
HLID Hailey 73.26 47 ⇓P **P 05 50 37.9 -0.8**
baz=73
HLID Hailey 73.26 47 *e*P **P 05 50 38.6 0.0**
comp=Z,2.5nm,1.3s,mb4.0
G15A Dillon 73.34 45 ⇓P **P 05 50 39.2 +0.1**
baz=73,SNR=6.7
J13A Cove Ranch, Pi 73.50 47 ⇓P **P 05 50 39.8 -0.3**
baz=73
BOZ Bozeman (W) 73.50 44 ⇑P **P 05 50 40.2 +0.2**
baz=73,SNR=7.4
BOZ Bozeman (W) 73.50 44 *e*P **P 05 50 40.3 +0.3**
BOZ pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
BOZ Bozeman (W) 73.50 44 *e*P **P 05 50 40.2 +0.2**
comp=Z,2.6nm,0.8s,mb4.2
I14A Mackay 73.58 46 ⇓P **P 05 50 40.1 -0.4**
baz=73
SFJD Kangerlussuaq 73.83 5 *i* P **P 05 50 36.9 -4.7**
comp=Z,8.8nm,1.0s,mb4.6
F17A Fitzpatrick Pl 73.86 44 ⇑P **P 05 50 42.0 -0.1**
baz=74
M12A Wells 74.30 49 ⇓P **P 05 50 45.5 +0.7**
baz=74
F18A Big Timber 74.37 43 ⇑P **P 05 50 45.1 0.0**
baz=74,SNR=7.0
GCMT Greycliff 74.47 43 *e*P **P 05 50 46.2 +0.6**
comp=Z,1.8nm,0.8s,mb4.0
P10A Eureka 74.48 51 ⇑P **P 05 50 46.2 +0.4**
baz=74
J15A Blackfoot 74.48 46 ⇓P **P 05 50 46.1 +0.3**
baz=74
K14A Jones Ranch, D 74.60 47 ⇓P **P 05 50 45.8 -0.7**
baz=74
I16A Newdale 74.71 46 ⇑P **P 05 50 46.9 -0.2**
baz=74
M13A Montello 74.77 49 ⇑P **P 05 50 47.8 +0.2**
baz=74
L14A Malta 74.89 48 ⇑P **P 05 50 48.7 +0.5**
baz=75
IMW Indian Meadow 75.00 45 *e*P **P 05 50 50.4 +1.6**
comp=Z,2.4nm,0.7s,mb4.2
Q10A Clear Creek Ra 75.01 52 ⇓P **P 05 50 49.3 +0.3**
baz=75
RLMT Red Lodge 75.11 44 ⇓P **P 05 50 49.4 0.0**
baz=75
K16A Soda Springs 75.32 46 ⇓P **P 05 50 50.8 +0.1**
baz=75
S10A Tonopah Range, 75.45 53 ⇑P **P 05 50 51.0 -0.5**
baz=75
Q11A Duckwater 75.45 52 ⇑P **P 05 50 51.6 +0.1**
baz=75
GRAC Grapevine Rang 75.53 54 ⇓P **P 05 50 51.5 -0.5**
baz=75
SBC Santa Barbara 75.60 57 ⇓P **P 05 50 52.0 -0.5**
baz=75
R11A Troy Canyon, C 75.81 52 ⇑P **P 05 50 52.3 -1.2**
baz=76
Q12A Willow Creek R 75.83 51 ⇓P **P 05 50 52.5 -1.2**
baz=76
MPMC Manual Prospec 76.04 55 ⇑P **P 05 50 54.1 -0.8**
baz=76
HWUT Hardware Ranch 76.12 47 *e*P **P 05 50 55.8 +0.5**
comp=Z,5.5nm,1.3s,mb4.3
DUG Dugway 76.31 49 ⇓P **P 05 50 56.4 +0.1**
baz=76,SNR=5.3
DUG Dugway 76.31 49 *e*P **P 05 50 57.2 +0.8**
DUG pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
DUG Dugway 76.31 49 *e*P **P 05 50 57.2 +0.8**
comp=Z,2.4nm,0.8s,mb4.2
K18A Toltan Ranch, 76.32 46 ⇓P **P 05 50 55.9 -0.5**
baz=76
Q13A Wheeler Ranch, 76.38 51 ⇓P **P 05 50 56.7 -0.1**
baz=76
BUR08 Bucovina Ar. S 76.39 321 *e*P **P 05 50 56.4 -0.3**
R12A Pony Springs, 76.42 52 ⇓P **P 05 50 57.6 +0.6**
baz=76
BW06 Boulder Array 76.50 46 ⇑P **P 05 50 57.2 -0.2**
baz=76

MKAR Makanchi Array 42.67 300 P **P 05 47 02.9 -1.0**
KURK Kurchatov 44.32 306 *c e*P **P 05 47 16.9 -0.3**
KURK pmax pmax
comp=Z,26nm,1.2s,mb4.8
KURK Kurchatov 44.32 306 *e*P **P 05 47 16.2 -1.0**
comp=Z,9.9nm,0.6s,mb4.7
KDAK Kodiak Island 45.84 43 P **P 05 47 29.2 0.0**
comp=Z,7.2nm,0.6s,mb4.8,baz=234,slow=8.9,SNR=8.8
KDAK Kodiak Island 45.84 43 *i* P **P 05 47 29.3 +0.1**
ODAN Odare 45.90 271 *e*P **P 05 47 29.0 -1.1**
comp=Z,10nm,0.7s,mb4.9
RAMN Ramite 46.47 272 *e*P **P 05 47 33.9 -0.6**
comp=Z,15nm,0.6s,mb5.1
TRF Thorofare Moun 46.55 35 *e*P **P 05 47 35.4 +0.7**
comp=Z,28nm,1.8s,mb4.9
GUN Gumba 46.56 273 *e*P **P 05 47 35.0 -0.3**
comp=Z,45nm,0.8s,mb5.4
KKN Kakani 47.09 274 *e*P **P 05 47 38.7 -0.7**
comp=Z,40nm,0.7s,mb5.5
KKN Kakani 47.09 274 *e*P **P 05 47 38.7 -0.7**
KKN pmax pmax
comp=Z,40nm,0.7s,mb5.5
MCK McKinley 47.14 35 *e*P **P 05 47 39.5 +0.2**
MCK pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
MCK McKinley 47.14 35 *e*P **P 05 47 39.5 +0.2**
comp=Z,4.9nm,0.8s,mb4.5
PMR Palmer 47.21 38 *e*P **P 05 47 39.7 -0.2**
PMR pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
PMR Palmer 47.21 38 *e*P **P 05 47 39.7 -0.2**
comp=Z,7.7nm,0.9s,mb4.6
TKM2 Tokmak 2 48.28 297 *e*P **P 05 47 49.1 +0.6**
TKM2 pmax pmax
comp=Z,22nm,1.0s,mb5.1
TKM2 Tokmak 2 48.28 297 *e*P **P 05 47 49.0 +0.6**
comp=Z,22nm,1.0s,mb5.1
BVAR Borovoye Array 48.86 311 P **P 05 47 52.6 -0.1**
comp=Z,3.7nm,0.6s,mb4.6,baz=79,slow=8.1,SNR=21
BVAR PcP PcP 05 49 17.3 +0.1
comp=Z,2.1nm,0.7s,baz=66,slow=3.6,SNR=5.1
BVAR Borovoye Array 48.86 311 P **P 05 47 52.6 -0.1**
BVAR 05 49 17.3
BVAR pmax pmax
comp=Z,4.0nm,0.6s
BRVK Borovoye 48.91 311 *c e*P **P 05 47 53.3 +0.1**
BRVK pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
BRVK Borovoye 48.91 311 *e*P **P 05 47 53.5 +0.3**
comp=Z,4.9nm,0.8s,mb4.6
AAK Ala-Archa 49.14 297 *e*P **P 05 47 54.8 -0.3**
AAK pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
AAK Ala-Archa 49.14 297 *e*P **P 05 47 54.8 -0.3**
comp=Z,9.7nm,1.0s,mb4.8
KSH Kashi 49.19 292 *e*P **P 05 47 59.1 +3.6**
KSH pP pP 05 48 03.5 +6.7
KSH sP sP 05 48 06.1 +8.8
KSH PcP PcP 05 49 21.6 +2.9
KSH PP PP 05 49 53.6 +4.6
KSH ScP ScP 05 53 15.1 +0.5
KSH PcS PcS 05 53 16.8 +1.7
KSH S **S 05 55 04.1 +2.5**
KSH ScS ScS 05 57 47.6 -0.8
KSH SS SS 05 58 32.0 -0.5
KSH pmax pmax
comp=Z,16nm,1.5s,mb4.8
KSH LR LR
comp=N,45nm,5.5s
KSH LR LR
comp=E,86nm,6.5s
KSH LR LR
comp=Z,160nm,5.4s
UCH Uchtor 49.26 296 *e*P **P 05 47 56.8 +0.8**
comp=Z,4.2nm,1.0s,mb4.4
EKS2 Erkin-Say 49.63 297 *e*P **P 05 47 59.1 +0.3**
comp=Z,6.3nm,1.1s,mb4.6
AML Almayashu 49.87 296 *e*P **P 05 48 01.6 +0.9**
comp=Z,21nm,1.2s,mb5.0
EGAK Eagle 50.40 33 *e*P **P 05 48 03.8 -0.5**
comp=Z,4.6nm,1.2s,mb4.4
KAKA Kakadu 52.17 190 *e*P **P 05 48 18.9 +0.7**
INK Inuvik 52.72 28 P **P 05 48 22.1 +0.5**
comp=Z,3.2nm,0.5s,mb4.5,baz=297,slow=7.0,SNR=9.5
INK Inuvik 52.72 28 P **P 05 48 22.1 +0.5**
INK pmax pmax
comp=Z,3.0nm,0.5s
INK Inuvik 52.72 28 *e*P **P 05 48 22.1 +0.5**
comp=Z,3.5nm,0.5s,mb4.5
HYT Haines Junctio 52.88 37 *e*P **P 05 48 24.9 +2.0**
SVE Sverdlovsk 53.30 317⇑ *e*P **P 05 48 26.7 +0.6**
SVE pmax pmax
comp=Z,20nm,0.9s,mb5.0
SVE MLR MLR
comp=Z,291nm,18.0s,MS4.4
ARU Arti 54.51 317 *c i*P **P 05 48 34.6 -0.3**
ARU *e* 05 50 35.1
ARU S **S 05 56 12.0 -2.3**
ARU SS SS 05 59 54.1 -2.1
ARU pmax pmax
comp=Z,24nm,1.2s,mb5.1
ARU Arti 54.51 317 *e*P **P 05 48 34.4 -0.5**
comp=Z,9.9nm,0.7s,mb5.0
KBL Kabul 56.29 289 *e*P **P 05 48 48.8 +0.7**
KBL pmax pmax
comp=Z,13nm,0.7s,mb5.1
KBL Kabul 56.29 289 *e*P **P 05 48 48.8 +0.7**
comp=Z,13nm,0.7s,mb5.1
DLBC Dease Lake 57.24 39 P **P 05 48 55.9 +1.4**
comp=Z,1.4nm,0.6s,mb4.2,baz=308,slow=12,SNR=2.1
WRAB Tennant Creek 59.08 187 *e*P **P 05 49 06.3 -1.4**
WRAB pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
WRAB Tennant Creek 59.08 187 *e*P **P 05 49 06.3 -1.4**
comp=Z,8.9nm,0.8s,mb4.8
WRA Warramunga Arr 59.09 187 P **P 05 49 06.4 -1.3**
comp=Z,4.1nm,0.6s,mb4.6,baz=6.0,slow=7.3,SNR=27
WRA Warramunga Arr 59.09 187 P **P 05 49 06.4 -1.3**
WRA pmax pmax
comp=Z,4.0nm,0.6s
RES Resolute Bay 60.67 15 *e*P **P 05 49 17.5 -0.6**
RES pmax pmax
comp=Z,9.0nm,0.7s,mb5.0
RES Resolute Bay 60.67 15 *e*P **P 05 49 17.5 -0.6**
comp=Z,8.9nm,0.7s,mb5.0
ARCES ARCESS Array B 61.88 339 P **P 05 49 25.9 -0.4**
comp=Z,1.0nm,0.6s,mb4.1,baz=64,slow=8.5,SNR=9.3
ARCES ARCESS Array B 61.88 339 P **P 05 49 25.9 -0.4**
ARCES pmax pmax
comp=Z,1.0nm,0.6s
ARCES ARCESS Array B 61.88 339 P **P 05 49 25.9 -0.4**
YKA Yellowknife Ar 62.21 31 P **P 05 49 27.7 -0.9**
comp=Z,1.3nm,0.8s,mb4.1,baz=302,slow=6.7,SNR=4.7
YKA Yellowknife Ar 62.21 31 P **P 05 49 27.7 -0.9**
YKA pmax pmax
comp=Z,1.0nm,0.9s
ASAR Alice Springs 62.81 187 P **P 05 49 31.9 -1.1**
comp=Z,2.5nm,0.7s,mb4.5,baz=7.8,slow=4.8,SNR=31
ASAR Alice Springs 62.81 187 P **P 05 49 31.9 -1.1**
ASAR pmax pmax
comp=Z,3.0nm,0.7s
JOF Joensuu 63.91 331 *ep* **P 05 49 37.2 -2.7**
JOF Joensuu 63.91 331 *ep* **P 05 49 37.2 -2.7**
NLWA Neilton Lookou 65.62 48 ⇑P **P 05 49 51.7 +0.4**
baz=65
OBN Obninsk 66.16 323 *e*P **P 05 49 54.7 0.0**
OBN pmax pmax
comp=Z,16nm,1.2s,mb4.9
OBN MLR MLR
comp=Z,100nm,14.0s,MS4.2
KAF Kangasniemi 66.25 332 *e*P **P 05 49 53.6 -1.5**
KAF pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
KAF Kangasniemi 66.25 332 *ep* **P 05 49 53.6 -1.5**
comp=Z,5.1nm,0.6s,mb4.7,baz=48,slow=6.1
KAF Kangasniemi 66.25 332 *ep* **P 05 49 53.6 -1.5**
comp=Z,5.1nm,0.6s,mb4.7,baz=48,slow=6.1
FINES FINESS Array B 66.76 332 P **P 05 49 57.8 -0.6**
comp=Z,8.3nm,0.7s,mb4.9,baz=46,slow=8.2,SNR=29
FINES FINESS Array B 66.76 332 P **P 05 49 57.8 -0.6**
FINES pmax pmax
comp=Z,8.0nm,0.7s
GOF Gofitskoye 68.39 311 *e*P **P 05 50 03.4 -5.6**
GOF pmax pmax
comp=Z,30nm,1.3s,mb5.2
C09A Chrisman Ranch 68.56 45 ⇑P **P 05 50 09.9 -0.1**

BW06 **Boulder Array** 76.50 46 *eP* P 05 50 57.6 +0.2
comp=Z,2.2nm,0.9s,mb4.1
PDAR **Pinedale Array** 76.50 46 P P 05 50 57.8 +0.3
comp=Z,1.7nm,0.7s,mb4.1,baz=294,slow=2.2,SNR=18
U10A **Ash Meadows, A** 76.55 54 ⇓P P 05 50 57.5 -0.3
baz=76
S12A **Delamar Landin** 76.72 52 ⇑P P 05 50 58.5 -0.3
baz=76
T11A **Corn Creek, Al** 76.73 53 ⇑P P 05 50 59.0 +0.2
baz=76
L18A **Fontenelle, Gr** 76.78 46 ⇑P P 05 50 57.9 -1.1
baz=76
Q14A **Sevier Lake (B** 76.80 50 ⇑P P 05 50 59.9 +0.7
baz=76,SNR=5.7
KOLS **Kolonicke sedl** 76.87 324 *eP* P 05 51 00.1 +0.7
KOLS pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
KOLS **Kolonicke sedl** 76.87 324 *eP* P 05 51 00.1 +0.7
comp=Z,4.9nm,1.2s,mb4.3
KOLS **Kolonicke sedl** 76.87 324 *eP* P 05 51 00.1 +0.7
GSC **Goldstone** 76.95 55 ⇓P P 05 51 00.2 +0.2
baz=77
STHS **Stebnicka Huta** 77.00 324 *eP* P 05 51 01.4 +1.3
STHS pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
STHS **Stebnicka Huta** 77.00 324 *eP* P 05 51 01.4 +1.3
comp=Z,3.1nm,0.8s,mb4.3
STHS **Stebnicka Huta** 77.00 324 *eP* P 05 51 01.4 +1.3
OJC **Ojcow** 77.06 326 *eP* P 05 50 59.5 -0.9
O16A **Springville** 77.06 48 ⇓P P 05 51 01.4 +0.8
baz=77
DAU **Daniels Canyon** 77.08 48 *eP* P 05 51 01.0 +0.3
DAU pmax pmax
comp=Z,17nm,1.7s,mb4.7
DAU **Daniels Canyon** 77.08 48 *eP* P 05 51 01.0 +0.3
comp=Z,17nm,1.7s,mb4.7
BRTR **Keskin Array B** 77.15 311 P P 05 51 01.1 0.0
comp=Z,1.3nm,0.6s,mb4.0,baz=73,slow=4.3,SNR=12
BRTR **Keskin Array B** 77.15 311 P P 05 51 01.1 0.0
BRTR pmax pmax
comp=Z,1.0nm,0.6s
CRVS **Cervenica-Dubn** 77.27 324 *eP* P 05 51 02.0 +0.4
CRVS pmax pmax
comp=Z,5.0nm,1.4s,mb4.2
CRVS **Cervenica-Dubn** 77.27 324 *eP* P 05 51 02.0 +0.4
comp=Z,5.1nm,1.4s,mb4.3
CRVS **Cervenica-Dubn** 77.27 324 *eP* P 05 51 02.0 +0.4
Q15A **Fillmore** 77.33 50 ⇓P P 05 51 02.8 +0.7
baz=77
S13A **Holt Ranch, En** 77.35 52 ⇓P P 05 51 02.5 +0.2
baz=77,SNR=8.3
TUQ **Turquoise Moun** 77.42 55 ⇑P P 05 51 03.2 +0.5
baz=77
O17A **Robinson Place** 77.52 48 ⇑P P 05 51 03.5 +0.3
baz=77
U12A **Valley of Fire** 77.66 53 ⇑P P 05 51 04.6 +0.5
baz=77
T13A **Saint George** 77.68 52 ⇑P P 05 51 05.2 +1.1
baz=77,SNR=6.2
O18A **Roosevelt** 77.89 48 ⇑P P 05 51 06.2 +0.9
baz=78
V12A **Nelson** 77.92 54 ⇓P P 05 51 05.6 +0.1
baz=78
U13A **Pakoon Wash** 78.03 53 ⇑P P 05 51 05.7 -0.4
baz=78
Q16A **Castle Valley** 78.10 49 ⇑P P 05 51 06.8 +0.4
baz=78
T14A **Hurricane** 78.15 52 ⇑P P 05 51 07.2 +0.4
baz=78
P18A **Preston Nutter** 78.17 48 ⇑P P 05 51 07.4 +0.5
baz=78
S15A **Panguitch** 78.19 51 ⇓P P 05 51 07.6 +0.6
baz=78
L21A **Rawlins** 78.24 45 ⇑P P 05 51 07.2 0.0
baz=78
R16A **Teasdale** 78.33 50 ⇑P P 05 51 08.2 +0.5
baz=78,SNR=9.8
SRU **San Rafael** 78.35 49 ⇓P P 05 51 07.6 -0.3
baz=78,SNR=5.1
MORC **Moravsky Berou** 78.37 326 *eP* P 05 51 07.4 -0.3
MORC pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
MORC **Moravsky Berou** 78.37 326 *eP* P 05 51 07.4 -0.3
comp=Z,9.9nm,1.2s,mb4.6
V13A **Grand Canyon W** 78.38 53 ⇓P P 05 51 08.6 +0.5
baz=78
DPC **Dobruska-Polom** 78.45 327 *eP* P 05 51 08.8 +0.6
DPC *e* 05 51 19.8
DPC **Dobruska-Polom** 78.45 327 *eP* P 05 51 08.8 +0.6
DPC *ex* x 05 51 19.8
UPC **Upice** 78.47 328 *eP* P 05 51 08.3 0.0
UPC **Upice** 78.47 328 *eP* P 05 51 08.3 0.0
N20A **Spence Gulch,** 78.51 46 P P 05 51 09.6 +0.9
baz=78,SNR=5.1
U14A **Mt Trumbull** 78.51 52 ⇑P P 05 51 09.2 +0.4
baz=78
T15A **Red Dirt Ranch** 78.61 51 ⇓P P 05 51 09.6 +0.3
baz=78
R17A **Hanksville Air** 78.70 49 ⇓P P 05 51 10.1 +0.3
baz=78
VYHS **Vyhne** 78.76 325 *eP* P 05 51 10.5 +0.6
VYHS pmax pmax
comp=Z,8.0nm,1.9s,mb4.3
VYHS **Vyhne** 78.76 325 *eP* P 05 51 10.5 +0.6
comp=Z,7.8nm,1.9s,mb4.3
VYHS **Vyhne** 78.76 325 *eP* P 05 51 10.5 +0.6
BC3 **Big Chuckawall** 78.85 56 ⇓P P 05 51 10.6 -0.1
baz=79
N21A **Black Mountain** 78.97 46 ⇑P P 05 51 11.1 -0.1
baz=79
BRG **Berggiesshubel** 79.03 329 *eP* P 05 51 24.7 +13
comp=Z,2.7nm,0.8s,mb4.2
U15A **North Rim** 79.05 52 ⇓P P 05 51 12.1 +0.4
baz=79,SNR=7.8
V14A **Boquillas Ranc** 79.06 53 ⇓P P 05 51 12.5 +0.7
baz=79,SNR=5.8
CLL **Collm** 79.06 330 *eP* P 05 51 11.1 -0.4
comp=Z,10.0nm,1.4s,mb4.5
CLL **Collm** 79.06 330 ⇑*iP* P 05 51 11.2 -0.3
CLL *e* 05 51 21.0
CLL pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
CLL **Collm** 79.06 330 ⇑*iP* P 05 51 11.2 -0.3
comp=Z,10.0nm,1.4s,mb4.5
CLL *i* pP 05 51 13.4 +0.5
CLL *e* 05 51 21.0
CLL **Collm** 79.06 330 ⇑*iP* P 05 51 11.2 -0.3
comp=Z,10.0nm,1.4s,mb4.5
CLL *i* pP pP 05 51 13.4 +0.5
CLL **Collm** 79.06 330 *eP* P 05 51 21.0 +9.5
S17A **Black Ridge (B** 79.16 50 ⇓P P 05 51 12.5 +0.2
baz=79,SNR=9.3
Q19A **Hogan Spring (** 79.19 48 ⇓P P 05 51 11.5 -1.0
baz=79
R18A **Canyonlands Na** 79.20 49 ⇑P P 05 51 11.2 -1.4
baz=79
X13A **Yucca** 79.28 54 ⇓P P 05 51 12.8 -0.2
baz=79,SNR=5.7
W14A **Seligman** 79.35 53 ⇑P P 05 51 13.7 +0.3
baz=79
PRU **Pruhonice** 79.47 328 *eP* P 05 51 14.8 +1.0
PRU **Pruhonice** 79.47 328 *eP* P 05 51 14.8 +1.0
S18A **Hurst Farm, Bl** 79.60 50 ⇑P P 05 51 14.8 +0.1
baz=79,SNR=7.0
CLZ **Clausthal** 79.65 331 *eP* P 05 51 15.1 +0.4
comp=Z,15nm,1.5s,mb4.7
CLZ **Clausthal** 79.65 331 *eP* P 05 51 15.1 +0.4
CLZ pmax pmax
comp=Z,15nm,1.5s,mb4.7
CLZ **Clausthal** 79.65 331 *eP* P 05 51 15.1 +0.4
comp=Z,15nm,1.5s,mb4.7
PV10 **Paradox Valley** 79.71 49 *eP* P 05 51 16.3 +1.0
comp=Z,122nm,0.8s,mb5.9
PV04 **Paradox Valley** 79.77 49 *eP* P 05 51 15.9 +0.3
U17A **Shonto** 79.93 51 ⇓P P 05 51 16.9 +0.4
baz=80,SNR=7.0
T18A **Mexican Hat** 80.04 50 ⇓P P 05 51 15.8 -1.3
baz=80,SNR=5.4
S19A **Harvey Farm, M** 80.07 49 ⇑P P 05 51 17.4 +0.1
baz=80
MOX **Moxa** 80.13 330 *eP* P 05 51 16.8 -0.5
comp=Z,33nm,2.2s,mb4.9
PV01 **Paradox Valley** 80.14 49 *eP* P 05 51 18.0 +0.3
comp=Z,412nm,1.3s
WUAZ **Wupatki** 80.21 52 ⇓P P 05 51 18.9 +0.9
baz=80,SNR=6.5
Y14A **Wickenburg** 80.23 54 ⇓P P 05 51 18.4 +0.2
baz=80
Z13A **Yuma Proving G** 80.29 55 ⇓P P 05 51 18.6 +0.1
baz=80,SNR=6.7
X15A **Humboldt** 80.35 53 ⇓P P 05 51 19.3 +0.4
baz=80,SNR=6.3
SMCO **Snowmass** 80.36 47 *eP* P 05 51 19.1 +0.3
comp=Z,4.1nm,1.3s,mb4.2
V17A **Tonalea, Kykot** 80.49 52 ⇑P P 05 51 20.3 +0.7
baz=80
U18A **Rough Rock, Ch** 80.52 51 ⇓P P 05 51 20.2 +0.4
baz=80,SNR=6.5
KHC **Kasperske Hory** 80.53 328 *eP* P 05 51 19.6 +0.1
KHC pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
KHC **Kasperske Hory** 80.53 328 *eP* P 05 51 19.6 0.0
comp=Z,3.6nm,1.0s,mb4.3
KHC **Kasperske Hory** 80.53 328 *eP* P 05 51 20.1 +0.6
Y15A **Casa Rosa Ranc** 80.64 54 ⇑P P 05 51 20.9 +0.5
baz=80,SNR=7.7
GEC2 **GERESS Array S** 80.70 328 *eP* P 05 51 20.0 -0.5
comp=Z,4.0nm,0.9s,mb4.3
GEC2 **GERESS Array S** 80.70 328 *eP* P 05 51 20.0 -0.5
GEC2 pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
GEC2 **GERESS Array S** 80.70 328 *eP* P 05 51 20.0 -0.5
comp=Z,4.0nm,0.9s,mb4.3
GERES **GERESS Array B** 80.70 328 P P 05 51 19.8 -0.7
comp=Z,1.1nm,0.6s,mb4.0,baz=28,slow=6.0,SNR=12
GERES **GERESS Array B** 80.70 328 P P 05 51 19.8 -0.7
GERES pmax pmax
comp=Z,1.0nm,0.6s
GERES **GERESS Array B** 80.70 328 P P 05 51 19.8 -0.7
T19A **Beclabito** 80.75 50 ⇓P P 05 51 20.9 -0.1
baz=80,SNR=5.8
MVCO **Mesa Verde** 80.81 49 ⇓P P 05 51 21.0 -0.2
baz=80
WET **Wettzell** 80.81 328 *eP* P 05 51 21.2 +0.2
comp=Z,4.0nm,1.1s,mb4.3
WET **Wettzell** 80.81 328 *eP* P 05 51 21.2 +0.2
WET pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
WET **Wettzell** 80.81 328 *eP* P 05 51 21.2 +0.2
comp=Z,4.0nm,1.1s,mb4.3
X16A **Lo Mia Camp, P** 80.89 53 ⇓P P 05 51 22.1 +0.3
baz=81,SNR=5.3
U19A **Dine' College,** 81.00 50 ⇑P P 05 51 22.6 +0.2
baz=81,SNR=8.0
GRA1 **Grafenberg Arr** 81.04 330 *eP* P 05 51 22.5 +0.3
comp=Z,19nm,1.2s,mb4.9
GRF **Grafenberg Arr** 81.04 330 *eP* P 05 51 22.5 +0.3
comp=Z,19nm,1.2s,mb4.9
GRF **Grafenberg Arr** 81.04 330 *eP* P 05 51 22.5 +0.3
GRF pmax pmax
comp=Z,19nm,1.2s,mb4.9
GRF **Grafenberg Arr** 81.04 330 *eP* P 05 51 22.5 +0.3
GRF pmax pmax
comp=Z,19nm,1.2s,mb4.9
GRF **Grafenberg Arr** 81.04 330 *eP* P 05 51 22.5 +0.3
comp=Z,19nm,1.2s,mb4.9
114A **Black Gap (USA** 81.08 55 ⇓P P 05 51 23.4 +0.6
baz=81
R22A **Saguache, Gunn** 81.13 47 ⇓P P 05 51 23.7 +0.8
baz=81
X17A **Forest Lakes** 81.34 53 ⇓P P 05 51 24.6 +0.5
baz=81
TNS **Taunus Mts** 81.68 331 *eP* P 05 51 25.8 +0.2
comp=Z,21nm,1.5s,mb4.8
TNS **Taunus Mts** 81.68 331 *eP* P 05 51 25.8 +0.2
TNS pmax pmax
comp=Z,21nm,1.5s,mb4.8
TNS **Taunus Mts** 81.68 331 *eP* P 05 51 25.8 +0.2
comp=Z,21nm,1.5s,mb4.8
X18A **Snowflake** 81.73 52 ⇑P P 05 51 26.7 +0.5
baz=82
U21A **Nageezi** 81.83 49 ⇓P P 05 51 26.6 -0.1
baz=82
SDCO **Great Sand Dun** 82.18 47 *eP* P 05 51 29.7 +1.2
comp=Z,2.1nm,1.2s,mb3.9
Y18A **Canyon Day Jun** 82.19 53 ⇓P P 05 51 29.1 +0.5
baz=82
X19A **St. Johns** 82.21 52 ⇓P P 05 51 29.2 +0.5
baz=82,SNR=5.5
Y19A **Nutrioso** 82.55 52 ⇓P P 05 51 29.6 -0.9
baz=82
X20A **Quemado** 82.61 51 ⇑P P 05 51 31.7 +0.9
baz=82
U23A **El Rito** 82.76 49 ⇑P P 05 51 31.8 +0.2
baz=82
X21A **Alamocita Cree** 83.11 51 ⇑P P 05 51 33.2 -0.2
baz=83
Y20A **Horse Springs,** 83.11 52 ⇑P P 05 51 33.2 -0.2
baz=83
BFO **Black Forest** 83.27 330 *eP* P 05 51 33.9 0.0
comp=Z,8.0nm,1.0s,mb4.7
BFO **Black Forest** 83.27 330 *eP* P 05 51 33.9 0.0
BFO pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
BFO **Black Forest** 83.27 330 *eP* P 05 51 33.9 0.0
comp=Z,8.0nm,1.0s,mb4.7
SCHQ **Schefferville** 83.43 16 P P 05 51 33.1 -1.6
comp=Z,1.6nm,0.5s,mb4.3,baz=11,slow=11,SNR=5.8
Y21A **Point of Rocks** 83.47 51 ⇓P P 05 51 35.9 +0.6
baz=83
Z20A **Nine Sixteen R** 83.52 52 ⇓P P 05 51 35.5 0.0
baz=83
LAZ **Ladron** 83.53 50 *eP* P 05 51 36.7 +1.1
comp=Z,0.9nm,1.0s,mb3.9
ANMO **Albuquerque** 83.55 50 *eP* P 05 51 36.2 +0.5
ANMO pmax pmax
comp=Z,1.0nm,1.1s
ANMO **Albuquerque** 83.55 50 *eP* P 05 51 36.2 +0.5
comp=Z,0.8nm,1.1s,mb3.8
CDF **Champ du Feu** 83.60 331 *eP* P 05 51 35.3 -0.4
CDF **Champ du Feu** 83.60 331 *eP* P 05 51 35.3 -0.4
CDF **Champ du Feu** 83.60 331 *eP* P 05 51 35.3 -0.4
318A **Bisbee** 83.78 54 ⇓P P 05 51 37.3 +0.4
baz=84
219A **White Tail Can** 83.86 53 ⇓P P 05 51 37.6 +0.3
baz=84
Y22A **Socorro** 83.95 51 ⇑P P 05 51 37.7 -0.1
baz=84
Z21A **St. Cloud Mine** 83.95 52 ⇓P P 05 51 37.9 +0.1
baz=84
W24A **Lazy 6 Ranch,** 83.99 49 ⇑P P 05 51 38.3 +0.4
baz=84
HINF **Hinteralfeld** 84.25 331 *eP* P 05 51 38.3 -0.7
comp=Z,11nm,1.2s,mb4.6
HINF **Hinteralfeld** 84.25 331 *eP* P 05 51 38.3 -0.7
HINF pmax pmax
comp=Z,5.0nm,1.2s,mb4.5
HINF **Hinteralfeld** 84.25 331 *eP* P 05 51 38.3 -0.7
comp=Z,5.4nm,1.2s,mb4.5
HAU **Haudompre** 84.28 331 *eP* P 05 51 38.5 -0.7
HAU **Haudompre** 84.28 331 *eP* P 05 51 38.5 -0.7
HAU **Haudompre** 84.28 331 *eP* P 05 51 38.5 -0.7
MEZF **Maizieres J'vi** 84.35 332 *eP* P 05 51 39.3 -0.2
comp=Z,6.2nm,0.5s,mb4.7
MEZF **Maizieres J'vi** 84.35 332 *eP* P 05 51 39.3 -0.2
comp=Z,6.2nm,0.5s,mb5.0
Z22A **Elephant Butte** 84.42 51 ⇑P P 05 51 39.9 -0.2
baz=84
W25A **X Bar L Ranch,** 84.54 48 ⇑P P 05 51 40.6 -0.2
baz=84
320A **Kipp Ranch, An** 84.77 54 ⇑P P 05 51 42.3 +0.3
baz=84
CABF **La Chapelle** 85.54 331 *eP* P 05 51 45.1 -0.4
comp=Z,3.9nm,0.8s,mb4.4
CABF **La Chapelle** 85.54 331 *eP* P 05 51 45.1 -0.4
CABF pmax pmax
comp=Z,2.0nm,0.8s,mb4.4
CABF **La Chapelle** 85.54 331 *eP* P 05 51 45.1 -0.4
comp=Z,2.0nm,0.8s,mb4.4
LOR **Lormes** 85.82 332 ⇑*iP* P 05 51 46.4 -0.5
baz=84
LOR **Lormes** 85.82 332 ⇑*iP* P 05 51 46.4 -0.5
LOR pmax pmax
comp=Z,10.0nm,1.0s,mb5.0
LOR **Lormes** 85.82 332 ⇑*iP* P 05 51 46.4 -0.5
comp=Z,10nm,1.0s,mb5.0
FLN **La Foliniere** 86.02 336 *eP* P 05 51 47.3 -0.5
comp=Z,39nm,1.4s,mb5.1
FLN **La Foliniere** 86.02 336 *eP* P 05 51 47.3 -0.5
FLN pmax pmax
comp=Z,19nm,1.4s,mb5.1
FLN **La Foliniere** 86.02 336 *eP* P 05 51 47.3 -0.5
comp=Z,19nm,1.4s,mb5.1
LDF **La Druitiere** 86.05 335 ⇑*iP* P 05 51 47.4 -0.6
comp=Z,7.1nm,0.9s,mb4.6
LDF **La Druitiere** 86.05 335 ⇑*iP* P 05 51 47.4 -0.6
LDF pmax pmax
comp=Z,4.0nm,0.9s,mb4.7
LDF **La Druitiere** 86.05 335 ⇑*iP* P 05 51 47.4 -0.6
comp=Z,3.5nm,0.9s,mb4.6
224A **Cornudas Mount** 86.11 51 ⇓P P 05 51 49.1 +0.4
baz=86
SSF **Saint Saulge** 86.12 332 ⇑*iP* P 05 51 47.9 -0.5
comp=Z,10nm,1.0s,mb4.7
SSF **Saint Saulge** 86.12 332 ⇑*iP* P 05 51 47.9 -0.5
SSF pmax pmax
comp=Z,5.0nm,1.0s,mb4.7
SSF **Saint Saulge** 86.12 332 ⇑*iP* P 05 51 47.9 -0.5
comp=Z,5.2nm,1.0s,mb4.7
Z26A **Caprock** 86.20 49 ⇑P P 05 51 49.3 +0.3
baz=86
LPL **La Plagne** 86.20 330 *eP* P 05 51 48.6 -0.2
comp=Z,28nm,1.1s,mb5.1
LPL **La Plagne** 86.20 330 *eP* P 05 51 48.6 -0.2
LPL pmax pmax
comp=Z,14nm,1.1s,mb5.1
LPL **La Plagne** 86.20 330 *eP* P 05 51 48.6 -0.2
comp=Z,14nm,1.1s,mb5.1
LPG **La Plagne** 86.21 330 *eP* P 05 51 48.8 -0.1
comp=Z,11nm,0.9s,mb4.8
LPG **La Plagne** 86.21 330 *eP* P 05 51 48.8 -0.1
LPG pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
LPG **La Plagne** 86.21 330 *eP* P 05 51 48.8 -0.1
comp=Z,5.7nm,0.9s,mb4.8
125A **Gardner Draw,** 86.22 50 ⇓P P 05 51 49.8 +0.6
baz=86
Y27A **Causey** 86.24 49 ⇓P P 05 51 49.4 +0.2
baz=86
SMF **Signal de Mont** 86.36 332 *eP* P 05 51 49.2 -0.3
comp=Z,29nm,1.4s,mb5.0
SMF **Signal de Mont** 86.36 332 *eP* P 05 51 49.2 -0.3
SMF pmax pmax
comp=Z,15nm,1.4s,mb5.0
SMF **Signal de Mont** 86.36 332 *eP* P 05 51 49.2 -0.3
comp=Z,15nm,1.4s,mb5.0
AVF **Avril sur Loir** 86.41 332 ⇑*iP* P 05 51 49.5 -0.3
comp=Z,23nm,1.0s,mb5.1
AVF **Avril sur Loir** 86.41 332 ⇑*iP* P 05 51 49.5 -0.3
AVF pmax pmax
comp=Z,12nm,1.0s,mb5.1
AVF **Avril sur Loir** 86.41 332 ⇑*iP* P 05 51 49.5 -0.3
comp=Z,12nm,1.0s,mb5.1
GRR **Gorron** 86.47 336 ⇑*iP* P 05 51 49.7 -0.4
comp=Z,16nm,0.9s,mb5.0
GRR **Gorron** 86.47 336 ⇑*iP* P 05 51 49.7 -0.4
GRR pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
GRR **Gorron** 86.47 336 ⇑*iP* P 05 51 49.7 -0.4
comp=Z,8.1nm,0.9s,mb5.0
Z27A **Tatum** 86.62 49 ⇓P P 05 51 51.3 +0.2
baz=86
BGF **Bois d'Agland** 86.79 332 *eP* P 05 51 51.4 -0.3
BGF **Bois d'Agland** 86.79 332 *eP* P 05 51 51.4 -0.3
BGF **Bois d'Agland** 86.79 332 *eP* P 05 51 51.4 -0.3
SGMF **Saint Gilles** 87.12 337 *eP* P 05 51 53.2 -0.1
comp=Z,15nm,1.0s,mb4.9
SGMF **Saint Gilles** 87.12 337 *eP* P 05 51 53.2 -0.1
SGMF pmax pmax
comp=Z,8.0nm,1.0s,mb4.9
SGMF **Saint Gilles** 87.12 337 *eP* P 05 51 53.2 -0.1
comp=Z,7.6nm,1.0s,mb4.9
TCF **Toulx Ste Croi** 87.25 333 *eP* P 05 51 54.0 +0.1
TCF **Toulx Ste Croi** 87.25 333 *eP* P 05 51 54.0 +0.1
TCF **Toulx Ste Croi** 87.25 333 *eP* P 05 51 54.0 +0.1
ROSF **Rostrenen** 87.27 337 ⇑*iP* P 05 51 54.0 0.0
comp=Z,44nm,1.2s,mb5.2
ROSF **Rostrenen** 87.27 337 ⇑*iP* P 05 51 54.0 0.0
ROSF pmax pmax
comp=Z,22nm,1.2s,mb5.3
ROSF **Rostrenen** 87.27 337 ⇑*iP* P 05 51 54.0 0.0
comp=Z,22nm,1.2s,mb5.3
326A **Caldwell Ranch** 87.58 51 ⇓P P 05 51 56.2 +0.4
baz=87
MFF **Saint Martin d** 87.80 334 ⇑*iP* P 05 51 56.4 -0.1
comp=Z,22nm,1.2s,mb5.0
MFF **Saint Martin d** 87.80 334 ⇑*iP* P 05 51 56.4 -0.1
MFF pmax pmax
comp=Z,11nm,1.2s,mb5.0
MFF **Saint Martin d** 87.80 334 ⇑*iP* P 05 51 56.4 -0.1
comp=Z,11nm,1.2s,mb5.0
FRF **La Foret Royal** 87.86 329 *eP* P 05 51 57.1 +0.2
FRF **La Foret Royal** 87.86 329 *eP* P 05 51 57.1 +0.2
FRF **La Foret Royal** 87.86 329 *eP* P 05 51 57.1 +0.2
SMRF **Simiane la Rot** 87.94 329 *eP* P 05 51 56.5 -0.8
SMRF **Simiane la Rot** 87.94 329 *eP* P 05 51 56.5 -0.8
LMR **La Mourre** 88.10 329 *eP* P 05 51 56.8 -1.3
LMR **La Mourre** 88.10 329 *eP* P 05 51 56.8 -1.3
LMR **La Mourre** 88.10 329 *eP* P 05 51 56.8 -1.3
RJF **Les Rejaudoux** 88.34 333 *eP* P 05 51 59.1 -0.1
comp=Z,10.0nm,1.1s,mb4.7
RJF **Les Rejaudoux** 88.34 333 *eP* P 05 51 59.1 -0.1
RJF pmax pmax
comp=Z,5.0nm,1.1s,mb4.7
RJF **Les Rejaudoux** 88.34 333 *eP* P 05 51 59.1 -0.1
comp=Z,5.0nm,1.1s,mb4.7
526A **Mary Lane Ranc** 88.40 52 ⇑P P 05 51 59.6 -0.1
baz=88
CAF **Calviac** 88.47 332 *eP* P 05 52 00.1 +0.3
CAF **Calviac** 88.47 332 *eP* P 05 52 00.1 +0.3
CAF **Calviac** 88.47 332 *eP* P 05 52 00.1 +0.3
428A **Kincaid Ranch,** 88.78 50 ⇑P P 05 52 01.6 +0.1
baz=88
LFF **La Frestale** 88.93 333 *eP* P 05 52 02.1 +0.1
LFF **La Frestale** 88.93 333 *eP* P 05 52 02.1 +0.1
LFF **La Frestale** 88.93 333 *eP* P 05 52 02.1 +0.1
528A **Cox Ranch, San** 89.12 51 ⇓P P 05 52 02.5 -0.6
baz=89
TXAR **Lajitas Array** 89.17 52 P P 05 52 03.4 0.0
comp=Z,0.7nm,0.8s,mb4.0,baz=297,slow=2.9,SNR=9.3
TXAR **Lajitas Array** 89.17 52 P P 05 52 03.4 0.0
TXAR pmax pmax
comp=Z,1.0nm,0.8s
SJPF **Ste Jean** 91.22 333 *eP* P 05 52 13.4 +0.7
SJPF **Ste Jean** 91.22 333 *eP* P 05 52 13.4 +0.7
SJPF **Ste Jean** 91.22 333 *eP* P 05 52 13.4 +0.7
DBIC **Dimbokro** 124.46 317 PKP PKPdf 05 58 06.6 -0.7
comp=Z,7.0nm,1.1s,baz=214,slow=17,SNR=4.5
DBIC **Dimbokro** 124.46 317 PKIKP PKPdf 05 58 06.6 -0.7
DBIC pmax pmax
comp=Z,7.0nm,1.1s
DBIC **Dimbokro** 124.46 317 PKP PKPdf 05 58 06.6 -0.8
VNA1 **Neumayer--Stat** 144.61 197 *e*PKPdf PKPdf 05 58 41.0 -1.9
VNA1 *e* 05 58 52.8
LPAZ **La Paz** 145.94 56 PKPbc PKPbc 05 58 47.9 +0.4
comp=Z,3.1nm,0.9s,baz=344,slow=5.0,SNR=11
LPAZ **La Paz** 145.94 56 *e*PKPdf PKPdf 05 58 47.4 +0.5
LCO **Las Campanas** 152.09 78 *e*PKPdf PKPdf 05 58 57.3 +0.9

IDC ***14*** *05:39:15.8±0.8, 39°.15N×140°.82E, h0km, mb4.4/13, mb1 4.5/14, mb1mx4.3/25, mbtmp4.4/14, ML4.2/1, Error ellipse: s-maj=26.9km s-min=17.9km az=91.0*
NEIC ***14*** *05:39:17.6±0.4, 39°.14N×140°.89E, h10km, mb4.7/14, Error ellipse: s-maj=9.6km s-min=9.0km az=164.0*
MOS ***14*** *05:39:18.8±1.0, 39°.13N×141°.02E, h33km, mb4.7/20, Error ellipse: s-maj=16.7km s-min=10.7km az=98.0*
ISCJB ***14*** *05:39:18.7±0.5, 39°.12N±0°.08×141°.12E±0°.08, h33km, mb4.5/27, Error ellipse: s-maj=12.1km s-min=7.6km az=148.5*
SZGRF ***14*** *05:39:21.8, 40°.95N×140°.25E, h33km, mb4.8, Eastern Honshu, Japan*
ISC 14 05:39:21.4±0.5, 39°.19N±0°.08×141°.0E±0°.1, h35km, n63, σ0:94/62, mb4.5/27, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ASAJ	**Asahikawa**	5.07	13	Pn		Pn	Pn	05 40 34.0	-0.8
	7.1nm,0.3s,baz=190,slow=11,SNR=12								
ASAJ	**Asahikawa**	5.07	13	P		Pn	Pn	05 40 34.0	-0.8
ASAJ	pmax pmax								
	comp=Z,7.0nm,0.3s								
MDJ	**Mudanjiang**	10.08	306	*e*Pn		Pn	Pn	05 41 40.1	-3.5
HABR	**Khabarovsk**	10.22	337	*e*P		Pn	Pn	05 41 43.7	-1.8
KSRS	**Korea Array**	10.42	265	Pn		Pn	Pn	05 41 50.7	+2.5
	comp=Z,5.2nm,0.3s,baz=75,slow=14,SNR=16								
KSRS				Sn		Sn	Sn	05 43 48.8	+5.1
	comp=Z,2.5nm,0.3s,baz=75,slow=24,SNR=13								

KSRS	Korea Array	10.42	265	P	Pn	05 41 50.7 +2.5
KSRS						05 43 48.8
KSRS				pmax	pmax	
	comp=Z,5.0nm,0.3s					
KSRS				smax		
	comp=N,3.0nm,0.3s					
CLNS	Chul'man	20.59	334	*e*P	P	05 44 00.9 +3.8
ENH	Enshi	27.27	261	*e*P	P	05 45 01.8 -0.6
	comp=N,12nm,0.6s,mb4.6					
ZALV	Zalesovo Beam	40.25	311	P	P	05 46 53.4 -1.0
	comp=N,6.7nm,0.8s,mb4.4,baz=83,slow=6.4,SNR=8.8					
ZALV				PcP	PcP	05 48 58.1 +0.3
	comp=N,1.4nm,0.5s,baz=53,slow=2.5,SNR=3.9					
ZALV	Zalesovo Beam	40.25	311	P	P	05 46 53.4 -1.1
ZALV						05 48 58.1
ZALV				pmax	pmax	
	comp=Z,7.0nm,0.8s,mb4.4					
KURK	Kurchatov	44.37	306	*e*P	P	05 47 27.5 -0.6
KURK				pmax	pmax	
	comp=Z,14nm,0.7s,mb4.8					
KURK	Kurchatov	44.37	306	*e*P	P	05 47 27.5 -0.6
	comp=Z,14nm,0.7s,mb4.8					
KDAK	Kodiak Island	45.74	43	P	P	05 47 38.6 -0.2
	comp=Z,5.3nm,0.6s,mb4.7,baz=294,slow=3.6,SNR=5.9					
KDAK	Kodiak Island	45.74	43	P	P	05 47 38.6 -0.2
KDAK				pmax	pmax	
	comp=Z,5.0nm,0.6s,mb4.6					
KDAK	Kodiak Island	45.74	43	P	P	05 47 38.6 -0.2
MCK	McKinley	47.04	35	*e*P	P	05 47 50.3 +1.3
MCK				pmax	pmax	
	comp=Z,4.0nm,0.7s,mb4.5					
MCK	McKinley	47.04	35	*e*P	P	05 47 50.2 +1.3
	comp=Z,4.4nm,0.7s,mb4.5					
TKM2	Tokmak 2	48.35	297	*e*P	P	05 47 59.9 +0.5
TKM2				pmax	pmax	
	comp=Z,32nm,1.2s,mb5.2					
TKM2	Tokmak 2	48.35	297	*e*P	P	05 47 59.9 +0.5
	comp=Z,32nm,1.2s,mb5.2					
BVAR	Borovoye Array	48.90	311	P	P	05 48 03.3 -0.2
	comp=Z,1.5nm,0.5s,mb4.3,baz=69,slow=8.4,SNR=6.5					
BVAR				PcP	PcP	05 49 27.6 +0.2
	comp=Z,2.5nm,0.7s,baz=78,slow=2.8,SNR=4.5					
BVAR	Borovoye Array	48.90	311	P	P	05 48 03.3 -0.2
BVAR						05 49 27.6
BVAR				pmax	pmax	
	comp=Z,2.0nm,0.5s					
BRVK	Borovoye	48.95	311	*e*P	P	05 48 03.8 -0.1
BRVK				pmax	pmax	
	comp=Z,4.0nm,0.9s,mb4.5					
BRVK	Borovoye	48.95	311	*e*P	P	05 48 03.8 -0.1
	comp=Z,4.0nm,0.9s,mb4.5					
UCH	Uchtor	49.33	296	*e*P	P	05 48 08.0 +1.0
	comp=Z,3.9nm,0.9s,mb4.4					
AML	Almayashu	49.94	296	*e*P	P	05 48 12.6 +1.0
	comp=Z,10nm,0.9s,mb4.9					
EGAK	Eagle	50.30	33	*e*P	P	05 48 14.9 +0.9
	comp=Z,5.7nm,0.8s,mb4.7					
INK	Inuvik	52.63	28	P	P	05 48 33.0 +1.7
	comp=Z,2.8nm,0.6s,mb4.4,baz=291,slow=9.3,SNR=5.0					
INK	Inuvik	52.63	28	P	P	05 48 33.0 +1.7
INK				pmax	pmax	
	comp=Z,3.0nm,0.6s					
ARU	Arti	54.54	317	*e*P	P	05 48 45.8 +0.2
	comp=Z,9.2nm,0.6s,mb5.0					
KBL	Kabul	56.37	289	*e*P	P	05 48 59.5 +0.5
KBL				pmax	pmax	
	comp=Z,11nm,0.8s,mb4.9					
KBL	Kabul	56.37	289	*e*P	P	05 48 59.5 +0.5
	comp=Z,11nm,0.8s,mb4.9					
WRAB	Tennant Creek	59.14	187	*e*P	P	05 49 17.4 -1.0
WRAB				pmax	pmax	
	comp=Z,6.0nm,0.7s,mb4.7					
WRAB	Tennant Creek	59.14	187	*e*P	P	05 49 17.4 -1.0
	comp=Z,6.1nm,0.7s,mb4.7					
WRA	Warramunga Arr	59.15	187	P	P	05 49 17.7 -0.8
	comp=Z,4.8nm,0.6s,mb4.7,baz=4.6,slow=7.0,SNR=8.4					
WRA	Warramunga Arr	59.15	187	P	P	05 49 17.7 -0.8
WRA				pmax	pmax	
	comp=Z,5.0nm,0.6s					
WRA	Warramunga Arr	59.15	187	P	P	05 49 17.7 -0.8
RES	Resolute Bay	60.60	15	*e*P	P	05 49 27.8 -0.1
RES				pmax	pmax	
	comp=Z,4.0nm,0.6s,mb4.7					
RES	Resolute Bay	60.60	15	*e*P	P	05 49 27.8 -0.1
	comp=Z,4.1nm,0.6s,mb4.7					
ARCES	ARCESS Array B	61.87	339	P	P	05 49 35.6 -1.0
	comp=Z,2.2nm,0.8s,mb4.4,baz=60,slow=7.2,SNR=4.0					
ARCES	ARCESS Array B	61.87	339	P	P	05 49 35.6 -1.0
ARCES				pmax	pmax	
	comp=Z,2.0nm,0.8s					
YKA	Yellowknife Ar	62.12	31	P	P	05 49 38.6 +0.3
	comp=Z,0.7nm,0.7s,mb3.9,baz=300,slow=7.4,SNR=3.3					
ASAR	Alice Springs	62.88	187	P	P	05 49 43.1 -0.6
	comp=Z,2.8nm,0.7s,mb4.5,baz=359,slow=4.5,SNR=12					
ASAR	Alice Springs	62.88	187	P	P	05 49 43.2 -0.5
ASAR				pmax	pmax	
	comp=Z,3.0nm,0.7s					
FINES	FINESS Array B	66.76	332	P	P	05 50 08.3 -0.3
	comp=Z,6.4nm,0.7s,mb4.8,baz=49,slow=8.6,SNR=7.8					
FINES	FINESS Array B	66.76	332	P	P	05 50 08.4 -0.3
FINES				pmax	pmax	
	comp=Z,6.0nm,0.7s					
NOA	NORSAR Array B	72.08	337	P	P	05 50 41.0 -0.5
	comp=Z,2.3nm,0.6s,mb4.3,baz=38,slow=6.0,SNR=7.0					
NOA	NORSAR Array B	72.08	337	P	P	05 50 41.0 -0.5
NOA				pmax	pmax	
	comp=Z,2.0nm,0.6s					
AKASG	Malin Array Be	72.40	322	P	P	05 50 42.7 -0.9
	comp=Z,3.0nm,0.5s,mb4.5,baz=44,slow=6.3,SNR=6.1					
AKASG	Malin Array Be	72.40	322	P	P	05 50 42.7 -0.9
AKASG				pmax	pmax	
	comp=Z,3.0nm,0.5s					
AKASG	Malin Array Be	72.40	322	P	P	05 50 42.7 -0.9
BUR08	Bucovina Ar. S	76.42	321	*e*P	P	05 51 07.8 +0.8
BRTR	Keskin Array B	77.19	311	P	P	05 51 10.8 -0.8
	comp=Z,0.9nm,0.5s,mb4.0,baz=82,slow=3.7,SNR=4.5					
BRTR	Keskin Array B	77.19	311	P	P	05 51 10.8 -0.7
BRTR				pmax	pmax	
	comp=Z,1.0nm,0.5s					
BRTR	Keskin Array B	77.19	311	P	P	05 51 10.8 -0.8
MORC	Moravsky Berou	78.38	326	*e*P	P	05 51 18.9 +0.9
MORC				pmax	pmax	
	comp=Z,2.0nm,0.5s,mb4.3					
MORC	Moravsky Berou	78.38	326	*e*P	P	05 51 18.9 +0.9
	comp=Z,2.5nm,0.5s,mb4.4					
KHC	Kasperske Hory	80.54	328	*e*P	P	05 51 30.4 +0.6
KHC				pmax	pmax	
	comp=Z,3.0nm,0.7s,mb4.3					
KHC	Kasperske Hory	80.54	328	*e*P	P	05 51 30.4 +0.6
	comp=Z,2.9nm,0.7s,mb4.3					
KHC	Kasperske Hory	80.54	328	*ex*	P	05 51 30.3 +0.5
GERES	GERESS Array B	80.72	328	P	P	05 51 30.3 -0.4
	comp=Z,1.2nm,0.7s,mb4.0,baz=35,slow=4.9,SNR=6.3					
GERES	GERESS Array B	80.72	328	P	P	05 51 30.3 -0.4
GERES				pmax	pmax	
	comp=Z,1.0nm,0.7s					
DBIC	Dimbokro	124.49	317	PKP	PKPdf	05 58 17.5 +0.1
	comp=Z,4.6nm,1.0s,baz=208,slow=18,SNR=3.3					
DBIC	Dimbokro	124.49	317	PKIKP	PKPdf	05 58 17.5 +0.1
DBIC				pmax	pmax	
	comp=Z,5.0nm,1.0s					

*ISCJB **14** 05:50:09.5±0.9, 54°.4N±0°.1×161°.20W±0°.09, h10km, mb4.1/14, Error ellipse: s-maj=19.1km s-min=4.5km az=162.6*
*IDC **14** 05:50:11.1±3.7, 54°.76N×161°.76W, h0km, mb3.9/10, mb1 4.0/11, mb1mx3.8/27, mbtmp3.9/11, ML3.5/1, Error ellipse: s-maj=92.9km s-min=18.3km az=163.0*
*NEIC **14** 05:50:11.1, 54°.22N×161°.39W, h5km, ML3.6(AEIC), After AEIC.*

ISC 14 05:50:10.3±0.8, 54°.23N±0°.08×161°.30W±0°.07, h10km, n24, σ1§27/29, mb4.1/14, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDPT	Sand Point	1.22	23	P	Pb	05 50 34.9	+1.5
SDPT				S	Sb	05 50 50.8	+1.7
FALS	False Pass	1.38	298	P	Pn	05 50 35.5	-0.2
FALS				S	Sb	05 50 52.8	-1.1
AKUT	Akutan	2.63	270	P	Pn	05 50 53.9	+1.2
AKGG	Akutan Green G	2.76	271	P	Pn	05 50 55.3	+0.8
AKGG				S	Sn	05 51 30.6	+2.8
UNV	Unalaska Valle	3.09	265	P	Pn	05 50 59.5	+0.4
OHAK	Old Harbor	5.43	53	*e*Pn	Pn	05 51 32.6	+1.5
	11nm,0.5s						
OHAK				*e*Sg	Sg	05 53 03.8	-0.6
KDAK	Kodiak Island	6.04	50	Pn	Pn	05 51 40.8	+1.2
	1.3nm,0.3s,baz=187,slow=7.6,SNR=9.6						
KDAK				Sn	Sn	05 52 47.6	-1.2
	baz=97,slow=16,SNR=1.9						
KDAK				Lg		05 53 16.4	
	1.8nm,0.3s,baz=303,slow=20,SNR=7.6						
KDAK	Kodiak Island	6.04	50	*e*Pn	Pn	05 51 41.4	+1.8
	44nm,1.3s						
PETK	Petropavlovsk-	24.08	284	P	P	05 55 23.4	-2.1
	5.1nm,0.6s,mb4.1,baz=78,slow=12,SNR=13						
YKA	Yellowknife Ar	25.32	52	P	P	05 55 37.8	+1.1
	0.5nm,0.6s,mb3.2,baz=270,slow=9.4,SNR=3.6						
MDJ	Mudanjiang	44.26	287	P	P	05 58 21.4	+1.7
MDJ				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.0						
MDJ				pmax	pmax		
	comp=Z,69nm,5.8s						
ARCES	ARCESS Array B	56.44	357	P	P	05 59 50.3	-1.1
	comp=Z,0.5nm,0.4s,mb3.9,baz=24,slow=6.5,SNR=8.7						
HHC	Hu-ho-hao-te	56.66	295	*e*P	P	05 59 57.3	+3.9
HHC				pmax	pmax		
	comp=Z,15nm,0.7s,mb5.1						
HHC				pmax	pmax		
	comp=Z,92nm,4.7s						
JOF	Joensuu	62.77	354	*e*p	P	06 00 31.5	-3.6
	comp=Z,2.8nm,0.7s,mb4.5						
JOF	Joensuu	62.77	354	*e*p	P	06 00 31.5	-3.6
	comp=Z,2.8nm,0.7s,mb4.5						
KAF	Kangasniemi	63.84	356	*e*p	P	06 00 41.0	-1.2
	comp=Z,1.8nm,0.4s,mb4.5						
KAF	Kangasniemi	63.84	356	*e*p	P	06 00 41.0	-1.2
	comp=Z,1.8nm,0.4s,mb4.5						
FINES	FINESS Array B	64.52	356	P	P	06 00 45.4	-1.3
	comp=Z,2.4nm,0.7s,mb4.4,baz=9.4,slow=8.2,SNR=10						
BVAR	Borovoye Array	64.83	328	P	P	06 00 47.9	-0.9
	comp=Z,1.3nm,0.7s,mb4.1,baz=64,slow=5.1,SNR=6.1						
NOA	NORSAR Array B	64.92	4	P	P	06 00 49.1	-0.2
	comp=Z,0.6nm,0.6s,mb3.8,baz=357,slow=6.4,SNR=3.3						
MKAR	Makanchi Array	65.87	318	P	P	06 00 54.6	-1.1
	comp=Z,0.2nm,0.4s,mb3.5,baz=33,slow=7.8,SNR=3.1						
AKASG	Malin Array Be	75.07	353	P	P	06 01 50.6	-1.2
	comp=Z,2.3nm,0.5s,mb4.4,baz=8.5,slow=5.8,SNR=14						
GERES	GERESS Array B	77.21	3	P	P	06 02 04.3	+0.3
	comp=Z,0.4nm,0.6s,mb3.6,baz=355,slow=4.6,SNR=6.5						
BRTR	Keskin Array B	85.54	348	P	P	06 02 47.6	-0.7
	comp=Z,0.8nm,0.8s,mb4.0,baz=31,slow=3.2,SNR=4.8						

*NEIC **14** 05:52:28.2, 40°.17N×19°.76E, h5km, MD3.4(ATH), After ATH.*
*ATH **14** 05:52:28.2, 40°.17N×19°.76E, h5km±3km, MD3.4/6*
*SKO **14** 05:52:28.1, 39°.88N×19°.86E, h1km, M2.3, ML2.7*
*ISCJB **14** 05:52:29.1±0.5, 40°.10N±0°.02×19°.68E±0°.04, h10km, Error ellipse: s-maj=4.7km s-min=2.7km az=3.0*
*TIR **14** 05:52:29.2±1.8, 40°.00N×19°.83E, h24km±13km, ML3.4*
*CSEM **14** 05:52:29.2±0.3, 40°.10N×19°.74E, h2km, ML3.4, Error ellipse: s-maj=5.4km s-min=3.1km az=85.0*
*THE **14** 05:52:30.0, 40°.10N×19°.80E, h0km±2km, ML3.4/7, Error ellipse: s-maj=3.5km s-min=0.9km az=284.0*

ISC 14 05:52:29.1±0.7, 40°.10N±0°.02×19°.72E±0°.04, h1km±4km, n53, σ0§93/96, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRN	Sarande	0.30	135	*e*PG	Pg	05 52 34.5	-0.5
SRN				*i* SG	Sg	05 52 38.5	-0.4
SRN	Sarande	0.30	135	*e*Pg	Pg	05 52 34.5	-0.5
	SNR=137						
SRN				*i* Sg	Sg	05 52 38.5	-0.4
	SNR=137						
KEK	Kerkira	0.39	171	*e*Pb	Pg	05 52 37.2	+0.6
KEK				*e*Sb	Sg	05 52 43.6	+2.0
KEK	Kerkira	0.39	171	P	Pg	05 52 37.3	+0.7
KEK				S	Sg	05 52 44.2	+2.6
KEK	Kerkira	0.39	171	*e*PB	Pg	05 52 37.2	+0.6
KEK				*e*SB	Sg	05 52 43.6	+2.0
KEK	Kerkira	0.39	171	P	Pg	05 52 37.3	+0.7
KEK				*e*Sb	Sg	05 52 43.6	+2.0
KEK				S	Sg	05 52 44.2	+2.6
IGT	Igoumenitsa	0.73	140	P	Pg	05 52 42.5	-0.7
IGT				S	Sg	05 52 53.5	+0.8
IGT	Igoumenitsa	0.73	140	P	Pg	05 52 42.5	-0.7
IGT				S	Sg	05 52 53.5	+0.8
KBN	Korca	0.97	57	*e*PG	Pg	05 52 47.5	-0.2
KBN				*i* SG	Sg	05 53 01.6	+1.3
KBN	Korca	0.97	57	*e*Pg	Pg	05 52 47.5	-0.2
	SNR=95						
KBN				*i* Sg	Sg	05 53 01.6	+1.3
	SNR=95						
JAN	Janina	0.97	117	*e*Pb	Pb	05 52 47.1	-1.7
JAN				*e*Sb	Sb	05 53 00.7	-1.4
JAN	Janina	0.97	117	*e*PB	Pb	05 52 47.1	-1.7
JAN				*e*SB	Sb	05 53 00.7	-1.4
JAN	Janina	0.97	117	*e*Pb	Pb	05 52 47.1	-1.7
JAN				*e*Sb	Sb	05 53 00.7	-1.4
MEV	Metsovon	1.20	105	P	Pg	05 52 51.5	-0.6
MEV	Metsovon	1.20	105	P	Pg	05 52 51.5	-0.6
OHR	Ohrid	1.30	39	*e*Pg	Pg	05 52 53.4	-0.7
OHR				*e*Sg	Sg	05 53 13.5	+2.5
OHR				*e*Lg		05 53 13.7	
	comp=E,114nm,0.7s						
OHR				*e*Lg		05 53 15.4	
	comp=N,100nm,0.7s						
OHR	Ohrid	1.30	39	P	Pg	05 52 53.3	-0.8
OHR				S	Sg	05 53 12.6	+1.6
OHR	Ohrid	1.30	39	P	Pg	05 52 53.3	-0.8
OHR				S	Sg	05 53 12.6	+1.6
FNA	Florina	1.44	61	P	Pn	05 52 55.6	-0.7
FNA				S	Sg	05 53 15.4	+0.1
FNA	Florina	1.44	61	P	Pn	05 52 55.6	-0.7
FNA				S	Sg	05 53 15.4	+0.1
LKD2	Lefkada island	1.49	151	P	Pn	05 52 57.3	+0.2
LKD2				S	Sg	05 53 18.4	+1.3
LKD2	Lefkada island	1.49	151	P	Pn	05 52 57.3	+0.2
LKD2				S	Sg	05 53 18.4	+1.3
BIA	Bitola	1.53	52	*e*Pn	Pn	05 52 56.9	-0.6
BIA				*e*Sg	Sg	05 53 18.8	+0.5
BIA	Bitola	1.53	52	P	Pn	05 52 56.8	-0.8
BIA				S	Sn	05 53 18.4	+0.3
BIA	Bitola	1.53	52	P	Pn	05 52 56.8	-0.8
BIA				S	Sn	05 53 18.4	+0.3
KZN	Kozani	1.58	82	*e*Pg	Pg	05 52 57.3	-2.2
KZN				*e*Sb	Sb	05 53 19.7	0.0
KZN	Kozani	1.58	82	P	Pn	05 52 57.4	-0.9
KZN				S	Sn	05 53 20.2	+0.8
KZN	Kozani	1.58	82	*e*PG	Pg	05 52 57.3	-2.2
KZN				*e*SB	Sb	05 53 19.7	0.0
KZN	Kozani	1.58	82	P	Pn	05 52 57.4	-0.9
KZN				*e*Sb	Sb	05 53 19.7	0.0
KZN				S	Sn	05 53 20.2	+0.8
PHP	Peshkopia	1.68	19	*e*PG	Pg	05 53 01.6	+0.3
PHP				*i* SG	Sg	05 53 27.5	+4.5
PHP	Peshkopia	1.68	19	*e*Pg	Pg	05 53 01.6	+0.3
	SNR=92						
KRUS	Krusevo	1.72	42	*e*Pn	Pn	05 53 00.6	+0.4
THL	Klokotos Trika	1.84	106	P	Pn	05 53 02.6	+0.7
THL				S	Sn	05 53 25.9	+0.1
THL	Klokotos Trika	1.84	106	*e*PN	Pn	05 53 02.7	+0.8
THL				*e*SN	Sn	05 53 28.0	+2.2
THL	Klokotos Trika	1.84	106	P	Pn	05 53 02.6	+0.7
THL				S	Sn	05 53 25.9	+0.1
THL				*e*Sn	Sn	05 53 28.0	+2.2
PUK	Puka	1.95	4	*e*PG	Pg	05 53 06.5	0.0
PUK	Puka	1.95	4	*e*Pg	Pg	05 53 06.5	0.0
	SNR=91						
EVR	Evrytania	2.00	125	*e*Pg	Pg	05 53 05.6	-1.8
EVR	Evrytania	2.00	125	*e*PG	Pg	05 53 05.6	-1.8
EVR	Evrytania	2.00	125	*e*Pg	Pg	05 53 05.6	-1.8
VLS	Valsamata	2.03	160	*e*Pg	Pg	05 53 07.8	-0.3
VLS				*e*Sn	Sn	05 53 35.8	+5.3
VLS	Valsamata	2.03	160	P	Pn	05 53 04.1	-0.4
VLS				S	Sn	05 53 30.7	+0.2
VLS	Valsamata	2.03	160	*e*PG	Pg	05 53 07.8	-0.3
VLS				*e*SN	Sn	05 53 35.8	+5.3
VLS	Valsamata	2.03	160	P	Pn	05 53 04.1	-0.4
VLS	Valsamata	2.03	160	*e*Pg	Pg	05 53 07.8	-0.3
VLS				S	Sn	05 53 30.7	+0.2
VLS				*e*Sn	Sn	05 53 35.8	+5.3
KFL	Anninata	2.15	157	P	Pn	05 53 06.5	+0.4
AGG	Agios Georgios	2.28	117	*e*Pn	Pn	05 53 08.9	+1.0
AGG	Agios Georgios	2.28	117	P	Pn	05 53 08.9	+1.0
AGG				S	Sn	05 53 36.5	-0.2
AGG	Agios Georgios	2.28	117	*e*PN	Pn	05 53 08.9	+1.0
AGG	Agios Georgios	2.28	117	P	Pn	05 53 08.9	+1.0
AGG				S	Sn	05 53 36.5	-0.2
VAY	Valandovo	2.49	60	*e*Pn	Pn	05 53 10.2	-0.6
STON	Ston	3.16	332	*e*Pn	Pn	05 53 20.4	+0.4
STON				Sn	Sn	05 53 58.1	-0.2
STON	Ston	3.16	332	*e*Pn	Pn	05 53 20.3	+0.3
STON				Sn	Sn	05 53 58.1	-0.2

KRSC 14 05:58:54.0±2.1, 50°.24N×157°.01E, h49km±49km, ML3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	Alaid	1.12	305	*e*P	Pn	05 59 13.6	+0.3
ALID				*i* S	Sn	05 59 28.3	+0.6
MIPR	Malaya Ipel'ka	2.04	356	*e*P	Pn	05 59 27.4	+1.5
AVH	Avacha	3.21	19	*e*P	Pn	05 59 44.9	+3.0
GNL	Ganaly	3.51	9	*e*P	Pn	05 59 49.5	+3.6
MKZ	Mys Kozlova	5.20	32	*e*P	Pn	06 00 09.6	+0.5

NEIC 14 05:59:18.0±3.0, 44°.52N×129°.60W, h10km, mb4.0/2, Error ellipse: s-maj=33.7km s-min=10.8km az=76.0, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEBO	Mount Hebo	4.21	78	*e*Pn	Pn	06 00 21.3	-0.9
MPOR	Mary's Peak	4.33	88	P	Pn	06 00 22.5	-1.3
KMOR	Kings Mountain	4.47	73	P	Pn	06 00 24.8	-0.9
COR	Corvallis	4.50	87	*e*Pn	Pn	06 00 25.5	-0.7
NLWA	Neilton Lookou	4.92	52	*e*Pn	Pn	06 00 31.5	-0.4
OTR	Olympics--Tyee	5.09	44	P	Pn	06 00 34.5	+0.2
RVW	Rose Valley	5.10	69	P	Pn	06 00 34.4	0.0
SSOR	Sweet Springs	5.10	84	P	Pn	06 00 34.8	+0.3
HUMO	Hull Mountain	5.19	109	*e*Pn	Pn	06 00 35.1	-0.6
HUMO				*e*Sn	Sn	06 01 35.9	+0.3
LCW	Lucas Creek	5.29	64	P	Pn	06 00 37.0	-0.1
LVP	Lakeview Peak	5.30	71	P	Pn	06 00 37.2	-0.1
FL2	Flat Top 2	5.38	69	P	Pn	06 00 38.4	+0.2
MTMW	Mount Mitchell	5.42	71	P	Pn	06 00 38.9	0.0
GNW	Green Mountain	5.61	55	*e*Pn	Pn	06 00 40.8	-0.6
VLL	Laurance Lake	5.70	78	P	Pn	06 00 43.9	+1.3
HOOD	Mount Hood Mea	5.70	79	*e*Pn	Pn	06 00 43.0	+0.3
	33nm,0.4s						
GHW	Garrison Hill	5.71	61	P	Pn	06 00 43.1	+0.3
LON	Longmire	5.90	65	*e*Pn	Pn	06 00 45.5	+0.1
PGC	Sidney	5.92	44	*e*Pn	Pn	06 00 44.6	-1.0
RMW	Rattlesnake Mo	6.17	59	P	Pn	06 00 49.7	+0.6
JCW	Jim Creek	6.45	53	*e*Pn	Pn	06 00 53.3	+0.3
RPW	Rockport	6.82	52	*e*Pn	Pn	06 00 58.6	+0.5
VDB	Vedder Mountai	6.84	46	P	Pn	06 00 58.7	+0.5
ETW	Entiat	7.14	61	*e*Pn	Pn	06 01 03.1	+0.6
BMO	Blue Mountains	8.77	84	*e*Pn	Pn	06 01 25.3	+0.5
MSO	Missoula	11.20	73	*e*Pn	Pn	06 01 58.5	+0.5
SLMT	Seeley Lake	11.55	71	*e*Pn	Pn	06 02 02.9	0.0
MCMT	McKenzie Canyo	11.93	83	*e*Pn	Pn	06 02 10.9	+2.9
	1.4nm,1.4s						
SRU	San Rafael	15.20	104	*e*P	Pn	06 02 59.4	+6.7
	6.5nm,1.2s						
WMOK	Wichita Mounta	25.54	102	*e*P	P	06 04 47.3	+0.5
	4.9nm,1.3s						

JMA 14 06:09:32.7, 38°.82N×140°.78E, h4km±1km, M2.8, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYK	Kaneyama	0.34	287	P	Pg	06 09 39.7	+0.4
JYK				*e*S	Sg	06 09 44.4	+0.6
JMK	Ichinoseki	0.37	69	P	Pg	06 09 39.8	0.0
JMK				S	Sg	06 09 45.1	+0.5
JOU	Okura	0.46	191	P	Pg	06 09 41.9	+0.3
JOU				S	Sg	06 09 48.2	+0.6
JOM	Ohasama	0.76	31	P	Pg	06 09 47.2	-0.2
JOM				S	Sg	06 09 57.5	+0.2
MAT	Matsushiro	3.06	223	P	Pn	06 10 23.1	+1.4
MAT				*e*S	Sn	06 11 07.5	+8.8

*ISK **14** 06:18:57.6, 39°.71N×43°.60E, h18km, MD2.8*
*CSEM **14** 06:18:57.3±0.2, 39°.73N×43°.60E, h20km, MD2.8, Error ellipse: s-maj=5.9km s-min=5.5km az=162.0*
*ISCJB **14** 06:18:57.9±0.7, 39°.74N±0°.04×43°.61E±0°.05, h10km, Error ellipse: s-maj=6.4km s-min=5.2km az=168.6*

ISC 14 06:18:58.9±0.7, 39°.72N±0°.05×43°.62E±0°.05, h14km±17km, n10, σ0§93/17, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DYDN	Diyadin	0.18	164	*i* P	Pg	06 19 03.0	-0.1
DYDN	Diyadin	0.18	164	*i* P	Pg	06 19 03.0	-0.1
AGRB	Hanur-Agry	0.51	254	*e*PG	Pg	06 19 07.9	-1.0
AGRB				*e*SG	Sg	06 19 15.5	-0.2
AGRB	Hanur-Agry	0.51	254	*e*Pg	Pg	06 19 07.9	-1.0
AGRB				*e*Sg	Sg	06 19 15.5	-0.2
CLDR	Caldiran	0.62	158	*e*PG	Pg	06 19 10.2	-0.8
CLDR				*e*SG	Sg	06 19 19.3	+0.1
CLDR	Caldiran	0.62	158	*e*Pg	Pg	06 19 10.2	-0.8
CLDR				*e*Sg	Sg	06 19 19.3	+0.1
GNI	Garni	0.96	63	*e*PG	Pg	06 19 16.4	-1.0
GNI				*e*SG	Sg	06 19 31.2	+1.2
GNI	Garni	0.96	63	*e*Pg	Pg	06 19 16.4	-1.0
GNI

CMAR				LR	LR	06 38 43.5	
	comp=Z,34nm,21.1s,baz=340,slow=33						
KSRS	**Korea Array**	**21.77**	**15**	P	**P**	**06 31 50.1**	**-1.3**
	1.4nm,0.5s,mb3.6,baz=195,slow=10,SNR=6.3						
SONM	**Songino Array**	**33.54**	**342**	P	**P**	**06 33 40.1**	**+0.8**
	1.4nm,0.4s,mb4.2,baz=168,slow=7.4,SNR=2.8						
WRA	**Warramunga Arr**	**38.45**	**160**	P	**P**	**06 34 21.2**	**-0.4**
	1.4nm,0.8s,mb3.7,baz=341,slow=9.4,SNR=6.1						
ASAR	**Alice Springs**	**41.80**	**162**	P	**P**	**06 34 48.8**	**-0.6**
	0.6nm,0.7s,mb3.3,baz=337,slow=7.3,SNR=6.5						
KURK	**Kurchatov**	**48.13**	**325**	P	**P**	**06 35 38.9**	**-0.6**
	1.0nm,0.6s,mb4.0,baz=123,slow=8.4,SNR=4.6						
AKTO	**Aktyubinsk**	**60.36**	**319**	P	**P**	**06 37 07.4**	**-1.3**
	1.5nm,0.7s,mb4.1,baz=127,slow=7.7,SNR=4.0						
FINES	**FINESS Array B**	**78.06**	**331**	P	**P**	**06 38 57.0**	**-1.2**
	1.4nm,0.9s,mb3.9,baz=20,slow=6.1,SNR=3.5						
NOA	**NORSAR Array B**	**84.99**	**333**	P	**P**	**06 39 33.2**	**-1.7**
	0.9nm,0.8s,mb3.9,baz=64,slow=5.0,SNR=3.8						

*IDC **14** 06:28:27.2±0.8, 30°.83N×103°.26E, h0km, mb3.9/12, mb1 4.1/12, mb1mx3.9/24, mbtmp4.0/12, MS3.0/1, Ms1 3.0/1, ms1mx2.4/31, Error ellipse: s-maj=38.5km s-min=14.9km az=54.0*
*NEIC **14** 06:28:29.0±0.5, 30°.86N×103°.34E, h10km, mb4.2/3, Error ellipse: s-maj=20.7km s-min=8.0km az=224.0*
*BJI **14** 06:28:30.1, 30°.96N×103°.40E, h14km, mB4.6/2, mb4.5/3, ML3.9/20, Ms3.6/5, Ms7 3.6/5*

ISC 14 06:28:30.8±1.0, 31°.08N±0°.04×103°.46E±0°.06, h16km±6km, n26, σ1°.41/33, mb3.9/15, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.31**	**123**	⇓iPg	**Pg**	**06 28 37.6**	**+0.2**
CD2				Sg	**Sg**	**06 28 44.1**	**+2.3**
CD2				smax			
	comp=N,13μm,0.8s						
CD2				smax			
	comp=E,13μm,0.8s						
LZH	**Lanzhou**	**5.00**	**4**	Pn	**Pn**	**06 29 51.8**	**+6.6**
LZH				Sn	**Sn**	**06 30 51.3**	**+8.6**
LZH				Sg	**Sg**	**06 31 10.6**	**-0.9**
LZH				smax			
	comp=N,78nm,0.9s						
LZH				smax			
	comp=E,95nm,0.7s						
LZH				LR	LR		
	comp=N,500nm,6.6s						
LZH				LR	LR		
	comp=Z,570nm,7.5s						
ENH	**Enshi**	**5.26**	**97**	*e*Pn	**Pn**	**06 29 49.9**	**+1.3**
	comp=Z,93nm,0.6s						
GYA	**Guiyang**	**5.39**	**148**	Pg	**Pb**	**06 30 01.8**	**-2.9**
GYA				smax			
	comp=N,300nm,1.0s						
GYA				smax			
	comp=E,220nm,1.0s						
XAN	**Xi'an**	**5.48**	**56**	Pn	**Pn**	**06 29 52.3**	**+0.6**
XAN				Pg	**Pg**	**06 30 13.0**	**-2.7**
XAN				Sn	**Sn**	**06 30 56.3**	**+2.0**
XAN				Sg	**Sg**	**06 31 24.3**	**-2.3**
XAN				smax			
	comp=N,460nm,0.8s						
XAN				smax			
	comp=E,230nm,0.8s						
XAN				LR	LR		
	comp=N,400nm,12.3s						
XAN				LR	LR		
	comp=E,96nm,11.3s						
XAN				LR	LR		
	comp=Z,110nm,10.6s						
KMI	**Kunming**	**5.97**	**186**	Pn	**Pn**	**06 30 01.0**	**+2.5**
KMI				Sn	**Sn**	**06 31 13.9**	**+7.5**
KMI				smax			
	comp=N,45nm,0.9s						
KMI				smax			
	comp=E,33nm,1.0s						
KMI				LR	LR		
	comp=N,540nm,11.1s						
KMI				LR	LR		
	comp=E,510nm,8.2s						
KMI				LR	LR		
	comp=Z,580nm,10.2s						
KSRS	**Korea Array**	**21.17**	**66**	P	**P**	**06 33 17.0**	**+1.7**
	comp=Z,7.2nm,0.6s,mb4.2,baz=245,slow=9.5,SNR=26						
MK31	**Makanchi Array**	**22.64**	**320**	*e*P	**P**	**06 33 32.5**	**+1.6**
MKAR	**Makanchi Array**	**22.64**	**320**	P	**P**	**06 33 32.5**	**+1.6**
	comp=Z,0.3nm,0.5s,mb3.0,baz=304,slow=24,SNR=8.6						
MKAR	**Makanchi Array**	**22.64**	**320**	P	**P**	**06 33 32.5**	**+1.6**
UCH	**Uchtor**	**25.63**	**304**	*e*P	**P**	**06 34 00.2**	**+0.8**
	comp=Z,1.5nm,0.9s,mb3.5						
ZALV	**Zalesovo Beam**	**26.51**	**335**	P	**P**	**06 34 07.3**	**+0.1**
	comp=Z,1.7nm,0.5s,mb3.8,baz=137,slow=8.8,SNR=6.3						
ZALV				LR	LR	06 45 13.9	
	comp=Z,34nm,19.1s,baz=54,slow=38						
ZALV	**Zalesovo Beam**	**26.51**	**335**	P	**P**	**06 34 07.3**	**+0.1**
ZALV				LR	LR	06 45 13.9	
KURK	**Kurchatov**	**26.94**	**324**	P	**P**	**06 34 11.6**	**+0.5**
	comp=Z,1.7nm,0.6s,mb3.7,baz=131,slow=9.7,SNR=10						
BVAR	**Borovoye Array**	**32.47**	**322**	P	**P**	**06 35 00.2**	**+0.1**
	comp=Z,0.9nm,0.6s,mb3.8,baz=120,slow=7.7,SNR=4.7						
BVAR				PcP	PcP	06 37 45.6	-1.3
	comp=Z,0.6nm,0.6s,baz=132,slow=4.2,SNR=4.2						
ARCES	**ARCESS Array B**	**57.05**	**336**	P	**P**	**06 38 15.8**	**+0.2**
	comp=Z,2.1nm,1.0s,mb4.1,baz=90,slow=6.3,SNR=7.4						
FINES	**FINESS Array B**	**57.28**	**326**	P	**P**	**06 38 16.6**	**-0.6**
	comp=Z,1.1nm,0.7s,mb4.0,baz=103,slow=8.6,SNR=4.9						
WRAB	**Tennant Creek**	**58.76**	**146**	*e*P	**P**	**06 38 26.5**	**-1.6**
	comp=Z,7.7nm,1.1s,mb4.7						
WRA	**Warramunga Arr**	**58.76**	**146**	P	**P**	**06 38 26.6**	**-1.6**
	comp=Z,1.3nm,0.4s,mb4.3,baz=337,slow=7.4,SNR=10						
ASAR	**Alice Springs**	**61.76**	**148**	P	**P**	**06 38 47.1**	**-1.4**
	comp=Z,0.4nm,0.4s,mb3.9,baz=329,slow=6.6,SNR=9.6						
NB2	**NORSAR Subarra**	**64.38**	**327**	P	**P**	**06 39 04.2**	**-1.4**
	comp=Z,0.6nm,0.5s,mb3.9,baz=75,slow=6.5						
NOA	**NORSAR Array B**	**64.38**	**327**	P	**P**	**06 39 04.2**	**-1.3**
	comp=Z,1.4nm,0.8s,mb4.0,baz=75,slow=6.3,SNR=5.9						
STKA	**Stephens Creek**	**72.29**	**147**	P	**P**	**06 39 53.7**	**-1.7**
	comp=Z,1.0nm,0.6s,mb3.9,baz=176,slow=6.1,SNR=3.4						
INK	**Inuvik**	**72.36**	**19**	*e*P	**P**	**06 39 55.2**	**-0.2**
	comp=Z,1.9nm,0.9s,mb4.0						
YKA	**Yellowknife Ar**	**81.88**	**17**	P	**P**	**06 40 49.2**	**+0.2**
	comp=Z,1.2nm,0.6s,mb4.0,baz=330,slow=5.7,SNR=5.2						
YKA	**Yellowknife Ar**	**81.88**	**17**	P	**P**	**06 40 49.2**	**+0.2**

JMA 14 06:38:15.0, 38°.88N×140°.85E, h6km±1km, M3.4, 1C-1D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.30**	**76**	P	Pg	06 38 20.8	0.0
JMK				S	Sg	06 38 24.9	+0.2
JYK	**Kaneyama**	**0.39**	**276**	⇓P	Pg	06 38 22.6	+0.2
JYK				S	Sg	06 38 27.8	+0.3
JOU	**Okura**	**0.53**	**196**	⇑P	Pg	06 38 25.4	+0.1
JOU				S	Sg	06 38 32.5	+0.3
JRG	**Rokugo**	**0.54**	**342**	P	Pg	06 38 25.7	+0.2
OFUJ	**Ofunato**	**0.67**	**72**	P	Pg	06 38 27.6	-0.3
OFUJ				S	Sg	06 38 36.6	0.0
JOM	**Ohasama**	**0.69**	**30**	S	Sg	06 38 37.3	+0.2
MAT	**Matsushiro**	**3.14**	**223**	P	Pn	06 39 06.6	+1.7
MAT				*e*S	Sn	06 39 51.6	+8.9

CASC 14 06:40:17.7±1.3, 13°.44N×90°.80W, h19km±8km, MD3.5, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**0.96**	**11**	*e*P	Pb	06 40 35.7	-0.1
FUG	**Fuego 3**	**1.00**	**357**	*e*P	Pb	06 40 35.8	-0.7
FG6		**1.11**	**356**	*e*P	Pn	06 40 37.3	-1.0
JAT	**Jato**	**1.19**	**317**	*e*P	Pn	06 40 38.2	-1.2
RTR	**El Retiro**	**1.21**	**68**	*e*P	Pn	06 40 39.3	-0.2
RTR				*e*S	Sb	06 40 55.8	+0.7
SBLS	**San Blas**	**1.21**	**71**	*e*P	Pn	06 40 39.1	-0.5
SBLS				*e*S	Sb	06 40 56.1	+1.0
NBG	**Las Nubes**	**1.22**	**21**	*e*P	Pn	06 40 40.9	+1.2
RBDL	**Robledal**	**1.27**	**58**	*e*P	Pn	06 40 40.4	0.0
RBDL				*e*S	Sb	06 40 57.9	+1.0
BOQS	**Boqueron**	**1.50**	**79**	*e*P	Pn	06 40 44.0	+0.4
BOQS				*e*S	Sn	06 41 03.5	+0.8
LFRS	**El Faro**	**1.69**	**84**	*e*P	Pn	06 40 46.6	+0.3
LFRS				*e*S	Sn	06 41 09.1	+1.6

*IDC **14** 06:43:30.1±1.4, 39°.17N×141°.35E, h0km, mb3.7/5, mb1 3.8/7, mb1mx3.6/26, mbtmp3.7/7, ML3.2/2, Error ellipse: s-maj=31.5km s-min=19.8km az=98.0*
*JMA **14** 06:43:32.7, 39°.10N×140°.98E, h10km±1km, M3.3*
JMA Felt II J1.
*ISCJB **14** 06:43:32.4±0.7, 39°.12N±0°.05×141°.04E±0°.06, h16km±6km, mb3.7/5, Error ellipse: s-maj=8.3km s-min=6.9km az=140.8*

ISC 14 06:43:32.8±0.7, 39°.12N±0°.04×141°.01E±0°.05, h6km±5km, n14, σ0°.90/18, mb3.7/5, 2C-2D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.23**	**135**	⇓P	**Pg**	**06 43 37.5**	**+0.1**
JMK				*e*S	**Sg**	**06 43 40.8**	**+0.3**
JRG	**Rokugo**	**0.40**	**314**	P	**Pg**	**06 43 40.9**	**+0.3**
JOM	**Ohasama**	**0.42**	**32**	P	**Pg**	**06 43 41.5**	**+0.6**
OFUJ	**Ofunato**	**0.52**	**94**	⇓P	**Pg**	**06 43 43.1**	**+0.3**
JYK	**Kaneyama**	**0.54**	**249**	⇑P	**Pg**	**06 43 42.8**	**-0.4**
JYK				*e*S	**Sg**	**06 43 49.9**	**-0.4**
JOU	**Okura**	**0.80**	**200**	⇑P	**Pg**	**06 43 47.4**	**-0.7**
JOU				S	**Sg**	**06 43 57.8**	**-0.6**
MJAR	**Matsushiro Arr**	**3.39**	**222**	Pn	**Pn**	**06 44 27.7**	**+1.4**
	0.7nm,0.3s,baz=50,slow=14,SNR=7.3						
MJAR				Lg		06 45 24.8	
	0.6nm,0.3s,baz=338,slow=31,SNR=5.1						
MAT	**Matsushiro**	**3.39**	**222**	P	**Pn**	**06 44 27.1**	**+0.8**
MAT				*e*S	**Sn**	**06 45 08.8**	**+1.9**
KSRS	**Korea Array**	**10.42**	**265**	Pn	**Pn**	**06 46 06.1**	**+3.4**
	0.5nm,0.3s,baz=75,slow=14,SNR=12						
MKAR	**Makanchi Array**	**42.77**	**300**	P	**P**	**06 51 30.6**	**-0.3**
	0.3nm,0.4s,mb3.4,baz=80,slow=9.5,SNR=2.8						
KURK	**Kurchatov**	**44.42**	**306**	P	**P**	**06 51 43.4**	**-0.8**
	0.4nm,0.3s,mb3.6,baz=83,slow=8.3,SNR=6.0						
WRA	**Warramunga Arr**	**59.08**	**187**	P	**P**	**06 53 33.0**	**-0.9**
	0.6nm,0.5s,mb3.9,baz=5.6,slow=7.3,SNR=4.9						
ASAR	**Alice Springs**	**62.81**	**187**	P	**P**	**06 53 57.7**	**-1.5**
	0.4nm,0.7s,mb3.7,baz=353,slow=4.1,SNR=5.5						
FINES	**FINESS Array B**	**66.83**	**332**	P	**P**	**06 54 24.4**	**-0.6**
	1.2nm,0.7s,mb4.0,baz=45,slow=6.8,SNR=3.2						

JMA 14 06:46:38.8, 38°.93N×140°.81E, h4km±2km, M3.1, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.32**	**86**	P	Pg	06 46 45.0	0.0
JMK				*e*S	Sg	06 46 49.6	+0.4
JYK	**Kaneyama**	**0.35**	**268**	P	Pg	06 46 45.8	+0.2
JYK				*e*S	Sg	06 46 50.5	+0.3
JRG	**Rokugo**	**0.48**	**344**	P	Pg	06 46 48.6	+0.5
JOU	**Okura**	**0.57**	**192**	P	Pg	06 46 50.1	+0.3
JOU				S	Sg	06 46 57.7	+0.4
JOM	**Ohasama**	**0.66**	**34**	P	Pg	06 46 51.6	+0.1
JOM				S	Sg	06 47 00.1	+0.1
OFUJ	**Ofunato**	**0.69**	**77**	P	Pg	06 46 51.7	-0.3
MAT	**Matsushiro**	**3.15**	**222**	P	Pn	06 47 30.6	+1.4
MAT				*e*S	Sn	06 48 15.5	+8.3

*BJI **14** 06:47:05.0, 44°.20N×129°.20W, h10km, mB5.1/16, mb4.8/18, Ms5.0/15, Ms7 4.7/15*
*IDC **14** 06:47:05.5±1.0, 44°.10N×129°.17W, h0km, mb4.3/18, mb1 4.4/21, mb1mx4.3/31, mbtmp4.3/21, ML4.1/3, MS4.4/28, Ms1 4.4/28, ms1mx4.2/38, Error ellipse: s-maj=28.2km s-min=12.0km az=34.0*
*ISCJB **14** 06:47:07.8±0.2, 44°.27N±0°.02×129°.08W±0°.03, h10km, mb4.8/82, MS4.5/31, Error ellipse: s-maj=4.0km s-min=2.5km az=34.2*
*GCMT **14** 06:47:09.1±0.2, 44°.00N×129°.35W, h14km±1km, MW5.2, Moment Tensor Solution. s37,c48; s99,c191; Moment tensor: Scale 10^{16}Nm; M_{rr}=2.01±.23; $M_{\theta\theta}$=4.69±.17; $M_{\phi\phi}$=6.70±.21; $M_{r\theta}$=2.10±.45; $M_{\theta\phi}$=-5.50±.17; $M_{r\phi}$=3.06±.49; Best double couple: M_0=8.50000×10^{16} NP1:ϕ_s=25.00000°, δ70.00000°, λ4.00000°. NP2:ϕ_s=293.00000°, δ86.00000°, λ160.00000°. Principal axes: T 10.0000, Plg17.0000°, Azm247.0000°; N -2.9000, Plg70.0000°, Azm102.0000°; P -7.1000, Plg11.0000°, Azm340.0000°; Data Used: II IU CN IC G. Surface waves from 106 sta.*
*NEIC **14** 06:47:09.0±0.3, 44°.23N×129°.20W, h10km, mb4.9/85 Error ellipse: s-maj=5.7km s-min=3.0km az=218.0*
*SZGRF **14** 06:47:16.2, 44°.65N×129°.53W, h33km, mb4.4, MS4.9, Off coast of Oregon, United States*

ISC 14 06:47:09.2±0.2, 44°.24N±0°.03×129°.18W±0°.03, h10km, (h12km±6km:pP-P), n276, σ1°.23/264, mb4.8/82, MS4.5/31, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RNO	**Roman Nose**	**3.94**	**93**	P	**Pn**	**06 48 07.0**	**-2.6**
HEBO	**Mount Hebo**	**3.99**	**74**	*e*Pn	**Pn**	**06 48 07.9**	**-2.4**
COR	**Corvallis**	**4.23**	**83**	*e*Pn	**Pn**	**06 48 11.5**	**-2.2**
KMOR	**Kings Mountain**	**4.28**	**69**	P	**Pn**	**06 48 12.4**	**-1.9**
NLO	**Nicolai Mounta**	**4.45**	**64**	P	**Pn**	**06 48 15.8**	**-0.9**
HSO	**Harness Mounta**	**4.46**	**97**	P	**Pn**	**06 48 15.2**	**-1.7**
HUMO	**Hull Mountain**	**4.82**	**108**	*e*Pn	**Pn**	**06 48 18.8**	**-3.0**
HUMO				*e*Sn	**Sn**	**06 49 14.0**	**-3.7**
SSOR	**Sweet Springs**	**4.84**	**80**	P	**Pn**	**06 48 21.4**	**-0.7**
NLWA	**Neilton Lookou**	**4.87**	**48**	*e*Pn	**Pn**	**06 48 21.0**	**-1.5**
NLWA				*e*Sn	**Sn**	**06 49 17.8**	**-1.1**
OOW	**Octopus West**	**4.93**	**43**	P	**Pn**	**06 48 22.2**	**-1.1**
RVW	**Rose Valley**	**4.93**	**65**	P	**Pn**	**06 48 22.2**	**-1.2**
IRO	**Indian Ridge**	**4.99**	**90**	P	**Pn**	**06 48 23.6**	**-0.6**
FL2	**Flat Top 2**	**5.21**	**66**	P	**Pn**	**06 48 26.3**	**-0.8**
KHMM	**Horse Mountain**	**5.25**	**128**	*e*Pn	**Pn**	**06 48 26.5**	**-1.2**
YBH	**Yreka Blue Hor**	**5.37**	**116**	Pn	**Pn**	**06 48 26.4**	**-2.9**
	1.8nm,0.3s,baz=303,slow=11,SNR=22						
YBH				Sn	**Sn**	**06 49 26.7**	**-4.5**
	0.9nm,0.3s,baz=103,slow=21,SNR=6.5						
YBH				LR	LR	06 50 11.4	
	comp=Z,1μm,22.0s,baz=303,slow=35						
YBH	**Yreka Blue Hor**	**5.37**	**116**	*e*Pn	**Pn**	**06 48 27.1**	**-2.3**
YBH				*e*Sn	**Sn**	**06 49 29.1**	**-2.1**
HOOD	**Mount Hood Mea**	**5.47**	**76**	*e*Pn	**Pn**	**06 48 29.7**	**-1.0**
VLL	**Laurance Lake**	**5.47**	**74**	P	**Pn**	**06 48 30.8**	**0.0**
VBEM	**Beaver Butte**	**5.48**	**79**	P	**Pn**	**06 48 31.0**	**+0.2**
GNW	**Green Mountain**	**5.54**	**51**	*e*Pn	**Pn**	**06 48 29.9**	**-1.8**
	48nm,0.7s						
LON	**Longmire**	**5.76**	**62**	P	**Pn**	**06 48 34.0**	**-0.6**
WPW	**White Pass**	**5.90**	**63**	P	**Pn**	**06 48 36.5**	**-0.2**
PGC	**Sidney**	**5.92**	**40**	*e*Pn	**Pn**	**06 48 35.6**	**-1.3**
PGC				*e*Sn	**Sn**	**06 49 42.3**	**-2.5**
WDC	**Whiskeytown Da**	**6.13**	**124**	*e*Pn	**Pn**	**06 48 38.5**	**-1.2**
KCPM	**Cahto Peak**	**6.17**	**136**	*e*Pn	**Pn**	**06 48 39.3**	**-1.1**
JCW	**Jim Creek**	**6.40**	**49**	*e*Pn	**Pn**	**06 48 42.3**	**-1.1**
JCW				*e*Sn	**Sn**	**06 49 56.9**	**+0.4**
RPW	**Rockport**	**6.77**	**49**	*e*Pn	**Pn**	**06 48 48.0**	**-0.6**
RPW				*e*Sn	**Sn**	**06 50 06.9**	**+1.2**
MOD	**Modoc**	**6.91**	**107**	*e*Pn	**Pn**	**06 48 48.5**	**-2.0**
HOPS	**Hopland**	**6.96**	**137**	*e*Pn	**Pn**	**06 48 48.8**	**-2.4**
ETW	**Entiat**	**7.03**	**58**	*e*Pn	**Pn**	**06 48 52.2**	**+0.1**
RSW	**Rattlesnake Hi**	**7.10**	**69**	*e*Pn	**Pn**	**06 48 53.4**	**+0.3**
HAWA	**Hanford**	**7.13**	**69**	*e*Pn	**Pn**	**06 48 53.7**	**+0.1**
OHCM	**Honcut**	**7.56**	**128**	*e*Pn	**Pn**	**06 48 58.6**	**-0.7**
LNOR	**Lincton Mounta**	**7.89**	**74**	*e*Pn	**Pn**	**06 49 07.7**	**+3.8**
WVOR	**Wild Horse Val**	**7.90**	**100**	*e*Pn	**Pn**	**06 49 01.7**	**-2.3**
	23nm,0.9s						
OD2	**Odessa Site #2**	**7.96**	**63**	*e*Pn	**Pn**	**06 49 04.2**	**-0.8**
BMO	**Blue Mountains**	**8.51**	**82**	*e*Pn	**Pn**	**06 49 11.2**	**-1.1**
PAHR	**Pah Rah Range**	**8.59**	**118**	*e*Pn	**Pn**	**06 49 16.0**	**+2.4**
CMB	**Columbia Colle**	**9.08**	**130**	*e*Pn	**Pn**	**06 49 20.1**	**-0.2**
NEW	**Newport**	**9.27**	**60**	*e*Pn	**Pn**	**06 49 22.0**	**-0.8**
WAKR	**Walker**	**9.30**	**125**	*e*Pn	**Pn**	**06 49 24.0**	**+0.8**
BMN	**Battle Mountai**	**9.64**	**109**	*e*Pn	**Pn**	**06 49 30.9**	**+3.0**
MTUM	**Tungsten Hills**	**10.58**	**127**	*e*Pn	**Pn**	**06 49 42.3**	**+1.4**
BSMT	**Bassoo Peak**	**10.64**	**65**	*e*Pn	**Pn**	**06 49 41.5**	**0.0**
HLID	**Hailey**	**10.68**	**89**	*e*Pn	**Pn**	**06 49 44.4**	**+2.2**
ELK	**Elko**	**10.87**	**104**	Pn	**Pn**	**06 49 45.2**	**+0.4**
	0.3nm,0.3s,baz=293,slow=9.6,SNR=43						
ELK				LR	LR	06 54 05.6	
	comp=Z,3μm,18.6s,baz=285,slow=39						
ELK	**Elko**	**10.87**	**104**	*e*Pn	**Pn**	**06 49 46.5**	**+1.7**
JTMT	**Jette**	**10.94**	**66**	*e*Pn	**Pn**	**06 49 45.8**	**+0.1**
N12A	**Clover Valley,**	**10.97**	**103**	*e*Pn	**Pn**	**06 49 47.8**	**+1.6**
MSO	**Missoula**	**11.00**	**71**	*e*Pn	**Pn**	**06 49 45.6**	**-1.0**
SWMT	**Swartz Lake**	**11.08**	**68**	*e*Pn	**Pn**	**06 49 47.8**	**+0.2**
YBMT	**Yellow Bay**	**11.15**	**66**	*e*Pn	**Pn**	**06 49 48.3**	**-0.2**
SLMT	**Seeley Lake**	**11.37**	**69**	*e*Pn	**Pn**	**06 49 51.0**	**-0.6**
M13A	**Montello**	**11.40**	**99**	*e*Pn	**Pn**	**06 49 55.2**	**+3.1**
CHMT	**Chamberlain Mo**	**11.48**	**71**	*e*Pn	**Pn**	**06 49 52.9**	**-0.2**
CRAG	**Craig**	**11.52**	**349**	*e*Pn	**Pn**	**06 49 55.3**	**+1.7**
WALA	**Waterton Lakes**	**11.54**	**60**	*e*Pn	**Pn**	**06 49 53.6**	**-0.4**
N13A	**Wendover, West**	**11.55**	**102**	*e*Pn	**Pn**	**06 49 54.9**	**+0.8**
	47nm,1.1s						
MCMT	**McKenzie Canyo**	**11.68**	**81**	*e*Pn	**Pn**	**06 49 55.7**	**-0.1**
	100nm,1.9s						
DLMT	**Dillon**	**11.84**	**79**	*e*Pn	**Pn**	**06 49 59.2**	**+1.2**
ISA	**Isabella**	**11.86**	**133**	*e*Pn	**Pn**	**06 49 58.2**	**-0.1**
LRM	**Limekiln Ridge**	**11.95**	**77**	*e*Pn	**Pn**	**06 49 59.3**	**-0.2**
HVU	**Hansel Valley**	**12.26**	**96**	*e*Pn	**Pn**	**06 50 05.6**	**+1.8**
BGU	**Big Grassy Mou**	**12.36**	**100**	*e*P	**Pn**	**06 50 05.2**	**+0.1**
	52nm,1.4s						
HRY	**Holter Researc**	**12.43**	**72**	*e*Pn	**Pn**	**06 50 07.7**	**+1.7**
BOZ	**Bozeman (W)**	**12.52**	**77**	*e*Pn	**Pn**	**06 50 07.4**	**+0.1**
	90nm,1.5s						
SPUT	**South Promonto**	**12.64**	**98**	*e*Pn	**Pn**	**06 50 11.3**	**+2.3**
QLMT	**Earthquake Lak**	**12.69**	**81**	*e*Pn	**Pn**	**06 50 11.1**	**+1.5**
DUG	**Dugway**	**12.79**	**103**	*e*Pn	**Pn**	**06 50 11.3**	**+0.3**
RRI2	**Red Ridge**	**12.94**	**88**	*e*Pn	**Pn**	**06 50 15.2**	**+2.2**
	265nm,1.8s						
DCID1	**Drake Creek**	**13.00**	**87**	*e*Pn	**Pn**	**06 50 16.1**	**+2.2**
	41nm,0.4s						
YMR	**Madison River**	**13.03**	**82**	*e*Pn	**Pn**	**06 50 15.9**	**+1.6**
	354nm,1.9s						
GSC	**Goldstone**	**13.04**	**129**	*e*Pn	**Pn**	**06 50 15.1**	**+0.6**
IMW	**Indian Meadow**	**13.13**	**85**	*e*Pn	**Pn**	**06 50 17.8**	**+2.1**
YFT	**Old Faithful**	**13.14**	**83**	*e*Pn	**Pn**	**06 50 18.8**	**+3.1**
HWUT	**Hardware Ranch**	**13.18**	**95**	*e*Pn	**Pn**	**06 50 17.6**	**+1.3**
TPAW	**Teton Pass**	**13.18**	**87**	*e*Pn	**Pn**	**06 50 18.4**	**+2.0**
	194nm,1.4s						
MWC	**Mount Wilson**	**13.19**	**136**	*e*Pn	**Pn**	**06 50 15.0**	**-1.6**
AHID	**Auburn Hatcher**	**13.21**	**90**	*e*Pn	**Pn**	**06 50 18.6**	**+1.8**
REDW	**Red Top Meadow**	**13.27**	**87**	*e*Pn	**Pn**	**06 50 19.4**	**+1.8**
SNOW	**Snow King Moun**	**13.33**	**87**	*e*Pn	**Pn**	**06 50 21.3**	**+3.0**
NLU	**North Lily Min**	**13.40**	**103**	*e*Pn	**Pn**	**06 50 21.6**	**+2.1**
LOHW	**Long Hollow**	**13.41**	**86**	*e*Pn	**Pn**	**06 50 21.4**	**+2.0**
LKWY	**Lake**	**13.44**	**82**	*e*Pn	**Pn**	**06 50 21.5**	**+1.7**
ARUT	**Antelope Range**	**13.51**	**113**	*e*Pn	**Pn**	**06 50 21.2**	**+0.3**
	57nm,1.1s						
JLU	**Jordanelle**	**13.60**	**99**	*e*Pn	**Pn**	**06 50 22.5**	**+0.5**
MPU	**Maple Canyon**	**13.69**	**102**	*e*Pn	**Pn**	**06 50 25.0**	**+1.7**
CCUT	**Cedar City**	**13.70**	**114**	*e*Pn	**Pn**	**06 50 25.0**	**+1.6**
EDM	**Edmonton**	**13.75**	**44**	*e*Pn	**Pn**	**06 50 23.4**	**-0.7**
DAU	**Daniels Canyon**	**13.80**	**100**	*e*Pn	**Pn**	**06 50 25.9**	**+1.1**
GCMT	**Greycliff**	**13.89**	**77**	*e*Pn	**Pn**	**06 50 27.1**	**+1.0**
	100nm,1.0s						
MSU	**Marysvale**	**13.98**	**108**	*e*Pn	**Pn**	**06 50 28.9**	**+1.5**
EGMT	**Eagleton**	**13.99**	**67**	*e*Pn	**Pn**	**06 50 26.8**	**-0.5**
LDFC	**Landfair**	**14.17**	**125**	*e*Pn	**Pn**	**06 50 29.5**	**-0.4**
	306nm,1.4s						
RLMT	**Red Lodge**	**14.20**	**79**	*e*Pn	**Pn**	**06 50 31.8**	**+1.5**
DLBC	**Dease Lake**	**14.22**	**358**	Pn	**Pn**	**06 50 34.7**	**+4.2**
	0.1nm,0.3s,baz=178,slow=8.8,SNR=5.5						
DLBC				LR	LR	06 55 22.7	
	comp=Z,4μm,18.1s,baz=178,slow=35						
DLBC	**Dease Lake**	**14.22**	**358**	*e*Pn	**Pn**	**06 50 34.4**	**+3.9**
TMUT	**Trail Mountain**	**14.29**	**104**	*e*Pn	**Pn**	**06 50 32.7**	**+1.2**
BW06	**Boulder Array**	**14.32**	**89**	*e*Pn	**Pn**	**06 50 32.9**	**+1.0**
	36nm,1.2s						
PDAR	**Pinedale Array**	**14.32**	**89**	Pn	**Pn**	**06 50 32.2**	**+0.3**
	0.1nm,0.3s,baz=280,slow=12,SNR=32		

4.9nm,1.0s,mb3.9,baz=162,slow=11,SNR=7.7
INK LR LR 07 01 33.8
comp=Z,1μm,21.6s,MS4.3,baz=35,slow=36
INK Inuvik 24.23 356 *eP* **P 06 52 25.8 0.0**
87nm,2.5s,mb4.7
TTA Tatalina 24.26 330 *eP* **P 06 52 27.0 +0.9**
KSU1 Kansas State U 24.77 91 *eP* **P 06 52 31.5 +0.6**
122nm,1.4s,mb5.2
TXAR Lajitas Array 25.14 118 P **P 06 52 33.3 -1.1**
3.8nm,0.8s,mb4.0,baz=299,slow=7.6,SNR=33
TXAR LR LR 07 01 26.6
comp=Z,479nm,20.9s,MS4.0,baz=185,slow=34
WMOK Wichita Mounta 25.19 102 *eP* **P 06 52 35.5 +0.7**
149nm,1.3s,mb5.4
COLD Coldfoot 25.63 341 *eP* **P 06 52 40.3 +1.8**
13nm,1.4s,mb4.3
FCC Fort Churchill 25.86 43 *eP* **P 06 52 42.8 +2.1**
2.8nm,1.4s
UNV Unalaska Valle 26.00 305 *eP* **P 06 52 42.6 +0.6**
81nm,1.2s,mb5.1
EYMN Ely 26.22 68 *eP* **P 06 52 43.5 -0.6**
45nm,1.2s,mb4.9
SCIA State Center 26.25 82 *eP* **P 06 52 45.5 +1.1**
78nm,1.4s,mb5.0
JCT Junction City 26.93 111 *eP* **P 06 52 48.9 -1.7**
16nm,1.1s,mb4.5
JFWS Jewell Farm 28.06 79 *eP* **P 06 53 00.3 -0.3**
14nm,0.7s,mb4.7
COWI Conover 28.09 72 *eP* **P 06 52 59.7 -1.1**
20nm,1.1s,mb4.7
MIAR Mount Ida 28.98 97 *eP* **P 06 53 09.2 +0.4**
84nm,1.3s,mb5.3
HDIL Hopedale 29.48 83 *eP* **P 06 53 14.1 +0.8**
126nm,1.4s,mb5.5
PARMO Parma 30.71 91 *eP* **P 06 53 24.5 +0.3**
OLIL Olney 31.02 86 *eP* **P 06 53 27.2 +0.3**
110nm,1.3s,mb5.5
GLAT Glass 31.22 91 *eP* **P 06 53 28.7 0.0**
UTMT University of 31.50 90 *eP* **P 06 53 31.9 +0.8**
USIN University of 31.65 87 *eP* **P 06 53 32.9 +0.4**
130nm,1.4s,mb5.6
OXF Oxford 31.97 94 *eP* **P 06 53 34.5 -0.9**
244nm,1.1s
BLO Bloomington 31.98 84 *eP* **P 06 53 36.1 +0.7**
31nm,1.0s,mb5.1
WVT Waverly 32.34 90 *eP* **P 06 53 37.0 -1.5**
34nm,1.4s,mb5.0
VBMS Vicksburg 32.37 98 *eP* **P 06 53 39.9 +1.1**
48nm,0.8s,mb5.4
WCI Wyandotte Cave 32.52 86 *eP* **P 06 53 40.7 +0.6**
17nm,1.4s,mb4.8
AAM Ann Arbor 32.88 77 *eP* **P 06 53 44.0 +0.8**
9.4nm,0.3s,mb5.2
ACSO Alum Creek Sta 34.09 80 *eP* **P 06 53 53.3 -0.4**
45nm,1.2s,mb5.3
RES Resolute Bay 34.10 15 P **P 06 53 53.4 -0.1**
8.4nm,0.9s,mb4.7,baz=223,slow=8.7,SNR=8.0
RES Resolute Bay 34.10 15 *eP* **P 06 53 53.9 +0.5**
9.4nm,0.9s,mb4.7
SWET Sewanee 34.13 90 *eP* **P 06 53 54.7 +0.6**
LRAL Lakeview Retre 34.45 94 *eP* **P 06 53 57.3 +0.4**
17nm,1.1s,mb4.9
CPCT Cooper Cave 35.03 89 *eP* **P 06 54 00.8 -1.2**
TZTN Tazewell 35.22 87 *eP* **P 06 54 03.7 +0.1**
34nm,1.5s,mb5.1
ALLY Alegheny Colle 35.57 77 *eP* **P 06 54 07.8 +1.3**
MCWV Mont Chateau 36.53 80 *eP* **P 06 54 15.2 +0.3**
72nm,1.4s,mb5.3
GOGA Godfrey 36.79 91 *eP* **P 06 54 15.9 -1.2**
43nm,1.4s,mb5.1
ELN Prospectdale 36.92 84 *eP* **P 06 54 16.4 -1.7**
SSPA Standing Stone 37.53 77 *eP* **P 06 54 23.2 0.0**
57nm,1.6s,mb5.0
FX1 Attu Island--F 38.18 304 LR LR 07 07 22.5
comp=Z,305nm,19.4s,MS4.1,baz=262,slow=32
LONY Lake Ozonia 38.37 70 *eP* **P 06 54 29.7 -0.6**
28nm,1.5s,mb4.8
CNNC Cliffs of the 39.89 85 *eP* **P 06 54 44.0 +0.9**
28nm,1.1s,mb4.9
LBNH Lisbon 40.29 69 *eP* **P 06 54 45.6 -0.7**
18nm,0.9s,mb4.8
BILL Bilibino 40.50 328 *eP* **P 06 54 48.6 +0.9**
21nm,1.4s,mb4.7
SCHQ Schefferville 40.53 52 P **P 06 54 45.4 -2.8**
7.1nm,1.0s,mb4.2,baz=274,slow=7.3,SNR=3.7
SCHQ LR LR 07 11 32.2
comp=Z,2μm,19.4s,MS4.9,baz=283,slow=36
TGUH Tegucigalpa,Un 46.62 117 *eP* **P 06 55 37.7 0.0**
31nm,0.9s,mb5.2
PETK Petropavlovsk- 47.11 308 P **P 06 55 38.4 -2.7**
3.1nm,0.9s,mb4.2,baz=82,slow=7.4,SNR=3.6
PETK LR LR 07 13 52.0
comp=Z,116nm,20.7s,MS3.8,baz=275,slow=34
PETK Petropavlovsk- 47.11 308 P **P 06 55 38.4 -2.7**
PETK LR LR 07 13 52.0
SUMG Summit 48.68 24 *eP* **P 06 55 53.2 +0.2**
17nm,1.0s,mb5.0
TIXI Tiksi 52.24 337 *eP* **P 06 56 20.0 +0.1**
10nm,1.3s,mb4.6
TAOE Nuku Hiva Isla 53.77 193 *e*LR LR 07 11 48.6
346nm,25.3s
ROSC El Rosal 61.92 113 LR LR 07 24 54.8
comp=Z,125nm,21.8s,MS4.0,baz=18,slow=37
OTAV Otavalo 62.76 119 *eP* **P 06 57 34.6 -0.2**
18nm,1.5s,mb5.0
PPT Papeete 64.27 202 *e*LQ 07 13 47.3
2μm,27.8s
PPT *e*LR LR 07 16 37.2
160nm,27.0s
PPT Papeete 64.27 202 LR LR 07 19 16.0
comp=Z,324nm,18.9s,MS4.5,baz=35,slow=30
RKT Rikitea 67.24 186 *e*LQ 07 15 09.7
725nm,29.2s
RKT *e*LR LR 07 18 05.4
432nm,25.0s
MDJ Mudanjiang 67.25 311 P **P 06 58 02.1 -1.5**
MDJ pP pP 06 58 05.4 -1.5
MDJ PP PP 07 00 29.8 -1.5
MDJ S S 07 06 55.1 -3.2
MDJ SS SS 07 11 14.3 -2.7
MDJ pmax pmax
comp=Z,4.0nm,1.3s,mb4.3
MDJ pmax pmax
comp=Z,73nm,6.5s
MDJ LR LR
comp=Z,180nm,30.9s,MS4.1
MJAR Matsushiro Arr 67.31 299 LR LR 07 22 34.8
comp=Z,86nm,20.9s,MS4.0,baz=50,slow=32
CN2 Changchun 70.03 312 *eP* **P 06 58 20.8 -0.2**
NB2 NORSAR Subarra 70.25 19 P **P 06 58 19.8 -2.3**
comp=Z,7.9nm,1.2s,mb4.5,baz=332,slow=6.2
NOA NORSAR Array B 70.25 19 P **P 06 58 22.2 +0.2**
comp=Z,2.7nm,0.9s,mb4.2,baz=333,slow=6.0,SNR=4.9
CBIJ Chichi jima 70.71 289 LR LR 07 22 42.3
comp=Z,283nm,21.2s,MS4.5,baz=145,slow=30
FINES FINESS Array B 72.78 12 P **P 06 58 35.7 -1.6**
comp=Z,5.0nm,0.9s,mb4.5,baz=29,slow=8.7,SNR=8.3
FINES LR LR 07 33 52.8
comp=Z,115nm,19.2s,MS4.2,baz=352,slow=38
FINES FINESS Array B 72.78 12 P **P 06 58 35.7 -1.6**
FINES LR LR 07 33 52.8
SONM Songino Array 76.11 325 P **P 06 58 56.4 -0.5**
comp=Z,0.9nm,0.4s,mb4.1,baz=108,slow=3.3,SNR=4.1
FLN La Foliniere 77.06 32 *eP* **P 06 59 00.6 -1.6**
comp=Z,36nm,1.4s,mb4.8
FLN La Foliniere 77.06 32 *eP* **P 06 59 00.6 -1.6**
comp=Z,18nm,1.4s,mb4.8
GRR Gorron 77.22 32 *eP* **P 06 59 01.4 -1.8**
comp=Z,55nm,1.5s,mb5.0
GRR Gorron 77.22 32 *eP* **P 06 59 01.4 -1.8**
comp=Z,28nm,1.5s,mb5.0
LDF La Druitiere 77.33 32 *eP* **P 06 59 02.6 -1.2**
comp=Z,70nm,1.6s,mb5.0
LDF La Druitiere 77.33 32 *eP* **P 06 59 02.6 -1.2**
comp=Z,35nm,1.6s,mb5.0
BJI Beijing 77.56 314 P **P 06 59 03.6 -1.6**
BJI S S 07 08 53.5 -2.9
BJI SS SS 07 13 56.3 +1.7
BJI pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
BJI pmax pmax
comp=Z,91nm,3.4s
BJI LR LR
comp=N,170nm,20.0s,MS4.6
BJI LR LR
comp=E,200nm,19.1s,MS4.6
BJI LR LR
comp=Z,140nm,24.4s
BAIF Baives 77.68 29 *eP* **P 06 59 03.9 -1.8**
comp=Z,35nm,1.4s,mb4.8
BAIF Baives 77.68 29 *eP* **P 06 59 03.9 -1.8**
comp=Z,18nm,1.4s,mb4.8
ZALV Zalesovo Beam 77.96 340 P **P 06 59 05.8 -1.4**
comp=Z,0.6nm,0.4s,mb3.9,baz=7.1,slow=6.0,SNR=5.6
ZALV LR LR 07 33 59.7
comp=Z,178nm,20.1s,MS4.4,baz=51,slow=36
ZALV Zalesovo Beam 77.96 340 P **P 06 59 05.8 -1.4**
ZALV LR LR 07 33 59.7
CLL Collm 79.35 23 *i* P **P 06 59 15.4 +0.5**
comp=Z,15nm,1.8s,mb4.6
CLL *i* 06 59 20.5
CLL *e*S S 07 09 15.0 -0.2
CLL LR LR
comp=Z,300nm,17.0s,MS4.7
ARU Arti 79.49 356 *eP* **P 06 59 18.1 +2.5**
comp=Z,12nm,1.0s,mb4.8
LOR Lormes 79.92 30 *eP* **P 06 59 16.2 -1.9**
SSF Saint Saulge 79.97 31 *eP* **P 06 59 17.3 -1.0**
TCF Toulx Ste Croi 80.13 32 *eP* **P 06 59 17.2 -2.0**
comp=Z,32nm,1.6s,mb4.7
TCF Toulx Ste Croi 80.13 32 *eP* **P 06 59 17.2 -2.0**
comp=Z,16nm,1.6s,mb4.7
CDF Champ du Feu 80.13 28 *eP* **P 06 59 17.9 -1.3**
comp=Z,13nm,1.1s,mb4.5
CDF Champ du Feu 80.13 28 *eP* **P 06 59 17.9 -1.3**
comp=Z,6.6nm,1.1s,mb4.5
GRA1 Grafenberg Arr 80.27 25 *eP* **P 06 59 20.8 +0.9**
comp=Z,6.0nm,1.2s,mb4.4
GRA1 LR LR
comp=Z,500nm,18.0s,MS4.9
GRF Grafenberg Arr 80.27 25 *eP* **P 06 59 20.8 +0.9**
comp=Z,6.0nm,1.2s,mb4.4
GRF *e*L 07 36 39.8
comp=Z,459nm,18.0s
RJF Les Rejaudoux 80.69 33 *eP* **P 06 59 19.8 -2.4**
comp=Z,18nm,1.2s,mb4.6
RJF Les Rejaudoux 80.69 33 *eP* **P 06 59 19.8 -2.4**
comp=Z,8.8nm,1.2s,mb4.6
UPC Upice 80.89 22 *eP* **P 06 59 24.9 +1.7**
PRU Pruhonice 80.97 23 *eP* **P 06 59 24.1 +0.5**
PRU AMS AMS 07 38 00.0
comp=Z,300nm,16.0s
DPC Dobruska-Polom 81.12 22 *eP* **P 06 59 25.8 +1.4**
DPC AMS AMS 07 37 30.0
comp=Z,300nm,15.0s
KHC Kasperske Hory 81.47 24 *eP* **P 06 59 27.7 +1.4**
KHC AMS AMS 07 37 20.0
comp=Z,300nm,16.1s
BRVK Borovoye 81.64 348 *eP* **P 06 59 26.5 -0.7**
comp=Z,14nm,1.4s,mb4.7
BVAR Borovoye Array 81.66 348 P **P 06 59 25.9 -1.3**
comp=Z,1.2nm,0.7s,mb3.9,baz=20,slow=4.7,SNR=7.5
BVAR LR LR 07 37 26.5
comp=Z,269nm,21.4s,MS4.6,baz=25,slow=37
GERES GERESS Array B 81.76 24 P **P 06 59 28.0 +0.2**
comp=Z,0.6nm,0.7s,mb3.7,baz=324,slow=6.7,SNR=4.2
TREC Trest 81.86 22 AMS AMS 07 38 30.0
comp=Z,400nm,16.7s
LPAZ La Paz 81.94 122 P **P 06 59 26.4 -2.7**
comp=Z,4.0nm,0.9s,mb4.3,baz=345,slow=5.4,SNR=14
LPAZ La Paz 81.94 122 *eP* **P 06 59 27.1 -2.1**
comp=Z,4.5nm,0.9s,mb4.4
NJ2 Nanjing 82.02 307 *eP* **P 06 59 30.3 +0.8**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
OKC Ostrava-Krasne 82.06 21 AMS AMS 07 38 20.0
comp=Z,200nm,18.9s
KURK Kurchatov 82.39 343 P **P 06 59 30.2 -0.9**
comp=Z,4.6nm,0.8s,mb4.5,baz=18,slow=4.9,SNR=10
KURK LR LR 07 37 52.3
comp=Z,124nm,20.1s,MS4.3,baz=35,slow=37
KURK Kurchatov 82.39 343 *eP* **P 06 59 29.3 -1.8**
comp=Z,4.5nm,0.9s,mb4.4
ESDC Sonseca Array 82.98 39 LR LR 07 34 49.3
comp=Z,257nm,18.3s,MS4.6,baz=315,slow=34
HNR Honiara 83.15 250 LR LR 07 28 40.0
comp=Z,657nm,21.7s,MS5.0,baz=329,slow=30
AKASG Malin Array Be 83.59 14 P **P 06 59 36.8 -0.5**
comp=Z,0.9nm,0.4s,mb4.2,baz=341,slow=4.5,SNR=9.1
AKASG LR LR 07 39 04.3
comp=Z,166nm,18.5s,MS4.4,baz=10.0,slow=37
PSZ Piszkesteto 84.28 20 *eP* **P 06 59 42.6 +1.7**
comp=Z,11nm,1.4s,mb4.8
MK31 Makanchi Array 85.18 339 *eP* **P 06 59 45.8 +0.3**
MKAR Makanchi Array 85.18 339 P **P 06 59 43.4 -2.1**
comp=Z,1.2nm,1.0s,mb4.0,baz=47,slow=9.4,SNR=6.6
MKAR LR LR 07 40 18.7
comp=Z,199nm,18.5s,MS4.5,baz=22,slow=37
AKTK Aktyubinsk 85.50 355 P **P 06 59 46.3 -0.7**
AKTO Aktyubinsk 85.50 355 P **P 06 59 46.3 -0.7**
comp=Z,1.7nm,0.7s,mb4.3,baz=111,slow=14,SNR=3.6
GTA Gaotai 85.74 324 *eP* **P 06 59 48.6 +0.2**
GTA pP pP 06 59 52.5 +0.8
GTA sP sP 06 59 54.9 +2.0
GTA PP PP 07 03 08.8 +2.0
GTA SKS 07 10 10.3
GTA S S 07 10 18.3 -2.7
GTA sS sS 07 10 25.8 -0.7
GTA SS SS 07 15 56.3 +0.2
GTA pmax pmax
comp=Z,3.0nm,1.5s,mb4.3
GTA pmax pmax
comp=Z,41nm,4.5s
GTA LR LR
comp=N,290nm,22.9s,MS4.8
GTA LR LR
comp=E,310nm,23.2s,MS4.8
WMQ Urumqi 86.36 334 *eP* **P 06 59 53.0 +1.6**
LZH Lanzhou 86.70 320 *eP* **P 06 59 54.0 +0.8**
LZH pP pP 06 59 58.0 +1.4
LZH sP sP 07 00 00.1 +2.4
LZH PP PP 07 03 17.0 +2.3
LZH *e*S S 07 10 28.3 -2.2
LZH sS sS 07 10 36.0 0.0
LZH SS SS 07 16 10.5 +0.1
LZH pmax pmax
comp=Z,15nm,1.1s,mb5.1
LZH pmax pmax
comp=Z,81nm,4.8s
LZH LR LR
comp=E,370nm,16.7s
LZH LR LR
comp=Z,560nm,18.0s,MS5.0
DZM Mont Dzumac 88.36 237 *e*LR LR 07 27 59.7
comp=Z,566nm,22.6s
TKM2 Tokmak 2 90.44 342 *eP* **P 07 00 09.6 -1.2**
comp=Z,11nm,1.4s,mb5.0
CD2 Chengdu 90.97 317 *eP* **P 07 00 14.5 +1.0**
CD2 PP PP 07 03 52.8 +3.9
CD2 SKS 07 10 41.8
CD2 S S 07 11 06.3 -4.6
CD2 SS SS 07 17 12.5 -0.2
CD2 pmax pmax
comp=Z,10.0nm,0.8s,mb5.2
CD2 pmax pmax
comp=Z,30nm,4.6s
CD2 LR LR
comp=N,160nm,18.2s
CD2 LR LR
comp=Z,130nm,16.2s,MS4.5
GYA Guiyang 93.07 312 P **P 07 00 22.4 -0.9**
GYA PP PP 07 04 06.4 +0.8
GYA SKS 07 10 54.5
GYA S S 07 11 25.8 -4.1
GYA SS SS 07 17 41.9 -1.3
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.5
GYA pmax pmax
comp=Z,110nm,5.8s
GYA LR LR
comp=N,460nm,19.4s,MS5.1
GYA LR LR
comp=E,430nm,19.0s,MS5.1
GYA LR LR
comp=Z,510nm,18.7s,MS5.0
BRTR Keskin Array B 94.99 13 LR LR 07 50 13.1
comp=Z,85nm,18.2s,MS4.2,baz=151,slow=40
DAV Davao City (W) 95.88 286 LR LR 07 35 45.6
comp=Z,288nm,21.0s,MS4.7,baz=180,slow=30
KMI Kunming 96.22 314 P **P 07 00 38.8 +1.1**
KMI pP pP 07 00 41.9 +0.8
KMI sP sP 07 00 43.3 +1.0
KMI PP PP 07 04 33.5 +3.4
KMI S S 07 11 54.0 -3.4
KMI sS sS 07 11 59.3 -3.6
KMI SS SS 07 18 28.6 +0.7
KMI pmax pmax
comp=Z,54nm,3.8s
KMI LR LR
comp=N,180nm,14.8s,MS4.8
KMI LR LR
comp=E,130nm,15.8s,MS4.8
KMI LR LR
comp=Z,120nm,18.5s,MS4.4
PLCA Paso Flores 99.65 139 LR LR 07 36 16.3
comp=Z,125nm,19.0s,MS4.4,baz=102,slow=30
CTA Charters Tower 99.98 252 LR LR 07 42 48.2
comp=Z,491nm,18.3s,MS5.0,baz=54,slow=33
LSZ Lusaka 145.32 41 *e*PKPdf PKPdf 07 06 46.7 -0.8

CASC 14 06:55:28.0±1.7, 8°.38N×82°.95W, h4km, MD3.7, 5C-1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.34**	**322⇑**	*e*P	Pg	06 55 35.4	+0.8
ACR				*e*S	Sg	06 55 41.0	+2.0
BRU2	**Volcan**	**0.48**	**32⇑**	*i*P	Pg	06 55 38.7	+1.4
BRU2				*e*S	Sg	06 55 46.5	+2.9
CTCR	**Cotoan**	**0.54**	**21⇑**	*i*P	Pg	06 55 39.5	+1.0
CTCR				*e*S	Sg	06 55 48.4	+2.9
BAR1		**0.92**	**337⇓**	*e*P	Pg	06 55 45.6	-0.1
CNI	**Changuinola**	**1.11**	**23⇑**	*i*P	Pg	06 55 49.3	0.0
BUS	**Buena Vista**	**1.41**	**326⇑**	*e*P	Pn	06 55 53.9	-0.6
BUS				*e*S	Sb	06 56 12.3	-1.0
QCR	**Quepos**	**1.58**	**311**	*e*P	Pn	06 55 56.3	-0.5
QCR				*e*S	Sn	06 56 18.9	+1.2
QCR				*e*S	Sn	06 56 20.3	+2.5
URSC	**Urasca**	**1.66**	**331**	*e*P	Pn	06 55 57.4	-0.4
PRS1	**Puriscal**	**2.08**	**320**	*e*P	Pn	06 56 03.5	-0.2

JMA 14 07:02:07.8, 39°.21N×140°.85E, h11km±1km, M1.9, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRG	**Rokugo**	**0.25**	**318**	*e*S	Sg	07 02 17.0	+0.6
JMK	**Ichinoseki**	**0.39**	**132**	*e*S	Sg	07 02 20.7	+0.1
JOM	**Ohasama**	**0.43**	**52**	*e*S	Sg	07 02 22.0	-0.1
JYK	**Kaneyama**	**0.48**	**233**	*e*S	Sg	07 02 23.8	+0.2

NIED ***14*** *07:02:00, 39°.00N×140°.90E, h5km, Mw3.7 Best double couple: M₀4.29000×10¹⁴ NP1:φs253.00000°, δ48.00000°, λ74.00000°. NP2:φs97.00000°, δ44.00000°, λ108.00000°.*
IDC ***14*** *07:02:16.3±0.7, 38°.95N×140°.70E, h0km, mb3.8/12, mb1 4.0/13, mb1mx3.8/25, mbtmp3.8/13, ML3.4/1, Error ellipse: s-maj=24.4km s-min=17.6km az=86.0*
NEIC ***14*** *07:02:17.7, 38°.97N×140°.89E, h8km, mb4.6/1, MW3.7(NIED), After JMA.*
NEIC Recorded [2 JMA] in Iwate and [1 JMA] in Akita and Miyagi.
JMA ***14*** *07:02:17.7, 38°.97N×140°.89E, h6km±1km, M3.7 Broadband fault plane solution: P waves. NP1: φs104.00000°, δ41.00000°, λ110.00000°. NP2: φs258.00000°, δ51.00000°, λ73.00000°. Principal axes: T Plg76.0000°, Azm112.0000°; N Plg13.0000°, Azm269.0000°; P Plg5.0000°, Azm0.0000°;*
JMA Felt II J1.
ISCJB ***14*** *07:02:17.6±0.5, 38°.96N±0°.03×140°.89E±0°.05, h18km±4km, mb3.9/13 Error ellipse: s-maj=6.7km s-min=5.2km az=31.5*
MOS ***14*** *07:02:20.0±1.2, 39°.02N×140°.75E, h33km, mb4.1/10, Error ellipse: s-maj=16.4km s-min=10.3km az=75.9*
ISC 14 07:02:17.9±0.5, 38°.96N±0°.03×140°.89E±0°.04, h7km±4km, n44, σ1.9 06/51, mb3.9/13, 2C-2D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.26**	**91**	⇑P	**Pg**	**07 02 22.7**	**-0.3**
JMK				S	**Sg**	**07 02 26.5**	**0.0**
JYK	**Kaneyama**	**0.41**	**265**	P	**Pg**	**07 02 26.1**	**+0.2**
JRG	**Rokugo**	**0.48**	**336**	⇓P	**Pg**	**07 02 26.9**	**-0.3**
JRG				S	**Sg**	**07 02 33.8**	**+0.3**
JOM	**Ohasama**	**0.60**	**31**	P	**Pg**	**07 02 28.8**	**-0.7**
JOU	**Okura**	**0.62**	**196**	⇓P	**Pg**	**07 02 29.8**	**0.0**
JOU				S	**Sg**	**07 02 38.2**	**+0.4**
OFUJ	**Ofunato**	**0.62**	**78**	⇑P	**Pg**	**07 02 29.3**	**-0.6**
MJAR	**Matsushiro Arr**	**3.21**	**222**	Pn	**Pn**	**07 03 10.4**	**+1.7**
	2.4nm,0.3s,baz=86,slow=32,SNR=13						
MJAR				Pg	**Pg**	**07 03 15.9**	**-3.6**
	3.1nm,0.3s,baz=20,slow=17,SNR=16						
MJAR				Lg		07 03 55.4	
	1.8nm,0.3s,baz=37,slow=32,SNR=4.7						
MJAR	**Matsushiro Arr**	**3.21**	**222**	P	**Pn**	**07 03 10.4**	**+1.7**
MJAR						07 03 55.4	
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MJAR	**Matsushiro Arr**	**3.21**	**222**	Pn	**Pn**	**07 03 10.4**	**+1.7**
MJAR				Pg	**Pg**	**07 03 15.9**	**-3.6**
MJAR				Lg		07 03 55.4	
MAJO	**Matsushiro**	**3.21**	**222**	*e*P	**Pn**	**07 03 09.8**	**+1.1**
MAT	**Matsushiro**	**3.21**	**222**	P	**Pn**	**07 03 09.3**	**+0.6**
MAT				S	**Sn**	**07 03 56.4**	**+9.2**
ERM	**Erimo**	**3.51**	**29**	*e*P	**Pn**	**07 03 15.4**	**+2.6**
ASAJ	**Asahikawa**	**5.31**	**13**	Pn	**Pn**	**07 03 39.1**	**+1.6**
	comp=Z,1.0nm,0.3s,baz=188,slow=15,SNR=4.5						
ASAJ				Sn	**Sn**	**07 04 40.9**	**+2.0**
	comp=Z,1.2nm,0.3s,baz=126,slow=19,SNR=2.3						
ASAJ	**Asahikawa**	**5.31**	**13**	P	**Pn**	**07 03 39.2**	**+1.7**
ASAJ						07 04 40.9	
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
KSRS	**Korea Array**	**10.31**	**266**	Pn	**Pn**	**07 04 49.3**	**+3.1**
	comp=N,0.9nm,0.3s,baz=78,slow=14,SNR=14						
KSRS				Sn	**Sn**	**07 06 42.1**	**+0.2**
	comp=N,0.1nm,0.3s,baz=95,slow=24,SNR=2.9						
KSRS	**Korea Array**	**10.31**	**266**	P	**Pn**	**07 04 49.3**	**+3.1**
KSRS						07 06 42.1	
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV	**Zalesovo Beam**	**40.33**	**311**	P	**P**	**07 09 54.6**	**-1.0**
	comp=Z,0.8nm,0.4s,mb3.9,baz=77,slow=6.7,SNR=5.6						
ZALV	**Zalesovo Beam**	**40.33**	**311**	P	**P**	**07 09 54.6**	**-1.1**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
MK31	**Makanchi Array**	**42.77**	**300**	*e*P	**P**	**07 10 15.1**	**-0.7**
MKAR	**Makanchi Array**	**42.77**	**300**	P	**P**	**07 10 15.0**	**-0.8**
	comp=Z,1.2nm,0.9s,mb3.6,baz=75,slow=14,SNR=7.6						
MKAR	**Makanchi Array**	**42.77**	**300**	P	**P**	**07 10 15.0**	**-0.8**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KURK	**Kurchatov**	**44.44**	**307**	*e*P	**P**	**07 10 28.3**	**-0.8**
KURK				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.5						
KURK	**Kurchatov**	**44.44**	**307**	*e*P	**P**	**07 10 28.2**	**-0.9**
	comp=Z,9.8nm,1.0s,mb4.5						
BVAR	**Borovoye Array**	**48.98**	**311**	P	**P**	**07 11 03.2**	**-1.5**
	comp=Z,0.5nm,0.5s,mb3.8,baz=100,slow=6.0,SNR=3.6						
BVAR	**Borovoye Array**	**48.98**	**311**	P	**P**	**07 11 03.2**	**-1.5**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
INK	**Inuvik**	**52.87**	**28**	P	**P**	**07 11 34.2**	**+0.4**
	comp=Z,1.3nm,0.8s,mb3.9,baz=282,slow=6.3,SNR=3.6						
INK	**Inuvik**	**52.87**	**28**	P	**P**	**07 11 34.2**	**+0.4**
INK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRA	**Warramunga Arr**	**58.91**	**187**	P	**P**	**07 12 16.7**	**-0.8**
	comp=Z,1.3nm,0.7s,mb4.1,baz=5.8,slow=7.1,SNR=9.1						
WRA	**Warramunga Arr**	**58.91**	**187**	P	**P**	**07 12 16.7**	**-0.8**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES	**ARCESS Array B**	**62.05**	**339**	P	**P**	**07 12 37.8**	**-0.7**
	comp=Z,0.7nm,0.7s,mb3.9,baz=59,slow=7.3,SNR=5.6						
ARCES	**ARCESS Array B**	**62.05**	**339**	P	**P**	**07 12 37.8**	**-0.7**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**62.64**	**187**	P	**P**	**07 12 42.8**	**-0.1**
	comp=Z,1.0nm,0.7s,mb4.0,baz=10,slow=5.0,SNR=10						

ASAR	**Alice Springs**	**62.64**	**187**	P	**P**	**07 12 42.8**	**0.0**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**66.92**	**332**	P	**P**	**07 13 09.5**	**-1.0**
	comp=Z,1.5nm,0.7s,mb4.1,baz=51,slow=7.6,SNR=5.7						
FINES	**FINESS Array B**	**66.92**	**332**	P	**P**	**07 13 09.5**	**-0.9**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NB2	**NORSAR Subarra**	**72.26**	**337**	P	**P**	**07 13 41.5**	**-1.8**
	comp=Z,1.3nm,0.9s,mb3.9,baz=39,slow=6.2						
NOA	**NORSAR Array B**	**72.26**	**337**	P	**P**	**07 13 42.0**	**-1.3**
	comp=Z,0.8nm,0.7s,mb3.8,baz=39,slow=6.2,SNR=4.2						
NOA	**NORSAR Array B**	**72.26**	**337**	P	**P**	**07 13 42.1**	**-1.2**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**72.53**	**322**	P	**P**	**07 13 43.8**	**-1.4**
	comp=Z,0.5nm,0.4s,mb3.8,baz=47,slow=5.3,SNR=3.5						
AKASG	**Malin Array Be**	**72.53**	**322**	P	**P**	**07 13 43.8**	**-1.4**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
PDAR	**Pinedale Array**	**76.62**	**46**	P	**P**	**07 14 09.5**	**+0.4**
	comp=Z,0.2nm,0.4s,mb3.4,baz=266,slow=2.2,SNR=4.5						
PV10	**Paradox Valley**	**79.82**	**49**	*e*P	**P**	**07 14 28.4**	**+1.5**
TXAR	**Lajitas Array**	**89.27**	**52**	P	**P**	**07 15 14.5**	**-0.3**
	comp=Z,0.2nm,0.6s,mb3.6,baz=297,slow=4.0,SNR=3.1						
LPAZ	**La Paz**	**146.03**	**56**	PKPbc	PKPbc	07 21 59.1	+0.4
	comp=Z,1.5nm,0.7s,baz=338,slow=5.5,SNR=7.3						

*IDC **14** 07:16:31.6±4.7, 1°.97S×100°.47E, h0km, mb3.8/2, mb1 4.1/2, mb1mx3.4/22, mbtmp3.8/2, Error ellipse: s-maj=247.8km s-min=68.2km az=46.0*
*ISCJB **14** 07:16:39.5±1.5, 2°.2S±0°.2×100°.3E±0°.1, h79km±19km, mb3.8/2, Error ellipse: s-maj=27.0km s-min=17.9km az=18.6*
*DJA **14** 07:16:42, 1°.94S×100°.33E, h11km, MLv3.6/8*

ISC 14 07:16:40.0±1.6, 2°.3S±0°.2×100°.3E±0°.1, h67km±22km, n11, σ0°38/10, mb3.8/2, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**1.17**	**82**	P	**Pn**	**07 17 00.5**	**0.0**
PDSI	**Padang**	**1.34**	**7**	P	**Pn**	**07 17 02.2**	**-0.6**
SISI	**Saibi**	**1.52**	**307**	P	**Pn**	**07 17 05.2**	**+0.1**
SDSI	**Sungai Dareh**	**1.73**	**41**	P	**Pn**	**07 17 08.1**	**+0.2**
PPI	**Padang Panjang**	**1.78**	**3**	P	**Pn**	**07 17 09.4**	**+0.7**
BKNI	**Bangkinang**	**2.66**	**16**	P	**Pn**	**07 17 20.1**	**-0.5**
KSI	**Kapahiang**	**2.68**	**121**	P	**Pn**	**07 17 29.8**	**+9.0**
MYKOM	**Kota Tinggi**	**5.36**	**42**	P	**Pn**	**07 17 57.7**	**+0.3**
WRA	**Warramunga Arr**	**37.61**	**120**	P	**P**	**07 23 48.2**	**-0.2**
	0.8nm,0.5s,mb3.8,baz=296,slow=8.0,SNR=6.8						
ASAR	**Alice Springs**	**38.86**	**126**	P	**P**	**07 23 59.1**	**+0.2**
	0.7nm,0.5s,mb3.7,baz=302,slow=7.7,SNR=18						
TXAR	**Lajitas Array**	**144.72**	**38**	PKP	PKPdf	07 36 10.6	+0.8
	0.6nm,0.6s,baz=264,slow=1.7,SNR=9.7						

JMA 14 07:31:02.7, 39°.04N×140°.86E, h5km±1km, M1.6, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.29**	**107**	S	Sg	07 31 12.4	+0.2
JRG	**Rokugo**	**0.40**	**334**	P	Pg	07 31 10.7	+0.3
JRG				S	Sg	07 31 16.1	+0.5
JYK	**Kaneyama**	**0.41**	**253**	P	Pg	07 31 10.9	+0.3
JYK				*e*S	Sg	07 31 16.6	+0.7
JOU	**Okura**	**0.69**	**193**	P	Pg	07 31 16.0	+0.1
JOU				S	Sg	07 31 25.1	+0.2

JMA 14 07:31:50.1, 39°.07N×140°.99E, h13km±1km, M2.1, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.21**	**123**	P	Pg	07 31 54.7	-0.1
JRG	**Rokugo**	**0.43**	**320**	P	Pg	07 31 58.8	+0.2
JOM	**Ohasama**	**0.47**	**30**	P	Pg	07 31 59.1	-0.2
OFUJ	**Ofunato**	**0.53**	**89**	P	Pg	07 32 00.5	0.0

*NIED **14** 07:31:00, 39°.10N×140°.90E, h5km, Mw3.6 Best double couple: M0=2.73000×10^14 NP1:φ=226.00000°, δ50.00000°, λ123.00000°. NP2:φ=1.00000°, δ50.00000°, λ57.00000°.*
*IDC **14** 07:31:54.6±1.7, 39°.16N×141°.30E, h0km, mb3.6/5, mb1 3.7/7, mb1mx3.5/26, mbtmp3.6/7, ML3.3/2, Error ellipse: s-maj=32.0km s-min=18.0km az=107.0*
*NEIC **14** 07:31:57.5, 39°.12N×140°.94E, h11km, mb3.8/1, After JMA.*
*JMA **14** 07:31:57.5, 39°.12N×140°.94E, h9km±1km, M3.5*
JMA Felt I J1.
*ISCJB **14** 07:31:57.1±0.6, 39°.13N±0°.04×140°.97E±0°.05, h10km±5km, mb3.6/6, Error ellipse: s-maj=7.2km s-min=5.1km az=39.5*

ISC 14 07:31:57.6±0.7, 39°.12N±0°.04×140°.95E±0°.05, h5km±5km, n23, σ1°25/31, mb3.6/6, 1D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.27**	**128**	P	**Pg**	**07 32 02.8**	**0.0**
JMK				S	**Sg**	**07 32 06.6**	**+0.2**
JRG	**Rokugo**	**0.37**	**319**	⇓P	**Pg**	**07 32 04.8**	**0.0**
JOM	**Ohasama**	**0.44**	**37**	S	**Sg**	**07 32 12.5**	**+0.5**
JYK	**Kaneyama**	**0.50**	**247**	S	**Sg**	**07 32 13.6**	**-0.1**
OFUJ	**Ofunato**	**0.56**	**94**	P	**Pg**	**07 32 08.5**	**+0.1**
JOU	**Okura**	**0.78**	**197**	P	**Pg**	**07 32 12.3**	**-0.3**
ERM	**Erimo**	**3.35**	**29**	*e*Pn	**Pn**	**07 32 48.0**	**-2.6**
MJAR	**Matsushiro Arr**	**3.36**	**221**	Pn	**Pn**	**07 32 51.6**	**+0.8**
	1.6nm,0.3s,baz=20,slow=27,SNR=9.0						
MJAR				Pg	**Pg**	**07 32 58.6**	**-3.5**
	1.5nm,0.3s,baz=25,slow=14,SNR=8.4						
MJAR				Sn	**Sn**	**07 33 36.5**	**+5.4**
	0.6nm,0.3s,baz=16,slow=27,SNR=2.5						
MJAR				Lg		07 33 48.4	
	0.6nm,0.3s,baz=28,slow=29,SNR=3.7						
MJAR	**Matsushiro Arr**	**3.36**	**221**	Pn	**Pn**	**07 32 51.6**	**+0.8**
MJAR				Pg	**Pg**	**07 32 58.6**	**-3.5**
MJAR				Sn	**Sn**	**07 33 36.5**	**+5.4**
MJAR				Lg		07 33 48.4	
MAT	**Matsushiro**	**3.36**	**221**	P	**Pn**	**07 32 51.7**	**+0.9**
MAT				S	**Sn**	**07 33 33.3**	**+2.2**
ASAJ	**Asahikawa**	**5.14**	**13**	Pn	**Pn**	**07 33 17.1**	**+1.8**
	0.8nm,0.3s,baz=210,slow=16,SNR=4.8						
ASAJ				Sn	**Sn**	**07 34 17.6**	**+2.6**
	0.5nm,0.3s,baz=308,slow=19,SNR=2.1						
KSRS	**Korea Array**	**10.37**	**265**	Pn	**Pn**	**07 34 30.3**	**+3.3**
	0.4nm,0.3s,baz=75,slow=14,SNR=6.1						
KSRS				Sn	**Sn**	**07 36 28.9**	**+5.3**
	0.4nm,0.3s,baz=77,slow=24,SNR=6.0						
ZALV	**Zalesovo Beam**	**40.26**	**311**	P	**P**	**07 39 34.8**	**-0.4**
	0.4nm,0.4s,mb3.5,baz=81,slow=8.9,SNR=3.1						
ZALV	**Zalesovo Beam**	**40.26**	**311**	P	**P**	**07 39 34.8**	**-0.4**
MKAR	**Makanchi Array**	**42.73**	**300**	P	**P**	**07 39 54.1**	**-1.4**
	0.2nm,0.6s,mb3.0,baz=79,slow=7.6,SNR=4.1						
MKAR	**Makanchi Array**	**42.73**	**300**	P	**P**	**07 39 54.1**	**-1.4**
KURK	**Kurchatov**	**44.38**	**306**	P	**P**	**07 40 08.1**	**-0.7**
	0.4nm,0.3s,mb3.6,baz=87,slow=8.5,SNR=4.1						
KURK	**Kurchatov**	**44.38**	**306**	*e*P	**P**	**07 40 07.8**	**-1.0**
BVAR	**Borovoye Array**	**48.92**	**311**	P	**P**	**07 40 44.0**	**-0.3**
	0.3nm,0.5s,mb3.6,baz=76,slow=14,SNR=3.5						
BVAR	**Borovoye Array**	**48.92**	**311**	P	**P**	**07 40 44.0**	**-0.3**
ABKAR	**Akbulak array**	**56.33**	**309**	*e*P	**P**	**07 41 38.3**	**-1.0**
	0.6nm,0.6s,mb3.8						
WRA	**Warramunga Arr**	**59.07**	**187**	P	**P**	**07 41 57.1**	**-1.7**
	0.6nm,0.5s,mb3.9,baz=6.5,slow=6.6,SNR=3.5						
WRA	**Warramunga Arr**	**59.07**	**187**	P	**P**	**07 41 57.1**	**-1.7**

*DJA **14** 07:32:40, 8°.19S×120°.30E, h18km, MLv4.5/10*
*ISCJB **14** 07:32:40.1±0.6, 8°.22S±0°.04×120°.33E±0°.05, h43km±6km, mb4.5/19, Error ellipse: s-maj=9.1km s-min=5.2km az=157.5*
*NEIC **14** 07:32:41.2±0.3, 8°.19S×120°.35E, h35km, mb4.5/9, Error ellipse: s-maj=13.2km s-min=5.6km az=63.0*
NEIC Felt [II] at Ruteng.
*IDC **14** 07:32:42.2±2.1, 8°.13S×120°.44E, h43km±19km, mb4.2/10, mb1 4.4/13, mb1mx4.1/24, mbtmp4.3/13, ML4.3/3, Error ellipse: s-maj=30.4km s-min=10.2km az=64.0*

ISC 14 07:32:41.8±0.5, 8°.22S±0°.03×120°.36E±0°.05, h40km±6km, n60, σ1°06/66, mb4.5/19, 2C-1D, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.44**	**182**	P	**Pn**	**07 33 06.5**	**+1.0**
MMRI	**Maumere**	**1.91**	**103**	P	**Pn**	**07 33 12.7**	**+0.8**
BKSI	**Bulukumba**	**2.89**	**355**	P	**Pn**	**07 33 24.3**	**-1.1**
KAPI	**Kappang**	**3.24**	**349**	P	**Pn**	**07 33 28.4**	**-1.8**
	45nm,0.3s,baz=178,slow=11,SNR=70						
KAPI				S	**Sn**	**07 34 04.0**	**-3.6**
	24nm,0.3s,baz=54,slow=22,SNR=7.5						
KAPI	**Kappang**	**3.24**	**349**	*e*Pn	**Pn**	**07 33 28.2**	**-2.0**
KAPI				S	**Sn**	**07 34 04.0**	**-3.6**
KAPI	**Kappang**	**3.24**	**349**	P	**Pn**	**07 33 28.9**	**-1.3**
BNSI	**Bone**	**3.80**	**356**	P	**Pn**	**07 33 38.3**	**+0.4**
SPSI	**Sidrap Palu**	**4.27**	**352**	P	**Pn**	**07 33 45.0**	**+0.7**
KDI	**Kendari**	**4.79**	**28**	P	**Pn**	**07 33 52.6**	**+1.0**
SRBI	**Singaraja**	**5.09**	**271**	P	**Pn**	**07 33 54.1**	**-1.6**
	0.4nm84nm,0.8s						
TTSI	**Tana Toraja**	**5.17**	**354**	P	**Pn**	**07 33 59.0**	**+2.3**
	0.3nm2μm65nm,0.7s						
IGBI	**Denpasar**	**5.19**	**263**	P	**Pn**	**07 34 01.7**	**+4.7**
ABJI	**Asem Bagus**	**6.08**	**274**	P	**Pn**	**07 34 09.7**	**+0.5**
GMJI	**Gumukmas**	**6.84**	**269**	P	**Pn**	**07 34 19.4**	**-0.3**
	0.3nm69nm,1.0s						
FITZ	**Fitzroy Crossi**	**11.09**	**153**	*e*P	**Pn**	**07 35 19.1**	**+1.2**
	20nm,0.6s						
FITZ				*e*S	**Sn**	**07 37 19.5**	**-1.1**
FITZ	**Fitzroy Crossi**	**11.09**	**153**	P	**Pn**	**07 35 18.6**	**+0.7**
	0.8nm,0.3s,baz=338,slow=7.8,SNR=25						
FITZ				S	**Sn**	**07 37 17.2**	**-3.5**
	0.3nm,0.3s,baz=202,slow=19,SNR=2.3						
FITZ	**Fitzroy Crossi**	**11.09**	**153**	*e*Pn	**Pn**	**07 35 18.0**	**+0.1**
FITZ				*e*Sn	**Sn**	**07 37 21.2**	**+0.6**
KNA	**Kununurra**	**11.12**	**133**	*e*P	**Pn**	**07 35 18.1**	**-0.3**
	28nm,0.7s						
KNA				*e*S	**Sn**	**07 37 19.1**	**-2.3**
KNA	**Kununurra**	**11.12**	**133**	P	**Pn**	**07 35 19.0**	**+0.6**
KAKA	**Kakadu**	**12.69**	**112**	*e*P	**Pn**	**07 35 39.4**	**-0.5**
	17nm,0.4s						
KAKA	**Kakadu**	**12.69**	**112**	*e*Pn	**Pn**	**07 35 39.6**	**-0.3**
	42nm,0.5s						
MBWA	**Marble Bar**	**12.88**	**183**	*e*P	**Pn**	**07 35 41.3**	**-1.1**
MBWA				*e*S	**Sn**	**07 37 56.5**	**-8.0**
MBWA	**Marble Bar**	**12.88**	**183**	*e*Pn	**Pn**	**07 35 41.2**	**-1.2**
WRA	**Warramunga Arr**	**17.86**	**132**	P	**Pn**	**07 36 46.5**	**-0.9**
	1.7nm,0.3s,baz=308,slow=12,SNR=39						
WRA				S	**S**	**07 39 58.0**	**-13**
	0.3nm,0.3s,baz=305,slow=24,SNR=5.2						
WRAB	**Tennant Creek**	**17.87**	**132**	*e*P	**Pn**	**07 36 45.7**	**-1.7**
	15nm,0.8s						
MEEK	**Meekatharra**	**18.39**	**185**	*e*P	**Pn**	**07 36 55.5**	**+1.7**
ASAR	**Alice Springs**	**20.11**	**141**	P	**P**	**07 37 13.3**	**+1.0**
	28nm,0.8s,baz=316,slow=9.3,SNR=129						
ASAR				S	**S**	**07 40 56.0**	**-0.2**
	1.5nm,0.6s,baz=312,slow=21,SNR=4.1						
ASAR				ScP	ScP	07 44 57.7	-2.2
	0.3nm,0.5s,baz=336,slow=2.0,SNR=4.3						
MORW	**Morawa**	**21.13**	**191**	*e*P	**P**	**07 37 23.9**	**+0.6**
TGY	**Tagaytay City**	**22.18**	**1**	pP	pP	07 37 42.5	-2.4
	94nm,0.3s,baz=185,slow=12,SNR=1.6						
COEN	**Coen**	**23.10**	**106**	*e*P	**P**	**07 37 44.3**	**-0.1**
	59nm,0.6s,mb5.2						
KLBR	**Kellerberrin**	**23.38**	**186**	*e*P	**P**	**07 37 46.7**	**-0.4**
	7.5nm,0.4s,mb4.5						
FORT	**Forrest**	**23.57**	**163**	*e*P	**P**	**07 37 48.9**	**0.0**
	47nm,0.6s,mb5.1						
FORT	**Forrest**	**23.57**	**163**	*e*P	**P**	**07 37 48.7**	**-0.2**
	51nm,0.6s,mb5.1						
NWAO	**Narrogin (SRO)**	**24.76**	**186**	*e*P	**P**	**07 38 00.5**	**+0.8**
	88nm,0.6s,mb5.5						
NWAO	**Narrogin (SRO)**	**24.76**	**186**	P	**P**	**07 38 00.2**	**+0.6**
	17nm,0.7s,mb4.7,baz=11,slow=14,SNR=8.9						
NWAO	**Narrogin (SRO)**	**24.76**	**186**	*e*P	**P**	**07 37 60.0**	**+0.3**
	13nm,0.8s,mb4.5						
QIZ	**Qiongzhong**	**28.99**	**339**	P	**P**	**07 38 36.6**	**-1.3**
QIZ				S	**S**	**07 43 25.3**	**-1.1**
QIZ				pmax	pmax		
	comp=Z,20nm,2.0s,mb4.5						
QIZ				pmax	pmax		
	comp=Z,79nm,3.7s						
STKA	**Stephens Creek**	**30.73**	**143**	*e*P	**P**	**07 38 54.1**	**+0.9**
	comp=Z,4.8nm,0.4s,mb4.7						
STKA	**Stephens Creek**	**30.73**	**143**	P	**P**	**07 38 53.8**	**+0.6**
	comp=Z,6.5nm,0.5s,mb4.7,baz=318,slow=9.5,SNR=24						
CMSA	**Cobar Meteorol**	**33.09**	**138**	*e*P	**P**	**07 39 15.2**	**+1.3**
WHN	**Wuhan**	**38.97**	**352**	P	**P**	**07 40 08.8**	**+4.6**
ENH	**Enshi**	**39.67**	**345**	*e*P	**P**	**07 40 11.5**	**+1.5**
	comp=Z,13nm,0.8s,mb4.7						
GTA	**Gaotai**	**51.08**	**340**	⇑P	**P**	**07 41 42.1**	**+1.9**
GTA				pP	pP	07 41 50.6	-1.3
GTA				sP	sP	07 41 54.8	-1.8
GTA				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
ULN	**Ulaanbaatar**	**57.07**	**349**	*e*P	**P**	**07 42 24.9**	**+1.1**
	comp=Z,7.7nm,1.1s,mb4.7						
SONM	**Songino Array**	**57.16**	**349**	P	**P**	**07 42 24.5**	**+0.1**
	comp=Z,2.2nm,0.6s,mb4.4,baz=179,slow=13,SNR=3.6						
MK31	**Makanchi Array**	**64.39**	**332**	*e*P	**P**	**07 43 13.5**	**-0.1**
MKAR	**Makanchi Array**	**64.39**	**332**	P	**P**	**07 43 13.4**	**-0.3**
	comp=Z,1.9nm,0.5s,mb4.4,baz=106,slow=8.9,SNR=25						
AAK	**Ala-Archa**	**65.61**	**324**	P	**P**	**07 43 22.2**	**+0.4**
	comp=Z,1.6nm,0.5s,mb4.3,baz=198,slow=9.2,SNR=4.3						
ZALV	**Zalesovo Beam**	**68.80**	**338**	P	**P**	**07 43 40.9**	**-0.8**
	comp=Z,3.0nm,0.5s,mb4.5,baz=142,slow=4.9,SNR=15						
PETK	**Petropavlovsk-**	**68.83**	**23**	P	**P**	**07 43 42.6**	**+0.7**
	comp=Z,2.2nm,0.9s,mb4.1,baz=183,slow=2.9,SNR=2.8						
KURK	**Kurchatov**	**68.90**	**333**	P	**P**	**07 43 41.9**	**-0.5**
	baz=143,slow=5.7						
KURK	**Kurchatov**	**68.90**	**333**	*e*P	**P**	**07 43 41.3**	**-1.1**
	comp=Z,1.8nm,0.6s,mb4.2						
MAW	**Mawson**	**70.42**	**200**	P	**P**	**07 43 52.6**	**+1.0**
	comp=Z,3.1nm,0.7s,mb4.4,baz=75,slow=6.7,SNR=8.5						
BVAR	**Borovoye Array**	**74.25**	**331**	P	**P**	**07 44 13.8**	**-0.8**
	comp=Z,1.3nm,0.7s,mb4.0,baz=134,slow=6.4,SNR=4.8						
ABKAR	**Akbulak array**	**77.70**	**324**	*e*P	**P**	**07 44 32.9**	**-1.4**
	comp=Z,0.9nm,0.6s,mb3.9						
SYO	**Syowa Base**	**79.06**	**201**	⇑*e*P	**P**	**07 44 41.2**	**-0.3**
SYO	**Syowa Base**	**79.06**	**201**	⇓*e*PcP	PcP	07 44 49.0	-0.9
TIXI	**Tiksi**	**79.90**	**3**	*e*P	**P**	**07 44 44.7**	**-1.2**
	comp=Z,2.8nm,0.8s,mb4.2						
CPUP	**Villa Florida**	**145.59**	**184**	PKPbc	PKPbc	07 52 17.4	+0.6
	comp=Z,4.4nm,0.9s,baz=144,slow=0.8,SNR=10.0						
LPAZ	**La Paz**	**154.24**	**161**	PKPab	PKPab	07 52 54.5	+2.2
	comp=Z,4.4nm,0.7s,baz=155,slow=2.6,SNR=18						

*NEIC **14** 07:47:44.1, 35°.61S×71°.17W, h104km, MD3.4(GUC), After GUC.*

GUC 14 07:47:44.1±0.7, 35°.61S×71°.17W, h104km±4km, MD3.4, ML3.5, 9C, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TALC	**Talca**	**0.44**	**299**	⇑*i*P	Pn	07 47 59.7	-0.2
TALC				*i* S	Sn	07 48 11.4	-0.4
TALC	**Talca**	**0.44**	**299**	⇑*i*P	Pn	07 47 59.7	-0.2
TALC				*i* S	Sn	07 48 11.4	-0.4
TALC				AML	AML	07 48 12.8	
	comp=E,5μm,0.1s						
NICH	**Los Niches**	**0.61**	**355**	⇑*i*P	Pn	07 48 01.5	+0.4
NICH				*i* S	Sn	07 48 14.1	+0.2
CNCO	**Chanco**	**1.12**	**263**	⇑*i*P	Pn	07 48 06.1	0.0
CNCO				*i* S	Sn	07 48 23.1	+0.3
CNCO	**Chanco**	**1.12**	**263**	⇑*i*P	Pn	07 48 06.1	0.0
CNCO				*i* S	Sn	07 48 23.1	+0.3
CCHI	**Chillan**	**1.23**	**216**	⇑*i*P	Pn	07 48 07.4	0.0
CCHI				*i* S	Sn	07 48 25.0	-0.1
CCHI	**Chillan**	**1.23**	**216**	⇑*i*P	Pn	07 48 07.4	0.0
CCHI				*i* S	Sn	07 48 25.0	-0.1
CCHI				AML	AML	07 48 28.2	
	comp=N,573nm,0.3s						
CACH	**El Canelo**	**1.56**	**17**	*e*P	Pn	07 48 12.1	+0.8
CACH				*e*S	Sn	07 48 32.9	+0.9
CACH	**El Canelo**	**1.56**	**17**	*e*P	Pn	07 48 12.1	+0.8
CACH				*e*S	Sn	07 48 32.9	+0.9
LNV	**Longovilo**	**1.66**	**353**	⇑*i*P	Pn	07 48 12.9	+0.3
LNV				S	Sn	07 48 33.8	-0.4
LNV	**Longovilo**	**1.66**	**353**	⇑*i*P	Pn	07 48 12.9	+0.3
LNV				*e*S	Sn	07 48 33.8	-0.4
CHCH	**Chadas Angostu**	**1.73**	**14**	*e*P	Pn	07 48 14.1	+0.7
CHCH				*i* S	Sn	07 48 36.3	+0.6
CHCH	**Chadas Angostu**	**1.73**	**14**	*e*P	Pn	07 48 14.1	+0.7
CHCH				*i* S	Sn	07 48 36.3	+0.6
ANTU	**Antumapu**	**2.08**	**12**	*e*P	Pn	07 48 18.4	+0.4
ANTU				*i* S	Sn	07 48 44.2	+0.5
ANTU	**Antumapu**	**2.08**	**12**	*e*P	Pn	07 48 18.4	+0.4
ANTU				*i* S	Sn	07 48 44.2	+0.5
ANTU				AML	AML	07 48 44.9	
	comp=E,358nm,0.2s						
CLCH	**Cerro Calan**	**2.27**	**13**	*e*P	Pn	07 48 20.8	+0.5
CLCH				*i* S	Sn	07 48 48.8	+0.7
CLCH	**Cerro Calan**	**2.27**	**13**	*e*P	Pn	07 48 20.8	+0.5
CLCH				*i* S	Sn	07 48 48.8	+0.7
CLCH				AML	AML	07 48 51.2	
	comp=N,355nm,0.8s						
FCH	**Farellones**	**2.39**	**18**	*e*P	Pn	07 48 22.4	+0.5
FCH				*e*S	Sn	07 48 51.9	+1.1
FCH	**Farellones**	**2.39**	**18**	*e*P	Pn	07 48 22.4	+0.5
FCH				*e*S	Sn	07 48 51.9	+1.1
PEL	**Peldehue**	**2.49**	**9**	*e*P	Pn	07 48 23.9	+0.6
PEL				*i* S	Sn	07 48 53.5	+0.2
PEL				AML	AML	07 48 56.1	
	comp=N,332nm,0.3s						

*IDC **14** 07:56:03.4±5.4, 36°.09N×70°.87E, h102km±43km, mb3.5/8, mb1 3.6/13, mb1mx3.4/29, mbtmp3.5/13, Error ellipse: s-maj=42.5km s-min=20.3km az=34.0*
*NEIC **14** 07:56:07.7±1.0, 36°.40N×71°.10E, h129km±10km, mb3.8/1, Error ellipse: s-maj=14.7km s-min=10.7km az=110.0*
*ISCJB **14** 07:56:07.6±0.5, 36°.42N±0°.03×71°.06E±0°.07, h144km±7km, mb3.5/7, Error ellipse: s-maj=10.1km s-min=4.8km az=168.1*
*NNC **14** 07:56:10.6±7.0, 36°.61N×70°.47E, h109km±122km, mb3.4, mpv4.1, Error ellipse: s-maj=54.8km s-min=41.4km az=29.0*

ISC 14 07:56:08.7±0.5, 36°.41N±0°.03×71°.06E±0°.08, h140km±6km, n38, σ1°09/49, mb3.5/7, 7C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.49**	**222**	*e*Pn	**Pn**	**07 56 48.5**	**-0.6**
CEP	**Cherat**	**2.68**	**165**	⇑P	**Pn**	**07 56 52.5**	**+0.9**
CEP				S	**Sn**	**07 57 25.0**	**+0.4**
CHCP	**Chirah Chowk**	**3.29**	**146**	⇑P	**Pn**	**07 57 00.8**	**+1.4**
CHCP				S	**Sn**	**07 57 39.0**	**+0.3**
KSH	**Kashi**	**4.97**	**50**	Pn	**Pn**	**07 57 18.6**	**-2.8**
KSH				Sn	**Sn**	**07 58 09.1**	**-9.0**
KSH				smax			
	comp=N,90nm,0.3s						
KSH				smax			
	comp=E,73nm,0.3s						
THN	**Thein Dam**	**5.53**	**135**	*e*PKP	**Pn**	**07 57 28.0**	**-1.0**
THN				*ex*	**Sn**	**07 58 31.0**	**-0.7**
AML	**Almayashu**	**6.07**	**19**	P	**Pn**	**07 57 37.0**	**+0.9**
	SNR=16						
UCH	**Uchtor**	**6.39**	**24**	P	**Pn**	**07 57 41.3**	**+0.8**
	SNR=15						
KZA	**Kyzart**	**6.53**	**29**	P	**Pn**	**07 57 40.4**	**-1.8**
	SNR=7.6						
EKS2	**Erkin-Say**	**6.58**	**18**	P	**Pn**	**07 57 44.6**	**+1.6**
	SNR=14						
KK31	**Karatay Array**	**6.69**	**357**	⇓P	**Pn**	**07 57 44.5**	**0.0**
	comp=E,14nm,0.3s,baz=181,slow=13,SNR=366						
KK31				⇑S	**Sn**	**07 58 57.9**	**-1.6**
	comp=E,17nm,0.7s,baz=185,slow=25,SNR=3.9						
AAK	**Ala-Archa**	**6.75**	**22**	P	**Pn**	**07 57 47.8**	**+2.4**
	SNR=7.3						
AAK	**Ala-Archa**	**6.75**	**22**	P	**Pn**	**07 57 45.8**	**+0.5**
	comp=E,0.1nm,0.3s,baz=186,slow=4.7,SNR=11						
AAK				S	**Sn**	**07 59 01.0**	**0.0**
	comp=E,0.0nm,0.3s,baz=319,slow=19,SNR=15						
AAK	**Ala-Archa**	**6.75**	**22**	*e*Pn	**Pn**	**07 57 44.8**	**-0.5**
AAK				S	**Sn**	**07 59 00.9**	**0.0**
SDNR	**Sundarnagar**	**6.94**	**133**	*e*PKP	**Pn**	**07 57 47.5**	**-0.4**
SDNR				*ex*	x	07 59 02.1	
USP	**Ospenovka**	**7.34**	**20**	P	**Pn**	**07 57 53.6**	**+0.5**
	SNR=6.8						
TKM2	**Tokmak 2**	**7.38**	**27**	⇑P	**Pn**	**07 57 54.7**	**+1.0**
	comp=E,2.4nm,0.5s						
TKM2				⇑S	**Sn**	**07 59 19.6**	**+3.6**
	comp=E,4.4nm,0.8s						
KLP	**Kalpa**	**7.71**	**127**	*e*PKP	**Pn**	**07 57 59.2**	**+1.1**
KLP				*e*S	**Sn**	**07 59 17.6**	**-6.4**
KLP				AML	AML	07 59 20.7	
	comp=N,29nm,0.2s						
KLP				AML	AML	07 59 21.0	

ISCJB 14 08:11:19.2±0.7, 39°.18N±0°.04×140°.98E±0°.06, h12km±5km, mb3.6/5, Error ellipse: s-maj=7.8km s-min=6.4km az=35.9

ISC 14 08:11:19.7±0.7, 39°.18N±0°.04×140°.96E±0°.05, h4km±6km, n16, σ0s99/21, mb3.6/5, 1C-2D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.30**	**138**	P	**Pg**	**08 11 25.3**	**-0.2**
JMK				S	**Sg**	**08 11 29.5**	**+0.1**
JRG	**Rokugo**	**0.34**	**311**	⇓P	**Pg**	**08 11 26.4**	**+0.2**
JOM	**Ohasama**	**0.39**	**41**	P	**Pg**	**08 11 27.4**	**+0.2**
JYK	**Kaneyama**	**0.54**	**242**	⇓P	**Pg**	**08 11 29.6**	**-0.4**
JYK				S	**Sg**	**08 11 36.6**	**-0.3**
JOU	**Okura**	**0.84**	**196**	⇑P	**Pg**	**08 11 35.2**	**-0.6**
ERM	**Erimo**	**3.29**	**30**	*e*Pn	**Pn**	**08 12 13.1**	**+1.1**
ERM				*e*S	**Sn**	**08 12 57.2**	**+5.7**
MAJO	**Matsushiro**	**3.42**	**221**	*e*Pn	**Pn**	**08 12 14.8**	**+1.1**
MAT	**Matsushiro**	**3.42**	**221**	P	**Pn**	**08 12 15.3**	**+1.6**
MAT				S	**Sn**	**08 12 55.5**	**+0.9**
MJAR	**Matsushiro Arr**	**3.42**	**221**	Pn	**Pn**	**08 12 14.7**	**+1.0**
	0.7nm,0.3s,baz=31,slow=13,SNR=7.2						
MJAR				Pg	**Pg**	**08 12 21.3**	**-3.8**
	1.5nm,0.3s,baz=25,slow=14,SNR=15						
MJAR				Lg		08 13 06.8	
	0.7nm,0.3s,baz=22,slow=23,SNR=5.9						
ASAJ	**Asahikawa**	**5.09**	**13**	Pn	**Pn**	**08 12 37.5**	**+0.9**
	0.5nm,0.3s,baz=235,slow=16,SNR=3.2						
KSRS	**Korea Array**	**10.39**	**265**	Pn	**Pn**	**08 13 53.1**	**+3.6**
	0.7nm,0.3s,baz=82,slow=14,SNR=11						
ZALV	**Zalesovo Beam**	**40.23**	**311**	P	**P**	**08 18 56.3**	**-0.9**
	0.3nm,0.3s,mb3.5,baz=81,slow=10,SNR=2.8						
MKAR	**Makanchi Array**	**42.71**	**300**	P	**P**	**08 19 16.5**	**-1.1**
	0.2nm,0.3s,mb3.3,baz=75,slow=14,SNR=3.8						
WRA	**Warramunga Arr**	**59.13**	**187**	P	**P**	**08 21 19.9**	**-1.5**
	0.9nm,0.8s,mb3.9,baz=5.3,slow=7.5,SNR=8.8						
ASAR	**Alice Springs**	**62.86**	**187**	P	**P**	**08 21 45.5**	**-1.2**
	0.4nm,0.8s,mb3.6,baz=14,slow=5.7,SNR=4.4						
FINES	**FINESS Array B**	**66.76**	**332**	P	**P**	**08 22 10.6**	**-1.2**
	0.7nm,0.6s,mb3.9,baz=61,slow=15,SNR=2.6						

JMA 14 08:12:29.0, 39°.07N×140°.85E, h10km±1km, M2.4, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.31**	**112**	P	Pg	08 12 35.1	-0.1
JMK				S	Sg	08 12 39.4	0.0
JRG	**Rokugo**	**0.37**	**333**	P	Pg	08 12 36.3	+0.1
JYK	**Kaneyama**	**0.41**	**248**	P	Pg	08 12 37.1	0.0
JYK				S	Sg	08 12 42.5	0.0

NIED 14 08:13:00, 39°.00N×140°.90E, h8km, Mw3.6 Best double couple: M0=2.77000×10^14 NP1:φs=199.00000°, δ62.00000°, λ104.00000°. NP2:φs=351.00000°, δ31.00000°, λ66.00000°.
IDC 14 08:13:54.9±1.1, 38°.83N×141°.16E, h0km, mb3.6/3, mb1 3.8/5, mb1mx3.5/26, mbtmp3.6/5, ML3.0/3, Error ellipse: s-maj=29.2km s-min=17.6km az=124.0
NEIC 14 08:13:55.9, 39°.04N×140°.89E, h12km, MG3.7(JMA), After JMA.
JMA 14 08:13:55.9, 39°.03N×140°.89E, h10km±1km, M3.8
JMA Felt II J1.
ISCJB 14 08:13:55.6±0.5, 39°.01N±0°.03×140°.89E±0°.04, h6km±6km, mb3.7/3, Error ellipse: s-maj=6.0km s-min=4.7km az=36.3

ISC 14 08:13:56.3±0.6, 39°.02N±0°.03×140°.90E±0°.04, h3km±6km, n15, σ1s05/22, mb3.7/3, 1C-2D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.26**	**104**	⇓P	**Pg**	**08 14 01.2**	**0.0**
JMK				S	**Sg**	**08 14 05.0**	**+0.4**
JYK	**Kaneyama**	**0.43**	**257**	⇓P	**Pg**	**08 14 04.4**	**-0.1**
JYK				*e*S	**Sg**	**08 14 10.4**	**+0.2**
JRG	**Rokugo**	**0.43**	**332**	P	**Pg**	**08 14 04.1**	**-0.5**
JRG				S	**Sg**	**08 14 09.7**	**-0.5**
JOM	**Ohasama**	**0.55**	**34**	P	**Pg**	**08 14 06.2**	**-0.6**
JOM				S	**Sg**	**08 14 13.6**	**-0.4**
JOU	**Okura**	**0.67**	**196**	⇑P	**Pg**	**08 14 09.1**	**-0.1**
JOU				S	**Sg**	**08 14 18.4**	**+0.5**
MJAR	**Matsushiro Arr**	**3.26**	**222**	Pn	**Pn**	**08 14 47.8**	**-0.4**
	0.6nm,0.3s,baz=18,slow=15,SNR=4.5						
MJAR				Pg	**Pg**	**08 14 54.1**	**-4.6**
	1.1nm,0.3s,baz=23,slow=15,SNR=5.7						
MJAR				Lg		08 15 38.6	
	0.6nm,0.3s,baz=23,slow=28,SNR=3.1						
MAJO	**Matsushiro**	**3.26**	**222**	*e*Pn	**Pn**	**08 14 47.7**	**-0.5**
MAJO				*e*Pg	**Pg**	**08 14 59.3**	**+0.5**
MAT	**Matsushiro**	**3.26**	**222**	P	**Pn**	**08 14 47.5**	**-0.7**
MAT				S	**Sn**	**08 15 31.3**	**+3.8**
ERM	**Erimo**	**3.46**	**29**	*e*Pn	**Pn**	**08 14 53.7**	**+2.8**
ASAJ	**Asahikawa**	**5.25**	**13**	Pn	**Pn**	**08 15 16.9**	**+1.4**
	0.4nm,0.3s,baz=207,slow=16,SNR=2.6						
KSRS	**Korea Array**	**10.33**	**265**	Pn	**Pn**	**08 16 28.3**	**+3.1**
	0.5nm,0.3s,baz=71,slow=14,SNR=4.6						
MKAR	**Makanchi Array**	**42.75**	**300**	P	**P**	**08 21 55.4**	**+0.8**
	0.3nm,0.5s,mb3.3,baz=74,slow=11,SNR=2.5						
WRA	**Warramunga Arr**	**58.97**	**187**	P	**P**	**08 23 54.9**	**-2.0**
	0.8nm,0.5s,mb4.0,baz=4.8,slow=7.4,SNR=12						
ASAR	**Alice Springs**	**62.69**	**187**	P	**P**	**08 24 20.4**	**-1.8**
	0.5nm,0.7s,mb3.8,baz=1.8,slow=6.0,SNR=6.7						
LPAZ	**La Paz**	**145.99**	**56**	PKPbc	PKPbc	08 33 36.8	-0.9
	0.7nm,0.8s,baz=243,slow=4.5,SNR=4.1						

DDA 14 08:19:21.8, 40°.00N×36°.18E, h7km±4km, Md2.6
ISK 14 08:19:22.1, 40°.07N×36°.11E, h5km, MD2.7
CSEM 14 08:19:22.8±0.2, 40°.08N×36°.12E, h8km, MD2.6, Error ellipse: s-maj=7.4km s-min=4.0km az=159.0
ISCJB 14 08:19:23.0±1.4, 40°.06N±0°.05×36°.15E±0°.10, h7km±20km, Error ellipse: s-maj=12.6km s-min=7.4km az=171.0

ISC 14 08:19:23.4±1.0, 40°.08N±0°.07×36°.13E±0°.06, h10km±14km, n16, σ0s88/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOKA	**Tokat**	**0.36**	**47**	*i*P	**Pg**	**08 19 29.1**	**-1.4**
TOKA				*i*S	**Sg**	**08 19 36.2**	**+0.9**
TOKA	**Tokat**	**0.36**	**47**	*i*P	**Pg**	**08 19 29.1**	**-1.4**
TOKA				*i*S	**Sg**	**08 19 36.2**	**+0.8**
TOKT	**Tokat**	**0.40**	**52**	*e*PG	**Pg**	**08 19 30.6**	**-0.6**
TOKT				*e*SG	**Sg**	**08 19 37.3**	**+0.7**
TOKT	**Tokat**	**0.40**	**52**	*e*Pg	**Pg**	**08 19 30.6**	**-0.6**
TOKT				*e*Sg	**Sg**	**08 19 37.3**	**+0.8**
SVSK	**Karacayir**	**0.68**	**103**	*e*PG	**Pg**	**08 19 36.1**	**-0.5**
SVSK				*e*SG	**Sg**	**08 19 46.0**	**+0.5**
SVSK	**Karacayir**	**0.68**	**103**	*e*Pg	**Pg**	**08 19 36.1**	**-0.5**
SVSK				*e*Sg	**Sg**	**08 19 46.0**	**+0.5**
ERBA	**Erbaa**	**0.77**	**38**	*i*P	**Pg**	**08 19 37.4**	**-0.8**
ERBA				*i*S	**Sg**	**08 19 49.1**	**+0.8**
ERBA	**Erbaa**	**0.77**	**38**	*i*P	**Pg**	**08 19 37.4**	**-0.8**
ERBA				*i*S	**Sg**	**08 19 49.1**	**+0.8**
CORM	**Corum**	**1.16**	**275**	*e*PN	**Pn**	**08 19 44.5**	**-1.2**
CORM	**Corum**	**1.16**	**275**	*e*Pn	**Pn**	**08 19 44.5**	**-1.2**
CTKT	**Corum**	**1.16**	**298**	*i*P	**Pb**	**08 19 45.5**	**-0.1**
CTKT				*i*S	**Sg**	**08 20 01.8**	**+0.9**
CTKT	**Corum**	**1.16**	**298**	*i*P	**Pb**	**08 19 45.5**	**-0.1**
CTKT				*i*S	**Sg**	**08 20 01.8**	**+0.9**
CDAG	**Cicekdag**	**1.43**	**252**	*i*P	**Pn**	**08 19 48.2**	**-1.2**
CDAG				*i*S	**Sn**	**08 20 08.6**	**+0.3**
CDAG	**Cicekdag**	**1.43**	**252**	*i*P	**Pn**	**08 19 48.2**	**-1.2**
CDAG				*i*S	**Sn**	**08 20 08.6**	**+0.3**
AVNT	**Avonos**	**1.63**	**218**	*i*P	**Pn**	**08 19 52.5**	**+0.3**
AVNT				*i*S	**Sn**	**08 20 14.7**	**+1.4**
AVNT	**Avonos**	**1.63**	**218**	*i*P	**Pn**	**08 19 52.5**	**+0.3**
AVNT				*i*S	**Sn**	**08 20 14.7**	**+1.4**

BJI 14 08:24:35.4, 39°.64N×76°.67E, h15km, ML3.1/5, 3C-1D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.55**	**257**	⇑*i*Pg	Pg	08 24 51.5	+5.2
KSH				Sg	Sg	08 25 03.4	+10
KSH				smax			
	comp=N,370nm,0.3s						
KSH				smax			
	comp=E,500nm,0.2s						
TKM2	**Tokmak 2**	**3.38**	**346**	⇑Pg	Pg	08 25 43.6	+3.5
	comp=E,2.8nm,0.4s						
TKM2				⇑Lg		08 26 34.8	
	comp=E,17nm,0.7s						
KK31	**Karatay Array**	**5.78**	**309**	⇓Pn	Pn	08 26 02.3	+1.7
	comp=E,0.2nm,0.3s,baz=135,slow=12,SNR=2.8						
KK31				Lg		08 27 46.1	
	comp=E,2.0nm,0.5s,baz=123,slow=29,SNR=4.2						

DDA 14 08:24:38.6, 36°.29N×27°.49E, h34km±1km, Md2.9
ATH 14 08:24:39.8, 36°.43N×27°.65E, h18km±1km, MD3.6/9
NEIC 14 08:24:39.8, 36°.43N×27°.65E, h18km, MD3.6(ATH), After ATH.
ISCJB 14 08:24:40.8±0.5, 36°.37N±0°.02×27°.62E±0°.03, h6km±3km, Error ellipse: s-maj=3.7km s-min=3.1km az=139.4
THE 14 08:24:40.7, 36°.43N×27°.71E, h3km±1km, ML3.6/2, Error ellipse: s-maj=2.0km s-min=0.6km az=56.0
CSEM 14 08:24:40.8±0.1, 36°.36N×27°.63E, h5km, MD3.0, Error ellipse: s-maj=3.7km s-min=3.0km az=143.0
ISK 14 08:24:41.2, 36°.40N×27°.67E, h9km, MD3.0, ML3.0

ISC 14 08:24:41.5±0.5, 36°.37N±0°.02×27°.63E±0°.03, h8km±3km, n85, σ0s95/132, 2C, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.36**	**353**	*e*PG	**Pg**	**08 24 48.4**	**-0.2**
DAT				*e*SG	**Sg**	**08 24 54.1**	**+0.7**
DAT	**Datca**	**0.36**	**353**	*e*Pg	**Pg**	**08 24 48.4**	**-0.1**
DAT				*e*Sg	**Sg**	**08 24 54.1**	**+0.8**
ARG	**Arkhangelos**	**0.43**	**111**	⇑*i*Pb	**Pg**	**08 24 48.9**	**-0.8**
ARG				*e*Sb	**Sg**	**08 24 55.1**	**-0.3**
ARG	**Arkhangelos**	**0.43**	**111**	P	**Pg**	**08 24 48.9**	**-0.8**
ARG				S	**Sg**	**08 24 54.7**	**-0.7**
ARG	**Arkhangelos**	**0.43**	**111**	⇑*i*PB	**Pg**	**08 24 48.9**	**-0.8**
ARG				*e*SB	**Sg**	**08 24 55.1**	**-0.3**
ARG	**Arkhangelos**	**0.43**	**111**	P	**Pg**	**08 24 48.9**	**-0.8**
ARG				S	**Sg**	**08 24 54.7**	**-0.7**
ARG				*e*Sb	**Sg**	**08 24 55.1**	**-0.3**
NIS1	**Nisyros Isl.**	**0.43**	**303**	P	**Pg**	**08 24 49.8**	**-0.1**
NIS1				S	**Sg**	**08 24 57.2**	**+1.6**
NIS1	**Nisyros Isl.**	**0.43**	**303**	P	**Pg**	**08 24 49.8**	**-0.1**
NIS1				S	**Sg**	**08 24 57.2**	**+1.6**
BDRM	**Kayabasi**	**0.71**	**348**	*i* P	**Pg**	**08 24 54.5**	**-0.7**
BDRM				*i* S	**Sg**	**08 25 06.8**	**+2.3**
BDRM	**Kayabasi**	**0.71**	**348**	*i* P	**Pg**	**08 24 54.5**	**-0.7**
BDRM				*i* S	**Sg**	**08 25 06.8**	**+2.4**
KARP	**Karpathos**	**0.91**	**205**	*e*Pn	**Pg**	**08 24 58.1**	**-0.7**
KARP				*e*Sn	**Sg**	**08 25 12.1**	**+1.5**
KARP	**Karpathos**	**0.91**	**205**	*e*PN	**Pg**	**08 24 58.1**	**-0.7**
KARP				*e*SN	**Sg**	**08 25 12.1**	**+1.5**
KARP	**Karpathos**	**0.91**	**205**	*e*Pn	**Pg**	**08 24 58.1**	**-0.7**
KARP				*e*Sn	**Sg**	**08 25 12.1**	**+1.5**
YER	**Yerkesik**	**0.93**	**34**	*e*PG	**Pg**	**08 24 58.5**	**-0.8**
YER				*e*SG	**Sg**	**08 25 11.6**	**+0.3**
YER	**Yerkesik**	**0.93**	**34**	*e*Pg	**Pg**	**08 24 58.5**	**-0.8**
YER				*e*Sg	**Sg**	**08 25 11.6**	**+0.3**
TURN	**Turunc**	**0.93**	**57**	*i* P	**Pg**	**08 24 52.8**	**-6.5**
TURN				*i* S	**Sg**	**08 25 03.0**	**-8.4**
MLSB	**Milas**	**0.93**	**7**	*e*PG	**Pg**	**08 24 59.1**	**-0.3**
MLSB				*e*SG	**Sg**	**08 25 11.6**	**+0.1**
MLSB	**Milas**	**0.93**	**7**	*e*Pg	**Pg**	**08 24 59.1**	**-0.3**
MLSB				*e*Sg	**Sg**	**08 25 11.6**	**+0.1**
FETY	**Fethiye**	**1.20**	**77**	*e*PN	**Pn**	**08 25 03.9**	**-0.7**
FETY	**Fethiye**	**1.20**	**77**	*e*Pn	**Pn**	**08 25 03.9**	**-0.6**
AYDN	**Tasoluk**	**1.30**	**9**	*i* P	**Pn**	**08 25 04.0**	**-2.0**
AYDN				*i* S	**Sb**	**08 25 24.2**	**+1.0**
AYDN	**Tasoluk**	**1.30**	**9**	*i* P	**Pn**	**08 25 04.0**	**-2.0**
AYDN				*i* S	**Sb**	**08 25 24.2**	**+1.1**
GCAM	**G?zelcaml?**	**1.37**	**347**	*i* P	**Pn**	**08 25 06.3**	**-0.5**
GCAM				*i* S	**Sb**	**08 25 29.3**	**+4.4**
GCAM	**G?zelcaml?**	**1.37**	**347**	*i* P	**Pn**	**08 25 06.3**	**-0.6**
GCAM				*i* S	**Sb**	**08 25 29.3**	**+4.4**
SMG	**Samos**	**1.48**	**335**	*e*Pn	**Pn**	**08 25 07.1**	**-1.3**
SMG	**Samos**	**1.48**	**335**	*e*PN	**Pn**	**08 25 07.1**	**-1.3**
SMG	**Samos**	**1.48**	**335**	*e*Pn	**Pn**	**08 25 07.1**	**-1.3**
KSL	**Kastellorizon**	**1.59**	**97**	*e*Pn	**Pn**	**08 25 09.8**	**-0.1**
KSL	**Kastellorizon**	**1.59**	**97**	*e*PN	**Pn**	**08 25 09.8**	**-0.1**
KSL	**Kastellorizon**	**1.59**	**97**	*e*Pn	**Pn**	**08 25 09.8**	**-0.1**
AKAS	**Kas**	**1.60**	**94**	*i* P	**Pn**	**08 25 09.5**	**-0.5**
AKAS				*i* S	**Sn**	**08 25 32.0**	**+1.1**
AKAS	**Kas**	**1.60**	**94**	*i* P	**Pn**	**08 25 09.5**	**-0.5**
AKAS				*i* S	**Sn**	**08 25 32.0**	**+1.1**
GLHS	**Glhisar (BURDU**	**1.69**	**62**	*e*PN	**Pn**	**08 25 11.4**	**0.0**
GLHS	**Glhisar (BURDU**	**1.69**	**62**	*e*Pn	**Pn**	**08 25 11.4**	**+0.1**
ZKR	**Zakros**	**1.70**	**223**	*e*Pb	**Pn**	**08 25 10.7**	**-0.7**
ZKR				*e*Sn	**Sn**	**08 25 35.6**	**+2.2**
ZKR	**Zakros**	**1.70**	**223**	P	**Pn**	**08 25 11.1**	**-0.3**
ZKR				S	**Sn**	**08 25 35.1**	**+1.7**
ZKR	**Zakros**	**1.70**	**223**	*e*PB	**Pn**	**08 25 10.7**	**-0.7**
ZKR				*e*SN	**Sn**	**08 25 35.6**	**+2.2**
ZKR	**Zakros**	**1.70**	**223**	*e*Pb	**Pn**	**08 25 10.7**	**-0.7**
ZKR	**Zakros**	**1.70**	**223**	P	**Pn**	**08 25 11.1**	**-0.3**
ZKR				S	**Sn**	**08 25 35.1**	**+1.7**
ZKR				*e*Sn	**Sn**	**08 25 35.6**	**+2.2**
DNZL	**Cakiroluk**	**1.74**	**40**	*i* P	**Pn**	**08 25 11.9**	**0.0**
DNZL				*i* S	**Sn**	**08 25 35.4**	**+1.1**
DNZL	**Cakiroluk**	**1.74**	**40**	*i* P	**Pn**	**08 25 11.9**	**-0.1**
DNZL				*i* S	**Sn**	**08 25 35.4**	**+1.1**
GOLH	**Golhisar**	**1.77**	**60**	*i* P	**Pn**	**08 25 14.2**	**+1.7**
GOLH				*i* S	**Sn**	**08 25 36.9**	**+1.7**
GOLH	**Golhisar**	**1.77**	**60**	*i* P	**Pn**	**08 25 14.2**	**+1.7**
GOLH				*i* S	**Sn**	**08 25 36.9**	**+1.7**
DENT	**Denizli**	**1.78**	**39**	*e*PN	**Pn**	**08 25 12.0**	**-0.6**
DENT	**Denizli**	**1.78**	**39**	*e*Pn	**Pn**	**08 25 12.0**	**-0.5**
APE	**Apeiranthos**	**1.83**	**293**	*e*Pb	**Pn**	**08 25 11.7**	**-1.5**
APE	**Apeiranthos**	**1.83**	**293**	P	**Pn**	**08 25 12.0**	**-1.2**
APE				S	**Sn**	**08 25 36.4**	**-0.1**
APE	**Apeiranthos**	**1.83**	**293**	*e*PB	**Pn**	**08 25 11.7**	**-1.5**
APE	**Apeiranthos**	**1.83**	**293**	*e*Pb	**Pn**	**08 25 11.7**	**-1.5**
APE	**Apeiranthos**	**1.83**	**293**	P	**Pn**	**08 25 12.0**	**-1.2**
APE				S	**Sn**	**08 25 36.4**	**-0.1**
ELL	**Elmali**	**1.87**	**78**	*e*PN	**Pn**	**08 25 14.0**	**+0.2**
ELL	**Elmali**	**1.87**	**78**	*e*Pn	**Pn**	**08 25 14.0**	**+0.2**
NPS	**Neapolis**	**1.98**	**237**	*e*Pb	**Pn**	**08 25 14.7**	**-0.6**
NPS	**Neapolis**	**1.98**	**237**	*e*PB	**Pn**	**08 25 14.7**	**-0.6**
NPS	**Neapolis**	**1.98**	**237**	*e*Pb	**Pn**	**08 25 14.7**	**-0.6**
IZM	**Izmir**	**2.05**	**352**	*e*PN	**Pn**	**08 25 16.0**	**-0.2**
IZM	**Izmir**	**2.05**	**352**	*e*Pn	**Pn**	**08 25 16.0**	**-0.2**
BLCB	**Balcova**	**2.07**	**347**	*e*PN	**Pn**	**08 25 16.6**	**+0.1**
BLCB	**Balcova**	**2.07**	**347**	*e*Pn	**Pn**	**08 25 16.6**	**+0.1**
LAST	**Lasithi**	**2.13**	**236**	*e*Pb	**Pn**	**08 25 16.6**	**-0.7**
LAST				*e*Sn	**Sn**	**08 25 44.6**	**+0.7**
LAST	**Lasithi**	**2.13**	**236**	P	**Pn**	**08 25 16.7**	**-0.6**
LAST				S	**Sn**	**08 25 45.2**	**+1.3**
LAST	**Lasithi**	**2.13**	**236**	*e*PB	**Pn**	**08 25 16.6**	**-0.7**
LAST				*e*SN	**Sn**	**08 25 44.6**	**+0.7**
LAST	**Lasithi**	**2.13**	**236**	P	**Pn**	**08 25 16.7**	**-0.6**
LAST				*e*Sn	**Sn**	**08 25 44.6**	**+0.7**
LAST				S	**Sn**	**08 25 45.2**	**+1.3**
URLA	**Izmir**	**2.15**	**338**	*i* P	**Pn**	**08 25 12.6**	**-5.1**
URLA				*i* S	**Sn**	**08 25 52.2**	**+7.7**
MANT	**Manisa**	**2.24**	**19**	*i* P	**Pn**	**08 25 17.8**	**-1.1**
MANT	**Manisa**	**2.24**	**19**	*i* P	**Pn**	**08 25 17.8**	**-1.1**
KORT	**Korkueli**	**2.27**	**73**	*i* P	**Pn**	**08 25 24.0**	**+4.7**
KORT				*i* S	**Sn**	**08 25 54.7**	**+7.1**
KORT	**Korkueli**	**2.27**	**73**	*i* P	**Pn**	**08 25 24.0**	**+4.7**
CHOS	**Chios island**	**2.37**	**329**	P	**Pn**	**08 25 19.7**	**-1.0**
CHOS				S	**Sn**	**08 25 48.4**	**-1.6**
CHOS	**Chios island**	**2.37**	**329**	*e*PB	**Pn**	**08 25 19.5**	**-1.2**
CHOS	**Chios island**	**2.37**	**329**	P	**Pn**	**08 25 19.7**	**-1.0**
CHOS				S	**Sn**	**08 25 48.4**	**-1.6**
KHL	**Karahalli**	**2.46**	**37**	*e*PN	**Pn**	**08 25 22.1**	**+0.2**
KHL	**Karahalli**	**2.46**	**37**	*e*Pn	**Pn**	**08 25 22.1**	**+0.1**
IDI	**Anoyia**	**2.48**	**245**	*e*Pn	**Pn**	**08 25 21.2**	**-0.9**
IDI	**Anoyia**	**2.48**	**245**	*e*PN	**Pn**	**08 25 21.2**	**-0.9**
IDI	**Anoyia**	**2.48**	**245**	*e*Pn	**Pn**	**08 25 21.2**	**-0.9**
SUTC	**Sutluce-Ispart**	**2.92**	**67**	*e*PN	**Pn**	**08 25 28.6**	**+0.4**
SUTC	**Sutluce-Ispart**	**2.92**	**67**	*e*Pn	**Pn**	**08 25 28.6**	**+0.4**
VAM	**Vamos**	**2.95**	**252**	*e*Pn	**Pn**	**08 25 29.4**	**+0.8**
VAM	**Vamos**	**2.95**	**252**	*e*PN	**Pn**	**08 25 29.4**	**+0.8**
VAM	**Vamos**	**2.95**	**252**	*e*Pn	**Pn**	**08 25 29.4**	**+0.8**
KARN	**Karanos**	**3.17**	**253**	P	**Pn**	**08 25 31.6**	**0.0**
KARN				S	**Sn**	**08 26 10.1**	**+0.5**
KARN	**Karanos**	**3.17**	**253**	*e*PN	**Pn**	**08 25 31.9**	**+0.3**
KARN	**Karanos**	**3.17**	**253**	P	**Pn**	**08 25 31.6**	**0.0**
KARN	**Karanos**	**3.17**	**253**	*e*Pn	**Pn**	**08 25 31.9**	**+0.3**
KARN				S	**Sn**	**08 26 10.1**	**+0.5**

NIED 14 08:34:00, 39°.10N×140°.90E, h5km, Mw4.3 Best double couple: M0=2.82000×10^15 NP1:φs=359.00000°, δ55.00000°, λ77.00000°. NP2:φs=202.00000°, δ37.00000°, λ108.00000°.
BJI 14 08:34:06.6, 38°.90N×141°.13E, h15km, mB4.7/21, mb4.6/25, Ms4.0/22, Ms7 3.9/22
IDC 14 08:34:07.3±0.6, 39°.08N×140°.82E, h0km, mb4. 1/17, mb1 4.3/20, mb1mx4.2/29, mbtmp4. 1/20, ML3.8/3, MS3.4/12, Ms1 3.4/12, ms1mx3.1/40, Error ellipse: s-maj=16.8km s-min=13.8km az=111.0
ISCJB 14 08:34:08.5±0.5, 39°.15N±0°.02×140°.87E±0°.03, h13km±2km, mb4.5/58, MS3.7/15, Error ellipse: s-maj=3.8km s-min=3.5km az=16.7
NEIC 14 08:34:08.8, 39°.15N×140°.93E, h11km, mb4.5/24, MW4.2(NIED), After JMA.
NEIC Recorded [3 JMA] in Iwate and [2 JMA] in Akita and Miyagi.
JMA 14 08:34:08.8, 39°.15N×140°.92E, h10km±1km, M4.3 Broadband fault plane solution: P waves. NP1: φs=220.00000°, δ48.00000°, λ130.00000°. NP2: φs=349.00000°, δ55.00000°, λ54.00000°. Principal axes: T Plg61.0000°, Azm200.0000°; N Plg29.0000°, Azm11.0000°; P Plg4.0000°, Azm103.0000°;
JMA Felt III J1.
MOS 14 08:34:12.0±1.0, 39°.26N×140°.73E, h33km, mb4.5/26 Error ellipse: s-maj=10.2km s-min=6.6km az=89.0
SZGRF 14 08:34:14.8, 38°.88N×139°.95E, h33km, mb4.5, Near west coast of eastern Honshu, Japan

ISC 14 08:34:09.1±0.4, 39°.14N±0°.02×140°.89E±0°.03, h6km±3km, h15km±1.1km: pP-P, n150, σ0s98/164, mb4.5/58, MS3.7/15, 6C-9D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.32**	**126**	⇓P	**Pg**	**08 34 14.7**	**-0.6**
JMK				*e*S	**Sg**	**08 34 18.7**	**-0.8**
JRG	**Rokugo**	**0.32**	**323**	⇓P	**Pg**	**08 34 15.6**	**+0.2**
JRG				*e*S	**Sg**	**08 34 20.4**	**+0.7**
JOM	**Ohasama**	**0.46**	**43**	⇓P	**Pg**	**08 34 17.2**	**-0.7**
JOM				S	**Sg**	**08 34 23.1**	**-0.8**
JYK	**Kaneyama**	**0.47**	**242**	⇓P	**Pg**	**08 34 18.4**	**+0.3**
JYK				S	**Sg**	**08 34 24.9**	**+0.7**
OFUJ	**Ofunato**	**0.61**	**95**	⇓P	**Pg**	**08 34 19.9**	**-0.9**
JIO	**Ouri**	**0.77**	**152**	⇓P	**Pg**	**08 34 23.0**	**-0.9**
JIO				S	**Sg**	**08 34 33.5**	**-0.4**
JOU	**Okura**	**0.79**	**193**	⇑P	**Pg**	**08 34 24.1**	**-0.2**
JOU				S	**Sg**	**08 34 35.0**	**+0.5**
MAJO	**Matsushiro**	**3.35**	**220**	*e*P	**Pn**	**08 35 03.0**	**+1.1**
MAT	**Matsushiro**	**3.35**	**220**	P	**Pn**	**08 35 03.2**	**+1.3**
MAT				*e*S	**Sn**	**08 35 45.3**	**+3.4**
MJAR	**Matsushiro Arr**	**3.35**	**220**	Pn	**Pn**	**08 35 03.0**	**+1.2**
	4.9nm,0.3s,baz=19,slow=31,SNR=28						
MJAR				Pg	**Pg**	**08 35 08.4**	**-4.9**
	5.6nm,0.3s,baz=29,slow=16,SNR=28						
MJAR				Lg		08 35 56.5	
	3.3nm,0.3s,baz=20,slow=24,SNR=8.4						
ERM	**Erimo**	**3.35**	**30**	*ce*P	**Pn**	**08 35 04.5**	**+2.6**
ERM	**Erimo**	**3.35**	**30**	*e*Pn	**Pn**	**08 35 04.3**	**+2.4**
ASAJ	**Asahikawa**	**5.14**	**14**	Pn	**Pn**	**08 35 28.1**	**+1.7**
	2.6nm,0.3s,baz=216,slow=11,SNR=13						
ASAJ				Sn	**Sn**	**08 36 28.2**	**+2.3**
	0.8nm,0.3s,baz=16,slow=18,SNR=2.7						
ASAJ	**Asahikawa**	**5.14**	**14**	P	**Pn**	**08 35 28.1**	**+1.7**
ASAJ						08 36 28.3	
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
JHJ	**Hachijo jima 2**	**6.07**	**189**

comp=N,73nm,19.1s,MS3.2,baz=186,slow=35
SONM Songino Array 26.31 301 P **P 08 39 46.3 +1.0**
SONM pmax pmax
comp=Z,1.0nm,0.4s
SONM MLR MLR
comp=Z,73nm,19.1s
LZH Lanzhou 29.37 276 *e*P **P 08 40 14.0 +1.2**
LZH pP pP 08 40 18.5 +3.7
LZH sP sP 08 40 21.0 +5.4
LZH PP PP 08 41 04.0 -15
LZH *e*S **S 08 45 03.3 -3.4**
LZH SS SS 08 46 35.0 -36
LZH pmax pmax
comp=Z,20nm,1.5s,mb4.6
LZH pmax pmax
comp=Z,100nm,5.6s
LZH LR LR
comp=E,460nm,11.3s
LZH LR LR
comp=Z,700nm,12.6s,MS4.5
GYA Guiyang 31.24 256 P **P 08 40 29.0 -0.4**
GYA PP PP 08 41 32.0 -7.8
GYA PcP PcP 08 43 25.6 +1.7
GYA S **S 08 45 32.3 -3.8**
GYA ScP ScP 08 47 06.5 -0.8
GYA SS SS 08 47 19.6 -30
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
GYA LR LR
comp=N,400nm,16.1s,MS4.3
GYA LR LR
comp=E,380nm,15.5s,MS4.3
GYA LR LR
comp=Z,430nm,15.9s,MS4.2
CD2 Chengdu 31.32 266 *e*P **P 08 40 31.3 +1.2**
CD2 pP pP 08 40 35.6 +3.5
CD2 sP sP 08 40 38.5 +5.6
CD2 PP PP 08 41 34.1 -6.6
CD2 S **S 08 45 35.8 -1.6**
CD2 SS SS 08 47 21.3 -30
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
CD2 pmax pmax
comp=Z,40nm,5.2s
CD2 LR LR
comp=N,160nm,13.8s
CD2 LR LR
comp=Z,150nm,14.2s,MS3.8
BILL Bilibino 32.14 18 *e*P **P 08 40 38.7 +1.9**
BILL pmax pmax
comp=Z,4.0nm,1.2s,mb4.1
KMI Kunming 34.93 258 P **P 08 41 02.8 +1.2**
KMI pP pP 08 41 05.9 +2.3
KMI sP sP 08 41 07.0 +2.6
KMI PP PP 08 42 20.3 -0.5
KMI S **S 08 46 32.8 -0.7**
KMI SS SS 08 48 45.5 -19
KMI pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
KMI pmax pmax
comp=Z,70nm,3.6s
KMI LR LR
comp=N,150nm,15.6s,MS4.0
KMI LR LR
comp=E,140nm,12.5s,MS4.0
KMI LR LR
comp=Z,120nm,15.6s,MS3.8
WMQ Urumqi 39.56 294 *e*P **P 08 41 40.0 -0.7**
ZALV Zalesovo Beam 40.21 311 P **P 08 41 45.4 -0.6**
comp=Z,4.3nm,0.9s,mb4.2,baz=79,slow=7.9,SNR=12
ZALV LR LR 08 58 58.1
comp=Z,34nm,20.6s,MS3.2,baz=85,slow=37
ZALV Zalesovo Beam 40.21 311 P **P 08 41 45.4 -0.6**
ZALV pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
ZALV MLR MLR
comp=Z,34nm,20.6s,MS3.2
NVS Novosibirsk 41.11 312 *i*P **P 08 41 53.2 -0.2**
CMAR Chiang Mai Arr 41.68 253 LR LR 09 01 03.4
comp=Z,28nm,19.2s,MS3.2,baz=0.0,slow=39
MK31 Makanchi Array 42.68 300 *e*P **P 08 42 05.9 -0.4**
MKAR Makanchi Array 42.68 300 P **P 08 42 05.5 -0.9**
comp=Z,2.8nm,0.8s,mb4.0,baz=74,slow=13,SNR=22
MKAR LR LR 08 59 29.5
comp=Z,43nm,19.5s,MS3.4,baz=354,slow=36
MKAR Makanchi Array 42.68 300 P **P 08 42 05.5 -0.8**
MKAR pmax pmax
comp=Z,3.0nm,0.8s
MKAR MLR MLR
comp=Z,43nm,19.5s
KURK Kurchatov 44.33 306 *de*P **P 08 42 18.9 -0.7**
KURK pmax pmax
comp=Z,17nm,1.7s,mb4.5
KURK Kurchatov 44.33 306 *e*P **P 08 42 18.7 -0.9**
comp=Z,9.3nm,0.8s,mb4.6
KDAK Kodiak Island 45.83 43 P **P 08 42 31.2 -0.2**
comp=Z,4.6nm,0.6s,mb4.6,baz=243,slow=2.3,SNR=4.9
KDAK Kodiak Island 45.83 43 *i*P **P 08 42 33.0 +1.5**
TKM2 Tokmak 2 48.29 297 *e*P **P 08 42 51.1 +0.2**
TKM2 pmax pmax
comp=Z,19nm,1.1s,mb5.0
TKM2 Tokmak 2 48.29 297 *e*P **P 08 42 51.1 +0.2**
comp=Z,19nm,1.1s,mb5.0
BVAR Borovoye Array 48.87 311 P **P 08 42 54.5 -0.7**
comp=Z,1.7nm,0.6s,mb4.2,baz=72,slow=8.6,SNR=8.5
BVAR PcP PcP 08 44 18.8 -0.8
comp=Z,0.9nm,0.5s,baz=66,slow=4.9,SNR=2.9
BVAR Borovoye Array 48.87 311 P **P 08 42 54.5 -0.7**
BVAR 08 44 18.8
BVAR pmax pmax
comp=Z,2.0nm,0.6s
BRVK Borovoye 48.92 311 *e*P **P 08 42 55.0 -0.6**
BRVK pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
BRVK Borovoye 48.92 311 *e*P **P 08 42 55.0 -0.6**
comp=Z,4.5nm,0.8s,mb4.5
AAK Ala-Archa 49.15 297 LR LR 09 04 59.2
comp=Z,35nm,19.0s,MS3.4,baz=193,slow=38
AAK Ala-Archa 49.15 297 *e*P **P 08 42 57.1 -0.4**
AAK pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
AAK Ala-Archa 49.15 297 *e*P **P 08 42 57.1 -0.4**
comp=Z,3.6nm,0.7s,mb4.5
KSH Kashi 49.20 292 *e*P **P 08 43 02.1 +4.2**
KSH pP pP 08 43 06.6 +6.7
KSH sP sP 08 43 09.1 +8.4
KSH PcP PcP 08 44 23.9 +2.9
KSH PP PP 08 44 57.1 +5.6
KSH ScP ScP 08 48 17.4 +0.8
KSH PcS PcS 08 48 19.1 +1.7
KSH S **S 08 50 07.9 +4.1**
KSH ScS ScS 08 52 50.3 -0.2
KSH SS SS 08 53 36.9 +2.1
KSH pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
KSH pmax pmax
comp=Z,66nm,6.6s
KSH LR LR
comp=N,150nm,11.4s
KSH LR LR
comp=E,92nm,5.0s
KSH LR LR
comp=Z,120nm,4.1s
UCH Uchtor 49.28 296 *e*P **P 08 42 58.2 -0.2**
comp=Z,3.7nm,1.1s,mb4.3
EKS2 Erkin-Say 49.64 297 *e*P **P 08 43 01.3 +0.1**
comp=Z,5.9nm,0.9s,mb4.6
AML Almayashu 49.88 296 *e*P **P 08 43 04.0 +0.9**
comp=Z,6.0nm,0.8s,mb4.7
INK Inuvik 52.71 28 P **P 08 43 24.2 +0.3**
comp=Z,4.2nm,0.7s,mb4.5,baz=314,slow=6.4,SNR=10
INK Inuvik 52.71 28 *e*P **P 08 43 23.8 -0.1**
INK pmax pmax
comp=Z,6.0nm,1.0s
INK Inuvik 52.71 28 *e*P **P 08 43 23.8 -0.2**
comp=Z,6.5nm,1.0s,mb4.5
HYT Haines Junctio 52.87 37 *e*P **P 08 43 27.3 +2.1**
SVE Sverdlovsk 53.31 317 ||*e*P **P 08 43 28.4 -0.1**
SVE pmax pmax
comp=Z,16nm,1.1s,mb4.9
ARU Arti 54.52 317 *c i*P **P 08 43 36.6 -0.7**
ARU *e* 08 45 34.6
ARU S **S 08 51 14.2 -2.3**
ARU SS SS 08 54 49.5 -8.9
ARU pmax pmax
comp=Z,11nm,1.2s,mb4.8
ARU Arti 54.52 317 *e*P **P 08 43 36.4 -0.9**
comp=Z,5.9nm,0.8s,mb4.7
ABKAR Akbulak array 56.28 309 *e*P **P 08 43 49.5 -0.6**
comp=Z,1.4nm,0.5s,mb4.2
KBL Kabul 56.30 289 *e*P **P 08 43 50.8 +0.3**
KBL pmax pmax
comp=Z,12nm,0.9s,mb4.9
KBL Kabul 56.30 289 *e*P **P 08 43 50.8 +0.3**
comp=Z,12nm,0.9s,mb4.9
WRA Warramunga Arr 59.09 187 P **P 08 44 08.9 -1.2**
comp=Z,2.8nm,0.8s,mb4.4,baz=6.0,slow=7.2,SNR=16
WRA Warramunga Arr 59.09 187 P **P 08 44 08.9 -1.2**
WRA pmax pmax
comp=Z,3.0nm,0.8s
RES Resolute Bay 60.67 15 *e*P **P 08 44 19.1 -1.3**
RES pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
RES Resolute Bay 60.67 15 *e*P **P 08 44 19.1 -1.2**
comp=Z,6.0nm,0.9s,mb4.7
ARCES ARCESS Array B 61.89 339 P **P 08 44 28.3 -0.4**
comp=Z,2.1nm,1.0s,mb4.2,baz=62,slow=8.4,SNR=3.6
ARCES ARCESS Array B 61.89 339 P **P 08 44 28.3 -0.4**
ARCES pmax pmax
comp=Z,2.0nm,1.0s
YKA Yellowknife Ar 62.20 31 P **P 08 44 29.6 -1.3**
comp=Z,0.9nm,0.8s,mb3.9,baz=309,slow=6.9,SNR=4.3
ASAR Alice Springs 62.81 187 P **P 08 44 34.5 -0.9**
comp=Z,1.4nm,0.8s,mb4.2,baz=3.2,slow=5.1,SNR=14
ASAR Alice Springs 62.81 187 P **P 08 44 34.5 -0.9**
ASAR pmax pmax
comp=Z,1.0nm,0.8s
OBN Obninsk 66.17 323 *e*P **P 08 44 58.6 +1.5**
OBN *e* 08 45 27.9
OBN pmax pmax
comp=Z,22nm,1.7s,mb4.9
FINES FINESS Array B 66.77 332 P **P 08 44 59.8 -0.9**
comp=Z,2.5nm,0.7s,mb4.4,baz=35,slow=7.0,SNR=9.8
FINES LR LR 09 16 12.1
comp=Z,29nm,18.4s,MS3.5,baz=113,slow=38
FINES FINESS Array B 66.77 332 P **P 08 44 59.8 -1.0**
FINES pmax pmax
comp=Z,3.0nm,0.7s
FINES MLR MLR
comp=Z,29nm,18.4s
ZEI Tsey 69.17 309 *e*P **P 08 45 14.4 -1.8**
ZEI pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
KIV Kislovodsk 69.23 310 *d i*P **P 08 45 17.3 +0.8**
KIV *e* 08 45 40.1
KIV pmax pmax
comp=Z,37nm,1.6s,mb5.1
KIV Kislovodsk 69.23 310 *e*P **P 08 45 17.2 +0.6**
comp=Z,23nm,1.0s,mb5.1
GNI Garni 70.13 306 *ce*P **P 08 45 23.9 +1.7**
GNI pmax pmax
comp=Z,21nm,1.7s
HFS Hagfors 72.00 335 LR LR 09 19 55.6
comp=Z,51nm,18.9s,MS3.8,baz=152,slow=38
NB2 NORSAR Subarra 72.09 337 P **P 08 45 32.9 -0.8**
comp=Z,1.2nm,0.7s,mb3.9,baz=39,slow=6.2
NOA NORSAR Array B 72.09 337 P **P 08 45 32.8 -0.9**
comp=Z,1.9nm,0.7s,mb4.1,baz=38,slow=6.1,SNR=7.0
NOA LR LR 09 18 17.7
comp=Z,24nm,20.1s,MS3.5,baz=25,slow=37
NOA NORSAR Array B 72.09 337 P **P 08 45 32.8 -0.9**
NOA pmax pmax
comp=Z,2.0nm,0.7s
NOA MLR MLR
comp=Z,25nm,20.1s
FFC Flin Flon 72.16 33 *i*P **P 08 45 34.4 +0.2**
AKASG Malin Array Be 72.39 322 P **P 08 45 34.4 -1.2**
comp=Z,1.1nm,0.5s,mb4.1,baz=48,slow=6.8,SNR=6.5
AKASG Malin Array Be 72.39 322 P **P 08 45 34.4 -1.2**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
LRM Limekiln Ridge 72.94 44 *e*P **P 08 45 39.8 +0.8**
comp=Z,34nm,1.3s,mb5.1
CMB Columbia Colle 72.99 55 *e*P **P 08 45 39.9 +0.4**
CMB pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
CMB Columbia Colle 72.99 55 *e*P **P 08 45 39.9 +0.4**
comp=Z,3.7nm,1.0s,mb4.3
DLMT Dillon 73.14 45 *e*P **P 08 45 40.6 +0.4**
comp=Z,5.1nm,1.0s,mb4.4
HLID Hailey 73.25 47 *e*P **P 08 45 41.4 +0.5**
comp=Z,1.7nm,1.0s,mb3.9
BOZ Bozeman (W) 73.49 44 *e*P **P 08 45 42.3 0.0**
BOZ pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
BOZ Bozeman (W) 73.49 44 *e*P **P 08 45 42.3 0.0**
comp=Z,2.9nm,0.8s,mb4.3
NVAR Mina Array Bea 74.06 53 P **P 08 45 46.4 +0.6**
comp=Z,1.7nm,0.8s,mb4.0,baz=281,slow=6.3,SNR=13
NVAR Mina Array Bea 74.06 53 P **P 08 45 46.4 +0.6**
HWUT Hardware Ranch 76.11 47 *e*P **P 08 46 00.1 +2.5**
comp=Z,7.3nm,1.5s,mb4.4
DUG Dugway 76.30 49 *e*P **P 08 45 58.7 +0.1**
DUG pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
DUG Dugway 76.30 49 *e*P **P 08 45 58.7 +0.1**
comp=Z,3.7nm,1.0s,mb4.3
BW06 Boulder Array 76.49 46 *e*P **P 08 46 01.0 +1.4**
comp=Z,11nm,1.6s,mb4.5
PDAR Pinedale Array 76.49 46 P **P 08 45 59.6 0.0**
comp=Z,1.8nm,0.8s,mb4.0,baz=321,slow=2.0,SNR=14
OJC Ojcow 77.07 326 *e*P **P 08 46 01.5 -1.3**
BRTR Keskin Array B 77.16 311 P **P 08 46 01.9 -1.6**
comp=Z,0.9nm,0.7s,mb3.8,baz=120,slow=5.0,SNR=6.9
BRTR Keskin Array B 77.16 311 P **P 08 46 01.9 -1.6**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
MLR Muntele Rosu 77.52 319 LR LR 09 20 02.9
comp=Z,61nm,19.6s,MS3.9,baz=198,slow=36
MSU Marysvale 77.75 50 *e*P **P 08 46 08.1 +1.2**
MSU pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
MSU Marysvale 77.75 50 *e*P **P 08 46 08.1 +1.2**
comp=Z,2.7nm,1.0s,mb4.1
SRU San Rafael 78.34 49 *e*P **P 08 46 10.3 +0.2**
SRU pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
SRU San Rafael 78.34 49 *e*P **P 08 46 10.3 +0.2**
comp=Z,3.7nm,0.9s,mb4.3
DPC Dobruska-Polom 78.46 327 *e*P **P 08 46 11.0 +0.5**
DPC Dobruska-Polom 78.46 327 *e*P **P 08 46 11.0 +0.5**
CLL Collm 79.07 330 *i*P **P 08 46 13.5 -0.4**
CLL *e*PcP PcP 08 46 15.0 -7.4
CLL *i* 08 46 22.6
VRAC Vranov 79.14 327 LR LR 09 23 56.6
comp=Z,42nm,18.4s,MS3.8,baz=258,slow=38
PRU Pruhonice 79.48 328 *e*P **P 08 46 15.9 -0.2**
PRU Pruhonice 79.48 328 *e*P **P 08 46 15.9 -0.2**
PV10 Paradox Valley 79.70 49 *e*P **P 08 46 17.6 +0.1**
comp=Z,108nm,0.9s
KHC Kasperske Hory 80.54 328 *e*P **P 08 46 21.6 -0.3**
KHC Kasperske Hory 80.54 328 *e*P **P 08 46 21.6 -0.3**
GRF Grafenberg Arr 81.05 330 *e*P **P 08 46 24.4 -0.2**
comp=Z,6.0nm,1.2s,mb4.4
GRF Grafenberg Arr 81.05 330 *e*P **P 08 46 24.4 -0.2**
GRF pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
ANMO Albuquerque 83.54 50 *e*P **P 08 46 39.3 +1.3**
ANMO pmax pmax
comp=Z,1.0nm,1.0s
ANMO Albuquerque 83.54 50 *e*P **P 08 46 39.3 +1.4**
comp=Z,0.7nm,1.0s,mb3.8
CDF Champ du Feu 83.61 331 *e*P **P 08 46 37.3 -0.7**
HINF Hinteralfeld 84.26 331 *e*P **P 08 46 40.7 -0.6**
CABF La Chapelle 85.55 331 *e*P **P 08 46 47.1 -0.8**
LOR Lormes 85.83 332 *e*P **P 08 46 48.4 -0.8**
FLN La Foliniere 86.02 336 *e*P **P 08 46 49.2 -1.0**
comp=Z,11nm,0.9s,mb4.8
LDF La Druitiere 86.06 335 *e*P **P 08 46 49.4 -0.9**
SSF Saint Saulge 86.13 332 *e*P **P 08 46 50.0 -0.7**
comp=Z,7.1nm,0.9s,mb4.6
LPG La Plagne 86.22 330 *e*P **P 08 46 50.9 -0.3**
comp=Z,8.2nm,0.9s,mb4.6
AVF Avril sur Loir 86.42 332 *e*P **P 08 46 51.5 -0.7**
comp=Z,13nm,1.0s,mb4.8
GRR Gorron 86.47 336 *e*P **P 08 46 51.9 -0.5**
SGMF Saint Gilles 87.13 337 *e*P **P 08 46 55.2 -0.4**
comp=Z,27nm,1.2s,mb5.1
TCF Toulx Ste Croi 87.25 333 *e*P **P 08 46 55.9 -0.4**
FRF La Foret Royal 87.87 329 *e*P **P 08 46 59.3 0.0**
RJF Les Rejaudoux 88.35 333 *e*P **P 08 47 01.2 -0.3**
CAF Calviac 88.48 332 *e*P **P 08 47 02.2 +0.1**
comp=Z,31nm,1.5s,mb5.0
TXAR Lajitas Array 89.16 52 P **P 08 47 05.5 -0.1**
comp=Z,0.5nm,0.7s,mb4.0,baz=270,slow=3.5,SNR=6.6
TXAR Lajitas Array 89.16 52 P **P 08 47 05.6 -0.1**
TXAR pmax pmax
comp=Z,1.0nm,0.7s
EPF Esparros 90.74 332 *e*P **P 08 47 12.0 -0.8**
ETSF Etsaut 91.18 333 *e*P **P 08 47 14.2 -0.6**
LPAZ La Paz 145.93 56 PKPbc PKPbc 08 53 49.8 0.0
comp=Z,3.5nm,0.9s,baz=346,slow=7.2,SNR=10
LPAZ La Paz 145.93 56 *e*PKPdf PKPbc 08 53 49.5 -0.2

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*IDC **14** 08:45:44.5±0.7, 8.°07S×120.°41E, h0km, mb4.2/7, mb1 4.4/10, mb1mx4.1/23, mbtmp4.3/10, ML4.2/3, MS3.1/1, Ms1 3.1/1, ms1mx2.3/28, Error ellipse: s-maj=38.4km s-min=11.4km az=62.0*
*NEIC **14** 08:45:49.9±0.4, 8.°19S×120.°30E, h35km, mb4.7/3, Error ellipse: s-maj=13.2km s-min=6.6km az=62.0*
*DJA **14** 08:45:49, 8.°17S×120.°26E, h22km, MLv4.4/5*
*ISCJB **14** 08:45:49.3±0.6, 8.°14S±0.°04×120.°33E±0.°06, h50km±8km, mb4.4/10, Error ellipse: s-maj=10.6km s-min=6.2km az=158.6*
ISC 14 08:45:50.5±0.6, **8.°17S**±0.°04×**120.°35E**±0.°06, **h41**km±8km, **n41**, σ1**9**09/46, **mb4.4**/10, **Flores region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.49**	**182**		P	**Pn**	**08 46 15.7**	**+0.8**
MMRI	**Maumere**	**1.93**	**104**		P	**Pn**	**08 46 21.7**	**+0.9**
BKSI	**Bulukumba**	**2.84**	**356**		P	**Pn**	**08 46 32.0**	**-1.3**
KAPI	**Kappang**	**3.19**	**349**		Pn	**Pn**	**08 46 35.3**	**-2.9**
	17nm,0.3s,baz=144,slow=10,SNR=38							
KAPI					Sn	**Sn**	**08 47 13.2**	**-1.8**
	11nm,0.3s,baz=38,slow=22,SNR=6.7							
KAPI	**Kappang**	**3.19**	**349**	*e*	Pn	**Pn**	**08 46 38.6**	**+0.4**
KAPI					Sn	**Sn**	**08 47 13.2**	**-1.8**
KAPI	**Kappang**	**3.19**	**349**		P	**Pn**	**08 46 38.8**	**+0.6**
BNSI	**Bone**	**3.75**	**356**		P	**Pn**	**08 46 46.8**	**+0.9**
SPSI	**Sidrap Palu**	**4.21**	**352**		P	**Pn**	**08 46 52.6**	**+0.3**
KHKI	**Kahang-Kahang**	**4.69**	**267**		P	**Pn**	**08 47 04.9**	**+6.1**
TTSI	**Tana Toraja**	**5.12**	**354**		P	**Pn**	**08 47 07.3**	**+2.6**
	37nm,0.8s							
IGBI	**Denpasar**	**5.18**	**262**		P	**Pn**	**08 47 07.2**	**+1.6**
KMMI	**Kalianget**	**6.42**	**280**		P	**Pn**	**08 47 21.7**	**-0.9**
FITZ	**Fitzroy Crossi**	**11.14**	**153**	*e*	P	**Pn**	**08 48 27.3**	**+0.1**
	13nm,0.7s							
FITZ				*e*	S	**Sn**	**08 50 28.1**	**-2.4**
FITZ	**Fitzroy Crossi**	**11.14**	**153**		Pn	**Pn**	**08 48 26.6**	**-0.7**
	0.8nm,0.3s,baz=341,slow=5.7,SNR=16							
FITZ					Sn	**Sn**	**08 50 28.4**	**-2.1**
	0.5nm,0.3s,baz=234,slow=17,SNR=2.2							
FITZ					LR	LR	08 53 00.9	
	comp=Z,105nm,19.7s,baz=72,slow=39							
FITZ	**Fitzroy Crossi**	**11.14**	**153**	*e*	Pn	**Pn**	**08 48 27.1**	**-0.2**
FITZ					Sn	**Sn**	**08 50 28.4**	**-2.1**
FITZ					LR	LR	08 53 00.9	
KAKA	**Kakadu**	**12.72**	**112**	*e*	Pn	**Pn**	**08 48 49.8**	**+0.9**
	37nm,0.7s							
MBWA	**Marble Bar**	**12.93**	**183**	*e*	P	**Pn**	**08 48 49.9**	**-1.8**
MBWA	**Marble Bar**	**12.93**	**183**	*e*	Pn	**Pn**	**08 48 50.5**	**-1.3**
WRA	**Warramunga Arr**	**17.91**	**132**		P	**Pn**	**08 49 55.3**	**-1.3**
	1.5nm,0.3s,baz=303,slow=14,SNR=46							
WRA					S	**S**	**08 53 07.1**	**-13**
	0.1nm,0.3s,baz=306,slow=24,SNR=3.7							
WRAB	**Tennant Creek**	**17.91**	**132**	*e*	P	**Pn**	**08 49 56.1**	**-0.5**
	9.5nm,0.8s							
MEEK	**Meekatharra**	**18.44**	**185**	*e*	P	**Pn**	**08 50 04.3**	**+1.2**
ASAR	**Alice Springs**	**20.16**	**141**		P	**P**	**08 50 22.4**	**+0.9**
	8.8nm,0.4s,baz=316,slow=10,SNR=194							
ASAR					S	**S**	**08 54 09.0**	**+3.3**
	2.6nm,1.1s,baz=312,slow=20,SNR=5.5							
MORW	**Morawa**	**21.18**	**190**	*e*	P	**P**	**08 50 32.4**	**-0.1**
COEN	**Coen**	**23.12**	**106**	*e*	P	**P**	**08 50 53.1**	**-0.2**
COEN	**Coen**	**23.12**	**106**	*e*	P	**P**	**08 50 52.4**	**-0.9**
	50nm,0.8s,mb5.0							
KLBR	**Kellerberrin**	**23.43**	**186**	*e*	P	**P**	**08 50 55.4**	**-0.8**
	7.1nm,0.4s,mb4.5							
FORT	**Forrest**	**23.62**	**163**	*e*	P	**P**	**08 50 55.0**	**-3.0**
	21nm,0.7s,mb4.7							
FORT	**Forrest**	**23.62**	**163**	*e*	P	**P**	**08 50 57.3**	**-0.7**
	27nm,0.7s,mb4.8							
NWAO	**Narrogin (SRO)**	**24.81**	**186**		P	**P**	**08 51 09.3**	**+0.5**
	7.6nm,0.7s,mb4.3,baz=25,slow=9.5,SNR=8.9							
NWAO	**Narrogin (SRO)**	**24.81**	**186**		P	**P**	**08 51 09.3**	**+0.5**
MTSU	**Mount Surprise**	**25.33**	**115**	*e*	P	**P**	**08 51 14.5**	**+0.8**
	81nm,1.5s,mb5.0							
STKA	**Stephens Creek**	**30.78**	**143**	*e*	P	**P**	**08 52 02.9**	**+0.6**
	4.3nm,0.7s,mb4.4							
STKA	**Stephens Creek**	**30.78**	**143**		P	**P**	**08 52 02.6**	**+0.4**
	3.2nm,0.4s,mb4.5,baz=319,slow=9.2,SNR=34							
CMSA	**Cobar Meteorol**	**33.13**	**138**	*e*	P	**P**	**08 52 24.1**	**+1.1**
SONM	**Songino Array**	**57.11**	**349**		P	**P**	**08 55 31.8**	**-0.9**
	0.4nm,0.3s,mb3.9,baz=169,slow=8.5,SNR=2.5							
MK31	**Makanchi Array**	**64.34**	**332**	*e*	P	**P**	**08 56 22.4**	**+0.4**
MKAR	**Makanchi Array**	**64.34**	**332**		P	**P**	**08 56 22.1**	**+0.2**
	0.9nm,0.5s,mb4.0,baz=111,slow=8.7,SNR=8.8							
ZALV	**Zalesovo Beam**	**68.75**	**338**		P	**P**	**08 56 49.4**	**-0.7**
	1.4nm,0.5s,mb4.1,baz=146,slow=5.4,SNR=5.6							
BOSA	**Boshof**	**90.57**	**241**		P	**P**	**08 58 49.1**	**+0.1**
	0.7nm,0.4s,mb4.3,baz=99,slow=2.2,SNR=3.9							
CPUP	**Villa Florida**	**145.63**	**184**		PKPbc	PKPbc	09 05 25.9	+0.4
	1.3nm,0.5s,baz=131,slow=2.1,SNR=5.7							
LPAZ	**La Paz**	**154.29**	**161**		PKPab	PKPab	09 06 01.9	+0.7
	2.3nm,0.8s,baz=175,slow=3.1,SNR=9.3							

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*NEIC **14** 08:49:07.3, 36.°34N×27.°22E, h42km, MD3.5(ATH), After ATH.*
*CSEM **14** 08:49:07.3, 36.°34N×27.°22E, h42km, MD3.5, After ATH*
ATH 14 08:49:07.3, 36.°34N×27.°22E, h42km±4km, **MD3.5**/3,
Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.74**	**99**	*e*	P	Pn	08 49 22.5	+1.2
ARG	**Arkhangelos**	**0.74**	**99**	*e*	P	Pn	08 49 22.5	+1.2
ARG	**Arkhangelos**	**0.74**	**99**	*e*	P	Pn	08 49 22.5	+1.2
KARP	**Karpathos**	**0.79**	**183**	*e*	P	Pn	08 49 23.4	+1.4
KARP	**Karpathos**	**0.79**	**183**	*e*	P	Pn	08 49 23.4	+1.4
KARP	**Karpathos**	**0.79**	**183**	*e*	P	Pn	08 49 23.4	+1.4
SMG	**Samos**	**1.40**	**347**	*e*	P	Pn	08 49 31.7	+1.4
SMG	**Samos**	**1.40**	**347**	*e*	P	Pn	08 49 31.7	+1.4
SMG	**Samos**	**1.40**	**347**	*e*	P	Pn	08 49 31.7	+1.4
ZKR	**Zakros**	**1.47**	**214**	*e*	P	Pn	08 49 32.7	+1.4
ZKR	**Zakros**	**1.47**	**214**	*e*	P	Pn	08 49 32.7	+1.4
ZKR	**Zakros**	**1.47**	**214**	*e*	P	Pn	08 49 32.7	+1.4
APE	**Apeiranthos**	**1.54**	**299**	*e*	P	Pn	08 49 34.1	+1.8
APE	**Apeiranthos**	**1.54**	**299**	*e*	P	Pn	08 49 34.1	+1.8
APE	**Apeiranthos**	**1.54**	**299**	*e*	P	Pn	08 49 34.1	+1.8
NPS	**Neapolis**	**1.69**	**231**	*e*	P	Pn	08 49 35.3	+1.0
NPS	**Neapolis**	**1.69**	**231**	*e*	P	Pn	08 49 35.3	+1.0
NPS	**Neapolis**	**1.69**	**231**	*e*	P	Pn	08 49 35.3	+1.0
LAST	**Lasithi**	**1.84**	**231**	*e*	P	Pn	08 49 37.8	+1.4
LAST	**Lasithi**	**1.84**	**231**	*e*	P	Pn	08 49 37.8	+1.4
LAST	**Lasithi**	**1.84**	**231**	*e*	P	Pn	08 49 37.8	+1.4
XRY	**Khrisi**	**1.92**	**221**	*e*	P	Pn	08 49 39.4	+1.9
XRY	**Khrisi**	**1.92**	**221**	*e*	P	Pn	08 49 39.4	+1.9
XRY	**Khrisi**	**1.92**	**221**	*e*	P	Pn	08 49 39.4	+1.9
IDI	**Anoyia**	**2.17**	**242**	*e*	P	Pn	08 49 42.3	+1.5
IDI	**Anoyia**	**2.17**	**242**	*e*	P	Pn	08 49 42.3	+1.5
IDI	**Anoyia**	**2.17**	**242**	*e*	P	Pn	08 49 42.3	+1.5

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*ISCJB **14** 09:00:09.0±0.4, 31.°44N±0.°03×104.°22E±0.°05, h10km, mb3.9/10, Error ellipse: s-maj=5.9km s-min=4.7km az=19.9*
*IDC **14** 09:00:09.4±0.8, 31.°49N×104.°07E, h0km, mb3.9/10, mb1 4.0/12, mb1mx3.8/27, mbtmp3.8/12, ML3.8/1, Error ellipse: s-maj=34.8km s-min=15.6km az=57.0*
*BJI **14** 09:00:10.9, 31.°42N×104.°26E, h12km, mB4.5/2, mb4.4/3, ML3.6/15, Ms3.3/3, Ms7 3.4/3*
*NEIC **14** 09:00:11.2±0.4, 31.°53N×104.°15E, h10km, mb4.1/1, Error ellipse: s-maj=12.4km s-min=7.5km az=59.0*
ISC 14 09:00:10.8±0.4, **31.°50N**±0.°03×**104.°17E**±0.°04, **h10**km, **n23**, σ1**9**17/31, **mb3.9**/10, **1D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.69**	**211**	‖*i*/Pg		**Pg**	**09 00 22.0**	**-2.1**
CD2					Sg	**Sg**	**09 00 31.0**	**-2.0**

CD2				smax			
	comp=N,6μm,1.1s						
CD2				smax			
	comp=E,3μm,0.8s						
LZH	**Lanzhou**	**4.58**	**357**	Pg	**Pg**	**09 01 36.4**	**-2.2**
LZH				Sn	**Sn**	**09 02 17.4**	**+3.9**
LZH				Sg	**Sg**	**09 02 37.4**	**-0.6**
LZH				smax			
	comp=N,73nm,1.0s						
LZH				smax			
	comp=E,56nm,0.7s						
LZH				LR	LR		
	comp=E,230nm,5.6s						
LZH				LR	LR		
	comp=Z,260nm,6.7s						
ENH	**Enshi**	**4.73**	**104**	*e*Pn	**Pn**	**09 01 23.6**	**+1.4**
ENH				*e*Sg	**Sg**	**09 02 42.0**	**-0.9**
XAN	**Xi'an**	**4.74**	**56**	Pn	**Pn**	**09 01 22.8**	**+0.5**
XAN				Sn	**Sn**	**09 02 16.5**	**-0.8**
XAN				Sg	**Sg**	**09 02 41.1**	**-1.8**
XAN				smax			
	comp=N,110nm,0.8s						
XAN				smax			
	comp=E,50nm,0.8s						
GYA	**Guiyang**	**5.48**	**156**	Pg	**Pb**	**09 01 49.0**	**+2.4**
GYA				Sn	**Sn**	**09 02 35.8**	**+0.2**
GYA				Sg	**Sg**	**09 03 05.8**	**-0.9**
GYA				smax			
	comp=N,70nm,0.8s						
GYA				smax			
	comp=E,80nm,0.8s						
CMAR	**Chiang Mai Arr**	**13.82**	**201**	Pn	**Pn**	**09 03 27.7**	**+0.9**
	baz=12,slow=9.5,SNR=2.2						
SONM	**Songino Array**	**16.40**	**5**	Pn	**Pn**	**09 04 01.3**	**+0.2**
	comp=E,0.4nm,0.3s,baz=238,slow=8.3,SNR=3.1						
SONM	**Songino Array**	**16.40**	**5**	Pn	**Pn**	**09 04 01.3**	**+0.2**
KSRS	**Korea Array**	**20.44**	**67**	P	**P**	**09 04 49.8**	**+1.4**
	comp=E,1.2nm,0.9s,baz=262,slow=11,SNR=3.5						
CN2	**Changchun**	**20.78**	**48**	*e*P	**P**	**09 04 54.0**	**+2.1**
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
MK31	**Makanchi Array**	**22.72**	**318**	*e*P	**P**	**09 05 13.7**	**+1.0**
MKAR	**Makanchi Array**	**22.72**	**318**	P	**P**	**09 05 12.9**	**+0.2**
	comp=Z,1.2nm,0.6s,mb3.5,baz=99,slow=14,SNR=9.9						
ZALV	**Zalesovo Beam**	**26.39**	**334**	P	**P**	**09 05 47.3**	**+0.1**
	comp=Z,3.9nm,0.7s,mb4.0,baz=134,slow=9.7,SNR=14						
AML	**Almayashc**	**26.48**	**302**	P	**P**	**09 05 49.4**	**+1.3**
	comp=Z,2.0nm,0.5s,mb3.9						
KURK	**Kurchatov**	**26.96**	**323**	P	**P**	**09 05 52.5**	**+0.1**
	comp=Z,1.5nm,0.6s,mb3.7,baz=130,slow=7.8,SNR=10						
KURK	**Kurchatov**	**26.96**	**323**	P	**P**	**09 05 52.5**	**+0.1**
BVAR	**Borovoye Array**	**32.52**	**321**	P	**P**	**09 06 41.9**	**+0.3**
	comp=Z,0.6nm,0.4s,mb3.9,baz=122,slow=7.4,SNR=3.1						
ARCES	**ARCESS Array B**	**56.92**	**336**	P	**P**	**09 09 55.1**	**-0.5**
	comp=Z,1.0nm,0.5s,mb4.1,baz=93,slow=4.9,SNR=9.9						
FINES	**FINESS Array B**	**57.27**	**326**	P	**P**	**09 09 57.5**	**-0.7**
	comp=Z,2.3nm,0.6s,mb4.4,baz=80,slow=8.7,SNR=11						
WRA	**Warramunga Arr**	**58.77**	**146**	P	**P**	**09 10 09.1**	**-0.2**
	comp=Z,1.7nm,0.8s,mb4.1,baz=339,slow=8.0,SNR=19						
ASAR	**Alice Springs**	**61.80**	**149**	P	**P**	**09 10 30.9**	**+1.0**
	comp=Z,0.5nm,0.9s,mb3.6,baz=341,slow=6.2,SNR=5.1						
NB2	**NORSAR Subarra**	**64.36**	**327**	P	**P**	**09 10 45.6**	**-0.9**
	comp=Z,0.4nm,0.5s,mb3.7,baz=61,slow=5.3						
NOA	**NORSAR Array B**	**64.36**	**327**	P	**P**	**09 10 45.5**	**-1.0**
	comp=Z,0.6nm,0.7s,mb3.8,baz=108,slow=3.0,SNR=3.8						

*IDC **14** 09:21:15.1±23.0, 30.°89N×129.°59E, h0km, mb3.9/3, mb1 4.0/3, mb1mx3.5/25, mbtmp3.9/3, Error ellipse: s-maj=517.7km s-min=286.6km az=144.0*
*ISCJB **14** 09:21:21.8±1.5, 30.°49N±0.°06×131.°64E±0.°09, h33km±9km, mb4.0/3, Error ellipse: s-maj=13.4km s-min=9.4km az=165.0*
*JMA **14** 09:21:22.2±0.2, 30.°48N×131.°60E, h41km±2km, M3.1*

ISC 14 09:21:23.4±1.7, 30.°55N±0.°06×131.°58E±0.°10, h32km±10km, n11, σ0°44/15, mb4.0/3, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTN	**Tanegashima 3**	**0.52**	**282**	P	**Pb**	**09 21 33.7**	**-0.6**
JTN				S	**Sb**	**09 21 42.2**	**+0.5**
JTSR	**Tashiro 2**	**0.83**	**318**	P	**Pn**	**09 21 38.5**	**-0.4**
JTSR				*e*S	**Sb**	**09 21 50.6**	**+0.3**
JNAR	**Kushima--Naru**	**1.01**	**345**	P	**Pn**	**09 21 41.0**	**-0.3**
JNAR				*e*S	**Sn**	**09 21 54.6**	**+0.2**
JKC	**Kuchinoerabu**	**1.19**	**266**	P	**Pn**	**09 21 43.4**	**-0.4**
JKC				*e*S	**Sn**	**09 21 59.3**	**+0.3**
JSU	**Suzuyama**	**1.35**	**315**	P	**Pn**	**09 21 45.7**	**-0.4**
JTZ	**Takazaki**	**1.41**	**343**	P	**Pn**	**09 21 47.2**	**+0.4**
JZO	**Okuchi**	**1.79**	**332**	P	**Pn**	**09 21 52.5**	**+0.4**
JSJ	**Shimokoshiki**	**1.95**	**306**	P	**Pn**	**09 21 53.5**	**-0.8**
WRA	**Warramunga Arr**	**50.27**	**177**	P	**P**	**09 30 16.4**	**-0.3**
	0.7nm,0.4s,mb4.0,baz=353,slow=8.1,SNR=12						
ASAR	**Alice Springs**	**53.95**	**177**	P	**P**	**09 30 44.3**	**+0.3**
	0.6nm,0.5s,mb3.8,baz=12,slow=12,SNR=16						
STKA	**Stephens Creek**	**62.81**	**170**	P	**P**	**09 31 46.5**	**+0.7**
	1.6nm,0.6s,mb4.3,baz=0.0,slow=4.0,SNR=5.4						

*DDA **14** 09:33:50.1, 39.°67N×28.°00E, h7km±2km, Md2.9*
*ISK **14** 09:33:50.8, 39.°71N×27.°99E, h3km, MD2.6*
*CSEM **14** 09:33:50.5±0.1, 39.°66N×28.°00E, h8km, MD2.6, Error ellipse: s-maj=2.8km s-min=1.8km az=30.0*
*ISCJB **14** 09:33:50.8±0.5, 39.°66N±0.°04×28.°01E±0.°04, h8km±5km, Error ellipse: s-maj=7.7km s-min=4.3km az=29.0*

ISC 14 09:33:51.0±0.5, 39.°66N±0.°04×28.°00E±0.°04, h9km±5km, n24, σ0°59/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.10**	**257**	*e*PG	**Pg**	**09 33 53.1**	**-0.3**
BALB				*e*SG	**Sg**	**09 33 55.8**	**+0.7**
BALB	**Balikesir**	**0.10**	**257**	*e*Pg	**Pg**	**09 33 53.1**	**-0.3**
BALB				*e*Sg	**Sg**	**09 33 55.8**	**+0.7**
BALY	**Balya**	**0.31**	**285**	*i* P	**Pg**	**09 33 56.8**	**-0.2**
BALY				*i* S	**Sg**	**09 34 01.7**	**+0.6**
BALY	**Balya**	**0.31**	**285**	*i* P	**Pg**	**09 33 56.8**	**-0.2**
BALY				*i* S	**Sg**	**09 34 01.7**	**+0.5**
DURS	**Dursunbey**	**0.37**	**99**	*i* P	**Pg**	**09 33 57.6**	**-0.6**
DURS				*i* S	**Sg**	**09 34 03.9**	**+0.8**
DURS	**Dursunbey**	**0.37**	**99**	*i* P	**Pg**	**09 33 57.6**	**-0.6**
DURS				*i* S	**Sg**	**09 34 03.9**	**+0.8**
KCT	**Karacabey**	**0.66**	**24**	*e*PG	**Pg**	**09 34 03.2**	**-0.5**
KCT	**Karacabey**	**0.66**	**24**	*e*Pg	**Pg**	**09 34 03.2**	**-0.5**
DEMI	**Demirci**	**0.83**	**138**	*i* P	**Pg**	**09 34 06.1**	**-0.8**
DEMI				*i* S	**Sg**	**09 34 18.0**	**+0.3**
DEMI	**Demirci**	**0.83**	**138**	*i* P	**Pg**	**09 34 06.1**	**-0.8**
DEMI				*i* S	**Sg**	**09 34 18.0**	**+0.3**
ULDT	**Uludag**	**0.99**	**61**	*i* P	**Pg**	**09 34 09.0**	**-1.0**
ULDT				*i* S	**Sg**	**09 34 23.4**	**+0.5**
ULDT	**Uludag**	**0.99**	**61**	*i* P	**Pg**	**09 34 09.0**	**-1.1**
ULDT				*i* S	**Sg**	**09 34 23.4**	**+0.4**
ARMT	**Armutlu**	**1.12**	**36**	*e*PN	**Pn**	**09 34 12.7**	**0.0**
ARMT				*e*SN	**Sn**	**09 34 28.5**	**+0.3**
ARMT	**Armutlu**	**1.12**	**36**	*e*Pn	**Pn**	**09 34 12.7**	**0.0**
ARMT				*e*Sn	**Sn**	**09 34 28.5**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.20**	**329**	*e*PN	**Pn**	**09 34 13.5**	**-0.5**
RKY	**Sarkoy-Tekirda**	**1.20**	**329**	*e*Pn	**Pn**	**09 34 13.5**	**-0.5**
SART	**Tekirdag**	**1.20**	**329**	*i* P	**Pb**	**09 34 13.1**	**-0.8**
SART				*i* S	**Sb**	**09 34 29.8**	**+0.3**
SART	**Tekirdag**	**1.20**	**329**	*i* P	**Pb**	**09 34 13.1**	**-0.8**
SART				*i* S	**Sb**	**09 34 29.8**	**+0.2**
MFT	**Murefte**	**1.25**	**334**	*e*PN	**Pn**	**09 34 14.8**	**+0.2**
MFT	**Murefte**	**1.25**	**334**	*e*Pn	**Pn**	**09 34 14.8**	**+0.2**
GDZ	**Gediz**	**1.28**	**116**	*i* P	**Pn**	**09 34 15.0**	**0.0**
GDZ				*i* S	**Sb**	**09 34 31.7**	**-0.1**
GDZ	**Gediz**	**1.28**	**116**	*i* P	**Pn**	**09 34 15.0**	**0.0**
GDZ				*i* S	**Sb**	**09 34 31.7**	**0.0**
YLV	**Yalova**	**1.38**	**49**	*e*PN	**Pn**	**09 34 17.8**	**+1.4**
YLV	**Yalova**	**1.38**	**49**	*e*Pn	**Pn**	**09 34 17.8**	**+1.4**

*IDC **14** 09:37:27.4±3.2, 2.°21S×127.°97E, h0km, mb3.8/2, mb1 4.0/4, mb1mx3.6/20, mbtmp3.8/4, ML3.7/2, Error ellipse: s-maj=93.6km s-min=28.4km az=70.0*
*NEIC **14** 09:37:37.3±11.0, 2.°64S×128.°05E, h49km±70km, mb4.0/3, Error ellipse: s-maj=109.7km s-min=27.5km az=167.0*
*ISCJB **14** 09:37:39.2±0.8, 2.°94S±0.°08×128.°1E±0.°1, h61km±13km, mb3.7/2, Error ellipse: s-maj=17.4km s-min=13.3km az=17.5*
*DJA **14** 09:37:40, 2.°99S×128.°05E, h38km, MLv3.8/5*

ISC 14 09:37:40.1±0.9, 2.°96S±0.°08×128.°1E±0.°1, h48km±18km, n11, σ1°03/12, mb3.7/2, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.73**	**168**	P	**Pn**	**09 37 54.3**	**0.0**
NLAI	**Namlea**	**0.98**	**254**	P	**Pn**	**09 37 57.3**	**-0.3**
LBMI	**Labuha**	**2.37**	**347**	P	**Pn**	**09 38 16.9**	**+0.3**
SWI	**Sorong**	**3.83**	**57**	P	**Pn**	**09 38 36.7**	**+0.1**
FITZ	**Fitzroy Crossi**	**15.23**	**189**	Pn	**Pn**	**09 41 14.2**	**+2.0**
	0.1nm,0.3s,baz=12,slow=11,SNR=2.0						
WRAB	**Tennant Creek**	**17.95**	**160**	*e*P	**Pn**	**09 41 46.9**	**+0.5**
	4.3nm,0.8s						
WRA	**Warramunga Arr**	**17.96**	**160**	P	**Pn**	**09 41 46.0**	**-0.4**
	0.5nm,0.3s,baz=340,slow=12,SNR=19						
WRA				S	**S**	**09 45 18.7**	**+8.4**
	0.1nm,0.3s,baz=339,slow=22,SNR=3.4						
COEN	**Coen**	**18.51**	**127**	*e*P	**Pn**	**09 41 51.6**	**-1.5**
	28nm,0.9s						
MBWA	**Marble Bar**	**19.82**	**203**	*e*P	**Pn**	**09 42 06.5**	**-2.2**
	8.7nm,1.1s						
ASAR	**Alice Springs**	**21.35**	**165**	P	**P**	**09 42 23.8**	**+0.4**
	4.2nm,0.8s,mb3.8,baz=346,slow=12,SNR=30						
STKA	**Stephens Creek**	**31.46**	**158**	P	**P**	**09 43 58.1**	**+0.9**
	0.9nm,0.8s,mb3.6,baz=342,slow=9.6,SNR=3.2						

*NEIC **14** 09:38:57.9, 38.°99N×140.°83E, h7km, MG3.4(JMA), After JMA.*
*IDC **14** 09:38:57.3±1.9, 38.°83N×141.°10E, h0km, mb3.2/2, mb1 3.3/5, mb1mx3.2/27, mbtmp3.2/5, ML2.9/3, Error ellipse: s-maj=40.9km s-min=21.9km az=110.0*
*JMA **14** 09:38:57.8, 38.°99N×140.°83E, h4km±1km, M3.5*
JMA Felt I J1.
*ISCJB **14** 09:38:57.4±0.5, 38.°98N±0.°03×140.°83E±0.°05, h10km, mb3.2/2, Error ellipse: s-maj=5.5km s-min=4.4km az=35.5*

ISC 14 09:38:58.2±0.5, 38.°98N±0.°03×140.°85E±0.°05, h10km, n13, σ1°06/20, mb3.2/2, 1D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.29**	**95**	P	**Pg**	**09 39 03.7**	**-0.3**
JMK				*e*S	**Sg**	**09 39 08.0**	**+0.1**
JYK	**Kaneyama**	**0.39**	**261**	↓P	**Pg**	**09 39 05.2**	**-0.7**
JRG	**Rokugo**	**0.45**	**338**	P	**Pg**	**09 39 06.5**	**-0.5**
JRG				*e*S	**Sg**	**09 39 12.6**	**-0.4**
JOM	**Ohasama**	**0.60**	**34**	P	**Pg**	**09 39 09.2**	**-0.7**
JOM				S	**Sg**	**09 39 17.3**	**-0.5**
JOU	**Okura**	**0.63**	**194**	S	**Sg**	**09 39 18.6**	**0.0**
MJAR	**Matsushiro Arr**	**3.21**	**222**	Pn	**Pn**	**09 39 50.2**	**+1.6**
	0.5nm,0.3s,baz=25,slow=15,SNR=4.3						
MJAR				Pg	**Pg**	**09 39 56.7**	**-3.1**
	1.4nm,0.3s,baz=26,slow=15,SNR=5.2						
MAJO	**Matsushiro**	**3.21**	**222**	Pn	**Pn**	**09 39 48.0**	**-0.7**
MAT	**Matsushiro**	**3.21**	**222**	P	**Pg**	**09 39 53.4**	**-6.3**
MAT				*e*S	**Sg**	**09 40 35.0**	**-6.3**
ASAJ	**Asahikawa**	**5.30**	**14**	Pn	**Pn**	**09 40 19.8**	**+2.4**
	0.5nm,0.3s,baz=209,slow=12,SNR=4.1						
ASAJ				Sn	**Sn**	**09 41 24.6**	**+6.2**
	0.1nm,0.3s,baz=204,slow=18,SNR=1.9						
KSRS	**Korea Array**	**10.29**	**266**	Pn	**Pn**	**09 41 29.8**	**+4.0**
	0.2nm,0.3s,baz=83,slow=14,SNR=3.8						
KSRS				Sn	**Sn**	**09 43 21.6**	**+0.4**
	0.2nm,0.3s,baz=79,slow=31,SNR=2.8						
MKAR	**Makanchi Array**	**42.73**	**300**	P	**P**	**09 46 57.1**	**+1.7**
	0.1nm,0.3s,mb3.0,baz=80,slow=11,SNR=3.6						
WRA	**Warramunga Arr**	**58.93**	**187**	P	**P**	**09 48 57.2**	**-0.3**
	0.3nm,0.8s,mb3.4,baz=4.3,slow=7.4,SNR=5.5						
WRA	**Warramunga Arr**	**58.93**	**187**	P	**P**	**09 48 57.2**	**-0.3**

*IDC **14** 09:43:11.6±1.4, 38.°86N×141.°17E, h0km, mb3.4/3, mb1 3.6/6, mb1mx3.4/27, mbtmp3.4/6, ML3.2/3, MS2.5/1, Ms1 2.5/1, ms1mx1.9/26, Error ellipse: s-maj=29.1km s-min=19.2km az=118.0*
*NEIC **14** 09:43:12.3, 39.°04N×140.°86E, h11km, MG3.4(JMA), After JMA.*
*JMA **14** 09:43:12.4, 39.°04N×140.°86E, h8km±1km, M3.5*
JMA Felt II J1.
*ISCJB **14** 09:43:12.2±0.5, 39.°02N±0.°03×140.°88E±0.°04, h10km, mb3.5/3, Error ellipse: s-maj=4.8km s-min=3.9km az=38.7*

ISC 14 09:43:12.9±0.5, 39.°04N±0.°03×140.°89E±0.°04, h10km, n15, σ0°99/22, mb3.5/3, 2C-4D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.28**	**108**	↓P	**Pg**	**09 43 18.1**	**-0.4**
JMK				S	**Sg**	**09 43 22.3**	**+0.1**
JRG	**Rokugo**	**0.41**	**331**	↓P	**Pg**	**09 43 20.2**	**-0.7**
JRG				S	**Sg**	**09 43 26.0**	**-0.3**
JYK	**Kaneyama**	**0.43**	**254**	↓P	**Pg**	**09 43 20.5**	**-0.8**
JYK				S	**Sg**	**09 43 26.1**	**-0.9**
JOM	**Ohasama**	**0.54**	**36**	↑P	**Pg**	**09 43 22.9**	**-0.5**
JOM				S	**Sg**	**09 43 30.4**	**0.0**
OFUJ	**Ofunato**	**0.61**	**86**	↓P	**Pg**	**09 43 24.3**	**-0.5**
JOU	**Okura**	**0.69**	**195**	↑P	**Pg**	**09 43 25.6**	**-0.8**
JOU				S	**Sg**	**09 43 34.9**	**-0.5**
MAJO	**Matsushiro**	**3.27**	**221**	*e*Pn	**Pn**	**09 44 05.4**	**+1.1**
MAT	**Matsushiro**	**3.27**	**221**	P	**Pn**	**09 44 05.1**	**+0.8**
MAT				*e*S	**Sn**	**09 44 48.1**	**+4.9**
MJAR	**Matsushiro Arr**	**3.27**	**221**	Pn	**Pn**	**09 44 05.4**	**+1.1**
	2.1nm,0.3s,baz=44,slow=16,SNR=14						
MJAR				Pg	**Pg**	**09 44 11.6**	**-4.1**
	1.8nm,0.3s,baz=25,slow=14,SNR=16						
MJAR				Lg		09 44 56.4	
	0.7nm,0.3s,baz=25,slow=30,SNR=3.1						
ASAJ	**Asahikawa**	**5.23**	**14**	Pn	**Pn**	**09 44 34.2**	**+3.1**
	0.5nm,0.3s,baz=208,slow=12,SNR=5.0						
JHJ	**Hachijo jima 2**	**5.97**	**189**	Sn	**Sn**	**09 45 50.6**	**+0.7**
	5.0nm,0.3s,baz=46,slow=16,SNR=2.5						
KSRS	**Korea Array**	**10.32**	**265**	Pn	**Pn**	**09 45 44.5**	**+3.6**
	0.4nm,0.3s,baz=74,slow=13,SNR=4.3						
KSRS				LR	LR	09 49 03.9	
	comp=Z,25nm,21.3s,baz=0.0,slow=33						
MKAR	**Makanchi Array**	**42.73**	**300**	P	**P**	**09 51 12.0**	**+2.0**
	0.2nm,0.7s,mb3.0,baz=64,slow=6.6,SNR=2.9						
WRA	**Warramunga Arr**	**58.99**	**187**	P	**P**	**09 53 11.7**	**-1.0**
	0.6nm,0.5s,mb3.9,baz=4.5,slow=7.2,SNR=20						
ASAR	**Alice Springs**	**62.72**	**187**	P	**P**	**09 53 37.2**	**-0.7**
	0.2nm,0.4s,mb3.6,baz=359,slow=6.2,SNR=6.8						

JMA 14 09:58:59.5, 39.°05N×140.°85E, h6km±1km, M1.6, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.30**	**109**	S	Sg	09 59 09.3	-0.1
JRG	**Rokugo**	**0.38**	**334**	P	Pg	09 59 07.4	+0.4
JRG				*e*S	Sg	09 59 13.0	+1.0
JOM	**Ohasama**	**0.54**	**39**	*e*S	Sg	09 59 17.2	+0.1

*IDC **14** 09:59:07.9±3.4, 39.°39N×140.°80E, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.3/24, mbtmp3.6/2, ML2.6/1, Error ellipse: s-maj=92.6km s-min=25.9km az=137.0*
*JMA **14** 09:59:12.8, 38.°88N×140.°80E, h3km±2km, M3.0*
JMA Felt II J1.
*NEIC **14** 09:59:12.9, 38.°88N×140.°79E, h3km, MG3.0(JMA), After JMA.*
*ISCJB **14** 09:59:12.9±0.6, 38.°86N±0.°05×140.°83E±0.°06, h10km, mb3.8/2, Error ellipse: s-maj=8.5km s-min=5.2km az=42.7*

ISC 14 09:59:13.6±0.6, 38.°86N±0.°05×140.°82E±0.°06, h10km, n14, σ1°30/22, mb3.8/2, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.33**	**74**	P	**Pg**	**09 59 19.4**	**-0.6**
JMK				S	**Sg**	**09 59 24.1**	**-0.3**
JYK	**Kaneyama**	**0.36**	**279**	P	**Pg**	**09 59 19.6**	**-1.1**
JOU	**Okura**	**0.51**	**194**	P	**Pg**	**09 59 22.9**	**-0.6**
JOU				S	**Sg**	**09 59 30.1**	**-0.1**
JRG	**Rokugo**	**0.55**	**345**	P	**Pg**	**09 59 23.6**	**-0.7**
MJAR	**Matsushiro Arr**	**3.11**	**223**	Pn	**Pn**	**10 00 03.8**	**+1.2**
	0.5nm,0.3s,baz=27,slow=12,SNR=4.7						
MJAR				Pg	**Pg**	**10 00 10.8**	**-2.3**
	1.2nm,0.3s,baz=27,slow=15,SNR=8.9						
MJAR				Sn	**Sn**	**10 00 48.3**	**+8.5**
	0.6nm,0.3s,baz=12,slow=25,SNR=2.9						
MJAR				Lg		10 00 59.5	
	0.5nm,0.3s,baz=34,slow=26,SNR=2.9						
MJAR	**Matsushiro Arr**	**3.11**	**223**	Pn	**Pn**	**10 00 03.8**	**+1.3**
MJAR				Pg	**Pg**	**10 00 10.8**	**-2.3**
MJAR				Sn	**Sn**	**10 00 48.3**	**+8.5**
MJAR				Lg		10 00 59.5	
MAJO	**Matsushiro**	**3.11**	**223**	*e*Pn	**Pn**	**10 00 04.0**	**+1.4**
MAT	**Matsushiro**	**3.11**	**223**	P	**Pn**	**10 00 05.5**	**+2.9**
MAT				S	**Sn**	**10 00 46.7**	**+6.9**
ERM	**Erimo**	**3.62**	**29**	*e*Pn	**Pn**	**10 00 12.4**	**+2.7**
ERM				*e*Sn	**Sn**	**10 00 59.0**	**+6.6**
TWG	**Pinlang**	**23.23**	**232**	*e*P	**P**	**10 04 17.2**	**-3.7**
WRA	**Warramunga Arr**	**58.81**	**187**	P	**P**	**10 09 11.3**	**-0.7**
	0.7nm,0.6s,mb3.9,baz=4.6,slow=7.2,SNR=16						
WRA	**Warramunga Arr**	**58.81**	**187**	P	**P**	**10 09 11.3**	**-0.7**
ASAR	**Alice Springs**	**62.54**	**187**	P	**P**	**10 09 37.4**	**-0.1**
	0.4nm,0.7s,mb3.6,baz=8.6,slow=7.7,SNR=5.7						
ASAR	**Alice Springs**	**62.54**	**187**	P	**P**	**10 09 37.4**	**-0.1**

*NEIC **14** 10:06:54.7, 37.°87N×21.°44E, h10km, MD3.2(ATH), After ATH.*
*ATH **14** 10:06:54.7, 37.°87N×21.°44E, h10km±4km, MD3.2/13*
*THE **14** 10:06:54.8, 37.°90N×21.°45E, h2km±1km, ML3.1/11, Error ellipse: s-maj=1.8km s-min=0.8km az=193.0*
*CSEM **14** 10:06:54.4±0.3, 37.°85N×21.°43E, h14km, MD3.2, Error ellipse: s-maj=5.3km s-min=4.3km az=62.0*
*ISCJB **14** 10:06:54.1±0.5, 37.°86N±0.°02×21.°43E±0.°03, h4km±4km, Error ellipse: s-maj=3.8km s-min=3.5km az=153.9*

ISC 14 10:06:54.8±0.4, 37.°87N±0.°02×21.°44E±0.°03, h8km±3km, n74, σ1°06/115, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.19**	**7**	*e*Pg	**Pg**	**10 06 59.3**	**+0.6**
RLS				*e*Sg	**Sg**	**10 07 02.7**	**+1.4**
RLS	**Riolos of Patr**	**0.19**	**7**	*e*PG	**Pg**	**10 06 59.2**	**+0.5**
RLS				*e*SG	**Sg**	**10 07 02.7**	**+1.4**
RLS	**Riolos of Patr**	**0.19**	**7**	*e*Pg	**Pg**	**10 06 59.3**	**+0.6**
RLS				*e*Sg	**Sg**	**10 07 02.7**	**+1.4**
UPR	**University Cam**	**0.50**	**34**	P	**Pg**	**10 07 04.3**	**-0.1**
UPR				S	**Sg**	**10 07 12.1**	**+1.2**
UPR	**University Cam**	**0.50**	**34**	*e*PB	**Pg**	**10 07 04.7**	**+0.3**
UPR				*e*SB	**Sg**	**10 07 11.7**	**+0.8**
UPR	**University Cam**	**0.50**	**34**	P	**Pg**	**10 07 04.3**	**-0.1**
UPR	**University Cam**	**0.50**	**34**	*e*Pb	**Pg**	**10 07 04.7**	**+0.3**
UPR				*e*Sb	**Sg**	**10 07 11.7**	**+0.8**
UPR				S	**Sg**	**10 07 12.1**	**+1.2**
LAKA	**Lakka**	**0.56**	**49**	P	**Pg**	**10 07 04.9**	**-0.8**
LAKA				S	**Sg**	**10 07 13.5**	**+0.4**
LAKA	**Lakka**	**0.56**	**49**	P	**Pg**	**10 07 04.9**	**-0.8**
LAKA				S	**Sg**	**10 07 13.5**	**+0.4**
KFL	**Anninata**	**0.57**	**295**	P	**Pg**	**10 07 05.3**	**-0.4**
EFP	**Efpalio**	**0.67**	**33**	P	**Pg**	**10 07 06.8**	**-0.9**
EFP				S	**Sg**	**10 07 16.8**	**+0.4**
EFP	**Efpalio**	**0.67**	**33**	*e*PB	**Pg**	**10 07 06.9**	**-0.8**
EFP				*e*SB	**Sg**	**10 07 16.7**	**+0.3**
EFP	**Efpalio**	**0.67**	**33**	*e*Pb	**Pg**	**10 07 06.9**	**-0.8**
EFP				*e*Sb	**Sg**	**10 07 16.7**	**+0.3**
GUR	**Goura**	**0.72**	**84**	P	**Pg**	**10 07 07.5**	**-1.1**
GUR				S	**Sg**	**10 07 18.5**	**+0.5**
GUR	**Goura**	**0.72**	**84**	*e*PB	**Pg**	**10 07 07.5**	**-1.1**
GUR				*e*SB	**Sg**	**10 07 18.7**	**+0.7**
GUR	**Goura**	**0.72**	**84**	P	**Pg**	**10 07 07.5**	**-1.1**
GUR				S	**Sg**	**10 07 18.5**	**+0.5**
VLS	**Valsamata**	**0.74**	**295**	*e*Pb	**Pg**	**10 07 08.1**	**-0.9**
VLS				*e*Sb	**Sg**	**10 07 20.2**	**+1.6**
VLS	**Valsamata**	**0.74**	**295**	P	**Pg**	**10 07 07.7**	**-1.3**
VLS				S	**Sg**	**10 07 19.5**	**+0.9**
VLS	**Valsamata**	**0.74**	**295**	*e*PB	**Pg**	**10 07 08.1**	**-0.9**
VLS				*e*SB	**Sg**	**10 07 20.2**	**+1.6**
VLS	**Valsamata**	**0.74**	**295**	P	**Pg**	**10 07 07.7**	**-1.3**
VLS	**Valsamata**	**0.74**	**295**	*e*Pb	**Pg**	**10 07 08.1**	**-0.9**
VLS				S	**Sg**	**10 07 19.5**	**+0.9**
KALE	**Kalithea**	**0.76**	**47**	P	**Pg**	**10 07 08.2**	**-1.2**
KALE				S	**Sg**	**10 07 19.6**	**+0.3**
KALE	**Kalithea**	**0.76**	**47**	P	**Pg**	**10 07 08.2**	**-1.2**
KALE				S	**Sg**	**10 07 19.6**	**+0.3**
ITM	**Ithomi**	**0.79**	**150**	*e*Pb	**Pg**	**10 07 09.9**	**-0.1**
ITM	**Ithomi**	**0.79**	**150**	P	**Pg**	**10 07 09.8**	**-0.2**
ITM				S	**Sg**	**10 07 22.4**	**+2.2**
ITM	**Ithomi**	**0.79**	**150**	*e*PB	**Pg**	**10 07 09.9**	**-0.1**
ITM	**Ithomi**	**0.79**	**150**	P	**Pg**	**10 07 09.8**	**-0.2**
ITM

JYS	**Shiratake**	**0.95**	**216**	P	Pg	10 10 40.9	+0.1
JYS				*e*S	Sg	10 10 53.5	+0.4

IDC ***14*** *10:11:05.0±4.9, 36°.34N×71°.41E, h190km±49km, mb3.3/4, mb1 3.2/10, mb1mx3.0/31, mbtmp3.2/10, Error ellipse: s-maj=55.6km s-min=36.0km az=124.0*
NEIC ***14*** *10:11:07.9±0.8, 36°.56N×71°.45E, h210km±8km, mb4.2/5, Error ellipse: s-maj=15.7km s-min=9.0km az=127.0*
ISCJB ***14*** *10:11:07.3±0.6, 36°.65N±0°.06×71°.33E±0°.09, h214km±7km, mb3.5/5, Error ellipse: s-maj=12.8km s-min=6.7km az=35.0*
NNC ***14*** *10:11:13.2±8.9, 37°.12N×70°.97E, h185km±112km, mb2.6, mpv3.8, Error ellipse: s-maj=82.3km s-min=43.6km az=15.0*
ISC 14 10:11:08.9±0.7, 36°.75N±0°.08×71°.2E±0°.1, h199km±8km, n34, σ1°.05/42, mb3.5/5, 4C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.82**	**219**	*e*Pn	**Pn**	**10 11 56.6**	**+0.2**
KBL				*e*Sn	**Sn**	**10 12 32.6**	**-0.8**
KSH	**Kashi**	**4.67**	**52**	Pn	**Pn**	**10 12 14.8**	**-4.1**
KSH				Sn	**Sn**	**10 13 02.3**	**-12**
KSH				smax			
	comp=N,110nm,0.3s						
KSH				smax			
	comp=E,91nm,0.5s						
AML	**Almayashu**	**5.71**	**19**	P	**Pn**	**10 12 33.4**	**+1.2**
	SNR=10						
AML	**Almayashu**	**5.71**	**19**	*e*Pn	**Pn**	**10 12 33.2**	**+1.0**
	comp=E,40nm,0.6s						
UCH	**Uchtor**	**6.04**	**24**	P	**Pn**	**10 12 37.6**	**+1.1**
	SNR=26						
UCH	**Uchtor**	**6.04**	**24**	*e*Pn	**Pn**	**10 12 37.5**	**+1.0**
	comp=E,16nm,0.6s						
UCH				*e*Sn	**Sn**	**10 13 44.0**	**-1.9**
KZA	**Kyzart**	**6.17**	**29**	P	**Pn**	**10 12 38.9**	**+0.6**
	SNR=6.3						
EKS2	**Erkin-Say**	**6.23**	**18**	P	**Pn**	**10 12 40.2**	**+1.3**
	SNR=7.8						
EKS2	**Erkin-Say**	**6.23**	**18**	*e*Pn	**Pn**	**10 12 39.0**	**0.0**
	comp=E,5.7nm,0.7s						
KK31	**Karatay Array**	**6.37**	**355**	⇓P	**Pn**	**10 12 41.3**	**+0.6**
	comp=E,1.4nm,0.3s,baz=177,slow=12						
KK31				⇑S	**Sn**	**10 13 49.9**	**-3.7**
	comp=E,4.7nm,0.2s,baz=181,slow=22						
AAK	**Ala-Archa**	**6.40**	**22**	P	**Pn**	**10 12 42.3**	**+1.1**
	SNR=7.6						
AAK	**Ala-Archa**	**6.40**	**22**	P	**Pn**	**10 12 42.0**	**+0.8**
	comp=E,0.1nm,0.3s,baz=155,slow=4.5,SNR=15						
AAK				S	**Sn**	**10 13 53.3**	**-1.0**
	comp=E,0.0nm,0.3s,baz=312,slow=23,SNR=24						
KBK	**Karagaybulak**	**6.56**	**25**	P	**Pn**	**10 12 44.8**	**+1.5**
	SNR=5.8						
ULHL	**Ulahol**	**6.73**	**34**	P	**Pn**	**10 12 45.9**	**+0.4**
	SNR=6.3						
TKM2	**Tokmak 2**	**7.03**	**27**	⇑P	**Pn**	**10 12 50.2**	**+0.8**
	comp=E,7.8nm,0.5s						
TKM2				⇓S	**Sn**	**10 14 06.9**	**-2.2**
	comp=E,4.7nm,0.8s						
TKM2	**Tokmak 2**	**7.03**	**27**	P	**Pn**	**10 12 50.3**	**+0.9**
	SNR=18						
TKM2	**Tokmak 2**	**7.03**	**27**	*e*Pn	**Pn**	**10 12 50.0**	**+0.6**
	comp=E,14nm,0.8s						
TKM2				*e*Sn	**Sn**	**10 14 08.7**	**-0.4**
MK31	**Makanchi Array**	**12.99**	**36**	*e*Pn	**Pn**	**10 14 05.4**	**-0.7**
MKAR	**Makanchi Array**	**12.99**	**36**	P	**Pn**	**10 14 06.0**	**-0.2**
	comp=E,0.4nm,0.3s,baz=217,slow=9.1,SNR=8.1						
KURK	**Kurchatov**	**14.94**	**19**	P	**Pn**	**10 14 28.1**	**-2.1**
	comp=E,0.1nm,0.3s,baz=263,slow=30,SNR=5.1						
AB31	**Akbulak array**	**14.94**	**330**	⇓P	**Pn**	**10 14 29.7**	**-0.6**
	comp=E,0.3nm,0.5s						
AB31				⇑S	**Sn**	**10 17 12.0**	**-5.4**
	comp=E,0.2nm,0.5s						
BVAR	**Borovoye Array**	**16.28**	**358**	P	**Pn**	**10 14 47.9**	**+1.5**
	comp=E,0.2nm,0.3s,baz=178,slow=4.3,SNR=3.9						
AKTK	**Aktyubinsk**	**16.64**	**329**	P	**Pn**	**10 14 51.0**	**+0.2**
AKTO	**Aktyubinsk**	**16.64**	**329**	⇑P	**Pn**	**10 14 50.9**	**+0.2**
	comp=E,0.3nm,0.6s						
AKTO	**Aktyubinsk**	**16.64**	**329**	P	**Pn**	**10 14 51.0**	**+0.2**
	comp=E,0.3nm,0.3s,baz=138,slow=9.8,SNR=5.9						
ZALV	**Zalesovo Beam**	**19.62**	**24**	P	**P**	**10 15 21.8**	**-0.2**
	comp=E,0.8nm,0.3s,baz=223,slow=12,SNR=4.4						
ZALV	**Zalesovo Beam**	**19.62**	**24**	P	**P**	**10 15 21.8**	**-0.2**
ARCES	**ARCESS Array B**	**40.97**	**337**	P	**P**	**10 18 32.8**	**+1.0**
	comp=E,1.5nm,0.8s,mb3.5,baz=47,slow=5.3,SNR=6.5						
HFS	**Hagfors**	**42.97**	**322**	P	**P**	**10 18 48.1**	**+0.1**
	comp=E,1.4nm,0.6s,mb3.6,baz=97,slow=11,SNR=7.6						
NB2	**NORSAR Subarra**	**44.28**	**323**	P	**P**	**10 18 58.5**	**+0.1**
	comp=Z,0.6nm,0.5s,mb3.2,baz=98,slow=7.9						
NOA	**NORSAR Array B**	**44.28**	**323**	P	**P**	**10 18 58.3**	**-0.1**
	comp=Z,1.1nm,0.7s,mb3.3,baz=98,slow=7.9,SNR=4.8						
KKM	**Kota Kinabalu**	**51.17**	**115**	*e*P	**P**	**10 19 48.0**	**-4.0**
	comp=Z,5.5nm,0.8s,mb4.0						
TORD	**Torodi Ar. Bea**	**65.89**	**269**	P	**P**	**10 21 31.7**	**-1.9**
	comp=Z,0.5nm,0.5s,mb3.4,baz=45,slow=6.3,SNR=9.6						
TORD	**Torodi Ar. Bea**	**65.89**	**269**	P	**P**	**10 21 31.7**	**-1.9**

NIED ***14*** *10:11:00, 38°.90N×140°.90E, h5km, Mw3.9 Best double couple: M0:8.67000×10^14 NP1:φ0:195.00000°, δ55.00000°, λ89.00000°. NP2:φ0:17.00000°, δ35.00000°, λ91.00000°.*
BJI ***14*** *10:11:52.1, 38°.94N×141°.36E, h16km, mB4.7/18, mb4.5/22, Ms4.3/17, Ms7 3.8/16*
IDC ***14*** *10:11:54.8±0.5, 38°.88N×140°.76E, h0km, mb4.2/23, mb1 4.4/25, mb1mx4.3/34, mbtmp4.3/25, ML3.9/3, MS2.7/3, Ms1 2.7/3, ms1mx2.4/28, Error ellipse: s-maj=17.0km s-min=12.7km az=77.0*
NEIC ***14*** *10:11:56.4, 38°.87N×140°.86E, h9km, mb4.5/19, MW3.9(NIED), After JMA.*
NEIC Recorded [3 JMA] in Miyagi, [2 JMA] in Iwate and [1 JMA] in Yamagata.
JMA ***14*** *10:11:56.4, 38°.87N×140°.86E, h8km±1km, M4.1*
JMA Felt III J1.
ISCJB ***14*** *10:11:56.1±0.5, 38°.88N±0°.02×140°.83E±0°.03, h14km±3km, mb4.3/48, MS4.0/5, Error ellipse: s-maj=3.9km s-min=2.9km az=143.6*
MOS ***14*** *10:11:58.8±0.9, 38°.91N×140°.69E, h33km, mb4.6/24, Error ellipse: s-maj=11.4km s-min=7.0km az=80.9*
ISC 14 10:11:56.5±0.4, 38°.86N±0°.02×140°.86E±0°.02, h7km±2km, h10km±.7km: pP-P, n286, σ0°.88/297, mb4.3/48, MS4.0/5, 86C-95D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.29**	**72**	⇓P	**Pg**	**10 12 02.2**	**0.0**
JMK				S	**Sg**	**10 12 06.4**	**+0.3**
JYK	**Kaneyama**	**0.40**	**278**	⇓P	**Pg**	**10 12 04.2**	**+0.1**
JYK				*e*S	**Sg**	**10 12 09.5**	**+0.2**
JOU	**Okura**	**0.52**	**197**	⇑P	**Pg**	**10 12 06.6**	**+0.1**
JOU				S	**Sg**	**10 12 13.5**	**+0.3**
JIO	**Ouri**	**0.56**	**137**	⇓P	**Pg**	**10 12 06.9**	**-0.3**
JRG	**Rokugo**	**0.56**	**342**	⇓P	**Pg**	**10 12 07.4**	**+0.1**
JRG				S	**Sg**	**10 12 15.3**	**+0.6**
OFUJ	**Ofunato**	**0.67**	**71**	⇓P	**Pg**	**10 12 09.0**	**-0.3**
OFUJ				*e*S	**Sg**	**10 12 17.9**	**-0.1**
JOM	**Ohasama**	**0.70**	**29**	⇑P	**Pg**	**10 12 09.5**	**-0.4**
JOM				S	**Sg**	**10 12 18.9**	**0.0**
JYS	**Shiratake**	**0.89**	**225**	⇑P	**Pg**	**10 12 13.4**	**-0.2**
JYS				S	**Sg**	**10 12 25.4**	**+0.2**
JYA	**Atsumi**	**0.94**	**254**	⇓P	**Pg**	**10 12 14.1**	**-0.4**
JMM	**Marumori**	**1.00**	**183**	⇑P	**Pg**	**10 12 14.4**	**-1.2**
JMM				S	**Sg**	**10 12 27.7**	**-0.8**
MAJO	**Matsushiro**	**3.13**	**223**	*e*P	**Pn**	**10 12 47.1**	**+0.9**
MAT	**Matsushiro**	**3.13**	**223**	P	**Pn**	**10 12 47.0**	**+0.8**
MAT				S	**Sn**	**10 13 27.6**	**+3.7**
MJAR	**Matsushiro Arr**	**3.13**	**223**	Pn	**Pn**	**10 12 46.8**	**+0.6**
	2.8nm,0.3s,baz=26,slow=15,SNR=21						
MJAR				Sn	**Sn**	**10 13 32.1**	**+8.3**
	6.5nm,0.3s,baz=25,slow=34,SNR=4.7						
ERM	**Erimo**	**3.60**	**28**	*e*P	**Pn**	**10 12 54.1**	**+1.3**
ERM	**Erimo**	**3.60**	**28**	*c i*P	**Pn**	**10 12 54.2**	**+1.4**
ASAJ	**Asahikawa**	**5.41**	**13**	Pn	**Pn**	**10 13 19.5**	**+1.9**
	2.4nm,0.3s,baz=193,slow=11,SNR=16						
ASAJ	**Asahikawa**	**5.41**	**13**	P	**Pn**	**10 13 19.5**	**+1.9**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
JHJ	**Hachijo jima 2**	**5.80**	**189**	Pn	**Pn**	**10 13 23.6**	**+0.7**
	comp=Z,19nm,0.3s,baz=42,slow=20,SNR=9.7						
JHJ				Sn	**Sn**	**10 14 31.2**	**+1.5**
	comp=Z,14nm,0.3s,baz=53,slow=20,SNR=3.3						
YUK	**Yuzh-Kuril'sk**	**6.39**	**34**	*e*P	**Pn**	**10 13 30.0**	**-1.0**
YUK				*i* S	**Sn**	**10 14 41.6**	**-2.6**
YUK				pmax	pmax		
	comp=N,70nm,0.9s						
YUK				pmax	pmax		
	comp=Z,100nm,0.9s						
YUK				pmax	pmax		
	comp=E,50nm,0.4s						
YUK				smax			
	comp=N,380nm,0.5s						
YUK				smax			
	comp=E,190nm,0.5s						
YUK				smax			
	comp=N,230nm,0.6s						
YUK				smax			
	comp=E,30nm,0.2s						
MDJ	**Mudanjiang**	**10.19**	**308**	P	**Pn**	**10 14 21.3**	**-1.9**
MDJ				S	**Sn**	**10 16 19.0**	**+1.3**
MDJ				PcS	PcS	10 24 04.8	-0.3
MDJ				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MDJ				pmax	pmax		
	comp=Z,34nm,6.3s						
KSRS	**Korea Array**	**10.29**	**266**	Pn	**Pn**	**10 14 26.3**	**+1.8**
	comp=Z,0.9nm,0.3s,baz=77,slow=14,SNR=14						
KSRS				LR	LR	10 17 59.3	
	comp=Z,41nm,18.2s,baz=95,slow=36						
KSRS	**Korea Array**	**10.29**	**266**	P	**Pn**	**10 14 26.3**	**+1.8**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,41nm,18.2s						
CBIJ	**Chichi jima**	**11.79**	**174**	Pn	**Pn**	**10 14 42.5**	**-2.6**
	comp=Z,4.3nm,0.3s,baz=283,slow=22,SNR=5.1						
CBIJ				LR	LR	10 18 54.1	
	comp=Z,40nm,18.1s,baz=23,slow=36						
KLR	**Kul'dur**	**12.25**	**331**	*e*P	**Pn**	**10 14 51.9**	**+0.6**
CN2	**Changchun**	**12.59**	**298**	*e*P	**Pn**	**10 14 57.3**	**+1.4**
PETK	**Petropavlovsk-**	**18.37**	**34**	LR	LR	10 25 04.9	
	comp=Z,13nm,18.5s,baz=152,slow=43						
NJ2	**Nanjing**	**19.15**	**256**	*e*P	**Pn**	**10 16 23.4**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**22.54**	**284**	*e*P	**P**	**10 16 55.9**	**-1.0**
HHC				pP		10 17 00.1	
HHC				sP	sP	10 17 03.0	+3.4
HHC				PP		10 17 23.4	
HHC				PcP	PcP	10 20 52.0	+1.5
HHC				S	**S**	**10 20 56.0**	**-8.6**
HHC				ScP	ScP	10 24 27.0	-1.5
HHC				PcS	PcS	10 24 29.4	+0.2
HHC				pmax	pmax		
	comp=Z,20nm,0.7s,mb4.7						
HHC				pmax	pmax		
	comp=Z,83nm,4.5s						
HHC				LR	LR		
	comp=N,92nm,14.3s,MS3.5						
HHC				LR	LR		
	comp=E,100nm,14.3s,MS3.5						
HHC				LR	LR		
	comp=Z,110nm,14.3s,MS3.4						
TWG	**Pinlang**	**23.25**	**232**	*e*P	**P**	**10 17 04.3**	**-0.3**
	comp=Z,18nm,0.8s,mb4.5						
SEY	**Seymchan**	**25.09**	**12**	⇑*e*P	**P**	**10 17 22.7**	**+1.2**
LZH	**Lanzhou**	**29.38**	**276**	*e*P	**P**	**10 18 03.4**	**+3.1**
LZH				pP	pP	10 18 07.0	+4.7
LZH				sP	sP	10 18 09.1	+6.0
LZH				PP	PP	10 18 57.0	-9.4
LZH				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.7						
LZH				pmax	pmax		
	comp=Z,87nm,5.6s						
LZH				LR	LR		
	comp=E,530nm,12.1s						
LZH				LR	LR		
	comp=Z,860nm,14.2s,MS4.5						
GYA	**Guiyang**	**31.15**	**257**	P	**P**	**10 18 15.5**	**-0.5**
GYA				PP	PP	10 19 17.8	-8.4
GYA				PcP	PcP	10 21 11.3	+0.2
GYA				S	**S**	**10 23 16.8**	**-5.4**
GYA				ScP	ScP	10 24 53.5	-0.9
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
GYA				pmax	pmax		
	comp=Z,30nm,3.5s						
GYA				LR	LR		
	comp=N,470nm,15.2s,MS4.3						
GYA				LR	LR		
	comp=E,310nm,16.6s,MS4.3						
GYA				LR	LR		
	comp=Z,410nm,15.1s,MS4.2						
CD2	**Chengdu**	**31.29**	**267**	*e*P	**P**	**10 18 17.6**	**+0.4**
CD2				pP	pP	10 18 22.0	+2.8
CD2				sP	sP	10 18 24.8	+4.8
CD2				PP	PP	10 19 19.6	-8.1
CD2				S	**S**	**10 23 21.0**	**-3.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
CD2				pmax	pmax		
	comp=Z,80nm,6.2s						
CD2				LR	LR		
	comp=N,140nm,15.2s						
CD2				LR	LR		
	comp=Z,130nm,14.2s,MS3.7						
GTA	**Gaotai**	**31.65**	**284**	*e*P	**P**	**10 18 23.3**	**+3.0**
GTA				pP	pP	10 18 26.4	+4.1
GTA				sP	sP	10 18 28.9	+5.8
GTA				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.3						
BILL	**Bilibino**	**32.41**	**18**	*e*P	**P**	**10 18 26.9**	**+0.3**
BILL				pmax	pmax		
	comp=Z,8.0nm,2.5s,mb4.1						
KMI	**Kunming**	**34.85**	**258**	P	**P**	**10 18 48.9**	**+0.5**
KMI				pP	pP	10 18 52.0	+1.6
KMI				sP	sP	10 18 53.0	+1.8
KMI				PP	PP	10 20 05.8	-1.5
KMI				S	**S**	**10 24 17.1**	**-2.6**
KMI				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.8						
KMI				pmax	pmax		
	comp=Z,110nm,4.5s						
KMI				LR	LR		
	comp=N,130nm,10.4s,MS4.0						
KMI				LR	LR		
	comp=E,60nm,10.8s,MS4.0						
KMI				LR	LR		
	comp=Z,66nm,11.3s,MS3.6						
WMQ	**Urumqi**	**39.65**	**295**	*e*P	**P**	**10 19 28.0**	**-0.9**
ZALV	**Zalesovo Beam**	**40.38**	**311**	P	**P**	**10 19 33.5**	**-1.3**
	comp=Z,4.6nm,1.0s,mb4.2,baz=86,slow=7.6,SNR=11						
ZALV	**Zalesovo Beam**	**40.38**	**311**	P	**P**	**10 19 33.5**	**-1.3**
ZALV				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.2						
MKAR	**Makanchi Array**	**42.80**	**300**	P	**P**	**10 19 53.7**	**-1.0**
	comp=Z,0.6nm,0.7s,mb3.4,baz=78,slow=11,SNR=5.1						
MKAR	**Makanchi Array**	**42.80**	**300**	P	**P**	**10 19 53.7**	**-1.0**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**42.80**	**300**	P	**P**	**10 19 53.7**	**-1.0**
KURK	**Kurchatov**	**44.48**	**307**	P	**P**	**10 20 07.8**	**-0.4**
	comp=Z,5.8nm,0.8s,mb4.3,baz=82,slow=8.5,SNR=20						
KURK	**Kurchatov**	**44.48**	**307**	*de*P	**P**	**10 20 07.4**	**-0.8**
KURK				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.5						
KURK	**Kurchatov**	**44.48**	**307**	*e*P	**P**	**10 20 07.0**	**-1.1**
	comp=Z,16nm,1.3s,mb4.6						
KDAK	**Kodiak Island**	**46.05**	**43**	P	**P**	**10 20 20.3**	**-0.2**
	comp=Z,1.5nm,0.4s,mb4.3,baz=150,slow=14,SNR=4.8						
KDAK	**Kodiak Island**	**46.05**	**43**	*i* P	**P**	**10 20 20.7**	**+0.2**
KTH	**Kantishna Hill**	**46.49**	**35**	*e*P	**P**	**10 20 25.1**	**+1.1**
	comp=Z,8.8nm,1.2s,mb4.6						
COLA	**College**	**47.78**	**33**	*e*P	**P**	**10 20 34.5**	**+0.5**
COLA				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
COLA	**College**	**47.78**	**33**	*e*P	**P**	**10 20 34.5**	**+0.5**
	comp=Z,1.4nm,0.6s,mb4.2						
TKM2	**Tokmak 2**	**48.40**	**297**	*e*P	**P**	**10 20 39.5**	**+0.4**
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
TKM2	**Tokmak 2**	**48.40**	**297**	*e*P	**P**	**10 20 39.5**	**+0.4**
	comp=Z,1.8nm,0.8s,mb4.2						
BVAR	**Borovoye Array**	**49.03**	**311**	P	**P**	**10 20 42.9**	**-0.9**
	comp=Z,1.5nm,0.7s,mb4.1,baz=81,slow=8.9,SNR=5.8						
BVAR				PcP	PcP	10 22 06.5	-1.1
	comp=Z,0.6nm,0.5s,baz=120,slow=5.2,SNR=3.6						
BVAR	**Borovoye Array**	**49.03**	**311**	P	**P**	**10 20 43.0**	**-0.9**
BVAR				PcP	PcP	10 22 06.5	-1.1
AAK	**Ala-Archa**	**49.26**	**297**	P	**P**	**10 20 45.9**	**+0.2**
	comp=Z,1.1nm,0.3s,mb4.4,baz=0.0,slow=1.0,SNR=2.2						
AAK	**Ala-Archa**	**49.26**	**297**	P	**P**	**10 20 45.9**	**+0.2**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
AAK	**Ala-Archa**	**49.26**	**297**	P	**P**	**10 20 45.9**	**+0.2**
	comp=Z,1.7nm,0.4s,mb4.4						
KSH	**Kashi**	**49.28**	**292**	*e*P	**P**	**10 20 48.0**	**+2.1**
KSH				pP	pP	10 20 52.5	+4.5
KSH				sP	sP	10 20 55.1	+6.3
KSH				PcP	PcP	10 22 10.6	+1.9
KSH				PP	PP	10 22 42.6	+3.0
KSH				ScP	ScP	10 26 04.1	-0.3
KSH				PcS	PcS	10 26 05.8	+0.6
KSH				S	**S**	**10 27 53.0**	**+0.6**
KSH				sS	sS	10 28 09.0	+13
KSH				ScS	ScS	10 30 36.5	-1.9
KSH				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
KSH				pmax	pmax		
	comp=Z,36nm,3.8s						
KSH				LR	LR		
	comp=N,120nm,4.8s						
KSH				LR	LR		
	comp=E,82nm,7.3s						
KSH				LR	LR		
	comp=Z,120nm,4.8s						
UCH	**Uchtor**	**49.38**	**296**	*e*P	**P**	**10 20 43.5**	**-3.1**
	comp=Z,0.5nm,0.6s,mb3.7						
INK	**Inuvik**	**52.97**	**28**	*e*P	**P**	**10 21 13.3**	**+0.1**
ARU	**Arti**	**54.71**	**318**	*c i*P	**P**	**10 21 26.5**	**+0.4**
ARU						10 23 29.3	
ARU				S	**S**	**10 29 06.6**	**+0.1**
ARU				SS	SS	10 32 45.4	-3.4
ARU				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.7						
ARU	**Arti**	**54.71**	**318**	*e*P	**P**	**10 21 25.6**	**-0.5**
	comp=Z,48nm,0.9s						
ABKAR	**Akbulak array**	**56.44**	**309**	*e*P	**P**	**10 21 37.8**	**-0.9**
	comp=Z,4.4nm,0.6s,mb4.7						
AKTK	**Aktyubinsk**	**57.14**	**311**	P	**P**	**10 21 42.4**	**-1.2**
AKTO	**Aktyubinsk**	**57.14**	**311**	P	**P**	**10 21 42.4**	**-1.2**
	comp=Z,2.8nm,0.6s,mb4.5,baz=65,slow=12,SNR=11						
AKTO	**Aktyubinsk**	**57.14**	**311**	P	**P**	**10 21 42.4**	**-1.2**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
WRA	**Warramunga Arr**	**58.81**	**187**	P	**P**	**10 21 54.3**	**-1.2**
	comp=Z,6.6nm,0.8s,mb4.7,baz=6.3,slow=7.3,SNR=23						
WRA	**Warramunga Arr**	**58.81**	**187**	P	**P**	**10 21 54.3**	**-1.2**
WRA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
RES	**Resolute Bay**	**60.94**	**15**	*e*P	**P**	**10 22 08.8**	**-0.8**
RES				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.6						
RES	**Resolute Bay**	**60.94**	**15**	*e*P	**P**	**10 22 08.8**	**-0.8**
	comp=Z,2.8nm,0.6s,mb4.6						
ARCES	**ARCESS Array B**	**62.14**	**339**	P	**P**	**10 22 16.9**	**-0.8**
	comp=Z,2.9nm,1.0s,mb4.4,baz=46,slow=8.8,SNR=6.7						
ARCES	**ARCESS Array B**	**62.14**	**339**	P	**P**	**10 22 17.0**	**-0.7**
ARCES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ASAR	**Alice Springs**	**62.54**	**187**	P	**P**	**10 22 20.2**	**-0.6**
	comp=Z,3.3nm,0.7s,mb4.6,baz=9.3,slow=5.5,SNR=24						
ASAR	**Alice Springs**	**62.54**	**187**	P	**P**	**10 22 20.3**	**-0.6**
ASAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MBWA	**Marble Bar**	**62.90**	**202**	*e*P	**P**	**10 22 22.8**	**-0.5**
	comp=Z,3.6nm,0.8s,mb4.5						
FINES	**FINESS Array B**	**67.00**	**332**	P	**P**	**10 22 48.5**	**-1.1**
	comp=Z,2.2nm,0.7s,mb4.3,baz=29,slow=9.6,SNR=7.3						
FINES	**FINESS Array B**	**67.00**	**332**	P	**P**	**10 22 48.5**	**-1.1**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KIV	**Kislovodsk**	**69.39**	**310**	*e*P	**P**	**10 23 05.1**	**+0.2**
KIV				*e*		10 23 29.8	
KIV				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.1						
KIV	**Kislovodsk**	**69.39**	**310**	*e*P	**P**	**10 23 05.1**	**+0.2**
	comp=Z,21nm,0.9s,mb5.1						
GNI	**Garni**	**70.27**	**306**	P	**P**	**10 23 09.7**	**-0.7**
	comp=Z,4.1nm,0.4s,mb4.7,baz=80,slow=12,SNR=2.0						
GNI	**Garni**	**70.27**	**306**	P	**P**	**10 23 09.7**	**-0.8**
GNI				pmax	pmax		
	comp=Z,4.0nm,0.4s						
STKA	**Stephens Creek**	**70.38**	**179**	P	**P**	**10 23 10.4**	**-0.5**
	comp=Z,1.6nm,0.7s,mb4.1,baz=330,slow=5.5,SNR=4.8						
STKA	**Stephens Creek**	**70.38**	**179**	*e*P	**P**	**10 23 10.9**	**0.0**
	comp=Z,0.2nm,0.7s						
BMO	**Blue Mountains**	**71.01**	**47**	*e*P	**P**	**10 23 15.4**	**+0.5**
	comp=Z,1.6nm,0.8s,mb4.0						
A15A	**Johnson Ranch,**	**71.05**	**42**	⇓P	**P**	**10 23 14.1**	**-0.9**
	baz=71						
YBMT	**Yellow Bay**	**71.05**	**43**	*e*P	**P**	**10 23 16.1**	**+1.0**
F11A	**Grangeville**	**71.06**	**46**	⇓P	**P**	**10 23 14.8**	**-0.3**
	baz=71						
E12A	**Beaver Dam Sad**	**71.07**	**45**	⇓P	**P**	**10 23 14.9**	**-0.3**
	baz=71						
D13A	**Huson**	**71.27**	**44**	⇓P	**P**	**10 23 15.4**	**-1.0**
	baz=71						
G11A	**Walters Elk Ra**	**71.28**	**46**	⇓P	**P**	**10 23 16.2**	**-0.3**
	baz=71						
B15A	**Bradely Ranch,**	**71.55**	**42**	⇑P	**P**	**10 23 17.8**	**-0.3**
	baz=71,SNR=5.5						
F12A	**Elk City**	**71.64**	**46**	⇓P	**P**	**10 23 18.7**	**+0.1**
	baz=71						
SLMT	**Seeley Lake**	**71.70**	**44**	*e*P	**P**	**10 23 19.6**	**+0.6**
D14A	**Greenough**	**71.80**	**44**	⇓P	**P**	**10 23 19.5**	**-0.1**
	baz=72,SNR=6.3						
H11A	**Donnelly**	**71.84**	**47**	⇑P	**P**	**10 23 19.7**

baz=73
LRM Limekiln Ridge 73.15 44 *e*P **P 10 23 28.6 +0.9**
CMB Columbia Colle 73.17 55 *e*P **P 10 23 28.2 +0.3**
DLMT Dillon 73.36 45 *e*P **P 10 23 29.5 +0.6**
comp=Z,5.4nm,0.6s,mb4.7
HLID Hailey 73.45 47 ⇓P **P 10 23 29.6 +0.1**
baz=73
L11A Cat Creek Ranc 73.53 49 ⇑P **P 10 23 29.9 -0.1**
baz=73
G15A Dillon 73.54 45 ⇓P **P 10 23 29.7 -0.2**
baz=73,SNR=7.7
E17A Martinsdale 73.61 43 ⇑P **P 10 23 30.6 +0.3**
baz=73,SNR=5.5
F16A Kennard Place, 73.62 44 ⇑P **P 10 23 29.0 -1.4**
baz=73,SNR=6.1
J13A Cove Ranch, Pi 73.69 47 ⇑P **P 10 23 31.1 +0.2**
baz=73
D18A Linhart Farms, 73.70 42 ⇓P **P 10 23 30.6 -0.3**
baz=73
BOZ Bozeman (W) 73.71 44 ⇑P **P 10 23 29.3 -1.6**
baz=73,SNR=10.0
BOZ ⇓pP pP 10 23 32.0 -1.1
baz=73
BOZ Bozeman (W) 73.71 44 *e*P **P 10 23 31.7 +0.8**
BOZ pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
BOZ Bozeman (W) 73.71 44 *e*P **P 10 23 31.7 +0.8**
comp=Z,2.8nm,0.7s,mb4.3
K12A Draper Farm, C 73.74 48 ⇓P **P 10 23 31.6 +0.4**
baz=74
I14A Mackay 73.77 46 ⇑P **P 10 23 30.0 -1.4**
baz=74
G16A Moss Hill, Enn 73.87 45 ⇑P **P 10 23 30.3 -1.6**
baz=74
G16A ⇑pP pP 10 23 32.3 -1.7
baz=74
M11A Holland Ranch, 73.95 50 ⇓P **P 10 23 33.2 +0.7**
baz=74
L12A House Creek Ra 73.97 49 ⇑P **P 10 23 33.0 +0.4**
baz=74
E18A Harlowton 74.04 43 ⇓P **P 10 23 31.4 -1.5**
baz=74
E18A ⇓pP pP 10 23 34.1 -0.9
baz=74
F17A Fitzpatrick Pl 74.07 44 ⇑P **P 10 23 31.6 -1.4**
baz=74,SNR=5.5
F17A ⇑pP pP 10 23 33.9 -1.3
baz=74
J14A Carey 74.11 47 ⇑P **P 10 23 31.3 -2.0**
baz=74
J14A ⇑pP pP 10 23 34.6 -0.9
baz=74,SNR=5.2
NVAR Mina Array Bea 74.25 53 P **P 10 23 35.3 +1.0**
comp=Z,1.8nm,0.7s,mb4.1,baz=293,slow=5.4,SNR=20
G17A Pierce Place, 74.40 44 ⇑P **P 10 23 35.8 +0.9**
baz=74
M12A Wells 74.48 49 ⇓P **P 10 23 36.2 +0.7**
baz=74
H16A Russell Place, 74.51 45 ⇓P **P 10 23 36.1 +0.4**
baz=74
F18A Big Timber 74.57 43 ⇑P **P 10 23 36.1 +0.1**
baz=74,SNR=11
P10A Eureka 74.66 51 ⇓P **P 10 23 37.8 +1.1**
baz=74
GCMT Greycliff 74.67 43 *e*P **P 10 23 37.4 +0.8**
comp=Z,2.0nm,0.6s,mb4.2
J15A Blackfoot 74.68 46 ⇑P **P 10 23 36.9 +0.2**
baz=74
N12A Clover Valley, 74.76 50 ⇓P **P 10 23 37.8 +0.6**
baz=74
N12A Clover Valley, 74.76 50 *e*P **P 10 23 38.6 +1.4**
comp=Z,3.6nm,0.9s,mb4.3
K14A Jones Ranch, D 74.79 47 ⇑P **P 10 23 37.4 +0.1**
baz=74
I16A Newdale 74.91 46 ⇑P **P 10 23 38.6 +0.7**
baz=75,SNR=5.6
L14A Malta 75.08 48 ⇑P **P 10 23 38.7 -0.3**
baz=75
Q10A Clear Creek Ra 75.19 52 ⇑P **P 10 23 40.2 +0.5**
baz=75
IMW Indian Meadow 75.20 45 *e*P **P 10 23 41.2 +1.5**
O12A Currie 75.30 50 ⇑P **P 10 23 40.9 +0.6**
baz=75
RLMT Red Lodge 75.32 43 ⇓P **P 10 23 40.9 +0.5**
baz=75,SNR=6.0
RLMT Red Lodge 75.32 43 *e*P **P 10 23 41.1 +0.8**
R10A Warm Springs 75.58 52 ⇑P **P 10 23 40.8 -1.1**
baz=75
L15A Malad City 75.59 47 ⇑P **P 10 23 42.3 +0.4**
baz=75
S10A Tonopah Range, 75.62 53 ⇑P **P 10 23 42.3 +0.1**
baz=75,SNR=6.5
Q11A Duckwater 75.63 52 ⇑P **P 10 23 41.3 -0.9**
baz=75
J17A Brown Place, J 75.67 46 ⇓P **P 10 23 42.8 +0.4**
baz=75
O13A Hicks Ranch, I 75.84 50 ⇑P **P 10 23 43.6 +0.2**
baz=76
N14A Grayback Hills 75.86 49 ⇓P **P 10 23 44.1 +0.6**
baz=76
M15A Larsen Ranch, 75.90 48 ⇑P **P 10 23 43.9 +0.2**
baz=76,SNR=5.2
R11A Troy Canyon, C 75.98 52 ⇓P **P 10 23 44.3 +0.1**
baz=76,SNR=7.3
J18A Kendall Valley 76.15 45 ⇓P **P 10 23 44.0 -1.2**
baz=76
MPMC Manual Prospec 76.20 55 ⇑P **P 10 23 45.8 +0.2**
baz=76
P13A Bates Ranch, G 76.24 50 ⇓P **P 10 23 45.7 0.0**
baz=76
FURC Furnace Creek, 76.35 54 ⇑P **P 10 23 46.5 +0.1**
baz=76
M16A Huntsville 76.47 48 ⇑P **P 10 23 46.8 -0.1**
baz=76
DUG Dugway 76.49 49 ⇑P **P 10 23 47.7 +0.6**
baz=76,SNR=6.4
DUG Dugway 76.49 49 *e*P **P 10 23 47.8 +0.7**
DUG pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
DUG Dugway 76.49 49 *e*P **P 10 23 47.8 +0.6**
comp=Z,3.9nm,0.9s,mb4.3
K18A Toltan Ranch, 76.51 46 ⇑P **P 10 23 47.8 +0.6**
baz=76
Q13A Wheeler Ranch, 76.56 51 ⇑P **P 10 23 48.3 +0.8**
baz=76,SNR=5.7
R12A Pony Springs, 76.59 52 ⇑P **P 10 23 48.4 +0.7**
baz=76,SNR=6.3
EDW2 Edwards Air Fo 76.61 56 ⇓P **P 10 23 47.3 -0.6**
baz=76
EDW2 ⇓pP pP 10 23 48.7 -1.3
baz=76
BW06 Boulder Array 76.70 45 ⇓P **P 10 23 48.2 0.0**
baz=76
PDAR Pinedale Array 76.70 45 P **P 10 23 48.4 +0.1**
comp=Z,1.7nm,0.6s,mb4.2,baz=281,slow=1.4,SNR=21
T11A Corn Creek, Al 76.90 53 ⇓P **P 10 23 49.8 +0.3**
baz=77,SNR=9.4
Q14A Sevier Lake (B 76.98 50 ⇓P **P 10 23 50.1 +0.2**
baz=77,SNR=6.9
O16A Springville 77.25 48 ⇑P **P 10 23 52.2 +0.8**
baz=77
BRTR Keskin Array B 77.32 311 P **P 10 23 50.8 -1.0**
comp=Z,1.1nm,0.8s,mb3.9,baz=100,slow=3.0,SNR=6.4
BRTR Keskin Array B 77.32 311 P **P 10 23 50.8 -1.0**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
Q15A Fillmore 77.51 50 ⇑P **P 10 23 53.5 +0.6**
baz=77
S13A Holt Ranch, En 77.52 52 ⇑P **P 10 23 53.7 +0.7**
baz=77
TUQ Turquoise Moun 77.59 54 ⇓P **P 10 23 53.8 +0.5**
baz=77
O17A Robinson Place 77.71 48 ⇑P **P 10 23 54.0 0.0**
baz=78
MLR Muntele Rosu 77.72 319 P **P 10 23 53.0 -0.9**
comp=Z,1.3nm,0.4s,mb4.2,baz=24,slow=12,SNR=3.6
MLR Muntele Rosu 77.72 319 P **P 10 23 53.0 -0.9**
MLR pmax pmax
comp=Z,1.0nm,0.4s
U12A Valley of Fire 77.83 53 ⇑P **P 10 23 55.4 +0.7**
baz=78
T13A Saint George 77.85 52 ⇓P **P 10 23 55.9 +1.1**
baz=78,SNR=5.3
MURC Murrieta 77.91 57 ⇑P **P 10 23 56.6 +1.4**
baz=78
MSU Marysvale 77.95 50 *e*P **P 10 23 56.2 +0.9**
O18A Roosevelt 78.08 48 ⇑P **P 10 23 56.8 +0.8**
baz=78

GMRC Granite Mounta 78.17 55 ⇓P **P 10 23 56.9 +0.3**
baz=78
P17A Butcher Ranch, 78.18 49 ⇓P **P 10 23 57.1 +0.6**
baz=78,SNR=5.2
U13A Pakoon Wash 78.20 53 P **P 10 23 58.0 +1.2**
baz=78,SNR=5.7
R16A Teasdale 78.51 50 ⇓P **P 10 23 59.6 +1.2**
baz=78,SNR=6.4
SRU San Rafael 78.54 49 ⇓P **P 10 23 58.6 0.0**
baz=78,SNR=6.2
SRU San Rafael 78.54 49 *e*P **P 10 23 59.1 +0.5**
V13A Grand Canyon W 78.55 53 ⇓P **P 10 23 59.5 +0.8**
baz=78
U14A Mt Trumbull 78.68 52 ⇑P **P 10 23 57.4 -2.0**
baz=78
U14A ⇓pP pP 10 24 00.8 -0.8
baz=78
UPC Upice 78.69 328 *e*P **P 10 23 59.2 0.0**
UPC Upice 78.69 328 *e*P **P 10 23 59.2 0.0**
N20A Spence Gulch, 78.70 46 ⇑P **P 10 23 60.0 +0.5**
baz=78
T15A Red Dirt Ranch 78.79 51 ⇓P **P 10 24 00.2 +0.2**
baz=78
R17A Hanksville Air 78.88 49 ⇑P **P 10 23 59.0 -1.5**
baz=79
R17A ⇓pP pP 10 24 01.2 -1.5
baz=79
IRM Iron Mountain 78.89 55 ⇑P **P 10 24 00.9 +0.3**
baz=79
BC3 Big Chuckawall 79.01 56 ⇓P **P 10 24 01.8 +0.5**
baz=79
P19A Cripple Cowboy 79.09 48 ⇑P **P 10 24 01.9 +0.2**
baz=79
U15A North Rim 79.22 52 ⇓P **P 10 24 03.4 +1.0**
baz=79
V14A Boquillas Ranc 79.23 53 ⇓P **P 10 24 03.5 +1.0**
baz=79
S17A Black Ridge (B 79.34 50 ⇓P **P 10 24 03.2 +0.1**
baz=79,SNR=5.6
VRAC Vranov 79.36 327 P **P 10 24 01.7 -1.2**
comp=Z,2.2nm,0.4s,mb4.5,baz=283,slow=22,SNR=3.5
VRAC Vranov 79.36 327 P **P 10 24 01.7 -1.2**
VRAC pmax pmax
comp=Z,2.0nm,0.4s
Q19A Hogan Spring (79.38 48 ⇓P **P 10 24 02.3 -0.9**
baz=79
R18A Canyonlands Na 79.39 49 ⇓P **P 10 24 03.1 -0.1**
baz=79
X13A Yucca 79.45 54 ⇓P **P 10 24 03.5 -0.1**
baz=79
W14A Seligman 79.52 53 ⇑P **P 10 24 04.7 +0.6**
baz=79
V15A Kaibab Nationa 79.69 52 ⇑P **P 10 24 05.5 +0.6**
baz=80
S18A Hurst Farm, Bl 79.79 50 ⇓P **P 10 24 05.7 +0.3**
baz=80
R19A Curley Farm, L 79.82 49 ⇑P **P 10 24 04.5 -1.1**
baz=80
T18A Mexican Hat 80.22 50 ⇓P **P 10 24 07.0 -0.8**
baz=80
S19A Harvey Farm, M 80.26 49 ⇑P **P 10 24 07.7 -0.3**
baz=80
PV01 Paradox Valley 80.33 48 P **P 10 24 07.4 -1.0**
WUAZ Wupatki 80.38 52 ⇓P **P 10 24 07.8 -0.9**
baz=80
Y14A Wickenburg 80.39 54 ⇓P **P 10 24 08.8 0.0**
baz=80
Z13A Yuma Proving G 80.46 55 ⇑P **P 10 24 07.9 -1.2**
baz=80
Z13A ⇓pP pP 10 24 10.0 -1.3
baz=80
X15A Humboldt 80.52 53 ⇓P **P 10 24 07.9 -1.5**
baz=80
X15A ⇓pP pP 10 24 10.9 -0.8
baz=80
SMCO Snowmass 80.55 47 *e*P **P 10 24 10.6 +1.1**
113A Mohawk Valley, 80.66 55 ⇑P **P 10 24 10.7 +0.5**
baz=80
V17A Tonalea, Kykot 80.67 52 ⇑P **P 10 24 10.8 +0.6**
baz=80
U18A Rough Rock, Ch 80.70 50 ⇓P **P 10 24 10.5 +0.1**
baz=80
KHC Kasperske Hory 80.76 328 *e*P **P 10 24 10.5 0.0**
KHC 10 24 22.9 *e*
KHC Kasperske Hory 80.76 328 *e*P **P 10 24 10.5 0.0**
KHC 10 24 22.9 *ex* x
Q22A Crested Butte, 80.80 47 ⇑P **P 10 24 09.1 -1.8**
baz=80
Y15A Casa Rosa Ranc 80.81 54 ⇓P **P 10 24 11.1 +0.1**
baz=81
GERES GERESS Array B 80.93 328 P **P 10 24 09.7 -1.7**
comp=Z,0.2nm,0.4s,mb3.4,baz=25,slow=7.5,SNR=4.3
T19A Beclabito 80.94 50 ⇓P **P 10 24 12.0 +0.3**
baz=81
X16A Lo Mia Camp, P 81.06 53 ⇑P **P 10 24 11.2 -1.2**
baz=81
V18A Ganado 81.14 51 ⇑P **P 10 24 11.2 -1.6**
baz=81
X18A Snowflake 81.91 52 ⇑P **P 10 24 16.0 -0.8**
baz=82
U21A Nageezi 82.02 49 ⇓P **P 10 24 15.6 -1.7**
baz=82
U21A ⇓pP pP 10 24 18.5 -1.0
baz=82
T22A Edith 82.06 48 ⇑P **P 10 24 17.7 +0.1**
baz=82
Y18A Canyon Day Jun 82.36 53 ⇑P **P 10 24 19.5 +0.3**
baz=82
X19A St. Johns 82.38 52 ⇑P **P 10 24 18.9 -0.4**
baz=82
X20A Quemado 82.79 51 ⇓P **P 10 24 21.6 +0.1**
baz=82
V22A San Miguel Ran 82.81 49 ⇓P **P 10 24 21.8 +0.2**
baz=83
U23A El Rito 82.95 49 ⇑P **P 10 24 22.9 +0.7**
baz=83
118A Homack Ranch, 83.16 53 ⇓P **P 10 24 24.0 +0.6**
baz=83
217A Green Valley 83.20 55 ⇓P **P 10 24 24.0 +0.4**
baz=83
X21A Alamocita Cree 83.29 51 ⇑P **P 10 24 25.1 +1.1**
baz=83
Y20A Horse Springs, 83.29 52 ⇑P **P 10 24 25.2 +1.1**
baz=83
V23A Ortiz Mt. (NFS 83.36 49 ⇑P **P 10 24 25.6 +1.3**
baz=83
T25A Trinidad 83.42 47 ⇓P **P 10 24 24.9 +0.3**
baz=83
Y21A Point of Rocks 83.65 51 ⇓P **P 10 24 26.4 +0.5**
baz=83
ANMO Albuquerque 83.74 50 *e*P **P 10 24 27.0 +0.7**
W23A Werner Place, 83.78 49 ⇓P **P 10 24 26.3 -0.2**
baz=84
318A Bisbee 83.95 54 ⇑P **P 10 24 28.0 +0.6**
baz=84
219A White Tail Can 84.03 53 ⇓pP pP 10 24 28.9 -1.2
baz=84
Z21A St. Cloud Mine 84.13 52 ⇑P **P 10 24 29.0 +0.6**
baz=84
W24A Lazy 6 Ranch, 84.18 49 ⇓P **P 10 24 29.9 +1.3**
baz=84
V25A Rancho No Teng 84.21 48 ⇑P **P 10 24 29.8 +1.1**
baz=84
220A Playas Peak, P 84.56 53 ⇓P **P 10 24 31.4 +0.8**
baz=84
Y23A Lovelace Mesa, 84.68 50 ⇑P **P 10 24 32.1 +1.0**
baz=84
V26A Tequesquite Ra 84.72 48 ⇑P **P 10 24 31.6 +0.3**
baz=84
W25A X Bar L Ranch, 84.73 48 ⇓P **P 10 24 32.2 +0.8**
baz=84
X26A CR and CF Fran 85.58 48 ⇓P **P 10 24 35.8 +0.2**
baz=85
W27A Bowe Ranch, En 85.65 48 ⇑P **P 10 24 36.5 +0.5**
baz=85
124A Stringfield Ra 85.90 51 ⇓pP pP 10 24 38.1 -1.4
baz=86
Z25A Roswell 85.94 50 ⇓P **P 10 24 35.6 -1.8**
baz=86
Z25A ⇑pP pP 10 24 38.3 -1.4
baz=86
Z26A Caprock 86.38 49 ⇓P **P 10 24 39.6 0.0**
baz=86
125A Gardner Draw, 86.41 50 ⇓P **P 10 24 39.5 -0.3**
baz=86
Z27A Tatum 86.80 49 ⇑P **P 10 24 41.3 -0.4**
baz=86
TXAR Lajitas Array 89.35 52 P **P 10 24 53.9 0.0**

comp=Z,0.8nm,0.7s,mb4.1,baz=290,slow=3.1,SNR=14
TXAR Lajitas Array 89.35 52 P **P 10 24 53.9 0.0**
TXAR pmax pmax
comp=Z,1.0nm,0.7s
TXAR Lajitas Array 89.35 52 P **P 10 24 53.9 0.0**
JCT Junction City 90.85 49 *e*P **P 10 25 00.8 -0.1**
JCT pmax pmax
comp=Z,2.0nm,0.7s,mb4.6
JCT Junction City 90.85 49 *e*P **P 10 25 00.8 -0.2**
comp=Z,2.4nm,0.7s,mb4.6
CBN Corbin 95.64 29 *e*P **P 10 25 23.3 +0.5**
LPAZ La Paz 146.10 57 PKPbc PKPbc 10 31 37.6 -0.1
comp=Z,3.3nm,0.8s,baz=343,slow=5.8,SNR=12
LPAZ La Paz 146.10 57 PKP2 PKPbc 10 31 37.6 -0.1
LPAZ pmax pmax
comp=Z,3.0nm,0.8s
LPAZ La Paz 146.10 57 *e*PKPbc PKPbc 10 31 38.2 +0.5

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*ISK **14** 10:16:56.0, 40°.53N×36°.96E, h8km, MD2.8*
*ISCJB **14** 10:16:56.7±0.5, 40°.52N±0°.04×36°.99E±0°.04, h10km, Error ellipse: s-maj=5.2km s-min=4.0km az=162.5*
*CSEM **14** 10:16:57.1±0.2, 40°.53N×36°.98E, h5km, MD2.7, Error ellipse: s-maj=5.5km s-min=2.7km az=155.0*
*DDA **14** 10:16:58.2, 40°.78N×37°.01E, h7km±2km, Md2.7*
ISC 14 10:16:57.2±0.6, 40°.53N±0°.04×37°.00E±0°.05, h4km±10km, n20, σ0°81/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERBA	**Erbaa**	**0.24**	**310**	*i* P	**Pg**	**10 17 02.8**	**+0.9**
ERBA				*i* S	**Sg**	**10 17 06.3**	**+1.3**
ERBA	**Erbaa**	**0.24**	**310**	*i* P	**Pg**	**10 17 02.8**	**+0.9**
ERBA				*i* S	**Sg**	**10 17 06.3**	**+1.3**
TOKT	**Tokat**	**0.40**	**239**	*e*PG	**Pg**	**10 17 04.7**	**-0.3**
TOKT				*e*SG	**Sg**	**10 17 09.5**	**-0.7**
TOKT	**Tokat**	**0.40**	**239**	*e*Pg	**Pg**	**10 17 04.7**	**-0.3**
TOKT				*e*Sg	**Sg**	**10 17 09.5**	**-0.7**
TOKA	**Tokat**	**0.45**	**243**	*i* P	**Pg**	**10 17 05.1**	**-0.7**
TOKA				*i* S	**Sg**	**10 17 11.9**	**+0.4**
TOKA	**Tokat**	**0.45**	**243**	*i* P	**Pg**	**10 17 05.1**	**-0.7**
TOKA				*i* S	**Sg**	**10 17 11.9**	**+0.3**
SVSK	**Karacayir**	**0.61**	**180**	*e*PG	**Pg**	**10 17 08.4**	**-0.5**
SVSK				*e*SG	**Sg**	**10 17 17.0**	**+0.1**
SVSK	**Karacayir**	**0.61**	**180**	*e*Pg	**Pg**	**10 17 08.5**	**-0.4**
SVSK				*e*Sg	**Sg**	**10 17 17.0**	**+0.1**
KVT	**Kavak**	**0.91**	**308**	*e*PG	**Pg**	**10 17 13.1**	**-1.6**
KVT	**Kavak**	**0.91**	**308**	*e*Pg	**Pg**	**10 17 13.1**	**-1.5**
GRSN	**GIRESUNGRSN**	**1.04**	**67**	*i* P	**Pg**	**10 17 17.2**	**-0.1**
GRSN				*i* S	**Sg**	**10 17 30.3**	**-0.5**
GRSN	**GIRESUNGRSN**	**1.04**	**67**	*i* P	**Pg**	**10 17 17.2**	**-0.1**
GRSN				*i* S	**Sg**	**10 17 30.3**	**-0.5**
ESPY	**Espiye-Giresun**	**1.37**	**73**	*e*PN	**Pn**	**10 17 22.1**	**-1.0**
ESPY	**Espiye-Giresun**	**1.37**	**73**	*e*Pn	**Pn**	**10 17 22.1**	**-1.0**
DARE	**Darende-Malaty**	**1.69**	**158**	*e*PN	**Pg**	**10 17 30.9**	**+1.3**
DARE	**Darende-Malaty**	**1.69**	**158**	*e*Pn	**Pg**	**10 17 30.9**	**+1.2**
GUMT	**Gumushane**	**1.90**	**91**	*e*PN	**Pn**	**10 17 30.9**	**+0.7**
GUMT	**Gumushane**	**1.90**	**91**	*e*Pn	**Pn**	**10 17 30.9**	**+0.6**
PTK	**Pertek**	**2.47**	**131**	*e*PN	**Pn**	**10 17 38.8**	**+0.7**
PTK	**Pertek**	**2.47**	**131**	*e*Pn	**Pn**	**10 17 38.8**	**+0.7**

IDC 14 10:18:40.7±1.8, 17°.16S×178°.25W, h0km, mb3.9/4, mb1 4.2/4, mb1mx3.8/16, mbtmp3.9/4, Error ellipse: s-maj=165.5km s-min=30.7km az=156.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.13**	**240**	P	P	10 26 10.7	+0.7
1.7nm,0.8s,baz=90,slow=12,SNR=3.1							
WRA	**Warramunga Arr**	**44.92**	**259**	P	P	10 26 57.3	-0.3
0.4nm,0.6s,baz=95,slow=7.7,SNR=12							
ASAR	**Alice Springs**	**45.14**	**254**	P	P	10 26 59.0	-0.3
4.7nm,0.6s,baz=88,slow=8.1,SNR=81							
TXAR	**Lajitas Array**	**85.47**	**58**	P	P	10 31 20.9	+0.2
0.1nm,0.6s,baz=223,slow=6.8,SNR=5.4							

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*DDA **14** 10:19:36.5, 37°.36N×28°.04E, h7km±5km, Md2.7*
*CSEM **14** 10:19:36.4±0.2, 37°.34N×28°.05E, h2km, MD2.7, Error ellipse: s-maj=4.0km s-min=3.6km az=161.0*
*ISCJB **14** 10:19:36.2±0.5, 37°.34N±0°.03×28°.04E±0°.03, h11km±7km, Error ellipse: s-maj=5.5km s-min=4.6km az=13.6*
ISC 14 10:19:36.6±0.5, 37°.33N±0°.03×28°.03E±0°.04, h14km±6km, n20, σ0°88/35, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSB	**Milas**	**0.21**	**260**	*e*PG	**Pg**	**10 19 40.5**	**-0.8**
MLSB				*e*SG	**Sg**	**10 19 44.3**	**-0.2**
MLSB	**Milas**	**0.21**	**260**	*e*Pg	**Pg**	**10 19 40.5**	**-0.8**
MLSB				*e*Sg	**Sg**	**10 19 44.3**	**-0.2**
YER	**Yerkesik**	**0.28**	**135**	*e*PG	**Pg**	**10 19 42.6**	**+0.2**
YER	**Yerkesik**	**0.28**	**135**	*e*Pg	**Pg**	**10 19 42.6**	**+0.1**
AYDN	**Tasoluk**	**0.35**	**340**	*i* P	**Pg**	**10 19 43.8**	**0.0**
AYDN				*i* S	**Sg**	**10 19 48.2**	**-0.3**
AYDN	**Tasoluk**	**0.35**	**340**	*i* P	**Pg**	**10 19 43.8**	**0.0**
AYDN				*i* S	**Sg**	**10 19 48.2**	**-0.4**
BDRM	**Kayabasi**	**0.54**	**241**	*i* P	**Pg**	**10 19 46.6**	**-0.6**
BDRM				*i* S	**Sg**	**10 19 56.0**	**+1.5**
BDRM	**Kayabasi**	**0.54**	**241**	*i* P	**Pg**	**10 19 46.6**	**-0.6**
BDRM				*i* S	**Sg**	**10 19 56.0**	**+1.6**
TURN	**Turunc**	**0.65**	**135**	*i* P	**Pg**	**10 19 48.0**	**-1.2**
TURN				*i* S	**Sg**	**10 19 57.5**	**-0.2**
TURN	**Turunc**	**0.65**	**135**	*i* P	**Pg**	**10 19 48.0**	**-1.2**
TURN				*i* S	**Sg**	**10 19 57.5**	**-0.2**
DAT	**Datca**	**0.70**	**211**	*e*PG	**Pg**	**10 19 50.7**	**+0.4**
DAT	**Datca**	**0.70**	**211**	*e*Pg	**Pg**	**10 19 50.7**	**+0.4**
GCAM	**G?zelcaml?**	**0.73**	**300**	*i* P	**Pg**	**10 19 49.7**	**-1.2**
GCAM				*i* S	**Sg**	**10 20 01.4**	**+0.9**
GCAM	**G?zelcaml?**	**0.73**	**300**	*i* P	**Pg**	**10 19 49.7**	**-1.2**
GCAM				*i* S	**Sg**	**10 20 01.4**	**+0.8**
DNZL	**Cakiroluk**	**0.88**	**66**	*i* P	**Pg**	**10 19 53.5**	**-0.1**
DNZL				*i* S	**Sg**	**10 20 08.1**	**+2.9**
DNZL	**Cakiroluk**	**0.88**	**66**	*i* P	**Pb**	**10 19 53.5**	**-0.1**
MANT	**Manisa**	**1.23**	**20**	*i* P	**Pn**	**10 20 00.5**	**+1.2**
MANT				*i* S	**Sn**	**10 20 14.5**	**-1.2**
MANT	**Manisa**	**1.23**	**20**	*i* P	**Pn**	**10 20 00.5**	**+1.2**
MANT				*i* S	**Sn**	**10 20 14.5**	**-1.2**
KHAL	**Karahalli**	**1.55**	**48**	*i* P	**Pn**	**10 20 04.2**	**+0.4**
KHAL				*i* S	**Sg**	**10 20 26.6**	**0.0**
KHAL	**Karahalli**	**1.55**	**48**	*i* P	**Pn**	**10 20 04.2**	**+0.5**
KHAL				*i* S	**Sg**	**10 20 26.6**	**0.0**

IDC 14 10:45:06.6±1.2, 31°.26N×103°.73E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.5/25, mbtmp3.6/6, Error ellipse: s-maj=46.9km s-min=21.1km az=49.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.88**	**66**	P	P	10 49 50.4	+0.1
0.8nm,0.7s,baz=252,slow=8.7,SNR=3.3							
MKAR	**Makanchi Array**	**22.66**	**319**	P	P	10 50 10.1	+0.8
1.3nm,1.0s,baz=123,slow=10,SNR=4.6							
ZALV	**Zalesovo Beam**	**26.45**	**335**	P	P	10 50 44.8	-0.2
0.7nm,0.7s,baz=146,slow=14,SNR=3.7							
KURK	**Kurchatov**	**26.93**	**323**	P	P	10 50 49.7	+0.3
0.3nm,0.4s,baz=128,slow=10,SNR=4.0							
ARCES	**ARCESS Array B**	**56.99**	**336**	P	P	10 54 52.8	-0.7
1.9nm,1.0s,baz=86,slow=7.7,SNR=5.5							
WRA	**Warramunga Arr**	**58.78**	**146**	P	P	10 55 06.7	0.0
0.9nm,0.4s,baz=339,slow=8.0,SNR=21							

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*NIED **14** 11:07:00, 39°.00N×140°.80E, h5km, Mw3.5 Best double couple: M0 1.86000×10^14 NP1:φs=356.00000°, δ62.00000°, λ38.00000°. NP2:φs=246.00000°, δ57.00000°, λ146.00000°.*
JMA 14 11:07:28.4, 38°.99N×140°.83E, h7km±1km, M3.8, 3C-2D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.31**	**97**	⇓P	Pg	11 07 34.2	-0.2
JMK				S	Sg	11 07 38.4	0.0
JYK	**Kaneyama**	**0.37**	**259**	⇑P	Pg	11 07 35.9	+0.2
JYK				*e*S	Sg	11 07 40.9	+0.3
JRG	**Rokugo**	**0.43**	**339**	⇓P	Pg	11 07 36.9	+0.1
JRG				S	Sg	11 07 43.1	+0.6
JOM	**Ohasama**	**0.60**	**37**	⇑P	Pg	11 07 39.7	-0.3
JOM				S	Sg	11 07 47.7	-0.1

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOU	**Okura**	**0.64**	**192**	⇑P	Pg	11 07 40.7	+0.1
JOU				S	Sg	11 07 49.1	+0.2
MAT	**Matsushiro**	**3.21**	**221**	P	Pn	11 08 20.5	+1.3
MAT				S	Sn	11 09 03.3	+5.7

*ISCJB **14** 11:11:25.7±1.4, 6°.94S±0°.06×127°.78E±0°.09, h252km±15km, mb3.9/8, Error ellipse: s-maj=15.0km s-min=10.2km az=172.6*
*NEIC **14** 11:11:28.2±1.7, 6°.97S×127°.77E, h264km±19km, mb4.5/4, Error ellipse: s-maj=15.4km s-min=12.4km az=98.0*
*IDC **14** 11:11:28.4±3.5, 7°.02S×127°.83E, h265km±38km, mb3.4/6, mb1 3.6/9, mb1mx3.4/20, mbtmp3.5/9, Error ellipse: s-maj=30.8km s-min=12.8km az=80.0*
ISC 14 11:11:29.0±1.4, 7°.04S±0°.07×127°.8E±0°.1, h270km±15km, n24, σ0§72/29, mb3.8/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**7.26**	**141**	*eP*	**Pn**	**11 13 14.3**	**+1.1**
	10.0nm,0.4s						
KAKA	**Kakadu**	**7.26**	**141**	*ePn*	**Pn**	**11 13 13.3**	**+0.1**
KAKA				*eSn*	**S**	**11 14 31.9**	**-5.3**
KNA	**Kununurra**	**8.71**	**174**	*eP*	**Pn**	**11 13 31.5**	**+0.2**
	25nm,1.0s						
FITZ	**Fitzroy Crossi**	**11.20**	**191**	*eP*	**Pn**	**11 14 06.8**	**+4.5**
	23nm,0.6s						
FITZ				*eS*	**S**	**11 16 02.1**	**-5.5**
FITZ	**Fitzroy Crossi**	**11.20**	**191**	P	**Pn**	**11 14 01.4**	**-0.8**
	3.1nm,0.3s,baz=20,slow=8.5,SNR=51						
FITZ				S	**S**	**11 16 04.9**	**-2.7**
	0.7nm,0.3s,baz=93,slow=18,SNR=4.0						
WRAB	**Tennant Creek**	**14.31**	**154**	*eP*	**Pn**	**11 14 39.7**	**-0.6**
	11nm,0.6s						
WRAB				*ePcP*	PcP	11 19 34.5	-2.2
WRA	**Warramunga Arr**	**14.32**	**154**	P	**Pn**	**11 14 39.8**	**-0.6**
	3.3nm,0.3s,baz=331,slow=12,SNR=154						
WRA				S	**S**	**11 17 14.4**	**-4.0**
	0.4nm,0.3s,baz=329,slow=20,SNR=14						
MBWA	**Marble Bar**	**16.06**	**208**	*eP*	**P**	**11 15 00.2**	**+0.8**
MBWA	**Marble Bar**	**16.06**	**208**	*eP*	**P**	**11 15 00.1**	**+0.7**
	7.0nm,0.4s						
COEN	**Coen**	**16.61**	**116**	*eP*	**P**	**11 15 06.1**	**+0.7**
	67nm,0.8s						
ASAR	**Alice Springs**	**17.55**	**161**	P	**P**	**11 15 16.6**	**+1.0**
	5.7nm,0.3s,baz=341,slow=12,SNR=361						
ASAR				S	**S**	**11 18 23.5**	**-0.3**
	0.1nm,0.3s,baz=342,slow=24,SNR=6.5						
MEEK	**Meekatharra**	**21.36**	**203**	*eP*	**P**	**11 15 55.4**	**-0.2**
FORT	**Forrest**	**23.62**	**179**	*eP*	**P**	**11 16 16.4**	**+0.3**
	12nm,0.6s,mb4.4						
FORT	**Forrest**	**23.62**	**179**	*eP*	**P**	**11 16 16.5**	**+0.4**
	11nm,0.5s,mb4.4						
MORW	**Morawa**	**24.56**	**205**	*eP*	**P**	**11 16 25.1**	**+0.4**
KLBR	**Kellerberrin**	**26.17**	**200**	*eP*	**P**	**11 16 39.2**	**+0.2**
	4.5nm,0.4s,mb4.2						
NWAO	**Narrogin (SRO)**	**27.57**	**199**	*eP*	**P**	**11 16 51.7**	**+0.2**
	30nm,0.4s,mb5.1						
NWAO	**Narrogin (SRO)**	**27.57**	**199**	P	**P**	**11 16 51.8**	**+0.3**
	6.7nm,0.5s,mb4.3,baz=41,slow=4.9,SNR=12						
STKA	**Stephens Creek**	**27.87**	**154**	*eP*	**P**	**11 16 54.3**	**+0.1**
	1.3nm,0.3s,mb3.8						
STKA	**Stephens Creek**	**27.87**	**154**	P	**P**	**11 16 54.4**	**+0.2**
	1.5nm,0.3s,mb3.9,baz=334,slow=7.6,SNR=13						
KSRS	**Korea Array**	**44.26**	**0**	P	**P**	**11 19 12.3**	**+0.2**
	1.0nm,0.5s,mb3.3,baz=179,slow=8.9,SNR=6.8						
MJAR	**Matsushiro Arr**	**44.43**	**12**	P	**P**	**11 19 12.0**	**-1.5**
	0.5nm,0.5s,mb3.0,baz=193,slow=9.4,SNR=4.0						
MKAR	**Makanchi Array**	**67.07**	**328**	P	**P**	**11 21 53.7**	**+0.3**
	0.3nm,0.5s,mb3.3,baz=92,slow=11,SNR=5.4						
KURK	**Kurchatov**	**71.42**	**330**	P	**P**	**11 22 19.5**	**-0.5**
	0.6nm,0.4s,mb3.5,baz=127,slow=5.0,SNR=5.1						

*NIED **14** 11:21:00.38°.90N×140°.80E, h5km, Mw3.8 Best double couple: M0=5.28000×10^14 NP1:φ=214.00000°, δ73.00000°, λ153.00000°. NP2:φ=313.00000°, δ64.00000°, λ19.00000°.*
*IDC **14** 11:21:10.3±0.9, 39°.12N×141°.20E, h0km, mb3.8/6, mb1 4.0/8, mb1mx3.7/28, mbtmp3.9/8, ML3.3/3, Error ellipse: s-maj=25.4km s-min=17.7km az=90.0*
*NEIC **14** 11:21:14.8, 38°.88N×140°.76E, h7km, mb3.8/1, After JMA.*
NEIC Recorded [3 JMA] in Miyagi; [2 JMA] in Iwate and [1 JMA] in Akita and Yamagata.
*JMA **14** 11:21:14.7, 38°.88N×140°.76E, h7km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φ=310.00000°, δ65.00000°, λ28.00000°. NP2: φ=208.00000°, δ65.00000°, λ152.00000°. Principal axes: T Plg37.0000°, Azm169.0000°; N Plg53.0000°, Azm349.0000°; P Plg0.0000°, Azm259.0000°; JMA Felt III J1.*
*ISCJB **14** 11:21:14.2±0.4, 38°.91N±0°.03×140°.78E±0°.04, h23km±4km, mb3.8/7 Error ellipse: s-maj=5.8km s-min=4.7km az=31.3*
ISC 11:21:14.6±0.5, 38°.88N±0°.03×140°.78E±0°.04, h9km±4km, n23, σ0§86/33, mb3.8/7, 3C-4D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.33**	**276**	⇓P	**Pg**	**11 21 21.0**	**-0.1**
JYK				S	**Sg**	**11 21 25.3**	**-0.2**
JMK	**Ichinoseki**	**0.35**	**79**	⇓P	**Pg**	**11 21 21.8**	**+0.3**
JMK				S	**Sg**	**11 21 26.8**	**+0.6**
JRG	**Rokugo**	**0.52**	**348**	⇑P	**Pg**	**11 21 25.0**	**+0.2**
JOU	**Okura**	**0.53**	**190**	⇑P	**Pg**	**11 21 24.8**	**+0.1**
JOU				*eS*	**Sg**	**11 21 31.9**	**+0.3**
JIO	**Ouri**	**0.62**	**134**	⇑P	**Pg**	**11 21 26.3**	**-0.2**
JIO				S	**Sg**	**11 21 34.4**	**-0.2**
JOM	**Ohasama**	**0.71**	**34**	P	**Pg**	**11 21 28.4**	**+0.1**
JOM				S	**Sg**	**11 21 37.8**	**+0.2**
JYS	**Shiratake**	**0.87**	**220**	⇓P	**Pg**	**11 21 30.9**	**-0.3**
JYS				S	**Sg**	**11 21 42.5**	**0.0**
JYA	**Atsumi**	**0.88**	**251**	⇓P	**Pg**	**11 21 31.0**	**-0.5**
JMM	**Marumori**	**1.02**	**179**	P	**Pg**	**11 21 33.0**	**-1.1**
JMM				S	**Sg**	**11 21 46.5**	**-0.8**
MAJO	**Matsushiro**	**3.10**	**222**	*ePn*	**Pn**	**11 22 05.0**	**+1.5**
MAJO				*eSn*	**Sn**	**11 22 49.0**	**+8.3**
MAT	**Matsushiro**	**3.10**	**222**	P	**Pn**	**11 22 04.9**	**+1.3**
MAT				S	**Sn**	**11 22 48.8**	**+8.1**
MJAR	**Matsushiro Arr**	**3.10**	**222**	**Pn**	**Pn**	**11 22 04.8**	**+1.2**
	1.4nm,0.3s,baz=38,slow=24,SNR=15						
MJAR				Sn	**Sn**	**11 22 49.9**	**+9.2**
	1.6nm,0.3s,baz=194,slow=21,SNR=4.1						
JHJ	**Hachijo jima 2**	**5.81**	**188**	Pn	**Pn**	**11 22 41.2**	**+0.4**
	3.3nm,0.3s,baz=108,slow=20,SNR=4.5						
JHJ				Sn	**Sn**	**11 23 51.8**	**+4.2**
	3.9nm,0.3s,baz=72,slow=20,SNR=2.1						
KSRS	**Korea Array**	**10.22**	**266**	Pn	**Pn**	**11 23 43.2**	**+1.8**
	0.4nm,0.3s,baz=81,slow=14,SNR=8.1						
ZALV	**Zalesovo Beam**	**40.31**	**311**	P	**P**	**11 28 49.0**	**-2.9**
	0.3nm,0.3s,mb3.5,baz=98,slow=5.0,SNR=2.4						
KURK	**Kurchatov**	**44.41**	**307**	P	**P**	**11 29 25.0**	**-0.3**
	1.0nm,0.5s,mb3.8,baz=82,slow=8.3,SNR=6.8						
ABKAR	**Akbulak array**	**56.38**	**309**	*eP*	**P**	**11 30 55.9**	**+0.1**
	0.6nm,0.6s,mb3.8						
AKTK	**Aktyubinsk**	**57.08**	**311**	P	**P**	**11 30 59.4**	**-1.4**
AKTO	**Aktyubinsk**	**57.08**	**311**	P	**P**	**11 30 59.4**	**-1.4**
	0.4nm,0.3s,mb4.0,baz=30,slow=8.1,SNR=2.4						
WRA	**Warramunga Arr**	**58.83**	**187**	P	**P**	**11 31 12.5**	**-0.8**
	2.2nm,1.1s,mb4.1,baz=2.3,slow=7.3,SNR=30						
ASAR	**Alice Springs**	**62.55**	**187**	P	**P**	**11 31 38.7**	**+0.1**
	1.0nm,0.7s,mb4.0,baz=6.0,slow=5.9,SNR=10.0						
NVAR	**Mina Array Bea**	**74.28**	**53**	P	**P**	**11 32 47.4**	**-4.6**
	0.1nm,0.3s,mb3.2,baz=157,slow=32,SNR=3.6						
TORD	**Torodi Ar. Bea**	**115.67**	**315**	PKP	PKPdf	11 39 52.8	-4.8
	0.5nm,0.7s,baz=50,slow=4.8,SNR=2.8						

*BJI **14** 11:28:18.0, 36°.40N×82°.09E, h14km, mb4.5/2, ML3.7/4*
*IDC **14** 11:28:21.0±9.9, 36°.69N×82°.43E, h0km, mb3.3/1, mb1 3.8/5, mb1mx3.4/28, mbtmp3.8/5, ML3.5/4, Error ellipse: s-maj=135.9km s-min=31.6km az=24.0*
ISC 14 11:28:21.1±3.5, 36°.7N±0°.3×82°.1E±0°.1, h10km, n8, σ1§87/8, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**5.59**	**303**	*ePn*	**Pn**	**11 29 45.3**	**+1.0**
KSH				Sn	**Sn**	**11 30 46.3**	**-2.2**
KSH				smax			
	comp=N,73nm,1.0s						
KSH				smax			
	comp=E,59nm,0.7s						
AAK	**Ala-Archa**	**8.35**	**318**	Pg	Px	11 30 56.0	
	comp=E,0.0nm,0.3s,baz=26,slow=21,SNR=5.2						
AAK				Lg		11 32 49.5	
	comp=E,0.0nm,0.3s,baz=192,slow=14,SNR=2.6						
WMQ	**Urumqi**	**8.36**	**29**	*eP*	**Pn**	**11 30 25.4**	**+3.1**
WMQ				pmax	pmax		
	comp=Z,17nm,1.0s						
MKAR	**Makanchi Array**	**10.14**	**1**	Pn	**Pn**	**11 30 50.0**	**+3.3**
	comp=Z,1.8nm,0.3s,baz=193,slow=14,SNR=74						
KURK	**Kurchatov**	**14.28**	**351**	Pn	**Pn**	**11 31 41.6**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=173,slow=12,SNR=4.9						
ZALV	**Zalesovo Beam**	**17.41**	**5**	P	**Pn**	**11 32 22.7**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=193,slow=9.8,SNR=8.8						
BVAR	**Borovoye Array**	**18.30**	**337**	P	**Pn**	**11 32 37.1**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=134,slow=11,SNR=8.6						
SONM	**Songino Array**	**21.11**	**50**	P	**P**	**11 33 04.1**	**-1.7**
	comp=Z,1.5nm,0.8s,baz=243,slow=9.5,SNR=5.7						

*BJI **14** 11:32:06.9, 35°.49N×82°.29E, h15km, ML3.9/5*
*IDC **14** 11:32:23.2±10.0, 36°.90N×82°.69E, h0km, mb3.2/1, mb1 3.7/5, mb1mx3.4/29, mbtmp3.7/5, ML3.6/4, MS3.2/1, Ms1 3.2/1, ms1mx2.2/27, Error ellipse: s-maj=141.7km s-min=41.7km az=20.0*
ISC 14 11:32:17.3±4.9, 36°.2N±0°.4×82°.4E±0°.1, h10km, n7, σ1§40/7, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**6.02**	**305**	Pg	**Pb**	**11 33 58.8**	**-3.5**
KSH				Sn	**Sn**	**11 34 56.5**	**+1.1**
KSH				smax			
	comp=N,70nm,0.9s						
KSH				smax			
	comp=E,74nm,1.0s						
AAK	**Ala-Archa**	**8.82**	**319**	Pg	Px	11 34 57.1	
	comp=E,0.0nm,0.3s,baz=159,slow=17,SNR=2.4						
AAK				Lg		11 36 45.6	
	comp=E,0.0nm,0.3s,baz=114,slow=12,SNR=2.5						
MKAR	**Makanchi Array**	**10.54**	**360**	Pn	**Pn**	**11 34 48.7**	**+0.3**
	comp=E,1.9nm,0.3s,baz=190,slow=15,SNR=23						
KURK	**Kurchatov**	**14.72**	**351**	Pn	**Pn**	**11 35 41.0**	**-4.4**
	comp=E,0.0nm,0.3s,baz=171,slow=12,SNR=4.5						
ZALV	**Zalesovo Beam**	**17.79**	**5**	P	**Pn**	**11 36 22.5**	**-2.3**
	comp=E,0.2nm,0.3s,baz=186,slow=12,SNR=9.2						
BVAR	**Borovoye Array**	**18.78**	**337**	P	**Pn**	**11 36 38.0**	**+1.1**
	comp=E,0.2nm,0.3s,baz=133,slow=11,SNR=6.5						
SONM	**Songino Array**	**21.18**	**49**	P	**P**	**11 37 03.7**	**+1.0**
	comp=E,0.9nm,0.6s,baz=238,slow=9.8,SNR=4.4						

DJA 14 11:33:47, 2°.19S×121°.09E, h10km, MLv3.9/10, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	**Ampana**	**1.39**	**24**	P	Pn	11 34 12.5	+0.1
APSI				S	Sb	11 34 30.9	+0.1
TTSI	**Tana Toraja**	**1.53**	**236**	P	Pn	11 34 13.1	-1.3
TTSI				S	Sn	11 34 35.4	+1.1
PCI	**Palu**	**1.79**	**316**	P	Pn	11 34 18.7	+0.7
LUWI	**Luwuk**	**2.03**	**56**	P	Pn	11 34 20.7	-0.6
LUWI				S	Sn	11 34 51.2	+4.4
SPSI	**Sidrap Palu**	**2.20**	**217**	P	Pn	11 34 24.0	+0.4
KDI	**Kendari**	**2.33**	**139**	P	Pn	11 34 27.0	+1.6
BNSI	**Bone**	**2.41**	**204**	P	Pn	11 34 27.4	+0.9
MRSI	**Marisa**	**2.78**	**18**	P	Pn	11 34 31.7	+0.1
KAPI	**Kappang**	**3.11**	**205**	P	Pn	11 34 37.0	+0.9
BKSI	**Bulukumba**	**3.26**	**197**	P	Pn	11 34 39.0	+0.8

BJI 14 11:36:38.2, 35°.84N×82°.19E, h19km, ML3.8/4, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**6.15**	**309**	Pg	Pn	11 38 26.3	+18
KSH				smax			
	comp=N,58nm,0.9s						
KSH				smax			
	comp=E,67nm,1.0s						

*NNC **14** 11:37:38.2±0.3, 50°.00N×78°.70E, h0km, mb3.3, mpv2.8, Error ellipse: s-maj=4.3km s-min=1.6km az=80.0*
*ISCJB **14** 11:37:38.8±0.5, 50°.02N±0°.02×78°.57E±0°.06, h10km, Error ellipse: s-maj=5.4km s-min=3.2km az=176.0*
*IDC **14** 11:37:39.6±0.8, 50°.07N×78°.75E, h0km, mb1 3.1/3, mb1mx3.0/27, mbtmp3.1/3, ML3.0/3, Error ellipse: s-maj=12.3km s-min=5.9km az=59.0*
ISC 14 11:37:39.8±0.7, 50°.05N±0°.03×78°.74E±0°.07, h10km, n30, σ0§83/59, 19C-13D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR10	**Kurchatov Arra**	**0.50**	**342**	P	**Pg**	**11 37 48.9**	**-0.7**
KUR10				S	**Sg**	**11 37 57.6**	**+1.3**
KUR09	**Kurchatov Arra**	**0.52**	**343**	P	**Pg**	**11 37 49.4**	**-0.5**
KUR09				S	**Sg**	**11 37 57.8**	**+1.0**
KUR08	**Kurchatov Arra**	**0.54**	**344**	P	**Pg**	**11 37 49.6**	**-0.7**
KUR08				S	**Sg**	**11 37 58.0**	**+0.6**
KUR07	**Kurchatov Arra**	**0.56**	**345**	⇓P	**Pg**	**11 37 50.2**	**-0.4**
KUR07				⇓S	**Sg**	**11 37 58.6**	**+0.6**
KUR11	**Kurchatov Arra**	**0.56**	**356**	P	**Pg**	**11 37 50.1**	**-0.6**
KUR11				S	**Sg**	**11 37 58.4**	**+0.4**
KUR12	**Kurchatov Arra**	**0.56**	**354**	P	**Pg**	**11 37 50.1**	**-0.6**
KUR12				S	**Sg**	**11 37 58.5**	**+0.3**
KUR13	**Kurchatov Arra**	**0.57**	**352**	P	**Pg**	**11 37 50.3**	**-0.6**
KUR13				S	**Sg**	**11 37 58.7**	**+0.3**
KUR06	**Kurchatov Arra**	**0.57**	**346**	⇑P	**Pg**	**11 37 50.3**	**-0.6**
KUR06				⇓S	**Sg**	**11 37 58.9**	**+0.4**
KUR14	**Kurchatov Arra**	**0.58**	**350**	⇑P	**Pg**	**11 37 50.4**	**-0.6**
KUR14				⇓S	**Sg**	**11 37 58.9**	**+0.3**
KUR15	**Kurchatov Arra**	**0.58**	**349**	⇑P	**Pg**	**11 37 50.6**	**-0.6**
KUR15				⇑S	**Sg**	**11 37 59.6**	**+0.8**
KURBB	**Kurchatov Arra**	**0.59**	**347**	⇓P	**Pg**	**11 37 50.6**	**-0.7**
	5.2nm,0.3s						
KURBB				⇑S	**Sg**	**11 37 59.3**	**+0.2**
	24nm,0.5s						
KUR16	**Kurchatov Arra**	**0.60**	**345**	⇓P	**Pg**	**11 37 50.9**	**-0.6**
KUR16				⇓S	**Sg**	**11 37 59.6**	**+0.3**
KUR05	**Kurchatov Arra**	**0.61**	**348**	⇑P	**Pg**	**11 37 50.9**	**-0.7**
KUR05				⇑S	**Sg**	**11 37 59.8**	**+0.1**
KUR17	**Kurchatov Arra**	**0.61**	**343**	⇓P	**Pg**	**11 37 51.1**	**-0.6**
KUR17				⇑S	**Sg**	**11 38 00.4**	**+0.7**
KUR18	**Kurchatov Arra**	**0.62**	**342**	P	**Pg**	**11 37 51.1**	**-0.7**
KUR18				S	**Sg**	**11 38 00.3**	**+0.3**
KUR04	**Kurchatov Arra**	**0.63**	**348**	⇑P	**Pg**	**11 37 51.2**	**-0.8**
KUR04				⇑S	**Sg**	**11 38 00.5**	**+0.3**
KUR19	**Kurchatov Arra**	**0.63**	**340**	P	**Pg**	**11 37 51.2**	**-0.9**
KUR19				S	**Sg**	**11 38 00.4**	**+0.1**
KUR20	**Kurchatov Arra**	**0.64**	**339**	P	**Pg**	**11 37 51.2**	**-1.1**
KUR20				S	**Sg**	**11 38 00.5**	**-0.2**
KUR03	**Kurchatov Arra**	**0.65**	**349**	P	**Pg**	**11 37 51.6**	**-0.8**
KUR03				S	**Sg**	**11 38 01.0**	**+0.2**
KUR02	**Kurchatov Arra**	**0.67**	**350**	P	**Pg**	**11 37 51.9**	**-0.8**
KUR02				S	**Sg**	**11 38 01.5**	**+0.1**
KURK	**Kurchatov**	**0.68**	**353**	⇑P	**Pg**	**11 37 52.1**	**-0.7**
	12nm,0.3s						
KURK				⇓S	**Sg**	**11 38 02.1**	**+0.4**
	116nm,1.4s						
KURK	**Kurchatov**	**0.68**	**353**	Pg	**Pg**	**11 37 49.9**	**-3.0**
	5.2nm,0.3s,baz=163,slow=19,SNR=122						
KURK				Lg		11 37 59.6	
	6.8nm,0.3s,baz=157,slow=42,SNR=39						
KUR01	**Kurchatov Arra**	**0.69**	**350**	P	**Pg**	**11 37 52.4**	**-0.7**
KUR01				S	**Sg**	**11 38 02.1**	**+0.1**
MK31	**Makanchi Array**	**4.02**	**143**	⇓Pn	**Pn**	**11 38 43.1**	**+1.8**
	0.2nm,0.2s,baz=323,slow=9.9,SNR=12						
MK31				⇑Pg	**Pg**	**11 38 51.8**	**-4.9**
	2.3nm,0.5s,baz=337,slow=16,SNR=11						
MK31				⇓Lg		11 39 44.5	
	20nm,0.8s,baz=333,slow=27,SNR=9.9						
MKAR	**Makanchi Array**	**4.02**	**143**	Pn	**Pn**	**11 38 42.9**	**+1.6**
	0.6nm,0.3s,baz=322,slow=10.0,SNR=10						
MKAR				Pg	**Pg**	**11 38 49.5**	**-7.2**
	1.3nm,0.3s,baz=324,slow=16,SNR=10.0						
MKAR				Sn	**Sn**	**11 39 32.7**	**+4.2**
	1.1nm,0.3s,baz=326,slow=23,SNR=4.4						
MKAR				Lg		11 39 44.8	
	3.1nm,0.3s,baz=339,slow=26,SNR=13						
ZALV	**Zalesovo Beam**	**5.42**	**42**	Pn	**Pn**	**11 39 02.3**	**+1.8**
	1.6nm,0.3s,baz=233,slow=14,SNR=19						
ZALV				Lg		11 40 35.0	
	0.9nm,0.3s,baz=222,slow=29,SNR=6.2						
VOSK	**Vostochnaya**	**5.55**	**302**	⇓Pn	**Pn**	**11 39 03.3**	**+0.9**
	2.3nm,1.0s						
VOSK				⇑Sn	**Sn**	**11 40 07.5**	**+1.3**
	3.1nm,0.5s						
VOSK				⇑Lg		11 40 32.1	
	7.8nm,0.8s						
BVA0	**Borovoye Array**	**6.01**	**303**	⇓Pn	**Pn**	**11 39 10.9**	**+2.3**
	0.2nm,0.5s,baz=209,slow=48,SNR=4.8						
BVA0				⇑Sn	**Sn**	**11 40 16.8**	**-0.6**
	0.3nm,0.4s,baz=116,slow=21,SNR=9.3						
BVA0				⇑Lg		11 40 43.8	
	0.6nm,0.5s,baz=120,slow=32,SNR=4.0						
BVAR	**Borovoye Array**	**6.01**	**303**	Pn	**Pn**	**11 39 09.5**	**+0.9**
	0.3nm,0.3s,baz=123,slow=14,SNR=3.6						
BVAR				Sn	**Sn**	**11 40 15.6**	**-1.7**
	1.7nm,0.3s,baz=113,slow=23,SNR=11						
ZRNK	**Zerenda**	**6.74**	**299**	⇑Pn	**Pn**	**11 39 18.6**	**-0.1**
	1.5nm,0.8s						
ZRNK				⇑Sn	**Sn**	**11 40 35.8**	**+0.4**
	1.7nm,0.5s						
ZRNK				⇑Lg		11 41 10.4	
	4.1nm,0.7s						

*IDC **14** 11:38:13.4±0.8, 29°.57N×89°.26E, h0km, mb3.7/10, mb1 3.9/12, mb1mx3.7/28, mbtmp3.7/12, ML3.9/2, Error ellipse: s-maj=38.3km s-min=15.0km az=58.0*
*NEIC **14** 11:38:16.2±0.5, 29°.95N×89°.89E, h10km, mb3.8/1, ML4.5(DMN), Error ellipse: s-maj=10.4km s-min=7.0km az=107.0*
*DMN **14** 11:38:23.0±0.6, 29°.74N×89°.57E, h10km, Ml4.5/8, Error ellipse: s-maj=16.0km s-min=11.6km az=159.0*
ISC 14 11:38:16.8±0.6, 29°.85N±0°.05×89°.63E±0°.06, h10km, n26, σ1§46/36, mb3.7/11, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**1.33**	**96**	Pg	**Pg**	**11 38 49.8**	**+7.4**
LSA				Sg	**Sg**	**11 39 09.3**	**+10**
LSA				smax			
	comp=E,390nm,0.8s						
TAPN	**Taplejung**	**3.01**	**215**	*ePn*	**Pn**	**11 39 08.3**	**+3.8**
ODAN	**Odare**	**3.57**	**214**	*ePn*	**Pn**	**11 39 14.5**	**+2.2**
ODAN				*eSn*	**Sn**	**11 39 54.2**	**-0.3**
	comp=E,136nm,0.2s						
JIRN	**Jiri**	**3.72**	**235**	*ePn*	**Pn**	**11 39 17.9**	**+3.6**
JIRN				*eSn*	**Sn**	**11 39 57.0**	**-1.3**
	comp=E,265nm,0.3s						
GUN	**Gumba**	**3.81**	**240**	*ePn*	**Pn**	**11 39 19.1**	**+3.5**
GUN				*eSn*	**Sn**	**11 40 00.4**	**0.0**
	comp=E,272nm,0.2s						
RAMN	**Ramite**	**3.93**	**223**	*ePn*	**Pn**	**11 39 18.9**	**+1.7**
RAMN				*eSn*	**Sn**	**11 40 02.6**	**-0.8**
	comp=E,124nm,0.3s						
KKN	**Kakani**	**4.33**	**243**	*ePn*	**Pn**	**11 39 25.6**	**+2.9**
KKN				*eSn*	**Sn**	**11 40 12.2**	**-1.0**
	comp=E,307nm,0.2s						
PKI	**Pulchoki**	**4.34**	**239**	*ePn*	**Pn**	**11 39 26.0**	**+3.1**
PKI				*eSn*	**Sn**	**11 40 12.2**	**-1.4**
	comp=E,216nm,0.3s						
PKI	**Pulchoki**	**4.34**	**239**	*ePn*	**Pn**	**11 39 26.8**	**+3.9**
PKI				*eSn*	**Sn**	**11 40 12.2**	**-1.4**
PKI				*eSn*	**Sn**	**11 40 12.5**	**-1.1**
PKIN	**Phulchoki**	**4.35**	**240**	*ePn*	**Pn**	**11 39 26.8**	**+3.8**
PKIN				*eSn*	**Sn**	**11 40 12.5**	**-1.2**
	comp=E,136nm,0.2s						
DMN	**Daman**	**4.55**	**242**	*ePn*	**Pn**	**11 39 28.6**	**+2.8**
DMN				*eSn*	**Sn**	**11 40 17.9**	**-0.9**
	comp=E,163nm,0.3s						
CMAR	**Chiang Mai Arr**	**14.17**	**141**	Pn	**Pn**	**11 41 36.9**	**-0.7**
	comp=E,0.3nm,0.3s,baz=318,slow=13,SNR=6.1						
MKAR	**Makanchi Array**	**17.85**	**343**	P	**Pn**	**11 42 26.5**	**+1.3**
	comp=E,0.1nm,0.3s,baz=189,slow=8.3,SNR=2.4						
SONM	**Songino Array**	**22.12**	**31**	P	**P**	**11 43 15.2**	**+2.9**
	comp=E,0.8nm,0.8s,mb3.2,baz=213,slow=12,SNR=4.7						
KURK	**Kurchatov**	**22.42**	**341**	P	**P**	**11 43 15.3**	**-0.1**
	comp=E,0.4nm,0.5s,mb3.1,baz=223,slow=32,SNR=2.8						
ZALV	**Zalesovo Beam**	**24.33**	**353**	P	**P**	**11 43 33.1**	**-1.4**
	comp=E,0.6nm,0.5s,mb3.3,baz=177,slow=5.8,SNR=3.3						
ZALV	**Zalesovo Beam**	**24.33**	**353**	P	**P**	**11 43 33.1**	**-1.4**
BVAR	**Borovoye Array**	**27.11**	**334**	P	**P**	**11 44 00.1**	**+0.5**
	comp=E,0.4nm,0.4s,mb3.3,baz=98,slow=10,SNR=3.6						
ABKAR	**Akbulak array**	**29.70**	**319**	*eP*	**P**	**11 44 23.4**	**+0.6**
	comp=E,0.6nm,0.3s,mb3.8						
FINES	**FINESS Array B**	**51.66**	**327**	P	**P**	**11 47 22.6**	**-0.9**
	comp=E,0.8nm,0.7s,mb3.7,baz=132,slow=8.0,SNR=3.7						
ARCES	**ARCESS Array B**	**53.35**	**337**	P	**P**	**11 47 35.3**	**-

*ISCJB **14** 11:45:46.2±1.2, 34.36N±0.04×32.24E±0.08, h5km±9km, Error ellipse: s-maj=11.5km s-min=6.1km az=0.7*
*ISK **14** 11:45:47.4, 34.39N×32.28E, h15km, MD3.4*
*GII **14** 11:45:48.3±0.5, 34.46N×32.20E, h50km, Md2.8/2, Mm2.7/3*
ISC 14 11:45:47.4±1.3, **34.39N**±0.04×**32.24E**±0.08, **h6**km±10km, **n18**, σ0.55/26, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEF	**Lefka**	**0.90**	**36**	*e*Pg	**Pg**	**11 46 04.6**	**-0.1**
LEF				*e*SG	**Sg**	11 46 16.7	+0.3
LFK	**Lefkose**	**1.38**	**50**	*e*PN	**Pn**	11 46 12.6	-0.7
LFK				*e*SN	**Sn**	11 46 31.0	-0.8
IKL	**Isikli**	**2.19**	**32**	*e*PN	**Pn**	11 46 23.8	-0.5
HDMB	**Hadim**	**2.58**	**4**	*e*PN	**Pn**	11 46 29.9	+0.3
OFRI	**'Ofer**	**2.89**	**127**	Pn	**Pn**	11 46 34.8	+0.8
MMA4	**Mount Meron ar**	**2.97**	**117**	Pn	**Pn**	11 46 34.8	-0.2
KSDI	**Kefar Szold**	**3.09**	**112**	Pn	**Pn**	11 46 35.9	-0.8
KSDI				Sn	**Sn**	11 47 13.4	-0.5
MERS	**Mersin**	**3.09**	**36**	*e*PN	**Pn**	11 46 37.5	+0.7
SUTC	**Sutluce-Ispart**	**3.24**	**342**	*e*PN	**Pn**	11 46 39.5	+0.8
MMLI	**Mount Malkishu**	**3.30**	**125**	Pn	**Pn**	11 46 39.7	+0.2
MMLI				Sn	**Sn**	11 47 19.5	+0.4
HMDT	**Nahal Hemdat**	**3.48**	**127**	Pn	**Pn**	11 46 42.3	+0.2
HMDT				Sn	**Sn**	11 47 24.7	+1.1
DSI	**Dead Sea**	**3.86**	**136**	Pn	**Pn**	11 46 47.2	0.0
DSI				Sn	**Sn**	11 47 33.6	+0.7
RTMI	**Retamim**	**3.92**	**148**	Pn	**Pn**	11 46 48.2	+0.1
KZIT	**Kziot**	**3.92**	**152**	Pn	**Pn**	11 46 47.9	-0.2
MZDA	**Masada**	**4.04**	**139**	Pn	**Pn**	11 46 49.4	-0.4
MZDA				Sn	**Sn**	11 47 37.9	+0.4
RMNI	**Mount Ramon**	**4.34**	**150**	Pn	**Pn**	11 46 53.6	-0.3
PRNI	**Paran**	**4.66**	**149**	Pn	**Pn**	11 46 57.8	-0.5
EIL	**Elat**	**5.24**	**153**	Pn	**Pn**	11 47 06.0	-0.3
EIL				Sn	**Sn**	11 48 06.1	-0.9

*ISK **14** 11:49:17.2, 35.57N×27.10E, h6km, MD3.2*
*NEIC **14** 11:49:17.8, 35.57N×27.22E, h21km, MD3.6(ATH), After ATH.*
*ATH **14** 11:49:17.8, 35.58N×27.22E, h21km±1km, MD3.6/8*
*ISCJB **14** 11:49:17.8±0.8, 35.59N±0.04×27.21E±0.04, h4km±6km, Error ellipse: s-maj=8.6km s-min=3.3km az=144.7*
*CSEM **14** 11:49:19.1±0.3, 35.54N×27.29E, h15km, MD3.6, Error ellipse: s-maj=11.8km s-min=4.9km az=154.0*
ISC 14 11:49:19.1±0.6, **35.58N**±0.05×**27.24E**±0.04, **h12**km±3km, **n59**, σ1.04/84, **3C, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.07**	**245**	⇑*i*Pb	**Pg**	**11 49 21.3**	**-0.2**
KARP				*e*Sb	**Sg**	11 49 24.0	+0.8
KARP	**Karpathos**	**0.07**	**245**	⇑*i*PB	**Pg**	11 49 21.3	-0.2
KARP				*e*SB	**Sg**	11 49 24.0	+0.8
KARP	**Karpathos**	**0.07**	**245**	⇑*i*Pb	**Pg**	11 49 21.3	-0.2
KARP				*e*Sb	**Sg**	11 49 24.0	+0.8
ZKR	**Zakros**	**0.95**	**241**	*e*Pb	**Pg**	11 49 34.9	-2.5
ZKR				*e*Sn	**Sg**	11 49 49.7	-0.1
ZKR	**Zakros**	**0.95**	**241**	*e*PB	**Pg**	11 49 34.9	-2.5
ZKR				*e*SN	**Sg**	11 49 49.7	-0.1
ZKR	**Zakros**	**0.95**	**241**	*e*Pb	**Pg**	11 49 34.9	-2.5
ZKR				*e*Sn	**Sg**	11 49 49.7	-0.1
ARG	**Arkhangelos**	**0.96**	**48**	*e*Pn	**Pg**	11 49 36.5	-1.1
ARG				*e*Sn	**Sg**	11 49 50.5	+0.3
ARG	**Arkhangelos**	**0.96**	**48**	*e*PN	**Pg**	11 49 36.5	-1.1
ARG				*e*SN	**Sg**	11 49 50.5	+0.3
ARG	**Arkhangelos**	**0.96**	**48**	*e*Pn	**Pg**	11 49 36.5	-1.1
ARG				*e*Sn	**Sg**	11 49 50.5	+0.3
DAT	**Datca**	**1.18**	**13**	*e*PN	**Pn**	11 49 40.9	-0.6
DAT				*e*SN	**Sn**	11 49 58.3	+0.8
DAT	**Datca**	**1.18**	**13**	*e*Pn	**Pn**	11 49 40.9	-0.5
DAT				*e*Sn	**Sn**	11 49 58.3	+0.8
NPS	**Neapolis**	**1.36**	**257**	*e*Pn	**Pn**	11 49 43.5	-0.4
NPS				*e*Sn	**Sn**	11 50 01.6	-0.3
NPS	**Neapolis**	**1.36**	**257**	*e*PN	**Pn**	11 49 43.5	-0.4
NPS				*e*SN	**Sn**	11 50 01.6	-0.3
NPS	**Neapolis**	**1.36**	**257**	*e*Pn	**Pn**	11 49 43.5	-0.4
NPS				*e*Sn	**Sn**	11 50 01.6	-0.3
LAST	**Lasithi**	**1.50**	**254**	*e*Pn	**Pn**	11 49 45.7	0.0
LAST				*e*Sn	**Sn**	11 50 05.6	+0.4
LAST	**Lasithi**	**1.50**	**254**	*e*PN	**Pn**	11 49 45.7	0.0
LAST				*e*SN	**Sn**	11 50 05.6	+0.4
LAST	**Lasithi**	**1.50**	**254**	*e*Pn	**Pn**	11 49 45.7	0.0
LAST				*e*Sn	**Sn**	11 50 05.6	+0.4
BDRM	**Kayabasi**	**1.50**	**6**	*i* P	**Pn**	11 49 44.5	-1.2
BDRM	**Kayabasi**	**1.50**	**6**	*i* P	**Pn**	11 49 44.5	-1.2
BDRM				*i* S	**Sn**	11 50 05.1	-0.1
TURN	**Turunc**	**1.70**	**40**	*i* P	**Pn**	11 49 45.4	-3.2
TURN	**Turunc**	**1.70**	**40**	*i* P	**Pn**	11 49 45.4	-3.2
TURN				*i* S	**Sn**	11 50 05.8	-4.5
YER	**Yerkesik**	**1.77**	**28**	*e*PN	**Pn**	11 49 50.1	+0.6
YER	**Yerkesik**	**1.77**	**28**	*e*Pn	**Pn**	11 49 50.1	+0.6
FETY	**Fethiye**	**1.83**	**54**	*e*PN	**Pn**	11 49 51.4	+1.0
FETY	**Fethiye**	**1.83**	**54**	*e*Pn	**Pn**	11 49 51.4	+1.1
IDI	**Anoyia**	**1.94**	**262**	*e*Pb	**Pn**	11 49 50.9	-0.9
IDI	**Anoyia**	**1.94**	**262**	*e*PB	**Pn**	11 49 50.9	-0.9
APE	**Apeiranthos**	**2.03**	**318**	*e*Pn	**Pn**	11 49 52.9	-0.2
APE				*e*Sn	**Sn**	11 50 18.2	-0.1
APE	**Apeiranthos**	**2.03**	**318**	*e*PN	**Pn**	11 49 52.9	-0.2
APE				*e*SN	**Sn**	11 50 18.2	-0.1
APE	**Apeiranthos**	**2.03**	**318**	*e*Pn	**Pn**	11 49 52.9	-0.2
APE				*e*Sn	**Sn**	11 50 18.2	-0.1
AKAS	**Kas**	**2.03**	**70**	*i* P	**Pn**	11 49 52.6	-0.5
AKAS	**Kas**	**2.03**	**70**	*i* P	**Pn**	11 49 52.6	-0.5
AKAS				*i* S	**Sn**	11 50 16.8	-1.6
AYDN	**Tasoluk**	**2.14**	**14**	*i* P	**Pn**	11 49 54.6	-0.1
AYDN	**Tasoluk**	**2.14**	**14**	*i* P	**Pn**	11 49 54.6	0.0
AYDN				*i* S	**Sn**	11 50 19.6	-1.6
SMG	**Samos**	**2.15**	**352**	*e*Pb	**Pn**	11 49 54.5	-0.3
SMG	**Samos**	**2.15**	**352**	*e*PB	**Pn**	11 49 54.5	-0.3
GLHS	**Glhisar (BURDU**	**2.41**	**49**	*e*PN	**Pn**	11 49 59.0	+0.7
GLHS	**Glhisar (BURDU**	**2.41**	**49**	*e*Pn	**Pn**	11 49 59.0	+0.7
VAM	**Vamos**	**2.48**	**267**	*e*Pb	**Pn**	11 50 01.4	+2.1
GOLH	**Golhisar**	**2.50**	**48**	*i* P	**Pn**	11 50 01.3	+1.7
GOLH	**Golhisar**	**2.50**	**48**	*i* P	**Pn**	11 50 01.3	+1.7
GOLH				*i* S	**Sn**	11 50 34.3	+4.3
DNZL	**Cakiroluk**	**2.56**	**34**	*i* P	**Pn**	11 49 56.3	-4.1
DNZL	**Cakiroluk**	**2.56**	**34**	*i* P	**Pn**	11 49 56.3	-4.1
KARN	**Karanos**	**2.71**	**267**	*e*PN	**Pn**	11 50 02.0	-0.5
KARN	**Karanos**	**2.71**	**267**	*e*Pn	**Pn**	11 50 02.0	-0.5
KORT	**Korkueli**	**2.89**	**60**	*i* P	**Pn**	11 50 05.1	+0.2
KORT	**Korkueli**	**2.89**	**60**	*i* P	**Pn**	11 50 05.1	+0.2
KHAL	**Karahalli**	**3.32**	**32**	*i* P	**Pn**	11 50 11.7	+0.8
KHAL	**Karahalli**	**3.32**	**32**	*i* P	**Pn**	11 50 11.6	+0.8
KYTH	**Kithira**	**3.48**	**283**	*e*Pn	**Pn**	11 50 12.6	-0.4
KYTH	**Kithira**	**3.48**	**283**	*e*PN	**Pn**	11 50 12.6	-0.4
KYTH	**Kithira**	**3.48**	**283**	*e*Pn	**Pn**	11 50 12.6	-0.4
SUTC	**Sutluce-Ispart**	**3.58**	**57**	*e*PN	**Pn**	11 50 16.9	+2.6
SUTC	**Sutluce-Ispart**	**3.58**	**57**	*e*Pn	**Pn**	11 50 16.9	+2.6
VLI	**Veliai**	**3.66**	**289**	*e*Pn	**Pn**	11 50 16.0	+0.5
VLI	**Veliai**	**3.66**	**289**	*e*PN	**Pn**	11 50 16.0	+0.5
VLI	**Veliai**	**3.66**	**289**	*e*Pn	**Pn**	11 50 16.0	+0.5
GUR	**Goura**	**4.58**	**302**	*e*PN	**Pn**	11 50 30.0	+1.9
GUR	**Goura**	**4.58**	**302**	*e*Pn	**Pn**	11 50 30.0	+1.9

*NEIC **14** 11:57:14.8, 38.11N×21.63E, h22km, ML2.9(ATH), After ATH.*
*ATH **14** 11:57:14.8, 38.11N×21.63E, h22km±1km, MD3.3/14, ML2.9*
*THE **14** 11:57:15.4, 38.11N×21.62E, h14km±1km, ML3.5/10, Error ellipse: s-maj=1.2km s-min=0.7km az=3.0*
*CSEM **14** 11:57:15.8±0.2, 38.08N×21.70E, h15km, ML2.9, Error ellipse: s-maj=4.7km s-min=3.8km az=82.0*
*ISCJB **14** 11:57:15.7±0.3, 38.11N±0.02×21.63E±0.02, h20km±3km, Error ellipse: s-maj=3.6km s-min=3.2km az=166.7*
ISC 14 11:57:15.6±0.4, **38.11N**±0.02×**21.63E**±0.02, **h16**km±2km, **n82**, σ1.04/118, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.14**	**249**	*e*Pb	**Pg**	**11 57 19.5**	**+0.1**
RLS				*e*Sb	**Sg**	11 57 23.2	+1.2
RLS	**Riolos of Patr**	**0.14**	**249**	*e*PB	**Pg**	11 57 19.5	+0.1
RLS				*e*SB	**Sg**	11 57 23.2	+1.2
RLS	**Riolos of Patr**	**0.14**	**249**	*e*Pb	**Pg**	11 57 19.5	+0.1
RLS				*e*Sb	**Sg**	11 57 23.2	+1.2
UPR	**University Cam**	**0.21**	**35**	P	**Pg**	**11 57 20.6**	**+0.1**
UPR				S	**Sg**	11 57 24.1	+0.2
UPR	**University Cam**	**0.21**	**35**	*e*PB	**Pg**	11 57 20.8	+0.3
UPR	**University Cam**	**0.21**	**35**	*e*Pb	**Pg**	11 57 20.8	+0.3
UPR				S	**Sg**	11 57 24.1	+0.2
LAKA	**Lakka**	**0.30**	**64**	P	**Pg**	11 57 22.0	0.0
LAKA				S	**Sg**	11 57 26.8	+0.4
EFP	**Efpalio**	**0.39**	**34**	P	**Pg**	11 57 23.1	-0.4
EFP				S	**Sg**	11 57 29.2	+0.4
EFP	**Efpalio**	**0.39**	**34**	*e*PB	**Pg**	11 57 23.1	-0.4
EFP				*e*SB	**Sg**	11 57 29.4	+0.6
EFP	**Efpalio**	**0.39**	**34**	*e*Pb	**Pg**	11 57 23.1	-0.4
EFP				S	**Sg**	11 57 29.2	+0.4
KALE	**Kalithea**	**0.49**	**55**	P	**Pg**	11 57 24.9	-0.5
KALE				S	**Sg**	11 57 33.0	+1.0
GUR	**Goura**	**0.59**	**107**	P	**Pg**	11 57 26.2	-1.0
GUR				S	**Sg**	11 57 36.2	+1.2
GUR	**Goura**	**0.59**	**107**	*e*PN	**Pg**	11 57 26.3	-0.9
GUR				*e*SN	**Sg**	11 57 35.5	+0.5
GUR	**Goura**	**0.59**	**107**	*e*Pn	**Pg**	11 57 26.3	-0.9
GUR				S	**Sg**	11 57 36.2	+1.2
KFL	**Anninata**	**0.67**	**270**	P	**Pg**	11 57 27.5	-1.1
DSF	**Desfina**	**0.77**	**66**	P	**Pg**	11 57 29.3	-1.3
DSF				S	**Sg**	11 57 40.9	+0.2
EVR	**Evrytania**	**0.82**	**10**	*e*Pb	**Pb**	11 57 29.9	-1.6
EVR	**Evrytania**	**0.82**	**10**	*e*PB	**Pb**	11 57 29.9	-1.6
EVR	**Evrytania**	**0.82**	**10**	*e*Pb	**Pb**	11 57 29.9	-1.6
VLS	**Valsamata**	**0.82**	**275**	*e*Pn	**Pb**	11 57 29.8	-1.7
VLS				*e*Sn	**Sn**	11 57 42.8	-1.6
VLS	**Valsamata**	**0.82**	**275**	P	**Pb**	11 57 29.8	-1.7
VLS				S	**Sb**	11 57 43.5	+1.1
VLS	**Valsamata**	**0.82**	**275**	*e*PN	**Pb**	11 57 29.8	-1.7
VLS				*e*SN	**Sn**	11 57 42.8	-1.6
VLS	**Valsamata**	**0.82**	**275**	P	**Pb**	11 57 29.8	-1.7
VLX	**Vlachokerasia**	**0.94**	**141**	P	**Pb**	11 57 33.5	-0.1
VLX				S	**Sb**	11 57 47.1	+1.2
VLX	**Vlachokerasia**	**0.94**	**141**	*e*PB	**Pb**	11 57 32.4	-1.2
VLX	**Vlachokerasia**	**0.94**	**141**	*e*Pb	**Pb**	11 57 32.4	-1.2
VLX				S	**Sb**	11 57 47.1	+1.2
ITM	**Ithomi**	**0.95**	**166**	*e*Pn	**Pn**	11 57 33.0	-1.3
ITM	**Ithomi**	**0.95**	**166**	P	**Pb**	11 57 33.3	-0.5
ITM				S	**Sb**	11 57 46.6	+0.5
ITM	**Ithomi**	**0.95**	**166**	*e*PN	**Pn**	11 57 33.0	-1.3
ITM	**Ithomi**	**0.95**	**166**	*e*Pn	**Pn**	11 57 33.0	-1.3
ITM	**Ithomi**	**0.95**	**166**	P	**Pb**	11 57 33.3	-0.5
ITM				S	**Sb**	11 57 46.6	+0.5
LKD2	**Lefkada island**	**1.02**	**312**	P	**Pb**	11 57 33.4	-1.5
LKD2				S	**Sb**	11 57 49.8	+1.7
LKD2	**Lefkada island**	**1.02**	**312**	P	**Pb**	11 57 33.4	-1.5
LKD2				S	**Sb**	11 57 49.8	+1.7
LTK	**Loutraki**	**1.06**	**94**	P	**Pb**	11 57 34.8	-0.7
LTK				S	**Sb**	11 57 51.2	+2.1
LTK	**Loutraki**	**1.06**	**94**	*e*PN	**Pn**	11 57 35.2	-0.6
LTK	**Loutraki**	**1.06**	**94**	*e*PN	**Pn**	11 57 35.1	-0.7
LTK	**Loutraki**	**1.06**	**94**	*e*Pn	**Pn**	11 57 35.2	-0.6
LTK				S	**Sb**	11 57 51.2	+2.1
AGG	**Agios Georgios**	**1.07**	**31**	*e*Pn	**Pn**	11 57 35.0	-0.9
AGG	**Agios Georgios**	**1.07**	**31**	P	**Pb**	11 57 35.1	-0.6
AGG				S	**Sb**	11 57 49.9	+0.5
AGG	**Agios Georgios**	**1.07**	**31**	*e*PN	**Pn**	11 57 35.0	-0.9
AGG	**Agios Georgios**	**1.07**	**31**	P	**Pb**	11 57 35.1	-0.6
AGG				S	**Sb**	11 57 49.9	+0.5
LKR	**Lokris**	**1.21**	**63**	*e*Pn	**Pn**	11 57 37.5	-0.3
LKR				*e*Sn	**Sn**	11 57 54.2	+0.4
LKR	**Lokris**	**1.21**	**63**	P	**Pn**	11 57 37.4	-0.4
LKR				S	**Sb**	11 57 53.5	+0.1
LKR	**Lokris**	**1.21**	**63**	*e*PN	**Pn**	11 57 37.5	-0.3
LKR				*e*SN	**Sn**	11 57 54.2	+0.4
LKR	**Lokris**	**1.21**	**63**	*e*Pn	**Pn**	11 57 37.5	-0.3
LKR				S	**Sb**	11 57 53.5	+0.1
LKR				*e*Sn	**Sn**	11 57 54.2	+0.4
PYL	**PYLOS**	**1.21**	**176**	P	**Pn**	11 57 37.9	0.0
PYL				S	**Sb**	11 57 54.6	+1.0
PYL	**PYLOS**	**1.21**	**176**	*e*PN	**Pn**	11 57 38.0	+0.1
PYL	**PYLOS**	**1.21**	**176**	*e*Pn	**Pn**	11 57 38.0	+0.1
PYL				S	**Sb**	11 57 54.6	+1.0
ATAL	**Atalanti**	**1.24**	**61**	P	**Pn**	11 57 38.0	-0.2
ATAL				S	**Sb**	11 57 54.1	-0.2
ATAL	**Atalanti**	**1.24**	**61**	P	**Pn**	11 57 38.0	-0.2
ATAL				S	**Sb**	11 57 54.1	-0.2
THL	**Klokotos Trika**	**1.49**	**12**	P	**Pn**	11 57 42.6	+0.9
THL	**Klokotos Trika**	**1.49**	**12**	*e*PN	**Pn**	11 57 43.1	+1.4
THL	**Klokotos Trika**	**1.49**	**12**	P	**Pn**	11 57 42.6	+0.9
THL	**Klokotos Trika**	**1.49**	**12**	*e*Pn	**Pn**	11 57 43.1	+1.4
NAIG	**Nisos Aigina**	**1.51**	**103**	*e*Pb	**Pb**	11 57 41.8	-1.4
NAIG	**Nisos Aigina**	**1.51**	**103**	*e*PB	**Pb**	11 57 41.8	-1.4
NAIG	**Nisos Aigina**	**1.51**	**103**	*e*Pb	**Pb**	11 57 41.8	-1.4
ATH	**Athens Observa**	**1.65**	**94**	*e*Pn	**Pn**	11 57 44.6	+0.7
ATH	**Athens Observa**	**1.65**	**94**	*e*PN	**Pn**	11 57 44.6	+0.7
ATH	**Athens Observa**	**1.65**	**94**	*e*Pn	**Pn**	11 57 44.6	+0.7
JAN	**Janina**	**1.66**	**339**	*e*Pn	**Pn**	11 57 45.3	+1.2
JAN	**Janina**	**1.66**	**339**	*e*PN	**Pn**	11 57 45.3	+1.2
JAN	**Janina**	**1.66**	**339**	*e*Pn	**Pn**	11 57 45.3	+1.2
MEV	**Metsovon**	**1.71**	**350**	P	**Pn**	11 57 47.5	+2.8
MEV	**Metsovon**	**1.71**	**350**	P	**Pn**	11 57 47.5	+2.8
NEO	**Neokhori**	**1.73**	**46**	*e*Pb	**Pb**	11 57 45.0	-2.0
NEO	**Neokhori**	**1.73**	**46**	*e*PB	**Pb**	11 57 45.0	-2.0
VLY	**Voula,Athens**	**1.73**	**98**	*e*Pb	**Pb**	11 57 45.1	-1.8
VLY	**Voula,Athens**	**1.73**	**98**	*e*PB	**Pb**	11 57 45.1	-1.8
VLY	**Voula,Athens**	**1.73**	**98**	*e*Pb	**Pb**	11 57 45.1	-1.8
VLI	**Veliai**	**1.73**	**143**	*e*Pn	**Pn**	11 57 46.5	+1.5
VLI	**Veliai**	**1.73**	**143**	*e*PN	**Pn**	11 57 46.5	+1.5
VLI	**Veliai**	**1.73**	**143**	*e*Pn	**Pn**	11 57 46.5	+1.5
IGT	**Igoumenitsa**	**1.75**	**325**	P	**Pn**	11 57 46.6	+1.4
IGT	**Igoumenitsa**	**1.75**	**325**	P	**Pn**	11 57 46.6	+1.4
XOR	**Xorichti**	**1.75**	**44**	P	**Pn**	11 57 45.5	+0.2
XOR	**Xorichti**	**1.75**	**44**	P	**Pn**	11 57 45.5	+0.2
AOS	**Alonnisos**	**2.06**	**58**	P	**Pn**	11 57 49.0	-0.5
AOS	**Alonnisos**	**2.06**	**58**	P	**Pn**	11 57 49.0	-0.5
KEK	**Kerkira**	**2.15**	**319**	*e*Pn	**Pn**	11 57 51.7	+1.0
KEK	**Kerkira**	**2.15**	**319**	*e*PN	**Pn**	11 57 51.7	+1.0
KEK	**Kerkira**	**2.15**	**319**	*e*Pn	**Pn**	11 57 51.7	+1.0

JMA 14 12:10:04.2, 39.02N×140.85E, h6km±1km, **M1.9, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.30**	**103**	P	Pg	12 10 10.1	+0.1
JMK				*e*S	Sg	12 10 14.0	+0.1
JRG	**Rokugo**	**0.41**	**336**	P	Pg	12 10 12.5	+0.3
JRG				*e*S	Sg	12 10 18.5	+0.9

*NIED **14** 12:10:00, 39.10N×140.90E, h5km, Mw4.0 Best double couple: M0=1.01000×10^15 NP1:φs=30.00000°, δ=58.00000°, λ=87.00000°. NP2:φs=215.00000°, δ=32.00000°, λ=94.00000°.*
*IDC **14** 12:10:20.8±1.3, 39.11N×140.73E, h0km, mb3.8/6, mb1 3.8/9, mb1mx3.6/28, mbtmp3.8/9, ML3.7/3, MS3.1/2, Ms1 3.1/2, ms1mx2.4/27, Error ellipse: s-maj=42.8km s-min=16.7km az=83.0*
*NEIC **14** 12:10:21.3, 39.13N×140.90E, h11km, mb4.0/2, After JMA.*
*JMA **14** 12:10:21.3, 39.13N×140.90E, h10km±1km, M4.0*
JMA Felt II J1.
*ISCJB **14** 12:10:21.1±0.9, 39.13N±0.03×140.92E±0.06, h15km±7km, mb3.8/8, Error ellipse: s-maj=7.6km s-min=4.8km az=14.7*
ISC 14 12:10:21.6±0.5, **39.13N**±0.03×**140.90E**±0.05, **h6**km±4km, **n23**, σ0.92/30, **mb3.8**/8, **1C-4D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.30**	**125**	⇓P	**Pg**	**12 10 27.1**	**-0.4**
JMK				*e*S	**Sg**	12 10 31.7	+0.2
JRG	**Rokugo**	**0.34**	**322**	⇓P	**Pg**	12 10 28.2	0.0
JRG				*e*S	**Sg**	12 10 33.1	+0.4
JOM	**Ohasama**	**0.46**	**41**	⇑P	**Pg**	12 10 30.3	-0.1
JOM				S	**Sg**	12 10 36.7	+0.3
JYK	**Kaneyama**	**0.47**	**244**	P	**Pg**	12 10 30.4	-0.3
OFUJ	**Ofunato**	**0.60**	**94**	⇓P	**Pg**	12 10 32.8	-0.3
JOU	**Okura**	**0.78**	**194**	⇓P	**Pg**	12 10 36.3	-0.3
JOU				S	**Sg**	12 10 46.8	0.0
MJAR	**Matsushiro Arr**	**3.35**	**220**	Pn	**Pn**	12 11 14.0	-0.4
	1.2nm,0.3s,baz=324,slow=10,SNR=14						
MAJO	**Matsushiro**	**3.35**	**220**	*e*Pn	**Pn**	12 11 14.8	+0.3
MAT	**Matsushiro**	**3.35**	**220**	P	**Pn**	12 11 15.7	+1.3
MAT				*e*S	**Sn**	12 11 55.9	+1.4
ERM	**Erimo**	**3.36**	**30**	*e*Pn	**Pn**	**12 11 16.1**	**+1.5**
ERM				*e*Sn	**Sn**	12 11 59.9	+5.2
ASAJ	**Asahikawa**	**5.14**	**14**	Pn	**Pn**	12 11 40.9	+1.8
	5.0nm,0.3s,baz=227,slow=11,SNR=49						
JHJ	**Hachijo jima 2**	**6.06**	**189**	Pn	**Pn**	**12 11 51.2**	**-0.5**
	5.0nm,0.3s,baz=73,slow=17,SNR=3.4						
JHJ				Sn	**Sn**	12 13 02.5	+1.0
	6.8nm,0.3s,baz=84,slow=23,SNR=7.4						
KSRS	**Korea Array**	**10.34**	**265**	Pn	**Pn**	12 12 54.0	+3.6
	1.2nm,0.3s,baz=79,slow=14,SNR=32						
KSRS				LR	LR	12 16 15.7	
	comp=Z,78nm,20.8s,baz=350,slow=35						
CBIJ	**Chichi jima**	**12.05**	**175**	Pn	**Pn**	12 13 10.6	-3.2
	2.8nm,0.3s,baz=29,slow=14,SNR=3.3						
ZALV	**Zalesovo Beam**	**40.23**	**311**	P	**P**	12 17 57.9	-0.9
	1.7nm,0.7s,mb3.9,baz=79,slow=8.3,SNR=8.8						
ZALV				LR	LR	12 35 19.1	
	comp=Z,38nm,19.7s,baz=78,slow=37						
MKAR	**Makanchi Array**	**42.69**	**300**	P	**P**	**12 18 17.8**	**-1.3**
	1.8nm,1.0s,mb3.7,baz=82,slow=8.8,SNR=5.9						
KURK	**Kurchatov**	**44.35**	**306**	*e*P	**P**	12 18 31.0	-1.4
	3.7nm,0.9s,mb4.1						
BVAR	**Borovoye Array**	**48.88**	**311**	P	**P**	12 19 08.0	+0.1
	0.4nm,0.5s,mb3.7,baz=69,slow=8.1,SNR=3.9						
ABKAR	**Akbulak array**	**56.30**	**309**	*e*P	**P**	12 20 01.6	-1.2
	0.6nm,0.5s,mb3.9						
WRA	**Warramunga Arr**	**59.08**	**187**	P	**P**	12 20 21.8	-0.8
	0.5nm,0.4s,mb3.9,baz=4.6,slow=7.3,SNR=19						
ASAR	**Alice Springs**	**62.81**	**187**	P	**P**	12 20 48.4	+0.6
	0.3nm,0.7s,mb3.6,baz=3.0,slow=6.8,SNR=3.5						
HFS	**Hagfors**	**72.02**	**335**	P	**P**	12 21 45.5	-0.3
	0.5nm,0.4s,mb3.8,baz=60,slow=8.8,SNR=5.7						
HFS	**Hagfors**	**72.02**	**335**	P	**P**	12 21 45.5	-0.3

*NEIC **14** 12:43:56.8, 37.93N×21.50E, h21km, MD3.0(ATH), After ATH.*
*ATH **14** 12:43:56.8, 37.93N×21.50E, h21km±3km, MD3.0/10*
*ISCJB **14** 12:43:56.7±0.5, 37.90N±0.03×21.50E±0.03, h10km±5km, Error ellipse: s-maj=4.7km s-min=4.2km az=13.7*
*THE **14** 12:43:57.2, 37.93N×21.50E, h9km±2km, ML2.6/7, Error ellipse: s-maj=2.5km s-min=0.9km az=184.0*
*CSEM **14** 12:43:57.0±0.2, 37.94N×21.47E, h20km, MD3.0, Error ellipse: s-maj=5.2km s-min=5.0km az=162.0*
ISC 14 12:43:57.3±0.5, **37.91N**±0.03×**21.50E**±0.03, **h14**km±5km, **n41**, σ0.94/66, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.14**	**350**	*e*Pb	**Pg**	**12 44 01.1**	**+0.1**
RLS				*e*Sb	**Sg**	12 44 04.8	+1.1
RLS	**Riolos of Patr**	**0.14**	**350**	*e*PB	**Pg**	12 44 01.1	+0.1
RLS				*e*SB	**Sg**	12 44 04.8	+1.1
RLS	**Riolos of Patr**

MAJO Matsushiro 3.32 220 *e*P **Pn 12 49 22.5 +1.6**
MAT Matsushiro 3.32 220 P **Pn 12 49 22.3 +1.4**
MAT S **Sn 12 50 04.3 +3.7**
MJAR Matsushiro Arr 3.32 220 Pn **Pn 12 49 22.1 +1.2**
13nm,0.3s,baz=325,slow=11,SNR=105
MJAR Sn **Sn 12 50 07.5 +6.9**
7.5nm,0.3s,baz=15,slow=17,SNR=4.6
MJAR LR LR 12 50 35.6
comp=Z,336nm,19.1s,baz=15,slow=39
MJAR Matsushiro Arr 3.32 220 P **Pn 12 49 22.1 +1.2**
MJAR 12 50 07.5
MJAR pmax pmax
comp=Z,13nm,0.3s
MJAR smax
comp=N,8.0nm,0.3s
MJAR MLR MLR
comp=Z,336nm,19.2s
MJAR Matsushiro Arr 3.32 220 Pn **Pn 12 49 22.1 +1.2**
MJAR Sn **Sn 12 50 07.5 +6.9**
MJAR LR LR 12 50 35.6
ERM Erimo 3.38 30 *e*P **Pn 12 49 24.0 +2.2**
ERM Erimo 3.38 30 *e*Pn **Pn 12 49 23.4 +1.6**
ERM *e*Sn **Sn 12 50 04.0 +1.8**
ASAJ Asahikawa 5.17 14 Pn **Pn 12 49 47.8 +1.5**
comp=Z,16nm,0.3s,baz=224,slow=10,SNR=126
ASAJ Asahikawa 5.17 14 P **Pn 12 49 47.8 +1.5**
ASAJ pmax pmax
comp=Z,16nm,0.3s
JHJ Hachijo jima 2 6.04 189 Pn **Pn 12 49 57.0 -1.4**
comp=Z,17nm,0.3s,baz=243,slow=14,SNR=11
JHJ Sn **Sn 12 51 07.8 0.0**
comp=Z,51nm,0.3s,baz=93,slow=23,SNR=11
YUK Yuzh-Kuril'sk 6.18 36⇑ *i*P **Pn 12 50 01.2 +1.0**
YUK *i*S **Sn 12 51 09.7 -1.4**
YUK pmax pmax
comp=Z,190nm,0.3s
YUK pmax pmax
comp=Z,150nm,0.5s
YUK pmax pmax
comp=N,80nm,0.5s
YUK pmax pmax
comp=E,70nm,0.5s
YUK smax
comp=E,180nm,0.5s
YUK smax
comp=N,380nm,0.5s
YUK smax
comp=N,380nm,0.5s
YUK smax
comp=E,380nm,0.5s
YUK MLR MLR
comp=E,270nm,9.2s
YUK MLR MLR
comp=Z,630nm,9.2s
YUK MLR MLR
comp=N,1μm,18.3s
VLA Vladivostok 7.87 303 *e*P **Pn 12 50 22.8 -0.6**
VLA pmax pmax
comp=Z,30nm,1.0s
VLA MLR MLR
comp=Z,1μm,15.7s
YSS Yuzh-Sakhalins 7.96 9 *e*P **Pn 12 50 25.0 +0.4**
YSS *e*S **Sn 12 51 54.0 -0.8**
YSS pmax pmax
comp=Z,60nm,1.0s
YSS MLR MLR
comp=Z,900nm,12.0s
YSS MLR MLR
comp=N,700nm,10.0s
YSS Yuzh-Sakhalins 7.96 9 *e*Pn **Pn 12 50 25.4 +0.9**
MDJ Mudanjiang 10.04 307 P **Pn 12 50 50.5 -2.7**
MDJ pP 12 50 55.3
MDJ S **Sn 12 52 44.4 -1.6**
MDJ PcP PcP 12 57 03.6 0.0
MDJ PcS PcS 13 00 37.8 +0.9
MDJ pmax pmax
comp=Z,7.0nm,1.2s
MDJ pmax pmax
comp=Z,47nm,5.9s
MDJ LR LR
comp=N,470nm,15.7s
MDJ LR LR
comp=E,920nm,15.0s
MDJ LR LR
comp=Z,1μm,14.2s
MDJ Mudanjiang 10.04 307 *e*Pn **Pn 12 50 59.0 +5.9**
comp=Z,23nm,1.0s
HABR Khabarovsk 10.25 338 *e*P **Pn 12 50 59.1 +3.1**
HABR 12 52 51.8
HABR pmax pmax
comp=Z,88nm,1.6s
HABR pmax pmax
comp=E,31nm,1.3s
HABR pmax pmax
comp=N,52nm,1.4s
HABR MLR MLR
comp=Z,578nm,15.0s
KSRS Korea Array 10.31 265 Pn **Pn 12 51 01.0 +4.1**
comp=Z,4.1nm,0.3s,baz=80,slow=14,SNR=105
KSRS LR LR 12 54 31.8
comp=Z,652nm,19.3s,baz=81,slow=35
KSRS Korea Array 10.31 265 P **Pn 12 51 01.0 +4.1**
KSRS pmax pmax
comp=Z,4.0nm,0.3s
KSRS MLR MLR
comp=Z,652nm,19.3s
CBIJ Chichi jima 12.04 174 Pn **Pn 12 51 16.8 -3.7**
comp=Z,4.2nm,0.3s,baz=290,slow=15,SNR=5.4
KLR Kul'dur 12.04 330 *e*P **Pn 12 51 20.9 +0.5**
KLR pmax pmax
comp=E,100nm,1.6s
KLR pmax pmax
comp=Z,110nm,1.6s
KLR MLR MLR
comp=N,800nm,13.0s
KLR MLR MLR
comp=Z,2μm,13.0s
CN2 Changchun 12.48 297 *e*P **Pn 12 51 29.5 +3.0**
CN2 pmax pmax
comp=Z,20nm,1.2s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,500nm,15.0s
CN2 LR LR
comp=E,600nm,15.0s
CN2 LR LR
comp=Z,500nm,17.0s
SNY Shenyang 13.44 287 ⇓P **Pn 12 51 42.5 +2.8**
SNY pmax pmax
comp=Z,10.0nm,1.1s
SNY LR LR
comp=N,620nm,10.8s
SNY LR LR
comp=E,520nm,13.2s
SNY LR LR
comp=Z,790nm,17.1s
PETK Petropavlovsk- 18.16 34 P **Pn 12 52 40.8 -0.3**
comp=Z,0.1nm,0.3s,baz=204,slow=6.3,SNR=2.8
PETK LR LR 13 00 08.0
comp=Z,96nm,19.5s,baz=224,slow=39
BJI Beijing 19.05 281 P **Pn 12 52 50.8 -1.1**
BJI S **Sn 12 56 19.9 -5.4**
BJI pmax pmax
comp=Z,23nm,1.7s
BJI LR LR
comp=N,310nm,13.3s
BJI LR LR
comp=E,930nm,13.3s
BJI LR LR
comp=Z,310nm,15.7s
NJ2 Nanjing 19.21 255 *e*P **Pn 12 52 55.4 +1.4**
NJ2 pP pP 12 52 59.0 +3.8
NJ2 sP sP 12 53 01.5 +5.3
NJ2 PP 12 53 09.4
NJ2 S **Sn 12 56 26.5 -3.0**
NJ2 sS sS 12 56 33.5 -0.8
NJ2 pmax pmax
comp=Z,10.0nm,1.0s
NJ2 pmax pmax
comp=Z,170nm,4.0s
NJ2 LR LR
comp=N,290nm,18.0s
NJ2 LR LR
comp=E,390nm,18.8s
NJ2 LR LR
comp=Z,330nm,19.4s
HHC Hu-ho-hao-te 22.48 284 *e*P **P 12 53 26.8 -1.5**
HHC pP 12 53 30.9
HHC sP sP 12 53 33.8 +2.4
HHC PP 12 53 53.8
HHC PcP PcP 12 57 23.9 +1.5
HHC S **S 12 57 27.1 -8.3**
HHC SS 12 58 07.9
HHC ScP ScP 13 00 59.8 -0.5
HHC PcS PcS 13 01 01.8 +0.7
HHC pmax pmax
comp=Z,14nm,0.9s,mb4.4
HHC pmax pmax
comp=Z,120nm,4.7s
HHC LR LR
comp=N,380nm,15.0s,MS4.3
HHC LR LR
comp=E,730nm,13.8s,MS4.3
HHC LR LR
comp=Z,840nm,15.0s,MS4.3
WHN Wuhan 23.32 257 *e*P **P 12 53 39.0 +1.6**
WHN S **S 12 57 38.0 -12**
WHN LR LR
comp=N,1μm,13.8s
WHN LR LR
comp=E,3μm,19.5s
WHN LR LR
comp=Z,1μm,18.3s,MS4.3
YAK Yakutsk 23.95 347 *e*P **P 12 53 40.0 -3.1**
YAK *e**PP 12 53 49.7
YAK *e*PPP 12 54 18.4
YAK *e*S **S 12 57 55.6 -4.0**
YAK *e*SS 12 58 42.3
YAK *e*SSS 12 59 05.7
YAK *e* 13 04 51.0
YAK pmax pmax
comp=Z,32nm,1.1s,mb4.7
YAK pmax pmax
comp=E,8.0nm,1.1s
YAK pmax pmax
comp=N,24nm,1.1s
YAK smax
comp=E,115nm,2.4s
YAK smax
comp=N,154nm,2.8s
YAK MLR MLR
comp=E,157nm,11.0s,MS4.0
YAK MLR MLR
comp=Z,305nm,13.0s,MS4.0
YAK MLR MLR
comp=N,265nm,13.0s,MS4.0
YAK Yakutsk 23.95 347 *e*P **P 12 53 40.7 -2.4**
comp=N,29nm,1.0s,mb4.7
SEY Seymchan 24.85 13⇑ *e*P **P 12 53 52.1 +0.8**
BOD Bodaibo 25.56 326 *e*P **P 12 53 56.8 -0.9**
BOD pmax pmax
comp=Z,18nm,1.1s,mb4.5
ULN Ulaanbaatar 25.87 301 *e*P **P 12 54 00.2 -0.6**
ULN pmax pmax
comp=Z,25nm,1.6s,mb4.5
ULN Ulaanbaatar 25.87 301 *e*P **P 12 54 00.2 -0.6**
comp=Z,25nm,1.6s,mb4.5
SONM Songino Array 26.31 301 P **P 12 54 04.8 +0.1**
comp=Z,1.0nm,0.4s,mb3.7,baz=98,slow=11,SNR=11
SONM LR LR 13 04 50.4
comp=Z,335nm,18.6s,MS3.9,baz=85,slow=37
SONM Songino Array 26.31 301 P **P 12 54 04.8 +0.1**
SONM pmax pmax
comp=Z,1.0nm,0.4s
SONM MLR MLR
comp=Z,335nm,18.6s
LZH Lanzhou 29.36 276 *e*P **P 12 54 35.0 +2.9**
LZH pP pP 12 54 39.3 +5.0
LZH sP sP 12 54 41.6 +6.3
LZH PP PP 12 55 29.1 -9.1
LZH *e*S **S 12 59 25.0 -0.8**
LZH SS SS 13 00 55.0 -35
LZH pmax pmax
comp=Z,33nm,1.0s,mb5.0
LZH pmax pmax
comp=Z,140nm,4.0s
LZH LR LR
comp=E,860nm,14.8s
LZH LR LR
comp=Z,1μm,15.3s,MS4.7
GYA Guiyang 31.21 256 P **P 12 54 47.8 -0.8**
GYA PP PP 12 55 51.8 -7.2
GYA PcP PcP 12 57 44.6 +1.3
GYA S **S 12 59 52.8 -2.3**
GYA ScP ScP 13 01 26.5 0.0
GYA SS SS 13 01 38.3 -30
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
GYA pmax pmax
comp=Z,50nm,3.6s
GYA LR LR
comp=N,490nm,16.3s,MS4.4
GYA LR LR
comp=E,430nm,15.1s,MS4.4
GYA LR LR
comp=Z,480nm,15.3s,MS4.3
CD2 Chengdu 31.31 266 *e*P **P 12 54 50.6 +1.2**
CD2 pP pP 12 54 55.0 +3.4
CD2 sP sP 12 54 58.3 +5.8
CD2 PP PP 12 55 52.8 -7.1
CD2 S **S 12 59 54.0 -2.4**
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
CD2 pmax pmax
comp=Z,40nm,5.2s
CD2 LR LR
comp=N,130nm,14.2s
CD2 LR LR
comp=Z,120nm,16.2s,MS3.6
GTA Gaotai 31.59 284 P **P 12 54 52.6 +0.8**
GTA pP pP 12 54 55.9 +1.8
GTA sP sP 12 54 58.5 +3.5
GTA PcP PcP 12 57 46.6 +2.5
GTA S **S 13 00 00.0 -0.8**
GTA sS sS 13 00 08.0 +3.5
GTA SS SS 13 01 48.8 -27
GTA pmax pmax
comp=Z,4.0nm,0.5s,mb4.5
GTA pmax pmax
comp=Z,120nm,5.3s
GTA LR LR
comp=N,250nm,13.1s,MS4.4
GTA LR LR
comp=E,520nm,16.0s,MS4.4
GTA LR LR
comp=Z,650nm,16.7s,MS4.4
BILL Bilibino 32.17 18 *e*P **P 12 54 58.2 +1.7**
BILL pmax pmax
comp=Z,18nm,2.6s,mb4.4
BILL MLR MLR
comp=Z,200nm,17.0s,MS3.9
BILL Bilibino 32.17 18 *e*P **P 12 54 57.0 +0.4**
comp=Z,6.0nm,0.9s,mb4.4
TIXI Tiksi 33.18 353 *e*P **P 12 55 04.9 -0.4**
TIXI pmax pmax
comp=Z,11nm,1.5s,mb4.6
TIXI Tiksi 33.18 353 *e*P **P 12 55 04.9 -0.5**
comp=Z,11nm,1.5s,mb4.5
QIZ Qiongzhong 33.45 242 P **P 12 55 08.1 -0.2**
QIZ S **S 13 00 29.6 -0.4**
QIZ pmax pmax
comp=Z,25nm,2.1s,mb4.8
QIZ LR LR
comp=N,310nm,12.5s
QIZ LR LR
comp=Z,220nm,15.4s,MS4.0
KMI Kunming 34.91 258 P **P 12 55 22.3 +1.4**
KMI pP pP 12 55 25.8 +2.7
KMI sP sP 12 55 27.3 +3.2
KMI PP PP 12 56 40.0 +0.1
KMI S **S 13 00 52.3 -0.2**
KMI SS SS 13 03 04.3 -20
KMI pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
KMI pmax pmax
comp=Z,49nm,3.1s
KMI LR LR
comp=N,210nm,16.1s,MS4.2
KMI LR LR
comp=E,250nm,16.7s,MS4.2
KMI LR LR
comp=Z,250nm,17.3s,MS4.0
WMQ Urumqi 39.55 295 *e*P **P 12 56 00.0 -0.1**
ZALV Zalesovo Beam 40.22 311 P **P 12 56 04.7 -0.7**
comp=Z,16nm,0.9s,mb4.8,baz=90,slow=6.4,SNR=48
ZALV LR LR 13 13 16.3
comp=Z,182nm,20.9s,MS3.9,baz=244,slow=37
ZALV Zalesovo Beam 40.22 311 P **P 12 56 04.7 -0.8**
ZALV pmax pmax
comp=Z,16nm,0.9s,mb4.8
ZALV MLR MLR
comp=Z,182nm,20.9s,MS3.9
ZALV Zalesovo Beam 40.22 311 P **P 12 56 04.7 -0.7**
ZALV LR LR 13 13 16.3
NVS Novosibirsk 41.11 312 *e*P **P 12 56 11.9 -0.9**
NVS pmax pmax
comp=E,18nm,1.2s
NVS pmax pmax
comp=Z,20nm,1.2s,mb4.6
NVS pmax pmax
comp=N,3.0nm,0.9s
CHTO Chiang Mai 41.44 253 *e*P **P 12 56 15.8 -0.1**
CHTO pmax pmax
comp=Z,12nm,1.3s,mb4.4
CHTO Chiang Mai 41.44 253 *e*P **P 12 56 15.8 -0.1**
comp=Z,12nm,1.3s,mb4.4
CMAR Chiang Mai Arr 41.66 253 P **P 12 56 17.2 -0.5**
comp=Z,1.1nm,0.8s,mb3.6,baz=47,slow=6.8,SNR=4.8
CMAR PcP PcP 12 58 14.7 +0.1
comp=Z,1.1nm,0.9s,baz=96,slow=0.9,SNR=4.3
CMAR LR LR 13 13 06.8
comp=Z,87nm,21.2s,MS3.6,baz=261,slow=36
CMAR Chiang Mai Arr 41.66 253 P **P 12 56 17.3 -0.4**
CMAR 12 58 14.7
CMAR pmax pmax
comp=Z,1.0nm,0.8s
CMAR MLR MLR
comp=Z,87nm,21.3s
MK31 Makanchi Array 42.68 300 *e*P **P 12 56 25.3 -0.5**
MKAR Makanchi Array 42.68 300 P **P 12 56 25.1 -0.7**
comp=Z,8.3nm,0.9s,mb4.5,baz=76,slow=11,SNR=42
MKAR LR LR 13 14 48.5
comp=Z,165nm,18.3s,MS4.0,baz=356,slow=37
MKAR Makanchi Array 42.68 300 P **P 12 56 25.1 -0.7**
MKAR pmax pmax
comp=Z,8.0nm,0.9s
MKAR MLR MLR
comp=Z,165nm,18.3s
SVW2 Sparrevohn 44.15 39 *e*P **P 12 56 38.6 +1.2**
KURK Kurchatov 44.33 306 P **P 12 56 38.8 -0.2**
comp=Z,31nm,0.9s,mb5.0,baz=84,slow=8.9,SNR=51
KURK Kurchatov 44.33 306 *ce*P **P 12 56 37.9 -1.1**
KURK pmax pmax
comp=Z,51nm,1.1s,mb5.2
KURK Kurchatov 44.33 306 *e*P **P 12 56 38.0 -1.1**
comp=Z,43nm,1.0s,mb5.1
PPLA Purkeypile 45.73 36 *e*P **P 12 56 51.8 +1.8**
comp=Z,19nm,1.5s,mb4.8
KDAK Kodiak Island 45.86 43 P **P 12 56 51.1 0.0**
comp=Z,5.5nm,0.5s,mb4.7,baz=263,slow=5.0,SNR=10
KDAK Kodiak Island 45.86 43 *i* P **P 12 56 51.5 +0.4**
KTH Kantishna Hill 46.28 35 *e*P **P 12 56 54.6 +0.2**
comp=Z,29nm,1.4s,mb5.0
COLD Coldfoot 46.56 30 *e*P **P 12 56 57.9 +1.4**
comp=Z,20nm,1.5s,mb4.8
KSM Kuching 46.70 224 *e*P **P 12 57 00.2 +1.9**
COLA College 47.57 33 *e*P **P 12 57 05.0 +0.6**
COLA pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
COLA College 47.57 33 *e*P **P 12 57 05.0 +0.6**
comp=Z,4.2nm,0.9s,mb4.5
TKM2 Tokmak 2 48.29 297 P **P 12 57 10.9 +0.6**
SNR=34
TKM2 Tokmak 2 48.29 297 *e*P **P 12 57 10.8 +0.5**
TKM2 pmax pmax
comp=Z,48nm,1.2s,mb5.4
TKM2 Tokmak 2 48.29 297 *e*P **P 12 57 10.8 +0.5**
comp=Z,48nm,1.2s,mb5.4
KZA Kyzart 48.81 296 P **P 12 57 16.0 +1.7**
SNR=14
KBK Karagaybulak 48.83 297 P **P 12 57 15.1 +0.7**
SNR=24
BVAR Borovoye Array 48.87 311 P **P 12 57 14.1 -0.5**
comp=Z,7.4nm,0.9s,mb4.7,baz=91,slow=7.7,SNR=28
BVAR PcP PcP 12 58 39.8 +0.8
comp=Z,1.9nm,0.6s,baz=93,slow=2.4,SNR=5.5
BVAR LR LR 13 18 42.9
comp=Z,246nm,19.9s,MS4.2,baz=81,slow=37
BVAR Borovoye Array 48.87 311 P **P 12 57 14.1 -0.5**
BVAR 12 58 39.8
BVAR pmax pmax
comp=Z,7.0nm,0.9s
BVAR MLR MLR
comp=Z,246nm,19.9s
BRVK Borovoye 48.93 311⇓ *e*P **P 12 57 14.2 -0.8**
BRVK pmax pmax
comp=Z,12nm,1.1s,mb4.8
BRVK Borovoye 48.93 311 *e*P **P 12 57 14.9 -0.1**
USP Ospenovka 48.94 297 P **P 12 57 15.6 +0.3**
SNR=7.4
FRU Bishkek 49.00 297 *e*P **P 12 57 14.0 -1.7**
AAK Ala-Archa 49.15 297 P **P 12 57 16.4 -0.5**
comp=Z,1.4nm,0.4s,mb4.4,baz=146,slow=5.4,SNR=12
AAK Ala-Archa 49.15 297 P **P 12 57 16.4 -0.5**
AAK pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
AAK Ala-Archa 49.15 297 *e*P **P 12 57 16.8 -0.1**
comp=Z,19nm,1.3s,mb5.0
KSH Kashi 49.19 292 P **P 12 57 21.1 +3.8**
KSH pP pP 12 57 25.6 +6.0
KSH sP sP 12 57 28.0 +7.5
KSH PcP PcP 12 58 43.6 +3.2
KSH PP PP 12 59 15.6 +4.8
KSH ScP ScP 13 02 37.1 +1.2
KSH PcS PcS 13 02 38.8 +2.0
KSH S **S 13 04 26.1 +3.0**
KSH ScS ScS 13 07 09.6 -0.2
KSH SS SS 13 07 54.1 +0.1
KSH pmax pmax
comp=Z,14nm,1.2s,mb4.9
KSH pmax pmax
comp=Z,93nm,3.6s
KSH LR LR
comp=N,81nm,4.6s
KSH LR LR
comp=E,89nm,6.2s
KSH LR LR
comp=Z,150nm,5.0s
UCH Uchtor 49.27 296 P **P 12 57 18.9 +1.0**
SNR=6.8
UCH Uchtor 49.27 296 *e*P **P 12 57 18.7 +0.8**
comp=Z,9.0nm,1.1s,mb4.7
MENT Mentasta 49.59 36 *e*P **P 12 57 20.5 +0.6**
EKS2 Erkin-Say 49.64 297 P **P 12 57 20.0 -0.6**
SNR=8.4
EKS2 Erkin-Say 49.64 297 *e*P **P 12 57 20.7 +0.1**
comp=Z,11nm,1.0s,mb4.8
AML Almayashu 49.88 296 *e*P **P 12 57 23.9 +1.4**
comp=Z,46nm,1.1s,mb5.4
EGAK Eagle 50.42 33 *e*P **P 12 57 26.3 +0.1**
comp=Z,4.1nm,0.8s,mb4.5
HNR Honiara 51.45 156 LR LR 13 16 55.6
comp=Z,112nm,18.9s,MS3.9,baz=327,slow=33
INK Inuvik 52.74 28 P **P 12 57 43.4 -0.1**
comp=Z,2.3nm,0.4s,mb4.5,baz=310,slow=7.5,SNR=19
INK Inuvik 52.74 28 P **P 12 57 43.4 -0.2**
INK pmax pmax
comp=Z,2.0nm,0.4s
INK Inuvik 52.74 28 *e*P **P 12 57 43.9 +0.3**
comp=Z,4.6nm,0.6s,mb4.6
HYT Haines Junctio 52.90 37 *e*P **P 12 57 46.9 +2.1**
SVE Sverdlovsk 53.32 318⇑ *e*P **P 12 57 48.1 +0.2**
SVE *e* 12 59 47.6
SVE pmax pmax
comp=Z,42nm,1.0s,mb5.3
SVE MLR MLR
comp=Z,536nm,16.0s,MS4.7
SOKR Solikamsk 54.43 322 *c i*P **P 12 57 57.7 +1.6**
SOKR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
SOKR MLR MLR
comp=Z,180nm,18.0s,MS4.2
ARU Arti 54.53 317 *c i*P **P 12 57 56.2 -0.6**
ARU *e* 12 59 54.5
ARU S **S 13 05 33.4 -2.6**
ARU SS SS 13 09 08.3 -10

ARU pmax pmax
comp=Z,44nm,1.2s,mb5.4
ARU MLR MLR
comp=Z,443nm,17.0s,MS4.6
ARU Arti 54.53 317 *e*P **P 12 57 56.0 -0.9**
ABKAR Akbulak array 56.29 309 *e*P **P 12 58 09.0 -0.6**
comp=Z,9.6nm,0.7s,mb4.9
KBL Kabul 56.29 289 *e*P **P 12 58 09.8 -0.1**
DLBC Dease Lake 57.27 39 *e*P **P 12 58 19.0 +2.6**
WRA Warramunga Arr 59.06 187 P **P 12 58 28.0 -1.3**
comp=Z,4.4nm,0.6s,mb4.7,baz=4.5,slow=7.3,SNR=42
WRA Warramunga Arr 59.06 187 P **P 12 58 28.0 -1.3**
WRA pmax pmax
comp=Z,4.0nm,0.6s
WRA Warramunga Arr 59.06 187 P **P 12 58 28.0 -1.3**
CTA Charters Tower 59.10 174 LR LR 13 20 26.2
comp=Z,62nm,18.8s,MS3.8,baz=226,slow=32
RES Resolute Bay 60.70 15 P **P 12 58 39.0 -1.0**
comp=Z,7.4nm,0.9s,mb4.8,baz=321,slow=6.4,SNR=11
RES Resolute Bay 60.70 15 P **P 12 58 39.0 -1.0**
RES pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
RES Resolute Bay 60.70 15 *e*P **P 12 58 39.3 -0.7**
ARCES ARCESS Array B 61.90 339 P **P 12 58 47.0 -1.2**
comp=Z,2.9nm,0.9s,mb4.4,baz=57,slow=9.0,SNR=8.1
ARCES LR LR 13 30 23.2
comp=Z,109nm,19.5s,MS4.0,baz=250,slow=41
ARCES ARCESS Array B 61.90 339 P **P 12 58 47.0 -1.2**
ARCES pmax pmax
comp=Z,3.0nm,0.9s
ARCES MLR MLR
comp=Z,109nm,19.5s
ARCES ARCESS Array B 61.90 339 P **P 12 58 47.0 -1.2**
ARCES LR LR 13 30 23.2
YKA Yellowknife Ar 62.23 31 P **P 12 58 49.3 -1.2**
comp=Z,1.4nm,0.9s,mb4.1,baz=297,slow=6.9,SNR=4.6
YKA Yellowknife Ar 62.23 31 P **P 12 58 49.3 -1.2**
YKA pmax pmax
comp=Z,1.0nm,0.9s
YKA Yellowknife Ar 62.23 31 P **P 12 58 49.3 -1.2**
ASAR Alice Springs 62.79 187 P **P 12 58 54.0 -0.6**
comp=Z,2.4nm,0.8s,mb4.4,baz=8.4,slow=5.8,SNR=16
ASAR Alice Springs 62.79 187 P **P 12 58 54.0 -0.6**
ASAR pmax pmax
comp=Z,2.0nm,0.8s
JOF Joensuu 63.93 331 *e*P **P 12 58 59.9 -1.9**
JOF pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
JOF Joensuu 63.93 331 *e*p **P 12 58 59.9 -1.9**
comp=Z,5.1nm,0.7s,mb4.7
DZM Mont Dzumac 65.40 154 *e*LR LR 13 18 52.4
comp=Z,280nm,22.7s
VRHR Novokhopersk 65.87 317 *e*P **P 12 59 14.7 +0.1**
VRHR pmax pmax
comp=Z,9.0nm,0.5s,mb5.1
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,20nm,1.4s
OBN Obninsk 66.18 323 *e*P **P 12 59 16.8 +0.3**
OBN *i* 12 59 48.8
OBN *e* 13 15 12.6
OBN pmax pmax
comp=Z,32nm,1.4s,mb5.2
KAF Kangasniemi 66.27 332 *e*P **P 12 59 15.1 -1.9**
KAF pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
KAF Kangasniemi 66.27 332 *e*p **P 12 59 15.1 -1.9**
comp=Z,2.2nm,0.4s,mb4.5
FINES FINESS Array B 66.78 332 P **P 12 59 19.5 -0.7**
comp=Z,8.8nm,0.8s,mb4.8,baz=38,slow=7.2,SNR=22
FINES LR LR 13 30 21.3
comp=Z,82nm,20.0s,MS3.9,baz=0.5,slow=38
FINES FINESS Array B 66.78 332 P **P 12 59 19.5 -0.8**
FINES pmax pmax
comp=Z,9.0nm,0.8s
FINES MLR MLR
comp=Z,83nm,20.0s
FINES FINESS Array B 66.78 332 P **P 12 59 19.5 -0.7**
FINES LR LR 13 30 21.3
VSR Storozhevoye 67.09 318 *e*P **P 12 59 22.0 -0.4**
VSR pmax pmax
comp=E,10.0nm,0.5s
VSR pmax pmax
comp=Z,9.0nm,0.5s,mb5.1
VSR pmax pmax
comp=N,3.0nm,0.4s
EDM Edmonton 67.99 39 *e*P **P 12 59 30.2 +2.1**
VSU Vasula 68.45 329⇓*e*P **P 12 59 31.3 +0.4**
VSU pmax pmax
comp=Z,28nm,1.2s,mb5.2
ZEI Tsey 69.17 309 *e*P **P 12 59 33.5 -2.1**
ZEI pmax pmax
comp=Z,6.0nm,0.4s,mb4.9
KIV Kislovodsk 69.23 310 *d i*P **P 12 59 36.4 +0.4**
KIV *e* 13 00 01.9
KIV pmax pmax
comp=Z,72nm,1.1s,mb5.5
KIV MLR MLR
comp=Z,100nm,15.0s,MS4.2
KIV Kislovodsk 69.23 310 *e*P **P 12 59 36.9 +0.9**
comp=Z,60nm,1.0s,mb5.5
G08A Pilot Rock 69.63 48 ⇑P **P 12 59 39.3 +0.8**
baz=69
C11A Tepee Creek (N 69.67 44 ⇑P **P 12 59 39.4 +0.8**
baz=69
GNI Garni 70.13 306 *e*P **P 12 59 38.8 -2.8**
GNI pmax pmax
comp=Z,15nm,0.7s
GNI Garni 70.13 306 *e*P **P 12 59 38.8 -2.8**
comp=Z,15nm,0.7s,mb5.0
B13A Whitefish 70.31 43 ⇓P **P 12 59 43.2 +0.7**
baz=70,SNR=6.8
IZAR Zarasai 70.43 327 *e*P **P 12 59 42.6 -0.5**
IZAR AMB AMB 12 59 45.5
comp=Z,5.7nm,0.8s,mb4.5
IDID Didziasalis 70.51 326 *e*P **P 12 59 43.2 -0.4**
IDID AMB AMB 12 59 46.2
comp=Z,5.2nm,0.9s,mb4.5
ISAL Salakas 70.60 327 *e*P **P 12 59 43.7 -0.5**
ISAL AMB AMB 12 59 46.9
comp=Z,8.3nm,1.1s,mb4.6
STKA Stephens Creek 70.63 179 LR LR 13 27 20.4
comp=Z,109nm,21.1s,MS4.1,baz=205,slow=33
C13A Hot Springs 70.67 44 ⇓P **P 12 59 43.6 -1.2**
baz=70
IIGN Ignalina 70.70 327 *e*P **P 12 59 44.4 -0.4**
IIGN AMB AMB 12 59 48.0
comp=Z,6.9nm,1.0s,mb4.5
A15A Johnson Ranch, 70.86 42 ⇓P **P 12 59 45.2 -0.6**
baz=71
C14A Swan Lake 71.06 43 ⇑P **P 12 59 46.1 -1.1**
baz=71
SWMT Swartz Lake 71.09 44 *e*P **P 12 59 50.1 +2.8**
G11A Walters Elk Ra 71.11 47 ⇑P **P 12 59 47.2 -0.2**
baz=71,SNR=5.8
B15A Bradely Ranch, 71.36 42 ⇓P **P 12 59 48.3 -0.6**
baz=71,SNR=9.5
J09A Fry Pan Ranch, 71.47 49 ⇑P **P 12 59 49.4 -0.3**
baz=71
SLMT Seeley Lake 71.52 44 *e*P **P 12 59 50.8 +0.8**
C15A Salmond Ranch, 71.67 43 ⇑P **P 12 59 51.2 +0.4**
baz=71
ANN Anapa 71.79 313 *e*P **P 12 59 49.9 -1.7**
ANN *e*S S 13 09 05.8 -6.3
ANN pmax pmax
comp=Z,45nm,1.3s,mb5.2
BEKR Beckworth 71.95 53 ⇓P **P 12 59 53.3 +0.6**
baz=72
NB2 NORSAR Subarra 72.11 337 P **P 12 59 52.4 -0.8**
comp=Z,16nm,1.2s,mb4.8,baz=40,slow=6.2
NOA NORSAR Array B 72.11 337 P **P 12 59 52.4 -0.8**
comp=Z,9.9nm,1.1s,mb4.7,baz=39,slow=6.1,SNR=9.0
NOA LR LR 13 34 07.6
comp=Z,126nm,18.6s,MS4.2,baz=30,slow=38
NOA NORSAR Array B 72.11 337 P **P 12 59 52.4 -0.8**
NOA pmax pmax
comp=Z,10.0nm,1.1s
NOA MLR MLR
comp=Z,126nm,18.6s
FFC Flin Flon 72.19 33 *i*P **P 12 59 56.8 +3.0**
K10A MacKenzie Ranc 72.33 49 ⇓P **P 12 59 55.0 +0.1**
baz=72
AKASG Malin Array Be 72.40 322 P **P 12 59 54.0 -1.1**
comp=Z,5.7nm,0.7s,mb4.6,baz=45,slow=6.4,SNR=19
AKASG LR LR 13 34 12.4
comp=Z,129nm,20.7s,MS4.2,baz=60,slow=38
AKASG Malin Array Be 72.40 322 P **P 12 59 54.0 -1.1**
AKASG pmax pmax
comp=Z,6.0nm,0.7s
AKASG MLR MLR
comp=Z,129nm,20.7s
AKBB Malin Array Si 72.40 322 *e*P **P 12 59 54.2 -0.9**
KIEV Kiev 72.41 322 *e*P **P 12 59 54.1 -1.1**
KIEV pmax pmax
comp=Z,11nm,0.9s,mb4.8
KIEV Kiev 72.41 322 *e*P **P 12 59 54.1 -1.1**
comp=Z,11nm,0.9s,mb4.8
G13A Cobalt 72.44 46 ⇑P **P 12 59 54.9 -0.5**
baz=72
E15A Deer Lodge 72.49 44 ⇓P **P 12 59 55.6 -0.1**
baz=72
PAHR Pah Rah Range 72.65 53 *e*P **P 12 59 59.3 +2.5**
H13A Challis 72.75 46 ⇑P **P 12 59 57.4 +0.1**
baz=72
B18A Beardsley Farm 72.75 41 ⇓P **P 12 59 57.5 +0.2**
baz=72,SNR=6.0
F15A Butte 72.93 44 ⇓P **P 12 59 58.4 0.0**
baz=73,SNR=8.5
LRM Limekiln Ridge 72.97 44 *e*P **P 12 59 59.2 +0.6**
EGMT Eagleton 73.00 41 ⇑P **P 12 59 58.9 +0.2**
baz=73
CMB Columbia Colle 73.02 55 *e*P **P 13 00 00.8 +1.7**
DLMT Dillon 73.17 45 *e*P **P 13 00 00.4 +0.6**
I13A Wildhorse Cree 73.23 47 ⇓P **P 13 00 00.4 +0.2**
baz=73
HLID Hailey 73.28 47 ⇑P **P 12 59 59.9 -0.6**
baz=73
M10A I.L. Ranch, Tu 73.29 50 ⇓P **P 13 00 01.1 +0.5**
baz=73
L11A Cat Creek Ranc 73.36 49 ⇓P **P 13 00 01.1 +0.1**
baz=73,SNR=5.3
BOZ Bozeman (W) 73.52 44 ⇑P **P 13 00 01.8 -0.1**
baz=73,SNR=7.1
BOZ Bozeman (W) 73.52 44 *e*P **P 13 00 02.4 +0.5**
BOZ *e* 13 00 20.5
BOZ pmax pmax
comp=Z,7.0nm,1.3s,mb4.4
BOZ Bozeman (W) 73.52 44 *e*P **P 13 00 02.4 +0.6**
comp=Z,6.6nm,1.3s,mb4.4
BOZ *e*PcP PcP 13 00 20.5 +2.6
I14A Mackay 73.60 46 ⇓P **P 13 00 01.4 -1.0**
baz=73
E18A Harlowton 73.85 43 ⇑P **P 13 00 03.4 -0.4**
baz=74
J14A Carey 73.94 47 ⇓P **P 13 00 03.4 -1.0**
baz=74,SNR=5.5
NVAR Mina Array Bea 74.09 53 P **P 13 00 05.7 +0.3**
comp=Z,2.3nm,0.8s,mb4.1,baz=283,slow=6.0,SNR=17
M12A Wells 74.32 49 ⇓P **P 13 00 06.2 -0.4**
baz=74
K14A Jones Ranch, D 74.62 47 ⇑P **P 13 00 08.6 +0.2**
baz=74
IMW Indian Meadow 75.02 45 *e*P **P 13 00 11.8 +1.1**
comp=Z,2.9nm,0.8s,mb4.3
RLMT Red Lodge 75.14 44 *e*P **P 13 00 14.0 +2.8**
comp=Z,3.7nm,1.1s,mb4.2
TPAW Teton Pass 75.28 46 *e*P **P 13 00 15.8 +3.7**
S10A Tonopah Range, 75.47 53 ⇓P **P 13 00 13.7 +0.4**
baz=75,SNR=9.2
Q11A Duckwater 75.47 52 ⇓P **P 13 00 13.7 +0.3**
baz=75
P12A McGill 75.53 51 ⇑P **P 13 00 14.6 +0.9**
baz=75,SNR=6.1
ISA Isabella 75.67 56 ⇑P **P 13 00 14.5 -0.1**
baz=76
N14A Grayback Hills 75.69 49 ⇑P **P 13 00 14.6 +0.1**
baz=76
R11A Troy Canyon, C 75.82 52 ⇑P **P 13 00 15.5 +0.1**
baz=76,SNR=6.7
MPMC Manual Prospec 76.06 55 ⇓P **P 13 00 16.7 -0.1**
baz=76,SNR=5.8
DUG Dugway 76.32 49 ⇓P **P 13 00 18.9 +0.7**
baz=76
Q13A Wheeler Ranch, 76.39 51 ⇑P **P 13 00 19.3 +0.7**
baz=76,SNR=5.3
BUR08 Bucovina Ar. S 76.41 321 *e*P **P 13 00 18.3 -0.2**
R12A Pony Springs, 76.44 52 ⇑P **P 13 00 18.6 -0.3**
baz=76
EDW2 Edwards Air Fo 76.47 56 ⇑P **P 13 00 18.3 -0.8**
baz=76
BW06 Boulder Array 76.52 46 ⇓P **P 13 00 18.7 -0.6**
baz=76
PDAR Pinedale Array 76.52 46 P **P 13 00 19.4 +0.2**
comp=Z,1.3nm,0.7s,mb4.0,baz=302,slow=0.7,SNR=12
P14A Drum Mountains 76.56 50 ⇑P **P 13 00 18.5 -1.0**
baz=76
S12A Delamar Landin 76.74 52 ⇑P **P 13 00 19.9 -0.7**
baz=77
T11A Corn Creek, Al 76.74 53 ⇑P **P 13 00 20.8 +0.1**
baz=77,SNR=5.8
Q14A Sevier Lake (B 76.82 50 ⇑P **P 13 00 20.6 -0.4**
baz=77
KOLS Kolonicke sedl 76.89 324 *e*P **P 13 00 21.8 +0.6**
KOLS pmax pmax
comp=Z,26nm,2.3s,mb4.8
KOLS Kolonicke sedl 76.89 324 *e*P **P 13 00 21.8 +0.6**
comp=Z,26nm,2.3s,mb4.8
STHS Stebnicka Huta 77.02 324 *e*P **P 13 00 22.6 +0.7**
STHS pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
STHS Stebnicka Huta 77.02 324 *e*P **P 13 00 22.6 +0.7**
comp=Z,6.6nm,1.2s,mb4.4
OJC Ojcow 77.08 326 *e*P **P 13 00 20.8 -1.5**
BR131 Keskin Array S 77.16 311 *e*P **P 13 00 23.4 +0.5**
comp=Z,7.6nm,1.1s,mb4.5
BRTR Keskin Array B 77.16 311 P **P 13 00 22.9 0.0**
comp=Z,5.3nm,1.0s,mb4.4,baz=84,slow=3.8,SNR=20
BRTR LR LR 13 38 50.4
comp=Z,44nm,20.5s,MS3.8,baz=86,slow=39
BRTR Keskin Array B 77.16 311 P **P 13 00 23.0 +0.1**
BRTR pmax pmax
comp=Z,5.0nm,1.0s
BRTR MLR MLR
comp=Z,44nm,20.5s
CRVS Cervenica-Dubn 77.29 324 *e*P **P 13 00 23.4 -0.1**
CRVS pmax pmax
comp=Z,12nm,1.6s,mb4.6
CRVS Cervenica-Dubn 77.29 324 *e*P **P 13 00 23.4 -0.1**
comp=Z,12nm,1.6s,mb4.6
U12A Valley of Fire 77.68 53 ⇓P **P 13 00 24.7 -1.2**
baz=78
CCUT Cedar City 77.69 52 *e*P **P 13 00 26.7 +0.8**
comp=Z,2.8nm,1.3s,mb4.0
T13A Saint George 77.69 52 ⇑P **P 13 00 24.9 -1.1**
baz=78
KECS Kecovo 78.04 324 *e*P **P 13 00 29.7 +2.0**
KECS pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
KECS Kecovo 78.04 324 *e*P **P 13 00 29.7 +2.0**
comp=Z,2.8nm,1.2s,mb4.1
KECS Kecovo 78.04 324 *e*P **P 13 00 29.7 +2.0**
U13A Pakoon Wash 78.05 53 ⇑P **P 13 00 26.5 -1.5**
baz=78
OKC Ostrava-Krasne 78.08 326 *e*P **P 13 00 28.0 +0.1**
OKC Ostrava-Krasne 78.08 326 *e*P **P 13 00 28.0 +0.1**
KSP Ksiaz 78.11 328 *e*P **P 13 00 28.6 +0.6**
R16A Teasdale 78.35 50 ⇑P **P 13 00 30.5 +0.9**
baz=78,SNR=5.7
MORC Moravsky Berou 78.39 326 *e*P **P 13 00 29.8 +0.2**
MORC pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
MORC Moravsky Berou 78.39 326 *e*P **P 13 00 29.8 +0.2**
comp=Z,8.1nm,1.0s,mb4.6
V13A Grand Canyon W 78.39 53 ⇓P **P 13 00 27.9 -2.0**
baz=78,SNR=5.7
DPC Dobruska-Polom 78.47 327 *e*P **P 13 00 31.4 +1.4**
DPC Dobruska-Polom 78.47 327 *e*P **P 13 00 31.4 +1.4**
UPC Upice 78.48 328 *e*P **P 13 00 31.2 +1.1**
UPC Upice 78.48 328 *e*P **P 13 00 31.2 +1.1**
U14A Mt Trumbull 78.53 52 ⇓P **P 13 00 31.3 +0.7**
baz=78,SNR=5.2
R17A Hanksville Air 78.72 49 ⇓P **P 13 00 32.0 +0.4**
baz=78
VYHS Vyhne 78.78 325 *e*P **P 13 00 31.7 0.0**
VYHS pmax pmax
comp=Z,4.0nm,1.5s,mb4.1
VYHS Vyhne 78.78 325 *e*P **P 13 00 31.7 0.0**
comp=Z,4.3nm,1.5s,mb4.2
VYHS Vyhne 78.78 325 *e*P **P 13 00 31.6 -0.1**
BC3 Big Chuckawall 78.87 56 ⇓P **P 13 00 33.0 +0.5**
baz=79
BRG Berggiesshubel 79.05 329 *e*P **P 13 00 32.8 -0.4**
comp=Z,3.3nm,0.9s,mb4.3
BRG
comp=Z,272nm,20.5s
BRG
comp=N,189nm,14.4s
BRG
comp=E,97nm,14.4s
PVCC Panska Ves 79.06 328 *e*P **P 13 00 34.4 +1.1**
PVCC Panska Ves 79.06 328 *e*P **P 13 00 34.4 +1.1**
U15A North Rim 79.07 52 ⇓P **P 13 00 34.4 +0.8**
baz=79,SNR=6.3
V14A Boquillas Ranc 79.08 53 ⇑P **P 13 00 34.2 +0.6**
baz=79,SNR=6.2
CLL Collm 79.08 330⇓*i*P **P 13 00 33.0 -0.4**
CLL *i* 13 00 40.5
CLL pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
CLL Collm 79.08 330⇓*i*P **P 13 00 33.0 -0.4**
comp=Z,10.0nm,1.1s,mb4.7
CLL *i* 13 00 40.5
CLL Collm 79.08 330⇓*i*P **P 13 00 33.0 -0.4**
comp=Z,10.0nm,1.1s,mb4.7
CLL *i* PcP PcP 13 00 40.5 -1.3
S17A Black Ridge (B 79.18 50 ⇓P **P 13 00 34.5 +0.3**
baz=79,SNR=5.9
Q19A Hogan Spring (79.21 48 ⇑P **P 13 00 34.3 0.0**
baz=79
W14A Seligman 79.37 53 ⇑P **P 13 00 34.2 -1.0**
baz=79
PRU Pruhonice 79.49 328 *e*P **P 13 00 37.2 +1.6**
PRU Pruhonice 79.49 328 *e*P **P 13 00 37.2 +1.6**
S18A Hurst Farm, Bl 79.62 50 ⇓P **P 13 00 34.9 -1.6**
baz=79
TREC Trest 79.63 327 *e*P **P 13 00 37.6 +1.2**
TREC Trest 79.63 327 *e*P **P 13 00 37.6 +1.2**
S19A Harvey Farm, M 80.09 49 ⇓P **P 13 00 39.4 +0.3**
baz=80
WUAZ Wupatki 80.22 52 ⇓P **P 13 00 39.9 0.0**
baz=80
X15A Humboldt 80.37 53 ⇓P **P 13 00 39.8 -0.9**
baz=80,SNR=6.6
V17A Tonalea, Kykot 80.51 52 ⇑P **P 13 00 41.6 +0.2**
baz=80
U18A Rough Rock, Ch 80.54 51 ⇓P **P 13 00 41.8 +0.3**
baz=80
KHC Kasperske Hory 80.55 328 *e*P **P 13 00 41.5 +0.1**
comp=Z,12nm,1.4s,mb4.6
KHC Kasperske Hory 80.55 328 *e*P **P 13 00 41.5 +0.1**
GERES GERESS Array B 80.72 328 P **P 13 00 41.6 -0.7**
comp=Z,1.0nm,0.7s,mb3.9,baz=42,slow=4.2,SNR=9.5
GERES LR LR 13 40 54.6
comp=Z,117nm,18.7s,MS4.3,baz=37,slow=39
GERES GERESS Array B 80.72 328 P **P 13 00 41.6 -0.7**
GERES pmax pmax
comp=Z,1.0nm,0.7s
GERES MLR MLR
comp=Z,117nm,18.7s
T19A Beclabito 80.77 50 ⇑P **P 13 00 42.2 -0.6**
baz=81
V18A Ganado 80.97 51 ⇓P **P 13 00 43.9 +0.1**
baz=81
GRA1 Grafenberg Arr 81.06 330 *e*P **P 13 00 44.0 -0.1**
comp=Z,14nm,1.3s,mb4.7
GRF Grafenberg Arr 81.06 330 *e*P **P 13 00 44.0 -0.1**
comp=Z,14nm,1.3s,mb4.7
GRF Grafenberg Arr 81.06 330 *e*P **P 13 00 44.0 -0.1**
GRF pmax pmax
comp=Z,14nm,1.3s,mb4.7
GRF Grafenberg Arr 81.06 330 *e*P **P 13 00 44.0 -0.1**
GRF pmax pmax
comp=Z,14nm,1.3s,mb4.7
Y18A Canyon Day Jun 82.20 53 ⇓P **P 13 00 50.4 -0.1**
baz=82
X19A St. Johns 82.22 52 ⇓P **P 13 00 49.5 -1.1**
baz=82
BAIF Baives 83.36 334 *e*P **P 13 00 55.6 -0.5**
SCHQ Schefferville 83.46 16 LR LR 13 40 35.6
comp=Z,72nm,19.0s,MS4.1,baz=305,slow=38
Z20A Nine Sixteen R 83.54 52 ⇑P **P 13 00 57.8 +0.4**
baz=83
CDF Champ du Feu 83.62 331 *e*P **P 13 00 56.9 -0.6**
219A White Tail Can 83.88 53 ⇑P **P 13 00 58.9 -0.3**
baz=84
Z21A St. Cloud Mine 83.97 52 ⇓P **P 13 00 59.7 +0.1**
baz=84
W24A Lazy 6 Ranch, 84.01 49 ⇑P **P 13 01 00.7 +0.9**
baz=84
MEZF Maizieres J'vi 84.37 332 *e*P **P 13 01 00.9 -0.4**
220A Playas Peak, P 84.40 53 ⇑P **P 13 01 02.6 +0.8**
baz=84
Y23A Lovelace Mesa, 84.52 50 ⇑P **P 13 01 02.7 +0.3**
baz=84
W25A X Bar L Ranch, 84.56 48 ⇑P **P 13 01 03.8 +1.2**
baz=84
W27A Bowe Ranch, En 85.48 48 ⇓P **P 13 01 07.8 +0.7**
baz=85
CABF La Chapelle 85.56 331 *e*P **P 13 01 07.2 -0.2**
Z25A Roswell 85.77 50 ⇑P **P 13 01 08.8 +0.1**
baz=86
LOR Lormes 85.84 332 *e*P **P 13 01 07.9 -0.8**
comp=Z,18nm,1.1s,mb4.9
LOR *e*MLR MLR
comp=Z,80nm,22.5s,MS3.8
LOR Lormes 85.84 332 *e*P **P 13 01 07.9 -0.8**
LOR pmax pmax
comp=Z,9.0nm,1.1s,mb4.9
LOR MLR MLR
comp=Z,80nm,22.5s,MS4.1
LOR Lormes 85.84 332 *e*P **P 13 01 07.9 -0.8**
comp=Z,9.1nm,1.1s,mb4.9
LOR LR LR
comp=Z,80nm,22.5s,MS4.1
PPT Papeete 85.94 116 *e*LR LR 13 28 20.4
comp=Z,139nm,22.0s
FLN La Foliniere 86.04 336 *e*P **P 13 01 09.0 -0.7**
comp=Z,13nm,1.0s,mb4.8
FLN *e*MLR MLR
comp=Z,157nm,19.8s,MS4.1
FLN La Foliniere 86.04 336 *e*P **P 13 01 09.0 -0.7**
FLN pmax pmax
comp=Z,6.0nm,1.0s,mb4.8
FLN MLR MLR
comp=Z,160nm,19.8s,MS4.4
FLN La Foliniere 86.04 336 *e*P **P 13 01 09.0 -0.7**
comp=Z,6.4nm,1.0s,mb4.8
FLN LR LR
comp=Z,160nm,19.8s,MS4.4
LDF La Druitiere 86.07 335 *e*P **P 13 01 09.1 -0.7**
comp=Z,53nm,1.6s,mb5.2
LDF La Druitiere 86.07 335 *e*P **P 13 01 09.1 -0.7**
LDF pmax pmax
comp=Z,26nm,1.6s,mb5.2
LDF La Druitiere 86.07 335 *e*P **P 13 01 09.1 -0.7**
comp=Z,26nm,1.6s,mb5.2
224A Cornudas Mount 86.13 51 ⇑P **P 13 01 09.9 -0.5**
baz=86
SSF Saint Saulge 86.14 332 *e*P **P 13 01 09.5 -0.7**
LPL La Plagne 86.22 330 *e*P **P 13 01 10.1 -0.5**
comp=Z,10nm,1.0s,mb4.7
LPL La Plagne 86.22 330 *e*P **P 13 01 10.1 -0.5**
LPL pmax pmax
comp=Z,5.0nm,1.0s,mb4.7
LPL La Plagne 86.22 330 *e*P **P 13 01 10.1 -0.5**
comp=Z,5.3nm,1.0s,mb4.7
LPG La Plagne 86.23 330 *e*P **P 13 01 10.4 -0.3**
SMF Signal de Mont 86.38 332 *e*P **P 13 01 10.6 -0.8**
AVF Avril sur Loir 86.43 332 *e*P **P 13 01 11.0 -0.6**
comp=Z,18nm,1.0s,mb5.0
AVF Avril sur Loir 86.43 332 *e*P **P 13 01 11.0 -0.6**
AVF pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
AVF Avril sur Loir 86.43 332 *e*P **P 13 01 11.0 -0.6**
comp=Z,8.9nm,1.0s,mb5.0
GRR Gorron 86.49 336 *e*P **P 13 01 11.5 -0.4**
comp=Z,46nm,1.4s,mb5.2
GRR Gorron 86.49 336 *e*P **P 13 01 11.5 -0.4**
GRR pmax pmax
comp=Z,23nm,1.4s,mb5.2
GRR Gorron 86.49 336 *e*P **P 13 01 11.5 -0.4**
comp=Z,23nm,1.4s,mb5.2
Z27A Tatum 86.63 49 ⇓P **P 13 01 13.3 +0.4**
baz=86
TAOE Nuku Hiva Isla 87.09 104 *e*LR LR 13 28 54.4
comp=Z,164nm,23.6s
SGMF Saint Gilles 87.14 336 *e*P **P 13 01 14.7 -0.4**
TCF Toulx Ste Croi 87.27 333 *e*P **P 13 01 15.3 -0.4**
comp=Z,7.7nm,1.0s,mb4.6

TCF	**Toulx Ste Croi**	**87.27 333**	*e*P	**P**	**13 01 15.3**	**-0.4**
TCF			pmax	pmax		
comp=Z,4.0nm,1.0s,mb4.6						
TCF	**Toulx Ste Croi**	**87.27 333**	*e*P	**P**	**13 01 15.3**	**-0.4**
comp=Z,3.8nm,1.0s,mb4.6						
ROSF	**Rostrenen**	**87.29 337**	*e*P	**P**	**13 01 15.6**	**-0.2**
MFF	**Saint Martin d**	**87.82 334**	*e*P	**P**	**13 01 18.0**	**-0.4**
comp=Z,21nm,1.2s,mb4.9						
MFF	**Saint Martin d**	**87.82 334**	*e*P	**P**	**13 01 18.0**	**-0.4**
MFF			pmax	pmax		
comp=Z,11nm,1.2s,mb5.0						
MFF	**Saint Martin d**	**87.82 334**	*e*P	**P**	**13 01 18.0**	**-0.4**
comp=Z,10nm,1.2s,mb4.9						
RJF	**Les Rejaudoux**	**88.36 333**	*e*P	**P**	**13 01 20.6**	**-0.4**
comp=Z,21nm,1.3s,mb4.9						
RJF			*e*MLR	MLR		
comp=Z,110nm,23.0s,MS3.9						
RJF	**Les Rejaudoux**	**88.36 333**	*e*P	**P**	**13 01 20.6**	**-0.4**
RJF			pmax	pmax		
comp=Z,11nm,1.3s,mb4.9						
RJF			MLR	MLR		
comp=Z,110nm,23.0s,MS4.2						
RJF	**Les Rejaudoux**	**88.36 333**	*e*P	**P**	**13 01 20.6**	**-0.4**
comp=Z,11nm,1.3s,mb4.9						
RJF			LR	LR		
comp=Z,110nm,23.0s,MS4.2						
CAF	**Calviac**	**88.49 332**	*e*P	**P**	**13 01 21.6**	**0.0**
LFF	**La Frestale**	**88.95 333**	*e*P	**P**	**13 01 23.5**	**-0.3**
TXAR	**Lajitas Array**	**89.19 52**	P	**P**	**13 01 24.6**	**-0.6**
comp=Z,0.7nm,0.8s,mb4.1,baz=265,slow=3.2,SNR=9.9						
TXAR	**Lajitas Array**	**89.19 52**	P	**P**	**13 01 24.6**	**-0.6**
TXAR			pmax	pmax		
comp=Z,1.0nm,0.8s						
MTLF	**Montolieu**	**89.79 331**	*e*P	**P**	**13 01 27.4**	**-0.4**
ETSF	**Etsaut**	**91.19 333**	*e*P	**P**	**13 01 34.6**	**+0.3**
SJPF	**Ste Jean**	**91.24 333**	*e*P	**P**	**13 01 34.9**	**+0.4**
comp=Z,30nm,1.3s,mb5.2						
SJPF	**Ste Jean**	**91.24 333**	*e*P	**P**	**13 01 34.9**	**+0.4**
SJPF			pmax	pmax		
comp=Z,15nm,1.3s,mb5.2						
SJPF	**Ste Jean**	**91.24 333**	*e*P	**P**	**13 01 34.9**	**+0.4**
comp=Z,15nm,1.3s,mb5.2						
ESDC	**Sonseca Array**	**95.24 333**	LR	LR	13 49 07.8	
comp=Z,121nm,20.6s,MS4.3,baz=350,slow=38						
LPAZ	**La Paz**	**145.96 56**	PKPbc	PKPbc	13 08 09.0	-0.3
comp=Z,2.9nm,0.8s,baz=1.8,slow=5.4,SNR=9.9						
LPAZ	**La Paz**	**145.96 56**	PKP2	PKPbc	13 08 09.0	-0.3
LPAZ			pmax	pmax		
comp=Z,3.0nm,0.8s						
LPAZ	**La Paz**	**145.96 56**	*e*PKPdf	PKPbc	13 08 10.5	+1.2

BJI ***14*** *12:55:21.1,4°.45S×144°.90E,h161km,mB4.8/25,mb4.9/41*
ISCJB ***14*** *12:55:23.2±1.2,4°.38S±0°.04×144°.35E±0°.05,h154km±11km, mb4.9/91,Error ellipse: s-maj=7.6km s-min=5.7km az=13.1*
NEIC ***14*** *12:55:25.1±0.1,4°.38S×144°.35E,mb4.9/59,Error ellipse: s-maj=5.0km s-min=3.6km az=90.0*
IDC ***14*** *12:55:26.5±2.3,4°.42S×144°.29E,h174km±21km,mb4.5/25, mb1 4.5/28,mb1mx4.5/29,mbtmp4.5/28,MS3.4/3, Ms1 3.4/3,ms1mx2.7/26,Error ellipse: s-maj=12.4km s-min=6.8km az=97.0*
GCMT ***14*** *12:55:27.4±0.3,4°.48S×144°.32E,h163km±2km,MW5.0, Moment Tensor Solution. s35,c40; s78,c114; Moment tensor: Scale 10^{16}Nm; M_{rr}3.92±.12; $M_{\theta\theta}$-1.67±.16; $M_{\phi\phi}$-2.25±.18; $M_{r\theta}$-1.42±.13; $M_{r\phi}$1.41±.15; $M_{\theta\phi}$0.83±.15; Best double couple: $M_0$4.00000×10^{16} NP1:ϕ_s147.00000°, δ34.00000°,λ101.00000°. NP2:ϕ_s313.00000°,δ57.00000°, λ83.00000°. Principal axes: T 4.3000, Plg77.0000°, Azm200.0000°; N -0.5800, Plg6.0000°, Azm317.0000°; P -3.7100, Plg12.0000°, Azm49.0000°; Data Used: IU II G CN IC.*
DJA ***14*** *12:55:27,4°.56S×144°.23E,h148km,Mw5.2/15*
ISC 14 12:55:25.6±1.0,4°.41S±0°.04×144°.38E±0°.05,h163km±10km, h164km±1.0km;pP-P,n171,σ0s89/148,mb4.9/91,2C-1D, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**9.56**	**187**	*e*Pn	**Pn**	**12 57 40.5**	**+0.8**
KAKA	**Kakadu**	**14.39**	**234**	*e*P	**Pn**	**12 58 41.8**	**-0.2**
129nm,0.4s							
KAKA	**Kakadu**	**14.39**	**234**	*e*Pn	**Pn**	**12 58 41.9**	**-0.1**
413nm,0.6s							
KAKA				*e*Sn	**Sn**	**13 01 11.8**	**-10**
CTA	**Charters Tower**	**15.69**	**173**	*e*P	**Pn**	**12 58 59.2**	**+1.2**
12nm,0.6s							
CTA	**Charters Tower**	**15.69**	**173**	P	**Pn**	**12 58 59.1**	**+1.1**
1.3nm,0.3s,baz=351,slow=13,SNR=22							
CTAO	**Charters Tower**	**15.69**	**173**	*e*P	**Pn**	**12 58 59.1**	**+1.1**
16nm,0.7s							
HNR	**Honiara**	**16.24**	**109**	P	**Pn**	**12 59 04.7**	**-0.1**
5.9nm,0.3s,baz=188,slow=4.6,SNR=5.3							
HNR	**Honiara**	**16.24**	**109**	Pn	**Pn**	**12 59 03.7**	**-1.1**
247nm,1.5s							
WRAB	**Tennant Creek**	**18.26**	**212**	*e*Pn	**Pn**	**12 59 26.9**	**-1.9**
168nm,0.8s							
WRAB				*e*S	**S**	**13 02 43.8**	**-3.7**
WRA	**Warramunga Arr**	**18.27**	**212**	P	**P**	**12 59 27.1**	**0.0**
12nm,0.3s,baz=33,slow=11,SNR=125							
WRA				S	**S**	**13 02 43.4**	**-4.3**
0.5nm,0.3s,baz=32,slow=18,SNR=8.3							
KNA	**Kununurra**	**19.04**	**233**	*e*P	**P**	**12 59 35.3**	**-0.1**
106nm,0.9s							
ASAR	**Alice Springs**	**21.65**	**207**	P	**P**	**13 00 03.5**	**+0.2**
149nm,0.7s,mb5.5,baz=35,slow=9.4,SNR=428							
ASAR				S	**S**	**13 03 52.3**	**-0.2**
69nm,0.8s,baz=30,slow=18,SNR=29							
EIDS	**Eidsvold**	**21.81**	**163**	*e*P	**P**	**13 00 05.5**	**+0.6**
84nm,0.8s,mb5.2							
RMQ	**Roma**	**22.35**	**170**	*e*P	**P**	**13 00 11.7**	**+1.4**
116nm,0.7s,mb5.4							
FITZ	**Fitzroy Crossi**	**22.83**	**232**	*e*P	**P**	**13 00 13.9**	**-0.9**
150nm,0.7s,mb5.5							
FITZ	**Fitzroy Crossi**	**22.83**	**232**	P	**P**	**13 00 14.5**	**-0.3**
81nm,0.7s,mb5.2,baz=65,slow=9.2,SNR=156							
FITZ	**Fitzroy Crossi**	**22.83**	**232**	*e*P	**P**	**13 00 14.5**	**-0.3**
84nm,0.8s,mb5.2							
KAPI	**Kappang**	**24.55**	**268**	P	**P**	**13 00 29.2**	**-1.4**
27nm,0.8s,mb4.8,baz=98,slow=4.2,SNR=12							
KAPI	**Kappang**	**24.55**	**268**	*e*P	**P**	**13 00 29.8**	**-0.8**
46nm,1.0s,mb5.0							
ARMA	**Armidale**	**26.76**	**166**	*e*P	**P**	**13 00 51.3**	**+1.0**
ARMA	**Armidale**	**26.76**	**166**	*e*P	**P**	**13 00 51.3**	**+1.1**
17nm,0.8s,mb4.7							
CMSA	**Cobar Meteorol**	**27.01**	**178**	*e*P	**P**	**13 00 52.7**	**+0.2**
STKA	**Stephens Creek**	**27.45**	**185**	*e*P	**P**	**13 00 56.3**	**-0.1**
6.5nm,0.6s,mb4.4							
STKA	**Stephens Creek**	**27.45**	**185**	P	**P**	**13 00 56.3**	**-0.1**
8.5nm,0.6s,mb4.5,baz=359,slow=8.9,SNR=20							
STKA				LR	LR	13 13 58.6	
comp=Z,212nm,18.7s,baz=218,slow=40							
STKA	**Stephens Creek**	**27.45**	**185**	*e*P	**P**	**13 00 56.6**	**+0.2**
2.8nm,0.8s,mb3.9							
MBWA	**Marble Bar**	**29.16**	**233**	*e*P	**P**	**13 01 10.4**	**-1.3**
0.4nm,0.3s							
KKM	**Kota Kinabalu**	**29.98**	**290**	P	**P**	**13 01 18.2**	**-0.9**
FORT	**Forrest**	**30.41**	**209**	*e*P	**P**	**13 01 22.7**	**+0.1**
159nm,0.6s,mb5.9							
CBIJ	**Chichi jima**	**31.39**	**356**	P	**P**	**13 01 29.7**	**-1.6**
38nm,0.6s,mb5.3,baz=280,slow=9.2,SNR=7.0							
ARPS	**Mount Arapiles**	**32.29**	**184**	*e*P	**P**	**13 01 39.6**	**+0.6**
24nm,0.5s,mb5.2							
GIRL	**Giralia**	**34.33**	**235**	*e*P	**P**	**13 01 58.4**	**+1.5**
261nm,0.9s,mb6.0							
KSM	**Kuching**	**34.54**	**279**	*e*P	**P**	**13 01 58.1**	**-0.7**
37nm,1.7s,mb4.7							
YULB	**Yu-li**	**35.65**	**322**	*e*P	**P**	**13 02 08.4**	**+0.2**
22nm,0.7s,mb4.9							
SSLB	**Suanglung**	**36.15**	**322**	*e*P	**P**	**13 02 12.8**	**+0.4**
22nm,0.6s,mb5.0							
MORW	**Morawa**	**36.37**	**224**	*e*P	**P**	**13 02 14.1**	**-0.2**
YHNB	**Yeheng**	**36.55**	**323**	*e*P	**P**	**13 02 16.9**	**+1.1**
38nm,0.7s,mb5.1							
KLBR	**Kellerberrin**	**36.82**	**220**	*e*P	**P**	**13 02 17.2**	**-0.9**
22nm,0.9s,mb4.8							
JHJ	**Hachijo jima 2**	**37.58**	**354**	P	**P**	**13 02 22.8**	**-1.5**
64nm,0.8s,mb5.3,baz=203,slow=15,SNR=3.0							
NWAO	**Narrogin (SRO)**	**38.04**	**219**	P	**P**	**13 02 27.1**	**-1.2**
15nm,0.7s,mb4.7,baz=212,slow=4.5,SNR=6.8							
NWAO				PcP	PcP	13 04 39.7	-0.6
19nm,0.7s,baz=96,slow=6.9,SNR=4.8							
NWAO	**Narrogin (SRO)**	**38.04**	**219**	P	**P**	**13 02 27.1**	**-1.2**
NWAO				PcP	PcP	13 04 39.7	-0.6
MJAR	**Matsushiro Arr**	**41.14**	**352**	P	**P**	**13 02 52.5**	**-1.4**
2.2nm,0.8s,mb3.8,baz=176,slow=10,SNR=6.0							
NJ2	**Nanjing**	**43.64**	**328**	*e*P	**P**	**13 03 15.4**	**+1.3**
NJ2				pmax	pmax		
comp=Z,10.0nm,0.5s,mb4.7							
KSRS	**Korea Array**	**44.38**	**341**	P	**P**	**13 03 19.9**	**+0.1**
comp=Z,12nm,0.8s,mb4.6,baz=160,slow=9.2,SNR=38							
INCN	**Inchon**	**44.83**	**340**	*e*P	**P**	**13 03 23.7**	**+0.2**
comp=Z,47nm,1.2s,mb5.0							
URZ	**Urewera**	**44.98**	**143**	P	**P**	**13 03 25.5**	**+0.8**
comp=Z,7.1nm,0.3s,mb4.7,baz=317,slow=6.6,SNR=20							
URZ				PcP	PcP	13 05 01.1	-1.9
comp=Z,10.0nm,0.8s,baz=310,slow=2.5,SNR=3.8							
RPZ	**Rata Peaks**	**45.68**	**153**	P	**P**	**13 03 31.0**	**+0.8**
comp=Z,37nm,0.8s,mb5.1,baz=147,slow=0.4,SNR=14							
GYA	**Guiyang**	**47.68**	**312**	P	**P**	**13 03 47.1**	**+1.2**
GYA				pP	pP	13 04 23.1	+0.7
GYA				sP	sP	13 04 41.3	+0.7
GYA				PcP	PcP	13 05 13.8	+1.0
GYA				PP	PP	13 05 40.4	+1.2
GYA				ScP	ScP	13 08 51.3	-0.6
GYA				PcS	PcS	13 09 07.6	-1.1
GYA				S	**S**	**13 10 30.3**	**+0.7**
GYA				sS	sS	13 11 33.5	+0.4
GYA				SS	SS	13 13 56.9	-3.4
GYA				pmax	pmax		
comp=Z,10.0nm,0.9s,mb4.5							
GYA				pmax	pmax		
comp=Z,60nm,4.0s							
GYA				LR	LR		
comp=N,560nm,17.6s							
GYA				LR	LR		
comp=E,480nm,17.5s							
GYA				LR	LR		
comp=Z,550nm,16.4s							
ENH	**Enshi**	**47.99**	**318**	*e*P	**P**	**13 03 48.1**	**-0.1**
comp=Z,14nm,1.0s,mb4.5							
ASAJ	**Asahikawa**	**48.33**	**358**	P	**P**	**13 03 50.7**	**+0.1**
comp=Z,7.5nm,0.8s,mb4.4,baz=102,slow=26,SNR=4.2							
KMI	**Kunming**	**49.96**	**308**	P	**P**	**13 04 05.4**	**+2.0**
KMI				pP	pP	13 04 42.5	+2.4
KMI				sP	sP	13 04 59.9	+1.7
KMI				PP	PP	13 06 03.4	+3.4
KMI				S	**S**	**13 11 03.8**	**+2.2**
KMI				sS	sS	13 12 06.8	+1.3
KMI				SS	SS	13 14 36.3	-0.6
KMI				pmax	pmax		
comp=Z,8.0nm,1.1s,mb4.3							
KMI				pmax	pmax		
comp=Z,99nm,3.9s							
KMI				LR	LR		
comp=N,92nm,10.1s							
KMI				LR	LR		
comp=E,97nm,11.5s							
KMI				LR	LR		
comp=Z,130nm,12.2s							
CM31	**Chiang Mai Arr**	**50.20**	**298**	*e*P	**P**	**13 04 06.3**	**+1.1**
comp=Z,14nm,0.6s,mb4.8							
CMAR	**Chiang Mai Arr**	**50.20**	**298**	P	**P**	**13 04 06.0**	**+0.8**
comp=Z,16nm,0.7s,mb4.8,baz=122,slow=6.1,SNR=89							
CHTO	**Chiang Mai**	**50.34**	**299**	*e*P	**P**	**13 04 06.3**	**0.0**
MDJ	**Mudanjiang**	**50.58**	**346**	P	**P**	**13 04 08.5**	**+0.9**
MDJ				pP	pP	13 04 44.8	+0.4
MDJ				sP	sP	13 05 03.0	+0.5
MDJ				PP	PP	13 06 06.0	+0.8
MDJ				S	**S**	**13 11 09.5**	**+0.1**
MDJ				pmax	pmax		
comp=Z,5.0nm,0.8s,mb4.2							
MDJ				pmax	pmax		
comp=Z,140nm,12.9s							
MDJ				LR	LR		
comp=N,28nm,29.5s							
MDJ				LR	LR		
comp=E,54nm,27.9s							
MDJ				LR	LR		
comp=Z,54nm,30.5s							
XAN	**Xi'an**	**50.81**	**322**	P	**P**	**13 04 08.3**	**-1.3**
XAN				pP	pP	13 04 48.5	+2.0
XAN				pmax	pmax		
comp=Z,4.0nm,1.4s,mb3.9							
CN2	**Changchun**	**50.93**	**342**	*e*P	**P**	**13 04 10.3**	**0.0**
CN2				pmax	pmax		
comp=Z,100nm,0.8s,mb5.5							
YSS	**Yuzh-Sakhalins**	**51.16**	**359**	*e*P	**P**	**13 04 11.9**	**0.0**
BJI	**Beijing**	**51.27**	**332**	P	**P**	**13 04 12.9**	**0.0**
BJI				pP	pP	13 04 50.9	+1.1
BJI				sP	sP	13 05 06.1	-1.7
BJI				S	**S**	**13 11 21.1**	**+2.0**
BJI				pmax	pmax		
comp=Z,31nm,0.7s,mb5.0							
BJI				pmax	pmax		
comp=Z,59nm,3.5s							
CD2	**Chengdu**	**52.30**	**315**	*e*P	**P**	**13 04 21.5**	**+0.8**
CD2				pP	pP	13 04 58.1	+0.3
CD2				sP	sP	13 05 16.1	+0.3
CD2				PP	PP	13 06 23.4	+2.3
CD2				S	**S**	**13 11 33.6**	**0.0**
CD2				sS	sS	13 12 37.6	-0.4
CD2				SS	SS	13 15 12.3	-1.4
CD2				pmax	pmax		
comp=Z,60nm,0.6s,mb5.4							
CD2				pmax	pmax		
comp=Z,150nm,5.8s							
HHC	**Hu-ho-hao-te**	**54.13**	**330**	*e*P	**P**	**13 04 36.8**	**+2.9**
HHC				pP	pP	13 05 13.6	+2.4
HHC				sP	sP	13 05 31.6	+2.5
HHC				PcP	PcP	13 05 39.8	+3.4
HHC				PP	PP	13 06 42.5	+5.2
HHC				ScP	ScP	13 09 21.5	+2.2
HHC				PcS	PcS	13 09 37.4	+1.5
HHC				S	**S**	**13 12 01.6**	**+3.7**
HHC				sS	sS	13 13 02.9	+0.2
HHC				ScS	ScS	13 14 05.8	-1.0
HHC				SS	SS	13 15 42.0	-0.2
HHC				pmax	pmax		
comp=Z,9.0nm,0.6s,mb4.7							
HHC				pmax	pmax		
comp=Z,190nm,7.0s							
HHC				LR	LR		
comp=N,83nm,16.6s							
HHC				LR	LR		
comp=E,97nm,17.8s							
HHC				LR	LR		
comp=Z,97nm,17.8s							
LZH	**Lanzhou**	**55.32**	**320**	*e*P	**P**	**13 04 43.0**	**+0.5**
LZH				pP	pP	13 05 20.0	0.0
LZH				sP	sP	13 05 37.4	-0.5
LZH				PP	PP	13 06 49.5	+1.5
LZH				*e*S	**S**	**13 12 12.5**	**-1.4**
LZH				sS	sS	13 13 17.1	-1.9
LZH				SS	SS	13 16 00.3	-0.8
LZH				pmax	pmax		
comp=Z,24nm,1.0s,mb4.9							
LZH				pmax	pmax		
comp=Z,100nm,4.0s							
LZH				LR	LR		
comp=E,430nm,16.9s							
LZH				LR	LR		
comp=Z,530nm,17.4s							
HIA	**Hailar**	**57.59**	**341**	*e*P	**P**	**13 04 58.7**	**+0.4**
comp=Z,6.2nm,0.4s,mb4.8							
PETK	**Petropavlovsk-**	**58.40**	**9**	P	**P**	**13 05 04.2**	**+0.4**
comp=Z,14nm,1.0s,mb4.8,baz=163,slow=5.4,SNR=10							
GTA	**Gaotai**	**59.86**	**321**	P	**P**	**13 05 15.3**	**+1.1**
GTA				pP	pP	13 05 52.0	-0.2
GTA				sP	sP	13 06 09.4	-0.6
GTA				pmax	pmax		
comp=Z,12nm,0.6s,mb4.9							
LSA	**Lhasa**	**61.20**	**307**	P	**P**	**13 05 24.3**	**+0.8**
LSA	**Lhasa**	**61.20**	**307**	*e*P	**P**	**13 05 24.9**	**+1.4**
comp=Z,9.7nm,0.7s,mb4.7							
ULN	**Ulaanbaatar**	**61.48**	**332**	*e*P	**P**	**13 05 25.7**	**+0.8**
comp=Z,8.4nm,0.8s,mb4.6							
SONM	**Songino Array**	**61.77**	**332**	P	**P**	**13 05 27.4**	**+0.5**
comp=Z,3.8nm,0.7s,mb4.4,baz=158,slow=6.3,SNR=12							
TAPN	**Taplejung**	**63.10**	**304**	*e*P	**P**	**13 05 35.7**	**-0.5**
comp=Z,31nm,0.8s,mb5.2							
ODAN	**Odare**	**63.19**	**303**	*e*P	**P**	**13 05 36.4**	**-0.4**
comp=Z,44nm,0.9s,mb5.3							
RAMN	**Ramite**	**63.89**	**303**	*e*P	**P**	**13 05 41.0**	**-0.3**
comp=Z,35nm,0.8s,mb5.3							
JIRN	**Jiri**	**64.47**	**303**	*e*P	**P**	**13 05 44.2**	**-0.9**
comp=Z,9.6nm,0.4s,mb4.9							
GUN	**Gumba**	**64.82**	**304**	*e*P	**P**	**13 05 46.0**	**-1.4**
comp=Z,70nm,0.7s,mb5.6							
PKI	**Pulchoki**	**65.09**	**303**	*e*P	**P**	**13 05 48.5**	**-0.7**
comp=Z,33nm,0.8s,mb5.2							
PKIN	**Phulchoki**	**65.11**	**303**	*e*P	**P**	**13 05 47.9**	**-1.3**
comp=Z,42nm,0.6s,mb5.4							
KKN	**Kakani**	**65.27**	**303**	*e*P	**P**	**13 05 48.9**	**-1.4**
comp=Z,67nm,0.8s,mb5.5							
DMN	**Daman**	**65.36**	**303**	*e*P	**P**	**13 05 49.9**	**-1.0**
comp=Z,51nm,0.7s,mb5.5							
CASY	**Casey**	**66.12**	**194**	*e*P	**P**	**13 05 54.5**	**-0.5**
CASY	**Casey**	**66.12**	**194**	*e*P	**P**	**13 05 54.7**	**-0.2**
comp=Z,25nm,0.8s,mb5.1							
WMQ	**Urumqi**	**69.89**	**320**	*e*P	**P**	**13 06 20.0**	**+1.0**
WMQ				pmax	pmax		
comp=Z,21nm,1.0s,mb4.8							
BILL	**Bilibino**	**73.91**	**8**	*e*P	**P**	**13 06 42.4**	**0.0**
comp=Z,6.6nm,0.8s,mb4.4							
SBA	**Scott Base**	**74.34**	**175**	*e*P	**P**	**13 06 46.1**	**+1.3**
comp=Z,12nm,0.7s,mb4.7							
MK31	**Makanchi Array**	**74.62**	**321**	*e*P	**P**	**13 06 47.0**	**0.0**
MKAR	**Makanchi Array**	**74.62**	**321**	P	**P**	**13 06 47.0**	**0.0**
comp=Z,16nm,0.8s,mb4.7,baz=82,slow=9.9,SNR=122							
ZALV	**Zalesovo Beam**	**76.29**	**328**	P	**P**	**13 06 55.6**	**-0.7**
comp=Z,13nm,0.6s,mb4.7,baz=114,slow=5.7,SNR=54							
KSH	**Kashi**	**76.38**	**312**	*e*P	**P**	**13 06 58.8**	**+1.7**
KSH				PcP	PcP	13 07 10.3	+2.1
KSH				pP	pP	13 07 38.1	+1.2
KSH				sP	sP	13 07 55.4	+1.1
KSH				PP	PP	13 09 54.1	+3.0
KSH				S	S	13 16 25.8	-3.2
KSH				SKS		13 16 49.8	
KSH				ScS	ScS	13 16 55.8	-2.0
KSH				sS	sS	13 17 37.8	-0.1
KSH				SS	SS	13 21 29.8	+2.7
KSH				pmax	pmax		
comp=Z,12nm,1.4s,mb4.3							
KSH				pmax	pmax		
comp=Z,100nm,5.3s							
KSH				LR	LR		
comp=N,140nm,6.2s							
KSH				LR	LR		
comp=E,92nm,5.5s							
KSH				LR	LR		
comp=Z,140nm,6.2s							
TIXI	**Tiksi**	**76.59**	**355**	*e*P	**P**	**13 06 56.1**	**-1.5**
comp=Z,6.5nm,0.6s,mb4.4							
ULHL	**Ulahol**	**77.02**	**315**	P	**P**	**13 07 01.3**	**+0.6**
SNR=7.0							
KZA	**Kyzart**	**77.67**	**315**	P	**P**	**13 07 05.8**	**+1.5**
SNR=51							
TKM2	**Tokmak 2**	**77.69**	**316**	P	**P**	**13 07 04.8**	**+0.5**
SNR=19							
TKM2	**Tokmak 2**	**77.69**	**316**	*e*P	**P**	**13 07 04.7**	**+0.3**
comp=Z,14nm,0.6s,mb4.8							
TKM2				*e*pP	pP	13 07 44.1	-0.2
KBK	**Karagaybulak**	**78.06**	**315**	P	**P**	**13 07 06.8**	**+0.4**
SNR=7.2							
UCH	**Uchtor**	**78.24**	**315**	P	**P**	**13 07 08.5**	**+1.0**
SNR=26							
UCH	**Uchtor**	**78.24**	**315**	*e*P	**P**	**13 07 08.4**	**+1.0**
comp=Z,17nm,0.8s,mb4.7							
CHMS	**Chumysh**	**78.30**	**315**	P	**P**	**13 07 08.1**	**+0.4**
SNR=7.3							
AAK	**Ala-Archa**	**78.37**	**315**	P	**P**	**13 07 09.0**	**+0.9**
SNR=6.1							
AAK	**Ala-Archa**	**78.37**	**315**	P	**P**	**13 07 08.4**	**+0.2**
comp=Z,8.0nm,0.7s,mb4.5,baz=148,slow=6.4,SNR=16							
AAK	**Ala-Archa**	**78.37**	**315**	*e*P	**P**	**13 07 08.6**	**+0.5**
comp=Z,10nm,0.8s,mb4.5							
KURK	**Kurchatov**	**78.39**	**324**	P	**P**	**13 07 06.7**	**-1.3**
comp=Z,6.6nm,0.8s,mb4.3,baz=280,slow=10,SNR=22							
KURK	**Kurchatov**	**78.39**	**324**	*e*P	**P**	**13 07 07.5**	**-0.5**
comp=Z,16nm,1.0s,mb4.6							
KURK				*e*pP	pP	13 07 47.2	-0.8
USP	**Ospenovka**	**78.56**	**316**	P	**P**	**13 07 09.4**	**+0.3**
SNR=17							
AML	**Almayashu**	**78.80**	**314**	*e*P	**P**	**13 07 11.6**	**+1.1**
comp=Z,21nm,0.8s,mb4.8							
AML				*e*pP	pP	13 07 51.2	+0.8
EKS2	**Erkin-Say**	**78.89**	**315**	P	**P**	**13 07 12.0**	**+1.1**
SNR=6.0							
EKS2	**Erkin-Say**	**78.89**	**315**	*e*P	**P**	**13 07 11.7**	**+0.7**
comp=Z,16nm,0.8s,mb4.7							
KDAK	**Kodiak Island**	**79.77**	**29**	P	**P**	**13 07 14.4**	**-1.0**
comp=Z,12nm,0.7s,mb4.6,baz=205,slow=3.0,SNR=12							
KDAK	**Kodiak Island**	**79.77**	**29**	*e*P	**P**	**13 07 15.3**	**0.0**
comp=Z,13nm,0.8s,mb4.6							
SVW2	**Sparrevohn**	**79.91**	**25**	*e*P	**P**	**13 07 16.5**	**+0.4**
KBL	**Kabul**	**80.48**	**306**	*e*P	**P**	**13 07 19.0**	**-0.8**
comp=Z,5.8nm,0.6s,mb4.4							
TTA	**Tatalina**	**80.63**	**24**	*e*P	**P**	**13 07 19.8**	**-0.1**
RSO	**Redoubt South**	**80.85**	**27**	P	**P**	**13 07 21.7**	**+0.6**
PPLA	**Purkeypile**	**82.16**	**24**	*e*P	**P**	**13 07 27.5**	**-0.4**
comp=Z,9.0nm,0.7s,mb4.5							
SEW	**Seward**	**82.20**	**28**	*e*P	**P**	**13 07 27.7**	**-0.5**
comp=Z,21nm,1.0s,mb4.7							
CHUM	**Lake Minchumin**	**82.55**	**24**	*e*P	**P**	**13 07 30.4**	**+0.5**
comp=Z,62nm,0.7s,mb5.4							
MAW	**Mawson**	**82.70**	**202**	P	**P**	**13 07 30.8**	**0.0**
comp=Z,20nm,0.7s,mb5.0,baz=88,slow=6.4,SNR=46							
MAW	**Mawson**	**82.70**	**202**	*e*P	**P**	**13 07 30.8**	**0.0**
comp=Z,4.5nm,0.7s,mb4.3							
MAW				*e*pP	pP	13 08 11.6	+0.5
PMR	**Palmer**	**82.93**	**26**	*e*P	**P**	**13 07 31.4**	**-0.5**
comp=Z,22nm,1.0s,mb4.8							
KTH	**Kantishna Hill**	**82.96**	**24**	*e*P	**P**	**13 07 31

GERES	**GERESS Array B**	**119.12**	**325**	PKP	PKPdf	13 13 54.9	-0.4
	comp=Z,1.5nm,0.8s,baz=8.5,slow=2.7,SNR=11						
GERES				PKKPbc	PKKPbc	13 24 09.2	-1.9
	comp=Z,0.8nm,0.7s,baz=204,slow=2.9,SNR=6.2						
CDF	**Champ du Feu**	**122.93**	**327**	*e*PKP1	PKPdf	13 14 01.5	-1.1
HINF	**Hinteralfeld**	**123.51**	**327**	*e*PKP1	PKPdf	13 14 02.8	-0.9
	comp=Z,6.7nm,0.8s						
HAU	**Haudompre**	**123.67**	**327**	*e*PKP1	PKPdf	13 14 02.6	-1.4
	comp=Z,5.0nm,0.6s						
MEZF	**Maizieres J'vi**	**124.05**	**328**	*e*PKP1	PKPdf	13 14 04.3	-0.4
CABF	**La Chapelle**	**124.64**	**326**	*e*PKP1	PKPdf	13 14 05.8	-0.1
	comp=Z,12nm,0.9s						
PLCA	**Paso Flores**	**124.86**	**148**	PKP	PKPdf	13 14 07.0	+0.4
	comp=Z,3.5nm,0.7s,baz=68,slow=0.7,SNR=12						
LPG	**La Plagne**	**124.92**	**325**	*e*PKP1	PKPdf	13 14 06.3	-0.2
LPL	**La Plagne**	**124.92**	**325**	*e*PKP1	PKPdf	13 14 06.2	-0.3
MBDF	**Montbardon**	**125.34**	**324**	*e*PKP1	PKPdf	13 14 07.1	-0.2
SBF	**Sospel**	**125.43**	**323**	*e*PKP1	PKPdf	13 14 07.1	-0.4
	comp=Z,64nm,1.0s						
ORIF	**Oris-en-Rattie**	**125.75**	**325**	*e*PKP1	PKPdf	13 14 07.6	-0.5
	comp=Z,9.9nm,0.9s						
SSF	**Saint Saulge**	**125.77**	**328**	*e*PKP1	PKPdf	13 14 07.6	-0.5
TKL	**Tuckaleechee C**	**125.88**	**48**	*e*PKPdf	PKPdf	13 14 07.7	-0.9
AVF	**Avril sur Loir**	**126.02**	**328**	*e*PKP1	PKPdf	13 14 07.7	-0.9
TCF	**Toulx Ste Croi**	**126.95**	**328**	*e*PKP1	PKPdf	13 14 10.0	-0.4
	comp=Z,12nm,0.9s						
LPAZ	**La Paz**	**141.84**	**123**	PKhKP		13 14 35.3	
	comp=Z,4.1nm,0.6s,baz=255,slow=4.3,SNR=14						
CPUP	**Villa Florida**	**142.91**	**147**	PKhKP		13 14 36.4	
	comp=Z,2.4nm,0.6s,baz=263,slow=3.5,SNR=10						
SDV	**Santo Domingo**	**144.96**	**81**	*e*PKPbc	PKPdf	13 14 43.9	-0.6
SJG	**San Juan**	**147.19**	**63**	*e*PKPbc	PKPbc	13 14 49.5	-1.1
KIC	**Kosan Boka**	**149.19**	**275**	*e*PKIKP	PKPbc	13 14 55.8	-0.2
	comp=Z,67nm,1.1s						
DBIC	**Dimbokro**	**149.30**	**276**	PKPbc	PKPbc	13 14 56.0	-0.3
	comp=Z,12nm,0.7s,baz=86,slow=3.1,SNR=19						
DBIC	**Dimbokro**	**149.30**	**276**	PKPbc	PKPbc	13 14 56.0	-0.3
TIC	**Toumodi**	**149.46**	**276**	*e*PKIKP	PKPbc	13 14 56.1	-0.6
	comp=Z,10nm,0.3s						
LIC	**Lamto**	**149.49**	**275**	*e*PKIKP	PKPbc	13 14 56.3	-0.4
	comp=Z,76nm,1.0s						
LIC	**Lamto**	**149.49**	**275**	*e*PKIKP	PKPbc	13 14 56.4	-0.3
	comp=Z,28nm,0.7s						
SPB	**Sao Paulo**	**149.88**	**158**	*e*PKPbc	PKPbc	13 14 58.5	+1.1

NEIC ***14*** *12:59:54.0, 37.°93N×21.°44E, h25km, MD2.9(ATH), After ATH.*
ATH ***14*** *12:59:54.0, 37.°93N×21.°44E, h25km±4km, MD2.9/6*
CSEM ***14*** *12:59:54.6±0.2, 37.°92N×21.°45E, h20km, MD2.9, Error ellipse: s-maj=4.7km s-min=3.9km az=106.0*
ISCJB ***14*** *12:59:54.1±0.7, 37.°88N±0.°03×21.°48E±0.°03, h10km±4km, Error ellipse: s-maj=4.8km s-min=4.1km az=170.7*
THE ***14*** *12:59:55.1, 37.°92N×21.°49E, h10km±1km, ML2.6/9, Error ellipse: s-maj=1.3km s-min=0.8km az=174.0*
ISC 14 12:59:54.7±0.5, 37.°90N±0.°03×21.°47E±0.°03, h16km±3km, n44, σ1°06/75, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.16**	**359**	*e*Pb	**Pg**	**12 59 59.0**	**+0.2**
RLS				*e*Sb	**Sg**	**13 00 02.6**	**+0.9**
RLS	**Riolos of Patr**	**0.16**	**359**	*e*PB	**Pg**	**12 59 59.0**	**+0.2**
RLS				*e*SB	**Sg**	**13 00 02.6**	**+0.9**
RLS	**Riolos of Patr**	**0.16**	**359**	*e*Pb	**Pg**	**12 59 59.0**	**+0.2**
RLS				*e*Sb	**Sg**	**13 00 02.6**	**+0.9**
UPR	**University Cam**	**0.46**	**33**	P	**Pg**	**13 00 04.1**	**+0.2**
UPR				S	**Sg**	**13 00 10.7**	**+0.6**
UPR	**University Cam**	**0.46**	**33**	*e*PB	**Pb**	**13 00 03.7**	**-0.6**
UPR				*e*SB	**Sb**	**13 00 11.3**	**+0.4**
UPR	**University Cam**	**0.46**	**33**	*e*Pb	**Pb**	**13 00 03.7**	**-0.6**
UPR	**University Cam**	**0.46**	**33**	P	**Pg**	**13 00 04.1**	**+0.2**
UPR				S	**Sg**	**13 00 10.7**	**+0.6**
UPR				*e*Sb	**Sb**	**13 00 11.3**	**+0.4**
LAKA	**Lakka**	**0.53**	**50**	P	**Pg**	**13 00 04.8**	**-0.4**
LAKA				S	**Sg**	**13 00 11.8**	**-0.5**
LAKA	**Lakka**	**0.53**	**50**	P	**Pg**	**13 00 04.8**	**-0.4**
LAKA				S	**Sg**	**13 00 11.8**	**-0.5**
KFL	**Anninata**	**0.58**	**292**	P	**Pg**	**13 00 06.2**	**+0.1**
EFP	**Efpalio**	**0.63**	**33**	P	**Pg**	**13 00 06.0**	**-1.1**
EFP				S	**Sg**	**13 00 15.7**	**+0.2**
EFP	**Efpalio**	**0.63**	**33**	*e*PN	**Pn**	**13 00 06.2**	**-2.7**
EFP	**Efpalio**	**0.63**	**33**	P	**Pg**	**13 00 06.0**	**-1.1**
EFP				S	**Sg**	**13 00 15.7**	**+0.2**
GUR	**Goura**	**0.69**	**87**	P	**Pg**	**13 00 07.4**	**-0.8**
GUR				S	**Sg**	**13 00 18.3**	**+0.9**
GUR	**Goura**	**0.69**	**87**	*e*PN	**Pn**	**13 00 07.5**	**-2.2**
GUR				*e*SN	**Sg**	**13 00 18.6**	**+1.2**
GUR	**Goura**	**0.69**	**87**	P	**Pg**	**13 00 07.4**	**-0.8**
GUR				S	**Sg**	**13 00 18.3**	**+0.9**
GUR				*e*Sn	**Sg**	**13 00 18.6**	**+1.2**
KALE	**Kalithea**	**0.72**	**47**	P	**Pg**	**13 00 07.8**	**-1.0**
KALE				S	**Sg**	**13 00 18.3**	**-0.1**
KALE	**Kalithea**	**0.72**	**47**	P	**Pg**	**13 00 07.8**	**-1.0**
KALE				S	**Sg**	**13 00 18.3**	**-0.1**
VLS	**Valsamata**	**0.75**	**292**	*e*Pn	**Pn**	**13 00 08.5**	**-2.0**
VLS	**Valsamata**	**0.75**	**292**	P	**Pg**	**13 00 08.6**	**-0.7**
VLS				S	**Sg**	**13 00 21.0**	**+1.8**
VLS	**Valsamata**	**0.75**	**292**	*e*PN	**Pn**	**13 00 08.5**	**-2.0**
VLS	**Valsamata**	**0.75**	**292**	P	**Pg**	**13 00 08.6**	**-0.7**
VLS				S	**Sg**	**13 00 21.0**	**+1.8**
ITM	**Ithomi**	**0.80**	**153**	*e*Pn	**Pn**	**13 00 10.0**	**-1.2**
ITM	**Ithomi**	**0.80**	**153**	P	**Pb**	**13 00 10.6**	**+0.4**
ITM				S	**Sb**	**13 00 23.0**	**+2.2**
ITM	**Ithomi**	**0.80**	**153**	*e*PN	**Pn**	**13 00 10.0**	**-1.2**
ITM	**Ithomi**	**0.80**	**153**	*e*Pn	**Pn**	**13 00 10.0**	**-1.2**
ITM	**Ithomi**	**0.80**	**153**	P	**Pb**	**13 00 10.6**	**+0.4**
ITM				S	**Sb**	**13 00 23.0**	**+2.2**
DSF	**Desfina**	**0.98**	**58**	P	**Pb**	**13 00 12.2**	**-1.0**
DSF				S	**Sb**	**13 00 26.4**	**+0.6**
DSF	**Desfina**	**0.98**	**58**	P	**Pb**	**13 00 12.2**	**-1.0**
DSF				S	**Sb**	**13 00 26.4**	**+0.6**
PYL	**PYLOS**	**1.02**	**168**	*e*PN	**Pn**	**13 00 15.2**	**+0.9**
PYL	**PYLOS**	**1.02**	**168**	*e*Pn	**Pn**	**13 00 15.2**	**+0.9**
EVR	**Evrytania**	**1.05**	**15**	*e*Pn	**Pn**	**13 00 14.0**	**-0.7**
EVR	**Evrytania**	**1.05**	**15**	*e*PN	**Pn**	**13 00 14.0**	**-0.7**
EVR	**Evrytania**	**1.05**	**15**	*e*Pn	**Pn**	**13 00 14.0**	**-0.7**
LKD2	**Lefkada island**	**1.09**	**325**	P	**Pb**	**13 00 14.5**	**-0.7**
LKD2				S	**Sb**	**13 00 32.0**	**+2.8**
LKD2	**Lefkada island**	**1.09**	**325**	P	**Pb**	**13 00 14.5**	**-0.7**
LKD2				S	**Sb**	**13 00 32.0**	**+2.8**
LTK	**Loutraki**	**1.19**	**84**	P	**Pn**	**13 00 17.1**	**+0.5**
LTK	**Loutraki**	**1.19**	**84**	P	**Pn**	**13 00 17.1**	**+0.5**
AGG	**Agios Georgios**	**1.31**	**31**	P	**Pn**	**13 00 18.4**	**+0.2**
AGG				S	**Sn**	**13 00 35.9**	**+0.6**
AGG	**Agios Georgios**	**1.31**	**31**	P	**Pn**	**13 00 18.4**	**+0.2**
AGG				S	**Sn**	**13 00 35.9**	**+0.6**
LKR	**Lokris**	**1.42**	**58**	P	**Pn**	**13 00 19.1**	**-0.6**
LKR				S	**Sn**	**13 00 38.6**	**+0.6**
LKR	**Lokris**	**1.42**	**58**	P	**Pn**	**13 00 19.1**	**-0.6**
LKR				S	**Sn**	**13 00 38.6**	**+0.6**
ATAL	**Atalanti**	**1.46**	**57**	P	**Pn**	**13 00 20.6**	**+0.4**
ATAL				S	**Sn**	**13 00 40.8**	**+1.9**
ATAL	**Atalanti**	**1.46**	**57**	P	**Pn**	**13 00 20.6**	**+0.4**
ATAL				S	**Sn**	**13 00 40.8**	**+1.9**

NEIC ***14*** *13:06:49.4±1.0, 24.°98N×123.°94E, h35km, mb3.5/1, Error ellipse: s-maj=27.1km s-min=8.8km az=145.0*
TAP ***14*** *13:07:04.0, 24.°83N×122.°47E, h107km, ML4.1, C*
ISCJB ***14*** *13:07:03.8±0.4, 24.°77N±0.°03×122.°51E±0.°02, h107km±4km, Error ellipse: s-maj=4.5km s-min=2.5km az=161.9*
JMA ***14*** *13:07:04.2±0.2, 24.°89N×122.°53E, h102km±3km, M3.3*
ISC 14 13:07:04.5±0.4, 24.°78N±0.°03×122.°51E±0.°02, h104km±4km, n72, σ0°79/134, 12C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.56**	**124**	P	**Pn**	**13 07 21.1**	**0.0**
YOJ				S	**Sn**	**13 07 33.6**	**0.0**
TWC	**Suao**	**0.62**	**255**	⇑*i*P	**Pn**	**13 07 21.4**	**-0.3**
	baz=244						
TWC				*i* S	**Sn**	**13 07 34.2**	**-0.3**
	baz=244						
ILA	**Ilan**	**0.69**	**269**	*i* P	**Pn**	**13 07 22.4**	**+0.1**
	baz=258						
ILA				*i* S	**Sn**	**13 07 36.1**	**+0.5**
	baz=258						
NWF	**Wu-fen Shan**	**0.72**	**294**	⇑*i*P	**Pn**	**13 07 22.6**	**+0.1**
	baz=296						
NWF				S	**Sn**	**13 07 35.9**	**-0.1**
	baz=296						
TWE	**Neicheng**	**0.77**	**266**	⇑*i*P	**Pn**	**13 07 23.0**	**+0.1**
	baz=261						
TWE				*i* S	**Sn**	**13 07 36.4**	**-0.4**
	baz=261						
ENA	**Nanau**	**0.78**	**244**	⇑*i*P	**Pn**	**13 07 23.3**	**+0.3**
	baz=235						
ENA				*i* S	**Sn**	**13 07 37.5**	**+0.5**
	baz=235						
TWA	**Mucha**	**0.86**	**284**	⇑*i*P	**Pn**	**13 07 23.8**	**0.0**
	baz=272						
TWA				S	**Sn**	**13 07 38.0**	**-0.4**
	baz=272						
ENTT	**Nioudou**	**0.87**	**261**	⇑*i*P	**Pn**	**13 07 24.2**	**+0.3**
	baz=261						
ENTT				S	**Sn**	**13 07 39.4**	**+0.9**
	baz=261						
TAP1	**Taipei**	**0.93**	**286**	*e*P	**Pn**	**13 07 24.3**	**-0.2**
	baz=275						
TAP1				*e*S	**Sn**	**13 07 38.8**	**-0.8**
	baz=275						
TATO	**Taipei**	**0.95**	**282**	*e*P	**Pn**	**13 07 23.9**	**-0.8**
TWY	**Chenhua**	**0.96**	**301**	P	**Pn**	**13 07 24.5**	**-0.3**
	baz=298						
TWY				S	**Sn**	**13 07 39.3**	**-0.9**
	baz=298						
NACB	**Ninganchiao**	**1.03**	**234**	*e*P	**Pn**	**13 07 24.4**	**-1.2**
NACB				*e*S	**Sn**	**13 07 40.7**	**-0.7**
YHNB	**Yeheng**	**1.04**	**264**	*e*P	**Pn**	**13 07 25.6**	**-0.1**
YHNB				*e*S	**Sn**	**13 07 41.4**	**-0.2**
TWS1	**Kuangyinshan**	**1.04**	**288**	P	**Pn**	**13 07 25.9**	**+0.2**
	baz=285						
TWS1				S	**Sn**	**13 07 41.6**	**-0.1**
	baz=285						
NSK	**Sanguang**	**1.05**	**265**	*i* P	**Pn**	**13 07 25.7**	**-0.1**
	baz=268						
NSK				S	**Sn**	**13 07 41.7**	**-0.1**
	baz=268						
TWD	**Chiawan**	**1.08**	**230**	⇑*i*P	**Pn**	**13 07 25.8**	**-0.4**
	baz=222						
TWD				S	**Sn**	**13 07 42.3**	**-0.2**
	baz=222						
NNS	**Nan Shan**	**1.09**	**252**	⇑*i*P	**Pn**	**13 07 26.7**	**+0.5**
	baz=241						
NNS				S	**Sn**	**13 07 42.8**	**+0.2**
	baz=241						
HWA	**Hwalien**	**1.15**	**226**	P	**Pn**	**13 07 26.7**	**-0.2**
	baz=218						
HWA				S	**Sn**	**13 07 44.4**	**+0.7**
	baz=218						
IRIF	**Iriomote-Funau**	**1.20**	**111**	P	**Pn**	**13 07 27.1**	**-0.3**
IRIF				S	**Sn**	**13 07 44.8**	**+0.1**
NCU	**National Centr**	**1.22**	**279**	*e*P	**Pn**	**13 07 27.9**	**+0.3**
	baz=276						
NCU				*e*S	**Sn**	**13 07 45.3**	**+0.2**
	baz=276						
WHF	**Hehuan Shan**	**1.30**	**241**	⇑*i*P	**Pn**	**13 07 29.1**	**+0.5**
	baz=237						
WHF				*e*S	**Sn**	**13 07 47.0**	**+0.2**
	baz=237						
TWT	**Tachien**	**1.32**	**247**	P	**Pn**	**13 07 29.8**	**+0.9**
	baz=239						
TWT				*e*S	**Sn**	**13 07 47.9**	**+0.6**
	baz=239						
ESL	**Shilin**	**1.37**	**226**	⇑*i*P	**Pn**	**13 07 28.9**	**-0.6**
	baz=231						
ESL				S	**Sn**	**13 07 47.4**	**-1.0**
	baz=231						
NSTT	**Nanjuang**	**1.38**	**264**	P	**Pn**	**13 07 29.6**	**0.0**
	baz=261						
NSTT				*e*S	**Sn**	**13 07 48.1**	**-0.4**
	baz=261						
HATJ	**Hateruma jima**	**1.38**	**121**	P	**Pn**	**13 07 30.0**	**+0.4**
HATJ				S	**Sn**	**13 07 49.5**	**+0.9**
HSN	**Hsinchu**	**1.40**	**271**	P	**Pn**	**13 07 29.7**	**-0.1**
	baz=261						
HSN				*e*S	**Sn**	**13 07 48.3**	**-0.6**
	baz=261						
JKRS	**Kuro-shima**	**1.47**	**111**	P	**Pn**	**13 07 30.9**	**+0.3**
JKRS				S	**Sn**	**13 07 51.5**	**+1.1**
JIJ	**Ishigaki jima**	**1.54**	**105**	P	**Pn**	**13 07 31.2**	**-0.3**
JIJ				S	**Sn**	**13 07 52.1**	**+0.1**
NSY	**Sanyi**	**1.63**	**258**	P	**Pn**	**13 07 33.0**	**+0.4**
	baz=254						
NSY				*e*S	**Sn**	**13 07 54.2**	**+0.3**
	baz=254						
TWQ1	**Liyutan**	**1.64**	**255**	P	**Pn**	**13 07 33.0**	**+0.3**
	baz=252						
TWQ1				*e*S	**Sn**	**13 07 54.0**	**-0.1**
	baz=252						
EHY	**Hungye**	**1.67**	**221**	*e*P	**Pn**	**13 07 32.3**	**-0.8**
	baz=226						
EHY				S	**Sn**	**13 07 53.0**	**-1.7**
	baz=226						
SMLT	**Sun Moon Lake**	**1.72**	**239**	⇑*i*P	**Pn**	**13 07 34.5**	**+0.8**
	baz=232						
SMLT				*e*S	**Sn**	**13 07 56.3**	**+0.4**
	baz=232						
SSLB	**Suanglung**	**1.73**	**236**	*e*P	**Pn**	**13 07 33.8**	**0.0**
SSLB				*e*S	**Sn**	**13 07 55.4**	**-0.7**
TYC	**Yuchr**	**1.74**	**240**	P	**Pn**	**13 07 34.8**	**+0.9**
	baz=234						
TYC				*e*S	**Sn**	**13 07 56.6**	**+0.2**
	baz=234						
YULB	**Yu-li**	**1.77**	**219**	*e*Pn	**Pn**	**13 07 32.8**	**-1.5**
YULB				*e*Sn	**Sn**	**13 07 55.0**	**-2.0**
TCU	**Taichung**	**1.78**	**250**	*e*P	**Pn**	**13 07 35.1**	**+0.6**
	baz=247						
TCU				*e*S	**Sn**	**13 07 57.7**	**+0.3**
	baz=247						
TWF1	**Yuli**	**1.80**	**218**	*i* P	**Pn**	**13 07 34.0**	**-0.7**
	baz=223						
TWF1				*e*S	**Sn**	**13 07 57.2**	**-0.5**
	baz=223						
WNT	**Mingjian**	**1.89**	**242**	*e*P	**Pn**	**13 07 36.9**	**+1.0**
	baz=239						
WNT				*e*S	**Sn**	**13 08 00.8**	**+1.0**
	baz=239						
YUS	**Yu-Shan**	**1.92**	**228**	*e*P	**Pn**	**13 07 37.2**	**+1.0**
	baz=219						
YUS				*e*S	**Sn**	**13 08 00.8**	**+0.5**
	baz=219						
JTJ	**Tarama**	**2.00**	**93**	P	**Pn**	**13 07 37.4**	**+0.2**
JTJ				*e*S	**Sn**	**13 08 02.5**	**+0.3**
ALS	**Alishan**	**2.00**	**231**	⇑*i*P	**Pn**	**13 07 38.6**	**+1.3**
	baz=222						
ALS				*e*S	**Sn**	**13 08 02.9**	**+0.6**
	baz=222						
CHN5	**Tsauling**	**2.04**	**235**	*e*P	**Pn**	**13 07 38.8**	**+1.0**
	baz=241						
CHN5				*e*S	**Sn**	**13 08 03.9**	**+0.7**
	baz=241						
WGK	**Gukeng**	**2.08**	**239**	*e*P	**Pn**	**13 07 39.2**	**+0.8**
	baz=245						
WGK				*e*S	**Sn**	**13 08 05.6**	**+1.5**
	baz=245						
ELDTW	**Lidau**	**2.09**	**221**	P	**Pn**	**13 07 38.0**	**-0.4**
	baz=219						
ELDTW				*e*S	**Sn**	**13 08 03.3**	**-1.0**
	baz=219						
WTCT	**Ta-ch'eng**	**2.23**	**246**	*e*P	**Pn**	**13 07 40.7**	**+0.5**
	baz=243						
WTCT				*e*S	**Sn**	**13 08 07.2**	**-0.2**
	baz=243						
TPUB	**Ta-pu**	**2.26**	**230**	*e*Pn	**Pn**	**13 07 41.3**	**+0.6**
TPUB				*e*Sn	**Sn**	**13 08 08.5**	**+0.2**
STYT	**Tauyuan**	**2.27**	**225**	*e*S	**Sn**	**13 08 09.8**	**+1.3**
	baz=223						
CHY	**Chiayi**	**2.29**	**237**	*e*P	**Pn**	**13 07 41.8**	**+0.7**
	baz=243						
CHY				*e*S	**Sn**	**13 08 08.8**	**-0.2**
	baz=243						
WTP	**Ta-pu**	**2.31**	**229**	P	**Pn**	**13 07 42.1**	**+0.9**
	baz=226						
WTP				*e*S	**Sn**	**13 08 09.9**	**+0.5**
	baz=226						
TWG	**Pinlang**	**2.35**	**214**	*e*Pn	**Pn**	**13 07 39.8**	**-2.0**
TWG				*e*Sn	**Sn**	**13 08 07.7**	**-2.7**
TWG	**Pinlang**	**2.35**	**214**	*e*P	**Pn**	**13 07 41.1**	**-0.7**
	baz=212						
TWG				*e*S	**Sn**	**13 08 08.7**	**-1.7**
	baz=212						
TTN	**Taitung**	**2.37**	**212**	*e*P	**Pn**	**13 07 42.5**	**+0.4**
	baz=217						
TTN				*e*S	**Sn**	**13 08 11.3**	**+0.5**
	baz=217						
WSF	**Szhu**	**2.38**	**242**	*e*P	**Pn**	**13 07 42.4**	**+0.3**
	baz=239						
WSF				*e*S	**Sn**	**13 08 11.3**	**+0.3**
	baz=239						
TWK	**Hsinying**	**2.38**	**231**	*e*P	**Pn**	**13 07 43.0**	**+0.8**
	baz=229						
TWK				*e*S	**Sn**	**13 08 11.2**	**+0.1**
	baz=229						
CHN1	**Nanshi**	**2.41**	**229**	*e*P	**Pn**	**13 07 43.4**	**+0.8**
	baz=227						
CHN1				*e*S	**Sn**	**13 08 12.1**	**+0.3**
	baz=227						
SGST	**Jiashian**	**2.44**	**227**	*e*P	**Pn**	**13 07 43.9**	**+0.9**
	baz=233						
SGST				*e*S	**Sn**	**13 08 12.6**	**+0.2**
	baz=233						
JMJ	**Miyako jima 2**	**2.53**	**89**	*e*S	**Sn**	**13 08 14.5**	**-0.1**
CHN8	**Yiju**	**2.54**	**236**	*e*P	**Pn**	**13 07 45.0**	**+0.8**
	baz=234						
CHN8				*e*S	**Sn**	**13 08 13.9**	**-0.9**
	baz=234						
ECL	**Taimali**	**2.60**	**214**	*e*P	**Pn**	**13 07 43.9**	**-1.1**
	baz=211						
ECL				*e*S	**Sn**	**13 08 14.6**	**-1.5**
	baz=211						
JOGS	**Gusukube**	**2.63**	**90**	P	**Pn**	**13 07 46.1**	**+0.6**
JOGS				*e*S	**Sn**	**13 08 18.4**	**+1.4**
SCLT	**Jiali**	**2.65**	**233**	*e*S	**Sn**	**13 08 18.2**	**+0.7**
	baz=231						
SSD	**Sandimen**	**2.66**	**221**	*e*P	**Pn**	**13 07 47.0**	**+1.2**
	baz=229						
SSD				*e*S	**Sn**	**13 08 17.8**	**+0.2**
	baz=229						
EAST	**Anshuo**	**2.83**	**213**	*e*P	**Pn**	**13 07 47.6**	**-0.5**
	baz=208						
EAST				*e*S	**Sn**	**13 08 20.7**	**-1.0**
	baz=208						
LAY	**Lan-yu**	**2.87**	**198**	*e*P	**Pn**	**13 07 47.9**	**-0.7**
	baz=199						
LAY				*e*S	**Sn**	**13 08 19.9**	**-2.6**
	baz=199						
PNG	**Penghu**	**2.96**	**247**	*e*P	**Pn**	**13 07 48.7**	**-1.0**
	baz=244						
PNG				*e*S	**Sn**	**13 08 22.4**	**-2.2**
	baz=244						
SCZT	**Fangliau**	**2.96**	**216**	*e*P	**Pn**	**13 07 50.9**	**+1.1**
	baz=214						
SCZT				*e*S	**Sn**	**13 08 24.3**	**-0.4**
	baz=214						
JKE	**Kume jima 2**	**4.16**	**67**	P	**Pn**	**13 08 06.2**	**+0.3**
JAGN	**Aguni-jima**	**4.63**	**66**	P	**Pn**	**13 08 12.4**	**+0.1**
JIH	**Iheya**	**5.40**	**64**	P	**Pn**	**13 08 21.9**	**-0.8**
JOW	**Kunigami**	**5.58**	**67**	P	**Pn**	**13 08 23.8**	**-1.4**
JTK	**Tokunoshima**	**6.51**	**61**	P	**Pn**	**13 08 35.4**	**-2.4**
JAM	**Amami Oshima**	**7.31**	**59**	P	**Pn**	**13 08 46.2**	**-2.4**

IDC ***14*** *13:16:09.3±1.4, 33.°94S×178.°88W, h0km, mb4.0/5, mb1 4.1/6, mb1mx3.9/18, mbtmp4.0/6, ML4.0/1, Error ellipse: s-maj=33.4km s-min=29.9km az=95.0*
NEIC ***14*** *13:16:14.6±1.1, 33.°99S×178.°95W, h35km, mb3.8/1, Error ellipse: s-maj=23.7km s-min=15.4km az=100.0*
ISC 14 13:16:13.6±6.1, 34.°0S±0.°1×179.°1W±0.°3, h22km±43km, n12, σ0°90/13, mb3.9/6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.28**	**215**	Pn	**Pn**	**13 17 30.5**	**-0.7**
	5.3nm,0.3s,baz=295,slow=1.7,SNR=31						
URZ				Sn	**Sn**	**13 18 32.8**	**+1.5**
	6.1nm,0.3s,baz=156,slow=18,SNR=7.1						
URZ	**Urewera**	**5.28**	**215**	Pn	**Pn**	**13 17 30.5**	**-0.7**
URZ				*e*Sn	**Sn**	**13 18 27.4**	**-3.9**
URZ				Sn	**Sn**	**13 18 32.8**	**+1.5**
SNZO	**South Karori**	**8.83**	**212**	*e*Pn	**Pn**	**13 18 20.4**	**+0.5**
	8.3nm,0.6s						
SNZO				*e*Sn	**Sn**	**13 19 53.3**	**-5.4**
STKA	**Stephens Creek**	**32.96**	**263**	P	**P**	**13 22 48.5**	**+1.8**
	1.9nm,1.0s,mb4.0,baz=108,slow=9.6,SNR=3.1						
ASAR	**Alice Springs**	**42.16**	**271**	P	**P**	**13 24 04.8**	**+0.1**
	0.9nm,0.6s,mb3.5,baz=115,slow=7.5,SNR=14						
WRAB	**Tennant Creek**	**43.47**	**277**	*e*P	**P**	**13 24 14.6**	**-0.7**
	0.9nm,0.5s,mb3.8						
WRA	**Warramunga Arr**	**43.48**	**276**	P	**P**	**13 24 15.5**	**+0.1**
	1.4nm,0.7s,mb3.8,baz=118,slow=7.5,SNR=5.2						
FITZ	**Fitzroy Crossi**	**51.57**	**273**	P	**P**	**13 25 17.2**	**-1.0**
	3.7nm,1.1s,mb4.2,baz=131,slow=11,SNR=3.3						
QSPA	**South Pole Qui**	**56.14**	**180**	P	**P**	**13 25 51.0**	**+0.1**
	2.2nm,1.1s,mb4.1,baz=299,slow=7.4,SNR=3.1						
FINES	**FINESS Array B**	**148.15**	**337**	PKPbc	PKPbc	13 35 55.2	-1.6
	1.4nm,0.6s,baz=20,slow=4.4,SNR=8.7						
FINES	**FINESS Array B**	**148.15**	**337**	PKPbc	PKPbc	13 35 55.2	-1.6
NOA	**NORSAR Array B**	**152.12**	**349**	PKPbc	PKPbc	13 36 05.8	-0.6
	0.7nm,0.6s,baz=17,slow=4.2,SNR=3.2						

IDC ***14*** *13:17:44.8±1.4, 5.°30N×126.°75E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.6/22, mbtmp3.7/6, Error ellipse: s-maj=99.4km s-min=18.6km az=68.0*
NEIC ***14*** *13:17:49.5±1.0, 5.°31N×126.°81E, h35km, mb3.9/3, Error ellipse: s-maj=80.7km s-min=10.9km az=69.0*
**ISC 14 13:17:49.6±1.2, 5.°3N±0.°2×126.°8E±0.°6, h35km, n10,

comp=E,2μm,0.3s
PLCA Paso Flores 4.13 148 *e*Pn Pn 13 25 06.8 +0.8

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*GII **14** 13:26:12.4±0.5, 33°.29N×35°.46E, h1km±1km, Md2.6/7, Mm2.3/6*
*CSEM **14** 13:26:12.8±0.2, 33°.32N×35°.44E, h2km, ML3.3, Error ellipse: s-maj=3.5km s-min=2.0km az=105.0*
*ISCJB **14** 13:26:12.5±0.4, 33°.33N±0°.02×35°.45E±0°.03, h6km±3km, Error ellipse: s-maj=4.6km s-min=2.8km az=34.1*
*GRAL **14** 13:26:13.3±0.4, 33°.32N×35°.45E, h8km±2km, MD3.3*
*NSSC **14** 13:26:14, 33°.27N×35°.56E, h4km±2km*
ISC 14 13:26:13.0±0.4, 33°.33N±0°.02×35°.45E±0°.03, h4km±4km, n36, σ0°61/61, 8D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.19**	**327**	*e*P	**Pg**	**13 26 17.1**	**+0.5**
MATL	**Matarih**	**0.19**	**327**	*e*P	**Pg**	**13 26 17.1**	**+0.5**
KSDI	**Kefar Szold**	**0.22**	**128**	Pg	**Pg**	**13 26 17.0**	**-0.3**
KSDI				Sg	**Sg**	**13 26 21.0**	**+0.7**
HRI	**Mount Hermon**	**0.25**	**105**	Pg	**Pg**	**13 26 17.5**	**-0.3**
MMA0B	**Mount Meron ar**	**0.32**	**187**	Pg	**Pg**	**13 26 18.6**	**-0.5**
MMA0B				Sg	**Sg**	**13 26 24.4**	**+1.1**
HNTI	**Hanita**	**0.34**	**223**	Pg	**Pg**	**13 26 19.4**	**-0.1**
HNTI				Sg	**Sg**	**13 26 24.8**	**+0.9**
RCY	**Rachaya**	**0.34**	**64**	*e*P	**Pg**	**13 26 19.9**	**+0.3**
RCY				*e*S	**Sg**	**13 26 25.2**	**+1.1**
RCY	**Rachaya**	**0.34**	**64**	*e*P	**Pg**	**13 26 19.9**	**+0.3**
RCY				*e*S	**Sg**	**13 26 25.2**	**+1.1**
BRBR	**Barbar**	**0.43**	**79**	⇓P	**Pg**	**13 26 21.0**	**-0.2**
BRBR				⇑S	**Sg**	**13 26 27.0**	**+0.3**
BRBR	**Barbar**	**0.43**	**79**	⇓*i*P	**Pg**	**13 26 21.5**	**+0.3**
BRBR				⇑*i*S	**Sg**	**13 26 27.6**	**+0.9**
KSHT	**Keshet**	**0.46**	**139**	Pg	**Pg**	**13 26 21.8**	**0.0**
BHL	**Bhannes**	**0.59**	**16**	*e*P	**Pg**	**13 26 24.3**	**-0.2**
BHL				*e*S	**Sg**	**13 26 32.4**	**+0.3**
BHL	**Bhannes**	**0.59**	**16**	*e*P	**Pg**	**13 26 24.3**	**-0.1**
BHL				*e*S	**Sg**	**13 26 32.4**	**+0.2**
BLGI	**Bet Lehem HaGe**	**0.64**	**200**	Pg	**Pg**	**13 26 24.9**	**-0.3**
QASN	**Qassioun**	**0.72**	**74**	⇓P	**Pg**	**13 26 27.0**	**+0.2**
QASN				⇓S	**Sg**	**13 26 36.0**	**-0.1**
QASN	**Qassioun**	**0.72**	**74**	⇓*i*P	**Pg**	**13 26 27.5**	**+0.7**
QASN				⇓*i*S	**Sg**	**13 26 37.0**	**+0.9**
TCHB	**Talchebab**	**0.79**	**146**	⇑P	**Pg**	**13 26 27.0**	**-1.2**
TCHB				⇑S	**Sg**	**13 26 38.0**	**-0.4**
TCHB	**Talchebab**	**0.79**	**146**	⇑*i*P	**Pg**	**13 26 28.0**	**-0.2**
TCHB				⇑*i*S	**Sg**	**13 26 38.2**	**-0.2**
OFRI	**'Ofer**	**0.81**	**209**	Pg	**Pg**	**13 26 28.2**	**-0.3**
TOTH	**TOTAH**	**0.82**	**88**	⇑P	**Pg**	**13 26 28.0**	**-0.7**
TOTH				⇑S	**Sg**	**13 26 40.0**	**+0.7**
TOTH	**TOTAH**	**0.82**	**88**	⇑*i*P	**Pg**	**13 26 28.9**	**+0.2**
TOTH				⇑*i*S	**Sg**	**13 26 40.1**	**+0.8**
MMLI	**Mount Malkishu**	**0.89**	**182**	Pg	**Pg**	**13 26 29.1**	**-1.0**
MMLI				Sg	**Sg**	**13 26 42.2**	**+0.6**
HWQ	**Hawqa**	**1.03**	**23**	*e*P	**Pg**	**13 26 32.5**	**-0.2**
HWQ				*e*S	**Sg**	**13 26 45.5**	**-0.7**
HMDT	**Nahal Hemdat**	**1.08**	**177**	Pg	**Pg**	**13 26 32.7**	**-0.9**
HMDT				Sg	**Sg**	**13 26 48.1**	**+0.5**
SLTI	**Sal'it**	**1.14**	**198**	Pg	**Pg**	**13 26 34.0**	**-0.9**
SLTI				Sg	**Sg**	**13 26 49.8**	**+0.1**
SALA	**Sala**	**1.24**	**120**	⇑P	**Pg**	**13 26 35.0**	**-1.8**
SALA				⇑S	**Sg**	**13 26 52.0**	**-0.9**
SALA	**Sala**	**1.24**	**120**	⇑*i*P	**Pg**	**13 26 35.7**	**-1.1**
SALA				⇑*i*S	**Sg**	**13 26 52.3**	**-0.6**
ZALF	**Zalf**	**1.63**	**104**	⇓P	**Pn**	**13 26 42.0**	**-0.4**
ZALF				⇑S	**Sn**	**13 27 03.0**	**-0.9**
ZALF	**Zalf**	**1.63**	**104**	⇓*i*P	**Pn**	**13 26 42.4**	**0.0**
ZALF				⇑*i*S	**Sn**	**13 27 03.6**	**-0.3**
DSI	**Dead Sea**	**1.76**	**182**	Pn	**Pn**	**13 26 43.6**	**-0.5**
DSI				Sn	**Sn**	**13 27 07.1**	**+0.2**
YTIR	**Yattir**	**1.98**	**188**	Pn	**Pn**	**13 26 47.9**	**+0.7**
MZDA	**Masada**	**2.02**	**182**	Pn	**Pn**	**13 26 47.8**	**+0.1**
MZDA				Sn	**Sn**	**13 27 14.5**	**+1.1**
RTMI	**Retamim**	**2.36**	**196**	Pn	**Pn**	**13 26 52.3**	**-0.1**
KZIT	**Kziot**	**2.58**	**201**	Pn	**Pn**	**13 26 55.6**	**+0.2**
ZFRI	**Zfri**	**2.78**	**185**	Pn	**Pn**	**13 26 58.4**	**+0.2**
PRNI	**Paran**	**3.00**	**187**	Pn	**Pn**	**13 27 01.0**	**-0.2**

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*ATH **14** 13:43:05.9, 37°.87N×21°.43E, h19km±2km, MD3.2/10*
*NEIC **14** 13:43:05.9, 37°.87N×21°.43E, h19km, MD3.2(ATH), After ATH.*
*CSEM **14** 13:43:05.8±0.2, 37°.87N×21°.40E, h20km, MD3.2, Error ellipse: s-maj=5.1km s-min=3.9km az=89.0*
*ISCJB **14** 13:43:05.5±0.7, 37°.87N±0°.02×21°.40E±0°.03, h9km±5km, Error ellipse: s-maj=4.1km s-min=3.9km az=168.0*
*THE **14** 13:43:06.1, 37°.87N×21°.44E, h11km±1km, ML3.1/9, Error ellipse: s-maj=1.5km s-min=0.9km az=132.0*
ISC 14 13:43:06.0±0.5, 37°.86N±0°.02×21°.42E±0°.03, h14km±3km, n60, σ0°08/97, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.20**	**10**	*e*Pb	**Pg**	**13 43 10.6**	**-0.1**
RLS				*e*Sb	**Sg**	**13 43 14.2**	**+0.3**
RLS	**Riolos of Patr**	**0.20**	**10**	*e*PB	**Pg**	**13 43 10.6**	**-0.1**
RLS				*e*SB	**Sg**	**13 43 14.2**	**+0.3**
RLS	**Riolos of Patr**	**0.20**	**10**	*e*Pb	**Pg**	**13 43 10.6**	**-0.1**
RLS				*e*Sb	**Sg**	**13 43 14.2**	**+0.3**
UPR	**University Cam**	**0.51**	**34**	P	**Pg**	**13 43 15.9**	**-0.3**
UPR				S	**Sg**	**13 43 24.1**	**+1.0**
UPR	**University Cam**	**0.51**	**34**	*e*PN	**Pg**	**13 43 16.0**	**-0.2**
UPR				*e*SN	**Sg**	**13 43 23.3**	**+0.2**
UPR	**University Cam**	**0.51**	**34**	*e*Pn	**Pg**	**13 43 16.0**	**-0.2**
UPR				S	**Sg**	**13 43 24.1**	**+1.0**
KFL	**Anninata**	**0.56**	**297**	P	**Pg**	**13 43 16.9**	**-0.2**
LAKA	**Lakka**	**0.58**	**49**	P	**Pg**	**13 43 16.6**	**-0.9**
LAKA				S	**Sg**	**13 43 25.7**	**+0.5**
LAKA	**Lakka**	**0.58**	**49**	P	**Pg**	**13 43 16.6**	**-0.9**
LAKA				S	**Sg**	**13 43 25.7**	**+0.5**
EFP	**Efpalio**	**0.69**	**34**	P	**Pg**	**13 43 18.1**	**-1.3**
EFP				S	**Sg**	**13 43 29.2**	**+0.7**
EFP	**Efpalio**	**0.69**	**34**	*e*PB	**Pb**	**13 43 18.4**	**-1.3**
EFP				*e*SN	**Sg**	**13 43 28.7**	**+0.2**
EFP	**Efpalio**	**0.69**	**34**	P	**Pg**	**13 43 18.1**	**-1.3**
EFP	**Efpalio**	**0.69**	**34**	*e*Pb	**Pb**	**13 43 18.4**	**-1.3**
EFP				*e*Sn	**Sg**	**13 43 28.7**	**+0.2**
EFP				S	**Sg**	**13 43 29.2**	**+0.7**
GUR	**Goura**	**0.73**	**83**	P	**Pg**	**13 43 19.1**	**-1.2**
GUR				S	**Sg**	**13 43 30.9**	**+1.0**
GUR	**Goura**	**0.73**	**83**	*e*PB	**Pb**	**13 43 19.2**	**-1.3**
GUR				*e*SN	**Sg**	**13 43 30.9**	**+1.0**
GUR	**Goura**	**0.73**	**83**	P	**Pg**	**13 43 19.1**	**-1.2**
GUR				S	**Sg**	**13 43 30.9**	**+1.0**
VLS	**Valsamata**	**0.73**	**296**	*e*Pn	**Pg**	**13 43 19.6**	**-0.7**
VLS				*e*Sn	**Sg**	**13 43 31.3**	**+1.4**
VLS	**Valsamata**	**0.73**	**296**	P	**Pg**	**13 43 19.6**	**-0.7**
VLS				S	**Sg**	**13 43 31.1**	**+1.2**
VLS	**Valsamata**	**0.73**	**296**	*e*PN	**Pg**	**13 43 19.6**	**-0.7**
VLS				*e*SN	**Sg**	**13 43 31.3**	**+1.4**
VLS	**Valsamata**	**0.73**	**296**	P	**Pg**	**13 43 19.6**	**-0.7**
VLS				*e*Sn	**Sg**	**13 43 31.3**	**+1.4**
KALE	**Kalithea**	**0.78**	**46**	P	**Pg**	**13 43 19.8**	**-1.4**
KALE				S	**Sg**	**13 43 31.7**	**+0.3**
KALE	**Kalithea**	**0.78**	**46**	P	**Pg**	**13 43 19.8**	**-1.4**
KALE				S	**Sg**	**13 43 31.7**	**+0.3**
ITM	**Ithomi**	**0.79**	**149**	*e*Pn	**Pn**	**13 43 21.5**	**-1.1**
ITM	**Ithomi**	**0.79**	**149**	P	**Pg**	**13 43 20.4**	**-0.9**
ITM				S	**Sg**	**13 43 33.8**	**+2.2**
ITM	**Ithomi**	**0.79**	**149**	*e*PN	**Pn**	**13 43 21.5**	**-1.1**
ITM	**Ithomi**	**0.79**	**149**	P	**Pg**	**13 43 20.4**	**-0.9**
ITM	**Ithomi**	**0.79**	**149**	*e*Pn	**Pn**	**13 43 21.5**	**-1.1**
ITM				S	**Sg**	**13 43 33.8**	**+2.2**
VLX	**Vlachokerasia**	**0.90**	**122**	P	**Pb**	**13 43 22.7**	**-0.7**
VLX				S	**Sg**	**13 43 36.9**	**+1.6**
VLX	**Vlachokerasia**	**0.90**	**122**	*e*PN	**Pn**	**13 43 23.2**	**-1.0**
VLX	**Vlachokerasia**	**0.90**	**122**	P	**Pb**	**13 43 22.7**	**-0.7**
VLX	**Vlachokerasia**	**0.90**	**122**	*e*Pn	**Pn**	**13 43 23.3**	**-0.9**
VLX				S	**Sg**	**13 43 36.9**	**+1.6**
PYL	**PYLOS**	**0.99**	**165**	P	**Pb**	**13 43 24.7**	**-0.2**
PYL				S	**Sb**	**13 43 39.2**	**+1.4**
PYL	**PYLOS**	**0.99**	**165**	*e*PN	**Pn**	**13 43 25.0**	**-0.5**
PYL	**PYLOS**	**0.99**	**165**	P	**Pb**	**13 43 24.7**	**-0.2**
PYL	**PYLOS**	**0.99**	**165**	*e*Pn	**Pn**	**13 43 25.0**	**-0.5**
PYL				S	**Sb**	**13 43 39.2**	**+1.4**
DSF	**Desfina**	**1.03**	**57**	P	**Pb**	**13 43 24.2**	**-1.4**
DSF				S	**Sb**	**13 43 39.4**	**+0.4**
DSF	**Desfina**	**1.03**	**57**	P	**Pb**	**13 43 24.2**	**-1.4**
DSF				S	**Sb**	**13 43 39.4**	**+0.4**
EVR	**Evrytania**	**1.10**	**16**	*e*Pn	**Pn**	**13 43 26.2**	**-0.8**
EVR	**Evrytania**	**1.10**	**16**	*e*PN	**Pn**	**13 43 26.2**	**-0.8**
EVR	**Evrytania**	**1.10**	**16**	*e*Pn	**Pn**	**13 43 26.2**	**-0.8**
LKD2	**Lefkada island**	**1.11**	**327**	P	**Pb**	**13 43 26.0**	**-1.0**
LKD2				S	**Sb**	**13 43 43.9**	**+2.7**
LKD2	**Lefkada island**	**1.11**	**327**	P	**Pb**	**13 43 26.0**	**-1.0**
LKD2				S	**Sb**	**13 43 43.9**	**+2.7**
LTK	**Loutraki**	**1.23**	**82**	P	**Pn**	**13 43 29.4**	**+0.6**
LTK				S	**Sb**	**13 43 45.6**	**+0.8**
LTK	**Loutraki**	**1.23**	**82**	*e*PN	**Pn**	**13 43 29.4**	**+0.6**
LTK	**Loutraki**	**1.23**	**82**	P	**Pn**	**13 43 29.4**	**+0.6**
LTK				S	**Sb**	**13 43 45.6**	**+0.8**
AGG	**Agios Georgios**	**1.36**	**31**	*e*Pn	**Pn**	**13 43 31.0**	**+0.4**
AGG	**Agios Georgios**	**1.36**	**31**	P	**Pn**	**13 43 30.6**	**0.0**
AGG				S	**Sn**	**13 43 49.5**	**+1.0**
AGG	**Agios Georgios**	**1.36**	**31**	*e*PN	**Pn**	**13 43 31.0**	**+0.4**
AGG	**Agios Georgios**	**1.36**	**31**	P	**Pn**	**13 43 30.6**	**0.0**
AGG	**Agios Georgios**	**1.36**	**31**	*e*Pn	**Pn**	**13 43 31.0**	**+0.4**
AGG				S	**Sn**	**13 43 49.5**	**+1.0**
LKR	**Lokris**	**1.47**	**57**	*e*Pn	**Pn**	**13 43 33.3**	**+1.2**
LKR	**Lokris**	**1.47**	**57**	P	**Pn**	**13 43 30.6**	**-1.5**
LKR				S	**Sn**	**13 43 50.7**	**-0.4**
LKR	**Lokris**	**1.47**	**57**	*e*PN	**Pn**	**13 43 33.3**	**+1.2**
LKR	**Lokris**	**1.47**	**57**	P	**Pn**	**13 43 30.6**	**-1.5**
LKR	**Lokris**	**1.47**	**57**	*e*Pn	**Pn**	**13 43 33.3**	**+1.2**
LKR				S	**Sn**	**13 43 50.7**	**-0.4**
THL	**Klokotos Trika**	**1.77**	**15**	P	**Pn**	**13 43 38.3**	**+2.2**
THL	**Klokotos Trika**	**1.77**	**15**	*e*PN	**Pn**	**13 43 38.3**	**+2.2**
THL	**Klokotos Trika**	**1.77**	**15**	P	**Pn**	**13 43 38.3**	**+2.2**
MEV	**Metsovon**	**1.93**	**356**	P	**Pn**	**13 43 42.0**	**+3.6**
MEV	**Metsovon**	**1.93**	**356**	P	**Pn**	**13 43 42.0**	**+3.6**

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*IDC **14** 13:44:10.6±1.0, 32°.27N×105°.01E, h0km, mb3.6/7, mb1 3.7/7, mb1mx3.5/26, mbtmp3.6/7, Error ellipse: s-maj=155.5km s-min=17.7km az=57.0*
*NEIC **14** 13:44:12.0±0.9, 31°.28N×103°.09E, h10km, Error ellipse: s-maj=38.5km s-min=13.1km az=222.0*
ISC 14 13:44:11.7±0.8, 32°.17N±0°.03×104°.73E±0°.05, h3km±6km, n16, σ1°24/22, mb3.7/7, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.50**	**214**	⇓*i*Pg	**Pg**	**13 44 39.9**	**-0.7**
CD2				Sg	**Sg**	**13 45 01.5**	**+1.4**
CD2				smax			
	comp=N,4μm,0.5s						
CD2				smax			
	comp=E,4μm,0.6s						
LZH	**Lanzhou**	**3.98**	**350**	Pn	**Pn**	**13 45 15.6**	**+2.0**
LZH				Pg	**Pg**	**13 45 28.3**	**+0.4**
LZH				Sn	**Sn**	**13 46 02.4**	**+1.6**
LZH				Sg	**Sg**	**13 46 18.4**	**-1.1**
LZH				smax			
	comp=N,130nm,0.7s						
LZH				smax			
	comp=E,160nm,0.7s						
LZH				LR	LR		
	comp=E,360nm,5.5s						
LZH				LR	LR		
	comp=Z,650nm,8.0s						
XAN	**Xi'an**	**3.98**	**61**	Pg	**Pg**	**13 45 27.0**	**-1.0**
XAN				Sg	**Sg**	**13 46 20.3**	**+0.7**
XAN				smax			
	comp=N,100nm,0.8s						
XAN				smax			
	comp=E,63nm,0.6s						
XAN				LR	LR		
	comp=N,170nm,8.3s						
XAN				LR	LR		
	comp=E,48nm,9.1s						
XAN				LR	LR		
	comp=Z,64nm,8.3s						
ENH	**Enshi**	**4.49**	**114**	*e*Pn	**Pg**	**13 45 35.7**	**-2.1**
	comp=Z,34nm,0.8s						
ENH				*e*Sn	**Sg**	**13 46 37.7**	**+1.8**
MK31	**Makanchi Array**	**22.55**	**317**	*e*P	**P**	**13 49 09.4**	**-3.4**
MKAR	**Makanchi Array**	**22.55**	**317**	P	**P**	**13 49 13.6**	**+0.8**
	comp=Z,0.4nm,0.5s,mb3.1,baz=104,slow=12,SNR=5.6						
MKAR	**Makanchi Array**	**22.55**	**317**	P	**P**	**13 49 13.6**	**+0.8**
ZALV	**Zalesovo Beam**	**26.01**	**333**	P	**P**	**13 49 46.3**	**+0.5**
	comp=Z,2.0nm,0.5s,mb3.9,baz=135,slow=9.2,SNR=8.9						
KURK	**Kurchatov**	**26.73**	**322**	P	**P**	**13 49 52.7**	**+0.4**
	comp=Z,0.3nm,0.2s,mb3.4,baz=126,slow=11,SNR=4.0						
KURK	**Kurchatov**	**26.73**	**322**	P	**P**	**13 49 52.7**	**+0.4**
ARCES	**ARCESS Array B**	**56.51**	**336**	P	**P**	**13 53 53.9**	**-0.9**
	comp=Z,2.3nm,1.0s,mb4.2,baz=76,slow=9.4,SNR=5.0						
ARCES	**ARCESS Array B**	**56.51**	**336**	P	**P**	**13 53 53.9**	**-0.9**
FINES	**FINESS Array B**	**56.99**	**326**	P	**P**	**13 53 56.6**	**-1.6**
	comp=Z,1.5nm,0.9s,mb4.0,baz=95,slow=4.9,SNR=4.3						
WRA	**Warramunga Arr**	**59.06**	**147**	P	**P**	**13 54 12.8**	**-0.5**
	comp=Z,0.6nm,0.7s,mb3.8,baz=341,slow=7.7,SNR=3.2						
WRA	**Warramunga Arr**	**59.06**	**147**	P	**P**	**13 54 12.8**	**-0.5**
ASAR	**Alice Springs**	**62.13**	**150**	P	**P**	**13 54 33.1**	**-1.0**
	comp=Z,0.3nm,0.8s,mb3.5,baz=341,slow=6.9,SNR=2.7						

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*IDC **14** 13:47:40.5±1.4, 38°.80N×140°.76E, h0km, mb3.5/3, mb1 3.5/4, mb1mx3.3/26, mbtmp3.4/4, ML2.5/2, Error ellipse: s-maj=37.6km s-min=18.6km az=118.0*
*JMA **14** 13:47:41.5, 38°.82N×140°.80E, h4km±1km, M3.3 Broadband fault plane solution: P waves. NP1: ϕ_s=166.00000°, δ25.00000°, λ103.00000°. NP2: ϕ_s=331.00000°, δ65.00000°, λ84.00000°. Principal axes: T Plg69.0000°, Azm229.0000°; N Plg6.0000°, Azm334.0000°; P Plg20.0000°, Azm66.0000°;*
JMA Felt II J1.
*ISCJB **14** 13:47:41.2±0.6, 38°.81N±0°.04×140°.81E±0°.05, h13km±5km, mb3.5/3 Error ellipse: s-maj=7.8km s-min=5.8km az=146.2*
ISC 14 13:47:41.8±0.7, 38°.81N±0°.04×140°.82E±0°.05, h4km±6km, n12, σ0°92/17, mb3.5/3, 5D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.35**	**66**	⇓P	**Pg**	**13 47 48.4**	**-0.1**
JMK				S	**Sg**	**13 47 53.5**	**+0.5**
JYK	**Kaneyama**	**0.37**	**287**	⇓P	**Pg**	**13 47 48.7**	**-0.3**
JYK				S	**Sg**	**13 47 53.5**	**-0.4**
JOU	**Okura**	**0.46**	**195**	⇓P	**Pg**	**13 47 50.6**	**0.0**
JOU				S	**Sg**	**13 47 56.8**	**+0.2**
JRG	**Rokugo**	**0.60**	**346**	⇓P	**Pg**	**13 47 53.4**	**0.0**
OFUJ	**Ofunato**	**0.72**	**68**	⇓P	**Pg**	**13 47 55.1**	**-0.5**
MJAR	**Matsushiro Arr**	**3.07**	**223**	Pn	**Pn**	**13 48 31.4**	**+0.3**
	0.5nm,0.3s,baz=26,slow=14,SNR=5.3						
MJAR				Pg	**Pg**	**13 48 36.8**	**-3.8**
	1.3nm,0.3s,baz=29,slow=16,SNR=11						
MJAR				Lg		13 49 15.6	
	1.2nm,0.3s,baz=359,slow=22,SNR=5.6						
MAT	**Matsushiro**	**3.07**	**223**	P	**Pn**	**13 48 32.1**	**+1.0**
MAT				S	**Sn**	**13 49 14.8**	**+6.6**
ASAJ	**Asahikawa**	**5.47**	**14**	Pn	**Pn**	**13 49 05.1**	**+1.0**
	0.1nm,0.3s,baz=313,slow=19,SNR=2.8						
KSRS	**Korea Array**	**10.25**	**266**	Pn	**Pn**	**13 50 11.8**	**+2.1**
	0.2nm,0.3s,baz=87,slow=14,SNR=4.9						
KURK	**Kurchatov**	**44.48**	**307**	P	**P**	**13 55 52.6**	**-1.4**
	0.4nm,0.5s,mb3.4,baz=81,slow=8.4,SNR=3.5						
WRA	**Warramunga Arr**	**58.76**	**187**	P	**P**	**13 57 40.8**	**-0.2**
	0.2nm,0.3s,mb3.6,baz=7.8,slow=7.7,SNR=6.7						
ASAR	**Alice Springs**	**62.48**	**187**	P	**P**	**13 58 04.6**	**-1.7**
	0.3nm,0.7s,mb3.5,baz=7.9,slow=4.0,SNR=3.0						

MEX 14 13:54:49.3±0.8, 18°.21N×103°.41W, h10km±4km, MD3.7, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.10**	**37**	*e*P	Pg	13 54 50.8	-1.2
MMIG				*i* S	Sg	13 54 53.5	-0.3
R15V		**1.10**	**330**	*i* P	Pb	13 55 06.8	-3.6
R15V				*i* S	Sb	13 55 20.8	-4.0
EZ5V		**1.28**	**352**	*i* P	Pn	13 55 09.8	-3.3
EZ5V				*i* S	Sb	13 55 25.6	-4.3
ZIIG	**Zihuatanejo**	**1.94**	**108**	*i* P	Pn	13 55 19.6	-2.8
ZIIG				*i* S	Sn	13 55 42.0	-4.8
SFJM	**Santa Fe**	**2.29**	**9**	*i* P	Pn	13 55 24.5	-2.7
SFJM				*i* S	Sn	13 55 51.4	-4.0
PPM	**Popocatepetl**	**4.61**	**79**	*i* P	Pn	13 55 58.1	-1.0
PPM				*i* S	Sn	13 56 47.6	-5.1

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*MOS **14** 14:00:57.8±1.2, 8°.18N×126°.47E, h51km, mb5.0/23, Error ellipse: s-maj=12.9km s-min=7.1km az=120.4*
*ISCJB **14** 14:01:01.0±0.2, 8°.18N±0°.03×126°.61E±0°.03, h75km, mb4.7/7/11, Error ellipse: s-maj=4.1km s-min=3.9km az=150.8*
*BJI **14** 14:01:01.2, 8°.04N×126°.51E, h81km, mB4.9/22, mb4.8/29, Ms4.4/20, Ms7 4.0/19*
*NEIC **14** 14:01:02.7±0.3, 8°.19N×126°.50E, h79km±3km, mb4.9/33, Error ellipse: s-maj=6.9km s-min=5.8km az=70.0*
NEIC Felt [IV PIVS] at Bislig and [II PIVS] at Compostela.
*IDC **14** 14:01:02.5±0.5, 8°.21N×126°.60E, h79km±4km, mb4.4/24, mb1 4.4/25, mb1mx4.4/28, mbtmp4.3/25, MS3.5/9, Ms1 3.5/9, ms1mx3.3/26, Error ellipse: s-maj=12.1km s-min=6.8km az=116.0*
*MAN **14** 14:01:04, 8°.15N×126°.34E, h58km, mb5.5, ML4.5, MS4.8*
MAN INTENSITY IV - BISLIG SURIGAO DEL SUR; INTENSITY II - COMPOSTELA VALLEY.
*GCMT **14** 14:01:04.0±0.3, 8°.07N×126°.45E, h118km±5km, MW4.9, Moment Tensor Solution. s21,c24; s61,c80; Moment tensor: Scale 10^{16}Nm; M_{rr}0.70±.19; $M_{\theta\theta}$-1.10±.17; $M_{\phi\phi}$0.40±.19; $M_{r\theta}$1.48±.11; $M_{\theta\phi}$0.08±.15; $M_{\phi r}$-2.49±.12; Best double couple: $M_0$3.00000×10^{16} NP1:ϕ_s251.00000°, δ15.00000°, λ18.00000°. NP2:ϕ_s144.00000°, δ85.00000°, λ105.00000°. Principal axes: T 3.2900, Plg48.0000°, Azm69.0000°; N -0.5600, Plg14.0000°, Azm323.0000°; P -2.7400, Plg39.0000°, Azm221.0000°; Data Used: II IC IU G CN.*
*DJA **14** 14:01:05, 8°.14N×126°.58E, h93km, Mw5.2/23*
ISC 14 14:01:02.8±0.2, 8°.18N±0°.03×126°.57E±0°.03, h77km, n77km±1.3km:**pP-P, n190,** σ1°27/196**, mb4.7**/71**, 4C-4D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.20**	**272**	⇓*i*P	**Pn**	**14 01 14.2**	**0.0**
BIPH				*i* S	**Sn**	**14 01 21.6**	**-0.9**
BUTP	**Butuan**	**1.22**	**310**	*e*P	**Pn**	**14 01 25.4**	**+1.0**
BUTP				*e*S	**Sn**	**14 01 38.6**	**-2.0**
MATI	**Mati**	**1.26**	**194**	*e*P	**Pn**	**14 01 25.0**	**+0.1**
MATI				*e*S	**Sn**	**14 01 36.5**	**-5.0**
DAV	**Davao City (W)**	**1.47**	**222**	P	**Pn**	**14 01 28.5**	**+0.8**
	251nm,0.3s,baz=35,slow=2.0,SNR=82						
DAV				LR	LR	14 01 45.9	
	comp=Z,4μm,20.1s,baz=350,slow=29						
DAV				S	**Sn**	**14 01 48.2**	**+1.8**
	843nm,0.3s,baz=252,slow=19,SNR=29						
DAV	**Davao City (W)**	**1.47**	**222**	*e*Pn	**Pn**	**14 01 28.5**	**+0.9**
DMPH	**Davao City--Mi**	**1.51**	**224**	⇑*i*P	**Pn**	**14 01 28.8**	**+0.7**
DMPH				*i* S	**Sn**	**14 01 36.4**	**-11**
BUKP	**Musuan**	**1.52**	**259**	*e*P	**Pn**	**14 01 28.4**	**+0.2**
BUKP				*e*S	**Sn**	**14 01 43.4**	**-4.0**
CGP	**Cagayan de Oro**	**1.87**	**279**	*e*P	**Pn**	**14 01 32.4**	**-0.5**
CTBH	**Cotabato--PC H**	**2.49**	**248**	⇑*i*P	**Pn**	**14 01 40.4**	**-0.8**
CTBH				*i* S	**Sn**	**14 02 08.3**	**-2.3**
TBP	**Tagbilaran**	**3.07**	**300**	*e*P	**Pn**	**14 01 49.5**	**+0.5**
TBP				*e*S	**Sn**	**14 02 23.0**	**-1.6**
PAGZ	**Pagadian**	**3.17**	**264**	*e*P	**Pn**	**14 01 50.8**	**+0.4**
OCLP	**Ormoc**	**3.45**	**326**	*e*P	**Pn**	**14 01 58.0**	**+3.8**
SNPH	**Sibulan**	**3.49**	**290**	⇑*i*P	**Pn**	**14 01 54.9**	**+0.2**
SNPH				*i* S	**Sn**	**14 02 33.1**	**-1.8**
IPIL	**Ipil**	**3.98**	**265**	*e*P	**Pn**	**14 02 02.8**	**+1.5**
GUIM	**Jordan**	**4.62**	**302**	*e*P	**Pn**	**14 02 11.2**	**+1.0**
CNP	**Catarman**	**4.70**	**337**	*e*P	**Pn**	**14 02 13.7**	**+2.4**
PVCP	**Virac**	**5.88**	**336**	*e*P	**Pn**	**14 02 34.5**	**+7.0**
CUYO	**Cuyo Island**	**6.08**	**296**	*e*P	**Pn**	**14 02 30.8**	**+0.7**
SJMP	**San Jose**	**6.84**	**309**	*e*P	**Pn**	**14 02 44.3**	**+3.7**
ENPP	**El Nido**	**7.66**	**294**	*e*P	**Pn**	**14 02 52.4**	**+0.7**
TGY	**Tagaytay City**	**8.07**	**317**	P	**Pn**	**14 03 01.8**	**+4.4**
	32nm,0.3s,baz=155,slow=17,SNR=8.1						
LUBP	**Lubang**	**8.30**	**312**	*e*P	**Pn**	**14 03 04.9**	**+4.4**
MYLDM	**Lahad Datu**	**8.

KMI sP sP 14 07 17.8 +1.7
KMI PP PP 14 07 44.5 -10
KMI S **S** **14 11 30.8 +0.7**
KMI sS sS 14 12 01.4 +0.4
KMI SS SS 14 12 58.5 -34
KMI pmax pmax
comp=Z,7.0nm,0.7s,mb4.3
KMI pmax pmax
comp=Z,88nm,3.6s
KMI LR LR
comp=N,150nm,20.3s
KMI LR LR
comp=E,140nm,21.9s
KMI LR LR
comp=Z,160nm,17.7s
CM31 Chiang Mai Arr 28.71 294 *e*P **P** **14 06 53.0 -0.1**
CM31 *e*pP pP 14 07 13.6 +2.6
CMAR Chiang Mai Arr 28.71 294 P **P** **14 06 53.4 +0.3**
comp=Z,2.3nm,1.1s,mb3.7,baz=119,slow=6.9,SNR=4.1
CMAR PcP PcP 14 10 02.3 +0.4
comp=Z,1.7nm,0.9s,baz=169,slow=1.5,SNR=4.5
CMAR ScP ScP 14 13 36.6 0.0
comp=Z,1.8nm,0.9s,baz=70,slow=1.2,SNR=6.4
CMAR LR LR 14 18 53.5
comp=Z,107nm,18.5s,baz=288,slow=37
CMAR Chiang Mai Arr 28.71 294 P **P** **14 06 53.4 +0.4**
CMAR 14 10 02.3
CHTO Chiang Mai 28.82 294 *e*P **P** **14 06 53.3 -0.7**
CHTO *e**PP pP 14 07 12.5 +0.6
CHTO pmax pmax
comp=Z,11nm,1.1s,mb4.4
CHTO Chiang Mai 28.82 294 *e*P **P** **14 06 53.3 -0.7**
comp=Z,11nm,1.1s,mb4.4
CHTO *e*pP pP 14 07 12.5 +0.5
WRAB Tennant Creek 28.96 165 *e*P **P** **14 06 53.2 -2.0**
WRA Warramunga Arr 28.97 165 P **P** **14 06 53.9 -1.3**
comp=Z,1.9nm,0.7s,mb3.9,baz=344,slow=7.9,SNR=10
WRA S **S** **14 11 35.3 -5.5**
comp=Z,3.2nm,0.9s,baz=348,slow=15,SNR=5.9
WRA Warramunga Arr 28.97 165 P **P** **14 06 53.9 -1.3**
WRA S **S** **14 11 35.3 -5.5**
KSRS Korea Array 29.17 2 pP pP 14 07 14.7 -0.2
comp=Z,4.5nm,0.8s,baz=187,slow=8.3,SNR=6.7
KSRS LR LR 14 18 15.6
comp=Z,70nm,20.3s,baz=182,slow=36
MJAR Matsushiro Arr 30.16 19 LR LR 14 17 38.2
comp=Z,110nm,21.4s,baz=210,slow=33
CD2 Chengdu 31.07 320 *e*P **P** **14 07 16.3 +2.6**
CD2 pP pP 14 07 33.9 +2.2
CD2 sP sP 14 07 43.3 +2.6
CD2 PP PP 14 08 20.8 -4.4
CD2 S **S** **14 12 14.8 +1.2**
CD2 sS sS 14 12 45.1 +0.6
CD2 SS SS 14 14 03.1 -26
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
CD2 pmax pmax
comp=Z,40nm,5.8s
CD2 LR LR
comp=N,240nm,19.0s
CD2 LR LR
comp=E,340nm,20.2s
CD2 LR LR
comp=Z,220nm,26.2s
ASAR Alice Springs 32.45 167 P **P** **14 07 24.9 -1.0**
comp=Z,3.8nm,0.7s,mb4.2,baz=342,slow=7.3,SNR=73
ASAR PcP PcP 14 10 11.1 -0.6
comp=Z,2.5nm,0.7s,baz=348,slow=4.0,SNR=6.7
ASAR pPcP 14 10 29.5
comp=Z,2.4nm,0.8s,baz=355,slow=2.3,SNR=6.1
ASAR ScP ScP 14 13 46.0 -2.8
comp=Z,2.2nm,0.9s,baz=346,slow=3.4,SNR=6.2
ASAR Alice Springs 32.45 167 P **P** **14 07 24.9 -1.0**
ASAR 14 10 11.1
BJI Beijing 33.06 345 P **P** **14 07 31.5 +0.5**
BJI S **S** **14 12 48.0 +3.6**
BJI pmax pmax
comp=Z,9.0nm,0.4s,mb5.0
BJI LR LR
comp=N,140nm,16.9s
BJI LR LR
comp=E,110nm,11.1s
CTAO Charters Tower 34.12 146 *e*P **P** **14 07 40.4 -0.1**
CTAO pmax pmax
comp=Z,26nm,1.4s,mb4.9
CTAO Charters Tower 34.12 146 *e*P **P** **14 07 40.4 -0.1**
comp=Z,26nm,1.4s,mb4.9
LZH Lanzhou 34.66 327 *e*P **P** **14 08 01.0 +16**
LZH pP pP 14 08 06.5 +3.3
LZH sP sP 14 08 09.8 -2.3
LZH pmax pmax
comp=Z,19nm,1.4s,mb4.7
HHC Hu-ho-hao-te 35.17 340 *e*P **P** **14 07 51.8 +2.5**
HHC pP pP 14 08 09.9 +2.4
HHC sP sP 14 08 18.8 +2.4
HHC PP PP 14 09 12.9 +2.4
HHC PcP PcP 14 10 22.3 +3.2
HHC S **S** **14 13 19.3 +2.4**
HHC sS sS 14 13 50.0 +1.9
HHC ScP ScP 14 13 59.8 +1.7
HHC PcS PcS 14 14 07.4 +1.5
HHC SS SS 14 15 42.8 -10
HHC ScS ScS 14 18 01.8 -0.3
HHC pmax pmax
comp=Z,11nm,0.6s,mb4.9
HHC pmax pmax
comp=Z,38nm,4.5s
HHC LR LR
comp=N,120nm,14.3s
HHC LR LR
comp=E,150nm,14.4s
HHC LR LR
comp=Z,150nm,13.1s
MDJ Mudanjiang 36.40 4 P **P** **14 08 01.3 +1.6**
MDJ pP pP 14 08 17.9 -0.1
MDJ S **S** **14 13 37.5 +1.9**
MDJ sS sS 14 14 08.3 +1.4
MDJ PcS PcS 14 14 11.4 +1.1
MDJ pmax pmax
comp=Z,16nm,1.4s,mb4.8
MDJ pmax pmax
comp=Z,97nm,5.4s
MDJ LR LR
comp=N,96nm,35.4s
MDJ LR LR
comp=E,69nm,32.6s
MDJ LR LR
comp=Z,120nm,31.3s
MDJ Mudanjiang 36.40 4 *e*P **P** **14 07 55.9 -3.8**
comp=Z,18nm,1.0s,mb5.0
SHL Shillong 37.26 302 *e*PKP **P** **14 08 18.0 +11**
SHL *ex* x 14 09 37.0
ASAJ Asahikawa 38.43 19 LR LR 14 22 03.0
comp=Z,133nm,20.2s,baz=50,slow=33
FORT Forrest 38.76 178 *e*P **P** **14 08 19.8 0.0**
comp=Z,29nm,0.6s,mb5.3
FORT Forrest 38.76 178 *e*P **P** **14 08 19.2 -0.6**
comp=Z,40nm,0.7s,mb5.4
FORT *e*pP pP 14 08 39.1 +0.8
GTA Gaotai 39.27 327 *e*P **P** **14 08 25.3 +1.3**
GTA pP pP 14 08 43.8 +1.3
GTA sP sP 14 08 54.3 +3.0
GTA PP PP 14 10 01.3 +5.8
GTA PcP PcP 14 10 29.3 -2.3
GTA ScP ScP 14 14 12.3 -1.2
GTA S **S** **14 14 20.3 +1.1**
GTA sS sS 14 14 50.6 -0.2
GTA SS SS 14 17 09.3 -6.1
GTA pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
GTA LR LR
comp=N,69nm,14.9s
GTA LR LR
comp=E,99nm,18.4s
GTA LR LR
comp=Z,150nm,14.9s
LSA Lhasa 39.50 308 P **P** **14 08 27.3 +1.2**
LSA Lhasa 39.50 308 *e*P **P** **14 08 27.5 +1.4**
LSA pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
LSA Lhasa 39.50 308 *e*P **P** **14 08 27.5 +1.4**
comp=Z,10nm,0.6s,mb4.8
HABR Khabarovsk 40.79 9 *e*P pP 14 08 53.9 -1.2
HABR *e*SS SS 14 17 45.6 +0.1
HABR *e*SSS 14 18 15.7
HABR pmax pmax
comp=N,20nm,1.7s
HABR pmax pmax
comp=Z,56nm,2.0s,mb5.0
HABR pmax pmax
comp=E,39nm,1.6s
KLR Kul'dur 41.15 5 *e*P **P** **14 08 52.0 +13**
TAPN Taplejung 41.38 302 *e*P **P** **14 08 41.0 -0.7**
ODAN Odare 41.49 302 *e*P **P** **14 08 41.3 -1.3**
comp=E,12nm,0.5s,mb5.0
NWAO Narrogin (SRO) 41.83 192 *e*P **P** **14 08 45.9 +0.7**
comp=E,97nm,1.0s,mb5.5
NWAO Narrogin (SRO) 41.83 192 P **P** **14 08 44.8 -0.4**
comp=E,16nm,0.9s,mb4.7,baz=9.5,slow=6.0,SNR=4.1
RAMN Ramite 42.19 301 *e*P **P** **14 08 46.8 -1.5**
comp=E,11nm,0.2s,mb5.2
STKA Stephens Creek 42.34 161 *e*P **P** **14 08 49.0 -0.3**
comp=E,7.5nm,0.8s,mb4.5
STKA Stephens Creek 42.34 161 P **P** **14 08 48.2 -1.1**
comp=E,7.1nm,0.6s,mb4.6,baz=338,slow=7.9,SNR=22
STKA pP pP 14 09 06.2 -1.8
comp=E,9.2nm,0.9s,baz=348,slow=10,SNR=5.9
STKA Stephens Creek 42.34 161 *e*P **P** **14 08 49.1 -0.2**
STKA *e**PP pP 14 09 00.8 -7.2
STKA pmax pmax
comp=Z,2.0nm,0.9s
STKA Stephens Creek 42.34 161 *e*P **P** **14 08 49.1 -0.2**
comp=Z,2.2nm,0.9s,mb3.9
STKA *e*pP pP 14 09 00.8 -7.2
JIRN Jiri 42.76 302 *e*P **P** **14 08 51.8 -1.1**
comp=Z,10nm,0.3s,mb5.0
SONM Songino Array 43.07 340 P **P** **14 08 55.5 +0.5**
comp=Z,0.4nm,0.3s,mb3.6,baz=167,slow=7.0,SNR=3.3
SONM PcP PcP 14 10 44.4 +0.5
comp=Z,1.6nm,0.7s,baz=179,slow=4.4,SNR=4.5
GUN Gumba 43.10 302 *e*P **P** **14 08 54.6 -1.1**
comp=Z,16nm,0.5s,mb5.0
PKI Pulchoki 43.39 302 *e*P **P** **14 08 56.2 -1.8**
comp=Z,14nm,0.7s,mb4.8
PKI Pulchoki 43.39 302 *e*P **P** **14 08 56.2 -1.8**
PKI pmax pmax
comp=Z,14nm,0.7s,mb4.8
KKN Kakani 43.57 302 *e*P **P** **14 08 57.4 -2.0**
comp=Z,4.2nm,0.3s,mb4.6
KKN Kakani 43.57 302 *e*P **P** **14 08 57.4 -2.0**
KKN pmax pmax
comp=Z,4.0nm,0.3s,mb4.6
DMN Daman 43.66 302 *e*P **P** **14 08 57.8 -2.3**
comp=Z,7.3nm,0.5s,mb4.7
WMQ Urumqi 49.05 323 *e*P **P** **14 09 44.0 +1.9**
WMQ pP pP 14 10 03.0 +1.8
WMQ sP sP 14 10 12.0 +2.1
WMQ PP PP 14 11 39.0 +2.6
WMQ S **S** **14 16 41.0 -0.2**
WMQ ScS ScS 14 19 26.0 -1.1
WMQ SS SS 14 20 09.0 -4.2
WMQ pmax pmax
comp=Z,18nm,1.0s,mb5.0
WMQ LR LR
comp=N,250nm,16.0s
WMQ LR LR
comp=E,130nm,15.0s
WMQ LR LR
comp=Z,87nm,16.0s
PETK Petropavlovsk- 51.42 24 P **P** **14 10 00.6 +0.8**
comp=Z,1.9nm,0.5s,mb4.4,baz=198,slow=3.5,SNR=14
PETK pP pP 14 10 19.6 +0.6
comp=Z,10nm,0.7s,baz=199,slow=5.6,SNR=12
PET Petropavlovsk 51.74 24 *e*P **P** **14 10 08.4 +6.2**
PET *e*S **S** **14 17 27.2 +9.0**
PET pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
MK31 Makanchi Array 53.87 324 *e*P **P** **14 10 17.3 -0.7**
MKAR Makanchi Array 53.87 324 P **P** **14 10 17.6 -0.5**
comp=Z,8.3nm,0.5s,mb5.0,baz=97,slow=8.6,SNR=100
MKAR PcP PcP 14 11 22.1 -0.7
comp=Z,3.2nm,0.7s,baz=124,slow=9.2,SNR=5.7
MKAR LR LR 14 34 34.6
comp=Z,67nm,20.4s,baz=348,slow=37
MKAR Makanchi Array 53.87 324 P **P** **14 10 17.6 -0.4**
MKAR 14 11 22.1
KSH Kashi 54.85 313↑↑ *i*P **P** **14 10 26.6 +1.2**
KSH pP pP 14 10 45.8 +1.1
KSH PcP PcP 14 11 28.6 +1.9
KSH PP PP 14 12 31.4 +2.5
KSH ScP ScP 14 15 18.6 -0.1
KSH PcS PcS 14 15 26.9 +0.4
KSH S **S** **14 17 58.4 -2.5**
KSH ScS ScS 14 20 05.3 -2.3
KSH SS SS 14 21 41.9 -3.4
KSH pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
KSH pmax pmax
comp=Z,65nm,6.4s
KSH LR LR
comp=N,150nm,6.8s
KSH LR LR
comp=E,130nm,5.3s
KSH LR LR
comp=Z,100nm,5.6s
TKM2 Tokmak 2 56.37 317 *e*P **P** **14 10 35.6 -0.6**
TKM2 *e**PP pP 14 10 55.0 -0.6
TKM2 pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
TKM2 Tokmak 2 56.37 317 *e*P **P** **14 10 35.6 -0.6**
comp=Z,4.7nm,0.8s,mb4.6
TKM2 *e*pP pP 14 10 55.0 -0.6
ZALV Zalesovo Beam 56.59 332 P **P** **14 10 36.0 -1.6**
comp=Z,4.5nm,0.4s,mb4.8,baz=127,slow=6.5,SNR=26
UCH Uchtor 56.85 316 *e*P **P** **14 10 39.9 +0.3**
UCH *e**PP pP 14 10 58.7 -0.4
UCH pmax pmax
comp=Z,13nm,0.9s,mb5.0
UCH Uchtor 56.85 316 *e*P **P** **14 10 39.9 +0.3**
comp=Z,13nm,0.9s,mb5.0
UCH *e*pP pP 14 10 58.7 -0.4
EKS2 Erkin-Say 57.52 316 *e*P **P** **14 10 44.3 0.0**
EKS2 *e**PP pP 14 11 03.4 -0.4
EKS2 pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
EKS2 Erkin-Say 57.52 316 *e*P **P** **14 10 44.3 0.0**
comp=Z,6.5nm,0.8s,mb4.7
EKS2 *e*pP pP 14 11 03.4 -0.4
SEY Seymchan 57.77 14↓↓ *e*P **P** **14 10 47.6 +1.9**
NVS Novosibirsk 57.87 332 *e*P **P** **14 10 44.6 -1.9**
NVS *e*S **S** **14 18 35.5 -4.8**
NVS pmax pmax
comp=N,4.0nm,0.7s
NVS pmax pmax
comp=E,5.0nm,0.7s
NVS pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
NVS smax
comp=N,16nm,1.9s
NVS smax
comp=E,20nm,1.9s
KURK Kurchatov 57.95 326 P **P** **14 10 46.4 -0.8**
comp=E,11nm,0.4s,mb5.2,baz=123,slow=7.6,SNR=81
KURK Kurchatov 57.95 326 *d i*P **P** **14 10 45.6 -1.6**
KURK pmax pmax
comp=Z,17nm,0.9s,mb5.1
KURK Kurchatov 57.95 326 *e*P **P** **14 10 46.1 -1.0**
comp=Z,15nm,0.6s,mb5.2
KBL Kabul 58.76 305 *e*pP pP 14 11 12.2 -0.6
TIXI Tiksi 63.43 1 *e*P **P** **14 11 23.8 -0.2**
TIXI *e**PP pP 14 11 42.4 -1.4
TIXI pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
TIXI Tiksi 63.43 1 *e*P **P** **14 11 23.8 -0.2**
comp=Z,9.2nm,0.9s,mb4.7
TIXI *e*pP pP 14 11 42.4 -1.4
BVAR Borovoye Array 63.55 326 P **P** **14 11 23.9 -1.2**
comp=Z,5.0nm,0.4s,mb4.7,baz=124,slow=6.4,SNR=44
BRVK Borovoye 63.62 326 *de*P **P** **14 11 24.9 -0.7**
BRVK pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
BRVK Borovoye 63.62 326 *e*P **P** **14 11 25.0 -0.6**
BILL Bilibino 65.33 15 *e*P **P** **14 11 35.5 -1.0**
BILL *e**PP pP 14 11 55.5 -0.9
BILL pmax pmax
comp=Z,38nm,1.7s,mb5.0
BILL Bilibino 65.33 15 *e*P **P** **14 11 35.5 -1.0**
comp=Z,38nm,1.7s,mb5.0
BILL *e*pP pP 14 11 55.5 -0.9
ABKAR Akbulak array 68.65 320 *e*P **P** **14 11 56.4 -1.5**
comp=Z,5.5nm,0.6s,mb4.6
ABKAR *e*pP pP 14 12 16.9 -1.1
ABKAR *e*PcP PcP 14 12 21.8 -0.6
AKTK Aktyubinsk 70.11 321 P **P** **14 12 04.8 -2.1**
AKTO Aktyubinsk 70.11 321 P **P** **14 12 04.8 -2.1**
comp=Z,3.4nm,0.6s,mb4.4,baz=94,slow=7.0,SNR=14
ARU Arti 71.13 327 *e*P **P** **14 12 12.5 -0.4**
ARU Arti 71.13 327 *e*P **P** **14 12 12.5 -0.4**
CHGN Chignik 74.93 34 *e*P **P** **14 12 42.4 +6.9**
SVW2 Sparrevohn 77.01 29 *e*pP pP 14 13 08.2 +0.6
TTA Tatalina 77.04 27 *e*pP pP 14 13 07.1 -0.6
KDAK Kodiak Island 78.25 33 P **P** **14 12 54.6 +0.6**
comp=Z,2.4nm,0.5s,mb4.2,baz=352,slow=12,SNR=4.3
KDAK pP pP 14 13 14.2 -0.4
comp=Z,16nm,0.9s,baz=262,slow=2.0,SNR=7.1
KDAK Kodiak Island 78.25 33 P **P** **14 12 54.7 +0.6**
ZEI Tsey 79.13 312 *e*P **P** **14 12 57.5 -1.8**
ZEI pmax pmax
comp=Z,10.0nm,0.9s,mb4.7
BPAW Bear Paw Mtn. 79.39 26 *e*P **P** **14 13 01.0 +0.7**
comp=Z,28nm,1.1s,mb5.0
BPAW *e*pP pP 14 13 20.2 -0.5
TRF Thorofare Moun 79.67 27 *e*P **P** **14 13 00.7 -1.0**
comp=Z,15nm,1.0s,mb4.8
TRF *e*pP pP 14 13 21.2 -1.0
COLD Coldfoot 79.89 23 *e*P **P** **14 13 04.6 +1.7**
comp=Z,3.4nm,0.8s,mb4.2
COLD *e*pP pP 14 13 23.6 +0.2
KIV Kislovodsk 79.98 313 *e*P **P** **14 13 04.2 +0.3**
KIV pmax pmax
comp=Z,8.0nm,0.8s,mb4.6
PMR Palmer 80.15 29 *e*pP pP 14 13 24.2 -0.7
MCK McKinley 80.28 27 *e*pP pP 14 13 25.1 -0.5
DIV Divide 81.77 29 *e*pP pP 14 13 34.5 +0.9
MENT Mentasta 82.65 27 *e*P **P** **14 13 19.0 +1.4**
EGAK Eagle 83.64 26 *e*P **P** **14 13 25.0 +2.4**
JOF Joensuu 85.17 333 *e*p **P** **14 13 28.5 -1.9**
comp=Z,11nm,0.5s,mb5.0
JOF Joensuu 85.17 333 *e*p **P** **14 13 28.5 -1.9**
comp=Z,11nm,0.5s,mb5.0
HYT Haines Junctio 85.81 29 *e*pP pP 14 13 55.2 +0.8
INK Inuvik 86.11 22 P **P** **14 13 34.5 -0.5**
comp=Z,0.7nm,0.5s,mb3.9,baz=298,slow=5.8,SNR=7.1
INK pP pP 14 13 55.7 0.0
comp=Z,3.3nm,0.7s,baz=290,slow=9.4,SNR=8.7
INK Inuvik 86.11 22 *e*P **P** **14 13 34.4 -0.6**
INK pmax pmax
comp=Z,3.0nm,1.0s
INK Inuvik 86.11 22 *e*P **P** **14 13 34.4 -0.6**
comp=Z,3.2nm,1.0s,mb4.2
INK *e*pP pP 14 13 55.9 +0.2
ARCES ARCESS Array B 86.25 340 P **P** **14 13 35.0 -0.7**
comp=Z,5.2nm,0.6s,mb4.7,baz=80,slow=5.9,SNR=43
MMAI Mount Meron Ar 86.58 303 P **P** **14 13 37.0 -1.0**
comp=Z,3.2nm,0.7s,mb4.3,baz=147,slow=7.8,SNR=4.2
BR131 Keskin Array S 87.08 310 *e*P **P** **14 13 38.7 -1.6**
BRTR Keskin Array B 87.08 310 P **P** **14 13 38.7 -1.6**
comp=Z,1.8nm,0.6s,mb4.2,baz=126,slow=4.6,SNR=11
BRTR LR LR 15 01 17.8
comp=Z,24nm,19.9s,baz=285,slow=42
KAF Kangasniemi 87.60 332 *e*P **P** **14 13 40.6 -1.7**
KAF pmax pmax
comp=Z,4.0nm,0.4s,mb4.8
KAF Kangasniemi 87.60 332 *e*p **P** **14 13 40.6 -1.7**
comp=Z,4.3nm,0.4s,mb4.8
KAF Kangasniemi 87.60 332 *e*p **P** **14 13 40.6 -1.7**
comp=Z,4.3nm,0.4s,mb4.8
MAW Mawson 87.85 200 pP pP 14 14 03.2 -0.9
comp=Z,4.4nm,1.0s,baz=64,slow=4.9,SNR=3.9
FINES FINESS Array B 87.86 332 P **P** **14 13 41.9 -1.7**
comp=Z,7.8nm,0.4s,mb5.1,baz=87,slow=3.8,SNR=114
AKASG Malin Array Be 88.36 321 P **P** **14 13 43.8 -2.4**
comp=Z,3.6nm,0.6s,mb4.6,baz=71,slow=4.5,SNR=15
SBA Scott Base 88.73 172 *e*P **P** **14 13 48.7 +1.4**
BUR08 Bucovina Ar. S 91.59 318 *e*P **P** **14 14 01.2 -0.2**
KOLS Kolonicke sedl 93.15 320 *e*P **P** **14 14 08.1 -0.4**
KOLS pmax pmax
comp=Z,6.0nm,1.6s,mb4.7
KOLS Kolonicke sedl 93.15 320 *e*P **P** **14 14 08.1 -0.4**
comp=Z,6.3nm,1.6s,mb4.7
KOLS Kolonicke sedl 93.15 320 *e*P **P** **14 14 08.1 -0.4**
STHS Stebnicka Huta 93.66 321 *e*P **P** **14 14 11.7 +0.9**
STHS pmax pmax
comp=Z,3.0nm,1.5s,mb4.4
STHS Stebnicka Huta 93.66 321 *e*P **P** **14 14 11.7 +0.9**
comp=Z,2.7nm,1.5s,mb4.4
STHS Stebnicka Huta 93.66 321 *e*P **P** **14 14 11.7 +0.9**
CRVS Cervenica-Dubn 93.67 320 *e*P **P** **14 14 11.1 +0.2**
CRVS pmax pmax
comp=Z,6.0nm,1.4s,mb4.7
CRVS Cervenica-Dubn 93.67 320 *e*P **P** **14 14 11.1 +0.2**
comp=Z,5.7nm,1.4s,mb4.7
CRVS Cervenica-Dubn 93.67 320 *e*P **P** **14 14 11.1 +0.2**
OJC Ojcow 94.31 322 *e*P **P** **14 14 12.0 -1.8**
NB2 NORSAR Subarra 94.75 334 P **P** **14 14 14.0 -1.6**
comp=Z,1.0nm,0.6s,mb4.4,baz=66,slow=4.6
NOA NORSAR Array B 94.75 334 P **P** **14 14 13.6 -2.0**
comp=Z,1.0nm,0.6s,mb4.4,baz=65,slow=4.5,SNR=5.1
YKA Yellowknife Ar 95.54 24 P **P** **14 14 19.8 +0.7**
comp=Z,0.8nm,0.7s,mb4.3,baz=297,slow=4.6,SNR=3.3
YKA pP pP 14 14 38.2 -1.9
comp=Z,1.6nm,0.8s,baz=301,slow=4.8,SNR=3.7
YKA LR LR 14 55 12.3
comp=Z,3.8nm,20.6s,baz=25,slow=34
YKA Yellowknife Ar 95.54 24 P **P** **14 14 19.8 +0.7**
YKA *PP pP 14 14 38.2 -1.9
GERES GERESS Array B 98.51 322 P **P** **14 14 32.6 -0.3**
comp=Z,1.5nm,0.8s,mb4.6,baz=52,slow=5.2,SNR=10
TXAR Lajitas Array 118.95 50 PKP PKPdf 14 19 44.1 +0.8
comp=Z,0.3nm,0.6s,baz=354,slow=2.5,SNR=5.7
TXAR pPKP pPKPdf 14 20 03.1 -1.9
comp=Z,1.1nm,0.9s,baz=194,slow=1.3,SNR=7.7
PLCA Paso Flores 144.18 158 PKP PKPdf 14 20 28.8 -1.3
comp=Z,3.4nm,0.9s,baz=237,slow=14,SNR=3.4
MTP Monte Pirata 151.28 25 *e*PKPbc PKPbc 14 20 50.5 +2.0
LPAZ La Paz 163.54 121 PKP PKPdf 14 20 59.3 +1.5
comp=Z,1.5nm,1.0s,baz=30,slow=11,SNR=4.6

JMA 14 14:03:43.1, 38.°93N×140.°88E, h8km±1km, M2.6, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.27**	**85**	P	Pg	14 03 48.4	0.0
JMK				S	Sg	14 03 52.1	+0.2
JYK	**Kaneyama**	**0.41**	**268**	P	Pg	14 03 51.1	+0.1
JYK				S	Sg	14 03 56.4	0.0
JRG	**Rokugo**	**0.50**	**338**	P	Pg	14 03 53.1	+0.2
JRG				S	Sg	14 04 00.4	+0.9
JOU	**Okura**	**0.59**	**197**	P	Pg	14 03 54.4	0.0
JOU				S	Sg	14 04 02.0	-0.1
JOM	**Ohasama**	**0.63**	**30**	P	Pg	14 03 55.3	0.0
JOM				S	Sg	14 04 03.8	+0.3
OFUJ	**Ofunato**	**0.63**	**76**	P	Pg	14 03 55.1	-0.2
OFUJ				S	Sg	14 04 03.5	-0.1

*NIED **14** 14:04:00, 38.°90N×140.°80E, h5km, Mw4.0 Best double couple: M0 1.15000×10^15 NP1:φs198.00000°, δ49.00000°, λ116.00000°. NP2:φs342.00000°, δ48.00000°, λ64.00000°.*
*IDC **14** 14:04:23.3±0.6, 38.°93N×140.°72E, h0km, mb4.2/16, mb1 4.4/17, mb1mx4.2/28, mbtmp4.2/17, ML3.8/2, Error ellipse: s-maj=18.3km s-min=12.0km az=102.0*
*BJI **14** 14:04:23.6, 38.°31N×140.°39E, h18km, mB4.6/5, mb4.3/6, Ms3.4/2, Ms7 3.2/2*
*ISCJB **14** 14:04:24.9±0.4, 38.°90N±0.°03×140.°78E±0.°04, h22km±3km, mb4.4/30, Error ellipse: s-maj=5.8km s-min=3.9km az=31.4*
*NEIC **14** 14:04:25.0, 38.°91N×140.°76E, h7km, mb4.5/10, MW4.0(NIED), After JMA.*
NEIC Recorded [3 JMA] in Miyagi; [2 JMA] in Iwate and Yamagata; [1 JMA] in Akita.
*JMA **14** 14:04:24.9, 38.°91N×140.°76E, h6km±1km, M4.1 Broadband fault plane solution: P waves. NP1: φs335.00000°, δ47.00000°, λ62.00000°. NP2: φs192.00000°, δ50.00000°, λ116.00000°. Principal axes: T Plg70.0000°, Azm169.0000°; N Plg20.0000°, Azm355.0000°; P Plg2.0000°, Azm264.0000°;*
JMA Felt III J1.
*MOS **14** 14:04:26.7±0.9, 38.°89N×140.°70E, h33km, mb4.6/23 Error ellipse: s-maj=13.4km s-min=6.8km az=84.0*

ISC 14 14:04:24.8±0.4, 38°.90N±0°.03×140°.76E±0°.04, h10km±3km, n93, σ0s92/100, mb4.4/30, 2C-10D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase Id Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.31**	**273**	⇓P	**Pg**	**14 04 31.1**	**+0.2**
JMK	**Ichinoseki**	**0.37**	**82**	⇓P	**Pg**	**14 04 31.9**	**-0.1**
JMK				S	**Sg**	**14 04 36.9**	**0.0**
JRG	**Rokugo**	**0.50**	**349**	P	**Pg**	**14 04 34.9**	**+0.3**
JOU	**Okura**	**0.54**	**188**	⇑P	**Pg**	**14 04 35.6**	**+0.3**
JOU				S	**Sg**	**14 04 43.0**	**+0.7**
JIO	**Ouri**	**0.64**	**134**	⇓P	**Pg**	**14 04 36.9**	**-0.3**
JIO				S	**Sg**	**14 04 45.1**	**-0.6**
JOM	**Ohasama**	**0.71**	**36**	⇓P	**Pg**	**14 04 38.1**	**-0.4**
JOM				S	**Sg**	**14 04 48.0**	**+0.3**
JYS	**Shiratake**	**0.87**	**219**	⇓P	**Pg**	**14 04 41.5**	**0.0**
JYS				S	**Sg**	**14 04 53.3**	**+0.5**
JYA	**Atsumi**	**0.87**	**250**	⇓P	**Pg**	**14 04 41.3**	**-0.2**
JMM	**Marumori**	**1.03**	**178**	P	**Pg**	**14 04 43.9**	**-0.8**
JMM				S	**Sg**	**14 04 57.3**	**-0.8**
MJAR	**Matsushiro Arr**	**3.10**	**221**	Pn	**Pn**	**14 05 15.5**	**+1.7**
	4.1nm,0.3s,baz=12,slow=26,SNR=28						
MJAR				Pg	**Pg**	**14 05 21.5**	**-2.7**
	8.6nm,0.3s,baz=22,slow=15,SNR=28						
MJAR				Lg		14 06 01.3	
	9.0nm,0.3s,baz=164,slow=24,SNR=5.9						
MAJO	**Matsushiro**	**3.10**	**221**	*e*P	**Pn**	**14 05 14.5**	**+0.7**
MAT	**Matsushiro**	**3.10**	**221**	P	**Pn**	**14 05 15.1**	**+1.3**
MAT				S	**Sn**	**14 05 57.4**	**+6.4**
ERM	**Erimo**	**3.61**	**30**	⇓*e*P	**Pn**	**14 05 24.0**	**+3.2**
ERM	**Erimo**	**3.61**	**30**	*e*Pn	**Pn**	**14 05 22.0**	**+1.2**
ASAJ	**Asahikawa**	**5.39**	**14**	Pn	**Pn**	**14 05 47.1**	**+1.9**
	2.4nm,0.3s,baz=212,slow=17,SNR=21						
ASAJ	**Asahikawa**	**5.39**	**14**	P	**Pn**	**14 05 47.2**	**+1.9**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
JHJ	**Hachijo jima 2**	**5.82**	**188**	Pn	**Pn**	**14 05 52.3**	**+1.0**
	comp=Z,24nm,0.3s,baz=116,slow=21,SNR=13						
YSS	**Yuzh-Sakhalins**	**8.18**	**10**	*e*P	**Pn**	**14 06 27.0**	**+3.5**
KSRS	**Korea Array**	**10.21**	**266**	Pn	**Pn**	**14 06 54.2**	**+2.9**
	comp=Z,1.0nm,0.3s,baz=73,slow=14,SNR=16						
KSRS				Sn	**Sn**	**14 08 49.6**	**+3.8**
	comp=Z,0.7nm,0.3s,baz=75,slow=24,SNR=8.6						
CN2	**Changchun**	**12.50**	**298**	*e*P	**Pn**	**14 07 20.6**	**-2.0**
CN2				pmax	pmax		
	comp=Z,20nm,0.6s						
PET	**Petropavlovsk**	**18.75**	**35**	*e*P	**Pn**	**14 08 45.1**	**+1.0**
PET				MLR	MLR		
	comp=Z,100nm,17.0s						
YAK	**Yakutsk**	**24.14**	**347**	*e*P	**P**	**14 09 39.1**	**-1.5**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.2						
SEY	**Seymchan**	**25.07**	**13**	⇑*i*P	**P**	**14 09 50.6**	**+1.5**
GUMO	**Guam**	**25.47**	**171**	*e*P	**P**	**14 09 54.4**	**+1.2**
GUMO				pmax	pmax		
	comp=Z,279nm,1.5s,mb5.6						
GUMO	**Guam**	**25.47**	**171**	*e*P	**P**	**14 09 54.4**	**+1.2**
	comp=Z,279nm,1.5s,mb5.6						
BILL	**Biiibino**	**32.40**	**18**	*e*P	**P**	**14 10 55.1**	**+0.8**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.2						
BILL	**Bilibino**	**32.40**	**18**	*e*P	**P**	**14 10 53.3**	**-1.1**
	comp=Z,1.4nm,0.4s,mb4.1						
TIXI	**Tiksi**	**33.38**	**353**	*e*P	**P**	**14 11 02.1**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
TIXI	**Tiksi**	**33.38**	**353**	*e*P	**P**	**14 11 02.1**	**-0.8**
	comp=Z,1.6nm,0.6s,mb4.1						
ZALV	**Zalesovo Beam**	**40.29**	**311**	P	**P**	**14 12 01.8**	**-0.1**
	comp=Z,4.2nm,0.7s,mb4.3,baz=75,slow=7.2,SNR=5.6						
ZALV				PcP	PcP	14 14 05.2	-0.1
	comp=Z,1.4nm,0.4s,baz=83,slow=3.2,SNR=5.3						
ZALV	**Zalesovo Beam**	**40.29**	**311**	P	**P**	**14 12 01.8**	**-0.1**
ZALV						14 14 05.2	
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
ZALV	**Zalesovo Beam**	**40.29**	**311**	P	**P**	**14 12 01.8**	**-0.1**
ZALV				PcP	PcP	14 14 05.2	-0.1
KURK	**Kurchatov**	**44.39**	**307**	P	**P**	**14 12 35.4**	**+0.1**
	comp=Z,5.2nm,0.7s,mb4.4,baz=82,slow=8.4,SNR=9.2						
KURK	**Kurchatov**	**44.39**	**307**	*d i*P	**P**	**14 12 34.8**	**-0.5**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.4						
COLA	**College**	**47.79**	**33**	*e*P	**P**	**14 13 01.0**	**-0.9**
COLA				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
COLA	**College**	**47.79**	**33**	*e*P	**P**	**14 13 01.0**	**-0.9**
COLA				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
COLA	**College**	**47.79**	**33**	*e*P	**P**	**14 13 01.0**	**-1.0**
	comp=Z,6.1nm,1.0s,mb4.6						
BVAR	**Borovoye Array**	**48.95**	**311**	P	**P**	**14 13 10.9**	**-0.1**
	comp=Z,1.0nm,0.5s,mb4.1,baz=75,slow=8.0,SNR=4.6						
BVAR				PcP	PcP	14 14 35.3	+0.2
	comp=Z,1.2nm,0.5s,baz=100,slow=2.3,SNR=4.9						
BVAR	**Borovoye Array**	**48.95**	**311**	P	**P**	**14 13 10.9**	**-0.1**
BVAR						14 14 35.3	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARU	**Arti**	**54.63**	**318**	*d i*P	**P**	**14 13 53.4**	**+0.1**
ARU				*e*		14 15 52.0	
ARU				S	**S**	**14 21 29.6**	**-3.3**
ARU				SS	SS	14 25 10.3	-4.7
ARU				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.7						
AKTK	**Aktyubinsk**	**57.05**	**311**	P	**P**	**14 14 10.6**	**-0.3**
AKTO	**Aktyubinsk**	**57.05**	**311**	P	**P**	**14 14 10.6**	**-0.3**
	comp=Z,1.9nm,0.6s,mb4.3,baz=78,slow=13,SNR=3.8						
AKTO	**Aktyubinsk**	**57.05**	**311**	P	**P**	**14 14 10.6**	**-0.2**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
FITZ	**Fitzroy Crossi**	**58.44**	**197**	P	**P**	**14 14 20.8**	**0.0**
	comp=Z,1.9nm,0.5s,mb4.3,baz=0.9,slow=3.0,SNR=8.6						
WRAB	**Tennant Creek**	**58.83**	**187**	*e*P	**P**	**14 14 22.9**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
WRAB	**Tennant Creek**	**58.83**	**187**	*e*P	**P**	**14 14 22.9**	**-0.6**
	comp=Z,9.9nm,0.9s,mb4.8						
WRA	**Warramunga Arr**	**58.84**	**187**	P	**P**	**14 14 23.1**	**-0.5**
	comp=Z,4.9nm,0.6s,mb4.7,baz=5.0,slow=7.4,SNR=25						
WRA	**Warramunga Arr**	**58.84**	**187**	P	**P**	**14 14 23.1**	**-0.5**
WRA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ASAR	**Alice Springs**	**62.57**	**187**	P	**P**	**14 14 48.8**	**-0.1**
	comp=Z,3.0nm,0.7s,mb4.5,baz=357,slow=4.7,SNR=21						
ASAR	**Alice Springs**	**62.57**	**187**	P	**P**	**14 14 48.8**	**-0.1**
ASAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
FINES	**FINESS Array B**	**66.92**	**332**	P	**P**	**14 15 16.0**	**-1.0**
	comp=Z,4.1nm,0.8s,mb4.5,baz=41,slow=3.5,SNR=5.3						
FINES	**FINESS Array B**	**66.92**	**332**	P	**P**	**14 15 16.0**	**-1.0**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KIV	**Kislovodsk**	**69.30**	**310**	*d i*P	**P**	**14 15 33.6**	**+1.4**
KIV				pmax	pmax		
	comp=Z,22nm,1.6s,mb4.8						
STKA	**Stephens Creek**	**70.42**	**179**	P	**P**	**14 15 38.4**	**-0.7**
	comp=Z,2.2nm,0.6s,mb4.2,baz=77,slow=7.7,SNR=4.1						
NB2	**NORSAR Subarra**	**72.27**	**337**	P	**P**	**14 15 49.6**	**-0.4**
	comp=Z,1.0nm,0.7s,mb3.9,baz=38,slow=6.5						
NOA	**NORSAR Array B**	**72.27**	**337**	P	**P**	**14 15 50.0**	**0.0**
	comp=Z,1.6nm,0.8s,mb4.0,baz=38,slow=6.1,SNR=5.9						
NOA	**NORSAR Array B**	**72.27**	**337**	P	**P**	**14 15 50.0**	**0.0**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKASG	**Malin Array Be**	**72.51**	**322**	P	**P**	**14 15 50.6**	**-1.0**
	comp=Z,1.2nm,0.5s,mb4.1,baz=46,slow=5.9,SNR=5.7						
AKASG	**Malin Array Be**	**72.51**	**322**	P	**P**	**14 15 50.6**	**-1.0**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BOZ	**Bozeman (W)**	**73.74**	**44**	*e*P	**P**	**14 16 00.0**	**+1.1**
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
BOZ	**Bozeman (W)**	**73.74**	**44**	*e*P	**P**	**14 15 60.0**	**+1.1**
	comp=Z,1.9nm,0.7s,mb4.1						
NVAR	**Mina Array Bea**	**74.29**	**53**	P	**P**	**14 16 03.4**	**+1.0**
	comp=Z,0.8nm,0.5s,mb3.9,baz=294,slow=5.5,SNR=8.1						
PDAR	**Pinedale Array**	**76.73**	**45**	P	**P**	**14 16 17.1**	**+0.9**
	comp=Z,1.1nm,0.6s,mb3.9,baz=280,slow=1.5,SNR=10						
OJC	**Ojcow**	**77.21**	**326**	*e*P	**P**	**14 16 17.8**	**-1.0**
BRTR	**Keskin Array B**	**77.23**	**311**	P	**P**	**14 16 19.2**	**+0.1**
	comp=Z,0.5nm,0.4s,mb3.8,baz=103,slow=3.9,SNR=5.6						
BRTR	**Keskin Array B**	**77.23**	**311**	P	**P**	**14 16 19.2**	**+0.1**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CLL	**Collm**	**79.22**	**330**	*e*P	**P**	**14 16 24.0**	**-5.9**
CLL				*e*		14 16 30.0	
GERES	**GERESS Array B**	**80.86**	**328**	P	**P**	**14 16 38.5**	**-0.3**
	comp=Z,0.7nm,0.6s,mb3.8,baz=45,slow=4.5,SNR=5.1						
GERES	**GERESS Array B**	**80.86**	**328**	P	**P**	**14 16 38.5**	**-0.3**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CDF	**Champ du Feu**	**83.76**	**331**	*e*P	**P**	**14 16 53.8**	**-0.2**
	comp=Z,2.1nm,0.5s,mb4.2						
CDF	**Champ du Feu**	**83.76**	**331**	*e*P	**P**	**14 16 53.8**	**-0.2**
CDF				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.2						
CDF	**Champ du Feu**	**83.76**	**331**	*e*P	**P**	**14 16 53.8**	**-0.2**
	comp=Z,1.0nm,0.5s,mb4.2						
CABF	**La Chapelle**	**85.71**	**331**	*e*P	**P**	**14 17 03.5**	**-0.4**
	comp=Z,7.8nm,0.9s,mb4.6						
CABF	**La Chapelle**	**85.71**	**331**	*e*P	**P**	**14 17 03.5**	**-0.4**
CABF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.7						
CABF	**La Chapelle**	**85.71**	**331**	*e*P	**P**	**14 17 03.5**	**-0.4**
	comp=Z,3.9nm,0.9s,mb4.6						
LOR	**Lormes**	**85.99**	**332**	*e*P	**P**	**14 17 04.6**	**-0.6**
LDF	**La Druitiere**	**86.23**	**335**	*e*P	**P**	**14 17 05.7**	**-0.7**
SSF	**Saint Saulge**	**86.29**	**332**	*e*P	**P**	**14 17 06.5**	**-0.2**
	comp=Z,11nm,1.1s,mb4.7						
SSF	**Saint Saulge**	**86.29**	**332**	*e*P	**P**	**14 17 06.5**	**-0.2**
SSF				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.7						
SSF	**Saint Saulge**	**86.29**	**332**	*e*P	**P**	**14 17 06.5**	**-0.2**
	comp=Z,5.6nm,1.1s,mb4.7						
LPL	**La Plagne**	**86.36**	**330**	*e*P	**P**	**14 17 07.1**	**0.0**
LPG	**La Plagne**	**86.37**	**330**	*e*P	**P**	**14 17 07.3**	**+0.1**
	comp=Z,5.6nm,0.7s,mb4.6						
LPG	**La Plagne**	**86.37**	**330**	*e*P	**P**	**14 17 07.3**	**+0.1**
LPG				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.6						
LPG	**La Plagne**	**86.37**	**330**	*e*P	**P**	**14 17 07.3**	**+0.1**
	comp=Z,2.8nm,0.7s,mb4.6						
AVF	**Avril sur Loir**	**86.58**	**332**	*e*P	**P**	**14 17 07.9**	**-0.3**
	comp=Z,8.0nm,0.8s,mb4.7						
AVF	**Avril sur Loir**	**86.58**	**332**	*e*P	**P**	**14 17 07.9**	**-0.3**
AVF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.7						
AVF	**Avril sur Loir**	**86.58**	**332**	*e*P	**P**	**14 17 07.9**	**-0.3**
	comp=Z,4.0nm,0.8s,mb4.7						
GRR	**Gorron**	**86.65**	**336**	*e*P	**P**	**14 17 08.1**	**-0.4**
TXAR	**Lajitas Array**	**89.39**	**52**	P	**P**	**14 17 22.1**	**+0.2**
	comp=Z,0.3nm,0.5s,mb3.8,baz=294,slow=2.3,SNR=6.9						
TKL	**Tuckaleechee C**	**95.17**	**35**	*e*P	**P**	**14 17 47.2**	**-1.3**
CBYP	**Canovanas**	**117.91**	**29**	*e*P	Pdif	14 19 30.1	+0.3
LPAZ	**La Paz**	**146.15**	**56**	PKPbc	PKPbc	14 24 06.5	+0.8
	comp=Z,1.6nm,0.7s,baz=8.4,slow=6.0,SNR=5.8						
LPAZ	**La Paz**	**146.15**	**56**	PKPbc	PKPbc	14 24 06.5	+0.8

MAN 14 14:17:16, 7°.31N×125°.83E, h32km, mb4.3, ML3.2, MS3.0, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase Id Op	ISC	Time h m s	Res ISC
DMPH	**Davao City--Mi**	**0.39**	**235**	⇓*e*P	Pb	14 17 26.2	+1.3
DMPH				*i* S	Sb	14 17 33.9	+2.8
MATI	**Mati**	**0.55**	**130**	*e*P	Pb	14 17 28.8	+1.4
MATI				*e*S	Sb	14 17 36.5	+1.4
BUKP	**Musuan**	**0.95**	**307**	*e*P	Pn	14 17 33.2	0.0
BUKP				*e*S	Sn	14 17 42.1	-3.6

JMA 14 14:21:55.0, 38°.89N×140°.76E, h6km±1km, M1.5, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase Id Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.31**	**275**	P	Pg	14 22 01.4	+0.3
JYK				*e*S	Sg	14 22 05.6	+0.4
JMK	**Ichinoseki**	**0.36**	**80**	P	Pg	14 22 02.1	0.0

NIED ***14*** *14:22:00, 39°.20N×140°.90E, h5km, Mw4.2 Best double couple: M0=2.04000×10^15 NP1:φs=4.00000°, δ50.00000°, λ77.00000°. NP2:φs=204.00000°, δ42.00000°, λ105.00000°.*
BJI ***14*** *14:22:22.2, 38°.72N×141°.22E, h9km, mB4.6/6, mb4.4/7, Ms3.6/4, Ms7 3.4/4*
IDC ***14*** *14:22:25.6±0.6, 39°.14N×140°.91E, h0km, mb4.1/18, mb1 4.3/20, mb1mx4.2/29, mbtmp4.1/20, ML3.6/2, MS3.1/4, Ms1 3.1/4, ms1mx2.8/30, Error ellipse: s-maj=17.1km s-min=11.9km az=116.0*
ISCJB ***14*** *14:22:26.8±0.4, 39°.17N±0°.02×140°.94E±0°.03, h19km±3km, mb4.3/38, MS3.1/2, Error ellipse: s-maj=4.5km s-min=3.9km az=21.1*
NEIC ***14*** *14:22:27.0, 39°.15N×140°.92E, h11km, mb4.6/16, MW4.1(NIED), After JMA.*
NEIC Recorded [2 JMA] in Akita and Iwate; [1 JMA] in Miyagi.
JMA ***14*** *14:22:27.0, 39°.15N×140°.92E, h10km±1km, M4.2 Broadband fault plane solution: P waves. NP1: φs=220.00000°, δ39.00000°, λ136.00000°. NP2: φs=346.00000°, δ64.00000°, λ60.00000°. Principal axes: T Plg59.0000°, Azm212.0000°; N Plg27.0000°, Azm1.0000°; P Plg14.0000°, Azm98.0000°;*
JMA Felt II J1.
MOS ***14*** *14:22:29.4±1.1, 39°.23N×140°.83E, h33km, mb4.5/25 Error ellipse: s-maj=10.2km s-min=6.3km az=95.7*
SZGRF ***14*** *14:22:42.6, 40°.78N×139°.50E, h33km, mb4.5, Near west coast of eastern Honshu, Japan*

ISC 14 14:22:27.3±0.4, 39°.14N±0°.02×140°.93E±0°.03, h10km±3km, n102, σ0s93/113, mb4.3/38, MS3.1/2, 2C-9D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase Id Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.30**	**130**	P	**Pg**	**14 22 32.9**	**-0.3**
JMK				S	**Sg**	**14 22 37.2**	**0.0**
JRG	**Rokugo**	**0.34**	**318**	⇓P	**Pg**	**14 22 33.8**	**-0.2**
JRG				S	**Sg**	**14 22 38.7**	**+0.1**
JOM	**Ohasama**	**0.43**	**40**	⇓P	**Pg**	**14 22 35.4**	**-0.4**
JOM				S	**Sg**	**14 22 41.3**	**-0.2**
JYK	**Kaneyama**	**0.50**	**243**	⇓P	**Pg**	**14 22 36.7**	**-0.3**
JYK				S	**Sg**	**14 22 43.4**	**-0.1**
OFUJ	**Ofunato**	**0.58**	**96**	⇓P	**Pg**	**14 22 38.2**	**-0.3**
OFUJ				S	**Sg**	**14 22 46.5**	**+0.4**
JIO	**Ouri**	**0.76**	**154**	⇓P	**Pg**	**14 22 41.2**	**-0.8**
JIO				S	**Sg**	**14 22 51.8**	**-0.1**
JOU	**Okura**	**0.80**	**195**	⇑P	**Pg**	**14 22 42.4**	**-0.4**
JOU				S	**Sg**	**14 22 53.2**	**0.0**
ERM	**Erimo**	**3.33**	**30**	*d e*P	**Pn**	**14 23 22.4**	**+3.0**
ERM	**Erimo**	**3.33**	**30**	*e*Pn	**Pn**	**14 23 21.9**	**+2.5**
MJAR	**Matsushiro Arr**	**3.37**	**220**	Pn	**Pn**	**14 23 21.2**	**+1.2**
	2.6nm,0.3s,baz=27,slow=13,SNR=45						
MJAR				Pg	**Pg**	**14 23 27.8**	**-4.1**
	7.9nm,0.3s,baz=22,slow=15,SNR=46						
MJAR				Lg		14 24 11.8	
	4.5nm,0.3s,baz=19,slow=25,SNR=8.3						
MJAR	**Matsushiro Arr**	**3.37**	**220**	Pn	**Pn**	**14 23 21.2**	**+1.2**
MJAR				Pg	**Pg**	**14 23 27.8**	**-4.1**
MJAR				Lg		14 24 11.8	
MAJO	**Matsushiro**	**3.37**	**221**	*e*P	**Pn**	**14 23 21.4**	**+1.4**
MAT	**Matsushiro**	**3.37**	**221**	P	**Pn**	**14 23 21.5**	**+1.5**
MAT				S	**Sn**	**14 24 04.1**	**+4.0**
ASAJ	**Asahikawa**	**5.12**	**14**	Pn	**Pn**	**14 23 45.9**	**+1.9**
	2.6nm,0.3s,baz=318,slow=29,SNR=26						
ASAJ	**Asahikawa**	**5.12**	**14**	P	**Pn**	**14 23 45.9**	**+1.9**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
JHJ	**Hachijo jima 2**	**6.08**	**189**	Pn	**Pn**	**14 23 58.3**	**+1.1**
	comp=Z,12nm,0.3s,baz=70,slow=23,SNR=7.5						
JHJ				Sn	**Sn**	**14 25 10.0**	**+3.1**
	comp=Z,9.6nm,0.3s,baz=68,slow=22,SNR=7.5						
YUK	**Yuzh-Kuril'sk**	**6.13**	**36**	*e*P	**Pn**	**14 23 58.8**	**+1.0**
YUK				*i* S	**Sn**	**14 25 07.4**	**-0.5**
YUK				pmax	pmax		
	comp=N,60nm,1.2s						
YUK				pmax	pmax		
	comp=E,50nm,1.2s						
YUK				pmax	pmax		
	comp=Z,110nm,1.2s						
YUK				smax			
	comp=E,150nm,0.9s						
YUK				smax			
	comp=E,90nm,1.0s						
YUK				MLR	MLR		
	comp=N,60nm,3.2s						
YUK				MLR	MLR		
	comp=Z,180nm,3.2s						
YUK				MLR	MLR		
	comp=E,200nm,12.7s						
VLA	**Vladivostok**	**7.89**	**303**	*e*P	**Pn**	**14 24 21.9**	**-0.1**
VLA				MLR	MLR		
	comp=Z,200nm,12.7s						
YSS	**Yuzh-Sakhalins**	**7.92**	**9**	*e*P	**Pn**	**14 24 23.0**	**+0.6**
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS	**Yuzh-Sakhalins**	**7.92**	**9**	*e*Pn	**Pn**	**14 24 23.8**	**+1.4**
	comp=Z,19nm,0.8s						
HABR	**Khabarovsk**	**10.24**	**337**	*e*P	**Pn**	**14 24 56.0**	**+1.8**
HABR						14 26 48.2	
KSRS	**Korea Array**	**10.36**	**265**	Pn	**Pn**	**14 25 00.2**	**+4.3**
	comp=Z,2.4nm,0.3s,baz=80,slow=14,SNR=61						
KSRS				Sn	**Sn**	**14 26 58.2**	**+6.1**
	comp=Z,0.9nm,0.3s,baz=76,slow=24,SNR=16						
KSRS				LR	LR	14 28 30.5	
	comp=Z,142nm,20.0s,baz=153,slow=35						
KSRS	**Korea Array**	**10.36**	**265**	P	**Pn**	**14 25 00.2**	**+4.3**
KSRS						14 26 58.2	
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KSRS				smax			
	comp=N,1.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,142nm,20.0s						
KLR	**Kul'dur**	**12.03**	**330**	*e*P	**Pn**	**14 25 19.2**	**+0.5**
CBIJ	**Chichi jima**	**12.06**	**175**	LR	LR	14 29 21.3	
	comp=Z,62nm,21.1s,baz=329,slow=34						
CN2	**Changchun**	**12.51**	**297**	*e*P	**Pn**	**14 25 31.3**	**+6.1**
CN2				*es*P		14 25 38.0	
YHNB	**Yeheng**	**21.93**	**235**	*e*P	**P**	**14 27 19.5**	**-1.3**
	comp=Z,22nm,1.0s,mb4.5						
SEY	**Seymchan**	**24.81**	**13**	⇓*e*P	**P**	**14 27 50.3**	**+1.2**
SONM	**Songino Array**	**26.34**	**301**	P	**P**	**14 28 02.3**	**-0.8**
	comp=Z,1.0nm,0.8s,mb3.4,baz=90,slow=8.3,SNR=6.2						
SONM				LR	LR	14 37 55.6	
	comp=Z,53nm,21.8s,MS3.0,baz=271,slow=35						
SONM	**Songino Array**	**26.34**	**301**	P	**P**	**14 28 02.3**	**-0.9**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SONM				MLR	MLR		
	comp=Z,53nm,21.8s						
SONM	**Songino Array**	**26.34**	**301**	P	**P**	**14 28 02.3**	**-0.8**
SONM				LR	LR	14 37 55.6	
BILL	**Bilibino**	**32.12**	**18**	*e*P	**P**	**14 28 55.2**	**+0.8**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.0						
TIXI	**Tiksi**	**33.15**	**353**	*e*P	**P**	**14 29 02.3**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
TIXI	**Tiksi**	**33.15**	**353**	*e*P	**P**	**14 29 02.3**	**-1.0**
	comp=Z,1.7nm,0.8s,mb4.0						
ZALV	**Zalesovo Beam**	**40.23**	**311**	P	**P**	**14 30 03.6**	**-0.2**
	comp=Z,2.9nm,0.8s,mb4.0,baz=81,slow=9.2,SNR=13						
ZALV				PcP	PcP	14 32 08.4	+0.9
	comp=Z,0.9nm,0.4s,baz=90,slow=3.8,SNR=4.7						
ZALV				LR	LR	14 47 24.8	
	comp=Z,29nm,19.4s,MS3.1,baz=78,slow=37						
ZALV	**Zalesovo Beam**	**40.23**	**311**	P	**P**	**14 30 03.6**	**-0.2**
ZALV						14 32 08.4	
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
ZALV				MLR	MLR		
	comp=Z,29nm,19.5s,MS3.1						
NVS	**Novosibirsk**	**41.13**	**312**	*e*P	**P**	**14 30 10.4**	**-0.8**
NVS				pmax	pmax		
	comp=N,3.0nm,1.4s						
NVS				pmax	pmax		
	comp=E,8.0nm,1.4s						
NVS				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.0						
MK31	**Makanchi Array**	**42.70**	**300**	*e*P	**P**	**14 30 23.9**	**-0.3**
MKAR	**Makanchi Array**	**42.70**	**300**	P	**P**	**14 30 24.1**	**-0.1**
	comp=Z,2.8nm,0.8s,mb4.0,baz=77,slow=13,SNR=25						
MKAR	**Makanchi Array**	**42.70**	**300**	P	**P**	**14 30 24.1**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURK	**Kurchatov**	**44.35**	**306**	*e*P	**P**	**14 30 36.5**	**-0.9**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.3s,mb4.7						
KURK	**Kurchatov**	**44.35**	**306**	*e*P	**P**	**14 30 36.5**	**-0.9**
	comp=Z,4.7nm,0.3s,mb4.7						
KDAK	**Kodiak Island**	**45.81**	**43**	P	**P**	**14 30 49.3**	**+0.4**
	comp=Z,3.3nm,0.5s,mb4.5,baz=247,slow=3.3,SNR=4.9						
KDAK	**Kodiak Island**	**45.81**	**43**	P	**P**	**14 30 49.3**	**+0.4**
KDAK				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
KTH	**Kantishna Hill**	**46.23**	**35**	*e*P	**P**	**14 30 50.2**	**-2.0**
	comp=Z,11nm,1.2s,mb4.7						
TKM2	**Tokmak 2**	**48.32**	**297**	*e*P	**P**	**14 31 08.5**	**-0.2**
TKM2				pmax

FINES	**FINESS Array B**	**66.78**	**332**	P	**P**	**14 33 18.2**	**-0.2**
	comp=Z,3.5nm,0.8s,mb4.5,baz=57,slow=7.0,SNR=8.3						
FINES	**FINESS Array B**	**66.78**	**332**	P	**P**	**14 33 18.3**	**-0.2**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ZEI	**Tsey**	**69.19**	**309**	*e*P	**P**	**14 33 32.1**	**-1.9**
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.8						
KIV	**Kislovodsk**	**69.25**	**310**	*e*P	**P**	**14 33 35.4**	**+1.1**
KIV				pmax	pmax		
	comp=Z,33nm,1.4s,mb5.1						
KIV	**Kislovodsk**	**69.25**	**310**	*e*P	**P**	**14 33 35.1**	**+0.8**
	comp=Z,17nm,0.8s,mb5.0						
GNI	**Garni**	**70.15**	**306**⇑	*e*P	**P**	**14 33 41.8**	**+1.9**
GNI				pmax	pmax		
	comp=Z,11nm,1.2s						
NB2	**NORSAR Subarra**	**72.10**	**337**	P	**P**	**14 33 51.1**	**-0.3**
	comp=Z,2.0nm,0.8s,mb4.1,baz=40,slow=6.2						
NOA	**NORSAR Array B**	**72.10**	**337**	P	**P**	**14 33 51.4**	**0.0**
	comp=Z,1.3nm,0.7s,mb4.0,baz=39,slow=6.0,SNR=5.3						
NOA	**NORSAR Array B**	**72.10**	**337**	P	**P**	**14 33 51.4**	**0.0**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**72.40**	**322**	P	**P**	**14 33 52.5**	**-0.9**
	comp=Z,1.0nm,0.4s,mb4.1,baz=48,slow=6.8,SNR=6.7						
AKASG	**Malin Array Be**	**72.40**	**322**	P	**P**	**14 33 52.5**	**-0.9**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BOZ	**Bozeman (W)**	**73.47**	**44**	*e*P	**P**	**14 33 59.5**	**-0.3**
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
BOZ	**Bozeman (W)**	**73.47**	**44**	*e*P	**P**	**14 33 59.5**	**-0.2**
	comp=Z,2.7nm,0.9s,mb4.2						
NVAR	**Mina Array Bea**	**74.03**	**53**	P	**P**	**14 34 02.8**	**-0.5**
	comp=Z,1.3nm,0.8s,mb3.9,baz=287,slow=5.5,SNR=8.9						
PDAR	**Pinedale Array**	**76.46**	**46**	P	**P**	**14 34 18.1**	**+1.0**
	comp=Z,1.1nm,0.6s,mb4.0,baz=338,slow=1.6,SNR=9.6						
BRTR	**Keskin Array B**	**77.18**	**311**	P	**P**	**14 34 21.4**	**+0.2**
	comp=Z,0.7nm,0.7s,mb3.7,baz=119,slow=4.5,SNR=5.5						
BRTR	**Keskin Array B**	**77.18**	**311**	P	**P**	**14 34 21.4**	**+0.2**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KHC	**Kasperske Hory**	**80.55**	**328**	*e*P	**P**	**14 34 40.1**	**+0.5**
KHC	**Kasperske Hory**	**80.55**	**328**	*e*P	**P**	**14 34 40.1**	**+0.5**
GERES	**GERESS Array B**	**80.72**	**328**	P	**P**	**14 34 40.6**	**+0.1**
	comp=Z,0.4nm,0.5s,mb3.6,baz=90,slow=2.9,SNR=5.0						
GRA1	**Grafenberg Arr**	**81.06**	**330**	*e*P	**P**	**14 34 42.4**	**+0.1**
	comp=Z,7.0nm,1.3s,mb4.4						
GRF	**Grafenberg Arr**	**81.06**	**330**	*e*P	**P**	**14 34 42.4**	**+0.1**
	comp=Z,7.0nm,1.3s,mb4.4						
GRF	**Grafenberg Arr**	**81.06**	**330**	*e*P	**P**	**14 34 42.4**	**+0.1**
GRF				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.4						
GRF	**Grafenberg Arr**	**81.06**	**330**	*e*P	**P**	**14 34 42.4**	**+0.1**
GRF				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.4						
TXAR	**Lajitas Array**	**89.13**	**52**	P	**P**	**14 35 23.0**	**-0.2**
	comp=Z,0.3nm,0.6s,mb3.8,baz=258,slow=1.2,SNR=4.6						
LPAZ	**La Paz**	**145.90**	**56**	PKPbc	PKPbc	14 42 07.8	+0.5
	comp=Z,2.5nm,0.9s,baz=356,slow=6.5,SNR=8.1						
LPAZ	**La Paz**	**145.90**	**56**	PKP2	PKPbc	14 42 07.8	+0.5
LPAZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						

KRSC 14 14:29:38.1±1.2, 49°.38N×156°.09E, h5km±5km, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**1.53**	**347**	*e*P	Pn	14 30 06.1	0.0
ALID				*i* S	Sn	14 30 26.5	+0.2
MIPR	**Malaya Ipel'ka**	**2.93**	**8**	*e*P	Pn	14 30 27.8	+2.5
AVH	**Avacha**	**4.23**	**22**	*e*P	Pn	14 30 47.1	+4.0
GNL	**Ganaly**	**4.47**	**14**	*e*P	Pn	14 30 50.1	+3.6
MKZ	**Mys Kozlova**	**6.25**	**32**	*e*P	Pn	14 31 11.6	+0.8

JMA 14 14:42:07.5, 38°.78N×140°.78E, h2km±1km, M2.3, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.36**	**293**	P	Pg	14 42 14.7	+0.4
JMK	**Ichinoseki**	**0.38**	**63**	P	Pg	14 42 15.2	+0.3
JMK				*e*S	Sg	14 42 20.7	+0.8
JOU	**Okura**	**0.42**	**192**	P	Pg	14 42 15.9	+0.3
JOU				*e*S	Sg	14 42 21.7	+0.6
OFUJ	**Ofunato**	**0.76**	**66**	P	Pg	14 42 21.9	-0.1
OFUJ				*e*S	Sg	14 42 32.2	+0.4

NIED ***14*** *14:42:00, 39°.00N×140°.90E, h5km, Mw4.6 Best double couple: M0 1.02000×10^16 NP1:φs213.00000°, δ46.00000°, λ97.00000°. NP2:φs23.00000°, δ45.00000°, λ83.00000°.*
BJI ***14*** *14:42:26.1, 38°.84N×141°.40E, h10km, mB5.0/29, mb4.7/52, Ms4.4/42, Ms7 4.1/38*
ISCJB ***14*** *14:42:31.5±0.6, 39°.01N±0°.02×140°.83E±0°.02, h12km±3km, mb4.9/231, MS4.2/45, Error ellipse: s-maj=3.3km s-min=2.3km az=156.0*
IDC ***14*** *14:42:31.0±0.4, 39°.04N×140°.81E, h0km, mb4.8/26, mb1 5.0/27, mb1mx4.9/28, mbtmp4.8/27, ML3.8/3, MS3.9/23, Ms1 3.9/23, ms1mx3.8/33, Error ellipse: s-maj=13.2km s-min=9.8km az=123.0*
NEIC ***14*** *14:42:32.4, 39°.00N×140°.89E, h10km, mb5.0/151, MS4.2/6, MW4.6(NIED), After JMA.*
NEIC Recorded [4 JMA] in Miyagi; [3 JMA] in Fukushima and Iwate; [2 JMA] in Akita and Yamagata; [1 JMA] in Aomori.
JMA ***14*** *14:42:32.4, 39°.00N×140°.89E, h6km±1km, M4.9 Broadband fault plane solution: P waves. NP1: φs224.00000°, δ38.00000°, λ122.00000°. NP2:φs6.00000°, δ59.00000°, λ68.00000°. Principal axes: T Plg68.0000°, Azm232.0000°; N Plg19.0000°, Azm18.0000°; P Plg11.0000°, Azm112.0000°;*
JMA Felt IV J1.
GCMT ***14*** *14:42:34.5±0.6, 39°.05N×140°.94E, h17km±1km, MW4.8, Moment Tensor Solution. s11,c14; s60,c95; Moment tensor: Scale 10^16Nm; Mrr1.65±.15; Mθθ-0.38±.09; Mφφ-1.27±.09; Mrθ0.28±.23; Mθφ-0.68±.05; Mφr0.64±.20; Best double couple: M0 1.80000×10^16 NP1:φs210.00000°, δ34.00000°, λ93.00000°. NP2:φs27.00000°, δ57.00000°, λ88.00000°. Principal axes: T 1.7900, Plg78.0000°, Azm290.0000°; N -0.0200, Plg2.0000°, Azm28.0000°; P -1.7800, Plg12.0000°, Azm118.0000°; Data Used: II IC IU G.*
MOS ***14*** *14:42:35.1±0.9, 39°.10N×140°.76E, h33km, mb5.2/104, MS4.0/25 Error ellipse: s-maj=6.8km s-min=4.1km az=101.4*
DJA ***14*** *14:42:37, 39°.12N×140°.93E, h43km, mb5.3/19*
SZGRF ***14*** *14:42:39.5, 39°.83N×141°.73E, h33km, mb5.0, MS4.3, Eastern Honshu, Japan*

ISC 14 14:42:32.5±0.4, 38°.99N±0°.02×140°.84E±0°.02, h9km±2km, h11km±2.6km: pP-P, n854, σ0°.72/866, mb4.9/231, MS4.2/45, 235C-182D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.30**	**98**	⇓P	**Pg**	**14 42 37.5**	**-0.9**
JMK				S	**Sg**	**14 42 41.2**	**-1.2**
JYK	**Kaneyama**	**0.39**	**259**	⇓P	**Pg**	**14 42 40.8**	**+0.7**
JRG	**Rokugo**	**0.43**	**338**	⇓P	**Pg**	**14 42 41.2**	**+0.2**
JRG				*e*S	**Sg**	**14 42 47.9**	**+1.2**
JOM	**Ohasama**	**0.59**	**36**	P	**Pg**	**14 42 43.3**	**-0.7**
JOM				S	**Sg**	**14 42 51.1**	**-0.7**
JOU	**Okura**	**0.64**	**193**	⇑P	**Pg**	**14 42 45.0**	**+0.1**
JOU				S	**Sg**	**14 42 53.5**	**+0.2**
OFUJ	**Ofunato**	**0.65**	**82**	⇓P	**Pg**	**14 42 44.0**	**-1.1**
JIO	**Ouri**	**0.67**	**144**	⇓P	**Pg**	**14 42 44.5**	**-0.9**
JIO				S	**Sg**	**14 42 53.1**	**-1.1**
JYA	**Atsumi**	**0.97**	**246**	⇑P	**Pg**	**14 42 51.2**	**+0.1**
JYA				S	**Sg**	**14 43 04.8**	**+1.1**
JYS	**Shirataka**	**0.98**	**218**	⇑P	**Pg**	**14 42 51.4**	**0.0**
JYS				S	**Sg**	**14 43 04.8**	**+0.6**
MAJO	**Matsushiro**	**3.22**	**221**	*e*P	**Pn**	**14 43 24.4**	**+1.2**
MAT	**Matsushiro**	**3.22**	**221**	P	**Pn**	**14 43 24.7**	**+1.5**
MAT				S	**Sn**	**14 44 10.0**	**+8.4**
MJAR	**Matsushiro Arr**	**3.22**	**221**	Pn	**Pn**	**14 43 24.1**	**+0.9**
	7.7nm,0.3s,baz=70,slow=32,SNR=54						
MJAR				Pg	**Pg**	**14 43 30.1**	**-4.0**
	15nm,0.3s,baz=31,slow=13,SNR=44						
MJAR				Lg		14 44 15.2	
	23nm,0.3s,baz=196,slow=22,SNR=7.6						
ERM	**Erimo**	**3.50**	**30**	Pn	**Pn**	**14 43 28.3**	**+1.3**
	1μm,0.7s,SNR=37						
ERM	**Erimo**	**3.50**	**30**	*c i* P	**Pn**	**14 43 28.8**	**+1.8**
ERM	**Erimo**	**3.50**	**30**	*e*Pn	**Pn**	**14 43 28.0**	**+0.9**
ASAJ	**Asahikawa**	**5.28**	**14**	Pn	**Pn**	**14 43 53.3**	**+1.7**
	6.8nm,0.3s,baz=227,slow=12,SNR=42						
ASAJ	**Asahikawa**	**5.28**	**14**	P	**Pn**	**14 43 53.3**	**+1.7**
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.3s						
JHJ	**Hachijo jima 2**	**5.92**	**189**	Pn	**Pn**	**14 44 01.6**	**+1.1**
	comp=Z,24nm,0.3s,baz=272,slow=9.9,SNR=18						
JHJ				Sn	**Sn**	**14 45 09.3**	**+0.9**
	comp=Z,101nm,0.3s,baz=59,slow=19,SNR=9.6						
JHJ				LR	LR	14 46 18.0	
	comp=Z,410nm,19.2s,baz=132,slow=38						
YUK	**Yuzh-Kuril'sk**	**6.29**	**35**	*i* P	**Pn**	**14 44 05.7**	**+0.3**
YUK				*i* S	**Sn**	**14 45 15.0**	**-2.3**
YUK				pmax	pmax		
	comp=N,100nm,0.5s						
YUK				pmax	pmax		
	comp=E,140nm,0.5s						
YUK				pmax	pmax		
	comp=Z,220nm,0.5s						
YUK				smax			
	comp=N,950nm,0.5s						
YUK				smax			
	comp=E,220nm,0.5s						
YUK				MLR	MLR		
	comp=N,680nm,16.0s						
YUK				MLR	MLR		
	comp=Z,630nm,16.0s						
VLA	**Vladivostok**	**7.92**	**304**	*e*P	**Pn**	**14 44 28.7**	**+1.0**
VLA				pmax	pmax		
	comp=Z,32nm,1.4s						
VLA	**Vladivostok**	**7.92**	**304**	⇓*e*P	**Pn**	**14 44 29.6**	**+1.9**
YSS	**Yuzh-Sakhalins**	**8.08**	**9**	⇓*i*P	**Pn**	**14 44 31.0**	**+1.1**
YSS				*e*S	**Sn**	**14 46 02.0**	**+0.7**
YSS				pmax	pmax		
	comp=Z,50nm,0.9s						
YSS				MLR	MLR		
	comp=Z,900nm,10.0s						
YSS	**Yuzh-Sakhalins**	**8.08**	**9**	*e*Pn	**Pn**	**14 44 30.9**	**+0.9**
MDJ	**Mudanjiang**	**10.10**	**307**	P	**Pn**	**14 44 57.4**	**-0.3**
MDJ				S	**Sn**	**14 46 50.1**	**-0.9**
MDJ				PcP	PcP	14 51 07.8	+0.5
MDJ				pmax	pmax		
	comp=Z,20nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,140nm,4.0s						
MDJ				LR	LR		
	comp=N,500nm,17.6s						
MDJ				LR	LR		
	comp=E,530nm,18.4s						
MDJ				LR	LR		
	comp=Z,900nm,15.6s						
MDJ	**Mudanjiang**	**10.10**	**307**	*e*P	**Pn**	**14 45 03.2**	**+5.5**
	comp=Z,49nm,1.1s						
KSRS	**Korea Array**	**10.28**	**265**	Pn	**Pn**	**14 45 04.3**	**+4.2**
	comp=Z,5.5nm,0.3s,baz=77,slow=14,SNR=219						
KSRS				Sn	**Sn**	**14 47 02.9**	**+7.3**
	comp=Z,1.6nm,0.3s,baz=74,slow=24,SNR=19						
KSRS				LR	LR	14 48 35.4	
	comp=Z,520nm,19.1s,baz=71,slow=35						
KSRS	**Korea Array**	**10.28**	**265**	P	**Pn**	**14 45 04.4**	**+4.2**
KSRS						14 47 02.9	
KSRS				pmax	pmax		
	comp=Z,6.0nm,0.3s						
KSRS				smax			
	comp=N,2.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,520nm,19.1s						
HABR	**Khabarovsk**	**10.36**	**338**	*e*P	**Pn**	**14 45 01.9**	**+0.8**
HABR						14 46 56.8	
HABR				pmax	pmax		
	comp=Z,54nm,1.4s						
HABR				pmax	pmax		
	comp=N,30nm,1.4s						
HABR				pmax	pmax		
	comp=E,21nm,1.5s						
HABR				MLR	MLR		
	comp=Z,541nm,14.0s						
CBIJ	**Chichi jima**	**11.92**	**174**	Pn	**Pn**	**14 45 18.5**	**-4.1**
	comp=Z,11nm,0.3s,baz=331,slow=5.1,SNR=11						
CBIJ				Sn	**Sn**	**14 47 26.6**	**-9.2**
	comp=Z,9.6nm,0.3s,baz=285,slow=20,SNR=5.9						
CBIJ				LR	LR	14 50 19.8	
	comp=Z,298nm,18.4s,baz=358,slow=39						
KLR	**Kul'dur**	**12.13**	**330**	*e*P	**Pn**	**14 45 24.8**	**-0.6**
KLR				pmax	pmax		
	comp=E,70nm,1.8s						
KLR				pmax	pmax		
	comp=Z,85nm,1.8s						
KLR				MLR	MLR		
	comp=N,500nm,13.5s						
KLR				MLR	MLR		
	comp=Z,1μm,13.5s						
CN2	**Changchun**	**12.51**	**297**	*e*P	**Pn**	**14 45 35.6**	**+4.9**
CN2				*es*P		14 45 42.3	
CN2				pmax	pmax		
	comp=Z,20nm,1.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,600nm,11.0s						
CN2				LR	LR		
	comp=E,300nm,11.0s						
CN2				LR	LR		
	comp=Z,400nm,12.0s						
SNY	**Shenyang**	**13.46**	**288**	⇑P	**Pn**	**14 45 48.6**	**+5.0**
SNY				S	**Sn**	**14 48 12.3**	**-0.9**
SNY				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SNY				LR	LR		
	comp=N,410nm,12.0s						
SNY				LR	LR		
	comp=E,570nm,15.6s						
SNY				LR	LR		
	comp=Z,590nm,15.0s						
DL2	**Dalian**	**14.96**	**276**	P	**Pn**	**14 46 05.8**	**+1.8**
DL2				S	**Sn**	**14 48 54.8**	**+5.1**
DL2				pmax	pmax		
	comp=Z,30nm,1.0s						
DL2				pmax	pmax		
	comp=Z,100nm,3.6s						
DL2				LR	LR		
	comp=N,310nm,10.5s						
DL2				LR	LR		
	comp=E,230nm,15.5s						
DL2				LR	LR		
	comp=Z,270nm,13.0s						
SKR	**Severo-Kuril's**	**15.90**	**38**	*e*P	**Pn**	**14 46 21.5**	**+5.2**
SKR				pmax	pmax		
	comp=N,20nm,0.7s						
SKR				pmax	pmax		
	comp=E,40nm,0.7s						
SKR				pmax	pmax		
	comp=Z,50nm,0.7s						
SSE	**Sheshan**	**17.90**	**250**	P	**Pn**	**14 46 40.4**	**-1.3**
SSE				S	**Sn**	**14 49 58.8**	**-2.5**
SSE				pmax	pmax		
	comp=Z,39nm,0.6s						
SSE				pmax	pmax		
	comp=Z,170nm,3.1s						
SSE				LR	LR		
	comp=N,280nm,16.8s						
SSE				LR	LR		
	comp=E,170nm,17.1s						
SSE				LR	LR		
	comp=Z,220nm,19.9s						
PETK	**Petropavlovsk-**	**18.27**	**34**	P	**Pn**	**14 46 43.7**	**-2.3**
	comp=Z,0.1nm,0.3s,baz=250,slow=12,SNR=3.5						
PETK				LR	LR	14 53 36.8	
	comp=Z,144nm,19.5s,baz=57,slow=36						
PETK	**Petropavlovsk-**	**18.27**	**34**	P	**Pn**	**14 46 43.7**	**-2.3**
PETK				LR	LR	14 53 36.8	
PET	**Petropavlovsk**	**18.63**	**35**	*e*P	**Pn**	**14 46 51.0**	**+0.5**
PET				*e*S	**Sn**	**14 50 18.8**	**+0.1**
PET				smax			
	comp=E,100nm,13.2s						
PET				MLR	MLR		
	comp=Z,200nm,18.0s						
PET	**Petropavlovsk**	**18.63**	**35**	*i* P	**Pn**	**14 46 52.1**	**+1.6**
BJI	**Beijing**	**19.05**	**281**	P	**Pn**	**14 46 54.6**	**-1.1**
BJI				S	**Sn**	**14 50 30.1**	**+1.1**
BJI				pmax	pmax		
	comp=Z,33nm,0.8s						
BJI				pmax	pmax		
	comp=Z,190nm,3.0s						
BJI				LR	LR		
	comp=N,320nm,15.4s						
BJI				LR	LR		
	comp=E,540nm,15.8s						
BJI				LR	LR		
	comp=Z,290nm,24.0s						
NJ2	**Nanjing**	**19.17**	**256**	*e*P	**Pn**	**14 46 57.1**	**0.0**
NJ2				pP	pP	14 47 00.0	+1.2
NJ2				sP	sP	14 47 04.3	+4.3
NJ2				PP		14 47 12.3	
NJ2				S	**Sn**	**14 50 26.0**	**-6.0**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,710nm,5.8s						
NJ2				LR	LR		
	comp=N,380nm,12.0s						
NJ2				LR	LR		
	comp=E,590nm,12.4s						
NJ2				LR	LR		
	comp=Z,600nm,13.6s						
CLNS	**Chul'man**	**20.71**	**335**	*e*P	**P**	**14 47 10.9**	**-2.0**
CLNS				*e*		14 47 34.1	
CLNS				*e*S	**S**	**14 51 02.3**	**-1.8**
CLNS				*e*		14 51 22.4	
CLNS				*e*SS		14 51 32.8	
CLNS				pmax	pmax		
	comp=Z,45nm,1.3s						
CLNS				pmax	pmax		
	comp=N,30nm,1.2s						
CLNS				pmax	pmax		
	comp=E,20nm,1.0s						
CLNS				pmax	pmax		
	comp=N,29nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,14nm,0.9s						
CLNS				pmax	pmax		
	comp=E,13nm,0.9s						
CLNS				smax			
	comp=E,50nm,12.5s						
CLNS				smax			
	comp=N,97nm,11.7s						
CLNS				MLR	MLR		
	comp=N,323nm,13.0s,MS4.0						
CLNS				MLR	MLR		
	comp=Z,294nm,14.0s,MS3.8						
CLNS				MLR	MLR		
	comp=E,206nm,12.0s,MS4.0						
TATO	**Taipei**	**21.50**	**235**	*e*P	**P**	**14 47 20.1**	**-1.5**
YHNB	**Yeheng**	**21.79**	**235**	*e*P	**P**	**14 47 24.7**	**-0.1**
HHC	**Hu-ho-hao-te**	**22.49**	**284**	*e*P	**P**	**14 47 30.3**	**-1.8**
HHC				PP		14 47 57.8	
HHC				PcP	PcP	14 51 25.5	-0.5
HHC				S	**S**	**14 51 30.5**	**-8.6**
HHC				ScP	ScP	14 55 01.6	-2.1
HHC				PcS	PcS	14 55 03.6	-1.1
HHC				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.4						
HHC				pmax	pmax		
	comp=Z,91nm,5.0s						
HHC				LR	LR		
	comp=N,260nm,12.0s,MS4.2						
HHC				LR	LR		
	comp=E,570nm,14.3s,MS4.2						
HHC				LR	LR		
	comp=Z,680nm,13.9s,MS4.2						
YULB	**Yu-li**	**22.76**	**233**	*e*P	**P**	**14 47 32.5**	**-2.6**
	comp=Z,25nm,0.8s,mb4.7						
TPUB	**Ta-pu**	**23.25**	**234**	*e*P	**P**	**14 47 39.8**	**-0.4**
	comp=Z,48nm,0.8s,mb5.0						
WHN	**Wuhan**	**23.28**	**257**	P	**P**	**14 47 41.3**	**+0.8**
WHN				S	**S**	**14 51 53.5**	**+0.8**
WHN				pmax	pmax		
	comp=Z,50nm,1.2s,mb4.8						
WHN				LR	LR		
	comp=N,2μm,14.6s,MS4.7						
WHN				LR	LR		
	comp=E,930nm,11.2s,MS4.7						
WHN				LR	LR		
	comp=Z,890nm,13.3s,MS4.4						
TWG	**Pinlang**	**23.32**	**232**	*e*P	**P**	**14 47 38.8**	**-2.2**
	comp=Z,85nm,0.9s,mb5.2						
YAK	**Yakutsk**	**24.06**	**347**	*e*P	**P**	**14 47 45.0**	**-2.7**
YAK				*e**PP		14 47 51.3	
YAK				*e*PPP		14 48 19.8	
YAK				*e*S	**S**	**14 52 00.9**	**-4.0**
YAK				*e*SS		14 52 44.6	
YAK				*e*SSS		14 53 02.1	
YAK				pmax	pmax		
	comp=Z,87nm,0.9s,mb5.2						
YAK				pmax	pmax		
	comp=N,27nm,1.0s						
YAK				pmax	pmax		
	comp=E,8.0nm,0.7s						
YAK				smax			
	comp=N,109nm,2.3s						
YAK				smax			
	comp=E,132nm,2.8s						
YAK				MLR	MLR		
	comp=Z,210nm,13.0s,MS3.8						
YAK				MLR	MLR		
	comp=N,217nm,13.0s,MS4.0						
YAK				MLR	MLR		
	comp=E,190nm,12.0s,MS4.0						
YAK	**Yakutsk**	**24.06**	**347**	*e*P	**P**	**14 47 46.2**	**-1.5**
	comp=E,90nm,0.8s,mb5.2						
SEY	**Seymchan**	**24.97**	**13**	*c i* P	**P**	**14 47 56.7**	**+0.7**
ULN	**Ulaanbaatar**	**25.92**	**301**	*e*P	**P**	**14 48 04.3**	**-0.5**
ULN				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.3						
ULN	**Ulaanbaatar**	**25.92**	**301**	*e*P	**P**	**14 48 04.3**	**-0.5**
	comp=Z,9.0nm,0.9s,mb4.3						
XAN	**Xi'an**	**26.05**	**269**	P	**P**	**14 48 05.8**	**-0.3**
XAN				pP	pP	14 48 13.9	+5.1
XAN				pmax	pmax		
	comp=Z,4.0nm,2.2s						
FX1	**Attu Island--F**	**26.16**	**47**	P	**P**	**14 48 08.6**	**+1.7**
	comp=Z,66nm,1.0s,mb5.1,baz=295,slow=5.0,SNR=4.9						
FX1	**Attu Island--F**	**26.16**	**47**	P	**P**	**14 48 08.6**	**+1.7**
FX1				pmax	pmax		
	comp=Z,66nm,1.0s						
SONM	**Songino Array**	**26.36**	**301**	P	**P**	**14 48 07.6**	**-1.1**
	comp=Z,4.1nm,0.8s,mb4.0,baz=85,slow=8.7,SNR=14						
SONM				PcP	PcP	14 51 33.5	-0.8
	comp=Z,1.7nm,0.9s,baz=124,slow=1.3,SNR=3.5						
SONM				LR	LR	14 58 37.0	
	comp=Z,220nm,20.8s,MS3.7,baz=82,slow=37						
SONM	**Songino Array**	**26.36**	**301**	P	**P**	**14 48 07.6**	**-1.1**
SONM						14 51 33.5	
SONM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SONM				MLR	MLR		
	comp=Z,220nm,20.8s						
ENH	**Enshi**	**27.12**	**261**	*e*P	**P**	**14 48 14.1**	**-1.7**
	comp=Z,33nm,0.8s,mb4.9						
ZAK	**Zakamensk**	**28.73**	**306**	*e*P	**P**	**14 48 27.2**	**-2.8**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.1						
TLY	**Talaya**	**28.73**	**308**	*e*P	**P**	**14 48 33.7**	**+3.7**
TLY				*e*		14 49 29.9	
TLY				pmax	pmax		
	comp=Z,7.0nm,1.6s,mb4.1						
TLY				MLR	MLR		
	comp=Z,330nm,16.0s,MS4.0						
LZH	**Lanzhou**	**29.35**	**276**	P	**P**	**14 48 34.5**	**-1.2**
LZH				PP	PP	14 49 28.3	-14
LZH				*e*S	**S**	**14 53 24.0**	**-5.2**
LZH				pmax	pmax		
	comp=Z,23nm,1.5s,mb4.7						
LZH				pmax	pmax		
	comp=Z,100nm,6.6s						
LZH				LR	LR		
	comp=N,820nm,13.3s						
LZH				LR	LR		
	comp=Z,950nm,14.8s,MS4.5						
TGY	**Tagaytay City**	**30.39**	**221**	P	**P**	**14 48 45.8**	**+0.9**
	comp=Z,81nm,0.5s,mb5.8,baz=74,slow=20,SNR=4.1						
GYA	**Guiyang**	**31.17**	**257**	⇓*i*P	**P**	**14 48 51.3**	**-0.5**
GYA				PP	PP	14 49 52.1	-10
GYA				S	**S**	**14 53 53.4**	**-4.4**
GYA				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.1						

GYA pmax pmax
comp=Z,120nm,4.1s
GYA LR LR
comp=N,2µm,19.2s,MS4.8
GYA LR LR
comp=E,1µm,18.9s,MS4.8
GYA LR LR
comp=Z,2µm,17.9s,MS4.9
CD2 Chengdu 31.28 267 *e*P **P 14 48 54.3 +1.5**
CD2 pP pP 14 48 58.6 +3.1
CD2 sP sP 14 49 02.0 +5.3
CD2 PP PP 14 49 56.3 -7.0
CD2 S **S 14 53 57.4 -2.1**
CD2 pmax pmax
comp=Z,30nm,0.6s,mb5.3
CD2 pmax pmax
comp=Z,130nm,5.2s
CD2 LR LR
comp=N,540nm,14.2s,MS4.4
CD2 LR LR
comp=E,360nm,14.2s,MS4.4
CD2 LR LR
comp=Z,260nm,31.1s
GTA Gaotai 31.60 284 *e*P **P 14 48 54.9 -0.6**
GTA PcP PcP 14 51 48.6 +0.9
GTA S **S 14 54 03.3 -1.1**
GTA PcS PcS 14 55 32.6 +0.5
GTA pmax pmax
comp=Z,7.0nm,1.3s,mb4.3
GTA pmax pmax
comp=Z,120nm,5.4s
GTA LR LR
comp=N,250nm,14.0s,MS4.3
GTA LR LR
comp=E,420nm,16.4s,MS4.3
GTA LR LR
comp=Z,470nm,14.0s,MS4.3
BILL Bilibino 32.29 18*c i*P **P 14 49 00.7 -0.5**
BILL *i* 14 51 49.3
BILL pmax pmax
comp=Z,24nm,1.0s,mb5.0
BILL MLR MLR
comp=Z,200nm,14.0s,MS4.0
BILL Bilibino 32.29 18 *e*P **P 14 49 00.3 -0.9**
comp=Z,19nm,1.0s,mb4.9
TIXI Tiksi 33.29 353 *e*P **P 14 49 07.6 -2.4**
TIXI pmax pmax
comp=Z,25nm,1.5s,mb4.9
TIXI Tiksi 33.29 353 *e*P **P 14 49 07.6 -2.4**
comp=Z,25nm,1.5s,mb4.9
QIZ Qiongzhong 33.38 242 P **P 14 49 10.9 -0.4**
QIZ S **S 14 54 33.1 +0.7**
QIZ pmax pmax
comp=Z,20nm,1.6s,mb4.8
QIZ pmax pmax
comp=Z,100nm,4.2s
QIZ LR LR
comp=N,390nm,16.3s
QIZ LR LR
comp=Z,210nm,18.5s,MS3.9
QIZ Qiongzhong 33.38 242 *e*P **P 14 49 10.8 -0.5**
KMI Kunming 34.87 258 P **P 14 49 24.9 +0.8**
KMI pP pP 14 49 28.3 +1.4
KMI PP PP 14 50 41.1 -2.0
KMI S **S 14 54 54.8 -0.5**
KMI SS SS 14 57 07.1 -19
KMI pmax pmax
comp=Z,10.0nm,1.5s,mb4.5
KMI pmax pmax
comp=Z,64nm,3.1s
KMI LR LR
comp=N,300nm,15.3s,MS4.3
KMI LR LR
comp=E,220nm,14.2s,MS4.3
KMI LR LR
comp=Z,220nm,19.2s,MS3.9
WMQ Urumqi 39.58 295 *e*P **P 14 50 04.0 0.0**
WMQ sP sP 14 50 11.0 +3.1
WMQ PP PP 14 51 39.0 +4.3
WMQ S **S 14 56 05.0 -1.7**
WMQ pmax pmax
comp=Z,16nm,1.0s,mb4.7
WMQ pmax pmax
comp=Z,59nm,4.0s
WMQ LR LR
comp=N,82nm,15.0s,MS4.0
WMQ LR LR
comp=E,140nm,15.0s,MS4.0
WMQ LR LR
comp=Z,160nm,15.0s,MS4.0
ZAA0 Zalesovo Array 40.28 311 *e*P **P 14 50 08.9 -0.7**
ZAA0 *e*PcP PcP 14 52 12.9 -0.3
ZALV Zalesovo Beam 40.28 311 P **P 14 50 08.3 -1.3**
comp=Z,20nm,0.8s,mb4.9,baz=79,slow=7.7,SNR=76
ZALV PcP PcP 14 52 12.9 -0.2
comp=Z,4.0nm,0.8s,baz=87,slow=3.1,SNR=4.0
ZALV LR LR 15 07 32.1
comp=Z,168nm,19.1s,MS3.9,baz=237,slow=37
ZALV Zalesovo Beam 40.28 311 P **P 14 50 08.3 -1.3**
ZALV 14 52 12.9
ZALV pmax pmax
comp=Z,21nm,0.8s,mb4.9
ZALV MLR MLR
comp=Z,169nm,19.1s,MS3.9
ZALV Zalesovo Beam 40.28 311 P **P 14 50 08.3 -1.3**
ZALV PcP PcP 14 52 12.9 -0.2
ZALV LR LR 15 07 32.1
NVS Novosibirsk 41.18 312 *e*P **P 14 50 15.1 -1.9**
NVS pmax pmax
comp=N,7.0nm,1.4s
NVS pmax pmax
comp=E,23nm,1.4s
NVS pmax pmax
comp=Z,26nm,1.4s,mb4.7
CHTQ Chiang Mai 41.38 253 *e*P **P 14 50 18.9 -0.2**
CMAR Chiang Mai Arr 41.60 253 P **P 14 50 21.3 +0.4**
comp=Z,1.9nm,0.6s,mb3.9,baz=44,slow=4.1,SNR=10
CMAR PcP PcP 14 52 18.8 +0.8
comp=Z,2.4nm,0.7s,baz=8.2,slow=1.6,SNR=9.9
CMAR LR LR 15 07 08.7
comp=Z,96nm,21.2s,MS3.6,baz=296,slow=36
CMAR Chiang Mai Arr 41.60 253 P **P 14 50 21.3 +0.4**
CMAR 14 52 18.8
CMAR pmax pmax
comp=Z,2.0nm,0.6s
CMAR MLR MLR
comp=Z,97nm,21.2s
MK31 Makanchi Array 42.72 300 *e*P **P 14 50 29.5 -0.2**
MKAR Makanchi Array 42.72 300 P **P 14 50 29.7 -0.1**
comp=Z,14nm,0.8s,mb4.8,baz=76,slow=13,SNR=115
MKAR LR LR 15 08 45.0
comp=Z,134nm,19.2s,MS3.9,baz=358,slow=37
MKAR Makanchi Array 42.72 300 P **P 14 50 29.7 0.0**
MKAR pmax pmax
comp=Z,14nm,0.8s
MKAR MLR MLR
comp=Z,134nm,19.3s
MKAR Makanchi Array 42.72 300 P **P 14 50 29.7 -0.1**
MKAR LR LR 15 08 45.0
TTA Tatalina 44.09 36 *e*P **P 14 50 41.7 +1.2**
SVW2 Sparrevohn 44.26 39 *e*P **P 14 50 43.2 +1.3**
KURK Kurchatov 44.39 306 P **P 14 50 42.0 -1.1**
comp=Z,402nm,0.8s,SNR=42
KURK Kurchatov 44.39 306 P **P 14 50 43.0 -0.1**
comp=Z,46nm,0.8s,mb5.3,baz=82,slow=8.4,SNR=173
KURK PcP PcP 14 52 26.8 0.0
comp=Z,3.8nm,0.8s,baz=79,slow=4.8,SNR=4.4
KURK LR LR 15 09 57.0
comp=Z,223nm,18.8s,MS4.1,baz=85,slow=37
KURK Kurchatov 44.39 306*c i*P **P 14 50 42.4 -0.7**
KURK pmax pmax
comp=Z,90nm,1.2s,mb5.4
TAPN Taplejung 45.39 272 *e*P **P 14 50 52.2 +0.8**
OHAK Old Harbor 45.64 44 *e*P **P 14 50 51.7 -1.3**
comp=Z,29nm,1.0s,mb5.2
RSO Redoubt South 45.66 39 *e*P **P 14 50 54.1 +1.0**
CHUM Lake Minchumin 45.77 35 *e*P **P 14 50 55.1 +1.3**
comp=Z,18nm,1.1s,mb4.9
PPLA Purkeypile 45.84 36 *e*P **P 14 50 55.4 +0.9**
comp=Z,15nm,1.1s,mb4.8
ODAN Odare 45.88 271 *e*P **P 14 50 55.6 +0.3**
KDAK Kodiak Island 45.96 43 P **P 14 50 55.0 -0.5**
comp=Z,26nm,0.9s,mb5.2,baz=302,slow=2.2,SNR=12
KDAK Kodiak Island 45.96 43 *i* P **P 14 50 56.0 +0.5**
KDAK Kodiak Island 45.96 43 *e*P **P 14 50 55.5 -0.1**
BPAW Bear Paw Mtn. 46.35 34 *e*Pn **P 14 50 57.6 -0.9**
comp=Z,6.7nm,1.1s,mb4.5
KTH Kantishna Hill 46.39 35 *e*P **P 14 50 59.1 +0.3**
comp=Z,34nm,1.1s,mb5.2
KSM Kuching 46.61 224 *e*P **P 14 51 00.0 -1.1**
comp=Z,10nm,0.8s,mb4.8
COLD Coldfoot 46.67 30 *e*P **P 14 51 01.3 +0.3**
comp=Z,13nm,1.0s,mb4.8
TRF Thorofare Moun 46.68 35 *e*P **P 14 51 01.1 0.0**
comp=Z,8.9nm,0.9s,mb4.7
KKN Kakani 47.07 274 *e*P **P 14 51 05.3 +0.6**
comp=Z,74nm,0.8s,mb5.7
KKN Kakani 47.07 274 *e*P **P 14 51 05.3 +0.6**
KKN pmax pmax
comp=Z,74nm,0.8s,mb5.7
PKI Pulchoki 47.08 273 *e*P **P 14 51 05.2 +0.5**
PKI Pulchoki 47.08 273 *e*P **P 14 51 05.3 +0.6**
PKI pmax pmax
comp=Z,23nm,0.7s,mb5.2
PKI Pulchoki 47.08 273 *e*P **P 14 51 05.3 +0.6**
comp=Z,23nm,0.7s,mb5.2
PKIN Phulchoki 47.08 273 *e*P **P 14 51 05.3 +0.5**
comp=Z,23nm,0.7s,mb5.2
MCK McKinley 47.27 35 *e*P **P 14 51 06.0 +0.3**
DMN Daman 47.30 274 *e*P **P 14 51 06.7 +0.3**
comp=Z,59nm,1.2s,mb5.4
SEW Seward 47.33 40 *e*P **P 14 51 05.3 -0.9**
comp=Z,13nm,1.0s,mb4.8
PMR Palmer 47.34 38 *e*P **P 14 51 06.5 +0.2**
PMR pmax pmax
comp=Z,23nm,1.2s,mb5.0
PMR Palmer 47.34 38 *e*P **P 14 51 06.5 +0.2**
comp=Z,23nm,1.2s,mb5.0
COLA College 47.68 33 *e*P **P 14 51 08.9 +0.1**
COLA pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
COLA College 47.68 33 *e*P **P 14 51 08.9 0.0**
comp=Z,5.8nm,0.8s,mb4.7
KAPI Kappang 47.94 209 *e*P **P 14 51 10.8 -0.7**
comp=Z,34nm,1.3s,mb5.4
ULHL Ulahol 48.09 296 P **P 14 51 12.8 +0.4**
SNR=5.6
TKM2 Tokmak 2 48.32 297 P **P 14 51 15.1 +0.9**
SNR=42
TKM2 Tokmak 2 48.32 297 *e*P **P 14 51 14.7 +0.5**
TKM2 pmax pmax
comp=Z,45nm,1.1s,mb5.4
TKM2 Tokmak 2 48.32 297 *e*P **P 14 51 14.7 +0.5**
comp=Z,45nm,1.1s,mb5.4
KZA Kyzart 48.84 296 P **P 14 51 19.8 +1.6**
SNR=13
KBK Karagaybulak 48.86 297 P **P 14 51 19.1 +0.8**
SNR=25
CHMS Chumysh 48.89 297 P **P 14 51 19.1 +0.6**
SNR=6.5
PAX Paxson 48.90 36 *e*P **P 14 51 17.3 -1.0**
PAX pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
PAX Paxson 48.90 36 *e*P **P 14 51 17.3 -1.0**
comp=Z,8.7nm,1.1s,mb4.7
BVAR Borovoye Array 48.94 311 P **P 14 51 18.6 -0.1**
comp=Z,5.6nm,0.6s,mb4.8,baz=78,slow=8.0,SNR=32
BVAR PcP PcP 14 52 43.1 +0.3
comp=Z,3.6nm,0.7s,baz=85,slow=3.1,SNR=5.2
BVAR Borovoye Array 48.94 311 P **P 14 51 18.6 -0.1**
BVAR 14 52 43.1
BVAR pmax pmax
comp=Z,6.0nm,0.6s
USP Ospenovka 48.97 298 P **P 14 51 19.7 +0.5**
SNR=11
BRVK Borovoye 48.99 311*c i*P **P 14 51 19.0 -0.1**
BRVK pmax pmax
comp=Z,12nm,1.2s,mb4.8
BRVK Borovoye 48.99 311 *e*P **P 14 51 18.2 -0.9**
comp=Z,12nm,1.0s,mb4.9
AAK Ala-Archa 49.19 297 P **P 14 51 21.6 +0.8**
SNR=7.4
AAK Ala-Archa 49.19 297 *e*P **P 14 51 21.1 +0.3**
AAK pmax pmax
comp=Z,14nm,0.9s,mb5.0
AAK Ala-Archa 49.19 297 *e*P **P 14 51 21.1 +0.3**
comp=Z,14nm,0.9s,mb5.0
KSH Kashi 49.22 292 P **P 14 51 25.1 +4.0**
KSH pP pP 14 51 29.5 +5.5
KSH sP sP 14 51 32.1 +7.0
KSH PcP PcP 14 52 46.8 +2.7
KSH PP PP 14 53 20.1 +5.4
KSH ScP ScP 14 56 40.3 +0.8
KSH PcS PcS 14 56 42.0 +1.5
KSH S **S 14 58 30.9 +4.0**
KSH ScS ScS 15 01 13.3 -0.1
KSH SS SS 15 01 59.9 +2.0
KSH pmax pmax
comp=Z,16nm,1.2s,mb4.9
KSH pmax pmax
comp=Z,120nm,3.1s
KSH LR LR
comp=N,130nm,5.8s
KSH LR LR
comp=E,72nm,4.2s
KSH LR LR
comp=Z,160nm,4.8s
UCH Uchtor 49.31 296 P **P 14 51 22.9 +1.2**
SNR=11
UCH Uchtor 49.31 296 *e*P **P 14 51 22.4 +0.6**
comp=Z,11nm,1.1s,mb4.8
BMRM Bremner River 49.59 38 *e*P **P 14 51 23.5 -0.1**
comp=Z,17nm,0.9s,mb5.1
EKS2 Erkin-Say 49.67 297 P **P 14 51 24.9 +0.3**
SNR=12
EKS2 Erkin-Say 49.67 297 *e*P **P 14 51 24.6 +0.1**
comp=Z,13nm,0.9s,mb5.0
MENT Mentasta 49.69 35 *e*P **P 14 51 25.4 +1.1**
AML Almayashu 49.91 296 P **P 14 51 27.5 +1.2**
SNR=10
AML Almayashu 49.91 296 *e*P **P 14 51 27.2 +0.8**
comp=Z,33nm,1.0s,mb5.3
EGAK Eagle 50.53 33 *e*P **P 14 51 29.1 -1.6**
comp=Z,5.8nm,0.9s,mb4.5
HNR Honiara 51.35 156 LR LR 15 11 48.6
comp=Z,146nm,18.3s,MS4.0,baz=181,slow=34
KAKA Kakadu 52.03 190 *e*P **P 14 51 43.3 +0.9**
comp=Z,28nm,1.0s,mb5.2
KAKA Kakadu 52.03 190 *e*P **P 14 51 43.0 +0.6**
comp=Z,56nm,0.8s,mb5.5
COEN Coen 52.72 177 *e*P **P 14 51 48.2 +0.7**
INK Inuvik 52.86 28 P **P 14 51 48.6 +0.6**
comp=Z,15nm,0.8s,mb5.0,baz=296,slow=7.3,SNR=52
INK Inuvik 52.86 28 P **P 14 51 48.7 +0.7**
INK pmax pmax
comp=Z,15nm,0.8s
HYT Haines Junctio 53.01 37 *e*P **P 14 51 51.1 +1.9**
SVE Sverdlovsk 53.39 318⇓*e*P **P 14 51 52.5 +0.4**
SVE pmax pmax
comp=Z,44nm,0.9s,mb5.4
SVE MLR MLR
comp=Z,395nm,16.0s,MS4.6
SOKR Solikamsk 54.51 322 *e*P **P 14 52 00.6 +0.3**
SOKR pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
ARU Arti 54.60 318 P **P 14 52 00.5 -0.5**
comp=Z,232nm,0.9s,SNR=10
ARU Arti 54.60 318*c i*P **P 14 52 00.8 -0.2**
ARU 14 53 01.2
ARU *e* 14 54 00.3
ARU PPP 14 55 11.5
ARU S **S 14 59 39.3 -1.1**
ARU SS SS 15 03 15.8 -6.7
ARU pmax pmax
comp=Z,28nm,1.0s,mb5.2
ARU MLR MLR
comp=Z,326nm,18.0s,MS4.4
ARU Arti 54.60 318 *e*P **P 14 52 00.6 -0.3**
comp=Z,32nm,0.8s,mb5.4
KNA Kununurra 55.62 194 *e*P **P 14 52 09.0 +0.3**
comp=Z,33nm,0.9s,mb5.4
KBL Kabul 56.31 290⇑*e*P **P 14 52 13.4 -0.3**
KBL pmax pmax
comp=Z,33nm,1.0s,mb5.3
KBL Kabul 56.31 290⇑*e*P **P 14 52 13.4 -0.3**
comp=Z,33nm,1.0s,mb5.3
ABKAR Akbulak array 56.35 309⇑*i*P **P 14 52 13.4 -0.3**
comp=Z,24nm,0.7s,mb5.3
DLBC Dease Lake 57.37 39 *e*P **P 14 52 21.4 +0.7**
ALE Alert 58.19 3 P **P 14 52 26.6 +0.4**
comp=Z,223nm,0.8s,SNR=8.4
FITZ Fitzroy Crossi 58.55 197 *e*P **P 14 52 29.7 +0.3**
comp=Z,19nm,0.9s,mb5.1
FITZ Fitzroy Crossi 58.55 197 *e*P **P 14 52 26.0 -3.4**
comp=Z,15nm,1.1s,mb4.9
KBS Kingsbay 58.65 350⇑*i*P **P 14 52 29.3 -0.2**
KBS pmax pmax
comp=Z,29nm,1.2s,mb5.2
WRAB Tennant Creek 58.93 187 P **P 14 52 31.3 -0.7**
comp=Z,213nm,0.8s,SNR=17
WRAB Tennant Creek 58.93 187 *e*P **P 14 52 30.5 -1.5**
WRAB pmax pmax
comp=Z,26nm,0.8s,mb5.3
WRAB Tennant Creek 58.93 187 *e*P **P 14 52 30.5 -1.5**
comp=Z,26nm,0.8s,mb5.3
WRA Warramunga Arr 58.94 187 P **P 14 52 31.4 -0.7**
comp=Z,26nm,0.8s,mb5.3,baz=5.8,slow=7.3,SNR=68
WRA Warramunga Arr 58.94 187 P **P 14 52 31.4 -0.7**
WRA pmax pmax
comp=Z,26nm,0.8s
APA Apatity 60.72 335⇑*i*P **P 14 52 43.0 -0.8**
APA MLR MLR
comp=Z,200nm,16.0s,MS4.4
RES Resolute Bay 60.82 15 *e*P **P 14 52 43.5 -0.9**
RES pmax pmax
comp=Z,24nm,0.8s,mb5.4
RES Resolute Bay 60.82 15 *e*P **P 14 52 43.5 -0.9**
comp=Z,24nm,0.8s,mb5.4
ARCES ARCESS Array B 62.01 339 P **P 14 52 52.2 -0.3**
comp=Z,6.9nm,0.8s,mb4.8,baz=57,slow=8.8,SNR=17
ARCES LR LR 15 24 29.8
comp=Z,73nm,20.1s,MS3.8,baz=248,slow=41
ARCES ARCESS Array B 62.01 339 P **P 14 52 52.3 -0.2**
ARCES pmax pmax
comp=Z,7.0nm,0.8s
ARCES MLR MLR
comp=Z,73nm,20.2s
ARCES ARCESS Array B 62.01 339 P **P 14 52 52.2 -0.3**
ARCES LR LR 15 24 29.8
YKA Yellowknife Ar 62.35 30 P **P 14 52 54.1 -0.8**
comp=Z,1.9nm,0.7s,mb4.3,baz=300,slow=6.4,SNR=6.0
YKA PcP PcP 14 53 34.8 +0.3
comp=Z,2.4nm,0.8s,baz=302,slow=4.2,SNR=6.5
YKA LR LR 15 24 11.1
comp=Z,5.6nm,18.1s,baz=60,slow=40
YKA Yellowknife Ar 62.35 30 P **P 14 52 54.1 -0.8**
YKA PcP PcP 14 53 34.8 +0.3
YKA LR LR 15 24 11.1
ABKT Ailbek 62.51 298 P **P 14 52 56.3 -0.1**
comp=Z,207nm,0.9s,SNR=14
ASAR Alice Springs 62.67 187 P **P 14 52 57.1 -0.3**
comp=Z,14nm,0.8s,mb5.2,baz=11,slow=5.2,SNR=125
ASAR Alice Springs 62.67 187 P **P 14 52 57.2 -0.2**
ASAR pmax pmax
comp=Z,14nm,0.8s
MBWA Marble Bar 63.02 202 *e*P **P 14 53 16.0 +16**
MBWA Marble Bar 63.02 202 *e*P **P 14 52 59.1 -0.7**
comp=Z,41nm,1.6s,mb5.3
DAG Danmarks Havn 63.79 355⇓*i*P **P 14 53 04.0 -0.3**
comp=Z,14nm,0.7s,mb5.1
JOF Joensuu 64.03 331 *e*P **P 14 53 04.1 -1.9**
JOF pmax pmax
comp=Z,20nm,1.0s,mb5.1
JOF Joensuu 64.03 331 *e*p **P 14 53 04.1 -1.9**
comp=Z,20nm,1.0s,mb5.1
JOF Joensuu 64.03 331 *e*p **P 14 53 04.1 -1.9**
comp=Z,20nm,1.0s,mb5.1
DZM Mont Dzumac 65.31 154 *e*LR LR 15 12 48.3
comp=Z,217nm,22.2s
MOS Moscow 65.41 323 *e*P **P 14 53 14.3 -0.9**
MOS pmax pmax
comp=Z,73nm,1.2s,mb5.6
RMQ Roma 65.56 172 *e*P **P 14 53 16.6 +0.3**
comp=Z,28nm,0.8s,mb5.3
NLWA Neilton Lookou 65.73 48⇑P **P 14 53 16.9 -0.5**
baz=66
NLWA Neilton Lookou 65.73 48 *e*P **P 14 53 17.9 +0.5**
comp=Z,21nm,1.0s,mb5.1
VRHR Novokhopersk 65.94 317 *e*P **P 14 53 18.0 -0.7**
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
VRHR pmax pmax
comp=N,30nm,0.5s
VRHR pmax pmax
comp=E,9.0nm,0.5s
MBW Mount Baker 66.11 46 P **P 14 53 20.9 +1.1**
OBN Obninsk 66.26 323⇓*i*P **P 14 53 20.5 -0.2**
OBN *i* 14 53 50.0
OBN pmax pmax
comp=Z,43nm,2.5s,mb5.0
OBN MLR MLR
comp=Z,100nm,15.0s,MS4.2
KAF Kangasniemi 66.36 332 *e*P **P 14 53 19.7 -1.5**
KAF pmax pmax
comp=Z,17nm,0.7s,mb5.2
KAF Kangasniemi 66.36 332 *e*p **P 14 53 19.7 -1.5**
comp=Z,17nm,0.7s,mb5.2,baz=49,slow=6.1
KAF Kangasniemi 66.36 332 *e*p **P 14 53 19.7 -1.5**
comp=Z,17nm,0.7s,mb5.2,baz=49,slow=6.1
JCW Jim Creek 66.41 46 P **P 14 53 23.0 +1.2**
B06A Marblemount 66.49 46⇓P **P 14 53 20.9 -1.4**
baz=66
RPW Rockport 66.51 46 P **P 14 53 23.2 +0.8**
A07A Ashnola River, 66.81 45⇓P **P 14 53 24.2 -0.1**
baz=66
FINES FINESS Array B 66.88 332 P **P 14 53 24.0 -0.5**
comp=Z,24nm,0.8s,mb5.3,baz=53,slow=7.9,SNR=69
FINES LR LR 15 24 05.0
comp=Z,92nm,18.9s,MS4.0,baz=182,slow=37
FINES FINESS Array B 66.88 332 P **P 14 53 24.0 -0.5**
FINES pmax pmax
comp=Z,24nm,0.8s
FINES MLR MLR
comp=Z,92nm,18.9s
D05A Enumclaw 66.92 47⇓P **P 14 53 24.9 -0.2**
baz=67
VSR Storozhevoye 67.17 318 *e*P **P 14 53 26.1 -0.4**
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
VSR pmax pmax
comp=N,20nm,1.2s
VSR pmax pmax
comp=E,10.0nm,1.3s
VORD Divnogorie 67.24 318 *e*P **P 14 53 26.5 -0.5**
VORD pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
VORD pmax pmax
comp=N,20nm,0.9s
VORD pmax pmax
comp=E,10.0nm,1.0s
TDL Tradedollar La 67.25 48 P **P 14 53 28.7 +1.6**
F04A Amboy 67.36 49⇑P **P 14 53 27.6 -0.2**
baz=67
NLW Nelson Butte 67.37 46 P **P 14 53 28.9 +1.0**
ETW Entiat 67.64 46 *e*P **P 14 53 28.4 -1.2**
comp=E,23nm,1.0s,mb5.2
B08A Colville Reser 67.78 45⇑P **P 14 53 30.1 -0.4**
baz=68,SNR=6.3
EBG Ellensburg 67.89 47 P **P 14 53 32.6 +1.4**
H04A Detroit Lake 68.18 50⇑P **P 14 53 32.7 -0.3**
baz=68
GOF Gofitskoye 68.47 311⇓*i*P **P 14 53 46.2 +11**
VSU Vasula 68.54 329⇓*i*P **P 14 53 35.3 +0.2**
OD2 Odessa Site #2 68.67 46 P **P 14 53 36.6 +0.5**
C09A Chrisman Ranch 68.68 45⇑P **P 14 53 35.7 -0.4**
baz=68
SUMG Summit 68.73 360 *e*P **P 14 53 36.6 +0.6**
comp=E,21nm,0.8s,mb5.1
SUMG Summit 68.73 360 *i* P **P 14 53 36.2 +0.2**
comp=E,21nm,0.9s,mb5.1
AFI Afiamalu 68.73 130 LR LR 15 17 06.7
comp=E,144nm,21.0s,MS4.2,baz=83,slow=30
NEW Newport 69.04 44 *e*P **P 14 53 38.2 -0.2**
NEW pmax pmax
comp=Z,14nm,1.1s
NEW Newport 69.04 44 *e*P **P 14 53 38.2 -0.1**
comp=Z,14nm,1.1s,mb4.8
ZEI Tsey 69.23 309 *e*P **P 14 53 38.4 -1.2**
ZEI pmax pmax
comp=Z,25nm,1.0s,mb5.1
MTA Mtatsminda 69.28 307 P **P 14 53 39.9 -0.1**
KIV Kislovodsk 69.29 310 P **P 14 53 40.1 +0.1**
comp=Z,706nm,0.9s,SNR=21
KIV Kislovodsk 69.29 310*c i*P **P 14 53 40.2 +0.2**
KIV *i* 14 54 02.9
KIV Kislovodsk 69.29 310 *e*P **P 14 53 40.0 0.0**
comp=Z,120nm,0.9s,mb5.8
TBLG Delisi 69.30 307 *e*P **P 14 53 40.1 +0.1**

TBLG **Delisi** 69.30 307 P P 14 53 40.1 +0.1
KEH **Kehvi** 69.47 308 P P 14 53 40.7 -0.4
E09A **Wood Farm, Sta** 69.49 46 ⇓P P 14 53 41.4 +0.2
baz=69
YBH **Yreka Blue Hor** 69.51 53 eP P 14 53 41.5 +0.1
YBH pmax pmax
comp=Z,7.0nm,0.9s
YBH **Yreka Blue Hor** 69.51 53 eP P 14 53 41.5 +0.2
comp=Z,6.6nm,0.9s,mb4.6
GOR **Gori** 69.54 308 P P 14 53 42.6 +1.0
ONI **Oni** 69.60 309 P P 14 53 42.4 +0.5
D10A **Wagner Farm, O** 69.66 46 ⇑P P 14 53 42.5 +0.3
baz=69
G08A **Pilot Rock** 69.73 48 ⇓P P 14 53 42.9 +0.3
baz=70
C11A **Tepee Creek (N** 69.76 44 ⇑P P 14 53 42.8 0.0
baz=70,SNR=10.0
K05A **Summer Lake** 70.06 51 ⇓P P 14 53 44.2 -0.5
baz=70,SNR=6.6
E10A **Myers Farm, Un** 70.09 46 ⇑P P 14 53 44.6 -0.2
baz=70
I07A **Izee** 70.11 49 ⇓P P 14 53 45.1 +0.1
baz=70
SCO **Scoresbysund** 70.12 354 i P P 14 53 44.6 0.0
comp=Z,16nm,0.9s,mb5.0
GNI **Garni** 70.18 306 LR LR 15 27 41.1
comp=Z,101nm,18.6s,MS4.1,baz=83,slow=39
GNI **Garni** 70.18 306 eP P 14 53 46.3 +0.7
GNI pmax pmax
comp=Z,23nm,0.9s
GNI **Garni** 70.18 306 eP P 14 53 46.3 +0.8
comp=Z,23nm,0.9s,mb5.1
WALA **Waterton Lakes** 70.29 42 eP P 14 53 45.5 -0.6
comp=Z,0.4nm,1.3s
H08A **Prairie City** 70.34 48 ⇑P P 14 53 46.0 -0.4
baz=70
B13A **Whitefish** 70.41 43 ⇓P P 14 53 46.1 -0.7
baz=70,SNR=15
G09A **Cove** 70.41 47 ⇓P P 14 53 47.0 +0.2
baz=70
FORT **Forrest** 70.43 192 eP P 14 53 46.1 -0.8
comp=Z,29nm,0.7s,mb5.3
STKA **Stephens Creek** 70.51 179 eP P 14 53 47.4 0.0
comp=Z,5.3nm,0.8s,mb4.5
STKA **Stephens Creek** 70.51 179 P P 14 53 47.8 +0.4
comp=Z,5.8nm,0.7s,mb4.6,baz=344,slow=6.7,SNR=14
STKA LR LR 15 22 44.7
comp=Z,97nm,18.2s,MS4.1,baz=25,slow=34
IZAR **Zarasai** 70.52 327 eP P 14 53 47.5 +0.2
IZAR AMB AMB 14 53 48.0
comp=Z,9.7nm,0.9s,mb4.8
IDID **Didziasalis** 70.59 326 eP P 14 53 48.0 +0.3
IDID AMB AMB 14 53 49.5
comp=Z,12nm,1.0s,mb4.8
A14A **Double T Ranch** 70.60 42 ⇑P P 14 53 47.1 -0.9
baz=70,SNR=7.2
ISAL **Salakas** 70.69 327 eP P 14 53 48.6 +0.3
ISAL AMB AMB 14 53 50.1
comp=Z,18nm,1.0s,mb5.0
D12A **Red Ives Fores** 70.72 45 ⇑P P 14 53 48.8 +0.1
baz=70
C13A **Hot Springs** 70.77 44 ⇓P P 14 53 49.0 0.0
baz=70,SNR=7.6
G10A **Bishop Farm, J** 70.78 47 ⇓P P 14 53 48.8 -0.3
baz=70
IIGN **Ignalina** 70.79 327 eP P 14 53 49.2 +0.2
IIGN AMB AMB 14 53 49.8
comp=Z,14nm,0.8s,mb4.9
H09A **Durkee** 70.84 48 ⇑P P 14 53 49.6 +0.2
baz=71
LBCM **Butte Creek Ri** 70.86 53 P P 14 53 50.9 +1.3
JTMT **Jette** 70.89 44 eP P 14 53 50.1 +0.4
comp=Z,6.3nm,1.0s,mb4.5
MOD **Modoc** 70.89 51 eP P 14 53 49.0 -0.8
comp=Z,4.5nm,0.8s,mb4.5
BMO **Blue Mountains** 70.94 47 eP P 14 53 50.3 +0.3
BMO pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
BMO **Blue Mountains** 70.94 47 eP P 14 53 50.2 +0.2
comp=Z,3.4nm,1.0s,mb4.2
A15A **Johnson Ranch,** 70.96 42 ⇑P P 14 53 50.0 -0.1
baz=71,SNR=8.0
YBMT **Yellow Bay** 70.96 43 eP P 14 53 49.5 -0.6
comp=Z,6.3nm,1.0s,mb4.5
F11A **Grangeville** 70.97 46 ⇓P P 14 53 50.1 -0.2
baz=71,SNR=8.2
E12A **Beaver Dam Sad** 70.98 45 ⇓P P 14 53 50.6 +0.3
baz=71,SNR=14
B14A **Marquette Ranc** 71.05 43 ⇑P P 14 53 50.7 0.0
baz=71,SNR=5.3
J08A **Circle Bar Ran** 71.14 49 ⇑P P 14 53 51.9 +0.6
baz=71,SNR=6.1
C14A **Swan Lake** 71.16 43 ⇓P P 14 53 51.4 0.0
baz=71,SNR=7.8
SWMT **Swartz Lake** 71.18 44 eP P 14 53 51.8 +0.3
comp=Z,10nm,1.1s,mb4.7
D13A **Huson** 71.19 44 ⇓P P 14 53 51.0 -0.5
baz=71,SNR=6.9
G11A **Walters Elk Ra** 71.20 47 P P 14 53 51.9 +0.2
baz=71,SNR=25
I09A **Lost Marbles R** 71.20 48 ⇓P P 14 53 52.1 +0.4
baz=71
SOC **Sochi** 71.26 311 c iP P 14 53 51.8 -0.3
SOC eS S 15 03 02.3 -7.2
SOC e 15 03 45.5
SOC pmax pmax
comp=Z,37nm,0.8s,mb5.4
SOC MLR MLR
comp=Z,165nm,14.0s,MS4.5
SOC **Sochi** 71.26 311 eP P 14 53 51.9 -0.2
H10A **Noah's Angus R** 71.41 47 ⇑P P 14 53 52.6 -0.4
baz=71,SNR=8.3
B15A **Bradely Ranch,** 71.46 42 ⇑P P 14 53 53.2 0.0
baz=71,SNR=15
F12A **Elk City** 71.56 46 ⇑P P 14 53 54.1 +0.3
baz=71,SNR=16
J09A **Fry Pan Ranch,** 71.56 49 ⇑P P 14 53 54.4 +0.5
baz=71,SNR=11
A16A **West Butte Ran** 71.57 41 ⇑P P 14 53 53.4 -0.3
baz=71
SLMT **Seeley Lake** 71.62 44 eP P 14 53 54.6 +0.4
comp=Z,9.4nm,0.7s,mb4.8
MSO **Missoula** 71.63 44 eP P 14 53 53.5 -0.7
comp=Z,5.8nm,1.2s,mb4.4
D14A **Greenough** 71.71 44 ⇓P P 14 53 54.2 -0.5
baz=71,SNR=8.9
H11A **Donnelly** 71.76 47 ⇑P P 14 53 54.6 -0.5
baz=72,SNR=7.3
C15A **Salmond Ranch,** 71.77 43 ⇑P P 14 53 55.6 +0.6
baz=72,SNR=14
ANN **Anapa** 71.86 313 eP P 14 53 54.5 -1.1
ANN eS S 15 03 15.9 -0.4
ANN pmax pmax
comp=Z,51nm,1.2s,mb5.3
G12A **Big Creek, Yel** 71.90 46 ⇓P P 14 53 55.3 -0.6
baz=72
BEKR **Beckworth** 72.04 53 ⇑P P 14 53 56.9 +0.1
baz=72,SNR=9.8
C16A **Fuhringer Ranc** 72.20 43 ⇓P P 14 53 57.8 +0.2
baz=72,SNR=5.9
NB2 **NORSAR Subarra** 72.21 337 P P 14 53 56.9 -0.5
comp=Z,24nm,0.8s,mb5.2,baz=39,slow=6.2
NOA **NORSAR Array B** 72.21 337 P P 14 53 57.1 -0.3
comp=Z,16nm,0.8s,mb5.0,baz=38,slow=6.0,SNR=57
NOA LR LR 15 27 55.8
comp=Z,101nm,22.0s,MS4.0,baz=30,slow=38
NOA **NORSAR Array B** 72.21 337 P P 14 53 57.1 -0.3
NOA pmax pmax
comp=Z,16nm,0.8s
NOA MLR MLR
comp=Z,101nm,22.0s
FFC **Flin Flon** 72.30 33 P P 14 53 57.1 -1.0
comp=Z,60nm,0.9s,mb5.5,SNR=5.4
FFC **Flin Flon** 72.30 33 i P P 14 53 58.2 +0.1
FFC **Flin Flon** 72.30 33 eP P 14 53 56.8 -1.3
comp=Z,9.5nm,0.9s,mb4.7
K10A **MacKenzie Ranc** 72.42 49 ⇓P P 14 53 60.0 +0.9
baz=72,SNR=8.0
NAO01 **NORSAR Array S** 72.46 337 eP P 14 53 56.5 -2.5
comp=Z,6.4nm,0.7s,mb4.7
AKASG **Malin Array Be** 72.48 322 P P 14 53 58.7 -0.5
comp=Z,15nm,0.7s,mb5.0,baz=48,slow=5.9,SNR=70
AKASG LR LR 15 28 28.2
comp=Z,176nm,18.0s,MS4.4,baz=55,slow=38
AKASG **Malin Array Be** 72.48 322 P P 14 53 58.7 -0.5
AKASG pmax pmax
comp=Z,15nm,0.7s
AKASG MLR MLR
comp=Z,176nm,18.0s
AKASG **Malin Array Be** 72.48 322 P P 14 53 58.7 -0.6
AKASG LR LR 15 28 28.2
AKBB **Malin Array Si** 72.48 322 eP P 14 53 58.4 -0.8
KIEV **Kiev** 72.49 322 eP P 14 53 58.5 -0.8
KIEV e 14 54 17.4
KIEV pmax pmax
comp=Z,21nm,0.8s,mb5.1
KIEV **Kiev** 72.49 322 eP P 14 53 58.5 -0.8
comp=Z,21nm,0.8s,mb5.1
KIEV ePcP PcP 14 54 17.4 +0.4
H12A **Diamond D Ranc** 72.51 47 ⇓P P 14 53 59.2 -0.4
baz=72,SNR=7.8
G13A **Cobalt** 72.53 46 ⇓P P 14 53 58.8 -0.8
baz=72,SNR=5.1
E15A **Deer Lodge** 72.58 44 ⇓P P 14 54 00.0 +0.1
baz=72,SNR=15
MFID **Camas Ranch** 72.65 48 ⇓P P 14 53 59.9 -0.5
baz=72
WCN **Washoe City** 72.75 53 ⇓P P 14 54 00.8 -0.2
baz=72,SNR=6.3
D16A **Dana Ranch, Ca** 72.79 43 ⇑P P 14 54 01.8 +0.6
baz=72,SNR=5.4
I12A **Atlanta** 72.82 47 ⇑P P 14 54 01.1 -0.3
baz=72,SNR=17
H13A **Challis** 72.84 46 ⇓P P 14 54 00.7 -0.8
baz=73,SNR=15
F15A **Butte** 73.03 44 ⇑P P 14 54 02.3 -0.3
baz=73,SNR=20
E16A **East Helena** 73.04 44 ⇑P P 14 54 02.5 -0.2
baz=73,SNR=10
LRM **Limekiln Ridge** 73.06 44 eP P 14 54 03.3 +0.5
comp=Z,56nm,0.7s,mb5.6
L10A **Juniper Basin** 73.08 49 ⇓P P 14 54 03.7 +0.7
baz=73,SNR=8.0
EGMT **Eagleton** 73.10 41 ⇑P P 14 54 03.0 0.0
baz=73,SNR=7.3
EGMT **Eagleton** 73.10 41 eP P 14 54 03.1 +0.2
comp=Z,15nm,1.0s,mb4.9
CMB **Columbia Colle** 73.10 55 eP P 14 54 02.3 -0.9
CMB pmax pmax
comp=Z,17nm,1.1s,mb4.9
CMB **Columbia Colle** 73.10 55 eP P 14 54 02.3 -0.9
comp=Z,17nm,1.1s,mb4.9
DLMT **Dillon** 73.27 45 eP P 14 54 05.1 +1.0
comp=Z,20nm,1.0s,mb5.0
I13A **Wildhorse Cree** 73.32 47 ⇑P P 14 54 04.8 +0.5
baz=73,SNR=9.4
HLID **Hailey** 73.37 47 ⇓P P 14 54 05.3 +0.7
baz=73,SNR=9.5
HLID **Hailey** 73.37 47 eP P 14 54 04.8 +0.2
comp=Z,4.9nm,0.9s,mb4.4
M10A **I.L. Ranch, Tu** 73.38 50 ⇓P P 14 54 04.8 +0.1
baz=73,SNR=10
L11A **Cat Creek Ranc** 73.45 49 ⇑P P 14 54 05.1 -0.1
baz=73,SNR=15
G15A **Dillon** 73.45 45 ⇑P P 14 54 05.0 -0.1
baz=73,SNR=12
MCMT **McKenzie Canyo** 73.47 45 eP P 14 54 03.9 -1.3
comp=Z,0.6nm,0.8s
E17A **Martinsdale** 73.52 43 ⇑P P 14 54 06.0 +0.5
baz=73,SNR=14
F16A **Kennard Place,** 73.54 44 ⇓P P 14 54 05.6 0.0
baz=73,SNR=11
J13A **Cove Ranch, Pi** 73.61 47 ⇓P P 14 54 06.6 +0.6
baz=73,SNR=9.2
BOZ **Bozeman (W)** 73.62 44 P P 14 54 06.8 +0.8
baz=73,SNR=23
BOZ **Bozeman (W)** 73.62 44 eP P 14 54 06.7 +0.6
BOZ pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
BOZ **Bozeman (W)** 73.62 44 eP P 14 54 06.7 +0.6
comp=Z,7.5nm,0.8s,mb4.7
SIM **Simferopol'** 73.62 315 eP P 14 54 08.0 +1.9
SIM pmax pmax
comp=Z,23nm,0.8s,mb5.2
BMN **Battle Mountai** 73.63 51 eP P 14 54 06.2 0.0
BMN pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
BMN **Battle Mountai** 73.63 51 eP P 14 54 06.2 -0.1
comp=Z,10nm,0.9s,mb4.8
I14A **Mackay** 73.69 46 ⇓P P 14 54 07.1 +0.6
baz=73,SNR=12
G16A **Moss Hill, Enn** 73.79 45 ⇓P P 14 54 07.4 +0.3
baz=74,SNR=8.0
M11A **Holland Ranch,** 73.88 50 ⇓P P 14 54 08.3 +0.6
baz=74,SNR=6.6
M11A ⇓pP pP 14 54 09.8 -0.9
baz=74
L12A **House Creek Ra** 73.90 49 ⇓P P 14 54 08.6 +0.9
baz=74,SNR=10.0
E18A **Harlowton** 73.95 43 ⇓P P 14 54 08.2 +0.2
baz=74,SNR=9.8
SFJD **Kangerlussuaq** 73.97 5 i P P 14 54 07.4 -0.4
comp=Z,9.9nm,0.8s,mb4.8
F17A **Fitzpatrick Pl** 73.98 44 ⇓P P 14 54 07.9 -0.3
baz=74,SNR=12
J14A **Carey** 74.03 47 ⇑P P 14 54 08.8 +0.3
baz=74,SNR=17
NVAR **Mina Array Bea** 74.18 53 P P 14 54 10.8 +1.3
comp=Z,7.4nm,0.8s,mb4.7,baz=284,slow=5.7,SNR=55
M12A **Wells** 74.41 49 ⇓P P 14 54 11.6 +0.9
baz=74,SNR=14
H16A **Russell Place,** 74.43 45 ⇑P P 14 54 11.1 +0.3
baz=74,SNR=11
F18A **Big Timber** 74.49 43 ⇑P P 14 54 11.2 +0.1
baz=74,SNR=23
L13A **Double Diamond** 74.56 48 ⇑P P 14 54 12.2 +0.6
baz=74,SNR=5.7
GCMT **Greycliff** 74.58 43 eP P 14 54 11.3 -0.4
comp=Z,9.5nm,0.9s,mb4.7
P10A **Eureka** 74.59 51 ⇓P P 14 54 12.5 +0.6
baz=74,SNR=10
J15A **Blackfoot** 74.60 46 ⇑P P 14 54 11.6 -0.2
baz=74,SNR=9.2
N12A **Clover Valley,** 74.69 50 ⇑P P 14 54 12.9 +0.5
baz=74,SNR=6.4
N12A **Clover Valley,** 74.69 50 eP P 14 54 13.2 +0.8
comp=Z,21nm,1.2s,mb5.0
O11A **Cowboy Ranch,** 74.76 51 ⇓P P 14 54 13.2 +0.4
baz=74
RDF **Al-Radifah** 74.79 295 eP P 14 54 12.6 -0.6
RDF AMb AMB 14 54 14.2
comp=Z,111nm,0.9s,mb5.8
YFT **Old Faithful** 74.82 45 eP P 14 54 14.8 +1.7
comp=Z,12nm,0.8s,mb4.9
NAY **Al-Naaiem** 74.82 295 eP P 14 54 12.3 -1.0
NAY AMb AMB 14 54 13.9
comp=Z,29nm,1.3s,mb5.1
I16A **Newdale** 74.83 46 ⇓pP pP 14 54 15.2 -0.9
baz=74,SNR=8.5
M13A **Montello** 74.88 49 ⇓P P 14 54 12.5 -1.1
baz=75
M13A **Montello** 74.88 49 eP P 14 54 13.9 +0.4
comp=Z,5.0nm,0.8s,mb4.5
H17A **Grant Village** 75.00 45 ⇓P P 14 54 14.9 +0.8
baz=75,SNR=11
K15A **Arbon** 75.00 47 ⇓P P 14 54 15.1 +0.9
baz=75,SNR=5.6
L14A **Malta** 75.00 48 ⇓P P 14 54 13.5 -0.7
baz=75,SNR=12
IMW **Indian Meadow** 75.12 45 eP P 14 54 16.5 +1.6
comp=Z,10nm,0.8s,mb4.8
Q10A **Clear Creek Ra** 75.12 52 ⇓P P 14 54 14.3 -0.6
baz=75,SNR=11
N13A **Wendover, West** 75.18 49 ⇑P P 14 54 15.5 +0.3
baz=75
N13A **Wendover, West** 75.18 49 eP P 14 54 15.6 +0.4
comp=Z,12nm,0.9s,mb4.8
N13A ePcP PcP 14 54 27.2 -1.6
O12A **Currie** 75.22 50 ⇑P P 14 54 15.3 -0.3
baz=75,SNR=10
RLMT **Red Lodge** 75.23 44 ⇓P P 14 54 14.6 -0.9
baz=75,SNR=12
RLMT **Red Lodge** 75.23 44 eP P 14 54 16.2 +0.8
comp=Z,6.2nm,0.8s,mb4.6
RRI2 **Red Ridge** 75.26 46 eP P 14 54 16.9 +1.3
comp=Z,11nm,1.0s,mb4.7
M14A **Sheep Mountain** 75.27 48 ⇑P P 14 54 15.9 +0.1
baz=75,SNR=12
TPAW **Teton Pass** 75.37 46 eP P 14 54 17.5 +1.2
comp=Z,15nm,1.3s,mb4.8
HVU **Hansel Valley** 75.43 48 eP P 14 54 17.5 +0.8
HVU pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
HVU **Hansel Valley** 75.43 48 eP P 14 54 17.5 +0.8
comp=Z,9.8nm,0.9s,mb4.7
K16A **Soda Springs** 75.44 46 ⇓P P 14 54 16.6 -0.1
baz=75,SNR=10
LOHW **Long Hollow** 75.48 45 eP P 14 54 18.0 +1.1
comp=Z,1.7nm,0.5s,mb4.2
REDW **Red Top Meadow** 75.51 46 eP P 14 54 16.9 -0.2
comp=Z,13nm,1.3s,mb4.7
L15A **Malad City** 75.51 47 ⇑P P 14 54 16.6 -0.6
baz=75,SNR=5.8
CWC **Cottonwood Cre** 75.53 55 ⇑P P 14 54 17.3 0.0
baz=75
LVV **L'vov** 75.54 323 eP P 14 54 16.7 -0.4
S10A **Tonopah Range,** 75.55 53 ⇓P P 14 54 17.0 -0.4
baz=75,SNR=30
Q11A **Duckwater** 75.56 52 ⇓P P 14 54 17.6 +0.1
baz=75,SNR=11
P12A **McGill** 75.62 51 ⇓P P 14 54 18.0 +0.2
baz=75,SNR=10
P12A ⇓pP pP 14 54 19.3 -1.5
baz=75
GRAC **Grapevine Rang** 75.64 54 ⇑P P 14 54 18.2 +0.2
baz=75,SNR=16
ISA **Isabella** 75.75 56 ⇓P P 14 54 17.9 -0.8
baz=76
ISA **Isabella** 75.75 56 eP P 14 54 18.2 -0.4
ISA pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
ISA **Isabella** 75.75 56 eP P 14 54 18.2 -0.4
comp=Z,5.1nm,1.0s,mb4.4
N14A **Grayback Hills** 75.78 49 ⇑P P 14 54 18.4 -0.3
baz=76,SNR=16
M15A **Larsen Ranch,** 75.82 48 ⇑P P 14 54 18.7 -0.2
baz=76,SNR=14
R11A **Troy Canyon, C** 75.91 52 ⇑P P 14 54 19.1 -0.4
baz=76,SNR=29
Q12A **Willow Creek R** 75.94 51 ⇑P P 14 54 19.3 -0.3
baz=76,SNR=7.4
L16A **Fish Haven** 76.05 47 ⇑P P 14 54 20.3 0.0
baz=76,SNR=6.6
J18A **Kendall Valley** 76.07 45 ⇓P P 14 54 20.3 0.0
baz=76,SNR=9.7
MPMC **Manual Prospec** 76.14 55 ⇓P P 14 54 20.6 -0.3
baz=76,SNR=14
P13A **Bates Ranch, G** 76.17 50 ⇓P P 14 54 20.8 -0.2
baz=76,SNR=7.2
HWUT **Hardware Ranch** 76.24 47 eP P 14 54 22.4 +1.1
comp=Z,19nm,1.3s,mb4.9
S11A **Rachel** 76.25 53 ⇓P P 14 54 21.5 0.0
baz=76
FURC **Furnace Creek,** 76.29 54 ⇑P P 14 54 21.5 -0.2
baz=76,SNR=12
L17A **Cokeville** 76.31 47 ⇑P P 14 54 21.6 -0.1
baz=76
TLCR 76.33 318 ⇓P P 14 54 21.4 -0.3
TLCR 76.33 318 ⇓iP P 14 54 21.4 -0.3
DUG **Dugway** 76.42 49 ⇓P P 14 54 22.3 0.0
baz=76,SNR=17
DUG **Dugway** 76.42 49 eP P 14 54 23.2 +0.9
DUG pmax pmax
comp=Z,13nm,0.9s,mb4.9
DUG **Dugway** 76.42 49 eP P 14 54 23.1 +0.8
comp=Z,13nm,0.9s,mb4.9
K18A **Toltan Ranch,** 76.43 46 ⇓P P 14 54 21.5 -0.8
baz=76,SNR=6.2
Q13A **Wheeler Ranch,** 76.48 51 ⇓P P 14 54 22.4 -0.3
baz=76,SNR=13
BUR08 **Bucovina Ar. S** 76.49 321 eP P 14 54 22.7 +0.1
BUR01 **Bucovina Ar. S** 76.50 321 P P 14 54 23.7 +1.0
BURAR **Bucovina Array** 76.50 321 ⇓P P 14 54 22.8 +0.1
BURAR **Bucovina Array** 76.50 321 ⇓iP P 14 54 22.8 +0.1
R12A **Pony Springs,** 76.52 52 ⇑P P 14 54 22.5 -0.5
baz=76,SNR=11
EDW2 **Edwards Air Fo** 76.55 56 ⇑P P 14 54 23.3 +0.2
baz=76,SNR=9.9
O15A **The Old Anders** 76.56 49 ⇓P P 14 54 23.5 +0.3
baz=76
BW06 **Boulder Array** 76.62 45 ⇑P P 14 54 22.8 -0.6
baz=76,SNR=14
PDAR **Pinedale Array** 76.62 45 P P 14 54 23.8 +0.4
comp=Z,5.0nm,0.7s,mb4.5,baz=282,slow=2.6,SNR=48
P14A **Drum Mountains** 76.65 50 ⇓P P 14 54 23.3 -0.3
baz=76,SNR=14
U10A **Ash Meadows, A** 76.65 54 ⇓P P 14 54 24.1 +0.3
baz=76,SNR=7.8
T11A **Corn Creek, Al** 76.83 53 ⇑P P 14 54 24.4 -0.3
baz=77
M17A **Scullys Gap (B** 76.84 47 ⇓P P 14 54 24.1 -0.6
baz=77,SNR=5.1
L18A **Fontenelle, Gr** 76.90 46 ⇓P P 14 54 24.5 -0.5
baz=77,SNR=8.5
Q14A **Sevier Lake (B** 76.91 50 ⇑P P 14 54 25.3 +0.1
baz=77,SNR=23
VRI **Vrincioaia** 76.95 319 P P 14 54 27.0 +1.8
VRI **Vrincioaia** 76.95 319 ⇓iP P 14 54 26.9 +1.7
K19A **Absolon Red Bu** 76.97 45 ⇓P P 14 54 24.1 -1.3
baz=77
KOLS **Kolonicke sedl** 76.98 324 eP P 14 54 25.6 +0.3
KOLS pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
KOLS **Kolonicke sedl** 76.98 324 eP P 14 54 25.6 +0.3
comp=Z,7.5nm,1.0s,mb4.6
KOLS **Kolonicke sedl** 76.98 324 eP P 14 54 25.6 +0.3
R13A **O'Grain Ranch,** 77.01 51 ⇑P P 14 54 25.7 0.0
baz=77,SNR=8.1
SHOC **Shoshone** 77.01 54 ⇑P P 14 54 25.7 -0.1
baz=77
TIRR **Tirgusor** 77.03 317 ⇑P P 14 54 26.2 +0.5
TIRR **Tirgusor** 77.03 317 ⇑iP P 14 54 26.1 +0.4
GSC **Goldstone** 77.05 55 ⇓P P 14 54 25.9 -0.1
baz=77,SNR=7.1
GSC **Goldstone** 77.05 55 eP P 14 54 26.3 +0.3
GSC pmax pmax
comp=Z,11nm,1.2s,mb4.7
GSC **Goldstone** 77.05 55 eP P 14 54 26.3 +0.4
comp=Z,11nm,1.2s,mb4.7
STHS **Stebnicka Huta** 77.10 324 eP P 14 54 27.3 +1.3
STHS pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
STHS **Stebnicka Huta** 77.10 324 eP P 14 54 27.3 +1.3
comp=Z,10nm,0.9s,mb4.8
STHS **Stebnicka Huta** 77.10 324 eP P 14 54 27.3 +1.3
HARR **Harsova** 77.12 318 ⇓P P 14 54 26.8 +0.6
HARR **Harsova** 77.12 318 ⇓iP P 14 54 26.8 +0.6
P15A **Leamington** 77.13 49 ⇑P P 14 54 26.5 +0.1
baz=77,SNR=6.9
L19A **Farson** 77.17 46 ⇓P P 14 54 26.0 -0.5
baz=77,SNR=5.5
OJC **Ojcow** 77.17 326 i P P 14 54 25.5 -0.9
O16A **Springville** 77.18 48 ⇓P P 14 54 25.1 -1.5
baz=77,SNR=5.3
DAU **Daniels Canyon** 77.19 48 eP P 14 54 27.7 +1.0
DAU pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
DAU **Daniels Canyon** 77.19 48 eP P 14 54 27.7 +1.0
comp=Z,6.8nm,0.9s,mb4.6
BR131 **Keskin Array S** 77.22 311 eP P 14 54 27.3 +0.4
comp=Z,23nm,1.3s,mb4.9
BRTR **Keskin Array B** 77.22 311 P P 14 54 27.1 +0.3
comp=Z,7.7nm,0.9s,mb4.6,baz=95,slow=4.2,SNR=33
BRTR LR LR 15 34 35.4
comp=Z,29nm,18.1s,MS3.6,baz=213,slow=40
MPU **Maple Canyon** 77.22 49 eP P 14 54 28.1 +1.2
comp=Z,13nm,0.9s,mb4.8
CRVS **Cervenica-Dubn** 77.37 324 i P P 14 54 28.0 +0.4
CRVS pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
CRVS **Cervenica-Dubn** 77.37 324 i P P 14 54 28.0 +0.4
comp=Z,7.3nm,1.0s,mb4.6
CRVS **Cervenica-Dubn** 77.37 324 i P P 14 54 28.0 +0.4
S13A **Holt Ranch, En** 77.45 52 ⇑P P 14 54 27.7 -0.5
baz=77,SNR=10
NIE **Niedzica** 77.52 325 eP P 14 54 29.6 +1.2
TUQ **Turquoise Moun** 77.52 55 ⇓P P 14 54 27.9 -0.8
baz=77,SNR=13
MLR **Muntele Rosu** 77.61 319 ⇓P P 14 54 30.6 +1.7
MLR **Muntele Rosu** 77.61 319 ⇓iP P 14 54 30.6 +1.7
O17A **Robinson Place** 77.63 48 ⇓P P 14 54 28.4 -0.7
baz=77,SNR=6.9
HEC **Hector,Ludlow** 77.64 55 ⇓P P 14 54 28.4 -1.0
baz=77,SNR=7.8
N18A **Larsen Ranch,** 77.73 47 ⇑P P 14 54 30.2 +0.5
baz=77
U12A **Valley of Fire** 77.77 53 ⇑P P 14 54 30.0 0.0
baz=78
CCUT **Cedar City** 77.78 51 eP P 14 54 31.0 +1.0
comp=Z,5.2nm,0.8s,mb4.5
T13A **Saint George** 77.78 52 ⇑P P 14 54 29.7 -0.4
baz=78,SNR=12

L20A **Wamsutter** 77.80 45 ⇑P P 14 54 29.5 -0.6
baz=78
MSU **Marysvale** 77.87 50 eP P 14 54 32.2 +1.6
MSU pmax pmax
comp=Z,14nm,1.3s,mb4.7
MSU **Marysvale** 77.87 50 eP P 14 54 32.2 +1.6
comp=Z,14nm,1.3s,mb4.7
O18A **Roosevelt** 78.00 48 ⇑P P 14 54 31.6 +0.4
baz=78,SNR=5.7
R15A **Junction** 78.01 50 ⇓P P 14 54 31.6 +0.3
baz=78,SNR=6.7
V12A **Nelson** 78.02 54 ⇓P P 14 54 31.2 -0.2
baz=78,SNR=5.8
RAO **Raoul Island** 78.03 144 LR LR 15 21 39.0
comp=Z,893nm,20.6s,MS5.1,baz=99,slow=30
P17A **Butcher Ranch,** 78.10 49 ⇓P P 14 54 31.9 +0.1
baz=78,SNR=6.7
GMRC **Granite Mounta** 78.11 55 ⇑P P 14 54 31.5 -0.4
baz=78,SNR=5.9
BSEG **Bad Segeberg** 78.11 333 eP P 14 54 31.5 -0.1
comp=Z,25nm,1.0s,mb5.1
BSEG **Bad Segeberg** 78.11 333 eP P 14 54 31.5 -0.1
BSEG pmax pmax
comp=Z,25nm,1.0s,mb5.1
ULM **Lac du Bonnet** 78.12 33 P P 14 54 30.6 -1.0
comp=Z,7.4nm,0.8s,mb4.7,baz=315,slow=5.7,SNR=5.8
KECS **Kecovo** 78.12 324 eP P 14 54 32.5 +0.8
KECS pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
KECS **Kecovo** 78.12 324 eP P 14 54 32.5 +0.8
comp=Z,3.4nm,1.0s,mb4.2
KECS **Kecovo** 78.12 324 eP P 14 54 32.5 +0.8
U13A **Pakoon Wash** 78.13 53 ⇑P P 14 54 32.1 0.0
baz=78,SNR=21
OKC **Ostrava-Krasne** 78.17 326 eP P 14 54 32.4 +0.4
OKC **Ostrava-Krasne** 78.17 326 eP P 14 54 32.4 +0.4
KSP **Ksiaz** 78.20 328 eP P 14 54 31.0 -1.1
Q16A **Castle Valley** 78.21 49 ⇑P P 14 54 32.7 +0.2
baz=78,SNR=6.3
M20A **Sweetwater, Wa** 78.22 46 ⇓P P 14 54 32.4 -0.1
baz=78,SNR=5.5
LDFC **Landfair** 78.27 54 eP P 14 54 33.3 +0.5
comp=Z,19nm,1.2s,mb4.9
P18A **Preston Nutter** 78.29 48 ⇓P P 14 54 32.9 +0.1
baz=78,SNR=9.7
DRGR 78.30 322 ⇓P P 14 54 33.2 +0.5
DRGR 78.30 322 ⇓iP P 14 54 33.2 +0.5
PFO **Pinyon Flat Ob** 78.33 56 ⇓P P 14 54 32.5 -0.7
baz=78
L21A **Rawlins** 78.36 45 ⇓P P 14 54 32.5 -0.7
baz=78,SNR=7.6
BELC **Belle Mtn. Jos** 78.38 56 ⇑P P 14 54 33.4 -0.1
baz=78,SNR=5.8
R16A **Teasdale** 78.44 50 ⇓pP pP 14 54 35.9 -0.8
baz=78,SNR=18
SRU **San Rafael** 78.46 49 ⇑P P 14 54 34.0 +0.2
baz=78,SNR=17
SRU **San Rafael** 78.46 49 eP P 14 54 34.0 +0.2
SRU pmax pmax
comp=Z,14nm,0.9s,mb4.9
SRU **San Rafael** 78.46 49 eP P 14 54 34.0 +0.2
comp=Z,14nm,0.9s,mb4.9
MORC **Moravsky Berou** 78.48 326 P P 14 54 34.3 +0.6
MORC **Moravsky Berou** 78.48 326 eP P 14 54 34.0 +0.3
comp=Z,18nm,1.0s,mb5.0
MORC **Moravsky Berou** 78.48 326⇑iP P 14 54 34.0 +0.3
V13A **Grand Canyon W** 78.48 53 ⇑P P 14 54 34.2 +0.2
baz=78,SNR=10
O19A **Miners Draw (B** 78.49 47 ⇓P P 14 54 33.5 -0.5
baz=78
DPC **Dobruska-Polom** 78.56 327 eP P 14 54 34.9 +0.8
DPC **Dobruska-Polom** 78.56 327 eP P 14 54 34.9 +0.8
UPC **Upice** 78.58 328 eP P 14 54 34.7 +0.5
UPC **Upice** 78.58 328 eP P 14 54 34.7 +0.5
M21A **Separation Pea** 78.61 45 ⇓P P 14 54 34.6 0.0
baz=78
U14A **Mt Trumbull** 78.61 52 ⇓P P 14 54 35.0 +0.3
baz=78,SNR=13
N20A **Spence Gulch,** 78.62 46 ⇑P P 14 54 34.5 -0.1
baz=78,SNR=16
T15A **Red Dirt Ranch** 78.72 51 ⇓P P 14 54 35.3 0.0
baz=78,SNR=9.0
PSZ **Piszkesteto** 78.81 324 eP P 14 54 35.4 -0.1
PSZ pmax pmax
comp=Z,13nm,0.9s,mb4.9
PSZ **Piszkesteto** 78.81 324 eP P 14 54 35.4 -0.1
comp=Z,13nm,0.9s,mb4.9
PSZ **Piszkesteto** 78.81 324⇑eP P 14 54 36.0 +0.5
PSZ **Piszkesteto** 78.81 324⇓iP P 14 54 36.4 +0.9
MONP **Monument Peak** 78.81 57 ⇓P P 14 54 35.6 -0.2
baz=79
R17A **Hanksville Air** 78.81 49 ⇓P P 14 54 35.7 0.0
baz=78,SNR=16
IRM **Iron Mountain** 78.82 55 ⇑P P 14 54 35.6 -0.2
baz=79,SNR=8.9
L22A **Ellis Ranch, M** 78.83 44 ⇓P P 14 54 35.3 -0.4
baz=78
VYHS **Vyhne** 78.86 325 iP P 14 54 36.5 +0.7
VYHS pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
VYHS **Vyhne** 78.86 325 iP P 14 54 36.5 +0.7
comp=Z,5.1nm,0.9s,mb4.5
VYHS **Vyhne** 78.86 325 iP P 14 54 36.5 +0.7
BC3 **Big Chuckawall** 78.95 56 ⇑P P 14 54 36.3 -0.3
baz=79,SNR=6.8
P19A **Cripple Cowboy** 79.01 48 ⇑P P 14 54 37.0 +0.1
baz=79,SNR=5.4
W13A **Hualapai Mount** 79.02 54 ⇓P P 14 54 37.3 +0.3
baz=79,SNR=5.9
N21A **Black Mountain** 79.09 46 ⇑P P 14 54 37.2 0.0
baz=79,SNR=9.1
O20A **White River Ci** 79.10 47 ⇑P P 14 54 37.2 -0.1
baz=79
PVCC **Panska Ves** 79.15 328 eP P 14 54 38.1 +0.7
PVCC **Panska Ves** 79.15 328 eP P 14 54 38.1 +0.7
U15A **North Rim** 79.16 52 ⇓pP pP 14 54 39.4 -1.2
baz=79,SNR=20
DVTC **Desert V Tower** 79.16 57 ⇓P P 14 54 38.0 +0.2
baz=79
V14A **Boquillas Ranc** 79.17 53 ⇓P P 14 54 37.7 0.0
baz=79,SNR=22
CLL **Collm** 79.18 330 eP P 14 54 37.1 -0.4
comp=Z,17nm,0.9s,mb5.0
CLL **Collm** 79.18 330⇑iP P 14 54 36.9 -0.6
CLL pmax pmax
comp=Z,18nm,0.9s,mb5.0
CLL MLR MLR
comp=Z,200nm,17.3s,MS4.5
CLL **Collm** 79.18 330⇑iP P 14 54 36.9 -0.6
comp=Z,18nm,0.9s,mb5.0
CLL LR LR
comp=Z,200nm,17.3s,MS4.5
CLL **Collm** 79.18 330⇑iP P 14 54 36.9 -0.6
comp=Z,18nm,0.9s,mb5.0
SWSC **Sam W. Stewart** 79.18 56 ⇓P P 14 54 37.5 -0.3
baz=79
VRAC **Vranov** 79.24 327 P P 14 54 38.6 +0.7
VRAC **Vranov** 79.24 327⇑iP P 14 54 38.8 +0.9
GZR **Gura Zlata** 79.26 321 P P 14 54 38.5 +0.4
GZR **Gura Zlata** 79.26 321 ⇓iP P 14 54 38.7 +0.6
S17A **Black Ridge (B** 79.27 50 ⇑P P 14 54 37.6 -0.7
baz=79,SNR=12
Q19A **Hogan Spring (** 79.30 48 ⇓P P 14 54 37.9 -0.5
baz=79,SNR=9.5
R18A **Canyonlands Na** 79.31 49 ⇓P P 14 54 38.1 -0.4
baz=79,SNR=12
NRDL **Niedersach Rie** 79.34 332 eP P 14 54 38.0 -0.4
comp=Z,6.0nm,0.9s,mb4.5
PDMCI **Parker Dam,Lak** 79.38 54 ⇑P P 14 54 38.8 -0.1
baz=79
X13A **Yucca** 79.38 54 ⇑P P 14 54 39.3 +0.3
baz=79,SNR=17
P20A **De Beque** 79.44 47 ⇑P P 14 54 39.4 +0.2
baz=79
W14A **Seligman** 79.45 53 ⇑P P 14 54 39.3 0.0
baz=79,SNR=12
O21A **Pagoda** 79.48 46 ⇓P P 14 54 39.1 -0.2
baz=79
Y12C **Blythe** 79.48 55 ⇓P P 14 54 40.1 +0.6
baz=79
BUD **Budapest** 79.53 324⇑eP P 14 54 40.0 +0.5
PRU **Pruhonice** 79.58 328 eP P 14 54 40.5 +0.8
PRU **Pruhonice** 79.58 328 eP P 14 54 40.5 +0.8
AGMN **Agassiz Nation** 79.58 35 eP P 14 54 38.7 -1.1
comp=Z,1.8nm,0.3s,mb4.5
V15A **Kaibab Nationa** 79.62 52 ⇓P P 14 54 40.4 +0.2
baz=79,SNR=11
N22A **Wattenberg Ran** 79.65 45 ⇑P P 14 54 40.2 -0.1
baz=79,SNR=7.9
BZS **Buzias** 79.67 321 ⇓P P 14 54 40.4 +0.1
BZS **Buzias** 79.67 321 P P 14 54 40.6 +0.3
BZS **Buzias** 79.67 321 ⇓iP P 14 54 40.4 +0.1
T17A **Navajo Res., N** 79.69 51 ⇑P P 14 54 40.1 -0.4
baz=79,SNR=8.8
S18A **Hurst Farm, Bl** 79.71 50 ⇑P P 14 54 40.9 +0.2
baz=79,SNR=18
TREC **Trest** 79.72 327 eP P 14 54 40.7 +0.2
TREC **Trest** 79.72 327 eP P 14 54 40.7 +0.2
R19A **Curley Farm, L** 79.75 49 ⇑P P 14 54 41.4 +0.6
baz=80
CLZ **Clausthal** 79.77 331 eP P 14 54 40.7 0.0
comp=Z,16nm,0.9s,mb5.0
CLZ **Clausthal** 79.77 331 eP P 14 54 40.7 0.0
CLZ pmax pmax
comp=Z,16nm,0.9s,mb5.0
Q20A **Ridgley Place,** 79.86 48 ⇑P P 14 54 41.6 +0.1
baz=80
PV04 **Paradox Valley** 79.89 48 eP P 14 54 41.8 +0.2
W15A **Williams** 79.98 53 ⇑P P 14 54 42.8 +0.6
baz=80
U17A **Shonto** 80.03 51 ⇑P P 14 54 42.9 +0.4
baz=80,SNR=9.1
X14A **Yava** 80.06 54 ⇓P P 14 54 43.4 +0.8
baz=80,SNR=8.3
TANN **Tannenbergstha** 80.09 329 eP P 14 54 42.5 0.0
comp=Z,5.0nm,0.9s,mb4.4
T18A **Mexican Hat** 80.15 50 ⇓P P 14 54 43.0 -0.1
baz=80,SNR=16
S19A **Harvey Farm, M** 80.18 49 ⇑P P 14 54 43.3 +0.1
baz=80,SNR=9.2
NKC **Novy Kostel** 80.24 329 eP P 14 54 43.8 +0.5
NKC **Novy Kostel** 80.24 329 eP P 14 54 43.8 +0.5
MOX **Moxa** 80.24 330 eP P 14 54 53.5 +10
comp=Z,16nm,1.3s,mb4.8
MOX **Moxa** 80.24 330 eP P 14 54 43.2 -0.1
comp=Z,8.0nm,0.9s,mb4.7
MOX **Moxa** 80.24 330 eP P 14 54 53.5 +10
MOX pmax pmax
comp=Z,16nm,1.3s,mb4.8
PV01 **Paradox Valley** 80.25 49 eP P 14 54 44.2 +0.6
comp=Z,922nm,1.3s
WUAZ **Wupatki** 80.31 52 ⇑P P 14 54 43.4 -0.6
baz=80,SNR=11
WUAZ **Wupatki** 80.31 52 eP P 14 54 44.6 +0.7
comp=Z,14nm,1.0s,mb4.8
Y14A **Wickenburg** 80.33 54 ⇓P P 14 54 44.0 0.0
baz=80,SNR=9.9
R20A **Redvale** 80.33 48 ⇓P P 14 54 43.8 -0.2
baz=80,SNR=9.3
IBBN **Ibbenburen** 80.34 333 eP P 14 54 43.3 -0.5
comp=Z,25nm,0.9s,mb5.1
Z13A **Yuma Proving G** 80.39 55 ⇓P P 14 54 44.5 +0.1
baz=80,SNR=17
X15A **Humboldt** 80.45 53 ⇑P P 14 54 45.6 +0.9
baz=80,SNR=12
SMCO **Snowmass** 80.47 47 eP P 14 54 44.0 -0.8
comp=Z,8.3nm,0.9s,mb4.7
MMAI **Mount Meron Ar** 80.47 305 P P 14 54 45.2 +0.3
comp=Z,18nm,1.0s,mb5.0,baz=31,slow=6.9,SNR=12
MMAI LR LR 15 33 12.9
comp=Z,80nm,21.1s,MS4.0,baz=320,slow=38
SOP **Sopron** 80.48 326⇓eP P 14 54 45.8 +1.2
V17A **Tonalea, Kykot** 80.60 52 ⇑P P 14 54 46.3 +0.8
baz=80,SNR=23
113A **Mohawk Valley,** 80.60 55 ⇓P P 14 54 45.6 +0.1
baz=80,SNR=5.5
U18A **Rough Rock, Ch** 80.63 50 ⇑P P 14 54 45.7 +0.1
baz=80,SNR=16
KHC **Kasperske Hory** 80.64 328 eP P 14 54 45.5 0.0
KHC pmax pmax
comp=Z,11nm,0.8s,mb4.8
KHC **Kasperske Hory** 80.64 328 eP P 14 54 45.5 0.0
comp=Z,12nm,0.8s,mb4.9
KHC **Kasperske Hory** 80.64 328 eP P 14 54 45.7 +0.2
PKSM **Moragy** 80.64 323 ⇑P P 14 54 45.3 -0.2
PKSM **Moragy** 80.64 323 ⇑iP P 14 54 45.3 -0.2
R21A **Cimarron** 80.69 48 ⇑P P 14 54 46.0 0.0
baz=80,SNR=5.8
Q22A **Crested Butte,** 80.72 47 ⇓P P 14 54 46.6 +0.5
baz=80,SNR=8.9
UBBA **Unterbreizbach** 80.72 331 eP P 14 54 45.4 -0.5
comp=Z,4.0nm,0.9s,mb4.3
Y15A **Casa Rosa Ranc** 80.74 54 ⇑P P 14 54 46.7 +0.4
baz=80,SNR=14
ISCO **Idaho Springs** 80.81 46 eP P 14 54 47.6 +1.1
ISCO pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
ISCO **Idaho Springs** 80.81 46 eP P 14 54 47.6 +1.0
comp=Z,3.7nm,0.7s,mb4.4
GEC2 **GERESS Array S** 80.81 328 eP P 14 54 46.3 -0.1
comp=Z,8.0nm,1.0s,mb4.6
GEC2 **GERESS Array S** 80.81 328 eP P 14 54 46.3 -0.1
GEC2 pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
GERES **GERESS Array B** 80.81 328 P P 14 54 46.3 -0.1
comp=Z,4.5nm,0.8s,mb4.5,baz=35,slow=4.9,SNR=38
GERES LR LR 15 32 16.3
comp=Z,139nm,21.2s,MS4.3,baz=32,slow=37
GERES **GERESS Array B** 80.81 328 P P 14 54 46.3 -0.1
GERES pmax pmax
comp=Z,5.0nm,0.8s
GERES MLR MLR
comp=Z,139nm,21.2s
T19A **Beclabito** 80.86 50 ⇓P P 14 54 47.5 +0.6
baz=81,SNR=13
MVCO **Mesa Verde** 80.92 49 ⇑P P 14 54 47.7 +0.5
baz=81,SNR=7.3
MVCO **Mesa Verde** 80.92 49 eP P 14 54 47.7 +0.5
comp=Z,6.2nm,0.8s,mb4.6
WET **Wettzell** 80.92 328 eP P 14 54 47.3 +0.3
comp=Z,13nm,1.1s,mb4.8
WET **Wettzell** 80.92 328 eP P 14 54 47.3 +0.3
WET pmax pmax
comp=Z,13nm,1.1s,mb4.8
X16A **Lo Mia Camp, P** 80.99 53 ⇓P P 14 54 47.8 +0.1
baz=81,SNR=12
S21A **Coal Bank Pass** 81.03 48 ⇑pP P 14 54 49.6 +1.8
baz=81,SNR=5.8
V18A **Ganado** 81.06 51 ⇓pP P 14 54 49.6 +1.6
baz=81,SNR=8.6
U19A **Dine' College,** 81.11 50 ⇓P P 14 54 48.2 0.0
baz=81,SNR=16
GRA1 **Grafenberg Arr** 81.15 330 eP P 14 54 48.4 +0.2
comp=Z,27nm,0.9s,mb5.2
GRA1 LR LR
comp=Z,100nm,19.4s,MS4.2
GRF **Grafenberg Arr** 81.15 330 eP P 14 54 48.4 +0.2
comp=Z,27nm,0.9s,mb5.2
GRF eL 15 33 44.0
comp=Z,138nm,19.4s
GRF **Grafenberg Arr** 81.15 330 eP P 14 54 48.4 +0.2
GRF pmax pmax
comp=Z,27nm,0.9s,mb5.2
GRF MLR MLR
comp=Z,100nm,19.4s,MS4.2
GRF **Grafenberg Arr** 81.15 330 eP P 14 54 48.4 +0.2
GRF pmax pmax
comp=Z,27nm,0.9s,mb5.2
GRF MLR MLR
comp=Z,100nm,19.4s,MS4.2
ESK **Eskdalemuir** 81.17 340 iP P 14 54 49.3 +1.2
114A **Black Gap (USA** 81.18 55 ⇓P P 14 54 49.1 +0.4
baz=81,SNR=8.5
BUG **Bochum–Univer** 81.22 333 eP P 14 54 48.2 -0.3
comp=Z,16nm,0.7s,mb5.1
R22A **Saguache, Gunn** 81.24 47 ⇓P P 14 54 49.3 +0.5
baz=81
X17A **Forest Lakes** 81.44 53 ⇓P P 14 54 50.6 +0.6
baz=81,SNR=6.9
EYMN **Ely** 81.73 33 eP P 14 54 50.0 -1.3
comp=Z,9.4nm,1.0s,mb4.7
214A **Organ Pipe Nat** 81.74 56 ⇑P P 14 54 51.9 +0.2
baz=82
TNS **Taus Mts** 81.79 331 eP P 14 54 51.5 -0.1
comp=Z,14nm,1.0s,mb4.8
TNS **Taunus Mts** 81.79 331 eP P 14 54 51.5 -0.1
TNS pmax pmax
comp=Z,14nm,1.0s,mb4.8
W19A **Sanders** 81.80 51 ⇓P P 14 54 52.4 +0.5
baz=82,SNR=9.7
Y17A **Roosevelt** 81.84 53 ⇓P P 14 54 52.5 +0.4
baz=82,SNR=5.9
V20A **Brimhall** 81.89 50 ⇓P P 14 54 51.9 -0.4
baz=82
PERS **Pernice** 81.92 326 iP P 14 54 52.6 +0.3
U21A **Nageezi** 81.94 49 ⇑P P 14 54 52.5 -0.1
baz=82,SNR=7.1
T22A **Edith** 81.99 48 ⇓P P 14 54 52.9 0.0
baz=82,SNR=6.7
116A **Eloy** 82.05 54 ⇓P P 14 54 53.8 +0.5
baz=82
RJOB **Jochberg** 82.06 328 eP P 14 54 53.6 +0.6
comp=Z,19nm,0.9s,mb5.0
Y18A **Canyon Day Jun** 82.29 53 ⇓P P 14 54 55.1 +0.6
baz=82,SNR=11
SDCO **Great Sand Dun** 82.29 47 eP P 14 54 55.0 +0.6
comp=Z,3.7nm,1.0s,mb4.3
X19A **St. Johns** 82.31 52 ⇓P P 14 54 53.9 -0.7
baz=82,SNR=19
X19A ⇑pP pP 14 54 56.1 -1.5
baz=82
BEBN **Eben Emael** 82.32 333 P P 14 54 54.1 -0.3
comp=Z,5.9nm,0.9s,mb4.5
W20A **Ramah** 82.32 51 ⇑P P 14 54 55.1 +0.4
baz=82
KBA **Koelnbreinsper** 82.34 327 iP P 14 54 55.7 +1.2
comp=Z,32nm,1.2s,mb5.1,SNR=11
FUR **Furstenfeldbru** 82.34 329 eP P 14 54 54.5 0.0
comp=Z,30nm,0.9s,mb5.2
FUR **Furstenfeldbru** 82.34 329 eP P 14 54 54.5 0.0
FUR pmax pmax
comp=Z,30nm,0.9s,mb5.2
MEM **Membach** 82.36 333 P P 14 54 54.1 -0.5
comp=Z,8.9nm,1.1s,mb4.6
V21A **Milan** 82.38 50 ⇑P P 14 54 54.6 -0.3
baz=82
U22A **Llaves** 82.45 49 ⇑P P 14 54 55.3 0.0
baz=82
216A **Three Points,** 82.58 55 ⇓P P 14 54 56.7 +0.7
baz=82
Y19A **Nutrioso** 82.65 52 ⇑P P 14 54 57.3 +0.9
baz=82
117A **Oracle** 82.65 54 ⇑P P 14 54 56.0 -0.4
baz=82,SNR=5.4
ECSD **EROS Data Cent** 82.66 38 eP P 14 54 55.7 -0.6
comp=Z,9.7nm,0.8s,mb4.9
VISS **Visnje** 82.68 325 iP P 14 54 49.9 -6.5
STU **Stuttgart** 82.69 330 eP P 14 54 56.3 0.0
comp=Z,23nm,0.8s,mb5.3
X20A **Quemado** 82.72 51 ⇑P P 14 54 57.2 +0.5
baz=82,SNR=9.5
V22A **San Miguel Ran** 82.74 49 ⇑P P 14 54 57.0 +0.2
baz=82,SNR=8.4
BCLA **Clavier** 82.77 333 P P 14 54 56.6 -0.1
TUC **Tucson** 82.80 54 eP P 14 54 57.5 +0.3
TUC pmax pmax
comp=Z,7.0nm,1.3s,mb4.5
TUC **Tucson** 82.80 54 eP P 14 54 57.5 +0.3
comp=Z,7.2nm,1.3s,mb4.5
U23A **El Rito** 82.87 49 ⇓P P 14 54 58.0 +0.6
baz=83,SNR=22
JAVS **Javornik** 82.95 326 iP P 14 54 57.2 -0.5
SNF **Seneffe** 83.05 334 P P 14 54 58.1 -0.1
118A **Homack Ranch,** 83.09 53 ⇓P P 14 54 58.9 +0.2
baz=83
RETA **Reutte** 83.09 328⇑iP P 14 54 58.9 +0.5
comp=Z,22nm,0.8s,mb5.2
WLF **Walferdange** 83.09 332 eP P 14 54 58.5 +0.1
comp=Z,7.0nm,1.0s,mb4.7
217A **Green Valley** 83.14 55 ⇓P P 14 54 59.1 +0.2
baz=83,SNR=9.8
GIVF **Givet** 83.20 333⇑iP P 14 54 58.3 -0.6
X21A **Alamocita Cree** 83.22 51 ⇑P P 14 55 00.1 +0.8
baz=83,SNR=14
Y20A **Horse Springs,** 83.22 52 ⇑pP P 14 55 01.2 +1.8
baz=83,SNR=20
T25A **Trinidad** 83.34 47 ⇑P P 14 55 00.1 +0.3
baz=83,SNR=6.5
BFO **Black Forest** 83.38 330 P P 14 55 00.5 +0.6
comp=Z,96nm,0.8s,mb5.9,SNR=6.8
BFO **Black Forest** 83.38 330 eP P 14 54 59.4 -0.5
comp=Z,16nm,0.9s,mb5.0
BFO **Black Forest** 83.38 330 eP P 14 54 59.4 -0.5
BFO pmax pmax
comp=Z,16nm,0.9s,mb5.0
119A **Ashpeak Ranch,** 83.42 53 ⇓P P 14 55 00.2 -0.2
baz=83
BAIF **Baives** 83.45 334⇑iP P 14 54 59.7 -0.5
comp=Z,12nm,0.9s,mb4.6
BAIF **Baives** 83.45 334⇑iP P 14 54 59.7 -0.5
BAIF pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
BAIF **Baives** 83.45 334⇑iP P 14 54 59.7 -0.5
comp=Z,6.1nm,0.9s,mb4.6
FETA **Feichten** 83.48 328⇑iP P 14 55 00.5 +0.1
comp=Z,12nm,0.8s,mb5.0,SNR=9.2
218A **Dragoon** 83.49 54 ⇑P P 14 55 01.7 +0.9
baz=83,SNR=8.7
SCHQ **Schefferville** 83.58 16 P P 14 55 00.1 -0.7
comp=Z,5.9nm,0.7s,mb4.8,baz=16,slow=7.6,SNR=6.4
Y21A **Point of Rocks** 83.58 51 ⇓pP pP 14 55 03.1 -1.1
baz=83,SNR=9.7
DAVA **Damuels** 83.61 329⇓iP P 14 55 01.1 0.0
comp=Z,29nm,1.0s,mb5.4
Z20A **Nine Sixteen R** 83.63 52 ⇓P P 14 55 00.9 -0.6
baz=83,SNR=16
LAZ **Ladron** 83.64 50 eP P 14 55 02.4 +0.9
comp=Z,5.1nm,1.2s,mb4.5
ANMO **Albuquerque** 83.66 50 eP P 14 55 01.7 +0.1
ANMO pmax pmax
comp=Z,2.0nm,1.0s
ANMO **Albuquerque** 83.66 50 eP P 14 55 01.7 +0.1
comp=Z,2.1nm,1.0s,mb4.2
W23A **Werner Place,** 83.70 49 ⇓pP pP 14 55 03.5 -1.3
baz=83,SNR=5.1
CDF **Champ du Feu** 83.71 331⇑iP P 14 55 01.4 -0.2
comp=Z,29nm,1.1s,mb5.0
CDF **Champ du Feu** 83.71 331⇑iP P 14 55 01.4 -0.2
CDF pmax pmax
comp=Z,14nm,1.1s,mb5.0
CDF **Champ du Feu** 83.71 331⇑iP P 14 55 01.4 -0.2
comp=Z,14nm,1.1s,mb5.0
U25A **Circle Dot Ran** 83.86 47 ⇓P P 14 55 01.7 -0.9
baz=84
318A **Bisbee** 83.88 54 ⇓P P 14 55 03.0 +0.2
baz=84,SNR=21
ECH **Echery** 83.92 331 eP P 14 55 01.9 -0.8
ECH pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
ECH **Echery** 83.92 331 eP P 14 55 01.9 -0.7
comp=Z,9.8nm,1.0s,mb4.9
219A **White Tail Can** 83.97 53 ⇓P P 14 55 03.5 +0.3
baz=84,SNR=16
120A **U Bar Ranch, L** 83.99 53 ⇓P P 14 55 03.7 +0.4
baz=84,SNR=6.8
Y22A **Socorro** 84.06 51 ⇓P P 14 55 04.1 +0.5
baz=84,SNR=5.3
Z21A **St. Cloud Mine** 84.06 52 ⇓P P 14 55 04.3 +0.7
baz=84,SNR=18
W24A **Lazy 6 Ranch,** 84.11 49 ⇑P P 14 55 04.6 +0.7
baz=84,SNR=19
BNM **Barren Site** 84.11 50 eP P 14 55 04.3 +0.4
comp=Z,3.0nm,0.8s,mb4.5
V25A **Rancho No Teng** 84.13 48 ⇓P P 14 55 04.6 +0.6
baz=84,SNR=12
U26A **Atchley Ranch,** 84.24 47 ⇓P P 14 55 04.2 -0.4
baz=84
HINF **Hinteralfeld** 84.37 331⇑iP P 14 55 04.4 -0.5
comp=Z,8.8nm,0.9s,mb4.6
HINF **Hinteralfeld** 84.37 331⇑iP P 14 55 04.4 -0.5
HINF pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
HINF **Hinteralfeld** 84.37 331⇑iP P 14 55 04.4 -0.5
comp=Z,4.4nm,0.9s,mb4.6
319A **Douglas** 84.37 54 ⇑P P 14 55 05.4 +0.1
baz=84,SNR=9.0
HAU **Haudompre** 84.40 331⇑iP P 14 55 04.6 -0.5
comp=Z,13nm,0.7s,mb4.9
HAU eMLR MLR
comp=Z,89nm,19.2s,MS3.9
HAU **Haudompre** 84.40 331⇑iP P 14 55 04.6 -0.5
HAU pmax pmax
comp=Z,6.0nm,0.7s,mb4.8
HAU MLR MLR
comp=Z,90nm,19.3s,MS4.2
HAU **Haudompre** 84.40 331⇑iP P 14 55 04.6 -0.5
comp=Z,6.4nm,0.7s,mb4.9
HAU LR LR
comp=Z,90nm,19.3s,MS4.2
MEZF **Maizieres J'vi** 84.47 332 eP P 14 55 05.4 0.0
comp=Z,21nm,0.9s,mb5.0
MEZF **Maizieres J'vi** 84.47 332 eP P 14 55 05.4 0.0

comp=Z,21nm,0.9s,mb5.3
220A Playas Peak, P 84.49 53 ⇑P P 14 55 06.2 +0.4
baz=84,SNR=9.3
121A Cookes Peak, D 84.52 52 ⇑P P 14 55 06.4 +0.4
baz=84,SNR=7.3
Z22A Elephant Butte 84.53 51 ⇑P P 14 55 06.3 +0.3
baz=84,SNR=10
Y23A Lovelace Mesa, 84.61 50 ⇓P P 14 55 06.7 +0.3
baz=84,SNR=16
V26A Tequesquite Ra 84.64 48 ⇓P P 14 55 06.7 +0.2
baz=84
W25A X Bar L Ranch, 84.65 48 ⇑P P 14 55 06.9 +0.3
baz=84,SNR=14
320A Kipp Ranch, An 84.87 54 ⇑P P 14 55 07.4 -0.4
baz=85
Z23A Rita Site, Whi 84.97 51 ⇑P P 14 55 07.9 -0.4
baz=85
Y24A Capitan 84.98 50 ⇑P P 14 55 07.9 -0.4
baz=85,SNR=7.1
X25A Clemmons Ranch 85.02 49 ⇓P P 14 55 08.2 -0.3
baz=85,SNR=7.3
Y25A Mesa, Roswell 85.43 49 ⇑P P 14 55 10.2 -0.3
baz=85,SNR=7.6
Z24A Sheeppen Canyo 85.44 50 ⇑P P 14 55 10.4 -0.2
baz=85
X26A CR and CF Fran 85.50 48 ⇑P P 14 55 10.9 0.0
baz=85,SNR=12
W27A Bowe Ranch, En 85.57 48 ⇓P P 14 55 11.4 +0.2
baz=85,SNR=12
CABF La Chapelle 85.66 331⇑iP P 14 55 11.1 -0.3
comp=Z,16nm,0.8s,mb5.0
CABF La Chapelle 85.66 331⇑iP P 14 55 11.1 -0.3
CABF pmax pmax
comp=Z,8.0nm,0.8s,mb5.0
CABF La Chapelle 85.66 331⇑iP P 14 55 11.1 -0.3
comp=Z,8.0nm,0.8s,mb5.0
SCIA State Center 85.67 37 eP P 14 55 10.8 -0.8
comp=Z,43nm,1.0s,mb5.6
124A Stringfield Ra 85.83 51 ⇓P P 14 55 12.7 +0.1
baz=86,SNR=7.2
X27A F and S Farms, 85.85 48 ⇓P P 14 55 12.4 -0.2
baz=86
Z25A Roswell 85.86 50 ⇓P P 14 55 12.3 -0.4
baz=86,SNR=7.9
PPT Papeete 85.91 116 eLR LR 15 22 22.1
comp=Z,177nm,25.0s
PPT Papeete 85.91 116 P P 14 55 12.2 -0.8
comp=Z,64nm,0.7s,mb6.0,baz=340,slow=16,SNR=3.9
PPT LR LR 15 28 42.8
comp=Z,176nm,20.4s,MS4.5,baz=310,slow=32
LOR Lormes 85.94 332⇑iP P 14 55 12.4 -0.4
comp=Z,49nm,1.0s,mb5.4
LOR eMLR MLR
comp=Z,88nm,18.2s,MS3.9
LOR Lormes 85.94 332⇑iP P 14 55 12.4 -0.4
LOR pmax pmax
comp=Z,24nm,1.0s,mb5.4
LOR MLR MLR
comp=Z,90nm,18.3s,MS4.2
LOR Lormes 85.94 332⇑iP P 14 55 12.4 -0.4
comp=Z,24nm,1.0s,mb5.4
LOR LR LR
comp=Z,90nm,18.3s,MS4.2
Y26A Elida 85.94 49 ⇓P P 14 55 12.6 -0.5
baz=86
FLN La Foliniere 86.14 336⇑iP P 14 55 13.3 -0.5
comp=Z,21nm,0.8s,mb5.1
FLN eMLR MLR
comp=Z,154nm,19.5s,MS4.1
FLN La Foliniere 86.14 336⇑iP P 14 55 13.3 -0.5
FLN pmax pmax
comp=Z,11nm,0.8s,mb5.1
FLN MLR MLR
comp=Z,150nm,19.5s,MS4.4
FLN La Foliniere 86.14 336⇑iP P 14 55 13.3 -0.5
comp=Z,11nm,0.8s,mb5.1
FLN LR LR
comp=Z,150nm,19.5s,MS4.4
LDF La Druitiere 86.17 335⇑iP P 14 55 13.4 -0.5
comp=Z,11nm,0.7s,mb4.9
LDF La Druitiere 86.17 335⇑iP P 14 55 13.4 -0.5
LDF pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
LDF La Druitiere 86.17 335⇑iP P 14 55 13.4 -0.5
comp=Z,5.4nm,0.7s,mb4.9
224A Cornudas Mount 86.22 51 ⇑P P 14 55 14.2 -0.3
baz=86,SNR=8.6
SSF Saint Saulge 86.24 332⇑iP P 14 55 14.0 -0.3
comp=Z,24nm,0.9s,mb5.2
SSF Saint Saulge 86.24 332⇑iP P 14 55 14.0 -0.3
SSF pmax pmax
comp=Z,12nm,0.9s,mb5.1
SSF Saint Saulge 86.24 332⇑iP P 14 55 14.0 -0.3
comp=Z,12nm,0.9s,mb5.1
Z26A Caprock 86.31 49 ⇓P P 14 55 14.4 -0.5
baz=86,SNR=8.3
LPL La Plagne 86.32 330⇑iP P 14 55 14.6 -0.1
comp=Z,36nm,1.1s,mb5.2
LPL La Plagne 86.32 330⇑iP P 14 55 14.6 -0.1
LPL pmax pmax
comp=Z,18nm,1.1s,mb5.2
LPL La Plagne 86.32 330⇑iP P 14 55 14.6 -0.1
comp=Z,18nm,1.1s,mb5.2
LPG La Plagne 86.32 330⇑iP P 14 55 14.8 0.0
comp=Z,22nm,0.8s,mb5.2
LPG La Plagne 86.32 330⇑iP P 14 55 14.8 0.0
LPG pmax pmax
comp=Z,11nm,0.8s,mb5.1
LPG La Plagne 86.32 330⇑iP P 14 55 14.8 0.0
comp=Z,11nm,0.8s,mb5.1
125A Gardner Draw, 86.33 50 ⇑P P 14 55 14.5 -0.6
baz=86,SNR=8.7
Y27A Causey 86.35 49 ⇑P P 14 55 14.4 -0.7
baz=86,SNR=7.1
HYF Humbligny 86.37 333 eP P 14 55 15.1 +0.1
SMF Signal de Mont 86.47 332⇑iP P 14 55 15.1 -0.4
comp=Z,36nm,1.2s,mb5.2
SMF Signal de Mont 86.47 332⇑iP P 14 55 15.1 -0.4
SMF pmax pmax
comp=Z,18nm,1.2s,mb5.2
SMF Signal de Mont 86.47 332⇑iP P 14 55 15.1 -0.4
comp=Z,18nm,1.2s,mb5.2
MSTX Muleshoe 86.52 48 ⇓P P 14 55 15.7 -0.3
baz=86
AVF Avril sur Loir 86.53 332⇑iP P 14 55 15.5 -0.2
comp=Z,64nm,0.9s,mb5.5
AVF Avril sur Loir 86.53 332⇑iP P 14 55 15.5 -0.2
AVF pmax pmax
comp=Z,32nm,0.9s,mb5.5
AVF Avril sur Loir 86.53 332⇑iP P 14 55 15.5 -0.2
comp=Z,32nm,0.9s,mb5.5
CPRX Cap Rock 86.54 50 eP P 14 55 16.1 +0.1
comp=Z,3.1nm,0.8s,mb4.6
GRR Gorron 86.59 336⇑iP P 14 55 15.8 -0.2
comp=Z,54nm,1.0s,mb5.4
GRR Gorron 86.59 336⇑iP P 14 55 15.8 -0.2
GRR pmax pmax
comp=Z,27nm,1.0s,mb5.4
GRR Gorron 86.59 336⇑iP P 14 55 15.8 -0.2
comp=Z,27nm,1.0s,mb5.4
324A Moseley Ranch, 86.68 52 ⇑P P 14 55 15.7 -1.1
baz=86
Z27A Tatum 86.73 49 ⇑P P 14 55 15.8 -1.1
baz=86
GDL2 Guadalupe Moun 86.83 50 eP P 14 55 17.8 +0.3
comp=Z,6.5nm,0.8s,mb4.9
BGF Bois d'Agland 86.91 332⇑iP P 14 55 17.4 -0.2
comp=Z,14nm,0.8s,mb4.9
BGF Bois d'Agland 86.91 332⇑iP P 14 55 17.4 -0.2
BGF pmax pmax
comp=Z,7.0nm,0.8s,mb4.9
BGF Bois d'Agland 86.91 332⇑iP P 14 55 17.4 -0.2
comp=Z,7.2nm,0.8s,mb5.0
MBDF Montbardon 86.95 329⇑iP P 14 55 17.1 -0.8
325A Bean Ranch, Si 87.05 51 ⇓P P 14 55 17.4 -1.2
baz=87,SNR=7.7
TAOE Nuku Hiva Isla 87.08 104 eLR LR 15 22 54.1
comp=Z,209nm,28.7s
ORIF Oris-en-Rattie 87.15 330⇑iP P 14 55 18.3 -0.5
ORIF eMLR MLR
comp=Z,112nm,18.2s,MS4.0
SGMF Saint Gilles 87.25 336⇑iP P 14 55 19.2 0.0
comp=Z,37nm,0.9s,mb5.3
SGMF Saint Gilles 87.25 336⇑iP P 14 55 19.2 0.0
SGMF pmax pmax
comp=Z,19nm,0.9s,mb5.3
SGMF Saint Gilles 87.25 336⇑iP P 14 55 19.2 0.0
comp=Z,19nm,0.9s,mb5.3

TCF Toulx Ste Croi 87.37 333 eP P 14 55 19.7 -0.1
comp=Z,26nm,1.1s,mb5.1
TCF Toulx Ste Croi 87.37 333 eP P 14 55 19.7 -0.1
TCF pmax pmax
comp=Z,13nm,1.1s,mb5.1
TCF Toulx Ste Croi 87.37 333 eP P 14 55 19.7 -0.1
comp=Z,13nm,1.1s,mb5.1
ROSF Rostrenen 87.39 337⇑iP P 14 55 20.0 +0.1
comp=Z,51nm,1.0s,mb5.4
ROSF Rostrenen 87.39 337⇑iP P 14 55 20.0 +0.1
ROSF pmax pmax
comp=Z,26nm,1.0s,mb5.4
ROSF Rostrenen 87.39 337⇑iP P 14 55 20.0 +0.1
comp=Z,26nm,1.0s,mb5.4
SBF Sospel 87.40 328 eP P 14 55 20.2 +0.2
425A Indio Mountain 87.45 52 ⇓P P 14 55 19.4 -1.2
baz=87
VIVF Saint-Julien-l 87.67 330 eP P 14 55 20.9 -0.4
326A Caldwell Ranch 87.69 51 ⇑P P 14 55 20.4 -1.3
baz=87
QUIF Quistinic 87.73 337⇑iP P 14 55 21.4 -0.2
comp=Z,21nm,1.1s,mb5.0
QUIF Quistinic 87.73 337⇑iP P 14 55 21.4 -0.2
QUIF pmax pmax
comp=Z,11nm,1.1s,mb5.0
QUIF Quistinic 87.73 337⇑iP P 14 55 21.4 -0.2
comp=Z,11nm,1.1s,mb5.0
MFF Saint Martin d 87.91 334⇑iP P 14 55 22.5 0.0
comp=Z,24nm,0.9s,mb5.1
MFF Saint Martin d 87.91 334⇑iP P 14 55 22.5 0.0
MFF pmax pmax
comp=Z,12nm,0.9s,mb5.1
MFF Saint Martin d 87.91 334⇑iP P 14 55 22.5 0.0
comp=Z,12nm,0.9s,mb5.1
426A McDonald Obser 88.11 51 ⇓P P 14 55 22.6 -1.1
baz=88
LMR La Mourre 88.22 329⇑iP P 14 55 23.3 -0.6
comp=Z,50nm,1.2s,mb5.3
LMR La Mourre 88.22 329⇑iP P 14 55 23.3 -0.6
LMR pmax pmax
comp=Z,25nm,1.2s,mb5.3
LMR La Mourre 88.22 329⇑iP P 14 55 23.3 -0.6
comp=Z,25nm,1.2s,mb5.3
427A Hayter Ranch, 88.36 51 ⇓P P 14 55 24.1 -0.8
baz=88
RJF Les Rejaudoux 88.46 333⇑iP P 14 55 25.1 0.0
comp=Z,15nm,0.9s,mb4.9
RJF eMLR MLR
comp=Z,111nm,19.5s,MS4.0
RJF Les Rejaudoux 88.46 333⇑iP P 14 55 25.1 0.0
RJF pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
RJF MLR MLR
comp=Z,110nm,19.5s,MS4.3
RJF Les Rejaudoux 88.46 333⇑iP P 14 55 25.1 0.0
comp=Z,7.5nm,0.9s,mb4.9
RJF LR LR
comp=Z,110nm,19.5s,MS4.3
526A Mary Lane Ranc 88.50 52 ⇓P P 14 55 25.4 -0.2
baz=88,SNR=6.6
CAF Calviac 88.59 332 eP P 14 55 26.1 +0.4
comp=Z,22nm,1.0s,mb5.1
CAF Calviac 88.59 332 eP P 14 55 26.1 +0.4
CAF pmax pmax
comp=Z,11nm,1.0s,mb5.1
CAF Calviac 88.59 332 eP P 14 55 26.1 +0.4
comp=Z,11nm,1.0s,mb5.2
LASF Ste Croix 88.64 331 eP P 14 55 26.2 +0.3
527A Woodward Ranch 88.74 51 ⇑P P 14 55 25.7 -1.0
baz=88
626A Big Bend Ranch 88.84 52 ⇑P P 14 55 26.1 -1.1
baz=89
428A Kincaid Ranch, 88.89 50 ⇓P P 14 55 26.4 -0.9
baz=89
LFF La Frestale 89.05 333⇑iP P 14 55 28.1 +0.2
comp=Z,15nm,0.7s,mb5.1
LFF La Frestale 89.05 333⇑iP P 14 55 28.1 +0.2
LFF pmax pmax
comp=Z,8.0nm,0.7s,mb5.2
LFF La Frestale 89.05 333⇑iP P 14 55 28.1 +0.2
comp=Z,7.6nm,0.7s,mb5.1
TXAR Lajitas Array 89.28 52 P P 14 55 29.5 +0.3
comp=Z,2.9nm,0.7s,mb4.7,baz=292,slow=3.4,SNR=44
TXAR Lajitas Array 89.28 52 P P 14 55 29.5 +0.3
TXAR pmax pmax
comp=Z,3.0nm,0.7s
TXAR Lajitas Array 89.28 52 P P 14 55 29.5 +0.3
627A Terlingua Ranc 89.36 52 ⇓P P 14 55 29.0 -0.7
baz=89
MTLF Montolieu 89.89 331⇑iP P 14 55 31.9 +0.1
OLIL Olney 90.56 36 eP P 14 55 35.1 0.0
comp=Z,6.5nm,0.6s,mb5.1
JCT Junction City 90.78 49 eP P 14 55 36.2 0.0
JCT pmax pmax
comp=Z,10.0nm,0.7s,mb5.2
JCT Junction City 90.78 49 eP P 14 55 36.2 0.0
comp=Z,10nm,0.7s,mb5.3
EPF Esparros 90.85 332 eP P 14 55 35.8 -0.5
comp=Z,7.3nm,0.9s,mb4.7
EPF Esparros 90.85 332 eP P 14 55 35.8 -0.5
EPF pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
EPF Esparros 90.85 332 eP P 14 55 35.8 -0.5
comp=Z,3.7nm,0.9s,mb4.7
MIAR Mount Ida 91.18 42 eP P 14 55 37.7 -0.3
MIAR pmax pmax
comp=Z,11nm,0.8s,mb5.2
MIAR Mount Ida 91.18 42 eP P 14 55 37.7 -0.3
comp=Z,10nm,0.8s,mb5.2
ETSF Etsaut 91.29 333⇑iP P 14 55 38.7 +0.4
comp=Z,9.5nm,0.8s,mb4.9
ETSF Etsaut 91.29 333⇑iP P 14 55 38.7 +0.4
ETSF pmax pmax
comp=Z,5.0nm,0.8s,mb4.9
ETSF Etsaut 91.29 333⇑iP P 14 55 38.7 +0.4
comp=Z,4.8nm,0.8s,mb4.9
SJPF Ste Jean 91.34 333 eP P 14 55 39.1 +0.5
ACSO Alum Creek Sta 91.56 32 eP P 14 55 38.3 -1.3
comp=Z,15nm,1.1s,mb5.2
KEST Kesra 93.20 322 LR LR 15 42 37.4
comp=Z,41nm,18.8s,MS3.9,baz=322,slow=39
ESDC Sonseca Array 95.34 333 P P 14 55 56.4 -0.6
comp=Z,0.1nm,0.3s,baz=20,slow=5.5,SNR=4.5
ESDC LR LR 15 43 15.3
comp=Z,85nm,20.6s,MS4.2,baz=25,slow=38
TORD Torodi Ar. Bea 115.63 315 PKP PKPdf 15 01 13.5 -2.1
comp=Z,0.5nm,0.7s,baz=15,slow=0.9,SNR=5.9
DBIC Dimbokro 124.55 317 PKP PKPdf 15 01 31.4 -1.5
comp=Z,9.9nm,1.0s,baz=216,slow=1.9,SNR=5.4
DBIC Dimbokro 124.55 317 PKIKP PKPdf 15 01 31.4 -1.4
DBIC pmax pmax
comp=Z,10.0nm,1.0s
BOSA Boshof 126.47 260 PKP PKPdf 15 01 35.0 -0.9
comp=Z,3.7nm,0.8s,baz=281,slow=4.3,SNR=5.8
BOSA Boshof 126.47 260 PKIKP PKPdf 15 01 35.1 -0.9
BOSA pmax pmax
comp=Z,4.0nm,0.8s
VNA1 Neumayer--Stat 144.46 197 ePKPdf PKPdf 15 02 05.7 -2.3
LPAZ La Paz 146.04 56 PKPbc PKPbc 15 02 13.7 +0.5
comp=Z,20nm,0.9s,baz=334,slow=3.1,SNR=56
LPAZ La Paz 146.04 56 PKP2 PKPbc 15 02 13.7 +0.6
LPAZ pmax pmax
comp=Z,20nm,0.9s
CPUP Villa Florida 160.21 56 PKPab PKPab 15 03 12.4 -0.4
comp=Z,0.3nm,0.3s,baz=250,slow=7.5,SNR=4.0

JMA 14 15:04:01.1,39°.03N×140°.86E,h7km±1km,M1.6,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.29**	**105**	P	Pg	15 04 06.8	0.0
JMK				S	Sg	15 04 10.7	0.0
JRG	**Rokugo**	**0.41**	**334**	P	Pg	15 04 09.2	+0.2
JRG				S	Sg	15 04 15.0	+0.7
JYK	**Kaneyama**	**0.41**	**254**	P	Pg	15 04 09.3	+0.3
JYK				S	Sg	15 04 14.7	+0.4
JOM	**Ohasama**	**0.56**	**37**	P	Pg	15 04 11.5	-0.3
JOM				S	Sg	15 04 19.0	-0.1
JOU	**Okura**	**0.68**	**193**	P	Pg	15 04 14.4	+0.2
JOU				S	Sg	15 04 23.2	+0.2
JIO	**Ouri**	**0.69**	**146**	P	Pg	15 04 14.6	+0.2
JIO				S	Sg	15 04 23.5	+0.2

NIED ***14*** *15:04:00,38°.90N×140°.90E,h5km,Mw3.5 Best double couple: M₀2.24000×10¹⁴ NP1:φs61.00000°,δ48.00000°,λ98.00000°. NP2:φs229.00000°,δ42.00000°,λ81.00000°.*
IDC ***14*** *15:04:41.8±1.6,38°.94N×140°.89E,h0km,mb3.9/3, mb1 4.0/4,mb1mx3.5/26,mbtmp4.0/4,ML3.2/2,Error ellipse: s-maj=33.6km s-min=21.2km az=111.0*
JMA ***14*** *15:04:43.5,38°.92N×140°.88E,h8km±1km,M3.6 Broadband fault plane solution: P waves. NP1: φs45.00000°,δ42.00000°,λ81.00000°. NP2:φs238.00000°, δ48.00000°,λ98.00000°. Principal axes: T Plg83.0000°, Azm206.0000°; N Plg6.0000°, Azm52.0000°; P Plg3.0000°, Azm322.0000°;*
JMA Felt II J1.
ISCJB ***14*** *15:04:43.1±0.6,38°.91N±0°.03×140°.89E±0°.04,h13km±4km, mb4.0/3 Error ellipse: s-maj=5.1km s-min=4.1km az=137.9*
ISC 14 15:04:43.7±0.5,38°.91N±0°.03×140°.89E±0°.03,h4km±5km, n16,σ0.72/27,mb4.0/3,1C-6D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.26**	**81**	⇓P	Pg	15 04 48.8	0.0
JMK				S	Sg	15 04 52.6	+0.4
JYK	**Kaneyama**	**0.41**	**271**	⇓P	Pg	15 04 51.4	-0.3
JYK				S	Sg	15 04 56.8	-0.2
JRG	**Rokugo**	**0.52**	**338**	⇓P	Pg	15 04 53.6	-0.2
JRG				S	Sg	15 05 00.6	0.0
JOU	**Okura**	**0.57**	**198**	⇓P	Pg	15 04 54.8	+0.1
JOU				S	Sg	15 05 02.4	+0.3
JIO	**Ouri**	**0.58**	**142**	⇓P	Pg	15 04 54.6	-0.2
JIO				eS	Sg	15 05 02.6	+0.2
OFUJ	**Ofunato**	**0.63**	**74**	⇓P	Pg	15 04 55.5	-0.3
OFUJ				S	Sg	15 05 04.0	0.0
JOM	**Ohasama**	**0.64**	**29**	P	Pg	15 04 55.7	-0.4
JOM				S	Sg	15 05 04.2	-0.2
JYS	**Shiratake**	**0.94**	**223**	⇑P	Pg	15 05 01.4	-0.4
JYS				S	Sg	15 05 14.0	0.0
MJAR	**Matsushiro Arr**	**3.18**	**223**	Pn	Pn	15 05 35.2	+0.7
	1.3nm,0.3s,baz=337,slow=25,SNR=22						
MJAR				Pg	Pg	15 05 40.4	-4.3
	1.5nm,0.3s,baz=25,slow=14,SNR=18						
MJAR				Lg		15 06 21.6	
	1.4nm,0.3s,baz=53,slow=32,SNR=3.7						
MAT	**Matsushiro**	**3.18**	**223**	P	Pn	15 05 34.8	+0.4
MAT				S	Sn	15 06 18.9	+6.1
ASAJ	**Asahikawa**	**5.36**	**13**	Pn	Pn	15 06 06.1	+1.8
	0.6nm,0.3s,baz=104,slow=28,SNR=7.3						
JHJ	**Hachijo jima 2**	**5.85**	**189**	Pn	Pn	15 06 11.8	+0.7
	3.8nm,0.3s,baz=54,slow=19,SNR=4.1						
JHJ				Sn	Sn	15 07 18.2	-0.4
	5.1nm,0.3s,baz=233,slow=20,SNR=4.1						
KSRS	**Korea Array**	**10.31**	**266**	Pn	Pn	15 07 14.2	+1.9
	0.4nm,0.3s,baz=83,slow=14,SNR=7.8						
KURK	**Kurchatov**	**44.47**	**307**	P	P	15 12 54.8	-0.9
	1.1nm,0.7s,mb3.7,baz=82,slow=8.4,SNR=6.4						
WRA	**Warramunga Arr**	**58.86**	**187**	P	P	15 14 41.9	-1.6
	1.1nm,0.5s,mb4.2,baz=4.4,slow=7.1,SNR=8.2						
ASAR	**Alice Springs**	**62.59**	**187**	P	P	15 15 07.8	-1.0
	0.6nm,0.6s,mb3.9,baz=5.3,slow=4.9,SNR=11						

NEIC 14 15:07:25.6,41°.18S×174°.42E,h40km,ML3.7(WEL),After WEL.,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TCW	**Tory Channel**	**0.11**	**253**	P	Pn	15 07 32.0	-0.3
TCW				S	Sn	15 07 36.6	-0.3
SNZO	**South Karori**	**0.25**	**121**	P	Pn	15 07 33.1	-0.2
SNZO				S	Sn	15 07 38.9	+0.2
WEL	**Wellington**	**0.28**	**112**	P	Pn	15 07 33.5	-0.2
BHW	**Baring Head**	**0.41**	**124**	P	Pn	15 07 34.9	-0.3
BHW				S	Sn	15 07 41.9	+0.1
KIW	**Kapiti Island**	**0.49**	**50**	P	Pn	15 07 35.9	-0.3
CAW	**Cannon Point**	**0.49**	**82**	P	Pn	15 07 36.1	-0.1
MSWZ	**Moikau Station**	**0.67**	**111**	P	Pn	15 07 38.2	-0.4
KHZ	**Kahutara**	**1.40**	**208**	ePn	Pn	15 07 48.1	-0.5

IDC ***14*** *15:19:43.6±0.7,38°.67N×70°.78E,h0km,mb4.0/14, mb1 4.2/20,mb1mx4.1/32,mbtmp4.1/20,ML3.9/6,MS3.4/9, Ms1 3.4/9,ms1mx3.0/36,Error ellipse: s-maj=12.6km s-min=10.1km az=148.0*
NNC ***14*** *15:19:45.4±3.0,39°.05N×70°.28E,h0km,mb4.4,mpv4.5, Error ellipse: s-maj=25.9km s-min=18.4km az=39.0*
MOS ***14*** *15:19:48.8±1.0,39°.01N×70°.88E,h33km,mb4.4/25,Error ellipse: s-maj=8.3km s-min=5.4km az=120.1*
SZGRF ***14*** *15:19:50.7,39°.79N×71°.85E,h33km,mb4.3,Tajikistan*
BJI ***14*** *15:19:51.3,39°.00N×70°.91E,h59km,mB4.7/2,mb4.5/8, ML4.2/3,Ms3.9/3,Ms7 3.8/3*
NEIC ***14*** *15:19:53.0±0.7,38°.89N×70°.94E,h65km±8km,mb4.4/27, Error ellipse: s-maj=7.0km s-min=5.5km az=224.0*
ISC 14 15:19:53.5±0.5,38°.94N±0°.03×70°.93E±0°.05,h68km±5km, n177,σ1.22/201,mb4.2/41,19C-8D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**3.83**	**33**	P	Pn	15 20 50.8	+0.9
	SNR=50						
AML	**Almayashu**	**3.83**	**33**	ePn	Pn	15 20 50.2	+0.4
AML				eSn	Sn	15 21 38.2	+4.6
KSH	**Kashi**	**3.96**	**80**	P	Pn	15 20 48.1	-3.7
KSH				smax			
	comp=N,560nm,0.9s						
KSH				smax			
	comp=E,670nm,1.2s						
KK31	**Karatay Array**	**4.17**	**356**	⇓Pn	Pn	15 20 53.0	-1.6
	comp=E,20nm,0.3s,baz=175,slow=12,SNR=21						
KK31				⇑Sn	Sn	15 21 42.8	+0.7
	comp=E,71nm,0.6s,baz=188,slow=29,SNR=5.7						
KK31				⇓Lg		15 21 56.1	
	comp=E,324nm,0.7s,baz=185,slow=31,SNR=4.9						
UCH	**Uchtor**	**4.27**	**39**	P	Pn	15 20 57.3	+1.3
	SNR=319						
UCH	**Uchtor**	**4.27**	**39**	ePn	Pn	15 20 57.1	+1.1
UCH				eSn	Sn	15 21 49.6	+5.0
EKS2	**Erkin-Say**	**4.30**	**29**	P	Pn	15 20 57.2	+0.8
	SNR=64						
EKS2	**Erkin-Say**	**4.30**	**29**	ePn	Pn	15 20 56.8	+0.3
EKS2				eSn	Sn	15 21 46.7	+1.4
KZA	**Kyzart**	**4.55**	**45**	P	Pn	15 21 01.1	+1.3
	SNR=363						
AAK	**Ala-Archa**	**4.58**	**35**	P	Pn	15 21 01.4	+1.3
	SNR=67						
AAK	**Ala-Archa**	**4.58**	**35**	Pn	Pn	15 21 01.7	+1.5
	comp=E,0.2nm,0.3s,baz=196,slow=8.6,SNR=74						
AAK				Sn	Sn	15 21 59.3	+7.3
	comp=E,0.2nm,0.3s,baz=124,slow=24,SNR=6.9						
AAK				LR	LR	15 23 09.9	
	comp=E,344nm,19.4s,baz=216,slow=42						
AAK	**Ala-Archa**	**4.58**	**35**	PN	Pn	15 21 01.7	+1.5
AAK						15 21 59.3	
AAK				pmax	pmax		
	comp=Z,11nm,0.3s						
AAK				smax			
	comp=N,10.0nm,0.3s						
KBL	**Kabul**	**4.64**	**200**	ePn	Pn	15 20 59.3	-1.8
KBL				eSn	Sn	15 21 56.3	+2.7
FRU	**Bishkek**	**4.79**	**35**	i PN	Pn	15 21 04.0	+0.9
FRU				e		15 21 22.0	
FRU				i S	Sn	15 22 06.0	+8.7
FRU				pmax	pmax		
	comp=Z,240nm,1.6s						
FRU				smax			
	comp=E,600nm,1.6s						
KBK	**Karagaybulak**	**4.81**	**38**	P	Pn	15 21 05.1	+1.8
	SNR=306						
CHMS	**Chumysh**	**4.99**	**34**	P	Pn	15 21 06.3	+0.6
	SNR=56						
USP	**Ospenovka**	**5.10**	**31**	P	Pn	15 21 08.2	+1.0
	SNR=15						
CEP	**Cherat**	**5.17**	**171**	P	Pn	15 21 07.7	-0.5
CEP				S	Sn	15 22 10.0	+3.5
ULHL	**Ulahol**	**5.22**	**49**	P	Pn	15 21 09.8	+0.8
	SNR=70						
TKM2	**Tokmak 2**	**5.32**	**40**	⇑Pn	Pn	15 21 11.4	+1.1
	comp=E,50nm,0.6s						
TKM2				⇑Sn	Sn	15 22 18.7	+8.4
	comp=E,141nm,0.7s						
TKM2	**Tokmak 2**	**5.32**	**40**	P	Pn	15 21 11.4	+1.0

SNR=130
TKM2 Tokmak 2 5.32 40 *e*PN **Pn 15 21 11.2 +0.8**
TKM2 pmax pmax
comp=Z,67nm,0.5s
TKM2 Tokmak 2 5.32 40 *e*Pn **Pn 15 21 11.2 +0.8**
comp=Z,67nm,0.5s
CHCP Chirah Chowk 5.60 160 P **Pn 15 21 14.5 +0.4**
AAA Alma-Ata 6.28 44 *i* PN **Pn 15 21 25.0 +1.6**
AAA pmax pmax
comp=Z,100nm,1.6s
AAA MLR MLR
comp=Z,1μm,9.0s
THN Thein Dam 7.57 148 *e*PKP **Pn 15 21 40.0 -1.1**
THN *e*S **Sn 15 23 15.0 +10**
MK31 Makanchi Array 11.45 43 Pn **Pn 15 22 34.0 0.0**
comp=Z,19nm,0.9s,baz=218,slow=9.2,SNR=92
MK31 ⇑Lg 15 25 51.1
comp=Z,10nm,0.8s
MK31 Makanchi Array 11.45 43 *e*Pn **Pn 15 22 33.7 -0.2**
MKAR Makanchi Array 11.45 43 Pn **Pn 15 22 32.7 -1.3**
comp=Z,0.4nm,0.3s,baz=232,slow=7.4,SNR=81
MKAR Lg 15 25 57.8
comp=Z,0.2nm,0.3s,baz=217,slow=23,SNR=3.6
MKAR Makanchi Array 11.45 43 Pn **Pn 15 22 32.7 -1.3**
MKAR Lg 15 25 57.8
KURBB Kurchatov Arra 12.86 22 ⇑Pn **Pn 15 22 48.6 -4.6**
comp=Z,1.0nm,1.0s
KURBB Lg 15 26 38.5
KURK Kurchatov 12.97 22 ⇑Pn **Pn 15 22 51.4 -3.3**
comp=Z,5.2nm,1.1s
KURK Lg 15 26 40.1
KURK Kurchatov 12.97 22 Pn **Pn 15 22 48.5 -6.2**
comp=Z,0.1nm,0.3s,baz=214,slow=12,SNR=8.2
KURK Sn **Sn 15 25 14.8 -2.3**
comp=Z,0.1nm,0.3s,baz=208,slow=23,SNR=3.4
KURK LR LR 15 28 12.6
comp=Z,67nm,19.5s,baz=190,slow=39
KURK Kurchatov 12.97 22⇑*e*P **Pn 15 22 50.6 -4.1**
KURK pmax pmax
comp=Z,5.0nm,1.0s
KURK Kurchatov 12.97 22 *e*Pn **Pn 15 22 50.2 -4.5**
comp=Z,5.0nm,0.9s
KURK *e*Sn **Sn 15 25 27.6 +10**
AB31 Akbulak array 12.97 326 Pn **Pn 15 22 47.1 -7.6**
comp=Z,17nm,0.6s,baz=144,slow=11,SNR=280
AB31 ⇑Sn **Sn 15 25 03.7 -13**
comp=Z,15nm,0.6s,baz=148,slow=23,SNR=11
ABKAR Akbulak array 12.97 326 *e*Pn **Pn 15 22 46.7 -8.0**
comp=Z,26nm,0.6s
ABKAR *e*Sn **Sn 15 25 02.8 -14**
VOSK Vostochnaya 13.79 0 ⇑Pn **Pn 15 23 02.9 -2.7**
comp=Z,9.0nm,1.1s
VOSK ⇑Sn **Sn 15 25 29.1 -7.9**
comp=Z,20nm,0.9s
VOSK ⇑Lg 15 27 01.6
comp=Z,119nm,2.2s
ZRNK Zerenda 14.08 355 ⇓Pn **Pn 15 23 04.8 -4.6**
comp=Z,4.0nm,0.6s
ZRNK ⇓Sn **Sn 15 25 37.5 -6.5**
comp=Z,12nm,1.2s
BVA0 Borovoye Array 14.10 359 ⇓Pn **Pn 15 23 06.8 -2.9**
comp=Z,0.6nm,0.7s,baz=165,slow=12,SNR=38
BVA0 ⇓Sn **Sn 15 25 39.6 -4.7**
comp=Z,0.5nm,0.9s,baz=168,slow=19,SNR=6.2
BVAR Borovoye Array 14.10 359 Pn **Pn 15 23 05.9 -3.8**
comp=Z,0.6nm,0.3s,baz=164,slow=12,SNR=15
BVAR Sn **Sn 15 25 39.1 -5.3**
comp=Z,0.6nm,0.3s,baz=176,slow=27,SNR=6.0
BVAR Borovoye Array 14.10 359 P **Pn 15 23 05.9 -3.7**
BVAR 15 25 39.1
BVAR pmax pmax
comp=Z,1.0nm,0.3s
BVAR smax
comp=N,1.0nm,0.3s
BRVK Borovoye 14.13 358⇑*e*P **Pn 15 23 07.7 -2.4**
BRVK pmax pmax
comp=Z,8.0nm,1.2s
BRVK Borovoye 14.13 358 *e*Pn **Pn 15 23 05.0 -5.1**
comp=Z,13nm,1.0s
AKTK Aktyubinsk 14.69 326 Pn **Pn 15 23 10.6 -6.8**
AKTK Sn **Sn 15 25 51.9 -6.8**
AKTK LR LR 15 29 27.2
AKTO Aktyubinsk 14.69 326 ⇑Pn **Pn 15 23 10.5 -6.9**
comp=Z,4.1nm,0.8s
AKTO ⇑Sn **Sn 15 25 49.4 -9.3**
comp=Z,17nm,1.2s
AKTO Aktyubinsk 14.69 326 Pn **Pn 15 23 10.6 -6.8**
comp=Z,1.1nm,0.3s,baz=136,slow=14,SNR=22
AKTO Sn **Sn 15 25 51.9 -6.8**
comp=Z,1.3nm,0.3s,baz=330,slow=24,SNR=8.0
AKTO LR LR 15 29 27.2
comp=Z,141nm,21.4s,baz=137,slow=39
AKTO Aktyubinsk 14.69 326 P **Pn 15 23 10.6 -6.7**
AKTO 15 25 51.9
AKTO pmax pmax
comp=Z,1.0nm,0.3s
AKTO smax
comp=N,1.0nm,0.3s
AKTO MLR MLR
comp=Z,141nm,21.4s
KKN Kakani 16.33 129 *e*P **Pn 15 23 39.1 +0.6**
comp=Z,17nm,0.5s
KKN Kakani 16.33 129 *e*P **Pn 15 23 39.1 +0.6**
KKN pmax pmax
comp=Z,17nm,0.5s
DMN Daman 16.36 129 *e*P **Pn 15 23 37.9 -0.9**
comp=Z,38nm,0.7s
PKIN Phulchoki 16.55 129 *e*P **Pn 15 23 39.7 -1.6**
comp=Z,40nm,0.7s
PKI Pulchoki 16.57 129 *e*P **Pn 15 23 39.5 -1.9**
comp=Z,22nm,0.7s
PKI Pulchoki 16.57 129 *e*P **Pn 15 23 39.7 -1.7**
PKI pmax pmax
comp=Z,40nm,0.7s
PKI Pulchoki 16.57 129 *e*P **Pn 15 23 39.7 -1.7**
comp=Z,40nm,0.7s
GUN Gumba 16.61 127 *e*P **Pn 15 23 43.3 +1.3**
comp=Z,15nm,0.4s
JIRN Jiri 16.98 127 *e*P **Pn 15 23 45.0 -1.6**
comp=Z,25nm,0.4s
ZAA0 Zalesovo Array 17.75 28 *e*Pn **Pn 15 23 53.5 -2.3**
ZAA0 Sn **Sn 15 27 12.3 -0.6**
ZALV Zalesovo Beam 17.75 28 P **Pn 15 23 54.0 -1.9**
comp=Z,0.6nm,0.3s,baz=228,slow=12,SNR=42
ZALV LR LR 15 31 11.0
comp=Z,68nm,18.5s,baz=56,slow=38
ZALV Zalesovo Beam 17.75 28 P **Pn 15 23 54.0 -1.8**
ZALV pmax pmax
comp=Z,1.0nm,0.3s
ZALV MLR MLR
comp=Z,68nm,18.5s
ZALV Zalesovo Beam 17.75 28 P **Pn 15 23 54.0 -1.9**
ZALV LR LR 15 31 11.0
NVS Novosibirsk 17.95 24 *e*P **Pn 15 23 55.9 -2.3**
NVS pmax pmax
comp=E,6.0nm,1.3s
NVS pmax pmax
comp=Z,13nm,1.3s
NVS pmax pmax
comp=N,17nm,1.7s
MAK Makhachkala 18.13 290 *e*P **Pn 15 23 53.5 -6.9**
MAK MLR MLR
comp=Z,439nm,14.0s
LSA Lhasa 19.05 113 P **Pn 15 24 11.8 +0.2**
LSA Lhasa 19.05 113 *e*P **Pn 15 24 11.8 +0.2**
LSA pmax pmax
comp=Z,4.0nm,0.3s
LSA Lhasa 19.05 113 *e*P **Pn 15 24 11.8 +0.3**
comp=Z,3.6nm,0.3s
SVE Sverdlovsk 19.14 343⇓*e*P **Pn 15 24 10.0 -2.5**
SVE *e*S **S 15 27 31.1 -13**
SVE pmax pmax
comp=Z,15nm,1.0s
SVE MLR MLR
comp=Z,177nm,9.0s
ARU Arti 19.33 339*c i*P **Pn 15 24 11.3 -3.4**
ARU S **S 15 27 40.2 -7.6**
ARU pmax pmax
comp=Z,7.0nm,0.8s
ARU Arti 19.33 339 *e*P **Pn 15 24 10.9 -3.7**
comp=Z,5.5nm,0.6s
ARU *e*Sn **Sn 15 27 37.5 -13**
GNI Garni 20.21 282 P **P 15 24 19.9 -2.8**
comp=Z,4.3nm,0.4s,baz=332,slow=19,SNR=3.5
GNI Garni 20.21 282*ce*P **P 15 24 22.2 -0.5**
GNI pmax pmax
comp=Z,15nm,1.2s
GNI Garni 20.21 282 P **P 15 24 21.4 -1.3**
comp=Z,8.6nm,0.8s
ZEI Tsey 20.76 289 *e*P **P 15 24 28.8 +0.1**
ZEI pmax pmax
comp=Z,6.0nm,0.5s
ONI Oni 21.09 289 P **P 15 24 30.2 -2.0**
GOF Gofitskoye 21.55 295 *e*P pP 15 24 50.0 -1.4
GOF pmax pmax
comp=Z,90nm,1.0s,mb5.0
KIV Kislovodsk 21.70 292 *e*P **P 15 24 39.5 +0.8**
KIV *i* 15 25 00.3
KIV *i* 15 28 38.2
KIV pmax pmax
comp=Z,42nm,1.0s,mb4.7
KIV MLR MLR
comp=Z,100nm,17.0s
KIV Kislovodsk 21.70 292 *e*P **P 15 24 39.5 +0.8**
comp=Z,28nm,0.8s,mb4.6
GTA Gaotai 22.37 80 *e*P **P 15 24 47.0 +1.2**
GTA sS sS 15 29 08.1 -3.6
GTA pmax pmax
comp=Z,3.0nm,0.8s,mb3.7
GTA pmax pmax
comp=Z,120nm,3.5s
GTA LR LR
comp=N,130nm,11.6s
GTA LR LR
comp=E,140nm,13.1s
GTA LR LR
comp=Z,160nm,10.4s
SOKR Solikamsk 22.52 341*c i*P **P 15 24 49.2 +1.9**
SOKR pmax pmax
comp=Z,10.0nm,0.8s,mb4.2
SOKR MLR MLR
comp=Z,120nm,14.0s
VRHR Novokhopersk 23.84 310 *e*P **P 15 25 03.2 +3.0**
VRHR pmax pmax
comp=N,30nm,0.7s
VRHR pmax pmax
comp=Z,30nm,0.7s,mb4.7
VRHR pmax pmax
comp=E,80nm,1.4s
VSR Storozhevoye 25.35 309 *e*P **P 15 25 12.9 -1.0**
VSR pmax pmax
comp=Z,6.0nm,0.5s,mb4.3
VSR pmax pmax
comp=N,10.0nm,1.2s
VSR pmax pmax
comp=E,10.0nm,1.0s
ZAK Zakamensk 25.50 53 *e*P **P 15 25 16.5 +1.2**
ZAK pmax pmax
comp=Z,3.0nm,1.1s,mb3.6
ANN Anapa 25.50 294 *e*P **P 15 25 15.3 0.0**
ANN pmax pmax
comp=Z,36nm,1.0s,mb4.8
LZH Lanzhou 26.19 86 *e*P **P 15 25 20.0 -1.7**
LZH pmax pmax
comp=Z,17nm,1.4s,mb4.3
SONM Songino Array 27.07 59 P **P 15 25 30.1 +0.7**
comp=Z,1.3nm,1.1s,mb3.4,baz=260,slow=9.5,SNR=5.9
SONM LR LR 15 37 22.9
comp=Z,110nm,20.2s,baz=154,slow=39
SONM Songino Array 27.07 59 P **P 15 25 30.1 +0.7**
SONM pmax pmax
comp=Z,1.0nm,1.1s
SONM MLR MLR
comp=Z,110nm,20.2s
OBN Obninsk 28.09 316 *e*P **P 15 25 42.0 +3.5**
OBN *i* 15 26 26.1
OBN pmax pmax
comp=Z,7.0nm,1.0s,mb4.2
BR131 Keskin Array S 28.72 284 *e*P **P 15 25 42.3 -1.9**
comp=Z,1.4nm,0.6s,mb3.8
BRTR Keskin Array B 28.72 284 P **P 15 25 42.8 -1.5**
comp=Z,3.2nm,0.9s,mb4.0,baz=96,slow=6.3,SNR=11
BRTR Keskin Array B 28.72 284 P **P 15 25 42.8 -1.5**
BRTR pmax pmax
comp=Z,3.0nm,0.9s
AKASG Malin Array Be 31.42 306 P **P 15 26 05.7 -2.3**
comp=Z,1.1nm,0.5s,mb3.8,baz=77,slow=7.8,SNR=6.6
AKASG Malin Array Be 31.42 306 P **P 15 26 05.7 -2.3**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
CMAR Chiang Mai Arr 31.74 122 P **P 15 26 09.4 -1.7**
comp=Z,0.4nm,0.6s,mb3.3,baz=312,slow=8.3,SNR=3.2
CMAR LR LR 15 40 40.1
comp=Z,38nm,20.9s,baz=175,slow=40
FINES FINESS Array B 35.45 324 P **P 15 26 42.4 -0.5**
comp=Z,1.8nm,0.7s,mb4.0,baz=116,slow=9.4,SNR=11
FINES LR LR 15 41 51.1
comp=Z,112nm,18.4s,baz=169,slow=37
FINES FINESS Array B 35.45 324 P **P 15 26 42.4 -0.5**
FINES pmax pmax
comp=Z,2.0nm,0.7s
FINES MLR MLR
comp=Z,113nm,18.5s
FINES FINESS Array B 35.45 324 P **P 15 26 42.4 -0.5**
FINES LR LR 15 41 51.1
KOLS Kolonicke sedl 35.88 302 *e*P **P 15 26 48.3 +1.6**
KOLS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
KOLS Kolonicke sedl 35.88 302 *e*P **P 15 26 48.3 +1.6**
comp=Z,2.7nm,0.9s,mb4.2
KOLS Kolonicke sedl 35.88 302 *e*P **P 15 26 48.2 +1.5**
WHN Wuhan 36.37 90 P **P 15 26 45.8 -5.4**
CRVS Cervenica-Dubn 36.41 302 *e*P **P 15 26 53.1 +1.8**
CRVS pmax pmax
comp=Z,3.0nm,1.4s,mb4.0
CRVS Cervenica-Dubn 36.41 302 *e*P **P 15 26 53.1 +1.8**
comp=Z,3.2nm,1.4s,mb4.1
CRVS Cervenica-Dubn 36.41 302 *e*P **P 15 26 53.1 +1.8**
STHS Stebnicka Huta 36.53 303 *e*P **P 15 26 53.2 +1.0**
STHS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
STHS Stebnicka Huta 36.53 303 *e*P **P 15 26 53.2 +1.0**
comp=Z,2.5nm,0.9s,mb4.1
STHS Stebnicka Huta 36.53 303 *e*P **P 15 26 53.2 +1.0**
OJC Ojcow 37.43 305 *e*P **P 15 26 57.3 -2.6**
VYHS Vyhne 38.18 302 *e*P **P 15 27 07.3 +1.1**
VYHS pmax pmax
comp=Z,5.0nm,1.8s,mb4.0
VYHS Vyhne 38.18 302 *e*P **P 15 27 07.3 +1.1**
comp=Z,4.9nm,1.8s,mb4.0
VYHS Vyhne 38.18 302 *e*P **P 15 27 07.3 +1.1**
ARCES ARCESS Array B 38.88 336 P **P 15 27 11.7 -0.1**
comp=Z,1.2nm,0.6s,mb3.9,baz=110,slow=8.2,SNR=13
ARCES LR LR 15 44 24.8
comp=Z,151nm,19.6s,baz=303,slow=38
ARCES ARCESS Array B 38.88 336 P **P 15 27 11.7 -0.1**
ARCES pmax pmax
comp=Z,1.0nm,0.6s
ARCES MLR MLR
comp=Z,151nm,19.6s
GERES GERESS Array B 41.51 303 P **P 15 27 34.4 +0.5**
comp=Z,0.7nm,0.6s,mb3.6,baz=87,slow=6.8,SNR=8.0
GERES GERESS Array B 41.51 303 P **P 15 27 34.4 +0.6**
GERES pmax pmax
comp=Z,1.0nm,0.6s
NB2 NORSAR Subarra 42.42 321 P **P 15 27 39.2 -1.9**
comp=Z,3.6nm,0.8s,mb4.2,baz=93,slow=8.6
NOA NORSAR Array B 42.42 321 P **P 15 27 41.2 +0.2**
comp=Z,3.4nm,0.8s,mb4.1,baz=94,slow=8.2,SNR=8.8
NOA LR LR 15 45 58.1
comp=Z,52nm,19.3s,baz=90,slow=37
NOA NORSAR Array B 42.42 321 P **P 15 27 41.3 +0.2**
NOA pmax pmax
comp=Z,3.0nm,0.8s
NOA MLR MLR
comp=Z,52nm,19.3s
GRA1 Grafenberg Arr 42.99 305 *e*P **P 15 27 46.9 +1.1**
comp=Z,7.0nm,1.2s,mb4.3
GRF Grafenberg Arr 42.99 305 *e*P **P 15 27 46.9 +1.1**
comp=Z,7.0nm,1.2s,mb4.3
GRF Grafenberg Arr 42.99 305 *e*P **P 15 27 46.9 +1.1**
GRF pmax pmax
comp=Z,7.0nm,1.2s,mb4.3
GRF Grafenberg Arr 42.99 305 *e*P **P 15 27 46.9 +1.1**
GRF pmax pmax
comp=Z,7.0nm,1.2s,mb4.3
TIXI Tiksi 43.55 23 *e*P **P 15 27 50.0 0.0**
TIXI pmax pmax
comp=Z,12nm,0.8s,mb4.7
TIXI Tiksi 43.55 23 *e*P **P 15 27 50.0 0.0**
comp=Z,12nm,0.8s,mb4.7
CDF Champ du Feu 45.78 304 *e*P **P 15 28 09.0 +0.9**
HINF Hinteralfeld 46.19 303 *e*P **P 15 28 11.2 -0.2**
comp=Z,2.5nm,0.5s,mb3.9
HINF Hinteralfeld 46.19 303 *e*P **P 15 28 11.2 -0.2**
HINF pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
HINF Hinteralfeld 46.19 303 *e*P **P 15 28 11.2 -0.2**
comp=Z,1.3nm,0.5s,mb3.9
HAU Haudompre 46.48 303 *e*P **P 15 28 13.5 -0.1**
SBF Sospel 46.84 297 *e*P **P 15 28 16.8 +0.3**
LPG La Plagne 46.85 300 *e*P **P 15 28 17.9 +1.3**
LPL La Plagne 46.86 300 *e*P **P 15 28 16.8 +0.2**
comp=Z,8.7nm,0.6s,mb4.3
LPL La Plagne 46.86 300 *e*P **P 15 28 16.8 +0.2**
LPL pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
LPL La Plagne 46.86 300 *e*P **P 15 28 16.8 +0.2**
comp=Z,4.3nm,0.6s,mb4.4
CABF La Chapelle 47.00 301 *e*P **P 15 28 18.7 +1.0**
comp=Z,9.2nm,0.8s,mb4.2
CABF La Chapelle 47.00 301 *e*P **P 15 28 18.7 +1.0**
CABF pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
CABF La Chapelle 47.00 301 *e*P **P 15 28 18.7 +1.0**
comp=Z,4.6nm,0.8s,mb4.3
MBDF Montbardon 47.05 299 *e*P **P 15 28 17.9 -0.2**
MEZF Maizieres J'vi 47.20 304 *e*P **P 15 28 19.7 +0.5**
BAIF Baives 47.37 306 *e*P **P 15 28 21.3 +0.8**
FRF La Foret Royal 47.48 297 *e*P **P 15 28 21.4 -0.1**
SMRF Simiane la Rot 48.09 298 *e*P **P 15 28 26.3 +0.1**
comp=Z,22nm,1.1s,mb4.6
SMRF Simiane la Rot 48.09 298 *e*P **P 15 28 26.3 +0.1**
comp=Z,22nm,1.1s,mb4.9
LOR Lormes 48.30 303 *e*P **P 15 28 28.3 +0.6**
VIVF Saint-Julien-l 48.44 300 *e*P **P 15 28 29.5 +0.6**
SMF Signal de Mont 48.48 302 *e*P **P 15 28 29.0 -0.1**
SSF Saint Saulge 48.58 303 *e*P **P 15 28 30.4 +0.5**
AVF Avril sur Loir 48.76 302 *e*P **P 15 28 31.2 -0.1**
comp=Z,8.7nm,0.8s,mb4.4
AVF Avril sur Loir 48.76 302 *e*P **P 15 28 31.2 -0.1**
AVF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
AVF Avril sur Loir 48.76 302 *e*P **P 15 28 31.2 -0.1**
comp=Z,4.3nm,0.8s,mb4.4
LASF Ste Croix 49.24 299 *e*P **P 15 28 35.5 +0.5**
comp=Z,17nm,1.1s,mb4.6
TCF Toulx Ste Croi 49.66 302 *e*P **P 15 28 38.4 +0.2**
comp=Z,17nm,1.0s,mb4.6
TCF Toulx Ste Croi 49.66 302 *e*P **P 15 28 38.4 +0.2**
TCF pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
TCF Toulx Ste Croi 49.66 302 *e*P **P 15 28 38.4 +0.2**
comp=Z,8.3nm,1.0s,mb4.6
CAF Calviac 50.18 300 *e*P **P 15 28 42.8 +0.6**
LDF La Druitiere 50.49 306 *e*P **P 15 28 45.4 +1.0**
comp=Z,16nm,1.1s,mb4.6
LDF La Druitiere 50.49 306 *e*P **P 15 28 45.4 +1.0**
LDF pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
LDF La Druitiere 50.49 306 *e*P **P 15 28 45.4 +1.0**
comp=Z,7.9nm,1.1s,mb4.6
MTLF Montolieu 50.60 298 *e*P **P 15 28 45.6 +0.2**
FLN La Foliniere 50.67 306 *e*P **P 15 28 45.9 +0.2**
GRR Gorron 51.02 305 *e*P **P 15 28 48.7 +0.3**
LFF La Frestale 51.07 301 *e*P **P 15 28 49.2 +0.4**
MFF Saint Martin d 51.11 303 *e*P **P 15 28 49.8 +0.7**
SGMF Saint Gilles 52.14 306 *e*P **P 15 28 57.5 +0.8**
ETSF Etsaut 52.66 299 *e*P **P 15 29 01.1 +0.4**
ESDC Sonseca Array 56.30 296 P **P 15 29 26.1 -1.0**
comp=Z,1.1nm,0.5s,mb4.1,baz=56,slow=7.3,SNR=12
BILL Bilibino 56.45 27*d i*P **P 15 29 28.9 +1.1**
BILL pmax pmax
comp=Z,4.0nm,1.2s,mb4.3
BILL MLR MLR
comp=Z,100nm,19.0s
SUMG Summit 58.74 341 *e*P **P 15 29 43.0 -0.8**
comp=Z,17nm,1.3s,mb4.9
TORD Torodi Ar. Bea 65.74 267 P **P 15 30 29.3 -2.1**
comp=Z,1.1nm,0.8s,mb3.8,baz=50,slow=6.1,SNR=7.2
COLD Coldfoot 69.65 16 *e*P **P 15 30 55.7 +0.5**
comp=Z,2.3nm,0.9s,mb4.0
INK Inuvik 71.51 9 *e*P **P 15 31 06.1 -0.4**
INK pmax pmax
comp=Z,3.0nm,1.3s
INK Inuvik 71.51 9 *e*P **P 15 31 06.0 -0.5**
comp=Z,3.0nm,1.3s,mb4.0
KDAK Kodiak Island 76.97 22*ce*P **P 15 31 40.4 +2.0**
YKA Yellowknife Ar 78.82 3 P **P 15 31 47.6 -0.9**
comp=Z,1.2nm,0.7s,mb3.8,baz=349,slow=5.8,SNR=4.7
WRA Warramunga Arr 83.33 122 P **P 15 32 12.3 -0.8**
comp=Z,1.1nm,0.7s,mb3.8,baz=326,slow=4.9,SNR=6.2
WRA Warramunga Arr 83.33 122 P **P 15 32 12.4 -0.7**
WRA pmax pmax
comp=Z,1.0nm,0.7s
ASAR Alice Springs 85.70 125 P **P 15 32 24.9 0.0**
comp=Z,0.4nm,0.7s,mb3.5,baz=314,slow=5.0,SNR=7.1
FFC Flin Flon 86.51 356*ce*P **P 15 32 32.9 +4.3**

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*ISCJB **14** 15:23:37.7±0.8, 38°.86N±0°.08×140°.84E±0°.05, h15km±9km, mb3.5/2, Error ellipse: s-maj=14.3km s-min=6.5km az=176.4*
*JMA **14** 15:23:38.2, 38°.85N×140°.82E, h7km±1km, M3.1*
*IDC **14** 15:23:38.4±2.8, 38°.67N×140°.95E, h0km, mb3.3/2, mb1 3.5/3, mb1mx3.2/25, mbtmp3.3/3, ML2.7/2, Error ellipse: s-maj=60.1km s-min=25.1km az=152.0*
ISC 14 15:23:38.4±0.8, 38°.83N±0°.05×140°.83E±0°.05, h3km±7km, n10, σ0°81/14, mb3.5/2, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.33**	**68**	S	**Sg**	**15 23 49.3**	**+0.3**
JYK	**Kaneyama**	**0.38**	**284**	P	**Pg**	**15 23 45.6**	**0.0**
JYK				S	**Sg**	**15 23 50.5**	**0.0**
JOU	**Okura**	**0.48**	**196**	P	**Pg**	**15 23 47.9**	**+0.4**
JOU				S	**Sg**	**15 23 54.5**	**+0.8**
JIO	**Ouri**	**0.55**	**132**	P	**Pg**	**15 23 48.7**	**-0.2**
JYS	**Shirataka**	**0.85**	**225**	P	**Pg**	**15 23 54.5**	**-0.2**
JYS				S	**Sg**	**15 24 06.0**	**+0.3**
JYA	**Atsumi**	**0.90**	**255**	P	**Pg**	**15 23 55.3**	**-0.4**
MJAR	**Matsushiro Arr**	**3.09**	**223**	Pn	**Pn**	**15 24 28.1**	**+0.1**
	0.4nm,0.3s,baz=30,slow=13,SNR=5.3						
MJAR				Pg	**Pg**	**15 24 34.8**	**-2.7**
	0.8nm,0.3s,baz=28,slow=17,SNR=12						
MJAR				Lg		15 25 13.8	
	0.6nm,0.3s,baz=165,slow=15,SNR=4.2						
KSRS	**Korea Array**	**10.26**	**266**	Pn	**Pn**	**15 26 08.2**	**+1.8**
	0.1nm,0.3s,baz=77,slow=15,SNR=4.1						
WRA	**Warramunga Arr**	**58.77**	**187**	P	**P**	**15 33 37.1**	**-0.6**
	0.3nm,0.3s,mb3.7,baz=1.8,slow=7.4,SNR=5.2						
ASAR	**Alice Springs**	**62.50**	**187**	P	**P**	**15 34 02.6**	**-0.5**
	0.2nm,0.7s,mb3.4,baz=1.2,slow=4.2,SNR=2.9						

IDC 14 15:24:44.1±2.9, 21°.63N×144°.40E, h126km±24km, mb3.5/12, mb1 3.6/13, mb1mx3.4/27, mbtmp3.5/13, Error ellipse: s-maj=37.2km s-min=15.0km az=80.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.81**	**340**	P	Pn	15 26 07.1	-0.8
	1.5nm,0.3s,baz=237,slow=11,SNR=2.1						
CBIJ				S	Sn	15 27 13.7	+0.3
	6.1nm,0.3s,baz=270,slow=22,SNR=9.1						
KSRS	**Korea Array**	**21.26**	**322**	P	P	15 29 21.9	+1.6
	1.3nm,0.6s,baz=145,slow=9.1,SNR=9.7						
SONM	**Songino Array**	**40.12**	**320**	P	P	15 32 08.8	+1.5
	0.3nm,0.5s,baz=104,slow=6.1,SNR=3.0						
WRA	**Warramunga Arr**	**42.47**	**194**	P	P	15 32 26.9	+0.1
	0.5nm,0.4s,baz=17,slow=9.1,SNR=8.2						
ASAR	**Alice Springs**	**46.16**	**193**	P	P	15 32 55.9	-0.2
	0.2nm,0.7s,baz=24,slow=7.4,SNR=3.9						
ZALV	**Zalesovo Beam**	**54.97**	**321**	P	P	15 34 01.4	-0.5
	0.7nm,0.5s,baz=104,slow=6.1,SNR=3.3						
MKAR	**Makanchi Array**	**55.58**	**313**	P	P	15 34 06.9	+0.4
	0.3nm,0.3s,baz=79,slow=13,SNR=5.6						
KURK	**Kurchatov**	**58.30**	**317**	P	P	15 34 25.8	+0.3
	2.4nm,0.4s,baz=91,slow=7.9,SNR=8.1						
BVAR	**Borovoye Array**	**63.46**	**320**	P	P	15 35 00.5	+0.1
	2.5nm,0.4s,baz=94,slow=7.2,SNR=22						
AKTO	**Aktyubinsk**	**71.38**	**318**	P	P	15 35 49.5	-0.8
	0.6nm,0.6s,baz=67,slow=7.7,SNR=3.9						
ARCES	**ARCESS Array B**	**79.35**	**342**	P	P	15 36 35.5	0.0
	1.3nm,0.8s,baz=53,slow=10,SNR=3.4						
NVAR	**Mina Array Bea**	**82.30**	**52**	P	P	15 36 53.2	+1.4

0.2nm,0.5s,baz=245,slow=5.9,SNR=3.8
FINES **FINESS Array B** 83.73 335 P P 15 36 57.8 -0.9
1.7nm,0.4s,baz=61,slow=4.4,SNR=28

IDC 14 15:53:49.3±29.0, 22°07S×173°04W, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.8/19, mbtmp3.9/4, Error ellipse: s-maj=531.9km s-min=162.1km az=76.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	37.95	265	P	P	16 01 09.2	+0.3
	1.0nm,0.3s,baz=108,slow=6.4,SNR=3.2						
STKA	**Stephens Creek**	41.34	246	P	P	16 01 37.0	0.0
	1.3nm,0.9s,baz=92,slow=14,SNR=4.5						
ASAR	**Alice Springs**	48.68	257	P	P	16 02 35.5	0.0
	2.0nm,0.9s,baz=93,slow=7.8,SNR=17						
WRA	**Warramunga Arr**	48.97	262	P	P	16 02 37.3	-0.5
	0.6nm,0.5s,baz=103,slow=8.1,SNR=5.6						

*ISCJB **14** 16:18:21.9±0.5, 4°11N±0°04×126°23E±0°08, h141km±7km, mb4.1/9, Error ellipse: s-maj=13.0km s-min=6.3km az=179.4*
*IDC **14** 16:18:24.8±1.2, 4°03N×125°91E, h152km±13km, mb3.6/7, mb1 3.7/9, mb1mx3.4/25, mbtmp3.7/9, Error ellipse: s-maj=33.5km s-min=11.2km az=87.0*
*NEIC **14** 16:18:24.3±1.3, 4°04N×126°06E, h147km±16km, mb3.9/1, Error ellipse: s-maj=20.5km s-min=11.7km az=95.0*
*DJA **14** 16:18:25, 4°00N×126°20E, h83km, MLv4.7/7*
*MAN **14** 16:18:31, 4°73N×125°63E, h33km, mb5.1, ML4.0, MS4.1*
ISC 14 16:18:23.0±0.5, 4°09N±0°04×126°21E±0°08, h133km±7km, n32, σ1°20/36, mb4.1/9, 1C-1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	0.80	239	P	Pn	16 18 42.7	-1.7
MATI	**Mati**	2.83	1	eP	Pn	16 19 07.4	-0.2
MATI				eS	Sn	16 19 34.8	-5.7
MNI	**Manado**	2.97	208	P	Pn	16 19 08.9	-0.4
DAV	**Davao City (W)**	3.02	348	P	Pn	16 19 12.5	+2.4
	30nm,0.3s,baz=270,slow=3.0,SNR=3.1						
DAV				S	Sn	16 19 51.1	+6.0
	44nm,0.3s,baz=270,slow=20,SNR=7.1						
DAV	**Davao City (W)**	3.02	348	P	Pn	16 19 12.5	+2.4
DAV				S	Sn	16 19 51.1	+6.0
DMPH	**Davao City--Mi**	3.05	347	⇓iP	Pn	16 19 10.0	-0.4
DMPH				iS	Sn	16 19 48.8	+3.0
TNTI	**Ternate**	3.49	161	P	Pn	16 19 16.6	+0.4
CTBH	**Cotabato--PC H**	3.67	328	⇑eP	Pn	16 19 14.2	-4.3
BUKP	**Musuan**	3.93	343	eP	Pn	16 19 21.4	-0.5
KMSI	**Cibinong**	4.15	213	P	Pn	16 19 25.1	+0.3
PAGZ	**Pagadian**	4.67	323	eP	Pn	16 19 29.9	-1.9
IPIL	**Ipil**	5.16	316	eP	Pn	16 19 36.3	-1.9
MRSI	**Marisa**	5.58	230	P	Pn	16 19 44.1	+0.2
	0.6nm2μm162nm,0.6s						
LUWI	**Luwuk**	6.15	214	P	Pn	16 19 52.9	+1.3
	0.7nm2μm254nm,0.8s						
APSI	**Ampana**	6.75	223	P	Pn	16 20 02.0	+2.4
NLAI	**Namlea**	7.34	173	P	Pn	16 20 06.4	-1.2
MYLDM	**Lahad Datu**	7.76	278	P	Pn	16 20 15.4	+2.1
	29nm,0.8s						
AAI	**Ambon**	7.98	166	P	Pn	16 20 16.5	+0.3
	0.3nm60nm,1.2s						
TTSI	**Tana Toraja**	9.54	222	P	Pn	16 20 38.4	+1.1
	465nm44nm,1.0s						
SPSI	**Sidrap Palu**	10.27	219	P	Pn	16 20 46.6	-0.4
KAPI	**Kappang**	11.11	216	P	Pn	16 20 56.1	-2.0
	1.1nm,0.3s,baz=25,slow=5.3,SNR=7.2						
KSM	**Kuching**	16.10	261	ePn	Pn	16 22 02.0	+0.1
	4.8nm,0.7s						
FITZ	**Fitzroy Crossi**	22.06	181	eP	P	16 23 06.8	-0.4
	9.5nm,0.6s,mb4.4						
FITZ	**Fitzroy Crossi**	22.06	181	P	P	16 23 06.2	-1.0
	2.7nm,0.3s,mb4.1,baz=18,slow=7.3,SNR=26						
WRA	**Warramunga Arr**	25.18	162	P	P	16 23 35.9	-0.3
	1.4nm,0.4s,mb3.8,baz=340,slow=10.0,SNR=7.9						
ASAR	**Alice Springs**	28.59	165	P	P	16 24 06.9	+0.3
	0.3nm,0.3s,mb3.5,baz=339,slow=7.6,SNR=25						
ASAR				ScP	ScP	16 30 43.5	-0.3
	0.4nm,0.9s,baz=348,slow=3.4,SNR=5.0						
FORT	**Forrest**	34.72	177	eP	P	16 25 00.6	+0.4
	11nm,0.7s,mb4.6						
KLBR	**Kellerberrin**	36.39	192	eP	P	16 25 14.0	-0.5
	62nm,1.6s,mb5.0						
NWAO	**Narrogin (SRO)**	37.79	192	P	P	16 25 26.2	-0.1
	4.6nm,0.4s,mb4.4,baz=20,slow=8.7,SNR=11						
STKA	**Stephens Creek**	38.65	159	P	P	16 25 34.5	+1.0
	1.8nm,0.8s,mb3.8,baz=344,slow=9.2,SNR=5.3						
PETK	**Petropavlovsk-**	55.29	23	P	P	16 27 43.2	+0.9
	1.1nm,0.7s,mb3.7,baz=212,slow=6.8,SNR=2.3						
MKAR	**Makanchi Array**	56.97	325	P	P	16 27 52.6	-1.8
	0.3nm,0.2s,mb3.7,baz=119,slow=7.9,SNR=3.4						

*NEIC **14** 16:49:22.4±0.4, 3°18S×127°59E, h35km, mb3.6/5, Error ellipse: s-maj=13.8km s-min=7.4km az=68.0*
*ISCJB **14** 16:49:24.4±0.4, 3°39S±0°04×127°31E±0°04, h70km±4km, mb3.9/10, Error ellipse: s-maj=8.1km s-min=5.9km az=44.9*
*DJA **14** 16:49:26, 3°38S×127°32E, h37km, MLv4.4/12*
*IDC **14** 16:49:27.4±2.8, 3°40S×127°34E, h85km±26km, mb3.7/9, mb1 3.9/12, mb1mx3.7/22, mbtmp3.7/12, MS3.1/2, Ms1 3.1/2, ms1mx2.4/38, Error ellipse: s-maj=34.2km s-min=9.4km az=71.0*
ISC 14 16:49:25.8±0.4, 3°40S±0°04×127°35E±0°04, h68km±5km, n36, σ0°90/41, mb3.9/10, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	0.29	303	P	Pn	16 49 34.7	-2.0
NLAI				S	Sn	16 49 41.8	-2.9
AAI	**Ambon**	0.89	109	P	Pn	16 49 42.5	-0.4
AAI				S	Sn	16 49 55.6	+0.1
TNTI	**Ternate**	4.14	0	P	Pn	16 50 27.1	+0.4
TNTI				S	Sn	16 51 16.2	+2.3
KDI	**Kendari**	4.75	263	P	Pn	16 50 35.4	+0.4
LUWI	**Luwuk**	5.14	297	P	Pn	16 50 39.8	-0.5
	0.7nm2μm101nm,0.8s						
MNI	**Manado**	5.42	332	P	Pn	16 50 43.8	-0.4
	0.7nm2μm157nm,0.7s						
TLE	**Tual**	5.81	113	P	Pn	16 50 50.9	+1.4
	0.6nm81nm,1.8s						
APSI	**Ampana**	6.21	293	P	Pn	16 50 55.6	+0.7
	0.4nm9μm86nm,1.0s						
MMRI	**Maumere**	7.27	224	P	Pn	16 51 09.3	-0.2
	0.1nm36nm,1.2s						
BKSI	**Bulukumba**	7.45	255	P	Pn	16 51 12.1	+0.1
	0.1nm368nm20nm,1.5s						
SPSI	**Sidrap Palu**	7.58	266	P	Pn	16 51 14.1	+0.4
	0.1nm17nm,0.7s						
KAPI	**Kappang**	7.74	258	P	Pn	16 51 17.4	+1.5
	3.1nm,0.3s,baz=128,slow=6.3,SNR=5.9						
DAV	**Davao City (W)**	10.55	350	ePn	Pn	16 51 44.7	-10
	110nm,0.5s						
KNA	**Kununurra**	12.35	174	P	Pn	16 52 19.0	+0.1
	50nm,0.8s						
FITZ	**Fitzroy Crossi**	14.71	186	P	Pn	16 52 51.9	+1.7
	0.2nm,0.3s,baz=342,slow=13,SNR=4.5						
FITZ				LR	LR	16 58 54.8	
	comp=Z,74nm,20.2s,baz=24,slow=39						
KSM	**Kuching**	17.71	286	eP	Pn	16 53 28.2	+0.2
	3.3nm,0.9s						
WRAB	**Tennant Creek**	17.80	158	eP	Pn	16 53 29.6	+0.6
	4.5nm,0.3s						
WRAB	**Tennant Creek**	17.80	158	P	Pn	16 53 29.9	+0.9
WRA	**Warramunga Arr**	17.80	158	P	Pn	16 53 29.0	-0.1
	1.5nm,0.3s,baz=341,slow=12,SNR=26						
WRA				S	S	16 56 48.5	-1.7
	0.1nm,0.3s,baz=335,slow=22,SNR=2.8						
WRA	**Warramunga Arr**	17.80	158	P	Pn	16 53 29.0	-0.1
WRA				S	S	16 56 48.5	-1.7
COEN	**Coen**	18.82	125	P	Pn	16 53 41.1	-0.3
MBWA	**Marble Bar**	19.14	202	eP	Pn	16 53 39.7	-5.5
	1.4nm,0.6s						
ASAR	**Alice Springs**	21.12	163	P	P	16 54 05.5	+0.4
	8.3nm,0.8s,mb4.1,baz=343,slow=11,SNR=75						
ASAR				S	S	16 57 56.5	+0.1
	3.1nm,1.0s,baz=344,slow=22,SNR=12						
STKA	**Stephens Creek**	31.34	156	P	P	16 55 40.2	+0.2
	0.9nm,0.4s,mb3.8,baz=336,slow=14,SNR=5.4						
STKA	**Stephens Creek**	31.34	156	eP	P	16 55 39.6	-0.3
	0.3nm,0.7s,mb3.1						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	40.65	1	P	P	16 56 59.6	+0.2
	1.7nm,0.8s,mb3.9,baz=183,slow=8.1,SNR=5.8						
KSRS				LR	LR	17 13 14.7	
	comp=Z,25nm,19.3s,baz=130,slow=35						
MJAR	**Matsushiro Arr**	41.01	13	P	P	16 57 02.1	-0.2
	0.9nm,0.7s,mb3.7,baz=196,slow=7.9,SNR=5.2						
SONM	**Songino Array**	54.23	343	P	P	16 58 44.2	-0.4
	0.9nm,0.9s,mb3.8,baz=165,slow=7.2,SNR=4.6						
MK31	**Makanchi Array**	63.79	327	eP	P	16 59 51.1	+0.3
MKAR	**Makanchi Array**	63.79	327	P	P	16 59 50.5	-0.3
	0.6nm,0.3s,mb4.0,baz=102,slow=9.4,SNR=16						
MKAR	**Makanchi Array**	63.79	327	P	P	16 59 50.5	-0.3
ZALV	**Zalesovo Beam**	67.21	334	P	P	17 00 11.7	-1.1
	0.6nm,0.3s,mb3.9,baz=123,slow=5.5,SNR=4.7						
KURK	**Kurchatov**	68.09	329	eP	P	17 00 17.9	-0.4
	3.5nm,1.0s,mb4.1						
BVAR	**Borovoye Array**	73.63	328	P	P	17 00 51.2	-0.7
	0.5nm,0.4s,mb3.6,baz=114,slow=7.0,SNR=5.6						
ARCES	**ARCESS Array B**	97.31	340	P	P	17 02 50.2	-0.9
	1.1nm,0.7s,mb4.4,baz=56,slow=6.5,SNR=5.3						
TORD	**Torodi Ar. Bea**	125.46	284	PKP	PKPdf	17 08 20.6	+0.3
	0.5nm,1.0s,baz=90,slow=2.9,SNR=2.2						

*NEIC **14** 16:56:06.9, 32°65N×116°05W, h9km, ML2.8(PAS), After PAS.*
NEIC Felt at Ocotillo.
*ISCJB **14** 16:56:06.2±0.5, 32°70N±0°03×116°04W±0°03, h11km±3km, Error ellipse: s-maj=4.8km s-min=4.1km az=163.6*
*ECX **14** 16:56:07.5±0.7, 32°68N×116°03W, h4km±1km, MD2.8, ML2.9*
ISC 14 16:56:06.3±0.5, 32°70N±0°03×116°03W±0°03, h6km±5km, n17, σ0°74/30, 4C-3D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUH	**Yuha Desert**	0.10	118	eP	Pg	16 56 09.0	+0.5
RMX	**La Rumorosa**	0.10	204	eP	Pg	16 56 09.4	+0.8
RMX				eS	Sg	16 56 11.0	+1.0
SGL	**Mount Signal**	0.26	100	⇑eP	Pg	16 56 12.1	+0.7
COK	**Cook Ranch**	0.30	59	⇑eP	Pg	16 56 13.3	+1.2
BAR	**Barrett**	0.54	268	⇑eP	Pg	16 56 17.2	+0.4
BAR	**Barrett**	0.54	268	eP	Pg	16 56 16.9	+0.1
BAR				eS	Sg	16 56 24.1	+0.3
CBX	**Cerro Bola**	0.66	235	eP	Pg	16 56 19.1	+0.1
CBX				eS	Sg	16 56 27.8	+0.3
CBX				e		16 56 30.5	
	comp=N,612nm,0.3s						
CPBX	**Cerro Prieto**	0.67	114	eP	Pg	16 56 19.0	-0.2
CPBX				eS	Sg	16 56 28.9	+0.9
RDX	**Rancho Dawling**	0.77	175	⇓iP	Pg	16 56 20.7	-0.4
RDX				eS	Sg	16 56 30.6	-0.5
RDX				e		16 56 31.6	
	comp=N,309nm,0.2s						
EMX	**El Mayor**	0.97	136	eP	Pg	16 56 24.4	-0.5
EMX				eS	Sg	16 56 37.1	-0.5
EMX				⇑e		16 56 37.6	
	comp=N,329nm,0.3s						
PFO	**Pinyon Flat Ob**	0.98	339	eP	Pg	16 56 24.4	-0.7
PFO				eS	Sg	16 56 37.8	0.0
GLA	**Glamis**	1.07	70	eP	Pg	16 56 25.3	-1.6
GLA				eS	Sg	16 56 40.2	-0.6
PBX	**Punta Banda**	1.12	212	eP	Pg	16 56 27.1	-0.6
PBX				eS	Sg	16 56 41.8	-0.5
ECNX	**Esteban Cantu**	1.14	205	eP	Pg	16 56 27.5	-0.8
ECNX				eS	Sg	16 56 42.3	-0.7
ECBX	**El Chinero**	1.48	146	eP	Pn	16 56 32.5	-0.9
ECBX				eS	Sn	16 56 52.9	-0.1
SPX	**San Pedro Mart**	1.71	164	ePN	Pn	16 56 37.7	+1.0
SPX				eS	Sn	16 57 00.1	+1.2
SPX				⇓e		16 57 01.8	
	comp=E,84nm,0.2s						
SPX				e		16 57 03.4	
	comp=N,62nm,0.3s						
GSC	**Goldstone**	2.68	346	ePn	Pn	16 56 54.0	+4.0
GSC				eSn	Sn	16 57 31.1	+8.5

*VIE **14** 17:09:59.8±0.5, 44°43N×15°54E, h10km, mb2.4/3, ML2.5/4, Error ellipse: s-maj=6.8km s-min=4.3km az=64.0 118 km S of Karlovac*
*CSEM **14** 17:10:00.3±0.2, 44°50N×15°35E, h2km, ML3.2/5, Error ellipse: s-maj=5.2km s-min=3.9km az=61.0*
*ISCJB **14** 17:10:01.2±0.6, 44°53N±0°03×15°36E±0°05, h10km, Error ellipse: s-maj=5.5km s-min=3.9km az=155.2*
ISC 14 17:10:01.4±0.6, 44°50N±0°03×15°35E±0°05, h10km, n49, σ1°03/84, 6C-2D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NVLJ	**Novalja**	0.35	281	ePg	Pg	17 10 06.5	-1.7
NVLJ				Sg	Sg	17 10 12.3	-0.6
NVLJ	**Novalja**	0.35	281	ePg	Pg	17 10 06.5	-1.8
NVLJ				Sg	Sg	17 10 12.3	-0.6
BOJS	**Bojanci**	1.01	356	iPg	Pg	17 10 19.6	-1.2
BOJS				iSg	Sg	17 10 33.5	-0.6
BOJS							
	comp=Z,34nm,0.2s						
BOJS	**Bojanci**	1.01	356	Pg	Pg	17 10 19.6	-1.3
BOJS				iSg	Sg	17 10 33.5	-0.5
	comp=Z,34nm,0.2s						
CRES	**Cresnjev**	1.33	3	iPn	Pn	17 10 25.2	-0.8
CRES				iSg	Sg	17 10 44.0	-0.4
CRES							
	comp=Z,19nm,0.2s						
CRES	**Cresnjev**	1.33	3	iPn	Pn	17 10 25.2	-0.9
CRES				iSg	Sg	17 10 44.0	-0.3
	comp=Z,19nm,0.2s						
VISS	**Visnje**	1.36	345	iPg	Pg	17 10 26.0	-1.5
VISS				iSg	Sg	17 10 44.1	-1.0
VISS							
	comp=Z,25nm,0.2s						
VISS	**Visnje**	1.36	345	iPg	Pg	17 10 26.0	-1.5
VISS				iSg	Sg	17 10 44.1	-1.0
	comp=Z,25nm,0.2s						
GCIS	**Gornji Cirnik**	1.39	8	iPn	Pn	17 10 26.1	-0.7
GCIS	**Gornji Cirnik**	1.39	8	iPn	Pn	17 10 26.1	-0.7
CEY	**Cerknica**	1.40	333	iPn	Pn	17 10 26.8	-0.3
CEY				iSg	Sg	17 10 47.4	+0.8
CEY							
	comp=Z,18nm,0.1s						
CEY	**Cerknica**	1.40	333	iPn	Pn	17 10 26.8	-0.3
CEY				iSg	Sg	17 10 47.4	+0.8
	comp=Z,18nm,0.1s						
SKDS	**Skadanscina**	1.41	319	iPn	Pn	17 10 26.4	-0.8
SKDS				iSg	Sg	17 10 46.4	-0.4
SKDS							
	comp=Z,28nm,0.2s						
LEGS	**Legarje**	1.45	359	iPn	Pn	17 10 27.6	-0.2
LEGS				iSg	Sg	17 10 47.2	-1.0
LEGS	**Legarje**	1.45	359	iPn	Pn	17 10 27.6	-0.1
LEGS				iSg	Sg	17 10 47.2	-1.0
GOLS	**Golise**	1.53	7	iPn	Pn	17 10 28.4	-0.4
GOLS				eSn	Sn	17 10 49.9	+1.2
GOLS							
	comp=Z,13nm,0.3s						
GOLS	**Golise**	1.53	7	iPn	Pn	17 10 28.4	-0.4
GOLS				eSn	Sn	17 10 49.9	+1.2
	comp=Z,13nm,0.3s						
PDKS	**Podkum**	1.58	351	iPn	Pn	17 10 29.5	0.0
PDKS				iSg	Sg	17 10 51.0	-1.4
LJU	**Ljubljana**	1.65	340	iPn	Pn	17 10 30.5	0.0
LJU				iSn	Sn	17 10 53.3	+1.5
LJU	**Ljubljana**	1.65	340	iPn	Pn	17 10 30.5	0.0
LJU				iSn	Sn	17 10 53.3	+1.6
DOBS	**Dobrina**	1.66	3	iPn	Pn	17 10 30.2	-0.3
DOBS	**Dobrina**	1.66	3	iPn	Pn	17 10 30.2	-0.3
JAVS	**Javornik**	1.67	328	iPn	Pn	17 10 30.6	-0.1
JAVS				iSn	Sn	17 10 53.9	+1.9
JAVS	**Javornik**	1.67	328	iPn	Pn	17 10 30.6	-0.1
JAVS				iSn	Sn	17 10 53.9	+1.8
VNDS	**Vrh nad Dolski**	1.67	344	iPn	Pn	17 10 30.5	-0.2
VNDS				iSn	Sn	17 10 52.8	+0.6
CRNS	**Crni Vrh**	1.76	335	iPn	Pn	17 10 32.0	0.0
CRNS				iSn	Sn	17 10 56.5	+2.1
CRNS							
	comp=Z,17nm,0.2s						
VOY	**Vojsko**	1.85	327	eSn	Sn	17 10 59.0	+2.5
VOJS	**Vojsko**	1.85	327	iPn	Pn	17 10 32.8	-0.4
VOJS							
	comp=Z,7.0nm,0.1s						
VOJS	**Vojsko**	1.85	327	iPn	Pn	17 10 32.8	-0.4
	comp=Z,7.0nm,0.1s						
MOZS	**Mozjanca**	1.91	341	iPn	Pn	17 10 34.2	+0.3
MOZS				iSn	Sn	17 11 00.0	+2.0
ZAVS	**Zavodnje**	1.95	353	iPn	Pn	17 10 34.1	-0.5
ZAVS							
	comp=Z,6.0nm,0.2s						
GORS	**Gorjuse**	2.06	333	iPn	Pn	17 10 35.9	-0.1
GORS							
	comp=Z,11nm,0.3s						
GORS	**Gorjuse**	2.06	333	iPn	Pn	17 10 35.9	-0.1
	comp=Z,11nm,0.3s						
CADS	**Cadrg**	2.07	327	iPn	Pn	17 10 35.5	-0.7
CADS				iSn	Sn	17 11 07.1	+5.0
CADS							
	comp=Z,20nm,0.3s						
CADS	**Cadrg**	2.07	327	iPn	Pn	17 10 35.5	-0.7
CADS				iSn	Sn	17 11 07.1	+5.0
	comp=Z,20nm,0.3s						
OBKA	**Obir**	2.09	345	⇑iPn	Pn	17 10 36.9	+0.4
OBKA				⇑iSn	Sn	17 11 04.8	+2.3
OBKA	**Obir**	2.09	345	Pn	Pn	17 10 36.9	+0.4
OBKA				Sn	Sn	17 11 04.8	+2.3
PERS	**Pernice**	2.15	356	iPn	Pn	17 10 36.8	-0.4
PERS	**Pernice**	2.15	356	iPn	Pn	17 10 36.8	-0.5
SOKA	**Soboth**	2.19	354	⇑iPn	Pn	17 10 37.4	-0.5
SOKA				⇑iSn	Sn	17 11 06.9	+1.8
SOKA	**Soboth**	2.19	354	Pn	Pn	17 10 37.4	-0.5
SOKA				Sn	Sn	17 11 06.9	+1.8
STON	**Ston**	2.36	133	ePn	Pn	17 10 41.1	+0.9
STON				Sn	Sn	17 11 11.5	+2.4
STON	**Ston**	2.36	133	ePn	Pn	17 10 41.0	+0.9
STON				Sn	Sn	17 11 11.4	+2.3
MOA	**Molln**	3.44	348	⇑iPn	Pn	17 10 55.4	+0.4
MOA				⇓iSn	Sn	17 11 36.1	+0.3
MOA	**Molln**	3.44	348	Pn	Pn	17 10 55.4	+0.4
MOA				Sn	Sn	17 11 36.1	+0.3
CONA	**Conrad Observa**	3.45	6	⇑iPn	Pn	17 10 54.9	-0.3
CONA				⇓iSn	Sn	17 11 35.1	-1.0
CONA	**Conrad Observa**	3.45	6	Pn	Pn	17 10 54.9	-0.3
CONA				Sn	Sn	17 11 35.1	-1.0
VYHS	**Vyhne**	4.67	30	ePN	Pn	17 11 10.9	-1.0
VYHS				e		17 12 03.2	
VYHS	**Vyhne**	4.67	30	ePn	Pn	17 11 10.9	-1.0

*SKO **14** 17:18:15.7, 41°93N×22°88E, h15km, M1.3, ML1.5*
*ISCJB **14** 17:18:15.4±0.6, 41°94N±0°02×22°91E±0°06, h1km±9km, Error ellipse: s-maj=7.9km s-min=4.1km az=171.1*
*THE **14** 17:18:16.1, 41°92N×22°94E, h4km±1km, ML2.5/4, Error ellipse: s-maj=2.0km s-min=0.8km az=282.0*
*CSEM **14** 17:18:16.2±0.2, 41°93N×22°92E, h10km, ML2.5/4, Error ellipse: s-maj=5.2km s-min=2.5km az=71.0*
*BEO **14** 17:18:18.4±1.3, 41°97N×22°92E, h0km, ML1.9/2*
ISC 14 17:18:16.4±0.5, 41°93N±0°02×22°92E±0°06, h10km±7km, n21, σ0°47/40, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	0.66	203	iPg	Pg	17 18 28.8	-0.3
VAY				iSg	Sg	17 18 38.2	+0.4
VAY				eLg		17 18 38.3	
	comp=N,18nm,0.4s						
VAY				eLg		17 18 38.7	
	comp=E,18nm,0.3s						
VAY	**Valandovo**	0.66	203	P	Pg	17 18 28.8	-0.4
VAY				S	Sg	17 18 37.8	0.0
VAY	**Valandovo**	0.66	203	P	Pg	17 18 28.8	-0.4
VAY				S	Sg	17 18 37.8	0.0
VTS	**Vitosha**	0.69	18	ePg	Pg	17 18 29.6	-0.2
VTS				eSg	Sg	17 18 38.9	0.0
VTS	**Vitosha**	0.69	18	P	Pg	17 18 29.4	-0.4
VTS				S	Sg	17 18 38.9	0.0
VTS	**Vitosha**	0.69	18	ePg	Pg	17 18 29.6	-0.2
VTS				S	Sg	17 18 38.9	0.0
SRS	**Serrai**	0.96	148	P	Pg	17 18 34.0	-0.8
SRS				S	Sg	17 18 47.6	+0.3
SRS	**Serrai**	0.96	148	P	Pg	17 18 34.0	-0.8
SRS				S	Sg	17 18 47.6	+0.3
SOH	**Sokhos**	1.16	163	P	Pb	17 18 37.8	-0.6
SOH				S	Sg	17 18 54.2	+0.6
SOH	**Sokhos**	1.16	163	P	Pb	17 18 37.8	-0.6
SOH				S	Sg	17 18 54.2	+0.6
BARS	**Barje**	1.20	318	ePg	Pg	17 18 39.1	-0.4
BARS				eSg	Sg	17 18 54.9	-0.2
BARS	**Barje**	1.20	318	ePg	Pg	17 18 39.1	-0.4
BARS				eSg	Sg	17 18 54.9	-0.2
HORT	**Hortiatis**	1.34	174	P	Pn	17 18 41.4	+0.3
HORT				S	Sb	17 18 59.5	+0.8
HORT	**Hortiatis**	1.34	174	P	Pn	17 18 41.4	+0.3
HORT				S	Sb	17 18 59.5	+0.8
ZAPS	**Zavoj**	1.36	351	ePg	Pg	17 18 42.4	-0.1
ZAPS				eSg	Sg	17 19 00.7	+0.6
KAVA	**Kavala**	1.52	127	P	Pn	17 18 43.8	+0.2
KAVA				S	Sn	17 19 03.4	0.0
KAVA	**Kavala**	1.52	127	P	Pn	17 18 43.8	+0.2
KAVA				S	Sn	17 19 03.4	0.0
PLG	**Polygyros**	1.61	165	P	Pn	17 18 43.9	-0.9
PLG	**Polygyros**	1.61	165	P	Pn	17 18 43.9	-0.9
NISS		1.64	334	ePg	Pg	17 18 48.1	+0.3
NISS				eSg	Sg	17 19 09.4	+0.4
NISS		1.64	334	ePg	Pg	17 18 48.1	+0.3
NISS				eSg	Sg	17 19 09.4	+0.4

*ISK **14** 17:21:01.7, 36°93N×29°32E, h6km, MD3.0*
*CSEM **14** 17:21:01.9±0.2, 36°94N×29°29E, h2km, MD3.0, Error ellipse: s-maj=4.3km s-min=3.0km az=134.0*
*DDA **14** 17:21:02.1, 37°01N×29°16E, h7km±4km, Md3.0*
*ISCJB **14** 17:21:02.9±0.4, 37°01N±0°03×29°23E±0°03, h10km, Error ellipse: s-maj=3.7km s-min=3.2km az=177.9*
ISC 14 17:21:02.5±0.5, 36°99N±0°03×29°21E±0°03, h3km±6km, n38, σ1°02/55, Turkey

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

KHL	**Karahalli**	**1.36**	**10**	*e*Pn	**Pn**	**17 21 28.0**	**-0.4**
KHAL	**Karahalli**	**1.40**	**9**	*i* P	**Pn**	**17 21 28.9**	**0.0**
KHAL				*i* S	**Sg**	**17 21 48.8**	**+1.3**
KHAL	**Karahalli**	**1.40**	**9**	*i* P	**Pn**	**17 21 28.9**	**0.0**
KHAL				*i* S	**Sg**	**17 21 48.8**	**+1.3**
BDRM	**Kayabasi**	**1.42**	**274**	*i* P	**Pn**	**17 21 30.0**	**+0.9**
BDRM				*i* S	**Sg**	**17 21 47.7**	**-0.3**
BDRM	**Kayabasi**	**1.42**	**274**	*i* P	**Pn**	**17 21 30.0**	**+0.9**
BDRM				*i* S	**Sg**	**17 21 47.7**	**-0.3**
SUTC	**Sutluce-Ispart**	**1.51**	**71**	*e*PN	**Pn**	**17 21 29.0**	**-1.5**
SUTC	**Sutluce-Ispart**	**1.51**	**71**	*e*Pn	**Pn**	**17 21 29.0**	**-1.4**

JMA 14 17:24:10.5, 39°.03N×140°.81E, h4km±1km, M2.1, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.33**	**104**	*e*S	Sg	17 24 21.2	+0.1
JYK	**Kaneyama**	**0.37**	**252**	*e*S	Sg	17 24 22.9	+0.5
JRG	**Rokugo**	**0.39**	**340**	P	Pg	17 24 18.2	+0.2
JRG				*e*S	Sg	17 24 24.1	+1.0
JOM	**Ohasama**	**0.58**	**40**	P	Pg	17 24 21.5	-0.1
JOU	**Okura**	**0.67**	**190**	P	Pg	17 24 23.7	+0.3

JMA 14 17:25:07.6, 39°.07N×140°.85E, h12km±1km, M1.5, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.31**	**112**	P	Pg	17 25 13.7	-0.2
JRG	**Rokugo**	**0.37**	**333**	P	Pg	17 25 15.0	+0.1
JRG				*e*S	Sg	17 25 20.3	+0.4
JYK	**Kaneyama**	**0.41**	**248**	P	Pg	17 25 15.8	+0.1
JYK				*e*S	Sg	17 25 21.2	-0.1

NIED ***14*** *17:25:00, 39°.00N×141°.00E, h11km, Mw3.8 Best double couple: M0=6.17000×10^14 NP1:φs=56.00000°, δ63.00000°, λ93.00000°. NP2:φs=229.00000°, δ27.00000°, λ84.00000°.*
IDC ***14*** *17:25:26.4±0.6, 39°.01N×140°.94E, h0km, mb3.9/18, mb1 4.0/20, mb1mx4.0/29, mbtmp3.9/20, ML3.4/3, Error ellipse: s-maj=17.7km s-min=12.8km az=115.0*
ISCJB ***14*** *17:25:28.6±0.4, 39°.03N±0°.03×141°.01E±0°.04, h24km±3km, mb3.9/22, Error ellipse: s-maj=6.1km s-min=4.2km az=23.7*
JMA ***14*** *17:25:29.0, 39°.01N×140°.94E, h11km±1km, M4.1 Broadband fault plane solution: P waves. NP1: φs=202.00000°, δ39.00000°, λ69.00000°. NP2:φs=48.00000°, δ54.00000°, λ106.00000°. Principal axes: T Plg75.0000°, Azm8.0000°; N Plg13.0000°, Azm219.0000°; P Plg7.0000°, Azm127.0000°;*
JMA Felt III J1.
NEIC ***14*** *17:25:29.0, 39°.01N×140°.94E, h12km, mb4.2/4, After JMA.*
NEIC Recorded [3 JMA] in Iwate, [2 JMA] in Miyagi and [1 JMA] in Akita.

ISC 14 17:25:28.9±0.4, 39°.01N±0°.02×140°.97E±0°.04, h14km±3km, n48, σ0°.81/56, mb3.9/22, 1C-4D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.20**	**105**	⇓P	**Pg**	**17 25 33.7**	**+0.3**
JMK				S	**Sg**	**17 25 36.9**	**+0.3**
JRG	**Rokugo**	**0.47**	**326**	⇓P	**Pg**	**17 25 37.9**	**-0.3**
JRG				S	**Sg**	**17 25 44.5**	**0.0**
JOM	**Ohasama**	**0.53**	**28**	⇑P	**Pg**	**17 25 39.3**	**0.0**
JOM				*e*S	**Sg**	**17 25 46.1**	**-0.3**
OFUJ	**Ofunato**	**0.55**	**82**	P	**Pg**	**17 25 40.0**	**+0.3**
JIO	**Ouri**	**0.62**	**152**	⇓P	**Pg**	**17 25 41.0**	**-0.1**
JIO				S	**Sg**	**17 25 49.5**	**+0.1**
JOU	**Okura**	**0.68**	**201**	⇓P	**Pg**	**17 25 41.9**	**-0.3**
JOU				S	**Sg**	**17 25 50.8**	**-0.4**
JYS	**Shirataka**	**1.06**	**222**	P	**Pb**	**17 25 48.1**	**-0.9**
JYS				S	**Sb**	**17 26 02.4**	**-0.3**
JYA	**Atsumi**	**1.06**	**248**	P	**Pb**	**17 25 48.3**	**-0.8**
MAJO	**Matsushiro**	**3.29**	**223**	*e*Pn	**Pn**	**17 26 21.4**	**+1.4**
MAT	**Matsushiro**	**3.29**	**223**	P	**Pn**	**17 26 21.7**	**+1.6**
MAT				*e*S	**Sn**	**17 27 02.2**	**+3.2**
MJAR	**Matsushiro Arr**	**3.29**	**222**	Pn	**Pn**	**17 26 20.5**	**+0.5**
	0.5nm,0.3s,baz=21,slow=26,SNR=3.9						
MJAR				Pg	**Pg**	**17 26 26.0**	**-6.0**
	0.7nm,0.3s,baz=20,slow=16,SNR=9.1						
MJAR				Lg		17 27 09.8	
	1.1nm,0.3s,baz=93,slow=12,SNR=5.1						
ERM	**Erimo**	**3.44**	**28**	*e*Pn	**Pn**	**17 26 22.2**	**+0.2**
ASAJ	**Asahikawa**	**5.25**	**13**	Pn	**Pn**	**17 26 47.9**	**+0.9**
	1.8nm,0.3s,baz=222,slow=5.5,SNR=14						
ASAJ				Sn	**Sn**	**17 28 00.4**	**+13**
	1.0nm,0.3s,baz=5.8,slow=25,SNR=6.5						
YSS	**Yuzh-Sakhalins**	**8.05**	**9**	*e*Pn	**Pn**	**17 27 26.1**	**+0.7**
KSRS	**Korea Array**	**10.38**	**265**	Pn	**Pn**	**17 28 00.3**	**+3.0**
	0.4nm,0.3s,baz=78,slow=14,SNR=14						
KSRS				Sn	**Sn**	**17 29 58.5**	**+5.0**
	0.1nm,0.3s,baz=74,slow=24,SNR=6.0						
CBIJ	**Chichi jima**	**11.92**	**175**	Pn	**Pn**	**17 28 16.0**	**-2.5**
	1.3nm,0.3s,baz=273,slow=19,SNR=2.1						
SONM	**Songino Array**	**26.43**	**301**	P	**P**	**17 31 06.4**	**+1.3**
	0.2nm,0.3s,mb3.1,baz=49,slow=4.4,SNR=2.7						
BILL	**Bilibino**	**32.25**	**18**	P	**P**	**17 31 56.9**	**+0.3**
ZALV	**Zalesovo Beam**	**40.35**	**311**	P	**P**	**17 33 05.3**	**-0.6**
	1.1nm,0.4s,mb3.9,baz=87,slow=9.1,SNR=7.4						
MKAR	**Makanchi Array**	**42.80**	**300**	P	**P**	**17 33 25.3**	**-0.8**
	1.1nm,0.7s,mb3.7,baz=75,slow=14,SNR=8.1						
MKAR	**Makanchi Array**	**42.80**	**300**	P	**P**	**17 33 25.3**	**-0.8**
KURK	**Kurchatov**	**44.46**	**306**	P	**P**	**17 33 39.5**	**+0.1**
	2.0nm,0.4s,mb4.2,baz=82,slow=8.5,SNR=9.9						
TKM2	**Tokmak 2**	**48.41**	**297**	*e*P	**P**	**17 34 10.9**	**+0.4**
	1.2nm,0.5s,mb4.2						
BVAR	**Borovoye Array**	**49.00**	**311**	P	**P**	**17 34 14.5**	**-0.4**
	1.1nm,0.7s,mb4.0,baz=225,slow=39,SNR=4.1						
EKS2	**Erkin-Say**	**49.76**	**297**	*e*P	**P**	**17 34 21.3**	**+0.4**
	1.5nm,0.8s,mb4.1						
AML	**Almayashu**	**50.00**	**296**	*e*P	**P**	**17 34 23.4**	**+0.7**
	2.9nm,0.9s,mb4.3						
INK	**Inuvik**	**52.80**	**28**	P	**P**	**17 34 43.7**	**+0.4**
	1.0nm,0.5s,mb4.0,baz=274,slow=2.3,SNR=3.7						
INK	**Inuvik**	**52.80**	**28**	*e*P	**P**	**17 34 43.6**	**+0.3**
ARU	**Arti**	**54.66**	**318**	*e*P	**P**	**17 34 56.4**	**-0.7**
WRA	**Warramunga Arr**	**58.96**	**187**	P	**P**	**17 35 27.1**	**-0.8**
	0.7nm,0.6s,mb3.9,baz=2.4,slow=7.0,SNR=4.9						
WRA	**Warramunga Arr**	**58.96**	**187**	P	**P**	**17 35 27.1**	**-0.8**
ARCES	**ARCESS Array B**	**62.03**	**339**	P	**P**	**17 35 48.1**	**-0.2**
	0.9nm,0.5s,mb4.1,baz=61,slow=8.3,SNR=9.9						
ASAR	**Alice Springs**	**62.69**	**187**	P	**P**	**17 35 53.6**	**+0.4**
	0.4nm,0.6s,mb3.7,baz=4.7,slow=4.8,SNR=6.4						
FINES	**FINESS Array B**	**66.91**	**332**	P	**P**	**17 36 18.5**	**-1.9**
	2.5nm,0.7s,mb4.4,baz=50,slow=10,SNR=11						
KIV	**Kislovodsk**	**69.36**	**310**	*e*P	**P**	**17 36 36.4**	**+0.3**
	3.4nm,0.6s,mb4.5						
NB2	**NORSAR Subarra**	**72.24**	**337**	P	**P**	**17 36 53.3**	**+0.1**
	comp=Z,1.2nm,0.6s,mb4.0,baz=39,slow=6.5						
NOA	**NORSAR Array B**	**72.24**	**337**	P	**P**	**17 36 52.9**	**-0.4**
	comp=Z,2.0nm,0.8s,mb4.1,baz=38,slow=6.2,SNR=6.9						
AKASG	**Malin Array Be**	**72.53**	**322**	P	**P**	**17 36 54.2**	**-1.0**
	comp=Z,1.1nm,0.5s,mb4.1,baz=47,slow=6.3,SNR=7.5						
AKASG	**Malin Array Be**	**72.53**	**322**	P	**P**	**17 36 54.2**	**-1.0**
NVAR	**Mina Array Bea**	**74.09**	**53**	P	**P**	**17 37 05.1**	**+0.5**
	comp=Z,0.3nm,0.5s,mb3.5,baz=316,slow=4.1,SNR=4.0						
FRB	**Frobisher Bay**	**74.94**	**13**	P	**P**	**17 37 08.8**	**-0.3**
	comp=Z,0.9nm,0.3s,mb4.2,baz=345,slow=6.5,SNR=3.4						
FRB	**Frobisher Bay**	**74.94**	**13**	P	**P**	**17 37 08.8**	**-0.3**
PDAR	**Pinedale Array**	**76.54**	**46**	P	**P**	**17 37 18.4**	**-0.2**
	comp=Z,0.4nm,0.6s,mb3.5,baz=0.0,slow=0.9,SNR=3.2						
BRTR	**Keskin Array B**	**77.29**	**311**	P	**P**	**17 37 22.4**	**-0.5**
	comp=Z,0.5nm,0.5s,mb3.7,baz=90,slow=4.3,SNR=3.7						
GERES	**GERESS Array B**	**80.86**	**328**	P	**P**	**17 37 41.6**	**-0.6**
	comp=Z,0.3nm,0.5s,mb3.5,baz=25,slow=7.5,SNR=3.6						
TXAR	**Lajitas Array**	**89.19**	**52**	P	**P**	**17 38 24.5**	**+0.1**
	comp=Z,0.1nm,0.6s,mb3.3,baz=10,slow=5.5,SNR=2.5						
LPAZ	**La Paz**	**145.95**	**57**	PKPbc	PKPbc	17 45 08.8	+0.3
	comp=Z,0.9nm,0.5s,baz=24,slow=6.1,SNR=5.3						
LPAZ	**La Paz**	**145.95**	**57**	PKPbc	PKPbc	17 45 08.8	+0.3

JMA 14 17:26:27.0, 39°.02N×140°.87E, h8km±1km, M2.2, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.28**	**104**	P	Pg	17 26 32.5	0.0
JMK				*e*S	Sg	17 26 36.2	-0.1

NIED ***14*** *17:29:00, 39°.10N×141°.00E, h5km, Mw4.1 Best double couple: M0=1.34000×10^15 NP1:φs=206.00000°, δ48.00000°, λ94.00000°. NP2:φs=20.00000°, δ42.00000°, λ85.00000°.*
BJI ***14*** *17:29:24.6, 38°.93N×141°.24E, h18km, mB4.7/23, mb4.4/22, Ms4.1/16, Ms7 3.8/17*
IDC ***14*** *17:29:25.9±0.5, 39°.10N×140°.96E, h0km, mb4.1/24, mb1 4.2/28, mb1mx4.2/35, mbtmp4.1/28, ML3.6/4, MS3.4/8, Ms1 3.4/8, ms1mx2.9/42, Error ellipse: s-maj=14.8km s-min=11.9km az=111.0*
ISCJB ***14*** *17:29:26.7±0.6, 39°.10N±0°.02×140°.97E±0°.03, h14km±4km, mb4.3/56, MS3.7/11, Error ellipse: s-maj=4.6km s-min=3.6km az=22.7*
NEIC ***14*** *17:29:27.0, 39°.09N×140°.97E, h11km, mb4.4/17, After JMA.*
NEIC Recorded [3 JMA] in Iwate, [2 JMA] in Miyagi and [1 JMA] in Akita.
JMA ***14*** *17:29:27.0, 39°.09N×140°.97E, h10km±1km, M4.2 Broadband fault plane solution: P waves. NP1: φs=168.00000°, δ63.00000°, λ3.00000°. NP2:φs=77.00000°, δ87.00000°, λ153.00000°. Principal axes: T Plg21.0000°, Azm29.0000°; N Plg62.0000°, Azm252.0000°; P Plg17.0000°, Azm126.0000°;*
JMA Felt III J1.
MOS ***14*** *17:29:29.3±1.1, 39°.13N×140°.97E, h33km, mb4.5/31 Error ellipse: s-maj=10.2km s-min=6.3km az=85.3*

ISC 14 17:29:27.3±0.5, 39°.09N±0°.02×140°.98E±0°.03, h7km±3km, h13km±1.8km: pP-P, n147, σ0°.88/162, mb4.3/56, MS3.7/11, 4C-8D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.23**	**127**	P	**Pg**	**17 29 31.9**	**0.0**
JMK				S	**Sg**	**17 29 35.3**	**+0.3**
JRG	**Rokugo**	**0.41**	**319**	⇓P	**Pg**	**17 29 35.1**	**-0.1**
JOM	**Ohasama**	**0.45**	**32**	⇑P	**Pg**	**17 29 35.9**	**-0.2**
JOM				*e*S	**Sg**	**17 29 42.4**	**+0.4**
JYK	**Kaneyama**	**0.52**	**251**	⇓P	**Pg**	**17 29 37.0**	**-0.2**
JYK				S	**Sg**	**17 29 43.9**	**-0.1**
OFUJ	**Ofunato**	**0.54**	**91**	⇓P	**Pg**	**17 29 37.6**	**0.0**
JIO	**Ouri**	**0.70**	**156**	P	**Pg**	**17 29 40.3**	**-0.4**
JIO				*e*S	**Sg**	**17 29 49.6**	**-0.2**
JOU	**Okura**	**0.77**	**199**	⇑P	**Pg**	**17 29 41.6**	**-0.4**
JOU				S	**Sg**	**17 29 51.9**	**0.0**
ERM	**Erimo**	**3.36**	**29**	*ce*P	**Pn**	**17 30 21.8**	**+1.7**
ERM	**Erimo**	**3.36**	**29**	*e*Pn	**Pn**	**17 30 22.1**	**+2.0**
ERM				*e*Sn	**Sn**	**17 31 06.4**	**+6.2**
MAJO	**Matsushiro**	**3.36**	**222**	*e*P	**Pn**	**17 30 21.3**	**+1.1**
MAT	**Matsushiro**	**3.36**	**222**	P	**Pn**	**17 30 21.3**	**+1.1**
MAT				*e*S	**Sn**	**17 31 01.3**	**+1.0**
MJAR	**Matsushiro Arr**	**3.36**	**222**	Pn	**Pn**	**17 30 21.6**	**+1.5**
	2.5nm,0.3s,baz=24,slow=14,SNR=21						
MJAR				Pg	**Pg**	**17 30 27.9**	**-3.7**
	10.0nm,0.3s,baz=26,slow=14,SNR=43						
ASAJ	**Asahikawa**	**5.17**	**13**	Pn	**Pn**	**17 30 46.4**	**+1.4**
	2.4nm,0.3s,baz=218,slow=12,SNR=14						
ASAJ	**Asahikawa**	**5.17**	**13**	P	**Pn**	**17 30 46.4**	**+1.5**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
JHJ	**Hachijo jima 2**	**6.04**	**190**	Pn	**Pn**	**17 30 58.1**	**+1.2**
	comp=Z,15nm,0.3s,baz=222,slow=18,SNR=7.4						
JHJ				Sn	**Sn**	**17 32 07.0**	**+0.8**
	comp=Z,8.1nm,0.3s,baz=47,slow=23,SNR=5.7						
YUK	**Yuzh-Kuril'sk**	**6.15**	**35**	*e*P	**Pn**	**17 30 59.6**	**+1.2**
YUK				*i* S	**Sn**	**17 32 14.3**	**+5.4**
YUK				pmax	pmax		
	comp=Z,120nm,1.6s						
YUK				pmax	pmax		
	comp=N,70nm,0.8s						
YUK				pmax	pmax		
	comp=E,50nm,0.4s						
YUK				smax			
	comp=N,170nm,0.6s						
YUK				smax			
	comp=E,50nm,0.6s						
YSS	**Yuzh-Sakhalins**	**7.97**	**9**	⇓*e*P	**Pn**	**17 31 24.0**	**+0.6**
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS	**Yuzh-Sakhalins**	**7.97**	**9**	*e*Pn	**Pn**	**17 31 23.8**	**+0.5**
	comp=Z,19nm,0.8s						
MDJ	**Mudanjiang**	**10.13**	**307**	P	**Pn**	**17 31 52.1**	**-0.9**
MDJ				pP		17 31 56.9	
MDJ				S	**Sn**	**17 33 48.5**	**+1.7**
MDJ				PcP	PcP	17 38 02.4	0.0
MDJ				PcS	PcS	17 41 35.9	+0.2
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,61nm,5.7s						
KSRS	**Korea Array**	**10.40**	**265**	Pn	**Pn**	**17 32 00.8**	**+4.0**
	comp=Z,2.3nm,0.3s,baz=73,slow=14,SNR=61						
KSRS				Sn	**Sn**	**17 33 58.3**	**+4.9**
	comp=Z,1.3nm,0.3s,baz=76,slow=24,SNR=11						
KSRS				LR	LR	17 35 33.0	
	comp=Z,138nm,19.4s,baz=146,slow=35						
KSRS	**Korea Array**	**10.40**	**265**	P	**Pn**	**17 32 00.8**	**+4.0**
KSRS						17 33 58.3	
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KSRS				smax			
	comp=N,1.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,138nm,19.4s						
CBIJ	**Chichi jima**	**12.00**	**175**	Pn	**Pn**	**17 32 13.4**	**-5.4**
	comp=Z,4.5nm,0.3s,baz=334,slow=14,SNR=5.1						
KLR	**Kul'dur**	**12.10**	**330**	*e*P	**Pn**	**17 32 19.7**	**-0.3**
KLR				*e*		17 34 30.8	
CN2	**Changchun**	**12.57**	**297**	*e*P	**Pn**	**17 32 28.9**	**+2.5**
PETK	**Petropavlovsk-**	**18.12**	**34**	P	**Pn**	**17 33 39.9**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=226,slow=20,SNR=2.9						
PET	**Petropavlovsk**	**18.49**	**35**	*e*P	**Pn**	**17 33 44.1**	**+0.4**
PET				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PET	**Petropavlovsk**	**18.49**	**35**	*e*P	**Pn**	**17 33 44.1**	**+0.3**
	comp=Z,10nm,1.1s						
BJI	**Beijing**	**19.14**	**281**	P	**Pn**	**17 33 49.9**	**-1.8**
BJI				S	**Sn**	**17 37 20.6**	**-5.6**
BJI				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BJI				pmax	pmax		
	comp=Z,56nm,4.2s						
BJI				LR	LR		
	comp=N,240nm,17.4s						
BJI				LR	LR		
	comp=E,190nm,15.3s						
BJI				LR	LR		
	comp=Z,83nm,16.1s						
HHC	**Hu-ho-hao-te**	**22.57**	**284**	*e*P	**P**	**17 34 26.3**	**-1.7**
HHC				pP		17 34 35.5	
HHC				sP	sP	17 34 39.6	+8.6
HHC				PP		17 34 53.9	
HHC				PcP	PcP	17 38 21.4	+0.1
HHC				S	**S**	**17 38 26.3**	**-10**
HHC				sS	sS	17 38 40.6	+1.4
HHC				ScP	ScP	17 41 56.1	-3.1
HHC				PcS	PcS	17 41 59.8	-0.2
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.1						
HHC				pmax	pmax		
	comp=Z,130nm,6.1s						
HHC				LR	LR		
	comp=N,240nm,15.7s,MS3.9						
HHC				LR	LR		
	comp=E,200nm,13.7s,MS3.9						
HHC				LR	LR		
	comp=Z,200nm,15.0s,MS3.7						
YAK	**Yakutsk**	**23.99**	**347**	*e*P	**P**	**17 34 38.9**	**-3.2**
YAK				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.5						
YAK				pmax	pmax		
	comp=N,12nm,1.1s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.4s						
YAK	**Yakutsk**	**23.99**	**347**	P	**P**	**17 34 39.7**	**-2.4**
SEY	**Seymchan**	**24.85**	**12**	⇓*e*P	**P**	**17 34 50.6**	**+0.6**
SONM	**Songino Array**	**26.40**	**301**	P	**P**	**17 35 04.3**	**+0.1**
	comp=E,0.6nm,0.8s,baz=99,slow=8.9,SNR=4.7						
ENH	**Enshi**	**27.25**	**261**	*e*P	**P**	**17 35 11.7**	**-0.3**
	comp=E,5.6nm,0.7s,mb4.2						
LZH	**Lanzhou**	**29.45**	**276**	*e*P	**P**	**17 35 32.8**	**+1.2**
LZH				pP	pP	17 35 35.0	+1.2
LZH				sP	sP	17 35 38.1	+3.4
LZH				PP	PP	17 36 26.4	-12
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.6						
LZH				pmax	pmax		
	comp=Z,60nm,4.5s						
LZH				LR	LR		
	comp=N,270nm,15.2s						
LZH				LR	LR		
	comp=Z,410nm,17.3s,MS4.1						
GYA	**Guiyang**	**31.30**	**257**	P	**P**	**17 35 47.8**	**-0.2**
GYA				PP	PP	17 36 51.8	-6.7
GYA				PcP	PcP	17 38 43.3	+1.1
GYA				S	**S**	**17 40 50.8**	**-4.3**
GYA				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
GYA				pmax	pmax		
	comp=Z,20nm,3.9s						
GYA				LR	LR		
	comp=N,380nm,15.2s,MS4.3						
GYA				LR	LR		
	comp=E,390nm,14.3s,MS4.3						
GYA				LR	LR		
	comp=Z,380nm,14.2s,MS4.2						
CD2	**Chengdu**	**31.39**	**266**	*e*P	**P**	**17 35 48.6**	**-0.2**
CD2				pP	pP	17 35 53.0	+2.0
CD2				sP	sP	17 35 56.4	+4.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
CD2				pmax	pmax		
	comp=Z,30nm,5.2s						
BILL	**Bilibino**	**32.16**	**18**	*e*P	**P**	**17 35 54.6**	**-0.5**
BILL				pmax	pmax		
	comp=Z,10.0nm,2.5s,mb4.2						
BILL	**Bilibino**	**32.16**	**18**	P	**P**	**17 35 55.1**	**0.0**
	comp=Z,1.2nm,0.7s,mb3.8						
KMI	**Kunming**	**34.99**	**258**	P	**P**	**17 36 21.4**	**+1.1**
KMI				pP	pP	17 36 24.4	+1.9
KMI				sP	sP	17 36 25.5	+2.1
KMI				PP	PP	17 37 39.0	-0.5
KMI				S	**S**	**17 41 51.8**	**-0.7**
KMI				SS	SS	17 44 04.8	-19
KMI				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
KMI				pmax	pmax		
	comp=Z,120nm,3.9s						
KMI				LR	LR		
	comp=N,170nm,12.9s,MS4.1						
KMI				LR	LR		
	comp=E,140nm,12.4s,MS4.1						
KMI				LR	LR		
	comp=Z,120nm,14.5s,MS3.8						
WMQ	**Urumqi**	**39.64**	**295**	*e*P	**P**	**17 36 59.0**	**-0.5**
ZALV	**Zalesovo Beam**	**40.30**	**311**	P	**P**	**17 37 04.7**	**-0.1**
	comp=Z,2.5nm,0.6s,mb4.1,baz=86,slow=8.0,SNR=11						
ZALV				PcP	PcP	17 39 07.3	-0.9
	comp=Z,1.1nm,0.5s,baz=108,slow=2.5,SNR=4.7						
ZALV				LR	LR	17 54 17.8	
	comp=Z,44nm,19.5s,MS3.3,baz=82,slow=37						
ZALV	**Zalesovo Beam**	**40.30**	**311**	P	**P**	**17 37 04.7**	**-0.1**
ZALV						17 39 07.4	
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
ZALV				MLR	MLR		
	comp=Z,44nm,19.5s,MS3.3						
ZALV	**Zalesovo Beam**	**40.30**	**311**	P	**P**	**17 37 04.7**	**-0.1**
ZALV				PcP	PcP	17 39 07.3	-0.9
ZALV				LR	LR	17 54 17.8	
NVS	**Novosibirsk**	**41.19**	**312**	*e*P	**P**	**17 37 14.5**	**+2.3**
CMAR	**Chiang Mai Arr**	**41.73**	**253**	P	**P**	**17 37 15.8**	**-1.3**
	comp=Z,1.4nm,1.0s,mb3.5,baz=226,slow=30,SNR=3.3						
CMAR				LR	LR	17 56 42.8	
	comp=Z,34nm,19.8s,MS3.2,baz=190,slow=39						
CMAR	**Chiang Mai Arr**	**41.73**	**253**	P	**P**	**17 37 15.8**	**-1.3**
CMAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
CMAR				MLR	MLR		
	comp=Z,34nm,19.8s						
MK31	**Makanchi Array**	**42.77**	**300**	*e*P	**P**	**17 37 24.6**	**-0.5**
MKAR	**Makanchi Array**	**42.77**	**300**	P	**P**	**17 37 24.6**	**-0.5**
	comp=Z,1.6nm,0.7s,mb3.9,baz=74,slow=13,SNR=13						
MKAR				LR	LR	17 54 39.9	
	comp=Z,37nm,19.9s,MS3.3,baz=272,slow=35						
MKAR	**Makanchi Array**	**42.77**	**300**	P	**P**	**17 37 24.7**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR				MLR	MLR		
	comp=Z,37nm,19.9s						
KURK	**Kurchatov**	**44.42**	**306**	P	**P**	**17 37 38.3**	**-0.1**
	comp=Z,3.0nm,0.6s,mb4.2,baz=84,slow=8.3,SNR=15						
KURK				LR	LR	17 56 42.4	
	comp=Z,41nm,19.5s,MS3.4,baz=140,slow=37						
KURK	**Kurchatov**	**44.42**	**306**	P	**P**	**17 37 38.3**	**-0.1**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
KURK				MLR	MLR		
	comp=Z,41nm,19.5s,MS3.4						
KURK	**Kurchatov**	**44.42**	**306**	P	**P**	**17 37 37.7**	**-0.7**
KDAK	**Kodiak Island**	**45.82**	**43**	P	**P**	**17 37 48.0**	**-1.4**
	comp=Z,6.1nm,0.7s,mb4.6,baz=264,slow=4.3,SNR=4.5						
KDAK	**Kodiak Island**	**45.82**	**43**	P	**P**	**17 37 48.0**	**-1.4**
KDAK				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
TKM2	**Tokmak 2**	**48.38**	**297**	*e*P	**P**	**17 38 10.6**	**+1.0**
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
TKM2	**Tokmak 2**	**48.38**	**297**	*e*P	**P**	**17 38 10.6**	**+0.9**
	comp=Z,4.7nm,0.9s,mb4.5						
BVAR	**Borovoye Array**	**48.95**	**311**	P	**P**	**17 38 13.8**	**-0.1**
	comp=Z,1.4nm,0.5s,mb4.2,baz=71,slow=8.1,SNR=10						
BVAR				PcP	PcP	17 39 37.7	-0.2
	comp=Z,0.9nm,0.6s,baz=108,slow=4.7,SNR=4.2						
BVAR	**Borovoye Array**	**48.95**	**311**	P	**P**	**17 38 13.8**	**-0.1**

KBL pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
KBL Kabul 56.38 290 *eP* **P 17 39 09.3 +0.1**
comp=Z,8.9nm,0.9s,mb4.8
AKTK Aktyubinsk 57.06 311 P **P 17 39 13.6 -0.1**
AKTO Aktyubinsk 57.06 311 P **P 17 39 13.6 -0.1**
comp=Z,2.3nm,0.8s,mb4.3,baz=74,slow=14,SNR=10
AKTO Aktyubinsk 57.06 311 P **P 17 39 13.6 -0.1**
AKTO pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
WRAB Tennant Creek 59.04 187 *eP* **P 17 39 27.0 -0.8**
WRAB pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
WRAB Tennant Creek 59.04 187 *eP* **P 17 39 27.0 -0.8**
comp=Z,7.8nm,0.9s,mb4.7
WRA Warramunga Arr 59.05 187 P **P 17 39 27.4 -0.5**
comp=Z,3.3nm,0.6s,mb4.5,baz=5.8,slow=7.3,SNR=24
WRA Warramunga Arr 59.05 187 P **P 17 39 27.4 -0.5**
WRA pmax pmax
comp=Z,3.0nm,0.6s
RES Resolute Bay 60.70 15 *eP* **P 17 39 37.8 -0.9**
RES pmax pmax
comp=Z,3.0nm,0.7s,mb4.5
RES Resolute Bay 60.70 15 *eP* **P 17 39 37.8 -0.8**
comp=Z,3.4nm,0.7s,mb4.6
ARCES ARCESS Array B 61.96 339 P **P 17 39 46.8 -0.5**
comp=Z,1.1nm,0.8s,mb4.0,baz=72,slow=7.8,SNR=4.7
ARCES LR LR 18 12 01.9
comp=Z,31nm,19.7s,MS3.5,baz=93,slow=41
ARCES ARCESS Array B 61.96 339 P **P 17 39 46.8 -0.4**
ARCES pmax pmax
comp=Z,1.0nm,0.8s
ARCES MLR MLR
comp=Z,31nm,19.7s
ASAR Alice Springs 62.78 187 P **P 17 39 53.1 -0.1**
comp=Z,2.0nm,0.7s,mb4.4,baz=5.9,slow=4.8,SNR=24
ASAR Alice Springs 62.78 187 P **P 17 39 53.1 -0.1**
ASAR pmax pmax
comp=Z,2.0nm,0.7s
MBWA Marble Bar 63.15 202 *eP* **P 17 39 54.8 -0.9**
FINES FINESS Array B 66.84 332 P **P 17 40 18.7 -0.6**
comp=Z,3.5nm,0.8s,mb4.5,baz=28,slow=8.6,SNR=11
FINES FINESS Array B 66.84 332 P **P 17 40 18.7 -0.6**
FINES pmax pmax
comp=Z,4.0nm,0.8s
KIV Kislovodsk 69.31 310*d iP* **P 17 40 36.0 +0.8**
KIV *e* 17 40 57.9
KIV pmax pmax
comp=Z,13nm,0.8s,mb4.9
KIV Kislovodsk 69.31 310 *eP* **P 17 40 36.3 +1.1**
comp=Z,11nm,0.8s,mb4.8
STKA Stephens Creek 70.61 179 P **P 17 40 41.8 -1.2**
comp=Z,1.3nm,0.7s,mb4.0,baz=359,slow=20,SNR=2.8
STKA Stephens Creek 70.61 179 *eP* **P 17 40 43.5 +0.5**
HFS Hagfors 72.08 335 LR LR 18 14 58.2
comp=Z,55nm,18.1s,MS3.9,baz=174,slow=38
NB2 NORSAR Subarra 72.16 337 P **P 17 40 51.7 -0.5**
comp=Z,1.3nm,0.7s,mb4.0,baz=41,slow=6.2
NOA NORSAR Array B 72.16 337 P **P 17 40 51.8 -0.5**
comp=Z,2.7nm,0.8s,mb4.2,baz=40,slow=6.0,SNR=7.2
NOA LR LR 18 14 48.5
comp=Z,35nm,21.6s,MS3.6,baz=30,slow=38
NOA NORSAR Array B 72.16 337 P **P 17 40 51.8 -0.4**
NOA pmax pmax
comp=Z,3.0nm,0.8s
NOA MLR MLR
comp=Z,35nm,21.6s
AKASG Malin Array Be 72.47 322 P **P 17 40 53.2 -1.0**
comp=Z,1.0nm,0.5s,mb4.0,baz=46,slow=6.3,SNR=9.5
AKASG Malin Array Be 72.47 322 P **P 17 40 53.2 -1.0**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
NVAR Mina Array Bea 74.03 53 P **P 17 41 05.3 +1.6**
comp=Z,2.0nm,0.9s,mb4.0,baz=287,slow=5.9,SNR=12
FRB Frobisher Bay 74.85 13 P **P 17 41 06.7 -1.3**
comp=Z,5.1nm,0.6s,mb4.6,baz=3.4,slow=8.0,SNR=8.2
FRB Frobisher Bay 74.85 13 P **P 17 41 06.7 -1.3**
FRB pmax pmax
comp=Z,5.0nm,0.6s
DUG Dugway 76.27 49 *eP* **P 17 41 17.6 +1.0**
DUG pmax pmax
comp=Z,1.0nm,0.8s,mb3.8
DUG Dugway 76.27 49 *eP* **P 17 41 17.6 +1.0**
comp=Z,1.4nm,0.8s,mb3.9
PDAR Pinedale Array 76.47 46 P **P 17 41 17.2 -0.4**
comp=Z,1.0nm,0.7s,mb3.9,baz=301,slow=2.9,SNR=9.0
BUR08 Bucovina Ar. S 76.48 321 *eP* **P 17 41 17.5 -0.1**
BRTR Keskin Array B 77.24 311 P **P 17 41 22.4 +0.3**
comp=Z,0.7nm,0.5s,mb3.8,baz=65,slow=4.3,SNR=5.5
BRTR Keskin Array B 77.24 311 P **P 17 41 22.4 +0.3**
BRTR pmax pmax
comp=Z,1.0nm,0.5s
MORC Moravsky Berou 78.46 326 *eP* **P 17 41 27.1 -1.5**
MORC pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
MORC Moravsky Berou 78.46 326 *eP* **P 17 41 27.1 -1.5**
comp=Z,4.0nm,1.1s,mb4.3
DPC Dobruska-Polom 78.54 327 *eP* **P 17 41 29.9 +0.8**
DPC Dobruska-Polom 78.54 327 *eP* **P 17 41 29.9 +0.8**
CLL Collm 79.15 330 *eP* **P 17 41 32.0 -0.4**
CLL *i* 17 41 43.0
CLL pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
CLL Collm 79.15 330 *eP* **P 17 41 32.0 -0.4**
comp=Z,5.0nm,1.1s,mb4.4
CLL *i* 17 41 43.0
PRU Pruhonice 79.56 328 *eP* **P 17 41 33.5 -1.1**
PRU Pruhonice 79.56 328 *eP* **P 17 41 33.5 -1.1**
ASF Jabal al Asfar 80.09 303 P **P 17 41 38.3 +0.5**
comp=Z,0.9nm,0.3s,mb4.1,baz=5.9,slow=6.6,SNR=3.0
ASF Jabal al Asfar 80.09 303 P **P 17 41 38.3 +0.4**
ASF pmax pmax
comp=Z,1.0nm,0.4s
KHC Kasperske Hory 80.62 328 *eP* **P 17 41 40.7 +0.3**
KHC Kasperske Hory 80.62 328 *eP* **P 17 41 40.7 +0.3**
GERES GERESS Array B 80.79 328 P **P 17 41 41.4 +0.1**
comp=Z,0.7nm,0.6s,mb3.8,baz=35,slow=5.1,SNR=9.9
GERES GERESS Array B 80.79 328 P **P 17 41 41.4 +0.1**
GERES pmax pmax
comp=Z,1.0nm,0.6s
BAIF Baives 83.42 334 *eP* **P 17 41 54.6 -0.5**
ANMO Albuquerque 83.52 50 P **P 17 41 55.0 -0.9**
comp=Z,0.9nm,0.8s,mb4.0,baz=323,slow=4.8,SNR=4.1
ANMO Albuquerque 83.52 50 P **P 17 41 55.1 -0.8**
ANMO pmax pmax
comp=Z,1.0nm,0.8s
CDF Champ du Feu 83.68 331 *eP* **P 17 41 56.1 -0.4**
HAU Haudompre 84.37 331 *eP* **P 17 41 59.4 -0.6**
CABF La Chapelle 85.63 331 *eP* **P 17 42 05.9 -0.4**
LOR Lormes 85.90 332 *eP* **P 17 42 07.2 -0.5**
comp=Z,21nm,1.3s,mb4.9
FLN La Foliniere 86.10 336 *eP* **P 17 42 08.2 -0.4**
LDF La Druitiere 86.13 335 *eP* **P 17 42 08.2 -0.6**
SSF Saint Saulge 86.21 332 *eP* **P 17 42 09.6 +0.4**
comp=Z,9.4nm,0.9s,mb4.7
LPL La Plagne 86.29 330 *eP* **P 17 42 09.5 -0.1**
LPG La Plagne 86.30 330 *eP* **P 17 42 09.6 -0.1**
SMF Signal de Mont 86.44 332 *eP* **P 17 42 09.9 -0.4**
comp=Z,2.4nm,0.5s,mb4.4
AVF Avril sur Loir 86.49 332 *eP* **P 17 42 10.3 -0.3**
comp=Z,12nm,0.9s,mb4.8
GRR Gorron 86.55 336 *eP* **P 17 42 10.6 -0.2**
SGMF Saint Gilles 87.20 337 *eP* **P 17 42 14.0 0.0**
comp=Z,18nm,1.1s,mb4.9
TCF Toulx Ste Croi 87.33 333 *eP* **P 17 42 14.7 0.0**
comp=Z,7.0nm,1.1s,mb4.5
ROSF Rostrenen 87.35 337 *eP* **P 17 42 14.7 -0.1**
comp=Z,16nm,1.1s,mb4.9
MFF Saint Martin d 87.88 334 *eP* **P 17 42 17.4 +0.1**
comp=Z,4.3nm,0.8s,mb4.4
RJF Les Rejaudoux 88.42 333 *eP* **P 17 42 19.8 -0.2**
comp=Z,12nm,1.2s,mb4.7
LFF La Frestale 89.02 333 *eP* **P 17 42 22.9 +0.2**
TXAR Lajitas Array 89.13 52 P **P 17 42 24.6 +1.0**
comp=Z,0.5nm,0.8s,mb3.9,baz=315,slow=4.3,SNR=7.4
TXAR Lajitas Array 89.13 52 P **P 17 42 24.6 +1.0**
TXAR pmax pmax
comp=Z,1.0nm,0.8s
LPAZ La Paz 145.89 56 PKPbc PKPbc 17 49 08.5 +0.7
comp=Z,10nm,0.7s,baz=306,slow=9.4,SNR=39
LPAZ La Paz 145.89 56 *e*PKPdf PKPbc 17 49 08.0 +0.2

NIED ***14*** *17:31:00,38.˚90N×140.˚80E,h8km,Mw4.1 Best double couple: M0 1.47000×10^15 NP1:φs 34.00000°,δ89.00000°, λ167.00000°. NP2:φs 124.00000°,δ77.00000°,λ1.00000°.*
IDC ***14*** *17:31:34.8±1.3,38.˚94N×140.˚99E,h0km,mb3.8/5, mb1 3.9/8,mb1mx3.7/28,mbtmp3.9/8,ML3.6/3,MS3.0/1, Ms1 3.0/1,ms1mx2.2/41,Error ellipse: s-maj=28.4km s-min=16.8km az=100.0*
ISCJB ***14*** *17:31:36.8±0.6,38.˚89N±0.˚03×140.˚79E±0.˚04,h14km±5km, mb3.9/5,Error ellipse: s-maj=5.2km s-min=4.3km az=141.5*
NEIC ***14*** *17:31:37.3,38.˚88N×140.˚76E,h8km,mb4.4/1,After JMA.*
NEIC Recorded [3 JMA] in Miyagi, [2 JMA] in Iwate and [1 JMA] in Akita and Yamagata.
JMA ***14*** *17:31:37.3,38.˚88N×140.˚76E,h8km±1km,M4.1 Broadband fault plane solution: P waves. NP1: φs 206.00000°,δ63.00000°,λ156.00000°. NP2: φs 307.00000°,δ69.00000°,λ29.00000°. Principal axes: T Plg35.0000°, Azm168.0000°; N Plg55.0000°, Azm339.0000°; P Plg4.0000°, Azm75.0000°;*
JMA Felt III J1.

ISC 14 17:31:37.2±0.5,38.˚87N±0.˚03×140.˚78E±0.˚03,h5km±4km, n23,σ0.˚97/33,mb3.9/5,3C-4D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.33**	**278**	↓P	**Pg**	**17 31 43.6**	**-0.1**
JYK				S	**Sg**	**17 31 48.0**	**0.0**
JMK	**Ichinoseki**	**0.35**	**77**	↓P	**Pg**	**17 31 44.2**	**+0.1**
JMK				S	**Sg**	**17 31 49.1**	**+0.4**
JOU	**Okura**	**0.51**	**190**	↑P	**Pg**	**17 31 47.4**	**+0.3**
JOU				*e*S	**Sg**	**17 31 54.4**	**+0.6**
JRG	**Rokugo**	**0.54**	**348**	↑P	**Pg**	**17 31 47.5**	**-0.1**
JIO	**Ouri**	**0.61**	**133**	↑P	**Pg**	**17 31 48.8**	**-0.2**
JIO				S	**Sg**	**17 31 57.0**	**+0.1**
JOM	**Ohasama**	**0.72**	**33**	P	**Pg**	**17 31 50.7**	**-0.4**
JOM				S	**Sg**	**17 32 00.5**	**0.0**
JYS	**Shiratake**	**0.86**	**221**	↓P	**Pg**	**17 31 53.6**	**-0.1**
JYS				S	**Sg**	**17 32 05.5**	**+0.7**
JYA	**Atsumi**	**0.88**	**252**	↓P	**Pg**	**17 31 53.6**	**-0.5**
JYA				S	**Sg**	**17 32 05.5**	**0.0**
JMM	**Marumori**	**1.00**	**179**	P	**Pg**	**17 31 55.6**	**-0.9**
JMM				S	**Sg**	**17 32 09.0**	**-0.5**
MAJO	**Matsushiro**	**3.09**	**222**	*e*Pn	**Pn**	**17 32 27.3**	**+0.6**
MAT	**Matsushiro**	**3.09**	**222**	P	**Pn**	**17 32 27.3**	**+0.6**
MAT				S	**Sn**	**17 33 08.8**	**+4.8**
MJAR	**Matsushiro Arr**	**3.09**	**222**	Pn	**Pn**	**17 32 27.7**	**+1.0**
	2.5nm,0.3s,baz=298,slow=9.2,SNR=4.2						
MJAR				Pg	**Pg**	**17 32 33.7**	**-2.8**
	6.8nm,0.3s,baz=27,slow=16,SNR=7.2						
MJAR				Lg		17 33 15.5	
	5.0nm,0.3s,baz=58,slow=31,SNR=3.5						
ASAJ	**Asahikawa**	**5.42**	**14**	Pn	**Pn**	**17 33 00.9**	**+2.3**
	1.4nm,0.3s,baz=232,slow=11,SNR=3.9						
ASAJ				LR	LR	17 35 05.6	
	comp=Z,136nm,19.2s,baz=191,slow=40						
JHJ	**Hachijo jima 2**	**5.80**	**188**	Pn	**Pn**	**17 33 04.8**	**+0.9**
	6.7nm,0.3s,baz=342,slow=16,SNR=5.4						
YSS	**Yuzh-Sakhalins**	**8.21**	**10**	*e*Pn	**Pn**	**17 33 37.0**	**+0.1**
KSRS	**Korea Array**	**10.22**	**266**	Pn	**Pn**	**17 34 07.3**	**+2.8**
	0.7nm,0.3s,baz=77,slow=14,SNR=6.7						
MKAR	**Makanchi Array**	**42.74**	**300**	P	**P**	**17 39 35.5**	**+0.3**
	0.2nm,0.2s,mb3.4,baz=78,slow=11,SNR=2.2						
KURK	**Kurchatov**	**44.42**	**307**	P	**P**	**17 39 47.8**	**-0.9**
	1.5nm,0.6s,mb3.9,baz=82,slow=8.6,SNR=3.3						
KURK	**Kurchatov**	**44.42**	**307**	*e*P	**P**	**17 39 46.1**	**-2.6**
	5.9nm,0.9s,mb4.3						
WRA	**Warramunga Arr**	**58.81**	**187**	P	**P**	**17 41 35.5**	**-1.1**
	1.3nm,0.7s,mb4.0,baz=4.6,slow=7.1,SNR=5.4						
WRA	**Warramunga Arr**	**58.81**	**187**	P	**P**	**17 41 35.5**	**-1.1**
ASAR	**Alice Springs**	**62.54**	**187**	P	**P**	**17 42 00.9**	**-1.0**
	0.5nm,0.8s,mb3.7,baz=12,slow=9.8,SNR=5.0						
FINES	**FINESS Array B**	**66.96**	**332**	P	**P**	**17 42 27.9**	**-2.5**
	2.0nm,1.0s,mb4.1,baz=145,slow=30,SNR=2.7						

IDC ***14*** *17:40:12.0±1.0,39.˚13N×140.˚77E,h0km,mb3.6/6, mb1 3.7/8,mb1mx3.5/28,mbtmp3.5/8,ML2.5/2,MS2.8/2, Ms1 2.8/2,ms1mx2.4/34,Error ellipse: s-maj=26.8km s-min=15.0km az=112.0*
NEIC ***14*** *17:40:13.6,39.˚05N×140.˚81E,h10km,MG3.3(JMA),After JMA.*
JMA ***14*** *17:40:13.6,39.˚05N×140.˚81E,h6km±1km,M3.4*
JMA Felt I J1.
ISCJB ***14*** *17:40:13.3±0.4,39.˚07N±0.˚03×140.˚84E±0.˚04,h21km±5km, mb3.5/6,Error ellipse: s-maj=5.8km s-min=5.1km az=26.2*

ISC 14 17:40:13.6±0.5,39.˚05N±0.˚03×140.˚83E±0.˚04,h9km±4km, n21,σ0.˚95/26,mb3.5/6,1C-4D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.32**	**107**	↓P	**Pg**	**17 40 19.9**	**0.0**
JMK				S	**Sg**	**17 40 24.5**	**+0.3**
JRG	**Rokugo**	**0.38**	**337**	↓P	**Pg**	**17 40 21.0**	**0.0**
JRG				S	**Sg**	**17 40 26.7**	**+0.7**
JYK	**Kaneyama**	**0.39**	**251**	↑P	**Pg**	**17 40 21.0**	**-0.1**
JYK				S	**Sg**	**17 40 26.0**	**-0.2**
JOM	**Ohasama**	**0.56**	**40**	P	**Pg**	**17 40 24.4**	**0.0**
JOM				S	**Sg**	**17 40 32.1**	**+0.4**
JOU	**Okura**	**0.69**	**190**	↓P	**Pg**	**17 40 26.9**	**0.0**
JIO	**Ouri**	**0.72**	**145**	↓P	**Pg**	**17 40 27.2**	**-0.3**
JIO				S	**Sg**	**17 40 36.8**	**0.0**
JYS	**Shiratake**	**1.02**	**216**	P	**Pg**	**17 40 32.8**	**-0.3**
JYS				S	**Sg**	**17 40 46.1**	**-0.2**
MAJO	**Matsushiro**	**3.25**	**220**	*e*Pn	**Pn**	**17 41 06.0**	**+1.3**
MAT	**Matsushiro**	**3.25**	**220**	P	**Pn**	**17 41 06.3**	**+1.6**
MAT				*e*S	**Sn**	**17 41 51.6**	**+8.1**
MJAR	**Matsushiro Arr**	**3.25**	**220**	Pn	**Pn**	**17 41 06.0**	**+1.3**
	0.8nm,0.3s,baz=35,slow=11,SNR=16						
MJAR				Pg	**Pg**	**17 41 12.9**	**-2.9**
	0.8nm,0.3s,baz=26,slow=15,SNR=14						
MJAR				Lg		17 41 57.6	
	0.5nm,0.3s,baz=308,slow=5.0,SNR=4.3						
ASAJ	**Asahikawa**	**5.24**	**14**	Pn	**Pn**	**17 41 30.8**	**-1.2**
	0.1nm,0.3s,baz=177,slow=18,SNR=2.2						
KSRS	**Korea Array**	**10.27**	**265**	Pn	**Pn**	**17 42 44.0**	**+2.9**
	0.2nm,0.3s,baz=74,slow=13,SNR=8.2						
FX1	**Attu Island--F**	**26.13**	**47**	LR	LR	17 54 33.1	
	comp=Z,42nm,21.9s,baz=70,slow=33						
ZALV	**Zalesovo Beam**	**40.23**	**311**	P	**P**	**17 47 48.9**	**-1.4**
	0.3nm,0.3s,mb3.5,baz=72,slow=9.3,SNR=2.7						
MKAR	**Makanchi Array**	**42.68**	**300**	P	**P**	**17 48 08.9**	**-1.6**
	0.1nm,0.3s,mb3.0,baz=73,slow=12,SNR=2.7						
KURK	**Kurchatov**	**44.34**	**306**	P	**P**	**17 48 23.6**	**-0.2**
	0.2nm,0.3s,mb3.3,baz=288,slow=40,SNR=3.3						
INK	**Inuvik**	**52.82**	**28**	P	**P**	**17 49 29.6**	**+0.8**
	0.7nm,0.5s,mb3.8,baz=344,slow=11,SNR=4.7						
WRA	**Warramunga Arr**	**58.99**	**187**	P	**P**	**17 50 13.1**	**-0.5**
	1.7nm,1.1s,mb4.0,baz=5.2,slow=7.4,SNR=5.3						
YKA	**Yellowknife Ar**	**62.31**	**30**	LR	LR	18 21 01.0	
	comp=Z,4.6nm,18.4s,baz=30,slow=39						
ASAR	**Alice Springs**	**62.72**	**187**	P	**P**	**17 50 38.5**	**-0.3**
	0.4nm,0.8s,mb3.6,baz=358,slow=5.6,SNR=4.4						
LPAZ	**La Paz**	**146.02**	**56**	PKPbc	PKPbc	17 59 54.0	-0.1
	0.9nm,0.7s,baz=304,slow=7.3,SNR=3.2						

IDC 14 17:47:58.9±27.0,22.˚83S×173.˚35W,h0km,mb4.2/4, mb1 4.4/4,mb1mx3.9/17,mbtmp4.2/4,MS3.2/1,Ms1 3.2/1, ms1mx2.5/25,Error ellipse: s-maj=492.4km s-min=155.2km az=76.0,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**37.61**	**266**	P	P	17 55 16.2	+0.6
	4.9nm,0.3s,baz=88,slow=6.3,SNR=19						
CTA				LR	LR	18 09 02.7	
	comp=Z,31nm,18.7s,baz=45,slow=34						
STKA	**Stephens Creek**	**40.78**	**247**	P	P	17 55 41.4	-0.6
	0.9nm,0.3s,baz=73,slow=11,SNR=2.9						
ASAR	**Alice Springs**	**48.23**	**258**	P	P	17 56 41.3	-0.4
	1.0nm,0.7s,baz=95,slow=8.6,SNR=38						
WRA	**Warramunga Arr**	**48.59**	**263**	P	P	17 56 44.6	+0.1
	1.4nm,0.3s,baz=101,slow=8.3,SNR=11						

IDC ***14*** *18:07:25.5±0.8,8.˚26S×120.˚08E,h0km,mb4.0/7, mb1 4.1/10,mb1mx3.9/23,mbtmp4.0/10,ML3.8/3,Error ellipse: s-maj=44.2km s-min=13.8km az=71.0*
NEIC ***14*** *18:07:30.4±0.4,8.˚23S×120.˚19E,h35km,mb3.6/1,Error ellipse: s-maj=15.1km s-min=6.3km az=63.0*
ISCJB ***14*** *18:07:30.1±0.7,8.˚22S±0.˚04×120.˚28E±0.˚06,h52km±8km, mb3.9/6,Error ellipse: s-maj=11.1km s-min=4.9km az=153.9*
DJA ***14*** *18:07:32,8.˚10S×120.˚42E,h30km,MLv4.2/5*

ISC 14 18:07:31.0±0.7,8.˚23S±0.˚04×120.˚22E±0.˚07,h38km±9km, n41,σ0.˚84/50,mb3.9/6,Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.44**	**177**	P	**Pn**	**18 07 55.6**	**+1.0**
WSI				S	**Sn**	**18 08 19.4**	**+7.2**
WSI	**Waingapu**	**1.44**	**177**	P	**Pn**	**18 07 55.4**	**+0.8**
WSI				S	**Sn**	**18 08 21.2**	**+9.0**
MMRI	**Maumere**	**2.04**	**102**	P	**Pn**	**18 08 01.9**	**-0.9**
MMRI				S	**Sn**	**18 08 27.3**	**+0.3**
MMRI	**Maumere**	**2.04**	**102**	P	**Pn**	**18 08 02.0**	**-0.8**
MMRI				S	**Sn**	**18 08 27.2**	**+0.2**
BKSI	**Bulukumba**	**2.89**	**358**	P	**Pn**	**18 08 13.8**	**-0.7**
BKSI				S	**Sn**	**18 08 46.6**	**-1.4**
BKSI	**Bulukumba**	**2.89**	**358**	P	**Pn**	**18 08 13.7**	**-0.8**
BKSI				S	**Sn**	**18 08 47.6**	**-0.4**
KAPI	**Kappang**	**3.22**	**352**	Pn	**Pn**	**18 08 19.1**	**-0.1**
	12nm,0.3s,baz=147,slow=10,SNR=25						
KAPI				Sn	**Sn**	**18 08 57.1**	**+0.8**
	4.9nm,0.3s,baz=228,slow=19,SNR=3.6						
KAPI	**Kappang**	**3.22**	**352**	Pn	**Pn**	**18 08 19.1**	**-0.1**
KAPI				Sn	**Sn**	**18 08 57.1**	**+0.8**
BNSI	**Bone**	**3.80**	**358**	P	**Pn**	**18 08 27.7**	**+0.6**
BNSI				S	**Sn**	**18 09 15.8**	**+5.2**
BNSI	**Bone**	**3.80**	**358**	P	**Pn**	**18 08 27.7**	**+0.6**
BNSI				S	**Sn**	**18 09 12.9**	**+2.3**
KHKI	**Kahang-Kahang**	**4.57**	**268**	P	**Pn**	**18 08 43.5**	**+5.9**
KHKI	**Kahang-Kahang**	**4.57**	**268**	P	**Pn**	**18 08 43.3**	**+5.7**
IGBI	**Denpasar**	**5.05**	**263**	P	**Pn**	**18 08 50.0**	**+5.7**
MRSI	**Marisa**	**8.81**	**11**	P	Px	18 10 23.5	
FITZ	**Fitzroy Crossi**	**11.14**	**152**	Pn	**Pn**	**18 10 07.5**	**-0.3**
	0.2nm,0.3s,baz=319,slow=7.6,SNR=8.6						
FITZ				Sn	**Sn**	**18 12 13.2**	**+2.0**
	0.4nm,0.3s,baz=114,slow=18,SNR=3.6						
FITZ	**Fitzroy Crossi**	**11.14**	**152**	Pn	**Pn**	**18 10 07.5**	**-0.3**
FITZ				Sn	**Sn**	**18 12 13.2**	**+2.0**
KNA	**Kununurra**	**11.21**	**133**	P	**Pn**	**18 10 07.4**	**-1.4**
KAKA	**Kakadu**	**12.81**	**111**	*e*Pn	**Pn**	**18 10 30.6**	**-0.1**
KAKA				*e*Sn	**Sn**	**18 12 52.9**	**+0.7**
MBWA	**Marble Bar**	**12.87**	**182**	*e*Pn	**Pn**	**18 10 30.9**	**-0.5**
MBWA				*e*Sn	**Sn**	**18 12 49.6**	**-3.9**
WRA	**Warramunga Arr**	**17.96**	**132**	P	**Pn**	**18 11 37.0**	**-0.9**
	0.6nm,0.3s,baz=308,slow=12,SNR=16						
WRA	**Warramunga Arr**	**17.96**	**132**	P	**Pn**	**18 11 37.0**	**-0.9**
WRAB	**Tennant Creek**	**17.96**	**132**	*e*P	**Pn**	**18 11 37.2**	**-0.7**
	3.1nm,0.7s						
ASAR	**Alice Springs**	**20.19**	**141**	P	**P**	**18 12 02.9**	**+0.4**
	7.3nm,0.8s,baz=318,slow=10,SNR=84						
ASAR	**Alice Springs**	**20.19**	**141**	P	**P**	**18 12 02.9**	**+0.4**
NWAO	**Narrogin (SRO)**	**24.74**	**186**	P	**P**	**18 12 49.5**	**+0.6**
	13nm,1.1s,mb4.4,baz=39,slow=16,SNR=4.5						
NWAO	**Narrogin (SRO)**	**24.74**	**186**	P	**P**	**18 12 49.5**	**+0.6**
STKA	**Stephens Creek**	**30.81**	**143**	P	**P**	**18 13 42.9**	**-0.4**
	0.9nm,0.3s,mb4.1,baz=326,slow=18,SNR=4.5						
STKA	**Stephens Creek**	**30.81**	**143**	P	**P**	**18 13 42.9**	**-0.4**
KSRS	**Korea Array**	**46.01**	**9**	P	**P**	**18 15 51.6**	**+0.9**
	0.7nm,0.8s,mb3.6,baz=178,slow=9.2,SNR=3.3						
SONM	**Songino Array**	**57.14**	**349**	P	**P**	**18 17 14.1**	**+0.4**
	0.3nm,0.5s,mb3.6,baz=174,slow=7.0,SNR=2.6						
SONM	**Songino Array**	**57.14**	**349**	P	**P**	**18 17 14.1**	**+0.4**
MK31	**Makanchi Array**	**64.33**	**332**	*e*P	**P**	**18 18 02.4**	**-0.3**
MKAR	**Makanchi Array**	**64.33**	**332**	P	**P**	**18 18 03.2**	**+0.5**
	0.4nm,0.5s,mb3.7,baz=108,slow=6.8,SNR=11						
MKAR	**Makanchi Array**	**64.33**	**332**	P	**P**	**18 18 03.2**	**+0.5**
ZAA0	**Zalesovo Array**	**68.76**	**338**	P	**P**	**18 18 30.4**	**-0.4**
ZALV	**Zalesovo Beam**	**68.76**	**338**	P	**P**	**18 18 29.9**	**-1.0**
	0.8nm,0.4s,mb4.0,baz=142,slow=5.4,SNR=4.0						
ZALV	**Zalesovo Beam**	**68.76**	**338**	P	**P**	**18 18 29.9**	**-1.0**
TORD	**Torodi Ar. Bea**	**119.51**	**280**	PKP	PKPdf	18 26 15.9	-1.7
	0.2nm,0.7s,baz=217,slow=3.6,SNR=2.4						
TORD	**Torodi Ar. Bea**	**119.51**	**280**	PKP	PKPdf	18 26 15.9	-1.7
LPAZ	**La Paz**	**154.28**	**161**	PKPab	PKPab	18 27 43.3	+1.4
	1.1nm,0.5s,baz=237,slow=2.9,SNR=5.8						
LPAZ	**La Paz**	**154.28**	**161**	PKPab	PKPab	18 27 43.3	+1.4

JMA 14 18:28:45.5,39.˚00N×140.˚84E,h5km±1km,M1.8,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRG	**Rokugo**	**0.43**	**338**	P	Pg	18 28 53.9	+0.2
JRG				S	Sg	18 29 00.0	+0.7
JOU	**Okura**	**0.65**	**192**	P	Pg	18 28 58.0	+0.1
JOU				S	Sg	18 29 06.7	+0.4

NIED ***14*** *18:29:00,39.˚20N×140.˚90E,h5km,Mw4.3 Best double couple: M0 3.46000×10^15 NP1:φs 131.00000°,δ87.00000°, λ-11.00000°. NP2:φs 222.00000°,δ79.00000°, λ-177.00000°.*
BJI ***14*** *18:29:18.9,39.˚11N×141.˚16E,h17km,mB4.8/18,mb4.4/22, Ms4.2/19,Ms7 3.9/19*
IDC ***14*** *18:29:19.9±0.6,39.˚14N×140.˚90E,h0km,mb4.1/16, mb1 4.2/19,mb1mx4.1/27,mbtmp4.0/19,ML3.7/3,MS3.5/12, Ms1 3.5/12,ms1mx3.2/46,Error ellipse: s-maj=17.8km s-min=11.7km az=108.0*
ISCJB ***14*** *18:29:20.6±0.5,39.˚16N±0.˚02×140.˚84E±0.˚03,h9km±3km, mb4.3/44,MS3.8/18,Error ellipse: s-maj=4.2km s-min=3.5km az=7.6*
JMA ***14*** *18:29:20.7,39.˚16N×140.˚86E,h10km±1km,M4.5*
JMA Felt II J1.
NEIC ***14*** *18:29:20.8,39.˚17N×140.˚86E,h10km,mb4.6/15, MW4.3(NIED),After JMA.*
NEIC Recorded [3 JMA] in Iwate and [2 JMA] in Akita and Miyagi.
MOS ***14*** *18:29:23.7±1.1,39.˚19N×140.˚75E,h33km,mb4.6/20,Error ellipse: s-maj=11.2km s-min=6.6km az=95.2*

ISC 14 18:29:21.1±0.5,39.˚16N±0.˚02×140.˚85E±0.˚03,h1km±3km, n126,σ1.˚04/137,mb4.4/44,MS3.8/18,4C-7D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRG	**Rokugo**	**0.29**	**325**	P	**Pg**	**18 29 26.7**	**0.0**
JRG				S	**Sg**	**18 29 31.1**	**+0.7**
JMK	**Ichinoseki**	**0.35**	**126**	P	**Pg**	**18 29 27.4**	**-0.5**
JMK				S

YSS			pmax	pmax		
	comp=Z,30nm,0.8s					
YSS			MLR	MLR		
	comp=Z,500nm,12.0s					
YSS	**Yuzh-Sakhalins**	**7.91 10**	*e*Pn	**Pn**	**18 31 18.8**	**+1.6**
	comp=Z,12nm,0.6s					
MDJ	**Mudanjiang**	**10.01 307**	P	**Pn**	**18 31 45.1**	**-0.8**
MDJ			pP		18 31 50.3	
MDJ			S	**Sn**	**18 33 37.3**	**-1.5**
MDJ			pmax	pmax		
	comp=Z,6.0nm,1.0s					
MDJ			pmax	pmax		
	comp=Z,56nm,3.7s					
MDJ			LR	LR		
	comp=N,640nm,15.4s					
MDJ			LR	LR		
	comp=E,360nm,15.0s					
MDJ			LR	LR		
	comp=Z,140nm,16.3s					
HABR	**Khabarovsk**	**10.21 338**	*e*P	**Pn**	**18 31 49.8**	**+1.1**
HABR					18 33 42.2	
HABR			pmax	pmax		
	comp=Z,22nm,1.5s					
HABR			pmax	pmax		
	comp=N,11nm,1.4s					
HABR			pmax	pmax		
	comp=E,15nm,1.5s					
HABR			MLR	MLR		
	comp=Z,378nm,17.0s					
KSRS	**Korea Array**	**10.30 265**	Pn	**Pn**	**18 31 52.5**	**+2.5**
	comp=Z,1.7nm,0.3s,baz=77,slow=14,SNR=73					
KSRS			Sn	**Sn**	**18 33 46.2**	**0.0**
	comp=Z,0.2nm,0.3s,baz=34,slow=36,SNR=5.9					
KSRS			LR	LR	18 35 23.8	
	comp=Z,286nm,19.2s,baz=348,slow=35					
KSRS	**Korea Array**	**10.30 265**	P	**Pn**	**18 31 52.6**	**+2.6**
KSRS					18 33 46.2	
KSRS			pmax	pmax		
	comp=Z,2.0nm,0.3s					
KSRS			MLR	MLR		
	comp=Z,286nm,19.2s					
KLR	**Kul'dur**	**11.99 330**	*e*P	**Pn**	**18 32 12.4**	**-0.7**
KLR			MLR	MLR		
	comp=Z,600nm,13.5s					
CBIJ	**Chichi jima**	**12.08 174**	Pn	**Pn**	**18 32 09.8**	**-4.7**
	comp=Z,3.5nm,0.3s,baz=293,slow=18,SNR=5.2					
CN2	**Changchun**	**12.44 297**	*e*P	**Pn**	**18 32 23.8**	**+4.5**
PETK	**Petropavlovsk-**	**18.12 34**	LR	LR	18 41 51.3	
	comp=Z,75nm,19.1s,baz=207,slow=42					
BJI	**Beijing**	**19.02 281**	P	**Pn**	**18 33 43.0**	**-2.0**
BJI			S	**Sn**	**18 37 14.0**	**-4.5**
BJI			pmax	pmax		
	comp=Z,8.0nm,0.8s					
BJI			LR	LR		
	comp=N,650nm,14.0s					
BJI			LR	LR		
	comp=E,210nm,19.1s					
NJ2	**Nanjing**	**19.21 255**	*e*P	**Pn**	**18 33 48.3**	**+0.9**
NJ2			pmax	pmax		
	comp=Z,10.0nm,0.5s					
HHC	**Hu-ho-hao-te**	**22.45 284**	*e*P	**P**	**18 34 19.6**	**-1.9**
HHC			pP		18 34 23.8	
HHC			sP	sP	18 34 26.6	+4.7
HHC			PP		18 34 47.0	
HHC			PcP	PcP	18 38 16.1	+0.1
HHC			S	**S**	**18 38 19.8**	**-9.1**
HHC			SS		18 39 01.3	
HHC			ScP	ScP	18 41 50.5	-4.0
HHC			PcS	PcS	18 41 52.8	-1.8
HHC			pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.1					
HHC			pmax	pmax		
	comp=Z,81nm,6.1s					
HHC			LR	LR		
	comp=N,170nm,11.2s,MS3.9					
HHC			LR	LR		
	comp=E,210nm,13.5s,MS3.9					
HHC			LR	LR		
	comp=Z,180nm,15.5s,MS3.6					
YAK	**Yakutsk**	**23.90 347**	*e*P	**P**	**18 34 32.3**	**-3.8**
YAK			*e**PP		18 34 41.4	
YAK			*e*PPP		18 35 16.1	
YAK			*e*		18 38 22.1	
YAK			*e*S	**S**	**18 38 46.2**	**-6.7**
YAK			*e*SSS		18 39 39.8	
YAK			*e*		18 45 33.9	
YAK			pmax	pmax		
	comp=Z,15nm,1.1s,mb4.4					
YAK			pmax	pmax		
	comp=N,9.0nm,1.1s					
YAK			pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.0					
YAK			smax			
	comp=E,42nm,2.3s					
YAK			smax			
	comp=N,60nm,2.5s					
YAK			MLR	MLR		
	comp=N,163nm,15.0s,MS3.7					
YAK			MLR	MLR		
	comp=Z,174nm,15.0s,MS3.6					
YAK			MLR	MLR		
	comp=E,50nm,12.0s,MS3.7					
YAK	**Yakutsk**	**23.90 347**	*e*P	**P**	**18 34 32.7**	**-3.4**
	comp=E,16nm,0.9s,mb4.5					
SEY	**Seymchan**	**24.80 13**	*d i*P	**P**	**18 34 45.1**	**+0.8**
ULN	**Ulaanbaatar**	**25.84 301**	*e*P	**P**	**18 34 54.4**	**+0.5**
SONM	**Songino Array**	**26.27 301**	P	**P**	**18 34 57.7**	**-0.1**
	comp=E,0.6nm,0.7s,mb3.3,baz=76,slow=6.1,SNR=4.5					
SONM			LR	LR	18 45 33.6	
	comp=E,84nm,18.4s,MS3.3,baz=253,slow=37					
SONM	**Songino Array**	**26.27 301**	P	**P**	**18 34 57.7**	**-0.2**
SONM			pmax	pmax		
	comp=Z,1.0nm,0.7s					
SONM			MLR	MLR		
	comp=Z,84nm,18.4s					
LZH	**Lanzhou**	**29.34 276**	*e*P	**P**	**18 35 26.8**	**+1.4**
LZH			pP		18 35 29.8	
LZH			sP	sP	18 35 32.0	+6.2
LZH			PP	PP	18 36 20.1	-11
LZH			pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8					
LZH			pmax	pmax		
	comp=Z,68nm,5.3s					
LZH			LR	LR		
	comp=N,400nm,11.6s					
LZH			LR	LR		
	comp=Z,460nm,13.8s,MS4.3					
GYA	**Guiyang**	**31.21 256**	*e*P	**P**	**18 35 41.9**	**-0.2**
GYA			PP	PP	18 36 45.8	-6.5
GYA			PcP	PcP	18 38 38.6	+1.8
GYA			S	**S**	**18 40 43.9**	**-5.3**
GYA			ScP	ScP	18 42 20.3	-0.5
GYA			SS	SS	18 42 31.6	-31
GYA			pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7					
GYA			pmax	pmax		
	comp=Z,30nm,4.1s					
GYA			LR	LR		
	comp=N,430nm,15.3s,MS4.4					
GYA			LR	LR		
	comp=E,420nm,14.1s,MS4.4					
GYA			LR	LR		
	comp=Z,440nm,15.2s,MS4.2					
BILL	**Bilibino**	**32.13 18**	*d i*P	**P**	**18 35 50.5**	**+0.9**
BILL			*e*SS	SS	18 43 00.9	-19
BILL			pmax	pmax		
	comp=Z,8.0nm,2.4s,mb4.2					
BILL			MLR	MLR		
	comp=Z,100nm,16.0s,MS3.6					
TIXI	**Tiksi**	**33.13 353**	*e*P	**P**	**18 35 57.7**	**-0.7**
TIXI			pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2					
TIXI	**Tiksi**	**33.13 353**	*e*P	**P**	**18 35 57.7**	**-0.7**
	comp=Z,1.7nm,0.6s,mb4.2					
QIZ	**Qiongzhong**	**33.46 242**	P	**P**	**18 36 02.6**	**+0.8**
QIZ			S	**S**	**18 41 26.1**	**+1.8**
QIZ			pmax	pmax		
	comp=Z,110nm,4.4s					
QIZ			LR	LR		
	comp=Z,190nm,13.9s,MS4.0					
KMI	**Kunming**	**34.91 258**	P	**P**	**18 36 15.8**	**+1.5**
KMI			pP		18 36 18.6	
KMI			sP	sP	18 36 19.8	+5.1
KMI			PP	PP	18 37 32.9	-0.4
KMI			S	**S**	**18 41 45.3**	**-1.3**
KMI			SS	SS	18 43 57.9	-20
KMI			pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4					
KMI			pmax	pmax		
	comp=Z,95nm,3.6s					
KMI			LR	LR		
	comp=N,160nm,14.5s,MS4.1					
KMI			LR	LR		
	comp=E,190nm,15.3s,MS4.1					
KMI			LR	LR		
	comp=Z,170nm,15.3s,MS3.9					
WMQ	**Urumqi**	**39.52 294**	*e*P	**P**	**18 36 53.0**	**-0.3**
KKM	**Kota Kinabalu**	**39.77 220**	P	**P**	**18 36 56.4**	**+0.7**
ZAA0	**Zalesovo Array**	**40.18 311**	*e*P	**P**	**18 36 57.5**	**-1.2**
ZALV	**Zalesovo Beam**	**40.18 311**	P	**P**	**18 36 57.8**	**-0.8**
	comp=Z,3.3nm,0.7s,mb4.1,baz=88,slow=7.9,SNR=18					
ZALV	**Zalesovo Beam**	**40.18 311**	P	**P**	**18 36 57.8**	**-0.8**
ZALV			pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.0					
CMAR	**Chiang Mai Arr**	**41.66 253**	LR	LR	18 56 44.5	
	comp=Z,62nm,19.9s,MS3.5,baz=264,slow=40					
MKAR	**Makanchi Array**	**42.64 300**	P	**P**	**18 37 18.1**	**-0.8**
	comp=Z,2.5nm,0.8s,mb4.0,baz=75,slow=12,SNR=21					
MKAR	**Makanchi Array**	**42.64 300**	P	**P**	**18 37 18.2**	**-0.8**
MKAR			pmax	pmax		
	comp=Z,3.0nm,0.8s					
KURK	**Kurchatov**	**44.29 306**	*e*P	**P**	**18 37 31.1**	**-1.1**
KURK			pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5					
KURK	**Kurchatov**	**44.29 306**	*e*P	**P**	**18 37 31.1**	**-1.2**
	comp=Z,9.4nm,1.0s,mb4.5					
TKM2	**Tokmak 2**	**48.26 297**	*e*P	**P**	**18 38 04.0**	**+0.5**
TKM2			pmax	pmax		
	comp=Z,13nm,1.1s,mb5.0					
TKM2	**Tokmak 2**	**48.26 297**	*e*P	**P**	**18 38 04.0**	**+0.5**
	comp=Z,13nm,1.1s,mb5.0					
BVAR	**Borovoye Array**	**48.83 311**	P	**P**	**18 38 07.2**	**-0.6**
	comp=Z,1.7nm,0.6s,mb4.2,baz=75,slow=8.1,SNR=13					
BVAR			PcP	PcP	18 39 32.6	+0.2
	comp=Z,0.9nm,0.6s,baz=95,slow=2.5,SNR=4.6					
BVAR	**Borovoye Array**	**48.83 311**	P	**P**	**18 38 07.2**	**-0.6**
BVAR					18 39 32.6	
BVAR			pmax	pmax		
	comp=Z,2.0nm,0.6s					
BVAR			pmax	pmax		
	comp=Z,1.0nm,0.6s					
BRVK	**Borovoye**	**48.88 311**	*e*P	**P**	**18 38 07.4**	**-0.8**
BRVK			pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2					
BRVK	**Borovoye**	**48.88 311**	*e*P	**P**	**18 38 07.4**	**-0.9**
	comp=Z,1.9nm,0.8s,mb4.2					
AAK	**Ala-Archa**	**49.12 297**	LR	LR	18 57 40.4	
	comp=Z,45nm,19.5s,MS3.5,baz=224,slow=35					
AAK	**Ala-Archa**	**49.12 297**	P	**P**	**18 38 09.5**	**-0.7**
UCH	**Uchtor**	**49.24 296**	*e*P	**P**	**18 38 12.0**	**+0.9**
EKS2	**Erkin-Say**	**49.60 297**	*e*P	**P**	**18 38 13.8**	**-0.1**
	comp=Z,4.4nm,1.0s,mb4.3					
AML	**Almayashu**	**49.84 296**	*e*P	**P**	**18 38 16.4**	**+0.7**
	comp=Z,9.3nm,1.1s,mb4.6					
INK	**Inuvik**	**52.71 28**	P	**P**	**18 38 35.8**	**-1.0**
	comp=Z,3.5nm,1.0s,mb4.2,baz=282,slow=7.6,SNR=6.2					
INK			LR	LR	19 02 34.4	
	comp=Z,66nm,18.5s,MS3.7,baz=271,slow=38					
INK	**Inuvik**	**52.71 28**	P	**P**	**18 38 35.8**	**-1.0**
INK			pmax	pmax		
	comp=Z,4.0nm,1.0s					
INK			MLR	MLR		
	comp=Z,66nm,18.5s					
INK	**Inuvik**	**52.71 28**	*e*P	**P**	**18 38 36.4**	**-0.4**
	comp=Z,9.0nm,1.4s,mb4.5					
SVE	**Sverdlovsk**	**53.27 317**	⇓*e*P	**P**	**18 38 41.2**	**+0.1**
SVE			pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8					
ARU	**Arti**	**54.48 317**	*d i*P	**P**	**18 38 49.0**	**-1.0**
ARU			*e*		18 40 48.0	
ARU			S	**S**	**18 46 26.0**	**-3.6**
ARU			SS	SS	18 50 06.3	-5.0
ARU			pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8					
ARU	**Arti**	**54.48 317**	*e*P	**P**	**18 38 49.3**	**-0.8**
	comp=Z,11nm,1.0s,mb4.8					
ABKAR	**Akbulak array**	**56.25 309**	*e*P	**P**	**18 39 01.4**	**-1.4**
	comp=Z,3.0nm,0.6s,mb4.5					
KBL	**Kabul**	**56.27 289**	*e*P	**P**	**18 39 02.6**	**-0.6**
KBL			pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7					
KBL	**Kabul**	**56.27 289**	*e*P	**P**	**18 39 02.5**	**-0.6**
	comp=Z,5.5nm,0.8s,mb4.6					
WRA	**Warramunga Arr**	**59.11 187**	P	**P**	**18 39 21.1**	**-2.1**
	comp=Z,1.6nm,0.7s,mb4.2,baz=4.8,slow=6.9,SNR=9.8					
WRA	**Warramunga Arr**	**59.11 187**	P	**P**	**18 39 21.1**	**-2.0**
WRA			pmax	pmax		
	comp=Z,2.0nm,0.7s					
RES	**Resolute Bay**	**60.66 15**	*e*P	**P**	**18 39 32.9**	**-0.3**
ARCES	**ARCESS Array B**	**61.85 339**	P	**P**	**18 39 40.1**	**-1.3**
	comp=Z,1.8nm,0.9s,mb4.3,baz=46,slow=10,SNR=4.0					
ARCES	**ARCESS Array B**	**61.85 339**	P	**P**	**18 39 40.2**	**-1.2**
ARCES			pmax	pmax		
	comp=Z,2.0nm,0.9s					
ASAR	**Alice Springs**	**62.83 187**	P	**P**	**18 39 47.4**	**-1.0**
	comp=Z,1.2nm,0.7s,mb4.1,baz=3.3,slow=4.2,SNR=12					
ASAR	**Alice Springs**	**62.83 187**	P	**P**	**18 39 47.4**	**-1.0**
ASAR			pmax	pmax		
	comp=Z,1.0nm,0.7s					
JOF	**Joensuu**	**63.88 331**	*e*p	**P**	**18 39 52.2**	**-2.8**
OBN	**Obninsk**	**66.14 322**	*e*P	**P**	**18 40 08.9**	**-0.9**
OBN			pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.5					
KAF	**Kangasniemi**	**66.22 332**	*e*P	**P**	**18 40 07.2**	**-3.0**
KAF			pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.8					
KAF	**Kangasniemi**	**66.22 332**	*e*p	**P**	**18 40 07.2**	**-3.0**
	comp=Z,5.2nm,0.7s,mb4.9					
FINES	**FINESS Array B**	**66.73 332**	P	**P**	**18 40 12.6**	**-0.9**
	comp=Z,4.1nm,0.6s,mb4.8,baz=54,slow=9.7,SNR=18					
FINES	**FINESS Array B**	**66.73 332**	P	**P**	**18 40 12.6**	**-0.9**
FINES			pmax	pmax		
	comp=Z,4.0nm,0.6s					
ZEI	**Tsey**	**69.13 309**	*e*P	**P**	**18 40 26.9**	**-2.0**
ZEI			pmax	pmax		
	comp=Z,5.0nm,0.5s,mb5.0					
KIV	**Kislovodsk**	**69.19 310**	*c i*P	**P**	**18 40 29.9**	**+0.6**
KIV			pmax	pmax		
	comp=Z,16nm,0.8s,mb5.3					
KIV	**Kislovodsk**	**69.19 310**	*e*P	**P**	**18 40 29.8**	**+0.5**
	comp=Z,16nm,0.9s,mb5.2					
NB2	**NORSAR Subarra**	**72.06 337**	P	**P**	**18 40 45.9**	**-0.6**
	comp=Z,2.2nm,0.7s,mb4.4,baz=39,slow=6.5					
NOA	**NORSAR Array B**	**72.06 337**	P	**P**	**18 40 45.0**	**-1.4**
	comp=Z,2.1nm,0.8s,mb4.3,baz=39,slow=6.0,SNR=5.9					
NOA			LR	LR	19 15 43.8	
	comp=Z,38nm,18.7s,MS3.7,baz=25,slow=39					
NOA	**NORSAR Array B**	**72.06 337**	P	**P**	**18 40 45.1**	**-1.4**
NOA			pmax	pmax		
	comp=Z,2.0nm,0.8s					
NOA			MLR	MLR		
	comp=Z,38nm,18.7s					
FFC	**Flin Flon**	**72.16 33**	*i* P	**P**	**18 40 47.9**	**+0.7**
FFC	**Flin Flon**	**72.16 33**	*e*P	**P**	**18 40 46.4**	**-0.8**
	comp=Z,4.9nm,1.1s,mb4.5					
AKASG	**Malin Array Be**	**72.35 322**	P	**P**	**18 40 47.4**	**-1.0**
	comp=Z,2.1nm,0.5s,mb4.5,baz=46,slow=5.9,SNR=13					
AKASG	**Malin Array Be**	**72.35 322**	P	**P**	**18 40 47.4**	**-1.0**
AKASG			pmax	pmax		
	comp=Z,2.0nm,0.5s					
AKASG	**Malin Array Be**	**72.35 322**	P	**P**	**18 40 47.4**	**-1.0**
BOZ	**Bozeman (W)**	**73.50 44**	*e*P	**P**	**18 40 55.5**	**+0.2**
BOZ			pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0					
BOZ	**Bozeman (W)**	**73.50 44**	*e*P	**P**	**18 40 55.5**	**+0.2**
	comp=Z,0.6nm,0.7s,mb3.8					
NVAR	**Mina Array Bea**	**74.07 53**	P	**P**	**18 40 58.4**	**-0.5**
	comp=Z,2.0nm,1.0s,mb4.1,baz=286,slow=5.3,SNR=10					
BORG	**Borgarnes**	**75.48 352**	LR	LR	19 14 11.1	
	comp=Z,22nm,21.8s,MS3.4,baz=210,slow=36					
PDAR	**Pinedale Array**	**76.50 46**	P	**P**	**18 41 11.4**	**-1.3**
	comp=Z,0.8nm,0.8s,mb3.9,baz=311,slow=2.5,SNR=4.1					
BRTR	**Keskin Array B**	**77.12 311**	P	**P**	**18 41 15.2**	**-1.0**
	comp=Z,0.8nm,0.9s,mb3.9,baz=116,slow=2.9,SNR=4.8					
BRTR	**Keskin Array B**	**77.12 311**	P	**P**	**18 41 15.3**	**-0.9**
BRTR			pmax	pmax		
	comp=Z,1.0nm,0.9s					
VRAC	**Vranov**	**79.10 327**	LR	LR	19 21 03.4	
	comp=Z,48nm,18.6s,MS3.9,baz=265,slow=39					
GERES	**GERESS Array B**	**80.68 328**	P	**P**	**18 41 34.9**	**-0.7**
	comp=Z,0.5nm,0.8s,mb3.6,baz=32,slow=5.2,SNR=4.0					
GERES	**GERESS Array B**	**80.68 328**	P	**P**	**18 41 34.9**	**-0.7**
GERES			pmax	pmax		
	comp=Z,1.0nm,0.8s					
CDF	**Champ du Feu**	**83.57 331**	*e*P	**P**	**18 41 51.7**	**+0.9**
DAVOX	**Davos/Dischmat**	**83.88 329**	LR	LR	19 20 41.2	
	comp=Z,44nm,18.7s,MS3.9,baz=86,slow=37					
CABF	**La Chapelle**	**85.52 331**	*e*P	**P**	**18 42 01.5**	**+0.8**
LOR	**Lormes**	**85.79 332**	*e*P	**P**	**18 42 02.7**	**+0.7**
	comp=Z,4.9nm,0.9s,mb4.3					
LOR			*e*MLR	MLR		
	comp=Z,62nm,18.2s,MS3.7					
FLN	**La Foliniere**	**85.99 336**	*e*P	**P**	**18 42 03.7**	**+0.7**
FLN			*e*MLR	MLR		
	comp=Z,81nm,20.5s,MS3.8					
LDF	**La Druitiere**	**86.02 335**	*e*P	**P**	**18 42 03.7**	**+0.5**
	comp=Z,4.2nm,0.6s,mb4.5					
SSF	**Saint Saulge**	**86.10 332**	*e*P	**P**	**18 42 04.3**	**+0.7**
	comp=Z,9.8nm,1.1s,mb4.6					
LPL	**La Plagne**	**86.18 330**	*e*P	**P**	**18 42 05.1**	**+1.1**
LPG	**La Plagne**	**86.18 330**	*e*P	**P**	**18 42 05.3**	**+1.3**
	comp=Z,3.8nm,0.5s,mb4.5					
AVF	**Avril sur Loir**	**86.38 332**	⇑*i*P	**P**	**18 42 05.8**	**+0.8**
	comp=Z,7.6nm,0.8s,mb4.6					
GRR	**Gorron**	**86.44 336**	*e*P	**P**	**18 42 06.1**	**+0.9**
SGMF	**Saint Gilles**	**87.10 336**	*e*P	**P**	**18 42 09.6**	**+1.2**
TCF	**Toulx Ste Croi**	**87.22 333**	*e*P	**P**	**18 42 10.1**	**+1.0**
	comp=Z,5.0nm,0.9s,mb4.4					
ROSF	**Rostrenen**	**87.24 337**	*e*P	**P**	**18 42 10.5**	**+1.4**
QUIF	**Quistinic**	**87.58 337**	*e*P	**P**	**18 42 12.0**	**+1.2**
MFF	**Saint Martin d**	**87.77 334**	*e*P	**P**	**18 42 12.9**	**+1.2**
RJF	**Les Rejaudoux**	**88.31 333**	*e*P	**P**	**18 42 15.6**	**+1.3**
RJF			*e*MLR	MLR		
	comp=Z,72nm,20.8s,MS3.8					
LFF	**La Frestale**	**88.91 333**	*e*P	**P**	**18 42 18.4**	**+1.3**
TXAR	**Lajitas Array**	**89.17 52**	P	**P**	**18 42 17.5**	**-1.2**
	comp=Z,0.5nm,0.9s,mb3.8,baz=318,slow=3.4,SNR=5.8					
TXAR	**Lajitas Array**	**89.17 52**	P	**P**	**18 42 17.5**	**-1.2**
TXAR			pmax	pmax		
	comp=Z,1.0nm,0.9s					
LPAZ	**La Paz**	**145.94 56**	PKPbc	PKPbc	18 49 02.1	-0.7
	comp=Z,6.0nm,1.3s,baz=339,slow=6.5,SNR=5.9					
LPAZ	**La Paz**	**145.94 56**	PKP2	PKPbc	18 49 02.1	-0.7
LPAZ			pmax	pmax		
	comp=Z,6.0nm,1.3s					
LPAZ	**La Paz**	**145.94 56**	*e*PKPdf	PKPbc	18 49 03.0	+0.2

NIED ***14*** *18:47:00,39.°20N×140.°90E,h5km,Mw4.2 Best double couple: M0=2.30000×10^15 NP1:φs=15.00000°,δ51.00000°, λ94.00000°. NP2:φs=190.00000°,δ39.00000°,λ86.00000°.*
BJI ***14*** *18:47:33.8,39.°06N×141.°33E,h20km,mB4.7/22,mb4.5/31, Ms4.1/22,Ms7 4.1/21*
IDC ***14*** *18:47:35.4±0.6,39.°21N×140.°84E,h0km,mb4.1/21, mb1 4.3/24,mb1mx4.2/32,mbtmp4.1/24,ML3.6/3,MS3.4/10, Ms1 3.4/10,ms1mx3.0/39,Error ellipse: s-maj=15.6km s-min=10.8km az=115.0*
NEIC ***14*** *18:47:36.4,39.°15N×140.°95E,h9km,mb4.7/35, MW4.2(NIED),After JMA.*
NEIC Recorded [2 JMA] in Iwate and [1 JMA] in Akita and Miyagi.
JMA ***14*** *18:47:36.4,39.°16N×140.°95E,h9km±1km,M4.2 Broadband fault plane solution: P waves. NP1: φs173.00000°,δ37.00000°,λ42.00000°. NP2:φs47.00000°, δ66.00000°,λ120.00000°. Principal axes: T Plg58.0000°, Azm359.0000°; N Plg27.0000°, Azm214.0000°; P Plg16.0000°, Azm116.0000°;*
JMA Felt II J1.
ISCJB ***14*** *18:47:36.1±0.5,39.°18N±0.°02×140.°96E±0.°03,h14km±3km, mb4.5/63,MS3.7/12 Error ellipse: s-maj=4.2km s-min=3.5km az=10.1*
MOS ***14*** *18:47:39.4±1.0,39.°22N×140.°76E,h33km,mb4.7/39,Error ellipse: s-maj=9.3km s-min=5.5km az=101.0*
ISC 14 18:47:36.7±0.4,**39.°16N**±0.°02×**140.°93E**±0.°03,**h8**km±3km, **h14**km±1.3km**:pP-P,n191,σ0=93**/208,**mb4.5**/63,**MS3.7**/12, **20C-7D,Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.30**	**132**	⇓P	**Pg**	**18 47 42.1**	**-0.6**
JMK				S	**Sg**	**18 47 46.6**	**-0.2**
JRG	**Rokugo**	**0.33**	**316**	P	**Pg**	**18 47 43.3**	**0.0**
JRG				*e*S	**Sg**	**18 47 48.4**	**+0.7**
JOM	**Ohasama**	**0.42**	**41**	⇑P	**Pg**	**18 47 44.5**	**-0.5**
JOM				S	**Sg**	**18 47 50.3**	**-0.2**
JYK	**Kaneyama**	**0.51**	**242**	P	**Pg**	**18 47 46.3**	**-0.2**
OFUJ	**Ofunato**	**0.58**	**97**	⇓P	**Pg**	**18 47 47.4**	**-0.5**
JIO	**Ouri**	**0.77**	**155**	P	**Pg**	**18 47 50.8**	**-0.8**
JIO				*e*S	**Sg**	**18 48 01.6**	**-0.1**
JOU	**Okura**	**0.82**	**195**	P	**Pg**	**18 47 52.0**	**-0.5**
JOU				S	**Sg**	**18 48 03.1**	**0.0**
ERM	**Erimo**	**3.32**	**30**	⇓*i*P	**Pn**	**18 48 33.1**	**+4.2**
ERM	**Erimo**	**3.32**	**30**	*e*Pn	**Pn**	**18 48 31.3**	**+2.4**
MAJO	**Matsushiro**	**3.39**	**220**	*e*P	**Pn**	**18 48 31.2**	**+1.4**
MAT	**Matsushiro**	**3.39**	**220**	P	**Pn**	**18 48 31.3**	**+1.5**
MAT				*e*S	**Sn**	**18 49 14.9**	**+4.8**
MJAR	**Matsushiro Arr**	**3.39**	**220**	Pn	**Pn**	**18 48 31.1**	**+1.3**
	2.6nm,0.3s,baz=31,slow=12,SNR=41						
MJAR				Pg	**Pg**	**18 48 38.3**	**-3.3**
	5.1nm,0.3s,baz=30,slow=13,SNR=51						
MJAR				Lg		18 49 22.9	
	2.4nm,0.3s,baz=21,slow=26,SNR=6.7						
MJAR				LR	LR	18 49 58.4	
	comp=Z,342nm,19.7s,baz=70,slow=42						
MJAR	**Matsushiro Arr**	**3.39**	**220**	Pn	**Pn**	**18 48 31.1**	**+1.2**
MJAR				Pg	**Pg**	**18 48 38.3**	**-3.3**
MJAR				Lg		18 49 22.9	
MJAR				LR	LR	18 49 58.4	
ASAJ	**Asahikawa**	**5.11**	**14**	Pn	**Pn**	**18 48 54.9**	**+1.4**
	2.6nm,0.3s,baz=221,slow=10,SNR=29						
ASAJ				Sn	**Sn**	**18 49 54.1**	**+1.5**
	1.1nm,0.3s,baz=287,slow=29,SNR=2.0						
ASAJ	**Asahikawa**	**5.11**	**14**	P	**Pn**	**18 48 54.9**	**+1.4**
ASAJ						18 49 54.1	
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
JHJ	**Hachijo jima 2**	**6.10**	**189**	Pn	**Pn**	**18 49 08.1**	**+1.0**
	comp=N,5.9nm,0.3s,baz=216,slow=19,SNR=8.1						
JHJ				Sn	**Sn**	**18 50 17.6**	**+0.7**
	comp=N,2.9nm,0.3s,baz=76,slow=23,SNR=3.3						
YUK	**Yuzh-Kuril'sk**	**6.12**	**36**	*e*P	**Pn**	**18 49 11.5**	**+4.2**
YUK				*i* S	**Sn**	**18 50 17.1**	**-0.3**
YUK				pmax	pmax		
	comp=Z,120nm,1.2s						
YUK				pmax	pmax		
	comp=N,900nm,0.6s						
YUK				pmax	pmax		
	comp=E,60nm,0.6s						
YUK				smax			
	comp=N,100nm,0.6s						
YUK				smax			
	comp=E,200nm,0.6s						
YSS	**Yuzh-Sakhalins**	**7.91**	**9**	⇓*e*P	**Pn**	**18 49 33.0**	**+1.1**
YSS

KSRS 18 52 07.2
KSRS pmax pmax
comp=Z,2.0nm,0.3s
KSRS MLR MLR
comp=Z,174nm,20.5s
KLR Kul'dur 12.02 330 *e*P **Pn 18 50 29.0 +0.8**
KLR pmax pmax
comp=Z,34nm,1.6s
KLR MLR MLR
comp=Z,600nm,13.0s
CN2 Changchun 12.50 297 *e*P **Pn 18 50 38.8 +4.0**
CN2 *es*P 18 50 45.3
CN2 pmax pmax
comp=Z,10.0nm,0.8s
PETK Petropavlovsk- 18.09 34 LR LR 18 59 51.7
comp=Z,42nm,18.4s,baz=52,slow=41
BJI Beijing 19.09 281 P **Pn 18 52 01.1 +0.7**
BJI S **Sn 18 55 33.4 -0.9**
BJI pmax pmax
comp=Z,12nm,1.3s
BJI pmax pmax
comp=Z,130nm,3.6s
BJI LR LR
comp=N,170nm,13.1s
BJI LR LR
comp=E,250nm,14.8s
NJ2 Nanjing 19.28 255 *e*P **Pn 18 52 03.4 +0.7**
NJ2 pmax pmax
comp=Z,20nm,0.6s
HHC Hu-ho-hao-te 22.52 284 *e*P **P 18 52 34.8 -1.9**
HHC pP 18 52 39.0
HHC PP 18 53 01.4
HHC PcP PcP 18 56 30.4 0.0
HHC S **S 18 56 34.9 -9.1**
HHC ScP ScP 19 00 06.3 -1.9
HHC PcS PcS 19 00 07.8 -1.3
HHC pmax pmax
comp=Z,14nm,0.8s,mb4.4
HHC pmax pmax
comp=Z,88nm,5.9s
HHC LR LR
comp=N,150nm,10.7s,MS3.9
HHC LR LR
comp=E,220nm,12.5s,MS3.9
HHC LR LR
comp=Z,270nm,16.1s,MS3.8
WHN Wuhan 23.38 257 P **P 18 52 46.5 +0.6**
WHN S **S 18 56 56.1 -2.7**
WHN LR LR
comp=N,450nm,10.8s
WHN LR LR
comp=E,280nm,16.6s
WHN LR LR
comp=Z,500nm,17.9s
YAK Yakutsk 23.92 347 *e*P **P 18 52 48.7 -2.0**
YAK *e**PP 18 52 57.8
YAK *e*PPP 18 53 20.3
YAK *e*S **S 18 57 02.0 -4.9**
YAK *e**SS sS 18 57 15.3 +4.2
YAK *e*SSS 18 57 55.7
YAK pmax pmax
comp=Z,26nm,1.0s,mb4.6
YAK pmax pmax
comp=N,17nm,1.1s
YAK pmax pmax
comp=E,6.0nm,1.1s
YAK smax
comp=E,32nm,2.3s
YAK smax
comp=N,76nm,2.8s
YAK Yakutsk 23.92 347 *e*Pn **P 18 52 48.5 -2.3**
comp=N,26nm,1.0s,mb4.6
SEY Seymchan 24.79 13⇑ *e*P **P 18 53 00.0 +1.3**
ULN Ulaanbaatar 25.89 301 *e*P **P 18 53 08.3 -0.6**
SONM Songino Array 26.33 301 P **P 18 53 10.8 -2.1**
comp=N,0.7nm,0.7s,baz=138,slow=8.9,SNR=5.1
SONM LR LR 19 03 48.6
comp=N,87nm,18.4s,MS3.3,baz=243,slow=37
SONM Songino Array 26.33 301 P **P 18 53 10.8 -2.0**
SONM pmax pmax
comp=Z,1.0nm,0.7s
SONM MLR MLR
comp=Z,87nm,18.4s
LZH Lanzhou 29.41 276 *e*P **P 18 53 40.5 +0.1**
LZH pP pP 18 53 44.8 +1.8
LZH sP sP 18 53 47.0 +2.9
LZH PP PP 18 54 34.5 -12
LZH pmax pmax
comp=Z,14nm,1.0s,mb4.7
LZH pmax pmax
comp=Z,65nm,5.0s
LZH LR LR
comp=E,180nm,10.8s
LZH LR LR
comp=Z,260nm,13.3s,MS4.0
GYA Guiyang 31.27 256 P **P 18 53 58.8 +1.7**
GYA PP PP 18 55 01.0 -6.6
GYA PcP PcP 18 56 53.3 +2.0
GYA S **S 18 59 02.8 -1.1**
GYA ScP ScP 19 00 35.4 +0.9
GYA SS SS 19 00 48.3 -29
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
GYA pmax pmax
comp=Z,30nm,4.2s
GYA LR LR
comp=N,470nm,15.5s,MS4.4
GYA LR LR
comp=E,430nm,16.1s,MS4.4
GYA LR LR
comp=Z,460nm,15.7s,MS4.2
CD2 Chengdu 31.36 266 *e*P **P 18 53 58.3 +0.5**
CD2 pP pP 18 54 03.0 +2.7
CD2 sP sP 18 54 05.9 +4.5
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
CD2 pmax pmax
comp=Z,40nm,4.8s
GTA Gaotai 31.63 284 *e*P **P 18 54 01.5 +1.4**
GTA pP pP 18 54 04.8 +2.1
GTA sP sP 18 54 07.8 +4.1
GTA pmax pmax
comp=Z,2.0nm,1.1s,mb3.9
BILL Bilibino 32.11 18 *e*P **P 18 54 04.9 +0.9**
BILL pmax pmax
comp=Z,3.0nm,1.0s,mb4.1
BILL Bilibino 32.11 18 *e*P **P 18 54 04.1 +0.1**
comp=Z,3.1nm,0.8s,mb4.2
QIZ Qiongzhong 33.52 242 P **P 18 54 17.1 +0.3**
QIZ S **S 18 59 39.1 +0.2**
QIZ pmax pmax
comp=Z,180nm,3.1s
KMI Kunming 34.97 258 P **P 18 54 31.3 +2.0**
KMI pP pP 18 54 33.9 +2.0
KMI sP sP 18 54 35.1 +2.1
KMI PP PP 18 55 48.3 -0.3
KMI S **S 19 00 00.8 -0.5**
KMI SS SS 19 02 13.6 -19
KMI pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
KMI pmax pmax
comp=Z,120nm,3.7s
KMI LR LR
comp=N,150nm,12.3s,MS4.0
KMI LR LR
comp=E,110nm,14.3s,MS4.0
KMI LR LR
comp=Z,160nm,14.3s,MS3.9
WMQ Urumqi 39.58 294 *e*P **P 18 55 08.0 -0.3**
ZAA0 Zalesovo Array 40.23 311 *e*P **P 18 55 12.5 -1.0**
ZALV Zalesovo Beam 40.23 311 P **P 18 55 11.6 -1.9**
comp=Z,2.1nm,0.6s,mb4.0,baz=87,slow=7.6,SNR=13
ZALV LR LR 19 12 01.1
comp=Z,25nm,19.0s,MS3.1,baz=61,slow=36
ZALV Zalesovo Beam 40.23 311 P **P 18 55 11.6 -1.9**
ZALV pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
ZALV MLR MLR
comp=Z,25nm,19.0s,MS3.1
ZALV Zalesovo Beam 40.23 311 P **P 18 55 11.6 -1.9**
ZALV LR LR 19 12 01.1
NVS Novosibirsk 41.12 312 *e*P **P 18 55 19.5 -1.4**
NVS pmax pmax
comp=N,4.0nm,1.5s
NVS pmax pmax
comp=E,7.0nm,1.5s
NVS pmax pmax
comp=Z,7.0nm,1.5s,mb4.1
CMAR Chiang Mai Arr 41.72 253 P **P 18 55 25.1 -1.1**
comp=Z,0.3nm,0.8s,baz=54,slow=8.3,SNR=3.1
CMAR LR LR 19 14 33.1
comp=Z,49nm,19.3s,MS3.4,baz=140,slow=39
MK31 Makanchi Array 42.70 300 *e*P **P 18 55 32.8 -1.1**
MKAR Makanchi Array 42.70 300 P **P 18 55 33.7 -0.2**
comp=Z,3.0nm,0.8s,mb4.1,baz=77,slow=13,SNR=32
MKAR LR LR 19 13 47.8
comp=Z,57nm,18.6s,MS3.5,baz=239,slow=37
MKAR Makanchi Array 42.70 300 P **P 18 55 33.7 -0.2**
MKAR pmax pmax
comp=Z,3.0nm,0.8s
MKAR MLR MLR
comp=Z,57nm,18.6s
MKAR Makanchi Array 42.70 300 P **P 18 55 33.7 -0.2**
MKAR LR LR 19 13 47.8
KURK Kurchatov 44.35 306 P **P 18 55 47.4 +0.3**
comp=Z,7.3nm,0.7s,mb4.5,baz=83,slow=9.4,SNR=23
KURK Kurchatov 44.35 306*c i*P **P 18 55 46.1 -1.0**
KURK pmax pmax
comp=Z,16nm,1.2s,mb4.6
KURK Kurchatov 44.35 306 *e*P **P 18 55 46.1 -1.0**
comp=Z,7.8nm,0.8s,mb4.5
KDAK Kodiak Island 45.80 43 P **P 18 55 58.0 -0.6**
comp=Z,5.7nm,0.7s,mb4.6,baz=256,slow=8.3,SNR=3.3
KDAK Kodiak Island 45.80 43 P **P 18 55 58.0 -0.5**
KDAK pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
KTH Kantishna Hill 46.22 35 *e*P **P 18 56 02.8 +1.0**
comp=Z,5.9nm,0.9s,mb4.5
GUN Gumba 46.61 273 *e*P **P 18 56 06.1 +0.8**
comp=Z,34nm,0.7s,mb5.4
KSM Kuching 46.77 224 *e*P **P 18 56 06.1 -0.6**
KKN Kakani 47.13 274 *e*P **P 18 56 09.1 -0.3**
comp=Z,35nm,0.8s,mb5.3
KKN Kakani 47.13 274 *e*P **P 18 56 09.1 -0.3**
KKN pmax pmax
comp=Z,35nm,0.8s,mb5.3
PKI Pulchoki 47.14 273 *e*P **P 18 56 10.9 +1.4**
comp=Z,14nm,0.9s,mb4.9
PKI Pulchoki 47.14 273 *e*P **P 18 56 10.9 +1.4**
PKI pmax pmax
comp=Z,14nm,0.9s,mb4.9
PKIN Phulchoki 47.14 273 *e*P **P 18 56 10.7 +1.2**
comp=Z,12nm,0.8s,mb4.9
DMN Daman 47.35 274 *e*P **P 18 56 11.4 +0.2**
comp=Z,28nm,1.1s,mb5.1
TKM2 Tokmak 2 48.31 297 P **P 18 56 19.4 +1.0**
SNR=19
TKM2 Tokmak 2 48.31 297 *e*P **P 18 56 18.9 +0.5**
TKM2 pmax pmax
comp=Z,17nm,1.0s,mb5.0
TKM2 Tokmak 2 48.31 297 *e*P **P 18 56 18.9 +0.5**
comp=Z,17nm,1.0s,mb5.0
KZA Kyzart 48.83 296 P **P 18 56 24.5 +2.1**
SNR=10
KBK Karagaybulak 48.85 297 P **P 18 56 23.6 +1.1**
SNR=21
BVAR Borovoye Array 48.88 311 P **P 18 56 22.6 0.0**
comp=Z,1.6nm,0.6s,mb4.3,baz=74,slow=8.3,SNR=15
BVAR PcP PcP 18 57 46.4 -0.5
comp=Z,1.3nm,0.7s,baz=85,slow=3.1,SNR=5.0
BVAR Borovoye Array 48.88 311 P **P 18 56 22.6 0.0**
BVAR 18 57 46.4
BVAR pmax pmax
comp=Z,2.0nm,0.6s
BRVK Borovoye 48.94 311 *e*P **P 18 56 22.4 -0.6**
BRVK pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
BRVK Borovoye 48.94 311 *e*P **P 18 56 22.4 -0.7**
comp=Z,3.2nm,0.9s,mb4.3
AAK Ala-Archa 49.17 297 P **P 18 56 24.3 -0.7**
comp=Z,1.7nm,0.4s,mb4.5,baz=108,slow=2.1,SNR=9.3
AAK Ala-Archa 49.17 297 P **P 18 56 24.3 -0.7**
AAK pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
AAK Ala-Archa 49.17 297 *e*P **P 18 56 25.4 +0.4**
comp=Z,7.0nm,0.8s,mb4.7
KSH Kashi 49.22 292⇓ *i*P **P 18 56 30.1 +4.7**
KSH pP pP 18 56 34.5 +6.4
KSH sP sP 18 56 37.0 +7.9
KSH PcP PcP 18 57 51.8 +3.3
KSH PP PP 18 58 25.0 +5.9
KSH ScP ScP 19 01 45.3 +1.4
KSH PcS PcS 19 01 47.0 +2.1
KSH S **S 19 03 36.0 +4.7**
KSH ScS ScS 19 06 18.3 +0.5
KSH SS SS 19 07 04.9 +2.6
KSH pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
KSH LR LR
comp=N,77nm,4.7s
KSH LR LR
comp=E,110nm,6.2s
KSH LR LR
comp=Z,99nm,5.2s
UCH Uchtor 49.30 296 *e*P **P 18 56 26.1 +0.2**
comp=Z,3.4nm,1.0s,mb4.3
EKS2 Erkin-Say 49.66 297 P **P 18 56 29.4 +0.6**
SNR=7.8
EKS2 Erkin-Say 49.66 297 *e*P **P 18 56 28.8 0.0**
comp=Z,5.6nm,0.9s,mb4.6
AML Almayashu 49.90 296 P **P 18 56 32.0 +1.4**
SNR=14
AML Almayashu 49.90 296 *e*P **P 18 56 31.7 +1.1**
comp=Z,13nm,0.9s,mb5.0
EGAK Eagle 50.36 33 *e*P **P 18 56 34.3 +0.6**
comp=Z,4.4nm,1.0s,mb4.4
INK Inuvik 52.68 28 P **P 18 56 50.7 -0.3**
comp=Z,1.8nm,0.5s,mb4.2,baz=276,slow=6.0,SNR=10
INK Inuvik 52.68 28 P **P 18 56 50.7 -0.3**
INK pmax pmax
comp=Z,2.0nm,0.5s
INK Inuvik 52.68 28 *e*P **P 18 56 51.3 +0.3**
comp=Z,2.2nm,0.7s,mb4.2
SVE Sverdlovsk 53.32 317⇓ *e*P **P 18 56 56.8 +0.9**
SVE pmax pmax
comp=Z,11nm,0.9s,mb4.8
SVE MLR MLR
comp=Z,159nm,18.0s,MS4.1
ARU Arti 54.53 317*c i*P **P 18 57 04.4 -0.4**
ARU S **S 19 04 41.5 -2.3**
ARU SS SS 19 08 20.2 -5.5
ARU pmax pmax
comp=Z,15nm,1.2s,mb4.9
ARU Arti 54.53 317 *e*P **P 18 57 04.2 -0.6**
comp=Z,11nm,0.9s,mb4.9
ABKAR Akbulak array 56.30 309 *e*P **P 18 57 17.1 -0.5**
comp=Z,3.2nm,0.6s,mb4.5
KBL Kabul 56.33 289 *e*P **P 18 57 17.6 -0.4**
KBL pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
KBL Kabul 56.33 289 *e*P **P 18 57 17.6 -0.4**
comp=Z,9.4nm,0.9s,mb4.8
AKTO Aktyubinsk 56.99 311 LR LR 19 21 48.0
comp=Z,27nm,19.7s,MS3.4,baz=282,slow=36
WRA Warramunga Arr 59.11 187 P **P 18 57 37.1 -0.4**
comp=Z,3.5nm,0.8s,mb4.5,baz=6.7,slow=7.2,SNR=13
WRA Warramunga Arr 59.11 187 P **P 18 57 37.2 -0.4**
WRA pmax pmax
comp=Z,4.0nm,0.8s
RES Resolute Bay 60.64 15 P **P 18 57 46.5 -1.1**
comp=Z,4.1nm,0.8s,mb4.6,baz=302,slow=7.2,SNR=8.3
RES Resolute Bay 60.64 15 P **P 18 57 46.5 -1.1**
RES pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
RES Resolute Bay 60.64 15 *e*P **P 18 57 46.6 -0.9**
comp=Z,4.2nm,0.8s,mb4.6
ARCES ARCESS Array B 61.88 339 P **P 18 57 55.3 -0.7**
comp=Z,1.8nm,0.9s,mb4.2,baz=54,slow=6.2,SNR=4.9
ARCES LR LR 19 31 00.7
comp=Z,39nm,20.8s,MS3.5,baz=183,slow=42
ARCES ARCESS Array B 61.88 339 P **P 18 57 55.3 -0.7**
ARCES pmax pmax
comp=Z,2.0nm,0.9s
ARCES MLR MLR
comp=Z,39nm,20.8s
ASAR Alice Springs 62.84 187 P **P 18 58 02.9 0.0**
comp=Z,2.5nm,0.8s,mb4.4,baz=12,slow=5.7,SNR=22
ASAR Alice Springs 62.84 187 P **P 18 58 02.9 0.0**
ASAR pmax pmax
comp=Z,3.0nm,0.8s
JOF Joensuu 63.92 331 *e*P **P 18 58 08.0 -1.6**
JOF pmax pmax
comp=Z,1.0nm,0.5s,mb4.1
JOF Joensuu 63.92 331 *e*p **P 18 58 08.0 -1.6**
comp=Z,1.4nm,0.5s,mb4.2
KAF Kangasniemi 66.25 332 *e*P **P 18 58 22.2 -2.6**
KAF pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
KAF Kangasniemi 66.25 332 *e*p **P 18 58 22.2 -2.6**
comp=Z,4.4nm,0.7s,mb4.6
FINES FINESS Array B 66.77 332 P **P 18 58 27.6 -0.5**
comp=Z,3.9nm,0.7s,mb4.5,baz=54,slow=9.8,SNR=14
FINES FINESS Array B 66.77 332 P **P 18 58 27.6 -0.5**
FINES pmax pmax
comp=Z,4.0nm,0.7s
ZEI Tsey 69.18 309 *e*P **P 18 58 42.7 -0.9**
ZEI pmax pmax
comp=Z,5.0nm,0.4s,mb4.8
KIV Kislovodsk 69.24 310*d i*P **P 18 58 44.9 +0.9**
KIV pmax pmax
comp=Z,23nm,1.3s,mb5.0
KIV Kislovodsk 69.24 310 *e*P **P 18 58 45.1 +1.1**
comp=Z,14nm,0.9s,mb4.9
GNI Garni 70.14 306 P **P 18 58 49.4 -0.2**
GNI pmax pmax
comp=Z,18nm,1.1s
GNI Garni 70.14 306 P **P 18 58 49.4 -0.2**
comp=Z,18nm,1.1s,mb4.9
SOC Sochi 71.21 311 *e*P **P 18 58 54.4 -1.6**
SOC *e*PPP 19 03 17.5
SOC *e*S S 19 08 07.8 -5.4
SOC *e* 19 08 59.3
SOC *e*SS SS 19 12 44.0 -2.2
SOC pmax pmax
comp=Z,4.0nm,0.3s,mb4.8
HFS Hagfors 72.00 335 LR LR 19 33 04.7
comp=Z,62nm,18.5s,MS3.9,baz=180,slow=38
NB2 NORSAR Subarra 72.09 337 P **P 18 59 00.6 -0.4**
comp=Z,1.6nm,0.7s,mb4.1,baz=40,slow=6.2
NOA NORSAR Array B 72.09 337 P **P 18 59 00.8 -0.3**
comp=Z,2.4nm,0.8s,mb4.2,baz=39,slow=6.1,SNR=8.1
NOA NORSAR Array B 72.09 337 P **P 18 59 00.8 -0.2**
NOA pmax pmax
comp=Z,2.0nm,0.8s
AKASG Malin Array Be 72.39 322 P **P 18 59 02.5 -0.6**
comp=Z,1.2nm,0.4s,mb4.2,baz=45,slow=5.8,SNR=11
AKASG Malin Array Be 72.39 322 P **P 18 59 02.5 -0.5**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
NVAR Mina Array Bea 74.03 53 P **P 18 59 14.1 +1.2**
comp=Z,1.7nm,0.8s,mb4.0,baz=287,slow=6.4,SNR=12
BUR08 Bucovina Ar. S 76.41 321 *e*P **P 18 59 26.2 -0.2**
PDAR Pinedale Array 76.45 46 P **P 18 59 27.6 +0.8**
comp=Z,1.2nm,0.7s,mb4.0,baz=291,slow=4.1,SNR=5.9
KOLS Kolonicke sedl 76.89 324 *e*P **P 18 59 30.0 +0.9**
KOLS pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
KOLS Kolonicke sedl 76.89 324 *e*P **P 18 59 30.0 +0.9**
comp=Z,2.2nm,1.1s,mb4.0
STHS Stebnicka Huta 77.01 324 *e*P **P 18 59 31.2 +1.4**
STHS pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
STHS Stebnicka Huta 77.01 324 *e*P **P 18 59 31.2 +1.4**
comp=Z,2.4nm,0.7s,mb4.2
OJC Ojcow 77.07 326 *e*P **P 18 59 29.3 -0.8**
BRTR Keskin Array B 77.17 311 P **P 18 59 31.1 +0.1**
comp=Z,1.3nm,0.9s,mb3.9,baz=20,slow=3.9,SNR=6.2
BRTR Keskin Array B 77.17 311 P **P 18 59 31.1 +0.2**
BRTR pmax pmax
comp=Z,1.0nm,0.9s
CRVS Cervenica-Dubn 77.28 324 *e*P **P 18 59 32.5 +1.1**
NIE Niedzica 77.43 325 *e*P **P 18 59 33.3 +1.1**
SRU San Rafael 78.30 49 *e*P **P 18 59 37.6 +0.4**
SRU pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
SRU San Rafael 78.30 49 *e*P **P 18 59 37.6 +0.3**
comp=Z,2.4nm,0.8s,mb4.2
MORC Moravsky Berou 78.38 326 *e*P **P 18 59 37.8 +0.4**
DPC Dobruska-Polom 78.46 327 *e*P **P 18 59 38.8 +0.9**
DPC Dobruska-Polom 78.46 327 *e*P **P 18 59 38.8 +0.9**
VYHS Vyhne 78.77 325 *e*P **P 18 59 40.3 +0.7**
CLL Collm 79.07 330 *e*P **P 18 59 41.0 -0.2**
CLL *i* 18 59 47.6
CLL pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
CLL Collm 79.07 330 *e*P **P 18 59 41.0 -0.2**
comp=Z,4.0nm,1.1s,mb4.3
CLL *i* 18 59 47.6
KHC Kasperske Hory 80.54 328 *e*P **P 18 59 49.7 +0.5**
KHC Kasperske Hory 80.54 328 *e*P **P 18 59 49.7 +0.5**
GERES GERESS Array B 80.71 328 P **P 18 59 50.3 +0.1**
comp=Z,0.9nm,0.8s,mb3.8,baz=32,slow=5.2,SNR=9.8
GERES GERESS Array B 80.71 328 P **P 18 59 50.3 +0.1**
GERES pmax pmax
comp=Z,1.0nm,0.8s
BAIF Baives 83.34 334 *e*P **P 19 00 03.2 -0.7**
CDF Champ du Feu 83.61 331 *e*P **P 19 00 04.9 -0.4**
HAU Haudompre 84.29 331 *e*P **P 19 00 08.1 -0.8**
MEZF Maizieres J'vi 84.35 332 *e*P **P 19 00 08.9 -0.3**
CABF La Chapelle 85.55 331 *e*P **P 19 00 14.1 -1.1**
LOR Lormes 85.83 332⇑ *i*P **P 19 00 16.0 -0.6**
comp=Z,9.0nm,0.9s,mb4.7
LOR Lormes 85.83 332⇑ *i*P **P 19 00 16.0 -0.6**
LOR pmax pmax
comp=Z,5.0nm,0.9s,mb4.7
LOR Lormes 85.83 332⇑ *i*P **P 19 00 16.0 -0.6**
comp=Z,4.5nm,0.9s,mb4.7
FLN La Foliniere 86.02 336 *e*P **P 19 00 16.9 -0.6**
LDF La Druitiere 86.05 335⇑ *i*P **P 19 00 17.0 -0.7**
SSF Saint Saulge 86.13 332⇑ *i*P **P 19 00 17.5 -0.6**
comp=Z,10.0nm,1.1s,mb4.7
SSF Saint Saulge 86.13 332⇑ *i*P **P 19 00 17.5 -0.6**
SSF pmax pmax
comp=Z,5.0nm,1.1s,mb4.7
SSF Saint Saulge 86.13 332⇑ *i*P **P 19 00 17.5 -0.6**
comp=Z,5.0nm,1.1s,mb4.7
LPL La Plagne 86.21 330 *e*P **P 19 00 18.3 -0.2**
LPG La Plagne 86.22 330 *e*P **P 19 00 18.5 -0.1**
comp=Z,13nm,1.1s,mb4.8
LPG La Plagne 86.22 330 *e*P **P 19 00 18.5 -0.1**
LPG pmax pmax
comp=Z,7.0nm,1.1s,mb4.8
LPG La Plagne 86.22 330 *e*P **P 19 00 18.5 -0.1**
comp=Z,6.6nm,1.1s,mb4.8
SMF Signal de Mont 86.36 332 *e*P **P 19 00 18.8 -0.4**
AVF Avril sur Loir 86.41 332⇑ *i*P **P 19 00 19.1 -0.4**
comp=Z,9.2nm,0.8s,mb4.8
AVF Avril sur Loir 86.41 332⇑ *i*P **P 19 00 19.1 -0.4**
AVF pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
AVF Avril sur Loir 86.41 332⇑ *i*P **P 19 00 19.1 -0.4**
comp=Z,4.6nm,0.8s,mb4.8
MBDF Montbardon 86.85 329 *e*P **P 19 00 20.7 -1.0**
ORIF Oris-en-Rattie 87.04 330 *e*P **P 19 00 22.2 -0.4**
SGMF Saint Gilles 87.12 337⇑ *i*P **P 19 00 22.7 -0.2**
comp=Z,12nm,0.9s,mb4.8
SGMF Saint Gilles 87.12 337⇑ *i*P **P 19 00 22.7 -0.2**
SGMF pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
SGMF Saint Gilles 87.12 337⇑ *i*P **P 19 00 22.7 -0.2**
comp=Z,6.1nm,0.9s,mb4.8
TCF Toulx Ste Croi 87.25 333 *e*P **P 19 00 23.5 -0.1**
comp=Z,11nm,1.0s,mb4.7
TCF Toulx Ste Croi 87.25 333 *e*P **P 19 00 23.5 -0.1**
TCF pmax pmax
comp=Z,5.0nm,1.0s,mb4.7
TCF Toulx Ste Croi 87.25 333 *e*P **P 19 00 23.5 -0.1**
comp=Z,5.3nm,1.0s,mb4.7
ROSF Rostrenen 87.27 337 *e*P **P 19 00 23.6 0.0**
comp=Z,11nm,0.8s,mb4.8
ROSF Rostrenen 87.27 337 *e*P **P 19 00 23.6 0.0**
ROSF pmax pmax
comp=Z,6.0nm,0.8s,mb4.9
ROSF Rostrenen 87.27 337 *e*P **P 19 00 23.6 0.0**
comp=Z,5.5nm,0.8s,mb4.8
MFF Saint Martin d 87.80 334⇑ *i*P **P 19 00 26.2 0.0**
comp=Z,3.6nm,0.6s,mb4.5
MFF Saint Martin d 87.80 334⇑ *i*P **P 19 00 26.2 0.0**
MFF pmax pmax
comp=Z,2.0nm,0.6s,mb4.5
MFF Saint Martin d 87.80 334⇑ *i*P **P 19 00 26.2 0.0**
comp=Z,1.8nm,0.6s,mb4.5
RJF Les Rejaudoux 88.35 333 *e*P **P 19 00 28.8 0.0**
CAF Calviac 88.47 332 *e*P **P 19 00 29.8 +0.3**
TXAR Lajitas Array 89.12 52 P **P 19 00 32.8 0.0**
comp=Z,0.5nm,0.8s,mb3.9,baz=287,slow=3.3,SNR=7.1

TXAR	**Lajitas Array**	**89.12**	**52**	P	**P**	**Pn**	**19 00 32.8**	**0.0**
TXAR				pmax	pmax			
comp=Z,1.0nm,0.8s								
ETSF	**Etsaut**	**91.18**	**333**	*e*P	**P**	**Pn**	**19 00 42.6**	**+0.5**
LPAZ	**La Paz**	**145.89**	**56**	PKPbc	PKPbc		19 07 17.9	+0.9
comp=Z,2.6nm,0.8s,baz=356,slow=6.5,SNR=7.5								
LPAZ	**La Paz**	**145.89**	**56**	*e*PKPdf	PKPbc		19 07 17.4	+0.4

MOS ***14*** *19:08:58.8±1.2, 36°.11N×21°.19E, h26km, mb4.0/8, Error ellipse: s-maj=9.4km s-min=4.5km az=82.6*
ATH ***14*** *19:09:00.2, 36°.04N×21°.19E, h38km±5km, MD4.1/25, ML3.4*
THE ***14*** *19:09:00.9, 36°.00N×21°.02E, h30km±8km, ML4.0/5, Error ellipse: s-maj=10.0km s-min=1.9km az=230.0*
NEIC ***14*** *19:09:00.1, 36°.06N×21°.23E, h32km, mb4.0/6, ML3.4(ATH), After ATH.*
CSEM ***14*** *19:09:00.6±0.3, 36°.00N×21°.15E, h30km, mb4.1/10, Error ellipse: s-maj=7.1km s-min=4.9km az=14.0*
IDC ***14*** *19:09:01.8±1.4, 36°.14N×21°.18E, h41km±18km, mb3.6/11, mb1 3.7/19, mb1mx3.6/35, mbtmp3.5/19, ML3.6/7, MS3.1/2, Ms1 3.1/2, ms1mx2.4/34, Error ellipse: s-maj=30.0km s-min=8.8km az=16.0*
BEO ***14*** *19:09:02.0±1.0, 36°.12N×20°.68E, h31km±2km, ML3.8/5*

ISC 14 19:09:00.3±0.8, 36°.03N±0°.03×21°.12E±0°.03, h26km±7km, n226, σ1°.23/280, mb3.9/14, 6C-4D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**1.00**	**30**	P	**Pn**	**19 09 18.2**	**-0.5**
PYL				S	**Sb**	**19 09 33.7**	**+1.9**
PYL	**PYLOS**	**1.00**	**30**	*e*PN	**Pn**	**19 09 18.4**	**-0.3**
PYL	**PYLOS**	**1.00**	**30**	*e*Pn	**Pn**	**19 09 18.4**	**-0.3**
PYL				S	**Sb**	**19 09 33.7**	**+1.9**
ITM	**Ithomi**	**1.32**	**29**	⇑*i*Pn	**Pn**	**19 09 23.2**	**+0.1**
ITM	**Ithomi**	**1.32**	**29**	P	**Pn**	**19 09 23.1**	**0.0**
ITM				S	**Sn**	**19 09 42.0**	**+2.2**
ITM	**Ithomi**	**1.32**	**29**	⇑*i*PN	**Pn**	**19 09 23.2**	**+0.1**
ITM	**Ithomi**	**1.32**	**29**	⇑*i*Pn	**Pn**	**19 09 23.2**	**+0.1**
ITM				S	**Sn**	**19 09 42.0**	**+2.2**
KYTH	**Kithira**	**1.57**	**80**	*e*Pn	**Pn**	**19 09 27.2**	**+0.8**
KYTH	**Kithira**	**1.57**	**80**	*e*PB	**Pn**	**19 09 27.2**	**+0.8**
KYTH	**Kithira**	**1.57**	**80**	*e*Pn	**Pn**	**19 09 27.2**	**+0.8**
VLI	**Veliai**	**1.62**	**64**	*e*Pn	**Pn**	**19 09 28.3**	**+1.2**
VLI				*e*Sn	**Sn**	**19 09 47.2**	**+0.1**
VLI	**Veliai**	**1.62**	**64**	*e*PB	**Pn**	**19 09 28.3**	**+1.2**
VLI				*e*SB	**Sn**	**19 09 47.2**	**+0.1**
VLI	**Veliai**	**1.62**	**64**	*e*Pn	**Pn**	**19 09 28.3**	**+1.2**
VLI				*e*Sn	**Sn**	**19 09 47.2**	**+0.1**
VLX	**Vlachokerasia**	**1.68**	**37**	P	**Pn**	**19 09 28.6**	**+0.6**
VLX				S	**Sn**	**19 09 51.1**	**+2.4**
VLX	**Vlachokerasia**	**1.68**	**37**	*e*PB	**Pn**	**19 09 28.9**	**+0.9**
VLX	**Vlachokerasia**	**1.68**	**37**	P	**Pn**	**19 09 28.6**	**+0.6**
VLX	**Vlachokerasia**	**1.68**	**37**	*e*Pn	**Pn**	**19 09 28.9**	**+0.9**
VLX				S	**Sn**	**19 09 51.1**	**+2.4**
RLS	**Riolos of Patr**	**2.05**	**8**	*e*Pb	**Pb**	**19 09 34.7**	**-2.1**
RLS	**Riolos of Patr**	**2.05**	**8**	*e*PB	**Pb**	**19 09 34.7**	**-2.1**
GUR	**Goura**	**2.14**	**27**	P	**Pn**	**19 09 35.5**	**+1.2**
GUR	**Goura**	**2.14**	**27**	*e*PB	**Pb**	**19 09 35.7**	**-2.7**
GUR	**Goura**	**2.14**	**27**	P	**Pn**	**19 09 35.5**	**+1.2**
VLS	**Valsamata**	**2.19**	**349**	*e*Pn	**Pn**	**19 09 35.5**	**+0.5**
VLS				*e*Sn	**Sn**	**19 10 02.5**	**+1.3**
VLS	**Valsamata**	**2.19**	**349**	P	**Pn**	**19 09 35.5**	**+0.5**
VLS				S	**Sn**	**19 10 01.8**	**+0.6**
VLS	**Valsamata**	**2.19**	**349**	*e*PN	**Pn**	**19 09 35.5**	**+0.5**
VLS				*e*SN	**Sn**	**19 10 02.5**	**+1.3**
VLS	**Valsamata**	**2.19**	**349**	P	**Pn**	**19 09 35.5**	**+0.5**
VLS				S	**Sn**	**19 10 01.8**	**+0.6**
VLS				*e*Sn	**Sn**	**19 10 02.5**	**+1.3**
LAKA	**Lakka**	**2.31**	**17**	P	**Pn**	**19 09 38.3**	**+1.6**
LAKA	**Lakka**	**2.31**	**17**	P	**Pn**	**19 09 38.3**	**+1.6**
KARN	**Karanos**	**2.36**	**104**	P	**Pn**	**19 09 38.0**	**+0.7**
KARN				S	**Sn**	**19 10 08.2**	**+2.8**
KARN	**Karanos**	**2.36**	**104**	*e*PN	**Pn**	**19 09 37.8**	**+0.5**
KARN	**Karanos**	**2.36**	**104**	P	**Pn**	**19 09 38.0**	**+0.7**
KARN				S	**Sn**	**19 10 08.2**	**+2.8**
EFP	**Efpalio**	**2.48**	**14**	P	**Pn**	**19 09 41.1**	**+2.2**
EFP	**Efpalio**	**2.48**	**14**	*e*PB	**Pn**	**19 09 41.1**	**+2.2**
EFP	**Efpalio**	**2.48**	**14**	P	**Pn**	**19 09 41.1**	**+2.2**
LTK	**Loutraki**	**2.48**	**36**	*e*PB	**Pn**	**19 09 39.1**	**+0.1**
LTK	**Loutraki**	**2.48**	**36**	*e*Pn	**Pn**	**19 09 39.1**	**+0.1**
KALE	**Kalithea**	**2.50**	**19**	P	**Pn**	**19 09 41.6**	**+2.4**
KALE	**Kalithea**	**2.50**	**19**	P	**Pn**	**19 09 41.6**	**+2.4**
NAIG	**Nisos Aigina**	**2.57**	**47**	*e*Pn	**Pn**	**19 09 40.2**	**0.0**
NAIG	**Nisos Aigina**	**2.57**	**47**	*e*PN	**Pn**	**19 09 40.2**	**0.0**
NAIG	**Nisos Aigina**	**2.57**	**47**	*e*Pn	**Pn**	**19 09 40.2**	**0.0**
VAM	**Vamos**	**2.58**	**103**	*e*Pn	**Pn**	**19 09 40.9**	**+0.6**
VAM				*e*Sn	**Sn**	**19 10 10.0**	**-0.8**
VAM	**Vamos**	**2.58**	**103**	*e*PN	**Pn**	**19 09 40.9**	**+0.6**
VAM				*e*SN	**Sn**	**19 10 10.0**	**-0.8**
VAM	**Vamos**	**2.58**	**103**	*e*Pn	**Pn**	**19 09 40.9**	**+0.6**
VAM				*e*Sn	**Sn**	**19 10 10.0**	**-0.8**
DSF	**Desfina**	**2.63**	**25**	P	**Pn**	**19 09 42.0**	**+0.9**
DSF	**Desfina**	**2.63**	**25**	P	**Pn**	**19 09 42.0**	**+0.9**
VLY	**Voula,Athens**	**2.81**	**49**	*e*Pn	**Pn**	**19 09 42.9**	**-0.6**
VLY	**Voula,Athens**	**2.81**	**49**	*e*PN	**Pn**	**19 09 42.9**	**-0.6**
VLY	**Voula,Athens**	**2.81**	**49**	*e*Pn	**Pn**	**19 09 42.9**	**-0.6**
ATH	**Athens Observa**	**2.84**	**46**	*e*Pn	**Pn**	**19 09 43.7**	**-0.3**
ATH				*e*Sn	**Sn**	**19 10 16.7**	**-0.7**
ATH	**Athens Observa**	**2.84**	**46**	*e*PN	**Pn**	**19 09 43.7**	**-0.3**
ATH				*e*SN	**Sn**	**19 10 16.7**	**-0.7**
ATH	**Athens Observa**	**2.84**	**46**	*e*Pn	**Pn**	**19 09 43.7**	**-0.3**
ATH				*e*Sn	**Sn**	**19 10 16.7**	**-0.7**
EVR	**Evrytania**	**2.94**	**10**	*e*Pb	**Pb**	**19 09 48.4**	**-3.6**
EVR	**Evrytania**	**2.94**	**10**	*e*PB	**Pb**	**19 09 48.4**	**-3.6**
PTL	**Penteli**	**2.98**	**47**	*e*Pn	**Pn**	**19 09 44.5**	**-1.4**
PTL	**Penteli**	**2.98**	**47**	*e*PN	**Pn**	**19 09 44.5**	**-1.4**
PTL	**Penteli**	**2.98**	**47**	*e*Pn	**Pn**	**19 09 44.5**	**-1.4**
LKR	**Lokris**	**3.02**	**29**	*e*Pn	**Pn**	**19 09 46.1**	**-0.3**
LKR	**Lokris**	**3.02**	**29**	*e*PN	**Pn**	**19 09 46.1**	**-0.3**
LKR	**Lokris**	**3.02**	**29**	*e*Pn	**Pn**	**19 09 46.1**	**-0.3**
AGG	**Agios Georgios**	**3.14**	**17**	*e*Pn	**Pn**	**19 09 49.8**	**+1.7**
AGG				*e*Sn	**Sn**	**19 10 24.5**	**-0.2**
AGG	**Agios Georgios**	**3.14**	**17**	P	**Pn**	**19 09 49.7**	**+1.6**
AGG				S	**Sn**	**19 10 27.4**	**+2.7**
AGG	**Agios Georgios**	**3.14**	**17**	*e*PN	**Pn**	**19 09 49.8**	**+1.7**
AGG				*e*SN	**Sn**	**19 10 24.5**	**-0.2**
AGG	**Agios Georgios**	**3.14**	**17**	P	**Pn**	**19 09 49.7**	**+1.6**
AGG				*e*Sn	**Sn**	**19 10 24.5**	**-0.2**
AGG				S	**Sn**	**19 10 27.4**	**+2.7**
IDI	**Anoyia**	**3.15**	**102**	P	**Pn**	**19 09 47.6**	**-0.6**
0.5nm,0.3s,baz=266,slow=14,SNR=4.2							
IDI				S	**Sn**	**19 10 25.8**	**+0.8**
9.0nm,0.3s,baz=325,slow=14,SNR=15							
IDI	**Anoyia**	**3.15**	**102**	*e*Pn	**Pn**	**19 09 49.4**	**+1.2**
IDI	**Anoyia**	**3.15**	**102**	*e*PN	**Pn**	**19 09 49.4**	**+1.2**
IDI	**Anoyia**	**3.15**	**102**	*e*Pn	**Pn**	**19 09 49.4**	**+1.2**
THL	**Klokotos Trika**	**3.60**	**11**	P	**Pn**	**19 09 55.5**	**+1.1**
THL				S	**Sn**	**19 10 37.8**	**+1.7**
THL	**Klokotos Trika**	**3.60**	**11**	*e*PN	**Pn**	**19 09 55.4**	**+1.0**
THL				*e*SN	**Sn**	**19 10 36.8**	**+0.7**
THL	**Klokotos Trika**	**3.60**	**11**	*e*Pn	**Pn**	**19 09 55.4**	**+1.0**
THL				*e*Sn	**Sn**	**19 10 36.8**	**+0.7**
THL				S	**Sn**	**19 10 37.8**	**+1.7**
JAN	**Janina**	**3.63**	**357**	*e*Pn	**Pn**	**19 09 56.2**	**+1.4**
JAN				*e*Sn	**Sn**	**19 10 36.2**	**-0.6**
JAN	**Janina**	**3.63**	**357**	*e*PN	**Pn**	**19 09 56.2**	**+1.4**
JAN				*e*SN	**Sn**	**19 10 36.2**	**-0.6**
JAN	**Janina**	**3.63**	**357**	*e*Pn	**Pn**	**19 09 56.2**	**+1.4**
JAN				*e*Sn	**Sn**	**19 10 36.2**	**-0.6**
LAST	**Lasithi**	**3.65**	**102**	*e*Pn	**Pn**	**19 09 52.8**	**-2.3**
NEO	**Neokhori**	**3.68**	**26**	*e*Pn	**Pn**	**19 09 56.2**	**+0.8**
NEO				*e*Sn	**Sn**	**19 10 37.8**	**-0.1**
NEO	**Neokhori**	**3.68**	**26**	*e*PN	**Pn**	**19 09 56.2**	**+0.8**
NEO				*e*SN	**Sn**	**19 10 37.8**	**-0.1**
NEO	**Neokhori**	**3.68**	**26**	*e*Pn	**Pn**	**19 09 56.2**	**+0.8**
NEO				*e*Sn	**Sn**	**19 10 37.8**	**-0.1**
APE	**Apeiranthos**	**3.70**	**72**	*e*P	**Pn**	**19 09 56.3**	**+0.6**
APE	**Apeiranthos**	**3.70**	**72**	P	**Pn**	**19 09 56.5**	**+0.8**
APE	**Apeiranthos**	**3.70**	**72**	*e*PN	**Pn**	**19 09 56.3**	**+0.6**
APE	**Apeiranthos**	**3.70**	**72**	*e*Pn	**Pn**	**19 09 56.3**	**+0.6**
XOR	**Xorichti**	**3.72**	**26**	P	**Pn**	**19 09 56.7**	**+0.7**
XOR				S	**Sn**	**19 10 40.1**	**+1.2**
XOR	**Xorichti**	**3.72**	**26**	P	**Pn**	**19 09 56.7**	**+0.7**
XOR				S	**Sn**	**19 10 40.1**	**+1.2**
KEK	**Kerkira**	**3.83**	**345**	*e*Pn	**Pn**	**19 09 57.7**	**+0.2**
KEK	**Kerkira**	**3.83**	**345**	*e*PN	**Pn**	**19 09 57.7**	**+0.2**
KEK	**Kerkira**	**3.83**	**345**	*e*Pn	**Pn**	**19 09 57.7**	**+0.2**
KZN	**Kozani**	**4.31**	**7**	*e*P	**Pn**	**19 10 05.3**	**+1.2**
KZN	**Kozani**	**4.31**	**7**	P	**Pn**	**19 10 05.0**	**+0.9**
KZN				S	**Sn**	**19 10 54.5**	**+1.1**
KZN	**Kozani**	**4.31**	**7**	*e*PN	**Pn**	**19 10 05.3**	**+1.2**
KZN	**Kozani**	**4.31**	**7**	P	**Pn**	**19 10 05.0**	**+0.9**
KZN	**Kozani**	**4.31**	**7**	*e*Pn	**Pn**	**19 10 05.3**	**+1.2**
KZN				S	**Sn**	**19 10 54.5**	**+1.1**
SOI	**Samo**	**4.54**	**298**	P	**Pn**	**19 10 08.7**	**+1.4**
SOI	**Samo**	**4.54**	**298**	P	**Pn**	**19 10 08.7**	**+1.4**
CHOS	**Chios island**	**4.59**	**58**	*e*PN	**Pn**	**19 10 06.9**	**-1.1**
CHOS	**Chios island**	**4.59**	**58**	*e*Pn	**Pn**	**19 10 06.9**	**-1.1**
TIP	**Timpagrande**	**4.68**	**314**	Pn	**Pn**	**19 10 09.9**	**+0.7**
TIP	**Timpagrande**	**4.68**	**314**	Pn	**Pn**	**19 10 09.9**	**+0.7**
PLG	**Polygyros**	**4.71**	**22**	*e*P	**Pn**	**19 10 09.6**	**0.0**
PLG	**Polygyros**	**4.71**	**22**	*e*PN	**Pn**	**19 10 09.6**	**0.0**
PLG	**Polygyros**	**4.71**	**22**	*e*Pn	**Pn**	**19 10 09.6**	**0.0**
CEL	**Celeste**	**4.74**	**300**	Pn	**Pn**	**19 10 11.4**	**+1.4**
CEL	**Celeste**	**4.74**	**300**	Pn	**Pn**	**19 10 11.4**	**+1.4**
FNA	**Florina**	**4.76**	**2**	P	**Pn**	**19 10 10.8**	**+0.6**
FNA	**Florina**	**4.76**	**2**	P	**Pn**	**19 10 10.8**	**+0.6**
MTTG	**Motta San Giov**	**4.77**	**296**	Pn	**Pn**	**19 10 11.9**	**+1.4**
MTTG	**Motta San Giov**	**4.77**	**296**	Pn	**Pn**	**19 10 11.9**	**+1.4**
SMG	**Samos**	**4.88**	**68**	*e*Pn	**Pn**	**19 10 13.6**	**+1.6**
SMG	**Samos**	**4.88**	**68**	*e*PN	**Pn**	**19 10 13.6**	**+1.6**
SMG	**Samos**	**4.88**	**68**	*e*Pn	**Pn**	**19 10 13.6**	**+1.6**
BIA	**Bitola**	**4.99**	**2**	*e*Pn	**Pn**	**19 10 13.3**	**-0.2**
LIA	**Limnos Island**	**5.02**	**38**	*e*Pn	**Pn**	**19 10 11.2**	**-2.7**
SOH	**Sokhos**	**5.10**	**19**	*e*P	**Pn**	**19 10 15.6**	**+0.6**
SOH	**Sokhos**	**5.10**	**19**	*e*PN	**Pn**	**19 10 15.6**	**+0.6**
SOH	**Sokhos**	**5.10**	**19**	*e*Pn	**Pn**	**19 10 15.6**	**+0.6**
KRUS	**Krusevo**	**5.34**	**1**	*e*Pn	**Pn**	**19 10 17.7**	**-0.5**
KRUS				*e*Sg	**Sn**	**19 11 18.8**	**-0.1**
TIR	**Tirane**	**5.41**	**350**	*e*Pn	**Pn**	**19 10 18.5**	**-0.7**
TIR				*e*Sn	**Sn**	**19 11 16.2**	**-4.3**
TIR	**Tirane**	**5.41**	**350**	*e*P	**Pn**	**19 10 16.8**	**-2.4**
TIR				pmax	pmax		
comp=Z,36nm,0.6s							
TIR	**Tirane**	**5.41**	**350**	*e*Pn	**Pn**	**19 10 16.8**	**-2.4**
comp=Z,36nm,0.6s							
TIR	**Tirane**	**5.41**	**350**	*e*P	**Pn**	**19 10 16.8**	**-2.4**
comp=Z,36nm,0.6s							
TIR	**Tirane**	**5.41**	**350**	*e*Pn	**Pn**	**19 10 18.5**	**-0.7**
TIR				*e*Sn	**Sn**	**19 11 16.2**	**-4.3**
VAY	**Valandovo**	**5.41**	**12**	*e*Pn	**Pn**	**19 10 18.7**	**-0.5**
VAE	**Valguarnera**	**5.58**	**287**	P	**Pn**	**19 10 23.8**	**+2.2**
comp=Z,1.3nm,0.3s,baz=273,slow=21,SNR=5.4							
VAE				S	**Sn**	**19 11 25.6**	**+0.8**
comp=Z,2.8nm,0.3s,baz=292,slow=22,SNR=3.8							
VAE	**Valguarnera**	**5.58**	**287**	P	**Pn**	**19 10 23.8**	**+2.2**
VAE				S	**Sn**	**19 11 25.6**	**+0.8**
VAE	**Valguarnera**	**5.58**	**287**	P	**Pn**	**19 10 23.8**	**+2.2**
VAE				S	**Sn**	**19 11 25.6**	**+0.7**
NVR	**Nevrokopi**	**5.73**	**21**	*e*Pn	**Pn**	**19 10 24.0**	**+0.3**
NVR	**Nevrokopi**	**5.73**	**21**	*e*Pn	**Pn**	**19 10 24.0**	**+0.3**
RDO	**Rodhopi**	**6.17**	**33**	*e*Pn	**Pn**	**19 10 29.5**	**-0.2**
RDO	**Rodhopi**	**6.17**	**33**	*e*Pn	**Pn**	**19 10 29.5**	**-0.2**
VTS	**Vitosha**	**6.75**	**13**	*e*Pn	**Pn**	**19 10 38.5**	**+0.8**
VTS				*e*Sn	**Sn**	**19 11 51.1**	**-2.6**
VTS	**Vitosha**	**6.75**	**13**	*e*Pn	**Pn**	**19 10 38.5**	**+0.8**
BARS	**Barje**	**6.80**	**4**	*e*Pn	**Pn**	**19 10 37.6**	**-0.8**
BARS				*e*Sn	**Sn**	**19 11 51.1**	**-3.8**
BARS	**Barje**	**6.80**	**4**	*e*Pn	**Pn**	**19 10 37.6**	**-0.8**
FG5	**Orsara di Pugl**	**6.97**	**321**	P	**Pn**	**19 10 41.9**	**+1.3**
FG5				pmax	pmax		
comp=Z,29nm,0.4s							
FG5	**Orsara di Pugl**	**6.97**	**321**	Pn	**Pn**	**19 10 41.9**	**+1.3**
comp=Z,29nm,0.4s							
FG5	**Orsara di Pugl**	**6.97**	**321**	P	**Pn**	**19 10 41.9**	**+1.3**
comp=Z,29nm,0.4s							
TREB	**Trebinje**	**7.02**	**343**	*e*Pn	**Pn**	**19 10 39.6**	**-1.7**
TREB				*e*Sn	**Sn**	**19 11 52.5**	**-7.7**
RGNG	**Rignano Grg**	**7.10**	**324**	Pn	**Pn**	**19 10 38.4**	**-4.1**
ZAPS	**Zavoj**	**7.33**	**9**	*e*Pn	**Pn**	**19 10 46.3**	**+0.7**
GRUS	**Gruza**	**7.86**	**358**	*e*Pn	**Pn**	**19 10 51.2**	**-1.7**
GRUS	**Gruza**	**7.86**	**358**	*e*Pn	**Pn**	**19 10 51.2**	**-1.7**
BBLS	**Lazići**	**7.94**	**351**	*e*Pn	**Pn**	**19 10 53.4**	**-0.6**
BBLS				*e*Sn	**Sn**	**19 12 16.2**	**-6.7**
BBLS	**Lazići**	**7.94**	**351**	*e*Pn	**Pn**	**19 10 53.4**	**-0.6**
DIVS	**Divibare**	**8.11**	**354**	*e*Pn	**Pn**	**19 10 54.4**	**-1.9**
DIVS				*e*Sn	**Sn**	**19 12 20.3**	**-6.8**
GZR	**Gura Zlata**	**9.44**	**7**	⇑P	**Pn**	**19 11 13.9**	**-0.6**
GZR	**Gura Zlata**	**9.44**	**7**	⇑*i*P	**Pn**	**19 11 13.9**	**-0.6**
GZR	**Gura Zlata**	**9.44**	**7**	P	**Pn**	**19 11 13.9**	**-0.6**
KEST	**Kesra**	**9.56**	**272**	P	**Pn**	**19 11 16.4**	**+0.2**
comp=Z,0.1nm,0.3s,baz=218,slow=13,SNR=4.6							
HARR	**Harsova**	**10.09**	**29**	⇓P	**Pn**	**19 11 24.0**	**+0.6**
HARR	**Harsova**	**10.09**	**29**	P	**Pn**	**19 11 24.0**	**+0.6**
MLR	**Muntele Rosu**	**10.14**	**20**	P	**Pn**	**19 11 24.2**	**+0.2**
comp=Z,0.3nm,0.3s,baz=165,slow=16,SNR=6.5							
MLR	**Muntele Rosu**	**10.14**	**20**	⇓P	**Pn**	**19 11 24.8**	**+0.7**
MLR	**Muntele Rosu**	**10.14**	**20**	P	**Pn**	**19 11 24.8**	**+0.8**
PKSM	**Moragy**	**10.35**	**350**	⇓P	**Pn**	**19 11 25.6**	**-1.3**
PKSM	**Moragy**	**10.35**	**350**	P	**Pn**	**19 11 25.6**	**-1.3**
BRTR	**Keskin Array B**	**10.56**	**66**	P	**Pn**	**19 11 28.9**	**-0.9**
comp=Z,0.1nm,0.3s,baz=250,slow=12,SNR=3.5							
BRTR	**Keskin Array B**	**10.56**	**66**	P	**Pn**	**19 11 29.0**	**-0.9**
PLOR	**Plostina**	**10.67**	**21**	⇓P	**Pn**	**19 11 31.5**	**+0.2**
PLOR	**Plostina**	**10.67**	**21**	P	**Pn**	**19 11 31.5**	**+0.2**
PSZ	**Piszkesteto**	**11.92**	**356**	P	**Pn**	**19 11 46.5**	**-1.9**
MMAI	**Mount Meron Ar**	**12.15**	**100**	P	**Pn**	**19 11 52.0**	**+0.2**
comp=Z,0.4nm,0.3s,baz=316,slow=12,SNR=2.6							
MMAI				LR	LR	19 17 08.4	
comp=Z,19nm,20.6s,baz=195,slow=40							
KECS	**Kecovo**	**12.46**	**358**	*e*P	**Pn**	**19 11 54.6**	**-1.2**
KECS				*e*		19 14 08.7	
KECS	**Kecovo**	**12.46**	**358**	*e*P	**Pn**	**19 11 54.6**	**-1.2**
VYHS	**Vyhne**	**12.57**	**353**	*e*P	**Pn**	**19 11 54.4**	**-3.0**
CRVS	**Cervenica-Dubn**	**12.87**	**1**	*e*P	**Pn**	**19 12 00.6**	**-0.8**
CRVS	**Cervenica-Dubn**	**12.87**	**1**	*e*P	**Pn**	**19 12 00.6**	**-0.8**
DAVOX	**Davos/Dischmat**	**13.65**	**325**	S	**Sn**	**19 14 33.7**	**-8.9**
comp=Z,0.1nm,0.3s,baz=155,slow=23,SNR=2.3							
GERES	**GERESS Array B**	**13.92**	**339**	P	**Pn**	**19 12 14.6**	**-1.2**
comp=Z,0.1nm,0.3s,baz=160,slow=13,SNR=14							
GERES				S	**Sn**	**19 14 39.5**	**-10**
comp=Z,0.2nm,0.3s,baz=153,slow=24,SNR=6.3							
KIEV	**Kiev**	**15.78**	**19**	*e*P	**Pn**	**19 12 38.9**	**-1.7**
KIEV				pmax	pmax		
comp=Z,8.0nm,1.2s							
KIEV	**Kiev**	**15.78**	**19**	*e*Pn	**Pn**	**19 12 38.9**	**-1.7**
comp=Z,7.7nm,1.2s							
AKASG	**Malin Array Be**	**15.79**	**19**	P	**Pn**	**19 12 39.5**	**-1.2**
comp=Z,1.6nm,0.3s,baz=210,slow=11,SNR=6.5							
AKASG	**Malin Array Be**	**15.79**	**19**	P	**Pn**	**19 12 39.5**	**-1.2**
AKASG				pmax	pmax		
comp=Z,2.0nm,0.3s							
AKBB	**Malin Array Si**	**15.79**	**19**	P	**Pn**	**19 12 42.8**	**+2.1**
AKBB	**Malin Array Si**	**15.79**	**19**	P	**Pn**	**19 12 42.8**	**+2.1**
CLL	**Collm**	**16.35**	**342**	*e*P	**Pn**	**19 12 53.0**	**+5.1**
CLL	**Collm**	**16.35**	**342**	P	**Pn**	**19 12 53.0**	**+5.1**
SUW	**Suwalki**	**18.05**	**4**	*e*P	**Pn**	**19 13 08.1**	**-0.9**
SUW				pmax	pmax		
comp=Z,28nm,0.8s							
SUW	**Suwalki**	**18.05**	**4**	*e*Pn	**Pn**	**19 13 08.1**	**-0.9**
comp=Z,28nm,0.8s							
SUW	**Suwalki**	**18.05**	**4**	*e*P	**Pn**	**19 13 08.1**	**-0.9**
comp=Z,28nm,0.8s							
ZEI	**Tsey**	**18.82**	**62**	*e*P	**Pn**	**19 13 18.4**	**-0.1**
ZEI				pmax	pmax		
comp=Z,3.0nm,0.4s							
ZEI	**Tsey**	**18.82**	**62**	*e*P	**Pn**	**19 13 18.4**	**-0.1**
comp=Z,3.0nm,0.4s							
ESDC	**Sonseca Array**	**20.12**	**288**	P	**P**	**19 13 33.8**	**+1.6**
comp=Z,0.7nm,0.6s,baz=83,slow=11,SNR=6.5							
ESDC	**Sonseca Array**	**20.12**	**288**	P	**P**	**19 13 33.8**	**+1.7**
PAB	**San Pablo**	**20.41**	**288**	P	**P**	**19 13 38.9**	**+3.6**
PAB				pmax	pmax		
comp=Z,3.0nm,1.0s							
PAB	**San Pablo**	**20.41**	**288**	P	**P**	**19 13 38.9**	**+3.6**
comp=Z,2.7nm,1.0s							
OBN	**Obninsk**	**21.85**	**24**	⇑*i*P	**P**	**19 13 49.4**	**-1.2**
OBN				*e*		19 14 15.3	
OBN				pmax	pmax		
comp=Z,12nm,1.1s,mb4.2							
OBN	**Obninsk**	**21.85**	**24**	*i*P	**P**	**19 13 49.4**	**-1.2**
comp=Z,12nm,1.1s,mb4.2							
HFS	**Hagfors**	**24.60**	**351**	P	**P**	**19 14 16.6**	**-1.4**
comp=Z,2.6nm,0.5s,mb4.0,baz=165,slow=12,SNR=13							
HFS	**Hagfors**	**24.60**	**351**	P	**P**	**19 14 16.6**	**-1.4**
HFS				pmax	pmax		
comp=Z,3.0nm,0.5s							
HFS	**Hagfors**	**24.60**	**351**	P	**P**	**19 14 16.6**	**-1.4**
comp=Z,3.0nm,0.5s,mb4.1							
EKA	**Eskdalemuir Ar**	**25.48**	**327**	P	**P**	**19 14 26.1**	**+0.1**
comp=Z,2.2nm,0.7s,mb3.8,baz=127,slow=9.5,SNR=6.3							
EKA	**Eskdalemuir Ar**	**25.48**	**327**	P	**P**	**19 14 26.2**	**+0.2**
EKA				pmax	pmax		
comp=Z,2.0nm,0.7s							
EKA	**Eskdalemuir Ar**	**25.48**	**327**	P	**P**	**19 14 26.1**	**+0.1**
FINES	**FINESS Array B**	**25.63**	**6**	P	**P**	**19 14 27.1**	**-0.3**
comp=Z,1.7nm,0.7s,mb3.7,baz=154,slow=10,SNR=4.5							
FINES	**FINESS Array B**	**25.63**	**6**	P	**P**	**19 14 27.1**	**-0.3**
FINES				pmax	pmax		
comp=Z,2.0nm,0.7s							
FINES	**FINESS Array B**	**25.63**	**6**	P	**P**	**19 14 27.1**	**-0.3**
comp=Z,2.0nm,0.7s,mb3.8							
NAO01	**NORSAR Array S**	**25.69**	**348**	*e*P	**P**	**19 14 27.9**	**0.0**
comp=Z,6.8nm,0.9s,mb4.2							
NAO01	**NORSAR Array S**	**25.69**	**348**	*e*P	**P**	**19 14 27.9**	**0.0**
comp=Z,6.8nm,0.9s,mb4.2							
NB2	**NORSAR Subarra**	**25.82**	**349**	P	**P**	**19 14 28.7**	**-0.4**
comp=Z,3.8nm,0.8s,mb4.0,baz=161,slow=10							
NB2	**NORSAR Subarra**	**25.82**	**349**	P	**P**	**19 14 28.7**	**-0.4**
comp=Z,3.8nm,0.8s,mb4.0,SNR=7.1							
NOA	**NORSAR Array B**	**25.82**	**349**	P	**P**	**19 14 28.6**	**-0.4**
comp=Z,3.3nm,0.8s,mb3.9,baz=162,slow=9.6,SNR=7.7							
NOA	**NORSAR Array B**	**25.82**	**349**	P	**P**	**19 14 28.7**	**-0.4**
NOA				pmax	pmax		
comp=Z,3.0nm,0.9s							
NOA	**NORSAR Array B**	**25.82**	**349**	P	**P**	**19

6.1nm,0.7s,mb4.1
ZALV Zalesovo Beam 40.38 311 P **P 19 31 01.8 -0.9**
0.2nm,0.3s,mb3.4,baz=77,slow=6.4,SNR=3.6
MKAR Makanchi Array 42.79 300 P **P 19 31 22.9 +0.4**
0.2nm,0.2s,mb3.4,baz=78,slow=15,SNR=3.6
KURK Kurchatov 44.48 307 P **P 19 31 36.3 +0.3**
1.2nm,0.6s,mb3.8,baz=82,slow=8.7,SNR=4.4
KURK Kurchatov 44.48 307 P **P 19 31 36.1 +0.1**
1.3nm,0.8s,mb3.7
ARU Arti 54.73 318 *e*P **P 19 32 54.1 +0.1**
2.1nm,0.7s,mb4.3
WRA Warramunga Arr 58.74 187 P **P 19 33 22.0 -0.8**
1.1nm,0.7s,mb4.0,baz=6.3,slow=7.3,SNR=8.1
ASAR Alice Springs 62.46 187 P **P 19 33 48.0 -0.3**
0.8nm,0.7s,mb4.0,baz=11,slow=5.9,SNR=8.8
HFS Hagfors 72.29 335 P **P 19 34 49.8 -0.3**
0.7nm,0.6s,mb3.8,baz=27,slow=8.3,SNR=4.6
AKASG Malin Array Be 72.61 322 P **P 19 34 49.9 -2.3**
0.7nm,0.5s,mb3.9,baz=45,slow=5.9,SNR=5.6
NVAR Mina Array Bea 74.33 53 P **P 19 35 03.9 +1.3**
0.3nm,0.5s,mb3.5,baz=294,slow=4.7,SNR=4.2
PDAR Pinedale Array 76.79 45 P **P 19 35 16.6 +0.1**
0.7nm,0.4s,mb4.0,baz=157,slow=4.5,SNR=4.5

DJA 14 19:23:59, 1°.44N×126°.65E, h11km, MLv3.8/4, Northern Moluccа Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.98**	**133**	P	Pg	19 24 16.2	-1.6
TNTI				S	Sg	19 24 30.5	-0.1
MNI	**Manado**	**1.81**	**270**	P	Pn	19 24 29.5	-0.6
MNI				S	Sn	19 24 53.8	+0.7
KMSI	**Cibinong**	**2.80**	**252**	P	Pn	19 24 44.1	+0.3
KMSI				S	Sn	19 25 18.9	+1.2
LUWI	**Luwuk**	**4.59**	**238**	P	Pn	19 25 08.9	+0.4
LUWI				S	Sn	19 26 01.5	-0.4
MRSI	**Marisa**	**4.80**	**259**	P	Pn	19 25 09.3	-2.1

NIED ***14*** *19:38:00, 43°.50N×147°.50E, h23km, Mw3.5 Best double couple: M0=1.93000×10^14 NP1:φs=318.00000°, δ89.00000°, λ35.00000°. NP2:φs=228.00000°, δ55.00000°, λ179.00000°.*

JMA 14 19:38:47.9±0.2, 43°.50N×147°.55E, h21km, M3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.32**	**265**	P	Pn	19 39 11.5	+0.4
NEM2				*e*S	Sn	19 39 28.3	+1.2
JRA	**Rausu**	**1.81**	**285**	P	Pn	19 39 18.5	+0.6
JRA				*e*S	Sn	19 39 41.3	+1.1
JNK	**Nakash**	**2.06**	**273**	P	Pn	19 39 22.1	+0.9
JNK				*e*S	Sn	19 39 47.2	+0.9
JAK	**Akkeshi**	**2.15**	**257**	P	Pn	19 39 23.0	+0.6
JAK				*e*S	Sn	19 39 48.9	+0.5
JTKR	**Abashiri--Toko**	**2.68**	**281**	P	Pn	19 39 31.4	+1.6
JAR	**Ashorobuto**	**2.76**	**267**	P	Pn	19 39 32.5	+1.6
JAR				*e*S	Sn	19 40 05.6	+2.0
JOB	**Onbets**	**2.78**	**259**	P	Pn	19 39 32.8	+1.6
JOB				*e*S	Sn	19 40 05.8	+1.7
JMP	**Maruseppu**	**3.08**	**281**	P	Pn	19 39 37.1	+1.9
JCH	**Churui**	**3.19**	**255**	P	Pn	19 39 38.4	+1.6
JFR	**Furan**	**3.63**	**266**	P	Pn	19 39 45.7	+2.9
JFR				*e*S	Sn	19 40 27.5	+2.5
JNBK	**Urakawa-nobuka**	**3.73**	**253**	P	Pn	19 39 46.0	+1.8

ISCJB ***14*** *20:01:14.5±0.5, 43°.73N±0°.05×105°.24W±0°.06, h0km, Error ellipse: s-maj=7.5km s-min=6.5km az=152.0*
IDC ***14*** *20:01:15.2±1.7, 43°.75N×105°.49W, h0km, mb4.0/1, mb1 4.1/3, mb1mx3.5/25, mbtmp3.9/3, MS2.8/1, Ms1 2.7/1, ms1mx2.0/41, Error ellipse: s-maj=49.4km s-min=8.8km az=151.0*
NEIC ***14*** *20:01:16.2±0.4, 43°.72N×105°.23W, h0km, ML2.9, Error ellipse: s-maj=7.0km s-min=5.8km az=145.0, Suspected Mining explosion.*
NEIC 65 km [40 miles] SSE of Gillette.

ISC 14 20:01:16.3±0.5, 43°.72N±0°.05×105°.22W±0°.06, h0km, n21, σ0.99/22, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.95**	**65**	*e*Pg	**Pg**	**20 01 34.9**	**+0.5**
PHWY	**Pilot Hill**	**2.43**	**184**	*e*Pn	**Pn**	**20 01 56.7**	**-0.4**
RWWY	**Rawlins**	**2.50**	**216**	*e*Pn	**Pn**	**20 01 58.8**	**+0.6**
LAO	**LASA Array**	**3.05**	**347**	*e*Pn	**Pn**	**20 02 07.1**	**+1.4**
RLMT	**Red Lodge**	**3.22**	**297**	*e*Pn	**Pn**	**20 02 08.2**	**+0.2**
PDAR	**Pinedale Array**	**3.31**	**255**	Pn	**Pn**	**20 02 09.2**	**0.0**
14nm,0.3s,baz=76,slow=16,SNR=80							
PDAR				Pg	**Pg**	**20 02 13.8**	**-5.8**
14nm,0.3s,baz=74,slow=17,SNR=80							
PDAR				Lg		20 02 54.6	
16nm,0.3s,baz=72,slow=32,SNR=20							
OGNE	**Ogallala**	**3.65**	**138**	*e*Pn	**Pn**	**20 02 14.7**	**+0.8**
ISCO	**Idaho Springs**	**3.93**	**184**	*e*Pn	**Pn**	**20 02 18.0**	**+0.2**
SNOW	**Snow King Moun**	**4.03**	**268**	*e*Pn	**Pn**	**20 02 17.9**	**-1.2**
REDW	**Red Top Meadow**	**4.11**	**267**	*e*Pn	**Pn**	**20 02 22.9**	**+2.7**
BOZ	**Bozeman (W)**	**4.96**	**295**	*e*Pn	**Pn**	**20 02 31.3**	**-0.6**
JLU	**Jordanelle**	**5.58**	**238**	*e*Pn	**Pn**	**20 02 39.2**	**-1.2**
PV04	**Paradox Valley**	**6.01**	**209**	*e*Pn	**Pn**	**20 02 46.3**	**0.0**
SRU	**San Rafael**	**6.09**	**223**	*e*Pn	**Pn**	**20 02 46.2**	**-1.2**
5.4nm,0.3s							
PV01	**Paradox Valley**	**6.13**	**206**	*e*Pn	**Pn**	**20 02 48.5**	**+0.4**
165nm,0.4s							
ECSD	**EROS Data Cent**	**6.24**	**87**	*e*Pn	**Pn**	**20 02 49.5**	**0.0**
2.6nm,0.3s							
CHMT	**Chamberlain Mo**	**6.50**	**302**	*e*Pn	**Pn**	**20 02 52.7**	**-0.3**
2.1nm,0.3s							
MSU	**Marysvale**	**7.39**	**228**	*e*Pn	**Pn**	**20 03 05.4**	**+0.1**
0.7nm,0.3s							
ULM	**Lac du Bonnet**	**9.13**	**41**	Pn	**Pn**	**20 03 28.1**	**-1.1**
1.3nm,0.3s,baz=234,slow=13,SNR=7.1							
ULM				LR	LR	20 07 15.7	
comp=Z,52nm,19.0s,baz=347,slow=39							
WVOR	**Wild Horse Val**	**9.90**	**267**	*e*Pn	**Pn**	**20 03 42.4**	**+2.7**
2.0nm,0.6s							
ARCES	**ARCESS Array B**	**61.42**	**18**	P	**P**	**20 11 32.4**	**-1.3**
1.9nm,1.0s,baz=334,slow=6.9,SNR=4.2							

ISCJB ***14*** *20:14:24.3±0.3, 5°.61S±0°.04×154°.39E±0°.05, h97km, mb4.6/63, Error ellipse: s-maj=7.3km s-min=5.4km az=174.6*
NEIC ***14*** *20:14:25.9±0.2, 5°.56S×154°.32E, mb4.7/40, Error ellipse: s-maj=7.5km s-min=5.3km az=106.0*
IDC ***14*** *20:14:25.1±0.7, 5°.62S×154°.41E, h93km±5km, mb4.2/17, mb1 4.3/19, mb1mx4.3/22, mbtmp4.3/19, MS3.3/5, Ms1 3.3/5, ms1mx2.9/30, Error ellipse: s-maj=17.7km s-min=11.0km az=86.0*
BJI ***14*** *20:14:27.2, 4°.96S×154°.38E, h92km, mB5.0/20, mb4.7/28*
DJA ***14*** *20:14:43, 5°.96S×154°.12E, h258km, mb5.1/10*

ISC 14 20:14:26.2±0.3, 5°.62S±0°.04×154°.37E±0°.05, h99km, h99km±1.6km: pP-P, n98, σ1.9/07/96, mb4.6/63, 1C, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.70**	**125**	P	**Pn**	**20 16 02.0**	**-0.1**
29nm,0.3s,baz=218,slow=3.4,SNR=9.7							
HNR	**Honiara**	**6.70**	**125**	*e*Pn	**Pn**	**20 16 02.4**	**+0.3**
207nm,0.9s							
COEN	**Coen**	**13.79**	**232**	*e*Pn	**Pn**	**20 17 39.1**	**+1.6**
160nm,0.8s							
CTA	**Charters Tower**	**16.40**	**208**	*e*P	**Pn**	**20 18 13.2**	**+2.6**
31nm,0.8s							
CTA	**Charters Tower**	**16.40**	**208**	P	**Pn**	**20 18 11.3**	**+0.8**
1.5nm,0.3s,baz=32,slow=12,SNR=28							
CTA				LR	LR	20 23 43.7	
comp=Z,63nm,20.5s,baz=44,slow=34							
CTAO	**Charters Tower**	**16.40**	**208**	*e*Pn	**Pn**	**20 18 12.6**	**+2.0**
57nm,0.9s							
EIDS	**Eidsvold**	**19.89**	**189**	*e*Pn	**Pn**	**20 18 51.2**	**-1.1**
58nm,0.9s							
NOUC	**Port Laguerre**	**20.04**	**146**	*e*P	**P**	**20 18 51.6**	**+0.1**
DZM	**Mont Dzumac**	**20.10**	**146**	*e*P	**P**	**20 18 52.7**	**+0.6**
DZM	**Mont Dzumac**	**20.10**	**146**	*e*P	**P**	**20 18 53.3**	**+1.2**
20nm,0.4s							
KAKA	**Kakadu**	**22.75**	**250**	*e*P	**P**	**20 19 20.3**	**-0.2**
50nm,0.6s,mb5.0							
KAKA	**Kakadu**	**22.75**	**250**	*e*P	**P**	**20 19 20.0**	**-0.5**
148nm,0.6s,mb5.5							
WRAB	**Tennant Creek**	**24.11**	**232**	*e*P	**P**	**20 19 32.9**	**0.0**
80nm,0.6s,mb5.2							
WRA	**Warramunga Arr**	**24.12**	**232**	P	**P**	**20 19 33.2**	**+0.2**
70nm,0.5s,mb5.2,baz=56,slow=10,SNR=476							
ARMA	**Armidale**	**24.80**	**186**	*e*P	**P**	**20 19 40.3**	**+1.3**
ASAR	**Alice Springs**	**26.65**	**226**	P	**P**	**20 19 55.6**	**-0.2**
7.0nm,0.4s,mb4.6,baz=58,slow=9.5,SNR=333							
STKA	**Stephens Creek**	**28.73**	**203**	*e*P	**P**	**20 20 13.8**	**-0.5**
12nm,0.5s,mb4.8							
STKA	**Stephens Creek**	**28.73**	**203**	P	**P**	**20 20 13.8**	**-0.4**
19nm,0.6s,mb4.9,baz=12,slow=8.4,SNR=57							
STKA				LR	LR	20 32 30.0	
comp=Z,103nm,18.2s,baz=26,slow=38							
STKA	**Stephens Creek**	**28.73**	**203**	*e*P	**P**	**20 20 13.5**	**-0.8**
3.6nm,0.6s,mb4.2							
FITZ	**Fitzroy Crossi**	**30.67**	**244**	*e*P	**P**	**20 20 30.7**	**-0.9**
68nm,0.6s,mb5.5							
FITZ	**Fitzroy Crossi**	**30.67**	**244**	LR	LR	20 33 27.9	
comp=Z,3.8nm,20.0s,baz=57,slow=37							
FITZ	**Fitzroy Crossi**	**30.67**	**244**	*e*P	**P**	**20 20 30.7**	**-1.0**
39nm,0.7s,mb5.2							
FITZ				*e*pP	pP	20 20 54.1	+0.2
CBIJ	**Chichi jima**	**34.59**	**341**	P	**P**	**20 21 03.5**	**-2.2**
23nm,0.6s,mb5.2,baz=310,slow=20,SNR=7.3							
FORT	**Forrest**	**35.17**	**221**	*e*P	**P**	**20 21 10.1**	**-0.7**
80nm,0.6s,mb5.7							
FORT				*e*	pP	20 21 36.4	+3.1
FORT	**Forrest**	**35.17**	**221**	*e*P	**P**	**20 21 10.2**	**-0.6**
78nm,0.6s,mb5.7							
MBWA	**Marble Bar**	**36.94**	**242**	*e*P	**P**	**20 21 24.5**	**-1.4**
26nm,1.1s,mb5.1							
TAU	**Tasmania Unive**	**37.65**	**188**	*e*P	**P**	**20 21 32.8**	**+1.2**
46nm,1.2s,mb5.2							
URZ	**Urewera**	**38.50**	**151**	P	**P**	**20 21 37.2**	**-1.6**
6.4nm,0.6s,mb4.6,baz=298,slow=5.3,SNR=3.4							
KKM	**Kota Kinabalu**	**39.81**	**286**	*e*P	**P**	**20 21 49.9**	**-0.2**
8.5nm,0.9s,mb4.6							
RPZ	**Rata Peaks**	**40.69**	**161**	P	**P**	**20 21 55.7**	**-1.2**
16nm,0.8s,mb4.9,baz=151,slow=4.8,SNR=6.6							
RPZ	**Rata Peaks**	**40.69**	**161**	*e*P	**P**	**20 21 57.6**	**+0.7**
28nm,1.0s,mb5.0							
KLBR	**Kellerberrin**	**42.91**	**228**	*e*P	**P**	**20 22 13.7**	**-1.5**
18nm,0.4s,mb5.2							
KLBR				*e*	pP	20 22 37.9	-0.4
NACB	**Ninganchiao**	**43.56**	**314**	*e*P	**P**	**20 22 20.4**	**-0.1**
NWAO	**Narrogin (SRO)**	**43.95**	**227**	*e*P	**P**	**20 22 21.8**	**-1.8**
16nm,0.9s,mb4.7							
YHNB	**Yeheng**	**44.02**	**315**	*e*P	**P**	**20 22 26.1**	**+1.8**
KSM	**Kuching**	**44.56**	**278**	*e*P	**P**	**20 22 28.3**	**-0.4**
16nm,0.6s,mb4.9							
MJAR	**Matsushiro Arr**	**44.59**	**341**	P	**P**	**20 22 26.8**	**-1.7**
1.2nm,0.6s,mb3.8,baz=170,slow=9.4,SNR=7.3							
MAJO	**Matsushiro**	**44.59**	**341**	*e*P	**P**	**20 22 27.0**	**-1.5**
4.9nm,0.8s,mb4.3							
KSRS	**Korea Array**	**49.44**	**332**	P	**P**	**20 23 05.5**	**-0.8**
3.9nm,0.6s,mb4.5,baz=148,slow=7.2,SNR=20							
WHN	**Wuhan**	**52.53**	**316**	⇑P	**P**	**20 23 32.0**	**+2.5**
WHN				pmax	pmax		
comp=Z,75nm,1.4s,mb5.5							
KULM	**Kulim**	**54.72**	**280**	*e*P	**P**	**20 23 44.0**	**-1.8**
comp=Z,12nm,1.1s,mb4.8							
KULM				*e*pP	pP	20 24 08.6	-1.3
MDJ	**Mudanjiang**	**54.74**	**338**	P	**P**	**20 23 46.8**	**+1.4**
MDJ				pmax	pmax		
comp=Z,5.0nm,0.8s,mb4.6							
MDJ				pmax	pmax		
comp=Z,50nm,5.0s							
MDJ				LR	LR		
comp=Z,13nm,29.9s							
GYA	**Guiyang**	**56.13**	**307**	P	**P**	**20 23 56.8**	**+1.0**
GYA				pP	pP	20 24 21.3	+1.4
GYA				sP	sP	20 24 33.5	+2.6
GYA				PP	PP	20 26 04.8	+2.8
GYA				ScP	ScP	20 28 41.3	-1.7
GYA				S	**S**	**20 31 36.5**	**-1.0**
GYA				sS	sS	20 32 19.6	+0.6
GYA				SS	SS	20 35 25.0	-0.6
GYA				pmax	pmax		
comp=Z,10.0nm,1.0s,mb4.8							
GYA				pmax	pmax		
comp=Z,90nm,5.0s							
GYA				LR	LR		
comp=N,470nm,18.5s							
GYA				LR	LR		
comp=E,430nm,19.1s							
GYA				LR	LR		
comp=Z,460nm,18.7s							
BJI	**Beijing**	**57.44**	**326**	P	**P**	**20 24 05.1**	**+0.3**
BJI				sP	sP	20 24 38.0	-2.0
BJI				S	**S**	**20 31 53.0**	**-1.3**
BJI				SS	SS	20 35 40.3	-5.5
BJI				pmax	pmax		
comp=Z,12nm,0.6s,mb5.1							
BJI				pmax	pmax		
comp=Z,52nm,3.3s							
PETK	**Petropavlovsk-**	**58.58**	**2**	P	**P**	**20 24 12.9**	**+0.5**
comp=Z,1.4nm,0.5s,mb4.2,baz=158,slow=7.4,SNR=6.9							
PETK				pP	pP	20 24 36.6	-0.1
comp=Z,5.6nm,0.8s,baz=166,slow=6.6,SNR=7.1							
PETK				LR	LR	20 43 41.7	
comp=Z,31nm,21.9s,baz=258,slow=30							
KMI	**Kunming**	**58.74**	**304**	P	**P**	**20 24 15.8**	**+1.7**
KMI				pP	pP	20 24 40.6	+2.1
KMI				sP	sP	20 24 52.0	+2.6
KMI				PP	PP	20 26 28.8	+3.6
KMI				S	**S**	**20 32 11.1**	**-0.6**
KMI				sS	sS	20 32 54.3	+0.8
KMI				SS	SS	20 36 07.1	+0.5
KMI				pmax	pmax		
comp=Z,5.0nm,1.1s,mb4.5							
KMI				pmax	pmax		
comp=Z,110nm,4.9s							
KMI				LR	LR		
comp=N,74nm,11.5s							
KMI				LR	LR		
comp=E,60nm,10.4s							
KMI				LR	LR		
comp=Z,54nm,8.2s							
CM31	**Chiang Mai Arr**	**59.64**	**295**	P	**P**	**20 24 20.6**	**+0.2**
comp=Z,3.3nm,0.6s,mb4.5							
CM31				*e*pP	pP	20 24 43.6	-1.2
CMAR	**Chiang Mai Arr**	**59.64**	**295**	P	**P**	**20 24 20.8**	**+0.4**
comp=Z,1.4nm,0.7s,mb4.1,baz=122,slow=5.6,SNR=7.3							
CMAR				pP	pP	20 24 44.5	-0.4
comp=Z,6.2nm,0.8s,baz=122,slow=5.4,SNR=14							
CHTO	**Chiang Mai**	**59.75**	**295**	*e*P	**P**	**20 24 17.7**	**-3.4**
CHTO				*e*pP	pP	20 24 44.9	-0.7
CD2	**Chengdu**	**60.45**	**310**	*e*P	**P**	**20 24 27.9**	**+2.1**
CD2				pP	pP	20 24 52.0	+1.7
CD2				sP	sP	20 25 03.3	+2.1
CD2				PP	PP	20 26 44.1	+3.8
CD2				S	**S**	**20 32 33.8**	**+0.1**
CD2				sS	sS	20 33 15.3	-0.3
CD2				SS	SS	20 36 33.9	+0.5
CD2				pmax	pmax		
comp=Z,10.0nm,0.6s,mb5.0							
CD2				pmax	pmax		
comp=Z,40nm,4.8s							
CD2				LR	LR		
comp=N,150nm,16.2s							
CD2				LR	LR		
comp=Z,130nm,14.2s							
HHC	**Hu-ho-hao-te**	**60.62**	**324**	*e*P	**P**	**20 24 27.4**	**+0.7**
HHC				pP	pP	20 24 51.6	+0.4
HHC				sP	sP	20 25 02.8	+0.7
HHC				PcP	PcP	20 25 10.4	+0.3
HHC				PP	PP	20 26 44.5	+2.9
HHC				ScP	ScP	20 29 02.3	-0.3
HHC				PcS	PcS	20 29 11.8	-0.9
HHC				S	**S**	**20 32 34.5**	**-0.9**
HHC				sS	sS	20 33 17.4	0.0
HHC				ScS	ScS	20 34 05.6	-2.8
LZH	**Lanzhou**	**62.91**	**315**	*e*P	**P**	**20 24 43.0**	**+0.8**
LZH				pP	pP	20 25 05.9	-0.9
LZH				sP	sP	20 25 17.5	-0.2
LZH				PP	PP	20 27 01.0	-0.8
LZH				pmax	pmax		
comp=Z,14nm,1.5s,mb4.7							
GTA	**Gaotai**	**67.32**	**317**	P	**P**	**20 25 12.1**	**+1.5**
GTA				pP	pP	20 25 36.3	+0.7
GTA				sP	sP	20 25 48.0	+1.6
GTA				PP	PP	20 27 44.6	+4.3
GTA				S	S	20 33 58.0	-0.3
GTA				sS	sS	20 34 38.8	-2.2
GTA				pmax	pmax		
comp=Z,4.0nm,0.7s,mb4.4							
GTA				pmax	pmax		
comp=Z,49nm,3.6s							
ULN	**Ulaanbaatar**	**67.52**	**328**	*e*P	**P**	**20 25 12.6**	**+0.9**
comp=Z,9.7nm,1.0s,mb4.6							
CASY	**Casey**	**67.70**	**198**	*e*P	**P**	**20 25 12.1**	**-0.5**
CASY	**Casey**	**67.70**	**198**	*e*P	**P**	**20 25 11.7**	**-0.9**
comp=Z,5.4nm,0.7s,mb4.5							
UNV	**Unalaska Valle**	**67.72**	**24**	*e*P	**P**	**20 25 12.9**	**0.0**
comp=Z,9.5nm,0.5s,mb4.9							
SONM	**Songino Array**	**67.85**	**327**	P	**P**	**20 25 14.6**	**+0.8**
comp=Z,4.2nm,0.5s,mb4.5,baz=132,slow=6.6,SNR=25							
YAK	**Yakutsk**	**70.09**	**348**	P	**P**	**20 25 27.6**	**+0.2**
comp=Z,10nm,0.8s,mb4.7							
TAPN	**Taplejung**	**72.16**	**301**	*e*P	**P**	**20 25 35.3**	**-5.4**
comp=Z,35nm,1.1s,mb5.1							
ODAN	**Odare**	**72.30**	**300**	*e*P	**P**	**20 25 41.6**	**+0.1**
comp=Z,14nm,0.7s,mb4.9							
SBA	**Scott Base**	**72.48**	**177**	P	**P**	**20 25 43.7**	**+2.1**
comp=Z,7.6nm,1.3s,mb4.4							
GUN	**Gumba**	**73.88**	**301**	*e*P	**P**	**20 25 41.9**	**-8.9**
comp=Z,5.7nm,0.3s,mb4.7							
BILL	**Bilibino**	**73.97**	**5**	*e*P	**P**	**20 25 50.7**	**+0.3**
comp=Z,10nm,0.9s,mb4.6							
KKN	**Kakani**	**74.36**	**301**	*e*P	**P**	**20 25 46.7**	**-6.9**
comp=Z,2.2nm,0.2s,mb4.5							
DMN	**Daman**	**74.46**	**301**	*e*P	**P**	**20 25 49.2**	**-5.0**
comp=Z,19nm,1.0s,mb4.8							
OHAK	**Old Harbor**	**75.58**	**26**	*e*P	**P**	**20 26 00.1**	**+0.2**
comp=Z,14nm,0.7s,mb4.8							
KDAK	**Kodiak Island**	**76.21**	**26**	P	**P**	**20 26 04.0**	**+0.5**
comp=Z,2.1nm,0.4s,mb4.2,baz=203,slow=5.0,SNR=5.8							
WMQ	**Urumqi**	**77.40**	**317**	*e*P	**P**	**20 26 12.0**	**+1.5**
TTA	**Tatalina**	**77.97**	**21**	*e*P	**P**	**20 26 14.2**	**+1.0**
comp=Z,2.1nm,0.6s,mb4.0							
RC01	**Rabbit Creek A**	**79.27**	**24**	*e*P	**P**	**20 26 20.9**	**+0.4**
comp=Z,6.6nm,0.9s,mb4.5							
PMR	**Palmer**	**79.79**	**24**	*e*P	**P**	**20 26 22.6**	**-0.6**
KTH	**Kantishna Hill**	**80.19**	**22**	*e*P	**P**	**20 26 24.9**	**-0.4**
comp=Z,5.6nm,1.1s,mb4.3							
TRF	**Thorofare Moun**	**80.36**	**22**	*e*P	**P**	**20 26 25.8**	**-0.5**
comp=Z,4.3nm,0.7s,mb4.4							
BPAW	**Bear Paw Mtn.**	**80.47**	**21**	*e*P	**P**	**20 26 26.4**	**-0.5**
comp=Z,3.1nm,1.1s,mb4.0							
MCK	**McKinley**	**81.03**	**22**	*e*P	**P**	**20 26 29.5**	**-0.3**
comp=Z,8.3nm,0.7s,mb4.7							
MCK				*e*pP	pP	20 26 56.5	+1.0
MK31	**Makanchi Array**	**81.97**	**319**	*e*P	**P**	**20 26 34.2**	**-0.9**
MK31				*e*pP	pP	20 27 00.1	-0.8
MKAR	**Makanchi Array**	**81.97**	**319**	P	**P**	**20 26 35.8**	**+0.6**
comp=Z,1.6nm,0.7s,mb4.0,baz=77,slow=14,SNR=13							
MKAR				pP	pP	20 26 58.3	-2.6
comp=Z,0.9nm,0.5s,baz=78,slow=12,SNR=4.0							
COLA	**College**	**82.04**	**21**	P	**P**	**20 26 34.1**	**-1.0**
comp=Z,8.5nm,0.7s,mb4.7							
ZAA0	**Zalesovo Array**	**82.70**	**326**	*e*P	**P**	**20 26 37.9**	**-0.9**
ZALV	**Zalesovo Beam**	**82.70**	**326**	P	**P**	**20 26 38.7**	**-0.1**
comp=Z,1.4nm,0.4s,mb4.1,baz=111,slow=5.9,SNR=8.6							
ZALV				pP	pP	20 27 01.6	-3.0
comp=Z,1.1nm,0.4s,baz=114,slow=5.1,SNR=3.9							
EGAK	**Eagle**	**84.50**	**23**	*e*P	**P**	**20 26 47.9**	**+0.2**
comp=Z,6.0nm,0.8s,mb4.6							
KSH	**Kashi**	**84.65**	**310**	*e*P	**P**	**20 26 52.0**	**+2.9**
KSH				pP	pP	20 27 17.6	+2.6
KSH				sP	sP	20 27 28.3	+2.7
KSH				PP	PP	20 30 11.8	+5.5
KSH				SKS		20 37 04.1	
KSH				S	S	20 37 08.6	0.0
KSH				sS	sS	20 37 55.9	+2.9
KSH				pmax	pmax		
comp=Z,3.0nm,0.9s,mb4.2							
KSH				pmax	pmax		
comp=Z,95nm,5.3s							
KSH				LR	LR		
comp=N,40nm,4.1s							
KSH				LR	LR		
comp=E,49nm,4.5s							
KSH				LR	LR		
comp=Z,78nm,5.2s							
KURK	**Kurchatov**	**85.37**	**322**	*e*P	**P**	**20 26 51.5**	**-0.9**
comp=Z,6.8nm,1.4s,mb4.4							
MAW	**Mawson**	**85.42**	**203**	*e*P	**P**	**20 26 52.1**	**-0.3**
comp=Z,3.7nm,0.6s,mb4.5							
MAW	**Mawson**	**85.42**	**203**	P	**P**	**20 26 52.3**	**-0.1**
comp=Z,4.6nm,0.6s,mb4.6,baz=93,slow=5.3,SNR=18							
MAW	**Mawson**	**85.42**	**203**	*e*P	**P**	**20 26 51.7**	**-0.6**
comp=Z,1.4nm,0.9s,mb3.9							
UCH	**Uchtor**	**86.27**	**313**	P	**P**	**20 26 57.2**	**+0.1**
comp=Z,7.5nm,1.3s,mb4.5							
UCH				*e*pP	pP	20 27 21.9	-1.1
EKS2	**Erkin-Say**	**86.89**	**313**	P	**P**	**20 27 01.1**	**+1.0**
comp=Z,2.0nm,0.9s,mb4.0							
INK	**Inuvik**	**88.66**	**21**	P	**P**	**20 27 07.2**	**-0.8**
comp=Z,1.8nm,1.0s,mb4.1,baz=246,slow=5.7,SNR=4.2							
BVAR	**Borovoye Array**	**90.83**	**323**	P	**P**	**20 27 16.7**	**-1.7**
comp=Z,1.2nm,0.7s,mb4.1,baz=98,slow=4.5,SNR=8.7							
BVAR				pP	pP	20 27 42.1	-2.4
comp=Z,1.1nm,0.6s,baz=108,slow=5.8,SNR=6.8							
NVAR	**Mina Array Bea**	**91.36**	**52**	P	**P**	**20 27 20.6**	**-0.7**
comp=Z,0.7nm,0.6s,mb4.0,baz=249,slow=6.4,SNR=9.3							
YKA	**Yellowknife Ar**	**95.42**	**28**	LR	LR	21 07 42.8	
comp=Z,4.9nm,19.9s,baz=260,slow=34							
PDAR	**Pinedale Array**	**98.24**	**48**	LR	LR	21 13 02.6	
comp=Z,39nm,18.3s,baz=72,slow=36

NVAR Mina Array Bea 94.74 52 P P 20 39 38.9 +1.9
2.0nm,0.8s,mb4.6,baz=252,slow=7.0,SNR=16
PDAR Pinedale Array 101.48 48 P Pdif 20 40 06.6 -0.4
0.4nm,0.7s,baz=336,slow=3.3,SNR=4.0
GERES GERESS Array B 124.15 327 PKP PKPdf 20 45 14.2 +0.2
0.7nm,0.6s,baz=90,slow=2.7,SNR=10

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*ISCJB **14** 20:28:27.4±0.2, 47°.44N±0°.01×7°.59E±0°.01, h10km, Error ellipse: s-maj=1.6km s-min=1.3km az=146.1*
*BGR **14** 20:28:28.7±0.9, 47°.47N×7°.66E, h10km, ML2.6/10, Error ellipse: s-maj=8.9km s-min=5.6km az=18.0*
*CSEM **14** 20:28:28.8±0.1, 47°.46N×7°.62E, h18km, ML2.7/31, Error ellipse: s-maj=1.7km s-min=1.4km az=156.0*
*ZUR **14** 20:28:29.8, 47°.47N×7°.65E, h15km, ML2.4/13*
*LDG **14** 20:28:29.9±0.0, 47°.46N×7°.64E, h13km, Md2.9/3, Ml2.7/28, Error ellipse: s-maj=0.7km s-min=0.5km az=140.0*
*GEN **14** 20:28:29.1, 47°.59N×7°.27E, h42km, ML2.4*
*STR **14** 20:28:29.6±0.2, 47°.46N×7°.66E, h10km, Ml2.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*PRU **14** 20:28:29.9, 47°.52N×7°.63E, h0km*
*NEIC **14** 20:28:29.8, 47°.46N×7°.66E, h14km, ML2.7(LDG), ML2.6(ZUR), ML2.5(SZGRF), ML2.4(STR), After ZUR.*
*VIE **14** 20:28:31.9±0.5, 47°.40N×7°.85E, h12km±2km, mb1.7/1, ML2.6/3, Error ellipse: s-maj=4.5km s-min=2.8km az=4.0*
25 km SE of Basel
ISC 14 20:28:28.6±0.1, 47°.456N±0°.010×7°.61E±0°.01, h10km, n204, σ1§16/372, 26C-16D, Switzerland

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BBS	**Basel-Blauen**	**0.07**	**277**	⇓*i*P*			**Pg**	**20 28 33.1**	**+2.3**
BBS	**Basel-Blauen**	**0.07**	**277**	P			**Pg**	**20 28 33.0**	**+2.2**
BBS				Sg			**Sg**	**20 28 34.7**	**+2.4**
BBS	**Basel-Blauen**	**0.07**	**277**	P			**Pg**	**20 28 33.0**	**+2.2**
BBS				Sg			**Sg**	**20 28 34.7**	**+2.4**
BALST	**Balsthal**	**0.13**	**155**	⇑*i*Pg			**Pg**	**20 28 33.5**	**+1.9**
	2μm,0.3s								
BALST	**Balsthal**	**0.13**	**155**	⇑*i*Pg			**Pg**	**20 28 33.5**	**+1.9**
BALST				*e*Sg			**Sg**	**20 28 35.6**	**+1.9**
BALST	**Balsthal**	**0.13**	**155**	⇑*i*Pg			**Pg**	**20 28 33.5**	**+1.9**
	2μm,0.3s								
BALST				*e*Sg			**Sg**	**20 28 35.6**	**+1.9**
BOURR	**Bourrignon**	**0.27**	**257**	⇑*i*Pg			**Pg**	**20 28 36.1**	**+2.1**
	384nm,0.5s								
BOURR	**Bourrignon**	**0.27**	**257**	⇑*i*Pg			**Pg**	**20 28 36.1**	**+2.1**
	384nm,0.5s								
SULZ	**Cheisacher**	**0.34**	**78**	⇑*i*Pg			**Pg**	**20 28 36.5**	**+1.1**
	387nm,0.3s								
SULZ	**Cheisacher**	**0.34**	**78**	⇑*i*Pg			**Pg**	**20 28 36.5**	**+1.1**
	387nm,0.3s								
FELD	**Feldberg im Sc**	**0.50**	**32**	⇑*i*P*			**Pg**	**20 28 39.4**	**+1.1**
FELD	**Feldberg im Sc**	**0.50**	**32**	Pg			**Pg**	**20 28 39.3**	**+1.1**
FELD				Sg			**Sg**	**20 28 45.8**	**+1.0**
FELD	**Feldberg im Sc**	**0.50**	**32**	Pg			**Pg**	**20 28 39.3**	**+1.1**
FELD				Sg			**Sg**	**20 28 45.8**	**+1.0**
MOF	**Molkenrain**	**0.51**	**321**	Pg			**Pg**	**20 28 40.2**	**+1.7**
MOF				Sg			**Sg**	**20 28 47.2**	**+1.9**
MOF	**Molkenrain**	**0.51**	**321**	⇓*i*P*			**Pg**	**20 28 40.3**	**+1.8**
MOF				S*			**Sg**	**20 28 47.3**	**+2.0**
MOF	**Molkenrain**	**0.51**	**321**	Pg			**Pg**	**20 28 40.2**	**+1.7**
MOF				Sb			**Sg**	**20 28 47.3**	**+2.0**
KIZ	**Kirchzarten**	**0.54**	**22**	⇑P*			**Pg**	**20 28 40.1**	**+1.0**
KIZ				⇓*i*PmP				20 28 41.1	
KIZ				S*			**Sg**	**20 28 47.1**	**+0.9**
LOMF	**Lomont**	**0.54**	**259**	Pg			**Pg**	**20 28 41.0**	**+1.9**
LOMF	**Lomont**	**0.54**	**259**	⇑P*			**Pg**	**20 28 41.1**	**+2.0**
LOMF	**Lomont**	**0.54**	**259**	Pg			**Pg**	**20 28 41.0**	**+1.9**
FBB	**Freiburg im Br**	**0.57**	**16**	P*			**Pg**	**20 28 41.1**	**+1.5**
FBB				S*			**Sg**	**20 28 48.6**	**+1.6**
FBB	**Freiburg im Br**	**0.57**	**16**	Pb			**Pg**	**20 28 41.1**	**+1.5**
FBB				Sb			**Sg**	**20 28 48.6**	**+1.5**
HINF	**Hinteralfeld**	**0.63**	**305**	*e*Pn			**Pg**	**20 28 43.1**	**+2.4**
HINF				*e*Sg			**Sg**	**20 28 50.5**	**+1.6**
	25nm,0.2s								
HINF	**Hinteralfeld**	**0.63**	**305**	*e*Pg			**Pg**	**20 28 42.1**	**+1.4**
HINF				*e*Pn			**Pg**	**20 28 43.1**	**+2.4**
HINF				*e*Sg			**Pg**	**20 28 50.5**	**+1.6**
HINF	**Hinteralfeld**	**0.63**	**305**	*e*Pg			**Pg**	**20 28 42.1**	**+1.4**
HINF	**Hinteralfeld**	**0.63**	**305**	*e*Pn			**Pg**	**20 28 43.1**	**+2.4**
HINF				*e*Sg			**Sg**	**20 28 50.5**	**+1.6**
	13nm,0.2s								
ZUR	**Degenried**	**0.66**	**97**	*e*Pg			**Pg**	**20 28 42.4**	**+1.0**
	1μm,0.1s								
ZUR	**Degenried**	**0.66**	**97**	*e*P			**Pg**	**20 28 42.4**	**+1.0**
ZUR				*e*S			**Sg**	**20 28 51.0**	**+1.0**
ZUR	**Degenried**	**0.66**	**97**	*e*Pg			**Pg**	**20 28 42.4**	**+1.0**
	1μm,0.1s								
ZUR				*e*S			**Sg**	**20 28 51.0**	**+1.0**
SLE	**Schleitheim**	**0.67**	**62**	⇑*i*Pg			**Pg**	**20 28 42.4**	**+0.9**
	794nm,0.2s								
SLE	**Schleitheim**	**0.67**	**62**	⇑*i*Pg			**Pg**	**20 28 42.4**	**+0.9**
SLE				*e*Sg			**Sg**	**20 28 50.8**	**+0.5**
SLE	**Schleitheim**	**0.67**	**62**	⇑*i*Pg			**Pg**	**20 28 42.4**	**+0.9**
	794nm,0.2s								
SLE				*e*Sg			**Sg**	**20 28 50.8**	**+0.5**
LIBD	**Limburg**	**0.69**	**359**	PmP			**Pg**	**20 28 43.8**	**+1.8**
LIBD	**Limburg**	**0.69**	**359**	Pg			**Pg**	**20 28 43.2**	**+1.2**
LIBD				Sg			**Sg**	**20 28 52.5**	**+1.4**
LIBD	**Limburg**	**0.69**	**359**	Pg			**Pg**	**20 28 43.2**	**+1.2**
LIBD				Sg			**Sg**	**20 28 52.5**	**+1.4**
TRULL	**Truellikon**	**0.75**	**75**	*e*P			**Pg**	**20 28 44.0**	**+1.0**
TRULL	**Truellikon**	**0.75**	**75**	*e*P			**Pg**	**20 28 44.0**	**+1.0**
HASLI	**Hasliberg/Brie**	**0.79**	**152**	⇓*i*Pg			**Pg**	**20 28 45.2**	**+1.4**
	214nm,0.3s								
HASLI	**Hasliberg/Brie**	**0.79**	**152**	⇓*i*Pg			**Pg**	**20 28 45.2**	**+1.4**
	214nm,0.3s								
WIMIS	**Wimmis**	**0.79**	**179**	*e*Pg			**Pg**	**20 28 45.5**	**+1.7**
	98nm,0.4s								
WIMIS	**Wimmis**	**0.79**	**179**	*e*Pg			**Pg**	**20 28 45.5**	**+1.7**
	98nm,0.4s								
BNALP	**Bannalp**	**0.81**	**136**	*e*Pg			**Pg**	**20 28 45.3**	**+1.2**
	80nm,0.3s								
BNALP	**Bannalp**	**0.81**	**136**	*i* Pn			**Pg**	**20 28 45.3**	**+1.2**
BNALP	**Bannalp**	**0.81**	**136**	*e*Pg			**Pg**	**20 28 45.3**	**+1.2**
	80nm,0.3s								
TORNY	**Torny/Romont**	**0.82**	**213**	⇓*i*P			**Pg**	**20 28 46.3**	**+2.0**
	482nm,0.2s								
TORNY	**Torny/Romont**	**0.82**	**213**	⇓*i*Pg			**Pg**	**20 28 46.0**	**+1.7**
TORNY	**Torny/Romont**	**0.82**	**213**	⇓*i*Pg			**Pg**	**20 28 46.0**	**+1.7**
TORNY	**Torny/Romont**	**0.82**	**213**	⇓*i*P			**Pg**	**20 28 46.3**	**+2.0**
	482nm,0.2s								
ECH	**Echery**	**0.82**	**338**	Pg			**Pg**	**20 28 45.8**	**+1.4**
ECH				Sg			**Sg**	**20 28 56.8**	**+1.8**
ECH	**Echery**	**0.82**	**338**	P			**Pg**	**20 28 45.7**	**+1.3**
ECH	**Echery**	**0.82**	**338**	Pg			**Pg**	**20 28 45.8**	**+1.4**
ECH				Sg			**Sg**	**20 28 56.8**	**+1.8**
MUO	**Muotathal**	**0.85**	**125**	⇓*i*Pg			**Pg**	**20 28 46.0**	**+1.0**
	254nm,0.4s								
MUO	**Muotathal**	**0.85**	**125**	⇓*i*Pg			**Pg**	**20 28 46.0**	**+1.0**
	254nm,0.4s								
WILA	**Wila**	**0.88**	**92**	⇑*i*P			**Pg**	**20 28 46.6**	**+1.1**
	834nm,0.2s								
WILA	**Wila**	**0.88**	**92**	⇑*i*P			**Pg**	**20 28 46.6**	**+1.1**
	834nm,0.2s								
WEIN	**Weingarten**	**0.93**	**85**	⇑*i*P			**Pg**	**20 28 47.2**	**+0.7**
	182nm,0.3s								
WEIN	**Weingarten**	**0.93**	**85**	⇑*i*P			**Pg**	**20 28 47.2**	**+0.7**
	182nm,0.3s								
BRANT	**Les Verrieres**	**0.94**	**237**	*e*Pn			**Pg**	**20 28 47.6**	**+1.1**
	313nm,0.2s								
BRANT	**Les Verrieres**	**0.94**	**237**	*e*Pn			**Pg**	**20 28 47.6**	**+1.1**
	313nm,0.2s								
SISB	**Singen-Schiene**	**0.94**	**75**	⇑P			**Pg**	**20 28 47.0**	**+0.3**
SISB				⇑PmP				20 28 47.6	
SISB				S			**Sg**	**20 28 59.3**	**+0.3**
CDF	**Champ du Feu**	**0.98**	**347**	*e*Pg			**Pg**	**20 28 48.5**	**+1.0**
CDF				*e*Sg			**Sg**	**20 29 01.0**	**+0.7**
	52nm,0.4s								
CDF	**Champ du Feu**	**0.98**	**347**	*e*Pn			**Pg**	**20 28 47.6**	**+0.1**
CDF				*e*Pg			**Pg**	**20 28 48.5**	**+1.0**
CDF				*e*Sg			**Sg**	**20 29 01.0**	**+0.7**
CDF	**Champ du Feu**	**0.98**	**347**	*e*Pn			**Pg**	**20 28 47.6**	**+0.1**
CDF	**Champ du Feu**	**0.98**	**347**	*e*Pg			**Pg**	**20 28 48.5**	**+1.0**
CDF				*e*Sg			**Sg**	**20 29 01.0**	**+0.7**
	26nm,0.4s								
BFO	**Black Forest**	**1.00**	**29**	⇑*i*P			**Pg**	**20 28 47.1**	**-0.6**
BFO				Pg			**Pg**	**20 28 48.1**	**+0.4**
BFO				*i* PmP				20 28 48.6	
BFO				S			**Sg**	**20 29 00.4**	**-0.3**
BFO	**Black Forest**	**1.00**	**29**	*e*Pn			**Pg**	**20 28 47.1**	**-0.7**
BFO				*e*Sg			**Sg**	**20 29 01.4**	**+0.7**
BFO	**Black Forest**	**1.00**	**29**	*e*Sg			**Sg**	**20 29 01.4**	**+0.7**
HAU	**Haudompre**	**1.02**	**303**	*e*Pg			**Pg**	**20 28 49.4**	**+1.3**
HAU				*e*Sg			**Sg**	**20 29 02.7**	**+1.4**
	85nm,0.3s								
HAU	**Haudompre**	**1.02**	**303**	*e*Pn			**Pg**	**20 28 48.3**	**+0.2**
HAU				*e*Pg			**Pg**	**20 28 49.4**	**+1.3**
HAU				*e*Sg			**Sg**	**20 29 02.7**	**+1.4**
HAU	**Haudompre**	**1.02**	**303**	*e*Pn			**Pg**	**20 28 48.3**	**+0.2**
HAU	**Haudompre**	**1.02**	**303**	*e*Pg			**Pg**	**20 28 49.4**	**+1.3**
HAU				*e*Sg			**Sg**	**20 29 02.7**	**+1.4**
	42nm,0.3s								
SPAK	**Spaichingen-Ko**	**1.02**	**50**	⇑*i*P			**Pg**	**20 28 47.7**	**-0.5**
SPAK				PmP				20 28 48.9	
SPAK	**Spaichingen-Ko**	**1.02**	**50**	Pg			**Pg**	**20 28 47.7**	**-0.5**
SPAK	**Spaichingen-Ko**	**1.02**	**50**	Pg			**Pg**	**20 28 47.7**	**-0.5**
GUT	**Gutenstein**	**1.19**	**58**	⇑*i*P			**Pb**	**20 28 49.8**	**-1.3**
GUT				*i* PmP				20 28 52.0	
GUT				S			**Sb**	**20 29 05.3**	**-1.2**
THEF	**They Montfort**	**1.34**	**306**	Pg			**Pg**	**20 28 55.3**	**+1.0**
THEF	**They Montfort**	**1.34**	**306**	Pg			**Pg**	**20 28 55.4**	**+1.2**
THEF	**They Montfort**	**1.34**	**306**	Pg			**Pg**	**20 28 55.3**	**+1.0**
CABF	**La Chapelle**	**1.34**	**232**	*e*Pg			**Pg**	**20 28 55.6**	**+1.3**
CABF				*e*Sn			**Sn**	**20 29 09.8**	**-1.4**
CABF				*e*Sg			**Sg**	**20 29 13.0**	**+1.3**
	26nm,0.3s								
CABF	**La Chapelle**	**1.34**	**232**	*e*Pn			**Pn**	**20 28 53.1**	**-0.2**
CABF				*e*Pg			**Pg**	**20 28 55.6**	**+1.3**
CABF				*e*Sn			**Sn**	**20 29 09.8**	**-1.4**
CABF				*e*Sg			**Sg**	**20 29 13.0**	**+1.3**
CABF	**La Chapelle**	**1.34**	**232**	*e*Pn			**Pn**	**20 28 53.1**	**-0.2**
CABF	**La Chapelle**	**1.34**	**232**	*e*Pg			**Pg**	**20 28 55.6**	**+1.3**
CABF				*e*Sn			**Sn**	**20 29 09.8**	**-1.4**
CABF				*e*Sg			**Sg**	**20 29 13.0**	**+1.3**
	13nm,0.3s								
TUBL	**Tuebingen-Lenn**	**1.45**	**42**	Pg			**Pg**	**20 28 56.8**	**+0.3**
TUBL				Sg			**Sg**	**20 29 16.1**	**+0.8**
BUCH	**Bad Urach**	**1.54**	**49**	⇑*i*P			**Pn**	**20 28 54.3**	**-1.6**
BUCH				Pg			**Pg**	**20 28 57.8**	**-0.2**
BUCH				PmP				20 28 58.6	
BUCH				Sg			**Sg**	**20 29 18.4**	**+0.5**
DAVA	**Damuels**	**1.55**	**95**	*e*Pn			**Pg**	**20 28 59.1**	**+0.8**
DAVA				*e*Sg			**Sg**	**20 29 18.8**	**+0.4**
DAVA	**Damuels**	**1.55**	**95**	⇓*i*Pn			**Pn**	**20 28 57.1**	**+0.9**
DAVA				⇓*i*Pg			**Pg**	**20 28 58.3**	**+0.1**
DAVA				⇑*i*Sn			**Sn**	**20 29 16.5**	**+0.2**
DAVA				⇑*i*Sg			**Sg**	**20 29 17.7**	**-0.7**
	37nm,0.2s								
DAVA	**Damuels**	**1.55**	**95**	Pn			**Pn**	**20 28 57.1**	**+0.9**
STU	**Stuttgart**	**1.69**	**38**	*e*Pn			**Pg**	**20 29 00.7**	**-0.2**
STU				*e*Sg			**Sg**	**20 29 23.1**	**+0.2**
STU	**Stuttgart**	**1.69**	**38**	*e*Pn			**Pg**	**20 29 00.7**	**-0.3**
STU				*e*Sg			**Sg**	**20 29 23.1**	**+0.2**
UBR	**Ueberruh**	**1.70**	**82**	PmP				20 29 02.3	
UBR				S			**Sn**	**20 29 17.5**	**-2.6**
ORO	**Oropa**	**1.85**	**172**	Pn			**Pg**	**20 29 04.5**	**+0.6**
ORO				Sn			**Sg**	**20 29 28.8**	**+0.9**
RFYF	**Reffroy**	**1.85**	**310**	*e*Pg			**Pg**	**20 29 04.5**	**+0.4**
	baz=125								
RFYF				*e*Sg			**Sg**	**20 29 28.4**	**+0.3**
	14nm,0.2s,baz=131								
RFYF	**Reffroy**	**1.85**	**310**	*e*Pn			**Pn**	**20 28 59.7**	**-0.7**
RFYF				*e*Pg			**Pg**	**20 29 04.5**	**+0.4**
RFYF				*e*Sg			**Sg**	**20 29 28.4**	**+0.3**
RFYF	**Reffroy**	**1.85**	**310**	*e*Pn			**Pn**	**20 28 59.7**	**-0.7**
RFYF	**Reffroy**	**1.85**	**310**	*e*Pg			**Pg**	**20 29 04.5**	**+0.4**
	baz=125								
RFYF				*e*Sg			**Sg**	**20 29 28.4**	**+0.3**
	7.2nm,0.2s,baz=131								
SFTF	**Sexfontaines**	**1.89**	**294**	*e*Pn			**Pn**	**20 29 00.9**	**+0.1**
	baz=105								
SFTF	**Sexfontaines**	**1.89**	**294**	*e*Pg			**Pg**	**20 29 05.5**	**+0.7**
	baz=114								
SFTF				*e*Sn			**Sn**	**20 29 22.7**	**-2.0**
	baz=117								
SFTF				*e*Sg			**Sg**	**20 29 30.2**	**+0.9**
	5.3nm,0.2s								
SFTF	**Sexfontaines**	**1.89**	**294**	*e*Pn			**Pn**	**20 29 00.9**	**+0.1**
SFTF				*e*Pg			**Pg**	**20 29 05.5**	**+0.7**
SFTF				*e*Sn			**Sn**	**20 29 22.7**	**-2.0**
SFTF				*e*Sg			**Sg**	**20 29 30.2**	**+0.9**
SFTF	**Sexfontaines**	**1.89**	**294**	*e*Pn			**Pn**	**20 29 00.9**	**+0.1**
	baz=105								
SFTF	**Sexfontaines**	**1.89**	**294**	*e*Pg			**Pg**	**20 29 05.5**	**+0.7**
	baz=114								
SFTF				*e*Sn			**Sn**	**20 29 22.7**	**-2.0**
	baz=117								
SFTF				*e*Sg			**Sg**	**20 29 30.2**	**+0.9**
	2.7nm,0.2s								
TRAV	**Traversella**	**1.95**	**177**	Pn			**Pn**	**20 29 03.0**	**+1.4**
TRAV				Sn			**Sg**	**20 29 30.8**	**-0.3**
TRAV	**Traversella**	**1.95**	**177**	P			**Pn**	**20 29 00.8**	**-0.8**
TRAV	**Traversella**	**1.95**	**177**	Pn			**Pn**	**20 29 03.0**	**+1.4**
TRAV				S			**Sn**	**20 29 22.7**	**-3.4**
MEZF	**Maizieres J'vi**	**2.01**	**302**	*e*Pg			**Pg**	**20 29 07.7**	**+0.6**
MEZF				*e*Sn			**Sn**	**20 29 25.8**	**-2.0**
	baz=122								
MEZF				*e*Sg			**Sg**	**20 29 33.8**	**+0.6**
	11nm,0.4s,baz=120								
MEZF	**Maizieres J'vi**	**2.01**	**302**	*e*Pn			**Pn**	**20 29 02.1**	**-0.5**
MEZF				*e*Pg			**Pg**	**20 29 07.7**	**+0.6**
MEZF				*e*Sn			**Sn**	**20 29 25.8**	**-2.0**
MEZF				*e*Sg			**Sg**	**20 29 33.8**	**+0.6**
MEZF	**Maizieres J'vi**	**2.01**	**302**	*e*Pn			**Pn**	**20 29 02.1**	**-0.5**
MEZF	**Maizieres J'vi**	**2.01**	**302**	*e*Pg			**Pg**	**20 29 07.7**	**+0.6**
MEZF				*e*Sn			**Sn**	**20 29 25.8**	**-2.0**
	baz=122								
MEZF				*e*Sg			**Sg**	**20 29 33.8**	**+0.6**
	5.7nm,0.4s,baz=120								
LSD	**Lago del Serru**	**2.02**	**190**	P			**Pn**	**20 29 02.6**	**-0.1**
LSD				S			**Sn**	**20 29 26.0**	**-2.0**
LPL	**La Plagne**	**2.03**	**198**	*e*Pg			**Pg**	**20 29 08.8**	**+1.3**
LPL				*e*Sg			**Sg**	**20 29 34.5**	**+0.6**
	12nm,0.4s								
LPL	**La Plagne**	**2.03**	**198**	*e*Pn			**Pn**	**20 29 03.2**	**+0.4**
LPL				*e*Pg			**Pg**	**20 29 08.8**	**+1.3**
LPL				*e*Sg			**Sg**	**20 29 34.5**	**+0.6**
LPL	**La Plagne**	**2.03**	**198**	*e*Pn			**Pn**	**20 29 03.2**	**+0.4**
LPL	**La Plagne**	**2.03**	**198**	*e*Pg			**Pg**	**20 29 08.8**	**+1.3**
LPL				*e*Sg			**Sg**	**20 29 34.5**	**+0.6**
	6.1nm,0.4s								
LPG	**La Plagne**	**2.05**	**197**	*e*Pg			**Pg**	**20 29 08.3**	**+0.5**
LPG				*e*Sg			**Sg**	**20 29 34.6**	**+0.3**
	8.9nm,0.3s								
LPG	**La Plagne**	**2.05**	**197**	*e*Pn			**Pn**	**20 29 03.2**	**+0.2**
LPG				*e*Pg			**Pg**	**20 29 08.3**	**+0.5**
LPG				*e*Sg			**Sg**	**20 29 34.6**	**+0.3**
LPG	**La Plagne**	**2.05**	**197**	*e*Pn			**Pn**	**20 29 03.2**	**+0.2**
LPG	**La Plagne**	**2.05**	**197**	*e*Pg			**Pg**	**20 29 08.3**	**+0.5**
LPG				*e*Sg			**Sg**	**20 29 34.6**	**+0.3**
	4.4nm,0.3s								
HDH	**Heidenheim-Cha**	**2.08**	**56**	Pg			**Pg**	**20 29 08.4**	**+0.1**
HDH				S			**Sn**	**20 29 26.3**	**-2.9**
RETA	**Reutte**	**2.14**	**88**	⇑*i*Pg			**Pg**	**20 29 09.8**	**+0.3**
RETA				⇓*i*Sg			**Sg**	**20 29 37.6**	**+0.5**
	4.1nm,0.1s								
RETA	**Reutte**	**2.14**	**88**	Pg			**Pg**	**20 29 09.8**	**+0.3**
RETA				Sg			**Sg**	**20 29 37.6**	**+0.4**
	4.1nm,0.1s								
SWS	**Schriesheim-Wi**	**2.15**	**19**	Sg			**Sg**	**20 29 38.2**	**+0.4**
SIND	**Sindeldorf**	**2.31**	**34**	Pg			**Pg**	**20 29 12.7**	**-0.2**
SIND				Sg			**Sg**	**20 29 42.6**	**-0.2**
RSP	**Reno Superiore**	**2.32**	**186**	P			**Pn**	**20 29 06.1**	**-0.7**
RSP				S			**Sn**	**20 29 31.0**	**-4.3**
MOTA	**Moosalm**	**2.37**	**91**	⇓*i*Pg			**Pg**	**20 29 14.3**	**+0.3**
MOTA				⇓*i*Sg			**Sg**	**20 29 45.2**	**+0.5**
	2.7nm,0.1s								
MOTA	**Moosalm**	**2.37**	**91**	Pg			**Pg**	**20 29 14.3**	**+0.3**
MOTA				Sg			**Sg**	**20 29 45.2**	**+0.4**
	2.7nm,0.1s								
WLF	**Walferdange**	**2.41**	**337**	Sg			**Sg**	**20 29 46.8**	**+0.8**
LOR	**Lormes**	**2.56**	**267**	*e*Pn			**Pn**	**20 29 09.8**	**-0.2**
	baz=85								
LOR	**Lormes**	**2.56**	**267**	*e*Pg			**Pg**	**20 29 17.7**	**+0.1**
	baz=88								
LOR				*e*Sn			**Sn**	**20 29 39.2**	**-2.0**
	baz=85								
LOR				*e*Sg			**Sg**	**20 29 50.3**	**-0.4**
	14nm,0.2s,baz=84								
LOR	**Lormes**	**2.56**	**267**	*e*Pn			**Pn**	**20 29 09.8**	**-0.2**
LOR				*e*Pg			**Pg**	**20 29 17.7**	**+0.1**
LOR				*e*Sn			**Sn**	**20 29 39.2**	**-2.0**
LOR				*e*Sg			**Sg**	**20 29 50.3**	**-0.4**
LOR	**Lormes**	**2.56**	**267**	*e*Pn			**Pn**	**20 29 09.8**	**-0.2**
	baz=85								
LOR	**Lormes**	**2.56**	**267**	*e*Pg			**Pg**	**20 29 17.7**	**+0.1**
	baz=88								
LOR				*e*Sn			**Sn**	**20 29 39.2**	**-2.0**
	baz=85								
LOR				*e*Sg			**Sg**	**20 29 50.3**	**-0.4**
	6.9nm,0.2s,baz=84								
FUR	**Furstenfeldbru**	**2.57**	**73**	*e*Sg			**Sg**	**20 29 51.9**	**+0.9**
SMF	**Signal de Mont**	**2.70**	**254**	*e*Pg			**Pg**	**20 29 20.2**	**-0.1**
SMF				*e*Sg			**Sg**	**20 29 55.8**	**+0.4**
	5.9nm,0.2s								
SMF	**Signal de Mont**	**2.70**	**254**	*e*Pn			**Pn**	**20 29 11.9**	**-0.1**
SMF				*e*Pg			**Pg**	**20 29 20.2**	**-0.1**
SMF				*e*Sg			**Sg**	**20 29 55.8**	**+0.4**
SMF	**Signal de Mont**	**2.70**	**254**	*e*Pn			**Pn**	**20 29 11.9**	**-0.1**
SMF	**Signal de Mont**	**2.70**	**254**	*e*Pg			**Pg**	**20 29 20.2**	**-0.1**
SMF				*e*Sg			**Sg**	**20 29 55.8**	**+0.4**
	3.0nm,0.2s								
MBDF	**Montbardon**	**2.79**	**192**	*e*Pg			**Pg**	**20 29 21.7**	**-0.3**
MBDF				*e*Sg			**Sg**	**20 29 57.5**	**-0.7**
	5.7nm,0.5s								
MBDF	**Montbardon**	**2.79**	**192**	*e*Pg			**Pg**	**20 29 21.7**	**-0.3**
MBDF				*e*Sg			**Sg**	**20 29 57.5**	**-0.7**
	2.8nm,0.5s								
ORIF	**Oris-en-Rattie**	**2.81**	**206**	*e*Pg			**Pg**	**20 29 22.9**	**+0.5**
ORIF				*e*Sg			**Sg**	**20 29 57.9**	**-0.9**
	6.1nm,0.3s								
ORIF	**Oris-en-Rattie**	**2.81**	**206**	*e*Pn			**Pn**	**20 29 13.5**	**0.0**
ORIF				*e*Pg			**Pg**	**20 29 22.9**	**+0.5**
ORIF				*e*Sg			**Sg**	**20 29 57.9**	**-0.9**
ORIF	**Oris-en-Rattie**	**2.81**	**206**	*e*Pn			**Pn**	**20 29 13.5**	**0.0**
ORIF	**Oris-en-Rattie**	**2.81**	**206**	*e*Pg			**Pg**	**20 29 22.9**	**+0.5**
ORIF				*e*Sg			**Sg**	**20 29 57.9**	**-0.9**
	3.0nm,0.3s								
TNS	**Taunus Mts**	**2.82**	**11**	Sg			**Sg**	**20 29 59.7**	**+0.6**
SSF	**Saint Saulge**	**2.83**	**263**	*e*Pg			**Pg**	**20 29 22.7**	**0.0**
SSF				*e*Sg			**Sg**	**20 29 59.8**	**+0.5**
	5.0nm,0.3s								
SSF	**Saint Saulge**	**2.83**	**263**	*e*Pn			**Pn**	**20 29 14.0**	**+0.3**
SSF				*e*Pg			**Pg**	**20 29 22.7**	**0.0**
SSF				*e*Sg			**Sg**	**20 29 59.8**	**+0.5**
SSF	**Saint Saulge**	**2.83**	**263**	*e*Pn			**Pn**	**20 29 14.0**	**+0.3**
SSF	**Saint Saulge**	**2.83**	**263**	*e*Pg			**Pg**	**20 29 22.7**	**0.0**
SSF				*e*S

comp=Z,0.6nm,0.3s
RJF Les Rejaudoux 4.74 245 *e*Pn **Pn 20 29 39.6 -0.4**
RJF *e*Sg **Sg 20 30 58.9 -1.7**
comp=Z,1.5nm,0.4s
RJF Les Rejaudoux 4.74 245 *e*Pn **Pn 20 29 39.6 -0.4**
RJF *e*Sg **Sg 20 30 58.9 -1.7**
comp=Z,0.8nm,0.4s
CLL Collm 5.22 40 *e*Pg **Pg 20 30 07.0 -1.4**
CLL *e*Sg **Sg 20 31 13.2 -2.8**
SNR=2.9
CLL Collm 5.22 40 *e*Pg **Pg 20 30 07.0 -1.4**
CLL *e*Sg **Sg 20 31 14.0 -2.0**
CLL Collm 5.22 40 *e*Pg **Pg 20 30 07.0 -1.4**
CLL *e*Sg **Sg 20 31 14.0 -2.0**
PRU Pruhonice 5.24 59 *e*SG **Sg 20 31 15.5 -1.1**
comp=Z,3.2nm,0.9s
PRU Pruhonice 5.24 59 Sg **Sg 20 31 15.5 -1.1**
comp=Z,3.2nm,0.9s
LDF La Druitiere 5.31 285 *e*Pn **Pn 20 29 47.3 -0.6**
LDF *e*Sg **Sg 20 31 17.3 -1.7**
comp=Z,2.8nm,0.4s
LDF La Druitiere 5.31 285 *e*Pn **Pn 20 29 47.3 -0.6**
LDF *e*Sg **Sg 20 31 17.3 -1.7**
comp=Z,1.4nm,0.4s
MFF Saint Martin d 5.37 264 *e*Pn **Pn 20 29 48.5 -0.2**
MFF *e*Sg **Sg 20 31 19.1 -1.9**
comp=Z,1.1nm,0.4s
MFF Saint Martin d 5.37 264 *e*Pn **Pn 20 29 48.5 -0.2**
MFF *e*Sg **Sg 20 31 19.1 -1.9**
comp=Z,0.6nm,0.4s
FLN La Foliniere 5.58 287 *e*Pg **Pg 20 30 13.6 -1.7**
baz=110
FLN *e*Sg **Sg 20 31 25.5 -2.0**
comp=Z,2.1nm,0.3s,baz=102
FLN La Foliniere 5.58 287 *e*Pn **Pn 20 29 51.0 -0.5**
FLN *e*Pg **Pg 20 30 13.6 -1.7**
FLN *e*Sg **Sg 20 31 25.5 -2.0**
FLN La Foliniere 5.58 287 *e*Pn **Pn 20 29 51.0 -0.5**
FLN La Foliniere 5.58 287 *e*Pg **Pg 20 30 13.6 -1.7**
baz=110
FLN *e*Sg **Sg 20 31 25.5 -2.0**
comp=Z,1.0nm,0.3s,baz=102

IDC 14 20:43:38.7±2.8, 12°89S×172°09E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.6/16, mbtmp3.8/3, Error ellipse: s-maj=124.5km s-min=44.9km az=140.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**33.76**	**231**	P	P	20 50 21.6	-0.7
	2.0nm,0.3s,baz=60,slow=9.7,SNR=20						
WRA	**Warramunga Arr**	**36.82**	**254**	P	P	20 50 49.7	+0.9
	0.4nm,0.7s,baz=82,slow=8.1,SNR=3.9						
ASAR	**Alice Springs**	**37.70**	**248**	P	P	20 50 56.0	-0.3
	0.6nm,0.6s,baz=78,slow=9.3,SNR=20						
ARCES	**ARCESS Array B**	**119.59**	**347**	PKP	PKPdf	21 02 29.9	0.0
	1.1nm,0.8s,baz=53,slow=3.0,SNR=6.5						

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*ISCJB **14** 20:56:45.8±0.5, 37°52N±0°04×72°35E±0°08, h146km±11km, mb3.5/2, Error ellipse: s-maj=11.3km s-min=6.2km az=15.6*
*NEIC **14** 20:56:47.6±1.2, 37°60N×72°17E, h142km±14km, mb3.7/4, Error ellipse: s-maj=27.4km s-min=10.9km az=126.0*
*IDC **14** 20:56:51.7±8.8, 37°82N×72°46E, h169km±55km, mb3.3/2, mb1 3.1/7, mb1mx2.9/29, mbtmp3.1/7, MS3.7/1, Ms1 3.7/1, ms1mx2.3/22, Error ellipse: s-maj=82.6km s-min=52.1km az=164.0*
ISC 14 20:56:46.9±0.5, 37°52N±0°04×72°35E±0°09, h141km±10km, n26, σ0°93/35, mb3.5/2, 3C-1D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**3.47**	**54**	Pn	**Pn**	**20 57 38.9**	**-1.0**
KSH				Sn	**Sn**	**20 58 16.3**	**-4.7**
KSH				smax			
	comp=N,170nm,0.4s						
KSH				smax			
	comp=E,120nm,0.5s						
KBL	**Kabul**	**4.00**	**223**	*e*Pn	**Pn**	**20 57 47.4**	**+0.5**
KBL				*e*Sn	**Sn**	**20 58 33.1**	**-0.4**
AML	**Almayashu**	**4.72**	**12**	P	**Pn**	**20 57 57.1**	**+0.8**
	SNR=48						
AML	**Almayashu**	**4.72**	**12**	*e*Pn	**Pn**	**20 57 56.4**	**+0.1**
AML				*e*Sn	**Sn**	**20 58 43.4**	**-7.0**
UCH	**Uchtor**	**4.99**	**19**	P	**Pn**	**20 58 01.2**	**+1.3**
	SNR=12						
UCH	**Uchtor**	**4.99**	**19**	*e*Pn	**Pn**	**20 58 01.0**	**+1.1**
UCH				*e*Sn	**Sn**	**20 58 51.4**	**-5.4**
EKS2	**Erkin-Say**	**5.25**	**12**	P	**Pn**	**20 58 04.3**	**+0.9**
	SNR=8.1						
EKS2	**Erkin-Say**	**5.25**	**12**	*e*Pn	**Pn**	**20 58 04.0**	**+0.6**
	comp=E,27nm,1.0s						
EKS2				*e*Sn	**Sn**	**20 58 57.3**	**-5.8**
AAK	**Ala-Archa**	**5.36**	**17**	P	**Pn**	**20 58 06.3**	**+1.4**
	SNR=6.8						
AAK	**Ala-Archa**	**5.36**	**17**	P	**Pn**	**20 58 06.4**	**+1.5**
	comp=E,0.1nm,0.3s,baz=178,slow=7.1,SNR=10						
AAK				S	**Sn**	**20 59 05.1**	**-0.6**
	comp=E,0.0nm,0.3s,baz=197,slow=4.2,SNR=15						
KK31	**Karatay Array**	**5.75**	**346**	⇑Pn	**Pn**	**20 58 08.6**	**-1.4**
	comp=E,8.6nm,0.3s,baz=162,slow=12,SNR=42						
KK31				⇑Sn	**Sn**	**20 59 08.6**	**-6.4**
	comp=E,10nm,0.2s,baz=167,slow=22,SNR=4.7						
THN	**Thein Dam**	**5.78**	**150**	*e*PKP	**Pn**	**20 58 11.5**	**+0.9**
THN				*e*S	**Sn**	**20 59 15.0**	**-0.9**
TKM2	**Tokmak 2**	**5.94**	**24**	⇑Pn	**Pn**	**20 58 14.4**	**+1.8**
	comp=E,1.9nm,0.5s						
TKM2				⇓Sn	**Sn**	**20 59 18.6**	**-0.9**
	comp=E,2.9nm,0.9s						
TKM2	**Tokmak 2**	**5.94**	**24**	P	**Pn**	**20 58 14.6**	**+2.0**
	SNR=5.3						
TKM2	**Tokmak 2**	**5.94**	**24**	*e*Pn	**Pn**	**20 58 13.5**	**+0.9**
	comp=E,2.4nm,0.5s						
KURK	**Kurchatov**	**13.93**	**17**	P	**Pn**	**20 59 58.5**	**+0.5**
	comp=E,0.0nm,0.3s,baz=207,slow=11,SNR=4.7						
ABKAR	**Akbulak array**	**14.77**	**326**	*e*Pn	**Pn**	**21 00 05.2**	**-3.4**
	comp=E,0.7nm,0.3s						
ABKAR				*e*Sn	**Sn**	**21 02 36.4**	**-16**
BVAR	**Borovoye Array**	**15.56**	**356**	P	**Pn**	**21 00 19.1**	**+0.7**
	comp=E,0.5nm,0.3s,baz=161,slow=8.8,SNR=12						
BRVK	**Borovoye**	**15.60**	**355**	*e*Pn	**Pn**	**21 00 18.5**	**-0.5**
	comp=E,3.2nm,0.9s						
AKTK	**Aktyubinsk**	**16.48**	**326**	P	**Pn**	**21 00 29.6**	**-0.1**
AKTO	**Aktyubinsk**	**16.48**	**326**	P	**Pn**	**21 00 29.6**	**-0.1**
	comp=E,0.5nm,0.3s,baz=115,slow=11,SNR=7.5						
ZALV	**Zalesovo Beam**	**18.54**	**24**	P	**P**	**21 00 51.1**	**-1.3**
	comp=E,0.1nm,0.3s,baz=220,slow=8.7,SNR=2.8						
FINES	**FINESS Array B**	**37.25**	**325**	P	**P**	**21 03 44.7**	**+0.2**
	comp=E,0.4nm,0.3s,mb3.6,baz=119,slow=9.8,SNR=5.9						
FINES	**FINESS Array B**	**37.25**	**325**	P	**P**	**21 03 44.7**	**+0.2**
ARCES	**ARCESS Array B**	**40.62**	**337**	P	**P**	**21 04 12.9**	**+0.5**
	comp=E,0.7nm,0.8s,mb3.4,baz=95,slow=7.4,SNR=5.5						
KSRS	**Korea Array**	**43.53**	**72**	LR	LR	21 24 19.9	
	comp=E,88nm,18.9s,baz=220,slow=38						

JMA 14 21:01:50.7, 39°19N×140°92E, h9km±1km, M2.1, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRG	**Rokugo**	**0.30**	**313**	P	Pg	21 01 56.9	+0.2
JRG				S	Sg	21 02 01.4	+0.6
JMK	**Ichinoseki**	**0.33**	**135**	P	Pg	21 01 57.3	0.0
JMK				S	Sg	21 02 01.8	+0.1
JOM	**Ohasama**	**0.40**	**46**	P	Pg	21 01 58.5	-0.1
JOM				S	Sg	21 02 04.0	0.0

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*NIED **14** 21:02:00, 38°70N×140°80E, h5km, Mw4.0 Best double couple: M0 1.23000×10^15 NP1:φs0.00000°, δ48.00000°, λ79.00000°. NP2:φs196.00000°, δ43.00000°, λ102.00000°.*
*BJI **14** 21:02:27.3, 38°40N×141°01E, h24km, mB4.7/6, mb4.4/6*
*IDC **14** 21:02:28.9±0.6, 38°78N×140°71E, h0km, mb4.0/19, mb1 4.1/22, mb1mx4.0/30, mbtmp4.0/22, ML3.4/3, MS3.2/3, Ms1 3.2/3, ms1mx2.7/45, Error ellipse: s-maj=16.7km s-min=12.1km az=112.0*
*ISCJB **14** 21:02:30.4±1.2, 38°77N±0°02×140°79E±0°03, h15km±7km, mb4.2/35, Error ellipse: s-maj=4.6km s-min=3.6km az=35.7*
*JMA **14** 21:02:30.0, 38°77N×140°78E, h4km±1km, M4.1 Broadband fault plane solution: P waves. NP1: φs205.00000°, δ26.00000°, λ123.00000°. NP2: φs350.00000°, δ68.00000°, λ75.00000°. Principal axes: T Plg64.0000°, Azm235.0000°; N Plg14.0000°, Azm355.0000°; P Plg22.0000°, Azm91.0000°;*
JMA Felt III J1.
*NEIC **14** 21:02:30.0, 38°77N×140°78E, h4km, mb4.5/15, MW4.0(NIED), After JMA.*
NEIC Recorded [3 JMA] in Miyagi and [1 JMA] in Iwate and Yamagata.
*MOS **14** 21:02:32.2±0.8, 38°77N×140°75E, h33km, mb4.6/25, Error ellipse: s-maj=11.3km s-min=6.2km az=98.5*
ISC 14 21:02:30.1±0.4, 38°76N±0°02×140°77E±0°03, h8km±2km, n134, σ0°76/143, mb4.2/35, 5C-7D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.36**	**297**	⇓P	**Pg**	**21 02 37.2**	**0.0**
JYK				S	**Sg**	**21 02 42.0**	**0.0**
JMK	**Ichinoseki**	**0.40**	**61**	⇓P	**Pg**	**21 02 37.5**	**-0.3**
JMK				S	**Sg**	**21 02 43.1**	**0.0**
JOU	**Okura**	**0.40**	**193**	⇑P	**Pg**	**21 02 38.1**	**+0.3**
JOU				S	**Sg**	**21 02 43.7**	**+0.6**
JIO	**Ouri**	**0.54**	**124**	⇓P	**Pg**	**21 02 40.2**	**-0.3**
JIO				S	**Sg**	**21 02 47.9**	**+0.3**
JRG	**Rokugo**	**0.65**	**350**	P	**Pg**	**21 02 42.7**	**+0.1**
JYS	**Shiratake**	**0.77**	**226**	⇑P	**Pg**	**21 02 45.0**	**+0.1**
JYS				S	**Sg**	**21 02 55.4**	**+0.5**
JOM	**Ohasama**	**0.82**	**29**	P	**Pg**	**21 02 45.4**	**-0.5**
JOM				S	**Sg**	**21 02 56.4**	**-0.2**
JYA	**Atsumi**	**0.85**	**259**	⇓P	**Pg**	**21 02 46.2**	**-0.1**
JYA				S	**Sg**	**21 02 57.4**	**+0.1**
JMM	**Marumori**	**0.89**	**179**	⇑P	**Pg**	**21 02 46.6**	**-0.5**
JMM				S	**Sg**	**21 02 58.1**	**-0.6**
MAJO	**Matsushiro**	**3.00**	**223**	*e*P	**Pn**	**21 03 19.0**	**+1.1**
MAT	**Matsushiro**	**3.00**	**223**	P	**Pn**	**21 03 19.0**	**+1.1**
MAT				S	**Sn**	**21 04 02.8**	**+8.7**
MJAR	**Matsushiro Arr**	**3.00**	**223**	Pn	**Pn**	**21 03 19.1**	**+1.3**
	2.8nm,0.3s,baz=31,slow=15,SNR=47						
MJAR				Pg	**Pg**	**21 03 25.1**	**-2.5**
	6.5nm,0.3s,baz=25,slow=16,SNR=47						
MJAR				Lg		21 04 03.5	
	4.8nm,0.3s,baz=102,slow=14,SNR=7.0						
MJAR	**Matsushiro Arr**	**3.00**	**223**	P	**Pn**	**21 03 19.2**	**+1.3**
MJAR						21 04 03.5	
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ERM	**Erimo**	**3.73**	**28**	*e*P	**Pn**	**21 03 27.2**	**-0.6**
ASAJ	**Asahikawa**	**5.53**	**14**	Pn	**Pn**	**21 03 55.4**	**+2.8**
	comp=Z,1.8nm,0.3s,baz=217,slow=10,SNR=17						
ASAJ	**Asahikawa**	**5.53**	**14**	P	**Pn**	**21 03 55.4**	**+2.9**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
JHJ	**Hachijo jima 2**	**5.68**	**188**	Pn	**Pn**	**21 03 54.8**	**+0.1**
	comp=Z,8.9nm,0.3s,baz=216,slow=19,SNR=5.0						
YSS	**Yuzh-Sakhalins**	**8.32**	**9**	*e*P	**Pn**	**21 04 33.2**	**+2.3**
YSS				MLR	MLR		
	comp=Z,400nm,12.0s						
KSRS	**Korea Array**	**10.21**	**267**	Pn	**Pn**	**21 05 00.1**	**+3.3**
	comp=Z,1.5nm,0.3s,baz=77,slow=14,SNR=43						
KSRS				Sn	**Sn**	**21 06 56.8**	**+5.3**
	comp=Z,1.4nm,0.3s,baz=75,slow=24,SNR=14						
KSRS				LR	LR	21 08 29.6	
	comp=Z,121nm,19.2s,baz=359,slow=35						
KSRS	**Korea Array**	**10.21**	**267**	P	**Pn**	**21 05 00.2**	**+3.4**
KSRS						21 06 56.8	
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KSRS				smax			
	comp=N,1.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,121nm,19.2s						
KLR	**Kul'dur**	**12.31**	**331**	*e*P	**Pn**	**21 05 26.0**	**+5.5**
PETK	**Petropavlovsk-**	**18.49**	**34**	P	**Pn**	**21 06 46.7**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=202,slow=5.9,SNR=3.2						
PETK	**Petropavlovsk-**	**18.49**	**34**	P	**Pn**	**21 06 46.7**	**+0.3**
WHN	**Wuhan**	**23.17**	**257**	P	**P**	**21 07 35.0**	**-2.0**
SEY	**Seymchan**	**25.21**	**12**	⇓*e*P	**P**	**21 07 56.9**	**+1.1**
SONM	**Songino Array**	**26.43**	**301**	P	**P**	**21 08 07.0**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=39,slow=9.7,SNR=4.6						
SONM				LR	LR	21 18 31.7	
	comp=Z,55nm,19.0s,baz=256,slow=36						
ZAA0	**Zalesovo Array**	**40.40**	**311**	*e*P	**P**	**21 10 07.7**	**-0.6**
ZALV	**Zalesovo Beam**	**40.40**	**311**	P	**P**	**21 10 07.8**	**-0.4**
	comp=Z,2.0nm,0.7s,mb4.0,baz=88,slow=7.4,SNR=12						
ZALV				PcP	PcP	21 12 11.0	-0.2
	comp=Z,0.9nm,0.5s,baz=95,slow=3.5,SNR=4.4						
ZALV	**Zalesovo Beam**	**40.40**	**311**	P	**P**	**21 10 07.8**	**-0.4**
ZALV						21 12 11.0	
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
MKAR	**Makanchi Array**	**42.79**	**300**	P	**P**	**21 10 27.6**	**-0.3**
	comp=Z,0.8nm,0.6s,mb3.6,baz=78,slow=11,SNR=10						
MKAR				LR	LR	21 28 21.0	
	comp=Z,29nm,18.4s,baz=350,slow=36						
MKAR	**Makanchi Array**	**42.79**	**300**	P	**P**	**21 10 27.7**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR				MLR	MLR		
	comp=Z,29nm,18.4s						
KURK	**Kurchatov**	**44.49**	**307**	P	**P**	**21 10 41.6**	**+0.1**
	comp=Z,2.6nm,0.7s,mb4.0,baz=82,slow=8.3,SNR=16						
KURK	**Kurchatov**	**44.49**	**307**	*e*P	**P**	**21 10 41.1**	**-0.4**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.2						
KURK	**Kurchatov**	**44.49**	**307**	*e*P	**P**	**21 10 40.9**	**-0.6**
	comp=Z,3.0nm,0.8s,mb4.1						
BVAR	**Borovoye Array**	**49.05**	**311**	P	**P**	**21 11 17.3**	**0.0**
	comp=Z,0.6nm,0.5s,mb3.9,baz=73,slow=6.8,SNR=6.3						
BVAR	**Borovoye Array**	**49.05**	**311**	P	**P**	**21 11 17.3**	**+0.1**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
INK	**Inuvik**	**53.09**	**28**	P	**P**	**21 11 47.3**	**-0.1**
	comp=Z,0.7nm,0.5s,mb3.9,baz=272,slow=12,SNR=3.7						
INK	**Inuvik**	**53.09**	**28**	P	**P**	**21 11 47.3**	**-0.1**
INK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SVE	**Sverdlovsk**	**53.53**	**318**	*e*P	**P**	**21 11 51.5**	**+0.7**
ARU	**Arti**	**54.74**	**318**	*c iP*	**P**	**21 11 59.4**	**-0.2**
ARU				*e*		21 13 59.7	
ARU				S	**S**	**21 19 36.7**	**-3.3**
ARU				SS	SS	21 23 19.1	-3.3
ARU				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
ARU	**Arti**	**54.74**	**318**	*e*P	**P**	**21 11 59.8**	**+0.2**
	comp=Z,5.1nm,0.6s,mb4.7						
ABKAR	**Akbulak array**	**56.45**	**309**	*e*P	**P**	**21 12 11.7**	**-0.4**
	comp=Z,1.5nm,0.5s,mb4.3						
AKTK	**Aktyubinsk**	**57.16**	**311**	P	**P**	**21 12 16.6**	**-0.4**
AKTO	**Aktyubinsk**	**57.16**	**311**	P	**P**	**21 12 16.6**	**-0.4**
	comp=Z,1.2nm,0.7s,mb4.0,baz=45,slow=7.1,SNR=3.0						
AKTO	**Aktyubinsk**	**57.16**	**311**	P	**P**	**21 12 16.6**	**-0.4**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
WRAB	**Tennant Creek**	**58.69**	**187**	*e*P	**P**	**21 12 27.9**	**-0.1**
WRA	**Warramunga Arr**	**58.70**	**187**	P	**P**	**21 12 27.7**	**-0.4**
	comp=Z,2.3nm,0.6s,mb4.4,baz=5.7,slow=7.2,SNR=20						
WRA	**Warramunga Arr**	**58.70**	**187**	P	**P**	**21 12 27.7**	**-0.3**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
WRA	**Warramunga Arr**	**58.70**	**187**	P	**P**	**21 12 27.7**	**-0.4**
ARCES	**ARCESS Array B**	**62.21**	**339**	P	**P**	**21 12 52.1**	**+0.6**
	comp=Z,1.4nm,0.8s,mb4.1,baz=58,slow=7.7,SNR=5.1						
ARCES	**ARCESS Array B**	**62.21**	**339**	P	**P**	**21 12 52.2**	**+0.7**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**62.42**	**187**	P	**P**	**21 12 53.5**	**+0.1**
	comp=Z,1.2nm,0.7s,mb4.2,baz=7.2,slow=5.0,SNR=17						
ASAR	**Alice Springs**	**62.42**	**187**	P	**P**	**21 12 53.5**	**+0.1**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
OBN	**Obninsk**	**66.42**	**323**	*e*P	**P**	**21 13 19.6**	**+0.3**
OBN				pmax	pmax		
	comp=Z,23nm,2.5s,mb4.8						
FINES	**FINESS Array B**	**67.06**	**332**	P	**P**	**21 13 22.8**	**-0.5**
	comp=Z,1.9nm,0.7s,mb4.2,baz=42,slow=5.9,SNR=7.1						
FINES	**FINESS Array B**	**67.06**	**332**	P	**P**	**21 13 22.8**	**-0.5**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	**FINESS Array B**	**67.06**	**332**	P	**P**	**21 13 22.8**	**-0.5**
VSR	**Storozhevoye**	**67.31**	**318**	*e*P	**P**	**21 13 24.8**	**-0.3**
VSR				pmax	pmax		
	comp=E,4.0nm,0.5s						
VSR				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.9						
VSR				pmax	pmax		
	comp=N,3.0nm,0.4s						
VORD	**Divnogorie**	**67.38**	**318**	*e*P	**P**	**21 13 25.4**	**-0.1**
VORD				pmax	pmax		
	comp=N,10.0nm,0.6s						
VORD				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
VORD				pmax	pmax		
	comp=E,20nm,0.7s						
KIV	**Kislovodsk**	**69.41**	**310**	*c iP*	**P**	**21 13 38.7**	**+0.4**
KIV				*e*		21 14 02.0	
KIV				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.8						
KIV	**Kislovodsk**	**69.41**	**310**	*e*P	**P**	**21 13 38.6**	**+0.3**
	comp=Z,15nm,1.2s,mb4.8						
GNI	**Garni**	**70.28**	**306**	⇓*e*P	**P**	**21 13 44.6**	**+0.8**
GNI				pmax	pmax		
	comp=Z,10.0nm,1.2s						
NB2	**NORSAR Subarra**	**72.41**	**337**	P	**P**	**21 13 54.6**	**-1.6**
	comp=Z,6.5nm,1.2s,mb4.4,baz=37,slow=6.2						
NOA	**NORSAR Array B**	**72.41**	**337**	P	**P**	**21 13 56.2**	**-0.1**
	comp=Z,2.6nm,0.9s,mb4.1,baz=38,slow=6.0,SNR=4.2						
NOA	**NORSAR Array B**	**72.41**	**337**	P	**P**	**21 13 56.2**	**0.0**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NOA	**NORSAR Array B**	**72.41**	**337**	P	**P**	**21 13 56.2**	**-0.1**
AKASG	**Malin Array Be**	**72.63**	**322**	P	**P**	**21 13 57.5**	**-0.2**
	comp=Z,2.8nm,0.6s,mb4.4,baz=47,slow=5.8,SNR=17						
AKASG	**Malin Array Be**	**72.63**	**322**	P	**P**	**21 13 57.5**	**-0.3**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NVAR	**Mina Array Bea**	**74.36**	**53**	P	**P**	**21 14 09.2**	**+1.0**
	comp=Z,0.9nm,0.8s,mb3.8,baz=286,slow=7.6,SNR=6.3						
BUR08	**Bucovina Ar. S**	**76.64**	**321**	*e*P	**P**	**21 14 21.7**	**+0.6**
PDAR	**Pinedale Array**	**76.82**	**45**	P	**P**	**21 14 23.0**	**+0.8**
	comp=Z,0.7nm,0.6s,mb3.7,baz=1.4,slow=3.6,SNR=3.6						
PDAR	**Pinedale Array**	**76.82**	**45**	P	**P**	**21 14 23.0**	**+0.8**
KOLS	**Kolonicke sedl**	**77.14**	**324**	*e*P	**P**	**21 14 24.1**	**+0.2**
KOLS				*e*		21 14 31.9	
KOLS				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
KOLS	**Kolonicke sedl**	**77.14**	**324**	*e*P	**P**	**21 14 24.1**	**+0.2**
	comp=Z,1.8nm,0.9s,mb4.0						
STHS	**Stebnicka Huta**	**77.27**	**324**	*e*P	**P**	**21 14 26.0**	**+1.4**
STHS				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
STHS	**Stebnicka Huta**	**77.27**	**324**	*e*P	**P**	**21 14 26.0**	**+1.4**
	comp=Z,2.5nm,1.0s,mb4.1						
OJC	**Ojcow**	**77.33**	**326**	*e*P	**P**	**21 14 24.3**	**-0.6**
BRTR	**Keskin Array B**	**77.34**	**311**	P	**P**	**21 14 25.2**	**0.0**
	comp=Z,0.7nm,0.7s,mb3.7,baz=145,slow=4.5,SNR=4.9						
BRTR	**Keskin Array B**	**77.34**	**311**	P	**P**	**21 14 25.2**	**0.0**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CRVS	**Cervenica-Dubn**	**77.53**	**324**	*e*P	**P**	**21 14 30.7**	**+4.6**
CRVS				pmax	pmax		
	comp=Z,6.0nm,1.5s,mb4.3						
CRVS	**Cervenica-Dubn**	**77.53**	**324**	*e*P	**P**	**21 14 30.7**	**+4.6**
	comp=Z,5.7nm,1.5s,mb4.3						
NIE	**Niedzica**	**77.69**	**325**	*e*P	**P**	**21 14 28.1**	**+1.2**
DPC	**Dobruska-Polom**	**78.74**	**327**	*e*P	**P**	**21 14 32.4**	**-0.3**
DPC	**Dobruska-Polom**	**78.74**	**327**	*e*P	**P**	**21 14 32.4**	**-0.3**
VYHS	**Vyhne**	**79.03**	**325**	*e*P	**P**	**21 14 36.9**	**+2.5**
VYHS				pmax	pmax		
	comp=Z,6.0nm,2.1s,mb4.2						
VYHS	**Vyhne**	**79.03**	**325**	*e*P	**P**	**21 14 36.9**	**+2.5**
	comp=Z,6.3nm,2.1s,mb4.2						
CLL	**Collm**	**79.36**	**330**	*e*P	**P**	**21 14 35.0**	**-1.1**
CLL				*e*		21 15 02.0	
PRU	**Pruhonice**	**79.75**	**328**	*e*P	**P**	**21 14 39.2**	**+0.9**
PRU	**Pruhonice**	**79.75**	**328**	*e*P	**P**	**21 14 39.2**	**+0.9**
MMAI	**Mount Meron Ar**	**80.56**	**305**	P	**P**	**21 14 43.0**	**0.0**
	comp=Z,2.7nm,0.8s,mb4.2,baz=77,slow=11,SNR=4.1						
KHC	**Kasperske Hory**	**80.82**	**328**	*e*P	**P**	**21 14 44.4**	**+0.4**
KHC	**Kasperske Hory**	**80.82**	**328**	*e*P	**P**	**21 14 44.4**	**+0.4**
GERES	**GERESS Array B**	**80.99**	**328**	P	**P**	**21 14 44.9**	**0.0**
	comp=Z,0.6nm,0.6s,mb3.7,baz=45,slow=5.8,SNR=8.2						
GERES	**GERESS Array B**	**80.99**	**328**	P	**P**	**21 14 44.9**	**-0.1**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GIVF	**Givet**	**83.39**	**333**	*e*P	**P**	**21 14 56.6**	**-0.9**
BAIF	**Baives**	**83.64**	**334**	*e*P	**P**	**21 14 57.9**	**-0.9**
CDF	**Champ du Feu**	**83.90**	**331**	*e*P	**P**	**21 15 00.0**	**-0.2**
HINF	**Hinteralfeld**	**84.55**	**331**	*e*P	**P**	**21 15 02.8**	**-0.7**
CABF	**La Chapelle**	**85.84**	**331**	*e*P	**P**	**21 15 09.6**	**-0.4**
LOR	**Lormes**	**86.12**	**332**	*e*P	**P**	**21 15 10.7**	**-0.7**
	comp=Z,5.4nm,0.9s,mb4.5						
LOR	**Lormes**	**86.12**	**332**	*e*P	**P**	**21 15 10.7**	**-0.7**
LOR				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.5						
LOR	**Lormes**	**86.12**	**332**	*e*P	**P**	**21 15 10.7**	**-0.7**
	comp=Z,2.7nm,0.9s,mb4.5						
FLN	**La Foliniere**	**86.33**	**335**	*e*P	**P**	**21 15 11.6**	**-0.8**
	comp=Z,15nm,1.1s,mb4.8						
FLN	**La Foliniere**	**86.33**	**335**	*e*P	**P**	**21 15 11.6**	**-0.8**
FLN				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.9						
FLN	**La Foliniere**	**86.33**	**335**	*e*P	**P

OHAK	Old Harbor	2.86	41	P	Pn	21 18 26.2	+0.7
OHAK				S	Sn	21 18 59.7	+0.7
KDAK	Kodiak Island	3.53	39	*e*Pn	Pn	21 18 34.9	+0.3
RC01	Rabbit Creek A 2μm,0.8s	7.04	29	*e*Pn	Pn	21 19 23.2	+0.5
INK	Inuvik 4.6nm,0.5s	17.03	30	*e*Pn	Pn	21 21 37.5	0.0

IDC 14 21:17:49.2±2.0, 17°22S×174°42W, h0km, mb4.5/4, mb1 4.7/4, mb1mx4.0/17, mbtmp4.5/4, MS2.8/1, Ms1 2.8/1, ms1mx2.5/28, Error ellipse: s-maj=57.9km s-min=34.8km az=117.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu comp=Z,122nm,19.5s,baz=276,slow=26	4.16	38	P LR	Pn LR	21 19 39.6	
URZ	Urewera 4.2nm,0.5s,baz=270,slow=20,SNR=6.3	22.24	198	P	P	21 22 47.9	+0.3
STKA	Stephens Creek 7.4nm,1.0s,baz=71,slow=8.6,SNR=8.5	42.29	241	P	P	21 25 44.4	-0.3
WRA	Warramunga Arr 1.8nm,0.5s,baz=97,slow=7.0,SNR=32	48.49	258	P	P	21 26 33.9	-0.2
ASAR	Alice Springs 17nm,0.8s,baz=90,slow=8.0,SNR=131	48.63	253	P	P	21 26 35.3	+0.2
BRTR	Keskin Array B 0.5nm,0.7s,baz=85,slow=5.5,SNR=3.6	146.90	318	PKPbc	PKPbc	21 37 33.2	-0.7
GERES	GERESS Array B 0.4nm,0.7s,baz=24,slow=1.2,SNR=4.6	147.77	350	PKPbc	PKPbc	21 37 35.4	-0.5

*JMA **14** 21:18:47.9±0.4, 28°.73N×128°.39E, h0km, M3.4*
*IDC **14** 21:18:49.0±3.7, 28°.45N×127°.87E, h0km, mb3.8/6, mb1 3.8/6, mb1mx3.6/26, mbtmp3.8/6, MS2.4/1, Ms1 2.4/1, ms1mx2.2/40, Error ellipse: s-maj=214.0km s-min=24.1km az=65.0*
*ISCJB **14** 21:18:48.3±3.9, 28°.75N±0°.07×128°.36E±0°.07, h11km±27km, mb3.7/6, Error ellipse: s-maj=13.7km s-min=8.5km az=38.0*
ISC 14 21:18:48.6±2.4, 28°.73N±0°.08×128°.4E±0°.1, h4km±18km, n12, σ0s56/13, mb3.7/6, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	Tokunoshima	1.06	153	P	Pg	21 19 08.5	-0.3
JTK				*e*S	Sg	21 19 23.7	+1.2
JAM	Amami Oshima	1.10	106	P	Pg	21 19 09.1	-0.7
JAM				*e*S	Sg	21 19 24.1	0.0
JZK	Kikaishima	1.44	106	P	Pn	21 19 15.8	+0.3
JIH	Iheya	1.73	193	P	Pn	21 19 19.0	-0.4
JOW	Kunigami	1.89	183	P	Pn	21 19 21.2	-0.4
MJAR	Matsushiro Arr comp=Z,21nm,20.5s,baz=205,slow=32	11.36	44	LR	LR	21 25 16.2	
SONM	Songino Array 1.4nm,1.0s,mb3.4,baz=120,slow=8.8,SNR=8.7	25.58	324	P	P	21 24 19.5	+0.9
MKAR	Makanchi Array 1.0nm,0.7s,mb3.6,baz=84,slow=13,SNR=7.8	40.02	310	P	P	21 26 24.6	+0.1
ZALV	Zalesovo Beam 0.2nm,0.3s,mb3.3,baz=94,slow=12,SNR=2.8	40.38	321	P	P	21 26 27.9	+0.5
KURK	Kurchatov 1.1nm,0.9s,mb3.6,baz=102,slow=9.0,SNR=7.4	43.15	315	P	P	21 26 49.6	-0.4
BVAR	Borovoye Array 1.8nm,0.9s,mb4.1,baz=111,slow=11,SNR=7.1	48.54	317	P	P	21 27 32.6	0.0
WRA	Warramunga Arr 1.3nm,1.0s,mb3.9,baz=350,slow=8.3,SNR=3.4	48.72	173	P	P	21 27 33.6	-0.7

*ATH **14** 21:34:19.9, 36°.62N×28°.26E, h22km±2km, MD3.3/7*
*NEIC **14** 21:34:19.9, 36°.62N×28°.26E, h22km, MD3.3(ATH), After ATH.*
*ISK **14** 21:34:19.9, 36°.56N×28°.37E, h10km, MD2.9*
*DDA **14** 21:34:20.4, 36°.63N×28°.34E, h14km±3km, Md3.0*
*ISCJB **14** 21:34:20.8±0.5, 36°.56N±0°.03×28°.32E±0°.03, h17km±6km, Error ellipse: s-maj=5.0km s-min=3.8km az=147.3*
*CSEM **14** 21:34:21.1±0.2, 36°.58N×28°.32E, h20km, MD3.0, Error ellipse: s-maj=5.2km s-min=4.2km az=154.0*
ISC 14 21:34:20.7±0.5, 36°.56N±0°.03×28°.33E±0°.03, h11km±4km, n66, σ1s13/94, 3C, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	Arkhangelos	0.38	206	⇑*i*Pb	Pg	21 34 28.4	+0.3
ARG				*e*Sb	Sg	21 34 35.5	+2.4
ARG	Arkhangelos	0.38	206	⇑*i*PB	Pg	21 34 28.4	+0.3
ARG				*e*SB	Sg	21 34 35.5	+2.4
ARG	Arkhangelos	0.38	206	⇑*i*Pb	Pg	21 34 28.4	+0.3
ARG				*e*Sb	Sg	21 34 35.5	+2.4
TURN	Turunc	0.39	35	*i* P	Pg	21 34 24.2	-4.2
TURN				*i* S	Sg	21 34 27.6	-6.0
YER	Yerkesik	0.58	357	*e*PG	Pg	21 34 31.4	-0.6
YER				*e*SG	Sg	21 34 40.3	+0.7
YER	Yerkesik	0.58	357	*e*Pg	Pg	21 34 31.4	-0.6
YER				*e*Sg	Sg	21 34 40.3	+0.7
FETY	Fethiye	0.61	82	*e*PG	Pg	21 34 31.8	-0.8
FETY				*e*SG	Sg	21 34 40.3	-0.4
FETY	Fethiye	0.61	82	*e*Pg	Pg	21 34 31.8	-0.8
FETY				*e*Sg	Sg	21 34 40.3	-0.4
DAT	Datca	0.63	286	*e*PG	Pg	21 34 32.2	-0.7
DAT				*e*SG	Sg	21 34 43.6	+2.5
DAT	Datca	0.63	286	*e*Pg	Pg	21 34 32.2	-0.7
DAT				*e*Sg	Sg	21 34 43.6	+2.5
MLSB	Milas	0.86	329	*e*PG	Pg	21 34 36.7	-0.6
MLSB	Milas	0.86	329	*e*Pg	Pg	21 34 36.7	-0.6
BDRM	Kayabasi	0.87	306	*i* P	Pg	21 34 35.8	-1.8
BDRM				*i* S	Sg	21 34 50.2	+1.2
BDRM	Kayabasi	0.87	306	*i* P	Pg	21 34 35.8	-1.7
BDRM				*i* S	Sg	21 34 50.2	+1.3
AKAS	Kas	1.08	107	*i* P	Pb	21 34 41.4	0.0
AKAS				*i* S	Sg	21 35 01.3	+5.8
AKAS	Kas	1.08	107	*i* P	Pb	21 34 41.4	0.0
GLHS	Glhisar (BURDU	1.11	57	*e*PN	Pn	21 34 41.3	-0.9
GLHS	Glhisar (BURDU	1.11	57	*e*Pn	Pn	21 34 41.3	-0.9
AYDN	Tasoluk	1.16	342	*i* P	Pb	21 34 41.4	-1.4
AYDN				*i* S	Sb	21 35 00.5	+2.7
AYDN	Tasoluk	1.16	342	*i* P	Pb	21 34 41.4	-1.4
GOLH	Golhisar	1.20	55	*i* P	Pn	21 34 41.1	-2.3
GOLH				*i* S	Sb	21 35 00.8	+1.8
GOLH	Golhisar	1.20	55	*i* P	Pn	21 34 41.1	-2.3
GOLH				*i* S	Sb	21 35 00.8	+1.8
DNZL	Cakiroluk	1.27	27	*i* P	Pn	21 34 44.0	-0.4
DNZL				*i* S	Sb	21 35 04.2	+3.2
DNZL	Cakiroluk	1.27	27	*i* P	Pn	21 34 44.0	-0.4
ELL	Elmali	1.29	81	*e*PN	Pn	21 34 44.5	-0.1
ELL	Elmali	1.29	81	*e*Pn	Pn	21 34 44.5	-0.1
KARP	Karpathos	1.38	224	*e*Pn	Pn	21 34 46.3	+0.4
KARP				*e*Sn	Sn	21 35 05.0	+0.9
KARP	Karpathos	1.38	224	*e*PN	Pn	21 34 46.3	+0.4
KARP				*e*SN	Sn	21 35 05.0	+0.9
KARP	Karpathos	1.38	224	*e*Pn	Pn	21 34 46.3	+0.4
KARP				*e*Sn	Sn	21 35 05.0	+0.9
GCAM	G?zelcaml?	1.44	323	*i* P	Pn	21 34 45.9	-0.8
GCAM	G?zelcaml?	1.44	323	*i* P	Pn	21 34 45.9	-0.8
SMG	Samos	1.66	314	*e*Pn	Pn	21 34 48.6	-1.1
SMG	Samos	1.66	314	*e*PN	Pn	21 34 48.6	-1.1
SMG	Samos	1.66	314	*e*Pn	Pn	21 34 48.6	-1.1
KORT	Korkueli	1.68	74	*i* P	Pn	21 34 52.8	+2.7
KORT				*i* S	Sn	21 35 17.0	+5.4
KHL	Karahalli	2.01	28	*e*PN	Pn	21 34 55.0	+0.5
KHL	Karahalli	2.01	28	*e*Pn	Pn	21 34 55.0	+0.5
IZM	Izmir	2.02	336	*e*PN	Pn	21 34 55.9	+1.1
IZM	Izmir	2.02	336	*e*Pn	Pn	21 34 55.9	+1.1
KHAL	Karahalli	2.04	27	*i* P	Pn	21 34 55.4	+0.5
KHAL				*i* S	Sn	21 35 21.0	+0.7
KHAL	Karahalli	2.04	27	*i* P	Pn	21 34 55.3	+0.4
KHAL				*i* S	Sn	21 35 21.0	+0.7
BLCB	Balcova	2.09	331	*e*PN	Pn	21 34 55.3	-0.4
BLCB	Balcova	2.09	331	*e*Pn	Pn	21 34 55.3	-0.4
ZKR	Zakros	2.24	231	*e*Pn	Pn	21 34 57.1	-0.6
ZKR	Zakros	2.24	231	*e*PN	Pn	21 34 57.1	-0.6
ZKR	Zakros	2.24	231	*e*Pn	Pn	21 34 57.1	-0.6
APE	Apeiranthos	2.30	284	*e*Pb	Pb	21 34 58.2	-4.0
APE	Apeiranthos	2.30	284	*e*PB	Pb	21 34 58.2	-4.0
APE	Apeiranthos	2.30	284	*e*Pb	Pb	21 34 58.2	-4.0
SUTC	Sutluce-Ispart	2.33	66	*e*PN	Pn	21 34 58.4	-0.5
SUTC	Sutluce-Ispart	2.33	66	*e*Pn	Pn	21 34 58.4	-0.5
NPS	Neapolis	2.55	240	*e*Pn	Pn	21 35 02.3	+0.3
NPS				*e*Sn	Sn	21 35 32.3	-0.7
NPS	Neapolis	2.55	240	*e*PN	Pn	21 35 02.3	+0.3
NPS				*e*SN	Sn	21 35 32.3	-0.7
NPS	Neapolis	2.55	240	*e*Pn	Pn	21 35 02.3	+0.3
NPS				*e*Sn	Sn	21 35 32.3	-0.7
CHOS	Chios island	2.57	316	*e*PN	Pn	21 35 01.1	-1.2
CHOS	Chios island	2.57	316	*e*Pn	Pn	21 35 01.1	-1.2
LAST	Lasithi	2.70	240	*e*Pn	Pn	21 35 03.9	-0.1
LAST	Lasithi	2.70	240	*e*PN	Pn	21 35 03.9	-0.1
LAST	Lasithi	2.70	240	*e*Pn	Pn	21 35 03.9	-0.1
IDI	Anoyia	3.06	247	*e*Pn	Pn	21 35 08.7	-0.3
IDI				*e*Sn	Sn	21 35 41.4	-4.2
IDI	Anoyia	3.06	247	*e*Pn	Pn	21 35 08.7	-0.3
IDI				*e*Sn	Sn	21 35 41.4	-4.2
PRK	Paraskevi	3.14	329	*e*Pn	Pn	21 35 09.7	-0.4
PRK	Paraskevi	3.14	329	*e*PN	Pn	21 35 09.7	-0.4
PRK	Paraskevi	3.14	329	*e*Pn	Pn	21 35 09.7	-0.4
HDMB	Hadim	3.37	82	*e*PN	Pn	21 35 13.4	+0.3
HDMB	Hadim	3.37	82	*e*Pn	Pn	21 35 13.4	+0.2

*NEIC **14** 21:38:49.3±2.2, 35°.71N×0°.50W, h10km, MN2.6(MDD), Error ellipse: s-maj=27.2km s-min=7.2km az=155.0*
*CRAAG **14** 21:38:50.6, 35°.90N×0°.51W, Ml3.5*
*ISCJB **14** 21:38:51.6±0.4, 36°.05N±0°.03×0°.67W±0°.03, h10km, Error ellipse: s-maj=3.7km s-min=3.0km az=14.6*
*MDD **14** 21:38:52.2±0.3, 35°.96N×0°.63W, h0km, mbLg2.6/25, Error ellipse: s-maj=4.9km s-min=3.4km az=46.0, PRIMO*
*CSEM **14** 21:38:52.5±0.2, 35°.98N×0°.68W, h10km, ML3.5, Error ellipse: s-maj=5.8km s-min=5.0km az=48.0*
ISC 14 21:38:52.4±0.4, 36°.01N±0°.02×0°.68W±0°.03, h10km, n151, σ1s40/250, 3C, Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USTO	Oran	0.30	159	P	Pg	21 38 57.0	-1.3
USTO	Oran	0.30	159	P	Pg	21 38 57.0	-1.3
USTO	Oran	0.30	159	P	Pg	21 38 57.0	-1.3
OTSS	Djebel Tessala	0.74	187	P	Pg	21 39 05.0	-1.6
OTSS	Djebel Tessala	0.74	187	P	Pg	21 39 05.0	-1.6
OTSS	Djebel Tessala	0.74	187	P	Pg	21 39 05.0	-1.6
OTSS	Djebel Tessala	0.74	187	P	Pg	21 39 05.0	-1.6
ODZI	Dzioua	0.85	212	P	Pg	21 39 08.0	-0.7
ODZI	Dzioua	0.85	212	P	Pg	21 39 08.0	-0.7
ODZI	Dzioua	0.85	212	P	Pg	21 39 08.0	-0.7
OJBR	Djebel Berber	0.94	117	P	Pg	21 39 07.0	-3.4
OJBR	Djebel Berber	0.94	117	P	Pg	21 39 07.0	-3.4
OJBR	Djebel Berber	0.94	117	P	Pg	21 39 07.0	-3.4
OJBR	Djebel Berber	0.94	117	P	Pg	21 39 07.0	-3.4
OKGL	Djebel Kef Gue	1.07	88	P	Pg	21 39 10.0	-3.0
OKGL	Djebel Kef Gue	1.07	88	P	Pg	21 39 10.0	-3.0
OKGL	Djebel Kef Gue	1.07	88	P	Pg	21 39 10.0	-3.0
OKGL	Djebel Kef Gue	1.07	88	P	Pg	21 39 10.0	-3.0
OJGS	Djebel Guires	1.27	113	P	Pg	21 39 20.0	+3.3
OJGS	Djebel Guires	1.27	113	P	Pg	21 39 20.0	+3.3
OJGS	Djebel Guires	1.27	113	P	Pg	21 39 20.0	+3.3
OJGS	Djebel Guires	1.27	113	P	Pg	21 39 20.0	+3.3
EANR	'Ain N'Sour	1.44	92	P	Pn	21 39 19.4	+0.9
EANR	'Ain N'Sour	1.44	92	P	Pn	21 39 19.4	+0.9
EANR	'Ain N'Sour	1.44	92	P	Pn	21 39 19.4	+0.9
EANR	'Ain N'Sour	1.44	92	P	Pn	21 39 19.4	+0.9
ENIJ	Nijar	1.56	308	P	Pn	21 39 20.1	-0.1
ENIJ				S	Sn	21 39 39.3	-1.0
ENIJ	Nijar 9.9nm,0.2s,SNR=10	1.56	308	P	Pn	21 39 20.1	-0.1
ENIJ				S	Sn	21 39 39.6	-0.8
ENIJ	Nijar 9.9nm,0.2s,SNR=10	1.56	308	P	Pn	21 39 20.1	-0.1
ENIJ				S	Sn	21 39 39.6	-0.8
ENIJ	Nijar 9.9nm,0.2s,SNR=10	1.56	308	P	Pn	21 39 20.1	0.0
ENIJ				S	Sn	21 39 39.3	-1.1
CART	Cartagena	1.59	351	*e*Pn	Pn	21 39 20.7	+0.1
CART				*e*Sg	Sn	21 39 39.4	-1.8
CART	Cartagena	1.59	351	*e*Pn	Pn	21 39 20.7	+0.1
ECHF	Ech Chlef	1.64	84	P	Pg	21 39 27.1	+3.3
ECHF	Ech Chlef	1.64	84	P	Pg	21 39 27.1	+3.3
ECHA	Ech Chlef	1.66	85	P	Pg	21 39 27.1	+2.9
ECHA	Ech Chlef	1.66	85	P	Pg	21 39 27.1	+2.9
ETRT	Tiaret	1.73	111	P	Pn	21 39 21.7	-0.7
ETRT	Tiaret	1.73	111	P	Pn	21 39 21.7	-0.7
ETRT	Tiaret	1.73	111	P	Pn	21 39 21.7	-0.7
ETRT	Tiaret	1.73	111	P	Pn	21 39 21.7	-0.7
EBNR	Beni Rached	1.81	81	P	Pg	21 39 28.2	+1.2
EBNR	Beni Rached	1.81	81	P	Pg	21 39 28.2	+1.2
EALB	Alboran	1.91	268	P	Pn	21 39 24.1	-0.9
EALB				S	Sn	21 39 48.0	-1.1
EALB	Alboran 2.5nm,0.1s,SNR=7.9	1.91	268	P	Pn	21 39 24.1	-0.9
EALB				S	Sn	21 39 48.0	-1.1
EALB	Alboran 2.5nm,0.1s,SNR=7.9	1.91	268	P	Pn	21 39 24.1	-0.9
EALB				S	Sn	21 39 48.0	-1.1
EALB	Alboran 2.5nm,0.1s,SNR=7.9	1.91	268	P	Pn	21 39 24.1	-0.9
EALB				S	Sn	21 39 48.0	-1.1
EBER	Berja	1.99	297	P	Pn	21 39 25.8	-0.2
EBER				S	Sn	21 39 50.8	-0.2
EBER	Berja 3.7nm,0.2s,SNR=7.9	1.99	297	P	Pn	21 39 25.8	-0.2
EBER				S	Sn	21 39 50.8	-0.2
EBER	Berja 3.7nm,0.2s,SNR=7.9	1.99	297	P	Pn	21 39 25.8	-0.2
EBER				S	Sn	21 39 50.8	-0.2
EBER	Berja 3.7nm,0.2s,SNR=7.9	1.99	297	P	Pn	21 39 25.8	-0.2
EBER				S	Sn	21 39 50.8	-0.2
EHUE	Huescar	2.36	320	P	Pn	21 39 33.4	+2.2
EHUE				S	Sn	21 40 00.4	+0.2
EHUE	Huescar 1.9nm,0.1s,SNR=7.9	2.36	320	P	Pn	21 39 33.4	+2.2
EHUE				S	Sn	21 40 00.4	+0.2
EHUE	Huescar 3.5nm,0.2s,SNR=7.9	2.36	320	P	Pn	21 40 00.4	+0.2
EHUE				S	Sn	21 39 33.4	+2.2
EHUE	Huescar 1.9nm,0.1s,SNR=7.9	2.36	320	P	Pn	21 39 33.4	+2.2
EHUE				S	Sn	21 40 00.4	+0.2
EHUE	Huescar 1.9nm,0.1s,SNR=7.9	2.36	320	P	Pn	21 39 33.4	+2.2
EHUE				S	Sn	21 40 00.4	+0.2
EHUE	Huescar 3.5nm,0.2s,SNR=7.9	2.36	320	P	Pn	21 40 00.4	+0.2
EHUE				S	Sn	21 39 33.4	+2.2
EGUA	Guajares	2.47	290	P	Pn	21 39 32.7	+0.1
EGUA				S	Sn	21 40 01.9	-0.9
EGUA	Guajares 11nm,0.2s,SNR=7.9	2.47	290	P	Pn	21 39 32.7	+0.1
EGUA				S	Sn	21 40 01.8	-0.9
EGUA	Guajares 42nm,0.4s,SNR=7.9	2.47	290	P	Pn	21 39 32.7	+0.1
EGUA				S	Sn	21 40 01.8	-0.9
EGUA	Guajares 11nm,0.2s,SNR=7.9	2.47	290	P	Pn	21 39 32.7	+0.1
EGUA				S	Sn	21 40 01.8	-1.0
EGUA	Guajares 42nm,0.4s,SNR=7.9	2.47	290	P	Pn	21 39 32.7	+0.1
EGUA				S	Sn	21 40 01.8	-1.0
EQUE	Quentar 2.8nm,0.2s,SNR=7.9	2.52	299	P	Pn	21 39 35.2	+1.9
EQUE				S	Sn	21 40 03.9	-0.2
EQUE	Quentar 8.8nm,0.5s,SNR=7.9	2.52	299	P	Pn	21 39 35.2	+1.9
EQUE				S	Sn	21 40 03.9	-0.2
EQUE	Quentar 2.8nm,0.2s,SNR=7.9	2.52	299	P	Pn	21 39 35.2	+1.9
EQUE				S	Sn	21 40 03.9	-0.2
EQUE	Quentar 8.8nm,0.5s,SNR=7.9	2.52	299	P	Pn	21 39 35.2	+1.9
EQUE				S	Sn	21 40 03.9	-0.2
EQES	Quesada	2.62	314	P	Pn	21 39 37.1	+2.4
EQES				S	Sn	21 40 09.6	+3.1
EQES	Quesada 4.5nm,0.1s,SNR=7.9	2.62	314	P	Pn	21 39 37.1	+2.4
EQES				S	Sn	21 40 09.6	+3.1
EQES	Quesada 4.5nm,0.1s,SNR=7.9	2.62	314	P	Pn	21 39 37.1	+2.4
EQES				S	Sn	21 40 09.6	+3.1
EQES	Quesada 4.5nm,0.1s,SNR=7.9	2.62	314	P	Pn	21 39 37.1	+2.4
EQES				S	Sn	21 40 09.6	+3.0
EBEN	Beniarda 2.3nm,0.3s,SNR=14	2.71	8	P	Pn	21 39 36.4	+0.4
EBEN				S	Sn	21 40 07.2	-1.6
EBEN	Beniarda 2.3nm,0.3s,SNR=14	2.71	8	P	Pn	21 39 36.4	+0.5
EBEN				S	Sn	21 40 07.2	-1.6
EBEN	Beniarda 13nm,0.2s,SNR=7.9	2.71	8	P	Pn	21 39 36.4	+0.5
EBEN				S	Sn	21 40 07.2	-1.6
EBEN	Beniarda 2.3nm,0.3s,SNR=14	2.71	8	P	Pn	21 39 36.4	+0.5
EBEN				S	Sn	21 40 07.2	-1.6
EBEN	Beniarda 13nm,0.2s,SNR=7.9	2.71	8	P	Pn	21 39 36.4	+0.5
EBEN				S	Sn	21 40 07.2	-1.6
ERON	Agron 3.7nm,0.4s,SNR=7.9	2.71	293	P	Pn	21 39 37.3	+1.3
ERON				S	Sn	21 40 10.3	+1.5
ERON	Agron 3.7nm,0.4s,SNR=7.9	2.71	293	P	Pn	21 39 37.3	+1.3
ERON				S	Sn	21 40 10.3	+1.5
ERON	Agron 6.4nm,0.3s,SNR=7.9	2.71	293	P	Pn	21 39 37.3	+1.3
ERON				S	Sn	21 40 10.3	+1.5
ERON	Agron 3.7nm,0.4s,SNR=7.9	2.71	293	P	Pn	21 39 37.3	+1.3
ERON				S	Sn	21 40 10.3	+1.5
ERON	Agron 6.4nm,0.3s,SNR=7.9	2.71	293	P	Pn	21 39 37.3	+1.3
ERON				S	Sn	21 40 10.3	+1.5
ETOB	Tobarra 6.3nm,0.3s,SNR=18	2.72	345	⇑P	Pn	21 39 37.6	+1.6
ETOB				S	Sn	21 40 09.2	+0.3
ETOB	Tobarra 6.3nm,0.3s,SNR=18	2.72	345	⇑P	Pn	21 39 37.6	+1.6
ETOB				S	Sn	21 40 09.3	+0.3
ETOB	Tobarra 24nm,0.1s,SNR=7.9	2.72	345	⇑P	Pn	21 39 37.6	+1.6
ETOB				S	Sn	21 40 09.3	+0.3
ETOB	Tobarra 6.3nm,0.3s,SNR=18	2.72	345	P	Pn	21 39 37.6	+1.6
ETOB				S	Sn	21 40 09.2	+0.3
EMHD	Djebel Mahouad	2.95	85	P	Pn	21 39 35.0	-4.2
EMHD	Djebel Mahouad	2.95	85	P	Pn	21 39 35.0	-4.2
EVIA	Vianos	3.00	332	P	Pn	21 39 41.1	+1.3
EVIA				S	Sn	21 40 17.9	+2.1
EVIA	Vianos 4.6nm,0.1s,SNR=7.9	3.00	332	P	Pn	21 39 41.1	+1.3
EVIA				S	Sn	21 40 17.9	+2.1
EVIA	Vianos 14nm,0.2s,SNR=7.9	3.00	332	P	Pn	21 39 41.1	+1.3
EVIA				S	Sn	21 40 17.9	+2.1
EVIA	Vianos 4.6nm,0.1s,SNR=7.9	3.00	332	P	Pn	21 39 41.1	+1.3
EVIA				S	Sn	21 40 17.9	+2.1
ELOJ	Sierra Loja 3.7nm,0.7s,SNR=7.9	3.02	293	P	Pn	21 39 42.5	+2.4
ELOJ				S	Sn	21 40 20.8	+4.5
ELOJ	Sierra Loja 3.7nm,0.7s,SNR=7.9	3.02	293	P	Pn	21 39 42.5	+2.3
ELOJ				S	Sn	21 40 18.7	+2.3
ELOJ	Sierra Loja 5.0nm,0.6s,SNR=7.9	3.02	293	P	Pn	21 39 42.5	+2.3
ELOJ				S	Sn	21 40 18.7	+2.3
ELOJ	Sierra Loja 3.7nm,0.7s,SNR=7.9	3.02	293	P	Pn	21 39 42.5	+2.3
ELOJ				S	Sn	21 40 18.7	+2.3
ELOJ	Sierra Loja 5.0nm,0.6s,SNR=7.9	3.02	293	P	Pn	21 39 42.5	+2.4
ELOJ				S	Sn	21 40 18.7	+2.3
ELOJ	Sierra Loja 3.7nm,0.7s,SNR=7.9	3.02	293	P	Pn	21 39 42.5	+2.4
ELOJ				S	Sn	21 40 18.7	+2.3
ELUQ	Luque 2.0nm,0.2s,SNR=7.9	3.27	299	P	Pn	21 39 47.3	+3.7
ELUQ				Sn	Sn	21 40 22.3	-0.2
ELUQ	Luque 2.0nm,0.2s,SNR=7.9	3.27	299	P	Pn	21 39 47.3	+3.7
ELUQ				S	Sn	21 40 22.3	-0.3
ELUQ	Luque 1.7nm,0.2s,SNR=7.9	3.27	299	P	Pn	21 39 47.3	+3.7
ELUQ				S	Sn	21 40 22.3	-0.3
ELUQ	Luque 2.0nm,0.2s,SNR=7.9	3.27	299	P	Pn	21 39 47.3	+3.7
ELUQ				S	Sn	21 40 22.3	-0.3
ELUQ	Luque 1.7nm,0.2s,SNR=7.9	3.27	299	P	Pn	21 39 47.3	+3.7
ELUQ				S	Sn	21 40 22.3	-0.2
EBAN	Banos Encina 2.2nm,0.2s,SNR=7.9	3.28	312	P	Pn	21 39 43.8	0.0
EBAN				S	Sn	21 40 21.8	-1.1
EBAN	Banos Encina 2.2nm,0.2s,SNR=7.9	3.28	312	P	Pn	21 39 43.8	0.0
EBAN				S	Sn	21 40 21.8	-1.1
EBAN	Banos Encina 4.1nm,0.3s,SNR=7.9	3.28	312	P	Pn	21 39 43.8	0.0
EBAN				S	Sn	21 40 21.8	-1.1
EBAN	Banos Encina 2.2nm,0.2s,SNR=7.9	3.28	312	P	Pn	21 39 43.8	0.0
EBAN				S	Sn	21 40 21.8	-1.1
EBAN	Banos Encina 4.1nm,0.3s,SNR=7.9	3.28	312	P	Pn	21 39 43.8	0.0
EBAN				S	Sn	21 40 21.8	-1.1
EMIJ	Mijas 0.9nm,0.1s,SNR=7.9	3.35	281	P	Pn	21 39 43.3	-1.5
EMIJ				S	Sn	21 40 20.7	-3.9
EMIJ	Mijas 0.9nm,0.1s,SNR=7.9	3.35	281	P	Pn	21 39 43.3	-1.5
EMIJ				S	Sn	21 40 20.7	-3.9
EMIJ	Mijas 3.6nm,0.3s,SNR=7.9	3.35	281	P	Pn	21 39 43.3	-1.5
EMIJ				S	Sn	21 40 20.7	-3.9
EMIJ	Mij

ETOS				S	Sn	21 40 54.9	-1.8
	2.4nm,0.3s,SNR=7.9						
ETOS	**Mallorca**	**4.66**	**35**	P	**Pn**	**21 40 02.4**	**-0.3**
	2.0nm,0.3s,SNR=7.9						
ETOS				S	Sn	21 40 54.9	-1.8
	2.4nm,0.3s,SNR=7.9						
ETOS	**Mallorca**	**4.66**	**35**	S	**Sn**	**21 40 55.0**	**-1.8**
ETOR	**Torete**	**4.92**	**348**	P	**Pn**	**21 40 09.3**	**+3.0**
ETOR				S	Sn	21 41 02.8	-0.4
ETOR	**Torete**	**4.92**	**348**	P	**Pn**	**21 40 09.3**	**+3.0**
	2.7nm,0.3s,SNR=7.9						
ETOR				S	Sn	21 41 02.8	-0.4
	5.4nm,0.2s,SNR=7.9					

HHC pP pP 21 47 48.8 +1.0
HHC sP sP 21 47 51.3 +0.3
HHC PP PP 21 48 48.3 -2.5
HHC PcP PcP 21 50 38.6 +4.8
HHC S **S** **21 52 49.9 +4.7**
HHC sS sS 21 52 56.4 -1.6
HHC PcS PcS 21 54 21.1 +3.2
HHC ScS ScS 21 58 16.8 +4.5
CMAR Chiang Mai Arr 31.92 122 P P 21 47 45.3 -0.4
comp=Z,1.7nm,0.9s,mb3.9,baz=312,slow=9.8,SNR=6.2
CMAR Chiang Mai Arr 31.92 122 P P 21 47 45.3 -0.4
CMAR pmax pmax
comp=Z,2.0nm,0.9s
GYA Guiyang 32.57 102 P P 21 47 57.6 +6.2
GYA PP PP 21 49 06.8 +1.6
GYA PcP PcP 21 50 43.0 +5.5
GYA S **S** **21 53 13.9 +8.5**
GYA ScP ScP 21 54 25.6 +6.1
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
GYA pmax pmax
comp=Z,90nm,4.6s
GYA LR LR
comp=N,490nm,17.5s,MS4.4
GYA LR LR
comp=E,450nm,17.1s,MS4.4
GYA LR LR
comp=Z,480nm,17.7s,MS4.2
MLR Muntele Rosu 33.40 296 P P 21 47 59.0 +0.5
comp=Z,3.2nm,0.9s,mb4.2,baz=192,slow=16,SNR=4.7
MLR LR LR 22 03 43.9
comp=Z,63nm,18.9s,MS3.4,baz=342,slow=40
MLR Muntele Rosu 33.40 296 P P 21 47 59.0 +0.5
MLR pmax pmax
comp=Z,3.0nm,0.9s
MLR MLR MLR
comp=Z,63nm,18.9s
JOF Joensuu 33.66 328 *eP* **P 21 47 59.5 -1.0**
JOF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
JOF Joensuu 33.66 328 *ep* **P 21 47 59.5 -1.0**
comp=Z,2.5nm,0.6s,mb4.3
JOF Joensuu 33.66 328 *ep* **P 21 47 59.5 -1.0**
comp=Z,2.5nm,0.6s,mb4.3
BOD Bodaibo 33.73 41 *eP* **P 21 47 54.9 -6.3**
BOD pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
BJI Beijing 34.90 73 P P 21 48 10.8 -0.7
BJI S **S** **21 53 40.8 -0.4**
BJI pmax pmax
comp=Z,5.0nm,1.4s,mb4.2
BJI pmax pmax
comp=Z,62nm,4.2s
FINES FINESS Array B 35.35 324 P P 21 48 14.9 -0.2
comp=Z,3.9nm,0.7s,mb4.5,baz=111,slow=9.2,SNR=20
FINES LR LR 22 03 11.1
comp=Z,19nm,21.8s,MS2.8,baz=134,slow=37
FINES FINESS Array B 35.35 324 P P 21 48 14.9 -0.2
FINES pmax pmax
comp=Z,4.0nm,0.7s
FINES MLR MLR
comp=Z,19nm,21.8s
KWP Kalwaria Pacla 35.39 304 *eP* **P 21 48 16.6 +0.9**
KWP pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
KWP Kalwaria Pacla 35.39 304 *eP* **P 21 48 16.6 +1.0**
comp=Z,9.2nm,0.9s,mb4.7
KOLS Kolonicke sedl 35.70 302 *eP* **P 21 48 19.0 +0.7**
KOLS pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
KOLS Kolonicke sedl 35.70 302 *eP* **P 21 48 19.0 +0.7**
comp=Z,3.0nm,1.2s,mb4.1
KOLS *e*PP PP 21 49 40.4 +0.9
KOLS Kolonicke sedl 35.70 302 *eP* **P 21 48 19.0 +0.7**
KOLS *e*PP PP 21 49 40.4 +0.9
CRVS Cervenica-Dubn 36.23 302 *eP* **P 21 48 28.2 +5.3**
CRVS pmax pmax
comp=Z,1.0nm,0.8s,mb3.8
CRVS Cervenica-Dubn 36.23 302 *eP* **P 21 48 28.2 +5.3**
comp=Z,1.1nm,0.8s,mb3.8
CRVS *e*PP PP 21 49 47.8 +2.4
CRVS Cervenica-Dubn 36.23 302 *eP* **P 21 48 28.2 +5.3**
CRVS *e*PP PP 21 49 47.8 +2.4
STHS Stebnicka Huta 36.35 303 *eP* **P 21 48 26.0 +2.1**
STHS pmax pmax
comp=Z,1.0nm,0.8s,mb3.8
STHS Stebnicka Huta 36.35 303 *eP* **P 21 48 26.0 +2.1**
comp=Z,1.4nm,0.8s,mb3.9
STHS Stebnicka Huta 36.35 303 *eP* **P 21 48 26.0 +2.1**
WHN Wuhan 36.62 90 *eP* **P 21 48 26.8 +0.4**
KECS Kecovo 36.91 302 *eP* **P 21 48 30.5 +1.9**
KECS pmax pmax
comp=Z,2.0nm,1.4s,mb3.8
KECS Kecovo 36.91 302 *eP* **P 21 48 30.5 +1.9**
comp=Z,2.3nm,1.4s,mb3.8
KECS Kecovo 36.91 302 *eP* **P 21 48 30.5 +1.9**
NIE Niedzica 36.96 303 *eP* **P 21 48 29.8 +0.7**
VYHS Vyhne 38.00 302 *eP* **P 21 48 37.9 0.0**
VYHS pmax pmax
comp=Z,10.0nm,2.7s,mb4.1
VYHS Vyhne 38.00 302 *eP* **P 21 48 37.9 0.0**
comp=Z,10nm,2.7s,mb4.1
VYHS *e*PP PP 21 50 09.5 +4.7
VYHS Vyhne 38.00 302 *eP* **P 21 48 37.9 0.0**
VYHS *e*PP PP 21 50 09.5 +4.7
ARCES ARCESS Array B 38.83 337 P P 21 48 44.1 -0.5
comp=Z,2.8nm,0.7s,mb4.1,baz=111,slow=7.5,SNR=15
ARCES LR LR 22 05 59.1
comp=Z,225nm,19.3s,MS4.0,baz=91,slow=38
ARCES ARCESS Array B 38.83 337 P P 21 48 44.1 -0.5
ARCES pmax pmax
comp=Z,3.0nm,0.7s
ARCES MLR MLR
comp=Z,225nm,19.3s
VRAC Vranov 39.39 303 P P 21 48 49.8 +0.2
comp=Z,3.0nm,0.8s,mb4.0,baz=75,slow=10,SNR=5.4
VRAC LR LR 22 07 48.2
comp=Z,34nm,18.4s,MS3.2,baz=91,slow=40
VRAC Vranov 39.39 303 P P 21 48 49.8 +0.2
VRAC pmax pmax
comp=Z,3.0nm,0.9s
VRAC MLR MLR
comp=Z,34nm,18.4s
NJ2 Nanjing 39.50 85 *eP* **P 21 48 47.8 -2.9**
NJ2 pmax pmax
comp=Z,30nm,0.6s,mb5.2
BRG Berggiesshubel 40.94 306 *i* P **P 21 49 02.9 +0.5**
comp=Z,4.7nm,1.1s,mb4.0
BRG *i* 21 49 05.2
comp=Z,5.7nm,1.0s
HFS Hagfors 41.02 320 P P 21 49 02.5 -0.4
comp=Z,6.8nm,0.5s,mb4.6,baz=98,slow=11,SNR=65
HFS LR LR 22 05 57.4
comp=Z,30nm,20.6s,MS3.1,baz=80,slow=36
HFS Hagfors 41.02 320 P P 21 49 02.5 -0.4
HFS pmax pmax
comp=Z,7.0nm,0.5s
HFS MLR MLR
comp=Z,30nm,20.7s
HFS Hagfors 41.02 320 P P 21 49 02.5 -0.4
HFS LR LR 22 05 57.4
GERES GERESS Array B 41.34 303 P P 21 49 06.2 +0.5
comp=Z,0.6nm,0.6s,mb3.4,baz=77,slow=8.4,SNR=7.4
GERES PP PP 21 50 49.1 +7.9
comp=Z,1.6nm,1.0s,baz=76,slow=11,SNR=5.7
GERES LR LR 22 09 18.8
comp=Z,44nm,21.5s,MS3.3,baz=84,slow=41
GERES GERESS Array B 41.34 303 P P 21 49 06.2 +0.6
GERES 21 50 49.1
GERES pmax pmax
comp=Z,1.0nm,0.6s
GERES pmax pmax
comp=Z,2.0nm,1.0s
GERES MLR MLR
comp=Z,44nm,21.5s
CLL Collm 41.49 307 *eP* **P 21 49 07.0 +0.2**
CLL Collm 41.49 307 *eP* **P 21 49 07.0 +0.2**
CLL *e*(PP) 21 50 35.0
YAK Yakutsk 42.22 37 *eP* **P 21 49 13.2 +0.5**
YAK pmax pmax
comp=Z,14nm,0.9s,mb4.6
YAK Yakutsk 42.22 37 *eP* **P 21 49 14.7 +1.9**
comp=Z,15nm,0.7s,mb4.7
NB2 NORSAR Subarra 42.31 322 P P 21 49 12.7 -0.7
comp=Z,4.2nm,0.7s,mb4.2,baz=92,slow=7.9
NOA NORSAR Array B 42.31 322 P P 21 49 12.7 -0.7
comp=Z,6.6nm,0.9s,mb4.2,baz=94,slow=8.1,SNR=12
NOA PP PP 21 50 52.3 +0.9
comp=Z,2.2nm,1.0s,baz=95,slow=9.7,SNR=3.6
NOA NORSAR Array B 42.31 322 P P 21 49 12.7 -0.7
NOA 21 50 52.3
NOA pmax pmax
comp=Z,7.0nm,1.0s
GRA1 Grafenberg Arr 42.82 305 *eP* **P 21 49 20.2 +2.5**
comp=Z,8.0nm,1.2s,mb4.3
GRF Grafenberg Arr 42.82 305 *eP* **P 21 49 20.2 +2.5**
comp=Z,8.0nm,1.2s,mb4.3
GRF Grafenberg Arr 42.82 305 *eP* **P 21 49 20.2 +2.5**
GRF pmax pmax
comp=Z,8.0nm,1.2s,mb4.3
GRF Grafenberg Arr 42.82 305 *eP* **P 21 49 20.2 +2.5**
GRF pmax pmax
comp=Z,8.0nm,1.2s,mb4.3
MDJ Mudanjiang 43.54 63 P P 21 49 26.3 +2.7
MDJ pP pP 21 49 29.4 -2.2
MDJ S **S** **21 55 55.8 +4.9**
MDJ pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
MDJ pmax pmax
comp=Z,51nm,4.2s
MDJ LR LR
comp=N,47nm,22.4s,MS3.5
MDJ LR LR
comp=E,37nm,19.0s,MS3.5
MDJ LR LR
comp=Z,38nm,18.3s,MS3.3
TIXI Tiksi 43.69 23 *eP* **P 21 49 26.6 +2.2**
TIXI pmax pmax
comp=Z,17nm,0.8s,mb4.8
TIXI Tiksi 43.69 23 *eP* **P 21 49 26.6 +2.1**
comp=Z,17nm,0.8s,mb4.8
DAVOX Davos/Dischmat 44.24 301 P P 21 49 29.1 -0.1
comp=Z,2.6nm,0.5s,mb4.2,baz=100,slow=6.1,SNR=4.6
KSRS Korea Array 44.43 73 P P 21 49 30.3 -0.5
comp=Z,1.1nm,0.7s,mb3.7,baz=293,slow=7.3,SNR=4.2
KSRS Korea Array 44.43 73 P P 21 49 30.3 -0.6
KSRS pmax pmax
comp=Z,1.0nm,0.7s,mb3.6
CDF Champ du Feu 45.61 304 *eP* **P 21 49 40.4 +0.3**
comp=Z,3.1nm,0.7s,mb4.0
CDF Champ du Feu 45.61 304 *eP* **P 21 49 40.4 +0.3**
CDF pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
CDF Champ du Feu 45.61 304 *eP* **P 21 49 40.4 +0.3**
comp=Z,1.5nm,0.7s,mb4.0
HINF Hinteralfeld 46.02 303 *eP* **P 21 49 42.5 -0.8**
comp=Z,3.1nm,0.6s,mb4.1
HINF Hinteralfeld 46.02 303 *eP* **P 21 49 42.5 -0.8**
HINF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
HINF Hinteralfeld 46.02 303 *eP* **P 21 49 42.5 -0.8**
comp=Z,1.5nm,0.6s,mb4.1
HAU Haudompre 46.30 303 *eP* **P 21 49 44.9 -0.7**
comp=Z,3.3nm,0.5s,mb4.2
HAU *e*MLR MLR
comp=Z,50nm,17.2s,MS3.2
HAU Haudompre 46.30 303 *eP* **P 21 49 44.9 -0.7**
HAU pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
HAU MLR MLR
comp=Z,50nm,17.3s,MS3.5
HAU Haudompre 46.30 303 *eP* **P 21 49 44.9 -0.7**
comp=Z,1.6nm,0.5s,mb4.2
HAU LR LR
comp=Z,50nm,17.3s,MS3.5
SBF Sospel 46.65 297 *eP* **P 21 49 48.2 -0.2**
LPG La Plagne 46.67 300 *eP* **P 21 49 48.8 +0.4**
comp=Z,8.4nm,0.8s,mb4.4
LPG La Plagne 46.67 300 *eP* **P 21 49 48.8 +0.4**
LPG pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
LPG La Plagne 46.67 300 *eP* **P 21 49 48.8 +0.4**
comp=Z,4.2nm,0.8s,mb4.4
LPL La Plagne 46.67 300 *eP* **P 21 49 48.3 -0.2**
comp=Z,8.3nm,0.5s,mb4.6
LPL La Plagne 46.67 300 *eP* **P 21 49 48.3 -0.2**
LPL pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
LPL La Plagne 46.67 300 *eP* **P 21 49 48.3 -0.2**
comp=Z,4.2nm,0.5s,mb4.6
CABF La Chapelle 46.82 301 *eP* **P 21 49 50.1 +0.5**
comp=Z,5.8nm,0.7s,mb4.3
CABF La Chapelle 46.82 301 *eP* **P 21 49 50.1 +0.5**
CABF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
CABF La Chapelle 46.82 301 *eP* **P 21 49 50.1 +0.5**
comp=Z,2.9nm,0.7s,mb4.3
MBDF Montbardon 46.86 299 *eP* **P 21 49 49.3 -0.7**
MEZF Maizieres J'vi 47.03 304 *eP* **P 21 49 51.2 0.0**
comp=Z,9.7nm,0.8s,mb4.5
MEZF Maizieres J'vi 47.03 304 *eP* **P 21 49 51.2 0.0**
comp=Z,9.7nm,0.8s,mb4.8
BAIF Baives 47.21 306 *eP* **P 21 49 52.8 +0.2**
FRF La Foret Royal 47.29 297 *eP* **P 21 49 52.8 -0.5**
LOR Lormes 48.12 303 *eP* **P 21 49 59.4 -0.3**
comp=Z,5.6nm,0.8s,mb4.4
LOR *e*MLR MLR
comp=Z,52nm,17.0s,MS3.3
LOR Lormes 48.12 303 *eP* **P 21 49 59.4 -0.3**
LOR pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
LOR MLR MLR
comp=Z,50nm,17.0s,MS3.6
LOR Lormes 48.12 303 *eP* **P 21 49 59.4 -0.3**
comp=Z,2.8nm,0.8s,mb4.3
LOR LR LR
comp=Z,50nm,17.0s,MS3.6
VIVF Saint-Julien-l 48.26 299 *eP* **P 21 50 00.8 0.0**
comp=Z,7.5nm,0.7s,mb4.5
VIVF Saint-Julien-l 48.26 299 *eP* **P 21 50 00.8 0.0**
VIVF pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
VIVF Saint-Julien-l 48.26 299 *eP* **P 21 50 00.8 0.0**
comp=Z,3.8nm,0.7s,mb4.5
SMF Signal de Mont 48.30 302 *eP* **P 21 50 00.4 -0.7**
comp=Z,5.2nm,0.7s,mb4.4
SMF Signal de Mont 48.30 302 *eP* **P 21 50 00.4 -0.7**
SMF pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
SMF Signal de Mont 48.30 302 *eP* **P 21 50 00.4 -0.7**
comp=Z,2.6nm,0.6s,mb4.4
SSF Saint Saulge 48.41 303 *eP* **P 21 50 01.5 -0.4**
comp=Z,5.5nm,0.9s,mb4.3
SSF Saint Saulge 48.41 303 *eP* **P 21 50 01.5 -0.4**
SSF pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
SSF Saint Saulge 48.41 303 *eP* **P 21 50 01.5 -0.4**
comp=Z,2.8nm,0.9s,mb4.3
AVF Avril sur Loir 48.58 302 *eP* **P 21 50 02.6 -0.7**
comp=Z,10nm,1.0s,mb4.5
AVF Avril sur Loir 48.58 302 *eP* **P 21 50 02.6 -0.7**
AVF pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
AVF Avril sur Loir 48.58 302 *eP* **P 21 50 02.6 -0.7**
comp=Z,5.2nm,1.0s,mb4.5
BGF Bois d'Agland 48.98 302 *eP* **P 21 50 05.5 -0.9**
LASF Ste Croix 49.05 299 *eP* **P 21 50 06.7 -0.2**
comp=Z,14nm,1.1s,mb4.6
TCF Toulx Ste Croi 49.48 302 *eP* **P 21 50 10.0 -0.2**
comp=Z,14nm,1.0s,mb4.7
TCF Toulx Ste Croi 49.48 302 *eP* **P 21 50 10.0 -0.2**
TCF pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
TCF Toulx Ste Croi 49.48 302 *eP* **P 21 50 10.0 -0.2**
comp=Z,7.3nm,1.0s,mb4.7
CAF Calviac 50.00 300 *eP* **P 21 50 14.2 0.0**
RJF Les Rejaudoux 50.25 301 *eP* **P 21 50 16.0 0.0**
RJF *e*MLR MLR
comp=Z,56nm,19.2s,MS3.3
RJF Les Rejaudoux 50.25 301 *eP* **P 21 50 16.0 0.0**
RJF LR LR
comp=Z,60nm,19.3s,MS3.6
LDF La Druitiere 50.32 305 *eP* **P 21 50 15.7 -0.8**
EKA Eskdalemuir Ar 50.38 315 P P 21 50 16.0 -0.9
comp=Z,0.9nm,0.7s,mb3.9,baz=76,slow=6.7,SNR=3.8
EKA Eskdalemuir Ar 50.38 315 P P 21 50 16.0 -0.9
EKA pmax pmax
comp=Z,1.0nm,0.7s
MTLF Montolieu 50.41 298 *eP* **P 21 50 17.1 -0.2**
comp=Z,3.3nm,0.7s,mb4.2
MTLF Montolieu 50.41 298 *eP* **P 21 50 17.1 -0.2**
MTLF pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
MTLF Montolieu 50.41 298 *eP* **P 21 50 17.1 -0.2**
comp=Z,1.6nm,0.7s,mb4.2
FLN La Foliniere 50.50 306 *eP* **P 21 50 16.9 -1.0**
FLN *e*MLR MLR
comp=Z,50nm,20.8s,MS3.2
FLN La Foliniere 50.50 306 *eP* **P 21 50 16.9 -1.0**
FLN LR LR
comp=Z,50nm,20.8s,MS3.5
GRR Gorron 50.85 305 *eP* **P 21 50 19.6 -0.9**
LFF La Frestale 50.89 301 *eP* **P 21 50 20.8 -0.1**
MFF Saint Martin d 50.94 303 *eP* **P 21 50 20.2 -1.0**
comp=Z,35nm,1.6s,mb4.7
MFF Saint Martin d 50.94 303 *eP* **P 21 50 20.2 -1.0**
MFF pmax pmax
comp=Z,18nm,1.6s,mb4.8
MFF Saint Martin d 50.94 303 *eP* **P 21 50 20.2 -1.0**
comp=Z,18nm,1.6s,mb4.7
EPF Esparros 51.81 299 *eP* **P 21 50 27.7 -0.1**
SGMF Saint Gilles 51.97 306 *eP* **P 21 50 28.6 -0.3**
comp=Z,6.6nm,0.8s,mb4.3
SGMF Saint Gilles 51.97 306 *eP* **P 21 50 28.6 -0.3**
SGMF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
SGMF Saint Gilles 51.97 306 *eP* **P 21 50 28.6 -0.3**
comp=Z,3.3nm,0.8s,mb4.3
MAJO Matsushiro 52.39 70 *e*S **S 21 57 51.3 -5.2**
ROSF Rostrenen 52.40 306 *eP* **P 21 50 31.1 -1.0**
QUIF Quistinic 52.46 305 *eP* **P 21 50 31.5 -1.1**
ESDC Sonseca Array 56.10 296 P P 21 50 59.2 +0.1
comp=Z,1.2nm,0.5s,mb4.2,baz=58,slow=7.4,SNR=20
BILL Bilibino 56.61 27 *eP* **P 21 51 05.1 +2.8**
BILL pmax pmax
comp=Z,5.0nm,1.6s,mb4.3
PETK Petropavlovsk- 58.48 45 P P 21 51 16.2 +0.5
comp=Z,2.6nm,0.9s,mb4.2,baz=1.8,slow=9.5,SNR=3.7
PETK Petropavlovsk- 58.48 45 P P 21 51 16.3 +0.5
PETK pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
COLD Coldfoot 69.76 16 *eP* **P 21 52 32.3 +2.7**
comp=Z,4.0nm,0.8s,mb4.4
INK Inuvik 71.60 9 *eP* **P 21 52 43.6 +2.9**
INK pmax pmax
comp=Z,4.0nm,0.7s
INK Inuvik 71.60 9 *eP* **P 21 52 43.5 +2.8**
comp=Z,3.6nm,0.7s,mb4.4
YKA Yellowknife Ar 78.88 2 P P 21 53 22.7 0.0
comp=Z,2.2nm,0.7s,mb4.2,baz=348,slow=5.4,SNR=8.5
YKA LR LR 22 31 41.9
comp=Z,4.1nm,19.7s,MS2.8,baz=5.0,slow=38
YKA Yellowknife Ar 78.88 2 P P 21 53 22.7 0.0
YKA LR LR 22 31 41.9
WRA Warramunga Arr 83.51 122 P P 21 53 47.3 -0.6
comp=Z,1.5nm,0.5s,mb4.3,baz=325,slow=5.0,SNR=12
WRA Warramunga Arr 83.51 122 P P 21 53 47.3 -0.6
WRA pmax pmax
comp=Z,2.0nm,0.5s
ASAR Alice Springs 85.87 125 P P 21 53 59.1 -0.6
comp=Z,0.5nm,0.6s,mb3.9,baz=311,slow=5.3,SNR=12
ASAR Alice Springs 85.87 125 P P 21 53 59.1 -0.6
ASAR pmax pmax
comp=Z,1.0nm,0.6s
FFC Flin Flon 86.54 356 *i P* **P 21 54 06.2 +3.5**
ULM Lac du Bonnet 90.45 351 LR LR 22 36 39.6
comp=Z,42nm,19.3s,MS3.9,baz=61,slow=37
PLCA Paso Flores 150.27 254 PKPbc PKPbc 22 01 12.3 +1.6
comp=Z,3.1nm,0.9s,baz=186,slow=15,SNR=3.5
PLCA Paso Flores 150.27 254 PKIKP PKPbc 22 01 12.3 +1.6
PLCA pmax pmax
comp=Z,3.0nm,0.9s
PLCA Paso Flores 150.27 254 PKPbc PKPbc 22 01 12.3 +1.6

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*IDC **14** 21:47:32.9±3.7, 34°.87N×25°.46E, h0km, mb3.3/2, mb1 3.4/5, mb1mx3.3/26, mbtmp3.3/5, ML3.9/2, Error ellipse: s-maj=72.9km s-min=10.2km az=27.0*
*CSEM **14** 21:47:33.7±0.6, 34°.70N×25°.00E, h20km, MD3.6, Error ellipse: s-maj=14.9km s-min=6.9km az=3.0*
*ATH **14** 21:47:34.6, 34°.80N×24°.91E, h36km±2km, MD3.6/12*
*NEIC **14** 21:47:34.6, 34°.80N×24°.91E, h36km, MD3.6(ATH), After ATH.*
*ISCJB **14** 21:47:35.5±1.0, 34°.8N±0°.1×24°.94E±0°.05, h48km±7km, mb3.2/2, Error ellipse: s-maj=16.9km s-min=6.5km az=2.7*
ISC 14 21:47:36.2±1.0,**34°.79N**±0°.09×**24°.93E**±0°.05,**h38**km±11km, **n61**,σ1§**14**/71,**mb3.2**/2,**6D**,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.24**	**336**	*e*Pb	**Pn**	**21 47 41.9**	**-1.8**
SIVA	**Sivas**	**0.24**	**336**	*e*PB	**Pn**	**21 47 41.9**	**-1.8**
SIVA	**Sivas**	**0.24**	**336**	*e*Pb	**Pn**	**21 47 41.9**	**-1.8**
IDI	**Anoyia**	**0.49**	**356**	Pg	**Pn**	**21 47 45.2**	**-1.6**
	68nm,0.3s,baz=167,slow=17,SNR=881						
IDI				Lg		21 47 53.6	
	238nm,0.3s,baz=118,slow=15,SNR=53						
IDI	**Anoyia**	**0.49**	**356**	*e*Pg	**Pn**	**21 47 45.0**	**-1.8**
IDI				⇓*i*Pb	**Pn**	**21 47 45.2**	**-1.6**
IDI				*e*Sg	**Sn**	**21 47 53.1**	**-1.1**
IDI				*e*Sb	**Sn**	**21 47 53.2**	**-1.0**
IDI	**Anoyia**	**0.49**	**356**	⇓*i*PB	**Pn**	**21 47 45.2**	**-1.6**
IDI				*e*SB	**Sn**	**21 47 53.2**	**-1.0**
IDI	**Anoyia**	**0.49**	**356**	*e*Pg	**Pn**	**21 47 45.0**	**-1.8**
IDI	**Anoyia**	**0.49**	**356**	⇓*i*Pb	**Pn**	**21 47 45.2**	**-1.6**
IDI				*e*Sb	**Sn**	**21 47 53.2**	**-1.0**
LAST	**Lasithi**	**0.58**	**51**	*e*Pn	**Pn**	**21 47 46.5**	**-1.4**
LAST	**Lasithi**	**0.58**	**51**	*e*PN	**Pn**	**21 47 46.5**	**-1.4**
LAST	**Lasithi**	**0.58**	**51**	*e*Pn	**Pn**	**21 47 46.5**	**-1.4**
GVD	**Gavdhos**	**0.70**	**274**	*e*Pg	**Pn**	**21 47 49.8**	**+0.3**
GVD	**Gavdhos**	**0.70**	**274**	*e*Pg	**Pn**	**21 47 49.8**	**+0.3**
NPS	**Neapolis**	**0.73**	**50**	⇓*i*Pn	**Pn**	**21 47 49.0**	**-1.0**
NPS				*e*Sn	**Sn**	**21 48 00.2**	**+0.3**
NPS	**Neapolis**	**0.73**	**50**	⇓*i*PN	**Pn**	**21 47 49.0**	**-1.0**
NPS				*e*SN	**Sn**	**21 48 00.2**	**+0.3**
NPS	**Neapolis**	**0.73**	**50**	⇓*i*Pn	**Pn**	**21 47 49.0**	**-1.0**
NPS				*e*Sn	**Sn**	**21 48 00.2**	**+0.3**
VAM	**Vamos**	**0.86**	**316**	*e*Pn	**Pn**	**21 47 51.9**	**+0.2**
VAM	**Vamos**	**0.86**	**316**	*e*PN	**Pn**	**21 47 51.9**	**+0.2**
VAM	**Vamos**	**0.86**	**316**	*e*Pn	**Pn**	**21 47 51.9**	**+0.2**
KARN	**Karanos**	**1.03**	**306**	*e*PN	**Pn**	**21 47 54.5**	**+0.4**
KARN	**Karanos**	**1.03**	**306**	*e*Pn	**Pn**	**21 47 54.5**	**+0.4**
ZKR	**Zakros**	**1.10**	**73**	*e*Pb	**Pn**	**21 47 54.8**	**-0.3**
ZKR				*e*Sn	**Sn**	**21 48 11.4**	**+2.3**
ZKR	**Zakros**	**1.10**	**73**	*e*PB	**Pn**	**21 47 54.8**	**-0.3**
ZKR				*e*SN	**Sn**	**21 48 11.4**	**+2.3**
ZKR	**Zakros**	**1.10**	**73**	*e*Pb	**Pn**	**21 47 54.8**	**-0.3**
KARP	**Karpathos**	**1.97**	**67**	*e*Pb	**Pn**	**21 48 08.4**	**+1.3**
KARP	**Karpathos**	**1.97**	**67**	*e*PB	**Pn**	**21 48 08.4**	**+1.3**
KYTH	**Kithira**	**2.14**	**314**	*e*Pb	**Pn**	**21 48 10.7**	**+1.3**
KYTH	**Kithira**	**2.14**	**314**	*e*PB	**Pn**	**21 48 10.7**	**+1.3**
APE	**Apeiranthos**	**2.32**	**12**	*e*Pn	**Pn**	**21 48 11.4**	**-0.5**
APE	**Apeiranthos**	**2.32**	**12**	*e*PN	**Pn**	**21 48 11.4**	**-0.5**
APE	**Apeiranthos**	**2.32**	**12**	*e*Pn	**Pn**	**21 48 11.4**	**-0.5**
VLI	**Veliai**	**2.52**	**320**	*e*Pn	**Pn**	**21 48 14.0**	**-0.5**
VLI	**Veliai**	**2.52**	**320**	*e*PN	**Pn**	**21 48 14.0**	**-0.5**
VLI	**Veliai**	**2.52**	**320**	*e*Pn	**Pn**	**21 48 14.0**	**-0.5**
ARG	**Arkhangelos**	**2.97**	**60**	*e*Pn	**Pn**	**21 48 20.3**	**-0.4**
ARG	**Arkhangelos**	**2.97**	**60**	*e*PN	**Pn**	**21 48 20.3**	**-0.4**
ARG	**Arkhangelos**	**2.97**	**60**	*e*Pn	**Pn**	**21 48 20.3**	**-0.4**
SMG	**Samos**	**3.29**	**27**	*e*Pn	**Pn**	**21 48 25.3**	**+0.1**
SMG	**Samos**	**3.29**	**27**	*e*PN	**Pn**	**21 48 25.3**	**+0.1**
SMG	**Samos**	**3.29**	**27**	*e*Pn	**Pn**	**21 48 25.3**	**+0.1**
ITM	**Ithomi**	**3.41**	**315**	*e*Pn	**Pn**	**21 48 26.8**	**0.0**
ITM	**Ithomi**	**3.41**	**315**	*e*PN	**Pn**	**21 48 26.8**	**0.0**
ITM	**Ithomi**	**3.41**	**315**	*e*Pn	**Pn**	**21 48 26.8**	**0.0**
CHOS	**Chios island**	**3.70**	**14**	*e*PN	**Pn**	**21 48 32.7**	**+1.9**
CHOS	**Chios island**	**3.70**	**14**	*e*Pn	**Pn**	**21 48 32.7**	**+1.9**
GUR	**Goura**	**3.77**	**327**	*e*PN	**Pn**	**21 48 32.2**	**+0.5**
GUR	**Goura**	**3.77**	**327**	*e*Pn	**Pn**	**21 48 32.2**	**+0.5**
AGG	**Agios Georgios**	**4.71**	**334**	*e*Pn	**Pn**	**21 48 45.9**	**+1.3**
AGG	**Agios Georgios**	**4.71**	**334**	*e*PN	**Pn**	**21 48 45.9**	**+1.3**
AGG	**Agios Georgios**	**4.71**	**334**	*e*Pn	**Pn**	**21 48 45.9**	**+1.3**
BRTR	**Keskin Array B**	**8.51**	**52**	Pn	**Pn**	**21 49 38.1**	**+1.4**
	0.1nm,0.3s,baz=238,slow=15,SNR=2.6						
BRTR	**Keskin Array B**	**8.51**	**52**	Pn	**Pn**	**21 49 38.2**	**+1.4**
MMAI	**Mount Meron Ar**	**8.88**	**99**	Pn	**Pn**	**21 49 37.6**	**-4.3**
	baz=309,slow=14,SNR=2.7						
AKASG	**Malin Array Be**	**16.20**	**10**	Pn	**Pn**	**21 51 20.5**	**-0.3**
	0.7nm,0.3s,baz=200,slow=10,SNR=4.2						
AKASG	**Malin Array Be**	**16.20**	**10**	Pn	**Pn**	**21 51 20.5**	**-0.3**
GERES	**GERESS Array B**	**16.32**	**333**	Pn	**Pn**	**21 51 23.9**	**+1.6**
	0.2nm,0.3s,baz=146,slow=12,SNR=8.3						
GERES	**GERESS Array B**	**16.32**	**333**	Pn	**Pn**	**21 51 23.9**	**+1.6**

KURK Kurchatov 41.55 51 P P 21 55 18.1 -1.7
0.4nm,0.9s,mb3.0,baz=273,slow=8.4,SNR=2.7
KURK Kurchatov 41.55 51 P P 21 55 18.1 -1.8
MKAR Makanchi Array 44.13 56 P P 21 55 39.2 -1.6
0.2nm,0.2s,mb3.4,baz=290,slow=5.8,SNR=2.4
MKAR Makanchi Array 44.13 56 P P 21 55 39.2 -1.6

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*IDC **14** 21:52:18.8±1.3,39.°11N×141.°28E,h0km,mb3.7/6, mb1 3.7/8,mb1mx3.5/28,mbtmp3.7/8,ML3.2/2,Error ellipse: s-maj=36.6km s-min=21.8km az=80.0*
*NEIC **14** 21:52:21.3,39.°11N×140.°94E,h11km,MG3.4(JMA),After JMA.*
*JMA **14** 21:52:21.2,39.°11N×140.°94E,h10km±1km,M3.4 Broadband fault plane solution: P waves. NP1: φs62.00000°,δ50.00000°,λ125.00000°. NP2: φs195.00000°,δ51.00000°,λ56.00000°. Principal axes: T Plg64.0000°, Azm40.0000°; N Plg26.0000°, Azm218.0000°; P Plg1.0000°, Azm308.0000°;*
JMA Felt I J1.
*ISCJB **14** 21:52:21.4±0.6,39.°14N±0.°04×141.°06E±0.°06,h20km±5km, mb3.8/6 Error ellipse: s-maj=7.7km s-min=5.9km az=19.6*
ISC 14 21:52:22.1±0.6,39.°15N±0.°03×141.°02E±0.°06,h11km±4km, n16,σ1°23/22,mb3.8/6,1C-2D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.25**	**141**	⇓P	**Pg**	**21 52 26.6**	**-0.6**
JMK				S	**Sg**	**21 52 30.5**	**-0.2**
JOM	**Ohasama**	**0.39**	**33**	⇑P	**Pg**	**21 52 30.0**	**+0.2**
JOM				S	**Sg**	**21 52 36.3**	**+1.3**
JRG	**Rokugo**	**0.39**	**310**	⇓P	**Pg**	**21 52 28.7**	**-1.1**
JRG				S	**Sg**	**21 52 34.4**	**-0.6**
ERM	**Erimo**	**3.30**	**29**	*e*Pn	**Pn**	**21 53 15.8**	**+2.2**
ERM				*e*S	**Sn**	**21 53 50.7**	**-2.0**
MAJO	**Matsushiro**	**3.42**	**221**	*e*Pn	**Pn**	**21 53 15.6**	**+0.3**
MAT	**Matsushiro**	**3.42**	**221**	P	**Pn**	**21 53 15.6**	**+0.3**
MAT				*e*S	**Sn**	**21 53 58.7**	**+2.9**
MJAR	**Matsushiro Arr**	**3.42**	**221**	Pn	**Pn**	**21 53 15.2**	**-0.1**
	1.0nm,0.3s,baz=231,slow=14,SNR=14						
ASAJ	**Asahikawa**	**5.11**	**13**	Pn	**Pn**	**21 53 40.9**	**+2.4**
	0.8nm,0.3s,baz=239,slow=12,SNR=7.5						
KSRS	**Korea Array**	**10.43**	**265**	Pn	**Pn**	**21 54 54.5**	**+3.0**
	0.3nm,0.3s,baz=74,slow=14,SNR=7.9						
KSRS				Sn	**Sn**	**21 56 52.9**	**+4.5**
	0.2nm,0.3s,baz=74,slow=24,SNR=5.4						
KURK	**Kurchatov**	**44.41**	**306**	P	**P**	**22 00 32.5**	**0.0**
	0.6nm,0.4s,mb3.7,baz=80,slow=8.2,SNR=5.9						
KURK	**Kurchatov**	**44.41**	**306**	P	**P**	**22 00 32.5**	**0.0**
BVAR	**Borovoye Array**	**48.94**	**311**	P	**P**	**22 01 07.1**	**-0.8**
	0.3nm,0.4s,mb3.7,baz=79,slow=7.5,SNR=3.4						
WRA	**Warramunga Arr**	**59.11**	**187**	P	**P**	**22 02 20.9**	**-1.6**
	1.4nm,0.9s,mb4.0,baz=6.0,slow=7.4,SNR=5.4						
ASAR	**Alice Springs**	**62.84**	**187**	P	**P**	**22 02 46.9**	**-0.8**
	0.2nm,0.6s,mb3.4,baz=3.0,slow=4.7,SNR=5.2						
FINES	**FINESS Array B**	**66.81**	**332**	P	**P**	**22 03 12.7**	**-0.5**
	1.3nm,0.7s,mb4.0,baz=46,slow=5.5,SNR=3.4						
HFS	**Hagfors**	**72.04**	**335**	P	**P**	**22 03 44.9**	**-0.7**
	0.6nm,0.4s,mb3.9,baz=37,slow=8.2,SNR=5.6						

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*JMA **14** 21:54:58.7±0.2,29.°30N×139.°93E,h483km±4km,M4.1*
*ISCJB **14** 21:54:58.4±0.4,29.°16N±0.°05×139.°3E±0.°1,h460km±5km, mb3.5/11,Error ellipse: s-maj=15.4km s-min=6.6km az=167.3*
*NEIC **14** 21:54:59.6±0.9,29.°18N×139.°16E,h454km±10km,mb4.2/2, Error ellipse: s-maj=14.3km s-min=9.6km az=116.0*
*IDC **14** 21:54:59.0±0.6,29.°15N×139.°24E,h447km±8km,mb3.2/11, mb1 3.3/16,mb1mx3.1/30,mbtmp3.2/16,Error ellipse: s-maj=14.6km s-min=9.3km az=81.0*
ISC 14 21:54:59.2±0.4,29.°17N±0.°05×139.°3E±0.°1,h450km±6km, n34,σ0°99/42,mb3.5/11,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.27**	**128**	P	**P**	**21 56 08.4**	**+0.1**
CBIJ				S	**S**	**21 57 03.2**	**-1.2**
CBIJ	**Chichi jima**	**3.27**	**128**	P	**P**	**21 56 08.4**	**+0.1**
	26nm,0.3s,baz=23,slow=3.2,SNR=39						
CBIJ				S	**S**	**21 57 03.6**	**-0.8**
	237nm,0.3s,baz=287,slow=19,SNR=31						
JHHJ	**Haha-jima-NKT**	**3.58**	**134**	P	**P**	**21 56 11.1**	**+0.2**
JHHJ				S	**S**	**21 57 08.3**	**-0.7**
JHJ2	**Mitsune**	**3.96**	**6**	P	**P**	**21 56 15.3**	**+1.4**
JHJ2				S	**S**	**21 57 15.1**	**+0.4**
JHJ	**Hachijo jima 2**	**3.96**	**6**	P	**P**	**21 56 15.7**	**+1.7**
	18nm,0.3s,baz=252,slow=24,SNR=25						
JHJ				S	**S**	**21 57 15.5**	**+0.7**
	23nm,0.3s,baz=245,slow=23,SNR=8.4						
BSO1	**Boso 1**	**5.65**	**14**	S	**S**	**21 57 42.1**	**-1.9**
JIE	**Ise**	**5.67**	**338**	P	**P**	**21 56 33.3**	**+3.3**
JKN2	**Miekihoku**	**5.68**	**334**	P	**P**	**21 56 33.2**	**+3.0**
BSO3	**Boso 3**	**5.71**	**10**	S	**S**	**21 57 43.3**	**-1.7**
HMMJ	**Hamamatsu 2**	**5.83**	**347**	P	**P**	**21 56 33.6**	**+1.9**
BSO4	**Boso 4**	**5.87**	**8**	S	**S**	**21 57 47.2**	**-0.8**
JOD2	**Odawara 2**	**6.08**	**358**	P	**P**	**21 56 35.1**	**+0.9**
JOD2				*e*S	**S**	**21 57 50.6**	**-1.4**
JRY	**Ryogami san**	**6.84**	**357**	P	**P**	**21 56 42.8**	**+0.7**
JYT	**Yasato**	**7.08**	**6**	P	**P**	**21 56 44.8**	**+0.1**
JYT				S	**S**	**21 58 06.5**	**-4.6**
JAG	**Ashikaga**	**7.24**	**1**	P	**P**	**21 56 45.8**	**-0.5**
JAG				S	**S**	**21 58 08.6**	**-5.6**
MJAR	**Matsushiro Arr**	**7.42**	**353**	P	**P**	**21 56 48.4**	**+0.2**
	1.3nm,0.3s,baz=206,slow=7.1,SNR=11						
MAJO	**Matsushiro**	**7.42**	**353**	*e*Pn	**P**	**21 56 48.6**	**+0.4**
	6.4nm,0.6s						
MAT	**Matsushiro**	**7.42**	**353**	P	**P**	**21 56 48.0**	**-0.2**
KSRS	**Korea Array**	**12.61**	**314**	P	**P**	**21 57 43.8**	**-0.7**
	0.3nm,0.3s,baz=127,slow=10,SNR=6.0						
ASAJ	**Asahikawa**	**15.15**	**9**	P	**P**	**21 58 11.9**	**+0.2**
	0.9nm,0.3s,baz=225,slow=21,SNR=5.2						
SSLB	**Suanglung**	**17.29**	**256**	P	**P**	**21 58 33.3**	**-1.2**
	4.5nm,0.4s						
CMAR	**Chiang Mai Arr**	**38.28**	**263**	P	**P**	**22 01 39.4**	**-0.3**
	2.6nm,0.6s,mb3.8,baz=94,slow=4.5,SNR=23						
MKAR	**Makanchi Array**	**47.21**	**308**	P	**P**	**22 02 48.8**	**-1.0**
	0.2nm,0.2s,mb3.1,baz=75,slow=14,SNR=5.8						
WRA	**Warramunga Arr**	**49.05**	**186**	P	**P**	**22 03 03.4**	**-0.5**
	0.6nm,0.3s,mb3.4,baz=14,slow=8.0,SNR=21						
WRA	**Warramunga Arr**	**49.05**	**186**	P	**P**	**22 03 03.4**	**-0.5**
KURK	**Kurchatov**	**49.73**	**313**	P	**P**	**22 03 08.2**	**-0.3**
	1.5nm,0.5s,mb3.5,baz=92,slow=7.4,SNR=10						
ASAR	**Alice Springs**	**52.78**	**186**	P	**P**	**22 03 31.9**	**+0.8**
	0.6nm,0.6s,mb3.1,baz=14,slow=12,SNR=11						
BVAR	**Borovoye Array**	**54.81**	**316**	P	**P**	**22 03 44.7**	**-0.5**
	0.4nm,0.4s,mb3.1,baz=89,slow=7.6,SNR=4.4						
INK	**Inuvik**	**62.22**	**25**	P	**P**	**22 04 35.5**	**+0.3**
	2.3nm,0.4s,mb4.0,baz=299,slow=5.5,SNR=14						
INK	**Inuvik**	**62.22**	**25**	P	**P**	**22 04 35.5**	**+0.3**
ARCES	**ARCESS Array B**	**70.75**	**340**	P	**P**	**22 05 28.4**	**0.0**
	0.5nm,0.4s,mb3.4,baz=69,slow=8.3,SNR=14						
YKA	**Yellowknife Ar**	**71.52**	**28**	P	**P**	**22 05 33.1**	**+0.1**
	1.0nm,0.4s,mb3.7,baz=299,slow=5.9,SNR=11						
FINES	**FINESS Array B**	**74.97**	**333**	P	**P**	**22 05 52.2**	**-0.7**
	1.1nm,0.7s,mb3.5,baz=297,slow=0.4,SNR=5.7						
NVAR	**Mina Array Bea**	**81.21**	**51**	P	**P**	**22 06 28.6**	**+1.5**
	1.2nm,0.6s,mb3.6,baz=293,slow=5.3,SNR=12						

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*BJI **14** 22:03:59.7,22.°20S×179.°60W,h590km,mB4.7/11, mb4.6/15*
*NEIC **14** 22:04:00.8±0.8,22.°16S×179.°55W,h590km±7km,mb4.4/21, Error ellipse: s-maj=11.8km s-min=6.6km az=143.0*
*ISCJB **14** 22:04:00.2±0.7,22.°22S±0.°07×179.°57W±0.°05, h594km±8km,mb4.3/44,Error ellipse: s-maj=11.8km s-min=6.0km az=153.3*
*BGS **14** 22:04:03.4±4.7,22.°16S×179.°55W,h590km,mb4.4(NEIC)*
*IDC **14** 22:04:04.4±2.3,22.°08S×179.°70W,h623km±26km, mb3.7/13,mb1 3.9/13,mb1mx3.9/16,mbtmp3.7/13,Error ellipse: s-maj=19.6km s-min=11.3km az=150.0*
*SZGRF **14** 22:04:06.6,21.°94S×178.°66W,h33km,Fiji Islands region*
ISC 14 22:04:00.7±0.8,22.°18S±0.°08×179.°54W±0.°05, h585km±8km,h599km±2.5km:pP-P,n342,σ0°57/212, mb4.3/44,101C-76D,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.97**	**332**	*e*P	**P**	**22 05 32.2**	**-0.4**
MSVF				*e*S	**S**	**22 06 47.4**	**+0.1**
URZ	**Urewera**	**16.29**	**189**	P	**P**	**22 07 19.3**	**-1.8**
	2.0nm,0.3s,baz=304,slow=4.4,SNR=16						
URZ				S	**S**	**22 09 57.4**	**-7.0**
	1.0nm,0.3s,baz=164,slow=19,SNR=9.4						
CNB	**Canberra Magne**	**30.11**	**237**	*e*P	**P**	**22 09 24.2**	**+0.1**
CTA	**Charters Tower**	**31.93**	**267**	*e*P	**P**	**22 09 40.2**	**+0.3**
	3.1nm,0.4s,mb4.3						
TOO	**Toolangi**	**33.76**	**235**	*e*P	**P**	**22 09 56.0**	**+1.0**
STKA	**Stephens Creek**	**35.78**	**246**	⇑*i*P	**P**	**22 10 12.8**	**+0.9**
	8.4nm,0.9s,mb4.3						
STKA	**Stephens Creek**	**35.78**	**246**	P	**P**	**22 10 12.9**	**+1.0**
	10nm,0.7s,mb4.5,baz=81,slow=10,SNR=40						
ASAR	**Alice Springs**	**42.76**	**259**	P	**P**	**22 11 08.1**	**+0.1**
	11nm,0.7s,mb4.5,baz=98,slow=7.7,SNR=85						
ASAR				PcP	PcP	22 12 45.9	+0.1
	4.2nm,0.7s,baz=109,slow=3.6,SNR=13						
ASAR				S	**S**	**22 16 48.1**	**-2.4**
	2.3nm,0.9s,baz=96,slow=15,SNR=10						
WRAB	**Tennant Creek**	**42.96**	**264**	*e*P	**P**	**22 11 09.2**	**-0.4**
	4.0nm,0.6s,mb4.1						
WRA	**Warramunga Arr**	**42.97**	**264**	P	**P**	**22 11 09.2**	**-0.5**
	2.7nm,0.3s,mb4.3,baz=93,slow=6.8,SNR=20						
WRA				PcP	PcP	22 12 46.5	-0.1
	2.7nm,0.9s,baz=95,slow=3.6,SNR=5.3						
WRA				S	**S**	**22 16 50.6**	**-3.0**
	1.1nm,0.6s,baz=101,slow=14,SNR=6.9						
KAKA	**Kakadu**	**46.60**	**273**	*e*P	**P**	**22 11 38.3**	**+0.8**
	13nm,1.0s,mb4.4						
FORT	**Forrest**	**47.32**	**248**	⇑*i*P	**P**	**22 11 42.4**	**-0.3**
	27nm,0.8s,mb4.8						
FORT	**Forrest**	**47.32**	**248**	*e*P	**P**	**22 11 42.8**	**+0.1**
	35nm,0.8s,mb5.0						
FITZ	**Fitzroy Crossi**	**51.40**	**264**	*e*P	**P**	**22 12 13.0**	**+0.2**
	15nm,1.1s,mb4.3						
FITZ	**Fitzroy Crossi**	**51.40**	**264**	*e*P	**P**	**22 12 13.1**	**+0.3**
	2.4nm,0.3s,mb4.1						
KLBR	**Kellerberrin**	**56.05**	**246**	*e*P	**P**	**22 12 45.1**	**-0.3**
	31nm,0.9s,mb4.5						
MBWA	**Marble Bar**	**56.10**	**259**	*e*P	**P**	**22 12 45.5**	**-0.3**
	22nm,0.7s,mb4.5						
CASY	**Casey**	**61.84**	**206**	⇑*i*P	**P**	**22 13 23.7**	**+0.3**
CASY	**Casey**	**61.84**	**206**	*e*P	**P**	**22 13 23.8**	**+0.4**
	12nm,1.0s,mb4.1						
KKM	**Kota Kinabalu**	**68.82**	**286**	*e*P	**P**	**22 14 07.8**	**-0.1**
	9.7nm,0.6s,mb4.4						
MJAR	**Matsushiro Arr**	**70.73**	**325**	P	**P**	**22 14 18.1**	**-0.6**
	4.6nm,0.8s,mb4.0,baz=162,slow=6.0,SNR=15						
MAJO	**Matsushiro**	**70.73**	**325**	*e*P	**P**	**22 14 18.4**	**-0.3**
	4.7nm,0.8s,mb4.1						
MAT	**Matsushiro**	**70.73**	**325**	P	**P**	**22 14 17.7**	**-1.0**
KSM	**Kuching**	**72.24**	**279**	*e*P	**P**	**22 14 28.2**	**+0.1**
ASAJ	**Asahikawa**	**74.53**	**333**	P	**P**	**22 14 40.9**	**+0.6**
	4.5nm,0.7s,mb4.1,baz=148,slow=20,SNR=5.2						
KSRS	**Korea Array**	**77.21**	**320**	P	**P**	**22 14 55.7**	**+0.4**
	1.2nm,0.7s,mb3.4,baz=134,slow=5.8,SNR=6.1						
PETK	**Petropavlovsk-**	**77.53**	**346**	P	**P**	**22 14 56.3**	**-0.3**
	11nm,0.7s,mb4.4,baz=124,slow=7.1,SNR=21						
MAW	**Mawson**	**79.50**	**200**	P	**P**	**22 15 08.2**	**+1.2**
	4.4nm,0.6s,mb3.9,baz=134,slow=7.2,SNR=10						
MAW	**Mawson**	**79.50**	**200**	*e*P	**P**	**22 15 07.4**	**+0.4**
	0.6nm,0.6s						
MDJ	**Mudanjiang**	**81.08**	**326**	P	**P**	**22 15 15.6**	**+0.1**
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.0						
MDJ				pmax	pmax		
	comp=Z,59nm,3.9s						
MONP	**Monument Peak**	**81.39**	**49**	⇓P	**P**	**22 15 17.0**	**-0.4**
	baz=82						
EDW2	**Edwards Air Fo**	**81.41**	**47**	⇓P	**P**	**22 15 16.8**	**-0.7**
	baz=82						
CMB	**Columbia Colle**	**81.66**	**43**	*e*P	**P**	**22 15 18.8**	**+0.1**
	comp=Z,7.5nm,1.0s,mb4.2						
PFO	**Pinyon Flat Ob**	**81.76**	**49**	⇑P	**P**	**22 15 18.6**	**-0.6**
	baz=82						
BELC	**Belle Mtn. Jos**	**82.29**	**49**	⇓P	**P**	**22 15 22.3**	**+0.4**
	baz=82						
MPMC	**Manual Prospec**	**82.41**	**46**	⇓P	**P**	**22 15 22.2**	**-0.3**
	baz=83						
GSC	**Goldstone**	**82.45**	**47**	⇓P	**P**	**22 15 22.2**	**-0.5**
	baz=83						
WAKR	**Walker**	**82.54**	**43**	*e*P	**P**	**22 15 23.7**	**+0.6**
KULM	**Kulim**	**82.59**	**279**	*e*P	**P**	**22 15 24.2**	**+0.3**
	comp=Z,5.6nm,0.6s,mb4.3						
CN2	**Changchun**	**82.76**	**323**	*e*P	**P**	**22 15 24.3**	**+0.3**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.6						
BEKR	**Beckworth**	**82.77**	**42**	⇓P	**P**	**22 15 24.7**	**+0.5**
	baz=83						
GMRC	**Granite Mounta**	**82.95**	**48**	⇑P	**P**	**22 15 25.5**	**+0.3**
	baz=83						
IRM	**Iron Mountain**	**82.97**	**49**	⇑P	**P**	**22 15 25.5**	**+0.2**
	baz=83						
FURC	**Furnace Creek,**	**83.06**	**46**	⇓P	**P**	**22 15 25.9**	**+0.1**
	baz=83						
NVAR	**Mina Array Bea**	**83.22**	**44**	P	**P**	**22 15 27.0**	**+0.5**
	comp=Z,3.8nm,0.9s,mb3.9,baz=222,slow=9.4,SNR=24						
U10A	**Ash Meadows, A**	**83.39**	**46**	⇑P	**P**	**22 15 27.4**	**0.0**
	baz=84						
Z13A	**Yuma Proving G**	**83.51**	**50**	⇑P	**P**	**22 15 28.2**	**+0.1**
	baz=84						
V11A	**Goodsprings**	**83.68**	**47**	⇑P	**P**	**22 15 29.5**	**+0.7**
	baz=84						
MOD	**Modoc**	**84.02**	**40**	*e*P	**P**	**22 15 31.0**	**+0.7**
S10A	**Tonopah Range,**	**84.05**	**45**	⇓P	**P**	**22 15 30.5**	**-0.1**
	baz=84,SNR=8.1						
Z14A	**Wintersburg**	**84.11**	**51**	⇑P	**P**	**22 15 31.5**	**+0.5**
	baz=84						
X13A	**Yucca**	**84.12**	**49**	⇑P	**P**	**22 15 31.0**	**-0.1**
	baz=84						
K05A	**Summer Lake**	**84.17**	**39**	⇑P	**P**	**22 15 31.5**	**+0.5**
	baz=84						
W13A	**Hualapai Mount**	**84.35**	**49**	⇑P	**P**	**22 15 31.6**	**-0.6**
	baz=84						
R10A	**Warm Springs**	**84.44**	**45**	⇓P	**P**	**22 15 32.3**	**-0.2**
	baz=85						
T11A	**Corn Creek, Al**	**84.58**	**46**	⇑P	**P**	**22 15 33.3**	**+0.1**
	baz=85						
116A	**Eloy**	**84.59**	**52**	⇓P	**P**	**22 15 33.2**	**-0.2**
	baz=85						
U12A	**Valley of Fire**	**84.61**	**47**	⇓P	**P**	**22 15 33.6**	**+0.3**
	baz=85						
V13A	**Grand Canyon W**	**84.68**	**48**	⇑P	**P**	**22 15 33.3**	**-0.5**
	baz=85						
X14A	**Yava**	**84.72**	**50**	⇓P	**P**	**22 15 33.9**	**0.0**
	baz=85						
SYO	**Syowa Base**	**84.78**	**193**	⇓*e*P	**P**	**22 15 31.7**	**-2.0**
217A	**Green Valley**	**84.85**	**53**	⇑P	**P**	**22 15 35.5**	**+0.8**
	baz=85,SNR=7.8						
W14A	**Seligman**	**84.97**	**49**	⇑P	**P**	**22 15 35.6**	**+0.4**
	baz=85						
U13A	**Pakoon Wash**	**84.99**	**48**	⇑P	**P**	**22 15 35.0**	**-0.3**
	baz=85,SNR=6.4						
S12A	**Delamar Landin**	**85.03**	**46**	⇓P	**P**	**22 15 36.5**	**+1.1**
	baz=85						
V14A	**Boquillas Ranc**	**85.17**	**49**	⇓P	**P**	**22 15 35.7**	**-0.4**
	baz=85						
Z16A	**Peralta Trail,**	**85.19**	**51**	⇑P	**P**	**22 15 36.7**	**+0.4**
	baz=85						
X15A	**Humboldt**	**85.19**	**50**	⇑P	**P**	**22 15 37.1**	**+0.9**
	baz=85						
318A	**Bisbee**	**85.30**	**53**	⇑P	**P**	**22 15 37.2**	**+0.4**
	baz=86,SNR=9.2						
117A	**Oracle**	**85.30**	**52**	⇑P	**P**	**22 15 36.9**	**+0.1**
	baz=86						
WVOR	**Wild Horse Val**	**85.33**	**40**	*e*P	**P**	**22 15 37.1**	**+0.4**
	comp=Z,4.0nm,0.9s,mb4.0						
T13A	**Saint George**	**85.35**	**47**	⇑P	**P**	**22 15 37.0**	**+0.1**
	baz=86						
U14A	**Mt Trumbull**	**85.53**	**48**	⇑P	**P**	**22 15 38.3**	**+0.5**
	baz=86						
R12A	**Pony Springs,**	**85.58**	**46**	⇑P	**P**	**22 15 38.0**	**0.0**
	baz=86						
S13A	**Holt Ranch, En**	**85.68**	**47**	⇓P	**P**	**22 15 38.9**	**+0.4**
	baz=86						
Y17A	**Roosevelt**	**85.78**	**51**	⇓P	**P**	**22 15 39.5**	**+0.4**
	baz=86						
I07A	**Izee**	**85.79**	**39**	⇓P	**P**	**22 15 38.6**	**-0.2**
	baz=86,SNR=5.1						
319A	**Douglas**	**85.80**	**54**	⇓P	**P**	**22 15 39.9**	**+0.7**
	baz=86						
G06A	**Carlson Farm,**	**85.83**	**37**	⇑P	**P**	**22 15 39.1**	**+0.1**
	baz=86						
V15A	**Kaibab Nationa**	**85.92**	**49**	⇓P	**P**	**22 15 39.2**	**-0.4**
	baz=86						
T14A	**Hurricane**	**85.93**	**47**	⇑P	**P**	**22 15 38.7**	**-1.0**
	baz=86						
J08A	**Circle Bar Ran**	**85.97**	**40**	⇑P	**P**	**22 15 39.3**	**-0.4**
	baz=86,SNR=5.6						
CCUT	**Cedar City**	**86.00**	**47**	*e*P	**P**	**22 15 40.9**	**+0.9**
HDW	**Hoodsport**	**86.01**	**34**	P	**P**	**22 15 40.7**	**+0.9**
BJI	**Beijing**	**86.08**	**316**	P	**P**	**22 15 40.4**	**+0.1**
BJI				S	S	22 25 24.4	-2.1
BJI				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.5						
BJI				pmax	pmax		
	comp=Z,72nm,3.4s						
219A	**White Tail Can**	**86.11**	**53**	⇓P	**P**	**22 15 40.9**	**+0.2**
	baz=86,SNR=5.1						
U15A	**North Rim**	**86.15**	**48**	⇑P	**P**	**22 15 40.7**	**0.0**
	baz=86,SNR=9.4						
GYA	**Guiyang**	**86.24**	**300**	P	**P**	**22 15 40.8**	**-0.6**
GYA				pP	pP	22 17 48.9	+1.6
GYA				sP	sP	22 18 47.0	+0.9
GYA				PP	PP	22 19 14.6	+0.9
GYA				SKS		22 25 09.6	
GYA				S	S	22 25 27.3	-1.2
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
D05A	**Enumclaw**	**86.29**	**35**	⇓P	**P**	**22 15 41.5**	**+0.3**
	baz=86						
WUAZ	**Wupatki**	**86.32**	**49**	⇑P	**P**	**22 15 42.4**	**+0.8**
	baz=86						
T15A	**Red Dirt Ranch**	**86.39**	**48**	⇓P	**P**	**22 15 41.2**	**-0.7**
	baz=87						
J09A	**Fry Pan Ranch,**	**86.39**	**40**	P	**P**	**22 15 42.2**	**+0.5**
	baz=87,SNR=7.5						
Y18A	**Canyon Day Jun**	**86.41**	**51**	⇓P	**P**	**22 15 41.7**	**-0.4**
	baz=87,SNR=5.7						
K10A	**MacKenzie Ranc**	**86.60**	**41**	⇓P	**P**	**22 15 42.2**	**-0.5**
	baz=87,SNR=5.4						
220A	**Playas Peak, P**	**86.61**	**54**	⇓P	**P**	**22 15 44.0**	**+1.0**
	baz=87						
I09A	**Lost Marbles R**	**86.76**	**40**	⇑P	**P**	**22 15 42.9**	**-0.5**
	baz=87,SNR=5.6						
V17A	**Tonalea, Kykot**	**86.78**	**50**	⇓P	**P**	**22 15 43.9**	**+0.2**
	baz=87,SNR=7.2						
Q14A	**Sevier Lake (B**	**86.81**	**46**	⇑P	**P**	**22 15 44.0**	**+0.2**
	baz=87,SNR=6.2						
G08A	**Pilot Rock**	**86.82**	**38**	⇑P	**P**	**22 15 43.9**	**+0.3**
	baz=87,SNR=8.7						
TTA	**Tatalina**	**86.84**	**11**	*e*P	**P**	**22 15 43.0**	**-0.3**
L11A	**Cat Creek Ranc**	**86.94**	**42**	⇓P	**P**	**22 15 44.8**	**+0.5**
	baz=87						
K11A	**Parker Ranch,**	**87.11**	**41**	⇑P	**P**	**22 15 44.6**	**-0.5**
	baz=87						
H09A	**Durkee**	**87.20**	**39**	⇓P	**P**	**22 15 44.6**	**-0.9**
	baz=87,SNR=7.4						
RPW	**Rockport**	**87.32**	**34**	*e*P	**P**	**22 15 45.9**	**0.0**
ETW	**Entiat**	**87.43**	**36**	*e*P	**P**	**22 15 46.9**	**+0.4**
E08A	**Dider Farm, El**	**87.47**	**37**	⇑P	**P**	**22 15 46.9**	**+0.2**
	baz=88						
G09A	**Cove**	**87.48**	**39**	⇓P	**P**	**22 15 46.4**	**-0.4**
	baz=88						
M13A	**Montello**	**87.50**	**43**	⇑P	**P**	**22 15 46.6**	**-0.4**
	baz=88						
MFID	**Camas Ranch**	**87.59**	**41**	⇓P	**P**	**22 15 47.3**	**0.0**
	baz=88						
R16A	**Teasdale**	**87.65**	**47**	⇑P	**P**	**22 15 48.2**	**+0.4**
	baz=88						
Y20A	**Horse Springs,**	**87.68**	**52**	⇓P	**P**	**22 15 47.5**	**-0.5**
	baz=88						
WTV	**Waterville**	**87.69**	**36**	P	**P**	**22 15 47.9**	**+0.2**
H10A	**Noah's Angus R**	**87.69**	**39**	P	**P**	**22 15 47.6**	**-0.1**
	baz=88,SNR=8.3						
K12A	**Draper Farm, C**	**87.72**	**42**	⇑P	**P**	**22 15 47.6**	**-0.3**
	baz=88						
I11A	**Placerville**	**87.78**	**40**	⇓P	**P**	**22 15 48.4**	**+0.2**
	baz=88						
G10A	**Bishop Farm, J**	**87.88**	**39**	⇑P	**P**	**22 15 48.2**	**-0.5**
	baz=88,SNR=5.2						
D08A	**Wollman Farm,**	**87.88**	**37**	⇓P	**P**	**22 15 48.6**	**0.0**
	baz=88						
Z21A	**St. Cloud Mine**	**87.91**	**53**	⇑P	**P**	**22 15 49.1**	**0.0**
	baz=88						
J12A	**Stokes Ranch,**	**87.94**	**41**	P	**P**	**22 15 49.6**	**+0.6**
	baz=88,SNR=12						
E09A	**Wood Farm, Sta**	**87.99**	**37**	⇓P	**P**	**22 15 48.8**	**-0.3**
	baz=88						
T18A	**Mexican Hat**	**88.18**	**49**	⇓P	**P**	**22 15 49.8**	**-0.4**
	baz=88,SNR=8.8						
OD2	**Odessa Site #2**	**88.19**	**36**	*e*P	**P**	**22 15 50.4**	**+0.4**
H11A	**Donnelly**	**88.19**	**40**	⇑P	**P**	**22 15 50.0**	**-0.1**
	baz=88,SNR=10						
F10A	**Beach

I14A	Mackay	89.31	41	⇑P		P	22 15 55.7 +0.4
	baz=90,SNR=5.6						
CM31	Chiang Mai Arr	89.33	290	eP		P	22 15 57.6 +1.6
	comp=Z,7.6nm,0.9s,mb4.5						
CMAR	Chiang Mai Arr	89.33	290	P		P	22 15 57.5 +1.5
	comp=Z,8.9nm,0.8s,mb4.6,baz=135,slow=3.1,SNR=44						
U21A	Nageezi	89.39	50	⇓P		P	22 15 56.1 +0.1
	baz=90,SNR=6.5						
Y23A	Lovelace Mesa,	89.40	53	⇓P		P	22 15 56.1 +0.1
	baz=90						
627A	Terlingua Ranc	89.43	58	⇑P		P	22 15 56.3 0.0
	baz=90						
G13A	Cobalt	89.46	40	⇑P		P	22 15 56.2 +0.2
	baz=90						
426A	McDonald Obser	89.47	57	⇑P		P	22 15 56.5 +0.1
	baz=90,SNR=5.7						
Q19A	Hogan Spring (	89.49	47	⇓P		P	22 15 56.8 +0.5
	baz=90						
225A	Deer Hill, Car	89.50	55	⇓P		P	22 15 56.7 +0.2
	baz=90						
HHC	Hu-ho-hao-te	89.50	315	eP		P	22 15 58.1 +1.8
HHC				S		S	22 25 58.8 +0.8
HHC				pmax		pmax	
	comp=Z,7.0nm,4.8s						
ANMO	Albuquerque	89.57	52	eP		P	22 15 57.2 +0.4
	comp=Z,0.8nm,0.9s,mb3.5						
L16A	Fish Haven	89.58	44	⇓P		P	22 15 56.3 -0.3
	baz=90						
H14A	Leadore	89.73	41	⇑P		P	22 15 57.8 +0.5
	baz=90						
F13A	Darby	89.78	39	⇓P		P	22 15 57.0 -0.5
	baz=90						
M17A	Scullys Gap (B	89.80	45	⇑P		P	22 15 57.6 -0.1
	baz=90						
C11A	Tepee Creek (N	89.81	37	⇑P		P	22 15 57.4 -0.1
	baz=90						
Y24A	Capitan	89.85	53	⇑P		P	22 15 57.7 -0.4
	baz=90,SNR=13						
125A	Gardner Draw,	89.87	55	⇑P		P	22 15 58.0 -0.2
	baz=90						
P19A	Cripple Cowboy	90.01	47	⇑P		P	22 15 58.5 -0.2
	baz=90						
226A	Malaga, Loving	90.02	55	⇑P		P	22 15 58.9 -0.1
	baz=90						
427A	Hayter Ranch,	90.03	57	⇑P		P	22 15 58.9 -0.1
	baz=90,SNR=5.3						
Z25A	Roswell	90.10	54	⇓P		P	22 15 59.3 0.0
	baz=90						
COLA	College	90.15	13	eP		P	22 15 57.5 -1.2
	comp=Z,10nm,1.3s,mb4.5						
M18A	Lyman	90.17	45	⇑P		P	22 15 59.8 +0.4
	baz=90,SNR=6.2						
K17A	Gardner Place,	90.28	43	⇓P		P	22 15 59.8 -0.1
	baz=90						
U23A	El Rito	90.39	51	⇑P		P	22 15 59.7 -0.8
	baz=91						
Y25A	Mesa, Roswell	90.40	53	⇑P		P	22 16 00.1 -0.5
	baz=91						
CD2	Chengdu	90.49	303	eP		P	22 16 00.5 -0.6
CD2				pP		pP	22 18 11.1 +2.9
CD2				sP		sP	22 19 10.0 +3.4
CD2				pmax		pmax	
	comp=Z,10.0nm,0.6s,mb4.8						
CD2				pmax		pmax	
	comp=Z,30nm,5.2s						
BILL	Bilibino	90.56	355	eP		P	22 16 00.2 -0.4
	comp=Z,6.3nm,0.8s,mb4.6						
Z26A	Caprock	90.65	54	⇓P		P	22 16 01.6 -0.2
	baz=91						
K18A	Toltan Ranch,	90.79	44	⇑P		P	22 16 02.3 +0.1
	baz=91,SNR=5.6						
L19A	Farson	90.97	44	⇓P		P	22 16 02.9 -0.1
	baz=91						
N20A	Spence Gulch,	91.07	46	⇓P		P	22 16 02.8 -0.8
	baz=91						
J18A	Kendall Valley	91.09	43	⇓P		P	22 16 03.4 -0.2
	baz=91,SNR=6.5						
W25A	X Bar L Ranch,	91.15	52	⇓P		P	22 16 03.1 -1.0
	baz=91						
PDAR	Pinedale Array	91.16	44	P		P	22 16 03.8 -0.2
	comp=Z,1.8nm,0.9s,mb4.0,baz=222,slow=2.0,SNR=12						
V25A	Rancho No Teng	91.31	52	⇓P		P	22 16 04.0 -0.8
	baz=92						
BOZ	Bozeman (W)	91.32	41	⇑P		P	22 16 04.3 -0.2
	baz=92						
L20A	Wamsutter	91.58	45	⇑P		P	22 16 06.2 +0.4
	baz=92						
EGAK	Eagle	91.59	15	eP		P	22 16 04.5 -0.9
	comp=Z,14nm,1.4s,mb4.8						
U25A	Circle Dot Ran	91.71	51	⇓P		P	22 16 06.9 +0.2
	baz=92						
MSTX	Muleshoe	91.86	54	⇑P		P	22 16 07.5 +0.1
	baz=92						
A14A	Double T Ranch	92.01	37	⇓P		P	22 16 07.4 -0.2
	baz=92						
T25A	Trinidad	92.04	51	⇓P		P	22 16 08.4 +0.3
	baz=92						
LZH	Lanzhou	92.65	308	eP		P	22 16 12.0 +1.1
LZH				pP		pP	22 18 22.1 +3.8
LZH				sP		sP	22 19 20.0 +3.5
LZH				PP		PP	22 20 06.8 +3.2
LZH				pmax		pmax	
	comp=Z,13nm,1.0s,mb4.9						
B16A	M & M Farms, S	92.69	38	⇓P		P	22 16 10.1 -0.7
	baz=93						
YAK	Yakutsk	93.13	339	eP		P	22 16 11.8 -0.7
SONM	Songino Array	96.08	319	P		P	22 16 26.1 0.0
	comp=Z,0.6nm,0.3s,mb4.2,baz=149,slow=6.7,SNR=3.5						
ZALV	Zalesovo Beam	110.89	321	PKiKP		PKiKP	22 21 25.9 -1.7
	comp=Z,0.9nm,0.5s,baz=135,slow=0.7,SNR=6.4						
MKAR	Makanchi Array	111.30	313	PKiKP		PKiKP	22 21 27.4 -1.2
	comp=Z,0.7nm,0.4s,baz=68,slow=1.1,SNR=7.8						
KURK	Kurchatov	114.24	317	PKP		PKiKP	22 21 32.7 -1.5
	comp=Z,1.3nm,0.5s,baz=109,slow=1.6,SNR=14						
KURK	Kurchatov	114.24	317	PKP		PKiKP	22 21 32.7 -1.5
KBL	Kabul	119.42	298	ePKPdf		PKPdf	22 21 44.5 -0.2
BVAR	Borovoye Array	119.42	319	PKP		PKPdf	22 21 43.0 -1.1
	comp=Z,2.1nm,0.4s,baz=134,slow=1.1,SNR=33						
SUMG	Summit	125.11	13	iP		PKPdf	22 21 53.4 -1.1
	comp=Z,3.7nm,0.8s						
ARU	Arti	125.74	324	ePKPdf		PKPdf	22 21 55.5 -0.6
ABKAR	Akbulak array	126.29	316	ePKPdf		PKPdf	22 21 56.3 -1.1
ARCES	ARCESS Array B	130.29	349	PKP		PKPdf	22 22 03.4 -1.1
	comp=Z,3.2nm,0.6s,baz=43,slow=1.4,SNR=24						
FINES	FINESS Array B	136.95	342	PKhKP			22 22 03.5
	comp=Z,3.7nm,1.1s,baz=40,slow=3.2,SNR=6.5						
FINES				PKP		PKPdf	22 22 15.8 -1.3
	comp=Z,3.4nm,0.8s,baz=31,slow=3.2,SNR=9.8						
FINES	FINESS Array B	136.95	342	PKP			22 22 03.5
FINES				PKP		PKPdf	22 22 15.8 -1.3
NOA	NORSAR Array B	140.45	352	PKhKP			22 22 16.1
	comp=Z,2.5nm,0.8s,baz=14,slow=2.3,SNR=8.1						
AKASG	Malin Array Be	143.74	329	PKP		PKPdf	22 22 27.4 -2.2
	comp=Z,9.3nm,0.5s,baz=41,slow=4.4,SNR=95						
AKASG	Malin Array Be	143.74	329	PKP		PKPdf	22 22 27.4 -2.2
KIEV	Kiev	143.75	329	ePKPdf		PKPdf	22 22 27.5 -2.1
SUW	Suwalki	143.86	337	ePKP		PKPdf	22 22 28.5 -1.2
SUW	Suwalki	143.86	337	ePKPdf		PKPdf	22 22 28.3 -1.4
RRH	Rhenigidale	143.92	6	eP		PKPdf	22 22 28.0 -1.7
KAC	Achnashellach	144.47	5	eP		PKPdf	22 22 29.9 -0.7
KPL	Plockton	144.60	6	eP		PKPdf	22 22 30.1 -0.8
KPL	Plockton	144.60	6	P		PKPdf	22 22 30.1 -0.8
MDO	Dochfour	144.60	4	eP		PKPdf	22 22 30.2 -0.7
MUD	Monsted U'grnd	145.16	352	iP		PKPdf	22 22 31.6 -0.3
	comp=Z,15nm,1.0s						
BSD	Bornholm Skovb	145.37	345	iP		PKPdf	22 22 32.5 +0.2
	comp=Z,23nm,0.9s						
EBH	Black Hill	145.85	4	eP		PKPdf	22 22 33.4 +0.3
EAB	Aberfoyle	145.85	5	eP		PKPdf	22 22 33.9 +0.8
ASF	Jabal al Asfar	146.23	295	PKPbc		PKPbc	22 22 36.0 -0.8
	comp=Z,6.7nm,0.7s,baz=353,slow=3.2,SNR=18						
EAU	Auchinoon	146.25	4	eP		PKPbc	22 22 35.3 -0.7
EBL	Broad Law	146.35	4	eP		PKPbc	22 22 34.9 -1.4
GKP	Gorka Klasztor	146.42	342	ePKP		PKPbc	22 22 36.5 -0.1
ESK	Eskdalemuir	146.79	4	eP		PKPbc	22 22 35.9 -1.6
BR131	Keskin Array S	146.84	309	ePKPbc		PKPbc	22 22 37.6 -0.6
BRTR	Keskin Array B	146.84	309	PKPbc		PKPbc	22 22 37.6 -0.6
	comp=Z,6.5nm,0.8s,baz=134,slow=4.3,SNR=42						
ECK	Cauldkaine Hil	146.93	4	eP		PKPbc	22 22 36.3 -1.6
GAL1	Galloway	147.13	6	eP		PKPbc	22 22 37.3 -1.1
GAL1				eP			22 22 37.4
GAL1	Galloway	147.13	6	P		PKPbc	22 22 37.4 -1.0
MMAI	Mount Meron Ar	147.34	297	PKPbc		PKPbc	22 22 40.1 +0.4
	comp=Z,14nm,0.6s,baz=69,slow=4.7,SNR=31						
TLCR		147.37	321	⇓P		PKPbc	22 22 39.0 -0.4
TLCR		147.37	321	⇓iP		PKPbc	22 22 39.0 -0.4
BSEG	Bad Segeberg	147.42	349	ePKPbc		PKPbc	22 22 38.7 -0.5
BSEG				ePKPab		PKPab	22 22 42.7 -0.5
KWP	Kalwaria Pacla	147.45	333	ePKP		PKPbc	22 22 39.2 -0.3
KWP	Kalwaria Pacla	147.45	333	ePKPbc		PKPbc	22 22 39.3 -0.2
KWP	Kalwaria Pacla	147.45	333	⇑iP		PKPbc	22 22 39.1 -0.3
BUR08	Bucovina Ar. S	147.75	328	ePKPbc		PKPbc	22 22 40.8 +0.5
BUR01	Bucovina Ar. S	147.76	328	P		PKPbc	22 22 41.3 +1.0
BURAR	Bucovina Array	147.76	328	⇓P		PKPbc	22 22 41.5 +1.2
BURAR	Bucovina Array	147.76	328	⇓iP		PKPbc	22 22 41.5 +1.2
VRI	Vrincioaia	148.13	324	⇓P		PKPbc	22 22 40.3 -1.0
VRI	Vrincioaia	148.13	324	⇓iP		PKPbc	22 22 40.3 -1.0
OJC	Ojcow	148.15	336	ePKP		PKPbc	22 22 39.6 -1.6
KOLS	Kolonicke sedl	148.17	332	ePKP		PKPbc	22 22 41.5 +0.2
KOLS	Kolonicke sedl	148.17	332	ePKP		PKPbc	22 22 41.5 +0.2
HARR	Harsova	148.17	321	⇑P		PKPbc	22 22 41.4 0.0
HARR	Harsova	148.17	321	⇑iP		PKPbc	22 22 41.4 0.0
EIL	Elat	148.18	291	PKPbc		PKPbc	22 22 42.3 +0.4
	comp=Z,12nm,0.7s,baz=301,slow=11,SNR=13						
PLOR	Plostina	148.18	324	⇑iP		PKPbc	22 22 39.4 -2.0
STHS	Stebnicka Huta	148.23	334	ePKP		PKPbc	22 22 41.7 +0.3
STHS	Stebnicka Huta	148.23	334	ePKP		PKPbc	22 22 41.7 +0.3
HPK	Haverah Park	148.23	2	eP		PKPbc	22 22 40.4 -0.9
CRVS	Cervenica-Dubn	148.54	333	ePKP		PKPbc	22 22 42.2 0.0
CRVS	Cervenica-Dubn	148.54	333	ePKP		PKPbc	22 22 42.2 0.0
BMR	Baia Mare	148.55	330	P		PKPbc	22 22 42.3 0.0
NIE	Niedzica	148.60	335	ePKP		PKPbc	22 22 42.7 +0.4
LHO	Holmfirth	148.63	3	eP		PKPbc	22 22 41.0 -1.2
MLR	Muntele Rosu	148.79	324	⇑P		PKPbc	22 22 42.2 -0.7
MLR	Muntele Rosu	148.79	324	⇑iP		PKPbc	22 22 42.2 -0.7
KSP	Ksiaz	148.82	340	ePKP		PKPbc	22 22 43.1 +0.3
NRDL	Niedersach Rie	148.84	349	ePKPbc		PKPbc	22 22 42.2 -0.6
KBI1	Birley Grange	148.94	2	eP		PKPbc	22 22 41.9 -1.1
OKC	Ostrava-Krasne	149.07	337	⇑ePKP		PKPbc	22 22 43.3 -0.1
OKC				ePKPAB		PKPab	22 22 50.1 -0.1
UPC	Upice	149.21	340	⇑ePKP		PKPbc	22 22 43.6 -0.1
UPC				ePKPAB		PKPab	22 22 49.6 -1.1
DPC	Dobruska-Polom	149.25	340	⇑ePKP		PKPbc	22 22 44.1 +0.2
KECS	Kecovo	149.27	334	ePKP		PKPbc	22 22 44.4 +0.4
KECS				e			22 22 51.0
KECS	Kecovo	149.27	334	ePKP		PKPbc	22 22 44.4 +0.4
KECS				e			22 22 51.0
VOIR		149.31	325	⇓P		PKPbc	22 22 43.9 -0.2
VOIR		149.31	325	⇓iP		PKPbc	22 22 43.9 -0.3
CLL	Collm	149.33	344	ePKPbc		PKPbc	22 22 43.5 -0.5
CLL				ePKPab		PKPab	22 22 50.6 -0.6
CLL	Collm	149.33	344	⇑iPKP		PKPbc	22 22 43.7 -0.3
CLL	Collm	149.33	344	⇑iPKPbc		PKPbc	22 22 43.7 -0.3
	comp=Z,36nm,0.8s						
CLL				⇓iPKPab		PKPab	22 22 50.5 -0.7
	comp=Z,13nm,0.8s						
CLL				e			22 22 58.0
MORC	Moravsky Berou	149.33	338	ePKPbc		PKPbc	22 22 44.0 -0.1
MORC	Moravsky Berou	149.33	338	⇑iP		PKPbc	22 22 44.1 0.0
CLZ	Clausthal	149.41	348	ePKPbc		PKPbc	22 22 43.9 -0.3
CWF	Charnwood Fore	149.46	2	eP		PKPbc	22 22 43.0 -1.3
BRG	Berggiesshubel	149.48	343	iPKP		PKPbc	22 22 44.1 -0.3
	comp=Z,29nm,0.8s						
BRG				i			22 22 51.6
	comp=Z,8.2nm,0.8s						
DRGR		149.56	329	⇑iP		PKPbc	22 22 44.3 -0.4
PVCC	Panska Ves	149.62	342	⇑ePKP		PKPbc	22 22 44.8 +0.1
PVCC				ePKPAB		PKPab	22 22 52.0 -0.4
VYHS	Vyhne	149.92	335	ePKP		PKPbc	22 22 45.3 -0.2
VYHS				e		PKPab	22 22 53.6 -0.2
PSZ	Piszkesteto	149.96	333	⇑iP		PKPbc	22 22 45.0 -0.6
HTR	Trewern Hill	150.01	5	eP		PKPbc	22 22 44.2 -1.4
VRAC	Vranov	150.06	339	⇓iP		PKPbc	22 22 44.9 -0.9
PRU	Pruhonice	150.11	342	⇑ePKP		PKPbc	22 22 46.1 +0.2
PRU				ePKPAB		PKPab	22 22 54.4 -0.1
MOX	Moxa	150.27	346	ePKP		PKPbc	22 22 45.7 -0.6
	comp=Z,16nm,1.1s						
MOX	Moxa	150.27	346	ePKPbc		PKPbc	22 22 45.6 -0.7
MOX				ePKPab		PKPab	22 22 54.4 -0.7
TANN	Tannenbergstha	150.28	344	ePKPbc		PKPbc	22 22 46.0 -0.3
TANN				ePKPab		PKPab	22 22 55.2 0.0
BUG	Bochum--Univer	150.31	351	ePKPbc		PKPbc	22 22 45.4 -0.9
TREC	Trest	150.43	340	⇑ePKP		PKPbc	22 22 46.1 -0.6
SMOL	Smolenice	150.44	337	ePKP		PKPbc	22 22 47.5 +0.8
SMOL	Smolenice	150.44	337	ePKP		PKPbc	22 22 47.5 +0.8
UBBA	Unterbreizbach	150.45	348	ePKPbc		PKPbc	22 22 45.8 -0.9
HGH	Gray Hill	150.48	4	eP		PKPbc	22 22 45.5 -1.2
GZR	Gura Zlata	150.52	327	⇑iP		PKPbc	22 22 46.4 -0.6
BZS	Buzias	150.93	329	⇑P		PKPbc	22 22 47.2 -0.8
BZS	Buzias	150.93	329	⇑iP		PKPbc	22 22 47.2 -0.7
KHC	Kasperske Hory	151.16	342	ePKPbc		PKPbc	22 22 48.1 -0.2
KHC				ePKPab		PKPab	22 22 59.1 +0.2
KHC	Kasperske Hory	151.16	342	⇑ePKP		PKPbc	22 22 48.0 -0.3
KHC				ePKPAB		PKPab	22 22 58.6 -0.3
GRA1	Grafenberg Arr	151.25	345	ePKPbc		PKPbc	22 22 48.5 0.0
GRA1				ePKPab		PKPab	22 22 59.2 -0.1
GRF	Grafenberg Arr	151.25	345	ePKPbc		PKPbc	22 22 48.5 0.0
GRF				ePKPab		PKPab	22 22 59.2 -0.1
UCC	Uccle	151.27	355	ePKPbc		PKPbc	22 22 47.9 -0.6
MEM	Membach	151.29	353	PKPbc		PKPbc	22 22 47.9 -0.7
TNS	Taunus Mts	151.31	349	ePKPbc		PKPbc	22 22 48.3 -0.3
TNS				ePKPab		PKPab	22 22 58.8 -0.7
WET	Wettzell	151.34	343	ePKPbc		PKPbc	22 22 48.3 -0.4
WET				ePKPab		PKPab	22 22 59.7 0.0
GEC2	GERESS Array S	151.38	342	ePKPbc		PKPbc	22 22 48.2 -0.6
GEC2				ePKPab		PKPab	22 22 59.9 +0.1
GERES	GERESS Array B	151.38	342	PKP		PKPdf	22 22 40.7 -1.4
	comp=Z,0.6nm,0.9s,baz=207,slow=1.5,SNR=4.2						
GERES				PKPbc		PKPbc	22 22 48.4 -0.5
	comp=Z,5.3nm,0.8s,baz=28,slow=2.3,SNR=38						
GERES				PKPab		PKPab	22 22 59.4 -0.4
	comp=Z,1.6nm,0.7s,baz=28,slow=3.5,SNR=6.7						
GERES				pPKPbc		pPKPbc	22 25 07.2 +3.4
	comp=Z,0.6nm,0.9s,baz=151,slow=3.0,SNR=4.2						
CSNA	Conrad Observa	151.49	338	⇑iPKiKP		PKiKP	22 22 48.9 -0.5
	comp=Z,8.3nm,0.7s						
SNF	Seneffe	151.56	355	PKPbc		PKPbc	22 22 48.9 -0.3
SNF				PKPab		PKPab	22 22 59.5 -1.0
DYA	Yadsworthy	151.59	6	eP		PKPbc	22 22 48.1 -1.1
PKSM	Moragy	151.83	333	⇑P		PKPbc	22 22 49.0 -0.9
PKSM	Moragy	151.83	333	⇑iP		PKPbc	22 22 49.0 -0.9
DOU	Dourbes	151.95	354	PKPbc		PKPbc	22 22 49.7 -0.3
WLF	Walferdange	152.20	352	PKPbc		PKPbc	22 22 50.9 +0.3
WLF	Walferdange	152.20	352	ePKPbc		PKPbc	22 22 50.5 -0.1
STU	Stuttgart	152.56	347	ePKPbc		PKPbc	22 22 51.3 -0.2
RJOB	Jochberg	152.64	342	ePKPbc		PKPbc	22 22 51.0 -0.6
RJOB				ePKPab		PKPab	22 23 05.3 +0.1
FUR	Furstenfeldbru	152.66	344	ePKPbc		PKPbc	22 22 51.0 -0.7
FUR				ePKPab		PKPab	22 23 05.1 -0.2
BFO	Black Forest	153.16	348	ePKPbc		PKPbc	22 22 52.1 -0.6
BFO				ePKPab		PKPab	22 23 06.6 -0.8
FETA	Feichten	153.86	344	⇑iPKPdf		PKPdf	22 22 44.8 -1.0
	comp=Z,6.5nm,0.9s						
LOR	Lormes	154.82	355	ePKIKP		PKPdf	22 22 46.2 -0.9
	comp=Z,6.9nm,1.0s						
SSF	Saint Saulge	155.05	355	ePKIKP		PKPdf	22 22 46.5 -0.9
	comp=Z,5.9nm,0.9s						
SMF	Signal de Mont	155.44	354	ePKIKP		PKPdf	22 22 47.8 -0.1
MFF	Saint Martin d	155.63	1	ePKIKP		PKPdf	22 22 47.0 -1.2
TCF	Toulx Ste Croi	155.91	357	ePKIKP		PKPdf	22 22 47.5 -1.1
	comp=Z,5.5nm,0.9s						
FRF	La Foret Royal	158.06	348	ePKIKP		PKPdf	22 22 52.6 +1.3
TORD	Torodi Ar. Bea	170.94	188	PKPab		PKPab	22 24 25.8 -0.3
	comp=Z,2.3nm,0.9s,baz=176,slow=4.7,SNR=3.7						

KRSC 14 22:06:07.0±0.8, 52°.15N×158°.57E, h103km±73km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	Gorelyy	0.51	323	eP	Pn	22 06 24.6	+1.5
GRL				iS	Sn	22 06 38.5	+3.4
PET	Petropavlovsk	0.88	3	eP	Pn	22 06 27.4	+1.1
PET				iS	Sn	22 06 41.9	+1.1
AVH	Avacha	1.12	5	eP	Pn	22 06 30.9	+2.0
AVH				iS	Sn	22 06 47.9	+2.4
MIPR	Malaya Ipel'ka	1.12	277	eP	Pn	22 06 28.3	-0.6
NLC	Nalytchevo	1.13	24	eP	Pn	22 06 30.2	+1.2
NLC				iS	Sn	22 06 46.5	+0.9
GNL	Ganaly	1.59	346	eP	Pn	22 06 34.3	-0.2
GNL				iS	Sn	22 06 54.4	-1.0
ALID	Alaid	2.28	237	eP	Pn	22 06 43.8	+0.5
MKZ	Mys Kozlova	3.06	37	eP	Pn	22 06 55.3	+1.7
MKZ				iS	Sn	22 07 29.9	+0.4
KMNR	Kamenistaya	3.75	15	eP	Pn	22 07 04.4	+1.7
KBTR	Krutoberegovo	4.77	30	eP	Pn	22 07 19.0	+2.5

JMA 14 22:06:36.8, 38°.89N×140°.86E, h8km±1km, M3.2, 2C-3D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	Ichinoseki	0.29	77	⇓P	Pg	22 06 42.6	+0.1
JMK				S	Sg	22 06 46.8	+0.5
JYK	Kaneyama	0.39	274	⇓P	Pg	22 06 44.5	+0.1
JYK				S	Sg	22 06 49.6	0.0
JRG	Rokugo	0.54	341	⇓P	Pg	22 06 47.5	+0.3
JRG				S	Sg	22 06 55.2	+1.0
JOU	Okura	0.55	196	⇑P	Pg	22 06 47.3	0.0
JOU				S	Sg	22 06 54.4	-0.1
JOM	Ohasama	0.67	30	⇑P	Pg	22 06 49.6	-0.2
JOM				S	Sg	22 06 59.0	+0.5
MAT	Matsushiro	3.15	223	P	Pn	22 07 30.4	+3.7
MAT				S	Sn	22 08 13.9	+9.5

ISCJB ***14*** *22:11:13.1±1.0, 21°.45S±0°.04×68°.28W±0°.06, h86km±9km, mb4.5/37, Error ellipse: s-maj=10.1km s-min=7.0km az=158.3*
NEIC ***14*** *22:11:16.8±0.8, 21°.58S×68°.26W, h112km±7km, mb4.6/28, Error ellipse: s-maj=9.1km s-min=6.7km az=74.0*
BJI ***14*** *22:11:18.7, 21°.60S×68°.30W, h112km, mB5.1/8*
IDC ***14*** *22:11:20.4±0.8, 21°.32S×68°.19W, h140km±5km, mb4.2/11, mb1 4.3/15, mb1mx4.2/20, mbtmp4.1/15, MS3.4/3, Ms1 3.4/3, ms1mx2.9/26, Error ellipse: s-maj=22.5km s-min=14.0km az=35.0*

ISC 14 22:11:14.1±0.8, 21°.49S±0°.04×68°.22W±0°.06, h80km±7km, h132km±3.3km; pP-P, n337, σ0°69/323, mb4.5/37, 120C-97D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	5.18	1	P	Pn	22 12 36.0	+6.9
	6.4nm,0.3s,baz=186,slow=5.9,SNR=102						
LPAZ				S	Sn	22 13 28.0	+0.4
	1.3nm,0.3s,baz=189,slow=7.4,SNR=4.5						
LPAZ	La Paz	5.18	1	ePn	Pn	22 12 35.6	+6.5
LCO	Las Campanas	7.81	196	eP	Pn	22 13 05.3	+0.3
LCO				eS	Sn	22 14 30.5	-1.5
LCO	Las Campanas	7.81	196	eP	Sn	22 14 30.0	-1.9
SIV	San Ignacio	8.71	52	P	Pn	22 13 20.2	+2.9
	7.3nm,0.3s,baz=246,slow=12,SNR=276						
SIV				S	Sn	22 14 51.4	-2.5
	1.0nm,0.3s,baz=156,slow=22,SNR=8.5						
TLL	Tololo Astrono	8.95	195	eP	Sn	22 14 56.9	-2.7
CFAA	Coronel Fontan	10.07	180	P	Pn	22 13 37.0	+1.2
	0.1nm,0.3s,baz=347,slow=13,SNR=17						
CFAA				S	Sn	22 15 21.3	-5.8
	0.1nm,0.3s,baz=298,slow=17,SNR=3.5						
CPUP	Villa Florida	11.06	118	P	Pn	22 13 53.6	+4.2
	0.8nm,0.3s,baz=277,slow=12,SNR=18						
CPUP	Villa Florida	11.06	118	ePn	Pn	22 13 53.0	+3.6
NNA	Nana	12.55	318	P	Pn	22 14 17.4	+7.8
	0.5nm,0.3s,baz=184,slow=8.4,SNR=6.4						
NNA	Nana	12.55	318	P	Pn	22 14 17.4	+7.8
ATAH	Atahualpa	17.33	324	P	Pn	22 15 11.4	+0.4
	0.5nm,0.3s,baz=130,slow=4.6,SNR=6.0						
TRQA	Tornquist	17.36	163	ePn	Pn	22 15 12.7	+1.5
	50nm,1.3s						
PLCA	Paso Flores	19.28	185	P	Pn	22 15 30.1	-4.1
	0.1nm,0.3s,baz=194,slow=1.6,SNR=3.3						
OTAV	Otavalo	23.80	334	P	P	22 16 20.8	+1.2
	6.6nm,0.8s,mb4.0						
CAM4	Nova Friburgo	23.81	97	⇓iP	P	22 16 21.3	+1.6
CAM4				i	

X26A **CR and CF Fran** 65.20 328 ⇊P P 22 21 45.7 -1.3
baz=66
320A **Kipp Ranch, An** 65.22 322 ⇑P P 22 21 46.3 -0.9
baz=66
W26A **Owens Ranch, T** 65.61 328 ⇊P P 22 21 50.1 +0.5
baz=66
220A **Playas Peak, P** 65.64 323 P P 22 21 50.0 +0.2
baz=66,SNR=6.8
319A **Douglas** 65.67 322 ⇑P P 22 21 50.2 +0.1
baz=66,SNR=13
121A **Cookes Peak, D** 65.70 324 ⇊P P 22 21 50.5 +0.3
baz=66,SNR=7.5
Z22A **Elephant Butte** 65.81 325 P P 22 21 51.2 +0.3
baz=66,SNR=11
W25A **X Bar L Ranch,** 66.05 328 ⇑P P 22 21 51.1 -1.3
baz=66,SNR=6.1
219A **White Tail Can** 66.12 322 ⇊P P 22 21 52.2 -0.7
baz=66,SNR=9.2
318A **Bisbee** 66.13 321 ⇊P P 22 21 52.1 -0.9
baz=66,SNR=12
120A **U Bar Ranch, L** 66.18 323 ⇑P P 22 21 53.6 +0.3
baz=66
V26A **Tequesquite Ra** 66.19 329 ⇑P P 22 21 52.7 -0.6
baz=66
Z21A **St. Cloud Mine** 66.23 324 ⇊P P 22 21 53.9 +0.3
baz=66,SNR=12
Y22A **Socorro** 66.33 325 ⇑P P 22 21 54.5 +0.3
baz=67
W24A **Lazy 6 Ranch,** 66.52 327 ⇑P P 22 21 54.5 -0.9
baz=67
218A **Dragoon** 66.56 322 ⇑P P 22 21 55.8 +0.1
baz=67
Z20A **Nine Sixteen R** 66.58 324 ⇊P P 22 21 56.1 +0.2
baz=67,SNR=11
V25A **Rancho No Teng** 66.62 328 ⇑P P 22 21 55.4 -0.7
baz=67,SNR=8.4
U26A **Atchley Ranch,** 66.65 329 ⇊P P 22 21 55.9 -0.3
baz=67,SNR=7.2
Y21A **Point of Rocks** 66.76 325 ⇑P P 22 21 57.9 +0.9
baz=67,SNR=15
ANMO **Albuquerque** 66.85 326 eP P 22 21 57.4 -0.1
1.1nm,0.8s,mb3.7
217A **Green Valley** 66.86 321 ⇊P P 22 21 57.5 -0.1
baz=67,SNR=8.1
U25A **Circle Dot Ran** 66.97 329 ⇑P P 22 21 58.0 -0.2
baz=67,SNR=6.9
118A **Homack Ranch,** 67.00 322 ⇊P P 22 21 58.3 -0.2
baz=67,SNR=7.3
Y20A **Horse Springs,** 67.06 324 P P 22 21 59.8 +0.9
baz=67,SNR=5.7
Z19A **T-Link Ranch,** 67.09 323 ⇊P P 22 21 59.6 +0.5
baz=67
X21A **Alamocita Cree** 67.16 325 P P 22 21 60.0 +0.5
baz=68,SNR=8.1
TUC **Tucson** 67.23 322 eP P 22 21 59.9 -0.1
V23A **Ortiz Mt. (NFS** 67.33 327 ⇊P P 22 22 01.1 +0.6
baz=68
Z18A **Geronimo** 67.37 323 ⇑P P 22 22 00.8 0.0
baz=68
117A **Oracle** 67.39 322 P P 22 22 01.2 +0.2
baz=68,SNR=8.8
216A **Three Points,** 67.40 321 ⇊P P 22 22 00.5 -0.5
baz=68
T25A **Trinidad** 67.56 329 ⇊P P 22 22 01.4 -0.6
baz=68
Y19A **Nutrioso** 67.58 324 ⇊P P 22 22 03.0 +0.8
baz=68
X20A **Quemado** 67.61 325 ⇑P P 22 22 02.7 +0.3
baz=68,SNR=5.1
LIC **Lamto** 67.77 73 eP P 22 22 03.0 -0.8
33nm,0.8s,mb5.2
Z17A **San Carlos Hig** 67.77 323 ⇑P P 22 22 03.5 +0.1
baz=68
U23A **El Rito** 67.79 328 ⇊P P 22 22 03.7 +0.3
baz=68
Y18A **Canyon Day Jun** 67.88 323 ⇑P P 22 22 04.2 +0.2
baz=68
116A **Eloy** 67.94 321 ⇑P P 22 22 05.0 +0.5
baz=68
X19A **St. Johns** 67.95 324 ⇑P P 22 22 05.0 +0.5
baz=68
TIC **Toumodi** 67.96 73 eP P 22 22 04.3 -0.7
21nm,0.8s,mb5.0
W20A **Ramah** 68.05 325 ⇑P P 22 22 05.1 0.0
baz=68,SNR=6.7
KIC **Kosan Boka** 68.08 73 eP P 22 22 05.0 -0.8
50nm,0.8s,mb5.4
DBIC **Dimbokro** 68.12 73 P P 22 22 05.5 -0.5
23nm,0.8s,mb5.1,baz=220,slow=6.7,SNR=24
DBIC **Dimbokro** 68.12 73 eP P 22 22 05.7 -0.3
19nm,0.7s,mb5.0
214A **Organ Pipe Nat** 68.17 320 ⇑P P 22 22 06.1 +0.2
baz=68,SNR=8.4
Y17A **Roosevelt** 68.27 323 ⇑P P 22 22 06.9 +0.3
baz=69,SNR=8.1
Z16A **Peralta Trail,** 68.35 322 ⇊P P 22 22 07.4 +0.4
baz=69
X18A **Snowflake** 68.39 324 ⇊P P 22 22 07.5 +0.3
baz=69
W19A **Sanders** 68.52 325 ⇑P P 22 22 08.5 +0.5
baz=69
SDCO **Great Sand Dun** 68.57 329 eP P 22 22 08.3 0.0
6.1nm,0.9s,mb4.4
U21A **Nageezi** 68.61 327 ⇊P P 22 22 08.9 +0.4
baz=69
T22A **Edith** 68.68 328 ⇊P P 22 22 09.4 +0.5
baz=69
X17A **Forest Lakes** 68.72 323 ⇊P P 22 22 09.8 +0.5
baz=69
Y16A **Circle Bar Ran** 68.77 322 ⇑P P 22 22 10.1 +0.5
baz=69
114A **Black Gap (USA** 68.77 321 ⇑P P 22 22 10.1 +0.5
baz=69
V19A **Window Rock** 68.79 325 P P 22 22 10.4 +0.7
baz=69,SNR=6.8
T21A **Navajo Lake** 68.98 327 ⇊P P 22 22 11.2 +0.4
baz=69
U20A **Newcomb** 69.01 326 ⇊P P 22 22 11.1 0.0
baz=69
X16A **Lo Mia Camp, P** 69.14 323 ⇑P P 22 22 12.5 +0.6
baz=69
U19A **Dine' College,** 69.31 325 ⇑P P 22 22 12.7 -0.2
baz=70
Z13A **Yuma Proving G** 69.55 320 ⇑P P 22 22 14.7 +0.2
baz=70
T19A **Beclabito** 69.62 326 ⇑P P 22 22 14.9 +0.1
baz=70
S21A **Coal Bank Pass** 69.63 327 ⇑P P 22 22 15.2 +0.4
baz=70
MVCO **Mesa Verde** 69.64 327 ⇑P P 22 22 15.3 +0.4
baz=70
MVCO **Mesa Verde** 69.64 327 eP P 22 22 15.4 +0.5
7.0nm,0.8s,mb4.5
X15A **Humboldt** 69.64 322 ⇑P P 22 22 15.2 +0.2
baz=70,SNR=7.8
V17A **Tonalea, Kykot** 69.66 324 ⇑P P 22 22 15.6 +0.5
baz=70,SNR=14
W16A **Flagstaff** 69.68 323 ⇊P P 22 22 16.0 +0.8
baz=70
Y14A **Wickenburg** 69.69 321 ⇑P P 22 22 15.4 +0.1
baz=70,SNR=5.4
U18A **Rough Rock, Ch** 69.76 325 ⇑P P 22 22 16.4 +0.8
baz=70
WUAZ **Wupatki** 69.91 324 ⇑P P 22 22 16.7 +0.1
baz=70,SNR=11
WUAZ **Wupatki** 69.91 324 eP P 22 22 16.9 +0.3
5.2nm,0.8s,mb4.4
X14A **Yava** 70.00 322 ⇊P P 22 22 17.9 +0.7
baz=70,SNR=5.5
R21A **Cimarron** 70.06 328 ⇊P P 22 22 18.0 +0.6
baz=70
GLA **Glamis** 70.15 320 ⇊P P 22 22 18.3 +0.2
baz=70
ISCO **Idaho Springs** 70.26 330 eP P 22 22 19.1 +0.5
T18A **Mexican Hat** 70.30 326 P P 22 22 18.9 0.0
baz=71,SNR=12
U17A **Shonto** 70.32 325 ⇊P P 22 22 19.4 +0.4
baz=71,SNR=5.7
R20A **Redvale** 70.33 327 ⇊P P 22 22 19.5 +0.4
baz=71,SNR=8.7
S19A **Harvey Farm, M** 70.38 327 ⇑P P 22 22 19.6 +0.2
baz=71
PV01 **Paradox Valley** 70.39 327 eP P 22 22 20.1 +0.6
443nm,1.0s
V15A **Kaibab Nationa** 70.57 323 ⇑P P 22 22 21.2 +0.6
baz=71,SNR=10
X13A **Yucca** 70.63 321 ⇑P P 22 22 21.4 +0.3
baz=71,SNR=7.5
W14A **Seligman** 70.64 322 P P 22 22 22.0 +0.9
baz=71,SNR=5.7
DVTC **Desert V Tower** 70.66 318 ⇊P P 22 22 21.9 +0.7
baz=71
T17A **Navajo Res., N** 70.69 325 P P 22 22 22.4 +1.0
baz=71,SNR=9.2
S18A **Hurst Farm, Bl** 70.78 326 ⇑P P 22 22 22.7 +0.8
baz=71,SNR=12
R19A **Curley Farm, L** 70.86 327 ⇊P P 22 22 22.5 +0.2
baz=71
BC3 **Big Chuckawall** 70.94 320 ⇑P P 22 22 22.8 -0.1
baz=71,SNR=8.7
V14A **Boquillas Ranc** 70.96 323 P P 22 22 24.0 +1.0
baz=71,SNR=14
MONP **Monument Peak** 71.01 318 ⇊P P 22 22 23.9 +0.6
baz=71
W13A **Hualapai Mount** 71.02 322 ⇑P P 22 22 23.9 +0.5
baz=71,SNR=5.8
U15A **North Rim** 71.08 324 ⇑P P 22 22 24.5 +0.8
baz=71,SNR=9.8
IRM **Iron Mountain** 71.11 320 ⇊P P 22 22 24.0 +0.1
baz=71,SNR=8.8
R18A **Canyonlands Na** 71.25 327 ⇑P P 22 22 24.4 -0.3
baz=72,SNR=5.4
Q19A **Hogan Spring (** 71.36 327 ⇊P P 22 22 26.4 +1.1
baz=72
N22A **Wattenberg Ran** 71.44 330 ⇊P P 22 22 26.4 +0.6
baz=72
BELC **Belle Mtn. Jos** 71.51 320 ⇊P P 22 22 27.1 +0.8
baz=72
PFO **Pinyon Flat Ob** 71.52 319 ⇑P P 22 22 27.1 +0.7
baz=72
T15A **Red Dirt Ranch** 71.56 324 ⇊P P 22 22 27.0 +0.4
baz=72,SNR=8.5
U14A **Mt Trumbull** 71.56 323 P P 22 22 27.7 +1.0
baz=72,SNR=13
V13A **Grand Canyon W** 71.61 322 P P 22 22 27.4 +0.5
baz=72,SNR=12
R17A **Hanksville Air** 71.70 326 P P 22 22 27.6 +0.2
baz=72,SNR=17
P19A **Cripple Cowboy** 71.74 328 ⇑P P 22 22 27.8 +0.2
baz=72,SNR=7.9
O20A **White River Ci** 71.77 329 ⇑P P 22 22 28.2 +0.4
baz=72
GMRC **Granite Mounta** 71.84 320 ⇊P P 22 22 28.8 +0.5
baz=72,SNR=11
Q18A **Rafter H Ranch** 71.91 327 ⇑P P 22 22 28.9 +0.3
baz=72
T14A **Hurricane** 71.97 324 ⇑P P 22 22 29.3 +0.2
baz=72,SNR=6.0
U13A **Pakoon Wash** 72.00 323 ⇑P P 22 22 29.4 +0.2
baz=72
V12A **Nelson** 72.02 322 ⇊P P 22 22 28.8 -0.6
baz=72
SRU **San Rafael** 72.12 327 P P 22 22 30.0 +0.1
baz=72,SNR=14
SRU **San Rafael** 72.12 327 eP P 22 22 30.0 +0.1
11nm,0.7s,mb4.8
HEC **Hector,Ludlow** 72.28 320 ⇊P P 22 22 31.2 +0.3
baz=72,SNR=7.3
Q16A **Castle Valley** 72.31 326 P P 22 22 31.7 +0.6
baz=73,SNR=7.2
N20A **Spence Gulch,** 72.32 329 ⇑P P 22 22 31.3 +0.2
baz=73
O19A **Miners Draw (B** 72.32 328 ⇊P P 22 22 31.0 -0.1
baz=73
U12A **Valley of Fire** 72.34 322 ⇑P P 22 22 31.7 +0.4
baz=73,SNR=8.8
P18A **Preston Nutter** 72.37 327 ⇑P P 22 22 31.8 +0.5
baz=73,SNR=13
T13A **Saint George** 72.40 323 ⇑P P 22 22 32.3 +0.7
baz=73
V11A **Goodsprings** 72.44 321 ⇑P P 22 22 32.2 +0.3
baz=73
TUQ **Turquoise Moun** 72.45 321 ⇊P P 22 22 32.1 +0.2
baz=73
CCUT **Cedar City** 72.48 324 eP P 22 22 33.3 +1.2
14nm,1.0s,mb4.8
P17A **Butcher Ranch,** 72.50 327 P P 22 22 32.5 +0.3
baz=73,SNR=6.0
MSU **Marysvale** 72.54 325 eP P 22 22 33.0 +0.6
BFSC **Mount Baldy Ra** 72.68 319 ⇊P P 22 22 33.5 +0.1
baz=73
ARUT **Antelope Range** 72.69 324 eP P 22 22 34.4 +1.0
14nm,0.9s,mb4.8
O18A **Roosevelt** 72.73 328 ⇑P P 22 22 34.2 +0.7
baz=73
S13A **Holt Ranch, En** 72.78 324 ⇑P P 22 22 34.1 +0.3
baz=73,SNR=5.7
L21A **Rawlins** 72.78 330 P P 22 22 33.7 -0.1
baz=73,SNR=5.3
N19A **John Jarvie Ra** 72.80 329 ⇊P P 22 22 33.9 -0.1
baz=73
GSC **Goldstone** 72.88 320 ⇑P P 22 22 34.6 +0.1
baz=73
GSC **Goldstone** 72.88 320 eP P 22 22 35.1 +0.5
4.4nm,0.9s,mb4.3
O17A **Robinson Place** 73.04 327 ⇊P P 22 22 35.6 +0.3
baz=73,SNR=5.2
T11A **Corn Creek, Al** 73.30 322 ⇑P P 22 22 37.6 +0.7
baz=74,SNR=13
EDW2 **Edwards Air Fo** 73.31 319 ⇑P P 22 22 37.1 0.0
baz=74,SNR=5.6
U10A **Ash Meadows, A** 73.37 321 ⇊P P 22 22 37.7 +0.4
baz=74
Q14A **Sevier Lake (B** 73.47 325 ⇑P P 22 22 37.9 0.0
baz=74,SNR=13
M18A **Lyman** 73.64 328 ⇑P P 22 22 38.7 -0.1
baz=74
N17A **Moffit Pass** 73.65 328 ⇊P P 22 22 39.0 +0.1
baz=74
FURC **Furnace Creek,** 73.71 321 ⇑P P 22 22 39.6 +0.2
baz=74,SNR=8.2
R12A **Pony Springs,** 73.72 324 ⇊P P 22 22 39.7 +0.3
baz=74,SNR=12
K20A **Yellowstone Ra** 73.78 330 ⇑P P 22 22 39.3 -0.3
baz=74
P14A **Drum Mountains** 73.80 325 P P 22 22 40.8 +1.0
baz=74,SNR=8.1
MPMC **Manual Prospec** 73.80 320 ⇊P P 22 22 39.8 -0.1
baz=74,SNR=6.9
L19A **Farson** 73.82 329 ⇊P P 22 22 39.8 -0.1
baz=74
L18A **Fontenelle, Gr** 74.01 329 ⇊P P 22 22 41.1 +0.1
baz=74
DUG **Dugway** 74.11 326 ⇊P P 22 22 41.7 +0.1
baz=74
ISA **Isabella** 74.13 319 ⇑P P 22 22 41.9 +0.1
baz=74,SNR=8.3
ISA **Isabella** 74.13 319 eP P 22 22 41.9 0.0
5.2nm,0.7s,mb4.4
K19A **Absolon Red Bu** 74.14 330 ⇊P P 22 22 41.4 -0.3
baz=74
P13A **Bates Ranch, G** 74.21 325 ⇊P P 22 22 42.7 +0.5
baz=74,SNR=5.5
R11A **Troy Canyon, C** 74.28 323 ⇑P P 22 22 43.1 +0.5
baz=75,SNR=7.8
Q12A **Willow Creek R** 74.35 324 ⇑P P 22 22 43.2 +0.1
baz=75
PDAR **Pinedale Array** 74.42 330 P P 22 22 43.0 -0.4
0.9nm,0.7s,mb3.6,baz=145,slow=5.4,SNR=7.4
PDAR pP pP 22 23 16.0 +11
0.7nm,0.7s,baz=157,slow=1.1,SNR=3.1
PKM **Peak Mountain** 74.45 318 ⇑P P 22 22 44.0 +0.3
baz=75,SNR=5.4
HWUT **Hardware Ranch** 74.52 328 eP P 22 22 43.6 -0.3
2.9nm,0.6s,mb4.2
K18A **Toltan Ranch,** 74.56 329 P P 22 22 44.9 +0.7
baz=75,SNR=6.4
S10A **Tonopah Range,** 74.56 322 ⇑P P 22 22 44.6 +0.4
baz=75,SNR=8.5
R10A **Warm Springs** 74.64 323 P P 22 22 46.1 +1.3
baz=75,SNR=8.2
Q11A **Duckwater** 74.67 323 ⇊P P 22 22 45.6 +0.7
baz=75
P12A **McGill** 74.70 324 ⇑P P 22 22 45.0 0.0
baz=75
L16A **Fish Haven** 74.76 328 ⇑P P 22 22 44.9 -0.4
baz=75
N14A **Grayback Hills** 74.78 326 P P 22 22 45.5 0.0
baz=75,SNR=5.6
SMMC **Simmler** 74.83 318 ⇊P P 22 22 45.7 -0.2
baz=75,SNR=5.7
M15A **Larsen Ranch,** 74.85 327 ⇊P P 22 22 45.6 -0.2
baz=75,SNR=6.9
J18A **Kendall Valley** 74.98 330 ⇑P P 22 22 46.0 -0.6
baz=75,SNR=7.7
Q10A **Clear Creek Ra** 75.07 323 ⇊P P 22 22 46.7 -0.5
baz=75
O12A **Currie** 75.18 325 ⇑P P 22 22 47.6 -0.2
baz=76,SNR=9.5
L15A **Malad City** 75.22 328 ⇑P P 22 22 47.5 -0.5
baz=76,SNR=7.2
M14A **Sheep Mountain** 75.34 327 ⇑P P 22 22 48.9 +0.2
baz=76
J17A **Brown Place, J** 75.43 329 ⇑P P 22 22 49.6 +0.4
baz=76
K16A **Soda Springs** 75.45 329 ⇊P P 22 22 50.2 +1.0
baz=76
ULM **Lac du Bonnet** 75.50 342 P P 22 22 47.4 -2.0
4.0nm,0.5s,mb4.4,baz=168,slow=5.4,SNR=4.6
ULM **Lac du Bonnet** 75.50 342 P P 22 22 47.4 -2.0
O11A **Cowboy Ranch,** 75.57 324 ⇑P P 22 22 50.1 0.0
baz=76
L14A **Malta** 75.67 327 ⇊P P 22 22 50.7 +0.1
baz=76
NVAR **Mina Array Bea** 75.88 322 P P 22 22 52.1 +0.3
3.2nm,0.9s,mb4.0,baz=162,slow=7.4,SNR=19
L13A **Double Diamond** 76.07 327 ⇑P P 22 22 53.5 +0.6
baz=76
RLMT **Red Lodge** 76.11 331 ⇑P P 22 22 53.3 +0.3
baz=76
RLMT **Red Lodge** 76.11 331 eP P 22 22 53.1 +0.1
2.6nm,0.8s,mb4.0
G18A **Lazy EL Ranch,** 76.40 331 ⇑P P 22 22 54.7 +0.1
baz=77
K13A **Stover Farm, H** 76.55 327 ⇊P P 22 22 56.0 +0.4
baz=77
M11A **Holland Ranch,** 76.56 325 ⇑P P 22 22 55.4 -0.3
baz=77,SNR=7.5
WAKR **Walker** 76.59 321 eP P 22 22 57.0 +1.1
L12A **House Creek Ra** 76.67 326 ⇊P P 22 22 56.7 +0.5
baz=77,SNR=7.0
TORD **Torodi Ar. Bea** 76.75 70 P P 22 22 56.4 -0.9
16nm,0.7s,mb4.9,baz=253,slow=5.4,SNR=165
I15A **Monteview** 76.75 329 ⇊P P 22 22 57.6 +0.9
baz=77
J14A **Carey** 76.76 328 ⇊P P 22 22 56.7 0.0
baz=77
F18A **Big Timber** 76.92 332 ⇑P P 22 22 56.9 -0.7
baz=77
K12A **Draper Farm, C** 76.96 327 ⇑P P 22 22 58.2 +0.4
baz=77,SNR=11
M10A **I.L. Ranch, Tu** 77.03 325 ⇑P P 22 22 58.3 0.0
baz=77
L11A **Cat Creek Ranc** 77.06 326 ⇑P P 22 22 58.8 +0.3
baz=77,SNR=6.7
J13A **Cove Ranch, Pi** 77.14 327 ⇑P P 22 22 59.3 +0.5
baz=77
I14A **Mackay** 77.17 328 P P 22 22 59.7 +0.7
baz=78,SNR=6.2
F17A **Fitzpatrick Pl** 77.34 331 ⇑P P 22 23 00.2 +0.3
baz=78
PAHR **Pah Rah Range** 77.36 322 eP P 22 23 01.1 +1.0
HLID **Hailey** 77.38 327 ⇊P P 22 23 00.4 +0.2
baz=78,SNR=6.4
L10A **Juniper Basin** 77.38 325 P P 22 23 00.7 +0.4
baz=78,SNR=15
I13A **Wildhorse Cree** 77.49 328 ⇑P P 22 23 01.0 +0.2
baz=78,SNR=5.8
J12A **Stokes Ranch,** 77.50 327 ⇊P P 22 23 01.2 +0.3
baz=78,SNR=7.3
MCMT **McKenzie Canyo** 77.54 329 eP P 22 23 02.0 +0.9
3.1nm,1.0s,mb4.0
BOZ **Bozeman (W)** 77.58 330 ⇑P P 22 23 00.8 -0.5
baz=78
G15A **Dillon** 77.62 330 ⇊P P 22 23 02.0 +0.5
baz=78
H14A **Leadore** 77.64 329 ⇊P P 22 23 02.0 +0.4
baz=78
K11A **Parker Ranch,** 77.64 326 ⇑P P 22 23 01.4 -0.3
baz=78,SNR=5.2
E17A **Martinsdale** 77.86 331 ⇊P P 22 23 03.0 +0.2
baz=78
I12A **Atlanta** 77.91 327 ⇊P P 22 23 03.7 +0.6
baz=78,SNR=6.2
H13A **Challis** 78.03 328 ⇊P P 22 23 03.6 -0.1
baz=78,SNR=11
BEKR **Beckworth** 78.03 322 ⇑P P 22 23 04.1 +0.2
baz=78,SNR=5.9
K10A **MacKenzie Ranc** 78.08 326 ⇑P P 22 23 03.9 -0.3
baz=78,SNR=5.8
D17A **Six Diamond Ra** 78.31 332 ⇊P P 22 23 04.9 -0.3
baz=79
H12A **Diamond D Ranc** 78.31 328 ⇑P P 22 23 05.2 -0.1
baz=79,SNR=5.4
G13A **Cobalt** 78.40 329 ⇊P P 22 23 06.3 +0.5
baz=79,SNR=21
D16A **Dana Ranch, Ca** 78.60 331 ⇊P P 22 23 06.4 -0.4
baz=79,SNR=5.5
E15A **Deer Lodge** 78.63 330 ⇑P P 22 23 06.6 -0.5
baz=79
F13A **Darby** 78.96 329 ⇊P P 22 23 08.5 -0.4
baz=79,SNR=12
D15A **Lincoln** 79.04 331 ⇑P P 22 23 09.6 +0.3
baz=79
H10A **Noah's Angus R** 79.29 327 ⇊P P 22 23 10.2 -0.5
baz=80
J08A **Circle Bar Ran** 79.33 325 ⇊P P 22 23 11.2 +0.2
baz=80
MOD **Modoc** 79.35 323 eP P 22 23 11.3 +0.2
11nm,1.0s,mb4.6
E13A **Victor** 79.37 330 ⇊P P 22 23 11.2 +0.2
baz=80
I09A **Lost Marbles R** 79.37 326 ⇊P P 22 23 11.2 +0.1
baz=80,SNR=5.3
F12A **Elk City** 79.38 329 ⇊P P 22 23 10.9 -0.2
baz=80
G11A **Walters Elk Ra** 79.62 328 ⇑P P 22 23 12.6 +0.1
baz=80,SNR=6.2
C15A **Salmond Ranch,** 79.63 331 ⇑P P 22 23 12.7 +0.2
baz=80,SNR=6.4
BMO **Blue Mountains** 79.76 327 eP P 22 23 13.1 -0.1
5.8nm,0.8s,mb4.5
F11A **Grangeville** 79.91 328 ⇑P P 22 23 13.7 -0.3
baz=80
D13A **Huson** 79.97 330 ⇑P P 22 23 14.1 -0.2
baz=80
G10A **Bishop Farm, J** 79.97 327 ⇑P P 22 23 14.4 0.0
baz=80,SNR=9.5
E12A **Beaver Dam Sad** 80.01 329 ⇑P P 22 23 14.2 -0.4
baz=80
B15A **Bradely Ranch,** 80.01 332 ⇑P P 22 23 13.5 -1.0
baz=80
K05A **Summer Lake** 80.22 324 ⇑P P 22 23 16.1 +0.3
baz=80,SNR=5.9
H08A **Prairie City** 80.23 326 ⇊P P 22 23 15.7 0.0
baz=80,SNR=6.3
G09A **Cove** 80.30 327 ⇑P P 22 23 16.5 +0.4
baz=81
D12A **Red Ives Fores** 80.36 329 ⇑P P 22 23 16.4 0.0
baz=81
I07A **Izee** 80.37 325 ⇊P P 22 23 16.4 -0.1
baz=81
C13A **Hot Springs** 80.45 330 ⇑P P 22 23 16.9 0.0
baz=81
F10A **Beach Ranch, E** 80.50 328 ⇑P P 22 23 16.8 -0.4
baz=81
E10A **Myers Farm, Un** 80.80 328 ⇑P P 22 23 18.6 -0.2
baz=81
A14A **Double T Ranch** 80.89 332 ⇑P P 22 23 18.1 -1.0
baz=81
G08A **Pilot Rock** 80.91 326 ⇑P P 22 23 19.5 +0.1
baz=81
B13A **Whitefish** 80.91 331 ⇊P P 22 23 18.6 -0.7
baz=81
D10A **Wagner Farm, O** 81.29 328 ⇊P P 22 23 20.7 -0.6
baz=82
A13A **Flathead Natio** 81.30 331 ⇑P P 22 23 21.2 -0.2
baz=82
C11A **Tepee Creek (N** 81.35 330 ⇊P P 22 23 21.5 -0.2
baz=82
HAWA **Hanford** 81.95 327 eP P 22 23 25.1 +0.2
OD2 **Odessa Site #2** 82.22 328 eP P 22 23 26.2 0.0
C09A **Chrisman Ranch** 82.29 329 P P 22 23 26.5 -0.1
baz=83,SNR=5.6
BOSA **Boshof** 82.88 118 P P 22 23 29.9 -0.4
4.5nm,0.7s,mb4.4,baz=261,slow=4.1,SNR=9.9
ETW **Entiat** 83.17 327 eP P 22 23 29.8 -1.4
A07A **Ashnola River,** 84.17 329 ⇊P P 22 23 35.9 -0.4
baz=84
JCW **Jim Creek** 84.37 327 eP P 22 23 36.2 -1.1
ESDC **Sonseca Array** 85.38 44 P P 22 23 42.9 +0.3
1.8nm,0.9s,mb4.0,baz=244,slow=4.6,SNR=11
YKA **Yellowknife Ar** 91.39 340 P P 22 24 09.5 -1.1
7.2nm,0.6s,mb5.0,baz=133,slow=4.4,SNR=32

YKA				pP	pP	22 24 44.4	+12
	1.8nm,0.8s,baz=142,slow=4.6,SNR=3.3						
YKA	**Yellowknife Ar**	**91.39**	**340**	P	**P**	**22 24 09.5**	**-1.1**
YKA				pP	pP	22 24 44.4	+12
DAVOX	**Davos/Dischmat**	**97.62**	**43**	LR	LR	23 06 20.5	
	comp=Z,33nm,18.2s,baz=256,slow=34						
ASAR	**Alice Springs**	**130.21**	**207**	PKP	PKPdf	22 30 14.1	-1.6
	1.4nm,0.8s,baz=184,slow=2.7,SNR=9.7						
ASAR				pPKP	pPKPdf	22 30 51.4	+13
	0.8nm,0.9s,baz=150,slow=2.0,SNR=3.3						
WRA	**Warramunga Arr**	**133.28**	**210**	PKP	PKPdf	22 30 20.1	-1.4
	1.4nm,0.6s,baz=160,slow=2.0,SNR=9.3						
ZALV	**Zalesovo Beam**	**141.67**	**26**	PKP	PKPdf	22 30 34.6	-1.2
	1.1nm,0.7s,baz=316,slow=8.3,SNR=4.5						
KSH	**Kashi**	**144.60**	**51**	*e*PKP	PKPdf	22 30 40.1	-1.4
KSH				PKS		22 34 14.3	
KSH				SKS	SKSdf	22 37 38.1	-5.7
KSH				SKKS	SKKSac	22 40 34.9	-8.9
KSH				AMB	AMB		
	comp=Z,100nm,5.1s						
MKAR	**Makanchi Array**	**145.25**	**36**	PKPbc	PKPbc	22 30 41.6	-0.7
	comp=Z,3.1nm,0.9s,baz=15,slow=5.3,SNR=14						
MKAR				pPKPbc	pPKPbc	22 31 18.2	+14
	comp=Z,4.5nm,0.9s,baz=15,slow=5.0,SNR=6.0						
MKAR	**Makanchi Array**	**145.25**	**36**	PKPbc	PKPbc	22 30 41.6	-0.7
MKAR				pPKPbc	pPKPbc	22 31 18.2	+14
ASAJ	**Asahikawa**	**145.97**	**319**	PKPbc	PKPbc	22 30 43.6	-1.0
	comp=Z,2.2nm,0.6s,baz=72,slow=26,SNR=4.5						
MJAR	**Matsushiro Arr**	**152.57**	**309**	PKPbc	PKPbc	22 30 59.0	-2.5
	comp=Z,1.6nm,0.5s,baz=83,slow=1.3,SNR=8.9						
MAT	**Matsuhiro**	**152.57**	**309**	*e*PKP	PKPbc	22 31 00.2	-1.4
HHC	**Hu-ho-hao-te**	**160.70**	**0**	*e*PKP	PKPdf	22 31 02.0	-2.8
HHC				PKS		22 34 34.1	
HHC				SKS	SKSdf	22 37 56.4	-6.5
HHC				SKKS	SKKSac	22 42 08.6	-2.2
HHC				SS	SS	22 55 31.1	-3.1
HHC				LR	LR		
	comp=N,4.0nm,20.2s						
HHC				LR	LR		
	comp=E,17nm,22.6s						
HHC				LR	LR		
	comp=Z,15nm,21.4s						
BJI	**Beijing**	**161.14**	**350**	PKP	PKPdf	22 31 03.3	-2.0
LZH	**Lanzhou**	**163.89**	**24**	*e*PKP	PKPdf	22 31 09.8	+1.6
LZH				pPKP	pPKPdf	22 31 36.5	+5.5
LZH				sPKP		22 31 47.3	
NJ2	**Nanjing**	**167.74**	**331**	*e*PKP	PKPdf	22 31 11.3	-0.1
CD2	**Chengdu**	**168.18**	**36**	*e*PKP	PKPdf	22 31 11.5	-0.3
KMI	**Kunming**	**170.94**	**65**	PKP	PKPdf	22 31 11.5	-2.1
GYA	**Guiyang**	**173.19**	**42**	*e*PKP	PKPdf	22 31 11.4	-3.2
GYA				pPKP	pPKPdf	22 31 42.3	+4.9
GYA				sPKP		22 31 54.5	
GYA				PKPab	PKPab	22 32 42.8	+0.2
GYA				PKS		22 34 42.9	
GYA				PP	PP	22 36 35.0	+1.1
GYA				AMB	AMB		
	comp=Z,70nm,8.0s						

NEIC ***14*** *22:55:15.0, 36.°97N×29.°22E, h2km, MD3.2(ISK), ML3.0(ATH), After ISK.*
DDA ***14*** *22:55:15.8, 36.°99N×29.°20E, h22km±1km, Md3.3*
ISK ***14*** *22:55:16.0, 36.°99N×29.°20E, h6km, MD3.3*
CSEM ***14*** *22:55:16.8±0.1, 37.°03N×29.°22E, h2km, MD3.3, Error ellipse: s-maj=3.3km s-min=2.5km az=166.0*
ISCJB ***14*** *22:55:16.4±0.4, 37.°02N±0.°02×29.°19E±0.°02, h3km±3km, Error ellipse: s-maj=3.1km s-min=2.5km az=146.9*
THE ***14*** *22:55:18.9, 37.°11N×29.°17E, h0km±1km, ML3.7/3, Error ellipse: s-maj=2.0km s-min=1.1km az=141.0*

ISC 14 22:55:17.0±0.4, 37.°03N±0.°02×29.°20E±0.°02, h1km±3km, n126, σ1°09/180, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.28**	**62**	PG	**Pg**	**22 55 22.0**	**-0.3**
GLHS				SG	**Sg**	**22 55 27.0**	**+1.2**
GLHS	**Glhisar (BURDU**	**0.28**	**62**	*i* Pg	**Pg**	**22 55 22.0**	**-0.3**
GLHS				*i* Sg	**Sg**	**22 55 27.0**	**+1.1**
GOLH	**Golhisar**	**0.36**	**54**	*i* P	**Pg**	**22 55 23.8**	**-0.1**
GOLH				*i* S	**Sg**	**22 55 30.5**	**+1.9**
GOLH	**Golhisar**	**0.36**	**54**	*i* P	**Pg**	**22 55 23.8**	**-0.1**
GOLH				*i* S	**Sg**	**22 55 30.5**	**+1.9**
FETY	**Fethiye**	**0.40**	**193**	*e*PG	**Pg**	**22 55 23.1**	**-1.5**
FETY				*e*SG	**Sg**	**22 55 29.3**	**-0.5**
FETY	**Fethiye**	**0.40**	**193**	*e*Pg	**Pg**	**22 55 23.2**	**-1.4**
FETY				*e*Sg	**Sg**	**22 55 29.3**	**-0.5**
TURN	**Turunc**	**0.50**	**252**	*i* P	**Pg**	**22 55 30.9**	**+4.4**
TURN				*i* S	**Sg**	**22 55 42.6**	**+10**
TURN	**Turunc**	**0.50**	**252**	*i* P	**Pg**	**22 55 30.9**	**+4.4**
ELL	**Elmali**	**0.64**	**116**	*e*PG	**Pg**	**22 55 28.2**	**-0.9**
ELL				*e*SG	**Sg**	**22 55 37.6**	**+0.2**
ELL	**Elmali**	**0.64**	**116**	*e*Pg	**Pg**	**22 55 28.2**	**-1.0**
ELL				*e*Sg	**Sg**	**22 55 37.6**	**+0.2**
DNZL	**Cakiroluk**	**0.67**	**350**	*i* P	**Pg**	**22 55 29.4**	**-0.5**
DNZL				*i* S	**Sg**	**22 55 38.9**	**+0.3**
DNZL	**Cakiroluk**	**0.67**	**350**	*i* P	**Pg**	**22 55 29.4**	**-0.5**
DNZL				*i* S	**Sg**	**22 55 38.9**	**+0.2**
DENT	**Denizli**	**0.74**	**350**	*e*PG	**Pg**	**22 55 30.5**	**-0.6**
DENT	**Denizli**	**0.74**	**350**	*e*Pg	**Pg**	**22 55 30.5**	**-0.7**
YER	**Yerkesik**	**0.74**	**279**	*e*PG	**Pg**	**22 55 31.3**	**+0.2**
YER				*e*SG	**Sg**	**22 55 41.7**	**+1.0**
YER	**Yerkesik**	**0.74**	**279**	*e*Pg	**Pg**	**22 55 31.3**	**+0.2**
YER				*e*Sg	**Sg**	**22 55 41.7**	**+1.0**
AKAS	**Kas**	**0.86**	**157**	*i* P	**Pg**	**22 55 32.4**	**-1.0**
AKAS				*i* S	**Sg**	**22 55 46.2**	**+1.7**
AKAS	**Kas**	**0.86**	**157**	*i* P	**Pg**	**22 55 32.4**	**-1.0**
AKAS				*i* S	**Sg**	**22 55 46.2**	**+1.7**
KORT	**Korkueli**	**0.93**	**91**	*i* P	**Pg**	**22 55 33.0**	**-1.7**
KORT				*i* S	**Sg**	**22 55 48.8**	**+2.1**
KORT	**Korkueli**	**0.93**	**91**	*i* P	**Pg**	**22 55 33.0**	**-1.7**
KORT				*i* S	**Sg**	**22 55 48.8**	**+2.1**
MLSB	**Milas**	**1.17**	**284**	*e*PN	**Pn**	**22 55 39.1**	**-1.3**
MLSB	**Milas**	**1.17**	**284**	*e*Pn	**Pn**	**22 55 39.1**	**-1.3**
ANTB	**Antalya**	**1.18**	**96**	*e*PN	**Pn**	**22 55 38.7**	**-1.9**
ANTB	**Antalya**	**1.18**	**96**	*e*Pn	**Pn**	**22 55 38.7**	**-1.9**
ARG	**Arkhangelos**	**1.18**	**227**	P	**Pg**	**22 55 38.3**	**-1.3**
ARG	**Arkhangelos**	**1.18**	**227**	P	**Pn**	**22 55 38.0**	**-2.6**
ARG				S	**Sg**	**22 55 58.5**	**+3.6**
ARG	**Arkhangelos**	**1.18**	**227**	*e*P	**Pn**	**22 55 37.6**	**-3.0**
ARG	**Arkhangelos**	**1.18**	**227**	P	**Pg**	**22 55 38.3**	**-1.3**
ARG				S	**Sg**	**22 55 58.5**	**+3.6**
BCK	**Bucak**	**1.19**	**68**	*e*PN	**Pn**	**22 55 39.4**	**-1.5**
BCK	**Bucak**	**1.19**	**68**	*e*Pn	**Pn**	**22 55 39.4**	**-1.4**
AYDN	**Tasoluk**	**1.23**	**302**	*i* P	**Pg**	**22 55 40.0**	**-0.4**
AYDN				*i* S	**Sg**	**22 55 56.9**	**+0.5**
AYDN	**Tasoluk**	**1.23**	**302**	*i* P	**Pg**	**22 55 40.0**	**-0.5**
AYDN				*i* S	**Sg**	**22 55 56.8**	**+0.4**
KHL	**Karahalli**	**1.32**	**11**	*e*PN	**Pn**	**22 55 41.9**	**-0.7**
KHL	**Karahalli**	**1.32**	**11**	*e*Pn	**Pn**	**22 55 41.9**	**-0.7**
ISP	**Isparta**	**1.32**	**53**	*e*PN	**Pg**	**22 55 42.6**	**+0.2**
ISP	**Isparta**	**1.32**	**53**	*e*Pn	**Pn**	**22 55 41.8**	**-0.9**
ISP				*e*S	**Sg**	**22 56 02.0**	**+2.5**
ISP	**Isparta**	**1.32**	**53**	P	**Pg**	**22 55 42.6**	**+0.2**
ISP				S	**Sg**	**22 56 01.4**	**+1.9**
ISP	**Isparta**	**1.32**	**53**	P	**Pg**	**22 55 42.6**	**+0.2**
ISP				S	**Sg**	**22 56 01.4**	**+1.9**
DAT	**Datca**	**1.33**	**258**	*e*PN	**Pn**	**22 55 40.8**	**-2.0**
DAT	**Datca**	**1.33**	**258**	*e*Pn	**Pn**	**22 55 40.8**	**-1.9**
KHAL	**Karahalli**	**1.36**	**10**	*i* P	**Pn**	**22 55 42.2**	**-1.0**
KHAL				*i* S	**Sg**	**22 56 02.5**	**+1.7**
KHAL	**Karahalli**	**1.36**	**10**	*i* P	**Pn**	**22 55 42.2**	**-1.0**
KHAL				*i* S	**Sg**	**22 56 02.5**	**+1.7**
BDRM	**Kayabasi**	**1.40**	**272**	*i* P	**Pn**	**22 55 42.6**	**-1.1**
BDRM				*i* S	**Sg**	**22 56 01.4**	**-0.6**
BDRM	**Kayabasi**	**1.40**	**272**	*i* P	**Pn**	**22 55 42.6**	**-1.1**
BDRM				*i* S	**Sg**	**22 56 01.4**	**-0.6**
SUTC	**Sutluce-Ispart**	**1.51**	**72**	*e*PN	**Pn**	**22 55 44.0**	**-1.1**
SUTC	**Sutluce-Ispart**	**1.51**	**72**	*e*Pn	**Pn**	**22 55 44.0**	**-1.2**
NIS1	**Nisyros Isl.**	**1.67**	**256**	P	**Pb**	**22 55 47.4**	**-1.2**
NIS1				S	**Sg**	**22 56 11.2**	**+0.5**
NIS1	**Nisyros Isl.**	**1.67**	**256**	P	**Pb**	**22 55 47.4**	**-1.2**
NIS1				S	**Sg**	**22 56 11.2**	**+0.5**
GCAM	**G?zelcaml?**	**1.70**	**294**	*i* P	**Pn**	**22 55 47.4**	**-0.4**
GCAM				*i* S	**Sn**	**22 56 09.7**	**-0.5**
GCAM	**G?zelcaml?**	**1.70**	**294**	*i* P	**Pn**	**22 55 47.4**	**-0.4**
GCAM				*i* S	**Sn**	**22 56 09.7**	**-0.5**
SHUT	**Suhut-Afyon**	**1.86**	**35**	*e*PN	**Pn**	**22 55 49.6**	**-0.5**
SHUT	**Suhut-Afyon**	**1.86**	**35**	*e*Pn	**Pn**	**22 55 49.6**	**-0.5**
SMG	**Samos**	**2.00**	**291**	P	**Pn**	**22 55 52.1**	**+0.2**
SMG	**Samos**	**2.00**	**291**	*e*P	**Pn**	**22 55 51.0**	**-0.9**
SMG	**Samos**	**2.00**	**291**	P	**Pn**	**22 55 52.1**	**+0.2**
DEMI	**Demirci**	**2.05**	**350**	*i* P	**Pn**	**22 55 51.9**	**-0.7**
DEMI				*i* S	**Sn**	**22 56 19.2**	**+0.4**
DEMI	**Demirci**	**2.05**	**350**	*i* P	**Pn**	**22 55 51.9**	**-0.7**
DEMI				*i* S	**Sn**	**22 56 19.2**	**+0.4**
IZM	**Izmir**	**2.06**	**312**	*e*PN	**Pn**	**22 55 52.9**	**+0.2**
IZM	**Izmir**	**2.06**	**312**	*e*Pn	**Pn**	**22 55 52.9**	**+0.2**
KDAG	**Bornova**	**2.06**	**313**	*i* P	**Pn**	**22 55 52.3**	**-0.4**
KDAG	**Bornova**	**2.06**	**313**	*i* P	**Pn**	**22 55 52.3**	**-0.4**
AKHS	**Akhisar**	**2.15**	**330**	*e*P	**Pn**	**22 55 52.0**	**-2.0**
AKHS				*i* S	**Sn**	**22 56 22.5**	**+1.3**
AKHS	**Akhisar**	**2.15**	**330**	*e*P	**Pn**	**22 55 52.0**	**-2.0**
AKHS				*i* S	**Sn**	**22 56 22.5**	**+1.2**
AKS	**Akhisar**	**2.15**	**330**	*e*PN	**Pn**	**22 55 53.3**	**-0.7**
AKS	**Akhisar**	**2.15**	**330**	*e*Pn	**Pn**	**22 55 53.3**	**-0.7**
ALT	**Altintas**	**2.15**	**19**	*e*PN	**Pn**	**22 55 53.8**	**-0.2**
ALT	**Altintas**	**2.15**	**19**	*e*Pn	**Pn**	**22 55 53.8**	**-0.2**
BLCB	**Balcova**	**2.18**	**309**	*e*PN	**Pn**	**22 55 54.0**	**-0.4**
BLCB	**Balcova**	**2.18**	**309**	P	**Pn**	**22 55 53.8**	**-0.6**
BLCB				S	**Sn**	**22 56 20.5**	**-1.6**
BLCB	**Balcova**	**2.18**	**309**	*e*Pn	**Pn**	**22 55 54.0**	**-0.4**
BLCB				S	**Sn**	**22 56 20.5**	**-1.6**
BOLV	**Bolvadin**	**2.19**	**39**	*i* P	**Pn**	**22 55 55.0**	**+0.5**
BOLV	**Bolvadin**	**2.19**	**39**	*i* P	**Pn**	**22 55 55.0**	**+0.5**
KARP	**Karpathos**	**2.21**	**229**	P	**Pn**	**22 55 56.3**	**+1.5**
KARP	**Karpathos**	**2.21**	**229**	*e*P	**Pn**	**22 55 54.6**	**-0.2**
KARP	**Karpathos**	**2.21**	**229**	P	**Pn**	**22 55 56.3**	**+1.5**
HDMB	**Hadim**	**2.63**	**90**	*e*PN	**Pn**	**22 56 00.7**	**0.0**
HDMB	**Hadim**	**2.63**	**90**	*e*Pn	**Pn**	**22 56 00.7**	**0.0**
KONT	**Konya--Tatoy**	**2.68**	**69**	*e*PN	**Pn**	**22 56 01.6**	**+0.3**
KONT	**Konya--Tatoy**	**2.68**	**69**	*e*Pn	**Pn**	**22 56 01.6**	**+0.3**
BALB	**Balikesir**	**2.81**	**339**	*e*PN	**Pn**	**22 56 02.8**	**-0.2**
BALB	**Balikesir**	**2.81**	**339**	*e*Pn	**Pn**	**22 56 02.8**	**-0.2**
ESKT	**Eskisehir**	**2.81**	**27**	*e*PN	**Pn**	**22 56 03.1**	**+0.1**
ESKT	**Eskisehir**	**2.81**	**27**	*e*Pn	**Pn**	**22 56 03.1**	**0.0**
KIZT	**Kizilcal**	**2.82**	**48**	*e*PN	**Pn**	**22 56 04.0**	**+0.8**
KIZT	**Kizilcal**	**2.82**	**48**	*e*Pn	**Pn**	**22 56 04.0**	**+0.9**
CHOS	**Chios island**	**2.84**	**300**	P	**Pn**	**22 56 03.5**	**+0.1**
CHOS				S	**Sn**	**22 56 38.4**	**+0.2**
CHOS	**Chios island**	**2.84**	**300**	*e*P	**Pn**	**22 56 03.3**	**-0.1**
CHOS	**Chios island**	**2.84**	**300**	P	**Pn**	**22 56 03.5**	**+0.1**
CHOS				S	**Sn**	**22 56 38.4**	**+0.2**
APE	**Apeiranthos**	**2.93**	**272**	P	**Pn**	**22 56 04.6**	**-0.1**
APE				S	**Sn**	**22 56 40.0**	**-0.6**
APE	**Apeiranthos**	**2.93**	**272**	*e*P	**Pn**	**22 56 04.4**	**-0.3**
APE	**Apeiranthos**	**2.93**	**272**	P	**Pn**	**22 56 04.6**	**-0.1**
APE				S	**Sn**	**22 56 40.0**	**-0.6**
ZKR	**Zakros**	**3.08**	**233**	P	**Pn**	**22 56 07.4**	**+0.7**
ZKR				S	**Sn**	**22 56 46.3**	**+2.2**
ZKR	**Zakros**	**3.08**	**233**	*e*P	**Pn**	**22 56 07.4**	**+0.7**
ZKR	**Zakros**	**3.08**	**233**	P	**Pn**	**22 56 07.4**	**+0.7**
ZKR				S	**Sn**	**22 56 46.3**	**+2.2**
PRK	**Paraskevi**	**3.20**	**315**	P	**Pn**	**22 56 08.4**	**0.0**
PRK				S	**Sn**	**22 56 46.8**	**-0.4**
PRK	**Paraskevi**	**3.20**	**315**	*e*P	**Pn**	**22 56 07.8**	**-0.6**
PRK	**Paraskevi**	**3.20**	**315**	P	**Pn**	**22 56 08.4**	**0.0**
PRK				S	**Sn**	**22 56 46.8**	**-0.4**
NPS	**Neapolis**	**3.39**	**240**	P	**Pn**	**22 56 11.6**	**+0.5**
NPS	**Neapolis**	**3.39**	**240**	*e*P	**Pn**	**22 56 10.7**	**-0.4**
NPS	**Neapolis**	**3.39**	**240**	P	**Pn**	**22 56 11.6**	**+0.5**
LAST	**Lasithi**	**3.54**	**239**	P	**Pn**	**22 56 13.9**	**+0.8**
LAST				S	**Sn**	**22 56 56.4**	**+0.8**
LAST	**Lasithi**	**3.54**	**239**	*e*P	**Pn**	**22 56 12.9**	**-0.2**
LAST	**Lasithi**	**3.54**	**239**	P	**Pn**	**22 56 13.9**	**+0.8**
LAST				S	**Sn**	**22 56 56.4**	**+0.8**
IDI	**Anoyia**	**3.89**	**245**	P	**Pn**	**22 56 18.9**	**+1.0**
IDI	**Anoyia**	**3.89**	**245**	*e*P	**Pn**	**22 56 18.0**	**+0.1**
IDI	**Anoyia**	**3.89**	**245**	P	**Pn**	**22 56 18.9**	**+1.0**
CSS	**Prodhromos**	**3.94**	**120**	Pn	**Pn**	**22 56 16.5**	**-2.1**
CSS	**Prodhromos**	**3.94**	**120**	Pn	**Pn**	**22 56 16.5**	**-2.0**
SIVA	**Sivas**	**4.08**	**242**	P	**Pn**	**22 56 21.8**	**+1.3**
SIVA				S	**Sn**	**22 57 10.9**	**+2.0**
SIVA	**Sivas**	**4.08**	**242**	*e*P	**Pn**	**22 56 22.4**	**+1.9**
SIVA	**Sivas**	**4.08**	**242**	P	**Pn**	**22 56 21.8**	**+1.3**
SIVA				S	**Sn**	**22 57 10.9**	**+2.0**
LIA	**Limnos Island**	**4.26**	**314**	*e*P	**Pn**	**22 56 22.8**	**-0.2**
VAM	**Vamos**	**4.35**	**250**	*e*P	**Pn**	**22 56 24.8**	**+0.6**
BR131	**Keskin Array S**	**4.41**	**51**	*e*Pn	**Pn**	**22 56 25.1**	**0.0**
BR131				*e*S	**Sn**	**22 57 18.2**	**+1.2**
BR131	**Keskin Array S**	**4.41**	**51**	*e*Pn	**Pn**	**22 56 25.1**	**0.0**
BR131				*e*S	**Sn**	**22 57 18.2**	**+1.1**
KARN	**Karanos**	**4.56**	**251**	P	**Pn**	**22 56 28.6**	**+1.4**
KARN				S	**Sn**	**22 57 23.5**	**+2.6**
KARN	**Karanos**	**4.56**	**251**	*e*P	**Pn**	**22 56 28.3**	**+1.1**
KARN	**Karanos**	**4.56**	**251**	P	**Pn**	**22 56 28.6**	**+1.4**
KARN				S	**Sn**	**22 57 23.5**	**+2.6**
ALN	**Alexandroupoli**	**4.58**	**329**	*e*P	**Pn**	**22 56 27.3**	**-0.1**
RDO	**Rodhopi**	**5.00**	**326**	*e*P	**Pn**	**22 56 33.1**	**-0.1**
KYTH	**Kithira**	**5.01**	**263**	*e*P	**Pn**	**22 56 36.4**	**+3.1**
VLI	**Veliai**	**5.03**	**268**	*e*P	**Pn**	**22 56 35.2**	**+1.7**
NVR	**Nevrokopi**	**5.98**	**318**	P	**Pn**	**22 56 48.1**	**+1.4**
NVR	**Nevrokopi**	**5.98**	**318**	P	**Pn**	**22 56 48.1**	**+1.4**
TIRR	**Tirgusor**	**7.45**	**356**	*e*Pn	**Pn**	**22 57 06.5**	**-0.3**
TIRR	**Tirgusor**	**7.45**	**356**	*e*Pn	**Pn**	**22 57 06.5**	**-0.3**

IDC ***14*** *22:55:58.6±1.8, 5.°80S×130.°35E, h0km, mb3.9/4, mb1 4.1/7, mb1mx3.9/17, mbtmp4.0/7, ML4.2/3, Error ellipse: s-maj=110.6km s-min=23.8km az=79.0*
NEIC ***14*** *22:56:16.5±3.9, 6.°47S×130.°62E, h188km±48km, mb4.0/1, Error ellipse: s-maj=35.2km s-min=27.3km az=139.0*

ISC 14 22:56:14.9±1.5, 6.°40S±0.°07×130.°4E±0.°1, h164km±16km, n12, σ1°00/19, mb3.7/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.57**	**163**	*e*Pn	**Pn**	**22 57 50.0**	**+0.6**
	86nm,0.5s						
KAKA				*e*Sn	**Sn**	**22 59 03.4**	**-0.2**
FITZ	**Fitzroy Crossi**	**12.54**	**202**	Pn	**Pn**	**22 59 06.4**	**-1.4**
	0.7nm,0.3s,baz=34,slow=8.6,SNR=28						
FITZ				Sn	**Sn**	**23 01 20.8**	**-6.0**
	3.7nm,0.3s,baz=280,slow=9.5,SNR=12						
FITZ	**Fitzroy Crossi**	**12.54**	**202**	*e*Pn	**Pn**	**22 59 06.8**	**-1.0**
FITZ				*e*Sn	**Sn**	**23 01 20.5**	**-6.3**
WRAB	**Tennant Creek**	**13.98**	**165**	*e*Pn	**Pn**	**22 59 24.8**	**-1.2**
	6.2nm,0.8s						
WRAB				*e*Sn	**Sn**	**23 01 56.1**	**-5.2**
WRA	**Warramunga Arr**	**13.98**	**165**	Pn	**Pn**	**22 59 25.6**	**-0.5**
	1.2nm,0.3s,baz=347,slow=13,SNR=11						
WRA				Sn	**Sn**	**23 01 55.0**	**-6.4**
	2.0nm,0.3s,baz=292,slow=13,SNR=8.3						
ASAR	**Alice Springs**	**17.49**	**169**	P	**Pn**	**23 00 11.7**	**+2.7**
	0.7nm,0.3s,baz=339,slow=8.0,SNR=17						
ASAR				S	**S**	**23 03 21.2**	**+0.2**
	0.5nm,0.3s,baz=357,slow=28,SNR=6.3						
MBWA	**Marble Bar**	**17.97**	**214**	*e*Pn	**Pn**	**23 00 16.9**	**+2.3**
MBWA				*e*S	**S**	**23 03 30.3**	**-0.4**
SONM	**Songino Array**	**58.02**	**341**	P	**P**	**23 05 50.4**	**-0.1**
	0.4nm,0.4s,mb3.6,baz=151,slow=6.6,SNR=2.3						
MK31	**Makanchi Array**	**67.97**	**326**	*e*P	**P**	**23 06 56.8**	**+0.7**
MKAR	**Makanchi Array**	**67.97**	**326**	P	**P**	**23 06 56.1**	**0.0**
	2.0nm,0.4s,mb4.2,baz=96,slow=9.3,SNR=25						
ZALV	**Zalesovo Beam**	**71.24**	**333**	P	**P**	**23 07 15.1**	**-1.0**
	0.9nm,0.6s,mb3.6,baz=103,slow=6.2,SNR=3.9						
BVAR	**Borovoye Array**	**77.79**	**328**	P	**P**	**23 07 54.0**	**+0.1**
	0.5nm,0.4s,mb3.5,baz=121,slow=8.1,SNR=5.1						

DJA 14 23:02:22, 9.°52S×112.°69E, h30km, MLv3.5/3, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**1.45**	**31**	P	Pn	23 02 46.9	+0.8
GMJI				S	Sn	23 03 04.5	+0.4
PWJI	**Pagerwojo**	**1.73**	**329**	P	Pn	23 02 52.2	+2.2
PWJI				S	Sn	23 03 12.4	+1.4
PCJI	**Pacitan**	**1.99**	**311**	P	Pn	23 02 55.6	+1.9
UGM	**Wanagama**	**2.67**	**307**	P	Pn	23 03 01.0	-2.0

ISCJB ***14*** *23:06:20.7±0.8, 38.°82N±0.°03×25.°59E±0.°06, h8km±5km, Error ellipse: s-maj=8.1km s-min=4.4km az=163.3*
ATH ***14*** *23:06:21.6, 38.°84N×25.°69E, h19km±3km, MD3.4/6*
THE ***14*** *23:06:21.9, 38.°81N×25.°67E, h11km±1km, ML2.9/5, Error ellipse: s-maj=2.8km s-min=1.0km az=82.0*
NEIC ***14*** *23:06:21.6, 38.°84N×25.°69E, h20km, MD3.5(ATH), After ATH.*
CSEM ***14*** *23:06:21.9±0.2, 38.°82N×25.°69E, h12km, ML2.9/5, Error ellipse: s-maj=8.1km s-min=4.6km az=85.0*

ISC 14 23:06:21.6±0.8, 38.°82N±0.°03×25.°63E±0.°06, h9km±6km, n32, σ0°83/54, 2C-1D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.43**	**24**	P	**Pg**	**23 06 30.1**	**+0.1**
SIGR				S	**Sg**	**23 06 36.7**	**+1.0**
SIGR	**SIGRI**	**0.43**	**24**	P	**Pg**	**23 06 30.1**	**+0.1**
SIGR				S	**Sg**	**23 06 36.7**	**+1.0**
CHOS	**Chios island**	**0.54**	**142**	P	**Pg**	**23 06 31.9**	**-0.1**
CHOS				S	**Sg**	**23 06 39.1**	**0.0**
CHOS	**Chios island**	**0.54**	**142**	⇓*i*PN	**Pg**	**23 06 32.0**	**0.0**
CHOS				*e*SN	**Sg**	**23 06 39.3**	**+0.2**
CHOS	**Chios island**	**0.54**	**142**	P	**Pg**	**23 06 31.9**	**-0.1**
CHOS				S	**Sg**	**23 06 39.1**	**0.0**
PRK	**Paraskevi**	**0.66**	**49**	⇑*i*Pn	**Pg**	**23 06 34.0**	**-0.3**
PRK				*e*Sn	**Sg**	**23 06 42.6**	**-0.3**
PRK	**Paraskevi**	**0.66**	**49**	P	**Pg**	**23 06 33.9**	**-0.4**
PRK				S	**Sg**	**23 06 42.8**	**-0.1**
PRK	**Paraskevi**	**0.66**	**49**	⇑*i*PN	**Pg**	**23 06 34.0**	**-0.3**
PRK				*e*SN	**Sg**	**23 06 42.6**	**-0.3**
PRK	**Paraskevi**	**0.66**	**49**	P	**Pg**	**23 06 33.9**	**-0.4**
PRK				*e*Sn	**Sg**	**23 06 42.6**	**-0.3**
LIA	**Limnos Island**	**1.14**	**342**	*e*Pn	**Pg**	**23 06 43.1**	**-0.3**
LIA				*e*Sn	**Sg**	**23 06 58.0**	**-0.1**
LIA	**Limnos Island**	**1.14**	**342**	P	**Pg**	**23 06 42.9**	**-0.5**
LIA				S	**Sg**	**23 06 58.1**	**0.0**
LIA	**Limnos Island**	**1.14**	**342**	*e*PN	**Pg**	**23 06 43.1**	**-0.3**
LIA				*e*SN	**Sg**	**23 06 58.0**	**-0.1**
LIA	**Limnos Island**	**1.14**	**342**	P	**Pg**	**23 06 42.9**	**-0.5**
LIA				*e*Sn	**Sg**	**23 06 58.0**	**-0.1**
BLCB	**Balcova**	**1.19**	**111**	P	**Pb**	**23 06 43.3**	**-0.8**
BLCB				S	**Sb**	**23 06 59.5**	**-0.1**
BLCB	**Balcova**	**1.19**	**111**	P	**Pb**	**23 06 43.3**	**-0.8**
BLCB				S	**Sb**	**23 06 59.5**	**-0.1**
SMG	**Samos**	**1.46**	**139**	*e*Pn	**Pn**	**23 06 48.6**	**+0.6**
SMG				*e*Sn	**Sn**	**23 07 08.6**	**+1.5**
SMG	**Samos**	**1.46**	**139**	*e*PN	**Pn**	**23 06 48.6**	**+0.6**
SMG				*e*SN	**Sn**	**23 07 08.6**	**+1.5**
SMG	**Samos**	**1.46**	**139**	*e*Pn	**Pn**	**23 06 48.6**	**+0.6**
SMG				*e*Sn	**Sn**	**23 07 08.6**	**+1.5**
VLY	**Voula,Athens**	**1.74**	**237**	*e*Pn	**Pn**	**23 06 54.2**	**+2.4**
VLY	**Voula,Athens**	**1.74**	**237**	*e*PN	**Pn**	**23 06 54.2**	**+2

CONA			⇑*i*Sn	**Sn**	**23 17 38.5**	**-0.9**
CONA	**Conrad Observa**	**4.62 349**	Pn	**Pn**	**23 16 44.5**	**-1.2**
CONA			Sn	**Sn**	**23 17 38.5**	**-0.9**
MOA	**Molln**	**4.90 336**	⇑*i*Pn	**Pn**	**23 16 49.4**	**0.0**
MOA			⇑*i*Sn	**Sn**	**23 17 47.1**	**+1.0**
MOA	**Molln**	**4.90 336**	Pn	**Pn**	**23 16 49.4**	**0.0**
MOA			Sn	**Sn**	**23 17 47.1**	**+1.0**

MAN 14 23:26:17.16˝50N×121˝00E, h1km, mb4.0, ML2.8, MS2.5, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCPH	**Baguio City Da**	**0.42**	**254**	⇑*i*P	Pg	23 26 26.6	+1.5
BALP	**Baler**	**0.93**	**144**	*e*P	Pg	23 26 33.1	-1.8
BALP				*e*S	Sg	23 26 43.1	-3.9
BOLP	**Bolinao**	**1.05**	**264**	*e*P	Pg	23 26 38.6	+1.4
ABRA	**Dolores**	**1.18**	**346**	*e*P	Pg	23 26 39.9	+0.3
APYP	**Conner**	**1.38**	**10**	*e*P	Pn	23 26 44.3	+0.9
PALP	**Palanan**	**1.48**	**67**	*e*P	Pn	23 26 45.1	+0.4
POLP	**Polilio Island**	**1.98**	**153**	*e*P	Pn	23 26 52.3	+0.7

NIED ***14*** *23:29:00, 22˚80N×120˚50E, h26km, Mw4.4 Best double couple: M0:5.11000×1015 NP1:φ=198.00000°, δ71.00000°, λ116.00000°. NP2:φ=321.00000°, δ32.00000°, λ38.00000°.*
IDC ***14*** *23:29:21.6±0.6, 22˚82N×120˚82E, h0km, mb4.1/18, mb1 4.3/19, mb1mx4.2/28, mbtmp4.1/19, ML3.7/1, MS3.7/15, Ms1 3.7/15, ms1mx3.4/35, Error ellipse: s-maj=21.2km s-min=13.6km az=69.0*
TAP ***14*** *23:29:24.4, 22˚91N×120˚59E, h17km, ML4.8, B*
NEIC ***14*** *23:29:25.7, 22˚89N×120˚62E, h6km, mb4.7/7, ML5.2(TAP), After TAP.*
NEIC Recorded [4 TAP] in P'ing-tung; [3 TAP] in Kao-hsiung; [2 TAP] in Chia-i, T'ai-nan, T'ai-tung and Yun-lin; [1 TAP] in Chang-hua, Hua-lien and Nan-tou.
JMA ***14*** *23:29:25.0±0.3, 22˚79N×120˚54E, h97km, M4.4*
ISCJB ***14*** *23:29:25.0±0.2, 22˚84N±0˚01×120˚56E±0˚02, h26km±1km, mb4.2/24, MS3.7/14, Error ellipse: s-maj=2.6km s-min=2.3km az=174.1*
BJI ***14*** *23:29:26.5, 23˚11N×120˚28E, h10km, mB4.5/7, mb4.2/13, ML4.4/6, Ms4.2/9, Ms7 4.1/10*
ISC 14 23:29:25.4±0.2, 22˚88N±0˚01×120˚57E±0˚02, h17km±1km, n136, σ1˚04/188, mb4.2/24, MS3.7/14, 11C-26D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSD	**Sandimen**	**0.14**	**155**	⇑*i*P	Pg	**23 29 29.3**	**-0.1**
	baz=166						
SSD				*e*S	Sg	**23 29 32.5**	**+0.4**
	baz=166						
SGST	**Jiashian**	**0.20**	**5**	⇓*i*P	Pg	**23 29 29.9**	**-0.4**
	baz=4.0						
SGST				S	Sg	**23 29 33.7**	**+0.1**
	baz=4.0						
CHN1	**Nanshi**	**0.31**	**354**	⇓*i*P	Pg	**23 29 32.0**	**-0.1**
	baz=348						
STYT	**Tauyuan**	**0.34**	**32**	⇑*i*P	Pg	**23 29 31.9**	**-0.6**
	baz=39						
TAI1	**Yung-k'ang**	**0.35**	**298**	⇑*i*P	Pg	**23 29 33.5**	**+0.7**
	baz=294						
WTP	**Ta-pu**	**0.37**	**7**	⇓*i*P	Pg	**23 29 32.8**	**-0.3**
	baz=3.0						
KAU	**Kaohsiung**	**0.39**	**218**	*e*P	Pg	**23 29 34.9**	**+1.5**
	baz=228						
TWK	**Hsinying**	**0.39**	**350**	⇓*i*P	Pg	**23 29 33.5**	**-0.1**
	baz=358						
TWK				*e*S	Sg	**23 29 39.6**	**+0.6**
	baz=358						
TPUB	**Ta-pu**	**0.43**	**8**	*e*Pg	Pg	**23 29 33.5**	**-0.6**
TPUB				*e*S	Sg	**23 29 40.2**	**+0.2**
SCLT	**Jiali**	**0.45**	**311**	⇑*i*P	Pg	**23 29 35.1**	**+0.5**
	baz=307						
SCLT				*e*S	Sg	**23 29 43.5**	**+2.8**
	baz=307						
ECL	**Taimali**	**0.45**	**128**	⇑*i*P	Pg	**23 29 34.2**	**-0.4**
	baz=132						
ECL				*e*S	Sg	**23 29 40.3**	**-0.5**
	baz=132						
TWG	**Pinlang**	**0.47**	**97**	*e*Pg	Pg	**23 29 34.4**	**-0.5**
TWG	**Pinlang**	**0.47**	**97**	⇑*i*P	Pg	**23 29 34.5**	**-0.3**
	baz=104						
TWG				*e*S	Sg	**23 29 41.4**	**+0.1**
	baz=104						
SCZT	**Fangliau**	**0.51**	**174**	⇓*i*P	Pg	**23 29 35.6**	**+0.1**
	baz=171						
SCZT				*e*S	Sg	**23 29 43.3**	**+1.0**
	baz=171						
ELDTW	**Lidau**	**0.52**	**53**	⇑*i*P	Pg	**23 29 35.3**	**-0.5**
	baz=45						
ELDTW				*e*S	Sg	**23 29 42.3**	**-0.5**
	baz=45						
TTN	**Taitung**	**0.55**	**103**	*e*P	Pg	**23 29 35.7**	**-0.7**
	baz=106						
TTN				*e*S	Sg	**23 29 45.6**	**+1.9**
	baz=106						
EAST	**Anshuo**	**0.56**	**152**	⇓*i*P	Pg	**23 29 36.4**	**-0.1**
	baz=150						
EAST				*e*S	Sg	**23 29 44.2**	**+0.3**
	baz=150						
TWP	**Hsiaoliuchiu**	**0.56**	**200**	⇑P	Pg	**23 29 39.1**	**+2.6**
	baz=201						
TWP				*e*S	Sg	**23 29 49.9**	**+5.9**
	baz=201						
CHN8	**Yiju**	**0.57**	**325**	⇑*e*P	Pg	**23 29 36.6**	**-0.1**
	baz=322						
CHN8				*e*S	Sg	**23 29 46.2**	**+1.9**
	baz=322						
TAW	**Tawu**	**0.60**	**149**	⇓P	Pg	**23 29 37.2**	**-0.1**
	baz=147						
TAW				S	Sg	**23 29 45.6**	**+0.3**
	baz=147						
CHY	**Chiayi**	**0.63**	**348**	⇑P	Pg	**23 29 37.7**	**-0.1**
	baz=346						
CHY				*e*S	Sg	**23 29 47.1**	**+0.8**
	baz=346						
ALS	**Alishan**	**0.67**	**19**	⇓*i*P	Pg	**23 29 37.7**	**-0.9**
	baz=18						
ALS				*e*S	Sg	**23 29 47.6**	**+0.1**
	baz=18						
YUS	**Yu-Shan**	**0.71**	**30**	⇓P	Pg	**23 29 38.7**	**-0.6**
	baz=30						
YUS				S	Sg	**23 29 49.8**	**+1.1**
	baz=30						
CHN5	**Tsauling**	**0.72**	**8**	⇓*e*P	Pb	**23 29 38.5**	**-1.1**
	baz=7.0						
CHKT	**Chengkung**	**0.77**	**73**	⇓P	Pb	**23 29 39.9**	**-0.5**
	baz=65						
CHKT				*e*S	Sb	**23 29 51.9**	**+1.3**
	baz=65						
WGK	**Gukeng**	**0.81**	**360**	P	Pb	**23 29 40.5**	**-0.5**
	baz=358						
WGK				*e*S	Sb	**23 29 52.4**	**+0.8**
	baz=358						
WSF	**Szhu**	**0.82**	**337**	*e*P	Pb	**23 29 40.6**	**-0.7**
	baz=336						
TWF1	**Yuli**	**0.82**	**55**	⇓*i*P	Pb	**23 29 40.5**	**-0.8**
	baz=63						
TWF1				*i* S	Sb	**23 29 51.4**	**-0.7**
	baz=63						
YULB	**Yu-li**	**0.85**	**53**	*e*Pg	Pg	**23 29 40.3**	**-1.6**
YULB				*e*S	Sb	**23 29 51.6**	**-1.2**
HEN	**Hengchun**	**0.88**	**170**	⇓P	Pb	**23 29 43.2**	**+0.9**
	baz=167						
HEN				*e*S	Sb	**23 29 56.5**	**+2.8**
	baz=167						
WDGT	**Dungji**	**0.92**	**295**	*e*P	Pb	**23 29 41.6**	**-1.2**
	baz=294						
EHY	**Hungye**	**0.94**	**48**	⇓*i*P	Pb	**23 29 42.3**	**-1.0**
	baz=56						
EHY				*i* S	Sb	**23 29 54.7**	**-0.6**
	baz=56						
SSLB	**Suanglung**	**0.97**	**21**	*e*Pg	Pg	**23 29 42.8**	**-1.6**
WNT	**Mingjian**	**1.00**	**6**	⇓P	Pb	**23 29 43.5**	**-0.8**
	baz=6.0						
WNT				*e*S	Sb	**23 29 57.8**	**+0.5**
	baz=6.0						
WTCT	**Ta-ch'eng**	**1.02**	**345**	*e*P	Pb	**23 29 43.6**	**-1.0**
	baz=344						
WTCT				*e*S	Sb	**23 29 58.1**	**+0.5**
	baz=344						
TSEB	**Hengchuen, Pin**	**1.02**	**162**	⇓*e*P	Pb	**23 29 44.8**	**+0.2**
	baz=165						
TSEB				*e*S	Sb	**23 29 59.2**	**+1.5**
	baz=165						
SMLT	**Sun Moon Lake**	**1.05**	**17**	⇓*i*P	Pb	**23 29 44.2**	**-0.9**
	baz=17						
SMLT				S	Sb	**23 29 59.6**	**+1.0**
	baz=17						
TYC	**Yuchr**	**1.06**	**15**	⇓P	Pb	**23 29 44.3**	**-1.0**
	baz=14						
TYC				*e*S	Sb	**23 29 59.6**	**+0.8**
	baz=14						
PNG	**Penghu**	**1.16**	**307**	⇑*e*P	Pn	**23 29 44.9**	**-2.0**
	baz=306						
PNG				*e*S	Sb	**23 29 60.0**	**-1.7**
	baz=306						
TEGC	**Jichi Village**	**1.22**	**47**	*e*P	Pn	**23 29 48.8**	**+1.1**
	baz=46						
ESL	**Shilin**	**1.23**	**40**	⇓*i*P	Pn	**23 29 47.4**	**-0.5**
	baz=40						
ESL				S	Sb	**23 30 03.4**	**-0.4**
	baz=40						
TCU	**Taichung**	**1.27**	**5**	⇓P	Pn	**23 29 47.8**	**-0.6**
	baz=353						
TCU				*e*S	Sb	**23 30 05.1**	**+0.2**
	baz=353						
ESF	**Shoufeng Towns**	**1.31**	**41**	*e*P	Pn	**23 29 48.6**	**-0.4**
	baz=31						
WHF	**Hehuan Shan**	**1.42**	**27**	⇓P	Pn	**23 29 50.3**	**-0.1**
	baz=17						
WHF				*e*S	Sn	**23 30 10.5**	**+1.8**
	baz=17						
HWA	**Hwalien**	**1.45**	**41**	*e*P	Pn	**23 29 50.3**	**-0.6**
	baz=32						
HWA				*e*S	Sn	**23 30 10.0**	**+0.4**
	baz=32						
TWQ1	**Liyutan**	**1.48**	**7**	⇓*e*P	Pn	**23 29 50.9**	**-0.4**
	baz=8.0						
TWQ1				*e*S	Sn	**23 30 10.8**	**+0.6**
	baz=8.0						
TWT	**Tachien**	**1.48**	**22**	⇓*e*P	Pn	**23 29 50.9**	**-0.4**
	baz=22						
TWT				*e*S	Sn	**23 30 10.7**	**+0.5**
	baz=22						
TWD	**Chiawan**	**1.53**	**38**	P	Pn	**23 29 51.8**	**-0.2**
	baz=39						
TWD				S	Sn	**23 30 11.8**	**+0.4**
	baz=39						
NSY	**Sanyi**	**1.54**	**7**	*e*P	Pn	**23 29 51.9**	**-0.3**
	baz=357						
NSY				*e*S	Sn	**23 30 12.3**	**+0.5**
	baz=357						
NACB	**Ninganchiao**	**1.60**	**36**	*e*Pn	Pn	**23 29 52.3**	**-0.6**
NACB				*e*Sg	Sg	**23 30 14.9**	**-2.1**
NNS	**Nan Shan**	**1.72**	**25**	⇓*e*P	Pn	**23 29 55.0**	**+0.3**
	baz=14						
NNS				*e*S	Sn	**23 30 17.5**	**+1.3**
	baz=14						
NSTT	**Nanjuang**	**1.79**	**13**	⇓*e*P	Pn	**23 29 54.8**	**-0.8**
	baz=358						
NSTT				*e*S	Sn	**23 30 18.5**	**+0.6**
	baz=358						
ENA	**Nanau**	**1.88**	**35**	P	Pn	**23 29 56.7**	**-0.1**
	baz=35						
NSK	**Sanguang**	**1.93**	**22**	⇓P	Pn	**23 29 57.4**	**-0.1**
	baz=7.0						
NSK				*e*S	Sn	**23 30 22.0**	**+0.5**
	baz=7.0						
YHNB	**Yeheng**	**1.93**	**22**	*e*Pn	Pn	**23 29 57.3**	**-0.2**
HSN	**Hsinchu**	**1.95**	**11**	*e*P	Pn	**23 29 58.7**	**+1.0**
	baz=357						
ENTT	**Nioudou**	**1.98**	**27**	P	Pn	**23 29 58.7**	**+0.5**
	baz=28						
ENTT				*e*S	Sn	**23 30 23.7**	**+1.1**
	baz=28						
TWC	**Suao**	**2.09**	**34**	*e*P	Pn	**23 29 59.5**	**-0.1**
	baz=35						
TWC				*e*S	Sn	**23 30 26.9**	**+1.6**
	baz=35						
TWE	**Neicheng**	**2.10**	**29**	*e*P	Pn	**23 30 00.4**	**+0.6**
	baz=29						
TWE				*e*S	Sn	**23 30 27.9**	**+2.5**
	baz=29						
NCU	**National Centr**	**2.16**	**15**	*e*P	Pn	**23 30 01.6**	**+1.0**
	baz=17						
ILA	**Ilan**	**2.17**	**30**	*e*P	Pn	**23 30 01.5**	**+0.8**
	baz=48						
TATO	**Taipei**	**2.25**	**22**	*e*Pn	Pn	**23 30 02.2**	**+0.2**
TWA	**Mucha**	**2.29**	**24**	*e*P	Pn	**23 30 02.6**	**+0.1**
	baz=25						
TAP1	**Taipei**	**2.32**	**22**	*e*P	Pn	**23 30 03.7**	**+0.8**
	baz=23						
TAP1				*e*S	Sn	**23 30 34.0**	**+2.9**
	baz=23						
TWS1	**Kuangyinshan**	**2.35**	**19**	*e*P	Pn	**23 30 02.8**	**-0.4**
	baz=21						
TWS1				*e*S	Sn	**23 30 32.6**	**+0.9**
	baz=21						
NWF	**Wu-fen Shan**	**2.45**	**27**	*e*P	Pn	**23 30 04.9**	**+0.2**
	baz=12						
KNM	**Kinmen**	**2.48**	**309**	*e*P	Pn	**23 30 04.8**	**-0.3**
	baz=308						
TWY	**Chenhua**	**2.57**	**21**	*e*P	Pn	**23 30 05.7**	**-0.6**
	baz=22						
QZH	**Quanzhou**	**2.74**	**319**	Pn	Pn	**23 30 08.6**	**0.0**
QZH				Sn	Sn	**23 30 38.3**	**-3.0**
QZH				smax			
	comp=N,2μm,0.7s						
QZH				smax			
	comp=E,2μm,0.9s						
YOJ	**Yonaguni jima**	**2.74**	**54**	P	Pn	**23 30 09.1**	**+0.5**
YOJ				S	Sn	**23 30 42.4**	**+1.0**
YOJ	**Yonaguni jima**	**2.74**	**54**	*e*P	Pn	**23 30 08.8**	**+0.1**
	baz=56						
YOJ				*e*S	Sn	**23 30 41.0**	**-0.4**
	baz=56						
PCYT	**Pengchaiyu**	**3.06**	**26**	*e*P	Pn	**23 30 13.2**	**+0.1**
	baz=15						
HATJ	**Hateruma jima**	**3.20**	**68**	P	Pn	**23 30 15.0**	**+0.1**
HATJ				S	Sn	**23 30 53.3**	**+0.6**
IRIF	**Iriomote-Funau**	**3.25**	**63**	P	Pn	**23 30 15.7**	**+0.1**
IRIF				*e*S	Sn	**23 30 55.1**	**+1.3**
JKRS	**Kuro-shima**	**3.44**	**66**	P	Pn	**23 30 18.8**	**+0.6**
JKRS				S	Sn	**23 30 59.4**	**+0.8**
JIJ	**Ishigaki jima**	**3.60**	**65**	P	Pn	**23 30 20.1**	**-0.3**
JIJ				S	Sn	**23 31 01.7**	**-0.9**
JTJ	**Tarama**	**4.18**	**64**	P	Pn	**23 30 28.5**	**+0.1**
JTJ				*e*S	Sn	**23 31 17.0**	**+0.2**
JMJ	**Miyako jima 2**	**4.74**	**65**	P	Pn	**23 30 36.8**	**+0.7**
JMJ				*e*S	Sn	**23 31 30.5**	**-0.2**
JMJ	**Miyako jima 2**	**4.74**	**65**	*e*P	Pn	**23 30 37.1**	**+1.0**
	baz=73						
JOGS	**Gusukube**	**4.81**	**66**	P	Pn	**23 30 37.5**	**+0.4**
JOGS				*e*S	Sn	**23 31 33.4**	**+0.9**
JKE	**Kume jima 2**	**6.62**	**58**	P	Pn	**23 31 01.2**	**-0.8**
WHN	**Wuhan**	**9.44**	**325**	P	Pn	**23 31 38.0**	**-2.7**
WHN				S	Sn	**23 33 16.4**	**-10**
WHN				LR	LR		
	comp=Z,2μm,16.0s						
QIZ	**Qiongzhong**	**10.72**	**251**	P	Pn	**23 32 05.4**	**+7.1**
QIZ				pmax	pmax		
	comp=Z,36nm,1.1s						
QIZ				LR	LR		
	comp=N,940nm,11.1s						
QIZ				LR	LR		
	comp=Z,2μm,14.4s						
GYA	**Guiyang**	**13.13**	**289**	P	Pn	**23 32 31.5**	**+0.3**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,70nm,4.4s						
GYA				LR	LR		
	comp=N,7μm,19.2s						
GYA				LR	LR		
	comp=E,910nm,14.0s						
GYA				LR	LR		
	comp=Z,970nm,13.1s						
XAN	**Xi'an**	**15.10**	**320**	P	Pn	**23 33 10.3**	**+12**
XAN				pP	pP	23 33 16.9	+9.0
XAN				pmax	pmax		
	comp=Z,3.0nm,1.4s						
XAN				LR	LR		
	comp=N,460nm,12.2s						
XAN				LR	LR		
	comp=E,130nm,13.5s						
XAN				LR	LR		
	comp=Z,240nm,16.7s						
KSRS	**Korea Array**	**15.85**	**22**	Pn	Pn	**23 33 06.3**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=198,slow=12,SNR=8.3						
KSRS				LR	LR	23 39 54.4	
	comp=Z,262nm,20.8s,baz=200,slow=40						
DAV	**Davao City (W)**	**16.44**	**162**	LR	LR	23 39 29.7	
	comp=Z,268nm,20.1s,baz=346,slow=37						
BJI	**Beijing**	**17.51**	**349**	P	Pn	**23 33 37.0**	**+8.3**
BJI				S	Sn	**23 36 53.3**	**+10**
BJI				pmax	pmax		
	comp=Z,15nm,0.8s						
BJI				pmax	pmax		
	comp=Z,120nm,4.0s						
BJI				LR	LR		
	comp=N,380nm,14.1s						
BJI				LR	LR		
	comp=E,400nm,19.4s						
BJI				LR	LR		
	comp=Z,180nm,17.1s						
LZH	**Lanzhou**	**19.59**	**316**	*e*P	Pn	**23 33 58.6**	**+4.5**
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
LZH				LR	LR		
	comp=E,380nm,11.3s						
LZH				LR	LR		
	comp=Z,640nm,13.9s						
JHJ	**Hachijo jima 2**	**19.77**	**55**	LR	LR	23 41 41.0	
	comp=Z,96nm,19.6s,baz=86,slow=38						
CBIJ	**Chichi jima**	**20.04**	**73**	LR	LR	23 41 21.3	
	comp=Z,80nm,18.8s,MS3.1,baz=223,slow=36						
MAJO	**Matsushiro**	**20.45**	**44**	P	**P**	**23 34 04.9**	**+2.7**
MAT	**Matsushiro**	**20.45**	**44**	P	**P**	**23 34 02.4**	**+0.3**
MAT				S		23 39 31.0	
MJAR	**Matsushiro Arr**	**20.45**	**44**	P	**P**	**23 34 00.6**	**-1.5**
	comp=Z,11nm,0.8s,baz=231,slow=8.1,SNR=30						
CHTO	**Chiang Mai**	**20.60**	**263**	P	**P**	**23 34 05.8**	**+1.9**
	comp=Z,10nm,1.2s						
CMAR	**Chiang Mai Arr**	**20.70**	**262**	P	**P**	**23 34 06.7**	**+1.7**
	comp=Z,0.9nm,0.3s,baz=66,slow=9.5,SNR=9.1						
CMAR				LR	LR	23 43 41.5	
	comp=Z,375nm,18.4s,MS3.8,baz=225,slow=41						
GTA	**Gaotai**	**24.14**	**318**	*e*P	**P**	**23 34 40.9**	**+0.4**
GTA				pP		23 34 46.9	
GTA				sP	sP	23 34 50.1	+2.4
GTA				PP		23 35 15.6	
GTA				S	**S**	**23 38 55.5**	**-2.2**
GTA				sS	sS	23 39 02.0	-4.1
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.5						
GTA				pmax	pmax		
	comp=Z,59nm,4.5s						
GTA				LR	LR		
	comp=N,200nm,15.2s,MS3.9						
GTA				LR	LR		
	comp=E,250nm,18.7s,MS3.9						
GTA				LR	LR		
	comp=Z,390nm,14.6s,MS4.0						
LSA	**Lhasa**	**27.19**	**291**	P	**P**	**23 35 10.0**	**+1.8**
LSA				S	**S**	**23 39 50.3**	**+3.9**
LSA				LR	LR		
	comp=Z,400nm,16.6s,MS4.1						
SONM	**Songino Array**	**27.36**	**339**	P	**P**	**23 35 10.4**	**+0.8**
	comp=Z,2.3nm,0.9s,mb3.7,baz=146,slow=11,SNR=4.8						
SONM				LR	LR	23 47 28.3	
	comp=Z,224nm,18.5s,MS3.8,baz=105,slow=40						
ASAJ	**Asahikawa**	**27.88**	**35**	P	**P**	**23 35 12.8**	**-1.4**
	comp=Z,1.6nm,0.4s,mb4.0,baz=286,slow=33,SNR=4.1						
PSI	**Prapat**	**28.95**	**230**	LR	LR	23 47 32.1	
	comp=Z,187nm,18.0s,MS3.7,baz=32,slow=37						
MK31	**Makanchi Array**	**38.89**	**317**	*e*P	**P**	**23 36 50.7**	**+0.7**
MKAR	**Makanchi Array**	**38.89**	**317**	P	**P**	**23 36 50.6**	**+0.7**
	comp=Z,1.3nm,0.7s,mb3.8,baz=96,slow=12,SNR=14						
KNA	**Kununurra**	**39.22**	**167**	*e*P	**P**	**23 36 50.7**	**-2.2**
	comp=Z,15nm,0.9s,mb4.7						
ZALV	**Zalesovo Beam**	**41.04**	**328**	P	**P**	**23 37 06.8**	**-0.9**
	comp=Z,1.8nm,0.6s,mb3.9,baz=109,slow=7.1,SNR=6.6						
ZALV				LR	LR	23 55 24.2	
	comp=Z,50nm,18.2s,MS3.4,baz=81,slow=38						
ZALV	**Zalesovo Beam**	**41.04**	**328**	P	**P**	**23 37 06.8**	**-0.9**
ZALV				LR	LR	23 55 24.2	
PETK	**Petropavlovsk-**	**41.27**	**33**	P	**P**	**23 37 06.8**	**-2.8**
	comp=Z,1.6nm,0.7s,mb3.8,baz=220,slow=3.7,SNR=4.3						
PETK				LR	LR	23 55 16.7	
	comp=Z,101nm,19.1s,MS3.7,baz=228,slow=38						
KURK	**Kurchatov**	**42.74**	**321**	P	**P**	**23 37 21.1**	**-0.5**
	comp=Z,3.0nm,1.0s,mb4.0,baz=115,slow=7.2,SNR=3.7						
COEN	**Coen**	**42.78**	**147**	*e*P	**P**	**23 37 19.9**	**-2.4**
WRA	**Warramunga Arr**	**44.63**	**161**	P	**P**	**23 37 34.5**	**-2.6**
	comp=Z,11nm,0.7s,mb4.8,baz=345,slow=8.7,SNR=33						
KBL	**Kabul**	**46.22**	**296**	*e*P	**P**	**23 37 51.6**	**+1.9**
	comp=Z,8.5nm,1.0s,mb4.6						
ASAR	**Alice Springs**	**48.05**	**163**	P	**P**	**23 38 02.2**	**-1.8**
	comp=Z,4.1nm,0.6s,mb4.6,baz=342,slow=7.7,SNR=50						
ASAR				PcP	PcP	23 39 30.4	-1.3
	comp=Z,2.2nm,0.8s,baz=356,slow=3.3,SNR=7.4						
BVAR	**Borovoye Array**	**48.33**	**322**	P	**P**	**23 38 06.4**	**+0.6**
	comp=Z,0.9nm,0.6s,mb4.0,baz=98,slow=11,SNR=5.0						
TIXI	**Tiksi**	**49.03**	**3**	*e*P	**P**	**23 38 09.1**	**-1.9**
	comp=Z,6.9nm,1.0s,mb4.6						
AKTO	**Aktyubinsk**	**55.32**	**316**	LR	LR	00 04 12.4	
	comp=Z,71nm,18.6s,MS3.8,baz=322,slow=38						
ARU	**Arti**	**55.81**	**324**	P	**P**	**23 39 01.7**	**+0.2**
	comp=Z,6.9nm,0.9s,mb4.7						
STKA	**Stephens Creek**	**58.05**	**159**	*e*P	**P**	**23 39 15.7**	**-1.9**
	comp=Z,2.5nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**58.05**	**159**	P	**P**	**23 39 15.5**	**-2.0**
	comp=Z,2.6nm,0.6s,mb4.5,baz=308,slow=4.3,SNR=13						
STKA	**Stephens Creek**	**58.05**	**159**	P	**P**	**23 39 15.5**	**-2.0**
CMSA	**Cobar Meteorol**	**59.22**	**155**	*e*P	**P**	**23 39 24.6**	**-1.1**
GNI	**Garni**	**65.08**	**305**	LR	LR	00 12 40.7	
	comp=Z,40nm,18.4s,MS3.6,baz=244,slow=40						
BPAW	**Bear Paw Mtn.**	**69.01**	**28**	*e*P	**P**	**23 40 28.8**	**-0.9**
	comp=Z,11nm,1.5s,mb4.6						
ARCES	**ARCESS Array B**	**70.53**	**338**	P	**P**	**23 40 40.4**	**+1.4**
	comp=Z,3.3nm,0.7s,mb4.4,baz=70,slow=7.1,SNR=15						
ARCES				LR	LR	00 15 58.9	
	comp=Z,39nm,18.6s,MS3.7,baz=316,slow=40						
ARCES	**ARCESS Array B**	**70.53**	**338**	P	**P**	**23 40 40.4**	**+1.4**
ARCES				LR	LR	00 15 58.9	
FINES	**FINESS Array B**	**72.28**	**330**	P	**P**	**23 40 49.5**	**-0.2**
	comp=Z,1.9nm,0.7s,mb4.1,baz=57,slow=7.0,SNR=9.2						
FINES				LR	LR	00 15 30.9	
	comp=Z,33nm,18.3s,MS3.6,baz=11,slow=38						
FINES	**FINESS Array B**	**72.28**	**330**	P	**P**	**23 40 49.5**	**-0.2**
FINES				LR	LR	00 15 30.9	
EGAK	**Eagle**	**73.00**	**26**	*e*P	**P**	**23 40 52.4**	**-1.5**
	comp=Z,4.7nm,1.1s,mb4.3						
BRTR	**Keskin Array B**	**73.49**	**307**	P	**P**	**23 40 58.6**	**+1.3**
	comp=Z,0.6nm,0.8s,mb3.6,baz=108,slow=3.2,SNR=3.4						
INK	**Inuvik**	**74.64**	**22**	*e*P	**P**	**23 41 02.0**	**-1.5**
	comp=Z,9.1nm,1.1s,mb4.6						
EIL	**Elat**	**75.42**	**296**	LR	LR	00 15 21.6	
	comp=Z,52nm,18.2s,MS3.9,baz=93,slow=36						
NB2	**NORSAR Subarra**	**79.11**	**332**	P	**P**	**23 41 27.4**	**-1.4**
	comp=Z,3.2nm,1.1s,mb4.2,baz=62,slow=5.6						
NOA	**NORSAR Array B**	**79.11**	**332**	P	**P**	**23 41 27.1**	**-1.6**
	comp=Z,1.2nm,0.7s,mb3.9,baz=62,slow=5.4,SNR=5.6						
NOA				LR	LR	00 20 20.7	
	comp=Z,80nm,19.1s,

DAT	**Datca**	**0.82**	**99**	*e*Pg	**Pg**	**23 43 32.3**	**-0.2**
DAT				*e*Sg	**Sg**	**23 43 43.1**	**-0.1**
APE	**Apeiranthos**	**0.86**	**284**	*e*Pn	**Pn**	**23 43 33.3**	**-0.9**
APE				*e*Sn	**Sn**	**23 43 46.2**	**-0.4**
APE	**Apeiranthos**	**0.86**	**284**	P	**Pb**	**23 43 33.2**	**0.0**
APE				S	**Sb**	**23 43 45.9**	**+1.3**
APE	**Apeiranthos**	**0.86**	**284**	*e*PN	**Pn**	**23 43 33.3**	**-0.9**
APE				*e*SN	**Sn**	**23 43 46.2**	**-0.4**
APE	**Apeiranthos**	**0.86**	**284**	P	**Pb**	**23 43 33.2**	**0.0**
APE				S	**Sb**	**23 43 45.9**	**+1.3**
APE				*e*Sn	**Sn**	**23 43 46.2**	**-0.4**
SMG	**Samos**	**0.87**	**14**	*e*Pn	**Pn**	**23 43 32.9**	**-1.6**
SMG				*e*Sn	**Sn**	**23 43 45.0**	**-2.0**
SMG	**Samos**	**0.87**	**14**	*e*PN	**Pn**	**23 43 32.9**	**-1.6**
SMG				*e*SN	**Sn**	**23 43 45.0**	**-2.0**
SMG	**Samos**	**0.87**	**14**	*e*Pn	**Pn**	**23 43 32.9**	**-1.6**
SMG				*e*Sn	**Sn**	**23 43 45.0**	**-2.0**
THR2	**Thira island,**	**1.00**	**246**	P	**Pb**	**23 43 37.0**	**+1.3**
THR2	**Thira island,**	**1.00**	**246**	P	**Pb**	**23 43 37.0**	**+1.3**
THR1	**Thera Island**	**1.02**	**242**	P	**Pb**	**23 43 35.6**	**-0.4**
THR1	**Thera Island**	**1.02**	**242**	P	**Pb**	**23 43 35.6**	**-0.4**
THR3	**Thira Island,**	**1.04**	**245**	P	**Pb**	**23 43 37.5**	**+1.1**
THR3	**Thira Island,**	**1.04**	**245**	P	**Pb**	**23 43 37.5**	**+1.1**
MLSB	**Milas**	**1.06**	**65**	*e*PG	**Pg**	**23 43 37.0**	**0.0**
MLSB				*e*SG	**Sg**	**23 43 50.6**	**-0.3**
MLSB	**Milas**	**1.06**	**65**	*e*Pg	**Pg**	**23 43 37.0**	**0.0**
MLSB				*e*Sg	**Sg**	**23 43 50.6**	**-0.2**
KARP	**Karpathos**	**1.40**	**160**	*e*Pn	**Pn**	**23 43 41.5**	**-0.1**
KARP	**Karpathos**	**1.40**	**160**	*e*Pn	**Pn**	**23 43 41.5**	**-0.1**
KARP	**Karpathos**	**1.40**	**160**	*e*Pn	**Pn**	**23 43 41.5**	**-0.1**
YER	**Yerkesik**	**1.40**	**78**	*e*PN	**Pn**	**23 43 42.9**	**+1.2**
YER	**Yerkesik**	**1.40**	**78**	*e*Pn	**Pn**	**23 43 42.9**	**+1.2**
ARG	**Arkhangelos**	**1.41**	**117**	*e*Pn	**Pn**	**23 43 41.0**	**-0.8**
ARG	**Arkhangelos**	**1.41**	**117**	P	**Pn**	**23 43 41.2**	**-0.6**
ARG				S	**Sn**	**23 43 59.3**	**-0.9**
ARG	**Arkhangelos**	**1.41**	**117**	*e*PN	**Pn**	**23 43 41.0**	**-0.8**
ARG	**Arkhangelos**	**1.41**	**117**	P	**Pn**	**23 43 41.2**	**-0.6**
ARG				S	**Sn**	**23 43 59.3**	**-0.9**
BLCB	**Balcova**	**1.57**	**14**	*e*PN	**Pn**	**23 43 46.1**	**+2.1**
BLCB				*e*SN	**Sn**	**23 44 06.9**	**+2.8**
BLCB	**Balcova**	**1.57**	**14**	P	**Pn**	**23 43 43.5**	**-0.5**
BLCB				S	**Sn**	**23 44 04.2**	**+0.1**
BLCB	**Balcova**	**1.57**	**14**	P	**Pn**	**23 43 43.5**	**-0.5**
BLCB	**Balcova**	**1.57**	**14**	*e*Pn	**Pn**	**23 43 46.1**	**+2.1**
BLCB				S	**Sn**	**23 44 04.2**	**+0.1**
BLCB				*e*Sn	**Sn**	**23 44 06.9**	**+2.8**
CHOS	**Chios island**	**1.58**	**345**	P	**Pn**	**23 43 43.5**	**-0.6**
CHOS				S	**Sn**	**23 44 04.3**	**-0.1**
CHOS	**Chios island**	**1.58**	**345**	*e*PB	**Pn**	**23 43 43.5**	**-0.6**
CHOS	**Chios island**	**1.58**	**345**	P	**Pn**	**23 43 43.5**	**-0.6**
CHOS				S	**Sn**	**23 44 04.3**	**-0.1**
IZM	**Izmir**	**1.63**	**20**	*e*PN	**Pn**	**23 43 47.4**	**+2.5**
IZM	**Izmir**	**1.63**	**20**	*e*Pn	**Pn**	**23 43 47.4**	**+2.5**
ZKR	**Zakros**	**1.77**	**189**	*e*Pn	**Pn**	**23 43 46.5**	**-0.2**
ZKR	**Zakros**	**1.77**	**189**	P	**Pn**	**23 43 46.5**	**-0.2**
ZKR				S	**Sn**	**23 44 08.9**	**0.0**
ZKR	**Zakros**	**1.77**	**189**	*e*PN	**Pn**	**23 43 46.5**	**-0.2**
ZKR	**Zakros**	**1.77**	**189**	P	**Pn**	**23 43 46.5**	**-0.2**
ZKR				S	**Sn**	**23 44 08.9**	**0.0**
NPS	**Neapolis**	**1.77**	**206**	*e*Pn	**Pn**	**23 43 46.3**	**-0.5**
NPS	**Neapolis**	**1.77**	**206**	*e*PN	**Pn**	**23 43 46.3**	**-0.5**
NPS	**Neapolis**	**1.77**	**206**	*e*Pn	**Pn**	**23 43 46.3**	**-0.5**
LAST	**Lasithi**	**1.91**	**208**	*e*Pb	**Pb**	**23 43 49.6**	**-1.6**
LAST	**Lasithi**	**1.91**	**208**	*e*PB	**Pb**	**23 43 49.6**	**-1.6**
LAST	**Lasithi**	**1.91**	**208**	*e*Pb	**Pb**	**23 43 49.6**	**-1.6**
FETY	**Fethiye**	**2.03**	**96**	*e*PN	**Pn**	**23 43 51.8**	**+1.4**
FETY	**Fethiye**	**2.03**	**96**	*e*Pn	**Pn**	**23 43 51.8**	**+1.4**
IDI	**Anoyia**	**2.08**	**221**	*e*Pn	**Pn**	**23 43 50.8**	**-0.2**
IDI	**Anoyia**	**2.08**	**221**	*e*PN	**Pn**	**23 43 50.8**	**-0.2**
IDI	**Anoyia**	**2.08**	**221**	*e*Pn	**Pn**	**23 43 50.8**	**-0.2**
GLHS	**Glhisar (BURDU**	**2.36**	**82**	*e*PN	**Pn**	**23 43 56.5**	**+1.6**
GLHS	**Glhisar (BURDU**	**2.36**	**82**	*e*Pn	**Pn**	**23 43 56.5**	**+1.6**
PRK	**Paraskevi**	**2.39**	**354**	*e*Pn	**Pn**	**23 43 54.5**	**-0.9**
PRK	**Paraskevi**	**2.39**	**354**	*e*PN	**Pn**	**23 43 54.5**	**-0.9**
PRK	**Paraskevi**	**2.39**	**354**	*e*Pn	**Pn**	**23 43 54.5**	**-0.9**
ELL	**Elmali**	**2.68**	**91**	*e*PN	**Pn**	**23 44 01.1**	**+1.8**
ELL	**Elmali**	**2.68**	**91**	*e*Pn	**Pn**	**23 44 01.1**	**+1.8**
ALN	**Alexandroupoli**	**4.05**	**354**	*e*Pn	**Pn**	**23 44 17.5**	**-0.6**
ALN	**Alexandroupoli**	**4.05**	**354**	*e*PN	**Pn**	**23 44 17.5**	**-0.6**
ALN	**Alexandroupoli**	**4.05**	**354**	*e*Pn	**Pn**	**23 44 17.5**	**-0.6**

*GII **14** 23:59:32.3±0.5, 33°.30N×35°.46E, h1km±1km, Md2.0/6*
*ISCJB **14** 23:59:32.8±0.5, 33°.33N±0°.02×35°.44E±0°.04, h5km±5km, Error ellipse: s-maj=6.6km s-min=3.3km az=23.5*
*GRAL **14** 23:59:33.6±0.3, 33°.31N×35°.45E, h0km±4km, MD3.1*
*CSEM **14** 23:59:33.0±0.3, 33°.33N×35°.43E, h0km±5km, ML3.1, Error ellipse: s-maj=9.6km s-min=4.0km az=108.0*

ISC 14 23:59:33.2±0.5, 33°.33N±0°.02×35°.45E±0°.04, h3km±7km, n26, σ0s61/36, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.19**	**328**	*e*P	**Pg**	**23 59 37.3**	**+0.5**
MATL	**Matarih**	**0.19**	**328**	*e*P	**Pg**	**23 59 37.3**	**+0.4**
KSDI	**Kefar Szold**	**0.22**	**128**	Pg	**Pg**	**23 59 37.3**	**-0.2**
KSDI				Sg	**Sg**	**23 59 40.6**	**+0.2**
HRI	**Mount Hermon**	**0.25**	**105**	Pg	**Pg**	**23 59 37.7**	**-0.3**
MMC7	**Mount Meron ar**	**0.31**	**189**	Pg	**Pg**	**23 59 38.8**	**-0.4**
MMA0B	**Mount Meron ar**	**0.32**	**187**	Pg	**Pg**	**23 59 38.5**	**-0.8**
MMA0B				Sg	**Sg**	**23 59 44.3**	**+0.9**
MMA3	**Mount Meron ar**	**0.32**	**187**	Pg	**Pg**	**23 59 38.9**	**-0.4**
HNTI	**Hanita**	**0.34**	**223**	Pg	**Pg**	**23 59 39.7**	**0.0**
HNTI				Sg	**Sg**	**23 59 44.8**	**+0.8**
RCY	**Rachaya**	**0.35**	**63**	*e*P	**Pg**	**23 59 40.2**	**+0.3**
RCY				*e*S	**Sg**	**23 59 45.4**	**+1.0**
RCY	**Rachaya**	**0.35**	**63**	*e*P	**Pg**	**23 59 40.2**	**+0.3**
RCY				*e*S	**Sg**	**23 59 45.4**	**+1.0**
KSHT	**Keshet**	**0.46**	**139**	Pg	**Pg**	**23 59 42.1**	**0.0**
BHL	**Bhannes**	**0.60**	**17**	*e*P	**Pg**	**23 59 44.8**	**+0.1**
BHL				*e*S	**Sg**	**23 59 53.0**	**+0.6**
BHL	**Bhannes**	**0.60**	**17**	*e*P	**Pg**	**23 59 44.8**	**+0.1**
BHL				*e*S	**Sg**	**23 59 53.0**	**+0.5**
BLGI	**Bet Lehem HaGe**	**0.63**	**200**	Pg	**Pg**	**23 59 45.2**	**-0.1**
OFRI	**'Ofer**	**0.81**	**209**	Pg	**Pg**	**23 59 48.4**	**-0.3**
MMLI	**Mount Malkishu**	**0.89**	**181**	Sg	**Sg**	**00 00 02.7**	**+0.9**
MMLI	**Mount Malkishu**	**0.89**	**181**	Pg	**Pg**	**23 59 49.5**	**-0.8**
HWQ	**Hawqa**	**1.03**	**24**	*e*P	**Pg**	**23 59 52.6**	**-0.4**
HWQ				*e*S	**Sg**	**00 00 06.5**	**0.0**
HWQ	**Hawqa**	**1.03**	**24**	*e*P	**Pg**	**23 59 52.6**	**-0.4**
HWQ				*e*S	**Sg**	**00 00 06.5**	**+0.1**
HMDT	**Nahal Hemdat**	**1.07**	**176**	Pg	**Pg**	**23 59 52.8**	**-1.0**
SLTI	**Sal'it**	**1.14**	**198**	Sg	**Sg**	**00 00 10.8**	**+1.0**
SLTI	**Sal'it**	**1.14**	**198**	Pg	**Pg**	**23 59 54.0**	**-1.0**
FKH	**Fakeheh**	**1.20**	**41**	*e*P	**Pg**	**23 59 55.7**	**-0.6**
FKH	**Fakeheh**	**1.20**	**41**	*e*P	**Pg**	**23 59 55.7**	**-0.6**
DSI	**Dead Sea**	**1.75**	**182**	Pn	**Pn**	**00 00 03.7**	**-0.8**
DSI				Sn	**Sn**	**00 00 28.1**	**+0.8**
PRNI	**Paran**	**2.99**	**187**	Pn	**Pn**	**00 00 21.6**	**+0.1**

*IDC **15** 00:00:29.5±0.9, 31°.48N×104°.14E, h0km, mb3.7/10, mb1 3.9/11, mb1mx3.7/27, mbtmp3.7/11, ML3.6/1, Error ellipse: s-maj=37.0km s-min=17.0km az=51.0*
*ISCJB **15** 00:00:29.7±0.4, 31°.54N±0°.04×104°.19E±0°.06, h10km, mb3.7/9, Error ellipse: s-maj=7.9km s-min=5.1km az=21.2*
*NEIC **15** 00:00:31.0±0.6, 31°.48N×104°.17E, h10km, Error ellipse: s-maj=21.8km s-min=9.6km az=59.0*
*BJI **15** 00:00:33.3, 31°.58N×104°.29E, h13km, mb4.5/2, ML3.6/14, Ms3.3/3, Ms7 3.3/2*

ISC 15 00:00:31.5±0.4, 31°.55N±0°.04×104°.16E±0°.06, h10km, n18, σ0s97/23, mb3.7/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.73**	**208**	Pg	**Pg**	**00 00 44.3**	**-1.2**
CD2				Sg	**Sg**	**00 00 54.1**	**-0.9**
CD2				smax			
	comp=N,2μm,0.8s						
CD2				smax			
	comp=E,2μm,0.9s						
LZH	**Lanzhou**	**4.53**	**357**	*e*Pg	**Pb**	**00 01 50.8**	**-0.2**
LZH				Sg	**Sg**	**00 02 53.3**	**-3.6**
LZH				smax			
	comp=N,65nm,1.0s						
LZH				smax			
	comp=E,74nm,1.1s						
LZH				LR	LR		
	comp=N,310nm,6.8s						
LZH				LR	LR		
	comp=Z,370nm,8.9s						
XAN	**Xi'an**	**4.72**	**57**	Pn	**Pn**	**00 01 42.6**	**0.0**
XAN				Sn	**Sn**	**00 02 37.0**	**-0.4**
XAN				Sg	**Sg**	**00 02 59.9**	**-3.0**
XAN				smax			
	comp=N,150nm,0.7s						
XAN				smax			
	comp=E,80nm,1.0s						
GYA	**Guiyang**	**5.53**	**156**	Pn	**Pn**	**00 01 58.3**	**+4.5**
GYA				Sn	**Sn**	**00 02 59.8**	**+2.3**
GYA				smax			
	comp=N,60nm,0.9s						
GYA				smax			
	comp=E,70nm,0.8s						
SONM	**Songino Array**	**16.35**	**5**	Pn	**Pn**	**00 04 22.4**	**+1.4**
	comp=E,0.2nm,0.3s,baz=187,slow=10,SNR=2.6						
KSRS	**Korea Array**	**20.43**	**67**	P	**P**	**00 05 09.1**	**+0.3**
	comp=E,2.1nm,0.8s,baz=258,slow=11,SNR=6.1						
CN2	**Changchun**	**20.75**	**48**	*e*P	**P**	**00 05 13.8**	**+1.5**
CN2				pmax	pmax		
	comp=Z,20nm,0.6s						
MK31	**Makanchi Array**	**22.67**	**318**	*e*P	**P**	**00 05 33.5**	**+0.7**
MKAR	**Makanchi Array**	**22.67**	**318**	P	**P**	**00 05 33.6**	**+0.8**
	comp=Z,1.0nm,0.7s,mb3.4,baz=100,slow=16,SNR=9.9						
ZAA0	**Zalesovo Array**	**26.34**	**334**	*e*P	**P**	**00 06 07.2**	**-0.1**
ZALV	**Zalesovo Beam**	**26.34**	**334**	P	**P**	**00 06 07.3**	**-0.1**
	comp=Z,1.0nm,0.5s,mb3.6,baz=146,slow=11,SNR=7.0						
KURK	**Kurchatov**	**26.92**	**323**	P	**P**	**00 06 12.9**	**+0.3**
	comp=Z,2.0nm,0.3s,mb4.2,baz=134,slow=8.5,SNR=3.1						
BVAR	**Borovoye Array**	**32.47**	**321**	P	**P**	**00 07 02.2**	**+0.4**
	comp=Z,0.2nm,0.5s,mb3.2,baz=123,slow=5.3,SNR=3.0						
FINES	**FINESS Array B**	**57.22**	**326**	P	**P**	**00 10 18.0**	**-0.5**
	comp=Z,2.0nm,1.0s,mb4.1,baz=78,slow=7.7,SNR=4.0						
WRA	**Warramunga Arr**	**58.82**	**146**	P	**P**	**00 10 29.6**	**-0.6**
	comp=Z,0.8nm,0.6s,mb3.9,baz=330,slow=8.7,SNR=2.9						
ASAR	**Alice Springs**	**61.85**	**149**	P	**P**	**00 10 50.4**	**-0.5**
	comp=Z,0.3nm,0.5s,mb3.7,baz=334,slow=6.5,SNR=4.9						
GERES	**GERESS Array B**	**67.27**	**314**	P	**P**	**00 11 25.9**	**-0.2**
	comp=Z,0.4nm,0.8s,mb3.5,baz=22,slow=1.1,SNR=3.2						
YKA	**Yellowknife Ar**	**81.25**	**17**	P	**P**	**00 12 46.5**	**-0.8**
	comp=Z,0.8nm,0.7s,mb3.8,baz=325,slow=4.8,SNR=3.0						

JMA 15 00:01:19.9±0.4, 44°.65N×149°.01E, h30km, M3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**2.68**	**243**	P	Pn	00 02 00.1	-0.9
NEM2				*e*S	Sn	00 02 29.4	-3.1
JRA	**Rausu**	**2.88**	**257**	P	Pn	00 02 04.9	+1.2
JRA				*e*S	Sn	00 02 38.3	+1.0
JNK	**Nakash**	**3.27**	**252**	P	Pn	00 02 09.6	+0.6
JNK				*e*S	Sn	00 02 46.0	-0.9
JAK	**Akkeshi**	**3.53**	**244**	P	Pn	00 02 11.9	-0.8
JAK				*e*S	Sn	00 02 50.5	-2.9
JAR	**Ashorobuto**	**4.02**	**252**	P	Pn	00 02 20.9	+1.6
JMP	**Maruseppu**	**4.11**	**263**	P	Pn	00 02 22.9	+2.4
JOB	**Onbets**	**4.13**	**247**	P	Pn	00 02 21.5	+0.6
JOB				*e*S	Sn	00 03 06.5	-1.7
JCH	**Churui**	**4.58**	**246**	P	Pn	00 02 27.7	+0.7
JCH				*e*S	Sn	00 03 17.7	-1.4
JNBK	**Urakawa-nobuka**	**5.13**	**245**	P	Pn	00 02 33.6	-1.1
JKB	**Kayabe**	**6.44**	**247**	P	Pn	00 02 52.2	-0.5
JKB				*e*S	Sn	00 04 00.0	-5.1

*IDC **15** 00:11:20.2±0.5, 31°.08N×103°.60E, h0km, mb4.2/24, mb1 4.3/26, mb1mx4.2/32, mbtmp4.2/26, ML4.0/2, MS3.8/21, Ms1 3.8/21, ms1mx3.6/35, Error ellipse: s-maj=16.6km s-min=10.8km az=48.0*
*NEIC **15** 00:11:21.8±0.2, 31°.07N×103°.65E, h10km, mb4.6/42, Error ellipse: s-maj=5.1km s-min=4.3km az=184.0*
*ISCJB **15** 00:11:22.9±0.5, 31°.11N±0°.03×103°.67E±0°.03, h29km±4km, mb4.5/68, MS4.0/36, Error ellipse: s-maj=4.4km s-min=4.1km az=162.9*
*BJI **15** 00:11:23.1±0.9, 31°.04N×103°.67E, h33km, mb4.6/47, Error ellipse: s-maj=8.4km s-min=5.2km az=113.8*
*SZGRF **15** 00:11:27.8, 31°.59N×103°.78E, h33km, mb4.7, Sichuan, China*

ISC 15 00:11:23.6±0.7, 31°.13N±0°.03×103°.66E±0°.03, h18km±4km, n220, σ1s09/238, mb4.5/68, MS4.0/36, 12C-9D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.24**	**158**	↓*i*Pg	**Pg**	**00 11 28.3**	**-0.8**
CD2				Sg	**Sg**	**00 11 32.8**	**-0.1**
CD2				smax			
	comp=N,94μm,1.1s						
CD2				smax			
	comp=E,120μm,0.7s						
LZH	**Lanzhou**	**4.95**	**2**	Pn	**Pn**	**00 12 38.8**	**+1.9**
LZH				Pg	**Pg**	**00 12 53.0**	**-5.3**
LZH				Sn	**Sn**	**00 13 33.1**	**-0.5**
LZH				Sg	**Sg**	**00 13 56.0**	**-6.3**
LZH				smax			
	comp=N,1μm,1.1s						
LZH				smax			
	comp=E,5μm,1.1s						
LZH				LR	LR		
	comp=E,5μm,6.0s						
LZH				LR	LR		
	comp=Z,6μm,9.0s						
ENH	**Enshi**	**5.09**	**98**	*e*Pn	**Pn**	**00 12 39.3**	**+0.3**
	comp=Z,449nm,1.0s						
ENH				*e*S	**Sg**	**00 14 01.2**	**-6.0**
XAN	**Xi'an**	**5.31**	**55**	Pn	**Pn**	**00 12 39.8**	**-2.1**
XAN				Pg	**Pb**	**00 12 57.5**	**+1.7**
XAN				Sn	**Sn**	**00 13 40.0**	**-2.6**
XAN				Sg	**Sb**	**00 14 00.8**	**+1.7**
XAN				smax			
	comp=N,1μm,1.2s						
XAN				smax			
	comp=E,470nm,1.0s						
XAN				LR	LR		
	comp=N,5μm,10.4s						
XAN				LR	LR		
	comp=E,1μm,11.3s						
XAN				LR	LR		
	comp=Z,730nm,8.5s						
GYA	**Guiyang**	**5.35**	**150**	Pn	**Pn**	**00 12 43.8**	**+1.2**
GYA				Sg	**Sg**	**00 14 13.5**	**-1.9**
GYA				smax			
	comp=N,1μm,1.3s						
GYA				smax			
	comp=E,2μm,1.4s						
GYA				LR	LR		
	comp=N,4μm,6.5s						
GYA				LR	LR		
	comp=E,5μm,6.8s						
GYA				LR	LR		
	comp=Z,6μm,5.9s						
KMI	**Kunming**	**6.04**	**188**	Pn	**Pn**	**00 12 53.3**	**+1.3**
KMI				Sn	**Sn**	**00 14 03.3**	**+2.6**
KMI				smax			
	comp=N,250nm,1.6s						
KMI				smax			
	comp=E,310nm,1.3s						
KMI				LR	LR		
	comp=N,3μm,9.8s						
KMI				LR	LR		
	comp=E,7μm,6.3s						
KMI				LR	LR		
	comp=Z,3μm,5.0s						
GTA	**Gaotai**	**8.84**	**340**	*e*P	**Pn**	**00 13 34.0**	**+3.7**
GTA				pP		00 13 37.0	
GTA				sP		00 13 38.8	
GTA				S	**Sn**	**00 15 07.8**	**-1.6**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,600nm,3.6s						
GTA				LR	LR		
	comp=N,2μm,14.0s						
GTA				LR	LR		
	comp=E,2μm,11.0s						
GTA				LR	LR		
	comp=Z,4μm,11.6s						
WHN	**Wuhan**	**9.21**	**91**	P	**Pn**	**00 13 39.3**	**+3.7**
WHN				S	**Sn**	**00 15 13.0**	**-5.8**
WHN				LR	LR		
	comp=N,8μm,8.6s						
WHN				LR	LR		
	comp=E,7μm,8.7s						
WHN				LR	LR		
	comp=Z,5μm,8.0s						
BTO	**Baotou**	**10.77**	**27**	*e*P	**Pn**	**00 14 08.3**	**+12**
LSA	**Lhasa**	**10.89**	**266**	P	**Pn**	**00 14 00.8**	**+2.3**
LSA				LR	LR		
	comp=E,2μm,8.2s						
LSA				LR	LR		
	comp=Z,2μm,10.1s						
HHC	**Hu-ho-hao-te**	**11.62**	**31**	*e*P	**Pn**	**00 14 09.0**	**+0.6**
HHC				pP		00 14 12.3	
HHC				sP		00 14 15.3	
HHC				PP		00 14 18.1	
HHC				S	**Sn**	**00 16 17.5**	**0.0**
HHC				SS		00 16 31.8	
HHC				PcS	PcS	00 23 34.1	+1.7
HHC				ScS	ScS	00 27 07.5	+1.6
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
HHC				pmax	pmax		
	comp=Z,87nm,4.2s						
HHC				LR	LR		
	comp=N,1μm,7.0s						
HHC				LR	LR		
	comp=E,1μm,7.6s						
HHC				LR	LR		
	comp=Z,1μm,8.4s						
GZH	**Guangzhou**	**11.77**	**131**	P	**Pn**	**00 14 09.0**	**-1.6**
GZH				S	**Sn**	**00 16 22.1**	**+0.6**
GZH				LR	LR		
	comp=N,2μm,9.5s						
GZH				LR	LR		
	comp=E,2μm,11.6s						
GZH				LR	LR		
	comp=Z,3μm,11.1s						
NJ2	**Nanjing**	**12.99**	**82**	*e*P	**Pn**	**00 14 28.4**	**+1.1**
NJ2				pP		00 14 32.0	
NJ2				sP		00 14 34.8	
NJ2				PP		00 14 38.8	
NJ2				S	**Sn**	**00 16 49.8**	**-1.5**
NJ2				pmax	pmax		
	comp=Z,20nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,50nm,4.8s						
NJ2				LR	LR		
	comp=N,890nm,9.8s						
NJ2				LR	LR		
	comp=E,2μm,11.8s						
NJ2				LR	LR		
	comp=Z,2μm,10.7s						
QIZ	**Qiongzhong**	**13.29**	**154**	P	**Pn**	**00 14 33.6**	**+2.3**
QIZ				S	**Sn**	**00 17 05.3**	**+6.7**
QIZ				pmax	pmax		
	comp=Z,190nm,3.5s						
QIZ				LR	LR		
	comp=N,2μm,8.6s						
QIZ				LR	LR		
	comp=Z,1μm,8.6s						
CM31	**Chiang Mai Arr**	**13.32**	**200**	*e*Pn	**Pn**	**00 14 38.2**	**+6.3**
	comp=Z,7.3nm,0.6s						
CMAR	**Chiang Mai Arr**	**13.32**	**200**	Pn	**Pn**	**00 14 29.3**	**-2.5**
	comp=Z,0.3nm,0.3s,baz=3.7,slow=8.6,SNR=2.9						
CMAR				LR	LR	00 20 23.3	
	comp=Z,294nm,18.8s,baz=166,slow=41						
BJI	**Beijing**	**13.51**	**45**	P	**Pn**	**00 14 37.4**	**+3.1**
BJI				pmax	pmax		
	comp=Z,11nm,1.5s						
BJI				pmax	pmax		
	comp=Z,190nm,3.9s						
BJI				LR	LR		
	comp=N,2μm,12.2s						
BJI				LR	LR		
	comp=E,2μm,12.2s						
TAPN	**Taplejung**	**14.42**	**259**	*e*P	**Pn**	**00 14 46.5**	**-0.3**
	comp=E,84nm,1.2s						
BDT	**Bhumibol Dam**	**14.46**	**198**	P	**Pn**	**00 14 56.0**	**+8.7**
QZH	**Quanzhou**	**14.55**	**111**	*e*P	**Pn**	**00 15 01.8**	**+13**
QZH				*e*S	**Sn**	**00 17 40.8**	**+11**
QZH				LR	LR		
	comp=N,2μm,7.7s						
QZH				LR	LR		
	comp=E,4μm,10.7s						
QZH				LR	LR		
	comp=Z,4μm,10.4s						
ODAN	**Odare**	**14.85**	**257**	*e*P	**Pn**	**00 14 51.1**	**-1.6**
	comp=Z,32nm,0.7s						
NST	**Nakhon Sawan**	**15.72**	**193**	P	**Pn**	**00 15 07.5**	**+3.3**
	comp=Z,39nm,0.7s						
GUN	**Gumba**	**15.80**	**263**	*e*P	**Pn**	**00 15 05.0**	**-0.2**
	comp=Z,105nm,1.0s						
PKI	**Pulchoki**	**16.30**	**262**	*e*P	**Pn**	**00 15 09.8**	**-1.8**
	comp=Z,44nm,0.6s						
PKI	**Pulchoki**	**16.30**	**262**	*e*P	**Pn**	**00 15 10.2**	**-1.4**
PKI				pmax	pmax		
	comp=Z,63nm,0.6s						
PKI	**Pulchoki**	**16.30**	**262**	*e*P	**Pn**	**00 15 10.2**	**-1.4**
	comp=Z,63nm,0.6s						
PKIN	**Phulchoki**	**16.31**	**262**	*e*P	**Pn**	**00 15 10.2**	**-1.5**
	comp=Z,63nm,0.6s						
KKN	**Kakani**	**16.35**	**263**	*e*P	**Pn**	**00 15 10.4**	**-1.8**
	comp=Z,136nm,1.1s						
KKN	**Kakani**	**16.35**	**263**	*e*P	**Pn**	**00 15 10.4**	**-1.8**
KKN				pmax	pmax		
	comp=Z,136nm,1.1s						
DMN	**Daman**	**16.55**	**262**	*e*P	**Pn**	**00 15 12.7**	**-2.0**
	comp=Z,121nm,0.9s						
DL2	**Dalian**	**16.62**	**57**	*e*P	**Pn**	**00 15 17.4**	**+1.8**
DL2				S	**Sn**	**00 18 26.0**	**+6.3**
DL2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
DL2				LR	LR		
	comp=N,440nm,16.5s						
DL2				LR	LR		
	comp=E,390nm,16.0s						
DL2				LR	LR		
	comp=Z,380nm,12.8s						
SONM	**Songino Array**	**16.81**	**6**	Pn	**Pn**	**00 15 17.2**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=188,slow=14,SNR=17						
SONM				LR	LR	00 22 24.0	
	comp=Z,568nm,19.4s,baz=253,slow=39						
SONM	**Songino Array**	**16.81**	**6**	P	**Pn**	**00 15 17.2**	**-0.7**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM				MLR

KSRS MLR MLR
comp=Z,233nm,18.9s,MS3.6
IRK Irkutsk 21.10 1 *e*P **P 00 16 08.8 +1.9**
IRK pmax pmax
comp=Z,102nm,1.5s,mb4.9
CN2 Changchun 21.35 48 *e*P **P 00 16 09.9 +0.2**
CN2 *ep*P 00 16 14.0
CN2 *es*P sP 00 16 16.9 -0.4
CN2 *e*S **S 00 20 00.9 -5.1**
CN2 pmax pmax
comp=Z,40nm,0.8s,mb4.8
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,700nm,11.0s,MS4.4
CN2 LR LR
comp=E,400nm,11.0s,MS4.4
CN2 LR LR
comp=Z,200nm,12.0s,MS3.7
HIA Hailar 21.81 29 *e*P **P 00 16 14.9 +0.4**
HIA pmax pmax
comp=Z,28nm,1.0s
HIA Hailar 21.81 29 *e*P **P 00 16 14.9 +0.4**
comp=Z,28nm,1.0s,mb4.7
MK31 Makanchi Array 22.71 320 *e*P **P 00 16 24.7 +0.6**
MKAR Makanchi Array 22.71 320 P **P 00 16 24.2 +0.1**
comp=Z,11nm,1.0s,mb4.2,baz=106,slow=12,SNR=31
MKAR LR LR 00 25 33.2
comp=Z,176nm,18.4s,MS3.5,baz=126,slow=38
MKAR Makanchi Array 22.71 320 P **P 00 16 24.2 +0.1**
MKAR pmax pmax
comp=Z,11nm,1.0s
MKAR MLR MLR
comp=Z,176nm,18.4s
KSH Kashi 24.02 298 P **P 00 16 41.1 +3.8**
KSH pP 00 16 45.3
KSH sP sP 00 16 48.0 +2.8
KSH PP 00 17 16.5
KSH PcP PcP 00 20 21.4 +2.5
KSH S **S 00 20 56.5 +3.0**
KSH sS sS 00 21 04.3 +1.7
KSH SS 00 21 51.5
KSH ScP ScP 00 23 58.1 +1.7
KSH PcS PcS 00 23 59.9 +1.4
KSH ScS ScS 00 27 44.4 +1.0
KSH pmax pmax
comp=Z,15nm,1.0s,mb4.4
KSH pmax pmax
comp=Z,100nm,3.2s
KSH LR LR
comp=N,300nm,8.1s
KSH LR LR
comp=E,520nm,11.7s
KSH LR LR
comp=Z,460nm,11.6s,MS4.2
MDJ Mudanjiang 24.38 49 P **P 00 16 39.3 -1.2**
MDJ pP 00 16 42.3
MDJ S **S 00 20 58.0 -1.2**
MDJ sS sS 00 21 03.5 -4.9
MDJ ScP ScP 00 23 58.3 +1.0
MDJ PcS PcS 00 23 59.5 +0.2
MDJ pmax pmax
comp=Z,4.0nm,0.9s,mb3.9
MDJ pmax pmax
comp=Z,74nm,3.8s
MDJ LR LR
comp=N,320nm,21.1s,MS3.8
MDJ LR LR
comp=E,150nm,21.1s,MS3.8
MDJ LR LR
comp=Z,230nm,9.4s
MDJ Mudanjiang 24.38 49 *e*P **P 00 16 40.9 +0.3**
comp=Z,38nm,1.2s,mb4.7
TKM2 Tokmak 2 25.18 306 *e*P **P 00 16 49.4 +1.5**
TKM2 pmax pmax
comp=Z,10.0nm,1.1s,mb4.3
TKM2 Tokmak 2 25.18 306 *e*P **P 00 16 49.4 +1.5**
comp=Z,10nm,1.1s,mb4.3
UCH Uchtor 25.74 304 *e*P **P 00 16 55.2 +2.2**
comp=Z,17nm,1.1s,mb4.5
AAK Ala-Archa 25.87 305 P **P 00 16 55.1 +0.9**
comp=Z,2.6nm,0.7s,mb3.9,baz=81,slow=7.6,SNR=5.5
AAK LR LR 00 27 55.4
comp=Z,462nm,19.3s,MS4.0,baz=250,slow=38
AAK Ala-Archa 25.87 305 P **P 00 16 55.1 +1.0**
AAK pmax pmax
comp=Z,3.0nm,0.7s,mb3.9
AAK MLR MLR
comp=Z,462nm,19.3s,MS4.0
AAK Ala-Archa 25.87 305 *e*P **P 00 16 56.4 +2.3**
comp=Z,6.7nm,0.8s,mb4.2
AML Almayashu 26.30 303 *e*P **P 00 16 59.6 +1.6**
comp=Z,12nm,1.2s,mb4.3
EKS2 Erkin-Say 26.39 304 *e*P **P 00 16 59.7 +0.9**
comp=Z,8.9nm,1.0s,mb4.2
ZAA0 Zalesovo Array 26.53 335 *e*P **P 00 17 00.1 +0.1**
ZALV Zalesovo Beam 26.53 335 P **P 00 16 59.6 -0.4**
comp=Z,11nm,0.8s,mb4.4,baz=133,slow=8.3,SNR=30
ZALV LR LR 00 27 56.8
comp=Z,231nm,21.3s,MS3.7,baz=118,slow=38
ZALV Zalesovo Beam 26.53 335 P **P 00 16 59.6 -0.4**
ZALV pmax pmax
comp=Z,11nm,0.8s,mb4.4
ZALV MLR MLR
comp=Z,231nm,21.3s,MS3.7
KURK Kurchatov 27.00 324 P **P 00 17 04.2 0.0**
comp=Z,7.3nm,0.8s,mb4.2,baz=131,slow=9.3,SNR=26
KURK LR LR 00 28 48.0
comp=Z,373nm,18.9s,MS4.0,baz=120,slow=39
KURK Kurchatov 27.00 324 P **P 00 17 04.2 0.0**
KURK pmax pmax
comp=Z,7.0nm,0.8s,mb4.2
KURK MLR MLR
comp=Z,373nm,18.9s,MS4.0
KURK Kurchatov 27.00 324 *e*P **P 00 17 04.4 +0.2**
comp=Z,22nm,1.2s,mb4.6
KLR Kul'dur 27.82 41 *e*P **P 00 17 09.8 -1.8**
KLR MLR MLR
comp=N,1μm,14.0s,MS4.7
KLR MLR MLR
comp=E,600nm,14.0s,MS4.7
KLR MLR MLR
comp=Z,600nm,12.0s,MS4.4
PSI Prapat 28.53 190 P **P 00 17 16.8 -1.5**
comp=Z,3.0nm,0.6s,mb4.2,baz=354,slow=15,SNR=3.2
PSI LR LR 00 28 27.9
comp=Z,314nm,21.1s,MS3.9,baz=176,slow=36
PSI Prapat 28.53 190 P **P 00 17 16.8 -1.4**
PSI pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
PSI MLR MLR
comp=Z,314nm,21.2s,MS3.9
MJAR Matsushiro Arr 29.10 70 P **P 00 17 22.5 -0.7**
comp=Z,0.6nm,0.6s,mb3.5,baz=262,slow=9.3,SNR=3.8
MJAR LR LR 00 28 07.5
comp=Z,111nm,18.9s,MS3.5,baz=230,slow=34
MJAR Matsushiro Arr 29.10 70 P **P 00 17 22.5 -0.7**
MJAR pmax pmax
comp=Z,1.0nm,0.6s
MJAR MLR MLR
comp=Z,111nm,18.9s
MJAR Matsushiro Arr 29.10 70 P **P 00 17 22.5 -0.7**
MJAR LR LR 00 28 07.5
KBL Kabul 29.20 286 *e*P **P 00 17 25.8 +1.8**
KBL pmax pmax
comp=Z,15nm,1.1s,mb4.6
KBL Kabul 29.20 286 *e*P **P 00 17 25.8 +1.8**
comp=Z,15nm,1.1s,mb4.6
DAV Davao City (W) 31.52 135 LR LR 00 31 09.5
comp=Z,374nm,18.7s,MS4.1,baz=346,slow=38
BVAR Borovoye Array 32.53 322 P **P 00 17 53.3 +0.1**
comp=Z,1.0nm,0.6s,mb3.9,baz=124,slow=8.5,SNR=11
BVAR PcP PcP 00 20 38.6 -0.9
comp=Z,2.1nm,0.9s,baz=134,slow=4.3,SNR=6.7
BVAR Borovoye Array 32.53 322 P **P 00 17 53.3 +0.1**
BVAR 00 20 38.6
BVAR pmax pmax
comp=Z,1.0nm,0.6s
BRVK Borovoye 32.60 322 *d iP* **P 00 17 54.4 +0.5**
BRVK pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
BRVK Borovoye 32.60 322 *e*P **P 00 17 54.0 +0.2**
comp=Z,2.8nm,0.6s,mb4.4
ASAJ Asahikawa 33.15 56 P **P 00 17 59.8 +1.1**
comp=Z,3.1nm,0.7s,mb4.3,baz=270,slow=9.1,SNR=2.8
ASAJ Asahikawa 33.15 56 P **P 00 17 59.8 +1.1**
ASAJ pmax pmax
comp=Z,3.0nm,0.7s
CBIJ Chichi jima 33.79 87 LR LR 00 31 56.9
comp=Z,116nm,18.6s,MS3.6,baz=313,slow=37
YSS Yuzh-Sakhalins 33.83 51 *e*P **P 00 18 05.3 +0.6**
YSS MLR MLR
comp=Z,200nm,16.0s,MS3.9
YSS MLR MLR
comp=N,200nm,14.0s
ABKAR Akbulak array 37.37 312 *e*P **P 00 18 35.4 +0.4**
comp=N,3.1nm,0.8s,mb4.2
AKTK Aktyubinsk 38.84 313 P **P 00 18 47.5 +0.1**
AKTO Aktyubinsk 38.84 313 P **P 00 18 47.5 +0.1**
comp=N,1.6nm,0.9s,mb3.8,baz=85,slow=5.5,SNR=5.1
AKTO Aktyubinsk 38.84 313 P **P 00 18 47.5 +0.1**
AKTO pmax pmax
comp=Z,2.0nm,0.9s,mb3.9
KAPI Kappang 39.09 154 P **P 00 18 49.3 -0.6**
comp=Z,7.5nm,0.8s,mb4.5,baz=283,slow=5.9,SNR=2.8
SVE Sverdlovsk 39.25 324⇑ *e*P **P 00 18 51.4 +0.7**
SVE pmax pmax
comp=Z,10.0nm,1.2s,mb4.4
ARU Arti 40.17 322 *c iP* **P 00 18 58.3 -0.1**
ARU *e* 00 20 30.6
ARU *e* 00 20 59.8
ARU S **S 00 25 04.9 +0.8**
ARU SS SS 00 27 57.0 -5.0
ARU pmax pmax
comp=Z,7.0nm,1.0s,mb4.3
ARU Arti 40.17 322 *e*P **P 00 18 58.4 0.0**
comp=Z,16nm,1.3s,mb4.6
SOKR Solikamsk 42.16 326 *e*P **P 00 19 18.9 +4.2**
SOKR pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
SOKR MLR MLR
comp=Z,170nm,21.0s,MS3.9
TIXI Tiksi 42.80 11 *e*P **P 00 19 18.8 -1.0**
TIXI pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
TIXI Tiksi 42.80 11 *e*P **P 00 19 18.8 -1.0**
comp=Z,5.6nm,0.8s,mb4.3
SEY Seymchan 44.26 30⇑ *e*P **P 00 19 31.8 +0.2**
PETK Petropavlovsk- 44.44 44 P **P 00 19 33.6 +0.4**
comp=Z,2.8nm,0.8s,mb4.1,baz=212,slow=8.7,SNR=4.7
PETK LR LR 00 39 49.5
comp=Z,82nm,19.1s,MS3.7,baz=84,slow=38
PETK Petropavlovsk- 44.44 44 P **P 00 19 33.6 +0.4**
PETK pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
PETK MLR MLR
comp=Z,82nm,19.1s,MS3.7
ZEI Tsey 48.23 301 *e*P **P 00 20 03.1 -0.1**
ZEI pmax pmax
comp=Z,4.0nm,0.4s,mb4.8
KIV Kislovodsk 48.98 303 *e*P **P 00 20 09.7 +0.8**
KIV pmax pmax
comp=Z,13nm,1.1s,mb4.9
KIV MLR MLR
comp=Z,113nm,16.0s,MS4.0
KIV Kislovodsk 48.98 303 *e*P **P 00 20 09.8 +0.9**
comp=Z,9.3nm,0.9s,mb4.8
VSR Storozhevoye 50.78 313 *e*P **P 00 20 21.6 -0.9**
VSR pmax pmax
comp=N,2.0nm,0.7s
VSR pmax pmax
comp=E,9.0nm,0.7s
VSR pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
BILL Bilibino 51.32 25⇓ *e*P **P 00 20 25.4 -0.8**
BILL pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
BILL MLR MLR
comp=Z,200nm,16.0s,MS4.2
BILL Bilibino 51.32 25 *e*P **P 00 20 25.7 -0.6**
comp=Z,8.1nm,0.9s,mb4.7
MOS Moscow 51.59 319 *e*P **P 00 20 32.8 +4.3**
MOS pmax pmax
comp=Z,36nm,0.8s,mb5.3
OBN Obninsk 52.20 318⇑ *e*P **P 00 20 32.3 -0.7**
OBN *e* pP 00 20 38.2 -0.7
OBN 00 21 46.0
OBN pmax pmax
comp=Z,17nm,2.5s,mb4.5
OBN MLR MLR
comp=Z,200nm,17.0s,MS4.2
ANN Anapa 52.60 305 *e*P **P 00 20 35.2 -1.0**
ANN *eS* **S 00 28 00.8 -1.6**
ANN pmax pmax
comp=Z,21nm,1.9s,mb4.7
ANN MLR MLR
comp=Z,142nm,23.0s,MS4.0
FITZ Fitzroy Crossi 53.31 154 LR LR 00 44 54.2
comp=Z,54nm,18.3s,MS3.6,baz=332,slow=38
APA Apatity 54.11 334⇑ *e*P **P 00 20 46.0 -0.9**
APA pmax pmax
comp=Z,27nm,1.4s,mb5.0
APA MLR MLR
comp=Z,500nm,15.0s,MS4.7
JOF Joensuu 54.80 328 *e*P **P 00 20 50.6 -1.4**
JOF pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
JOF Joensuu 54.80 328 *ep* **P 00 20 50.6 -1.4**
comp=Z,2.1nm,0.6s,mb4.3
JOF Joensuu 54.80 328 *ep* **P 00 20 50.6 -1.4**
comp=Z,2.1nm,0.6s,mb4.3
ASF Jabal al Asfar 55.97 290 P **P 00 21 01.0 +0.1**
comp=Z,3.0nm,0.8s,mb4.4,baz=285,slow=5.2,SNR=6.7
ASF Jabal al Asfar 55.97 290 P **P 00 21 01.0 0.0**
ASF pmax pmax
comp=Z,3.0nm,0.8s
BR131 Keskin Array S 56.39 300 *e*P **P 00 21 03.5 -0.3**
comp=Z,1.9nm,0.9s,mb4.1
BRTR Keskin Array B 56.39 300 P **P 00 21 03.5 -0.3**
comp=Z,1.7nm,0.9s,mb4.1,baz=100,slow=5.5,SNR=13
BRTR PcP PcP 00 21 59.2 -1.6
comp=Z,0.9nm,0.8s,baz=90,slow=6.6,SNR=2.3
BRTR LR LR 00 49 11.7
comp=Z,41nm,20.3s,MS3.5,baz=272,slow=40
BRTR Keskin Array B 56.39 300 P **P 00 21 03.5 -0.3**
BRTR 00 21 59.2
BRTR pmax pmax
comp=Z,2.0nm,0.9s
BRTR MLR MLR
comp=Z,41nm,20.3s
KEV Kevo 56.55 336 *e*P **P 00 21 03.1 -1.4**
KEV pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
KEV Kevo 56.55 336 *ep* **P 00 21 03.1 -1.4**
comp=Z,5.7nm,0.7s,mb4.7
KEV Kevo 56.55 336 *ep* **P 00 21 03.1 -1.4**
comp=Z,5.7nm,0.7s,mb4.7
MMAI Mount Meron Ar 56.91 291 LR LR 00 49 25.7
comp=Z,52nm,20.4s,MS3.6,baz=175,slow=40
ARCES ARCESS Array B 57.08 336 P **P 00 21 07.9 -0.3**
comp=Z,3.6nm,0.7s,mb4.5,baz=86,slow=6.8,SNR=9.6
ARCES PcP PcP 00 22 02.1 -0.8
comp=Z,0.6nm,0.4s,baz=90,slow=3.9,SNR=5.9
ARCES LR LR 00 46 00.9
comp=Z,131nm,19.9s,MS4.0,baz=106,slow=36
ARCES ARCESS Array B 57.08 336 P **P 00 21 07.9 -0.3**
ARCES 00 22 02.1
ARCES pmax pmax
comp=Z,4.0nm,0.7s
ARCES MLR MLR
comp=Z,131nm,19.9s
AKASG Malin Array Be 57.09 313 P **P 00 21 06.2 -2.4**
comp=Z,0.6nm,0.4s,mb4.0,baz=73,slow=6.1,SNR=7.9
AKASG LR LR 00 49 18.4
comp=Z,56nm,19.3s,MS3.7,baz=65,slow=40
AKASG Malin Array Be 57.09 313 P **P 00 21 06.2 -2.4**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG MLR MLR
comp=Z,56nm,19.3s
KAF Kangasniemi 57.16 327 *e*P **P 00 21 05.3 -3.6**
KAF pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
KAF Kangasniemi 57.16 327 *ep* **P 00 21 05.3 -3.6**
comp=Z,2.1nm,0.7s,mb4.3
KAF Kangasniemi 57.16 327 *ep* **P 00 21 05.3 -3.6**
comp=Z,2.1nm,0.7s,mb4.3
FINES FINESS Array B 57.33 326 P **P 00 21 09.5 -0.6**
comp=Z,1.7nm,0.6s,mb4.2,baz=106,slow=6.9,SNR=7.2
FINES LR LR 00 47 10.1
comp=Z,99nm,19.1s,MS3.9,baz=132,slow=38
FINES FINESS Array B 57.33 326 P **P 00 21 09.5 -0.6**
FINES pmax pmax
comp=Z,2.0nm,0.6s
FINES MLR MLR
comp=Z,99nm,19.1s
EIL Elat 58.37 288 P **P 00 21 17.9 -0.1**
comp=Z,3.6nm,0.7s,mb4.5,baz=12,slow=5.4,SNR=3.8
WRAB Tennant Creek 58.71 146 *e*P **P 00 21 20.8 +0.6**
WRAB pmax pmax
comp=Z,31nm,0.8s,mb5.4
WRAB Tennant Creek 58.71 146 *e*P **P 00 21 20.8 +0.5**
comp=Z,31nm,0.8s,mb5.4
WRA Warramunga Arr 58.71 146 P **P 00 21 20.1 -0.1**
comp=Z,26nm,0.8s,mb5.3,baz=338,slow=7.5,SNR=47
WRA Warramunga Arr 58.71 146 P **P 00 21 20.1 -0.1**
WRA pmax pmax
comp=Z,26nm,0.9s
VRI Vrincioaia 59.77 308 ⇑P **P 00 21 27.7 +0.4**
VRI Vrincioaia 59.77 308 ⇑*iP* **P 00 21 27.7 +0.4**
PLOR Plostina 59.82 308 ⇑P **P 00 21 27.4 -0.3**
PLOR Plostina 59.82 308 ⇑*iP* **P 00 21 27.4 -0.3**
BURAR Bucovina Array 60.32 310 ⇑P **P 00 21 39.0 +7.9**
BURAR Bucovina Array 60.32 310 ⇑*iP* **P 00 21 39.0 +7.9**
MLR Muntele Rosu 60.39 308 ⇓P **P 00 21 32.3 +0.6**
MLR Muntele Rosu 60.39 308 ⇓*iP* **P 00 21 32.3 +0.6**
KWP Kalwaria Pacla 61.41 313 *e*P **P 00 21 38.6 +0.1**
KWP Kalwaria Pacla 61.41 313 *e*P **P 00 21 38.4 -0.1**
KWP pmax pmax
comp=Z,18nm,1.1s,mb5.1
KWP Kalwaria Pacla 61.41 313 *e*P **P 00 21 38.4 -0.1**
comp=Z,18nm,1.1s,mb5.1
KWP Kalwaria Pacla 61.41 313 ⇑*iP* **P 00 21 39.2 +0.7**
ASAR Alice Springs 61.72 148 P **P 00 21 40.7 -0.1**
comp=Z,5.4nm,0.8s,mb4.7,baz=340,slow=6.4,SNR=28
ASAR Alice Springs 61.72 148 P **P 00 21 40.7 -0.1**
ASAR pmax pmax
comp=Z,5.0nm,0.8s
KOLS Kolonicke sedl 61.87 312 *e*P **P 00 21 41.4 -0.2**
KOLS pmax pmax
comp=Z,3.0nm,1.2s,mb4.3
KOLS Kolonicke sedl 61.87 312 *e*P **P 00 21 41.4 -0.2**
comp=Z,3.1nm,1.2s,mb4.3
KOLS *e*PP pP 00 21 47.0 -0.5
KOLS Kolonicke sedl 61.87 312 *e*P **P 00 21 41.4 -0.2**
KOLS *ep*P pP 00 21 47.0 -0.5
DRGR 62.19 310 ⇓P **P 00 21 44.6 +0.8**
DRGR 62.19 310 ⇓*iP* **P 00 21 44.6 +0.8**
STHS Stebnicka Huta 62.38 313 *e*P **P 00 21 45.6 +0.5**
STHS pmax pmax
comp=Z,2.0nm,1.0s,mb4.2
STHS Stebnicka Huta 62.38 313 *e*P **P 00 21 45.6 +0.5**
comp=Z,2.1nm,1.0s,mb4.2
STHS *e*PP PP 00 24 01.3 -0.8
STHS Stebnicka Huta 62.38 313 *e*P **P 00 21 45.6 +0.5**
STHS *e*PP PP 00 24 01.3 -0.8
CRVS Cervenica-Dubn 62.39 312 *e*P **P 00 21 46.0 +0.9**
CRVS Cervenica-Dubn 62.39 312 *e*P **P 00 21 46.0 +0.9**
KECS Kecovo 63.13 312 *e*P **P 00 21 51.2 +1.1**
KECS *e* 00 22 02.6
KECS pmax pmax
comp=Z,2.0nm,1.1s,mb4.2
KECS Kecovo 63.13 312 *e*P **P 00 21 51.2 +1.1**
comp=Z,1.7nm,1.1s,mb4.1
KECS *e* 00 22 02.6
KECS Kecovo 63.13 312 *e*P **P 00 21 51.2 +1.1**
KECS *e* 00 22 02.6
VYHS Vyhne 64.17 313 *e*P **P 00 21 57.4 +0.5**
VYHS *e* 00 22 12.1
VYHS *e* 00 24 19.6
VYHS pmax pmax
comp=Z,2.0nm,1.2s,mb4.0
VYHS Vyhne 64.17 313 *e*P **P 00 21 57.4 +0.5**
comp=Z,2.3nm,1.2s,mb4.1
VYHS *e* 00 22 12.1
VYHS *e*PP PP 00 24 19.6 +1.8
VYHS Vyhne 64.17 313 *e*P **P 00 21 57.4 +0.5**
VYHS *e* 00 22 12.1
VYHS *e*PP PP 00 24 19.6 +1.8
OKC Ostrava-Krasne 64.18 314 *e*P **P 00 21 57.9 +0.9**
OKC MLR MLR
comp=Z,200nm,14.6s,MS4.4
OKC Ostrava-Krasne 64.18 314 *e*P **P 00 21 57.9 +0.9**
OKC AMS AMS 00 50 40.0
comp=Z,200nm,14.6s
NB2 NORSAR Subarra 64.43 327 P **P 00 21 56.8 -1.6**
comp=Z,2.3nm,0.8s,mb4.3,baz=74,slow=6.9
NOA NORSAR Array B 64.43 327 P **P 00 21 56.8 -1.5**
comp=Z,0.4nm,0.6s,mb3.6,baz=39,slow=4.9,SNR=4.1
NOA LR LR 00 50 39.0
comp=Z,83nm,18.2s,MS4.0,baz=70,slow=37
NOA NORSAR Array B 64.43 327 P **P 00 21 56.8 -1.5**
NOA LR LR 00 50 39.0
MORC Moravsky Berou 64.57 314 ⇓P **P 00 22 00.1 +0.6**
MORC Moravsky Berou 64.57 314 ⇓*iP* **P 00 22 00.1 +0.6**
DPC Dobruska-Polom 65.13 315 *e*P **P 00 22 03.3 +0.2**
DPC MLR MLR
comp=Z,300nm,19.5s,MS4.5
DPC Dobruska-Polom 65.13 315 *e*P **P 00 22 03.3 +0.2**
DPC AMS AMS 00 51 20.0
comp=Z,300nm,19.5s
UPC Upice 65.26 315 *e*P **P 00 22 04.5 +0.5**
UPC Upice 65.26 315 *e*P **P 00 22 04.5 +0.5**
TREC Trest 66.00 314 AMS AMS 00 51 50.0
comp=Z,200nm,14.8s
PRU Pruhonice 66.33 315 *e*P **P 00 22 10.9 0.0**
PRU MLR MLR
comp=Z,300nm,18.1s,MS4.5
PRU Pruhonice 66.33 315 *e*P **P 00 22 10.9 0.0**
PRU AMS AMS 00 52 10.0
comp=Z,300nm,18.1s
CLL Collm 66.78 317 *i P* **P 00 22 13.2 -0.5**
CLL MLR MLR
comp=Z,200nm,20.0s,MS4.3
CLL Collm 66.78 317 *i P* **P 00 22 13.2 -0.5**
CLL *e*PcP PcP 00 22 41.0 -1.5
CLL Lm 00 52 00.0
comp=N,100nm,19.0s
CLL Lm 00 52 00.0
comp=E,100nm,21.2s
CLL Lm 00 52 00.0
comp=Z,200nm,20.0s
KHC Kasperske Hory 67.22 315 *e*P **P 00 22 16.2 -0.4**
KHC MLR MLR
comp=Z,300nm,17.2s,MS4.6
KHC Kasperske Hory 67.22 315 *e*P **P 00 22 16.2 -0.4**
KHC AMS AMS 00 52 40.0
comp=Z,300nm,17.2s
GERES GERESS Array B 67.25 314 P **P 00 22 16.9 +0.1**
comp=Z,1.6nm,1.0s,mb4.0,baz=76,slow=5.6,SNR=9.8
GERES LR LR 00 53 10.5
comp=Z,157nm,18.6s,MS4.3,baz=62,slow=37
GERES GERESS Array B 67.25 314 P **P 00 22 16.9 +0.1**
GERES pmax pmax
comp=Z,2.0nm,1.0s
GERES MLR MLR
comp=Z,157nm,18.6s
COLD Coldfoot 67.60 24 *e*P **P 00 22 18.7 +0.1**
comp=Z,5.3nm,0.9s,mb4.6
GRA1 Grafenberg Arr 68.44 316 *e*P **P 00 22 24.1 -0.1**
comp=Z,5.0nm,1.1s,mb4.5
GRF Grafenberg Arr 68.44 316 *e*P **P 00 22 24.1 -0.1**
comp=Z,5.0nm,1.1s,mb4.5
GRF Grafenberg Arr 68.44 316 *e*P **P 00 22 24.1 -0.1**
GRF pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
GRF Grafenberg Arr 68.44 316 *e*P **P 00 22 24.1 -0.1**
GRF pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
BPAW Bear Paw Mtn. 68.75 27 *e*P **P 00 22 25.6 -0.4**
comp=Z,4μm,1.2s
PPLA Purkeypile 68.82 28 *e*P **P 00 22 26.0 -0.4**
comp=Z,26nm,0.7s,mb5.3
COLA College 69.57 26 *e*P **P 00 22 30.3 -0.7**
COLA pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
COLA College 69.57 26 *e*P **P 00 22 30.3 -0.7**
comp=Z,7.8nm,0.8s,mb4.7
BFO Black Forest 70.73 315 *i P* **P 00 22 40.0 +1.6**
CDF Champ du Feu 71.33 316 *e*P **P 00 22 41.4 -0.6**
WLF Walferdange 71.44 317 P **P 00 22 43.5 +0.8**
comp=Z,6.2nm,1.1s,mb4.5
STKA Stephens Creek 72.24 147 P **P 00 22 47.5 0.0**
comp=Z,4.0nm,0.6s,mb4.5,baz=327,slow=6.5,SNR=9.7
INK Inuvik 72.26 19 *e*P **P 00 22 46.6 -0.7**
INK pmax pmax
comp=Z,9.0nm,0.9s

INK Inuvik 72.26 19 *eP* **P 00 22 46.6 -0.6**
comp=Z,9.2nm,0.9s,mb4.7
LPG La Plagne 72.95 313 *eP* **P 00 22 52.1 +0.3**
comp=Z,14nm,0.9s,mb4.6
LPG La Plagne 72.95 313 *eP* **P 00 22 52.1 +0.3**
LPG pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
LPG La Plagne 72.95 313 *eP* **P 00 22 52.1 +0.3**
comp=Z,6.9nm,0.9s,mb4.6
LPL La Plagne 72.95 313 *eP* **P 00 22 52.1 +0.3**
comp=Z,13nm,0.8s,mb4.6
LPL La Plagne 72.95 313 *eP* **P 00 22 52.1 +0.3**
LPL pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
LPL La Plagne 72.95 313 *eP* **P 00 22 52.1 +0.3**
comp=Z,6.3nm,0.8s,mb4.6
SMF Signal de Mont 74.21 315 *eP* **P 00 22 58.5 -0.7**
comp=Z,28nm,1.2s,mb4.8
SMF Signal de Mont 74.21 315 *eP* **P 00 22 58.5 -0.7**
SMF pmax pmax
comp=Z,14nm,1.2s,mb4.8
SMF Signal de Mont 74.21 315 *eP* **P 00 22 58.5 -0.7**
comp=Z,14nm,1.2s,mb4.8
AVF Avril sur Loir 74.43 315 *eP* **P 00 22 59.7 -0.8**
comp=Z,15nm,1.1s,mb4.5
AVF Avril sur Loir 74.43 315 *eP* **P 00 22 59.7 -0.8**
AVF pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
AVF Avril sur Loir 74.43 315 *eP* **P 00 22 59.7 -0.8**
comp=Z,7.6nm,1.1s,mb4.5
TCF Toulx Ste Croi 75.36 315 *eP* **P 00 23 05.4 -0.5**
comp=Z,9.0nm,1.1s,mb4.3
TCF Toulx Ste Croi 75.36 315 *eP* **P 00 23 05.4 -0.5**
TCF pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
TCF Toulx Ste Croi 75.36 315 *eP* **P 00 23 05.4 -0.5**
comp=Z,4.5nm,1.1s,mb4.3
CAF Calviac 76.13 314 *eP* **P 00 23 10.3 0.0**
YKA Yellowknife Ar 81.78 17 P **P 00 23 40.7 -0.2**
comp=Z,2.6nm,0.7s,mb4.2,baz=326,slow=5.1,SNR=10.0
YKA LR LR 00 59 24.1
comp=Z,6.3nm,18.4s,MS3.0,baz=165,slow=35
YKA Yellowknife Ar 81.78 17 P **P 00 23 40.7 -0.2**
YKA pmax pmax
comp=Z,3.0nm,0.7s
YKA MLR MLR
comp=Z,6.0nm,18.4s
ESDC Sonseca Array 82.72 312 P **P 00 23 46.1 -0.2**
comp=Z,0.2nm,0.4s,mb3.5,baz=64,slow=6.8,SNR=4.8
TXAR Lajitas Array 114.49 26 PKP PKiKP 00 30 02.6 -0.2
comp=Z,0.1nm,0.4s,baz=69,slow=1.3,SNR=2.7

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*NEIC **15** 00:28:23.6, 18°.60N×67°.97W, h143km, MD3.7(RSPR), After RSPR.*
RSPR 15 00:28:23.6, 18°.60N×67°.97W, h143km±6km, MD3.6/6, MD3.6/6, 2C-3D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**1.21**	**121**	*e*S			Sn	00 29 11.2	+1.7
OBIP	**Obispado Ponce**	**1.41**	**113⇑**	*e*P			Pn	00 28 50.8	-0.9
OBIP				*e*S			Sn	00 29 12.0	-1.1
CELP	**Cerrillos**	**1.42**	**111**	*e*S			Sn	00 29 12.3	-1.1
SJG	**San Juan**	**1.80**	**105**	*e*Pn			Pn	00 28 53.8	-2.2
CPD	**Cerro la Pandu**	**2.03**	**106⇓**	*e*P			Pn	00 28 58.6	-0.1
CPD				*e*S			Sn	00 29 26.6	+1.0
CBYP	**Canovanas**	**2.04**	**99⇓**	*e*P			Pn	00 28 57.4	-1.3
CBYP	**Canovanas**	**2.04**	**99**	*e*S			Sn	00 29 26.6	+1.0
CBYP	**Canovanas**	**2.04**	**99**	*e*Pn			Pn	00 28 57.5	-1.2
CBYP				*e*S			Sn	00 29 22.4	-3.3
HUMP	**Col San Antoni**	**2.07**	**102⇓**	*e*P			Pn	00 28 58.7	-0.4
HUMP				*e*S			Sn	00 29 26.3	0.0
MTP	**Monte Pirata**	**2.35**	**102⇑**	*e*P			Pn	00 29 03.9	+1.3
MTP	**Monte Pirata**	**2.35**	**102**	*e*S			Sn	00 29 34.0	+1.5
MTP	**Monte Pirata**	**2.35**	**102**	*e*Pn			Pn	00 29 04.0	+1.4
MTP				*e*S			Sn	00 29 34.0	+1.5

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*SZGRF **15** 01:13:08.9, 18°.36S×177°.31W, h600km, Fiji Islands region*
*MOS **15** 01:13:08.5±0.8, 17°.61S×179°.74W, h576km, mb5.6/48, MS4.4/7, Error ellipse: s-maj=8.6km s-min=6.7km az=53.1*
*BJI **15** 01:13:08.8, 17°.73S×179°.00W, h612km, mB5.3/31, mb5.2/51*
*ISCJB **15** 01:13:09.9±0.5, 17°.73S±0°.04×179°.75W±0°.02, h597km±6km, mb5.4/217, Error ellipse: s-maj=5.7km s-min=3.0km az=160.6*
*IDC **15** 01:13:11.0±0.4, 17°.76S×179°.78W, h597km±3km, mb4.7/28, mb1 4.8/28, mb1mx4.8/28, mbtmp4.7/28, Error ellipse: s-maj=7.9km s-min=6.3km az=134.0*
*NEIC **15** 01:13:11.9±0.1, 17°.74S×179°.73W, mb5.5/181, MW5.9, Error ellipse: s-maj=4.8km s-min=3.2km az=145.0, Moment Tensor Solution. s78 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.58; $M_{\theta\theta}$1.46; $M_{\phi\phi}$0.12; $M_{r\theta}$5.22; $M_{\theta\phi}$0.34; $M_{\phi r}$-8.31; Best double couple: $M_0$9.90000×10^{17} NP1: ϕ_s101.00000°, δ4.00000°, λ-137.00000°. NP2: ϕ_s327.00000°, δ87.00000°, λ-87.00000°. Principal axes: T 9.2000, Plg42.0000°, Azm54.0000°; N 1.4000, Plg2.0000°, Azm147.0000°; P -10.6000, Plg47.0000°, Azm240.0000°;*
*BGS **15** 01:13:12.9±4.8, 17°.74S×179°.73W, h611km, mb5.5(NEIC)*
*GCMT **15** 01:13:15.0±0.1, 17°.77S×179°.66W, h624km±1km, MW5.9, Moment Tensor Solution. s105,c205; s62,c69; Moment tensor: Scale 10^{17}Nm; M_{rr}-2.12±.07; $M_{\theta\theta}$2.52±.11; $M_{\phi\phi}$-0.40±.12; $M_{r\theta}$4.93±.11; $M_{\theta\phi}$-2.06±.11; $M_{\phi r}$-7.86±.11; Best double couple: $M_0$9.80000×10^{17} NP1:ϕ_s84.00000°, δ14.00000°, λ-152.00000°. NP2:ϕ_s327.00000°, δ83.00000°, λ-77.00000°. Principal axes: T 9.9200, Plg37.0000°, Azm46.0000°; N -0.2600, Plg13.0000°, Azm145.0000°; P -9.6600, Plg50.0000°, Azm251.0000°; Data Used: II IU IC G CN.*
*DJA **15** 01:13:16, 17°.95S×179°.98W, h646km, Mw6.1/71*
ISC 15 01:13:10.5±0.5, 17°.74S±0°.03×179°.71W±0°.02, h589km±5km, h604km±.4km:pP-P, n1364, c_0s71/864, mb5.4/216, 490C-421D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.13**	**270**	P			**P**	**01 14 29.1**	**+4.8**
	61μm,0.5s								
MSVF	**Nonsavu**	**2.13**	**270⇑**	*i*P			**P**	**01 14 29.2**	**+4.9**
MSVF	**Nonsavu**	**2.13**	**270**	P			**P**	**01 14 29.1**	**+4.8**
	9μm,0.5s								
AFI	**Afiamalu**	**8.53**	**65**	P			**P**	**01 15 12.9**	**-1.7**
	123nm,0.3s,baz=57,slow=1.7,SNR=52								
AFI				S			**S**	**01 16 53.4**	**-3.0**
	baz=208,slow=22,SNR=1.2								
AFI	**Afiamalu**	**8.53**	**65**	*e*P			**P**	**01 15 13.1**	**-1.5**
AFI				*e*S			**S**	**01 16 56.7**	**+0.3**
AFI				pmax	pmax				
	comp=Z,465nm,0.6s								
AFI	**Afiamalu**	**8.53**	**65**	*e*P			**P**	**01 15 13.1**	**-1.5**
	comp=Z,465nm,0.6s								
AFI				*e*S			**S**	**01 16 56.7**	**+0.3**
FUNA	**Funafuti**	**9.22**	**353**	*e*P			**P**	**01 15 22.2**	**+0.9**
	comp=Z,1μm,1.2s								
RAO	**Raoul Island**	**11.58**	**172**	P			**P**	**01 15 44.1**	**-0.7**
	comp=Z,432nm,0.3s,baz=298,slow=22,SNR=13								
RAO				S			**S**	**01 17 48.7**	**-2.8**
	comp=Z,492nm,0.3s,baz=97,slow=23,SNR=12								
DZM	**Mont Dzumac**	**13.71**	**249**	*e*P			**P**	**01 16 07.8**	**+1.3**
	comp=Z,1μm,1.2s								
DZM	**Mont Dzumac**	**13.71**	**249**	*e*P			**P**	**01 16 07.0**	**+0.5**
NORM	**Noumea**	**13.72**	**249**	*e*P			**P**	**01 16 07.9**	**+1.3**
NOUC	**Port Laguerre**	**13.85**	**249**	*e*P			**P**	**01 16 08.0**	**+0.1**
OUZ	**Omahuta**	**18.41**	**198**	*e*P			**P**	**01 16 52.5**	**+2.4**
	comp=Z,182nm,0.7s								
RAR	**Rarotonga**	**19.11**	**104**	*e*P			**P**	**01 16 56.5**	**-0.3**
RAR				pmax	pmax				
	comp=Z,260nm,1.0s								
RAR	**Rarotonga**	**19.11**	**104**	*e*P			**P**	**01 16 56.5**	**-0.3**
	comp=Z,260nm,1.0s								
URZ	**Urewera**	**20.64**	**187**	P			**P**	**01 17 08.2**	**-2.1**
	comp=Z,65nm,0.6s,baz=21,slow=3.3,SNR=40								
URZ				S			**S**	**01 20 17.1**	**-6.7**
	comp=Z,42nm,0.8s,baz=15,slow=23,SNR=2.4								
URZ				ScS			ScS	01 27 13.3	-6.3
	comp=Z,54nm,0.9s,baz=190,slow=22,SNR=13								
URZ	**Urewera**	**20.64**	**187**	*e*P			**P**	**01 17 08.2**	**-2.0**
	comp=Z,84nm,0.6s								
URZ				*e*S			**S**	**01 20 20.3**	**-3.5**
HNR	**Honiara**	**21.41**	**290**	P			**P**	**01 17 16.4**	**-1.1**
	comp=Z,269nm,0.8s,mb5.9,baz=231,slow=6.6,SNR=11								
HNR	**Honiara**	**21.41**	**290**	*e*P			**P**	**01 17 16.9**	**-0.6**
HNR				pmax	pmax				
	comp=Z,452nm,1.0s,mb6.1								
HNR	**Honiara**	**21.41**	**290**	*e*P			**P**	**01 17 16.9**	**-0.6**
	comp=Z,452nm,1.0s,mb6.1								
SNZO	**South Karori**	**23.98**	**190**	*e*P			**P**	**01 17 38.5**	**-1.5**
	comp=Z,88nm,0.7s,mb5.5								
SNZO				*e*S			**S**	**01 21 13.2**	**-3.2**
KHZ	**Kahutara**	**25.27**	**192⇑**	*i*P			**P**	**01 17 49.5**	**-1.8**
	comp=Z,402nm,0.9s,mb6.0								
KHZ				*e*S			**S**	**01 21 28.9**	**-7.6**
RPZ	**Rata Peaks**	**27.05**	**195**	P			**P**	**01 18 05.6**	**-1.4**
	comp=Z,219nm,0.7s,mb5.9,baz=331,slow=1.0,SNR=60								
RPZ				S			**S**	**01 21 57.8**	**-6.6**
	comp=Z,77nm,0.9s,baz=174,slow=23,SNR=4.3								
RPZ				ScS			ScS	01 27 43.3	-2.3
	comp=Z,23nm,1.1s,baz=100,slow=24,SNR=2.2								
RPZ	**Rata Peaks**	**27.05**	**195**	*e*P			**P**	**01 18 05.4**	**-1.6**
	comp=Z,220nm,0.7s,mb5.9								
RPZ				*e*pP				01 19 41.7	
RPZ				*e*S			**S**	**01 21 59.9**	**-4.5**
EIDS	**Eidsvold**	**28.16**	**249⇓**	*i*P			**P**	**01 18 17.1**	**+0.1**
	comp=Z,432nm,0.9s,mb6.1								
ODZ	**Otahua Downs**	**28.40**	**194**	*e*P			**P**	**01 18 17.2**	**-1.5**
	comp=Z,142nm,0.9s,mb5.6								
PPT	**Papeete**	**28.71**	**94**	*e*P			**P**	**01 18 22.1**	**+0.3**
	comp=Z,332nm,1.4s,mb5.8								
PPT				*e*ScP			ScP	01 23 53.9	-5.2
	comp=Z,183nm,1.3s								
PPT	**Papeete**	**28.71**	**94**	P			**P**	**01 18 22.0**	**+0.2**
	comp=Z,92nm,0.7s,mb5.5,baz=239,slow=9.2,SNR=5.9								
PPT				ScP			ScP	01 24 00.0	+0.9
	comp=Z,133nm,1.0s,baz=97,slow=3.2,SNR=5.0								
TIAR	**Tiarei**	**28.93**	**94**	*e*P			**P**	**01 18 23.9**	**+0.2**
	comp=Z,498nm,1.3s,mb6.0								
TIAR				*e*ScP			ScP	01 23 54.5	-5.3
	comp=Z,201nm,0.9s								
ARMA	**Armidale**	**28.96**	**239**	*e*P			**P**	**01 18 25.1**	**+1.3**
ARMA				*e*S			**S**	**01 22 35.7**	**+1.3**
ARMA				*e*SCP			ScP	01 24 01.4	+1.7
ARMA	**Armidale**	**28.96**	**239⇓**	*i*P			**P**	**01 18 25.1**	**+1.2**
	comp=Z,356nm,0.9s,mb6.0								
ARMA				*e*ScP			ScP	01 24 01.1	+1.4
MEH	**Mehetia**	**30.11**	**95**	*e*P			**P**	**01 18 33.9**	**0.0**
	comp=Z,462nm,1.4s,mb5.9								
MEH				*e*ScP			ScP	01 23 58.0	-5.7
	comp=Z,284nm,1.1s								
PMOR	**Pomariorio Ree**	**30.63**	**90**	*e*P			**P**	**01 18 38.6**	**+0.2**
PMOR				*e*ScP			ScP	01 24 00.6	-4.8
	comp=Z,838nm,1.3s								
CTA	**Charters Tower**	**32.25**	**260**	*e*P			**P**	**01 18 52.2**	**+0.1**
	comp=Z,443nm,0.8s,mb6.1								
CTA				*e*S			**S**	**01 23 22.4**	**-2.7**
CTA				*e*SCP			ScP	01 24 10.9	0.0
CTA	**Charters Tower**	**32.25**	**260**	P			**P**	**01 18 52.2**	**+0.1**
	comp=Z,406nm,0.7s,mb6.2,baz=86,slow=9.7,SNR=360								
CTA				S			**S**	**01 23 23.5**	**-1.6**
	comp=Z,23nm,0.9s,baz=287,slow=16,SNR=4.1								
CTA				ScP			ScP	01 24 11.1	+0.2
	comp=Z,131nm,1.0s,baz=97,slow=2.2,SNR=15								
CTA				ScS			ScS	01 28 11.0	-0.9
	comp=Z,3.1nm,0.3s,baz=224,slow=24,SNR=7.8								
CTA	**Charters Tower**	**32.25**	**260**	P			**P**	**01 18 52.2**	**+0.1**
CTA				S			**S**	**01 23 23.5**	**-1.6**
CTA								01 28 11.0	
CTA	**Charters Tower**	**32.25**	**260**	P			**P**	**01 18 52.2**	**+0.1**
CTA				S			**S**	**01 23 23.5**	**-1.6**
CTA				ScP			ScP	01 24 11.1	+0.2
CTA				ScS			ScS	01 28 11.0	-0.9
CTAO	**Charters Tower**	**32.25**	**260⇓**	*i*P			**P**	**01 18 52.3**	**+0.2**
CTAO				*e*S			**S**	**01 23 23.7**	**-1.4**
CTAO				pmax	pmax				
	comp=Z,511nm,0.8s,mb6.2								
CTAO	**Charters Tower**	**32.25**	**260⇓**	*i*P			**P**	**01 18 52.3**	**+0.2**
	comp=Z,511nm,0.8s,mb6.2								
CTAO				*e*S			**S**	**01 23 23.7**	**-1.4**
CTAO				*e*ScP			ScP	01 24 10.7	-0.2
CNB	**Canberra Magne**	**32.55**	**231**	*e*P			**P**	**01 18 55.5**	**+1.0**
CNB				*e*S			**S**	**01 23 29.7**	**+0.3**
CNB				*e*SCP			ScP	01 24 13.1	+1.4
CAN	**Canberra**	**32.83**	**232⇓**	*i*P			**P**	**01 18 56.9**	**+0.1**
CAN				pmax	pmax				
	comp=Z,303nm,1.0s,mb5.9								
CAN	**Canberra**	**32.83**	**232⇓**	*i*P			**P**	**01 18 56.9**	**+0.2**
	comp=Z,303nm,1.0s,mb5.9								
JOHN	**Johnston Islan**	**35.69**	**17**	*e*P			**P**	**01 19 20.8**	**0.0**
	comp=Z,798nm,1.2s,mb6.1								
COEN	**Coen**	**35.86**	**271⇓**	*i*P			**P**	**01 19 23.1**	**+0.7**
	comp=Z,4μm,0.8s								
COEN				*e*S			**S**	**01 24 19.4**	**-0.1**
TOO	**Toolangi**	**36.32**	**230**	*e*P			**P**	**01 19 26.2**	**+0.4**
TOO				*e*S			ScP	01 24 13.9	-11
TOO				*e*PCS			S	**01 24 24.9**	**-0.9**
TOO				*e*SS			SS	01 27 46.5	+3.1
TAU	**Tasmania Unive**	**37.55**	**221**	P			**P**	**01 19 36.2**	**+0.5**
	comp=Z,2μm,0.9s,SNR=24								
TAU	**Tasmania Unive**	**37.55**	**221⇓**	*i*P			**P**	**01 19 36.0**	**+0.3**
TAU				pmax	pmax				
	comp=Z,463nm,1.0s,mb6.0								
TAU	**Tasmania Unive**	**37.55**	**221⇓**	*i*P			**P**	**01 19 36.0**	**+0.3**
	comp=Z,463nm,1.0s,mb6.0								
STKA	**Stephens Creek**	**37.63**	**241**	*e*P			**P**	**01 19 37.2**	**+0.6**
	comp=Z,792nm,1.1s,mb6.2								
STKA				*e*SCP			ScP	01 24 30.7	+0.3
STKA				*e*S			**S**	**01 24 41.3**	**-4.0**
STKA				*e*SCS			ScS	01 28 41.5	+0.2
STKA	**Stephens Creek**	**37.63**	**241**	P			**P**	**01 19 37.0**	**+0.5**
	comp=Z,412nm,0.7s,mb6.1,baz=90,slow=8.7,SNR=539								
STKA				ScP			ScP	01 24 30.9	+0.5
	comp=Z,83nm,0.9s,baz=61,slow=3.6,SNR=9.5								
STKA				ScS			ScS	01 28 41.3	0.0
	comp=Z,3.5nm,0.8s,baz=212,slow=23,SNR=1.1								
STKA	**Stephens Creek**	**37.63**	**241⇓**	*i*P			**P**	**01 19 37.3**	**+0.8**
	comp=Z,277nm,1.2s,mb5.7								
STKA				*e*PcP			PcP	01 21 38.4	+0.1
STKA				*e*ScP			ScP	01 24 30.7	+0.3
ARPS	**Mount Arapiles**	**38.76**	**233**	*e*P			**P**	**01 19 45.6**	**0.0**
	comp=Z,2μm,1.3s								
WAKE	**Wake Island**	**39.15**	**339**	*e*P			**P**	**01 19 48.6**	**-0.3**
	comp=Z,113nm,0.6s,mb5.6								
TAOE	**Nuku Hiva Isla**	**39.43**	**82**	*e*P			**P**	**01 19 51.4**	**0.0**
	comp=Z,886nm,1.1s,mb6.2								
MCQ	**Macquarie Isla**	**40.20**	**199**	*e*P			**P**	**01 19 57.3**	**+0.5**
	comp=Z,55μm,1.3s								
RKT	**Rikitea**	**42.15**	**105**	*e*P			**P**	**01 20 12.9**	**+0.2**
	comp=Z,178nm,1.4s,mb5.4								
RKT	**Rikitea**	**42.15**	**105**	*e*P			**P**	**01 20 12.9**	**+0.2**
RKT				pmax	pmax				
	comp=Z,179nm,1.4s,mb5.4								
WRAB	**Tennant Creek**	**43.43**	**260**	P			**P**	**01 20 22.0**	**-0.8**
	comp=Z,4μm,0.8s								
WRAB	**Tennant Creek**	**43.43**	**260⇓**	*i*P			**P**	**01 20 21.9**	**-0.9**
WRAB				*e*				01 21 57.5	
WRAB				pmax	pmax				
	comp=Z,373nm,0.7s,mb6.0								
WRAB	**Tennant Creek**	**43.43**	**260⇓**	*i*P			**P**	**01 20 21.9**	**-0.9**
	comp=Z,373nm,0.7s,mb6.0								
WRAB				*e*PcP			PcP	01 21 57.5	-0.1
WRAB				*e*ScP			ScP	01 24 53.2	-0.4
WRA	**Warramunga Arr**	**43.44**	**260**	P			**P**	**01 20 21.8**	**-1.1**
	comp=Z,353nm,0.7s,mb6.0,baz=94,slow=7.6,SNR=1180								
WRA				PcP			PcP	01 21 57.1	-0.5
	comp=Z,63nm,0.9s,baz=94,slow=4.0,SNR=8.9								
WRA				pP			pP	01 22 08.2	+1.9
	comp=Z,21nm,1.0s,baz=95,slow=9.6,SNR=2.3								
WRA				ScP			ScP	01 24 53.2	-0.5
	comp=Z,30nm,1.0s,baz=84,slow=4.2,SNR=11								
WRA				S			**S**	**01 26 04.9**	**-4.8**
	comp=Z,35nm,0.9s,baz=94,slow=14,SNR=12								
WRA				ScS			ScS	01 29 15.6	-1.7
	comp=Z,11nm,1.1s,baz=106,slow=3.4,SNR=8.0								
WRA	**Warramunga Arr**	**43.44**	**260**	P			**P**	**01 20 21.8**	**-1.0**
WRA								01 21 57.1	
WRA				*PP			pP	01 22 08.2	+1.9
WRA				S			**S**	**01 26 04.9**	**-4.7**
WRA								01 29 15.6	
WRA	**Warramunga Arr**	**43.44**	**260**	P			**P**	**01 20 21.8**	**-1.1**
WRA				PcP			PcP	01 21 57.1	-0.5
WRA				pP			pP	01 22 08.2	+1.9
WRA				ScP			ScP	01 24 53.2	-0.5
WRA				S			**S**	**01 26 04.9**	**-4.8**
WRA				ScS			ScS	01 29 15.6	-1.7
ASAR	**Alice Springs**	**43.64**	**254**	P			**P**	**01 20 24.1**	**-0.3**
	comp=Z,2μm,0.6s,baz=88,slow=8.2								
ASAR				PcP			PcP	01 21 58.1	-0.2
	comp=Z,37nm,0.6s,baz=106,slow=3.7,SNR=4.1								
ASAR				pP			pP	01 22 10.0	+2.1
	comp=Z,18nm,0.7s,baz=91,slow=10,SNR=2.0								
ASAR				ScP			ScP	01 24 54.6	+0.2
	comp=Z,62nm,1.0s,baz=90,slow=4.2,SNR=17								
ASAR				S			**S**	**01 26 08.8**	**-3.6**
	comp=Z,157nm,1.0s,baz=86,slow=16,SNR=52								
ASAR	**Alice Springs**	**43.64**	**254**	P			**P**	**01 20 24.1**	**-0.3**
ASAR								01 21 58.1	
ASAR				*PP			pP	01 22 10.0	+2.1
ASAR				S			**S**	**01 26 08.8**	**-3.6**
KHU	**Kahuku**	**43.72**	**34⇑**	*i*P			**P**	**01 20 24.6**	**-0.3**
PUH	**Pauahi**	**44.04**	**34**	*e*P			**P**	**01 20 27.8**	**+0.4**
STCH	**Steam Cracks**	**44.09**	**34⇑**	*i*P			**P**	**01 20 27.7**	**-0.1**
POHA	**Pohakuloa**	**44.18**	**34**	*e*P			**P**	**01 20 28.4**	**0.0**
	comp=Z,349nm,1.2s,mb5.8								
POHA				*e*ScP			ScP	01 24 57.8	+1.3
KIP	**Kipapa**	**44.35**	**30⇑**	*e*P			**P**	**01 20 29.1**	**-0.6**
KAKA	**Kakadu**	**46.34**	**269**	*e*P			**P**	**01 20 45.9**	**+0.8**
	comp=Z,908nm,0.8s,mb6.4								
KAKA	**Kakadu**	**46.34**	**269**	*e*P			**P**	**01 20 45.9**	**+0.8**
	comp=Z,2μm,0.7s								
KAKA				*e*S			**S**	**01 26 49.0**	**-1.4**
GUMO	**Guam**	**46.80**	**309⇓**	*i*P			**P**	**01 20 48.6**	**+0.1**
GUMO				pmax	pmax				
	comp=Z,405nm,0.8s,mb6.0								
GUMO	**Guam**	**46.80**	**309⇓**	*i*P			**P**	**01 20 48.6**	**+0.2**
	comp=Z,405nm,0.8s,mb6.0								
FORT	**Forrest**	**48.96**	**244**	*e*P			**P**	**01 21 03.8**	**-0.6**
	comp=Z,1μm,0.6s								
FORT				*e*S			**S**	**01 27 23.0**	**-3.0**
FORT	**Forrest**	**48.96**	**244⇓**	*i*P			**P**	**01 21 03.8**	**-0.6**
	comp=Z,2μm,0.7s								
FORT				*e*ScP			ScP	01 25 16.6	-0.1
FORT				*e*S			**S**	**01 27 22.8**	**-3.2**
FITZ	**Fitzroy Crossi**	**51.83**	**261**	*e*P			**P**	**01 21 25.4**	**0.0**
	comp=Z,559nm,0.8s,mb5.9								
FITZ				*e*S			**S**	**01 28 03.8**	**-1.2**
FITZ	**Fitzroy Crossi**	**51.83**	**261**	P			**P**	**01 21 25.5**	**+0.1**
	comp=Z,115nm,0.4s,mb5.6,baz=97,slow=4.8,SNR=451								
FITZ				pP			pP	01 23 17.0	+2.4
	comp=Z,35nm,0.6s,baz=76,slow=4.2,SNR=1.8								
FITZ				S			**S**	**01 28 04.1**	**-0.9**
	comp=Z,16nm,1.1s,baz=270,slow=22,SNR=2.9								
FITZ	**Fitzroy Crossi**	**51.83**	**261⇓**	*i*P			**P**	**01 21 25.4**	**0.0**
	comp=Z,266nm,0.8s,mb5.6								
FITZ				*e*S			**S**	**01 28 04.3**	**-0.7**
KMBL	**Kambalda**	**54.27**	**244**	*e*P			**P**	**01 21 41.5**	**-1.0**
	comp=Z,3μm,1.2s								
DRV	**Dumont d'Urvil**	**55.43**	**198**	P			**P**	**01 21 56.0**	**+6.1**
DRV				S			**S**	**01 28 47.0**	**-3.7**
DRV				SS			SS	01 33 07.0	+19
DRV				L				01 36 00.0	
MBWA	**Marble Bar**	**56.91**	**256⇓**	*i*P			**P**	**01 22 00.2**	**-0.8**
	comp=Z,440nm,0.8s,mb5.7								
MBWA				*e*S			**S**	**01 29 09.1**	**-2.1**
MBWA	**Marble Bar**	**56.91**	**256**	P			**P**	**01 22 00.6**	**-0.3**
	SNR=44								
MBWA				P				01 22 00.6	
	SNR=44								
MEEK	**Meekatharra**	**57.33**	**249**	*e*P			**P**	**01 22 02.8**	**-0.9**
KLBR	**Kellerberrin**	**57.79**	**243**	*e*P			**P**	**01 22 05.5**	**-1.3**
	comp=Z,1μm,0.7s,mb6.1								
KLBR				*e*			pP	01 24 00.0	+0.4
KLBR				*e*S			**S**	**01 29 18.3**	**-3.8**
CBIJ	**Chichi jima**	**57.90**	**320**	P			**P**	**01 22 07.1**	**-0.3**
	comp=Z,41nm,0.5s,mb4.8,baz=310,slow=0.8,SNR=10								
NWAO	**Narrogin (SRO)**	**58.19**	**242**	*e*P			**P**	**01 22 09.1**	**-0.3**
	comp=Z,1μm,0.6s,mb6.3								
NWAO	**Narrogin (SRO)**	**58.19**	**242⇓**	*i*P			**P**	**01 22 08.7**	**-0.7**
NWAO				*e*PP			pP	01 24 05.5	+2.9
NWAO				pmax	pmax				
	comp=Z,445nm,1.1s								
NWAO	**Narrogin (SRO)**	**58.19**	**242⇓**	*i*P			**P**	**01 22 08.7**	**-0.7**
	comp=Z,445nm,1.1s,mb5.5								
NWAO				*e*pP			pP	01 24 05.5	+3.0
NWAO	**Narrogin (SRO)**	**58.19**	**242**	P			**P**	**01 22 10.0**	**+0.6**
	SNR=11								
NWAO				P				01 22 10.0	
	SNR=11								
DAV	**Davao City (W)**	**59.37**	**290**	P			**P**	**01 22 18.3**	**+0.7**
	SNR=8.8								
DAV				P				01 22 18.3	
	SNR

comp=Z,737nm,1.1s,mb6.1
UNV Unalaska Valle 72.19 8⇑*i*P P 01 23 34.4 -1.9
comp=Z,63nm,0.6s,mb5.3
QSPA South Pole Qui 72.32 180 P **P 01 23 37.0 +0.2**
comp=Z,398nm,0.9s,mb5.9,baz=32,slow=1.8,SNR=593
QSPA pP pP 01 25 39.9 +2.6
comp=Z,37nm,1.0s,baz=336,slow=2.8,SNR=3.0
QSPA S S 01 32 10.9 -2.3
comp=Z,6.6nm,1.0s,baz=16,slow=6.2,SNR=3.1
QSPA South Pole Qui 72.32 180⇓*i*P P 01 23 37.0 +0.3
comp=Z,477nm,1.0s,mb6.0
AKUT Akutan 72.57 9 *e*P P 01 23 36.7 -1.8
comp=Z,112nm,0.8s,mb5.5
YSS Yuzh-Sakhalins 72.71 334⇑*i*P P 01 23 41.0 +1.5
YSS *e**PP pP 01 25 45.0 +4.8
YSS *e* 01 26 34.0
YSS *e*S S 01 32 19.0 +0.6
YSS *e* 01 32 54.0
YSS pmax pmax
comp=Z,40nm,1.0s,mb4.9
YSS smax
comp=N,1μm,14.0s
YSS smax
comp=E,2μm,12.0s
YSS MLR MLR
comp=Z,200nm,15.0s
YSS Yuzh-Sakhalins 72.71 334 *e*P P 01 23 40.2 +0.7
comp=Z,26nm,0.7s,mb4.9
MIR Mirnyy 72.80 205⇓*i*P P 01 23 39.8 0.0
MIR *i**PP PcP 01 24 00.0 +6.9
MIR *e*SP S 01 32 18.0 -0.9
MIR *e**SS SKSac 01 32 48.0 -0.9
MIR pmax pmax
comp=E,808nm,2.0s
MIR pmax pmax
comp=Z,2μm,2.0s,mb6.2
MIR pmax pmax
comp=N,303nm,1.2s
MIR pmax pmax
comp=Z,936nm,1.4s,mb6.1
PET Petropavlovsk 72.91 347*c i*P P 01 23 39.5 -1.0
PET *e**PP pP 01 25 42.6 +1.3
PET *e* 01 26 34.5
PET *i*S S 01 32 17.7 -2.6
PET *e*SP 01 32 51.9
PET *e*SSS 01 40 35.3
PET pmax pmax
comp=Z,300nm,9.0s
PET pmax pmax
comp=Z,78nm,0.6s,mb5.4
PET pmax pmax
comp=Z,200nm,17.2s
PET Petropavlovsk 72.91 347⇑*i*P P 01 23 39.7 -0.8
PEA0B Petropavlovsk- 73.20 346⇑*i*P P 01 23 41.6 -0.6
PETK Petropavlovsk- 73.20 346 P **P 01 23 41.6 -0.6**
comp=Z,20nm,0.5s,mb4.9,baz=111,slow=7.4,SNR=37
QZH Quanzhou 73.54 304⇓*i*P P 01 23 45.6 +0.8
QZH S S 01 32 27.0 -1.4
QZH pmax pmax
comp=Z,270nm,1.0s,mb5.7
FALS False Pass 73.63 10 *e*P P 01 23 42.6 -1.9
comp=Z,76nm,0.5s,mb5.5
KSRS Korea Array 73.75 319 P **P 01 23 46.8 +1.1**
comp=Z,9,1nm,0.9s,mb4.3,baz=140,slow=6.4,SNR=33
SDPT Sand Point 74.61 11 *e*P P 01 23 48.8 -1.2
comp=Z,117nm,0.8s,mb5.5
VLA Vladivostok 75.10 325*d i*P P 01 23 54.0 +0.9
VLA pmax pmax
comp=Z,65nm,1.6s,mb4.9
CHGN Chignik 75.90 12 *e*P P 01 23 56.2 -1.0
SNCC San Nicolas Is 76.60 48 ⇑P P 01 24 01.8 +0.3
baz=77
SNCC San Nicolas Is 76.60 48 *e*P P 01 24 01.9 +0.4
comp=Z,212nm,1.5s,mb5.3
NJ2 Nanjing 76.87 310 *e*P P 01 24 04.4 +1.3
NJ2 pP pP 01 26 10.0 +4.3
NJ2 sP sP 01 27 09.9 +4.1
NJ2 S S 01 33 08.0 +4.0
NJ2 SKS 01 33 13.5
NJ2 pmax pmax
comp=Z,120nm,1.2s,mb5.2
NJ2 pmax pmax
comp=Z,580nm,6.8s
BSC Santa Cruz Isl 76.91 48 ⇑P P 01 24 03.7 +0.5
baz=77,SNR=5.2
SBC Santa Barbara 77.09 47 ⇑P P 01 24 04.2 0.0
baz=77
SCI San Clemente I 77.16 49 ⇓P P 01 24 04.7 +0.1
baz=77
HABR Khabarovsk 77.25 331 *e*P P 01 24 04.8 0.0
HABR *e* 01 24 11.1
HABR *e**PP pP 01 26 08.5 +1.0
HABR *e* 01 27 08.0
HABR *e**SP sP 01 27 09.3 +1.8
HABR PPP 01 29 00.5
HABR S S 01 33 07.0 -0.2
HABR *e* 01 33 25.1
HABR *e*SS SS 01 38 20.1 -3.0
HABR *e*SSS 01 41 51.2
HABR pmax pmax
comp=E,8.0nm,0.8s
HABR pmax pmax
comp=Z,30nm,1.5s,mb4.5
HABR pmax pmax
comp=N,15nm,1.6s
HABR MLR MLR
comp=Z,87nm,17.0s
PKM Peak Mountain 77.26 47 ⇓P P 01 24 05.7 +0.6
baz=77,SNR=28
PKM ⇓pP pP 01 26 10.1 +2.2
baz=77
PKM ⇓PP PP 01 27 10.1 -0.4
baz=77
MDJ Mudanjiang 77.34 326 P **P 01 24 06.0 +0.7**
MDJ pP pP 01 26 12.3 +4.2
MDJ PP PP 01 27 11.8 +0.8
MDJ sP sP 01 27 14.6 +6.5
MDJ S S 01 33 12.6 +4.3
MDJ ScS ScS 01 33 28.1 -1.2
MDJ pmax pmax
comp=Z,45nm,1.2s,mb4.8
MDJ pmax pmax
comp=Z,190nm,5.6s
MDJ Mudanjiang 77.34 326 *e*P P 01 24 06.1 +0.8
comp=Z,114nm,1.4s,mb5.1
SMMC Simmler 77.36 46 ⇓P P 01 24 06.3 +0.6
baz=78,SNR=17
HOPS Hopland 77.37 42 *e*P P 01 24 05.7 0.0
comp=Z,260nm,1.6s,mb5.4
BLG Laguna Peak 77.37 48 ⇓P P 01 24 05.6 -0.1
baz=78
BLG ⇓pP pP 01 26 08.3 -0.2
baz=78
CIS Catalina Islan 77.48 49 ⇑P P 01 24 06.1 -0.2
baz=78
MYKOM Kota Tinggi 77.64 276 P **P 01 24 08.7 +1.0**
FMP Fort Macarthur 77.72 49 ⇑P P 01 24 07.8 +0.2
baz=78
FMP ⇓pP pP 01 26 12.8 +2.2
baz=78
OHAK Old Harbor 77.87 14 *e*P P 01 24 07.8 0.0
comp=Z,187nm,1.3s,mb5.4
OSI Osito Adit 77.88 48 ⇑P P 01 24 08.7 +0.2
baz=78
DECC Green Verdugo 77.97 48 ⇑P P 01 24 08.7 -0.2
baz=78
DECC ⇓PP PP 01 27 14.1 -2.2
baz=78
ARVC Arvin 78.07 47 ⇓P P 01 24 09.0 -0.5
baz=78,SNR=27
MWC Mount Wilson 78.14 48 *e*P P 01 24 09.8 -0.1
MWC pmax pmax
comp=Z,179nm,1.4s,mb5.3
MWC Mount Wilson 78.14 48 *e*P P 01 24 09.8 -0.1
comp=Z,180nm,1.4s,mb5.3
109C Camp Elliot, M 78.15 50 ⇓P P 01 24 09.4 -0.6
baz=78,SNR=6.1
109C ⇓pP pP 01 26 17.9 +4.8
baz=78
KGM Kluang 78.22 276 P **P 01 24 11.8 +1.0**
QIZ Qiongzhong 78.25 294 P **P 01 24 11.0 +0.2**
QIZ pP pP 01 26 16.6 +2.7
QIZ sP sP 01 27 18.1 +4.2
QIZ S S 01 33 19.4 +0.6
QIZ sS sS 01 37 05.4 +7.1
QIZ pmax pmax
comp=Z,47nm,1.9s,mb4.6
QIZ pmax pmax
comp=Z,610nm,4.5s
VES Vestal, Richgr 78.27 46 ⇑P P 01 24 10.2 -0.3
baz=78,SNR=52
BAR Barrett 78.36 50 *e*P P 01 24 10.4 -0.7
comp=Z,223nm,1.9s,mb5.3
RCTC Rector, Farmer 78.41 46 ⇑P P 01 24 10.9 -0.4
baz=79
BFSC Mount Baldy Ra 78.44 48 ⇓P P 01 24 10.8 -0.6
baz=79,SNR=19
MURC Murrieta 78.44 49 ⇑P P 01 24 11.2 -0.3
baz=79,SNR=16
EDW2 Edwards Air Fo 78.53 48 ⇓P P 01 24 12.2 +0.2
baz=79,SNR=41
KDAK Kodiak Island 78.54 14 P **P 01 24 11.0 -0.4**
comp=Z,565nm,1.5s,mb5.7,SNR=9.1
KDAK Kodiak Island 78.54 14 P **P 01 24 10.8 -0.6**
comp=Z,18nm,0.6s,mb4.6,baz=205,slow=4.6,SNR=9.1
KDAK S S 01 33 18.6 -1.7
comp=Z,1.8nm,0.2s,baz=160,slow=23,SNR=13
KDAK Kodiak Island 78.54 14 *i* P P 01 24 11.1 -0.3
KDAK Kodiak Island 78.54 14 *e*P P 01 24 10.6 -0.8
comp=Z,233nm,1.4s,mb5.3
CMB Columbia Colle 78.57 44⇑*i*P P 01 24 11.7 -0.4
CMB pmax pmax
comp=Z,62nm,1.0s,mb4.9
CMB Columbia Colle 78.57 44⇑*i*P P 01 24 11.7 -0.4
comp=Z,62nm,1.0s,mb4.9
ISA Isabella 78.60 47 P **P 01 24 12.6 +0.3**
baz=79,SNR=57
ISA ⇑pP pP 01 26 18.8 +3.2
baz=79
ISA Isabella 78.60 47⇑*i*P P 01 24 12.4 +0.1
ISA pmax pmax
comp=Z,195nm,1.4s,mb5.2
ISA Isabella 78.60 47⇑*i*P P 01 24 12.4 +0.1
comp=Z,195nm,1.4s,mb5.2
DL2 Dalian 78.61 317⇓*i*P P 01 24 12.1 -0.2
DL2 S S 01 33 22.8 +0.9
DL2 sS sS 01 37 10.3 +8.6
DL2 pmax pmax
comp=Z,30nm,1.0s,mb4.6
DL2 pmax pmax
comp=Z,200nm,5.3s
WDC Whiskeytown Da 78.62 41⇑*i*P P 01 24 12.3 0.0
WDC pmax pmax
comp=Z,279nm,1.7s,mb5.3
WDC Whiskeytown Da 78.62 41⇑*i*P P 01 24 12.3 0.0
comp=Z,279nm,1.7s,mb5.3
MONP Monument Peak 78.65 50 ⇑P P 01 24 13.0 +0.3
baz=79,SNR=26
DVTC Desert V Tower 78.77 50 ⇓P P 01 24 13.9 +0.6
baz=79,SNR=16
BBRC Big Bear Solar 78.98 49 ⇑P P 01 24 14.2 -0.1
baz=79
PFO Pinyon Flat Ob 78.98 49 P **P 01 24 14.6 +0.2**
comp=Z,233nm,1.9s,mb5.2,SNR=12
PFO Pinyon Flat Ob 78.98 49 ⇑P P 01 24 14.5 +0.2
baz=79,SNR=18
PFO ⇓pP pP 01 26 20.0 +2.1
baz=79
PFO ⇑PP PP 01 27 24.4 -0.3
baz=79,SNR=6.0
PFO Pinyon Flat Ob 78.98 49⇑*i*P P 01 24 14.3 -0.1
PFO *e**PP pP 01 26 21.2 +3.3
PFO *e* 01 27 23.1
PFO pmax pmax
comp=Z,142nm,1.6s,mb5.0
PFO Pinyon Flat Ob 78.98 49⇑*i*P P 01 24 14.3 -0.1
comp=Z,142nm,1.6s,mb5.0
PFO *e*pP pP 01 26 21.2 +3.3
PFO *e*PP PP 01 27 23.1 -1.6
LRMC Laurel Mountai 79.05 47 P **P 01 24 15.1 +0.4**
baz=79,SNR=26
SNY Shenyang 79.06 320 ⇑P P 01 24 15.5 +0.9
SNY S S 01 33 28.5 +2.2
SNY pmax pmax
comp=Z,35nm,1.3s,mb4.5
SNY pmax pmax
comp=Z,460nm,2.8s,mb5.3
CN2 Changchun 79.13 323 *e*P P 01 24 15.8 +0.9
CN2 *e*pP pP 01 26 22.8 +4.3
CN2 *e*sP sP 01 27 22.5 +4.2
CN2 *e*S S 01 33 29.8 +2.8
CN2 pmax pmax
comp=Z,70nm,1.4s,mb4.8
CN2 pmax pmax
comp=Z,200nm,3.0s
SWSC Sam W. Stewart 79.14 50 ⇑P P 01 24 15.3 +0.1
baz=79,SNR=30
SWSC ⇓pP pP 01 26 22.8 +4.0
baz=79
YBH Yreka Blue Hor 79.18 40⇑*i*P P 01 24 15.5 +0.3
YBH pmax pmax
comp=Z,163nm,1.4s
YBH Yreka Blue Hor 79.18 40⇑*i*P P 01 24 15.5 +0.3
comp=Z,163nm,1.4s,mb5.2
YBH *e*pP pP 01 26 23.4 +4.6
RRX Edison Barstow 79.23 48 ⇓P P 01 24 15.7 0.0
baz=79
CWC Cottonwood Cre 79.28 46 ⇑P P 01 24 16.1 +0.3
baz=80,SNR=7.4
KLR Kul'dur 79.34 330 *e*P P 01 24 12.3 -3.5
KLR *e* 01 27 27.3
KLR *e*S S 01 33 29.0 +0.1
KLR smax
comp=N,2μm,14.0s
KLR smax
comp=E,1μm,14.0s
MLAC Mammoth Lakes 79.39 45 ⇓P P 01 24 17.1 +0.7
baz=80,SNR=7.6
KTGM Kuala Trenggan 79.45 279 P **P 01 24 18.6 +1.3**
MPMC Manual Prospec 79.49 47 ⇓P P 01 24 17.2 +0.2
baz=80,SNR=73
TIN Tinemaha 79.50 46 ⇓P P 01 24 17.4 +0.4
baz=80,SNR=12
WHN Wuhan 79.50 307 ⇑P P 01 24 18.3 +1.1
WHN S S 01 33 29.1 -2.3
WHN pmax pmax
comp=Z,230nm,1.2s,mb5.4
WHN pmax pmax
comp=Z,2μm,4.9s
BELC Belle Mtn. Jos 79.51 49 ⇑P P 01 24 17.4 +0.3
baz=80,SNR=38
HUMO Hull Mountain 79.54 39⇑*i*P P 01 24 17.3 +0.2
comp=Z,358nm,1.8s,mb5.4
HUMO *e*pP pP 01 26 25.9 +5.1
GSC Goldstone 79.58 48 ⇓P P 01 24 17.5 0.0
baz=80,SNR=39
GSC Goldstone 79.58 48⇓*i*P P 01 24 17.4 -0.1
GSC *e* 01 27 28.1
GSC pmax pmax
comp=Z,263nm,1.7s,mb5.3
GSC Goldstone 79.58 48⇓*i*P P 01 24 17.4 -0.1
comp=Z,263nm,1.7s,mb5.3
GSC *e*pP pP 01 26 26.5 +5.3
GSC *e*PP PP 01 27 28.1 -1.4
BEKR Beckworth 79.60 42 P **P 01 24 17.7 +0.2**
baz=80,SNR=67
BEKR ⇓pP pP 01 26 23.4 +2.2
baz=80
WCN Washoe City 79.68 43 ⇑P P 01 24 18.3 +0.5
baz=80,SNR=13
WCN ⇓pP pP 01 26 25.2 +3.5
baz=80
HEC Hector,Ludlow 79.68 48 ⇑P P 01 24 17.9 -0.1
baz=80,SNR=48
BC3 Big Chuckawall 79.73 50 P **P 01 24 18.9 +0.6**
baz=80,SNR=38
BC3 ⇑pP pP 01 26 23.8 +1.6
baz=80
BC3 ⇑PP PP 01 27 30.2 -0.6
baz=80,SNR=5.4
112A Yuma 79.84 51 ⇑P P 01 24 19.4 +0.5
baz=80,SNR=12
GLA Glamis 79.90 51 ⇓P P 01 24 19.9 +0.7
baz=80,SNR=14
GLA ⇓pP pP 01 26 25.0 +1.9
baz=80
GLA Glamis 79.90 51⇑*i*P P 01 24 19.7 +0.5
GLA *e**PP pP 01 26 27.1 +4.0
GLA *e* 01 27 30.9
GLA pmax pmax
comp=Z,218nm,1.5s,mb5.3
GLA Glamis 79.90 51⇑*i*P P 01 24 19.7 +0.5
comp=Z,218nm,1.5s,mb5.3
GLA *e*pP pP 01 26 27.1 +4.1
GLA *e*PP PP 01 27 30.9 -1.3
GRAC Grapevine Rang 80.05 46 ⇑P P 01 24 20.5 +0.6
baz=80,SNR=22
FURC Furnace Creek, 80.13 47 ⇑P P 01 24 20.3 -0.1
baz=80,SNR=14
GMRC Granite Mounta 80.14 49 ⇓P P 01 24 20.5 +0.1
baz=80,SNR=37
GMRC ⇓pP pP 01 26 27.3 +2.9
baz=80
GMRC ⇓PP PP 01 27 32.9 -1.1
baz=80
NVAR Mina Array Bea 80.17 44 P **P 01 24 20.8 +0.4**
comp=Z,46nm,1.0s,mb4.8,baz=222,slow=9.1,SNR=188
NVAR pP pP 01 26 27.0 +2.6
comp=Z,3.0nm,0.9s,baz=224,slow=6.3,SNR=3.3
NVAR S S 01 33 39.4 +1.6
comp=Z,0.3nm,0.4s,baz=150,slow=29,SNR=1.8
NVAR PKKPbc PKKPbc 01 43 00.6 +0.6
comp=Z,0.5nm,0.7s,baz=54,slow=4.9,SNR=3.9
NVAR PKPPKP 01 51 01.0
comp=Z,1.7nm,0.9s,baz=103,slow=2.9,SNR=6.4
NVAR Mina Array Bea 80.17 44 P **P 01 24 20.8 +0.4**
NVAR pP pP 01 26 27.0 +2.6
NVAR S S 01 33 39.4 +1.6
NVAR PKKPbc PKKPbc 01 43 00.6 +0.6
NVAR P'P' 01 51 01.0
IRM Iron Mountain 80.20 49 ⇓P P 01 24 21.0 +0.3
baz=80,SNR=86
IRM ⇓pP pP 01 26 28.2 +3.4
baz=80
FRIM Kepong 80.21 277 P **P 01 24 21.9 +0.6**
COCO West Island 80.22 260 *i* P P 01 24 23.0 +1.7
COCO West Island 80.22 260⇓*i*P P 01 24 21.6 +0.2
comp=Z,255nm,1.2s,mb5.4
SHOC Shoshone 80.25 47 ⇓P P 01 24 20.9 -0.1
baz=80,SNR=16
TUQ Turquoise Moun 80.27 48 ⇓P P 01 24 21.3 +0.2
baz=80,SNR=16
Y12C Blythe 80.46 50 ⇓P P 01 24 22.4 +0.3
baz=81,SNR=9.1
Y12C ⇓PP PP 01 27 35.3 -1.4
baz=81
U10A Ash Meadows, A 80.48 47 P **P 01 24 22.5 +0.4**
baz=81,SNR=34
U10A ⇓pP pP 01 26 29.7 +3.4
baz=81
U10A ⇓PP PP 01 27 36.3 -0.5
baz=81
113A Mohawk Valley, 80.55 51 ⇑P P 01 24 22.8 +0.2
baz=81,SNR=62
113A ⇓pP pP 01 26 29.3 +2.6
baz=81
113A ⇓PP PP 01 27 36.4 -1.1
baz=81,SNR=5.8
HEBO Mount Hebo 80.62 36 *e*P P 01 24 23.0 +0.3
comp=Z,221nm,1.5s,mb5.4
LDFC Landfair 80.67 49⇑*i*P P 01 24 23.6 +0.4
comp=Z,623nm,1.5s,mb5.8
MOD Modoc 80.76 41⇓*i*P P 01 24 23.4 -0.1
comp=Z,382nm,1.6s,mb5.6
MOD *e*pP pP 01 26 32.4 +4.7
V11A Goodsprings 80.82 48 ⇓P P 01 24 24.2 +0.3
baz=81,SNR=41
V11A ⇑pP pP 01 26 29.4 +1.3
baz=81
V11A ⇓PP PP 01 27 38.6 -1.0
baz=81
Z13A Yuma Proving G 80.83 51 ⇓P P 01 24 24.3 +0.3
baz=81,SNR=54
Z13A ⇑pP pP 01 26 30.4 +2.1
baz=81
Z13A ⇑PP PP 01 27 38.2 -1.6
baz=81
K05A Summer Lake 80.86 40 ⇓P P 01 24 24.6 +0.7
baz=81,SNR=50
K05A ⇓pP pP 01 26 31.0 +2.8
baz=81
NEE2 Needles Airpor 80.88 49 ⇑P P 01 24 24.6 +0.4
baz=81,SNR=11
NEE2 ⇓pP pP 01 26 31.6 +3.1
baz=81
NEE2 ⇑PP PP 01 27 38.7 -1.4
baz=81
214A Organ Pipe Nat 80.89 52 ⇓P P 01 24 24.0 -0.3
baz=81,SNR=76
214A ⇑pP pP 01 26 30.8 +2.2
baz=81
RSO Redoubt South 80.91 13 *e*P P 01 24 22.2 -1.5
SVW2 Sparrevohn 80.91 12 *e*P P 01 24 23.2 -0.6
W12A Cal Nev Ari 80.95 49 ⇓P P 01 24 25.0 +0.3
baz=81,SNR=13
W12A ⇑pP pP 01 26 30.7 +1.8
baz=81
PDMCI Parker Dam,Lak 81.00 50 ⇓P P 01 24 25.3 +0.4
baz=81,SNR=20
S10A Tonopah Range, 81.06 46 P **P 01 24 25.4 +0.4**
baz=81,SNR=139
S10A ⇑pP pP 01 26 32.6 +3.2
baz=81
S10A ⇑PP PP 01 27 40.7 -0.8
baz=81
U11A Corn Creek 81.14 47 ⇑P P 01 24 26.0 +0.5
baz=81,SNR=8.5
F03A Seaside 81.16 36 ⇑P P 01 24 25.4 0.0
baz=81,SNR=8.4
IPM Ipoh 81.17 278 P **P 01 24 27.3 +1.1**
V12A Nelson 81.18 48 ⇑P P 01 24 26.0 +0.3
baz=81,SNR=41
V12A ⇑pP pP 01 26 32.4 +2.3
baz=81
114A Black Gap (USA 81.20 52 ⇑P P 01 24 26.4 +0.5
baz=81,SNR=22
114A ⇑PP PP 01 27 40.9 -1.9
baz=81
H04A Detroit Lake 81.21 38 ⇓P P 01 24 25.1 -0.5
baz=81,SNR=22
BKCOR Black Crater 81.27 38 P **P 01 24 26.3 +0.3**
G04A Mulino 81.34 37 ⇑P P 01 24 26.2 -0.2
baz=82,SNR=7.1
G04A ⇓pP pP 01 26 33.1 +2.3
baz=82
SEW Seward 81.35 15⇑*i*P P 01 24 24.6 -1.5
comp=Z,58nm,1.1s,mb4.9
X13A Yucca 81.36 50 P **P 01 24 27.1 +0.3**
baz=82,SNR=64
X13A ⇓pP pP 01 26 34.5 +3.3
baz=82
X13A ⇓PP PP 01 27 42.5 -1.5
baz=82
Z14A Wintersburg 81.44 51 ⇓P P 01 24 27.2 +0.1
baz=82,SNR=24
Z14A ⇑pP pP 01 26 34.3 +2.6
baz=82
R10A Warm Springs 81.44 45 ⇓P P 01 24 27.3 +0.3
baz=82,SNR=105
R10A ⇑pP pP 01 26 35.4 +3.8
baz=82
GAMB Gambell 81.49 4⇑*i*P P 01 24 26.4 -0.2
comp=Z,220nm,1.8s,mb5.3
S11A Rachel 81.49 46 ⇓P P 01 24 27.6 +0.2
baz=82,SNR=24
S11A ⇑PP PP 01 27 44.2 -0.8
baz=82
W13A Hualapai Mount 81.56 49 ⇑P P 01 24 28.1 +0.3
baz=82,SNR=61
Q10A Clear Creek Ra 81.64 45 ⇓P P 01 24 28.2 +0.2
baz=82,SNR=27
T11A Corn Creek, Al 81.66 47 ⇓P P 01 24 28.4 +0.2
baz=82,SNR=145
T11A ⇓pP pP 01 26 35.7 +2.9
baz=82
Y14A Wickenburg 81.66 51 ⇓P P 01 24 28.5 +0.2
baz=82,SNR=37
115A Sonoran Desert 81.67 52 ⇑P P 01 24 29.0 +0.7
baz=82,SNR=30
115A ⇓pP pP 01 26 34.6 +1.7
baz=82
U12A Valley of Fire 81.74 48 P **P 01 24 29.2 +0.6**
baz=82,SNR=77
T12A Moapa 81.76 47 ⇑P P 01 24 29.1 +0.4
baz=82
KULM Kulim 81.78 278 P **P 01 24 30.4 +1.1**
KULM Kulim 81.78 278⇓*i*P P 01 24 29.3 -0.1
comp=Z,174nm,1.0s,mb5.5
KULM *e*PP PP 01 27 45.3 -2.4
F04A Amboy 81.80 36 P **P 01 24 28.6 -0.1**
baz=82,SNR=17

V13A **Grand Canyon W 81.85 48** P **P 01 24 29.5 +0.3**
baz=82,SNR=83
V13A ⇑pP pP 01 26 37.0 +3.1
baz=82
V13A ⇑PP PP 01 27 46.8 -1.2
baz=82
NLWA Neilton Lookou 81.87 35 ⇑P **P 01 24 29.2 +0.2**
baz=82,SNR=17
NLWA ⇑pP pP 01 26 37.6 +3.9
baz=82
NLWA ⇑PP PP 01 27 48.0 +0.1
baz=82
NLWA Neilton Lookou 81.87 35⇑*i*P **P 01 24 29.2 +0.2**
comp=Z,162nm,1.5s,mb5.3
HOOD Mount Hood Mea 81.89 37⇑*i*P **P 01 24 29.0 -0.1**
comp=Z,794nm,1.7s,mb6.0
BMN Battle Mountai 81.93 43⇑*i*P **P 01 24 29.6 +0.1**
BMN pmax pmax
comp=Z,218nm,1.3s,mb5.5
BMN Battle Mountai 81.93 43⇑*i*P **P 01 24 29.6 +0.1**
comp=Z,218nm,1.3s,mb5.5
216A Three Points, 81.94 53 ⇓P **P 01 24 30.3 +0.6**
baz=82,SNR=44
216A ⇑pP pP 01 26 39.1 +4.7
baz=82
216A pP PP 01 27 47.2 -1.5
baz=82,SNR=6.2
R11A Troy Canyon, C 81.96 46 P **P 01 24 29.6 0.0**
baz=82,SNR=63
Z15A Gila River Ind 81.99 51 ⇓P **P 01 24 30.3 +0.4**
baz=82,SNR=6.2
X14A Yava 81.99 50 ⇑P **P 01 24 30.5 +0.6**
baz=82,SNR=43
116A Eloy 82.00 52 ⇑P **P 01 24 30.6 +0.6**
baz=82,SNR=29
116A ⇑PP PP 01 27 47.8 -1.4
baz=82
P10A Eureka 82.01 44 ⇑P **P 01 24 30.2 +0.3**
baz=82,SNR=19
CROR Criterion Ridg 82.08 38 P **P 01 24 30.1 0.0**
WVOR Wild Horse Val 82.08 41⇑*i*P **P 01 24 30.4 +0.2**
WVOR pmax pmax
comp=Z,282nm,1.4s,mb5.6
WVOR Wild Horse Val 82.08 41⇑*i*P **P 01 24 30.4 +0.2**
comp=Z,282nm,1.4s,mb5.6
STD Studebaker Rid 82.09 36 P **P 01 24 30.5 +0.4**
S12A Delamar Landin 82.10 47 P **P 01 24 31.1 +0.7**
baz=82,SNR=108
U13A Pakoon Wash 82.14 48 P **P 01 24 31.1 +0.5**
baz=82,SNR=124
U13A ⇓pP pP 01 26 37.9 +2.4
baz=82
U13A ⇑PP PP 01 27 49.4 -0.8
baz=82
Q11A Duckwater 82.16 45 P **P 01 24 30.9 +0.3**
baz=82,SNR=108
Y15A Casa Rosa Ranc 82.16 51 P **P 01 24 31.2 +0.4**
baz=82,SNR=44
Y15A ⇑pP pP 01 26 38.3 +2.7
baz=82
TDL Tradedollar La 82.16 36 P **P 01 24 31.0 +0.5**
W14A Seligman 82.20 49 P **P 01 24 31.8 +0.8**
baz=82,SNR=99
W14A ⇑PP PP 01 27 49.9 -0.9
baz=82
217A Green Valley 82.32 53 P **P 01 24 32.5 +0.8**
baz=82,SNR=84
217A ⇑PP PP 01 27 50.2 -1.6
baz=82
O10A Cortez Mining, 82.33 44 ⇓P **P 01 24 31.9 +0.4**
baz=82,SNR=36
V14A Boquillas Ranc 82.38 49 ⇓P **P 01 24 32.0 +0.1**
baz=83,SNR=90
V14A ⇑PP PP 01 27 51.2 -1.0
baz=83,SNR=6.6
SNG Songkhla 82.41 280 P **P 01 24 31.0 -1.5**
comp=Z,360nm,1.0s,mb5.9
G06A Carlson Farm, 82.43 38 ⇓P **P 01 24 31.7 -0.1**
baz=83
G06A ⇓pP pP 01 26 40.1 +3.3
baz=83
P11A Circle Ranch, 82.45 44 ⇑P **P 01 24 32.5 +0.3**
baz=83,SNR=19
I07A Izee 82.45 39 P **P 01 24 32.3 +0.3**
baz=83,SNR=89
HDW Hoodsport 82.47 35 P **P 01 24 32.5 +0.5**
T13A Saint George 82.47 47 P **P 01 24 32.8 +0.5**
baz=83,SNR=88
T13A ⇓PP PP 01 27 51.7 -1.2
baz=83
X15A Humboldt 82.48 50 ⇑P **P 01 24 32.9 +0.5**
baz=83,SNR=123
TTA Tatalina 82.53 11 *e*P **P 01 24 30.9 -1.0**
GNW Green Mountain 82.54 35⇑*i*P **P 01 24 32.0 -0.4**
comp=Z,62nm,1.3s,mb5.0
GNW *e*pP pP 01 26 41.8 +4.4
GNW *e*PP PP 01 27 52.7 -0.5
N10A Dunphy 82.54 43 ⇓P **P 01 24 32.9 +0.3**
baz=83,SNR=7.8
Z16A Peralta Trail, 82.56 52 ⇓P **P 01 24 33.3 +0.5**
baz=83,SNR=26
TUC Tucson 82.58 53⇑*i*P **P 01 24 33.7 +0.7**
TUC *e**PP pP 01 26 42.2 +4.3
TUC pmax pmax
comp=Z,193nm,1.5s,mb5.4
TUC Tucson 82.58 53⇑*i*P **P 01 24 33.7 +0.7**
comp=Z,193nm,1.5s,mb5.4
TUC *e*pP pP 01 26 42.2 +4.3
R12A Pony Springs, 82.61 46 ⇑P **P 01 24 33.3 +0.4**
baz=83,SNR=70
LON Longmire 82.62 36 P **P 01 24 32.3 -0.5**
J08A Circle Bar Ran 82.68 40 P **P 01 24 33.4 +0.2**
baz=83,SNR=112
J08A ⇑pP pP 01 26 40.4 +2.1
baz=83
U14A Mt Trumbull 82.69 48 P **P 01 24 34.2 +0.8**
baz=83,SNR=176
117A Oracle 82.73 53 ⇑P **P 01 24 34.3 +0.6**
baz=83,SNR=68
117A ⇓pP pP 01 26 42.3 +3.6
baz=83
PMR Palmer 82.73 14 *e*P **P 01 24 30.9 -2.1**
PMR pmax pmax
comp=Z,226nm,1.5s,mb5.5
PMR Palmer 82.73 14 *e*P **P 01 24 30.9 -2.1**
comp=Z,226nm,1.5s,mb5.5
WPW White Pass 82.74 36 P **P 01 24 33.4 0.0**
Y16A Circle Bar Ran 82.76 51 ⇓P **P 01 24 34.4 +0.6**
baz=83,SNR=84
Y16A ⇓pP pP 01 26 41.1 +2.2
baz=83
S13A Holt Ranch, En 82.77 47 ⇑P **P 01 24 34.1 +0.3**
baz=83,SNR=40
W15A Williams 82.77 50 ⇓P **P 01 24 34.5 +0.6**
baz=83,SNR=14
W15A ⇑PP PP 01 27 54.7 -0.7
baz=83
D05A Enumclaw 82.78 36 P **P 01 24 33.9 +0.3**
baz=83,SNR=44
BJT Baijiatuau 82.79 316 *e*P **P 01 24 34.4 +0.6**
BJT pmax pmax
comp=Z,180nm,1.4s
BJT Baijiatuau 82.79 316 *e*P **P 01 24 34.4 +0.6**
comp=Z,180nm,1.4s,mb5.4
BJI Beijing 82.79 316 P **P 01 24 34.1 +0.3**
BJI pP pP 01 26 42.8 +3.9
BJI sP sP 01 27 44.6 +6.3
BJI PP PP 01 27 55.8 +0.4
BJI S S 01 34 03.8 -0.3
BJI sS sS 01 37 53.8 +6.8
BJI pmax pmax
comp=Z,85nm,1.4s,mb5.1
BJI pmax pmax
comp=Z,590nm,6.5s
O11A Cowboy Ranch, 82.80 44 ⇓P **P 01 24 34.1 +0.2**
baz=83,SNR=103
O11A ⇓pP pP 01 26 42.0 +3.1
baz=83
318A Bisbee 82.81 54 ⇑P **P 01 24 34.4 +0.2**
baz=83,SNR=70
318A ⇓pP pP 01 26 40.3 +1.1
baz=83
Q12A Willow Creek R 82.81 45 P **P 01 24 34.3 +0.3**
baz=83,SNR=51
PGC Sidney 82.85 34⇑*i*P **P 01 24 33.5 -0.4**
comp=Z,8.7nm,1.4s
PGC *e*pP pP 01 26 43.9 +4.9

CRAG Craig 82.87 25 *e*P **P 01 24 33.7 -0.1**
comp=Z,180nm,1.6s,mb5.3
M10A I.L. Ranch, Tu 82.93 42 ⇓P **P 01 24 35.1 +0.6**
baz=83,SNR=28
P12A McGill 82.97 45 ⇑P **P 01 24 35.2 +0.5**
baz=83
R13A O'Grain Ranch, 82.98 46 P **P 01 24 35.5 +0.7**
baz=83,SNR=41
R13A ⇓pP pP 01 26 41.7 +1.7
baz=83
218A Dragoon 83.00 53 ⇓P **P 01 24 36.0 +0.9**
baz=83,SNR=47
218A ⇑pP pP 01 26 42.6 +2.4
baz=83
X16A Lo Mia Camp, P 83.03 51 P **P 01 24 36.0 +0.8**
baz=83,SNR=98
T14A Hurricane 83.07 48 ⇑P **P 01 24 35.6 +0.3**
baz=83,SNR=66
N11A Elko Archery C 83.10 43 ⇑P **P 01 24 35.7 +0.4**
baz=83,SNR=8.4
CCUT Cedar City 83.10 47⇑*i*P **P 01 24 36.1 +0.6**
comp=Z,178nm,1.5s,mb5.4
CCUT *e*pP pP 01 26 45.6 +5.0
CCUT *e*PP PP 01 27 57.5 -0.5
J09A Fry Pan Ranch, 83.12 40 P **P 01 24 35.4 0.0**
baz=83,SNR=107
V15A Kaibab Nationa 83.14 49 P **P 01 24 36.6 +1.0**
baz=83,SNR=86
V15A ⇓pP pP 01 26 41.2 +0.4
baz=83
V15A ⇓PP PP 01 27 57.5 -0.8
baz=83
ENH Enshi 83.15 305⇓*i*P **P 01 24 35.8 0.0**
comp=Z,516nm,1.4s,mb5.9
Y17A Roosevelt 83.15 52 ⇓P **P 01 24 36.1 +0.3**
baz=83,SNR=32
Y17A ⇑pP pP 01 26 44.2 +3.2
baz=83
ARUT Antelope Range 83.16 47 *e*P **P 01 24 35.9 +0.2**
ARUT pmax pmax
comp=Z,194nm,1.6s,mb5.4
ARUT Antelope Range 83.16 47 *e*P **P 01 24 35.9 +0.2**
comp=Z,194nm,1.6s,mb5.4
DIV Divide 83.17 16⇑*i*P **P 01 24 33.9 -1.3**
comp=Z,335nm,1.6s,mb5.6
SIT Sitka 83.19 23 *e*P **P 01 24 35.2 -0.2**
SIT pmax pmax
comp=Z,220nm,1.9s,mb5.4
SIT Sitka 83.19 23 *e*P **P 01 24 35.2 -0.2**
comp=Z,220nm,1.9s,mb5.4
H08A Prairie City 83.19 39 P **P 01 24 35.7 0.0**
baz=83,SNR=32
H08A ⇓pP pP 01 26 43.7 +2.7
baz=83
F07A Phinny Hill Vi 83.21 37 ⇑P **P 01 24 35.6 -0.2**
baz=83
F07A ⇑pP pP 01 26 43.8 +2.8
baz=83
F07A ⇓PP PP 01 27 56.7 -1.9
baz=83
PPLA Purkeypile 83.22 12⇑*i*P **P 01 24 32.6 -2.8**
comp=Z,115nm,1.5s,mb5.2
Z17A San Carlos Hig 83.25 52 ⇓P **P 01 24 37.0 +0.7**
baz=83,SNR=7.8
L10A Juniper Basin 83.26 42 P **P 01 24 36.5 +0.3**
baz=84,SNR=94
W16A Flagstaff 83.27 50 ⇑P **P 01 24 37.1 +0.8**
baz=83,SNR=23
W16A ⇓pP pP 01 26 44.6 +3.0
baz=83
Q13A Wheeler Ranch, 83.32 46 P **P 01 24 36.6 +0.1**
baz=84,SNR=64
Q13A ⇓pP pP 01 26 44.6 +2.8
baz=84
319A Douglas 83.33 54 ⇑P **P 01 24 37.5 +0.8**
baz=84,SNR=36
319A ⇓pP pP 01 26 45.8 +3.8
baz=84
U15A North Rim 83.33 49 ⇓P **P 01 24 37.2 +0.6**
baz=84
U15A ⇑PP PP 01 27 58.3 -1.6
baz=84
SEY Seymchan 83.33 348*c i*P **P 01 24 35.2 -0.8**
S14A Cedar City 83.34 47 P **P 01 24 37.2 +0.7**
baz=84,SNR=24
BMRM Bremner River 83.34 16⇑*i*P **P 01 24 35.0 -1.0**
comp=Z,120nm,1.0s,mb5.4
118A Homack Ranch, 83.35 53 P **P 01 24 37.6 +0.9**
baz=84,SNR=61
118A ⇑pP pP 01 26 45.3 +3.3
baz=84
M11A Holland Ranch, 83.37 43 P **P 01 24 37.5 +0.8**
baz=84,SNR=55
M11A ⇓pP pP 01 26 45.5 +3.5
baz=84
K10A MacKenzie Ranc 83.37 41 P **P 01 24 37.0 +0.4**
baz=84,SNR=114
K10A ⇑pP pP 01 26 44.1 +2.2
baz=84
ELK Elko 83.39 44⇑*i*P **P 01 24 36.9 +0.1**
ELK pmax pmax
comp=Z,253nm,1.6s
ELK Elko 83.39 44⇑*i*P **P 01 24 36.9 +0.1**
comp=Z,253nm,1.6s,mb5.5
JCW Jim Creek 83.40 35 *e*P **P 01 24 36.3 -0.3**
comp=Z,454nm,1.7s,mb5.7
JCW *e*pP pP 01 26 45.5 +3.5
JCW *e*PP PP 01 27 59.4 -0.7
G08A Pilot Rock 83.44 38 ⇓P **P 01 24 36.9 0.0**
baz=84,SNR=79
G08A ⇓pP pP 01 26 43.8 +1.5
baz=84
I09A Lost Marbles R 83.46 40 P **P 01 24 37.0 -0.1**
baz=84,SNR=41
I09A ⇓pP pP 01 26 45.2 +2.8
baz=84
X17A Forest Lakes 83.47 51 P **P 01 24 38.3 +1.0**
baz=84,SNR=39
X17A ⇓pP pP 01 26 45.8 +3.1
baz=84
O12A Currie 83.47 44 P **P 01 24 37.4 +0.1**
baz=84,SNR=38
Z18A Geronimo 83.49 52 ⇑P **P 01 24 38.3 +0.8**
baz=84,SNR=8.7
T15A Red Dirt Ranch 83.54 48 ⇓P **P 01 24 38.1 +0.5**
baz=84,SNR=68
P13A Bates Ranch, G 83.57 45 ⇓P **P 01 24 38.0 +0.3**
baz=84
N12A Clover Valley, 83.57 44 ⇓P **P 01 24 37.7 0.0**
baz=84,SNR=32
N12A ⇓pP pP 01 26 44.5 +1.4
baz=84
N12A Clover Valley, 83.57 44⇑*i*P **P 01 24 37.7 0.0**
comp=Z,230nm,1.4s,mb5.5
N12A *e*PP PP 01 28 01.0 -0.6
WUAZ Wupatki 83.58 50 ⇑P **P 01 24 38.3 +0.5**
baz=84,SNR=49
WUAZ Wupatki 83.58 50⇑*i*P **P 01 24 38.1 +0.3**
comp=Z,177nm,1.4s,mb5.4
WUAZ *e*pP pP 01 26 47.7 +4.5
WUAZ *e*PP PP 01 28 00.2 -1.6
MAW Mawson 83.60 200 *e*P **P 01 24 37.1 -0.3**
comp=Z,185nm,0.9s,mb5.6
MAW *e*S S 01 34 00.9 -10
MAW Mawson 83.60 200 P **P 01 24 37.5 +0.1**
comp=Z,203nm,0.9s,mb5.7,baz=120,slow=5.9,SNR=270
MAW *e*pP pP 01 26 45.4 +2.7
comp=Z,25nm,1.1s,baz=158,slow=8.1,SNR=2.5
MAW S S 01 34 01.1 -10
comp=Z,2.6nm,0.9s,baz=286,slow=20,SNR=2.4
MAW Mawson 83.60 200⇓*i*P **P 01 24 37.3 -0.1**
MAW pmax pmax
comp=Z,70nm,1.0s
MAW Mawson 83.60 200⇓*i*P **P 01 24 37.2 -0.1**
comp=Z,70nm,1.0s,mb5.2
MAW *e*pP pP 01 26 46.9 +4.2
219A White Tail Can 83.61 54 ⇑P **P 01 24 37.9 -0.2**
baz=84,SNR=68
E07A Sunnyside 83.62 37 ⇓P **P 01 24 37.7 -0.1**
baz=84,SNR=6.5
E07A ⇑pP pP 01 26 45.8 +2.6
baz=84
RSW Rattlesnake Hi 83.68 37 *e*P **P 01 24 38.2 +0.1**
comp=Z,440nm,1.6s,mb5.7
R14A James Farms, M 83.69 47 ⇓P **P 01 24 38.6 +0.3**
baz=84,SNR=11
HAWA Hanford 83.71 37⇑*i*P **P 01 24 38.2 -0.1**
comp=Z,228nm,1.3s,mb5.5

HAWA *e*pP pP 01 26 48.5 +4.8
L11A Cat Creek Ranc 83.77 42 P **P 01 24 39.0 +0.4**
baz=84,SNR=101
L11A ⇓pP pP 01 26 46.1 +2.0
baz=84
RPW Rockport 83.77 35 P **P 01 24 37.9 -0.6**
J10A Berg Farm, Mel 83.78 41 ⇑P **P 01 24 38.7 +0.1**
baz=84,SNR=7.2
J10A ⇑pP pP 01 26 46.7 +2.6
baz=84
A05A Maple Falls 83.79 34 ⇑P **P 01 24 37.8 -0.7**
baz=84,SNR=6.1
Y18A Canyon Day Jun 83.79 52 ⇓P **P 01 24 38.9 0.0**
baz=84,SNR=65
Y18A ⇑pP pP 01 26 49.5 +5.1
baz=84
B06A Marblemount 83.83 35 ⇑P **P 01 24 38.0 -0.7**
baz=84
Q14A Sevier Lake (B 83.84 46 P **P 01 24 39.5 +0.4**
baz=84,SNR=176
S15A Panguitch 83.86 47 ⇓P **P 01 24 40.4 +1.2**
baz=84,SNR=15
W17A Winslow 83.86 50 ⇓P **P 01 24 39.9 +0.6**
baz=84,SNR=9.6
W17A ⇑pP pP 01 26 47.1 +2.4
baz=84
GYA Guiyang 83.87 300⇑*i*P **P 01 24 40.6 +1.1**
GYA pP pP 01 26 49.3 +4.3
GYA sP sP 01 27 48.6 +4.3
GYA PP PP 01 28 07.3 +2.9
GYA SKS 01 34 04.9
GYA S S 01 34 16.0 +0.8
GYA sS sS 01 38 01.8 +3.0
GYA SS SS 01 40 05.5 +4.1
GYA pmax pmax
comp=Z,80nm,1.0s,mb5.2
GYA pmax pmax
comp=Z,630nm,5.5s
H09A Durkee 83.88 39 ⇓P **P 01 24 39.1 0.0**
baz=84,SNR=5.8
320A Kipp Ranch, An 83.90 55 ⇑P **P 01 24 40.8 +1.3**
baz=84,SNR=34
K11A Parker Ranch, 83.90 42 P **P 01 24 39.5 +0.3**
baz=84,SNR=77
K11A ⇑pP pP 01 26 47.9 +3.1
baz=84
119A Ashpeak Ranch, 83.91 53 ⇓P **P 01 24 40.3 +0.7**
baz=84,SNR=31
O13A Hicks Ranch, I 83.92 45 ⇓P **P 01 24 39.9 +0.4**
baz=84
M12A Wells 83.93 43 ⇓P **P 01 24 39.8 +0.3**
baz=84,SNR=69
ETW Entiat 83.94 36 *e*P **P 01 24 39.0 -0.3**
comp=Z,105nm,0.9s,mb5.4
ETW *e*pP pP 01 26 48.8 +4.0
E08A Dider Farm, El 84.04 37 P **P 01 24 39.8 -0.1**
baz=84,SNR=18
E08A ⇓pP pP 01 26 48.5 +3.0
baz=84
E08A ⇑PP PP 01 28 04.5 -0.8
baz=84
V17A Tonalea, Kykot 84.05 50 ⇓P **P 01 24 40.5 +0.3**
baz=84,SNR=108
KTH Kantishna Hill 84.07 13⇑*i*P **P 01 24 37.3 -2.3**
comp=Z,107nm,1.4s,mb5.2
CHUM Lake Minchumin 84.09 12⇑*i*P **P 01 24 37.7 -2.0**
comp=Z,172nm,1.4s,mb5.4
I10A Payette 84.10 40 ⇑P **P 01 24 40.5 +0.3**
baz=84,SNR=29
I10A ⇓pP pP 01 26 49.1 +3.3
baz=84
TRF Thorofare Moun 84.11 13⇑*i*P **P 01 24 38.0 -1.8**
comp=Z,88nm,0.8s,mb5.3
N13A Wendover, West 84.12 44 ⇓P **P 01 24 40.6 +0.2**
baz=84,SNR=16
N13A ⇓pP pP 01 26 49.1 +3.1
baz=84
N13A ⇑PP PP 01 28 05.0 -1.1
baz=84
N13A Wendover, West 84.12 44⇑*i*P **P 01 24 40.5 +0.1**
comp=Z,431nm,1.7s,mb5.7
G09A Cove 84.13 39 P **P 01 24 40.3 -0.1**
baz=84,SNR=55
G09A ⇓pP pP 01 26 48.5 +2.6
baz=84
G09A ⇑PP PP 01 28 05.2 -0.9
baz=84
220A Playas Peak, P 84.14 54 ⇑P **P 01 24 41.4 +0.8**
baz=84,SNR=52
220A ⇓pP pP 01 26 48.8 +2.5
baz=84
T16A Glen Canyon Da 84.15 48 ⇑P **P 01 24 41.0 +0.4**
baz=84,SNR=13
LNOR Lincton Mounta 84.15 38 *e*P **P 01 24 39.5 -0.9**
LNOR pmax pmax
comp=Z,97nm,1.7s,mb5.1
LNOR Lincton Mounta 84.15 38 *e*P **P 01 24 39.5 -0.9**
comp=Z,98nm,1.7s,mb5.1
Z19A T-Link Ranch, 84.16 53 ⇑P **P 01 24 41.5 +0.7**
baz=84,SNR=9.4
Z19A ⇓pP pP 01 26 49.3 +3.0
baz=84
R15A Junction 84.17 47 ⇓P **P 01 24 41.5 +0.9**
baz=84,SNR=7.5
X18A Snowflake 84.18 51 ⇑P **P 01 24 41.0 +0.2**
baz=84,SNR=21
BMO Blue Mountains 84.19 39⇑*i*P **P 01 24 40.0 -0.6**
BMO pmax pmax
comp=Z,159nm,1.7s,mb5.3
BMO Blue Mountains 84.19 39⇑*i*P **P 01 24 40.0 -0.6**
comp=Z,159nm,1.7s,mb5.3
BMO *e*pP pP 01 26 50.5 +4.3
BMO *e*PP PP 01 28 05.0 -1.6
L12A House Creek Ra 84.23 43 P **P 01 24 41.4 +0.5**
baz=84,SNR=79
L12A ⇑pP pP 01 26 49.9 +3.3
baz=84
P14A Drum Mountains 84.27 45 ⇓P **P 01 24 41.2 +0.1**
baz=84,SNR=45
P14A ⇑PP PP 01 28 06.3 -1.0
baz=84
F09A S2 Ranch, Elgi 84.29 38 ⇓P **P 01 24 40.8 -0.2**
baz=84,SNR=8.8
F09A ⇑PP PP 01 28 06.7 -0.6
baz=84
120A U Bar Ranch, L 84.33 53 ⇑P **P 01 24 42.2 +0.6**
baz=84,SNR=22
120A ⇑pP pP 01 26 53.7 +6.4
baz=84
MFID Camas Ranch 84.36 41 P **P 01 24 41.6 +0.2**
baz=84,SNR=76
MFID ⇑pP pP 01 26 51.1 +3.9
baz=84
MSU Marysvale 84.38 47 *e*P **P 01 24 42.3 +0.6**
MSU *e* 01 28 06.7
MSU pmax pmax
comp=Z,172nm,1.7s,mb5.3
MSU Marysvale 84.38 47 *e*P **P 01 24 42.3 +0.6**
comp=Z,172nm,1.7s,mb5.3
MSU *e*PP PP 01 28 06.7 -1.5
H10A Noah's Angus R 84.39 40 P **P 01 24 41.2 -0.4**
baz=85,SNR=83
H10A ⇓pP pP 01 26 49.7 +2.4
baz=85
M13A Montello 84.40 44 ⇑P **P 01 24 41.8 +0.1**
baz=85,SNR=12
D08A Wollman Farm, 84.43 37 ⇑P **P 01 24 41.6 -0.2**
baz=85,SNR=40
D08A ⇓PP PP 01 28 07.4 -1.0
baz=85
Y19A Nutrioso 84.45 52 ⇓P **P 01 24 43.0 +0.8**
baz=85,SNR=64
Y19A ⇓pP pP 01 26 50.0 +2.1
baz=85
Q15A Fillmore 84.47 46 ⇑P **P 01 24 42.5 +0.4**
baz=85,SNR=14
Q15A ⇓pP pP 01 26 51.0 +3.1
baz=85
I11A Placerville 84.53 41 ⇓P **P 01 24 42.4 +0.1**
baz=85,SNR=23
G10A Bishop Farm, J 84.54 39 ⇓P **P 01 24 42.0 -0.3**
baz=85,SNR=79
G10A ⇑pP pP 01 26 50.8 +2.8
baz=85
G10A ⇓PP PP 01 28 08.1 -1.2
baz=85
BPAW Bear Paw Mtn. 84.55 12⇑*i*P **P 01 24 39.4 -2.5**

comp=Z,140nm,1.6s,mb5.3
K12A Draper Farm, C 84.55 42 P P 01 24 42.8 +0.3
baz=85,SNR=41
K12A ⇓pP pP 01 26 51.6 +3.4
baz=85
U17A Shonto 84.58 49 ⇓P P 01 24 43.3 +0.6
baz=85,SNR=16
U17A ⇑PP PP 01 28 09.1 -0.7
baz=85
E09A Wood Farm, Sta 84.58 38 ⇓P P 01 24 42.0 -0.5
baz=85,SNR=16
Z20A Nine Sixteen R 84.59 53 P P 01 24 43.7 +0.8
baz=85,SNR=44
W18A Petrified Fore 84.60 51 ⇑P P 01 24 43.1 +0.3
baz=85,SNR=7.5
W18A ⇓pP pP 01 26 52.1 +3.4
baz=85
X19A St. Johns 84.63 51 ⇑P P 01 24 43.6 +0.6
baz=85
X19A ⇑PP PP 01 28 09.1 -1.2
baz=85
MCK McKinley 84.65 13⇑*i*P P 01 24 40.8 -1.6
MCK pmax pmax
comp=Z,489nm,2.0s,mb5.8
MCK McKinley 84.65 13⇑*i*P P 01 24 40.8 -1.6
comp=Z,489nm,2.0s,mb5.8
T17A Navajo Res., N 84.66 49 P P 01 24 43.9 +0.8
baz=85,SNR=40
T17A ⇓PP PP 01 28 10.0 -0.4
baz=85
V18A Ganado 84.71 50 ⇑P P 01 24 44.0 +0.6
baz=85,SNR=31
A07A Ashnola River, 84.73 35 P P 01 24 42.9 -0.3
baz=85,SNR=28
A07A ⇓pP pP 01 26 52.1 +3.0
baz=85
J12A Stokes Ranch, 84.73 42 P P 01 24 43.6 +0.3
baz=85,SNR=123
J12A ⇓pP pP 01 26 51.7 +2.6
baz=85
DUG Dugway 84.73 45 P P 01 24 43.3 -0.1
baz=85,SNR=20
DUG ⇑pP pP 01 26 52.1 +2.8
baz=85
DUG Dugway 84.73 45⇑*i*P P 01 24 43.1 -0.3
DUG *e* 01 28 09.8
DUG pmax pmax
comp=Z,148nm,1.9s,mb5.3
DUG Dugway 84.73 45⇑*i*P P 01 24 43.1 -0.3
comp=Z,148nm,1.9s,mb5.3
DUG *e*PP PP 01 28 09.8 -1.2
OD2 Odessa Site #2 84.73 37 P P 01 24 43.1 -0.1
221A Mesquite Ranch 84.76 54 ⇑P P 01 24 44.3 +0.6
baz=85,SNR=6.5
221A ⇓PP PP 01 28 09.4 -1.9
baz=85
R16A Teasdale 84.76 47 P P 01 24 44.3 +0.7
baz=85,SNR=21
R16A ⇓PP PP 01 28 10.6 -0.7
baz=85,SNR=7.0
N14A Grayback Hills 84.80 44 ⇓P P 01 24 43.5 -0.2
baz=85,SNR=22
N14A ⇑pP pP 01 26 51.6 +2.0
baz=85
N14A ⇓PP PP 01 28 10.8 -0.7
baz=85,SNR=6.1
PAX Paxson 84.80 15⇑*i*P P 01 24 41.6 -1.6
PAX pmax pmax
comp=Z,94nm,1.5s,mb5.2
PAX Paxson 84.80 15⇑*i*P P 01 24 41.6 -1.6
comp=Z,94nm,1.5s,mb5.2
P15A Leamington 84.80 46 ⇑P P 01 24 43.3 -0.5
baz=85
F10A Beach Ranch, E 84.83 38 P P 01 24 43.3 -0.4
baz=85,SNR=82
F10A ⇑pP pP 01 26 51.5 +1.9
baz=85
W19A Sanders 84.85 51 ⇓P P 01 24 43.4 -0.7
baz=85
L13A Double Diamond 84.90 43 ⇓P P 01 24 44.3 +0.2
baz=85,SNR=21
L13A ⇓pP pP 01 26 53.3 +3.2
baz=85
H11A Donnelly 84.90 40 P P 01 24 44.0 -0.1
baz=85,SNR=111
H11A ⇑pP pP 01 26 52.0 +2.0
baz=85
B08A Colville Reser 84.92 36 P P 01 24 43.4 -0.7
baz=85,SNR=39
B08A ⇑pP pP 01 26 52.2 +2.1
baz=85
BGU Big Grassy Mou 84.94 44⇑*i*P P 01 24 44.1 -0.2
comp=Z,164nm,2.0s,mb5.3
BGU *e*PP PP 01 28 10.1 -2.5
S17A Black Ridge (B 84.94 48 ⇓P P 01 24 44.3 -0.2
baz=85,SNR=12
S17A ⇑PP PP 01 28 09.9 -2.8
baz=85
121A Cookes Peak, D 84.97 54 ⇑P P 01 24 45.4 +0.7
baz=85,SNR=18
121A ⇑pP pP 01 26 51.6 +1.0
baz=85
SKAG Skagway 84.98 21 *e*P P 01 24 44.3 +0.2
comp=Z,581nm,2.4s,mb5.8
I12A Atlanta 84.98 41 P P 01 24 45.0 +0.4
baz=85,SNR=75
I12A ⇓pP pP 01 26 54.1 +3.7
baz=85
I12A ⇓PP PP 01 28 11.0 -1.9
baz=85
NNT Nongplab 85.00 285 P P 01 24 47.3 +2.0
M14A Sheep Mountain 85.00 44 P P 01 24 44.6 -0.1
baz=85,SNR=73
M14A ⇓pP pP 01 26 52.0 +1.4
baz=85
O15A The Old Anders 85.01 45 ⇑P P 01 24 44.8 +0.1
baz=85,SNR=7.8
U18A Rough Rock, Ch 85.07 49 ⇓P P 01 24 45.2 +0.1
baz=85,SNR=25
U18A ⇓pP pP 01 26 54.6 +3.5
baz=85
U18A ⇓PP PP 01 28 12.6 -1.1
baz=85
K13A Stover Farm, H 85.08 42 P P 01 24 45.6 +0.6
baz=85,SNR=42
K13A ⇑PP PP 01 28 12.4 -1.3
baz=85
Y20A Horse Springs, 85.09 52 P P 01 24 46.1 +0.8
baz=85,SNR=67
Y20A ⇓pP pP 01 26 54.8 +3.5
baz=85
G11A Walters Elk Ra 85.11 39 P P 01 24 44.7 -0.4
baz=85,SNR=160
G11A ⇑pP pP 01 26 53.0 +1.9
baz=85
G11A ⇑PP PP 01 28 12.4 -1.4
baz=85
NLU North Lily Min 85.12 46⇑*i*P P 01 24 45.1 -0.2
comp=Z,259nm,2.3s,mb5.5
NLU *e*PP PP 01 28 12.8 -1.3
XAN Xi'an 85.17 308 P P 01 24 45.5 -0.2
XAN pP pP 01 26 55.3 +3.6
XAN sP sP 01 27 56.6 +5.7
XAN PP PP 01 28 14.8 +0.2
XAN S S 01 34 26.3 -1.1
XAN sS sS 01 38 18.1 +6.1
XAN pmax pmax
comp=Z,47nm,1.5s,mb4.9
XAN pmax pmax
comp=Z,140nm,5.4s
E10A Myers Farm, Un 85.17 38 ⇑P P 01 24 44.6 -0.8
baz=85,SNR=11
C09A Chrisman Ranch 85.21 36 ⇓P P 01 24 45.0 -0.5
baz=85,SNR=20
C09A ⇓pP pP 01 26 54.1 +2.6
baz=85
MENT Mentasta 85.21 16 *e*P P 01 24 44.4 -0.8
P16A Fountain Green 85.25 46 ⇓P P 01 24 46.0 +0.1
baz=85
P16A ⇓pP pP 01 26 55.1 +3.1
baz=85
P16A ⇑PP PP 01 28 13.3 -1.8
baz=85
N15A Stansbury Isla 85.26 45 ⇓P P 01 24 45.9 0.0
baz=85,SNR=12
N15A ⇓pP pP 01 26 54.6 +2.6
baz=85
N15A ⇓PP PP 01 28 14.4 -0.8
baz=85
Q16A Castle Valley 85.26 47 ⇑P P 01 24 46.6 +0.6
baz=85,SNR=31
Q16A ⇑pP pP 01 26 55.4 +3.3
baz=85
Q16A ⇑PP PP 01 28 13.8 -1.5
baz=85,SNR=5.8
X20A Quemado 85.27 52 ⇓P P 01 24 46.6 +0.5
baz=85,SNR=18
HLID Hailey 85.32 42 P P 01 24 46.5 +0.4
baz=86,SNR=87
HLID ⇑PP PP 01 28 14.5 -1.0
baz=86
HLID Hailey 85.32 42⇑*i*P P 01 24 46.5 +0.4
comp=Z,99nm,1.4s,mb5.2
HLID *e*pP pP 01 26 57.5 +5.3
HLID *e*PP PP 01 28 12.3 -3.2
222A Williams Famil 85.32 54 ⇓P P 01 24 46.9 +0.4
baz=86,SNR=6.0
222A ⇓pP pP 01 26 55.9 +3.4
baz=86
222A ⇑PP PP 01 28 14.3 -1.6
baz=86
L14A Malta 85.33 43 ⇓P P 01 24 46.2 0.0
baz=86,SNR=42
R17A Hanksville Air 85.36 47 ⇓P P 01 24 46.2 -0.2
baz=86,SNR=26
R17A ⇑pP pP 01 26 54.2 +1.7
baz=86
R17A ⇓PP PP 01 28 15.0 -1.0
baz=86
V19A Window Rock 85.37 50 ⇑P P 01 24 46.8 +0.2
baz=86,SNR=7.4
D10A Wagner Farm, O 85.38 37 P P 01 24 45.7 -0.6
baz=86,SNR=36
D10A ⇓pP pP 01 26 55.1 +2.6
baz=86
Z21A St. Cloud Mine 85.38 53 ⇓P P 01 24 47.3 +0.6
baz=86,SNR=46
T18A Mexican Hat 85.38 49 ⇓P P 01 24 46.9 +0.3
baz=86,SNR=114
T18A ⇓PP PP 01 28 15.1 -1.1
baz=86
J13A Cove Ranch, Pi 85.39 42 ⇓P P 01 24 47.0 +0.5
baz=86,SNR=95
J13A ⇑PP PP 01 28 15.1 -1.1
baz=86
TMUT Trail Mountain 85.41 46⇑*i*P P 01 24 47.1 +0.4
comp=Z,924nm,2.3s,mb6.0
NOQ North Oquirrh 85.42 45⇑*i*P P 01 24 46.6 0.0
comp=Z,384nm,2.0s,mb5.7
F11A Grangeville 85.43 39 ⇑P P 01 24 44.9 -1.6
baz=86,SNR=34
F11A ⇓PP PP 01 28 14.1 -2.3
baz=86
MPU Maple Canyon 85.45 46⇑*i*P P 01 24 47.1 +0.2
comp=Z,161nm,1.8s,mb5.3
MPU *e*PP PP 01 28 14.9 -1.8
U19A Dine' College, 85.50 50 ⇓P P 01 24 47.6 +0.4
baz=86,SNR=37
SPUT South Promonto 85.50 44⇑*i*P P 01 24 47.2 +0.1
comp=Z,388nm,2.0s,mb5.7
SPUT *e*PP PP 01 28 16.6 -0.5
HVU Hansel Valley 85.51 44⇑*i*P P 01 24 47.1 0.0
HVU pmax pmax
comp=Z,239nm,1.7s,mb5.5
HVU Hansel Valley 85.51 44⇑*i*P P 01 24 47.1 0.0
comp=Z,239nm,1.7s,mb5.5
HIA Hailar 85.51 325 *i* P P 01 24 46.8 -0.1
HIA Hailar 85.51 325 *i* P P 01 24 46.8 -0.1
W20A Ramah 85.52 51 P P 01 24 47.9 +0.6
baz=86,SNR=67
W20A ⇑PP PP 01 28 16.3 -1.1
baz=86,SNR=8.8
H12A Diamond D Ranc 85.53 40 P P 01 24 47.0 -0.1
baz=86,SNR=87
H12A ⇓PP PP 01 28 16.0 -1.3
baz=86
G12A Big Creek, Yel 85.54 40 ⇓P P 01 24 47.2 +0.1
baz=86
G12A ⇑pP pP 01 26 56.0 +2.7
baz=86
G12A ⇑PP PP 01 28 15.8 -1.5
baz=86
S18A Hurst Farm, Bl 85.54 48 ⇓P P 01 24 46.9 -0.4
baz=86,SNR=15
S18A ⇑PP PP 01 28 16.2 -1.2
baz=86
M15A Larsen Ranch, 85.58 44 ⇓P P 01 24 47.3 -0.1
baz=86,SNR=14
M15A ⇓PP PP 01 28 16.5 -1.2
baz=86
K14A Jones Ranch, D 85.62 43 P P 01 24 48.0 +0.4
baz=86,SNR=56
K14A ⇑pP pP 01 26 57.3 +3.5
baz=86
K14A ⇓PP PP 01 28 16.7 -1.3
baz=86
O16A Springville 85.63 45 ⇓P P 01 24 47.7 0.0
baz=86,SNR=10.0
122A Conniff Cattle 85.64 54 ⇑P P 01 24 48.8 +0.8
baz=86
NST Nakhon Sawan 85.66 288 P P 01 24 48.8 +0.4
comp=Z,81nm,1.4s,mb5.2
Y21A Point of Rocks 85.67 52 P P 01 24 49.1 +1.0
baz=86,SNR=39
I13A Wildhorse Cree 85.68 41 P P 01 24 48.3 +0.5
baz=86,SNR=54
I13A ⇓pP pP 01 26 56.8 +2.7
baz=86
X21A Alamocita Cree 85.76 52 P P 01 24 49.1 +0.7
baz=86,SNR=35
X21A ⇑PP PP 01 28 16.2 -3.1
baz=86,SNR=5.2
J14A Carey 85.77 42 P P 01 24 49.2 +1.0
baz=86,SNR=40
J14A ⇑PP PP 01 28 17.8 -1.3
baz=86
SRU San Rafael 85.80 47 ⇑P P 01 24 48.5 -0.1
baz=86,SNR=20
SRU ⇓PP PP 01 28 16.5 -3.0
baz=86
SRU San Rafael 85.80 47⇑*i*P P 01 24 48.7 +0.2
SRU *e*S SKSac 01 34 21.2 +2.6
SRU pmax pmax
comp=Z,205nm,1.7s,mb5.5
SRU San Rafael 85.80 47⇑*i*P P 01 24 48.7 +0.1
comp=Z,205nm,1.7s,mb5.5
SRU *e*S SKSac 01 34 21.2 +2.6
223A Chaparral, Ant 85.80 55 ⇑P P 01 24 49.4 +0.7
baz=86
P17A Butcher Ranch, 85.81 46 ⇓P P 01 24 48.1 -0.5
baz=86,SNR=14
P17A PP PP 01 28 18.8 -0.8
baz=86,SNR=6.3
V20A Brimhall 85.83 51 ⇑P P 01 24 48.7 -0.1
baz=86,SNR=11
JLU Jordanelle 85.84 45⇑*i*P P 01 24 48.6 -0.1
comp=Z,171nm,1.8s,mb5.4
JLU *e*PP PP 01 28 18.3 -1.5
T19A Beclabito 85.86 49 P P 01 24 49.1 +0.3
baz=86,SNR=28
L15A Malad City 85.87 44 ⇓P P 01 24 48.6 -0.2
baz=86,SNR=44
L15A ⇓pP pP 01 26 58.3 +3.2
baz=86
L15A ⇑PP PP 01 28 18.3 -1.7
baz=86
COLA College 85.88 13⇑*i*P P 01 24 46.3 -2.0
COLA pmax pmax
comp=Z,237nm,1.5s,mb5.6
COLA College 85.88 13⇑*i*P P 01 24 46.3 -2.0
comp=Z,237nm,1.5s,mb5.6
COLA *e*pP pP 01 26 56.7 +2.1
DAU Daniels Canyon 85.89 45 *e*P P 01 24 49.0 +0.1
DAU *e* 01 28 17.7
DAU pmax pmax
comp=Z,259nm,2.0s,mb5.5
DAU Daniels Canyon 85.89 45 *e*P P 01 24 49.0 +0.1
comp=Z,259nm,2.0s,mb5.5
DAU *e*PP PP 01 28 17.7 -2.5
Z22A Elephant Butte 85.90 53 ⇑P P 01 24 49.2 +0.1
baz=86,SNR=14
F12A Elk City 85.90 39 P P 01 24 48.6 -0.2
baz=86,SNR=149
F12A ⇓pP pP 01 26 58.1 +2.9
baz=86
F12A ⇑PP PP 01 28 18.5 -1.6
baz=86
H13A Challis 85.92 41 P P 01 24 49.1 +0.2
baz=86,SNR=88
H13A ⇑pP pP 01 26 58.3 +3.1
baz=86
H13A ⇑PP PP 01 28 18.5 -1.7
baz=86
R18A Canyonlands Na 85.92 48 ⇓P P 01 24 49.0 -0.1
baz=86,SNR=49
R18A ⇑pP pP 01 26 58.6 +3.2
baz=86
R18A ⇓PP PP 01 28 19.0 -1.4
baz=86
N16A Rees Ranch, Co 85.98 45 ⇑P P 01 24 49.4 0.0
baz=86,SNR=21
N16A ⇓PP PP 01 28 20.0 -0.9
baz=86
U20A Newcomb 86.03 50 ⇑P P 01 24 49.4 -0.3
baz=86,SNR=12
U20A ⇓pP pP 01 26 59.5 +3.4
baz=86
E12A Beaver Dam Sad 86.05 39 ⇑P P 01 24 48.7 -0.8
baz=86,SNR=34
E12A ⇓PP PP 01 28 19.2 -2.1
baz=86
M16A Huntsville 86.05 44 ⇑P P 01 24 49.7 0.0
baz=86
M16A ⇓pP pP 01 26 58.7 +2.6
baz=86
Q18A Rafter H Ranch 86.07 47 ⇑P P 01 24 49.7 -0.2
baz=86,SNR=40
Q18A ⇓PP PP 01 28 19.9 -1.7
baz=86
K15A Arbon 86.10 43 P P 01 24 50.2 +0.3
baz=86,SNR=30
K15A ⇑pP pP 01 26 57.8 +1.5
baz=86
K15A ⇓PP PP 01 28 20.2 -1.6
baz=86
I14A Mackay 86.11 42 ⇓P P 01 24 49.8 -0.1
baz=86,SNR=98
I14A ⇑pP pP 01 26 57.7 +1.4
baz=86
I14A ⇑PP PP 01 28 20.7 -1.1
baz=86,SNR=9.1
NEW Newport 86.11 36⇑*i*P P 01 24 49.0 -0.8
NEW *e* 01 28 18.3
NEW pmax pmax
comp=Z,123nm,1.5s
NEW Newport 86.11 36⇑*i*P P 01 24 49.0 -0.8
comp=Z,123nm,1.5s,mb5.3
NEW *e*PP PP 01 28 18.3 -3.4
BILL Bilibino 86.14 355α*i*P P 01 24 48.3 -1.2
BILL 01 34 18.0
BILL *e*SS SS 01 40 35.9 +3.3
BILL SSS 01 44 15.0
BILL pmax pmax
comp=Z,85nm,1.8s,mb5.1
BILL MLR MLR
comp=Z,100nm,16.0s
BILL Bilibino 86.14 355⇑*i*P P 01 24 48.4 -1.0
comp=Z,24nm,0.7s,mb4.9
O17A Robinson Place 86.14 46 ⇓P P 01 24 50.7 +0.6
baz=86,SNR=56
O17A ⇑pP pP 01 26 59.9 +3.3
baz=86
O17A ⇑PP PP 01 28 21.6 -0.6
baz=86,SNR=6.9
W21A San Fidel 86.15 51 ⇑P P 01 24 50.7 +0.4
baz=86
W21A ⇓PP PP 01 28 21.6 -0.8
baz=86
DLBC Dease Lake 86.17 24⇑*i*P P 01 24 49.7 -0.1
Y22A Socorro 86.17 53 ⇓P P 01 24 50.6 +0.1
baz=86,SNR=41
Y22A ⇑PP PP 01 28 19.7 -2.9
baz=86
S19A Harvey Farm, M 86.18 49 ⇑P P 01 24 50.5 +0.1
baz=86,SNR=31
S19A ⇓pP pP 01 27 00.2 +3.4
baz=86
123A Bell Site, Whi 86.18 54 ⇑P P 01 24 49.8 -0.7
baz=86
G13A Cobalt 86.19 40 P P 01 24 50.2 0.0
baz=86,SNR=58
G13A ⇑pP pP 01 26 59.6 +2.9
baz=86
P18A Preston Nutter 86.23 46 ⇑P P 01 24 50.6 0.0
baz=86,SNR=20
P18A ⇓PP PP 01 28 22.1 -0.8
baz=86,SNR=6.1
HWUT Hardware Ranch 86.23 44⇑*i*P P 01 24 50.2 -0.3
comp=Z,182nm,1.8s,mb5.4
HWUT *e*PP PP 01 28 21.2 -1.7
LAZ Ladron 86.23 52 *e*P P 01 24 50.8 +0.1
comp=Z,94nm,2.0s,mb5.1
LAZ *e*pP pP 01 27 01.5 +4.3
LAZ *e*PP PP 01 28 21.2 -1.8
LENM Lemitar 86.26 53 *e*P P 01 24 51.0 +0.1
comp=Z,28nm,1.1s,mb4.8
Y22D IRIS PASSCAL I 86.26 53 ⇓P P 01 24 51.7 +0.8
baz=86
HHC Hu-ho-hao-te 86.27 315 *e*P P 01 24 51.0 +0.3
HHC pP pP 01 27 00.3 +3.1
HHC sP sP 01 28 00.3 +4.0
HHC PP PP 01 28 26.8 +3.6
HHC S S 01 34 36.4 -1.1
HHC sS sS 01 38 26.1 +3.2
HHC SS SS 01 40 39.0 +3.4
HHC pmax pmax
comp=Z,20nm,0.7s,mb4.9
HHC pmax pmax
comp=Z,610nm,4.9s
324A Moseley Ranch, 86.32 56 P P 01 24 51.5 +0.3
baz=86,SNR=54
324A ⇓pP pP 01 27 00.3 +2.7
baz=86
R19A Curley Farm, L 86.33 48 P P 01 24 51.2 +0.2
baz=86,SNR=14
R19A ⇓pP pP 01 26 59.1 +1.6
baz=86
X22A Bernardo 86.37 52 ⇓P P 01 24 51.6 +0.2
baz=86
C11A Tepee Creek (N 86.38 37 P P 01 24 51.0 -0.1
baz=87,SNR=78
C11A ⇑pP pP 01 26 57.6 0.0
baz=87
MVCO Mesa Verde 86.41 49 P P 01 24 51.6 +0.1
baz=87,SNR=6.8
MVCO Mesa Verde 86.41 49⇑*i*P P 01 24 51.1 -0.3
comp=Z,84nm,1.7s,mb5.1
N17A Moffit Pass 86.42 45 ⇑P P 01 24 51.6 +0.2
baz=87,SNR=5.2
N17A ⇑PP PP 01 28 23.4 -1.0
baz=87
V21A Milan 86.44 51 ⇓P P 01 24 51.8 +0.1
baz=87,SNR=18
425A Indio Mountain 86.45 56 ⇑P P 01 24 52.4 +0.6
baz=87,SNR=135
425A ⇓pP pP 01 26 59.6 +1.2
baz=87
Z23A Rita Site, Whi 86.46 54 ⇓P P 01 24 52.1 +0.3
baz=87,SNR=7.0
F13A Darby 86.47 40 P P 01 24 51.1 -0.4
baz=87,SNR=77
F13A ⇑pP pP 01 27 00.8 +2.7
baz=87
H14A Leadore 86.49 41 ⇓P P 01 24 51.8 +0.1
baz=87,SNR=47
H14A ⇓pP pP 01 26 59.3 +1.0
baz=87
MNTX Cornudas Mount 86.50 55⇑*i*P P 01 24 52.2 +0.2
comp=Z,252nm,2.0s,mb5.5
D12A Red Ives Fores 86.50 38 ⇓P P 01 24 51.0 -0.7
baz=87
D12A ⇑pP pP 01 27 00.5 +2.3
baz=87
J15A Blackfoot 86.50 42 ⇑P P 01 24 52.6 +0.9
baz=87,SNR=52
J15A PP PP 01 28 24.1 -0.9
baz=87,SNR=5.1
L16A Fish Haven 86.51 44 P P 01 24 51.8 -0.1
baz=87,SNR=44
L16A ⇓pP pP 01 26 59.3 +0.9
baz=87
L16A ⇑PP PP 01 28 23.4 -1.6
baz=87

BNM Barren Site 86.52 53 eP P 01 24 52.3 +0.2
comp=Z,78nm,1.5s,mb5.2
BNM eP pP 01 27 03.0 +4.3
BNM eP PP 01 28 22.9 -2.4
224A Cornudas Mount 86.54 55 P P 01 24 52.7 +0.5
baz=87,SNR=69
Q19A Hogan Spring (86.61 47 P P 01 24 52.4 0.0
baz=87,SNR=54
Q19A ⇑pP pP 01 27 02.1 +3.1
baz=87
Q19A ⇑PP PP 01 28 23.9 -2.1
baz=87
PV04 Paradox Valley 86.62 48⇑iP P 01 24 52.6 +0.1
PV04 eP PP 01 28 22.0 -4.0
KMI Kunming 86.65 298 P P 01 24 53.9 +1.0
KMI pP pP 01 27 04.3 +4.8
KMI sP sP 01 28 08.8 +10
KMI PP PP 01 28 32.8 +6.3
KMI SKS 01 34 22.5
KMI S S 01 34 41.9 +0.1
KMI sS sS 01 38 38.3 +11
KMI SS SS 01 40 49.8 +8.2
KMI pmax pmax
comp=Z,100nm,1.5s,mb5.3
KMI pmax pmax
comp=Z,610nm,3.3s
626A Big Bend Ranch 86.66 58 ⇑P P 01 24 53.5 +0.6
baz=87,SNR=107
626A ⇓pP pP 01 27 02.5 +3.0
baz=87
626A ⇓PP PP 01 28 25.1 -1.5
baz=87
O18A Roosevelt 86.67 46 ⇓P P 01 24 53.0 +0.3
baz=87,SNR=19
O18A ⇓PP PP 01 28 25.5 -0.9
baz=87,SNR=5.3
U21A Nageezi 86.69 50 ⇑P P 01 24 52.7 -0.1
baz=87,SNR=81
U21A ⇓PP PP 01 28 25.1 -1.5
baz=87
325A Bean Ranch, Si 86.69 56 P P 01 24 53.2 +0.3
baz=87,SNR=62
325A ⇓pP pP 01 27 01.5 +1.9
baz=87
325A ⇑PP PP 01 28 25.4 -1.3
baz=87
W22A Albuquerque 86.71 52 ⇓P P 01 24 53.7 +0.8
baz=87
G14A Jackson 86.74 40 P P 01 24 53.2 +0.4
baz=87,SNR=11
PV01 Paradox Valley 86.75 48 eP P 01 24 52.8 -0.2
comp=Z,13µm,1.7s
I15A Monteview 86.75 42 ⇓P P 01 24 53.6 +0.7
baz=87,SNR=17
I15A ⇓pP pP 01 27 02.6 +3.0
baz=87
I15A ⇓PP PP 01 28 25.8 -1.1
baz=87
C12B Naegeli Ranch, 86.76 38 ⇓P P 01 24 52.4 -0.4
baz=87,SNR=12
C12B ⇑pP pP 01 27 02.6 +3.0
baz=87
M17A Scullys Gap (B 86.77 45 ⇓P P 01 24 52.8 -0.3
baz=87,SNR=28
M17A ⇑PP PP 01 28 25.2 -1.9
baz=87
K16A Soda Springs 86.78 43 ⇑P P 01 24 53.8 +0.7
baz=87,SNR=26
124A Stringfield Ra 86.83 54 ⇓P P 01 24 53.7 +0.1
baz=87,SNR=36
Y23A Lovelace Mesa, 86.86 53 ⇑P P 01 24 53.3 -0.4
baz=87,SNR=33
E13A Victor 86.89 39 ⇑P P 01 24 52.6 -0.9
baz=87,SNR=27
E13A ⇑pP pP 01 27 02.7 +2.5
baz=87
E13A ⇓PP PP 01 28 26.1 -1.9
baz=87
526A Mary Lane Ranc 86.89 57 ⇓P P 01 24 54.3 +0.4
baz=87,SNR=84
R20A Redvale 86.91 48 ⇓P P 01 24 53.7 -0.1
baz=87,SNR=26
L17A Cokeville 86.92 44 ⇓P P 01 24 53.0 -0.7
baz=87,SNR=6.0
L17A ⇓PP PP 01 28 25.9 -2.3
baz=87
MCMT McKenzie Canyo 86.92 41 eP P 01 24 53.9 +0.2
comp=Z,63nm,1.3s,mb5.2
MCMT eP pP 01 27 05.8 +5.4
MCMT eP PP 01 28 25.9 -2.3
H15A Lima 86.95 41 ⇓P P 01 24 54.3 +0.5
baz=87,SNR=54
H15A ⇑PP PP 01 28 26.5 -1.9
baz=87
TXAR Lajitas Array 86.96 58 P P 01 24 55.1 +0.9
comp=Z,75nm,1.1s,mb5.3,baz=234,slow=4.2,SNR=237
TXAR pP pP 01 27 03.4 +2.4
comp=Z,3.3nm,1.1s,baz=343,slow=1.9,SNR=2.9
TXAR PP PP 01 28 27.3 -1.6
comp=Z,1.6nm,1.0s,baz=226,slow=6.1,SNR=3.7
TXAR S SKSac 01 34 25.5 -0.5
comp=Z,1.0nm,1.1s,baz=324,slow=4.5,SNR=4.0
TXAR PKKPbc PKKPbc 01 42 43.0 -0.9
comp=Z,0.8nm,0.7s,baz=114,slow=2.3,SNR=5.9
TXAR PKPPKP 01 50 44.0
comp=Z,0.3nm,0.7s,baz=270,slow=1.3,SNR=3.8
TXAR Lajitas Array 86.96 58 P P 01 24 55.1 +0.9
TXAR *PP pP 01 27 03.4 +2.4
TXAR 01 28 27.3
TXAR S SKSac 01 34 25.5 -0.5
TXAR Lajitas Array 86.96 58 P P 01 24 55.1 +0.9
TXAR pP pP 01 27 03.4 +2.4
TXAR PP PP 01 28 27.3 -1.6
TXAR S SKSac 01 34 25.4 -0.5
TXAR PKKPbc PKKPbc 01 42 43.0 -0.9
TXAR P'P' 01 50 44.0
ANMO Albuquerque 86.97 52c iP P 01 24 53.6 -0.5
ANMO pmax pmax
comp=Z,103nm,2.1s
ANMO Albuquerque 86.97 52⇑iP P 01 24 54.0 -0.1
comp=Z,20nm,1.4s,mb4.7
ANMO eP pP 01 27 05.6 +4.7
ANMO eP PP 01 28 25.6 -3.2
T21A Navajo Lake 87.01 50 P P 01 24 54.7 +0.4
baz=87,SNR=13
X23A Hourglass Bar 87.02 52 P P 01 24 54.4 0.0
baz=87,SNR=20
X23A ⇓PP PP 01 28 28.0 -1.3
baz=87
V22A San Miguel Ran 87.02 51 P P 01 24 54.5 +0.1
baz=87,SNR=5.9
D13A Huson 87.05 38 ⇓P P 01 24 52.9 -1.3
baz=87,SNR=40
D13A ⇑pP pP 01 27 03.1 +2.1
baz=87
AHID Auburn Hatcher 87.07 43⇑iP P 01 24 54.5 +0.1
comp=Z,422nm,1.9s,mb5.8
F14A Wisdom 87.07 40 ⇑P P 01 24 53.9 -0.5
baz=87,SNR=13
F14A ⇑pP pP 01 27 04.0 +2.8
baz=87
F14A ⇓PP PP 01 28 28.1 -1.3
baz=87
B12A Libby 87.09 37 ⇑P P 01 24 54.1 -0.2
baz=87,SNR=11
B12A ⇓pP pP 01 27 03.1 +1.9
baz=87
225A Deer Hill, Car 87.10 55 ⇓P P 01 24 53.8 -1.0
baz=87,SNR=23
P19A Cripple Cowboy 87.11 47 ⇓P P 01 24 53.5 -1.2
baz=87,SNR=6.6
S21A Coal Bank Pass 87.11 49 ⇑P P 01 24 54.8 +0.1
baz=87,SNR=28
S21A ⇓pP pP 01 27 04.7 +3.2
baz=87
M18A Lyman 87.15 45 ⇓P P 01 24 54.8 0.0
baz=87,SNR=48
M18A ⇓pP pP 01 27 04.6 +3.0
baz=87
M18A ⇑PP PP 01 28 28.2 -2.0
baz=87
Z24A Sheeppen Canyo 87.15 54 ⇓P P 01 24 54.8 -0.2
baz=87,SNR=20
Z24A ⇑pP pP 01 27 05.3 +3.4
baz=87
426A McDonald Obser 87.17 57 P P 01 24 55.9 +0.6
baz=87,SNR=71
426A ⇓pP pP 01 27 04.7 +2.7
baz=87
K17A Gardner Place, 87.18 43 ⇓P P 01 24 55.1 +0.2
baz=87,SNR=34
K17A ⇓pP pP 01 27 04.8 +3.0
baz=87
RRI2 Red Ridge 87.19 43⇑iP P 01 24 55.6 +0.6
comp=Z,351nm,1.6s,mb5.8
RRI2 eP pP 01 27 07.0 +5.1
RRI2 eP PP 01 28 28.6 -1.9
BDT Bhumibol Dam 87.20 289 P P 01 24 56.0 +0.4
comp=Z,33nm,1.0s,mb5.0
N18A Larsen Ranch, 87.22 45 ⇓P P 01 24 54.9 -0.2
baz=87,SNR=20
MSO Missoula 87.22 39⇑iP P 01 24 53.9 -1.2
comp=Z,9.5nm,0.5s,mb4.8
627A Terlingua Ranc 87.23 58 ⇑P P 01 24 56.0 +0.5
baz=87,SNR=121
627A ⇓pP pP 01 27 05.1 +2.8
baz=87
BSMT Bassoo Peak 87.23 38 eP P 01 24 54.4 -0.6
comp=Z,56nm,1.3s,mb5.1
BSMT eP pP 01 27 06.5 +4.6
BSMT eP PP 01 28 28.9 -1.7
U22A Llaves 87.25 51 ⇑P P 01 24 55.0 -0.4
baz=87,SNR=8.6
U22A ⇓PP PP 01 28 29.3 -1.7
baz=87
C13A Hot Springs 87.27 38 ⇑P P 01 24 54.3 -0.9
baz=88,SNR=21
C13A ⇓PP PP 01 28 29.3 -1.7
baz=88
W23A Werner Place, 87.28 52 ⇑P P 01 24 54.5 -1.1
baz=87,SNR=14
A12A Yaak River Ran 87.29 36 ⇑P P 01 24 55.0 -0.3
baz=88,SNR=6.7
E14A Clinton 87.29 39 ⇓P P 01 24 54.8 -0.6
baz=88,SNR=39
E14A ⇑pP pP 01 27 04.2 +1.9
baz=88
E14A ⇑PP PP 01 28 29.5 -1.6
baz=88
Q20A Ridgley Place, 87.29 48 ⇓P P 01 24 55.5 -0.1
baz=88,SNR=57
Q20A ⇑pP pP 01 27 04.5 +2.0
baz=88
Q20A ⇓PP PP 01 28 28.8 -2.5
baz=88
O19A Miners Draw (B 87.30 46 ⇓P P 01 24 55.4 -0.1
baz=88,SNR=50
O19A ⇓pP pP 01 27 05.1 +2.6
baz=88
O19A ⇑PP PP 01 28 29.4 -1.9
baz=88
527A Woodward Ranch 87.31 57 ⇑P P 01 24 55.2 -0.6
baz=87,SNR=77
G15A Dillon 87.31 41 ⇓P P 01 24 55.4 0.0
baz=88,SNR=81
G15A ⇓pP pP 01 27 04.6 +2.3
baz=88
G15A ⇓PP PP 01 28 28.8 -2.5
baz=88,SNR=7.8
USHA Ushuaia 87.31 147 P P 01 24 56.2 +0.8
comp=Z,14nm,1.0s,mb4.7,baz=332,slow=9.5,SNR=6.1
DLMT Dillon 87.33 41⇑iP P 01 24 55.6 0.0
comp=Z,107nm,1.3s,mb5.4
DLMT eP pP 01 27 07.6 +5.1
DLMT eP PP 01 28 28.5 -3.0
I16A Newdale 87.33 42 ⇑P P 01 24 55.6 -0.1
baz=88,SNR=23
I16A ⇓PP PP 01 28 30.8 -0.7
baz=88
Y24A Capitan 87.33 53 ⇓P P 01 24 55.9 +0.1
baz=88,SNR=61
Y24A ⇓PP PP 01 28 30.2 -1.5
baz=88
EGAK Eagle 87.38 16⇑iP P 01 24 54.1 -1.2
comp=Z,97nm,1.4s,mb5.3
EGAK eP pP 01 27 06.3 +4.1
L18A Fontenelle, Gr 87.39 44 ⇑P P 01 24 55.8 -0.2
baz=88,SNR=9.4
L18A ⇑PP PP 01 28 29.9 -2.1
baz=88
DCID1 Drake Creek 87.40 43 eP P 01 24 56.8 +0.9
comp=Z,232nm,1.5s,mb5.7
125A Gardner Draw, 87.44 55 ⇑P P 01 24 56.3 -0.1
baz=88,SNR=22
326A Caldwell Ranch 87.46 56 ⇑P P 01 24 56.2 -0.3
baz=88
326A ⇑pP pP 01 27 04.7 +1.2
baz=88
326A ⇓PP PP 01 28 31.2 -1.6
baz=88
P20A De Beque 87.46 47 ⇑P P 01 24 56.5 +0.1
baz=88,SNR=58
JTMT Jette 87.48 38 eP P 01 24 54.9 -1.3
comp=Z,85nm,1.8s,mb5.2
COLD Coldfoot 87.48 11⇑iP P 01 24 55.1 -0.7
comp=Z,44nm,0.9s,mb5.2
COLD eP pP 01 27 06.9 +4.2
T22A Edith 87.48 50 ⇓P P 01 24 56.4 -0.1
baz=88,SNR=23
T22A ⇑pP pP 01 27 05.9 +2.4
baz=88
T22A ⇑PP PP 01 28 32.0 -0.9
baz=88
GDL2 Guadalupe Moun 87.49 55 eP P 01 24 57.1 +0.4
comp=Z,178nm,1.7s,mb5.5
V23A Ortiz Mt. (NFS 87.50 51 ⇑P P 01 24 57.3 +0.6
baz=88,SNR=21
V23A ⇓PP PP 01 28 32.4 -0.6
baz=88
TPAW Teton Pass 87.50 43⇑iP P 01 24 56.9 +0.4
comp=Z,323nm,1.8s,mb5.8
TPAW eP PP 01 28 30.2 -2.6
REDW Red Top Meadow 87.51 43⇑iP P 01 24 56.8 +0.4
comp=Z,341nm,1.5s,mb5.9
REDW eP pP 01 27 08.7 +5.2
REDW eP PP 01 28 33.0 +0.1
N19A John Jarvie Ra 87.52 46 ⇓P P 01 24 56.2 -0.4
baz=88,SNR=17
N19A ⇓PP PP 01 28 31.1 -2.0
baz=88
SWMT Swartz Lake 87.53 38 eP P 01 24 54.9 -1.6
comp=Z,77nm,1.8s,mb5.1
SWMT eP PP 01 28 31.2 -1.7
R21A Cimarron 87.58 48 P P 01 24 57.5 +0.6
baz=88,SNR=59
R21A ⇓pP pP 01 27 06.3 +2.5
baz=88
R21A ⇑PP PP 01 28 32.4 -1.1
baz=88
X24A Lazy VL Ranch, 87.59 53 ⇑P P 01 24 56.5 -0.6
baz=88
X24A ⇓PP PP 01 28 32.0 -1.7
baz=88
J17A Brown Place, J 87.60 43 ⇑P P 01 24 57.5 +0.6
baz=88
D14A Greenough 87.61 39 P P 01 24 56.0 -0.8
baz=88,SNR=33
D14A ⇓pP pP 01 27 05.1 +1.3
baz=88
D14A ⇑PP PP 01 28 30.6 -3.0
baz=88
SNOW Snow King Moun 87.61 43⇑iP P 01 24 57.4 +0.4
comp=Z,338nm,1.7s,mb5.8
F15A Butte 87.62 40 P P 01 24 57.0 0.0
baz=88,SNR=48
F15A ⇑pP pP 01 27 06.3 +2.4
baz=88
F15A ⇓PP PP 01 28 31.6 -2.1
baz=88,SNR=8.8
Z25A Roswell 87.63 54 P P 01 24 57.6 +0.3
baz=88,SNR=38
Z25A ⇑PP PP 01 28 32.0 -2.1
baz=88
LRM Limekiln Ridge 87.64 40 eP P 01 24 57.0 0.0
comp=Z,1µm,1.9s,mb6.3
LRM eP pP 01 27 08.2 +4.1
LRM eP PP 01 28 31.6 -2.3
226A Malaga, Loving 87.64 55 P P 01 24 57.6 +0.2
baz=88,SNR=32
226A ⇑PP PP 01 28 33.0 -1.2
baz=88
628A Black Gap, Mar 87.64 58 P P 01 24 58.2 +0.7
baz=88,SNR=99
CM31 Chiang Mai Arr 87.66 290 eP P 01 24 58.8 +1.1
comp=Z,39nm,0.9s,mb5.1
CMAR Chiang Mai Arr 87.66 290 P P 01 24 58.8 +1.1
comp=Z,45nm,0.9s,mb5.2,baz=109,slow=2.9,SNR=130
CMAR pP pP 01 27 09.0 +4.3
comp=Z,2.2nm,0.6s,baz=120,slow=5.3,SNR=2.1
CMAR PP PP 01 28 34.7 +0.1
comp=Z,2.2nm,0.6s,baz=127,slow=5.8,SNR=4.0
CHMT Chamberlain Mo 87.68 39 eP P 01 24 56.6 -0.6
comp=Z,67nm,1.4s,mb5.2
CHMT eP pP 01 27 07.7 +3.5
CHMT eP PP 01 28 31.5 -2.7
B13A Whitefish 87.68 37 ⇑P P 01 24 56.0 -1.2
baz=88,SNR=28
B13A ⇓pP pP 01 27 05.5 +1.3
baz=88
B13A ⇑PP PP 01 28 32.2 -2.0
baz=88
IMW Indian Meadow 87.69 42⇑iP P 01 24 57.7 +0.4
comp=Z,222nm,1.5s,mb5.7
IMW eP PP 01 28 31.6 -2.8
SLMT Seeley Lake 87.69 39 eP P 01 24 55.8 -1.4
comp=Z,68nm,1.5s,mb5.2
SLMT eP PP 01 28 30.1 -4.2
YBMT Yellow Bay 87.69 38 eP P 01 24 55.9 -1.4
comp=Z,37nm,1.5s,mb4.9
K18A Toltan Ranch, 87.71 44 P P 01 24 58.0 +0.6
baz=88,SNR=112
K18A ⇓pP pP 01 27 06.9 +2.4
baz=88
K18A ⇓PP PP 01 28 32.0 -2.5
baz=88,SNR=5.3
U23A El Rito 87.72 51 P P 01 24 57.9 +0.2
baz=88,SNR=38
427A Hayter Ranch, 87.74 57 P P 01 24 58.4 +0.5
baz=88,SNR=72
427A ⇓pP pP 01 27 05.4 +0.5
baz=88
Q21A Lamborn Mesa, 87.75 48 ⇓P P 01 24 58.0 +0.3
baz=88,SNR=11
G16A Moss Hill, Enn 87.76 41 ⇓P P 01 24 57.6 0.0
baz=88,SNR=31
G16A ⇑pP pP 01 27 07.2 +2.5
baz=88
CHG Chiang Mai 87.78 290 ⇓P P 01 24 59.2 +0.9
comp=Z,76nm,0.9s,mb5.4
CHTO Chiang Mai 87.78 290⇓iP P 01 24 58.6 +0.3
CHTO pmax pmax
comp=Z,249nm,1.6s,mb5.7
CHTO Chiang Mai 87.78 290⇓iP P 01 24 58.6 +0.3
comp=Z,249nm,1.6s,mb5.7
CHTO Chiang Mai 87.78 290 P P 01 24 59.9 +1.6
SNR=12
CHTO P 01 24 59.9
SNR=12
LOHW Long Hollow 87.78 43⇑iP P 01 24 57.8 +0.1
comp=Z,238nm,1.8s,mb5.6
LOHW eP pP 01 27 08.7 +3.9
LOHW eP PP 01 28 27.2 -7.8
M19A Rock Springs 87.80 45 ⇑P P 01 24 57.8 0.0
baz=88,SNR=26
C14A Swan Lake 87.80 38 ⇓P P 01 24 56.4 -1.3
baz=88
C14A ⇑pP pP 01 27 06.2 +1.4
baz=88
QLMT Earthquake Lak 87.81 41 eP P 01 24 58.5 +0.6
comp=Z,124nm,1.6s,mb5.4
QLMT eP PP 01 28 33.7 -1.6
E15A Deer Lodge 87.81 40 ⇓P P 01 24 57.1 -0.7
baz=88,SNR=13
E15A ⇓pP pP 01 27 07.0 +2.1
baz=88
E15A ⇑PP PP 01 28 33.3 -1.9
baz=88
O20A White River Ci 87.83 47 ⇑P P 01 24 58.2 +0.1
baz=88,SNR=51
327A Balmorhea Ranc 87.86 56 ⇓P P 01 24 58.8 +0.4
baz=88
W24A Lazy 6 Ranch, 87.86 52 ⇓P P 01 24 57.6 -0.7
baz=88,SNR=33
W24A ⇑PP PP 01 28 34.3 -1.6
baz=88
H16A Russell Place, 87.87 42 ⇑P P 01 24 58.8 +0.6
baz=88,SNR=64
H16A ⇓pP pP 01 27 08.2 +3.0
baz=88
H16A ⇑P 01 28 33.9
baz=88,SNR=7.6
CLNB Carlsbad 87.89 55 eP P 01 24 58.2 -0.3
comp=Z,35nm,1.6s,mb4.8
Y25A Mesa, Roswell 87.90 53 ⇑P P 01 24 58.3 -0.3
baz=88,SNR=31
L19A Farson 87.92 45 ⇓P P 01 24 58.6 +0.1
baz=88,SNR=69
L19A ⇓pP pP 01 27 08.8 +3.3
baz=88
L19A ⇓PP PP 01 28 34.3 -1.9
baz=88
126A Clayton Basin, 87.93 55 ⇑P P 01 24 57.6 -1.1
baz=88,SNR=13
126A ⇑pP pP 01 27 08.7 +2.9
baz=88
126A ⇑PP PP 01 28 35.1 -1.3
baz=88
CD2 Chengdu 87.93 303⇑iP P 01 25 00.3 +1.5
CD2 pP pP 01 27 10.3 +4.4
CD2 sP sP 01 28 09.3 +4.5
CD2 PP PP 01 28 40.4 +3.9
CD2 SKS 01 34 31.1
CD2 S S 01 34 53.1 -0.4
CD2 sS sS 01 38 44.0 +4.0
CD2 SS SS 01 41 04.3 +4.4
CD2 pmax pmax
comp=Z,60nm,1.8s,mb5.0
CD2 pmax pmax
comp=Z,490nm,5.9s
I17A Pilgrim Ck. 87.94 43 ⇑P P 01 24 58.6 +0.2
baz=88,SNR=6.9
I17A ⇑pP pP 01 27 08.1 +2.6
baz=88
528A Cox Ranch, San 87.97 58 ⇑P P 01 24 59.3 +0.3
baz=88,SNR=12
528A ⇑pP pP 01 27 09.4 +3.3
baz=88
J18A Kendall Valley 87.98 43 ⇑P P 01 24 58.8 +0.1
baz=88,SNR=94
J18A ⇑pP pP 01 27 08.7 +2.9
baz=88
J18A ⇑PP PP 01 28 34.6 -2.0
baz=88
A13A Flathead Natio 87.99 37 ⇓P P 01 24 58.1 -0.5
baz=88
A13A ⇑pP pP 01 27 09.1 +3.4
baz=88
A13A ⇑PP PP 01 28 35.2 -1.4
baz=88
YFT Old Faithful 88.01 42⇑iP P 01 25 00.3 +1.5
comp=Z,186nm,1.6s,mb5.6
YMR Madison River 88.03 42 eP P 01 24 59.8 +0.9
comp=Z,340nm,1.9s,mb5.8
YMR epP pP 01 27 11.0 +5.0
BOZ Bozeman (W) 88.07 41 P P 01 24 59.1 +0.1
baz=88,SNR=80
BOZ ⇓pP pP 01 27 09.0 +2.8
baz=88
BOZ ⇓PP PP 01 28 34.7 -2.6
baz=88,SNR=9.7
BOZ Bozeman (W) 88.07 41⇑iP P 01 24 59.0 0.0
BOZ e 01 28 34.8
BOZ pmax pmax
comp=Z,119nm,1.5s,mb5.4
BOZ Bozeman (W) 88.07 41⇑iP P 01 24 59.0 -0.1
comp=Z,119nm,1.5s,mb5.4
BOZ eP pP 01 27 10.7 +4.6
BOZ eP PP 01 28 34.8 -2.5
BW06 Boulder Array 88.08 44 P P 01 24 58.8 -0.4
baz=88,SNR=50
BW06 ⇑pP pP 01 27 08.0 +1.7
baz=88
BW06 ⇑PP PP 01 28 34.4 -3.0
baz=88,SNR=8.8
BW06 Boulder Array 88.08 44⇑iP P 01 24 58.7 -0.5
comp=Z,182nm,1.6s,mb5.6
BW06 eP pP 01 27 10.2 +3.9
BW06 eP PP 01 28 34.1 -3.4
PDAR Pinedale Array 88.08 44 P P 01 24 58.7 -0.5
comp=Z,20nm,0.8s,mb4.9,baz=207,slow=3.0,SNR=140
PDAR pP pP 01 27 08.9 +2.6
comp=Z,2.6nm,1.0s,baz=216,slow=5.6,SNR=4.1

PDAR PP PP 01 28 34.5 -2.9
comp=Z,9.0nm,1.2s,baz=241,slow=6.1,SNR=10
PDAR S SKSac 01 34 31.3 -0.7
comp=Z,0.2nm,0.4s,baz=260,slow=31,SNR=1.5
PDAR PKKP PKKPbc 01 42 38.5 -3.2
comp=Z,0.6nm,0.4s,baz=62,slow=4.2,SNR=6.1
PDAR SKKPbc 01 45 22.2
comp=Z,1.8nm,1.0s,baz=70,slow=4.9,SNR=6.1
PDAR PKPPKP 01 50 44.6
comp=Z,1.9nm,1.1s,baz=75,slow=1.7,SNR=7.9
R22A Saguache, Gunn 88.08 49 ⇑P P 01 24 59.8 +0.5
baz=88
N20A Spence Gulch, 88.12 46 ⇓P P 01 24 59.5 +0.1
baz=88,SNR=54
F16A Kennard Place, 88.13 41 ⇓P P 01 24 59.4 +0.1
baz=88,SNR=20
F16A ⇓pP pP 01 27 09.5 +3.0
baz=88
F16A ⇓PP PP 01 28 35.4 -2.4
baz=88,SNR=5.8
H17A Grant Village 88.15 42 ⇑P P 01 25 00.8 +1.4
baz=88,SNR=11
X25A Clemmons Ranch 88.16 53 ⇑P P 01 24 59.2 -0.5
baz=88,SNR=13
X25A ⇓pP pP 01 27 09.2 +2.3
baz=88
D15A Lincoln 88.18 39 P P 01 24 59.4 -0.1
baz=88,SNR=61
D15A ⇑pP pP 01 27 08.3 +1.6
baz=88
CPRX Cap Rock 88.19 55 eP P 01 24 59.8 -0.2
comp=Z,61nm,1.5s,mb5.1
Z26A Caprock 88.20 54 ⇑P P 01 24 59.8 -0.1
baz=88
Z26A ⇓PP PP 01 28 36.8 -1.8
baz=88
YNR Norris Junctio 88.23 42⇑iP P 01 25 00.7 +0.9
comp=Z,90nm,1.4s,mb5.3
Q22A Crested Butte, 88.24 48 ⇓P P 01 25 00.4 +0.4
baz=88,SNR=54
227A Bennet, Jal 88.26 56 ⇑P P 01 24 59.9 -0.4
baz=88
428A Kincaid Ranch, 88.26 57 ⇑P P 01 25 01.0 +0.7
baz=88,SNR=27
428A ⇑PP PP 01 28 38.4 -0.7
baz=88
SMCO Snowmass 88.32 48⇑iP P 01 25 00.8 +0.4
comp=Z,261nm,1.8s,mb5.7
SMCO ePP PP 01 28 35.0 -4.3
I18A Diamond G Ranc 88.33 43 ⇓P P 01 25 00.4 +0.1
baz=88,SNR=18
I18A ⇓PP PP 01 28 36.8 -2.5
baz=88
WALA Waterton Lakes 88.34 37⇑iP P 01 24 59.8 -0.5
comp=Z,4.2nm,1.6s
WALA ePP PP 01 28 35.1 -4.2
B14A Marquette Ranc 88.37 38 ⇓P P 01 24 59.6 -0.7
baz=89,SNR=50
B14A ⇑pP pP 01 27 09.8 +2.2
baz=89
O21A Pagoda 88.40 47 ⇑P P 01 25 00.6 -0.2
baz=89,SNR=6.5
328A Wristen Ranch, 88.41 56 ⇑P P 01 25 00.5 -0.5
baz=88,SNR=25
U24A Moreno Valley 88.43 51 ⇑P P 01 25 01.2 +0.2
baz=89
U24A ⇑PP PP 01 28 39.5 -0.8
baz=89
HRY Holter Researc 88.44 40 eP P 01 25 00.7 -0.1
comp=Z,162nm,1.6s,mb5.5
M20A Sweetwater, Wa 88.45 45 P P 01 25 01.3 +0.4
baz=89,SNR=30
M20A ⇑PP PP 01 28 38.5 -1.8
baz=89,SNR=7.1
E16A East Helena 88.45 40 ⇑P P 01 25 00.6 -0.2
baz=89,SNR=13
E16A ⇓pP pP 01 27 10.8 +2.7
baz=89
E16A ⇑PP PP 01 28 38.4 -1.8
baz=89
127A Arkansas Junct 88.46 55 ⇓P P 01 25 01.0 -0.2
baz=89,SNR=11
127A ⇑pP pP 01 27 10.7 +2.3
baz=89
127A ⇓PP PP 01 28 38.6 -2.0
baz=89
G17A Pierce Place, 88.47 41 ⇓P P 01 25 01.2 +0.3
baz=89,SNR=11
C15A Salmond Ranch, 88.48 38 ⇑P P 01 25 00.3 -0.6
baz=89,SNR=57
C15A ⇓pP pP 01 27 10.3 +2.2
baz=89
Y26A Elida 88.57 54 ⇑P P 01 25 01.2 -0.4
baz=89,SNR=14
Y26A ⇓PP PP 01 28 39.9 -1.6
baz=89
L20A Wamsutter 88.57 45 ⇓P P 01 25 01.5 +0.1
baz=89,SNR=57
L20A ⇓pP pP 01 27 11.8 +3.1
baz=89
L20A ⇑PP PP 01 28 38.9 -2.4
baz=89,SNR=7.9
W25A X Bar L Ranch, 88.58 52 ⇑P P 01 25 01.1 -0.6
baz=89,SNR=71
A14A Double T Ranch 88.58 37 ⇑P P 01 25 00.8 -0.5
baz=89,SNR=45
A14A ⇑pP pP 01 27 11.0 +2.4
baz=89
K19A Absolon Red Bu 88.58 44 ⇑P P 01 25 00.9 -0.6
baz=89,SNR=35
K19A ⇑pP pP 01 27 11.1 +2.3
baz=89
N21A Black Mountain 88.60 46 ⇑P P 01 25 00.7 -0.9
baz=89,SNR=75
V25A Rancho No Teng 88.70 52 ⇑P P 01 25 01.9 -0.4
baz=89,SNR=37
V25A ⇑pP pP 01 27 13.7 +4.1
baz=89
V25A PP PP 01 28 41.1 -1.4
baz=89,SNR=6.7
D16A Dana Ranch, Ca 88.76 39 ⇑P P 01 25 01.7 -0.5
baz=89,SNR=42
D16A ⇓pP pP 01 27 14.0 +4.4
baz=89
B15A Bradely Ranch, 88.76 38 P P 01 25 01.0 -1.2
baz=89,SNR=36
B15A ⇓pP pP 01 27 12.0 +2.5
baz=89
F17A Fitzpatrick Pl 88.79 41 ⇓P P 01 25 02.4 0.0
baz=89,SNR=41
F17A ⇓pP pP 01 27 12.1 +2.4
baz=89
SDCO Great Sand Dun 88.80 50⇑iP P 01 25 02.5 -0.1
comp=Z,109nm,1.7s,mb5.4
SDCO ePP PP 01 28 39.5 -3.7
Z27A Tatum 88.81 55 ⇓P P 01 25 01.3 -1.5
baz=89,SNR=10
Z27A ⇑PP PP 01 28 41.4 -2.0
baz=89
X26A CR and CF Fran 88.82 53 ⇓P P 01 25 01.7 -1.1
baz=89,SNR=11
K20A Yellowstone Ra 88.84 44 ⇑P P 01 25 02.1 -0.6
baz=89,SNR=42
K20A PP PP 01 28 40.6 -2.8
baz=89,SNR=6.0
E17A Martinsdale 88.92 40 P P 01 25 03.0 0.0
baz=89,SNR=20
E17A ⇑pP pP 01 27 13.7 +3.3
baz=89
E17A ⇑PP PP 01 28 40.0 -3.9
baz=89
YAK Yakutsk 88.96 339⇑eP P 01 25 02.1 -0.7
A15A Johnson Ranch, 88.98 37 ⇑P P 01 25 02.2 -1.0
baz=89,SNR=47
A15A ⇑pP pP 01 27 13.3 +2.6
baz=89
A15A ⇑PP PP 01 28 41.7 -2.6
baz=89
C16A Fuhringer Ranc 89.00 39 ⇑P P 01 25 02.6 -0.8
baz=89,SNR=24
C16A ⇓pP pP 01 27 13.3 +2.6
baz=89
C16A ⇓PP PP 01 28 42.0 -2.5
baz=89
SYO Syowa Base 89.04 193⇑iP P 01 25 00.6 -2.6
SYO Syowa Base 89.04 193⇓iP P 01 25 02.1 -1.1
SYO Syowa Base 89.04 193 eSH SKSac 01 34 30.0 -6.9
W26A Owens Ranch, T 89.05 53 ⇑P P 01 25 03.1 -0.8
baz=89,SNR=9.9
M21A Separation Pea 89.06 46 ⇓P P 01 25 03.5 -0.2
baz=89,SNR=44
M21A ⇓pP pP 01 27 13.9 +2.7
baz=89
M21A ⇑PP PP 01 28 42.5 -2.6
baz=89,SNR=6.0
Y27A Causey 89.06 54 ⇑P P 01 25 03.0 -0.9
baz=89,SNR=17
U25A Circle Dot Ran 89.07 51 ⇑P P 01 25 03.5 -0.5
baz=89,SNR=26
U25A ⇓pP pP 01 27 13.2 +1.9
baz=89
U25A ⇑PP PP 01 28 43.9 -1.5
baz=89
RWWY Rawlins 89.20 46⇑iP P 01 25 04.0 -0.4
comp=Z,262nm,1.6s,mb5.8
RWWY ePP PP 01 28 43.5 -2.7
L21A Rawlins 89.20 45 ⇓P P 01 25 04.1 -0.3
baz=89,SNR=22
L21A ⇓PP PP 01 28 44.2 -2.1
baz=89,SNR=11
G18A Lazy EL Ranch, 89.21 42 ⇑P P 01 25 04.4 +0.1
baz=89,SNR=26
G18A ⇑PP PP 01 28 45.3 -1.0
baz=89
V26A Tequesquite Ra 89.31 52 ⇓P P 01 25 03.9 -1.2
baz=90,SNR=25
V26A ⇓PP PP 01 28 45.3 -1.9
baz=90
B16A M & M Farms, S 89.31 38 ⇑P P 01 25 03.8 -0.9
baz=90
B16A ⇑pP pP 01 27 13.6 +1.3
baz=90
RLMT Red Lodge 89.31 42 ⇓P P 01 25 04.8 0.0
baz=90,SNR=38
RLMT Red Lodge 89.31 42⇑iP P 01 25 05.1 +0.3
comp=Z,73nm,1.3s,mb5.3
D17A Six Diamond Ra 89.34 40 ⇑P P 01 25 04.9 0.0
baz=90,SNR=35
D17A ⇓pP pP 01 27 14.9 +2.5
baz=90
N22A Wattenberg Ran 89.35 47 ⇑P P 01 25 05.7 +0.6
baz=90,SNR=44
N22A ⇓pP pP 01 27 15.8 +3.2
baz=90
GCMT Greycliff 89.36 41 eP P 01 25 05.2 +0.2
comp=Z,106nm,1.6s,mb5.4
T25A Trinidad 89.36 51 P P 01 25 05.0 -0.3
baz=90,SNR=16
F18A Big Timber 89.38 41 P P 01 25 05.4 +0.3
baz=90,SNR=26
F18A ⇑pP pP 01 27 16.0 +3.4
baz=90
MSTX Muleshoe 89.39 54 ⇓P P 01 25 04.9 -0.6
baz=90,SNR=29
X27A F and S Farms, 89.40 53 ⇑P P 01 25 05.0 -0.5
baz=90
C17A Wharram Farm, 89.51 39 ⇓P P 01 25 05.5 -0.2
baz=90,SNR=27
C17A ⇓pP pP 01 27 14.9 +1.6
baz=90
C17A ⇓PP PP 01 28 45.2 -3.3
baz=90,SNR=5.4
ISCO Idaho Springs 89.53 48⇑iP P 01 25 06.2 +0.2
ISCO e 01 28 43.6
ISCO pmax pmax
comp=Z,159nm,1.8s,mb5.5
ISCO Idaho Springs 89.53 48⇑iP P 01 25 06.2 +0.2
comp=Z,159nm,1.8s,mb5.5
ISCO ePP PP 01 28 43.6 -5.3
E18A Harlowton 89.55 40 ⇑P P 01 25 05.8 0.0
baz=90,SNR=34
E18A ⇓pP pP 01 27 15.6 +2.2
baz=90
U26A Atchley Ranch, 89.57 52 ⇓P P 01 25 04.9 -1.4
baz=90,SNR=40
W27A Bowe Ranch, En 89.58 53 ⇓P P 01 25 05.3 -1.0
baz=90,SNR=24
W27A ⇓pP pP 01 27 16.1 +2.2
baz=90
B17A L&G Farms, Che 89.79 39 ⇑P P 01 25 06.4 -0.5
baz=90,SNR=12
LZH Lanzhou 89.80 308 ⇑P P 01 25 09.3 +2.0
LZH pP pP 01 27 19.6 +4.7
LZH sP sP 01 28 19.0 +5.4
LZH PP PP 01 28 55.3 +4.2
LZH SKS 01 34 41.5
LZH S S 01 35 10.5 +0.2
LZH sS sS 01 39 00.8 +2.7
LZH SS SS 01 41 30.6 +4.1
LZH pmax pmax
comp=Z,170nm,1.1s,mb5.8
LZH pmax pmax
comp=Z,670nm,7.5s
L22A Ellis Ranch, M 89.87 46 ⇑P P 01 25 08.1 +0.6
baz=90,SNR=21
D18A Linhart Farms, 89.90 40 ⇑P P 01 25 07.7 +0.2
baz=90,SNR=26
D18A ⇓pP pP 01 27 18.0 +2.9
baz=90
D18A ⇓PP PP 01 28 49.9 -1.6
baz=90,SNR=5.3
PHWY Pilot Hill 90.24 46⇑iP P 01 25 08.8 -0.4
comp=Z,63nm,1.3s,mb5.3
PHWY ePP PP 01 28 49.1 -5.2
EGMT Eagleton 90.30 39 ⇓P P 01 25 08.9 -0.4
baz=90,SNR=11
EGMT ⇑pP pP 01 27 19.5 +2.5
baz=90
EGMT Eagleton 90.30 39⇑iP P 01 25 08.9 -0.4
comp=Z,152nm,1.8s,mb5.5
EGMT ePP PP 01 28 49.8 -4.8
B18A Beardsley Farm 90.45 39 ⇓P P 01 25 09.5 -0.5
baz=91,SNR=7.6
B18A ⇓pP pP 01 27 19.8 +2.0
baz=91
JCT Junction City 90.50 58⇑iP P 01 25 10.0 -0.7
JCT e 01 28 51.5
JCT pmax pmax
comp=Z,146nm,1.7s,mb5.5
JCT Junction City 90.50 58⇑iP P 01 25 10.0 -0.7
comp=Z,146nm,1.7s,mb5.5
JCT ePP PP 01 28 51.5 -5.2
AMTX Amarillo 90.57 54⇑iP P 01 25 10.2 -0.7
comp=Z,270nm,1.8s,mb5.9
A18A Metzger Ranch, 90.64 38 ⇑P P 01 25 10.3 -0.5
baz=91,SNR=11
A18A ⇑pP pP 01 27 21.1 +2.4
baz=91
EDM Edmonton 90.70 33⇑iP P 01 25 09.8 -1.2
EDM epP pP 01 27 22.8 +4.0
EDM ePP PP 01 28 54.9 -2.7
MAIT Maitri 91.36 184 eP P 01 25 12.8 -1.1
MAIT eE 01 25 23.6
NVL N'lazarevskaya 91.36 184⇓iP P 01 25 08.6 -5.3
NVL pmax pmax
comp=Z,88nm,0.9s,mb5.7
VNA1 Neumayer--Stat 91.64 177 eP P 01 25 13.9 -1.3
VNA1 e 01 29 04.5
LAO LASA Array 91.90 41 eP P 01 25 16.4 -0.3
comp=Z,214nm,1.4s,mb6.0
INK Inuvik 92.05 16 P P 01 25 15.0 -1.9
comp=Z,20nm,1.0s,mb5.1,baz=236,slow=4.2,SNR=20
INK PP PP 01 28 59.3 -8.4
comp=Z,2.1nm,0.8s,baz=198,slow=10,SNR=3.6
INK S SKSac 01 34 50.1 -3.3
comp=Z,1.1nm,0.7s,baz=311,slow=31,SNR=28
INK Inuvik 92.05 16⇑iP P 01 25 15.1 -1.8
INK pmax pmax
comp=Z,120nm,1.6s
INK Inuvik 92.05 16⇑iP P 01 25 15.1 -1.8
comp=Z,120nm,1.6s,mb5.7
ULN Ulaanbaatar 92.22 320⇑eP P 01 25 18.4 +0.2
ULN Ulaanbaatar 92.22 320⇓iP P 01 25 17.7 -0.5
comp=Z,32nm,1.4s,mb5.2
ULN ePP PP 01 29 06.5 -3.0
ULN Ulaanbaatar 92.22 320 P P 01 25 18.8 +0.6
SNR=11
ULN P 01 25 18.8
SNR=11
RSSD Black Hills 92.31 44⇑iP P 01 25 18.0 -0.7
RSSD pmax pmax
comp=Z,28nm,1.3s,mb5.1
RSSD Black Hills 92.31 44⇑iP P 01 25 18.0 -0.7
comp=Z,28nm,1.3s,mb5.1
PLCA Paso Flores 92.35 134 P P 01 25 20.4 +1.4
comp=Z,2.9nm,1.0s,mb4.3,baz=231,slow=23,SNR=3.7
OGNE Ogallala 92.50 48⇑iP P 01 25 19.1 -0.5
comp=Z,136nm,1.7s,mb5.7
SONM Songino Array 92.61 320 P P 01 25 19.8 -0.1
comp=Z,2.6nm,0.8s,mb4.3,baz=142,slow=3.4,SNR=8.7
SONM PP PP 01 29 10.7 -1.8
comp=Z,0.7nm,0.3s,baz=114,slow=7.0,SNR=2.8
SONM S SKSac 01 34 53.9 -3.4
comp=Z,0.5nm,0.3s,baz=289,slow=6.2,SNR=1.8
WMOK Wichita Mounta 92.75 55⇑iP P 01 25 19.8 -1.2
WMOK pmax pmax
comp=Z,71nm,2.1s,mb5.3
WMOK Wichita Mounta 92.75 55⇑iP P 01 25 19.8 -1.2
comp=Z,71nm,2.1s,mb5.3
CBKS Cedar Bluff 93.41 50⇑iP P 01 25 23.3 -0.5
CBKS pmax pmax
comp=Z,77nm,1.4s,mb5.5
CBKS Cedar Bluff 93.41 50⇑iP P 01 25 23.3 -0.5
comp=Z,77nm,1.4s,mb5.5
HKT Hockley 93.57 60⇑iP P 01 25 24.4 -0.4
HKT e 01 29 18.2
HKT pmax pmax
comp=Z,47nm,1.6s,mb5.4
HKT Hockley 93.57 60⇑iP P 01 25 24.4 -0.4
comp=Z,47nm,1.6s,mb5.4
HKT epP pP 01 27 37.3 +4.5
HKT ePP PP 01 29 18.2 -2.1
APG El Apazote 93.77 76 S SKSac 01 35 05.4 +0.4
comp=Z,3.3nm,1.0s,baz=64,slow=21,SNR=14
APG PKKPab 01 43 06.6
comp=Z,2.0nm,0.7s,baz=94,slow=20,SNR=4.4
DGMT Dagmar 93.86 40 ⇑P P 01 25 25.0 -0.6
baz=94,SNR=9.7
DGMT ⇑pP pP 01 27 36.1 +2.3
baz=94
DGMT Dagmar 93.86 40⇑iP P 01 25 25.5 -0.1
comp=Z,95nm,1.1s,mb5.8
DGMT ePP PP 01 29 19.1 -3.1
GTA Gaotai 93.97 310 P P 01 25 27.1 +0.7
GTA pP pP 01 27 37.9 +3.5
GTA sP sP 01 28 37.9 +4.9
GTA PP PP 01 29 27.1 +3.9
GTA SKS 01 35 04.0
GTA S S 01 35 45.3 -1.3
GTA sS sS 01 39 38.3 +1.3
GTA SS SS 01 42 29.3 +4.0
GTA pmax pmax
comp=Z,30nm,0.9s,mb5.4
GTA pmax pmax
comp=Z,140nm,6.8s
YKA Yellowknife Ar 94.70 25 P P 01 25 27.7 -1.4
comp=Z,5.3nm,0.8s,mb4.7,baz=244,slow=4.4,SNR=27
YKA PP PP 01 29 25.8 -2.4
comp=Z,0.5nm,0.6s,baz=240,slow=7.0,SNR=3.0
YKA PKKPbc PKKPbc 01 42 22.5 -3.2
comp=Z,0.7nm,0.5s,baz=30,slow=2.3,SNR=5.9
YKA PKKPab 01 42 59.2
comp=Z,1.9nm,1.0s,baz=55,slow=5.4,SNR=5.9
YKA Yellowknife Ar 94.70 25 P P 01 25 27.7 -1.4
YKA 01 29 25.8
YKA Yellowknife Ar 94.70 25 P P 01 25 27.7 -1.4
YKA PP PP 01 29 25.8 -2.4
YKA PKKPbc PKKPbc 01 42 22.6 -3.2
YKA PKKPab 01 42 59.2
ZAK Zakamensk 95.47 321 eP P 01 25 31.6 -1.3
ZAK e 01 28 37.8
ZAK pmax pmax
comp=Z,3.0nm,2.0s
TIXI Tiksi 95.68 346⇑eP P 01 25 32.1 -1.3
KSU1 Kansas State U 95.81 51⇑iP P 01 25 34.5 -0.2
comp=Z,111nm,1.5s,mb5.9
ECSD EROS Data Cent 97.21 46⇑iP P 01 25 39.5 -1.3
comp=Z,21nm,1.3s,mb5.2
ECSD epP pP 01 27 52.8 +3.5
JTS JuntasAbangare 97.56 82 PP PP 01 29 50.1 -0.8
comp=Z,6.0nm,0.9s,baz=226,slow=3.3,SNR=5.8
LSA Lhasa 97.86 299 P Pdif 01 25 45.5 +1.7
ULM Lac du Bonnet 99.58 40 P Pdif 01 25 50.2 -1.2
comp=Z,3.5nm,0.7s,baz=251,slow=4.3,SNR=3.9
ULM PP PP 01 30 00.6 -4.7
comp=Z,1.9nm,0.5s,baz=256,slow=6.8,SNR=4.9
ULM S SKSac 01 35 28.4 -4.7
comp=Z,2.1nm,0.6s,baz=80,slow=21,SNR=2.1
ULM Lac du Bonnet 99.58 40 eP Pdif 01 25 50.0 -1.4
comp=Z,8.4nm,1.1s
FVM French Village 100.15 53 eP Pdif 01 25 54.9 +1.0
FVM pmax pmax
comp=Z,13nm,1.1s
FVM French Village 100.15 53 ePdif Pdif 01 25 54.9 +1.0
comp=Z,13nm,1.1s
WVT Waverly 101.72 56 eP Pdif 01 26 01.1 +0.2
FCC Fort Churchill 102.74 32 eP Pdif 01 26 04.7 -0.8
LPAZ La Paz 104.61 113 PKKPbc PKKPbc 01 41 56.8 +0.1
comp=Z,1.5nm,0.8s,baz=32,slow=1.1,SNR=4.6
RES Resolute Bay 105.60 16 PP PP 01 30 45.2 -3.7
comp=Z,1.1nm,0.9s,baz=247,slow=11,SNR=6.4
RES S SKSac 01 35 56.5 -3.5
comp=Z,1.0nm,0.9s,baz=233,slow=20,SNR=1.9
RES PKKPbc PKKPbc 01 41 52.7 -2.4
comp=Z,3.2nm,1.1s,baz=193,slow=2.6,SNR=4.5
RES PKKPab PKKPab 01 42 07.5 -4.1
comp=Z,2.5nm,0.9s,baz=63,slow=4.4,SNR=4.1
RES Resolute Bay 105.60 16 ePKP PKiKP 01 30 26.1 -0.7
RES ePP PP 01 30 46.3 -2.6
ROSC El Rosal 106.11 90 S SKSac 01 36 06.0 +1.2
comp=Z,1.9nm,0.4s,baz=108,slow=21,SNR=5.9
ZALV Zalesovo Beam 107.33 322 PKiKP PKiKP 01 30 29.0 -1.5
comp=Z,1.3nm,0.4s,baz=195,slow=0.5,SNR=9.5
ZALV SKP 01 33 08.4
comp=Z,0.7nm,0.3s,baz=114,slow=3.6,SNR=3.9
ZALV Zalesovo Beam 107.33 322 PKPdf PKiKP 01 30 29.0 -1.5
ZALV SKP 01 33 08.4
MK31 Makanchi Array 108.12 314 ePKP PKiKP 01 30 30.6 -1.6
MK31 ePP PP 01 31 06.0 -1.7
MKAR Makanchi Array 108.12 314 Pdiff Pdif 01 26 32.2 +2.8
comp=Z,0.7nm,0.7s,baz=66,slow=7.6,SNR=5.5
MKAR PKiKP PKiKP 01 30 30.6 -1.6
comp=Z,2.2nm,0.6s,baz=54,slow=3.1,SNR=17
MKAR PP PP 01 31 06.2 -1.6
comp=Z,0.8nm,0.8s,baz=85,slow=15,SNR=3.9
MKAR SKP 01 33 11.1
comp=Z,1.5nm,0.6s,baz=67,slow=0.9,SNR=4.4
MKAR S SKSac 01 36 08.6 -3.3
comp=Z,0.8nm,0.7s,baz=91,slow=8.6,SNR=4.3
MKAR PKKPbc PKKPbc 01 41 45.0 -1.6
comp=Z,1.5nm,1.1s,baz=337,slow=3.3,SNR=3.6
MKAR SKKPbc 01 44 30.1
comp=Z,1.2nm,0.9s,baz=340,slow=3.2,SNR=4.1
MKAR Makanchi Array 108.12 314 P Pdif 01 26 32.2 +2.8
MKAR 01 31 06.2
MKAR S SKSac 01 36 08.6 -3.4
KURK Kurchatov 110.87 318 Pdiff Pdif 01 26 41.7 +0.2
comp=Z,0.3nm,0.5s,baz=149,slow=4.1,SNR=3.1
KURK PKiKP PKiKP 01 30 35.6 -1.7
comp=Z,3.7nm,0.8s,baz=94,slow=1.7,SNR=23
KURK PP PP 01 31 22.3 -4.9
comp=Z,4.0nm,1.1s,baz=96,slow=5.3,SNR=3.7
KURK SKP 01 33 15.6
comp=Z,3.0nm,0.8s,baz=96,slow=1.5,SNR=6.3
KURK PKKPbc PKKPbc 01 41 36.4 -1.7
comp=Z,0.6nm,0.4s,baz=273,slow=4.5,SNR=4.4
KURK SKKPbc 01 44 22.5
comp=Z,3.1nm,1.0s,baz=275,slow=3.6,SNR=9.3
KURK Kurchatov 110.87 318 Pdif Pdif 01 26 41.7 +0.2
KURK ePKP PKiKP 01 30 35.6 -1.6
KURK ePP PP 01 31 25.6 -1.6
SIV San Ignacio 110.88 115 PP PP 01 31 27.0 -0.6
comp=Z,3.3nm,0.8s,baz=268,slow=16,SNR=3.8
SIV S SKSac 01 36 21.4 -3.4
comp=Z,0.8nm,0.8s,baz=45,slow=23,SNR=5.7
SIV PKKPbc PKKPbc 01 41 36.9 -0.6
comp=Z,2.4nm,0.7s,baz=82,slow=5.9,SNR=10
SIV PKKPab PKKPab 01 41 50.0 -0.8
comp=Z,2.3nm,0.7s,baz=74,slow=6.6,SNR=7.5
SIV SKKPbc 01 44 23.9
comp=Z,0.8nm,0.6s,baz=85,slow=8.5,SNR=5.0
TKM2 Tokmak 2 112.52 310 ePKP PKiKP 01 30 39.4 -1.3
TKM2 eSKPdf SKPdf 01 33 19.1 -1.8
UCH Uchtor 113.28 309 ePKP PKiKP 01 30 42.0 -0.2
UCH ePP PP 01 31 42.3 -1.9
AAK Ala-Archa 113.31 309 PKiKP PKiKP 01 30 41.4 -0.7
comp=Z,1.2nm,0.3s,baz=338,slow=5.3,SNR=4.5
AAK Ala-Archa 113.31 309 ePKP PKiKP 01 30 41.3 -0.9
EKS2 Erkin-Say 113.84 309 ePKP PKiKP 01 30 42.1 -1.1
AML Almayashu 113.88 309 ePKP PKiKP 01 30 43.0 -0.3
BVAR Borovoye Array 115.93 321 PKP PKPdf 01 30 45.4 -1.4

comp=Z,6.4nm,0.6s,baz=95,slow=1.8,SNR=39
BVAR PP PP 01 32 01.8 -0.5
comp=Z,2.8nm,0.9s,baz=86,slow=6.1,SNR=4.1
BVAR SKPab 01 32 33.6
comp=Z,2.6nm,0.8s,baz=116,slow=5.1,SNR=3.7
BVAR SKP 01 33 25.6
comp=Z,4.3nm,0.7s,baz=61,slow=0.4,SNR=7.2
BVAR Borovoye Array 115.93 321 PKIKP PKPdf 01 30 45.4 -1.5
BVAR 01 32 01.8
BVAR Borovoye Array 115.93 321 PKP PKPdf 01 30 45.4 -1.4
BVAR PP PP 01 32 01.8 -0.5
BVAR SKPab 01 32 33.6
BVAR SKP 01 33 25.6
BRVK Borovoye 115.99 321 *c i* PKIKP PKPdf 01 30 45.7 -1.3
BRVK pmax pmax
comp=Z,30nm,2.5s
BRVK Borovoye 115.99 321 *e*PKPdf PKPdf 01 30 45.4 -1.5
BRVK Borovoye 115.99 321 PKPdf PKPdf 01 30 46.2 -0.8
SNR=7.5
BRVK PKPdf PKPdf 01 30 46.2 -0.8
SNR=7.5
SJG San Juan 117.12 78 SKP SKPdf 01 33 29.2 -1.2
comp=Z,17nm,0.9s,baz=288,slow=8.3,SNR=3.5
KBL Kabul 117.13 300 *e*PKIKP PKPdf 01 30 49.6 -0.2
SCHQ Schefferville 117.47 37 PP PP 01 32 09.2 -3.6
comp=Z,8.3nm,1.2s,baz=286,slow=6.1,SNR=5.9
SCHQ PKKPab PKKPab 01 41 19.4 +0.1
comp=Z,6.5nm,0.6s,baz=77,slow=5.1,SNR=11
SVE Sverdlovsk 120.81 326 *e*PKIKP PKPdf 01 30 55.3 -0.8
SVE pmax pmax
comp=Z,19nm,1.1s
SUMG Summit 120.84 13 *i* P PKKPbc 01 41 03.7 -0.6
comp=Z,13nm,1.0s
SFJD Kangerlussuaq 120.97 21 PP PP 01 32 31.7 -4.2
comp=Z,4.6nm,0.6s,baz=292,slow=12,SNR=6.9
SFJD Kangerlussuaq 120.97 21 *i* P PKKPbc 01 41 03.1 -0.7
comp=Z,8.9nm,0.8s
FDF Fort de France 121.16 83 *e*P PKPdf 01 30 59.3 +1.3
BIM Bigot 121.19 84 *e*P PKPdf 01 31 00.8 +2.7
MVM Montagne Vaucl 121.36 83⇑*e*P PKPdf 01 30 59.6 +1.2
SOKR Solikamsk 121.89 330 *c i* PKIKP PKPdf 01 30 57.3 -0.8
SOKR pmax pmax
comp=Z,30nm,1.1s
ARU Arti 122.02 326 *i* PKIKP PKPdf 01 30 56.9 -1.6
ARU 01 32 38.3
ARU 01 36 59.3
ARU SP SP 01 41 34.3 -4.7
ARU Arti 122.02 326 *e*PKPdf PKPdf 01 30 57.4 -1.1
ARU *e*SKPdf SKPdf 01 33 37.4 -1.3
ABKAR Akbulak array 122.97 318 *e*PKPdf PKPdf 01 30 59.3 -1.2
ABKAR *e*SKPdf SKPdf 01 33 39.2 -1.5
AKTK Aktyubinsk 123.93 319 PKP PKPdf 01 31 01.6 -0.7
AKTK SKP 01 33 41.8
AKTK SKKPbc 01 43 41.5
AKTO Aktyubinsk 123.93 319 PKP PKPdf 01 31 01.6 -0.7
comp=Z,9.2nm,0.8s,baz=76,slow=2.7,SNR=39
AKTO SKP 01 33 41.8
comp=Z,3.9nm,0.7s,baz=112,slow=2.0,SNR=6.2
AKTO SKKPbc 01 43 41.5
comp=Z,2.1nm,1.1s,baz=186,slow=4.6,SNR=4.4
KEV Kevo 125.46 349 *e*pkp PKPdf 01 31 03.6 -1.1
KEV Kevo 125.46 349 *e*pkp PKPdf 01 31 03.6 -1.1
SCO Scoresbysund 125.57 9 *i* P PKKPdf 01 41 18.0 -8.8
comp=Z,14nm,1.0s
APA Apatity 125.87 345⇑*e*PKIKP PKPdf 01 31 05.0 -0.6
APA pmax pmax
comp=Z,11nm,0.9s
ARCES ARCESS Array B 125.92 349 PKHKP PKPpre 01 30 56.9
comp=Z,1.4nm,0.8s,baz=48,slow=1.8,SNR=6.1
ARCES PKP PKPdf 01 31 04.5 -1.1
comp=Z,3.6nm,0.4s,baz=16,slow=1.1,SNR=55
ARCES SKPab 01 33 25.8
comp=Z,3.5nm,0.6s,baz=22,slow=3.9,SNR=6.3
ARCES SKP 01 33 45.1
comp=Z,6.0nm,0.8s,baz=5.7,slow=1.2,SNR=5.4
ARCES PKKPbc PKKPbc 01 40 42.3 -2.6
comp=Z,4.5nm,0.9s,baz=217,slow=1.7,SNR=13
ARCES ARCESS Array B 125.92 349 PKP PKPpre 01 30 56.9
ARCES PKP PKPdf 01 31 04.5 -1.1
ARCES SKPab 01 33 25.8
ARCES SKP 01 33 45.1
ARCES PKKPbc PKKPbc 01 40 42.3 -2.6
SUR Sutherland 126.43 202 PKP PKPdf 01 31 08.0 +0.2
baz=154,slow=1.6
SUR SKPab 01 33 28.7
comp=Z,24nm,1.0s,baz=113,slow=5.6,SNR=3.9
SUR Sutherland 126.43 202 *e*PKPdf PKPdf 01 31 07.5 -0.3
BOSA Boshof 127.98 208 PKP PKPdf 01 31 10.8 0.0
comp=Z,29nm,1.1s,baz=121,slow=4.1,SNR=15
BOSA pPKP pPKPdf 01 33 25.9 -1.3
comp=Z,46nm,1.1s,baz=171,slow=9.1,SNR=16
BOSA SKPab 01 33 35.4
comp=Z,50nm,1.2s,baz=145,slow=6.0,SNR=8.3
BOSA Boshof 127.98 208 *e*PKPdf PKPdf 01 31 10.3 -0.6
BOSA *e*PP PP 01 33 22.0 +0.2
JOF Joensuu 130.02 342 *e*pkp PKPdf 01 31 12.2 -1.4
JOF Joensuu 130.02 342 *e*pkp PKPdf 01 31 12.2 -1.4
LBTB Lobatse 130.87 211 PKP PKPdf 01 31 14.8 -1.6
comp=Z,8.1nm,0.7s,baz=181,slow=3.5,SNR=7.1
LBTB SKPbc SKPbc 01 33 45.0 -1.6
comp=Z,47nm,1.1s,baz=154,slow=5.8,SNR=21
LBTB Lobatse 130.87 211 PKP PKPdf 01 31 14.8 -1.6
LBTB SKPbc SKPbc 01 33 45.0 -1.6
KAF Kangasniemi 132.06 344 *e*pkp PKPdf 01 31 14.6 -2.9
KAF Kangasniemi 132.06 344 *e*pkp PKPdf 01 31 14.6 -2.9
FINES FINESS Array B 132.68 343 PKhKP PKPpre 01 31 03.8
comp=Z,3.9nm,1.0s,baz=42,slow=2.4,SNR=5.6
FINES PKP PKPdf 01 31 18.3 -0.3
comp=Z,1.8nm,0.6s,baz=20,slow=3.4,SNR=5.4
FINES pPKP pPKPdf 01 33 35.2 +0.1
comp=Z,4.0nm,0.9s,baz=57,slow=5.1,SNR=3.4
FINES SKPbc SKPbc 01 33 50.1 -1.5
comp=Z,10nm,0.5s,baz=46,slow=5.5,SNR=20
FINES SKKPbc 01 43 10.2
comp=Z,4.1nm,1.1s,baz=222,slow=2.6,SNR=4.1
FINES SKKP 01 43 41.8
comp=Z,5.5nm,1.1s,baz=142,slow=9.6,SNR=3.8
FINES FINESS Array B 132.68 343 PKHKP PKPpre 01 31 03.8
FINES 01 31 18.3
FINES 01 33 50.1
MOS Moscow 132.71 332 *e*PKIKP PKPdf 01 31 15.6 -3.3
MOS *e* 01 33 49.0
MOS *e* 01 43 08.4
OBN Obninsk 133.57 332⇑*i*PKIKP PKPdf 01 31 19.4 -1.1
OBN *i* 01 33 52.5
OBN *e* 01 56 07.2
OBN pmax pmax
comp=Z,21nm,1.2s
VSR Storozhevoye 134.59 326 *e*PKIKP PKPdf 01 31 21.3 -1.2
VSR pmax pmax
comp=N,3.0nm,0.8s
VSR pmax pmax
comp=E,4.0nm,0.8s
VSR pmax pmax
comp=Z,10.0nm,0.8s
MTA Mtatsminda 135.21 312 P PKPdf 01 31 23.2 -0.8
TBLG Delisi 135.24 312 *e*PKIKP PKPdf 01 31 23.8 -0.2
TBLG Delisi 135.24 312 P PKPdf 01 31 23.8 -0.2
ZEI Tsey 135.48 314 *e*PKIKP PKPdf 01 31 27.1 +2.6
ZEI pmax pmax
comp=Z,14nm,1.1s
GOR Gori 135.60 312 P PKPdf 01 31 24.9 +0.2
GNI Garni 135.72 310 *e*PKPdf PKPdf 01 31 24.2 -0.8
GNI ⇑*e*PKP PKPdf 01 31 27.3 +2.3
ONI Oni 135.85 314 P PKPdf 01 31 21.8 -3.3
KIV Kislovodsk 135.87 316 *e*PKIKP PKPdf 01 31 23.6 -1.5
KIV *e* 01 34 09.1
KIV *e* 01 37 41.2
KIV *e*SS SS 01 51 18.9 -6.9
KIV *e*SSS 01 56 38.7
KIV pmax pmax
comp=Z,13nm,1.1s
KIV Kislovodsk 135.87 316 *e*PKPdf PKPdf 01 31 24.8 -0.4
KIV *e*SKPbc SKPbc 01 34 01.0 -1.3
KIV Kislovodsk 135.87 316 PKPdf PKPdf 01 31 24.9 -0.3
SNR=6.7
KIV PKPdf PKPdf 01 31 24.9 -0.3
SNR=6.7
NB2 NORSAR Subarra 136.05 352 PKP PKPdf 01 31 13.3 -12
comp=Z,1.2nm,0.5s,baz=17,slow=2.6
NOA NORSAR Array B 136.05 352 PKhKP PKPpre 01 31 16.2
comp=Z,3.6nm,1.1s,baz=15,slow=4.9,SNR=4.0
NOA PKP PKPdf 01 31 24.5 -0.5
comp=Z,1.3nm,0.5s,baz=13,slow=4.0,SNR=7.3
NOA SKPbc SKPbc 01 34 00.5 -1.7
comp=Z,7.7nm,0.7s,baz=15,slow=4.4,SNR=14
NOA SKKPbc 01 43 03.6
comp=Z,8.1nm,1.1s,baz=188,slow=4.6,SNR=4.0
NOA NORSAR Array B 136.05 352 PKHKP PKPpre 01 31 16.2
NOA 01 31 24.5
HFS Hagfors 136.56 350 PKhKP PKPpre 01 31 13.1
comp=Z,1.0nm,0.3s,baz=67,slow=3.9,SNR=13
HFS PKP PKPdf 01 31 25.5 -0.5
comp=Z,1.8nm,0.6s,baz=113,slow=3.4,SNR=4.2
HFS SKPbc SKPbc 01 34 01.7 -2.1
comp=Z,18nm,0.8s,baz=64,slow=3.4,SNR=17
HFS SKPab 01 34 09.8
comp=Z,5.6nm,0.7s,baz=56,slow=0.5,SNR=4.1
HFS SKKPbc 01 43 00.2
comp=Z,7.0nm,1.0s,baz=211,slow=5.2,SNR=5.2
HFS Hagfors 136.56 350 PKHKP PKPpre 01 31 13.1
HFS 01 31 25.5
LSZ Lusaka 137.19 222 PKhKP PKPpre 01 31 17.4
comp=Z,5.5nm,0.6s,baz=118,slow=0.6,SNR=15
LSZ PKP PKPdf 01 31 28.6 +0.2
comp=Z,13nm,0.6s,baz=144,slow=0.2,SNR=14
LSZ SKPbc SKPbc 01 34 07.0 -0.1
comp=Z,12nm,0.8s,baz=162,slow=3.7,SNR=10.0
LSZ SKPab 01 34 17.1
comp=Z,44nm,1.2s,baz=167,slow=5.3,SNR=13
LSZ Lusaka 137.19 222 *e*PKHKP PKPpre 01 31 16.8
LSZ *e* 01 31 28.0
LSZ *e* 01 34 19.6
LSZ Lusaka 137.19 222 *e*PKPpre PKPpre 01 31 16.8
LSZ *e*PKPdf PKPdf 01 31 28.0 -0.4
LSZ PKP PKPdf 01 31 28.6 +0.2
LSZ *e*SKP 01 34 06.2
LSZ SKPbc SKPbc 01 34 07.0 -0.1
LSZ SKPab 01 34 17.1
LSZ *e*PP PP 01 34 19.6 -0.7
LSZ Lusaka 137.19 222 PKPdf PKPdf 01 31 28.9 +0.5
SNR=6.1
LSZ PKPdf PKPdf 01 31 28.9 +0.5
SNR=6.1
IZAR Zarasai 137.24 339 *e*P PKPdf 01 31 18.9 -8.4
IZAR Zarasai 137.24 339 *e*P SKPbc 01 34 04.8 -1.1
IZAR Zarasai 137.24 339 *e*P SKPbc 01 34 04.8 -1.2
IDID Didziasalis 137.41 338 *e*P PKPdf 01 31 19.9 -7.7
IDID Didziasalis 137.41 338 *e*P SKPbc 01 34 04.8 -1.7
IDID Didziasalis 137.41 338 *e*P SKPbc 01 34 05.3 -1.1
ISAL Salakas 137.43 339 *e*P PKPdf 01 31 19.1 -8.6
ISAL Salakas 137.43 339 *e*P SKPbc 01 34 05.0 -1.4
ISAL Salakas 137.43 339 *e*P SKPbc 01 34 05.0 -1.4
IIGN Ignalina 137.57 338 *e*P PKPdf 01 31 20.4 -7.5
IIGN Ignalina 137.57 338 *e*P SKPbc 01 34 05.5 -1.4
IIGN Ignalina 137.57 338 *e*P SKPbc 01 34 05.8 -1.1
SOC Sochi 137.98 316 *c i* PKIKP PKPdf 01 31 30.0 +0.9
SOC *e* 01 34 23.2
SOC *e*SS SS 01 51 48.8 -1.7
ATD Arta Tunnel 138.43 267 SKPbc SKPbc 01 34 11.3 +0.8
comp=Z,72nm,1.0s,baz=69,slow=0.2,SNR=36
ANN Anapa 138.89 319 *i* PKIKP PKPdf 01 31 44.2 +14
ANN pmax pmax
comp=Z,13nm,0.9s
KMBO Kilima Mbogo 139.06 247 PKhKP PKPpre 01 31 24.4
comp=Z,4.7nm,0.8s,baz=66,slow=4.5,SNR=12
KMBO PKP PKPdf 01 31 32.1 +0.1
comp=Z,26nm,1.1s,baz=61,slow=4.4,SNR=8.0
KMBO SKPbc SKPbc 01 34 12.8 +0.4
comp=Z,30nm,1.1s,baz=72,slow=3.0,SNR=14
KMBO SKPab 01 34 24.2
comp=Z,23nm,1.0s,baz=86,slow=4.8,SNR=8.7
KMBO SKKPbc 01 42 54.2
comp=Z,4.1nm,1.1s,baz=347,slow=4.6,SNR=4.6
KMBO Kilima Mbogo 139.06 247 *e*PKHKP PKPpre 01 31 24.5
KMBO *e* 01 31 31.3
KMBO Kilima Mbogo 139.06 247 *e*PKPpre PKPpre 01 31 24.5
KMBO *e*PKPdf PKPdf 01 31 31.3 -0.7
KMBO PKP PKPdf 01 31 32.1 +0.1
KMBO *e*SKP 01 34 11.0
KMBO SKPbc SKPbc 01 34 12.8 +0.4
KMBO *e*SKPab 01 34 23.5
KMBO SKPab 01 34 24.2
KMBO SKKPbc 01 42 54.2
SUW Suwalki 139.69 339 *e*PKP PKPpre 01 31 26.7
SUW *e* SKPbc 01 34 11.1 -1.7
SUW Suwalki 139.69 339 *e*PKPpre PKPpre 01 31 25.5
SUW *e*SKP SKPbc 01 34 10.3 -2.4
AKASG Malin Array Be 139.82 332 PKhKP PKPpre 01 31 24.1
comp=Z,2.5nm,0.3s,baz=41,slow=4.1,SNR=19
AKASG PKP PKPdf 01 31 30.9 -1.3
comp=Z,2.8nm,0.4s,baz=46,slow=3.6,SNR=20
AKASG SKPbc SKPbc 01 34 10.9 -2.3
comp=Z,10nm,0.8s,baz=40,slow=3.1,SNR=16
AKASG SKKPbc 01 42 43.4
comp=Z,0.4nm,0.4s,baz=237,slow=4.6,SNR=7.5
AKASG Malin Array Be 139.82 332 PKHKP PKPpre 01 31 24.1
AKASG 01 31 30.9
AKBB Malin Array Si 139.82 332 *e*PKHKP PKPpre 01 31 24.2
AKBB *e* 01 31 31.1
AKBB Malin Array Si 139.82 332 *e*PKPpre PKPpre 01 31 24.1
AKBB *e*PKPdf PKPdf 01 31 31.1 -1.1
AKBB *e*SKP 01 34 10.7
KIEV Kiev 139.84 332 *e*PKHKP PKPpre 01 31 24.2
KIEV *e* 01 31 31.1
KIEV Kiev 139.84 332 *e*PKPpre PKPpre 01 31 24.2
KIEV *e*PKPdf PKPdf 01 31 31.1 -1.1
KIEV *e*SKPdf SKPdf 01 34 10.5 -1.3
SIM Simferopol' 140.84 321 *i* PKIKP PKPdf 01 31 30.8 -3.4
SIM pmax pmax
comp=Z,12nm,0.7s
BSD Bornholm Skovb 141.04 347 *i* P PKKPdf 01 40 57.3 +0.7
comp=Z,16nm,1.0s
WNDE Wendo Genet 141.16 259 *e*P PKPdf 01 31 31.7 -4.0
DESE Dese 141.38 266 *e*P PKPdf 01 31 33.5 -2.5
EAU Auchinoon 141.85 3 *e*P PKPdf 01 31 30.9 -4.8
EAU Auchinoon 141.85 3 P PKPdf 01 31 30.9 -4.8
EBL Broad Law 141.95 3 *e*P PKPdf 01 31 31.1 -4.8
EBL Broad Law 141.95 3 P PKPdf 01 31 31.1 -4.8
GKP Gorka Klasztor 142.15 343 *e*PKP PKPdf 01 31 32.0 -4.3
GKP *e* 01 34 16.0
EKA Eskdalemuir Ar 142.38 3 PKhKP PKPpre 01 31 32.1
comp=Z,5.1nm,0.6s,baz=342,slow=2.8,SNR=32
EKA SKPbc SKPbc 01 34 17.8 -1.7
comp=Z,9.1nm,1.0s,baz=328,slow=3.0,SNR=6.4
EKA SKKPbc 01 42 35.5
comp=Z,11nm,1.1s,baz=152,slow=3.8,SNR=9.0
KIS Kishinev 142.55 327 *e*PKP PKPdf 01 31 32.0 -5.2
GAL1 Galloway 142.74 5 *e*P PKPdf 01 31 32.5 -4.8
GAL1 Galloway 142.74 5 P PKPdf 01 31 32.5 -4.8
XAL Allendale 142.90 2 *e*P PKPdf 01 31 33.9 -3.6
XAL Allendale 142.90 2 P PKPdf 01 31 33.9 -3.6
BSEG Bad Segeberg 143.04 350 *e*PKPbc PKPdf 01 31 34.9 -2.9
BSEG *e*SKPdf SKPdf 01 34 19.6 +2.5
BSEG *e*SS SS 01 52 44.0 -2.9
IAS Iasi 143.05 329 PKIKP PKPdf 01 31 36.2 -1.8
XDE Dent Fell 143.19 4 *e*P PKPdf 01 31 34.8 -3.3
XDE Dent Fell 143.19 4 P PKPdf 01 31 34.8 -3.3
GIM North Isle of 143.33 5 *e*P PKPdf 01 31 35.7 -2.6
GIM North Isle of 143.33 5 P PKPdf 01 31 35.7 -2.6
KWP Kalwaria Pacla 143.41 335 *e*PKPdf PKPdf 01 31 37.1 -1.4
KWP *e* 01 34 20.7
KWP Kalwaria Pacla 143.41 335 ⇓PKIKP PKPdf 01 31 37.2 -1.4
KWP Kalwaria Pacla 143.41 335 *e*PKPdf PKPdf 01 31 36.9 -1.7
KWP *e*SKPbc SKPbc 01 34 20.9 -1.3
KWP Kalwaria Pacla 143.41 335 ⇓*i*P PKPdf 01 31 37.2 -1.4
KWP Kalwaria Pacla 143.41 335 ⇓*i*P 01 42 31.1
DMUB Kingscourt 143.48 7⇑*i*P PKPdf 01 31 35.7 -2.9
TLCR 143.73 325 ⇓PKIKP PKPdf 01 31 38.6 -0.7
TLCR 143.73 325 ⇓*i*P PKPdf 01 31 38.5 -0.8
RUE Ruedersdorf 143.74 346 *e*PKPdf PKPdf 01 31 37.5 -1.5
RUE *e*SKPbc SKPbc 01 34 21.8 -1.1
BR131 Keskin Array S 143.78 314 *e*PKPdf PKPdf 01 31 38.2 -1.4
BR131 *e*SKPdf SKPdf 01 34 17.4 -1.4
BR131 *e*SKPbc SKPbc 01 34 22.0 -1.4
BRTR Keskin Array B 143.78 314 PKP PKPdf 01 31 38.0 -1.6
comp=Z,35nm,0.9s,baz=129,slow=3.3,SNR=177
BRTR SKPbc SKPbc 01 34 22.1 -1.4
comp=Z,16nm,0.9s,baz=130,slow=4.2,SNR=14
BRTR SKKPbc 01 42 29.3
comp=Z,8.0nm,1.1s,baz=222,slow=1.7,SNR=15
HPK Haverah Park 143.82 2 *e*P PKPdf 01 31 37.5 -1.7
HPK Haverah Park 143.82 2 P PKPdf 01 31 37.5 -1.7
BUR08 Bucovina Ar. S 143.86 331 *e*PKPdf PKPdf 01 31 39.1 -0.4
BUR08 *e*SKPbc SKPbc 01 34 23.1 -0.2
BUR01 Bucovina Ar. S 143.87 331 P PKPdf 01 31 39.5 0.0
BURAR Bucovina Array 143.87 331 ⇓PKIKP PKPdf 01 31 38.8 -0.7
BURAR Bucovina Array 143.87 331 ⇓*i*P PKPdf 01 31 38.8 -0.7
BURAR Bucovina Array 143.87 331⇑*i*P 01 42 29.9
DCN Croghan 143.98 8⇑*i*P PKPdf 01 31 37.6 -1.9
OJC Ojcow 144.01 339 *e*PKPbc PKPdf 01 31 37.6 -2.0
OJC *e*PKPdf PKPdf 01 31 39.2 -0.4
OJC *ep*PKPdf pPKPdf 01 33 56.6 +0.3
OJC *es*PKPdf 01 34 57.6
OJC *e*SKSac 01 40 53.0
OJC *e*SS SS 01 52 57.0 -1.3
OJC L 02 27 07.2
comp=Z,0.1nm,23.9s
OJC Ojcow 144.01 339 *e*PKIKP PKPdf 01 31 39.2 -0.4
OJC *e* 01 34 57.6
OJC *e*SS SS 01 52 57.0 -1.3
ASF Jabal al Asfar 144.02 301 PKP PKPdf 01 31 39.2 -1.0
comp=Z,46nm,0.9s,baz=274,slow=0.8,SNR=70
ASF SKPbc SKPbc 01 34 23.1 -1.1
comp=Z,16nm,1.0s,baz=304,slow=1.2,SNR=8.1
ASF SKKPbc 01 42 28.8
comp=Z,4.1nm,0.9s,baz=83,slow=4.6,SNR=6.8
CFR Carcaliu 144.10 326 ⇓PKIKP PKPdf 01 31 40.2 +0.3
CFR Carcaliu 144.10 326 ⇓*i*P PKPdf 01 31 40.2 +0.3
KOLS Kolonicke sedl 144.13 335 *e*PKP PKPdf 01 31 39.5 -0.4
KOLS *e* 01 34 23.5
KOLS Kolonicke sedl 144.13 335 *e*PKP PKPdf 01 31 39.5 -0.4
KOLS *e*SKP 01 34 23.4
KOLS Kolonicke sedl 144.13 335 *e*P 01 42 27.7
KOLS *ep*P Sdif 01 42 43.3 -2.1
STHS Stebnicka Huta 144.15 336 *e*PKP PKPdf 01 31 40.1 +0.2
STHS *e* 01 34 23.8
STHS Stebnicka Huta 144.15 336 *e*PKP PKPdf 01 31 40.1 +0.2
STHS *e*SKP 01 34 23.8
DSB Dublin 144.18 7 *e*PKPdf PKPdf 01 31 38.5 -1.3
HWQ Hawqa 144.19 304 *e*P PKPdf 01 31 39.8 -0.7
LHO Holmfirth 144.22 2 *e*P PKPdf 01 31 38.5 -1.4
LHO Holmfirth 144.22 2 P PKPdf 01 31 38.5 -1.4
WLF1 Llynfaes 144.33 5 *e*P PKPdf 01 31 38.1 -2.0
WLF1 Llynfaes 144.33 5 P PKPdf 01 31 38.1 -2.0
UZH Uzhgorod 144.37 335 ⇓*i*PKIKP PKPdf 01 31 40.0 -0.3
VRI Vrincioaia 144.38 328 PKIKP PKPdf 01 31 40.6 +0.2
VRI Vrincioaia 144.38 328 ⇑P PKPdf 01 31 39.7 -0.7
VRI Vrincioaia 144.38 328⇑*i*P PKPdf 01 31 39.7 -0.7
TIRR Tirgusor 144.41 325 ⇑PKIKP PKPdf 01 31 40.6 +0.1
TIRR Tirgusor 144.41 325⇑P PKPdf 01 31 40.6 +0.1
TIRR Tirgusor 144.41 325 ⇓*i*P 01 42 26.6
PLOR Plostina 144.43 328 ⇑PKIKP PKPdf 01 31 41.3 +0.8
PLOR Plostina 144.43 328⇑*i*P PKPdf 01 31 41.3 +0.8
NRDL Niedersach Rie 144.47 350 *e*PKPbc PKPdf 01 31 39.8 -0.5
NRDL *e*SKPdf SKPdf 01 34 22.9 +3.4
NRDL *e*SS SS 01 52 57.9 -5.1
CRVS Cervenica-Dubn 144.48 336 *e*PKP PKPdf 01 31 40.9 +0.4
CRVS *e* 01 34 24.2
CRVS Cervenica-Dubn 144.48 336 *e*PKP PKPdf 01 31 40.9 +0.4
CRVS *e*SKP 01 34 24.1
CRVS Cervenica-Dubn 144.48 336 *e*P 01 42 23.6
NIE Niedzica 144.50 337 *e*PKP PKPdf 01 31 40.4 -0.1
KBI1 Birley Grange 144.53 2 *e*P PKPdf 01 31 39.5 -0.9
KBI1 Birley Grange 144.53 2 P PKPdf 01 31 39.5 -0.9
HARR Harsova 144.53 325 ⇓PKIKP PKPdf 01 31 41.1 +0.4
HARR Harsova 144.53 325 ⇓*i*P PKPdf 01 31 41.1 +0.4
RCY Rachaya 144.53 303 *e*P PKPdf 01 31 41.5 +0.4
KSP Ksiaz 144.58 342 *e*PKP PKPdf 01 31 40.8 +0.2
KSP *e* 01 34 05.8
KSP Ksiaz 144.58 342 *e*PKIKP PKPdf 01 31 40.5 -0.1
KSP *e*SS SS 01 53 01.5 -3.1
BMR Baia Mare 144.60 333 ⇑PKIKP PKPdf 01 31 41.0 +0.3
BMR Baia Mare 144.60 333⇑*i*P PKPdf 01 31 41.0 +0.3
STNC Stoke 144.66 3 *e*P PKPdf 01 31 39.1 -1.6
STNC Stoke 144.66 3 P PKPdf 01 31 39.1 -1.6
KSDI Kefar Szold 144.75 303 *e*P PKPdf 01 31 40.5 -0.9
KWE Weaver Farm 144.75 2 *e*P PKPdf 01 31 40.5 -0.3
KWE Weaver Farm 144.75 2 P PKPdf 01 31 40.5 -0.3
OKC Ostrava-Krasne 144.90 340 *e*PKIKP PKPdf 01 31 41.6 +0.5
OKC Ostrava-Krasne 144.90 340 *e*PKP PKPdf 01 31 41.6 +0.5
OKC *ep*PKP pPKPdf 01 34 06.8 +9.0
OKC *e*SKP 01 34 23.8
OKC *e*SKKP 01 42 23.7
OKC *e*SS SS 01 53 00.3 -7.9
AMRR Amara 144.90 326 ⇑P PKPdf 01 31 43.3 +1.9
AMRR Amara 144.90 326⇑*i*P PKPdf 01 31 43.3 +2.0
UPC Upice 144.97 342 *e*PKIKP PKPdf 01 31 41.5 +0.3
UPC Upice 144.97 342 *e*PKP PKPdf 01 31 41.5 +0.3
UPC *ep*PKP pPKPdf 01 34 02.6 +4.7
UPC *e*SKP 01 34 25.2
IBBN Ibbenburen 145.00 352 *e*PKPbc PKPbc 01 31 41.7 -0.4
IBBN *e*SKPdf SKPdf 01 34 24.9 +4.5
IBBN *e*SS SS 01 53 03.6 -5.4
MMAI Mount Meron Ar 145.00 303 PKP PKPdf 01 31 42.0 +0.1
comp=Z,97nm,0.7s,baz=73,slow=5.7,SNR=160
MMAI SKPbc SKPbc 01 34 25.9 -0.6
comp=Z,19nm,0.6s,baz=76,slow=7.0,SNR=11
MMAI SKKPbc 01 42 23.9
comp=Z,3.0nm,0.8s,baz=356,slow=1.1,SNR=5.3
CLL Collm 145.01 346 *e*PKPbc PKPbc 01 31 41.4 -0.8
CLL *ep*PKPbc 01 34 04.4
CLL *e*SKPdf SKPdf 01 34 24.6 +4.2
CLL *e*SS SS 01 53 04.1 -5.1
CLL Collm 145.01 346 *i* PKIKP PKPdf 01 31 41.7 +0.4
CLL pmax pmax
comp=Z,89nm,0.7s
CLL Collm 145.01 346 *i* PKP PKPdf 01 31 41.7 +0.4
CLL *ep*PKP pPKPdf 01 34 04.0 +6.0
CLL *i* SKP 01 34 24.5
CLL *e*SKKPbc 01 42 24.0
CLL Collm 145.01 346 *i* PKPdf PKPdf 01 31 41.7 +0.4
comp=Z,89nm,0.7s
CLL *i* 01 31 47.2
comp=Z,51nm,1.1s
CLL *ep*PKiKP 01 34 04.0
CLL *i* SKPbc SKPbc 01 34 24.5 -1.4
comp=Z,47nm,0.8s
CLL *e* 01 34 28.0
CLL *e* 01 34 40.0
CLL *es*PKPdf 01 35 00.0
CLL *e*(pPP) 01 36 58.0
CLL *e*PPP 01 38 21.0
CLL *e*SKKSac SKKSac 01 41 03.0 +2.9
CLL *e*SKKPbc 01 42 24.0
comp=Z,11nm,1.3s
CLL *e*SKSP 01 44 20.0
CLL *e*PPPrev 01 46 34.0
CLL *e*PPS 01 47 54.0
CLL *ep*PPS 01 49 35.0
CLL *e* 01 52 06.0
CLL *e*SS SS 01 53 02.0 -7.2
CLL *e*SKSSKSac 01 54 28.0
CLL *es*SS 01 56 58.0
CLL *e*SSS 01 58 48.0
CLL *e*SSSS 02 02 36.0
CLL *e*SPSrev 02 06 06.0
DPC Dobruska-Polom 145.01 342 *e*PKIKP PKPdf 01 31 41.4 +0.1
DPC *e*SS SS 01 53 10.5 +1.1
DPC Dobruska-Polom 145.01 342 *e*PKP PKPdf 01 31 41.4 +0.1
DPC *ex* x 01 31 42.5
DPC *ep*PKP pPKPdf 01 34 02.1 +4.1
DPC *e*SKP 01 34 25.4
DPC *e*SKKS SKKSac 01 40 59.7 -0.5
DPC *e*SKKP 01 42 23.2
DPC *e*SS SS 01 53 10.5 +1.1
MLR Muntele Rosu 145.03 328 PKPbc PKPbc 01 31 41.6 -0.8
comp=Z,12nm,0.3s,baz=335,slow=5.0,SNR=125
MLR SKPbc SKPbc 01 34 24.6 -1.5
comp=Z,16nm,1.0s,baz=9.9,slow=4.5,SNR=5.0
MLR SKKPbc 01 42 23.7
comp=Z,17nm,1.2s,baz=227,slow=3.1,SNR=9.3
MLR Muntele Rosu 145.03 328 ⇓P PKPdf 01 31 42.1 +0.6
MLR Muntele Rosu 145.03 328 ⇓*i*P PKPdf 01 31 42.1 +0.6
MLR Muntele Rosu 145.03 328⇑*i*P 01 42 24.2
CLZ Clausthal 145.05 349 *e*PKPbc PKPbc 01 31 41.9 -0.4
CLZ *ep*PKPbc 01 34 03.7
CLZ *e*SS SS 01 53 05.3 -4.2
CWF Charnwood Fore 145.05 2 *e*P PKPdf 01 31 41.0 -0.3
CWF Charnwood Fore 145.05 2 P PKPdf 01 31 41.0 -0.3
MORC Moravsky Berou 145.14 340 ⇓PKP2 PKPab 01 31 42.7 -1.1
MORC Moravsky Berou 145.14 340 *e*PKPbc PKPbc 01 31 41.2 -1.4
MORC *e*SKPbc SKPbc 01 34 25.1 -1.1
MORC Moravsky Berou 145.14 340 ⇓*i*P PKPdf 01 31 42.7 +1.1
MORC Moravsky Berou 145.14 340 ⇓*i*P 01 42 22.7
AEU East Anglia Un 145.18 359 *e*P PKPdf 01 31 42.1 +0.6
AEU East Anglia Un 145.18 359 P PKPdf 01 31 42.1 +0.6
BRG Berggiesshubel 145.19 345 *i* PKP PKPdf 01 31 41.5 -0.1
comp=Z,9.2nm,1.3s

BRG *i* 01 32 42.6
comp=Z,31nm,1.0s
BRG pPKP pPKPdf 01 34 02.5 +4.2
comp=Z,48nm,1.7s
BRG SKP 01 34 25.6
comp=Z,32nm,0.8s
BRG SKKP 01 42 23.5
comp=Z,14nm,1.6s
BRG *e* 01 42 35.8
comp=Z,10nm,1.4s
KECS Kecovo 145.20 336 *e*PKP PKPdf 01 31 43.0 +1.3
KECS *e* 01 34 05.5
KECS Kecovo 145.20 336 *e*PKP PKPdf 01 31 43.0 +1.3
KECS *e* 01 34 05.4
KECS Kecovo 145.20 336 *e*P 01 42 23.1
HLM1 Long Mynd 145.20 3 *e*P PKPdf 01 31 41.5 -0.1
HLM1 Long Mynd 145.20 3 P PKPdf 01 31 41.5 -0.1
PVCC Panska Ves 145.34 344 *e*PKIKP PKPdf 01 31 41.8 -0.1
PVCC *e* 01 31 43.2
PVCC Panska Ves 145.34 344 *e*PKP PKPdf 01 31 41.8 -0.1
PVCC *ex* x 01 31 43.2
PVCC *ep*PKP pPKPdf 01 34 05.2 +6.6
PVCC *e*SKP 01 34 26.0
PVCC *e*SKKP 01 42 19.6
PHNC Paralimni 145.43 307 P PKPdf 01 31 44.1 +1.5
comp=Z,1.7nm,0.9s
HTR Trewern Hill 145.62 4 *e*P PKPdf 01 31 42.5 +0.2
HTR Trewern Hill 145.62 4 P PKPdf 01 31 42.5 +0.2
DRGR 145.62 332 PKIKP PKPdf 01 31 42.4 -0.1
DRGR 145.62 332 ⇑P PKPdf 01 31 41.6 -0.9
DRGR 145.62 332 ⇑*i*P PKPdf 01 31 41.6 -0.9
DRGR 145.62 332 ⇑*i*P 01 42 21.5
PRD Provadia 145.78 324 *i* P PKPdf 01 31 44.2 +1.3
VYHS Vyhne 145.80 338 *e*PKIKP PKPdf 01 31 42.2 -0.5
VYHS *e* 01 31 44.9
VYHS Vyhne 145.80 338 *e*PKP PKPdf 01 31 42.2 -0.5
VYHS *e* 01 31 44.9
VYHS *e* 01 34 07.6
VYHS Vyhne 145.80 338 *e*PKP PKPdf 01 31 42.2 -0.5
VYHS *e* 01 31 44.9
VYHS *e* 01 34 07.6
VYHS Vyhne 145.80 338 *e*P 01 42 19.6
PRU Pruhonice 145.84 344 *e*PKIKP PKPdf 01 31 42.8 +0.1
PRU *e* 01 31 44.9
PRU *e*SS SS 01 53 18.2 -0.4
PRU Pruhonice 145.84 344 *e*PKP PKPdf 01 31 42.8 +0.1
PRU *ex* x 01 31 44.9
PRU *ep*PKP pPKPdf 01 34 06.7 +7.2
PRU *e*SKP 01 34 27.0
PRU *e*SKKS SKKSac 01 41 06.6 +1.8
PRU *e*SKKP 01 42 18.8
PRU *e*SS SS 01 53 18.2 -0.4
VRAC Vranov 145.85 341 PKPbc PKPbc 01 31 43.1 -1.5
comp=Z,8.1nm,0.5s,baz=39,slow=2.2,SNR=16
VRAC SKPbc SKPbc 01 34 27.1 -0.7
comp=Z,3.2nm,0.6s,baz=218,slow=0.2,SNR=3.9
VRAC Vranov 145.85 341 ⇓P PKPbc 01 31 45.9 +1.2
VRAC Vranov 145.85 341 ⇓*i*P PKPdf 01 31 45.9 +3.1
VRAC Vranov 145.85 341 ⇓*i*P 01 42 19.2
PSZ Piszkesteto 145.89 336 *e*PKIKP PKPdf 01 31 42.1 -0.8
PSZ *e* 01 31 44.7
PSZ Piszkesteto 145.89 336 *e*PKPdf PKPdf 01 31 42.1 -0.8
PSZ *e*PKPbc PKPbc 01 31 44.7 -0.1
PSZ *e*SKPbc SKPbc 01 34 25.6 -2.4
PSZ Piszkesteto 145.89 336⇓*e*PKP PKPdf 01 31 44.4 +1.5
PSZ Piszkesteto 145.89 336⇓*i*P PKPdf 01 31 44.8 +1.9
PSZ Piszkesteto 145.89 336⇓*i*P 01 42 19.5
BUG Bochum--Univer 145.92 352 *e*PKPbc PKPbc 01 31 44.3 -0.5
BUG *e*SKPdf SKPdf 01 34 26.8 +5.0
BUG *e*SS SS 01 53 14.9 -4.3
MOX Moxa 145.94 347 *e*PKP PKPdf 01 31 43.2 +0.3
comp=Z,46nm,1.8s
MOX *e* 01 34 07.9
MOX *e*S 01 53 15.0
MOX Moxa 145.94 347 *e*PKPbc PKPbc 01 31 44.1 -0.8
MOX *e*PKPab PKPab 01 31 46.5 -0.4
MOX *e*SKPdf SKPdf 01 34 27.1 +5.2
MOX *e*SS SS 01 53 14.9 -4.7
MOX Moxa 145.94 347 *e*PKIKP PKPdf 01 31 43.2 +0.3
MOX *e*S 01 53 15.0
MOX pmax pmax
comp=Z,46nm,1.8s
TANN Tannenbergstha 145.97 346 *e*PKPbc PKPbc 01 31 44.6 -0.3
TANN *e*PKPab PKPab 01 31 47.2 +0.2
TANN *ep*PKPbc 01 34 06.7
TANN *e*SS SS 01 53 15.5 -4.5
TCR Colchester 145.97 359 *e*P PKPdf 01 31 44.4 +1.5
TCR Colchester 145.97 359 P PKPdf 01 31 44.4 +1.5
CSS Prodhromos 145.99 307 *e*PKPbc PKPbc 01 31 43.8 -1.7
MAMC Mammari 145.99 307 P PKPdf 01 31 45.3 +1.8
SHEL Horse Pasture 146.00 170 *e*PKIKP PKPdf 01 31 45.6 +1.6
HGH Gray Hill 146.09 3 *e*P PKPdf 01 31 43.9 +0.8
HGH Gray Hill 146.09 3 P PKPdf 01 31 43.9 +0.8
UBBA Unterbreizbach 146.09 349 *e*PKPbc PKPbc 01 31 44.4 -0.9
UBBA *e*PKPab PKPab 01 31 47.8 +0.3
UBBA *e*SS SS 01 53 16.3 -5.0
NKC Novy Kostel 146.14 346 *e*PKP2 PKPbc 01 31 45.4 0.0
NKC Novy Kostel 146.14 346 *e*PKP PKPbc 01 31 45.4 0.0
TREC Trest 146.20 342 *e*PKIKP PKPdf 01 31 43.0 -0.4
TREC *e* 01 31 45.6
TREC *e*SS SS 01 53 23.8 +1.1
TREC Trest 146.20 342 *e*PKP PKPdf 01 31 43.0 -0.4
TREC *ex* x 01 31 45.6
TREC *ep*PKP pPKPdf 01 34 07.2 +7.1
TREC *e*SKP 01 34 27.3
TREC *e*SKKS SKKSac 01 41 05.2 -1.7
TREC *e*SKKP 01 42 17.5
TREC *e*SS SS 01 53 23.8 +1.1
EIL Elat 146.24 297 PKP PKPdf 01 31 42.6 -1.4
comp=Z,74nm,1.1s,baz=158,slow=1.5,SNR=14
EIL PKPbc PKPbc 01 31 46.4 0.0
comp=Z,106nm,1.1s,baz=12,slow=2.0,SNR=37
EIL SKPbc SKPbc 01 34 28.1 -1.3
comp=Z,21nm,0.8s,baz=352,slow=3.0,SNR=9.4
EIL SKKPbc 01 42 20.4
comp=Z,7.1nm,1.1s,baz=45,slow=6.7,SNR=4.7
EIL Elat 146.24 297 *e*P PKPdf 01 31 43.0 -1.1
SWN1 Swindon 146.26 2 *e*P PKPdf 01 31 44.7 +1.3
SWN1 Swindon 146.26 2 P PKPdf 01 31 44.7 +1.3
SMOL Smolenice 146.28 339 *e*PKP2 PKPbc 01 31 46.7 +0.8
SMOL Smolenice 146.28 339 *e*PKP PKPbc 01 31 46.7 +0.8
ALFC Alevga 146.47 308 ⇑P PKPbc 01 31 46.0 -0.8
comp=Z,2.4nm,0.6s
ALFC Alevga 146.47 308⇑*e*P PKPbc 01 31 46.0 -0.8
WOL Wolverton 146.48 2 *e*P PKPdf 01 31 45.0 +1.2
WOL Wolverton 146.48 2 P PKPdf 01 31 45.0 +1.2
SZH Strazhica 146.55 325 *i* P PKPdf 01 31 45.4 +1.2
BUD Budapest 146.58 337⇓*e*PKP PKPbc 01 31 46.3 -0.4
ZIMR 146.60 326 ⇑PKP2 PKPbc 01 31 48.5 +1.6
ZIMR 146.60 326 ⇑*i*P PKPbc 01 31 48.5 +1.6
HTL Hartland 146.60 5 *e*P PKPdf 01 31 45.3 +1.3
HTL Hartland 146.60 5 P PKPdf 01 31 45.3 +1.3
ROTZ Rotzenmuhle 146.63 346 *e*PKPbc PKPbc 01 31 46.6 -0.2
ROTZ *ep*PKPbc 01 34 06.7
ROTZ *e*SS SS 01 53 23.7 -3.7
GZR Gura Zlata 146.65 331 ⇑PKIKP PKPbc 01 31 46.5 -0.5
GZR Gura Zlata 146.65 331 ⇑*i*P PKPbc 01 31 46.5 -0.5
TFO1 Folkestone 146.69 359 *e*P PKPbc 01 31 46.8 -0.1
TFO1 Folkestone 146.69 359 P PKPbc 01 31 46.8 -0.1
JMB Yambol 146.71 323 P PKPdf 01 31 42.2 -2.3
JMB Yambol 146.71 323 *i* P PKPbc 01 31 46.5 -0.7
BEBN Eben Emael 146.74 354 PKPbc PKPbc 01 31 47.1 0.0
BEBN PKPab PKPab 01 31 49.8 -0.3
PPCY Paphos 146.76 307 ⇑P PKPbc 01 31 46.5 -1.1
PPCY Paphos 146.76 307⇑*e*P PKPbc 01 31 46.5 -1.1
ISP Isparta 146.82 313 ⇓PKIKP PKPdf 01 31 46.1 +1.3
ISP Isparta 146.82 313 *e*PKPbc PKPbc 01 31 46.5 -1.2
ISP Isparta 146.82 313 P PKPdf 01 31 41.9 -2.9
ISP Isparta 146.82 313⇓*i*P PKPdf 01 31 46.1 +1.3
UCC Uccle 146.85 355 PKPbc PKPbc 01 31 46.1 -1.2
UCC APKP 01 34 04.6
KHC Kasperske Hory 146.88 344 *e*PKIKP PKPdf 01 31 44.2 -0.3
KHC *e* 01 31 47.2
KHC Kasperske Hory 146.88 344 *e*PKPdf PKPdf 01 31 43.6 -0.9
KHC *e*PKPbc PKPbc 01 31 47.0 -0.5
KHC *e*SKPbc SKPbc 01 34 28.7 -1.4
KHC Kasperske Hory 146.88 344 *e*PKP PKPdf 01 31 44.2 -0.3
KHC *ex* x 01 31 47.2
KHC *ep*PKP pPKPdf 01 34 06.5 +5.2
KHC *e*SKP 01 34 29.3
KHC *e*SKKS SKKSac 01 41 10.2 -0.5

KHC *e*SKKP 01 42 14.4
KHC *ex* x 01 53 17.7
MEM Membach 146.89 353 PKP PKPdf 01 31 44.5 0.0
MEM PKPbc PKPbc 01 31 47.5 +0.1
MEM PKPab PKPab 01 31 51.9 +1.2
GRA1 Grafenberg Arr 146.92 347 *e*PKPbc PKPbc 01 31 47.4 -0.2
GRA1 *e*PKPab PKPab 01 31 51.3 +0.4
GRA1 *ep*PKPbc pPKPbc 01 34 04.8 +3.0
GRA1 *e*SS SS 01 53 26.0 -4.6
GRF Grafenberg Arr 146.92 347 *e*PKPbc PKPbc 01 31 47.4 -0.2
GRF *e*PKPab PKPab 01 31 51.3 +0.4
GRF *ep*PKPbc pPKPbc 01 34 04.8 +3.0
GRF *e*SS SS 01 53 26.0 -4.6
GRF Grafenberg Arr 146.92 347 *e*PKP2 PKPab 01 31 51.3 +0.4
GRF *e*SS SS 01 53 26.0 -4.6
GRF Grafenberg Arr 146.92 347 *e*PKP2 PKPab 01 31 47.4 -3.5
GRF *e*SS SS 01 53 26.0 -4.6
TNS Taunus Mts 146.94 350 *e*PKPbc PKPbc 01 31 47.2 -0.4
TNS *e*PKPab PKPab 01 31 51.1 +0.2
TNS *ep*PKPbc pPKPbc 01 34 07.6 +5.7
TNS *e*SS SS 01 53 26.0 -4.6
TNS Taunus Mts 146.94 350 *e*PKP2 PKPab 01 31 51.1 +0.2
TNS *e*SS SS 01 53 26.0 -4.6
BZS Buzias 147.01 332 ⇓PKIKP PKPdf 01 31 44.3 -0.5
BZS Buzias 147.01 332 ⇓*i*P PKPdf 01 31 44.3 -0.5
WET Wettzell 147.05 345 *e*PKPbc PKPbc 01 31 47.3 -0.6
WET *ep*PKPbc pPKPbc 01 34 06.1 +3.8
WET *e*SS SS 01 53 28.7 -3.4
GEC2 GERESS Array S 147.11 344 *e*PKPbc PKPbc 01 31 47.7 -0.4
GEC2 *ep*PKPbc pPKPbc 01 34 07.0 +4.5
GEC2 *e*SS SS 01 53 29.4 -3.4
GEC2 GERESS Array S 147.11 344 *e*PKPdf PKPdf 01 31 44.0 -0.9
GEC2 *e*PKPbc PKPbc 01 31 47.7 -0.5
GEC2 *e*PKPbc PKPbc 01 31 47.7 -0.4
GEC2 *ep*PKPbc pPKPbc 01 34 07.0 +4.5
GEC2 *e*SKPbc SKPbc 01 34 28.0 -2.6
GEC2 *e*SS SS 01 53 29.4 -3.4
GERES GERESS Array B 147.11 344 PKP PKPdf 01 31 43.9 -1.0
comp=Z,8.1nm,0.4s,baz=106,slow=2.1,SNR=26
GERES PKPbc PKPbc 01 31 47.7 -0.4
comp=Z,8.7nm,0.4s,baz=24,slow=3.0,SNR=80
GERES SKPbc SKPbc 01 34 29.4 -1.2
comp=Z,5.6nm,0.9s,baz=29,slow=3.0,SNR=6.0
GERES GERESS Array B 147.11 344 PKP PKPdf 01 31 43.9 -1.0
GERES PKPbc PKPbc 01 31 47.7 -0.4
GERES SKPbc SKPbc 01 34 29.4 -1.2
BCLA Clavier 147.15 354 PKPbc PKPbc 01 31 47.2 -1.0
BCLA PKPab PKPab 01 31 51.5 -0.2
SNF Seneffe 147.15 355 PKPbc PKPbc 01 31 47.8 -0.3
SNF PKPab PKPab 01 31 51.4 -0.3
SNF APKP 01 34 08.1
DYA Yadsworthy 147.20 5 *e*P PKPdf 01 31 46.4 +1.4
DYA Yadsworthy 147.20 5 P PKPdf 01 31 46.4 +1.4
SOP Sopron 147.29 339⇓*e*PKP PKPbc 01 31 48.5 -0.1
CONA Conrad Observa 147.30 340⇓*i*PKIKP PKPbc 01 31 48.7 +0.1
comp=Z,48nm,1.1s,SNR=26
CCA1 Carnmenellis 147.33 7 *e*P PKPbc 01 31 47.4 -1.2
CCA1 Carnmenellis 147.33 7 P PKPbc 01 31 47.4 -1.2
TOD Tromm 147.47 350 PKP PKPdf 01 31 45.8 +0.3
GIVF Givet 147.51 355 *e*PKP1 PKPbc 01 31 48.5 -0.6
comp=Z,34nm,0.5s
DOU Dourbes 147.53 355 PKPbc PKPbc 01 31 48.9 -0.3
DOU PKPab PKPab 01 31 52.7 -0.7
BAIF Baives 147.60 355 *e*PKP1 PKPbc 01 31 48.8 -0.5
comp=Z,29nm,0.5s
RUP Ruppelstein 147.65 352 PKP PKPdf 01 31 46.7 +0.9
PKSM Moragy 147.78 336 PKIKP PKPdf 01 31 45.6 -0.5
PKSM Moragy 147.78 336 ⇓P PKPbc 01 31 48.8 -1.1
PKSM Moragy 147.78 336 ⇓*i*P PKPbc 01 31 48.8 -1.1
PKSM Moragy 147.78 336 ⇓*i*P 01 42 11.2
WLF Walferdange 147.80 353 PKP PKPdf 01 31 46.2 +0.2
WLF PKPbc PKPbc 01 31 49.9 +0.1
WLF PKPab PKPab 01 31 54.1 -0.3
WLF APKP 01 34 12.1
WLF Walferdange 147.80 353 *e*PKPbc PKPbc 01 31 49.8 0.0
WLF *e*PKPab PKPab 01 31 54.5 +0.1
WLF *e*SS SS 01 53 36.3 -3.9
WLF Walferdange 147.80 353 *e*PKPbc PKPbc 01 31 49.9 +0.1
MOA Molln 147.86 342 ⇑*i*PKPbc PKPbc 01 31 49.5 -0.6
comp=Z,12nm,0.8s,SNR=12
ALN Alexandroupoli 148.01 322 P PKPdf 01 31 44.0 -2.6
ALN Alexandroupoli 148.01 322 *e*P PKPdf 01 31 47.7 +1.1
RDO Rodhopi 148.15 322 P PKPdf 01 31 45.0 -1.9
RDO Rodhopi 148.15 322 *e*P PKPdf 01 31 45.9 -1.0
STU Stuttgart 148.21 349 *e*PKPbc PKPbc 01 31 50.9 0.0
STU *e*PKPab PKPab 01 31 55.6 -0.5
STU *ep*PKPbc pPKPbc 01 34 09.0 +3.3
STU *e*SS SS 01 53 40.1 -4.7
STU Stuttgart 148.21 349 *e*PKPdf PKPdf 01 31 46.0 -0.7
STU *e*PKPbc PKPbc 01 31 50.0 -0.9
STU *e*PKPab PKPab 01 31 55.9 -0.2
LANF Langenberg 148.24 351 PKP PKPdf 01 31 45.8 -0.9
KSL Kastellorizon 148.27 311 *e*P PKPbc 01 31 49.5 -2.0
RZN Rozhen 148.27 324 *i* P PKPbc 01 31 50.6 -0.7
FUR Furstenfeldbru 148.35 346 *e*PKPbc PKPbc 01 31 50.9 -0.3
FUR *e*PKPab PKPab 01 31 55.9 -0.8
FUR *e*SS SS 01 53 41.4 -5.0
FUR Furstenfeldbru 148.35 346 *e*PKP2 PKPab 01 31 55.9 -0.8
FUR *e*SS SS 01 53 41.4 -5.0
RJOB Jochberg 148.37 344 *e*PKPbc PKPbc 01 31 51.2 -0.1
RJOB *ep*PKPbc pPKPbc 01 34 10.3 +4.1
RJOB *e*SS SS 01 53 44.5 -2.2
VTS Vitosha 148.47 327 P PKPdf 01 31 45.2 -2.1
VTS Vitosha 148.47 327 *i* P PKPbc 01 31 50.6 -1.1
PERS Pernice 148.68 340 *i* PKPbc PKPbc 01 31 51.3 -0.8
BFO Black Forest 148.79 350 *e*PKPbc PKPbc 01 31 51.7 -0.6
BFO *e*PKPab PKPab 01 31 57.1 -1.4
BFO *ep*PKPbc pPKPbc 01 34 10.0 +2.6
BFO *e*SS SS 01 53 46.1 -5.0
BFO Black Forest 148.79 350 *e*PKHKP PKPdf 01 31 47.2 -0.4
BFO *e* 01 31 57.1
BFO *e*SS SS 01 53 46.1 -5.0
BFO Black Forest 148.79 350 *e*PKPdf PKPdf 01 31 47.2 -0.5
BFO *e*PKPbc PKPbc 01 31 51.6 -0.7
BFO *e*PKPab PKPab 01 31 57.1 -1.4
BFO *e*PKPab PKPab 01 31 57.3 -1.2
BFO *ep*PKPbc pPKPbc 01 34 10.0 +2.6
BFO *e* 01 34 12.8
BFO *e*SS SS 01 53 46.1 -5.0
KBA Koelnbreinsper 148.82 343⇓*i*PKPbc PKPbc 01 31 51.2 -1.3
comp=Z,18nm,0.5s,SNR=20
KAVA Kavala 148.84 323 P PKPdf 01 31 46.2 -1.8
BLCB Balcova 148.87 317 P PKPdf 01 31 44.7 -3.4
PRK Paraskevi 148.87 319 P PKPdf 01 31 46.3 -1.8
PRK Paraskevi 148.87 319 *e*P PKPdf 01 31 47.2 -0.9
CDF Champ du Feu 148.88 351 *e*PKP1 PKPbc 01 31 51.9 -0.6
comp=Z,22nm,0.5s
MMB Musomiste 148.89 325 *i* P PKPbc 01 31 51.2 -1.6
DIVS Divibare 148.92 332 P PKPdf 01 31 47.0 -1.0
SPAK Spaichingen-Ko 148.93 349 PKP PKPbc 01 31 53.1 +0.4
NVR Nevrokopi 148.97 324 *e*P PKPbc 01 31 51.5 -1.5
KKB Krupnik 149.05 326 *i* P PKPbc 01 31 51.8 -1.4
FLN La Foliniere 149.05 1 *e*PKP1 PKPbc 01 31 51.9 -1.0
comp=Z,41nm,0.4s
FLN *e*MLR MLR
comp=Z,109nm,20.8s
FLN La Foliniere 149.05 1 *e*PKP PKPbc 01 31 51.9 -1.0
FLN LR LR
comp=Z,110nm,20.8s
WATA Walderalm 149.05 345⇑*i*PKPbc PKPbc 01 31 52.0 -0.9
comp=Z,14nm,0.4s,SNR=17
GOLS Golise 149.06 339 *i* PKPbc PKPbc 01 31 52.8 -0.3
GOLS *ep*PKPbc pPKPbc 01 34 12.8 +4.7
MEZF Maizieres J'vi 149.07 354 *e*PKP1 PKPbc 01 31 52.5 -0.5
comp=Z,11nm,0.4s
ECH Echery 149.09 351 PKP PKPbc 01 31 53.1 +0.1
ECH Echery 149.09 351 *e*PKPbc PKPbc 01 31 52.7 -0.4
ECH *e*PKPab PKPab 01 31 58.8 -0.9
RETA Reutte 149.11 346⇓*i*PKIKP PKiKP 01 31 52.5 -1.5
comp=Z,11nm,0.4s,SNR=12
WTTA Wattenberg 149.11 345⇑*i*PKIKP PKiKP 01 31 52.7 -1.3
comp=Z,32nm,0.5s,SNR=28
MYKA Terra Mystica 149.14 342⇑*i*PKPbc PKPbc 01 31 51.0 -2.2
comp=Z,16nm,0.4s
LIA Limnos Island 149.15 321 P PKPdf 01 31 46.4 -2.1
LIA Limnos Island 149.15 321 *e*P PKPdf 01 31 46.8 -1.7
MOTA Moosalm 149.16 346⇑*i*PKPbc PKPbc 01 31 52.2 -1.0
comp=Z,44nm,1.1s,SNR=15
LDF La Drutiiere 149.22 1 *e*PKP1 PKPbc 01 31 52.2 -1.2
comp=Z,32nm,0.5s
THEF They Montfort 149.24 353 PKP PKPbc 01 31 54.0 +0.6

ARG Arkhangelos 149.28 312 P PKPbc 01 31 52.9 -1.0
SRS Serrai 149.28 324 P PKPdf 01 31 45.4 -3.3
ROSF Rostrenen 149.34 5 *e*PKP1 PKPbc 01 31 52.4 -1.3
comp=Z,35nm,0.9s
ABTA Abfaltersbach 149.36 343 *i* PKPbc PKPbc 01 31 52.7 -1.1
comp=Z,44nm,1.0s,SNR=17
SMG Samos 149.38 316 *e*P PKPbc 01 31 52.5 -1.6
LJU Ljubljana 149.39 340 *i* PKPbc PKPbc 01 31 53.4 -0.5
LJU *ep*PKPbc pPKPbc 01 34 14.0 +4.9
HAU Haudompre 149.41 352 *e*PKP1 PKPbc 01 31 53.0 -0.8
comp=Z,20nm,0.4s
HAU *e*MLR MLR
comp=Z,94nm,22.2s
HAU Haudompre 149.41 352 *e*PKP PKPbc 01 31 53.0 -0.8
HAU LR LR
comp=Z,90nm,22.3s
GRR Gorron 149.41 2 *e*PKP1 PKPbc 01 31 53.0 -0.8
comp=Z,41nm,0.5s
FVI Forni Avoltri 149.42 343 PKHKP PKPbc 01 31 53.3 -0.6
PTCC Patocco-Chiusa 149.43 342 PKP PKPbc 01 31 53.3 -0.6
SEST Monte Rota 149.43 344 PKP PKPbc 01 31 53.4 -0.5
MOF Molkerain 149.44 351 PKP PKPbc 01 31 54.5 +0.6
SGMF Saint Gilles 149.47 4 *e*PKP1 PKPbc 01 31 52.8 -1.2
comp=Z,26nm,0.6s
DAVA Damuels 149.49 347⇓*i*PKiKP PKiKP 01 31 53.9 -0.9
comp=Z,35nm,1.1s,SNR=9.1
CHOS Chios island 149.51 318 P PKPdf 01 31 47.4 -1.7
CHOS Chios island 149.51 318 *e*P PKPbc 01 31 52.5 -1.9
HINF Hinteralfeld 149.52 351 *e*PKP1 PKPbc 01 31 53.2 -0.9
comp=Z,7.7nm,0.5s
FETA Feichten 149.55 346⇓*i*PKiKP PKiKP 01 31 53.8 -1.1
comp=Z,40nm,1.1s,SNR=8.4
OUR Ouranopolis 149.58 323 P PKPdf 01 31 47.1 -2.1
GMNA Gemona 149.58 342 PKP PKPbc 01 31 53.7 -0.6
SOH Sokhos 149.61 324 P PKPdf 01 31 46.9 -2.3
SOH Sokhos 149.61 324 *e*P PKPbc 01 31 52.1 -2.5
BOJS Bojanci 149.63 339 *i* PKPbc PKPbc 01 31 54.1 -0.4
BOJS *ep*PKPbc pPKPbc 01 34 14.0 +4.3
VAY Valandovo 149.70 326 *e*PKP PKPdf 01 31 48.9 -0.5
VAY *e*PKP PKPdf 01 31 53.0 +3.7
VAY Valandovo 149.70 326 P PKPdf 01 31 46.5 -2.8
BBS Basel-Blauen 149.76 350 PKP PKPbc 01 31 53.6 -1.1
QUIF Quistinic 149.77 5 *e*PKP1 PKPbc 01 31 53.3 -1.4
SKO Skopje 149.83 328 *e*PKP PKPdf 01 31 48.6 -0.9
SKO *e*PKP PKPdf 01 31 54.5 +5.0
PLG Polygyros 149.86 323 P PKPbc 01 31 53.0 -2.2
PLG Polygyros 149.86 323 *e*P PKPbc 01 31 52.7 -2.5
APPI Appiano 149.94 345 PKP PKPbc 01 31 53.8 -1.3
DAVOX Davos/Dischmat 149.97 347 PKP PKPdf 01 31 49.7 +0.1
comp=Z,4.2nm,0.9s,baz=228,slow=7.1,SNR=6.0
DAVOX PKPbc PKPbc 01 31 55.1 -0.1
comp=Z,43nm,0.4s,baz=258,slow=3.3,SNR=131
DAVOX *ep*PKPbc pPKPbc 01 34 10.6 +0.1
comp=Z,5.6nm,0.8s,baz=12,slow=12,SNR=3.1
LOMF Lomont 149.98 351 PKP PKPbc 01 31 54.9 -0.3
PAIG Paliouri 150.02 322 P PKPdf 01 31 46.0 -3.9
BRMO Bormio 150.15 346 PKP PKPbc 01 31 56.2 +0.6
CTI Castel Tesino 150.23 344 PKIKP PKPbc 01 31 55.5 -0.3
KARP Karpathos 150.29 312 *e*P PKPbc 01 31 55.2 -1.1
KRUS Krusevo 150.37 327 *e*PKP PKPdf 01 31 50.2 -0.1
KRUS *e*PKP PKPdf 01 31 54.8 +4.5
AOS Alonnisos 150.39 321 P PKPdf 01 31 48.0 -2.5
LOR Lormes 150.40 355 *e*PKP1 PKPbc 01 31 55.5 -0.7
comp=Z,13nm,0.4s
LOR *e*MLR MLR
comp=Z,99nm,22.0s
LOR Lormes 150.40 355 *e*PKP PKPbc 01 31 55.5 -0.7
LOR LR LR
comp=Z,100nm,22.0s
HYF Humbligny 150.49 357 *e*PKP1 PKPbc 01 31 56.1 -0.3
BIA Bitola 150.58 326 *e*PKP PKPbc 01 31 55.3 -1.5
NVLJ Novalja 150.58 339 P PKPbc 01 31 55.8 -0.9
NVLJ Novalja 150.58 339 *i* P PKPbc 01 31 55.8 -0.9
APE Apeiranthos 150.60 316 ⇓PKIKP PKPbc 01 31 54.6 -2.4
APE Apeiranthos 150.60 316 P PKPdf 01 31 48.1 -2.8
APE Apeiranthos 150.60 316⇓*i*P PKPdf 01 31 54.5 +3.6
APE Apeiranthos 150.60 316 *e*P PKPdf 01 31 54.6 +3.7
SSF Saint Saulge 150.63 356 *e*PKP1 PKPbc 01 31 56.1 -0.6
comp=Z,21nm,0.5s
XOR Xorichti 150.67 322 P PKPdf 01 31 48.3 -2.6
NEO Neokhori 150.69 322 *e*P PKPdf 01 31 54.6 +3.7
FNA Florina 150.72 326 P PKPdf 01 31 48.6 -2.3
CABF La Chapelle 150.81 352 *e*PKP1 PKPbc 01 31 56.9 -0.2
comp=Z,44nm,1.0s
KZN Kozani 150.84 325 *e*P PKPbc 01 31 54.8 -2.6
AVF Avril sur Loir 150.92 356 *e*PKP1 PKPbc 01 31 56.8 -0.6
comp=Z,8.9nm,0.5s
SMF Signal de Mont 151.02 355 *e*PKP1 PKPbc 01 31 57.0 -0.6
comp=Z,4.4nm,0.5s
TIR Tirane 151.09 329 *e*P PKPbc 01 31 56.9 -1.0
PTL Penteli 151.10 319 *e*P PKPbc 01 31 55.4 -2.7
ZKR Zakros 151.17 312 *e*P PKPbc 01 31 57.1 -1.2
BGF Bois d'Agland 151.18 356 *e*PKP1 PKPbc 01 31 57.3 -0.7
comp=Z,15nm,0.5s
ATAL Atalanti 151.21 321 P PKPdf 01 31 54.0 +2.3
MFF Saint Martin d 151.21 1 *e*PKP1 PKPbc 01 31 57.1 -0.9
comp=Z,14nm,0.5s
THL Klokotos Trika 151.22 324 P PKPdf 01 31 48.8 -2.9
THL Klokotos Trika 151.22 324 *e*P PKPbc 01 31 56.3 -2.0
ATH Athens Observa 151.24 319 *e*P PKPdf 01 31 51.5 -0.3
LKR Lokris 151.25 321 P PKPdf 01 31 53.7 +1.9
LKR Lokris 151.25 321 *e*P PKPbc 01 31 56.5 -1.9
VLY Voula,Athens 151.26 319 *e*P PKPbc 01 31 56.3 -2.2
AGG Agios Georgios 151.40 322 P PKPdf 01 31 53.8 +1.8
AGG Agios Georgios 151.40 322 *e*P PKPbc 01 31 56.2 -2.5
ORO Oropa 151.46 349 PKIKP PKPbc 01 31 58.2 -0.4
TCF Toulx Ste Croi 151.49 357 *e*PKP1 PKPbc 01 31 57.8 -0.9
comp=Z,7.2nm,0.6s
NAIG Nisos Aigina 151.51 319 *e*P PKPbc 01 31 57.0 -2.0
NPS Neapolis 151.52 313 *e*P PKPbc 01 31 57.8 -1.3
LAST Lasithi 151.67 313 P PKPbc 01 31 57.3 -2.1
LAST Lasithi 151.67 313 *e*P PKPbc 01 31 57.8 -1.6
LTK Loutraki 151.67 320 *e*P PKPbc 01 31 57.3 -2.1
PLDF La Plantade 151.71 355 PKP PKPbc 01 31 59.9 +0.7
EVR Evrytania 151.77 323 *e*P PKPdf 01 31 59.1 +6.5
LPL La Plagne 151.78 350 *e*PKP1 PKPbc 01 31 59.8 +0.4
comp=Z,15nm,0.5s
LPG La Plagne 151.80 350 *e*PKP1 PKPbc 01 31 59.9 +0.5
comp=Z,14nm,0.7s
JAN Janina 151.80 325 *e*P PKPbc 01 31 59.5 -0.1
IDI Anoyia 152.01 313 PKPbc PKPbc 01 31 59.7 -0.5
comp=Z,48nm,1.1s,baz=62,slow=7.6,SNR=27
EFP Efpalio 152.04 322 *e*P PKPbc 01 31 58.5 -1.7
RSP Reno Superiore 152.05 349 PKIKP PKPbc 01 31 59.0 -1.0
GUR Goura 152.10 321 P PKPdf 01 31 55.3 +2.2
GUR Goura 152.10 321 *e*P PKPbc 01 31 57.8 -2.5
SIVA Sivas 152.21 313 *e*P PKPbc 01 32 00.6 0.0
BNI Bardonecchia 152.24 350 *e*PKIKP PKPbc 01 32 00.5 +0.1
BNI *e* 01 32 13.6
SSB Saint Sauveur 152.31 354 *e*PKPdf PKPdf 01 31 52.6 -0.5
SSB *e*PKPbc PKPbc 01 32 00.1 -0.4
SSB *e*PKPab PKPab 01 32 13.1 -0.3
SNTG Esanatoglia 152.39 340 PKP PKPbc 01 32 00.4 -0.4
VAM Vamos 152.42 314 *e*P PKPbc 01 31 59.7 -1.4
VLX Vlachokerasia 152.44 320 *e*P PKPbc 01 31 57.6 -3.5
VLX Vlachokerasia 152.44 320 *e*P PKPbc 01 31 57.6 -3.5
LBL Lubilhac 152.47 355 PKP PKPbc 01 32 02.0 +1.1
RJF Les Rejaudoux 152.49 358 *e*PKP1 PKPbc 01 32 00.1 -0.8
comp=Z,14nm,0.9s
RJF *e*MLR MLR
comp=Z,112nm,23.0s
RJF Les Rejaudoux 152.49 358 *e*PKP PKPbc 01 32 00.1 -0.8
RJF LR LR
comp=Z,110nm,23.0s
VLI Veliai 152.50 318 *e*P PKPbc 01 31 57.5 -3.7
ORIF Oris-en-Rattie 152.50 351 *e*PKP1 PKPbc 01 32 00.4 -0.5
comp=Z,8.9nm,0.7s
ORIF *e*MLR MLR
comp=Z,97nm,19.5s
MBDF Montbardon 152.55 350 *e*PKP1 PKPbc 01 32 00.9 -0.2
comp=Z,11nm,0.5s
RLS Riolos of Patr 152.55 322 *e*P PKPbc 01 32 00.9 -0.4
KARN Karanos 152.61 315 *e*P PKPbc 01 32 00.2 -1.3
KYTH Kithira 152.69 317 *e*P PKPbc 01 32 00.6 -1.1
VIVF Saint-Julien-l 152.71 353 *e*PKP1 PKPbc 01 32 01.7 +0.3
ITM Ithomi 152.84 320 *e*P PKPbc 01 32 00.3 -1.7
CAF Calviac 152.85 357 *e*PKP1 PKPbc 01 32 01.0 -0.7
comp=Z,5.3nm,0.6s
VLS Valsamata 152.98 323 *e*P PKPdf 01 32 02.7 +8.4
SBF Sospel 153.26 348 *e*PKP1 PKPbc 01 32 01.7 -0.9
comp=Z,10nm,0.5s
SMRF Simiane la Rot 153.46 351 *e*PKP1 PKPbc 01 32 02.5 -0.6
LASF Ste Croix 153.57 354 *e*PKP1 PKPbc 01 32 02.8 -0.5

FRF	**La Foret Royal**	**153.70**	**350**	*e*PKP1	PKPbc	01 32 02.7	-0.9
TIP	**Timpagrande**	**154.27**	**329**	*e*PKPdf	PKPdf	01 31 55.1	-1.0
TIP				*e*PKPbc	PKPbc	01 32 04.2	-0.7
TIP				*e*PKPab	PKPab	01 32 21.8	-0.2
PCAB	**Cabril**	**155.07**	**15**	*e*PKPab	PKPab	01 32 24.7	-0.6
PVRL	**Vila Real**	**155.55**	**15**	*e*PKPab	PKPab	01 32 26.9	-0.5
MVO	**Moncorvo**	**155.82**	**14**	*e*PKPab	PKPab	01 32 27.6	-1.0
PVIS	**Viseu**	**156.04**	**15**	*e*PKPab	PKPab	01 32 29.1	-0.4
PTOM	**Tomar**	**156.93**	**17**	*e*PKPab	PKPab	01 32 32.3	-1.1
PCBR	**Castelo Branco**	**156.97**	**15**	*e*PKPab	PKPab	01 32 32.5	-1.1
PMAFR	**Mafra**	**157.27**	**20**	*e*PKPab	PKPab	01 32 34.1	-0.8
PMRV	**Marv??o**	**157.38**	**16**	*e*PKPab	PKPab	01 32 34.1	-1.3
ESDC	**Sonseca Array**	**157.83**	**9**	PKP	PKPdf	01 32 00.9	+0.2
	comp=Z,0.1nm,0.3s,baz=333,slow=5.0,SNR=4.4						
ESDC				PKPbc	PKPdf	01 32 14.2	+14
	comp=Z,0.1nm,0.2s,baz=327,slow=2.4,SNR=3.5						
ESDC				PKPab	PKPab	01 32 36.5	-0.8
	comp=Z,1.3nm,0.4s,baz=342,slow=4.3,SNR=22						
ESDC				PP	PP	01 36 18.1	-0.3
	comp=Z,1.2nm,1.1s,baz=332,slow=6.5,SNR=3.4						
PESTR	**Estremoz**	**157.85**	**16**	*e*PKPab	PKPab	01 32 36.1	-1.4
EVO	**Evora**	**158.05**	**18**	*e*PKP2	PKPab	01 32 37.1	-1.2
	comp=Z,131nm,1.5s						
EVO				*e*MLR	MLR		
	comp=Z,106nm,23.0s						
EVO	**Evora**	**158.05**	**18**	*e*PKPab	PKPab	01 32 37.2	-1.1
PBEJ	**Beja**	**158.56**	**18**	*e*PKPab	PKPab	01 32 39.4	-1.2
PBAR	**Barrancos**	**158.65**	**16**	*e*PKPab	PKPab	01 32 40.0	-0.9
PTEO	**Sao Teotonio**	**158.74**	**20**	*e*PKPab	PKPab	01 32 40.7	-0.6
PCVE	**Castro Verde**	**158.87**	**19**	*e*PKPab	PKPab	01 32 32.7	-9.2
PFVI	**Vila Bisbo**	**159.08**	**21**	*e*PKPab	PKPab	01 32 41.7	-1.1
PVAQ	**Vaqueiros**	**159.18**	**18**	*e*PKPab	PKPab	01 32 42.5	-0.8
PBDV	**Barranco-do-Ve**	**159.26**	**19**	*e*PKPab	PKPab	01 32 43.3	-0.4
KEST	**Kesra**	**160.35**	**338**	PKPab	PKPab	01 32 48.6	+0.1
	comp=Z,1.8nm,0.6s,baz=52,slow=1.1,SNR=14						
LIC	**Lamto**	**167.44**	**155**	*e*P	PKPdf	01 32 08.1	-2.6
	comp=Z,163nm,2.0s						
LIC	**Lamto**	**167.44**	**155**	*e*P	PKPab	01 33 19.7	-0.5
	comp=Z,159nm,1.3s						
LIC	**Lamto**	**167.44**	**155**	*e*PKIKP	PKPdf	01 32 08.5	-2.2
	comp=Z,111nm,1.5s						
LIC				*e*MLR	MLR		
	comp=Z,221nm,20.5s						
LIC	**Lamto**	**167.44**	**155**	*e*PKPdf	PKPdf	01 32 08.5	-2.2
LIC				*e*P		01 33 19.7	
LIC				LR	LR		
	comp=Z,110nm,20.5s						
KIC	**Kosan Boka**	**167.67**	**156**	*e*P	PKPdf	01 32 09.6	-1.3
	comp=Z,40nm,1.4s						
KIC	**Kosan Boka**	**167.67**	**156**	*e*P	PKPab	01 33 21.0	-0.2
	comp=Z,133nm,1.1s						
KIC	**Kosan Boka**	**167.67**	**156**	*e*P	PKPdf	01 32 09.6	-1.3
KIC				*e*P		01 33 21.0	
TIC	**Toumodi**	**167.82**	**154**	*e*P	PKPdf	01 32 08.7	-2.3
	comp=Z,70nm,1.3s						
TIC	**Toumodi**	**167.82**	**154**	*e*P	PKPab	01 33 21.5	-0.4
	comp=Z,159nm,1.4s						
TIC	**Toumodi**	**167.82**	**154**	*e*P	PKPdf	01 32 08.7	-2.3
TIC				*e*P		01 33 21.5	
DBIC	**Dimbokro**	**167.91**	**155**	PKPab	PKPab	01 33 22.1	-0.1
	comp=Z,27nm,1.1s,baz=212,slow=2.6,SNR=7.9						
DBIC				PP	PP	01 37 13.5	+2.4
	comp=Z,14nm,1.0s,baz=173,slow=6.1,SNR=5.6						
DBIC	**Dimbokro**	**167.91**	**155**	*e*PKIKP	PKPdf	01 32 09.6	-1.4
DBIC				*e*		01 33 22.1	
DBIC						01 37 13.5	
TAM	**Tamanrasset**	**172.97**	**317**	*e*PKIKP	PKPdf	01 32 13.2	-0.3
TAM				*e*		01 33 44.3	
TAM				*e*		01 37 36.7	

*CRAAG **15** 01:19:37.4, 36.°68N×3.°46E, Ml3.5*
*NEIC **15** 01:19:41.3, 36.°90N×3.°36E, h0km, MG3.9(MDD), After MDD.*
*CSEM **15** 01:19:42.2±0.3, 37.°01N×3.°23E, h2km, ML3.5, Error ellipse: s-maj=7.8km s-min=5.3km az=100.0*

MDD 15 01:19:39.2±0.7, 36.°68N×3.°47E, h7km±8km, mb4.0/10, Error ellipse: s-maj=8.2km s-min=5.5km az=27.0, PRIMO, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABA	**Alger-Bouzarea**	**0.37**	**289**	P	Pg	01 19 46.1	-0.3
ABA	**Alger-Bouzarea**	**0.37**	**289**	P	Pg	01 19 46.1	-0.3
ABA	**Alger-Bouzarea**	**0.37**	**289**	P	Pg	01 19 46.1	-0.3
ABA	**Alger-Bouzarea**	**0.37**	**289**	P	Pg	01 19 46.1	-0.3
ADJB	**Djebel Djouab**	**0.52**	**183**	P	Pg	01 19 48.5	-0.8
ADJB	**Djebel Djouab**	**0.52**	**183**	P	Pg	01 19 48.5	-0.8
ADJB	**Djebel Djouab**	**0.52**	**183**	P	Pg	01 19 48.5	-0.8
EMHD	**Djebel Mahouad**	**0.63**	**221**	P	Pg	01 19 51.1	-0.3
EMHD	**Djebel Mahouad**	**0.63**	**221**	P	Pg	01 19 51.1	-0.3
EMHD	**Djebel Mahouad**	**0.63**	**221**	P	Pg	01 19 51.1	-0.3
AKET	**Djebel Ketaf**	**0.71**	**152**	P	Pg	01 19 52.6	-0.3
AKET	**Djebel Ketaf**	**0.71**	**152**	P	Pg	01 19 52.6	-0.3
AKET	**Djebel Ketaf**	**0.71**	**152**	P	Pg	01 19 52.6	-0.3
AKF	**Akfadou**	**0.88**	**93**	P	Pg	01 19 55.5	-0.7
AKF	**Akfadou**	**0.88**	**93**	P	Pg	01 19 55.5	-0.7
AKF	**Akfadou**	**0.88**	**93**	P	Pg	01 19 55.5	-0.7
ATAF	**Djebel Tarf**	**1.03**	**141**	P	Pg	01 19 48.6	-10
ATAF	**Djebel Tarf**	**1.03**	**141**	P	Pg	01 19 48.6	-10
ATAF	**Djebel Tarf**	**1.03**	**141**	P	Pg	01 19 48.6	-10
EBNR	**Beni Rached**	**1.61**	**257**	P	Pn	01 20 09.7	+1.6
EBNR	**Beni Rached**	**1.61**	**257**	P	Pn	01 20 09.7	+1.6
ECHA	**Ech Chlef**	**1.78**	**253**	P	Pn	01 20 14.8	+4.5
ECHA	**Ech Chlef**	**1.78**	**253**	P	Pn	01 20 14.8	+4.5
ECHF	**Ech Chlef**	**1.79**	**254**	P	Pn	01 20 14.8	+4.2
ECHF	**Ech Chlef**	**1.79**	**254**	P	Pn	01 20 14.8	+4.2
DFRA	**Djebel Bou Aff**	**1.94**	**93**	P	Pn	01 20 15.0	+2.4
DFRA	**Djebel Bou Aff**	**1.94**	**93**	P	Pn	01 20 15.0	+2.4
DFRA	**Djebel Bou Aff**	**1.94**	**93**	P	Pn	01 20 15.0	+2.4
EANR	**'Ain N'Sour**	**2.05**	**250**	P	Pn	01 20 18.0	+3.9
EANR	**'Ain N'Sour**	**2.05**	**250**	P	Pn	01 20 18.0	+3.9
EANR	**'Ain N'Sour**	**2.05**	**250**	P	Pn	01 20 18.0	+3.9
EANR	**'Ain N'Sour**	**2.05**	**250**	P	Pn	01 20 18.0	+3.9
ETRT	**Tiaret**	**2.18**	**234**	P	Pn	01 20 20.2	+4.3
ETRT	**Tiaret**	**2.18**	**234**	P	Pn	01 20 20.2	+4.3
ETRT	**Tiaret**	**2.18**	**234**	P	Pn	01 20 20.2	+4.3
ETRT	**Tiaret**	**2.18**	**234**	P	Pn	01 20 20.2	+4.3
OKGL	**Djebel Kef Gue**	**2.37**	**255**	P	Pn	01 20 30.0	+12
OKGL	**Djebel Kef Gue**	**2.37**	**255**	P	Pn	01 20 30.0	+12
OKGL	**Djebel Kef Gue**	**2.37**	**255**	P	Pn	01 20 30.0	+12
CASM	**Ain Smara**	**2.47**	**99**	P	Pn	01 20 25.7	+5.8
CASM	**Ain Smara**	**2.47**	**99**	P	Pn	01 20 25.7	+5.8
CASM	**Ain Smara**	**2.47**	**99**	P	Pn	01 20 25.7	+5.8
CASM	**Ain Smara**	**2.47**	**99**	P	Pn	01 20 25.7	+5.8
OJGS	**Djebel Guires**	**2.50**	**243**	P	Pn	01 20 25.0	+4.8
OJGS	**Djebel Guires**	**2.50**	**243**	P	Pn	01 20 25.0	+4.8
OJGS	**Djebel Guires**	**2.50**	**243**	P	Pn	01 20 25.0	+4.8
OJGS	**Djebel Guires**	**2.50**	**243**	P	Pn	01 20 25.0	+4.8
OJBR	**Djebel Berber**	**2.76**	**248**	P	Pn	01 20 29.0	+5.2
OJBR	**Djebel Berber**	**2.76**	**248**	P	Pn	01 20 29.0	+5.2
OJBR	**Djebel Berber**	**2.76**	**248**	P	Pn	01 20 29.0	+5.2
OJBR	**Djebel Berber**	**2.76**	**248**	P	Pn	01 20 29.0	+5.2
EIBI	**Ibiza**	**2.88**	**325**	P	Pn	01 20 23.9	-1.7
EIBI				S	Sn	01 20 55.4	-5.1
EIBI	**Ibiza**	**2.88**	**325**	P	Pn	01 20 23.9	-1.7
	10nm,0.4s,SNR=28						
EIBI				S	Sn	01 20 55.4	-5.1
	24nm,0.4s,SNR=7.9					

mb1 3.8/11, mb1mx3.6/27, mbtmp3.6/11, ML3.2/2, MS3.3/1, Ms1 3.3/1, ms1mx2.4/47, Error ellipse: s-maj=26.8km s-min=16.1km az=105.0
*NEIC **15** 01:35:52.8, 39°.13N×140°.91E, h11km, mb4.1/3, After JMA.*
*JMA **15** 01:35:52.8, 39°.13N×140°.90E, h10km±1km, M3.9*
JMA Felt I J1.
*ISCJB **15** 01:35:52.7±0.7, 39°.13N±0°.04×140°.93E±0°.06, h15km±5km, mb3.8/11, Error ellipse: s-maj=7.7km s-min=5.7km az=25.8*

ISC 15 01:35:53.0±0.6, 39°.12N±0°.04×140°.90E±0°.05, h6km±4km, n27, σ0°99/33, mb3.8/11, 1C-1D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.30**	**123**	⇓P	**Pg**	**01 35 58.6**	**-0.3**
JMK				S	**Sg**	**01 36 03.2**	**+0.3**
JRG	**Rokugo**	**0.34**	**324**	P	**Pg**	**01 35 59.7**	**0.0**
JYK	**Kaneyama**	**0.46**	**245**	⇑P	**Pg**	**01 36 02.1**	**+0.1**
JYK				S	**Sg**	**01 36 08.5**	**+0.5**
JOM	**Ohasama**	**0.47**	**41**	P	**Pg**	**01 36 01.6**	**-0.5**
JOM				S	**Sg**	**01 36 08.2**	**-0.1**
JIO	**Ouri**	**0.75**	**152**	P	**Pg**	**01 36 06.9**	**-0.5**
JOU	**Okura**	**0.77**	**194**	P	**Pg**	**01 36 08.0**	**+0.2**
MAJO	**Matsushiro**	**3.34**	**220**	*e*Pn	**Pn**	**01 36 47.2**	**+1.5**
MAT	**Matsushiro**	**3.34**	**220**	P	**Pn**	**01 36 47.2**	**+1.5**
MAT				*e*S	**Sn**	**01 37 30.6**	**+4.9**
MJAR	**Matsushiro Arr**	**3.34**	**220**	Pn	**Pn**	**01 36 46.4**	**+0.7**
	0.9nm,0.3s,baz=28,slow=13,SNR=28						
MJAR				Pg	**Pg**	**01 36 55.5**	**-1.5**
	1.7nm,0.3s,baz=20,slow=16,SNR=24						
MJAR				Lg		01 37 37.9	
	0.6nm,0.3s,baz=20,slow=26,SNR=7.4						
ERM	**Erimo**	**3.37**	**30**	*e*Pn	**Pn**	**01 36 48.1**	**+1.9**
ASAJ	**Asahikawa**	**5.16**	**14**	Pn	**Pn**	**01 37 11.8**	**+1.1**
	1.1nm,0.3s,baz=253,slow=12,SNR=11						
KSRS	**Korea Array**	**10.33**	**265**	Pn	**Pn**	**01 38 25.2**	**+3.4**
	1.0nm,0.3s,baz=78,slow=14,SNR=39						
KSRS				Sn	**Sn**	**01 40 23.9**	**+6.0**
	0.2nm,0.3s,baz=75,slow=24,SNR=8.3						
KSRS				LR	LR	01 42 13.7	
	comp=Z,148nm,19.2s,baz=65,slow=37						
ZALV	**Zalesovo Beam**	**40.23**	**311**	P	**P**	**01 43 29.0**	**-1.2**
	0.7nm,0.6s,mb3.6,baz=81,slow=9.5,SNR=4.4						
MK31	**Makanchi Array**	**42.69**	**300**	*e*P	**P**	**01 43 49.7**	**-0.8**
MKAR	**Makanchi Array**	**42.69**	**300**	P	**P**	**01 43 48.7**	**-1.9**
	0.6nm,0.7s,mb3.5,baz=85,slow=6.5,SNR=4.9						
KURK	**Kurchatov**	**44.35**	**306**	P	**P**	**01 44 03.9**	**+0.1**
	1.2nm,0.6s,mb3.8,baz=83,slow=8.6,SNR=7.2						
KURK	**Kurchatov**	**44.35**	**306**	*e*P	**P**	**01 44 02.4**	**-1.4**
	1.8nm,0.6s,mb4.0						
BVAR	**Borovoye Array**	**48.89**	**311**	P	**P**	**01 44 39.5**	**+0.2**
	0.4nm,0.5s,mb3.7,baz=57,slow=5.3,SNR=2.8						
ARU	**Arti**	**54.54**	**317**	*e*P	**P**	**01 45 20.7**	**-0.9**
	3.2nm,0.9s,mb4.3						
ABKAR	**Akbulak array**	**56.30**	**309**	*e*P	**P**	**01 45 34.1**	**-0.2**
	1.0nm,0.7s,mb4.0						
WRA	**Warramunga Arr**	**59.07**	**187**	P	**P**	**01 45 53.5**	**-0.5**
	0.5nm,0.5s,mb3.8,baz=4.5,slow=7.0,SNR=4.9						
WRA	**Warramunga Arr**	**59.07**	**187**	P	**P**	**01 45 53.5**	**-0.5**
ASAR	**Alice Springs**	**62.80**	**187**	P	**P**	**01 46 17.6**	**-1.6**
	0.3nm,0.8s,mb3.5,baz=3.3,slow=4.7,SNR=4.4						
FINES	**FINESS Array B**	**66.79**	**332**	P	**P**	**01 46 44.7**	**-0.2**
	1.1nm,0.8s,mb4.0,baz=37,slow=7.3,SNR=2.8						
FINES	**FINESS Array B**	**66.79**	**332**	P	**P**	**01 46 44.7**	**-0.2**
NOA	**NORSAR Array B**	**72.11**	**337**	P	**P**	**01 47 19.1**	**+1.3**
	0.5nm,0.6s,mb3.6,baz=41,slow=6.0,SNR=3.0						
NVAR	**Mina Array Bea**	**74.07**	**53**	P	**P**	**01 47 30.6**	**+0.7**
	0.2nm,0.4s,mb3.4,baz=317,slow=3.7,SNR=2.3						

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*IDC **15** 01:42:47.3±0.7, 13°.91N×144°.91E, h0km, mb4.0/10, mb1 4.2/10, mb1mx4.0/25, mbtmp4.0/10, Error ellipse: s-maj=38.5km s-min=16.3km az=97.0*
*NEIC **15** 01:43:03.3±0.8, 13°.85N×144°.66E, h134km±7km, mb4.4/3, Error ellipse: s-maj=25.2km s-min=10.1km az=95.0*

ISC 15 01:43:03.1±0.7, 13°.84N±0°.09×144°.7E±0°.2, h133km±6km, n19, σ0°78/18, mb3.9/13, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.31**	**144**	*e*Pn	**Pn**	**01 43 22.3**	**+0.7**
GUMO				*e*Sn	**Sn**	**01 43 35.2**	**-0.4**
MJAR	**Matsushiro Arr**	**23.33**	**347**	P	**P**	**01 47 57.8**	**-1.6**
	1.1nm,0.7s,mb3.4,baz=169,slow=10,SNR=4.6						
CTA	**Charters Tower**	**33.75**	**177**	P	**P**	**01 49 32.5**	**+0.3**
	6.0nm,1.0s,mb4.3,baz=354,slow=9.2,SNR=3.0						
WRAB	**Tennant Creek**	**35.07**	**197**	*e*P	**P**	**01 49 43.0**	**-0.5**
	4.8nm,0.6s,mb4.3						
WRA	**Warramunga Arr**	**35.08**	**197**	P	**P**	**01 49 43.2**	**-0.4**
	2.6nm,0.6s,mb4.1,baz=18,slow=9.3,SNR=12						
FITZ	**Fitzroy Crossi**	**36.88**	**211**	P	**P**	**01 49 59.4**	**+0.4**
	1.3nm,0.3s,mb4.1,baz=56,slow=13,SNR=29						
ASAR	**Alice Springs**	**38.74**	**196**	P	**P**	**01 50 14.4**	**-0.1**
	0.9nm,0.4s,mb3.7,baz=19,slow=12,SNR=24						
ASAR				PcP	PcP	01 52 24.3	+0.7
	1.2nm,0.9s,baz=300,slow=3.7,SNR=4.8						
STKA	**Stephens Creek**	**45.55**	**184**	P	**P**	**01 51 09.0**	**-0.6**
	1.7nm,0.7s,mb3.8,baz=9.4,slow=10,SNR=4.5						
STKA	**Stephens Creek**	**45.55**	**184**	P	**P**	**01 51 09.0**	**-0.6**
FORT	**Forrest**	**47.16**	**200**	*e*P	**P**	**01 51 22.4**	**+0.2**
	4.7nm,0.5s,mb4.4						
KURK	**Kurchatov**	**64.27**	**320**	*e*P	**P**	**01 53 23.9**	**-0.2**
	0.9nm,0.4s,mb4.0						
BVAR	**Borovoye Array**	**69.61**	**322**	P	**P**	**01 53 59.0**	**+1.1**
	0.7nm,0.5s,mb3.6,baz=106,slow=7.0,SNR=7.2						
YKA	**Yellowknife Ar**	**82.72**	**27**	P	**P**	**01 55 10.7**	**-1.1**
	0.2nm,0.4s,mb3.2,baz=284,slow=4.8,SNR=3.2						
YKA	**Yellowknife Ar**	**82.72**	**27**	P	**P**	**01 55 10.7**	**-1.1**
NVAR	**Mina Array Bea**	**86.91**	**51**	P	**P**	**01 55 34.4**	**+1.1**
	0.2nm,0.4s,mb3.3,baz=246,slow=6.8,SNR=2.6						
FINES	**FINESS Array B**	**90.86**	**335**	P	**P**	**01 55 52.4**	**+1.1**
	0.5nm,0.3s,mb4.0,baz=85,slow=2.1,SNR=6.3						
FINES	**FINESS Array B**	**90.86**	**335**	P	**P**	**01 55 52.4**	**+1.1**
LPAZ	**La Paz**	**148.25**	**99**	PKPbc	PKPbc	02 02 36.0	+1.5
	2.1nm,0.5s,baz=273,slow=3.0,SNR=15						
LPAZ	**La Paz**	**148.25**	**99**	PKPbc	PKPbc	02 02 36.0	+1.5

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*TAP **15** 01:47:08.7, 24°.81N×121°.94E, h13km, ML3.9, C*
*JMA **15** 01:47:09.0±0.7, 24°.05N×122°.02E, h13km, M3.1*
*NEIC **15** 01:47:10.2±4.4, 24°.76N×121°.87E, h3km±15km, MG3.1(JMA), Error ellipse: s-maj=44.5km s-min=12.9km az=70.0*

ISC 15 01:47:08.5±0.5, 24°.78N±0°.02×122°.02E±0°.02, h2km±4km, n58, σ1°01/95, 2C-6D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.23**	**222**	⇓*i*P	**Pg**	**01 47 13.7**	**+0.8**
	baz=196						
TWC				*i* S	**Sg**	**01 47 16.6**	**+0.6**
	baz=196						
ILA	**Ilan**	**0.25**	**266**	P	**Pg**	**01 47 13.4**	**+0.2**
	baz=254						
ILA				*i* S	**Sg**	**01 47 16.9**	**+0.5**
	baz=254						
TWE	**Neicheng**	**0.33**	**259**	⇑*i*P	**Pg**	**01 47 14.8**	**0.0**
	baz=249						
TWE				*i* S	**Sg**	**01 47 18.6**	**-0.4**
	baz=249						
NWF	**Wu-fen Shan**	**0.36**	**323**	⇓*i*P	**Pg**	**01 47 15.6**	**+0.3**
	baz=326						
NWF				*i* S	**Sg**	**01 47 20.5**	**+0.5**
	baz=326						
ENA	**Nanau**	**0.43**	**216**	P	**Pg**	**01 47 17.3**	**+0.5**
	baz=201						
ENA				*e*S	**Sg**	**01 47 22.7**	**+0.3**
	baz=201						
ENTT	**Nioudou**	**0.44**	**251**	P	**Pg**	**01 47 16.6**	**-0.3**
	baz=235						
ENTT				*e*S	**Sg**	**01 47 22.1**	**-0.4**
	baz=235						
TWA	**Mucha**	**0.44**	**296**	⇓*i*P	**Pg**	**01 47 16.9**	**0.0**
	baz=286						
TWA				*i* S	**Sg**	**01 47 22.2**	**-0.4**
	baz=286						
TAP1	**Taipei**	**0.52**	**300**	⇓*i*P	**Pg**	**01 47 18.8**	**+0.4**
	baz=291						
TAP1				*i* S	**Sg**	**01 47 24.8**	**-0.3**
	baz=291						
TATO	**Taipei**	**0.52**	**292**	*e*Pg	**Pg**	**01 47 18.0**	**-0.4**
TATO				*e*Sg	**Sg**	**01 47 23.6**	**-1.5**
EHP	**Heping Village**	**0.54**	**208**	*e*P	**Pg**	**01 47 19.6**	**+0.9**
	baz=194						
YHNB	**Yeheng**	**0.59**	**259**	*e*Pg	**Pg**	**01 47 19.1**	**-0.8**
YHNB				*e*Sg	**Sg**	**01 47 23.1**	**-4.5**
NSK	**Sanguang**	**0.61**	**260**	⇑*i*P	**Pg**	**01 47 19.7**	**-0.5**
	baz=254						
NSK				*e*S	**Sg**	**01 47 26.2**	**-1.9**
	baz=254						
TWY	**Chenhua**	**0.62**	**322**	⇓*i*P	**Pg**	**01 47 20.6**	**+0.3**
	baz=317						
TWS1	**Kuangyinshan**	**0.63**	**300**	⇓*i*P	**Pg**	**01 47 21.2**	**+0.7**
	baz=293						
TWS1				S	**Sg**	**01 47 29.0**	**+0.2**
	baz=293						
NNS	**Nan Shan**	**0.68**	**240**	*e*P	**Pg**	**01 47 21.1**	**-0.4**
	baz=228						
NACB	**Ninganchiao**	**0.72**	**213**	*e*Pg	**Pg**	**01 47 22.3**	**0.0**
NACB				*e*Sg	**Sg**	**01 47 31.8**	**+0.1**
NCU	**National Centr**	**0.78**	**284**	*i* P	**Pg**	**01 47 24.2**	**+0.8**
	baz=282						
NCU				S	**Sg**	**01 47 34.1**	**+0.6**
	baz=282						
TWD	**Chiawan**	**0.80**	**209**	P	**Pg**	**01 47 23.9**	**+0.1**
	baz=193						
TWD				*e*S	**Sg**	**01 47 35.1**	**+0.9**
	baz=193						
HWA	**Hwalien**	**0.89**	**205**	*e*P	**Pg**	**01 47 25.9**	**+0.4**
	baz=205						
TWT	**Tachien**	**0.93**	**236**	P	**Pg**	**01 47 26.4**	**+0.1**
	baz=230						
WHF	**Hehuan Shan**	**0.94**	**227**	P	**Pg**	**01 47 25.9**	**-0.5**
	baz=222						
WHF				*e*S	**Sg**	**01 47 38.8**	**+0.2**
	baz=222						
NSTT	**Nanjuang**	**0.94**	**261**	P	**Pg**	**01 47 26.4**	**-0.1**
	baz=250						
NSTT				*e*S	**Sg**	**01 47 39.4**	**+0.8**
	baz=250						
HSN	**Hsinchu**	**0.95**	**271**	*e*P	**Pg**	**01 47 25.7**	**-1.1**
	baz=270						
HSN				*e*S	**Sg**	**01 47 38.1**	**-1.1**
	baz=270						
YOJ	**Yonaguni jima**	**0.96**	**109**	P	**Pg**	**01 47 27.7**	**+0.8**
YOJ				*e*S	**Sg**	**01 47 40.8**	**+1.5**
YOJ	**Yonaguni jima**	**0.96**	**109**	*e*P	**Pg**	**01 47 27.9**	**+1.1**
	baz=110						
ESL	**Shilin**	**1.10**	**209**	*e*P	**Pg**	**01 47 29.3**	**-0.3**
	baz=202						
NSY	**Sanyi**	**1.20**	**253**	*e*P	**Pg**	**01 47 31.6**	**+0.1**
	baz=243						
NSY				*e*S	**Sg**	**01 47 48.4**	**+1.3**
	baz=243						
TWQ1	**Liyutan**	**1.21**	**249**	*e*P	**Pg**	**01 47 32.2**	**+0.4**
	baz=264						
SMLT	**Sun Moon Lake**	**1.36**	**229**	P	**Pn**	**01 47 34.0**	**-0.4**
	baz=214						
TYC	**Yuchr**	**1.37**	**231**	*e*P	**Pn**	**01 47 33.9**	**-0.8**
	baz=215						
TCU	**Taichung**	**1.38**	**243**	*e*P	**Pg**	**01 47 35.0**	**+0.2**
	baz=254						
TCU				*e*S	**Sg**	**01 47 54.1**	**+1.4**
	baz=254						
SSLB	**Suanglung**	**1.39**	**225**	*e*Pn	**Pn**	**01 47 33.9**	**-1.0**
SSLB				*e*Sn	**Sn**	**01 47 51.1**	**-2.6**
EHY	**Hungye**	**1.42**	**207**	*e*P	**Pn**	**01 47 35.3**	**0.0**
	baz=201						
WNT	**Mingjian**	**1.52**	**234**	*e*P	**Pg**	**01 47 37.4**	**-0.2**
	baz=230						
WNT				*e*S	**Sg**	**01 47 58.1**	**+0.9**
	baz=230						
YULB	**Yu-li**	**1.53**	**206**	*e*Pn	**Pn**	**01 47 37.1**	**+0.3**
YULB				*e*Sg	**Sg**	**01 47 58.3**	**+0.5**
TWF1	**Yuli**	**1.57**	**205**	*e*P	**Pn**	**01 47 37.3**	**-0.1**
	baz=200						
YUS	**Yu-Shan**	**1.61**	**217**	*e*P	**Pn**	**01 47 38.2**	**+0.2**
	baz=212						
IRIF	**Iriomote-Funau**	**1.62**	**106**	P	**Pn**	**01 47 36.9**	**-1.2**
IRIF				*e*S	**Sn**	**01 47 57.4**	**-2.1**
ALS	**Alishan**	**1.68**	**221**	*e*P	**Pn**	**01 47 40.4**	**+1.5**
	baz=206						
CHN5	**Tsauling**	**1.70**	**226**	*e*P	**Pg**	**01 47 40.3**	**-0.8**
	baz=222						
CHN5				*e*S	**Sg**	**01 48 04.1**	**+0.9**
	baz=222						
ELDTW	**Lidau**	**1.83**	**210**	*e*P	**Pn**	**01 47 41.9**	**+0.9**
	baz=194						
JKRS	**Kuro-shima**	**1.89**	**106**	P	**Pn**	**01 47 41.2**	**-0.6**
JKRS				*e*S	**Sn**	**01 48 05.2**	**-1.0**
CHY	**Chiayi**	**1.94**	**229**	*e*P	**Pn**	**01 47 43.5**	**+1.1**
	baz=245						
TPUB	**Ta-pu**	**1.95**	**221**	*e*Pn	**Pn**	**01 47 44.0**	**+1.4**
TPUB				*e*Sg	**Sg**	**01 48 09.6**	**-1.5**
JIJ	**Ishigaki jima**	**1.98**	**102**	P	**Pn**	**01 47 41.7**	**-1.3**
WTP	**Ta-pu**	**2.00**	**220**	*e*P	**Pg**	**01 47 45.2**	**-1.6**
	baz=200						
WTP				*e*S	**Sg**	**01 48 13.0**	**+0.3**
	baz=200						
TWK	**Hsinying**	**2.06**	**223**	*e*P	**Pg**	**01 47 46.4**	**-1.6**
	baz=218						
TWK				*e*S	**Sg**	**01 48 14.2**	**-0.4**
	baz=218						
CHN1	**Nanshi**	**2.10**	**221**	*e*P	**Pg**	**01 47 46.6**	**-2.0**
	baz=201						
CHN1				*e*S	**Sg**	**01 48 15.0**	**-0.8**
	baz=201						
TWG	**Pinlang**	**2.14**	**204**	*e*Pn	**Pn**	**01 47 46.2**	**+1.1**
TWG				*e*Pg	**Pg**	**01 47 50.5**	**+1.0**
TWG				*e*Sn	**Sn**	**01 48 11.3**	**-1.0**
TWG	**Pinlang**	**2.14**	**204**	*e*P	**Pn**	**01 47 45.8**	**+0.6**
	baz=185						
SGST	**Jiashian**	**2.14**	**218**	*e*P	**Pg**	**01 47 47.1**	**-2.5**
	baz=199						
SGST				*e*S	**Sg**	**01 48 16.3**	**-1.1**
	baz=199						
SCLT	**Jiali**	**2.31**	**227**	*e*P	**Pg**	**01 47 50.4**	**-2.4**
	baz=239						
SCLT				*e*S	**Sg**	**01 48 21.9**	**-0.9**
	baz=239						
ECL	**Taimali**	**2.38**	**204**	*e*P	**Pn**	**01 47 49.9**	**+1.4**
	baz=187						
SSD	**Sandimen**	**2.39**	**212**	*e*P	**Pn**	**01 47 50.5**	**+1.9**
	baz=207						
SSD				*e*S	**Sn**	**01 48 21.8**	**+3.2**
	baz=207						
EAST	**Anshuo**	**2.62**	**204**	*e*P	**Pn**	**01 47 52.4**	**+0.6**
	baz=189						
SCZT	**Fangliau**	**2.72**	**208**	*e*P	**Pn**	**01 47 55.5**	**+2.3**
	baz=206						
QZH	**Quanzhou**	**3.12**	**274**	Pn	**Pg**	**01 48 09.8**	**+1.6**
QZH				Sn	**Sn**	**01 48 42.1**	**+5.7**
QZH				smax			
	comp=N,320nm,0.9s						
QZH				smax			
	comp=E,150nm,0.7s						
KNM	**Kinmen**	**3.28**	**264**	*e*P	**Pn**	**01 48 03.9**	**+3.0**
	baz=262						

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*IDC **15** 01:56:35.1±1.8, 39°.18N×141°.19E, h0km, mb3.6/5, mb1 3.7/7, mb1mx3.5/26, mbtmp3.6/7, ML3.3/2, MS3.0/1, Ms1 3.0/1, ms1mx2.5/38, Error ellipse: s-maj=40.3km s-min=22.4km az=78.0*
*NEIC **15** 01:56:37.3, 39°.15N×140°.93E, h11km, mb4.0/3, After JMA.*
*JMA **15** 01:56:37.3, 39°.14N×140°.93E, h10km±1km, M3.3*
JMA Felt I J1.
*ISCJB **15** 01:56:37.2±0.5, 39°.15N±0°.03×140°.97E±0°.05, h19km±5km, mb3.8/8, Error ellipse: s-maj=6.9km s-min=5.5km az=14.3*

ISC 15 01:56:37.7±0.5, 39°.15N±0°.03×140°.96E±0°.05, h9km±4km, n21, σ0°88/29, mb3.8/8, 1C-1D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.28**	**134**	P	**Pg**	**01 56 43.3**	**0.0**
JMK				S	**Sg**	**01 56 47.2**	**+0.1**
JRG	**Rokugo**	**0.35**	**315**	⇓P	**Pg**	**01 56 44.3**	**-0.4**
JRG				S	**Sg**	**01 56 49.5**	**+0.1**
JOM	**Ohasama**	**0.42**	**38**	P	**Pg**	**01 56 45.8**	**0.0**
JOM				S	**Sg**	**01 56 51.8**	**+0.5**
JYK	**Kaneyama**	**0.52**	**244**	⇑P	**Pg**	**01 56 47.0**	**-0.8**
JIO	**Ouri**	**0.76**	**156**	P	**Pg**	**01 56 51.9**	**-0.4**
ERM	**Erimo**	**3.32**	**30**	*e*Pn	**Pn**	**01 57 31.4**	**+1.6**
ERM				*e*Pg	**Pg**	**01 57 40.3**	**-1.0**
ERM				*e*Sn	**Sn**	**01 58 08.6**	**-0.7**
MAJO	**Matsushiro**	**3.39**	**221**	*e*Pn	**Pn**	**01 57 31.6**	**+0.8**
MAT	**Matsushiro**	**3.39**	**221**	P	**Pn**	**01 57 31.9**	**+1.1**
MAT				*e*S	**Sn**	**01 58 10.8**	**-0.4**
MJAR	**Matsushiro Arr**	**3.39**	**221**	Pn	**Pn**	**01 57 31.9**	**+1.0**
	1.1nm,0.3s,baz=28,slow=13,SNR=16						
MJAR				Pg	**Pg**	**01 57 38.2**	**-4.5**
	1.4nm,0.3s,baz=23,slow=15,SNR=14						
MJAR	**Matsushiro Arr**	**3.39**	**221**	Pn	**Pn**	**01 57 31.9**	**+1.0**
MJAR				Pg	**Pg**	**01 57 38.2**	**-4.5**
ASAJ	**Asahikawa**	**5.11**	**13**	Pn	**Pn**	**01 57 56.2**	**+1.8**
	1.2nm,0.3s,baz=239,slow=15,SNR=8.8						
KSRS	**Korea Array**	**10.38**	**265**	Pn	**Pn**	**01 59 09.4**	**+2.6**
	0.7nm,0.3s,baz=78,slow=14,SNR=19						
KSRS				LR	LR	02 03 12.3	
	comp=Z,75nm,19.0s,baz=132,slow=38						
ZALV	**Zalesovo Beam**	**40.25**	**311**	P	**P**	**02 04 14.4**	**-0.2**
	0.3nm,0.3s,mb3.5,baz=90,slow=8.9,SNR=5.1						
MK31	**Makanchi Array**	**42.72**	**300**	*e*P	**P**	**02 04 34.0**	**-1.0**
MKAR	**Makanchi Array**	**42.72**	**300**	P	**P**	**02 04 34.3**	**-0.7**
	0.9nm,0.7s,mb3.6,baz=75,slow=14,SNR=6.8						
KURK	**Kurchatov**	**44.37**	**306**	*e*P	**P**	**02 04 47.7**	**-0.5**
	2.0nm,0.8s,mb3.9						
TKM2	**Tokmak 2**	**48.34**	**297**	*e*P	**P**	**02 05 20.2**	**+0.7**
	2.0nm,0.8s,mb4.2						
BVAR	**Borovoye Array**	**48.90**	**311**	P	**P**	**02 05 23.2**	**-0.5**
	0.3nm,0.4s,mb3.6,baz=101,slow=7.9,SNR=4.0						
ABKAR	**Akbulak array**	**56.32**	**309**	*e*P	**P**	**02 06 17.8**	**-0.9**
	0.8nm,0.7s,mb3.9						
WRA	**Warramunga Arr**	**59.10**	**187**	P	**P**	**02 06 37.7**	**-0.8**
	0.3nm,0.3s,mb3.8,baz=6.1,slow=7.3,SNR=5.1						
ASAR	**Alice Springs**	**62.83**	**187**	P	**P**	**02 07 03.0**	**-0.7**
	0.3nm,0.7s,mb3.5,baz=23,slow=5.0,SNR=4.5						

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*CSEM **15** 02:05:57.7±1.4, 51°.50N×16°.08E, h1km, ML2.6/4, Error ellipse: s-maj=21.9km s-min=9.6km az=12.0*
*PRU **15** 02:05:58.9, 51°.48N×16°.13E, h0km*
*WAR **15** 02:05:59.1, 51°.50N×16°.09E, Mining Induced*

ISC 15 02:05:57.9±1.4, 51°.50N±0°.06×16°.13E±0°.07, h0km, n17, σ0°86/27, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.67**	**171**	*e*Pg	**Pg**	**02 06 11.4**	**+0.7**
KSP				*e*Sg	**Sg**	**02 06 20.5**	**+1.1**
UPC	**Upice**	**1.00**	**184**	*e*PG	**Pg**	**02 06 17.7**	**+0.6**
UPC	**Upice**	**1.00**	**184**	Pg	**Pg**	**02 06 17.7**	**+0.6**
DPC	**Dobruska-Polom**	**1.16**	**174**	*e*PG	**Pg**	**02 06 20.3**	**+0.2**
DPC				*e*SG	**Sg**	**02 06 35.1**	**-0.1**
	comp=Z,4.0nm,0.4s						
DPC	**Dobruska-Polom**	**1.16**	**174**	Pg	**Pg**	**02 06 20.3**	**+0.2**
DPC				Sg	**Sg**	**02 06 35.1**	**-0.1**
	comp=Z,4.0nm,0.4s						
PVCC	**Panska Ves**	**1.39**	**226**	*e*PG	**Pg**	**02 06 24.0**	**-0.5**
PVCC				*e*SG	**Sg**	**02 06 43.2**	**+0.8**
	comp=Z,14nm,0.2s						
PVCC	**Panska Ves**	**1.39**	**226**	Pg	**Pg**	**02 06 24.0**	**-0.5**
PVCC				Sg	**Sg**	**02 06 43.2**	**+0.8**
	comp=Z,14nm,0.2s						
BRG	**Berggiesshubel**	**1.51**	**246**	PG	**Pg**	**02 06 27.2**	**+0.3**
BRG				SG	**Sg**	**02 06 47.3**	**+0.8**
	comp=Z,3.7nm,0.4s						
PRU	**Pruhonice**	**1.82**	**214**	*e*SG	**Sg**	**02 06 54.8**	**-1.6**
	comp=Z,3.8nm,0.5s						
PRU	**Pruhonice**	**1.82**	**214**	Sg	**Sg**	**02 06 54.8**	**-1.6**
	comp=Z,3.8nm,0.5s						
MORC	**Moravsky Berou**	**1.95**	**152**	*e*Sg	**Sg**	**02 07 00.3**	**-0.2**
CLL	**Collm**	**1.97**	**266**	*e*Pn	**Pn**	**02 06 32.0**	**-0.5**
CLL				*e*Pg	**Pg**	**02 06 35.0**	**-0.6**
CLL				*e*Sg	**Sg**	**02 07 01.0**	**-0.1**
NKC	**Novy Kostel**	**2.66**	**243**	*e*SG	**Sg**	**02 07 23.5**	**+0.3**
	comp=Z,3.2nm,0.3s						
NKC	**Novy Kostel**	**2.66**	**243**	Sg	**Sg**	**02 07 23.5**	**+0.3**
	comp=Z,3.2nm,0.3s						
KHC	**Kasperske Hory**	**2.88**	**216**	*e*PG	**Pg**	**02 06 51.4**	**-1.7**
KHC				*e*SG	**Sg**	**02 07 29.3**	**-1.2**
KHC	**Kasperske Hory**	**2.88**	**216**	Pg	**Pg**	**02 06 51.4**	**-1.7**
KHC				Sg	**Sg**	**02 07 29.3**	**-1.2**
MOX	**Moxa**	**2.97**	**255**	*e*SG	**Sg**	**02 07 34.9**	**+1.5**

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*CSEM **15** 02:16:50.5±0.1, 46°.55N×15°.03E, h8km, ML2.6/7, Error ellipse: s-maj=2.1km s-min=1.6km az=120.0*
*VIE **15** 02:16:50.1±0.1, 46°.53N×15°.05E, h8km±1km, mb1.4/3, ML2.1/4, Error ellipse: s-maj=1.2km s-min=0.9km az=132.0 14 km SSE of Lavamnd*
*LJU **15** 02:16:50.1, 46°.54N×15°.04E, h10km, ML2.0*
*ISCJB **15** 02:16:50.3±0.3, 46°.54N±0°.02×15°.03E±0°.03, h6km±4km, Error ellipse: s-maj=3.8km s-min=2.8km az=34.2*
*PRU **15** 02:16:52.1, 46°.62N×14°.99E, h0km*

ISC 15 02:16:50.7±0.3, 46°.56N±0°.02×15°.02E±0°.03, h5km±4km, n55, σ0°93/80, 6C-17D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PERS	**Pernice**	**0.10**	**42**	⇓*i*Pg	**Pg**	**02 16 53.3**	**+0.5**
PERS				*i* Sg	**Sg**	**02 16 54.9**	**+0.7**
PERS							
	comp=Z,973nm,0.1s						
PERS	**Pernice**	**0.10**	**42**	Pg	**Pg**	**02 16 53.3**	**+0.5**
PERS				*i* Sg

JAVS	**Javornik**	**0.94 225**	*i* Pg	**Pg**	**02 17 08.0**	**-0.8**
VOY	**Vojsko**	**0.95 236**	*e*Sg	**Sg**	**02 17 22.3**	**+1.2**
CADS	**Cadrg**	**0.95 250**	*i* Pg	**Pg**	**02 17 08.2**	**-0.7**
CADS	**Cadrg**	**0.95 250**	*i* Pg	**Pg**	**02 17 08.2**	**-0.7**
VOJS	**Vojsko**	**0.95 236**	*i* Pg	**Pg**	**02 17 08.3**	**-0.6**
VOJS	**Vojsko**	**0.95 236**	*i* Pg	**Pg**	**02 17 08.4**	**-0.5**
DRE	**Drenchia**	**1.03 248**	⇓*i*Pg	**Pg**	**02 17 09.9**	**-0.5**
DRE			*i* Sg	**Sg**	**02 17 25.2**	**+1.4**
DRE	**Drenchia**	**1.03 248**	*i* Pg	**Pg**	**02 17 09.9**	**-0.6**
DRE			*i* Sg	**Sg**	**02 17 25.2**	**+1.4**
KNDS	**Knezji Dol**	**1.13 204**	*e*Pg	**Pg**	**02 17 11.9**	**-0.4**
KNDS	**Knezji Dol**	**1.13 204**	*e*Pg	**Pg**	**02 17 11.9**	**-0.4**
MOA	**Molln**	**1.39 338**	⇓*i*Pn	**Pn**	**02 17 16.7**	**0.0**
MOA			⇑*i*Pg	**Pg**	**02 17 17.7**	**+0.4**
	comp=Z,1.2nm,0.2s					
MOA			⇑*i*Sg	**Sg**	**02 17 37.3**	**+2.1**
	comp=Z,4.2nm,0.3s					
MOA	**Molln**	**1.39 338**	Pn	**Pn**	**02 17 16.7**	**0.0**
CONA	**Conrad Observa**	**1.48 22**	⇓*i*Pn	**Pn**	**02 17 17.5**	**-0.5**
CONA			⇑*i*Pg	**Pg**	**02 17 19.0**	**-0.1**
	comp=Z,1.7nm,0.3s					
CONA			⇓*i*Sn	**Sn**	**02 17 38.4**	**+0.7**
CONA			⇓*i*Sg	**Sg**	**02 17 40.3**	**+2.0**
	comp=Z,3.8nm,0.3s					
CONA	**Conrad Observa**	**1.48 22**	Pn	**Pn**	**02 17 17.5**	**-0.5**
CONA	**Conrad Observa**	**1.48 22**	Pg	**Pg**	**02 17 19.0**	**-0.1**
	comp=Z,1.7nm,0.3s					
CONA			Sn	**Sn**	**02 17 38.4**	**+0.7**
CONA			Sg	**Sg**	**02 17 40.3**	**+2.0**
	comp=Z,3.8nm,0.3s					
NVLJ	**Novalja**	**2.00 183**	⇑*i*Pn	**Pn**	**02 17 27.2**	**+2.1**
NVLJ			Sn	**Sn**	**02 17 51.2**	**+0.7**
KHC	**Kasperske Hory**	**2.75 340**	*e*PG	**Pg**	**02 17 40.4**	**-2.9**
KHC			*e*SG	**Sg**	**02 18 16.7**	**-2.2**
KHC	**Kasperske Hory**	**2.75 340**	Pg	**Pg**	**02 17 40.4**	**-2.9**
KHC			Sg	**Sg**	**02 18 16.7**	**-2.2**
WET	**Wettzell**	**2.96 332**	Sg	**Sg**	**02 18 24.4**	**-1.3**
PRU	**Pruhonice**	**3.44 355**	*e*SG	**Sg**	**02 18 39.8**	**-1.4**
	comp=Z,3.7nm,0.6s					
PRU	**Pruhonice**	**3.44 355**	Sg	**Sg**	**02 18 39.8**	**-1.4**
	comp=Z,3.7nm,0.6s					
DPC	**Dobruska-Polom**	**3.89 12**	*e*SG	**Sg**	**02 18 53.2**	**-2.3**
DPC	**Dobruska-Polom**	**3.89 12**	Sg	**Sg**	**02 18 53.2**	**-2.3**

BJI 15 02:26:33.2, 35°.70N×81°.53E, h15km, ML3.6/4, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**5.83**	**312**	Pn	Pn	02 28 02.1	+3.1
KSH				Sn	Sn	02 29 10.5	+4.9
KSH				smax			
	comp=N,38nm,0.7s						
KSH				smax			
	comp=E,57nm,1.2s						

NEIC ***15*** *02:29:01.0, 37°.00N×29°.18E, h7km, MD3.3(ISK), After ISK.*
ISK ***15*** *02:29:01.3, 37°.01N×29°.17E, h6km, MD3.3*
IDC ***15*** *02:29:01.7±1.4, 36°.95N×29°.24E, h0km, mb2.9/1, mb1 3.5/6, mb1mx3.4/26, mbtmp3.4/6, ML3.4/4, Error ellipse: s-maj=22.8km s-min=19.7km az=17.0*
ISCJB ***15*** *02:29:01.9±0.4, 37°.03N±0°.02×29°.17E±0°.02, h4km±3km, Error ellipse: s-maj=3.4km s-min=2.4km az=166.9*
DDA ***15*** *02:29:01.1, 36°.99N×29°.19E, h24km±1km, Md3.5*
CSEM ***15*** *02:29:02.1±0.1, 37°.02N×29°.20E, h2km, MD3.3, Error ellipse: s-maj=3.3km s-min=2.4km az=171.0*
THE ***15*** *02:29:04.2, 37°.15N×29°.12E, h0km, ML3.8/3, Error ellipse: s-maj=1.5km s-min=0.9km az=148.0*

ISC 15 02:29:02.5±0.4, 37°.01N±0°.02×29°.18E±0°.02, h4km±3km, n138, σ1°.07/195, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.29**	**61**	PG	**Pg**	**02 29 07.4**	**-0.8**
GLHS				*e*SG	**Sg**	**02 29 12.8**	**+0.7**
GLHS	**Glhisar (BURDU**	**0.29**	**61**	*i* Pg	**Pg**	**02 29 07.4**	**-0.8**
GLHS				*e*Sg	**Sg**	**02 29 12.8**	**+0.7**
GOLH	**Golhisar**	**0.38**	**54**	*i* P	**Pg**	**02 29 09.1**	**-0.8**
GOLH				*i* S	**Sg**	**02 29 16.2**	**+1.4**
GOLH	**Golhisar**	**0.38**	**54**	*i* P	**Pg**	**02 29 09.1**	**-0.8**
GOLH				*i* S	**Sg**	**02 29 16.2**	**+1.4**
FETY	**Fethiye**	**0.38**	**191**	PG	**Pg**	**02 29 08.5**	**-1.4**
FETY				*e*SG	**Sg**	**02 29 14.9**	**0.0**
FETY	**Fethiye**	**0.38**	**191**	*i* Pg	**Pg**	**02 29 08.5**	**-1.4**
FETY				*e*Sg	**Sg**	**02 29 14.9**	**0.0**
TURN	**Turunc**	**0.48**	**253**	*i* P	**Pg**	**02 29 16.2**	**+4.4**
TURN				*i* S	**Sg**	**02 29 27.4**	**+9.4**
TURN	**Turunc**	**0.48**	**253**	*i* P	**Pg**	**02 29 16.2**	**+4.4**
ELL	**Elmali**	**0.64**	**114**	*e*PG	**Pg**	**02 29 13.6**	**-1.3**
ELL				*e*SG	**Sg**	**02 29 24.4**	**+1.2**
ELL	**Elmali**	**0.64**	**114**	*e*Pg	**Pg**	**02 29 13.6**	**-1.3**
ELL				*e*Sg	**Sg**	**02 29 24.4**	**+1.2**
DNZL	**Cakiroluk**	**0.69**	**351**	*i* P	**Pg**	**02 29 14.8**	**-0.9**
DNZL				*i* S	**Sg**	**02 29 25.9**	**+1.2**
DNZL	**Cakiroluk**	**0.69**	**351**	*i* P	**Pg**	**02 29 14.8**	**-0.9**
DNZL				*i* S	**Sg**	**02 29 25.9**	**+1.3**
YER	**Yerkesik**	**0.73**	**280**	*e*PG	**Pg**	**02 29 16.5**	**0.0**
YER	**Yerkesik**	**0.73**	**280**	*e*Pg	**Pg**	**02 29 16.5**	**0.0**
DENT	**Denizli**	**0.75**	**351**	*e*PG	**Pg**	**02 29 15.6**	**-1.3**
DENT	**Denizli**	**0.75**	**351**	*e*Pg	**Pg**	**02 29 15.6**	**-1.4**
AKAS	**Kas**	**0.85**	**156**	*i* P	**Pg**	**02 29 17.5**	**-1.3**
AKAS				*i* S	**Sg**	**02 29 35.0**	**+5.2**
AKAS	**Kas**	**0.85**	**156**	*i* P	**Pg**	**02 29 17.5**	**-1.3**
AKAS				*i* S	**Sg**	**02 29 35.0**	**+5.2**
KORT	**Korkueli**	**0.94**	**90**	*i* P	**Pg**	**02 29 18.7**	**-1.8**
KORT				*i* S	**Sg**	**02 29 35.3**	**+2.6**
KORT	**Korkueli**	**0.94**	**90**	*i* P	**Pg**	**02 29 18.7**	**-1.8**
KORT				*i* S	**Sg**	**02 29 35.3**	**+2.6**
MLSB	**Milas**	**1.16**	**285**	*e*PN	**Pn**	**02 29 24.1**	**-1.3**
MLSB	**Milas**	**1.16**	**285**	*e*Pn	**Pn**	**02 29 24.1**	**-1.3**
ARG	**Arkhangelos**	**1.16**	**227**	P	**Pg**	**02 29 23.8**	**-1.0**
ARG	**Arkhangelos**	**1.16**	**227**	P	**Pg**	**02 29 27.0**	**+2.2**
ARG	**Arkhangelos**	**1.16**	**227**	*e*P	**Pg**	**02 29 23.2**	**-1.6**
ARG	**Arkhangelos**	**1.16**	**227**	P	**Pg**	**02 29 23.8**	**-1.0**
ANTB	**Antalya**	**1.19**	**95**	*e*PN	**Pn**	**02 29 24.9**	**-1.0**
ANTB	**Antalya**	**1.19**	**95**	*e*Pn	**Pn**	**02 29 24.9**	**-1.0**
BCK	**Bucak**	**1.21**	**68**	*e*PN	**Pn**	**02 29 25.0**	**-1.3**
BCK	**Bucak**	**1.21**	**68**	*e*Pn	**Pn**	**02 29 25.0**	**-1.2**
AYDN	**Tasoluk**	**1.22**	**302**	*i* P	**Pg**	**02 29 25.4**	**-0.6**
AYDN				*i* S	**Sg**	**02 29 41.8**	**0.0**
AYDN	**Tasoluk**	**1.22**	**302**	*i* P	**Pg**	**02 29 25.4**	**-0.6**
AYDN				*i* S	**Sg**	**02 29 41.8**	**0.0**
DAT	**Datca**	**1.31**	**258**	*e*PN	**Pn**	**02 29 26.4**	**-1.3**
DAT	**Datca**	**1.31**	**258**	*e*Pn	**Pn**	**02 29 26.4**	**-1.2**
KHL	**Karahalli**	**1.34**	**12**	*e*PN	**Pn**	**02 29 26.6**	**-1.4**
KHL	**Karahalli**	**1.34**	**12**	*e*Pn	**Pn**	**02 29 26.6**	**-1.4**
ISP	**Isparta**	**1.34**	**52**	*e*PN	**Pn**	**02 29 27.8**	**-0.3**
ISP	**Isparta**	**1.34**	**52**	P	**Pn**	**02 29 28.6**	**+0.6**
ISP	**Isparta**	**1.34**	**52**	P	**Pn**	**02 29 27.6**	**-0.4**
ISP				S	**Sg**	**02 29 47.0**	**+1.3**
ISP	**Isparta**	**1.34**	**52**	*e*Pn	**Pn**	**02 29 27.8**	**-0.2**
ISP				S	**Sg**	**02 29 47.0**	**+1.3**
KHAL	**Karahalli**	**1.38**	**10**	*i* P	**Pn**	**02 29 27.0**	**-1.5**
KHAL				*i* S	**Sg**	**02 29 48.7**	**+1.8**
KHAL	**Karahalli**	**1.38**	**10**	*i* P	**Pn**	**02 29 27.0**	**-1.5**
KHAL				*i* S	**Sg**	**02 29 48.7**	**+1.8**
BDRM	**Kayabasi**	**1.39**	**273**	*i* P	**Pn**	**02 29 27.9**	**-0.7**
BDRM				*i* S	**Sg**	**02 29 48.4**	**+1.2**
BDRM	**Kayabasi**	**1.39**	**273**	*i* P	**Pn**	**02 29 27.9**	**-0.7**
BDRM				*i* S	**Sg**	**02 29 48.4**	**+1.2**
SUTC	**Sutluce-Ispart**	**1.53**	**72**	*e*PN	**Pn**	**02 29 30.2**	**-0.3**
SUTC	**Sutluce-Ispart**	**1.53**	**72**	*e*Pn	**Pn**	**02 29 30.2**	**-0.3**
NIS1	**Nisyros Isl.**	**1.66**	**256**	P	**Pn**	**02 29 33.0**	**+0.7**
NIS1				S	**Sn**	**02 29 55.0**	**+1.0**
NIS1	**Nisyros Isl.**	**1.66**	**256**	P	**Pn**	**02 29 33.0**	**+0.7**
NIS1				S	**Sn**	**02 29 55.0**	**+1.0**
GCAM	**G?zelcaml?**	**1.69**	**295**	*i* P	**Pn**	**02 29 32.8**	**0.0**
GCAM				*i* S	**Sn**	**02 29 54.3**	**-0.7**
GCAM	**G?zelcaml?**	**1.69**	**295**	*i* P	**Pn**	**02 29 32.8**	**-0.1**
GCAM				*i* S	**Sn**	**02 29 54.3**	**-0.7**
SHUT	**Suhut-Afyon**	**1.88**	**35**	*e*PN	**Pn**	**02 29 35.2**	**-0.2**
SHUT	**Suhut-Afyon**	**1.88**	**35**	*e*Pn	**Pn**	**02 29 35.3**	**-0.2**
SMG	**Samos**	**1.99**	**291**	P	**Pn**	**02 29 36.9**	**0.0**
SMG	**Samos**	**1.99**	**291**	*e*P	**Pn**	**02 29 36.4**	**-0.5**
SMG	**Samos**	**1.99**	**291**	P	**Pn**	**02 29 36.9**	**0.0**
IZM	**Izmir**	**2.06**	**313**	*e*PN	**Pn**	**02 29 37.7**	**-0.2**
KDAG	**Bornova**	**2.06**	**313**	*i* P	**Pn**	**02 29 37.7**	**-0.1**
KDAG				*i* S	**Sn**	**02 30 02.5**	**-1.4**
KDAG	**Bornova**	**2.06**	**313**	*i* P	**Pn**	**02 29 37.7**	**-0.1**
KDAG				*i* S	**Sn**	**02 30 02.5**	**-1.4**
AKHS	**Akhisar**	**2.15**	**330**	*i* P	**Pn**	**02 29 38.6**	**-0.6**
AKHS				*i* S	**Sn**	**02 30 06.8**	**+0.5**
AKHS	**Akhisar**	**2.15**	**330**	*i* P	**Pn**	**02 29 38.6**	**-0.6**
AKHS				*i* S	**Sn**	**02 30 06.8**	**+0.5**
AKS	**Akhisar**	**2.15**	**330**	*e*PN	**Pn**	**02 29 38.3**	**-0.9**
AKS	**Akhisar**	**2.15**	**330**	*e*Pn	**Pn**	**02 29 38.3**	**-0.9**
ALT	**Altintas**	**2.17**	**20**	*e*PN	**Pn**	**02 29 38.5**	**-0.8**
ALT	**Altintas**	**2.17**	**20**	*e*Pn	**Pn**	**02 29 38.6**	**-0.8**
BLCB	**Balcova**	**2.18**	**310**	*e*PN	**Pn**	**02 29 39.1**	**-0.4**
BLCB	**Balcova**	**2.18**	**310**	P	**Pn**	**02 29 38.9**	**-0.6**
BLCB				S	**Sn**	**02 30 04.8**	**-2.1**
BLCB	**Balcova**	**2.18**	**310**	*e*Pn	**Pn**	**02 29 39.1**	**-0.4**
BLCB				S	**Sn**	**02 30 04.8**	**-2.1**
KARP	**Karpathos**	**2.19**	**229**	P	**Pn**	**02 29 41.5**	**+1.8**
KARP	**Karpathos**	**2.19**	**229**	*e*P	**Pn**	**02 29 40.1**	**+0.4**
KARP	**Karpathos**	**2.19**	**229**	P	**Pn**	**02 29 41.5**	**+1.8**
BOLV	**Bolvadin**	**2.21**	**39**	*i* P	**Pn**	**02 29 40.6**	**+0.7**
BOLV				*i* S	**Sn**	**02 30 08.5**	**+0.9**
BOLV	**Bolvadin**	**2.21**	**39**	*i* P	**Pn**	**02 29 40.6**	**+0.7**
BOLV				*i* S	**Sn**	**02 30 08.5**	**+0.9**
URLA	**Izmir**	**2.45**	**304**	*i* P	**Pn**	**02 29 42.7**	**-0.6**
URLA				*i* S	**Sn**	**02 30 14.4**	**+0.7**
URLA	**Izmir**	**2.45**	**304**	*i* P	**Pn**	**02 29 42.7**	**-0.6**
URLA				*i* S	**Sn**	**02 30 14.4**	**+0.8**
GAZI	**Gazipasa**	**2.64**	**106**	*i* P	**Pn**	**02 29 46.3**	**+0.4**
GAZI				*i* S	**Sn**	**02 30 21.5**	**+3.2**
GAZI	**Gazipasa**	**2.64**	**106**	*i* P	**Pn**	**02 29 46.3**	**+0.4**
GAZI				*i* S	**Sn**	**02 30 21.5**	**+3.2**
HDMB	**Hadim**	**2.65**	**90**	*e*PN	**Pn**	**02 29 45.5**	**-0.5**
HDMB	**Hadim**	**2.65**	**90**	*e*Pn	**Pn**	**02 29 45.5**	**-0.5**
KONT	**Konya--Tatoy**	**2.70**	**69**	*e*PN	**Pn**	**02 29 46.4**	**-0.3**
KONT	**Konya--Tatoy**	**2.70**	**69**	*e*Pn	**Pn**	**02 29 46.4**	**-0.3**
KDHN	**Kadinhani**	**2.77**	**56**	*i* P	**Pn**	**02 29 48.1**	**+0.4**
KDHN				*i* S	**Sn**	**02 30 21.1**	**-0.5**
KDHN	**Kadinhani**	**2.77**	**56**	*i* P	**Pn**	**02 29 48.1**	**+0.4**
KDHN				*i* S	**Sn**	**02 30 21.0**	**-0.6**
LADK	**Ladik-KONYA**	**2.79**	**64**	*e*PN	**Pn**	**02 29 47.8**	**-0.2**
LADK	**Ladik-KONYA**	**2.79**	**64**	*e*Pn	**Pn**	**02 29 47.8**	**-0.2**
ESKT	**Eskisehir**	**2.83**	**27**	*e*PN	**Pn**	**02 29 48.7**	**+0.2**
ESKT	**Eskisehir**	**2.83**	**27**	*e*Pn	**Pn**	**02 29 48.7**	**+0.2**
CHOS	**Chios island**	**2.83**	**300**	P	**Pn**	**02 29 48.6**	**+0.1**
CHOS				S	**Sn**	**02 30 22.3**	**-0.7**
CHOS	**Chios island**	**2.83**	**300**	*e*P	**Pn**	**02 29 48.8**	**+0.3**
CHOS	**Chios island**	**2.83**	**300**	P	**Pn**	**02 29 48.6**	**+0.1**
CHOS				S	**Sn**	**02 30 22.3**	**-0.7**
KIZT	**Kizilcal**	**2.84**	**48**	*e*PN	**Pn**	**02 29 48.6**	**+0.1**
KIZT	**Kizilcal**	**2.84**	**48**	*e*Pn	**Pn**	**02 29 48.7**	**+0.1**
APE	**Apeiranthos**	**2.92**	**272**	P	**Pn**	**02 29 49.8**	**+0.1**
APE				S	**Sn**	**02 30 25.6**	**+0.4**
APE	**Apeiranthos**	**2.92**	**272**	*e*P	**Pn**	**02 29 49.8**	**+0.1**
APE	**Apeiranthos**	**2.92**	**272**	P	**Pn**	**02 29 49.8**	**+0.1**
APE				S	**Sn**	**02 30 25.6**	**+0.4**
ERMK	**Ermenek**	**3.02**	**96**	*e*P	**Pn**	**02 29 55.8**	**+4.7**
ERMK				*i* S	**Sn**	**02 30 35.1**	**+7.5**
ERMK	**Ermenek**	**3.02**	**96**	*e*P	**Pn**	**02 29 55.8**	**+4.7**
ZKR	**Zakros**	**3.06**	**233**	P	**Pn**	**02 29 53.0**	**+1.4**
ZKR				S	**Sn**	**02 30 31.8**	**+3.2**
ZKR	**Zakros**	**3.06**	**233**	*e*P	**Pn**	**02 29 52.9**	**+1.3**
ZKR	**Zakros**	**3.06**	**233**	P	**Pn**	**02 29 53.0**	**+1.4**
ZKR				S	**Sn**	**02 30 31.8**	**+3.2**
PRK	**Paraskevi**	**3.20**	**315**	P	**Pn**	**02 29 53.0**	**-0.5**
PRK				S	**Sn**	**02 30 30.2**	**-1.9**
PRK	**Paraskevi**	**3.20**	**315**	*e*P	**Pn**	**02 29 53.8**	**+0.3**
PRK	**Paraskevi**	**3.20**	**315**	P	**Pn**	**02 29 53.0**	**-0.5**
PRK				S	**Sn**	**02 30 30.2**	**-1.9**
NPS	**Neapolis**	**3.37**	**240**	P	**Pn**	**02 29 57.0**	**+1.1**
NPS	**Neapolis**	**3.37**	**240**	*e*P	**Pn**	**02 29 56.4**	**+0.5**
NPS	**Neapolis**	**3.37**	**240**	P	**Pn**	**02 29 57.0**	**+1.1**
LAST	**Lasithi**	**3.52**	**239**	P	**Pn**	**02 29 58.6**	**+0.6**
LAST	**Lasithi**	**3.52**	**239**	*e*P	**Pn**	**02 29 57.7**	**-0.3**
LAST	**Lasithi**	**3.52**	**239**	P	**Pn**	**02 29 58.6**	**+0.6**
EZN	**Ezine**	**3.59**	**322**	*e*PN	**Pn**	**02 29 59.1**	**+0.2**
EZN	**Ezine**	**3.59**	**322**	*e*Pn	**Pn**	**02 29 59.1**	**+0.1**
IDI	**Anoyia**	**3.87**	**245**	Pn	**Pn**	**02 30 03.4**	**+0.6**
	3.6nm,0.3s,baz=61,slow=15,SNR=18						
IDI				Sn	**Sn**	**02 30 49.5**	**+0.8**
	7.7nm,0.3s,baz=38,slow=14,SNR=7.5						
IDI	**Anoyia**	**3.87**	**245**	*e*P	**Pn**	**02 30 03.2**	**+0.4**
IDI	**Anoyia**	**3.87**	**245**	Pn	**Pn**	**02 30 03.4**	**+0.6**
IDI				Sn	**Sn**	**02 30 49.5**	**+0.8**
SIVA	**Sivas**	**4.06**	**242**	P	**Pn**	**02 30 06.6**	**+1.2**
SIVA	**Sivas**	**4.06**	**242**	*e*P	**Pn**	**02 30 06.3**	**+0.9**
SIVA	**Sivas**	**4.06**	**242**	P	**Pn**	**02 30 06.6**	**+1.2**
LIA	**Limnos Island**	**4.26**	**314**	P	**Pn**	**02 30 10.1**	**+2.0**
LIA	**Limnos Island**	**4.26**	**314**	*e*P	**Pn**	**02 30 08.8**	**+0.7**
LIA	**Limnos Island**	**4.26**	**314**	P	**Pn**	**02 30 10.1**	**+2.0**
VAM	**Vamos**	**4.33**	**250**	*e*P	**Pn**	**02 30 10.9**	**+1.8**
BR131	**Keskin Array S**	**4.43**	**51**	*e*Pn	**Pn**	**02 30 11.1**	**+0.7**
BR131				*e*Sn	**Sn**	**02 31 02.9**	**+0.4**
BR131	**Keskin Array S**	**4.43**	**51**	*e*Pn	**Pn**	**02 30 11.1**	**+0.6**
BR131				*e*Sn	**Sn**	**02 31 02.9**	**+0.4**
BRTR	**Keskin Array B**	**4.43**	**51**	Pn	**Pn**	**02 30 11.2**	**+0.7**
	0.7nm,0.3s,baz=232,slow=17,SNR=41						
BRTR				Sn	**Sn**	**02 31 04.1**	**+1.7**
	0.7nm,0.3s,baz=223,slow=25,SNR=11						
BRTR	**Keskin Array B**	**4.43**	**51**	Pn	**Pn**	**02 30 11.1**	**+0.6**
BRTR				Sn	**Sn**	**02 31 04.1**	**+1.6**
KARN	**Karanos**	**4.55**	**251**	*e*P	**Pn**	**02 30 13.6**	**+1.5**
ALN	**Alexandroupoli**	**4.58**	**329**	*e*P	**Pn**	**02 30 12.6**	**0.0**
NVR	**Nevrokopi**	**5.98**	**318**	P	**Pn**	**02 30 33.5**	**+1.7**
NVR	**Nevrokopi**	**5.98**	**318**	*e*P	**Pn**	**02 30 31.6**	**-0.2**
NVR	**Nevrokopi**	**5.98**	**318**	P	**Pn**	**02 30 33.5**	**+1.7**
MMAI	**Mount Meron Ar**	**6.48**	**126**	Pn	**Pn**	**02 30 37.6**	**-1.1**
	1.7nm,0.3s,baz=310,slow=12,SNR=8.6						
MMAI				Sn	**Sn**	**02 31 50.2**	**-2.7**
	0.6nm,0.3s,baz=299,slow=21,SNR=2.0						
EIL	**Elat**	**8.77**	**145**	Pn	**Pn**	**02 31 08.4**	**-1.7**
	0.4nm,0.3s,baz=4.4,slow=13,SNR=3.3						
EIL	**Elat**	**8.77**	**145**	Pn	**Pn**	**02 31 08.4**	**-1.7**
MLR	**Muntele Rosu**	**8.81**	**345**	Pn	**Pn**	**02 31 12.2**	**+1.6**
	baz=165,slow=16						
MLR	**Muntele Rosu**	**8.81**	**345**	Pn	**Pn**	**02 31 12.2**	**+1.6**
BUR08	**Bucovina Ar. S**	**11.02**	**346**	*e*Pn	**Pn**	**02 31 41.0**	**+1.0**
GERES	**GERESS Array B**	**16.34**	**321**	Pn	**Pn**	**02 32 58.6**	**+5.9**
	0.0nm,0.3s,baz=140,slow=11,SNR=3.5						
ESDC	**Sonseca Array**	**26.05**	**286**	P	**P**	**02 34 37.4**	**+0.6**
	0.3nm,0.6s,baz=76,slow=10,SNR=5.3						
ESDC	**Sonseca Array**	**26.05**	**286**	P	**P**	**02 34 37.4**	**+0.6**

IDC ***15*** *02:29:28.0±4.7, 17°.69S×179°.89W, h614km±55km, mb3.2/7, mb1 3.5/7, mb1mx3.3/16, mbtmp3.2/7, Error ellipse: s-maj=42.0km s-min=23.0km az=146.0*
NEIC ***15*** *02:29:28.1±0.9, 17°.68S×179°.92W, h618km±8km, mb3.8/2, Error ellipse: s-maj=39.5km s-min=12.4km az=152.0*
ISCJB ***15*** *02:29:28.3±1.1, 17°.7S±0°.4×180°.0E±0°.2, h638km±8km, mb3.6/9, Error ellipse: s-maj=61.8km s-min=18.8km az=152.3*

ISC 15 02:29:28.9±1.2, 17°.7S±0°.4×179°.9W±0°.2, h627km±8km, n15, σ0°.63/12, mb3.7/9, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**1.93**	**270**	*e*P	**P**	**02 30 43.9**	**-1.4**
MSVF				*e*S	**S**	**02 31 48.5**	**+0.9**
STKA	**Stephens Creek**	**37.45**	**241**	P	**P**	**02 35 52.2**	**+0.9**
	2.3nm,0.4s,mb4.0,baz=87,slow=12,SNR=12						
STKA	**Stephens Creek**	**37.45**	**241**	P	**P**	**02 35 52.2**	**+0.9**
WRAB	**Tennant Creek**	**43.23**	**260**	*e*P	**P**	**02 36 36.7**	**-0.4**
	1.9nm,0.6s,mb3.8						
WRA	**Warramunga Arr**	**43.24**	**260**	P	**P**	**02 36 37.0**	**-0.3**
	2.1nm,0.7s,mb3.8,baz=95,slow=7.8,SNR=8.9						
WRA				PcP	PcP	02 38 11.4	-0.3
	0.3nm,0.4s,baz=88,slow=3.1,SNR=2.5						
ASAR	**Alice Springs**	**43.45**	**254**	P	**P**	**02 36 38.8**	**0.0**
	16nm,0.6s,mb4.7,baz=88,slow=8.1,SNR=224						
ASAR				PcP	PcP	02 38 12.7	+0.3
	0.7nm,0.6s,baz=102,slow=4.0,SNR=4.4						
MBWA	**Marble Bar**	**56.71**	**256**	*e*P	**P**	**02 38 14.8**	**-0.4**
	4.3nm,0.7s,mb3.8						
MJAR	**Matsushiro Arr**	**66.91**	**324**	P	**P**	**02 39 21.0**	**+0.3**
	0.6nm,0.5s,mb3.2,baz=169,slow=6.3,SNR=4.0						
NVAR	**Mina Array Bea**	**80.31**	**45**	P	**P**	**02 40 36.4**	**+0.1**
	1.0nm,0.8s,mb3.2,baz=224,slow=6.3,SNR=5.8						
TXAR	**Lajitas Array**	**87.13**	**58**	P	**P**	**02 41 10.5**	**+0.5**
	0.9nm,1.0s,mb3.5,baz=215,slow=5.8,SNR=7.6						
PDAR	**Pinedale Array**	**88.22**	**44**	P	**P**	**02 41 14.5**	**-0.3**
	0.3nm,0.5s,mb3.3,baz=245,slow=1.9,SNR=3.8						
BRTR	**Keskin Array B**	**143.63**	**314**	PKP	PKPdf	02 47 53.3	-0.6
	0.6nm,0.6s,baz=122,slow=2.9,SNR=6.4						
MMAI	**Mount Meron Ar**	**144.83**	**302**	PKP	PKPdf	02 47 58.0	+1.8
	1.8nm,0.5s,baz=79,slow=5.3,SNR=4.9						
CLL	**Collm**	**144.96**	**346**	⇓*i*PKPbc	PKPdf	02 47 56.8	+1.0
	comp=Z,5.0nm,1.0s						
GERES	**GERESS Array B**	**147.05**	**343**	PKPbc	PKPbc	02 48 02.6	0.0
	comp=Z,0.6nm,0.6s,baz=12,slow=2.5,SNR=7.6						

ISCJB ***15*** *02:57:55.6±0.8, 23°.97S±0°.05×66°.8W±0°.1, h194km±8km, mb3.7/19, Error ellipse: s-maj=15.3km s-min=8.6km az=176.4*
NEIC ***15*** *02:57:56.5±0.7, 23°.95S×66°.80W, h188km±7km, mb3.9/13, Error ellipse: s-maj=10.2km s-min=7.1km az=93.0*
IDC ***15*** *02:57:56.3±1.6, 23°.92S×66°.82W, h184km±15km, mb3.4/7, mb1 3.6/11, mb1mx3.5/18, mbtmp3.4/11, Error ellipse: s-maj=20.6km s-min=12.6km az=82.0*

ISC 15 02:57:56.3±0.8, 23°.96S±0°.05×66°.8W±0°.1, h184km±8km, n31, σ0°.81/28, mb3.8/19, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**6.12**	**214**	*e*Pn	**Pn**	**02 59 25.0**	**0.0**
CFAA	**Coronel Fontan**	**7.72**	**189**	P	**Pn**	**02 59 45.6**	**-0.3**
	0.1nm,0.3s,baz=5.7,slow=12,SNR=17						
CFAA				S	**Sn**	**03 01 06.4**	**-6.4**
	0.4nm,0.3s,baz=276,slow=20,SNR=19						
LPAZ	**La Paz**	**7.73**	**351**	P	**Pn**	**02 59 47.7**	**+1.6**
	1.0nm,0.3s,baz=154,slow=9.5,SNR=24						
LPAZ				S	**Sn**	**03 01 12.7**	**-0.4**
	0.4nm,0.3s,baz=63,slow=24,SNR=8.3						
CPUP	**Villa Florida**	**8.91**	**107**	P	**Pn**	**03 00 01.6**	**+0.1**
	0.8nm,0.3s,baz=270,slow=11,SNR=13						
SIV	**San Ignacio**	**9.58**	**35**	P	**Pn**	**03 00 10.0**	**-0.4**
	0.5nm,0.3s,baz=228,slow=13,SNR=12						
PLCA	**Paso Flores**	**17.02**	**190**	P	**Pn**	**03 01 42.4**	**-1.1**
	0.1nm,0.3s,baz=31,slow=12,SNR=3.1						
PLCA	**Pa

DAT	Datca	1.67	4	ePN	Pb	03 00 17.5	-2.0
DAT				eSN	Sb	03 00 36.6	-3.5
DAT	Datca	1.67	4	ePn	Pb	03 00 17.5	-2.0
DAT				eSn	Sb	03 00 36.6	-3.5
BDRM	Kayabasi	2.01	360	iP	Pb	03 00 21.8	-3.4
BDRM				iS	Sb	03 00 47.0	-2.6
BDRM	Kayabasi	2.01	360	iP	Pb	03 00 21.8	-3.4
BDRM				iS	Sb	03 00 47.0	-2.7
TURN	Turunc	2.04	27	iP	Pn	03 00 20.1	-2.1
TURN				iS	Sn	03 00 45.2	-1.9
TURN	Turunc	2.04	27	iP	Pn	03 00 20.1	-2.2
TURN				iS	Sn	03 00 45.2	-1.8
KSL	Kastellorizon	2.06	57	ePn	Pb	03 00 23.6	-2.4
KSL	Kastellorizon	2.06	57	ePN	Pb	03 00 23.6	-2.4
THR1	Thera Island	2.08	310	P	Pn	03 00 22.8	0.0
THR1	Thera Island	2.08	310	P	Pn	03 00 22.8	0.0
IDI	Anoyia	2.11	277	Pn	Pb	03 00 25.0	-1.9
	66nm,0.3s,baz=93,slow=14,SNR=75						
IDI				Sn	Sb	03 00 54.3	+1.8
	70nm,0.3s,baz=326,slow=24,SNR=7.2						
IDI	Anoyia	2.11	277	ePn	Pb	03 00 25.4	-1.5
IDI				eSn	Sb	03 00 52.2	-0.4
IDI	Anoyia	2.11	277	ePN	Pb	03 00 25.4	-1.5
IDI				eSN	Sb	03 00 52.2	-0.4
IDI	Anoyia	2.11	277	ePn	Pb	03 00 25.4	-1.5
IDI				eSn	Sb	03 00 52.2	-0.4
AKAS	Kas	2.12	56	iP	Pb	03 00 24.3	-2.7
AKAS	Kas	2.12	56	iP	Pb	03 00 24.3	-2.7
THR3	Thira Island,	2.14	310	P	Pn	03 00 24.1	+0.4
THR3	Thira Island,	2.14	310	P	Pn	03 00 24.1	+0.4
THR2	Thira island,	2.15	311	P	Pn	03 00 24.2	+0.5
THR2	Thira island,	2.15	311	P	Pn	03 00 24.2	+0.5
SIVA	Sivas	2.16	270	ePn	Pb	03 00 26.7	-1.1
SIVA	Sivas	2.16	270	P	Pb	03 00 26.4	-1.4
SIVA				S	Sb	03 00 53.7	-0.5
SIVA	Sivas	2.16	270	ePN	Pb	03 00 26.7	-1.1
SIVA	Sivas	2.16	270	P	Pb	03 00 26.4	-1.4
SIVA	Sivas	2.16	270	ePn	Pb	03 00 26.7	-1.1
SIVA				S	Sb	03 00 53.7	-0.5
THR5	Thira Island,	2.18	309	P	Pn	03 00 24.6	+0.4
THR5	Thira Island,	2.18	309	P	Pn	03 00 24.6	+0.4
YER	Yerkesik	2.18	18	ePN	Pn	03 00 24.8	+0.6
YER	Yerkesik	2.18	18	ePn	Pn	03 00 24.8	+0.6
MLSB	Milas	2.25	7	ePN	Pn	03 00 25.3	+0.1
MLSB				eSN	Sn	03 00 51.7	-0.5
MLSB	Milas	2.25	7	ePn	Pn	03 00 25.3	+0.1
MLSB				eSn	Sn	03 00 51.7	-0.5
APE	Apeiranthos	2.54	323	eP	Pn	03 00 29.5	+0.4
APE	Apeiranthos	2.54	323	P	Pn	03 00 29.0	-0.1
APE				S	Sn	03 00 58.8	-0.5
APE	Apeiranthos	2.54	323	ePN	Pn	03 00 29.5	+0.4
APE	Apeiranthos	2.54	323	P	Pn	03 00 29.0	-0.1
APE	Apeiranthos	2.54	323	ePn	Pn	03 00 29.5	+0.4
APE				S	Sn	03 00 58.8	-0.5
ELL	Elmali	2.62	49	ePN	Pn	03 00 31.0	+0.8
ELL	Elmali	2.62	49	ePn	Pn	03 00 31.0	+0.8
AYDN	Tasoluk	2.62	8	iP	Pn	03 00 30.7	+0.5
AYDN				iS	Sn	03 01 04.5	+3.1
AYDN	Tasoluk	2.62	8	iP	Pn	03 00 30.7	+0.4
AYDN				iS	Sn	03 01 04.4	+3.0
GCAM	G?zelcaml?	2.65	356	eP	Pn	03 00 31.1	+0.5
GCAM				iS	Sn	03 01 02.1	+0.2
GCAM	G?zelcaml?	2.65	356	eP	Pn	03 00 31.1	+0.5
GCAM				iS	Sn	03 01 02.1	+0.2
GLHS	Glhisar (BURDU	2.68	38	ePN	Pn	03 00 31.7	+0.7
GLHS	Glhisar (BURDU	2.68	38	ePn	Pn	03 00 31.7	+0.7
VAM	Vamos	2.68	278	P	Pn	03 00 34.8	+3.8
VAM	Vamos	2.68	278	ePB	Pb	03 00 34.0	-2.6
VAM	Vamos	2.68	278	ePb	Pb	03 00 34.0	-2.6
VAM	Vamos	2.68	278	P	Pn	03 00 34.8	+3.8
SMG	Samos	2.69	350	ePn	Pn	03 00 31.6	+0.4
SMG				eSn	Sn	03 01 04.6	+1.5
SMG	Samos	2.69	350	ePN	Pn	03 00 31.6	+0.4
SMG				eSN	Sn	03 01 04.6	+1.5
SMG	Samos	2.69	350	ePn	Pn	03 00 31.6	+0.4
SMG				eSn	Sn	03 01 04.6	+1.5
GVD	Gavdhos	2.77	266	ePn	Pn	03 00 28.6	-3.7
GVD	Gavdhos	2.77	266	ePn	Pn	03 00 28.5	-3.7
GOLH	Golhisar	2.77	38	iP	Pn	03 00 33.9	+1.7
GOLH				iS	Sx	03 01 19.5	
GOLH	Golhisar	2.77	38	iP	Pn	03 00 33.9	+1.6
KARN	Karanos	2.91	278	P	Pn	03 00 36.5	+2.3
KARN	Karanos	2.91	278	ePB	Pb	03 00 37.3	-3.2
KARN	Karanos	2.91	278	P	Pn	03 00 36.5	+2.3
KARN	Karanos	2.91	278	ePb	Pb	03 00 37.3	-3.2
DNZL	Cakiroluk	2.93	26	iP	Pn	03 00 34.8	+0.4
DNZL				iS	Sb	03 01 15.5	-0.7
DNZL	Cakiroluk	2.93	26	iP	Pn	03 00 34.8	+0.3
DENT	Denizli	2.98	25	ePN	Pn	03 00 35.4	+0.2
DENT	Denizli	2.98	25	ePn	Pn	03 00 35.4	+0.2
KORT	Korkueli	3.05	50	iP	Pn	03 00 39.8	+3.6
KORT				iS	Sb	03 01 18.8	-1.0
KORT	Korkueli	3.05	50	iP	Pn	03 00 39.8	+3.6
ANTB	Antalya	3.19	54	ePN	Pn	03 00 38.4	+0.4
ANTB	Antalya	3.19	54	ePn	Pn	03 00 38.4	+0.4
BLCB	Balcova	3.34	355	ePN	Pn	03 00 40.2	+0.1
BLCB	Balcova	3.34	355	P	Pn	03 00 40.2	+0.1
BLCB	Balcova	3.34	355	P	Pn	03 00 40.2	+0.1
IZM	Izmir	3.34	358	ePN	Pn	03 00 40.7	+0.6
IZM	Izmir	3.34	358	ePn	Pn	03 00 40.7	+0.6
URLA	Izmir	3.37	349	iP	Pn	03 00 40.5	0.0
URLA				iS	Sb	03 01 32.6	+3.7
URLA	Izmir	3.37	349	iP	Pn	03 00 40.5	0.0
BCK	Bucak	3.50	46	ePN	Pn	03 00 43.7	+1.4
BCK	Bucak	3.50	46	ePn	Pn	03 00 43.7	+1.4
CHOS	Chios island	3.51	342	P	Pn	03 00 42.6	+0.2
CHOS				S	Sn	03 01 22.5	-0.7
CHOS	Chios island	3.51	342	ePN	Pn	03 00 42.9	+0.5
CHOS	Chios island	3.51	342	P	Pn	03 00 42.6	+0.2
CHOS	Chios island	3.51	342	ePn	Pn	03 00 42.9	+0.5
CHOS				S	Sn	03 01 22.5	-0.7
KHL	Karahalli	3.66	27	ePN	Pn	03 00 44.8	+0.2
KHL	Karahalli	3.66	27	ePn	Pn	03 00 44.8	+0.2
KHAL	Karahalli	3.69	26	iP	Pn	03 00 44.9	-0.1
KHAL				iS	Sb	03 01 35.6	-2.7
KHAL	Karahalli	3.69	26	iP	Pn	03 00 44.9	-0.1
ISP	Isparta	3.71	41	ePN	Pn	03 00 46.5	+1.2
ISP	Isparta	3.71	41	P	Px	03 01 01.2	
ISP	Isparta	3.71	41	P	Pn	03 00 46.2	+1.0
ISP	Isparta	3.71	41	P	Pn	03 00 46.2	+1.0
ISP	Isparta	3.71	41	ePn	Pn	03 00 46.5	+1.3
SUTC	Sutluce-Ispart	3.75	49	ePN	Pn	03 00 47.1	+1.3
SUTC	Sutluce-Ispart	3.75	49	ePn	Pn	03 00 47.1	+1.3
KYTH	Kithira	3.79	290	ePn	Pn	03 00 47.5	+1.2
KYTH	Kithira	3.79	290	ePN	Pn	03 00 47.5	+1.2
KYTH	Kithira	3.79	290	ePn	Pn	03 00 47.5	+1.2
AKHS	Akhisar	3.83	4	iP	Pn	03 00 46.9	0.0
AKHS	Akhisar	3.83	4	iP	Pn	03 00 46.9	+0.1
AKS	Akhisar	3.83	4	ePN	Pn	03 00 47.1	+0.3
AKS	Akhisar	3.83	4	ePn	Pn	03 00 47.1	+0.3
VLI	Veliai	4.02	296	ePn	Pn	03 00 50.5	+1.1
VLI				eSn	Sn	03 01 36.9	+1.1
VLI	Veliai	4.02	296	ePN	Pn	03 00 50.5	+1.1
VLI				eSN	Sn	03 01 36.9	+1.1
VLI	Veliai	4.02	296	ePn	Pn	03 00 50.5	+1.1
VLI				eSn	Sn	03 01 36.9	+1.1
PPCY	Paphos	4.03	91	P	Pn	03 00 49.8	+0.2
PPCY	Paphos	4.03	91	P	Pn	03 00 49.8	+0.2
VLY	Voula,Athens	4.06	315	ePn	Pn	03 00 51.3	+1.3
VLY	Voula,Athens	4.06	315	ePN	Pn	03 00 51.3	+1.3
VLY	Voula,Athens	4.06	315	ePn	Pn	03 00 51.3	+1.3
DEMI	Demirci	4.11	14	iP	Pn	03 00 50.5	-0.1
DEMI				iS	Sn	03 01 35.4	-2.6
DEMI	Demirci	4.11	14	iP	Pn	03 00 50.5	-0.2
DEMI				iS	Sn	03 01 35.4	-2.6
GAZI	Gazipasa	4.14	72	iP	Pn	03 00 51.0	-0.1
GAZI				iS	Sn	03 01 37.8	-0.9
GAZI	Gazipasa	4.14	72	iP	Pn	03 00 51.0	-0.1
GAZI				iS	Sn	03 01 37.8	-0.9
ATHU	Athens Univers	4.14	316	P	Pn	03 00 52.3	+1.2
ATHU				S	Sn	03 01 37.6	-1.1
ATHU	Athens Univers	4.14	316	P	Pn	03 00 52.3	+1.2
ATHU				S	Sn	03 01 37.6	-1.1
PTL	Penteli	4.15	317	ePn	Pn	03 00 52.8	+1.5
PTL	Penteli	4.15	317	ePN	Pn	03 00 52.8	+1.5
PTL	Penteli	4.15	317	ePn	Pn	03 00 52.8	+1.5
NAIG	Nisos Aigina	4.18	311	ePn	Pn	03 00 53.0	+1.4
NAIG	Nisos Aigina	4.18	311	ePN	Pn	03 00 53.0	+1.4
NAIG	Nisos Aigina	4.18	311	ePn	Pn	03 00 53.0	+1.4
ATH	Athens Observa	4.18	315	eP	Pn	03 00 53.6	+1.9
ATH	Athens Observa	4.18	315	ePN	Pn	03 00 53.6	+1.9
ATH	Athens Observa	4.18	315	ePn	Pn	03 00 53.6	+1.9
LTBQ	Tobruq	4.20	226	iP	Pn	03 00 54.5	+2.6
	122nm,0.8s,SNR=100						
ALFC	Alevga	4.23	87	⇑P	Pn	03 00 52.3	0.0
	14nm,0.2s						
ALFC				S	Sn	03 01 41.5	+0.6
ALFC	Alevga	4.23	87	⇑iP	Pn	03 00 52.3	0.0
ALFC				S	Sn	03 01 41.5	+0.6
ALFC	Alevga	4.23	87	⇑iP	Pn	03 00 52.3	0.0
	14nm,0.2s						
ALFC				S	Sn	03 01 41.5	+0.6
PRK	Paraskevi	4.29	348	eP	Pn	03 00 53.7	+0.6
PRK	Paraskevi	4.29	348	P	Pn	03 00 53.9	+0.8
PRK				S	Sn	03 01 43.3	+0.9
PRK	Paraskevi	4.29	348	ePN	Pn	03 00 53.7	+0.6
PRK	Paraskevi	4.29	348	ePn	Pn	03 00 53.7	+0.6
PRK				S	Sn	03 01 43.3	+0.9
SHUT	Suhut-Afyon	4.29	35	ePN	Pn	03 00 54.2	+1.0
SHUT	Suhut-Afyon	4.29	35	ePn	Pn	03 00 54.2	+1.0
SIGR	SIGRI	4.34	343	P	Pn	03 00 54.1	+0.3
SIGR				S	Sn	03 01 44.2	+0.6
SIGR	SIGRI	4.34	343	P	Pn	03 00 54.1	+0.3
SIGR				S	Sn	03 01 44.2	+0.6
GDZ	Gediz	4.34	21	iP	Pn	03 00 53.9	0.0
GDZ	Gediz	4.34	21	iP	Pn	03 00 53.9	0.0
LEF	Lefka	4.47	88	ePN	Pn	03 00 55.7	+0.1
LEF	Lefka	4.47	88	ePn	Pn	03 00 55.7	+0.1
HDMB	Hadim	4.51	64	ePN	Pn	03 00 56.8	+0.6
HDMB	Hadim	4.51	64	ePn	Pn	03 00 56.8	+0.6
ALT	Altintas	4.53	27	ePN	Pn	03 00 56.3	-0.1
ALT	Altintas	4.53	27	ePn	Pn	03 00 56.3	-0.1
BALB	Balikesir	4.59	4	ePN	Pn	03 00 57.2	-0.1
BALB	Balikesir	4.59	4	ePn	Pn	03 00 57.2	-0.1
BOLV	Bolvadin	4.61	37	iP	Pn	03 00 58.7	+1.1
BOLV	Bolvadin	4.61	37	iP	Pn	03 00 58.7	+1.1
LTK	Loutraki	4.67	311	P	Pn	03 01 00.3	+2.0
LTK	Loutraki	4.67	311	ePN	Pn	03 01 00.3	+2.0
LTK	Loutraki	4.67	311	P	Pn	03 01 00.3	+2.0
VLX	Vlachokerasia	4.70	301	P	Pn	03 01 00.5	+1.7
VLX				S	Sn	03 01 53.1	+0.5
VLX	Vlachokerasia	4.70	301	ePN	Pn	03 01 01.0	+2.2
VLX	Vlachokerasia	4.70	301	P	Pn	03 01 00.5	+1.7
VLX	Vlachokerasia	4.70	301	ePn	Pn	03 01 01.0	+2.2
VLX				S	Sn	03 01 53.1	+0.5
ERMK	Ermenek	4.71	69	iP	Pn	03 01 01.7	+2.7
ERMK				iS	Sn	03 01 54.6	+1.6
ERMK	Ermenek	4.71	69	iP	Pn	03 01 01.7	+2.7
ERMK				iS	Sn	03 01 54.6	+1.6
MAMC	Mammari	4.73	87	P	Pn	03 00 59.4	+0.1
MAMC	Mammari	4.73	87	P	Pn	03 00 59.4	+0.1
CSS	Prodhromos	4.83	89	P	Pn	03 01 01.0	+0.4
CSS				S	Sn	03 01 55.6	-0.2
CSS	Prodhromos	4.83	89	P	Pn	03 01 01.0	+0.4
CSS				S	Sn	03 01 55.6	-0.2
EZN	Ezine	4.84	350	ePN	Pn	03 01 00.8	0.0
EZN	Ezine	4.84	350	ePn	Pn	03 01 00.8	0.0
KONT	Konya--Tatoy	4.90	53	ePN	Pn	03 01 02.8	+1.2
KONT	Konya--Tatoy	4.90	53	ePn	Pn	03 01 02.8	+1.3
ITM	Ithomi	4.94	297	ePn	Pn	03 01 03.7	+1.5
ITM	Ithomi	4.94	297	P	Pn	03 01 03.7	+1.5
ITM				S	Sn	03 02 01.1	+2.5
ITM	Ithomi	4.94	297	ePN	Pn	03 01 03.7	+1.5
ITM	Ithomi	4.94	297	P	Pn	03 01 03.7	+1.5
ITM				S	Sn	03 02 01.1	+2.5
PYL	PYLOS	4.98	293	P	Pn	03 01 03.5	+0.9
PYL				S	Sn	03 02 01.5	+2.1
PYL	PYLOS	4.98	293	ePN	Pn	03 01 03.2	+0.6
PYL	PYLOS	4.98	293	ePn	Pn	03 01 03.2	+0.6
PYL	PYLOS	4.98	293	P	Pn	03 01 03.5	+0.9
PYL				S	Sn	03 02 01.5	+2.1
LFK	Lefkose	4.99	86	ePN	Pn	03 01 03.8	+0.9
LFK	Lefkose	4.99	86	ePn	Pn	03 01 03.8	+1.0
AOS	Alonnisos	5.00	326	P	Pn	03 01 01.5	-1.4
AOS				S	Sn	03 02 00.2	+0.3
AOS	Alonnisos	5.00	326	P	Pn	03 01 01.5	-1.4
AOS				S	Sn	03 02 00.2	+0.3
GUR	Goura	5.02	306	P	Pn	03 01 04.8	+1.6
GUR				S	Sn	03 02 02.2	+1.8
GUR	Goura	5.02	306	ePN	Pn	03 01 04.9	+1.7
GUR	Goura	5.02	306	ePn	Pn	03 01 04.9	+1.7
GUR				S	Sn	03 02 02.2	+1.8
LADK	Ladik-KONYA	5.05	50	ePN	Pn	03 01 04.6	+1.0
LADK	Ladik-KONYA	5.05	50	ePn	Pn	03 01 04.6	+1.0
LKR	Lokris	5.06	316	ePn	Pn	03 01 05.1	+1.4
LKR	Lokris	5.06	316	P	Pn	03 01 05.0	+1.3
LKR	Lokris	5.06	316	ePN	Pn	03 01 05.1	+1.4
LKR	Lokris	5.06	316	P	Pn	03 01 05.0	+1.3
KDHN	Kadinhani	5.10	46	iP	Pn	03 01 05.6	+1.3
KDHN	Kadinhani	5.10	46	iP	Pn	03 01 05.6	+1.3
LIA	Limnos Island	5.16	340	⇑iPn	Pn	03 01 05.7	+0.6
LIA	Limnos Island	5.16	340	P	Pn	03 01 05.2	+0.1
LIA	Limnos Island	5.16	340	⇑iPn	Pn	03 01 05.7	+0.6
LIA	Limnos Island	5.16	340	P	Pn	03 01 05.2	+0.1
LIA	Limnos Island	5.16	340	⇑iPn	Pn	03 01 05.7	+0.6
DSF	Desfina	5.18	312	P	Pn	03 01 07.2	+1.8
DSF	Desfina	5.18	312	P	Pn	03 01 07.2	+1.8
KIZT	Kizilcal	5.21	42	ePN	Pn	03 01 07.0	+1.1
KIZT	Kizilcal	5.21	42	ePn	Pn	03 01 07.0	+1.1
IKL	Isikli	5.22	75	ePN	Pn	03 01 06.5	+0.6
IKL	Isikli	5.22	75	ePn	Pn	03 01 06.5	+0.6
ESKT	Eskisehir	5.22	30	ePN	Pn	03 01 05.8	-0.1
ESKT	Eskisehir	5.22	30	ePn	Pn	03 01 05.8	-0.1
GADA	Gvkgeada	5.27	347	ePN	Pn	03 01 07.0	+0.3
GADA	Gvkgeada	5.27	347	ePn	Pn	03 01 07.0	+0.3
EDC	Edincik	5.29	3	ePN	Pn	03 01 07.3	+0.4
EDC	Edincik	5.29	3	ePn	Pn	03 01 07.3	+0.4
BNT	Bandirma	5.30	4	ePN	Pn	03 01 07.0	-0.2
BNT	Bandirma	5.30	4	ePn	Pn	03 01 07.0	-0.1
PHNC	Paralimni	5.41	89	P	Pn	03 01 11.1	+2.6
	8.6nm,0.9s						
PHNC				S	Sn	03 02 13.9	+3.9
PHNC	Paralimni	5.41	89	P	Pn	03 01 11.1	+2.6
	8.6nm,0.9s						
PHNC				S	Sn	03 02 13.9	+3.9
KALE	Kalithea	5.41	310	P	Pn	03 01 10.3	+1.8
KALE	Kalithea	5.41	310	P	Pn	03 01 10.3	+1.8
NEO	Neokhori	5.42	323	ePn	Pn	03 01 10.3	+1.6
NEO	Neokhori	5.42	323	ePN	Pn	03 01 10.3	+1.6
NEO	Neokhori	5.42	323	ePn	Pn	03 01 10.3	+1.6
LAKA	Lakka	5.42	307	P	Pn	03 01 10.6	+1.9
LAKA	Lakka	5.42	307	P	Pn	03 01 10.6	+1.9
XOR	Xorichti	5.48	323	P	Pn	03 01 10.7	+1.2
XOR				S	Sn	03 02 11.4	-0.4
XOR	Xorichti	5.48	323	P	Pn	03 01 10.7	+1.2
XOR				S	Sn	03 02 11.4	-0.4
EREN	Erenkoy	5.52	83	ePN	Pn	03 01 10.1	0.0
EREN	Erenkoy	5.52	83	ePn	Pn	03 01 10.1	0.0
GEMT	Gemlik	5.54	14	ePN	Pn	03 01 11.0	+0.6
GEMT	Gemlik	5.54	14	ePn	Pn	03 01 11.0	+0.6
EFP	Efpalio	5.58	309	P	Pn	03 01 12.9	+2.0
EFP				S	Sn	03 02 14.3	+0.1
EFP	Efpalio	5.58	309	ePN	Pn	03 01 14.3	+3.4
EFP	Efpalio	5.58	309	P	Pn	03 01 12.9	+2.0
EFP	Efpalio	5.58	309	ePn	Pn	03 01 14.3	+3.4
EFP				S	Sn	03 02 14.3	+0.1
ARMT	Armutlu	5.61	11	ePN	Pn	03 01 11.5	+0.1
ARMT	Armutlu	5.61	11	ePn	Pn	03 01 11.5	+0.1
RKY	Sarkoy-Tekirda	5.63	358	ePN	Pn	03 01 11.5	0.0
RKY	Sarkoy-Tekirda	5.63	358	ePn	Pn	03 01 11.5	0.0
ADVT	Abdulvahap	5.67	18	ePN	Pn	03 01 12.9	+0.8
ADVT	Abdulvahap	5.67	18	ePn	Pn	03 01 12.9	+0.8
RLS	Riolos of Patr	5.67	304	ePn	Pn	03 01 14.4	+2.3
RLS	Riolos of Patr	5.67	304	ePN	Pn	03 01 14.4	+2.3
RLS	Riolos of Patr	5.67	304	ePn	Pn	03 01 14.4	+2.3
AGG	Agios Georgios	5.69	316	eP	Pn	03 01 15.1	+2.7
AGG	Agios Georgios	5.69	316	P	Pn	03 01 14.8	+2.4
AGG	Agios Georgios	5.69	316	ePN	Pn	03 01 15.1	+2.7
AGG	Agios Georgios	5.69	316	P	Pn	03 01 14.8	+2.4
AGG	Agios Georgios	5.69	316	ePn	Pn	03 01 15.1	+2.7
GPA	Golpazari	5.70	23	ePN	Pn	03 01 12.9	+0.4
GPA	Golpazari	5.70	23	ePn	Pn	03 01 12.9	+0.4
YLV	Yalova	5.71	15	ePN	Pn	03 01 12.6	-0.1
YLV	Yalova	5.71	15	ePn	Pn	03 01 12.6	-0.1
PAIG	Paliouri	5.71	330	P	Pn	03 01 13.5	+0.8
PAIG	Paliouri	5.71	330	P	Pn	03 01 13.5	+0.8
ENEZ	Enez	5.76	350	ePN	Pn	03 01 13.7	+0.3
ENEZ	Enez	5.76	350	ePn	Pn	03 01 13.7	+0.3
SULT	Sultanhani-AKS	5.80	56	eP	Pn	03 01 14.2	+0.3
SULT	Sultanhani-AKS	5.80	56	ePn	Pn	03 01 14.3	+0.3
GULT	Gulveren	5.89	23	ePN	Pn	03 01 14.7	-0.5
GULT	Gulveren	5.89	23	ePn	Pn	03 01 14.7	-0.5
EVR	Evrytania	5.93	312	ePn	Pn	03 01 19.8	+4.1
EVR	Evrytania	5.93	312	ePN	Pn	03 01 19.8	+4.1
EVR	Evrytania	5.93	312	ePn	Pn	03 01 19.8	+4.1
ALN	Alexandroupoli	5.94	350	eP	Pn	03 01 16.8	+1.0
ALN	Alexandroupoli	5.94	350	P	Pn	03 01 16.5	+0.7
ALN	Alexandroupoli	5.94	350	ePN	Pn	03 01 16.8	+1.0
ALN	Alexandroupoli	5.94	350	P	Pn	03 01 16.5	+0.7
ALN	Alexandroupoli	5.94	350	ePn	Pn	03 01 16.8	+1.0
OUR	Ouranopolis	5.94	334	P	Pn	03 01 18.4	+2.5
OUR	Ouranopolis	5.94	334	P	Pn	03 01 18.4	+2.5
CRLT	Corlu	6.07	2	ePN	Pn	03 01 17.5	-0.1
CRLT	Corlu	6.07	2	ePn	Pn	03 01 17.5	-0.1
ISK	Istanbul-Kandi	6.13	12	ePN	Pn	03 01 18.4	-0.1
ISK	Istanbul-Kandi	6.13	12	ePn	Pn	03 01 18.4	-0.1
MDU	Mudurnu	6.17	28	ePN	Pn	03 01 18.8	-0.2
MDU	Mudurnu	6.17	28	ePn	Pn	03 01 18.8	-0.2
PLG	Polygyros	6.18	330	eP	Pn	03 01 20.1	+0.9
PLG	Polygyros	6.18	330	P	Pn	03 01 21.1	+1.9
PLG	Polygyros	6.18	330	ePN	Pn	03 01 20.1	+0.9
PLG	Polygyros	6.18	330	ePn	Pn	03 01 20.1	+0.9
PLG	Polygyros	6.18	330	P	Pn	03 01 21.1	+1.9
SLVT	Silivri	6.19	5	ePN	Pn	03 01 19.6	+0.3
SLVT	Silivri	6.19	5	ePn	Pn	03 01 19.6	+0.3
CTKS	Kestanelik-??a	6.23	7	ePN	Pn	03 01 19.3	-0.5
CTKS	Kestanelik-??a	6.23	7	ePn	Pn	03 01 19.3	-0.5
THL	Klokotos Trika	6.24	318	P	Pn	03 01 22.2	+2.2
THL	Klokotos Trika	6.24	318	ePN	Pn	03 01 22.2	+2.2
THL	Klokotos Trika	6.24	318	P	Pn	03 01 22.2	+2.2
KLYT	Kilyos	6.31	11	ePN	Pn	03 01 20.2	-0.8
KLYT	Kilyos	6.31	11	ePn	Pn	03 01 20.2	-0.8
SILT	Sile	6.33	15	ePN	Pn	03 01 20.7	-0.5
SILT	Sile	6.33	15	ePn	Pn	03 01 20.7	-0.5
VLS	Valsamata	6.33	301	eP	Pn	03 01 22.3	+1.1
VLS	Valsamata	6.33	301	P	Pn	03 01 21.6	+0.4
VLS	Valsamata	6.33	301	ePN	Pn	03 01 22.3	+1.1
VLS	Valsamata	6.33	301	P	Pn	03 01 21.6	+0.4
VLS	Valsamata	6.33	301	ePn	Pn	03 01 22.3	+1.1
KAVA	Kavala	6.37	340	P	Pn	03 01 22.3	+0.6
KAVA	Kavala	6.37	340	P	Pn	03 01 22.3	+0.6
LOD	Lodumlu	6.42	40	ePN	Pn	03 01 22.5	+0.2
LOD	Lodumlu	6.42	40	ePn	Pn	03 01 22.5	+0.1
CTYL	Yal??k??y-??at	6.44	6	ePN	Pn	03 01 22.5	-0.2
CTYL	Yal??k??y-??at	6.44	6	ePn	Pn	03 01 22.5	-0.2
HORT	Hortiatis	6.51	329	P	Pn	03 01 24.9	+1.2
HORT	Hortiatis	6.51	329	P	Pn	03 01 24.9	+1.2
LKD2	Lefkada island	6.59	306	P	Pn	03 01 25.6	+0.8
LKD2	Lef

CEL	Celeste	9.81	292	Pn	Pn	03 02 07.5 -1.5
	comp=Z,112nm,1.5s					
AGST	Augusta-Monte	10.12	286	Pn	Pn	03 02 11.3 -1.9
AGST	Augusta-Monte	10.12	286	Pn	Pn	03 02 11.3 -1.9
HAVL	Avola	10.16	284	Pn	Pn	03 02 12.4 -1.3
	comp=Z,75nm,0.2s					
HAVL	Avola	10.16	284	Pn	Pn	03 02 12.4 -1.3
	comp=Z,75nm,0.2s					
SSY	Sortino	10.23	285	Pn	Pn	03 02 13.2 -1.5
	comp=Z,61nm,0.5s					
SSY	Sortino	10.23	285	Pn	Pn	03 02 13.2 -1.5
	comp=Z,61nm,0.5s					
GRUS	Gruza	10.24	332	ePn	Pn	03 02 17.4 +2.7
GRUS	Gruza	10.24	332	ePn	Pn	03 02 17.4 +2.7
TREB	Trebinje	10.42	320	ePn	Pn	03 02 18.7 +1.4
TREB	Trebinje	10.42	320	ePn	Pn	03 02 18.7 +1.4
HMDC	Modica	10.43	284	Pn	Pn	03 02 16.2 -1.3
	comp=Z,53nm,0.2s					
HMDC	Modica	10.43	284	Pn	Pn	03 02 16.2 -1.3
	comp=Z,53nm,0.2s					
MLR	Muntele Rosu	10.49	354	Pn	Pn	03 02 16.8 -1.4
	comp=Z,0.1nm,0.3s,baz=165,slow=12,SNR=1.9					
MLR	Muntele Rosu	10.49	354	⇑i P	Pn	03 02 24.1 +5.9
MLR	Muntele Rosu	10.49	354	P	Pn	03 02 16.8 -1.4
HVZN	Vizzini	10.51	285	Pn	Pn	03 02 17.0 -1.6
	comp=Z,82nm,0.6s					
HVZN	Vizzini	10.51	285	Pn	Pn	03 02 17.0 -1.6
	comp=Z,82nm,0.6s					
DIVS	Divibare	10.70	330	ePn	Pn	03 02 23.3 +2.2
DIVS	Divibare	10.70	330	ePn	Pn	03 02 23.3 +2.2
BBLS	Lazići	10.77	327	ePn	Pn	03 02 23.0 +1.0
BBLS	Lazići	10.77	327	ePn	Pn	03 02 23.0 +1.0
VAE	Valguarnera	10.80	287	Pn	Pn	03 02 23.9 +1.5
	comp=Z,1.0nm,0.3s,baz=86,slow=14,SNR=3.9					
VAE				Sn	Sn	03 04 20.0 -2.5
	comp=Z,2.6nm,0.3s,baz=58,slow=19,SNR=4.2					
VAE	Valguarnera	10.80	287	Pn	Pn	03 02 23.9 +1.5
VAE				Sn	Sn	03 04 20.0 -2.5
VAE	Valguarnera	10.80	287	Pn	Pn	03 02 23.9 +1.4
VAE				Sn	Sn	03 04 20.0 -2.5
PLOR	Plostina	10.80	357	⇑i P	Pn	03 02 29.5 +7.0
VRI	Vrincioaia	10.81	357	⇓P	Pn	03 02 28.7 +6.1
VRI	Vrincioaia	10.81	357	⇓i P	Pn	03 02 28.7 +6.1
VRI	Vrincioaia	10.81	357	⇓P	Pn	03 02 28.7 +6.1
SIM	Simferopol'	11.12	25	eP	Pn	03 02 30.3 +3.4
SIM				pmax	pmax	
	comp=Z,37nm,0.4s					
SIM				MLR	MLR	
	comp=Z,160nm,17.0s					
BZS	Buzias	11.44	339	ePn	Pn	03 02 32.7 +1.4
BZS	Buzias	11.44	339	⇑i P	Pn	03 02 32.7 +1.4
BZS	Buzias	11.44	339	ePn	Pn	03 02 32.7 +1.4
LJFR	Jufra	11.51	242	i P	Pn	03 02 32.6 +0.4
	comp=Z,24nm,1.4s,SNR=92					
ANN	Anapa	12.38	35	eP	Pn	03 02 39.5 -4.5
ANN				eS	Sn	03 04 56.2 -4.9
ANN				pmax	pmax	
	comp=Z,10.0nm,0.6s					
BURAR	Bucovina Array	12.66	353	⇓P	Pn	03 02 54.0 +6.2
BURAR	Bucovina Array	12.66	353	⇓i P	Pn	03 02 54.0 +6.2
BURAR	Bucovina Array	12.66	353	⇓P	Pn	03 02 54.0 +6.2
BUR08	Bucovina Ar. S	12.69	353	ePn	Pn	03 02 51.6 +3.3
BUR08	Bucovina Ar. S	12.69	353	ePn	Pn	03 02 51.6 +3.3
NVLJ	Novalja	13.53	318	i Pn	Pn	03 02 57.0 -2.9
NVLJ				Sn	Sn	03 05 18.6 -11
NVLJ	Novalja	13.53	318	i Pn	Pn	03 02 57.0 -2.8
NVLJ				Sn	Sn	03 05 18.6 -11
PSZ	Piszkesteto	14.03	339	eP	Pn	03 03 02.0 -4.6
PSZ				pmax	pmax	
	comp=Z,3.0nm,0.6s					
PSZ	Piszkesteto	14.03	339	ePn	Pn	03 03 01.9 -4.6
	comp=Z,3.3nm,0.6s					
PSZ	Piszkesteto	14.03	339	⇑i P	Pn	03 03 14.1 +7.5
PSZ	Piszkesteto	14.03	339	ePn	Pn	03 03 02.0 -4.6
	comp=Z,3.3nm,0.6s					
UZH	Uzhgorod	14.09	346	eP	Pn	03 03 11.0 +3.6
UZH	Uzhgorod	14.09	346	eP	Pn	03 03 11.0 +3.6
KECS	Kecovo	14.38	341	eP	Pn	03 03 15.9 +4.6
KECS				e		03 03 23.2
KECS	Kecovo	14.38	341	eP	Pn	03 03 15.9 +4.6
KECS				epP	pP	03 03 23.2 -1.3
KOLS	Kolonicke sedl	14.38	346	eP	Px	03 03 21.4
KOLS	Kolonicke sedl	14.38	346	eP	Pn	03 03 21.4 +10
KOLS	Kolonicke sedl	14.38	346	eP	Px	03 03 21.4
CRVS	Cervenica-Dubn	14.53	344	eP	Pn	03 03 20.8 +7.5
CRVS	Cervenica-Dubn	14.53	344	eP	Pn	03 03 20.8 +7.5
CRVS	Cervenica-Dubn	14.53	344	eP	Pn	03 03 20.8 +7.5
GNI	Garni	14.62	65	LR	LR	03 10 09.7
	comp=Z,156nm,18.2s,baz=73,slow=43					
GNI	Garni	14.62	65	⇑eP	Pn	03 03 08.3 -6.3
GNI				pmax	pmax	
	comp=Z,4.0nm,0.8s					
KIV	Kislovodsk	14.73	48	eP	Pn	03 03 12.8 -3.3
KIV				eS	Sn	03 05 52.2 -6.3
KIV				pmax	pmax	
	comp=Z,2.0nm,0.7s					
KIV				MLR	MLR	
	comp=Z,31nm,12.0s					
KIV	Kislovodsk	14.73	48	ePn	Pn	03 03 15.8 -0.3
	comp=Z,35nm,1.1s					
KIV	Kislovodsk	14.73	48	ePn	Pn	03 03 15.8 -0.3
	comp=Z,35nm,1.1s					
KEST	Kesra	14.78	278	Pn	Pn	03 03 15.4 -1.4
	comp=Z,0.0nm,0.3s,baz=70,slow=12,SNR=5.3					
KEST	Kesra	14.78	278	ePn	Pn	03 03 15.4 -1.5
KEST				eP		03 03 23.6
KEST	Kesra	14.78	278	ePn	Pn	03 03 15.4 -1.5
KEST	Kesra	14.78	278	eP	Pn	03 03 23.6 +6.7
VYHS	Vyhne	14.87	337	eP	Pn	03 03 21.9 +3.9
VYHS	Vyhne	14.87	337	eP	Pn	03 03 21.9 +3.9
VYHS	Vyhne	14.87	337	eP	Pn	03 03 21.9 +3.9
SOKA	Soboth	14.91	325	⇓i Pn	Pn	03 03 17.4 -1.1
SOKA	Soboth	14.91	325	Pn	Pn	03 03 17.4 -1.2
ZEI	Tsey	14.93	54	eP	Pn	03 03 27.8 +8.9
ZEI				pmax	pmax	
	comp=Z,20nm,1.0s					
STHS	Stebnicka Huta	15.06	344	eP	Pn	03 03 27.8 +7.3
STHS	Stebnicka Huta	15.06	344	eP	Pn	03 03 27.8 +7.3
STHS	Stebnicka Huta	15.06	344	eP	Pn	03 03 27.8 +7.3
SMOL	Smolenice	15.36	334	eP	Pn	03 03 30.8 +6.3
SMOL	Smolenice	15.36	334	eP	Pn	03 03 30.8 +6.3
SMOL	Smolenice	15.36	334	eP	Pn	03 03 30.8 +6.3
AKASG	Malin Array Be	15.69	4	Pn	Pn	03 03 31.3 +2.5
	comp=Z,1.2nm,0.3s,baz=194,slow=11,SNR=4.8					
AKASG	Malin Array Be	15.69	4	P	Pn	03 03 31.3 +2.5
AKASG				pmax	pmax	
	comp=Z,1.0nm,0.3s					
AKASG	Malin Array Be	15.69	4	Pn	Pn	03 03 31.3 +2.5
AKASG	Malin Array Be	15.69	4	P	Pn	03 03 31.3 +2.5
	comp=Z,1.0nm,0.3s					
PGF	Pioggiola	16.19	303	eP	Pn	03 03 32.1 -3.2
	comp=Z,43nm,1.0s					
PGF	Pioggiola	16.19	303	eP	Pn	03 03 32.1 -3.2
PGF				pmax	pmax	
	comp=Z,22nm,1.0s					
PGF	Pioggiola	16.19	303	eP	Pn	03 03 32.1 -3.2
	comp=Z,22nm,1.0s					
OKC	Ostrava-Krasne	16.27	338	eP	Pn	03 03 41.6 +5.4
OKC				MLR	MLR	
	comp=Z,200nm,11.3s					
OKC	Ostrava-Krasne	16.27	338	eP	Pn	03 03 41.6 +5.4
OKC				AMS	AMS	03 11 00.0
	comp=Z,200nm,11.3s					
VRAC	Vranov	16.33	334	Pn	Pn	03 03 36.3 -0.7
	comp=Z,0.2nm,0.3s,baz=151,slow=7.1,SNR=3.8					
VRAC				LR	LR	03 10 01.3
	comp=Z,60nm,19.4s,baz=146,slow=38					
VRAC	Vranov	16.33	334	⇓i P	Pn	03 03 40.1 +3.1
VRAC	Vranov	16.33	334	Pn	Pn	03 03 36.2 -0.8
MORC	Moravsky Berou	16.41	337	eP	Pn	03 03 35.2 -2.7
MORC				pmax	pmax	
	comp=Z,3.0nm,0.8s					
MORC	Moravsky Berou	16.41	337	ePn	Pn	03 03 35.1 -2.8
	comp=Z,3.2nm,0.8s					
MORC	Moravsky Berou	16.41	337	⇓i P	Pn	03 03 42.3 +4.4
MORC	Moravsky Berou	16.41	337	ePn	Pn	03 03 35.2 -2.7
	comp=Z,3.2nm,0.8s					
TREC	Trest	16.73	332	eP	Pn	03 03 42.7 +0.6
TREC				MLR	MLR	
	comp=Z,200nm,13.3s					
TREC	Trest	16.73	332	eP	Pn	03 03 42.7 +0.6
TREC				AMS	AMS	03 10 50.0
	comp=Z,200nm,13.3s					
TREC	Trest	16.73	332	eP	Pn	03 03 42.7 +0.6
	comp=Z,200nm,13.3s					
RJOB	Jochberg	16.74	324	eP	Pn	03 03 45.8 +3.7
	comp=Z,7.0nm,1.5s					
GEC2	GERESS Array S	17.12	328	eP	Pn	03 03 47.0 +0.1
	comp=Z,10.0nm,1.1s					
GEC2	GERESS Array S	17.12	328	eP	Pn	03 03 47.0 +0.1
GEC2				pmax	pmax	
	comp=Z,10.0nm,1.1s					
GEC2	GERESS Array S	17.12	328	eP	Pn	03 03 47.0 +0.1
	comp=Z,10.0nm,1.1s					
GERES	GERESS Array B	17.12	328	Pn	Pn	03 03 46.0 -1.0
	comp=Z,0.1nm,0.3s,baz=138,slow=12,SNR=19					
GERES				LR	LR	03 10 53.4
	comp=Z,111nm,18.1s,baz=309,slow=39					
GERES	GERESS Array B	17.12	328	P	Pn	03 03 46.0 -0.9
	comp=Z,111nm,18.1s					
DPC	Dobruska-Polom	17.30	335	eP	Pn	03 03 49.5 +0.3
DPC				MLR	MLR	
	comp=Z,200nm,13.2s					
DPC	Dobruska-Polom	17.30	335	eP	Pn	03 03 49.5 +0.3
DPC				epP	pP	03 03 52.5 -4.4
DPC				AMS	AMS	03 11 30.0
	comp=Z,200nm,13.2s					
DPC	Dobruska-Polom	17.30	335	eP	Pn	03 03 49.5 +0.3
	comp=Z,200nm,13.2s					
FETA	Feichten	17.33	319	⇓i Pn	Pn	03 03 48.2 -1.5
FETA	Feichten	17.33	319	Pn	Pn	03 03 48.2 -1.4
MOTA	Moosalm	17.33	320	⇑i Pn	Pn	03 03 47.8 -1.8
MOTA	Moosalm	17.33	320	Pn	Pn	03 03 47.8 -1.8
KHC	Kasperske Hory	17.39	328	eP	Pn	03 03 49.4 -0.9
KHC				MLR	MLR	
	comp=Z,200nm,16.7s					
KHC	Kasperske Hory	17.39	328	eP	Pn	03 03 49.3 -0.9
	comp=Z,8.6nm,0.7s					
KHC	Kasperske Hory	17.39	328	eP	Pn	03 03 49.4 -0.9
KHC				epP	pP	03 03 53.1 -4.8
KHC				AMS	AMS	03 12 10.0
	comp=Z,200nm,16.7s					
KHC	Kasperske Hory	17.39	328	eP	Pn	03 03 49.3 -1.0
	comp=Z,8.6nm,0.7s					
MAK	Makhachkala	17.45	57	eP	Pn	03 03 49.7 -1.4
MAK				pmax	pmax	
	comp=Z,12nm,0.3s					
MAK				MLR	MLR	
	comp=Z,135nm,13.0s					
MAK	Makhachkala	17.45	57	eP	Pn	03 03 49.7 -1.4
	comp=Z,135nm,13.0s					
UPC	Upice	17.54	335	eP	Pn	03 03 52.4 +0.2
UPC	Upice	17.54	335	eP	Pn	03 03 52.4 +0.2
UPC				epP	pP	03 03 55.9 -3.7
UPC	Upice	17.54	335	eP	Pn	03 03 52.4 +0.2
PRU	Pruhonice	17.66	332	eP	Pn	03 03 52.2 -1.4
PRU				MLR	MLR	
	comp=Z,200nm,14.7s					
PRU	Pruhonice	17.66	332	eP	Pn	03 03 52.2 -1.4
PRU				epP	pP	03 03 56.7 -4.2
PRU				AMS	AMS	03 13 20.0
	comp=Z,200nm,14.7s					
PRU	Pruhonice	17.66	332	eP	Pn	03 03 52.2 -1.4
	comp=Z,200nm,14.7s					
DAVOX	Davos/Dischmat	17.66	317	P	Pn	03 03 53.8 +0.1
	comp=Z,0.1nm,0.3s,baz=138,slow=18,SNR=3.3					
DAVOX	Davos/Dischmat	17.66	317	P	Pn	03 03 53.8 +0.2
WET	Wettzell	17.70	327	eP	Pn	03 03 53.1 -1.1
WET	Wettzell	17.70	327	eP	Pn	03 03 53.1 -1.1
SBF	Sospel	17.75	306	eP	Pn	03 03 52.1 -2.7
	comp=Z,41nm,0.7s					
SBF	Sospel	17.75	306	eP	Pn	03 03 52.1 -2.7
SBF				pmax	pmax	
	comp=Z,21nm,0.7s					
SBF	Sospel	17.75	306	eP	Pn	03 03 52.1 -2.7
	comp=Z,21nm,0.7s					
DAVA	Damuels	17.95	318	⇓i P	Pn	03 03 54.9 -2.4
DAVA	Damuels	17.95	318	P	Pn	03 03 54.9 -2.4
PVCC	Panska Ves	18.08	333	eP	Pn	03 03 59.6 +0.8
PVCC	Panska Ves	18.08	333	eP	Pn	03 03 59.6 +0.8
PVCC	Panska Ves	18.08	333	eP	Pn	03 03 59.6 +0.8
FRF	La Foret Royal	18.16	304	eP	Pn	03 03 59.3 -0.6
	comp=Z,29nm,1.0s					
FRF	La Foret Royal	18.16	304	eP	Pn	03 03 59.3 -0.6
FRF				pmax	pmax	
	comp=Z,14nm,1.0s					
FRF	La Foret Royal	18.16	304	eP	Pn	03 03 59.3 -0.6
	comp=Z,14nm,1.0s					
FRF	La Foret Royal	18.16	304	eP	Pn	03 03 59.3 -0.6
	comp=Z,14nm,1.0s					
LMR	La Mourre	18.18	303	eP	Pn	03 03 59.4 -0.7
	comp=Z,60nm,1.5s					
LMR	La Mourre	18.18	303	eP	Pn	03 03 59.4 -0.7
LMR				pmax	pmax	
	comp=Z,30nm,1.5s					
LMR	La Mourre	18.18	303	eP	Pn	03 03 59.4 -0.7
	comp=Z,30nm,1.5s					
LMR	La Mourre	18.18	303	eP	Pn	03 03 59.4 -0.7
	comp=Z,30nm,1.5s					
VSR	Storozhevoye	18.24	24	eP	Pn	03 04 00.4 -0.3
VSR				pmax	pmax	
	comp=N,3.0nm,0.4s					
VSR				pmax	pmax	
	comp=E,3.0nm,0.4s					
VSR				pmax	pmax	
	comp=Z,5.0nm,0.4s					
VSR	Storozhevoye	18.24	24	eP	Pn	03 04 00.4 -0.3
ROTZ	Rotzenmuhle	18.46	327	eP	Pn	03 04 01.8 -1.6
	comp=Z,10.0nm,1.7s					
MBDF	Montbardon	18.53	308	eP	Pn	03 04 03.5 -0.8
	comp=Z,14nm,0.7s					
MBDF	Montbardon	18.53	308	eP	Pn	03 04 03.5 -0.8
MBDF				pmax	pmax	
	comp=Z,7.0nm,0.7s					
MBDF	Montbardon	18.53	308	eP	Pn	03 04 03.5 -0.8
	comp=Z,6.8nm,0.7s					
MBDF	Montbardon	18.53	308	eP	Pn	03 04 03.5 -0.8
	comp=Z,6.8nm,0.7s					
BRG	Berggiesshubel	18.59	332	eP	Pn	03 04 03.2 -1.8
	comp=Z,2.8nm,1.1s					
BRG				e		03 04 12.1
	comp=Z,4.8nm,1.1s					
GRA1	Grafenberg Arr	18.85	326	eP	Pn	03 04 06.6 -1.6
	comp=Z,7.0nm,0.9s					
GRA1	Grafenberg Arr	18.85	326	eP	Pn	03 04 06.6 -1.6
	comp=Z,7.0nm,0.9s					
GRF	Grafenberg Arr	18.85	326	eP	Pn	03 04 06.6 -1.6
	comp=Z,7.0nm,0.9s					
GRF	Grafenberg Arr	18.85	326	eP	Pn	03 04 06.6 -1.6
GRF				pmax	pmax	
	comp=Z,7.0nm,0.9s					
GRF	Grafenberg Arr	18.85	326	eP	Pn	03 04 06.6 -1.6
GRF				pmax	pmax	
	comp=Z,7.0nm,0.9s					
GRF	Grafenberg Arr	18.85	326	eP	Pn	03 04 06.6 -1.6
	comp=Z,7.0nm,0.9s					
LPG	La Plagne	18.87	310	eP	Pn	03 04 05.7 -2.8
	comp=Z,16nm,0.7s					
LPG	La Plagne	18.87	310	eP	Pn	03 04 05.7 -2.8
LPG				pmax	pmax	
	comp=Z,8.0nm,0.7s					
LPG	La Plagne	18.87	310	eP	Pn	03 04 05.7 -2.8
	comp=Z,7.9nm,0.7s					
LPG	La Plagne	18.87	310	eP	Pn	03 04 05.7 -2.8
	comp=Z,7.9nm,0.7s					
LPL	La Plagne	18.89	310	eP	Pn	03 04 07.8 -0.9
	comp=Z,10.0nm,0.5s					
LPL	La Plagne	18.89	310	eP	Pn	03 04 07.8 -0.9
LPL				pmax	pmax	
	comp=Z,5.0nm,0.5s					
LPL	La Plagne	18.89	310	eP	Pn	03 04 07.8 -0.9
	comp=Z,5.0nm,0.5s					
LPL	La Plagne	18.89	310	eP	Pn	03 04 07.8 -0.9
	comp=Z,5.0nm,0.5s					
SMRF	Simiane la Rot	19.04	304	eP	Pn	03 04 07.7 -2.8
SMRF	Simiane la Rot	19.04	304	eP	Pn	03 04 07.7 -2.8
ORIF	Oris-en-Rattie	19.19	307	eP	Pn	03 04 09.3 -3.0
	comp=Z,17nm,0.9s					
ORIF				eMLR	MLR	
	comp=Z,146nm,18.5s					
ORIF	Oris-en-Rattie	19.19	307	eP	Pn	03 04 09.3 -3.0
ORIF				pmax	pmax	
	comp=Z,8.0nm,0.9s					
ORIF	Oris-en-Rattie	19.19	307	eP	Pn	03 04 09.3 -3.0
	comp=Z,8.4nm,0.9s					
ORIF	Oris-en-Rattie	19.19	307	eP	Pn	03 04 09.3 -3.0
	comp=Z,8.4nm,0.9s					
STU	Stuttgart	19.23	321	eP	Pn	03 04 11.0 -1.7
STU				pmax	pmax	
	comp=Z,10.0nm,0.8s					
STU	Stuttgart	19.23	321	eP	Pn	03 04 11.0 -1.7
	comp=Z,10.0nm,0.8s					
STU	Stuttgart	19.23	321	eP	Pn	03 04 11.0 -1.7
	comp=Z,10.0nm,0.8s					
CLL	Collm	19.30	332	eP	Pn	03 04 12.0 -1.6
CLL				MLR	MLR	
	comp=Z,100nm,18.7s					
CLL	Collm	19.30	332	eP	Pn	03 04 12.0 -1.6
CLL				i pP	pP	03 04 16.1 -2.9
CLL				eS	Sn	03 07 54.0 +4.8
CLL	Collm	19.30	332	eP	Pn	03 04 12.0 -1.6
CLL				i pP	pP	03 04 16.1 -2.9
	comp=Z,10.0nm,1.1s					
CLL				esP	sP	03 04 19.0 -3.0
CLL				e		03 04 22.0
CLL				eS	Sn	03 07 54.0 +4.8
CLL	Collm	19.30	332	eP	Pn	03 04 12.0 -1.6
	comp=Z,100nm,18.7s					
MOX	Moxa	19.36	328	eP	Pn	03 04 16.1 +1.8
	comp=Z,18nm,1.6s					
MOX						
	comp=Z,200nm,19.0s					
MOX	Moxa	19.36	328	eP	Pn	03 04 16.1 +1.8
MOX				pmax	pmax	
	comp=Z,18nm,1.6s					
MOX				MLR	MLR	
	comp=Z,200nm,19.0s					
MOX	Moxa	19.36	328	eP	Pn	03 04 16.1 +1.8
	comp=Z,18nm,1.6s					
BFO	Black Forest	19.41	319	eP	Pn	03 04 17.6 +2.6
	comp=Z,8.0nm,1.3s					
BFO	Black Forest	19.41	319	eP	Pn	03 04 17.6 +2.6
BFO				pmax	pmax	
	comp=Z,8.0nm,1.3s					
BFO	Black Forest	19.41	319	eP	Pn	03 04 17.6 +2.6
	comp=Z,8.0nm,1.3s					
CABF	La Chapelle	19.79	312	eP	Pn	03 04 15.8 -3.7
	comp=Z,15nm,0.6s					
CABF	La Chapelle	19.79	312	eP	Pn	03 04 15.8 -3.7
CABF				pmax	pmax	
	comp=Z,8.0nm,0.6s					
CABF	La Chapelle	19.79	312	eP	Pn	03 04 15.8 -3.7
	comp=Z,7.7nm,0.6s					
CABF	La Chapelle	19.79	312	eP	Pn	03 04 15.8 -3.7
	comp=Z,7.7nm,0.6s					
HINF	Hinteralfeld	19.95	316	eP	Pn	03 04 17.9 -3.4
	comp=Z,6.4nm,0.6s					
HINF	Hinteralfeld	19.95	316	eP	Pn	03 04 17.9 -3.4
HINF				pmax	pmax	
	comp=Z,3.0nm,0.6s					
HINF	Hinteralfeld	19.95	316	eP	Pn	03 04 17.9 -3.4
	comp=Z,3.2nm,0.6s					
HINF	Hinteralfeld	19.95	316	eP	Pn	03 04 17.9 -3.4
	comp=Z,3.2nm,0.6s					
VIVF	Saint-Julien-l	19.96	306	eP	Pn	03 04 17.3 -4.2
	comp=Z,11nm,0.7s					
VIVF	Saint-Julien-l	19.96	306	eP	Pn	03 04 17.3 -4.2
VIVF				pmax	pmax	
	comp=Z,6.0nm,0.7s					
VIVF	Saint-Julien-l	19.96	306	eP	Pn	03 04 17.3 -4.2
	comp=Z,5.7nm,0.7s					
VIVF	Saint-Julien-l	19.96	306	eP	Pn	03 04 17.3 -4.2
	comp=Z,5.7nm,0.7s					
ECH	Echery	19.99	317	eP	Pn	03 04 23.7 +1.9
ECH				pmax	pmax	
	comp=Z,13nm,1.3s					
ECH	Echery	19.99	317	eP	Pn	03 04 23.7 +1.8
	comp=Z,13nm,1.3s					
ECH	Echery	19.99	317	eP	Pn	03 04 23.7 +1.9
	comp=Z,13nm,1.3s					
CDF	Champ du Feu	20.04	318	eP	P	03 04 19.4 -1.1
	comp=Z,9.9nm,0.7s					
CDF	Champ du Feu	20.04	318	eP	P	03 04 19.4 -1.1
CDF				pmax	pmax	
	comp=Z,5.0nm,0.7s					
CDF	Champ du Feu	20.04	318	eP	P	03 04 19.4 -1.1
	comp=Z,4.9nm,0.7s					
CDF	Champ du Feu	20.04	318	eP	P	03 04 19.4 -1.1
	comp=Z,4.9nm,0.7s					
SSB	Saint Sauveur	20.20	307	eP	P	03 04 19.5 -2.8
SSB				pmax	pmax	
	comp=Z,3.0nm,0.7s					
SSB	Saint Sauveur	20.20	307	eP	P	03 04 19.5 -2.9
	comp=Z,3.1nm,0.7s					
SSB	Saint Sauveur	20.20	307	eP	P	03 04 19.5 -2.8
	comp=Z,3.1nm,0.7s					
LASF	Ste Croix	20.24	304	eP	P	03 04 21.1 -1.7
LASF	Ste Croix	20.24	304	eP	P	03 04 21.1 -1.7
IDID	Didziasalis	20.27	359	eP	P	03 04 21.7 -1.2
IDID	Didziasalis	20.27	359	eP	P	03 04 21.7 -1.2
	SNR=34					
IIGN	Ignalina	20.31	358	eP	P	03 04 22.3 -1.1
IIGN	Ignalina	20.31	358	eP	P	03 04 22.3 -1.2
	SNR=34					
HAU	Haudompre	20.34	316	eP	P	03 04 21.3 -2.5
	comp=Z,6.4nm,0.4s					
HAU				eMLR	MLR	
	comp=Z,103nm,19.5s,MS2.9					
HAU	Haudompre	20.34	316	eP	P	03 04 21.3 -2.5
HAU				pmax	pmax	
	comp=Z,3.0nm,0.4s					
HAU				MLR	MLR	
	comp=Z,100nm,19.5s,MS3.2					
HAU	Haudompre	20.34	316	eP	P	03 04 21.3 -2.5
	comp=Z,3.2nm,0.4s					
HAU				LR	LR	
	comp=Z,100nm,19.5s,MS3.2					
HAU	Haudompre	20.34	316	eP	P	03 04 21.3 -2.5
	comp=Z,3.2nm,0.4s					
TNS	Taunus Mts	20.53	323	eP	P	03 04 27.0 +1.2
	comp=Z,20nm,0.7s					
TNS	Taunus Mts	20.53	323	eP	P	03 04 27.0 +1.2
TNS				pmax	pmax	
	comp=Z,20nm,0.7s					
TNS	Taunus Mts	20.53	323	eP	P	03 04 27.0 +1.2
	comp=Z,20nm,0.7s					
ISAL	Salakas	20.54	358	eP	P	03 04 24.7 -1.1
ISAL	Salakas	20.54	358	eP	P	03 04 24.7 -1.2
	SNR=34					
OBN	Obninsk	21.03	15	P	P	03 04 30.0 -1.2
OBN						03 04 48.0
OBN				eS	S	03 08 21.1 -3.0
OBN				pmax	pmax	
	comp=Z,8.0nm,0.8s,mb4.1					
OBN				MLR	MLR	
	comp=Z,100nm,17.0s,MS3.3					
OBN	Obninsk	21.03	15	eP	P	03 04 30.2 -1.0
	comp=Z,12nm,0.4s,mb4.6					
OBN	Obninsk	21.03	15	eP	P	03 04 30.2 -1.0
	comp=Z,12nm,0.4s,mb4.6					
CLLI	Liivia	21.15	298	P	P	03 04

comp=Z,8.5nm,0.9s,mb4.1
AVF Avril sur Loir 21.56 310 *e*P **P 03 04 34.1 -2.9**
comp=Z,23nm,1.1s,mb4.2
AVF Avril sur Loir 21.56 310 *e*P **P 03 04 34.1 -2.9**
AVF pmax pmax
comp=Z,11nm,1.1s,mb4.2
AVF Avril sur Loir 21.56 310 *e*P **P 03 04 34.1 -2.9**
comp=Z,11nm,1.1s,mb4.2
AVF Avril sur Loir 21.56 310 *e*P **P 03 04 34.1 -2.9**
comp=Z,11nm,1.1s,mb4.2
SSF Saint Saulge 21.58 311 *e*P **P 03 04 34.8 -2.4**
comp=Z,37nm,0.9s,mb4.5
SSF Saint Saulge 21.58 311 *e*P **P 03 04 34.8 -2.4**
SSF pmax pmax
comp=Z,18nm,0.9s,mb4.5
SSF Saint Saulge 21.58 311 *e*P **P 03 04 34.8 -2.4**
comp=Z,18nm,0.9s,mb4.5
SSF Saint Saulge 21.58 311 *e*P **P 03 04 34.8 -2.4**
comp=Z,18nm,0.9s,mb4.5
EPOB Poblet 21.61 295 P **P 03 04 35.7 -1.8**
EPOB Poblet 21.61 295 P **P 03 04 35.7 -1.9**
comp=Z,9.4nm,0.7s,mb4.3,SNR=7.9
CAF Calviac 21.72 305 *e*P **P 03 04 37.9 -0.9**
comp=Z,15nm,1.1s,mb4.0
CAF Calviac 21.72 305 *e*P **P 03 04 37.9 -0.9**
CAF pmax pmax
comp=Z,7.0nm,1.1s,mb4.0
CAF Calviac 21.72 305 *e*P **P 03 04 37.9 -0.9**
comp=Z,7.3nm,1.1s,mb4.0
CAF Calviac 21.72 305 *e*P **P 03 04 37.9 -0.9**
comp=Z,7.3nm,1.1s,mb4.0
CSOR Sort 21.74 298 P **P 03 04 38.2 -0.7**
CSOR Sort 21.74 298 P **P 03 04 38.2 -0.8**
comp=Z,12nm,0.8s,mb4.4,SNR=7.9
BGF Bois d'Agland 21.79 309 *e*P **P 03 04 37.3 -2.1**
comp=Z,10nm,0.5s,mb4.2
BGF Bois d'Agland 21.79 309 *e*P **P 03 04 37.3 -2.1**
BGF pmax pmax
comp=Z,5.0nm,0.5s,mb4.2
BGF Bois d'Agland 21.79 309 *e*P **P 03 04 37.3 -2.1**
comp=Z,5.1nm,0.5s,mb4.2
BGF Bois d'Agland 21.79 309 *e*P **P 03 04 37.3 -2.1**
comp=Z,5.1nm,0.5s,mb4.2
MOS Moscow 21.84 16 *e*P **P 03 04 44.5 +4.6**
TCF Toulx Ste Croi 22.09 308 *e*P **P 03 04 40.8 -1.9**
comp=Z,14nm,1.2s,mb4.0
TCF Toulx Ste Croi 22.09 308 *e*P **P 03 04 40.8 -1.9**
TCF pmax pmax
comp=Z,7.0nm,1.2s,mb4.0
TCF Toulx Ste Croi 22.09 308 *e*P **P 03 04 40.8 -1.9**
comp=Z,6.8nm,1.2s,mb4.0
TCF Toulx Ste Croi 22.09 308 *e*P **P 03 04 40.8 -1.9**
comp=Z,6.8nm,1.2s,mb4.0
ERTA Horta de San J 22.11 294 P **P 03 04 41.7 -1.3**
ERTA Horta de San J 22.11 294 P **P 03 04 41.7 -1.3**
comp=Z,9.1nm,0.8s,mb4.3,SNR=7.9
RJF Les Rejaudoux 22.21 305 *e*P **P 03 04 42.4 -1.6**
comp=Z,20nm,1.0s,mb4.2
RJF *e*MLR MLR
comp=Z,138nm,18.2s,MS3.1
RJF Les Rejaudoux 22.21 305 *e*P **P 03 04 42.4 -1.6**
RJF pmax pmax
comp=Z,10.0nm,1.0s,mb4.2
RJF MLR MLR
comp=Z,140nm,18.3s,MS3.4
RJF Les Rejaudoux 22.21 305 *e*P **P 03 04 42.4 -1.6**
comp=Z,9.8nm,1.0s,mb4.2
RJF LR LR
comp=Z,140nm,18.3s,MS3.4
RJF Les Rejaudoux 22.21 305 *e*P **P 03 04 42.4 -1.6**
comp=Z,9.8nm,1.0s,mb4.2
EBEN Beniarda 22.40 288 P **P 03 04 49.1 +3.1**
EBEN Beniarda 22.40 288 P **P 03 04 49.2 +3.2**
comp=Z,15nm,1.5s,mb4.2,SNR=7.9
EPF Esparros 22.44 299 *e*P **P 03 04 43.7 -2.7**
comp=Z,5.5nm,0.7s,mb3.8
EPF Esparros 22.44 299 *e*P **P 03 04 43.7 -2.7**
EPF pmax pmax
comp=Z,3.0nm,0.7s,mb3.8
EPF Esparros 22.44 299 *e*P **P 03 04 43.7 -2.7**
comp=Z,2.8nm,0.7s,mb3.8
EPF Esparros 22.44 299 *e*P **P 03 04 43.7 -2.7**
comp=Z,2.8nm,0.7s,mb3.8
EBIE Bielsa 22.52 298 P **P 03 04 48.2 +0.9**
EBIE Bielsa 22.52 298 P **P 03 04 48.2 +1.0**
comp=Z,6.0nm,0.8s,mb4.1,SNR=7.9
BAIF Baives 22.62 319 *e*P **P 03 04 45.9 -2.4**
comp=Z,37nm,1.1s,mb4.4
BAIF Baives 22.62 319 *e*P **P 03 04 45.9 -2.4**
BAIF pmax pmax
comp=Z,19nm,1.1s,mb4.4
BAIF Baives 22.62 319 *e*P **P 03 04 45.9 -2.4**
comp=Z,18nm,1.1s,mb4.4
BAIF Baives 22.62 319 *e*P **P 03 04 45.9 -2.4**
comp=Z,18nm,1.1s,mb4.4
LFF La Frestale 22.62 304 *e*P **P 03 04 46.7 -1.7**
comp=Z,18nm,0.9s,mb4.2
LFF La Frestale 22.62 304 *e*P **P 03 04 46.7 -1.7**
LFF pmax pmax
comp=Z,9.0nm,0.9s,mb4.2
LFF La Frestale 22.62 304 *e*P **P 03 04 46.7 -1.7**
comp=Z,9.1nm,0.9s,mb4.2
LFF La Frestale 22.62 304 *e*P **P 03 04 46.7 -1.7**
comp=Z,9.1nm,0.9s,mb4.2
TAM Tamanrasset 22.69 243 *e*P **P 03 04 50.8 +1.5**
TAM pmax pmax
comp=Z,7.0nm,1.1s,mb4.0
TAM Tamanrasset 22.69 243 *e*P **P 03 04 50.8 +1.5**
comp=Z,6.8nm,1.1s,mb4.0
TAM Tamanrasset 22.69 243 *e*P **P 03 04 50.8 +1.5**
comp=Z,6.8nm,1.1s,mb4.0
ESAC San Caprasio 22.81 295 P **P 03 04 49.8 -0.6**
ESAC San Caprasio 22.81 295 P **P 03 04 49.8 -0.6**
comp=Z,22nm,1.1s,mb4.5,SNR=7.9
ETSF Etsaut 23.06 298 *e*P **P 03 04 50.0 -3.0**
comp=Z,6.4nm,0.6s,mb3.9
ETSF Etsaut 23.06 298 *e*P **P 03 04 50.0 -3.0**
ETSF pmax pmax
comp=Z,3.0nm,0.6s,mb3.9
ETSF Etsaut 23.06 298 *e*P **P 03 04 50.0 -3.0**
comp=Z,3.2nm,0.6s,mb3.9
ETSF Etsaut 23.06 298 *e*P **P 03 04 50.0 -3.0**
comp=Z,3.2nm,0.6s,mb3.9
ETOB Tobarra 23.43 287 P **P 03 05 04.4 +7.5**
ETOB Tobarra 23.43 287 P **P 03 05 04.4 +7.4**
comp=Z,4.2nm,0.8s,mb3.9,SNR=5.0
SJPF Ste Jean 23.58 299 *e*P **P 03 04 56.0 -2.3**
comp=Z,25nm,1.0s,mb4.3
SJPF Ste Jean 23.58 299 *e*P **P 03 04 56.0 -2.3**
SJPF pmax pmax
comp=Z,12nm,1.0s,mb4.3
SJPF Ste Jean 23.58 299 *e*P **P 03 04 56.0 -2.3**
comp=Z,12nm,1.0s,mb4.3
SJPF Ste Jean 23.58 299 *e*P **P 03 04 56.0 -2.3**
comp=Z,12nm,1.0s,mb4.3
MFF Saint Martin d 23.73 307 *e*P **P 03 04 57.3 -2.3**
comp=Z,30nm,1.2s,mb4.3
MFF Saint Martin d 23.73 307 *e*P **P 03 04 57.3 -2.3**
MFF pmax pmax
comp=Z,15nm,1.2s,mb4.3
MFF Saint Martin d 23.73 307 *e*P **P 03 04 57.3 -2.3**
comp=Z,15nm,1.2s,mb4.3
MFF Saint Martin d 23.73 307 *e*P **P 03 04 57.3 -2.3**
comp=Z,15nm,1.2s,mb4.3
ETOR Torete 23.90 293 P **P 03 05 00.7 -0.6**
ETOR Torete 23.90 293 P **P 03 05 00.7 -0.6**
comp=Z,1.3nm,0.6s,mb3.6,SNR=7.9
LDF La Druitiere 24.44 312 *e*P **P 03 05 02.8 -3.3**
comp=Z,14nm,0.8s,mb4.1
LDF La Druitiere 24.44 312 *e*P **P 03 05 02.8 -3.3**
LDF pmax pmax
comp=Z,7.0nm,0.8s,mb4.1
LDF La Druitiere 24.44 312 *e*P **P 03 05 02.8 -3.3**
comp=Z,7.2nm,0.8s,mb4.2
EBER Berja 24.57 283 P **P 03 05 07.5 +0.1**
FLN La Foliniere 24.72 312 *e*P **P 03 05 05.7 -3.0**
comp=Z,20nm,0.6s,mb4.5
FLN *e*MLR MLR
comp=Z,70nm,20.0s,MS2.9
FLN La Foliniere 24.72 312 *e*P **P 03 05 05.7 -3.0**
FLN pmax pmax
comp=Z,10.0nm,0.6s,mb4.5
FLN MLR MLR
comp=Z,70nm,20.0s,MS3.2
FLN La Foliniere 24.72 312 *e*P **P 03 05 05.7 -3.0**
comp=Z,9.9nm,0.6s,mb4.5
FLN LR LR
comp=Z,70nm,20.0s,MS3.2
FLN La Foliniere 24.72 312 *e*P **P 03 05 05.7 -3.0**
comp=Z,9.9nm,0.6s,mb4.5
GRR Gorron 24.81 311 *e*P **P 03 05 07.6 -1.9**
comp=Z,9.8nm,0.5s,mb4.3
GRR Gorron 24.81 311 *e*P **P 03 05 07.6 -1.9**
GRR pmax pmax
comp=Z,5.0nm,0.5s,mb4.3
GRR Gorron 24.81 311 *e*P **P 03 05 07.6 -1.9**
comp=Z,4.9nm,0.5s,mb4.3
GRR Gorron 24.81 311 *e*P **P 03 05 07.6 -1.9**
comp=Z,4.9nm,0.5s,mb4.3
ELAN Lanestosa 25.19 298 P **P 03 05 14.6 +1.6**
ELAN Lanestosa 25.19 298 P **P 03 05 14.6 +1.6**
SNR=7.9
ESDC Sonseca Array 25.31 290 P **P 03 05 13.1 -1.1**
comp=Z,1.6nm,0.5s,mb3.8,baz=78,slow=10,SNR=22
ESDC Sonseca Array 25.31 290 P **P 03 05 13.6 -0.6**
ESLA Sonseca Array 25.31 290 *e*P **P 03 05 13.3 -0.9**
comp=Z,9.0nm,1.5s,mb4.1
ESLA Sonseca Array 25.31 290 *e*P **P 03 05 13.3 -0.9**
comp=Z,9.0nm,1.5s,mb4.1
GUD Guadarrama 25.48 292 P **P 03 05 15.8 +0.1**
SGMF Saint Gilles 25.82 310 *e*P **P 03 05 15.9 -2.8**
comp=Z,18nm,0.9s,mb4.3
SGMF Saint Gilles 25.82 310 *e*P **P 03 05 15.9 -2.8**
SGMF pmax pmax
comp=Z,9.0nm,0.9s,mb4.3
SGMF Saint Gilles 25.82 310 *e*P **P 03 05 15.9 -2.8**
comp=Z,9.1nm,0.9s,mb4.3
SGMF Saint Gilles 25.82 310 *e*P **P 03 05 15.9 -2.8**
comp=Z,9.1nm,0.9s,mb4.3
QUIF Quistinic 26.10 309 *e*P **P 03 05 18.5 -2.7**
comp=Z,11nm,0.7s,mb4.2
QUIF Quistinic 26.10 309 *e*P **P 03 05 18.5 -2.7**
QUIF pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
QUIF Quistinic 26.10 309 *e*P **P 03 05 18.5 -2.7**
comp=Z,5.3nm,0.7s,mb4.2
QUIF Quistinic 26.10 309 *e*P **P 03 05 18.5 -2.7**
comp=Z,5.3nm,0.7s,mb4.2
EMIJ Mijas 26.11 283 P **P 03 05 21.7 +0.3**
ROSF Rostrenen 26.30 310 *e*P **P 03 05 20.3 -2.7**
comp=Z,15nm,0.8s,mb4.3
ROSF Rostrenen 26.30 310 *e*P **P 03 05 20.3 -2.7**
ROSF pmax pmax
comp=Z,7.0nm,0.8s,mb4.2
ROSF Rostrenen 26.30 310 *e*P **P 03 05 20.3 -2.7**
comp=Z,7.3nm,0.8s,mb4.3
ROSF Rostrenen 26.30 310 *e*P **P 03 05 20.3 -2.7**
comp=Z,7.3nm,0.8s,mb4.3
FINES FINESS Array B 26.42 359 P **P 03 05 21.8 -2.2**
comp=Z,1.2nm,0.4s,mb3.8,baz=163,slow=11,SNR=16
FINES FINESS Array B 26.42 359 P **P 03 05 21.8 -2.1**
FINES pmax pmax
comp=Z,1.0nm,0.4s
FINES FINESS Array B 26.42 359 P **P 03 05 21.8 -2.2**
FINES FINESS Array B 26.42 359 P **P 03 05 21.8 -2.1**
comp=Z,1.0nm,0.4s,mb3.7
MDT Midelt 26.63 274 P **P 03 05 26.5 +0.4**
comp=Z,2.7nm,0.8s,mb3.8,baz=80,slow=6.1,SNR=6.5
MDT Midelt 26.63 274 P **P 03 05 26.5 +0.3**
HFS Hagfors 26.64 345 P **P 03 05 24.2 -1.7**
comp=Z,1.1nm,0.4s,mb3.7,baz=154,slow=11,SNR=14
HFS Hagfors 26.64 345 P **P 03 05 24.2 -1.7**
HFS pmax pmax
comp=Z,1.0nm,0.4s
HFS Hagfors 26.64 345 P **P 03 05 24.2 -1.7**
comp=Z,1.0nm,0.4s,mb3.7
AKTK Aktyubinsk 26.96 46 P **P 03 05 26.7 -2.2**
AKTK LR LR 03 18 38.2
AKTK Aktyubinsk 26.96 46 P **P 03 05 26.7 -2.2**
comp=Z,42nm,18.0s
AKTO Aktyubinsk 26.96 46 P **P 03 05 26.7 -2.2**
comp=Z,1.2nm,0.6s,mb3.6,baz=249,slow=11,SNR=3.3
AKTO LR LR 03 18 38.2
comp=Z,42nm,18.0s,MS3.0,baz=353,slow=42
AKTO Aktyubinsk 26.96 46 P **P 03 05 26.7 -2.2**
AKTO pmax pmax
comp=Z,1.0nm,0.6s,mb3.5
AKTO MLR MLR
comp=Z,42nm,18.0s,MS3.0
KAF Kangasniemi 27.09 359 *e*P **P 03 05 27.2 -2.7**
KAF pmax pmax
comp=Z,2.0nm,0.6s,mb3.8
KAF Kangasniemi 27.09 359 *e*p **P 03 05 27.2 -2.7**
comp=Z,2.3nm,0.6s,mb3.9
PBRG Braganca 27.49 294 *e*P **P 03 05 35.6 +1.8**
EMIN Mina Concepcio 27.50 286 P **P 03 05 34.7 +0.7**
MVO Moncorvo 27.68 293 *e*P **P 03 05 37.0 +1.5**
comp=Z,17nm,1.2s,mb4.6
ABKAR Akbulak array 27.71 49 *e*P **P 03 05 36.3 +0.7**
comp=Z,3.0nm,0.7s,mb4.0
ABKAR Akbulak array 27.71 49 *e*P **P 03 05 36.3 +0.6**
comp=Z,3.0nm,0.7s,mb4.0
PBAR Barrancos 27.76 287 *e*P **P 03 05 36.2 0.0**
comp=Z,15nm,1.3s,mb4.5
PBAR Barrancos 27.76 287 *e*P **P 03 05 36.2 0.0**
comp=Z,15nm,1.3s,mb4.5
JOF Joensuu 27.99 4 *e*P **P 03 05 36.3 -1.7**
JOF pmax pmax
comp=Z,1.0nm,0.3s,mb3.9
JOF Joensuu 27.99 4 *e*p **P 03 05 36.3 -1.7**
comp=Z,0.6nm,0.3s,mb3.7
JOF Joensuu 27.99 4 *e*P **P 03 05 36.3 -1.7**
comp=Z,1.0nm,0.3s,mb3.9
NB2 NORSAR Subarra 28.01 343 P **P 03 05 35.5 -2.7**
comp=Z,0.6nm,0.5s,mb3.5,baz=154,slow=10
NOA NORSAR Array B 28.01 343 P **P 03 05 35.2 -3.0**
comp=Z,0.5nm,0.7s,mb3.3,baz=147,slow=11,SNR=3.8
NOA NORSAR Array B 28.01 343 P **P 03 05 35.2 -3.0**
NOA pmax pmax
comp=Z,1.0nm,0.7s
EKA Eskdalemuir Ar 29.22 323 P **P 03 05 46.8 -2.2**
comp=Z,1.1nm,0.7s,mb3.7,baz=120,slow=10,SNR=5.5
EKA Eskdalemuir Ar 29.22 323 P **P 03 05 46.8 -2.3**
EKA pmax pmax
comp=Z,1.0nm,0.7s
ARCES ARCESS Array B 34.55 359 P **P 03 06 33.6 -2.0**
comp=Z,1.9nm,0.8s,mb4.1,baz=168,slow=8.3,SNR=26
ARCES ARCESS Array B 34.55 359 P **P 03 06 33.6 -2.0**
ARCES pmax pmax
comp=Z,2.0nm,0.8s
ARCES ARCESS Array B 34.55 359 P **P 03 06 33.6 -2.0**
comp=Z,2.0nm,0.8s,mb4.1
KEV Kevo 34.76 360 *e*P **P 03 06 35.5 -1.9**
KEV pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
KEV Kevo 34.76 360 *e*p **P 03 06 35.5 -1.9**
comp=Z,2.1nm,0.6s,mb4.2
KEV Kevo 34.76 360 *e*P **P 03 06 35.5 -1.9**
comp=Z,2.1nm,0.6s,mb4.2
BRVK Borovoye 35.02 46 *e*P **P 03 06 38.1 -1.8**
BRVK pmax pmax
comp=Z,2.0nm,1.2s,mb3.9
BRVK Borovoye 35.02 46 *e*P **P 03 06 38.1 -1.8**
comp=Z,2.0nm,1.2s,mb3.9
BVAR Borovoye Array 35.07 46 P **P 03 06 39.6 -0.8**
comp=Z,0.2nm,0.3s,mb3.5,baz=246,slow=10,SNR=3.1
BVAR Borovoye Array 35.07 46 P **P 03 06 39.6 -0.7**
EKS2 Erkin-Say 36.49 64 *e*P **P 03 06 54.5 +1.8**
comp=Z,3.8nm,1.0s,mb4.3
EKS2 Erkin-Say 36.49 64 *e*P **P 03 06 54.5 +1.8**
comp=Z,3.8nm,1.0s,mb4.3
TKM2 Tokmak 2 37.81 63 *e*P **P 03 07 02.9 -1.0**
TKM2 pmax pmax
comp=Z,3.0nm,0.9s,mb4.0
TKM2 Tokmak 2 37.81 63 *e*P **P 03 07 02.9 -1.0**
comp=Z,3.1nm,0.9s,mb4.0
TKM2 Tokmak 2 37.81 63 *e*P **P 03 07 02.9 -1.0**
comp=Z,3.1nm,0.9s,mb4.0
KURK Kurchatov 39.80 51 *e*P **P 03 07 20.1 -0.3**
KURK pmax pmax
comp=Z,3.0nm,0.9s,mb4.0
KURK Kurchatov 39.80 51 *e*P **P 03 07 20.1 -0.3**
comp=Z,3.5nm,0.9s,mb4.1
KURK Kurchatov 39.80 51 *e*P **P 03 07 20.1 -0.3**
comp=Z,3.5nm,0.9s,mb4.1
DBIC Dimbokro 40.99 234 P **P 03 07 30.1 -0.6**
comp=Z,6.6nm,1.0s,mb4.2,baz=49,slow=11,SNR=5.5
DBIC Dimbokro 40.99 234 P **P 03 07 30.1 -0.6**
DBIC pmax pmax
comp=Z,7.0nm,1.0s
DBIC Dimbokro 40.99 234 *e*P **P 03 07 32.8 +2.1**
comp=Z,20nm,1.3s,mb4.6
DBIC Dimbokro 40.99 234 P **P 03 07 30.1 -0.6**
comp=Z,7.0nm,1.0s,mb4.2
MK31 Makanchi Array 42.27 57 *e*P **P 03 07 41.8 +1.0**
MK31 Makanchi Array 42.27 57 *e*P **P 03 07 41.8 +1.0**
MKAR Makanchi Array 42.27 57 P **P 03 07 41.6 +0.8**
comp=Z,1.5nm,0.5s,mb3.9,baz=335,slow=4.7,SNR=8.2
MKAR Makanchi Array 42.27 57 P **P 03 07 41.6 +0.8**
MKAR pmax pmax
comp=Z,2.0nm,0.5s
NVS Novosibirsk 42.84 45 *e*P **P 03 07 46.2 +0.9**
NVS pmax pmax
comp=E,3.0nm,0.8s
NVS pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
NVS pmax pmax
comp=N,4.0nm,1.0s
SPITS Spitsbergen Ar 43.49 357 P **P 03 07 48.9 -1.4**
comp=N,1.0nm,0.3s,mb4.0,baz=153,slow=13,SNR=5.0
SPITS Spitsbergen Ar 43.49 357 P **P 03 07 48.9 -1.4**
SPITS pmax pmax
comp=Z,1.0nm,0.3s
SPITS Spitsbergen Ar 43.49 357 P **P 03 07 48.9 -1.4**
comp=Z,1.0nm,0.3s,mb4.0
ZAA0 Zalesovo Array 43.73 46 *e*P **P 03 07 52.7 +0.2**
ZAA0 Zalesovo Array 43.73 46 *e*P **P 03 07 52.7 +0.2**
ZALV Zalesovo Beam 43.73 46 P **P 03 07 52.3 -0.2**
comp=Z,0.8nm,0.4s,mb3.8,baz=268,slow=10,SNR=5.1
ZALV Zalesovo Beam 43.73 46 P **P 03 07 52.3 -0.2**
ZALV pmax pmax
comp=Z,1.0nm,0.4s,mb3.9
TSUM Tsumeb 54.76 191 *e*P **P 03 09 20.4 +3.3**
comp=Z,2.8nm,1.0s,mb4.2
ZAK Zakamensk 55.41 49 *e*P **P 03 09 23.2 +1.7**
ZAK pmax pmax
comp=Z,1.0nm,1.3s,mb3.7
SONM Songino Array 58.10 51 P **P 03 09 41.5 +0.8**
comp=Z,0.7nm,0.6s,mb3.9,baz=262,slow=8.6,SNR=3.5
SONM Songino Array 58.10 51 P **P 03 09 41.5 +0.8**
SONM pmax pmax
comp=Z,1.0nm,0.6s
SONM Songino Array 58.10 51 P **P 03 09 41.5 +0.8**
BOSA Boshof 63.36 182 P **P 03 10 19.3 +2.7**
comp=Z,6.1nm,1.3s,mb4.6,baz=6.6,slow=8.4,SNR=3.8
BOSA Boshof 63.36 182 P **P 03 10 19.3 +2.7**
BOSA pmax pmax
comp=Z,6.0nm,1.3s,mb4.6
BOSA Boshof 63.36 182 P **P 03 10 19.3 +2.7**
SCHQ Schefferville 64.47 320 P **P 03 10 22.8 -0.9**
comp=Z,2.9nm,0.6s,mb4.5,baz=67,slow=8.1,SNR=7.7
SCHQ Schefferville 64.47 320 P **P 03 10 22.8 -0.9**
CMAR Chiang Mai Arr 64.72 85 P **P 03 10 33.0 +7.1**
comp=Z,1.6nm,0.3s,mb4.5,baz=304,slow=8.7,SNR=4.0
CMAR LR LR 03 43 40.6
comp=Z,97nm,20.9s,MS4.0,baz=128,slow=41
CMAR Chiang Mai Arr 64.72 85 P **P 03 10 33.0 +7.1**
CMAR pmax pmax
comp=Z,2.0nm,0.3s
CMAR MLR MLR
comp=Z,97nm,20.9s
NJ2 Nanjing 73.45 62 *e*P **P 03 11 17.8 -2.2**
NJ2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
KSRS Korea Array 76.85 53 P **P 03 11 40.2 +0.8**
comp=Z,1.3nm,0.7s,mb4.0,baz=291,slow=4.9,SNR=4.6
KSRS Korea Array 76.85 53 P **P 03 11 40.2 +0.8**
KSRS pmax pmax
comp=Z,1.0nm,0.7s,mb3.9
YKA Yellowknife Ar 78.11 343 P **P 03 11 46.0 0.0**
comp=Z,0.3nm,0.5s,mb3.5,baz=35,slow=5.3,SNR=3.3
YKA Yellowknife Ar 78.11 343 P **P 03 11 46.0 0.0**
PPLA Purkeypile 82.39 360 *e*P **P 03 12 09.1 0.0**
comp=Z,3.2nm,0.6s,mb4.4
PPLA Purkeypile 82.39 360 *e*P **P 03 12 09.1 +0.1**
comp=Z,3.2nm,0.6s,mb4.4
MJAR Matsushiro Arr 83.99 49 P **P 03 12 19.0 +1.2**
comp=Z,0.7nm,0.6s,mb4.0,baz=305,slow=4.8,SNR=4.0
MJAR Matsushiro Arr 83.99 49 P **P 03 12 19.0 +1.2**
MJAR pmax pmax
comp=Z,1.0nm,0.6s

NEIC 15 03:10:48.8, 37°.57S×177°.09E, h2km, ML3.8(WEL), **After WEL., Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	**White Island**	**0.09**	**62**	P	Pg	03 10 50.9	+0.4
WIZ				S	Sg	03 10 52.2	+0.5
MARZ	**Manawahe**	**0.53**	**218**	P	Pg	03 10 59.7	+0.7
URZ	**Urewera**	**0.69**	**179**	P	Pg	03 11 02.1	+0.1
MKRZ	**Makatiti**	**0.75**	**221**	P	Pg	03 11 03.7	+0.4
KARZ	**Kaharoa**	**0.81**	**236**	P	Pg	03 11 05.2	+0.9
MWZ	**Matawai**	**0.84**	**156**	P	Pg	03 11 05.1	+0.2
MWZ				S	Sg	03 11 16.5	+0.7

IDC ***15*** *03:23:04.0±1.6, 34°.80N×27°.74E, h0km, mb3.8/4, mb1 3.8/7, mb1mx3.6/24, mbtmp3.7/7, ML3.7/2, Error ellipse: s-maj=35.7km s-min=22.1km az=22.0*
CSEM ***15*** *03:23:04.9±0.2, 34°.60N×27°.74E, h10km, MD3.5, Error ellipse: s-maj=8.9km s-min=6.4km az=35.0*
ISCJB ***15*** *03:23:06.6±0.4, 34°.49N±0°.03×27°.74E±0°.03, h60km±10km, mb3.6/4, Error ellipse: s-maj=5.2km s-min=4.6km az=24.2*
HLW ***15*** *03:23:08.5, 34°.43N×27°.76E, h31km±33km, Md3.6, Ml3.5*
NEIC ***15*** *03:23:13.2, 35°.14N×27°.27E, h27km±3km, MD3.5(ATH), After ATH.*
ATH ***15*** *03:23:13.2, 35°.14N×27°.27E, h27km±3km, MD3.5/10*
ISC 15 03:23:08.2±0.3, 34°.49N±0°.03×27°.69E±0°.03, h52km±10km, n76, σ0.94/95, mb3.6/4, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**1.14**	**338**	*e*Pb	**Pn**	**03 23 23.0**	**-4.8**
KARP				*e*Sb	**Sn**	**03 23 28.3**	**-14**
KARP	**Karpathos**	**1.14**	**338**	*e*PB	**Pn**	**03 23 23.0**	**-4.8**
KARP				*e*SB	**Sn**	**03 23 28.3**	**-14**
KARP	**Karpathos**	**1.14**	**338**	*e*Pb	**Pn**	**03 23 23.0**	**-4.8**
KARP				*e*Sb	**Sn**	**03 23 28.3**	**-14**
ZKR	**Zakros**	**1.36**	**297**	*e*Pn	**Pn**	**03 23 30.5**	**-0.3**
ZKR				*e*Sn	**Sn**	**03 23 42.6**	**-5.2**
ZKR	**Zakros**	**1.36**	**297**	*e*PN	**Pn**	**03 23 30.5**	**-0.3**
ZKR				*e*SN	**Sn**	**03 23 42.6**	**-5.2**
ZKR	**Zakros**	**1.36**	**297**	*e*Pn	**Pn**	**03 23 30.5**	**-0.3**
ZKR				*e*Sn	**Sn**	**03 23 42.6**	**-5.2**
ARG	**Arkhangelos**	**1.75**	**12**	*e*Pn	**Pn**	**03 23 36.7**	**+0.5**
ARG	**Arkhangelos**	**1.75**	**12**	*e*PN	**Pn**	**03 23 36.7**	**+0.5**
ARG	**Arkhangelos**	**1.75**	**12**	*e*Pn	**Pn**	**03 23 36.7**	**+0.5**
NPS	**Neapolis**	**1.87**	**295**	*e*Pn	**Pn**	**03 23 38.3**	**+0.5**
NPS	**Neapolis**	**1.87**	**295**	*e*PN	**Pn**	**03 23 38.3**	**+0.5**
NPS	**Neapolis**	**1.87**	**295**	*e*Pn	**Pn**	**03 23 38.3**	**+0.5**
LAST	**Lasithi**	**1.94**	**291**	*e*Pb	**Pn**	**03 23 39.2**	**+0.5**
LAST	**Lasithi**	**1.94**	**291**	*e*PB	**Pn**	**03 23 39.2**	**+0.5**
LAST	**Lasithi**	**1.94**	**291**	*e*Pb	**Pn**	**03 23 39.2**	**+0.5**
AKAS	**Kas**	**2.34**	**41**	*i* P	**Pn**	**03 23 45.3**	**+1.1**
SIVA	**Sivas**	**2.43**	**283**	*e*Pn	**Pn**	**03 23 46.4**	**+1.0**
SIVA	**Sivas**	**2.43**	**283**	*e*PN	**Pn**	**03 23 46.4**	**+1.0**
SIVA	**Sivas**	**2.43**	**283**	*e*Pn	**Pn**	**03 23 46.4**	**+1.0**
IDI	**Anoyia**	**2.44**	**290**	Pn	**Pn**	**03 23 46.1**	**+0.6**
	11nm,0.3s,baz=102,slow=15,SNR=55						
IDI				Sn	**Sn**	**03 24 12.2**	**-1.8**
	4.6nm,0.3s,baz=218,slow=18,SNR=3.9						
IDI	**Anoyia**	**2.44**	**290**	*e*Pn	**Pn**	**03 23 46.4**	**+0.9**
IDI	**Anoyia**	**2.44**	**290**	*e*PN	**Pn**	**03 23 46.4**	**+0.9**
IDI	**Anoyia**	**2.44**	**290**	*e*Pn	**Pn**	**03 23 46.4**	**+0.9**
TURN	**Turunc**	**2.49**	**17**	*i* P	**Pn**	**03 23 43.6**	**-2.6**
VAM	**Vamos**	**3.01**	**289**	*e*Pn	**Pn**	**03 23 54.3**	**+0.9**
VAM	**Vamos**	**3.01**	**289**	*e*PN	**Pn**	**03 23 54.3**	**+0.9**
VAM	**Vamos**	**3.01**	**289**	*e*Pn	**Pn**	**03 23 54.3**	**+0.9**
APE	**Apeiranthos**	**3.11**	**326**	*e*Pb	**Pn**	**03 23 53.5**	**-1.3**
APE	**Apeiranthos**	**3.11**	**326**	*e*PB	**Pn**	**03 23 53.5**	**-1.3**
APE	**Apeiranthos**	**3.11**	**326**	*e*Pb	**Pn**	**03 23 53.5**	**-1.3**
KARN	**Karanos**	**3.23**	**287**	*e*PN	**Pn**	**03 23 57.5**	**+1.1**
KARN	**Karanos**	**3.23**	**287**	*e*Pn	**Pn**	**03 23 57.5**	**+1.1**
SMG	**Samos**	**3.28**	**348**	*e*Pb	**Pn**	**03 23 56.8**	**-0.3**
SMG	**Samos**	**3.28**	**348**	*e*PB	**Pn**	**03 23 56.8**	**-0.3**
SMG	**Samos**	**3.28**	**348**	*e*Pb	**Pn**	**03 23 56.8**	**-0.3**
KORT	**Korkueli**	**3.31**	**40**	*i* P	**Pn**	**03 23 59.3**	**+1.9**
HMAT	**Matruh**	**3.43**	**189**	P	**Pn**	**03 23 58.8**	**-0.3**
	baz=190						
HMAT				S	**Sn**	**03 24 37.5**	**-1.0**
	baz=190						
HMAT	**Matruh**	**3.43**	**189**	P	**Pn**	**03 23 58.8**	**-0.3**
HMAT				S	**Sn**	**03 24 37.5**	**-1.0**
SLUM		**3.65**	**216**	P	**Pn**	**03 24 02.3**	**+0.2**
	baz=217						

SLUM		**3.65 216**	P	**Pn**	**03 24 02.3**	**+0.2**
GAZI	**Gazipasa**	**4.16 64**	*i* P	**Pn**	**03 24 09.1**	**0.0**
VLI	**Veliai**	**4.46 301**	*e*Pn	**Pn**	**03 24 12.0**	**-1.3**
VLI	**Veliai**	**4.46 301**	*e*PN	**Pn**	**03 24 12.0**	**-1.3**
VLI	**Veliai**	**4.46 301**	*e*Pn	**Pn**	**03 24 12.0**	**-1.3**
CSS	**Prodhromos**	**4.67 83**	*e*Pn	**Pn**	**03 24 15.9**	**-0.2**
CSS			*e*Sn	**Sn**	**03 25 08.0**	**-0.9**
CSS	**Prodhromos**	**4.67 83**	*e*Pn	**Pn**	**03 24 15.9**	**-0.2**
CSS			*e*Sn	**Sn**	**03 25 08.0**	**-0.9**
SWA2		**5.57 201**	P	**Pn**	**03 24 29.2**	**+0.7**
	baz=202					
SWA2			AMP		03 25 00.0	
	comp=E,40μm,0.3s,logA/T=5.2,baz=202					
SWA2			S	**Sn**	**03 25 29.3**	**-1.9**
	baz=202					
SWA2		**5.57 201**	P	**Pn**	**03 24 29.2**	**+0.7**
SWA2			S	**Sn**	**03 25 29.3**	**-1.9**
HSAF	**As Saff**	**5.86 145**	P	**Pn**	**03 24 32.3**	**-0.2**
	baz=145					
HSAF	**As Saff**	**5.86 145**	P	**Pn**	**03 24 32.3**	**-0.2**
GLL	**Jalalah**	**5.97 144**	P	**Pn**	**03 24 33.5**	**-0.5**
	baz=144					
GLL	**Jalalah**	**5.97 144**	P	**Pn**	**03 24 33.5**	**-0.5**
AMAG	**Maghara**	**6.04 128**	P	**Pn**	**03 24 34.4**	**-0.5**
	baz=127					
AMAG	**Maghara**	**6.04 128**	P	**Pn**	**03 24 34.4**	**-0.5**
AWBH		**6.24 170**	P	**Pn**	**03 24 38.2**	**+0.5**
	baz=170					
AWBH		**6.24 170**	P	**Pn**	**03 24 38.2**	**+0.5**
SUZ		**6.36 135**	P	**Pn**	**03 24 39.5**	**+0.1**
	baz=135					
SUZ		**6.36 135**	P	**Pn**	**03 24 39.4**	**0.0**
MMAI	**Mount Meron Ar**	**6.59 101**	Pn	**Pn**	**03 24 43.2**	**+0.7**
	comp=E,2.4nm,0.3s,baz=289,slow=14,SNR=8.3					
MMAI			Sn	**Sn**	**03 25 56.2**	**-0.1**
	comp=E,2.8nm,0.3s,baz=288,slow=19,SNR=4.6					
BRTR	**Keskin Array B**	**7.06 41**	Pn	**Pn**	**03 24 49.3**	**+0.4**
	comp=E,0.1nm,0.3s,baz=236,slow=15,SNR=3.8					
BRTR			Sn	**Sn**	**03 26 06.5**	**-1.1**
	comp=E,0.3nm,0.3s,baz=210,slow=26,SNR=9.2					
BRTR	**Keskin Array B**	**7.06 41**	Pn	**Pn**	**03 24 49.3**	**+0.5**
BRTR			Sn	**Sn**	**03 26 06.6**	**-1.1**
EIL	**Elat**	**7.81 126**	Pn	**Pn**	**03 25 00.7**	**+1.4**
	comp=E,0.6nm,0.3s,baz=349,slow=16,SNR=9.4					
EIL			Sn	**Sn**	**03 26 21.9**	**-4.4**
	comp=E,1.2nm,0.3s,baz=330,slow=22,SNR=5.6					
EIL	**Elat**	**7.81 126**	Pn	**Pn**	**03 25 00.7**	**+1.4**
EIL			Sn	**Sn**	**03 26 21.9**	**-4.4**
EIL	**Elat**	**7.81 126**	Pn	**Pn**	**03 25 00.7**	**+1.5**
EIL			Sn	**Sn**	**03 26 21.9**	**-4.4**
HDK1	**Dakhla**	**9.04 170**	P	**Pn**	**03 25 17.2**	**+1.1**
	baz=170					
HDK1	**Dakhla**	**9.04 170**	P	**Pn**	**03 25 17.2**	**+1.1**
GNI	**Garni**	**14.69 62**	*e*Pn	**Pn**	**03 26 32.0**	**-0.8**
GNI	**Garni**	**14.69 62**	*e*Pn	**Pn**	**03 26 32.0**	**-0.8**
ESDC	**Sonseca Array**	**25.70 291**	P	**P**	**03 28 34.5**	**+1.1**
	comp=E,0.6nm,0.6s,mb3.3,baz=84,slow=10.0,SNR=8.8					
ESDC	**Sonseca Array**	**25.70 291**	P	**P**	**03 28 34.5**	**+1.1**
FINES	**FINESS Array B**	**26.99 358**	P	**P**	**03 28 44.5**	**-0.3**
	comp=E,2.3nm,0.9s,mb3.7,baz=164,slow=10,SNR=10.0					
FINES	**FINESS Array B**	**26.99 358**	P	**P**	**03 28 44.5**	**-0.3**
EKA	**Eskdalemuir Ar**	**29.80 324**	P	**P**	**03 29 09.4**	**-0.4**
	comp=E,1.3nm,0.8s,mb3.7,baz=108,slow=10,SNR=3.5					
EKA	**Eskdalemuir Ar**	**29.80 324**	P	**P**	**03 29 09.4**	**-0.4**
ARCES	**ARCESS Array B**	**35.12 359**	P	**P**	**03 29 56.2**	**0.0**
	comp=E,0.9nm,0.7s,mb3.8,baz=173,slow=7.8,SNR=11					
ARCES	**ARCESS Array B**	**35.12 359**	P	**P**	**03 29 56.2**	**0.0**

LDG ***15*** *03:27:10.2±0.1,29°.55N×81°.13E,h10km,Mb4.7/34, Ms3.3/1,Error ellipse: s-maj=6.6km s-min=4.6km az=66.0*
IDC ***15*** *03:27:10.5±0.5,29°.38N×81°.16E,h0km,mb4.4/29, mb1 4.5/32,mb1mx4.4/38,mbtmp4.4/32,ML3.9/3,MS3.8/6, Ms1 3.8/6,ms1mx3.1/35,Error ellipse: s-maj=16.6km s-min=12.3km az=49.0*
BJI ***15*** *03:27:11.0,29°.41N×80°.71E,h32km,mB4.7/19,mb4.5/27, Ms4.4/23,Ms7 4.2/20*
SZGRF ***15*** *03:27:12.3,29°.73N×82°.37E,h33km,mb4.6,Nepal*
ISCJB ***15*** *03:27:13.7±0.6,29°.41N±0°.02×81°.06E±0°.02,h30km±4km, mb4.5/109,MS3.9/14,Error ellipse: s-maj=3.9km s-min=2.2km az=16.7*
DMN ***15*** *03:27:13.2±0.3,29°.73N×80°.96E,h10km,Ml5.0/5,Error ellipse: s-maj=33.7km s-min=6.6km az=27.0*
MOS ***15*** *03:27:14.0±0.9,29°.42N×81°.08E,h33km,mb4.7/72,Error ellipse: s-maj=8.3km s-min=3.8km az=127.3*
NEIC ***15*** *03:27:15.4±1.1,29°.46N×81°.08E,h29km±8km,mb4.6/60, ML5.0(DMN),Error ellipse: s-maj=5.3km s-min=2.8km az=224.0*
NDI ***15*** *03:27:17.3±6.4,29°.43N×81°.06E,h29km,ML4.7, mb4.6(NEIC)*
TEH ***15*** *03:27:17.0,29°.61N×81°.06E,h35km*
ISC 15 03:27:15.3±0.7,29°.42N±0°.02×81°.06E±0°.02,h26km±5km, h22km±1.4km:pP-P,n361,σ0°98/389,mb4.5/109,MS3.9/14, 56C-16D,Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTH	**Pithoragarh**	**0.75**	**280**	*e*PKP	**Pb**	**03 27 27.2**	**-2.5**
PTH				*e*S	**Sb**	**03 27 37.6**	**-1.9**
JOSI	**Joshimath**	**1.73**	**311**	*e*PKP	**Pn**	**03 27 45.2**	**+1.6**
JOSI				*e*S	**Sn**	**03 28 06.9**	**+2.1**
JOSI				AML	AML	03 28 12.2	
	comp=E,28μm,0.5s						
JOSI				AML	AML	03 28 14.5	
	comp=N,30μm,0.9s						
DDI	**Dehra Dun**	**2.76**	**290**	*e*PKP	**Pn**	**03 27 58.2**	**+0.4**
DDI				*e*S	**Sn**	**03 28 32.6**	**+2.3**
KLP	**Kalpa**	**3.21**	**312**	*e*PKP	**Pn**	**03 28 06.9**	**+2.9**
KLP				*e*S	**Sn**	**03 28 42.4**	**+0.9**
KLP				AML	AML	03 29 00.0	
	comp=E,3μm,0.8s						
KLP				AML	AML	03 29 02.4	
	comp=N,3μm,0.9s						
BISR	**Bishrakh**	**3.28**	**256**	*e*x	x	03 28 16.2	
NDI	**New Delhi**	**3.44**	**259**	*e*x	**Pn**	**03 28 07.0**	**-0.2**
NDI				*e*S	**Sn**	**03 28 46.0**	**-1.2**
AGRA	**Agra**	**3.51**	**232**	*e*PKP	**Pn**	**03 28 10.4**	**+2.2**
AGRA				*e*S	**Sn**	**03 28 47.8**	**-1.0**
AGRA				AML	AML	03 29 05.4	
	comp=E,2μm,0.4s						
AGRA				AML	AML	03 29 11.2	
	comp=N,2μm,0.2s						
AYAN	**Aya Nagar**	**3.57**	**256**	*e*PKP	**Pn**	**03 28 11.0**	**+2.0**
AYAN				*e*S	**Sn**	**03 28 50.3**	**-0.1**
SONA	**Sohna**	**3.68**	**252**	*e*PKP	**Pn**	**03 28 11.8**	**+1.3**
SONA				*e*S	**Sn**	**03 28 54.5**	**+1.5**
SONA				AML	AML	03 29 17.2	
	comp=N,1μm,0.4s						
SONA				AML	AML	03 29 19.5	
	comp=E,1μm,0.4s						
KKR	**Kurukshetra**	**3.73**	**279**	*e*PKP	**Pn**	**03 28 12.1**	**+1.0**
SMLA	**Simla**	**3.77**	**298**	*i* P	**Pn**	**03 28 13.1**	**+1.4**
SMLA				*i* S	**Sn**	**03 28 55.2**	**-0.2**
SMLA				⦚E		03 29 15.2	
	comp=E,13μm,0.5s						
SMLA				⦚E		03 29 15.6	
	comp=N,9μm,0.5s						
DMN	**Daman**	**3.99**	**116**	*e*Pn	**Pn**	**03 28 15.6**	**+0.8**
DMN				*e*Sn	**Sn**	**03 29 02.8**	**+2.1**
	comp=N,1μm,0.6s						
KKN	**Kakani**	**4.05**	**113**	*e*Pn	**Pn**	**03 28 16.1**	**+0.5**
KKN				*e*Sn	**Sn**	**03 29 03.2**	**+1.0**
SDNR	**Sundarnagar**	**4.09**	**301**	*e*PKP	**Pn**	**03 28 18.1**	**+1.9**
SDNR				*e*x	x	03 29 21.1	
PKIN	**Phulchoki**	**4.24**	**115**	*e*Pn	**Pn**	**03 28 19.4**	**+1.3**
PKIN				*e*Sn	**Sn**	**03 29 08.1**	**+1.4**
	comp=N,638nm,0.5s						
PKI	**Pulchoki**	**4.25**	**115**	*e*Pn	**Pn**	**03 28 18.9**	**+0.6**
PKI				*e*Sn	**Sn**	**03 29 08.4**	**+1.3**
	comp=N,612nm,0.5s						
PKI	**Pulchoki**	**4.25**	**115**	*e*Pn	**Pn**	**03 28 19.4**	**+1.1**
PKI				*e*Sn	**Sn**	**03 29 08.4**	**+1.3**
BHK	**Bhakra**	**4.48**	**298**	*e*x	**Pn**	**03 28 20.0**	**-1.4**
BHK				*e*x	x	03 29 36.0	
GUN	**Gumba**	**4.49**	**108**	*e*Pn	**Pn**	**03 28 22.6**	**+0.9**
GUN				*e*Sn	**Sn**	**03 29 12.8**	**-0.3**
JHNI	**Jhansi**	**4.53**	**210**	*e*PKP	**Pn**	**03 28 24.4**	**+2.2**
JHNI				*e*x	x	03 29 16.0	
KHET	**Khetri**	**4.80**	**255**	*e*PKP	**Pn**	**03 28 27.7**	**+1.7**
KHET				*e*S	**Sn**	**03 29 19.9**	**-0.8**
JIRN	**Jiri**	**4.84**	**110**	*e*Pn	**Pn**	**03 28 27.3**	**+0.8**
JIRN				*e*Sn	**Sn**	**03 29 21.5**	**-0.2**
	comp=N,407nm,0.2s						
RAMN	**Ramite**	**5.47**	**115**	*e*Pn	**Pn**	**03 28 35.4**	**+0.2**
RAMN				*e*Sn	**Sn**	**03 29 36.4**	**-0.9**
THN	**Thein Dam**	**5.49**	**305**	*e*PKP	**Pn**	**03 28 36.0**	**+0.7**
THN				*e*x	x	03 29 44.0	
ODAN	**Odare**	**6.14**	**113**	*e*Pn	**Pn**	**03 28 45.0**	**+0.6**
ODAN				*e*Sn	**Sn**	**03 29 53.3**	**-0.5**
	comp=N,813nm,0.5s						
TAPN	**Taplejung**	**6.21**	**108**	*e*Pn	**Pn**	**03 28 45.4**	**+0.1**
JBP	**Jabalpur**	**6.30**	**189**	⇑*i* P	**Pn**	**03 28 46.3**	**-0.2**
JBP				*e*x	x	03 29 56.9	
AJM	**Ajmer**	**6.39**	**244**	*e*PKP	**Pn**	**03 28 49.0**	**+1.3**
AJM				*e*x	x	03 29 59.0	
BHPL	**Bhopal**	**6.96**	**209**	*e*x	**Pn**	**03 28 55.1**	**-0.5**
BHPL				*e*S	**Sn**	**03 30 10.0**	**-4.1**
BHPL				AML	AML	03 30 13.9	
	comp=N,391nm,0.3s						
BHPL				AML	AML	03 30 16.7	
	comp=E,461nm,0.3s						
CHCP	**Chirah Chowk**	**7.88**	**304**	P	**Pn**	**03 29 09.1**	**+0.9**
LSA	**Lhasa**	**8.79**	**86**	*e*P	**Pn**	**03 29 21.9**	**+1.2**
LSA				*e*		03 30 59.1	
LSA				pmax	pmax		
	comp=Z,28nm,0.8s						
LSA	**Lhasa**	**8.79**	**86**	*e*Pn	**Pn**	**03 29 21.9**	**+1.2**
	comp=Z,28nm,0.8s						
LSA				*e*Sn	**Sn**	**03 30 59.1**	**+0.1**
CEP	**Cherat**	**8.95**	**302**	P	**Pn**	**03 29 22.9**	**0.0**
CEP				S	**Sn**	**03 30 59.0**	**-3.8**
AKL	**Akola**	**9.42**	**204**	⇑*i* P	**Pn**	**03 29 29.7**	**+0.4**
AKL				*e*PKP		03 29 29.9	
AKL				*i* S	**Sn**	**03 31 08.3**	**-6.1**
AKL				*e*S	**Sn**	**03 31 09.6**	**-4.8**
AKL				*e*x	x	03 31 13.6	
	comp=E,2μm,0.3s						
AKL				*e*x	x	03 31 15.3	
	comp=N,2μm,0.7s						
KSH	**Kashi**	**10.91**	**339**	P	**Pn**	**03 29 44.4**	**-5.3**
KSH				pP		03 29 49.8	
KSH				PP		03 29 52.9	
KSH				S	**Sn**	**03 31 39.8**	**-11**
KSH				SS		03 31 52.6	
KSH				pmax	pmax		
	comp=Z,4.0nm,0.4s						
KSH				pmax	pmax		
	comp=Z,54nm,3.1s						
KSH				LR	LR		
	comp=N,270nm,9.6s						
KSH				LR	LR		
	comp=E,250nm,8.1s						
KSH				LR	LR		
	comp=Z,310nm,8.8s						
BHV	**Bhavnagar**	**11.09**	**229**	*e*x	**Pn**	**03 29 50.5**	**-1.7**
KBL	**Kabul**	**11.41**	**300**	*e*Pn	**Pn**	**03 29 55.9**	**-0.6**
KBL				*e*Sn	**Sn**	**03 31 56.7**	**-6.3**
LATR	**Latur**	**11.70**	**202**	*e*x	**Pn**	**03 29 57.1**	**-3.5**
LATR				*e*S	**Sn**	**03 32 02.9**	**-7.5**
VIS	**Vishakhapatnam**	**11.83**	**169**	*i* x	**Pn**	**03 30 00.7**	**-1.7**
VIS				*i* x	x	03 31 55.4	
HYB	**Hyderabad**	**12.17**	**191**	*e*P	**Pn**	**03 30 06.0**	**-1.0**
HYB				*e*S	**Sn**	**03 32 23.0**	**+1.2**
HYB				pmax	pmax		
	comp=Z,160nm,1.0s						
HYB	**Hyderabad**	**12.17**	**191**	*e*P	**Pn**	**03 30 06.0**	**-1.0**
	comp=Z,160nm,1.0s						
HYB				*e*S	**Sn**	**03 32 23.0**	**+1.2**
HYB	**Hyderabad**	**12.17**	**191**	*i* P	**Pn**	**03 30 06.0**	**-1.0**
HYB				*e*S	**Sn**	**03 32 23.0**	**+1.2**
POO	**Poona**	**12.68**	**213**	⇓*i* x	**Pn**	**03 30 11.0**	**-3.0**
UCH	**Uchtor**	**13.83**	**339**	*e*Pn	**Pn**	**03 30 27.2**	**-2.4**
	comp=Z,19nm,0.7s						
AML	**Almayashu**	**14.01**	**337**	*e*Pn	**Pn**	**03 30 28.6**	**-3.5**
	comp=Z,13nm,0.6s						
TKM2	**Tokmak 2**	**14.17**	**343**	*e*P	**Pn**	**03 30 34.6**	**+0.4**
TKM2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TKM2	**Tokmak 2**	**14.17**	**343**	*e*Pn	**Pn**	**03 30 34.6**	**+0.4**
	comp=Z,9.9nm,0.9s						
AAK	**Ala-Archa**	**14.21**	**340**	Pn	**Pn**	**03 30 34.1**	**-0.6**
	comp=Z,0.0nm,0.3s,baz=189,slow=6.2,SNR=10						
AAK				Sn	**Sn**	**03 33 04.0**	**-7.4**
	comp=Z,0.0nm,0.3s,baz=170,slow=17,SNR=3.1						
AAK				LR	LR	03 36 35.7	
	comp=Z,287nm,19.1s,baz=359,slow=40						
AAK	**Ala-Archa**	**14.21**	**340**	*e*Pn	**Pn**	**03 30 34.0**	**-0.8**
EKS2	**Erkin-Say**	**14.46**	**338**	*e*Pn	**Pn**	**03 30 37.4**	**-0.7**
	comp=Z,11nm,0.8s						
WMQ	**Urumqi**	**15.32**	**18**	*e*P	**Pn**	**03 30 50.0**	**+0.4**
WMQ				sP	sP	03 30 59.0	-5.6
WMQ				PP		03 31 03.0	
WMQ				S	**Sn**	**03 33 39.0**	**+0.5**
WMQ				SS		03 33 58.0	
WMQ				pmax	pmax		
	comp=Z,16nm,0.6s						
WMQ				LR	LR		
	comp=N,130nm,6.0s						
WMQ				LR	LR		
	comp=E,120nm,6.0s						
WMQ				LR	LR		
	comp=Z,98nm,6.0s						
MK31	**Makanchi Array**	**17.37**	**3**	*e*P	**Pn**	**03 31 14.3**	**-1.5**
MKAR	**Makanchi Array**	**17.37**	**3**	Pn	**Pn**	**03 31 13.1**	**-2.7**
	comp=Z,0.1nm,0.3s,baz=173,slow=11,SNR=9.1						
MKAR				Sn	**Sn**	**03 34 19.6**	**-8.6**
	comp=Z,0.0nm,0.3s,baz=190,slow=16,SNR=2.7						
GTA	**Gaotai**	**18.37**	**52**	*e*P	**Pn**	**03 31 30.3**	**+2.1**
GTA				pP	pP	03 31 35.4	+0.3
GTA				sP	sP	03 31 39.1	+0.6
GTA				S	**Sn**	**03 34 54.0**	**+1.4**
GTA				sS	sS	03 35 01.3	-6.6
GTA				SS		03 35 16.5	
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,98nm,3.6s						
GTA				LR	LR		
	comp=N,800nm,10.2s						
GTA				LR	LR		
	comp=E,980nm,9.3s						
GTA				LR	LR		
	comp=Z,770nm,12.0s						
IMYA	**Miami**	**18.89**	**297**	*e*P	**Pn**	**03 31 31.5**	**-2.9**
IKOO	**Kooshah**	**19.15**	**285**	*e*P	**Pn**	**03 31 36.5**	**-1.2**
CHTO	**Chiang Mai**	**19.41**	**119**	*e*P	**Pn**	**03 31 39.5**	**-1.4**
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CHTO	**Chiang Mai**	**19.41**	**119**	*e*P	**Pn**	**03 31 39.5**	**-1.4**
	comp=Z,5.9nm,0.8s						
CM31	**Chiang Mai Arr**	**19.63**	**120**	*e*P	**Pn**	**03 31 41.9**	**-1.5**
	comp=Z,8.7nm,0.7s						
CMAR	**Chiang Mai Arr**	**19.63**	**120**	Pn	**Pn**	**03 31 41.5**	**-1.9**
	comp=Z,0.9nm,0.3s,baz=310,slow=10.0,SNR=41						
CMAR	**Chiang Mai Arr**	**19.63**	**120**	P	**Pn**	**03 31 41.5**	**-1.9**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CD2	**Chengdu**	**19.68**	**80**	P	**Pn**	**03 31 42.6**	**-1.4**
CD2				pP	pP	03 31 47.8	-1.7
CD2				sP	sP	03 31 51.4	-1.5
CD2				PP		03 32 00.8	
CD2				S	**Sn**	**03 35 19.3**	**-5.0**
CD2				SS		03 35 46.9	
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
CD2				pmax	pmax		
	comp=Z,100nm,4.2s						
CD2				LR	LR		
	comp=E,420nm,7.2s						
CD2				LR	LR		
	comp=Z,290nm,9.5s						
KMI	**Kunming**	**19.73**	**97**	P	**Pn**	**03 31 43.0**	**-1.7**
KMI				pP	pP	03 31 51.3	+1.1
KMI				sP	sP	03 31 54.9	+1.4
KMI				PP		03 32 04.8	
KMI				S	**Sn**	**03 35 21.5**	**-4.2**
KMI				SS		03 35 48.5	
KMI				pmax	pmax		
	comp=Z,12nm,0.8s						
KMI				pmax	pmax		
	comp=Z,99nm,3.8s						
KMI				LR	LR		
	comp=N,980nm,7.0s						
KMI				LR	LR		
	comp=E,580nm,6.3s						
KMI				LR	LR		
	comp=Z,870nm,8.1s						
LZH	**Lanzhou**	**20.26**	**65**	*e*P	**P**	**03 31 49.5**	**+0.8**
LZH				pP		03 31 56.3	
LZH				sP	sP	03 32 00.1	+0.9
LZH				PP		03 32 09.4	
LZH				*e*S	**S**	**03 35 29.6**	**-5.1**
LZH				*e*SS		03 35 59.3	
LZH				pmax	pmax		
	comp=Z,27nm,1.1s						
LZH				pmax	pmax		
	comp=Z,130nm,4.2s						
LZH				LR	LR		
	comp=N,680nm,10.5s						
LZH				LR	LR		
	comp=Z,810nm,14.2s,MS4.2						
KURK	**Kurchatov**	**21.35**	**356**	P	**P**	**03 31 58.2**	**-2.2**
	comp=Z,16nm,0.6s,mb4.5,baz=180,slow=10,SNR=50						
KURK	**Kurchatov**	**21.35**	**356**	*e*P	**P**	**03 31 59.0**	**-1.3**
KURK				pmax	pmax		
	comp=Z,35nm,0.8s,mb4.7						
KURK	**Kurchatov**	**21.35**	**356**	*e*P	**P**	**03 31 59.0**	**-1.3**
	comp=Z,35nm,0.8s,mb4.7						
GYA	**Guiyang**	**22.80**	**91**	P	**P**	**03 32 16.8**	**+0.8**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.3						
IMEH	**Mehriz**	**22.88**	**282**	*e*P	**P**	**03 32 15.3**	**-1.6**
ISHM	**Shahmirzad**	**24.19**	**292**	*e*P	**P**	**03 32 30.1**	**+0.5**
ISRV	**Sarvestan**	**24.33**	**277**	*e*P	**P**	**03 32 31.7**	**+0.8**
IPAR	**Pars**	**24.33**	**278**	*e*P	**P**	**03 32 32.3**	**+1.4**
ENH	**Enshi**	**24.65**	**81**	*e*P	**P**	**03 32 33.2**	**-0.6**
	comp=Z,14nm,0.4s,mb4.8						
ZAA0	**Zalesovo Array**	**24.66**	**5**	*e*P	**P**	**03 32 32.4**	**-1.2**
ZALV	**Zalesovo Beam**	**24.66**	**5**	P	**P**	**03 32 32.8**	**-0.9**
	comp=Z,26nm,0.8s,mb4.8,baz=194,slow=9.2,SNR=50						
ZALV	**Zalesovo Beam**	**24.66**	**5**	P	**P**	**03 32 32.8**	**-0.9**
ZALV				pmax	pmax		
	comp=Z,27nm,0.8s,mb4.8						
IMOK	**Mouk**	**24.72**	**276**	*e*P	**P**	**03 32 35.9**	**+1.4**
IZEF	**Zefreh**	**24.80**	**285**	*e*P	**P**	**03 32 36.1**	**+1.0**
BVAR	**Borovoye Array**	**24.86**	**345**	P	**P**	**03 32 35.6**	**+0.2**
	comp=Z,1.5nm,0.3s,mb3.9,baz=145,slow=8.8,SNR=12						
BVAR	**Borovoye Array**	**24.86**	**345**	P	**P**	**03 32 35.6**	**+0.1**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BRVK	**Borovoye**	**24.91**	**344**	*e*P	**P**	**03 32 35.4**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.2						
BRVK	**Borovoye**	**24.91**	**344**	*e*P	**P**	**03 32 35.4**	**-0.5**
	comp=Z,5.7nm,0.7s,mb4.2						
ISFB	**Sefidab**	**24.92**	**289**	*e*P	**P**	**03 32 35.2**	**-1.0**
NVS	**Novosibirsk**	**25.45**	**3**	*e*P	**P**	**03 32 39.9**	**-0.9**
NVS				*e*		03 37 06.9	
NVS				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.4						
NVS				pmax	pmax		
	comp=N,21nm,1.3s						
NVS				pmax	pmax		
	comp=E,6.0nm,0.8s						
ABKAR	**Akbulak array**	**25.52**	**327**	*e*P	**P**	**03 32 41.9**	**+0.4**
	comp=E,10nm,0.8s,mb4.4						
IPIR	**Pirpir**	**26.01**	**285**	*e*P	**P**	**03 32 48.3**	**+2.1**
MOY	**Mondy**	**26.73**	**28**	*e*P	**P**	**03 32 53.3**	**+0.9**
ZAK	**Zakamensk**	**26.81**	**32**	*e*P	**P**	**03 32 47.6**	**-5.6**
ZAK				*e*		03 38 45.0	
ZAK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.0						
SONM	**Songino Array**	**26.82**	**40**	P	**P**	**03 32 54.1**	**+0.8**
	comp=Z,2.4nm,0.6s,mb3.9,baz=232,slow=9.8,SNR=8.3						
SONM	**Songino Array**	**26.82**	**40**	P	**P**	**03 32 54.1**	**+0.8**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ULN	**Ulaanbaatar**	**27.21**	**40**	*e*P	**P**	**03 32 57.1**	**+0.3**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.8						
ULN	**Ulaanbaatar**	**27.21**	**40**	*e*P	**P**	**03 32 57.1**	**+0.3**
	comp=Z,2.2nm,0.7s,mb3.8						
AKTK	**Aktyubinsk**	**27.24**	**327**	P	**P**	**03 32 57.2**	**+0.2**
AKTK				LR	LR	03 44 32.6	
AKTO	**Aktyubinsk**	**27.24**	**327**	P	**P**	**03 32 57.2**	**+0.2**
	comp=Z,3.7nm,0.9s,mb3.9,baz=123,slow=10,SNR=7.4						
AKTO				LR	LR	03 44 32.6	
	comp=Z,165nm,18.4s,MS3.6,baz=248,slow=38						
AKTO	**Aktyubinsk**	**27.24**	**327**	P	**P**	**03 32 57.2**	**+0.2**
AKTO				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
AKTO				MLR	MLR		
	comp=Z,165nm,18.4s,MS3.6						
HHC	**Hu-ho-hao-te**	**27.30**	**57**	*e*P	**P**	**03 32 58.1**	**+0.4**
HHC				pP	pP	03 33 03.8	-1.5
HHC				sP	sP	03 33 07.0	-1.6
HHC				PP		03 33 44.8	
HHC				PcP	PcP	03 36 18.9	+2.1
HHC				S	**S**	**03 37 34.4**	**-1.2**
HHC				SS		03 38 50.5	
HHC				ScP	ScP	03 39 56.3	+0.8
HHC				PcS	PcS	03 39 58.9	+0.5
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.4						
HHC				pmax	pmax		
	comp=Z,140nm,4.4s						
HHC				LR	LR		
	comp=N,220nm,7.8s						
HHC				LR	LR		
	comp=E,340nm,7.6s						
HHC				LR	LR		
	comp=Z,290nm,11.4s,MS4.1						
QIZ	**Qiongzhong**	**28.14**	**105**	P	**P**	**03 33 05.5**	**0.0**
QIZ				S	**S**	**03 37 51.4**	**+2.1**
QIZ				pmax	pmax		
	comp=Z,19nm,1.8s,mb4.4						
QIZ				pmax	pmax		
	comp=Z,99nm,3.9s						
QIZ				LR	LR		
	comp=N,360nm,5.3s						
QIZ				LR	LR		
	comp=Z,440nm,10.4s,MS4.3						
BJI	**Beijing**	**30.57**	**60**	P	**P**	**03 33 26.6**	**-0.2**
BJI				S	**S**	**03 38 27.3**	**

CN2 LR LR
comp=Z,200nm,11.0s,MS4.2
VSR Storozhevoye 37.96 317 *eP* **P 03 34 30.2 -0.4**
VSR pmax pmax
comp=N,6.0nm,0.5s
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb4.8
VSR pmax pmax
comp=E,2.0nm,0.3s
SIM Simferopol' 39.91 306 *eP* **P 03 34 47.6 +0.6**
SIM pmax pmax
comp=Z,10.0nm,1.7s,mb4.3
BR131 Keskin Array S 39.97 298 *eP* **P 03 34 48.5 +0.9**
comp=Z,0.9nm,0.6s,mb3.7
BRTR Keskin Array B 39.97 298 P **P 03 34 47.6 0.0**
comp=Z,1.4nm,0.7s,mb3.8,baz=117,slow=10,SNR=12
BRTR Keskin Array B 39.97 298 P **P 03 34 47.6 0.0**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
OBN Obninsk 40.75 322⇓*eP* **P 03 34 53.9 +0.1**
OBN *PP pP 03 35 00.0 -1.7
OBN 03 36 55.0
OBN pmax pmax
comp=Z,7.0nm,0.4s,mb4.6
OBN MLR MLR
comp=Z,100nm,18.0s,MS3.7
MDJ Mudanjiang 41.00 55 P **P 03 34 55.3 -0.8**
MDJ pP pP 03 35 01.4 -2.5
MDJ sP sP 03 35 04.0 -3.1
MDJ ScP ScP 03 40 44.1 +0.3
MDJ PcS PcS 03 40 46.6 0.0
MDJ S **S 03 41 06.3 -0.4**
MDJ pmax pmax
comp=Z,6.0nm,0.9s,mb4.2
MDJ pmax pmax
comp=Z,51nm,4.5s
MDJ LR LR
comp=N,47nm,22.0s,MS3.4
MDJ LR LR
comp=E,24nm,18.6s,MS3.4
TLCR 43.67 306⇓*P* **P 03 35 18.0 +0.2**
TLCR 43.67 306⇓*iP* **P 03 35 18.0 +0.2**
AKASG Malin Array Be 43.95 314 P **P 03 35 19.3 -0.6**
comp=E,1.0nm,0.5s,mb3.8,baz=74,slow=7.0,SNR=9.1
AKASG Malin Array Be 43.95 314 P **P 03 35 19.3 -0.6**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKBB Malin Array Si 43.95 314 *eP* **P 03 35 19.4 -0.5**
AKBB *e**PP pP 03 35 27.9 +0.1
KIEV Kiev 43.96 314 *eP* **P 03 35 19.2 -0.8**
KIEV pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
KIEV Kiev 43.96 314 *eP* **P 03 35 19.2 -0.8**
comp=Z,3.6nm,0.8s,mb4.2
VRI Vrincioaia 45.17 307⇓*P* **P 03 35 31.1 +1.4**
VRI Vrincioaia 45.17 307⇓*iP* **P 03 35 31.1 +1.4**
PLOR Plostina 45.22 307⇑*P* **P 03 35 31.5 +1.3**
PLOR Plostina 45.22 307⇑*iP* **P 03 35 31.5 +1.3**
MLR Muntele Rosu 45.70 306 P **P 03 35 35.8 +1.8**
comp=Z,17nm,0.7s,mb5.1,baz=76,slow=4.2
MLR Muntele Rosu 45.70 306 P **P 03 35 35.8 +1.8**
MLR pmax pmax
comp=Z,17nm,0.7s
MLR Muntele Rosu 45.70 306⇓*P* **P 03 35 36.0 +2.0**
MLR Muntele Rosu 45.70 306⇓*iP* **P 03 35 36.0 +2.0**
JOF Joensuu 46.17 331 *eP* **P 03 35 37.1 -0.3**
JOF pmax pmax
comp=Z,7.0nm,0.5s,mb4.8
JOF Joensuu 46.17 331 *ep* **P 03 35 37.1 -0.3**
comp=Z,6.8nm,0.5s,mb4.8
JOF Joensuu 46.17 331 *ep* **P 03 35 37.1 -0.3**
comp=Z,6.8nm,0.5s,mb4.8
BURAR Bucovina Array 46.27 309⇑*P* **P 03 35 38.9 +0.5**
BURAR Bucovina Array 46.27 309⇑*iP* **P 03 35 38.9 +0.5**
BUR08 Bucovina Ar. S 46.28 309 *eP* **P 03 35 39.0 +0.5**
BUR08 *e*PcP PcP 03 37 14.6 +1.0
IIGN Ignalina 46.52 320 *eP* **P 03 35 40.5 +0.3**
IIGN AMB AMB 03 41 21.2
comp=Z,4.0nm,0.9s,mb4.3
IZAR Zarasai 46.58 320 *eP* **P 03 35 41.9 +1.1**
ISAL Salakas 46.61 320 *eP* **P 03 35 41.2 +0.3**
MJAR Matsushiro Arr 47.87 66 LR LR 03 56 40.2
comp=Z,68nm,18.4s,MS3.6,baz=45,slow=37
DRGR 47.96 308⇓*P* **P 03 35 52.9 +1.3**
DRGR 47.96 308⇓*iP* **P 03 35 52.9 +1.3**
FINES FINESS Array B 48.00 328 P **P 03 35 51.3 -0.4**
comp=Z,4.6nm,0.6s,mb4.7,baz=101,slow=8.7,SNR=29
FINES LR LR 03 57 23.1
comp=Z,141nm,18.5s,MS4.0,baz=326,slow=38
FINES FINESS Array B 48.00 328 P **P 03 35 51.3 -0.4**
FINES pmax pmax
comp=Z,5.0nm,0.6s
FINES MLR MLR
comp=Z,141nm,18.5s
KAF Kangasniemi 48.08 329 *eP* **P 03 35 51.8 -0.5**
KAF pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
KAF Kangasniemi 48.08 329 *ep* **P 03 35 51.8 -0.5**
comp=Z,2.0nm,0.6s,mb4.3
KAF Kangasniemi 48.08 329 *ep* **P 03 35 51.8 -0.5**
comp=Z,2.0nm,0.6s,mb4.3
KOLS Kolonicke sedl 48.28 311 *eP* **P 03 35 54.3 +0.3**
KOLS pmax pmax
comp=Z,4.0nm,1.4s,mb4.3
KOLS Kolonicke sedl 48.28 311 *eP* **P 03 35 54.3 +0.3**
comp=Z,3.7nm,1.4s,mb4.2
KOLS Kolonicke sedl 48.28 311 *eP* **P 03 35 54.3 +0.3**
BZS Buzias 48.74 306⇑*P* **P 03 35 58.4 +0.7**
BZS Buzias 48.74 306⇑*iP* **P 03 35 58.3 +0.6**
STHS Stebnicka Huta 48.96 312 *eP* **P 03 35 59.9 +0.6**
STHS pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
STHS Stebnicka Huta 48.96 312 *eP* **P 03 35 59.9 +0.6**
comp=Z,1.5nm,0.7s,mb4.1
STHS Stebnicka Huta 48.96 312 *eP* **P 03 35 59.9 +0.6**
KECS Kecovo 49.46 310 *eP* **P 03 36 03.9 +0.8**
KECS pmax pmax
comp=Z,1.0nm,0.8s,mb3.9
KECS Kecovo 49.46 310 *eP* **P 03 36 03.9 +0.8**
comp=Z,1.3nm,0.8s,mb4.0
KECS Kecovo 49.46 310 *eP* **P 03 36 03.9 +0.8**
TIXI Tiksi 49.52 18 *eP* **P 03 36 02.3 -1.0**
TIXI pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
TIXI Tiksi 49.52 18 *eP* **P 03 36 02.2 -1.0**
comp=Z,8.4nm,1.1s,mb4.7
NIE Niedzica 49.57 312 *eP* **P 03 36 05.5 +1.6**
JHJ Hachijo jima 2 49.77 70 LR LR 03 58 43.7
comp=Z,81nm,18.3s,MS3.8,baz=131,slow=38
PSZ Piszkesteto 49.86 310 *eP* **P 03 36 06.5 +0.3**
PSZ pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
PSZ Piszkesteto 49.86 310 *eP* **P 03 36 06.5 +0.3**
comp=Z,4.0nm,0.8s,mb4.5
KEV Kevo 50.48 339 *eP* **P 03 36 09.4 -1.1**
KEV pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
KEV Kevo 50.48 339 *ep* **P 03 36 09.4 -1.1**
comp=Z,3.7nm,0.6s,mb4.6
KEV Kevo 50.48 339 *ep* **P 03 36 09.4 -1.1**
comp=Z,3.7nm,0.6s,mb4.6
VYHS Vyhne 50.55 310 *eP* **P 03 36 11.7 +0.3**
VYHS *e* pP 03 36 20.0 +0.6
VYHS pmax pmax
comp=Z,5.0nm,1.7s,mb4.2
VYHS Vyhne 50.55 310 *eP* **P 03 36 11.7 +0.3**
comp=Z,4.5nm,1.7s,mb4.1
VYHS *e* pP 03 36 20.0 +0.6
VYHS Vyhne 50.55 310 *eP* **P 03 36 11.7 +0.3**
VYHS *ep*P pP 03 36 20.0 +0.6
ARCES ARCESS Array B 50.87 338 P **P 03 36 13.3 -0.2**
comp=Z,3.9nm,0.7s,mb4.5,baz=100,slow=7.8,SNR=33
ARCES ARCESS Array B 50.87 338 P **P 03 36 13.4 -0.1**
ARCES pmax pmax
comp=Z,4.0nm,0.7s
ARE0 ARCESS Array S 50.87 338 *eP* **P 03 36 13.8 +0.2**
OKC Ostrava-Krasne 50.98 312 *eP* **P 03 36 15.0 +0.4**
OKC Ostrava-Krasne 50.98 312 *eP* **P 03 36 15.0 +0.4**
MORC Moravsky Berou 51.37 312 *eP* **P 03 36 18.1 +0.6**
MORC pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
MORC Moravsky Berou 51.37 312 *eP* **P 03 36 18.1 +0.6**
comp=Z,2.4nm,0.7s,mb4.2
KMBO Kilima Mbogo 51.69 242 P **P 03 36 21.7 +1.3**
comp=Z,1.4nm,0.6s,mb4.0,baz=40,slow=16,SNR=3.5
KMBO Kilima Mbogo 51.69 242 P **P 03 36 21.7 +1.3**
KMBO pmax pmax
comp=Z,1.0nm,0.6s
KMBO Kilima Mbogo 51.69 242 P **P 03 36 21.7 +1.3**
VRAC Vranov 52.00 311 P **P 03 36 22.9 +0.6**
comp=Z,1.2nm,0.4s,mb4.2,baz=90,slow=8.1,SNR=5.3
VRAC Vranov 52.00 311⇑*P* **P 03 36 23.0 +0.8**
VRAC Vranov 52.00 311⇑*iP* **P 03 36 23.0 +0.7**
DPC Dobruska-Polom 52.14 313 *eP* **P 03 36 23.7 +0.4**
DPC *e* pP 03 36 29.6 -1.7
DPC Dobruska-Polom 52.14 313 *eP* **P 03 36 23.7 +0.4**
DPC *ep*P pP 03 36 29.6 -1.7
UPC Upice 52.33 313 *eP* **P 03 36 24.8 +0.1**
UPC *e* 03 36 30.0
UPC Upice 52.33 313 *eP* **P 03 36 24.8 +0.1**
UPC *ep*P pP 03 36 30.0 -2.7
CONA Conrad Observa 52.57 310⇓*iP* **P 03 36 27.0 +0.5**
comp=Z,6.4nm,1.0s,mb4.5
TREC Trest 52.73 311 *eP* **P 03 36 27.8 +0.2**
TREC *e* pP 03 36 34.5 -1.2
TREC Trest 52.73 311 *eP* **P 03 36 27.8 +0.2**
TREC *ep*P pP 03 36 34.5 -1.2
PRU Pruhonice 53.30 312 *eP* **P 03 36 32.7 +0.9**
PRU *e* pP 03 36 38.7 -1.2
PRU Pruhonice 53.30 312 *eP* **P 03 36 32.7 +0.9**
PRU *ep*P pP 03 36 38.7 -1.2
HFS Hagfors 53.76 325 P **P 03 36 34.7 -0.4**
comp=Z,4.2nm,0.6s,mb4.5,baz=79,slow=7.7,SNR=24
HFS Hagfors 53.76 325 P **P 03 36 34.7 -0.4**
HFS pmax pmax
comp=Z,4.0nm,0.6s
GERES GERESS Array B 53.93 311 P **P 03 36 36.6 +0.1**
comp=Z,1.3nm,0.6s,mb4.0,baz=86,slow=6.6,SNR=22
GERES GERESS Array B 53.93 311 P **P 03 36 36.6 +0.1**
GERES pmax pmax
comp=Z,1.0nm,0.6s
KHC Kasperske Hory 53.99 311 *eP* **P 03 36 36.8 -0.1**
KHC *e* pP 03 36 43.3 -1.7
KHC Kasperske Hory 53.99 311 *eP* **P 03 36 36.8 -0.1**
KHC *ep*P pP 03 36 43.3 -1.7
CLL Collm 54.19 314 *eP* **P 03 36 38.0 -0.4**
CLL *ep*P pP 03 36 43.0 -3.4
CLL Collm 54.19 314 *eP* **P 03 36 38.0 -0.4**
CLL *ep*P pP 03 36 44.0 -2.4
CLL *e*PP PP 03 38 39.0 -1.0
NB2 NORSAR Subarra 55.02 326 P **P 03 36 43.3 -0.9**
comp=Z,1.7nm,0.5s,mb4.3,baz=90,slow=7.4
NOA NORSAR Array B 55.02 326 P **P 03 36 43.5 -0.7**
comp=Z,2.0nm,0.5s,mb4.4,baz=88,slow=7.2,SNR=11
NOA NORSAR Array B 55.02 326 P **P 03 36 43.5 -0.7**
NOA pmax pmax
comp=Z,2.0nm,0.5s
NAO01 NORSAR Array S 55.18 326 *eP* **P 03 36 44.6 -0.7**
comp=Z,2.8nm,0.7s,mb4.4
GRA1 Grafenberg Arr 55.47 312 *eP* **P 03 36 47.8 +0.2**
comp=Z,8.0nm,1.2s,mb4.6
GRF Grafenberg Arr 55.47 312 *eP* **P 03 36 47.8 +0.2**
comp=Z,8.0nm,1.2s,mb4.6
GRF Grafenberg Arr 55.47 312 *eP* **P 03 36 47.8 +0.2**
GRF pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
GRF Grafenberg Arr 55.47 312 *eP* **P 03 36 47.8 +0.2**
GRF pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
MOTA Moosalm 55.83 309⇓*iP* **P 03 36 49.5 -0.8**
comp=Z,6.1nm,0.8s,mb4.7
FETA Feichten 56.13 309⇑*iP* **P 03 36 51.9 -0.5**
comp=Z,3.1nm,0.5s,mb4.6
DAVA Damuels 56.66 310⇓*iP* **P 03 36 55.9 -0.3**
comp=Z,8.6nm,0.6s,mb5.0
DAVOX Davos/Dischmat 56.74 309 P **P 03 36 55.9 -0.9**
comp=Z,3.8nm,0.5s,mb4.7,baz=101,slow=4.1,SNR=11
STU Stuttgart 56.90 311 *eP* **P 03 36 57.6 -0.3**
PGF Pioggiola 58.14 304 *eP* **P 03 37 05.9 -0.8**
CDF Champ du Feu 58.21 311 *eP* **P 03 37 06.8 -0.3**
HINF Hinteralfeld 58.60 311 *eP* **P 03 37 09.4 -0.4**
comp=Z,7.2nm,0.7s,mb4.5
HINF Hinteralfeld 58.60 311 *eP* **P 03 37 09.4 -0.4**
HINF pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
HINF Hinteralfeld 58.60 311 *eP* **P 03 37 09.4 -0.4**
comp=Z,3.6nm,0.7s,mb4.5
HAU Haudompre 58.90 311 *eP* **P 03 37 11.6 -0.3**
comp=Z,18nm,0.9s,mb4.8
HAU Haudompre 58.90 311 *eP* **P 03 37 11.6 -0.3**
HAU pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
HAU Haudompre 58.90 311 *eP* **P 03 37 11.6 -0.3**
comp=Z,9.1nm,0.9s,mb4.8
SBF Sospel 58.98 306 *eP* **P 03 37 12.5 0.0**
comp=Z,23nm,0.6s,mb5.1
SBF Sospel 58.98 306 *eP* **P 03 37 12.5 0.0**
SBF pmax pmax
comp=Z,12nm,0.6s,mb5.1
SBF Sospel 58.98 306 *eP* **P 03 37 12.5 0.0**
comp=Z,12nm,0.6s,mb5.1
LPG La Plagne 59.11 308⇑*iP* **P 03 37 13.9 +0.5**
comp=Z,21nm,0.7s,mb5.0
LPG La Plagne 59.11 308⇑*iP* **P 03 37 13.9 +0.5**
LPG pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
LPG La Plagne 59.11 308⇑*iP* **P 03 37 13.9 +0.5**
comp=Z,10nm,0.7s,mb5.0
LPL La Plagne 59.12 308⇑*iP* **P 03 37 14.0 +0.5**
comp=Z,38nm,0.7s,mb5.2
LPL La Plagne 59.12 308⇑*iP* **P 03 37 14.0 +0.5**
LPL pmax pmax
comp=Z,19nm,0.7s,mb5.2
LPL La Plagne 59.12 308⇑*iP* **P 03 37 14.0 +0.5**
comp=Z,19nm,0.7s,mb5.2
BNI Bardonecchia 59.26 307 *eP* **P 03 37 14.5 +0.1**
BNI pmax pmax
comp=Z,21nm,1.5s,mb5.0
BNI Bardonecchia 59.26 307 *eP* **P 03 37 14.5 +0.1**
comp=Z,21nm,1.5s,mb5.0
MBDF Montbardon 59.26 307 *eP* **P 03 37 13.9 -0.6**
comp=Z,18nm,0.9s,mb4.8
MBDF Montbardon 59.26 307 *eP* **P 03 37 13.9 -0.6**
MBDF pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
MBDF Montbardon 59.26 307 *eP* **P 03 37 13.9 -0.6**
comp=Z,9.3nm,0.9s,mb4.8
CABF La Chapelle 59.34 309 *eP* **P 03 37 15.0 0.0**
comp=Z,11nm,0.9s,mb4.6
CABF La Chapelle 59.34 309 *eP* **P 03 37 15.0 0.0**
CABF pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
CABF La Chapelle 59.34 309 *eP* **P 03 37 15.0 0.0**
comp=Z,5.7nm,0.9s,mb4.6
GIVF Givet 59.50 313 *eP* **P 03 37 15.9 -0.1**
KEST Kesra 59.55 296 P **P 03 37 16.8 +0.2**
comp=Z,3.3nm,0.7s,mb4.5,baz=348,slow=3.0,SNR=19
KEST Kesra 59.55 296 *eP* **P 03 37 16.4 -0.3**
FRF La Foret Royal 59.60 306 *eP* **P 03 37 16.5 -0.4**
comp=Z,18nm,0.7s,mb4.9
FRF La Foret Royal 59.60 306 *eP* **P 03 37 16.5 -0.4**
FRF pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
FRF La Foret Royal 59.60 306 *eP* **P 03 37 16.5 -0.4**
comp=Z,8.8nm,0.7s,mb4.9
MEZF Maizieres J'vi 59.65 312 *eP* **P 03 37 16.9 -0.2**
comp=Z,6.8nm,0.7s,mb4.5
MEZF Maizieres J'vi 59.65 312 *eP* **P 03 37 16.9 -0.2**
comp=Z,6.8nm,0.7s,mb4.8
ORIF Oris-en-Rattie 59.84 307 *eP* **P 03 37 17.7 -0.8**
BAIF Baives 59.90 313 *eP* **P 03 37 17.9 -0.9**
comp=Z,6.1nm,0.8s,mb4.3
BAIF Baives 59.90 313 *eP* **P 03 37 17.9 -0.9**
BAIF pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
BAIF Baives 59.90 313 *eP* **P 03 37 17.9 -0.9**
comp=Z,3.0nm,0.8s,mb4.4
SMRF Simiane la Rot 60.26 306 *eP* **P 03 37 21.6 +0.2**
comp=Z,7.9nm,0.7s,mb4.5
SMRF Simiane la Rot 60.26 306 *eP* **P 03 37 21.6 +0.2**
comp=Z,7.9nm,0.7s,mb4.8
VIVF Saint-Julien-l 60.69 308 *eP* **P 03 37 24.2 -0.1**
comp=Z,8.9nm,0.9s,mb4.6
VIVF Saint-Julien-l 60.69 308 *eP* **P 03 37 24.2 -0.1**
VIVF pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
VIVF Saint-Julien-l 60.69 308 *eP* **P 03 37 24.2 -0.1**
comp=Z,4.4nm,0.9s,mb4.6
LOR Lormes 60.69 310⇑*iP* **P 03 37 23.3 -1.0**
SMF Signal de Mont 60.84 310⇑*iP* **P 03 37 24.8 -0.5**
comp=Z,21nm,1.0s,mb4.9
SMF Signal de Mont 60.84 310⇑*iP* **P 03 37 24.8 -0.5**
SMF pmax pmax
comp=Z,11nm,1.0s,mb4.9
SMF Signal de Mont 60.84 310⇑*iP* **P 03 37 24.8 -0.5**
comp=Z,11nm,1.0s,mb4.9
SSF Saint Saulge 60.98 310⇑*iP* **P 03 37 25.6 -0.6**
comp=Z,15nm,0.9s,mb4.8
SSF Saint Saulge 60.98 310⇑*iP* **P 03 37 25.6 -0.6**
SSF pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
SSF Saint Saulge 60.98 310⇑*iP* **P 03 37 25.6 -0.6**
comp=Z,7.4nm,0.9s,mb4.8
AVF Avril sur Loir 61.14 310⇑*iP* **P 03 37 26.6 -0.7**
comp=Z,8.6nm,0.7s,mb4.7
AVF Avril sur Loir 61.14 310⇑*iP* **P 03 37 26.6 -0.7**
AVF pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
AVF Avril sur Loir 61.14 310⇑*iP* **P 03 37 26.6 -0.7**
comp=Z,4.3nm,0.7s,mb4.7
BILL Bilibino 61.30 25 P **P 03 37 27.0 -1.0**
BILL *e* pP 03 37 33.9 -2.3
BILL MLR MLR
comp=Z,100nm,17.0s,MS4.0
LASF Ste Croix 61.44 307 *eP* **P 03 37 29.5 +0.1**
comp=Z,23nm,1.1s,mb4.9
HYF Humbligny 61.50 311 *eP* **P 03 37 29.7 -0.1**
BGF Bois d'Agland 61.53 310 *eP* **P 03 37 29.4 -0.6**
TCF Toulx Ste Croi 62.02 310⇑*iP* **P 03 37 33.2 -0.1**
comp=Z,10nm,0.7s,mb4.8
TCF Toulx Ste Croi 62.02 310⇑*iP* **P 03 37 33.2 -0.1**
TCF pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
TCF Toulx Ste Croi 62.02 310⇑*iP* **P 03 37 33.2 -0.1**
comp=Z,5.2nm,0.7s,mb4.8
CAF Calviac 62.47 308⇑*iP* **P 03 37 36.3 0.0**
comp=Z,6.6nm,0.6s,mb4.6
CAF Calviac 62.47 308⇑*iP* **P 03 37 36.3 0.0**
CAF pmax pmax
comp=Z,3.0nm,0.6s,mb4.6
CAF Calviac 62.47 308⇑*iP* **P 03 37 36.3 0.0**
comp=Z,3.3nm,0.6s,mb4.6
RJF Les Rejaudoux 62.74 309⇑*iP* **P 03 37 38.3 +0.2**
comp=Z,12nm,0.8s,mb4.8
RJF Les Rejaudoux 62.74 309⇑*iP* **P 03 37 38.3 +0.2**
RJF pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
RJF Les Rejaudoux 62.74 309⇑*iP* **P 03 37 38.3 +0.2**
comp=Z,6.1nm,0.8s,mb4.8
MTLF Montlieu 62.78 306 *eP* **P 03 37 38.4 0.0**
comp=Z,4.6nm,0.8s,mb4.4
MTLF Montlieu 62.78 306 *eP* **P 03 37 38.4 0.0**
MTLF pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
MTLF Montlieu 62.78 306 *eP* **P 03 37 38.4 0.0**
comp=Z,2.3nm,0.8s,mb4.4
LDF La Druitiere 62.98 313 *eP* **P 03 37 38.8 -0.9**
comp=Z,9.4nm,0.8s,mb4.7
LDF La Druitiere 62.98 313 *eP* **P 03 37 38.8 -0.9**
LDF pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
LDF La Druitiere 62.98 313 *eP* **P 03 37 38.8 -0.9**
comp=Z,4.7nm,0.8s,mb4.7
FLN La Foliniere 63.17 313 *eP* **P 03 37 40.1 -0.8**
EKA Eskdalemuir Ar 63.17 320 P **P 03 37 39.5 -1.3**
comp=Z,2.1nm,0.6s,mb4.4,baz=79,slow=7.3,SNR=13
EKA Eskdalemuir Ar 63.17 320 P **P 03 37 39.5 -1.3**
EKA pmax pmax
comp=Z,2.0nm,0.6s
LFF La Frestale 63.37 308⇑*iP* **P 03 37 42.3 0.0**
comp=Z,11nm,0.6s,mb4.8
LFF La Frestale 63.37 308⇑*iP* **P 03 37 42.3 0.0**
LFF pmax pmax
comp=Z,5.0nm,0.6s,mb4.8
LFF La Frestale 63.37 308⇑*iP* **P 03 37 42.3 0.0**
comp=Z,5.4nm,0.6s,mb4.8
GRR Gorron 63.51 312 *eP* **P 03 37 42.1 -1.0**
comp=Z,11nm,0.8s,mb4.6
GRR Gorron 63.51 312 *eP* **P 03 37 42.1 -1.0**
GRR pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
GRR Gorron 63.51 312 *eP* **P 03 37 42.1 -1.0**
comp=Z,5.4nm,0.8s,mb4.6
MFF Saint Martin d 63.52 310⇑*iP* **P 03 37 42.4 -0.8**
comp=Z,8.0nm,0.6s,mb4.6
MFF Saint Martin d 63.52 310⇑*iP* **P 03 37 42.4 -0.8**
MFF pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
MFF Saint Martin d 63.52 310⇑*iP* **P 03 37 42.4 -0.8**
comp=Z,4.0nm,0.6s,mb4.6
SGMF Saint Gilles 64.64 313⇑*iP* **P 03 37 50.0 -0.6**
comp=Z,8.7nm,0.6s,mb4.7
SGMF Saint Gilles 64.64 313⇑*iP* **P 03 37 50.0 -0.6**
SGMF pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
SGMF Saint Gilles 64.64 313⇑*iP* **P 03 37 50.0 -0.6**
comp=Z,4.3nm,0.6s,mb4.7
ETSF Etsaut 64.86 307⇑*iP* **P 03 37 52.2 +0.1**
comp=Z,6.9nm,0.6s,mb4.6
ETSF Etsaut 64.86 307⇑*iP* **P 03 37 52.2 +0.1**
ETSF pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
ETSF Etsaut 64.86 307⇑*iP* **P 03 37 52.2 +0.1**
comp=Z,3.5nm,0.6s,mb4.6
ROSF Rostrenen 65.07 313⇑*iP* **P 03 37 52.7 -0.7**
comp=Z,8.6nm,0.7s,mb4.6
ROSF Rostrenen 65.07 313⇑*iP* **P 03 37 52.7 -0.7**
ROSF pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
ROSF Rostrenen 65.07 313⇑*iP* **P 03 37 52.7 -0.7**
comp=Z,4.3nm,0.6s,mb4.7
QUIF Quistinic 65.12 312⇑*iP* **P 03 37 52.8 -0.9**
comp=Z,5.7nm,0.6s,mb4.5
QUIF Quistinic 65.12 312⇑*iP* **P 03 37 52.8 -0.9**
QUIF pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
QUIF Quistinic 65.12 312⇑*iP* **P 03 37 52.8 -0.9**
comp=Z,2.8nm,0.6s,mb4.5
SJPF Ste Jean 65.26 307 *eP* **P 03 37 54.7 0.0**
CART Cartagena 66.89 301 *eP* **P 03 38 04.5 -0.8**
comp=Z,11nm,0.8s,mb4.9
TAM Tamanrasset 67.09 284 *eP* **P 03 38 06.5 -0.3**
TAM pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
TAM Tamanrasset 67.09 284 *eP* **P 03 38 06.5 -0.3**
comp=Z,2.5nm,0.8s,mb4.3
LSZ Lusaka 67.65 236 *eP* **P 03 38 09.9 -0.4**
LSZ pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
LSZ Lusaka 67.65 236 *eP* **P 03 38 09.9 -0.4**
comp=Z,3.2nm,0.8s,mb4.4
ESDC Sonseca Array 68.34 304 P **P 03 38 14.2 -0.2**
comp=Z,2.9nm,0.8s,mb4.4,baz=59,slow=6.9,SNR=37
PAB San Pablo 68.66 304 *eP* **P 03 38 16.3 -0.1**
PAB pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
PAB San Pablo 68.66 304 *eP* **P 03 38 16.3 -0.1**
comp=Z,8.2nm,1.1s,mb4.6
MVO Moncorvo 69.98 307 *eP* **P 03 38 24.7 +0.2**
comp=Z,12nm,1.6s,mb4.6
MTE Manteigas 70.63 306 *eP* x 03 38 47.1
PVIS Viseu 70.75 306 *eP* **P 03 38 29.7 +0.4**
comp=Z,11nm,1.2s,mb4.7
PCBR Castelo Branco 70.79 305 *eP* **P 03 38 29.9 +0.4**
comp=Z,10nm,1.8s,mb4.5
WRA Warramunga Arr 71.03 127 P **P 03 38 29.9 -1.2**
comp=Z,4.6nm,0.7s,mb4.5,baz=323,slow=6.2,SNR=28
WRA Warramunga Arr 71.03 127 P **P 03 38 29.9 -1.2**
WRA pmax pmax
comp=Z,5.0nm,0.7s
WRAB Tennant Creek 71.03 127 *eP* **P 03 38 30.1 -1.0**
WRAB pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
WRAB Tennant Creek 71.03 127 *eP* **P 03 38 30.1 -1.0**
comp=Z,6.1nm,0.8s,mb4.6
PBAR Barrancos 71.12 304 *eP* **P 03 38 31.5 0.0**
comp=Z,14nm,1.1s,mb4.8
MDT Midelt 71.40 298 P **P 03 38 32.7 -0.6**
comp=Z,1.4nm,0.8s,mb3.9,baz=59,slow=7.0,SNR=4.4
PTOM Tomar 71.54 305 *eP* **P 03 38 34.2 +0.1**
comp=Z,24nm,1.4s,mb4.9
EVO Evora 71.68 304⇑*iP* **P 03 38 35.4 +0.4**
comp=Z,9.4nm,0.9s,mb4.4
EVO Evora 71.68 304 *eP* **P 03 38 35.1 +0.1**
comp=Z,15nm,1.7s,mb4.7
PVAQ Vaqueiros 71.92 303 *eP* **P 03 38 36.4 0.0**
comp=Z,24nm,1.4s,mb4.9

PCVE	**Castro Verde**	**72.06 303**	*e*P	**P**	**03 38 35.9**	**-1.3**
ASAR	**Alice Springs**	**73.26 130**	P	**P**	**03 38 43.4**	**-1.0**
	comp=Z,3.5nm,0.7s,mb4.4,baz=315,slow=6.1,SNR=32					
ASAR	**Alice Springs**	**73.26 130**	P	**P**	**03 38 43.4**	**-1.0**
ASAR			pmax	pmax		
	comp=Z,4.0nm,0.7s					
LBTB	**Lobatse**	**75.92 230**	*e*P	**P**	**03 38 59.8**	**0.0**
LBTB			pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5					
LBTB	**Lobatse**	**75.92 230**	*e*P	**P**	**03 38 59.8**	**-0.1**
	comp=Z,4.4nm,0.7s,mb4.5					
BOSA	**Boshof**	**78.56 228**	P	**P**	**03 39 14.1**	**-0.5**
	comp=Z,3.6nm,0.7s,mb4.4,baz=67,slow=4.5,SNR=9.9					
BOSA			LR	LR	04 11 16.1	
	comp=Z,106nm,18.7s,MS4.2,baz=359,slow=34					
BOSA	**Boshof**	**78.56 228**	*e*P	**P**	**03 39 14.2**	**-0.4**
BOSA			pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5					
BOSA	**Boshof**	**78.56 228**	*e*P	**P**	**03 39 14.2**	**-0.4**
	comp=Z,4.9nm,0.8s,mb4.5					
CHGN	**Chignik**	**80.87 29**	*e*P	**P**	**03 39 32.4**	**+5.6**
KDAK	**Kodiak Island**	**82.21 26**	P	**P**	**03 39 33.4**	**-0.5**
	comp=Z,6.6nm,0.6s,mb4.7,baz=326,slow=2.1,SNR=8.7					
KDAK	**Kodiak Island**	**82.21 26**	P	**P**	**03 39 33.4**	**-0.4**
KDAK			pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8					
DBIC	**Dimbokro**	**83.22 274**	P	**P**	**03 39 39.8**	**-0.1**
	comp=Z,4.7nm,0.8s,mb4.6,baz=108,slow=6.2,SNR=5.4					
DBIC	**Dimbokro**	**83.22 274**	P	**P**	**03 39 39.8**	**-0.1**
DBIC			pmax	pmax		
	comp=Z,5.0nm,0.8s					
DBIC	**Dimbokro**	**83.22 274**	*e*P	**P**	**03 39 38.9**	**-0.9**
	comp=Z,4.9nm,0.7s,mb4.7					
LIC	**Lamto**	**83.58 274**	*e*P	**P**	**03 39 39.9**	**-1.8**
	comp=Z,14nm,0.9s,mb4.8					
LIC	**Lamto**	**83.58 274**	*e*P	**P**	**03 39 39.9**	**-1.8**
	comp=Z,7.1nm,0.9s,mb4.8					
STKA	**Stephens Creek**	**83.78 132**	P	**P**	**03 39 40.9**	**-1.4**
	comp=Z,2.2nm,0.6s,mb4.5,baz=142,slow=4.4,SNR=3.3					
YKA	**Yellowknife Ar**	**87.55 7**	P	**P**	**03 39 59.4**	**-1.2**
	comp=Z,2.0nm,0.6s,mb4.5,baz=342,slow=5.1,SNR=13					
YKA	**Yellowknife Ar**	**87.55 7**	P	**P**	**03 39 59.4**	**-1.2**
YKA			pmax	pmax		
	comp=Z,2.0nm,0.6s					
TXAR	**Lajitas Array**	**121.40 5**	PKP	PKPdf	03 46 06.6	-0.1
	comp=Z,0.3nm,0.6s,baz=184,slow=1.2,SNR=6.8					
SIV	**San Ignacio**	**142.77 283**	PKhKP	PKPpre	03 46 41.9	
	comp=Z,0.4nm,0.7s,baz=45,slow=5.7,SNR=3.5					
CPUP	**Villa Florida**	**143.22 265**	PKhKP	PKPpre	03 46 43.8	
	comp=Z,1.1nm,0.6s,baz=75,slow=6.0,SNR=4.4					
CPUP	**Villa Florida**	**143.22 265**	PKIKP	PKPpre	03 46 43.8	
CPUP			pmax	pmax		
	comp=Z,1.0nm,0.6s					
OTAV	**Otavalo**	**144.61 323**	*e*PKPdf	PKPdf	03 46 51.1	+0.8
TRQA	**Tornquist**	**148.25 244**	*e*PKPbc	PKPbc	03 46 59.4	+0.3
LPAZ	**La Paz**	**148.85 288**	PKPbc	PKPbc	03 47 01.6	+0.4
	comp=Z,4.1nm,0.9s,baz=55,slow=2.6,SNR=15					
LPAZ	**La Paz**	**148.85 288**	PKP2	PKPbc	03 47 01.6	+0.4
LPAZ			pmax	pmax		
	comp=Z,4.0nm,0.9s					
LPAZ	**La Paz**	**148.85 288**	*e*PKPbc	PKPbc	03 47 01.6	+0.4
PLCA	**Paso Flores**	**154.28 236**	PKPbc	PKPbc	03 47 13.2	+0.1
	comp=Z,2.0nm,0.8s,baz=102,slow=2.2,SNR=3.5					
PLCA	**Paso Flores**	**154.28 236**	PKIKP	PKPbc	03 47 13.2	+0.2
PLCA			pmax	pmax		
	comp=Z,2.0nm,0.8s					

BJI ***15*** *03:29:59.0,38.°97N×140.°99E,h9km,mB4.8/17,mb4.6/26, Ms4.5/18,MS7 4.0/16*

NIED ***15*** *03:30:00,39.°20N×141.°00E,h5km,Mw4.2 Best double couple: M0=2.38000×10^15 NP1:φs=18.00000°,δ50.00000°, λ91.00000°. NP2:φs=197.00000°,δ40.00000°,λ89.00000°.*

IDC ***15*** *03:30:00.5±0.6,39.°16N×140.°90E,h0km,mb4.2/25, mb1 4.3/27,mb1mx4.3/33,mbtmp4.2/27,ML3.5/2,MS3.4/8, Ms1 3.4/8,ms1mx3.1/35,Error ellipse: s-maj=16.5km s-min=15.6km az=60.0*

ISCJB ***15*** *03:30:01.4±0.5,39.°19N±0.°02×140.°93E±0.°03,h14km±3km, mb4.5/94,MS3.8/15,Error ellipse: s-maj=4.1km s-min=3.7km az=166.8*

NEIC ***15*** *03:30:01.8,39.°17N×140.°96E,h9km,mb4.6/56, MW4.2(NIED),After JMA.*

NEIC Recorded [3 JMA] in Iwate, [2 JMA] in Akita and [1 JMA] in Aomori and Miyagi.

JMA ***15*** *03:30:01.8,39.°17N×140.°96E,h9km±1km,M4.3 Broadband fault plane solution: P waves. NP1: φs=14.00000°,δ46.00000°,λ76.00000°. NP2:φs=214.00000°, δ46.00000°,λ104.00000°. Principal axes: T Plg80.0000°, Azm204.0000°; N Plg10.0000°, Azm24.0000°; P Plg0.0000°, Azm294.0000°;*

JMA Felt III J1.

MOS ***15*** *03:30:05.1±0.9,39.°32N×140.°84E,h33km,mb4.8/54 Error ellipse: s-maj=9.2km s-min=4.9km az=105.3*

SZGRF ***15*** *03:30:09.7,40.°03N×141.°60E,h33km,mb4.5,Near east coast of eastern Honshu, Japan*

ISC 15 03:30:02.1±0.4,39.°17N±0.°02×140.°94E±0.°03,h9km±2km, h13km±1.8km;pP-P,n262,σ0.9s84/275,mb4.5/94,MS3.8/15, 13C-12D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.30**	**134**	⇓P	**Pg**	**03 30 07.6**	**-0.6**
JMK				S	**Sg**	**03 30 11.7**	**-0.6**
JRG	**Rokugo**	**0.33**	**314**	⇓P	**Pg**	**03 30 08.7**	**0.0**
JRG				S	**Sg**	**03 30 13.7**	**+0.6**
JOM	**Ohasama**	**0.41**	**42**	⇓P	**Pg**	**03 30 09.7**	**-0.5**
JOM				S	**Sg**	**03 30 15.0**	**-0.7**
JYK	**Kaneyama**	**0.52**	**242**	⇓P	**Pg**	**03 30 12.1**	**0.0**
JYK				S	**Sg**	**03 30 19.1**	**+0.2**
OFUJ	**Ofunato**	**0.57**	**98**	⇓P	**Pg**	**03 30 12.6**	**-0.6**
OFUJ				*e*S	**Sg**	**03 30 20.6**	**-0.2**
JOU	**Okura**	**0.83**	**195**	⇑P	**Pg**	**03 30 17.6**	**-0.4**
JOU				*e*S	**Sg**	**03 30 28.7**	**-0.1**
ERM	**Erimo**	**3.31**	**30**	⇓*e*P	**Pn**	**03 30 55.3**	**+1.2**
ERM	**Erimo**	**3.31**	**30**	*e*Pn	**Pn**	**03 30 55.6**	**+1.6**
ERM				*e*Sn	**Sn**	**03 31 39.4**	**+5.8**
MAJO	**Matsushiro**	**3.40**	**220**	*e*P	**Pn**	**03 30 56.5**	**+1.2**
MAT	**Matsushiro**	**3.40**	**220**	P	**Pn**	**03 30 56.6**	**+1.3**
MAT				*e*S	**Sn**	**03 31 39.1**	**+3.5**
MJAR	**Matsushiro Arr**	**3.40**	**220**	Pn	**Pn**	**03 30 56.2**	**+0.9**
	1.6nm,0.3s,baz=26,slow=14,SNR=27						
MJAR				LR	LR	03 32 24.2	
	comp=Z,281nm,20.3s,baz=35,slow=43						
ASAJ	**Asahikawa**	**5.10**	**14**	Pn	**Pn**	**03 31 19.1**	**+0.5**
	2.7nm,0.3s,baz=230,slow=11,SNR=27						
ASAJ				Sn	**Sn**	**03 32 21.9**	**+4.2**
	3.1nm,0.3s,baz=80,slow=13,SNR=4.1						
ASAJ	**Asahikawa**	**5.10**	**14**	P	**Pn**	**03 31 19.2**	**+0.5**
ASAJ						03 32 21.9	
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				smax			
	comp=N,3.0nm,0.3s						
VLA	**Vladivostok**	**7.89**	**303**	P	**Pn**	**03 31 59.0**	**+2.1**
VLA				pmax	pmax		
	comp=Z,12nm,1.0s						
VLA				MLR	MLR		
	comp=Z,200nm,13.0s						
YSS	**Yuzh-Sakhalins**	**7.90**	**9**	*e*P	**Pn**	**03 31 57.0**	**-0.1**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS	**Yuzh-Sakhalins**	**7.90**	**9**	*e*Pn	**Pn**	**03 31 58.7**	**+1.6**
MDJ	**Mudanjiang**	**10.06**	**306**	P	**Pn**	**03 32 25.6**	**-1.1**
MDJ				pP		03 32 28.8	
MDJ				S	**Sn**	**03 34 18.8**	**-0.8**
MDJ				ScP	ScP	03 42 08.8	-0.4
MDJ				PcS	PcS	03 42 09.8	-0.4
MDJ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,70nm,3.2s						
HABR	**Khabarovsk**	**10.23**	**337**	*e*P	**Pn**	**03 32 28.9**	**-0.1**
HABR						03 34 18.7	
HABR				MLR	MLR		
	comp=Z,100nm,13.0s						
KSRS	**Korea Array**	**10.37**	**265**	Pn	**Pn**	**03 32 35.2**	**+4.1**
	comp=Z,1.9nm,0.3s,baz=71,slow=14,SNR=37						
KSRS				Sn	**Sn**	**03 34 33.9**	**+6.5**
	baz=76,slow=25,SNR=6.6						
KSRS				LR	LR	03 36 07.2	
	comp=Z,185nm,20.4s,baz=166,slow=35						
KSRS	**Korea Array**	**10.37**	**265**	P	**Pn**	**03 32 35.2**	**+4.2**
KSRS						03 34 33.9	
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,185nm,20.4s						
KLR	**Kul'dur**	**12.02**	**330**	*e*P	**Pn**	**03 32 54.3**	**+0.8**
CBIJ	**Chichi jima**	**12.08**	**175**	LR	LR	03 37 20.5	
	comp=Z,75nm,21.6s,baz=15,slow=36						
CN2	**Changchun**	**12.50**	**297**	*e*P	**Pn**	**03 33 00.9**	**+0.8**
CN2				*e*S	**Sn**	**03 35 20.3**	**+0.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.8s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,11.0s						
CN2				LR	LR		
	comp=E,200nm,11.0s						
CN2				LR	LR		
	comp=Z,200nm,11.0s						
BJI	**Beijing**	**19.09**	**281**	P	**Pn**	**03 34 25.3**	**-0.5**
BJI				S	**Sn**	**03 37 57.0**	**-2.7**
BJI				LR	LR		
	comp=N,330nm,5.0s						
BJI				LR	LR		
	comp=E,170nm,4.6s						
HHC	**Hu-ho-hao-te**	**22.52**	**284**	*e*P	**P**	**03 35 00.9**	**-1.2**
HHC				pP		03 35 05.1	
HHC				sP	sP	03 35 07.9	+2.1
HHC				PP		03 35 28.3	
HHC				PcP	PcP	03 38 56.0	+0.3
HHC				S	**S**	**03 39 00.9**	**-8.5**
HHC				SS		03 39 42.9	
HHC				ScS	ScS	03 46 16.0	-2.6
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.2						
HHC				pmax	pmax		
	comp=Z,34nm,5.6s						
HHC				LR	LR		
	comp=N,250nm,9.2s						
HHC				LR	LR		
	comp=E,290nm,7.1s						
HHC				LR	LR		
	comp=Z,320nm,7.8s						
YAK	**Yakutsk**	**23.91**	**347**	*e*P	**P**	**03 35 13.7**	**-2.3**
YAK				*e**PP		03 35 23.1	
YAK				pmax	pmax		
	comp=E,5.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,25nm,1.2s,mb4.5						
YAK				pmax	pmax		
	comp=N,15nm,1.2s						
YAK	**Yakutsk**	**23.91**	**347**	*e*P	**P**	**03 35 13.7**	**-2.3**
YAK				*e**PP		03 35 23.1	
YAK				*e*		03 35 44.7	
YAK				*e*PPP		03 35 55.9	
YAK				*e*S	**S**	**03 39 31.6**	**-0.5**
YAK				*e*SS		03 40 16.2	
YAK				*e*SSS		03 40 30.8	
YAK				pmax	pmax		
	comp=E,5.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,25nm,1.2s,mb4.5						
YAK				pmax	pmax		
	comp=N,15nm,1.2s						
YAK				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.1						
YAK				pmax	pmax		
	comp=E,5.0nm,1.3s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.3s						
YAK				smax			
	comp=N,59nm,2.3s						
YAK				smax			
	comp=E,24nm,1.9s						
YAK				MLR	MLR		
	comp=Z,54nm,14.0s,MS3.2						
YAK				MLR	MLR		
	comp=N,70nm,17.0s						
YAK	**Yakutsk**	**23.91**	**347**	*e*P	**P**	**03 35 15.8**	**-0.2**
SEY	**Seymchan**	**24.79**	**13**	⇓*e*P	**P**	**03 35 24.0**	**+0.1**
SONM	**Songino Array**	**26.33**	**301**	P	**P**	**03 35 39.0**	**+0.9**
	comp=N,0.7nm,0.6s,mb3.4,baz=99,slow=8.9,SNR=3.5						
LZH	**Lanzhou**	**29.41**	**276**	*e*P	**P**	**03 36 06.3**	**+0.5**
LZH				pP	pP	03 36 10.5	+1.9
LZH				sP	sP	03 36 13.3	+3.6
LZH				PP	PP	03 37 01.4	-11
LZH				pmax	pmax		
	comp=Z,21nm,1.2s,mb4.7						
LZH				pmax	pmax		
	comp=Z,73nm,5.0s						
LZH				LR	LR		
	comp=E,630nm,13.2s						
LZH				LR	LR		
	comp=Z,810nm,17.0s,MS4.4						
GYA	**Guiyang**	**31.28**	**256**	P	**P**	**03 36 22.8**	**+0.4**
GYA				PP	PP	03 37 25.4	-7.6
GYA				PcP	PcP	03 39 17.6	+0.9
GYA				S	**S**	**03 41 27.4**	**-1.8**
GYA				ScP	ScP	03 42 59.6	-0.2
GYA				SS	SS	03 43 12.0	-31
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
GYA				pmax	pmax		
	comp=Z,80nm,4.8s						
GYA				LR	LR		
	comp=N,490nm,16.8s,MS4.4						
GYA				LR	LR		
	comp=E,470nm,15.4s,MS4.4						
GYA				LR	LR		
	comp=Z,490nm,16.5s,MS4.2						
CD2	**Chengdu**	**31.37**	**266**	*e*P	**P**	**03 36 22.6**	**-0.5**
CD2				pP	pP	03 36 27.0	+1.1
CD2				sP	sP	03 36 29.8	+2.8
CD2				PP	PP	03 37 24.8	-9.1
CD2				S	**S**	**03 41 27.8**	**-2.7**
CD2				sS	sS	03 41 34.4	-0.6
CD2				SS	SS	03 43 12.8	-32
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.9						
CD2				pmax	pmax		
	comp=Z,40nm,5.2s						
CD2				LR	LR		
	comp=E,260nm,11.9s						
CD2				LR	LR		
	comp=Z,160nm,9.5s						
GTA	**Gaotai**	**31.64**	**284**	*e*P	**P**	**03 36 26.6**	**+1.2**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.4						
BILL	**Bilibino**	**32.10**	**18**	⇓*e*P	**P**	**03 36 29.1**	**-0.1**
BILL				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.4						
BILL	**Bilibino**	**32.10**	**18**	*e*P	**P**	**03 36 29.4**	**+0.2**
	comp=Z,2.0nm,0.4s,mb4.3						
KMI	**Kunming**	**34.98**	**258**	P	**P**	**03 36 55.6**	**+0.9**
KMI				pP	pP	03 36 58.4	+0.9
KMI				sP	sP	03 36 59.6	+1.0
KMI				S	**S**	**03 42 25.8**	**-0.8**
KMI				sS	sS	03 42 30.6	-0.6
KMI				SS	SS	03 44 38.9	-19
KMI				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
KMI				pmax	pmax		
	comp=Z,33nm,3.1s						
KMI				LR	LR		
	comp=N,210nm,13.9s,MS4.1						
KMI				LR	LR		
	comp=E,140nm,13.9s,MS4.1						
KMI				LR	LR		
	comp=Z,110nm,17.3s,MS3.7						
WMQ	**Urumqi**	**39.58**	**294**	*e*P	**P**	**03 37 33.0**	**-0.6**
ZAA0	**Zalesovo Array**	**40.23**	**311**	*e*P	**P**	**03 37 37.8**	**-1.0**
ZALV	**Zalesovo Beam**	**40.23**	**311**	P	**P**	**03 37 38.2**	**-0.6**
	comp=Z,3.7nm,0.8s,mb4.2,baz=93,slow=8.9,SNR=8.0						
ZALV				PcP	PcP	03 39 42.1	-0.5
	comp=Z,1.7nm,0.7s,baz=98,slow=6.0,SNR=4.4						
ZALV				LR	LR	03 54 58.9	
	comp=Z,67nm,18.0s,MS3.5,baz=76,slow=37						
ZALV	**Zalesovo Beam**	**40.23**	**311**	P	**P**	**03 37 38.2**	**-0.6**
ZALV						03 39 42.1	
CMAR	**Chiang Mai Arr**	**41.73**	**253**	LR	LR	03 56 06.1	
	comp=Z,35nm,20.6s,MS3.2,baz=0.0,slow=38						
MK31	**Makanchi Array**	**42.70**	**300**	*e*P	**P**	**03 37 58.7**	**-0.5**
MKAR	**Makanchi Array**	**42.70**	**300**	P	**P**	**03 37 58.6**	**-0.6**
	comp=Z,4.1nm,0.9s,mb4.1,baz=77,slow=13,SNR=12						
KURK	**Kurchatov**	**44.35**	**306**	P	**P**	**03 38 12.2**	**-0.2**
	comp=Z,5.4nm,0.7s,mb4.4,baz=82,slow=8.5,SNR=13						
KURK				LR	LR	03 56 51.7	
	comp=Z,52nm,21.1s,MS3.4,baz=165,slow=36						
KURK	**Kurchatov**	**44.35**	**306**	P	**P**	**03 38 12.2**	**-0.2**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
KURK				MLR	MLR		
	comp=Z,52nm,21.1s,MS3.4						
KURK	**Kurchatov**	**44.35**	**306**	*e*P	**P**	**03 38 11.8**	**-0.6**
	comp=Z,6.7nm,0.8s,mb4.4						
OHAK	**Old Harbor**	**45.47**	**44**	*e*P	**P**	**03 38 20.9**	**-0.3**
KDAK	**Kodiak Island**	**45.79**	**43**	P	**P**	**03 38 23.5**	**-0.2**
	comp=Z,5.3nm,0.6s,mb4.7,baz=256,slow=4.3,SNR=12						
KDAK	**Kodiak Island**	**45.79**	**43**	*ce*P	**P**	**03 38 23.8**	**0.0**
KDAK	**Kodiak Island**	**45.79**	**43**	P	**P**	**03 38 23.5**	**-0.2**
COLA	**College**	**47.49**	**33**	*e*P	**P**	**03 38 37.2**	**+0.2**
COLA				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
COLA	**College**	**47.49**	**33**	*e*P	**P**	**03 38 37.2**	**+0.1**
	comp=Z,2.5nm,0.7s,mb4.2						
TKM2	**Tokmak 2**	**48.32**	**297**	*e*P	**P**	**03 38 44.6**	**+0.9**
TKM2				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.1						
TKM2	**Tokmak 2**	**48.32**	**297**	*e*P	**P**	**03 38 44.6**	**+0.8**
	comp=Z,19nm,1.0s,mb5.1						
BVAR	**Borovoye Array**	**48.88**	**311**	P	**P**	**03 38 47.7**	**-0.2**
	comp=Z,1.6nm,0.5s,mb4.3,baz=76,slow=7.4,SNR=10						
BVAR				PcP	PcP	03 40 12.0	-0.3
	comp=Z,1.8nm,0.6s,baz=59,slow=3.6,SNR=5.1						
BRVK	**Borovoye**	**48.94**	**311**	⇓*e*P	**P**	**03 38 48.2**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
BRVK	**Borovoye**	**48.94**	**311**	*e*P	**P**	**03 38 48.2**	**-0.1**
	comp=Z,2.7nm,0.8s,mb4.3						
AAK	**Ala-Archa**	**49.18**	**297**	P	**P**	**03 38 50.9**	**+0.5**
	comp=Z,1.4nm,0.3s,mb4.5,baz=184,slow=3.8,SNR=5.6						
AAK	**Ala-Archa**	**49.18**	**297**	*e*P	**P**	**03 38 51.2**	**+0.9**
AAK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
AAK	**Ala-Archa**	**49.18**	**297**	*e*P	**P**	**03 38 51.2**	**+0.9**
	comp=Z,5.8nm,0.9s,mb4.6						
KSH	**Kashi**	**49.23**	**292**	*e*P	**P**	**03 38 55.0**	**+4.2**
KSH				pP	pP	03 38 59.5	+5.9
KSH				sP	sP	03 39 02.1	+7.4
KSH				PcP	PcP	03 40 16.8	+3.0
KSH				PP	PP	03 40 50.0	+5.6
KSH				ScP	ScP	03 44 10.4	+1.3
KSH				PcS	PcS	03 44 12.0	+1.8
KSH				S	**S**	**03 46 01.6**	**+5.0**
KSH				sS	sS	03 46 09.3	+8.0
KSH				ScS	ScS	03 48 43.4	+0.4
KSH				SS	SS	03 49 29.9	+2.3
KSH				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb5.0						
KSH				pmax	pmax		
	comp=Z,72nm,3.4s						
KSH				LR	LR		
	comp=N,72nm,5.0s						
KSH				LR	LR		
	comp=E,91nm,7.1s						
KSH				LR	LR		
	comp=Z,83nm,4.6s						
KULM	**Kulim**	**49.60**	**238**	*e*P	**P**	**03 38 52.8**	**-1.1**
	comp=Z,9.3nm,1.0s,mb4.8						
EKS2	**Erkin-Say**	**49.66**	**297**	*e*P	**P**	**03 38 54.1**	**0.0**
	comp=Z,5.8nm,0.9s,mb4.6						
INK	**Inuvik**	**52.67**	**28**	P	**P**	**03 39 16.9**	**+0.6**
	comp=Z,2.3nm,0.5s,mb4.4,baz=320,slow=5.8,SNR=8.4						
INK	**Inuvik**	**52.67**	**28**	P	**P**	**03 39 16.9**	**+0.6**
INK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
INK	**Inuvik**	**52.67**	**28**	*e*P	**P**	**03 39 16.6**	**+0.3**
INK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
INK	**Inuvik**	**52.67**	**28**	*e*P	**P**	**03 39 16.6**	**+0.3**
	comp=Z,1.9nm,0.6s,mb4.2						
HYT	**Haines Junctio**	**52.83**	**37**	*e*P	**P**	**03 39 22.4**	**+4.9**
COEN	**Coen**	**52.88**	**177**	*e*P	**P**	**03 39 18.8**	**+0.4**
	comp=Z,55nm,0.9s,mb5.5						
SVE	**Sverdlovsk**	**53.32**	**317**	⇑*e*P	**P**	**03 39 21.6**	**+0.4**
SVE				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
ARU	**Arti**	**54.53**	**317**	*d*iP	**P**	**03 39 29.6**	**-0.5**
ARU				S	**S**	**03 47 05.7**	**-3.3**
ARU				SS	SS	03 50 40.8	-10
ARU				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
ARU	**Arti**	**54.53**	**317**	*e*P	**P**	**03 39 29.0**	**-1.1**
	comp=Z,14nm,1.2s,mb4.8						
ABKAR	**Akbulak array**	**56.30**	**309**	*e*P	**P**	**03 39 42.3**	**-0.6**
	comp=Z,3.2nm,0.5s,mb4.6						
KBL	**Kabul**	**56.33**	**289**	*e*P	**P**	**03 39 43.9**	**+0.5**
KBL				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.0						
KBL	**Kabul**	**56.33**	**289**	*e*P	**P**	**03 39 43.9**	**+0.5**
	comp=Z,13nm,0.9s,mb5.0						
AKTK	**Aktyubinsk**	**56.99**	**311**	P	**P**	**03 39 47.5**	**-0.3**
AKTK				PcP	PcP	03 40 42.9	0.0
AKTO	**Aktyubinsk**	**56.99**	**311**	P	**P**	**03 39 47.5**	**-0.3**
	comp=Z,2.3nm,0.9s,mb4.2,baz=75,slow=16,SNR=5.1						
AKTO				PcP	PcP	03 40 42.9	0.0
	comp=Z,1.4nm,0.7s,baz=96,slow=6.3,SNR=3.6						
WRAB	**Tennant Creek**	**59.11**	**187**	*e*P	**P**	**03 40 02.5**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
WRAB	**Tennant Creek**	**59.11**	**187**	*e*P	**P**	**03 40 02.5**	**-0.4**
	comp=Z,6.5nm,0.9s,mb4.7						
WRA	**Warramunga Arr**	**59.12**	**187**	P	**P**	**03 40 02.0**	**-1.0**
	comp=Z,3.8nm,0.7s,mb4.5,baz=6.7,slow=7.0,SNR=15						
RES	**Resolute Bay**	**60.64**	**15**	*e*P	**P**	**03 40 12.2**	**-0.6**
RES				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.6						
RES	**Resolute Bay**	**60.64**	**15**	*e*P	**P**	**03 40 12.2**	**-0.6**
	comp=Z,3.2nm,0.6s,mb4.6						
KEV	**Kevo**	**61.32**	**339**	*e*p	**P**	**03 40 17.4**	**-0.1**
ARCES	**ARCESS Array B**	**61.88**	**339**	P	**P**	**03 40 21.0**	**-0.3**
	comp=Z,2.2nm,0.9s,mb4.3,baz=51,slow=7.1,SNR=6.7						
ASAR	**Alice Springs**	**62.85**	**187**	P	**P**	**03 40 27.8**	**-0.4**
	comp=Z,2.4nm,0.8s,mb4.4,baz=10,slow=4.5,SNR=12						
JOF	**Joensuu**	**63.91**	**331**	*e*P	**P**	**03 40 32.7**	**-2.2**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
JOF	**Joensuu**	**63.91**	**331**	*e*p	**P**	**03 40 32.7**	**-2.2**
	comp=Z,2.8nm,0.6s,mb4.5						
OBN	**Obninsk**	**66.17**	**323**	⇓*e*P	**P**	**03 40 51.3**	**+1.6**
OBN				pmax	pmax		
	comp=Z,21nm,2.5s,mb4.7						
KAF	**Kangasniemi**	**

IIGN *e*P 03 41 17.9
SWMT Swartz Lake 71.01 44 *e*P **P 03 41 20.6 +0.5**
SOC Sochi 71.21 311 *c i*P **P 03 41 20.1 -1.2**
SOC *e* 03 41 41.7
SOC *e* 03 43 58.4
SOC *e*PPP 03 45 42.5
SOC *e*S S 03 50 31.7 -6.8
SOC pmax pmax
comp=Z,7.0nm,0.5s,mb4.8
WVOR Wild Horse Val 71.42 50 *e*P **P 03 41 23.2 +0.6**
WVOR pmax pmax
comp=Z,1.0nm,0.7s,mb3.9
WVOR Wild Horse Val 71.42 50 *e*P **P 03 41 23.2 +0.6**
WVOR pmax pmax
comp=Z,1.0nm,0.7s,mb3.9
WVOR Wild Horse Val 71.42 50 *e*P **P 03 41 23.2 +0.6**
comp=Z,1.1nm,0.7s,mb3.9
SLMT Seeley Lake 71.44 44 *e*P **P 03 41 23.1 +0.4**
comp=Z,1.3nm,0.5s,mb4.1
HFS Hagfors 72.00 335 P **P 03 41 25.5 -0.3**
comp=Z,2.7nm,0.4s,mb4.5,baz=33,slow=8.0,SNR=34
NB2 NORSAR Subarra 72.08 337 P **P 03 41 25.6 -0.7**
comp=Z,3.0nm,0.7s,mb4.3,baz=39,slow=6.2
NOA NORSAR Array B 72.08 337 P **P 03 41 26.0 -0.3**
comp=Z,3.2nm,0.8s,mb4.3,baz=39,slow=5.9,SNR=12
NOA LR LR 04 14 47.5
comp=Z,36nm,19.5s,MS3.6,baz=85,slow=37
NAO01 NORSAR Array S 72.34 337 *e*P **P 03 41 27.3 -0.5**
comp=Z,5.5nm,0.8s,mb4.5
AKASG Malin Array Be 72.39 322 P **P 03 41 27.7 -0.6**
comp=Z,1.9nm,0.5s,mb4.3,baz=46,slow=6.1,SNR=10
AKASG Malin Array Be 72.39 322 P **P 03 41 27.7 -0.7**
AKBB Malin Array Si 72.39 322 *e*P **P 03 41 27.2 -1.1**
KIEV Kiev 72.40 322 *e*P **P 03 41 27.3 -1.1**
KIEV pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
KIEV Kiev 72.40 322 *e*P **P 03 41 27.2 -1.1**
comp=Z,4.9nm,0.8s,mb4.5
CMB Columbia Colle 72.94 55 *e*P **P 03 41 32.9 +1.1**
DLMT Dillon 73.10 45 *e*P **P 03 41 33.8 +1.2**
comp=Z,36nm,2.6s,mb4.8
BOZ Bozeman (W) 73.45 44 *e*P **P 03 41 35.9 +1.2**
BOZ pmax pmax
comp=Z,26nm,2.5s,mb4.7
BOZ Bozeman (W) 73.45 44 *e*P **P 03 41 35.9 +1.3**
comp=Z,26nm,2.5s,mb4.7
SIM Simferopol' 73.56 315 *e*P **P 03 41 36.6 +1.3**
SIM pmax pmax
comp=Z,11nm,0.7s,mb4.9
NVAR Mina Array Bea 74.02 53 P **P 03 41 39.2 +1.0**
comp=Z,1.2nm,0.7s,mb4.0,baz=270,slow=5.9,SNR=6.9
DUG Dugway 76.25 49 *e*P **P 03 41 51.9 +0.9**
DUG pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
DUG Dugway 76.25 49 *e*P **P 03 41 51.9 +0.9**
DUG pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
DUG Dugway 76.25 49 *e*P **P 03 41 51.9 +1.0**
comp=Z,1.7nm,0.6s,mb4.2
BUR08 Bucovina Ar. S 76.40 321 *e*P **P 03 41 52.0 +0.3**
BURAR Bucovina Array 76.42 321 ⇑P **P 03 41 52.1 +0.3**
BW06 Boulder Array 76.44 46 *e*P **P 03 41 52.1 +0.1**
comp=Z,1.2nm,0.6s,mb4.0
PDAR Pinedale Array 76.44 46 P **P 03 41 52.4 +0.3**
comp=Z,1.1nm,0.6s,mb4.0,baz=284,slow=2.5,SNR=13
KOLS Kolonicke sedl 76.89 324 *e*P **P 03 41 57.1 +2.7**
KOLS pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
KOLS Kolonicke sedl 76.89 324 *e*P **P 03 41 57.1 +2.7**
comp=Z,2.9nm,1.1s,mb4.1
STHS Stebnicka Huta 77.01 324 *e*P **P 03 41 58.4 +3.3**
STHS pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
STHS Stebnicka Huta 77.01 324 *e*P **P 03 41 58.4 +3.3**
comp=Z,3.4nm,1.0s,mb4.2
MPU Maple Canyon 77.06 49 *e*P **P 03 41 53.9 -1.6**
comp=Z,8.1nm,0.7s,mb4.8
OJC Ojcow 77.07 326 *e*P **P 03 41 54.5 -0.9**
BR131 Keskin Array S 77.17 311 *e*P **P 03 41 55.8 -0.4**
BRTR Keskin Array B 77.17 311 P **P 03 41 56.1 -0.1**
comp=Z,1.8nm,1.0s,mb3.9,baz=92,slow=3.7,SNR=6.6
BRTR Keskin Array B 77.17 311 P **P 03 41 56.1 -0.1**
CRVS Cervenica-Dubn 77.28 324 *e*P **P 03 41 56.9 +0.2**
CRVS pmax pmax
comp=Z,3.0nm,1.3s,mb4.1
CRVS Cervenica-Dubn 77.28 324 *e*P **P 03 41 56.9 +0.2**
comp=Z,3.3nm,1.3s,mb4.1
NIE Niedzica 77.43 325 *e*P **P 03 41 58.5 +1.0**
MSU Marysvale 77.71 50 *e*P **P 03 42 00.6 +1.4**
MSU pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
MSU Marysvale 77.71 50 *e*P **P 03 42 00.6 +1.4**
MSU pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
MSU Marysvale 77.71 50 *e*P **P 03 42 00.6 +1.3**
comp=Z,2.2nm,0.9s,mb4.1
OKC Ostrava-Krasne 78.07 326 *e*P **P 03 42 02.0 +1.0**
OKC MLR MLR
comp=Z,600nm,20.9s,MS4.9
OKC Ostrava-Krasne 78.07 326 *e*P **P 03 42 02.0 +1.0**
DRGR 78.21 322 ⇑P **P 03 42 00.4 -1.5**
SRU San Rafael 78.29 49 *e*P **P 03 42 03.2 +0.7**
SRU pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
SRU San Rafael 78.29 49 *e*P **P 03 42 03.2 +0.7**
comp=Z,1.9nm,0.6s,mb4.2
MORC Moravsky Berou 78.38 326 ⇑P **P 03 42 03.7 +1.0**
MORC Moravsky Berou 78.38 326 *e*P **P 03 42 02.9 +0.2**
comp=Z,4.4nm,1.1s,mb4.3
DPC Dobruska-Polom 78.46 327 *e*P **P 03 42 03.5 +0.3**
DPC Dobruska-Polom 78.46 327 *e*P **P 03 42 03.5 +0.3**
UPC Upice 78.47 328 *e*P **P 03 42 03.7 +0.5**
UPC Upice 78.47 328 *e*P **P 03 42 03.7 +0.5**
PSZ Piszkesteto 78.71 324 ⇑P **P 03 42 05.6 +1.0**
PSZ Piszkesteto 78.71 324 *e*P **P 03 42 05.5 +0.9**
comp=Z,3.2nm,0.8s,mb4.3
VYHS Vyhne 78.77 325 *e*P **P 03 42 05.4 +0.5**
VYHS pmax pmax
comp=Z,12nm,2.4s,mb4.4
VYHS Vyhne 78.77 325 *e*P **P 03 42 05.4 +0.5**
comp=Z,12nm,2.4s,mb4.4
CLL Collm 79.07 330 *i*P **P 03 42 06.2 -0.3**
CLL *i* 03 42 18.4
CLL pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
CLL Collm 79.07 330 *i*P **P 03 42 06.2 -0.3**
comp=Z,4.0nm,1.1s,mb4.3
CLL *i* pP 03 42 08.2 -1.3
CLL *i* 03 42 18.4
VRAC Vranov 79.14 327 P **P 03 42 07.3 +0.4**
comp=Z,2.6nm,0.7s,mb4.2,baz=41,slow=6.7,SNR=4.6
VRAC Vranov 79.14 327 ⇑P **P 03 42 06.1 -0.8**
GZR Gura Zlata 79.18 321 ⇑P **P 03 42 07.6 +0.4**
PRU Pruhonice 79.48 328 *e*P **P 03 42 09.3 +0.5**
PRU Pruhonice 79.48 328 *e*P **P 03 42 09.3 +0.5**
BZS Buzias 79.58 322 ⇓P **P 03 42 08.1 -1.3**
TREC Trest 79.62 327 *e*P **P 03 42 09.9 +0.4**
TREC Trest 79.62 327 *e*P **P 03 42 09.9 +0.4**
KHC Kasperske Hory 80.54 328 *e*P **P 03 42 14.6 +0.1**
KHC pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
KHC Kasperske Hory 80.54 328 *e*P **P 03 42 14.6 +0.1**
comp=Z,2.8nm,0.8s,mb4.2
KHC Kasperske Hory 80.54 328 *e*P **P 03 42 14.4 -0.1**
GERES GERESS Array B 80.71 328 P **P 03 42 15.3 -0.1**
comp=Z,1.4nm,0.8s,mb3.9,baz=35,slow=4.9,SNR=12
GERES LR LR 04 18 51.3
comp=Z,48nm,18.6s,MS3.9,baz=177,slow=36
EKA Eskdalemuir Ar 81.00 340 P **P 03 42 16.6 -0.3**
comp=Z,1.0nm,0.6s,mb3.9,baz=31,slow=5.0,SNR=4.5
GRA1 Grafenberg Arr 81.04 330 *e*P **P 03 42 17.4 +0.2**
comp=Z,4.0nm,1.0s,mb4.3
GRF Grafenberg Arr 81.04 330 *e*P **P 03 42 17.4 +0.2**
comp=Z,4.0nm,1.0s,mb4.3
GRF Grafenberg Arr 81.04 330 *e*P **P 03 42 17.4 +0.2**
GRF pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
GRF Grafenberg Arr 81.04 330 *e*P **P 03 42 17.4 +0.2**
GRF pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
STU Stuttgart 82.58 330 *e*P **P 03 42 24.7 -0.6**
STU pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
STU Stuttgart 82.58 330 *e*P **P 03 42 24.7 -0.6**
comp=Z,8.0nm,0.8s,mb4.8
BFO Black Forest 83.27 330 *c e*P **P 03 42 30.9 +2.0**
SCHQ Schefferville 83.39 16 P **P 03 42 29.2 -0.2**
comp=Z,3.7nm,0.9s,mb4.4,baz=24,slow=1.8,SNR=4.1
SCHQ Schefferville 83.39 16 P **P 03 42 29.2 -0.2**
ANMO Albuquerque 83.50 50 ⇑*e*P **P 03 42 28.7 -1.7**
ANMO pmax pmax
comp=Z,3.0nm,1.2s
ANMO Albuquerque 83.50 50 *e*P **P 03 42 35.2 +4.9**
CDF Champ du Feu 83.60 331 *e*P **P 03 42 30.3 -0.3**
DAVOX Davos/Dischmat 83.92 329 P **P 03 42 31.9 -0.4**
comp=Z,2.6nm,0.7s,mb4.5,baz=67,slow=13,SNR=4.0
HAU Haudompre 84.29 331 *e*P **P 03 42 34.3 +0.2**
HAU *e*MLR MLR
comp=Z,45nm,20.5s,MS3.5
HAU Haudompre 84.29 331 *e*P **P 03 42 34.3 +0.2**
HAU LR LR
comp=Z,50nm,20.5s,MS3.9
MEZF Maizieres J'vi 84.35 332 *e*P **P 03 42 34.3 -0.1**
CABF La Chapelle 85.55 331 *e*P **P 03 42 40.1 -0.4**
comp=Z,18nm,1.1s,mb4.9
CABF La Chapelle 85.55 331 *e*P **P 03 42 40.1 -0.4**
CABF pmax pmax
comp=Z,9.0nm,1.1s,mb4.9
CABF La Chapelle 85.55 331 *e*P **P 03 42 40.1 -0.4**
comp=Z,9.1nm,1.1s,mb4.9
LOR Lormes 85.82 332 *e*P **P 03 42 41.4 -0.5**
comp=Z,7.9nm,0.8s,mb4.7
LOR *e*MLR MLR
comp=Z,62nm,20.5s,MS3.7
LOR Lormes 85.82 332 *e*P **P 03 42 41.4 -0.5**
LOR pmax pmax
comp=Z,4.0nm,0.8s,mb4.7
LOR MLR MLR
comp=Z,60nm,20.5s,MS4.0
LOR Lormes 85.82 332 *e*P **P 03 42 41.4 -0.5**
comp=Z,4.0nm,0.8s,mb4.7
LOR LR LR
comp=Z,60nm,20.5s,MS4.0
FLN La Foliniere 86.02 336 *e*P **P 03 42 42.2 -0.6**
comp=Z,6.8nm,0.6s,mb4.7
FLN *e*MLR MLR
comp=Z,68nm,21.0s,MS3.7
FLN La Foliniere 86.02 336 *e*P **P 03 42 42.2 -0.6**
FLN pmax pmax
comp=Z,3.0nm,0.6s,mb4.7
FLN MLR MLR
comp=Z,70nm,21.0s,MS4.0
FLN La Foliniere 86.02 336 *e*P **P 03 42 42.2 -0.6**
comp=Z,3.4nm,0.6s,mb4.8
FLN LR LR
comp=Z,70nm,21.0s,MS4.0
LDF La Druitiere 86.05 335 *e*P **P 03 42 42.2 -0.8**
comp=Z,11nm,1.0s,mb4.7
LDF La Druitiere 86.05 335 *e*P **P 03 42 42.2 -0.8**
LDF pmax pmax
comp=Z,6.0nm,1.0s,mb4.8
LDF La Druitiere 86.05 335 *e*P **P 03 42 42.2 -0.8**
comp=Z,5.6nm,1.0s,mb4.8
SSF Saint Saulge 86.12 332 *e*P **P 03 42 42.9 -0.5**
comp=Z,9.6nm,0.9s,mb4.7
SSF Saint Saulge 86.12 332 *e*P **P 03 42 42.9 -0.5**
SSF pmax pmax
comp=Z,5.0nm,0.9s,mb4.7
SSF Saint Saulge 86.12 332 *e*P **P 03 42 42.9 -0.5**
comp=Z,4.8nm,0.9s,mb4.7
LPL La Plagne 86.21 330 *e*P **P 03 42 43.7 -0.1**
comp=Z,6.9nm,0.8s,mb4.7
LPL La Plagne 86.21 330 *e*P **P 03 42 43.7 -0.1**
LPL pmax pmax
comp=Z,3.0nm,0.8s,mb4.6
LPL La Plagne 86.21 330 *e*P **P 03 42 43.7 -0.1**
comp=Z,3.5nm,0.8s,mb4.6
LPG La Plagne 86.22 330 *e*P **P 03 42 43.9 +0.1**
comp=Z,6.4nm,0.7s,mb4.6
LPG La Plagne 86.22 330 *e*P **P 03 42 43.9 +0.1**
LPG pmax pmax
comp=Z,3.0nm,0.7s,mb4.6
LPG La Plagne 86.22 330 *e*P **P 03 42 43.9 +0.1**
comp=Z,3.2nm,0.7s,mb4.7
SMF Signal de Mont 86.36 332 *e*P **P 03 42 44.1 -0.4**
comp=Z,15nm,1.2s,mb4.8
SMF Signal de Mont 86.36 332 *e*P **P 03 42 44.1 -0.4**
SMF pmax pmax
comp=Z,8.0nm,1.2s,mb4.8
SMF Signal de Mont 86.36 332 *e*P **P 03 42 44.1 -0.4**
comp=Z,7.7nm,1.2s,mb4.8
AVF Avril sur Loir 86.41 332 *e*P **P 03 42 44.5 -0.3**
comp=Z,16nm,0.8s,mb5.0
AVF Avril sur Loir 86.41 332 *e*P **P 03 42 44.5 -0.3**
AVF pmax pmax
comp=Z,8.0nm,0.8s,mb5.0
AVF Avril sur Loir 86.41 332 *e*P **P 03 42 44.5 -0.3**
comp=Z,7.9nm,0.8s,mb5.0
GRR Gorron 86.47 336 *e*P **P 03 42 44.7 -0.3**
BGF Bois d'Agland 86.79 333 *e*P **P 03 42 48.0 +1.4**
comp=Z,13nm,1.1s,mb4.8
BGF Bois d'Agland 86.79 333 *e*P **P 03 42 48.0 +1.4**
BGF pmax pmax
comp=Z,7.0nm,1.1s,mb4.8
BGF Bois d'Agland 86.79 333 *e*P **P 03 42 48.0 +1.4**
comp=Z,6.7nm,1.1s,mb4.8
ORIF Oris-en-Rattie 87.04 330 *e*P **P 03 42 47.3 -0.6**
comp=Z,9.6nm,0.9s,mb4.7
ORIF *e*MLR MLR
comp=Z,58nm,19.0s,MS3.7
ORIF Oris-en-Rattie 87.04 330 *e*P **P 03 42 47.3 -0.6**
ORIF pmax pmax
comp=Z,5.0nm,0.9s,mb4.7
ORIF Oris-en-Rattie 87.04 330 *e*P **P 03 42 47.3 -0.6**
comp=Z,4.8nm,0.9s,mb4.7
SGMF Saint Gilles 87.12 337 *e*P **P 03 42 48.2 0.0**
comp=Z,7.2nm,0.7s,mb4.7
SGMF Saint Gilles 87.12 337 *e*P **P 03 42 48.2 0.0**
SGMF pmax pmax
comp=Z,4.0nm,0.7s,mb4.8
SGMF Saint Gilles 87.12 337 *e*P **P 03 42 48.2 0.0**
comp=Z,3.6nm,0.7s,mb4.7
TCF Toulx Ste Croi 87.25 333 *e*P **P 03 42 48.8 -0.1**
comp=Z,9.2nm,1.1s,mb4.6
TCF Toulx Ste Croi 87.25 333 *e*P **P 03 42 48.8 -0.1**
TCF pmax pmax
comp=Z,5.0nm,1.1s,mb4.7
TCF Toulx Ste Croi 87.25 333 *e*P **P 03 42 48.8 -0.1**
comp=Z,4.6nm,1.1s,mb4.6
ROSF Rostrenen 87.27 337 *e*P **P 03 42 49.0 +0.1**
comp=Z,22nm,1.0s,mb5.0
ROSF Rostrenen 87.27 337 *e*P **P 03 42 49.0 +0.1**
ROSF pmax pmax
comp=Z,11nm,1.0s,mb5.0
ROSF Rostrenen 87.27 337 *e*P **P 03 42 49.0 +0.1**
comp=Z,11nm,1.0s,mb5.0
VIVF Saint-Julien-I 87.56 331 *e*P **P 03 42 50.1 -0.3**
QUIF Quistinic 87.61 337 *e*P **P 03 42 50.2 -0.4**
MFF Saint Martin d 87.79 334 *e*P **P 03 42 51.5 0.0**
comp=Z,25nm,1.3s,mb5.0
MFF Saint Martin d 87.79 334 *e*P **P 03 42 51.5 0.0**
MFF pmax pmax
comp=Z,12nm,1.3s,mb5.0
MFF Saint Martin d 87.79 334 *e*P **P 03 42 51.5 0.0**
comp=Z,12nm,1.3s,mb5.0
RJF Les Rejaudoux 88.34 333 *e*P **P 03 42 54.2 +0.1**
comp=Z,17nm,1.4s,mb4.8
RJF *e*MLR MLR
comp=Z,53nm,17.5s,MS3.7
RJF Les Rejaudoux 88.34 333 *e*P **P 03 42 54.2 +0.1**
RJF pmax pmax
comp=Z,9.0nm,1.4s,mb4.8
RJF MLR MLR
comp=Z,50nm,17.5s,MS4.0
RJF Les Rejaudoux 88.34 333 *e*P **P 03 42 54.2 +0.1**
comp=Z,8.6nm,1.4s,mb4.8
RJF LR LR
comp=Z,50nm,17.5s,MS4.0
CAF Calviac 88.47 332 *e*P **P 03 42 55.0 +0.3**
comp=Z,7.0nm,0.9s,mb4.6
CAF Calviac 88.47 332 *e*P **P 03 42 55.0 +0.3**
CAF pmax pmax
comp=Z,4.0nm,0.9s,mb4.7
CAF Calviac 88.47 332 *e*P **P 03 42 55.0 +0.3**
comp=Z,3.5nm,0.9s,mb4.6
LASF Ste Croix 88.53 331 *e*P **P 03 42 55.3 +0.3**
LFF La Frestale 88.94 333 *e*P **P 03 42 57.1 +0.2**
TXAR Lajitas Array 89.11 52 P **P 03 42 58.2 +0.1**
comp=Z,0.4nm,0.6s,mb3.9,baz=308,slow=3.5,SNR=5.2
MTLF Montolieu 89.78 331 *e*P **P 03 43 00.6 -0.3**
EPF Esparros 90.73 332 *e*P **P 03 43 06.4 +1.0**
ETSF Etsaut 91.17 333 *e*P **P 03 43 07.8 +0.4**
comp=Z,10.0nm,1.0s,mb4.8
ETSF Etsaut 91.17 333 *e*P **P 03 43 07.8 +0.4**
ETSF pmax pmax
comp=Z,5.0nm,1.0s,mb4.8
ETSF Etsaut 91.17 333 *e*P **P 03 43 07.8 +0.4**
comp=Z,5.0nm,1.0s,mb4.8
ESDC Sonseca Array 95.22 334 P **P 03 43 23.9 -2.2**
comp=Z,0.0nm,0.3s,baz=45,slow=5.8,SNR=3.8
LPAZ La Paz 145.88 56 PKPbc PKPbc 03 49 42.7 +0.5
comp=Z,1.7nm,0.7s,baz=21,slow=5.3,SNR=6.0
LPAZ La Paz 145.88 56 PKP2 PKPbc 03 49 42.7 +0.4
LPAZ pmax pmax
comp=Z,2.0nm,0.7s
LPAZ La Paz 145.88 56 *e*PKPbc PKPbc 03 49 42.5 +0.2
SIV San Ignacio 149.93 46 PKPbc PKPbc 03 49 53.2 0.0
comp=Z,2.6nm,0.8s,baz=311,slow=2.3,SNR=11

CASC 15 03:30:07.2±2.1, 9.°26N×82.°68W, h10km, MD3.7, 4C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNI	**Changuinola**	**0.22**	**46**	⇓*i*P	Pg	03 30 12.2	+0.4
CNI				*e*S	Sg	03 30 16.0	+1.2
CTCR	**Cotoan**	**0.37**	**193**	⇑*i*P	Pg	03 30 20.8	+6.3
CTCR				*e*S	Sg	03 30 27.3	+7.7
BRU2	**Volcan**	**0.47**	**182**	⇓*i*P	Pg	03 30 17.1	+0.7
BRU2				*e*S	Sg	03 30 23.1	+0.7
BAR1		**0.63**	**268**	⇑*e*P	Pg	03 30 19.1	-0.3
BAR1				*e*S	Sg	03 30 27.9	+0.3
ACR	**Cerro Adams**	**0.78**	**219**	⇓*e*P	Pg	03 30 22.5	+0.3
ACR				*e*S	Sg	03 30 34.9	+2.6
BUS	**Buena Vista**	**1.11**	**285**	⇑*e*P	Pb	03 30 27.4	-1.0
BUS				*e*S	Sg	03 30 42.8	-0.2
URSC	**Urasca**	**1.23**	**298**	*e*P	Pn	03 30 29.3	-1.2
URSC				*e*S	Sb	03 30 44.8	-1.6
QCR	**Quepos**	**1.48**	**276**	⇑*i*P	Pn	03 30 33.7	-0.2
QCR				*e*S	Sn	03 30 52.8	-0.5
LAJ	**Bijagual**	**1.55**	**293**	*e*P	Pn	03 30 42.0	+7.2
LAJ				*e*S	Sn	03 31 05.4	+10
PRS1	**Puriscal**	**1.77**	**294**	*e*P	Pn	03 30 38.0	+0.2
PRS1				*e*S	Sn	03 31 01.1	+0.7
CGA2	**Cerro Gallo 2**	**1.92**	**293**	*e*P	Pn	03 30 40.5	+0.5
CGA2				*e*S	Sn	03 31 05.1	+1.0

*IDC **15** 03:34:27.1±0.6, 31.°36N×104.°15E, h0km, mb4.2/21, mb1 4.3/22, mb1mx4.2/30, mbtmp4.2/22, ML3.7/1, Error ellipse: s-maj=23.8km s-min=12.5km az=55.0*
*NEIC **15** 03:34:28.9±0.3, 31.°41N×104.°21E, h10km, mb4.3/14, Error ellipse: s-maj=9.6km s-min=5.2km az=57.0*
*BJI **15** 03:34:29.4, 31.°36N×104.°42E, h16km, mB4.8/4, mb4.5/9, ML4.1/16, Ms4.2/10, Ms7 3.9/9*
ISC 15 03:34:28.7±0.7, 31.°43N±0.°02×104.°20E±0.°03, h7km±4km, n61, g0.°88/73, mb4.2/33, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.64**	**217**	Pg	**Pg**	**03 34 41.3**	**+0.2**
CD2				Sg	**Sg**	**03 34 49.9**	**+0.5**
CD2				smax			
	comp=N,8μm,0.7s						
CD2				smax			
	comp=E,5μm,1.3s						
LZH	**Lanzhou**	**4.66**	**356**	Pn	**Pn**	**03 35 45.3**	**+5.9**
LZH				Pg	**Pg**	**03 35 57.0**	**-0.9**
LZH				Sn	**Sn**	**03 36 36.8**	**+3.2**
LZH				Sg	**Sg**	**03 36 57.5**	**-0.8**
LZH				smax			
	comp=N,160nm,0.9s						
LZH				smax			
	comp=E,280nm,1.0s						
LZH				LR	LR		
	comp=E,1μm,8.4s						
LZH				LR	LR		
	comp=Z,1μm,9.5s						
ENH	**Enshi**	**4.69**	**103**	*e*Pn	**Pn**	**03 35 40.6**	**+0.8**
ENH				*e*Pg	**Pg**	**03 35 58.2**	**-0.3**
ENH				*e*Sg	**Sg**	**03 36 58.2**	**-1.0**
XAN	**Xi'an**	**4.75**	**56**	Pn	**Pn**	**03 35 40.9**	**+0.2**
XAN				Sn	**Sn**	**03 36 36.6**	**+0.6**
XAN				Sg	**Sg**	**03 37 02.3**	**+1.0**
XAN				smax			
	comp=N,590nm,0.9s						
XAN				smax			
	comp=E,270nm,0.9s						
XAN				LR	LR		
	comp=N,5μm,10.4s						
XAN				LR	LR		
	comp=E,1μm,11.3s						
XAN				LR	LR		
	comp=Z,730nm,8.5s						
GYA	**Guiyang**	**5.40**	**156**	Pn	**Pn**	**03 35 54.4**	**+4.8**
GYA				Pg	**Pg**	**03 36 13.6**	**+1.5**
GYA				Sn	**Sn**	**03 37 02.3**	**+10**
GYA				Sg	**Sg**	**03 37 20.3**	**-1.8**
GYA				smax			
	comp=N,450nm,0.9s						
GYA				smax			
	comp=E,450nm,1.0s						
GYA				LR	LR		
	comp=N,530nm,4.2s						
GYA				LR	LR		
	comp=E,450nm,4.0s						
GYA				LR	LR		
	comp=Z,900nm,4.2s						
KMI	**Kunming**	**6.41**	**192**	Pn	**Pn**	**03 36 03.9**	**+0.4**
KMI				Sn	**Sn**	**03 37 17.8**	**+0.9**
KMI				smax			
	comp=N,58nm,1.3s						
KMI				smax			
	comp=E,46nm,1.4s						
KMI				LR	LR		
	comp=N,980nm,7.6s						
KMI				LR	LR		
	comp=E,580nm,6.7s						
KMI				LR	LR		
	comp=Z,870nm,8.2s						
NJ2	**Nanjing**	**12.49**	**83**	*e*P	**Pn**	**03 37 30.9**	**+4.1**
NJ2				pP		03 37 34.1	
NJ2				sP		03 37 36.3	
NJ2				PP		03 37 41.1	
NJ2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,80nm,4.1s						
NJ2				LR	LR		
	comp=N,640nm,13.6s						
NJ2				LR	LR		
	comp=E,790nm,12.7s						
NJ2				LR	LR		
	comp=Z,710nm,13.5s						
CMAR	**Chiang Mai Arr**	**13.76**	**201**	Pn	**Pn**	**03 37 45.6**	**+1.3**
	comp=Z,0.4nm,0.3s,baz=14,slow=12,SNR=3.8						
CMAR	**Chiang Mai Arr**	**13.76**	**201**	P	**Pn**	**03 37 45.6**	**+1.4**
SONM	**Songino Array**	**16.47**	**5**	Pn	**Pn**	**03 38 21.4**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=186,slow=12,SNR=8.7						
ULN	**Ulaanbaatar**	**16.56**	**7**	*e*P	**Pn**	**03 38 25.4**	**+4.1**
	comp=Z,2.7nm,0.9s						
KSRS	**Korea Array**	**20.44**	**66**	P	**P**	**03 39 07.1**	**+0.5**
	comp=Z,8.7nm,0.7s,baz=256,slow=10,SNR=28						
CN2	**Changchun**	**20.81**	**48**	*e*P	**P**	**03 39 11.8**	**+1.3**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
MK31	**Makanchi Array**	**22.79**	**319**	*e*P	**P**	**03 39 32.0**	**+0.3**
MKAR	**Makanchi Array**	**22.79**	**319**	P	**P**	**03 39 33.1**	**+1.4**
	comp=Z,5.5nm,0.7s,mb4.1,baz=100,slow=11,SNR=18						
TKM2	**Tokmak 2**	**25.40**	**305**	*e*P	**P**	**03 39 57.8**	**+1.2**
	comp=Z,4.4nm,1.0s,mb3.9						
UCH	**Uchtor**	**25.97**	**303**	*e*P	**P**	**03 39 58.8**	**-3.0**
	comp=Z,8.9nm,1.1s,mb4.2						
ZAA0	**Zalesovo Array**	**26.47**	**334**	*e*P	**P**	**03 40 06.1**	**-0.1**
ZALV	**Zalesovo Beam**	**26.47**	**334**	P	**P**	**03 40 06.8**	**+0.6**
	comp=Z,7.5nm,0.7s,mb4.3,baz=135,slow=9.4,SNR=21						
AML	**Almayashu**	**26.54**	**302**	*e*P	**P**	**03 40 09.0**	**+2.0**
	comp=Z,2.6nm,0.6s,mb3.9						
KURK	**Kurchatov**	**27.04**	**323**	P	**P**	**03 40 12.1**	**+0.8**
	comp=Z,6.1nm,0.8s,mb4.2,baz=126,slow=9.2,SNR=18						
KURK				PcP	PcP	03 43 32.1	-0.4
	comp=Z,0.9nm,0.3s,baz=109,slow=2.3,SNR=5.0						
KURK	**Kurchatov**	**27.04**	**323**	*e*P	**P**	**03 40 11.8**	**+0.4**
	comp=Z,5.1nm,0.9s,mb4.0						
KURK				PcP	PcP	03 43 32.1	-0.4
PSI	**Prapat**	**28.91**	**191**	P	**P**	**03 40 28.1**	**-0.2**

comp=Z,3.8nm,0.8s,mb4.2,baz=329,slow=17,SNR=3.6
BVAR Borovoye Array 32.59 321 P P 03 41 01.2 +0.7
comp=Z,2.7nm,0.7s,mb4.3,baz=108,slow=8.3,SNR=6.3
BVAR PcP PcP 03 43 46.1 -0.6
comp=Z,1.3nm,0.6s,baz=116,slow=3.4,SNR=6.7
BRVK Borovoye 32.66 321 *eP* **P 03 41 01.6 +0.4**
comp=Z,3.3nm,0.8s,mb4.3
ABKAR Akbulak array 37.52 311 *eP* **P 03 41 43.3 +0.2**
comp=Z,1.9nm,0.8s,mb3.9
AKTK Aktyubinsk 38.98 313 P P 03 41 54.2 -1.1
AKTO Aktyubinsk 38.98 313 P P 03 41 54.2 -1.1
comp=Z,1.0nm,0.6s,mb3.7,baz=121,slow=12,SNR=3.1
ARU Arti 40.23 322 *eP* **P 03 42 06.0 +0.4**
comp=Z,13nm,0.8s,mb4.7
JOF Joensuu 54.80 328 *ep* **P 03 43 57.9 -0.9**
comp=Z,4.1nm,0.7s,mb4.6
KEV Kevo 56.47 336 *ep* **P 03 44 09.9 -0.8**
comp=Z,3.5nm,0.7s,mb4.5
BRTR Keskin Array B 56.66 299 P P 03 44 11.1 -1.4
comp=Z,0.4nm,0.7s,mb3.5,baz=92,slow=7.6,SNR=3.9
BRTR Keskin Array B 56.66 299 P P 03 44 11.1 -1.4
ARCES ARCESS Array B 57.00 336 P P 03 44 14.3 -0.2
comp=Z,1.6nm,0.6s,mb4.2,baz=87,slow=8.2,SNR=11
ARCES ARCESS Array B 57.00 336 P P 03 44 14.3 -0.2
KAF Kangasniemi 57.17 327 *ep* **P 03 44 14.4 -1.4**
comp=Z,2.6nm,0.6s,mb4.4
AKASG Malin Array Be 57.23 313 P P 03 44 15.6 -0.8
comp=Z,0.2nm,0.3s,mb3.6,baz=68,slow=7.3,SNR=4.3
FINES FINESS Array B 57.35 326 P P 03 44 17.0 -0.1
comp=Z,6.3nm,0.8s,mb4.7,baz=98,slow=7.9,SNR=12
COEN Coen 58.61 134 *eP* **P 03 44 26.2 -0.3**
comp=Z,38nm,0.8s
WRAB Tennant Creek 58.69 146 *eP* **P 03 44 26.4 -0.6**
comp=Z,12nm,0.8s,mb5.0
WRA Warramunga Arr 58.69 146 P P 03 44 26.7 -0.2
comp=Z,7.9nm,0.6s,mb4.9,baz=339,slow=7.6,SNR=36
ASAR Alice Springs 61.72 149 P P 03 44 47.4 -0.2
comp=Z,2.4nm,0.8s,mb4.4,baz=336,slow=6.2,SNR=16
HFS Hagfors 63.55 326 P P 03 44 59.1 -0.4
comp=Z,1.5nm,0.5s,mb4.3,baz=90,slow=5.8,SNR=7.4
NB2 NORSAR Subarra 64.43 327 P P 03 45 04.2 -1.1
comp=Z,1.1nm,0.6s,mb4.1,baz=73,slow=6.9
NOA NORSAR Array B 64.43 327 P P 03 45 04.5 -0.8
comp=Z,1.7nm,0.7s,mb4.2,baz=73,slow=6.9,SNR=6.8
MORC Moravsky Berou 64.70 314 *eP* **P 03 45 06.9 -0.3**
comp=Z,1.4nm,0.7s,mb4.1
GERES GERESS Array B 67.38 314 P P 03 45 24.6 +0.2
comp=Z,0.5nm,0.6s,mb3.7,baz=67,slow=5.4,SNR=6.1
KDAK Kodiak Island 70.52 34 P P 03 45 43.5 -0.3
comp=Z,4.1nm,0.8s,mb4.4,baz=301,slow=5.9,SNR=4.0
KDAK Kodiak Island 70.52 34 P P 03 45 43.5 -0.3
KDAK Kodiak Island 70.52 34 P P 03 45 43.5 -0.4
INK Inuvik 71.82 19 P P 03 45 50.9 -0.6
comp=Z,3.3nm,0.8s,mb4.3,baz=296,slow=6.9,SNR=4.5
STKA Stephens Creek 72.23 147 P P 03 45 53.9 -0.5
comp=Z,2.4nm,0.3s,mb4.6,baz=320,slow=7.9,SNR=4.1
LPG La Plagne 73.09 313 *eP* **P 03 46 00.0 +0.5**
comp=Z,4.1nm,0.5s,mb4.3
LPG La Plagne 73.09 313 *eP* **P 03 46 00.0 +0.5**
comp=Z,2.0nm,0.5s,mb4.3
LPL La Plagne 73.09 313 *eP* **P 03 45 59.9 +0.4**
comp=Z,5.3nm,0.6s,mb4.4
LPL La Plagne 73.09 313 *eP* **P 03 45 59.9 +0.4**
comp=Z,2.7nm,0.6s,mb4.3
SMF Signal de Mont 74.33 315 *eP* **P 03 46 06.1 -0.7**
AVF Avril sur Loir 74.55 316 *eP* **P 03 46 07.4 -0.6**
TCF Toulx Ste Croi 75.48 316 *eP* **P 03 46 13.2 -0.2**
YKA Yellowknife Ar 81.36 17 P P 03 46 45.4 -0.2
comp=Z,0.5nm,0.6s,mb3.6,baz=328,slow=5.5,SNR=4.8
ESDC Sonseca Array 82.86 312 P P 03 46 53.8 -0.2
comp=Z,0.4nm,0.7s,mb3.5,baz=41,slow=4.5,SNR=3.8

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*IDC **15** 03:38:58.0±1.1, 46°.56N×153°.32E, h0km, mb3.7/12, mb1 3.8/13, mb1mx3.7/28, mbtmp3.7/13, ML3.0/1, Error ellipse: s-maj=29.0km s-min=23.6km az=134.0*
*NEIC **15** 03:39:02.1±4.8, 46°.55N×153°.29E, h28km±32km, mb3.9/2, Error ellipse: s-maj=17.1km s-min=10.9km az=176.0*
*ISCJB **15** 03:39:02.9±1.9, 46°.6N±0°.1×153°.3E±0°.2, h45km±14km, mb3.8/12, Error ellipse: s-maj=26.6km s-min=10.8km az=136.4*
*MOS **15** 03:39:03.0±1.0, 46°.60N×153°.28E, h50km, mb4.2/1, Error ellipse: s-maj=19.8km s-min=12.6km az=77.7*
ISC 15 03:39:05.5±1.6, 46°.6N±0°.1×153°.3E±0°.2, h52km±12km, n21, σ0°56/22, mb3.8/12, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**4.47**	**24**	*e*PN	**Pn**	**03 40 12.0**	**+1.3**
SKR				*e*S	**Sn**	**03 41 01.2**	**-0.1**
SKR	comp=Z,20nm,0.4s			pmax	pmax		
SKR	comp=N,40nm,0.5s			smax			
SKR	comp=E,60nm,0.5s			smax			
SKR	comp=Z,20nm,0.5s			smax			
PETK	**Petropavlovsk-**	**7.09**	**22**	Pn	**Pn**	**03 40 45.1**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=184,slow=14,SNR=3.5						
ASAJ	**Asahikawa**	**7.93**	**255**	Pn	**Pn**	**03 40 57.9**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=86,slow=15,SNR=6.8						
ASAJ	**Asahikawa**	**7.93**	**255**	PN	**Pn**	**03 40 57.9**	**-0.1**
ASAJ	comp=Z,1.0nm,0.3s			pmax	pmax		
KSRS	**Korea Array**	**20.87**	**253**	P	**P**	**03 43 43.7**	**+0.7**
	comp=Z,0.8nm,0.8s,baz=54,slow=10,SNR=3.1						
MK31	**Makanchi Array**	**47.10**	**298**	*e*P	**P**	**03 47 31.5**	**-0.4**
MKAR	**Makanchi Array**	**47.10**	**298**	P	**P**	**03 47 31.9**	**-0.1**
	comp=Z,0.7nm,0.7s,mb3.7,baz=65,slow=9.9,SNR=5.1						
KURK	**Kurchatov**	**47.53**	**304**	P	**P**	**03 47 35.5**	**+0.3**
	comp=Z,1.6nm,0.8s,mb4.1,baz=69,slow=8.3,SNR=6.3						
KURK	**Kurchatov**	**47.53**	**304**	P	**P**	**03 47 35.5**	**+0.3**
KURK	comp=Z,2.0nm,0.8s,mb4.2			pmax	pmax		
KURK	**Kurchatov**	**47.53**	**304**	*e*P	**P**	**03 47 34.8**	**-0.4**
	comp=Z,1.1nm,0.7s,mb4.0						
YKA	**Yellowknife Ar**	**50.95**	**37**	P	**P**	**03 48 01.5**	**+0.3**
	comp=Z,0.4nm,0.6s,mb3.5,baz=293,slow=7.0,SNR=3.2						
BVAR	**Borovoye Array**	**51.02**	**310**	P	**P**	**03 48 01.6**	**-0.3**
	comp=Z,0.4nm,0.4s,mb3.7,baz=52,slow=9.6,SNR=3.9						
ABKAR	**Akbulak array**	**58.59**	**310**	*e*P	**P**	**03 48 56.3**	**-0.3**
	comp=Z,0.4nm,0.3s,mb3.9						
FINES	**FINESS Array B**	**64.20**	**335**	P	**P**	**03 49 34.4**	**+0.1**
	comp=Z,0.8nm,0.4s,mb4.1,baz=31,slow=6.4,SNR=15						
NB2	**NORSAR Subarra**	**68.38**	**341**	P	**P**	**03 50 00.2**	**-0.8**
	comp=Z,0.5nm,0.6s,mb3.7,baz=26,slow=6.5						
NOA	**NORSAR Array B**	**68.38**	**341**	P	**P**	**03 50 01.1**	**+0.1**
	comp=Z,0.8nm,0.7s,mb3.9,baz=27,slow=6.4,SNR=4.6						
HFS	**Hagfors**	**68.61**	**340**	P	**P**	**03 50 02.9**	**+0.4**
	comp=Z,2.1nm,0.6s,mb4.3,baz=36,slow=5.5,SNR=14						
AKASG	**Malin Array Be**	**71.71**	**326**	P	**P**	**03 50 21.7**	**+0.1**
	comp=Z,1.0nm,0.4s,mb4.1,baz=33,slow=6.2,SNR=5.5						
ASAR	**Alice Springs**	**72.13**	**199**	P	**P**	**03 50 23.7**	**-0.6**
	comp=Z,0.4nm,0.8s,mb3.4,baz=13,slow=6.1,SNR=5.7						
TXAR	**Lajitas Array**	**77.45**	**61**	P	**P**	**03 50 55.3**	**0.0**
	comp=Z,0.2nm,0.5s,mb3.3,baz=303,slow=3.9,SNR=3.5						
GERES	**GERESS Array B**	**78.61**	**334**	P	**P**	**03 51 01.8**	**+0.4**
	comp=Z,0.4nm,0.8s,mb3.4,baz=10,slow=6.0,SNR=3.8						

IDC 15 04:13:22.8±3.2, 8°.32S×74°.87W, h215km±59km, mb3.0/2, mb1 3.2/5, mb1mx3.1/19, mbtmp3.0/5, Error ellipse: s-maj=154.5km s-min=16.4km az=38.0, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**3.69**	**288**	P	Pn	04 14 21.2	-0.1
	3.6nm,0.3s,baz=164,slow=14,SNR=82						
ATAH				S	S	04 15 08.6	+1.2
	3.5nm,0.3s,baz=117,slow=17,SNR=5.1						
NNA	**Nana**	**4.13**	**208**	S	S	04 15 29.6	+12
	2.5nm,0.3s,baz=319,slow=19,SNR=3.5						
LPAZ	**La Paz**	**10.30**	**141**	P	Pn	04 15 46.9	+1.2
	0.1nm,0.3s,baz=331,slow=8.6,SNR=5.3						
SIV	**San Ignacio**	**15.48**	**121**	P	Pn	04 16 49.8	-0.6
	0.2nm,0.3s,baz=307,slow=12,SNR=12						
TXAR	**Lajitas Array**	**46.59**	**325**	P	P	04 21 30.3	+0.8
	0.4nm,0.7s,baz=140,slow=8.5,SNR=5.8						
YKA	**Yellowknife Ar**	**76.94**	**342**	P	P	04 24 50.7	-0.4
	0.3nm,0.5s,baz=140,slow=6.1,SNR=8.2						

NEIC 15 04:21:08.0, 39°.23S×174°.73E, h203km, MG3.7(WEL), After WEL., North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRZ	**Vera Road**	**0.11**	**12**	P	Pn	04 21 33.0	-1.6
VRZ				S	Sn	04 21 54.0	-1.1
NEZ	**North Egmont**	**0.49**	**265**	P	Pn	04 21 35.2	-0.2
DFE	**Dawson Falls**	**0.50**	**258**	P	Pn	04 21 35.3	-0.1
WAZ	**Wanganui**	**0.56**	**159**	P	Pn	04 21 36.0	+0.4
WAZ				S	Sn	04 21 57.5	+0.3
PKE	**Pukeiti**	**0.58**	**273**	P	Pn	04 21 35.3	-0.4
FWVZ	**Far West T-bar**	**0.64**	**93**	P	Pn	04 21 36.0	0.0
WTVZ	**West Tongariro**	**0.68**	**81**	P	Pn	04 21 35.9	-0.3
NGZ	**Ngauruhoe**	**0.68**	**86**	P	Pn	04 21 36.0	-0.2
WNVZ	**Wahianoa**	**0.68**	**99**	P	Pn	04 21 36.2	0.0
TUVZ	**Tukino**	**0.72**	**93**	P	Pn	04 21 36.5	+0.1
KATZ	**Kakaramea**	**0.79**	**72**	P	Pn	04 21 36.4	-0.4
MOVZ	**Moawhango**	**0.81**	**103**	P	Pn	04 21 36.5	-0.4
MOVZ				S	Sn	04 21 57.5	-1.7
TSZ	**Takapari Road**	**1.26**	**131**	P	Pn	04 21 40.1	+0.2
BKZ	**Black Stump Fm**	**1.37**	**88**	P	Pn	04 21 40.1	-0.7
MRZ	**Mangatainoka R**	**1.57**	**156**	P	Pn	04 21 42.4	-0.1
KIW	**Kapiti Island**	**1.64**	**175**	P	Pn	04 21 42.8	-0.3
BFZ	**Birch Farm**	**1.86**	**142**	P	Pn	04 21 44.9	-0.3
TCW	**Tory Channel**	**2.01**	**190**	P	Pn	04 21 46.5	-0.2
MTW	**Mount Morrison**	**2.02**	**163**	P	Pn	04 21 46.4	-0.4
URZ	**Urewera**	**2.10**	**63**	*e*Pn	Pn	04 21 45.3	-2.4
URZ				*e*Sn	Sn	04 22 14.3	-4.3

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*IDC **15** 04:21:29.6±0.8, 31°.42N×104°.07E, h0km, mb4.0/12, mb1 4.1/14, mb1mx3.9/27, mbtmp3.9/14, ML3.9/2, Error ellipse: s-maj=32.9km s-min=14.6km az=58.0*
*BJI **15** 04:21:31.8, 31°.33N×104°.28E, h19km, mB4.8/4, mb4.2/5, ML3.7/14, Ms3.5/6, Ms7 3.4/6*
*NEIC **15** 04:21:31.5±0.4, 31°.44N×104°.05E, h10km, mb4.1/4, Error ellipse: s-maj=11.9km s-min=6.7km az=58.0*
ISC 15 04:21:29.7±0.8, 31°.44N±0°.03×104°.22E±0°.04, h1km±5km, n30, σ0°94/39, mb4.1/15, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.66**	**217**	Pg	**Pg**	**04 21 42.4**	**0.0**
CD2				Sg	**Sg**	**04 21 51.3**	**+0.3**
CD2	comp=N,5μm,0.6s			smax			
CD2	comp=E,5μm,0.5s			smax			
LZH	**Lanzhou**	**4.64**	**356**	*e*Pg	**Pg**	**04 22 58.4**	**-0.3**
LZH				Sg	**Sg**	**04 23 58.1**	**-0.7**
LZH	comp=N,91nm,1.0s			smax			
LZH	comp=E,63nm,1.0s			smax			
LZH	comp=N,260nm,6.1s			LR	LR		
LZH	comp=Z,350nm,8.2s			LR	LR		
ENH	**Enshi**	**4.68**	**103**	*e*Pn	**Pn**	**04 22 45.8**	**+4.4**
ENH				*e*Sg	**Sg**	**04 24 01.1**	**+1.2**
XAN	**Xi'an**	**4.73**	**56**	Pn	**Pn**	**04 22 44.3**	**+2.2**
XAN				Sn	**Sn**	**04 23 41.0**	**+3.4**
XAN				Sg	**Sg**	**04 24 00.1**	**-1.6**
XAN	comp=N,110nm,0.8s			smax			
XAN	comp=E,63nm,0.8s			smax			
XAN	comp=N,130nm,5.6s			LR	LR		
XAN	comp=E,92nm,4.8s			LR	LR		
XAN	comp=Z,75nm,5.0s			LR	LR		
GYA	**Guiyang**	**5.41**	**156**	Pg	**Pg**	**04 23 07.8**	**-5.6**
GYA				Sg	**Sb**	**04 24 08.3**	**-2.1**
GYA	comp=N,160nm,0.8s			smax			
GYA	comp=E,230nm,0.9s			smax			
KMI	**Kunming**	**6.43**	**192**	Pn	**Pn**	**04 23 05.8**	**+0.3**
KMI				Sn	**Sn**	**04 24 19.3**	**-0.3**
KMI	comp=N,17nm,1.1s			smax			
KMI	comp=E,22nm,1.0s			smax			
KMI	comp=N,350nm,7.1s			LR	LR		
KMI	comp=E,200nm,5.6s			LR	LR		
KMI	comp=Z,280nm,5.9s			LR	LR		
GTA	**Gaotai**	**8.72**	**337**	*e*P	**Pn**	**04 23 45.8**	**+8.9**
GTA				pP		04 23 49.3	
GTA				sP		04 23 51.8	
GTA				S	**Sn**	**04 25 20.8**	**+4.9**
GTA	comp=Z,4.0nm,0.7s			pmax	pmax		
GTA	comp=N,190nm,12.3s			LR	LR		
GTA	comp=E,190nm,13.5s			LR	LR		
GTA	comp=Z,160nm,8.4s			LR	LR		
WHN	**Wuhan**	**8.74**	**93**	P	**Pn**	**04 23 30.6**	**-6.6**
WHN				S	**Sn**	**04 25 14.5**	**-1.9**
WHN	comp=N,1μm,5.0s			LR	LR		
CMAR	**Chiang Mai Arr**	**13.78**	**202**	Pn	**Pn**	**04 24 46.9**	**+0.6**
	comp=N,0.5nm,0.3s,baz=11,slow=11,SNR=2.6						
SONM	**Songino Array**	**16.45**	**5**	Pn	**Pn**	**04 25 22.5**	**+0.8**
	comp=N,0.1nm,0.3s,baz=179,slow=11,SNR=3.7						
KSRS	**Korea Array**	**20.42**	**66**	P	**P**	**04 26 10.6**	**+2.4**
	comp=N,1.5nm,0.7s,baz=252,slow=10.0,SNR=5.7						
MK31	**Makanchi Array**	**22.79**	**319**	*e*P	**P**	**04 26 34.2**	**+0.6**
MKAR	**Makanchi Array**	**22.79**	**319**	P	**P**	**04 26 33.8**	**+0.2**
	comp=N,2.5nm,0.9s,mb3.8,baz=102,slow=11,SNR=12						
ZAA0	**Zalesovo Array**	**26.46**	**334**	*e*P	**P**	**04 27 08.0**	**-0.1**
ZALV	**Zalesovo Beam**	**26.46**	**334**	P	**P**	**04 27 08.2**	**+0.1**
	comp=N,4.5nm,0.7s,mb4.2,baz=134,slow=9.5,SNR=18						
KURK	**Kurchatov**	**27.04**	**323**	P	**P**	**04 27 13.4**	**+0.1**
	comp=N,2.4nm,0.7s,mb4.0,baz=126,slow=9.0,SNR=18						
KURK	**Kurchatov**	**27.04**	**323**	*e*P	**P**	**04 27 13.6**	**+0.3**
	comp=N,3.6nm,1.1s,mb4.0						
BVAR	**Borovoye Array**	**32.59**	**321**	P	**P**	**04 28 02.4**	**0.0**
	comp=N,0.8nm,0.5s,mb3.9,baz=124,slow=9.6,SNR=6.1						
BRVK	**Borovoye**	**32.66**	**321**	*e*P	**P**	**04 28 03.0**	**-0.1**
	comp=N,2.9nm,0.8s,mb4.3						
ABKAR	**Akbulak array**	**37.52**	**311**	*e*P	**P**	**04 28 44.7**	**-0.4**
	comp=N,0.5nm,0.5s,mb3.5						
ARU	**Arti**	**40.23**	**322**	*e*P	**P**	**04 29 07.5**	**-0.1**
	comp=N,5.2nm,0.8s,mb4.2						
JOF	**Joensuu**	**54.79**	**328**	*ep*	**P**	**04 31 00.1**	**-0.7**
	comp=N,2.4nm,0.5s,mb4.5						
JOF	**Joensuu**	**54.79**	**328**	*ep*	**P**	**04 31 00.1**	**-0.7**
	comp=N,2.4nm,0.5s,mb4.5						
ARCES	**ARCESS Array B**	**56.99**	**336**	P	**P**	**04 31 16.2**	**-0.3**
	comp=N,2.3nm,0.9s,mb4.2,baz=91,slow=10,SNR=5.4						
FINES	**FINESS Array B**	**57.34**	**326**	P	**P**	**04 31 18.2**	**-0.9**
	comp=N,2.0nm,0.6s,mb4.3,baz=73,slow=6.6,SNR=12						
WRA	**Warramunga Arr**	**58.70**	**146**	P	**P**	**04 31 29.6**	**+0.5**
	comp=N,2.2nm,0.6s,mb4.4,baz=338,slow=7.6,SNR=12						
ASAR	**Alice Springs**	**61.73**	**149**	P	**P**	**04 31 49.9**	**+0.2**
	comp=N,0.9nm,0.9s,mb4.0,baz=335,slow=6.6,SNR=5.4						
NOA	**NORSAR Array B**	**64.43**	**327**	P	**P**	**04 32 06.1**	**-1.2**
	comp=N,0.8nm,0.6s,mb4.1,baz=74,slow=6.6,SNR=4.3						
STKA	**Stephens Creek**	**72.24**	**147**	P	**P**	**04 32 56.9**	**+0.4**
	comp=N,1.7nm,0.7s,mb4.3,baz=328,slow=19,SNR=3.1						
YKA	**Yellowknife Ar**	**81.34**	**17**	P	**P**	**04 33 47.3**	**-0.2**
	comp=N,0.5nm,0.6s,mb3.7,baz=328,slow=4.4,SNR=5.4						

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*IDC **15** 04:39:03.1±1.1, 5°.64S×103°.38E, h0km, mb3.9/15, mb1 4.0/15, mb1mx3.9/25, mbtmp3.9/15, Error ellipse: s-maj=39.3km s-min=15.2km az=52.0*
*NEIC **15** 04:39:08.2±0.7, 5°.63S×103°.43E, h35km, mb4.1/1, Error ellipse: s-maj=32.4km s-min=9.3km az=51.0*
*ISCJB **15** 04:39:08.5±0.8, 5°.83S±0°.06×103°.30E±0°.05, h64km±7km, mb4.0/16, Error ellipse: s-maj=11.5km s-min=5.1km az=38.7*
*DJA **15** 04:39:09.5°.81S×103°.35E, h30km, MLv4.3/16*
ISC 15 04:39:10.1±0.8, 5°.81S±0°.05×103°.32E±0°.05, h57km±6km, n43, σ1°04/47, mb4.0/16, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LWLI	**Liwa**	**1.08**	**43**	P	**Pn**	**04 39 28.3**	**-0.7**
LWLI				S	**Sn**	**04 39 42.5**	**-0.6**
KASI	**Kota Agung**	**1.20**	**76**	P	**Pn**	**04 39 29.6**	**-1.1**
KASI				S	**Sn**	**04 39 43.8**	**-2.3**
MNAI	**Manna**	**1.49**	**346**	P	**Pn**	**04 39 34.6**	**0.0**
MNAI				S	**Sn**	**04 39 51.4**	**-1.6**
MDSI	**Maura Dua**	**1.57**	**33**	P	**Pn**	**04 39 35.7**	**+0.1**
MDSI				S	**Sn**	**04 39 55.1**	**+0.2**
KLI	**Kotabumi**	**1.79**	**58**	P	**Pn**	**04 39 39.6**	**+0.9**
KLI				S	**Sn**	**04 40 01.9**	**+1.5**
LHSI	**Lahat**	**1.98**	**6**	P	**Pn**	**04 39 44.6**	**+3.3**
LHSI				S	**Sn**	**04 40 07.3**	**+2.3**
KSI	**Kapahiang**	**2.27**	**341**	P	**Pn**	**04 39 45.6**	**+0.5**
KSI				S	**Sn**	**04 40 13.0**	**+1.0**
CGJI	**Cibinong**	**2.49**	**109**	P	**Pn**	**04 39 47.2**	**-0.9**
CGJI				S	**Sn**	**04 40 16.3**	**-1.0**
SBJI	**Serang**	**2.81**	**96**	P	**Pn**	**04 39 52.8**	**+0.3**
CBJI	**Citeko**	**3.56**	**100**	P	**Pn**	**04 40 07.7**	**+4.9**
KRJI	**Kerinci**	**4.14**	**333**	P	**Pn**	**04 40 15.3**	**+4.5**
LEM	**Lembang**	**4.38**	**104**	P	**Pn**	**04 40 15.1**	**+1.0**
PPSI	**Pulau Pagai**	**4.48**	**312**	P	**Pn**	**04 40 15.6**	**+0.1**
PPBI	**Pangkal Pinang**	**4.58**	**38**	P	**Pn**	**04 40 17.1**	**+0.2**
SDSI	**Sungai Dareh**	**5.20**	**339**	P	**Pn**	**04 40 26.3**	**+0.9**
	5μm17nm,0.9s						
TPI	**Tanjungpandan**	**5.28**	**55**	P	**Pn**	**04 40 26.4**	**0.0**
	0.1nm12nm,1.2s						
PDSI	**Padang**	**5.64**	**329**	P	**Pn**	**04 40 30.6**	**-0.8**
	0.8nm118nm,0.3s						
PPI	**Padang Panjang**	**6.07**	**331**	P	**Pn**	**04 40 34.1**	**-3.2**
	0.1nm3μm21nm,0.9s						
SISI	**Saibi**	**6.14**	**316**	P	**Pn**	**04 40 37.6**	**-0.6**
	0.4nm72nm,0.6s						
UGM	**Wanagama**	**7.45**	**107**	P	**Pn**	**04 40 57.9**	**+1.8**
	0.9nm150nm,1.8s						
MNSI	**Mandailing Nat**	**7.55**	**330**	P	**Pn**	**04 40 57.8**	**+0.2**
CMAR	**Chiang Mai Arr**	**24.50**	**350**	P	**P**	**04 44 23.4**	**-0.7**
	0.9nm,0.3s,mb3.6,baz=185,slow=8.7,SNR=2.7						
FITZ	**Fitzroy Crossi**	**24.98**	**121**	P	**P**	**04 44 29.9**	**+1.4**
	0.9nm,0.4s,mb3.6,baz=300,slow=14,SNR=4.1						
WRA	**Warramunga Arr**	**33.25**	**118**	P	**P**	**04 45 41.9**	**-0.2**
	0.7nm,0.7s,mb3.7,baz=306,slow=9.1,SNR=3.6						
ASAR	**Alice Springs**	**34.36**	**124**	P	**P**	**04 45 52.0**	**+0.3**
	0.3nm,0.4s,mb3.6,baz=304,slow=8.6,SNR=9.1						
STKA	**Stephens Creek**	**44.16**	**131**	P	**P**	**04 47 14.7**	**+1.4**
	2.9nm,0.5s,mb4.3,baz=315,slow=9.6,SNR=10						
KSRS	**Korea Array**	**48.78**	**26**	P	**P**	**04 47 49.6**	**+0.2**
	3.0nm,0.6s,mb4.5,baz=223,slow=7.6,SNR=12						
MJAR	**Matsushiro Arr**	**53.30**	**35**	P	**P**	**04 48 21.2**	**-2.1**
	0.5nm,0.5s,mb3.7,baz=212,slow=8.5,SNR=4.5						
MJAR	**Matsushiro Arr**	**53.30**	**35**	P	**P**	**04 48 21.2**	**-2.1**
SONM	**Songino Array**	**53.48**	**3**	P	**P**	**04 48 25.3**	**+0.9**
	1.7nm,0.7s,mb4.1,baz=181,slow=10,SNR=3.9						
MK31	**Makanchi Array**	**55.60**	**343**	*e*P	**P**	**04 48 39.9**	**0.0**
MKAR	**Makanchi Array**	**55.60**	**343**	P	**P**	**04 48 39.3**	**-0.5**
	1.4nm,0.6s,mb4.2,baz=122,slow=9.5,SNR=8.6						
KURK	**Kurchatov**	**60.20**	**342**	P	**P**	**04 49 10.7**	**-1.2**
	0.6nm,0.6s,mb3.8,baz=164,slow=6.7,SNR=3.0						
ASAJ	**Asahikawa**	**60.99**	**31**	P	**P**	**04 49 15.8**	**-1.6**
	2.9nm,0.7s,mb4.5,baz=227,slow=18,SNR=3.6						
ZALV	**Zalesovo Beam**	**61.54**	**348**	P	**P**	**04 49 20.6**	**-0.4**
	2.2nm,0.4s,mb4.6,baz=159,slow=5.2,SNR=11						
BVAR	**Borovoye Array**	**64.90**	**339**	P	**P**	**04 49 43.3**	**+0.1**
	0.4nm,0.5s,mb3.7,baz=145,slow=10,SNR=3.9						
ABKAR	**Akbulak array**	**66.56**	**331**	*e*P	**P**	**04 49 54.1**	**+0.1**
	1.0nm,0.6s,mb4.0						
BRTR	**Keskin Array B**	**78.33**	**312**	P	**P**	**04 51 05.2**	**+0.9**
	0.3nm,0.6s,mb3.4,baz=144,slow=10.0,SNR=2.7						
FINES	**FINESS Array B**	**89.01**	**332**	P	**P**	**04 51 58.6**	**+0.1**
	1.5nm,0.8s,mb4.3,baz=133,slow=5.9,SNR=3.8						
WMOK	**Wichita Mounta**	**144.71**	**32**	*e*PKPdf	PKPdf	04 58 39.5	-1.5
TXAR	**Lajitas Array**	**145.40**	**44**	PKPbc	PKPbc	04 58 43.1	+0.9
	2.3nm,0.6s,baz=281,slow=1.3,SNR=38						
JCT	**Junction City**	**147.21**	**39**	*e*PKPbc	PKPbc	04 58 47.8	+0.2
WVT	**Waverly**	**148.14**	**17**	*e*PKPbc	PKPbc	04 58 49.7	-0.2

IDC 15 05:00:38.5±2.4, 1°.66N×127°.03E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.5/19, mbtmp3.6/3, Error ellipse: s-maj=194.4km s-min=27.2km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.63**	**162**	P	P	05 05 41.8	+0.6
	0.9nm,0.4s,baz=341,slow=11,SNR=5.8						
ASAR	**Alice Springs**	**26.05**	**166**	P	P	05 06 13.4	-0.4
	0.2nm,0.3s,baz=344,slow=11,SNR=5.6						
MKAR	**Makanchi Array**	**59.42**	**326**	P	P	05 10 43.1	+0.1
	0.4nm,0.3s,baz=124,slow=8.0,SNR=4.2						

JMA 15 05:00:54.3, 39°.12N×140°.95E, h10km±1km, M2.8, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.27**	**129**	P	Pg	05 00 59.8	+0.1
JMK				S	Sg	05 01 03.5	+0.1
JRG	**Rokugo**	**0.37**	**318**	P	Pg	05 01 01.6	0.0
JRG				S	Sg	05 01 06.9	+0.4
JOM	**Ohasama**	**0.44**	**37**	P	Pg	05 01 02.9	0.0
JOM				S	Sg	05 01 08.8	0.0
JYK	**Kaneyama**	**0.50**	**247**	P	Pg	05 01 04.0	-0.1
OFUJ	**Ofunato**	**0.56**	**94**	P	Pg	05 01 05.3	+

Ms1 2.6/1, ms1mx2.1/32, Error ellipse: s-maj=39.5km s-min=21.7km az=80.0
JMA 15 05:22:47.4, 38°.93N×140°.88E, h8km±1km, M3.5 Broadband fault plane solution: P waves. NP1: φ=242.00000°, δ=28.00000°, λ=122.00000°. NP2: φ=27.00000°, δ=67.00000°, λ=75.00000°. Principal axes: T Plg65.0000°, Azm271.0000°; N Plg14.0000°, Azm34.0000°; P Plg20.0000°, Azm129.0000°;
JMA Felt II J1.
NEIC 15 05:22:47.5, 38°.93N×140°.89E, h10km, MG3.4(JMA), After JMA.
ISCJB 15 05:22:47.1±0.6, 38°.94N±0°.03×140°.89E±0°.04, h13km±4km, mb3.7/4, Error ellipse: s-maj=6.3km s-min=4.5km az=150.1

ISC 15 05:22:47.7±0.5, 38°.94N±0°.03×140°.89E±0°.04, h7km±5km, n16, σ0s85/22, mb3.7/4, 5D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.26**	**87**	⇓P	**Pg**	**05 22 52.7**	**0.0**
JMK				S	**Sg**	**05 22 56.6**	**+0.5**
JYK	**Kaneyama**	**0.42**	**267**	⇓P	**Pg**	**05 22 55.5**	**-0.3**
JYK				S	**Sg**	**05 23 00.7**	**-0.6**
JRG	**Rokugo**	**0.50**	**336**	⇓P	**Pg**	**05 22 57.4**	**0.0**
JRG				S	**Sg**	**05 23 04.4**	**+0.5**
JOU	**Okura**	**0.60**	**198**	⇓P	**Pg**	**05 22 58.8**	**-0.4**
JOU				S	**Sg**	**05 23 06.6**	**-0.4**
JOM	**Ohasama**	**0.62**	**30**	P	**Pg**	**05 22 59.4**	**-0.2**
JOM				S	**Sg**	**05 23 08.1**	**+0.4**
OFUJ	**Ofunato**	**0.62**	**76**	⇓P	**Pg**	**05 22 59.3**	**-0.3**
OFUJ				S	**Sg**	**05 23 08.0**	**+0.3**
MJAR	**Matsushiro Arr**	**3.20**	**222**	*e*Pn	**Pn**	**05 23 39.3**	**+0.9**
	1.3nm,0.3s,baz=61,slow=19,SNR=14						
MAJO	**Matsushiro**	**3.20**	**223**	*e*Pn	**Pn**	**05 23 39.0**	**+0.7**
MAT	**Matsushiro**	**3.20**	**223**	P	**Pn**	**05 23 38.9**	**+0.5**
MAT				*e*S	**Sn**	**05 24 19.0**	**+2.3**
ASAJ	**Asahikawa**	**5.33**	**13**	Pn	**Pn**	**05 24 02.6**	**-4.9**
	0.1nm,0.3s,baz=234,slow=18,SNR=1.9						
KSRS	**Korea Array**	**10.32**	**266**	Pn	**Pn**	**05 25 19.4**	**+3.3**
	0.4nm,0.3s,baz=82,slow=14,SNR=5.7						
PETK	**Petropavlovsk-**	**18.29**	**34**	LR	LR	05 33 55.4	
	comp=Z,19nm,18.1s,baz=237,slow=37						
ZALV	**Zalesovo Beam**	**40.35**	**311**	P	**P**	**05 30 24.7**	**-1.0**
	0.3nm,0.3s,mb3.5,baz=72,slow=4.7,SNR=3.2						
KURK	**Kurchatov**	**44.45**	**307**	P	**P**	**05 30 58.4**	**-0.7**
	1.4nm,0.9s,mb3.7,baz=83,slow=8.5,SNR=6.9						
WRA	**Warramunga Arr**	**58.89**	**187**	P	**P**	**05 32 45.7**	**-1.5**
	0.9nm,0.5s,mb4.0,baz=6.2,slow=7.4,SNR=7.6						
ASAR	**Alice Springs**	**62.62**	**187**	P	**P**	**05 33 11.5**	**-1.0**
	0.4nm,0.6s,mb3.7,baz=4.8,slow=5.2,SNR=7.8						

IDC 15 05:28:30.4±0.7, 31°.97N×104°.61E, h0km, mb4.1/14, mb1 4.2/16, mb1mx4.1/27, mbtmp4.1/16, ML3.9/2, Error ellipse: s-maj=27.5km s-min=14.2km az=44.0
ISCJB 15 05:28:31.6±0.3, 32°.27N±0°.03×104°.79E±0°.05, h10km, mb4.2/25, Error ellipse: s-maj=6.4km s-min=4.2km az=3.6
NEIC 15 05:28:33.6±0.4, 32°.22N×104°.61E, h10km, mb4.4/10, Error ellipse: s-maj=12.2km s-min=8.0km az=50.0
BJI 15 05:28:34.5, 32°.24N×104°.73E, h16km, mB4.8/2, mb4.0/3, ML3.8/19, Ms3.9/8, Ms7 3.5/8

ISC 15 05:28:33.6±0.3, 32°.28N±0°.03×104°.76E±0°.04, h10km, n45, σ1s16/56, mb4.2/25, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.61**	**212**	⇓*i*Pg	**Pn**	**05 29 00.5**	**-1.5**
CD2				Sg	**Sn**	**05 29 21.4**	**-1.4**
CD2				smax			
	comp=N,12μm,0.7s						
CD2				smax			
	comp=E,10μm,0.7s						
LZH	**Lanzhou**	**3.88**	**349**	Pn	**Pn**	**05 29 36.1**	**+2.9**
LZH				Pg	**Pg**	**05 29 46.4**	**-1.4**
LZH				Sn	**Sn**	**05 30 20.8**	**+2.0**
LZH				Sg	**Sg**	**05 30 36.5**	**-1.5**
LZH				smax			
	comp=N,1μm,1.1s						
LZH				smax			
	comp=E,1μm,1.0s						
LZH				LR	LR		
	comp=E,2μm,7.4s						
LZH				LR	LR		
	comp=Z,2μm,8.3s						
XAN	**Xi'an**	**3.91**	**62**	Pn	**Pn**	**05 29 34.8**	**+1.1**
XAN				Pg	**Pg**	**05 29 45.9**	**-2.6**
XAN				Sn	**Sn**	**05 30 25.4**	**+5.8**
XAN				Sg	**Sg**	**05 30 38.3**	**-0.8**
XAN				smax			
	comp=N,370nm,0.8s						
XAN				smax			
	comp=E,180nm,0.8s						
XAN				LR	LR		
	comp=N,310nm,5.0s						
XAN				LR	LR		
	comp=E,120nm,7.1s						
XAN				LR	LR		
	comp=Z,180nm,6.7s						
ENH	**Enshi**	**4.51**	**115**	*e*Pn	**Pn**	**05 29 44.7**	**+2.8**
ENH				*e*Sg	**Sg**	**05 30 55.7**	**-2.8**
GYA	**Guiyang**	**6.03**	**164**	Pn	**Pn**	**05 30 07.1**	**+4.2**
GYA				Sn	**Sn**	**05 31 15.3**	**+3.3**
GYA				smax			
	comp=N,180nm,0.7s						
GYA				smax			
	comp=E,160nm,0.7s						
KMI	**Kunming**	**7.34**	**194**	Pn	**Pn**	**05 30 22.0**	**+1.1**
KMI				Sn	**Sn**	**05 31 44.8**	**+0.5**
KMI				smax			
	comp=N,23nm,0.9s						
KMI				smax			
	comp=E,36nm,0.8s						
KMI				LR	LR		
	comp=N,310nm,7.0s						
KMI				LR	LR		
	comp=E,350nm,8.2s						
KMI				LR	LR		
	comp=Z,250nm,7.2s						
GTA	**Gaotai**	**8.17**	**332**	*e*P	**Pn**	**05 30 33.1**	**+0.9**
GTA				pP		05 30 36.8	
GTA				S	**Sn**	**05 32 08.1**	**+3.5**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,100nm,3.5s						
GTA				LR	LR		
	comp=N,280nm,9.3s						
GTA				LR	LR		
	comp=E,200nm,9.6s						
GTA				LR	LR		
	comp=Z,190nm,5.7s						
CMAR	**Chiang Mai Arr**	**14.72**	**202**	Pn	**Pn**	**05 32 02.1**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=14,slow=10.0,SNR=5.1						
SONM	**Songino Array**	**15.59**	**4**	Pn	**Pn**	**05 32 16.3**	**+3.0**
	comp=Z,0.6nm,0.3s,baz=190,slow=15,SNR=2.3						
KSRS	**Korea Array**	**19.68**	**68**	P	**Pn**	**05 33 04.0**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=254,slow=10,SNR=8.7						
MK31	**Makanchi Array**	**22.49**	**317**	*e*P	**P**	**05 33 33.1**	**+0.2**
MKAR	**Makanchi Array**	**22.49**	**317**	P	**P**	**05 33 33.0**	**0.0**
	comp=Z,1.2nm,0.4s,mb3.7,baz=102,slow=11,SNR=11						
MKAR	**Makanchi Array**	**22.49**	**317**	P	**P**	**05 33 33.0**	**0.0**
TKM2	**Tokmak 2**	**25.32**	**303**	*e*P	**P**	**05 34 01.5**	**+1.2**
	comp=Z,3.9nm,0.8s,mb4.0						
UCH	**Uchtor**	**25.93**	**301**	*e*P	**P**	**05 34 07.1**	**+1.2**
	comp=Z,4.6nm,0.9s,mb4.0						
ZAA0	**Zalesovo Array**	**25.93**	**333**	*e*P	**P**	**05 34 05.9**	**+0.1**
ZALV	**Zalesovo Beam**	**25.93**	**333**	P	**P**	**05 34 06.1**	**+0.4**
	comp=Z,9.0nm,0.6s,mb4.5,baz=130,slow=10,SNR=41						
KURK	**Kurchatov**	**26.66**	**321**	P	**P**	**05 34 12.7**	**+0.2**
	comp=Z,2.1nm,0.8s,mb3.7,baz=121,slow=11,SNR=21						
KURK				PcP	PcP	05 37 34.9	-1.1
	comp=Z,0.8nm,0.5s,baz=116,slow=2.1,SNR=5.3						
MJAR	**Matsushiro Arr**	**27.84**	**72**	P	**P**	**05 34 24.3**	**+1.1**
	comp=Z,0.7nm,0.6s,mb3.5,baz=274,slow=11,SNR=3.4						
BVAR	**Borovoye Array**	**32.23**	**320**	P	**P**	**05 35 02.3**	**+0.5**
	comp=Z,1.1nm,0.8s,mb3.7,baz=126,slow=24,SNR=4.5						
BVAR				PcP	PcP	05 37 49.0	-1.1
	comp=Z,0.5nm,0.5s,baz=134,slow=4.2,SNR=3.6						
ABKAR	**Akbulak array**	**37.33**	**310**	*e*P	**P**	**05 35 45.8**	**-0.1**
	comp=Z,3.2nm,0.4s,mb4.5						
ARU	**Arti**	**39.86**	**321**	*e*P	**P**	**05 36 07.4**	**+0.3**
	comp=Z,6.9nm,0.6s,mb4.6						
FITZ	**Fitzroy Crossi**	**53.94**	**155**	P	**P**	**05 37 57.7**	**+0.2**
	comp=Z,2.5nm,0.9s,mb4.1,baz=326,slow=8.9,SNR=4.4						
JOF	**Joensuu**	**54.34**	**327**	*e*p	**P**	**05 37 59.0**	**-0.9**
	comp=Z,3.1nm,0.5s,mb4.5						
KEV	**Kevo**	**55.89**	**336**	*e*p	**P**	**05 38 10.1**	**-1.0**
	comp=Z,3.2nm,0.6s,mb4.5						
ARCES	**ARCESS Array B**	**56.42**	**335**	P	**P**	**05 38 14.4**	**-0.4**
	comp=Z,1.7nm,0.5s,mb4.3,baz=86,slow=7.9,SNR=26						
BR131	**Keskin Array S**	**56.66**	**299**	*e*P	**P**	**05 38 13.7**	**-3.3**
	comp=Z,0.5nm,0.4s,mb3.9						
BRTR	**Keskin Array B**	**56.66**	**299**	P	**P**	**05 38 16.4**	**-0.6**
	comp=Z,1.4nm,0.7s,mb4.1,baz=97,slow=6.7,SNR=9.2						
KAF	**Kangasniemi**	**56.72**	**327**	*e*p	**P**	**05 38 16.1**	**-1.0**
	comp=Z,2.5nm,0.6s,mb4.4						
FINES	**FINESS Array B**	**56.91**	**326**	P	**P**	**05 38 17.8**	**-0.7**
	comp=Z,3.6nm,0.5s,mb4.7,baz=81,slow=6.9,SNR=41						
AKASG	**Malin Array Be**	**57.00**	**313**	P	**P**	**05 38 18.2**	**-1.0**
	comp=Z,2.1nm,0.5s,mb4.5,baz=67,slow=7.5,SNR=7.7						
WRA	**Warramunga Arr**	**59.14**	**147**	P	**P**	**05 38 30.0**	**-4.5**
	comp=Z,2.2nm,0.8s,mb4.2,baz=340,slow=7.1,SNR=15						
WRA	**Warramunga Arr**	**59.14**	**147**	P	**P**	**05 38 30.0**	**-4.5**
ASAR	**Alice Springs**	**62.21**	**150**	P	**P**	**05 38 54.1**	**-1.2**
	comp=Z,1.1nm,0.7s,mb4.1,baz=332,slow=6.5,SNR=10						
NB2	**NORSAR Subarra**	**63.98**	**327**	P	**P**	**05 39 05.3**	**-1.4**
	comp=Z,0.8nm,0.5s,mb4.0,baz=72,slow=6.5						
NOA	**NORSAR Array B**	**63.98**	**327**	P	**P**	**05 39 05.6**	**-1.1**
	comp=Z,1.2nm,0.5s,mb4.2,baz=72,slow=6.6,SNR=8.2						
GERES	**GERESS Array B**	**67.13**	**314**	P	**P**	**05 39 26.9**	**-0.4**
	comp=Z,0.9nm,0.9s,mb3.8,baz=67,slow=4.5,SNR=7.2						
BPAW	**Bear Paw Mtn.**	**67.31**	**27**	*e*P	**P**	**05 39 28.6**	**+0.5**
	comp=Z,2.4nm,0.9s,mb4.2						
CDF	**Champ du Feu**	**71.17**	**316**	*e*P	**P**	**05 39 52.4**	**0.0**
LPG	**La Plagne**	**72.86**	**313**	*e*P	**P**	**05 40 02.6**	**0.0**
	comp=Z,14nm,0.8s,mb4.7						
LPG	**La Plagne**	**72.86**	**313**	*e*P	**P**	**05 40 02.6**	**0.0**
	comp=Z,6.8nm,0.8s,mb4.6						
LPL	**La Plagne**	**72.86**	**313**	*e*P	**P**	**05 40 02.5**	**-0.1**
	comp=Z,18nm,0.9s,mb4.7						
LPL	**La Plagne**	**72.86**	**313**	*e*P	**P**	**05 40 02.5**	**-0.1**
	comp=Z,8.9nm,0.9s,mb4.7						
YKA	**Yellowknife Ar**	**80.41**	**17**	P	**P**	**05 40 44.7**	**-0.2**
	comp=Z,1.2nm,0.7s,mb4.0,baz=329,slow=5.2,SNR=12						
YKA	**Yellowknife Ar**	**80.41**	**17**	P	**P**	**05 40 44.7**	**-0.2**

IDC 15 05:28:58.4±4.5, 20°.83S×178°.19W, h527km±51km, mb3.3/8, mb1 3.5/9, mb1mx3.3/18, mbtmp3.3/9, Error ellipse: s-maj=34.2km s-min=20.7km az=169.0
NEIC 15 05:28:58.9±1.0, 20°.86S×178°.21W, h535km±10km, mb4.1/2, Error ellipse: s-maj=18.8km s-min=11.5km az=144.0
ISCJB 15 05:28:58.7±1.4, 20°.8S±0°.2×178°.3W±0°.2, h540km±16km, mb3.7/9, Error ellipse: s-maj=27.7km s-min=18.4km az=141.9

ISC 15 05:28:59.0±1.5, 20°.9S±0°.2×178°.2W±0°.2, h533km±16km, n22, σ0s57/13, mb3.7/9, 2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.70**	**311**	*e*P	**P**	**05 30 25.3**	**0.0**
URZ	**Urewera**	**17.78**	**192**	P	**P**	**05 32 35.1**	**-0.4**
	1.3nm,0.3s,baz=280,slow=4.4,SNR=8.7						
CTA	**Charters Tower**	**33.23**	**265**	P	**P**	**05 34 52.9**	**+0.7**
	2.9nm,0.5s,mb4.1,baz=48,slow=21,SNR=6.8						
CTAO	**Charters Tower**	**33.23**	**265**	*e*P	**P**	**05 34 53.2**	**+1.0**
	2.0nm,0.4s,mb4.0						
ASAR	**Alice Springs**	**44.22**	**257**	P	**P**	**05 36 21.5**	**+0.4**
	2.4nm,0.5s,mb4.0,baz=95,slow=8.0,SNR=49						
ASAR				PcP	PcP	05 37 54.0	-0.1
	0.8nm,0.7s,baz=108,slow=4.0,SNR=8.4						
WRAB	**Tennant Creek**	**44.32**	**262**	*e*P	**P**	**05 36 21.0**	**-0.9**
	11nm,1.2s,mb4.2						
WRA	**Warramunga Arr**	**44.33**	**262**	P	**P**	**05 36 21.8**	**-0.2**
	1.3nm,0.3s,mb4.0,baz=96,slow=7.3,SNR=38						
FITZ	**Fitzroy Crossi**	**52.76**	**263**	P	**P**	**05 37 25.1**	**+0.4**
	0.9nm,0.5s,mb3.3,baz=38,slow=16,SNR=6.4						
PETK	**Petropavlovsk-**	**76.58**	**345**	P	**P**	**05 39 53.2**	**-1.1**
	1.8nm,0.7s,mb3.6,baz=120,slow=8.9,SNR=4.2						
PETK	**Petropavlovsk-**	**76.58**	**345**	P	**P**	**05 39 53.2**	**-1.1**
NVAR	**Mina Array Bea**	**81.45**	**43**	P	**P**	**05 40 20.9**	**+0.4**
	0.4nm,0.4s,mb3.2,baz=218,slow=9.3,SNR=5.5						
TXAR	**Lajitas Array**	**87.44**	**57**	P	**P**	**05 40 50.6**	**+0.5**
	0.8nm,0.9s,mb3.4,baz=216,slow=6.2,SNR=6.8						
PDAR	**Pinedale Array**	**89.39**	**43**	P	**P**	**05 40 58.6**	**-0.1**
	0.8nm,0.7s,mb3.7,baz=222,slow=2.0,SNR=6.7						
BVAR	**Borovoye Array**	**119.22**	**320**	PKP	PKPdf	05 46 46.3	-1.0
	0.7nm,0.4s,baz=144,slow=5.2,SNR=3.5						
ARCES	**ARCESS Array B**	**129.25**	**349**	PKP	PKPdf	05 47 05.4	-0.6
	1.6nm,0.9s,baz=56,slow=2.2,SNR=9.8						
FINES	**FINESS Array B**	**136.07**	**343**	PKP	PKPdf	05 47 19.2	+0.2
	1.7nm,0.9s,baz=56,slow=0.5,SNR=4.5						
AKASG	**Malin Array Be**	**143.23**	**331**	PKhKP		05 47 28.7	
	3.4nm,0.5s,baz=43,slow=4.3,SNR=22						
BRTR	**Keskin Array B**	**146.93**	**312**	PKPbc	PKPbc	05 47 41.3	-0.6
	1.1nm,0.6s,baz=122,slow=3.3,SNR=7.9						
MMAI	**Mount Meron Ar**	**147.81**	**299**	PKPbc	PKPbc	05 47 44.9	+0.5
	2.3nm,0.5s,baz=68,slow=6.7,SNR=5.1						
CLL	**Collm**	**148.38**	**347**	⇓*i*P	PKPbc	05 47 44.6	-0.6
CLL				*i*		05 47 49.5	
CLL				*e*		05 50 45.0	
CLL	**Collm**	**148.38**	**347**	⇓*i*PKPbc	PKPbc	05 47 44.6	-0.6
	comp=Z,5.0nm,0.6s						
CLL				*i* PKPab	PKPab	05 47 49.5	-0.9
CLL				*es*PKPab		05 50 45.0	
GERES	**GERESS Array B**	**150.50**	**344**	PKPbc	PKPbc	05 47 49.9	-0.4
	comp=Z,0.8nm,0.5s,baz=31,slow=3.1,SNR=12						
GERES				PKPab	PKPab	05 47 58.4	-0.9
	comp=Z,0.5nm,0.7s,baz=38,slow=8.9,SNR=4.0						

IDC 15 05:44:12.9±0.9, 14°.57S×71°.59W, h0km, mb3.8/4, mb1 3.9/8, mb1mx3.8/19, mbtmp3.7/8, ML3.5/2, MS3.2/7, Ms1 3.2/7, ms1mx3.0/29, Error ellipse: s-maj=40.6km s-min=20.0km az=65.0
ISCJB 15 05:44:16.0±1.5, 14°.58S±0°.09×71°.47W±0°.09, h36km±16km, mb4.2/8, MS3.3/4, Error ellipse: s-maj=19.0km s-min=8.7km az=42.9
NEIC 15 05:44:18.0, 14°.58S×71°.57W, h57km, mb4.6/4, After LIM.
NEIC Felt [II] at Yauri.

ISC 15 05:44:18.4±1.1, 14°.58S±0°.09×71°.46W±0°.09, h40km±13km, n24, σ1s24/19, mb4.2/8, MS3.3/4, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.63**	**118**	Pn	**Pn**	**05 45 17.5**	**+5.5**
	0.7nm,0.3s,baz=318,slow=11,SNR=16						
LPAZ	**La Paz**	**3.63**	**118**	*e*Pn	**Pn**	**05 45 17.4**	**+5.3**
NNA	**Nana**	**5.84**	**296**	Pn	**Pn**	**05 45 44.4**	**+1.9**
	1.6nm,0.3s,baz=204,slow=5.7,SNR=4.4						
NNA				Sn	**Sn**	**05 46 49.6**	**+1.3**
	0.5nm,0.3s,baz=204,slow=18,SNR=2.2						
NNA	**Nana**	**5.84**	**296**	*e*Pn	**Pn**	**05 45 39.4**	**-3.1**
NNA				Sn	**Sn**	**05 46 49.6**	**+1.3**
SIV	**San Ignacio**	**10.12**	**99**	Pn	**Pn**	**05 46 42.7**	**+1.6**
	0.5nm,0.3s,baz=278,slow=15,SNR=18						
ATAH	**Atahualpa**	**10.16**	**317**	Pn	**Pn**	**05 46 40.0**	**-1.7**
	0.2nm,0.3s,baz=165,slow=20,SNR=2.3						
OTAV	**Otavalo**	**16.27**	**334**	Pn	**Pn**	**05 48 03.0**	**-1.1**
	2.9nm,0.9s						
CFAA	**Coronel Fontan**	**17.20**	**171**	P	**Pn**	**05 48 14.4**	**-1.2**
	0.0nm,0.3s,baz=348,slow=12,SNR=6.6						
CFAA				LR	LR	05 54 19.1	
	comp=Z,15nm,21.5s,baz=184,slow=35						
CPUP	**Villa Florida**	**17.64**	**134**	P	**Pn**	**05 48 21.3**	**+0.1**
	0.1nm,0.3s,baz=270,slow=20,SNR=1.8						
CPUP				LR	LR	05 55 33.5	
	comp=Z,152nm,18.2s,baz=130,slow=38						
ROSC	**El Rosal**	**19.52**	**351**	LR	LR	05 56 49.7	
	comp=Z,59nm,20.9s,baz=241,slow=39						
SDV	**Santo Domingo**	**23.33**	**2**	P	**P**	**05 49 21.3**	**-2.0**
	2.8nm,0.8s,mb3.7,baz=177,slow=11,SNR=4.8						
SDV				LR	LR	05 59 05.0	
	comp=Z,76nm,21.9s,MS3.1,baz=183,slow=38						
PCRV	**Puerto La Cruz**	**25.51**	**16**	LR	LR	05 58 58.8	
	comp=Z,126nm,21.2s,MS3.4,baz=26,slow=35						
PLCA	**Paso Flores**	**26.07**	**178**	P	**P**	**05 49 47.8**	**-0.3**
	2.0nm,0.7s,mb3.7,baz=340,slow=14,SNR=4.0						
JTS	**JuntasAbangare**	**28.10**	**331**	LR	LR	05 59 50.2	
	comp=Z,48nm,20.3s,MS3.1,baz=110,slow=33						
TXAR	**Lajitas Array**	**53.60**	**325**	P	**P**	**05 53 35.7**	**0.0**
	0.3nm,0.8s,mb3.2,baz=143,slow=11,SNR=4.6						
SIUC	**Southern Illin**	**54.63**	**343**	*e*P	**P**	**05 53 42.4**	**-0.7**
	9.4nm,0.6s,mb5.0						
FVM	**French Village**	**55.23**	**342**	*e*P	**P**	**05 53 49.3**	**+1.9**
	8.5nm,0.7s,mb4.9						
SDCO	**Great Sand Dun**	**61.09**	**330**	*e*P	**P**	**05 54 29.7**	**+1.4**
	1.3nm,0.8s,mb4.1						
AGMN	**Agassiz Nation**	**66.26**	**342**	*e*P	**P**	**05 55 02.4**	**+0.2**
	2.2nm,0.6s,mb4.4						
ULM	**Lac du Bonnet**	**68.03**	**343**	LR	LR	06 24 12.9	
	comp=Z,40nm,19.0s,MS3.7,baz=29,slow=35						
YKA	**Yellowknife Ar**	**83.89**	**341**	P	**P**	**05 56 43.6**	**+0.1**
	1.0nm,0.6s,mb4.1,baz=134,slow=5.4,SNR=20						
ZALV	**Zalesovo Beam**	**136.53**	**20**	PKP	PKPdf	06 03 37.0	+1.2
	3.4nm,0.8s,baz=304,slow=2.6,SNR=14						
SONM	**Songino Array**	**146.79**	**3**	PKPbc	PKPbc	06 03 57.6	+1.5
	3.1nm,0.7s,baz=338,slow=3.2,SNR=8.5						
KSRS	**Korea Array**	**151.44**	**326**	PKPbc	PKPbc	06 04 09.1	+0.8
	1.9nm,0.8s,baz=31,slow=1.8,SNR=4.6						

IDC 15 05:47:28.3±6.4, 16°.87S×178°.20W, h0km, mb4.0/2, mb1 4.2/2, mb1mx3.6/16, mbtmp4.0/2, Error ellipse: s-maj=305.5km s-min=53.1km az=144.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.03**	**258**	P	P	05 55 45.9	-0.1
	0.3nm,0.4s,baz=93,slow=7.4,SNR=5.5						
ASAR	**Alice Springs**	**45.27**	**253**	P	P	05 55 47.9	0.0
	3.6nm,0.6s,baz=88,slow=8.2,SNR=71						
GERES	**GERESS Array B**	**146.66**	**346**	PKPbc	PKPbc	06 07 11.4	-0.5
	0.2nm,0.4s,baz=8.1,slow=2.8,SNR=4.2						

JMA 15 06:00:41.3, 38°.83N×140°.67E, h4km±1km, M3.1, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.26**	**290**	P	Pg	06 00 46.5	+0.2
JYK				S	Sg	06 00 50.1	+0.4
JMK	**Ichinoseki**	**0.45**	**74**	S	Sg	06 00 55.9	+0.2
JOU	**Okura**	**0.46**	**181**	P	Pg	06 00 50.4	+0.2
JRG	**Rokugo**	**0.57**	**357**	P	Pg	06 00 52.5	+0.3
JRG				*e*S	Sg	06 01 01.4	+1.9
JIO	**Ouri**	**0.65**	**125**	S	Sg	06 01 02.1	-0.1
MAT	**Matsushiro**	**3.00**	**221**	P	Pn	06 01 30.2	+0.5
MAT				S	Sn	06 02 10.7	+4.6

ATH 15 06:01:09.3, 35°.15N×27°.46E, h21km±2km, MD3.4/8
NEIC 15 06:01:09.3, 35°.15N×27°.46E, h21km, MD3.4(ATH), After ATH.
ISCJB 15 06:01:09.2±1.2, 35°.18N±0°.05×27°.43E±0°.04, h4km±10km, Error ellipse: s-maj=9.8km s-min=3.7km az=148.4
THE 15 06:01:10.4, 35°.16N×27°.43E, h3km±4km, ML3.3/1, Error ellipse: s-maj=6.7km s-min=1.3km az=142.0
CSEM 15 06:01:10.5±0.2, 35°.21N×27°.41E, h8km, MD3.4, Error ellipse: s-maj=6.5km s-min=2.7km az=150.0
ISK 15 06:01:11.8, 35°.13N×27°.43E, h32km, ML2.5

ISC 15 06:01:10.6±1.0, 35°.17N±0°.04×27°.43E±0°.04, h11km±5km, n63, σ0s87/92, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.44**	**330**	*e*Pb	**Pg**	**06 01 18.5**	**-0.7**
KARP				*e*Sb	**Sg**	**06 01 25.8**	**+0.7**
KARP	**Karpathos**	**0.44**	**330**	*e*PB	**Pg**	**06 01 18.5**	**-0.7**
KARP				*e*SB	**Sg**	**06 01 25.8**	**+0.7**
KARP	**Karpathos**	**0.44**	**330**	*e*Pb	**Pg**	**06 01 18.5**	**-0.7**
KARP				*e*Sb	**Sg**	**06 01 25.8**	**+0.7**
ZKR	**Zakros**	**0.99**	**267**	*e*Pn	**Pn**	**06 01 28.4**	**-2.0**
ZKR				*e*Sn	**Sn**	**06 01 43.8**	**-0.7**
ZKR	**Zakros**	**0.99**	**267**	P	**Pg**	**06 01 28.2**	**-1.5**
ZKR				S	**Sg**	**06 01 44.2**	**+1.5**
ZKR	**Zakros**	**0.99**	**267**	*e*PN	**Pn**	**06 01 28.4**	**-2.0**
ZKR				*e*SN	**Sn**	**06 01 43.8**	**-0.7**
ZKR	**Zakros**	**0.99**	**267**	P	**Pg**	**06 01 28.2**	**-1.5**
ZKR				*e*Sn	**Sn**	**06 01 43.8**	**-0.7**
ZKR				S	**Sg**	**06 01 44.2**	**+1.5**
ARG	**Arkhangelos**	**1.19**	**28**	*e*Pn	**Pn**	**06 01 32.0**	**-1.2**
ARG				*e*Sn	**Sn**	**06 01 49.3**	**0.0**
ARG	**Arkhangelos**	**1.19**	**28**	P	**Pn**	**06 01 31.9**	**-1.3**
ARG				S	**Sb**	**06 01 48.9**	**+0.3**
ARG	**Arkhangelos**	**1.19**	**28**	*e*PN	**Pn**	**06 01 32.0**	**-1.2**
ARG				*e*SN	**Sn**	**06 01 49.3**	**0.0**
ARG	**Arkhangelos**	**1.19**	**28**	P	**Pn**	**06 01 31.9**	**-1.3**
ARG				S	**Sb**	**06 01 48.9**	**+0.3**
ARG				*e*Sn	**Sn**	**06 01 49.3**	**0.0**
NIS1	**Nisyros Isl.**	**1.45**	**352**	P	**Pn**	**06 01 36.7**	**0.0**
NIS1				S	**Sn**	**06 01 56.1**	**+0.5**
NIS1	**Nisyros Isl.**	**1.45**	**352**	P	**Pn**	**06 01 36.7**	**0.0**

ATH.
ISCJB ***15*** *06:05:31.6±0.6, 35°.00N±0°.04×24°.42E±0°.03, h4km±6km, Error ellipse: s-maj=7.4km s-min=3.7km az=17.3*
ISC 15 06:05:32.1±0.6, 34°.97N±0°.04×24°.41E±0°.03, h4km±5km, n64, σ1°26/87, 9C-3D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.30**	**244**	⇑*i*Pg	**Pg**	**06 05 37.7**	**-0.1**
GVD				*e*Sg	**Sg**	**06 05 42.1**	**+0.4**
GVD	**Gavdhos**	**0.30**	**244**	P	**Pg**	**06 05 37.6**	**-0.2**
GVD				S	**Sg**	**06 05 42.3**	**+0.6**
GVD	**Gavdhos**	**0.30**	**244**	⇑*i*PG	**Pg**	**06 05 37.7**	**-0.1**
GVD				*e*SG	**Sg**	**06 05 42.1**	**+0.4**
GVD	**Gavdhos**	**0.30**	**244**	⇑*i*Pg	**Pg**	**06 05 37.7**	**-0.1**
GVD				*e*Sg	**Sg**	**06 05 42.1**	**+0.4**
SIVA	**Sivas**	**0.33**	**82**	⇑*i*Pb	**Pg**	**06 05 38.9**	**+0.4**
SIVA				*e*Sb	**Sg**	**06 05 43.7**	**+0.9**
SIVA	**Sivas**	**0.33**	**82**	P	**Pg**	**06 05 38.4**	**-0.1**
SIVA				S	**Sg**	**06 05 43.7**	**+0.9**
SIVA	**Sivas**	**0.33**	**82**	⇑*i*PB	**Pg**	**06 05 38.9**	**+0.4**
SIVA				*e*SB	**Sg**	**06 05 43.7**	**+0.9**
SIVA	**Sivas**	**0.33**	**82**	P	**Pg**	**06 05 38.4**	**-0.1**
SIVA	**Sivas**	**0.33**	**82**	⇑*i*Pb	**Pg**	**06 05 38.9**	**+0.4**
SIVA				S	**Sg**	**06 05 43.7**	**+0.9**
VAM	**Vamos**	**0.47**	**338**	⇓*i*Pg	**Pg**	**06 05 41.1**	**-0.1**
VAM				*e*Sb	**Sg**	**06 05 48.7**	**+1.4**
VAM	**Vamos**	**0.47**	**338**	⇓*i*PG	**Pg**	**06 05 41.1**	**-0.1**
VAM				*e*SB	**Sg**	**06 05 48.7**	**+1.4**
VAM	**Vamos**	**0.47**	**338**	⇓*i*Pg	**Pg**	**06 05 41.1**	**-0.1**
VAM				*e*Sb	**Sg**	**06 05 48.7**	**+1.4**
IDI	**Anoyia**	**0.51**	**51**	⇑*i*Pb	**Pg**	**06 05 41.4**	**-0.5**
IDI				*e*Sb	**Sg**	**06 05 48.1**	**-0.3**
IDI	**Anoyia**	**0.51**	**51**	⇑*i*PB	**Pg**	**06 05 41.4**	**-0.5**
IDI				*e*SB	**Sg**	**06 05 48.1**	**-0.3**
IDI	**Anoyia**	**0.51**	**51**	⇑*i*Pb	**Pg**	**06 05 41.4**	**-0.5**
IDI				*e*Sb	**Sg**	**06 05 48.1**	**-0.3**
KARN	**Karanos**	**0.59**	**317**	P	**Pg**	**06 05 42.7**	**-0.8**
KARN				S	**Sg**	**06 05 52.5**	**+1.3**
KARN	**Karanos**	**0.59**	**317**	*e*PB	**Pg**	**06 05 43.1**	**-0.4**
KARN				*e*SB	**Sg**	**06 05 52.4**	**+1.2**
KARN	**Karanos**	**0.59**	**317**	P	**Pg**	**06 05 42.7**	**-0.8**
KARN	**Karanos**	**0.59**	**317**	*e*Pb	**Pg**	**06 05 43.1**	**-0.4**
KARN				*e*Sb	**Sg**	**06 05 52.4**	**+1.2**
LAST	**Lasithi**	**0.90**	**77**	*e*Pg	**Pg**	**06 05 48.3**	**-1.0**
LAST	**Lasithi**	**0.90**	**77**	P	**Pg**	**06 05 48.2**	**-1.1**
LAST				S	**Sg**	**06 06 03.4**	**+2.4**
LAST	**Lasithi**	**0.90**	**77**	*e*PG	**Pg**	**06 05 48.3**	**-1.0**
LAST	**Lasithi**	**0.90**	**77**	*e*Pg	**Pg**	**06 05 48.3**	**-1.0**
LAST				S	**Sg**	**06 06 03.4**	**+2.4**
NPS	**Neapolis**	**1.03**	**73**	*e*Pb	**Pb**	**06 05 50.9**	**-1.6**
NPS	**Neapolis**	**1.03**	**73**	*e*PB	**Pb**	**06 05 50.9**	**-1.6**
NPS	**Neapolis**	**1.03**	**73**	*e*Pb	**Pb**	**06 05 50.9**	**-1.6**
XRY	**Khrisi**	**1.06**	**95**	*e*Pb	**Pb**	**06 05 51.7**	**-1.3**
XRY	**Khrisi**	**1.06**	**95**	*e*PB	**Pb**	**06 05 51.7**	**-1.3**
XRY	**Khrisi**	**1.06**	**95**	*e*Pb	**Pb**	**06 05 51.7**	**-1.3**
ZKR	**Zakros**	**1.49**	**84**	*e*Pb	**Pb**	**06 05 59.7**	**-0.7**
ZKR	**Zakros**	**1.49**	**84**	P	**Pn**	**06 05 59.5**	**-0.2**
ZKR				S	**Sn**	**06 06 20.8**	**+1.2**
ZKR	**Zakros**	**1.49**	**84**	*e*PB	**Pb**	**06 05 59.7**	**-0.7**
ZKR	**Zakros**	**1.49**	**84**	*e*Pb	**Pb**	**06 05 59.7**	**-0.7**
ZKR				S	**Sn**	**06 06 20.8**	**+1.2**
THR5	**Thira Island,**	**1.63**	**28**	P	**Pn**	**06 05 59.8**	**-1.9**
THR5	**Thira Island,**	**1.63**	**28**	P	**Pn**	**06 05 59.8**	**-1.9**
THR1	**Thera Island**	**1.64**	**31**	P	**Pn**	**06 06 01.3**	**-0.5**
THR1	**Thera Island**	**1.64**	**31**	P	**Pn**	**06 06 01.3**	**-0.5**
THR3	**Thira Island,**	**1.65**	**29**	P	**Pn**	**06 06 01.1**	**-0.8**
THR3	**Thira Island,**	**1.65**	**29**	P	**Pn**	**06 06 01.1**	**-0.8**
THR2	**Thira island,**	**1.69**	**29**	P	**Pn**	**06 06 02.3**	**-0.2**
THR2	**Thira island,**	**1.69**	**29**	P	**Pn**	**06 06 02.3**	**-0.2**
KYTH	**Kithira**	**1.72**	**320**	*e*Pg	**Pg**	**06 06 03.9**	**-1.2**
KYTH	**Kithira**	**1.72**	**320**	*e*PG	**Pg**	**06 06 03.9**	**-1.2**
KYTH	**Kithira**	**1.72**	**320**	*e*Pg	**Pg**	**06 06 03.9**	**-1.2**
VLI	**Veliai**	**2.12**	**326**	*e*Pn	**Pn**	**06 06 09.9**	**+1.6**
VLI	**Veliai**	**2.12**	**326**	*e*PN	**Pn**	**06 06 09.9**	**+1.6**
VLI	**Veliai**	**2.12**	**326**	*e*Pn	**Pn**	**06 06 09.9**	**+1.6**
APE	**Apeiranthos**	**2.28**	**23**	*e*Pb	**Pb**	**06 06 11.1**	**-2.8**
APE	**Apeiranthos**	**2.28**	**23**	P	**Pn**	**06 06 10.3**	**-0.3**
APE				S	**Sn**	**06 06 38.8**	**-0.4**
APE	**Apeiranthos**	**2.28**	**23**	*e*PB	**Pb**	**06 06 11.1**	**-2.8**
APE	**Apeiranthos**	**2.28**	**23**	P	**Pn**	**06 06 10.3**	**-0.3**
APE				S	**Sn**	**06 06 38.8**	**-0.4**
KARP	**Karpathos**	**2.32**	**75**	*e*Pn	**Pn**	**06 06 13.2**	**+2.0**
KARP	**Karpathos**	**2.32**	**75**	*e*PN	**Pn**	**06 06 13.2**	**+2.0**
VLX	**Vlachokerasia**	**2.91**	**326**	*e*PB	**Pb**	**06 06 21.3**	**-3.2**
VLY	**Voula,Athens**	**2.92**	**350**	*e*Pb	**Pb**	**06 06 21.4**	**-3.4**
VLY	**Voula,Athens**	**2.92**	**350**	*e*PB	**Pb**	**06 06 21.4**	**-3.4**
ARG	**Arkhangelos**	**3.27**	**67**	*e*Pn	**Pn**	**06 06 25.9**	**+1.7**
ARG	**Arkhangelos**	**3.27**	**67**	*e*PN	**Pn**	**06 06 25.9**	**+1.7**
ARG	**Arkhangelos**	**3.27**	**67**	*e*Pn	**Pn**	**06 06 25.9**	**+1.7**
CHOS	**Chios island**	**3.66**	**21**	*e*PN	**Pn**	**06 06 31.5**	**+2.0**
CHOS	**Chios island**	**3.66**	**21**	*e*Pn	**Pn**	**06 06 31.5**	**+2.0**
LKR	**Lokris**	**3.84**	**343**	*e*Pn	**Pn**	**06 06 33.6**	**+1.5**
LKR	**Lokris**	**3.84**	**343**	*e*PN	**Pn**	**06 06 33.6**	**+1.5**
LKR	**Lokris**	**3.84**	**343**	*e*Pn	**Pn**	**06 06 33.6**	**+1.5**

IDC ***15*** *06:13:44.6±0.7, 31°.93S×71°.70W, h0km, mb4.3/8, mb1 4.4/11, mb1mx4.3/16, mbtmp4.3/11, ML4.4/3, MS3.9/10, Ms1 3.9/10, ms1mx3.7/19, Error ellipse: s-maj=26.7km s-min=20.4km az=85.0*
BJI ***15*** *06:13:47.2, 31°.72S×72°.13W, h22km, mB5.0/2, Ms4.8/2, Ms7 4.7/2*
NEIC ***15*** *06:13:48.6, 31°.87S×71°.93W, h22km, mb4.4/9, ML4.7(GUC), After GUC.*
GUC ***15*** *06:13:48.6±0.7, 31°.87S×71°.93W, h22km±5km, ML4.7*
ISC 15 06:13:47.8±1.9, 31°.76S±0°.03×71°.83W±0°.07, h15km±11km, n66, σ1°02/63, mb4.4/19, MS4.0/7, 6C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROCH	**El Roble**	**1.40**	**151**	*i*P	**Pn**	**06 14 12.4**	**-0.4**
ROCH	**El Roble**	**1.40**	**151**	*i*P	**Pn**	**06 14 12.4**	**-0.4**
PEL	**Peldehue**	**1.69**	**145**	⇑*i*P	**Pn**	**06 14 16.9**	**+0.1**
PEL				*i*S	**Sn**	**06 14 37.8**	**-0.4**
PEL				AML	AML	06 14 39.9	
	comp=E,26μm,0.4s						
TLL	**Tololo Astrono**	**1.81**	**29**	*e*P	**Pn**	**06 14 20.5**	**+2.0**
TLL				*i*S	**Sn**	**06 14 45.6**	**+4.5**
TLL	**Tololo Astrono**	**1.81**	**29**	*e*P	**Pn**	**06 14 20.5**	**+2.0**
TLL				*i*S	**Sn**	**06 14 45.6**	**+4.5**
TLL				AML	AML	06 14 47.9	
	comp=N,20μm,0.8s						
CLCH	**Cerro Calan**	**1.97**	**147**	*i*P	**Pn**	**06 14 21.3**	**+0.7**
CLCH				*i*S	**Sn**	**06 14 46.0**	**+1.0**
CLCH	**Cerro Calan**	**1.97**	**147**	*i*P	**Pn**	**06 14 21.3**	**+0.7**
CLCH				*i*S	**Sn**	**06 14 46.0**	**+1.0**
CLCH				AML	AML	06 14 49.0	
	comp=E,13μm,0.6s						
FCH	**Farellones**	**2.04**	**141**	⇑*i*P	**Pn**	**06 14 20.8**	**-0.8**
FCH				*i*S	**Sn**	**06 14 47.4**	**+0.6**
FCH				AML	AML	06 15 02.2	
	comp=N,4μm,0.6s						
TACH	**Talagante**	**2.04**	**159**	*e*P	**Pn**	**06 14 21.9**	**+0.3**
TACH				*i*S	**Sn**	**06 14 46.6**	**-0.2**
TACH	**Talagante**	**2.04**	**159**	*e*P	**Pn**	**06 14 21.9**	**+0.3**
TACH				*i*S	**Sn**	**06 14 46.6**	**-0.2**
FSR	**Penalolen**	**2.04**	**148**	⇑*i*P	**Pn**	**06 14 22.0**	**+0.4**
FSR				*i*S	**Sn**	**06 14 47.9**	**+1.1**
FSR	**Penalolen**	**2.04**	**148**	⇑*i*P	**Pn**	**06 14 22.0**	**+0.4**
FSR				*i*S	**Sn**	**06 14 47.9**	**+1.1**
ANTU	**Antumapu**	**2.07**	**151**	*i*P	**Pn**	**06 14 21.8**	**-0.2**
ANTU				*i*S	**Sn**	**06 14 47.4**	**-0.1**
ANTU	**Antumapu**	**2.07**	**151**	*i*P	**Pn**	**06 14 21.8**	**-0.2**
ANTU				*i*S	**Sn**	**06 14 47.4**	**-0.1**
ANTU				AML	AML	06 14 57.0	
	comp=E,6μm,1.0s						
PCH	**Pirque**	**2.17**	**150**	⇑*e*P	**Pn**	**06 14 23.9**	**+0.6**
PCH				*i*S	**Sn**	**06 14 51.1**	**+1.2**
PCH	**Pirque**	**2.17**	**150**	⇑*e*P	**Pn**	**06 14 23.9**	**+0.6**
PCH				*i*S	**Sn**	**06 14 51.1**	**+1.2**
LCO	**Las Campanas**	**2.90**	**20**	*e*Pn	**Pn**	**06 14 34.0**	**+0.5**
LCO				*e*Sn	**Sn**	**06 15 09.0**	**+0.9**
CFAA	**Coronel Fontan**	**3.06**	**88**	Pn	**Pn**	**06 14 36.8**	**+1.0**
	comp=E,12nm,0.3s,baz=256,slow=11,SNR=575						
CFAA				Lg		06 15 18.0	
	comp=E,28nm,0.3s,baz=248,slow=11,SNR=5.6						
CFAA	**Coronel Fontan**	**3.06**	**88**	Pn	**Pn**	**06 14 36.8**	**+1.0**
CFAA				Lg		06 15 18.0	

PLCA	**Paso Flores**	**9.02**	**174**	Pn	**Pn**	**06 15 57.5**	**0.0**
	comp=E,0.6nm,0.3s,baz=340,slow=9.2,SNR=16						
PLCA				LR	LR	06 19 36.4	
	comp=E,344nm,19.6s,baz=245,slow=40						
PLCA	**Paso Flores**	**9.02**	**174**	*e*Pn	**Pn**	**06 15 57.1**	**-0.4**
TRQA	**Tornquist**	**10.24**	**131**	*e*Pn	**Pn**	**06 16 15.0**	**+0.8**
	comp=E,74nm,0.9s						
CPUP	**Villa Florida**	**13.78**	**71**	Pn	**Pn**	**06 17 00.8**	**-1.9**
	comp=E,1.5nm,0.3s,baz=216,slow=11,SNR=15						
CPUP				LR	LR	06 22 46.0	
	comp=E,682nm,18.1s,baz=231,slow=39						
CPUP	**Villa Florida**	**13.78**	**71**	*e*Pn	**Pn**	**06 17 00.8**	**-2.0**
LPAZ	**La Paz**	**15.76**	**13**	Pn	**Pn**	**06 17 30.6**	**+1.2**
	comp=E,0.2nm,0.3s,baz=182,slow=8.0,SNR=18						
LPAZ	**La Paz**	**15.76**	**13**	*e*Pn	**Pn**	**06 17 30.3**	**+1.0**
	comp=E,11nm,0.9s						
SIV	**San Ignacio**	**18.50**	**34**	P	**Pn**	**06 18 02.5**	**-1.2**
	comp=E,0.9nm,0.3s,baz=220,slow=11,SNR=30						
SIV				LR	LR	06 25 21.3	
	comp=E,277nm,19.1s,baz=202,slow=38						
SPB	**Sao Paulo**	**23.05**	**75**	*e*P	**P**	**06 18 51.7**	**-1.0**
	comp=E,42nm,1.0s,mb4.8						
USHA	**Ushuaia**	**23.19**	**175**	P	**P**	**06 18 51.0**	**-2.9**
	comp=E,12nm,1.0s,mb4.3,baz=329,slow=5.9,SNR=2.7						
USHA				LR	LR	06 28 59.1	
	comp=E,621nm,20.2s,MS4.0,baz=156,slow=40						
ATAH	**Atahualpa**	**25.25**	**345**	LR	LR	06 28 06.3	
	comp=E,98nm,22.0s,MS3.3,baz=9.8,slow=34						
QSPA	**South Pole Qui**	**58.48**	**180**	*e*P	**P**	**06 23 42.8**	**+0.1**
	comp=E,6.1nm,0.9s,mb4.6						
TXAR	**Lajitas Array**	**67.87**	**330**	P	**P**	**06 24 45.8**	**+0.2**
	comp=E,0.4nm,0.5s,mb3.7,baz=152,slow=7.4,SNR=8.6						
TXAR				LR	LR	06 51 20.8	
	comp=E,64nm,21.1s,MS3.8,baz=230,slow=33						
SWET	**Sewanee**	**67.92**	**348**	*e*P	**P**	**06 24 45.5**	**-0.2**
OXF	**Oxford**	**67.96**	**344**	P	**P**	**06 24 46.2**	**+0.2**
	comp=E,8.7nm,0.9s,mb4.8						
WVT	**Waverly**	**69.18**	**346**	P	**P**	**06 24 52.9**	**-0.7**
	comp=E,4.1nm,0.7s,mb4.5						
LIC	**Lamto**	**73.91**	**72**	*e*P	**P**	**06 25 20.9**	**-1.8**
	comp=E,27nm,0.7s,mb5.3						
TIC	**Toumodi**	**74.15**	**72**	*e*P	**P**	**06 25 22.6**	**-1.5**
	comp=E,81nm,1.6s,mb5.4						
KIC	**Kosan Boka**	**74.22**	**72**	*e*P	**P**	**06 25 23.2**	**-1.3**
	comp=E,35nm,0.8s,mb5.3						
DBIC	**Dimbokro**	**74.30**	**72**	P	**P**	**06 25 24.0**	**-1.0**
	comp=E,15nm,0.8s,mb5.0,baz=218,slow=6.3,SNR=15						
DBIC				LR	LR	06 54 00.8	
	comp=E,96nm,18.2s,MS4.1,baz=175,slow=32						
MAW	**Mawson**	**75.28**	**164**	P	**P**	**06 25 27.8**	**-2.0**
	comp=E,2.6nm,0.9s,mb4.2,baz=221,slow=7.7,SNR=6.9						
SMCO	**Snowmass**	**77.77**	**333**	*e*P	**P**	**06 25 44.8**	**+0.7**
	comp=E,3.7nm,0.9s,mb4.3						
ECSD	**EROS Data Cent**	**78.47**	**342**	*e*P	**P**	**06 25 47.4**	**-0.5**
	comp=E,1.2nm,0.7s,mb3.9						
ARUT	**Antelope Range**	**79.34**	**328**	*e*P	**P**	**06 25 52.6**	**-0.2**
	comp=E,1.8nm,0.7s,mb4.1						
BOSA	**Boshof**	**80.96**	**118**	P	**P**	**06 26 01.1**	**-0.9**
	comp=E,6.5nm,0.8s,mb4.6,baz=207,slow=5.2,SNR=11						
BOSA				LR	LR	07 00 42.3	
	comp=E,99nm,18.5s,MS4.2,baz=163,slow=35						
PDAR	**Pinedale Array**	**81.85**	**333**	P	**P**	**06 26 07.8**	**+1.6**
	comp=E,0.2nm,0.4s,mb3.4,baz=138,slow=8.2,SNR=2.3						
PDAR				LR	LR	06 58 43.0	
	comp=E,69nm,20.2s,MS4.0,baz=270,slow=33						
NVAR	**Mina Array Bea**	**82.15**	**325**	P	**P**	**06 26 08.8**	**+0.9**
	comp=E,0.4nm,0.7s,mb3.5,baz=160,slow=6.3,SNR=3.2						
AGMN	**Agassiz Nation**	**82.55**	**344**	P	**P**	**06 26 10.6**	**+0.9**
TORD	**Torodi Ar. Bea**	**83.28**	**70**	P	**P**	**06 26 12.9**	**-1.4**
	comp=E,5.5nm,0.8s,mb4.7,baz=254,slow=4.8,SNR=30						
TORD				LR	LR	06 59 37.1	
	comp=E,105nm,19.4s,MS4.2,baz=170,slow=33						
MCMT	**McKenzie Canyo**	**84.87**	**332**	*e*P	**P**	**06 26 23.6**	**+1.9**
	comp=E,1.0nm,0.8s,mb4.0						
ASAR	**Alice Springs**	**119.64**	**207**	PKP	PKPdf	06 32 36.1	-1.6
	comp=E,0.9nm,1.0s,baz=139,slow=2.1,SNR=4.9						
WRA	**Warramunga Arr**	**122.80**	**210**	PKP	PKPdf	06 32 42.3	-1.5
	comp=E,0.7nm,0.5s,baz=156,slow=1.6,SNR=14						
BRVK	**Borovoye**	**145.42**	**41**	*e*PKPbc	PKPbc	06 33 24.7	+0.1
BVAR	**Borovoye Array**	**145.50**	**41**	PKPbc	PKPbc	06 33 25.1	+0.2
	comp=E,7.8nm,0.8s,baz=296,slow=4.6,SNR=42						
PSI	**Prapat**	**149.91**	**161**	PKPbc	PKPbc	06 33 36.7	-1.5
	comp=E,1.1nm,0.3s,baz=188,slow=14,SNR=5.5						
EKS2	**Erkin-Say**	**150.71**	**58**	*e*PKPbc	PKPbc	06 33 39.4	+0.2
AML	**Almayashu**	**150.74**	**59**	*e*PKPbc	PKPbc	06 33 39.6	+0.3
AAK	**Ala-Archa**	**151.23**	**58**	*e*PKPbc	PKPbc	06 33 40.5	+0.1
UCH	**Uchtor**	**151.32**	**59**	*e*PKPbc	PKPbc	06 33 41.3	+0.6
ZAA0	**Zalesovo Array**	**152.22**	**30**	*e*PKPbc	PKPbc	06 33 41.8	-0.6
ZAA0				*e*PKPab	PKPab	06 33 51.1	-1.1
ZALV	**Zalesovo Beam**	**152.22**	**30**	PKP	PKPdf	06 33 35.2	-0.4
	comp=E,0.5nm,0.6s,baz=253,slow=1.5,SNR=2.6						
ZALV				PKPbc	PKPbc	06 33 41.7	-0.7
	comp=E,9.0nm,0.7s,baz=299,slow=3.1,SNR=34						
MKAR	**Makanchi Array**	**155.11**	**45**	PKPbc	PKPdf	06 33 47.9	+7.9
	comp=E,0.6nm,0.8s,baz=5.7,slow=6.1,SNR=5.0						
MKAR				PKPab	PKPab	06 34 03.0	-1.7
	comp=E,2.2nm,0.9s,baz=323,slow=2.0,SNR=10						
MDJ	**Mudanjiang**	**158.90**	**314**	PKP	PKPdf	06 33 41.9	-3.0
MDJ				AMB	AMB		
	comp=Z,61nm,4.7s						
HHC	**Hu-ho-hao-te**	**170.52**	**344**	*e*PKP	PKPdf	06 33 54.4	-0.7
HHC				PKS		06 37 26.3	
HHC				PP	PP	06 39 00.5	-1.3
HHC				SKS	SKSdf	06 40 57.4	-0.6
HHC				SKKS	SKKSac	06 45 51.0	+2.3
HHC				SS	SS	07 00 03.6	+1.2
HHC				AMB	AMB		
	comp=Z,57nm,4.0s						
HHC				LR	LR		
	comp=N,94nm,24.0s						
HHC				LR	LR		
	comp=E,78nm,21.6s						
HHC				LR	LR		
	comp=Z,110nm,22.8s						
KMI	**Kunming**	**171.84**	**143**	PKP	PKPdf	06 33 55.8	-0.5
LZH	**Lanzhou**	**174.38**	**39**	*e*PKP	PKPdf	06 33 57.6	+0.6
LZH				pPKP	pPKPdf	06 34 01.0	-1.1
LZH				sPKP		06 34 02.1	
LZH				LR	LR		
	comp=N,140nm,18.3s						
LZH				LR	LR		
	comp=Z,190nm,20.1s						
CD2	**Chengdu**	**176.13**	**101**	*e*PKP	PKPdf	06 33 56.8	-0.8

DDA ***15*** *06:17:50.5, 37°.88N×27°.22E, h7km±4km, Md2.7*
ISCJB ***15*** *06:17:51.0±0.6, 37°.88N±0°.03×27°.20E±0°.07, h11km±5km, Error ellipse: s-maj=9.5km s-min=4.1km az=159.2*
CSEM ***15*** *06:17:51.0±0.3, 37°.87N×27°.18E, h8km, MD2.7, Error ellipse: s-maj=11.3km s-min=5.2km az=65.0*
ISK ***15*** *06:17:51.2, 37°.98N×26°.93E, h27km, MD2.7*
ISC 15 06:17:51.2±0.6, 37°.87N±0°.03×27°.19E±0°.07, h10km±7km, n18, σ0°93/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.18**	**170**	*i*P	**Pg**	**06 17 55.2**	**+0.1**
GCAM				*i*S	**Sg**	**06 17 58.2**	**+0.6**
GCAM	**G?zelcaml?**	**0.18**	**170**	*i*P	**Pg**	**06 17 55.2**	**+0.2**
GCAM				*i*S	**Sg**	**06 17 58.2**	**+0.6**
BLCB	**Balcova**	**0.52**	**347**	*e*PG	**Pg**	**06 18 00.6**	**-0.8**
BLCB				*e*SG	**Sg**	**06 18 07.7**	**-0.7**
BLCB	**Balcova**	**0.52**	**347**	*e*Pg	**Pg**	**06 18 00.6**	**-0.9**
BLCB				*e*Sg	**Sg**	**06 18 07.7**	**-0.7**
IZM	**Izmir**	**0.53**	**6**	*e*PG	**Pg**	**06 18 02.5**	**+1.1**
IZM				*e*SG	**Sg**	**06 18 10.0**	**+1.6**
IZM	**Izmir**	**0.53**	**6**	*e*Pg	**Pg**	**06 18 02.6**	**+1.1**
IZM				*e*Sg	**Sg**	**06 18 10.0**	**+1.6**
AYDN	**Tasoluk**	**0.58**	**111**	*i*P	**Pg**	**06 18 02.2**	**-0.4**
AYDN				*i*S	**Sg**	**06 18 09.6**	**-0.6**
AYDN	**Tasoluk**	**0.58**	**111**	*i*P	**Pg**	**06 18 02.2**	**-0.4**
AYDN				*i*S	**Sg**	**06 18 09.6**	**-0.6**
URLA	**Izmir**	**0.68**	**316**	*i*P	**Pg**	**06 18 04.2**	**-0.2**
URLA				*i*S	**Sg**	**06 18 13.2**	**0.0**
URLA	**Izmir**	**0.68**	**316**	*i*P	**Pg**	**06 18 04.2**	**-0.1**
URLA				*i*S	**Sg**	**06 18 13.2**	**0.0**
BDRM	**Kayabasi**	**0.83**	**166**	*i*P	**Pg**	**06 18 05.8**	**-1.5**
BDRM				*i*S	**Sg**	**06 18 18.2**	**+0.1**
BDRM	**Kayabasi**	**0.83**	**166**	*i*P	**Pg**	**06 18 05.8**	**-1.5**
AKS	**Akhisar**	**1.12**	**26**	*e*PN	**Pn**	**06 18 11.4**	**-1.5**
AKS	**Akhisar**	**1.12**	**26**	*e*Pn	**Pn**	**06 18 11.4**	**-1.5**
YER	**Yerkesik**	**1.14**	**130**	*e*PN	**Pn**	**06 18 14.8**	**+1.6**
YER	**Yerkesik**	**1.14**	**130**	*e*Pn	**Pn**	**06 18 14.8**	**+1.6**
DAT	**Datca**	**1.18**	**165**	*e*PN	**Pn**	**06 18 14.4**	**+0.6**
DAT	**Datca**	**1.18**	**165**	*e*Pn	**Pn**	**06 18 14.4**	**+0.6**

IDC ***15*** *06:25:37.3±1.8, 39°.17N×141°.00E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.5/25, mbtmp3.5/6, ML3.1/1, Error ellipse: s-maj=58.6km s-min=21.9km az=76.0*
ISCJB ***15*** *06:25:38.9±0.5, 39°.13N±0°.03×140°.99E±0°.05, h17km±6km, mb3.8/6, Error ellipse: s-maj=5.9km s-min=5.1km az=0.3*
NEIC ***15*** *06:25:39.0, 39°.11N×140°.93E, h11km, MG3.4(JMA), After JMA.*
JMA ***15*** *06:25:39.0, 39°.10N×140°.93E, h10km±1km, M3.4*
JMA Felt II J1.
ISC 15 06:25:39.3±0.5, 39°.11N±0°.03×140°.95E±0°.04, h8km±4km, n17, σ0°75/25, mb3.8/6, 1C-3D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.26**	**127**	⇓P	**Pg**	**06 25 44.4**	**-0.1**
JMK				*e*S	**Sg**	**06 25 48.3**	**+0.3**
JRG	**Rokugo**	**0.38**	**319**	⇓P	**Pg**	**06 25 46.3**	**-0.3**
JRG				*e*S	**Sg**	**06 25 52.0**	**+0.4**
JOM	**Ohasama**	**0.45**	**36**	P	**Pg**	**06 25 48.0**	**0.0**
JOM				S	**Sg**	**06 25 54.4**	**+0.5**
JYK	**Kaneyama**	**0.50**	**248**	P	**Pg**	**06 25 48.6**	**-0.3**
JYK				S	**Sg**	**06 25 55.1**	**-0.4**
JIO	**Ouri**	**0.72**	**154**	⇓P	**Pg**	**06 25 52.8**	**-0.4**
JIO				S	**Sg**	**06 26 02.3**	**-0.4**
JOU	**Okura**	**0.78**	**197**	⇑P	**Pg**	**06 25 53.8**	**-0.4**
JOU				S	**Sg**	**06 26 04.4**	**+0.1**
MAJO	**Matsushiro**	**3.36**	**221**	*e*Pn	**Pn**	**06 26 33.3**	**+1.3**
MAT	**Matsushiro**	**3.36**	**221**	P	**Pn**	**06 26 33.4**	**+1.3**
MAT				*e*S	**Sn**	**06 27 16.4**	**+4.3**
MJAR	**Matsushiro Arr**	**3.36**	**221**	Pn	**Pn**	**06 26 33.3**	**+1.3**
	1.6nm,0.3s,baz=28,slow=13,SNR=24						
ASAJ	**Asahikawa**	**5.15**	**13**	Pn	**Pn**	**06 26 57.4**	**+0.7**
	0.8nm,0.3s,baz=219,slow=12,SNR=7.7						
KSRS	**Korea Array**	**10.38**	**265**	Pn	**Pn**	**06 28 12.3**	**+3.9**
	0.4nm,0.3s,baz=80,slow=14,SNR=12						
KSRS				Sn	**Sn**	**06 30 09.4**	**+4.6**
	0.4nm,0.3s,baz=76,slow=24,SNR=8.1						
TIXI	**Tiksi**	**33.19**	**353**	*e*P	**P**	**06 32 15.5**	**-0.4**
	4.1nm,0.5s,mb4.6						
ZALV	**Zalesovo Beam**	**40.27**	**311**	P	**P**	**06 33 15.8**	**-0.7**
	0.6nm,0.6s,mb3.5,baz=90,slow=7.4,SNR=3.6						
MKAR	**Makanchi Array**	**42.73**	**300**	P	**P**	**06 33 34.9**	**-1.8**
	0.3nm,0.7s,mb3.1,baz=92,slow=8.7,SNR=3.0						
WRA	**Warramunga Arr**	**59.07**	**187**	P	**P**	**06 35 39.1**	**-0.7**
	0.7nm,0.5s,mb4.0,baz=4.5,slow=7.2,SNR=11						
**AS

ARMT	**Armutlu**	**1.01**	**335**	*e*Pg	**Pg**	**06 37 27.6**	**-0.4**
ARMT				*e*Sg	**Sg**	**06 37 42.2**	**+1.1**
KCT	**Karacabey**	**1.02**	**307**	*e*PG	**Pg**	**06 37 27.9**	**-0.4**
KCT	**Karacabey**	**1.02**	**307**	*e*Pg	**Pg**	**06 37 27.9**	**-0.4**
EYL	**Eskiyayla**	**1.06**	**30**	*e*PG	**Pg**	**06 37 27.9**	**-1.1**
ESKT	**Eskisehir**	**1.11**	**97**	*e*PN	**Pg**	**06 37 30.1**	**+0.2**
ESKT	**Eskisehir**	**1.11**	**97**	*i* P	**Pg**	**06 37 30.1**	**+0.2**
ESKT	**Eskisehir**	**1.11**	**97**	*e*Pn	**Pg**	**06 37 30.1**	**+0.2**
SEYT	**Eskypehyr**	**1.11**	**97**	*i* P	**Pg**	**06 37 30.0**	**+0.1**
GULT	**Gulveren**	**1.14**	**47**	*e*PN	**Pg**	**06 37 30.2**	**-0.3**
GULT	**Gulveren**	**1.14**	**47**	*e*Pn	**Pg**	**06 37 30.2**	**-0.3**
BALB	**Balikesir**	**1.20**	**270**	*e*PN	**Pn**	**06 37 31.9**	**-0.8**
BALB	**Balikesir**	**1.20**	**270**	*e*Pn	**Pn**	**06 37 31.9**	**-0.7**
KHL	**Karahalli**	**1.33**	**177**	*e*PN	**Pn**	**06 37 33.6**	**-0.9**
KHL	**Karahalli**	**1.33**	**177**	*e*Pn	**Pn**	**06 37 33.6**	**-0.9**
BNT	**Bandirma**	**1.35**	**302**	*e*PN	**Pn**	**06 37 34.1**	**-0.7**
BALY	**Balya**	**1.40**	**274**	*i* P	**Pn**	**06 37 35.1**	**-0.3**
BALY	**Balya**	**1.40**	**274**	*i* P	**Pn**	**06 37 35.1**	**-0.3**
BALY				*i* S	**Sg**	**06 37 54.8**	**+1.2**
SVRH	**Sivrihisar-ESK**	**1.63**	**97**	*e*PN	**Pn**	**06 37 37.5**	**-1.2**
SVRH	**Sivrihisar-ESK**	**1.63**	**97**	*e*Pn	**Pn**	**06 37 37.5**	**-1.1**
KIZT	**Kizilcal**	**2.05**	**111**	*e*PN	**Pn**	**06 37 44.3**	**-0.2**
KIZT	**Kizilcal**	**2.05**	**111**	*e*Pn	**Pn**	**06 37 44.3**	**-0.1**

CSEM ***15*** *06:48:03.6±0.2, 37°.98N×21°.54E, h8km, ML2.7, Error ellipse: s-maj=3.6km s-min=3.2km az=49.0*
ATH ***15*** *06:48:03.9, 38°.00N×21°.55E, h14km±1km, MD3.5/5, ML2.7*
THE ***15*** *06:48:03.9, 37°.99N×21°.55E, h8km±1km, ML3.0/13, Error ellipse: s-maj=1.3km s-min=0.8km az=203.0*
NEIC ***15*** *06:48:03.9, 38°.00N×21°.55E, h14km, ML2.7(ATH), After ATH.*
ISCJB ***15*** *06:48:03.4±0.4, 37°.98N±0°.02×21°.55E±0°.03, h5km±3km, Error ellipse: s-maj=3.4km s-min=2.9km az=173.8*

ISC 15 06:48:04.1±0.4, 37°.99N±0°.02×21°.54E±0°.03, h9km±3km, n87, σ0.97/141, 3C, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.09**	**318**	⇑*i*Pg	**Pg**	**06 48 06.6**	**+0.2**
RLS				*e*Sg	**Sg**	**06 48 09.4**	**+1.3**
RLS	**Riolos of Patr**	**0.09**	**318**	⇑*i*PG	**Pg**	**06 48 06.6**	**+0.2**
RLS				*e*SG	**Sg**	**06 48 09.4**	**+1.3**
RLS	**Riolos of Patr**	**0.09**	**318**	*i*Pg	**Pg**	**06 48 06.6**	**+0.2**
RLS				*e*Sg	**Sg**	**06 48 09.4**	**+1.3**
UPR	**University Cam**	**0.35**	**34**	P	**Pg**	**06 48 10.8**	**-0.1**
UPR				S	**Sg**	**06 48 17.0**	**+1.4**
UPR	**University Cam**	**0.35**	**34**	*e*PB	**Pg**	**06 48 10.9**	**0.0**
UPR				*e*SB	**Sg**	**06 48 16.2**	**+0.6**
UPR	**University Cam**	**0.35**	**34**	P	**Pg**	**06 48 10.8**	**-0.1**
UPR				*e*Sb	**Sg**	**06 48 16.2**	**+0.6**
UPR				S	**Sg**	**06 48 17.0**	**+1.4**
LAKA	**Lakka**	**0.42**	**54**	P	**Pg**	**06 48 11.7**	**-0.7**
LAKA				S	**Sg**	**06 48 18.5**	**+0.5**
LAKA	**Lakka**	**0.42**	**54**	P	**Pg**	**06 48 11.7**	**-0.7**
LAKA				S	**Sg**	**06 48 18.5**	**+0.5**
EFP	**Efpalio**	**0.52**	**33**	P	**Pg**	**06 48 13.4**	**-0.8**
EFP				S	**Sg**	**06 48 21.6**	**+0.9**
EFP	**Efpalio**	**0.52**	**33**	*e*PB	**Pg**	**06 48 13.4**	**-0.8**
EFP				*e*SB	**Sg**	**06 48 21.5**	**+0.5**
EFP	**Efpalio**	**0.52**	**33**	P	**Pg**	**06 48 13.4**	**-0.8**
EFP				*e*Sb	**Sg**	**06 48 21.5**	**+0.5**
EFP				S	**Sg**	**06 48 21.9**	**+0.9**
KFL	**Anninata**	**0.61**	**281**	P	**Pg**	**06 48 15.4**	**-0.4**
KALE	**Kalithea**	**0.62**	**50**	P	**Pg**	**06 48 15.1**	**-0.9**
KALE				S	**Sg**	**06 48 25.0**	**+0.9**
KALE	**Kalithea**	**0.62**	**50**	P	**Pg**	**06 48 15.1**	**-0.9**
KALE				S	**Sg**	**06 48 25.0**	**+0.9**
GUR	**Goura**	**0.64**	**95**	P	**Pg**	**06 48 15.3**	**-1.0**
GUR				S	**Sg**	**06 48 25.3**	**+0.7**
GUR	**Goura**	**0.64**	**95**	*e*PB	**Pg**	**06 48 15.3**	**-1.0**
GUR				*e*SB	**Sb**	**06 48 25.2**	**-1.0**
GUR	**Goura**	**0.64**	**95**	P	**Pg**	**06 48 15.3**	**-1.0**
GUR				*e*Sb	**Sb**	**06 48 25.2**	**-1.0**
VLS	**Valsamata**	**0.77**	**284**	*e*Pg	**Pg**	**06 48 18.8**	**-0.2**
VLS				*e*Sb	**Sb**	**06 48 30.3**	**+0.1**
VLS	**Valsamata**	**0.77**	**284**	P	**Pg**	**06 48 17.5**	**-1.5**
VLS				S	**Sb**	**06 48 30.3**	**+0.1**
VLS	**Valsamata**	**0.77**	**284**	*e*PG	**Pg**	**06 48 18.8**	**-0.2**
VLS				*e*SB	**Sb**	**06 48 30.3**	**+0.1**
VLS	**Valsamata**	**0.77**	**284**	P	**Pg**	**06 48 17.5**	**-1.5**
VLS	**Valsamata**	**0.77**	**284**	*e*Pg	**Pg**	**06 48 18.8**	**-0.2**
VLS				S	**Sb**	**06 48 30.3**	**+0.1**
ITM	**Ithomi**	**0.87**	**159**	*e*Pg	**Pg**	**06 48 20.0**	**-0.8**
ITM				*e*Sb	**Sb**	**06 48 32.6**	**-0.3**
ITM	**Ithomi**	**0.87**	**159**	P	**Pg**	**06 48 19.8**	**-1.0**
ITM				S	**Sg**	**06 48 33.9**	**+1.9**
ITM	**Ithomi**	**0.87**	**159**	*e*PG	**Pg**	**06 48 20.0**	**-0.8**
ITM				*e*SB	**Sb**	**06 48 32.6**	**-0.3**
ITM	**Ithomi**	**0.87**	**159**	P	**Pg**	**06 48 19.8**	**-1.0**
ITM				*e*Sb	**Sb**	**06 48 32.6**	**-0.3**
ITM				S	**Sg**	**06 48 33.9**	**+1.9**
DSF	**Desfina**	**0.88**	**61**	P	**Pg**	**06 48 19.5**	**-1.5**
DSF				S	**Sg**	**06 48 33.3**	**+0.8**
DSF	**Desfina**	**0.88**	**61**	P	**Pg**	**06 48 19.5**	**-1.5**
DSF				S	**Sg**	**06 48 33.3**	**+0.8**
VLX	**Vlachokerasia**	**0.91**	**133**	P	**Pg**	**06 48 21.0**	**-0.6**
VLX				S	**Sg**	**06 48 34.6**	**+1.2**
VLX	**Vlachokerasia**	**0.91**	**133**	*e*PG	**Pg**	**06 48 21.0**	**-0.6**
VLX				*e*SB	**Sb**	**06 48 34.5**	**+0.4**
VLX	**Vlachokerasia**	**0.91**	**133**	P	**Pg**	**06 48 21.0**	**-0.6**
VLX				*e*Sb	**Sb**	**06 48 34.5**	**+0.4**
EVR	**Evrytania**	**0.95**	**13**	*e*Pn	**Pn**	**06 48 22.1**	**-1.4**
EVR				*e*Sb	**Sb**	**06 48 34.6**	**-0.6**
EVR	**Evrytania**	**0.95**	**13**	*e*PN	**Pn**	**06 48 22.1**	**-1.4**
EVR				*e*SB	**Sb**	**06 48 34.6**	**-0.6**
EVR	**Evrytania**	**0.95**	**13**	*e*Pn	**Pn**	**06 48 22.1**	**-1.4**
EVR				*e*Sb	**Sb**	**06 48 34.6**	**-0.6**
LKD2	**Lefkada island**	**1.06**	**319**	P	**Pg**	**06 48 22.6**	**-1.8**
LKD2				S	**Sg**	**06 48 39.5**	**+1.4**
LKD2	**Lefkada island**	**1.06**	**319**	P	**Pg**	**06 48 22.6**	**-1.8**
LKD2				S	**Sg**	**06 48 39.5**	**+1.4**
PYL	**PYLOS**	**1.11**	**172**	P	**Pg**	**06 48 24.6**	**-0.7**
PYL				S	**Sg**	**06 48 40.9**	**+1.2**
PYL	**PYLOS**	**1.11**	**172**	*e*PG	**Pg**	**06 48 24.7**	**-0.6**
PYL				*e*SB	**Sb**	**06 48 41.3**	**+1.5**
PYL	**PYLOS**	**1.11**	**172**	*e*Pg	**Pg**	**06 48 24.7**	**-0.6**
PYL				S	**Sg**	**06 48 40.9**	**+1.2**
LTK	**Loutraki**	**1.13**	**88**	P	**Pb**	**06 48 24.7**	**-1.0**
LTK				S	**Sg**	**06 48 40.5**	**+0.2**
LTK	**Loutraki**	**1.13**	**88**	*e*PG	**Pb**	**06 48 24.7**	**-1.0**
LTK	**Loutraki**	**1.13**	**88**	P	**Pb**	**06 48 24.7**	**-1.0**
LTK				S	**Sg**	**06 48 40.5**	**+0.2**
AGG	**Agios Georgios**	**1.20**	**31**	*e*Pg	**Pg**	**06 48 26.1**	**-1.0**
AGG	**Agios Georgios**	**1.20**	**31**	P	**Pb**	**06 48 26.2**	**-0.7**
AGG				S	**Sb**	**06 48 43.2**	**+0.7**
AGG	**Agios Georgios**	**1.20**	**31**	*e*PG	**Pg**	**06 48 26.1**	**-1.0**
AGG	**Agios Georgios**	**1.20**	**31**	P	**Pb**	**06 48 26.2**	**-0.7**
AGG				S	**Sb**	**06 48 43.2**	**+0.7**
LKR	**Lokris**	**1.32**	**60**	*e*Pn	**Pn**	**06 48 28.0**	**-0.6**
LKR	**Lokris**	**1.32**	**60**	P	**Pn**	**06 48 27.4**	**-1.2**
LKR				S	**Sb**	**06 48 46.8**	**+0.8**
LKR	**Lokris**	**1.32**	**60**	*e*PN	**Pn**	**06 48 28.0**	**-0.6**
LKR	**Lokris**	**1.32**	**60**	P	**Pn**	**06 48 27.4**	**-1.2**
LKR	**Lokris**	**1.32**	**60**	*e*Pn	**Pn**	**06 48 28.0**	**-0.6**
LKR				S	**Sb**	**06 48 46.8**	**+0.8**
ATAL	**Atalanti**	**1.36**	**59**	P	**Pn**	**06 48 28.2**	**-0.9**
ATAL				S	**Sb**	**06 48 47.2**	**+0.2**
ATAL	**Atalanti**	**1.36**	**59**	P	**Pn**	**06 48 28.2**	**-0.9**
ATAL				S	**Sb**	**06 48 47.2**	**+0.2**
NAIG	**Nisos Aigina**	**1.56**	**98**	*e*Pb	**Pb**	**06 48 33.1**	**+0.1**
NAIG	**Nisos Aigina**	**1.56**	**98**	*e*PB	**Pb**	**06 48 33.1**	**+0.1**
NAIG	**Nisos Aigina**	**1.56**	**98**	*e*Pb	**Pb**	**06 48 33.1**	**+0.1**
THL	**Klokotos Trika**	**1.61**	**13**	P	**Pn**	**06 48 32.8**	**+0.2**
THL				S	**Sn**	**06 48 54.8**	**+1.3**
THL	**Klokotos Trika**	**1.61**	**13**	*e*PB	**Pb**	**06 48 34.4**	**+0.4**
THL	**Klokotos Trika**	**1.61**	**13**	P	**Pn**	**06 48 32.8**	**+0.2**
THL	**Klokotos Trika**	**1.61**	**13**	*e*Pb	**Pb**	**06 48 34.4**	**+0.4**
THL				S	**Sn**	**06 48 54.8**	**+1.3**
VLI	**Veliai**	**1.69**	**138**	*e*Pg	**Pg**	**06 48 35.6**	**-0.9**
VLI	**Veliai**	**1.69**	**138**	*e*PG	**Pg**	**06 48 35.6**	**-0.9**
VLI	**Veliai**	**1.69**	**138**	*e*Pg	**Pg**	**06 48 35.6**	**-0.9**
ATH	**Athens Observa**	**1.72**	**90**	*e*Pg	**Pg**	**06 48 35.9**	**-1.1**
ATH	**Athens Observa**	**1.72**	**90**	*e*PG	**Pg**	**06 48 35.9**	**-1.1**
ATH	**Athens Observa**	**1.72**	**90**	*e*Pg	**Pg**	**06 48 35.9**	**-1.1**
JAN	**Janina**	**1.75**	**342**	*e*Pn	**Pn**	**06 48 35.6**	**+1.1**
JAN	**Janina**	**1.75**	**342**	*e*PN	**Pn**	**06 48 35.6**	**+1.1**
JAN	**Janina**	**1.75**	**342**	*e*Pn	**Pn**	**06 48 35.6**	**+1.1**
VLY	**Voula,Athens**	**1.79**	**94**	*e*Pn	**Pn**	**06 48 36.5**	**+1.5**
VLY	**Voula,Athens**	**1.79**	**94**	*e*PN	**Pn**	**06 48 36.5**	**+1.5**
VLY	**Voula,Athens**	**1.79**	**94**	*e*Pn	**Pn**	**06 48 36.5**	**+1.5**
MEV	**Metsovon**	**1.81**	**352**	P	**Pn**	**06 48 40.1**	**+4.8**
MEV	**Metsovon**	**1.81**	**352**	P	**Pn**	**06 48 40.1**	**+4.8**
PTL	**Penteli**	**1.83**	**88**	*e*Pn	**Pn**	**06 48 37.2**	**+1.5**
PTL	**Penteli**	**1.83**	**88**	*e*PN	**Pn**	**06 48 37.2**	**+1.5**
PTL	**Penteli**	**1.83**	**88**	*e*Pn	**Pn**	**06 48 37.2**	**+1.5**
NEO	**Neokhori**	**1.86**	**45**	*e*Pn	**Pn**	**06 48 37.2**	**+1.2**
NEO	**Neokhori**	**1.86**	**45**	*e*PN	**Pn**	**06 48 37.2**	**+1.2**
NEO	**Neokhori**	**1.86**	**45**	*e*Pn	**Pn**	**06 48 37.2**	**+1.2**
XOR	**Xorichti**	**1.88**	**43**	P	**Pn**	**06 48 36.8**	**+0.4**
XOR				S	**Sn**	**06 49 00.8**	**+0.6**
XOR	**Xorichti**	**1.88**	**43**	P	**Pn**	**06 48 36.8**	**+0.4**
XOR				S	**Sn**	**06 49 00.8**	**+0.6**
KYTH	**Kithira**	**2.08**	**145**	*e*Pg	**Pg**	**06 48 42.5**	**-1.5**
KYTH	**Kithira**	**2.08**	**145**	*e*PG	**Pg**	**06 48 42.5**	**-1.5**
KYTH	**Kithira**	**2.08**	**145**	*e*Pg	**Pg**	**06 48 42.5**	**-1.5**
AOS	**Alonnisos**	**2.18**	**57**	P	**Pn**	**06 48 39.6**	**-0.8**
AOS				S	**Sn**	**06 49 06.0**	**-1.4**
AOS	**Alonnisos**	**2.18**	**57**	P	**Pn**	**06 48 39.6**	**-0.8**
AOS				S	**Sn**	**06 49 06.0**	**-1.4**

IDC ***15*** *07:08:16.4±1.6, 5°.38S×104°.49E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.6/22, mbtmp3.7/6, Error ellipse: s-maj=98.3km s-min=21.5km az=45.0*
ISCJB ***15*** *07:08:26.8±0.6, 5°.70S±0°.08×104°.40E±0°.07, h98km±5km, mb3.6/6, Error ellipse: s-maj=15.9km s-min=6.0km az=37.3*
DJA ***15*** *07:08:29, 5°.75S×104°.36E, h52km, MLv3.8/10*

ISC 15 07:08:27.6±0.6, 5°.71S±0°.08×104°.39E±0°.06, h91km±5km, n19, σ1.07/26, mb3.6/6, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**0.21**	**31**	P	**Pn**	**07 08 39.8**	**-1.0**
KASI				S	**Sn**	**07 08 48.8**	**-1.8**
LWLI	**Liwa**	**0.76**	**334**	P	**Pn**	**07 08 45.0**	**+0.1**
LWLI				S	**Sn**	**07 08 58.0**	**+0.3**
BLSI	**Bandar Lampung**	**0.92**	**69**	P	**Pn**	**07 08 46.8**	**+0.3**
BLSI				S	**Sn**	**07 08 59.8**	**-0.8**
KLI	**Kotabumi**	**0.96**	**29**	P	**Pn**	**07 08 47.6**	**+0.6**
KLI				S	**Sn**	**07 09 02.6**	**+1.1**
MDSI	**Maura Dua**	**1.23**	**350**	P	**Pn**	**07 08 50.6**	**+0.5**
MDSI				S	**Sn**	**07 09 05.4**	**-1.7**
RBSI	**Rajabasa**	**1.35**	**96**	P	**Pn**	**07 08 51.6**	**0.0**
RBSI				S	**Sn**	**07 09 10.3**	**+0.6**
CGJI	**Cibinong**	**1.58**	**125**	P	**Pn**	**07 08 53.8**	**-0.6**
CGJI				S	**Sn**	**07 09 14.3**	**-0.5**
MNAI	**Manna**	**1.96**	**313**	P	**Pn**	**07 08 59.9**	**+0.6**
MNAI				S	**Sn**	**07 09 24.2**	**+0.7**
TNG	**Tangerang**	**2.29**	**102**	P	**Pn**	**07 09 06.3**	**+2.6**
CBJI	**Citeko**	**2.55**	**106**	P	**Pn**	**07 09 11.9**	**+4.8**
KSI	**Kapahiang**	**2.71**	**319**	P	**Pn**	**07 09 11.0**	**+1.6**
LEM	**Lembang**	**3.40**	**109**	P	**Pn**	**07 09 21.9**	**+3.4**
WRA	**Warramunga Arr**	**32.37**	**119**	P	**P**	**07 14 48.1**	**-0.5**
	0.3nm,0.8s,mb3.1,baz=291,slow=9.7,SNR=3.4						
ASAR	**Alice Springs**	**33.55**	**125**	P	**P**	**07 14 59.8**	**+0.8**
	0.2nm,0.3s,mb3.4,baz=297,slow=8.1,SNR=5.9						
MKAR	**Makanchi Array**	**55.82**	**342**	P	**P**	**07 17 53.9**	**-1.4**
	0.4nm,0.4s,mb3.8,baz=172,slow=9.1,SNR=5.6						
ZALV	**Zalesovo Beam**	**61.67**	**347**	P	**P**	**07 18 33.7**	**-2.0**
	0.7nm,0.3s,mb4.1,baz=153,slow=5.0,SNR=4.7						
BRTR	**Keskin Array B**	**79.04**	**312**	P	**P**	**07 20 22.0**	**+0.1**
	0.4nm,0.6s,mb3.5,baz=150,slow=6.7,SNR=2.8						
FINES	**FINESS Array B**	**89.41**	**332**	P	**P**	**07 21 13.9**	**0.0**
	0.5nm,0.4s,mb3.9,baz=135,slow=4.8,SNR=6.5						
TXAR	**Lajitas Array**	**144.58**	**45**	PKP	PKPdf	07 27 54.2	0.0
	0.8nm,0.5s,baz=271,slow=0.8,SNR=24						

NEIC ***15*** *07:18:22.2, 38°.05N×21°.55E, h19km, ML2.7(ATH), After ATH.*
CSEM ***15*** *07:18:22.1±0.2, 38°.04N×21°.55E, h10km, ML2.7, Error ellipse: s-maj=4.7km s-min=4.6km az=49.0*
ATH ***15*** *07:18:22.2, 38°.05N×21°.55E, h19km±1km, MD3.3/5, ML2.7*
THE ***15*** *07:18:22.6, 38°.05N×21°.56E, h10km±1km, ML3.5/13, Error ellipse: s-maj=1.1km s-min=0.7km az=241.0*
ISCJB ***15*** *07:18:22.3±0.4, 38°.05N±0°.02×21°.57E±0°.02, h6km±3km, Error ellipse: s-maj=3.4km s-min=3.2km az=41.0*

ISC 15 07:18:22.8±0.3, 38°.05N±0°.02×21°.57E±0°.03, h10km±3km, n78, σ0.98/126, 2C, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.08**	**274**	*e*Pb	**Pg**	**07 18 25.7**	**+0.6**
RLS				*e*Sb	**Sg**	**07 18 28.5**	**+1.7**
RLS	**Riolos of Patr**	**0.08**	**274**	*e*PB	**Pg**	**07 18 25.7**	**+0.6**
RLS				*e*SB	**Sg**	**07 18 28.5**	**+1.7**
RLS	**Riolos of Patr**	**0.08**	**274**	*e*Pb	**Pg**	**07 18 25.7**	**+0.6**
RLS				*e*Sb	**Sg**	**07 18 28.5**	**+1.7**
UPR	**University Cam**	**0.29**	**37**	P	**Pg**	**07 18 28.7**	**0.0**
UPR				S	**Sg**	**07 18 33.8**	**+1.2**
UPR	**University Cam**	**0.29**	**37**	*e*PB	**Pg**	**07 18 28.4**	**-0.3**
UPR				*e*SB	**Sg**	**07 18 33.8**	**+1.2**
UPR	**University Cam**	**0.29**	**37**	*e*Pb	**Pg**	**07 18 28.4**	**-0.3**
UPR				S	**Sg**	**07 18 33.8**	**+1.2**
LAKA	**Lakka**	**0.38**	**60**	P	**Pg**	**07 18 29.8**	**-0.5**
LAKA				S	**Sg**	**07 18 35.5**	**+0.2**
EFP	**Efpalio**	**0.46**	**36**	P	**Pg**	**07 18 31.2**	**-0.6**
EFP				S	**Sg**	**07 18 38.8**	**+0.8**
EFP	**Efpalio**	**0.46**	**36**	⇑*i*PB	**Pg**	**07 18 31.3**	**-0.5**
EFP				*e*SB	**Sg**	**07 18 39.0**	**+1.0**
EFP	**Efpalio**	**0.46**	**36**	⇑*i*Pb	**Pg**	**07 18 31.3**	**-0.5**
EFP				S	**Sg**	**07 18 38.8**	**+0.8**
KALE	**Kalithea**	**0.56**	**53**	P	**Pg**	**07 18 33.0**	**-0.8**
KALE				S	**Sg**	**07 18 42.1**	**+0.8**
KALE	**Kalithea**	**0.56**	**53**	P	**Pg**	**07 18 33.0**	**-0.8**
KALE				S	**Sg**	**07 18 42.1**	**+0.8**
KFL	**Anninata**	**0.62**	**276**	P	**Pg**	**07 18 34.3**	**-0.5**
GUR	**Goura**	**0.62**	**100**	P	**Pg**	**07 18 33.7**	**-1.2**
GUR				S	**Sg**	**07 18 44.3**	**+1.2**
GUR	**Goura**	**0.62**	**100**	*e*PB	**Pg**	**07 18 33.8**	**-1.1**
GUR				*e*SN	**Sg**	**07 18 44.3**	**+1.2**
GUR	**Goura**	**0.62**	**100**	*e*Pb	**Pg**	**07 18 33.8**	**-1.1**
GUR				S	**Sg**	**07 18 44.3**	**+1.2**
VLS	**Valsamata**	**0.78**	**280**	*e*Pn	**Pg**	**07 18 36.6**	**-1.3**
VLS				*e*Sn	**Sg**	**07 18 48.7**	**+0.7**
VLS	**Valsamata**	**0.78**	**280**	P	**Pg**	**07 18 36.5**	**-1.4**
VLS				S	**Sg**	**07 18 49.4**	**+1.4**
VLS	**Valsamata**	**0.78**	**280**	*e*PN	**Pg**	**07 18 36.6**	**-1.3**
VLS				*e*SN	**Sg**	**07 18 48.7**	**+0.7**
VLS	**Valsamata**	**0.78**	**280**	P	**Pg**	**07 18 36.5**	**-1.4**
VLS				*e*Sn	**Sg**	**07 18 48.7**	**+0.7**
VLS				S	**Sg**	**07 18 49.4**	**+1.4**
DSF	**Desfina**	**0.84**	**64**	P	**Pg**	**07 18 37.6**	**-1.4**
DSF				S	**Sg**	**07 18 50.1**	**+0.2**
DSF	**Desfina**	**0.84**	**64**	P	**Pg**	**07 18 37.6**	**-1.4**
DSF				S	**Sg**	**07 18 50.1**	**+0.2**
EVR	**Evrytania**	**0.88**	**12**	*e*Pn	**Pg**	**07 18 38.9**	**-1.0**
EVR	**Evrytania**	**0.88**	**12**	*e*PN	**Pg**	**07 18 38.9**	**-1.0**
EVR	**Evrytania**	**0.88**	**12**	*e*Pn	**Pg**	**07 18 38.9**	**-1.0**
ITM	**Ithomi**	**0.92**	**162**	*e*Pn	**Pg**	**07 18 39.6**	**-0.9**
ITM				*e*Sn	**Sg**	**07 18 53.4**	**+1.0**
ITM	**Ithomi**	**0.92**	**162**	P	**Pg**	**07 18 39.8**	**-0.7**
ITM				S	**Sg**	**07 18 53.5**	**+1.1**
ITM	**Ithomi**	**0.92**	**162**	*e*PN	**Pg**	**07 18 39.6**	**-0.9**
ITM				*e*SN	**Sg**	**07 18 53.4**	**+1.0**
ITM	**Ithomi**	**0.92**	**162**	*e*Pn	**Pg**	**07 18 39.6**	**-0.9**
ITM				*e*Sn	**Sg**	**07 18 53.4**	**+1.0**
VLX	**Vlachokerasia**	**0.94**	**136**	P	**Pg**	**07 18 40.6**	**-0.3**
VLX				S	**Sg**	**07 18 54.1**	**+1.0**
VLX	**Vlachokerasia**	**0.94**	**136**	*e*PN	**Pg**	**07 18 39.8**	**-1.1**
VLX				*e*SN	**Sg**	**07 18 53.3**	**+0.2**
VLX	**Vlachokerasia**	**0.94**	**136**	*e*Pn	**Pg**	**07 18 39.8**	**-1.1**
VLX				*e*Sn	**Sg**	**07 18 53.3**	**+0.2**
VLX				S	**Sg**	**07 18 54.1**	**+1.0**
LKD2	**Lefkada island**	**1.02**	**316**	P	**Pg**	**07 18 41.1**	**-1.4**
LKD2				S	**Sg**	**07 18 56.1**	**+0.2**
LKD2	**Lefkada island**	**1.02**	**316**	P	**Pg**	**07 18 41.1**	**-1.4**
LKD2				S	**Sg**	**07 18 56.1**	**+0.2**
LTK	**Loutraki**	**1.11**	**91**	P	**Pg**	**07 18 42.6**	**-1.5**
LTK				S	**Sg**	**07 18 58.4**	**-0.1**
LTK	**Loutraki**	**1.11**	**91**	*e*PB	**Pg**	**07 18 42.7**	**-1.4**
LTK	**Loutraki**	**1.11**	**91**	P	**Pg**	**07 18 42.6**	**-1.5**
LTK				S	**Sg**	**07 18 58.4**	**-0.1**
AGG	**Agios Georgios**	**1.14**	**32**	*e*Pn	**Pn**	**07 18 44.3**	**-0.5**
AGG	**Agios Georgios**	**1.14**	**32**	P	**Pb**	**07 18 43.4**	**-1.2**
AGG				S	**Sb**	**07 19 00.8**	**+1.4**
AGG	**Agios Georgios**	**1.14**	**32**	*e*PN	**Pn**	**07 18 44.3**	**-0.5**
AGG	**Agios Georgios**	**1.14**	**32**	P	**Pb**	**07 18 43.4**	**-1.2**
AGG	**Agios Georgios**	**1.14**	**32**	*e*Pn	**Pn**	**07 18 44.3**	**-0.5**
AGG				S	**Sb**	**07 19 00.8**	**+1.4**
PYL	**PYLOS**	**1.16**	**173**	P	**Pb**	**07 18 43.4**	**-1.6**
PYL				S	**Sb**	**07 19 00.8**	**+0.7**
PYL	**PYLOS**	**1.16**	**173**	*e*PN	**Pn**	**07 18 44.2**	**-0.9**
PYL	**PYLOS**	**1.16**	**173**	*e*Pn	**Pn**	**07 18 44.2**	**-0.9**
PYL				S	**Sb**	**07 19 00.8**	**+0.7**
LKR	**Lokris**	**1.28**	**62**	*e*Pb	**Pb**	**07 18 45.6**	**-1.3**
LKR	**Lokris**	**1.28**	**62**	P	**Pn**	**07 18 45.7**	**-1.0**
LKR				S	**Sb**	**07 19 03.0**	**-0.4**
LKR	**Lokris**	**1.28**	**62**	*e*PB	**Pb**	**07 18 45.6**	**-1.3**
LKR	**Lokris**	**1.28**	**62**	P	**Pn**	**07 18 45.7**	**-1.0**
LKR				S	**Sb**	**07 19 03.0**	**-0.4**
ATAL	**Atalanti**	**1.31**	**60**	P	**Pn**	**07 18 46.1**	**-1.1**
ATAL				S	**Sb**	**07 19 04.7**	**+0.3**
ATAL	**Atalanti**	**1.31**	**60**	P	**Pn**	**07 18 46.1**	**-1.1**
ATAL				S	**Sb**	**07 19 04.7**	**+0.3**
NAIG	**Nisos Aigina**	**1.55**	**100**	*e*Pn	**Pn**	**07 18 51.1**	**+0.7**
NAIG	**Nisos Aigina**	**1.55**	**100**	*e*PN	**Pn**	**07 18 51.1**	**+0.7**
NAIG	**Nisos Aigina**	**1.55**	**100**	*e*Pn	**Pn**	**07 18 51.1**	**+0.7**
THL	**Klokotos Trika**	**1.55**	**13**	P	**Pn**	**07 18 50.9**	**+0.4**
THL				S	**Sn**	**07 19 11.2**	**+0.6**
THL	**Klokotos Trika**	**1.55**	**13**	*e*PN	**Pn**	**07 18 51.3**	**+0.8**
THL	**Klokotos Trika**	**1.55**	**13**	P	**Pn**	**07 18 50.9**	**+0.4**
THL	**Klokotos Trika**	**1.55**	**13**	*e*Pn	**Pn**	**07 18 51.3**	**+0.8**
THL				S	**Sn**	**07 19 11.2**	**+0.6**
ATH	**Athens Observa**	**1.70**	**92**	*e*Pn	**Pn**	**07 18 52.8**	**+0.3**
ATH	**Athens Observa**	**1.70**	**92**	*e*PN	**Pn**	**07 18 52.8**	**+0.3**
ATH	**Athens Observa**	**1.70**	**92**	*e*Pn	**Pn**	**07 18 52.8**	**+0.3**
VLI	**Veliai**	**1.72**	**140**	*e*Pn	**Pn**	**07 18 54.0**	**+1.2**
VLI	**Veliai**	**1.72**	**140**	*e*PN	**Pn**	**07 18 54.0**	**+1.2**
VLI	**Veliai**	**1.72**	**140**	*e*Pn	**Pn**	**07 18 54.0**	**+1.2**
MEV	**Metsovon**	**1.75**	**351**	P	**Pn**

XAVN	Gruta Xavier	1.57	351	eP	Pn	07 57 12.2 +0.1
CSAN		1.62	348	eP	Pn	07 57 12.3 -0.5
COPN	Copaltepe	1.66	343	eP	Pn	07 57 12.7 -0.6
CGA2	Cerro Gallo 2	1.69	109	eP	Pn	07 57 13.6 -0.2
HUEN		1.74	357	eP	Pn	07 57 14.7 +0.2
PRS1	Puriscal	1.85	109	eP	Pn	07 57 15.4 -0.5
MOMN	Momotombo	1.87	346	eP	Pn	07 57 16.3 +0.1
BOAB	BOACO BROADBAN	.90	13	eP	Pn	07 57 17.2 +0.6
CNGN	Cerro Negro	2.00	343	eP	Pn	07 57 18.2 +0.3
LAJ	Bijagual	2.06	110	eP	Pn	07 57 13.3 -5.6
SJS	Escuela Geolog	2.10	108	eP	Pn	07 57 19.9 +0.5
QCR	Quepos	2.22	121	eP	Pn	07 57 23.0 +2.0
URSC	Urasca	2.39	108	eP	Pn	07 57 24.6 +1.3
BUS	Buena Vista	2.51	114	eP	Pn	07 57 27.6 +2.6
BAR1		3.04	116	eP	Pn	07 57 34.4 +2.1
CNCH	Conchagua	3.17	328	eP	Pn	07 57 33.2 -1.0
ACR	Cerro Adams	3.46	123	eP	Pn	07 57 38.3 +0.2
TGUH	Tegucigalpa,Un	3.64	342	ePn	Pn	07 57 40.6 0.0
TGUH	Tegucigalpa,Un	3.64	342	eP	Pn	07 57 40.3 -0.2
TGUH				AML	AML	07 58 55.0
	comp=N,291nm,0.6s					
CAHU	Cacacuatique	3.79	327	eP	Pn	07 57 41.7 -0.8
APG	El Apazote	6.12	316	Pn	Pn	07 58 15.4 +0.8
	comp=N,0.3nm,0.3s,baz=146,slow=7.4,SNR=10					
CMIG	Matias Romero	10.71	308	Pn	Pn	07 59 16.8 -0.7
	comp=N,0.1nm,0.3s,baz=130,slow=9.4,SNR=4.6					
CMIG	Matias Romero	10.71	300	Pn	Pn	07 59 16.8 -0.7
OTAV	Otavalo	12.78	143	ePn	Pn	07 59 44.9 -0.9
ATAH	Atahualpa	19.20	156	LR	LR	08 07 48.7
	comp=N,66nm,20.3s,baz=91,slow=34					
LRAL	Lakeview Retre	22.36	358	eP	P	08 01 41.0 +0.3
	comp=N,7.4nm,0.7s,mb4.2					
LRAL				epP		08 01 50.3
GOGA	Godfrey	22.85	6	P	P	08 01 46.4 +0.6
	comp=N,6.0nm,0.6s,mb4.2					
JCT	Junction City	23.55	329	eP	P	08 01 53.1 +0.3
	comp=N,2.8nm,0.7s,mb3.8					
JSC	Jenkinsville	24.00	10	eP	P	08 01 57.9 +1.0
OXF	Oxford	24.01	353	eP	P	08 01 55.5 -1.6
	comp=N,16nm,0.9s,mb4.5					
SWET	Sewanee	24.52	0	eP	P	08 02 01.4 -0.3
UALR	University of	24.75	348	eP	P	08 02 03.3 -0.4
	comp=N,9.8nm,0.8s,mb4.4					
CPCT	Cooper Cave	24.79	3	eP	P	08 02 04.8 +0.7
MIAR	Mount Ida	24.81	345	eP	P	08 02 03.5 -0.9
	comp=N,6.7nm,0.8s,mb4.2					
TXAR	Lajitas Array	24.86	321	P	P	08 02 05.6 +0.8
	comp=N,1.9nm,0.6s,mb3.8,baz=138,slow=10,SNR=25					
TXAR				PcP	PcP	08 05 43.4 +3.3
	comp=N,0.6nm,0.9s,baz=162,slow=3.7,SNR=4.6					
TXAR	Lajitas Array	24.86	321	P	P	08 02 05.6 +0.8
TXAR				PcP	PcP	08 05 43.4 +3.3
TKL	Tuckaleechee C	25.05	4	P	P	08 02 06.7 +0.2
	comp=N,4.5nm,0.6s,mb4.2,baz=169,slow=13,SNR=11					
TKL	Tuckaleechee C	25.05	4	eP	P	08 02 06.7 +0.2
WVT	Waverly	25.48	357	P	P	08 02 09.1 -1.3
	comp=N,2.1nm,0.6s,mb3.8					
TZTN	Tazewell	25.95	5	eP	P	08 02 15.0 +0.4
	comp=N,2.7nm,0.6s,mb4.0					
WMOK	Wichita Mounta	26.69	336	P	P	08 02 22.8 +1.4
	comp=N,6.0nm,0.8s,mb4.2					
WMOK				epP	pP	08 02 30.2 -3.5
WCI	Wyandotte Cave	27.53	360	eP	P	08 02 27.9 -0.9
	comp=N,5.9nm,0.7s,mb4.3					
WCI				epP	pP	08 02 37.4 -3.9
BLO	Bloomington	28.47	359	eP	P	08 02 35.6 -1.7
	comp=N,6.5nm,0.7s,mb4.4					
MCWV	Mont Chateau	29.48	10	eP	P	08 02 46.7 +0.5
	comp=N,3.1nm,0.6s,mb4.2					
ACSO	Alum Creek Sta	29.66	5	eP	P	08 02 47.7 0.0
	comp=N,14nm,0.6s,mb4.9					
HDIL	Hopedale	29.98	355	eP	P	08 02 50.1 -0.6
	comp=N,14nm,1.0s,mb4.7					
HDIL				epP	pP	08 02 56.2 -6.9
ANMO	Albuquerque	30.55	326	P	P	08 02 56.2 +0.5
	comp=N,1.2nm,0.7s,mb3.8,baz=143,slow=10,SNR=4.9					
ANMO	Albuquerque	30.55	326	P	P	08 02 56.2 +0.5
SDCO	Great Sand Dun	32.18	330	eP	P	08 03 10.6 +0.6
	comp=N,1.1nm,0.7s,mb3.8					
SIV	San Ignacio	36.20	136	P	P	08 03 45.4 +0.4
	comp=N,0.5nm,0.8s,mb3.5,baz=270,slow=13,SNR=3.1					
PDAR	Pinedale Array	38.04	332	P	P	08 03 59.7 -0.7
	comp=N,0.6nm,0.7s,mb3.5,baz=124,slow=9.1,SNR=6.4					
PDAR				PcP	PcP	08 06 16.4 +1.3
	comp=N,0.3nm,0.6s,baz=111,slow=4.9,SNR=3.2					
AGMN	Agassiz Nation	38.48	350	eP	P	08 04 02.0 -2.0
	comp=N,3.0nm,0.8s,mb4.1					
N12A	Clover Valley,	39.51	325	eP	P	08 04 14.8 +2.1
	comp=N,2.1nm,0.6s,mb4.0					
NVAR	Mina Array Bea	39.98	319	P	P	08 04 19.2 +2.5
	comp=N,2.2nm,0.8s,mb4.0,baz=139,slow=7.2,SNR=17					
NVAR				PcP	PcP	08 06 23.2 +2.0
	comp=N,0.9nm,0.7s,baz=147,slow=4.3,SNR=6.8					
MCMT	McKenzie Canyo	41.16	331	eP	P	08 04 28.2 +1.9
	comp=N,0.5nm,0.7s,mb3.2					
SCHQ	Schefferville	46.70	15	P	P	08 05 08.3 -2.2
	comp=N,4.7nm,0.8s,mb4.4,baz=206,slow=6.0,SNR=5.0					
SCHQ	Schefferville	46.70	15	P	P	08 05 08.3 -2.2
YKA	Yellowknife Ar	55.75	344	P	P	08 06 16.5 -1.9
	comp=N,0.6nm,0.8s,mb3.7,baz=137,slow=6.9,SNR=5.6					
MDJ	Mudanjiang	116.27	332	PKP	PKPdf	08 15 25.3 +0.2
MDJ				AMB	AMB	
	comp=Z,110nm,5.5s					
HHC	Hu-ho-hao-te	126.29	343	ePKP	PKPdf	08 15 43.8 -0.7
HHC				sPKP		08 15 58.1
HHC				PP	PP	08 17 42.0 +3.7
HHC				PKS		08 19 18.8
HHC				SKS	SKSdf	08 22 50.8 -1.8
HHC				SKKS	SKKSac	08 24 29.9 -3.7
HHC				AMB	AMB	
	comp=Z,48nm,5.6s					
HHC				LR	LR	
	comp=N,100nm,24.0s,MS4.8					
HHC				LR	LR	
	comp=E,190nm,22.8s,MS4.8					
HHC				LR	LR	
	comp=Z,110nm,24.0s,MS4.5					
LZH	Lanzhou	132.65	349	ePKP	PKPdf	08 15 58.5 +1.8
LZH				sPKP		08 16 09.4
LZH				LR	LR	
	comp=E,110nm,18.0s					
LZH				LR	LR	
	comp=Z,170nm,20.3s,MS4.8					
CD2	Chengdu	137.68	347	ePKP	PKPdf	08 16 05.1 -1.1
WRA	Warramunga Arr	140.00	252	PKhKP		08 16 10.8
	comp=Z,0.3nm,0.7s,baz=92,slow=1.9,SNR=4.3					
CMAR	Chiang Mai Arr	150.72	350	PKPbc	PKPbc	08 16 35.0 +0.5
	comp=Z,0.8nm,0.4s,baz=316,slow=5.3,SNR=5.2					

MAN 15 07:57:58, 7°.20N×123°.62E, h18km, mb4.5, ML3.4, MS3.3, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.62	88	⇓eP	Pg	07 58 09.7	-0.6
CTBH				i S	Sg	07 58 18.6	-0.2
PAGZ	Pagadian	0.69	340	eP	Pb	07 58 11.2	-0.2
PAGZ				eS	Sb	07 58 17.5	-3.1
IPIL	Ipil	1.19	300	eP	Pn	07 58 19.1	-0.7
IPIL				eS	Sb	07 58 32.8	-2.4
BUKP	Musuan	1.58	65	eP	Pn	07 58 26.2	+1.0
BUKP				eS	Sn	07 58 45.5	+0.3
CGP	Cagayan de Oro	1.64	40	⇑iP	Pn	07 58 26.1	+0.1
CGP				i S	Sn	07 58 47.4	+0.7

CASC ***15*** *08:18:46.1±1.9, 10°.42N×86°.33W, h0km±6km, MD4.6, ML4.4, mb4.7(NEIC)*
ISCJB ***15*** *08:18:48.0±0.2, 10°.52N±0°.03×86°.28W±0°.02, h30km, mb4.6/87, MS4.7/14, Error ellipse: s-maj=5.3km s-min=2.2km az=26.7*
NEIC ***15*** *08:18:50.1±0.4, 10°.62N×86°.17W, mb4.7/77, Error ellipse: s-maj=8.7km s-min=5.1km az=218.0*
NEIC Felt at Liberia.
IDC ***15*** *08:18:51.8±1.7, 11°.02N×85°.79W, h35km±14km, mb4.2/12, mb1 4.4/14, mb1mx4.2/23, mbtmp4.2/14, ML4.2/2, MS4.4/9, Ms1 4.4/9, ms1mx4.1/30, Error ellipse: s-maj=28.6km s-min=11.1km az=51.0*
GCMT ***15*** *08:18:53.5±0.3, 10°.29N×86°.46W, h25km, MW5.2, Moment Tensor Solution. s57,c86; s59,c100; Moment tensor: Scale 10^16 Nm; Mrr5.15±.21; Mθθ-3.95±.16;*
Mφφ-1.20±.18; Mθθ4.96±.39; Mθφ2.73±.12; Mθr-3.47±.41;
Best double couple: M0 8.10000×10^16 NP1:φ299.00000°, δ21.00000°, λ85.00000°. NP2:φ124.00000°, δ69.00000°, λ92.00000°. Principal axes: T 7.8700, Plg66.0000°, Azm38.0000°; N 0.4700, Plg2.0000°, Azm304.0000°; P -8.3400, Plg24.0000°, Azm213.0000°; Data Used: II IU IC G CN.

ISC 15 08:18:50.3±0.2, 10°.58N±0°.03×86°.19W±0°.02, h32km, h32km±.6km: pP-P, n448, σ0.91/432, mb4.6/87, MS4.7/14, 110C-109D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NY14	Universidad de	0.65	84	i P	Pb	08 19 03.1	-0.2
NY14				i S	Sb	08 19 16.8	+4.7
VCR	Vista de Mar	0.71	129	eP	Pn	08 19 01.0	-3.1
GBS3	Finca Las lm¯¡	0.75	74	i P	Pn	08 19 04.8	+0.1
LAPC	Finca la Perla	0.77	76	i P	Pn	08 19 04.8	-0.2
SSN	San Juan del S	0.80	25	eP	Pn	08 19 05.7	+0.3
GB1A	Boringuen Arri	0.82	73	i P	Pn	08 19 05.8	+0.2
GPS3	Bodega del ICE	0.83	78	i P	Pn	08 19 05.4	-0.4
GPS2	Hotel Rinc¯‡n	0.84	78	i P	Pn	08 19 05.7	-0.3
GPS1	Guardaparques	0.85	76	i P	Pn	08 19 06.1	0.0
LIM1	Limonal	0.93	82	i P	Pn	08 19 07.0	-0.2
GUAB	Guayabo de Bag	0.96	82	i P	Pn	08 19 07.7	+0.2
COLC	Colonia	0.98	85	i P	Pn	08 19 07.9	+0.1
MESS	Mesas	0.99	80	i P	Pn	08 19 08.3	+0.2
CUI	Cuipilapa	1.01	85	i P	Pn	08 19 08.1	-0.2
CONN	Concepcion	1.13	29	eP	Pn	08 19 11.2	+1.3
PTEN	Parque Tenorio	1.19	83	i P	Pn	08 19 11.3	+0.5
JTS	JuntasAbangare	1.25	103	Pn	Pn	08 19 10.2	-1.4
	243nm,0.3s,baz=286,slow=8.8,SNR=551						
JTS				Lg		08 19 31.3	
	532nm,0.3s,baz=303,slow=18,SNR=13						
JTS	JuntasAbangare	1.25	103	eP	Pn	08 19 11.0	-0.6
JTS	JuntasAbangare	1.25	103	eP	Pn	08 19 10.2	-1.4
JTS				eS	Sn	08 19 30.9	+3.6
CHPA	Chiripa	1.27	96	i P	Pn	08 19 11.8	0.0
JCR	Jicaral	1.28	124	eP	Pn	08 19 09.6	-2.5
APON	Apoyo	1.34	5	eP	Pn	08 19 14.4	+1.6
CRUN	El Crucero	1.40	356	i P	Pn	08 19 15.5	+1.8
MASN	Masaya	1.40	2	eP	Pn	08 19 14.4	+0.7
MGAN	Managua	1.56	358	eP	Pn	08 19 16.6	+0.8
XAVN	Gruta Xavier	1.57	355	eP	Pn	08 19 16.9	+0.9
WILN	Americas 2	1.58	0	eP	Pn	08 19 16.8	+0.8
CSAN		1.61	352	eP	Pn	08 19 17.2	+0.6
COPN	Copaltepe	1.64	346	eP	Pn	08 19 17.8	+0.8
HUEN		1.75	1	eP	Pn	08 19 19.5	+1.1
CGA2	Cerro Gallo 2	1.79	108	eP	Pn	08 19 18.7	-0.3
MOMN	Momotombo	1.85	349	eP	Pn	08 19 20.9	+1.1
BOAB	BOACO BROADBAN	.93	15	eP	Pn	08 19 21.7	+0.7
BOAB				AML	AML	08 20 06.5	
	comp=N,933nm,0.5s						
PRS1	Puriscal	1.94	107	eP	Pn	08 19 20.3	-0.8
CNGN	Cerro Negro	1.98	346	eP	Pn	08 19 22.2	+0.6
LAJ	Bijagual	2.16	109	eP	Pn	08 19 19.3	-4.8
SJS	Escuela Geolog	2.20	107	eP	Pn	08 19 26.6	+2.0
CRIN	San Cristobal	2.27	338	eP	Pn	08 19 26.4	+0.8
CRIN				AML	AML	08 20 05.9	
	comp=N,9μm,0.4s						
QCR	Quepos	2.30	120	eP	Pn	08 19 25.9	-0.2
URSC	Urasca	2.49	107	eP	Pn	08 19 29.3	+0.7
BUS	Buena Vista	2.60	113	eP	Pn	08 19 30.9	+0.7
CNCH	Conchagua	3.13	329	eP	Pn	08 19 37.6	+0.2
BAR1		3.13	115	eP	Pn	08 19 37.7	+0.2
BLLM	Bellamira	3.48	325	eP	Pn	08 19 42.4	+0.1
VSM	San Miguel	3.49	325	eP	Pn	08 19 43.4	+1.0
ACR	Cerro Adams	3.54	122	eP	Pn	08 19 43.7	+0.6
TGUH	Tegucigalpa,Un	3.62	343	ePn	Pn	08 19 45.7	+1.5
TGUH	Tegucigalpa,Un	3.62	343	eP	Pn	08 19 45.5	+1.4
TGUH				AML	AML	08 20 51.9	
	comp=N,3μm,0.7s						
CAHU	Cacacuatique	3.74	328	eP	Pn	08 19 46.6	+0.8
CTCR	Cotoan	3.77	116	eP	Pn	08 19 47.5	+1.2
CNI	Changuinola	3.80	107	eP	Pn	08 19 48.2	+1.6
BRU2	Volcan	3.88	117	eP	Pn	08 19 49.3	+1.5
BRU2				eS	Sn	08 20 49.9	+18
LFRS	El Faro	4.13	317	eP	Pn	08 19 51.3	+0.1
SNET	Serv Nac Est T	4.29	316	eP	Pn	08 19 54.3	+1.0
BOQS	Boqueron	4.36	316	eP	Pn	08 19 54.9	+0.6
SBLS	San Blas	4.67	314	eP	Pn	08 19 59.5	+0.9
APG	El Apazote	6.06	317	Pn	Pn	08 20 19.4	+1.7
	comp=N,3.3nm,0.3s,baz=60,slow=10,SNR=48						
BCIP	Isla Barro Col	6.42	102	ePn	Pn	08 20 23.2	+0.6
BCIP	Isla Barro Col	6.42	102	eP	Pn	08 20 22.0	-0.6
BCIP				eS	Sn	08 21 35.2	+0.3
TEIG	Tepich	9.80	348	ePn	Pn	08 21 09.2	+0.1
CMIG	Matias Romero	10.64	308	Pn	Pn	08 21 21.5	+0.9
	comp=N,3.0nm,0.3s,baz=120,slow=11,SNR=25						
MTDJ	Mount Denham	11.32	47	Pn	Pn	08 21 30.0	+0.1
SOR	Soroa	12.52	14	e	Pn	08 21 51.5	+5.1
OTAV	Otavalo	12.83	143	ePn	Pn	08 21 50.3	-0.3
LMGC	Las Mercedes	12.94	42	e	Pn	08 21 57.4	+5.4
ROSC	El Rosal	13.05	115	Pn	Pn	08 21 59.2	+5.6
	comp=N,0.4nm,0.3s,baz=98,slow=19,SNR=3.4						
ROSC				LR	LR	08 26 15.7	
	comp=N,2μm,20.1s,baz=339,slow=34						
ROSC	El Rosal	13.05	115	ePn	Pn	08 21 56.1	+2.5
RCC	Rio Carpintero	13.79	46	e	Pn	08 22 06.0	+2.4
SDV	Santo Domingo	15.43	95	Pn	Pn	08 22 27.9	+2.1
	comp=N,0.2nm,0.3s,baz=223,slow=5.5,SNR=6.0						
SDV				PcP	PcP	08 27 29.1	+0.5
	comp=N,0.2nm,0.3s,baz=0.0,slow=5.1,SNR=6.4						
SDV	Santo Domingo	15.43	95	eP	Pn	08 22 30.5	+4.7
	comp=N,13nm,0.9s						
SDDR	Presa de Saban	16.65	58	eP	Pn	08 22 42.6	+1.2
	comp=N,102nm,1.6s						
ATAH	Atahualpa	19.23	156	P	Pn	08 23 19.7	+6.6
	comp=N,0.2nm,0.3s,baz=26,slow=17,SNR=3.8						
ATAH				LR	LR	08 29 37.2	
	comp=N,3μm,19.6s,baz=160,slow=33						
SJG	San Juan	20.80	67	P	P	08 23 28.3	-0.8
	comp=N,12nm,0.8s,baz=341,slow=5.4,SNR=5.6						
SJG	San Juan	20.80	67	P	P	08 23 28.3	-0.8
PCRV	Puerto La Cruz	21.21	89	P	P	08 23 34.7	+1.1
	comp=N,15nm,0.6s,mb4.5,baz=153,slow=4.5,SNR=9.6						
HKT	Hockley	21.27	336	eP	P	08 23 34.9	+0.8
	comp=N,41nm,1.1s,mb4.7						
VBMS	Vicksburg	21.91	350	eP	P	08 23 42.0	+1.2
	comp=N,34nm,0.8s,mb4.8						
LRAL	Lakeview Retre	22.36	358	eP	P	08 23 46.1	+0.4
	comp=N,33nm,0.8s,mb4.8						
NATX	Nacogdoches	22.49	341	eP	P	08 23 48.6	+1.6
	comp=N,57nm,0.8s,mb5.0						
GOGA	Godfrey	22.87	6	eP	P	08 23 51.4	+0.4
	comp=N,43nm,1.0s,mb4.8						
NHSC	New Hope	23.10	13	eP	P	08 23 55.1	+1.7
	comp=N,49nm,1.0s,mb4.9						
COW	Cow Castle Cre	23.25	12	eP	P	08 23 56.6	+1.5
JCT	Junction City	23.51	329	eP	P	08 23 57.0	-0.7
	comp=N,13nm,0.7s,mb4.5						
JCT				ePcP	PcP	08 27 44.4	+1.6
OXF	Oxford	24.01	353	eP	P	08 24 00.6	-1.6
	comp=N,62nm,0.9s,mb5.0						
OXF				epP		08 24 10.4	
JSC	Jenkinsville	24.02	10	eP	P	08 24 02.6	+0.3
NNA	Nana	24.26	157	LR	LR	08 32 36.1	
	comp=N,717nm,19.2s,MS4.2,baz=165,slow=34						
628A	Black Gap, Mar	24.44	323	⇑P	P	08 24 06.1	-0.1
	baz=24,SNR=18						
SWET	Sewanee	24.53	1	eP	P	08 24 06.3	-0.7
SWET				epP		08 24 15.7	
627A	Terlingua Ranc	24.71	322	⇑P	P	08 24 08.9	+0.2
	baz=25,SNR=18						
UALR	University of	24.73	348	eP	P	08 24 07.6	-1.2
	comp=N,45nm,0.8s,mb5.0						
MIAR	Mount Ida	24.80	345	eP	P	08 24 08.4	-1.0
	comp=N,31nm,0.8s,mb4.9						
TXAR	Lajitas Array	24.80	321	P	P	08 24 09.9	+0.4
	comp=N,11nm,0.6s,mb4.5,baz=138,slow=10,SNR=92						
TXAR				PcP	PcP	08 27 47.7	+2.1
	comp=N,2.2nm,0.8s,baz=134,slow=4.7,SNR=7.3						
TXAR				LR	LR	08 35 10.1	
	comp=N,521nm,21.4s,MS4.0,baz=5.0,slow=40						
CPCT	Cooper Cave	24.81	3	eP	P	08 24 09.5	0.0
CPCT				epP		08 24 18.8	
528A	Cox Ranch, San	24.87	324	⇓P	P	08 24 10.1	0.0
	baz=25						
TKL	Tuckaleechee C	25.07	5	P	P	08 24 11.7	-0.2
	comp=N,20nm,0.6s,mb4.8,baz=178,slow=8.6,SNR=44						
TKL				LR	LR	08 33 57.5	
	comp=N,1μm,21.2s,MS4.4,baz=301,slow=37						
TKL	Tuckaleechee C	25.07	5	eP	P	08 24 11.2	-0.7
428A	Kincaid Ranch,	25.24	325	⇑P	P	08 24 13.8	+0.4
	baz=25,SNR=14						
626A	Big Bend Ranch	25.24	321	⇓P	P	08 24 13.3	-0.2
	baz=25,SNR=21						
527A	Woodward Ranch	25.34	323	⇓P	P	08 24 14.8	+0.3
	baz=25,SNR=11						
HALT	Halls	25.38	354	eP	P	08 24 13.4	-1.3
WVT	Waverly	25.48	357	eP	P	08 24 13.9	-1.7
	comp=N,41nm,1.6s,mb4.7						
526A	Mary Lane Ranc	25.57	322	⇓P	P	08 24 17.2	+0.7
	baz=26,SNR=8.6						
427A	Hayter Ranch,	25.74	324	⇑P	P	08 24 17.0	-1.0
	baz=26						
328A	Wristen Ranch,	25.80	326	⇑P	P	08 24 18.9	+0.3
	baz=26,SNR=20						
TZTN	Tazewell	25.96	5	eP	P	08 24 19.5	-0.5
	comp=N,13nm,0.6s,mb4.7						
426A	McDonald Obser	25.97	323	⇑P	P	08 24 21.1	+0.9
	baz=26,SNR=6.0						
PARMO	Parma	26.17	354	eP	P	08 24 20.7	-1.2
326A	Caldwell Ranch	26.41	324	⇑P	P	08 24 25.0	+0.8
	baz=26,SNR=11						
425A	Indio Mountain	26.63	322	⇓P	P	08 24 26.1	0.0
	baz=27,SNR=5.7						
WMOK	Wichita Mounta	26.66	336	eP	P	08 24 25.3	-1.0
ELN	Prospectdale	26.99	10	eP	P	08 24 29.4	+0.2
BLA	Blacksburg	27.03	10	eP	P	08 24 29.3	-0.3
	comp=N,16nm,0.6s,mb4.7						
BLA				epP	pP	08 24 39.1	+0.3
BLA				ePcP	PcP	08 27 49.6	-0.9
226A	Malaga, Loving	27.04	325	⇓P	P	08 24 30.5	+0.7
	baz=27,SNR=9.9						
325A	Bean Ranch, Si	27.04	323	⇑P	P	08 24 29.1	-0.7
	baz=27						
127A	Arkansas Junct	27.09	327	⇑P	P	08 24 30.1	-0.1
	baz=27						
SIUC	Southern Illin	27.16	355	eP	P	08 24 29.6	-1.2
	comp=N,25nm,0.8s,mb4.8						
GDL2	Guadalupe Moun	27.29	325	eP	P	08 24 35.3	+3.3
324A	Moseley Ranch,	27.39	322	⇑P	P	08 24 32.6	-0.4
	baz=28,SNR=6.8						
225A	Deer Hill, Car	27.48	324	⇑P	P	08 24 33.8	0.0
	baz=28,SNR=11						
Z27A	Tatum	27.51	328	⇑P	P	08 24 32.5	-1.5
	baz=28,SNR=9.0						
MNTX	Cornudas Mount	27.52	323	eP	P	08 24 34.0	-0.1
	comp=N,5.6nm,1.0s,mb4.2						
WCI	Wyandotte Cave	27.54	360	eP	P	08 24 32.7	-1.4
FVM	French Village	27.55	353	eP	P	08 24 34.1	-0.2
	comp=N,9.0nm,1.1s,mb4.3						
125A	Gardner Draw,	27.79	325	⇑P	P	08 24 35.7	-0.8
	baz=28,SNR=15						
MSTX	Muleshoe	27.80	329	⇓P	P	08 24 35.8	-0.7
	baz=28,SNR=14						
224A	Cornudas Mount	27.87	323	⇑P	P	08 24 36.4	-0.8
	baz=28,SNR=7.3						
Z26A	Caprock	27.88	327	⇓P	P	08 24 36.2	-1.1
	baz=28						
Y27A	Causey	27.93	329	⇓P	P	08 24 36.7	-1.0
	baz=28,SNR=15						
JSRW	J. Sargeant Re	28.02	14	eP	P	08 24 39.0	+0.6
AMTX	Amarillo	28.02	332	eP	P	08 24 37.4	-1.1
OLIL	Olney	28.09	357	eP	P	08 24 38.2	-0.8
	comp=N,24nm,0.8s,mb4.9						
124A	Stringfield Ra	28.28	324	⇓P	P	08 24 41.1	+0.3
	baz=28,SNR=12						
Z25A	Roswell	28.29	326	⇓P	P	08 24 41.1	+0.2
	baz=28,SNR=11						
Y26A	Elida	28.30	328	⇑P	P	08 24 41.4	+0.4
	baz=28						
BLO	Bloomington	28.48	359	eP	P	08 24 41.2	-1.4
	comp=N,25nm,0.8s,mb4.9						
CBN	Corbin	28.63	15	eP	P	08 24 44.9	+1.0
	comp=N,23nm,0.6s,mb5.1						
Z24A	Sheeppen Canyo	28.69	325	⇑P	P	08 24 44.8	+0.3
	baz=29,SNR=10						
Y25A	Mesa, Roswell	28.76	327	⇓P	P	08 24 45.4	+0.2
	baz=29,SNR=9.2						
X26A	CR and CF Fran	28.78	329	⇑P	P	08 24 44.7	-0.6
	baz=29						
W27A	Bowe Ranch, En	28.82	330	⇑P	P	08 24 45.4	-0.3
	baz=29,SNR=5.5						
Y24A	Capitan	29.17	326	⇓P	P	08 24 49.0	+0.3
	baz=29,SNR=15						
MCWV	Mont Chateau	29.51	10	eP	P	08 24 51.6	0.0
Y23A	Lovelace Mesa,	29.52	325	⇓P	P	08 24 51.7	-0.2
	baz=30,SNR=12						
W25A	X Bar L Ranch,	29.64	329	⇓P	P	08 24 52.4	-0.5
	baz=30,SNR=8.0						
ACSO	Alum Creek Sta	29.67	5	eP	P	08 24 52.6	-0.6
	comp=N,65nm,0.6s,mb5.5						
V26A	Tequesquite Ra	29.76	330

baz=32
T22A Edith 32.28 328 ⇓P P 08 25 16.1 0.0
baz=32
JFWS Jewell Farm 32.41 354 eP P 08 25 15.6 -1.6
214A Organ Pipe Nat 32.52 315 ⇑P P 08 25 19.3 +1.0
baz=33
T21A Navajo Lake 32.59 327 ⇓P P 08 25 18.6 -0.3
baz=33
X17A Forest Lakes 32.64 320 ⇓P P 08 25 20.7 +1.3
baz=33,SNR=6.2
U20A Newcomb 32.68 325 ⇑P P 08 25 20.4 +0.7
baz=33
BINY Binghamton 32.75 14 eP P 08 25 20.1 -0.1
Y16A Circle Bar Ran 32.78 319 ⇓P P 08 25 20.9 +0.3
baz=33
U19A Dine' College, 33.01 325 ⇓P P 08 25 23.3 +0.7
baz=33
X16A Lo Mia Camp, P 33.09 320 ⇑P P 08 25 24.3 +0.9
baz=33,SNR=8.6
R22A Saguache, Gunn 33.13 330 ⇓P P 08 25 24.1 +0.4
baz=33,SNR=9.2
MVCO Mesa Verde 33.27 326 ⇓P P 08 25 25.8 +0.9
baz=33,SNR=5.7
MVCO Mesa Verde 33.27 326 eP P 08 25 25.4 +0.5
comp=N,12nm,0.4s,mb5.2
MVCO ePcP PcP 08 28 08.6 +1.8
T19A Beclabito 33.29 325 ⇑P P 08 25 25.4 +0.4
baz=33,SNR=8.1
Y15A Casa Rosa Ranc 33.38 318 ⇓P P 08 25 26.6 +0.7
baz=34
V17A Tonalea, Kykot 33.48 322 ⇓P P 08 25 27.6 +0.9
baz=34
X15A Humboldt 33.65 319 ⇓P P 08 25 28.9 +0.8
baz=34
Q22A Crested Butte, 33.70 330 ⇑P P 08 25 28.5 -0.1
baz=34,SNR=7.6
ISCO Idaho Springs 33.84 333 eP P 08 25 30.1 +0.4
comp=N,3.2nm,1.0s,mb4.2
TRY Troy 33.85 17 eP P 08 25 30.5 +0.7
R20A Redvale 33.93 328 ⇓P P 08 25 30.7 +0.1
baz=34
SMCO Snowmass 33.98 330 eP P 08 25 26.3 -4.7
comp=N,4.3nm,1.0s,mb4.3
T18A Mexican Hat 33.98 325 ⇑P P 08 25 31.3 +0.3
baz=34,SNR=5.4
PV01 Paradox Valley 33.99 328 eP P 08 25 32.1 +0.9
comp=N,248nm,0.8s
PV01 epP pP 08 25 41.6 +1.2
S19A Harvey Farm, M 34.01 326 ⇑P P 08 25 31.3 0.0
baz=34,SNR=9.1
ECSD EROS Data Cent 34.25 347 eP P 08 25 30.6 -2.7
PV04 Paradox Valley 34.36 327 eP P 08 25 35.6 +1.3
T17A Navajo Res., N 34.42 324 ⇓P P 08 25 34.7 -0.1
baz=34
S18A Hurst Farm, Bl 34.44 326 P P 08 25 36.0 +1.0
baz=35,SNR=8.4
V15A Kaibab Nationa 34.45 321 ⇑P P 08 25 35.7 +0.5
baz=35,SNR=7.9
R19A Curley Farm, L 34.48 327 ⇑P P 08 25 35.7 +0.4
baz=35,SNR=7.4
W14A Seligman 34.64 319 ⇓P P 08 25 37.3 +0.5
baz=35
X13A Yucca 34.75 318 ⇑P P 08 25 38.2 +0.5
baz=35
NCB Newcomb 34.85 15 eP P 08 25 37.8 -0.6
comp=N,6.3nm,0.7s,mb4.7
S17A Black Ridge (B 34.86 325 ⇓P P 08 25 38.7 0.0
baz=35
R18A Canyonlands Na 34.89 326 ⇑P P 08 25 39.2 +0.3
baz=35,SNR=5.9
V14A Boquillas Ranc 34.92 320 ⇓P P 08 25 40.2 +1.0
baz=35
P20A De Beque 34.93 329 ⇑P P 08 25 39.7 +0.5
baz=35,SNR=7.9
Q19A Hogan Spring (34.97 328 ⇓P P 08 25 39.9 +0.3
baz=35
PHWY Pilot Hill 34.99 334 eP P 08 25 39.8 +0.1
N22A Wattenberg Ran 35.02 333 ⇓P P 08 25 40.5 +0.5
baz=35
BC3 Big Chuckawall 35.31 315 ⇓P P 08 25 43.5 +0.9
baz=35
O20A White River Ci 35.34 330 ⇑P P 08 25 43.3 +0.6
baz=36,SNR=6.1
R17A Hanksville Air 35.36 326 ⇓P P 08 25 43.0 +0.1
baz=36,SNR=13
LONY Lake Ozonia 35.37 14 eP P 08 25 41.9 -1.0
comp=N,19nm,0.7s,mb5.1
N21A Black Mountain 35.48 332 ⇑P P 08 25 45.4 +1.4
baz=36,SNR=5.2
COWI Conover 35.49 356 eP P 08 25 41.4 -2.5
comp=N,12nm,0.8s,mb4.9
R16A Teasdale 35.70 325 P P 08 25 47.2 +1.4
baz=36,SNR=10
SRU San Rafael 35.75 327 ⇑P P 08 25 46.0 -0.2
baz=36,SNR=11
SRU San Rafael 35.75 327 eP P 08 25 46.2 -0.1
W12A Cal Nev Ari 35.86 318 ⇓P P 08 25 47.7 +0.4
baz=36
N20A Spence Gulch, 35.89 331 ⇑P P 08 25 47.7 +0.3
baz=36,SNR=9.2
O19A Miners Draw (B 35.90 329 ⇑P P 08 25 48.4 +0.8
baz=36
U13A Pakoon Wash 35.95 320 ⇑P P 08 25 48.5 +0.5
baz=36,SNR=6.7
P18A Preston Nutter 35.98 328 ⇑P P 08 25 48.4 +0.2
baz=36
L22A Ellis Ranch, M 36.01 334 ⇑P P 08 25 48.4 -0.1
baz=36
RWWY Rawlins 36.08 333 eP P 08 25 50.3 +1.3
M21A Separation Pea 36.08 333 ⇓P P 08 25 49.1 0.0
baz=36,SNR=5.5
V12A Nelson 36.10 319 ⇑P P 08 25 49.8 +0.5
baz=36
P17A Butcher Ranch, 36.13 327 ⇑P P 08 25 50.0 +0.5
baz=36,SNR=8.4
MSU Marysvale 36.25 324 eP P 08 25 52.5 +1.9
CCUT Cedar City 36.30 322 eP P 08 25 54.9 +3.8
O18A Roosevelt 36.32 329 ⇑P P 08 25 50.8 -0.4
baz=36,SNR=6.5
L21A Rawlins 36.37 333 ⇑P P 08 25 51.4 -0.1
baz=36
ARUT Antelope Range 36.50 322 eP P 08 25 54.6 +1.8
comp=N,3.7nm,0.7s,mb4.3
S13A Holt Ranch, En 36.62 322 ⇑P P 08 25 53.2 -0.6
baz=37
O17A Robinson Place 36.65 328 ⇓P P 08 25 53.5 -0.4
baz=37,SNR=6.6
N18A Larsen Ranch, 36.69 330 ⇑P P 08 25 53.8 -0.5
baz=37
RSSD Black Hills 36.81 338 eP P 08 25 56.8 +1.5
comp=N,5.3nm,1.1s,mb4.3
RSSD epP pP 08 26 04.0 -0.7
MPU Maple Canyon 37.00 327 eP P 08 25 58.2 +1.3
O16A Springville 37.06 327 ⇑P P 08 25 57.5 0.0
baz=37,SNR=5.1
R13A O'Grain Ranch, 37.08 322 ⇑P P 08 25 58.3 +0.7
baz=37
Q14A Sevier Lake (B 37.20 324 ⇓P P 08 25 59.8 +1.1
baz=37,SNR=6.9
T11A Corn Creek, Al 37.25 320 ⇓P P 08 25 58.6 -0.5
baz=37
JLU Jordanelle 37.32 328 eP P 08 26 00.9 +1.3
K20A Yellowstone Ra 37.35 333 ⇓P P 08 25 58.4 -1.5
baz=38,SNR=6.6
L19A Farson 37.39 331 ⇑P P 08 25 59.8 -0.4
baz=38,SNR=6.6
P14A Drum Mountains 37.49 325 ⇓P P 08 26 01.0 -0.1
baz=38,SNR=8.5
EYMN Ely 37.52 354 eP P 08 25 58.6 -2.5
M17A Scullys Gap (B 37.55 329 ⇑P P 08 26 01.3 -0.3
baz=38,SNR=12
R12A Pony Springs, 37.56 322 ⇓P P 08 26 01.8 +0.1
baz=38
L18A Fontenelle, Gr 37.58 330 ⇓P P 08 26 01.2 -0.7
baz=38,SNR=8.0
Q13A Wheeler Ranch, 37.61 323 ⇑P P 08 26 03.2 +1.0
baz=38,SNR=10
K19A Absolon Red Bu 37.72 332 ⇑P P 08 26 02.1 -0.9
baz=38
DUG Dugway 37.77 326 ⇓P P 08 26 03.8 +0.4
baz=38
DUG Dugway 37.77 326 eP P 08 26 04.7 +1.3
comp=N,4.0nm,1.0s,mb4.1
S11A Rachel 37.83 320 ⇓P P 08 26 05.0 +1.0
baz=38
FURC Furnace Creek, 37.85 318 ⇑P P 08 26 05.6 +1.4
baz=38,SNR=6.4
M16A Huntsville 37.93 328 ⇓P P 08 26 04.9 +0.1
baz=38
P13A Bates Ranch, G 37.94 324 ⇑P P 08 26 05.3 +0.4
baz=38,SNR=7.1
PDAR Pinedale Array 38.00 332 P P 08 26 04.7 -0.6
comp=N,2.5nm,0.7s,mb4.1,baz=124,slow=9.3,SNR=24
PDAR PcP PcP 08 28 21.5 +0.9
comp=N,1.2nm,0.7s,baz=148,slow=5.2,SNR=5.8
BW06 Boulder Array 38.00 332 ⇑P P 08 26 04.5 -0.8
baz=38,SNR=6.9
MPMC Manual Prospec 38.04 317 ⇑P P 08 26 06.2 +0.4
baz=38
HWUT Hardware Ranch 38.11 329 eP P 08 26 06.2 -0.1
comp=N,7.0nm,0.7s,mb4.5
K18A Toltan Ranch, 38.13 331 ⇑P P 08 26 06.5 +0.1
baz=38,SNR=14
L16A Fish Haven 38.34 329 ⇑P P 08 26 08.0 -0.3
baz=38,SNR=7.8
AGMN Agassiz Nation 38.47 350 eP P 08 26 06.8 -2.4
comp=N,12nm,0.6s,mb4.8
ISA Isabella 38.49 316 eP P 08 26 13.0 +3.4
GRAC Grapevine Rang 38.49 318 ⇑P P 08 26 09.9 +0.3
baz=39,SNR=7.9
Q11A Duckwater 38.52 322 ⇓P P 08 26 10.5 +0.7
baz=39
S10A Tonopah Range, 38.53 320 ⇓P P 08 26 11.5 +1.6
baz=39,SNR=8.4
J18A Kendall Valley 38.56 332 ⇑P P 08 26 09.2 -0.8
baz=39,SNR=14
R10A Warm Springs 38.57 321 ⇑P P 08 26 11.0 +0.8
baz=39,SNR=5.4
K17A Gardner Place, 38.63 330 ⇑P P 08 26 11.1 +0.4
baz=39
L15A Malad City 38.82 328 ⇑P P 08 26 11.9 -0.4
baz=39,SNR=5.4
I18A Diamond G Ranc 38.84 332 ⇓P P 08 26 12.0 -0.4
baz=39,SNR=6.9
HVU Hansel Valley 38.86 328 eP P 08 26 14.5 +1.9
O12A Currie 38.90 324 ⇑P P 08 26 12.8 -0.2
baz=39,SNR=5.6
M14A Sheep Mountain 38.97 327 ⇓P P 08 26 13.5 0.0
baz=39,SNR=9.2
N13A Wendover, West 38.99 326 ⇓P P 08 26 14.6 +0.8
baz=39,SNR=10
N13A Wendover, West 38.99 326 eP P 08 26 14.8 +1.1
comp=N,24nm,0.8s,mb5.0
J17A Brown Place, J 39.00 331 ⇓P P 08 26 13.6 -0.1
baz=39
VES Vestal, Richgr 39.00 315 ⇓P P 08 26 15.3 +1.4
baz=39,SNR=5.8
REDW Red Top Meadow 39.06 331 eP P 08 26 14.2 -0.1
comp=N,7.1nm,0.6s,mb4.6
LOHW Long Hollow 39.14 332 eP P 08 26 14.7 -0.2
comp=N,3.9nm,0.6s,mb4.3
LOHW epP pP 08 26 24.1 -0.2
TPAW Teton Pass 39.21 331 eP P 08 26 16.2 +0.7
L14A Malta 39.28 328 ⇑P P 08 26 15.8 -0.3
baz=39,SNR=8.4
M13A Montello 39.31 326 ⇓P P 08 26 15.6 -0.8
baz=39
M13A Montello 39.31 326 eP P 08 26 16.8 +0.3
comp=N,6.3nm,1.0s,mb4.3
O11A Cowboy Ranch, 39.34 323 ⇑P P 08 26 16.3 -0.4
baz=39
N12A Clover Valley, 39.45 325 ⇑P P 08 26 17.4 -0.2
baz=40,SNR=6.3
N12A Clover Valley, 39.45 325 eP P 08 26 18.1 +0.5
comp=N,6.7nm,0.7s,mb4.5
P10A Eureka 39.49 322 ⇓P P 08 26 18.1 +0.1
baz=40
IMW Indian Meadow 39.51 332 eP P 08 26 18.8 +0.8
K14A Jones Ranch, D 39.61 328 P P 08 26 18.6 -0.3
baz=40,SNR=14
RLMT Red Lodge 39.72 334 ⇓P P 08 26 19.0 -0.7
baz=40,SNR=6.3
RLMT Red Lodge 39.72 334 eP P 08 26 19.0 -0.7
comp=N,3.2nm,0.6s,mb4.2
M12A Wells 39.76 326 ⇑P P 08 26 20.0 -0.2
baz=40
N11A Elko Archery C 39.83 324 ⇑P P 08 26 20.2 -0.6
baz=40,SNR=7.1
J15A Blackfoot 39.86 330 ⇑P P 08 26 20.4 -0.5
baz=40,SNR=9.8
NVAR Mina Array Bea 39.92 319 P P 08 26 23.6 +2.1
comp=N,9.2nm,0.7s,mb4.6,baz=139,slow=7.6,SNR=76
NVAR PcP PcP 08 28 28.7 +2.0
comp=N,3.9nm,0.7s,baz=136,slow=4.7,SNR=12
G18A Lazy EL Ranch, 40.00 334 ⇓P P 08 26 20.3 -1.7
baz=40,SNR=8.4
K13A Stover Farm, H 40.16 328 ⇑P P 08 26 22.9 -0.5
baz=40
M11A Holland Ranch, 40.26 325 ⇓P P 08 26 23.8 -0.5
baz=40
H16A Russell Place, 40.27 332 ⇑P P 08 26 23.9 -0.5
baz=40
L12A House Creek Ra 40.31 326 ⇑P P 08 26 24.1 -0.6
baz=40
J14A Carey 40.35 329 ⇑P P 08 26 25.0 0.0
baz=40,SNR=16
ULM Lac du Bonnet 40.36 350 P P 08 26 21.9 -3.0
comp=N,8.5nm,0.8s,mb4.5,baz=163,slow=8.9,SNR=6.6
ULM PcP PcP 08 28 28.2 +0.3
comp=N,3.4nm,0.6s,baz=195,slow=4.6,SNR=3.0
ULM LR LR 08 44 55.3
comp=N,507nm,18.7s,MS4.4,baz=36,slow=39
ULM Lac du Bonnet 40.36 350 eP P 08 26 21.8 -3.1
comp=N,6.7nm,0.8s,mb4.4
GCMT Greycliff 40.42 335 eP P 08 26 25.1 -0.5
comp=N,3.4nm,0.7s,mb4.2
G17A Pierce Place, 40.52 333 ⇑P P 08 26 26.1 -0.3
baz=41
F18A Big Timber 40.53 335 ⇓P P 08 26 25.6 -0.9
baz=41,SNR=8.8
K12A Draper Farm, C 40.59 327 ⇑P P 08 26 25.9 -1.1
baz=41
DGMT Dagmar 40.68 342 ⇓P P 08 26 25.8 -1.8
baz=41,SNR=7.5
DGMT Dagmar 40.68 342 eP P 08 26 26.6 -1.0
comp=N,18nm,0.8s,mb4.8
L11A Cat Creek Ranc 40.73 326 ⇓P P 08 26 27.0 -1.1
baz=41
J13A Cove Ranch, Pi 40.73 328 ⇑P P 08 26 27.0 -1.1
baz=41
I14A Mackay 40.75 330 ⇑P P 08 26 28.3 0.0
baz=41,SNR=10
H15A Lima 40.86 331 ⇑P P 08 26 29.0 -0.1
baz=41,SNR=14
G16A Moss Hill, Enn 40.93 332 ⇓P P 08 26 29.8 +0.1
baz=41,SNR=9.9
F17A Fitzpatrick Pl 40.94 334 ⇑P P 08 26 29.0 -0.8
baz=41
HLID Hailey 40.98 328 ⇑P P 08 26 29.7 -0.4
baz=41,SNR=10
HLID Hailey 40.98 328 eP P 08 26 29.8 -0.3
comp=N,4.6nm,0.8s,mb4.2
CMB Columbia Colle 41.05 317 P P 08 26 33.4 +2.5
comp=N,4.6nm,0.9s,mb4.1
L10A Juniper Basin 41.07 325 ⇓P P 08 26 31.1 +0.1
baz=41
I13A Wildhorse Cree 41.07 329 P P 08 26 30.8 -0.1
baz=41,SNR=8.6
MCMT McKenzie Canyo 41.11 331 eP P 08 26 31.9 +0.6
comp=N,3.5nm,0.8s,mb4.0
J12A Stokes Ranch, 41.11 328 ⇑P P 08 26 30.8 -0.5
baz=41,SNR=6.2
E18A Harlowton 41.14 335 ⇓P P 08 26 31.1 -0.4
baz=41
BOZ Bozeman (W) 41.17 333 ⇓P P 08 26 30.9 -0.8
baz=41,SNR=9.2
BOZ Bozeman (W) 41.17 333 eP P 08 26 31.1 -0.6
comp=N,3.1nm,0.7s,mb4.0
BOZ epP pP 08 26 40.9 -0.2
BOZ ePcP PcP 08 28 32.2 +1.7
G15A Dillon 41.20 332 ⇓P P 08 26 31.7 -0.3
baz=41,SNR=9.9
H14A Leadore 41.21 330 ⇓P P 08 26 32.1 0.0
baz=41,SNR=9.4
K11A Parker Ranch, 41.29 326 ⇑P P 08 26 32.7 0.0
baz=41,SNR=7.9
WCN Washoe City 41.35 320 ⇑P P 08 26 33.6 +0.3
baz=41
DLMT Dillon 41.39 332 eP P 08 26 34.2 +0.6
comp=N,11nm,1.4s,mb4.3
I12A Atlanta 41.51 328 ⇓P P 08 26 34.1 -0.4
baz=42
D18A Linhart Farms, 41.60 336 ⇑P P 08 26 34.7 -0.6
baz=42,SNR=10
H13A Challis 41.61 330 ⇑P P 08 26 34.4 -0.9
baz=42
MFID Camas Ranch 41.61 327 ⇓P P 08 26 35.1 -0.4
baz=42
LRM Limekiln Ridge 41.67 332 eP P 08 26 35.9 +0.1
comp=N,27nm,0.9s,mb4.9
LRM epP pP 08 26 45.4 +0.1
LRM ePcP PcP 08 28 34.2 +1.9
F15A Butte 41.70 332 ⇑P P 08 26 35.9 -0.2
baz=42,SNR=6.4
K10A MacKenzie Ranc 41.76 326 ⇓P P 08 26 36.8 +0.2
baz=42,SNR=6.7
D17A Six Diamond Ra 41.93 335 ⇓P P 08 26 37.7 -0.3
baz=42,SNR=9.9
I11A Placerville 42.02 328 ⇓P P 08 26 39.0 +0.2
baz=42
BEKR Beckworth 42.05 320 ⇑P P 08 26 39.4 +0.4
baz=42,SNR=11
E15A Deer Lodge 42.22 333 ⇓P P 08 26 39.7 -0.6
baz=42,SNR=7.6
EGMT Eagleton 42.25 336 ⇓P P 08 26 39.4 -1.1
baz=42,SNR=5.6
EGMT Eagleton 42.25 336 eP P 08 26 39.7 -0.9
comp=N,5.3nm,0.7s,mb4.3
EGMT ePcP PcP 08 28 34.8 +0.7
C17A Wharram Farm, 42.34 335 ⇑P P 08 26 41.0 -0.3
baz=42
F13A Darby 42.53 331 ⇓P P 08 26 41.9 -0.9
baz=43,SNR=9.1
WVOR Wild Horse Val 42.53 324 eP P 08 26 42.8 -0.2
comp=N,9.6nm,0.7s,mb4.6
WVOR epP pP 08 26 53.0 +0.6
WVOR ePcP PcP 08 28 37.9 +2.8
G12A Big Creek, Yel 42.54 329 ⇑P P 08 26 42.5 -0.5
baz=43
B18A Beardsley Farm 42.56 337 ⇑P P 08 26 42.2 -0.8
baz=43
I10A Payette 42.59 327 ⇑P P 08 26 42.8 -0.6
baz=43
H11A Donnelly 42.59 328 ⇓P P 08 26 42.6 -0.8
baz=43,SNR=8.5
E14A Clinton 42.60 332 ⇑P P 08 26 42.6 -0.8
baz=43,SNR=5.9
J09A Fry Pan Ranch, 42.62 326 ⇑P P 08 26 43.5 -0.1
baz=43,SNR=17
D15A Lincoln 42.63 333 ⇓P P 08 26 43.2 -0.5
baz=43
CHMT Chamberlain Mo 42.86 333 eP P 08 26 45.6 +0.1
comp=N,1.5nm,0.7s,mb3.8
B17A L&G Farms, Che 42.88 336 ⇓P P 08 26 45.2 -0.5
baz=43
H10A Noah's Angus R 42.90 328 ⇓P P 08 26 44.8 -1.1
baz=43,SNR=6.8
E13A Victor 42.94 332 ⇓P P 08 26 45.4 -0.8
baz=43,SNR=11
F12A Elk City 42.95 330 ⇑P P 08 26 45.4 -0.8
baz=43,SNR=12
A18A Metzger Ranch, 43.02 337 ⇓P P 08 26 45.7 -1.0
baz=43,SNR=5.9
I09A Lost Marbles R 43.02 326 ⇑P P 08 26 46.4 -0.4
baz=43,SNR=9.6
J08A Circle Bar Ran 43.03 325 ⇑P P 08 26 46.9 0.0
baz=43,SNR=6.9
D14A Greenough 43.10 333 ⇑P P 08 26 47.1 -0.4
baz=43
MSO Missoula 43.11 332 eP P 08 26 47.5 -0.1
comp=N,2.0nm,0.7s,mb4.0
G11A Walters Elk Ra 43.21 329 ⇑P P 08 26 47.4 -0.9
baz=43
BMO Blue Mountains 43.37 328 eP P 08 26 48.5 -1.2
comp=N,2.3nm,0.8s,mb4.0
H09A Durkee 43.44 327 ⇓P P 08 26 49.4 -0.8
baz=44,SNR=5.1
F11A Grangeville 43.49 330 ⇓P P 08 26 49.7 -0.9
baz=44
D13A Huson 43.55 332 ⇓P P 08 26 50.5 -0.5
baz=44,SNR=5.8
G10A Bishop Farm, J 43.57 328 ⇓P P 08 26 50.2 -1.1
baz=44
E12A Beaver Dam Sad 43.58 331 ⇑P P 08 26 50.2 -1.1
baz=44
B15A Bradely Ranch, 43.63 335 ⇓P P 08 26 50.3 -1.4
baz=44
G09A Cove 43.91 328 ⇓P P 08 26 53.4 -0.6
baz=44
D12A Red Ives Fores 43.93 331 ⇓P P 08 26 52.7 -1.5
baz=44
B14A Marquette Ranc 43.97 334 ⇑P P 08 26 53.9 -0.6
baz=44
I07A Izee 44.06 325 ⇓P P 08 26 54.2 -1.1
baz=44
F10A Beach Ranch, E 44.09 329 ⇑P P 08 26 54.4 -1.0
baz=44
A15A Johnson Ranch, 44.22 335 ⇑P P 08 26 55.5 -0.9
baz=44,SNR=18
A14A Double T Ranch 44.50 335 ⇑P P 08 26 58.0 -0.7
baz=45,SNR=8.2
B13A Whitefish 44.50 333 ⇓P P 08 26 58.4 -0.3
baz=45,SNR=7.3
D10A Wagner Farm, O 44.86 330 ⇓P P 08 27 01.1 -0.5
baz=45
C11A Tepee Creek (N 44.92 331 ⇓P P 08 27 01.3 -0.7
baz=45
HAWA Hanford 45.56 328 eP P 08 27 06.7 -0.5
comp=N,7.5nm,0.8s,mb4.7
HAWA epP pP 08 27 16.0 -0.6
H04A Detroit Lake 45.95 324 ⇓P P 08 27 10.5 +0.3
baz=46
CPUP Villa Florida 46.19 143 P P 08 27 13.2 +0.9
comp=N,1.8nm,0.7s,mb4.1,baz=309,slow=10.0,SNR=4.2
SCHQ Schefferville 46.73 15 P P 08 27 13.4 -2.8
comp=N,14nm,0.7s,mb5.0,baz=220,slow=6.3,SNR=22
SCHQ LR LR 08 47 36.3
comp=N,911nm,18.5s,MS4.8,baz=214,slow=37
SCHQ Schefferville 46.73 15 eP P 08 27 13.7 -2.5
comp=N,14nm,0.8s,mb4.9
SCHQ epP pP 08 27 22.8 -3.0
LON Longmire 47.00 327 eP P 08 27 17.5 -1.0
comp=N,4.0nm,0.7s,mb4.5
EDM Edmonton 47.80 338 eP P 08 27 22.8 -1.7
EDM epP pP 08 27 31.3 -2.8
RPW Rockport 47.92 329 eP P 08 27 23.2 -2.3
comp=N,3.1nm,0.6s,mb4.5
JCW Jim Creek 47.97 328 eP P 08 27 25.0 -0.9
comp=N,6.0nm,0.6s,mb4.8
JCW ePcP PcP 08 28 54.3 +0.4
PLCA Paso Flores 53.06 165 P P 08 28 06.7 +2.3
comp=N,6.2nm,1.1s,mb4.5,baz=340,slow=14,SNR=3.3
YKA Yellowknife Ar 55.73 344 P P 08 28 21.4 -2.2
comp=N,2.4nm,0.7s,mb4.3,baz=138,slow=7.2,SNR=17
YKA PcP PcP 08 29 22.2 -0.4
comp=N,1.7nm,0.7s,baz=144,slow=4.2,SNR=11
YKA LR LR 08 56 35.1
comp=N,58nm,20.1s,MS3.7,baz=165,slow=41
YKA Yellowknife Ar 55.73 344 P P 08 28 21.4 -2.2
YKA PcP PcP 08 29 22.2 -0.4
YKA LR LR 08 56 35.1
DLBC Dease Lake 58.12 335 eP P 08 28 40.0 -0.6
DLBC epP pP 08 28 49.4 -1.0
DLBC ePcP PcP 08 29 32.7 +0.7
RES Resolute Bay 64.27 357 eP P 08 29 19.3 -2.7
comp=N,4.9nm,0.6s,mb4.7
INK Inuvik 65.35 342 eP P 08 29 27.7 -1.4
comp=N,7.4nm,1.1s,mb4.6
INK epP pP 08 29 37.1 -1.9
EGAK Eagle 66.01 337 eP P 08 29 32.5 -1.0
comp=N,3.1nm,0.9s,mb4.3
PAX Paxson 66.94 335 eP P 08 29 38.3 -1.1
comp=N,1.5nm,0.6s,mb4.2
PAX epP pP 08 29 47.3 -2.0
PAX ePcP PcP 08 30 07.5 -0.3
MCK McKinley 68.67 335 eP P 08 29 48.5 -1.8
comp=N,10nm,1.0s,mb4.7
MCK epP pP 08 29 58.3 -2.0
TRF Thorofare Moun 69.15 334 eP P 08 29 52.6 -0.7
comp=N,11nm,1.0s,mb4.7
TRF epP pP 08 30 01.8 -1.5
KTH Kantishna Hill 69.45 334 eP P 08 29 54.1 -1.1
comp=N,2µm,0.8s
KTH epP pP 08 30 02.5 -2.6
BPAW Bear Paw Mtn. 69.65 335 eP P 08 29 55.1 -1.3
comp=N,11nm,1.0s,mb4.7
BPAW epP pP 08 30 04.2 -2.1
PPLA Purkeypile 69.80 334 eP P 08 29 56.4 -0.9
comp=N,11nm,1.0s,mb4.8
PPLA epP pP 08 30 05.5 -1.8
SVW2 Sparrevohn 70.88 331 eP P 08 30 03.0 -1.0
TTA Tatalina 71.50 333 eP P 08 30 06.3 -1.4
UNV Unalaska Valle 75.82 323 eP P 08 30 32.8 -0.5

comp=N,12nm,0.5s,mb5.1
UNV *e*pP pP 08 30 42.9 -0.4
UNV *e*sP sP 08 30 46.2 -0.8
ESDC Sonseca Array 77.38 52 P **P 08 30 40.4 -1.9**
comp=N,0.6nm,0.6s,mb3.7,baz=287,slow=6.0,SNR=5.4
TORD Torodi Ar. Bea 85.61 78 P **P 08 31 23.9 -2.4**
comp=N,0.5nm,0.5s,mb4.0,baz=286,slow=4.9,SNR=8.0
TORD Torodi Ar. Bea 85.61 78 P **P 08 31 23.9 -2.4**
TIXI Tiksi 94.70 349 *e*P **P 08 32 06.2 -1.8**
comp=N,2.8nm,0.6s,mb4.9
ZALV Zalesovo Beam 115.28 6 PKP PKPdf 08 37 27.6 -1.0
comp=N,0.6nm,0.5s,baz=271,slow=2.1,SNR=4.2
MDJ Mudanjiang 116.23 332 PKP PKPdf 08 37 30.4 -0.3
MDJ AMB AMB
comp=Z,75nm,4.8s
CN2 Changchun 118.71 334 *e*PKP PKPdf 08 37 35.6 +0.1
CN2 PP PP 08 38 57.3 +4.7
CN2 LR LR
comp=N,400nm,11.0s,MS5.5
CN2 LR LR
comp=E,400nm,11.0s,MS5.5
CN2 LR LR
comp=Z,300nm,12.0s,MS5.1
MKAR Makanchi Array 121.97 9 PKP PKPdf 08 37 40.0 -1.6
comp=Z,0.7nm,0.8s,baz=32,slow=7.1,SNR=4.9
KSRS Korea Array 122.51 328 PKP PKPdf 08 37 44.2 +1.2
comp=Z,2.9nm,0.7s,baz=360,slow=1.5,SNR=13
AML Almayashu 124.40 18 *e*PKPdf PKPdf 08 37 46.8 +0.3
UCH Uchtor 124.55 17 *e*PKPdf PKPdf 08 37 47.5 +0.7
BJI Beijing 125.54 339 PKP PKPdf 08 37 49.4 +0.7
BJI PP PP 08 39 39.3 +0.5
BJI SKS SKSdf 08 44 57.9 -0.6
BJI SS SS 08 56 37.0 +1.9
BJI AMB AMB
comp=Z,150nm,4.1s
BJI LR LR
comp=N,360nm,25.4s,MS5.3
BJI LR LR
comp=E,690nm,23.5s,MS5.3
BJI LR LR
comp=Z,1μm,30.9s
WMQ Urumqi 125.58 5 *e*PKP PKPdf 08 37 49.0 +0.3
HHC Hu-ho-hao-te 126.27 343 *e*PKP PKPdf 08 37 49.5 -0.6
HHC sPKP 08 38 03.9
HHC PP PP 08 39 48.4 +4.8
HHC PKS 08 41 24.5
HHC SKS SKSdf 08 44 56.5 -3.3
HHC SKKS SKKSac 08 46 35.6 -5.0
HHC SS SS 08 56 44.6 +0.6
HHC AMB AMB
comp=Z,36nm,3.8s
HHC LR LR
comp=N,220nm,20.4s,MS5.0
HHC LR LR
comp=E,260nm,20.4s,MS5.0
HHC LR LR
comp=Z,250nm,22.8s,MS4.8
GTA Gaotai 129.96 354 PKP PKPdf 08 37 57.8 +0.6
GTA PP PP 08 40 13.8 +6.1
GTA PKS 08 41 33.4
GTA SKS SKSdf 08 45 04.4 -2.3
GTA SKKS SKKSac 08 47 00.3 -3.5
GTA SS SS 08 57 29.9 +0.4
GTA AMB AMB
comp=Z,110nm,6.0s
GTA LR LR
comp=N,260nm,16.5s,MS5.1
GTA LR LR
comp=E,260nm,21.3s,MS5.1
GTA LR LR
comp=Z,410nm,27.3s
STKA Stephens Creek 131.14 237 PKP PKPdf 08 38 01.2 +1.7
comp=Z,1.5nm,0.9s,baz=260,slow=8.3,SNR=3.7
NJ2 Nanjing 131.31 331 *e*PKP PKPdf 08 38 00.1 +0.1
LZH Lanzhou 132.63 349 *e*PKP PKPdf 08 38 03.5 +1.2
LZH sPKP 08 38 17.8
LZH LR LR
comp=N,180nm,18.5s
LZH LR LR
comp=Z,260nm,20.3s,MS4.9
CD2 Chengdu 137.66 347 *e*PKP PKPdf 08 38 10.8 -1.1
CD2 sPKP 08 38 25.0
CD2 PP PP 08 40 59.1 +2.3
CD2 PKS 08 41 45.5
CD2 SKS SKSdf 08 45 16.1 -4.5
CD2 SKKS SKKSac 08 47 45.8 -4.9
CD2 SS SS 08 59 00.4 -2.4
CD2 AMB AMB
comp=Z,80nm,10.2s
CD2 LR LR
comp=N,130nm,16.8s
CD2 LR LR
comp=Z,120nm,14.8s,MS4.8
ASAR Alice Springs 139.68 246 PKP PKPdf 08 38 15.8 +0.1
comp=Z,0.6nm,0.6s,baz=100,slow=2.5,SNR=7.8
WRA Warramunga Arr 139.89 252 PKP PKPdf 08 38 15.7 -0.5
comp=Z,1.3nm,0.8s,baz=94,slow=2.8,SNR=11
KMI Kunming 143.47 346 PKP PKPdf 08 38 21.9 -0.6
KMI pPKP pPKPdf 08 38 31.4 -1.6
KMI sPKP 08 38 35.4
KMI PP PP 08 41 35.5 +3.1
KMI SS SS 09 00 09.8 -0.9
KMI AMB AMB
comp=Z,67nm,4.5s
KMI LR LR
comp=N,410nm,44.3s
KMI LR LR
comp=E,220nm,34.1s
KMI LR LR
comp=Z,380nm,40.9s,MS4.8
CMAR Chiang Mai Arr 150.71 350 PKP PKPdf 08 38 36.1 +1.4
comp=Z,4.0nm,0.8s,baz=22,slow=2.3,SNR=4.4
CMAR PKPbc PKPbc 08 38 40.0 -0.2
comp=Z,3.8nm,0.8s,baz=328,slow=2.6,SNR=15

CSEM ***15*** *08:26:06.6±0.3, 32°.57N×4°.65W, h10km, MD3.8, Error ellipse: s-maj=6.1km s-min=4.4km az=105.0*
CNRM ***15*** *08:26:07.2, 32°.55N×4°.61W, h0km, MD3.8*
MDD ***15*** *08:26:07.4±0.5, 32°.54N×4°.68W, h0km, mb4.0/8, Error ellipse: s-maj=6.9km s-min=3.8km az=68.0, PRIMO*
NEIC ***15*** *08:26:07.3±0.8, 32°.50N×4°.77W, h10km, ML3.7(CNRM), Error ellipse: s-maj=10.6km s-min=9.1km az=80.0*
INMG ***15*** *08:26:13.5±1.3, 32°.62N×4°.90W, h90km, ML2.5, Error ellipse: s-maj=10.5km s-min=9.4km az=95.0*
ISC 15 08:26:08.5±1.0, 32°.64N±0°.04×4°.71W±0°.05, h15km±5km, n89, σ1.31/154, Morocco

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CZD	**Col de Zad**	**0.48**	**324**	*i* P	**Pg**	**08 26 18.0**	**-0.1**
CZD				*i* S	**Sg**	**08 26 25.0**	**+0.5**
CZD	**Col de Zad**	**0.48**	**324**	P	**Pg**	**08 26 17.5**	**-0.6**
CZD				S	**Sg**	**08 26 26.0**	**+1.5**
CZD	**Col de Zad**	**0.48**	**324**	P	**Pg**	**08 26 17.5**	**-0.6**
CZD				S	**Sg**	**08 26 26.0**	**+1.5**
CZD	**Col de Zad**	**0.48**	**324**	*i* P	**Pg**	**08 26 18.0**	**-0.1**
CZD				*i* S	**Sg**	**08 26 26.0**	**+1.5**
ZFT	**Errachidia**	**0.68**	**153**	*i* P	**Pg**	**08 26 18.0**	**-3.7**
ZFT				*i* S	**Sg**	**08 26 25.0**	**-5.7**
ZFT	**Errachidia**	**0.68**	**153**	P	**Pg**	**08 26 17.5**	**-4.2**
ZFT				S	**Sg**	**08 26 26.0**	**-4.7**
ZFT	**Errachidia**	**0.68**	**153**	P	**Pg**	**08 26 17.5**	**-4.2**
ZFT				S	**Sg**	**08 26 26.0**	**-4.7**
ZFT	**Errachidia**	**0.68**	**153**	*i* P	**Pg**	**08 26 18.0**	**-3.7**
ZFT				*i* S	**Sg**	**08 26 25.0**	**-5.7**
KIB	**El Ksiba**	**1.12**	**267**	*i* P	**Pb**	**08 26 29.0**	**-0.6**
KIB				*i* S	**Sb**	**08 26 43.0**	**-1.1**
KIB	**El Ksiba**	**1.12**	**267**	P	**Pb**	**08 26 28.0**	**-1.6**
KIB				S	**Sb**	**08 26 48.0**	**+3.9**
KIB	**El Ksiba**	**1.12**	**267**	P	**Pb**	**08 26 28.0**	**-1.6**
KIB				S	**Sb**	**08 26 48.0**	**+3.9**
KIB	**El Ksiba**	**1.12**	**267**	*i* P	**Pb**	**08 26 29.0**	**-0.6**
KIB				*i* S	**Sb**	**08 26 43.0**	**-1.1**
TZK	**Tazeka**	**1.51**	**17**	*i* P	**Pn**	**08 26 36.0**	**+1.0**
TZK				*i* S	**Sn**	**08 26 54.0**	**-0.4**
TZK	**Tazeka**	**1.51**	**17**	P	**Pn**	**08 26 36.0**	**+1.0**
TZK				S	**Sn**	**08 26 57.0**	**+2.6**
TZK	**Tazeka**	**1.51**	**17**	P	**Pn**	**08 26 36.0**	**+1.0**
TZK				S	**Sn**	**08 26 57.0**	**+2.6**
TZK	**Tazeka**	**1.51**	**17**	*i* P	**Pn**	**08 26 36.0**	**+1.0**
TZK				*i* S	**Sn**	**08 26 54.0**	**-0.4**
TZC	**Tazercounte**	**1.58**	**252**	*i* P	**Pn**	**08 26 35.0**	**-1.0**
TZC				*i* S	**Sn**	**08 26 58.0**	**+1.8**
TZC	**Tazercounte**	**1.58**	**252**	P	**Pn**	**08 26 36.0**	**0.0**
TZC				S	**Sn**	**08 26 58.0**	**+1.8**
TZC	**Tazercounte**	**1.58**	**252**	P	**Pn**	**08 26 36.0**	**0.0**
TZC				S	**Sn**	**08 26 58.0**	**+1.8**
TZC	**Tazercounte**	**1.58**	**252**	*i* P	**Pn**	**08 26 35.0**	**-1.0**
TZC				*i* S	**Sn**	**08 26 58.0**	**+1.8**
OUK	**Oukaimeden**	**3.04**	**243**	P	**Pn**	**08 26 55.0**	**-1.1**
OUK				S	**Sn**	**08 27 32.0**	**-0.2**
OUK	**Oukaimeden**	**3.04**	**243**	P	**Pn**	**08 26 55.0**	**-1.1**
OUK				S	**Sn**	**08 27 32.0**	**-0.2**
OUK	**Oukaimeden**	**3.04**	**243**	*i* P	**Pn**	**08 26 55.0**	**-1.1**
OUK				*i* S	**Sn**	**08 27 32.0**	**-0.2**
CIA	**Chichaoua**	**3.60**	**254**	*i* S	**Sn**	**08 27 47.0**	**+1.0**
EMIJ	**Mijas**	**3.91**	**359**	P	**Pn**	**08 27 10.3**	**+2.2**
EMIJ				S	**Sn**	**08 27 54.0**	**+0.3**
EMIJ	**Mijas**	**3.91**	**359**	P	**Pn**	**08 27 10.3**	**+2.2**
3.4nm,0.8s,SNR=7.9							
EMIJ				S	**Sn**	**08 27 54.0**	**+0.3**
2.2nm,0.3s,SNR=7.9							
EMIJ	**Mijas**	**3.91**	**359**	P	**Pn**	**08 27 10.3**	**+2.2**
3.4nm,0.8s,SNR=7.9							
EMIJ				S	**Sn**	**08 27 54.0**	**+0.3**
2.2nm,0.3s,SNR=7.9							
EMIJ	**Mijas**	**3.91**	**359**	P	**Pn**	**08 27 10.3**	**+2.2**
3.4nm,0.8s,SNR=7.9							
EMIJ				S	**Sn**	**08 27 54.0**	**+0.2**
2.2nm,0.3s,SNR=7.9							
JHA	**Jbel Lahdid**	**4.12**	**259**	P	**Pn**	**08 27 11.0**	**+0.1**
JHA				S	**Sn**	**08 28 00.0**	**+1.1**
JHA	**Jbel Lahdid**	**4.12**	**259**	P	**Pn**	**08 27 11.0**	**+0.1**
JHA				S	**Sn**	**08 28 00.0**	**+1.1**
JHA	**Jbel Lahdid**	**4.12**	**259**	*i* P	**Pn**	**08 27 11.0**	**+0.1**
JHA				*i* S	**Sn**	**08 28 00.0**	**+1.1**
EGUA	**Guajares**	**4.29**	**12**	P	**Pn**	**08 27 15.5**	**+2.3**
EGUA				S	**Sn**	**08 28 03.6**	**+0.7**
EGUA	**Guajares**	**4.29**	**12**	P	**Pn**	**08 27 15.5**	**+2.3**
3.3nm,0.4s,SNR=4.0							
EGUA				S	**Sn**	**08 28 03.6**	**+0.7**
7.1nm,0.4s,SNR=7.9							
EGUA	**Guajares**	**4.29**	**12**	P	**Pn**	**08 27 15.5**	**+2.3**
3.3nm,0.4s,SNR=4.0							
EGUA				S	**Sn**	**08 28 03.6**	**+0.7**
7.1nm,0.4s,SNR=7.9							
EGUA	**Guajares**	**4.29**	**12**	P	**Pn**	**08 27 15.5**	**+2.3**
3.3nm,0.4s,SNR=4.0							
EGUA				S	**Sn**	**08 28 03.6**	**+0.6**
7.1nm,0.4s,SNR=7.9							
ESPR	**Espera**	**4.32**	**348**	P	**Pn**	**08 27 16.9**	**+3.2**
ESPR				S	**Sn**	**08 28 01.8**	**-2.0**
ESPR	**Espera**	**4.32**	**348**	P	**Pn**	**08 27 15.7**	**+2.1**
3.2nm,0.5s,SNR=4.7							
ESPR				S	**Sn**	**08 28 01.8**	**-2.0**
2.6nm,0.3s,SNR=7.9							
ESPR	**Espera**	**4.32**	**348**	P	**Pn**	**08 27 15.7**	**+2.1**
3.2nm,0.5s,SNR=4.7							
ESPR				S	**Sn**	**08 28 01.8**	**-2.0**
2.6nm,0.3s,SNR=7.9							
ESPR	**Espera**	**4.32**	**348**	P	**Pn**	**08 27 16.9**	**+3.2**
3.2nm,0.5s,SNR=4.7							
ESPR				S	**Sn**	**08 28 01.8**	**-2.0**
2.6nm,0.3s,SNR=7.9							
EBER	**Berja**	**4.50**	**19**	P	**Pn**	**08 27 19.6**	**+3.4**
EBER				S	**Sn**	**08 28 08.1**	**-0.2**
EBER	**Berja**	**4.50**	**19**	S	**Sn**	**08 28 08.1**	**-0.2**
2.0nm,0.4s,SNR=7.9							
EBER	**Berja**	**4.50**	**19**	S	**Sn**	**08 28 08.1**	**-0.2**
2.0nm,0.4s,SNR=7.9							
EBER	**Berja**	**4.50**	**19**	P	**Pn**	**08 27 19.6**	**+3.4**
EBER				S	**Sn**	**08 28 08.1**	**-0.2**
2.0nm,0.4s,SNR=7.9							
PBDV	**Barranco-do-Ve**	**5.30**	**331**	*e*P	**Pn**	**08 27 26.6**	**-0.5**
PBDV				*e*S	**Sn**	**08 28 23.7**	**-4.2**
PBDV				A		08 28 35.1	
3.8nm,0.4s							
PBDV	**Barranco-do-Ve**	**5.30**	**331**	*e*P	**Pn**	**08 27 26.6**	**-0.5**
PVAQ	**Vaqueiros**	**5.35**	**333**	*e*P	**Pn**	**08 27 26.8**	**-1.0**
PVAQ				*e*S	**Sn**	**08 28 24.8**	**-4.4**
PVAQ				A		08 28 31.3	
6.3nm,0.3s							
PVAQ	**Vaqueiros**	**5.35**	**333**	*e*P	**Pn**	**08 27 26.8**	**-1.0**
EMIN	**Mina Concepcio**	**5.36**	**343**	P	**Pn**	**08 27 29.7**	**+1.8**
EMIN				S	**Sn**	**08 28 25.1**	**-4.3**
EMIN	**Mina Concepcio**	**5.36**	**343**	P	**Pn**	**08 27 29.7**	**+1.8**
1.3nm,0.2s,SNR=9.4							
EMIN				S	**Sn**	**08 28 27.7**	**-1.7**
0.5nm,0.2s,SNR=7.9							
EMIN	**Mina Concepcio**	**5.36**	**343**	P	**Pn**	**08 27 29.7**	**+1.8**
1.3nm,0.2s,SNR=9.4							
EMIN				S	**Sn**	**08 28 27.7**	**-1.7**
0.5nm,0.2s,SNR=7.9							
EMIN	**Mina Concepcio**	**5.36**	**343**	P	**Pn**	**08 27 29.7**	**+1.8**
1.3nm,0.2s,SNR=9.4							
EGRO	**El Granado**	**5.38**	**336**	P	**Pn**	**08 27 27.7**	**-0.6**
EGRO				S	**Sn**	**08 28 25.4**	**-4.6**
EGRO	**El Granado**	**5.38**	**336**	P	**Pn**	**08 27 27.7**	**-0.6**
5.2nm,0.3s,SNR=13							
EGRO				S	**Sn**	**08 28 29.0**	**-1.0**
11nm,0.5s,SNR=7.9							
EGRO	**El Granado**	**5.38**	**336**	P	**Pn**	**08 27 27.7**	**-0.6**
5.2nm,0.3s,SNR=13							
EGRO				S	**Sn**	**08 28 29.0**	**-1.0**
11nm,0.5s,SNR=7.9							
EGRO	**El Granado**	**5.38**	**336**	P	**Pn**	**08 27 27.7**	**-0.6**
5.2nm,0.3s,SNR=13							
ECAB	**El Cabril**	**5.45**	**354**	P	**Pn**	**08 27 32.2**	**+3.0**
ECAB				S	**Sn**	**08 28 28.6**	**-3.1**
ECAB	**El Cabril**	**5.45**	**354**	P	**Pn**	**08 27 32.2**	**+3.0**
0.3nm,0.1s,SNR=7.9							
ECAB				S	**Sn**	**08 28 31.8**	**+0.2**
2.1nm,0.3s,SNR=7.9							
ECAB	**El Cabril**	**5.45**	**354**	P	**Pn**	**08 27 32.2**	**+3.0**
0.3nm,0.1s,SNR=7.9							
ECAB				S	**Sn**	**08 28 31.8**	**+0.2**
2.1nm,0.3s,SNR=7.9							
EADA	**Adamuz**	**5.51**	**1**	P	**Pn**	**08 27 31.4**	**+1.4**
EADA				S	**Sn**	**08 28 30.3**	**-2.9**
EADA	**Adamuz**	**5.51**	**1**	P	**Pn**	**08 27 31.4**	**+1.4**
1.1nm,0.4s,SNR=7.9							
EADA				S	**Sn**	**08 28 30.3**	**-2.9**
0.4nm,0.2s,SNR=7.9							
EADA	**Adamuz**	**5.51**	**1**	P	**Pn**	**08 27 31.4**	**+1.4**
1.1nm,0.4s,SNR=7.9							
EADA				S	**Sn**	**08 28 30.3**	**-2.9**
0.4nm,0.2s,SNR=7.9							
EADA	**Adamuz**	**5.51**	**1**	P	**Pn**	**08 27 31.4**	**+1.3**
1.1nm,0.4s,SNR=7.9							
PFVI	**Vila Bisbo**	**5.61**	**324**	P	**Pn**	**08 27 31.0**	**-0.4**
PFVI				S	**Sn**	**08 28 30.9**	**-4.8**
PFVI	**Vila Bisbo**	**5.61**	**324**	P	**Pn**	**08 27 31.0**	**-0.4**
3.7nm,0.3s,SNR=7.9							
PFVI				S	**Sn**	**08 28 34.5**	**-1.2**
1.2nm,0.2s,SNR=7.9							
PFVI	**Vila Bisbo**	**5.61**	**324**	P	**Pn**	**08 27 31.0**	**-0.4**
3.7nm,0.3s,SNR=7.9							
PFVI				S	**Sn**	**08 28 34.5**	**-1.2**
1.2nm,0.2s,SNR=7.9							
PFVI	**Vila Bisbo**	**5.61**	**324**	*e*P	**Pn**	**08 27 32.0**	**+0.6**
PFVI				*e*S	**Sn**	**08 28 34.8**	**-0.9**
PFVI				A		08 28 41.5	
9.2nm,0.7s							
PFVI	**Vila Bisbo**	**5.61**	**324**	P	**Pn**	**08 27 31.0**	**-0.4**
3.7nm,0.3s,SNR=7.9							
PFVI				*e*S	**Sn**	**08 28 34.8**	**-0.9**
9.2nm,0.7s							
PCVE	**Castro Verde**	**5.68**	**332**	*e*P	**Pn**	**08 27 29.0**	**-3.3**
PCVE				*e*S	**Sn**	**08 28 29.9**	**-7.3**
PCVE				A		08 28 36.3	
3.3nm,0.9s							
PBAR	**Barrancos**	**5.84**	**342**	*e*P	**Pn**	**08 27 34.5**	**0.0**
PBAR				*e*S	**Sn**	**08 28 36.1**	**-5.1**
PBAR	**Barrancos**	**5.84**	**342**	*e*P	**Pn**	**08 27 34.5**	**0.0**
EBAD	**Badajoz**	**6.38**	**344**	P	**Pn**	**08 27 42.9**	**+0.9**
EBAD				S	**Sn**	**08 28 50.4**	**-4.2**
EBAD	**Badajoz**	**6.38**	**344**	P	**Pn**	**08 27 42.9**	**+0.9**
1.9nm,0.2s,SNR=8.6							
EBAD				S	**Sn**	**08 28 53.8**	**-0.8**
2.0nm,0.3s,SNR=7.9							
EBAD	**Badajoz**	**6.38**	**344**	P	**Pn**	**08 27 42.9**	**+0.9**
1.9nm,0.2s,SNR=8.6							
EBAD				S	**Sn**	**08 28 53.8**	**-0.8**
2.0nm,0.3s,SNR=7.9							
EBAD	**Badajoz**	**6.38**	**344**	P	**Pn**	**08 27 42.9**	**+0.9**
1.9nm,0.2s,SNR=8.6							
EVO	**Evora**	**6.46**	**336**	*e*S	**Sn**	**08 28 52.8**	**-3.8**
EVO				A		08 28 58.6	
3.3nm,0.3s							
PESTR	**Estremoz**	**6.64**	**340**	*e*P	**Pn**	**08 27 49.4**	**+3.9**
PESTR				*e*S	**Sn**	**08 28 56.6**	**-4.3**
PESTR				A		08 28 59.1	
2.0nm,0.5s							
PMRV	**Marv??o**	**7.11**	**343**	*e*P	**Pn**	**08 27 52.0**	**0.0**
PMRV	**Marv??o**	**7.11**	**343**	*e*P	**Pn**	**08 27 52.0**	**0.0**
PCBR	**Castelo Branco**	**7.52**	**344**	*e*P	**Pn**	**08 27 56.3**	**-1.3**
PCBR	**Castelo Branco**	**7.52**	**344**	*e*P	**Pn**	**08 27 56.3**	**-1.3**
MVO	**Moncorvo**	**8.71**	**348**	P	**Pn**	**08 28 13.6**	**-0.3**
MVO	**Moncorvo**	**8.71**	**348**	P	**Pn**	**08 28 13.6**	**-0.3**
3.1nm,0.3s,SNR=7.9							
MVO	**Moncorvo**	**8.71**	**348**	P	**Pn**	**08 28 13.6**	**-0.3**
3.1nm,0.3s,SNR=7.9							
MVO	**Moncorvo**	**8.71**	**348**	*e*P	**Pn**	**08 28 13.6**	**-0.3**
MVO	**Moncorvo**	**8.71**	**348**	P	**Pn**	**08 28 13.6**	**-0.3**
3.1nm,0.3s,SNR=7.9							
ELOB	**Lobios**	**9.59**	**345**	P	**Pn**	**08 28 25.5**	**-0.4**
ELOB	**Lobios**	**9.59**	**345**	P	**Pn**	**08 28 25.5**	**-0.4**
0.9nm,0.2s,SNR=4.9							
ELOB	**Lobios**	**9.59**	**345**	P	**Pn**	**08 28 25.5**	**-0.4**
0.9nm,0.2s,SNR=4.9							
ELOB	**Lobios**	**9.59**	**345**	P	**Pn**	**08 28 25.5**	**-0.4**
0.9nm,0.2s,SNR=4.9							

IDC ***15*** *08:37:16.0±0.4, 36°.45S×107°.70W, h0km, mb4.9/22, mb1 5.0/22, mb1mx5.0/23, mbtmp4.9/22, MS5.3/20, Ms1 5.3/20, ms1mx5.3/21, Error ellipse: s-maj=15.4km s-min=13.4km az=141.0*
MOS ***15*** *08:37:16.4±1.1, 36°.43S×107°.49W, h10km, mb5.7/21, MS5.3/44, Error ellipse: s-maj=14.9km s-min=6.9km az=84.8*
ISCJB ***15*** *08:37:16.2±0.2, 36°.46S±0°.04×107°.48W±0°.06, h10km, mb5.3/81, MS5.4/223, Error ellipse: s-maj=6.8km s-min=5.6km az=156.5*
NEIC ***15*** *08:37:17.2±0.2, 36°.62S×107°.45W, h10km, mb5.5/63, MS5.4/203, MW6.0, MW6.0, Error ellipse: s-maj=5.8km s-min=5.0km az=98.0, Moment Tensor Solution. s37 Moment tensor: Scale 10^{18}Nm; M_{rr}0.09; $M_{\theta\theta}$0.32; $M_{\phi\phi}$-0.41; $M_{r\theta}$-0.02; $M_{\theta\phi}$-1.12; $M_{\phi r}$-0.23; Best double couple: $M_0$1.20000×10^{18} NP1:ϕ_s81.00000°, δ79.00000°, λ-179.00000°. NP2:ϕ_s351.00000°, δ89.00000°, λ-11.00000°. Principal axes: T 1.1500, Plg6.0000°, Azm36.0000°; N 0.1100, Plg79.0000°, Azm163.0000°; P -1.2500, Plg8.0000°, Azm305.0000°;*
GCMT ***15*** *08:37:23.6±0.1, 36°.62S×107°.67W, h22km, MW6.0, Moment Tensor Solution. s114, c254; s93, c148; Moment tensor: Scale 10^{18}Nm; M_{rr}-0.06±.01; $M_{\theta\theta}$0.59±.01; $M_{\phi\phi}$-0.54±.01; $M_{r\theta}$0.13±.02; $M_{\theta\phi}$-1.17±.01; $M_{\phi r}$-0.17±.02; Best double couple: $M_0$1.30000×10^{18} NP1:ϕ_s77.00000°, δ82.00000°, λ177.00000°. NP2: ϕ_s167.00000°, δ87.00000°, λ8.00000°. Principal axes: T 1.3500, Plg8.0000°, Azm32.0000°; N -0.0800, Plg81.0000°, Azm188.0000°; P -1.2800, Plg4.0000°, Azm302.0000°; Data Used: II IU IC G CN. Surface waves: sta=120, comp=268, per= 50.*
ISC 15 08:37:17.9±0.2, 36°.51S±0°.04×107°.51W±0°.06, h10km, (h19km±5.3km:pP-P), n888, σ0.66/595, mb5.3/81, MS5.4/223, 168C-181D, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**9.48**	**350**	*e*P	**Pn**	**08 39 37.7**	**+3.2**
RPN				pmax	pmax		
comp=Z,2μm,1.6s							
RPN	**Rapa Nui**	**9.48**	**350**	*e*Pn	**Pn**	**08 39 37.6**	**+3.2**
comp=Z,2μm,1.6s							
RPN				*e*Sn	**Sn**	**08 41 33.4**	**+12**
RKT	**Rikitea**	**27.20**	**292**	*e*P	**P**	**08 43 00.9**	**-0.9**
comp=Z,221nm,1.3s,mb5.5							
RKT				*e*S	**S**	**08 47 34.8**	**-5.8**
comp=Z,5μm,28.8s							
RKT				*e*LR	LR	08 49 41.3	
comp=Z,35μm,28.2s,baz=128							
RKT	**Rikitea**	**27.20**	**292**	*e*P	**P**	**08 43 00.9**	**-0.9**
comp=Z,221nm,1.3s,mb5.5							
RKT				*e*S	**S**	**08 47 34.8**	**-5.8**
PLCA	**Paso Flores**	**29.05**	**110**	P	**P**	**08 43 20.1**	**+1.9**
comp=Z,68nm,1.1s,mb5.3,baz=274,slow=8.9,SNR=42							
PLCA				LR	LR	08 50 52.2	
comp=Z,2μm,20.6s,MS4.8,baz=271,slow=28							
PLCA	**Paso Flores**	**29.05**	**110**	*e*P	**P**	**08 43 20.2**	**+2.0**
PLCA				pmax	pmax		
comp=Z,80nm,1.1s							
PLCA				MLR	MLR		
comp=Z,3μm,21.0s							
PLCA	**Paso Flores**	**29.05**	**110**	*e*P	**P**	**08 43 20.2**	**+2.1**
comp=Z,80nm,1.1s,mb5.4							
PLCA				LR	LR		
comp=Z,3μm,21.0s,MS4.9							
LCO	**Las Campanas**	**31.70**	**87**	*e*P	**P**	**08 43 43.2**	**+1.4**
comp=Z,56nm,1.3s,mb5.2							
LCO				LR	LR		
comp=Z,9μm,21.0s,MS5.4							
USHA	**Ushuaia**	**32.33**	**137**	P	**P**	**08 43 49.5**	**+2.5**
comp=Z,12nm,0.9s,mb4.7,baz=292,slow=13,SNR=3.9							
USHA				LR	LR	08 53 29.1	
comp=Z,21μm,20.3s,MS5.8,baz=273,slow=30							
CFAA	**Coronel Fontan**	**32.75**	**93**	P	**P**	**08 43 51.2**	**+0.3**
comp=Z,2.7nm,1.0s,baz=256,slow=7.6,SNR=22							
CFAA				LR	LR	08 53 53.1	
comp=Z,1μm,19.0s,MS4.6,baz=260,slow=30							
TRQA	**Tornquist**	**35.99**	**107**	*e*P	**P**	**08 44 19.2**	**+0.3**
comp=Z,113nm,1.5s,mb5.6							
TRQA				LR	LR		
comp=Z,7μm,21.0s,MS5.4							
NNA	**Nana**	**36.84**	**56**	P	**P**	**08 44 25.4**	**-1.0**
comp=Z,32nm,1.0s,mb5.1,baz=227,slow=7.8,SNR=6.2							
NNA				LR	LR	08 56 04.4	
comp=Z,8μm,18.8s,MS5.5,baz=224,slow=31							
NNA	**Nana**	**36.84**	**56**	*e*P	**P**	**08 44 26.3**	**-0.1**
comp=Z,24nm,1.0s,mb5.0							
NNA				LR	LR		
comp=Z,9μm,20.0s,MS5.6							
PMSA	**Palmer Station**	**38.21**	**152**	LR	LR	08 55 49.8	
comp=Z,9μm,19.5s,MS5.6,baz=291,slow=29							
PMSA	**Palmer Station**	**38.21**	**152**	PFAKE		08 44 50.0	+13
PMSA				LR	LR		
comp=Z,10μm,19.0s,MS5.7							
PAYG	**Puerto Ayora**	**39.06**	**28**	PFAKE		08 45 00.0	+15
PAYG				LR	LR		
comp=Z,10μm,20.0s,MS5.7							
ATAH	**Atahualpa**	**39.50**	**49**	P	**P**	**08 44 51.0**	**+2.1**
comp=Z,41nm,1.1s,mb5.1,baz=237,slow=5.0,SNR=24							
ATAH				LR	LR	08 57 03.5	
comp=Z,4μm,19.3s,MS5.3,baz=219,slow=30							
LPA	**La Plata**	**39.94**	**103**	*de*P	**P**	**08 44 51.0**	**-1.3**
LPA				*e*pP	pP	08 44 56.0	+0.6
LPA				*e*sS	sS	08 51 03.0	+0.5
LPAZ	**La Paz**	**40.26**	**71**	P	**P**	**08 44 57.5**	**+2.4**

PPT Papeete 41.56 286 *e*P **P 08 45 06.4 +0.6**
PPT *e*S **S 08 51 17.4 -4.4**
PPT pmax pmax
comp=Z,331nm,1.4s
PPT Papeete 41.56 286 *e*P **P 08 45 06.4 +0.6**
comp=Z,331nm,1.4s,mb5.8
PPT *e*S **S 08 51 17.4 -4.4**
PPT *e*LQ 08 54 37.1
PMOR Pomariorio Ree 41.80 290 *e*P **P 08 45 07.3 -0.6**
comp=Z,225nm,1.3s,mb5.6
CPUP Villa Florida 43.59 91 P **P 08 45 21.8 -0.5**
comp=Z,6.7nm,0.8s,mb4.4,baz=240,slow=9.5,SNR=9.6
CPUP LR LR 09 00 13.1
comp=Z,5μm,21.4s,MS5.4,baz=233,slow=32
OTAV Otavalo 45.43 43 *e*P **P 08 45 38.0 +1.0**
comp=Z,173nm,1.8s,mb5.6
OTAV LR LR
comp=Z,3μm,21.0s,MS5.2
SIV San Ignacio 45.88 76 P **P 08 45 40.7 +0.1**
comp=Z,17nm,0.7s,mb5.1,baz=244,slow=8.6,SNR=85
RAR Rarotonga 47.69 274 PFAKE 08 46 10.0 +15
RAR LR LR
comp=Z,6μm,20.0s,MS5.5
JTS JuntasAbangare 51.16 29 P **P 08 46 22.1 +0.8**
comp=Z,403nm,1.3s,mb6.2,SNR=10
JTS JuntasAbangare 51.16 29*c i*P **P 08 46 21.9 +0.6**
JTS JuntasAbangare 51.16 29 *e*P **P 08 46 21.8 +0.5**
comp=Z,122nm,0.9s,mb5.8
JTS LR LR
comp=Z,12μm,21.0s,MS5.9
ROSC El Rosal 51.53 44 P **P 08 46 26.2 +2.1**
comp=Z,74nm,1.0s,mb5.6,baz=183,slow=2.1,SNR=74
ROSC LR LR 09 04 19.6
comp=Z,3μm,20.7s,MS5.4,baz=200,slow=32
ROSC El Rosal 51.53 44 *e*P **P 08 46 26.3 +2.2**
BCIP Isla Barro Col 52.35 35 PFAKE 08 46 40.0 +10
BCIP LR LR
comp=Z,4μm,19.0s,MS5.5
SPB Sao Paulo 52.81 94 *e*P **P 08 46 33.8 +0.1**
comp=Z,35nm,1.1s,mb5.2
SPB LR LR
comp=Z,5μm,20.0s,MS5.6
QSPA South Pole Qui 53.70 180 P **P 08 46 40.8 +1.4**
comp=Z,37nm,1.0s,mb5.3,baz=127,slow=3.6,SNR=45
QSPA LR LR 09 06 31.0
comp=Z,4μm,18.8s,MS5.5,baz=115,slow=33
QSPA South Pole Qui 53.70 180 *e*P **P 08 46 40.9 +1.6**
comp=Z,46nm,1.0s,mb5.4
QSPA LR LR
comp=Z,4μm,19.0s,MS5.5
SBA Scott Base 53.73 195 *e*P **P 08 46 41.2 +1.6**
SBA pmax pmax
comp=Z,171nm,1.4s,mb5.8
SBA MLR MLR
comp=Z,4μm,19.0s,MS5.5
SBA Scott Base 53.73 195 *e*P **P 08 46 41.1 +1.5**
comp=Z,171nm,1.4s,mb5.8
SBA LR LR
comp=Z,4μm,19.0s,MS5.5
TGUH Tegucigalpa,Un 53.80 25 *e*P **P 08 46 41.4 +0.7**
comp=Z,186nm,1.4s,mb5.8
TGUH LR LR
comp=Z,1μm,19.0s,MS5.0
SDV Santo Domingo 56.91 45 P **P 08 47 01.7 -1.5**
comp=Z,27nm,1.0s,mb5.2,baz=234,slow=4.9,SNR=22
SDV LR LR 09 07 38.9
comp=Z,2μm,21.4s,MS5.2,baz=237,slow=32
SDV Santo Domingo 56.91 45 *e*P **P 08 47 01.8 -1.4**
comp=Z,46nm,1.2s,mb5.4
SDV LR LR
comp=Z,1μm,20.0s,MS4.9
CAM4 Nova Friburgo 57.33 95⇑*i*P **P 08 47 07.3 +1.0**
CAM4 *i* pP 08 47 10.4 +0.9
CAM4 *i* 08 47 13.6
CAM4 *i* 08 47 24.7
URZ Urewera 58.31 244 *e*P **P 08 47 14.0 +1.1**
comp=Z,47nm,1.4s,mb5.3
SNZO South Karori 58.80 239 PFAKE 08 47 30.0 +14
SNZO LR LR
comp=Z,7μm,20.0s,MS5.8
VNA1 Neumayer--Stat 58.98 157 *e*P **P 08 47 17.1 0.0**
TEIG Tepich 59.28 21 *e*P **P 08 47 19.2 -0.6**
comp=Z,60nm,1.3s,mb5.5
TEIG LR LR
comp=Z,4μm,21.0s,MS5.5
XMAS Kiritimati 60.18 298 *e*P **P 08 47 26.6 +0.5**
XMAS LR LR
comp=Z,8μm,20.0s,MS5.8
RPZ Rata Peaks 60.34 236 P **P 08 47 25.9 -1.0**
comp=Z,32nm,1.2s,mb5.2,baz=102,slow=5.0,SNR=4.6
AFI Afiamalu 61.24 274 PFAKE 08 47 50.0 +17
AFI LR LR
comp=Z,2μm,22.0s,MS5.2
MTDJ Mount Denham 61.37 33 PFAKE 08 47 50.0 +16
MTDJ LR LR
comp=Z,3μm,22.0s,MS5.4
PCRV Puerto La Cruz 61.49 50 P **P 08 47 34.5 -0.5**
comp=Z,24nm,1.0s,mb5.3,baz=194,slow=1.0,SNR=4.9
PCRV LR LR 09 11 15.7
comp=Z,6μm,20.5s,MS5.7,baz=11,slow=33
GTBY Guantanamo Bay 63.94 34 PFAKE 08 48 00.0 +8.8
GTBY LR LR
comp=Z,3μm,21.0s,MS5.5
KVTX Kingsville 64.35 9 PFAKE 08 48 10.0 +16
KVTX LR LR
comp=Z,2μm,20.0s,MS5.3
MAIT Maitri 64.63 161 *e*P **P 08 47 55.3 +0.2**
NVL N'lazarevskaya 64.66 161⇑*i*P **P 08 47 52.3 -3.0**
NVL *e**PP pP 08 48 01.4 +2.8
NVL pmax pmax
comp=Z,47nm,1.0s,mb5.5
GRGR Grenville 64.84 51 PFAKE 08 48 10.0 +13
GRGR LR LR
comp=Z,3μm,20.0s,MS5.4
SDDR Presa de Saban 64.94 38 *e*P **P 08 47 57.2 -0.6**
comp=Z,45nm,1.4s,mb5.3
SDDR LR LR
comp=Z,2μm,19.0s,MS5.2
DRV Dumont d'Urvil 65.13 204 S S 08 56 40.0 -0.8
DRV SS SS 09 01 02.0 +10
DRV L 09 04 00.0
DRV R 09 08 00.0
TXAR Lajitas Array 65.59 4 P **P 08 48 01.9 +0.1**
comp=Z,6.6nm,0.9s,mb4.7,baz=185,slow=9.7,SNR=68
TXAR LR LR 09 11 48.6
comp=Z,2μm,18.5s,MS5.4,baz=135,slow=32
TXAR Lajitas Array 65.59 4 P **P 08 48 01.9 +0.1**
TXAR LR LR 09 11 48.6
627A Terlingua Ranc 65.72 4 ⇓P **P 08 48 02.6 0.0**
baz=66,SNR=25
626A Big Bend Ranch 65.78 3 ⇓P **P 08 48 03.0 0.0**
baz=66,SNR=24
628A Black Gap, Mar 65.78 4 ⇓P **P 08 48 02.9 -0.2**
baz=66,SNR=19
526A Mary Lane Ranc 66.29 3 ⇓P **P 08 48 06.2 0.0**
baz=67,SNR=18
527A Woodward Ranch 66.40 4 ⇓P **P 08 48 06.8 -0.2**
baz=67,SNR=38
528A Cox Ranch, San 66.46 4 ⇓P **P 08 48 07.0 -0.3**
baz=67,SNR=11
426A McDonald Obser 66.90 3 ⇓P **P 08 48 09.9 -0.3**
baz=67,SNR=15
SJG San Juan 66.91 43 *e*P **P 08 48 08.3 -2.2**
SJG pmax pmax
comp=Z,41nm,1.1s
SJG MLR MLR
comp=Z,2μm,21.0s
SJG San Juan 66.91 43 *e*P **P 08 48 08.3 -2.2**
comp=Z,41nm,1.1s,mb5.4
SJG LR LR
comp=Z,2μm,21.0s,MS5.3
BBGH Gun Hill 66.93 52 PFAKE 08 48 20.0 +9.3
BBGH LR LR
comp=Z,3μm,21.0s,MS5.5
425A Indio Mountain 66.98 2⇑P **P 08 48 10.4 -0.3**
baz=67,SNR=5.3
HKT Hockley 67.01 11 *e*P **P 08 48 10.7 -0.2**
HKT pmax pmax
comp=Z,199nm,2.1s,mb5.8
HKT MLR MLR
comp=Z,1μm,21.0s,MS5.2
HKT Hockley 67.01 11 *e*P **P 08 48 10.7 -0.1**
comp=Z,199nm,2.1s,mb5.8
HKT LR LR
comp=Z,1μm,21.0s,MS5.2
JCT Junction City 67.02 7 *e*P **P 08 48 10.8 -0.1**
JCT pmax pmax
comp=Z,86nm,1.0s,mb5.7
JCT MLR MLR
comp=Z,2μm,22.0s,MS5.3
JCT Junction City 67.02 7 *e*P **P 08 48 10.8 -0.1**
comp=Z,86nm,1.0s,mb5.7
JCT LR LR
comp=Z,2μm,22.0s,MS5.3
428A Kincaid Ranch, 67.03 5 ⇓P **P 08 48 10.7 -0.3**
baz=68,SNR=16
427A Hayter Ranch, 67.11 4 P **P 08 48 11.8 +0.3**
baz=68,SNR=24
FDF Fort de France 67.15 49 *e*P **P 08 48 10.1 -2.0**
FDF pmax pmax
comp=Z,52nm,1.1s,mb5.5
FDF MLR MLR
comp=Z,1μm,21.0s,MS5.2
FDF Fort de France 67.15 49 *e*P **P 08 48 10.1 -2.0**
comp=Z,52nm,1.1s,mb5.5
FDF LR LR
comp=Z,1μm,21.0s,MS5.2
GRTK Grand Turk 67.16 37 PFAKE 08 48 20.0 +8.0
GRTK LR LR
comp=Z,1μm,21.0s,MS5.2
MSVF Nonsavu 67.34 264 P **P 08 48 13.8 +0.4**
comp=Z,450nm,2.8s,mb6.0
MSVF LR LR
comp=Z,1μm,19.0s,MS5.2
320A Kipp Ranch, An 67.49 359 ⇓P **P 08 48 14.7 +0.7**
baz=68,SNR=18
319A Douglas 67.55 358⇑P **P 08 48 14.6 +0.4**
baz=68,SNR=21
325A Bean Ranch, Si 67.56 2 P **P 08 48 13.8 -0.5**
baz=68,SNR=20
324A Moseley Ranch, 67.62 2 P **P 08 48 14.2 -0.5**
baz=68,SNR=42
327A Balmorhea Ranc 67.62 4 ⇓P **P 08 48 14.6 -0.2**
baz=68
318A Bisbee 67.63 358⇑P **P 08 48 14.7 -0.1**
baz=68,SNR=37
328A Wristen Ranch, 67.67 4 ⇓P **P 08 48 14.5 -0.6**
baz=68,SNR=9.5
MNTX Cornudas Mount 67.88 2 *e*P **P 08 48 15.4 -0.9**
comp=Z,10.0nm,0.9s,mb4.8
MNTX LR LR
comp=Z,1μm,20.0s,MS5.2
217A Green Valley 67.99 357 ⇓P **P 08 48 17.3 +0.2**
baz=68,SNR=14
220A Playas Peak, P 68.06 359 ⇓P **P 08 48 17.7 +0.3**
baz=68,SNR=18
221A Mesquite Ranch 68.16 360⇑P **P 08 48 18.9 +0.8**
baz=69,SNR=5.9
223A Chaparral, Ant 68.16 1⇑P **P 08 48 18.8 +0.7**
baz=69,SNR=6.6
218A Dragoon 68.16 358 ⇓P **P 08 48 18.2 0.0**
baz=69,SNR=6.7
219A White Tail Can 68.17 358 ⇓P **P 08 48 17.7 -0.5**
baz=69,SNR=23
224A Cornudas Mount 68.25 2⇑P **P 08 48 18.4 -0.3**
baz=69,SNR=83
216A Three Points, 68.25 356⇑P **P 08 48 18.6 -0.1**
baz=69,SNR=9.5
222A Williams Famil 68.25 0⇑P **P 08 48 18.7 0.0**
baz=69
227A Bennet, Jal 68.27 4 ⇓P **P 08 48 18.6 -0.2**
baz=69
226A Malaga, Loving 68.28 3⇑P **P 08 48 18.5 -0.4**
baz=69,SNR=13
214A Organ Pipe Nat 68.28 355 ⇓P **P 08 48 19.0 +0.2**
baz=69,SNR=9.7
225A Deer Hill, Car 68.30 2 P **P 08 48 18.6 -0.4**
baz=69,SNR=18
GDL2 Guadalupe Moun 68.41 3 *e*P **P 08 48 19.3 -0.4**
comp=Z,8.5nm,0.7s,mb4.9
TUC Tucson 68.52 357 *e*P **P 08 48 20.3 -0.1**
TUC pmax pmax
comp=Z,33nm,1.3s,mb5.1
TUC MLR MLR
comp=Z,2μm,19.0s,MS5.4
TUC Tucson 68.52 357 *e*P **P 08 48 20.2 -0.1**
comp=Z,33nm,1.3s,mb5.1
TUC LR LR
comp=Z,2μm,19.0s,MS5.4
121A Cookes Peak, D 68.68 360⇑P **P 08 48 21.7 +0.3**
baz=69,SNR=14
120A U Bar Ranch, L 68.70 359 P **P 08 48 22.3 +0.9**
baz=69,SNR=12
117A Oracle 68.78 357⇑P **P 08 48 22.0 +0.1**
baz=69,SNR=26
123A Bell Site, Whi 68.79 1 ⇓P **P 08 48 22.4 +0.4**
baz=69,SNR=6.7
DWPF Disney 68.80 25 *e*P **P 08 48 22.2 0.0**
comp=Z,122nm,1.1s,mb5.7
DWPF LR LR
comp=Z,2μm,21.0s,MS5.4
116A Eloy 68.82 356⇑P **P 08 48 22.6 +0.4**
baz=69,SNR=8.4
118A Homack Ranch, 68.82 358⇑P **P 08 48 22.4 +0.2**
baz=69
122A Conniff Cattle 68.85 0 ⇓P **P 08 48 23.1 +0.8**
baz=69,SNR=14
125A Gardner Draw, 68.86 3 P **P 08 48 21.9 -0.6**
baz=69,SNR=37
126A Clayton Basin, 68.87 3 ⇓P **P 08 48 21.9 -0.6**
baz=69,SNR=7.0
124A Stringfield Ra 68.87 2⇑P **P 08 48 22.6 +0.1**
baz=69
119A Ashpeak Ranch, 68.93 358⇑P **P 08 48 23.1 +0.2**
baz=69,SNR=11
127A Arkansas Junct 68.93 4⇑P **P 08 48 22.5 -0.4**
baz=69,SNR=11
NATX Nacogdoches 68.97 12 *e*P **P 08 48 23.6 +0.5**
comp=Z,168nm,1.1s,mb5.9
NATX LR LR
comp=Z,914nm,21.0s,MS5.0
115A Sonoran Desert 68.99 356 ⇓P **P 08 48 23.7 +0.4**
baz=70,SNR=10
ANWB Willy Bob 69.05 47 PFAKE 08 48 40.0 +16
ANWB LR LR
comp=Z,1μm,21.0s,MS5.1
114A Black Gap (USA 69.08 355 ⇓P **P 08 48 24.2 +0.4**
baz=70,SNR=7.3
113A Mohawk Valley, 69.16 354⇑P **P 08 48 24.8 +0.5**
baz=70
CPRX Cap Rock 69.26 3 *e*P **P 08 48 24.6 -0.3**
comp=Z,24nm,1.3s,mb5.0
Z20A Nine Sixteen R 69.26 359 ⇓P **P 08 48 25.3 +0.3**
baz=70,SNR=18
Z18A Geronimo 69.27 358 ⇓P **P 08 48 25.5 +0.5**
baz=70
DVTC Desert V Tower 69.27 352 ⇓P **P 08 48 25.4 +0.4**
baz=70
BAR Barrett 69.36 352 *e*P **P 08 48 27.4 +1.8**
comp=Z,42nm,1.4s,mb5.2
BAR *e*PP PP 08 50 52.3 -6.9
Z22A Elephant Butte 69.40 0 P **P 08 48 26.3 +0.5**
baz=70,SNR=34
Z23A Rita Site, Whi 69.42 1⇑P **P 08 48 26.3 +0.4**
baz=70,SNR=11
Z21A St. Cloud Mine 69.45 360⇑P **P 08 48 26.6 +0.5**
baz=70,SNR=31
Z25A Roswell 69.47 2 ⇓P **P 08 48 25.6 -0.6**
baz=70,SNR=16
Z26A Caprock 69.49 3 P **P 08 48 25.5 -0.9**
baz=70,SNR=22
Z17A San Carlos Hig 69.50 357 ⇓P **P 08 48 25.6 -0.8**
baz=70,SNR=7.6
Z24A Sheeppen Canyo 69.50 2 ⇓P **P 08 48 25.5 -0.9**
baz=70,SNR=16
SWSC Sam W. Stewart 69.52 353 ⇓P **P 08 48 26.2 -0.4**
baz=70
MONP Monument Peak 69.53 352⇑P **P 08 48 26.5 -0.2**
baz=70
Z15A Gila River Ind 69.57 356⇑P **P 08 48 26.4 -0.5**
baz=70
Z27A Tatum 69.57 4 P **P 08 48 26.4 -0.4**
baz=70,SNR=16
Z16A Peralta Trail, 69.58 357⇑P **P 08 48 26.8 -0.1**
baz=70,SNR=10.0
Z13A Yuma Proving G 69.58 355 ⇓P **P 08 48 27.1 +0.1**
baz=70
Z14A Wintersburg 69.69 355⇑P **P 08 48 28.3 +0.7**
baz=70
BRAL Brewton 69.85 19 PFAKE 08 48 40.0 +11
BRAL LR LR
comp=Z,3μm,20.0s,MS5.6
Y17A Roosevelt 69.91 357⇑P **P 08 48 28.5 -0.4**
baz=70,SNR=8.5
Y18A Canyon Day Jun 69.96 358⇑P **P 08 48 29.6 +0.4**
baz=70,SNR=10.0
Y20A Horse Springs, 70.06 359⇑P **P 08 48 30.4 +0.6**
baz=70,SNR=15
Y22A Socorro 70.08 0⇑P **P 08 48 29.3 -0.7**
baz=71
Y23A Lovelace Mesa, 70.09 1 ⇓P **P 08 48 30.2 +0.2**
baz=71,SNR=20
Y24A Capitan 70.09 2 P **P 08 48 30.6 +0.5**
baz=71,SNR=32
Y25A Mesa, Roswell 70.11 2⇑P **P 08 48 29.5 -0.7**
baz=71,SNR=20
Y19A Nutrioso 70.12 358 P **P 08 48 31.2 +1.0**
baz=71,SNR=30
Y16A Circle Bar Ran 70.12 356⇑P **P 08 48 30.8 +0.6**
baz=71,SNR=11
Y27A Causey 70.14 4 P **P 08 48 30.0 -0.3**
baz=71,SNR=36
Y26A Elida 70.15 3⇑P **P 08 48 29.9 -0.5**
baz=71
Y21A Point of Rocks 70.15 360 ⇓P **P 08 48 31.0 +0.6**
baz=71,SNR=33
BC3 Big Chuckawall 70.19 353⇑P **P 08 48 31.2 +0.5**
baz=71
VBMS Vicksburg 70.19 15 *e*P **P 08 48 31.2 +0.5**
comp=Z,58nm,0.9s,mb5.5
VBMS LR LR
comp=Z,1μm,19.0s,MS5.1
Y12C Blythe 70.20 354⇑P **P 08 48 31.0 +0.3**
baz=71
Y15A Casa Rosa Ranc 70.24 356 ⇓P **P 08 48 31.4 +0.4**
baz=71,SNR=17
MSTX Muleshoe 70.25 4⇑P **P 08 48 31.0 -0.1**
baz=71,SNR=27
PFO Pinyon Flat Ob 70.25 352 *e*P **P 08 48 32.1 +1.1**
PFO MLR MLR
comp=Z,2μm,22.0s,MS5.2
Y14A Wickenburg 70.27 355⇑P **P 08 48 31.5 +0.4**
baz=71,SNR=11
BNM Barren Site 70.30 1 *e*P **P 08 48 31.4 +0.1**
comp=Z,11nm,1.0s,mb4.7
LENM Lemitar 70.31 0 *e*P **P 08 48 32.4 +1.0**
LPM Los Pinos Moun 70.46 1 *e*P **P 08 48 33.1 +0.8**
LAZ Ladron 70.54 0 *e*P **P 08 48 33.1 +0.3**
comp=Z,53nm,1.9s,mb5.2
X17A Forest Lakes 70.55 357 ⇓P **P 08 48 33.2 +0.4**
baz=71,SNR=16
X21A Alamocita Cree 70.59 360⇑P **P 08 48 33.4 +0.3**
baz=71,SNR=22
X19A St. Johns 70.59 358⇑P **P 08 48 33.2 +0.1**
baz=71
BELC Belle Mtn. Jos 70.59 353 ⇓P **P 08 48 33.6 +0.5**
baz=71
X22A Bernardo 70.65 0 ⇓P **P 08 48 34.4 +1.0**
baz=71,SNR=9.4
X16A Lo Mia Camp, P 70.65 357 P **P 08 48 34.1 +0.7**
baz=71,SNR=12
IRM Iron Mountain 70.66 353 ⇓P **P 08 48 34.1 +0.6**
baz=71
X20A Quemado 70.69 359 ⇓P **P 08 48 33.4 -0.2**
baz=71,SNR=12
X18A Snowflake 70.71 358 ⇓P **P 08 48 33.7 -0.1**
baz=71,SNR=10
X25A Clemmons Ranch 70.72 2 ⇓P **P 08 48 34.6 +0.7**
baz=71
X23A Hourglass Bar 70.73 1 ⇓P **P 08 48 34.5 +0.6**
baz=71
X15A Humboldt 70.76 356⇑P **P 08 48 34.5 +0.3**
baz=71,SNR=16
X26A CR and CF Fran 70.78 3 ⇓P **P 08 48 33.5 -0.7**
baz=71,SNR=8.7
X14A Yava 70.79 355⇑P **P 08 48 34.5 +0.2**
baz=71
X27A F and S Farms, 70.91 4 ⇓P **P 08 48 34.5 -0.5**
baz=71,SNR=15
X13A Yucca 70.98 354 ⇓P **P 08 48 35.2 -0.3**
baz=72
PASC Pasadena Art C 71.01 351 *e*P **P 08 48 36.6 +1.0**
comp=Z,145nm,1.3s,mb5.8
MWC Mount Wilson 71.05 351 *e*P **P 08 48 38.6 +2.7**
MWC pmax pmax
comp=Z,409nm,2.9s,mb5.8
MWC Mount Wilson 71.05 351 *e*P **P 08 48 38.6 +2.7**
comp=Z,410nm,2.9s,mb5.8
ANMO Albuquerque 71.10 1*c i*P **P 08 48 36.0 -0.2**
ANMO pmax pmax
comp=Z,2μm,16.0s
ANMO Albuquerque 71.10 1 *e*P **P 08 48 36.1 0.0**
comp=Z,40nm,2.5s,mb4.9
ANMO LR LR
comp=Z,2μm,19.0s,MS5.4
W22A Albuquerque 71.21 1⇑P **P 08 48 36.8 -0.1**
baz=72
AMTX Amarillo 71.23 5 *e*P **P 08 48 36.7 -0.3**
AMTX LR LR
comp=Z,5μm,22.0s,MS5.7
W20A Ramah 71.27 359 ⇓P **P 08 48 37.9 +0.7**
baz=72,SNR=24
W23A Werner Place, 71.31 1⇑P **P 08 48 37.6 +0.1**
baz=72,SNR=24
W26A Owens Ranch, T 71.31 3 ⇓P **P 08 48 37.3 -0.1**
baz=72,SNR=14
W27A Bowe Ranch, En 71.32 4⇑P **P 08 48 37.4 -0.1**
baz=72,SNR=13
W16A Flagstaff 71.33 357 ⇓P **P 08 48 38.3 +0.7**
baz=72,SNR=14
WMOK Wichita Mounta 71.34 8 *e*P **P 08 48 36.6 -1.1**
WMOK MLR MLR
comp=Z,1μm,20.0s,MS5.2
W24A Lazy 6 Ranch, 71.38 2⇑P **P 08 48 38.3 +0.4**
baz=72,SNR=47
W25A X Bar L Ranch, 71.41 3⇑P **P 08 48 37.9 -0.2**
baz=72,SNR=23
W15A Williams 71.45 356 ⇓P **P 08 48 38.4 +0.1**
baz=72
W13A Hualapai Mount 71.48 354 ⇓P **P 08 48 37.8 -0.7**
baz=72
OSI Osito Adit 71.52 350 *e*P **P 08 48 39.6 +0.9**
comp=Z,44nm,0.6s,mb5.6
W14A Seligman 71.54 355⇑P **P 08 48 39.0 +0.1**
baz=72,SNR=14
FUNA Funafuti 71.56 273 PFAKE 08 48 50.0 +10
FUNA LR LR
comp=Z,11μm,19.0s,MS6.2
LDFC Landfair 71.57 353 *e*P **P 08 48 40.6 +1.6**
comp=Z,70nm,1.2s,mb5.5
LDFC *e*PcP PcP 08 48 57.8 -0.5
EDW2 Edwards Air Fo 71.69 351 ⇓P **P 08 48 40.0 +0.2**
baz=72
WUAZ Wupatki 71.75 357⇑P **P 08 48 40.0 0.0**
baz=72
WUAZ Wupatki 71.75 357 *e*P **P 08 48 41.5 +1.4**
WUAZ LR LR
comp=Z,2μm,19.0s,MS5.4
W12A Cal Nev Ari 71.77 354 ⇓P **P 08 48 40.4 +0.2**
baz=72
RCBR Riachuelo 71.78 84 PFAKE 08 48 50.0 +9.1
RCBR LR LR
comp=Z,3μm,21.0s,MS5.6
LRAL Lakeview Retre 71.79 18 *e*P **P 08 48 40.2 -0.2**
LRAL LR LR
comp=Z,3μm,22.0s,MS5.5
V17A Tonalea, Kykot 71.82 357 P **P 08 48 41.0 +0.5**
baz=72,SNR=24
V19A Window Rock 71.87 359⇑P **P 08 48 40.6 -0.2**
baz=72,SNR=5.7
MIAR Mount Ida 71.87 12 *e*P **P 08 48 40.1 -0.7**
MIAR pmax pmax
comp=Z,34nm,1.2s,mb5.2
MIAR MLR MLR
comp=Z,835nm,20.0s,MS5.0
MIAR Mount Ida 71.87 12 *e*P **P 08 48 40.1 -0.8**
comp=Z,34nm,1.2s,mb5.2
MIAR LR LR
comp=Z,835nm,20.0s,MS5.0
V18A Ganado 71.88 358 ⇓P **P 08 48 40.0 -0.9**
baz=72,SNR=23
V23A Ortiz Mt. (NFS 71.89 1 ⇓P **P 08 48 40.7 -0.3**
baz=72
V20A Brimhall 71.94 359 ⇓P **P 08 48 41.5 +0.3**
baz=72,SNR=30
V21A Milan 71.94 360 ⇓P **P 08 48 41.4 +0.1**
baz=72,SNR=5.7
V14A Boquillas Ranc 71.96 355⇑P **P 08 48 41.8 +0.4**
baz=72,SNR=12
GSC Goldstone 71.96 352⇑P **P 08 48 41.5 +0.1**
baz=72
GSC Goldstone 71.96 352 *e*P **P 08 48 42.2 +0.8**

GSC pmax pmax
comp=Z,155nm,2.3s,mb5.5
GSC Goldstone 71.96 352 *e*P **P 08 48 42.2 +0.8**
comp=Z,155nm,2.3s,mb5.5
TUQ Turquoise Moun 72.00 353 ⇑P **P 08 48 42.6 +1.0**
baz=72
SYO Syowa Base 72.02 168 ⇑*i*P **P 08 48 39.0 -2.4**
SYO Syowa Base 72.02 168 ⇓*i*P **P 08 48 44.0 +2.6**
V26A Tequesquite Ra 72.02 3 ⇓P **P 08 48 41.2 -0.5**
baz=72,SNR=12
V25A Rancho No Teng 72.03 2 P **P 08 48 41.7 -0.1**
baz=72,SNR=24
POHA Pohakuloa 72.03 313 PFAKE 08 48 50.0 +7.9
POHA LR LR
comp=Z,3μm,20.0s,MS5.6
ARVC Arvin 72.04 350 ⇑P **P 08 48 41.3 -0.6**
baz=72
V22A San Miguel Ran 72.05 1 ⇓P **P 08 48 42.1 +0.2**
baz=72,SNR=25
V15A Kaibab Nationa 72.09 356 ⇑P **P 08 48 41.9 -0.2**
baz=73,SNR=9.3
V12A Nelson 72.19 354 ⇓P **P 08 48 42.2 -0.5**
baz=73
V13A Grand Canyon W 72.24 354 ⇓P **P 08 48 42.8 -0.2**
baz=73,SNR=14
UALR University of 72.31 13 *e*P **P 08 48 43.3 -0.2**
comp=Z,72nm,1.3s,mb5.4
U19A Dine' College, 72.45 359 ⇑P **P 08 48 43.5 -0.7**
baz=73,SNR=7.2
U23A El Rito 72.47 1 ⇑P **P 08 48 45.0 +0.6**
baz=73,SNR=68
U22A Llaves 72.52 1 ⇑P **P 08 48 45.6 +0.9**
baz=73,SNR=27
ISA Isabella 72.52 351 ⇑P **P 08 48 45.3 +0.6**
baz=73,SNR=8.4
ISA Isabella 72.52 351 *e*P **P 08 48 45.5 +0.8**
ISA pmax pmax
comp=Z,208nm,2.5s,mb5.6
ISA Isabella 72.52 351 *e*P **P 08 48 45.5 +0.8**
comp=Z,208nm,2.5s,mb5.6
U21A Nageezi 72.56 360 ⇑P **P 08 48 45.4 +0.4**
baz=73,SNR=15
U24A Moreno Valley 72.58 2 ⇑P **P 08 48 45.7 +0.7**
baz=73,SNR=28
U18A Rough Rock, Ch 72.59 358 ⇑P **P 08 48 44.9 -0.2**
baz=73,SNR=28
U25A Circle Dot Ran 72.59 3 P **P 08 48 45.3 +0.2**
baz=73,SNR=11
U26A Atchley Ranch, 72.61 3 P **P 08 48 45.1 -0.1**
baz=73,SNR=24
OXF Oxford 72.64 16 *e*P **P 08 48 43.9 -1.5**
OXF *e* 08 49 01.4
OXF pmax pmax
comp=Z,75nm,1.3s,mb5.5
OXF MLR MLR
comp=Z,1μm,19.0s,MS5.2
OXF Oxford 72.64 16 *e*P **P 08 48 43.9 -1.6**
comp=Z,75nm,1.3s,mb5.5
OXF *e*PcP PcP 08 49 01.4 -1.5
OXF LR LR
comp=Z,1μm,19.0s,MS5.2
U15A North Rim 72.70 356 ⇑P **P 08 48 45.8 0.0**
baz=73
U14A Mt Trumbull 72.75 355 ⇓P **P 08 48 46.2 +0.2**
baz=73,SNR=14
VES Vestal, Richgr 72.78 350 ⇑P **P 08 48 46.6 +0.4**
baz=73
MPMC Manual Prospec 72.79 352 ⇑P **P 08 48 46.4 +0.1**
baz=73,SNR=11
U17A Shonto 72.79 357 ⇓P **P 08 48 45.7 -0.6**
baz=73,SNR=6.6
U13A Pakoon Wash 72.80 355 ⇓P **P 08 48 45.9 -0.4**
baz=73
U12A Valley of Fire 72.86 354 ⇓P **P 08 48 46.5 -0.2**
baz=73
T19A Beclabito 72.98 359 ⇑P **P 08 48 47.4 0.0**
baz=74,SNR=16
DAC Darwin (Calif) 73.02 351 PFAKE 08 49 00.0 +12
DAC LR LR
comp=Z,2μm,19.0s,MS5.3
U10A Ash Meadows, A 73.02 353 ⇓P **P 08 48 47.8 +0.1**
baz=74
GOGA Godfrey 73.09 21 *e*P **P 08 48 48.0 -0.2**
GOGA MLR MLR
comp=Z,745nm,21.0s,MS4.9
T21A Navajo Lake 73.13 360 ⇑P **P 08 48 48.5 +0.2**
baz=74,SNR=5.4
T22A Edith 73.15 1 ⇑P **P 08 48 49.3 +0.9**
baz=74,SNR=25
T12A Moapa 73.17 354 ⇓P **P 08 48 49.4 +0.9**
baz=74
T17A Navajo Res., N 73.19 357 ⇑P **P 08 48 49.3 +0.6**
baz=74,SNR=16
T16A Glen Canyon Da 73.21 357 P **P 08 48 49.6 +0.8**
baz=74,SNR=5.8
CWC Cottonwood Cre 73.24 351 ⇓P **P 08 48 49.2 +0.3**
baz=74
RCTC Rector, Farmer 73.26 350 ⇓P **P 08 48 48.7 -0.3**
baz=74
T15A Red Dirt Ranch 73.29 356 ⇑P **P 08 48 49.5 +0.2**
baz=74,SNR=13
T18A Mexican Hat 73.30 358 ⇓P **P 08 48 49.7 +0.4**
baz=74,SNR=31
T25A Trinidad 73.33 3 P **P 08 48 50.1 +0.6**
baz=74,SNR=18
MVCO Mesa Verde 73.35 359 P **P 08 48 50.0 +0.4**
baz=74,SNR=23
MVCO Mesa Verde 73.35 359 *e*P **P 08 48 50.0 +0.4**
MVCO LR LR
comp=Z,2μm,20.0s,MS5.3
T14A Hurricane 73.38 355 ⇑P **P 08 48 49.3 -0.5**
baz=74,SNR=5.7
T13A Saint George 73.39 355 ⇑P **P 08 48 49.3 -0.5**
baz=74,SNR=20
CASY Casey 73.44 195 *e*P **P 08 48 49.4 -0.5**
CASY Casey 73.44 195 *e*P **P 08 48 50.0 +0.1**
comp=Z,71nm,1.7s,mb5.3
CASY LR LR
comp=Z,2μm,20.0s,MS5.5
GRAC Grapevine Rang 73.70 352 ⇑P **P 08 48 50.7 -0.9**
baz=74
T11A Corn Creek, Al 73.72 354 ⇓P **P 08 48 52.1 +0.3**
baz=74,SNR=13
S21A Coal Bank Pass 73.80 360 ⇓P **P 08 48 52.3 +0.1**
baz=74,SNR=10
NHSC New Hope 73.81 24 *e*P **P 08 48 53.3 +0.9**
NHSC LR LR
comp=Z,2μm,19.0s,MS5.3
S17A Black Ridge (B 73.83 357 ⇓P **P 08 48 51.7 -0.7**
baz=74,SNR=10
S18A Hurst Farm, Bl 73.86 358 ⇑P **P 08 48 51.7 -0.9**
baz=74,SNR=24
CCUT Cedar City 73.88 355 *e*P **P 08 48 53.1 +0.3**
comp=Z,18nm,1.1s,mb4.9
S19A Harvey Farm, M 73.89 359 ⇓P **P 08 48 52.2 -0.6**
baz=74,SNR=17
SDCO Great Sand Dun 73.90 2 *e*P **P 08 48 53.3 +0.5**
SDCO LR LR
comp=Z,3μm,21.0s,MS5.5
S15A Panguitch 73.95 356 ⇑P **P 08 48 52.3 -0.8**
baz=74,SNR=7.7
S13A Holt Ranch, En 73.95 355 ⇑P **P 08 48 52.8 -0.3**
baz=74,SNR=13
HALT Halls 74.00 15 *e*P **P 08 48 53.2 -0.3**
S12A Delamar Landin 74.05 354 ⇑P **P 08 48 53.3 -0.4**
baz=74,SNR=11
S14A Cedar City 74.08 355 ⇓P **P 08 48 54.2 +0.4**
baz=75
SWET Sewanee 74.13 18 *e*P **P 08 48 53.8 -0.4**
DZM Mont Dzumac 74.17 254 *e*S S 08 58 33.0 +4.5
comp=Z,3μm,27.4s
DZM *e*LQ 09 08 34.3
comp=Z,6μm,28.6s
DZM *e*LR LR 09 11 45.8
comp=Z,4μm,30.0s
S11A Rachel 74.17 353 ⇑P **P 08 48 54.2 -0.2**
baz=75,SNR=13
MTUM Tungsten Hills 74.20 351 *e*P **P 08 48 55.8 +1.2**
PV01 Paradox Valley 74.27 359 *e*P **P 08 48 55.0 0.0**
comp=Z,2μm,1.2s
R20A Redvale 74.33 359 ⇑P **P 08 48 55.6 +0.3**
baz=75,SNR=20
GLAT Glass 74.36 15 *e*P **P 08 48 55.7 +0.1**
R22A Saguache, Gunn 74.36 1 ⇓P **P 08 48 54.9 -0.6**
baz=75,SNR=15
R19A Curley Farm, L 74.44 359 ⇑P **P 08 48 55.3 -0.7**
baz=75,SNR=32
R15A Junction 74.47 356 ⇑P **P 08 48 55.9 -0.3**
baz=75
R21A Cimarron 74.50 360 ⇓P **P 08 48 56.0 -0.3**
baz=75,SNR=18
R16A Teasdale 74.51 357 ⇓P **P 08 48 56.4 +0.1**
baz=75,SNR=12
UTMT University of 74.52 16 *e*P **P 08 48 56.5 0.0**
comp=Z,214nm,1.1s,mb6.0
S10A Tonopah Range, 74.53 353 ⇓P **P 08 48 56.7 +0.2**
baz=75
PV04 Paradox Valley 74.54 359 *e*P **P 08 48 56.2 -0.3**
WVT Waverly 74.55 16 *e*P **P 08 48 54.9 -1.7**
WVT MLR MLR
comp=Z,2μm,21.0s,MS5.5
R18A Canyonlands Na 74.55 358 ⇓P **P 08 48 56.4 -0.2**
baz=75,SNR=16
R13A O'Grain Ranch, 74.55 355 ⇓P **P 08 48 56.3 -0.3**
baz=75
JSC Jenkinsville 74.56 22 *e*P **P 08 48 57.2 +0.5**
R17A Hanksville Air 74.61 357 P **P 08 48 56.9 -0.1**
baz=75,SNR=10
PARMO Parma 74.64 15 *e*P **P 08 48 56.8 -0.4**
CPCT Cooper Cave 74.72 19 *e*P **P 08 48 57.5 -0.1**
R12A Pony Springs, 74.75 354 ⇓P **P 08 48 57.9 +0.1**
baz=75
TPH Tonopah 74.75 352 PFAKE 08 49 10.0 +12
TPH LR LR
comp=Z,961nm,22.0s,MS5.0
MVU Marysvale 74.76 356 PFAKE 08 49 10.0 +12
MVU LR LR
comp=Z,2μm,20.0s,MS5.3
MSU Marysvale 74.77 356 *e*P **P 08 48 58.8 +1.0**
KIP Kipapa 74.79 312 PFAKE 08 49 10.0 +12
KIP LR LR
comp=Z,2μm,21.0s,MS5.3
R11A Troy Canyon, C 74.85 353 ⇓P **P 08 48 58.7 +0.4**
baz=75,SNR=15
R10A Warm Springs 74.86 353 ⇓P **P 08 48 59.0 +0.6**
baz=75
Q21A Lamborn Mesa, 74.97 360 P **P 08 48 59.7 +0.7**
baz=76,SNR=22
Q22A Crested Butte, 75.00 0 ⇓P **P 08 48 59.9 +0.8**
baz=76,SNR=12
Q20A Ridgley Place, 75.09 359 P **P 08 49 00.5 +0.8**
baz=76,SNR=5.6
Q19A Hogan Spring (75.10 359 ⇑P **P 08 49 00.1 +0.3**
baz=76
TKL Tuckaleechee C 75.11 20 *e*P **P 08 48 59.5 -0.4**
CMB Columbia Colle 75.12 350 *e*P **P 08 49 00.2 +0.3**
CMB MLR MLR
comp=Z,1μm,22.0s,MS5.2
Q16A Castle Valley 75.12 357 P **P 08 49 00.1 +0.3**
baz=76,SNR=16
NVAR Mina Array Bea 75.23 351 P **P 08 49 01.4 +0.9**
comp=Z,6.0nm,0.8s,mb4.5,baz=186,slow=8.2,SNR=35
Q15A Fillmore 75.27 356 ⇓P **P 08 49 00.5 -0.2**
baz=76,SNR=7.8
Q18A Rafter H Ranch 75.27 358 ⇓P **P 08 49 00.3 -0.4**
baz=76,SNR=8.6
CBKS Cedar Bluff 75.29 6 *e*P **P 08 49 01.5 +0.7**
CBKS MLR MLR
comp=Z,4μm,19.0s,MS5.8
SRU San Rafael 75.29 358 ⇑P **P 08 49 00.3 -0.6**
baz=76,SNR=17
SRU San Rafael 75.29 358 *e*P **P 08 49 00.5 -0.3**
Q14A Sevier Lake (B 75.31 355 ⇓P **P 08 49 00.1 -0.8**
baz=76,SNR=10
SMCO Snowmass 75.31 0 *e*P **P 08 49 02.1 +1.2**
Q13A Wheeler Ranch, 75.33 355 ⇓P **P 08 49 01.1 +0.1**
baz=76,SNR=8.8
Q11A Duckwater 75.35 353 ⇓P **P 08 49 01.2 0.0**
baz=76,SNR=22
Q10A Clear Creek Ra 75.40 353 ⇓P **P 08 49 01.4 -0.1**
baz=76
Q12A Willow Creek R 75.47 354 ⇑P **P 08 49 02.6 +0.7**
baz=76
TMUT Trail Mountain 75.50 357 *e*P **P 08 49 03.1 +1.1**
comp=Z,384nm,2.5s,mb5.9
MCCM Marconi Confer 75.62 348 PFAKE 08 49 10.0 +7.2
MCCM LR LR
comp=Z,978nm,20.0s,MS5.1
P20A De Beque 75.64 359 ⇓P **P 08 49 03.4 +0.6**
baz=76,SNR=16
P17A Butcher Ranch, 75.66 357 ⇓P **P 08 49 02.5 -0.5**
baz=76,SNR=13
TAU Tasmania Unive 75.70 227 PFAKE 08 49 10.0 +6.5
TAU LR LR
comp=Z,3μm,19.0s,MS5.7
SIUC Southern Illin 75.77 15 *e*P **P 08 49 03.0 -0.6**
comp=Z,56nm,1.1s,mb5.4
P19A Cripple Cowboy 75.78 359 ⇓P **P 08 49 03.9 +0.3**
baz=76
FVM French Village 75.78 14 *e*P **P 08 49 02.9 -0.8**
P18A Preston Nutter 75.80 358 ⇓P **P 08 49 03.8 0.0**
baz=76
P13A Bates Ranch, G 75.82 355 ⇑P **P 08 49 04.5 +0.6**
baz=76
P16A Fountain Green 75.84 357 ⇑P **P 08 49 04.6 +0.6**
baz=76
KSU1 Kansas State U 75.90 9 PFAKE 08 49 20.0 +16
KSU1 LR LR
comp=Z,2μm,21.0s,MS5.3
P12A McGill 75.91 354 ⇑P **P 08 49 04.2 -0.1**
baz=76
ISCO Idaho Springs 75.95 2 *e*P **P 08 49 05.6 +1.0**
ISCO MLR MLR
comp=Z,3μm,20.0s,MS5.6
MAW Mawson 75.96 176 *e*P **P 08 49 04.4 -0.1**
comp=Z,4.9nm,0.9s,mb4.4
MAW *e*S S 08 58 47.3 +0.4
MAW Mawson 75.96 176 P **P 08 49 04.5 0.0**
comp=Z,5.8nm,1.0s,mb4.5,baz=196,slow=7.6,SNR=7.4
MAW LR LR 09 21 20.3
comp=Z,2μm,18.3s,MS5.5,baz=7.1,slow=35
MAW Mawson 75.96 176 *e*P **P 08 49 04.7 +0.2**
MAW LR LR
comp=Z,4μm,20.0s,MS5.8
TZTN Tazewell 76.01 20 *e*P **P 08 49 05.2 +0.2**
MIR Mirnyy 76.06 186 ⇓*i*P **P 08 49 05.2 +0.1**
MIR *e*S S 08 58 48.0 -0.2
MIR *e*S S 08 58 54.0 +5.8
MIR pmax pmax
comp=Z,62nm,1.4s,mb5.3
MIR smax
comp=E,2μm,10.0s
P10A Eureka 76.20 353 ⇓P **P 08 49 05.7 -0.3**
baz=77
NLU North Lily Min 76.20 356 *e*P **P 08 49 07.1 +1.0**
comp=E,26nm,1.2s,mb5.0
MPU Maple Canyon 76.24 357 *e*P **P 08 49 06.7 +0.4**
O20A White River Ci 76.27 359 ⇓P **P 08 49 06.1 -0.3**
baz=77,SNR=8.6
WCN Washoe City 76.27 350 ⇓P **P 08 49 06.5 +0.1**
baz=77
USIN University of 76.34 16 *e*P **P 08 49 07.0 +0.1**
O21A Pagoda 76.34 0 ⇓P **P 08 49 06.8 0.0**
baz=77
O17A Robinson Place 76.38 357 ⇑P **P 08 49 06.7 -0.4**
baz=77,SNR=7.4
O16A Springville 76.42 357 ⇑P **P 08 49 07.1 -0.2**
baz=77
O18A Roosevelt 76.43 358 ⇑P **P 08 49 07.0 -0.3**
baz=77,SNR=18
O19A Miners Draw (B 76.44 359 ⇑P **P 08 49 07.0 -0.4**
baz=77,SNR=12
DUG Dugway 76.48 356 ⇓P **P 08 49 07.2 -0.4**
baz=77
DUG Dugway 76.48 356 *e*P **P 08 49 08.3 +0.7**
DUG MLR MLR
comp=Z,1μm,21.0s,MS5.2
DUG Dugway 76.48 356 *e*P **P 08 49 08.3 +0.7**
DUG LR LR
comp=Z,1μm,21.0s,MS5.2
HOPS Hopland 76.48 348 PFAKE 08 49 20.0 +12
HOPS LR LR
comp=Z,1μm,19.0s,MS5.2
CNNC Cliffs of the 76.52 25 PFAKE 08 49 20.0 +12
CNNC LR LR
comp=Z,3μm,21.0s,MS5.6
OHCM Honcut 76.56 349 *e*P **P 08 49 08.6 +0.5**
DAU Daniels Canyon 76.62 357 *e*P **P 08 49 09.4 +1.0**
O11A Cowboy Ranch, 76.63 354 ⇑P **P 08 49 08.4 -0.1**
baz=77
O12A Currie 76.69 354 ⇓P **P 08 49 08.5 -0.3**
baz=77
JLU Jordanelle 76.82 357 *e*P **P 08 49 10.1 +0.5**
N21A Black Mountain 76.89 360 ⇓P **P 08 49 10.7 +0.8**
baz=77,SNR=11
WCI Wyandotte Cave 76.91 17 *e*P **P 08 49 09.5 -0.6**
WCI MLR MLR
comp=Z,2μm,22.0s,MS5.5
BEKR Beckworth 76.91 350 ⇓P **P 08 49 10.5 +0.4**
baz=77
N22A Wattenberg Ran 76.94 1 ⇓P **P 08 49 11.4 +1.2**
baz=77,SNR=27
N20A Spence Gulch, 76.97 359 ⇓P **P 08 49 10.2 -0.2**
baz=78,SNR=14
OLIL Olney 76.98 15 *e*P **P 08 49 10.3 -0.2**
N19A John Jarvie Ra 77.04 359 ⇓P **P 08 49 10.5 -0.3**
baz=78
BMN Battle Mountai 77.08 352 *e*P **P 08 49 12.1 +1.1**
BMN MLR MLR
comp=Z,996nm,20.0s,MS5.1
N16A Rees Ranch, Co 77.10 357 ⇓P **P 08 49 10.5 -0.6**
baz=78
N18A Larsen Ranch, 77.13 358 ⇓P **P 08 49 10.6 -0.7**
baz=78,SNR=9.0
ELK Elko 77.20 354 *e*P **P 08 49 16.1 +4.4**
ELK pmax pmax
comp=Z,4.0nm,0.5s
ELK MLR MLR
comp=Z,2μm,21.0s
ELK Elko 77.20 354 *e*P **P 08 49 16.1 +4.4**
comp=Z,4.1nm,0.5s,mb4.6
ELK LR LR
comp=Z,2μm,21.0s,MS5.3
BGU Big Grassy Mou 77.22 356 *e*P **P 08 49 11.5 -0.3**
comp=Z,81nm,2.3s,mb5.2
N13A Wendover, West 77.23 355 *e*P **P 08 49 11.9 +0.1**
comp=Z,14nm,0.6s,mb5.1
OGNE Ogallala 77.24 4 *e*P **P 08 49 12.9 +1.1**
OGNE LR LR
comp=Z,4μm,22.0s,MS5.7
N12A Clover Valley, 77.29 354 ⇑P **P 08 49 11.3 -0.8**
baz=78,SNR=8.6
N12A Clover Valley, 77.29 354 *e*P **P 08 49 12.8 +0.6**
ELN Prospectdale 77.44 22 *e*P **P 08 49 13.0 -0.1**
PHWY Pilot Hill 77.45 2 *e*P **P 08 49 13.8 +0.7**
BLA Blacksburg 77.53 22 *e*P **P 08 49 13.2 -0.4**
BLA pmax pmax
comp=Z,102nm,1.7s,mb5.5
BLA MLR MLR
comp=Z,1μm,19.0s,MS5.2
BLA Blacksburg 77.53 22 *e*P **P 08 49 13.2 -0.4**
comp=Z,102nm,1.7s,mb5.5
BLA LR LR
comp=Z,1μm,19.0s,MS5.2
M16A Huntsville 77.53 357 ⇑P **P 08 49 11.6 -1.9**
baz=78
M18A Lyman 77.59 358 P **P 08 49 13.4 -0.4**
baz=78,SNR=9.9
M20A Sweetwater, Wa 77.62 359 ⇓P **P 08 49 13.8 -0.2**
baz=78,SNR=17
M19A Rock Springs 77.65 359 ⇑P **P 08 49 12.5 -1.7**
baz=78
M17A Scullys Gap (B 77.66 358 ⇑P **P 08 49 12.5 -1.7**
baz=78
M13A Montello 77.73 355 ⇑P **P 08 49 13.6 -1.0**
baz=78
M13A Montello 77.73 355 *e*P **P 08 49 14.2 -0.4**
M21A Separation Pea 77.73 0 ⇑P **P 08 49 14.3 -0.4**
baz=78,SNR=8.5
BLO Bloomington 77.75 17 *e*P **P 08 49 14.0 -0.8**
M14A Sheep Mountain 77.81 356 ⇓P **P 08 49 15.0 -0.1**
baz=78
RWWY Rawlins 77.82 0 *e*P **P 08 49 15.5 +0.4**
HWUT Hardware Ranch 77.82 357 *e*P **P 08 49 17.6 +2.5**
HWUT LR LR
comp=Z,2μm,19.0s,MS5.4
M12A Wells 77.84 354 ⇑P **P 08 49 15.2 0.0**
baz=78
M11A Holland Ranch, 77.93 354 ⇓P **P 08 49 15.0 -0.7**
baz=78
WDC Whiskeytown Da 77.94 348 *e*P **P 08 49 15.8 0.0**
WDC MLR MLR
comp=Z,781nm,19.0s,MS5.0
L18A Fontenelle, Gr 78.09 358 ⇑P **P 08 49 15.8 -0.8**
baz=79,SNR=11
M10A I.L. Ranch, Tu 78.09 353 ⇓P **P 08 49 16.5 -0.1**
baz=79,SNR=7.0
L21A Rawlins 78.09 0 ⇑P **P 08 49 16.0 -0.6**
baz=79,SNR=16
L20A Wamsutter 78.14 359 ⇑P **P 08 49 16.8 -0.1**
baz=79,SNR=9.7
L22A Ellis Ranch, M 78.17 1 ⇓P **P 08 49 17.1 0.0**
baz=79,SNR=11
L16A Fish Haven 78.22 357 ⇑P **P 08 49 16.3 -1.0**
baz=79,SNR=21
L19A Farson 78.25 359 ⇓P **P 08 49 16.9 -0.6**
baz=79,SNR=18
L15A Malad City 78.26 356 ⇑P **P 08 49 16.3 -1.2**
baz=79,SNR=6.5
L17A Cokeville 78.29 357 ⇑P **P 08 49 16.6 -1.1**
baz=79,SNR=12
L14A Malta 78.34 356 ⇑P **P 08 49 17.4 -0.6**
baz=79,SNR=15
L13A Double Diamond 78.44 355 ⇓P **P 08 49 18.0 -0.5**
baz=79,SNR=7.8
HDIL Hopedale 78.49 14 *e*P **P 08 49 18.4 -0.4**
comp=Z,101nm,1.3s,mb5.6
HDIL LR LR
comp=Z,1μm,20.0s,MS5.3
L12A House Creek Ra 78.57 354 ⇓P **P 08 49 18.6 -0.6**
baz=79
L10A Juniper Basin 78.63 353 ⇓P **P 08 49 18.9 -0.7**
baz=79
L11A Cat Creek Ranc 78.66 354 ⇑P **P 08 49 19.2 -0.5**
baz=79,SNR=15
JSRW J. Sargeant Re 78.76 24 *e*P **P 08 49 19.9 -0.5**
K20A Yellowstone Ra 78.79 359 ⇓P **P 08 49 20.0 -0.5**
baz=79,SNR=18
K18A Toltan Ranch, 78.80 358 ⇑P **P 08 49 20.0 -0.5**
baz=79,SNR=8.3
K14A Jones Ranch, D 78.84 356 ⇑P **P 08 49 20.0 -0.8**
baz=79,SNR=9.2
JOHN Johnston Islan 78.89 300 PFAKE 08 49 30.0 +8.4
JOHN LR LR
comp=Z,2μm,21.0s,MS5.5
MOD Modoc 78.90 350 *e*P **P 08 49 22.1 +1.0**
MOD LR LR
comp=Z,1μm,22.0s,MS5.2
BW06 Boulder Array 78.92 358 P **P 08 49 20.7 -0.4**
baz=79,SNR=36
BW06 Boulder Array 78.92 358 *e*P **P 08 49 20.6 -0.5**
BW06 LR LR
comp=Z,2μm,20.0s,MS5.3
PDAR Pinedale Array 78.92 358 P **P 08 49 20.9 -0.2**
comp=Z,19nm,0.9s,mb5.0,baz=165,slow=6.2,SNR=124
PDAR LR LR 09 19 07.6
comp=Z,2μm,18.0s,MS5.4,baz=189,slow=32
PDAR Pinedale Array 78.92 358 P **P 08 49 20.9 -0.2**
PDAR LR LR 09 19 07.6
K17A Gardner Place, 78.94 357 ⇓P **P 08 49 19.9 -1.3**
baz=79
K15A Arbon 78.95 356 ⇑P **P 08 49 20.6 -0.7**
baz=79
AHID Auburn Hatcher 78.96 357 *e*P **P 08 49 21.4 0.0**
AHID LR LR
comp=Z,2μm,19.0s,MS5.4
K19A Absolon Red Bu 78.96 359 ⇓P **P 08 49 20.6 -0.8**
baz=80,SNR=14
K13A Stover Farm, H 79.00 355 ⇓P **P 08 49 21.8 +0.2**
baz=80,SNR=13
K16A Soda Springs 79.05 357 ⇓P **P 08 49 21.2 -0.7**
baz=80,SNR=7.3
K12A Draper Farm, C 79.05 354 ⇑P **P 08 49 21.5 -0.4**
baz=80
YBH Yreka Blue Hor 79.09 348 PFAKE 08 49 30.0 +7.9
YBH LR LR
comp=Z,1μm,22.0s,MS5.2
SCIA State Center 79.12 11 *e*P **P 08 49 22.8 +0.5**
SCIA LR LR
comp=Z,851nm,19.0s,MS5.1
CAN Canberra 79.21 234 PFAKE 08 49 30.0 +6.7
CAN LR LR
comp=Z,3μm,22.0s,MS5.6
WVOR Wild Horse Val 79.22 352 *e*P **P 08 49 23.5 +0.7**
WVOR pmax pmax
comp=Z,41nm,1.4s,mb5.2
WVOR MLR MLR
comp=Z,1μm,20.0s,MS5.2
WVOR Wild Horse Val 79.22 352 *e*P **P 08 49 23.5 +0.7**
comp=Z,41nm,1.4s,mb5.2

WVOR LR LR
comp=Z,1µm,20.0s,MS5.2
K11A Parker Ranch, 79.28 354 ⇑P **P 08 49 22.3 -0.9**
baz=80,SNR=10
BBSR BB Station 79.36 36 PFAKE 08 49 40.0 +16
BBSR LR LR
comp=Z,1µm,22.0s,MS5.2
K10A MacKenzie Ranc 79.37 353 ⇑P **P 08 49 22.9 -0.7**
baz=80,SNR=12
J18A Kendall Valley 79.37 358 ⇑P **P 08 49 22.7 -0.9**
baz=80,SNR=22
CBN Corbin 79.39 24 *e*P **P 08 49 23.5 -0.3**
CBN LR LR
comp=Z,3µm,21.0s,MS5.6
J17A Brown Place, J 79.54 358 ⇓P **P 08 49 23.7 -0.8**
baz=80
REDW Red Top Meadow 79.55 358 *e*P **P 08 49 24.7 +0.2**
RRI2 Red Ridge 79.55 357 *e*P **P 08 49 24.8 +0.2**
ACSO Alum Creek Sta 79.62 19 *e*P **P 08 49 24.8 -0.2**
ACSO LR LR
comp=Z,1µm,20.0s,MS5.2
J14A Carey 79.64 356 ⇓P **P 08 49 24.7 -0.4**
baz=80,SNR=17
J15A Blackfoot 79.65 356 ⇓P **P 08 49 24.6 -0.6**
baz=80,SNR=11
J12A Stokes Ranch, 79.68 354 ⇓P **P 08 49 24.9 -0.4**
baz=80,SNR=11
TPAW Teton Pass 79.68 357 *e*P **P 08 49 25.0 -0.3**
J13A Cove Ranch, Pi 79.76 355 ⇑P **P 08 49 25.7 0.0**
baz=80,SNR=17
LOHW Long Hollow 79.79 358 *e*P **P 08 49 25.8 -0.1**
DCID1 Drake Creek 79.79 357 *e*P **P 08 49 26.5 +0.6**
K05A Summer Lake 79.79 350 ⇑P **P 08 49 26.2 +0.2**
baz=80
I18A Diamond G Ranc 79.86 358 ⇓P **P 08 49 26.2 0.0**
baz=80,SNR=24
MFID Camas Ranch 79.90 354 ⇓P **P 08 49 25.9 -0.6**
baz=80
HLID Hailey 79.94 355 P **P 08 49 27.4 +0.8**
baz=80,SNR=35
HLID Hailey 79.94 355 *e*P **P 08 49 27.4 +0.7**
HLID LR LR
comp=Z,485nm,19.0s,MS4.9
MCWV Mont Chateau 79.96 21 *e*P **P 08 49 26.8 -0.1**
MCWV LR LR
comp=Z,2µm,20.0s,MS5.5
HUMO Hull Mountain 79.99 348 PFAKE 08 49 40.0 +13
HUMO LR LR
comp=Z,1µm,22.0s,MS5.2
J10A Berg Farm, Mel 80.00 353 ⇓P **P 08 49 28.0 +1.0**
baz=80
J09A Fry Pan Ranch, 80.02 352 ⇓P **P 08 49 27.6 +0.4**
baz=80,SNR=21
I16A Newdale 80.08 357 ⇓P **P 08 49 28.0 +0.5**
baz=81
IMW Indian Meadow 80.08 357 *e*P **P 08 49 27.4 0.0**
J08A Circle Bar Ran 80.11 352 ⇓P **P 08 49 27.1 -0.6**
baz=81,SNR=12
I12A Atlanta 80.22 354 ⇑P **P 08 49 27.4 -0.8**
baz=81
I14A Mackay 80.24 356 ⇑P **P 08 49 28.5 +0.2**
baz=81,SNR=16
I15A Monteview 80.25 356 ⇑P **P 08 49 28.3 -0.1**
baz=81
I13A Wildhorse Cree 80.27 355 ⇓P **P 08 49 28.2 -0.3**
baz=81,SNR=9.4
RSSD Black Hills 80.31 3 *e*P **P 08 49 28.9 +0.2**
RSSD MLR MLR
comp=Z,2µm,22.0s,MS5.5
I11A Placerville 80.41 354 ⇓P **P 08 49 29.2 0.0**
baz=81
ECSD EROS Data Cent 80.47 8 *e*P **P 08 49 28.8 -0.8**
ECSD LR LR
comp=Z,2µm,21.0s,MS5.3
JFWS Jewell Farm 80.59 13 *e*P **P 08 49 30.2 0.0**
JFWS MLR MLR
comp=Z,1µm,19.0s,MS5.2
I09A Lost Marbles R 80.64 353 ⇓P **P 08 49 30.0 -0.5**
baz=81
SDMD Soldier's Deli 80.66 24 *e*P **P 08 49 30.3 -0.4**
LKWY Lake 80.73 358 PFAKE 08 49 40.0 +9.0
LKWY LR LR
comp=Z,3µm,19.0s,MS5.6
H15A Lima 80.88 356 ⇓P **P 08 49 31.8 +0.1**
baz=81,SNR=9.0
H16A Russell Place, 80.90 357 ⇑P **P 08 49 31.9 +0.1**
baz=81,SNR=13
H14A Leadore 80.92 356 ⇑P **P 08 49 31.9 -0.1**
baz=81
H13A Challis 80.92 355 ⇓P **P 08 49 31.2 -0.8**
baz=81
I07A Izee 80.94 351 ⇓P **P 08 49 32.3 +0.2**
baz=81,SNR=16
H12A Diamond D Ranc 80.95 355 ⇑P **P 08 49 32.5 +0.4**
baz=81,SNR=8.0
QLMT Earthquake Lak 81.03 357 *e*P **P 08 49 33.8 +1.2**
MCMT McKenzie Canyo 81.10 356 *e*P **P 08 49 33.4 +0.5**
comp=Z,8.6nm,1.3s,mb4.5
H10A Noah's Angus R 81.15 353 ⇑P **P 08 49 33.5 +0.4**
baz=82
H11A Donnelly 81.20 354 ⇑P **P 08 49 33.6 +0.1**
baz=82
RLMT Red Lodge 81.27 359 ⇑P **P 08 49 33.7 -0.1**
baz=82,SNR=12
RLMT Red Lodge 81.27 359 *e*P **P 08 49 33.8 +0.1**
RLMT LR LR
comp=Z,3µm,21.0s,MS5.6
H08A Prairie City 81.28 352 ⇓P **P 08 49 34.4 +0.5**
baz=82
H09A Durkee 81.31 353 ⇑P **P 08 49 34.2 +0.1**
baz=82,SNR=10
MVL Millersville 81.35 24 *e*P **P 08 49 33.4 -1.0**
AAM Ann Arbor 81.40 18 *e*P **P 08 49 34.7 +0.1**
AAM MLR MLR
comp=Z,2µm,20.0s,MS5.4
G15A Dillon 81.42 356 ⇑P **P 08 49 34.5 -0.1**
baz=82
SSPA Standing Stone 81.44 22 *e*P **P 08 49 33.6 -1.3**
SSPA LR LR
comp=Z,2µm,21.0s,MS5.5
G13A Cobalt 81.45 355 ⇓P **P 08 49 34.7 0.0**
baz=82,SNR=9.2
G16A Moss Hill, Enn 81.45 357 ⇓P **P 08 49 35.4 +0.6**
baz=82
BMO Blue Mountains 81.46 353 *e*P **P 08 49 35.0 +0.2**
BMO LR LR
comp=Z,1µm,21.0s,MS5.2
G18A Lazy EL Ranch, 81.47 359 ⇓P **P 08 49 34.2 -0.6**
baz=82,SNR=15
G12A Big Creek, Yel 81.56 354 ⇓P **P 08 49 34.6 -0.7**
baz=82
DLMT Dillon 81.62 356 *e*P **P 08 49 36.0 +0.4**
ALLY Alegheny Colle 81.71 20 *e*P **P 08 49 36.2 0.0**
BOZ Bozeman (W) 81.86 357 ⇑P **P 08 49 36.2 -0.7**
baz=82,SNR=12
BOZ Bozeman (W) 81.86 357 *e*P **P 08 49 37.0 +0.1**
BOZ MLR MLR
comp=Z,1µm,20.0s,MS5.3
BOZ Bozeman (W) 81.86 357 *e*P **P 08 49 37.0 +0.1**
BOZ LR LR
comp=Z,1µm,20.0s,MS5.3
G10A Bishop Farm, J 81.88 353 ⇓P **P 08 49 36.8 -0.2**
baz=82,SNR=29
G11A Walters Elk Ra 81.91 354 ⇑P **P 08 49 36.9 -0.2**
baz=82,SNR=20
G09A Cove 81.93 353 ⇑P **P 08 49 37.3 0.0**
baz=82
GCMT Greycliff 81.94 358 *e*P **P 08 49 37.3 0.0**
comp=Z,24nm,1.8s,mb4.8
GCMT *e*PcP PcP 08 49 42.6 -0.3
COR Corvallis 81.97 349 PFAKE 08 49 50.0 +12
COR LR LR
comp=Z,859nm,21.0s,MS5.1
F16A Kennard Place, 82.00 357 ⇓P **P 08 49 37.3 -0.3**
baz=82,SNR=7.6
F18A Big Timber 82.06 358 ⇑P **P 08 49 37.3 -0.6**
baz=83,SNR=9.6
LRM Limekiln Ridge 82.07 357 *e*P **P 08 49 38.6 +0.6**
G08A Pilot Rock 82.07 352 ⇓P **P 08 49 38.1 0.0**
baz=83,SNR=12
F17A Fitzpatrick Pl 82.08 358 P **P 08 49 39.0 +0.9**
baz=83,SNR=14
F15A Butte 82.09 356 P **P 08 49 38.6 +0.5**
baz=83,SNR=6.8
F14A Wisdom 82.11 356 ⇑P **P 08 49 38.5 +0.2**
baz=83
F13A Darby 82.15 355 ⇓P **P 08 49 38.4 0.0**
baz=83,SNR=10
F12A Elk City 82.18 355 ⇓P **P 08 49 38.5 -0.1**
baz=83,SNR=9.6
ERPA Erie 82.19 20 *e*P **P 08 49 38.6 -0.1**
ERPA LR LR
comp=Z,2µm,20.0s,MS5.5
F11A Grangeville 82.39 354 ⇓P **P 08 49 39.8 +0.1**
baz=83,SNR=17
F10A Beach Ranch, E 82.57 353 ⇓P **P 08 49 40.4 -0.2**
baz=83
E17A Martinsdale 82.64 358 ⇓P **P 08 49 40.8 -0.2**
baz=83
E15A Deer Lodge 82.68 356 ⇓P **P 08 49 40.9 -0.3**
baz=83
E18A Harlowton 82.72 358 ⇑P **P 08 49 41.9 +0.5**
baz=83,SNR=17
E16A East Helena 82.75 357 ⇓P **P 08 49 41.7 +0.2**
baz=83,SNR=9.4
E13A Victor 82.79 355 ⇑P **P 08 49 41.0 -0.7**
baz=83,SNR=7.3
LAO LASA Array 82.82 1 *e*P **P 08 49 42.1 +0.2**
comp=Z,44nm,1.2s,mb5.4
LAO LR LR
comp=Z,2µm,20.0s,MS5.6
PAL Palisades 83.06 25 *e*P **P 08 49 42.5 -0.8**
F04A Amboy 83.15 350 ⇓P **P 08 49 43.4 -0.2**
baz=84
MSO Missoula 83.16 356 *e*P **P 08 49 44.6 +0.9**
MSO LR LR
comp=Z,810nm,19.0s,MS5.1
CHMT Chamberlain Mo 83.20 356 *e*P **P 08 49 44.6 +0.7**
HAWA Hanford 83.23 352 *e*P **P 08 49 44.3 +0.3**
HAWA LR LR
comp=Z,961nm,20.0s,MS5.2
RSW Rattlesnake Hi 83.23 352 *e*P **P 08 49 44.9 +0.9**
comp=Z,21nm,1.0s,mb5.1
D16A Dana Ranch, Ca 83.24 357 ⇑P **P 08 49 44.1 +0.1**
baz=84
E08A Dider Farm, El 83.27 352 ⇑P **P 08 49 44.8 +0.6**
baz=84
D15A Lincoln 83.29 357 ⇑P **P 08 49 45.1 +0.7**
baz=84
F03A Seaside 83.32 349 ⇓P **P 08 49 45.1 +0.5**
baz=84
D17A Six Diamond Ra 83.33 358 ⇑P **P 08 49 45.0 +0.5**
baz=84,SNR=14
D18A Linhart Farms, 83.35 358 ⇑P **P 08 49 44.9 +0.3**
baz=84,SNR=14
D14A Greenough 83.38 356 ⇓P **P 08 49 45.2 +0.4**
baz=84,SNR=13
D13A Huson 83.45 355 ⇑P **P 08 49 44.6 -0.6**
baz=84,SNR=7.2
BINY Binghamton 83.46 23 *e*P **P 08 49 44.8 -0.5**
BINY LR LR
comp=Z,4µm,22.0s,MS5.7
D12A Red Ives Fores 83.48 355 ⇓P **P 08 49 44.3 -0.9**
baz=84
SLMT Seeley Lake 83.54 356 *e*P **P 08 49 46.2 +0.6**
D10A Wagner Farm, O 83.64 353 ⇓P **P 08 49 45.3 -0.9**
baz=84
YLE Yale 83.67 25 *e*P **P 08 49 46.0 -0.5**
C17A Wharram Farm, 83.81 358 ⇑P **P 08 49 46.7 -0.2**
baz=84,SNR=6.0
D08A Wollman Farm, 83.81 352 ⇑P **P 08 49 46.9 -0.2**
baz=84,SNR=6.4
SWMT Swartz Lake 83.84 356 *e*P **P 08 49 47.6 +0.5**
EBG Ellensburg 83.86 351 P **P 08 49 47.9 +0.7**
LON Longmire 83.87 350 *e*P **P 08 49 47.1 -0.2**
COWI Conover 83.88 13 *e*P **P 08 49 47.1 -0.2**
comp=Z,45nm,0.9s,mb5.6
COWI LR LR
comp=Z,1µm,20.0s,MS5.3
C16A Fuhringer Ranc 84.02 357 ⇑P **P 08 49 48.4 +0.4**
baz=84,SNR=12
C15A Salmond Ranch, 84.03 357 ⇓P **P 08 49 48.8 +0.7**
baz=84
C13A Hot Springs 84.05 355 ⇓P **P 08 49 47.9 -0.2**
baz=84,SNR=13
C14A Swan Lake 84.08 356 ⇑P **P 08 49 48.5 +0.2**
baz=85
JTMT Jette 84.09 355 *e*P **P 08 49 49.1 +0.6**
OD2 Odessa Site #2 84.12 352 *e*P **P 08 49 48.4 -0.1**
TBM Table Mountain 84.12 351 P **P 08 49 49.0 +0.4**
EGMT Eagleton 84.18 358 ⇑P **P 08 49 49.5 +0.7**
baz=85,SNR=15
EGMT Eagleton 84.18 358 *e*P **P 08 49 49.7 +0.9**
EGMT LR LR
comp=Z,2µm,22.0s,MS5.4
YBMT Yellow Bay 84.19 356 *e*P **P 08 49 49.6 +0.7**
BSMT Bassoo Peak 84.23 355 *e*P **P 08 49 49.4 +0.3**
D05A Enumclaw 84.32 350 ⇓P **P 08 49 49.4 -0.2**
baz=85,SNR=8.1
C11A Tepee Creek (N 84.33 354 ⇑P **P 08 49 49.2 -0.4**
baz=85
B17A L&G Farms, Che 84.47 358 ⇑P **P 08 50.1 -0.2**
baz=85,SNR=21
C09A Chrisman Ranch 84.48 353 P **P 08 50.6 +0.2**
baz=85,SNR=6.4
ETW Entiat 84.52 351 *e*P **P 08 50.9 +0.3**
B18A Beardsley Farm 84.55 358 ⇓P **P 08 51.3 +0.6**
baz=85,SNR=21
B15A Bradely Ranch, 84.56 357 ⇓P **P 08 50.7 -0.1**
baz=85,SNR=16
WTV Waterville 84.56 352 P **P 08 51.0 +0.2**
B16A M & M Farms, S 84.62 357 ⇓P **P 08 50.9 -0.2**
baz=85
B14A Marquette Ranc 84.64 356 ⇓P **P 08 51.2 0.0**
baz=85,SNR=9.3
DGMT Dagmar 84.65 2 ⇑P **P 08 50.8 -0.5**
baz=85,SNR=8.6
DGMT Dagmar 84.65 2 *e*P **P 08 51.3 0.0**
DGMT LR LR
comp=Z,3µm,22.0s,MS5.7
TRY Troy 84.69 24 *e*P **P 08 50.8 -0.8**
B13A Whitefish 84.73 355 ⇓P **P 08 51.7 +0.1**
baz=85,SNR=14
NLWA Neilton Lookou 84.80 349 ⇓P **P 08 51.9 -0.1**
baz=85,SNR=5.0
NLWA Neilton Lookou 84.80 349 *e*P **P 08 52.4 +0.4**
NLWA LR LR
comp=Z,774nm,19.0s,MS5.1
GNW Green Mountain 84.81 350 *e*P **P 08 51.9 -0.2**
comp=Z,8.4nm,1.2s,mb4.8
NEW Newport 84.83 354 *e*P **P 08 52.0 -0.1**
NEW MLR MLR
comp=Z,1µm,20.0s
B12A Libby 84.90 355 ⇓P **P 08 51.9 -0.6**
baz=85
HDW Hoodsport 84.92 350 P **P 08 52.8 +0.2**
AGMN Agassiz Nation 85.06 8 *e*P **P 08 53.0 -0.3**
AGMN LR LR
comp=Z,2µm,21.0s,MS5.4
A18A Metzger Ranch, 85.07 358 ⇓P **P 08 52.7 -0.7**
baz=86,SNR=11
B08A Colville Reser 85.14 352 ⇑P **P 08 52.4 -1.3**
baz=86,SNR=5.3
A15A Johnson Ranch, 85.23 357 ⇑P **P 08 53.8 -0.3**
baz=86,SNR=13
A14A Double T Ranch 85.26 356 ⇓P **P 08 54.5 +0.2**
baz=86,SNR=43
ACCN Adirondack Com 85.27 24 *e*P **P 08 53.7 -0.8**
A13A Flathead Natio 85.28 355 ⇑P **P 08 54.9 +0.5**
baz=86
EYMN Ely 85.28 11 *e*P **P 08 53.3 -1.1**
EYMN LR LR
comp=Z,818nm,21.0s,MS5.1
JCW Jim Creek 85.30 350 P **P 08 54.0 -0.5**
B06A Marblemount 85.56 351 ⇑P **P 08 55.9 +0.1**
baz=86
NCB Newcomb 85.61 23 *e*P **P 08 55.3 -0.9**
NCB LR LR
comp=Z,2µm,22.0s,MS5.5
A07A Ashnola River, 85.94 352 ⇑P **P 08 57.1 -0.6**
baz=86,SNR=5.8
PGC Sidney 85.96 349 *e*P **P 08 58.3 +0.5**
LONY Lake Ozonia 86.08 23 *e*P **P 08 57.7 -0.8**
LONY LR LR
comp=Z,2µm,21.0s,MS5.6
STKA Stephens Creek 86.17 233 P **P 08 59.1 -0.4**
comp=Z,3.6nm,1.0s,mb4.6,baz=108,slow=1.1,SNR=3.9
STKA LR LR 09 21 36.1
comp=Z,3µm,20.1s,MS5.8,baz=127,slow=31
HNR Honiara 86.49 261 PFAKE 08 50 10.0 +8.6
HNR LR LR
comp=Z,1µm,21.0s,MS5.3
LBNH Lisbon 86.61 25 *e*P **P 08 49 59.9 -1.2**
LBNH pmax pmax
comp=Z,17nm,1.2s,mb5.2
LBNH MLR MLR
comp=Z,2µm,20.0s,MS5.5
LBNH Lisbon 86.61 25 *e*P **P 08 49 59.9 -1.2**
comp=Z,17nm,1.2s,mb5.1
LBNH LR LR
comp=Z,2µm,20.0s,MS5.5
ULM Lac du Bonnet 86.99 7 P **P 08 50 00.8 -1.9**
comp=Z,5.4nm,0.6s,mb4.9,baz=179,slow=4.1,SNR=6.9
ULM LR LR 09 24 24.2
comp=Z,1µm,21.1s,MS5.2,baz=187,slow=32
ULM Lac du Bonnet 86.99 7 *e*P **P 08 50 01.6 -1.2**
ULM LR LR
comp=Z,2µm,21.0s,MS5.4
EDM Edmonton 89.50 356 *e*P **P 08 50 13.9 -0.7**
SHEL Horse Pasture 89.78 110 PFAKE 08 50 30.0 +13
SHEL LR LR
comp=Z,2µm,21.0s,MS5.6
CTAO Charters Tower 90.54 244 PFAKE 08 50 30.0 +9.5
CTAO LR LR
comp=Z,2µm,20.0s,MS5.6
FFC Flin Flon 90.99 3 *i*P **P 08 50 21.0 -0.5**
FFC Flin Flon 90.99 3 PFAKE 08 50 30.0 +8.5
FFC LR LR
comp=Z,3µm,20.0s,MS5.8
MIDW Midway 91.93 304 PFAKE 08 50 40.0 +13
MIDW LR LR
comp=Z,3µm,21.0s,MS5.6
SACV Santiago Islan 93.98 74 PFAKE 08 50 50.0 +14
SACV LR LR
comp=Z,2µm,20.0s,MS5.5
SUR Sutherland 96.15 138 PFAKE 08 51 00.0 +14
SUR LR LR
comp=Z,3µm,20.0s,MS5.8
ASAR Alice Springs 96.72 234 P **P 08 50 46.7 -2.2**
comp=Z,4.8nm,1.3s,mb4.8,baz=126,slow=4.6,SNR=6.7
ASAR PP PP 08 54 41.4 -1.7
comp=Z,0.9nm,1.1s,baz=132,slow=6.9,SNR=4.3
SCHQ Schefferville 97.44 22 LR LR 09 28 49.2
comp=Z,1µm,22.0s,MS5.3,baz=217,slow=32
SCHQ Schefferville 97.44 22 PFAKE 08 51 00.0 +8.8
SCHQ LR LR
comp=Z,2µm,21.0s,MS5.5
WAKE Wake Island 98.00 288 PFAKE 08 51 10.0 +15
WAKE LR LR
comp=Z,1µm,19.0s,MS5.5
YKA Yellowknife Ar 98.82 357 P **P 08 50 56.2 -0.9**
comp=Z,1.6nm,1.0s,mb4.5,baz=171,slow=4.9,SNR=8.7
YKA LR LR 09 31 52.8
comp=Z,297nm,18.5s,MS4.8,baz=155,slow=33
YKA Yellowknife Ar 98.82 357 P **P 08 50 56.2 -0.9**
YKA LR LR 09 31 52.8
WRAB Tennant Creek 99.02 237 PFAKE 08 51 10.0 +11
WRAB LR LR
comp=Z,1µm,19.0s,MS5.4
WRA Warramunga Arr 99.02 237 P **P 08 50 57.5 -1.8**
comp=Z,0.8nm,0.9s,mb4.2,baz=150,slow=6.4,SNR=4.6
WRA PP PP 08 54 56.5 -4.3
comp=Z,3.4nm,1.3s,baz=136,slow=7.2,SNR=5.8
WRA LR LR 09 31 16.7
comp=Z,936nm,20.3s,MS5.3,baz=70,slow=33
WRA Warramunga Arr 99.02 237 P **P 08 50 57.5 -1.8**
WRA 08 54 56.5
NWAO Narrogin (SRO) 99.26 217 PFAKE 08 51 10.0 +10
NWAO LR LR
comp=Z,2µm,19.0s,MS5.6
KDAK Kodiak Island 101.26 337 PFAKE 08 51 20.0 +11
KDAK LR LR
comp=Z,1µm,22.0s,MS5.4
BOSA Boshof 101.47 139 P Pdif 08 51 08.7 -1.1
comp=Z,7.2nm,1.1s,baz=219,slow=6.5,SNR=4.3
BOSA Boshof 101.47 139 P Pdif 08 51 08.7 -1.1
BOSA LR LR
comp=Z,3µm,21.0s,MS5.8
DBIC Dimbokro 104.10 92 PFAKE 08 51 30.0 +8.5
DBIC LR LR
comp=Z,2µm,21.0s,MS5.5
TSUM Tsumeb 104.13 127 PFAKE 08 51 30.0 +8.3
TSUM LR LR
comp=Z,2µm,20.0s,MS5.7
EGAK Eagle 104.34 346 PFAKE 08 51 30.0 +7.4
EGAK LR LR
comp=Z,924nm,21.0s,MS5.3
LBTB Lobatse 104.51 137 PFAKE 08 51 30.0 +6.7
LBTB LR LR
comp=Z,2µm,20.0s,MS5.6
CMLA Cha da Macela 105.80 55 PFAKE 08 55 50.0 +8.4
CMLA LR LR
comp=Z,856nm,20.0s,MS5.3
COLA College 105.87 343 PFAKE 08 55 50.0 +9.2
COLA LR LR
comp=Z,1µm,19.0s,MS5.5
MBWA Marble Bar 107.34 226 PFAKE 08 56 00.0 +15
MBWA LR LR
comp=Z,2µm,19.0s,MS5.6
SFJD Kangerlussuaq 111.82 21 PFAKE 08 56 00.0 +8.1
SFJD LR LR
comp=Z,669nm,19.0s,MS5.2
GUMO Guam 112.05 271 PFAKE 08 56 00.0 +6.0
GUMO LR LR
comp=Z,707nm,20.0s,MS5.2
TORD Torodi Ar. Bea 113.08 90 PP PP 08 56 48.7 +3.4
comp=Z,2.1nm,0.9s,baz=251,slow=5.9,SNR=5.0
MSKU Masuku 113.53 111 PFAKE 08 56 10.0 +13
MSKU LR LR
comp=Z,27µm,21.0s,MS6.8
LSZ Lusaka 113.67 133 PFAKE 08 56 10.0 +13
LSZ LR LR
comp=Z,1µm,22.0s,MS5.5
SFS San Fernando 118.54 64 PFAKE 08 56 20.0 +14
SFS LR LR
comp=Z,745nm,20.0s,MS5.3
MTE Manteigas 119.27 60 PFAKE 08 56 20.0 +13
MTE LR LR
comp=Z,1µm,20.0s,MS5.6
KAPI Kappang 119.56 237 PFAKE 08 56 20.0 +11
KAPI LR LR
comp=Z,1µm,19.0s,MS5.6
ABPO Ambohimpanom 119.84 152 PFAKE 08 56 20.0 +11
ABPO LR LR
comp=Z,2µm,21.0s,MS5.6
PET Petropavlovsk 120.30 316 PFAKE 08 56 20.0 +11
PET LR LR
comp=Z,1µm,20.0s,MS5.5
BORG Borgarnes 120.80 30 PFAKE 08 56 20.0 +11
BORG LR LR
comp=Z,291nm,21.0s,MS4.9
PAB San Pablo 121.16 62 PFAKE 08 56 20.0 +9.3
PAB LR LR
comp=Z,1µm,22.0s,MS5.5
TAM Tamanrasset 121.27 84 PFAKE 08 56 20.0 +8.5
TAM LR LR
comp=Z,2µm,20.0s,MS5.7
ESDC Sonseca Array 121.49 62 PKP PKPdf 08 56 09.9 -1.4
comp=Z,0.3nm,0.5s,baz=294,slow=2.7,SNR=8.1
ESLA Sonseca Array 121.49 62 *e*PKPdf PKPdf 08 56 17.3 +5.9
ESLA LR LR
comp=Z,8µm,22.0s,MS6.3
BILL Bilibino 121.92 334 PFAKE 08 56 20.0 +8.7
BILL LR LR
comp=Z,1µm,20.0s,MS5.5
DAV Davao City (W) 123.55 252 PFAKE 08 56 30.0 +14
DAV LR LR
comp=Z,620nm,19.0s,MS5.3
SJPF Ste Jean 124.67 59 *e*PKIKP PKPdf 08 56 16.3 -1.0
comp=Z,22nm,1.0s
ROSF Rostrenen 124.99 52 *e*PKIKP PKPdf 08 56 15.3 -2.5
EPF Esparros 125.72 59 *e*PKIKP PKPdf 08 56 18.1 -1.3
comp=Z,20nm,1.1s
SEY Seymchan 126.25 326 *i*PKIKP PKPdf 08 56 18.1 -1.6
SEY Seymchan 126.25 326 *e*PKP PKPdf 08 56 18.1 -1.6
COCO West Island 126.40 210 PFAKE 08 56 30.0 +8.4
COCO LR LR
comp=Z,1µm,19.0s,MS5.6
ERM Erimo 126.42 299 PFAKE 08 56 30.0 +9.3
ERM LR LR
comp=Z,4µm,21.0s,MS6.0
MFF Saint Martin d 126.50 55 *e*PKIKP PKPdf 08 56 19.0 -1.7
GRR Gorron 126.54 53 *e*PKIKP PKPdf 08 56 19.0 -1.8
comp=Z,27nm,1.4s
ESK Eskdalemuir 126.86 44 PFAKE 08 56 30.0 +8.9
ESK LR LR
comp=Z,624nm,22.0s,MS5.2
FLN La Foliniere 126.89 52 *e*PKIKP PKPdf 08 56 19.7 -1.7
LDF La Druitiere 127.07 53 *e*PKIKP PKPdf 08 56 20.0 -1.8
comp=Z,29nm,1.4s

MTLF Montolieu 127.12 59 *e*PKIKP PKPdf 08 56 20.1 -1.9
comp=Z,18nm,1.4s
RJF Les Rejaudoux 127.23 57 *e*PKIKP PKPdf 08 56 20.4 -1.8
YSS Yuzh-Sakhalins 128.16 305 PFAKE 08 56 40.0 +16
YSS LR LR
comp=Z,348nm,20.0s,MS5.0
MJAR Matsushiro Arr 128.16 291 PKP PKPdf 08 56 22.2 -2.0
comp=Z,0.3nm,0.4s,baz=104,slow=5.3,SNR=4.7
MAJO Matsushiro 128.17 291 PFAKE 08 56 40.0 +16
MAJO LR LR
comp=Z,695nm,19.0s,MS5.4
BGF Bois d'Agland 128.47 56 *e*PKIKP PKPdf 08 56 22.8 -1.7
comp=Z,42nm,1.4s
AVF Avril sur Loir 128.87 56 *e*PKIKP PKPdf 08 56 23.3 -1.9
comp=Z,13nm,1.2s
SSF Saint Saulge 129.04 55 *e*PKIKP PKPdf 08 56 23.6 -2.0
SMF Signal de Mont 129.16 56 *e*PKIKP PKPdf 08 56 24.1 -1.7
comp=Z,19nm,1.1s
SSB Saint Sauveur 129.28 58 PFAKE 08 56 40.0 +14
SSB LR LR
comp=Z,880nm,21.0s,MS5.4
LOR Lormes 129.32 55 *e*PKIKP PKPdf 08 56 24.4 -1.7
KKM Kota Kinabalu 129.87 244 PFAKE 08 56 40.0 +12
KKM LR LR
comp=Z,668nm,22.0s,MS5.3
BAIF Baives 130.17 52 *e*PKIKP PKPdf 08 56 26.2 -1.4
comp=Z,67nm,1.5s
MEZF Maizieres J'vi 130.39 54 *e*PKIKP PKPdf 08 56 26.8 -1.3
comp=Z,40nm,1.3s
KSM Kuching 130.65 234 PFAKE 08 56 40.0 +10
KSM LR LR
comp=Z,855nm,20.0s,MS5.4
CABF La Chapelle 130.65 56 *e*PKIKP PKPdf 08 56 27.4 -1.2
comp=Z,33nm,1.3s
BNI Bardonecchia 130.68 58 PFAKE 08 56 40.0 +11
BNI LR LR
comp=Z,1μm,19.0s,MS5.6
VSL Villasalto 131.09 66 PFAKE 08 56 40.0 +10
VSL LR LR
comp=Z,1μm,22.0s,MS5.5
KBS Kingsbay 131.13 13 PFAKE 08 56 40.0 +11
KBS LR LR
comp=Z,951nm,20.0s,MS5.5
WLF Walferdange 131.33 52 PFAKE 08 56 40.0 +10
WLF LR LR
comp=Z,1μm,20.0s,MS5.6
ECH Echery 131.70 54 PFAKE 08 56 40.0 +9.4
ECH LR LR
comp=Z,586nm,20.0s,MS5.3
CDF Champ du Feu 131.82 54 *e*PKIKP PKPdf 08 56 29.4 -1.4
BFO Black Forest 132.49 55 *e*SSS 09 21 35.1
BFO Black Forest 132.49 55 PFAKE 08 56 40.0 +7.9
BFO LR LR
comp=Z,701nm,22.0s,MS5.3
TNS Taunus Mts 132.88 52 *e*SSS 09 21 42.2
VLC Villacollemand 133.04 60 PFAKE 08 56 40.0 +6.8
VLC LR LR
comp=Z,1μm,21.0s,MS5.5
STU Stuttgart 133.13 54 *e*SSS 09 21 43.5
WDD Wield Dalam 133.84 73 PFAKE 08 56 50.0 +15
WDD LR LR
comp=Z,1μm,19.0s,MS5.6
MUD Monsted U'grnd 133.91 44 *i* P SKPdf 09 00 04.6 -5.0
MUD
comp=Z,540nm,20.0s
UBBA Unterbreizbach 133.95 51 *e*SSS 09 21 56.1
KONO Kongsberg 134.16 39 PFAKE 08 56 50.0 +15
KONO LR LR
comp=Z,577nm,20.0s,MS5.3
NRDL Niedersach Rie 134.19 49 *e*SSS 09 22 02.6
CLZ Clausthal 134.29 50 *e*SSS 09 22 03.5
FUR Furstenfeldbru 134.41 55 *e*SSS 09 22 03.7
GRA1 Grafenberg Arr 134.58 53 *e*PKPdf PKPdf 08 56 35.2 -0.8
GRA1 *e*SSS 09 22 05.6
GRA1 LR LR
comp=Z,800nm,21.3s,MS5.4
GRF Grafenberg Arr 134.58 53 *e*PKPdf PKPdf 08 56 35.2 -0.8
GRF *e*SSS 09 22 05.6
GRF *e*L 09 49 33.0
comp=Z,766nm,21.3s
TIXI Tiksi 134.68 338⇑ *i*PKIKP PKPdf 08 56 34.7 -0.8
TIXI MLR MLR
comp=Z,871nm,21.0s,MS5.5
NAO01 NORSAR Array S 134.75 37 PFAKE 08 56 50.0 +14
NAO01 LR LR
comp=Z,575nm,21.0s,MS5.3
NB2 NORSAR Subarra134.90 37 PKPdf PKPdf 08 56 35.3 -0.9
comp=Z,8.2nm,1.1s,baz=289,slow=1.9
NB2 NORSAR Subarra134.90 37 PKPdf PKPdf 08 56 35.3 -0.9
baz=289,slow=1.9
NB2 NORSAR Subarra134.90 37 PKIKP PKPdf 08 56 35.3 -0.9
NB2 NORSAR Subarra134.90 37 PKPdf PKPdf 08 56 35.3 -0.9
NOA NORSAR Array B 134.90 37 PKP PKPdf 08 56 35.8 -0.4
comp=Z,1.1nm,0.7s,baz=280,slow=1.9,SNR=3.9
MOX Moxa 134.95 52 *e*SS SS 09 17 09.0 +3.6
MOX *e* 09 22 14.0
MOX
comp=Z,300nm,19.0s
MOX Moxa 134.95 52 *e*SSS 09 22 11.9
ROTZ Rotzenmuhle 135.23 53 *e*SSS 09 22 15.4
TANN Tannenbergstha 135.46 52 *e*SSS 09 22 19.2
WET Wettzell 135.59 54 *e*SSS 09 22 20.5
CEL Celeste 135.60 70 PFAKE 08 56 50.0 +12
CEL LR LR
comp=Z,860nm,19.0s,MS5.5
TRI Trieste 135.70 59 PFAKE 08 56 50.0 +12
TRI LR LR
comp=Z,851nm,21.0s,MS5.5
COP Copenhagen 135.72 45 *i* P SKPdf 09 00 05.9 -7.0
COP
comp=Z,300nm,19.0s
CLL Collm 135.88 51 *e*SSS 09 22 25.1
CLL Collm 135.88 51 *e*PKIKP PKPdf 08 56 36.0 -2.3
CLL *e* 08 56 38.0
CLL Collm 135.88 51 *e*PKP PKPdf 08 56 36.0 -2.3
CLL *e* 08 56 38.0
CLL *e* 08 56 45.0
CLL *e*PKSdf 09 00 11.0
CLL Collm 135.88 51 *e*PKPdf PKPdf 08 56 38.0 -0.3
CLL *e* 08 56 56.0
CLL *e*(PP) 08 59 06.0
CLL *e*PKSbc 09 00 11.0
CLL *e*(Sdif) 09 07 12.0
CLL *e*SS SS 09 17 19.0 +2.4
CLL *e*SSS 09 22 30.0
CLL *e* 09 25 06.0
CLL *e*SSSS 09 26 06.0
CLL *e* 09 32 42.0
KHC Kasperske Hory 136.05 54 *e*PKIKP PKPdf 08 56 38.4 -0.3
KHC Kasperske Hory 136.05 54 *e*SS SS 09 17 16.2 -2.5
KHC *ex* x 09 22 20.2
KHC AMS AMS 09 44 50.0
comp=Z,1μm,30.5s
MSEY Mahe Island 136.06 155 PFAKE 08 56 50.0 +10
MSEY LR LR
comp=Z,1μm,22.0s,MS5.6
GEC2 GERESS Array S 136.09 55 *e*SSS 09 22 27.0
GERES GERESS Array B 136.09 55 PKP PKPdf 08 56 38.7 -0.1
comp=Z,1.4nm,1.0s,baz=192,slow=3.7,SNR=11
KSRS Korea Array 136.26 289 PKP PKPdf 08 56 41.4 +1.9
comp=Z,0.9nm,0.7s,baz=135,slow=3.5,SNR=4.7
BRG Berggiesshubel 136.44 52 *e*PKP PKPdf 08 56 40.0 +0.6
comp=Z,4.7nm,1.2s
BRG PP PP 08 59 19.0 -2.2
BRG SP SP 09 09 31.0 -13
BRG SS SS 09 17 15.0 -8.3
BRG SSS 09 22 38.0
BRG
comp=Z,878nm,22.1s
BRG
comp=N,438nm,25.1s
BRG
comp=E,715nm,25.1s
TIP Timpagrande 136.49 69 PFAKE 08 56 50.0 +10
TIP LR LR
comp=Z,1μm,22.0s,MS5.7
MDJ Mudanjiang 136.65 299 PKP PKPdf 08 56 40.3 +0.3
MDJ PP PP 08 59 23.8 +1.1
MDJ SS SS 09 17 29.5 +3.3
MDJ LR LR
comp=N,580nm,38.1s
MDJ LR LR
comp=E,1μm,32.0s
MDJ LR LR
comp=Z,2μm,33.5s,MS5.6
MDJ Mudanjiang 136.65 299 PFAKE 08 56 50.0 +10
MDJ LR LR
comp=Z,2μm,22.0s,MS5.7
YHNB Yeheng 136.71 268 PFAKE 08 56 50.0 +9.3
YHNB LR LR
comp=Z,717nm,21.0s,MS5.4
YAK Yakutsk 136.73 325 *e*PKIKP PKPdf 08 56 40.8 +1.2
YAK *e* 08 59 18.5
YAK pmax pmax
comp=Z,10.0nm,1.4s
YAK Yakutsk 136.73 325 PFAKE 08 56 50.0 +10
YAK LR LR
comp=Z,1μm,21.0s,MS5.6
PRU Pruhonice 136.75 53 *e*SS SS 09 17 30.9 +3.8
PRU *ex* x 09 22 24.5
PRU AMS AMS 09 45 00.0
comp=Z,900nm,24.8s
TATO Taipei 136.76 269 PFAKE 08 56 50.0 +9.2
TATO LR LR
comp=Z,913nm,20.0s,MS5.5
BSD Bornholm Skovb 137.14 45 *i* P SKPdf 09 00 13.9 -1.6
BSD
comp=Z,710nm,20.0s
INCN Inchon 137.25 288 PFAKE 08 56 50.0 +8.7
INCN LR LR
comp=Z,1μm,20.0s,MS5.6
TREC Trest 137.31 54 AMS AMS 09 54 10.0
comp=Z,900nm,17.4s
DPC Dobruska-Polom 137.92 53 *e*SS SS 09 17 39.4 -1.5
DPC *ex* x 09 22 45.9
DPC AMS AMS 09 47 30.0
comp=Z,600nm,24.7s
ARCES ARCESS Array B 138.40 23 PKP PKPdf 08 56 41.3 -1.1
comp=Z,4.4nm,1.0s,baz=270,slow=2.4,SNR=5.1
KEV Kevo 138.75 22 PFAKE 08 56 50.0 +6.9
KEV LR LR
comp=Z,658nm,22.0s,MS5.3
OKC Ostrava-Krasne 139.07 53 *ex* SS 09 18 04.9 +10
OKC AMS AMS 09 55 20.0
comp=Z,600nm,20.9s
TIR Tirane 139.29 67 PFAKE 08 57 00.0 +15
TIR LR LR
comp=Z,991nm,22.0s,MS5.5
VYHS Vyhne 139.46 56 *e*PKIKP PKPdf 08 56 39.9 -5.1
VYHS *e* 08 56 47.5
VYHS Vyhne 139.46 56 *e*PKP PKPdf 08 56 39.9 -5.1
VYHS *e* 08 56 47.5
CN2 Changchun 139.46 297 *e*PKP PKPdf 08 56 47.3 +2.1
CN2 PP PP 08 59 46.1 +5.8
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,500nm,22.0s,MS5.4
CN2 LR LR
comp=E,600nm,22.0s,MS5.4
CN2 LR LR
comp=Z,800nm,23.0s,MS5.4
SSE Sheshan 139.52 277 PKP PKPdf 08 56 41.8 -3.9
SSE LR LR
comp=N,600nm,26.7s,MS5.3
SSE LR LR
comp=E,490nm,26.1s,MS5.3
SSE LR LR
comp=Z,980nm,27.3s,MS5.4
KULM Kulim 139.60 226 PFAKE 08 57 00.0 +14
KULM LR LR
comp=Z,792nm,21.0s,MS5.4
PSZ Piszkesteto 140.13 56 PFAKE 08 57 00.0 +14
PSZ LR LR
comp=Z,716nm,22.0s,MS5.4
STHS Stebnicka Huta 141.07 54 *e*PKHKP 08 56 42.2
STHS Stebnicka Huta 141.07 54 *e*PKP 08 56 42.2
BZS Buzias 141.15 60⇑ *i*PKIKP PKPdf 08 56 48.8 +0.6
BZS Buzias 141.15 60⇑ *i*P PKPdf 08 56 48.8 +0.6
CRVS Cervenica-Dubn 141.21 55 *e*PKIKP 08 56 43.0
CRVS Cervenica-Dubn 141.21 55 *e*PKP 08 56 43.0
NJ2 Nanjing 141.71 277 *e*PKP PKPdf 08 56 46.3 -3.4
KOLS Kolonicke sedl 141.75 55 *e*PKIKP PKPdf 08 57 01.1 +12
KOLS Kolonicke sedl 141.75 55 *e* PKPdf 08 57 01.1 +12
FINES FINESS Array B 141.85 34 PKP PKPdf 08 56 49.2 +0.3
comp=Z,2.1nm,0.8s,baz=214,slow=6.5,SNR=3.9
GZR Gura Zlata 141.94 61⇓ *i*PKIKP PKPdf 08 56 56.3 +6.7
GZR Gura Zlata 141.94 61⇓ *i*P PKPdf 08 56 56.3 +6.7
DRGR 141.99 58⇑ *i*PKIKP PKPdf 08 56 52.9 +3.3
DRGR 141.99 58⇑ *i*P PKPdf 08 56 52.8 +3.2
KWP Kalwaria Pacla 142.03 54 PFAKE 08 57 00.0 +10
KWP LR LR
comp=Z,712nm,21.0s,MS5.4
LVZ Lovozero 142.10 22 PFAKE 08 57 00.0 +11
LVZ LR LR
comp=Z,932nm,20.0s,MS5.5
LVV L'vov 142.88 53 *e*PKIKP PKPdf 08 56 46.4 -4.7
QIZ Qiongzhong 142.93 252 PKP PKPdf 08 56 51.6 -0.6
QIZ PP PP 09 00 00.3 -1.2
QIZ SS SS 09 18 44.1 +3.9
QIZ AMB AMB
comp=Z,200nm,4.7s
QIZ LR LR
comp=N,410nm,25.6s
QIZ LR LR
comp=Z,620nm,33.6s
QIZ Qiongzhong 142.93 252 PFAKE 08 57 00.0 +7.8
QIZ LR LR
comp=Z,643nm,20.0s,MS5.4
ISAL Salakas 143.45 44 *e*P PKPdf 08 56 48.5 -3.5
IIGN Ignalina 143.54 44 *e*P PKPdf 08 56 48.7 -3.4
HIA Hailar 143.68 306 *e*PKIKP PKPdf 08 56 49.3 -3.3
HIA MLR MLR
comp=Z,2μm,21.0s
BUR08 Bucovina Ar. S 143.70 57 *e*PKPdf PKPdf 08 56 50.2 -2.4
BURAR Bucovina Array 143.71 57⇓ *i*PKIKP PKPdf 08 56 50.5 -2.2
BURAR Bucovina Array 143.71 57⇓ *i*P PKPdf 08 56 50.5 -2.2
IDID Didziasalis 143.84 44 *e*P PKPdf 08 56 49.1 -3.5
MLR Muntele Rosu 144.18 61⇓ *i*PKIKP PKPdf 08 56 51.3 -2.3
MLR Muntele Rosu 144.18 61⇓ *i*P PKPdf 08 56 51.3 -2.3
MNK Minsk 144.63 45 *e*PKHKP 08 56 50.0
MNK pmax pmax
comp=Z,170nm,1.2s
MICGM Minsk 144.66 45 *e*P PKPdf 08 56 50.0 -4.1
PLOR Plostina 144.68 60⇓ *i*PKIKP PKPdf 08 56 52.0 -2.4
PLOR Plostina 144.68 60⇓ *i*P PKPdf 08 56 52.0 -2.4
VRI Vrincioaia 144.74 60⇑ *i*PKIKP PKPdf 08 56 52.6 -1.9
VRI Vrincioaia 144.74 60⇑ *i*P PKPdf 08 56 52.6 -1.9
WHN Wuhan 144.81 273⇑ PKP PKPdf 08 56 53.5 -1.6
WHN PP PP 09 00 13.6 +0.6
WHN SS SS 09 19 05.3 +3.2
WHN LR LR
comp=Z,2μm,20.3s,MS5.9
BALY Balya 144.83 71 *i* P PKPdf 08 56 51.6 -3.3
AKHS Akhisar 144.83 72 *i* P PKPdf 08 56 52.7 -2.2
BOD Bodaibo 145.41 321 *e*PKP2 PKPab 08 56 53.5 -1.9
BOD pmax pmax
comp=Z,32nm,1.6s
DURS Dursunbey 145.46 71 *i* P PKPdf 08 56 55.0 -1.0
HARR Harsova 145.55 62⇑ *i*PKIKP PKPdf 08 56 56.6 +0.6
HARR Harsova 145.55 62⇑ *i*P PKPdf 08 56 56.6 +0.6
DNZL Cakiroluk 145.56 75 *i* P PKPdf 08 56 56.3 +0.1
ELBA Catalca 145.64 69 *i* P PKPdf 08 56 55.3 -0.9
AKAS Kas 145.68 77 *i* P PKPdf 08 56 57.3 +0.8
CFR Carcaliu 145.71 61⇑ *i*PKP2 PKPab 08 56 56.9 -0.1
CFR Carcaliu 145.71 61⇑ *i*P PKPdf 08 56 56.9 +0.7
BJI Beijing 145.78 289 PKPbc PKPbc 08 56 55.5 -1.5
BJI SKS SKSdf 09 04 05.3 -0.2
BJI AMB AMB
comp=Z,210nm,8.5s
BJI LR LR
comp=N,390nm,26.2s,MS5.3
BJI LR LR
comp=E,620nm,25.4s,MS5.3
BJI LR LR
comp=Z,940nm,24.7s,MS5.5
BJT Baijiatuau 145.78 289 *e*PKP2 PKPab 08 56 55.8 -1.6
BJT MLR MLR
comp=Z,678nm,22.0s
TIRR Tirgusor 145.89 63 *e*PKP2 PKPab 08 56 56.5 -1.2
TIRR Tirgusor 145.89 63⇓ *i*P PKPdf 08 56 57.0 +0.5
KIEV Kiev 146.11 51 *e*PKP2 PKPdf 08 56 56.1 -0.6
KIEV MLR MLR
comp=Z,812nm,22.0s,MS5.5
AKASG Malin Array Be 146.12 51 PKPbc PKPdf 08 56 55.9 -0.8
comp=Z,6.3nm,0.8s,baz=272,slow=3.6,SNR=23
AKASG Malin Array Be 146.12 51 PKPbc PKPdf 08 56 55.9 -0.8
AKBB Malin Array Si 146.12 51 *e*PKP2 PKPdf 08 56 56.3 -0.4
KIS Kishinev 146.17 58 *e*PKIKP PKPdf 08 56 55.0 -1.9
KIS LRM 10 05 44.0
comp=Z,600nm,19.0s
KIS Kishinev 146.17 58 *i* PKIKP PKPdf 08 56 55.0 -1.9
KIS *e* 08 57 03.0
KIS *e* 09 00 20.0
ISP Isparta 146.73 75 *i* PKP2 PKPab 08 57 00.1 -1.0
ISP MLR MLR
comp=Z,477nm,20.0s,MS5.3
ISP Isparta 146.73 75 *i* PKP PKPbc 08 57 00.1 +0.2
ISP LR LR
comp=Z,477nm,20.0s,MS5.3
BOLV Bolvadin 147.22 73 *i* P PKPbc 08 57 01.9 +0.7
CSS Prodhromos 148.32 81 *e*PKPbc PKPbc 08 57 03.9 -0.5
ENH Enshi 148.62 269 *e*PKPbc PKPbc 08 57 05.0 -0.3
ENH *e*PKPab PKPab 08 57 08.4 -0.5
ENH LR LR
comp=Z,1μm,22.0s,MS5.7
BBAL Bala 149.01 72 *i* P PKPbc 08 57 05.8 -0.2
OBN Obninsk 149.28 41α *i*PKP2 PKPbc 08 57 05.0 -1.1
OBN *i* SS SS 09 19 57.4 +6.3
OBN *e*SSS 09 25 31.1
OBN pmax pmax
comp=Z,103nm,1.3s
OBN Obninsk 149.28 41 *e*PKPbc PKPbc 08 57 05.3 -0.9
OBN LR LR
comp=Z,625nm,19.0s,MS5.4
GYA Guiyang 149.32 261 PKPbc PKPbc 08 57 06.8 -0.4
GYA PKS 09 00 35.8
GYA AMB AMB
comp=Z,420nm,5.1s
GYA LR LR
comp=N,440nm,22.1s,MS5.5
GYA LR LR
comp=E,640nm,22.1s,MS5.5
GYA LR LR
comp=Z,640nm,20.5s,MS5.4
ELDT Eldivan 149.34 70 *i* P PKPbc 08 57 06.4 -0.4
HHC Hu-ho-hao-te 149.36 290 *e*PKPbc PKPbc 08 57 06.0 -0.8
HHC PKS 09 00 40.1
HHC SKS SKSdf 09 04 09.5 -1.0
HHC SKKS SKKSac 09 07 28.1 -2.3
HHC SS SS 09 19 58.8 +5.4
HHC AMB AMB
comp=Z,97nm,5.4s
HHC LR LR
comp=N,470nm,22.3s,MS5.4
HHC LR LR
comp=E,550nm,21.7s,MS5.4
HHC LR LR
comp=Z,850nm,22.5s,MS5.5
BR131 Keskin Array S 149.43 72 *e*PKPbc PKPbc 08 57 07.0 0.0
BR131 LR LR
comp=Z,605nm,20.0s,MS5.4
BRTR Keskin Array B 149.43 72 PKP PKPdf 08 57 02.1 -0.5
comp=Z,6.1nm,1.2s,baz=180,slow=2.0,SNR=7.1
BRTR PKPbc PKPbc 08 57 07.4 +0.4
comp=Z,9.2nm,1.1s,baz=204,slow=2.7,SNR=25
MMAI Mount Meron Ar 149.46 85 PKPbc PKPbc 08 57 08.0 +0.7
comp=Z,4.0nm,0.5s,baz=187,slow=1.2,SNR=2.6
MOS Moscow 149.58 40 *e*PKP2 PKPbc 08 57 05.3 -1.6
MOS pmax pmax
comp=Z,92nm,1.5s
SIM Simferopol' 149.95 62*d* *i*PKP2 PKPbc 08 57 09.6 +1.5
SIM *e*SS SS 09 20 03.0 +3.4
SIM pmax pmax
comp=Z,17nm,1.0s
CDAG Cicekdag 149.98 72 *i* P PKPbc 08 57 07.1 -1.2
AVNT Avonos 150.25 74 *i* P PKPdf 08 57 04.0 +0.1
XAN Xi'an 150.26 276 PKPbc PKPbc 08 57 07.8 -1.4
XAN AMB AMB
comp=Z,32nm,7.8s
XAN LR LR
comp=N,430nm,24.2s,MS5.2
XAN LR LR
comp=E,200nm,26.0s,MS5.2
XAN LR LR
comp=Z,210nm,21.4s,MS4.9
CTKT Corum 150.39 70 *i* P PKPbc 08 57 08.4 -0.9
CM31 Chiang Mai Arr 150.59 239 *e*PKPbc PKPbc 08 57 10.2 -0.2
CM31 *e*PKPab PKPab 08 57 17.9 +0.7
CM31 LR LR
comp=Z,663nm,19.0s,MS5.5
CMAR Chiang Mai Arr 150.59 239 PKPbc PKPbc 08 57 10.5 +0.1
comp=Z,6.0nm,1.0s,baz=190,slow=1.9,SNR=20
YAYL Yayladag 150.77 80 *i* P PKPbc 08 57 09.9 -0.5
CHTO Chiang Mai 150.83 240 *e*PKIKP PKPbc 08 57 10.2 -0.8
CHTO *e* 08 57 18.3
CHTO MLR MLR
comp=Z,706nm,19.0s,MS5.5
KMI Kunming 151.76 255 PKPbc PKPdf 08 57 06.9 +0.2
KMI pPKP pPKPdf 08 57 10.8 +0.7
KMI sPKP 08 57 12.6
KMI PKPab PKPab 08 57 24.5 +2.6
KMI PP PP 09 00 57.1 +3.6
KMI SKKS SKKSac 09 07 44.0 -0.2
KMI SS SS 09 20 21.4 +1.3
KMI AMB AMB
comp=Z,140nm,4.3s
KMI LR LR
comp=N,340nm,27.3s,MS5.3
KMI LR LR
comp=E,500nm,25.9s,MS5.3
KMI LR LR
comp=Z,840nm,23.2s,MS5.5
VOR Voronezh 151.97 47 PKIKP PKPdf 08 57 06.0 -0.1
VOR pmax pmax
comp=Z,140nm,2.6s
VSR Storozhevoye 152.12 48 *e*PKIKP PKPdf 08 57 06.3 0.0
VSR pmax pmax
comp=N,7.0nm,0.8s
VSR pmax pmax
comp=E,10.0nm,0.8s
VSR pmax pmax
comp=Z,30nm,0.8s
ULN Ulaanbaatar 152.21 305 *e*PKIKP PKPbc 08 57 12.4 -0.9
ULN MLR MLR
comp=Z,1μm,22.0s,MS5.7
VORD Divnogorie 152.28 48 *i* PKIKP PKPdf 08 57 06.7 +0.1
VORD pmax pmax
comp=N,20nm,0.9s
VORD pmax pmax
comp=Z,20nm,0.9s
VORD pmax pmax
comp=E,5.0nm,0.5s
ANN Anapa 152.31 62 *i* PKIKP PKPbc 08 57 11.8 -1.8
ANN *e*SS SS 09 20 29.1 +3.3
ANN pmax pmax
comp=Z,31nm,0.9s
SONM Songino Array 152.65 305 PKP PKPdf 08 57 08.0 +0.7
comp=Z,1.3nm,0.6s,baz=85,slow=3.1,SNR=2.0
SONM PKPbc PKPbc 08 57 13.4 -0.9
comp=Z,10.0nm,0.9s,baz=90,slow=1.9,SNR=12
IRK Irkutsk 152.65 315 *e*PKIKP PKPdf 08 57 11.4 +4.3
IRK pmax pmax
comp=Z,75nm,1.6s
TLY Talaya 153.23 314 *i* PKIKP PKPbc 08 57 14.7 -0.7
TLY *e*PPS 09 13 58.5
TLY pmax pmax
comp=Z,18nm,1.0s
TLY Talaya 153.23 314 PFAKE 08 57 20.0 +12
TLY LR LR
comp=Z,1μm,22.0s,MS5.6
CD2 Chengdu 153.47 267 *e*PKPbc PKPdf 08 57 08.5 -0.5
CD2 pPKP pPKPdf 08 57 13.8 +1.4
CD2 PKPab PKPab 08 57 25.8 -3.2
CD2 SKS SKSdf 09 04 10.3 -5.8
CD2 SKKS SKKSac 09 07 49.4 -3.9
CD2 SS SS 09 20 35.0 -4.1
CD2 AMB AMB
comp=Z,260nm,8.4s
CD2 LR LR
comp=E,2μm,22.6s
CD2 LR LR
comp=Z,1μm,27.4s,MS5.7
ZAK Zakamensk 153.91 312 *e*PKIKP PKPbc 08 57 15.2 -1.8
ZAK pmax pmax
comp=Z,6.0nm,1.2s
SOC Sochi 154.05 64 *i* PKIKP PKPbc 08 57 17.6 +0.1
SOC *e* 09 01 06.3
SOC *e*PPP 09 04 39.2
SOC *e*SS SS 09 20 48.1 +3.2
SOC *e*SSS 09 26 39.6
SOC pmax pmax
comp=Z,22nm,0.7s

MOY	**Mondy**	**154.74**	**316**	*e*PKP2	PKPab	08 57 33.4	-0.3
LZH	**Lanzhou**	**154.78**	**278**	*e*PKPbc	PKPdf	08 57 09.5	-1.2
LZH				pPKP	pPKPdf	08 57 12.8	-1.3
LZH				sPKP		08 57 14.0	
LZH				PP	PP	09 01 13.3	+2.6
LZH				SKS	SKSdf	09 04 13.6	-3.7
LZH				SKKS	SKKSac	09 08 00.3	+0.1
LZH				*e*SS	SS	09 20 53.1	-0.2
LZH				AMB	AMB		
	comp=Z,400nm,7.3s						
LZH				LR	LR		
	comp=E,830nm,19.0s						
LZH				LR	LR		
	comp=Z,2μm,20.5s,MS5.8						
SOKR	**Solikamsk**	**154.78**	**19**	*i* PKIKP	PKPdf	08 57 05.6	-4.3
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
DBAD	**Bademkaya**	**155.64**	**70**	*i* P	PKPdf	08 57 10.9	-0.7
ARTV	**Artvin**	**155.81**	**69**	*i* P	PKPdf	08 57 12.4	+0.5
KIV	**Kislovodsk**	**156.15**	**63**	*e*PKIKP	PKPdf	08 57 12.1	-0.2
KIV				*e*		09 01 16.9	
KIV				*e*SS	SS	09 21 07.4	-0.2
KIV				*e*SSS		09 27 07.8	
KIV				pmax	pmax		
	comp=Z,11nm,1.1s						
KIV	**Kislovodsk**	**156.15**	**63**	PFAKE		08 57 20.0	+7.7
KIV				LR	LR		
	comp=Z,494nm,20.0s,MS5.3						
GOF	**Gofitskoye**	**156.22**	**60**	*e*PKIKP	PKPdf	08 57 09.7	-2.6
GOF				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZEI	**Tsey**	**157.18**	**65**	*e*PKIKP	PKPdf	08 57 13.6	0.0
ZEI				pmax	pmax		
	comp=Z,31nm,1.7s						
ARU	**Arti**	**157.96**	**21**	*i* PKIKP	PKPdf	08 57 13.5	-0.6
ARU	**Arti**	**157.96**	**21**	*e*PKPdf	PKPdf	08 57 13.5	-0.6
ARU				*e*PKPab	PKPab	08 57 46.7	-0.7
ARU				LR	LR		
	comp=Z,835nm,21.0s,MS5.5						
GNI	**Garni**	**157.97**	**72**	PKP	PKPdf	08 57 15.2	+0.5
	comp=Z,2.0nm,0.3s,baz=192,slow=17,SNR=3.0						
GNI	**Garni**	**157.97**	**72**	PKP	PKPdf	08 57 15.2	+0.5
GNI				LR	LR		
	comp=Z,627nm,20.0s,MS5.5						
GTA	**Gaotai**	**158.29**	**286**	*e*PKP	PKPdf	08 57 15.1	0.0
GTA				pPKP	pPKPdf	08 57 20.9	+2.3
GTA				sPKP		08 57 23.4	
GTA				PKPab	PKPab	08 57 49.0	-0.4
GTA				PP	PP	09 01 29.8	-0.2
GTA				SKS	SKSdf	09 04 18.8	-2.0
GTA				SS	SS	09 21 30.3	-0.6
GTA				AMB	AMB		
	comp=Z,180nm,6.9s						
GTA				LR	LR		
	comp=N,340nm,21.6s,MS5.5						
GTA				LR	LR		
	comp=E,680nm,21.3s,MS5.5						
GTA				LR	LR		
	comp=Z,820nm,20.7s,MS5.5						
MAK	**Makhachkala**	**159.77**	**64**	*e*PKIKP	PKPdf	08 57 32.2	+15
MAK				*e*		09 01 42.5	
MAK				pmax	pmax		
	comp=Z,21nm,0.3s						
NVS	**Novosibirsk**	**160.23**	**341**	*e*PKIKP	PKPdf	08 57 11.7	-5.1
NVS	**Novosibirsk**	**160.23**	**341**	*e*PKP2	PKPab	08 57 55.2	-2.0
NVS				pmax	pmax		
	comp=Z,23nm,1.4s						
NVS				pmax	pmax		
	comp=N,9.0nm,1.5s						
NVS				pmax	pmax		
	comp=E,9.0nm,1.4s						
ZALV	**Zalesovo Beam**	**160.57**	**338**	PKP	PKPdf	08 57 14.3	-2.9
	comp=E,0.4nm,0.3s,baz=5.7,slow=1.4,SNR=4.5						
ZALV				PKPab	PKPab	08 57 58.1	-0.6
	comp=E,6.7nm,0.8s,baz=35,slow=5.4,SNR=13						
AKTK	**Aktyubinsk**	**162.60**	**32**	PKP	PKPdf	08 57 19.6	+0.1
AKTO	**Aktyubinsk**	**162.60**	**32**	PKP	PKPdf	08 57 19.6	+0.1
	comp=E,0.6nm,0.4s,baz=180,slow=2.5,SNR=5.2						
LSA	**Lhasa**	**162.97**	**252**	PFAKE		08 57 30.0	+9.5
LSA				LR	LR		
	comp=Z,978nm,20.0s						
BRVK	**Borovoye**	**163.38**	**5**	*e*PKIKP	PKPdf	08 57 19.1	-1.0
BRVK				MLR	MLR		
	comp=Z,1μm,20.0s						
BVAR	**Borovoye Array**	**163.42**	**4**	PKP	PKPdf	08 57 18.6	-1.6
	comp=Z,2.0nm,0.9s,baz=11,slow=1.5,SNR=9.8						
BVAR				PKPab	PKPab	08 58 11.1	-0.1
	comp=Z,2.9nm,0.9s,baz=349,slow=1.5,SNR=6.0						
BVAR				PP	PP	09 02 06.6	+11
	comp=Z,1.3nm,0.9s,baz=349,slow=3.0,SNR=3.8						
BVAR	**Borovoye Array**	**163.42**	**4**	PKIKP	PKPdf	08 57 18.6	-1.6
BVAR						08 58 11.1	
ABKAR	**Akbulak array**	**164.31**	**32**	*e*PKPdf	PKPdf	08 57 21.3	+0.2
ABKAR				*e*PKPab	PKPab	08 58 14.8	-0.5
KURK	**Kurchatov**	**165.13**	**345**	PKP	PKPdf	08 57 20.4	-1.4
	comp=Z,0.9nm,0.7s,baz=21,slow=0.4,SNR=7.4						
KURK				PKPab	PKPab	08 58 17.9	-0.9
	comp=Z,5.2nm,0.9s,baz=16,slow=4.6,SNR=12						
KURK	**Kurchatov**	**165.13**	**345**	PKP	PKPdf	08 57 20.4	-1.4
KURK				PKPab	PKPab	08 58 17.9	-0.9
KURK				LR	LR		
	comp=Z,2μm,22.0s						
WMQ	**Urumqi**	**166.28**	**307**	*e*PKP	PKPdf	08 57 25.0	+2.0
WMQ				PP	PP	09 02 16.0	+3.9
WMQ				SKS	SKSdf	09 04 28.0	+1.1
WMQ				SKKS	SKKSac	09 09 02.0	+2.7
WMQ				SS	SS	09 22 55.0	+1.9
WMQ				AMB	AMB		
	comp=Z,170nm,10.0s						
WMQ				LR	LR		
	comp=N,2μm,25.0s						
WMQ				LR	LR		
	comp=E,1μm,25.0s						
WMQ				LR	LR		
	comp=Z,2μm,26.0s						
MKAR	**Makanchi Array**	**167.39**	**328**	PKP	PKPdf	08 57 22.7	-1.0
	comp=Z,0.2nm,0.4s,baz=38,slow=7.3,SNR=3.1						
MKAR				PKPab	PKPab	08 58 28.6	-0.4
	comp=Z,1.4nm,0.9s,baz=50,slow=9.6,SNR=4.8						
TKM2	**Tokmak 2**	**173.16**	**340**	PFAKE		08 57 40.0	+13
TKM2				LR	LR		
	comp=Z,2μm,21.0s						
AAK	**Ala-Archa**	**173.69**	**346**	PFAKE		08 57 40.0	+13
AAK				LR	LR		
	comp=Z,2μm,22.0s						
EKS2	**Erkin-Say**	**173.77**	**351**	PFAKE		08 57 40.0	+13
EKS2				LR	LR		
	comp=Z,1μm,22.0s						
UCH	**Uchtor**	**174.07**	**345**	*e*PKPdf	PKPdf	08 57 28.0	+0.6
UCH				LR	LR		
	comp=Z,2μm,22.0s						
AML	**Almayashu**	**174.30**	**351**	PFAKE		08 57 40.0	+12
AML				LR	LR		
	comp=Z,1μm,20.0s						
KSH	**Kashi**	**175.92**	**319**	*e*PKP	PKPdf	08 57 25.3	-2.8
KSH				AMB	AMB		
	comp=Z,86nm,4.6s						

IDC ***15*** *08:50:15.3±2.9,29°.88N×50°.97E, h0km, mb3.7/5, mb1 3.7/5, mb1mx3.5/26, mbtmp3.7/5, Error ellipse: s-maj=70.1km s-min=27.6km az=145.0*
CSEM ***15*** *08:50:16.4±0.3,29°.64N×51°.49E, h10km, ML3.2, Error ellipse: s-maj=9.2km s-min=6.7km az=7.0*
NEIC ***15*** *08:50:17.8,29°.57N×51°.41E, h15km, ML3.2(THR), After THR.*
TEH ***15*** *08:50:19.6,29°.76N×51°.30E, h12km*
KISR ***15*** *08:50:19.7±0.8,29°.65N×50°.53E, h34km±54km, ML2.8*
ISC 15 08:50:18.9±0.9,**29°.75N**±0°.04×**51°.30E**±0°.04,**h15**km±7km,
n30,σ1º**08**/39,**mb3.6**/5,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHI	**Shiraz**	**1.06**	**96**	*e*Pg	**Pg**	**08 50 38.8**	**-0.6**
SHI				*e*Sg	**Sg**	**08 50 53.0**	**-0.2**
SHI				*e*		08 51 01.0	
	comp=Z,9μm,0.1s						
IMOK	**Mouk**	**1.42**	**119**	*e*Pg	**Pg**	**08 50 44.9**	**-1.3**
IMOK				*e*Sg	**Sg**	**08 51 04.7**	**0.0**
IPAR	**Pars**	**1.52**	**86**	*e*Pn	**Pn**	**08 50 46.3**	**+0.8**
IPAR				*e*		08 51 11.2	
	comp=Z,5μm,0.4s						
ISRV	**Sarvestan**	**1.62**	**103**	*e*Pn	**Pn**	**08 50 48.8**	**+1.9**
ISRV				*e*		08 51 17.1	
	comp=Z,9μm,0.1s						
RMKL	**Ramhormoz**	**1.78**	**314**	*e*Pg	**Pg**	**08 50 53.7**	**+0.5**
GHIR	**Ghir-Karzin**	**2.07**	**134**	*e*Pg	**Pn**	**08 50 52.0**	**-1.1**
GHIR	**Ghir-Karzin**	**2.07**	**134**	*e*Pg	**Pn**	**08 50 52.2**	**-0.9**
IPIR	**Pirpir**	**2.95**	**353**	*e*	**Sb**	**08 51 45.2**	**-1.6**
	comp=E,564nm,0.2s						
IPIR				*e*Pn	**Pn**	**08 51 06.5**	**+1.4**
KBD	**Kabd**	**3.20**	**261**	*e*P	**Pn**	**08 51 09.5**	**+0.9**
KBD				*e*S	**Sn**	**08 51 47.3**	**+0.8**
KBD				AML	AML	08 51 48.2	
	comp=Z,30nm,0.3s						
KBD	**Kabd**	**3.20**	**261**	*e*P	**Pn**	**08 51 09.5**	**+0.9**
KBD				*e*S	**Sn**	**08 51 47.3**	**+0.8**
IZEF	**Zefreh**	**3.26**	**15**	*e*Pn	**Pn**	**08 51 10.6**	**+1.2**
IZEF				*e*		08 51 32.4	
	comp=Z,230nm,0.2s						
IMEH	**Mehriz**	**3.29**	**59**	*e*Pn	**Pn**	**08 51 10.8**	**+1.0**
IMEH				*e*		08 51 13.0	
	comp=Z,616nm,0.1s						
RDF	**Al-Radifah**	**3.38**	**257**	*e*P	**Pn**	**08 51 11.5**	**+0.4**
RDF				*e*S	**Sn**	**08 51 50.9**	**0.0**
RDF				AML	AML	08 51 51.5	
	comp=Z,24nm,0.4s						
RDF	**Al-Radifah**	**3.38**	**257**	*e*P	**Pn**	**08 51 11.5**	**+0.4**
RDF				*e*S	**Sn**	**08 51 50.9**	**0.0**
IKLH	**Kolahrood**	**3.56**	**4**	*e*Pn	**Pn**	**08 51 14.3**	**+0.7**
IKLH				*e*		08 52 18.8	
	comp=N,309nm,0.2s						
NAY	**Al-Naaiem**	**3.58**	**263**	*e*P	**Pn**	**08 51 14.4**	**+0.6**
NAY				*e*S	**Sn**	**08 51 54.4**	**-1.3**
NAY				AML	AML	08 51 56.2	
	comp=Z,14nm,0.6s						
NAY	**Al-Naaiem**	**3.58**	**263**	*e*P	**Pn**	**08 51 14.4**	**+0.6**
NAY				*e*S	**Sn**	**08 51 54.4**	**-1.3**
ICHK	**Chekchek**	**3.64**	**46**	*e*Pn	**Pn**	**08 51 15.8**	**+1.1**
ICHK				*e*		08 51 31.6	
	comp=Z,285nm,0.2s						
IBAF	**Bafgh**	**4.11**	**62**	*e*Pn	**Pn**	**08 51 21.9**	**+0.8**
KRBR	**Kerman**	**4.75**	**86**	*e*Pn	**Pn**	**08 51 30.0**	**+0.1**
KRBR	**Kerman**	**4.75**	**86**	*e*Pn	**Pn**	**08 51 30.2**	**+0.3**
AKTK	**Aktyubinsk**	**21.27**	**12**	P	**P**	**08 55 03.1**	**-1.4**
AKTK	**Aktyubinsk**	**21.27**	**12**	P	**P**	**08 55 03.2**	**-1.3**
AKTO	**Aktyubinsk**	**21.27**	**12**	P	**P**	**08 55 03.1**	**-1.4**
	comp=Z,2.2nm,0.6s,mb3.7,baz=199,slow=8.2,SNR=9.5						
AKASG	**Malin Array Be**	**26.69**	**328**	P	**P**	**08 55 53.1**	**-4.1**
	comp=Z,0.4nm,0.3s,mb3.4,baz=133,slow=9.1,SNR=2.2						
BVAR	**Borovoye Array**	**27.14**	**26**	P	**P**	**08 56 00.4**	**-0.8**
	comp=Z,0.3nm,0.4s,mb3.1,baz=243,slow=6.3,SNR=3.1						
BVAR	**Borovoye Array**	**27.14**	**26**	P	**P**	**08 56 00.4**	**-0.8**
ZALV	**Zalesovo Beam**	**34.23**	**35**	P	**P**	**08 57 02.3**	**-1.5**
	comp=Z,0.6nm,0.3s,mb4.0,baz=250,slow=7.7,SNR=4.4						
TORD	**Torodi Ar. Bea**	**48.66**	**261**	P	**P**	**08 58 59.5**	**-3.1**
	comp=Z,0.8nm,0.7s,mb3.9,baz=56,slow=7.5,SNR=5.6						
TORD	**Torodi Ar. Bea**	**48.66**	**261**	P	**P**	**08 58 59.5**	**-3.1**

IDC ***15*** *08:51:58.2±0.7,58°.01S×25°.43W, h0km, mb4.2/8, mb1 4.3/8, mb1mx4.1/15, mbtmp4.2/8, Error ellipse: s-maj=26.6km s-min=20.9km az=58.0*
ISCJB ***15*** *08:51:58.3±0.7,58°.0S±0°.1×25°.4W±0°.3, h10km, mb4.2/8, Error ellipse: s-maj=22.8km s-min=17.7km az=43.0*
NEIC ***15*** *08:52:07.3±3.2,58°.04S×25°.44W, h70km±27km, Error ellipse: s-maj=13.5km s-min=9.8km az=218.0*
ISC 15 08:52:00.1±0.7,**58°.0S**±0°.1×**25°.4W**±0°.3,**h10**km,**n19**,
σ0º**69**/9,**mb4.2**/8,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QSPA	**South Pole Qui**	**32.21**	**180**	P	**P**	**08 58 28.7**	**+1.0**
	3.5nm,0.6s,mb4.4,baz=203,slow=5.0,SNR=30						
PLCA	**Paso Flores**	**33.34**	**281**	P	**P**	**08 58 38.1**	**+0.1**
	2.2nm,0.9s,mb4.1,baz=124,slow=3.6,SNR=3.4						
MAW	**Mawson**	**37.97**	**141**	P	**P**	**08 59 17.9**	**+0.5**
	3.2nm,0.6s,mb4.2,baz=232,slow=5.3,SNR=9.3						
BOSA	**Boshof**	**45.57**	**72**	P	**P**	**09 00 20.1**	**+0.1**
	3.4nm,0.9s,mb4.3,baz=206,slow=7.9,SNR=4.9						
LPAZ	**La Paz**	**52.33**	**305**	P	**P**	**09 01 12.0**	**+0.2**
	0.6nm,0.7s,mb3.6,baz=166,slow=4.2,SNR=3.7						
LPAZ	**La Paz**	**52.33**	**305**	P	**P**	**09 01 12.0**	**+0.1**
TORD	**Torodi Ar. Bea**	**74.33**	**27**	P	**P**	**09 03 37.8**	**+0.3**
	1.0nm,0.5s,mb4.0,baz=199,slow=6.4,SNR=26						
STKA	**Stephens Creek**	**89.77**	**169**	P	**P**	**09 04 57.4**	**-1.1**
	2.0nm,0.9s,mb4.5,baz=154,slow=5.8,SNR=3.1						
ASAR	**Alice Springs**	**96.79**	**161**	P	**P**	**09 05 29.9**	**-1.1**
	1.1nm,0.8s,mb4.3,baz=181,slow=4.2,SNR=8.3						
FINES	**FINESS Array B**	**125.68**	**28**	PKP	PKPdf	09 10 59.3	-0.9
	0.5nm,0.6s,baz=174,slow=1.4,SNR=5.6						
BVAR	**Borovoye Array**	**135.00**	**58**	PKP	PKPdf	09 11 16.7	-1.4
	0.2nm,0.5s,baz=323,slow=3.6,SNR=2.6						
YKA	**Yellowknife Ar**	**138.30**	**316**	PKP	PKPdf	09 11 22.5	-1.4
	0.8nm,0.5s,baz=130,slow=2.1,SNR=12						
INK	**Inuvik**	**147.96**	**318**	PKPbc	PKPbc	09 11 42.6	-1.2
	3.7nm,0.8s,baz=90,slow=4.1,SNR=17						
EGAK	**Eagle**	**149.79**	**310**	*e*PKPbc	PKPbc	09 11 47.3	-1.3
SONM	**Songino Array**	**149.83**	**89**	PKPbc	PKPbc	09 11 48.4	-0.8
	2.0nm,0.5s,baz=218,slow=2.9,SNR=11						
MENT	**Mentasta**	**150.28**	**306**	*e*PKPbc	PKPbc	09 11 48.9	-0.9
TRF	**Thorofare Moun**	**153.28**	**305**	*e*PKPbc	PKPbc	09 11 55.9	-0.8
TRF				*e*PKPab	PKPab	09 12 07.4	-1.4
KTH	**Kantishna Hill**	**153.58**	**305**	*e*PKPbc	PKPbc	09 11 56.9	-0.4
BPAW	**Bear Paw Mtn.**	**153.73**	**306**	*e*PKPbc	PKPbc	09 11 56.8	-0.8
BPAW				*e*PKPab	PKPab	09 12 08.3	-2.3

CSEM ***15*** *08:56:13.8±0.2,37°.89N×21°.47E, h0km±1km, MD3.4, Error ellipse: s-maj=4.7km s-min=3.9km az=64.0*
ISCJB ***15*** *08:56:14.0±0.4,37°.90N±0°.02×21°.48E±0°.03, h1km±4km, Error ellipse: s-maj=3.8km s-min=3.1km az=157.7*
NEIC ***15*** *08:56:14.1,37°.93N×21°.45E, h17km, MD3.4(ATH), After ATH.*
ATH ***15*** *08:56:14.1,37°.93N×21°.45E, h17km±1km, MD3.4/13*
THE ***15*** *08:56:14.5,37°.92N×21°.50E, h0km±1km, ML3.2/13, Error ellipse: s-maj=1.9km s-min=0.7km az=233.0*
ISC 15 08:56:14.6±0.4,**37°.91N**±0°.02×**21°.48E**±0°.03,**h3**km±3km,
n81,σ1º**03**/131,**Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.15**	**356**	*e*Pb	**Pg**	**08 56 18.1**	**+0.5**
RLS				*e*Sb	**Sg**	**08 56 21.0**	**+1.4**
RLS	**Riolos of Patr**	**0.15**	**356**	*e*PB	**Pg**	**08 56 18.1**	**+0.5**
RLS				*e*SB	**Sg**	**08 56 21.0**	**+1.4**
RLS	**Riolos of Patr**	**0.15**	**356**	*e*Pb	**Pg**	**08 56 18.1**	**+0.5**
RLS				*e*Sb	**Sg**	**08 56 21.0**	**+1.4**
UPR	**University Cam**	**0.45**	**33**	P	**Pg**	**08 56 23.1**	**-0.1**
UPR				S	**Sg**	**08 56 30.3**	**+1.3**
UPR	**University Cam**	**0.45**	**33**	*e*PB	**Pg**	**08 56 23.2**	**0.0**
UPR				*e*SB	**Sg**	**08 56 30.0**	**+1.0**
UPR	**University Cam**	**0.45**	**33**	*e*Pb	**Pg**	**08 56 23.2**	**0.0**
UPR				*e*Sb	**Sg**	**08 56 30.0**	**+1.0**
UPR				S	**Sg**	**08 56 30.3**	**+1.3**
LAKA	**Lakka**	**0.52**	**50**	P	**Pg**	**08 56 24.1**	**-0.4**
LAKA				S	**Sg**	**08 56 30.7**	**-0.5**
LAKA	**Lakka**	**0.52**	**50**	P	**Pg**	**08 56 24.1**	**-0.4**
LAKA				S	**Sg**	**08 56 30.7**	**-0.5**
KFL	**Anninata**	**0.58**	**290**	P	**Pg**	**08 56 25.7**	**-0.1**
EFP	**Efpalio**	**0.62**	**33**	P	**Pg**	**08 56 25.5**	**-1.0**
EFP				S	**Sg**	**08 56 35.3**	**+0.8**
EFP	**Efpalio**	**0.62**	**33**	*e*PB	**Pg**	**08 56 25.7**	**-0.8**
EFP				*e*SN	**Sg**	**08 56 35.1**	**+0.6**
EFP	**Efpalio**	**0.62**	**33**	*e*Pb	**Pg**	**08 56 25.7**	**-0.8**
EFP				S	**Sg**	**08 56 35.3**	**+0.8**
GUR	**Goura**	**0.68**	**87**	P	**Pg**	**08 56 26.8**	**-1.0**
GUR				S	**Sg**	**08 56 36.5**	**-0.1**
GUR	**Goura**	**0.68**	**87**	*e*PB	**Pg**	**08 56 27.0**	**-0.8**
GUR				*e*SN	**Sg**	**08 56 37.5**	**+0.9**
GUR	**Goura**	**0.68**	**87**	*e*Pb	**Pg**	**08 56 27.0**	**-0.8**
GUR				S	**Sg**	**08 56 36.5**	**-0.1**
KALE	**Kalithea**	**0.71**	**47**	P	**Pg**	**08 56 27.4**	**-0.9**
KALE				S	**Sg**	**08 56 38.6**	**+1.1**
KALE	**Kalithea**	**0.71**	**47**	P	**Pg**	**08 56 27.4**	**-0.9**
KALE				S	**Sg**	**08 56 38.6**	**+1.1**
VLS	**Valsamata**	**0.75**	**291**	*e*Pn	**Pg**	**08 56 28.0**	**-1.1**
VLS				*e*Sn	**Sg**	**08 56 39.0**	**+0.2**
VLS	**Valsamata**	**0.75**	**291**	P	**Pg**	**08 56 28.1**	**-1.0**
VLS				S	**Sg**	**08 56 40.0**	**+1.2**
VLS	**Valsamata**	**0.75**	**291**	*e*PN	**Pg**	**08 56 28.0**	**-1.1**
VLS				*e*SN	**Sg**	**08 56 39.0**	**+0.2**
VLS	**Valsamata**	**0.75**	**291**	P	**Pg**	**08 56 28.1**	**-1.0**
VLS				*e*Sn	**Sg**	**08 56 39.0**	**+0.2**
VLS				S	**Sg**	**08 56 40.0**	**+1.2**
ITM	**Ithomi**	**0.81**	**154**	*e*Pn	**Pg**	**08 56 29.9**	**-0.3**
ITM				*e*Sn	**Sg**	**08 56 42.3**	**+1.6**
ITM	**Ithomi**	**0.81**	**154**	P	**Pg**	**08 56 29.8**	**-0.4**
ITM				S	**Sg**	**08 56 42.7**	**+2.0**
ITM	**Ithomi**	**0.81**	**154**	*e*PN	**Pg**	**08 56 29.9**	**-0.3**
ITM				*e*SN	**Sg**	**08 56 42.3**	**+1.6**
ITM	**Ithomi**	**0.81**	**154**	P	**Pg**	**08 56 29.8**	**-0.4**
ITM				S	**Sg**	**08 56 42.7**	**+2.0**
VLX	**Vlachokerasia**	**0.89**	**127**	P	**Pg**	**08 56 31.3**	**-0.5**
VLX				S	**Sg**	**08 56 45.0**	**+1.6**
VLX	**Vlachokerasia**	**0.89**	**127**	*e*PN	**Pg**	**08 56 32.0**	**+0.2**
VLX				*e*SN	**Sg**	**08 56 43.9**	**+0.5**
VLX	**Vlachokerasia**	**0.89**	**127**	P	**Pg**	**08 56 31.3**	**-0.5**
VLX	**Vlachokerasia**	**0.89**	**127**	*e*Pn	**Pg**	**08 56 32.0**	**+0.2**
VLX				*e*Sn	**Sg**	**08 56 43.9**	**+0.5**
VLX				S	**Sg**	**08 56 45.0**	**+1.6**
DSF	**Desfina**	**0.97**	**58**	P	**Pg**	**08 56 31.4**	**-1.8**
DSF				S	**Sg**	**08 56 46.0**	**+0.3**
DSF	**Desfina**	**0.97**	**58**	P	**Pg**	**08 56 31.4**	**-1.8**
DSF				S	**Sg**	**08 56 46.0**	**+0.3**
PYL	**PYLOS**	**1.03**	**168**	P	**Pg**	**08 56 33.9**	**-0.5**
PYL				S	**Sg**	**08 56 49.5**	**+1.7**
PYL	**PYLOS**	**1.03**	**168**	*e*PN	**Pg**	**08 56 34.6**	**+0.2**
PYL	**PYLOS**	**1.03**	**168**	P	**Pg**	**08 56 33.9**	**-0.5**
PYL	**PYLOS**	**1.03**	**168**	*e*Pn	**Pg**	**08 56 34.6**	**+0.2**
PYL				S	**Sg**	**08 56 49.5**	**+1.7**
EVR	**Evrytania**	**1.04**	**14**	*e*Pn	**Pg**	**08 56 33.2**	**-1.4**
EVR	**Evrytania**	**1.04**	**14**	*e*PN	**Pg**	**08 56 33.2**	**-1.4**
EVR	**Evrytania**	**1.04**	**14**	*e*Pn	**Pg**	**08 56 33.2**	**-1.4**
LKD2	**Lefkada island**	**1.09**	**324**	P	**Pg**	**08 56 34.0**	**-1.6**
LKD2				S	**Sg**	**08 56 51.8**	**+2.1**
LKD2	**Lefkada island**	**1.09**	**324**	P	**Pg**	**08 56 34.0**	**-1.6**
LKD2				S	**Sg**	**08 56 51.8**	**+2.1**
LTK	**Loutraki**	**1.18**	**84**	P	**Pg**	**08 56 36.0**	**-1.3**
LTK				S	**Sg**	**08 56 53.0**	**+0.4**
LTK	**Loutraki**	**1.18**	**84**	*e*PN	**Pn**	**08 56 36.6**	**-1.4**
LTK	**Loutraki**	**1.18**	**84**	P	**Pg**	**08 56 36.0**	**-1.3**
LTK	**Loutraki**	**1.18**	**84**	*e*Pn	**Pn**	**08 56 36.6**	**-1.4**
LTK				S	**Sg**	**08 56 53.0**	**+0.4**
AGG	**Agios Georgios**	**1.30**	**31**	*e*Pn	**Pn**	**08 56 39.1**	**-0.5**
AGG	**Agios Georgios**	**1.30**	**31**	P	**Pg**	**08 56 38.8**	**-0.7**
AGG				S	**Sg**	**08 56 56.8**	**+0.5**
AGG	**Agios Georgios**	**1.30**	**31**	*e*PN	**Pn**	**08 56 39.1**	**-0.5**
AGG	**Agios Georgios**	**1.30**	**31**	P	**Pg**	**08 56 38.8**	**-0.7**
AGG	**Agios Georgios**	**1.30**	**31**	*e*Pn	**Pn**	**08 56 39.1**	**-0.5**
AGG				S	**Sg**	**08 56 56.8**	**+0.5**
LKR	**Lokris**	**1.41**	**58**	*e*Pn	**Pn**	**08 56 40.8**	**-0.3**
LKR	**Lokris**	**1.41**	**58**	P	**Pn**	**08 56 40.3**	**-0.8**
LKR				S	**Sb**	**08 56 59.4**	**-0.4**
LKR	**Lokris**	**1.41**	**58**	*e*PN	**Pn**	**08 56 40.8**	**-0.3**
LKR	**Lokris**	**1.41**	**58**	P	**Pn**	**08 56 40.3**	**-0.8**
LKR	**Lokris**	**1.41**	**58**	*e*Pn	**Pn**	**08 56 40.8**	**-0.3**
LKR				S	**Sb**	**08 56 59.4**	**-0.4**
ATAL	**Atalanti**	**1.44**	**57**	P	**Pn**	**08 56 41.0**	**-0.6**
ATAL				S	**Sb**	**08 57 00.6**	**-0.3**
ATAL	**Atalanti**	**1.44**	**57**	P	**Pn**	**08 56 41.0**	**-0.6**
ATAL				S	**Sb**	**08 57 00.6**	**-0.3**
NAIG	**Nisos Aigina**	**1.60**	**95**	*e*Pn	**Pn**	**08 56 44.4**	**+0.7**
NAIG	**Nisos Aigina**	**1.60**	**95**	*e*PN	**Pn**	**08 56 44.4**	**+0.7**
NAIG	**Nisos Aigina**	**1.60**	**95**	*e*Pn	**Pn**	**08 56 44.4**	**+0.7**
VLI	**Veliai**	**1.66**	**135**	*e*Pn	**Pn**	**08 56 45.6**	**+1.0**
VLI	**Veliai**	**1.66**	**135**	*e*PN	**Pn**	**08 56 45.6**	**+1.0**
VLI	**Veliai**	**1.66**	**135**	*e*Pn	**Pn**	**08 56 45.6**	**+1.0**
THL	**Klokotos Trika**	**1.71**	**14**	P	**Pn**	**08 56 45.1**	**-0.1**
THL				S	**Sn**	**08 57 08.9**	**+1.4**
THL	**Klokotos Trika**	**1.71**	**14**	*e*PN	**Pn**	**08 56 45.0**	**-0.2**
THL	**Klokotos Trika**	**1.71**	**14**	*e*Pn	**Pn**	**08 56 45.0**	**-0.2**
THL				S	**Sn**	**08 57 08.9**	**+1.4**
VLY	**Voula,Athens**	**1.83**	**91**	*e*Pn	**Pn**	**08 56 47.7**	**+0.7**
VLY	**Voula,Athens**	**1.83**	**91**	*e*PN	**Pn**	**08 56 47.7**	**+0.7**
VLY	**Voula,Athens**	**1.83**	**91**	*e*Pn	**Pn**	**08 56 47.7**	**+0.7**
IGT	**Igoumenitsa**	**1.85**	**331**	P	**Pn**	**08 56 46.0**	**-1.2**
IGT	**Igoumenitsa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DARE	**Darende-Malaty**	**0.67**	**147**	*e*PG	**Pb**	**09 17 14.5**	**+2.1**
DARE				*e*SG	**Sb**	**09 17 26.9**	**+5.6**
DARE	**Darende-Malaty**	**0.67**	**147**	*e*Pg	**Pb**	**09 17 14.5**	**+2.1**
DARE				*e*Sg	**Sb**	**09 17 26.9**	**+5.6**
SARI	**SarD1z-Kayseri**	**0.98**	**211**	*e*PN	**Pn**	**09 17 20.3**	**+2.8**
PINB	**Pinarbasi**	**1.11**	**221**	*i* P	**Pn**	**09 17 15.3**	**-4.0**
PINB				*i* S	**Sn**	**09 17 34.1**	**+0.2**
PINB	**Pinarbasi**	**1.11**	**221**	*i* P	**Pn**	**09 17 15.3**	**-4.0**
PINB				*i* S	**Sn**	**09 17 34.1**	**+0.3**
AKCD	**Akcadag**	**1.30**	**160**	*i* P	**Pn**	**09 17 19.8**	**-2.1**
AKCD				*i* S	**Sn**	**09 17 38.8**	**+0.4**
AKCD	**Akcadag**	**1.30**	**160**	*i* P	**Pn**	**09 17 19.8**	**-2.1**
MYA	**Malataya**	**1.46**	**144**	*e*PN	**Pn**	**09 17 22.2**	**-1.9**
MYA	**Malataya**	**1.46**	**144**	*e*Pn	**Pn**	**09 17 22.2**	**-1.9**
EZC	**Erzincan**	**1.57**	**81**	*e*PN	**Pb**	**09 17 26.0**	**-1.7**
YOZ	**Yozgat**	**1.57**	**275**	*e*PN	**Pn**	**09 17 24.7**	**-0.9**
GRSN	**GIRESUNGRSN**	**1.57**	**26**	*i* P	**Pn**	**09 17 27.9**	**+2.2**
GRSN				*i* S	**Sn**	**09 17 51.1**	**+5.9**
GRSN	**GIRESUNGRSN**	**1.57**	**26**	*i* P	**Pn**	**09 17 27.9**	**+2.2**
GRSN				*i* S	**Sn**	**09 17 51.1**	**+5.9**
ESPY	**Espiye-Giresun**	**1.75**	**37**	*e*PN	**Pn**	**09 17 28.4**	**+0.2**
ESPY	**Espiye-Giresun**	**1.75**	**37**	*e*Pn	**Pn**	**09 17 28.4**	**+0.3**
GUMT	**Gumushane**	**1.89**	**59**	*e*PN	**Pn**	**09 17 30.4**	**+0.4**
GUMT	**Gumushane**	**1.89**	**59**	*e*Pn	**Pn**	**09 17 30.4**	**+0.4**

IDC 15 09:56:25.4±1.3, 31°.78N×104°.82E, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.4/25, mbtmp3.5/4, Error ellipse: s-maj=82.8km s-min=25.8km az=61.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.88**	**317**	P	P	10 01 30.2	-0.2
	0.2nm,0.3s,baz=87,slow=10,SNR=5.0						
WRA	**Warramunga Arr**	**58.70**	**147**	P	P	10 06 25.1	+0.2
	0.6nm,0.5s,baz=340,slow=7.8,SNR=3.4						
ASAR	**Alice Springs**	**61.76**	**150**	P	P	10 06 45.8	0.0
	0.3nm,0.5s,baz=337,slow=5.5,SNR=9.7						
YKA	**Yellowknife Ar**	**80.87**	**17**	P	P	10 08 41.2	+0.3
	0.2nm,0.4s,baz=328,slow=4.9,SNR=4.7						

NIED ***15*** *10:02:00,24°.00N×123°.60E, h44km, Mw3.9 Best double couple: M0:8.40000×10^14 NP1:φ=214.00000°, δ87.00000°, λ-56.00000°. NP2:φ=308.00000°, δ34.00000°, λ-175.00000°.*
IDC ***15*** *10:02:25.0±1.0, 24°.04N×123°.46E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.6/24, mbtmp3.6/7, Error ellipse: s-maj=69.9km s-min=21.2km az=68.0*
ISCJB ***15*** *10:02:29.0±0.7, 23°.89N±0°.06×123°.56E±0°.03, h30km±5km, mb3.6/7, Error ellipse: s-maj=10.9km s-min=4.5km az=165.9*
NEIC ***15*** *10:02:30.1, 23°.97N×123°.58E, h32km, MG3.9(JMA), After JMA.*
JMA ***15*** *10:02:30.1±0.1, 23°.97N×123°.57E, h32km±1km, M3.9*
JMA Felt I J1.
ISC 15 10:02:29.8±0.7, 23°.94N±0°.06×123°.55E±0°.03, h27km±5km, n22, σ1°.02/32, mb3.6/7, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.26**	**62**	P	**Pb**	**10 02 36.6**	**+0.2**
HATJ				S	**Sb**	**10 02 41.5**	**+0.6**
IRIF	**Iriomote-Funau**	**0.43**	**22**	P	**Pb**	**10 02 38.8**	**-0.2**
IRIF				S	**Sb**	**10 02 45.0**	**-0.2**
JKRS	**Kuro-shima**	**0.52**	**54**	P	**Pb**	**10 02 40.2**	**-0.1**
JKRS				S	**Sb**	**10 02 47.5**	**0.0**
JIJ	**Ishigaki jima**	**0.69**	**52**	P	**Pb**	**10 02 42.4**	**-0.8**
JIJ				S	**Sb**	**10 02 51.2**	**-1.2**
YOJ	**Yonaguni jima**	**0.72**	**317**	P	**Pb**	**10 02 43.9**	**+0.1**
YOJ				S	**Sb**	**10 02 53.4**	**+0.1**
JTJ	**Tarama**	**1.26**	**56**	P	**Pn**	**10 02 52.0**	**+0.3**
JTJ				*e*S	**Sn**	**10 03 08.1**	**+0.3**
NACB	**Ninganchiao**	**1.81**	**278**	*e*Pn	**Pn**	**10 02 58.6**	**-0.5**
JOGS	**Gusukube**	**1.88**	**64**	P	**Pn**	**10 03 01.4**	**+1.2**
JOGS				*e*S	**Sn**	**10 03 25.2**	**+2.2**
YHNB	**Yeheng**	**2.12**	**291**	*e*Pn	**Pn**	**10 03 04.7**	**+1.2**
YULB	**Yu-li**	**2.14**	**256**	*e*Pn	**Pn**	**10 03 03.4**	**-0.3**
TATO	**Taipei**	**2.15**	**299**	*e*Pn	**Pn**	**10 03 04.7**	**+0.8**
SSLB	**Suanglung**	**2.38**	**267**	*e*Pn	**Pn**	**10 03 07.3**	**+0.2**
SSLB				*e*Sn	**Sn**	**10 03 37.1**	**+1.7**
TWG	**Pinlang**	**2.54**	**245**	*e*Pn	**Pn**	**10 03 08.2**	**-1.0**
TWG				*e*Sn	**Sn**	**10 03 36.9**	**-2.3**
TPUB	**Ta-pu**	**2.75**	**257**	*e*Pn	**Pn**	**10 03 13.8**	**+1.6**
TPUB				*e*Sn	**Sn**	**10 03 45.7**	**+1.1**
ZALV	**Zalesovo Beam**	**41.64**	**326**	P	**P**	**10 10 13.0**	**-2.6**
	0.7nm,0.5s,mb3.6,baz=117,slow=8.5,SNR=3.9						
ZALV	**Zalesovo Beam**	**41.64**	**326**	P	**P**	**10 10 13.0**	**-2.6**
WRA	**Warramunga Arr**	**44.86**	**166**	P	**P**	**10 10 41.5**	**-0.4**
	0.5nm,0.9s,mb3.3,baz=345,slow=8.7,SNR=6.4						
ASAR	**Alice Springs**	**48.37**	**167**	P	**P**	**10 11 10.1**	**+0.7**
	0.3nm,0.7s,mb3.5,baz=352,slow=7.4,SNR=8.3						
FINES	**FINESS Array B**	**72.75**	**330**	P	**P**	**10 13 53.8**	**-1.5**
	1.7nm,1.0s,mb3.9,baz=76,slow=8.0,SNR=4.2						
BRTR	**Keskin Array B**	**75.06**	**307**	P	**P**	**10 14 09.0**	**-0.3**
	0.5nm,0.7s,mb3.6,baz=125,slow=5.2,SNR=3.4						
NOA	**NORSAR Array B**	**79.45**	**333**	P	**P**	**10 14 31.9**	**-1.5**
	0.6nm,0.5s,mb3.8,baz=54,slow=6.0,SNR=3.7						
YKA	**Yellowknife Ar**	**82.35**	**23**	P	**P**	**10 14 48.7**	**-0.2**
	0.3nm,0.6s,mb3.4,baz=294,slow=6.0,SNR=2.4						

ISK ***15*** *10:02:34.9, 39°.39N×28°.25E, h2km, MD2.7*
DDA ***15*** *10:02:37.5, 39°.44N×28°.16E, h7km±4km, Md2.9*
CSEM ***15*** *10:02:37.4±0.3, 39°.46N×28°.20E, h15km, MD2.9, Error ellipse: s-maj=7.9km s-min=5.5km az=22.0*
ISCJB ***15*** *10:02:37.3±1.0, 39°.44N±0°.06×28°.20E±0°.05, h15km±6km, Error ellipse: s-maj=9.9km s-min=6.1km az=15.5*
ISC 15 10:02:37.5±0.9, 39°.42N±0°.05×28°.19E±0°.05, h17km±5km, n20, σ0°.87/31, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.28**	**51**	*i* P	**Pg**	**10 02 42.9**	**-0.8**
DURS				*i* S	**Sg**	**10 02 48.5**	**+0.6**
DURS	**Dursunbey**	**0.28**	**51**	*i* P	**Pg**	**10 02 42.9**	**-0.8**
DURS				*i* S	**Sg**	**10 02 48.5**	**+0.6**
BALB	**Balikesir**	**0.32**	**313**	*e*PG	**Pg**	**10 02 43.1**	**-1.2**
BALB				*e*SG	**Sg**	**10 02 49.7**	**+0.7**
BALB	**Balikesir**	**0.32**	**313**	*e*Pg	**Pg**	**10 02 43.1**	**-1.2**
BALB				*e*Sg	**Sg**	**10 02 49.7**	**+0.7**
BALY	**Balya**	**0.54**	**306**	*i* P	**Pg**	**10 02 47.0**	**-1.3**
BALY				*i* S	**Sg**	**10 02 56.0**	**+0.4**
BALY	**Balya**	**0.54**	**306**	*i* P	**Pg**	**10 02 47.0**	**-1.3**
BALY				*i* S	**Sg**	**10 02 56.0**	**+0.4**
DEMI	**Demirci**	**0.56**	**133**	*i* P	**Pg**	**10 02 49.3**	**+0.8**
DEMI				*i* S	**Sg**	**10 03 00.7**	**+4.7**
DEMI	**Demirci**	**0.56**	**133**	*i* P	**Pg**	**10 02 49.3**	**+0.8**
KCT	**Karacabey**	**0.85**	**9**	*e*PG	**Pg**	**10 02 52.9**	**-1.2**
KCT				*e*SG	**Sg**	**10 03 05.7**	**+0.3**
KCT	**Karacabey**	**0.85**	**9**	*e*Pg	**Pg**	**10 02 52.9**	**-1.2**
KCT				*e*Sg	**Sg**	**10 03 05.7**	**+0.3**
BNT	**Bandirma**	**0.96**	**348**	*e*PG	**Pg**	**10 02 55.4**	**-0.7**
BNT				*e*SG	**Sg**	**10 03 10.0**	**+1.4**
BNT	**Bandirma**	**0.96**	**348**	*e*Pg	**Pg**	**10 02 55.4**	**-0.6**
BNT				*e*Sg	**Sg**	**10 03 10.0**	**+1.4**
ARMT	**Armutlu**	**1.25**	**24**	*e*PN	**Pn**	**10 03 00.1**	**-0.1**
ARMT	**Armutlu**	**1.25**	**24**	*e*Pn	**Pn**	**10 03 00.1**	**-0.1**
GEMT	**Gemlik**	**1.27**	**37**	*e*PN	**Pn**	**10 02 59.6**	**-0.8**
GEMT	**Gemlik**	**1.27**	**37**	*e*Pn	**Pn**	**10 02 59.6**	**-0.8**
YLV	**Yalova**	**1.46**	**38**	*e*PN	**Pn**	**10 03 03.5**	**+0.4**
YLV	**Yalova**	**1.46**	**38**	*e*Pn	**Pn**	**10 03 03.5**	**+0.5**
EZN	**Ezine**	**1.50**	**286**	*e*PN	**Pn**	**10 03 04.6**	**+1.1**
EZN	**Ezine**	**1.50**	**286**	*e*Pn	**Pn**	**10 03 04.6**	**+1.1**

IDC ***15*** *10:10:58.3±1.5, 39°.10N×141°.21E, h0km, mb3.6/6, mb1 3.7/8, mb1mx3.5/27, mbtmp3.6/8, ML3.4/2, MS3.8/1, Ms1 3.8/1, ms1mx2.6/40, Error ellipse: s-maj=28.0km s-min=19.0km az=99.0*
JMA ***15*** *10:11:00.3, 39°.14N×140°.91E, h9km±1km, M3.1*
JMA Felt I J1.
NEIC ***15*** *10:11:00.3, 39°.14N×140°.97E, h10km, MG3.1(JMA), After JMA.*
ISCJB ***15*** *10:11:00.1±0.5, 39°.13N±0°.03×140°.92E±0°.04, h10km±4km, mb3.5/6, Error ellipse: s-maj=5.2km s-min=4.8km az=160.4*
ISC 15 10:11:00.6±0.5, 39°.12N±0°.03×140°.91E±0°.04, h4km±5km, n22, σ0°.84/29, mb3.5/6, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.30**	**125**	P	**Pg**	**10 11 06.3**	**0.0**
JMK				*e*S	**Sg**	**10 11 10.5**	**+0.3**
JRG	**Rokugo**	**0.35**	**322**	P	**Pg**	**10 11 07.1**	**-0.2**
JRG				*e*S	**Sg**	**10 11 12.1**	**+0.2**
JOM	**Ohasama**	**0.46**	**40**	P	**Pg**	**10 11 09.1**	**-0.4**
JOM				S	**Sg**	**10 11 15.4**	**-0.1**
JYK	**Kaneyama**	**0.47**	**245**	P	**Pg**	**10 11 09.7**	**0.0**
JYK				S	**Sg**	**10 11 16.0**	**+0.1**
OFUJ	**Ofunato**	**0.59**	**94**	P	**Pg**	**10 11 11.8**	**-0.2**
JIO	**Ouri**	**0.75**	**152**	P	**Pg**	**10 11 14.6**	**-0.4**
JIO				*e*S	**Sg**	**10 11 25.1**	**+0.4**
JOU	**Okura**	**0.78**	**194**	P	**Pg**	**10 11 15.5**	**0.0**
JOU				S	**Sg**	**10 11 26.2**	**+0.6**
MAJO	**Matsushiro**	**3.35**	**221**	*e*Pn	**Pn**	**10 11 54.4**	**+0.7**
MAT	**Matsushiro**	**3.35**	**221**	P	**Pn**	**10 11 54.7**	**+1.0**
MAT				*e*S	Sx	10 12 37.3	
MJAR	**Matsushiro Arr**	**3.35**	**221**	Pn	**Pn**	**10 11 54.7**	**+1.0**
	1.1nm,0.3s,baz=32,slow=11,SNR=13						
MJAR				Pg	**Pg**	**10 12 02.1**	**-2.6**
	1.4nm,0.3s,baz=27,slow=15,SNR=18						
MJAR				Lg		10 12 47.8	
	0.4nm,0.3s,baz=22,slow=28,SNR=5.1						
MJAR	**Matsushiro Arr**	**3.35**	**221**	Pn	**Pn**	**10 11 54.7**	**+1.0**
MJAR				Pg	**Pg**	**10 12 02.1**	**-2.6**
MJAR				Lg		10 12 47.8	
ERM	**Erimo**	**3.36**	**30**	*e*Pn	**Pn**	**10 11 54.9**	**+1.0**
ERM				*e*S	Sx	10 12 40.1	
ASAJ	**Asahikawa**	**5.15**	**14**	Pn	**Pn**	**10 12 19.4**	**+1.0**
	1.2nm,0.3s,baz=225,slow=14,SNR=10						
ASAJ				Sn	Sx	10 13 20.6	
	baz=47,slow=18,SNR=2.3						
KSRS	**Korea Array**	**10.34**	**265**	Pn	**Pn**	**10 13 33.6**	**+3.9**
	0.9nm,0.3s,baz=77,slow=14,SNR=33						
KSRS				Sn	Sx	10 15 31.4	
	0.2nm,0.3s,baz=74,slow=23,SNR=6.5						
ZALV	**Zalesovo Beam**	**40.24**	**311**	P	**P**	**10 18 37.6**	**-0.5**
	0.4nm,0.4s,mb3.5,baz=85,slow=6.1,SNR=2.5						
MKAR	**Makanchi Array**	**42.70**	**300**	P	**P**	**10 18 57.7**	**-0.8**
	0.3nm,0.7s,mb3.1,baz=82,slow=10,SNR=3.0						
KURK	**Kurchatov**	**44.35**	**306**	P	**P**	**10 19 11.5**	**-0.3**
	1.0nm,0.6s,mb3.7,baz=84,slow=8.3,SNR=3.2						
BVAR	**Borovoye Array**	**48.89**	**311**	P	**P**	**10 19 48.2**	**+1.0**
	0.2nm,0.4s,mb3.5,baz=90,slow=5.8,SNR=2.7						
WRA	**Warramunga Arr**	**59.07**	**187**	P	**P**	**10 21 00.6**	**-1.3**
	0.8nm,0.7s,mb3.8,baz=4.7,slow=7.3,SNR=7.1						
WRA	**Warramunga Arr**	**59.07**	**187**	P	**P**	**10 21 00.6**	**-1.3**
CTA	**Charters Tower**	**59.11**	**174**	LR	LR	10 45 00.1	
	comp=Z,85nm,20.8s,baz=102,slow=35						
ASAR	**Alice Springs**	**62.80**	**187**	P	**P**	**10 21 25.4**	**-1.8**
	0.4nm,0.9s,mb3.5,baz=16,slow=8.2,SNR=3.9						

CRAAG ***15*** *10:12:30.5, 35°.99N×0°.79W, Ml3.5*
NEIC ***15*** *10:12:35.5, 35°.82N×0°.67W, h29km, MG3.8(MDD), After MDD.*
CSEM ***15*** *10:12:35.3±0.3, 35°.84N×0°.71W, h40km, mb3.8/8, Error ellipse: s-maj=6.5km s-min=5.4km az=11.0*
MDD 15 10:12:31.6±0.5, 35°.79N×0°.64W, h0km, mb3.6/8, Error ellipse: s-maj=9.7km s-min=4.4km az=30.0, PRIMO, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USTO	**Oran**	**0.09**	**124**	P	Pg	10 12 34.0	+0.6
USTO	**Oran**	**0.09**	**124**	P	Pg	10 12 34.0	+0.6
USTO	**Oran**	**0.09**	**124**	P	Pg	10 12 34.0	+0.6
OTSS	**Djebel Tessala**	**0.52**	**194**	P	Pg	10 12 45.7	+4.1
OTSS	**Djebel Tessala**	**0.52**	**194**	P	Pg	10 12 45.7	+4.1
OTSS	**Djebel Tessala**	**0.52**	**194**	P	Pg	10 12 45.7	+4.1
OTSS	**Djebel Tessala**	**0.52**	**194**	P	Pg	10 12 45.7	+4.1
ODJA	**Bouhanifia**	**0.61**	**138**	P	Pg	10 12 38.0	-5.3
ODJA	**Bouhanifia**	**0.61**	**138**	P	Pg	10 12 38.0	-5.3
ODJA	**Bouhanifia**	**0.61**	**138**	P	Pg	10 12 38.0	-5.3
OJGS	**Djebel Guires**	**1.17**	**103**	P	Pg	10 12 56.0	+2.0
OJGS	**Djebel Guires**	**1.17**	**103**	P	Pg	10 12 56.0	+2.0
OJGS	**Djebel Guires**	**1.17**	**103**	P	Pg	10 12 56.0	+2.0
OJGS	**Djebel Guires**	**1.17**	**103**	P	Pg	10 12 56.0	+2.0
ENIJ	**Nijar**	**1.73**	**314**	P	Pn	10 13 01.9	-1.1
ENIJ				S	Sn	10 13 20.4	-5.3
ENIJ	**Nijar**	**1.73**	**314**	P	Pn	10 13 01.9	-1.1
	4.0nm,0.2s,SNR=10.0						
ENIJ				S	Sn	10 13 20.4	-5.3
	18nm,0.2s,SNR=5.2						
ENIJ	**Nijar**	**1.73**	**314**	P	Pn	10 13 01.9	-1.1
	4.0nm,0.2s,SNR=10.0						
ENIJ				S	Sn	10 13 20.4	-5.3
	18nm,0.2s,SNR=5.2						
ENIJ	**Nijar**	**1.73**	**314**	P	Pn	10 13 01.9	-1.1
	4.0nm,0.2s,SNR=10.0						
ENIJ				S	Sn	10 13 20.4	-5.4
	18nm,0.2s,SNR=5.2						
EALB	**Alboran**	**1.95**	**275**	P	Pn	10 13 04.6	-1.4
EALB				S	Sn	10 13 27.8	-3.4
EALB	**Alboran**	**1.95**	**275**	P	Pn	10 13 04.6	-1.4
	3.5nm,0.1s,SNR=8.5						
EALB				S	Sn	10 13 27.8	-3.4
	10nm,0.2s,SNR=7.9						
EALB	**Alboran**	**1.95**	**275**	P	Pn	10 13 04.6	-1.4
	3.5nm,0.1s,SNR=8.5						
EALB				S	Sn	10 13 27.8	-3.4
	10nm,0.2s,SNR=7.9						
EALB	**Alboran**	**1.95**	**275**	P	Pn	10 13 04.6	-1.4
	3.5nm,0.1s,SNR=8.5						
EALB				S	Sn	10 13 27.8	-3.3
	10nm,0.2s,SNR=7.9						
EBER	**Berja**	**2.13**	**302**	P	Pn	10 13 06.8	-1.7
EBER				S	Sn	10 13 31.9	-3.7
EBER	**Berja**	**2.13**	**302**	P	Pn	10 13 06.7	-1.7
	0.7nm,0.1s,SNR=8.0						
EBER				S	Sn	10 13 31.9	-3.7
	23nm,0.3s,SNR=16						
EBER	**Berja**	**2.13**	**302**	P	Pn	10 13 06.7	-1.7
	0.7nm,0.1s,SNR=8.0						
EBER				S	Sn	10 13 31.9	-3.7
	23nm,0.3s,SNR=16						
EBER	**Berja**	**2.13**	**302**	P	Pn	10 13 06.8	-1.6
EBER				S	Sn	10 13 31.9	-3.6
	23nm,0.3s,SNR=16						
EHUE	**Huescar**	**2.56**	**323**	P	Pn	10 13 14.5	+0.1
EHUE				S	Sn	10 13 40.7	-5.5
EHUE	**Huescar**	**2.56**	**323**	P	Pn	10 13 14.5	+0.1
	0.8nm,0.2s,SNR=7.9						
EHUE				S	Sn	10 13 42.5	-3.7
	1.5nm,0.1s,SNR=7.9						
EHUE	**Huescar**	**2.56**	**323**	P	Pn	10 13 14.5	+0.1
	0.8nm,0.2s,SNR=7.9						
EHUE				S	Sn	10 13 42.5	-3.7
	1.5nm,0.1s,SNR=7.9						
EHUE	**Huescar**	**2.56**	**323**	P	Pn	10 13 14.5	+0.1
	0.8nm,0.2s,SNR=7.9						
EHUE				S	Sn	10 13 40.7	-5.5
	1.5nm,0.1s,SNR=7.9						
EGUA	**Guajares**	**2.58**	**295**	P	Pn	10 13 13.5	-1.2
EGUA				S	Sn	10 13 41.8	-4.9
EGUA	**Guajares**	**2.58**	**295**	P	Pn	10 13 13.5	-1.2
	4.5nm,0.2s,SNR=7.9						
EGUA				S	Sn	10 13 41.8	-4.9
	19nm,0.3s,SNR=7.9						
EGUA	**Guajares**	**2.58**	**295**	P	Pn	10 13 13.5	-1.2
	4.5nm,0.2s,SNR=7.9						
EGUA				S	Sn	10 13 41.8	-4.9
	19nm,0.3s,SNR=7.9						
EGUA	**Guajares**	**2.58**	**295**	P	Pn	10 13 13.5	-1.2
	4.5nm,0.2s,SNR=7.9						
EGUA				S	Sn	10 13 41.8	-5.0
	19nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**2.66**	**303**	P	Pn	10 13 15.9	+0.2
	1.7nm,0.3s,SNR=5.7						
EQUE				S	Sn	10 13 45.4	-3.4
	3.1nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**2.66**	**303**	P	Pn	10 13 15.9	+0.2
	1.7nm,0.3s,SNR=5.7						
EQUE				S	Sn	10 13 45.4	-3.4
	3.1nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**2.66**	**303**	P	Pn	10 13 15.9	+0.1
	1.7nm,0.3s,SNR=5.7						
EQUE				S	Sn	10 13 45.4	-3.4
	3.1nm,0.3s,SNR=7.9						
ECOG	**Cogollos-Vega**	**2.79**	**303**	S	Sn	10 13 48.3	-3.5
	2.6nm,0.2s,SNR=7.9						
ECOG	**Cogollos-Vega**	**2.79**	**303**	S	Sn	10 13 48.3	-3.5
	2.6nm,0.2s,SNR=7.9						
ECOG	**Cogollos-Vega**	**2.79**	**303**	S	Sn	10 13 48.3	-3.5
	2.6nm,0.2s,SNR=7.9						
EQES	**Quesada**	**2.80**	**317**	P	Pn	10 13 18.1	+0.4
EQES				S	Sn	10 13 48.9	-3.3
EQES	**Quesada**	**2.80**	**317**	P	Pn	10 13 18.1	+0.4
	2.7nm,0.1s,SNR=12						
EQES				S	Sn	10 13 48.9	-3.3
	6.9nm,0.2s,SNR=5.9					

s-maj=112.0km s-min=31.8km az=153.0
ISCJB ***15*** *10:20:54.8±1.4,22°.7S±0°.3×169°.71E±0°.08, h33km, mb3.6/4, Error ellipse: s-maj=48.5km s-min=11.1km az=1.1*
ISC 15 10:20:57.1±1.4,22°.6S±0°.4×169°.69E±0°.09, h35km, n7, σ0:59/7, mb3.6/4, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.63**	**279**	*e*S	**Sn**	**10 22 08.8**	**+1.0**
NORM	**Noumea**	**2.99**	**276**	*e*P	**Pn**	**10 21 42.0**	**0.0**
NORM				*e*S	**Sn**	**10 22 15.5**	**-1.1**
ASAR	**Alice Springs**	**32.88**	**261**	P	**P**	**10 27 28.4**	**+0.4**
	0.6nm,0.7s,mb3.6,baz=88,slow=8.9,SNR=7.4						
WRA	**Warramunga Arr**	**33.01**	**268**	P	**P**	**10 27 28.8**	**-0.3**
	0.3nm,0.8s,mb3.3,baz=102,slow=8.9,SNR=6.0						
PETK	**Petropavlovsk-**	**76.08**	**353**	P	**P**	**10 32 40.6**	**-0.1**
	1.5nm,0.8s,mb4.0,baz=150,slow=5.0,SNR=4.1						
NVAR	**Mina Array Bea**	**90.69**	**48**	P	**P**	**10 33 56.2**	**0.0**
	0.3nm,0.7s,mb3.7,baz=216,slow=4.5,SNR=3.3						
GERES	**GERESS Array B**	**147.60**	**330**	PKPbc	PKPbc	10 40 37.8	+0.2
	0.6nm,0.7s,baz=57,slow=3.6,SNR=7.0						

IDC ***15*** *11:01:56.7±0.6, 32°.90N×76°.26E, h0km, mb4.0/22, mb1 4.2/24, mb1mx4.1/31, mbtmp4.1/24, ML3.8/2, MS3.2/2, Ms1 3.2/2, ms1mx2.6/37, Error ellipse: s-maj=17.0km s-min=12.1km az=35.0*
BJI ***15*** *11:01:57.4, 32°.63N×76°.91E, h30km, ML4.2/2*
ISCJB ***15*** *11:01:59.6±0.4, 32°.98N±0°.02×76°.47E±0°.03, h34km±5km, mb4.1/33, Error ellipse: s-maj=4.7km s-min=3.0km az=143.0*
MOS ***15*** *11:02:00.0±0.9, 32°.99N×76°.35E, h33km, mb4.4/9, Error ellipse: s-maj=10.9km s-min=6.0km az=112.7*
NEIC ***15*** *11:02:02.0±0.6, 32°.97N×76°.37E, h36km±6km, mb4.3/13, Error ellipse: s-maj=9.3km s-min=4.2km az=50.0*
NDI ***15*** *11:02:02.7±3.2, 33°.11N×76°.31E, h36km, ML4.2, mb4.3(NEIC)*
ISC 15 11:02:02.4±0.3, 32°.96N±0°.02×76°.40E±0°.03, h39km±4km, n113, σ1§12/137, mb4.1/33, 8C-3D, Kashmir-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DLH	**Dalhousie**	**0.56**	**221**	*e*PKP	**Pn**	**11 02 09.0**	**-4.8**
DLH				*e*S	**Sn**	**11 02 20.0**	**-1.9**
THN	**Thein Dam**	**0.78**	**228**	*e*PKP	**Pn**	**11 02 11.0**	**-5.9**
THN				*e*S	**Sn**	**11 02 24.0**	**-3.4**
JMU	**Jammu**	**1.29**	**259**	*e*PKP	**Pn**	**11 02 23.0**	**-0.8**
JMU				*e*S	**Sn**	**11 02 40.0**	**+0.2**
SDNR	**Sundarnagar**	**1.54**	**162**	*e*x	**Pn**	**11 02 28.1**	**+0.9**
SDNR				*e*S	**Sn**	**11 02 49.1**	**+3.1**
BHK	**Bhakra**	**1.54**	**179**	*e*PKP	**Pn**	**11 02 26.8**	**-0.5**
BHK				*e*S	**Sn**	**11 02 47.6**	**+1.5**
SRNI	**Srinagar**	**1.72**	**312**	*e*x	x	11 02 39.0	
SRNI				*e*S	**Sn**	**11 02 48.0**	**-2.6**
SMLA	**Simla**	**1.94**	**160**	*i* P	**Pn**	**11 02 35.7**	**+2.9**
SMLA				*i* S	**Sn**	**11 03 00.0**	**+4.1**
SMLA				⇓E		11 03 05.3	
	comp=N,34μm,0.3s						
SMLA				⇓E		11 03 05.4	
	comp=E,25μm,0.3s						
KLP	**Kalpa**	**2.12**	**132**	*e*PKP	**Pn**	**11 02 38.9**	**+3.7**
KLP				*e*S	**Sn**	**11 03 05.4**	**+5.1**
KLP				AML	AML	11 03 13.6	
	comp=N,2μm,0.5s						
KLP				AML	AML	11 03 17.2	
	comp=E,4μm,0.4s						
DDI	**Dehra Dun**	**2.99**	**151**	*e*x	x	11 02 59.3	
DDI				*e*x	x	11 03 56.9	
JOSI	**Joshimath**	**3.60**	**131**	*e*PKP	**Pn**	**11 03 00.3**	**+4.6**
JOSI				*e*x	x	11 03 42.6	
JOSI				AML	AML	11 04 06.1	
	comp=E,628nm,0.5s						
JOSI				AML	AML	11 04 09.1	
	comp=N,681nm,0.4s						
NDI	**New Delhi**	**4.32**	**170**	*e*x	x	11 03 15.0	
NDI				*e*x	x	11 04 10.0	
BISR	**Bishrakh**	**4.47**	**168**	*e*x	x	11 03 21.1	
AYAN	**Aya Nagar**	**4.51**	**172**	*e*PKP	**Pn**	**11 03 09.8**	**+1.6**
PTH	**Pithoragarh**	**4.72**	**135**	*e*x	x	11 03 17.0	
PTH				*e*x	x	11 04 30.0	
SONA	**Sohna**	**4.73**	**173**	*e*S	**Sn**	**11 04 04.8**	**0.0**
KHET	**Khetri**	**4.90**	**186**	*e*PKP	**Pn**	**11 03 14.4**	**+0.9**
KHET				*e*S	**Sn**	**11 04 09.8**	**+0.9**
AGRA	**Agra**	**5.87**	**166**	*e*PKP	**Pn**	**11 03 27.7**	**+0.9**
AGRA				*e*S	**Sn**	**11 04 32.5**	**-0.3**
KBL	**Kabul**	**6.33**	**286**	*e*P	**Pn**	**11 03 32.8**	**-0.3**
KBL				pmax	pmax		
	comp=Z,15nm,0.5s						
KBL	**Kabul**	**6.33**	**286**	*e*Pn	**Pn**	**11 03 32.8**	**-0.2**
	comp=Z,16nm,0.5s						
KSH	**Kashi**	**6.55**	**357**	Pn	**Pn**	**11 03 35.4**	**-0.7**
KSH				Sn	**Sn**	**11 04 43.8**	**-5.7**
KSH				smax			
	comp=N,80nm,0.7s						
KSH				smax			
	comp=E,250nm,0.9s						
AJM	**Ajmer**	**6.64**	**194**	*e*PKP	**Pn**	**11 03 38.4**	**+1.0**
AJM				*e*PKP		11 03 39.0	
AJM				*e*S	**Sn**	**11 04 39.1**	**-13**
AJM				*e*S	**Sn**	**11 04 39.1**	**-13**
AJM				AML	AML	11 04 40.3	
	comp=N,169nm,0.4s						
AJM				AML	AML	11 04 41.6	
	comp=E,143nm,0.1s						
AJM				*e*S	**Sn**	**11 04 49.0**	**-2.8**
KZA	**Kyzart**	**9.15**	**355**	P	**Pn**	**11 04 13.2**	**+1.5**
	SNR=19						
DMN	**Daman**	**9.22**	**123**	*e*Pn	**Pn**	**11 04 13.8**	**+1.0**
DMN				*e*Sn	**Sn**	**11 05 56.0**	**+0.7**
	comp=E,60nm,0.6s						
KKN	**Kakani**	**9.24**	**122**	*e*Pn	**Pn**	**11 04 13.2**	**+0.2**
KKN				*e*Sn	**Sn**	**11 05 54.4**	**-1.3**
	comp=E,34nm,0.4s						
UCH	**Uchtor**	**9.37**	**351**	P	**Pn**	**11 04 15.9**	**+1.2**
	SNR=31						
UCH	**Uchtor**	**9.37**	**351**	*e*Pn	**Pn**	**11 04 15.6**	**+0.8**
	comp=E,13nm,0.6s						
AML	**Almayashu**	**9.40**	**348**	P	**Pn**	**11 04 15.8**	**+0.6**
	SNR=15						
AML	**Almayashu**	**9.40**	**348**	*e*Pn	**Pn**	**11 04 15.2**	**0.0**
	comp=E,20nm,0.5s						
AML				*e*Sn	**Sn**	**11 05 59.8**	**+0.2**
PKIN	**Phulchoki**	**9.45**	**122**	*e*Sn	**Sn**	**11 06 01.1**	**+0.3**
	comp=E,55nm,0.4s						
PKI	**Pulchoki**	**9.46**	**122**	*e*Pn	**Pn**	**11 04 16.3**	**+0.2**
PKI				*e*Sn	**Sn**	**11 06 00.2**	**-0.9**
	comp=E,41nm,0.5s						
GUN	**Gumba**	**9.61**	**119**	*e*Pn	**Pn**	**11 04 18.3**	**+0.2**
BHPL	**Bhopal**	**9.73**	**174**	*e*PKP	**Pn**	**11 04 18.1**	**-1.6**
BHPL				*e*S	**Sn**	**11 06 02.3**	**-5.4**
BHPL				*e*S	**Sn**	**11 06 02.6**	**-5.1**
BHPL				AML	AML	11 06 04.3	
	comp=N,22nm,0.4s						
BHPL				AML	AML	11 06 04.6	
	comp=E,26nm,0.3s						
AAK	**Ala-Archa**	**9.77**	**352**	P	**Pn**	**11 04 21.8**	**+1.5**
	SNR=5.4						
AAK	**Ala-Archa**	**9.77**	**352**	Pn	**Pn**	**11 04 21.2**	**+0.9**
	comp=E,0.0nm,0.3s,baz=153,slow=7.5,SNR=11						
AAK				Sn	**Sn**	**11 06 10.3**	**+1.7**
	comp=E,0.0nm,0.3s,baz=119,slow=23,SNR=5.2						
AAK				LR	LR	11 08 59.7	
	comp=E,78nm,21.2s,baz=197,slow=43						
AAK	**Ala-Archa**	**9.77**	**352**	*e*P	**Pn**	**11 04 21.4**	**+1.1**
AAK						11 06 10.3	
AAK	**Ala-Archa**	**9.77**	**352**	*e*Pn	**Pn**	**11 04 21.4**	**+1.1**
AAK				Sn	**Sn**	**11 06 10.3**	**+1.7**
AAK				*e*Sn	**Sn**	**11 06 13.3**	**+4.7**
AAK				LR	LR	11 08 59.7	
EKS2	**Erkin-Say**	**9.90**	**349**	*e*Pn	**Pn**	**11 04 22.9**	**+0.8**
	comp=E,5.5nm,0.7s						
EKS2				*e*Sn	**Sn**	**11 06 14.4**	**+2.6**
TKM2	**Tokmak 2**	**9.96**	**357**	P	**Pn**	**11 04 24.4**	**+1.6**
	SNR=7.0						
TKM2	**Tokmak 2**	**9.96**	**357**	*e*P	**Pn**	**11 04 24.2**	**+1.3**
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
TKM2	**Tokmak 2**	**9.96**	**357**	*e*Pn	**Pn**	**11 04 24.1**	**+1.3**
	comp=Z,5.8nm,0.5s						
JIRN	**Jiri**	**9.97**	**119**	*e*Pn	**Pn**	**11 04 23.5**	**+0.4**
JIRN				*e*Sn	**Sn**	**11 06 12.6**	**-1.1**
	comp=Z,31nm,0.3s						
RAMN	**Ramite**	**10.68**	**121**	*e*Pn	**Pn**	**11 04 32.7**	**-0.1**
RAMN				*e*Sn	**Sn**	**11 06 28.9**	**-2.2**
	comp=Z,49nm,0.4s						
TAPN	**Taplejung**	**11.27**	**117**	*e*Pn	**Pn**	**11 04 40.1**	**-0.8**
TAPN				*e*Sn	**Sn**	**11 06 42.9**	**-2.6**
	comp=Z,27nm,0.6s						
ODAN	**Odare**	**11.30**	**120**	*e*Pn	**Pn**	**11 04 40.8**	**-0.5**
ODAN				*e*Sn	**Sn**	**11 06 43.9**	**-2.5**
	comp=Z,28nm,0.5s						
MK31	**Makanchi Array**	**14.53**	**16**	*e*Pn	**Pn**	**11 05 24.0**	**-1.2**
MK31				*e*Sn	**Sn**	**11 08 00.9**	**-4.0**
MKAR	**Makanchi Array**	**14.53**	**16**	Pn	**Pn**	**11 05 23.9**	**-1.4**
	comp=Z,1.0nm,0.3s,baz=203,slow=12,SNR=23						
MKAR				Sn	**Sn**	**11 07 58.5**	**-6.3**
	comp=Z,0.7nm,0.3s,baz=202,slow=24,SNR=11						
KURK	**Kurchatov**	**17.82**	**5**	P	**Pn**	**11 06 03.4**	**-3.7**
	comp=Z,0.2nm,0.3s,baz=192,slow=11,SNR=15						
KURK	**Kurchatov**	**17.82**	**5**	*e*P	**Pn**	**11 06 04.5**	**-2.6**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.4s						
KURK	**Kurchatov**	**17.82**	**5**	*e*P	**Pn**	**11 06 04.5**	**-2.6**
	comp=Z,5.6nm,0.4s						
ABKAR	**Akbulak array**	**20.39**	**328**	*e*P	**P**	**11 06 35.0**	**-0.7**
	comp=Z,8.1nm,0.6s						
BVAR	**Borovoye Array**	**20.52**	**350**	P	**P**	**11 06 37.1**	**+0.2**
	comp=Z,7.9nm,0.5s,baz=158,slow=10,SNR=66						
BRVK	**Borovoye**	**20.56**	**349**	*e i* P	**P**	**11 06 37.6**	**+0.1**
BRVK	**Borovoye**	**20.56**	**349**	*e*P	**P**	**11 06 37.8**	**+0.3**
	comp=Z,16nm,0.6s						
ZAA0	**Zalesovo Array**	**21.82**	**13**	*e*P	**P**	**11 06 49.5**	**-1.5**
ZALV	**Zalesovo Beam**	**21.82**	**13**	P	**P**	**11 06 50.1**	**-0.9**
	comp=Z,5.2nm,0.5s,mb4.2,baz=201,slow=11,SNR=25						
AKTK	**Aktyubinsk**	**22.11**	**328**	P	**P**	**11 06 53.8**	**-0.2**
AKTO	**Aktyubinsk**	**22.11**	**328**	P	**P**	**11 06 53.8**	**-0.2**
	comp=Z,11nm,0.5s,mb4.6,baz=124,slow=11,SNR=53						
NVS	**Novosibirsk**	**22.40**	**10**	*e*P	**P**	**11 06 56.5**	**-0.6**
CMAR	**Chiang Mai Arr**	**24.85**	**120**	P	**P**	**11 07 22.8**	**+1.6**
	comp=Z,1.4nm,0.7s,mb3.6,baz=284,slow=10,SNR=8.0						
GNI	**Garni**	**26.33**	**295**	P	**P**	**11 07 39.2**	**+4.8**
	comp=Z,2.4nm,0.3s,mb4.2,baz=191,slow=4.2,SNR=7.0						
GNI	**Garni**	**26.33**	**295**	*e i* P	**P**	**11 07 39.6**	**+5.2**
GNI	**Garni**	**26.33**	**295**	*e*P	**P**	**11 07 39.1**	**+4.7**
	comp=Z,9.3nm,0.8s,mb4.4						
ARU	**Arti**	**26.51**	**338**	*e*P	**P**	**11 07 36.1**	**+0.2**
ARU				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.9						
ARU	**Arti**	**26.51**	**338**	*e*P	**P**	**11 07 36.1**	**+0.2**
	comp=Z,1.6nm,0.5s,mb3.8						
SONM	**Songino Array**	**27.04**	**48**	P	**P**	**11 07 40.7**	**-0.1**
	comp=Z,1.0nm,0.4s,mb3.7,baz=259,slow=6.8,SNR=3.4						
BRTR	**Keskin Array B**	**34.84**	**294**	P	**P**	**11 08 50.5**	**+1.0**
	comp=Z,1.5nm,0.9s,mb3.9,baz=112,slow=8.3,SNR=10.0						
OBN	**Obninsk**	**35.50**	**321**	⇑*e*P	**P**	**11 08 55.0**	**0.0**
OBN				pmax	pmax		
	comp=Z,9.0nm,0.4s,mb5.0						
AKASG	**Malin Array Be**	**38.62**	**312**	P	**P**	**11 09 20.4**	**-1.2**
	comp=Z,1.0nm,0.5s,mb3.9,baz=74,slow=7.9,SNR=7.8						
MLR	**Muntele Rosu**	**40.41**	**303**	P	**P**	**11 09 37.6**	**+1.0**
	comp=Z,2.6nm,0.6s,mb4.1,baz=136,slow=2.5,SNR=6.8						
JOF	**Joensuu**	**41.14**	**330**	*e*P	**P**	**11 09 42.4**	**+0.1**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.0						
JOF	**Joensuu**	**41.14**	**330**	*e*p	**P**	**11 09 42.4**	**+0.1**
	comp=Z,2.4nm,0.5s,mb4.1						
KSRS	**Korea Array**	**41.91**	**69**	P	**P**	**11 09 50.5**	**+1.5**
	comp=Z,0.7nm,0.7s,mb3.4,baz=278,slow=11,SNR=4.2						
KSRS	**Korea Array**	**41.91**	**69**	P	**P**	**11 09 50.6**	**+1.6**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.5						
FINES	**FINESS Array B**	**42.88**	**327**	P	**P**	**11 09 56.8**	**+0.2**
	comp=Z,2.3nm,0.5s,mb4.2,baz=107,slow=11,SNR=21						
KAF	**Kangasniemi**	**42.99**	**328**	*e*P	**P**	**11 09 54.5**	**-2.9**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
KAF	**Kangasniemi**	**42.99**	**328**	*e*p	**P**	**11 09 54.5**	**-2.9**
	comp=Z,1.9nm,0.6s,mb4.0						
ARCES	**ARCESS Array B**	**46.10**	**338**	P	**P**	**11 10 23.0**	**+0.8**
	comp=Z,3.2nm,0.8s,mb4.3,baz=111,slow=8.5,SNR=16						
HFS	**Hagfors**	**48.57**	**324**	P	**P**	**11 10 41.5**	**+0.1**
	comp=Z,3.8nm,0.7s,mb4.5,baz=101,slow=7.7,SNR=7.7						
GERES	**GERESS Array B**	**48.60**	**309**	P	**P**	**11 10 41.8**	**-0.1**
	comp=Z,0.4nm,0.6s,mb3.6,baz=70,slow=1.6,SNR=3.5						
NB2	**NORSAR Subarra**	**49.85**	**325**	P	**P**	**11 10 50.9**	**-0.4**
	comp=Z,2.0nm,0.7s,mb4.3,baz=94,slow=7.9						
NOA	**NORSAR Array B**	**49.85**	**325**	P	**P**	**11 10 51.2**	**-0.1**
	comp=Z,2.6nm,0.7s,mb4.4,baz=95,slow=7.5,SNR=9.5						
MJAR	**Matsushiro Arr**	**50.14**	**68**	P	**P**	**11 10 55.0**	**+1.1**
	comp=Z,1.9nm,0.7s,mb4.2,baz=288,slow=9.2,SNR=8.4						
ASAJ	**Asahikawa**	**51.68**	**57**	LR	LR	11 32 41.6	
	comp=Z,46nm,19.2s,baz=184,slow=36						
LPG	**La Plagne**	**53.80**	**305**	*e*P	**P**	**11 11 21.1**	**+0.1**
LPL	**La Plagne**	**53.81**	**305**	*e*P	**P**	**11 11 21.1**	**+0.1**
CABF	**La Chapelle**	**54.02**	**307**	*e*P	**P**	**11 11 23.6**	**+1.1**
KEST	**Kesra**	**54.44**	**293**	P	**P**	**11 11 25.4**	**-0.4**
	comp=Z,1.1nm,0.8s,mb3.8,baz=238,slow=3.2,SNR=5.5						
SMF	**Signal de Mont**	**55.52**	**307**	⇑*i*P	**P**	**11 11 32.8**	**-0.6**
	comp=Z,4.9nm,0.7s,mb4.4						
SMF	**Signal de Mont**	**55.52**	**307**	⇑*i*P	**P**	**11 11 32.8**	**-0.6**
SMF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
SMF	**Signal de Mont**	**55.52**	**307**	⇑*i*P	**P**	**11 11 32.8**	**-0.6**
	comp=Z,2.5nm,0.6s,mb4.4						
SSF	**Saint Saulge**	**55.65**	**308**	*e*P	**P**	**11 11 33.6**	**-0.7**
AVF	**Avril sur Loir**	**55.82**	**307**	⇑*i*P	**P**	**11 11 34.8**	**-0.7**
	comp=Z,2.5nm,0.6s,mb4.1						
AVF	**Avril sur Loir**	**55.82**	**307**	⇑*i*P	**P**	**11 11 34.8**	**-0.7**
AVF				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
AVF	**Avril sur Loir**	**55.82**	**307**	⇑*i*P	**P**	**11 11 34.8**	**-0.7**
	comp=Z,1.3nm,0.6s,mb4.1						
TCF	**Toulx Ste Croi**	**56.70**	**307**	*e*P	**P**	**11 11 41.7**	**-0.1**
	comp=Z,5.6nm,0.9s,mb4.3						
TCF	**Toulx Ste Croi**	**56.70**	**307**	*e*P	**P**	**11 11 41.7**	**-0.1**
TCF				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
TCF	**Toulx Ste Croi**	**56.70**	**307**	*e*P	**P**	**11 11 41.7**	**-0.1**
	comp=Z,2.8nm,0.9s,mb4.3						
ROSF	**Rostrenen**	**59.74**	**311**	*e*P	**P**	**11 12 02.5**	**-0.5**
	comp=Z,3.7nm,0.6s,mb4.3						
ROSF	**Rostrenen**	**59.74**	**311**	*e*P	**P**	**11 12 02.5**	**-0.5**
ROSF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
ROSF	**Rostrenen**	**59.74**	**311**	*e*P	**P**	**11 12 02.5**	**-0.5**
	comp=Z,1.9nm,0.6s,mb4.3						
QUIF	**Quistinic**	**59.80**	**310**	*e*P	**P**	**11 12 02.7**	**-0.7**
ESDC	**Sonseca Array**	**63.07**	**301**	P	**P**	**11 12 23.9**	**-1.7**
	comp=Z,0.8nm,0.6s,mb4.0,baz=55,slow=8.1,SNR=5.6						
SUMG	**Summit**	**65.80**	**343**	*e*P	**P**	**11 12 44.4**	**+1.4**
	comp=Z,8.2nm,1.1s,mb4.7						
TORD	**Tonopdi Ar. Bea**	**70.22**	**273**	P	**P**	**11 13 09.5**	**-2.2**
	comp=Z,1.5nm,0.7s,mb4.1,baz=49,slow=5.1,SNR=11						
WRA	**Warramunga Arr**	**76.33**	**125**	P	**P**	**11 13 48.4**	**+0.9**
	comp=Z,0.6nm,0.4s,mb3.9,baz=316,slow=6.7,SNR=27						
WRAB	**Tennant Creek**	**76.34**	**125**	*e*P	**P**	**11 13 48.6**	**+1.1**
WRAB				pmax	pmax		
	comp=Z,12nm,1.4s,mb4.6						
WRAB	**Tennant Creek**	**76.34**	**125**	*e*P	**P**	**11 13 48.6**	**+1.1**
	comp=Z,12nm,1.4s,mb4.6						
COLA	**College**	**76.55**	**18**	*e*P	**P**	**11 13 49.1**	**+1.0**
COLA				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
COLA	**College**	**76.55**	**18**	*e*P	**P**	**11 13 49.1**	**+1.0**
	comp=Z,1.5nm,0.7s,mb4.0						
BOSA	**Boshof**	**78.13**	**224**	P	**P**	**11 13 57.0**	**-0.3**
	comp=Z,1.3nm,0.6s,mb4.0,baz=56,slow=3.6,SNR=3.5						
BOSA	**Boshof**	**78.13**	**224**	P	**P**	**11 13 57.0**	**-0.4**
BOSA				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
ASAR	**Alice Springs**	**78.58**	**128**	P	**P**	**11 14 00.8**	**+0.8**
	comp=Z,0.7nm,0.8s,mb3.7,baz=318,slow=5.2,SNR=13						
YKA	**Yellowknife Ar**	**84.47**	**5**	P	**P**	**11 14 30.9**	**+0.3**
	comp=Z,0.5nm,0.5s,mb3.9,baz=344,slow=5.3,SNR=5.3						

IDC ***15*** *11:02:50.0±4.6, 38°.96N×141°.29E, h0km, mb3.7/1, mb1 3.9/2, mb1mx3.3/25, mbtmp3.7/2, ML2.9/2, Error ellipse: s-maj=76.5km s-min=45.6km az=176.0*
JMA ***15*** *11:02:50.4, 39°.14N×140°.91E, h10km±1km, M2.7*
ISCJB ***15*** *11:02:50.3±0.7, 39°.12N±0°.04×140°.91E±0°.05, h1km±12km, Error ellipse: s-maj=7.1km s-min=5.2km az=139.6*
ISC 15 11:02:50.6±0.7, 39°.13N±0°.04×140°.91E±0°.05, h3km±10km, n9, σ0§82/15, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.30**	**126**	P	**Pg**	**11 02 56.3**	**0.0**
JMK				*e*S	**Sg**	**11 03 00.6**	**+0.4**
JRG	**Rokugo**	**0.34**	**321**	P	**Pg**	**11 02 57.2**	**-0.1**
JRG				*e*S	**Sg**	**11 03 02.2**	**+0.4**
JOM	**Ohasama**	**0.45**	**40**	P	**Pg**	**11 02 59.1**	**-0.2**
JYK	**Kaneyama**	**0.48**	**244**	P	**Pg**	**11 02 59.7**	**-0.1**
JYK				S	**Sg**	**11 03 06.3**	**+0.3**
JIO	**Ouri**	**0.75**	**153**	P	**Pg**	**11 03 04.9**	**-0.2**
JIO				*e*S	**Sg**	**11 03 15.1**	**+0.3**
JOU	**Okura**	**0.79**	**194**	P	**Pg**	**11 03 05.6**	**-0.1**
JOU				*e*S	**Sg**	**11 03 16.1**	**+0.3**
MJAR	**Matsushiro Arr**	**3.35**	**221**	Pn	**Pn**	**11 03 45.2**	**+1.3**
	0.4nm,0.3s,baz=28,slow=11,SNR=5.0						
MJAR				Pg	**Pg**	**11 03 52.3**	**-2.6**
	0.4nm,0.3s,baz=28,slow=15,SNR=8.3						
KSRS	**Korea Array**	**10.35**	**265**	Pn	**Pn**	**11 05 23.6**	**+3.7**
	0.3nm,0.3s,baz=83,slow=14,SNR=7.5						
WRA	**Warramunga Arr**	**59.08**	**187**	P	**P**	**11 12 51.0**	**-1.1**
	1.2nm,1.3s,baz=4.6,slow=7.3,SNR=3.8						

NIED ***15*** *11:15:00, 24°.30N×121°.70E, h32km, Mw4.3 Best double couple: M0:2.75000×10^15 NP1:φ0=255.00000°, δ63.00000°, λ-89.00000°. NP2:φ0=73.00000°, δ27.00000°, λ-92.00000°.*
IDC ***15*** *11:15:53.4±0.8, 24°.19N×121°.84E, h0km, mb3.8/12, mb1 3.9/12, mb1mx3.8/25, mbtmp3.8/12, MS3.2/4, Ms1 3.3/4, ms1mx2.9/31, Error ellipse: s-maj=35.6km s-min=15.4km az=62.0*
NEIC ***15*** *11:15:55.0±0.8, 24°.13N×121°.91E, h10km, ML4.7(TAP), Error ellipse: s-maj=13.5km s-min=7.7km az=95.0*
NEIC Recorded [3 TAP] in Hua-lien and I-lan; [2 TAP] in Nan-tou and T'ai-chung.
TAP ***15*** *11:15:58.6, 24°.16N×121°.67E, h29km, ML4.5, B*
JMA ***15*** *11:15:58.7±0.3, 24°.35N×121°.71E, h76km, M3.5*
ISCJB ***15*** *11:15:58.6±0.2, 24°.15N±0°.01×121°.75E±0°.02, h27km±2km, mb3.8/13, MS3.2/4, Error ellipse: s-maj=3.0km s-min=2.0km az=35.4*
ISC 15 11:15:58.8±0.2, 24°.15N±0°.01×121°.74E±0°.02, h25km±2km, n90, σ1§04/140, mb3.8/13, MS3.2/4, 14C-17D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.15**	**241**	⇓*i*P	**Pb**	**11 16 04.0**	**+0.2**
	baz=229						
TWD				S	**Sb**	**11 16 07.8**	**+0.5**
	baz=229						
EHP	**Heping Village**	**0.16**	**1**	*i* P	**Pb**	**11 16 04.2**	**+0.2**
	baz=24						
EHP				S	**Sb**	**11 16 08.5**	**+1.1**
	baz=24						
HWA	**Hwalien**	**0.21**	**215**	P	**Pb**	**11 16 05.1**	**+0.5**
	baz=204						
ENA	**Nanau**	**0.27**	**0**	⇓*i*P	**Pb**	**11 16 05.7**	**+0.2**
	baz=8.0						
ENA				S	**Sb**	**11 16 11.2**	**+1.3**
	baz=8.0						
ESF	**Shoufeng Towns**	**0.35**	**217**	*e*P	**Pb**	**11 16 06.2**	**-0.4**
	baz=217						
ESF				*e*S	**Sb**	**11 16 12.1**	**+0.2**
	baz=217						
WHF	**Hehuan Shan**	**0.43**	**269**	⇑*i*P	**Pb**	**11 16 07.4**	**-0.4**
	baz=268						
ESL	**Shilin**	**0.44**	**220**	⇑P	**Pb**	**11 16 07.1**	**-0.9**
	baz=222						
ESL				*e*S	**Sb**	**11 16 13.4**	**-0.8**
	baz=222						
NNS	**Nan Shan**	**0.44**	**311**	⇑*i*P	**Pb**	**11 16 07.6**	**-0.4**
	baz=315						
NNS				*e*S	**Sb**	**11 16 13.7**	**-0.6**
	baz=315						
TWC	**Suao**	**0.47**	**12**	⇓*i*P	**Pb**	**11 16 08.8**	**+0.3**
	baz=15						
TWC				*e*S	**Sb**	**11 16 16.2**	**+1.2**
	baz=15						
TEGC	**Jichi Village**	**0.48**	**202**	*e*P	**Pb**	**11 16 09.0**	**+0.4**
	baz=208						
TEGC				*e*S	**Sb**	**11 16 17.7**	**+2.4**
	baz=208						
ENTT	**Nioudou**	**0.51**	**342**	⇑*i*P	**Pb**	**11 16 08.9**	**-0.3**
	baz=346						
ENTT				*e*S

	baz=254						
ALS	Alishan	1.07	233	↓iP		Pn	11 16 18.0 -0.2
	baz=222						
CHN5	Tsauling	1.12	241	↓P		Pn	11 16 18.8 0.0
	baz=241						
CHN5				eS		Sn	11 16 33.8 +0.3
	baz=241						
TWY	Chenhua	1.12	354	eP		Pn	11 16 18.1 -0.9
	baz=342						
ELDTW	Lidau	1.17	215	eP		Pn	11 16 17.6 -2.0
	baz=204						
WGK	Gukeng	1.17	247	eP		Pn	11 16 19.5 -0.1
	baz=247						
WGK				eS		Sn	11 16 36.0 +1.2
	baz=247						
YOJ	Yonaguni jima	1.20	75	P		Pn	11 16 20.2 +0.2
YOJ				eS		Sn	11 16 36.2 +0.7
YOJ	Yonaguni jima	1.20	75	eP		Pn	11 16 20.1 +0.1
	baz=76						
TPUB	Ta-pu	1.32	230	ePn		Pn	11 16 21.9 +0.2
TPUB				eSn		Sn	11 16 38.5 -0.1
STYT	Tauyuan	1.33	223	↓P		Pn	11 16 21.5 -0.3
	baz=222						
WTCT	Ta-ch'eng	1.36	258	eP		Pn	11 16 22.5 +0.2
	baz=258						
WTCT				eS		Sn	11 16 39.4 -0.1
	baz=258						
CHY	Chiayi	1.37	242	P		Pn	11 16 23.4 +1.1
	baz=243						
CHY				eS		Sn	11 16 41.3 +1.6
	baz=243						
WTP	Ta-pu	1.37	229	↓P		Pn	11 16 22.7 +0.3
	baz=224						
WTP				eS		Sn	11 16 40.4 +0.7
	baz=224						
TWK	Hsinying	1.45	233	↓iP		Pn	11 16 24.3 +0.9
	baz=235						
TWK				eS		Sn	11 16 42.5 +1.0
	baz=235						
TWG	Pinlang	1.46	205	ePn		Pn	11 16 20.6 -3.0
TWG				eSn		Sn	11 16 45.1 +3.2
TWG	Pinlang	1.46	205	eP		Pn	11 16 21.1 -2.5
	baz=193						
CHN1	Nanshi	1.47	229	↓iP		Pn	11 16 24.2 +0.5
	baz=232						
CHN1				eS		Sn	11 16 44.4 +2.2
	baz=232						
WSF	Szhu	1.48	250	eP		Pn	11 16 24.3 +0.5
	baz=250						
WSF				eS		Sn	11 16 43.9 +1.5
	baz=250						
TTN	Taitung	1.49	201	eP		Pn	11 16 23.6 -0.5
	baz=201						
PCYT	Pengchaiyu	1.50	12	eP		Pn	11 16 24.5 +0.3
	baz=357						
SGST	Jiashian	1.50	225	↓P		Pn	11 16 25.0 +0.8
	baz=219						
SGST				eS		Sn	11 16 45.2 +2.2
	baz=219						
CHN8	Yiju	1.61	240	↓eP		Pn	11 16 26.4 +0.7
	baz=231						
CHN8				eS		Sn	11 16 47.6 +1.9
	baz=231						
ECL	Taimali	1.71	205	eP		Pn	11 16 25.2 -1.8
	baz=196						
SCLT	Jiali	1.72	236	eP		Pn	11 16 27.9 +0.8
	baz=239						
SCLT				eS		Sn	11 16 50.4 +2.1
	baz=239						
SSD	Sandimen	1.73	216	eP		Pn	11 16 27.7 +0.4
	baz=209						
SSD				eS		Sn	11 16 50.4 +1.8
	baz=209						
TAI1	Yung-k'ang	1.77	232	eP		Pn	11 16 28.4 +0.6
	baz=232						
IRIF	Iriomote-Funau	1.83	84	P		Pn	11 16 28.8 +0.2
IRIF				eS		Sn	11 16 51.5 +0.5
HATJ	Hateruma jima	1.89	92	P		Pn	11 16 30.1 +0.6
HATJ				eS		Sn	11 16 53.2 +0.7
EAST	Anshuo	1.94	205	eP		Pn	11 16 28.6 -1.7
	baz=198						
TAW	Tawu	1.95	204	eP		Pn	11 16 30.0 -0.3
	baz=202						
TAW				eS		Sn	11 16 54.3 +0.3
	baz=202						
SCZT	Fangliau	2.05	210	eP		Pn	11 16 32.4 +0.7
	baz=199						
JKRS	Kuro-shima	2.08	87	P		Pn	11 16 32.8 +0.8
JKRS				eS		Sn	11 16 59.2 +2.1
PNG	Penghu	2.08	254	↓eP		Pn	11 16 31.4 -0.8
	baz=253						
JIJ	Ishigaki jima	2.20	84	P		Pn	11 16 33.9 +0.1
JIJ				eS		Sn	11 17 00.2 -0.1
HEN	Hengchun	2.33	204	eP		Pn	11 16 37.3 +1.8
	baz=197						
TSEB	Hengchuen, Pin	2.37	199	eP		Pn	11 16 35.2 -0.9
	baz=192						
JTJ	Tarama	2.75	79	P		Pn	11 16 41.8 +0.5
QZH	Quanzhou	2.97	286	Pn		Pn	11 16 43.0 -1.4
QZH				Sn		Sn	11 17 14.5 -4.7
QZH				smax			
	comp=N,660nm,0.6s						
QZH				smax			
	comp=E,480nm,0.9s						
QZH				LR	LR		
	comp=Z,2μm,5.2s						
KNM	Kinmen	3.03	276	↓eP		Pn	11 16 45.8 +0.7
	baz=273						
JOW	Kunigami	6.48	64	eP		Pn	11 17 31.8 -0.8
	baz=71						
KSRS	Korea Array	14.28	20	Pn		Pn	11 19 23.2 +3.9
	comp=Z,0.6nm,0.3s,baz=201,slow=11,SNR=29						
CMAR	Chiang Mai Arr	21.97	259	P		P	11 20 50.7 -0.3
	comp=Z,0.8nm,0.7s,mb3.2,baz=58,slow=8.6,SNR=4.0						
CMAR				LR		LR	11 29 20.2
	comp=Z,51nm,19.7s,MS2.9,baz=205,slow=37						
GUMO	Guam	24.24	112	LR		LR	11 30 07.0
	comp=Z,32nm,19.4s,MS2.8,baz=211,slow=35						
SONM	Songino Array	26.60	337	P		P	11 21 36.0 +1.1
	comp=Z,1.0nm,0.3s,mb3.8,baz=142,slow=7.3,SNR=3.2						
MKAR	Makanchi Array	38.71	316	P		P	11 23 19.9 -0.8
	comp=Z,1.2nm,0.6s,mb3.8,baz=90,slow=14,SNR=12						
ZALV	Zalesovo Beam	40.55	327	P		P	11 23 34.3 -1.6
	comp=Z,1.2nm,0.7s,mb3.6,baz=111,slow=8.1,SNR=5.5						
ZALV				LR		LR	11 41 49.5
	comp=Z,25nm,19.2s,MS3.1,baz=64,slow=38						
KURK	Kurchatov	42.44	320	P		P	11 23 50.3 -1.2
	comp=Z,0.4nm,0.5s,mb3.3,baz=114,slow=8.1,SNR=2.9						
WRA	Warramunga Arr	45.51	163	P		P	11 24 14.0 -2.4
	comp=Z,1.7nm,0.7s,mb4.1,baz=345,slow=8.8,SNR=14						
BVAR	Borovoye Array	48.02	321	P		P	11 24 34.6 -1.1
	comp=Z,0.7nm,0.6s,mb3.9,baz=108,slow=8.0,SNR=6.6						
ASAR	Alice Springs	48.98	165	P		P	11 24 42.7 -0.6
	comp=Z,0.6nm,0.4s,mb3.9,baz=341,slow=7.0,SNR=23						
AKTK	Aktyubinsk	55.15	316	P		P	11 25 27.0 -2.1
AKTO	Aktyubinsk	55.15	316	P		P	11 25 27.0 -2.1
	comp=Z,0.5nm,0.6s,mb3.7,baz=104,slow=8.3,SNR=2.1						
STKA	Stephens Creek	58.86	160	P		P	11 25 53.6 -1.9
	comp=Z,3.0nm,1.0s,mb4.3,baz=319,slow=10,SNR=3.9						
FINES	FINESS Array B	71.73	330	P		P	11 27 17.2 -1.3
	comp=Z,0.7nm,0.5s,mb3.9,baz=54,slow=7.1,SNR=4.8						
FINES				LR		LR	12 01 48.1
	comp=Z,51nm,19.1s,MS3.8,baz=356,slow=38						
BRTR	Keskin Array B	73.60	307	P		P	11 27 28.6 -1.5
	comp=Z,0.4nm,0.6s,mb3.5,baz=114,slow=7.0,SNR=2.7						
YKA	Yellowknife Ar	82.80	23	P		P	11 28 19.2 -1.3
	comp=Z,1.0nm,0.7s,mb4.0,baz=312,slow=5.0,SNR=10						

IDC 15 11:27:47.5±1.0, 31°.29N×103°.93E, h0km, mb3.5/6, mb1 3.6/7, mb1mx3.4/26, mbtmp3.5/7, ML3.6/1, MS3.1/1, Ms1 3.1/1, ms1mx2.3/26, Error ellipse: s-maj=37.4km s-min=19.0km az=58.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	13.55	201	Pn	Pn	11 31 03.3	+2.2
	0.1nm,0.3s,baz=18,slow=9.6,SNR=2.5						
KSRS	Korea Array	20.71	66	P	P	11 32 29.8	+0.4
	0.4nm,0.4s,baz=252,slow=10,SNR=3.3						
MKAR	Makanchi Array	22.74	319	P	P	11 32 51.1	+0.1
	0.7nm,0.8s,baz=102,slow=11,SNR=4.3						
AAK	Ala-Archa	25.97	304	LR	LR	11 44 18.4	
	comp=Z,46nm,20.0s,baz=207,slow=38						
ZALV	Zalesovo Beam	26.49	334	P	P	11 33 26.3	0.0
	1.0nm,0.6s,baz=131,slow=8.3,SNR=4.0						
KURK	Kurchatov	27.01	323	P	P	11 33 30.9	-0.1
	0.2nm,0.4s,baz=128,slow=9.7,SNR=3.7						
WRA	Warramunga Arr	58.71	146	P	P	11 37 46.9	-0.2
	0.8nm,0.6s,baz=338,slow=7.9,SNR=15						
ASAR	Alice Springs	61.73	149	P	P	11 38 07.5	-0.2
	0.3nm,0.5s,baz=333,slow=6.7,SNR=8.5						

IDC 15 11:37:08.9±2.0, 33°.28S×179°.09W, h0km, mb3.7/2, mb1 4.0/3, mb1mx3.8/16, mbtmp3.8/3, ML4.0/1, MS3.5/2, Ms1 3.5/2, ms1mx2.9/25, Error ellipse: s-maj=46.1km s-min=43.1km az=75.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	4.14	14	LR	LR	11 39 22.1	
	comp=Z,202nm,18.2s,baz=11,slow=32						
URZ	Urewera	5.85	211	Pn	Pn	11 38 36.3	-0.5
	4.2nm,0.3s,baz=56,slow=1.7,SNR=26						
URZ				Sn	Sn	11 39 39.1	-5.5
	12nm,0.3s,baz=296,slow=21,SNR=6.4						
RPZ	Rata Peaks	12.96	214	Sn	Sn	11 42 21.0	-18
	0.6nm,0.3s,baz=143,slow=20,SNR=5.1						
ASAR	Alice Springs	42.12	271	P	P	11 45 02.7	-0.3
	0.5nm,0.5s,baz=109,slow=7.6,SNR=11						
WRA	Warramunga Arr	43.37	276	P	P	11 45 13.4	+0.2
	0.7nm,0.5s,baz=116,slow=8.0,SNR=17						
KDAK	Kodiak Island	93.41	14	LR	LR	12 28 28.6	
	comp=Z,53nm,19.9s,baz=56,slow=33						
FINES	FINESS Array B	147.49	338	PKPbc	PKPbc	11 56 53.4	-0.7
	2.1nm,0.9s,baz=48,slow=2.1,SNR=6.9						
TORD	Torodi Ar. Bea	159.95	182	PKPab	PKPab	11 57 49.5	-0.2
	0.5nm,0.5s,baz=174,slow=2.9,SNR=3.9						

IDC 15 12:02:19.2±9.4, 4°.77S×148°.19E, h0km, mb3.7/4, mb1 4.0/4, mb1mx3.6/16, mbtmp3.8/4, Error ellipse: s-maj=145.8km s-min=65.7km az=32.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.23	221	P	P	12 06 56.2	+0.2
	1.1nm,0.3s,baz=46,slow=12,SNR=40						
ASAR	Alice Springs	23.29	215	P	P	12 07 29.0	+0.1
	1.3nm,0.5s,baz=41,slow=8.9,SNR=39						
FITZ	Fitzroy Crossi	25.72	237	P	P	12 07 51.4	-0.1
	0.8nm,0.5s,baz=72,slow=16,SNR=2.8						
STKA	Stephens Creek	27.66	192	P	P	12 08 08.8	-0.1
	2.1nm,0.9s,baz=13,slow=18,SNR=2.5						

NIED ***15*** *12:19:00, 35°.80N×139°.40E, h59km, Mw4.0 Best double couple: M₀1.12000×1015 NP1:φ₀23.00000°, δ80.00000°, λ-18.00000°. NP2:φ₀116.00000°, δ72.00000°, λ-169.00000°.*

ISCJB ***15*** *12:19:31.4±0.4, 35°.83N±0°.03×139°.45E±0°.06, h64km±3km, mb3.9/13, Error ellipse: s-maj=8.6km s-min=4.5km az=173.9*

JMA ***15*** *12:19:32.7±0.1, 35°.85N×139°.41E, h51km±1km, M3.8 Broadband fault plane solution: P waves. NP1: φ₀21.00000°, δ70.00000°, λ-15.00000°. NP2:φ₀117.00000°, δ76.00000°, λ-159.00000°. Principal axes: T Plg4.0000°, Azm248.0000°; N Plg65.0000°, Azm150.0000°; P Plg25.0000°, Azm340.0000°;*

JMA Felt II J1.

IDC ***15*** *12:19:33.4±1.1, 35°.73N×139°.35E, h68km±8km, mb3.6/13, mb1 3.7/15, mb1mx3.6/28, mbtmp3.6/15 Error ellipse: s-maj=23.1km s-min=5.9km az=66.0*

ISC 15 12:19:32.3±0.4, 35°.83N±0°.03×139°.45E±0°.06, h56km±3km, n30, σ0°.75/44, mb3.9/13, 2C-6D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHU	Hanno	0.14	281	↓P	Pn	12 19 40.8	-0.2
JHU				S	Sn	12 19 46.7	-0.6
TOK	Tokyo	0.29	119	↓P	Pn	12 19 43.2	+1.3
JRY	Ryogami san	0.48	293	↑P	Pn	12 19 43.5	-0.3
JRY				S	Sn	12 19 51.9	-0.2
JAG	Ashikaga	0.60	0	↓P	Pn	12 19 45.0	-0.1
JAG				S	Sn	12 19 54.0	-0.4
JOD2	Odawara 2	0.63	208	↓P	Pn	12 19 45.2	-0.3
JOD2				S	Sn	12 19 55.1	0.0
JYN	Shimob	0.81	246	↑P	Pn	12 19 47.6	-0.1
JYN				S	Sn	12 19 58.8	-0.1
JKT	Katashina	0.95	350	↓P	Pn	12 19 49.6	0.0
JKT				S	Sn	12 20 02.7	+0.3
JIM2	Oshima 3	1.10	181	P	Pn	12 19 51.2	-0.4
JIM2				S	Sn	12 20 06.1	+0.2
JIZS	Izushimoda	1.20	203	↓P	Pn	12 19 52.9	0.0
JIZS				S	Sn	12 20 08.8	+0.6
MJAR	Matsushiro Arr	1.23	306	P	Pn	12 19 53.2	-0.1
	124nm,0.3s,baz=126,slow=12,SNR=1083						
MJAR				S	Sn	12 20 10.3	+1.3
	141nm,0.3s,baz=148,slow=22,SNR=18						
MAT	Matsushiro	1.23	306	P	Pn	12 19 53.7	+0.4
MAT				S	Sn	12 20 09.6	+0.6
MAT	Matsushiro	1.23	306	P	Pn	12 19 53.9	+0.6
MAT				S	Sn	12 20 07.7	-1.3
JHJ	Hachijo jima 2	2.71	174	P	Pn	12 20 14.4	+0.9
	667nm,0.3s,baz=96,slow=20,SNR=913						
JHJ				S	Sn	12 20 44.8	-0.3
	238nm,0.3s,baz=104,slow=23,SNR=14						
ASAJ	Asahikawa	8.63	15	P	Pn	12 21 35.0	+0.7
	0.4nm,0.3s,baz=280,slow=7.0,SNR=6.3						
ASAJ				S	Sn	12 23 09.0	-1.1
	0.3nm,0.3s,baz=209,slow=19,SNR=1.8						
CBIJ	Chichi jima	9.01	164	P	Pn	12 21 36.8	-2.9
	7.1nm,0.3s,baz=304,slow=19,SNR=11						
CBIJ				S	Sn	12 23 11.5	-8.2
	1.9nm,0.3s,baz=270,slow=20,SNR=3.1						
KSRS	Korea Array	9.41	283	P	Pn	12 21 46.1	+1.0
	0.4nm,0.3s,baz=98,slow=14,SNR=6.8						
ZALV	Zalesovo Beam	41.58	313	P	P	12 27 13.7	-0.5
	1.0nm,0.4s,mb3.8,baz=97,slow=8.1,SNR=3.6						
MKAR	Makanchi Array	43.43	303	P	P	12 27 28.7	-0.7
	0.8nm,0.5s,mb3.7,baz=74,slow=15,SNR=11						
BVAR	Borovoye Array	50.22	313	P	P	12 28 22.2	-0.2
	0.9nm,0.4s,mb4.1,baz=91,slow=6.8,SNR=6.7						
WRA	Warramunga Arr	55.67	186	P	P	12 29 02.3	-0.4
	1.5nm,0.5s,mb4.3,baz=1.8,slow=7.7,SNR=42						
INK	Inuvik	56.18	27	P	P	12 29 07.2	+1.4
	1.3nm,0.7s,mb4.1,baz=310,slow=7.7,SNR=4.6						
ASAR	Alice Springs	59.40	186	P	P	12 29 28.7	-0.2
	0.3nm,0.4s,mb3.7,baz=21,slow=11,SNR=15						
ARCES	ARCESS Array B	64.56	339	P	P	12 30 03.0	-0.1
	1.8nm,0.9s,mb4.1,baz=55,slow=6.5,SNR=5.0						
FINES	FINESS Array B	69.14	332	P	P	12 30 31.6	-0.6
	2.1nm,0.6s,mb4.2,baz=64,slow=5.2,SNR=11						
AKASG	Malin Array Be	74.27	322	P	P	12 31 02.4	-0.9
	0.4nm,0.3s,mb3.8,baz=48,slow=4.3,SNR=4.6						
NB2	NORSAR Subarra	74.68	337	P	P	12 31 05.1	-0.3
	comp=Z,0.8nm,0.5s,mb3.9,baz=43,slow=5.9						
NOA	NORSAR Array B	74.68	337	P	P	12 31 05.0	-0.4
	comp=Z,0.7nm,0.6s,mb3.8,baz=45,slow=5.5,SNR=5.2						
NVAR	Mina Array Bea	76.98	52	P	P	12 31 21.2	+2.2
	comp=Z,0.4nm,0.8s,mb3.4,baz=266,slow=9.7,SNR=3.1						
BRTR	Keskin Array B	78.45	311	P	P	12 31 27.6	+0.4
	comp=Z,1.1nm,0.9s,mb3.8,baz=91,slow=4.9,SNR=5.8						
GERES	GERESS Array B	82.89	327	P	P	12 31 50.8	+0.1
	comp=Z,0.1nm,0.3s,mb3.3,baz=35,slow=7.2,SNR=4.2						

DDA ***15*** *12:20:30.3, 36°.97N×29°.17E, h7km±4km, Md3.0*

ISK ***15*** *12:20:30.1, 37°.01N×29°.20E, h3km, MD2.9*

ISCJB ***15*** *12:20:30.9±0.5, 37°.00N±0°.03×29°.18E±0°.03, h2km±7km, Error ellipse: s-maj=4.5km s-min=4.2km az=3.1*

CSEM ***15*** *12:20:31.1±0.1, 36°.99N×29°.21E, h5km, MD2.9, Error ellipse: s-maj=3.6km s-min=2.8km az=164.0*

ISC 15 12:20:31.4±0.5, 37°.00N±0°.03×29°.19E±0°.03, h6km±6km, n30, σ0°.94/47, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.29	57	ePG	Pg	12 20 36.1	-1.0
GLHS				eSG	Sg	12 20 41.0	0.0
GLHS	Glhisar (BURDU	0.29	57	ePg	Pg	12 20 36.1	-1.0
GLHS				eSg	Sg	12 20 41.0	0.0
FETY	Fethiye	0.37	193	ePG	Pg	12 20 38.1	-0.4
FETY				eSG	Sg	12 20 44.0	+0.6
FETY	Fethiye	0.37	193	ePg	Pg	12 20 38.1	-0.4
FETY				eSg	Sg	12 20 44.0	+0.6
GOLH	Golhisar	0.38	51	iP	Pg	12 20 38.0	-0.8
GOLH				iS	Sg	12 20 44.8	+1.0
GOLH	Golhisar	0.38	51	iP	Pg	12 20 38.0	-0.8
GOLH				iS	Sg	12 20 44.8	+1.0
ELL	Elmali	0.63	113	ePG	Pg	12 20 42.6	-0.9
ELL				eSG	Sg	12 20 52.6	+1.0
ELL	Elmali	0.63	113	ePg	Pg	12 20 42.6	-0.9
ELL				eSg	Sg	12 20 52.6	+1.0
DNZL	Cakiroluk	0.70	351	iP	Pg	12 20 43.6	-1.3
DNZL				iS	Sg	12 20 55.2	+1.2
DNZL	Cakiroluk	0.70	351	iP	Pg	12 20 43.6	-1.3
DNZL				iS	Sg	12 20 55.2	+1.2
YER	Yerkesik	0.74	281	ePG	Pg	12 20 45.3	-0.2
YER				eSG	Sg	12 20 56.6	+1.5
YER	Yerkesik	0.74	281	ePg	Pg	12 20 45.3	-0.2
YER				eSg	Sg	12 20 56.6	+1.5
DENT	Denizli	0.77	351	ePG	Pg	12 20 44.5	-1.6
DENT				eSG	Sg	12 20 56.2	+0.1
DENT	Denizli	0.77	351	ePg	Pg	12 20 44.5	-1.6
DENT				eSg	Sg	12 20 56.2	+0.1
AKAS	Kas	0.83	156	iP	Pg	12 20 45.9	-1.5
AKAS				iS	Sg	12 21 04.2	+6.1
AKAS	Kas	0.83	156	iP	Pg	12 20 45.9	-1.4
KORT	Korkueli	0.93	89	iP	Pg	12 20 49.4	+0.2
KORT				iS	Sg	12 21 04.2	+2.8
KORT	Korkueli	0.93	89	iP	Pg	12 20 49.4	+0.2
KORT				iS	Sg	12 21 04.2	+2.9
MLSB	Milas	1.17	285	ePN	Pn	12 20 53.9	-0.2
MLSB	Milas	1.17	285	ePn	Pn	12 20 53.9	-0.2
BCK	Bucak	1.21	67	ePN	Pn	12 20 54.3	-0.5
BCK	Bucak	1.21	67	ePn	Pn	12 20 54.3	-0.5
DAT	Datca	1.32	259	ePN	Pn	12 20 57.0	+0.8
DAT	Datca	1.32	259	ePn	Pn	12 20 57.0	+0.8
ISP	Isparta	1.35	51	ePN	Pn	12 20 56.6	0.0
ISP	Isparta	1.35	51	ePn	Pn	12 20 56.6	0.0
KHL	Karahalli	1.35	11	ePN	Pn	12 20 56.7	0.0
KHL	Karahalli	1.35	11	ePn	Pn	12 20 56.7	0.0
SUTC	Sutluce-Ispart	1.52	71	ePN	Pn	12 20 59.5	+0.4
SUTC	Sutluce-Ispart	1.52	71	ePn	Pn	12 20 59.5	+0.4

ISCJB ***15*** *12:21:26.4±0.8, 23°.07S±0°.04×66°.43W±0°.04, h199km±6km, mb4.8/172, Error ellipse: s-maj=7.0km s-min=4.6km az=36.4*

IDC ***15*** *12:21:27.9±0.9, 23°.09S×66°.44W, h202km±7km, mb4.4/15, mb1 4.5/22, mb1mx4.5/23, mbtmp4.4/22, Error ellipse: s-maj=13.6km s-min=8.9km az=64.0*

NEIC ***15*** *12:21:28.9±0.2, 23°.08S×66°.42W, mb5.0/149, Error ellipse: s-maj=6.1km s-min=4.1km az=46.0*

BJI ***15*** *12:21:31.8, 23°.10S×66°.40W, h211km, mB5.2/19*

ISC 15 12:21:25.6±0.9, 23°.05S±0°.04×66°.37W±0°.04, h177km±8km, h218km±7.5km: pP-P, n686, σ0°.72/648, mb4.9/171, 139C-154D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	6.93	346	P	Pn	12 23 09.3	+4.4
	15nm,0.3s,baz=160,slow=8.1,SNR=384						
LPAZ				S	Sn	12 24 26.6	+3.4
	3.0nm,0.3s,baz=294,slow=18,SNR=3.5						
LPAZ	La Paz	6.93	346	ePn	Pn	12 23 09.2	+4.3
LPAZ				eSn	Sn	12 24 26.9	+3.7
LCO	Las Campanas	7.10	212	ePn	Pn	12 23 05.0	-2.0
LCO				eSn	Sn	12 24 12.7	-14
SIV	San Ignacio	8.62	36	P	Pn	12 23 30.4	+3.3
	21nm,0.3s,baz=223,slow=12,SNR=14						
SIV				S	Sn	12 24 56.8	-6.7
	0.5nm,0.3s,baz=236,slow=16,SNR=3.4						
CFAA	Coronel Fontan	8.68	191	P	Pn	12 23 27.6	-0.2
	1.3nm,0.3s,baz=24,slow=11,SNR=138						
CFAA				S	Sn	12 24 58.0	-6.8
	2.2nm,0.3s,baz=218,slow=18,SNR=14						
CPUP	Villa Florida	8.85	113	P	Pn	12 23 33.4	+3.3
	2.2nm,0.3s,baz=280,slow=11,SNR=30						
CPUP	Villa Florida	8.85	113	ePn	Pn	12 23 32.7	+2.7
NNA	Nana	14.85	316	Pn	Pn	12 24 48.9	+1.8
	801nm,0.7s,SNR=8.2						
NNA	Nana	14.85	316	P	Pn	12 24 48.3	+1.2
	3.9nm,0.3s,baz=158,slow=10,SNR=33						
NNA				S	Sn	12 27 27.8	-5.0
	1.8nm,0.3s,baz=323,slow=20,SNR=3.1						
NNA	Nana	14.85	316	ePn	Pn	12 24 48.0	+0.9
TRQA	Tornquist	15.42	167	eP	Pn	12 24 53.9	-0.1
	17nm,0.4s						
SPB	Sao Paulo	17.41	96	eP	Pn	12 25 19.1	+1.1
	108nm,0.8s						
PLCA	Paso Flores	17.98	190	P	Pn	12 25 22.5	-2.0
	1.2nm,0.3s,baz=7.4,slow=12,SNR=66						
PLCA				PcP	PcP	12 29 49.2	-0.1
	0.3nm,0.3s,baz=324,slow=3.8,SNR=4.7						
PLCA	Paso Flores	17.98	190	eP	Pn	12 25 22.4	-2.1
	26nm,0.8s						
ATAH	Atahualpa	19.60	322	P	P	12 25 42.8	+2.3
	1.5nm,0.3s,baz=147,slow=7.1,SNR=14						
CAM4	Nova Friburgo	21.97	93	↓iP	P	12 26 06.1	+0.5
CAM4				i		12 26 10.2	
CAM4				i		12 26 13.6	
CAM4				i		12 26 22.7	
CAM4				i		12 26 29.5	
CAM4				i		12 26 37.9	
OTAV	Otavalo	25.96	331	eP	P	12 26 42.6	+0.7
	31nm,1.2s,mb4.8						
OTAV				ePcP	PcP	12 30 06.1	+0.3
ROSC	El Rosal	28.81	343	P	P	12 27 07.5	+0.3
	7.1nm,0.4s,mb4.7,baz=107,slow=19,SNR=3.7						
USHA	Ushuaia	31.77	182	P	P	12 27 32.6	-0.3
	4.9nm,0.6s,mb4.4,baz=345,slow=4.4,SNR=6.6						
SDV	Santo Domingo	32.01	352	eP	P	12 27 34.4	-1.1
	34nm,1.1s,mb5.0						
RCBR	Riachuelo	33.99	64	eP	P	12 27 53.9	+1.1
	69nm,0.7s,mb5.5						
BCIP	Isla Barro Col	34.63	336	eP	P	12 27 59.0	+0.9
	62nm,0.8s,mb5.3						
GRGR	Grenville	35.27	8	eP	P	12 28 03.1	-0.5
	107nm,0.4s,mb5.8			

WVT	Waverly	62.26 340	eP	P	12 31 26.8 -1.9
	58nm,0.8s,mb5.5				
WVT			epP	pP	12 32 21.4 +11
UALR	University of	62.57 336	eP	P	12 31 29.7 -1.1
	61nm,1.6s,mb5.2				
UTMT	University of	62.78 340	eP	P	12 31 30.0 -2.1
	123nm,1.0s,mb5.7				
MIAR	Mount Ida	62.84 335	eP	P	12 31 31.5 -1.1
	60nm,1.3s,mb5.3				
628A	Black Gap, Mar	62.95 324	⇓P	P	12 31 33.3 -0.1
	baz=63				
627A	Terlingua Ranc	63.19 324	⇑P	P	12 31 34.3 -0.7
	baz=63,SNR=34				
TXAR	Lajitas Array	63.25 324	P	P	12 31 34.3 -1.1
	6.4nm,0.7s,mb4.6,baz=151,slow=8.6,SNR=117				
PARMO	Parma	63.36 339	eP	P	12 31 35.4 -0.5
528A	Cox Ranch, San	63.43 325	⇓P	P	12 31 35.7 -0.8
	baz=64,SNR=33				
MCWV	Mont Chateau	63.64 348	eP	P	12 31 37.6 -0.1
	44nm,0.8s,mb5.3				
626A	Big Bend Ranch	63.68 323	⇑P	P	12 31 38.0 -0.2
	baz=64,SNR=91				
WCI	Wyandotte Cave	63.76 343	eP	P	12 31 36.6 -2.0
	34nm,0.6s,mb5.3				
428A	Kincaid Ranch,	63.82 325	⇑P	P	12 31 38.2 -0.8
	baz=64,SNR=22				
527A	Woodward Ranch	63.86 324	⇑P	P	12 31 38.6 -0.7
	baz=64,SNR=27				
USIN	University of	63.91 341	eP	P	12 31 37.6 -1.9
	20nm,0.6s,mb5.1				
526A	Mary Lane Ranc	64.05 324	⇓P	P	12 31 40.2 -0.3
	baz=64,SNR=58				
SIUC	Southern Illin	64.15 340	eP	P	12 31 39.3 -1.7
	60nm,1.4s,mb5.2				
SSPA	Standing Stone	64.26 350	eP	P	12 31 41.5 -0.2
	6.0nm,0.5s,mb4.7				
427A	Hayter Ranch,	64.30 325	⇑P	P	12 31 41.4 -0.8
	baz=64,SNR=24				
YLE	Yale	64.33 355	eP	P	12 31 42.5 +0.4
328A	Wristen Ranch,	64.41 326	P	P	12 31 42.2 -0.6
	baz=65,SNR=42				
426A	McDonald Obser	64.49 324	⇓P	P	12 31 43.0 -0.4
	baz=65,SNR=45				
MAIT	Maitri	64.52 159	eP	P	12 31 43.9 +0.8
MAIT			eE		12 31 48.2
BLO	Bloomington	64.71 343	eP	P	12 31 42.4 -2.2
	35nm,0.6s,mb5.4				
327A	Balmorhea Ranc	64.75 325	⇓P	P	12 31 44.7 -0.4
	baz=65				
FVM	French Village	64.78 339	eP	P	12 31 43.8 -1.4
	81nm,1.2s,mb5.4				
ACSO	Alum Creek Sta	64.83 346	eP	P	12 31 44.2 -1.3
	47nm,0.8s,mb5.4				
326A	Caldwell Ranch	64.97 325	⇓P	P	12 31 45.9 -0.6
	baz=65,SNR=23				
425A	Indio Mountain	65.10 324	⇓P	P	12 31 46.7 -0.7
	baz=65,SNR=83				
227A	Bennet, Jal	65.15 326	⇑P	P	12 31 47.3 -0.4
	baz=65,SNR=14				
WMOK	Wichita Mounta	65.19 331	eP	P	12 31 46.3 -1.6
	46nm,1.8s,mb5.0				
BINY	Binghamton	65.53 352	eP	P	12 31 50.0 +0.1
	69nm,0.9s,mb5.5				
325A	Bean Ranch, Si	65.54 324	⇓P	P	12 31 49.6 -0.6
	baz=66,SNR=138				
226A	Malaga, Loving	65.61 325	⇑P	P	12 31 50.0 -0.7
	baz=66,SNR=26				
127A	Arkansas Junct	65.71 326	⇑P	P	12 31 50.1 -1.1
	baz=66,SNR=6.3				
GDL2	Guadalupe Moun	65.86 325	eP	P	12 31 52.0 -0.3
	16nm,0.8s,mb4.9				
324A	Moseley Ranch,	65.87 324	P	P	12 31 51.1 -1.2
	baz=66,SNR=88				
MNTX	Cornudas Mount	66.02 324	eP	P	12 31 51.5 -1.8
	21nm,0.9s,mb5.0				
126A	Clayton Basin,	66.03 326	⇑P	P	12 31 52.6 -0.7
	baz=66,SNR=26				
225A	Deer Hill, Car	66.03 325	P	P	12 31 52.8 -0.5
	baz=66,SNR=38				
ERPA	Erie	66.05 349	eP	P	12 31 52.5 -0.7
	80nm,0.8s,mb5.6				
Z27A	Tatum	66.15 327	P	P	12 31 53.0 -1.0
	baz=66,SNR=42				
CPRX	Cap Rock	66.25 326	eP	P	12 31 54.0 -0.7
	17nm,0.7s,mb5.0				
125A	Gardner Draw,	66.37 325	P	P	12 31 54.5 -1.0
	baz=67,SNR=34				
224A	Cornudas Mount	66.38 324	P	P	12 31 54.7 -0.9
	baz=67,SNR=109				
MSTX	Muleshoe	66.45 327	P	P	12 31 55.1 -0.8
	baz=67,SNR=59				
Z26A	Caprock	66.50 326	P	P	12 31 55.7 -0.6
	baz=67,SNR=45				
Y27A	Causey	66.57 327	P	P	12 31 55.9 -0.9
	baz=67,SNR=16				
LIC	Lamto	66.60 72	eP	P	12 31 55.0 -2.3
	91nm,1.0s,mb5.6				
LIC	Lamto	66.60 72	eP	P	12 31 56.0 -1.3
	22nm,0.5s,mb4.9,baz=248				
LIC	Lamto	66.60 72	eP	P	12 31 56.0 -1.3
	11nm,0.5s,mb4.9				
AMTX	Amarillo	66.65 329	eP	P	12 31 56.1 -1.1
	54nm,1.4s,mb5.2				
HDIL	Hopedale	66.78 341	eP	P	12 31 55.9 -2.0
	31nm,0.6s,mb5.3				
TIC	Toumodi	66.80 72	eP	P	12 31 57.6 -1.0
	20nm,0.2s,mb5.6				
223A	Chaparral, Ant	66.82 324	⇓P	P	12 31 57.3 -1.0
	baz=67				
124A	Stringfield Ra	66.83 325	P	P	12 31 58.0 -0.3
	baz=67,SNR=47				
Z25A	Roswell	66.89 326	P	P	12 31 57.9 -0.8
	baz=67,SNR=42				
KIC	Kosan Boka	66.91 72	eP	P	12 31 58.7 -0.6
	78nm,0.5s,mb5.8				
Y26A	Elida	66.94 327	⇓P	P	12 31 57.4 -1.6
	baz=67,SNR=13				
DBIC	Dimbokro	66.96 72	P	P	12 31 59.0 -0.6
	25nm,0.5s,mb5.3,baz=211,slow=6.9,SNR=42				
DBIC			S	S	12 40 33.5 -5.4
	4.9nm,0.9s,baz=26,slow=14,SNR=3.4				
DBIC	Dimbokro	66.96 72	eP	P	12 31 58.3 -1.3
	26nm,0.6s,mb5.2				
NCB	Newcomb	67.08 354	eP	P	12 31 59.1 -0.6
	30nm,1.2s,mb5.0				
X27A	F and S Farms,	67.15 328	⇑P	P	12 31 59.0 -1.4
	baz=67				
LBNH	Lisbon	67.15 356	eP	P	12 32 00.3 +0.2
	31nm,1.1s,mb5.0				
222A	Williams Famil	67.27 323	⇑P	P	12 32 01.1 0.0
	baz=68,SNR=6.7				
Z24A	Sheeppen Canyo	67.27 325	P	P	12 32 00.8 -0.4
	baz=68,SNR=68				
Y25A	Mesa, Roswell	67.38 326	P	P	12 32 00.9 -0.9
	baz=68,SNR=52				
X26A	CR and CF Fran	67.43 327	⇑P	P	12 32 01.4 -0.7
	baz=68,SNR=42				
W27A	Bowe Ranch, En	67.47 328	⇑P	P	12 32 01.5 -0.8
	baz=68,SNR=23				
320A	Kipp Ranch, An	67.50 322	P	P	12 32 02.9 +0.3
	baz=68,SNR=23				
221A	Mesquite Ranch	67.57 323	⇓P	P	12 32 03.8 +0.8
	baz=68				
122A	Conniff Cattle	67.66 324	⇑P	P	12 32 04.3 +0.7
	baz=68,SNR=12				
Z23A	Rita Site, Whi	67.67 325	⇓P	P	12 32 03.8 +0.1
	baz=68,SNR=23				
LONY	Lake Ozonia	67.76 354	eP	P	12 32 03.8 -0.1
	24nm,0.8s,mb5.0				
Y24A	Capitan	67.77 326	⇓P	P	12 32 03.1 -1.2
	baz=68,SNR=12				
W26A	Owens Ranch, T	67.83 327	P	P	12 32 04.5 -0.1
	baz=68,SNR=16				
X25A	Clemmons Ranch	67.84 326	⇑P	P	12 32 03.7 -0.9
	baz=68,SNR=9.6				
220A	Playas Peak, P	67.91 322	⇑P	P	12 32 05.1 -0.1
	baz=68,SNR=29				
319A	Douglas	67.96 321	P	P	12 32 05.7 +0.2
	baz=68,SNR=33				
121A	Cookes Peak, D	67.97 323	P	P	12 32 06.2 +0.7
	baz=68,SNR=43				
KSU1	Kansas State U	68.00 335	eP	P	12 32 04.5 -1.1
	46nm,0.9s,mb5.2				
Z22A	Elephant Butte	68.06 324	P	P	12 32 06.8 +0.7
	baz=68,SNR=128				
Y23A	Lovelace Mesa,	68.10 325	⇑P	P	12 32 05.8 -0.5
	baz=68,SNR=33				
X24A	Lazy VL Ranch,	68.26 326	⇓P	P	12 32 07.0 -0.3
	baz=68,SNR=5.5				
W25A	X Bar L Ranch,	68.28 327	P	P	12 32 07.0 -0.4
	baz=68,SNR=41				
219A	White Tail Can	68.40 322	P	P	12 32 08.5 +0.2
	baz=69,SNR=31				
V26A	Tequesquite Ra	68.41 328	P	P	12 32 07.8 -0.4
	baz=69,SNR=43				
318A	Bisbee	68.42 321	P	P	12 32 08.8 +0.4
	baz=69,SNR=52				
120A	U Bar Ranch, L	68.45 322	⇓P	P	12 32 08.9 +0.4
	baz=69,SNR=23				
Z21A	St. Cloud Mine	68.49 324	⇓P	P	12 32 09.3 +0.5
	baz=69,SNR=40				
BNM	Barren Site	68.57 325	eP	P	12 32 09.2 0.0
	47nm,1.3s,mb5.1				
Y22A	Socorro	68.58 324	⇓P	P	12 32 09.5 +0.2
	baz=69				
X23A	Hourglass Bar	68.67 325	P	P	12 32 10.2 +0.4
	baz=69,SNR=50				
W24A	Lazy 6 Ranch,	68.75 326	P	P	12 32 10.1 -0.2
	baz=69,SNR=23				
LENM	Lemitar	68.76 325	eP	P	12 32 11.2 +0.7
218A	Dragoon	68.84 321	P	P	12 32 11.3 +0.4
	baz=69,SNR=48				
V25A	Rancho No Teng	68.85 327	⇓P	P	12 32 10.5 -0.4
	baz=69,SNR=43				
Z20A	Nine Sixteen R	68.85 323	⇓P	P	12 32 11.4 +0.4
	baz=69,SNR=33				
U26A	Atchley Ranch,	68.86 328	P	P	12 32 10.9 -0.1
	baz=69,SNR=49				
119A	Ashpeak Ranch,	68.99 322	⇑P	P	12 32 11.9 +0.1
	baz=69,SNR=12				
Y21A	Point of Rocks	69.02 324	⇓P	P	12 32 12.6 +0.6
	baz=69,SNR=38				
CBKS	Cedar Bluff	69.03 333	eP	P	12 32 11.8 -0.2
	82nm,0.8s,mb5.5				
LAZ	Ladron	69.03 325	eP	P	12 32 12.2 +0.1
	6.3nm,0.8s,mb4.4				
X22A	Bernardo	69.04 325	⇓P	P	12 32 12.4 +0.3
	baz=69,SNR=5.3				
ANMO	Albuquerque	69.09 326	eP	P	12 32 12.8 +0.3
	5.9nm,0.7s,mb4.4				
W23A	Werner Place,	69.10 326	⇓P	P	12 32 12.6 +0.1
	baz=69,SNR=19				
217A	Green Valley	69.14 320	⇑P	P	12 32 12.8 0.0
	baz=69,SNR=53				
U25A	Circle Dot Ran	69.19 328	P	P	12 32 13.0 0.0
	baz=70,SNR=54				
JFWS	Jewell Farm	69.23 341	eP	P	12 32 11.9 -1.2
	36nm,0.7s,mb5.2				
SCIA	State Center	69.24 339	eP	P	12 32 12.1 -1.1
	40nm,0.9s,mb5.2				
118A	Homack Ranch,	69.28 322	⇓P	P	12 32 13.6 -0.1
	baz=70				
Y20A	Horse Springs,	69.33 323	⇓P	P	12 32 14.4 +0.5
	baz=70,SNR=31				
Z19A	T-Link Ranch,	69.36 322	⇓P	P	12 32 14.6 +0.5
	baz=70				
W22A	Albuquerque	69.40 325	⇓P	P	12 32 15.1 +0.7
	baz=70,SNR=14				
X21A	Alamocita Cree	69.41 324	P	P	12 32 15.2 +0.8
	baz=70,SNR=46				
TUC	Tucson	69.51 321	eP	P	12 32 14.8 -0.3
	33nm,1.2s,mb4.9				
V23A	Ortiz Mt. (NFS	69.57 326	P	P	12 32 16.0 +0.6
	baz=70,SNR=22				
U24A	Moreno Valley	69.63 327	⇓P	P	12 32 16.3 +0.6
	baz=70				
Z18A	Geronimo	69.64 322	⇑P	P	12 32 16.3 +0.4
	baz=70				
117A	Oracle	69.67 321	⇓P	P	12 32 15.8 -0.3
	baz=70,SNR=40				
216A	Three Points,	69.68 320	P	P	12 32 16.6 +0.4
	baz=70,SNR=19				
T25A	Trinidad	69.78 328	P	P	12 32 17.1 +0.5
	baz=70,SNR=35				
W21A	San Fidel	69.85 325	P	P	12 32 17.8 +0.8
	baz=70,SNR=25				
Y19A	Nutrioso	69.85 323	⇓P	P	12 32 17.8 +0.7
	baz=70,SNR=56				
X20A	Quemado	69.87 324	⇑P	P	12 32 17.2 0.0
	baz=70,SNR=17				
U23A	El Rito	70.02 327	⇑P	P	12 32 18.2 +0.1
	baz=70,SNR=26				
Z17A	San Carlos Hig	70.05 322	⇑P	P	12 32 18.3 0.0
	baz=70,SNR=6.2				
V22A	San Miguel Ran	70.07 326	P	P	12 32 19.3 +0.9
	baz=70,SNR=43				
Y18A	Canyon Day Jun	70.15 322	⇓P	P	12 32 19.0 +0.1
	baz=70,SNR=22				
X19A	St. Johns	70.22 323	⇑P	P	12 32 19.5 +0.1
	baz=70,SNR=7.1				
116A	Eloy	70.23 320	⇑P	P	12 32 18.7 -0.7
	baz=70,SNR=6.0				
W20A	Ramah	70.31 324	⇑P	P	12 32 20.3 +0.4
	baz=71,SNR=49				
V21A	Milan	70.37 325	⇑P	P	12 32 20.1 -0.1
	baz=71,SNR=8.0				
U22A	Llaves	70.40 326	⇓P	P	12 32 20.9 +0.5
	baz=71,SNR=24				
214A	Organ Pipe Nat	70.46 319	⇑P	P	12 32 21.1 +0.2
	baz=71,SNR=27				
Y17A	Roosevelt	70.55 322	⇑P	P	12 32 21.6 +0.2
	baz=71,SNR=54				
Z16A	Peralta Trail,	70.63 321	⇑P	P	12 32 22.0 +0.1
	baz=71,SNR=12				
115A	Sonoran Desert	70.64 320	⇑P	P	12 32 22.3 +0.3
	baz=71				
X18A	Snowflake	70.66 323	⇓P	P	12 32 22.4 +0.4
	baz=71,SNR=13				
W19A	Sanders	70.78 324	⇑P	P	12 32 23.0 +0.3
	baz=71,SNR=17				
SDCO	Great Sand Dun	70.79 328	eP	P	12 32 23.2 +0.5
	28nm,0.7s,mb5.1				
V20A	Brimhall	70.80 325	⇑P	P	12 32 23.2 +0.3
	baz=71,SNR=18				
U21A	Nageezi	70.85 326	⇓P	P	12 32 23.5 +0.3
	baz=71,SNR=38				
T22A	Edith	70.92 327	⇑P	P	12 32 23.9 +0.4
	baz=71,SNR=31				
X17A	Forest Lakes	71.00 322	⇓P	P	12 32 24.8 +0.8
	baz=71,SNR=37				
Z15A	Gila River Ind	71.02 321	P	P	12 32 24.5 +0.3
	baz=71,SNR=12				
V19A	Window Rock	71.05 324	P	P	12 32 25.1 +0.7
	baz=71,SNR=44				
Y16A	Circle Bar Ran	71.05 321	⇑P	P	12 32 24.6 +0.3
	baz=71,SNR=19				
114A	Black Gap (USA	71.06 320	⇓P	P	12 32 24.7 +0.3
	baz=71,SNR=12				
T21A	Navajo Lake	71.22 326	⇓P	P	12 32 25.3 0.0
	baz=72,SNR=11				
U20A	Newcomb	71.26 325	⇓P	P	12 32 25.7 +0.1
	baz=72,SNR=21				
X16A	Lo Mia Camp, P	71.41 322	⇑P	P	12 32 27.1 +0.5
	baz=72,SNR=40				
W17A	Winslow	71.49 323	⇑P	P	12 32 27.4 +0.4
	baz=72,SNR=5.2				
V18A	Ganado	71.52 324	⇑P	P	12 32 27.2 0.0
	baz=72,SNR=12				
U19A	Dine' College,	71.56 325	P	P	12 32 27.3 -0.1
	baz=72,SNR=13				
Y15A	Casa Rosa Ranc	71.59 321	⇑P	P	12 32 27.6 -0.1
	baz=72,SNR=27				
113A	Mohawk Valley,	71.60 319	⇑P	P	12 32 27.3 -0.4
	baz=72,SNR=18				
OGNE	Ogallala	71.78 332	eP	P	12 32 28.6 0.0
	52nm,0.7s,mb5.4				
R22A	Saguache, Gunn	71.78 328	⇓P	P	12 32 29.1 +0.4
	baz=72,SNR=16				
Z13A	Yuma Proving G	71.84 320	P	P	12 32 29.4 +0.3
	baz=72,SNR=13				
S21A	Coal Bank Pass	71.86 326	⇑P	P	12 32 29.6 +0.4
	baz=72,SNR=11				
T19A	Beclabito	71.87 325	P	P	12 32 29.5 +0.3
	baz=72,SNR=51				
MVCO	Mesa Verde	71.88 326	⇓P	P	12 32 29.4 +0.1
	baz=72,SNR=39				
MVCO	Mesa Verde	71.88 326	eP	P	12 32 29.6 +0.3
	32nm,0.8s,mb5.1				
X15A	Humboldt	71.92 321	⇑P	P	12 32 30.0 +0.4
	baz=72,SNR=39				
V17A	Tonalea, Kykot	71.93 323	⇑P	P	12 32 29.9 +0.3
	baz=72,SNR=34				
112A	Yuma	71.94 319	⇑P	P	12 32 30.0 +0.3
	baz=72				
W16A	Flagstaff	71.96 322	P	P	12 32 31.0 +1.2
	baz=72,SNR=23				
Y14A	Wickenburg	71.97 321	P	P	12 32 29.9 0.0
	baz=72,SNR=23				
U18A	Rough Rock, Ch	72.01 324	⇑P	P	12 32 30.6 +0.5
	baz=72,SNR=34				
ECSD	EROS Data Cent	72.03 337	eP	P	12 32 28.7 -1.3
	53nm,1.3s,mb5.1				
WUAZ	Wupatki	72.17 323	⇑P	P	12 32 31.5 +0.5
	baz=72,SNR=33				
WUAZ	Wupatki	72.17 323	eP	P	12 32 31.8 +0.7
	50nm,0.9s,mb5.2				
X14A	Yava	72.28 321	⇓P	P	12 32 31.9 +0.2
	baz=72,SNR=22				
R21A	Cimarron	72.28 327	P	P	12 32 32.5 +0.8
	baz=72,SNR=16				
Q22A	Crested Butte,	72.35 328	P	P	12 32 32.8 +0.8
	baz=73,SNR=12				
W15A	Williams	72.43 322	⇑P	P	12 32 33.3 +0.7
	baz=73,SNR=13				
GLA	Glamis	72.44 319	⇓P	P	12 32 33.1 +0.4
	baz=73,SNR=6.2				
GLA	Glamis	72.44 319	eP	P	12 32 33.0 +0.3
	22nm,0.9s,mb4.9				
ISCO	Idaho Springs	72.46 329	eP	P	12 32 33.2 +0.5
	18nm,0.7s,mb4.9				
T18A	Mexican Hat	72.55 325	⇑P	P	12 32 33.3 +0.1
	baz=73,SNR=60				
R20A	Redvale	72.57 326	⇓P	P	12 32 34.2 +0.9
	baz=73,SNR=52				
U17A	Shonto	72.58 324	⇑P	P	12 32 34.0 +0.6
	baz=73,SNR=25				
S19A	Harvey Farm, M	72.62 326	⇑P	P	12 32 33.9 +0.2
	baz=73,SNR=40				
PV01	Paradox Valley	72.62 326	eP	P	12 32 34.1 +0.5
	2μm,0.7s				
SMCO	Snowmass	72.63 328	eP	P	12 32 34.5 +0.9
	32nm,0.8s,mb5.1				
Q21A	Lamborn Mesa,	72.66 327	⇓P	P	12 32 34.1 +0.2
	baz=73,SNR=12				
Y12C	Blythe	72.74 319	P	P	12 32 34.9 +0.4
	baz=73,SNR=15				
V15A	Kaibab Nationa	72.84 322	⇓P	P	12 32 35.6 +0.6
	baz=73,SNR=23				
PDMCI	Parker Dam,Lak	72.89 320	⇓P	P	12 32 35.5 +0.1
	baz=73				
X13A	Yucca	72.92 321	⇓P	P	12 32 35.5 0.0
	baz=73				
W14A	Seligman	72.92 321	P	P	12 32 36.5 +1.0
	baz=73,SNR=20				
T17A	Navajo Res., N	72.94 324	P	P	12 32 36.6 +1.0
	baz=73,SNR=46				
DVTC	Desert V Tower	72.95 318	⇓P	P	12 32 36.0 +0.3
	baz=73				
SWSC	Sam W. Stewart	72.96 318	⇓P	P	12 32 35.5 -0.2
	baz=73				
PV04	Paradox Valley	72.99 326	eP	P	12 32 36.2 +0.4
S18A	Hurst Farm, Bl	73.03 325	P	P	12 32 36.9 +0.8
	baz=73,SNR=72				
PV10	Paradox Valley	73.05 326	eP	P	12 32 35.8 -0.3
	347nm,0.8s,mb6.1				
R19A	Curley Farm, L	73.10 326	P	P	12 32 36.8 +0.3
	baz=73,SNR=24				
Q20A	Ridgley Place,	73.11 327	⇑P	P	12 32 36.4 -0.1
	baz=73,SNR=10				
BC3	Big Chuckawall	73.23 319	⇑P	P	12 32 37.5 +0.1
	baz=74,SNR=26				
V14A	Boquillas Ranc	73.24 322	P	P	12 32 38.4 +1.1
	baz=74,SNR=42				
W13A	Hualapai Mount	73.31 321	⇓P	P	12 32 38.4 +0.7
	baz=74,SNR=8.3				
MONP	Monument Peak	73.31 318	⇓P	P	12 32 38.2 +0.4
	baz=74,SNR=8.9				
T16A	Glen Canyon Da	73.32 324	⇑P	P	12 32 38.3 +0.6
	baz=74,SNR=11				
BAR	Barrett	73.32 317	eP	P	12 32 38.1 +0.2
	24nm,0.8s,mb5.0				
U15A	North Rim	73.35 323	⇑P	P	12 32 38.5 +0.6
	baz=74				
IRM	Iron Mountain	73.40 319	⇓P	P	12 32 38.6 +0.3
	baz=74,SNR=12				
S17A	Black Ridge (B	73.42 325	⇑P	P	12 32 38.6 +0.2
	baz=74,SNR=25				
R18A	Canyonlands Na	73.50 326	⇑P	P	12 32 38.6 -0.2
	baz=74,SNR=27				
NEE2	Needles Airpor	73.50 320	⇑P	P	12 32 38.9 0.0
	baz=74				
P20A	De Beque	73.57 327	⇑P	P	12 32 39.5 +0.3
	baz=74,SNR=18				
PHWY	Pilot Hill	73.58 330	eP	P	12 32 39.5 +0.3
	14nm,0.6s,mb4.9				
Q19A	Hogan Spring (	73.60 326	⇓P	P	12 32 39.8 +0.4
	baz=74				
N22A	Wattenberg Ran	73.65 329	⇑P	P	12 32 40.4 +0.8
	baz=74,SNR=34				
O21A	Pagoda	73.67 328	⇓P	P	12 32 40.8 +1.1
	baz=74,SNR=7.9				
BELC	Belle Mtn. Jos	73.80 319	⇓P	P	12 32 41.1 +0.5
	baz=74,SNR=12				
PFO	Pinyon Flat Ob	73.81 318	P	P	12 32 41.3 +0.5
	baz=74,SNR=5.5				
PFO	Pinyon Flat Ob	73.81 318	eP	P	12 32 41.5 +0.8
	12nm,0.9s,mb4.6				
T15A	Red Dirt Ranch	73.82 323	⇑P	P	12 32 41.7 +0.9
	baz=74,SNR=37				
U14A	Mt Trumbull	73.84 322	⇑P	P	12 32 41.8 +1.0
	baz=74,SNR=63				
V13A	Grand Canyon W	73.89 321	⇓P	P	12 32 41.5 +0.4
	baz=74,SNR=37				
R17A	Hanksville Air	73.95 325	P	P	12 32 41.9 +0.5
	baz=74,SNR=81				
P19A	Cripple Cowboy	73.97 327	⇓P	P	12 32 42.3 +0.8
	baz=74,SNR=32				
O20A	White River Ci	73.99 328	⇑P	P	12 32 42.1 +0.5
	baz=74,SNR=38				
LDFC	Landfair	74.01 320	eP	P	12 32 42.9 +1.0
	26nm,0.8s,mb5.0				
N21A	Black Mountain	74.12 329	⇑P	P	12 32 43.2 +0.8
	baz=74,SNR=18				
GMRC	Granite Mounta	74.13 320	⇑P	P	12 32 43.2 +0.6
	baz=74,SNR=36				
Q18A	Rafter H Ranch	74.15 326	P	P	12 32 43.0 +0.4
	baz=74,SNR=16				
EYMN	Ely	74.19 343	eP	P	12 32 41.1 -1.5
	10nm,0.8s,mb4.6				
SYO	Syowa Base	74.22 159	⇑eP	P	12 32 41.6 -1.0
T14A	Hurricane	74.24 323	P	P	12 32 44.1 +1.0
	baz=74,SNR=22				
R16A	Teasdale	74.26 325	⇓P	P	12 32 43.1 -0.1
	baz=74,SNR=13				
MURC	Murrieta	74.27 318	P	P	12 32 43.8 +0.4
	baz=74,SNR=6.8				
U13A	Pakoon Wash	74.28 322	⇓P	P	12 32 43.0 -0.4
	baz=74,SNR=12				
S15A	Panguitch	74.29 324	⇓P	P	12 32 43.8 +0.4
	baz=74,SNR=6.0				
V12A	Nelson	74.31 321	⇑P	P	12 32 43.5 -0.1
	baz=74,SNR=27				
SRU	San Rafael	74.36 326	⇑P	P	12 32 43.8 +0.1
	baz=75,SNR=50				
SRU	San Rafael	74.36 326	eP	P	12 32 44.1 +0.3
	46nm,0.7s,mb5.3				
N20A	Spence Gulch,	74.53 328	P	P	12 32 45.2 +0.5
	baz=75,SNR=31				
BBRC	Big Bear Solar	74.54 318	⇓P	P	12 32 45.5 +0.5
	baz=75,SNR=6.8				
O19A	Miners Draw (B	74.55 327	P	P	12 32 45.3 +0.5
	baz=75,SNR=30				
Q16A	Castle Valley	74.56 325	P	P	12 32 45.5 +0.6
	baz=75,SNR=25				
HEC	Hector,Ludlow	74.57 319	⇑P	P	12 32 45.5 +0.4
	baz=75,SNR=13				
L22A	Ellis Ranch, M	74.60 330	P	P	12 32 46.0 +0.9
	baz=75,SNR=12				
P18A	Preston Nutter	74.61 326	⇑P	P	12 32 45.9 +0.8
	baz=75,SNR=73				
U12A	Valley of Fire	74.62 321	⇑P	P	12 32 45.9 +0.6
	baz=75,SNR=38				
R15A	Junction	74.63 324	⇓P	P	12 32 46.2 +0.8
	baz=75,SNR=5.3				
T13A	Saint George	74.67 322	P	P	12 32 46.6 +0.9
	baz=75,SNR=39				
RWWY	Rawlins	74.69 329	eP	P	12 32 46.1 +0.5
	30nm,0.7s,mb5.0				
M21A	Separation Pea	74.70 329	⇑P	P	12 32 46.0 +0.3
	baz=75,SNR=32				
V11A	Goodsprings	74.72

P17A **Butcher Ranch,** 74.74 326 ⇑P P 12 32 46.2 +0.2
baz=75,SNR=30
CCUT **Cedar City** 74.75 323 eP P 12 32 47.4 +1.3
45nm,0.9s,mb5.1
S14A **Cedar City** 74.79 323 ⇓P P 12 32 46.8 +0.6
baz=75,SNR=9.3
MSU **Marysvale** 74.79 324 eP P 12 32 47.1 +0.8
TMUT **Trail Mountain** 74.86 325 eP P 12 32 47.2 +0.6
14nm,0.7s,mb4.7
T12A **Moapa** 74.93 322 ⇑P P 12 32 47.5 +0.4
baz=75
ARUT **Antelope Range** 74.96 323 eP P 12 32 48.5 +1.2
57nm,1.0s,mb5.2
O18A **Roosevelt** 74.96 327 ⇑P P 12 32 47.6 +0.4
baz=75,SNR=6.7
BFSC **Mount Baldy Ra** 74.98 318 ⇓P P 12 32 47.6 +0.2
baz=75,SNR=7.6
L21A **Rawlins** 74.98 330 P P 12 32 47.6 +0.3
baz=75,SNR=65
M20A **Sweetwater, Wa** 75.00 329 ⇑P P 12 32 47.6 +0.1
baz=75,SNR=15
RRX **Edison Barstow** 75.00 319 ⇓P P 12 32 47.8 +0.2
baz=75
N19A **John Jarvie Ra** 75.03 328 P P 12 32 47.8 +0.2
baz=75,SNR=18
S13A **Holt Ranch, En** 75.05 323 ⇑P P 12 32 48.4 +0.7
baz=75,SNR=34
R14A **James Farms, M** 75.10 324 ⇓P P 12 32 48.8 +0.8
baz=75
U11A **Corn Creek** 75.10 321 ⇑P P 12 32 49.0 +0.9
baz=75
GSC **Goldstone** 75.17 319 ⇓P P 12 32 48.2 -0.4
baz=75,SNR=19
GSC **Goldstone** 75.17 319 eP P 12 32 49.0 +0.5
24nm,0.9s,mb4.8
MWC **Mount Wilson** 75.22 318 eP P 12 32 49.2 +0.4
22nm,0.9s,mb4.8
RSSD **Black Hills** 75.22 333 eP P 12 32 48.3 -0.3
20nm,0.9s,mb4.7
Q15A **Fillmore** 75.26 325 ⇓P P 12 32 49.2 +0.3
baz=76,SNR=11
PASC **Pasadena Art C** 75.26 318 eP P 12 32 49.2 +0.2
77nm,1.0s,mb5.3
SHOC **Shoshone** 75.27 320 ⇓P P 12 32 48.9 -0.2
baz=76
O17A **Robinson Place** 75.28 326 ⇑P P 12 32 49.7 +0.7
baz=76,SNR=85
N18A **Larsen Ranch,** 75.33 328 ⇓P P 12 32 49.2 -0.1
baz=76,SNR=21
DECC **Green Verdugo** 75.40 318 ⇓P P 12 32 50.3 +0.4
baz=76,SNR=5.5
L20A **Wamsutter** 75.47 329 ⇑P P 12 32 50.5 +0.4
baz=76,SNR=23
M19A **Rock Springs** 75.48 328 ⇑P P 12 32 50.4 +0.2
baz=76,SNR=8.8
R13A **O'Grain Ranch,** 75.53 323 ⇓P P 12 32 51.0 +0.5
baz=76,SNR=19
T11A **Corn Creek, Al** 75.58 322 ⇑P P 12 32 51.4 +0.6
baz=76,SNR=61
MPU **Maple Canyon** 75.61 326 eP P 12 32 51.5 +0.6
25nm,0.8s,mb4.9
EDW2 **Edwards Air Fo** 75.61 318 ⇓P P 12 32 50.9 -0.1
baz=76,SNR=9.3
P15A **Leamington** 75.62 325 ⇓P P 12 32 51.0 0.0
baz=76,SNR=9.4
S12A **Delamar Landin** 75.62 322 ⇑P P 12 32 51.7 +0.6
baz=76,SNR=13
U10A **Ash Meadows, A** 75.65 320 ⇓P P 12 32 51.6 +0.4
baz=76,SNR=21
O16A **Springville** 75.68 326 ⇓P P 12 32 51.6 +0.3
baz=76,SNR=22
TOA0 **Torodi Ar. Sit** 75.69 69 eP P 12 32 50.9 -1.0
TORD **Torodi Ar. Bea** 75.69 69 P P 12 32 51.2 -0.7
23nm,0.5s,mb5.0,baz=257,slow=5.5,SNR=214
TORD pP pP 12 33 39.9 +5.1
3.0nm,0.4s,baz=252,slow=5.1,SNR=1.3
TORD S S 12 42 12.3 -6.8
1.3nm,1.0s,baz=240,slow=12,SNR=3.5
TORD **Torodi Ar. Bea** 75.69 69 P P 12 32 51.2 -0.7
TORD pP pP 12 33 39.9 +5.1
TORD S S 12 42 12.3 -6.8
DAU **Daniels Canyon** 75.71 326 eP P 12 32 52.3 +0.9
Q14A **Sevier Lake (B** 75.73 324 ⇓P P 12 32 52.3 +0.6
baz=76
AGMN **Agassiz Nation** 75.79 340 eP P 12 32 50.5 -1.2
13nm,0.9s,mb4.6
NLU **North Lily Min** 75.79 325 eP P 12 32 52.6 +0.7
26nm,1.1s,mb4.8
LRMC **Laurel Mountai** 75.82 319 P P 12 32 52.6 +0.3
baz=76,SNR=16
M18A **Lyman** 75.87 328 ⇑P P 12 32 52.2 -0.1
baz=76,SNR=17
N17A **Moffit Pass** 75.89 327 ⇓P P 12 32 53.1 +0.7
baz=76,SNR=19
JLU **Jordanelle** 75.95 326 eP P 12 32 53.5 +0.7
30nm,0.6s,mb5.1
K20A **Yellowstone Ra** 75.98 329 P P 12 32 53.0 0.0
baz=76,SNR=31
R12A **Pony Springs,** 75.99 323 ⇓P P 12 32 54.0 +0.8
baz=76,SNR=54
FURC **Furnace Creek,** 76.00 320 P P 12 32 53.8 +0.6
baz=76,SNR=35
L19A **Farson** 76.03 328 P P 12 32 53.8 +0.6
baz=76,SNR=35
P14A **Drum Mountains** 76.05 325 P P 12 32 54.5 +1.1
baz=76,SNR=54
MPMC **Manual Prospec** 76.09 319 ⇑P P 12 32 53.1 -0.7
baz=76,SNR=20
Q13A **Wheeler Ranch,** 76.11 324 ⇓P P 12 32 54.1 +0.3
baz=76,SNR=29
N16A **Rees Ranch, Co** 76.15 326 ⇓P P 12 32 54.3 +0.3
baz=76,SNR=14
S11A **Rachel** 76.16 322 ⇑P P 12 32 54.6 +0.5
baz=76,SNR=5.1
M17A **Scullys Gap (B** 76.20 327 ⇑P P 12 32 53.8 -0.4
baz=76,SNR=17
L18A **Fontenelle, Gr** 76.23 328 ⇑P P 12 32 54.5 +0.1
baz=76,SNR=67
O15A **The Old Anders** 76.24 325 ⇓P P 12 32 54.2 -0.3
baz=76,SNR=6.0
NOQ **North Oquirrh** 76.33 326 eP P 12 32 54.7 -0.3
16nm,0.8s,mb4.7
K19A **Absolon Red Bu** 76.34 329 ⇓P P 12 32 54.8 -0.2
baz=77,SNR=30
DUG **Dugway** 76.36 325 ⇓P P 12 32 55.5 +0.3
baz=77,SNR=28
DUG **Dugway** 76.36 325 eP P 12 32 55.6 +0.5
24nm,0.9s,mb4.8
ISA **Isabella** 76.42 319 ⇓P P 12 32 55.6 0.0
baz=77,SNR=35
ISA **Isabella** 76.42 319 eP P 12 32 55.8 +0.2
31nm,0.9s,mb4.9
ISA epP pP 12 33 54.2 +16
P13A **Bates Ranch, G** 76.47 324 ⇑P P 12 32 56.1 +0.3
baz=77,SNR=26
R11A **Troy Canyon, C** 76.55 322 ⇑P P 12 32 56.9 +0.6
baz=77,SNR=55
M16A **Huntsville** 76.56 327 ⇑P P 12 32 56.3 0.0
baz=77,SNR=23
Q12A **Willow Creek R** 76.62 323 ⇓P P 12 32 57.1 +0.5
baz=77,SNR=17
BW06 **Boulder Array** 76.64 329 ⇓P P 12 32 56.1 -0.5
baz=77,SNR=23
BW06 **Boulder Array** 76.64 329 eP P 12 32 56.2 -0.5
13nm,0.8s,mb4.6
PDAR **Pinedale Array** 76.64 329 P P 12 32 56.3 -0.3
9.4nm,0.6s,mb4.6,baz=133,slow=7.6,SNR=68
GRAC **Grapevine Rang** 76.66 320 ⇓P P 12 32 56.8 -0.1
baz=77,SNR=9.7
CWC **Cottonwood Cre** 76.70 319 ⇑P P 12 32 57.5 +0.4
baz=77,SNR=8.0
N15A **Stansbury Isla** 76.71 326 ⇑P P 12 32 57.3 +0.2
baz=77
HWUT **Hardware Ranch** 76.75 327 eP P 12 32 57.5 +0.2
31nm,0.7s,mb5.0
PKM **Peak Mountain** 76.75 317 ⇓P P 12 32 57.6 +0.1
baz=77,SNR=10
K18A **Toltan Ranch,** 76.77 328 ⇓P P 12 32 57.9 +0.5
baz=77,SNR=35
L17A **Cokeville** 76.77 328 P P 12 32 57.4 -0.1
baz=77,SNR=44
S10A **Tonopah Range,** 76.83 321 P P 12 32 58.5 +0.6
baz=77,SNR=49
VES **Vestal, Richgr** 76.91 318 P P 12 32 58.6 +0.2
baz=77,SNR=20
R10A **Warm Springs** 76.92 322 ⇑P P 12 32 59.7 +1.4
baz=77,SNR=5.4
Q11A **Duckwater** 76.94 323 ⇑P P 12 32 58.8 +0.3
baz=77,SNR=27
P12A **McGill** 76.97 323 ⇓P P 12 32 59.0 +0.5
baz=77,SNR=14
L16A **Fish Haven** 76.98 327 ⇑P P 12 32 58.6 -0.1
baz=77,SNR=39
BGU **Big Grassy Mou** 77.00 326 eP P 12 32 58.5 -0.2
41nm,1.2s,mb4.9
N14A **Grayback Hills** 77.03 325 ⇓P P 12 32 59.0 +0.1
baz=77,SNR=18
M15A **Larsen Ranch,** 77.09 326 ⇑P P 12 32 58.9 -0.3
baz=77,SNR=8.6
SMMC **Simmler** 77.13 318 ⇑P P 12 33 00.0 +0.4
baz=77,SNR=6.0
J18A **Kendall Valley** 77.19 329 ⇓P P 12 32 59.8 +0.1
baz=78,SNR=105
K17A **Gardner Place,** 77.28 328 ⇓P P 12 33 00.3 +0.1
baz=78,SNR=51
RCTC **Rector, Farmer** 77.32 319 ⇑P P 12 32 59.8 -0.8
baz=78,SNR=7.5
Q10A **Clear Creek Ra** 77.34 322 ⇑P P 12 33 01.2 +0.5
baz=78,SNR=19
TSUM **Tsumeb** 77.35 106 eP P 12 33 00.9 -0.4
9.9nm,0.8s,mb4.5
AHID **Auburn Hatcher** 77.38 328 eP P 12 33 01.1 +0.3
68nm,0.7s,mb5.4
O12A **Currie** 77.44 324 ⇑P P 12 33 01.4 +0.2
baz=78,SNR=10.0
L15A **Malad City** 77.46 327 P P 12 33 01.2 0.0
baz=78,SNR=71
I18A **Diamond G Ranc** 77.47 329 P P 12 33 01.8 +0.5
baz=78,SNR=40
P11A **Circle Ranch,** 77.49 323 ⇓P P 12 33 01.6 +0.1
baz=78,SNR=7.7
HVU **Hansel Valley** 77.49 326 eP P 12 33 01.4 0.0
ULM **Lac du Bonnet** 77.52 341 P P 12 33 00.1 -1.2
10nm,0.5s,mb4.7,baz=157,slow=6.8,SNR=14
ULM **Lac du Bonnet** 77.52 341 eP P 12 32 59.9 -1.5
7.7nm,0.5s,mb4.6
SCHQ **Schefferville** 77.56 360 P P 12 33 00.4 -1.1
18nm,0.7s,mb4.8,baz=169,slow=4.0,SNR=25
SCHQ **Schefferville** 77.56 360 eP P 12 33 00.8 -0.8
16nm,0.8s,mb4.7
N13A **Wendover, West** 77.57 325 P P 12 33 02.1 +0.2
baz=78,SNR=8.4
M14A **Sheep Mountain** 77.58 326 P P 12 33 02.2 +0.2
baz=78,SNR=37
J17A **Brown Place, J** 77.64 329 ⇑P P 12 33 02.8 +0.6
baz=78
K16A **Soda Springs** 77.67 328 P P 12 33 03.2 +0.8
baz=78,SNR=70
REDW **Red Top Meadow** 77.71 328 eP P 12 33 03.0 +0.4
36nm,0.8s,mb5.0
LOHW **Long Hollow** 77.78 329 eP P 12 33 03.4 +0.4
38nm,0.8s,mb5.1
O11A **Cowboy Ranch,** 77.84 324 ⇓P P 12 33 03.6 +0.2
baz=78,SNR=19
TPAW **Teton Pass** 77.85 328 eP P 12 33 03.8 +0.5
28nm,0.8s,mb4.9
M13A **Montello** 77.91 325 ⇓P P 12 33 03.4 -0.4
baz=78,SNR=10.0
L14A **Malta** 77.91 326 ⇑P P 12 33 03.5 -0.3
baz=78,SNR=38
RRI2 **Red Ridge** 77.92 328 eP P 12 33 04.3 +0.6
34nm,0.8s,mb5.0
P10A **Eureka** 77.93 323 ⇑P P 12 33 04.6 +0.7
baz=78
MLAC **Mammoth Lakes** 77.95 320 ⇑P P 12 33 04.2 +0.1
baz=78,SNR=7.8
I17A **Pilgrim Ck.** 77.99 329 ⇑P P 12 33 05.1 +0.9
baz=78,SNR=16
N12A **Clover Valley,** 78.01 324 ⇑P P 12 33 03.9 -0.4
baz=78,SNR=7.8
K15A **Arbon** 78.03 327 ⇓P P 12 33 04.3 -0.1
baz=78,SNR=38
DCID1 **Drake Creek** 78.04 328 eP P 12 33 05.4 +1.0
45nm,0.9s,mb5.1
ELK **Elko** 78.04 324 eP P 12 33 04.9 +0.4
31nm,1.1s,mb4.8
IMW **Indian Meadow** 78.15 329 eP P 12 33 05.5 +0.5
47nm,0.8s,mb5.2
NVAR **Mina Array Bea** 78.17 321 P P 12 33 05.3 +0.1
7.4nm,0.8s,mb4.3,baz=157,slow=6.9,SNR=55
LAO **LASA Array** 78.21 333 eP P 12 33 04.5 -0.8
38nm,1.1s,mb4.9
K14A **Jones Ranch, D** 78.25 327 P P 12 33 05.5 -0.1
baz=78,SNR=19
RLMT **Red Lodge** 78.30 331 P P 12 33 06.2 +0.4
baz=79,SNR=57
RLMT **Red Lodge** 78.30 331 eP P 12 33 05.9 +0.1
40nm,0.6s,mb5.2
L13A **Double Diamond** 78.31 326 P P 12 33 06.7 +0.7
baz=79,SNR=35
M12A **Wells** 78.34 325 ⇑P P 12 33 06.2 0.0
baz=79,SNR=37
H17A **Grant Village** 78.35 329 ⇓P P 12 33 07.0 +0.8
baz=79,SNR=18
N11A **Elko Archery C** 78.36 324 ⇓P P 12 33 06.0 -0.3
baz=79,SNR=6.7
I16A **Newdale** 78.40 328 ⇑P P 12 33 06.7 +0.3
baz=79,SNR=37
LKWY **Lake** 78.40 330 eP P 12 33 06.7 +0.3
16nm,0.8s,mb4.7
J15A **Blackfoot** 78.50 328 ⇓P P 12 33 07.6 +0.6
baz=79,SNR=52
YFT **Old Faithful** 78.52 329 eP P 12 33 08.8 +1.7
26nm,0.8s,mb4.9
G18A **Lazy EL Ranch,** 78.58 330 ⇓P P 12 33 07.4 0.0
baz=79,SNR=40
N10A **Dunphy** 78.71 323 ⇑P P 12 33 08.5 +0.3
baz=79
K13A **Stover Farm, H** 78.79 326 P P 12 33 08.9 +0.3
baz=79,SNR=30
M11A **Holland Ranch,** 78.82 324 ⇓P P 12 33 09.2 +0.4
baz=79,SNR=16
DGMT **Dagmar** 78.84 335 ⇓P P 12 33 08.4 -0.3
baz=79,SNR=10
DGMT **Dagmar** 78.84 335 eP P 12 33 08.9 +0.3
65nm,0.9s,mb5.3
WAKR **Walker** 78.88 320 eP P 12 33 09.9 +0.8
H16A **Russell Place,** 78.90 329 ⇓P P 12 33 09.6 +0.5
baz=79,SNR=41
L12A **House Creek Ra** 78.91 325 ⇓P P 12 33 09.1 -0.2
baz=79,SNR=10
I15A **Monteview** 78.97 328 ⇓P P 12 33 09.8 +0.3
baz=79,SNR=30
J14A **Carey** 78.99 327 ⇑P P 12 33 10.3 +0.6
baz=79,SNR=43
GCMT **Greycliff** 79.00 331 eP P 12 33 09.7 +0.1
30nm,0.8s,mb5.0
QLMT **Earthquake Lak** 79.08 329 eP P 12 33 11.1 +1.0
F18A **Big Timber** 79.10 331 ⇓P P 12 33 10.2 0.0
baz=79,SNR=67
G17A **Pierce Place,** 79.13 330 ⇓P P 12 33 10.7 +0.3
baz=79,SNR=7.2
CMB **Columbia Colle** 79.14 319 eP P 12 33 10.2 -0.4
16nm,1.3s,mb4.5
K12A **Draper Farm, C** 79.20 326 ⇑P P 12 33 11.2 +0.4
baz=79,SNR=74
M10A **I.L. Ranch, Tu** 79.29 324 ⇓P P 12 33 11.5 +0.2
baz=80,SNR=5.1
L11A **Cat Creek Ranc** 79.32 325 ⇓P P 12 33 11.7 +0.2
baz=80,SNR=40
J13A **Cove Ranch, Pi** 79.37 327 ⇓P P 12 33 12.2 +0.5
baz=80,SNR=36
I14A **Mackay** 79.39 327 ⇓P P 12 33 12.8 +0.9
baz=80,SNR=75
H15A **Lima** 79.50 328 ⇓P P 12 33 12.8 +0.4
baz=80,SNR=13
F17A **Fitzpatrick Pl** 79.53 330 P P 12 33 13.0 +0.5
baz=80,SNR=56
G16A **Moss Hill, Enn** 79.56 329 ⇑P P 12 33 12.4 -0.3
baz=80,SNR=21
WCN **Washoe City** 79.59 321 ⇓P P 12 33 12.9 -0.1
baz=80,SNR=9.2
HLID **Hailey** 79.61 327 P P 12 33 13.9 +0.9
baz=80,SNR=140
HLID **Hailey** 79.61 327 eP P 12 33 13.9 +0.9
54nm,0.7s,mb5.3
L10A **Juniper Basin** 79.64 325 P P 12 33 13.8 +0.6
baz=80,SNR=63
E18A **Harlowton** 79.70 331 P P 12 33 13.4 0.0
baz=80,SNR=26
I13A **Wildhorse Cree** 79.72 327 ⇑P P 12 33 14.3 +0.7
baz=80,SNR=42
J12A **Stokes Ranch,** 79.74 326 P P 12 33 14.3 +0.6
baz=80,SNR=68
MCMT **McKenzie Canyo** 79.76 328 eP P 12 33 14.6 +0.8
24nm,0.7s,mb4.9
BOZ **Bozeman (W)** 79.79 330 ⇑P P 12 33 13.5 -0.4
baz=80,SNR=19
BOZ **Bozeman (W)** 79.79 330 eP P 12 33 13.6 -0.2
9.1nm,0.9s,mb4.4
G15A **Dillon** 79.83 329 P P 12 33 14.6 +0.4
baz=80,SNR=28
H14A **Leadore** 79.86 328 P P 12 33 15.0 +0.7
baz=80,SNR=46
F16A **Kennard Place,** 79.89 330 ⇓P P 12 33 14.7 +0.3
baz=80,SNR=8.7
K11A **Parker Ranch,** 79.89 325 P P 12 33 15.0 +0.5
baz=80,SNR=58
DLMT **Dillon** 80.03 329 eP P 12 33 15.7 +0.5
17nm,0.6s,mb4.9
E17A **Martinsdale** 80.04 331 P P 12 33 15.3 +0.1
baz=80,SNR=50
D18A **Linhart Farms,** 80.13 332 ⇑P P 12 33 15.3 -0.3
baz=80,SNR=15
I12A **Atlanta** 80.14 326 ⇑P P 12 33 16.4 +0.6
baz=80,SNR=45
MFID **Camas Ranch** 80.23 326 ⇓P P 12 33 16.5 +0.2
baz=80,SNR=14
H13A **Challis** 80.25 327 P P 12 33 17.2 +0.8
baz=80,SNR=117
LRM **Limekiln Ridge** 80.30 329 eP P 12 33 16.9 +0.3
BEKR **Beckworth** 80.31 321 ⇓P P 12 33 16.9 0.0
baz=80,SNR=24
F15A **Butte** 80.33 329 ⇓P P 12 33 16.9 +0.1
baz=81,SNR=37
K10A **MacKenzie Ranc** 80.33 325 ⇑P P 12 33 15.7 -1.2
baz=81,SNR=21
E16A **East Helena** 80.47 330 ⇑P P 12 33 17.4 -0.1
baz=81,SNR=26
D17A **Six Diamond Ra** 80.49 331 ⇓P P 12 33 17.2 -0.4
baz=81,SNR=50
H12A **Diamond D Ranc** 80.54 327 ⇑P P 12 33 18.1 +0.1
baz=81,SNR=42
G13A **Cobalt** 80.62 328 ⇓P P 12 33 19.1 +0.7
baz=81,SNR=192
BOSA **Boshof** 80.65 117 P P 12 33 18.6 -0.5
4.9nm,0.5s,mb4.4,baz=252,slow=4.0,SNR=21
BOSA **Boshof** 80.65 117 eP P 12 33 18.1 -1.0
9.8nm,1.0s,mb4.4
I11A **Placerville** 80.65 326 ⇓P P 12 33 18.2 -0.3
baz=81,SNR=24
HRY **Holter Researc** 80.67 330 eP P 12 33 19.0 +0.4
F14A **Wisdom** 80.73 329 ⇓P P 12 33 18.7 -0.2
baz=81,SNR=17
J10A **Berg Farm, Mel** 80.73 325 ⇓P P 12 33 18.8 -0.2
baz=81
EGMT **Eagleton** 80.75 332 ⇑P P 12 33 18.1 -0.9
baz=81,SNR=16
EGMT **Eagleton** 80.75 332 eP P 12 33 18.4 -0.5
62nm,1.1s,mb5.2
D16A **Dana Ranch, Ca** 80.78 331 ⇑P P 12 33 19.3 +0.1
baz=81,SNR=83
E15A **Deer Lodge** 80.83 330 ⇓P P 12 33 19.0 -0.4
baz=81,SNR=26
C17A **Wharram Farm,** 80.89 331 ⇓P P 12 33 19.0 -0.7
baz=81,SNR=14
B18A **Beardsley Farm** 81.04 332 P P 12 33 20.2 -0.2
baz=81,SNR=38
WVOR **Wild Horse Val** 81.05 324 eP P 12 33 19.8 -0.9
6.7nm,0.9s,mb4.3
F13A **Darby** 81.17 328 P P 12 33 21.7 +0.4
baz=81,SNR=99
G12A **Big Creek, Yel** 81.19 327 ⇓P P 12 33 21.4 +0.1
baz=81
J09A **Fry Pan Ranch,** 81.19 325 ⇓P P 12 33 21.3 -0.1
baz=81,SNR=14
I10A **Payette** 81.21 326 ⇓P P 12 33 22.0 +0.5
baz=82,SNR=5.6
E14A **Clinton** 81.23 329 ⇓P P 12 33 21.9 +0.4
baz=82,SNR=21
H11A **Donnelly** 81.23 327 ⇑P P 12 33 21.5 -0.1
baz=82,SNR=43
D15A **Lincoln** 81.24 330 P P 12 33 22.0 +0.4
baz=82,SNR=33
PBDV **Barranco-do-Ve** 81.37 43 eP P 12 33 23.7 +1.2
17nm,2.1s,mb4.3
B17A **L&G Farms, Che** 81.40 332 ⇑P P 12 33 21.6 -0.8
baz=82,SNR=16
C16A **Fuhringer Ranc** 81.45 331 ⇓P P 12 33 22.0 -0.6
baz=82,SNR=16
A18A **Metzger Ranch,** 81.47 333 ⇓P P 12 33 21.8 -0.9
baz=82,SNR=12
CHMT **Chamberlain Mo** 81.48 330 eP P 12 33 22.9 0.0
H10A **Noah's Angus R** 81.53 326 ⇑P P 12 33 22.5 -0.6
baz=82,SNR=39
PCVE **Castro Verde** 81.54 43 eP P 12 33 16.9 -6.5
20nm,1.8s,mb4.5
E13A **Victor** 81.58 329 ⇓P P 12 33 23.5 +0.1
baz=82,SNR=78
J08A **Circle Bar Ran** 81.59 324 ⇓P P 12 33 22.9 -0.6
baz=82,SNR=66
PVAQ **Vaqueiros** 81.60 43 eP P 12 33 24.9 +1.2
18nm,1.9s,mb4.4
F12A **Elk City** 81.60 328 ⇑P P 12 33 23.2 -0.4
baz=82,SNR=28
I09A **Lost Marbles R** 81.62 325 ⇓P P 12 33 23.7 0.0
baz=82,SNR=8.1
MOD **Modoc** 81.62 322 eP P 12 33 23.9 +0.2
17nm,0.7s,mb4.8
D14A **Greenough** 81.72 330 ⇑P P 12 33 24.0 -0.1
baz=82,SNR=20
MSO **Missoula** 81.74 329 eP P 12 33 24.2 0.0
11nm,1.1s,mb4.4
C15A **Salmond Ranch,** 81.82 331 P P 12 33 24.8 +0.2
baz=82,SNR=68
EGRO **El Granado** 81.83 43 P P 12 33 25.9 +1.0
8.7nm,0.6s,mb4.6
SLMT **Seeley Lake** 81.83 330 eP P 12 33 24.6 -0.1
G11A **Walters Elk Ra** 81.85 327 ⇓P P 12 33 24.4 -0.5
baz=82,SNR=50
PBEJ **Beja** 81.88 43 eP P 12 33 26.1 +0.9
9.4nm,2.3s,mb4.0
BMO **Blue Mountains** 82.00 326 eP P 12 33 25.5 -0.1
15nm,0.8s,mb4.7
WDC **Whiskeytown Da** 82.05 320 eP P 12 33 24.2 -1.8
16nm,0.6s,mb4.8
H09A **Durkee** 82.05 326 ⇓P P 12 33 25.4 -0.5
baz=82,SNR=12
EVO **Evora** 82.10 42 eP P 12 33 25.5 -0.8
11nm,0.6s,mb4.3
F11A **Grangeville** 82.14 327 P P 12 33 26.0 -0.3
baz=82,SNR=35
MAW **Mawson** 82.16 163 P P 12 33 26.2 -0.1
4.2nm,0.8s,mb4.1,baz=232,slow=6.2,SNR=12
MAW **Mawson** 82.16 163 eP P 12 33 25.9 -0.4
1.3nm,0.8s
D13A **Huson** 82.18 329 ⇑P P 12 33 25.7 -0.8
baz=82,SNR=36
B15A **Bradely Ranch,** 82.20 331 ⇓P P 12 33 25.4 -1.1
baz=82,SNR=20
G10A **Bishop Farm, J** 82.21 327 ⇓P P 12 33 27.4 +0.7
baz=82,SNR=31
E12A **Beaver Dam Sad** 82.22 328 ⇓P P 12 33 26.4 -0.4
baz=82
LBTB **Lobatse** 82.24 114 eP P 12 33 26.7 -0.8
6.1nm,0.5s,mb4.5
SWMT **Swartz Lake** 82.26 330 eP P 12 33 26.8 -0.1
C14A **Swan Lake** 82.33 330 ⇓P P 12 33 26.9 -0.4
baz=83
ESPR **Espera** 82.47 45 P P 12 33 29.3 +1.0
8.7nm,0.6s,mb4.6
H08A **Prairie City** 82.48 325 ⇑P P 12 33 28.1 -0.1
baz=83,SNR=20
EJIF **Jimena Fronter** 82.48 45 P P 12 33 29.8 +1.5
6.7nm,0.6s,mb4.5
EMIN **Mina Concepcio** 82.48 44 P P 12 33 29.1 +0.8
12nm,0.8s,mb4.6
K05A **Summer Lake** 82.49 323 ⇓P P 12 33 28.7 +0.5
baz=83,SNR=31
PBAR **Barrancos** 82.49 43 eP P 12 33 29.1 +0.7
10.0nm,0.6s,mb4.6
PTOM **Tomar** 82.52 41 eP P 12 33 29.3 +0.8
22nm,0.8s,mb4.9
YBMT **Yellow Bay** 82.53 330 eP P 12 33 28.3 0.0
G09A **Cove** 82.53 326 ⇓P P 12 33 28.6 +0.2
baz=83
JTMT **Jette** 82.57 330 eP P 12 33 28.5 0.0
PESTR **Estremoz** 82.57 42 eP P 12 33 29.6 +0.9
16nm,1.4s,mb4.5
D12A **Red Ives Fores** 82.57 329 ⇓P P 12 33 28.0 -0.6
baz=83
I07A **Izee** 82.63 324 ⇑P P 12 33 28.2 -0.6
baz=83,SNR=19
C13A **Hot Springs** 82.65 329 ⇑P P 12 33 28.5 -0.4

baz=83,SNR=26
F10A Beach Ranch, E 82.73 327 P **P 12 33 29.4 -0.1**
baz=83,SNR=35
A15A Johnson Ranch, 82.77 331 P **P 12 33 28.4 -1.1**
baz=83,SNR=8.2
EBAD Badajoz 82.86 43 P **P 12 33 30.9 +0.6**
5.3nm,0.7s,mb4.4
BSMT Bassoo Peak 82.88 329 *e*P **P 12 33 30.0 -0.1**
YBH Yreka Blue Hor 82.88 321 *e*P **P 12 33 28.9 -1.4**
11nm,0.7s,mb4.7
EMIJ Mijas 83.00 46 P **P 12 33 29.9 -1.1**
3.3nm,0.6s,mb4.2
PMRV Marv??o 83.03 42 *e*P **P 12 33 31.5 +0.4**
16nm,1.9s,mb4.4
E10A Myers Farm, Un 83.03 327 ⇑P **P 12 33 30.7 -0.3**
baz=83,SNR=28
A14A Double T Ranch 83.07 331 ⇓P **P 12 33 29.9 -1.1**
baz=83,SNR=7.4
B13A Whitefish 83.11 330 ⇓P **P 12 33 30.5 -0.7**
baz=83,SNR=16
G08A Pilot Rock 83.15 326 ⇑P **P 12 33 31.1 -0.5**
baz=83,SNR=16
LNOR Lincton Mounta 83.20 326 *e*P **P 12 33 30.9 -0.9**
PCBR Castelo Branco 83.23 42 *e*P **P 12 33 32.4 +0.3**
11nm,1.6s,mb4.3
WALA Waterton Lakes 83.35 331 *e*P **P 12 33 32.0 -0.5**
0.4nm,0.9s
A13A Flathead Natio 83.49 330 ⇓P **P 12 33 33.4 +0.2**
baz=84
D10A Wagner Farm, O 83.51 328 ⇑P **P 12 33 32.4 -0.9**
baz=84,SNR=22
C11A Tepee Creek (N 83.56 329 ⇑P **P 12 33 33.1 -0.5**
baz=84
HUMO Hull Mountain 83.58 322 *e*P **P 12 33 32.5 -1.3**
6.4nm,0.5s,mb4.6
B12A Libby 83.70 330 ⇓P **P 12 33 34.3 0.0**
baz=84,SNR=6.7
ELOJ Sierra Loja 83.75 45 P **P 12 33 36.2 +1.4**
5.6nm,0.6s,mb4.5
PVRL Vila Real 83.96 40 *e*P **P 12 33 36.4 +0.6**
23nm,1.5s,mb4.7
G06A Carlson Farm, 84.00 325 ⇑P **P 12 33 35.5 -0.4**
baz=84
PCAB Cabril 84.04 40 *e*P **P 12 33 37.1 +0.9**
61nm,1.8s,mb5.0
EADA Adamuz 84.06 44 P **P 12 33 36.6 +0.2**
4.1nm,0.8s,mb4.2
A12A Yaak River Ran 84.06 330 ⇓P **P 12 33 35.9 -0.2**
baz=84
WRD Warden 84.27 327 P **P 12 33 37.7 +0.5**
NEW Newport 84.28 329 *e*P **P 12 33 37.4 +0.2**
15nm,0.9s,mb4.7
MVO Moncorvo 84.30 41 P **P 12 33 38.3 +0.8**
MVO Moncorvo 84.30 41 *e*P **P 12 33 38.1 +0.6**
13nm,1.8s,mb4.4
D08A Wollman Farm, 84.33 327 ⇓P **P 12 33 37.0 -0.5**
baz=85,SNR=16
EBER Berja 84.44 46 P **P 12 33 36.6 -1.7**
2.9nm,0.7s,mb4.1
OD2 Odessa Site #2 84.45 327 P **P 12 33 37.7 -0.4**
H04A Detroit Lake 84.47 324 ⇑P **P 12 33 37.7 -0.6**
baz=85
C09A Chrisman Ranch 84.51 328 P **P 12 33 38.2 -0.2**
baz=85,SNR=22
EBAN Banos Encina 84.56 45 P **P 12 33 39.7 +0.8**
12nm,0.7s,mb4.7
HOOD Mount Hood Mea 84.59 324 *e*P **P 12 33 37.9 -1.0**
169nm,1.4s,mb5.6
FCC Fort Churchill 84.68 346 *e*P **P 12 33 38.1 -0.8**
0.9nm,0.8s
EQES Quesada 84.83 45 P **P 12 33 39.7 -0.5**
3.4nm,0.9s,mb4.1
PBRG Braganca 84.86 40 *e*P **P 12 33 41.8 +1.5**
24nm,1.6s,mb4.7
ECAL Calabor 84.94 40 P **P 12 33 41.5 +0.8**
4.1nm,0.6s,mb4.3
PAB San Pablo 85.00 43 *e*P **P 12 33 41.9 +0.8**
8.6nm,0.9s,mb4.5
MPOR Mary's Peak 85.11 323 P **P 12 33 41.6 +0.2**
TBM Table Mountain 85.25 326 P **P 12 33 42.0 -0.1**
ESDC Sonseca Array 85.31 43 P **P 12 33 43.1 +0.5**
1.9nm,0.6s,mb4.0,baz=240,slow=5.0,SNR=20
ESDC Sonseca Array 85.31 43 P **P 12 33 43.2 +0.5**
2.1nm,0.5s,mb4.1
ESLA Sonseca Array 85.31 43 *e*P **P 12 33 41.7 -0.9**
0.9nm,0.9s
F04A Amboy 85.40 324 ⇓P **P 12 33 41.5 -1.3**
baz=86,SNR=7.6
ETW Entiat 85.41 327 P **P 12 33 42.6 -0.2**
B08A Colville Reser 85.42 328 ⇓P **P 12 33 41.7 -1.2**
baz=86,SNR=9.9
LON Longmire 85.61 325 *e*P **P 12 33 42.5 -1.4**
6.7nm,0.8s,mb4.4
EVIA Vianos 85.67 45 P **P 12 33 45.5 +1.1**
7.6nm,0.7s,mb4.5
D05A Enumclaw 85.98 326 ⇑P **P 12 33 45.1 -0.6**
baz=86,SNR=9.4
EDM Edmonton 86.17 334 *e*P **P 12 33 44.5 -1.9**
ETOB Tobarra 86.29 45 P **P 12 33 48.0 +0.5**
5.2nm,0.8s,mb4.3
A07A Ashnola River, 86.39 328 ⇑P **P 12 33 47.3 -0.4**
baz=87,SNR=40
RPW Rockport 86.56 327 P **P 12 33 47.2 -1.3**
B06A Marblemount 86.59 327 ⇓P **P 12 33 47.3 -1.4**
baz=87,SNR=9.7
JCW Jim Creek 86.61 326 P **P 12 33 47.3 -1.4**
GNW Green Mountain 86.66 326 *e*P **P 12 33 47.8 -1.2**
17nm,1.3s,mb4.7
CMW Cultus Mountai 86.85 327 P **P 12 33 49.0 -0.9**
ETOR Torete 87.17 43 P **P 12 33 52.5 +0.9**
3.4nm,0.5s,mb4.4
A05A Maple Falls 87.21 327 ⇑P **P 12 33 50.1 -1.5**
baz=87,SNR=18
VDB Vedder Mountai 87.23 327 P **P 12 33 50.4 -1.4**
PGC Sidney 87.68 326 *e*P **P 12 33 52.9 -0.9**
3.1nm,1.1s,mb4.0
LSZ Lusaka 88.21 106 *e*P **P 12 33 59.0 +1.7**
4.7nm,0.8s,mb4.4
LSZ *e*pP pP 12 34 52.5 +11
SJPF Ste Jean 88.95 42 *e*P **P 12 34 00.0 0.0**
ETSF Etsaut 89.24 42 *e*P **P 12 34 01.5 +0.1**
10.0nm,0.9s,mb4.4
ETSF Etsaut 89.24 42 *e*P **P 12 34 01.5 +0.1**
5.0nm,0.9s,mb4.4
EPF Esparros 89.87 42 *e*P **P 12 34 04.7 +0.4**
ROSF Rostrenen 90.68 37 *e*P **P 12 34 07.6 -0.3**
CASY Casey 90.92 179 *e*P **P 12 34 08.8 -0.1**
19nm,0.9s,mb5.1
LFF La Frestale 91.13 41 *e*P **P 12 34 10.1 0.0**
MTLF Montolieu 91.20 43 *e*P **P 12 34 09.6 -0.9**
MFF Saint Martin d 91.49 39 *e*P **P 12 34 11.7 0.0**
KEST Kesra 92.38 52 P **P 12 34 17.0 +0.9**
1.4nm,0.7s,mb4.1,baz=244,slow=2.2,SNR=5.5
LDF La Druitiere 92.57 37 *e*P **P 12 34 15.2 -1.5**
YKA Yellowknife Ar 93.44 340 P **P 12 34 19.3 -1.0**
8.0nm,0.6s,mb5.0,baz=132,slow=4.7,SNR=103
YKA Yellowknife Ar 93.44 340 P **P 12 34 19.3 -1.0**
AVF Avril sur Loir 93.64 40 *e*P **P 12 34 21.5 -0.2**
ORIF Oris-en-Rattie 94.27 43 *e*P **P 12 34 23.7 -0.9**
8.3nm,0.9s,mb4.5
ORIF Oris-en-Rattie 94.27 43 *e*P **P 12 34 23.7 -0.9**
4.2nm,0.9s,mb4.6
RES Resolute Bay 99.22 353 P Pdif 12 34 45.7 -1.4
0.6nm,0.7s,baz=170,slow=6.1,SNR=2.6
RES Resolute Bay 99.22 353 P Pdif 12 34 45.7 -1.4
FINES FINESS Array B 111.12 31 PKKPbc PKKPbc 12 50 33.1 -3.4
0.8nm,0.7s,baz=90,slow=3.6,SNR=8.0
BRTR Keskin Array B 111.80 55 PKiKP PKiKP 12 39 37.5 -1.9
0.7nm,0.4s,baz=267,slow=2.5,SNR=5.1
BRTR PKKPab PKKPab 12 50 41.3 +0.1
1.3nm,0.7s,baz=99,slow=3.5,SNR=7.8
ARCES ARCESS Array B 112.03 22 PKKPbc PKKPbc 12 50 30.6 -3.1
0.5nm,0.3s,baz=79,slow=4.2,SNR=14
ARCES PKKPab PKKPab 12 50 37.9 -1.1
0.8nm,0.7s,baz=76,slow=5.1,SNR=3.7
CTA Charters Tower 126.60 219 PKP PKPdf 12 40 07.5 -1.0
11nm,1.0s,baz=353,slow=0.3,SNR=4.5
AKTK Aktyubinsk 129.20 43 PKP PKPdf 12 40 12.4 0.0
AKTK SKPbc 12 43 13.4
AKTO Aktyubinsk 129.20 43 PKP PKPdf 12 40 12.4 0.0
3.1nm,0.9s,baz=286,slow=1.4,SNR=7.0
AKTO SKPbc 12 43 13.4
1.3nm,0.4s,baz=284,slow=3.0,SNR=7.3
ASAR Alice Springs 129.55 204 PKhKP 12 39 47.9
0.3nm,0.9s,baz=137,slow=2.4,SNR=2.7
ASAR PKP PKPdf 12 40 12.4 -1.6
5.0nm,0.7s,baz=147,slow=2.0,SNR=34
ASAR SKPbc 12 43 13.9
2.1nm,0.8s,baz=153,slow=3.8,SNR=9.6
ASAR PKKP 12 50 16.4
0.3nm,0.9s,baz=345,slow=2.2,SNR=4.2
ASAR Alice Springs 129.55 204 PKP PKPdf 12 40 12.4 -1.6
ASAR SKPbc 12 43 13.9
ASAR PKKP 12 50 16.4
WRA Warramunga Arr 132.73 207 PKhKP 12 39 58.4
0.4nm,0.5s,baz=152,slow=1.9,SNR=8.0
WRA PKP PKPdf 12 40 18.9 -1.3
3.1nm,0.5s,baz=153,slow=1.8,SNR=25
WRA SKPbc SKPbc 12 43 25.8 -5.2
3.6nm,0.8s,baz=148,slow=3.0,SNR=12
WRA Warramunga Arr 132.73 207 PKP PKPdf 12 40 18.9 -1.3
WRA SKPbc SKPbc 12 43 25.8 -5.2
PETK Petropavlovsk- 135.20 323 PKhKP 12 40 14.5
0.9nm,0.6s,baz=87,slow=4.6,SNR=3.0
PETK PKP PKPdf 12 40 23.4 -0.3
3.2nm,0.8s,baz=91,slow=10,SNR=6.0
PETK SKPbc SKPbc 12 43 33.1 -4.9
3.8nm,0.7s,baz=80,slow=8.9,SNR=5.0
PETK Petropavlovsk- 135.20 323 PKP PKPdf 12 40 23.4 -0.3
PETK SKPbc SKPbc 12 43 33.1 -4.9
BVAR Borovoye Array 135.69 36 PKP PKPdf 12 40 24.6 0.0
1.7nm,0.7s,baz=276,slow=4.0,SNR=11
BVAR SKPbc SKPbc 12 43 35.8 -3.7
0.7nm,0.5s,baz=282,slow=3.8,SNR=4.7
FITZ Fitzroy Crossi 137.45 197 PKP PKPdf 12 40 27.8 -1.2
2.0nm,0.8s,baz=198,slow=5.7,SNR=6.1
FITZ SKPbc SKPbc 12 43 41.1 -4.8
6.0nm,0.9s,baz=242,slow=5.1,SNR=6.0
FITZ Fitzroy Crossi 137.45 197 *e*PKPdf PKPdf 12 40 29.3 +0.3
KURK Kurchatov 141.28 36 PKhKP 12 40 29.1
0.9nm,0.5s,baz=300,slow=2.9,SNR=5.8
KURK PKP PKPdf 12 40 34.1 -0.8
2.3nm,0.7s,baz=298,slow=2.8,SNR=8.3
KURK SKP 12 43 48.9
1.7nm,0.9s,baz=307,slow=3.1,SNR=4.5
KURK Kurchatov 141.28 36 *e*PKPdf PKPdf 12 40 34.8 -0.1
AAK Ala-Archa 142.19 49 PKP PKPdf 12 40 37.1 +0.3
1.7nm,0.3s,baz=206,slow=8.5,SNR=4.4
AAK SKPbc SKPbc 12 43 55.4 -2.4
4.5nm,0.8s,baz=255,slow=3.0,SNR=8.5
ZAA0 Zalesovo Array 142.29 28 *e*PKPdf 12 40 32.9
ZALV Zalesovo Beam 142.29 28 PKhKP 12 40 31.8
3.3nm,0.5s,baz=308,slow=3.8,SNR=18
ZALV SKP 12 43 50.4
2.4nm,0.6s,baz=300,slow=3.3,SNR=6.2
KSH Kashi 144.18 54 *e*PKP PKPdf 12 40 38.8 -1.6
KSH sPKP 12 41 59.6
KSH PKS 12 44 14.1
KSH SKS SKSdf 12 47 26.8 -6.3
KSH AMB AMB
comp=Z,140nm,4.7s
KSH LR LR
comp=N,97nm,4.4s
KSH LR LR
comp=E,120nm,5.4s
KSH LR LR
comp=Z,93nm,5.9s
THN Thein Dam 145.32 66 *e*PKP PKPdf 12 40 40.6 -2.0
MK31 Makanchi Array 145.43 39 *e*PKPdf PKPdf 12 40 41.9 -0.4
MKAR Makanchi Array 145.43 39 PKPbc PKPbc 12 40 42.1 -0.5
comp=Z,12nm,0.7s,baz=15,slow=5.0,SNR=101
MKAR SKPbc SKPbc 12 44 01.6 -3.8
comp=Z,2.8nm,0.8s,baz=5.4,slow=4.6,SNR=7.4
YSS Yuzh-Sakhalins 146.60 323 *e*PKPdf PKPdf 12 40 43.9 -0.4
NDI New Delhi 146.85 72 *e*PKP PKPdf 12 40 43.0 -2.3
WMQ Urumqi 150.25 40 *e*PKPbc PKPbc 12 40 55.0 -0.7
WMQ PP PP 12 44 40.0 +7.8
WMQ AMB AMB
comp=Z,53nm,10.0s
WMQ LR LR
comp=N,39nm,22.0s
WMQ LR LR
comp=E,28nm,22.0s
WMQ LR LR
comp=Z,30nm,22.0s
SONM Songino Array 154.60 11 PKP PKPdf 12 40 56.4 -0.2
comp=Z,1.2nm,0.3s,baz=243,slow=6.5,SNR=5.2
SONM PKPbc PKPbc 12 41 04.9 -0.4
comp=Z,3.0nm,0.7s,baz=207,slow=2.9,SNR=4.3
SONM PKPab PKPab 12 41 20.5 0.0
comp=Z,2.8nm,0.6s,baz=305,slow=5.1,SNR=3.1
ULN Ulaanbaatar 154.69 10 *e*PKPdf PKPdf 12 40 56.9 +0.1
ULN *e*PKPab PKPab 12 41 20.8 -0.1
MDJ Mudanjiang 154.82 333 PKPbc PKPdf 12 40 52.8 -4.2
MJAR Matsushiro Arr 154.88 308 PKPbc PKPbc 12 41 04.9 -1.3
comp=Z,3.1nm,0.6s,baz=92,slow=2.4,SNR=11
MJAR PKPab PKPab 12 41 20.7 -1.5
comp=Z,5.9nm,0.8s,baz=75,slow=2.9,SNR=12
MAT Matsushiro 154.88 308 PKP PKPbc 12 41 03.8 -2.4
CN2 Changchun 157.12 338 *e*PKP PKPdf 12 40 59.1 -1.0
CN2 PP PP 12 45 12.3 +2.1
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,11.0s
CN2 LR LR
comp=E,200nm,11.0s
CN2 LR LR
comp=Z,1μm,12.0s
GTA Gaotai 159.91 33 PKP PKPdf 12 41 03.5 -0.1
KSRS Korea Array 161.10 323 PKP PKPdf 12 41 04.5 -0.4
comp=Z,2.5nm,0.9s,baz=38,slow=1.5,SNR=9.6
KSRS PKPab PKPab 12 41 48.4 -0.7
comp=Z,7.7nm,1.1s,baz=53,slow=4.0,SNR=11
HHC Hu-ho-hao-te 162.17 5 *e*PKP PKPdf 12 41 04.0 -1.9
HHC pPKP pPKPdf 12 42 02.1 +10
HHC sPKP 12 42 25.0
HHC PKS 12 44 36.4
HHC PP PP 12 45 39.5 +2.4
HHC SKS SKSdf 12 47 45.5 -8.6
HHC SKKS SKKSac 12 52 03.1 -5.7
HHC AMB AMB
comp=Z,68nm,5.1s
HHC LR LR
comp=N,110nm,21.6s
HHC LR LR
comp=E,190nm,21.6s
HHC LR LR
comp=Z,86nm,24.0s
BJI Beijing 162.93 353 PKP PKPdf 12 41 05.8 -0.9
LZH Lanzhou 164.49 31 PKP PKPdf 12 41 07.0 -1.3
LZH pPKP pPKPdf 12 42 05.3 +10
LZH sPKP 12 42 28.3
LZH *e*PP PP 12 45 53.3 +3.4
LZH SKKS SKKSac 12 52 16.3 -4.6
LZH *e*SS SS 13 06 02.1 -4.5
LZH AMB AMB
comp=Z,120nm,8.6s
CMAR Chiang Mai Arr 165.52 106 PKP PKPdf 12 41 09.2 -0.4
comp=Z,1.5nm,0.9s,baz=260,slow=2.5,SNR=6.5
CMAR PKPab PKPab 12 42 08.8 -0.4
comp=Z,5.0nm,0.7s,baz=251,slow=5.6,SNR=24
CD2 Chengdu 168.23 46 *e*PKP PKPdf 12 41 10.5 -0.8
CD2 PP PP 12 46 11.0 +1.3
CD2 SKS SKSdf 12 47 56.5 -2.0
CD2 SKKS SKKSac 12 52 39.8 -0.2
CD2 SS SS 13 06 43.8 -1.6
CD2 AMB AMB
comp=Z,130nm,10.2s
CD2 LR LR
comp=N,160nm,18.2s
CD2 LR LR
comp=Z,180nm,20.1s
KMI Kunming 169.84 76 PKP PKPdf 12 41 11.3 -1.2
KMI PKPab PKPab 12 42 28.5 +0.4
KMI PP PP 12 46 19.4 +0.6
KMI SS SS 13 07 00.4 -2.8
KMI AMB AMB
comp=Z,140nm,7.0s
KMI LR LR
comp=Z,35nm,19.4s
GYA Guiyang 172.82 60 PKP PKPdf 12 41 10.9 -3.1
GYA pPKP pPKPdf 12 42 07.6 +6.9
GYA sPKP 12 42 30.0
GYA PKPab PKPab 12 42 39.8 -1.4
GYA PKS 12 44 42.3
GYA PP PP 12 46 32.8 -0.3
GYA AMB AMB
comp=Z,120nm,8.0s

IDC 15 12:25:05.2±2.8,**2°.33N**×**95°.03E,h0**km,**mb3.6**/5,**mb1 3.8**/6,
mb1mx3.5/26,**mbtmp3.6**/6,**ML4.0**/1,**MS3.7**/1,**Ms1 3.7**/1,
ms1mx2.5/34,**Error ellipse: s-maj=110.2km**
s-min=30.0km az=56.0,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**16.48**	**13**	Pn	Pn	12 28 56.5	-1.4
	0.2nm,0.3s,baz=208,slow=13,SNR=6.8						
WRA	**Warramunga Arr**	**44.47**	**122**	P	P	12 33 18.4	-0.1
	0.5nm,0.9s,baz=293,slow=9.3,SNR=3.2						
MKAR	**Makanchi Array**	**45.65**	**348**	P	P	12 33 27.6	+0.1
	1.0nm,0.7s,baz=128,slow=8.1,SNR=8.9						
SONM	**Songino Array**	**46.38**	**11**	LR	LR	12 56 09.2	
	comp=Z,82nm,21.4s,baz=262,slow=40						
KURK	**Kurchatov**	**50.17**	**346**	P	P	12 34 01.7	-0.7
	0.3nm,0.4s,baz=164,slow=7.2,SNR=2.0						
ZALV	**Zalesovo Beam**	**52.13**	**352**	P	P	12 34 17.1	0.0
	1.1nm,0.6s,baz=178,slow=8.4,SNR=6.7						
BVAR	**Borovoye Array**	**54.49**	**342**	P	P	12 34 34.9	+0.4
	0.4nm,0.6s,baz=134,slow=6.2,SNR=3.1						

ATH ***15*** *12:29:57.6,38°.25N*×*26°.49E,h29*km*,MD3.1/4*
ISCJB ***15*** *12:29:57.6*±*0.6,38°.24N*±*0°.03*×*26°.50E*±*0°.03,h7*km±*6*km*,*
Error ellipse: s-maj=4.9km s-min=3.8km az=19.4
CSEM ***15*** *12:29:58.7*±*0.3,38°.23N*×*26°.53E,h19*km*,MD2.7,Error*
ellipse: s-maj=5.7km s-min=5.4km az=6.0
DDA ***15*** *12:29:58.3,38°.26N*×*26°.55E,h7*km±*1*km*,Md2.8*
THE ***15*** *12:29:58.3,38°.28N*×*26°.53E,h12*km±*1*km*,ML2.9/3,Error*
ellipse: s-maj=1.3km s-min=0.7km az=75.0
ISK ***15*** *12:30:00.7,38°.40N*×*26°.63E,h7*km*,MD2.7*
ISC 15 12:29:58.5±0.5,**38°.25N**±0°.03×**26°.50E**±0°.03,**h10**km±5km,
n32,σ**0**§**91**/59,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOS	**Chios island**	**0.37**	**292**	P	**Pg**	**12 30 06.3**	**+0.4**
CHOS				S	**Sg**	**12 30 11.9**	**+1.0**
CHOS	**Chios island**	**0.37**	**292**	*e*PB	**Pg**	**12 30 06.4**	**+0.5**
CHOS				*e*SB	**Sg**	**12 30 12.2**	**+1.3**
CHOS	**Chios island**	**0.37**	**292**	P	**Pg**	**12 30 06.3**	**+0.4**
CHOS				S	**Sg**	**12 30 11.9**	**+1.0**
CHOS				*e*Sb	**Sg**	**12 30 12.2**	**+1.3**
BLCB	**Balcova**	**0.45**	**72**	*e*PG	**Pg**	**12 30 06.7**	**-0.6**
BLCB				*e*SG	**Sg**	**12 30 12.1**	**-1.2**
BLCB	**Balcova**	**0.45**	**72**	P	**Pg**	**12 30 06.5**	**-0.8**
BLCB				S	**Sg**	**12 30 12.6**	**-0.6**
BLCB	**Balcova**	**0.45**	**72**	*e*Pg	**Pg**	**12 30 06.7**	**-0.6**
BLCB				*e*Sg	**Sg**	**12 30 12.1**	**-1.1**
BLCB				S	**Sg**	**12 30 12.6**	**-0.6**
SMG	**Samos**	**0.60**	**153**	*e*PN	**Pg**	**12 30 09.8**	**-0.4**
SMG				*e*SN	**Sg**	**12 30 19.2**	**+1.1**
SMG	**Samos**	**0.60**	**153**	*e*Pn	**Pg**	**12 30 09.8**	**-0.4**
IZM	**Izmir**	**0.62**	**76**	*e*PG	**Pg**	**12 30 12.0**	**+1.4**
IZM				*e*SG	**Sg**	**12 30 19.1**	**+0.5**
IZM	**Izmir**	**0.62**	**76**	*e*Pg	**Pg**	**12 30 12.0**	**+1.5**
IZM				*e*Sg	**Sg**	**12 30 19.2**	**+0.6**
GCAM	**G?zelcaml?**	**0.80**	**133**	*i* P	**Pg**	**12 30 13.5**	**-0.4**
GCAM				*i* S	**Sg**	**12 30 24.5**	**+0.1**
GCAM	**G?zelcaml?**	**0.80**	**133**	*i* P	**Pg**	**12 30 13.5**	**-0.4**
GCAM				*i* S	**Sg**	**12 30 24.5**	**+0.2**
PRK	**Paraskevi**	**1.01**	**350**	P	**Pg**	**12 30 16.6**	**-1.4**
PRK				S	**Sg**	**12 30 30.6**	**-0.5**
PRK	**Paraskevi**	**1.01**	**350**	*e*PN	**Pg**	**12 30 17.0**	**-1.0**
PRK				*e*SN	**Sg**	**12 30 31.3**	**+0.2**
PRK	**Paraskevi**	**1.01**	**350**	P	**Pg**	**12 30 16.6**	**-1.4**
PRK	**Paraskevi**	**1.01**	**350**	*e*Pn	**Pg**	**12 30 17.0**	**-1.0**
PRK				S	**Sg**	**12 30 30.6**	**-0.5**
PRK				*e*Sn	**Sg**	**12 30 31.3**	**+0.2**
SIGR	**SIGRI**	**1.08**	**333**	P	**Pg**	**12 30 18.4**	**-1.0**
SIGR				S	**Sg**	**12 30 32.6**	**-0.9**
SIGR	**SIGRI**	**1.08**	**333**	P	**Pg**	**12 30 18.4**	**-1.0**
SIGR				S	**Sg**	**12 30 32.6**	**-0.9**
AKS	**Akhisar**	**1.21**	**58**	*e*PG	**Pg**	**12 30 21.2**	**-0.6**
AKS	**Akhisar**	**1.21**	**58**	*e*Pg	**Pg**	**12 30 21.2**	**-0.5**
AKHS	**Akhisar**	**1.21**	**58**	*i* P	**Pn**	**12 30 20.2**	**-1.3**
AKHS				*i* S	**Sb**	**12 30 37.3**	**+0.2**
AKHS	**Akhisar**	**1.21**	**58**	*i* P	**Pn**	**12 30 20.2**	**-1.3**
AKHS				*i* S	**Sb**	**12 30 37.3**	**+0.1**
APE	**Apeiranthos**	**1.41**	**213**	P	**Pn**	**12 30 23.2**	**-1.0**
APE				S	**Sn**	**12 30 42.3**	**-0.5**
APE	**Apeiranthos**	**1.41**	**213**	*e*PN	**Pn**	**12 30 23.5**	**-0.7**
APE				*e*SN	**Sn**	**12 30 41.9**	**-0.9**
APE	**Apeiranthos**	**1.41**	**213**	P	**Pn**	**12 30 23.2**	**-1.0**
APE	**Apeiranthos**	**1.41**	**213**	*e*Pn	**Pn**	**12 30 23.5**	**-0.7**
APE				*e*Sn	**Sn**	**12 30 41.9**	**-0.9**
APE				S	**Sn**	**12 30 42.3**	**-0.5**
EZN	**Ezine**	**1.58**	**355**	*e*PN	**Pn**	**12 30 28.1**	**+1.5**
EZN	**Ezine**	**1.58**	**355**	*e*Pn	**Pn**	**12 30 28.1**	**+1.5**
BALY	**Balya**	**1.73**	**30**	*i* P	**Pn**	**12 30 29.2**	**+0.5**
BALY				*i* S	**Sg**	**12 30 54.6**	**+0.6**
BALY	**Balya**	**1.73**	**30**	*i* P	**Pn**	**12 30 29.2**	**+0.6**
BALY				*i* S	**Sg**	**12 30 54.6**	**+0.6**
GADA	**Gvkgeada**	**1.99**	**347**	*e*PN	**Pn**	**12 30 34.0**	**+1.7**
GADA	**Gvkgeada**	**1.99**	**347**	*e*Pn	**Pn**	**12 30 34.0**	**+1.7**

CSEM ***15*** *12:41:09.9*±*0.6,37°.90N*×*27°.02E,h12*km*,MD2.6,Error*
ellipse: s-maj=16.8km s-min=5.5km az=84.0
DDA ***15*** *12:41:10.7,37°.93N*×*27°.16E,h7*km±*3*km*,Md2.6*
ISK ***15*** *12:41:10.7,38°.01N*×*26°.90E,h21*km*,MD2.7*
ISCJB ***15*** *12:41:10.9*±*0.9,37°.94N*±*0°.03*×*27°.14E*±*0°.09,h10*km*,Error*
ellipse: s-maj=9.7km s-min=3.9km az=177.0
ISC 15 12:41:10.6±1.5,**37°.93N**±0°.03×**27°.1E**±0°.1,**h17**km±9km,**n16,**
σ**1**§**09**/29,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.25**	**152**	*i* P	**Pg**	**12 41 15.9**	**-0.5**
GCAM				*i* S	**Sg**	**12 41 19.4**	**-0.8**
GCAM	**G?zelcaml?**	**0.25**	**152**	*i* P	**Pg**	**12 41 15.9**	**-0.4**
GCAM				*i* S	**Sg**	**12 41 19.5**	**-0.7**
BLCB	**Balcova**	**0.46**	**356**	*e*PG	**Pg**	**12 41 19.6**	**-0.3**
BLCB				*e*SG	**Sg**	**12 41 25.4**	**-0.9**
BLCB	**Balcova**	**0.46**	**356**	*e*Pg	**Pg**	**12 41 19.6**	**-0.4**
BLCB				*e*Sg	**Sg**	**12 41 25.4**	**-0.8**
IZM	**Izmir**	**0.49**	**17**	*e*PG	**Pg**	**12 41 21.9**	**+1.3**
IZM				*e*SG	**Sg**	**12 41 28.7**	**+1.5**
IZM	**Izmir**	**0.49**	**17**	*e*Pg	**Pg**	**12 41 21.9**	**+1.4**
IZM				*e*Sg	**Sg**	**12 41 28.7**	**+1.5**
KDAG	**Bornova**	**0.50**	**17**	*i* P	**Pg**	**12 41 19.9**	**-0.8**
KDAG				*i* S	**Sg**	**12 41 26.7**	**-0.7**
KDAG	**Bornova**	**0.50**	**17**	*i* P	**Pg**	**12 41 19.9**	**-0.7**
KDAG				*i* S	**Sg**	**12 41 26.7**	**-0.7**
MLSB	**Milas**	**0.84**	**139**	*e*PG	**Pg**	**12 41 29.6**	**+2.7**
MLSB	**Milas**	**0.84**	**139**	*e*Pg	**Pg**	**12 41 29.6**	**+2.7**
AKHS	**Akhisar**	**1.11**	**31**	*i* P	**Pg**	**12 41 31.3**	**-0.9**
AKHS				*i* S	**Sg**	**12 41 47.4**	**+0.6**
AKHS	**Akhisar**	**1.11**	**31**	*i* P	**Pg**	**12 41 31.3**	**-0.9**
AKHS				*i* S	**Sg**	**12 41 47.4**	**+0.7**
AKS	**Akhisar**	**1.11**	**31**	*e*PN	**Pg**	**12 41 31.7**	**-0.5**
AKS				*e*SN	**Sg**	**12 41 47.3**	**+0.6**
AKS	**Akhisar**	**1.11**	**31**	*e*Pn	**Pg**	**12 41 31.7**	**-0.4**
AKS				*e*Sn	**Sg**	**12 41 47.3**	**+0.6**
MANT	**Manisa**	**1.29**	**64**	*i* P	**Pn**	**12 41 34.7**	**+0.9**
MANT				*i* S	**Sb**	**12 41 48.5**	**-2.2**
MANT	**Manisa**	**1.29**	**64**	*i* P	**Pn**	**12 41 34.7**	**+0.9**

OMAN ***15*** *12:43:27.3*±*99.0,26°.02N*×*52°.56E,h0km±999km,Error*
ellipse: s-maj=3707.0km s-min=31.8km az=281.0
IDC ***15*** *12:43:29.6*±*3.0,26°.88N*×*54°.04E,h0km,mb3.7/6,*
mb1 3.7/6,mb1mx3.5/28,mbtmp3.7/6,Error ellipse:
s-maj=70.6km s-min=27.3km az=152.0
ISCJB ***15*** *12:43:32.1*±*0.7,27°.06N*±*0°.06*×*53°.98E*±*0°.07,h10km,*
mb3.6/6,Error ellipse: s-maj=12.0km s-min=4.4km
az=139.5
CSEM ***15*** *12:43:34.4*±*0.4,27°.09N*×*53°.98E,h20km,ML3.4,Error*
ellipse: s-maj=15.1km s-min=7.2km az=56.0
TEH ***15*** *12:43:35.4,27°.04N*×*54°.04E,h24km*
NEIC ***15*** *12:43:35.4,27°.04N*×*54°.04E,h24km,ML3.4(THR),*
MN3.5(TEH),After TEH.
ISC 15 12:43:33.5±0.6,**27°.07N**±0°.06×**54°.02E**±0°.07,**h10**km,**n41,**
σ**1**§**14**/46,**mb3.6**/6,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHIR	**Ghir-Karzin**	**1.52**	**323**	Pg	**Pg**	**12 44 01.0**	**-1.6**

GHIR					Sg	Sg	12 44 23.0	+0.7
GHIR	Ghir-Karzin	1.52	323	*e*Pg	Pg	12 44 01.4	-1.2
GHIR				*e*Sg	Sg	12 44 23.3	+1.0
BNDS	Bandar-Abbas	1.95	80	Pg	Pn	12 44 06.0	-0.6
IBND	Bandar-abas	2.28	80	*e*Pn	Pn	12 44 11.2	+0.1
IBND				*e*		12 45 11.8	
	comp=Z,9μm,0.3s						
IMOK	Mouk	2.28	330	Pn	Pn	12 44 12.6	+1.4
IMOK				Sg	Sg	12 44 48.0	+1.2
IMOK	Mouk	2.28	330	*e*Pn	Pn	12 44 12.6	+1.4
IMOK				*e*Sg	Sg	12 44 48.1	+1.3
IMOK				*e*		12 45 04.3	
	comp=Z,2μm,0.3s						
IMOK	Mouk	2.28	330	Pn	Pn	12 44 12.6	+1.4
IMOK				Sg	Sg	12 44 48.0	+1.2
BANOM	Banah	2.34	119	P	Pg	12 44 21.1	+2.7
	SNR=7.2						
BANOM				P		12 44 21.1	
	SNR=7.2						
ISRV	Sarvestan	2.44	341	Pn	Pn	12 44 13.8	+0.5
ISRV	Sarvestan	2.44	341	*e*Pn	Pn	12 44 13.8	+0.5
ISRV				*e*		12 45 00.5	
	comp=Z,2μm,0.3s						
ISRV	Sarvestan	2.44	341	Pn	Pn	12 44 13.8	+0.5
NAZ	Nazwa, Dubai	2.55	144	P	Pn	12 44 16.0	+1.2
	SNR=9.4						
NAZ				P		12 44 16.0	
	SNR=9.4						
NAZ	Nazwa, Dubai	2.55	144	P	Pn	12 44 16.0	+1.2
	SNR=9.4						
IPAR	Pars	2.89	343	Pn	Pn	12 44 20.5	+0.9
IPAR	Pars	2.89	343	*e*Pn	Pn	12 44 20.5	+0.9
IPAR				*e*		12 45 17.7	
	comp=Z,1μm,0.5s						
IPAR	Pars	2.89	343	Pn	Pn	12 44 20.5	+0.9
ASHO	Ashiyiah	3.00	142	P	Pn	12 44 21.7	+0.6
	SNR=9.2						
ASHO				P		12 44 21.7	
	SNR=9.2						
ASHO	Ashiyiah	3.00	142	P	Pn	12 44 21.7	+0.6
	SNR=9.2						
KRBR	Kerman	3.77	39	Pn	Pn	12 44 32.0	+0.3
KRBR	Kerman	3.77	39	Pn	Pn	12 44 32.0	+0.3
IMEH	Mehriz	4.34	7	Pn	Pn	12 44 40.6	+1.2
IMEH	Mehriz	4.34	7	*e*Pn	Pn	12 44 40.7	+1.3
IMEH				*e*		12 46 16.9	
	comp=Z,319nm,0.5s						
IMEH	Mehriz	4.34	7	Pn	Pn	12 44 40.6	+1.2
IBAF	Bafgh	4.70	16	Pn	Pn	12 44 44.4	-0.1
IBAF	Bafgh	4.70	16	*e*Pn	Pn	12 44 44.4	-0.1
IBAF				*e*		12 46 28.2	
	comp=Z,425nm,0.5s						
IBAF	Bafgh	4.70	16	Pn	Pn	12 44 44.4	-0.1
SMDO	Samad	5.41	137	P	Pn	12 44 54.7	+0.4
	SNR=8.8						
SMDO	Samad	5.41	137	P	Pn	12 44 54.7	+0.4
	SNR=8.8						
BRTR	Keskin Array B	21.12	312	P	P	12 48 17.8	-0.6
	comp=Z,1.1nm,0.8s,mb3.2,baz=132,slow=10,SNR=7.0						
BRTR	Keskin Array B	21.12	312	P	P	12 48 17.8	-0.6
AKTK	Aktyubinsk	23.53	6	P	P	12 48 43.5	-0.4
AKTK	Aktyubinsk	23.53	6	P	P	12 48 43.5	-0.4
AKTO	Aktyubinsk	23.53	6	P	P	12 48 43.5	-0.4
	comp=Z,1.6nm,0.8s,mb3.5,baz=189,slow=13,SNR=3.9						
BVAR	Borovoye Array	28.66	21	P	P	12 49 28.9	-1.2
	comp=Z,0.9nm,0.6s,mb3.7,baz=206,slow=9.9,SNR=5.5						
BVAR	Borovoye Array	28.66	21	P	P	12 49 28.9	-1.2
KURK	Kurchatov	30.14	32	P	P	12 49 42.5	-0.9
	comp=Z,0.3nm,0.4s,mb3.4,baz=231,slow=8.9,SNR=4.0						
KURK	Kurchatov	30.14	32	P	P	12 49 42.5	-0.8
ZAA0	Zalesovo Array	35.13	32	*e*P	P	12 50 24.4	-2.6
ZAA0	Zalesovo Array	35.13	32	*e*P	P	12 50 24.4	-2.6
ZALV	Zalesovo Beam	35.13	32	P	P	12 50 25.5	-1.4
	comp=Z,1.2nm,0.5s,mb4.1,baz=248,slow=9.0,SNR=7.8						
TORD	Torodi Ar. Bea	50.71	265	P	P	12 52 31.4	-2.2
	comp=Z,0.7nm,0.9s,mb3.6,baz=72,slow=10,SNR=4.1						

NEIC ***15*** *13:03:48.6,34°.79N×23°.90E,h29km,MD3.5(ATH),After ATH.*
CSEM ***15*** *13:03:48.6,34°.79N×23°.90E,h29km,MD3.5,After ATH*

ATH 15 13:03:48.6,34°.79N×23°.90E,h29km±1km,MD3.5/13,3D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	Gavdhos	0.16	72	⇓*i*Pb	Pb	13 03 54.3	0.0
GVD				*e*Sb	Sb	13 03 59.0	+0.9
GVD	Gavdhos	0.16	72	⇓*i*PB	Pb	13 03 54.3	0.0
GVD				*e*SB	Sb	13 03 59.0	+0.9
GVD	Gavdhos	0.16	72	⇓*i*Pb	Pb	13 03 54.3	0.0
GVD				*e*Sb	Sb	13 03 59.0	+0.9
KARN	Karanos	0.61	1	*e*PN	Pn	13 04 01.1	-0.2
KARN				*e*SN	Sn	13 04 10.6	+0.4
KARN	Karanos	0.61	1	*e*Pn	Pn	13 04 01.1	-0.2
KARN				*e*Sn	Sn	13 04 10.6	+0.4
VAM	Vamos	0.66	22	*e*Pn	Pn	13 04 01.6	-0.4
VAM				*e*Sn	Sn	13 04 12.3	+0.8
VAM	Vamos	0.66	22	*e*PN	Pn	13 04 01.6	-0.4
VAM				*e*SN	Sn	13 04 12.3	+0.8
VAM	Vamos	0.66	22	*e*Pn	Pn	13 04 01.6	-0.4
VAM				*e*Sn	Sn	13 04 12.3	+0.8
SIVA	Sivas	0.78	73	*e*Pn	Pn	13 04 04.3	+0.6
SIVA	Sivas	0.78	73	*e*PN	Pn	13 04 04.3	+0.6
SIVA	Sivas	0.78	73	*e*Pn	Pn	13 04 04.3	+0.6
IDI	Anoyia	0.95	58	*e*Pb	Pb	13 04 06.5	0.0
IDI				*e*Sn	Sn	13 04 21.0	+2.4
IDI	Anoyia	0.95	58	*e*PB	Pb	13 04 06.5	0.0
IDI				*e*SN	Sn	13 04 21.0	+2.4
IDI	Anoyia	0.95	58	*e*Pb	Pb	13 04 06.5	0.0
IDI				*e*Sn	Sn	13 04 21.0	+2.4
LAST	Lasithi	1.35	74	*e*Pn	Pn	13 04 13.7	+2.3
LAST	Lasithi	1.35	74	*e*PN	Pn	13 04 13.7	+2.3
LAST	Lasithi	1.35	74	*e*Pn	Pn	13 04 13.7	+2.3
XRY	Khrisi	1.48	86	*e*Pn	Pn	13 04 15.2	+2.0
XRY	Khrisi	1.48	86	*e*PN	Pn	13 04 15.2	+2.0
XRY	Khrisi	1.48	86	*e*Pn	Pn	13 04 15.2	+2.0
NPS	Neapolis	1.48	71	*e*Pn	Pn	13 04 15.9	+2.6
NPS	Neapolis	1.48	71	*e*PN	Pn	13 04 15.9	+2.6
NPS	Neapolis	1.48	71	*e*Pn	Pn	13 04 15.9	+2.6
KYTH	Kithira	1.65	335	*e*Pn	Pn	13 04 18.5	+3.0
KYTH	Kithira	1.65	335	*e*PN	Pn	13 04 18.5	+3.0
KYTH	Kithira	1.65	335	*e*Pn	Pn	13 04 18.5	+3.0
ZKR	Zakros	1.93	80	*e*Pb	Pb	13 04 21.9	-1.2
ZKR	Zakros	1.93	80	*e*PB	Pb	13 04 21.9	-1.2
ZKR	Zakros	1.93	80	*e*Pb	Pb	13 04 21.9	-1.2
VLI	Veliai	2.08	338	*e*Pb	Pb	13 04 24.1	-1.5
VLI	Veliai	2.08	338	*e*PB	Pb	13 04 24.1	-1.5
VLI	Veliai	2.08	338	*e*Pb	Pb	13 04 24.1	-1.5
APE	Apeiranthos	2.63	30	*e*Pn	Pn	13 04 30.1	+1.0
APE	Apeiranthos	2.63	30	*e*PN	Pn	13 04 30.1	+1.0
APE	Apeiranthos	2.63	30	*e*Pn	Pn	13 04 30.1	+1.0
KARP	Karpathos	2.78	73	*e*Pn	Pn	13 04 33.6	+2.5
KARP	Karpathos	2.78	73	*e*PN	Pn	13 04 33.6	+2.5
KARP	Karpathos	2.78	73	*e*Pn	Pn	13 04 33.6	+2.5
VLY	Voula,Athens	3.06	358	*e*Pn	Pn	13 04 36.6	+1.7
VLY	Voula,Athens	3.06	358	*e*PN	Pn	13 04 36.6	+1.7
VLY	Voula,Athens	3.06	358	*e*Pn	Pn	13 04 36.6	+1.7
PTL	Penteli	3.25	360	*e*Pn	Pn	13 04 39.2	+1.6
PTL	Penteli	3.25	360	*e*PN	Pn	13 04 39.2	+1.6
PTL	Penteli	3.25	360	*e*Pn	Pn	13 04 39.2	+1.6
ARG	Arkhangelos	3.73	66	*e*Pn	Pn	13 04 45.9	+1.7
ARG	Arkhangelos	3.73	66	*e*PN	Pn	13 04 45.9	+1.7
ARG	Arkhangelos	3.73	66	*e*Pn	Pn	13 04 45.9	+1.7

JMA 15 13:39:19.2±0.2,26°.90N×142°.00E,h40km,M3.8,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	0.26	40	P	Pn	13 39 26.8	-0.2
CBIJ				S	Sn	13 39 32.5	+0.1
JHHJ	Haha-jima-NKT	0.31	149	P	Pn	13 39 27.3	-0.3
JHHJ				S	Sn	13 39 33.9	+0.5
JOD2	Odawara 2	8.70	344	P	Pn	13 41 21.6	-0.9
JNY	Yasuok	9.14	338	P	Pn	13 41 28.1	-0.5
JHO	Hitachi	9.76	353	*e*S	Sn	13 43 21.9	-3.3

ISCJB ***15*** *13:40:18.0±0.6,38°.91N±0°.03×140°.89E±0°.03,h12km±5km, mb3.7/2,Error ellipse: s-maj=5.0km s-min=3.9km az=147.5*
IDC ***15*** *13:40:18.6±2.9,38°.57N×141°.15E,h0km,mb3.5/2, mb1 3.7/3,mb1mx3.3/25,mbtmp3.5/3,ML2.9/2,Error ellipse: s-maj=62.0km s-min=24.3km az=157.0*
JMA ***15*** *13:40:18.3,38°.92N×140°.87E,h8km±1km,M3.1*
JMA Felt I J1.

ISC 15 13:40:18.3±0.4,38°.90N±0°.03×140°.88E±0°.03,h7km±6km, n15,σ0°52/27,mb3.7/2,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	Ichinoseki	0.27	79	P	Pg	13 40 23.8	+0.1
JMK				S	Sg	13 40 27.8	+0.5
JYK	Kaneyama	0.40	272	P	Pg	13 40 26.2	+0.1
JYK				S	Sg	13 40 31.4	0.0
JRG	Rokugo	0.53	339	P	Pg	13 40 28.4	-0.1
JRG				*e*S	Sg	13 40 35.8	+0.4
JOU	Okura	0.56	197	P	Pg	13 40 29.3	+0.2
JOU				S	Sg	13 40 36.9	+0.5
JIO	Ouri	0.58	140	P	Pg	13 40 29.4	-0.1
JIO				S	Sg	13 40 37.4	+0.4
OFUJ	Ofunato	0.64	74	P	Pg	13 40 30.5	-0.2
OFUJ				*e*S	Sg	13 40 39.2	+0.1
JOM	Ohasama	0.66	29	P	Pg	13 40 30.5	-0.4
JOM				S	Sg	13 40 39.4	-0.1
JYS	Shiratake	0.93	223	P	Pg	13 40 36.0	-0.1
JYS				*e*S	Sg	13 40 48.7	+0.5
JYA	Atsumi	0.96	252	P	Pg	13 40 36.3	-0.4
JYA				*e*S	Sg	13 40 48.9	-0.3
JMM	Marumori	1.04	184	P	Pg	13 40 37.2	-1.0
JMM				*e*S	Sg	13 40 51.0	-0.6
MJAR	Matsushiro Arr	3.17	223	Pn	Pn	13 41 09.1	+0.7
	0.7nm,0.3s,baz=35,slow=12,SNR=10						
MJAR				Pg	Pg	13 41 14.6	-4.4
	0.9nm,0.3s,baz=22,slow=16,SNR=14						
MJAR				Lg		13 41 56.3	
	0.9nm,0.3s,baz=283,slow=14,SNR=4.2						
MAT	Matsushiro	3.17	223	P	Pn	13 41 09.5	+1.0
MAT				S	Sn	13 41 54.3	+7.9
KSRS	Korea Array	10.30	266	Pn	Pn	13 42 50.4	+4.0
	0.2nm,0.3s,baz=80,slow=14,SNR=4.3						
WRA	Warramunga Arr	58.85	187	P	P	13 50 16.6	-0.9
	0.5nm,0.5s,mb3.8,baz=5.6,slow=7.5,SNR=14						
ASAR	Alice Springs	62.58	187	P	P	13 50 42.6	-0.2
	0.2nm,0.4s,mb3.6,baz=355,slow=4.5,SNR=9.2						

MOS ***15*** *13:40:41.5±0.9,50°.46N×156°.21E,h111km,mb4.4/19, Error ellipse: s-maj=14.0km s-min=6.0km az=86.7*
MOS Felt (II) at Severo-Kuril'sk.
IDC ***15*** *13:40:42.3±4.6,50°.60N×156°.18E,h105km±41km, mb3.6/16,mb1 3.7/17,mb1mx3.6/26,mbtmp3.6/17,MS3.0/1, Ms1 3.0/1,ms1mx2.3/28,Error ellipse: s-maj=17.1km s-min=16.3km az=9.0*
ISCJB ***15*** *13:40:43.9±0.5,50°.57N±0°.05×156°.40E±0°.07, h131km±3km,mb3.9/37,Error ellipse: s-maj=10.5km s-min=5.5km az=141.7*
NEIC ***15*** *13:40:44.3±0.9,50°.53N×156°.29E,h123km±6km,mb4.3/22, Error ellipse: s-maj=10.3km s-min=6.5km az=184.0*
KRSC ***15*** *13:40:44.3±0.8,50°.45N×157°.34E,h85km±85km,ML4.5*

ISC 15 13:40:44.9±0.5,50°.57N±0°.05×156°.32E±0°.07,h126km±3km, n128,σ0°94/142,mb4.1/37,22C-2D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.17	310	⇓*i*PN	Pn	13 41 02.2	0.0
SKR				*e*S	Sn	13 41 14.5	-0.7
SKR				pmax	pmax		
	comp=Z,4μm,0.4s						
SKR				pmax	pmax		
	comp=N,2μm,0.2s						
SKR				pmax	pmax		
	comp=E,2μm,0.2s						
SKR				smax			
	comp=N,11μm,1.0s						
SKR				smax			
	comp=E,13μm,1.0s						
ALID	Alaid	0.57	301	*i*P	Pn	13 41 04.6	+0.7
MIPR	Malaya Ipel'ka	1.73	9	*i*P	Pn	13 41 16.4	+1.1
MIPR				*i*S	Sn	13 41 40.2	+1.6
GRL	Gorelyy	2.26	28	*e*P	Pn	13 41 22.1	+0.2
GRL				*i*S	Sn	13 41 49.1	-1.2
PEA0B	Petropavlovsk-	2.68	18	*e*Pn	Pn	13 41 27.8	+0.6
PETK	Petropavlovsk-	2.68	18	P	Pn	13 41 27.8	+0.6
	comp=E,6.4nm,0.3s,baz=205,slow=12,SNR=48						
PETK				S	Sn	13 41 57.3	-2.4
	comp=E,6.7nm,0.3s,baz=165,slow=15,SNR=5.2						
PET	Petropavlovsk	2.85	30	*e*PN	Pn	13 41 29.2	-0.2
PET				*e*S	Sn	13 42 03.5	-0.1
PET				pmax	pmax		
	comp=Z,39nm,0.7s						
PET				smax			
	comp=N,407nm,0.5s						
PET				smax			
	comp=E,308nm,0.7s						
PET	Petropavlovsk	2.85	30	*i*P	Pn	13 41 29.2	-0.2
PET				*i*S	Sn	13 42 02.0	-1.6
PET	Petropavlovsk	2.85	30	*e*P	Pn	13 41 29.1	-0.3
AVH	Avacha	3.08	28	*i*P	Pn	13 41 33.5	+1.1
AVH				*i*S	Sn	13 42 08.9	-0.2
NLC	Nalytchevo	3.21	35	*e*P	Pn	13 41 32.3	-1.7
NLC				*i*S	Sn	13 42 07.0	-4.9
GNL	Ganaly	3.28	17	*i*P	Pn	13 41 36.2	+1.2
GNL				*e*S	Sn	13 42 13.6	-0.1
KII	Karymskiy	3.96	28	P	Pn	13 41 43.8	-0.2
KII				*i*S	Sn	13 42 27.4	-2.4
MKZ	Mys Kozlova	5.18	37	*i*P	Pn	13 41 58.2	-2.0
KMNR	Kamenistaya	5.70	23	P	Pn	13 42 07.8	+0.6
KPT	Kopyto	5.89	22	P	Pn	13 42 11.4	+1.7
BZGR	Bezymyannyi-Gr	5.98	24	P	Pn	13 42 12.2	+1.2
ZLN	Zelenaya	6.08	24	*e*P	Pn	13 42 13.9	+1.6
SRDR	Sredinnyy	6.10	18	P	Pn	13 42 14.0	+1.4
KRSR	Krestovskiy	6.20	23	P	Pn	13 42 14.1	+0.2
SRKR	Sorokina	6.74	23	P	Pn	13 42 22.3	+1.1
KBTR	Krutoberegovo	6.85	32	*e*P	Pn	13 42 21.6	-1.1
KBTR				*i*S	Sn	13 43 33.7	-5.4
FX1	Attu Island--F	10.70	71	P	Pn	13 43 13.3	-1.1
	comp=E,1.4nm,0.3s,baz=233,slow=22,SNR=17						
FX1				S	Sn	13 45 03.9	-8.4
	comp=E,13nm,0.3s,baz=249,slow=23,SNR=12						
FX1	Attu Island--F	10.70	71	P	Pn	13 43 13.3	-1.2
FX1				S	Sn	13 45 03.9	-8.4
ASAJ	Asahikawa	11.32	241	P	Pn	13 43 23.9	+1.2
	comp=E,0.2nm,0.3s,baz=358,slow=34,SNR=2.2						
SEY	Seymchan	12.57	352	⇑*e*PN	Pn	13 43 40.5	+1.4
HABR	Khabarovsk	13.97	270	P	Pn	13 43 55.2	-2.0
HABR				*e*S	Sn	13 46 31.0	-0.3
HABR				pmax	pmax		
	comp=Z,45nm,2.4s						
HABR				pmax	pmax		
	comp=N,4.0nm,0.8s						
HABR				pmax	pmax		
	comp=E,70nm,2.3s						
HABR				MLR	MLR		
	comp=Z,121nm,17.0s						
BILL	Bilibino	18.20	12	P	P	13 44 48.0	+0.4
BILL				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BILL	Bilibino	18.20	12	*e*P	P	13 44 47.6	0.0
	comp=Z,7.4nm,0.3s						
YAK	Yakutsk	18.55	318	*e*P	P	13 44 50.8	-0.7
YAK				pmax	pmax		
	comp=Z,17nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.1s						
YAK	Yakutsk	18.55	318	*e*P	P	13 44 51.2	-0.3
	comp=E,25nm,0.8s						
TIXI	Tiksi	24.51	339	*e*P	P	13 45 51.3	-0.7
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.4						
TIXI	Tiksi	24.51	339	*e*P	P	13 45 51.3	-0.7
	comp=Z,8.6nm,0.6s,mb4.4						
RSO	Redoubt South	29.74	51	*e*P	P	13 46 39.8	+1.0
SEW	Seward	31.41	51	P	P	13 46 51.8	-1.8
SONM	Songino Array	32.24	285	LR	LR	14 02 24.8	
	comp=Z,22nm,18.8s,baz=257,slow=40						
EGAK	Eagle	34.70	42	*e*P	P	13 47 21.3	-0.8
	comp=Z,2.0nm,0.5s,mb4.2						
INK	Inuvik	37.29	35	*e*P	P	13 47 44.6	+0.5
INK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
INK	Inuvik	37.29	35	*e*P	P	13 47 44.5	+0.5
	comp=Z,1.9nm,0.5s,mb4.3						
ZALV	Zalesovo Beam	42.19	303	P	P	13 48 23.4	-1.3
	comp=Z,0.6nm,0.4s,mb3.7,baz=87,slow=6.1,SNR=3.2						
ZALV	Zalesovo Beam	42.19	303	P	P	13 48 23.4	-1.3
YKA	Yellowknife Ar	46.60	40	P	P	13 48 59.3	-0.4
	comp=Z,0.7nm,0.6s,mb3.6,baz=297,slow=7.5,SNR=5.6						
YKA	Yellowknife Ar	46.60	40	P	P	13 48 59.3	-0.4
KURK	Kurchatov	47.08	302	*e*P	P	13 49 03.3	-0.3
KURK				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.5						
KURK	Kurchatov	47.08	302	*e*P	P	13 49 03.3	-0.3
	comp=Z,3.8nm,0.4s,mb4.5						
MK31	Makanchi Array	47.14	296	*e*P	P	13 49 03.6	-0.5
MKAR	Makanchi Array	47.14	296	P	P	13 49 03.9	-0.2
	comp=Z,1.5nm,0.3s,mb4.1,baz=73,slow=3.5,SNR=38						
MKAR				pP	pP	13 49 26.4	-6.6
	comp=Z,0.6nm,0.5s,baz=72,slow=8.9,SNR=4.0						
BVAR	Borovoye Array	50.12	308	P	P	13 49 26.2	-0.6
	comp=Z,0.8nm,0.3s,mb4.1,baz=57,slow=8.4,SNR=7.9						
ARU	Arti	53.65	317	*d*P	P	13 49 51.9	-1.0
ARU				S	S	13 57 18.0	+1.6
ARU				SS	SS	14 00 52.9	-5.0
ARU				pmax	pmax		
	comp=Z,17nm,2.5s,mb4.6						
ARCES	ARCESS Array B	54.93	341	P	P	13 50 00.3	-1.7
	comp=Z,0.3nm,0.3s,mb3.7,baz=37,slow=7.8,SNR=10						
NVAR	Mina Array Bea	58.85	66	P	P	13 50 30.9	+0.9
	comp=Z,0.3nm,0.6s,mb3.5,baz=306,slow=6.2,SNR=3.1						
NVAR	Mina Array Bea	58.85	66	P	P	13 50 30.9	+0.8
PDAR	Pinedale Array	60.83	57	P	P	13 50 44.8	+1.3
	comp=Z,0.2nm,0.5s,mb3.4,baz=290,slow=2.6,SNR=2.5						
FINES	FINESS Array B	61.47	335	P	P	13 50 46.1	-1.4
	comp=Z,0.9nm,0.5s,mb4.0,baz=32,slow=9.0,SNR=8.5						
NB2	NORSAR Subarra	65.27	342	P	P	13 51 11.2	-1.3
	comp=Z,0.9nm,0.5s,mb3.9,baz=24,slow=6.5						
NOA	NORSAR Array B	65.27	342	P	P	13 51 11.6	-0.9
	comp=Z,1.2nm,0.6s,mb3.9,baz=24,slow=6.6,SNR=8.2						
SCHQ	Schefferville	68.95	25	P	P	13 51 35.6	-0.2
	comp=Z,0.9nm,0.3s,mb4.0,baz=59,slow=19,SNR=5.9						
AKASG	Malin Array Be	69.52	327	P	P	13 51 37.1	-2.3
	comp=Z,0.6nm,0.3s,mb3.9,baz=30,slow=6.8,SNR=5.0						
AKASG	Malin Array Be	69.52	327	P	P	13 51 37.1	-2.3
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
WRA	Warramunga Arr	72.84	202	P	P	13 51 58.5	-1.1
	comp=Z,0.6nm,0.5s,mb3.6,baz=20,slow=6.3,SNR=13						
BUR08	Bucovina Ar. S	73.50	328	*e*P	P	13 52 03.0	-0.4
TXAR	Lajitas Array	73.82	64	P	P	13 52 06.0	+0.5
	comp=Z,0.5nm,0.6s,mb3.4,baz=303,slow=4.6,SNR=8.5						
TXAR				pP	pP	13 52 35.3	-1.5
	comp=Z,0.2nm,0.5s,baz=295,slow=5.0,SNR=2.9						
ASAR	Alice Springs	76.53	201	P	P	13 52 20.9	+0.1
	comp=Z,0.5nm,0.5s,mb3.5,baz=14,slow=5.2,SNR=23						
BAIF	Baives	76.96	342	*e*P	P	13 52 23.1	0.0
	comp=Z,2.3nm,0.5s,mb3.9						
BAIF	Baives	76.96	342	*e*P	P	13 52 23.1	0.0
BAIF				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
BAIF	Baives	76.96	342	*e*P	P	13 52 23.1	0.0
	comp=Z,1.1nm,0.5s,mb3.8						
BRTR	Keskin Array B	77.01	318	P	P	13 52 23.7	+0.1
	comp=Z,0.5nm,0.8s,mb3.3,baz=18,slow=4.3,SNR=3.8						
BRTR	Keskin Array B	77.01	318	P	P	13 52 23.7	+0.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
CDF	Champ du Feu	77.87	339	*e*P	P	13 52 28.2	0.0
	comp=Z,5.7nm,0.9s,mb4.0						
CDF	Champ du Feu	77.87	339	*e*P	P	13 52 28.2	0.0
CDF				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.0						
CDF	Champ du Feu	77.87	339	*e*P	P	13 52 28.2	0.0
	comp=Z,2.8nm,0.9s,mb4.0						
MEZF	Maizieres J'vi	78.27	341	*e*P	P	13 52 30.6	+0.2
	comp=Z,5.7nm,0.5s,mb4.3						
MEZF	Maizieres J'vi	78.27	341	*e*P	P	13 52 30.6	+0.2
	comp=Z,5.7nm,0.5s,mb4.6						
HAU	Haudompre	78.46	340	*e*P	P	13 52 30.6	-0.8
FLN	La Foliniere	79.06	345	*e*P	P	13 52 34.1	-0.6
LDF	La Druitiere	79.16	344	⇑*i*P	P	13 52 35.1	-0.2
	comp=Z,4.8nm,0.5s,mb4.3						
LDF	La Druitiere	79.16	344	⇑*i*P	P	13 52 35.1	-0.2
LDF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2						
LDF	La Druitiere	79.16	344	⇑*i*P	P	13 52 35.1	-0.2
	comp=Z,2.4nm,0.5s,mb4.3						
GRR	Gorron	79.49	345	⇑*i*P	P	13 52 37.3	+0.3
	comp=Z,10nm,0.7s,mb4.5						
GRR	Gorron	79.49	345	⇑*i*P	P	13 52 37.3	+0.3
GRR				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
GRR	Gorron	79.49	345	⇑*i*P	P	13 52 37.3	+0.3
	comp=Z,5.3nm,0.7s,mb4.5						
LOR	Lormes	79.69	341	*e*P	P	13 52 38.1	0.0
	comp=Z,5.3nm,0.5s,mb4.3	

MFF	Saint Martin d	81.09	344	eP	P	13 52 46.2	+0.5
	comp=Z,2.8nm,0.6s,mb4.3						
ORIF	Oris-en-Rattie	81.49	339⇑	iP	P	13 52 48.6	+0.8
	comp=Z,5.9nm,0.7s,mb4.2						
ORIF	Oris-en-Rattie	81.49	339⇑	iP	P	13 52 48.6	+0.8
ORIF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
ORIF	Oris-en-Rattie	81.49	339⇑	iP	P	13 52 48.6	+0.8
	comp=Z,3.0nm,0.7s,mb4.2						
MMAI	Mount Meron Ar	81.81	313	P	P	13 52 50.4	+0.7
	comp=Z,5.1nm,0.5s,mb4.6,baz=29,slow=7.1,SNR=7.1						
VIVF	Saint-Julien-l	81.82	340	eP	P	13 52 50.2	+0.7
RJF	Les Rejaudoux	82.03	342	eP	P	13 52 51.2	+0.6
CAF	Calviac	82.29	342	eP	P	13 52 52.8	+0.8
LFF	La Frestale	82.53	343	eP	P	13 52 54.0	+0.7
LMR	La Mourre	82.84	338	eP	P	13 52 55.0	+0.1
LMR	La Mourre	82.84	338	eP	P	13 52 55.0	+0.1
LMR	La Mourre	82.84	338	eP	P	13 52 55.0	+0.1
EPF	Esparros	84.45	343	eP	P	13 53 03.2	+0.1

MOS ***15*** *13:44:31.4±2.8, 46°.77N×153°.62E, h38km, mb4.0/1, Error ellipse: s-maj=30.9km s-min=13.5km az=138.0*
ISCJB ***15*** *13:44:32.5±1.9, 47°.1N±0°.2×153°.1E±0°.2, h52km±23km, mb3.6/2, Error ellipse: s-maj=44.6km s-min=10.9km az=142.8*
IDC ***15*** *13:44:34.7±3.9, 47°.04N×153°.20E, h57km±43km, mb3.2/3, mb1 3.6/7, mb1mx3.3/28, mbtmp3.5/7, ML3.3/4, Error ellipse: s-maj=81.7km s-min=19.5km az=142.0*
NEIC ***15*** *13:44:35.0±1.9, 47°.12N×153°.20E, h59km±28km, mb3.6/1, Error ellipse: s-maj=42.7km s-min=10.6km az=143.0*

ISC 15 13:44:34.5±1.6, 47°.1N±0°.2×153°.2E±0°.2, h54km±21km, n14, σ1§14/13, mb3.6/2, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	4.14	246	PN	Pn	13 45 33.0	-2.2
PETK	Petropavlovsk-	6.70	24	P	Pn	13 46 10.7	+0.6
	0.1nm,0.3s,baz=191,slow=4.4,SNR=4.9						
YSS	Yuzh-Sakhalins	7.15	273	ePN	Pn	13 46 25.0	+8.6
YSS	Yuzh-Sakhalins	7.15	273	P	Pn	13 46 15.9	-0.5
ASAJ	Asahikawa	8.01	252	P	Pn	13 46 29.4	+1.2
	0.4nm,0.3s,baz=56,slow=22,SNR=5.8						
FX1	Attu Island--F	14.07	58	P	Pn	13 47 50.1	-0.7
	1.0nm,0.3s,baz=328,slow=9.5,SNR=3.3						
MAJO	Matsushiro	15.33	232	eP	Pn	13 48 09.7	+2.4
MAJO				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MAJO	Matsushiro	15.33	232	eP	Pn	13 48 09.7	+2.4
	comp=Z,1.8nm,0.4s						
MJAR	Matsushiro Arr	15.33	232	P	Pn	13 48 07.2	-0.1
	comp=Z,0.2nm,0.3s,baz=45,slow=9.2,SNR=5.2						
KSRS	Korea Array	20.96	252	P	P	13 49 11.9	-0.9
	comp=Z,0.8nm,0.8s,baz=56,slow=9.0,SNR=3.3						
KSRS	Korea Array	20.96	252	P	P	13 49 11.9	-1.0
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	50.63	37	pP	pP	13 53 44.2	+2.3
	comp=Z,0.5nm,0.6s,baz=292,slow=7.3,SNR=4.0						
ASAR	Alice Springs	72.53	199	P	P	13 55 55.1	-0.3
	comp=Z,0.4nm,0.8s,mb3.4,baz=13,slow=6.7,SNR=5.8						
TXAR	Lajitas Array	77.28	61	P	P	13 56 23.5	+0.4
	comp=Z,0.8nm,0.7s,mb3.8,baz=301,slow=4.0,SNR=11						
TXAR				pP	pP	13 56 40.0	+1.8
	comp=Z,0.2nm,0.5s,baz=300,slow=4.5,SNR=4.9						

LJU ***15*** *13:51:21.8, 46°.54N×15°.04E, h11km, ML2.1*
ISCJB ***15*** *13:51:22.0±0.3, 46°.52N±0°.02×15°.04E±0°.03, h10km, Error ellipse: s-maj=2.9km s-min=2.3km az=43.3*
NEIC ***15*** *13:51:22.1±0.5, 46°.55N×15°.02E, h10km, ML2.5(LJU), Error ellipse: s-maj=5.4km s-min=3.8km az=156.0*
NEIC Felt at Slovenj Gradec.
VIE ***15*** *13:51:22.0±0.1, 46°.53N×15°.05E, h8km±1km, mb1.4/3, ML2.1/4, Error ellipse: s-maj=1.1km s-min=1.0km az=90.0 14 km SSE of Lavamnd*
CSEM ***15*** *13:51:22.2±0.1, 46°.54N×15°.03E, h8km, ML2.5/7, Error ellipse: s-maj=2.1km s-min=1.7km az=144.0*
PRU ***15*** *13:51:27.0, 46°.19N×14°.01E, h13km*

ISC 15 13:51:22.7±0.3, 46°.53N±0°.02×15°.05E±0°.03, h2km±6km, n52, σ0§70/88, 7C-18D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAVS	Zavodnje	0.09	190	⇑iPg	Pg	13 51 25.0	+0.5
ZAVS				i Sg	Sg	13 51 26.8	+1.1
PERS	Pernice	0.12	23	⇓iPg	Pg	13 51 25.1	0.0
PERS				i Sg	Sg	13 51 26.7	0.0
PERS							
	comp=Z,1μm,0.2s						
PERS	Pernice	0.12	23	⇓iPg	Pg	13 51 25.1	0.0
PERS				i Sg	Sg	13 51 26.7	0.0
PERS	Pernice	0.12	23	⇓iPg	Pg	13 51 25.1	0.0
PERS				i Sg	Sg	13 51 26.7	0.0
	comp=Z,1μm,0.2s						
BISS	Bistriski jare	0.13	24	⇓iPg	Pg	13 51 25.3	-0.1
BISS				i Sg	Sg	13 51 26.9	-0.2
BISS							
	comp=Z,2μm,0.1s						
BISS	Bistriski jare	0.13	24	⇓iPg	Pg	13 51 25.3	-0.1
BISS				i Sg	Sg	13 51 26.9	-0.2
BISS	Bistriski jare	0.13	24	⇓iPg	Pg	13 51 25.3	0.0
BISS				i Sg	Sg	13 51 27.0	-0.1
SOKA	Soboth	0.15	356	⇓iPg	Pg	13 51 25.6	-0.1
	comp=Z,13nm,0.0s						
SOKA				⇓iSg	Sg	13 51 27.5	-0.3
	comp=Z,96nm,0.1s						
SOKA	Soboth	0.15	356	Pg	Pg	13 51 25.6	-0.1
	comp=Z,13nm,0.0s						
SOKA				Sg	Sg	13 51 27.5	-0.2
	comp=Z,96nm,0.1s						
GROS	Grobnik	0.32	101	⇓iPg	Pg	13 51 28.6	-0.3
GROS				i Sg	Sg	13 51 33.0	0.0
GROS							
	comp=Z,315nm,0.1s						
GROS	Grobnik	0.32	101	⇓iPg	Pg	13 51 28.6	-0.3
GROS				i Sg	Sg	13 51 33.0	0.0
GROS	Grobnik	0.32	101	⇓iPg	Pg	13 51 28.6	-0.3
GROS				i Sg	Sg	13 51 33.0	0.0
	comp=Z,315nm,0.1s						
OBKA	Obir	0.34	268	⇑iPg	Pg	13 51 29.3	0.0
	comp=Z,14nm,0.1s						
OBKA				⇑iSg	Sg	13 51 34.0	+0.2
	comp=Z,78nm,0.2s						
OBKA	Obir	0.34	268	Pg	Pg	13 51 29.3	0.0
	comp=Z,14nm,0.1s						
OBKA				Sg	Sg	13 51 34.0	+0.2
	comp=Z,78nm,0.2s						
PDKS	Podkum	0.47	184	⇓iPg	Pg	13 51 31.9	+0.3
PDKS				i Sg	Sg	13 51 37.8	+0.2
PDKS							
	comp=Z,14nm,0.1s						
PDKS	Podkum	0.47	184	i Pg	Pg	13 51 31.9	+0.3
PDKS				i Sg	Sg	13 51 37.8	+0.2
DOBS	Dobrina	0.48	142	i Pg	Pg	13 51 31.8	0.0
DOBS	Dobrina	0.48	142	i Pg	Pg	13 51 31.8	0.0
MOZS	Mozjanca	0.48	241	i Pg	Pg	13 51 31.7	-0.2
MOZS							
	comp=Z,30nm,0.2s						
VNDS	Vrh nad Dolski	0.49	210	⇓iPg	Pg	13 51 32.2	+0.1
GOLS	Golise	0.65	142	i Pg	Pg	13 51 35.5	+0.3
GOLS	Golise	0.65	142	i Pg	Pg	13 51 35.5	+0.3
CRNS	Crni Vrh	0.70	231	⇓iPg	Pg	13 51 35.9	-0.2
CRNS							
	comp=Z,6.0nm,0.1s						
VISS	Visnje	0.74	191	i Pg	Pg	13 51 36.7	-0.1
VISS							
	comp=Z,19nm,0.2s						
VISS	Visnje	0.74	191	i Pg	Pg	13 51 36.7	-0.1
	comp=Z,19nm,0.2s						
GORS	Gorjuse	0.76	254	i Pg	Pg	13 51 36.6	-0.6
GORS	Gorjuse	0.76	254	i Pg	Pg	13 51 36.6	-0.6
KOGS	Kog	0.83	95	i Pg	Pg	13 51 38.4	-0.3
KOGS				i Sg	Sg	13 51 50.2	+0.7
KOGS							
	comp=Z,24nm,0.1s						
KOGS	Kog	0.83	95	i Pg	Pg	13 51 38.4	-0.3
KOGS				i Sg	Sg	13 51 50.2	+0.7
KOGS	Kog	0.83	95	i Pg	Pg	13 51 38.4	-0.3
KOGS				i Sg	Sg	13 51 50.2	+0.7
CEY	Cerknica	0.90	209	i Pg	Pg	13 51 39.5	-0.4
CEY	Cerknica	0.90	209	i Pg	Pg	13 51 39.5	-0.4
VOY	Vojsko	0.94	239	ePg	Pg	13 51 40.0	-0.7
VOY				eSg	Sg	13 51 54.2	+1.3
VOY	Vojsko	0.94	239	ePg	Pg	13 51 40.0	-0.7
VOY				eSg	Sg	13 51 54.2	+1.3
CADS	Cadrg	0.95	252	i Pg	Pg	13 51 40.1	-0.9
CADS	Cadrg	0.95	252	i Pg	Pg	13 51 40.1	-0.9
DRE	Drenchia	1.03	251	⇓ePg	Pg	13 51 41.6	-0.9
DRE				eSg	Sg	13 51 57.4	+1.4
DRE	Drenchia	1.03	251	ePg	Pg	13 51 41.6	-0.9
DRE				eSg	Sg	13 51 57.4	+1.5
ACOM	Acomizza, Ital	1.06	272	⇑ePg	Pg	13 51 41.9	-1.1
ACOM				eSg	Sg	13 51 56.0	-0.7
ACOM	Acomizza, Ital	1.06	272	ePg	Pg	13 51 41.9	-1.1
ACOM				eSg	Sg	13 51 56.0	-0.8
VINO	Villanova	1.25	258	ePg	Pg	13 51 45.6	-1.1
VINO				eSg	Sg	13 52 03.4	+0.5
VINO	Villanova	1.25	258	ePg	Pg	13 51 45.6	-1.1
VINO				eSg	Sg	13 52 03.4	+0.5
MOA	Molln	1.43	338	⇓iPg	Pg	13 51 49.8	-0.3
	comp=Z,2.1nm,0.3s						
MOA				⇑iSg	Sg	13 52 09.7	+1.1
	comp=Z,2.8nm,0.3s						
MOA	Molln	1.43	338	Pg	Pg	13 51 49.8	-0.3
	comp=Z,2.1nm,0.3s						
MOA				Sg	Sg	13 52 09.7	+1.1
	comp=Z,2.8nm,0.3s						
CONA	Conrad Observa	1.51	21	⇓iPn	Pn	13 51 49.5	-1.3
CONA				⇑iPg	Pg	13 51 50.7	-0.9
	comp=Z,1.0nm,0.2s						
CONA				⇑iSn	Sn	13 52 10.1	-0.9
CONA				⇓iSg	Sg	13 52 11.8	+0.6
	comp=Z,4.0nm,0.3s						
CONA	Conrad Observa	1.51	21	Pn	Pn	13 51 49.5	-1.2
KHC	Kasperske Hory	2.79	340	ePN	Pb	13 52 13.4	+0.2
KHC				eSN	Sb	13 52 48.4	+0.6
KHC	Kasperske Hory	2.79	340	Pn	Sb	13 52 13.4	+0.2
KHC				Sn	Sb	13 52 48.4	+0.6
PRU	Pruhonice	3.48	355	ePN	Pb	13 52 26.2	+1.2
PRU				eSN	Sb	13 53 09.4	+1.7
PRU	Pruhonice	3.48	355	Pn	Pb	13 52 26.2	+1.2
PRU				Sn	Sb	13 53 09.4	+1.7
DPC	Dobruska-Polom	3.92	12	eSN	Sg	13 53 24.0	-4.6
DPC	Dobruska-Polom	3.92	12	Sn	Sg	13 53 24.0	-4.6

CSEM ***15*** *14:01:34.7±0.1, 38°.68N×30°.21E, h8km, MD2.7, Error ellipse: s-maj=1.6km s-min=1.4km az=24.0*
DDA ***15*** *14:01:34.5, 38°.63N×30°.21E, h7km±5km, Md2.8*
ISK ***15*** *14:01:34.0, 38°.67N×30°.20E, h10km, MD2.7*
ISCJB ***15*** *14:01:34.5±0.5, 38°.67N±0°.03×30°.21E±0°.03, h5km±7km, Error ellipse: s-maj=5.0km s-min=4.3km az=35.2*

ISC 15 14:01:35.0±0.5, 38°.68N±0°.03×30°.21E±0°.03, h10km±7km, n23, σ0§57/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHUT	Suhut-Afyon	0.29	115	ePG	Pg	14 01 40.8	0.0
SHUT				eSG	Sg	14 01 44.9	+0.1
SHUT	Suhut-Afyon	0.29	115	ePg	Pg	14 01 40.8	0.0
SHUT				eSg	Sg	14 01 44.9	+0.1
ALT	Altintas	0.39	348	ePG	Pg	14 01 42.3	-0.3
ALT				eSG	Sg	14 01 47.6	-0.1
ALT	Altintas	0.39	348	ePg	Pg	14 01 42.3	-0.3
ALT				eSg	Sg	14 01 47.6	-0.2
BOLV	Bolvadin	0.58	86	i P	Pg	14 01 46.0	-0.2
BOLV				i S	Sg	14 01 53.7	-0.1
BOLV	Bolvadin	0.58	86	i P	Pg	14 01 46.0	-0.2
BOLV				i S	Sg	14 01 53.7	-0.1
KHAL	Karahalli	0.64	242	i P	Pg	14 01 47.2	-0.2
KHAL				i S	Sg	14 01 55.8	0.0
KHAL	Karahalli	0.64	242	i P	Pg	14 01 47.2	-0.2
KHAL				i S	Sg	14 01 55.8	0.0
KHL	Karahalli	0.65	237	ePG	Pg	14 01 46.6	-0.9
KHL	Karahalli	0.65	237	ePg	Pg	14 01 46.6	-0.9
GDZ	Gediz	0.70	306	i P	Pg	14 01 48.7	+0.1
GDZ				i S	Sg	14 01 58.6	+0.8
GDZ	Gediz	0.70	306	i P	Pg	14 01 48.7	+0.1
GDZ				i S	Sg	14 01 58.7	+0.9
ISP	Isparta	0.86	164	ePG	Pg	14 01 50.9	-0.7
ISP				eSG	Sg	14 02 04.0	+1.2
ESKT	Eskisehir	0.98	30	ePG	Pg	14 01 53.4	-0.4
ESKT	Eskisehir	0.98	30	i P	Pg	14 01 55.5	+1.7
ESKT				i S	Sg	14 02 06.3	-0.3
ESKT	Eskisehir	0.98	30	ePg	Pg	14 01 53.4	-0.4
SEYT	Eskypehyr	0.98	30	i P	Pg	14 01 55.5	+1.7
SEYT				i S	Sg	14 02 06.3	-0.2
SVRH	Sivrihisar-ESK	1.28	53	ePN	Pn	14 01 59.5	+0.7
SVRH	Sivrihisar-ESK	1.28	53	ePn	Pn	14 01 59.5	+0.6
KIZT	Kizilcal	1.32	81	ePN	Pn	14 01 58.8	-0.6
KIZT	Kizilcal	1.32	81	ePn	Pn	14 01 58.8	-0.6
SUTC	Sutluce-Ispart	1.35	152	ePN	Pn	14 01 59.9	0.0
SUTC	Sutluce-Ispart	1.35	152	ePn	Pn	14 01 59.9	+0.1

SZGRF ***15*** *14:15:15.9, 15°.94S×173°.83W, h33km, Tonga Islands*
ISCJB ***15*** *14:15:19.6±1.4, 15°.2S±0°.1×174°.0W±0°.1, h58km±14km, mb4.4/9, Error ellipse: s-maj=25.7km s-min=12.7km az=141.3*
IDC ***15*** *14:15:21.8±2.8, 15°.20S×173°.92W, h67km±27km, mb4.1/8, mb1 4.3/9, mb1mx4.0/18, mbtmp4.1/9, ML3.4/1, MS3.1/2, Ms1 3.1/2, ms1mx2.9/18, Error ellipse: s-maj=34.1km s-min=16.8km az=129.0*
NEIC ***15*** *14:15:21.2±0.9, 15°.18S×173°.97W, h63km±7km, mb4.3/1, Error ellipse: s-maj=15.1km s-min=7.3km az=139.0*

ISC 15 14:15:21.1±1.3, 15°.2S±0°.1×174°.0W±0°.1, h58km±13km, n76, σ0§65/19, mb4.4/9, 5C-2D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.49	60	P	Pn	14 15 59.3	0.0
	449nm,0.3s,baz=69,slow=1.4,SNR=426						
AFI				S	Sn	14 16 22.5	-6.0
	399nm,0.3s,baz=37,slow=21,SNR=19						
AFI				LR	LR	14 16 41.6	
	comp=Z,291nm,21.2s,baz=275,slow=33						
AFI	Afiamalu	2.49	60	eP	Pn	14 15 59.3	+0.1
AFI				eS	Sn	14 16 22.2	-6.2
AFI				S	Sn	14 16 22.5	-6.0
AFI				LR	LR	14 16 41.6	
MSVF	Nonsavu	8.05	251	Pn	Pn	14 17 15.3	-0.1
	41nm,1.2s						
MSVF				e		14 17 29.0	
URZ	Urewera	24.30	197	P	P	14 20 34.2	+1.1
	3.6nm,0.4s,mb4.1,baz=49,slow=18,SNR=20						
URZ	Urewera	24.30	197	eP	P	14 20 33.0	-0.1
HNR	Honiara	26.09	280	LR	LR	14 29 33.8	
	comp=Z,54nm,18.6s,baz=212,slow=33						
STKA	Stephens Creek	43.66	240	P	P	14 23 20.2	-0.1
	3.9nm,0.6s,mb4.3,baz=64,slow=5.9,SNR=11						
STKA	Stephens Creek	43.66	240	eP	P	14 23 19.9	-0.3
WRA	Warramunga Arr	49.34	257	P	P	14 24 04.7	-0.3
	3.1nm,0.4s,mb4.7,baz=92,slow=6.7,SNR=117						
WRA				PcP	PcP	14 25 26.2	-0.7
	1.7nm,0.9s,baz=97,slow=3.5,SNR=5.0						
ASAR	Alice Springs	49.64	252	P	P	14 24 07.0	-0.3
	9.5nm,0.6s,mb5.0,baz=89,slow=7.6,SNR=232						
SBA	Scott Base	63.42	184	eP	P	14 25 44.8	+0.5
PETK	Petropavlovsk-	72.25	343	P	P	14 26 40.6	+0.6
	4.3nm,0.7s,mb4.5,baz=128,slow=8.3,SNR=12						
NVAR	Mina Array Bea	74.55	42	P	P	14 26 53.6	-0.2
	0.2nm,0.3s,mb3.5,baz=225,slow=9.6,SNR=3.4						
PPLA	Purkeypile	79.67	10	eP	P	14 27 22.5	+0.4
COLA	College	82.26	11	eP	P	14 27 34.5	-1.2
	2.9nm,0.8s,mb4.3						
MAW	Mawson	87.82	199	P	P	14 28 02.8	-1.0
	3.4nm,0.7s,mb4.7,baz=138,slow=7.4,SNR=9.6						
CMAR	Chiang Mai Arr	92.01	288	P	P	14 28 25.4	+1.1
	0.9nm,0.7s,mb4.2,baz=69,slow=2.4,SNR=4.8						
BVAR	Borovoye Array	117.36	322	PKP	PKPdf	14 33 58.2	-1.7
	0.4nm,0.4s,baz=243,slow=1.7,SNR=4.1						
ARCES	ARCESS Array B	124.32	352	PKP	PKPdf	14 34 11.4	-1.5
	2.8nm,0.8s,baz=0.0,slow=1.6,SNR=9.7						
FINES	FINESS Array B	131.61	347	PKP	PKPdf	14 34 26.4	-0.6
	1.5nm,0.8s,baz=323,slow=2.1,SNR=4.3						
CLL	Collm	143.53	353	ePKPbc	PKPdf	14 34 45.3	-3.9
DPC	Dobruska-Polom	143.94	349	ePKP	PKPdf	14 34 47.8	-2.1
MOX	Moxa	144.34	354	ePKPbc	PKPdf	14 34 48.5	-2.1
WERD	Werda	144.46	353	ePKPbc	PKPdf	14 34 48.8	-2.0
TANN	Tannenbergstha	144.47	353	ePKPbc	PKPdf	14 34 49.4	-1.5
GUNZ	Gunzen	144.54	353	ePKPbc	PKPdf	14 34 49.0	-2.0
PRU	Pruhonice	144.60	350	ePKP	PKPdf	14 34 50.1	-1.0
KECS	Kecovo	144.72	343	eP	PKPdf	14 34 50.1	-1.3
KECS	Kecovo	144.72	343	ePKP	PKPdf	14 34 50.1	-1.3
VRI	Vrincioaia	144.81	335	⇑iP	PKPdf	14 34 48.5	-3.1
VRAC	Vranov	144.88	348	⇑iP	PKPdf	14 34 51.0	-0.6
TREC	Trest	145.11	349	ePKP	PKPdf	14 34 51.1	-0.9
KMBO	Kilima Mbogo	145.11	245	PKPbc	PKPbc	14 34 52.4	-0.3
	3.1nm,1.0s,baz=40,slow=5.7,SNR=4.1						
KMBO	Kilima Mbogo	145.11	245	PKPbc	PKPbc	14 34 52.4	-0.3
VYHS	Vyhne	145.14	345	eP	PKPbc	14 34 51.4	-0.3
VYHS	Vyhne	145.14	345	ePKP	PKPdf	14 34 51.4	-0.7
GIVF	Givet	145.16	1	ePKP1	PKPbc	14 34 51.0	-0.7
	19nm,1.0s						
BAIF	Baives	145.19	2	ePKP1	PKPbc	14 34 51.2	-0.6
	21nm,1.0s						
HARR	Harsova	145.22	332	⇓iP	PKPbc	14 34 51.9	-0.2
GRF	Grafenberg Arr	145.32	354	ePKPbc	PKPbc	14 34 51.8	-0.4
MLR	Muntele Rosu	145.43	335	⇑iP	PKPdf	14 34 52.0	-0.7
DRGR		145.54	340	⇓iP	PKPdf	14 34 52.4	-0.4
KHC	Kasperske Hory	145.58	351	eP	PKPdf	14 34 52.2	-0.6
KHC	Kasperske Hory	145.58	351	ePKP	PKPdf	14 34 52.6	-0.2
WLF	Walferdange	145.61	360	ePKPbc	PKPbc	14 34 53.0	-0.1
BR131	Keskin Array S	145.63	321	eP	PKPdf	14 34 53.1	-0.1
BRTR	Keskin Array B	145.63	321	PKPbc	PKPbc	14 34 53.2	-0.3
	4.9nm,0.9s,baz=104,slow=1.7,SNR=19						
GEC2	GERESS Array S	145.84	351	ePKPbc	PKPbc	14 34 53.3	-0.6
GERES	GERESS Array B	145.84	351	PKPbc	PKPbc	14 34 53.4	-0.4
	1.4nm,0.6s,baz=32,slow=3.3,SNR=18						
FLN	La Foliniere	146.09	8	ePKP1	PKPbc	14 34 53.3	-1.3
GRR	Gorron	146.41	8	ePKP1	PKPbc	14 34 54.5	-1.1
GZR	Gura Zlata	146.73	338	⇑iP	PKPdf	14 34 55.6	+0.7
MEZF	Maizieres J'vi	146.77	1	ePKP1	PKPbc	14 34 57.3	+0.7
	19nm,1.0s						
CDF	Champ du Feu	146.85	358	ePKP1	PKPbc	14 34 56.3	-0.6
	11nm,0.9s						
BFO	Black Forest	146.89	357	ePKPbc	PKPbc	14 34 55.8	-1.2
BZS	Buzias	146.94	340	⇑iP	PKPbc	14 34 56.5	-0.7
HAU	Haudompre	147.27	360	ePKP1	PKPbc	14 34 57.4	-0.7
	14nm,0.8s						
LOR	Lormes	147.96	3	ePKP1	PKPbc	14 34 59.2	-0.8
	12nm,1.0s						
MMAI	Mount Meron Ar	147.99	309	PKPbc	PKPbc	14 34 59.5	-1.0
	1.0nm,0.5s,baz=231,slow=5.0,SNR=3.2						
SSF	Saint Saulge	148.15	3	ePKP1	PKPbc	14 34 59.8	-0.7
	18nm,1.1s						
AVF	Avril sur Loir	148.41	3	ePKP1	PKPbc	14 35 00.2	-1.0
	12nm,1.0s						
SMF	Signal de Mont	148.58	3	ePKP1	PKPbc	14 35 00.7	-0.9
	10nm,1.0s						
BGF	Bois d'Agland	148.61	4	ePKP1	PKPbc	14 35 00.9	-0.8
	12nm,0.9s						
CABF	La Chapelle	148.67	360	ePKP1	PKPbc	14 35 01.7	-0.1
	30nm,1.0s						
TCF	Toulx Ste Croi	148.83	5	ePKP1	PKPbc	14 35 01.2	-1.1
	12nm,1.2s						
LPL	La Plagne	149.76	359	ePKP1	PKPbc	14 35 04.9	+0.3
	12nm,1.0s						
LPG	La Plagne	149.77	359	ePKP1	PKPbc	14 35 05.1	+0.5
	16nm,0.9s						
LFF	La Frestale	150.00	8	ePKP1	PKPbc	14 35 05.1	-0.1
CAF	Calviac	150.16	6	ePKP1	PKPbc	14 35 04.8	-0.8
	14nm,1.2s						
VIVF	Saint-Julien-l	150.40	2	ePKP1	PKPbc	14 35 05.8	-0.4
	11nm,0.9s						
MBDF	Montbardon	150.54	359	ePKP1	PKPbc	14 35 06.2	-0.3
	9.9nm,0.8s						
LASF	Ste Croix	151.14	3	ePKP1	PKPbc	14 35 07.6	-0.3
	8.4nm,0.9s						
SMRF	Simiane la Rot	151.30	1	ePKP1	PKPbc	14 35 08.3	0.0
	10nm,0.9s						
MTLF	Montolieu	151.75	6	ePKP1	PKPbc	14 35 08.6	-0.8
ETSF	Etsaut	151.81	10	ePKP1	PKPbc	14 35 09.0	-0.5
EPF	Esparros	151.82	9	ePKP1	PKPbc	14 35 09.0	-0.5

THE ***15*** *14:37:10.6, 36°.58N×21°.59E, h18km±1km, ML3.7/5, Error ellipse: s-maj=2.0km s-min=1.4km az=23.0*
ATH ***15*** *14:37:11.8, 36°.78N×21°.56E, h34km±1km, MD3.6/6, ML3.0*
NEIC ***15*** *14:37:11.8, 36°.78N×21°.56E, h34km, ML3.0(ATH), After ATH.*
ISCJB ***15*** *14:37:11.4±0.9, 36°.72N±0°.05×21°.48E±0°.05, h27km±5km, Error ellipse: s-maj=9.3km s-min=5.5km az=37.6*
CSEM ***15*** *14:37:13.4±0.4, 36°.80N×21°.61E, h25km±2km, ML3.0, Error ellipse: s-maj=8.1km s-min=3.6km az=43.0*

ISC 15 14:37:12.2±1.0, 36°.74N±0°.05×21°.50E±0°.05, h23km±5km, n108, σ0§94/131, 1C-10D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.25	51	P	Pb	14 37 18.3	-0.1
PYL				S	Sb	14 37 23.4	+0.9
PYL	PYLOS	0.25	51	⇓iPB	Pb	14 37

ATHU	**Athens Univers**	**2.20**	**55**	P	**Pn**	**14 37 46.0**	**-1.3**
ATHU	**Athens Univers**	**2.20**	**55**	P	**Pn**	**14 37 46.0**	**-1.3**
LKR	**Lokris**	**2.25**	**31**	*e*Pn	**Pn**	**14 37 47.2**	**-0.8**
LKR	**Lokris**	**2.25**	**31**	P	**Pn**	**14 37 47.3**	**-0.7**
LKR	**Lokris**	**2.25**	**31**	*e*PN	**Pn**	**14 37 47.2**	**-0.8**
LKR	**Lokris**	**2.25**	**31**	P	**Pn**	**14 37 47.3**	**-0.7**
PTL	**Penteli**	**2.30**	**54**	*e*Pn	**Pn**	**14 37 47.7**	**-0.9**
PTL	**Penteli**	**2.30**	**54**	*e*PN	**Pn**	**14 37 47.7**	**-0.9**
PTL	**Penteli**	**2.30**	**54**	*e*Pn	**Pn**	**14 37 47.7**	**-0.9**
ATAL	**Atalanti**	**2.30**	**31**	P	**Pn**	**14 37 48.4**	**-0.2**
ATAL	**Atalanti**	**2.30**	**31**	P	**Pn**	**14 37 48.4**	**-0.2**
AGG	**Agios Georgios**	**2.38**	**16**	*e*Pn	**Pn**	**14 37 50.5**	**+0.8**
AGG	**Agios Georgios**	**2.38**	**16**	P	**Pn**	**14 37 50.4**	**+0.7**
AGG	**Agios Georgios**	**2.38**	**16**	*e*PN	**Pn**	**14 37 50.5**	**+0.8**
AGG	**Agios Georgios**	**2.38**	**16**	P	**Pn**	**14 37 50.4**	**+0.7**
VAM	**Vamos**	**2.56**	**120**	*e*Pn	**Pn**	**14 37 52.7**	**+0.5**
VAM	**Vamos**	**2.56**	**120**	*e*PN	**Pn**	**14 37 52.7**	**+0.5**
VAM	**Vamos**	**2.56**	**120**	*e*Pn	**Pn**	**14 37 52.7**	**+0.5**
THL	**Klokotos Trika**	**2.85**	**8**	P	**Pn**	**14 37 56.7**	**+0.4**
THL	**Klokotos Trika**	**2.85**	**8**	*e*PN	**Pn**	**14 37 56.5**	**+0.2**
THL	**Klokotos Trika**	**2.85**	**8**	*e*Pn	**Pn**	**14 37 56.5**	**+0.2**
NEO	**Neokhori**	**2.91**	**27**	*e*Pn	**Pn**	**14 37 56.5**	**-0.5**
NEO	**Neokhori**	**2.91**	**27**	*e*PN	**Pn**	**14 37 56.5**	**-0.5**
NEO	**Neokhori**	**2.91**	**27**	*e*Pn	**Pn**	**14 37 56.5**	**-0.5**
IGT	**Igoumenitsa**	**2.94**	**342**	P	**Pn**	**14 37 57.1**	**-0.4**
IGT	**Igoumenitsa**	**2.94**	**342**	P	**Pn**	**14 37 57.1**	**-0.4**
XOR	**Xorichti**	**2.95**	**26**	P	**Pn**	**14 37 57.2**	**-0.4**
XOR	**Xorichti**	**2.95**	**26**	P	**Pn**	**14 37 57.2**	**-0.4**
JAN	**Janina**	**2.96**	**350**	*e*Pn	**Pn**	**14 37 58.3**	**+0.6**
JAN	**Janina**	**2.96**	**350**	*e*PN	**Pn**	**14 37 58.3**	**+0.6**
JAN	**Janina**	**2.96**	**350**	*e*Pn	**Pn**	**14 37 58.3**	**+0.6**
MEV	**Metsovon**	**3.05**	**356**	P	**Pn**	**14 38 00.2**	**+1.2**
MEV	**Metsovon**	**3.05**	**356**	P	**Pn**	**14 38 00.2**	**+1.2**
IDI	**Anoyia**	**3.11**	**117**	*e*Pn	**Pn**	**14 38 00.5**	**+0.8**
IDI	**Anoyia**	**3.11**	**117**	*e*PN	**Pn**	**14 38 00.5**	**+0.8**
IDI	**Anoyia**	**3.11**	**117**	*e*Pn	**Pn**	**14 38 00.5**	**+0.8**
APE	**Apeiranthos**	**3.25**	**83**	*e*Pn	**Pn**	**14 38 01.9**	**+0.2**
APE	**Apeiranthos**	**3.25**	**83**	P	**Pn**	**14 38 00.3**	**-1.4**
APE	**Apeiranthos**	**3.25**	**83**	*e*PN	**Pn**	**14 38 01.9**	**+0.2**
APE	**Apeiranthos**	**3.25**	**83**	P	**Pn**	**14 38 00.3**	**-1.4**
APE	**Apeiranthos**	**3.25**	**83**	*e*Pn	**Pn**	**14 38 01.9**	**+0.2**
KEK	**Kerkira**	**3.26**	**336**	*e*Pn	**Pn**	**14 38 02.9**	**+1.0**
KEK	**Kerkira**	**3.26**	**336**	P	**Pn**	**14 38 01.3**	**-0.6**
KEK	**Kerkira**	**3.26**	**336**	*e*PN	**Pn**	**14 38 02.9**	**+1.0**
KEK	**Kerkira**	**3.26**	**336**	P	**Pn**	**14 38 01.3**	**-0.6**
KEK	**Kerkira**	**3.26**	**336**	*e*Pn	**Pn**	**14 38 02.9**	**+1.0**
KZN	**Kozani**	**3.57**	**3**	P	**Pn**	**14 38 06.4**	**+0.3**
KZN	**Kozani**	**3.57**	**3**	P	**Pn**	**14 38 06.4**	**+0.3**
LAST	**Lasithi**	**3.59**	**115**	*e*Pn	**Pn**	**14 38 07.0**	**+0.6**
LAST	**Lasithi**	**3.59**	**115**	*e*PN	**Pn**	**14 38 07.0**	**+0.6**
LAST	**Lasithi**	**3.59**	**115**	*e*Pn	**Pn**	**14 38 07.0**	**+0.6**
PLG	**Polygyros**	**3.94**	**22**	P	**Pn**	**14 38 11.9**	**+0.7**
PLG	**Polygyros**	**3.94**	**22**	P	**Pn**	**14 38 11.9**	**+0.7**
CHOS	**Chios island**	**3.98**	**64**	P	**Pn**	**14 38 10.2**	**-1.5**
CHOS	**Chios island**	**3.98**	**64**	P	**Pn**	**14 38 10.2**	**-1.5**
BARS	**Barje**	**6.08**	**2**	⇑*e*Pn	**Pn**	**14 38 39.2**	**-1.4**
STON	**Ston**	**6.79**	**336**	*e*Pn	**Pn**	**14 38 46.9**	**-3.4**
STON				Sn	**Sn**	**14 39 59.3**	**-7.5**
NVLJ	**Novalja**	**9.30**	**329**	Sn	**Sn**	**14 41 01.2**	**-7.3**

MEX 15 14:46:23.5±0.7, 18°.00N×101°.77W, h13km±8km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.48**	**143**	*e*P	Pg	14 46 31.5	-1.5
ZIIG				*i* S	Sg	14 46 39.0	-0.5
MMIG	**Aquila**	**1.53**	**281**	*i* P	Pn	14 46 46.8	-3.8
MMIG				*i* S	Sn	14 47 05.7	-4.6
CAIG	**El Cayaco**	**1.71**	**123**	*i* P	Pn	14 46 50.3	-2.8
CAIG				*i* S	Sn	14 47 10.5	-4.4
MOIG	**Morelia**	**1.76**	**18**	*e*P	Pn	14 46 51.2	-2.6
MOIG				*i* S	Sn	14 47 11.4	-4.7
MEIG	**Mezcala**	**2.05**	**92**	*e*P	Pn	14 46 55.5	-2.1
MEIG				*i* S	Sn	14 47 19.1	-4.0
ACX	**Acapulco**	**2.14**	**121**	*e*P	Pn	14 46 54.9	-4.0
ACX				*i* S	Sn	14 47 19.3	-6.2
PLIG	**Platanillo**	**2.19**	**79**	*i* P	Pn	14 46 57.5	-2.2
PLIG				*i* S	Sn	14 47 21.8	-4.9
PPM	**Popocatepetl**	**3.17**	**70**	*i* P	Pn	14 47 10.1	-3.0
PPM				*i* S	Sn	14 47 47.5	-3.3
UTMO	**Huajuapan**	**3.78**	**92**	*i* P	Pn	14 47 19.4	-2.1
UTMO				*i* S	Sn	14 48 04.1	-1.8

IDC ***15*** *14:57:33.1±1.6, 39°.01N×140°.78E, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.3/25, mbtmp3.5/4, ML3.2/1, Error ellipse: s-maj=59.9km s-min=27.4km az=82.0*
JMA ***15*** *14:57:33.7, 39°.16N×140°.95E, h9km±1km, M3.4*
JMA Felt I J1.
ISCJB ***15*** *14:57:33.5±0.5, 39°.16N±0°.03×140°.97E±0°.04, h9km±5km, mb3.5/3, Error ellipse: s-maj=5.6km s-min=5.2km az=135.8*

ISC 15 14:57:34.1±0.6, 39°.15N±0°.03×140°.97E±0°.04, h1km±6km, n13, σ0.97/20, mb3.5/3, 2C-3D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.28**	**136**	⇓P	**Pg**	**14 57 39.5**	**0.0**
JMK				S	**Sg**	**14 57 43.7**	**+0.6**
JRG	**Rokugo**	**0.36**	**313**	P	**Pg**	**14 57 40.8**	**-0.2**
JRG				S	**Sg**	**14 57 45.7**	**+0.1**
JOM	**Ohasama**	**0.41**	**38**	⇓P	**Pg**	**14 57 41.7**	**-0.2**
JOM				S	**Sg**	**14 57 47.4**	**+0.2**
JYK	**Kaneyama**	**0.53**	**244**	⇑P	**Pg**	**14 57 43.8**	**-0.5**
JYK				S	**Sg**	**14 57 50.9**	**-0.2**
OFUJ	**Ofunato**	**0.55**	**97**	⇓P	**Pg**	**14 57 44.6**	**0.0**
JIO	**Ouri**	**0.76**	**157**	P	**Pg**	**14 57 48.2**	**-0.4**
JIO				S	**Sg**	**14 57 58.7**	**+0.3**
JOU	**Okura**	**0.82**	**197**	⇑P	**Pg**	**14 57 49.4**	**-0.4**
JOU				S	**Sg**	**14 58 00.5**	**0.0**
MAT	**Matsushiro**	**3.40**	**221**	P	**Pn**	**14 58 29.0**	**+0.8**
MAT				*e*S	**Sn**	**14 59 10.7**	**+1.5**
ASAJ	**Asahikawa**	**5.11**	**13**	Pn	**Pn**	**14 58 53.3**	**+1.6**
	0.8nm,0.3s,baz=199,slow=16,SNR=8.9						
KSRS	**Korea Array**	**10.39**	**265**	Pn	**Pn**	**15 00 06.8**	**+2.6**
	0.8nm,0.3s,baz=78,slow=14,SNR=20						
MKAR	**Makanchi Array**	**42.73**	**300**	P	**P**	**15 05 31.2**	**-1.3**
	0.7nm,1.0s,mb3.4,baz=88,slow=9.0,SNR=4.9						
WRA	**Warramunga Arr**	**59.11**	**187**	P	**P**	**15 07 34.1**	**-1.9**
	0.3nm,0.5s,mb3.6,baz=5.4,slow=7.4,SNR=9.8						
ASAR	**Alice Springs**	**62.84**	**187**	P	**P**	**15 07 59.7**	**-1.6**
	0.3nm,0.7s,mb3.5,baz=8.2,slow=6.1,SNR=4.7						

BJI ***15*** *15:09:28.7, 9°.60S×107°.70E, h11km, mB5.0/28, mb4.8/41, Ms4.6/22, Ms7 4.2/22*
IDC ***15*** *15:09:28.7±0.5, 9°.51S×107°.81E, h0km, mb4.4/16, mb1 4.5/19, mb1mx4.4/24, mbtmp4.4/19, ML4.3/2, MS3.8/9, Ms1 3.8/9, ms1mx3.3/36, Error ellipse: s-maj=19.9km s-min=12.8km az=56.0*
ISCJB ***15*** *15:09:29.2±0.9, 9°.77S±0°.03×107°.66E±0°.03, h18km±6km, mb4.8/73, MS3.9/17, Error ellipse: s-maj=5.9km s-min=3.9km az=27.4*
NEIC ***15*** *15:09:30.7±2.7, 9°.55S×107°.75E, h12km±16km, mb5.1/31, Error ellipse: s-maj=9.5km s-min=4.5km az=223.0*
MOS ***15*** *15:09:32.2±1.0, 9°.50S×107°.89E, h33km, mb5.3/20, Error ellipse: s-maj=16.1km s-min=7.1km az=113.5*
DJA ***15*** *15:09:33, 9°.72S×107°.63E, h32km, mb4.7/44*

ISC 15 15:09:31.7±0.9, 9°.77S±0°.03×107°.65E±0°.03, h22km±6km, h35km±1.3km; pP-P, n199, σ1.9/07/192, mb4.8/73, MS3.9/17, 4C-7D, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	**Lembang**	**2.92**	**359**	P	**Pn**	**15 10 17.6**	**+0.7**
LEM				S	**Sn**	**15 10 52.9**	**+1.6**
UGM	**Wanagama**	**3.39**	**57**	P	**Pn**	**15 10 22.4**	**-0.9**
UGM				S	**Sn**	**15 10 58.9**	**-3.9**
CGJI	**Cibinong**	**3.68**	**328**	P	**Pn**	**15 10 26.7**	**-0.6**
CGJI				S	**Sn**	**15 11 08.8**	**-1.3**
TNG	**Tangerang**	**3.71**	**344**	P	**Pn**	**15 10 28.2**	**+0.5**
TNG				S	**Sn**	**15 11 10.7**	**0.0**
PCJI	**Pacitan**	**3.82**	**66**	P	**Pn**	**15 10 28.4**	**-0.8**
SMRI	**Semarang**	**3.86**	**46**	P	**Pn**	**15 10 29.7**	**-0.1**
SMRI				S	**Sn**	**15 11 14.1**	**-0.4**
SBJI	**Serang**	**3.92**	**337**	P	**Pn**	**15 10 31.5**	**+0.9**
RBSI	**Rajabasa**	**4.33**	**334**	P	**Pn**	**15 10 37.3**	**+1.0**
RBSI				S	**Sn**	**15 11 27.1**	**+1.0**
PWJI	**Pagerwojo**	**4.46**	**67**	P	**Pn**	**15 10 37.7**	**-0.3**
PWJI				S	**Sn**	**15 11 24.3**	**-4.9**
NGJI	**Ngawi**	**4.46**	**58**	P	**Pn**	**15 10 37.6**	**-0.4**
SJI	**Sawahan**	**4.54**	**64**	P	**Pn**	**15 10 39.8**	**+0.6**
SJI				S	**Sn**	**15 11 32.1**	**+0.7**
KRKI	**Karangkates**	**5.01**	**72**	P	**Pn**	**15 10 45.2**	**-0.4**
KASI	**Kota Agung**	**5.25**	**323**	P	**Pn**	**15 10 48.3**	**-0.6**
	1.2nm4μm68nm,0.8s						
GRJI	**Gresik**	**5.56**	**60**	P	**Pn**	**15 10 52.3**	**-0.8**
	0.5nm3μm107nm,1.5s						
LWLI	**Liwa**	**5.91**	**323**	P	**Pn**	**15 10 58.7**	**+0.7**
	7μm142nm,0.8s						
GMJI	**Gumukmas**	**5.91**	**76**	P	**Pn**	**15 10 57.1**	**-0.9**
	0.6nm3μm126nm,0.9s						
MDSI	**Maura Dua**	**6.28**	**326**	P	**Pn**	**15 11 02.5**	**-0.5**
	0.2nm838nm35nm,0.9s						
ABJI	**Asem Bagus**	**6.80**	**74**	P	**Pn**	**15 11 10.8**	**+0.6**
	0.5nm2μm102nm,0.8s						
BYJI	**Banyuwangi**	**6.80**	**77**	P	**Pn**	**15 11 11.3**	**+1.1**
	1.0nm175nm,0.9s						
TPI	**Tanjungpandan**	**6.97**	**0**	P	**Pn**	**15 11 12.2**	**-0.3**
	0.2nm37nm,0.9s						
IGBI	**Denpasar**	**7.46**	**83**	P	**Pn**	**15 11 19.0**	**-0.3**
	7μm180nm,1.1s						
SRBI	**Singaraja**	**7.66**	**78**	P	**Pn**	**15 11 21.0**	**-1.0**
	0.5nm1μm82nm,0.6s						
KSI	**Kapahiang**	**7.88**	**320**	P	**Pn**	**15 11 24.7**	**-0.4**
	0.6nm3μm110nm,0.8s						
KHKI	**Kahang-Kahang**	**7.98**	**81**	P	**Pn**	**15 11 25.5**	**-1.0**
	0.4nm66nm,1.2s						
SDSI	**Sungai Dareh**	**10.74**	**324**	P	**Pn**	**15 12 02.5**	**-1.8**
	9.9nm,0.9s						
COCO	**West Island**	**10.89**	**256**	P	**Pn**	**15 12 04.0**	**-2.3**
	114nm,1.5s						
SISI	**Saibi**	**11.95**	**314**	P	**Pn**	**15 12 22.0**	**+1.2**
	34nm,1.1s						
KAPI	**Kappang**	**12.90**	**69**	Pn	**Pn**	**15 12 31.1**	**-2.7**
	2.3nm,0.3s,baz=241,slow=11,SNR=3.4						
KAPI				LR	LR	15 18 24.6	
	comp=Z,182nm,20.5s,baz=250,slow=42						
KAPI	**Kappang**	**12.90**	**69**	Pn	**Pn**	**15 12 31.1**	**-2.7**
KAPI				LR	LR	15 18 24.6	
BKSI	**Bulukumba**	**13.13**	**71**	P	**Pn**	**15 12 37.7**	**+0.7**
	20nm,1.4s						
SPSI	**Sidrap Palu**	**13.34**	**65**	P	**Pn**	**15 12 40.8**	**+0.9**
	16nm,1.5s						
BNSI	**Bone**	**13.46**	**68**	P	**Pn**	**15 12 41.7**	**+0.2**
	25nm,1.5s						
TTSI	**Tana Toraja**	**13.81**	**62**	P	**Pn**	**15 12 48.0**	**+1.7**
	616nm44nm,1.3s						
MMRI	**Maumere**	**14.45**	**87**	P	**Pn**	**15 12 57.9**	**+2.9**
	34nm,1.7s						
GSI	**Gunungsitoli**	**14.88**	**317**	P	**Pn**	**15 12 57.0**	**-4.0**
	50nm,1.5s						
PCI	**Palu**	**14.98**	**55**	P	**Pn**	**15 13 03.8**	**+1.5**
	42nm1.8nm,1.0s						
PSI	**Prapat**	**15.21**	**325**	Pn	**Pn**	**15 13 03.5**	**-1.8**
	baz=148,slow=17,SNR=3.3						
PSI				LR	LR	15 19 22.0	
	comp=Z,267nm,21.5s,baz=143,slow=40						
IPM	**Ipoh**	**15.62**	**335**	P	**Pn**	**15 13 15.6**	**+5.1**
KDI	**Kendari**	**15.94**	**70**	P	**Pn**	**15 13 17.6**	**+2.8**
	13nm,1.2s						
MBWA	**Marble Bar**	**16.23**	**136**	*e*P	**Pn**	**15 13 14.9**	**-3.6**
MBWA	**Marble Bar**	**16.23**	**136**	P	**Pn**	**15 13 15.6**	**-2.8**
	27nm,3.1s						
APSI	**Ampana**	**16.47**	**59**	P	**Pn**	**15 13 24.3**	**+2.7**
	2μm70nm,1.0s						
KULM	**Kulim**	**16.50**	**335**	P	**Pn**	**15 13 25.2**	**+3.2**
	13nm,2.0s						
MRSI	**Marisa**	**17.49**	**55**	P	**Pn**	**15 13 34.6**	**+0.2**
	489nm49nm,1.0s						
KKM	**Kota Kinabalu**	**17.88**	**29**	*e*P	**Pn**	**15 13 37.1**	**-2.0**
	21nm,1.1s						
KKM	**Kota Kinabalu**	**17.88**	**29**	P	**Pn**	**15 13 36.7**	**-2.4**
	18nm,1.2s						
MYLDM	**Lahad Datu**	**18.37**	**37**	P	**Pn**	**15 13 46.4**	**+1.2**
	45nm,1.2s						
KMSI	**Cibinong**	**19.23**	**59**	P	**Pn**	**15 13 55.7**	**+0.1**
	148nm,1.0s						
FITZ	**Fitzroy Crossi**	**19.31**	**117**	*e*P	**Pn**	**15 13 58.6**	**+2.0**
	19nm,1.2s						
FITZ				*e*S	Sn	15 17 12.3	-20
FITZ	**Fitzroy Crossi**	**19.31**	**117**	P	**Pn**	**15 13 56.7**	**+0.1**
	0.7nm,0.3s,baz=263,slow=5.1,SNR=21						
FITZ				LR	LR	15 20 12.0	
	comp=Z,221nm,21.7s,baz=304,slow=33						
FITZ	**Fitzroy Crossi**	**19.31**	**117**	*e*P	**Pn**	**15 13 57.8**	**+1.2**
	14nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.31**	**117**	P	**Pn**	**15 13 56.2**	**-0.4**
	28nm,3.4s						
BSI	**Banda Aceh**	**19.53**	**320**	P	**Pn**	**15 13 58.9**	**-0.3**
	174nm,1.1s						
NLAI	**Namlea**	**20.38**	**73**	P	**P**	**15 14 06.7**	**-0.4**
	696nm48nm,0.9s						
MNI	**Manado**	**20.42**	**58**	P	**P**	**15 14 07.4**	**-0.2**
	57nm,1.1s						
AAI	**Ambon**	**21.27**	**75**	P	**P**	**15 14 14.7**	**-2.1**
	57nm,1.2s,mb4.8						
KNA	**Kununurra**	**21.43**	**108**	*e*P	**P**	**15 14 18.7**	**+0.3**
	33nm,1.2s,mb4.5						
KNA	**Kununurra**	**21.43**	**108**	P	**P**	**15 14 18.5**	**+0.1**
	475nm62nm,1.1s,mb4.8						
TNTI	**Ternate**	**22.25**	**63**	P	**P**	**15 14 27.0**	**-0.2**
	109nm,1.9s,mb5.0						
KAKA	**Kakadu**	**24.49**	**99**	*e*P	**P**	**15 14 50.7**	**+1.2**
	12nm,0.7s,mb4.4						
KAKA	**Kakadu**	**24.49**	**99**	*e*P	**P**	**15 14 50.7**	**+1.3**
	27nm,0.7s,mb4.8						
KAKA	**Kakadu**	**24.49**	**99**	P	**P**	**15 14 50.1**	**+0.6**
	27nm,0.7s,mb4.8						
TLE	**Tual**	**25.19**	**82**	P	**P**	**15 14 55.7**	**-0.2**
	49nm,2.7s,mb4.5						
WRA	**Warramunga Arr**	**27.67**	**114**	P	**P**	**15 15 18.5**	**+0.3**
	1.3nm,0.5s,mb3.8,baz=289,slow=11,SNR=9.5						
WRA				PcP	PcP	15 18 35.6	+0.3
	1.3nm,0.7s,baz=290,slow=2.0,SNR=7.1						
WRA	**Warramunga Arr**	**27.67**	**114**	P	**P**	**15 15 18.5**	**+0.3**
WRA				PcP	PcP	15 18 35.6	+0.3
WRAB	**Tennant Creek**	**27.68**	**114**	*e*P	**P**	**15 15 17.9**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.0						
WRAB	**Tennant Creek**	**27.68**	**114**	*e*P	**P**	**15 15 17.9**	**-0.4**
	comp=Z,3.9nm,1.0s,mb4.0						
WRAB	**Tennant Creek**	**27.68**	**114**	P	**P**	**15 15 18.1**	**-0.2**
	comp=Z,15nm,3.1s						
ASAR	**Alice Springs**	**28.62**	**122**	P	**P**	**15 15 27.0**	**+0.3**
	comp=Z,1.3nm,0.7s,mb3.8,baz=299,slow=9.0,SNR=14						
ASAR				PcP	PcP	15 18 38.1	+0.6
	comp=Z,3.1nm,1.0s,baz=315,slow=2.2,SNR=11						
QIZ	**Qiongzhong**	**28.70**	**4**	P	**P**	**15 15 27.8**	**+0.5**
QIZ				S	**S**	**15 20 15.3**	**+0.1**
QIZ				pmax	pmax		
	comp=Z,33nm,2.1s,mb4.7						
QIZ				LR	LR		
	comp=Z,140nm,34.8s,MS3.3						
CM31	**Chiang Mai Arr**	**29.33**	**343**	*e*P	**P**	**15 15 32.9**	**0.0**
	comp=Z,24nm,1.3s,mb4.8						
CMAR	**Chiang Mai Arr**	**29.33**	**343**	P	**P**	**15 15 32.7**	**-0.2**
	comp=Z,9.4nm,1.0s,mb4.5,baz=178,slow=8.6,SNR=27						
CMAR				PcP	PcP	15 18 39.4	0.0
	comp=Z,1.7nm,0.9s,baz=186,slow=3.9,SNR=6.4						
CMAR				LR	LR	15 29 01.8	
	comp=Z,169nm,18.3s,MS3.7,baz=160,slow=40						
CMAR	**Chiang Mai Arr**	**29.33**	**343**	P	**P**	**15 15 32.8**	**-0.2**
CMAR						15 18 39.4	
CHTO	**Chiang Mai**	**29.67**	**343**	*e*P	**P**	**15 15 36.3**	**+0.4**
CHTO				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.7						
CHTO	**Chiang Mai**	**29.67**	**343**	*e*P	**P**	**15 15 36.3**	**+0.3**
	comp=Z,15nm,1.0s,mb4.7						
CHTO	**Chiang Mai**	**29.67**	**343**	P	**P**	**15 15 35.9**	**0.0**
	comp=Z,17nm,1.1s,mb4.7						
COEN	**Coen**	**34.99**	**100**	P	**P**	**15 16 20.8**	**-2.0**
	comp=Z,58nm,3.4s						
KMI	**Kunming**	**35.01**	**352**	P	**P**	**15 16 25.0**	**+2.3**
KMI				PP	PP	15 17 44.3	+1.9
KMI				S	**S**	**15 21 54.8**	**+1.2**
KMI				SS	SS	15 24 10.3	-16
KMI				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.1						
KMI				pmax	pmax		
	comp=Z,73nm,5.1s						
KMI				LR	LR		
	comp=N,240nm,18.1s,MS4.1						
KMI				LR	LR		
	comp=E,210nm,19.6s,MS4.1						
KMI				LR	LR		
	comp=Z,280nm,15.1s,MS4.1						
SSLB	**Suanglung**	**35.80**	**21**	*e*P	**P**	**15 16 28.7**	**-0.8**
	comp=Z,28nm,0.8s,mb5.2						
GYA	**Guiyang**	**36.02**	**358**	P	**P**	**15 16 33.8**	**+2.4**
GYA				pP	pP	15 16 42.3	+4.1
GYA				PP	PP	15 17 56.4	+2.8
GYA				PcP	PcP	15 19 01.3	+3.6
GYA				S	**S**	**15 22 09.4**	**+0.3**
GYA				ScP	ScP	15 22 43.0	+0.2
GYA				SS	SS	15 24 31.8	-15
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
GYA				pmax	pmax		
	comp=Z,120nm,4.9s						
GYA				LR	LR		
	comp=N,740nm,16.1s,MS4.6						
GYA				LR	LR		
	comp=E,540nm,17.1s,MS4.6						
GYA				LR	LR		
	comp=Z,840nm,15.5s,MS4.6						
SHL	**Shillong**	**38.33**	**337**	*e*PKP	**P**	**15 16 53.2**	**+2.2**
STKA	**Stephens Creek**	**38.35**	**130**	*e*P	**P**	**15 16 51.9**	**+0.7**
	comp=Z,7.0nm,1.0s,mb4.3						
STKA	**Stephens Creek**	**38.35**	**130**	P	**P**	**15 16 51.2**	**+0.1**
	comp=Z,5.2nm,0.7s,mb4.3,baz=312,slow=10,SNR=8.9						
STKA				PcP	PcP	15 19 05.2	+0.5
	comp=Z,2.3nm,0.7s,baz=254,slow=7.8,SNR=3.1						
STKA	**Stephens Creek**	**38.35**	**130**	P	**P**	**15 16 51.2**	**+0.1**
STKA				PcP	PcP	15 19 05.2	+0.5
ENH	**Enshi**	**39.85**	**2**	*e*P	**P**	**15 17 03.0**	**-0.6**
	comp=Z,35nm,1.3s,mb4.9						
WHN	**Wuhan**	**40.59**	**9**	P	**P**	**15 17 09.3**	**-0.5**
CD2	**Chengdu**	**40.62**	**355**	*e*P	**P**	**15 17 10.3**	**+0.3**
CD2				pP	pP	15 17 20.0	+3.1
CD2				PP	PP	15 18 47.9	+4.0
CD2				S	**S**	**15 23 17.4**	**-1.1**
CD2				sS	sS	15 23 33.6	+3.7
CD2				SS	SS	15 26 13.0	-6.3
CD2				pmax	pmax		
	comp=Z,30nm,1.0s,mb4.9						
CD2				pmax	pmax		
	comp=Z,100nm,4.8s						
CD2				LR	LR		
	comp=N,310nm,14.2s,MS4.5						
CD2				LR	LR		
	comp=E,240nm,11.9s,MS4.5						
CD2				LR	LR		
	comp=Z,330nm,15.5s,MS4.3						
ODAN	**Odare**	**41.38**	**332**	*e*P	**P**	**15 17 15.6**	**-0.8**
	comp=Z,60nm,0.8s,mb5.3						
TAPN	**Taplejung**	**41.65**	**333**	*e*P	**P**	**15 17 18.5**	**-0.1**
	comp=Z,85nm,0.9s,mb5.4						
RAMN	**Ramite**	**41.83**	**331**	*e*P	**P**	**15 17 19.1**	**-0.9**
	comp=Z,115nm,1.6s,mb5.3						
LSA	**Lhasa**	**42.34**	**338**	P	**P**	**15 17 25.1**	**+1.0**
LSA	**Lhasa**	**42.34**	**338**	*e*P	**P**	**15 17 25.4**	**+1.3**
LSA				pmax	pmax		
	comp=Z,40nm,0.9s,mb5.0						
LSA	**Lhasa**	**42.34**	**338**	*e*P	**P**	**15 17 25.4**	**+1.3**
	comp=Z,40nm,0.9s,mb5.0						
JIRN	**Jiri**	**42.62**	**331**	*e*P	**P**	**15 17 25.9**	**-0.6**
	comp=Z,85nm,0.8s,mb5.5						
PKI	**Pulchoki**	**42.92**	**330**	*e*P	**P**	**15 17 28.2**	**-0.7**
PKIN	**Phulchoki**	**42.93**	**330**	*e*P	**P**	**15 17 28.1**	**-0.9**
	comp=Z,32nm,0.8s,mb5.1						
NJ2	**Nanjing**	**42.94**	**14**	*e*P	**P**	**15 17 28.3**	**-0.7**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
GUN	**Gumba**	**42.98**	**331**	*e*P	**P**	**15 17 29.2**	**-0.2**
	comp=Z,64nm,0.8s,mb5.4						
DMN	**Daman**	**43.10**	**330**	*e*P	**P**	**15 17 29.8**	**-0.6**
	comp=Z,56nm,0.9s,mb5.3						
KKN	**Kakani**	**43.16**	**330**	*e*P	**P**	**15 17 30.2**	**-0.7**
	comp=Z,58nm,0.9s,mb5.3						
KKN	**

comp=Z,28nm,1.0s,mb5.2
WMQ pmax pmax
comp=Z,120nm,6.0s
WMQ LR LR
comp=N,47nm,16.0s,MS4.0
WMQ LR LR
comp=E,78nm,16.0s,MS4.0
WMQ LR LR
comp=Z,38nm,16.0s,MS3.6
KSH Kashi 57.17 331 P **P 15 19 15.5 -1.4**
KSH pP pP 15 19 25.6 +1.5
KSH sP sP 15 19 29.5 +2.7
KSH PcP PcP 15 20 11.6 +0.2
KSH PP PP 15 21 23.0 -1.2
KSH ScP ScP 15 24 06.8 -3.2
KSH PcS PcS 15 24 10.8 -1.5
KSH S **S 15 27 02.1 -9.1**
KSH sS sS 15 27 20.3 -2.6
KSH ScS ScS 15 28 58.5 -6.6
KSH pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
KSH pmax pmax
comp=Z,68nm,5.1s
KSH LR LR
comp=N,410nm,13.2s
KSH LR LR
comp=E,210nm,9.0s
KSH LR LR
comp=Z,95nm,5.1s
SONM Songino Array 57.36 359 P **P 15 19 17.6 -0.5**
comp=Z,7.9nm,0.9s,mb4.7,baz=176,slow=6.9,SNR=30
ULN Ulaanbaatar 57.38 360 *e*P **P 15 19 18.4 +0.2**
ULN pmax pmax
comp=Z,13nm,1.1s,mb4.9
ULN Ulaanbaatar 57.38 360 *e*P **P 15 19 18.4 +0.2**
comp=Z,13nm,1.1s,mb4.9
ULN Ulaanbaatar 57.38 360 P **P 15 19 18.5 +0.3**
MDJ Mudanjiang 57.66 18 P **P 15 19 20.6 +0.4**
MDJ pP pP 15 19 29.8 +2.5
MDJ sP sP 15 19 33.6 +3.5
MDJ PP PP 15 21 27.9 -0.5
MDJ ScP ScP 15 24 11.3 -0.7
MDJ PcS PcS 15 24 14.9 +0.7
MDJ S **S 15 27 17.0 -0.3**
MDJ sS sS 15 27 32.5 +3.4
MDJ pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
MDJ pmax pmax
comp=Z,97nm,3.3s
ZAK Zakamensk 60.02 357 *e*P **P 15 19 36.1 -0.4**
ZAK *e* 15 20 22.6
ZAK pmax pmax
comp=Z,3.0nm,1.1s,mb4.2
TKM2 Tokmak 2 60.04 333 P **P 15 19 36.5 -0.4**
TKM2 pmax pmax
comp=Z,14nm,1.0s,mb5.0
TKM2 Tokmak 2 60.04 333 P **P 15 19 36.5 -0.4**
comp=Z,14nm,1.0s,mb4.9
EKS2 Erkin-Say 60.67 332 *e*P **P 15 19 40.7 -0.4**
EKS2 pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
EKS2 Erkin-Say 60.67 332 *e*P **P 15 19 40.7 -0.4**
comp=Z,5.8nm,0.9s,mb4.7
MK31 Makanchi Array 60.69 340 *e*P **P 15 19 41.3 +0.1**
MKAR Makanchi Array 60.69 340 P **P 15 19 41.3 +0.1**
comp=Z,6.7nm,0.7s,mb4.9,baz=114,slow=8.5,SNR=71
MKAR LR LR 15 50 30.9
comp=Z,59nm,18.6s,MS3.8,baz=258,slow=41
TLY Talaya 61.29 357 *e*P **P 15 19 45.5 +0.3**
TLY pmax pmax
comp=Z,12nm,1.8s,mb4.7
TLY MLR MLR
comp=Z,64nm,17.0s,MS3.8
MOY Mondy 61.45 355 *e*P **P 15 19 47.0 +0.7**
MOY pmax pmax
comp=Z,23nm,2.0s,mb5.0
IRK Irkutsk 61.83 358 *e*P **P 15 19 48.1 -0.7**
IRK pmax pmax
comp=Z,22nm,1.5s,mb5.1
KLR Kul'dur 62.45 18 *e*P **P 15 19 47.2 -5.8**
HABR Khabarovsk 62.84 20 *c*e*P **P 15 19 48.3 -7.3**
HABR *e*PP pP 15 20 01.2 -1.6
HABR *e* 15 20 30.7
HABR *e* 15 22 08.5
HABR S **S 15 28 12.4 -11**
HABR *e* 15 28 27.7
HABR 15 29 37.5
HABR *e*SS SS 15 32 17.4 -12
HABR *e*SSS 15 35 09.9
HABR pmax pmax
comp=N,27nm,1.9s
HABR pmax pmax
comp=E,95nm,2.2s
HABR pmax pmax
comp=Z,47nm,2.0s,mb5.3
HABR MLR MLR
comp=Z,35nm,17.0s,MS3.6
YSS Yuzh-Sakhalins 64.56 26 ‖*e*P **P 15 20 05.0 -2.0**
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.3
YSS Yuzh-Sakhalins 64.56 26 *e*P **P 15 20 06.0 -1.0**
comp=Z,29nm,1.0s,mb5.3
MAW Mawson 64.92 197 P **P 15 20 11.3 +2.2**
comp=Z,8.0nm,1.0s,mb4.7,baz=22,slow=6.3,SNR=11
KURK Kurchatov 65.30 340 *e*P **P 15 20 12.0 +0.2**
KURK pmax pmax
comp=Z,10.0nm,0.2s,mb5.5
KURK Kurchatov 65.30 340 *e*P **P 15 20 12.0 +0.2**
comp=Z,9.9nm,0.2s,mb5.5
ZAA0 Zalesovo Array 66.36 346 *e*P **P 15 20 17.1 -1.3**
ZALV Zalesovo Beam 66.36 346 P **P 15 20 17.2 -1.3**
comp=Z,1.0nm,0.4s,mb4.2,baz=125,slow=4.3,SNR=8.5
ZALV LR LR 15 51 49.8
comp=Z,30nm,20.3s,MS3.5,baz=268,slow=38
NVS Novosibirsk 67.56 345 *e*P **P 15 20 25.8 -0.3**
URZ Urewera 67.90 127 LR LR 15 50 24.4
comp=Z,156nm,18.9s,MS4.3,baz=190,slow=36
BVAR Borovoye Array 70.15 337 P **P 15 20 41.8 -0.5**
comp=Z,3.6nm,0.6s,mb4.5,baz=156,slow=9.1,SNR=19
BRVK Borovoye 70.22 337 ‖*e*P **P 15 20 43.3 +0.6**
BRVK pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
BRVK Borovoye 70.22 337 *e*P **P 15 20 42.5 -0.2**
comp=Z,3.7nm,0.7s,mb4.4
KMBO Kilima Mbogo 70.49 272 P **P 15 20 47.1 +1.9**
comp=Z,3.3nm,1.0s,mb4.2,baz=62,slow=7.1,SNR=4.7
KMBO LR LR 15 49 42.1
comp=Z,53nm,19.0s,MS3.8,baz=77,slow=34
ABKAR Akbulak array 72.10 329 *e*P **P 15 20 54.1 -0.1**
comp=Z,18nm,1.0s,mb5.0
SYO Syowa Base 73.14 200 ‖*e*X **P 15 21 00.4 +0.2**
YAK Yakutsk 73.61 11 *e*P **P 15 21 01.8 -1.1**
YAK pmax pmax
comp=Z,34nm,0.9s,mb5.3
YAK pmax pmax
comp=E,6.0nm,1.2s
YAK pmax pmax
comp=N,12nm,1.1s
YAK Yakutsk 73.61 11 *e*P **P 15 21 01.6 -1.3**
comp=N,40nm,0.9s,mb5.3
PETK Petropavlovsk- 75.69 28 P **P 15 21 13.6 -1.5**
comp=N,5.3nm,0.8s,mb4.5,baz=173,slow=2.3,SNR=12
SVE Sverdlovsk 76.78 336 ‖*e*P **P 15 21 22.2 +0.9**
SVE pmax pmax
comp=Z,27nm,1.4s,mb5.0
ARU Arti 77.38 335 *d*i*P **P 15 21 24.7 +0.1**
ARU *e* 15 24 15.9
ARU *e*PPP 15 26 02.4
ARU S S 15 31 12.3 -1.3
ARU pmax pmax
comp=Z,30nm,1.7s,mb5.0
ARU Arti 77.38 335 *e*P **P 15 21 24.8 +0.1**
comp=Z,27nm,1.3s,mb5.0
ZEI Tsey 78.05 318 *e*P **P 15 21 30.6 +1.9**
ZEI pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
BOSA Boshof 78.75 243 LR LR 15 52 21.7
comp=Z,121nm,18.6s,MS4.3,baz=346,slow=33
KIV Kislovodsk 79.36 318 *e*P **P 15 21 37.0 +1.1**
KIV pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
SEY Seymchan 80.19 19 ⇑i*P **P 15 21 39.7 -0.2**
MMAI Mount Meron Ar 80.73 306 P **P 15 21 44.9 +1.4**
comp=Z,6.9nm,0.9s,mb4.6,baz=73,slow=4.8,SNR=5.2
TIXI Tiksi 82.46 7 *e*P **P 15 21 51.3 -0.6**
TIXI pmax pmax
comp=Z,14nm,0.8s,mb4.9
TIXI Tiksi 82.46 7 *e*P **P 15 21 51.3 -0.5**
comp=Z,14nm,0.8s,mb4.9
MAIT Maitri 82.80 199 *e*P **P 15 21 54.6 +0.8**
VRHR Novokhopersk 83.01 325 *e*P **P 15 21 55.7 +0.6**
VRHR pmax pmax
comp=N,20nm,0.7s
VRHR pmax pmax
comp=E,20nm,0.7s
VRHR pmax pmax
comp=Z,40nm,0.7s,mb5.6
BR131 Keskin Array S 84.14 312 *e*P **P 15 22 01.5 +0.3**
comp=Z,5.3nm,1.1s,mb4.6
BRTR Keskin Array B 84.14 312 P **P 15 22 00.8 -0.5**
comp=Z,5.7nm,1.1s,mb4.6,baz=131,slow=6.7,SNR=22
VSR Storozhevoye 84.47 324 *e*P **P 15 22 02.8 +0.2**
VSR pmax pmax
comp=N,2.0nm,0.6s
VSR pmax pmax
comp=E,9.0nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb5.1
MOS Moscow 87.05 328 *e*P **P 15 22 14.4 -0.9**
OBN Obninsk 87.38 327 *c*e*P **P 15 22 17.4 +0.5**
OBN *e* 15 22 30.5
OBN pmax pmax
comp=Z,41nm,1.7s,mb5.4
OBN Obninsk 87.38 327 *e*P **P 15 22 17.5 +0.6**
comp=Z,19nm,0.8s,mb5.4
BILL Bilibino 87.89 19 ⇑‖*e*P **P 15 22 19.1 0.0**
BILL *e* 15 22 33.2
BILL *e* 15 32 49.6
BILL pmax pmax
comp=Z,8.0nm,2.5s,mb4.5
BILL Bilibino 87.89 19 *e*P **P 15 22 18.4 -0.6**
comp=Z,3.6nm,1.1s,mb4.5
AKASG Malin Array Be 90.25 321 P **P 15 22 29.1 -1.4**
comp=Z,0.3nm,0.4s,mb4.0,baz=68,slow=7.3,SNR=5.0
KOLS Kolonicke sedl 94.26 319 *e*P **P 15 22 50.2 +1.0**
KOLS pmax pmax
comp=Z,3.0nm,1.2s,mb4.6
KOLS Kolonicke sedl 94.26 319 *e*P **P 15 22 50.2 +1.0**
comp=Z,3.3nm,1.2s,mb4.6
KOLS Kolonicke sedl 94.26 319 *e*P **P 15 22 50.2 +1.0**
CRVS Cervenica-Dubn 94.78 319 *e*P **P 15 22 52.1 +0.5**
CRVS pmax pmax
comp=Z,2.0nm,0.5s,mb4.8
CRVS Cervenica-Dubn 94.78 319 *e*P **P 15 22 52.1 +0.5**
comp=Z,2.1nm,0.5s,mb4.8
CRVS Cervenica-Dubn 94.78 319 *e*P **P 15 22 52.1 +0.5**
YKA Yellowknife Ar 119.21 21 PKP PKPdf 15 28 18.6 0.0
comp=Z,1.2nm,0.8s,baz=291,slow=2.0,SNR=5.8
NVAR Mina Array Bea 129.99 47 PKP PKPdf 15 28 40.5 +0.4
comp=Z,0.4nm,0.7s,baz=241,slow=3.1,SNR=4.0
TXAR Lajitas Array 144.83 52 PKP PKPdf 15 29 08.2 +0.6
comp=Z,3.9nm,0.8s,baz=258,slow=1.7,SNR=61
WMOK Wichita Mounta 145.34 40 *e*PKIKP PKPdf 15 29 09.1 +0.8
WMOK *e* 15 29 21.1
HDIL Hopedale 145.85 23 *e*PKP PKPdf 15 29 09.9 +0.9
NCB Newcomb 145.89 2 *e*PKPdf PKPdf 15 29 09.8 +0.8
JCT Junction City 147.16 47 *e*PKP2 PKPab 15 29 14.1 -1.2
FVM French Village 147.54 27 *e*PKP2 PKPbc 15 29 14.8 +0.3
BINY Binghamton 147.54 5 *e*PKPbc PKPbc 15 29 15.0 +0.6
OLIL Olney 147.89 24 *e*PKPbc PKPbc 15 29 15.7 +0.3
ACSO Alum Creek Sta 148.22 16 *e*PKPbc PKPbc 15 29 16.9 +0.7
SIUC Southern Illin 148.29 26 *e*PKPbc PKPbc 15 29 17.2 +0.7
SIUC *e*PKPab PKPab 15 29 20.2 +0.7
MIAR Mount Ida 148.61 35 *e*PKPbc PKPbc 15 29 18.4 +1.0
MIAR *e*PKPab PKPab 15 29 21.9 +1.0
SSPA Standing Stone 148.87 8 *e*PKPbc PKPbc 15 29 18.5 +0.5
WCI Wyandotte Cave 149.01 22 *e*PKP2 PKPbc 15 29 18.9 +0.5
UALR University of 149.12 33 *e*PKPbc PKPbc 15 29 19.4 +0.7
UALR *e*PKPab PKPab 15 29 23.8 +0.8
WVT Waverly 150.23 26 *e*PKP2 PKPbc 15 29 21.9 +0.5
HKT Hockley 150.27 44 *e*PKHKP PKPdf 15 29 18.2 +1.6
OXF Oxford 150.84 30 *e*PKIKP PKPbc 15 29 23.4 +0.5
TZTN Tazewell 151.47 19 *e*PKPbc PKPbc 15 29 25.0 +0.6
ELN Prospectdale 151.63 14 *e*PKPbc PKPbc 15 29 25.0 +0.3
SWET Sewanee 151.80 24 *e*PKPbc PKPbc 15 29 25.3 +0.1
CPCT Cooper Cave 152.13 22 *e*PKPbc PKPbc 15 29 26.7 +0.8
CPCT *e*PKPab PKPab 15 29 35.7 +0.3
TKL Tuckaleechee C 152.21 20 *e*PKIKP PKPbc 15 29 26.6 +0.5
LPAZ La Paz 153.78 189 PKPbc PKPbc 15 29 32.6 +2.6
comp=Z,1.0nm,0.7s,baz=225,slow=3.6,SNR=4.0
LPAZ PKPab PKPab 15 29 45.3 +2.6
comp=Z,1.3nm,0.8s,baz=158,slow=5.3,SNR=5.3

*NEIC **15** 15:27:36.6,38°.15N×24°.02E,h22km,ML3.3(ATH),After ATH.*
*CSEM **15** 15:27:36.9±0.1,38°.18N×24°.05E,h5km,ML3.3,Error ellipse: s-maj=2.3km s-min=2.1km az=167.0*
*ATH **15** 15:27:36.6,38°.15N×24°.02E,h22km±1km,MD3.1/4,ML3.3*
*ISCJB **15** 15:27:36.8±0.5,38°.18N±0°.02×24°.04E±0°.03,h6km±4km, Error ellipse: s-maj=4.0km s-min=3.8km az=161.2*
*THE **15** 15:27:37.6,38°.18N×24°.01E,h7km±1km,ML2.8/9,Error ellipse: s-maj=1.6km s-min=0.8km az=262.0*
ISC 15 15:27:37.4±0.5,38°.17N±0°.02×24°.03E±0°.03,h9km±4km, n54,σ0=53/94,9C,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PTL	**Penteli**	**0.18**	**227**	⇑*i*Pb			**Pg**	**15 27 41.1**	**-0.1**
PTL				*e*Sb			**Sg**	**15 27 44.2**	**+0.4**
PTL	**Penteli**	**0.18**	**227**	⇑*i*PB			**Pg**	**15 27 41.1**	**-0.1**
PTL				*e*SB			**Sg**	**15 27 44.2**	**+0.4**
PTL	**Penteli**	**0.18**	**227**	⇑*i*Pb			**Pg**	**15 27 41.1**	**-0.1**
PTL				*e*Sb			**Sg**	**15 27 44.2**	**+0.4**
ATHU	**Athens Univers**	**0.28**	**224**	P			**Pg**	**15 27 42.7**	**-0.4**
ATHU				S			**Sg**	**15 27 46.4**	**-0.5**
ATHU	**Athens Univers**	**0.28**	**224**	P			**Pg**	**15 27 42.7**	**-0.4**
ATHU				S			**Sg**	**15 27 46.4**	**-0.5**
ATH	**Athens Observa**	**0.32**	**231**	⇑*i*Pb			**Pg**	**15 27 43.7**	**0.0**
ATH				*e*Sb			**Sg**	**15 27 48.2**	**+0.2**
ATH	**Athens Observa**	**0.32**	**231**	⇑*i*PB			**Pg**	**15 27 43.7**	**0.0**
ATH				*e*SB			**Sg**	**15 27 48.2**	**+0.2**
ATH	**Athens Observa**	**0.32**	**231**	⇑*i*Pb			**Pg**	**15 27 43.7**	**0.0**
ATH				*e*Sb			**Sg**	**15 27 48.2**	**+0.2**
VLY	**Voula,Athens**	**0.37**	**210**	⇑*i*Pb			**Pg**	**15 27 44.3**	**-0.4**
VLY				*e*Sb			**Sg**	**15 27 49.5**	**-0.1**
VLY	**Voula,Athens**	**0.37**	**210**	⇑*i*PB			**Pg**	**15 27 44.3**	**-0.4**
VLY				*e*SB			**Sg**	**15 27 49.5**	**-0.1**
VLY	**Voula,Athens**	**0.37**	**210**	⇑*i*Pb			**Pg**	**15 27 44.3**	**-0.4**
VLY				*e*Sb			**Sg**	**15 27 49.5**	**-0.1**
NAIG	**Nisos Aigina**	**0.59**	**226**	*e*Pn			**Pg**	**15 27 48.9**	**0.0**
NAIG	**Nisos Aigina**	**0.59**	**226**	*e*PN			**Pg**	**15 27 48.9**	**0.0**
NAIG	**Nisos Aigina**	**0.59**	**226**	*e*Pn			**Pg**	**15 27 48.9**	**0.0**
LTK	**Loutraki**	**0.85**	**260**	P			**Pg**	**15 27 54.1**	**+0.3**
LTK				S			**Sg**	**15 28 05.7**	**+0.8**
LTK	**Loutraki**	**0.85**	**260**	*e*PN			**Pg**	**15 27 53.9**	**+0.1**
LTK				*e*SN			**Sg**	**15 28 04.8**	**-0.1**
LTK	**Loutraki**	**0.85**	**260**	P			**Pg**	**15 27 54.1**	**+0.3**
LTK				*e*Sn			**Sg**	**15 28 04.8**	**-0.1**
LTK				S			**Sg**	**15 28 05.7**	**+0.8**
LKR	**Lokris**	**0.94**	**301**	*e*Pn			**Pg**	**15 27 54.8**	**-0.7**
LKR				*e*Sn			**Sg**	**15 28 08.1**	**+0.3**
LKR	**Lokris**	**0.94**	**301**	P			**Pg**	**15 27 54.8**	**-0.7**
LKR				S			**Sg**	**15 28 08.6**	**+0.8**
LKR	**Lokris**	**0.94**	**301**	*e*PN			**Pg**	**15 27 54.8**	**-0.7**
LKR				*e*SN			**Sg**	**15 28 08.1**	**+0.3**
LKR	**Lokris**	**0.94**	**301**	P			**Pg**	**15 27 54.8**	**-0.7**
LKR				S			**Sg**	**15 28 08.6**	**+0.8**
ATAL	**Atalanti**	**0.95**	**304**	P			**Pg**	**15 27 55.4**	**-0.3**
ATAL				S			**Sg**	**15 28 08.7**	**+0.7**
ATAL	**Atalanti**	**0.95**	**304**	P			**Pg**	**15 27 55.4**	**-0.3**
ATAL				S			**Sg**	**15 28 08.7**	**+0.7**
AOS	**Alonnisos**	**1.00**	**353**	P			**Pg**	**15 27 56.7**	**-0.1**
AOS				S			**Sg**	**15 28 10.5**	**+0.7**
AOS	**Alonnisos**	**1.00**	**353**	P			**Pg**	**15 27 56.7**	**-0.1**
AOS				S			**Sg**	**15 28 10.5**	**+0.7**
DSF	**Desfina**	**1.21**	**282**	P			**Pb**	**15 27 59.5**	**-0.9**
DSF				S			**Sb**	**15 28 17.0**	**+0.9**
DSF	**Desfina**	**1.21**	**282**	P			**Pb**	**15 27 59.5**	**-0.9**
DSF				S			**Sb**	**15 28 17.0**	**+0.9**
NEO	**Neokhori**	**1.30**	**331**	*e*Pn			**Pn**	**15 28 02.0**	**+0.3**
NEO				*e*Sn			**Sn**	**15 28 19.1**	**0.0**
NEO	**Neokhori**	**1.30**	**331**	*e*PN			**Pn**	**15 28 02.0**	**+0.3**
NEO				*e*SN			**Sn**	**15 28 19.1**	**0.0**
NEO	**Neokhori**	**1.30**	**331**	*e*Pn			**Pn**	**15 28 02.0**	**+0.3**
NEO				*e*Sn			**Sn**	**15 28 19.1**	**0.0**
GUR	**Goura**	**1.35**	**261**	P			**Pn**	**15 28 02.5**	**0.0**
GUR				S			**Sb**	**15 28 20.8**	**+0.5**
GUR	**Goura**	**1.35**	**261**	*e*PN			**Pn**	**15 28 02.7**	**+0.2**
GUR				*e*SN			**Sn**	**15 28 20.2**	**-0.3**
GUR	**Goura**	**1.35**	**261**	*e*Pn			**Pn**	**15 28 02.7**	**+0.2**
GUR				*e*Sn			**Sn**	**15 28 20.2**	**-0.3**
GUR				S			**Sb**	**15 28 20.8**	**+0.5**
XOR	**Xorichti**	**1.36**	**331**	P			**Pn**	**15 28 01.9**	**-0.7**
XOR				S			**Sb**	**15 28 20.4**	**-0.1**
XOR	**Xorichti**	**1.36**	**331**	P			**Pn**	**15 28 01.9**	**-0.7**
XOR				S			**Sb**	**15 28 20.4**	**-0.1**
AGG	**Agios Georgios**	**1.58**	**303**	*e*Pn			**Pn**	**15 28 05.2**	**-0.4**
AGG	**Agios Georgios**	**1.58**	**303**	*e*PN			**Pn**	**15 28 05.2**	**-0.4**
AGG	**Agios Georgios**	**1.58**	**303**	*e*Pn			**Pn**	**15 28 05.2**	**-0.4**
CHOS	**Chios island**	**1.61**	**82**	P			**Pn**	**15 28 06.3**	**+0.4**
CHOS				S			**Sn**	**15 28 28.2**	**+1.4**
CHOS	**Chios island**	**1.61**	**82**	*e*PN			**Pn**	**15 28 05.8**	**-0.1**
CHOS	**Chios island**	**1.61**	**82**	*e*Pn			**Pn**	**15 28 05.8**	**-0.1**
CHOS	**Chios island**	**1.61**	**82**	P			**Pn**	**15 28 06.3**	**+0.4**
CHOS				S			**Sn**	**15 28 28.2**	**+1.4**
APE	**Apeiranthos**	**1.62**	**132**	*e*Pn			**Pn**	**15 28 06.0**	**-0.1**
APE	**Apeiranthos**	**1.62**	**132**	P			**Pn**	**15 28 06.0**	**-0.1**
APE				S			**Sn**	**15 28 27.8**	**+0.7**
APE	**Apeiranthos**	**1.62**	**132**	*e*PN			**Pn**	**15 28 06.0**	**-0.1**
APE	**Apeiranthos**	**1.62**	**132**	P			**Pn**	**15 28 06.0**	**-0.1**
APE				S			**Sn**	**15 28 27.8**	**+0.7**
VLI	**Veliai**	**1.69**	**211**	*e*Pn			**Pn**	**15 28 06.8**	**-0.3**
VLI	**Veliai**	**1.69**	**211**	*e*PN			**Pn**	**15 28 06.8**	**-0.3**
VLI	**Veliai**	**1.69**	**211**	*e*Pn			**Pn**	**15 28 06.8**	**-0.3**
LIA	**Limnos Island**	**1.94**	**27**	P			**Pn**	**15 28 09.8**	**-0.8**
LIA				S			**Sn**	**15 28 34.1**	**-1.0**
LIA	**Limnos Island**	**1.94**	**27**	P			**Pn**	**15 28 09.8**	**-0.8**
LIA				S			**Sn**	**15 28 34.1**	**-1.0**
SMG	**Samos**	**2.27**	**101**	*e*Pn			**Pn**	**15 28 15.1**	**+0.1**
SMG	**Samos**	**2.27**	**101**	*e*PN			**Pn**	**15 28 15.1**	**+0.1**
SMG	**Samos**	**2.27**	**101**	*e*Pn			**Pn**	**15 28 15.1**	**+0.1**

*IDC **15** 15:31:15.9±1.9,38°.92N×140°.82E,h0km,mb3.5/1, mb1 3.7/4,mb1mx3.3/27,mbtmp3.7/4,ML2.7/4,Error ellipse: s-maj=42.9km s-min=20.2km az=124.0*
*ISCJB **15** 15:31:15.7±0.5,39°.01N±0°.03×140°.80E±0°.04,h10km, Error ellipse: s-maj=4.8km s-min=4.1km az=29.7*
*JMA **15** 15:31:16.0,39°.01N×140°.77E,h5km±1km,M3.1*
ISC 15 15:31:16.3±0.5,39°.00N±0°.03×140°.79E±0°.04,h10km,n14, σ0=90/21,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.34**	**98**	P			**Pg**	**15 31 22.8**	**-0.3**
JMK				S			**Sg**	**15 31 27.7**	**+0.1**
JYK	**Kaneyama**	**0.34**	**257**	P			**Pg**	**15 31 22.8**	**-0.3**
JRG	**Rokugo**	**0.41**	**343**	P			**Pg**	**15 31 24.0**	**-0.5**
JRG				S			**Sg**	**15 31 29.9**	**-0.1**
JOM	**Ohasama**	**0.62**	**39**	P			**Pg**	**15 31 27.7**	**-0.6**
JOM				*e*S			**Sg**	**15 31 36.1**	**-0.2**
JOU	**Okura**	**0.64**	**189**	P			**Pg**	**15 31 28.7**	**0.0**
JIO	**Ouri**	**0.70**	**141**	P			**Pg**	**15 31 29.4**	**-0.4**
JIO				S			**Sg**	**15 31 38.9**	**0.0**
JYA	**Atsumi**	**0.93**	**245**	P			**Pg**	**15 31 33.7**	**-0.5**
JYS	**Shiratake**	**0.96**	**216**	P			**Pg**	**15 31 34.3**	**-0.5**
JYS				S			**Sg**	**15 31 47.0**	**-0.2**
MAT	**Matsushiro**	**3.19**	**221**	P			**Pn**	**15 32 09.6**	**+3.1**
MAT				*e*S			**Sn**	**15 32 49.6**	**+5.0**
MJAR	**Matsushiro Arr**	**3.19**	**221**	Pn			**Pn**	**15 32 05.5**	**-1.1**
	0.1nm,0.3s,baz=305,slow=6.0,SNR=3.3								
MJAR				Pg			**Pg**	**15 32 14.0**	**-3.5**
	0.7nm,0.3s,baz=24,slow=15,SNR=7.8								
MJAR				Lg				15 32 54.2	
	0.2nm,0.3s,baz=75,slow=37,SNR=2.7								
ASAJ	**Asahikawa**	**5.29**	**14**	Pn			**Pn**	**15 32 36.5**	**+1.1**
	0.2nm,0.3s,baz=213,slow=13,SNR=3.3								
JHJ	**Hachijo jima 2**	**5.92**	**188**	Pn			**Pn**	**15 32 45.3**	**+1.2**
	1.2nm,0.3s,baz=253,slow=19,SNR=2.4								
KSRS	**Korea Array**	**10.24**	**265**	Pn			**Pn**	**15 33 46.4**	**+3.1**
	0.2nm,0.3s,baz=74,slow=14,SNR=8.0								
WRA	**Warramunga Arr**	**58.94**	**187**	P			**P**	**15 41 16.2**	**+0.5**
	0.4nm,0.8s,baz=358,slow=3.7,SNR=3.6								

*NEIC **15** 15:41:48.9±1.6,20°.33S×177°.62W,h506km±15km,Error ellipse: s-maj=31.8km s-min=22.5km az=111.0*
*ISCJB **15** 15:41:48.8±2.0,20°.3S±0°.2×177°.7W±0°.3,h507km±21km, mb3.1/3,Error ellipse: s-maj=39.6km s-min=30.6km az=18.6*
*IDC **15** 15:41:53.5±9.2,19°.91S×177°.94W,h543km±94km,mb2.6/3, mb1 2.9/3,mb1mx2.7/15,mbtmp2.6/3,Error ellipse: s-maj=148.2km s-min=39.6km az=153.0*
ISC 15 15:41:49.0±2.0,20°.4S±0°.2×177°.6W±0°.3,h499km±22km,n8, σ0=07/5,mb3.1/3,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.88**	**302**	*e*P			**P**	**15 43 14.9**	**0.0**
URZ	**Urewera**	**18.37**	**193**	*e*P			**P**	**15 45 32.6**	**0.0**
ASAR	**Alice Springs**	**44.88**	**257**	P			**P**	**15 49 18.5**	**-0.1**
	0.4nm,0.8s,mb2.9,baz=89,slow=9.7,SNR=5.5								
ASAR				PcP			PcP	15 50 48.8	-0.9
	0.3nm,0.5s,baz=108,slow=3.7,SNR=7.3								
WRA	**Warramunga Arr**	**44.96**	**262**	P			**P**	**15 49 19.2**	**0.0**
	0.4nm,0.8s,mb2.9,baz=97,slow=7.6,SNR=4.8								
PDAR	**Pinedale Array**	**88.65**	**43**	P			**P**	**15 53 48.4**	**0.0**
	0.3nm,0.5s,mb3.4,baz=196,slow=5.4,SNR=2.7								
AKASG	**Malin Array Be**	**143.10**	**331**	PKhKP				16 00 21.1	
	0.4nm,0.3s,baz=45,slow=4.4,SNR=6.8								
BRTR	**Keskin Array B**	**147.03**	**313**	PKPbc			PKPbc	16 00 33.6	-1.9
	0.4nm,0.6s,baz=135,slow=4.3,SNR=2.8								
GERES	**GERESS Array B**	**150.20**	**345**	PKPbc			PKPbc	16 00 42.2	-0.8
	0.1nm,0.3s,baz=40,slow=2.3,SNR=4.5								

*ISK **15** 15:46:59.4,38°.43N×43°.36E,h5km,ML3.6*
*CSEM **15** 15:47:00.3±0.2,38°.43N×43°.42E,h10km,MD3.5,Error ellipse: s-maj=7.2km s-min=4.2km az=94.0*
*TEH **15** 15:47:00.4,38°.48N×43°.03E,h18km*
*DDA **15** 15:47:00.7,38°.43N×43°.39E,h18km,Md3.5*
*ISCJB **15** 15:47:00.2±0.4,38°.44N±0°.02×43°.36E±0°.04,h10km,Error ellipse: s-maj=4.2km s-min=2.9km az=178.7*
ISC 15 15:47:00.9±0.4,38°.44N±0°.02×43°.37E±0°.04,h6km±4km, n32,σ1=27/50,Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
VANT	**Van**	**0.08**	**255**	*e*PG			**Pg**	**15 47 04.8**	**+2.0**
TVAN	**Van**	**0.09**	**19**	*i*P			**Pg**	**15 47 03.5**	**+0.5**
TVAN				*i*S			**Sg**	**15 47 07.6**	**+3.3**
TVAN	**Van**	**0.09**	**19**	*i*P			**Pg**	**15 47 03.5**	**+0.6**
TVAN				*i*S			**Sg**	**15 47 07.6**	**+3.3**
VANB	**Van**	**0.15**	**6**	*e*PG			**Pg**	**15 47 03.2**	**-0.8**
VANB	**Van**	**0.15**	**6**	*e*Pg			**Pg**	**15 47 03.2**	**-0.8**
VANB				*e*Sg			**Sg**	**15 47 04.8**	**-1.3**
CLDR	**Caldiran**	**0.82**	**31**	*e*PG			**Pg**	**15 47 16.3**	**-0.3**
CLDR				*e*SG			**Sg**	**15 47 29.6**	**+2.3**
CLDR	**Caldiran**	**0.82**	**31**	*e*Pg			**Pg**	**15 47 16.5**	**-0.2**
CLDR				*e*Sg			**Sg**	**15 47 28.2**	**+0.9**
HKR	**Hakkari**	**0.91**	**161**	*e*PG			**Pg**	**15 47 17.2**	**-1.2**
HKR				*e*SG			**Sg**	**15 47 30.3**	**+0.1**
HKR	**Hakkari**	**0.91**	**161**	*e*Pg			**Pg**	**15 47 17.0**	**-1.4**
HKR				*e*Sg			**Sg**	**15 47 30.3**	**+0.1**
HAKT	**HAKKARI**	**0.92**	**163**	*i*P			**

ISHB				*e*Sn	**Sn**	**15 47 58.9**	**+3.9**
IMRD	**Marand**	**1.85**	**81**	*e*Pn	**Pg**	**15 47 35.2**	**-1.1**
IMRD				*e*		15 47 47.8	
	comp=Z,4μm,0.2s						
HOMI	**Horasan**	**1.96**	**325**	*i* P	**Pg**	**15 47 36.6**	**-2.0**
HOMI				*i* S	**Sg**	**15 48 04.5**	**+0.5**
MSL	**Mosul**	**2.05**	**186**	*e*Pn	**Pg**	**15 47 41.0**	**+0.8**
KARS	**Kars**	**2.19**	**354**	*e*Pn	**Pn**	**15 47 37.4**	**-0.5**
IAZR	**Azarshahr**	**2.20**	**110**	*e*Pn	**Pn**	**15 47 40.1**	**+2.2**
IAZR				*e*		15 47 52.2	
	comp=Z,2μm,0.2s						
BINT	**Bingol**	**2.30**	**282**	*e*PN	**Pn**	**15 47 40.5**	**+1.2**
BINT	**Bingol**	**2.30**	**282**	*e*Pn	**Pn**	**15 47 39.8**	**+0.5**
IHRS	**Heris**	**2.89**	**91**	*e*Pn	**Pn**	**15 47 48.7**	**+1.3**
IHRS				*e*		15 48 01.8	
	comp=Z,463nm,0.3s						
SVRC	**Sivrice-ELAZID**	**3.19**	**270**	*e*PN	**Pn**	**15 47 53.4**	**+1.8**
SVRC	**Sivrice-ELAZID**	**3.19**	**270**	*e*Pn	**Pn**	**15 47 51.9**	**+0.3**
URFA	**Urfa**	**3.73**	**256**	*e*PN	**Pn**	**15 48 00.9**	**+1.9**
URFA	**Urfa**	**3.73**	**256**	*e*Pn	**Pn**	**15 47 59.1**	**+0.1**

*MEX **15** 15:47:01.2±0.8, 26°.62N×111°.27W, h9km±18km, MD4.3*
*IDC **15** 15:47:04.0±1.5, 27°.12N×110°.95W, h0km, mb4.0/4, mb1 4.0/10, mb1mx3.8/26, mbtmp3.8/10, ML3.5/5, MS4.1/20, Ms1 4.1/20, ms1mx3.9/31, Error ellipse: s-maj=23.1km s-min=16.5km az=16.0*
*NEIC **15** 15:47:04.3±0.8, 26°.84N×111°.13W, h10km, mb4.2/44, Error ellipse: s-maj=12.2km s-min=6.6km az=205.0*
NEIC Felt at Mulege, Mexico.

ISC 15 15:47:06.7±2.2, 26°.76N±0°.08×111°.09W±0°.05, h34km±15km, n124, σ1§34/109, mb4.3/26, MS4.1/15, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRIG	**Santa Rosalia**	**1.17**	**299**	*i* P	**Pn**	**15 47 19.4**	**-7.2**
SRIG				*i* S	**Sn**	**15 47 32.8**	**-8.5**
HSIG		**2.25**	**3**	*i* P	**Pn**	**15 47 37.2**	**-4.3**
HSIG				*i* S	**Sn**	**15 48 06.8**	**-1.3**
HPIG		**4.85**	**87**	*i* P	**Pn**	**15 48 15.4**	**-1.8**
HPIG				*i* S	**Sn**	**15 49 10.9**	**-1.1**
TUC	**Tucson** 28nm,0.7s	**5.54**	**3**	*e*P	**Pn**	**15 48 23.6**	**-3.0**
MNTX	**Cornudas Mount** 22nm,0.9s	**7.00**	**44**	*e*P	**Pn**	**15 48 45.3**	**-1.5**
TXAR	**Lajitas Array** 0.6nm,0.3s,baz=240,slow=13,SNR=40	**7.04**	**67**	Pn	**Pn**	**15 48 44.5**	**-2.8**
TXAR	0.5nm,0.3s,baz=249,slow=31,SNR=2.5			Lg		15 50 40.3	
TXAR	comp=Z,3μm,18.4s,baz=205,slow=41			LR	LR	15 51 41.7	
TXAR	**Lajitas Array**	**7.04**	**67**	Pn	**Pn**	**15 48 44.5**	**-2.8**
TXAR				Lg		15 50 40.3	
TXAR				LR	LR	15 51 41.7	
GLA	**Glamis** 17nm,0.6s	**7.06**	**334**	Pn	**Pn**	**15 48 44.2**	**-3.3**
BAR	**Barrett** 9.0nm,0.8s	**7.64**	**322**	Pn	**Pn**	**15 48 55.5**	**0.0**
GDL2	**Guadalupe Moun** 13nm,1.0s	**7.98**	**46**	*e*P	**Pn**	**15 49 01.4**	**+1.2**
PFO	**Pinyon Flat Ob** 7.7nm,1.1s	**8.26**	**327**	P	**Pn**	**15 49 07.9**	**+4.0**
BNM	**Barren Site** 6.8nm,0.9s	**8.31**	**26**	*e*Pn	**Pn**	**15 49 03.3**	**-1.4**
CLNB	**Carlsbad** 15nm,1.3s	**8.34**	**47**	*e*Pn	**Pn**	**15 49 06.2**	**+1.1**
LAZ	**Ladron** 7.0nm,0.9s	**8.34**	**23**	*e*Pn	**Pn**	**15 49 04.0**	**-1.1**
WUAZ	**Wupatki** 16nm,0.9s	**8.73**	**358**	*e*Pn	**Pn**	**15 49 09.4**	**-1.1**
ANMO	**Albuquerque** 0.1nm,0.3s,baz=228,slow=16,SNR=2.1	**9.08**	**25**	Pn	**Pn**	**15 49 09.6**	**-5.7**
ANMO	0.1nm,0.3s,baz=318,slow=21,SNR=3.1			Lg		15 51 44.1	
ANMO	comp=Z,820nm,20.4s,baz=190,slow=36			LR	LR	15 52 17.9	
ANMO	**Albuquerque**	**9.08**	**25**	*e*Pn	**Pn**	**15 49 16.1**	**+0.9**
ANMO				Lg		15 51 44.1	
ANMO				LR	LR	15 52 17.9	
GSC	**Goldstone** 8.7nm,1.1s	**9.82**	**331**	*e*Pn	**Pn**	**15 49 23.2**	**-2.2**
JCT	**Junction City** 6.2nm,0.7s	**10.58**	**67**	*e*Pn	**Pn**	**15 49 40.2**	**+4.3**
MVCO	**Mesa Verde** 12nm,0.8s	**10.65**	**11**	*e*Pn	**Pn**	**15 49 37.5**	**+0.8**
ISA	**Isabella** 29nm,1.5s	**10.89**	**326**	*e*Pn	**Pn**	**15 49 39.3**	**-0.8**
CCUT	**Cedar City** 20nm,1.1s	**10.93**	**350**	*e*Pn	**Pn**	**15 49 40.8**	**+0.2**
PV01	**Paradox Valley** 656nm,1.0s	**11.54**	**10**	*e*Pn	**Pn**	**15 49 49.0**	**+0.1**
PV04	**Paradox Valley**	**11.74**	**8**	*e*Pn	**Pn**	**15 49 52.8**	**+1.0**
MSU	**Marysvale** 11nm,1.2s	**11.76**	**356**	*e*Pn	**Pn**	**15 49 54.5**	**+2.6**
SDCO	**Great Sand Dun** 4.3nm,1.0s	**11.93**	**22**	*e*Pn	**Pn**	**15 49 56.4**	**+2.2**
SRU	**San Rafael** 8.8nm,0.9s	**12.32**	**2**	*e*Pn	**Pn**	**15 49 55.9**	**-3.8**
SMCO	**Snowmass** 10nm,1.2s	**12.85**	**15**	Pn	**Pn**	**15 50 06.9**	**0.0**
NVAR	**Mina Array Bea** 0.0nm,0.3s,baz=166,slow=13,SNR=10	**13.12**	**334**	Pn	**Pn**	**15 50 11.2**	**+0.6**
NLU	**North Lily Min** 14nm,1.2s	**13.19**	**357**	*e*Pn	**Pn**	**15 50 07.4**	**-4.0**
MPU	**Maple Canyon** 14nm,1.2s	**13.23**	**358**	P	**Pn**	**15 50 13.9**	**+2.0**
WMOK	**Wichita Mounta** 10nm,1.0s	**13.23**	**50**	*e*Pn	**Pn**	**15 50 08.3**	**-3.7**
DUG	**Dugway** 22nm,1.3s	**13.48**	**354**	*e*Pn	**Pn**	**15 50 16.4**	**+1.1**
CMB	**Columbia Colle** 11nm,1.4s	**13.70**	**327**	P	**Pn**	**15 50 08.4**	**-10**
HKT	**Hockley** 8.1nm,1.5s	**13.80**	**73**	*e*Pn	**Pn**	**15 50 18.3**	**-1.6**
JLU	**Jordanelle** 15nm,1.3s	**13.81**	**359**	P	**Pn**	**15 50 15.2**	**-4.7**
NOQ	**North Oquirrh** 35nm,1.2s	**13.88**	**357**	*e*P	**Pn**	**15 50 22.8**	**+1.9**
BGU	**Big Grassy Mou** 49nm,1.7s	**14.22**	**354**	*e*P	**Pn**	**15 50 27.1**	**+1.6**
N13A	**Wendover, West** 46nm,1.2s	**14.29**	**350**	*e*P	**Pn**	**15 50 25.4**	**-1.1**
ELK	**Elko** 0.1nm,0.3s,baz=163,slow=12,SNR=9.2	**14.37**	**347**	Pn	**Pn**	**15 50 26.9**	**-0.6**
ELK	0.1nm,0.3s,baz=196,slow=8.3,SNR=3.3			Lg		15 54 46.6	
ELK	comp=Z,1μm,19.0s,baz=139,slow=39			LR	LR	15 56 11.2	
ELK	**Elko**	**14.37**	**347**	Pn	**Pn**	**15 50 26.9**	**-0.6**
ELK				Lg		15 54 46.6	
ELK				LR	LR	15 56 11.2	
N12A	**Clover Valley,** 12nm,1.0s	**14.43**	**348**	*e*P	**Pn**	**15 50 26.5**	**-1.9**
HWUT	**Hardware Ranch** 30nm,1.2s	**14.81**	**359**	*e*P	**Pn**	**15 50 34.5**	**+0.8**
HVU	**Hansel Valley** 7.4nm,0.9s	**15.05**	**355**	P	**Pn**	**15 50 34.8**	**-1.9**
PHWY	**Pilot Hill** 4.6nm,0.8s	**15.23**	**16**	*e*P	**Pn**	**15 50 39.5**	**+0.4**
OGNE	**Ogallala** 31nm,0.8s	**16.01**	**26**	P	**Pn**	**15 50 53.6**	**+4.5**
PDAR	**Pinedale Array** 0.1nm,0.3s,baz=163,slow=11,SNR=13	**16.02**	**4**	Pn	**Pn**	**15 50 48.9**	**-0.3**
PDAR	0.1nm,0.3s,baz=172,slow=24,SNR=3.7			Lg		15 55 36.0	
PDAR	comp=Z,486nm,18.4s,baz=186,slow=37			LR	LR	15 56 41.1	
PDAR	**Pinedale Array**	**16.02**	**4**	Pn	**Pn**	**15 50 48.9**	**-0.3**
PDAR				Lg		15 55 36.0	
PDAR				LR	LR	15 56 41.1	
RRI2	**Red Ridge** 12nm,1.1s	**16.55**	**359**	P	**Pn**	**15 50 58.1**	**+2.1**
REDW	**Red Top Meadow** 17nm,1.4s	**16.57**	**1**	*e*P	**Pn**	**15 50 57.0**	**+0.8**
TPAW	**Teton Pass** 9.6nm,1.1s	**16.69**	**0**	*e*P	**Pn**	**15 50 59.5**	**+1.6**
WVOR	**Wild Horse Val** 27nm,1.5s	**16.81**	**340**	*e*P	**Pn**	**15 50 59.7**	**+0.4**
LOHW	**Long Hollow** 12nm,1.3s	**16.82**	**1**	*e*P	**Pn**	**15 50 59.6**	**+0.2**
MOD	**Modoc** 36nm,1.5s	**16.90**	**336**	*e*P	**Pn**	**15 51 01.5**	**+1.2**
MIAR	**Mount Ida** 7.8nm,1.1s	**16.94**	**59**	*e*P	**Pn**	**15 50 59.8**	**-1.1**
HLID	**Hailey** 12nm,1.4s	**16.98**	**352**	*e*P	**Pn**	**15 51 03.1**	**+1.7**
IMW	**Indian Meadow** 53nm,1.5s	**17.10**	**0**	*e*P	**Pn**	**15 51 03.2**	**+0.3**
YBH	**Yreka Blue Hor** comp=Z,443nm,21.7s,baz=254,slow=36	**17.73**	**330**	LR	LR	15 57 35.7	
LKWY	**Lake**	**17.77**	**2**	*e*P	**Pn**	**15 51 10.4**	**-0.8**
CMIG	**Matias Romero** baz=313,slow=6.8,SNR=2.8	**17.83**	**119**	P	**Pn**	**15 51 14.9**	**+2.8**
MCMT	**McKenzie Canyo** 3.8nm,1.1s	**18.09**	**356**	*e*P	**Pn**	**15 51 16.8**	**+1.7**
RSSD	**Black Hills** 7.9nm,0.8s	**18.24**	**16**	*e*P	**Pn**	**15 51 17.1**	**+0.2**
RLMT	**Red Lodge** 59nm,2.0s	**18.38**	**4**	*e*P	**Pn**	**15 51 18.9**	**+0.3**
BMO	**Blue Mountains** 10nm,1.4s	**18.73**	**346**	*e*P	**Pn**	**15 51 21.2**	**-1.7**
BOZ	**Bozeman (W)** 7.9nm,1.3s	**18.85**	**359**	*e*P	**Pn**	**15 51 24.5**	**+0.1**
GCMT	**Greycliff** 9.2nm,1.4s	**19.03**	**3**	P	**Pn**	**15 51 25.6**	**-0.9**
LNOR	**Lincton Mounta** 12nm,1.2s	**19.92**	**345**	*e*P	**Pn**	**15 51 35.5**	**-1.6**
MSO	**Missoula** 6.9nm,1.0s	**20.16**	**354**	*e*P	**P**	**15 51 36.9**	**-1.0**
CHMT	**Chamberlain Mo** 8.3nm,0.7s	**20.19**	**356**	*e*P	**P**	**15 51 38.9**	**+0.6**
LAO	**LASA Array** 29nm,1.2s	**20.26**	**10**	*e*P	**P**	**15 51 40.1**	**+1.1**
SLMT	**Seeley Lake** 7.2nm,0.9s	**20.53**	**355**	*e*P	**P**	**15 51 42.1**	**+0.2**
ECSD	**EROS Data Cent** 16nm,0.7s	**20.60**	**31**	*e*P	**P**	**15 51 43.3**	**+0.6**
FVM	**French Village** 7.7nm,0.8s	**20.68**	**52**	*e*P	**P**	**15 51 44.4**	**+0.7**
SWMT	**Swartz Lake** 8.3nm,0.9s	**20.84**	**354**	*e*P	**P**	**15 51 45.3**	**0.0**
EGMT	**Eagleton** 25nm,1.4s,mb4.3	**21.25**	**2**	*e*P	**P**	**15 51 49.9**	**+0.2**
BSMT	**Bassoo Peak** 2.6nm,0.8s,mb3.6	**21.25**	**353**	P	**P**	**15 51 48.8**	**-0.9**
SIUC	**Southern Illin** 29nm,1.1s,mb4.5	**21.43**	**54**	*e*P	**P**	**15 51 54.5**	**+2.8**
OD2	**Odessa Site #2** 12nm,1.0s,mb4.2	**21.45**	**346**	*e*P	**P**	**15 51 50.6**	**-1.3**
LON	**Longmire** 14nm,1.3s,mb4.2	**21.68**	**340**	*e*P	**P**	**15 51 54.1**	**-0.3**
LRAL	**Lakeview Retre** 31nm,1.8s,mb4.4	**21.78**	**68**	*e*P	**P**	**15 51 55.3**	**-0.2**
WVT	**Waverly** 12nm,1.0s,mb4.3	**21.89**	**59**	*e*P	**P**	**15 51 55.5**	**-1.2**
NEW	**Newport** 14nm,1.2s,mb4.3	**21.98**	**349**	*e*P	**P**	**15 51 56.3**	**-1.2**
APG	**El Apazote** 2.7nm,0.8s,mb3.7,baz=237,slow=18,SNR=4.6	**22.50**	**117**	P	**P**	**15 52 09.3**	**+6.0**
HDIL	**Hopedale** 9.3nm,0.5s,mb4.5	**22.69**	**47**	P	**P**	**15 52 06.7**	**+1.6**
JCW	**Jim Creek** 16nm,1.1s,mb4.4	**23.02**	**341**	*e*P	**P**	**15 52 07.4**	**-1.1**
SWET	**Sewanee**	**23.11**	**62**	P	**P**	**15 52 09.5**	**-0.1**
JFWS	**Jewell Farm** 9.6nm,0.7s,mb4.3	**23.40**	**41**	P	**P**	**15 52 15.4**	**+2.8**
AGMN	**Agassiz Nation** 14nm,0.8s,mb4.5	**24.57**	**25**	*e*P	**P**	**15 52 21.9**	**-1.3**
TKL	**Tuckaleechee C** 2.3nm,0.9s,mb3.7,baz=186,slow=9.2,SNR=3.1	**24.92**	**62**	P	**P**	**15 52 26.8**	**+0.2**
TKL	comp=Z,422nm,20.6s,MS3.9,baz=282,slow=38			LR	LR	16 02 35.8	
TKL	**Tuckaleechee C**	**24.92**	**62**	P	**P**	**15 52 27.0**	**+0.4**
COWI	**Conover** 29nm,1.5s,mb4.6	**26.01**	**36**	*e*P	**P**	**15 52 37.5**	**+1.2**
ULM	**Lac du Bonnet** 5.0nm,0.8s,mb4.1,baz=217,slow=8.8,SNR=4.6	**26.20**	**22**	P	**P**	**15 52 40.2**	**+2.3**
EDM	**Edmonton**	**26.48**	**357**	P	**P**	**15 52 39.1**	**-1.4**
JTS	**JuntasAbangare** comp=Z,97nm,19.1s,MS3.5,baz=309,slow=36	**29.61**	**119**	LR	LR	16 05 02.5	
DLBC	**Dease Lake** comp=Z,495nm,19.0s,MS4.3,baz=209,slow=38	**34.34**	**342**	LR	LR	16 08 38.8	
DLBC	**Dease Lake**	**34.34**	**342**	P	**P**	**15 53 50.2**	**+0.4**
YKA	**Yellowknife Ar** 0.9nm,0.8s,mb3.8,baz=177,slow=8.6,SNR=5.3	**35.81**	**357**	P	**P**	**15 54 00.1**	**-2.3**
YKA	**Yellowknife Ar**	**35.81**	**357**	P	**P**	**15 54 00.1**	**-2.3**
PNL	**Peninsula** 8.8nm,0.6s,mb4.7	**38.24**	**337**	*e*P	**P**	**15 54 17.1**	**-6.1**
ROSC	**El Rosal** comp=Z,124nm,18.0s,MS3.8,baz=11,slow=39	**41.28**	**115**	LR	LR	16 14 06.6	
SCHQ	**Schefferville** 9.3nm,1.0s,mb4.5,baz=271,slow=4.5,SNR=6.0	**42.62**	**37**	P	**P**	**15 55 00.1**	**+0.7**
PMR	**Palmer** 6.2nm,1.1s,mb4.2	**43.11**	**334**	*e*P	**P**	**15 55 08.2**	**+4.9**
INK	**Inuvik** comp=Z,272nm,18.5s,MS4.2,baz=56,slow=38	**43.70**	**348**	LR	LR	16 14 11.2	
TRF	**Thorofare Moun** 12nm,1.0s,mb4.7	**44.65**	**336**	*e*P	**P**	**15 55 19.4**	**+3.8**
KTH	**Kantishna Hill** 5.3nm,0.9s,mb4.4	**44.94**	**336**	*e*P	**P**	**15 55 21.3**	**+3.4**
PPLA	**Purkeypile** 46nm,1.6s,mb5.0	**45.03**	**335**	*e*P	**P**	**15 55 23.6**	**+4.9**
TAOE	**Nuku Hiva Isla** 564nm,26.9s	**45.26**	**223**	*e*LQ		16 06 08.0	
BPAW	**Bear Paw Mtn.** 7.3nm,0.9s,mb4.5	**45.28**	**337**	*e*P	**P**	**15 55 20.6**	**-0.1**
SVW2	**Sparrevohn**	**45.47**	**331**	P	**P**	**15 55 18.5**	**-3.6**
TTA	**Tatalina**	**46.54**	**334**	*e*P	**P**	**15 55 35.7**	**+5.1**
PPT	**Papeete** 231nm,26.0s	**57.77**	**225**	*e*LR	LR	16 13 43.7	
LPAZ	**La Paz** comp=Z,57nm,19.2s,MS3.7,baz=144,slow=36	**59.76**	**131**	LR	LR	16 22 48.7	
PETK	**Petropavlovsk-** 1.6nm,0.7s,mb4.0,baz=81,slow=8.9,SNR=3.3	**69.77**	**320**	P	**P**	**15 58 16.2**	**+3.0**
PLCA	**Paso Flores** comp=Z,140nm,20.6s,MS4.3,baz=269,slow=31	**76.98**	**150**	LR	LR	16 26 27.8	
ARCES	**ARCESS Array B** comp=Z,132nm,21.7s,MS4.2,baz=186,slow=35	**79.00**	**14**	LR	LR	16 33 12.3	
ESDC	**Sonseca Array** comp=Z,79nm,18.3s,MS4.1,baz=330,slow=35	**85.32**	**48**	LR	LR	16 36 06.0	
FINES	**FINESS Array B** comp=Z,118nm,18.8s,MS4.3,baz=168,slow=36	**85.54**	**19**	LR	LR	16 38 20.9	
MJAR	**Matsushiro Arr** comp=Z,110nm,19.0s,MS4.3,baz=160,slow=32	**89.38**	**311**	LR	LR	16 34 53.0	
MDJ	**Mudanjiang**	**89.96**	**321**	P	**P**	**16 00 00.9**	**-1.6**
MDJ	comp=Z,4.0nm,1.1s,mb4.7			pmax	pmax		
MDJ	comp=Z,190nm,4.2s			pmax	pmax		
GERES	**GERESS Array B** comp=Z,165nm,18.6s,MS4.5,baz=106,slow=37	**90.05**	**33**	LR	LR	16 42 35.5	
CBIJ	**Chichi jima** comp=Z,87nm,21.5s,MS4.2,baz=131,slow=29	**91.52**	**301**	LR	LR	16 31 22.1	
AKASG	**Malin Array Be** comp=Z,77nm,18.6s,MS4.2,baz=280,slow=37	**95.27**	**24**	LR	LR	16 44 57.1	
ZALV	**Zalesovo Beam** comp=Z,44nm,20.8s,MS3.9,baz=58,slow=37	**98.46**	**351**	LR	LR	16 47 28.5	
WRA	**Warramunga Arr** comp=Z,0.7nm,1.0s,baz=85,slow=1.8,SNR=4.9	**120.11**	**261**	PKP	PKPdf	16 05 57.1	+2.7

*IDC **15** 16:06:04.3±1.1, 50°.78N×173°.48W, h0km, mb3.7/4, mb1 4.1/5, mb1mx3.6/28, mbtmp3.8/5, ML3.1/1, Error ellipse: s-maj=46.3km s-min=17.9km az=7.0*
*ISCJB **15** 16:06:17.8±0.7, 52°.6N±0°.2×174°.26W±0°.10, h151km±10km, mb3.3/4, Error ellipse: s-maj=26.8km s-min=8.3km az=168.4*
*NEIC **15** 16:06:18.7±0.7, 52°.46N×174°.14W, h147km±8km, mb4.2/2, Error ellipse: s-maj=25.9km s-min=7.7km az=161.0*

ISC 15 16:06:18.8±0.7, 52°.6N±0°.2×174°.24W±0°.10, h147km±9km, n12, σ0§98/13, mb3.3/4, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**1.21**	**248**	*e*Pn	**Pn**	**16 06 45.2**	**+0.1**
NIKO	**Nikolski**	**3.30**	**81**	P	**Pn**	**16 07 09.0**	**-0.6**
AMKA	**Amchitka**	**4.17**	**256**	P	**Pn**	**16 07 21.7**	**+0.7**
UNV	**Unalaska Valle**	**4.82**	**72**	P	**Pn**	**16 07 30.1**	**+0.5**
FX1	**Attu Island--F** 0.8nm,0.3s,baz=77,slow=12,SNR=7.5	**7.66**	**277**	Pn	**Pn**	**16 08 08.4**	**+0.9**
FX1	1.1nm,0.3s,baz=55,slow=22,SNR=3.7			Sn	**Sn**	**16 09 31.6**	**-1.1**
KDAK	**Kodiak Island** 0.9nm,0.3s,baz=245,slow=6.8,SNR=5.9	**13.40**	**59**	Pn	**Pn**	**16 09 21.1**	**-1.8**
SEW	**Seward** 6.7nm,0.3s	**15.60**	**51**	*e*Pn	**Pn**	**16 09 49.6**	**-0.8**
KTH	**Kantishna Hill** 5.4nm,0.8s	**16.41**	**39**	*e*Pn	**Pn**	**16 10 02.5**	**+2.2**
NVAR	**Mina Array Bea** 0.5nm,0.6s,mb3.3,baz=299,slow=8.0,SNR=5.8	**40.64**	**87**	P	**P**	**16 13 44.4**	**+0.3**
PDAR	**Pinedale Array** 0.5nm,0.5s,mb3.5,baz=302,slow=5.1,SNR=3.9	**43.27**	**76**	P	**P**	**16 14 06.0**	**+0.7**
WRA	**Warramunga Arr** 0.2nm,0.5s,mb3.1,baz=32,slow=5.6,SNR=5.1	**84.86**	**228**	P	**P**	**16 18 35.8**	**-1.0**
ASAR	**Alice Springs** 0.5nm,0.7s,mb3.5,baz=23,slow=5.2,SNR=13	**88.31**	**226**	P	**P**	**16 18 53.5**	**+0.2**

DJA 15 16:17:45, 2°.33N×97°.09E, h30km, MLv3.8/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.13**	**155**	P	Pn	16 18 06.2	+1.4
GSI				S	Sn	16 18 18.5	-0.8
MNSI	**Mandailing Nat**	**2.92**	**121**	P	Pn	16 18 28.8	-0.6
MNSI				S	Sn	16 19 06.2	+2.7
BSI	**Banda Aceh**	**3.62**	**330**	P	Pn	16 18 39.1	+0.1
SISI	**Saibi**	**4.15**	**151**	P	Pn	16 18 47.4	+1.1
IPM	**Ipoh**	**4.47**	**61**	P	Pn	16 18 43.7	-7.1

JMA 15 16:25:57.1, 39°.06N×140°.84E, h12km±1km, M1.2, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRG	**Rokugo**	**0.37**	**335**	P	Pg	16 26 04.5	0.0
JRG				*e*S	Sg	16 26 10.1	+0.5
JOM	**Ohasama**	**0.54**	**40**	P	Pg	16 26 07.5	-0.2
JOM				*e*S	Sg	16 26 14.7	-0.2

*NIED **15** 16:26:00.39°.10N×140°.90E, h5km, Mw3.6 Best double couple: M0:2.41000×1014 NP1:φ0=325.00000°, δ61.00000°, λ78.00000°. NP2:φ0=169.00000°, δ31.00000°, λ111.00000°.*
*IDC **15** 16:26:30.2±3.5, 39°.04N×141°.31E, h0km, mb3.6/2, mb1 3.7/5, mb1mx3.5/27, mbtmp3.7/5, ML3.2/3, Error ellipse: s-maj=59.3km s-min=38.5km az=178.0*
*JMA **15** 16:26:31.8, 39°.10N×140°.94E, h10km±1km, M3.7 Broadband fault plane solution: P waves. NP1: φ0=168.00000°, δ19.00000°, λ105.00000°. NP2: φ0=332.00000°, δ71.00000°, λ85.00000°. Principal axes: T Plg63.0000°, Azm234.0000°; N Plg5.0000°, Azm334.0000°; P Plg26.0000°, Azm66.0000°;*
JMA Felt II J1.
*ISCJB **15** 16:26:31.6±0.5, 39°.10N±0°.03×140°.96E±0°.03, h10km, mb3.6/2 Error ellipse: s-maj=4.9km s-min=3.8km az=164.8*

ISC 15 16:26:32.0±0.5, 39°.10N±0°.03×140°.95E±0°.04, h10km, n13, σ0§77/22, mb3.6/2, 1C-6D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.26**	**125**	⇓P	**Pg**	**16 26 37.0**	**-0.2**
JMK				*e*S	**Sg**	**16 26 40.8**	**0.0**
JRG	**Rokugo**	**0.38**	**320**	⇓P	**Pg**	**16 26 39.3**	**-0.2**
JOM	**Ohasama**	**0.46**	**36**	⇓P	**Pg**	**16 26 40.7**	**-0.2**
JOM				S	**Sg**	**16 26 46.9**	**-0.1**
JYK	**Kaneyama**	**0.49**	**248**	⇓P	**Pg**	**16 26 41.4**	**-0.2**
JYK				S	**Sg**	**16 26 47.9**	**-0.3**
OFUJ	**Ofunato**	**0.56**	**92**	⇓P	**Pg**	**16 26 42.7**	**-0.2**
OFUJ				*e*S	**Sg**	**16 26 50.7**	**+0.5**
JIO	**Ouri**	**0.72**	**154**	⇓P	**Pg**	**16 26 45.4**	**-0.5**
JIO				*e*S	**Sg**	**16 26 54.9**	**-0.3**
JOU	**Okura**	**0.77**	**197**	⇑P	**Pg**	**16 26 46.5**	**-0.3**
JOU				S	**Sg**	**16 26 56.7**	**-0.1**
MAT	**Matsushiro**	**3.35**	**221**	P	**Pn**	**16 27 25.9**	**+1.5**
MAT				*e*S	**Sn**	**16 28 09.4**	**+5.1**
MJAR	**Matsushiro Arr** 1.3nm,0.3s,baz=45,slow=14,SNR=11	**3.35**	**221**	Pn	**Pn**	**16 27 25.7**	**+1.3**
MJAR	1.9nm,0.3s,baz=26,slow=15,SNR=19			Pg	**Pg**	**16 27 33.1**	**-3.2**
JHJ	**Hachijo jima 2** 2.0nm,0.3s,baz=14,slow=17,SNR=3.7	**6.04**	**189**	Pn	**Pn**	**16 28 02.6**	**+1.2**
KSRS	**Korea Array** 0.4nm,0.3s,baz=74,slow=14,SNR=16	**10.37**	**265**	Pn	**Pn**	**16 29 05.1**	**+4.3**
KSRS	0.3nm,0.3s,baz=75,slow=24,SNR=6.3			Sn	**Sn**	**16 31 02.2**	**+5.1**
WRA	**Warramunga Arr** 0.5nm,0.6s,mb3.7,baz=5.0,slow=7.4,SNR=6.8	**59.06**	**187**	P	**P**	**16 36 31.2**	**-1.0**
ASAR	**Alice Springs** 0.3nm,0.8s,mb3.5,baz=358,slow=4.2,SNR=3.3	**62.78**	**187**	P	**P**	**16 36 57.7**	**+0.2**

DJA 15 16:29:27, 2°.08N×126°.44E, h20km, MLv3.8/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.60**	**145**	P	Pn	16 29 54.4	+0.3
MNI	**Manado**	**1.72**	**248**	P	Pn	16 29 56.4	+0.6
MNI				S	Sn	16 30 17.7	+0.5
SGSI	**Sangihe**	**1.84**	**330**	P	Pn	16 29 56.3	-1.1
SGSI				S	Sn	16 30 22.7	+2.6
KMSI	**Cibinong**	**2.88**	**239**	P	Pn	16 30 11.9	+0.1
MRSI	**Marisa**	**4.77**	**251**	P	Pn	16 30 39.3	+1.5
LUWI	**Luwuk**	**4.80**	**230**	P	Pn	16 30 38.0	-0.2
APSI	**Ampana** 0.1nm25nm,1.2s	**5.64**	**238**	P	Pn	16 30 51.1	+1.4
KDI	**Kendari**	**7.11**	**212**	P	Pn	16 31 10.8	+0.8

*CSEM **15** 16:37:27.9±0.2, 44°.02N×9°.00E, h10km, ML2.5/5, Error ellipse: s-maj=4.6km s-min=2.4km az=167.0*
*ISCJB **15** 16:37:27.5±0.5, 44°.02N±0°.03×9°.00E±0°.02, h9km±3km, Error ellipse: s-maj=4.8km s-min=2.6km az=165.1*
*ROM **15** 16:37:28.9±0.2, 44°.08N×8°.99E, h10km, Md2.1/7, Ml2.0/5, Error ellipse: s-maj=3.2km s-min=1.6km az=171.0*
*NEIC **15** 16:37:28.9, 44°.08N×8°.99E, h10km, ML2.5(LDG), ML2.3(STR), ML2.0(ROM), After ROM.*
*STR **15** 16:37:29.8±0.4, 43°.90N×8°.90E, h5km, Ml2.3, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*GEN **15** 16:37:29.7, 44°.13N×9°.02E, h22km, ML2.0*
*LDG **15** 16:37:31.2±0.1, 43°.88N×8°.72E, h10km, Ml2.5/10, Error ellipse: s-maj=3.4km s-min=1.5km az=53.0*

ISC 15 16:37:27.9±0.4, 44°.02N±0°.03×9°.01E±0°.02, h15km±3km, n59, σ0§82/106, 2D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENL	**Genova Univers**	**0.39**	**356**	P	**Pg**	**16 37 36.0**	**+0.2**
GENL				S	**Sg**	**16 37 40.3**	**-0.8**
SC2M	**Scur

RONM	Roccetta Nervi	1.03 263	P	Pb	16 37 47.8	+0.3
RONM			S	Sb	16 37 59.5	-1.3
SAOF	Saorge	1.05 269	Pg	Pg	16 37 48.4	+0.2
SAOF			Sg	Sg	16 38 02.1	+0.2
SAOF	Saorge	1.05 269	Pg	Pg	16 37 48.4	+0.2
SAOF			Sg	Sg	16 38 02.1	+0.2
MAIM	Mastiano	1.07 95	P	Pb	16 37 48.9	+0.7
AUTN	L'Aution	1.14 269	Pg	Pg	16 37 50.0	0.0
AUTN			Sg	Sg	16 38 04.5	-0.4
AUTN	L'Aution	1.14 269	Pg	Pg	16 37 50.0	0.0
AUTN			Sg	Sg	16 38 04.5	-0.4
BDI	Bagni Di Lucca	1.14 87	Pg	Pg	16 37 50.7	+0.7
	31nm,0.7s					
BDI	Bagni Di Lucca	1.14 87	Pg	Pg	16 37 50.7	+0.7
	31nm,0.7s					
SBF	Sospel	1.15 263	*e*Pn	Pn	16 37 48.9	-0.6
SBF			*e*Sn	Sn	16 38 01.1	-3.8
	48nm,0.3s					
SBF	Sospel	1.15 263	*e*Pn	Pn	16 37 48.9	-0.6
SBF			*e*Sn	Sn	16 38 01.1	-3.8
	24nm,0.3s					
ENR	Entracque	1.17 281	P	Pn	16 37 49.3	-0.4
LUCF	Luceram	1.21 265	Pg	Pg	16 37 50.8	-0.4
LUCF			Sg	Sg	16 38 06.5	-0.5
LUCF	Luceram	1.21 265	Pg	Pg	16 37 50.8	-0.4
LUCF			Sg	Sg	16 38 06.5	-0.5
TOUF	Mont Tournerai	1.27 270	Pg	Pg	16 37 51.9	-0.5
TOUF	Mont Tournerai	1.27 270	Pg	Pg	16 37 51.9	-0.5
MVIF	Mont Vial	1.35 266	Pg	Pg	16 37 53.7	-0.1
MVIF	Mont Vial	1.35 266	Pg	Pg	16 37 53.7	-0.1
DOI	San Damiano	1.36 292	Pg	Pn	16 37 52.8	+0.4
	19nm,0.3s					
DOI	San Damiano	1.36 292	Pg	Pn	16 37 52.8	+0.4
	19nm,0.3s					
PZZ	Stroppo	1.45 290	Pg	Pn	16 37 53.6	0.0
	15nm,0.4s					
PGF	Pioggiola	1.47 180	*e*Pn	Pn	16 37 54.3	+0.4
PGF			*e*Sn	Sn	16 38 11.2	-1.6
	2.8nm,0.2s					
PGF	Pioggiola	1.47 180	*e*Pn	Pn	16 37 54.3	+0.4
PGF			*e*Sn	Sn	16 38 11.2	-1.6
	1.4nm,0.2s					
RSP	Reno Superiore	1.68 313	P	Pn	16 37 56.6	-0.2
MBDF	Montbardon	1.76 295	*e*P	Pg	16 38 01.0	-0.6
MBDF			*e*Sg	Sg	16 38 22.6	-1.8
	16nm,0.6s					
MBDF	Montbardon	1.76 295	*e*Pn	Pn	16 37 58.2	+0.4
MBDF			*e*P		16 38 01.0	
MBDF			*e*Sg	Sg	16 38 22.6	-1.8
MBDF	Montbardon	1.76 295	*e*Pn	Pn	16 37 58.2	+0.4
MBDF	Montbardon	1.76 295	*e*P	Pg	16 38 01.0	-0.6
MBDF			*e*Sg	Sg	16 38 22.6	-1.8
	8.1nm,0.6s					
FRF	La Foret Royal	1.77 256	*e*Pn	Pn	16 37 58.5	+0.5
FRF			*e*Sn	Sn	16 38 15.8	-4.5
	20nm,0.2s					
FRF	La Foret Royal	1.77 256	*e*Pn	Pn	16 37 58.5	+0.5
LMR	La Mourre	1.94 250	*e*Pn	Pn	16 38 00.4	+0.1
LMR			*e*Sn	Sn	16 38 20.1	-4.3
	17nm,0.2s					
LMR	La Mourre	1.94 250	*e*Pn	Pn	16 38 00.4	+0.1
LMR			*e*Sn	Sn	16 38 20.1	-4.3
	8.6nm,0.2s					
LPG	La Plagne	2.19 313	*e*Pn	Pn	16 38 05.7	+1.9
LPG			*e*Sg	Sg	16 38 38.2	0.0
	4.3nm,0.7s					
LPG	La Plagne	2.19 313	*e*Pn	Pn	16 38 05.7	+1.9
LPG			*e*Sg	Sg	16 38 38.2	0.0
	2.2nm,0.7s					
LPL	La Plagne	2.21 314	*e*Pn	Pn	16 38 06.0	+1.9
LPL			*e*Sg	Sg	16 38 38.8	-0.1
	2.4nm,0.3s					
LPL	La Plagne	2.21 314	*e*Pn	Pn	16 38 06.0	+1.9
LPL			*e*Sg	Sg	16 38 38.8	-0.1
	1.2nm,0.3s					
ORIF	Oris-en-Rattie	2.42 293	*e*P	Pn	16 38 09.7	+2.8
ORIF			*e*Sg	Sb	16 38 42.8	+2.1
	5.6nm,0.6s					
ORIF	Oris-en-Rattie	2.42 293	*e*Pn	Pn	16 38 07.6	+0.7
ORIF			*e*Sg	Sb	16 38 42.8	+2.1
ORIF	Oris-en-Rattie	2.42 293	*e*Pn	Pn	16 38 07.6	+0.7
ORIF	Oris-en-Rattie	2.42 293	*e*P	Pn	16 38 09.7	+2.8
ORIF			*e*Sg	Sb	16 38 42.8	+2.1
	2.8nm,0.6s					
SMRF	Simiane la Rot	2.48 270	*e*Pn	Pn	16 38 07.5	-0.3
SMRF			*e*Sg	Sb	16 38 42.6	+0.1
	4.8nm,0.3s					
SMRF	Simiane la Rot	2.48 270	*e*Pn	Pn	16 38 07.5	-0.3
SMRF			*e*Sg	Sb	16 38 42.6	+0.1
	2.4nm,0.3s					
VIVF	Saint-Julien-l	3.22 287	*e*Pn	Pn	16 38 18.1	+0.2
VIVF			*e*Sg	Sb	16 39 07.2	+3.4
	2.3nm,0.6s					
VIVF	Saint-Julien-l	3.22 287	*e*Pn	Pn	16 38 18.1	+0.2
VIVF			*e*Sg	Sb	16 39 07.2	+3.4
	1.1nm,0.6s					

DJA 15 16:54:05, 1.79N×98.72E, h80km, MLv2.9/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRSI	Tarutung	0.34	46	P	Pn	16 54 18.1	+0.6
GSI	Gunungsitoli	1.24	247	P	Pn	16 54 26.9	-0.1
GSI				S	Sn	16 54 44.9	+1.3
MNSI	Mandailing Nat	1.31	139	P	Pn	16 54 29.3	+1.4
IPM	Ipoh	3.53	41	P	Pn	16 54 57.6	+0.1
SDSI	Sungai Dareh	3.83	135	P	Pn	16 55 01.4	-0.2
BSI	Banda Aceh	5.02	317	P	Pn	16 55 18.5	+0.6

DJA 15 16:56:03, 3.02S×128.81E, h38km, mb4.1/11, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	Ambon	0.90	223	P	Pn	16 56 19.5	+0.3
AAI				S	Sn	16 56 32.5	+1.4
NLAI	Namlea	1.72	263	P	Pn	16 56 30.4	-0.1
NLAI				S	Sn	16 56 53.3	+2.0
TNTI	Ternate	4.03	339	P	Pn	16 57 02.3	0.0
TLE	Tual	4.70	124	P	Pn	16 57 13.0	+1.5
MNI	Manado	5.95	318	P	Pn	16 57 28.5	-0.2
	0.2nm43nm,1.0s						
KMSI	Cibinong	6.00	306	P	Pn	16 57 29.4	0.0
KDI	Kendari	6.25	261	P	Pn	16 57 33.4	+0.6
	0.1nm7.2nm,1.5s						
LUWI	Luwuk	6.35	288	P	Pn	16 57 31.7	-2.4
	0.2nm28nm,1.0s						
SGSI	Sangihe	7.42	334	P	Pn	16 57 49.4	+0.5
APSI	Ampana	7.46	286	P	Pn	16 57 48.8	-0.6
	0.1nm42nm,1.0s						
MMRI	Maumere	8.59	229	P	Pn	16 58 06.6	+1.7
	29nm,1.3s						
BNSI	Bone	8.79	261	P	Pn	16 58 07.9	+0.2
	7.2nm,1.7s						
PCI	Palu	9.21	283	P	Pn	16 58 16.1	+2.7
	46nm1.5nm,0.8s						
KAPI	Kappang	9.25	257	P	Pn	16 58 12.5	-1.5
	5.8nm,1.6s						
SMPI	Sarmi	9.94	84	P	Pn	16 58 23.8	+0.3
	15nm,2.8s						
KAKA	Kakadu	10.28	160	P	Pn	16 58 27.8	-0.2
	10nm,0.9s						
KNA	Kununurra	12.65	180	P	Pn	16 58 57.0	-3.5

*IDC **15** 16:56:13.3±2.3, 1.52S×149.63E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.7/17, mbtmp3.7/6, Error ellipse: s-maj=74.3km s-min=23.3km az=109.0*
*ISCJB **15** 16:56:15.8±2.0, 1.5S±0.2×149.8E±0.4, h33km, mb3.7/7, Error ellipse: s-maj=64.4km s-min=18.0km az=18.3*
*NEIC **15** 16:56:17.6±1.5, 1.61S×149.83E, h35km, mb3.9/1, Error ellipse: s-maj=52.6km s-min=15.1km az=108.0*

ISC 15 16:56:17.7±1.9, 1.6S±0.2×149.8E±0.4, h35km, n8, σ0s59/7, mb3.7/7, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRAB	Tennant Creek	23.68	219	*e*P	P	17 01 26.6	+0.2
	1.6nm,0.4s,mb3.8						
WRA	Warramunga Arr	23.70	219	P	P	17 01 25.9	-0.7
	1.1nm,0.5s,mb3.5,baz=39,slow=11,SNR=26						
ASAR	Alice Springs	26.81	214	P	P	17 01 55.8	+1.0
	0.7nm,0.7s,mb3.3,baz=38,slow=8.4,SNR=10.0						
FITZ	Fitzroy Crossi	28.85	234	P	P	17 02 12.4	-0.7
	1.9nm,0.8s,mb3.9,baz=27,slow=9.0,SNR=3.0						
CMAR	Chiang Mai Arr	53.85	294	P	P	17 05 38.4	+0.6
	0.6nm,0.7s,mb3.6,baz=126,slow=5.6,SNR=4.8						
PETK	Petropavlovsk-	54.92	6	P	P	17 05 44.8	0.0
	0.5nm,0.5s,mb3.8,baz=169,slow=9.0,SNR=4.2						
DIB	Dawson Inlet,	83.92	36	T		18 41 21.3	
	SNR=70						
BVAR	Borovoye Array	84.92	323	P	P	17 08 48.6	-0.4
	0.5nm,0.7s,mb3.8,baz=48,slow=6.4,SNR=5.3						

*IDC **15** 16:59:15.3±1.5, 48.19N×157.01E, h0km, mb3.5/2, mb1 3.7/3, mb1mx3.3/26, mbtmp3.4/3, ML2.8/1, MS3.5/1, Ms1 3.7/1, ms1mx2.4/30, Error ellipse: s-maj=73.2km s-min=27.8km az=107.0*
*ISCJB **15** 16:59:16.4±4.2, 48.22N±0.08×156.9E±0.3, h18km±31km, mb3.4/2, Error ellipse: s-maj=38.0km s-min=13.4km az=175.8*
*MOS **15** 16:59:19.9±1.2, 48.36N×156.98E, h47km, mb3.8/1, Error ellipse: s-maj=99.9km s-min=23.2km az=87.7*

ISC 15 16:59:17.2±4.3, 48.22N±0.08×156.8E±0.4, h12km±27km, n8, σ0s77/9, mb3.4/2, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.50	350	*e*PN	Pn	16 59 58.5	+0.8
SKR				*e*S	Sn	17 00 27.1	-1.1
SKR				pmax	pmax		
	comp=Z,70nm,0.5s						
SKR				pmax	pmax		
	comp=N,40nm,0.4s						
SKR				smax			
	comp=E,180nm,0.5s						
SKR				smax			
	comp=E,110nm,0.3s						
SKR				smax			
	comp=Z,40nm,0.3s						
PETK	Petropavlovsk-	4.93	6	Pn	Pn	17 00 31.2	+0.2
	comp=Z,0.4nm,0.3s,baz=195,slow=14,SNR=9.7						
PETK				Sn	Sn	17 01 29.1	+1.2
	comp=Z,0.6nm,0.3s,baz=179,slow=14,SNR=4.5						
PETK	Petropavlovsk-	4.93	6	PN	Pn	17 00 31.2	+0.2
PETK						17 01 29.1	
PETK				smax			
	comp=N,1.0nm,0.3s						
PET	Petropavlovsk	4.96	13	*e*PN	Pn	17 00 30.5	-0.9
CMAR	Chiang Mai Arr	55.12	258	LR	LR	17 31 47.7	
	comp=N,42nm,19.9s,baz=177,slow=35						
ASAR	Alice Springs	74.44	202	P	P	17 10 55.4	+0.3
	comp=N,0.3nm,0.6s,mb3.4,baz=14,slow=5.4,SNR=6.4						
TXAR	Lajitas Array	74.61	63	P	P	17 10 55.7	-0.5
	comp=N,0.2nm,0.5s,mb3.3,baz=304,slow=3.9,SNR=5.3						
TXAR	Lajitas Array	74.61	63	P	P	17 10 55.7	-0.5
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.1s						

KRSC 15 17:31:14.2±0.9, 52.58N×159.44E, h93km±73km, ML3.8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLC	Nalytchevo	0.59	354	*e*P	Pn	17 31 31.0	+1.0
NLC				*i* S	Sn	17 31 43.6	+1.8
PET	Petropavlovsk	0.65	313	*i* P	Pn	17 31 31.0	+0.5
PET				*i* S	Sn	17 31 43.6	+0.9
AVH	Avacha	0.81	329	*i* P	Pn	17 31 33.2	+1.2
AVH				*i* S	Sn	17 31 47.5	+2.2
GRL	Gorelyy	0.83	269	*i* P	Pn	17 31 32.9	+0.7
GRL				*i* S	Sn	17 31 46.5	+0.7
GNL	Ganaly	1.44	322	*i* P	Pn	17 31 39.2	0.0
GNL				*i* S	Sn	17 31 57.4	-0.8
KII	Karymskiy	1.46	0	*e*P	Pn	17 31 40.6	+1.1
KII				*i* S	Sn	17 32 00.1	+1.4
MIPR	Malaya Ipel'ka	1.67	261	*i* P	Pn	17 31 42.1	-0.1
MIPR				*i* S	Sn	17 32 02.2	-1.2
MKZ	Mys Kozlova	2.41	34	*i* P	Pn	17 31 52.4	+0.7
MKZ				*i* S	Sn	17 32 19.9	-0.6
ALID	Alaid	2.96	236	P	Pn	17 32 00.0	+0.8
ALID				*i* S	Sn	17 32 33.8	-0.1
KMNR	Kamenistaya	3.22	8	*e*P	Pn	17 32 04.4	+1.8
KPT	Kopyto	3.42	7	P	Pn	17 32 07.2	+1.8
BZGR	Bezymyannyi-Gr	3.45	12	P	Pn	17 32 07.1	+1.4
ZLN	Zelenaya	3.54	13	*e*P	Pn	17 32 08.4	+1.5
ZLN				*e*S	Sn	17 32 48.9	+1.3
KRSR	Krestovskiy	3.70	10	P	Pn	17 32 10.5	+1.4
SRDR	Sredinnyy	3.75	2	P	Pn	17 32 10.5	+0.8
KLY	Klyuchi	3.81	10	P	Pn	17 32 12.5	+2.0
KBTR	Krutoberegovo	4.14	27	*e*P	Pn	17 32 16.0	+1.0

*NEIC **15** 17:34:57.4±1.7, 28.69N×82.06E, h35km, mb3.7/2, Error ellipse: s-maj=32.8km s-min=13.4km az=50.0*
*IDC **15** 17:35:03.4±11.0, 29.65N×82.00E, h0km, mb3.5/2, mb1 3.5/4, mb1mx3.2/27, mbtmp3.4/4, ML3.3/2, Error ellipse: s-maj=313.0km s-min=30.9km az=59.0*
*ISCJB **15** 17:35:06.9±5.5, 29.6N±0.3×82.9E±0.3, h53km±40km, mb3.5/3, Error ellipse: s-maj=64.5km s-min=15.9km az=31.7*

ISC 15 17:35:08.3±5.3, 29.5N±0.3×82.8E±0.3, h67km±36km, n10, σ0s41/11, mb3.4/3, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	Lhasa	7.29	86	P	Pn	17 36 53.0	+0.9
LSA	Lhasa	7.29	86	*e*Pn	Pn	17 36 51.3	-0.7
	9.4nm,0.8s						
LSA				*e*Sn	Sn	17 38 13.3	0.0
MK31	Makanchi Array	17.28	359	*e*Pn	Pn	17 39 04.7	-0.4
MKAR	Makanchi Array	17.28	359	P	Pn	17 39 05.2	+0.2
	0.1nm,0.3s,baz=171,slow=10,SNR=5.3						
MKAR	Makanchi Array	17.28	359	P	Pn	17 39 05.2	+0.2
CMAR	Chiang Mai Arr	18.38	123	P	Pn	17 39 27.5	+8.9
	0.0nm,0.3s,baz=305,slow=11,SNR=2.8						
KURK	Kurchatov	21.43	353	P	P	17 39 50.6	-0.1
	2.4nm,0.8s,mb3.6,baz=172,slow=10,SNR=14						
KURK	Kurchatov	21.43	353	*e*P	P	17 39 50.4	-0.3
	2.3nm,0.8s,mb3.6						
ENH	Enshi	23.15	81	*e*P	P	17 40 08.8	-0.2
	1.2nm,0.4s,mb3.6						
ZALV	Zalesovo Beam	24.49	3	P	P	17 40 21.4	+0.5
	0.6nm,0.6s,mb3.1,baz=177,slow=9.4,SNR=4.2						

JMA 15 17:35:42.7, 38.94N×140.85E, h5km±1km, M2.2, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	Ichinoseki	0.29	88	P	Pg	17 35 48.4	+0.1
JMK				S	Sg	17 35 52.6	+0.5
JYK	Kaneyama	0.38	267	P	Pg	17 35 50.2	+0.1
JYK				*e*S	Sg	17 35 55.3	+0.2
JRG	Rokugo	0.49	340	P	Pg	17 35 52.2	+0.1
JRG				*e*S	Sg	17 35 59.2	+0.8
JOU	Okura	0.59	194	P	Pg	17 35 54.3	+0.2
JIO	Ouri	0.62	141	P	Pg	17 35 54.4	-0.2
JOM	Ohasama	0.63	33	P	Pg	17 35 54.7	-0.2
JOM				*e*S	Sg	17 36 03.4	+0.3
OFUJ	Ofunato	0.65	77	P	Pg	17 35 55.0	-0.2
JYS	Shiratake	0.94	221	P	Pg	17 36 00.8	0.0
JYS				*e*S	Sg	17 36 13.3	+0.2
JYA	Atsumi	0.95	249	P	Pg	17 36 00.7	-0.3
JYA				*i* S	Sg	17 36 13.3	0.0

*IDC **15** 17:36:01.3±2.1, 39.21N×141.42E, h0km, mb3.8/5, mb1 3.9/9, mb1mx3.7/29, mbtmp4.0/9, ML3.5/4, Error ellipse: s-maj=52.2km s-min=19.5km az=73.0*
*JMA **15** 17:36:04.6, 39.14N×140.93E, h10km±1km, M3.4*
*ISCJB **15** 17:36:04.5±0.5, 39.14N±0.03×140.96E±0.05, h16km±6km, mb3.8/5, Error ellipse: s-maj=6.2km s-min=5.1km az=175.9*

ISC 15 17:36:04.9±0.5, 39.13N±0.03×140.95E±0.04, h9km±4km, n20, σ0s79/27, mb3.8/5, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	Ichinoseki	0.28	129	P	Pg	17 36 10.3	-0.1
JMK				S	Sg	17 36 14.4	+0.3
JRG	Rokugo	0.36	318	P	Pg	17 36 11.6	-0.4
JRG				*e*S	Sg	17 36 16.9	+0.1
JOM	Ohasama	0.44	38	P	Pg	17 36 13.5	0.0
JOM				*e*S	Sg	17 36 19.3	0.0
JYK	Kaneyama	0.50	246	P	Pg	17 36 14.4	-0.2
JYK				*e*S	Sg	17 36 20.7	-0.5
JIO	Ouri	0.74	155	P	Pg	17 36 19.0	-0.1
JIO				S	Sg	17 36 28.8	0.0
JOU	Okura	0.79	196	P	Pg	17 36 19.9	-0.2
JOU				S	Sg	17 36 30.7	+0.4
MJAR	Matsushiro Arr	3.37	221	Pn	Pn	17 36 59.3	+1.7
	1.8nm,0.3s,baz=28,slow=13,SNR=35						
MAT	Matsushiro	3.37	221	P	Pn	17 36 59.1	+1.4
ASAJ	Asahikawa	5.14	13	Pn	Pn	17 37 22.9	+0.8
	0.8nm,0.3s,baz=259,slow=16,SNR=10						
JHJ	Hachijo jima 2	6.07	189	Pn	Pn	17 37 34.2	-0.5
	8.2nm,0.3s,baz=78,slow=20,SNR=4.5						
KSRS	Korea Array	10.37	265	Pn	Pn	17 38 37.3	+3.5
	0.5nm,0.3s,baz=81,slow=14,SNR=23						
KS15	Wonju Array Si	10.40	265	*e*Pn	Pn	17 38 38.7	+4.5
CBIJ	Chichi jima	12.04	175	Pn	Pn	17 38 53.8	-2.9
	1.1nm,0.3s,baz=288,slow=20,SNR=2.8						
QIZ	Qiongzhong	33.51	242	P	P	17 42 51.0	+6.1
QIZ				S	S	17 48 06.8	-0.1
QIZ				LR	LR		
	comp=Z,38nm,17.9s						
ZALV	Zalesovo Beam	40.26	311	P	P	17 43 41.5	-0.3
	comp=Z,1.4nm,0.8s,mb3.8,baz=81,slow=9.6,SNR=8.2						
MKAR	Makanchi Array	42.72	300	P	P	17 44 02.0	-0.2
	comp=Z,1.3nm,0.7s,mb3.7,baz=78,slow=13,SNR=8.7						
KURK	Kurchatov	44.37	306	P	P	17 44 15.5	0.0
	comp=Z,2.1nm,0.8s,mb3.9,baz=82,slow=8.5,SNR=12						
BVAR	Borovoye Array	48.91	311	P	P	17 44 50.5	-0.5
	comp=Z,0.4nm,0.6s,mb3.6,baz=93,slow=8.7,SNR=3.2						
WRA	Warramunga Arr	59.08	187	P	P	17 46 04.5	-1.0
	comp=Z,0.6nm,0.6s,mb3.8,baz=5.0,slow=7.5,SNR=13						
WRA	Warramunga Arr	59.08	187	P	P	17 46 04.5	-1.0

*NIED **15** 17:36:00, 39.10N×141.00E, h5km, Mw4.2 Best double couple: M0 2.63000×10^15 NP1:φs 18.00000°, δ49.00000°, λ85.00000°. NP2:φs 205.00000°, δ41.00000°, λ95.00000°.*
*BJI **15** 17:36:18.6, 38.60N×140.91E, h28km, mB5.0/11, mb4.4/19, Ms4.0/6, Ms7 3.8/8*
*IDC **15** 17:36:18.1±0.5, 39.09N×140.84E, h0km, mb4.3/23, mb1 4.4/25, mb1mx4.3/32, mbtmp4.3/25, ML4.1/2, MS3.3/1, Ms1 3.3/1, ms1mx2.4/39, Error ellipse: s-maj=14.9km s-min=13.5km az=88.0*
*ISCJB **15** 17:36:19.1±0.5, 39.16N±0.02×140.93E±0.03, h18km±3km, mb4.5/74, MS3.8/4, Error ellipse: s-maj=4.4km s-min=3.8km az=26.7*
*NEIC **15** 17:36:19.5, 39.14N×140.93E, h10km, mb4.7/41, MW4.2(NIED), After JMA.*
NEIC Recorded [3 JMA] in Iwate and [2 JMA] in Akita and Miyagi.
*JMA **15** 17:36:19.4, 39.14N×140.93E, h10km±1km, M4.4*
JMA Felt III J1.
*MOS **15** 17:36:21.7±0.9, 39.20N×140.87E, h33km, mb4.9/35, Error ellipse: s-maj=10.4km s-min=5.5km az=107.0*
*SZGRF **15** 17:36:23.3, 39.01N×140.97E, h33km, mb4.5, Eastern Honshu, Japan*

ISC 15 17:36:19.7±0.4, 39.14N±0.02×140.93E±0.03, h11km±3km, n184, σ0s91/191, mb4.5/74, MS3.8/4, 3C-4D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	Ichinoseki	0.29	129	P	Pg	17 36 25.2	-0.4
JMK				*e*S	Sg	17 36 29.2	-0.4
JRG	Rokugo	0.34	319	P	Pg	17 36 26.3	-0.2
JRG				*e*S	Sg	17 36 31.7	+0.5
JOM	Ohasama	0.44	40	*e*S	Sg	17 36 33.9	-0.3
JYK	Kaneyama	0.49	244	P	Pg	17 36 29.2	-0.1
JYK				*e*S	Sg	17 36 35.8	0.0
OFUJ	Ofunato	0.58	95	*e*S	Sg	17 36 38.8	+0.2
JIO	Ouri	0.76	154	*e*S	Sg	17 36 43.8	-0.4
JOU	Okura	0.80	195	P	Pg	17 36 34.9	-0.1
JOU				*e*S	Sg	17 36 45.4	0.0
MJAR	Matsushiro Arr	3.37	221	Pn	Pn	17 37 14.2	+2.0
	8.3nm,0.3s,baz=31,slow=12,SNR=40						
MJAR				Lg		17 38 04.5	
	5.1nm,0.3s,baz=16,slow=23,SNR=7.3						
MJAR				LR	LR	17 38 40.2	
	comp=Z,398nm,18.6s,baz=5.0,slow=43						
MAT	Matsushiro	3.37	221	P	Pn	17 37 13.9	+1.7
MAT				*e*S	Sn	17 37 56.9	+4.8
ASAJ	Asahikawa	5.13	14	Pn	Pn	17 37 39.0	+2.6
	4.1nm,0.3s,baz=229,slow=12,SNR=9.4						
ASAJ	Asahikawa	5.13	14	P	Pn	17 37 39.0	+2.6
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
JHJ	Hachijo jima 2	6.08	189	Pn	Pn	17 37 51.0	+1.6
	comp=Z,16nm,0.3s,baz=96,slow=18,SNR=10						
JHJ				Sn	Sn	17 39 00.1	+1.2
	comp=Z,31nm,0.3s,baz=76,slow=22,SNR=6.8						
YUK	Yuzh-Kuril'sk	6.13	36	||*i* P	P	17 37 50.6	+0.4
YUK				*i* S	Sn	17 38 59.5	-0.8
YUK				pmax	pmax		
	comp=Z,80μm,0.3s						
YUK				pmax	pmax		
	comp=N,130nm,1.0s						
YUK				pmax	pmax		
	comp=E,70nm,1.0s						
YUK				pmax	pmax		
	comp=Z,180nm,1.0s						
YUK				smax			
	comp=N,270nm,0.6s						
YUK				smax			
	comp=E,200nm,0.6s						
YUK				smax			
	comp=N,2μm,1.2s						
YUK				MLR	MLR		
	comp=N,320nm,15.1s						
YUK				MLR	MLR		
	comp=Z,220nm,15.1s						
YUK				MLR	MLR		
	comp=E,40nm,5.0s						
VLA	Vladivostok	7.89	303	P	Pn	17 38 09.0	-5.3
VLA				MLR	MLR		
	comp=Z,500nm,13.3s						
YSS	Yuzh-Sakhalins	7.93	9	*e*P	Pn	17 38 16.0	+1.2
YSS				*e*S	Sn	17 39 43.7	-0.7
YSS				pmax	pmax		
	comp=N,40nm,1.0s						
YSS				pmax	pmax		
	comp=Z,40nm,1.0s						
MDJ	Mudanjiang	10.07	307	*e*Pn	Pn	17 38 39.7	-4.4
	comp=Z,22nm,1.1s						
HABR	Khabarovsk	10.25	337	P	Pn	17 38 47.5	+0.9
HABR				pmax	pmax		
	comp=N,21nm,1.5s						
HABR				pmax	pmax		
	comp=Z,93nm,2.0s						
HABR				pmax	pmax		
	comp=E,40nm,1.5s						
HABR				MLR	MLR		
	comp=Z,103nm,16.0s						
KSRS	Korea Array	10.36	265	Pn	Pn	17 38 52.3	+4.1
	comp=Z,2.5nm,0.3s,baz=72,slow=12,SNR=14						
KSRS				Sn	Sn	17 40 50.1	+5.9
	comp=Z,1.2nm,0.3s,baz=75,slow=24,SNR=14						
KSRS	Korea Array	10.36

comp=N,160nm,13.7s
BJI LR LR
comp=E,350nm,13.0s
BJI LR LR
comp=Z,100nm,13.0s
NJ2 Nanjing 19.27 255 *e*P **Pn** **17 40 39.6 -5.6**
NJ2 pmax pmax
comp=Z,20nm,1.2s
TATO Taipei 21.63 235 *e*P **P** **17 41 09.3 -0.7**
comp=Z,279nm,1.7s,mb5.4
YAK Yakutsk 23.94 347 *e*P **P** **17 41 31.8 -1.7**
YAK *e**PP 17 41 40.2
YAK *e*PPP 17 42 09.5
YAK *e*S **S** **17 45 50.1 +0.5**
YAK *e*SS 17 46 40.7
YAK *e*SSS 17 46 53.5
YAK *e* 17 52 36.7
YAK pmax pmax
comp=Z,33nm,1.1s,mb4.7
YAK pmax pmax
comp=E,6.0nm,1.4s
YAK pmax pmax
comp=N,18nm,1.1s
YAK smax
comp=N,81nm,3.3s
YAK smax
comp=E,77nm,2.9s
YAK MLR MLR
comp=Z,94nm,14.0s,MS3.4
YAK MLR MLR
comp=N,72nm,13.0s,MS3.3
YAK MLR MLR
comp=E,36nm,16.0s,MS3.3
YAK Yakutsk 23.94 347 *e*P **P** **17 41 32.0 -1.5**
comp=E,40nm,1.1s,mb4.8
BOD Bodaibo 25.56 326 *e*P **P** **17 41 48.7 +0.4**
BOD pmax pmax
comp=Z,8.0nm,1.0s,mb4.2
ULN Ulaanbaatar 25.90 301 *e*P **P** **17 41 49.7 -1.8**
ULN pmax pmax
comp=Z,5.0nm,1.1s,mb4.0
ULN Ulaanbaatar 25.90 301 *e*P **P** **17 41 49.7 -1.8**
comp=Z,4.8nm,1.1s,mb3.9
SONM Songino Array 26.34 301 P **P** **17 41 55.5 +0.1**
comp=Z,0.6nm,0.3s,mb3.6,baz=115,slow=6.5,SNR=3.2
ENH Enshi 27.21 261 *e*P **P** **17 42 02.4 -1.1**
comp=Z,14nm,0.8s,mb4.5
ZAK Zakamensk 28.70 305 *e*P **P** **17 42 14.1 -2.5**
LZH Lanzhou 29.40 276 *e*P **P** **17 42 22.0 -1.0**
LZH pP pP 17 42 27.5 +1.2
LZH pmax pmax
comp=Z,16nm,1.1s,mb4.7
BILL Bilibino 32.13 18 *c*P **P** **17 42 47.9 +1.2**
BILL pmax pmax
comp=Z,7.0nm,1.2s,mb4.4
BILL MLR MLR
comp=Z,100nm,16.0s,MS3.6
BILL Bilibino 32.13 18 *e*P **P** **17 42 42.5 -4.2**
TIXI Tiksi 33.16 353 *e*P **P** **17 42 54.9 -0.8**
comp=Z,192nm,0.6s
ZAA0 Zalesovo Array 40.23 311 *e*P **P** **17 43 55.8 -0.4**
ZALV Zalesovo Beam 40.23 311 P **P** **17 43 56.1 -0.1**
comp=Z,5.6nm,0.8s,mb4.4,baz=92,slow=7.5,SNR=18
ZALV PcP PcP 17 45 59.8 -0.1
comp=Z,0.9nm,0.5s,baz=91,slow=3.3,SNR=4.1
NVS Novosibirsk 41.13 312 *i*P **P** **17 44 03.0 -0.5**
NVS pmax pmax
comp=Z,12nm,1.3s,mb4.4
NVS pmax pmax
comp=N,6.0nm,1.6s
NVS pmax pmax
comp=E,10.0nm,1.4s
CMAR Chiang Mai Arr 41.71 253 P **P** **17 44 08.7 0.0**
comp=E,1.0nm,0.8s,mb3.5,baz=46,slow=8.0,SNR=6.6
CMAR PcP PcP 17 46 05.2 -0.1
comp=E,1.0nm,0.8s,baz=20,slow=1.8,SNR=4.6
MK31 Makanchi Array 42.70 300 *e*P **P** **17 44 16.5 0.0**
MKAR Makanchi Array 42.70 300 P **P** **17 44 16.6 +0.1**
comp=E,6.3nm,0.8s,mb4.4,baz=75,slow=14,SNR=24
SVW2 Sparrevohn 44.10 39 *e*P **P** **17 44 28.9 +1.3**
KURK Kurchatov 44.35 306 P **P** **17 44 30.2 +0.5**
comp=E,12nm,0.8s,mb4.6,baz=83,slow=8.7,SNR=29
KURK Kurchatov 44.35 306 P **P** **17 44 30.3 +0.6**
KURK pmax pmax
comp=Z,12nm,0.9s,mb4.6
KDAK Kodiak Island 45.81 43 P **P** **17 44 41.1 -0.2**
comp=Z,5.2nm,0.5s,mb4.7,baz=258,slow=4.0,SNR=6.5
ODAN Odare 45.94 271 *e*P **P** **17 44 42.7 +0.1**
comp=Z,11nm,0.8s,mb4.8
JIRN Jiri 46.48 273 *e*P **P** **17 44 47.5 +0.6**
comp=Z,10nm,0.7s,mb4.9
RAMN Ramite 46.51 272 *e*P **P** **17 44 46.8 -0.3**
comp=Z,33nm,1.0s,mb5.2
GUN Gumba 46.60 273 *e*P **P** **17 44 48.7 +0.8**
comp=Z,43nm,0.9s,mb5.4
KKN Kakani 47.13 274 *e*P **P** **17 44 52.1 +0.1**
comp=Z,42nm,0.8s,mb5.5
KKN Kakani 47.13 274 *e*P **P** **17 44 52.1 +0.1**
KKN pmax pmax
comp=Z,42nm,0.8s,mb5.4
BVAR Borovoye Array 48.89 311 P **P** **17 45 05.5 +0.3**
comp=Z,2.8nm,0.6s,mb4.5,baz=84,slow=8.1,SNR=19
BVAR PcP PcP 17 46 29.9 +0.4
comp=Z,1.3nm,0.6s,baz=101,slow=3.2,SNR=3.8
AAK Ala-Archa 49.18 297 P **P** **17 45 07.4 -0.2**
comp=Z,4.0nm,0.8s,mb4.5,baz=202,slow=1.6,SNR=7.2
UCH Uchtor 49.30 296 *e*P **P** **17 45 10.0 +1.4**
comp=Z,9.3nm,1.4s,mb4.6
EKS2 Erkin-Say 49.67 297 *e*P **P** **17 45 11.8 +0.5**
comp=Z,4.1nm,0.9s,mb4.5
AML Almayashu 49.91 296 *e*P **P** **17 45 15.2 +2.0**
comp=Z,21nm,1.0s,mb5.1
INK Inuvik 52.70 28 P **P** **17 45 34.8 +1.0**
comp=Z,3.7nm,0.6s,mb4.5,baz=294,slow=4.6,SNR=9.9
SVE Sverdlovsk 53.33 318‖ *e*P **P** **17 45 39.4 +0.9**
SVE pmax pmax
comp=Z,19nm,0.9s,mb5.0
ARU Arti 54.54 317 *c i*P **P** **17 45 47.4 0.0**
ARU *e* 17 47 44.5
ARU S **S** **17 53 27.1 +0.8**
ARU SS SS 17 57 07.3 -1.0
ARU pmax pmax
comp=Z,23nm,1.2s,mb5.1
ARU Arti 54.54 317 *e*P **P** **17 45 47.4 0.0**
comp=Z,10nm,0.8s,mb4.9
ABKAR Akbulak array 56.31 309 *e*P **P** **17 45 59.8 -0.5**
comp=Z,4.4nm,0.6s,mb4.7
KBL Kabul 56.33 289 *e*P **P** **17 46 00.3 -0.3**
KBL pmax pmax
comp=Z,14nm,1.0s,mb5.0
KBL Kabul 56.33 289 *e*P **P** **17 46 00.3 -0.3**
comp=Z,14nm,1.0s,mb4.9
AKTK Aktyubinsk 57.00 311 P **P** **17 46 04.9 -0.2**
AKTO Aktyubinsk 57.00 311 P **P** **17 46 04.9 -0.2**
comp=Z,4.6nm,0.8s,mb4.5,baz=66,slow=13,SNR=7.9
FITZ Fitzroy Crossi 58.71 197 P **P** **17 46 17.0 -0.3**
comp=Z,1.0nm,0.8s,mb3.9,baz=38,slow=19,SNR=4.0
WRAB Tennant Creek 59.08 187 *e*P **P** **17 46 17.4 -2.5**
WRAB pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
WRAB Tennant Creek 59.08 187 *e*P **P** **17 46 17.4 -2.5**
comp=Z,6.3nm,0.9s,mb4.7
WRA Warramunga Arr 59.09 187 P **P** **17 46 19.6 -0.4**
comp=Z,3.3nm,0.6s,mb4.5,baz=4.5,slow=7.4,SNR=26
RES Resolute Bay 60.67 15 *e*P **P** **17 46 29.6 -0.7**
RES pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
RES Resolute Bay 60.67 15 *e*P **P** **17 46 29.6 -0.7**
comp=Z,5.1nm,0.8s,mb4.7
ARCES ARCESS Array B 61.90 339 P **P** **17 46 38.7 0.0**
comp=Z,2.8nm,0.9s,mb4.4,baz=50,slow=8.4,SNR=8.2
YKA Yellowknife Ar 62.19 31 P **P** **17 46 40.8 +0.1**
comp=Z,1.1nm,0.7s,mb4.1,baz=298,slow=5.9,SNR=3.4
ASAR Alice Springs 62.82 187 P **P** **17 46 45.5 +0.3**
comp=Z,2.5nm,0.7s,mb4.4,baz=6.5,slow=4.7,SNR=33
OBN Obninsk 66.19 323‖ *e*P **P** **17 47 06.7 -0.4**
OBN 17 47 33.0
OBN 17 49 35.0
OBN pmax pmax
comp=Z,20nm,1.2s,mb5.0
FINES FINESS Array B 66.78 332 P **P** **17 47 10.5 -0.3**
comp=Z,3.6nm,0.6s,mb4.6,baz=42,slow=11,SNR=14
VSR Storozhevoye 67.11 318 *e*P **P** **17 47 12.6 -0.4**
VSR pmax pmax
comp=E,2.0nm,0.4s
VSR pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
VSR pmax pmax
comp=N,8.0nm,0.9s
SUMG Summit 68.59 360 *i*P **P** **17 47 22.2 +0.2**
comp=N,5.2nm,0.8s,mb4.5
ZEI Tsey 69.19 309 *e*P **P** **17 47 25.7 -0.5**
ZEI pmax pmax
comp=Z,3.0nm,0.3s,mb4.7
KIV Kislovodsk 69.25 310 *e*P **P** **17 47 25.0 -1.6**
KIV pmax pmax
comp=Z,24nm,1.0s,mb5.1
KIV MLR MLR
comp=Z,37nm,18.0s,MS3.7
KIV Kislovodsk 69.25 310 *e*P **P** **17 47 27.1 +0.5**
comp=Z,17nm,0.9s,mb5.0
SWMT Swartz Lake 71.04 44 *e*P **P** **17 47 36.8 -0.7**
comp=Z,3.7nm,1.2s,mb4.2
SOC Sochi 71.22 311 *e*P **P** **17 47 38.4 -0.2**
SOC pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
ANN Anapa 71.81 313 *e*P **P** **17 47 40.8 -1.4**
ANN pmax pmax
comp=Z,21nm,1.5s,mb4.8
NB2 NORSAR Subarra 72.10 337 P **P** **17 47 43.6 -0.1**
comp=Z,1.4nm,0.7s,mb4.0,baz=39,slow=6.5
NOA NORSAR Array B 72.10 337 P **P** **17 47 43.7 0.0**
comp=Z,2.8nm,0.7s,mb4.3,baz=39,slow=6.1,SNR=10
NOA NORSAR Array B 72.10 337 P **P** **17 47 43.7 0.0**
AKASG Malin Array Be 72.41 322 P **P** **17 47 45.3 -0.3**
comp=Z,1.7nm,0.4s,mb4.4,baz=45,slow=6.4,SNR=14
AKBB Malin Array Si 72.41 322 *e*P **P** **17 47 45.4 -0.3**
KIEV Kiev 72.42 322 *e*P **P** **17 47 45.1 -0.6**
KIEV pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
KIEV Kiev 72.42 322 *e*P **P** **17 47 45.1 -0.6**
comp=Z,4.9nm,0.8s,mb4.5
SFJD Kangerlussuaq 73.83 5 *i*P **P** **17 47 54.8 +1.0**
NVAR Mina Array Bea 74.04 53 P **P** **17 47 57.4 +1.9**
comp=Z,2.4nm,0.8s,mb4.2,baz=287,slow=5.3,SNR=12
NVAR Mina Array Bea 74.04 53 P **P** **17 47 57.4 +1.9**
IMW Indian Meadow 74.97 45 *e*P **P** **17 48 02.7 +1.9**
comp=Z,2.6nm,0.8s,mb4.2
RLMT Red Lodge 75.09 44 *e*P **P** **17 48 02.6 +1.1**
comp=Z,3.1nm,0.9s,mb4.2
DUG Dugway 76.27 49 *e*P **P** **17 48 09.7 +1.3**
DUG pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
DUG Dugway 76.27 49 *e*P **P** **17 48 09.7 +1.3**
comp=Z,3.4nm,0.8s,mb4.3
BUR08 Bucovina Ar. S 76.42 321 *e*P **P** **17 48 09.0 -0.1**
PDAR Pinedale Array 76.47 46 P **P** **17 48 10.2 +0.8**
comp=Z,2.4nm,0.8s,mb4.2,baz=297,slow=1.0,SNR=9.5
KOLS Kolonicke sedl 76.90 324 *e*P **P** **17 48 13.0 +1.2**
KOLS pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
KOLS Kolonicke sedl 76.90 324 *e*P **P** **17 48 13.0 +1.2**
comp=Z,3.6nm,1.1s,mb4.2
KOLS Kolonicke sedl 76.90 324 *e*P **P** **17 48 13.0 +1.2**
STHS Stebnicka Huta 77.03 324 *e*P **P** **17 48 14.1 +1.7**
STHS pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
STHS Stebnicka Huta 77.03 324 *e*P **P** **17 48 14.1 +1.7**
comp=Z,3.7nm,0.9s,mb4.3
STHS Stebnicka Huta 77.03 324 *e*P **P** **17 48 14.1 +1.7**
OJC Ojcow 77.09 326 *e*P **P** **17 48 12.2 -0.6**
BR131 Keskin Array S 77.18 311 *e*P **P** **17 48 13.7 +0.2**
comp=Z,0.8nm,0.5s,mb3.9
BRTR Keskin Array B 77.18 311 P **P** **17 48 14.2 +0.8**
comp=Z,0.9nm,0.5s,mb4.0,baz=62,slow=3.6,SNR=10
CRVS Cervenica-Dubn 77.30 324 *e*P **P** **17 48 15.2 +1.2**
CRVS pmax pmax
comp=Z,16nm,2.3s,mb4.5
CRVS Cervenica-Dubn 77.30 324 *e*P **P** **17 48 15.2 +1.2**
comp=Z,16nm,2.3s,mb4.5
CRVS Cervenica-Dubn 77.30 324 *e*P **P** **17 48 15.2 +1.2**
NIE Niedzica 77.44 325 *e*P **P** **17 48 16.2 +1.4**
OKC Ostrava-Krasne 78.09 326 *e*P **P** **17 48 18.6 +0.2**
OKC MLR MLR
comp=E,100nm,8.9s
OKC Ostrava-Krasne 78.09 326 AMS AMS 17 28 00.0
OKC *e*P 17 48 18.6
DPC Dobruska-Polom 78.48 327 *e*P **P** **17 48 21.8 +1.3**
DPC Dobruska-Polom 78.48 327 *e*P **P** **17 48 21.8 +1.3**
DPC AMS AMS 18 27 10.0
VYHS Vyhne 78.78 325 *e*P **P** **17 48 23.0 +0.8**
VYHS pmax pmax
comp=Z,51nm,4.2s
VYHS Vyhne 78.78 325 *e*P **P** **17 48 23.0 +0.8**
comp=Z,51nm,4.2s
VYHS Vyhne 78.78 325 *e*P **P** **17 48 23.0 +0.8**
BRG Berggiesshubel 79.05 329 *e*(P) **P** **17 48 28.8 +5.1**
comp=Z,4.5nm,1.3s,mb4.2
PVCC Panska Ves 79.07 328 *e*P **P** **17 48 24.4 +0.6**
PVCC Panska Ves 79.07 328 *e*P **P** **17 48 24.4 +0.6**
CLL Collm 79.09 330‖ *i*P **P** **17 48 24.0 +0.1**
CLL Collm 79.09 330‖ *i*P **P** **17 48 24.0 +0.1**
PRU Pruhonice 79.49 328 *e*P **P** **17 48 27.4 +1.3**
PRU MLR MLR
comp=Z,100nm,10.1s,MS4.5
PRU Pruhonice 79.49 328 *e*P **P** **17 48 27.4 +1.3**
PRU AMS AMS 18 26 20.0
comp=Z,100nm,10.1s
TREC Trest 79.63 327 AMS AMS 18 26 10.0
NKC Novy Kostel 80.15 329 AMS AMS 18 26 50.0
KHC Kasperske Hory 80.56 328 *e*P **P** **17 48 32.2 +0.3**
KHC pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
KHC Kasperske Hory 80.56 328 *e*P **P** **17 48 32.2 +0.3**
comp=Z,4.0nm,1.1s,mb4.3
KHC Kasperske Hory 80.56 328 *e*P **P** **17 48 32.8 +0.9**
KHC AMS AMS 18 25 40.0
GERES GERESS Array B 80.73 328 P **P** **17 48 32.9 +0.1**
comp=Z,0.8nm,0.6s,mb3.8,baz=40,slow=5.2,SNR=11
GRA1 Grafenberg Arr 81.06 330 *e*P **P** **17 48 34.4 -0.2**
comp=Z,6.0nm,1.1s,mb4.4
GRF Grafenberg Arr 81.06 330 *e*P **P** **17 48 34.4 -0.2**
comp=Z,6.0nm,1.1s,mb4.4
GRF Grafenberg Arr 81.06 330 *e*P **P** **17 48 34.4 -0.2**
GRF pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
GRF Grafenberg Arr 81.06 330 *e*P **P** **17 48 34.4 -0.2**
GRF pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
GIVF Givet 83.11 333 *e*P **P** **17 48 43.8 -1.5**
BAIF Baives 83.36 334 *e*P **P** **17 48 45.2 -1.4**
MEZF Maizieres J'vi 84.37 332 *e*P **P** **17 48 51.0 -0.8**
LOR Lormes 85.84 332 *e*P **P** **17 48 58.0 -1.2**
comp=Z,10nm,1.0s,mb4.7
LOR Lormes 85.84 332 *e*P **P** **17 48 58.0 -1.2**
LOR pmax pmax
comp=Z,5.0nm,1.0s,mb4.7
LOR Lormes 85.84 332 *e*P **P** **17 48 58.0 -1.2**
comp=Z,5.3nm,1.0s,mb4.7
FLN La Foliniere 86.04 336 *e*P **P** **17 48 59.0 -1.1**
LDF La Druitiere 86.07 335 *e*P **P** **17 48 59.0 -1.3**
comp=Z,7.5nm,0.9s,mb4.6
LDF La Druitiere 86.07 335 *e*P **P** **17 48 59.0 -1.3**
LDF pmax pmax
comp=Z,4.0nm,0.9s,mb4.7
LDF La Druitiere 86.07 335 *e*P **P** **17 48 59.0 -1.3**
comp=Z,3.8nm,0.9s,mb4.6
SSF Saint Saulge 86.14 332 *e*P **P** **17 48 59.7 -1.0**
comp=Z,5.8nm,0.9s,mb4.5
SSF Saint Saulge 86.14 332 *e*P **P** **17 48 59.7 -1.0**
SSF pmax pmax
comp=Z,3.0nm,0.9s,mb4.5
SSF Saint Saulge 86.14 332 *e*P **P** **17 48 59.7 -1.0**
comp=Z,2.9nm,0.9s,mb4.5
LPL La Plagne 86.23 330 *e*P **P** **17 49 00.5 -0.6**
LPG La Plagne 86.23 330 *e*P **P** **17 49 00.4 -0.8**
comp=Z,12nm,1.1s,mb4.8
LPG La Plagne 86.23 330 *e*P **P** **17 49 00.4 -0.8**
LPG pmax pmax
comp=Z,6.0nm,1.1s,mb4.7
LPG La Plagne 86.23 330 *e*P **P** **17 49 00.4 -0.8**
comp=Z,6.2nm,1.1s,mb4.8
SMF Signal de Mont 86.38 332 *e*P **P** **17 49 01.0 -0.8**
AVF Avril sur Loir 86.43 332 *e*P **P** **17 49 01.2 -0.9**
comp=Z,17nm,1.0s,mb4.9
AVF Avril sur Loir 86.43 332 *e*P **P** **17 49 01.2 -0.9**
AVF pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
AVF Avril sur Loir 86.43 332 *e*P **P** **17 49 01.2 -0.9**
GRR Gorron 86.49 336 *e*P **P** **17 49 01.5 -0.9**
comp=Z,20nm,1.2s,mb4.9
GRR Gorron 86.49 336 *e*P **P** **17 49 01.5 -0.9**
GRR pmax pmax
comp=Z,10.0nm,1.2s,mb4.9
GRR Gorron 86.49 336 *e*P **P** **17 49 01.5 -0.9**
comp=Z,9.8nm,1.2s,mb4.9
SGMF Saint Gilles 87.14 337 *e*P **P** **17 49 05.0 -0.6**
comp=Z,5.4nm,0.7s,mb4.6
SGMF Saint Gilles 87.14 337 *e*P **P** **17 49 05.0 -0.6**
SGMF pmax pmax
comp=Z,3.0nm,0.7s,mb4.6
SGMF Saint Gilles 87.14 337 *e*P **P** **17 49 05.0 -0.6**
comp=Z,2.7nm,0.7s,mb4.6
TCF Toulx Ste Croi 87.27 333 *e*P **P** **17 49 05.5 -0.7**
comp=Z,14nm,1.2s,mb4.8
TCF Toulx Ste Croi 87.27 333 *e*P **P** **17 49 05.5 -0.7**
TCF pmax pmax
comp=Z,7.0nm,1.2s,mb4.8
TCF Toulx Ste Croi 87.27 333 *e*P **P** **17 49 05.5 -0.7**
comp=Z,7.0nm,1.2s,mb4.8
ROSF Rostrenen 87.29 337 *e*P **P** **17 49 05.7 -0.6**
comp=Z,24nm,1.3s,mb5.0
ROSF Rostrenen 87.29 337 *e*P **P** **17 49 05.7 -0.6**
ROSF pmax pmax
comp=Z,12nm,1.3s,mb5.0
ROSF Rostrenen 87.29 337 *e*P **P** **17 49 05.7 -0.6**
comp=Z,12nm,1.3s,mb5.0
MFF Saint Martin d 87.81 334 *e*P **P** **17 49 08.3 -0.5**
comp=Z,16nm,1.2s,mb4.8
MFF Saint Martin d 87.81 334 *e*P **P** **17 49 08.3 -0.5**
MFF pmax pmax
comp=Z,8.0nm,1.2s,mb4.8
MFF Saint Martin d 87.81 334 *e*P **P** **17 49 08.3 -0.5**
comp=Z,8.1nm,1.2s,mb4.8
RJF Les Rejaudoux 88.36 333 *e*P **P** **17 49 10.8 -0.7**
CAF Calviac 88.49 332 *e*P **P** **17 49 11.7 -0.4**
LFF La Frestale 88.95 333 *e*P **P** **17 49 13.6 -0.7**
TXAR Lajitas Array 89.14 52 P **P** **17 49 16.1 +0.7**
comp=Z,0.5nm,0.7s,mb3.9,baz=302,slow=3.8,SNR=8.4
ETSF Etsaut 91.19 333 *e*P **P** **17 49 25.3 +0.6**
comp=Z,15nm,1.3s,mb4.9
ETSF Etsaut 91.19 333 *e*P **P** **17 49 25.3 +0.6**
ETSF pmax pmax
comp=Z,8.0nm,1.3s,mb4.9
ETSF Etsaut 91.19 333 *e*P **P** **17 49 25.3 +0.6**
comp=Z,7.6nm,1.3s,mb4.9
SJPF Ste Jean 91.24 333 *e*P **P** **17 49 24.6 -0.4**
QSPA South Pole Qui 128.88 180 PKP PKPdf 17 55 26.1 +0.2
comp=Z,0.9nm,0.7s,baz=76,slow=0.7,SNR=8.0
LPAZ La Paz 145.91 56 PKPbc PKPbc 17 56 00.6 +1.1
comp=Z,3.3nm,0.9s,baz=1.4,slow=5.3,SNR=7.5

NEIC ***15*** *17:44:43.4±0.6, 31°.45S×179°.70E, h466km±9km, mb4.7/5, Error ellipse: s-maj=19.0km s-min=11.2km az=113.0*
IDC ***15*** *17:44:43.4±1.4, 31°.52S×179°.70E, h461km±17km, mb3.7/5, mb1 3.8/8, mb1mx3.4/19, mbtmp3.7/8, Error ellipse: s-maj=28.7km s-min=19.4km az=136.0*
ISC 15 17:44:43.8±1.6, 31°.5S±0°.2×179°.4E±0°.8, h445km±53km, n19, σ0=68/14, mb4.3/8, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.18**	**47**	P		**P**		**17 45 51.7**	**-0.2**
	118nm,0.3s,baz=311,slow=20,SNR=3.9								
URZ	**Urewera**	**7.04**	**195**	P		**P**		**17 46 29.9**	**+1.2**
	8.1nm,0.3s,baz=304,slow=2.6,SNR=48								
URZ				S		**S**		**17 47 53.8**	**-0.9**
	5.4nm,0.3s,baz=72,slow=20,SNR=9.5								
RPZ	**Rata Peaks**	**13.91**	**206**	P		**P**		**17 47 43.3**	**+0.2**
	0.4nm,0.3s,baz=31,slow=18,SNR=4.5								
AFI	**Afiamalu**	**19.25**	**27**	*e*P		Px		17 48 30.2	
	36nm,0.9s								
TAU	**Tasmania Unive**	**27.86**	**237**	*e*P		**P**		**17 49 55.4**	**-0.2**
	47nm,1.6s,mb4.7								
CTA	**Charters Tower**	**31.83**	**283**	P		**P**		**17 50 31.4**	**+0.9**
	1.9nm,0.3s,mb4.0,baz=96,slow=9.2,SNR=3.1								
CTAO	**Charters Tower**	**31.83**	**283**	*e*P		**P**		**17 50 30.9**	**+0.4**
	3.6nm,0.5s,mb4.1								
STKA	**Stephens Creek**	**32.10**	**259**	P		**P**		**17 50 34.5**	**+1.8**
	2.8nm,0.3s,mb4.1,baz=100,slow=11,SNR=27								
STKA	**Stephens Creek**	**32.10**	**259**	*e*P		**P**		**17 50 33.5**	**+0.9**
	0.6nm,0.3s,mb3.5								
PMG	**Port Moresby**	**37.13**	**299**	*e*P		**P**		**17 51 14.8**	**-0.4**
	68nm,1.3s,mb4.9								
ASAR	**Alice Springs**	**40.87**	**269**	P		**P**		**17 51 45.4**	**-0.2**
	3.0nm,0.4s,mb4.0,baz=107,slow=7.3,SNR=99								
WRAB	**Tennant Creek**	**41.95**	**275**	*e*P		**P**		**17 51 53.5**	**-0.7**
	5.7nm,0.3s,mb4.5								
WRA	**Warramunga Arr**	**41.95**	**275**	P		**P**		**17 51 53.9**	**-0.4**
	7.4nm,0.3s,mb4.6,baz=111,slow=8.0,SNR=198								
FITZ	**Fitzroy Crossi**	**50.17**	**272**	P		**P**		**17 52 57.1**	**-0.2**
	2.3nm,0.6s,mb3.7,baz=114,slow=4.5,SNR=25								
KAF	**Kangasniemi**	**144.76**	**338**	*e*p		PKPdf		18 03 25.0	-3.1
	1.1nm,0.5s								
KAF	**Kangasniemi**	**144.76**	**338**	*e*p		PKPdf		18 03 25.0	-3.1
	1.1nm,0.5s								
FINES	**FINESS Array B**	**145.33**	**338**	PKPbc		PKPbc		18 03 27.9	-2.1
	1.5nm,0.3s,baz=46,slow=3.7,SNR=29								
FINES	**FINESS Array B**	**145.33**	**338**	PKPbc		PKPbc		18 03 27.9	-2.1
BRTR	**Keskin Array B**	**151.12**	**296**	PKPbc		PKPbc		18 03 43.7	-1.8
	0.3nm,0.5s,baz=111,slow=3.2,SNR=3.1								

IDC ***15*** *17:49:38.7±1.5, 38°.69N×140°.84E, h0km, mb3.4/3, mb1 3.4/6, mb1mx3.2/28, mbtmp3.3/6, ML2.8/3, Error ellipse: s-maj=34.1km s-min=18.7km az=121.0*
JMA ***15*** *17:49:39.9, 38°.75N×140°.75E, h4km±1km, M2.9*
JMA Felt III J1.
ISCJB ***15*** *17:49:39.5±0.5, 38°.75N±0°.03×140°.76E±0°.04, h13km±4km, mb3.4/3, Error ellipse: s-maj=5.3km s-min=4.3km az=138.4*
ISC 15 17:49:39.9±0.5, 38°.74N±0°.03×140°.76E±0°.03, h4km±5km, n15, σ0=66/25, mb3.4/3, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.36**	**300**	P		**Pg**		**17 49 46.8**	**0.0**
JYK				S		**Sg**		**17 49 51.6**	**+0.1**
JOU	**Okura**	**0.38**	**191**	P		**Pg**		**17 49 47.6**	**+0.4**
JOU				S		**Sg**		**17 49 53.0**	**+0.8**
JMK	**Ichinoseki**	**0.42**	**59**	P		**Pg**		**17 49 48.1**	**+0.1**
JMK				*e*S		**Sg**		**17 49 53.9**	**+0.4**
JIO	**Ouri**	**0.55**	**121**	P		**Pg**		**17 49 50.4**	**0.0**
JIO				*e*S		**Sg**		**17 49 57.8**	**+0.3**
JYS	**Shiratake**	**0.75**	**227**	P		**Pg**		**17 49 54.3**	**0.0**
JYS				*e*S		**Sg**		**17 50 04.4**	**+0.4**
JYA	**Atsumi**	**0.83**	**260**	P		**Pg**		**17 49 55.5**	**-0.3**
JYA				*e*S		**Sg**		**17 50 06.5**	**-0.1**
JOM	**Ohasama**	**0.84**	**29**	P		**Pg**		**17 49 55.9**	**-0.2**
JOM				*e*S		**Sg**		**17 50 06.9**	**-0.2**
JMM	**Marumori**	**0.87**	**178**	P		**Pg**		**17 49 56.1**	**-0.5**
JMM				S		**Sg**		**17 50 07.5**	**-0.4**
MAT	**Matsushiro**	**2.98**	**223**	P		**Pn**		**17 50 28.5**	**+0.6**
MAT				S		**Sn**		**17 51 09.5**	**+5.4**
MJAR	**Matsushiro Arr**	**2.98**	**223**	Pn		**Pn**		**17 50 28.6**	**+0.7**
	0.6nm,0.3s,baz=30,slow=15,SNR=9.3								
MJAR				Pg		**Pg**		**17 50 34.4**	**-2.7**
	1.2nm,0.3s,baz=29,slow=17,SNR=32								
MJAR				Lg				17 51 12.1	
	0.5nm,0.3s,baz=54,slow=29,SNR=4.5								
ASAJ	**Asahikawa**	**5.55**	**14**	Pn		**Pn**		**17 51 03.5**	**+0.3**
	0.2nm,0.3s,baz=227,slow=13,SNR=3.6								
KSRS	**Korea Array**	**10.20**	**267**	Pn		**Pn**		**17 52 08.1**	**+1.1**
	0.2nm,0.3s,baz=77,slow=14,SNR=4.8								
KURK	**Kurchatov**	**44.48**	**307**	P		**P**		**17 57 52.1**	**0.0**
	0.3nm,0.5s,mb3.3,baz=81,slow=7.7,SNR=2.7								
WRA	**Warramunga Arr**	**58.68**	**187**	P		**P**		**17 59 37.1**	**-1.3**
	0.2nm,0.5s,mb3.4,baz=3.0,slow=7.3,SNR=5.0								
ASAR	**Alice Springs**	**62.41**	**187**	P		**P**		**18 00 03.3**	**-0.6**
	0.3nm,0.9s,mb3.4,baz=358,slow=4.9,SNR=3.5								

ISCJB ***15*** *18:05:13.6±0.3, 43°.81N±0°.03×105°.22W±0°.04, h0km, mb4.1/7, Error ellipse: s-maj=4.2km s-min=3.6km az=7.3*
NEIC ***15*** *18:05:15.4±0.3, 43°.80N×105°.21W, h0km, ML3.5, Error ellipse: s-maj=3.7km s-min=3.5km az=78.0, Suspected Mining explosion.*
NEIC 60 km [35 miles] SSE of Gillette.
IDC ***15*** *18:05:16.2±0.7, 44°.07N×105°.67W, h0km, mb4.0/7, mb1 4.0/14, mb1mx3.8/30, mbtmp3.9/14, ML3.6/7, MS2.9/2, Ms1 2.9/2, ms1mx2.5/40, Error ellipse: s-maj=21.0km s-min=6.9km az=145.0*
ISC 15 18:05:15.4±0.3, 43°.82N±0°.03×105°.19W±0°.04, h0km, n77,

σ0°89/79, mb4.1/7, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.89**	**69**	*e*P	**Pg**	**18 05 33.6**	**+1.2**
PHWY	**Pilot Hill**	**2.52**	**185**	*e*Pn	**Pn**	**18 05 57.3**	**-0.2**
PHWY				*e*Sn	**Sn**	**18 06 29.6**	**+0.8**
RWWY	**Rawlins**	**2.59**	**216**	*e*Pn	**Pn**	**18 05 58.6**	**+0.1**
LAO	**LASA Array**	**2.96**	**346**	*e*Pn	**Pn**	**18 06 03.8**	**+0.2**
LAO				*e*Sn	**Sn**	**18 06 41.4**	**+1.5**
RLMT	**Red Lodge**	**3.20**	**296**	*e*Pn	**Pn**	**18 06 07.0**	**+0.2**
BW06	**Boulder Array**	**3.35**	**253**	*e*Pn	**Pn**	**18 06 08.7**	**-0.3**
BW06				*e*Sn	**Sn**	**18 06 50.1**	**+0.6**
PDAR	**Pinedale Array**	**3.35**	**253**	Pn	**Pn**	**18 06 08.7**	**-0.3**
	3.6nm,0.3s,baz=66,slow=15,SNR=100						
PDAR				Lg		18 06 53.9	
	12nm,0.3s,baz=72,slow=31,SNR=6.1						
OGNE	**Ogallala**	**3.70**	**140**	*e*Pn	**Pn**	**18 06 14.2**	**+0.5**
GCMT	**Greycliff**	**3.75**	**303**	*e*Pn	**Pn**	**18 06 14.9**	**+0.5**
LKWY	**Lake**	**3.82**	**283**	*e*Pn	**Pn**	**18 06 17.0**	**+1.6**
LOHW	**Long Hollow**	**3.93**	**269**	*e*Pn	**Pn**	**18 06 17.5**	**+0.7**
ISCO	**Idaho Springs**	**4.02**	**185**	*e*Pn	**Pn**	**18 06 18.4**	**+0.2**
SNOW	**Snow King Moun**	**4.05**	**267**	*e*Pn	**Pn**	**18 06 19.9**	**+1.4**
YFT	**Old Faithful**	**4.11**	**281**	*e*Pn	**Pn**	**18 06 20.6**	**+1.3**
IMW	**Indian Meadow**	**4.16**	**273**	*e*Pn	**Pn**	**18 06 20.1**	**+0.1**
TPAW	**Teton Pass**	**4.19**	**268**	*e*Pn	**Pn**	**18 06 20.9**	**+0.4**
YMR	**Madison River**	**4.24**	**284**	*e*Pn	**Pn**	**18 06 24.5**	**+3.5**
DCID1	**Drake Creek**	**4.35**	**269**	*e*Pn	**Pn**	**18 06 22.2**	**-0.4**
AHID	**Auburn Hatcher**	**4.44**	**258**	*e*Pn	**Pn**	**18 06 24.0**	**+0.1**
RRI2	**Red Ridge**	**4.48**	**266**	*e*P	**Pn**	**18 06 24.1**	**-0.3**
QLMT	**Earthquake Lak**	**4.59**	**285**	Pn	**Pn**	**18 06 26.4**	**+0.5**
DGMT	**Dagmar**	**4.71**	**8**	*e*Pn	**Pn**	**18 06 28.8**	**+1.2**
SMCO	**Snowmass**	**4.82**	**197**	*e*Pn	**Pn**	**18 06 29.4**	**+0.2**
BOZ	**Bozeman (W)**	**4.94**	**294**	*e*Pn	**Pn**	**18 06 29.6**	**-1.2**
HWUT	**Hardware Ranch**	**5.19**	**247**	*e*Pn	**Pn**	**18 06 33.5**	**-0.7**
	24nm,0.6s						
EGMT	**Eagleton**	**5.28**	**325**	*e*Pn	**Pn**	**18 06 35.5**	**+0.2**
	72nm,0.6s						
HRY	**Holter Researc**	**5.51**	**304**	*e*Pn	**Pn**	**18 06 38.7**	**+0.1**
	51nm,0.6s						
DLMT	**Dillon**	**5.51**	**289**	*e*Pn	**Pn**	**18 06 39.0**	**+0.5**
	15nm,0.6s						
LRM	**Limekiln Ridge**	**5.54**	**294**	*e*Pn	**Pn**	**18 06 38.8**	**-0.2**
	65nm,0.6s						
MCMT	**McKenzie Canyo**	**5.59**	**283**	*e*Pn	**Pn**	**18 06 42.7**	**+3.1**
	6.4nm,0.6s						
DAU	**Daniels Canyon**	**5.65**	**235**	*e*Pn	**Pn**	**18 06 40.3**	**-0.2**
	29nm,0.6s						
JLU	**Jordanelle**	**5.65**	**238**	*e*Pn	**Pn**	**18 06 39.7**	**-0.8**
	16nm,0.6s						
SPUT	**South Promonto**	**5.92**	**247**	*e*Pn	**Pn**	**18 06 43.7**	**-0.4**
	18nm,0.7s						
HVU	**Hansel Valley**	**5.94**	**253**	*e*Pn	**Pn**	**18 06 43.2**	**-1.2**
	16nm,0.7s						
SDCO	**Great Sand Dun**	**6.07**	**182**	*e*Pn	**Pn**	**18 06 45.8**	**-0.5**
	4.7nm,0.7s						
PV04	**Paradox Valley**	**6.10**	**209**	*e*Pn	**Pn**	**18 06 46.8**	**+0.1**
MPU	**Maple Canyon**	**6.12**	**234**	*e*Pn	**Pn**	**18 06 46.4**	**-0.6**
	14nm,0.6s						
SRU	**San Rafael**	**6.17**	**222**	*e*Pn	**Pn**	**18 06 45.8**	**-1.9**
	37nm,0.6s						
ECSD	**EROS Data Cent**	**6.21**	**88**	*e*Pn	**Pn**	**18 06 48.5**	**+0.3**
	13nm,0.4s						
PV01	**Paradox Valley**	**6.22**	**205**	*e*Pn	**Pn**	**18 06 48.6**	**+0.3**
	1μm,0.7s						
TMUT	**Trail Mountain**	**6.38**	**227**	*e*Pn	**Pn**	**18 06 50.4**	**-0.2**
	26nm,0.7s						
NLU	**North Lily Min**	**6.42**	**235**	*e*Pn	**Pn**	**18 06 47.3**	**-3.8**
	6.8nm,0.6s						
CBKS	**Cedar Bluff**	**6.47**	**139**	*e*Pn	**Pn**	**18 06 53.3**	**+1.6**
	54nm,0.7s						
CHMT	**Chamberlain Mo**	**6.47**	**301**	*e*Pn	**Pn**	**18 06 51.3**	**-0.5**
	7.5nm,0.6s						
BGU	**Big Grassy Mou**	**6.48**	**246**	*e*Pn	**Pn**	**18 06 51.5**	**-0.5**
	4.9nm,0.7s						
HLID	**Hailey**	**6.69**	**271**	*e*Pn	**Pn**	**18 06 56.1**	**+1.3**
	5.6nm,0.6s						
DUG	**Dugway**	**6.73**	**240**	*e*Pn	**Pn**	**18 06 53.4**	**-1.9**
	8.6nm,0.6s						
SLMT	**Seeley Lake**	**6.76**	**303**	*e*Pn	**Pn**	**18 06 55.3**	**-0.5**
	13nm,0.6s						
MSO	**Missoula**	**6.86**	**299**	*e*Pn	**Pn**	**18 06 55.8**	**-1.4**
	3.7nm,0.6s						
MVCO	**Mesa Verde**	**7.06**	**202**	*e*Pn	**Pn**	**18 07 01.4**	**+1.5**
	12nm,0.6s						
M13A	**Montello**	**7.06**	**253**	*e*Pn	**Pn**	**18 06 59.8**	**-0.1**
	7.5nm,0.7s						
SWMT	**Swartz Lake**	**7.19**	**304**	*e*Pn	**Pn**	**18 07 00.8**	**-0.9**
	9.3nm,0.6s						
N13A	**Wendover, West**	**7.30**	**249**	*e*Pn	**Pn**	**18 07 02.7**	**-0.5**
	17nm,0.4s						
YBMT	**Yellow Bay**	**7.37**	**306**	*e*Pn	**Pn**	**18 07 04.6**	**+0.5**
	11nm,0.7s						
MSU	**Marysvale**	**7.47**	**227**	*e*Pn	**Pn**	**18 07 05.3**	**-0.2**
	13nm,0.7s						
JTMT	**Jette**	**7.47**	**305**	*e*Pn	**Pn**	**18 07 04.5**	**-1.0**
	8.2nm,0.6s						
BSMT	**Bassoo Peak**	**7.82**	**304**	*e*Pn	**Pn**	**18 07 10.9**	**+0.7**
	7.1nm,0.6s						
N12A	**Clover Valley,**	**7.87**	**251**	*e*Pn	**Pn**	**18 07 11.5**	**+0.5**
	8.3nm,0.6s						
AGMN	**Agassiz Nation**	**7.89**	**52**	*e*Pn	**Pn**	**18 07 09.3**	**-1.9**
	32nm,0.6s						
WALA	**Waterton Lakes**	**7.98**	**314**	*e*Pn	**Pn**	**18 07 11.7**	**-0.8**
	0.2nm,0.6s						
ELK	**Elko**	**8.05**	**251**	Pn	**Pn**	**18 07 13.8**	**+0.3**
ELK				Lg		18 09 24.5	
ELK				LR	LR	18 10 33.8	
ELK	**Elko**	**8.05**	**251**	Pn	**Pn**	**18 07 13.8**	**+0.3**
	0.4nm,0.3s,baz=76,slow=14,SNR=6.7						
ELK				Lg		18 09 24.5	
	0.1nm,0.3s,baz=174,slow=19,SNR=1.9						
ELK				LR	LR	18 10 33.8	
	comp=Z,57nm,20.4s,baz=292,slow=41						
CCUT	**Cedar City**	**8.81**	**228**	*e*Pn	**Pn**	**18 07 24.1**	**+0.2**
	5.6nm,0.6s						
ULM	**Lac du Bonnet**	**9.05**	**41**	Pn	**Pn**	**18 07 26.4**	**-0.7**
	2.8nm,0.3s,baz=230,slow=11,SNR=13						
ULM				Lg		18 09 58.5	
	0.6nm,0.3s,baz=323,slow=20,SNR=2.6						
WUAZ	**Wupatki**	**9.56**	**212**	*e*Pn	**Pn**	**18 07 33.0**	**-1.1**
	10nm,0.6s						
NVAR	**Mina Array Bea**	**11.25**	**246**	Pn	**Pn**	**18 07 57.8**	**+0.4**
	0.3nm,0.3s,baz=54,slow=11,SNR=17						
YBH	**Yreka Blue Hor**	**13.04**	**267**	Pn	**Pn**	**18 08 23.8**	**+2.0**
	0.2nm,0.3s,baz=59,slow=8.7,SNR=7.5						
TXAR	**Lajitas Array**	**14.50**	**175**	Pn	**Pn**	**18 08 49.2**	**+7.4**
	0.1nm,0.3s,baz=352,slow=9.3,SNR=9.4						
TXAR				Lg		18 12 52.2	
	0.1nm,0.3s,baz=351,slow=34,SNR=4.1						
SADO	**Sadowa**	**18.65**	**78**	LR	LR	18 16 26.2	
	comp=Z,46nm,18.7s,baz=68,slow=35						
YKA	**Yellowknife Ar**	**19.50**	**347**	P	**Pn**	**18 09 42.5**	**-2.4**
	0.2nm,0.3s,baz=160,slow=13,SNR=5.9						
ARCES	**ARCESS Array B**	**61.33**	**18**	P	**P**	**18 15 31.4**	**-0.7**
	1.6nm,0.6s,mb4.3,baz=337,slow=5.3,SNR=8.8						
NOA	**NORSAR Array B**	**63.52**	**29**	P	**P**	**18 15 46.8**	**-0.1**
	0.5nm,0.8s,mb3.8,baz=314,slow=6.8,SNR=2.3						
FINES	**FINESS Array B**	**67.94**	**23**	P	**P**	**18 16 15.0**	**-0.4**
	1.2nm,0.7s,mb4.2,baz=344,slow=4.5,SNR=2.4						
ZALV	**Zalesovo Beam**	**82.24**	**354**	P	**P**	**18 17 37.5**	**-0.6**
	1.3nm,0.6s,mb4.2,baz=4.6,slow=4.9,SNR=6.7						
BVAR	**Borovoye Array**	**83.47**	**3**	P	**P**	**18 17 44.6**	**+0.2**
	0.5nm,0.6s,mb4.0,baz=343,slow=4.6,SNR=5.1						
SONM	**Songino Array**	**84.59**	**339**	P	**P**	**18 17 50.0**	**-0.3**
	0.5nm,0.6s,mb3.9,baz=46,slow=4.2,SNR=4.5						
MKAR	**Makanchi Array**	**89.53**	**355**	P	**P**	**18 18 14.3**	**0.0**
	0.9nm,0.7s,mb4.1,baz=23,slow=7.8,SNR=10.0						

IDC 15 18:10:04.5±5.9, 8°.30S×150°.73E, h0km, mb3.8/3, mb1 3.8/4, mb1mx3.5/16, mbtmp3.7/4, Error ellipse: s-maj=156.1km s-min=31.8km az=112.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.64**	**232**	P	Pn	18 14 36.4	+0.2
	0.1nm,0.3s,baz=57,slow=11,SNR=11						
ASAR	**Alice Springs**	**22.21**	**225**	P	P	18 15 02.0	-0.7
	1.1nm,0.4s,baz=58,slow=9.4,SNR=38						
FITZ	**Fitzroy Crossi**	**26.27**	**246**	P	P	18 15 41.4	-0.4
	0.9nm,0.5s,baz=63,slow=10.0,SNR=7.0						
SONM	**Songino Array**	**68.22**	**330**	P	P	18 21 07.2	+0.4
	1.2nm,0.9s,baz=145,slow=6.7,SNR=5.4						

DJA 15 18:27:22,9°.08S×110°.77E, h10km, MLv3.9/14, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**0.97**	**25**	P	Pg	18 27 38.7	-1.9
PCJI				S	Sg	18 27 54.4	+1.2
UGM	**Wanagama**	**1.19**	**348**	P	Pb	18 27 42.0	-2.6
PWJI	**Pagerwojo**	**1.47**	**44**	P	Pn	18 27 47.7	-0.8
PWJI				S	Sn	18 28 06.0	-1.8
NGJI	**Ngawi**	**1.83**	**22**	P	Pn	18 27 55.3	+1.7
NGJI				S	Sn	18 28 19.6	+2.7
KRKI	**Karangkates**	**1.90**	**61**	P	Pn	18 27 55.9	+1.4
SMRI	**Semarang**	**2.04**	**351**	P	Pn	18 27 56.8	+0.3
SMRI				S	Sn	18 28 23.6	+1.5
GRJI	**Gresik**	**2.74**	**38**	P	Pn	18 28 07.2	+1.2
GMJI	**Gumukmas**	**2.76**	**73**	P	Pn	18 28 06.5	+0.1
BYJI	**Banyuwangi**	**3.65**	**77**	P	Pn	18 28 20.0	+1.4
ABJI	**Asem Bagus**	**3.66**	**70**	P	Pn	18 28 19.8	+1.1
KMMI	**Kalianget**	**3.75**	**58**	P	Pn	18 28 19.4	-0.6
LEM	**Lembang**	**3.84**	**305**	P	Pn	18 28 21.9	+0.7
NBBI	**Negara**	**3.87**	**80**	P	Pn	18 28 21.5	-0.1
IGBI	**Denpasar**	**4.33**	**87**	P	Pn	18 28 28.7	+0.8
CGJI	**Cibinong**	**5.59**	**296**	P	Pn	18 28 46.2	+0.9

DJA 15 18:41:16,2°.40N×95°.21E, h10km, MLv4.0/6
IDC 15 18:41:18.3±2.0, 2°.28N×95°.41E, h0km, mb3.5/6, mb1 3.6/8, mb1mx3.4/25, mbtmp3.4/8, ML3.3/2, Error ellipse: s-maj=58.6km s-min=22.4km az=52.0
ISCJB 15 18:41:21.7±0.9, 2°.42N±0°.08×95°.7E±0°.1, h33km, mb3.5/6, Error ellipse: s-maj=17.3km s-min=7.9km az=147.5
NEIC 15 18:41:24.3±1.3, 2°.43N×95°.62E, h35km, Error ellipse: s-maj=26.1km s-min=15.8km az=45.0
ISC 15 18:41:23.8±1.0, 2°.35N±0°.09×95°.6E±0°.1, h35km, n18, σ1°16/19, mb3.5/6, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**2.22**	**118**	P	**Pn**	**18 41 55.6**	**-2.5**
GSI				S	**Sn**	**18 42 33.1**	**+8.7**
BSI	**Banda Aceh**	**3.14**	**354**	P	**Pn**	**18 42 06.5**	**-4.3**
PSI	**Prapat**	**3.34**	**82**	Pn	**Pn**	**18 42 15.9**	**+2.4**
	1.7nm,0.3s,baz=302,slow=5.4,SNR=7.9						
MNSI	**Mandailing Nat**	**4.25**	**111**	P	**Pn**	**18 42 26.9**	**+0.8**
SISI	**Saibi**	**5.04**	**136**	P	**Pn**	**18 42 35.9**	**-1.1**
	23nm,1.2s						
PPI	**Padang Panjang**	**5.54**	**120**	P	**Pn**	**18 42 43.1**	**-0.7**
	0.1nm1μm22nm,0.7s						
IPM	**Ipoh**	**5.80**	**68**	P	**Pn**	**18 42 47.7**	**+0.3**
	0.1nm16nm,1.1s						
KULM	**Kulim**	**5.81**	**60**	*e*Pn	**Pn**	**18 42 45.5**	**-2.0**
	9.0nm,0.7s						
KULM	**Kulim**	**5.81**	**60**	P	**Pn**	**18 42 45.3**	**-2.3**
	0.1nm623nm15nm,0.9s						
SDSI	**Sungai Dareh**	**6.67**	**119**	P	**Pn**	**18 42 59.5**	**+0.2**
	7.9nm,0.6s						
MDSI	**Maura Dua**	**10.92**	**128**	P	**Pn**	**18 43 58.8**	**+1.0**
CMAR	**Chiang Mai Arr**	**16.34**	**11**	Pn	**Pn**	**18 45 11.0**	**+0.4**
	0.1nm,0.3s,baz=199,slow=13,SNR=5.6						
WRA	**Warramunga Arr**	**43.98**	**122**	P	**P**	**18 49 27.4**	**-0.6**
	0.5nm,0.8s,mb3.3,baz=299,slow=9.3,SNR=2.6						
ASAR	**Alice Springs**	**45.35**	**127**	P	**P**	**18 49 40.6**	**+1.7**
	0.3nm,0.8s,mb3.2,baz=301,slow=8.0,SNR=3.0						
MKAR	**Makanchi Array**	**45.76**	**347**	P	**P**	**18 49 41.8**	**0.0**
	0.4nm,0.4s,mb3.7,baz=140,slow=7.0,SNR=4.1						
SONM	**Songino Array**	**46.26**	**10**	P	**P**	**18 49 45.1**	**-0.5**
	0.4nm,0.7s,mb3.5,baz=179,slow=8.1,SNR=2.7						
ZALV	**Zalesovo Beam**	**52.19**	**352**	P	**P**	**18 50 30.3**	**-0.6**
	0.7nm,0.5s,mb3.9,baz=159,slow=6.4,SNR=3.3						
BVAR	**Borovoye Array**	**54.66**	**342**	P	**P**	**18 50 49.9**	**+0.8**
	0.6nm,0.6s,mb3.8,baz=156,slow=7.3,SNR=4.5						

MOS 15 19:00:03.3±2.0, 52°.75N×107°.11E, h18km, mb4.2/1, Error ellipse: s-maj=43.2km s-min=22.5km az=48.6
BYKL 15 19:00:05.6±0.2, 52°.82N×107°.03E, h13km±4km, 7C-1D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZRHB	**Zarechye**	**0.28**	**164**	⇑*i*Pg	Pg	19 00 10.9	-0.4
ZRHB				*e*Sg	Sg	19 00 15.1	-0.1
ZRHB				Pmax			
	1μm,0.1s						
ZRHB				Smax			
	3μm,0.7s						
TRG	**Tyrgan**	**0.42**	**262**	*e*PG	Pg	19 00 13.6	-0.3
TRG				*e*S	Sg	19 00 20.5	+1.0
TRG	**Tyrgan**	**0.42**	**262**	*e*Pg	Pg	19 00 13.6	-0.3
TRG				*e*Sg	Sg	19 00 19.5	0.0
TRG				*e*		19 00 21.0	
TRG				Pmax			
	110nm,0.1s						
TRG				max			
	559nm,0.1s						
KELR	**Kotokel**	**0.64**	**95**	*e*Pg	Pg	19 00 17.0	-1.1
KELR				*e*Sg	Sg	19 00 25.1	-1.4
FFNB	**Fofonovo**	**0.79**	**192**	*e*Pg	Pg	19 00 19.8	-1.1
FFNB				*e*Sg	Sg	19 00 29.9	-1.4
KAB	**Kabansk**	**0.81**	**197**	⇑*i*PG	Pg	19 00 20.3	-0.9
KAB				*i*		19 00 31.3	
KAB				pmax	pmax		
	comp=Z,222nm,0.1s						
KAB				smax			
	comp=N,2μm,0.3s						
KAB	**Kabansk**	**0.81**	**197**	⇑*i*Pg	Pg	19 00 20.3	-0.9
KAB				*e*Sg	Sg	19 00 31.1	-0.6
KAB				Pmax			
	comp=N,222nm,0.1s						
KAB				Smax			
	comp=N,2μm,0.3s						
OGRR	**Ongureny**	**0.89**	**22**	⇑*i*Pg	Pg	19 00 22.1	-0.7
OGRR				*e*Sg	Sg	19 00 33.9	-0.6
OGRR				Pmax			
	comp=N,41nm,0.2s						
OGRR				Smax			
	comp=N,264nm,0.5s						
UUDB	**Ulan-Yde**	**1.03**	**158**	⇓*i*Pg	Pg	19 00 23.8	-1.6
	comp=N,58nm,0.4s						
UUDB				⇑*i*Pg	Pg	19 00 23.8	-1.6
	comp=N,17nm,0.4s						
UUDB				⇑*i*Pg	Pg	19 00 23.8	-1.6
	comp=N,68nm,0.4s						
UUDB				*e*Sg	Sg	19 00 36.7	-2.2
UUDB				Pmax			
	comp=N,144nm,0.1s						
UUDB				Smax			
	comp=N,362nm,0.6s						
MXMB	**Maximikha**	**1.13**	**66**	*e*Pg	Pg	19 00 26.1	-1.2
MXMB				*e*Sg	Sg	19 00 41.8	-0.1
MXMB				*e*		19 00 51.7	
MXMB				Pmax			
	comp=N,88nm,0.4s						
MXMB				max			
	comp=N,886nm,0.8s						
HRMR	**Khuramsha**	**1.20**	**182**	⇑*i*Pg	Pg	19 00 26.9	-1.7
HRMR				*e*Sg	Sg	19 00 42.5	-1.6
LSTR	**Listvyanka**	**1.65**	**236**	*e*Pg	Pg	19 00 35.7	-1.6
LSTR				*e*Sg	Sg	19 00 57.3	-1.4
LSTR				*e*		19 01 07.4	
LSTR				Pmax			
	comp=N,22nm,0.1s						
LSTR				max			
	comp=N,388nm,1.6s						
IRK	**Irkutsk**	**1.78**	**252**	*e*PN	Pn	19 00 37.8	+1.8
IRK				*e*		19 01 01.4	
IRK				pmax	pmax		
	comp=Z,59nm,0.2s						
IRK				smax			
	comp=N,945nm,0.4s						
IRK	**Irkutsk**	**1.78**	**252**	*e*Pg	Pg	19 00 37.8	-2.0
IRK				*e*Sg	Sg	19 01 01.2	-1.6
IRK				Pmax			
	comp=N,58nm,0.1s						
IRK				Smax			
	comp=N,946nm,0.5s						
SYVR	**Suvo**	**1.97**	**64**	*e*Pn	Pn	19 00 39.0	+0.4
SYVR				*e*Pg	Pg	19 00 40.8	-2.6
SYVR				*e*Sg	Sg	19 01 07.0	-1.9
SYVR				Pmax			
	comp=N,27nm,0.4s						
SYVR				Smax			
	comp=N,98nm,1.1s						
TLY	**Talaya**	**2.37**	**243**	*e*PN	Pn	19 00 41.1	-3.1
TLY				*e*S	Sn	19 01 18.5	+5.4
TLY				smax			
	comp=E,183nm,0.5s						
TLY	**Talaya**	**2.37**	**243**	*e*Pn	Pn	19 00 45.0	+0.8
TLY				*e*Pg	Pg	19 00 48.3	-2.8
TLY				*e*		19 01 15.4	
TLY				*e*Sg	Sg	19 01 18.8	-3.0
TLY				Pmax			
	comp=E,12nm,0.3s						
TLY				Smax			
	comp=E,182nm,1.0s						
ARS	**Arshan**	**2.96**	**254**	*e*PN	Pn	19 00 59.0	+6.7
ARS				*e*		19 01 36.8	
ARS				pmax	pmax		
	comp=Z,32nm,0.3s						
ARS				smax			
	comp=E,322nm,0.6s						
ARS	**Arshan**	**2.96**	**254**	*e*Pn	Pn	19 00 53.1	+0.8
ARS				*e*Pg	Pg	19 00 58.4	-4.0
ARS				*e*Sg	Sg	19 01 36.0	-4.7
ARS				Pmax			
	comp=E,44nm,0.6s						
ARS				Smax			
	comp=E,327nm,0.7s						
YLYR	**Ulyunkhan**	**3.20**	**48**	*e*Pn	Pn	19 00 56.8	+1.3
YLYR				*e*Pg	Pg	19 01 02.9	-3.9
YLYR				*e*Sg	Sg	19 01 44.0	-4.2
YLYR				Pmax			
	comp=E,5.0nm,0.2s						
YLYR				Smax			
	comp=E,45nm,0.8s						
NIZ	**Nizh Angarsk**	**3.31**	**25**	*e*PN	Pn	19 01 05.7	+8.7
NIZ				*e*		19 01 45.7	
NIZ				pmax	pmax		
	comp=Z,31nm,0.5s						
NIZ				smax			
	comp=N,103nm,0.8s						
NIZ	**Nizh Angarsk**	**3.31**	**25**	*e*Pn	Pn	19 00 58.7	+1.7
NIZ				*e*Pg	Pg	19 01 04.6	-4.3
NIZ				*e*Sg	Sg	19 01 46.9	-4.8
NIZ				Pmax			
	comp=N,31nm,0.5s						
NIZ				Smax			
	comp=N,88nm,0.6s						
ZAK	**Zakamensk**	**3.38**	**225**	*e*	Pn	19 00 59.7	+1.7
ZAK				*e*Pg	Pg	19 01 07.2	-3.1
ZAK				*e*Sg	Sg	19 01 51.5	-2.6
ZAK				Pmax			
	comp=N,3.0nm,0.2s						
ZAK				Smax			
	comp=N,44nm,0.3s						
MOY	**Mondy**	**3.89**	**255**	*e*	Pn	19 01 08.1	+3.2
MOY				*e*Pg	Pg	19 01 15.0	-5.0
MOY				*e*		19 01 55.4	
MOY				*e*Sg	Sg	19 02 04.9	-5.4
MOY				Pmax			
	comp=N,26nm,0.8s						
MOY				Smax			
	comp=N,74nm,1.0s						
KMO	**Kumora**	**3.92**	**37**	*e*	Pn	19 01 08.5	+3.1
KMO				*e*Pg	Pg	19 01 15.7	-5.0
KMO				*e*Sg	Sg	19 02 06.5	-5.0
KMO				Pmax			
	comp=N,12nm,0.3s						
KMO				Smax			
	comp=N,77nm,1.4s						
CIT	**Chita**	**4.07**	**99**	*e*	Sn	19 01 44.7	-10
CIT				*e*Sg	Sg	19 02 11.5	-4.7
CIT				Smax			
	comp=N,89nm,0.3s						
ORL	**Orlik**	**4.40**	**269**	*e*	Pn	19 01 15.0	+3.0
ORL				*e*Pg	Pg	19 01 23.5	-6.4
ORL				*e*		19 02 06.0	
ORL				*e*Sg	Sg	19 02 21.0	-5.8
ORL				Pmax			
	comp=N,2.0nm,0.4s						
ORL				Smax			
	comp=N,58nm,1.2s						
KPC	**Khapcheranga**	**4.58**	**131**	*e*Pn	Pn	19 01 13.8	-0.7
KPC				*e*Pg	Pg	19 01 27.1	-6.2
KPC				*e*Sg	Sg	19 02 25.8	-6.9
KPC				Pmax			
	comp=N,6.0nm,0.4s						
KPC				Smax			
	comp=N,53nm,1.8s						
NLYR	**Nelyaty**	**6.23**	**50**	*e*	Pg	19 02 06.1	+1.3
NLYR				*e*Sg	Sg	19 03 20.7	-4.7
NLYR				Smax			
	comp=N,39nm,1.4s						
BOD	**Bodaibo**	**6.40**	**36**	*e*Sg	Sg	19 03 23.3	-7.4
BOD				Smax			
	comp=N,23nm,1.0s						
TUP	**Tupik**	**7.85**	**73**	*e*PN	Pn	19 01 58.0	-1.4
TUP				*e*		19 02 24.5	
TUP				*e*		19 04 07.4	
TUP				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TUP				smax			
	comp=N,22nm,1.0s						
TUP	**Tupik**	**7.85**	**73**	*e*	Sn	19 03 42.1	+14
TUP				*e*Sg	Sn	19 04 09.2	+41
TUP				Smax			
	comp=N,23nm,0.8s						

IDC 15 19:26:26.6±1.8, 38°.92N×141°.24E, h0km, mb3.4/2, mb1 3.6/4, mb1mx3.3/26, mbtmp3.5/4, ML3.1/3, Error ellipse: s-maj=42.5km s-min=27.2km az=121.0
ISCJB 15 19:26:26.9±0.5, 39°.11N±0°.03×140°.95E±0°.03, h10km, mb3.6/2, Error ellipse: s-maj=4.8km s-min=3.8km az=161.0
JMA 15 19:26:27.0, 39°.12N×140°.92E, h10km±1km, M3.0
JMA Felt I J1.
ISC 15 19:26:27.4±0.5, 39°.11N±0°.03×140°.93E±0°.04, h10km, n13, σ0°80/22, mb3.6/2, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.27**	**125**	P	**Pg**	**19 26 32.6**	**-0.3**
JMK				*e*S	**Sg

M15A				⇓S	Sg	19 27 32.1	+0.4
	baz=0.3						
L15A	**Malad City**	**0.32**	**33**	⇑P	**Pg**	**19 27 28.3**	**+0.3**
	baz=0.3						
L15A				⇑S	**Sg**	**19 27 32.7**	**+0.5**
	baz=0.3						
SPUT	**South Promonto**	**0.45**	**164**	*e*P	**Pg**	**19 27 30.9**	**+0.4**
SPUT				*e*S	**Sg**	**19 27 36.4**	**0.0**
L14A	**Malta**	**0.55**	**303**	⇑P	**Pg**	**19 27 32.8**	**+0.2**
	baz=0.6,SNR=656						
M14A	**Sheep Mountain**	**0.60**	**247**	⇑P	**Pg**	**19 27 33.9**	**+0.5**
	baz=0.6,SNR=1000						
M14A				⇓S	**Sg**	**19 27 42.1**	**+0.9**
	baz=0.6						
HWUT	**Hardware Ranch**	**0.80**	**99**	*e*P	**Pg**	**19 27 37.1**	**-0.1**
HWUT				*e*S	**Sg**	**19 27 49.5**	**+1.9**
N15A	**Stansbury Isla**	**0.85**	**175**	⇓P	**Pg**	**19 27 38.6**	**+0.3**
	baz=0.8						
N15A				⇑S	**Sg**	**19 27 50.0**	**+0.8**
	baz=0.8						
M16A	**Huntsville**	**0.85**	**120**	⇓P	**Pg**	**19 27 38.5**	**+0.2**
	baz=0.8,SNR=203						
BGU	**Big Grassy Mou**	**0.87**	**201**	*e*P	**Pg**	**19 27 38.6**	**0.0**
BGU				*e*S	**Sg**	**19 27 51.3**	**+1.4**
K14A	**Jones Ranch, D**	**0.91**	**333**	P	**Pg**	**19 27 39.4**	**+0.1**
	baz=0.9,SNR=1000						
L16A	**Fish Haven**	**0.93**	**72**	⇑P	**Pg**	**19 27 39.8**	**+0.1**
	baz=0.9,SNR=85						
L16A				⇑S	**Sg**	**19 27 51.7**	**+0.1**
	baz=0.9						
K15A	**Arbon**	**0.95**	**4**	⇓P	**Pg**	**19 27 40.1**	**0.0**
	baz=0.9						
K15A				⇑S	**Sg**	**19 27 52.9**	**+0.5**
	baz=0.9						
N14A	**Grayback Hills**	**0.99**	**206**	⇓P	**Pg**	**19 27 40.5**	**-0.3**
	baz=1.0,SNR=1000						
N14A				⇑S	**Sg**	**19 27 54.3**	**+0.7**
	baz=1.0						
L13A	**Double Diamond**	**1.05**	**290**	⇓P	**Pg**	**19 27 42.1**	**0.0**
	baz=1.1,SNR=275						
NOQ	**North Oquirrh**	**1.15**	**161**	*e*P	**Pg**	**19 27 43.9**	**-0.1**
NOQ				*e*S	**Sg**	**19 27 59.4**	**+0.6**
M13A	**Montello**	**1.22**	**252**	⇓Pg	**Pg**	**19 27 45.1**	**-0.2**
	baz=1.2,SNR=60						
M13A				⇓S	**Sg**	**19 28 01.3**	**+0.1**
	baz=1.2						
M13A	**Montello**	**1.22**	**252**	*e*Pn	**Pn**	**19 27 44.9**	**-0.8**
M13A				*e*Sn	**Sn**	**19 28 01.3**	**-1.2**
N16A	**Rees Ranch, Co**	**1.23**	**133**	⇑Pg	**Pg**	**19 27 45.7**	**+0.2**
	baz=1.2,SNR=424						
N16A				⇑S	**Sg**	**19 28 01.1**	**-0.3**
	baz=1.2						
CTU	**Camp Tracy**	**1.23**	**148**	*e*Pn	**Pn**	**19 27 44.7**	**-1.0**
CTU				*e*Sn	**Sn**	**19 28 01.1**	**-1.6**
K16A	**Soda Springs**	**1.33**	**35**	⇑Pg	**Pg**	**19 27 47.0**	**-0.5**
	baz=1.3						
L17A	**Cokeville**	**1.35**	**74**	⇑Pg	**Pg**	**19 27 47.4**	**-0.4**
	baz=1.3,SNR=131						
L17A				⇓Sg	**Sg**	**19 28 06.3**	**+1.0**
	baz=1.3						
K13A	**Stover Farm, H**	**1.42**	**310**	⇑Pb	**Pb**	**19 27 47.8**	**-1.1**
	baz=1.4						
K13A				⇓Sn	**Sn**	**19 28 05.8**	**-1.5**
	baz=1.4						
K13A				⇑Sb	**Sb**	**19 28 07.1**	**-0.1**
	baz=1.4						
JLU	**Jordanelle**	**1.44**	**142**	*e*Pn	**Pn**	**19 27 48.3**	**-0.3**
JLU				*e*Sn	**Sn**	**19 28 07.0**	**-0.7**
O15A	**The Old Anders**	**1.46**	**176**	⇑Pn	**Pn**	**19 27 47.8**	**-1.1**
	baz=1.5						
O15A				⇓Pb	**Pb**	**19 27 48.7**	**-0.8**
	baz=1.5,SNR=108						
O15A				⇑Sb	**Sb**	**19 28 08.2**	**-0.2**
	baz=1.5						
M17A	**Scullys Gap (B**	**1.49**	**100**	⇓Pn	**Pn**	**19 27 47.9**	**-1.3**
	baz=1.5						
M17A				⇓Pg	**Pg**	**19 27 50.3**	**-0.1**
	baz=1.5,SNR=182						
M17A				⇓Sg	**Sg**	**19 28 10.5**	**+0.9**
	baz=1.5						
N13A	**Wendover, West**	**1.49**	**234**	⇑Pb	**Pb**	**19 27 49.2**	**-0.8**
	baz=1.5,SNR=128						
N13A				⇑Sb	**Sb**	**19 28 09.3**	**+0.2**
	baz=1.5						
AHID	**Auburn Hatcher**	**1.52**	**47**	*e*Pn	**Pn**	**19 27 49.9**	**+0.1**
AHID				*e*Sn	**Sn**	**19 28 10.8**	**+1.0**
DUG	**Dugway**	**1.55**	**186**	⇓Pb	**Pb**	**19 27 49.9**	**-1.2**
	baz=1.6,SNR=283						
DUG				⇑Sn	**Sn**	**19 28 09.4**	**-1.2**
	baz=1.6						
DUG	**Dugway**	**1.55**	**186**	*e*Pn	**Pn**	**19 27 49.8**	**-0.3**
N17A	**Moffit Pass**	**1.56**	**120**	⇑Pg	**Pg**	**19 27 51.4**	**-0.4**
	baz=1.6,SNR=16						
K17A	**Gardner Place,**	**1.61**	**51**	⇑Pb	**Pb**	**19 27 51.1**	**-1.0**
	baz=1.6,SNR=15						
K17A				⇑Sg	**Sg**	**19 28 14.6**	**+0.9**
	baz=1.6						
J15A	**Blackfoot**	**1.67**	**5**	⇓Pn	**Pn**	**19 27 50.5**	**-1.2**
	baz=1.7						
J15A				⇑Pb	**Pb**	**19 27 51.7**	**-1.4**
	baz=1.7						
J15A				⇑Sb	**Sb**	**19 28 14.5**	**+0.2**
	baz=1.7						
DAU	**Daniels Canyon**	**1.68**	**142**	*e*Pn	**Pn**	**19 27 52.3**	**+0.5**
J14A	**Carey**	**1.72**	**337**	⇑Pn	**Pn**	**19 27 51.3**	**-1.2**
	baz=1.7						
J14A				⇑Pb	**Pb**	**19 27 52.8**	**-1.1**
	baz=1.7,SNR=54						
J14A				⇓Sb	**Sb**	**19 28 16.0**	**+0.2**
	baz=1.7						
O16A	**Springville**	**1.75**	**151**	⇓Pb	**Pb**	**19 27 53.4**	**-1.0**
	baz=1.7,SNR=32						
O16A				⇑Sb	**Sb**	**19 28 16.9**	**+0.3**
	baz=1.7						
M12A	**Wells**	**1.75**	**260**	⇑Pb	**Pb**	**19 27 53.6**	**-1.0**
	baz=1.8,SNR=130						
M12A				⇑Sb	**Sb**	**19 28 17.1**	**+0.2**
	baz=1.8						
NLU	**North Lily Min**	**1.83**	**167**	*e*Pn	**Pn**	**19 27 53.5**	**-0.5**
L12A	**House Creek Ra**	**1.84**	**284**	⇓Pb	**Pb**	**19 27 55.1**	**-0.8**
	baz=1.8,SNR=15						
L12A				⇑Sg	**Sg**	**19 28 22.4**	**+1.5**
	baz=1.8						
RRI2	**Red Ridge**	**1.87**	**30**	*e*Pn	**Pn**	**19 27 54.1**	**-0.4**
MPU	**Maple Canyon**	**1.88**	**156**	*e*Pn	**Pn**	**19 27 54.3**	**-0.3**
O13A	**Hicks Ranch, I**	**1.91**	**213**	⇑Pb	**Pb**	**19 27 55.9**	**-1.3**
	baz=1.9,SNR=22						
O13A				⇑Sb	**Sb**	**19 28 22.1**	**+0.8**
	baz=1.9						
K12A	**Draper Farm, C**	**1.92**	**299**	⇑Pb	**Pb**	**19 27 56.4**	**-1.0**
	baz=1.9,SNR=105						
K12A				⇓Sb	**Sb**	**19 28 21.8**	**+0.2**
	baz=1.9						
L18A	**Fontenelle, Gr**	**1.94**	**84**	⇑Pg	**Pg**	**19 27 58.3**	**-0.7**
	baz=1.9,SNR=72						
M18A	**Lyman**	**1.94**	**98**	⇓Pg	**Pg**	**19 27 58.7**	**-0.4**
	baz=1.9,SNR=32						
J13A	**Cove Ranch, Pi**	**2.02**	**326**	⇑Pb	**Pb**	**19 27 58.0**	**-1.0**
	baz=2.0,SNR=83						
J13A				⇓Sb	**Sb**	**19 28 24.0**	**-0.4**
	baz=2.0						
N12A	**Clover Valley,**	**2.03**	**245**	⇓Pb	**Pb**	**19 27 58.3**	**-0.9**
	baz=2.0,SNR=68						
N12A				⇑Sb	**Sb**	**19 28 25.0**	**+0.3**
	baz=2.0						
N12A	**Clover Valley,**	**2.03**	**245**	*e*Pn	**Pn**	**19 27 57.1**	**+0.5**
REDW	**Red Top Meadow**	**2.08**	**38**	*e*Pn	**Pn**	**19 27 58.1**	**+0.7**
O17A	**Robinson Place**	**2.10**	**137**	⇑P	**Pn**	**19 27 58.8**	**+1.1**
	baz=2.1,SNR=39						
O17A				⇑Sg	**Sg**	**19 28 30.8**	**+1.5**
	baz=2.1						
K18A	**Toltan Ranch,**	**2.11**	**64**	⇓Pb	**Pb**	**19 27 59.6**	**-1.0**
	baz=2.1,SNR=28						
K18A				⇑Pg	**Pg**	**19 28 01.8**	**-0.6**
	baz=2.1						
K18A				⇓Sb	**Sb**	**19 28 26.9**	**-0.2**
	baz=2.1						
K18A				⇑Sg	**Sg**	**19 28 31.0**	**+1.2**
	baz=2.1						
DCID1	**Drake Creek**	**2.13**	**29**	*e*Pn	**Pn**	**19 27 59.1**	**+1.0**
TPAW	**Teton Pass**	**2.14**	**35**	*e*Pn	**Pn**	**19 27 59.3**	**+1.1**
J17A	**Brown Place, J**	**2.15**	**40**	⇓Pb	**Pb**	**19 28 00.3**	**-0.9**
	baz=2.1						
P14A	**Drum Mountains**	**2.17**	**189**	P	**Pn**	**19 27 59.0**	**+0.3**
	baz=2.2,SNR=195						
P14A				⇑Sn	**Sn**	**19 28 24.9**	**-1.0**
	baz=2.2						
P15A	**Leamington**	**2.18**	**173**	⇓P	**Pn**	**19 28 00.2**	**+1.4**
	baz=2.2,SNR=20						
O12A	**Currie**	**2.18**	**228**	⇑Pb	**Pb**	**19 28 01.1**	**-0.7**
	baz=2.2,SNR=87						
O12A				⇓Sb	**Sb**	**19 28 29.6**	**+0.5**
	baz=2.2						
SNOW	**Snow King Moun**	**2.20**	**38**	*e*Pn	**Pn**	**19 28 00.3**	**+1.2**
ELK	**Elko**	**2.21**	**244**	*e*Pn	**Pn**	**19 28 00.1**	**+0.8**
ELK				*e*Sn	**Sn**	**19 28 29.2**	**+2.2**
HLID	**Hailey**	**2.25**	**325**	⇓Pb	**Pb**	**19 28 02.0**	**-1.0**
	baz=2.3,SNR=87						
HLID				⇑Sb	**Sb**	**19 28 31.6**	**+0.3**
	baz=2.3						
HLID	**Hailey**	**2.25**	**325**	*e*Pn	**Pn**	**19 28 00.7**	**+0.9**
I15A	**Monteview**	**2.26**	**2**	⇓Pb	**Pb**	**19 28 02.0**	**-1.2**
	baz=2.3,SNR=42						
I15A				⇓Sb	**Sb**	**19 28 32.1**	**+0.7**
	baz=2.3						
I14A	**Mackay**	**2.27**	**345**	⇑Pb	**Pb**	**19 28 02.4**	**-1.0**
	baz=2.3,SNR=14						
I14A				⇑Sb	**Sb**	**19 28 32.4**	**+0.7**
	baz=2.3						
I16A	**Newdale**	**2.29**	**21**	⇑Pb	**Pb**	**19 28 02.3**	**-1.3**
	baz=2.3,SNR=41						
N18A	**Larsen Ranch,**	**2.34**	**108**	⇓Sb	**Sb**	**19 28 34.2**	**+0.4**
	baz=2.3						
J12A	**Stokes Ranch,**	**2.38**	**310**	⇑Pb	**Pb**	**19 28 03.9**	**-1.3**
	baz=2.4,SNR=54						
J12A				⇑Sb	**Sb**	**19 28 35.2**	**+0.4**
	baz=2.4						
L11A	**Cat Creek Ranc**	**2.38**	**281**	⇓Pb	**Pb**	**19 28 03.9**	**-1.3**
	baz=2.4,SNR=50						
L11A				⇑Sb	**Sb**	**19 28 35.6**	**+0.8**
	baz=2.4						
M11A	**Holland Ranch,**	**2.40**	**264**	⇓Pb	**Pb**	**19 28 04.6**	**-0.9**
	baz=2.4,SNR=13						
M11A				⇑Sb	**Sb**	**19 28 36.4**	**+0.9**
	baz=2.4						
J18A	**Kendall Valley**	**2.42**	**52**	⇑Pb	**Pb**	**19 28 04.6**	**-1.3**
	baz=2.4,SNR=14						
I13A	**Wildhorse Cree**	**2.44**	**334**	⇓Pb	**Pb**	**19 28 05.1**	**-1.1**
	baz=2.4,SNR=49						
I13A				⇑Sb	**Sb**	**19 28 36.8**	**+0.3**
	baz=2.4						
L19A	**Farson**	**2.46**	**80**	⇓Pb	**Pb**	**19 28 05.1**	**-1.4**
	baz=2.4						
IMW	**Indian Meadow**	**2.48**	**29**	*e*Pn	**Pn**	**19 28 04.0**	**+1.0**
BW06	**Boulder Array**	**2.49**	**65**	⇑Pb	**Pb**	**19 28 05.9**	**-1.2**
	baz=2.5						
BW06				⇓Sb	**Sb**	**19 28 38.1**	**+0.1**
	baz=2.5						
P13A	**Bates Ranch, G**	**2.52**	**205**	⇓Pb	**Pb**	**19 28 06.7**	**-0.9**
	baz=2.5,SNR=82						
M19A	**Rock Springs**	**2.60**	**94**	⇑Sb	**Sb**	**19 28 41.8**	**+0.5**
	baz=2.6						
I17A	**Pilgrim Ck.**	**2.65**	**34**	⇑Pb	**Pb**	**19 28 08.8**	**-1.0**
	baz=2.6						
N19A	**John Jarvie Ra**	**2.72**	**107**	⇑Pn	**Pn**	**19 28 04.9**	**-1.4**
	baz=2.7,SNR=11						
N19A				⇓Sb	**Sb**	**19 28 45.4**	**+0.6**
	baz=2.7						
K11A	**Parker Ranch,**	**2.74**	**293**	⇓Sb	**Sb**	**19 28 46.4**	**+1.3**
	baz=2.7						
Q15A	**Fillmore**	**2.74**	**176**	⇓P	**Pn**	**19 28 07.3**	**+0.8**
	baz=2.7,SNR=14						
Q15A				⇑Sn	**Sn**	**19 28 38.6**	**-1.4**
	baz=2.7						
I12A	**Atlanta**	**2.77**	**319**	⇓Sb	**Sb**	**19 28 46.9**	**+0.9**
	baz=2.8						
P18A	**Preston Nutter**	**2.77**	**139**	⇓Pb	**Pb**	**19 28 10.5**	**-1.4**
	baz=2.8,SNR=30						
Q14A	**Sevier Lake (B**	**2.79**	**191**	P	**Pn**	**19 28 07.8**	**+0.6**
	baz=2.8,SNR=101						
O11A	**Cowboy Ranch,**	**2.81**	**236**	⇑P	**Pn**	**19 28 09.0**	**+1.5**
	baz=2.8						
I18A	**Diamond G Ranc**	**2.84**	**46**	⇓Pb	**Pb**	**19 28 11.9**	**-1.2**
	baz=2.8						
I18A				⇓Sb	**Sb**	**19 28 49.2**	**+1.0**
	baz=2.8						
P12A	**McGill**	**2.86**	**218**	⇓Pn	**Pn**	**19 28 08.0**	**-0.1**
	baz=2.9						
H15A	**Lima**	**2.88**	**360**	⇓Pb	**Pb**	**19 28 12.5**	**-1.1**
	baz=2.9						
L10A	**Juniper Basin**	**2.90**	**278**	⇑Pb	**Pb**	**19 28 12.8**	**-1.2**
	baz=2.9						
L10A				⇑Sb	**Sb**	**19 28 50.9**	**+1.2**
	baz=2.9						
MFID	**Camas Ranch**	**2.90**	**306**	⇑Pb	**Pb**	**19 28 13.1**	**-1.1**
	baz=2.9						
MFID				⇓Sb	**Sb**	**19 28 50.9**	**+1.0**
	baz=2.9						
H14A	**Leadore**	**2.93**	**349**	⇓Pb	**Pb**	**19 28 13.3**	**-1.3**
	baz=2.9						
H14A				⇑Sb	**Sb**	**19 28 51.4**	**+0.8**
	baz=2.9						
M10A	**I.L. Ranch, Tu**	**2.95**	**267**	⇓Pb	**Pb**	**19 28 13.7**	**-1.2**
	baz=2.9						
Q13A	**Wheeler Ranch,**	**2.98**	**202**	P	**Pn**	**19 28 10.5**	**+0.7**
	baz=3.0,SNR=44						
K19A	**Absolon Red Bu**	**3.00**	**68**	⇑Sb	**Sb**	**19 28 53.5**	**+0.9**
	baz=3.0						
H13A	**Challis**	**3.07**	**338**	⇑Sb	**Sb**	**19 28 56.1**	**+1.5**
	baz=3.1						
SRU	**San Rafael**	**3.07**	**148**	*e*Pn	**Pn**	**19 28 12.2**	**+1.2**
MCMT	**McKenzie Canyo**	**3.09**	**357**	*e*Pn	**Pn**	**19 28 15.4**	**+4.1**
Q12A	**Willow Creek R**	**3.18**	**213**	⇑P	**Pn**	**19 28 13.5**	**+0.9**
	baz=3.2,SNR=8.9						
QLMT	**Earthquake Lak**	**3.21**	**15**	*e*Pn	**Pn**	**19 28 15.6**	**+2.7**
MSU	**Marysvale**	**3.24**	**174**	*e*Pn	**Pn**	**19 28 14.6**	**+1.3**
I11A	**Placerville**	**3.28**	**313**	⇓Pb	**Pb**	**19 28 19.2**	**-1.4**
	baz=3.3						
I11A				⇑Sb	**Sb**	**19 29 02.4**	**+1.7**
	baz=3.3						
K10A	**MacKenzie Ranc**	**3.32**	**290**	⇑Pb	**Pb**	**19 28 19.9**	**-1.4**
	baz=3.3						
G15A	**Dillon**	**3.43**	**2**	⇓Pb	**Pb**	**19 28 21.2**	**-1.8**
	baz=3.4						
J10A	**Berg Farm, Mel**	**3.50**	**300**	⇓Sb	**Sb**	**19 29 08.9**	**+1.8**
	baz=3.5						
G16A	**Moss Hill, Enn**	**3.54**	**9**	⇑Sb	**Sb**	**19 29 09.6**	**+1.5**
	baz=3.5						
G13A	**Cobalt**	**3.55**	**341**	⇓Sb	**Sb**	**19 29 10.5**	**+1.9**
	baz=3.6						
G14A	**Jackson**	**3.56**	**350**	⇓Sb	**Sb**	**19 29 10.8**	**+2.1**
	baz=3.6						
DLMT	**Dillon**	**3.62**	**0**	*e*Pn	**Pn**	**19 28 24.5**	**+5.9**
R13A	**O'Grain Ranch,**	**3.70**	**197**	⇑P	**Pn**	**19 28 21.4**	**+1.7**
	baz=3.7,SNR=20						
G17A	**Pierce Place,**	**3.83**	**20**	⇑Pb	**Pb**	**19 28 29.1**	**-0.8**
	baz=3.8						
BOZ	**Bozeman (W)**	**3.97**	**10**	⇑Pb	**Pb**	**19 28 31.3**	**-1.0**
	baz=4.0						
BOZ	**Bozeman (W)**	**3.97**	**10**	*e*Pn	**Pn**	**19 28 28.8**	**+5.5**
ARUT	**Antelope Range**	**4.00**	**189**	*e*Pn	**Pn**	**19 28 23.9**	**+0.2**
RWWY	**Rawlins**	**4.05**	**89**	*e*Pn	**Pn**	**19 28 25.9**	**+1.5**
R11A	**Troy Canyon, C**	**4.08**	**215**	⇑Pb	**Pb**	**19 28 33.7**	**-0.5**
	baz=4.1						
F15A	**Butte**	**4.10**	**1**	⇑Pb	**Pb**	**19 28 33.8**	**-0.7**
	baz=4.1						
F16A	**Kennard Place,**	**4.11**	**10**	⇓Pb	**Pb**	**19 28 34.0**	**-0.7**
	baz=4.1						
CCUT	**Cedar City**	**4.22**	**188**	*e*Pn	**Pn**	**19 28 26.5**	**-0.4**
PV04	**Paradox Valley**	**4.39**	**138**	*e*Pn	**Pn**	**19 28 30.5**	**+1.4**
F17A	**Fitzpatrick Pl**	**4.40**	**18**	⇓Pb	**Pb**	**19 28 38.4**	**-1.2**
	baz=4.4						
BMO	**Blue Mountains**	**4.63**	**314**	*e*Pn	**Pn**	**19 28 36.4**	**+4.0**
PV01	**Paradox Valley**	**4.76**	**138**	*e*Pn	**Pn**	**19 28 35.5**	**+1.3**
PHWY	**Pilot Hill**	**5.39**	**92**	*e*Pn	**Pn**	**19 28 45.2**	**+2.3**
	5.1nm,0.6s						

*IDC **15** 19:37:27.0±3.4, 38°.44N×141°.21E, h0km, mb3.4/1, mb1 3.5/3, mb1mx3.2/26, mbtmp3.2/3, ML2.7/2, MS2.9/1, Ms1 2.9/1, ms1mx2.0/26, Error ellipse: s-maj=64.8km s-min=28.2km az=156.0*
*JMA **15** 19:37:27.6, 38°.79N×140°.79E, h3km±1km, M2.8*
JMA Felt I J1.
*ISCJB **15** 19:37:27.6±0.5, 38°.78N±0°.03×140°.82E±0°.03, h10km, Error ellipse: s-maj=3.9km s-min=3.4km az=39.2*

ISC 15 19:37:27.8±0.5, 38°.77N±0°.02×140°.81E±0°.03, h10km, n15, σ0°.89/23, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.37**	**61**	S	**Sg**	**19 37 40.0**	**0.0**
JYK	**Kaneyama**	**0.38**	**293**	P	**Pg**	**19 37 35.0**	**-0.2**
JYK				*e*S	**Sg**	**19 37 40.1**	**-0.2**
JOU	**Okura**	**0.42**	**195**	P	**Pg**	**19 37 36.1**	**+0.1**
JOU				S	**Sg**	**19 37 42.1**	**+0.5**
JIO	**Ouri**	**0.53**	**127**	P	**Pg**	**19 37 37.9**	**-0.2**
JIO				*e*S	**Sg**	**19 37 45.5**	**+0.4**
JRG	**Rokugo**	**0.64**	**348**	P	**Pg**	**19 37 40.4**	**+0.3**
JRG				*e*S	**Sg**	**19 37 49.0**	**+0.5**
OFUJ	**Ofunato**	**0.74**	**65**	*e*S	**Sg**	**19 37 51.8**	**+0.1**
JOM	**Ohasama**	**0.80**	**28**	S	**Sg**	**19 37 53.1**	**-0.4**
JYS	**Shiratake**	**0.80**	**227**	P	**Pg**	**19 37 43.2**	**0.0**
JYS				*e*S	**Sg**	**19 37 54.0**	**+0.4**
JYA	**Atsumi**	**0.87**	**259**	P	**Pg**	**19 37 44.1**	**-0.5**
JYA				*e*S	**Sg**	**19 37 55.9**	**-0.1**
JMM	**Marumori**	**0.91**	**181**	P	**Pg**	**19 37 44.7**	**-0.5**
JMM				S	**Sg**	**19 37 56.7**	**-0.3**
MAT	**Matsushiro**	**3.03**	**224**	P	**Pn**	**19 38 19.0**	**+3.2**
MAT				S	**Sn**	**19 38 59.3**	**+7.1**
MJAR	**Matsushiro Arr**	**3.03**	**224**	Pn	**Pn**	**19 38 17.9**	**+2.1**
	0.3nm,0.3s,baz=26,slow=15,SNR=6.3						
MJAR				Pg	**Pg**	**19 38 23.4**	**-2.5**
	1.0nm,0.3s,baz=29,slow=15,SNR=20						
MJAR				Lg		19 39 01.9	
	0.4nm,0.3s,baz=62,slow=34,SNR=4.6						
KSRS	**Korea Array**	**10.24**	**267**	Pn	**Pn**	**19 39 58.7**	**+4.0**
	0.2nm,0.3s,baz=81,slow=14,SNR=5.6						
SONM	**Songino Array**	**26.45**	**301**	LR	LR	19 54 29.7	
	comp=Z,22nm,18.7s,baz=254,slow=38						
WRA	**Warramunga Arr**	**58.72**	**187**	P	**P**	**19 47 24.1**	**-1.6**
	0.3nm,0.6s,baz=9.4,slow=6.7,SNR=3.7						

*IDC **15** 19:55:47.8±0.8, 32°.30N×105°.14E, h0km, mb3.9/14, mb1 4.0/16, mb1mx3.9/28, mbtmp3.9/16, ML3.6/2, MS3.1/1, Ms1 3.1/1, ms1mx2.2/37, Error ellipse: s-maj=26.7km s-min=15.4km az=49.0*
*NEIC **15** 19:55:50.2±0.5, 32°.40N×105°.14E, h10km, mb3.8/3, Error ellipse: s-maj=11.1km s-min=8.4km az=65.0*
*BJI **15** 19:55:50.2, 32°.27N×105°.27E, h16km, mB4.6/3, mb4.0/5, ML3.8/19, Ms3.6/8, Ms7 3.4/9*

ISC 15 19:55:49.2±1.1, 32°.38N±0°.03×105°.13E±0°.04, h5km±7km, n30, σ1°.03/41, mb3.9/16, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.88**	**219**	⇑*e*Pn	**Pn**	**19 56 21.5**	**-0.4**
CD2				Pg	**Pb**	**19 56 23.1**	**-0.8**
CD2				Sg	**Sb**	**19 56 47.5**	**-0.2**
CD2				smax			
	comp=N,4μm,0.7s						
CD2				smax			
	comp=E,2μm,0.8s						
XAN	**Xi'an**	**3.58**	**61**	Pn	**Pn**	**19 56 46.4**	**+1.0**
XAN				Pg	**Pb**	**19 56 55.0**	**+2.0**
XAN				Sn	**Sb**	**19 57 34.8**	**-2.0**
XAN				Sg	**Sg**	**19 57 43.4**	**-0.9**
XAN				smax			
	comp=N,600nm,0.8s						
XAN				smax			
	comp=E,240nm,0.9s						
XAN				LR	LR		
	comp=N,580nm,6.7s						
XAN				LR	LR		
	comp=E,120nm,5.0s						
XAN				LR	LR		
	comp=Z,120nm,8.2s						
LZH	**Lanzhou**	**3.85**	**344**	Pn	**Pn**	**19 56 52.5**	**+3.4**
LZH				Pg	**Pg**	**19 57 02.4**	**-0.6**
LZH				Sn	**Sn**	**19 57 37.8**	**+3.1**
LZH				Sg	**Sg**	**19 57 52.5**	**-0.4**
LZH				smax			
	comp=N,500nm,1.1s						
LZH				smax			
	comp=E,810nm,1.0s						
LZH				LR	LR		
	comp=E,2μm,6.3s						
LZH				LR	LR		
	comp=Z,2μm,9.2s						
ENH	**Enshi**	**4.28**	**118**	*e*Pn	**Pn**	**19 56 55.8**	**+0.8**
ENH				*e*Sn	**Sn**	**19 57 46.4**	**+1.2**
KMI	**Kunming**	**7.53**	**197**	Pn	**Pn**	**19 57 42.3**	**+2.7**
KMI				Sn	**Sn**	**19 59 04.6**	**-0.7**
KMI				smax			
	comp=N,10.0nm,1.5s						
KMI				smax			
	comp=E,15nm,1.7s						
KMI				LR	LR		
	comp=N,260nm,9.5s						
KMI				LR	LR		
	comp=E,280nm,8.5s						
KMI				LR	LR		
	comp=Z,130nm,8.1s						
GTA	**Gaotai**	**8.24**	**330**	*e*P	**Pn**	**19 57 50.9**	**+1.6**
GTA				S	**Sn**	**19 59 21.9**	**-0.8**
GTA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,51nm,5.1s						
GTA				LR	LR		
	comp=N,280nm,11.4s						
GTA				LR	LR		
	comp=E,210nm,9.6s						
GTA				LR	LR		
	comp=Z,160nm,10.2s						
CMAR	**Chiang Mai Arr**	**14.94**	**203**	Pn	**Pn**	**19 59 22.1**	**+1.0**
	comp=Z,0.0nm,0.3s,baz=9.2,slow=12,SNR=3.6						
SONM	**Songino Array**	**15.47**	**3**	Pn	**Pn**	**19 59 29.1**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=180,slow=14,SNR=9.6						
SONM				Lg		20 04 00.4	
	comp=Z,0.1nm,0.3s,baz=182,slow=

ENPP El Nido 5.05 188 *e*P Pn 20 07 26.8 -1.4

BER ***15*** *20:24:07.0±3.3, 77°.45N×8°.50E, h10km, MD2.5, ML1.5, ML2.2(NAO)*
NAO ***15*** *20:24:07.3±3.9, 77°.74N×8°.13E, ML2.2*
CSEM ***15*** *20:24:07.4±0.4, 77°.76N×8°.35E, h10km, ML2.2, Error ellipse: s-maj=10.1km s-min=1.8km az=50.0*
ISC 15 20:24:07.9±3.9, 77.73N±0°.09×±°, h5km±15km, n7, σ0°35/9, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**1.38**	**28**	Pg	**Pg**	**20 24 34.0**	**-0.4**
KBS				Lg		20 24 51.7	
KBS	**Kingsbay**	**1.38**	**28**	*e*P	**Pn**	**20 24 34.3**	**+0.5**
KBS				*e*S	**Sb**	**20 24 52.0**	**-0.1**
KBS				AML	AML	20 24 57.3	
	comp=Z,9.9nm,0.1s						
KBS	**Kingsbay**	**1.38**	**28**	Pg	**Pg**	**20 24 34.0**	**-0.3**
KBS				Lg		20 24 51.7	
SPA0	**Spitsbergen Ar**	**1.70**	**71**	Pg	**Pg**	**20 24 40.7**	**+0.3**
	baz=237,slow=16						
SPA0				Lg		20 25 03.5	
	baz=245,slow=18						
SPA0	**Spitsbergen Ar**	**1.70**	**71**	Pg	**Pg**	**20 24 40.7**	**+0.3**
	baz=237,slow=16						
SPA0				Lg		20 25 03.5	
	baz=245,slow=18						
SPA0	**Spitsbergen Ar**	**1.70**	**71**	Pg	**Pg**	**20 24 40.7**	**+0.4**
SPA0				Lg		20 25 03.5	
	SNR=7.2						
HSP	**Hornsund**	**1.70**	**112**	*e*Pn	**Pn**	**20 24 37.8**	**-0.3**
HSP				*e*Sn	**Sn**	**20 24 52.7**	**-7.5**

NEIC ***15*** *20:43:30.5, 38°.35N×20°.55E, h7km, MD3.6(ATH), After ATH.*
CSEM ***15*** *20:43:30.4±0.3, 38°.37N×20°.58E, h1km, MD3.6, Error ellipse: s-maj=6.7km s-min=4.7km az=76.0*
ATH ***15*** *20:43:30.5, 38°.35N×20°.55E, h7km±4km, MD3.6/13*
ISCJB ***15*** *20:43:30.8±0.7, 38°.35N±0°.03×20°.59E±0°.05, h10km, Error ellipse: s-maj=5.4km s-min=4.7km az=168.0*
ISC 15 20:43:30.7±0.9, 38°.35N±0°.04×20°.54E±0°.06, h8km±8km, n37, σ0°44/52, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.18**	**168**	*e*Pg	**Pg**	**20 43 34.3**	**-0.1**
VLS				*e*Sg	**Sg**	**20 43 37.5**	**+0.6**
VLS	**Valsamata**	**0.18**	**168**	*e*PG	**Pg**	**20 43 34.3**	**-0.1**
VLS				*e*SG	**Sg**	**20 43 37.5**	**+0.6**
VLS	**Valsamata**	**0.18**	**168**	*e*Pg	**Pg**	**20 43 34.3**	**-0.1**
VLS				*e*Sg	**Sg**	**20 43 37.5**	**+0.6**
RLS	**Riolos of Patr**	**0.79**	**112**	*e*Pb	**Pg**	**20 43 45.4**	**-0.4**
RLS				*e*Sb	**Sg**	**20 43 56.2**	**+0.2**
RLS	**Riolos of Patr**	**0.79**	**112**	*e*PB	**Pg**	**20 43 45.4**	**-0.4**
RLS				*e*SB	**Sg**	**20 43 56.2**	**+0.2**
RLS	**Riolos of Patr**	**0.79**	**112**	*e*Pb	**Pg**	**20 43 45.4**	**-0.4**
RLS				*e*Sb	**Sg**	**20 43 56.2**	**+0.2**
EFP	**Efpalio**	**1.07**	**86**	*e*PG	**Pg**	**20 43 50.4**	**-0.9**
EFP				*e*SB	**Sg**	**20 44 05.7**	**+0.4**
EFP	**Efpalio**	**1.07**	**86**	*e*Pg	**Pg**	**20 43 50.4**	**-0.9**
EFP				*e*Sb	**Sg**	**20 44 05.7**	**+0.4**
EVR	**Evrytania**	**1.14**	**60**	*e*Pg	**Pg**	**20 43 51.7**	**-0.9**
EVR				*e*Sb	**Sg**	**20 44 07.7**	**+0.3**
EVR	**Evrytania**	**1.14**	**60**	*e*PG	**Pg**	**20 43 51.7**	**-0.9**
EVR				*e*SB	**Sg**	**20 44 07.7**	**+0.3**
EVR	**Evrytania**	**1.14**	**60**	*e*Pg	**Pg**	**20 43 51.7**	**-0.9**
EVR				*e*Sb	**Sg**	**20 44 07.7**	**+0.3**
JAN	**Janina**	**1.32**	**10**	*e*Pb	**Pb**	**20 43 56.0**	**+0.2**
JAN	**Janina**	**1.32**	**10**	*e*PB	**Pb**	**20 43 56.0**	**+0.2**
JAN	**Janina**	**1.32**	**10**	*e*Pb	**Pb**	**20 43 56.0**	**+0.2**
KEK	**Kerkira**	**1.48**	**337**	*e*Pb	**Pb**	**20 43 58.4**	**0.0**
KEK	**Kerkira**	**1.48**	**337**	*e*PB	**Pb**	**20 43 58.4**	**0.0**
KEK	**Kerkira**	**1.48**	**337**	*e*Pb	**Pb**	**20 43 58.4**	**0.0**
GUR	**Goura**	**1.48**	**106**	*e*PG	**Pn**	**20 43 57.5**	**0.0**
GUR				*e*SB	**Sg**	**20 44 18.4**	**+0.2**
GUR	**Goura**	**1.48**	**106**	*e*Pg	**Pn**	**20 43 57.5**	**0.0**
GUR				*e*Sb	**Sg**	**20 44 18.4**	**+0.2**
AGG	**Agios Georgios**	**1.55**	**64**	*e*Pb	**Pb**	**20 43 59.9**	**+0.3**
AGG	**Agios Georgios**	**1.55**	**64**	*e*PB	**Pb**	**20 43 59.9**	**+0.3**
AGG	**Agios Georgios**	**1.55**	**64**	*e*Pb	**Pb**	**20 43 59.9**	**+0.3**
ITM	**Ithomi**	**1.60**	**136**	*e*Pb	**Pb**	**20 44 00.4**	**-0.1**
ITM	**Ithomi**	**1.60**	**136**	*e*PB	**Pb**	**20 44 00.4**	**-0.1**
ITM	**Ithomi**	**1.60**	**136**	*e*Pb	**Pb**	**20 44 00.4**	**-0.1**
THL	**Klokotos Trika**	**1.67**	**43**	*e*PG	**Pb**	**20 44 01.6**	**0.0**
THL	**Klokotos Trika**	**1.67**	**43**	*e*Pg	**Pb**	**20 44 01.6**	**0.0**
PYL	**PYLOS**	**1.74**	**146**	*e*PG	**Pb**	**20 44 02.5**	**-0.3**
PYL	**PYLOS**	**1.74**	**146**	*e*Pg	**Pb**	**20 44 02.5**	**-0.3**
VLX	**Vlachokerasia**	**1.75**	**123**	*e*PN	**Pg**	**20 44 04.0**	**-0.3**
VLX	**Vlachokerasia**	**1.75**	**123**	*e*Pn	**Pg**	**20 44 04.0**	**-0.3**
LTK	**Loutraki**	**1.94**	**99**	*e*PG	**Pb**	**20 44 06.9**	**+0.7**
LTK	**Loutraki**	**1.94**	**99**	*e*Pg	**Pb**	**20 44 06.9**	**+0.7**
VLI	**Veliai**	**2.51**	**130**	*e*Pn	**Pb**	**20 44 15.5**	**-0.4**
VLI	**Veliai**	**2.51**	**130**	*e*PN	**Pb**	**20 44 15.5**	**-0.4**
STON	**Ston**	**5.01**	**335**	*e*Pn	**Pn**	**20 44 46.4**	**+0.4**
STON				Sn	**Sn**	**20 45 39.7**	**-4.3**
STON	**Ston**	**5.01**	**335**	*e*Pn	**Pn**	**20 44 46.4**	**+0.4**
STON				Sn	**Sn**	**20 45 39.6**	**-4.4**

ISCJB ***15*** *20:55:22.0±0.2, 39°.10N±0°.01×0°.54W±0°.02, h10km, Error ellipse: s-maj=2.5km s-min=1.3km az=43.0*
CSEM ***15*** *20:55:23.3±0.1, 39°.01N×0°.49W, h5km, ML3.6/37, Error ellipse: s-maj=3.7km s-min=1.8km az=125.0*
MDD ***15*** *20:55:24.5±0.3, 39°.02N×0°.42W, h4km±3km, mbLg3.3/39, Error ellipse: s-maj=2.7km s-min=2.1km az=120.0, PRIMO , RAFELGUARAF SIMAT DE LA VALLDIGINA CANALS*
MDD EMS: IV - IVA GENOV.V, LA LLOSA DE RANES MANUEL.
NEIC ***15*** *20:55:24.5, 39°.02N×0°.42W, h5km, MN3.4(MDD), After MDD.*
INMG ***15*** *20:55:24.6±1.6, 39°.03N×0°.41W, h7km±3km, ML3.4, Error ellipse: s-maj=3.1km s-min=1.6km az=106.0*
SFS ***15*** *20:55:24.0, 39°.01N×0°.41W, h5km, ML3.4*
LDG ***15*** *20:55:24.9±0.1, 38°.99N×0°.42W, h5km, Ml3.3/30, Error ellipse: s-maj=2.0km s-min=1.0km az=131.0*
STR ***15*** *20:55:31.9±0.6, 39°.57N×0°.21W, h5km, Ml3.3, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 15 20:55:23.1±0.3, 39°.04N±0°.01×0°.47W±0°.02, h7km±2km, n332, σ1°23/634, 29C-39D, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EBEN	**Beniarda**	**0.38**	**151**	Pg	**Pg**	**20 55 30.9**	**+0.4**
EBEN				Lg		20 55 36.2	
EBEN	**Beniarda**	**0.38**	**151**	Pg	**Pg**	**20 55 30.9**	**+0.4**
	91nm,0.1s,SNR=2108						
EBEN				Lg		20 55 36.2	
	1μm,0.2s,SNR=11						
EBEN	**Beniarda**	**0.38**	**151**	Pg	**Pg**	**20 55 30.9**	**+0.4**
	91nm,0.1s,SNR=2108						
EBEN				Lg		20 55 36.2	
	1μm,0.2s,SNR=11						
EBEN	**Beniarda**	**0.38**	**151**	Pg	**Pg**	**20 55 30.9**	**+0.4**
	90nm,0.1s,SNR=1000						
EBEN				Lg		20 55 36.2	
	1μm,0.2s,SNR=11						
ETOB	**Tobarra**	**0.93**	**245**	⇑Pg	**Pg**	**20 55 41.9**	**+0.9**
ETOB				Pn	**Pn**	**20 55 43.0**	**+0.5**
ETOB				Lg		20 55 55.0	
ETOB	**Tobarra**	**0.93**	**245**	⇑Pg	**Pg**	**20 55 41.9**	**+0.9**
	546nm,0.5s,SNR=18						
ETOB				Pn	**Pn**	**20 55 43.0**	**+0.5**
	449nm,0.2s,SNR=7.9						
ETOB				Lg		20 55 55.0	
	930nm,0.2s,SNR=29						
ETOB	**Tobarra**	**0.93**	**245**	⇑Pg	**Pg**	**20 55 41.9**	**+0.9**
	546nm,0.5s,SNR=18						
ETOB				Pn	**Pn**	**20 55 43.0**	**+0.5**
	449nm,0.2s,SNR=7.9						
ETOB				Lg		20 55 55.0	
	930nm,0.2s,SNR=29						
ETOB	**Tobarra**	**0.93**	**245**	Pg	**Pg**	**20 55 41.9**	**+0.9**
	546nm,0.5s,SNR=18						
EMOS	**Mosqueruela**	**1.32**	**360**	⇑Pg	**Pg**	**20 55 48.3**	**-0.2**
EMOS				Lg		20 56 06.5	
EMOS	**Mosqueruela**	**1.32**	**360**	⇑Pg	**Pg**	**20 55 48.3**	**-0.2**
	102nm,0.3s,SNR=18						
EMOS				Lg		20 56 06.5	
	172nm,0.5s,SNR=7.2						
EMOS	**Mosqueruela**	**1.32**	**360**	⇑Pg	**Pg**	**20 55 48.3**	**-0.2**
	102nm,0.3s,SNR=18						
EMOS				Lg		20 56 06.5	
	172nm,0.5s,SNR=7.2						
EMOS	**Mosqueruela**	**1.32**	**360**	Pg	**Pg**	**20 55 48.3**	**-0.2**
	102nm,0.3s,SNR=18						
EMOS				Lg		20 56 06.5	
	172nm,0.5s,SNR=7.2						
EIBI	**Ibiza**	**1.41**	**90**	⇑Pn	**Pn**	**20 55 48.3**	**-0.8**
EIBI				Sn	**Sn**	**20 56 05.6**	**-2.3**
EIBI	**Ibiza**	**1.41**	**90**	⇑Pn	**Pn**	**20 55 48.3**	**-0.8**
	99nm,0.2s,SNR=18						
EIBI				Sn	**Sn**	**20 56 05.6**	**-2.3**
	209nm,0.2s,SNR=7.3						
EIBI	**Ibiza**	**1.41**	**90**	⇑Pn	**Pn**	**20 55 48.3**	**-0.8**
	99nm,0.2s,SNR=18						
EIBI				Sn	**Sn**	**20 56 05.6**	**-2.3**
	209nm,0.2s,SNR=7.3						
EIBI	**Ibiza**	**1.41**	**90**	Pn	**Pn**	**20 55 48.3**	**-0.8**
	99nm,0.2s,SNR=18						
EIBI				Sn	**Sn**	**20 56 05.6**	**-2.3**
	209nm,0.2s,SNR=7.3						
CART	**Cartagena**	**1.51**	**196**	*e*Pn	**Pn**	**20 55 49.0**	**-1.5**
CART	**Cartagena**	**1.51**	**196**	⇓Pg	**Pg**	**20 55 49.9**	**-2.2**
CART				Lg		20 56 08.4	
CART	**Cartagena**	**1.51**	**196**	⇓Pg	**Pg**	**20 55 49.9**	**-2.2**
CART				Lg		20 56 08.4	
CART	**Cartagena**	**1.51**	**196**	*e*Pn	**Pn**	**20 55 49.0**	**-1.5**
CART	**Cartagena**	**1.51**	**196**	*i*P	**Pn**	**20 55 49.9**	**-0.6**
CART				*e*S	**Sn**	**20 56 08.4**	**-1.9**
EVIA	**Vianos**	**1.64**	**257**	⇓Pn	**Pn**	**20 55 52.6**	**+0.3**
EVIA				Lg		20 56 16.6	
EVIA	**Vianos**	**1.64**	**257**	⇓Pn	**Pn**	**20 55 52.6**	**+0.3**
	93nm,0.2s,SNR=18						
EVIA				Lg		20 56 16.6	
	310nm,0.3s,SNR=9.8						
EVIA	**Vianos**	**1.64**	**257**	⇓Pn	**Pn**	**20 55 52.6**	**+0.3**
	93nm,0.2s,SNR=18						
EVIA				Lg		20 56 16.6	
	310nm,0.3s,SNR=9.8						
EVIA	**Vianos**	**1.64**	**257**	Pn	**Pn**	**20 55 52.6**	**+0.3**
	93nm,0.2s,SNR=18						
EVIA				Lg		20 56 16.6	
	310nm,0.3s,SNR=9.8						
ERTA	**Horta de San J**	**2.01**	**18**	⇓Pn	**Pn**	**20 55 58.2**	**+0.8**
ERTA				Sn	**Sn**	**20 56 23.3**	**+0.5**
ERTA	**Horta de San J**	**2.01**	**18**	⇓Pn	**Pn**	**20 55 58.2**	**+0.8**
	26nm,0.4s,SNR=18						
ERTA				Sn	**Sn**	**20 56 23.3**	**+0.5**
	63nm,0.2s,SNR=6.3						
ERTA	**Horta de San J**	**2.01**	**18**	⇓Pn	**Pn**	**20 55 58.2**	**+0.8**
	26nm,0.4s,SNR=18						
ERTA				Sn	**Sn**	**20 56 23.3**	**+0.5**
	63nm,0.2s,SNR=6.3						
ERTA	**Horta de San J**	**2.01**	**18**	Pn	**Pn**	**20 55 58.2**	**+0.8**
	26nm,0.4s,SNR=18						
ERTA				Sn	**Sn**	**20 56 23.3**	**+0.5**
	63nm,0.2s,SNR=6.3						
EHUE	**Huescar**	**2.07**	**235**	⇓Pn	**Pn**	**20 55 58.9**	**+0.7**
EHUE				Pg	**Pg**	**20 56 03.3**	**+0.5**
EHUE				Sn	**Sn**	**20 56 24.8**	**+0.6**
EHUE				Lg		20 56 30.7	
EHUE	**Huescar**	**2.07**	**235**	⇓Pn	**Pn**	**20 55 58.9**	**+0.7**
	44nm,0.2s,SNR=18						
EHUE				Pg	**Pg**	**20 56 03.3**	**+0.5**
	40nm,0.2s,SNR=7.9						
EHUE				Sn	**Sn**	**20 56 24.8**	**+0.6**
	58nm,0.2s,SNR=7.9						
EHUE				Lg		20 56 30.7	
	125nm,0.3s,SNR=7.9						
EHUE	**Huescar**	**2.07**	**235**	⇓Pn	**Pn**	**20 55 58.9**	**+0.7**
	44nm,0.2s,SNR=18						
EHUE				Pg	**Pg**	**20 56 03.3**	**+0.5**
	40nm,0.2s,SNR=7.9						
EHUE				Sn	**Sn**	**20 56 24.8**	**+0.6**
	58nm,0.2s,SNR=7.9						
EHUE				Lg		20 56 30.7	
	125nm,0.3s,SNR=7.9						
EHUE	**Huescar**	**2.07**	**235**	Pn	**Pn**	**20 55 58.9**	**+0.7**
	44nm,0.2s,SNR=18						
ETOR	**Torete**	**2.16**	**326**	Pn	**Pn**	**20 56 01.9**	**+2.5**
ETOR				Pg	**Pg**	**20 56 05.9**	**+1.4**
ETOR				Pg	**Pg**	**20 56 06.5**	**+2.0**
ETOR				Sn	**Sn**	**20 56 26.7**	**+0.3**
ETOR				Lg		20 56 33.4	
ETOR				Lg		20 56 34.6	
ETOR	**Torete**	**2.16**	**326**	Pn	**Pn**	**20 56 01.9**	**+2.5**
	16nm,0.1s,SNR=7.9						
ETOR				Pg	**Pg**	**20 56 05.9**	**+1.4**
	164nm,0.4s,SNR=7.9						
ETOR				Sn	**Sn**	**20 56 26.7**	**+0.3**
	97nm,0.3s,SNR=7.9						
ETOR				Lg		20 56 33.4	
	402nm,0.3s,SNR=7.9						
ETOR	**Torete**	**2.16**	**326**	Pn	**Pn**	**20 56 01.9**	**+2.5**
	16nm,0.1s,SNR=7.9						
ETOR				Pg	**Pg**	**20 56 05.9**	**+1.4**
	164nm,0.4s,SNR=7.9						
ETOR				Sn	**Sn**	**20 56 26.7**	**+0.3**
	97nm,0.3s,SNR=7.9						
ETOR				Lg		20 56 33.4	
	402nm,0.3s,SNR=7.9						
ETOR	**Torete**	**2.16**	**326**	Pn	**Pn**	**20 56 01.9**	**+2.5**
	16nm,0.1s,SNR=7.9						
EQES	**Quesada**	**2.39**	**240**	⇓Pn	**Pn**	**20 56 03.2**	**+0.6**
EQES				Pg	**Pg**	**20 56 09.5**	**+0.6**
EQES				Sn	**Sn**	**20 56 32.9**	**+0.8**
EQES				Lg		20 56 41.1	
EQES	**Quesada**	**2.39**	**240**	⇓Pn	**Pn**	**20 56 03.2**	**+0.6**
	14nm,0.2s,SNR=18						
EQES				Pg	**Pg**	**20 56 09.5**	**+0.6**
	58nm,0.1s,SNR=25						
EQES				Sn	**Sn**	**20 56 32.9**	**+0.8**
	50nm,0.2s,SNR=5.1						
EQES				Lg		20 56 41.1	
	168nm,0.2s,SNR=5.8						
EQES	**Quesada**	**2.39**	**240**	⇓Pn	**Pn**	**20 56 03.2**	**+0.6**
	14nm,0.2s,SNR=18						
EQES				Pg	**Pg**	**20 56 09.5**	**+0.6**
	58nm,0.1s,SNR=25						
EQES				Sn	**Sn**	**20 56 32.9**	**+0.8**
	50nm,0.2s,SNR=5.1						
EQES				Lg		20 56 41.1	
	168nm,0.2s,SNR=5.8						
EQES	**Quesada**	**2.39**	**240**	Pn	**Pn**	**20 56 03.2**	**+0.6**
	14nm,0.2s,SNR=18						
ENIJ	**Nijar**	**2.48**	**214**	Pn	**Pn**	**20 56 04.2**	**+0.4**
ENIJ				Pg	**Pg**	**20 56 11.0**	**+0.4**
ENIJ				Sn	**Sn**	**20 56 35.1**	**+0.8**
ENIJ	**Nijar**	**2.48**	**214**	Pn	**Pn**	**20 56 04.2**	**+0.4**
	17nm,0.2s,SNR=5.4						
ENIJ				Pg	**Pg**	**20 56 11.0**	**+0.4**
	32nm,0.4s,SNR=8.2						
ENIJ				Sn	**Sn**	**20 56 35.1**	**+0.8**
	22nm,0.3s,SNR=7.9						
ENIJ	**Nijar**	**2.48**	**214**	Pn	**Pn**	**20 56 04.2**	**+0.4**
	17nm,0.2s,SNR=5.4						
ENIJ	**Nijar**	**2.48**	**214**	Pg	**Pg**	**20 56 11.0**	**+0.4**
	32nm,0.4s,SNR=8.2						
ENIJ				Sn	**Sn**	**20 56 35.1**	**+0.8**
	22nm,0.3s,SNR=7.9						
EPOB	**Poblet**	**2.60**	**27**	⇓Pn	**Pn**	**20 56 05.9**	**+0.4**
EPOB				Pg	**Pg**	**20 56 11.8**	**-1.1**
EPOB				Sn	**Sn**	**20 56 35.9**	**-1.3**
EPOB				Lg		20 56 46.2	
EPOB	**Poblet**	**2.60**	**27**	⇓Pn	**Pn**	**20 56 05.9**	**+0.4**
	7.3nm,0.1s,SNR=18						
EPOB				Pg	**Pg**	**20 56 11.8**	**-1.1**
	17nm,0.3s,SNR=11						
EPOB				Sn	**Sn**	**20 56 35.9**	**-1.3**
	22nm,0.3s,SNR=23						
EPOB				Lg		20 56 46.2	
	25nm,0.4s,SNR=7.2						
EPOB	**Poblet**	**2.60**	**27**	⇓Pn	**Pn**	**20 56 05.9**	**+0.4**
	7.3nm,0.1s,SNR=18						
EPOB				Pg	**Pg**	**20 56 11.8**	**-1.1**
	17nm,0.3s,SNR=11						
EPOB				Sn	**Sn**	**20 56 35.9**	**-1.3**
	22nm,0.3s,SNR=23						
EPOB				Lg		20 56 46.2	
	25nm,0.4s,SNR=7.2						
EPOB	**Poblet**	**2.60**	**27**	Pn	**Pn**	**20 56 05.9**	**+0.5**
	7.3nm,0.1s,SNR=18						
ETOS	**Mallorca**	**2.64**	**73**	⇑Pn	**Pn**	**20 56 05.9**	**-0.2**
ETOS				Sn	**Sn**	**20 56 36.7**	**-1.6**
ETOS	**Mallorca**	**2.64**	**73**	⇑Pn	**Pn**	**20 56 05.9**	**-0.2**
	18nm,0.2s,SNR=18						
ETOS				Sn	**Sn**	**20 56 36.7**	**-1.6**
	42nm,0.3s,SNR=62						
ETOS	**Mallorca**	**2.64**	**73**	⇑Pn	**Pn**	**20 56 05.9**	**-0.2**
	18nm,0.2s,SNR=18						
ETOS				Sn	**Sn**	**20 56 36.7**	**-1.6**
	42nm,0.3s,SNR=62						
ETOS	**Mallorca**	**2.64**	**73**	Pn	**Pn**	**20 56 05.9**	**-0.2**
	18nm,0.2s,SNR=18						
ETOS				Sn	**Sn**	**20 56 36.7**	**-1.6**
	42nm,0.3s,SNR=62						
ESAC	**San Caprasio**	**2.68**	**360**	Pn	**Pn**	**20 56 07.1**	**+0.5**
ESAC				Lg		20 56 50.0	
ESAC	**San Caprasio**	**2.68**	**360**	Pn	**Pn**	**20 56 07.1**	**+0.5**
	7.8nm,0.2s,SNR=5.0						
ESAC				Lg		20 56 50.0	
	623nm,0.4s,SNR=7.9				

EGUA	**Guajares**	**3.29 229**	Pn	**Pn**	**20 56 17.5 +2.5**
	9.0nm,0.2s,SNR=7.9				
EGUA			Pg	**Pg**	**20 56 25.3 -0.9**
	89nm,0.4s,SNR=7.9				
EGUA			Lg		20 57 11.7
	261nm,0.6s,SNR=7.9				
EGUA	**Guajares**	**3.29 229**	Pn	**Pn**	**20 56 17.5 +2.5**
	9.0nm,0.2s,SNR=7.9				
EGUA			Pg	**Pg**	**20 56 25.3 -0.9**
	89nm,0.4s,SNR=7.9				
EGUA			Lg		20 57 11.7
	261nm,0.6s,SNR=7.9				
EGUA	**Guajares**	**3.29 229**	Pn	**Pn**	**20 56 17.5 +2.5**
	9.0nm,0.2s,SNR=7.9				
EGUA	**Guajares**	**3.29 229**	Pg	**Pg**	**20 56 25.3 -0.9**
	89nm,0.4s,SNR=7.9				
EGUA			Lg		20 57 11.7
	261nm,0.6s,SNR=7.9				
ERON	**Agron**	**3.32 234**	Pn	**Pn**	**20 56 16.1 +0.8**
ERON			Pg	**Pg**	**20 56 25.1 -1.6**
ERON			Lg		20 57 09.6
ERON	**Agron**	**3.32 234**	Pn	**Pn**	**20 56 16.1 +0.8**
	11nm,0.2s,SNR=4.0				
ERON			Pg	**Pg**	**20 56 25.1 -1.6**
	23nm,0.4s,SNR=4.0				
ERON			Lg		20 57 09.6
	32nm,0.5s,SNR=4.0				
ERON	**Agron**	**3.32 234**	Pn	**Pn**	**20 56 16.1 +0.8**
	11nm,0.2s,SNR=4.0				
ERON			Pg	**Pg**	**20 56 25.1 -1.6**
	23nm,0.4s,SNR=4.0				
ERON			Lg		20 57 09.6
	32nm,0.5s,SNR=4.0				
ERON	**Agron**	**3.32 234**	Pn	**Pn**	**20 56 16.1 +0.7**
	11nm,0.2s,SNR=4.0				
ELUQ	**Luque**	**3.33 245**	⇓Pn	**Pn**	**20 56 16.1 +0.5**
ELUQ			Pg	**Pg**	**20 56 27.6 +0.6**
ELUQ			Sn	**Sn**	**20 56 55.4 0.0**
ELUQ			Lg		20 57 10.9
ELUQ	**Luque**	**3.33 245**	⇓Pn	**Pn**	**20 56 16.1 +0.5**
	20nm,0.2s,SNR=18				
ELUQ			Pg	**Pg**	**20 56 27.6 +0.6**
	25nm,0.2s,SNR=7.9				
ELUQ			Sn	**Sn**	**20 56 55.4 0.0**
	24nm,0.2s,SNR=7.9				
ELUQ			Lg		20 57 10.9
	66nm,0.3s,SNR=7.9				
ELUQ	**Luque**	**3.33 245**	⇓Pn	**Pn**	**20 56 16.1 +0.5**
	20nm,0.2s,SNR=18				
ELUQ			Pg	**Pg**	**20 56 27.6 +0.6**
	25nm,0.2s,SNR=7.9				
ELUQ			Sn	**Sn**	**20 56 55.4 0.0**
	24nm,0.2s,SNR=7.9				
ELUQ			Lg		20 57 10.9
	66nm,0.3s,SNR=7.9				
ELUQ	**Luque**	**3.33 245**	Pn	**Pn**	**20 56 16.1 +0.5**
	20nm,0.2s,SNR=18				
EADA	**Adamuz**	**3.34 256**	⇓Pn	**Pn**	**20 56 15.0 -0.6**
EADA			Pg	**Pg**	**20 56 25.7 -1.3**
EADA			Sn	**Sn**	**20 56 55.6 +0.1**
EADA			Lg		20 57 09.3
EADA	**Adamuz**	**3.34 256**	⇓Pn	**Pn**	**20 56 15.0 -0.6**
	8.6nm,0.2s,SNR=18				
EADA			Pg	**Pg**	**20 56 25.7 -1.3**
	33nm,0.2s,SNR=30				
EADA			Sn	**Sn**	**20 56 55.6 +0.1**
	23nm,0.3s,SNR=6.9				
EADA			Lg		20 57 09.3
	96nm,0.2s,SNR=12				
EADA	**Adamuz**	**3.34 256**	⇓Pn	**Pn**	**20 56 15.0 -0.6**
	8.6nm,0.2s,SNR=18				
EADA			Pg	**Pg**	**20 56 25.7 -1.3**
	33nm,0.2s,SNR=30				
EADA			Sn	**Sn**	**20 56 55.6 +0.1**
	23nm,0.3s,SNR=6.9				
EADA			Lg		20 57 09.3
	96nm,0.2s,SNR=12				
EADA	**Adamuz**	**3.34 256**	Pn	**Pn**	**20 56 15.0 -0.6**
	8.6nm,0.2s,SNR=18				
ELOJ	**Sierra Loja**	**3.47 238**	⇓Pn	**Pn**	**20 56 18.4 +1.0**
ELOJ			Pg	**Pg**	**20 56 27.4 -2.1**
ELOJ			Sn	**Sn**	**20 56 59.7 +1.0**
ELOJ			Lg		20 57 16.4
ELOJ	**Sierra Loja**	**3.47 238**	⇓Pn	**Pn**	**20 56 18.4 +1.0**
	14nm,0.2s,SNR=18				
ELOJ			Pg	**Pg**	**20 56 27.4 -2.1**
	12nm,0.2s,SNR=9.3				
ELOJ			Sn	**Sn**	**20 56 59.7 +1.0**
	15nm,0.2s,SNR=5.0				
ELOJ			Lg		20 57 16.4
	23nm,0.3s,SNR=5.0				
ELOJ	**Sierra Loja**	**3.47 238**	⇓Pn	**Pn**	**20 56 18.4 +1.0**
	14nm,0.2s,SNR=18				
ELOJ			Pg	**Pg**	**20 56 27.4 -2.1**
	12nm,0.2s,SNR=9.3				
ELOJ			Sn	**Sn**	**20 56 59.7 +1.0**
	15nm,0.2s,SNR=5.0				
ELOJ			Lg		20 57 16.4
	23nm,0.3s,SNR=5.0				
ELOJ	**Sierra Loja**	**3.47 238**	Pn	**Pn**	**20 56 18.4 +1.0**
	14nm,0.2s,SNR=18				
CFON	**Fontmartina**	**3.51 38**	Pn	**Pn**	**20 56 18.4 +0.4**
CFON			Sn	**Sn**	**20 56 57.6 -2.1**
CFON	**Fontmartina**	**3.51 38**	Pn	**Pn**	**20 56 18.4 +0.4**
	9.5nm,0.2s,SNR=37				
CFON			Sn	**Sn**	**20 56 57.6 -2.1**
	20nm,0.3s,SNR=6.3			

MTLF	**Montolieu**	**4.75**	**24**	*e*Pn	**Pn**	**20 56 35.8**	**+0.8**
MTLF				*e*Sn	**Sn**	**20 57 28.4**	**-1.9**
MTLF				*e*Sg	**Sg**	**20 57 54.2**	**-1.5**
	3.8nm,0.4s						
ESPR	**Espera**	**4.78**	**245**	Pn	**Pn**	**20 56 35.5**	**0.0**
ESPR				Sn	**Sn**	**20 57 29.9**	**-1.1**
ESPR				Lg		20 57 57.1	
ESPR	**Espera**	**4.78**	**245**	Pn	**Pn**	**20 56 35.5**	**0.0**
	5.7nm,0.2s,SNR=17						
ESPR				Sn	**Sn**	**20 57 29.9**	**-1.1**
	21nm,0.4s,SNR=6.2						
ESPR				Lg		20 57 57.1	
	33nm,0.4s,SNR=4.6						
ESPR	**Espera**	**4.78**	**245**	Pn	**Pn**	**20 56 35.5**	**0.0**
	5.7nm,0.2s,SNR=17						
ESPR				Sn	**Sn**	**20 57 29.9**	**-1.1**
	21nm,0.4s,SNR=6.2						
ESPR				Lg		20 57 57.1	
	33nm,0.4s,SNR=4.6						
ESPR	**Espera**	**4.78**	**245**	Pn	**Pn**	**20 56 35.5**	**+0.1**
	5.7nm,0.2s,SNR=17						
ESPR				Sn	**Sn**	**20 57 29.9**	**-1.1**
	21nm,0.4s,SNR=6.2						
ESPR				Lg		20 57 57.1	
	33nm,0.4s,SNR=4.6						
GIBL	**Gibalbin**	**4.88**	**245**	Pn	**Pn**	**20 56 37.0**	**+0.2**
GIBL	**Gibalbin**	**4.88**	**245**	Pn	**Pn**	**20 56 37.0**	**+0.2**
GIBL	**Gibalbin**	**4.88**	**245**	*e*P	**Pn**	**20 56 37.0**	**+0.2**
EMIN	**Mina Concepcio**	**5.04**	**257**	Pn	**Pn**	**20 56 38.1**	**-0.8**
EMIN				Pg	**Pg**	**20 56 57.5**	**-2.1**
EMIN				Sn	**Sn**	**20 57 35.3**	**-2.1**
EMIN				Lg		20 58 01.8	
EMIN	**Mina Concepcio**	**5.04**	**257**	Pn	**Pn**	**20 56 38.1**	**-0.8**
	1.3nm,0.2s,SNR=18						
EMIN				Pg	**Pg**	**20 56 57.5**	**-2.1**
	2.1nm,0.3s,SNR=7.4						
EMIN				Sn	**Sn**	**20 57 35.3**	**-2.1**
	3.2nm,0.4s,SNR=6.9						
EMIN				Lg		20 58 01.8	
	57nm,0.6s,SNR=13						
EMIN	**Mina Concepcio**	**5.04**	**257**	Pn	**Pn**	**20 56 38.1**	**-0.8**
	1.3nm,0.2s,SNR=18						
EMIN				Pg	**Pg**	**20 56 57.5**	**-2.1**
	2.1nm,0.3s,SNR=7.4						
EMIN				Sn	**Sn**	**20 57 35.3**	**-2.1**
	3.2nm,0.4s,SNR=6.9						
EMIN				Lg		20 58 01.8	
	57nm,0.6s,SNR=13						
EMIN	**Mina Concepcio**	**5.04**	**257**	Pn	**Pn**	**20 56 38.2**	**-0.8**
EBAD	**Badajoz**	**5.12**	**269**	Pn	**Pn**	**20 56 39.4**	**-0.6**
EBAD				Pg	**Pg**	**20 56 59.7**	**-1.4**
EBAD				Sn	**Sn**	**20 57 37.0**	**-2.3**
EBAD				Lg		20 58 06.3	
EBAD	**Badajoz**	**5.12**	**269**	Pn	**Pn**	**20 56 39.4**	**-0.6**
	1.4nm,0.1s,SNR=18						
EBAD				Pg	**Pg**	**20 56 59.7**	**-1.4**
	4.7nm,0.2s,SNR=7.9						
EBAD				Sn	**Sn**	**20 57 37.0**	**-2.3**
	54nm,0.2s,SNR=11						
EBAD				Lg		20 58 06.3	
	58nm,0.2s,SNR=5.1						
EBAD	**Badajoz**	**5.12**	**269**	Pn	**Pn**	**20 56 39.4**	**-0.6**
	1.4nm,0.1s,SNR=18						
EBAD				Pg	**Pg**	**20 56 59.7**	**-1.4**
	4.7nm,0.2s,SNR=7.9						
EBAD				Sn	**Sn**	**20 57 37.0**	**-2.3**
	54nm,0.2s,SNR=11						
EBAD				Lg		20 58 06.3	
	58nm,0.2s,SNR=5.1						
EBAD	**Badajoz**	**5.12**	**269**	Pn	**Pn**	**20 56 39.4**	**-0.7**
	1.4nm,0.1s,SNR=18						
EBAD	**Badajoz**	**5.12**	**269**	Pg	**Pg**	**20 56 59.7**	**-1.4**
	4.7nm,0.2s,SNR=7.9						
EBAD				Sn	**Sn**	**20 57 37.0**	**-2.3**
	54nm,0.2s,SNR=11						
EBAD				Lg		20 58 06.3	
	58nm,0.2s,SNR=5.1						
PBAR	**Barrancos**	**5.22**	**263**	*e*Pn	**Pn**	**20 56 40.9**	**-0.6**
PBAR				*e*Sn	**Sn**	**20 57 41.2**	**-0.7**
PBAR				*e*Sg	**Sg**	**20 58 12.0**	**+1.3**
PBAR				A		20 58 16.9	
	46nm,0.6s						
PBAR	**Barrancos**	**5.22**	**263**	*e*Pn	**Pn**	**20 56 40.9**	**-0.6**
PBAR				*e*Sn	**Sn**	**20 57 41.2**	**-0.7**
PBAR				*e*Sg	**Sg**	**20 58 12.0**	**+1.3**
	46nm,0.6s						
PMRV	**Marv??o**	**5.39**	**276**	*e*Pn	**Pn**	**20 56 45.2**	**+1.4**
PMRV				*e*Sg	**Sg**	**20 58 18.0**	**+1.8**
PMRV				A		20 58 24.1	
	54nm,0.5s						
PMRV	**Marv??o**	**5.39**	**276**	*e*Pn	**Pn**	**20 56 45.2**	**+1.4**
PMRV				*e*Sg	**Sg**	**20 58 18.0**	**+1.8**
	54nm,0.5s						
MVO	**Moncorvo**	**5.46**	**295**	⇓Pn	**Pn**	**20 56 44.9**	**+0.1**
MVO				Sn	**Sn**	**20 57 45.8**	**-2.1**
MVO				Lg		20 58 17.8	
MVO	**Moncorvo**	**5.46**	**295**	⇓Pn	**Pn**	**20 56 44.9**	**+0.1**
	6.8nm,0.3s,SNR=18						
MVO				Sn	**Sn**	**20 57 45.8**	**-2.1**
	5.1nm,0.2s,SNR=5.8						
MVO				Lg		20 58 17.8	
	60nm,0.7s,SNR=7.0						
MVO	**Moncorvo**	**5.46**	**295**	⇓Pn	**Pn**	**20 56 44.9**	**+0.1**
	6.8nm,0.3s,SNR=18						
MVO				Sn	**Sn**	**20 57 45.8**	**-2.1**
	5.1nm,0.2s,SNR=5.8						
MVO				Lg		20 58 17.8	
	60nm,0.7s,SNR=7.0						
MVO	**Moncorvo**	**5.46**	**295**	*e*Pn	**Pn**	**20 56 45.0**	**+0.2**
MVO				*e*Sg	**Sg**	**20 58 19.1**	**+0.6**
MVO				A		20 58 26.0	
	43nm,0.5s						
MVO	**Moncorvo**	**5.46**	**295**	Pn	**Pn**	**20 56 44.9**	**+0.1**
	6.8nm,0.3s,SNR=18						
MVO				Sn	**Sn**	**20 57 45.8**	**-2.0**
	5.1nm,0.2s,SNR=5.8						
MVO				Lg		20 58 17.8	
	60nm,0.7s,SNR=7.0						
MVO				*e*Sg	**Sg**	**20 58 19.1**	**+0.6**
	43nm,0.5s						
PCBR	**Castelo Branco**	**5.49**	**281**	*e*Pn	**Pn**	**20 56 46.8**	**+1.6**
PCBR				*e*Sg	**Sg**	**20 58 17.5**	**-1.8**
PCBR				A		20 58 27.6	
	25nm,0.5s						
PCBR	**Castelo Branco**	**5.49**	**281**	*e*Pn	**Pn**	**20 56 46.8**	**+1.6**
PCBR				*e*Sg	**Sg**	**20 58 17.5**	**-1.8**
	25nm,0.5s						
PBRG	**Braganca**	**5.53**	**302**	*e*Pn	**Pn**	**20 56 46.9**	**+1.2**
PBRG				*e*Sg	**Sg**	**20 58 22.3**	**+1.7**
PBRG				A		20 58 31.1	
	27nm,0.4s						
PESTR	**Estremoz**	**5.56**	**270**	*e*Pn	**Pn**	**20 56 46.3**	**+0.2**
PESTR				*e*Sg	**Sg**	**20 58 21.7**	**+0.2**
PESTR				A		20 58 25.0	
	46nm,0.6s						
EARI	**Arriondas**	**5.56**	**321**	Pn	**Pn**	**20 56 47.7**	**+1.5**
EARI				Sn	**Sn**	**20 57 48.6**	**-1.7**
EARI				Lg		20 58 23.1	
EARI	**Arriondas**	**5.56**	**321**	Pn	**Pn**	**20 56 47.7**	**+1.5**
	1.9nm,0.2s,SNR=12						
EARI				Sn	**Sn**	**20 57 48.6**	**-1.7**
	3.0nm,0.4s,SNR=11						
EARI				Lg		20 58 23.1	
	23nm,1.1s,SNR=7.9				

mb1 3.3/6, mb1mx3.2/26, mbtmp3.2/6, Error ellipse: s-maj=53.5km s-min=21.4km az=9.0

ISC 15 20:56:49.6±0.6, 36°59N±0°02×22°64E±0°03, h4km±4km, n115, σ0.80/163, mb3.5/4, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLI	**Veliai**	**0.27**	**63**	*e*Pb	**Pg**	**20 56 54.7**	**-0.1**
VLI				*e*Sb	**Sg**	**20 56 59.3**	**+1.0**
VLI	**Veliai**	**0.27**	**63**	*e*PB	**Pg**	**20 56 54.7**	**-0.1**
VLI				*e*SB	**Sg**	**20 56 59.3**	**+1.0**
VLI	**Veliai**	**0.27**	**63**	*e*Pb	**Pg**	**20 56 54.7**	**-0.1**
VLI				*e*Sb	**Sg**	**20 56 59.3**	**+1.0**
KYTH	**Kithira**	**0.45**	**134**	*e*Pb	**Pg**	**20 56 58.0**	**-0.2**
KYTH	**Kithira**	**0.45**	**134**	*e*PB	**Pg**	**20 56 58.0**	**-0.2**
KYTH	**Kithira**	**0.45**	**134**	*e*Pb	**Pg**	**20 56 58.0**	**-0.2**
PYL	**PYLOS**	**0.78**	**293**	P	**Pg**	**20 57 03.9**	**-0.7**
PYL				S	**Sg**	**20 57 14.7**	**0.0**
PYL	**PYLOS**	**0.78**	**293**	*e*PN	**Pg**	**20 57 03.9**	**-0.7**
PYL				*e*SN	**Sg**	**20 57 15.5**	**+0.8**
PYL	**PYLOS**	**0.78**	**293**	P	**Pg**	**20 57 03.9**	**-0.7**
PYL				S	**Sg**	**20 57 14.7**	**0.0**
VLX	**Vlachokerasia**	**0.80**	**345**	P	**Pg**	**20 57 04.6**	**-0.4**
VLX				S	**Sg**	**20 57 15.2**	**-0.2**
VLX	**Vlachokerasia**	**0.80**	**345**	*e*PN	**Pg**	**20 57 04.5**	**-0.5**
VLX				*e*SN	**Sg**	**20 57 15.2**	**-0.2**
VLX	**Vlachokerasia**	**0.80**	**345**	P	**Pg**	**20 57 04.6**	**-0.4**
VLX				S	**Sg**	**20 57 15.2**	**-0.2**
ITM	**Ithomi**	**0.82**	**316**	*e*Pn	**Pg**	**20 57 04.7**	**-0.6**
ITM				*e*Sn	**Sg**	**20 57 15.7**	**-0.2**
ITM	**Ithomi**	**0.82**	**316**	P	**Pg**	**20 57 04.7**	**-0.6**
ITM				S	**Sg**	**20 57 16.0**	**+0.1**
ITM	**Ithomi**	**0.82**	**316**	*e*PN	**Pg**	**20 57 04.7**	**-0.6**
ITM				*e*SN	**Sg**	**20 57 15.7**	**-0.2**
ITM	**Ithomi**	**0.82**	**316**	*e*Pn	**Pg**	**20 57 04.7**	**-0.6**
ITM				S	**Sg**	**20 57 16.0**	**+0.1**
NAIG	**Nisos Aigina**	**1.34**	**30**	*e*Pn	**Pn**	**20 57 14.1**	**-1.1**
NAIG	**Nisos Aigina**	**1.34**	**30**	*e*PN	**Pn**	**20 57 14.1**	**-1.1**
NAIG	**Nisos Aigina**	**1.34**	**30**	*e*Pn	**Pn**	**20 57 14.1**	**-1.1**
GUR	**Goura**	**1.36**	**350**	P	**Pn**	**20 57 14.1**	**-1.3**
GUR				S	**Sg**	**20 57 34.6**	**+1.3**
GUR	**Goura**	**1.36**	**350**	*e*PN	**Pn**	**20 57 14.0**	**-1.4**
GUR	**Goura**	**1.36**	**350**	P	**Pn**	**20 57 14.1**	**-1.3**
GUR				S	**Sg**	**20 57 34.6**	**+1.3**
LTK	**Loutraki**	**1.45**	**10**	P	**Pn**	**20 57 16.7**	**+0.1**
LTK				S	**Sb**	**20 57 36.6**	**+0.6**
LTK	**Loutraki**	**1.45**	**10**	*e*PN	**Pn**	**20 57 16.7**	**+0.1**
LTK				*e*SN	**Sn**	**20 57 36.3**	**+0.2**
LTK	**Loutraki**	**1.45**	**10**	P	**Pn**	**20 57 16.7**	**+0.1**
LTK				*e*Sn	**Sn**	**20 57 36.3**	**+0.2**
LTK				S	**Sb**	**20 57 36.6**	**+0.6**
VLY	**Voula,Athens**	**1.56**	**36**	*e*Pn	**Pn**	**20 57 17.5**	**-0.6**
VLY				*e*Sn	**Sn**	**20 57 38.3**	**-0.5**
VLY	**Voula,Athens**	**1.56**	**36**	*e*PN	**Pn**	**20 57 17.5**	**-0.6**
VLY				*e*SN	**Sn**	**20 57 38.3**	**-0.5**
VLY	**Voula,Athens**	**1.56**	**36**	*e*Pn	**Pn**	**20 57 17.5**	**-0.6**
VLY				*e*Sn	**Sn**	**20 57 38.3**	**-0.5**
KARN	**Karanos**	**1.58**	**139**	P	**Pn**	**20 57 18.6**	**+0.2**
KARN				S	**Sn**	**20 57 40.6**	**+1.4**
KARN	**Karanos**	**1.58**	**139**	*e*PN	**Pn**	**20 57 17.5**	**-0.9**
KARN	**Karanos**	**1.58**	**139**	*e*Pn	**Pn**	**20 57 17.5**	**-0.9**
KARN	**Karanos**	**1.58**	**139**	P	**Pn**	**20 57 18.6**	**+0.2**
KARN				S	**Sn**	**20 57 40.6**	**+1.4**
ATH	**Athens Observa**	**1.62**	**32**	*e*Pn	**Pn**	**20 57 18.6**	**-0.4**
ATH	**Athens Observa**	**1.62**	**32**	*e*PN	**Pn**	**20 57 18.6**	**-0.4**
ATH	**Athens Observa**	**1.62**	**32**	*e*Pn	**Pn**	**20 57 18.6**	**-0.4**
ATHU	**Athens Univers**	**1.65**	**33**	P	**Pn**	**20 57 18.5**	**-0.8**
ATHU				S	**Sn**	**20 57 39.6**	**-1.4**
ATHU	**Athens Univers**	**1.65**	**33**	P	**Pn**	**20 57 18.5**	**-0.8**
ATHU				S	**Sn**	**20 57 39.6**	**-1.4**
LAKA	**Lakka**	**1.73**	**342**	P	**Pn**	**20 57 20.8**	**+0.4**
LAKA				S	**Sn**	**20 57 42.7**	**-0.2**
LAKA	**Lakka**	**1.73**	**342**	P	**Pn**	**20 57 20.8**	**+0.4**
LAKA				S	**Sn**	**20 57 42.7**	**-0.2**
VAM	**Vamos**	**1.73**	**133**	*e*Pn	**Pn**	**20 57 21.1**	**+0.6**
VAM	**Vamos**	**1.73**	**133**	*e*PN	**Pn**	**20 57 21.1**	**+0.6**
VAM	**Vamos**	**1.73**	**133**	*e*Pn	**Pn**	**20 57 21.1**	**+0.6**
RLS	**Riolos of Patr**	**1.73**	**328**	*e*Pn	**Pn**	**20 57 20.2**	**-0.3**
RLS				P		20 57 24.3	
RLS				*e*Sn	**Sn**	**20 57 42.3**	**-0.8**
RLS	**Riolos of Patr**	**1.73**	**328**	*e*PN	**Pn**	**20 57 20.2**	**-0.3**
RLS				*e*SN	**Sn**	**20 57 42.3**	**-0.8**
RLS	**Riolos of Patr**	**1.73**	**328**	*e*Pn	**Pn**	**20 57 20.2**	**-0.3**
PTL	**Penteli**	**1.75**	**34**	*e*Pn	**Pn**	**20 57 19.7**	**-1.0**
PTL				*e*Sn	**Sn**	**20 57 42.0**	**-1.5**
PTL	**Penteli**	**1.75**	**34**	*e*PN	**Pn**	**20 57 19.7**	**-1.0**
PTL				*e*SN	**Sn**	**20 57 42.0**	**-1.5**
PTL	**Penteli**	**1.75**	**34**	*e*Pn	**Pn**	**20 57 19.7**	**-1.0**
PTL				*e*Sn	**Sn**	**20 57 42.0**	**-1.5**
DSF	**Desfina**	**1.82**	**357**	P	**Pn**	**20 57 21.9**	**+0.2**
DSF				S	**Sn**	**20 57 44.2**	**-0.9**
DSF	**Desfina**	**1.82**	**357**	P	**Pn**	**20 57 21.9**	**+0.2**
DSF				S	**Sn**	**20 57 44.2**	**-0.9**
UPR	**University Cam**	**1.82**	**338**	*e*PN	**Pn**	**20 57 21.1**	**-0.6**
UPR	**University Cam**	**1.82**	**338**	*e*Pn	**Pn**	**20 57 21.1**	**-0.6**
KALE	**Kalithea**	**1.84**	**348**	P	**Pn**	**20 57 22.5**	**+0.5**
KALE				S	**Sn**	**20 57 45.7**	**0.0**
KALE	**Kalithea**	**1.84**	**348**	P	**Pn**	**20 57 22.5**	**+0.5**
KALE				S	**Sn**	**20 57 45.7**	**0.0**
EFP	**Efpalio**	**1.92**	**343**	P	**Pn**	**20 57 23.7**	**+0.6**
EFP				S	**Sn**	**20 57 47.0**	**-0.7**
EFP	**Efpalio**	**1.92**	**343**	*e*PN	**Pn**	**20 57 23.7**	**+0.6**
EFP	**Efpalio**	**1.92**	**343**	*e*Pn	**Pn**	**20 57 23.7**	**+0.6**
EFP				S	**Sn**	**20 57 47.0**	**-0.7**
LKR	**Lokris**	**2.07**	**8**	*e*Pn	**Pn**	**20 57 25.5**	**+0.3**
LKR	**Lokris**	**2.07**	**8**	P	**Pn**	**20 57 26.3**	**+1.1**
LKR				S	**Sn**	**20 57 52.7**	**+1.2**
LKR	**Lokris**	**2.07**	**8**	*e*PN	**Pn**	**20 57 25.5**	**+0.3**
LKR	**Lokris**	**2.07**	**8**	*e*Pn	**Pn**	**20 57 25.5**	**+0.3**
LKR	**Lokris**	**2.07**	**8**	P	**Pn**	**20 57 26.3**	**+1.1**
LKR				S	**Sn**	**20 57 52.7**	**+1.2**
GVD	**Gavdhos**	**2.11**	**146**	*e*Pb	**Pn**	**20 57 25.2**	**-0.5**
GVD	**Gavdhos**	**2.11**	**146**	*e*PB	**Pn**	**20 57 25.2**	**-0.5**
IDI	**Anoyia**	**2.24**	**125**	P	**Pn**	**20 57 26.5**	**-1.0**
	2.0nm,0.3s,baz=315,slow=13,SNR=15						
IDI	**Anoyia**	**2.24**	**125**	*e*Pn	**Pn**	**20 57 27.8**	**+0.3**
IDI	**Anoyia**	**2.24**	**125**	*e*PN	**Pn**	**20 57 27.8**	**+0.3**
IDI	**Anoyia**	**2.24**	**125**	*e*Pn	**Pn**	**20 57 27.8**	**+0.3**
VLS	**Valsamata**	**2.27**	**315**	*e*Pb	**Pn**	**20 57 27.8**	**-0.1**
VLS	**Valsamata**	**2.27**	**315**	*e*PB	**Pn**	**20 57 27.8**	**-0.1**
APE	**Apeiranthos**	**2.37**	**78**	*e*Pb	**Pn**	**20 57 28.9**	**-0.3**
APE	**Apeiranthos**	**2.37**	**78**	P	**Pn**	**20 57 29.6**	**+0.4**
APE				S	**Sn**	**20 57 59.8**	**+1.1**
APE	**Apeiranthos**	**2.37**	**78**	*e*PB	**Pn**	**20 57 28.9**	**-0.3**
APE	**Apeiranthos**	**2.37**	**78**	P	**Pn**	**20 57 29.6**	**+0.4**
APE				S	**Sn**	**20 57 59.8**	**+1.1**
EVR	**Evrytania**	**2.41**	**344**	*e*Pb	**Pn**	**20 57 30.5**	**+0.7**
EVR	**Evrytania**	**2.41**	**344**	*e*PB	**Pn**	**20 57 30.5**	**+0.7**
AGG	**Agios Georgios**	**2.44**	**354**	*e*Pb	**Pn**	**20 57 30.9**	**+0.7**
AGG	**Agios Georgios**	**2.44**	**354**	P	**Pn**	**20 57 31.1**	**+0.9**
AGG				S	**Sn**	**20 58 00.9**	**+0.5**
AGG	**Agios Georgios**	**2.44**	**354**	*e*PB	**Pn**	**20 57 30.9**	**+0.7**
AGG	**Agios Georgios**	**2.44**	**354**	P	**Pn**	**20 57 31.1**	**+0.9**
AGG				S	**Sn**	**20 58 00.9**	**+0.5**
LAST	**Lasithi**	**2.71**	**121**	*e*Pn	**Pn**	**20 57 33.5**	**-0.5**
LAST	**Lasithi**	**2.71**	**121**	*e*PN	**Pn**	**20 57 33.5**	**-0.5**
LAST	**Lasithi**	**2.71**	**121**	*e*Pn	**Pn**	**20 57 33.5**	**-0.5**
NEO	**Neokhori**	**2.75**	**9**	*e*Pn	**Pn**	**20 57 34.0**	**-0.5**
NEO	**Neokhori**	**2.75**	**9**	*e*PN	**Pn**	**20 57 34.0**	**-0.5**
NEO	**Neokhori**	**2.75**	**9**	*e*Pn	**Pn**	**20 57 34.0**	**-0.5**
AOS	**Alonnisos**	**2.75**	**21**	P	**Pn**	**20 57 34.4**	**-0.1**
AOS				S	**Sn**	**20 58 07.5**	**-0.8**
AOS	**Alonnisos**	**2.75**	**21**	P	**Pn**	**20 57 34.4**	**-0.1**
AOS				S	**Sn**	**20 58 07.5**	**-0.8**
NPS	**Neapolis**	**2.75**	**118**	*e*Pn	**Pn**	**20 57 33.9**	**-0.7**
NPS	**Neapolis**	**2.75**	**118**	*e*PN	**Pn**	**20 57 33.9**	**-0.7**
NPS	**Neapolis**	**2.75**	**118**	*e*Pn	**Pn**	**20 57 33.9**	**-0.7**
XOR	**Xorichti**	**2.80**	**9**	P	**Pn**	**20 57 35.6**	**+0.4**
XOR				S	**Sn**	**20 58 11.7**	**+2.2**
XOR	**Xorichti**	**2.80**	**9**	P	**Pn**	**20 57 35.6**	**+0.4**
XOR				S	**Sn**	**20 58 11.7**	**+2.2**
THL	**Klokotos Trika**	**3.01**	**351**	P	**Pn**	**20 57 38.8**	**+0.8**
THL				S	**Sn**	**20 58 15.0**	**+0.5**
THL	**Klokotos Trika**	**3.01**	**351**	*e*PB	**Pn**	**20 57 39.0**	**+1.0**
THL	**Klokotos Trika**	**3.01**	**351**	P	**Pn**	**20 57 38.8**	**+0.8**
THL				S	**Sn**	**20 58 15.0**	**+0.5**
ZKR	**Zakros**	**3.26**	**116**	*e*Pn	**Pn**	**20 57 40.7**	**-0.8**
ZKR	**Zakros**	**3.26**	**116**	*e*PN	**Pn**	**20 57 40.7**	**-0.8**
ZKR	**Zakros**	**3.26**	**116**	*e*Pn	**Pn**	**20 57 40.7**	**-0.8**
KARP	**Karpathos**	**3.81**	**105**	*e*Pn	**Pn**	**20 57 49.7**	**+0.6**
KARP	**Karpathos**	**3.81**	**105**	*e*PN	**Pn**	**20 57 49.7**	**+0.6**
KARP	**Karpathos**	**3.81**	**105**	*e*Pn	**Pn**	**20 57 49.7**	**+0.6**
PRK	**Paraskevi**	**3.91**	**46**	*e*Pn	**Pn**	**20 57 49.9**	**-0.5**
PRK	**Paraskevi**	**3.91**	**46**	*e*PN	**Pn**	**20 57 49.9**	**-0.5**
PRK	**Paraskevi**	**3.91**	**46**	*e*Pn	**Pn**	**20 57 49.9**	**-0.5**
TIP	**Timpagrande**	**5.32**	**301**	P	**Pn**	**20 58 10.8**	**+1.0**
TIP	**Timpagrande**	**5.32**	**301**	P	**Pn**	**20 58 10.8**	**+1.0**
BRTR	**Keskin Array B**	**9.21**	**67**	P	**Pn**	**20 59 08.5**	**+5.3**
	0.0nm,0.3s,baz=248,slow=12,SNR=2.6						
GERES	**GERESS Array B**	**13.88**	**335**	P	Px	21 00 20.5	
	0.1nm,0.3s,baz=147,slow=13,SNR=5.3						
CLL	**Collm**	**16.24**	**338**	*e*P	Px	21 00 46.0	
CLL				*e*		21 00 49.0	
CLL	**Collm**	**16.24**	**338**	*e*PP	Px	21 00 46.0	
CLL				*e*		21 00 49.0	
ESDC	**Sonseca Array**	**21.12**	**286**	P	**P**	**21 01 39.8**	**+4.5**
	0.4nm,0.6s,mb2.9,baz=87,slow=9.9,SNR=4.0						
EKA	**Eskdalemuir Ar**	**25.69**	**325**	P	**P**	**21 02 24.0**	**+3.5**
	2.4nm,1.0s,mb3.7,baz=120,slow=8.5,SNR=3.4						
MKAR	**Makanchi Array**	**44.71**	**57**	P	**P**	**21 05 03.3**	**-0.4**
	0.2nm,0.3s,mb3.5,baz=280,slow=8.1,SNR=3.3						
ZALV	**Zalesovo Beam**	**45.51**	**47**	P	**P**	**21 05 11.9**	**+1.9**
	0.7nm,0.6s,mb3.8,baz=267,slow=8.1,SNR=4.1						

SKHL ***15*** *21:03:49.9±2.2, 47°46N×154°62E, h45km±14km, mb5.7/1, Ms3.9/5, msh5.0/1*

ISCJB ***15*** *21:03:51.1±0.7, 47°83N±0°05×154°06E±0°05, h45km±5km, mb4.4/92, MS3.9/28, Error ellipse: s-maj=8.8km s-min=3.7km az=145.8*

NEIC ***15*** *21:03:51.8±0.6, 47°83N×154°05E, h38km±5km, mb4.5/61, MS4.0/4, Error ellipse: s-maj=6.5km s-min=3.5km az=154.0*

IDC ***15*** *21:03:51.3±3.7, 47°83N×154°05E, h33km±28km, mb4.0/25, mb1 4.2/28, mb1mx4.1/34, mbtmp4.0/28, ML3.9/3, MS3.8/18, Ms1 3.8/18, ms1mx3.5/40, Error ellipse: s-maj=17.0km s-min=11.4km az=159.0*

MOS ***15*** *21:03:51.1±1.0, 47°81N×154°07E, h45km, mb4.7/38, MS4.0/8, Error ellipse: s-maj=8.2km s-min=5.3km az=85.1*

SZGRF ***15*** *21:03:51.9, 48°07N×155°16E, h33km, mb4.6, Kuril Islands, Russia*

ISC 15 21:03:54.1±0.6, 47°88N±0°05×154°05E±0°05, h54km±4km, h43km±3.2km; pP-P, n258, σ0.82/252, mb4.4/92, MS3.9/28, 5C-9D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.12**	**25**	*e*PN	**Pn**	**21 04 40.5**	**-0.2**
SKR				*e*S	**Sn**	**21 05 16.5**	**-0.2**
SKR				pmax	pmax		
	comp=E,290nm,1.0s						
SKR				pmax	pmax		
	comp=Z,650nm,1.0s						
SKR				pmax	pmax		
	comp=N,100nm,0.4s						
SKR				pmax	pmax		
	comp=E,800nm,2.0s						
SKR				pmax	pmax		
	comp=Z,1μm,2.0s						
SKR				smax			
	comp=N,1μm,2.0s						
SKR				smax			
	comp=E,1μm,2.0s						
SKR				smax			
	comp=N,440nm,0.5s						
SKR				smax			
	comp=E,1μm,1.0s						
SKR				MLR	MLR		
	comp=E,2μm,12.0s						
SKR				MLR	MLR		
	comp=Z,2μm,12.0s						
SKR	**Severo-Kuril's**	**3.12**	**25**	*e*P	**Pn**	**21 04 40.5**	**-0.2**
SKR				AMB	AMB	21 04 43.6	
	comp=Z,1μm,2.0s						
SKR				AMB	AMB	21 04 43.6	
	comp=Z,800nm,2.0s						
SKR				AMB	AMB	21 04 43.6	
	comp=Z,100nm,0.4s						
SKR				AMB	AMB	21 04 43.6	
	comp=Z,290nm,1.0s						
SKR				AMB	AMB	21 04 43.6	
	comp=Z,650nm,1.0s						
SKR				*e*S	**Sn**	**21 05 16.5**	**-0.2**
SKR				A		21 05 26.0	
	comp=Z,1μm,2.0s						
SKR				A		21 05 26.0	
	comp=Z,1μm,2.0s						
SKR				A		21 05 31.0	
	comp=Z,1μm,1.0s						
SKR				A		21 05 31.0	
	comp=Z,490nm,1.0s						
SKR				A		21 05 31.0	
	comp=Z,440nm,0.5s						
SKR				AMS	AMS	21 06 12.0	
	comp=Z,2μm,12.0s						
SKR				AMS	AMS	21 06 12.0	
	comp=Z,2μm,12.0s						
KUR	**Kuril'sk**	**5.02**	**240**	*e*PN	**Pn**	**21 05 06.0**	**-0.8**
KUR				*e*S	**Sn**	**21 06 04.0**	**+0.6**
KUR				pmax	pmax		
	comp=N,190nm,1.0s						
KUR				pmax	pmax		
	comp=E,190nm,1.0s						
KUR				pmax	pmax		
	comp=Z,750nm,1.0s						
KUR				smax			
	comp=N,710nm,0.9s						
KUR				smax			
	comp=E,1μm,0.9s						
KUR	**Kuril'sk**	**5.02**	**240**	*e*P	**Pn**	**21 05 06.0**	**-0.8**
KUR				AMB	AMB	21 05 08.0	
	comp=E,190nm,1.0s						
KUR				AMB	AMB	21 05 08.0	
	comp=E,750nm,1.0s						
KUR				*e*S	**Sn**	**21 06 04.0**	**+0.6**
KUR				A		21 06 18.0	
	comp=E,710nm,0.9s						
KUR				A		21 06 18.0	
	comp=E,1μm,0.9s						
PEA0B	**Petropavlovsk-**	**5.73**	**23**	*e*Pn	**Pn**	**21 05 15.6**	**-0.9**
PEA0B				*e*Sn	**Sn**	**21 06 22.8**	**+2.0**
PETK	**Petropavlovsk-**	**5.73**	**23**	Pn	**Pn**	**21 05 16.1**	**-0.4**
	comp=E,3.2nm,0.3s,baz=179,slow=12,SNR=35						
PETK				LR	LR	21 07 48.1	
	comp=E,487nm,18.6s,baz=202,slow=41						
PET	**Petropavlovsk**	**5.93**	**28**	*e*PN	**Pn**	**21 05 17.6**	**-1.6**
PET				pmax	pmax		
	comp=Z,32nm,0.7s						
PET				MLR	MLR		
	comp=Z,300nm,20.0s						
PET	**Petropavlovsk**	**5.93**	**28**	*e*PN	**Pn**	**21 05 17.7**	**-1.5**
PET	**Petropavlovsk**	**5.93**	**28**	*e*Pn	**Pn**	**21 05 17.7**	**-1.6**
YUK	**Yuzh-Kuril'sk**	**6.88**	**239**	‖ *i*P	**Pn**	**21 05 31.9**	**-0.4**
YUK				pmax	pmax		
	comp=N,88μm,0.8s						
YUK				pmax	pmax		
	comp=E,98nm,0.8s						
YUK				pmax	pmax		
	comp=Z,299nm,1.5s						
YUK				pmax	pmax		
	comp=Z,315nm,1.4s						
YUK				MLR	MLR		
	comp=N,634nm,19.6s						
YUK				MLR	MLR		
	comp=Z,509nm,19.6s						
YUK				MLR	MLR		
	comp=E,350nm,9.8s						
YUK	**Yuzh-Kuril'sk**	**6.88**	**239**	‖ *i*P	**Pn**	**21 05 31.9**	**-0.4**
YUK				AMB	AMB	21 05 41.4	
	comp=E,88nm,0.8s						
YUK				AMB	AMB	21 05 41.4	
	comp=E,98nm,0.8s						
YUK				*i* S	**Sn**	**21 06 49.4**	**+0.3**
YUK				A		21 07 16.2	
	comp=E,440nm,0.5s						
YUK				A		21 07 16.2	
	comp=E,210nm,0.5s						
YUK				A		21 07 17.0	
	comp=E,2μm,1.0s						
YUK				A		21 07 17.0	
	comp=E,1μm,1.0s						
YUK				AMS	AMS	21 08 03.4	
	comp=E,634nm,20.0s						
YUK				AMS	AMS	21 08 03.4	
	comp=E,509nm,20.0s						
YSS	**Yuzh-Sakhalins**	**7.72**	**267**	‖ *e*PN	**Pn**	**21 05 46.2**	**+2.5**
YSS				pmax	pmax		
	comp=N,50nm,0.7s						
YSS				pmax	pmax		
	comp=E,70nm,0.7s						
YSS				pmax	pmax		
	comp=Z,60nm,0.7s						
YSS				MLR	MLR		
	comp=E,300nm,16.0s						
YSS				MLR	MLR		
	comp=Z,500nm,16.0s						
YSS	**Yuzh-Sakhalins**	**7.72**	**267**	*e*Pn	**Pn**	**21 05 46.9**	**+3.2**
YSS	**Yuzh-Sakhalins**	**7.72**	**267**	‖ *e*P	**Pn**	**21 05 46.2**	**+2.5**
YSS				AMB	AMB	21 05 47.6	
	comp=Z,60nm,0.7s						
YSS				AMB	AMB	21 05 47.6	
	comp=Z,50nm,0.7s						
YSS				AMB	AMB	21 05 47.6	
	comp=Z,70nm,0.7s						
YSS				*e*S	**Sn**	**21 07 11.2**	**+1.5**
YSS				*e*LQ		21 07 44.0	
YSS				AMS	AMS	21 08 46.0	
	comp=Z,300nm,16.0s						
YSS				AMS	AMS	21 08 46.0	
	comp=Z,500nm,16.0s						
UGL	**Uglegorsk**	**8.05**	**283**	PN	**Pn**	**21 05 52.5**	**+4.2**
UGL				pmax	pmax		
	comp=Z,60nm,0.8s						
UGL				MLR	MLR		
	comp=N,500nm,16.0s						
UGL				MLR	MLR		
	comp=E,500nm,16.0s						
UGL	**Uglegorsk**	**8.05**	**283**	*e*P	**Pn**	**21 05 52.5**	**+4.2**
UGL				AMS	AMS	21 09 04.0	
	comp=E,500nm,16.0s						
ASAJ	**Asahikawa**	**8.81**	**249**	Pn	**Pn**	**21 06 00.3**	**+1.6**
	comp=E,1.3nm,0.3s,baz=76,slow=13,SNR=19						
ASAJ				LR	LR	21 09 13.6	
	comp=E,386nm,18.3s,baz=12,slow=37						
ASAJ	**Asahikawa**	**8.81**	**249**	PN	**Pn**	**21 06 00.4**	**+1.6**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,386nm,18.3s						
ERM	**Erimo**	**9.69**	**237**	*e*PN	**Pn**	**21 06 09.3**	**-1.5**
NKL	**Nikolayevsk**	**10.01**	**307**	‖ *i*P	**Pn**	**21 06 14.0**	**-1.0**
NKL				AMB	AMB	21 06 16.0	
	comp=Z,60nm,1.2s						
NKL				AMB	AMB	21 06 16.0	
	comp=Z,70nm,1.2s						
NKL				AMB	AMB	21 06 16.0	
	comp=Z,80nm,1.2s						
NKL				*e*L		21 09 10.0	
NKL				AMS	AMS	21 10 48.0	
	comp=Z,500nm,17.0s						
HABR	**Khabarovsk**	**12.70**	**280**	*e*PN	**Pn**	**21 06 53.3**	**+1.6**
HABR						21 09 17.8	
HABR				pmax	pmax		
	comp=E,11nm,1.4s						
HABR				pmax	pmax		
	comp=N,17nm,1.6s						
HABR				pmax	pmax		
	comp=Z,48nm,1.9s						
HABR				MLR	MLR		
	comp=Z,289nm,18.0s						
FX1	**Attu Island--F**	**13.17**	**61**	Pn	**Pn**	**21 06 54.1**	**-4.2**
	comp=Z,2.4nm,0.3s,baz=328,slow=7.2,SNR=9.9						
FX1				Sn	**Sn**	**21 09 04.8**	**-18**
	comp=Z,5.4nm,0.3s,baz=55,slow=18,SNR=12						
FX1				LR	LR	21 11 43.6	
	comp=Z,138nm,18.4s,baz=252,slow=36						
KLR	**Kul'dur**	**14.82**	**284**	*e*P	**Pn**	**21 07 25.4**	**+5.2**
KLR				MLR	MLR		
	comp=Z,900nm,13.0s						
SEY	**Seymchan**	**15.12**	**357**	*e*P	**Pn**	**21 07 25.2**	**+1.2**
MJAR	**Matsushiro Arr**	**16.27**	**232**	Pn	**Pn**	**21 07 35.0**	**-3.9**
	comp=Z,0.5nm,0.3s,baz=28,slow=12,SNR=15						
MJAR				LR	LR	21 13 29.4	
	comp=Z,100nm,21.0s,baz=65,slow=36						
MAJO	**Matsushiro**	**16.27**	**232**	P	**Pn**	**21 07 34.0**	**-5.0**
MAJO				pmax	pmax		
	comp=Z,18nm,0.8s						
MAJO	**Matsushiro**	**16.27**	**232**	Pn	**Pn**	**21 07 34.0**	**-5.0**
	comp=Z,18nm,0.8s						
MDJ	**Mudanjiang**	**17.20**	**268**	P	**Pn**	**21 07 47.9**	**-2.6**
MDJ				pP	pP	21 07 59.3	-4.1
MDJ				sP	sP	21 08 04.6	-5.7
MDJ				S	**S**	**21 10 56.9**	**-11**
MDJ				ScP	ScP	21 16 03.0	+1.7
MDJ				PcS	PcS	21 16 07.8	+0.6
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MDJ				LR	LR		
	comp=N,87nm,25.0s						
MDJ				LR	LR		
	comp=E,39nm,32.8s						
MDJ				LR	LR		
	comp=Z,130nm,26.8s						
ZEA	**Zeya**	**17.86**	**299**	*e*P	**Pn**	**21 07 58.5**	**+0.1**
ZEA				AMB	AMB	21 07 59.4	
	comp=Z,12nm,1.0s						
YAK	**Yakutsk**	**19.74**	**325**	*e*P	**Pn**	**21 08 21.5**	**+0.6**
YAK				*e*S	**S**	**21 12 04.3**	**+6.1**
YAK				pmax	pmax		
	comp=Z,13nm,1.1s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.5s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.4s						
YAK				smax			
	comp=E,49nm,2.8s						
YAK				smax			
	comp

RSO Redoubt South 32.63 47 *eP* **P 21 10 13.1 -7.2**
ZAK Zakamensk 32.79 294 *eP* **P 21 10 21.2 -0.6**
BPAW Bear Paw Mtn. 33.48 41 *eP* **P 21 10 27.5 -0.2**
comp=Z,2.6nm,0.8s,mb4.2
TRF Thorofare Moun 33.77 42 *eP* **P 21 10 30.2 0.0**
comp=Z,4µm,1.2s
MCK McKinley 34.38 41 *eP* **P 21 10 35.2 -0.3**
MCK pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
MCK McKinley 34.38 41 *eP* **P 21 10 35.2 -0.3**
comp=Z,4.7nm,0.8s,mb4.5
COLA College 34.86 39 *eP* **P 21 10 39.0 -0.6**
COLA pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
COLA College 34.86 39 *eP* **P 21 10 39.0 -0.6**
comp=Z,3.5nm,0.7s,mb4.4
EGAK Eagle 37.72 39 *eP* **P 21 11 03.1 -0.9**
comp=Z,4.5nm,0.8s,mb4.2
ENH Enshi 38.20 259 *eP* **P 21 11 07.5 -0.9**
comp=Z,13nm,0.8s,mb4.7
LZH Lanzhou 38.49 271 *eP* **P 21 11 10.3 -0.5**
LZH pP pP 21 11 22.8 -2.1
LZH sP sP 21 11 27.8 -3.4
LZH PP PP 21 12 43.5 +3.9
LZH pmax pmax
comp=Z,19nm,1.3s,mb4.7
LZH pmax pmax
comp=Z,56nm,5.2s
LZH LR LR
comp=E,510nm,13.5s
LZH LR LR
comp=Z,630nm,17.4s,MS4.5
GTA Gaotai 39.43 278 *eP* **P 21 11 19.0 +0.4**
GTA pmax pmax
comp=Z,4.0nm,1.1s,mb4.1
GTA LR LR
comp=N,88nm,13.8s,MS3.9
GTA LR LR
comp=E,100nm,15.3s,MS3.9
GTA LR LR
comp=Z,150nm,15.9s,MS3.9
HYT Haines Junctio 40.02 45 *eP* **P 21 11 24.2 +1.0**
INK Inuvik 40.36 33 P **P 21 11 26.3 +0.4**
comp=Z,2.0nm,0.6s,mb4.0,baz=281,slow=8.1,SNR=5.4
INK Inuvik 40.36 33 P **P 21 11 26.3 +0.3**
INK pmax pmax
comp=Z,2.0nm,0.6s
SIT Sitka 42.15 50 *eP* **P 21 11 41.1 +0.3**
ZALV Zalesovo Beam 42.47 305 P **P 21 11 41.9 -1.5**
comp=Z,0.8nm,0.4s,mb3.7,baz=47,slow=6.5,SNR=4.1
ZALV PcP PcP 21 13 35.4 0.0
comp=Z,3.5nm,0.8s,baz=90,slow=3.0,SNR=14
ZALV LR LR 21 30 35.8
comp=Z,106nm,19.1s,MS3.8,baz=246,slow=38
ZALV Zalesovo Beam 42.47 305 P **P 21 11 41.9 -1.5**
ZALV 21 13 35.4
DLBC Dease Lake 44.35 47 P **P 21 11 59.7 +1.1**
comp=Z,2.3nm,0.8s,mb4.0,baz=256,slow=12,SNR=6.2
WMQ Urumqi 45.12 291 *eP* **P 21 12 06.0 +1.2**
KMI Kunming 46.08 259 P **P 21 12 11.8 -0.8**
KMI pP pP 21 12 20.6 -6.3
KMI pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
KMI LR LR
comp=Z,55nm,19.7s,MS3.5
MK31 Makanchi Array 46.99 297 *eP* **P 21 12 18.5 -1.0**
MKAR Makanchi Array 46.99 297 P **P 21 12 19.0 -0.5**
comp=Z,2.9nm,0.8s,mb4.2,baz=58,slow=12,SNR=20
MKAR PcP PcP 21 13 50.9 -0.1
comp=Z,0.3nm,0.3s,baz=67,slow=4.1,SNR=2.3
MKAR LR LR 21 33 48.1
comp=Z,120nm,19.1s,MS3.9,baz=78,slow=38
MKAR Makanchi Array 46.99 297 P **P 21 12 19.0 -0.5**
MKAR 21 13 50.9
MKAR Makanchi Array 46.99 297 P **P 21 12 19.0 -0.5**
MKAR PcP PcP 21 13 50.9 -0.1
MKAR LR LR 21 33 48.1
KURK Kurchatov 47.27 303 LR LR 21 33 43.0
comp=Z,150nm,20.2s,MS4.0,baz=70,slow=38
KURK Kurchatov 47.27 303 *eP* **P 21 12 21.1 -0.5**
KURK *e* 21 13 51.5
KURK pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
KURK Kurchatov 47.27 303 *eP* **P 21 12 21.1 -0.6**
comp=Z,2.4nm,0.6s,mb4.3
KURK *e*PcP PcP 21 13 51.5 -0.5
RES Resolute Bay 49.56 19 P **P 21 12 39.5 +0.6**
comp=Z,5.4nm,1.0s,mb4.5,baz=314,slow=7.6,SNR=14
RES Resolute Bay 49.56 19 *eP* **P 21 12 39.6 +0.6**
YKA Yellowknife Ar 49.64 38 P **P 21 12 39.7 0.0**
comp=Z,2.6nm,0.8s,mb4.3,baz=295,slow=7.4,SNR=5.1
YKA Yellowknife Ar 49.64 38 P **P 21 12 39.7 0.0**
BVAR Borovoye Array 50.63 309 P **P 21 12 46.4 -0.9**
comp=Z,1.9nm,0.6s,mb4.2,baz=62,slow=7.8,SNR=11
BVAR PcP PcP 21 14 04.0 -0.1
comp=Z,1.6nm,0.6s,baz=46,slow=4.3,SNR=5.6
BRVK Borovoye 50.67 309 *eP* **P 21 12 46.9 -0.7**
BRVK pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
BRVK Borovoye 50.67 309 *eP* **P 21 12 46.9 -0.7**
comp=Z,2.3nm,0.6s,mb4.3
LSA Lhasa 50.85 273 *eP* **P 21 12 49.8 +0.5**
LSA pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
LSA Lhasa 50.85 273 *eP* **P 21 12 49.8 +0.5**
comp=Z,4.6nm,0.8s,mb4.5
CHTO Chiang Mai 53.00 257 *eP* **P 21 13 06.0 +0.7**
CHTO pmax pmax
comp=Z,13nm,0.9s,mb4.9
CHTO Chiang Mai 53.00 257 *eP* **P 21 13 06.0 +0.7**
comp=Z,13nm,0.9s,mb4.9
SHL Shillong 53.04 268 *e*PKP **P 21 13 07.5 +1.9**
TKM2 Tokmak 2 53.07 296 P **P 21 13 04.8 -0.8**
CM31 Chiang Mai Arr 53.25 256 *eP* **P 21 13 06.4 -0.9**
comp=Z,7.1nm,0.9s,mb4.6
CMAR Chiang Mai Arr 53.25 256 P **P 21 13 08.1 +0.8**
comp=Z,7.1nm,1.0s,mb4.5,baz=33,slow=7.4,SNR=24
CMAR LR LR 21 36 37.3
comp=Z,53nm,18.6s,MS3.6,baz=179,slow=37
AAK Ala-Archa 53.91 296 LR LR 21 37 10.2
comp=Z,132nm,20.4s,MS4.0,baz=332,slow=37
AAK Ala-Archa 53.91 296 *eP* **P 21 13 10.9 -0.8**
AAK pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
AAK Ala-Archa 53.91 296 *eP* **P 21 13 10.8 -0.9**
comp=Z,2.4nm,0.6s,mb4.3
EKS2 Erkin-Say 54.32 296 *eP* **P 21 13 14.1 -0.6**
comp=Z,1.2nm,0.6s,mb4.0
ARU Arti 54.61 317 *eP* **P 21 13 15.9 -0.7**
ARU pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
ARU Arti 54.61 317 *eP* **P 21 13 15.9 -0.7**
comp=Z,1.6nm,0.4s,mb4.4
TAPN Taplejung 54.67 273 *eP* **P 21 13 17.3 -0.2**
comp=Z,22nm,1.0s,mb5.1
AML Almayashu 54.68 296 *eP* **P 21 13 18.7 +1.3**
EDM Edmonton 55.08 47 *eP* **P 21 13 20.0 0.0**
ODAN Odare 55.21 273 *eP* **P 21 13 21.0 -0.4**
comp=Z,14nm,0.7s,mb5.1
JIRN Jiri 55.49 274 *eP* **P 21 13 23.6 +0.2**
comp=Z,12nm,0.5s,mb5.2
RAMN Ramite 55.68 273 *eP* **P 21 13 24.9 +0.1**
comp=Z,45nm,0.9s,mb5.5
KKN Kakani 56.02 275 *eP* **P 21 13 27.5 +0.3**
comp=Z,15nm,0.8s,mb5.1
KKN Kakani 56.02 275 *eP* **P 21 13 27.5 +0.3**
KKN pmax pmax
comp=Z,15nm,0.8s,mb5.1
PKI Pulchoki 56.07 275 *eP* **P 21 13 27.8 +0.2**
comp=Z,4.2nm,0.4s,mb4.8
PKI Pulchoki 56.07 275 *eP* **P 21 13 27.8 +0.2**
PKI pmax pmax
comp=Z,4.0nm,0.4s,mb4.8
DMN Daman 56.25 275 *eP* **P 21 13 29.4 +0.6**
comp=Z,17nm,0.9s,mb5.1
ARCES ARCESS Array B 56.99 341 LR LR 21 43 11.7
comp=Z,74nm,18.2s,MS3.8,baz=358,slow=41
ABKAR Akbulak array 58.19 310 *eP* **P 21 13 40.3 -1.9**
comp=Z,1.0nm,0.5s,mb4.1
WVOR Wild Horse Val 58.64 60 *eP* **P 21 13 45.6 +0.2**
WVOR pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
WVOR Wild Horse Val 58.64 60 *eP* **P 21 13 45.6 +0.2**
comp=Z,2.9nm,0.8s,mb4.4
FFC Flin Flon 59.47 41 *i* P **P 21 13 51.5 +0.5**
FFC Flin Flon 59.47 41 *eP* **P 21 13 50.1 -0.8**
comp=Z,5.7nm,0.8s,mb4.7
SUMG Summit 59.53 4 *eP* **P 21 13 51.7 +0.6**
comp=Z,24nm,1.0s,mb5.2
SUMG Summit 59.53 4 *i* P **P 21 13 50.8 -0.3**
comp=Z,17nm,1.0s,mb5.0
LRM Limekiln Ridge 60.01 54 *eP* **P 21 13 55.5 +0.6**
BOZ Bozeman (W) 60.57 53 *eP* **P 21 13 58.9 +0.3**
BOZ *e* 21 14 42.1
BOZ pmax pmax
comp=Z,1.0nm,0.7s,mb4.0
BOZ Bozeman (W) 60.57 53 *eP* **P 21 13 58.9 +0.2**
comp=Z,0.9nm,0.7s,mb4.0
BOZ *e*PcP PcP 21 14 42.1 -0.6
JOF Joensuu 60.60 334 *eP* **P 21 13 57.2 -1.4**
JOF pmax pmax
comp=Z,1.0nm,0.5s,mb4.2
JOF Joensuu 60.60 334 *ep* **P 21 13 57.2 -1.4**
comp=Z,0.8nm,0.5s,mb4.1
JOF Joensuu 60.60 334 *ep* **P 21 13 57.2 -1.4**
comp=Z,0.8nm,0.5s,mb4.1
NVAR Mina Array Bea 61.35 63 P **P 21 14 04.2 +0.1**
comp=Z,1.4nm,0.6s,mb4.2,baz=281,slow=6.8,SNR=10
KBL Kabul 62.24 292 *eP* **P 21 14 08.4 -1.7**
KBL pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
KBL Kabul 62.24 292 *eP* **P 21 14 08.4 -1.7**
comp=Z,4.1nm,0.9s,mb4.6
HWUT Hardware Ranch 63.22 57 *eP* **P 21 14 16.8 +0.3**
FINES FINESS Array B 63.29 335 P **P 21 14 15.5 -1.2**
comp=Z,2.6nm,0.7s,mb4.5,baz=38,slow=7.3,SNR=18
FINES LR LR 21 45 52.3
comp=Z,77nm,19.6s,MS3.9,baz=319,slow=40
DUG Dugway 63.44 59 *eP* **P 21 14 18.1 +0.1**
DUG pmax pmax
comp=Z,2.0nm,0.6s,mb4.4
DUG Dugway 63.44 59 *eP* **P 21 14 18.1 +0.1**
comp=Z,1.6nm,0.6s,mb4.3
PDAR Pinedale Array 63.57 55 P **P 21 14 18.9 0.0**
comp=Z,1.2nm,0.8s,mb4.0,baz=328,slow=1.9,SNR=11
OBN Obninsk 64.73 326 P **P 21 14 25.0 -1.2**
OBN *e* pP 21 14 38.2 -3.0
OBN 21 14 58.0
OBN 21 16 59.0
OBN pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
CCUT Cedar City 64.88 61 *eP* **P 21 14 28.2 +0.7**
comp=Z,3.4nm,1.1s,mb4.3
RSSD Black Hills 65.61 51 *eP* **P 21 14 31.8 -0.3**
RSSD pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
RSSD Black Hills 65.61 51 *eP* **P 21 14 31.8 -0.3**
comp=Z,3.4nm,0.8s,mb4.4
NB2 NORSAR Subarra 67.36 341 P **P 21 14 43.1 +0.1**
comp=Z,0.7nm,0.6s,mb3.9,baz=25,slow=6.5
NOA NORSAR Array B 67.36 341 P **P 21 14 42.3 -0.7**
comp=Z,1.5nm,0.8s,mb4.0,baz=27,slow=6.2,SNR=4.6
NOA LR LR 21 49 01.5
comp=Z,53nm,18.1s,MS3.8,baz=15,slow=40
HFS Hagfors 67.62 340 P **P 21 14 44.5 -0.1**
comp=Z,1.4nm,0.4s,mb4.4,baz=52,slow=5.8,SNR=18
ISCO Idaho Springs 67.77 55 *eP* **P 21 14 46.2 +0.3**
ISCO pmax pmax
comp=Z,1.0nm,0.7s,mb4.0
ISCO Idaho Springs 67.77 55 *eP* **P 21 14 46.2 +0.3**
comp=Z,1.2nm,0.7s,mb4.0
CTAO Charters Tower 68.01 188 P **P 21 14 48.5 +1.0**
WRA Warramunga Arr 69.79 200 P **P 21 14 57.0 -1.5**
comp=Z,2.1nm,1.1s,mb4.0,baz=18,slow=6.6,SNR=5.0
ANMO Albuquerque 70.70 59 *eP* **P 21 15 04.2 +0.1**
AKASG Malin Array Be 70.96 326 P **P 21 15 04.3 -1.1**
comp=Z,1.3nm,0.5s,mb4.2,baz=33,slow=6.2,SNR=7.0
SCHQ Schefferville 72.02 23 LR LR 21 50 44.6
comp=Z,47nm,18.9s,MS3.8,baz=304,slow=39
GNI Garni 72.28 311 LR LR 21 50 45.9
comp=Z,99nm,20.1s,MS4.1,baz=124,slow=39
ASAR Alice Springs 73.48 199 P **P 21 15 20.2 -0.5**
comp=Z,1.0nm,0.7s,mb3.8,baz=12,slow=5.1,SNR=8.3
STHS Stebnicka Huta 74.85 330 *eP* **P 21 15 29.3 +0.8**
STHS pmax pmax
comp=Z,1.0nm,0.8s,mb3.8
STHS Stebnicka Huta 74.85 330 *eP* **P 21 15 29.3 +0.8**
comp=Z,1.4nm,0.8s,mb3.9
STHS Stebnicka Huta 74.85 330 *eP* **P 21 15 29.2 +0.7**
KOLS Kolonicke sedl 74.92 329 *eP* **P 21 15 29.8 +0.9**
KOLS pmax pmax
comp=Z,5.0nm,1.7s,mb4.2
KOLS Kolonicke sedl 74.92 329 *eP* **P 21 15 29.8 +0.9**
comp=Z,4.8nm,1.7s,mb4.2
KOLS Kolonicke sedl 74.92 329 *eP* **P 21 15 29.8 +0.9**
BUR08 Bucovina Ar. S 74.97 327 *eP* **P 21 15 29.2 0.0**
BURAR Bucovina Array 74.99 327⇑ *iP* **P 21 15 28.8 -0.5**
EKA Eskdalemuir Ar 75.39 347 P **P 21 15 31.4 -0.1**
comp=Z,1.2nm,0.8s,mb3.9,baz=17,slow=4.6,SNR=5.5
OKC Ostrava-Krasne 75.49 332 AMS AMS 21 53 30.0
DPC Dobruska-Polom 75.60 334 *eP* **P 21 15 33.3 +0.6**
DPC MLR MLR
comp=Z,100nm,19.0s,MS4.1
DPC Dobruska-Polom 75.60 334 *eP* **P 21 15 33.3 +0.6**
DPC AMS AMS 21 53 40.0
comp=Z,100nm,19.0s
CLL Collm 75.69 336⇓ *iP* **P 21 15 33.2 -0.1**
CLL pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
CLL MLR MLR
comp=Z,100nm,20.6s,MS4.1
CLL Collm 75.69 336⇓ *iP* **P 21 15 33.2 -0.1**
comp=Z,7.0nm,0.9s,mb4.6
CLL *e* 21 15 39.0
CLL LR LR
comp=Z,100nm,20.6s,MS4.1
CLL Collm 75.69 336⇓ *iP* **P 21 15 33.2 -0.1**
comp=Z,7.0nm,0.9s,mb4.6
CLL *e*pP pP 21 15 45.0 -3.6
CLL Lm 21 50 00.0
comp=Z,100nm,20.6s
MORC Moravsky Berou 75.73 333 *eP* **P 21 15 33.4 -0.1**
MORC pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
MORC Moravsky Berou 75.73 333 *eP* **P 21 15 33.4 -0.1**
comp=Z,0.8nm,0.6s,mb3.8
PVCC Panska Ves 75.95 335 AMS AMS 21 52 20.0
TXAR Lajitas Array 76.39 61 P **P 21 15 37.1 -0.5**
comp=Z,2.3nm,0.8s,mb4.2,baz=297,slow=4.4,SNR=35
PRU Pruhonice 76.44 334 *eP* **P 21 15 38.1 +0.5**
PRU MLR MLR
comp=Z,100nm,14.9s,MS4.2
PRU Pruhonice 76.44 334 *eP* **P 21 15 38.1 +0.5**
PRU AMS AMS 21 52 50.0
comp=Z,100nm,14.9s
VYHS Vyhne 76.45 331 *eP* **P 21 15 37.9 +0.3**
VYHS pmax pmax
comp=Z,1.0nm,1.1s,mb3.7
VYHS Vyhne 76.45 331 *eP* **P 21 15 37.9 +0.3**
comp=Z,1.4nm,1.1s,mb3.8
VYHS Vyhne 76.45 331 *eP* **P 21 15 37.9 +0.3**
MLR Muntele Rosu 76.50 325 P **P 21 15 38.4 +0.4**
comp=Z,3.5nm,0.5s,mb4.5,baz=331,slow=4.3,SNR=16
MLR Muntele Rosu 76.50 325⇑ *iP* **P 21 15 38.5 +0.5**
PSZ Piszkesteto 76.60 330 *eP* **P 21 15 38.7 +0.2**
TREC Trest 76.78 334 AMS AMS 21 53 20.0
comp=Z,100nm,19.8s
NKC Novy Kostel 76.82 336 AMS AMS 21 51 50.0
KHC Kasperske Hory 77.49 335 *eP* **P 21 15 44.0 +0.5**
KHC MLR MLR
comp=Z,100nm,12.8s,MS4.3
KHC Kasperske Hory 77.49 335 *eP* **P 21 15 42.8 -0.7**
comp=Z,4.6nm,0.9s,mb4.4
KHC Kasperske Hory 77.49 335 *eP* **P 21 15 44.0 +0.5**
KHC AMS AMS 21 53 30.0
comp=Z,100nm,12.8s
GRA1 Grafenberg Arr 77.64 336 *eP* **P 21 15 44.2 -0.1**
comp=Z,5.0nm,0.8s,mb4.5
GRF Grafenberg Arr 77.64 336 *eP* **P 21 15 44.2 -0.1**
comp=Z,5.0nm,0.8s,mb4.5
GRF Grafenberg Arr 77.64 336 *eP* **P 21 15 44.2 -0.1**
GRF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
GRF Grafenberg Arr 77.64 336 *eP* **P 21 15 44.2 -0.1**
GRF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
GERES GERESS Array B 77.71 334 P **P 21 15 44.9 +0.2**
comp=Z,1.3nm,0.6s,mb4.0,baz=28,slow=6.0,SNR=18
GERES LR LR 21 54 09.3
comp=Z,98nm,18.7s,MS4.2,baz=200,slow=39
BZS Buzias 78.00 328 *i* P **P 21 15 45.9 -0.4**
BR131 Keskin Array S 78.00 317 *eP* **P 21 15 46.4 -0.1**
comp=Z,2.1nm,0.9s,mb4.1
BRTR Keskin Array B 78.00 317 P **P 21 15 47.0 +0.5**
comp=Z,1.6nm,0.9s,mb4.0,baz=83,slow=3.9,SNR=10
WCI Wyandotte Cave 78.85 44 *eP* **P 21 15 50.6 -0.6**
WCI pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
WCI Wyandotte Cave 78.85 44 *eP* **P 21 15 50.6 -0.6**
comp=Z,7.7nm,0.8s,mb4.7
GIVF Givet 78.85 340 *eP* **P 21 15 50.6 -0.4**
BAIF Baives 79.03 341 *eP* **P 21 15 51.5 -0.5**
SOKA Soboth 79.26 333⇑ *iP* **P 21 15 53.6 +0.3**
comp=Z,3.7nm,0.8s,mb4.4
KBA Koelnbreinsper 79.41 334⇑ *iP* **P 21 15 55.1 +1.0**
comp=Z,7.8nm,0.6s,mb4.8
BFO Black Forest 79.66 338 *i* P **P 21 15 56.6 +1.2**
WTTA Wattenberg 79.74 335⇑ *iP* **P 21 15 56.8 +0.9**
comp=Z,9.4nm,0.6s,mb4.9
CDF Champ du Feu 79.85 338 *eP* **P 21 15 56.3 -0.1**
comp=Z,7.5nm,1.0s,mb4.3
CDF Champ du Feu 79.85 338 *eP* **P 21 15 56.3 -0.1**
CDF pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
CDF Champ du Feu 79.85 338 *eP* **P 21 15 56.3 -0.1**
comp=Z,3.8nm,1.0s,mb4.3
MEZF Maizieres J'vi 80.30 340 *eP* **P 21 15 59.0 +0.1**
HAU Haudompre 80.45 339 *eP* **P 21 15 59.4 -0.3**
comp=Z,10nm,1.0s,mb4.4
HAU *e*MLR MLR
comp=Z,63nm,18.2s,MS3.7
HAU Haudompre 80.45 339 *eP* **P 21 15 59.4 -0.3**
HAU pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
HAU MLR MLR
comp=Z,60nm,18.3s,MS4.0
HAU Haudompre 80.45 339 *eP* **P 21 15 59.4 -0.3**
comp=Z,5.2nm,1.0s,mb4.4
HAU LR LR
comp=Z,60nm,18.3s,MS4.0
HINF Hinteralfeld 80.50 338 *eP* **P 21 15 59.7 -0.3**
comp=Z,2.9nm,0.8s,mb4.0
HINF Hinteralfeld 80.50 338 *eP* **P 21 15 59.7 -0.3**
HINF pmax pmax
comp=Z,1.0nm,0.8s,mb3.8
HINF Hinteralfeld 80.50 338 *eP* **P 21 15 59.7 -0.3**
comp=Z,1.5nm,0.8s,mb4.0
PMOR Pomariorio Ree 81.15 124 *e*T 22 45 06.0
comp=Z,5.2nm,0.2s
FLN La Foliniere 81.24 343 *eP* **P 21 16 04.5 +0.6**
comp=Z,5.1nm,0.7s,mb4.3
FLN *e*MLR MLR
comp=Z,61nm,21.5s,MS3.6
FLN La Foliniere 81.24 343 *eP* **P 21 16 04.5 +0.6**
FLN pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
FLN MLR MLR
comp=Z,60nm,21.5s,MS3.9
FLN La Foliniere 81.24 343 *eP* **P 21 16 04.5 +0.6**
comp=Z,2.5nm,0.7s,mb4.2
FLN LR LR
comp=Z,60nm,21.5s,MS3.9
GRR Gorron 81.67 343 *eP* **P 21 16 06.2 0.0**
comp=Z,20nm,1.1s,mb4.7
GRR Gorron 81.67 343 *eP* **P 21 16 06.2 0.0**
GRR pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
GRR Gorron 81.67 343 *eP* **P 21 16 06.2 0.0**
comp=Z,9.9nm,1.1s,mb4.7
LOR Lormes 81.74 340 *eP* **P 21 16 06.2 -0.3**
comp=Z,14nm,1.1s,mb4.5
LOR *e*MLR MLR
comp=Z,74nm,19.0s,MS3.8
LOR Lormes 81.74 340 *eP* **P 21 16 06.2 -0.3**
LOR pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
LOR MLR MLR
comp=Z,70nm,19.0s,MS4.0
LOR Lormes 81.74 340 *eP* **P 21 16 06.2 -0.3**
comp=Z,6.9nm,1.1s,mb4.5
LOR LR LR
comp=Z,70nm,19.0s,MS4.0
CABF La Chapelle 81.82 338 *eP* **P 21 16 06.3 -0.7**
SSF Saint Saulge 82.01 340 *eP* **P 21 16 07.9 -0.1**
SGMF Saint Gilles 82.11 344 *eP* **P 21 16 08.6 +0.1**
ROSF Rostrenen 82.16 345 *eP* **P 21 16 08.9 +0.2**
comp=Z,30nm,1.1s,mb4.8
ROSF Rostrenen 82.16 345 *eP* **P 21 16 08.9 +0.2**
ROSF pmax pmax
comp=Z,15nm,1.1s,mb4.8
ROSF Rostrenen 82.16 345 *eP* **P 21 16 08.9 +0.2**
comp=Z,15nm,1.1s,mb4.8
AVF Avril sur Loir 82.30 340 *eP* **P 21 16 09.4 -0.1**
comp=Z,24nm,1.3s,mb4.7
AVF Avril sur Loir 82.30 340 *eP* **P 21 16 09.4 -0.1**
AVF pmax pmax
comp=Z,12nm,1.3s,mb4.7
AVF Avril sur Loir 82.30 340 *eP* **P 21 16 09.4 -0.1**
comp=Z,12nm,1.3s,mb4.7
PPT Papeete 82.31 127 *e*LR LR 21 42 00.0
comp=Z,80nm,23.0s
SMF Signal de Mont 82.33 340 *eP* **P 21 16 10.9 +1.3**
comp=Z,29nm,1.1s,mb4.8
SMF Signal de Mont 82.33 340 *eP* **P 21 16 10.9 +1.3**
SMF pmax pmax
comp=Z,14nm,1.1s,mb4.8
SMF Signal de Mont 82.33 340 *eP* **P 21 16 10.9 +1.3**
comp=Z,14nm,1.1s,mb4.8
MMAI Mount Meron Ar 82.54 312 P **P 21 16 12.0 +1.0**
comp=Z,8.1nm,0.7s,mb4.9,baz=43,slow=7.4,SNR=17
MMAI LR LR 21 58 21.4
comp=Z,91nm,18.1s,MS4.2,baz=35,slow=40
QUIF Quistinic 82.55 345 *eP* **P 21 16 11.3 +0.5**
BGF Bois d'Agland 82.64 340 *eP* **P 21 16 11.5 +0.2**
comp=Z,5.6nm,0.8s,mb4.4
BGF Bois d'Agland 82.64 340 *eP* **P 21 16 11.5 +0.2**
BGF pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
BGF Bois d'Agland 82.64 340 *eP* **P 21 16 11.5 +0.2**
comp=Z,2.8nm,0.8s,mb4.3
LPL La Plagne 82.67 337 *eP* **P 21 16 12.3 +0.8**
comp=Z,8.8nm,0.9s,mb4.5
LPL La Plagne 82.67 337 *eP* **P 21 16 12.3 +0.8**
LPL pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
LPL La Plagne 82.67 337 *eP* **P 21 16 12.3 +0.8**
comp=Z,4.4nm,0.9s,mb4.5
LPG La Plagne 82.69 337 *eP* **P 21 16 12.5 +1.0**
comp=Z,6.4nm,0.7s,mb4.4
LPG La Plagne 82.69 337 *eP* **P 21 16 12.5 +1.0**
LPG pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
LPG La Plagne 82.69 337 *eP* **P 21 16 12.5 +1.0**
comp=Z,3.2nm,0.7s,mb4.5
TCF Toulx Ste Croi 83.04 341 *eP* **P 21 16 13.5 +0.2**
comp=Z,11nm,1.0s,mb4.6
TCF Toulx Ste Croi 83.04 341 *eP* **P 21 16 13.5 +0.2**
TCF pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
TCF Toulx Ste Croi 83.04 341 *eP* **P 21 16 13.5 +0.2**
comp=Z,5.6nm,1.0s,mb4.5
MFF Saint Martin d 83.24 342 *eP* **P 21 16 14.4 0.0**
comp=Z,23nm,1.3s,mb4.8
MFF Saint Martin d 83.24 342 *eP* **P 21 16 14.4 0.0**
MFF pmax pmax
comp=Z,12nm,1.3s,mb4.8
MFF Saint Martin d 83.24 342 *eP* **P 21 16 14.4 0.0**
comp=Z,12nm,1.3s,mb4.8
ORIF Oris-en-Rattie 83.45 338 *eP* **P 21 16 16.2 +0.7**
comp=Z,15nm,0.9s,mb4.7
ORIF *e*MLR MLR
comp=Z,58nm,19.5s,MS3.7
ORIF Oris-en-Rattie 83.45 338 *eP* **P 21 16 16.2 +0.7**
ORIF pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
ORIF Oris-en-Rattie 83.45 338 *eP* **P 21 16 16.2 +0.7**
comp=Z,7.4nm,0.9s,mb4.7
VIVF Saint-Julien-l 83.81 339 *eP* **P 21 16 17.8 +0.5**
comp=Z,18nm,1.1s,mb4.8
VIVF Saint-Julien-l 83.81 339 *eP* **P 21 16 17.8 +0.5**
VIVF pmax pmax
comp=Z,9.0nm,1.1s,mb4.8
VIVF Saint-Julien-l 83.81 339 *eP* **P 21 16 17.8 +0.5**
comp=Z,8.9nm,1.1s,mb4.8
RJF Les Rejaudoux 84.12 341 *eP* **P 21 16 20.1 +1.2**
RJF *e*MLR MLR
comp=Z,87nm,22.2s,MS3.8
RJF Les Rejaudoux 84.12 341 *eP* **P 21 16 20.1 +1.2**
RJF LR LR

comp=Z,90nm,22.3s,MS4.1
CAF **Calviac** 84.36 340 *e*P P 21 16 20.7 +0.6
comp=Z,9.5nm,1.1s,mb4.5
CAF **Calviac** 84.36 340 *e*P P 21 16 20.7 +0.6
CAF pmax pmax
comp=Z,5.0nm,1.1s,mb4.6
CAF **Calviac** 84.36 340 *e*P P 21 16 20.7 +0.6
comp=Z,4.8nm,1.1s,mb4.5
LMR **La Mourre** 84.77 337 *e*P P 21 16 22.2 0.0
comp=Z,33nm,1.1s,mb5.1
LMR **La Mourre** 84.77 337 *e*P P 21 16 22.2 0.0
LMR pmax pmax
comp=Z,17nm,1.1s,mb5.1
LMR **La Mourre** 84.77 337 *e*P P 21 16 22.2 0.0
comp=Z,17nm,1.1s,mb5.1
ETSF **Etsaut** 86.87 342 *e*P P 21 16 32.9 +0.3
ESDC **Sonseca Array** 90.66 343 P P 21 16 48.9 -1.7
comp=Z,0.8nm,0.8s,mb4.1,baz=21,slow=3.6,SNR=5.6
KEST **Kesra** 90.98 332 LR LR 22 04 00.7
comp=Z,22nm,19.7s,MS3.6,baz=236,slow=40
CFAA **Coronel Fontan** 144.15 79 PKP PKPdf 21 23 20.4 -3.1
comp=Z,0.4nm,0.6s,baz=9.5,slow=6.1,SNR=5.0
CPUP **Villa Florida** 147.35 60 PKPbc PKPbc 21 23 30.7 -0.8
comp=Z,0.8nm,0.5s,baz=63,slow=4.5,SNR=3.4
CPUP **Villa Florida** 147.35 60 PKPbc PKPbc 21 23 30.7 -0.8
PLCA **Paso Flores** 147.66 94 PKPbc PKPbc 21 23 31.2 -0.8
comp=Z,2.0nm,0.8s,baz=89,slow=2.8,SNR=5.9
PLCA **Paso Flores** 147.66 94 PKPbc PKPbc 21 23 31.2 -0.8

IDC 15 21:03:58.0±4.6, 21°.13S×169°.46E, h0km, mb4.2/3, mb1 4.4/3, mb1mx3.8/15, mbtmp4.3/3, Error ellipse: s-maj=181.1km s-min=52.1km az=155.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	21.74	269	P	P	21 08 52.9	+1.8
	6.1nm,0.7s,baz=94,slow=7.7,SNR=6.1						
WRA	**Warramunga Arr**	32.87	266	P	P	21 10 32.2	-1.6
	1.1nm,0.6s,baz=96,slow=8.3,SNR=12						
ASAR	**Alice Springs**	32.92	259	P	P	21 10 34.6	+0.4
	5.7nm,0.6s,baz=86,slow=9.0,SNR=98						
GERES	**GERESS Array B**	146.24	331	PKPbc	PKPbc	21 23 40.1	-0.2
	0.2nm,0.5s,baz=29,slow=3.0,SNR=4.0						

*BJI **15** 21:19:09.4, 42°.99N×81°.73E, h16km, ML3.1/6*
*NNC **15** 21:19:18.5±10.0, 43°.63N×80°.85E, h0km, mb3.4, mpv3.1, Error ellipse: s-maj=152.3km s-min=36.4km az=137.0*
*IDC **15** 21:19:23.3±3.2, 44°.17N×81°.34E, h0km, mb1 3.4/5, mb1mx3.2/29, mbtmp3.4/5, ML3.2/5, Error ellipse: s-maj=43.6km s-min=11.9km az=135.0*
ISC 15 21:19:20.3±1.9, 43°.7N±0°.1×81°.2E±0°.2, h19km±13km, n13, σ0s98/18, 4C-4D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	3.16	14	⇑Pn	Pn	21 20 09.9	+1.0
	2.5nm,0.3s,baz=164,slow=9.1,SNR=91						
MK31				⇓Pg	Pg	21 20 20.3	-0.5
	7.8nm,0.5s,baz=174,slow=12,SNR=11						
MK31				⇑Lg		21 21 07.5	
	30nm,0.5s						
MK31	**Makanchi Array**	3.16	14	*e*Pn	Pn	21 20 09.2	+0.3
MK31				*e*Sn	Sn	21 20 44.8	-1.3
MKAR	**Makanchi Array**	3.16	14	Pn	Pn	21 20 09.8	+0.9
	5.9nm,0.3s,baz=197,slow=13,SNR=80						
MKAR				Sn	Sn	21 20 46.0	-0.1
	3.9nm,0.3s,baz=184,slow=19,SNR=7.8						
TKM2	**Tokmak 2**	4.14	260	⇑Pn	Pn	21 20 20.7	-1.7
	3.6nm,1.1s						
TKM2				⇓Lg		21 21 24.6	
	17nm,0.7s						
TKM2	**Tokmak 2**	4.14	260	*e*Pn	Pn	21 20 19.1	-3.3
AAK	**Ala-Archa**	5.00	259	Pn	Pb	21 20 46.7	-0.3
	0.0nm,0.3s,baz=108,slow=12,SNR=3.3						
AAK				Sn	Sb	21 21 46.7	0.0
	0.0nm,0.3s,baz=246,slow=20,SNR=2.3						
KURBB	**Kurchatov Arra**	7.11	346	⇓Pn	Pn	21 21 04.2	+0.9
	0.2nm,0.5s,baz=176,slow=14						
KURBB				⇓Lg		21 23 16.5	
	4.0nm,0.8s						
KURK	**Kurchatov**	7.19	347	⇑Pn	Pn	21 21 05.2	+0.9
	0.8nm,0.5s						
KURK	**Kurchatov**	7.19	347	Pn	Pn	21 21 03.9	-0.4
	0.2nm,0.3s,baz=152,slow=12,SNR=21						
KURK	**Kurchatov**	7.19	347	*e*Pn	Pn	21 21 05.1	+0.8
KURK				S	Sn	21 22 25.1	-0.2
ZALV	**Zalesovo Beam**	10.50	12	Pn	Pn	21 21 48.6	-1.0
	0.3nm,0.3s,baz=190,slow=14,SNR=5.0						
BVAR	**Borovoye Array**	11.71	326	Pn	Pn	21 22 06.2	0.0
	0.3nm,0.3s,baz=131,slow=14,SNR=7.2						
ARU	**Arti**	19.16	319	P	Pn	21 23 45.8	+2.6
	8.0nm,2.2s						

*NEIC **15** 21:19:28.1±0.9, 44°.17N×81°.34E, h35km, mb3.7/2, Error ellipse: s-maj=14.9km s-min=9.3km az=138.0*
*IDC **15** 21:19:29.5±3.1, 43°.85N×81°.58E, h0km, mb1 3.5/4, mb1mx3.2/28, mbtmp3.5/4, ML3.5/4, Error ellipse: s-maj=30.7km s-min=26.6km az=112.0*
ISC 15 21:19:28.2±4.0, 43°.5N±0°.1×81°.4E±0°.1, h17km±29km, n11, σ0s63/14, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	3.32	11	Pn	Pn	21 20 19.9	+0.6
	9.9nm,0.3s,baz=193,slow=18,SNR=37						
MKAR				Lg		21 21 07.2	
	16nm,0.3s,baz=186,slow=30,SNR=19						
MKAR	**Makanchi Array**	3.32	11	Pn	Pn	21 20 19.9	+0.6
MKAR				Lg		21 21 07.2	
AAK	**Ala-Archa**	5.12	262	Sn	Sb	21 21 53.6	-5.0
	0.0nm,0.3s,baz=287,slow=18,SNR=4.2						
AAK	**Ala-Archa**	5.12	262	Pn	Pn	21 20 45.2	+1.1
UCH	**Uchtor**	5.21	258	*e*Pn	Pn	21 20 45.0	-0.3
	2.8nm,0.5s						
EKS2	**Erkin-Say**	5.64	264	*e*Pn	Pn	21 20 50.5	-0.6
	1.8nm,0.5s						
EKS2				Sn	Sn	21 21 54.5	-0.9
AML	**Almayashu**	5.82	259	*e*Pn	Pn	21 20 53.5	-0.3
	2.9nm,0.5s						
AML				Sn	Sn	21 22 01.0	+0.9
KURK	**Kurchatov**	7.43	346	Pn	Pn	21 21 15.5	-0.2
	0.3nm,0.3s,baz=172,slow=15,SNR=19						
KURK				Sn	Sn	21 22 33.2	-6.3
	0.1nm,0.3s,baz=166,slow=22,SNR=3.5						
KURK				Lg		21 23 14.2	
	0.2nm,0.3s,baz=171,slow=31,SNR=7.1						
ZALV	**Zalesovo Beam**	10.67	11	Pn	Pn	21 21 59.4	-0.7
	0.6nm,0.3s,baz=194,slow=13,SNR=8.4						
ZALV				Lg		21 24 59.1	
	0.1nm,0.3s,baz=190,slow=24,SNR=3.3						
BVAR	**Borovoye Array**	11.98	326	Pn	Pn	21 22 18.4	+0.4
	0.2nm,0.3s,baz=165,slow=13,SNR=3.4						
ENH	**Enshi**	25.94	111	P	P	21 24 59.6	0.0
	1.8nm,0.5s						

CASC 15 21:30:27.1±1.8, 14°.34N×90°.72W, h6km±11km, MD3.5, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	0.12	65	*e*P	Pg	21 30 30.6	+0.9
FUG	**Fuego 3**	0.16	311	*e*P	Pg	21 30 30.6	+0.3
FG6		0.27	324	*e*P	Pg	21 30 32.7	+0.3
FG6				*e*S	Sg	21 30 36.3	+0.3
GCG	**Guatemala City**	0.30	37	*e*P	Pg	21 30 33.3	+0.3
GCG				*e*S	Sg	21 30 38.7	+1.7
IXG	**Ixpaco**	0.31	123	*e*P	Pg	21 30 33.2	+0.2
NBG	**Las Nubes**	0.43	56	*e*P	Pg	21 30 36.8	+1.3
TP2	**Tecpan 2**	0.53	326	*e*P	Pg	21 30 37.9	+0.7
JAT	**Jato**	0.89	269	*e*P	Pg	21 30 44.7	+0.5
RBDL	**Robledal**	1.03	103	*e*P	Pg	21 30 45.7	-1.2
RTR	**El Retiro**	1.13	113	*e*P	Pg	21 30 47.7	-1.1
SBLS	**San Blas**	1.18	115	*e*P	Pg	21 30 48.5	-1.2
SNJE	**San Jose**	1.18	113	*e*P	Pg	21 30 48.5	-1.2
MRL	**Marmol**	1.23	54	*e*P	Pg	21 30 51.0	+0.3
MRL				*e*S	Sg	21 31 10.0	+3.4
MTO2	**Montecristo 2**	1.32	87	*e*P	Pn	21 30 51.0	-1.0
MTO2				*e*S	Sb	21 31 08.2	-1.2
BOQS	**Boqueron**	1.52	113	*e*P	Pn	21 30 54.0	-0.8
LFRS	**El Faro**	1.76	114	*e*P	Pn	21 30 57.9	-0.2
CAHU	**Cacacuatique**	2.50	103	*e*P	Pn	21 31 07.4	-0.9

SKHL 15 21:31:28.0±0.5, 50°.39N×142°.16E, h10km, mb3.7/3, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TYV	**Tymovskoe**	0.57	34	*i*Pg	Pg	21 31 39.9	+0.9
TYV				*e*Sg	Sg	21 31 47.9	+1.4
UGL	**Uglegorsk**	1.31	183	*e*Pg	Pg	21 31 53.7	+0.5
UGL				AMB	AMB	21 31 55.0	
	55nm,0.7s						
UGL				*e*Sg	Sg	21 32 12.0	+1.7
UGL				A		21 32 14.0	
	154nm,0.5s						
UGL				A		21 32 14.0	
	231nm,0.5s						
NKL	**Nikolayevsk**	2.91	342	*e*P	Pn	21 32 09.6	-4.7
NKL				AMB	AMB	21 32 11.2	
	10.0nm,0.3s						
NKL				*e*Pg	Pg	21 32 25.0	+1.2
NKL				AMB	AMB	21 32 26.0	
	21nm,0.7s						
NKL				*e*Sb	Sb	21 32 51.0	-4.6
NKL				*e*Sg	Sg	21 32 57.0	-4.5
NKL				A		21 32 58.6	
	50nm,0.5s						
YSS	**Yuzh-Sakhalins**	3.46	173	*e*Pg	Pg	21 32 35.5	+1.2
YSS				AMB	AMB	21 32 36.5	
	25nm,0.8s						
YSS				*e*Sb	Sb	21 33 09.0	-2.4
YSS				*e*Sg	Sg	21 33 26.0	+6.9
YSS				A		21 33 27.0	
	30nm,0.3s						
GRNR	**Gornyy**	3.68	278	*e*P	Pn	21 32 26.0	+1.2
GRNR				*e*Sg	Sg	21 33 34.0	+8.0

*IDC **15** 21:40:32.3±1.2, 3°.61S×141°.12E, h0km, mb4.2/11, mb1 4.4/12, mb1mx4.2/18, mbtmp4.3/12, ML4.6/1, MS4.1/4, Ms1 4.0/4, ms1mx3.2/26, Error ellipse: s-maj=39.3km s-min=16.6km az=92.0*
*ISCJB **15** 21:40:36.4±3.3, 3°.62S±0°.07×141°.2E±0°.1, h41km±29km, mb4.3/22, MS3.9/3, Error ellipse: s-maj=17.1km s-min=11.8km az=170.5*
*NEIC **15** 21:40:39.1±1.7, 3°.64S×141°.18E, h50km±15km, mb4.5/13, Error ellipse: s-maj=12.1km s-min=6.3km az=71.0*
*DJA **15** 21:40:39, 3°.54S×141°.22E, h30km, mb4.8/5*
ISC 15 21:40:40.1±2.7, 3°.66S±0°.08×141°.2E±0°.1, h60km±25km, n56, σ0s83/45, mb4.3/22, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	12.51	224	*e*P	Pn	21 43 34.7	-0.7
	59nm,0.4s						
KAKA				*e*S	Sn	21 45 55.4	+2.2
KAKA	**Kakadu**	12.51	224	*e*Pn	Pn	21 43 34.9	-0.4
	154nm,0.5s						
WRAB	**Tennant Creek**	17.52	202	*e*Pn	Pn	21 44 39.7	-0.5
	35nm,0.8s						
WRA	**Warramunga Arr**	17.53	202	P	Pn	21 44 38.5	-1.9
	2.3nm,0.3s,baz=24,slow=12,SNR=57						
WRA				LR	LR	21 51 53.1	
	comp=Z,1μm,18.4s,baz=25,slow=39						
WRA	**Warramunga Arr**	17.53	202	P	Pn	21 44 38.5	-1.9
WRA				LR	LR	21 51 53.1	
FITZ	**Fitzroy Crossi**	20.96	226	*e*P	P	21 45 18.0	-0.2
	26nm,0.9s						
FITZ	**Fitzroy Crossi**	20.96	226	P	P	21 45 17.4	-0.8
	11nm,0.8s,baz=62,slow=18,SNR=13						
FITZ				LR	LR	21 54 25.3	
	comp=Z,987nm,19.4s,baz=28,slow=40						
FITZ	**Fitzroy Crossi**	20.96	226	*e*P	P	21 45 17.8	-0.5
	6.8nm,0.5s						
FITZ				LR	LR	21 54 25.3	
ASAR	**Alice Springs**	21.11	199	P	P	21 45 20.4	+0.5
	8.4nm,0.8s,mb4.1,baz=31,slow=10,SNR=46						
KAPI	**Kappang**	21.46	266	P	P	21 45 24.9	+1.2
	12nm,0.9s,mb4.2,baz=104,slow=7.9,SNR=7.3						
EIDS	**Eidsvold**	23.58	157	*e*P	P	21 45 46.9	+1.5
EIDS	**Eidsvold**	23.58	157	*e*P	P	21 45 45.6	+0.2
	41nm,1.2s,mb4.7						
MBWA	**Marble Bar**	27.20	228	*e*P	P	21 46 18.6	+0.3
STKA	**Stephens Creek**	28.07	179	P	P	21 46 25.7	-0.3
	2.5nm,0.8s,mb3.9,baz=11,slow=10,SNR=5.5						
STKA				LR	LR	21 58 05.5	
	comp=Z,126nm,21.6s,baz=186,slow=38						
STKA	**Stephens Creek**	28.07	179	*e*P	P	21 46 26.2	+0.2
STKA				LR	LR	21 58 05.5	
NACB	**Ninganchiao**	33.62	326	P	P	21 47 14.8	-0.2
NWAO	**Narrogin (SRO)**	36.77	215	P	P	21 47 40.4	-1.5
	21nm,1.1s,mb4.9,baz=22,slow=5.4,SNR=3.9						
NWAO	**Narrogin (SRO)**	36.77	215	*e*P	P	21 47 42.4	+0.4
TAU	**Tasmania Unive**	39.46	173	*e*P	P	21 48 04.8	+0.3
MJAR	**Matsushiro Arr**	40.09	356	P	P	21 48 10.0	+0.2
	0.5nm,0.3s,mb3.7,baz=170,slow=7.4,SNR=5.0						
PSI	**Prapat**	42.77	278	P	P	21 48 30.3	-1.8
	3.2nm,0.4s,mb4.4,baz=113,slow=5.7,SNR=5.4						
CMAR	**Chiang Mai Arr**	47.09	299	P	P	21 49 05.6	-0.7
	2.7nm,0.9s,mb4.2,baz=117,slow=6.1,SNR=11						
CHTO	**Chiang Mai**	47.23	300	P	P	21 49 07.1	-0.4
MDJ	**Mudanjiang**	49.17	349	*e*P	P	21 49 22.4	+0.4
GTA	**Gaotai**	57.33	322	*e*P	P	21 50 25.3	+3.3
GTA				pP	pP	21 50 30.4	-7.6
GTA				sP	sP	21 50 34.1	-11
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.2						
LSA	**Lhasa**	58.26	308	*e*P	P	21 50 29.0	+0.3
	comp=Z,23nm,1.6s,mb5.0						
ULN	**Ulaanbaatar**	59.39	334	P	P	21 50 36.3	+0.1
SONM	**Songino Array**	59.66	334	LR	LR	22 14 39.3	
	comp=Z,120nm,20.1s,baz=153,slow=34						
TLY	**Talaya**	63.72	335	*e*P	P	21 51 06.1	+0.8
	comp=Z,3.6nm,1.0s,mb4.4						
PPT	**Papeete**	69.08	107	*e*LR	LR	22 13 00.8	
	comp=Z,94nm,22.2s						
MK31	**Makanchi Array**	72.08	322	*e*P	P	21 51 58.2	+0.3
MKAR	**Makanchi Array**	72.08	322	P	P	21 51 57.3	-0.6
	comp=Z,1.8nm,0.7s,mb4.1,baz=84,slow=11,SNR=13						
ZALV	**Zalesovo Beam**	74.02	329	P	P	21 52 09.6	+0.3
	comp=Z,0.7nm,0.6s,mb3.8,baz=124,slow=0.5,SNR=4.4						
TKM2	**Tokmak 2**	74.96	316	*e*P	P	21 52 13.6	-1.3
	comp=Z,4.6nm,1.1s,mb4.3						
UCH	**Uchtor**	75.49	315	*e*P	P	21 52 18.3	+0.3
	comp=Z,2.1nm,0.9s,mb4.1						
KURK	**Kurchatov**	75.94	324	P	P	21 52 21.0	+0.7
	comp=Z,3.1nm,1.1s,mb4.2,baz=112,slow=5.9,SNR=9.8						
KURK	**Kurchatov**	75.94	324	*e*P	P	21 52 19.7	-0.7
	comp=Z,3.5nm,1.0s,mb4.2						
EKS2	**Erkin-Say**	76.14	315	*e*P	P	21 52 22.1	+0.4
	comp=Z,3.9nm,1.2s,mb4.2						
KBL	**Kabul**	77.51	306	*e*P	P	21 52 29.6	0.0
BVAR	**Borovoye Array**	81.53	325	P	P	21 52 50.4	-0.6
	comp=Z,4.3nm,0.8s,mb4.4,baz=107,slow=5.0,SNR=28						
BRVK	**Borovoye**	81.60	325	*e*P	P	21 52 51.9	+0.6
	comp=Z,8.3nm,1.2s,mb4.5						
MCK	**McKinley**	84.47	25	P	P	21 53 06.1	+0.1
QSPA	**South Pole Qui**	86.30	180	*e*P	P	21 53 14.7	-0.2
	comp=Z,8.3nm,1.2s,mb4.8						
ABKAR	**Akbulak array**	87.06	320	*e*P	P	21 53 18.3	-0.8
	comp=Z,3.9nm,1.0s,mb4.6						
EGAK	**Eagle**	88.02	25	*e*P	P	21 53 24.0	+0.6
ARU	**Arti**	88.96	327	P	P	21 53 28.2	+0.2
	comp=Z,4.3nm,1.0s,mb4.7						
RGN	**Rugen**	114.12	330	*e*PKiKP	PKiKP	21 59 13.2	+0.7
LPAZ	**La Paz**	144.85	125	PKP	PKPdf	22 00 11.9	+0.6
	comp=Z,2.2nm,0.9s,baz=230,slow=1.2,SNR=7.9						
KIC	**Kosan Boka**	146.00	276	*e*PKP1	PKPbc	22 00 14.3	+0.1
	comp=Z,56nm,1.5s						
KIC	**Kosan Boka**	146.00	276	*e*P	PKPdf	22 00 14.3	+0.9
DBIC	**Dimbokro**	146.10	276	PKPbc	PKPbc	22 00 14.7	+0.2
	comp=Z,2.9nm,0.7s,baz=76,slow=3.4,SNR=4.4						
TIC	**Toumodi**	146.26	276	*e*PKP1	PKPbc	22 00 15.1	+0.1
	comp=Z,38nm,1.3s						
TIC	**Toumodi**	146.26	276	*e*P	PKPdf	22 00 15.1	+1.3
LIC	**Lamto**	146.29	276	*e*PKP1	PKPbc	22 00 15.1	0.0
	comp=Z,40nm,1.3s						
LIC	**Lamto**	146.29	276	*e*P	PKPdf	22 00 15.1	+1.2
SDV	**Santo Domingo**	147.92	79	*e*PKPdf	PKPdf	22 00 17.2	+0.6

*IDC **15** 21:42:40.8±1.7, 31°.46N×103°.24E, h0km, mb3.7/6, mb1 3.8/8, mb1mx3.6/26, mbtmp3.8/8, ML3.6/2, Error ellipse: s-maj=35.9km s-min=29.4km az=29.0*
*NEIC **15** 21:42:42.5±0.5, 31°.50N×103°.34E, h10km, mb4.0/11, Error ellipse: s-maj=9.3km s-min=7.8km az=128.0*
*BJI **15** 21:42:42.3, 31°.29N×103°.38E, h15km, mb3.9/1, ML3.8/20, Ms3.9/6, Ms7 3.6/5*
ISC 15 21:42:42.1±0.9, 31°.42N±0°.03×103°.35E±0°.05, h8km±7km, n30, σ1s12/37, mb3.7/10, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	0.62	145	⇑*i*Pg	Pg	21 42 52.8	-1.2
CD2				Sg	Sg	21 43 02.1	+0.1
CD2				smax			
	comp=N,14μm,0.7s						
CD2				smax			
	comp=E,8μm,0.7s						
LZH	**Lanzhou**	4.67	5	Pn	Pn	21 43 55.1	+2.1
LZH				Pg	Pg	21 44 11.0	-0.7
LZH				Sn	Sn	21 44 52.6	+5.2
LZH				Sg	Sg	21 45 14.0	+1.8
LZH				smax			
	comp=N,120nm,1.1s						
LZH				smax			
	comp=E,230nm,1.0s						
LZH				LR	LR		
	comp=E,1μm,8.2s						
LZH				LR	LR		
	comp=Z,1μm,9.3s						
XAN	**Xi'an**	5.37	59	Pn	Pn	21 44 02.3	-0.3
XAN				Sn	Sn	21 45 12.6	+7.9
XAN				Sg	Sg	21 45 33.0	-1.7
XAN				smax			
	comp=N,120nm,1.0s						
XAN				smax			
	comp=E,60nm,0.7s						
ENH	**Enshi**	5.40	101	*e*Pn	Pn	21 44 03.3	+0.3
	comp=E,54nm,0.7s						
ENH				*e*S	Sb	21 45 23.3	+1.5
KMI	**Kunming**	6.29	185	Pn	Pn	21 44 14.8	-0.5
KMI				Sn	Sn	21 45 23.4	-4.0
KMI				smax			
	comp=N,43nm,1.4s						
KMI				smax			
	comp=E,39nm,1.3s						
KMI				LR	LR		
	comp=N,240nm,9.6s						
KMI				LR	LR		
	comp=E,1μm,9.6s						
KMI				LR	LR		
	comp=Z,320nm,14.6s						
CMAR	**Chiang Mai Arr**	13.51	198	Pn	Pn	21 45 55.9	+1.8
	comp=Z,0.2nm,0.3s,baz=356,slow=13,SNR=3.5						
ODAN	**Odare**	14.66	256	*e*P	Pn	21 46 14.6	+4.7
	comp=Z,14nm,0.8s						
RAMN	**Ramite**	15.29	257	*e*P	Pn	21 46 20.2	+1.9
	comp=Z,15nm,1.0s						
GUN	**Gumba**	15.58	261	*e*P	Pn	21 46 24.5	+2.4
	comp=Z,15nm,0.6s						
PKI	**Pulchoki**	16.08	261	*e*P	Pn	21 46 28.5	-0.1
	comp=Z,14nm,0.6s						
KKN	**Kakani**	16.12	262	*e*P	Pn	21 46 29.1	-0.1
	comp=Z,30nm,0.9s						
DMN	**Daman**	16.33	261	*e*P	Pn	21 46 30.3	-1.5
	comp=Z,23nm,1.0s						
SONM	**Songino Array**	16.56	7	Pn	Pn	21 46 35.7	+1.1
	comp=Z,0.1nm,0.3s,baz=186,slow=12,SNR=12						
ULN	**Ulaanbaatar**	16.67	9	*e*Pn	Pn	21 46 36.2	+0.3
	comp=Z,3.9nm,1.3s						
KSRS	**Korea Array**	21.12	67	P	P	21 47 27.9	+0.7
	comp=Z,1.9nm,0.6s,mb3.6,baz=258,slow=10,SNR=10						
MK31	**Makanchi Array**	22.32	319	*e*P	P	21 47 39.2	-0.9
MKAR	**Makanchi Array**	22.32	319	P	P	21 47 39.5	-0.5
	comp=Z,0.8nm,0.6s,mb3.3,baz=108,slow=14,SNR=9.7						
UCH	**Uchtor**	25.36	303	*e*P	P	21 48 09.9	+0.3
	comp=Z,1.2nm,0.8s,mb3.5						
AML	**Almayashu**	25.93	303	*e*P	P	21 48 15.2	+0.4
	comp=Z,1.5nm,0.7s,mb3.6						
EKS2	**Erkin-Say**	26.01	304	*e*P	P	21 48 15.8	+0.3
	comp=Z,1.4nm,0.7s,mb3.6						
KULM	**Kulim**	26.11	186	*e*P	P	21 48 17.8	+1.1
ZALV	**Zalesovo Beam**	26.16	335	P	P	21 48 15.8	-0.9
	comp=Z,2.8nm,0.8s,mb3.9,baz=140,slow=9.0,SNR=12						
KURK	**Kurchatov**	26.61	324	P	P	21 48 20.1	-0.7
	comp=Z,1.5nm,0.8s,mb3.6,baz=129,slow=9.3,SNR=13						
KURK	**Kurchatov**	26.61	324	*e*P	P	21 48 19.9	-0.9
	comp=Z,1.5nm,0.7s,mb3.6						
BVAR	**Borovoye Array**	32.15	322	P	P	21 49 09.7	-0.2
	comp=Z,0.3nm,0.6s,mb3.3,baz=125,slow=7.2,SNR=2.6						
BVAR				PcP	PcP	21 51 56.9	-1.9
	comp=Z,0.5nm,0.6s,baz=151,slow=3.4,SNR=5.1						
ARU	**Arti**	39.79	322	*e*P	P	21 50 14.5	-0.9
	comp=Z,3.0nm,0.8s,mb4.1						
FINES	**FINESS Array B**	56.95	326	P	P	21 52 26.1	-1.5
	comp=Z,1.7nm,0.9s,mb4.1,baz=100,slow=9.9,SNR=5.1						
KWP	**Kalwaria Pacla**	61.02	313	*e*P	P	21 52 54.7	-1.4
DZM	**Mont Dzumac**	80.50	123	*e*LR	LR	21 55 06.7	
	comp=Z,422nm,23.8s						
BOZ	**Bozeman (W)**	96.99	24	P	P	21 56 13.0	-1.4

*IDC **15** 21:42:54.9±0.6, 3°.49S×141°.35E, h0km, mb4.2/16, mb1 4.4/17, mb1mx4.4/19, mbtmp4.3/17, ML4.7/1, MS3.9/3, Ms1 3.9/3, ms1mx3.2/28, Error ellipse: s-maj=22.2km s-min=15.1km az=92.0*
*NEIC **15** 21:43:00.8±0.4, 3°.46S×141°.33E, h35km, mb4.9/22, Error ellipse: s-maj=11.3km s-min=7.7km az=99.0*
*BJI **15** 21:43:00.3, 3°.71S×141°.08E, h40km, mB5.2/6, mb4.6/13, Ms4.3/5, Ms7 3.8/6*
*ISCJB **15** 21:43:00.2±0.4, 3°.45S±0°.05×141°.05E±0°.08, h33km, mb4.6/40, MS3.7/7, Error ellipse: s-maj=11.0km s-min=7.3km az=175.5*
ISC 15 21:42:56.8±2.5, 3°.43S±0°.06×141°.22E±0°.10, h3km±16km, h29km±3.5km: pP-P, n92, σ1s19/71, mb4.6/40, MS3.7/7, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	17.27	164	P	Pn	21 47 02.3	+3.2
	0.2nm,0.3s,baz=333,slow=14,SNR=3.8						

ENH	**Enshi**	**45.20**	**320**	*e*P	**P**	**21 51 14.9**	**-0.3**
KMI	**Kunming**	**46.90**	**309**	P	**P**	**21 51 32.0**	**+3.2**
KMI				S	**S**	**21 58 18.4**	**-2.3**
KMI				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
KMI				LR	LR		
	comp=Z,49nm,24.9s,MS3.4						
CM31	**Chiang Mai Arr**	**46.97**	**299**	*e*P	**P**	**21 51 30.8**	**+1.4**
CMAR	**Chiang Mai Arr**	**46.97**	**299**	P	**P**	**21 51 29.0**	**-0.4**
	comp=Z,3.2nm,0.7s,mb4.4,baz=117,slow=6.2,SNR=12						
CMAR				LR	LR	22 11 30.7	
	comp=Z,42nm,19.7s,MS3.4,baz=115,slow=36						
CHTO	**Chiang Mai**	**47.11**	**300**	*e*P	**P**	**21 51 31.1**	**+0.5**
ASAJ	**Asahikawa**	**47.35**	**1**	P	**P**	**21 51 31.9**	**0.0**
	comp=Z,5.0nm,0.8s,mb4.5,baz=226,slow=11,SNR=2.6						
URZ	**Urewera**	**47.68**	**141**	LR	LR	22 10 40.0	
	comp=Z,204nm,18.2s,MS4.1,baz=330,slow=35						
RPZ	**Rata Peaks**	**48.02**	**151**	LR	LR	22 08 20.2	
	comp=Z,174nm,18.4s,MS4.1,baz=251,slow=32						
MDJ	**Mudanjiang**	**48.95**	**349**	P	**P**	**21 51 46.8**	**+2.4**
MDJ				pP	pP	21 51 55.3	+10
MDJ				sP	sP	21 51 59.5	+14
MDJ				ScP	ScP	21 57 02.8	-2.0
MDJ				PcS	PcS	21 57 06.1	+1.4
MDJ				S	**S**	**21 58 50.5**	**+1.3**
MDJ				sS	sS	21 59 06.0	+15
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
MDJ				pmax	pmax		
	comp=Z,120nm,4.3s						
MDJ				LR	LR		
	comp=N,47nm,23.2s,MS3.5						
MDJ				LR	LR		
	comp=E,39nm,24.0s,MS3.5						
MDJ				LR	LR		
	comp=Z,65nm,22.7s,MS3.6						
HHC	**Hu-ho-hao-te**	**51.73**	**331**	*e*P	**P**	**21 52 09.1**	**+3.6**
HHC				pP	pP	21 52 19.1	+13
HHC				sP	sP	21 52 23.0	+16
HHC				PcP	PcP	21 53 21.6	+2.7
HHC				PP	PP	21 54 08.3	+5.0
HHC				ScP	ScP	21 57 14.3	-2.5
HHC				PcS	PcS	21 57 18.1	+1.3
HHC				S	**S**	**21 59 28.3**	**+0.3**
HHC				sS	sS	21 59 45.3	+16
HHC				ScS	ScS	22 01 53.6	-3.3
HHC				SS	SS	22 03 04.3	-0.4
HHC				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
HHC				pmax	pmax		
	comp=Z,92nm,6.4s						
HHC				LR	LR		
	comp=N,150nm,16.6s,MS4.2						
HHC				LR	LR		
	comp=E,90nm,16.7s,MS4.2						
HHC				LR	LR		
	comp=Z,150nm,17.8s,MS4.1						
LZH	**Lanzhou**	**52.58**	**322**	*e*P	**P**	**21 52 16.0**	**+4.1**
LZH				pP	pP	21 52 20.8	+8.0
LZH				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
GTA	**Gaotai**	**57.15**	**322**	*e*P	**P**	**21 52 45.3**	**+0.3**
GTA				pP	pP	21 52 54.1	+8.2
GTA				sP	sP	21 52 58.3	+12
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
PETK	**Petropavlovsk-**	**58.02**	**12**	P	**P**	**21 52 49.7**	**-1.1**
	comp=Z,1.5nm,0.6s,mb4.2,baz=151,slow=3.3,SNR=3.3						
LSA	**Lhasa**	**58.12**	**308**	*e*P	**P**	**21 52 53.4**	**+1.4**
	comp=Z,5.4nm,0.8s,mb4.6						
SONM	**Songino Array**	**59.46**	**333**	P	**P**	**21 53 00.6**	**-0.3**
	comp=Z,0.6nm,0.8s,mb3.7,baz=141,slow=9.3,SNR=2.7						
TAPN	**Taplejung**	**59.94**	**304**	*e*P	**P**	**21 53 03.7**	**-1.0**
	comp=Z,25nm,1.0s,mb5.2						
ODAN	**Odare**	**60.02**	**304**	*e*P	**P**	**21 53 04.7**	**-0.6**
	comp=Z,29nm,1.0s,mb5.2						
RAMN	**Ramite**	**60.72**	**303**	*e*P	**P**	**21 53 09.5**	**-0.5**
	comp=Z,63nm,1.3s,mb5.6						
JIRN	**Jiri**	**61.31**	**304**	*e*P	**P**	**21 53 13.6**	**-0.4**
	comp=Z,14nm,0.6s,mb5.3						
GUN	**Gumba**	**61.66**	**304**	*e*P	**P**	**21 53 16.0**	**-0.4**
	comp=Z,60nm,1.1s,mb5.6						
PKI	**Pulchoki**	**61.93**	**304**	*e*P	**P**	**21 53 18.2**	**0.0**
KKN	**Kakani**	**62.11**	**304**	*e*P	**P**	**21 53 18.7**	**-0.7**
	comp=Z,51nm,1.2s,mb5.5						
DMN	**Daman**	**62.19**	**304**	*e*P	**P**	**21 53 19.6**	**-0.4**
	comp=Z,68nm,1.1s,mb5.7						
TLY	**Talaya**	**63.51**	**335**	*e*P	**P**	**21 53 25.7**	**-2.5**
	comp=Z,50nm,2.8s,mb5.0						
WMQ	**Urumqi**	**67.14**	**321**	*e*P	**P**	**21 53 54.0**	**+2.0**
MK31	**Makanchi Array**	**71.89**	**322**	*e*P	**P**	**21 54 23.0**	**+1.7**
MKAR	**Makanchi Array**	**71.89**	**322**	P	**P**	**21 54 20.7**	**-0.6**
	comp=Z,3.7nm,0.8s,mb4.3,baz=79,slow=12,SNR=12						
ZALV	**Zalesovo Beam**	**73.82**	**329**	P	**P**	**21 54 33.0**	**+0.4**
	comp=Z,1.1nm,0.7s,mb3.9,baz=104,slow=5.0,SNR=4.4						
TKM2	**Tokmak 2**	**74.79**	**316**	*e*P	**P**	**21 54 37.7**	**-0.9**
	comp=Z,1.4nm,0.4s,mb4.2						
UCH	**Uchtor**	**75.32**	**315**	*e*P	**P**	**21 54 41.7**	**+0.2**
	comp=Z,4.2nm,0.9s,mb4.4						
AAK	**Ala-Archa**	**75.46**	**316**	P	**P**	**21 54 43.2**	**+0.8**
SBA	**Scott Base**	**75.59**	**175**	*e*P	**P**	**21 54 48.2**	**+5.7**
KURK	**Kurchatov**	**75.75**	**324**	P	**P**	**21 54 42.5**	**-1.3**
	comp=Z,3.5nm,1.1s,mb4.2,baz=108,slow=4.2,SNR=9.2						
KURK	**Kurchatov**	**75.75**	**324**	*e*P	**P**	**21 54 44.5**	**+0.6**
	comp=Z,9.2nm,1.3s,mb4.5						
EKS2	**Erkin-Say**	**75.97**	**315**	*e*P	**P**	**21 54 46.6**	**+1.3**
KBL	**Kabul**	**77.37**	**306**	*e*P	**P**	**21 54 55.4**	**+2.0**
TTA	**Tatalina**	**81.02**	**24**	*e*P	**P**	**21 55 16.0**	**+3.2**
BVAR	**Borovoye Array**	**81.34**	**325**	P	**P**	**21 55 13.4**	**-1.2**
	comp=Z,5.0nm,0.7s,mb4.6,baz=113,slow=7.4,SNR=15						
BRVK	**Borovoye**	**81.41**	**325**	*e*P	**P**	**21 55 16.2**	**+1.2**
	comp=Z,6.6nm,0.8s,mb4.6						
MAW	**Mawson**	**82.40**	**202**	P	**P**	**21 55 18.8**	**-1.2**
	comp=Z,1.7nm,0.8s,mb4.0,baz=38,slow=12,SNR=3.4						
MAW	**Mawson**	**82.40**	**202**	*e*P	**P**	**21 55 25.6**	**+5.6**
COLD	**Coldfoot**	**85.00**	**21**	P	**P**	**21 55 33.6**	**+0.3**
	comp=Z,4.0nm,1.1s,mb4.5						
ABKAR	**Akbulak array**	**86.89**	**320**	*e*P	**P**	**21 55 41.9**	**-1.2**
	comp=Z,4.6nm,1.0s,mb4.7						
ARU	**Arti**	**88.77**	**327**	*e*P	**P**	**21 55 50.1**	**-1.7**
	comp=Z,3.2nm,0.8s,mb4.7						
WVOR	**Wild Horse Val**	**99.80**	**48**	*e*P	Pdif	21 56 43.6	+1.1
	comp=Z,8.3nm,0.8s						
TXAR	**Lajitas Array**	**113.51**	**60**	PKiKP	PKiKP	22 01 35.7	-1.5
	comp=Z,0.2nm,0.8s,baz=237,slow=3.0,SNR=2.6						
GERES	**GERESS Array B**	**116.50**	**324**	PKP	PKPdf	22 01 41.2	-1.1
	comp=Z,0.4nm,0.6s,baz=82,slow=2.8,SNR=3.9						
LPG	**La Plagne**	**122.28**	**324**	*e*PKIKP	PKPdf	22 01 51.9	-1.6
SSF	**Saint Saulge**	**123.25**	**327**	*e*PKIKP	PKPdf	22 01 54.4	-0.9
SMF	**Signal de Mont**	**123.31**	**326**	*e*PKIKP	PKPdf	22 01 54.4	-1.1
AVF	**Avril sur Loir**	**123.49**	**326**	*e*PKIKP	PKPdf	22 01 54.3	-1.5
TCF	**Toulx Ste Croi**	**124.43**	**327**	*e*PKIKP	PKPdf	22 01 56.7	-0.9
	comp=Z,6.6nm,0.9s						
TGUH	**Tegucigalpa,Un**	**131.03**	**74**	PKPdf	PKPdf	22 02 03.4	-7.7
LPAZ	**La Paz**	**144.99**	**125**	PKP	PKPdf	22 02 35.6	-1.0
	comp=Z,4.0nm,0.9s,baz=262,slow=2.8,SNR=9.3						
LPAZ	**La Paz**	**144.99**	**125**	*e*PKPdf	PKPdf	22 02 36.0	-0.7
CPUP	**Villa Florida**	**145.40**	**150**	PKPbc	PKPbc	22 02 35.0	-1.9
	comp=Z,0.7nm,0.5s,baz=191,slow=10,SNR=2.8						
CPUP	**Villa Florida**	**145.40**	**150**	PKPbc	PKPbc	22 02 35.0	-1.9
KIC	**Kosan Boka**	**145.96**	**276**	*e*P	PKPdf	22 02 37.3	-1.1
	comp=Z,50nm,1.2s						
DBIC	**Dimbokro**	**146.06**	**277**	PKPbc	PKPbc	22 02 37.4	-2.0
	comp=Z,6.9nm,0.7s,baz=71,slow=3.5,SNR=11						
DBIC	**Dimbokro**	**146.06**	**277**	*e*PKPdf	PKPdf	22 02 38.0	-0.6
TIC	**Toumodi**	**146.22**	**277**	*e*P	PKPdf	22 02 37.8	-1.0
	comp=Z,28nm,1.0s						
LIC	**Lamto**	**146.25**	**276**	*e*P	PKPdf	22 02 38.8	-0.1
	comp=Z,34nm,0.9s						
SDV	**Santo Domingo**	**147.89**	**79**	PKPbc	PKPbc	22 02 41.5	-3.1
	comp=Z,10nm,0.7s,baz=303,slow=9.5,SNR=7.7						
SDV	**Santo Domingo**	**147.89**	**79**	*e*PKPdf	PKPdf	22 02 44.0	+2.4
SJG	**San Juan**	**149.49**	**59**	PKPbc	PKPbc	22 02 46.2	-2.3
	baz=21,slow=8.6						
SIV	**San Ignacio**	**150.70**	**132**	PKPbc	PKPbc	22 02 49.1	-2.4
	comp=Z,6.8nm,0.9s,baz=258,slow=3.6,SNR=7.1						
SIV	**San Ignacio**	**150.70**	**132**	PKPbc	PKPbc	22 02 49.1	-2.4

NEIC 15 21:59:28.8,37°.17S×177°.45E,h137km,MG3.8(WEL), After WEL.,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.79**	**120**	P	Pn	21 59 50.4	-0.1
MXZ				S	Sn	22 00 07.0	0.0
PUZ	**Puketiti**	**1.11**	**145**	P	Pn	21 59 53.0	-0.3
URZ	**Urewera**	**1.12**	**194**	P	Pn	21 59 53.6	+0.2
MWZ	**Matawai**	**1.17**	**177**	P	Pn	21 59 54.0	+0.1
MWZ				S	Sn	22 00 13.1	+0.1
KNZ	**Kokohu**	**1.86**	**175**	P	Pn	22 00 01.2	-0.2
BKZ	**Black Stump Fm**	**2.13**	**200**	P	Pn	22 00 04.4	-0.3
FWVZ	**Far West T-bar**	**2.56**	**215**	P	Pn	22 00 10.5	+0.5
WAZ	**Wanganui**	**3.23**	**216**	P	Pn	22 00 18.2	-0.3
BFZ	**Birch Farm**	**3.63**	**195**	P	Pn	22 00 21.5	-2.3
MRZ	**Mangatainoka R**	**3.78**	**202**	P	Pn	22 00 23.1	-2.6
KIW	**Kapiti Island**	**4.18**	**207**	P	Pn	22 00 28.1	-3.0
MTW	**Mount Morrison**	**4.26**	**200**	P	Pn	22 00 28.6	-3.5
CAW	**Cannon Point**	**4.35**	**204**	P	Pn	22 00 29.9	-3.3
MSWZ	**Moikau Station**	**4.57**	**201**	P	Pn	22 00 32.6	-3.6
SNZO	**South Karori**	**4.65**	**206**	P	Pn	22 00 33.6	-3.7
TCW	**Tory Channel**	**4.73**	**210**	P	Pn	22 00 34.6	-3.7
NNZ	**Nelson**	**5.13**	**217**	P	Pn	22 00 40.9	-2.8
QRZ	**Quartz Range**	**5.29**	**225**	P	Pn	22 00 42.7	-3.1
ODZ	**Otahua Downs**	**9.39**	**211**	P	Pn	22 01 35.5	-5.2

*ISCJB **15** 22:01:03.6±1.4, 7°.8S±0°.1×118°.9E±0°.1, h257km±14km, mb3.2/3, Error ellipse: s-maj=25.1km s-min=10.4km az=146.5*
*NEIC **15** 22:01:04.9±1.4, 7°.78S×119°.03E, h254km±14km, mb3.8/1, Error ellipse: s-maj=31.1km s-min=10.7km az=63.0*
*IDC **15** 22:01:04.1±5.5, 7°.85S×119°.00E, h245km±41km, mb2.9/3, mb1 3.1/5, mb1mx2.9/20, mbtmp2.9/5, Error ellipse: s-maj=137.1km s-min=14.3km az=60.0*

ISC 15 22:01:04.8±1.4, 7°.80S±0°.10×119°.1E±0°.1, h252km±14km, n11, σ0.98 63/14, mb3.4/3, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**2.85**	**14**	P	**Pn**	**22 01 55.5**	**-0.3**
	2.0nm,0.3s,baz=178,slow=8.1,SNR=8.1						
FITZ	**Fitzroy Crossi**	**12.07**	**149**	P	**Pn**	**22 03 54.3**	**+5.0**
	0.3nm,0.3s,baz=0.6,slow=5.2,SNR=7.4						
FITZ				S	**S**	**22 06 03.9**	**0.0**
	0.2nm,0.3s,baz=139,slow=20,SNR=4.3						
FITZ	**Fitzroy Crossi**	**12.07**	**149**	*e*Pn	**Pn**	**22 03 51.5**	**+2.3**
FITZ				*e*S	**S**	**22 06 03.8**	**-0.1**
KAKA	**Kakadu**	**14.03**	**111**	*e*Pn	**Pn**	**22 04 13.9**	**+0.5**
KAKA				*e*S	**S**	**22 06 48.3**	**-0.4**
WRA	**Warramunga Arr**	**19.09**	**131**	P	**P**	**22 05 08.6**	**-0.5**
	0.5nm,0.3s,baz=306,slow=12,SNR=27						
WRAB	**Tennant Creek**	**19.10**	**131**	*e*P	**P**	**22 05 08.9**	**-0.3**
	1.8nm,0.5s						
ASAR	**Alice Springs**	**21.24**	**140**	P	**P**	**22 05 32.4**	**+0.5**
	0.4nm,0.3s,mb3.5,baz=313,slow=8.5,SNR=8.3						
SONM	**Songino Array**	**56.52**	**350**	P	**P**	**22 10 21.4**	**+0.5**
	0.2nm,0.3s,mb3.2,baz=159,slow=8.2,SNR=2.6						
MKAR	**Makanchi Array**	**63.43**	**333**	P	**P**	**22 11 07.4**	**-0.4**
	0.3nm,0.3s,mb3.5,baz=120,slow=8.7,SNR=3.2						
MAW	**Mawson**	**70.38**	**200**	P	**P**	**22 11 50.3**	**-0.8**
BILL	**Bilibino**	**82.63**	**16**	P	**P**	**22 12 59.9**	**+0.4**

CASC 15 22:01:04.7±2.0, 14°.31N×90°.72W, h0km±6km, MD3.6, 1C-1D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**0.14**	**53**	*e*P	Pg	22 01 09.3	+1.9
FUG	**Fuego 3**	**0.18**	**320**	*e*P	Pg	22 01 09.5	+1.3
IXG	**Ixpaco**	**0.29**	**117**	i/P	Pg	22 01 12.0	+1.7
FG6	**FG6**	**0.29**	**328**	*e*P	Pg	22 01 11.4	+1.0
GCG	**Guatemala City**	**0.33**	**34**	*e*P	Pg	22 01 12.0	+0.9
GCG				*e*S	Sg	22 01 17.5	+2.1
NBG	**Las Nubes**	**0.46**	**53**	*e*P	Pg	22 01 15.4	+1.9
TP2	**Tecpan 2**	**0.55**	**328**	*e*P	Pg	22 01 16.6	+1.3
JAT	**Jato**	**0.89**	**271**	i/*e*P	Pg	22 01 23.6	+1.8
RBDL	**Robledal**	**1.02**	**101**	*e*P	Pg	22 01 24.4	+0.1
RTR	**El Retiro**	**1.12**	**111**	*e*P	Pg	22 01 25.1	-1.2
MRL	**Marmol**	**1.25**	**53**	*e*P	Pg	22 01 29.7	+1.0
MRL				*e*S	Sg	22 01 47.8	+2.9
MTO2	**Montecristo 2**	**1.32**	**86**	*e*P	Pg	22 01 29.5	-0.5
MTO2				*e*S	Sg	22 01 49.7	+2.5
BOQS	**Boqueron**	**1.51**	**112**	*e*P	Pn	22 01 32.9	-0.1

*IDC **15** 22:05:12.1±22.0, 19°.60S×177°.85W, h550km±274km, mb3.1/5, mb1 3.3/5, mb1mx3.1/16, mbtmp3.1/5, Error ellipse: s-maj=106.8km s-min=78.7km az=153.0*
*NEIC **15** 22:05:13.8±1.0, 19°.63S×177°.85W, h579km±12km, mb3.6/5, Error ellipse: s-maj=28.3km s-min=15.0km az=194.0*
*ISCJB **15** 22:05:13.1±1.3, 19°.7S±0°.2×177°.9W±0°.1, h583km±17km, mb3.6/8, Error ellipse: s-maj=33.7km s-min=20.6km az=174.5*

ISC 15 22:05:14.1±1.4, 19°.7S±0°.2×177°.9W±0°.1, h578km±16km, n14, σ0.98 32/14, mb3.6/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.31**	**296**	*e*P	**P**	**22 06 40.2**	**-0.1**
SNZO	**South Karori**	**22.47**	**195**	P	**P**	**22 09 30.9**	**+0.1**
CTA	**Charters Tower**	**33.69**	**263**	P	**P**	**22 11 09.2**	**+0.8**
	3.2nm,0.3s,mb4.4,baz=85,slow=10,SNR=6.1						
CTAO	**Charters Tower**	**33.69**	**263**	*e*P	**P**	**22 11 08.8**	**+0.3**
	3.2nm,0.4s,mb4.3						
STKA	**Stephens Creek**	**38.25**	**243**	P	**P**	**22 11 46.0**	**+0.2**
	2.1nm,1.0s,mb3.6,baz=84,slow=10,SNR=5.4						
STKA	**Stephens Creek**	**38.25**	**243**	*e*P	**P**	**22 11 46.0**	**+0.2**
	0.3nm,0.5s,mb3.1						
ASAR	**Alice Springs**	**44.82**	**256**	P	**P**	**22 12 37.8**	**+0.1**
	2.5nm,0.5s,mb4.0,baz=89,slow=7.9,SNR=33						
WRAB	**Tennant Creek**	**44.82**	**261**	*e*P	**P**	**22 12 37.3**	**-0.4**
	1.1nm,0.4s,mb3.7						
WRA	**Warramunga Arr**	**44.83**	**261**	P	**P**	**22 12 37.5**	**-0.3**
	1.1nm,0.5s,mb3.6,baz=98,slow=7.7,SNR=16						
FITZ	**Fitzroy Crossi**	**53.25**	**262**	*e*P	**P**	**22 13 40.0**	**+0.2**
	0.9nm,0.4s,mb3.5						
MBWA	**Marble Bar**	**58.14**	**257**	*e*P	**P**	**22 14 13.2**	**-0.4**
	1.6nm,0.5s,mb3.4						
RPN	**Rapa Nui**	**62.68**	**111**	P	**P**	**22 14 43.2**	**-0.3**
TXAR	**Lajitas Array**	**86.52**	**57**	P	**P**	**22 16 57.0**	**+0.3**
	0.2nm,0.5s,mb3.1,baz=215,slow=5.5,SNR=4.6						
TXAR	**Lajitas Array**	**86.52**	**57**	P	**P**	**22 16 57.0**	**+0.3**

*IDC **15** 22:13:16.7±0.9, 30°.72N×103°.18E, h0km, mb3.6/10, mb1 3.7/11, mb1mx3.6/24, mbtmp3.6/11, ML3.2/1, Error ellipse: s-maj=40.8km s-min=16.1km az=54.0*
*ISCJB **15** 22:13:16.8±0.4, 30°.85N±0°.05×103°.31E±0°.06, h10km, mb3.7/15, Error ellipse: s-maj=7.7km s-min=6.3km az=39.5*
*NEIC **15** 22:13:18.3±0.3, 30°.71N×103°.15E, h10km, mb3.8/7, Error ellipse: s-maj=8.0km s-min=6.0km az=57.0*
*BJI **15** 22:13:20.2, 30°.86N×103°.40E, h15km, mb3.9/1, ML3.6/17, Ms3.6/1, Ms7 3.2/1*

ISC 15 22:13:18.5±0.4, 30°.79N±0°.05×103°.22E±0°.04, h10km, n32, σ0.98 /38, mb3.7/15, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.48**	**75**	i/P	**Pg**	**22 13 29.1**	**+1.2**
CD2				Sg	**Sg**	**22 13 35.5**	**+1.3**
CD2				smax			
	comp=N,8μm,0.7s						
CD2				smax			
	comp=E,20μm,0.7s						
LZH	**Lanzhou**	**5.31**	**5**	*e*Pg	**Pg**	**22 15 10.0**	**+10**
LZH				Sg	**Sg**	**22 16 06.3**	**-2.7**
LZH				smax			
	comp=N,29nm,1.0s						
LZH				smax			
	comp=E,53nm,1.0s						
ENH	**Enshi**	**5.43**	**94**	*e*Pn	**Pn**	**22 14 40.4**	**+0.8**
	comp=E,68nm,0.7s						
ENH				*e*Sn	**Sn**	**22 15 40.2**	**-1.9**
KMI	**Kunming**	**5.66**	**184**	Pn	**Pn**	**22 14 46.6**	**+3.9**
KMI				Sn	**Sn**	**22 15 51.5**	**+3.8**
KMI				smax			
	comp=N,22nm,1.1s						
KMI				smax			
	comp=E,26nm,1.0s						
KMI				LR	LR		
	comp=N,190nm,6.5s						
KMI				LR	LR		
	comp=E,310nm,6.5s						
KMI				LR	LR		
	comp=Z,180nm,8.2s						
XAN	**Xi'an**	**5.81**	**55**	Pn	**Pn**	**22 14 42.8**	**-1.9**
XAN				Sn	**Sn**	**22 15 45.0**	**-6.4**
XAN				Sg	**Sg**	**22 16 13.6**	**-11**
XAN				smax			
	comp=N,94nm,0.9s						
XAN				smax			
	comp=E,55nm,0.9s						
CHTO	**Chiang Mai**	**12.54**	**199**	Pn	**Pn**	**22 16 15.6**	**-1.4**
SONM	**Songino Array**	**17.20**	**7**	P	**Pn**	**22 17 19.9**	**+1.2**
	comp=E,0.1nm,0.3s,baz=183,slow=11,SNR=4.0						
ULN	**Ulaanbaatar**	**17.30**	**9**	*e*Pn	**Pn**	**22 17 21.1**	**+1.0**
	comp=E,0.8nm,0.3s						
KSRS	**Korea Array**	**21.47**	**65**	P	**P**	**22 18 07.0**	**-0.2**
	comp=E,0.7nm,0.4s,mb3.4,baz=247,slow=9.0,SNR=4.4						
MK31	**Makanchi Array**	**22.73**	**321**	P	**P**	**22 18 20.9**	**+0.4**
MKAR	**Makanchi Array**	**22.73**	**321**	P	**P**	**22 18 21.5**	**+1.0**
	comp=E,0.3nm,0.3s,mb3.2,baz=105,slow=11,SNR=3.2						
TKM2	**Tokmak 2**	**25.08**	**307**	P	**P**	**22 18 43.4**	**+0.2**
UCH	**Uchtor**	**25.62**	**304**	*e*P	**P**	**22 18 49.5**	**+1.4**
	comp=E,1.7nm,0.9s,mb3.6						
AML	**Almayashu**	**26.18**	**304**	*e*P	**P**	**22 18 53.5**	**+0.4**
	comp=E,1.0nm,0.6s,mb3.5						
ZALV	**Zalesovo Beam**	**26.68**	**335**	P	**P**	**22 18 57.8**	**+0.3**
	comp=E,0.8nm,0.7s,mb3.4,baz=128,slow=9.7,SNR=4.1						
KURK	**Kurchatov**	**27.05**	**324**	P	**P**	**22 19 01.1**	**+0.3**
	comp=E,1.7nm,0.6s,mb3.7,baz=131,slow=9.5,SNR=19						
KURK	**Kurchatov**	**27.05**	**324**	*e*P	**P**	**22 19 00.6**	**-0.2**
	comp=E,1.5nm,0.7s,mb3.6						
KBL	**Kabul**	**28.93**	**287**	*e*P	**P**	**22 19 17.4**	**-0.4**
	comp=E,3.6nm,1.2s,mb4.0						
BVAR	**Borovoye Array**	**32.57**	**323**	P	**P**	**22 19 50.5**	**+0.7**
	comp=E,0.5nm,0.5s,mb3.7,baz=117,slow=11,SNR=5.6						
BVAR				PcP	PcP	22 22 35.5	-0.5
	comp=E,0.3nm,0.7s,baz=108,slow=4.8,SNR=3.5						
ARU	**Arti**	**40.22**	**323**	*e*P	**P**	**22 20 54.8**	**-0.2**
	comp=E,1.8nm,0.5s,mb4.1						
GNI	**Garni**	**47.78**	**298**	P	**P**	**22 21 56.0**	**0.0**
BR131	**Keskin Array S**	**56.24**	**300**	*e*P	**P**	**22 22 59.0**	**0.0**
	comp=E,0.3nm,0.3s,mb3.8						
ARCES	**ARCESS Array B**	**57.23**	**336**	P	**P**	**22 23 05.5**	**-0.1**
	comp=E,1.3nm,0.9s,mb4.0,baz=89,slow=7.6,SNR=8.1						
ARCES	**ARCESS Array B**	**57.23**	**336**	P	**P**	**22 23 05.5**	**-0.1**
FINES	**FINESS Array B**	**57.41**	**326**	P	**P**	**22 23 06.4**	**-0.5**
	comp=E,0.9nm,0.6s,mb4.0,baz=116,slow=8.7,SNR=6.5						
WRA	**Warramunga Arr**	**58.64**	**145**	P	**P**	**22 23 16.4**	**+0.4**
	comp=E,0.6nm,0.4s,mb4.0,baz=338,slow=7.5,SNR=11						
WRA	**Warramunga Arr**	**58.64**	**145**	P	**P**	**22 23 16.4**	**+0.4**
ISP	**Isparta**	**59.09**	**298**	P	**P**	**22 23 18.7**	**-0.4**
ASAR	**Alice Springs**	**61.62**	**148**	P	**P**	**22 23 35.4**	**-1.0**
	comp=E,0.2nm,0.4s,mb3.6,baz=327,slow=6.8,SNR=4.0						
NOA	**NORSAR Array B**	**64.52**	**327**	P	**P**	**22 23 54.4**	**-0.8**
	comp=E,0.4nm,0.6s,mb3.6,baz=83,slow=4.6,SNR=2.9						
TIP	**Timpagrande**	**68.79**	**304**	P	**P**	**22 24 21.9**	**-1.0**
WLF	**Walferdange**	**71.44**	**317**	P	**P**	**22 24 38.8**	**-0.2**

*CSEM **15** 22:19:02.5±0.2, 37°.85N×21°.38E, h10km, ML2.6, Error ellipse: s-maj=4.8km s-min=3.9km az=62.0*
*ATH **15** 22:19:02.5, 37°.88N×21°.39E, h20km±1km, MD3.4/14, ML2.6*
*NEIC **15** 22:19:02.5, 37°.88N×21°.39E, h20km, ML3.4(THE), ML2.6(ATH), After ATH.*
*ISCJB **15** 22:19:02.8±0.5, 37°.86N±0°.02×21°.41E±0°.03, h4km±3km, Error ellipse: s-maj=4.0km s-min=3.3km az=149.8*
*THE **15** 22:19:03.8, 37°.90N×21°.46E, h0km±2km, ML3.4/9, Error ellipse: s-maj=2.5km s-min=0.8km az=239.0*

ISC 15 22:19:03.4±0.5, 37°.87N±0°.02×21°.41E±0°.03, h8km±3km, n85, σ0.98 /144, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.20**	**13**	*e*Pb	**Pg**	**22 19 08.2**	**+0.8**
RLS				*e*Sb	**Sg**	**22 19 11.5**	**+1.3**
RLS	**Riolos of Patr**	**0.20**	**13**	*e*PB	**Pg**	**22 19 08.2**	**+0.8**
RLS				*e*SB	**Sg**	**22 19 11.5**	**+1.3**
RLS	**Riolos of Patr**	**0.20**	**13**	*e*Pb	**Pg**	**22 19 08.2**	**+0.8**
RLS				*e*Sb	**Sg**	**22 19 11.5**	**+1.3**
**U

AGG				S		Sb	22 19 46.9	+0.2
LKR	**Lokris**	**1.48**	**57**	*e*Pn		**Pn**	22 19 29.7	-0.5
LKR				*e*Sn		**Sn**	22 19 49.6	-0.1
LKR				S		**Sn**	22 19 51.0	+1.3
LKR	**Lokris**	**1.48**	**57**	*e*PN		**Pn**	22 19 29.1	-1.1
LKR				S		**Sn**	22 19 51.0	+1.3
LKR	**Lokris**	**1.48**	**57**	*e*PN		**Pn**	22 19 29.7	-0.5
LKR				*e*SN		**Sn**	22 19 49.6	-0.1
LKR	**Lokris**	**1.48**	**57**	P		**Pn**	22 19 29.1	-1.1
LKR	**Lokris**	**1.48**	**57**	*e*Pn		**Pn**	22 19 29.7	-0.5
LKR				*e*Sn		**Sn**	22 19 49.6	-0.1
LKR				S		**Sn**	22 19 51.0	+1.3
NAIG	**Nisos Aigina**	**1.65**	**93**	*e*Pn		**Pn**	22 19 33.6	+1.0
NAIG	**Nisos Aigina**	**1.65**	**93**	*e*PN		**Pn**	22 19 33.6	+1.0
NAIG	**Nisos Aigina**	**1.65**	**93**	*e*Pn		**Pn**	22 19 33.6	+1.0
THL	**Klokotos Trika**	**1.76**	**15**	P		**Pn**	22 19 35.3	+1.1
THL	**Klokotos Trika**	**1.76**	**15**	*e*PN		**Pn**	22 19 34.4	+0.2
THL				*e*SN		**Sn**	22 19 57.4	+0.6
THL	**Klokotos Trika**	**1.76**	**15**	*e*Pn		**Pn**	22 19 34.4	+0.2
THL	**Klokotos Trika**	**1.76**	**15**	P		**Pn**	22 19 35.3	+1.1
THL				*e*Sn		**Sn**	22 19 57.4	+0.6
ATH	**Athens Observa**	**1.83**	**86**	*e*Pn		**Pn**	22 19 35.0	-0.1
ATH				*e*Sn		**Sn**	22 19 58.5	+0.1
ATH	**Athens Observa**	**1.83**	**86**	*e*PN		**Pn**	22 19 35.0	-0.1
ATH				*e*SN		**Sn**	22 19 58.5	+0.1
ATH	**Athens Observa**	**1.83**	**86**	*e*Pn		**Pn**	22 19 35.0	-0.1
ATH				*e*Sn		**Sn**	22 19 58.5	+0.1
IGT	**Igoumenitsa**	**1.87**	**333**	P		**Pn**	22 19 34.5	-1.1
IGT	**Igoumenitsa**	**1.87**	**333**	P		**Pn**	22 19 34.5	-1.1
IGT	**Igoumenitsa**	**1.87**	**333**	P		**Pn**	22 19 34.5	-1.1
MEV	**Metsovon**	**1.92**	**356**	P		**Pn**	22 19 38.8	+2.4
MEV	**Metsovon**	**1.92**	**356**	P		**Pn**	22 19 38.8	+2.4
MEV	**Metsovon**	**1.92**	**356**	P		**Pn**	22 19 38.8	+2.4
PTL	**Penteli**	**1.95**	**84**	*e*Pn		**Pn**	22 19 36.6	-0.1
PTL	**Penteli**	**1.95**	**84**	*e*PN		**Pn**	22 19 36.6	-0.1
PTL	**Penteli**	**1.95**	**84**	*e*Pn		**Pn**	22 19 36.6	-0.1
NEO	**Neokhori**	**2.02**	**44**	*e*Pn		**Pn**	22 19 37.5	-0.3
NEO				*e*Sn		**Sn**	22 20 03.1	-0.1
NEO	**Neokhori**	**2.02**	**44**	*e*PN		**Pn**	22 19 37.5	-0.3
NEO				*e*SN		**Sn**	22 20 03.1	-0.1
NEO	**Neokhori**	**2.02**	**44**	*e*Pn		**Pn**	22 19 37.5	-0.3
NEO				*e*Sn		**Sn**	22 20 03.1	-0.1
XOR	**Xorichti**	**2.05**	**42**	P		**Pn**	22 19 37.8	-0.3
XOR				S		**Sn**	22 20 05.8	+2.0
XOR	**Xorichti**	**2.05**	**42**	P		**Pn**	22 19 37.8	-0.3
XOR				S		**Sn**	22 20 05.8	+2.0
XOR	**Xorichti**	**2.05**	**42**	P		**Pn**	22 19 37.8	-0.3
XOR				S		**Sn**	22 20 05.8	+2.0
AOS	**Alonnisos**	**2.33**	**55**	P		**Pn**	22 19 42.4	+0.4
AOS	**Alonnisos**	**2.33**	**55**	P		**Pn**	22 19 42.4	+0.4
AOS	**Alonnisos**	**2.33**	**55**	P		**Pn**	22 19 42.4	+0.4
STON	**Ston**	**5.75**	**332**	*e*Pn		**Pn**	22 20 27.1	-1.8
STON				Sn		**Sn**	22 21 29.7	-5.3
STON	**Ston**	**5.75**	**332**	*e*Pn		**Pn**	22 20 27.1	-1.8

IDC ***15*** *22:20:52.5±3.7, 3.°57S×141.°73E, h0km, mb3.7/4, mb1 4.0/5, mb1mx3.7/14, mbtmp3.9/5, ML4.2/1, MS3.4/1, Ms1 3.4/1, ms1mx2.4/21, Error ellipse: s-maj=123.1km s-min=26.4km az=98.0*
ISCJB ***15*** *22:20:54.6±4.6, 3.°66S±0.°09×141.°5E±0.°2, h14km±31km, mb3.9/8, Error ellipse: s-maj=33.6km s-min=11.4km az=19.9*
NEIC ***15*** *22:20:59.0±0.9, 3.°69S×141.°54E, h35km, mb4.1/5, Error ellipse: s-maj=25.2km s-min=8.7km az=97.0*
ISC 15 22:20:56.0±5.5, 3.°65S±0.°10×141.°6E±0.°2, h15km±36km**, n14,** σ0°60/15**, mb3.9**/8**, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu** 58nm,0.5s	**12.78**	**225**	*e*Pn	**Pn**	**22 23 57.2**	**-0.1**
KAKA				*e*Sn	**Sn**	**22 26 19.6**	**+0.1**
WRA	**Warramunga Arr** 0.9nm,0.3s,baz=24,slow=12,SNR=22	**17.68**	**203**	P	**Pn**	**22 25 01.8**	**-0.1**
WRA				LR	LR	22 32 33.3	
FITZ	**Fitzroy Crossi** comp=Z,114nm,20.3s,baz=235,slow=39	**21.23**	**226**	P	**P**	**22 25 41.2**	**-0.4**
FITZ	**Fitzroy Crossi** 2.9nm,0.6s,mb3.8	**21.23**	**226**	*e*P	**P**	**22 25 41.3**	**-0.3**
ASAR	**Alice Springs** 1.5nm,0.5s,mb3.6,baz=31,slow=10,SNR=25	**21.25**	**200**	P	**P**	**22 25 42.0**	**+0.4**
NACB	**Ninganchiao** 8.0nm,0.8s,mb4.7	**33.83**	**326**	*e*P	**P**	**22 27 39.0**	**+1.0**
KULM	**Kulim**	**41.87**	**282**	*e*P	**P**	**22 28 45.7**	**-0.4**
MK31	**Makanchi Array**	**72.31**	**322**	P	**P**	**22 32 21.9**	**+0.8**
MKAR	**Makanchi Array** 0.3nm,0.2s,mb3.8,baz=106,slow=7.9,SNR=3.3	**72.31**	**322**	P	**P**	**22 32 20.7**	**-0.4**
KURK	**Kurchatov** 0.4nm,0.4s,mb3.7	**76.16**	**324**	*e*P	**P**	**22 32 43.5**	**0.0**
EKS2	**Erkin-Say**	**76.41**	**315**	P	**P**	**22 32 45.8**	**+0.7**
BVAR	**Borovoye Array** 0.5nm,0.5s,mb3.7,baz=101,slow=7.5,SNR=5.1	**81.74**	**325**	P	**P**	**22 33 12.7**	**-1.3**
BRVK	**Borovoye** 1.1nm,0.5s,mb4.0	**81.81**	**325**	*e*P	**P**	**22 33 13.8**	**-0.6**
QSPA	**South Pole Qui** 1.5nm,1.0s,mb4.2	**86.30**	**180**	*e*P	**P**	**22 33 37.0**	**+0.2**

IDC ***15*** *22:36:45.4±0.9, 30.°79N×103.°12E, h0km, mb3.7/10, mb1 3.8/11, mb1mx3.6/25, mbtmp3.7/11, ML3.4/1, Error ellipse: s-maj=39.7km s-min=16.0km az=54.0*
ISCJB ***15*** *22:36:46.4±1.1, 30.°72N±0.°08×103.°19E±0.°05, h22km±9km, mb3.8/15, Error ellipse: s-maj=12.9km s-min=6.9km az=178.7*
NEIC ***15*** *22:36:47.1±0.4, 30.°75N×103.°11E, h10km, mb4.1/8, Error ellipse: s-maj=9.0km s-min=6.7km az=176.0*
BJI ***15*** *22:36:48.8, 30.°83N×103.°21E, h14km, mb4.2/2, ML3.5/17, Ms3.4/2, Ms7 3.3/2*
ISC 15 22:36:47.0±1.2, 30.°87N±0.°04×103.°16E±0.°05, h7km±8km**, n35,** σ1°05/39**, mb3.8**/15**, 1D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.51**	**85**	⇓*i*Pg	**Pg**	**22 36 56.6**	**-0.3**
CD2				Sg	**Sg**	**22 37 04.0**	**+0.4**
CD2	comp=N,14μm,0.7s			smax			
CD2	comp=E,7μm,0.6s			smax			
LZH	**Lanzhou**	**5.24**	**6**	*e*Pg	**Pg**	**22 38 34.1**	**+6.7**
LZH				Sg	**Sg**	**22 39 35.4**	**+0.1**
LZH	comp=N,29nm,1.0s			smax			
LZH	comp=E,55nm,1.0s			smax			
ENH	**Enshi** comp=E,87nm,0.8s	**5.49**	**95**	*e*Pn	**Pn**	**22 38 09.6**	**+0.5**
ENH				*e*Sn	**Sn**	**22 39 10.0**	**-2.5**
KMI	**Kunming**	**5.73**	**184**	Pn	**Pn**	**22 38 14.8**	**+2.2**
KMI				Sn	**Sn**	**22 39 20.8**	**+2.2**
KMI	comp=N,22nm,0.8s			smax			
KMI	comp=E,38nm,1.0s			smax			
KMI	comp=N,190nm,5.3s			LR	LR		
KMI	comp=E,390nm,8.3s			LR	LR		
KMI	comp=Z,200nm,6.6s			LR	LR		
RAMN	**Ramite**	**15.02**	**259**	*e*P	**Pn**	**22 40 18.2**	**-1.6**
PKI	**Pulchoki** comp=Z,12nm,0.6s	**15.85**	**262**	*e*P	**Pn**	**22 40 29.3**	**-1.3**
PKI	**Pulchoki** comp=Z,16nm,0.7s	**15.85**	**262**	*e*P	**Pn**	**22 40 29.4**	**-1.2**
PKIN	**Phulchoki** comp=Z,16nm,0.7s	**15.86**	**263**	*e*P	**Pn**	**22 40 29.4**	**-1.3**
KKN	**Kakani** comp=Z,16nm,0.6s	**15.90**	**263**	*e*P	**Pn**	**22 40 30.4**	**-0.9**
DMN	**Daman** comp=Z,24nm,1.1s	**16.09**	**263**	*e*P	**Pn**	**22 40 32.4**	**-1.4**
SONM	**Songino Array** comp=Z,0.1nm,0.3s,baz=190,slow=7.3,SNR=3.0	**17.13**	**7**	P	**Pn**	**22 40 48.7**	**+1.9**
KSRS	**Korea Array** comp=Z,1.5nm,0.7s,mb3.5,baz=243,slow=9.4,SNR=5.7	**21.48**	**66**	P	**P**	**22 41 35.6**	**-0.6**
HIA	**Hailar**	**22.25**	**30**	P	**P**	**22 41 44.3**	**0.0**
MK31	**Makanchi Array**	**22.64**	**321**	*e*P	**P**	**22 41 48.1**	**-0.4**
MKAR	**Makanchi Array** comp=Z,2.4nm,1.0s,mb3.6,baz=106,slow=13,SNR=9.2	**22.64**	**321**	P	**P**	**22 41 49.7**	**+1.2**
MKAR	**Makanchi Array**	**22.64**	**321**	P	**P**	**22 41 49.7**	**+1.2**
TKM2	**Tokmak 2**	**25.00**	**306**	*e*P	**P**	**22 42 11.6**	**+0.2**
UCH	**Uchtor** comp=Z,1.9nm,0.9s,mb3.6	**25.54**	**304**	*e*P	**P**	**22 42 17.9**	**+1.6**
AAK	**Ala-Archa** comp=Z,2.6nm,0.4s,mb4.1,baz=199,slow=1.8,SNR=6.5	**25.68**	**305**	P	**P**	**22 42 21.3**	**+3.7**
AAK	**Ala-Archa** comp=Z,0.9nm,0.4s,mb3.6	**25.68**	**305**	P	**P**	**22 42 19.3**	**+1.8**
EKS2	**Erkin-Say** comp=Z,0.9nm,0.4s,mb3.6	**26.19**	**305**	*e*P	**P**	**22 42 22.8**	**+0.6**
ZALV	**Zalesovo Beam** comp=Z,0.7nm,0.6s,mb3.4,baz=138,slow=8.9,SNR=3.2	**26.59**	**335**	P	**P**	**22 42 25.9**	**+0.2**
KURK	**Kurchatov** comp=Z,1.5nm,0.9s,mb3.5,baz=129,slow=9.5,SNR=6.3	**26.96**	**324**	P	**P**	**22 42 29.0**	**0.0**
KURK	**Kurchatov** comp=Z,1.0nm,0.7s,mb3.5	**26.96**	**324**	*e*P	**P**	**22 42 29.1**	**+0.1**
KBL	**Kabul** comp=Z,1.1nm,0.6s,mb3.8	**28.86**	**286**	*e*P	**P**	**22 42 47.3**	**+1.0**
BVAR	**Borovoye Array** comp=Z,0.2nm,0.5s,mb3.2,baz=69,slow=9.9,SNR=2.9	**32.48**	**322**	P	**P**	**22 43 18.2**	**+0.2**
BVAR				PcP	PcP	22 46 03.4	-1.4
KIV	**Kislovodsk** comp=Z,2.9nm,0.9s,mb4.3	**48.77**	**303**	*e*P	**P**	**22 45 33.4**	**+0.9**
BR131	**Keskin Array S**	**56.16**	**300**	P	**P**	**22 46 27.1**	**-0.3**
ARCES	**ARCESS Array B** comp=Z,0.7nm,0.7s,mb3.8,baz=84,slow=8.4,SNR=3.7	**57.15**	**336**	P	**P**	**22 46 33.7**	**-0.2**
FINES	**FINESS Array B** comp=Z,1.5nm,0.8s,mb4.1,baz=90,slow=7.6,SNR=5.5	**57.32**	**326**	P	**P**	**22 46 34.5**	**-0.8**
WRA	**Warramunga Arr** comp=Z,1.1nm,0.5s,mb4.1,baz=337,slow=7.6,SNR=12	**58.73**	**145**	P	**P**	**22 46 45.1**	**-0.5**
KWP	**Kalwaria Pacla**	**61.28**	**313**	P	**P**	**22 47 02.9**	**0.0**
ASAR	**Alice Springs** comp=Z,0.3nm,0.4s,mb3.7,baz=336,slow=6.9,SNR=7.1	**61.71**	**148**	P	**P**	**22 47 05.5**	**-0.6**
HFS	**Hagfors** comp=Z,0.7nm,0.5s,mb4.0,baz=59,slow=5.6,SNR=6.1	**63.52**	**326**	P	**P**	**22 47 16.3**	**-1.4**
PSZ	**Piszkesteto**	**63.54**	**312**	*e*P	**P**	**22 47 18.2**	**+0.1**

NEIC ***15*** *22:48:49.8, 36.°24N×21.°84E, h10km, mb3.6/8, ML3.5(ATH), After ATH.*
ATH ***15*** *22:48:49.8, 36.°24N×21.°84E, h10km±1km, MD3.9/18, ML3.5*
CSEM ***15*** *22:48:50.9±0.2, 36.°29N×21.°85E, h2km, ML3.8/6, Error ellipse: s-maj=6.2km s-min=4.1km az=24.0*
IDC ***15*** *22:48:50.9±2.3, 36.°22N×22.°01E, h21km±5km, mb3.6/10, mb1 3.6/13, mb1mx3.6/28, mbtmp3.5/13, ML3.4/3, Error ellipse: s-maj=41.7km s-min=18.6km az=20.0*
ISCJB ***15*** *22:48:51.0±0.6, 36.°34N±0.°02×21.°96E±0.°03, h2km±3km, mb3.7/12, Error ellipse: s-maj=4.1km s-min=3.2km az=40.5*
THE ***15*** *22:48:52.9, 36.°40N×21.°97E, h1km±2km, ML3.8/6, Error ellipse: s-maj=4.4km s-min=1.5km az=237.0*
BEO ***15*** *22:48:57.0±1.1, 36.°74N×21.°83E, h0km, ML3.7/4*
ISC 15 22:48:52.1±0.6, 36.°34N±0.°02×21.°98E±0.°03, h1km±3km**, n228,** σ1°34/285**, mb3.8**/12**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.58**	**341**	P	**Pg**	**22 49 01.7**	**-1.7**
PYL				S	**Sg**	**22 49 09.2**	**-1.8**
PYL	**PYLOS**	**0.58**	**341**	*e*PB	**Pg**	**22 49 01.5**	**-1.9**
PYL				*e*SB	**Sg**	**22 49 11.5**	**+0.5**
PYL	**PYLOS**	**0.58**	**341**	*e*Pb	**Pg**	**22 49 01.5**	**-1.9**
PYL				*e*Sb	**Sg**	**22 49 11.5**	**+0.5**
ITM	**Ithomi**	**0.84**	**357**	*e*Pg	**Pg**	**22 49 07.3**	**-0.9**
ITM				*e*Sb	**Sg**	**22 49 20.7**	**+1.6**
ITM	**Ithomi**	**0.84**	**357**	P	**Pg**	**22 49 07.2**	**-1.0**
ITM				S	**Sg**	**22 49 18.7**	**-0.4**
ITM	**Ithomi**	**0.84**	**357**	*e*PG	**Pg**	**22 49 07.3**	**-0.9**
ITM				*e*SB	**Sg**	**22 49 20.7**	**+1.6**
ITM	**Ithomi**	**0.84**	**357**	*e*Pg	**Pg**	**22 49 07.3**	**-0.9**
ITM				*e*Sb	**Sg**	**22 49 20.7**	**+1.6**
KYTH	**Kithira**	**0.85**	**94**	*e*Pn	**Pg**	**22 49 08.9**	**+0.4**
KYTH	**Kithira**	**0.85**	**94**	*e*PN	**Pg**	**22 49 08.9**	**+0.4**
KYTH	**Kithira**	**0.85**	**94**	*e*Pn	**Pg**	**22 49 08.9**	**+0.4**
VLI	**Veliai**	**0.86**	**64**	*e*Pg	**Pg**	**22 49 08.7**	**+0.1**
VLI				*e*Sb	**Sg**	**22 49 23.1**	**+3.4**
VLI	**Veliai**	**0.86**	**64**	*e*PG	**Pg**	**22 49 08.7**	**+0.1**
VLI				*e*SB	**Sg**	**22 49 23.1**	**+3.4**
VLI	**Veliai**	**0.86**	**64**	*e*Pg	**Pg**	**22 49 08.7**	**+0.1**
VLI				*e*Sb	**Sg**	**22 49 23.1**	**+3.4**
VLX	**Vlachokerasia**	**1.08**	**17**	P	**Pg**	**22 49 11.8**	**-1.0**
VLX				S	**Sg**	**22 49 26.8**	**+0.1**
VLX	**Vlachokerasia**	**1.08**	**17**	*e*PN	**Pg**	**22 49 11.8**	**-1.0**
VLX				*e*SB	**Sg**	**22 49 28.5**	**+1.8**
VLX	**Vlachokerasia**	**1.08**	**17**	*e*Pn	**Pg**	**22 49 11.8**	**-1.0**
VLX				*e*Sb	**Sg**	**22 49 28.5**	**+1.8**
GUR	**Goura**	**1.62**	**10**	P	**Pn**	**22 49 21.4**	**-0.4**
GUR				S	**Sn**	**22 49 42.6**	**-0.6**
GUR	**Goura**	**1.62**	**10**	*e*PG	**Pn**	**22 49 21.6**	**-0.2**
GUR				*e*SN	**Sg**	**22 49 45.3**	**+1.2**
GUR	**Goura**	**1.62**	**10**	P	**Pn**	**22 49 21.4**	**-0.4**
GUR				S	**Sn**	**22 49 42.6**	**-0.6**
GUR				*e*Sn	**Sg**	**22 49 45.3**	**+1.2**
RLS	**Riolos of Patr**	**1.76**	**347**	*e*Pn	**Pn**	**22 49 23.5**	**-0.2**
RLS				*e*Sn	**Sg**	**22 49 48.6**	**-0.1**
RLS	**Riolos of Patr**	**1.76**	**347**	*e*PN	**Pn**	**22 49 23.5**	**-0.2**
RLS				*e*SN	**Sg**	**22 49 48.6**	**-0.1**
RLS	**Riolos of Patr**	**1.76**	**347**	*e*Pn	**Pn**	**22 49 23.5**	**-0.2**
RLS				*e*Sn	**Sg**	**22 49 48.6**	**-0.1**
KARN	**Karanos**	**1.83**	**120**	P	**Pn**	**22 49 24.2**	**-0.5**
KARN				S	**Sg**	**22 49 50.3**	**-0.7**
KARN	**Karanos**	**1.83**	**120**	*e*PN	**Pn**	**22 49 24.2**	**-0.5**
KARN				*e*SN	**Sn**	**22 49 48.7**	**+0.2**
KARN	**Karanos**	**1.83**	**120**	P	**Pn**	**22 49 24.2**	**-0.5**
KARN				*e*Sn	**Sn**	**22 49 48.7**	**+0.2**
LTK	**Loutraki**	**1.85**	**25**	P	**Pn**	**22 49 25.3**	**+0.3**
LTK				S	**Sn**	**22 49 48.4**	**-0.7**
LTK	**Loutraki**	**1.85**	**25**	*e*PN	**Pn**	**22 49 26.1**	**+1.1**
LTK	**Loutraki**	**1.85**	**25**	P	**Pn**	**22 49 25.3**	**+0.3**
LTK	**Loutraki**	**1.85**	**25**	*e*Pn	**Pn**	**22 49 26.1**	**+1.1**
LTK				S	**Sn**	**22 49 48.4**	**-0.7**
NAIG	**Nisos Aigina**	**1.86**	**40**	*e*Pn	**Pb**	**22 49 26.1**	**-0.8**
NAIG	**Nisos Aigina**	**1.86**	**40**	*e*PN	**Pb**	**22 49 26.1**	**-0.8**
NAIG	**Nisos Aigina**	**1.86**	**40**	*e*Pn	**Pb**	**22 49 26.1**	**-0.8**
LAKA	**Lakka**	**1.90**	**360**	P	**Pn**	**22 49 25.5**	**-0.1**
LAKA				S	**Sn**	**22 49 49.9**	**-0.2**
LAKA	**Lakka**	**1.90**	**360**	P	**Pn**	**22 49 25.5**	**-0.1**
LAKA				S	**Sn**	**22 49 49.9**	**-0.2**
UPR	**University Cam**	**1.94**	**356**	*e*PG	**Pb**	**22 49 27.1**	**-1.2**
UPR	**University Cam**	**1.94**	**356**	*e*Pg	**Pb**	**22 49 27.1**	**-1.2**
KFL	**Anninata**	**2.00**	**332**	P	**Pn**	**22 49 25.6**	**-1.5**
VAM	**Vamos**	**2.03**	**117**	*e*Pn	**Pn**	**22 49 26.9**	**-0.5**
VAM	**Vamos**	**2.03**	**117**	*e*PN	**Pn**	**22 49 26.9**	**-0.5**
VAM	**Vamos**	**2.03**	**117**	*e*Pn	**Pn**	**22 49 26.9**	**-0.5**
KALE	**Kalithea**	**2.05**	**4**	P	**Pn**	**22 49 28.5**	**+0.8**
KALE	**Kalithea**	**2.05**	**4**	P	**Pn**	**22 49 28.5**	**+0.8**
EFP	**Efpalio**	**2.08**	**358**	P	**Pn**	**22 49 29.4**	**+1.2**
EFP				S	**Sn**	**22 49 54.7**	**0.0**
EFP	**Efpalio**	**2.08**	**358**	*e*PN	**Pn**	**22 49 29.2**	**+1.1**
EFP				*e*SN	**Sn**	**22 49 56.8**	**+2.1**
EFP	**Efpalio**	**2.08**	**358**	*e*Pn	**Pn**	**22 49 29.2**	**+1.1**
EFP				S	**Sn**	**22 49 54.7**	**0.0**
EFP				*e*Sn	**Sn**	**22 49 56.8**	**+2.1**
VLY	**Voula,Athens**	**2.09**	**43**	*e*Pn	**Pn**	**22 49 28.8**	**+0.5**
VLY				*e*Sn	**Sb**	**22 49 58.8**	**+1.5**
VLY	**Voula,Athens**	**2.09**	**43**	*e*PN	**Pn**	**22 49 28.8**	**+0.5**
VLY				*e*SN	**Sb**	**22 49 58.8**	**+1.5**
VLY	**Voula,Athens**	**2.09**	**43**	*e*Pn	**Pn**	**22 49 28.8**	**+0.5**
VLY				*e*Sn	**Sb**	**22 49 58.8**	**+1.5**
DSF	**Desfina**	**2.11**	**12**	P	**Pn**	**22 49 28.8**	**+0.3**
DSF				S	**Sn**	**22 49 55.1**	**-0.3**
DSF	**Desfina**	**2.11**	**12**	P	**Pn**	**22 49 28.8**	**+0.3**
DSF				S	**Sn**	**22 49 55.1**	**-0.3**
ATH	**Athens Observa**	**2.14**	**40**	*e*Pn	**Pn**	**22 49 29.8**	**+0.9**
ATH	**Athens Observa**	**2.14**	**40**	*e*PN	**Pn**	**22 49 29.8**	**+0.9**
ATH	**Athens Observa**	**2.14**	**40**	*e*Pn	**Pn**	**22 49 29.8**	**+0.9**
VLS	**Valsamata**	**2.14**	**329**	*e*Pn	**Pn**	**22 49 28.7**	**-0.3**
VLS	**Valsamata**	**2.14**	**329**	P	**Pn**	**22 49 27.6**	**-1.4**
VLS	**Valsamata**	**2.14**	**329**	*e*PN	**Pn**	**22 49 28.7**	**-0.3**
VLS	**Valsamata**	**2.14**	**329**	P	**Pn**	**22 49 27.6**	**-1.4**
VLS	**Valsamata**	**2.14**	**329**	*e*Pn	**Pn**	**22 49 28.7**	**-0.3**
ATHU	**Athens Univers**	**2.17**	**41**	P	**Pn**	**22 49 29.0**	**-0.3**
ATHU				S	**Sn**	**22 49 57.6**	**+0.7**
ATHU	**Athens Univers**	**2.17**	**41**	P	**Pn**	**22 49 29.0**	**-0.3**
ATHU				S	**Sn**	**22 49 57.6**	**+0.7**
PTL	**Penteli**	**2.27**	**41**	*e*Pn	**Pn**	**22 49 31.3**	**+0.5**
PTL	**Penteli**	**2.27**	**41**	*e*PN	**Pn**	**22 49 31.3**	**+0.5**
PTL	**Penteli**	**2.27**	**41**	*e*Pn	**Pn**	**22 49 31.3**	**+0.5**
LKR	**Lokris**	**2.44**	**19**	*e*Pn	**Pn**	**22 49 33.9**	**+0.8**
LKR	**Lokris**	**2.44**	**19**	*e*PN	**Pn**	**22 49 33.9**	**+0.8**
LKR	**Lokris**	**2.44**	**19**	*e*Pn	**Pn**	**22 49 33.9**	**+0.8**
ATAL	**Atalanti**	**2.49**	**19**	P	**Pn**	**22 49 32.8**	**-0.9**
ATAL	**Atalanti**	**2.49**	**19**	P	**Pn**	**22 49 32.8**	**-0.9**
EVR	**Evrytania**	**2.58**	**357**	*e*Pn	**Pn**	**22 49 35.8**	**+0.9**
EVR				*e*Sn	**Sn**	**22 50 08.2**	**+1.4**
EVR	**Evrytania**	**2.58**	**357**	*e*PN	**Pn**	**22 49 35.8**	**+0.9**
EVR				*e*SN	**Sn**	**22 50 08.2**	**+1.4**
EVR	**Evrytania**	**2.58**	**357**	*e*Pn	**Pn**	**22 49 35.8**	**+0.9**
EVR				*e*Sn	**Sn**	**22 50 08.2**	**+1.4**
IDI	**Anoyia** 2.4nm,0.3s,baz=282,slow=14,SNR=3.5	**2.59**	**113**	Pn	**Pn**	**22 49 34.3**	**-0.8**
IDI	**Anoyia**	**2.59**	**113**	*e*Pn	**Pn**	**22 49 35.2**	**+0.1**
IDI	**Anoyia**	**2.59**	**113**	*e*PN	**Pn**	**22 49 35.2**	**+0.1**
IDI	**Anoyia**	**2.59**	**113**	*e*Pn	**Pn**	**22 49 35.2**	**+0.1**
AGG	**Agios Georgios**	**2.69**	**6**	P	**Pn**	**22 49 36.4**	**-0.1**
AGG				S	**Sn**	**22 50 09.5**	**-0.2**
AGG	**Agios Georgios**	**2.69**	**6**	P	**Pn**	**22 49 36.4**	**-0.1**
AGG				S	**Sn**	**22 50 09.5**	**-0.2**
APE	**Apeiranthos**	**2.94**	**75**	*e*Pn	**Pn**	**22 49 40.7**	**+0.7**
APE	**Apeiranthos**	**2.94**	**75**	P	**Pn**	**22 49 40.0**	**0.0**
APE				S	**Sn**	**22 50 16.9**	**+0.9**
APE	**Apeiranthos**	**2.94**	**75**	*e*PN	**Pn**	**22 49 40.7**	**+0.7**
APE	**Apeiranthos**	**2.94**	**75**	P	**Pn**	**22 49 40.0**	**0.0**
APE	**Apeiranthos**	**2.94**	**75**	*e*Pn	**Pn**	**22 49 40.7**	**+0.7**
APE				S	**Sn**	**22 50 16.9**	**+0.9**
LAST	**Lasithi**	**3.08**	**111**	*e*Pn	**Pn**	**22 49 42.3**	**+0.5**
LAST	**Lasithi**	**3.08**	**111**	*e*PN	**Pn**	**22 49 42.3**	**+0.5**
LAST	**Lasithi**	**3.08**	**111**	*e*Pn	**Pn**	**22 49 42.3**	**+0.5**
NEO	**Neokhori**	**3.12**	**18**	*e*Pn	**Pn**	**22 49 43.4**	**+1.0**
NEO	**Neokhori**	**3.12**	**18**	*e*PN	**Pn**	**22 49 43.4**	**+1.0**
NEO	**Neokhori**	**3.12**	**18**	*e*Pn	**Pn**	**22 49 43.4**	**+1.0**
NPS	**Neapolis**	**3.14**	**109**	*e*Pn	**Pn**	**22 49 42.0**	**-0.7**
NPS	**Neapolis**	**3.14**	**109**	*e*PN	**Pn**	**22 49 42.0**	**-0.7**
NPS	**Neapolis**	**3.14**	**109**	*e*Pn	**Pn**	**22 49 42.0**	**-0.7**
XOR	**Xorichti**	**3.17**	**17**	P	**Pn**	**22 49 42.8**	**-0.3**
XOR				S	**Sn**	**22 50 19.9**	**-1.6**
XOR	**Xorichti**	**3.17**	**17**	P	**Pn**	**22 49 42.8**	**-0.3**
XOR				S	**Sn**	**22 50 19.9**	**-1.6**
AOS	**Alonnisos**	**3.20**	**27**	P	**Pn**	**22 49 42.2**	**-1.3**
AOS	**Alonnisos**	**3.20**	**27**	P	**Pn**	**22 49 42.2**	**-1.3**
THL	**Klokotos Trika**	**3.22**	**0**	P	**Pn**	**22 49 43.1**	**-0.7**
THL	**Klokotos Trika**	**3.22**	**0**	*e*PN	**Pn**	**22 49 43.6**	**-0.2**
THL	**Klokotos Trika**	**3.22**	**0**	P	**Pn**	**22 49 43.1**	**-0.7**
THL	**Klokotos Trika**	**3.22**	**0**	*e*Pn	**Pn**	**22 49 43.6**	**-0.2**
JAN	**Janina**	**3.43**	**345**	*e*Pn	**Pn**	**22 49 46.1**	**-0.5**
JAN	**Janina**	**3.43**	**345**	*e*PN	**Pn**	**22 49 46.1**	**-0.5**
JAN	**Janina**	**3.43**	**345**	*e*Pn	**Pn**	**22 49 46.1**	**-0.5**
IGT	**Igoumenitsa**	**3.44**	**338**	P	**Pn**	**22 49 44.7**	**-2.1**
IGT	**Igoumenitsa**	**3.44**	**338**	P	**Pn**	**22 49 44.7**	**-2.1**
ZKR	**Zakros**	**3.66**	**108**	*e*Pn	**Pn**	**22 49 50.9**	**+1.1**
ZKR	**Zakros**	**3.66**	**108**	*e*PN	**Pn**	**22 49 50.9**	**+1.1**
ZKR	**Zakros**	**3.66**	**108**	*e*Pn	**Pn**	**22 49 50.9**	**+1.1**
**

LOR	Lormes	17.33	315	*e*P	Pn	22 52 56.8	+1.7
	9.2nm,1.0s						
LOR	Lormes	17.33	315	*e*P	Pn	22 52 56.8	+1.7
	4.6nm,1.0s						
LOR	Lormes	17.33	315	*e*P	Pn	22 52 56.8	+1.7
	4.6nm,1.0s						
CAF	Calviac	17.35	306	*e*P	Pn	22 52 55.4	0.0
CAF	Calviac	17.35	306	*e*P	Pn	22 52 55.4	0.0
MEZF	Maizieres J'vi	17.39	320	*e*P	Pn	22 52 57.7	+1.9
	26nm,1.1s						
MEZF	Maizieres J'vi	17.39	320	*e*P	Pn	22 52 57.7	+1.9
	26nm,1.1s						
MEZF	Maizieres J'vi	17.39	320	*e*P	Pn	22 52 57.7	+1.9
	26nm,1.1s						
SSF	Saint Saulge	17.42	314	*e*P	Pn	22 52 57.9	+1.6
SSF	Saint Saulge	17.42	314	*e*P	Pn	22 52 57.9	+1.6
BGF	Bois d'Agland	17.56	311	*e*P	Pn	22 52 57.4	-0.6
BGF	Bois d'Agland	17.56	311	*e*P	Pn	22 52 57.4	-0.6
TCF	Toulx Ste Croi	17.83	310	*e*P	Pn	22 53 02.3	+1.0
TCF	Toulx Ste Croi	17.83	310	*e*P	Pn	22 53 02.3	+1.0
RJF	Les Rejaudoux	17.85	306	*e*P	Pn	22 53 03.5	+1.9
GNI	Garni	18.27	71	P	Pn	22 53 06.8	0.0
	0.1nm,0.3s,baz=279,slow=13,SNR=3.0						
GNI	Garni	18.27	71	P	Pn	22 53 06.8	0.0
ETSF	Etsaut	18.53	298	*e*P	Pn	22 53 12.2	+2.2
SJPF	Ste Jean	19.05	298	*e*P	Pn	22 53 18.4	+2.0
	6.1nm,0.7s						
SJPF	Ste Jean	19.05	298	*e*P	Pn	22 53 18.4	+2.0
	3.0nm,0.7s						
IIGN	Ignalina	19.23	7	*e*P	Pn	22 53 16.0	-2.4
IIGN	Ignalina	19.23	7	*e*P	Pn	22 53 16.0	-2.4
	SNR=40						
IDID	Didziasalis	19.25	8	*e*P	Pn	22 53 16.2	-2.4
MFF	Saint Martin d	19.43	309	*e*P	Pn	22 53 21.7	+0.8
ISAL	Salakas	19.44	7	*e*P	Pn	22 53 18.4	-2.5
ISAL	Salakas	19.44	7	*e*P	Pn	22 53 18.4	-2.5
	SNR=35						
IZAR	Zarasai	19.63	7	*e*P	Pn	22 53 20.4	-2.7
LDF	La Druitiere	20.30	314	*e*P	P	22 53 31.1	+1.8
FLN	La Foliniere	20.59	314	*e*P	P	22 53 34.0	+1.6
GRR	Gorron	20.64	313	*e*P	P	22 53 34.4	+1.5
ESDC	Sonseca Array	20.69	287	P	P	22 53 29.9	-3.6
	0.5nm,0.6s,baz=93,slow=10,SNR=4.2						
ESDC	Sonseca Array	20.69	287	P	P	22 53 30.0	-3.5
SGMF	Saint Gilles	21.60	311	*e*P	P	22 53 46.0	+2.7
QUIF	Quistinic	21.84	310	*e*P	P	22 53 47.0	+1.1
HFS	Hagfors	24.40	350	P	P	22 54 08.3	-3.4
	1.9nm,0.8s,mb3.7,baz=144,slow=11,SNR=6.9						
HFS				pP		22 54 14.6	
	2.9nm,0.5s,baz=168,slow=11,SNR=6.3						
FINES	FINESS Array B	25.26	5	P	P	22 54 16.4	-3.1
	3.3nm,0.6s,mb4.2,baz=193,slow=7.8,SNR=7.6						
FINES				pP		22 54 21.9	
	3.3nm,0.6s,baz=162,slow=11,SNR=6.2						
EKA	Eskdalemuir Ar	25.60	326	P	P	22 54 20.9	-1.8
	0.8nm,0.7s,mb3.5,baz=121,slow=6.8,SNR=3.1						
EKA	Eskdalemuir Ar	25.60	326	P	P	22 54 20.9	-1.7
NB2	NORSAR Subarra	25.65	348	P	P	22 54 22.5	-0.5
	comp=Z,0.8nm,0.6s,mb3.5,baz=144,slow=9.3						
NOA	NORSAR Array B	25.65	348	pP	pP	22 54 26.6	+3.2
	comp=Z,0.8nm,0.7s,baz=156,slow=9.8,SNR=2.6						
KAF	Kangasniemi	25.94	5	*e*p	P	22 54 27.2	+1.6
	comp=Z,3.7nm,0.8s,mb4.1						
JOF	Joensuu	27.22	9	*e*p	P	22 54 32.9	-4.3
	comp=Z,2.1nm,0.8s,mb3.9						
ARCES	ARCESS Array B	33.31	2	P	P	22 55 28.3	-2.6
	comp=Z,1.5nm,0.8s,mb4.0,baz=180,slow=8.4,SNR=5.7						
BVAR	Borovoye Array	37.44	48	P	P	22 56 04.1	-2.6
	comp=Z,0.5nm,0.6s,mb3.4,baz=252,slow=6.7,SNR=6.6						
BVAR				pP		22 56 10.5	
	comp=Z,1.0nm,0.6s,baz=261,slow=5.9,SNR=7.2						
KURK	Kurchatov	42.47	52	P	P	22 56 43.2	-5.3
	comp=Z,0.3nm,0.3s,mb3.5,baz=277,slow=8.7,SNR=4.8						
MKAR	Makanchi Array	45.30	57	P	P	22 57 07.3	-3.9
	comp=Z,0.6nm,0.4s,mb3.9,baz=276,slow=7.1,SNR=18						
ZALV	Zalesovo Beam	46.07	47	P	P	22 57 13.2	-4.2
	comp=Z,0.5nm,0.3s,mb4.0,baz=271,slow=10,SNR=4.2						
KSRS	Korea Array	79.58	51	P	P	23 00 55.4	-5.5
	comp=Z,0.6nm,0.5s,mb3.8,baz=321,slow=5.9,SNR=4.1						

*IDC **15** 23:20:16.6±1.0, 0.°37N×129.°88E, h0km, mb4.0/9, mb1 4.2/10, mb1mx4.0/19, mbtmp4.0/10, ML3.4/1, MS3.1/1, Ms1 3.1/1, ms1mx2.3/19, Error ellipse: s-maj=53.3km s-min=15.0km az=74.0*

*NEIC **15** 23:20:19.1±3.0, 0.°45N×130.°07E, h21km±22km, mb4.2/9, Error ellipse: s-maj=12.7km s-min=5.2km az=61.0*

ISC 15 23:20:20.0±4.8, 0.°40N±0.°08×130.°0E±0.°1, h25km±34km, n31, σ0°78/32, mb4.2/15, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	13.25	170	*e*Pn	Pn	23 23 26.9	+0.3
KAKA				Sn	Sn	23 25 46.2	-7.0
KKM	Kota Kinabalu	14.85	292	*e*Pn	Pn	23 23 48.8	+0.3
FITZ	Fitzroy Crossi	18.88	193	P	Pn	23 24 37.7	-1.6
	0.1nm,0.3s,baz=27,slow=5.3,SNR=3.5						
KSM	Kuching	19.71	273	*e*P	Pn	23 24 48.6	-0.8
	7.3nm,0.4s						
WRAB	Tennant Creek	20.65	168	*e*P	P	23 24 57.8	-0.1
	12nm,0.9s						
WRA	Warramunga Arr	20.66	168	P	P	23 24 58.1	+0.1
	9.3nm,0.8s,baz=346,slow=11,SNR=16						
MBWA	Marble Bar	23.66	204	*e*P	P	23 25 29.7	0.0
ASAR	Alice Springs	24.22	171	P	P	23 25 35.4	+0.6
	12nm,0.8s,mb4.4,baz=345,slow=8.9,SNR=55						
STKA	Stephens Creek	33.93	162	P	P	23 27 01.5	+0.3
	4.4nm,0.8s,mb4.4,baz=343,slow=8.4,SNR=4.9						
STKA	Stephens Creek	33.93	162	*e*P	P	23 27 02.0	+0.9
	0.8nm,0.7s,mb3.8						
CMAR	Chiang Mai Arr	35.38	302	P	P	23 27 14.9	+1.0
	1.1nm,0.4s,mb4.1,baz=119,slow=7.4,SNR=8.4						
CHTO	Chiang Mai	35.54	303	P	P	23 27 15.3	0.0
KSRS	Korea Array	36.92	357	P	P	23 27 29.2	+2.3
	0.6nm,0.6s,mb3.6,baz=164,slow=14,SNR=3.3						
KSRS				LR	LR	23 41 41.7	
	comp=Z,32nm,20.7s,baz=175,slow=35						
LZH	Lanzhou	43.02	328	*e*P	P	23 28 19.0	+1.4
LZH				pP	pP	23 28 23.5	-1.7
LZH				sP	sP	23 28 26.1	-2.2
LZH				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.7						
MDJ	Mudanjiang	44.03	360	P	P	23 28 24.9	-0.7
ULN	Ulaanbaatar	51.30	340	*e*P	P	23 29 22.4	+0.4
	comp=Z,3.3nm,1.1s,mb4.2						
SONM	Songino Array	51.50	340	P	P	23 29 22.6	-0.9
	comp=Z,0.7nm,0.7s,mb3.7,baz=156,slow=8.5,SNR=6.9						
MK31	Makanchi Array	62.14	325	*e*P	P	23 30 39.4	+0.4
MKAR	Makanchi Array	62.14	325	P	P	23 30 39.3	+0.4
	comp=Z,2.3nm,0.7s,mb4.4,baz=94,slow=11,SNR=16						
UCH	Uchtor	64.82	317	*e*P	P	23 30 57.0	+0.2
	comp=Z,0.9nm,0.6s,mb4.0						
ZALV	Zalesovo Beam	65.02	332	P	P	23 30 57.1	-0.8
	comp=Z,0.4nm,0.4s,mb3.8,baz=130,slow=5.8,SNR=3.3						
KURK	Kurchatov	66.29	327	*e*P	P	23 31 05.8	-0.4
	comp=Z,3.1nm,0.6s,mb4.5						
BVAR	Borovoye Array	71.87	327	P	P	23 31 41.0	+0.2
	comp=Z,0.8nm,0.7s,mb3.8,baz=132,slow=8.8,SNR=7.9						
BRVK	Borovoye	71.95	327	P	P	23 31 40.5	-0.7
BILL	Bilibino	71.96	14	P	P	23 31 39.8	-1.2
ABKAR	Akbulak array	76.78	321	*e*P	P	23 32 09.4	0.0
	comp=Z,1.0nm,0.4s,mb4.1						
ARU	Arti	79.48	328	*e*P	P	23 32 23.9	-0.3
	comp=Z,2.0nm,0.6s,mb4.2						
PMR	Palmer	85.30	28	P	P	23 32 53.8	-0.8
GNI	Garni	86.11	310	P	P	23 32 58.7	-0.4
COLA	College	86.30	25	*e*P	P	23 32 59.0	-0.4
QSPA	South Pole Qui	90.32	180	*e*P	P	23 33 19.6	+1.3
	comp=Z,4.5nm,1.2s,mb4.7						

*IDC **15** 23:51:48.8±0.9, 24.°21N×107.°61E, h0km, mb3.7/9, mb1 3.9/9, mb1mx3.7/22, mbtmp3.8/9, Error ellipse: s-maj=37.9km s-min=18.6km az=61.0*

*NEIC **15** 23:51:50.0±0.5, 24.°17N×107.°64E, h10km, mb4.1/5, Error ellipse: s-maj=17.0km s-min=8.0km az=67.0*

*BJI **15** 23:51:51.8, 24.°48N×107.°75E, h18km, mB4.9/1, mb4.3/5, ML3.8/5, Ms3.7/2, Ms7 3.5/2*

*PLV **15** 23:53:36.1±4.7, 23.°42N×107.°86E, h0km±28km, ML3.0*

ISC 15 23:51:48.8±1.2, 24.°21N±0.°05×107.°66E±0.°05, h1km±8km, n29, σ0°86/30, mb3.9/14, Southeastern China

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MTZV	Met	2.92	205	*e*Pn	x	23 54 12.8	
MTZV				*e*Pg	x	23 54 19.3	
MTZV				*e*Sg	x	23 54 52.7	
YTV	Yen Tu	3.17	196	*e*Pn	x	23 54 16.0	
YTV				*e*Pg	x	23 54 22.3	
YTV				*e*Sg	x	23 54 57.6	
BGV	Bac-Giang	3.19	205	*e*Pn	x	23 54 18.5	
BGV				*e*Pg	x	23 54 25.6	
BGV				*e*Sg	x	23 55 00.4	
BGV				AML	AML	23 55 14.3	
	comp=Z,160nm,0.5s						
PLV	Phu-Lien	3.52	196	*e*Pn	x	23 54 24.1	
PLV				*e*Pg	x	23 54 33.5	
PLV				*e*Sg	x	23 55 06.3	
HNV	Hanoi	3.59	209	*e*Pn	x	23 54 30.6	
HNV				*e*Pg	x	23 54 36.3	
HNV				*e*Sg	x	23 55 19.3	
DSV	Doi Son	3.93	204	*e*Pn	x	23 54 30.9	
DSV				*e*Pg	x	23 54 39.4	
DSV				*e*Sg	x	23 55 21.3	
KMI	Kunming	4.57	282	Pn	Pn	23 53 00.8	+1.8
KMI				Pg	Pg	23 53 14.9	-1.5
KMI				Sn	Sn	23 53 51.5	-1.3
KMI				Sg	Sg	23 54 16.6	+1.0
KMI				smax			
	comp=N,190nm,1.0s						
KMI				smax			
	comp=E,130nm,1.0s						
KMI				LR	LR		
	comp=N,470nm,4.0s						
KMI				LR	LR		
	comp=E,720nm,6.7s						
KMI				LR	LR		
	comp=Z,480nm,9.1s						
QIZ	Qiongzhong	5.54	158	Pg	Pg	23 53 36.1	+1.1
QIZ				Sg	Sg	23 54 43.5	-3.4
QIZ				LR	LR		
	comp=N,410nm,7.0s						
QIZ				LR	LR		
	comp=Z,420nm,9.8s						
QIZ	Qiongzhong	5.54	158	*e*Pn	Pn	23 53 11.1	-1.4
QIZ				*e*Pg	Pg	23 53 35.9	+0.9
QIZ				*e*Sg	Sg	23 54 46.7	-0.2
ENH	Enshi	6.25	15	*e*Pn	Pn	23 53 22.1	-0.1
ENH				*e*Sn	Sn	23 54 34.0	-0.2
WHN	Wuhan	8.66	42	P	Pn	23 53 55.3	0.0
WHN				S	Sn	23 55 27.4	-6.2
XAN	Xi'an	9.85	6	P	Pn	23 54 10.4	-1.2
XAN				smax			
	comp=N,10.0nm,0.7s						
XAN				smax			
	comp=E,5.0nm,1.1s						
CMAR	Chiang Mai Arr	9.94	236	Lg		23 57 12.8	
	comp=E,0.5nm,0.3s,baz=51,slow=30,SNR=4.1						
GTA	Gaotai	16.54	338	*e*P	Pn	23 55 41.4	-0.6
GTA				pP	pP	23 55 46.3	+1.3
GTA				sP	sP	23 55 49.1	+4.0
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KSRS	Korea Array	21.78	48	P	P	23 56 41.8	-0.2
	comp=Z,0.5nm,0.4s,mb3.3,baz=206,slow=11,SNR=3.1						
SONM	Songino Array	23.59	358	P	P	23 57 01.6	+0.5
	comp=Z,3.6nm,0.7s,mb4.0,baz=179,slow=10,SNR=21						
ULN	Ulaanbaatar	23.61	359	*e*P	P	23 57 02.2	+0.9
	comp=Z,4.4nm,0.8s,mb4.0						
EKS2	Erkin-Say	33.44	312	P	P	23 58 28.8	-0.4
	comp=Z,1.5nm,0.7s,mb4.0						
ZALV	Zalesovo Beam	34.27	336	P	P	23 58 37.4	+1.1
	comp=Z,3.6nm,0.7s,mb4.4,baz=132,slow=8.4,SNR=13						
KURK	Kurchatov	34.69	327	*e*P	P	23 58 40.4	+0.5
	comp=Z,3.6nm,0.9s,mb4.3						
KBL	Kabul	35.01	296	P	P	23 58 42.4	-0.5
BVAR	Borovoye Array	40.19	325	P	P	23 59 25.5	-1.0
	comp=Z,0.6nm,0.6s,mb3.4,baz=98,slow=6.6,SNR=5.7						
BRVK	Borovoye	40.26	325	*e*P	P	23 59 28.1	+1.0
	comp=Z,1.5nm,0.6s,mb3.8						
WRA	Warramunga Arr	51.00	147	P	P	00 00 53.4	+1.0
	comp=Z,0.3nm,0.5s,mb3.5,baz=334,slow=8.7,SNR=8.8						
ASAR	Alice Springs	53.98	150	P	P	00 01 14.2	-0.2
	comp=Z,0.3nm,0.4s,mb3.7,baz=325,slow=6.5,SNR=5.0						
KIV	Kislovodsk	55.87	308	*e*P	P	00 01 28.2	+0.1
	comp=Z,3.3nm,0.5s,mb4.6						
AKASG	Malin Array Be	64.46	316	P	P	00 02 26.3	-0.5
	comp=Z,0.2nm,0.4s,mb3.7,baz=67,slow=7.1,SNR=4.0						
ARCES	ARCESS Array B	64.81	337	P	P	00 02 28.9	+0.1
	comp=Z,2.0nm,0.8s,mb4.4,baz=83,slow=10.0,SNR=4.3						
GERES	GERESS Array B	74.66	317	P	P	00 03 30.6	+0.7
	comp=Z,0.4nm,0.7s,mb3.6,baz=70,slow=5.8,SNR=5.4						

*IDC **16** 00:21:14.4±0.6, 55.°94N×162.°81E, h0km, mb4.1/19, mb1 4.3/20, mb1mx4.2/30, mbtmp4.1/20, ML3.6/1, MS3.4/7, Ms1 3.4/7, ms1mx3.1/37, Error ellipse: s-maj=16.9km s-min=11.7km az=20.0*

*MOS **16** 00:21:16.2±1.2, 56.°00N×163.°11E, h20km, mb4.7/42, Error ellipse: s-maj=11.6km s-min=5.3km az=96.2*

*KRSC **16** 00:21:17.2±0.7, 55.°99N×163.°25E, h23km±22km, ML4.8*

*NEIC **16** 00:21:18.7±4.2, 55.°91N×162.°73E, h26km±29km, mb4.5/44, MS3.9/3, Error ellipse: s-maj=8.3km s-min=6.2km az=123.0*

*BJI **16** 00:21:19.6, 56.°65N×162.°18E, h25km, mB4.7/7, mb4.4/7, Ms4.1/3, Ms7 4.0/3*

*SZGRF **16** 00:21:26.4, 57.°12N×162.°32E, h33km, mb4.8, Near east coast of Kamchatka Peninsula, Russia*

ISC 16 00:21:18.5±0.9, 55.°98N±0.°03×163.°26E±0.°04, h24km±6km, n229, σ1°14/247, mb4.4/81, MS3.7/14, 9C-11D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.34	313	*i* P	Pb	00 21 24.7	-1.3
SRKR	Sorokina	1.35	301	*i* P	Pn	00 21 41.5	-0.2
SRKR				*e*S	Sn	00 21 59.9	+1.1
ZLN	Zelenaya	1.38	273	*i* P	Pn	00 21 41.9	-0.3
ZLN				*e*S	Sn	00 22 00.5	+0.9
BZGR	Bezymyannyi-Gr	1.44	269	*i* P	Pn	00 21 42.5	-0.5
BZGR				*i* S	Sn	00 22 01.3	+0.2
KLY	Klyuchi	1.50	284	*i* P	Pn	00 21 41.9	-1.9
KLY				*i* S	Sn	00 22 00.3	-2.2
KRSR	Krestovskiy	1.53	280	*i* P	Pn	00 21 43.8	-0.4
KRSR				*i* S	Sn	00 22 02.8	-0.5
MKZ	Mys Kozlova	1.67	212	*i* P	Pn	00 21 44.9	-1.3
MKZ				*i* S	Sn	00 22 04.8	-2.0
KPT	Kopyto	1.71	271	*i* P	Pn	00 21 46.8	+0.1
KPT				*i* S	Sn	00 22 08.1	+0.4
KMNR	Kamenistaya	1.72	264	*i* P	Pn	00 21 47.0	+0.2
KMNR				*i* S	Sn	00 22 09.1	+1.2
BKI	Bering	1.73	116	*i* P	Pn	00 21 46.9	0.0
BKI				*i* S	Sn	00 22 08.4	+0.3
KOZR	Kozyr	1.89	274	PN	Pn	00 21 50.1	+0.9
KOZR				S	Sn	00 22 14.5	+2.3
KOZ	Kozyrevsk	1.90	274	*i* P	Pn	00 21 50.1	+0.8
KOZ				*i* S	Sn	00 22 14.5	+2.0
SRDR	Sredinnyy	2.01	281	*i* P	Pn	00 21 51.3	+0.5
SRDR				*i* S	Sn	00 22 16.3	+1.1
KII	Karymskiy	2.93	230	P	Pn	00 22 04.3	+0.8
KII				*i* S	Sn	00 22 39.5	+1.6
AVH	Avacha	3.78	226	*i* P	Pn	00 22 16.4	+1.2
AVH				*i* S	Sn	00 23 00.7	+1.9
GNL	Ganaly	3.83	236	*e*P	Pn	00 22 16.8	+0.9
INSR	Institute	3.98	225	P	Pn	00 22 19.3	+1.4
INSR				*i* S	Sn	00 23 04.5	+0.7
PET	Petropavlovsk	4.00	224	↓*e*PN	Pn	00 22 20.0	+1.9
PET				*e*S	Sn	00 23 03.0	-1.1
PET				pmax	pmax		
	comp=Z,100nm,0.7s						
PET				pmax	pmax		
	comp=Z,89nm,0.5s						
PET				smax			
	comp=E,400nm,0.8s						
PET				smax			
	comp=E,358nm,0.9s						
PET				smax			
	comp=N,328nm,0.7s						
PET				MLR	MLR		
	comp=Z,700nm,17.0s						
PET				MLR	MLR		
	comp=Z,400nm,13.0s						
PET	Petropavlovsk	4.00	224	P	Pn	00 22 19.0	+0.9
PET				*i* S	Sn	00 23 03.3	-0.8
PET	Petropavlovsk	4.00	224	*e*Pn	Pn	00 22 19.5	+1.4
PET				Sn	Sn	00 23 01.1	-3.0
MIPR	Malaya Ipel'ka	5.33	229	P	Pn	00 22 38.5	+2.1
FX1	Attu Island--F	6.56	114	Pn	Pn	00 22 54.0	+0.7
	comp=Z,4.2nm,0.3s,baz=252,slow=23,SNR=15						
FX1				Sn	Sn	00 24 05.1	-2.1
	comp=Z,5.0nm,0.3s,baz=180,slow=19,SNR=3.3						
SKR	Severo-Kuril's	6.81	222	*e*PN	Pn	00 22 56.7	-0.1
ALID	Alaid	6.88	225	P	Pn	00 23 00.6	+2.8
SEY	Seymchan	8.89	326	*e*PN	Pn	00 23 29.9	+4.7
ASAJ	Asahikawa	17.72	237	P	Pn	00 25 22.9	-0.4
	comp=Z,0.7nm,0.3s,baz=67,slow=11,SNR=8.8						
ASAJ	Asahikawa	17.72	237	P	Pn	00 25 23.0	-0.3
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
YAK	Yakutsk	18.16	303	*e*P	Pn	00 25 26.8	-1.8
YAK				pmax	pmax		
	comp=Z,23nm,1.0s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.2s						
YAK	Yakutsk	18.16	303	*e*P	Pn	00 25 28.2	-0.4
	comp=N,17nm,0.4s						
TIXI	Tiksi	21.34	331	*e*P	P	00 26 05.8	+2.5
TIXI				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.2						
TIXI	Tiksi	21.34	331	*e*P	P	00 26 05.8	+2.5
	comp=Z,11nm,0.8s,mb4.2						
COLA	College	25.08	49	*e*P	P	00 26 48.6	+8.0
MAJO	Matsushiro	25.79	232	*e*P	P	00 26 45.4	-1.9
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.4						
MAJO	Matsushiro	25.79	232	*e*P	P	00 26 45.4	-1.9
	comp=Z,7.7nm,0.6s,mb4.4						
MJAR	Matsushiro Arr	25.79	232	P	P	00 26 45.1	-2.2
	comp=Z,1.4nm,0.3s,mb4.0,baz=23,slow=8.2,SNR=6.2						
INK	Inuvik	30.46	41	P	P	00 27 29.7	+1.0
	comp=Z,2.6nm,0.7s,mb4.1,baz=289,slow=10,SNR=6.5						
INK	Inuvik	30.46	41	P	P	00 27 29.7	+1.0
INK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
INK	Inuvik	30.46	41	*e*P	P	00 27 30.2	+1.5
INCN	Inchon	30.68	248	P	P	00 27 27.6	-3.3
SONM	Songino Array	35.10	281	P	P	00 28 07.4	-2.0
	comp=Z,1.0nm,0.5s,mb4.0,baz=60,slow=7.6,SNR=8.7						
SONM				LR	LR	00 42 39.5	
	comp=Z,58nm,18.0s,MS3.4,baz=256,slow=37						
HHC	Hu-ho-hao-te	36.56	268	*e*P	P	00 28 19.8	-2.2
HHC				PP	PP	00 29 43.9	-1.4
HHC				PcP	PcP	00 30 44.9	0.0
HHC				S	S	00 33 52.5	-10
HHC				PcS	PcS	00 34 32.6	-0.1
HHC				SS	SS	00 36 18.9	-24
HHC				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.7						
HHC				pmax	pmax		
	comp=Z,28nm,4.9s						
HHC				LR	LR		
	comp=N,150nm,16.6s,MS3.9						
HHC				LR	LR		
	comp=E,120nm,17.8s,MS3.9						
HHC				LR	LR		
	comp=Z,150nm,14.6s,MS3.9						
YKA	Yellowknife Ar	39.80	46	P	P	00 28 50.4	+1.4
	comp=Z,2.4nm,0.8s,mb4.0,baz=304,slow=8.0,SNR=5.6						
RES	Resolute Bay	39.94	24	P	P	00 28 51.0	+0.9
	comp=Z,1.5nm,0.8s,mb3.8,baz=328,slow=10,SNR=5.4						
RES	Resolute Bay	39.94	24	P	P	00 28 51.0	+0.9
RES				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.9						
RES	Resolute Bay	39.94	24	*e*P	P	00 28 51.2	+1.2
ZALV	Zalesovo Beam	42.80	302	LR	LR	00 48 56.0	
	comp=Z,58nm,18.6s,MS3.5,baz=67,slow=39						
GTA	Gaotai	44.14	276	*e*P	P	00 29 23.9	-0.8
GTA				pP	pP	00 29 27.8	-4.4
GTA				sP	sP	00 29 30.3	-4.8
GTA				PP	PP	00 31 09.3	+1.8
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
GTA				pmax	pmax		
	comp=Z,57nm,4.5s						
GTA				LR	LR		
	comp=N,150nm,16.5s,MS4.2						
GTA				LR	LR		
	comp=E,150nm,15.3s,MS4.2						
GTA				LR	LR		
	comp=Z,200nm,14.1s,MS4.2						
KURK	Kurchatov	47.79	301	P	P	00 29 51.6	-1.7
	comp=Z,7.3nm,0.8s,mb4.8,baz=55,slow=7.9,SNR=29						
KURK	Kurchatov	47.79	301	⇑*i* P	P	00 29 50.8	-2.5
KURK				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
KURK	Kurchatov	47.79	301	*e*P	P	00 29 50.9	-2.4
	comp=Z,12nm,0.9s,mb4.9						
MKAR	Makanchi Array	48.58	295	P	P	00 29 56.6	-2.9
	comp=Z,1.9nm,0.8s,mb4.2,baz=51,slow=10,SNR=9.2						
MKAR	Makanchi Array	48.58	295	*e*P	P	00 29 57.1	-2.4
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BVAR	Borovoye Array	50.05	308	P	P	00 30 08.5	-2.1
	comp=Z,1.0nm,0.5s,mb4.1,baz=50,slow=8.6,SNR=9.2						
BRVK	Borovoye	50.07	308	*e*P	P	00 30 08.6	-2.2
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
BRVK	Borovoye	50.07	308	*e*P	P	00 30 08.6	-2.2
	comp=Z,1.5nm,0.5s,mb4.3						
SUMG	Summit	50.85	8	*e*P	P	00 30 17.6	+

NOA	**NORSAR Array B**	**61.26**	**345**	P	**P**	**00 31 30.2**	**-0.7**
	comp=Z,3.1nm,0.8s,mb4.5,baz=17,slow=6.8,SNR=10						
NOA				LR	LR	01 04 21.2	
	comp=Z,26nm,18.9s,MS3.4,baz=40,slow=42						
ANMO	**Albuquerque**	**62.00**	**68**	*e*P	**P**	**00 31 41.5**	**+5.2**
IZAR	**Zarasai**	**63.27**	**334**	*e*P	**P**	**00 31 44.5**	**0.0**
ISAL	**Salakas**	**63.47**	**334**	*e*P	**P**	**00 31 45.9**	**+0.1**
IDID	**Didziasalis**	**63.55**	**334**	*e*P	**P**	**00 31 46.5**	**+0.2**
VSR	**Storozhevoye**	**63.59**	**324**	*e*P	**P**	**00 31 45.5**	**-1.1**
VSR				pmax	pmax		
	comp=E,1.0nm,0.6s						
VSR				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
VSR				pmax	pmax		
	comp=N,1.0nm,0.3s						
IIGN	**Ignalina**	**63.64**	**334**	*e*P	**P**	**00 31 47.1**	**+0.2**
MNTX	**Cornudas Mount**	**65.09**	**70**	*e*P	**P**	**00 31 59.9**	**+3.0**
	comp=N,1.9nm,0.9s,mb4.1						
WMOK	**Wichita Mounta**	**66.11**	**63**	*e*P	**P**	**00 32 04.5**	**+1.2**
WMOK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
WMOK	**Wichita Mounta**	**66.11**	**63**	*e*P	**P**	**00 32 04.5**	**+1.3**
	comp=Z,3.8nm,1.0s,mb4.4						
AKASG	**Malin Array Be**	**67.06**	**330**	P	**P**	**00 32 08.1**	**-1.0**
	comp=Z,1.4nm,0.6s,mb4.2,baz=27,slow=5.9,SNR=7.0						
AKASG	**Malin Array Be**	**67.06**	**330**	*e*P	**P**	**00 32 08.0**	**-1.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	**Lajitas Array**	**67.86**	**70**	P	**P**	**00 32 16.9**	**+2.4**
	comp=Z,1.6nm,0.7s,mb4.2,baz=296,slow=4.3,SNR=13						
BSEG	**Bad Segeberg**	**68.22**	**343**	*e*P	**P**	**00 32 16.2**	**-0.2**
	comp=Z,1.9nm,1.2s,mb4.8						
ZEI	**Tsey**	**69.11**	**317**	*e*P	**P**	**00 32 19.8**	**-2.3**
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.8						
KWP	**Kalwaria Pacla**	**69.75**	**334**	*e*P	**P**	**00 32 26.7**	**+0.8**
KWP				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
KWP	**Kalwaria Pacla**	**69.75**	**334**	*e*P	**P**	**00 32 26.7**	**+0.7**
	comp=Z,14nm,1.0s,mb4.8						
KWP	**Kalwaria Pacla**	**69.75**	**334**	⇑*i*P	**P**	**00 32 26.7**	**+0.8**
OJC	**Ojcow**	**69.89**	**336**	*e*P	**P**	**00 32 26.1**	**-0.7**
IBBN	**Ibbenburen**	**70.20**	**344**	*e*P	**P**	**00 32 29.2**	**+0.5**
	comp=Z,11nm,0.9s,mb4.8						
CLZ	**Clausthal**	**70.23**	**343**	*e*P	**P**	**00 32 29.4**	**+0.6**
	comp=Z,6.0nm,1.0s,mb4.5						
CLZ	**Clausthal**	**70.23**	**343**	*e*P	**P**	**00 32 29.4**	**+0.6**
CLZ				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
CLL	**Collm**	**70.28**	**341**	*e*P	**P**	**00 32 29.0**	**-0.1**
	comp=Z,10.0nm,1.2s,mb4.6						
CLL	**Collm**	**70.28**	**341**	⇓*i*P	**P**	**00 32 29.2**	**+0.1**
CLL				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
CLL	**Collm**	**70.28**	**341**	⇓*i*P	**P**	**00 32 29.2**	**+0.1**
	comp=Z,10.0nm,1.2s,mb4.6						
CLL	**Collm**	**70.28**	**341**	⇓*i*P	**P**	**00 32 29.2**	**+0.1**
	comp=Z,10.0nm,1.2s,mb4.6						
STHS	**Stebnicka Huta**	**70.31**	**335**	*e*P	**P**	**00 32 30.8**	**+1.4**
STHS				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
STHS	**Stebnicka Huta**	**70.31**	**335**	*e*P	**P**	**00 32 30.8**	**+1.4**
	comp=Z,4.5nm,0.9s,mb4.4						
STHS	**Stebnicka Huta**	**70.31**	**335**	*e*P	**P**	**00 32 30.8**	**+1.4**
UPC	**Upice**	**70.45**	**338**	*e*P	**P**	**00 32 30.7**	**+0.5**
UPC	**Upice**	**70.45**	**338**	*e*P	**P**	**00 32 30.7**	**+0.5**
KOLS	**Kolonicke sedl**	**70.50**	**334**	*e*P	**P**	**00 32 30.8**	**+0.2**
KOLS				pmax	pmax		
	comp=Z,31nm,2.5s,mb4.8						
KOLS	**Kolonicke sedl**	**70.50**	**334**	*e*P	**P**	**00 32 30.8**	**+0.2**
	comp=Z,31nm,2.5s,mb4.8						
KOLS	**Kolonicke sedl**	**70.50**	**334**	*e*P	**P**	**00 32 30.8**	**+0.2**
BRG	**Berggiesshubel**	**70.51**	**340**	*e*P	**P**	**00 32 30.7**	**+0.1**
	comp=Z,4.5nm,1.1s,mb4.3						
BRG				*e*		00 33 07.2	
	comp=Z,3.3nm,0.8s						
DPC	**Dobruska-Polom**	**70.53**	**338**	*e*P	**P**	**00 32 31.3**	**+0.6**
DPC	**Dobruska-Polom**	**70.53**	**338**	*e*P	**P**	**00 32 31.3**	**+0.6**
OKC	**Ostrava-Krasne**	**70.62**	**337**	*e*P	**P**	**00 32 31.7**	**+0.4**
OKC				*e*		00 32 46.7	
OKC	**Ostrava-Krasne**	**70.62**	**337**	*e*P	**P**	**00 32 31.7**	**+0.4**
OKC				*es*P	sP	00 32 46.7	+4.7
CRVS	**Cervenica-Dubn**	**70.73**	**334**	*e*P	**P**	**00 32 32.0**	**0.0**
CRVS				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.2						
CRVS	**Cervenica-Dubn**	**70.73**	**334**	*e*P	**P**	**00 32 32.0**	**0.0**
	comp=Z,5.0nm,1.4s,mb4.2						
CRVS	**Cervenica-Dubn**	**70.73**	**334**	*e*P	**P**	**00 32 32.0**	**0.0**
MORC	**Moravsky Berou**	**70.81**	**337**	*e*P	**P**	**00 32 33.1**	**+0.6**
MORC				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
MORC	**Moravsky Berou**	**70.81**	**337**	*e*P	**P**	**00 32 33.1**	**+0.6**
	comp=Z,5.1nm,0.8s,mb4.5						
MORC	**Moravsky Berou**	**70.81**	**337**	⇑*i*P	**P**	**00 32 32.9**	**+0.4**
BURAR	**Bucovina Array**	**70.96**	**331**	⇓*i*P	**P**	**00 32 33.5**	**+0.1**
MOX	**Moxa**	**71.16**	**341**	*e*P	**P**	**00 32 34.5**	**-0.1**
	comp=Z,5.0nm,1.0s,mb4.4						
TANN	**Tannenbergstha**	**71.23**	**341**	*e*P	**P**	**00 32 35.0**	**0.0**
	comp=Z,3.0nm,0.8s,mb4.3						
PRU	**Pruhonice**	**71.24**	**339**	*e*P	**P**	**00 32 35.7**	**+0.7**
PRU	**Pruhonice**	**71.24**	**339**	*e*P	**P**	**00 32 35.7**	**+0.7**
KECS	**Kecovo**	**71.36**	**335**	*e*P	**P**	**00 32 35.5**	**-0.3**
KECS				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.8						
KECS	**Kecovo**	**71.36**	**335**	*e*P	**P**	**00 32 35.5**	**-0.3**
	comp=Z,1.4nm,0.9s,mb3.9						
KECS	**Kecovo**	**71.36**	**335**	*e*P	**P**	**00 32 35.5**	**-0.3**
NKC	**Novy Kostel**	**71.41**	**341**	*e*P	**P**	**00 32 36.2**	**+0.2**
NKC	**Novy Kostel**	**71.41**	**341**	*e*P	**P**	**00 32 36.2**	**+0.2**
VRAC	**Vranov**	**71.46**	**338**	⇓*i*P	**P**	**00 32 37.4**	**+1.0**
TREC	**Trest**	**71.71**	**338**	*e*P	**P**	**00 32 38.4**	**+0.5**
TREC	**Trest**	**71.71**	**338**	*e*P	**P**	**00 32 38.4**	**+0.5**
VYHS	**Vyhne**	**71.73**	**336**	*e*P	**P**	**00 32 38.7**	**+0.7**
VYHS				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.0						
VYHS	**Vyhne**	**71.73**	**336**	*e*P	**P**	**00 32 38.7**	**+0.7**
	comp=Z,2.2nm,1.1s,mb4.0						
VYHS	**Vyhne**	**71.73**	**336**	*e*P	**P**	**00 32 38.7**	**+0.7**
ROTZ	**Rotzenmuhle**	**71.90**	**341**	*e*P	**P**	**00 32 39.4**	**+0.4**
	comp=Z,4.0nm,0.8s,mb4.4						
PSZ	**Piszkesteto**	**72.03**	**335**	*e*P	**P**	**00 32 40.6**	**+0.8**
PSZ				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
PSZ	**Piszkesteto**	**72.03**	**335**	*e*P	**P**	**00 32 40.6**	**+0.8**
	comp=Z,3.2nm,0.7s,mb4.4						
PSZ	**Piszkesteto**	**72.03**	**335**	⇓*i*P	**P**	**00 32 40.8**	**+1.0**
GRA1	**Grafenberg Arr**	**72.15**	**341**	*e*P	**P**	**00 32 40.7**	**+0.2**
	comp=Z,14nm,1.0s,mb4.8						
GRF	**Grafenberg Arr**	**72.15**	**341**	*e*P	**P**	**00 32 40.7**	**+0.2**
	comp=Z,14nm,1.0s,mb4.8						
GRF	**Grafenberg Arr**	**72.15**	**341**	*e*P	**P**	**00 32 40.7**	**+0.2**
GRF				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
GRF	**Grafenberg Arr**	**72.15**	**341**	*e*P	**P**	**00 32 40.7**	**+0.2**
GRF				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
KHC	**Kasperske Hory**	**72.25**	**340**	*e*P	**P**	**00 32 41.8**	**+0.7**
KHC				*e*		00 32 54.9	
KHC	**Kasperske Hory**	**72.25**	**340**	*e*P	**P**	**00 32 41.8**	**+0.7**
KHC				*es*P	sP	00 32 54.9	+3.1
WET	**Wettzell**	**72.37**	**340**	*e*P	**P**	**00 32 42.4**	**+0.6**
	comp=Z,7.0nm,1.1s,mb4.5						
WET	**Wettzell**	**72.37**	**340**	*e*P	**P**	**00 32 42.4**	**+0.6**
WET				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
ZST	**Bratislava**	**72.40**	**337**	*e*P	**P**	**00 32 44.2**	**+2.2**
ZST				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
ZST	**Bratislava**	**72.40**	**337**	*e*P	**P**	**00 32 44.2**	**+2.2**
	comp=Z,3.8nm,0.6s,mb4.5						
ZST	**Bratislava**	**72.40**	**337**	*e*P	**P**	**00 32 44.2**	**+2.2**
GEC2	**GERESS Array S**	**72.50**	**339**	*e*P	**P**	**00 32 42.9**	**+0.3**
	comp=Z,4.0nm,0.9s,mb4.3						
GEC2	**GERESS Array S**	**72.50**	**339**	*e*P	**P**	**00 32 42.9**	**+0.3**
GEC2				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
GERES	**GERESS Array B**	**72.50**	**339**	P	**P**	**00 32 42.8**	**+0.2**
	comp=Z,2.6nm,0.8s,mb4.2,baz=34,slow=5.0,SNR=25						
GERES				LR	LR	01 09 05.8	
	comp=Z,44nm,19.0s,MS3.8,baz=284,slow=40						
BAIF	**Baives**	**72.90**	**346**	*e*P	**P**	**00 32 45.0**	**0.0**
	comp=Z,5.3nm,0.8s,mb4.2						
BAIF	**Baives**	**72.90**	**346**	*e*P	**P**	**00 32 45.0**	**0.0**
BAIF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
BAIF	**Baives**	**72.90**	**346**	*e*P	**P**	**00 32 45.0**	**0.0**
	comp=Z,2.7nm,0.8s,mb4.2						
CONA	**Conrad Observa**	**72.92**	**338**	⇑*i*P	**P**	**00 32 46.2**	**+1.0**
	comp=Z,5.7nm,1.2s,mb4.4						
STU	**Stuttgart**	**73.39**	**342**	*e*P	**P**	**00 32 48.3**	**+0.4**
	comp=Z,14nm,0.7s,mb5.0						
RJOB	**Jochberg**	**73.73**	**340**	*e*P	**P**	**00 32 50.5**	**+0.6**
	comp=Z,8.0nm,0.9s,mb4.7						
BFO	**Black Forest**	**73.97**	**343**	*e*P	**P**	**00 32 51.2**	**-0.1**
	comp=Z,6.0nm,1.2s,mb4.4						
BFO	**Black Forest**	**73.97**	**343**	*e*P	**P**	**00 32 51.2**	**-0.1**
BFO				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.4						
CDF	**Champ du Feu**	**74.06**	**344**	*e*P	**P**	**00 32 51.9**	**+0.1**
	comp=Z,7.8nm,0.8s,mb4.4						
CDF	**Champ du Feu**	**74.06**	**344**	*e*P	**P**	**00 32 51.9**	**+0.1**
CDF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
CDF	**Champ du Feu**	**74.06**	**344**	*e*P	**P**	**00 32 51.9**	**+0.1**
	comp=Z,3.9nm,0.8s,mb4.4						
KBA	**Koelnbreinsper**	**74.25**	**339**	⇓*i*P	**P**	**00 32 54.2**	**+1.3**
	comp=Z,7.4nm,0.8s,mb4.7						
MEZF	**Maizieres J'vi**	**74.31**	**345**	*e*P	**P**	**00 32 52.6**	**-0.7**
	comp=Z,3.7nm,0.5s,mb4.3						
MEZF	**Maizieres J'vi**	**74.31**	**345**	*e*P	**P**	**00 32 52.6**	**-0.7**
	comp=Z,3.7nm,0.5s,mb4.6						
WTTA	**Wattenberg**	**74.41**	**340**	⇑*i*P	**P**	**00 32 54.8**	**+0.9**
	comp=Z,8.2nm,0.9s,mb4.6						
MOTA	**Moosalm**	**74.43**	**341**	⇑*i*P	**P**	**00 32 54.5**	**+0.5**
	comp=Z,6.9nm,1.0s,mb4.5						
OBKA	**Obir**	**74.55**	**338**	⇑*i*P	**P**	**00 32 55.4**	**+0.7**
	comp=Z,12nm,0.9s,mb4.8						
HAU	**Haudompre**	**74.60**	**344**	*e*P	**P**	**00 32 54.8**	**-0.2**
	comp=Z,7.7nm,0.8s,mb4.4						
HAU				*e*MLR	MLR		
	comp=Z,59nm,19.5s,MS3.6						
HAU	**Haudompre**	**74.60**	**344**	*e*P	**P**	**00 32 54.8**	**-0.2**
HAU				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
HAU				MLR	MLR		
	comp=Z,60nm,19.5s,MS3.9						
HAU	**Haudompre**	**74.60**	**344**	*e*P	**P**	**00 32 54.8**	**-0.2**
	comp=Z,3.8nm,0.8s,mb4.4						
HAU				LR	LR		
	comp=Z,60nm,19.5s,MS3.9						
HINF	**Hinteralfeld**	**74.70**	**344**	*e*P	**P**	**00 32 55.3**	**-0.3**
ABTA	**Abfaltersbach**	**74.74**	**340**	⇑*i*P	**P**	**00 32 56.1**	**+0.4**
	comp=Z,7.7nm,1.1s,mb4.6						
FLN	**La Foliniere**	**74.75**	**349**	*e*P	**P**	**00 32 55.4**	**-0.4**
	comp=Z,14nm,0.8s,mb4.6						
FLN				*e*MLR	MLR		
	comp=Z,56nm,19.8s,MS3.6						
FLN	**La Foliniere**	**74.75**	**349**	*e*P	**P**	**00 32 55.4**	**-0.4**
FLN				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
FLN				MLR	MLR		
	comp=Z,60nm,19.8s,MS3.9						
FLN	**La Foliniere**	**74.75**	**349**	*e*P	**P**	**00 32 55.4**	**-0.4**
	comp=Z,6.8nm,0.8s,mb4.6						
FLN				LR	LR		
	comp=Z,60nm,19.8s,MS3.9						
FETA	**Feichten**	**74.81**	**341**	⇑*i*P	**P**	**00 32 57.0**	**+0.8**
	comp=Z,7.5nm,0.9s,mb4.6						
LDF	**La Druitiere**	**74.88**	**349**	*e*P	**P**	**00 32 55.5**	**-1.1**
GRR	**Gorron**	**75.16**	**349**	*e*P	**P**	**00 32 58.0**	**-0.2**
	comp=Z,15nm,0.8s,mb4.7						
GRR	**Gorron**	**75.16**	**349**	*e*P	**P**	**00 32 58.0**	**-0.2**
GRR				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
GRR	**Gorron**	**75.16**	**349**	*e*P	**P**	**00 32 58.0**	**-0.2**
	comp=Z,7.6nm,0.8s,mb4.7						
ROSF	**Rostrenen**	**75.45**	**351**	*e*P	**P**	**00 33 00.0**	**+0.2**
SGMF	**Saint Gilles**	**75.46**	**350**	*e*P	**P**	**00 32 59.8**	**-0.1**
BRTR	**Keskin Array B**	**75.52**	**322**	P	**P**	**00 32 59.9**	**-0.6**
	comp=Z,0.6nm,0.7s,mb3.6,baz=83,slow=4.0,SNR=6.6						
BRTR	**Keskin Array B**	**75.52**	**322**	*e*P	**P**	**00 33 00.3**	**-0.1**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
LOR	**Lormes**	**75.68**	**346**	*e*P	**P**	**00 33 00.9**	**-0.3**
	comp=Z,6.9nm,0.9s,mb4.3						
LOR				*e*MLR	MLR		
	comp=Z,56nm,20.2s,MS3.6						
LOR	**Lormes**	**75.68**	**346**	*e*P	**P**	**00 33 00.9**	**-0.3**
LOR				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
LOR				MLR	MLR		
	comp=Z,60nm,20.3s,MS3.9						
LOR	**Lormes**	**75.68**	**346**	*e*P	**P**	**00 33 00.9**	**-0.3**
	comp=Z,3.5nm,0.9s,mb4.3						
LOR				LR	LR		
	comp=Z,60nm,20.3s,MS3.9						
QUIF	**Quistinic**	**75.85**	**351**	*e*P	**P**	**00 33 02.0**	**-0.2**
SSF	**Saint Saulge**	**75.93**	**346**	*e*P	**P**	**00 33 02.5**	**-0.1**
CABF	**La Chapelle**	**76.00**	**344**	*e*P	**P**	**00 33 03.3**	**+0.3**
	comp=Z,7.6nm,0.8s,mb4.4						
CABF	**La Chapelle**	**76.00**	**344**	*e*P	**P**	**00 33 03.3**	**+0.3**
CABF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
CABF	**La Chapelle**	**76.00**	**344**	*e*P	**P**	**00 33 03.3**	**+0.3**
	comp=Z,3.8nm,0.8s,mb4.4						
AVF	**Avril sur Loir**	**76.22**	**346**	*e*P	**P**	**00 33 04.2**	**-0.1**
	comp=Z,7.8nm,0.9s,mb4.3						
AVF	**Avril sur Loir**	**76.22**	**346**	*e*P	**P**	**00 33 04.2**	**-0.1**
AVF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
AVF	**Avril sur Loir**	**76.22**	**346**	*e*P	**P**	**00 33 04.2**	**-0.1**
	comp=Z,3.9nm,0.9s,mb4.3						
SMF	**Signal de Mont**	**76.29**	**346**	*e*P	**P**	**00 33 04.3**	**-0.4**
MFF	**Saint Martin d**	**76.84**	**348**	*e*P	**P**	**00 33 08.0**	**+0.2**
TCF	**Toulx Ste Croi**	**76.86**	**347**	*e*P	**P**	**00 33 07.9**	**0.0**
LPL	**La Plagne**	**76.96**	**343**	*e*P	**P**	**00 33 09.7**	**+1.2**
	comp=Z,11nm,0.8s,mb4.5						
LPL	**La Plagne**	**76.96**	**343**	*e*P	**P**	**00 33 09.7**	**+1.2**
LPL				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
LPL	**La Plagne**	**76.96**	**343**	*e*P	**P**	**00 33 09.7**	**+1.2**
	comp=Z,5.7nm,0.8s,mb4.5						
LPG	**La Plagne**	**76.97**	**343**	*e*P	**P**	**00 33 09.9**	**+1.3**
	comp=Z,12nm,0.8s,mb4.6						
LPG	**La Plagne**	**76.97**	**343**	*e*P	**P**	**00 33 09.9**	**+1.3**
LPG				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
LPG	**La Plagne**	**76.97**	**343**	*e*P	**P**	**00 33 09.9**	**+1.3**
	comp=Z,6.3nm,0.8s,mb4.6						
ORIF	**Oris-en-Rattie**	**77.68**	**344**	*e*P	**P**	**00 33 13.4**	**+0.9**
	comp=Z,11nm,0.8s,mb4.5						
ORIF				*e*MLR	MLR		
	comp=Z,50nm,20.8s,MS3.5						
ORIF	**Oris-en-Rattie**	**77.68**	**344**	*e*P	**P**	**00 33 13.4**	**+0.9**
ORIF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
ORIF	**Oris-en-Rattie**	**77.68**	**344**	*e*P	**P**	**00 33 13.4**	**+0.9**
	comp=Z,5.6nm,0.8s,mb4.5						
CAF	**Calviac**	**78.22**	**346**	*e*P	**P**	**00 33 15.0**	**-0.6**
LFF	**La Frestale**	**78.38**	**347**	*e*P	**P**	**00 33 16.2**	**-0.2**
WRAB	**Tennant Creek**	**79.48**	**208**	P	**P**	**00 33 21.5**	**-1.1**
WRA	**Warramunga Arr**	**79.49**	**208**	P	**P**	**00 33 21.7**	**-1.0**
	comp=Z,0.5nm,0.9s,mb3.5,baz=13,slow=5.8,SNR=3.4						
MTLF	**Montolieu**	**79.76**	**346**	*e*P	**P**	**00 33 24.7**	**+0.7**
EPF	**Esparros**	**80.31**	**347**	*e*P	**P**	**00 33 26.9**	**-0.1**
FITZ	**Fitzroy Crossi**	**80.33**	**216**	P	**P**	**00 33 25.4**	**-1.8**
ETSF	**Etsaut**	**80.55**	**348**	*e*P	**P**	**00 33 29.2**	**+1.0**
	comp=Z,7.9nm,0.9s,mb4.3						
ETSF	**Etsaut**	**80.55**	**348**	*e*P	**P**	**00 33 29.2**	**+1.0**
ETSF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
ETSF	**Etsaut**	**80.55**	**348**	*e*P	**P**	**00 33 29.2**	**+1.0**
	comp=Z,4.0nm,0.9s,mb4.3						
ASAR	**Alice Springs**	**83.16**	**207**	P	**P**	**00 33 41.8**	**-0.2**
	comp=Z,0.8nm,1.0s,mb3.7,baz=359,slow=5.3,SNR=4.7						
ASAR	**Alice Springs**	**83.16**	**207**	*e*P	**P**	**00 33 44.3**	**+2.3**
ASAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ESDC	**Sonseca Array**	**84.10**	**350**	P	**P**	**00 33 47.5**	**+0.6**
	comp=Z,1.0nm,0.6s,mb4.1,baz=5.0,slow=5.5,SNR=12						
NWAO	**Narrogin (SRO)**	**96.85**	**218**	P	**P**	**00 34 46.7**	**-0.1**

*ISCJB **16** 00:36:30.5±0.7, 10°.82N±0°.05×62°.17W±0°.03, h90km±7km, Error ellipse: s-maj=8.4km s-min=4.8km az=169.1*
*FUNV **16** 00:36:31.5, 10°.86N×62°.09W, h84km, MW3.1*
*TRN **16** 00:36:32.1, 10°.84N×62°.13W, h81km, MD2.7*
*NEIC **16** 00:36:32.3, 10°.84N×62°.14W, h79km, MD2.7(TRN), After TRN.*
ISC 16 00:36:31.4±0.7, **10°.82N**±0°.05×**62°.16W**±0°.03, **h85**km±7km,

n23, σ0°.69/39, **1D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.19**	**199**	*e*P	**Pn**	**00 36 44.1**	**+0.3**
GUIV				*e*S	**Sn**	**00 36 52.4**	**-0.5**
TCE	**Chacachacare**	**0.42**	**107**	*e*P	**Pn**	**00 36 45.5**	**+0.5**
TCE				*e*S	**Sn**	**00 36 55.0**	**-0.1**
TCE	**Chacachacare**	**0.42**	**107**	*e*P	**Pn**	**00 36 45.5**	**+0.5**
TCE				*e*S	**Sn**	**00 36 55.0**	**-0.1**
TRN	**Trinidad (W)**	**0.77**	**103**	*e*P	**Pn**	**00 36 48.5**	**+0.4**
TRN				*e*S	**Sn**	**00 36 59.7**	**-1.0**
TRN	**Trinidad (W)**	**0.77**	**103**	*e*P	**Pn**	**00 36 48.5**	**+0.4**
TRN				*e*S	**Sn**	**00 36 59.7**	**-1.0**
GUNV	**Guanoco**	**1.01**	**229**	*e*P	**Pn**	**00 36 51.9**	**+1.0**
GUNV				*e*S	**Sn**	**00 37 06.5**	**+1.0**
CRUV	**Carupano**	**1.07**	**262**	*e*P	**Pn**	**00 36 52.6**	**+1.0**
ITEV	**Isla Los Testi**	**1.09**	**299**	⇓*i*P	**Pn**	**00 36 52.2**	**+0.4**
ITEV				*e*S	**Sn**	**00 37 06.9**	**-0.2**
TBH	**Brigand Hill**	**1.13**	**107**	*e*P	**Pn**	**00 36 52.7**	**+0.5**
TBH				*e*S	**Sn**	**00 37 07.7**	**-0.3**
TBH	**Brigand Hill**	**1.13**	**107**	*e*P	**Pn**	**00 36 52.7**	**+0.5**
TBH				*e*S	**Sn**	**00 37 07.7**	**-0.3**
TPR	**Prospect**	**1.41**	**75**	*e*P	**Pn**	**00 36 56.1**	**+0.4**
TPR				*e*S	**Sn**	**00 37 14.6**	**+0.5**
TPR	**Prospect**	**1.41**	**75**	*e*P	**Pn**	**00 36 56.1**	**+0.4**
TPR				*e*S	**Sn**	**00 37 14.6**	**+0.5**
GRW	**Mount Saint Ca**	**1.42**	**20**	*e*P	**Pn**	**00 36 56.9**	**+1.0**
GRW				*e*S	**Sn**	**00 37 13.6**	**-0.7**
GRW	**Mount Saint Ca**	**1.42**	**20**	*e*P	**Pn**	**00 36 56.9**	**+1.0**
GRW				*e*S	**Sn**	**00 37 13.6**	**-0.7**
BOT	**Bacolet**	**1.46**	**76**	*e*P	**Pn**	**00 36 56.5**	**+0.1**
BOT	**Bacolet**	**1.46**	**76**	*e*P	**Pn**	**00 36 56.5**	**+0.1**
TOSP	**Speyside**	**1.67**	**73**	*e*P	**Pn**	**00 36 58.8**	**-0.2**
TOSP				*e*S	**Sn**	**00 37 19.4**	**-0.6**
PCRV	**Puerto La Cruz**	**2.52**	**255**	*e*P	**Pn**	**00 37 09.9**	**-0.4**
PCRV				*e*S	**Sn**	**00 37 38.9**	**-1.3**
IBAV	**Isla La Blanqu**	**2.57**	**293**	*e*P	**Pn**	**00 37 10.6**	**-0.4**
RIOV	**Rio Grande**	**2.76**	**173**	*e*P	**Pn**	**00 37 13.4**	**-0.2**
GURV	**El Guri**	**3.18**	**197**	*e*P	**Pn**	**00 37 18.6**	**-0.6**
BIRV	**Birongo**	**4.05**	**265**	*e*P	**Pn**	**00 37 31.9**	**+0.9**
BAUV	**El Baul**	**6.09**	**253**	*e*P	**Pn**	**00 37 57.4**	**-1.4**
BAUV				*e*S	**Sn**	**00 39 02.5**	**-4.6**

*CSEM **16** 00:42:46.8±0.2, 37°.89N×21°.48E, h5km, ML2.5, Error ellipse: s-maj=4.4km s-min=3.4km az=58.0*
*ATH **16** 00:42:47.4, 37°.92N×21°.49E, h7km±3km, MD3.4/18, ML2.5*
*THE **16** 00:42:47.6, 37°.90N×21°.50E, h0km±3km, ML3.2/12, Error ellipse: s-maj=3.2km s-min=0.9km az=196.0*
*NEIC **16** 00:42:47.4, 37°.92N×21°.49E, h7km, ML3.2(THE), ML2.5(ATH), After ATH.*
*ISCJB **16** 00:42:47.1±0.4, 37°.88N±0°.02×21°.50E±0°.03, h10km, Error ellipse: s-maj=3.3km s-min=2.8km az=27.5*
ISC 16 00:42:47.4±0.4, **37°.89N**±0°.02×**21°.50E**±0°.03, **h5**km±3km,

n95, σ1°.17/139, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.17**	**351**	*e*Pg	**Pg**	**00 42 51.3

VLI	Veliai	1.64	135	*e*Pb	Pb	00 43 18.7	+0.7
THL	Klokotos Trika	1.72	13	P	Pn	00 43 18.5	+0.5
THL				S	Sn	00 43 42.8	+2.5
THL	Klokotos Trika	1.72	13	*e*PG	Pg	00 43 18.4	-2.0
THL				*e*SB	Sb	00 43 42.7	+1.3
THL	Klokotos Trika	1.72	13	P	Pn	00 43 18.5	+0.5
THL				*e*Sb	Sb	00 43 42.7	+1.3
ATH	Athens Observa	1.75	87	*e*Pn	Pn	00 43 21.1	+2.7
ATH	Athens Observa	1.75	87	*e*PN	Pn	00 43 21.1	+2.7
ATHU	Athens Univers	1.81	87	P	Pn	00 43 20.3	+1.1
ATHU	Athens Univers	1.81	87	P	Pn	00 43 20.3	+1.1
VLY	Voula,Athens	1.82	90	*e*Pn	Pn	00 43 20.6	+1.3
VLY	Voula,Athens	1.82	90	*e*PN	Pn	00 43 20.6	+1.3
VLY	Voula,Athens	1.82	90	*e*Pn	Pn	00 43 20.6	+1.3
JAN	Janina	1.84	344	*e*Pn	Pn	00 43 20.1	+0.5
JAN	Janina	1.84	344	*e*PN	Pn	00 43 20.1	+0.5
JAN	Janina	1.84	344	*e*Pn	Pn	00 43 20.1	+0.5
PTL	Penteli	1.88	84	*e*Pg	Pg	00 43 22.1	-1.3
PTL	Penteli	1.88	84	*e*PG	Pg	00 43 22.1	-1.3
PTL	Penteli	1.88	84	*e*Pg	Pg	00 43 22.1	-1.3
IGT	Igoumenitsa	1.88	331	P	Pn	00 43 19.7	-0.4
IGT	Igoumenitsa	1.88	331	P	Pn	00 43 19.7	-0.4
IGT	Igoumenitsa	1.88	331	P	Pn	00 43 19.7	-0.4
MEV	Metsovon	1.91	354	P	Pn	00 43 21.9	+1.4
MEV	Metsovon	1.91	354	P	Pn	00 43 21.9	+1.4
MEV	Metsovon	1.91	354	P	Pn	00 43 21.9	+1.4
XOR	Xorichti	1.98	41	P	Pn	00 43 20.7	-0.9
XOR	Xorichti	1.98	41	P	Pn	00 43 20.7	-0.9
XOR	Xorichti	1.98	41	P	Pn	00 43 20.7	-0.9
KYTH	Kithira	2.02	142	*e*Pg	Pg	00 43 25.1	-1.0
KYTH	Kithira	2.02	142	*e*PG	Pg	00 43 25.1	-1.0
KYTH	Kithira	2.02	142	*e*Pg	Pg	00 43 25.1	-1.0
AOS	Alonnisos	2.26	55	P	Pn	00 43 25.1	-0.3
AOS	Alonnisos	2.26	55	P	Pn	00 43 25.1	-0.3
AOS	Alonnisos	2.26	55	P	Pn	00 43 25.1	-0.3
STON	Ston	5.76	331	*e*Pn	Pn	00 44 10.8	-2.7
STON				Sn	Sn	00 45 11.8	-8.2
STON	Ston	5.76	331	*e*Pn	Pn	00 44 10.8	-2.7

CSEM ***16*** *00:48:01.5, 37.°19N×13.°11W, h0km, mb3.8/1, After MDD*
MDD 16 00:48:01.5±4.9, 37.°19N×13.°11W, h0km, mb3.8/1, 2C,
Error ellipse: s-maj=42.5km s-min=39.3km az=97.0,
PRIMO SIN SOLUCI, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	3.42	90	⇑P	Pn	00 48 54.9	-1.2
	1.5nm,0.1s,SNR=18						
PFVI				S	Sn	00 49 34.3	-3.0
	1.8nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	3.42	90	⇑P	Pn	00 48 54.9	-1.2
	1.5nm,0.1s,SNR=18						
PFVI				S	Sn	00 49 34.3	-3.0
	1.8nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	3.42	90	P	Pn	00 48 54.9	-1.1
	1.5nm,0.1s,SNR=18						
PFVI				S	Sn	00 49 34.3	-3.0
	1.8nm,0.1s,SNR=7.9						
EBAD	Badajoz	5.06	70	P	Pn	00 49 17.7	-0.9
	0.3nm,0.1s,SNR=7.9						
EBAD				S	Sn	00 50 13.3	-4.5
	0.2

BDRM			*i* S		**Sg**	02 28 51.4	+0.2
BDRM	**Kayabasi**	**0.92 147**	*i* P		**Pg**	02 28 39.1	-0.2
BDRM			*i* S		**Sg**	02 28 51.4	+0.2
MLSB	**Milas**	**0.94 125**	*e*PG		**Pg**	02 28 39.1	-0.5
MLSB			*e*SG		**Sg**	02 28 51.8	+0.1
MLSB	**Milas**	**0.94 125**	*e*Pg		**Pg**	02 28 39.1	-0.5
MLSB			*e*Sg		**Sg**	02 28 51.8	+0.1
DAT	**Datca**	**1.26 151**	*e*PN		**Pn**	02 28 44.4	-1.1
DAT			*e*SN		**Sn**	02 29 01.0	-1.6
DAT	**Datca**	**1.26 151**	*e*Pn		**Pn**	02 28 44.4	-1.1
DAT			*e*Sn		**Sn**	02 29 01.0	-1.7
NIS1	**Nisyros Isl.**	**1.27 167**	P		**Pn**	02 28 46.2	+0.6
NIS1			S		**Sb**	02 29 02.7	+0.5
NIS1	**Nisyros Isl.**	**1.27 167**	P		**Pn**	02 28 46.2	+0.6
NIS1			S		**Sb**	02 29 02.7	+0.5
APE	**Apeiranthos**	**1.28 234**	*e*Pn		**Pn**	02 28 45.0	-0.8
APE			*e*Sn		**Sn**	02 29 03.0	-0.1
APE	**Apeiranthos**	**1.28 234**	P		**Pn**	02 28 44.1	-1.7
APE			S		**Sb**	02 29 03.8	+1.2
APE	**Apeiranthos**	**1.28 234**	*e*PN		**Pn**	02 28 45.0	-0.8
APE			*e*SN		**Sn**	02 29 03.0	-0.1
APE	**Apeiranthos**	**1.28 234**	P		**Pn**	02 28 44.1	-1.7
APE	**Apeiranthos**	**1.28 234**	*e*Pn		**Pn**	02 28 45.0	-0.8
APE			*e*Sn		**Sn**	02 29 03.0	-0.1
APE			S		**Sb**	02 29 03.8	+1.2
AKHS	**Akhisar**	**1.30 37**	*i* P		**Pn**	02 28 44.7	-1.3
AKHS			*i* S		**Sb**	02 29 01.8	-1.3
AKHS	**Akhisar**	**1.30 37**	*i* P		**Pn**	02 28 44.7	-1.3
AKHS			*i* S		**Sb**	02 29 01.8	-1.3
AKS	**Akhisar**	**1.30 37**	*e*PN		**Pn**	02 28 44.9	-1.1
AKS			*e*SN		**Sn**	02 29 03.4	-0.2
AKS	**Akhisar**	**1.30 37**	*e*Pn		**Pn**	02 28 44.9	-1.1
AKS			*e*Sn		**Sn**	02 29 03.4	-0.2
YER	**Yerkesik**	**1.36 121**	*e*PN		**Pn**	02 28 45.2	-1.7
YER			*e*SN		**Sn**	02 29 03.9	-1.2
YER	**Yerkesik**	**1.36 121**	*e*Pn		**Pn**	02 28 45.2	-1.7
YER			*e*Sn		**Sn**	02 29 03.9	-1.2
PRK	**Paraskevi**	**1.47 343**	*e*Pn		**Pn**	02 28 48.3	-0.1
PRK			*e*Sn		**Sn**	02 29 09.0	+1.2
PRK	**Paraskevi**	**1.47 343**	P		**Pn**	02 28 47.5	-0.9
PRK			S		**Sn**	02 29 07.6	-0.2
PRK	**Paraskevi**	**1.47 343**	*e*PN		**Pn**	02 28 48.3	-0.1
PRK			*e*SN		**Sn**	02 29 09.0	+1.2
PRK	**Paraskevi**	**1.47 343**	P		**Pn**	02 28 47.5	-0.9
PRK	**Paraskevi**	**1.47 343**	*e*Pn		**Pn**	02 28 48.3	-0.1
PRK			S		**Sn**	02 29 07.6	-0.2
PRK			*e*Sn		**Sn**	02 29 09.0	+1.2
AYVA	**Ayvalik**	**1.47 356**	*i* P		**Pn**	02 28 48.2	-0.2
AYVA			*i* S		**Sn**	02 29 08.3	+0.5
AYVA	**Ayvalik**	**1.47 356**	*i* P		**Pn**	02 28 48.2	-0.2
AYVA			*i* S		**Sn**	02 29 08.3	+0.5
MANT	**Manisa**	**1.52 64**	*i* P		**Pn**	02 28 49.4	+0.3
MANT			*i* S		**Sn**	02 29 06.8	-2.2
MANT	**Manisa**	**1.52 64**	*i* P		**Pn**	02 28 49.4	+0.4
MANT			*i* S		**Sn**	02 29 06.8	-2.1
DENT	**Denizli**	**1.76 92**	*e*PN		**Pn**	02 28 51.6	-0.7
DENT	**Denizli**	**1.76 92**	*e*Pn		**Pn**	02 28 51.7	-0.6
DNZL	**Cakiroluk**	**1.77 94**	*i* P		**Pn**	02 28 54.6	+2.0
DNZL			*i* S		**Sn**	02 29 19.3	+4.0
DNZL	**Cakiroluk**	**1.77 94**	*i* P		**Pn**	02 28 54.6	+2.1
DNZL			*i* S		**Sn**	02 29 19.3	+4.1
DEMI	**Demirci**	**1.91 51**	*i* P		**Pn**	02 28 56.5	+2.0
DEMI			*i* S		**Sn**	02 29 19.2	+0.5
DEMI	**Demirci**	**1.91 51**	*i* P		**Pn**	02 28 56.5	+2.0
DEMI			*i* S		**Sn**	02 29 19.2	+0.5
BALB	**Balikesir**	**1.98 24**	*e*PN		**Pn**	02 28 56.1	+0.7
BALB	**Balikesir**	**1.98 24**	*e*Pn		**Pn**	02 28 56.1	+0.7
BALY	**Balya**	**2.00 18**	*i* P		**Pn**	02 28 57.0	+1.3
BALY			*i* S		**Sn**	02 29 23.8	+2.9
BALY	**Balya**	**2.00 18**	*i* P		**Pn**	02 28 57.0	+1.3
BALY			*i* S		**Sn**	02 29 23.8	+3.0
EZN	**Ezine**	**2.02 349**	*e*PN		**Pn**	02 28 56.4	+0.5
EZN	**Ezine**	**2.02 349**	*e*Pn		**Pn**	02 28 56.4	+0.4
FETY	**Fethiye**	**2.17 123**	*e*PN		**Pn**	02 28 57.6	-0.4
FETY	**Fethiye**	**2.17 123**	*e*Pn		**Pn**	02 28 57.6	-0.4
KHAL	**Karahalli**	**2.17 75**	*i* P		**Pn**	02 29 02.0	+3.9
KHAL			*i* S		**Sn**	02 29 26.6	+1.4
KHAL	**Karahalli**	**2.17 75**	*i* P		**Pn**	02 29 02.0	+3.9
KHAL			*i* S		**Sn**	02 29 26.6	+1.4
DURS	**Dursunbey**	**2.18 36**	*i* P		**Pn**	02 28 59.5	+1.3
DURS			*i* S		**Sn**	02 29 29.1	+3.7
DURS	**Dursunbey**	**2.18 36**	*i* P		**Pn**	02 28 59.5	+1.3
DURS			*i* S		**Sn**	02 29 29.1	+3.7
KHL	**Karahalli**	**2.19 76**	*e*PN		**Pn**	02 28 58.8	+0.5
KHL	**Karahalli**	**2.19 76**	*e*Pn		**Pn**	02 28 58.8	+0.5
DST	**Dursunbey**	**2.26 38**	*e*PN		**Pn**	02 29 00.3	+1.0
DST	**Dursunbey**	**2.26 38**	*e*Pn		**Pn**	02 29 00.3	+1.0
LIA	**Limnos Island**	**2.42 329**	*e*PN		**Pn**	02 29 01.6	+0.2
LIA	**Limnos Island**	**2.42 329**	*e*PN		**Pn**	02 29 01.6	+0.2
LIA	**Limnos Island**	**2.42 329**	*e*Pn		**Pn**	02 29 01.6	+0.2
GADA	**Gvkgeada**	**2.46 343**	*e*PN		**Pn**	02 29 02.5	+0.6
GADA	**Gvkgeada**	**2.46 343**	*e*Pn		**Pn**	02 29 02.5	+0.6

MAN 16 02:38:37,12°91N×124°70E, h23km, mb4.6, ML3.5, MS3.5, 1C-1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Cataman**	**0.40**	**186**	*e*P	Pb	02 38 47.4	+1.9
CNP				*e*S	Sb	02 38 55.6	+4.3
PVCP	**Virac**	**0.86**	**322**	*e*P	Pb	02 38 53.9	+0.5
PVCP				*e*S	Sb	02 39 07.0	+2.6
PLP	**Palo**	**1.76**	**171**	⇓*e*P	Pn	02 39 05.3	-0.8
PLP				*e*S	Sn	02 39 28.7	+0.9
RCP	**Roxas**	**2.34**	**235**	⇑*e*P	Pn	02 39 18.8	+4.7
GUIM	**Jordan**	**3.08**	**223**	*e*P	Pn	02 39 27.7	+3.5
GUIM				*e*S	Sn	02 39 51.6	-8.7

IDC ***16*** *02:40:55.2±7.5, 5°52S×154°08E, h156km±68km, mb4.0/13, mb1 4.2/14, mb1mx4.1/19, mbtmp4.1/14, MS4.8/1, Ms1 4.8/1, ms1mx3.2/20, Error ellipse: s-maj=27.7km s-min=17.6km az=70.0*
ISCJB ***16*** *02:40:56.6±4.7, 5°6S±0°1×154°0E±0°1, h180km±42km, mb4.6/27, Error ellipse: s-maj=24.4km s-min=15.6km az=148.0*
BJI ***16*** *02:40:57.1, 5°34S×154°08E, h182km, mB4.8/5, mb4.8/14*
NEIC ***16*** *02:40:59.2±3.5, 5°58S×154°03E, h189km±33km, mb4.9/13, Error ellipse: s-maj=16.1km s-min=11.2km az=48.0*
ISC 16 02:40:59.1±4.4, 5°6S±0°1×154°1E±0°1, h188km±41km, n46, σ0°87/45, mb4.6/27, 3C, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**16.27**	**207**	*e*P	**Pn**	**02 44 36.2**	**-1.1**
	15nm,0.9s						
CTA	**Charters Tower**	**16.27**	**207**	P	**Pn**	**02 44 37.5**	**+0.2**
	0.4nm,0.3s,baz=27,slow=14,SNR=13						
CTAO	**Charters Tower**	**16.27**	**207**	*e*Pn	**Pn**	**02 44 36.6**	**-0.7**
	18nm,0.8s						
EIDS	**Eidsvold**	**19.86**	**188**	*e*P	**P**	**02 45 17.9**	**+2.1**
	18nm,1.1s						
KAKA	**Kakadu**	**22.46**	**250**	*e*P	**P**	**02 45 43.2**	**+0.5**
	11nm,0.5s,mb4.5						
KAKA	**Kakadu**	**22.46**	**250**	*e*P	**P**	**02 45 42.9**	**+0.1**
	40nm,0.6s,mb5.0						
WRAB	**Tennant Creek**	**23.87**	**232**	*e*P	**P**	**02 45 55.5**	**0.0**
	16nm,0.7s,mb4.7						
WRA	**Warramunga Arr**	**23.89**	**232**	P	**P**	**02 45 55.7**	**0.0**
	11nm,0.7s,mb4.5,baz=54,slow=9.6,SNR=107						
ASAR	**Alice Springs**	**26.44**	**225**	P	**P**	**02 46 18.3**	**-0.3**
	1.9nm,0.7s,mb3.9,baz=61,slow=8.9,SNR=16						
ASAR				PcP	PcP	02 49 39.2	+0.1
	1.1nm,0.6s,baz=61,slow=3.0,SNR=5.6						
STKA	**Stephens Creek**	**28.62**	**203**	*e*P	**P**	**02 46 37.6**	**-0.3**
	3.4nm,0.9s,mb4.1						
STKA	**Stephens Creek**	**28.62**	**203**	P	**P**	**02 46 37.1**	**-0.8**
	2.4nm,0.7s,mb4.0,baz=16,slow=17,SNR=4.6						
FITZ	**Fitzroy Crossi**	**30.40**	**243**	*e*P	**P**	**02 46 53.1**	**-0.7**
	22nm,0.7s,mb5.0						
FITZ	**Fitzroy Crossi**	**30.40**	**243**	P	**P**	**02 46 52.9**	**-0.9**
	12nm,0.7s,mb4.8,baz=86,slow=5.2,SNR=27						
FITZ	**Fitzroy Crossi**	**30.40**	**243**	*e*P	**P**	**02 46 53.3**	**-0.5**
KAPI	**Kappang**	**34.16**	**269**	P	**P**	**02 47 25.3**	**-1.4**
	5.2nm,0.6s,mb4.4,baz=90,slow=11,SNR=4.1						
RPZ	**Rata Peaks**	**40.80**	**161**	P	**P**	**02 48 22.1**	**+0.1**
	12nm,0.8s,mb4.6,baz=135,slow=4.6,SNR=5.9						
RPZ				LR	LR	03 02 06.3	
	comp=Z,1μm,18.2s,baz=34,slow=31						

KSRS	**Korea Array**	**49.28**	**332**	P	**P**	**02 49 27.4**	**-1.4**
	5.9nm,0.9s,mb4.2,baz=148,slow=8.9,SNR=16						
ENH	**Enshi**	**55.62**	**313**	*e*P	**P**	**02 50 15.2**	**-0.3**
	40nm,1.0s,mb5.2						
KMI	**Kunming**	**58.47**	**304**	P	**P**	**02 50 37.0**	**+1.3**
KMI				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.1						
CMAR	**Chiang Mai Arr**	**59.35**	**295**	P	**P**	**02 50 42.7**	**+0.8**
	comp=Z,2.8nm,0.3s,mb4.6,baz=112,slow=4.9,SNR=13						
CD2	**Chengdu**	**60.21**	**310**	P	**P**	**02 50 47.8**	**+0.3**
LZH	**Lanzhou**	**62.68**	**316**	⇑P	**P**	**02 51 03.8**	**-0.1**
LZH				pmax	pmax		
	comp=Z,21nm,1.3s,mb4.8						
LZH				pmax	pmax		
	comp=Z,85nm,4.3s						
GTA	**Gaotai**	**67.09**	**317**	⇑P	**P**	**02 51 33.4**	**+1.0**
GTA				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.8						
ULN	**Ulaanbaatar**	**67.34**	**328**	*e*P	**P**	**02 51 34.2**	**+0.5**
	comp=Z,9.8nm,1.1s,mb4.5						
SONM	**Songino Array**	**67.67**	**327**	P	**P**	**02 51 35.9**	**0.0**
	comp=Z,3.1nm,0.7s,mb4.2,baz=139,slow=5.7,SNR=20						
SHL	**Shillong**	**67.79**	**300**	*e*PKP	**P**	**02 51 37.5**	**+0.5**
LSA	**Lhasa**	**69.72**	**304**	P	**P**	**02 51 46.3**	**-2.6**
TAPN	**Taplejung**	**71.89**	**301**	*e*P	**P**	**02 52 02.8**	**+0.8**
	comp=Z,36nm,0.7s,mb5.2						
ODAN	**Odare**	**72.03**	**300**	*e*P	**P**	**02 52 03.4**	**+0.5**
	comp=Z,72nm,0.7s,mb5.5						
RAMN	**Ramite**	**72.73**	**300**	*e*P	**P**	**02 52 07.2**	**+0.2**
GUN	**Gumba**	**73.61**	**301**	*e*P	**P**	**02 52 12.9**	**+0.8**
	comp=Z,57nm,0.9s,mb5.3						
PKI	**Pulchoki**	**73.92**	**301**	*e*P	**P**	**02 52 14.1**	**+0.2**
PKI	**Pulchoki**	**73.92**	**301**	*e*P	**P**	**02 52 14.2**	**+0.3**
PKIN	**Phulchoki**	**73.93**	**301**	*e*P	**P**	**02 52 14.2**	**+0.2**
BILL	**Bilibino**	**73.98**	**5**	*e*P	**P**	**02 52 13.0**	**-0.5**
	comp=Z,9.7nm,0.8s,mb4.6						
KKN	**Kakani**	**74.08**	**301**	*e*P	**P**	**02 52 15.3**	**+0.4**
DMN	**Daman**	**74.19**	**301**	*e*P	**P**	**02 52 16.3**	**+0.8**
	comp=Z,144nm,1.2s,mb5.6						
MK31	**Makanchi Array**	**81.75**	**319**	*e*P	**P**	**02 52 56.8**	**0.0**
MKAR	**Makanchi Array**	**81.75**	**319**	P	**P**	**02 52 56.3**	**-0.5**
	comp=Z,4.2nm,0.9s,mb4.1,baz=80,slow=9.1,SNR=20						
ZALV	**Zalesovo Beam**	**82.51**	**326**	P	**P**	**02 52 59.4**	**-1.2**
	comp=Z,2.0nm,0.5s,mb4.1,baz=102,slow=6.2,SNR=13						
QSPA	**South Pole Qui**	**84.36**	**180**	*e*P	**P**	**02 53 10.1**	**+0.6**
	comp=Z,19nm,0.8s,mb4.9						
UCH	**Uchtor**	**86.03**	**313**	*e*P	**P**	**02 53 19.8**	**+1.2**
	comp=Z,2.6nm,1.0s,mb3.9						
BVAR	**Borovoye Array**	**90.63**	**323**	P	**P**	**02 53 38.4**	**-1.6**
	comp=Z,1.3nm,0.7s,mb4.1,baz=46,slow=4.3,SNR=5.6						
NVAR	**Mina Array Bea**	**91.60**	**52**	P	**P**	**02 53 44.9**	**0.0**
	comp=Z,0.3nm,0.4s,mb3.6,baz=260,slow=4.5,SNR=4.1						
SYO	**Syowa Base**	**93.32**	**199**	⇑*e*P	**P**	**02 53 50.6**	**-1.6**
DBIC	**Dimbokro**	**159.01**	**274**	PKPab	PKPab	03 01 12.8	-0.4
	comp=Z,6.1nm,0.9s,baz=47,slow=5.6,SNR=4.7						

ISCJB ***16*** *02:46:23.4±1.0, 60°7S±0°2×27°2W±0°4, h10km, mb4.3/4, Error ellipse: s-maj=32.3km s-min=16.4km az=141.3*
IDC ***16*** *02:46:24.2±1.5, 60°59S×27°25W, h0km, mb4.3/4, mb1 4.3/4, mb1mx4.0/12, mbtmp4.3/4, MS3.6/1, Ms1 3.6/1, ms1mx3.1/10, Error ellipse: s-maj=58.8km s-min=27.8km az=14.0*
NEIC ***16*** *02:46:25.5±0.9, 60°61S×27°22W, h10km, mb4.6/2, Error ellipse: s-maj=41.0km s-min=19.2km az=193.0*
ISC 16 02:46:25.7±1.0, 60°65S±0°2×27°2W±0°4, h10km, n13, σ0°39/7, mb4.3/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**12.65**	**150**	*e*	**Pn**	**02 49 25.3**	**0.0**
PLCA	**Paso Flores**	**33.09**	**287**	LR	LR	03 05 57.7	
	comp=Z,101nm,19.1s,baz=242,slow=36						
CPUP	**Villa Florida**	**39.97**	**315**	P	**P**	**02 53 59.4**	**-0.7**
	2.4nm,0.5s,mb4.2,baz=168,slow=6.7,SNR=14						
CPUP	**Villa Florida**	**39.97**	**315**	*e*P	**P**	**02 53 59.6**	**-0.5**
	9.7nm,0.5s,mb4.8						
BOSA	**Boshof**	**47.25**	**72**	P	**P**	**02 54 58.5**	**-0.2**
	2.0nm,0.9s,mb4.0,baz=218,slow=14,SNR=3.6						
LPAZ	**La Paz**	**53.13**	**308**	P	**P**	**02 55 43.9**	**+0.6**
	2.9nm,0.5s,mb4.4,baz=149,slow=5.6,SNR=26						
LPAZ	**La Paz**	**53.13**	**308**	*e*P	**P**	**02 55 43.7**	**+0.4**
	2.8nm,0.6s,mb4.4						
DBIC	**Dimbokro**	**69.35**	**24**	P	**P**	**02 57 33.6**	**+0.3**
	4.6nm,1.1s,mb4.3,baz=169,slow=10,SNR=2.4						
ARCES	**ARCESS Array B**	**135.18**	**23**	PKP	PKPdf	03 05 42.2	-1.2
	2.9nm,1.0s,baz=188,slow=0.9,SNR=4.7						
YKA	**Yellowknife Ar**	**139.49**	**314**	PKP	PKPdf	03 05 51.7	+0.1
	0.9nm,0.7s,baz=107,slow=1.7,SNR=4.6						
YKA	**Yellowknife Ar**	**139.49**	**314**	PKP	PKPdf	03 05 51.7	+0.1
SONM	**Songino Array**	**150.68**	**95**	PKPbc	PKPbc	03 06 17.6	+0.9
	1.1nm,0.7s,baz=217,slow=2.7,SNR=7.4						
KDAK	**Kodiak Island**	**152.58**	**289**	PKPbc	PKPbc	03 06 20.5	-0.3
	1.9nm,0.5s,baz=162,slow=6.4,SNR=3.9						

CSEM ***16*** *02:58:40.8±0.2, 37°87N×21°41E, h15km, MD3.1, Error ellipse: s-maj=4.3km s-min=3.4km az=70.0*
NEIC ***16*** *02:58:41.5, 37°90N×21°45E, h19km, MD3.1(ATH), After ATH.*
ATH ***16*** *02:58:41.5, 37°90N×21°45E, h19km±5km, MD3.1/8*
THE ***16*** *02:58:41.9, 37°87N×21°46E, h6km±2km, ML2.7/8, Error ellipse: s-maj=2.7km s-min=0.8km az=176.0*
ISCJB ***16*** *02:58:41.3±0.5, 37°87N±0°02×21°46E±0°03, h7km±6km, Error ellipse: s-maj=4.3km s-min=3.6km az=27.4*
ISC 16 02:58:42.0±0.5, 37°88N±0°03×21°45E±0°03, h11km±6km, n43, σ1°03/81, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.18**	**3**	*e*Pb	**Pg**	**02 58 45.8**	**-0.2**
RLS				*e*Sb	**Sg**	**02 58 48.8**	**+0.1**
RLS	**Riolos of Patr**	**0.18**	**3**	*e*PB	**Pg**	**02 58 45.8**	**-0.2**
RLS				*e*SB	**Sg**	**02 58 48.8**	**+0.1**
RLS	**Riolos of Patr**	**0.18**	**3**	*e*Pb	**Pg**	**02 58 45.8**	**-0.2**
RLS				*e*Sb	**Sg**	**02 58 48.8**	**+0.1**
UPR	**University Cam**	**0.48**	**33**	P	**Pg**	**02 58 51.5**	**0.0**
UPR				S	**Sg**	**02 58 59.1**	**+1.2**
UPR	**University Cam**	**0.48**	**33**	*e*PB	**Pg**	**02 58 51.3**	**-0.2**
UPR				*e*SB	**Sg**	**02 58 57.7**	**-0.2**
UPR	**University Cam**	**0.48**	**33**	*e*Pb	**Pg**	**02 58 51.3**	**-0.2**
UPR				*e*Sb	**Sg**	**02 58 57.7**	**-0.2**
UPR				S	**Sg**	**02 58 59.1**	**+1.2**
LAKA	**Lakka**	**0.55**	**48**	P	**Pg**	**02 58 52.0**	**-0.7**
LAKA				S	**Sg**	**02 59 01.0**	**+1.0**
LAKA	**Lakka**	**0.55**	**48**	P	**Pg**	**02 58 52.0**	**-0.7**
LAKA				S	**Sg**	**02 59 01.0**	**+1.0**
KFL	**Anninata**	**0.58**	**294**	P	**Pg**	**02 58 52.5**	**-0.7**
KFL				S	**Sg**	**02 59 02.4**	**+1.6**
EFP	**Efpalio**	**0.66**	**33**	P	**Pg**	**02 58 53.6**	**-1.1**
EFP				S	**Sg**	**02 59 04.0**	**+0.7**
EFP	**Efpalio**	**0.66**	**33**	*e*PB	**Pg**	**02 58 53.6**	**-1.1**
EFP				*e*SN	**Sg**	**02 59 03.3**	**0.0**
EFP	**Efpalio**	**0.66**	**33**	P	**Pg**	**02 58 53.6**	**-1.1**
EFP				*e*Sn	**Sg**	**02 59 03.3**	**0.0**
EFP				S	**Sg**	**02 59 04.0**	**+0.7**
GUR	**Goura**	**0.70**	**85**	P	**Pg**	**02 58 54.4**	**-1.2**
GUR				S	**Sg**	**02 59 06.0**	**+1.1**
GUR	**Goura**	**0.70**	**85**	*e*PB	**Pg**	**02 58 54.6**	**-1.0**
GUR				*e*SN	**Sg**	**02 59 05.9**	**+1.0**
GUR	**Goura**	**0.70**	**85**	P	**Pg**	**02 58 54.4**	**-1.2**
GUR				S	**Sg**	**02 59 06.0**	**+1.1**
KALE	**Kalithea**	**0.75**	**46**	P	**Pg**	**02 58 55.4**	**-1.0**
KALE				S	**Sg**	**02 59 06.6**	**+0.4**
KALE	**Kalithea**	**0.75**	**46**	P	**Pg**	**02 58 55.4**	**-1.0**
KALE				S	**Sg**	**02 59 06.6**	**+0.4**
VLS	**Valsamata**	**0.75**	**294**	*e*Pb	**Pg**	**02 58 54.9**	**-1.5**
VLS				*e*Sn	**Sg**	**02 59 07.3**	**+1.1**
VLS	**Valsamata**	**0.75**	**294**	P	**Pg**	**02 58 55.0**	**-1.4**
VLS				S	**Sg**	**02 59 07.3**	**+1.1**
VLS	**Valsamata**	**0.75**	**294**	*e*PB	**Pg**	**02 58 54.9**	**-1.5**
VLS				*e*SN	**Sg**	**02 59 07.3**	**+1.1**
VLS	**Valsamata**	**0.75**	**294**	P	**Pg**	**02 58 55.0**	**-1.4**
VLS				*e*Sn	**Sg**	**02 59 07.3**	**+1.1**
ITM	**Ithomi**	**0.79**	**151**	*e*Pn	**Pg**	**02 58 57.4**	**+0.2**
ITM	**Ithomi**	**0.79**	**151**	P	**Pg**	**02 58 56.6**	**-0.6**
ITM				S	**Sg**	**02 59 08.4**	**+0.9**
ITM	**Ithomi**	**0.79**	**151**	*e*PN	**Pg**	**02 58 57.4**	**+0.2**
ITM	**Ithomi**	**0.79**	**151**	P	**Pg**	**02 58 56.6**	**-0.6**
ITM	**Ithomi**	**0.79**	**151**	*e*Pn	**Pg**	**02 58 57.4**	**+0.2**
ITM				S	**Sg**	**02 59 08.4**	**+0.9**
VLX	**Vlachokerasia**	**0.89**	**124**	P	**Pg**	**02 58 58.9**	**-0.2**
VLX				S	**Sg**	**02 59 12.3**	**+1.6**
VLX	**Vlachokerasia**	**0.89**	**124**	*e*PN	**Pg**	**02 58 58.9**	**-0.2**
VLX				*e*SN	**Sg**	**02 59 11.6**	**+0.9**
VLX	**Vlachokerasia**	**0.89**	**124**	P	**Pg**	**02 58 58.9**	**-0.2**
VLX				*e*Sn	**Sg**	**02 59 11.6**	**+0.9**
VLX				S	**Sg**	**02 59 12.3**	**+1.6**
DSF	**Desfina**	**1.00**	**57**	P	**Pg**	**02 58 59.5**	**-1.8**
DSF				S	**Sg**	**02 59 14.8**	**+0.5**
DSF	**Desfina**	**1.00**	**57**	P	**Pg**	**02 58 59.5**	**-1.8**
DSF				S	**Sg**	**02 59 14.8**	**+0.5**
EVR	**Evrytania**	**1.08**	**15**	*e*Pn	**Pg**	**02 59 01.1**	**-1.6**
EVR				*e*Sn	**Sg**	**02 59 16.9**	**+0.2**
EVR	**Evrytania**	**1.08**	**15**	*e*PN	**Pg**	**02 59 01.1**	**-1.6**
EVR				*e*SN	**Sg**	**02 59 16.9**	**+0.2**
EVR	**Evrytania**	**1.08**	**15**	*e*Pn	**Pg**	**02 59 01.1**	**-1.6**
EVR				*e*Sn	**Sg**	**02 59 16.9**	**+0.2**
LKD2	**Lefkada island**	**1.11**	**326**	P	**Pg**	**02 59 01.2**	**-2.1**
LKD2				S	**Sg**	**02 59 19.6**	**+1.9**
LKD2	**Lefkada island**	**1.11**	**326**	P	**Pg**	**02 59 01.2**	**-2.1**
LKD2				S	**Sg**	**02 59 19.6**	**+1.9**
AGG	**Agios Georgios**	**1.34**	**31**	*e*Pn	**Pn**	**02 59 06.5**	**-0.1**
AGG	**Agios Georgios**	**1.34**	**31**	P	**Pn**	**02 59 05.6**	**-1.0**
AGG				S	**Sb**	**02 59 25.1**	**+0.9**
AGG	**Agios Georgios**	**1.34**	**31**	*e*PN	**Pn**	**02 59 06.5**	**-0.1**
AGG	**Agios Georgios**	**1.34**	**31**	P	**Pn**	**02 59 05.6**	**-1.0**
AGG	**Agios Georgios**	**1.34**	**31**	*e*Pn	**Pn**	**02 59 06.5**	**-0.1**
AGG				S	**Sb**	**02 59 25.1**	**+0.9**
IGT	**Igoumenitsa**	**1.87**	**332**	P	**Pn**	**02 59 14.7**	**+0.7**
IGT	**Igoumenitsa**	**1.87**	**332**	P	**Pn**	**02 59 14.7**	**+0.7**

IDC ***16*** *03:19:59.8±0.6, 22°92N×144°69E, h0km, mb4.1/13, mb1 4.3/15, mb1mx4.1/25, mbtmp4.1/15, ML4.0/2, MS3.1/1, Ms1 3.1/1, ms1mx2.3/22, Error ellipse: s-maj=26.7km s-min=15.9km az=76.0*
NIED ***16*** *03:20:00, 23°40N×144°90E, h8km, Mw3.9 Best double couple: M0=7.38000×10^14 NP1:φ0=219.00000°, δ76.00000°, λ-141.00000°. NP2:φ0=118.00000°, δ52.00000°, λ-18.00000°.*
ISCJB ***16*** *03:20:03.1±0.5, 22°94N±0°07×144°5E±0°1, h33km, mb4.2/16, Error ellipse: s-maj=18.8km s-min=8.6km az=162.5*
NEIC ***16*** *03:20:04.9±0.3, 22°94N×144°62E, h35km, mb4.6/3, MW3.8(NIED), Error ellipse: s-maj=14.7km s-min=8.0km az=84.0*
ISC 16 03:20:05.1±0.5, 22°95N±0°07×144°6E±0°1, h35km, n27, σ0°80/24, mb4.2/16, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**4.67**	**333**	Pn	**Pn**	**03 21 13.5**	**+0.4**
	16nm,0.3s,baz=271,slow=22,SNR=41						
CBIJ				Sn	**Sn**	**03 22 04.5**	**-1.6**
	32nm,0.3s,baz=288,slow=23,SNR=6.8						
MJAR	**Matsushiro Arr**	**14.63**	**339**	Pn	**Pn**	**03 23 29.4**	**-0.2**
	0.5nm,0.3s,baz=158,slow=12,SNR=5.3						
KSRS	**Korea Array**	**20.37**	**319**	P	**P**	**03 24 40.9**	**+2.2**
	4.1nm,0.9s,baz=131,slow=12,SNR=12						
PETK	**Petropavlovsk-**	**31.72**	**15**	LR	LR	03 39 33.9	
	comp

PEL					*i* S		**Sb**	**04 08 42.0**	**-0.7**
PEL					AML		AML	04 08 46.8	
	comp=E,10μm,0.8s								
ANTU	**Antumapu**	**1.43**	**98**	⇑	*i* P		**Pn**	**04 08 23.8**	**-0.7**
ANTU					*i* S		**Sn**	**04 08 42.8**	**-0.8**
ANTU	**Antumapu**	**1.43**	**98**	⇑	*i* P		**Pn**	**04 08 23.8**	**-0.7**
ANTU					*i* S		**Sn**	**04 08 42.8**	**-0.8**
ANTU					AML		AML	04 08 45.9	
	comp=N,4μm,0.5s								
CHCH	**Chadas Angostu**	**1.50**	**112**		*e*P		**Pn**	**04 08 24.6**	**-0.8**
CHCH					*i* S		**Sn**	**04 08 44.6**	**-0.7**
CHCH	**Chadas Angostu**	**1.50**	**112**		*e*P		**Pn**	**04 08 24.6**	**-0.8**
CHCH					*i* S		**Sn**	**04 08 44.6**	**-0.7**
CLCH	**Cerro Calan**	**1.50**	**91**		*e*P		**Pn**	**04 08 25.8**	**+0.3**
CLCH					*e*S		**Sn**	**04 08 46.4**	**+1.1**
CLCH	**Cerro Calan**	**1.50**	**91**		*e*P		**Pn**	**04 08 25.8**	**+0.3**
CLCH					*e*S		**Sn**	**04 08 46.4**	**+1.1**
CLCH					AML		AML	04 08 49.6	
	comp=E,5μm,0.5s								
FSR	**Penalolen**	**1.51**	**94**		*e*P		**Pn**	**04 08 25.6**	**0.0**
FSR					*e*S		**Sn**	**04 08 45.2**	**-0.4**
FSR	**Penalolen**	**1.51**	**94**		*e*P		**Pn**	**04 08 25.6**	**0.0**
FSR					*e*S		**Sn**	**04 08 45.2**	**-0.4**
FSR					AML		AML	04 08 51.5	
	comp=E,1μm,0.5s								
CACH	**El Canelo**	**1.62**	**117**	⇓	*i* P		**Pn**	**04 08 27.3**	**+0.3**
CACH					*i* S		**Sn**	**04 08 49.6**	**+1.5**
CACH	**El Canelo**	**1.62**	**117**	⇓	*i* P		**Pn**	**04 08 27.3**	**+0.3**
CACH					*i* S		**Sn**	**04 08 49.6**	**+1.5**
JACH	**Jahuel**	**1.62**	**65**		*e*P		**Pn**	**04 08 26.5**	**-0.6**
JACH					*i* S		**Sn**	**04 08 48.7**	**+0.5**
JACH	**Jahuel**	**1.62**	**65**		*e*P		**Pn**	**04 08 26.5**	**-0.6**
JACH					*i* S		**Sn**	**04 08 48.7**	**+0.5**
FCH	**Farellones**	**1.71**	**88**		*e*P		**Pn**	**04 08 28.6**	**+0.3**
FCH					*i* S		**Sn**	**04 08 51.5**	**+1.1**
FCH	**Farellones**	**1.71**	**88**		*e*P		**Pn**	**04 08 28.6**	**+0.3**
FCH					*i* S		**Sn**	**04 08 51.5**	**+1.1**
TALC	**Talca**	**2.08**	**164**		*e*P		**Pn**	**04 08 32.5**	**-0.9**
TALC					*i* S		**Sn**	**04 09 00.2**	**+0.5**
TALC	**Talca**	**2.08**	**164**		*e*P		**Pn**	**04 08 32.5**	**-0.9**
TALC					*i* S		**Sn**	**04 09 00.2**	**+0.5**
CFAA	**Coronel Fontan**	**3.89**	**64**		Pn		**Pn**	**04 08 59.8**	**+1.5**
	comp=E,0.2nm,0.3s,baz=241,slow=12,SNR=38								
CFAA					Pg		**Pb**	**04 09 04.3**	**-2.7**
	comp=E,0.5nm,0.3s,baz=240,slow=15,SNR=49								
CFAA					Lg			04 09 57.8	
	comp=E,2.0nm,0.3s,baz=83,slow=11,SNR=7.2								
LCO	**Las Campanas**	**4.58**	**18**		*e*Pn		**Pn**	**04 09 06.6**	**-1.2**
LCO					*e*Sn		**Sn**	**04 10 01.1**	**-0.2**
LCO					*e*Sg		**Sg**	**04 10 26.4**	**+1.1**
PLCA	**Paso Flores**	**7.47**	**170**		Pn		**Pn**	**04 09 47.4**	**0.0**
	comp=E,0.3nm,0.3s,baz=343,slow=14,SNR=7.7								
PLCA					Lg			04 11 55.2	
	comp=E,0.3nm,0.3s,baz=345,slow=9.8,SNR=4.3								
PLCA	**Paso Flores**	**7.47**	**170**		*e*Pn		**Pn**	**04 09 47.6**	**+0.2**
CPUP	**Villa Florida**	**14.79**	**66**		Pn		**Pn**	**04 11 32.4**	**+4.8**
	comp=E,0.2nm,0.3s,baz=252,slow=18,SNR=2.6								
CPUP	**Villa Florida**	**14.79**	**66**		Pn		**Pn**	**04 11 32.4**	**+4.8**
LPAZ	**La Paz**	**17.45**	**14**		P		**Pn**	**04 12 03.0**	**+1.0**
	comp=E,0.1nm,0.3s,baz=205,slow=7.4,SNR=9.1								
LPAZ	**La Paz**	**17.45**	**14**		*e*Pn		**Pn**	**04 12 03.1**	**+1.1**
	comp=E,0.7nm,0.6s								
SIV	**San Ignacio**	**20.09**	**33**		P		**P**	**04 12 31.3**	**-1.0**
	comp=E,1.5nm,0.7s,baz=222,slow=13,SNR=7.7								
TXAR	**Lajitas Array**	**69.08**	**331**		P		**P**	**04 19 07.4**	**+2.8**
	comp=E,0.1nm,0.5s,baz=144,slow=7.8,SNR=2.8								

*ISK **16** 04:14:16.1,38°.72N×27°.10E,h8km,MD2.8*
*CSEM **16** 04:14:16.9±0.3,38°.70N×27°.11E,h10km,MD2.8, Error ellipse: s-maj=6.8km s-min=4.2km az=113.0*
*ISCJB **16** 04:14:16.6±0.7,38°.70N±0°.04×27°.12E±0°.06,h10km±11km, Error ellipse: s-maj=9.3km s-min=4.7km az=31.3*
*DDA **16** 04:14:17.1,38°.63N×27°.20E,h12km±1km,Md2.8*

ISC 16 04:14:17.0±0.7,38°.68N±0°.04×27°.13E±0°.07,h15km±10km, n20,σ0s72/32,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAG	**Bornova**	**0.30**	**159**	*i* P	**Pg**	**04 14 22.4**	**-0.9**
KDAG				*i* S	**Sg**	**04 14 26.4**	**-1.1**
KDAG	**Bornova**	**0.30**	**159**	*i* P	**Pg**	**04 14 22.4**	**-0.9**
KDAG				*i* S	**Sg**	**04 14 26.4**	**-1.1**
IZM	**Izmir**	**0.30**	**160**	*e*PG	**Pg**	**04 14 24.6**	**+1.2**
IZM				*e*SG	**Sg**	**04 14 28.6**	**+1.0**
IZM	**Izmir**	**0.30**	**160**	*e*Pg	**Pg**	**04 14 24.6**	**+1.3**
IZM				*e*Sg	**Sg**	**04 14 28.4**	**+0.8**
BLCB	**Balcova**	**0.30**	**193**	*e*PG	**Pg**	**04 14 23.2**	**-0.1**
BLCB				*e*SG	**Sg**	**04 14 28.1**	**+0.4**
BLCB	**Balcova**	**0.30**	**193**	*e*Pg	**Pg**	**04 14 23.2**	**-0.2**
BLCB				*e*Sg	**Sg**	**04 14 28.1**	**+0.5**
URLA	**Izmir**	**0.53**	**233**	*i* P	**Pg**	**04 14 27.4**	**0.0**
URLA	**Izmir**	**0.53**	**233**	*i* P	**Pg**	**04 14 27.4**	**0.0**
AKS	**Akhisar**	**0.57**	**69**	*e*PG	**Pg**	**04 14 27.7**	**-0.5**
AKS				*e*SG	**Sg**	**04 14 35.9**	**0.0**
AKS	**Akhisar**	**0.57**	**69**	*e*Pg	**Pg**	**04 14 27.7**	**-0.5**
AKS				*e*Sg	**Sg**	**04 14 36.4**	**+0.5**
AKHS	**Akhisar**	**0.57**	**69**	*i* P	**Pg**	**04 14 27.5**	**-0.8**
AKHS				*i* S	**Sg**	**04 14 36.1**	**+0.2**
AKHS	**Akhisar**	**0.57**	**69**	*i* P	**Pg**	**04 14 27.5**	**-0.8**
AKHS				*i* S	**Sg**	**04 14 36.1**	**+0.2**
BALB	**Balikesir**	**1.12**	**31**	*e*PN	**Pg**	**04 14 37.6**	**-1.0**
BALB	**Balikesir**	**1.12**	**31**	*e*Pn	**Pg**	**04 14 37.6**	**-1.1**
BALY	**Balya**	**1.12**	**20**	*i* P	**Pg**	**04 14 39.0**	**+0.2**
BALY				*i* S	**Sg**	**04 14 54.3**	**+0.8**
BALY	**Balya**	**1.12**	**20**	*i* P	**Pg**	**04 14 39.0**	**+0.3**
BALY				*i* S	**Sg**	**04 14 54.3**	**+0.9**
EZN	**Ezine**	**1.30**	**332**	*e*PN	**Pn**	**04 14 40.0**	**-0.6**
EZN	**Ezine**	**1.30**	**332**	*e*Pn	**Pn**	**04 14 40.3**	**-0.3**
DST	**Dursunbey**	**1.48**	**51**	*e*PN	**Pn**	**04 14 43.9**	**+0.8**
DST	**Dursunbey**	**1.48**	**51**	*e*Pn	**Pn**	**04 14 43.8**	**+0.8**

*DDA **16** 04:20:57.5,39°.53N×28°.20E,h7km±3km,Md2.8*
*ISK **16** 04:20:57.9,39°.55N×28°.16E,h17km,MD2.7*
*CSEM **16** 04:20:58.2±0.2,39°.52N×28°.22E,h10km,MD2.7, Error ellipse: s-maj=4.5km s-min=3.9km az=129.0*
*ISCJB **16** 04:20:58.1±0.5,39°.51N±0°.03×28°.22E±0°.03,h9km±4km, Error ellipse: s-maj=4.7km s-min=3.9km az=137.8*

ISC 16 04:20:58.5±0.4,39°.52N±0°.03×28°.22E±0°.03,h11km±5km, n26,σ0s80/46,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.21**	**69**	*i* P	**Pg**	**04 21 02.5**	**-0.5**
DURS				*i* S	**Sg**	**04 21 06.2**	**+0.1**
DURS	**Dursunbey**	**0.21**	**69**	*i* P	**Pg**	**04 21 02.5**	**-0.5**
DURS				*i* S	**Sg**	**04 21 06.2**	**+0.1**
BALB	**Balikesir**	**0.28**	**294**	*e*PG	**Pg**	**04 21 03.8**	**-0.5**
BALB				*e*SG	**Sg**	**04 21 08.3**	**+0.2**
BALB	**Balikesir**	**0.28**	**294**	*e*Pg	**Pg**	**04 21 03.8**	**-0.5**
BALB				*e*Sg	**Sg**	**04 21 08.3**	**+0.2**
DST	**Dursunbey**	**0.32**	**75**	*e*PG	**Pg**	**04 21 06.4**	**+1.5**
DST				*e*SG	**Sg**	**04 21 11.5**	**+2.2**
DST	**Dursunbey**	**0.32**	**75**	*e*Pg	**Pg**	**04 21 06.4**	**+1.5**
DST				*e*Sg	**Sg**	**04 21 11.5**	**+2.2**
BALY	**Balya**	**0.51**	**295**	*i* P	**Pg**	**04 21 07.5**	**-0.9**
BALY	**Balya**	**0.51**	**295**	*i* P	**Pg**	**04 21 07.5**	**-0.9**
AKHS	**Akhisar**	**0.71**	**206**	*i* P	**Pg**	**04 21 12.2**	**-0.1**
AKHS				*i* S	**Sg**	**04 21 21.8**	**+0.2**
AKHS	**Akhisar**	**0.71**	**206**	*i* P	**Pg**	**04 21 12.2**	**-0.1**
AKHS				*i* S	**Sg**	**04 21 21.8**	**+0.1**
AKS	**Akhisar**	**0.71**	**206**	*e*PG	**Pg**	**04 21 12.8**	**+0.5**
AKS				*e*SG	**Sg**	**04 21 22.3**	**+0.6**
AKS	**Akhisar**	**0.71**	**206**	*e*Pg	**Pg**	**04 21 12.8**	**+0.5**
AKS				*e*Sg	**Sg**	**04 21 22.3**	**+0.6**
KCT	**Karacabey**	**0.75**	**8**	*e*PG	**Pg**	**04 21 12.9**	**-0.1**
KCT				*e*SG	**Sg**	**04 21 22.4**	**-0.4**
KCT	**Karacabey**	**0.75**	**8**	*e*Pg	**Pg**	**04 21 12.9**	**-0.1**
KCT				*e*Sg	**Sg**	**04 21 22.4**	**-0.4**
ULDT	**Uludag**	**0.94**	**49**	*i* P	**Pg**	**04 21 16.1**	**-0.6**
ULDT				*i* S	**Sg**	**04 21 28.8**	**-0.1**
ULDT	**Uludag**	**0.94**	**49**	*i* P	**Pg**	**04 21 16.0**	**-0.6**
ULDT				*i* S	**Sg**	**04 21 28.8**	**-0.1**
MANT	**Manisa**	**1.06**	**165**	*i* P	**Pg**	**04 21 17.8**	**-1.2**
MANT	**Manisa**	**1.06**	**165**	*i* P	**Pg**	**04 21 17.8**	**-1.1**
GDZ	**Gediz**	**1.07**	**113**	*i* P	**Pg**	**04 21 18.1**	**-1.0**
GDZ				*i* S	**Sg**	**04 21 33.1**	**0.0**
GDZ	**Gediz**	**1.07**	**113**	*i* P	**Pg**	**04 21 18.1**	**-1.0**
GDZ				*i* S	**Sg**	**04 21 33.1**	**0.0**
GEMT	**Gemlik**	**1.18**	**39**	*e*PN	**Pn**	**04 21 20.7**	**-0.2**
GEMT				*e*SN	**Sn**	**04 21 36.6**	**-0.3**
GEMT	**Gemlik**	**1.18**	**39**	*e*Pn	**Pn**	**04 21 20.7**	**-0.2**
GEMT				*e*Sn	**Sn**	**04 21 36.6**	**-0.3**
YLV	**Yalova**	**1.37**	**40**	*e*PN	**Pn**	**04 21 22.4**	**-1.1**
YLV	**Yalova**	**1.37**	**40**	*e*Pn	**Pn**	**04 21 22.4**	**-1.1**
SART	**Tekirdag**	**1.41**	**326**	*i* P	**Pn**	**04 21 25.1**	**+1.0**
SART				*i* S	**Sn**	**04 21 43.8**	**+1.2**
SART	**Tekirdag**	**1.41**	**326**	*i* P	**Pn**	**04 21 25.1**	**+1.0**
SART				*i* S	**Sn**	**04 21 43.8**	**+1.2**

*IDC **16** 04:31:37.9±0.7,31°.19N×103°.72E,h0km,mb4.1/15, mb1 4.3/17,mb1mx4.1/28,mbtmp4.1/17,ML4.0/2,MS3.5/6, Ms1 3.5/6,ms1mx3.0/33,Error ellipse: s-maj=25.4km s-min=13.7km az=57.0*
*NEIC **16** 04:31:39.9±0.4,31°.20N×103°.72E,h10km,mb4.3/3,Error ellipse: s-maj=12.0km s-min=7.4km az=50.0*
*BJI **16** 04:31:40.2,31°.22N×103°.91E,h17km,mB4.7/6,mb4.3/9, ML4.1/20,Ms4.0/11,Ms7 3.8/12*
*ISCJB **16** 04:31:40.3±0.7,31°.21N±0°.03×103°.75E±0°.05,h28km±6km, mb4.1/17,MS3.5/6,Error ellipse: s-maj=7.7km s-min=5.3km az=169.5*

ISC 16 04:31:40.1±0.8,31°.26N±0°.02×103°.79E±0°.04,h9km±5km, n37,σ1s15/49,mb4.1/17,MS3.5/6,1C,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.35**	**184**	Pg	**Pg**	**04 31 46.9**	**-0.1**
CD2				Sg	**Sg**	**04 31 52.4**	**+0.7**
CD2				smax			
	comp=N,55μm,0.6s						
CD2				smax			
	comp=E,69μm,0.6s						
LZH	**Lanzhou**	**4.81**	**1**	Pn	**Pn**	**04 32 55.0**	**+2.3**
LZH				Pg	**Pg**	**04 33 10.1**	**-2.1**
LZH				Sn	**Sn**	**04 33 51.9**	**+3.3**
LZH				Sg	**Sg**	**04 34 14.6**	**+0.1**
LZH				smax			
	comp=N,270nm,1.0s						
LZH				smax			
	comp=E,410nm,1.0s						
LZH				LR	LR		
	comp=E,1μm,8.0s						
LZH				LR	LR		
	comp=Z,2μm,9.5s						
ENH	**Enshi**	**5.01**	**100**	*e*Pn	**Pn**	**04 32 55.8**	**+0.4**
	comp=Z,128nm,0.6s						
ENH				*e*Sg	**Sg**	**04 34 18.2**	**-2.6**
XAN	**Xi'an**	**5.14**	**56**	Pn	**Pn**	**04 32 56.8**	**-0.4**
XAN				Sn	**Sn**	**04 33 56.3**	**-0.4**
XAN				Sg	**Sg**	**04 34 20.1**	**-5.0**
XAN				smax			
	comp=N,240nm,0.8s						
XAN				smax			
	comp=E,130nm,0.9s						
XAN				LR	LR		
	comp=N,560nm,8.9s						
XAN				LR	LR		
	comp=E,130nm,10.0s						
XAN				LR	LR		
	comp=Z,150nm,10.0s						
GYA	**Guiyang**	**5.41**	**151**	Pn	**Pn**	**04 33 01.9**	**+0.9**
GYA				Sn	**Sn**	**04 34 04.1**	**+0.6**
GYA				Sg	**Sg**	**04 34 35.3**	**+1.4**
GYA				smax			
	comp=N,290nm,0.9s						
GYA				smax			
	comp=E,350nm,0.7s						
KMI	**Kunming**	**6.19**	**189**	Pn	**Pn**	**04 33 12.3**	**+0.7**
KMI				Sn	**Sn**	**04 34 21.0**	**-1.6**
KMI				smax			
	comp=N,53nm,0.9s						
KMI				smax			
	comp=E,58nm,0.9s						
KMI				LR	LR		
	comp=N,510nm,7.5s						
KMI				LR	LR		
	comp=E,630nm,5.3s						
KMI				LR	LR		
	comp=Z,370nm,7.5s						
GTA	**Gaotai**	**8.75**	**339**	*e*P	**Pn**	**04 33 52.1**	**+5.3**
GTA				pP		04 33 56.0	
GTA				sP		04 33 58.6	
GTA				S	**Sn**	**04 35 26.3**	**+0.7**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,56nm,3.9s						
GTA				LR	LR		
	comp=N,460nm,15.3s						
GTA				LR	LR		
	comp=E,230nm,9.9s						
GTA				LR	LR		
	comp=Z,570nm,13.8s						
WHN	**Wuhan**	**9.11**	**92**	P	**Pn**	**04 33 54.3**	**+2.6**
WHN				S	**Sn**	**04 35 28.3**	**-6.1**
WHN				LR	LR		
	comp=N,2μm,3.4s						
WHN				LR	LR		
	comp=E,2μm,4.4s						
WHN				LR	LR		
	comp=Z,1μm,10.4s						
CMAR	**Chiang Mai Arr**	**13.48**	**200**	Pn	**Pn**	**04 34 50.6**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=4.8,slow=15,SNR=6.3						
SONM	**Songino Array**	**16.67**	**6**	Pn	**Pn**	**04 35 35.0**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=186,slow=12,SNR=8.8						
SONM				Lg		04 40 30.7	
	comp=Z,0.1nm,0.3s,baz=192,slow=28,SNR=2.7						
SONM				LR	LR	04 42 54.4	
	comp=Z,72nm,18.3s,baz=126,slow=40						
SSLB	**Suanglung**	**16.94**	**112**	*e*P	**Pn**	**04 35 39.0**	**+1.6**
	comp=Z,49nm,1.1s						
WMQ	**Urumqi**	**17.85**	**319**	*e*P	**Pn**	**04 35 47.5**	**-1.1**
WMQ				pmax	pmax		
	comp=Z,21nm,1.0s						
KSRS	**Korea Array**	**20.83**	**66**	P	**P**	**04 36 22.0**	**0.0**
	comp=Z,5.3nm,0.6s,baz=263,slow=10,SNR=27						
CN2	**Changchun**	**21.18**	**48**	⇑ P	**P**	**04 36 27.0**	**+1.3**
CN2				*e*S	**S**	**04 40 13.3**	**-8.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,300nm,10.0s,MS4.1						
CN2				LR	LR		
	comp=E,300nm,10.0s,MS4.1						
CN2				LR	LR		
	comp=Z,300nm,10.0s,MS4.0						
MK31	**Makanchi Array**	**22.68**	**319**	*e*P	**P**	**04 36 42.2**	**+0.5**
MKAR	**Makanchi Array**	**22.68**	**319**	P	**P**	**04 36 42.2**	**+0.5**
	comp=Z,4.6nm,0.7s,mb4.0,baz=103,slow=14,SNR=26						
MKAR				LR	LR	04 46 14.5	
	comp=Z,159nm,18.1s,MS3.5,baz=179,slow=39						
MKAR	**Makanchi Array**	**22.68**	**319**	P	**P**	**04 36 42.2**	**+0.5**
UCH	**Uchtor**	**25.76**	**303**	*e*P	**P**	**04 37 13.8**	**+2.6**
	comp=Z,7.2nm,1.1s,mb4.1						
AAK	**Ala-Archa**	**25.89**	**304**	P	**P**	**04 37 16.4**	**+4.2**
	comp=Z,1.9nm,0.5s,mb3.9,baz=173,slow=9.0,SNR=4.2						
AAK				LR	LR	04 49 06.1	
	comp=Z,151nm,20.3s,MS3.5,baz=3.4,slow=40						
ZALV	**Zalesovo Beam**	**26.46**	**334**	P	**P**	**04 37 17.5**	**+0.2**
	comp=Z,6.4nm,0.9s,mb4.2,baz=134,slow=9.6,SNR=14						
ZALV				LR	LR	04 48 21.4	
	comp=Z,61nm,21.8s,MS3.1,baz=249,slow=38						
KURK	**Kurchatov**	**26.95**	**323**	P	**P**	**04 37 21.8**	**0.0**
	comp=Z,2.9nm,0.7s,mb3.9,baz=128,slow=9.2,SNR=28						
KURK				LR	LR	04 48 18.0	
	comp=Z,60nm,18.1s,MS3.2,baz=150,slow=37						
KURK	**Kurchatov**	**26.95**	**323**	*e*P	**P**	**04 37 22.0**	**+0.2**
	comp=Z,9.3nm,1.3s,mb4.2						
BVAR	**Borovoye Array**	**32.50**	**322**	P	**P**	**04 38 10.6**	**-0.3**
	comp=Z,0.7nm,0.5s,mb3.8,baz=126,slow=7.7,SNR=5.2						
BRTR	**Keskin Array B**	**56.42**	**299**	P	**P**	**04 41 20.4**	**-1.7**
	comp=Z,0.6nm,0.6s,mb3.8,baz=133,slow=5.4,SNR=4.5						
ARCES	**ARCESS Array B**	**57.00**	**336**	P	**P**	**04 41 25.1**	**-0.6**
	comp=Z,2.1nm,0.8s,mb4.2,baz=91,slow=7.6,SNR=9.8						
FINES	**FINESS Array B**	**57.28**	**326**	P	**P**	**04 41 26.5**	**-1.3**
	comp=Z,0.8nm,0.5s,mb4.0,baz=100,slow=5.8,SNR=5.0						
FINES	**FINESS Array B**	**57.28**	**326**	P	**P**	**04 41 26.5**	**-1.3**
WRA	**Warramunga Arr**	**58.76**	**146**	P	**P**	**04 41 37.9**	**-0.7**
	comp=Z,8.0nm,0.6s,mb4.9,baz=338,slow=7.9,SNR=65						
ASAR	**Alice Springs**	**61.77**	**149**	P	**P**	**04 41 58.3**	**-0.9**
	comp=Z,1.4nm,0.7s,mb4.2,baz=330,slow=6.4,SNR=12						
NB2	**NORSAR Subarra**	**64.38**	**327**	P	**P**	**04 42 14.5**	**-1.6**
	comp=Z,1.1nm,0.7s,mb4.0,baz=73,slow=6.5						
NOA	**NORSAR Array B**	**64.38**	**327**	P	**P**	**04 42 14.8**	**-1.3**
	comp=Z,1.4nm,0.8s,mb4.0,baz=74,slow=6.8,SNR=4.9						
NOA	**NORSAR Array B**	**64.38**	**327**	P	**P**	**04 42 14.8**	**-1.3**
GERES	**GERESS Array B**	**67.24**	**314**	LR	LR	05 13 34.2	
	comp=Z,74nm,18.1s,MS3.9,baz=341,slow=37						
KDAK	**Kodiak Island**	**70.86**	**33**	P	**P**	**04 42 56.8**	**-0.3**
	comp=Z,2.1nm,0.5s,mb4.4,baz=297,slow=4.5,SNR=4.0						
INK	**Inuvik**	**72.10**	**19**	P	**P**	**04 43 04.1**	**-0.3**
	comp=Z,1.7nm,0.8s,mb4.0,baz=322,slow=6.2,SNR=3.3						
STKA	**Stephens Creek**	**72.29**	**147**	P	**P**	**04 43 05.0**	**-0.9**
	comp=Z,2.9nm,0.8s,mb4.2,baz=333,slow=4.5,SNR=4.6						
YKA	**Yellowknife Ar**	**81.62**	**17**	P	**P**	**04 43 57.9**	**-0.3**
	comp=Z,0.9nm,0.7s,mb3.8,baz=328,slow=4.5,SNR=4.4						

*IDC **16** 04:34:59.6±0.6,39°.13N×140°.83E,h0km,mb4.0/16, mb1 4.2/18,mb1mx4.1/27,mbtmp4.0/18,ML3.9/2,Error ellipse: s-maj=19.7km s-min=14.0km az=95.0*
*NIED **16** 04:35:00,39°.10N×140°.90E,h5km,Mw3.9 Best double couple: M0:7.21000×10^14 NP1:φs21.00000°,δ58.00000°, λ99.00000°. NP2:φs184.00000°,δ33.00000°,λ76.00000°.*
*ISCJB **16** 04:35:00.7±0.8,39°.12N±0°.03×140°.94E±0°.04,h14km±5km, mb3.9/18,Error ellipse: s-maj=5.6km s-min=4.1km az=22.4*
*NEIC **16** 04:35:01.1,39°.10N×140°.93E,h12km,mb4.2/2,After JMA.*
NEIC Recorded [2 JMA] in Iwate and Miyagi; [1 JMA] in Akita.
*JMA **16** 04:35:01.1,39°.10N×140°.92E,h10km±1km,M4.1 Broadband fault plane solution: P waves. NP1: φs216.00000°,δ31.00000°,λ111.00000°. NP2: φs11.00000°,δ61.00000°,λ78.00000°. Principal axes: T Plg71.0000°, Azm253.0000°; N Plg11.0000°, Azm17.0000°; P Plg15.0000°, Azm110.0000°;*
JMA Felt II J1.

ISC 16 04:35:01.3±0.5,39°.11N±0°.02×140°.94E±0°.04,h7km±3km, n37,σ0s98/47,mb3.9/18,1C-6D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.27**	**126**	⇓ P	**Pg**	**04 35 06.5**	**-0.1**
JMK				S	**Sg**	**04 35 10.2**	**0.0**
JRG	**Rokugo**	**0.37**	**321**	⇓ P	**Pg**	**04 35 08.4**	**-0.1**
JRG				S	**Sg**	**04 35 14.3**	**+0.9**
JOM	**Ohasama**	**0.46**	**37**	⇓ P	**Pg**	**04 35 10.1**	**0.0**
JOM				S	**Sg**	**04 35 16.5**	**+0.4**
JYK	**Kaneyama**	**0.49**	**247**	⇓ P	**Pg**	**04 35 10.4**	**-0.4**
JYK				S	**Sg**	**04 35 16.7**	**-0.5**
OFUJ	**Ofunato**	**0.57**	**93**	⇓ P	**Pg**	**04 35 12.3**	**0.0**
JIO	**Ouri**	**0.73**	**154**	⇓ P	**Pg**	**04 35 14.7**	**-0.6**
JIO				S	**Sg**	**04 35 24.7**	**-0.1**
JOU	**Okura**	**0.77**	**196**	⇑ P	**Pg**	**04 35 15.7**	**-0.5**
JOU				S	**Sg**	**04 35 26.0**	**-0.2**
MAJO	**Matsushiro**	**3.35**	**221**	*e*Pn	**Pn**	**04 35 55.1**	**+1.0**
MAT	**Matsushiro**	**3.35**	**221**	P	**Pn**	**04 35 54.9**	**+0.9**
MAT				*e*S	**Sn**	**04 36 35.8**	**+1.7**
MJAR	**Matsushiro Arr**	**3.35**	**221**	Pn	**Pn**	**04 35 54.9**	**+0.9**
	7.1nm,0.3s,baz=289,slow=15,SNR=20						
MJAR				Pg	**Pg**	**04 36 00.4**	**-5.2**
	7.8nm,0.3s,baz=30,slow=14,SNR=23						
MJAR				Lg		04 36 42.2	
	2.7nm,0.3s,baz=19,slow=23,SNR=2.9						
ERM	**Erimo**	**3.36**	**30**	*e*Pn	**Pn**	**04 35 56.1**	**+2.0**
ERM				*e*S	**Sn**	**04 36 35.5**	**+1.3**
JHJ	**Hachijo jima 2**	**6.05**	**189**	Pn	**Pn**	**04 36 32.4**	**+1.3**
	14nm,0.3s,baz=69,slow=14,SNR=4.2						
JHJ				Sn	**Sn**	**04 37 41.2**	**+0.6**
	17nm,0.3s,baz=198,slow=16,SNR=4.6						
KSRS	**Korea Array**	**10.37**	**265**	Pn	**Pn**	**04 37 33.2**	**+2.9**
	1.8nm,0.3s,baz=79,slow=14,SNR=18						
KSRS				Sn	**Sn**	**04 39 30.7**	**+4.0**
	1.3nm,0.3s,baz=77,slow=24,SNR=21						
CBIJ	**Chichi jima**	**12.03**	**175**	Pn	**Pn**	**04 37 48.4**	**-4.7**
	1.4nm,0.3s,baz=299,slow=19,SNR=3.4						
CBIJ				Sn	**Sn**	**04 39 57.8**	**-10**
	2.0nm,0.3s,baz=53,slow=20,SNR=2.6						
SONM	**Songino Array**	**26.36**	**301**	P	**P**	**04 40 40.0**	**+2.2**
	0.6nm,0.9s,mb3.1,baz=109,slow=7.8,SNR=4.6						
ZALV	**Zalesovo Beam**	**40.26**	**311**	P	**P**	**04 42 37.3**	**-1.2**
	1.2nm,0.4s,mb4.0,baz=81,slow=9.2,SNR=6.7						
ZALV				PcP	PcP	04 44 41.7	-0.5
	0.6nm,0.5s,baz=90,slow=1.4,SNR=2.5						
ZALV	**Zalesovo Beam**	**40.26**	**311**	P	**P**	**04

JYK	**Kaneyama**	**0.36 257**	⇑P		**Pg**	**04 56 59.0**	**-0.2**
JYK			S		**Sg**	**04 57 04.0**	**0.0**
JRG	**Rokugo**	**0.42 340**	⇓P		**Pg**	**04 57 00.1**	**-0.2**
JRG			S		**Sg**	**04 57 06.3**	**+0.5**
JOM	**Ohasama**	**0.60 38**	⇑P		**Pg**	**04 57 03.5**	**-0.2**
JOM			S		**Sg**	**04 57 11.7**	**+0.2**
JOU	**Okura**	**0.64 191**	⇓P		**Pg**	**04 57 04.5**	**0.0**
JIO	**Ouri**	**0.69 142**	⇓P		**Pg**	**04 57 05.0**	**-0.3**
JIO			*e*S		**Sg**	**04 57 14.4**	**+0.2**
JYA	**Atsumi**	**0.95 245**	⇑P		**Pg**	**04 57 09.8**	**-0.6**
JYS	**Shirataka**	**0.97 217**	⇑P		**Pg**	**04 57 10.3**	**-0.5**
MAJO	**Matsushiro**	**3.21 221**	*e*Pn		**Pn**	**04 57 43.9**	**+0.6**
MAT	**Matsushiro**	**3.21 221**	P		**Pn**	**04 57 44.2**	**+1.0**
MAT			*e*S		**Sn**	**04 58 26.8**	**+5.0**
MJAR	**Matsushiro Arr**	**3.21 221**	Pn		**Pn**	**04 57 44.1**	**+0.8**
	1.3nm,0.3s,baz=27,slow=14,SNR=15						
MJAR			Pg		**Pg**	**04 57 49.5**	**-4.1**
	2.9nm,0.3s,baz=28,slow=14,SNR=22						
MJAR			Lg			04 58 32.1	
	0.7nm,0.3s,baz=24,slow=27,SNR=2.8						
MJAR	**Matsushiro Arr**	**3.21 221**	Pn		**Pn**	**04 57 44.1**	**+0.8**
MJAR			Pg		**Pg**	**04 57 49.5**	**-4.1**
KSRS	**Korea Array**	**10.26 265**	Pn		**Pn**	**04 59 23.0**	**+2.9**
	0.6nm,0.3s,baz=78,slow=14,SNR=9.8						
ZALV	**Zalesovo Beam**	**40.26 311**	P		**P**	**05 04 28.1**	**-1.7**
	0.4nm,0.4s,mb3.5,baz=76,slow=6.1,SNR=3.8						
MKAR	**Makanchi Array**	**42.70 300**	P		**P**	**05 04 46.1**	**-3.8**
	0.2nm,0.4s,mb3.2,baz=64,slow=9.9,SNR=3.4						
MKAR			LR		LR	05 21 35.9	
	comp=Z,32nm,21.6s,baz=1.0,slow=35						
WRA	**Warramunga Arr**	**58.94 187**	P		**P**	**05 06 51.3**	**-1.2**
	0.9nm,0.8s,mb3.9,baz=5.1,slow=7.4,SNR=9.6						

ISCJB ***16*** *04:58:49.4±1.0, 33°.39S×0°.03×72°.43W±0°.04, h4km±6km, mb3.5/2, Error ellipse: s-maj=5.6km s-min=5.4km az=147.5*
IDC ***16*** *04:58:50.4±1.1, 33°.38S×72°.34W, h0km, mb3.5/3, mb1 3.7/7, mb1mx3.7/17, mbtmp3.6/7, ML3.9/3, Error ellipse: s-maj=27.8km s-min=19.0km az=126.0*
GUC ***16*** *04:58:52.4±0.6, 33°.45S×72°.28W, h3km±2km, MD4.1, ML4.1*
NEIC ***16*** *04:58:52.4, 33°.45S×72°.28W, h3km, ML4.1(GUC), After GUC.*
ISC 16 04:58:51.5±0.8, 33°.42S±0°.03×72°.35W±0°.04, h7km±4km, n48, σ0s74/76, mb3.5/2, 15C-5D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCCH	**Las Cruces**	**0.66**	**96**	⇑*i*P	**Pg**	**04 59 04.4**	**+0.3**
LCCH				*i* S	**Sg**	**04 59 13.2**	**+0.6**
LCCH	**Las Cruces**	**0.66**	**96**	⇑*i*P	**Pg**	**04 59 04.4**	**+0.3**
LCCH				*i* S	**Sg**	**04 59 13.2**	**+0.6**
LNV	**Longovilo**	**0.95**	**125**	⇓*i*P	**Pg**	**04 59 09.7**	**-0.1**
LNV				*i* S	**Sg**	**04 59 22.1**	**0.0**
LNV	**Longovilo**	**0.95**	**125**	⇓*i*P	**Pg**	**04 59 09.7**	**-0.1**
LNV				*i* S	**Sg**	**04 59 22.1**	**0.0**
PACH	**Papudo**	**1.16**	**41**	*e*P	**Pg**	**04 59 13.9**	**+0.1**
PACH	**Papudo**	**1.16**	**41**	*e*P	**Pg**	**04 59 13.9**	**+0.1**
TACH	**Talagante**	**1.20**	**102**	⇓*i*P	**Pg**	**04 59 13.5**	**-1.0**
TACH				*i* S	**Sg**	**04 59 29.6**	**-0.6**
TACH	**Talagante**	**1.20**	**102**	⇓*i*P	**Pg**	**04 59 13.5**	**-1.0**
TACH				*i* S	**Sg**	**04 59 29.6**	**-0.6**
ROCH	**El Roble**	**1.21**	**69**	⇑*i*P	**Pg**	**04 59 13.9**	**-0.7**
ROCH				*i* S	**Sg**	**04 59 30.9**	**+0.7**
ROCH	**El Roble**	**1.21**	**69**	⇑*i*P	**Pg**	**04 59 13.9**	**-0.7**
ROCH				*i* S	**Sg**	**04 59 30.9**	**+0.7**
SAN	**Santiago**	**1.41**	**92**	⇑*i*P	**Pn**	**04 59 17.1**	**-0.5**
SAN				*i* S	**Sb**	**04 59 35.6**	**-0.8**
SAN	**Santiago**	**1.41**	**92**	⇑*i*P	**Pn**	**04 59 17.1**	**-0.5**
SAN				*i* S	**Sb**	**04 59 35.6**	**-0.8**
SAN				AML	AML	04 59 44.1	
	comp=E,11μm,0.3s						
PEL	**Peldehue**	**1.42**	**79**	⇓*i*P	**Pn**	**04 59 17.3**	**-0.5**
PEL				*i* S	**Sb**	**04 59 36.4**	**-0.3**
PEL				AML	AML	04 59 45.8	
	comp=N,12μm,0.5s						
ANTU	**Antumapu**	**1.44**	**97**	*e*P	**Pn**	**04 59 17.5**	**-0.5**
ANTU				*i* S	**Sn**	**04 59 36.4**	**-0.9**
ANTU	**Antumapu**	**1.44**	**97**	*e*P	**Pn**	**04 59 17.5**	**-0.5**
ANTU				*i* S	**Sn**	**04 59 36.4**	**-0.9**
ANTU				AML	AML	04 59 39.4	
	comp=N,5μm,0.5s						
CHCH	**Chadas Angostu**	**1.51**	**111**	⇑*i*P	**Pn**	**04 59 18.1**	**-0.8**
CHCH	**Chadas Angostu**	**1.51**	**111**	⇑*i*P	**Pn**	**04 59 18.1**	**-0.8**
CLCH	**Cerro Calan**	**1.52**	**90**	⇑*i*P	**Pn**	**04 59 19.3**	**+0.2**
CLCH				*i* S	**Sn**	**04 59 39.1**	**+0.1**
CLCH	**Cerro Calan**	**1.52**	**90**	⇑*i*P	**Pn**	**04 59 19.3**	**+0.2**
CLCH				*i* S	**Sn**	**04 59 39.1**	**+0.1**
CLCH				AML	AML	04 59 43.1	
	comp=E,8μm,0.7s						
FSR	**Penalolen**	**1.52**	**93**	*e*P	**Pn**	**04 59 19.0**	**-0.2**
FSR				*i* S	**Sn**	**04 59 39.0**	**-0.2**
FSR	**Penalolen**	**1.52**	**93**	*e*P	**Pn**	**04 59 19.0**	**-0.2**
FSR				*i* S	**Sn**	**04 59 39.0**	**-0.2**
FSR				AML	AML	04 59 44.9	
	comp=E,1μm,0.6s						
PCH	**Pirque**	**1.55**	**98**	⇑*i*P	**Pn**	**04 59 19.1**	**-0.3**
PCH				*i* S	**Sn**	**04 59 39.6**	**-0.2**
PCH	**Pirque**	**1.55**	**98**	⇑*i*P	**Pn**	**04 59 19.1**	**-0.3**
PCH				*i* S	**Sn**	**04 59 39.6**	**-0.2**
CACH	**El Canelo**	**1.62**	**116**	⇑*i*P	**Pn**	**04 59 20.8**	**+0.4**
CACH				*e*S	**Sn**	**04 59 42.8**	**+1.3**
CACH	**El Canelo**	**1.62**	**116**	⇑*i*P	**Pn**	**04 59 20.8**	**+0.4**
CACH				*e*S	**Sn**	**04 59 42.8**	**+1.3**
JACH	**Jahuel**	**1.65**	**64**	*e*P	**Pn**	**04 59 20.1**	**-0.8**
JACH				*e*S	**Sn**	**04 59 41.8**	**-0.4**
JACH	**Jahuel**	**1.65**	**64**	*e*P	**Pn**	**04 59 20.1**	**-0.8**
JACH				*e*S	**Sn**	**04 59 41.8**	**-0.4**
FCH	**Farellones**	**1.73**	**88**	⇑*i*P	**Pn**	**04 59 22.8**	**+0.8**
FCH				*i* S	**Sn**	**04 59 45.9**	**+1.7**
FCH				AML	AML	04 59 48.8	
	comp=E,4μm,0.3s						
NICH	**Los Niches**	**1.84**	**150**	*e*P	**Pn**	**04 59 23.4**	**-0.1**
TALC	**Talca**	**2.06**	**164**	*e*P	**Pn**	**04 59 25.6**	**-1.0**
TALC				*i* S	**Sn**	**04 59 52.3**	**-0.3**
TALC	**Talca**	**2.06**	**164**	*e*P	**Pn**	**04 59 25.6**	**-1.0**
TALC				*i* S	**Sn**	**04 59 52.3**	**-0.3**
CCHI	**Chillan**	**3.19**	**176**	P	**Pn**	**04 59 42.9**	**+0.9**
CCHI	**Chillan**	**3.19**	**176**	*e*P	**Pn**	**04 59 42.9**	**+0.9**
CFAA	**Coronel Fontan**	**3.92**	**64**	Pn	**Pn**	**04 59 53.6**	**+1.5**
	baz=240,slow=13						
CFAA				Pg	**Pg**	**04 59 57.9**	**-8.6**
	comp=E,0.8nm,0.3s,baz=243,slow=17,SNR=77						
CFAA				Lg		05 00 53.2	
	comp=E,4.7nm,0.3s,baz=62,slow=14,SNR=8.7						
CFAA	**Coronel Fontan**	**3.92**	**64**	Pn	**Pn**	**04 59 53.6**	**+1.5**
CFAA				Pg	**Pg**	**04 59 57.9**	**-8.6**
CFAA				Lg		05 00 53.2	
LCO	**Las Campanas**	**4.61**	**18**	*e*Pn	**Pn**	**05 00 00.6**	**-1.0**
LCO				*e*Sg	**Sg**	**05 01 20.5**	**+0.9**
PLCA	**Paso Flores**	**7.44**	**169**	Pn	**Pn**	**05 00 40.9**	**+0.3**
	comp=E,0.6nm,0.3s,baz=344,slow=12,SNR=16						
PLCA				Lg		05 02 50.5	
	comp=E,0.2nm,0.3s,baz=257,slow=21,SNR=4.5						
PLCA	**Paso Flores**	**7.44**	**169**	*e*Pn	**Pn**	**05 00 41.0**	**+0.4**
	comp=E,5.8nm,0.8s						
TRQA	**Tornquist**	**9.62**	**122**	*e*Pn	**Pn**	**05 01 11.7**	**+1.4**
CPUP	**Villa Florida**	**14.81**	**65**	Pn	**Pn**	**05 02 22.2**	**+0.8**
	comp=E,0.1nm,0.3s,baz=233,slow=16,SNR=2.3						
CPUP	**Villa Florida**	**14.81**	**65**	Pn	**Pn**	**05 02 22.2**	**+0.8**
LPAZ	**La Paz**	**17.47**	**14**	P	**Pn**	**05 02 55.5**	**-0.3**
	comp=E,0.1nm,0.3s,baz=183,slow=6.4,SNR=14						
LPAZ	**La Paz**	**17.47**	**14**	*e*Pn	**Pn**	**05 02 55.6**	**-0.2**
	comp=E,4.2nm,1.0s						
SIV	**San Ignacio**	**20.12**	**33**	P	**P**	**05 03 24.5**	**-1.6**
	comp=E,2.9nm,0.7s,baz=216,slow=11,SNR=14						
QSPA	**South Pole Qui**	**56.82**	**180**	P	**P**	**05 08 36.4**	**+0.4**
	comp=E,1.5nm,0.9s,mb4.0,baz=141,slow=5.6,SNR=4.7						
TXAR	**Lajitas Array**	**69.10**	**331**	P	**P**	**05 09 58.7**	**+0.5**
	comp=E,0.1nm,0.5s,mb3.0,baz=152,slow=7.8,SNR=2.5						
TXAR	**Lajitas Array**	**69.10**	**331**	P	**P**	**05 09 58.7**	**+0.5**
ZALV	**Zalesovo Beam**	**153.87**	**31**	PKPbc	PKPbc	05 18 50.6	-0.3
	comp=E,0.5nm,0.4s,baz=221,slow=1.5,SNR=2.9						

IDC 16 05:03:24.8±6.6, 6°.31S×148°.24E, h0km, mb3.9/3, mb1 4.0/4, mb1mx3.7/16, mbtmp3.9/4, MS3.3/1, Ms1 3.3/1, ms1mx2.5/18, Error ellipse: s-maj=101.7km s-min=60.2km az=34.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.13 224**		P	Pn	05 07 48.5	-1.8
	0.6nm,0.3s,baz=51,slow=11,SNR=18						
ASAR	**Alice Springs**	**22.09 217**		P	P	05 08 21.4	-0.2
	1.3nm,0.4s,baz=51,slow=8.8,SNR=26						
FITZ	**Fitzroy Crossi**	**24.96 240**		P	P	05 08 50.3	+0.1
	2.7nm,0.4s,baz=62,slow=9.9,SNR=18						
STKA	**Stephens Creek**	**26.18 193**		P	P	05 09 01.8	+0.7
	1.5nm,0.6s,baz=19,slow=11,SNR=3.4						
PETK	**Petropavlovsk-**	**59.73**	**7**	LR	LR	05 40 44.8	
	comp=Z,23nm,18.6s,baz=253,slow=38						

NEIC ***16*** *05:09:30.6±4.0, 2°.15N×128°.27E, h331km±43km, mb4.0/3, Error ellipse: s-maj=40.9km s-min=12.3km az=59.0*
IDC ***16*** *05:09:30.3±9.3, 2°.17N×128°.19E, h326km±100km, mb3.5/7, mb1 3.6/8, mb1mx3.3/23, mbtmp3.5/8, Error ellipse: s-maj=58.4km s-min=15.4km az=56.0*
ISC 16 05:09:29.8±4.7, 2°.2N±0°.2×128°.3E±0°.2, h321km±52km, n14, σ0s53/16, mb3.8/7, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**11.09 230**		Pn	**Pn**	**05 12 01.3**	**+0.3**
	1.8nm,0.3s,baz=52,slow=12,SNR=5.0						
KAPI				S	**S**	**05 14 05.0**	**-0.2**
	1.6nm,0.3s,baz=189,slow=16,SNR=2.4						
KAPI	**Kappang**	**11.09 230**		Pn	**Pn**	**05 12 02.4**	**+1.3**
KAPI				S	**S**	**05 14 05.0**	**-0.2**
KAKA	**Kakadu**	**15.35 164**		*e*P	**P**	**05 12 48.7**	**-1.0**
	30nm,0.7s						
FITZ	**Fitzroy Crossi**	**20.30 187**		P	**P**	**05 13 42.4**	**-0.3**
	1.7nm,0.5s,baz=6.8,slow=13,SNR=13						
FITZ	**Fitzroy Crossi**	**20.30 187**		*e*P	**P**	**05 13 42.0**	**-0.7**
	1.2nm,0.4s						
WRAB	**Tennant Creek**	**22.76 165**		*e*P	**P**	**05 14 05.3**	**+0.2**
	3.5nm,0.5s,mb3.9						
WRA	**Warramunga Arr**	**22.76 165**		P	**P**	**05 14 05.2**	**0.0**
	6.4nm,0.7s,mb4.0,baz=345,slow=11,SNR=61						
ASAR	**Alice Springs**	**26.25 168**		P	**P**	**05 14 37.1**	**+0.6**
	2.5nm,0.5s,mb3.7,baz=355,slow=8.0,SNR=53						
STKA	**Stephens Creek**	**36.14 161**		P	**P**	**05 16 03.0**	**+0.6**
	1.8nm,0.3s,mb3.8,baz=340,slow=10,SNR=14						
STKA	**Stephens Creek**	**36.14 161**		P	**P**	**05 16 03.0**	**+0.6**
MKAR	**Makanchi Array**	**59.70 325**		P	**P**	**05 19 00.8**	**-0.4**
	0.4nm,0.4s,mb3.2,baz=142,slow=5.4,SNR=2.4						
KURK	**Kurchatov**	**63.87 327**		P	**P**	**05 19 28.7**	**-0.1**
	0.9nm,0.6s,mb3.5,baz=129,slow=6.4,SNR=4.7						
KDAK	**Kodiak Island**	**82.40**	**32**	P	**P**	**05 21 16.4**	**+0.1**
	5.0nm,1.1s,mb4.3,baz=261,slow=19,SNR=4.6						
KDAK	**Kodiak Island**	**82.40**	**32**	P	**P**	**05 21 16.4**	**+0.1**

NIED ***16*** *05:38:00, 39°.10N×140°.90E, h5km, Mw3.8 Best double couple: M0=5.60000×10^14 NP1:φs=205.00000°, δ54.00000°, λ102.00000°. NP2:φs=6.00000°, δ38.00000°, λ75.00000°.*
IDC ***16*** *05:38:09.7±1.0, 39°.12N×140°.97E, h0km, mb3.7/9, mb1 3.8/10, mb1mx3.7/25, mbtmp3.7/10, ML3.1/1, MS3.5/3, Ms1 3.5/3, ms1mx2.9/28, Error ellipse: s-maj=27.7km s-min=15.7km az=106.0*
NEIC ***16*** *05:38:10.8, 39°.13N×140°.94E, h12km, mb4.3/2, After JMA.*
JMA ***16*** *05:38:10.8, 39°.14N×140°.94E, h11km±1km, M3.5 Broadband fault plane solution: P waves. NP1: φs=9.00000°, δ39.00000°, λ73.00000°. NP2:φs=211.00000°, δ53.00000°, λ104.00000°. Principal axes: T Plg77.0000°, Azm169.0000°; N Plg11.0000°, Azm22.0000°; P Plg7.0000°, Azm291.0000°;*
JMA Felt I J1.
ISCJB ***16*** *05:38:10.5±0.6, 39°.16N±0°.03×140°.97E±0°.05, h15km±5km, mb3.8/11, MS3.6/3 Error ellipse: s-maj=6.6km s-min=5.1km az=0.5*
ISC 16 05:38:10.9±0.6, 39°.14N±0°.03×140°.94E±0°.04, h6km±4km, n25, σ0s84/32, mb3.8/11, MS3.6/3, 1C-6D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.29 131**	⇓P		**Pg**	**05 38 16.5**	**0.0**
JMK				S	**Sg**	**05 38 20.4**	**+0.2**
JRG	**Rokugo**	**0.35 317**	⇓P		**Pg**	**05 38 18.0**	**+0.4**
JOM	**Ohasama**	**0.43 39**	⇓P		**Pg**	**05 38 19.3**	**+0.2**
JOM				S	**Sg**	**05 38 25.3**	**+0.6**
JYK	**Kaneyama**	**0.51 244**	⇓P		**Pg**	**05 38 20.6**	**0.0**
JYK				*e*S	**Sg**	**05 38 26.8**	**-0.4**
OFUJ	**Ofunato**	**0.57 96**	⇓P		**Pg**	**05 38 21.9**	**+0.1**
JIO	**Ouri**	**0.76 155**	⇓P		**Pg**	**05 38 24.8**	**-0.6**
JIO				S	**Sg**	**05 38 35.1**	**-0.1**
JOU	**Okura**	**0.81 196**	⇑P		**Pg**	**05 38 26.1**	**-0.2**
JOU				S	**Sg**	**05 38 36.6**	**-0.2**
MAJO	**Matsushiro**	**3.38 221**	*e*Pn		**Pn**	**05 39 02.5**	**-1.7**
MAT	**Matsushiro**	**3.38 221**	P		**Pn**	**05 39 05.4**	**+1.2**
MAT			*e*S		**Sn**	**05 39 47.2**	**+2.6**
MJAR	**Matsushiro Arr**	**3.38 221**	Pn		**Pn**	**05 39 05.7**	**+1.6**
	1.8nm,0.3s,baz=29,slow=12,SNR=7.9						
MJAR			Pg		**Pg**	**05 39 10.8**	**-4.9**
	2.1nm,0.3s,baz=29,slow=14,SNR=12						
MJAR			Lg			05 39 57.1	
	0.9nm,0.3s,baz=51,slow=32,SNR=3.3						
MJAR	**Matsushiro Arr**	**3.38 221**	Pn		**Pn**	**05 39 05.7**	**+1.6**
MJAR			Pg		**Pg**	**05 39 10.8**	**-4.9**
MJAR			Lg			05 39 57.1	
KSRS	**Korea Array**	**10.37 265**	Pn		**Pn**	**05 40 43.9**	**+3.8**
	0.6nm,0.3s,baz=80,slow=14,SNR=20						
KSRS			Sn		**Sn**	**05 42 42.3**	**+5.7**
	0.4nm,0.3s,baz=75,slow=23,SNR=9.5						
TIXI	**Tiksi**	**33.16 353**	*e*P		**P**	**05 44 46.5**	**-1.1**
	1.5nm,0.2s,mb4.6						
ZALV	**Zalesovo Beam**	**40.24 311**	P		**P**	**05 45 47.7**	**-0.5**
	0.7nm,0.2s,mb4.0,baz=79,slow=7.5,SNR=5.8						
ZALV			LR		LR	06 02 37.4	
	comp=Z,28nm,18.7s,MS3.1,baz=69,slow=36						
MKAR	**Makanchi Array**	**42.71 300**	P		**P**	**05 46 08.1**	**-0.4**
	0.4nm,0.7s,mb3.3,baz=74,slow=13,SNR=5.5						
KURK	**Kurchatov**	**44.36 306**	*e*P		**P**	**05 46 21.2**	**-0.6**
	1.2nm,0.4s,mb4.0						
BVAR	**Borovoye Array**	**48.90 311**	P		**P**	**05 46 57.2**	**0.0**
	0.6nm,0.6s,mb3.8,baz=82,slow=11,SNR=3.7						
WRA	**Warramunga Arr**	**59.10 187**	P		**P**	**05 48 11.1**	**-0.9**
	0.3nm,0.4s,mb3.7,baz=3.8,slow=7.3,SNR=10						
ASAR	**Alice Springs**	**62.83 187**	P		**P**	**05 48 37.0**	**-0.3**
	0.4nm,0.6s,mb3.7,baz=7.6,slow=7.7,SNR=3.2						
FINES	**FINESS Array B**	**66.78 332**	P		**P**	**05 49 02.2**	**-0.6**
	1.0nm,0.7s,mb4.0,baz=48,slow=2.1,SNR=2.3						
NOA	**NORSAR Array B**	**72.10 337**	P		**P**	**05 49 35.1**	**-0.6**
	0.4nm,0.8s,mb3.4,baz=34,slow=2.4,SNR=2.5						
AKASG	**Malin Array Be**	**72.41 322**	P		**P**	**05 49 38.8**	**+1.1**
	0.5nm,0.4s,mb3.8,baz=46,slow=5.7,SNR=5.5						
PDAR	**Pinedale Array**	**76.46 46**	P		**P**	**05 50 02.2**	**+0.9**
	0.4nm,0.6s,mb3.5,baz=287,slow=7.6,SNR=3.8						
DAVOX	**Davos/Dischmat**	**83.94 329**	LR		LR	06 30 44.8	
	comp=Z,29nm,18.0s,MS3.7,baz=83,slow=38						
VAE	**Valguarnera**	**89.28 320**	LR		LR	06 34 38.2	
	comp=Z,56nm,19.9s,MS4.0,baz=280,slow=38						

IDC ***16*** *05:43:11.2±0.8, 11°.40S×166°.23E, h0km, mb4.1/13, mb1 4.2/13, mb1mx4.1/19, mbtmp4.0/13, Error ellipse: s-maj=29.2km s-min=19.0km az=140.0*
ISCJB ***16*** *05:43:14.8±0.6, 11°.5S±0°.1×166°.2E±0°.1, h33km, mb4.0/13, Error ellipse: s-maj=23.0km s-min=13.5km az=141.3*
NEIC ***16*** *05:43:16.5±0.5, 11°.41S×166°.23E, h35km, mb4.5/1, Error ellipse: s-maj=18.2km s-min=10.9km az=140.0*
ISC 16 05:43:16.7±0.6, 11°.4S±0°.1×166°.2E±0°.1, h35km, n16, σ0s71/16, mb4.0/14, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**21.04 243**		P	**P**	**05 47 58.8**	**+1.1**
	3.5nm,0.6s,mb3.9,baz=97,slow=10.0,SNR=4.2						
STKA	**Stephens Creek**	**30.50 224**		P	**P**	**05 49 25.9**	**-0.6**
	1.8nm,0.8s,mb3.9,baz=23,slow=9.3,SNR=2.8						
WRAB	**Tennant Creek**	**31.78 251**		P	**P**	**05 49 38.4**	**+0.4**
WRA	**Warramunga Arr**	**31.80 251**		P	**P**	**05 49 38.0**	**-0.1**
	1.3nm,0.8s,mb3.8,baz=83,slow=8.6,SNR=7.4						
RPZ	**Rata Peaks**	**32.45 173**		P	**P**	**05 49 43.2**	**-0.4**
	4.5nm,0.6s,mb4.5,baz=12,slow=10.8,SNR=3.8						
ASAR	**Alice Springs**	**33.05 244**		P	**P**	**05 49 48.6**	**-0.5**
	1.9nm,0.8s,mb4.1,baz=71,slow=9.7,SNR=18						
ASAR				PcP	PcP	05 52 31.0	-1.3
	1.0nm,0.9s,baz=85,slow=3.2,SNR=5.7						

FITZ	**Fitzroy Crossi**	**39.74 255**		P	**P**	**05 50 46.4**	**+0.1**
	3.7nm,0.8s,mb4.2,baz=128,slow=4.7,SNR=7.6						
CMAR	**Chiang Mai Arr**	**72.69 293**		P	**P**	**05 54 42.3**	**+0.8**
	0.7nm,0.4s,mb4.0,baz=138,slow=1.5,SNR=4.1						
SONM	**Songino Array**	**79.24 324**		P	**P**	**05 55 18.6**	**+0.3**
	0.2nm,0.3s,mb3.5,baz=108,slow=4.7,SNR=3.7						
EGAK	**Eagle**	**85.56**	**20**	*e*P	**P**	**05 55 49.8**	**-1.1**
	1.8nm,0.6s,mb4.5						
NVAR	**Mina Array Bea**	**85.91**	**50**	P	**P**	**05 55 53.8**	**+0.5**
	1.0nm,0.8s,mb4.1,baz=223,slow=8.1,SNR=6.8						
PDAR	**Pinedale Array**	**93.46**	**47**	P	**P**	**05 56 29.6**	**+0.8**
	0.2nm,0.4s,mb3.9,baz=323,slow=5.8,SNR=2.4						
MKAR	**Makanchi Array**	**94.11 317**		P	**P**	**05 56 30.5**	**-1.1**
	0.9nm,0.6s,mb4.4,baz=79,slow=9.1,SNR=7.5						
MKAR	**Makanchi Array**	**94.11 317**		P	**P**	**05 56 30.5**	**-1.1**
ZALV	**Zalesovo Beam**	**94.13 324**		P	**P**	**05 56 30.6**	**-0.9**
	0.5nm,0.5s,mb4.2,baz=145,slow=5.3,SNR=2.2						
TXAR	**Lajitas Array**	**95.60**	**61**	P	**P**	**05 56 39.6**	**+0.7**
	0.2nm,0.7s,mb3.7,baz=194,slow=4.8,SNR=3.7						

DJA 16 05:44:29, 0°.47S×122°.87E, h22km, MLv3.7/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.58 190**		P	Pb	05 44 40.0	-0.4
LUWI				S	Sb	05 44 47.2	-1.0
APSI	**Ampana**	**1.30 250**		P	Pn	05 44 50.5	-1.3
APSI				S	Sn	05 45 09.0	+0.5
MRSI	**Marisa**	**1.32 315**		P	Pn	05 44 51.8	-0.4
TTSI	**Tana Toraja**	**3.98 230**		P	Pn	05 45 29.1	+0.4

MEX 16 05:53:18.7±1.3, 16°.81N×94°.21W, h129km±22km, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**1.04**	**92**	*e*P	Pn	05 53 40.4	-1.5
TGIG				*i* S	Sn	05 53 57.7	-1.8
PCIG		**1.46**	**139**	*i* P	Pn	05 53 45.2	-1.0
PCIG				*i* S	Sn	05 54 05.8	-1.4
HUIG	**Huatulco**	**2.10**	**241**	*i* P	Pn	05 53 51.4	-2.4
HUIG				*i* S	Sn	05 54 19.2	-1.6
VHO	**Vista Hermosa**	**2.43**	**276**	*i* P	Pn	05 53 58.4	+0.4
VHO				*i* S	Sn	05 54 27.9	-0.2
THIG		**2.66**	**135**	*i* P	Pn	05 54 00.5	-0.4
THIG				*i* S	Sn	05 54 33.0	-0.5
PNIG	**Pinotepa**	**3.78**	**264**	*i* P	Pn	05 54 13.8	-1.8
PNIG				*i* S	Sn	05 54 57.8	-1.7

SKO ***16*** *06:01:22.2, 39°.68N×22°.03E, h0km, M2.0, ML2.4*
NEIC ***16*** *06:01:24.6, 39°.95N×22°.16E, h4km, MD3.3(ATH), After ATH.*
ATH ***16*** *06:01:24.6, 39°.95N×22°.16E, h4km, MD3.3/7*
THE ***16*** *06:01:25.8, 39°.94N×22°.08E, h0km±3km, ML3.2/9, Error ellipse: s-maj=3.8km s-min=1.1km az=34.0*
CSEM ***16*** *06:01:25.5±0.2, 39°.94N×22°.05E, h2km, ML3.2/9, Error ellipse: s-maj=4.9km s-min=3.9km az=74.0*
ISCJB ***16*** *06:01:26.1±0.4, 39°.91N±0°.02×22°.02E±0°.04, h10km, Error ellipse: s-maj=4.6km s-min=2.5km az=168.8*
ISC 16 06:01:26.1±0.4, 39°.91N±0°.02×22°.07E±0°.04, h1km±5km, n41, σ1s18/65, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THL	**Klokotos Trika**	**0.35 187**		P	**Pg**	**06 01 32.0**	**-0.8**
THL				S	**Sg**	**06 01 37.4**	**+0.1**
THL	**Klokotos Trika**	**0.35 187**		*e*PG	**Pg**	**06 01 31.9**	**-0.9**
THL				*e*SG	**Sg**	**06 01 37.4**	**+0.1**
THL	**Klokotos Trika**	**0.35 187**		P	**Pg**	**06 01 32.0**	**-0.8**
THL				S	**Sg**	**06 01 37.4**	**+0.1**
KZN	**Kozani**	**0.46 330**		*e*Pg	**Pg**	**06 01 33.2**	**-1.6**
KZN	

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.21**	**12**	*e*PG	**Pg**	**06 03 27.7**	**+2.1**
UPR				S	**Sg**	**06 03 30.5**	**+2.1**
UPR	**University Cam**	**0.21**	**12**	*e*PG	**Pg**	**06 03 27.7**	**+2.1**
UPR				*e*SG	**Sg**	**06 03 30.5**	**+2.1**
UPR	**University Cam**	**0.21**	**12**	P	**Pg**	**06 03 27.7**	**+2.1**
UPR				S	**Sg**	**06 03 30.5**	**+2.1**
RLS	**Riolos of Patr**	**0.21**	**264**	*e*PG	**Pg**	**06 03 25.1**	**-0.5**
RLS				*e*SG	**Sg**	**06 03 27.2**	**-1.2**
RLS	**Riolos of Patr**	**0.21**	**264**	*e*Pg	**Pg**	**06 03 25.1**	**-0.5**
RLS				*e*Sg	**Sg**	**06 03 27.2**	**-1.2**
LAKA	**Lakka**	**0.25**	**51**	P	**Pg**	**06 03 26.7**	**+0.3**
LAKA				S	**Sg**	**06 03 28.0**	**-1.8**
LAKA	**Lakka**	**0.25**	**51**	P	**Pg**	**06 03 26.7**	**+0.3**
EFP	**Efpalio**	**0.37**	**22**	P	**Pg**	**06 03 29.6**	**+1.0**
EFP				S	**Sg**	**06 03 33.4**	**-0.1**
EFP	**Efpalio**	**0.37**	**22**	*e*PG	**Pg**	**06 03 29.6**	**+1.0**
EFP	**Efpalio**	**0.37**	**22**	P	**Pg**	**06 03 29.6**	**+1.0**
EFP				S	**Sg**	**06 03 33.4**	**-0.1**
KALE	**Kalithea**	**0.45**	**46**	P	**Pg**	**06 03 30.1**	**+0.1**
KALE				S	**Sg**	**06 03 34.6**	**-1.3**
KALE	**Kalithea**	**0.45**	**46**	P	**Pg**	**06 03 30.1**	**+0.1**
GUR	**Goura**	**0.51**	**107**	P	**Pg**	**06 03 32.1**	**+1.0**
GUR				S	**Sg**	**06 03 38.9**	**+1.2**
GUR	**Goura**	**0.51**	**107**	*e*PG	**Pg**	**06 03 32.1**	**+1.0**
GUR	**Goura**	**0.51**	**107**	P	**Pg**	**06 03 32.1**	**+1.0**
GUR				S	**Sg**	**06 03 38.9**	**+1.2**
DSF	**Desfina**	**0.71**	**62**	P	**Pg**	**06 03 34.3**	**-0.7**
DSF				S	**Sg**	**06 03 42.0**	**-2.2**
DSF	**Desfina**	**0.71**	**62**	P	**Pg**	**06 03 34.3**	**-0.7**

*IDC **16** 06:04:30.0±1.0, 4°.92N×95°.63E, h0km, mb3.9/10, mb1 4.0/11, mb1mx3.8/24, mbtmp3.9/11, ML3.5/1, Error ellipse: s-maj=55.8km s-min=13.5km az=44.0*
*NEIC **16** 06:04:35.3±0.6, 4°.89N×95°.61E, h35km, mb4.2/2, Error ellipse: s-maj=22.6km s-min=8.3km az=220.0*
*ISCJB **16** 06:04:36.2±2.5, 5°.0N±0°.1×95°.7E±0°.1, h59km±23km, mb3.9/12, Error ellipse: s-maj=23.4km s-min=14.6km az=142.3*

ISC 16 06:04:37.8±2.4, 5°.0N±0°.1×95°.7E±0°.1, h58km±22km, n20, σ0°89/20, mb3.9/12, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**3.87**	**124**	Pn	**Pn**	**06 05 34.2**	**-0.7**
	3.5nm,0.3s,baz=295,slow=14,SNR=16						
PSI				Sn	**Sn**	**06 06 21.4**	**+2.3**
	7.4nm,0.3s,baz=107,slow=23,SNR=5.9						
PSI				Lg		06 06 35.1	
	5.8nm,0.3s,baz=353,slow=13,SNR=5.5						
PSI	**Prapat**	**3.87**	**124**	Pn	**Pn**	**06 05 34.2**	**-0.7**
PSI				Sn	**Sn**	**06 06 21.4**	**+2.3**
PSI				Lg		06 06 35.1	
KULM	**Kulim**	**4.93**	**86**	*e*Pn	**Pn**	**06 05 48.8**	**-0.7**
	124nm,0.8s						
KULM				*e*Sn	**Sn**	**06 06 45.3**	**0.0**
MKAR	**Makanchi Array**	**43.24**	**347**	P	**P**	**06 12 33.2**	**-0.2**
	0.3nm,0.6s,mb3.2,baz=195,slow=13,SNR=4.2						
SONM	**Songino Array**	**43.67**	**10**	P	**P**	**06 12 37.9**	**+1.1**
	0.4nm,0.3s,mb3.6,baz=195,slow=12,SNR=2.7						
WRA	**Warramunga Arr**	**45.34**	**124**	P	**P**	**06 12 49.7**	**-0.8**
	2.0nm,0.5s,mb4.2,baz=302,slow=9.2,SNR=16						
WRA	**Warramunga Arr**	**45.34**	**124**	P	**P**	**06 12 49.7**	**-0.8**
WRAB	**Tennant Creek**	**45.34**	**124**	*e*P	**P**	**06 12 50.0**	**-0.5**
	3.1nm,0.6s,mb4.3						
ASAR	**Alice Springs**	**46.88**	**129**	P	**P**	**06 13 02.1**	**-0.6**
	2.5nm,0.6s,mb4.3,baz=306,slow=7.7,SNR=22						
BVAR	**Borovoye Array**	**52.22**	**341**	P	**P**	**06 13 41.6**	**-1.2**
	0.5nm,0.5s,mb3.7,baz=126,slow=12,SNR=4.1						
ABKAR	**Akbulak array**	**53.50**	**332**	*e*P	**P**	**06 13 52.4**	**+0.1**
	0.6nm,0.4s,mb3.9						
BRTR	**Keskin Array B**	**65.49**	**312**	P	**P**	**06 15 15.8**	**+0.6**
	1.0nm,0.8s,mb3.9,baz=111,slow=6.9,SNR=3.9						
AKASG	**Malin Array Be**	**71.38**	**322**	P	**P**	**06 15 50.9**	**-0.8**
	0.8nm,0.5s,mb4.0,baz=89,slow=5.6,SNR=4.3						
AKASG	**Malin Array Be**	**71.38**	**322**	P	**P**	**06 15 50.9**	**-0.8**
FINES	**FINESS Array B**	**75.98**	**332**	P	**P**	**06 16 18.6**	**+0.2**
	1.4nm,0.7s,mb4.0,baz=101,slow=7.4,SNR=4.7						
ARCES	**ARCESS Array B**	**78.50**	**340**	P	**P**	**06 16 33.0**	**+0.5**
	1.1nm,0.8s,mb3.9,baz=101,slow=6.4,SNR=8.7						
GERES	**GERESS Array B**	**81.01**	**319**	P	**P**	**06 16 48.0**	**+1.5**
	0.9nm,0.6s,mb3.9,baz=80,slow=7.3,SNR=7.7						
NVAR	**Mina Array Bea**	**126.53**	**33**	PKP	PKPdf	06 23 37.3	+2.4
	0.1nm,0.3s,baz=224,slow=3.8,SNR=3.2						
PDAR	**Pinedale Array**	**127.24**	**23**	PKP	PKPdf	06 23 37.1	+1.0
	0.3nm,0.6s,baz=318,slow=6.6,SNR=2.8						
TXAR	**Lajitas Array**	**141.14**	**27**	PKP	PKPdf	06 24 03.9	+1.4
	0.2nm,0.6s,baz=8.5,slow=1.8,SNR=3.4						

JMA 16 06:07:41.0, 39°.00N×140°.82E, h4km±1km, M2.1, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.32**	**99**	P	Pg	06 07 47.0	-0.1
JMK				S	Sg	06 07 51.4	+0.2
JYK	**Kaneyama**	**0.37**	**257**	P	Pg	06 07 48.4	+0.3
JRG	**Rokugo**	**0.42**	**340**	P	Pg	06 07 49.5	+0.4
JRG				S	Sg	06 07 56.0	+1.4
JOM	**Ohasama**	**0.60**	**38**	P	Pg	06 07 52.4	-0.1
JOM				*e*S	Sg	06 08 00.7	+0.4
JOU	**Okura**	**0.65**	**191**	P	Pg	06 07 53.5	+0.1
JOU				S	Sg	06 08 02.0	+0.3
OFUJ	**Ofunato**	**0.67**	**83**	P	Pg	06 07 53.6	-0.2

*NIED **16** 06:08:00, 37°.90N×139°.90E, h23km, Mw3.6 Best double couple: M0 2.63000×10^14 NP1:φs234.00000°, δ86.00000°, λ165.00000°. NP2:φs325.00000°, δ75.00000°, λ4.00000°.*
*IDC **16** 06:08:57.2±2.4, 37°.70N×140°.03E, h0km, mb3.8/2, mb1 4.1/4, mb1mx3.5/26, mbtmp4.1/4, ML3.9/2, Error ellipse: s-maj=39.2km s-min=20.6km az=159.0*
*ISCJB **16** 06:08:57.7±0.5, 37°.85N±0°.02×139°.88E±0°.03, h12km±4km, mb4.0/2, Error ellipse: s-maj=4.4km s-min=3.7km az=36.7*
*NEIC **16** 06:08:58.1, 37°.86N×139°.87E, h9km, MG4.0(JMA), After JMA.*
NEIC Recorded [3 JMA] in Yamagata, [2 JMA] in Fukushima and [1 JMA] in Niigata.
*JMA **16** 06:08:58.1, 37°.86N×139°.87E, h9km±1km, M4.0 Broadband fault plane solution: P waves. NP1: φs326.00000°, δ77.00000°, λ-4.00000°. NP2:φs57.00000°, δ86.00000°, λ-167.00000°. Principal axes: T Plg6.0000°, Azm191.0000°; N Plg77.0000°, Azm75.0000°; P Plg12.0000°, Azm282.0000°;*
JMA Felt III J1.

ISC 16 06:08:58.1±0.4, 37°.85N±0°.02×139°.87E±0°.03, h5km±5km, n18, σ0°76/30, mb4.0/2, 4C-4D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYS	**Shiratake**	**0.40**	**22**	⇑P	**Pg**	**06 09 05.8**	**0.0**
JYS				S	**Sg**	**06 09 11.4**	**+0.4**
JNS	**Sasagawa**	**0.44**	**266**	⇓P	**Pg**	**06 09 06.6**	**0.0**
JNS				S	**Sg**	**06 09 12.3**	**0.0**
JFY	**Yanaizu**	**0.46**	**197**	⇑P	**Pg**	**06 09 07.4**	**+0.4**
JFY				S	**Sg**	**06 09 13.6**	**+0.6**
JFT	**Otama**	**0.49**	**132**	⇓P	**Pg**	**06 09 08.0**	**+0.4**
JFT				S	**Sg**	**06 09 14.6**	**+0.6**
JMM	**Marumori**	**0.73**	**88**	⇓P	**Pg**	**06 09 11.8**	**-0.2**
JMM				S	**Sg**	**06 09 21.4**	**-0.1**
JYA	**Atsumi**	**0.75**	**350**	⇑P	**Pg**	**06 09 12.1**	**-0.4**
JYA				S	**Sg**	**06 09 22.1**	**-0.2**
JAW	**Awa shima**	**0.78**	**321**	⇓P	**Pg**	**06 09 13.0**	**-0.1**
JAW				S	**Sg**	**06 09 23.6**	**+0.4**
JOU	**Okura**	**0.81**	**50**	P	**Pg**	**06 09 13.5**	**-0.1**
JOU				S	**Sg**	**06 09 23.9**	**-0.2**
JHK	**Hiroka**	**0.91**	**229**	⇑P	**Pg**	**06 09 15.0**	**-0.5**
JHK				S	**Sg**	**06 09 26.8**	**-0.5**
JFK	**Kawauchi**	**0.93**	**121**	P	**Pg**	**06 09 15.8**	**-0.1**
MAJO	**Matsushiro**	**1.86**	**226**	*e*Pn	**Pn**	**06 09 30.7**	**+0.1**
MAJO				*e*Sg	**Sg**	**06 09 56.6**	**-1.3**
MAT	**Matsushiro**	**1.86**	**226**	P	**Pn**	**06 09 30.5**	**-0.1**
MAT				S	**Sn**	**06 09 55.5**	**+1.0**
MJAR	**Matsushiro Arr**	**1.86**	**226**	Pn	**Pn**	**06 09 31.0**	**+0.4**
	23nm,0.3s,baz=66,slow=15,SNR=141						
MJAR				Lg		06 09 55.1	
	68nm,0.3s,baz=32,slow=32,SNR=21						
JHJ	**Hachijo jima 2**	**4.72**	**181**	Pn	**Pn**	**06 10 11.0**	**+1.1**
	11nm,0.3s,baz=36,slow=14,SNR=6.5						
KSRS	**Korea Array**	**9.49**	**271**	Pn	**Pn**	**06 11 17.6**	**+2.2**
	1.3nm,0.3s,baz=82,slow=14,SNR=13						
CBIJ	**Chichi jima**	**10.90**	**169**	Pn	**Pn**	**06 11 31.7**	**-3.0**
	3.2nm,0.3s,baz=276,slow=23,SNR=5.0						
CBIJ				Sn	**Sn**	**06 13 37.0**	**0.0**
	1.9nm,0.3s,baz=258,slow=20,SNR=4.6						
WRA	**Warramunga Arr**	**57.72**	**186**	P	**P**	**06 18 48.5**	**-1.3**
	1.6nm,0.8s,mb4.1,baz=5.1,slow=7.4,SNR=18						
ASAR	**Alice Springs**	**61.45**	**186**	P	**P**	**06 19 14.3**	**-1.1**
	1.1nm,1.0s,mb4.0,baz=6.3,slow=9.3,SNR=4.3						

*IDC **16** 06:34:48.5±0.6, 28°.22S×172°.05E, h0km, mb4.6/14, mb1 4.8/15, mb1mx4.8/16, mbtmp4.6/15, MS3.9/9, Ms1 3.9/9, ms1mx3.7/16, Error ellipse: s-maj=21.0km s-min=18.8km az=59.0*
*ISCJB **16** 06:34:49.0±0.3, 28°.21S±0°.05×172°.13E±0°.06, h10km, mb4.9/34, MS4.2/12, Error ellipse: s-maj=7.8km s-min=6.3km az=136.1*
*NEIC **16** 06:34:50.5±0.3, 28°.14S×172°.02E, h10km, mb5.0/15, Error ellipse: s-maj=9.1km s-min=8.6km az=49.0*
*GCMT **16** 06:34:54.0±0.3, 28°.27S×171°.99E, h18km±1km, MW4.9, Moment Tensor Solution. s24,c29; s56,c81; Moment tensor: Scale 10^16Nm; Mrr2.93±.20; Mθθ-0.92±.12; Mφφ-2.00±.14; Mrθ0.57±.29; Mrφ1.30±.07; Mθφ-0.72±.32; Best double couple: M0 3.00000×10^16 NP1:φs328.00000°, δ36.00000°, λ92.00000°. NP2:φs145.00000°, δ54.00000°, λ88.00000°. Principal axes: T 3.0700, Plg81.0000°, Azm47.0000°; N -0.0600, Plg1.0000°, Azm146.0000°; P -3.0100, Plg9.0000°, Azm236.0000°; Data Used: IU II G IC CN.*
*SZGRF **16** 06:34:58.7, 26°.53S×171°.10E, h38km, Norfolk Island, Australia, region*

ISC 16 06:34:50.9±0.3, 28°.21S±0°.05×172°.07E±0°.06, h10km, (h14km±1.1km:pP-P), n161, σ1§03/67, mb4.9/34, MS4.2/12, 24C-16D, Norfolk Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.96**	**319**	*e*P	**Pn**	**06 36 48.1**	**+1.5**
	51nm,1.1s						
DZM				*e*LR	LR	06 38 29.7	
	590nm,22.8s						
DZM	**Mont Dzumac**	**7.96**	**319**	*e*Pn	**Pn**	**06 36 44.1**	**-2.5**
	21nm,0.6s						
DZM				*e*Sn	**Sn**	**06 38 12.5**	**-4.2**
URZ	**Urewera**	**10.87**	**158**	Pn	**Pn**	**06 37 28.1**	**+1.5**
	0.2nm,0.3s,baz=333,slow=6.8,SNR=1.9						
URZ				LR	LR	06 40 46.4	
	comp=Z,679nm,20.6s,baz=347,slow=33						
MSVF	**Nonsavu**	**11.79**	**29**	Pn	**Pn**	**06 37 39.0**	**-0.2**
	376nm,0.7s,SNR=6.9						
MSVF	**Nonsavu**	**11.79**	**29**	*e*Pn	**Pn**	**06 37 38.6**	**-0.6**
	61nm,0.8s						
MSVF				*e*Sn	**Sn**	**06 39 50.4**	**-0.5**
MSVF	**Nonsavu**	**11.79**	**29**	Pn	**Pn**	**06 37 39.6**	**+0.4**
	283nm,1.0s,SNR=6.9						
RPZ	**Rata Peaks**	**15.50**	**183**	Pn	**Pn**	**06 38 29.8**	**+0.3**
	baz=0.0,slow=4.0,SNR=1.9						
RPZ				LR	LR	06 43 10.6	
	comp=Z,500nm,18.8s,baz=4.2,slow=32						
ARMA	**Armidale**	**17.96**	**258**	*e*P	**Pn**	**06 39 00.1**	**-0.7**
ARMA	**Armidale**	**17.96**	**258**	*e*P	**Pn**	**06 39 05.9**	**+5.2**
	119nm,1.7s						
EIDS	**Eidsvold**	**18.95**	**274**	*e*P	**Pn**	**06 39 13.5**	**+0.7**
EIDS	**Eidsvold**	**18.95**	**274**	*e*P	**Pn**	**06 39 13.6**	**+0.8**
	47nm,1.4s						
AFI	**Afiamalu**	**20.70**	**50**	LR	LR	06 46 00.6	
	comp=Z,215nm,18.2s,MS3.6,baz=226,slow=32						
RMQ	**Roma**	**20.77**	**269**	*e*P	**P**	**06 39 33.9**	**+1.8**
	56nm,1.2s						
CMSA	**Cobar Meteorol**	**23.09**	**255**	*e*P	**P**	**06 39 57.4**	**+0.5**
TOO	**Toolangi**	**24.12**	**240**	*e*P	**P**	**06 40 07.6**	**+0.7**
CTA	**Charters Tower**	**24.87**	**283**	P	**P**	**06 40 13.7**	**-0.2**
	14nm,0.7s,mb4.6,baz=94,slow=10,SNR=11						
CTA				LR	LR	06 48 04.8	
	comp=Z,252nm,18.8s,MS3.7,baz=294,slow=32						
CTAO	**Charters Tower**	**24.87**	**283**	*e*P	**P**	**06 40 13.8**	**0.0**
	19nm,1.0s,mb4.6						
STKA	**Stephens Creek**	**26.59**	**255**	*e*P	**P**	**06 40 28.1**	**-1.2**
	2.9nm,0.6s,mb4.0						
STKA	**Stephens Creek**	**26.59**	**255**	P	**P**	**06 40 27.5**	**-1.8**
	5.1nm,0.9s,mb4.0,baz=106,slow=14,SNR=4.3						
STKA				LR	LR	06 50 06.7	
	comp=Z,465nm,21.0s,MS4.0,baz=64,slow=35						
STKA	**Stephens Creek**	**26.59**	**255**	P	**P**	**06 40 27.5**	**-1.8**
STKA				LR	LR	06 50 06.7	
ASAR	**Alice Springs**	**34.52**	**269**	P	**P**	**06 41 39.0**	**-0.6**
	14nm,0.6s,mb5.1,baz=93,slow=8.0,SNR=132						
ASAR				PcP	PcP	06 44 13.2	-1.3
	1.4nm,0.8s,baz=118,slow=3.8,SNR=3.6						
WRAB	**Tennant Creek**	**35.30**	**275**	*e*P	**P**	**06 41 44.5**	**-1.8**
	102nm,2.0s,mb5.4						
WRA	**Warramunga Arr**	**35.30**	**275**	P	**P**	**06 41 44.5**	**-1.7**
	5.5nm,0.6s,mb4.7,baz=104,slow=8.5,SNR=33						
WRA				PcP	PcP	06 44 15.4	-1.4
	2.8nm,1.0s,baz=115,slow=2.6,SNR=5.5						
WRA				LR	LR	06 56 37.9	
	comp=Z,161nm,20.3s,MS3.8,baz=175,slow=37						
PPT	**Papeete**	**36.75**	**82**	*e*S	**S**	**06 47 39.2**	**-3.5**
	139nm,24.2s						
PPT				*e*LQ		06 50 00.6	
	390nm,27.0s						
PPT				*e*LR	LR	06 51 48.5	
	785nm,29.8s,baz=248						
PPT	**Papeete**	**36.75**	**82**	LR	LR	06 52 03.6	
	comp=Z,245nm,21.7s,MS4.0,baz=265,slow=28						
KAKA	**Kakadu**	**39.99**	**284**	*e*P	**P**	**06 42 25.3**	**-0.8**
	25nm,1.0s,mb4.9						
KAKA	**Kakadu**	**39.99**	**284**	*e*P	**P**	**06 42 25.4**	**-0.6**
	280nm,1.8s,mb5.7						
FITZ	**Fitzroy Crossi**	**43.63**	**273**	*e*P	**P**	**06 42 55.3**	**-0.5**
	26nm,1.0s,mb4.9						
FITZ	**Fitzroy Crossi**	**43.63**	**273**	*e*P	**P**	**06 42 55.8**	**-0.1**
	49nm,1.5s,mb5.0						
RKT	**Rikitea**	**47.70**	**97**	*e*S	**S**	**06 50 18.4**	**-5.8**
	136nm,26.5s						
RKT				*e*LR	LR	06 56 39.7	
	398nm,34.5s						
MBWA	**Marble Bar**	**47.77**	**266**	*e*P	**P**	**06 43 27.2**	**-1.3**
TAOE	**Nuku Hiva Isla**	**48.86**	**76**	*e*S	**S**	**06 50 36.8**	**-3.9**
	200nm,24.9s						
TAOE				*e*LR	LR	06 57 22.8	
	318nm,29.9s						
SBA	**Scott Base**	**49.78**	**181**	*e*P	**P**	**06 43 44.2**	**+1.0**
	31nm,1.1s,mb5.2						
CASY	**Casey**	**53.11**	**206**	*e*P	**P**	**06 44 07.2**	**-1.1**
QSPA	**South Pole Qui**	**61.89**	**180**	P	**P**	**06 45 09.7**	**-0.3**
	9.6nm,0.9s,mb4.9,baz=19,slow=2.5,SNR=24						
QSPA	**South Pole Qui**	**61.89**	**180**	*e*P	**P**	**06 45 09.4**	**-0.5**
	13nm,0.9s,mb5.1						
MAW	**Mawson**	**71.15**	**202**	⇑*i*P	**P**	**06 46 08.8**	**-0.5**
	8.1nm,0.9s,mb4.7						
MAW	**Mawson**	**71.15**	**202**	P	**P**	**06 46 08.6**	**-0.7**
	9.5nm,0.9s,mb4.7,baz=107,slow=7.5,SNR=19						
MAW				LR	LR	07 13 27.3	
	comp=Z,144nm,20.1s,MS4.2,baz=311,slow=33						
MAW	**Mawson**	**71.15**	**202**	*e*P	**P**	**06 46 08.8**	**-0.5**
	3.1nm,1.0s,mb4.2						
MJAR	**Matsushiro Arr**	**71.85**	**332**	P	**P**	**06 46 12.9**	**-1.0**
	1.8nm,0.3s,mb4.4,baz=166,slow=7.8,SNR=8.4						
SYO	**Syowa Base**	**77.06**	**196**	⇓*e*P	**P**	**06 46 40.7**	**-3.1**
KSRS	**Korea Array**	**77.33**	**325**	P	**P**	**06 46 45.5**	**-0.2**
	5.0nm,0.8s,mb4.5,baz=142,slow=5.9,SNR=18						
NJ2	**Nanjing**	**78.44**	**316**	*e*P	**P**	**06 46 52.6**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,30nm,0.6s,mb5.4						
YSS	**Yuzh-Sakhalins**	**79.36**	**340**	*e*P	**P**	**06 46 57.7**	**+1.0**
	comp=Z,14nm,0.6s,mb5.1						
MAIT	**Maitri**	**80.31**	**186**	*e*P	**P**	**06 47 00.2**	**-1.5**
PETK	**Petropavlovsk-**	**81.94**	**351**	P	**P**	**06 47 09.4**	**-0.9**
	comp=Z,3.1nm,0.9s,mb4.2,baz=134,slow=6.2,SNR=4.3						
GYA	**Guiyang**	**83.05**	**305**	⇓*i*P	**P**	**06 47 18.3**	**+1.5**
GYA				PP	PP	06 50 31.6	+3.5
GYA				SKS		06 57 35.4	
GYA				S	S	06 57 37.9	+1.4
GYA				SS	SS	07 03 04.8	+3.9
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
GYA				pmax	pmax		
	comp=Z,120nm,4.9s						
GYA				LR	LR		
	comp=N,520nm,19.8s,MS5.0						
GYA				LR	LR		
	comp=E,500nm,20.0s,MS5.0						
GYA				LR	LR		
	comp=Z,640nm,21.2s,MS5.0						
CN2	**Changchun**	**83.42**	**328**	*e*P	**P**	**06 47 20.8**	**+2.5**
CN2				*e*S	S	06 57 41.6	+2.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CMAR	**Chiang Mai Arr**	**84.54**	**294**	P	**P**	**06 47 25.1**	**+0.5**
	comp=Z,2.5nm,0.6s,mb4.5,baz=141,slow=4.2,SNR=14						
CHTO	**Chiang Mai**	**84.72**	**294**	*e*P	**P**	**06 47 26.3**	**+0.8**
	comp=Z,12nm,1.1s,mb4.9						
KMI	**Kunming**	**85.19**	**302**	P	**P**	**06 47 29.1**	**+1.4**
KMI				pP	pP	06 47 33.0	+1.9
KMI				sP	sP	06 47 34.3	+2.1
KMI				PP	PP	06 50 49.8	+4.3
KMI				S	S	06 57 59.3	+1.3
KMI				sS	sS	06 58 04.3	+0.8
KMI				SS	SS	07 03 37.0	+4.5
KMI				pmax	pmax		
	comp=Z,16nm,1.4s,mb5.0						
KMI				pmax	pmax		
	comp=Z,190nm,4.7s						
KMI				LR	LR		
	comp=N,130nm,21.4s,MS4.5						
KMI				LR	LR		
	comp=E,130nm,19.1s,MS4.5						
KMI				LR	LR		
	comp=Z,120nm,21.9s,MS4.2						
BJI	**Beijing**	**85.49**	**320**	P	**P**	**06 47 29.0**	**+0.1**
BJI				pmax	pmax		
	comp=Z,22nm,0.5s,mb5.5						
XAN	**Xi'an**	**86.04**	**312**	P	**P**	**06 47 31.5**	**-0.3**
XAN				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.5						
XAN				pmax	pmax		
	comp=Z,16nm,3.6s						
CD2	**Chengdu**	**87.71**	**307**	*e*P	**P**	**06 47 41.1**	**+1.1**
CD2				pP	pP	06 47 45.9	+2.6
CD2				sP	sP	06 47 48.5	+4.0
CD2				PP	PP	06 51 09.6	+3.8
CD2				S	S	06 58 22.3	0.0
CD2				sS	sS	06 58 30.3	+2.5
CD2				SS	SS	07 04 13.8	+4.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.2						
CD2				pmax	pmax		
	comp=Z,70nm,5.2s						
CD2				LR	LR		
	comp=E,490nm,7.2s						
CD2				LR	LR		
	comp=Z,210nm,6.8s						
HHC	**Hu-ho-hao-te**	**88.67**	**319**	*e*P	**P**	**06 47 44.6**	**+0.3**
HHC				pP	pP	06 47 49.4	+1.8
HHC				sP	sP	06 47 51.8	+3.0
HHC				PP	PP	06 51 16.8	+3.5
HHC				SKS		06 58 11.8	
HHC				S	S	06 58 30.8	-0.1
HHC				sS	sS	06 58 37.9	+1.4
HHC				SS	SS	07 04 26.9	+3.9
HHC				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.3						
HHC				pmax	pmax		
	comp=Z,50nm,4.6s						
HHC				LR	LR		
	comp=N,94nm,19.0s,MS4.4						
HHC				LR	LR		
	comp=E,100nm,19.0s,MS4.4						
HHC				LR	LR		
	comp=Z,110nm,20.2s,MS4.3						
PLCA	**Paso Flores**	**90.16**	**138**	P	**P**	**06 47 50.9**	**-0.7**
	comp=Z,9.3nm,1.0s,mb5.1,baz=226,slow=6.5,SNR=12						
LZH	**Lanzhou**	**90.60**	**311**	*e*P	**P**	**06 47 54.5**	**+1.0**
LZH				pP	pP	06 47 57.8	+1.0
LZH				sP	sP	06 47 59.3	+1.3
LZH				*e*PP	PP	06 51 32.5	+3.6
LZH				SKS		06 58 24.1	
LZH				*e*S	S	06 58 52.6	+3.4
LZH				sS	sS	06 58 55.3	+0.6
LZH				*e*SS	SS	07 04 54.3	+3.0
LZH				pmax	pmax		
	comp=Z,19nm,1.5s,mb5.2						
LZH				pmax	pmax		
	comp=Z,110nm,8.6s						
LZH				LR	LR		
	comp=E,440nm,18.0s						
LZH				LR	LR		
	comp=Z,510nm,19.5s,MS5.0						
ISA	**Isabella**	**91.19**	**50**	*e*P	**P**	**06 47 56.5**	**+0.3**
	comp=Z,11nm,1.0s,mb5.2						
CMB	**Columbia Colle**	**91.28**	**47**	*e*P	**P**	**06 47 56.6**	**+0.1**
	comp=Z,8.7nm,0.9s,mb5.1						
WDC	**Whiskeytown Da**	**91.42**	**44**	*e*P	**P**	**06 47 55.3**	**-1.8**
	comp=Z,20nm,1.4s,mb5.3						
WAKR	**Walker**	**92.16**	**47**	*e*P	**P**	**06 48 01.3**	**+0.7**
NVAR	**Mina Array Bea**	**92.85**	**47**	P	**P**	**06 48 03.6**	**-0.3**
	comp=Z,2.8nm,0.8s,mb4.7,baz=225,slow=9.2,SNR=18						
SHL	**Shillong**	**93.78**	**297**	*e*PKP	**P**	**06 48 08.5**	**+0.1**
GTA	**Gaotai**	**95.10**	**312**	*e*P	**P**	**06 48 14.8**	**+0.7**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.8						
CCUT	**Cedar City**	**95.67**	**50**	*e*P	**P**	**06 48 17.5**	**+0.7**
	comp=Z,3.6nm,1.1s,mb4.7						
SONM	**Songino Array**	**95.88**	**322**	P	**P**	**06 48 17.3**	**-0.2**
	comp=Z,3.2nm,0.9s,mb4.7,baz=135,slow=4.7,SNR=10.0						
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BURAR	Bucovina Array	147.80 316	⇑iP	PKPbc	06 54 36.6	+0.8
MLR	Muntele Rosu	148.17 312	⇑P	PKPbc	06 54 36.3	-0.6
MLR	Muntele Rosu	148.17 312	⇑iP	PKPbc	06 54 36.3	-0.6
KWP	Kalwaria Pacla	148.32 321	⇓P	PKPbc	06 54 36.8	-0.3
KWP	Kalwaria Pacla	148.32 321	⇓iP	PKPbc	06 54 36.8	-0.3
VOIR		148.78 312	⇑P	PKPbc	06 54 40.2	+1.8
VOIR		148.78 312	⇑iP	PKPbc	06 54 40.2	+1.8
KOLS	Kolonicke sedl	148.92 320	ePKP	PKPbc	06 54 38.8	+0.1
KOLS	Kolonicke sedl	148.92 320	ePKP	PKPbc	06 54 38.8	+0.1
STHS	Stebnicka Huta	149.24 321	ePKP	PKPbc	06 54 39.2	-0.3
STHS	Stebnicka Huta	149.24 321	ePKP	PKPbc	06 54 39.2	-0.3
CRVS	Cervenica-Dubn	149.40 320	ePKP	PKPbc	06 54 39.7	-0.2
CRVS			e		06 54 45.0	
CRVS	Cervenica-Dubn	149.40 320	ePKP	PKPbc	06 54 39.7	-0.2
CRVS			e		06 54 45.0	
OJC	Ojcow	149.56 324	ePKP	PKPbc	06 54 38.6	-1.6
DRGR		149.70 316	⇓P	PKPbc	06 54 40.0	-0.7
DRGR		149.70 316	⇓iP	PKPbc	06 54 40.0	-0.7
NIE	Niedzica	149.75 322	ePKP	PKPbc	06 54 41.4	+0.7
KECS	Kecovo	150.17 320	ePKP	PKPbc	06 54 40.6	-1.2
KECS			e		06 54 48.6	
KECS	Kecovo	150.17 320	ePKP	PKPbc	06 54 40.6	-1.2
KECS			e		06 54 48.6	
GZR	Gura Zlata	150.26 313	⇓P	PKPbc	06 54 41.7	-0.4
GZR	Gura Zlata	150.26 313	⇓iP	PKPbc	06 54 41.7	-0.4
APE	Apeiranthos	150.59 296	⇑P	PKPbc	06 54 41.1	-2.0
APE	Apeiranthos	150.59 296	⇑iP	PKPbc	06 54 41.1	-2.1
OKC	Ostrava-Krasne	150.65 325	⇑ePKP	PKPbc	06 54 42.7	-0.2
PSZ	Piszkesteto	150.80 320	ePKPdf	PKPdf	06 54 38.2	+0.5
PSZ			ePKPbc	PKPbc	06 54 43.2	-0.1
PSZ			ePKPab	PKPab	06 54 49.8	-0.6
PSZ	Piszkesteto	150.80 320	⇑epPKP	pPKPdf	06 54 42.8	+1.7
PSZ	Piszkesteto	150.80 320	⇑P	PKPbc	06 54 43.9	+0.6
BZS	Buzias	150.90 315	⇑P	PKPbc	06 54 42.8	-0.8
BZS	Buzias	150.90 315	⇑iP	PKPbc	06 54 42.8	-0.8
MORC	Moravsky Berou	150.99 325	ePKPdf	PKPdf	06 54 37.5	-0.4
MORC			ePKPbc	PKPbc	06 54 43.1	-0.5
MORC			ePKPab	PKPab	06 54 50.9	-0.2
MORC	Moravsky Berou	150.99 325	⇑iP	PKPbc	06 54 43.7	0.0
BSEG	Bad Segeberg	151.02 338	ePKPbc	PKPbc	06 54 43.1	-0.5
VYHS	Vyhne	151.07 322	ePKP	PKPbc	06 54 43.4	-0.5
VYHS	Vyhne	151.07 322	ePKP	PKPbc	06 54 43.4	-0.5
DPC	Dobruska-Polom	151.23 327	⇑ePKP	PKPbc	06 54 44.2	0.0
UPC	Upice	151.27 327	⇑ePKP	PKPbc	06 54 44.1	-0.2
BUD	Budapest	151.53 320	epPKP	pPKPdf	06 54 45.0	+2.7
PVCC	Panska Ves	151.93 329	⇑ePKP	PKPbc	06 54 46.0	+0.2
CLL	Collm	152.06 331	ePKPbc	PKPbc	06 54 45.5	-0.6
CLL			epPKPbc	pPKPbc	06 54 55.6	+6.1
CLL	Collm	152.06 331	⇑iPKP	PKPbc	06 54 45.6	-0.5
CLL			⇓iPKP	PKPab	06 54 49.3	-6.2
CLL	Collm	152.06 331	⇑iPKPbc	PKPbc	06 54 45.6	-0.5
	comp=Z,19nm,0.9s					
CLL			⇓iPKPbc	pPKPbc	06 54 49.3	-0.2
	comp=Z,13nm,1.2s					
CLL			ePKPab	PKPab	06 54 55.0	-0.5
NRDL	Niedersach Rie	152.27 336	ePKPbc	PKPbc	06 54 45.9	-0.6
PRU	Pruhonice	152.32 328	⇑ePKP	PKPbc	06 54 46.6	-0.1
CLZ	Clausthal	152.70 335	ePKPbc	PKPbc	06 54 47.2	-0.3
CLZ			epPKPbc	pPKPbc	06 54 58.0	+7.1
TANN	Tannenbergstha	152.95 331	ePKPbc	PKPbc	06 54 47.6	-0.5
TANN			epPKPbc	pPKPbc	06 54 59.2	+7.7
CONA	Conrad Observa	153.01 323	⇑iPKPbc	PKPbc	06 54 47.6	-0.7
	comp=Z,14nm,1.5s					
NKC	Novy Kostel	153.09 330	⇑ePKP	PKPbc	06 54 48.1	-0.3
MOX	Moxa	153.14 332	ePKPbc	PKPbc	06 54 47.6	-0.9
MOX			epPKPbc	pPKPbc	06 54 59.8	+7.9
IBBN	Ibbenburen	153.23 338	ePKPbc	PKPbc	06 54 48.4	-0.3
IBBN			epPKPbc	pPKPbc	06 55 00.2	+8.1
KHC	Kasperske Hory	153.37 328	⇑ePKP	PKPbc	06 54 48.6	-0.5
GEC2	GERESS Array S	153.50 327	ePKPbc	PKPbc	06 54 48.7	-0.7
GEC2	GERESS Array S	153.50 327	ePKPdf	PKPdf	06 54 41.0	-0.7
GEC2			ePKPbc	PKPbc	06 54 48.7	-0.6
GERES	GERESS Array B	153.50 327	PKPbc	PKPbc	06 54 48.9	-0.5
	comp=Z,3.5nm,0.8s,baz=70,slow=1.6,SNR=22					
ROTZ	Rotzenmuhle	153.54 330	ePKPbc	PKPbc	06 54 48.9	-0.5
WET	Wettzell	153.68 328	ePKPbc	PKPbc	06 54 49.6	-0.2
GRA1	Grafenberg Arr	154.03 331	ePKPbc	PKPbc	06 54 50.1	-0.4
GRF	Grafenberg Arr	154.03 331	ePKPbc	PKPbc	06 54 50.1	-0.4
RJOB	Jochberg	154.70 326	ePKPbc	PKPbc	06 54 51.1	-0.9
CDF	Champ du Feu	156.65 334	ePKP2	PKPab	06 55 14.1	-1.0
HAU	Haudompre	157.34 335	ePKP2	PKPab	06 55 17.0	-1.1
DBIC	Dimbokro	158.38 188	PKP	PKPdf	06 54 47.8	-1.5
	comp=Z,5.5nm,0.9s,baz=162,slow=9.9,SNR=3.6					
LOR	Lormes	158.86 337	ePKP2	PKPab	06 55 23.6	-1.1
GRR	Gorron	159.12 347	ePKP2	PKPab	06 55 23.7	-2.1
	comp=Z,38nm,1.3s					
SSF	Saint Saulge	159.16 338	ePKP2	PKPab	06 55 24.8	-1.2
SMF	Signal de Mont	159.40 336	ePKP2	PKPab	06 55 26.0	-1.1
	comp=Z,45nm,1.3s					
AVF	Avril sur Loir	159.44 337	ePKP2	PKPab	06 55 26.1	-1.1
	comp=Z,35nm,1.1s					
BGF	Bois d'Agland	159.82 338	ePKP2	PKPab	06 55 27.8	-1.1
TCF	Toulx Ste Croi	160.26 339	ePKP2	PKPab	06 55 27.9	-2.9

*NEIC **16** 07:00:11.9, 35.°09S×70.°64W, h25km, ML2.8(GUC), After GUC.*

GUC 16 07:00:11.9±0.6, 35.°09S×70.°64W, h25km±29km, MD3.6, ML2.8, 1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NICH	Los Niches	0.49	280	⇓iP	Pb	07 00 21.2	-0.8
NICH				i S	Sb	07 00 29.0	+0.1
CACH	El Canelo	0.97	2	eP	Pn	07 00 29.4	-0.6
CACH				i S	Sb	07 00 42.9	+0.3
CACH	El Canelo	0.97	2	eP	Pn	07 00 29.4	-0.6
CACH				i S	Sb	07 00 42.9	+0.3
CHCH	Chadas Angostu	1.16	359	eP	Pn	07 00 32.8	+0.3
CHCH				i S	Sn	07 00 49.0	+1.4
CHCH	Chadas Angostu	1.16	359	eP	Pn	07 00 32.8	+0.3
CHCH				i S	Sn	07 00 49.0	+1.4
LNV	Longovilo	1.30	330	eP	Pn	07 00 35.1	+0.6
LNV				i S	Sn	07 00 52.7	+1.6
LNV	Longovilo	1.30	330	eP	Pn	07 00 35.1	+0.6
LNV				i S	Sn	07 00 52.7	+1.6
ANTU	Antumapu	1.52	0	eP	Pn	07 00 39.0	+1.5
ANTU				i S	Sn	07 00 59.7	+3.2
ANTU	Antumapu	1.52	0	eP	Pn	07 00 39.0	+1.5
ANTU				i S	Sn	07 00 59.7	+3.2
ANTU				AML	AML	07 01 01.5	
	comp=E,176nm,0.2s						
FCH	Farellones	1.79	9	eP	Pn	07 00 44.3	+3.2
FCH				i S	Sn	07 01 08.3	+5.3
FCH				AML	AML	07 01 09.5	
	comp=N,123nm,0.2s						
PEL	Peldehue	1.95	359	eP	Pn	07 00 47.3	+4.0
PEL				i S	Sn	07 01 13.2	+6.2
PEL				AML	AML	07 01 20.0	
	comp=E,157nm,0.5s						

IDC 16 07:03:58.4±1.4, 30.°90N×103.°47E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.5/25, mbtmp3.6/6, Error ellipse: s-maj=43.8km s-min=21.9km az=52.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	Songino Array	17.06	7	P	Pn	07 07 57.9	-0.2
	baz=184,slow=12,SNR=2.8						
KSRS	Korea Array	21.23	65	P	P	07 08 45.8	0.0
	1.1nm,0.5s,baz=258,slow=9.2,SNR=5.1						
MKAR	Makanchi Array	22.78	320	P	P	07 09 03.2	+0.9
	0.6nm,0.8s,baz=135,slow=11,SNR=6.0						
ZALV	Zalesovo Beam	26.67	335	P	P	07 09 38.4	-0.4
	0.5nm,0.5s,baz=133,slow=8.1,SNR=3.9						
KURK	Kurchatov	27.09	324	P	P	07 09 42.2	-0.4
	0.3nm,0.5s,baz=129,slow=9.2,SNR=3.8						
WRA	Warramunga Arr	58.61	146	P	P	07 13 57.2	0.0
	0.5nm,0.6s,baz=337,slow=7.5,SNR=12						

*IDC **16** 07:35:48.6±2.5, 53.°50N×87.°70E, h0km, mb1 3.9/3, mb1mx3.4/29, mbtmp3.9/3, ML4.0/3, Error ellipse: s-maj=22.4km s-min=13.1km az=58.0*
*NNC **16** 07:35:52.6±5.3, 53.°24N×87.°47E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=39.2km s-min=31.1km az=45.0*

ISC 16 07:35:51.0±2.0, 53.°60N±0.°08×87.°5E±0.°2, h10km, n8, σ0°88/13, 7C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	Zalesovo Beam	1.60	284	Pn	Pn	07 36 18.8	-0.4
	26nm,0.3s,baz=102,slow=14,SNR=114						
ZALV				Lg		07 36 44.5	
	19nm,0.3s,baz=105,slow=20,SNR=24						
KURK	Kurchatov	6.16	246	⇓Pn	Pn	07 37 22.0	+0.2
	2.9nm,0.7s						
KURK				⇑Sn	Sn	07 38 33.9	+1.7
	1.7nm,0.5s						
KURK				⇑Lg		07 39 05.0	
	32nm,1.0s						
KURK	Kurchatov	6.16	246	Pn	Pn	07 37 23.5	+1.7
	1.7nm,0.3s,baz=63,slow=14,SNR=132						
KURK				Sn	Sn	07 38 35.1	+2.9
	0.2nm,0.3s,baz=65,slow=23,SNR=4.6						
KURK				Lg		07 39 09.9	
	0.2nm,0.3s,baz=60,slow=32,SNR=14						
KURBB	Kurchatov Arra	6.25	245	⇑Pn	Pn	07 37 23.6	+0.4
	1.1nm,0.3s,baz=63,slow=14						
KURBB				⇑Sn	Sn	07 38 34.1	-0.4
	1.4nm,0.6s,baz=70,slow=22						
KURBB				⇑Lg		07 39 10.2	
	6.0nm,0.7s,baz=65,slow=30						
MK31	Makanchi Array	7.58	208	⇑Pn	Pn	07 37 40.8	-0.5
	0.5nm,0.3s,baz=26,slow=11,SNR=107						
MK31				⇓Sn	Sn	07 39 06.7	-0.5
	7.0nm,0.9s,baz=41,slow=29,SNR=4.8						
MK31				⇑Lg		07 39 47.1	
	8.4nm,0.8s,baz=35,slow=34,SNR=6.0						
MKAR	Makanchi Array	7.58	208	Pn	Pn	07 37 41.1	-0.3
	2.4nm,0.3s,baz=26,slow=11,SNR=112						
MKAR				Sn	Sn	07 39 07.2	0.0
	0.3nm,0.3s,baz=31,slow=28,SNR=14						
MKAR				Lg		07 39 48.7	
	0.4nm,0.3s,baz=26,slow=32,SNR=6.7						
BVAR	Borovoye Array	10.23	274	Pn	Pn	07 38 18.4	+0.8
	0.5nm,0.3s,baz=76,slow=13,SNR=7.1						
BVAR				Sn	Sn	07 40 10.8	-1.4
	0.4nm,0.3s,baz=82,slow=21,SNR=8.0						
SONM	Songino Array	13.30	108	Lg		07 42 39.4	
	0.1nm,0.3s,baz=302,slow=27,SNR=5.1						

*IDC **16** 07:36:01.9±0.8, 31.°19N×103.°76E, h0km, mb3.8/9, mb1 4.0/11, mb1mx3.8/27, mbtmp3.8/11, ML3.9/2, MS3.0/1, Ms1 3.0/1, ms1mx2.2/32, Error ellipse: s-maj=33.0km s-min=16.2km az=60.0*
*BJI **16** 07:36:03.8, 31.°32N×103.°98E, h13km, mB4.7/1, mb4.0/3, ML3.8/18, Ms3.7/7, Ms7 3.5/7*
*NEIC **16** 07:36:03.5±0.5, 31.°22N×103.°69E, h10km, mb4.4/1, Error ellipse: s-maj=15.8km s-min=9.5km az=62.0*
*ISCJB **16** 07:36:05.1±0.6, 31.°21N±0.°04×103.°82E±0.°06, h34km±7km, mb4.0/1, Error ellipse: s-maj=9.1km s-min=6.3km az=163.2*

ISC 16 07:36:04.6±1.0, 31.°29N±0.°03×103.°84E±0.°06, h16km±6km, n23, σ1°19/32, mb4.0/11, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.39	190	Pg	Pg	07 36 11.8	-0.8
CD2				Sg	Sg	07 36 18.3	+0.4
CD2				smax			
	comp=N,14μm,0.5s						
CD2				smax			
	comp=E,23μm,0.6s						
LZH	Lanzhou	4.78	0	Pn	Pn	07 37 17.6	+1.7
LZH				Pg	Pg	07 37 32.3	-3.9
LZH				Sg	Sg	07 38 32.6	-5.5
LZH				smax			
	comp=N,120nm,0.8s						
LZH				smax			
	comp=E,120nm,0.7s						
LZH				LR	LR		
	comp=N,1μm,8.8s						
LZH				LR	LR		
	comp=Z,1μm,9.2s						
ENH	Enshi	4.97	100	ePn	Pn	07 37 19.8	+1.2
	comp=Z,78nm,0.8s						
ENH				eSn	Sn	07 38 15.9	+0.2
XAN	Xi'an	5.09	56	Pn	Pn	07 37 18.8	-1.4
XAN				Sn	Sn	07 38 16.5	-2.1
XAN				Sg	Sb	07 38 38.0	+3.8
XAN				smax			
	comp=N,130nm,0.7s						
XAN				smax			
	comp=E,76nm,0.8s						
XAN				LR	LR		
	comp=N,180nm,7.7s						
XAN				LR	LR		
	comp=E,56nm,6.0s						
XAN				LR	LR		
	comp=Z,140nm,8.6s						
GYA	Guiyang	5.42	152	Pn	Pn	07 37 26.8	+2.1
GYA				Sn	Sn	07 38 26.1	-0.6
GYA				Sg	Sb	07 38 43.6	0.0
GYA				smax			
	comp=N,120nm,1.0s						
GYA				smax			
	comp=E,190nm,0.8s						
KMI	Kunming	6.22	189	Pn	Pn	07 37 35.8	0.0
KMI				Sn	Sn	07 38 46.6	0.0
KMI				smax			
	comp=N,38nm,1.3s						
KMI				smax			
	comp=E,45nm,1.2s						
KMI				LR	LR		
	comp=N,350nm,7.7s						
KMI				LR	LR		
	comp=E,460nm,7.7s						
KMI				LR	LR		
	comp=Z,230nm,5.9s						
GTA	Gaotai	8.74	339	eP	Pn	07 38 15.3	+5.0
GTA				sP		07 38 20.4	
GTA				S	Sn	07 39 53.4	+5.0
GTA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
GTA				LR	LR		
	comp=N,220nm,15.0s						
GTA				LR	LR		
	comp=E,270nm,14.7s						
GTA				LR	LR		
	comp=Z,230nm,9.6s						
CMAR	Chiang Mai Arr	13.53	200	Pn	Pn	07 39 14.0	-1.8
	comp=Z,0.6nm,0.3s,baz=12,slow=12,SNR=6.9						
SONM	Songino Array	16.64	6	Pn	Pn	07 39 57.1	+0.1
	comp=Z,0.1nm,0.3s,baz=185,slow=15,SNR=4.1						
KSRS	Korea Array	20.78	66	P	P	07 40 44.5	-0.5
	comp=Z,1.0nm,0.6s,baz=252,slow=10,SNR=3.7						
CN2	Changchun	21.13	48	eP	P	07 40 50.9	+2.3
CN2				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.5						
MK31	Makanchi Array	22.69	319	P	P	07 41 03.9	-1.3
MKAR	Makanchi Array	22.69	319	P	P	07 41 06.7	+1.5
	comp=Z,0.9nm,0.7s,mb3.3,baz=107,slow=14,SNR=1.9						
ZALV	Zalesovo Beam	26.45	334	P	P	07 41 40.7	+0.1
	comp=Z,1.3nm,0.4s,mb3.8,baz=129,slow=11,SNR=4.2						
KURK	Kurchatov	26.96	323	P	P	07 41 45.1	-0.1
	comp=Z,1.7nm,0.7s,mb3.7,baz=131,slow=9.2,SNR=5.1						
MJAR	Matsushiro Arr	28.90	70	LR	LR	07 54 39.4	
	comp=Z,28nm,18.9s,baz=200,slow=38						
ARCES	ARCESS Array B	56.99	336	P	P	07 45 48.2	-0.7
	comp=Z,3.3nm,1.0s,mb4.3,baz=91,slow=8.1,SNR=3.4						
WRAB	Tennant Creek	58.76	146	eP	P	07 46 02.8	+0.9
	comp=Z,2.6nm,0.7s,mb4.4						
WRA	Warramunga Arr	58.76	146	P	P	07 46 01.6	-0.4
	comp=Z,1.2nm,0.4s,mb4.3,baz=339,slow=7.9,SNR=53						
ASAR	Alice Springs	61.77	149	P	P	07 46 21.8	-0.8
	comp=Z,0.6nm,0.5s,mb4.0,baz=339,slow=6.9,SNR=8.4						
NOA	NORSAR Array B	64.38	327	P	P	07 46 38.4	-1.0
	comp=Z,1.2nm,0.8s,mb4.0,baz=64,slow=8.0,SNR=3.6						
INK	Inuvik	72.05	19	P	P	07 47 31.5	+4.1
	comp=Z,1.1nm,0.6s,mb4.0,baz=344,slow=7.9,SNR=6.1						
YKA	Yellowknife Ar	81.58	17	P	P	07 48 23.8	+2.6
	comp=Z,0.5nm,0.7s,mb3.6,baz=328,slow=5.1,SNR=4.4						

*IDC **16** 07:43:07.6±0.6, 19.°38N×64.°34W, h0km, mb4.1/17, mb1 4.3/20, mb1mx4.1/32, mbtmp4.1/20, MS3.5/7, Ms1 3.5/7, ms1mx3.2/37, Error ellipse: s-maj=14.3km s-min=12.6km az=70.0*
*TRN **16** 07:43:10.2, 19.°49N×64.°39W, h32km*
*ISCJB **16** 07:43:11.9±0.6, 19.°40N±0.°04×64.°38W±0.°03, h39km±6km, mb4.2/51, MS3.6/5, Error ellipse: s-maj=6.0km s-min=4.1km az=7.9*
*NEIC **16** 07:43:13.3, 19.°59N×64.°50W, h37km, mb4.4/34, MD3.8(RSPR), After RSPR.*
*RSPR **16** 07:43:13.3, 19.°59N×64.°50W, h37km±24km, MD3.8/15, MD3.8/15*

ISC 16 07:43:12.0±1.3, 19.°42N±0.°02×64.°42W±0.°03, h22km±10km, n324, σ0°66/339, mb4.2/51, MS3.6/5, 127C-96D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	Tortola	1.02	190	⇑eP	Pn	07 43 29.8	-1.2
TBVI	Tortola	1.02	190	⇑eP	Pn	07 43 29.8	-1.2
STVI	Saint Thomas	1.18	205	⇑eP	Pn	07 43 32.6	-0.6
STVI	Saint Thomas	1.18	205	⇑ePn	Pn	07 43 32.3	-0.9
STVI	Saint Thomas	1.18	205	⇑eP	Pn	07 43 32.6	-0.6
STVI				eS	Sn	07 43 49.9	+1.4
CDVI	St. Croix	1.69	191	⇑ePn	Pn	07 43 41.5	+1.3
MTP	Monte Pirata	1.70	219	⇑eP	Pn	07 43 40.4	+0.1
MTP				eS	Sn	07 44 02.9	+1.6
MTP	Monte Pirata	1.70	219	⇑eP	Pn	07 43 40.4	+0.1
MTP				eS	Sn	07 44 02.9	+1.6
HUMP	Col San Antoni	1.86	227	⇑eP	Pn	07 43 42.1	-0.3
HUMP	Col San Antoni	1.86	227	⇑ePn	Pn	07 43 41.8	-0.7
HUMP	Col San Antoni	1.86	227	⇑eP	Pn	07 43 42.1	-0.3
HUMP				eS	Sn	07 44 05.5	+0.2
CPD	Cerro la Pandu	1.97	226	⇓eP	Pn	07 43 44.2	+0.1
CPD				eS	Sn	07 44 08.6	+0.4
CPD	Cerro la Pandu	1.97	226	⇓eP	Pn	07 43 44.2	+0.1
CPD				eS	Sn	07 44 08.6	+0.4
SJG	San Juan	2.09	232	⇑eP	Pn	07 43 45.5	-0.2
SJG	San Juan	2.09	232	⇓eP	Pn	07 43 45.2	-0.5
SJG	San Juan	2.09	232	Pn	Pn	07 43 45.2	-0.5
	42nm,0.3s,baz=64,slow=8.8,SNR=48						
SJG				Sn	Sn	07 44 10.9	-0.1
	98nm,0.3s,baz=279,slow=17,SNR=12						
SJG				LR	LR	07 44 38.0	
	comp=Z,877nm,18.5s,baz=214,slow=42						
SJG	San Juan	2.09	232	⇑eP	Pn	07 43 45.5	-0.2
SJG				eS	Sn	07 44 11.1	0.0
SJG	San Juan	2.09	232	⇓eP	Pn	07 43 45.2	-0.5
SJG	San Juan	2.09	232	⇑eP	Pn	07 43 45.5	-0.2
SJG				eS	Sn	07 44 11.1	0.0
SABA	Saba	2.12	148	⇑eP	Pn	07 43 48.5	+2.5
SABA	Saba	2.12	148	⇑eP	Pn	07 43 48.5	+2.5
SEUS	St. Eustatius	2.36	144	⇑eP	Pn	07 43 51.0	+1.6
SEUS	St. Eustatius	2.36	144	⇑eP	Pn	07 43 51.0	+1.6
CELP	Cerrillos	2.44	237	⇓eP	Pn	07 43 50.5	0.0
CELP	Cerrillos	2.44	237	⇓ePn	Pn	07 43 49.8	-0.7
CELP	Cerrillos	2.44	237	⇓eP	Pn	07 43 50.5	0.0
AOPR	Arecibo Observ	2.45	244	⇓eP	Pn	07 43 50.1	-0.6
AOPR	Arecibo Observ	2.45	244	⇓ePn	Pn	07 43 49.7	-1.0
AOPR	Arecibo Observ	2.45	244	⇓eP	Pn	07 43 50.1	-0.6
AOPR				eS	Sn	07 44 19.7	-0.3
OBIP	Obispado Ponce	2.48	237	⇓eP	Pn	07 43 51.0	0.0
OBIP	Obispado Ponce	2.48	237	⇓ePn	Pn	07 43 50.6	-0.5
OBIP	Obispado Ponce	2.48	237	⇓eP	Pn	07 43 51.4	+0.3
OBIP				eS	Sn	07 44 20.9	+0.2
ICM	Isla Caja Muer	2.50	233	⇓eP	Pn	07 43 51.9	+0.6
ICM	Isla Caja Muer	2.50	233	⇓eP	Pn	07 43 51.9	+0.6
LRS	Lares	2.55	244	⇑ePn	Pn	07 43 52.3	+0.2
SKI	Saint Kitts	2.62	142	eP	Pn	07 43 53.3	+0.3
SKI	Saint Kitts	2.62	142	eP	Pn	07 43 53.3	+0.3
SKI	Saint Kitts	2.62	142	e	Sx	07 44 44.4	
AGPR	Aguadilla, PR	2.71	250	⇑eP	Pn	07 43 54.0	-0.3
AGPR	Aguadilla, PR	2.71	250	⇑ePn	Pn	07 43 53.3	-0.9
AGPR	Aguadilla, PR	2.71	250	⇑eP	Pn	07 43 54.0	-0.3
AGPR				eS	Sn	07 44 24.6	-1.8
GBPR	Guanica, Bosqu	2.74	239	⇑eP	Pn	07 43 54.9	+0.3
GBPR	Guanica, Bosqu	2.74	239	⇑eP	Pn	07 43 54.9	+0.3
AGP	Aguadilla	2.76	249	⇑ePn	Pn	07 43 53.2	-1.7
LSP	Las Mesas	2.81	244	⇑eP	Pn	07 43 55.5	-0.1
LSP	Las Mesas	2.81	244	⇑ePn	Pn	07 43 55.1	-0.5
LSP	Las Mesas	2.81	244	⇑eP	Pn	07 43 55.5	-0.1
MPR	Mayaguez	2.84	245	⇑ePn	Pn	07 43 55.5	-0.5
CRPR	Cabo Rojo, PR	2.91	241	⇑eP	Pn	07 43 57.2	+0.3
CRPR				eS	Sn	07 44 31.0	-0.2
CRPR	Cabo Rojo, PR	2.91	241	⇑eP	Pn	07 43 57.2	+0.3
CRPR				eS	Sn	07 44 31.2	-0.1
BPA	Boggy Peak	3.40	134	eP	Pn	07 44 11.2	+7.5
BPA	Boggy Peak	3.40	134	eP	Pn	07 44 01.4	-2.2
LZG	Guadaloupe-1	4.13	142	eP	Pn	07 44 13.1	-0.6
BCG	Bois Riant Cap	4.26	141	eP	Pn	07 44 14.9	-0.7
HMG	Houelmont	4.30	142	eP	Pn	07 44 16.6	+0.5
PHG	Guadaloupe-2	4.30	142	eP	Pn	07 44 16.4	+0.3
TBG	Guadaloupe-3	4.43	143	eP	Pn	07 44 17.2	-0.7
MGG	Marie-Galante	4.58	139	eP	Pn	07 44 19.1	-0.8
FDF	Fort de France	5.62	146	eP	Pn	07 44 34.5	+0.3
BIM	Bigot	5.84	146	eP	Pn	07 44 37.5	+0.2
MVM	Montagne Vaucl	5.90	145	eP	Pn	07 44 38.5	+0.4
SDDR	Presa de Saban	6.50	267	⇑ePn	Pn	07 44 46.5	+0.1
SDDR				eSn	Sn	07 45 58.6	-1.3
GRTK	Grand Turk	6.62	289	⇑ePn	Pn	07 44 44.4	-3.6
GRTK				eSn	Sn	07 45 59.6	-3.3
PCRV	Puerto La Cruz	9.20	181	Pn	Pn	07 45 25.3	+1.9
	1.1nm,0.3s,baz=328,slow=9.5,SNR=4.6						

baz=36,SNR=7.5
528A Cox Ranch, San 36.28 295 ⇓P P 07 50 13.1 -0.8
baz=36
627A Terlingua Ranc 36.70 293 ⇑P P 07 50 17.1 -0.4
baz=37,SNR=7.6
427A Hayter Ranch, 36.90 296 ⇓P P 07 50 18.5 -0.7
baz=37
TXAR Lajitas Array 36.93 293 P P 07 50 19.3 -0.2
2.3nm,0.9s,mb4.0,baz=110,slow=11,SNR=21
TXAR PcP PcP 07 52 41.3 +0.6
0.7nm,0.8s,baz=131,slow=6.8,SNR=4.4
MSTX Muleshoe 36.97 301 ⇓P P 07 50 19.1 -0.6
baz=37
527A Woodward Ranch 36.98 295 ⇑P P 07 50 19.2 -0.7
baz=37,SNR=8.1
Z27A Tatum 37.19 300 ⇑P P 07 50 20.4 -1.2
baz=37
Y27A Causey 37.27 301 ⇓P P 07 50 21.2 -1.1
baz=37,SNR=5.7
626A Big Bend Ranch 37.36 293 ⇑P P 07 50 22.7 -0.5
baz=37
526A Mary Lane Ranc 37.38 294 ⇓P P 07 50 22.5 -0.8
baz=37
426A McDonald Obser 37.41 295 ⇑P P 07 50 23.0 -0.6
baz=37
W27A Bowe Ranch, En 37.46 303 ⇓P P 07 50 23.8 -0.1
baz=38
226A Malaga, Loving 37.69 298 ⇓P P 07 50 25.6 -0.3
baz=38
126A Clayton Basin, 37.72 298 ⇑P P 07 50 25.7 -0.4
baz=38
V26A Tequesquite Ra 38.21 304 ⇓P P 07 50 29.6 -0.7
baz=38,SNR=9.4
425A Indio Mountain 38.24 295 ⇓P P 07 50 30.5 -0.1
baz=38
125A Gardner Draw, 38.25 298 ⇑P P 07 50 30.0 -0.7
baz=38
225A Deer Hill, Car 38.30 297 ⇓P P 07 50 30.5 -0.5
baz=38
325A Bean Ranch, Si 38.31 296 ⇑P P 07 50 30.8 -0.3
baz=38,SNR=9.3
U26A Atchley Ranch, 38.34 304 ⇑P P 07 50 30.8 -0.4
baz=38
AGMN Agassiz Nation 38.39 326 eP P 07 50 29.8 -1.8
4.5nm,0.8s,mb4.2
Y25A Mesa, Roswell 38.52 300 ⇓P P 07 50 32.6 -0.3
baz=38
W25A X Bar L Ranch, 38.61 302 ⇓P P 07 50 33.5 -0.1
baz=39,SNR=5.4
MNTX Cornudas Mount 38.70 297 eP P 07 50 34.0 -0.5
4.8nm,1.6s,mb4.0
324A Moseley Ranch, 38.75 296 ⇑P P 07 50 34.2 -0.7
baz=39
U25A Circle Dot Ran 38.85 304 ⇓P P 07 50 35.6 -0.1
baz=39
224A Cornudas Mount 38.88 297 ⇑P P 07 50 35.3 -0.6
baz=39
V25A Rancho No Teng 38.88 303 ⇓P P 07 50 35.5 -0.3
baz=39
124A Stringfield Ra 38.92 298 ⇓P P 07 50 35.9 -0.3
baz=39
Z24A Sheeppen Canyo 38.95 299 ⇑P P 07 50 36.2 -0.3
baz=39
T25A Trinidad 39.05 305 ⇓P P 07 50 37.3 +0.1
baz=39
Y24A Capitan 39.12 300 ⇓P P 07 50 37.9 0.0
baz=39,SNR=6.6
W24A Lazy 6 Ranch, 39.36 302 ⇑P P 07 50 40.3 +0.4
baz=39,SNR=6.4
Y23A Lovelace Mesa, 39.63 300 ⇑P P 07 50 42.0 -0.2
baz=40
X23A Hourglass Bar 39.86 301 ⇑P P 07 50 43.9 -0.1
baz=40
W23A Werner Place, 39.95 302 ⇑P P 07 50 45.1 +0.4
baz=40,SNR=6.9
SDCO Great Sand Dun 40.05 306 eP P 07 50 45.8 +0.2
2.2nm,0.8s,mb3.9
V23A Ortiz Mt. (NFS 40.10 303 ⇓P P 07 50 45.9 -0.1
baz=40
BNM Barren Site 40.14 300 eP P 07 50 47.0 +0.6
5.8nm,1.0s,mb4.3
ANMO Albuquerque 40.15 301 eP P 07 50 46.3 -0.2
0.8nm,0.9s,mb3.5
U23A El Rito 40.23 304 ⇓P P 07 50 47.5 +0.4
baz=40
Y22A Socorro 40.38 300 ⇓P P 07 50 48.4 +0.1
baz=40
LAZ Ladron 40.60 300 eP P 07 50 51.2 +1.1
2.3nm,1.3s,mb3.6
V22A San Miguel Ran 40.71 303 ⇓P P 07 50 51.7 +0.6
baz=41
121A Cookes Peak, D 40.84 298 ⇑P P 07 50 52.4 +0.2
baz=41
Z21A St. Cloud Mine 40.85 299 ⇓P P 07 50 52.5 +0.2
baz=41
T22A Edith 40.95 304 ⇓P P 07 50 53.3 +0.3
baz=41
Y21A Point of Rocks 40.97 300 ⇑P P 07 50 54.2 +0.9
baz=41,SNR=7.3
R22A Saguache, Gunn 41.13 306 ⇑P P 07 50 55.1 +0.5
baz=41
X21A Alamocita Cree 41.13 300 ⇓P P 07 50 54.8 +0.2
baz=41
W21A San Fidel 41.14 301 ⇑P P 07 50 55.1 +0.5
baz=41
V21A Milan 41.27 302 ⇑P P 07 50 56.0 +0.3
baz=41
U21A Nageezi 41.41 303 ⇑P P 07 50 57.3 +0.5
baz=41,SNR=5.8
Y20A Horse Springs, 41.53 299 ⇑P P 07 50 58.3 +0.4
baz=42
SMCO Snowmass 41.55 308 eP P 07 50 57.9 0.0
7.7nm,0.8s,mb4.4
120A U Bar Ranch, L 41.55 297 ⇑P P 07 50 58.3 +0.3
baz=42
Z20A Nine Sixteen R 41.59 298 ⇑P P 07 50 58.4 0.0
baz=42
Q21A Lamborn Mesa, 41.91 307 ⇑P P 07 51 01.2 +0.3
baz=42
219A White Tail Can 42.02 296 ⇑P P 07 51 02.5 +0.6
baz=42
Y19A Nutrioso 42.26 299 ⇑P P 07 51 04.5 +0.7
baz=42,SNR=5.8
X19A St. Johns 42.36 300 ⇓P P 07 51 05.3 +0.7
baz=42
R20A Redvale 42.36 306 ⇓P P 07 51 04.9 +0.3
baz=42
Q20A Ridgley Place, 42.48 307 ⇓P P 07 51 05.8 +0.3
baz=42
M21A Separation Pea 42.54 311 ⇑P P 07 51 06.3 +0.4
baz=42
T19A Beclabito 42.57 304 ⇑P P 07 51 06.0 -0.3
baz=43,SNR=5.7
318A Bisbee 42.58 296 ⇓P P 07 51 06.8 +0.4
baz=43
U19A Dine' College, 42.61 303 ⇑P P 07 51 06.1 -0.5
baz=43
L21A Rawlins 42.66 311 ⇑P P 07 51 07.3 +0.4
baz=43
118A Homack Ranch, 42.68 297 ⇓P P 07 51 07.3 0.0
baz=43
O20A White River Ci 42.75 309 ⇑P P 07 51 08.0 +0.3
baz=43
S19A Harvey Farm, M 42.85 305 ⇓P P 07 51 08.3 -0.3
baz=43,SNR=5.4
Y18A Canyon Day Jun 42.88 299 ⇓P P 07 51 09.2 +0.4
baz=43
X18A Snowflake 42.91 300 ⇓P P 07 51 09.4 +0.3
baz=43
N20A Spence Gulch, 42.96 310 ⇑P P 07 51 09.7 +0.3
baz=43
R19A Curley Farm, L 43.06 306 ⇓P P 07 51 09.9 -0.4
baz=43
Z17A San Carlos Hig 43.18 298 ⇓P P 07 51 11.9 +0.6
baz=43
Q19A Hogan Spring (43.22 307 ⇓P P 07 51 11.6 +0.1
baz=43
T18A Mexican Hat 43.30 304 ⇑P P 07 51 12.0 -0.2
baz=43
217A Green Valley 43.31 296 ⇓P P 07 51 12.5 +0.1
baz=43
117A Oracle 43.32 297 ⇑P P 07 51 12.6 +0.1
baz=43,SNR=7.2
TUC Tucson 43.33 297 eP P 07 51 13.3 +0.7
5.3nm,1.4s,mb4.1
L20A Wamsutter 43.36 311 ⇓P P 07 51 12.4 -0.1
baz=43
S18A Hurst Farm, Bl 43.50 305 ⇑P P 07 51 13.9 +0.1
baz=44
Y17A Roosevelt 43.53 299 ⇓P P 07 51 14.8 +0.6
baz=44
K20A Yellowstone Ra 43.56 312 ⇓P P 07 51 13.9 -0.3
baz=44
R18A Canyonlands Na 43.57 306 ⇑P P 07 51 13.6 -0.8
baz=44
X17A Forest Lakes 43.58 300 ⇑P P 07 51 14.7 +0.1
baz=44
LAO LASA Array 43.60 318 eP P 07 51 14.5 0.0
5.5nm,1.0s,mb4.2
V17A Tonalea, Kykot 43.76 302 ⇓P P 07 51 15.7 -0.2
baz=44,SNR=8.2
Z16A Peralta Trail, 43.98 298 ⇑P P 07 51 18.1 +0.4
baz=44,SNR=7.0
Y16A Circle Bar Ran 44.08 299 ⇑P P 07 51 19.2 +0.6
baz=44
L19A Farson 44.11 311 ⇑P P 07 51 18.6 0.0
baz=44
P18A Preston Nutter 44.11 307 ⇓P P 07 51 19.0 +0.3
baz=44
X16A Lo Mia Camp, P 44.12 300 ⇑P P 07 51 19.3 +0.5
baz=44
R17A Hanksville Air 44.20 305 ⇑P P 07 51 19.1 -0.4
baz=44
SRU San Rafael 44.21 306 ⇓P P 07 51 19.5 0.0
baz=44
WUAZ Wupatki 44.21 301 ⇑P P 07 51 20.2 +0.7
baz=44
WUAZ Wupatki 44.21 301 eP P 07 51 20.4 +0.9
3.7nm,0.8s,mb4.2
W16A Flagstaff 44.28 301 ⇓P P 07 51 20.9 +0.8
baz=44
M18A Lyman 44.43 310 ⇑P P 07 51 21.2 -0.1
baz=44
BW06 Boulder Array 44.44 312 ⇓P P 07 51 20.8 -0.5
baz=44,SNR=5.6
BW06 Boulder Array 44.44 312 eP P 07 51 21.5 +0.2
4.1nm,1.0s,mb4.1
PDAR Pinedale Array 44.44 312 P P 07 51 21.1 -0.3
2.2nm,0.9s,mb3.9,baz=100,slow=8.3,SNR=15
O17A Robinson Place 44.62 308 ⇑P P 07 51 22.6 -0.1
baz=45
K18A Toltan Ranch, 44.75 311 ⇑P P 07 51 23.8 +0.1
baz=45
X15A Humboldt 44.78 300 ⇓P P 07 51 24.5 +0.4
baz=45
Y15A Casa Rosa Ranc 44.80 299 ⇑P P 07 51 24.6 +0.4
baz=45
J18A Kendall Valley 44.90 312 ⇓P P 07 51 24.9 0.0
baz=45
RLMT Red Lodge 44.99 315 ⇑P P 07 51 25.7 0.0
baz=45
RLMT Red Lodge 44.99 315 eP P 07 51 25.8 +0.1
52nm,2.8s,mb4.9
114A Black Gap (USA 45.14 297 ⇑P P 07 51 27.4 +0.3
baz=45
L17A Cokeville 45.19 311 ⇓P P 07 51 27.8 +0.6
baz=45
T15A Red Dirt Ranch 45.25 303 ⇓P P 07 51 28.1 +0.3
baz=45
X14A Yava 45.31 300 ⇑P P 07 51 28.9 +0.5
baz=45
Y14A Wickenburg 45.35 299 ⇓P P 07 51 29.0 +0.4
baz=45
K17A Gardner Place, 45.40 311 ⇑P P 07 51 28.6 -0.3
baz=45
LOHW Long Hollow 45.42 313 eP P 07 51 29.2 +0.1
13nm,1.9s,mb4.4
J17A Brown Place, J 45.43 312 ⇓P P 07 51 29.5 +0.3
baz=45
M16A Huntsville 45.54 309 ⇓P P 07 51 29.5 -0.6
baz=46,SNR=7.2
F18A Big Timber 45.55 316 ⇑P P 07 51 30.0 -0.1
baz=46,SNR=7.2
HWUT Hardware Ranch 45.56 310 eP P 07 51 30.0 -0.3
2.8nm,0.8s,mb4.2
L16A Fish Haven 45.57 310 ⇑P P 07 51 29.9 -0.4
baz=46,SNR=7.0
V14A Boquillas Ranc 45.63 301 ⇓P P 07 51 30.9 0.0
baz=46
TPAW Teton Pass 45.63 312 eP P 07 51 31.1 +0.3
3.1nm,1.0s,mb4.2
Z13A Yuma Proving G 45.82 298 ⇓P P 07 51 33.0 +0.6
baz=46
K16A Soda Springs 45.90 311 ⇓P P 07 51 33.2 +0.3
baz=46
E18A Harlowton 45.91 317 ⇓P P 07 51 33.3 +0.4
baz=46
CPUP Villa Florida 46.00 171 P P 07 51 31.2 -2.5
4.6nm,0.9s,mb4.4,baz=341,slow=8.3,SNR=5.2
D18A Linhart Farms, 46.06 318 ⇓P P 07 51 34.8 +0.7
baz=46
CCUT Cedar City 46.10 304 eP P 07 51 35.8 +1.2
37nm,2.9s,mb4.8
DUG Dugway 46.16 307 ⇑P P 07 51 35.0 0.0
baz=46
F17A Fitzpatrick Pl 46.17 316 ⇓P P 07 51 35.3 +0.3
baz=46
H16A Russell Place, 46.19 314 ⇓P P 07 51 35.5 +0.4
baz=46
W13A Hualapai Mount 46.20 300 ⇑P P 07 51 36.0 +0.6
baz=46
P14A Drum Mountains 46.24 307 ⇓P P 07 51 35.9 +0.3
baz=46
Q14A Sevier Lake (B 46.28 306 ⇓P P 07 51 36.3 +0.3
baz=46
EGMT Eagleton 46.34 319 ⇓P P 07 51 37.1 +0.8
baz=46
V13A Grand Canyon W 46.36 301 ⇑P P 07 51 37.5 +0.9
baz=46
U13A Pakoon Wash 46.42 302 ⇓P P 07 51 37.8 +0.8
baz=46
E17A Martinsdale 46.49 316 ⇑P P 07 51 38.1 +0.7
baz=46
N14A Grayback Hills 46.58 308 ⇑P P 07 51 38.8 +0.5
baz=47
D17A Six Diamond Ra 46.61 317 ⇑P P 07 51 38.7 +0.3
baz=47
J15A Blackfoot 46.64 312 ⇑P P 07 51 38.8 +0.1
baz=47
G16A Moss Hill, Enn 46.73 314 ⇑P P 07 51 39.4 +0.1
baz=47
A18A Metzger Ranch, 46.73 320 ⇑P P 07 51 38.6 -0.8
baz=47,SNR=5.8
BOZ Bozeman (W) 46.74 315 ⇑P P 07 51 39.5 +0.1
baz=47
BOZ Bozeman (W) 46.74 315 eP P 07 51 39.4 0.0
24nm,2.9s,mb4.6
F16A Kennard Place, 46.78 315 ⇑P P 07 51 39.7 0.0
baz=47
C17A Wharram Farm, 46.83 318 ⇑P P 07 51 40.0 -0.1
baz=47
I15A Monteview 46.84 313 ⇓P P 07 51 40.8 +0.6
baz=47
M14A Sheep Mountain 46.84 309 ⇓P P 07 51 40.1 -0.2
baz=47
Q13A Wheeler Ranch, 46.85 306 ⇓P P 07 51 41.0 +0.6
baz=47
L14A Malta 46.88 310 ⇓P P 07 51 40.1 -0.5
baz=47
P13A Bates Ranch, G 46.93 306 ⇓P P 07 51 41.0 0.0
baz=47
K14A Jones Ranch, D 46.96 311 ⇑P P 07 51 40.8 -0.3
baz=47,SNR=7.5
V12A Nelson 47.05 301 ⇑P P 07 51 42.4 +0.4
baz=47
H15A Lima 47.12 313 ⇑P P 07 51 43.0 +0.6
baz=47
D16A Dana Ranch, Ca 47.13 317 ⇑P P 07 51 42.5 0.0
baz=47
IRM Iron Mountain 47.14 299 ⇑P P 07 51 43.5 +0.7
baz=47
G15A Dillon 47.17 314 ⇑P P 07 51 42.9 +0.1
baz=47
DLMT Dillon 47.30 314 eP P 07 51 41.6 -2.2
4.6nm,1.1s,mb4.3
BC3 Big Chuckawall 47.36 298 ⇓P P 07 51 44.7 +0.2
baz=47
J14A Carey 47.39 311 ⇑P P 07 51 44.6 0.0
baz=47,SNR=12
M13A Montello 47.41 309 ⇑P P 07 51 44.8 0.0
baz=47
I14A Mackay 47.49 312 ⇓P P 07 51 45.7 +0.3
baz=48,SNR=6.0
T11A Corn Creek, Al 47.52 303 ⇓P P 07 51 46.0 +0.3
baz=48
V11A Goodsprings 47.53 301 ⇑P P 07 51 46.0 +0.2
baz=48
GMRC Granite Mounta 47.61 300 ⇑P P 07 51 46.7 +0.2
baz=48
P12A McGill 47.61 306 ⇑P P 07 51 46.9 +0.6
baz=48
H14A Leadore 47.62 313 ⇑P P 07 51 46.5 +0.2
baz=48
K13A Stover Farm, H 47.63 310 ⇑P P 07 51 46.2 -0.2
baz=48,SNR=5.9
D15A Lincoln 47.76 317 ⇑P P 07 51 46.9 -0.5
baz=48
J13A Cove Ranch, Pi 47.87 311 ⇑P P 07 51 48.3 0.0
baz=48
F14A Wisdom 47.95 315 ⇑P P 07 51 49.5 +0.6
baz=48
I13A Wildhorse Cree 47.96 312 ⇓P P 07 51 49.2 +0.3
baz=48,SNR=5.7
N12A Clover Valley, 47.96 308 ⇑P P 07 51 49.4 +0.3
baz=48
R11A Troy Canyon, C 47.96 304 ⇑P P 07 51 49.5 +0.4
baz=48
M12A Wells 47.98 309 ⇓P P 07 51 49.1 0.0
baz=48
S11A Rachel 47.99 303 ⇓P P 07 51 49.7 +0.4
baz=48
C15A Salmond Ranch, 48.05 317 ⇓P P 07 51 49.2 -0.3
baz=48,SNR=10
HLID Hailey 48.08 312 ⇑P P 07 51 50.1 +0.2
baz=48
HLID Hailey 48.08 312 eP P 07 51 50.4 +0.5
Q11A Duckwater 48.09 305 ⇓P P 07 51 50.1 0.0
baz=48
B15A Bradely Ranch, 48.20 318 ⇑P P 07 51 50.5 -0.2
baz=48
H13A Challis 48.22 313 ⇑P P 07 51 50.9 -0.1
baz=48
K12A Draper Farm, C 48.22 310 ⇑P P 07 51 51.4 +0.4
baz=48
SHOC Shoshone 48.22 301 ⇑P P 07 51 51.7 +0.6
baz=48
O11A Cowboy Ranch, 48.29 307 ⇓P P 07 51 51.8 +0.2
baz=48,SNR=5.8
U10A Ash Meadows, A 48.31 302 ⇑P P 07 51 52.4 +0.6
baz=48
J12A Stokes Ranch, 48.49 311 ⇑P P 07 51 53.4 +0.3
baz=48
A15A Johnson Ranch, 48.53 319 ⇑P P 07 51 52.8 -0.4
baz=48
M11A Holland Ranch, 48.62 308 ⇑P P 07 51 54.5 +0.3
baz=49
B14A Marquette Ranc 48.66 318 ⇑P P 07 51 54.2 -0.1
baz=49
E13A Victor 48.67 315 ⇑P P 07 51 54.4 0.0
baz=49
S10A Tonopah Range, 48.69 304 ⇑P P 07 51 55.1 +0.4
baz=49,SNR=5.7
L11A Cat Creek Ranc 48.74 309 ⇓P P 07 51 54.6 -0.4
baz=49
C14A Swan Lake 48.78 317 ⇑P P 07 51 55.3 +0.1
baz=49
A14A Double T Ranch 48.95 319 ⇑P P 07 51 56.0 -0.6
baz=49
YBMT Yellow Bay 48.98 317 eP P 07 51 56.9 +0.1
MFID Camas Ranch 49.05 311 ⇑P P 07 51 57.1 -0.2
baz=49
L10A Juniper Basin 49.24 309 ⇓P P 07 51 58.6 -0.3
baz=49
I11A Placerville 49.25 312 ⇓P P 07 51 58.5 -0.3
baz=49
H11A Donnelly 49.47 313 ⇓P P 07 52 00.2 -0.3
baz=49
G11A Walters Elk Ra 49.80 314 ⇑P P 07 52 02.7 -0.4
baz=50
F11A Grangeville 49.85 314 ⇓P P 07 52 02.6 -0.8
baz=50,SNR=5.7
NVAR Mina Array Bea 50.09 304 P P 07 52 05.5 +0.1
1.8nm,1.0s,mb4.0,baz=99,slow=6.6,SNR=9.9
C11A Tepee Creek (N 50.42 317 ⇑P P 07 52 07.1 -0.6
baz=50
F10A Beach Ranch, E 50.59 314 ⇑P P 07 52 08.0 -1.1
baz=51
RCTC Rector, Farmer 50.64 301 ⇓P P 07 52 09.5 -0.1
baz=51
J08A Circle Bar Ran 50.93 310 ⇓P P 07 52 10.9 -0.8
baz=51
NEW Newport 51.09 317 eP P 07 52 11.4 -1.3
4.0nm,0.7s,mb4.5
H08A Prairie City 51.28 312 ⇑P P 07 52 14.0 -0.2
baz=51
YBH Yreka Blue Hor 53.80 308 LR LR 08 18 32.9
comp=Z,64nm,19.5s,MS3.7,baz=94,slow=39
YKA Yellowknife Ar 55.01 334 P P 07 52 39.8 -1.6
1.4nm,0.6s,mb4.2,baz=105,slow=7.4,SNR=11
SUMG Summit 55.19 9 eP P 07 52 43.1 +0.5
6.2nm,0.8s,mb4.7
SUMG Summit 55.19 9 i P P 07 52 42.2 -0.4
6.1nm,1.1s,mb4.5
DBIC Dimbokro 59.14 94 P P 07 53 10.1 -1.3
4.5nm,0.9s,mb4.5,baz=236,slow=12,SNR=4.8
PLCA Paso Flores 60.12 185 P P 07 53 17.0 -0.6
2.0nm,0.9s,mb4.1,baz=338,slow=11,SNR=2.7
TORD Torodi Ar. Bea 63.45 85 P P 07 53 39.4 -1.3
1.2nm,0.7s,mb4.2,baz=289,slow=6.1,SNR=6.1
INK Inuvik 64.40 337 P P 07 53 44.6 -1.4
1.9nm,0.8s,mb4.2,baz=113,slow=6.6,SNR=5.2
INK Inuvik 64.40 337 eP P 07 53 44.3 -1.7
NOA NORSAR Array B 66.25 31 LR LR 08 21 06.1
comp=Z,43nm,18.1s,MS3.7,baz=270,slow=34
EGAK Eagle 66.95 333 eP P 07 54 01.7 -0.8
1.8nm,0.7s,mb4.2
ARCES ARCESS Array B 71.95 22 P P 07 54 33.3 0.0
2.0nm,0.9s,mb4.0,baz=263,slow=4.8,SNR=6.3
FINES FINESS Array B 73.39 30 P P 07 54 42.0 0.0
0.9nm,0.6s,mb3.9,baz=281,slow=6.4,SNR=3.1
BRTR Keskin Array B 83.78 50 P P 07 55 39.5 -0.2
0.5nm,0.5s,mb3.9,baz=272,slow=4.7,SNR=2.9
HHC Hu-ho-hao-te 119.92 4 ePKP PKPdf 08 01 59.4 -1.6
HHC sPKP 08 02 13.8
HHC PP PP 08 03 27.8 +4.2
HHC PKS 08 05 34.5
HHC SKS SKSdf 08 09 06.6 -5.3
HHC SKKS SKKSac 08 10 15.5 -8.3
HHC SS SS 08 19 47.3 +0.2
HHC AMB AMB
comp=Z,60nm,5.4s
HHC LR LR
comp=N,78nm,20.2s,MS4.5
HHC LR LR
comp=E,73nm,22.6s,MS4.5
HHC LR LR
comp=Z,61nm,21.4s,MS4.2
WRA Warramunga Arr 162.32 265 PKP PKPdf 08 03 11.2 -1.5
comp=Z,1.2nm,0.9s,baz=39,slow=0.9,SNR=5.3
WRA PKPab PKPab 08 03 58.9 -1.1
comp=Z,0.9nm,0.6s,baz=84,slow=4.2,SNR=13
ASAR Alice Springs 162.44 253 PKP PKPdf 08 03 11.7 -1.0
comp=Z,1.4nm,1.1s,baz=107,slow=1.7,SNR=5.1
ASAR PKPab PKPab 08 03 59.4 -1.1
comp=Z,1.0nm,0.7s,baz=115,slow=4.5,SNR=7.2

BJI 16 07:44:34.5, 35°.22N×80°.89E, h15km, ML3.8/3, Kashmir-Xizang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	Kashi	5.81	319	ePg	Pg	07 46 16.8	-8.9
KSH				Sn	Sn	07 47 13.8	+7.5
KSH				smax			
	comp=N,100nm,1.3s						
KSH				smax			
	comp=E,98nm,0.9s						
XAN	Xi'an	23.07	85	P	P	07 49 41.1	+1.6

IDC 16 07:49:42.7±5.9, 8°.81S×126°.50E, h0km, mb3.9/1, mb1 3.9/4, mb1mx3.6/18, mbtmp3.7/4, ML3.6/3, Error ellipse: s-maj=73.6km s-min=58.1km az=114.0, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	9.27	185	Pn	Pn	07 51 55.9	-1.9
	0.7nm,0.3s,baz=7.4,slow=12,SNR=20						
FITZ				Sn	Sn	07 53 42.6	-0.2
	0.6nm,0.3s,baz=13,slow=18,SNR=4.8						
WRA	Warramunga Arr	13.41	146	Pn	Pn	07 52 53.5	-1.0
	0.3nm,0.3s,baz=323,slow=13,SNR=19						
WRA				Sn	Sn	07 55 27.4	+2.9

0.2nm,0.3s,baz=329,slow=22,SNR=5.3
ASAR Alice Springs 16.38 155 Pn Pn 07 53 34.4 +0.2
0.3nm,0.3s,baz=340,slow=14,SNR=22
ASAR Sn Sn 07 56 40.4 +3.6
0.1nm,0.3s,baz=332,slow=24,SNR=3.5
STKA Stephens Creek 26.90 151 P P 07 55 26.4 +0.9
0.8nm,0.5s,baz=327,slow=11,SNR=3.0

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*ISK **16** 07:50:22.4, 40.″44N×40.″96E, h3km, MD3.1*
*DDA **16** 07:50:23.2, 40.″47N×41.″01E, h7km±2km, Md2.8*
*CSEM **16** 07:50:23.4±0.2, 40.″46N×41.″01E, h10km, MD3.1, Error ellipse: s-maj=3.8km s-min=3.3km az=95.0*
*ISCJB **16** 07:50:23.1±0.5, 40.″47N±0.″02×41.″01E±0.″03, h1km±6km, Error ellipse: s-maj=4.3km s-min=3.9km az=150.4*
ISC 16 07:50:23.9±0.4, 40.″47N±0.″02×41.″02E±0.″03, h4km±6km, n29,σ1§11/47, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOPT	**Kop Dagi**	**0.60**	**222**	*i* P	**Pg**	**07 50 34.8**	**-0.6**
KOPT				*i* S	**Sg**	**07 50 44.4**	**+1.3**
KOPT	**Kop Dagi**	**0.60**	**222**	*i* P	**Pg**	**07 50 34.8**	**-0.6**
KOPT				*i* S	**Sg**	**07 50 44.4**	**+1.3**
EZM	**Erzurum**	**0.62**	**155**	*e*PG	**Pg**	**07 50 34.8**	**-1.0**
EZM				*e*SG	**Sg**	**07 50 44.5**	**+0.7**
ERZM	**Erzurum**	**0.62**	**154**	*i* P	**Pg**	**07 50 34.8**	**-1.0**
ERZM				*i* S	**Sg**	**07 50 44.8**	**+0.9**
ERZM	**Erzurum**	**0.62**	**154**	*i* P	**Pg**	**07 50 34.8**	**-1.0**
ERZM				*i* S	**Sg**	**07 50 44.8**	**+0.9**
PZAR	**Pazar-Rize**	**0.71**	**353**	*e*PG	**Pg**	**07 50 37.8**	**+0.2**
PZAR				*e*SG	**Sg**	**07 50 48.4**	**+1.6**
PZAR	**Pazar-Rize**	**0.71**	**353**	*e*Pg	**Pg**	**07 50 37.8**	**+0.2**
PZAR				*e*Sg	**Sg**	**07 50 48.4**	**+1.5**
DBAD	**Bademkaya**	**0.75**	**43**	*i* P	**Pg**	**07 50 38.0**	**-0.3**
DBAD				*i* S	**Sg**	**07 50 49.0**	**+0.9**
DBAD	**Bademkaya**	**0.75**	**43**	*i* P	**Pg**	**07 50 38.0**	**-0.3**
DBAD				*i* S	**Sg**	**07 50 49.0**	**+0.9**
HOMI	**Horasan**	**0.80**	**122**	*i* P	**Pg**	**07 50 38.2**	**-1.1**
HOMI				*i* S	**Sg**	**07 50 50.5**	**+0.9**
ARTV	**Artvin**	**1.00**	**44**	*i* P	**Pg**	**07 50 42.5**	**-0.5**
ARTV				*i* S	**Sg**	**07 50 56.3**	**+0.4**
ARTV	**Artvin**	**1.00**	**44**	*i* P	**Pg**	**07 50 42.5**	**-0.5**
ARTV				*i* S	**Sg**	**07 50 56.3**	**+0.4**
MACK	**Trabzon**	**1.06**	**297**	*i* P	**Pg**	**07 50 43.6**	**-0.6**
MACK				*i* S	**Sg**	**07 50 58.1**	**+0.2**
MACK	**Trabzon**	**1.06**	**297**	*i* P	**Pg**	**07 50 43.6**	**-0.6**
MACK				*i* S	**Sg**	**07 50 58.1**	**+0.2**
BCA	**Borcka**	**1.08**	**25**	*e*PN	**Pn**	**07 50 44.2**	**-1.6**
BCA	**Borcka**	**1.08**	**25**	*e*Pn	**Pn**	**07 50 44.2**	**-1.6**
KTUT	**Trabzon**	**1.08**	**299**	*e*PG	**Pg**	**07 50 43.2**	**-1.4**
KTUT				*e*SG	**Sg**	**07 50 58.3**	**-0.3**
KTUT	**Trabzon**	**1.08**	**299**	*e*Pg	**Pg**	**07 50 43.2**	**-1.4**
KTUT				*e*Sg	**Sg**	**07 50 58.3**	**-0.3**
EZC	**Erzincan**	**1.17**	**232**	*e*PN	**Pn**	**07 50 50.0**	**+3.0**
GUMT	**Gumushane**	**1.17**	**270**	*e*PN	**Pn**	**07 50 45.0**	**-2.1**
GUMT	**Gumushane**	**1.17**	**270**	*e*Pn	**Pn**	**07 50 45.0**	**-2.0**
AGRB	**Hanur-Agry**	**1.76**	**120**	*e*PN	**Pn**	**07 50 55.0**	**-0.1**
AGRB	**Hanur-Agry**	**1.76**	**120**	*e*Pn	**Pn**	**07 50 55.0**	**-0.1**
ESPY	**Espiye-Giresun**	**1.80**	**285**	*e*PN	**Pn**	**07 50 55.3**	**-0.3**
ESPY	**Espiye-Giresun**	**1.80**	**285**	*e*Pn	**Pn**	**07 50 55.3**	**-0.3**
PTK	**Pertek**	**2.01**	**219**	*e*PN	**Pn**	**07 50 58.2**	**-0.4**
PTK	**Pertek**	**2.01**	**219**	*e*Pn	**Pn**	**07 50 58.2**	**-0.4**
GRSN	**GIRESUNGRSN**	**2.14**	**283**	*i* P	**Pn**	**07 51 02.2**	**+1.9**
GRSN				*i* S	**Sn**	**07 51 30.1**	**+2.8**
GRSN	**GIRESUNGRSN**	**2.14**	**283**	*i* P	**Pn**	**07 51 02.2**	**+1.9**
GRSN				*i* S	**Sn**	**07 51 30.1**	**+2.8**

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*NIED **16** 08:00:00, 46.″40N×153.″40E, h5km, Mw4.1 Best double couple: M0.46000×1015 NP1:φ0=60.00000°, δ82.00000°, λ99.00000°. NP2:φ0=192.00000°, δ12.00000°, λ43.00000°.*
*ISCJB **16** 08:00:37.8±2.0, 46.″48N±0.″10×153.″1E±0.″1, h30km±15km, mb4.0/16, Error ellipse: s-maj=20.6km s-min=6.4km az=140.4*
*MOS **16** 08:00:41.1±0.8, 46.″53N×153.″07E, h59km, mb4.2/3, Error ellipse: s-maj=12.6km s-min=9.8km az=64.4*
*NEIC **16** 08:00:42.5±1.0, 46.″67N×153.″01E, h47km±9km, mb4.3/2, Error ellipse: s-maj=13.9km s-min=7.2km az=137.0*
*IDC **16** 08:00:42.9±3.0, 46.″65N×153.″02E, h52km±27km, mb3.8/15, mb1 3.9/18, mb1mx3.7/31, mbtmp3.8/18, ML3.6/3, MS3.3/1, Ms1 3.3/1, ms1mx2.4/39, Error ellipse: s-maj=26.0km s-min=16.7km az=152.0*
ISC 16 08:00:41.0±1.0, 46.″52N±0.″09×153.″1E±0.″1, h39km±7km, n46,σ1§19/53, mb4.0/16, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.85**	**252**	*e*PN	**Pn**	**08 01 37.6**	**0.0**
KUR				*e*S	**Sn**	**08 02 23.0**	**+1.4**
KUR				pmax	pmax		
	comp=N,150nm,0.5s						
KUR				pmax	pmax		
	comp=Z,460nm,0.5s						
KUR				smax			
	comp=N,260nm,0.7s						
KUR				smax			
	comp=E,150nm,0.7s						
SKR	**Severo-Kuril's**	**4.63**	**25**	*e*PN	**Pn**	**08 01 50.2**	**+1.8**
SKR				*e*S	**Sn**	**08 02 40.0**	**-1.0**
SKR				pmax	pmax		
	comp=E,40nm,0.5s						
SKR				pmax	pmax		
	comp=Z,40nm,0.5s						
SKR				smax			
	comp=N,40nm,0.5s						
SKR				smax			
	comp=E,70nm,0.7s						
NEM2	**Nemuro 2**	**6.07**	**241**	P	**Pn**	**08 02 05.7**	**-2.5**
NEM2				*e*S	**Sn**	**08 03 11.0**	**-5.4**
JNK	**Nakash**	**6.59**	**247**	P	**Pn**	**08 02 14.9**	**-0.5**
JAK	**Akkeshi**	**6.92**	**242**	P	**Pn**	**08 02 17.1**	**-2.7**
JAK				*e*S	**Sn**	**08 03 32.1**	**-5.0**
YSS	**Yuzh-Sakhalins**	**7.09**	**277**	*e*PN	**Pn**	**08 02 27.2**	**+5.0**
PETK	**Petropavlovsk-**	**7.25**	**23**	P	**Pn**	**08 02 23.7**	**-0.6**
	comp=E,0.5nm,0.3s,baz=174,slow=13,SNR=9.7						
PETK	**Petropavlovsk-**	**7.25**	**23**	*e*PN	**Pn**	**08 02 25.8**	**+1.5**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**7.25**	**23**	P	**Pn**	**08 02 23.7**	**-0.6**
JAR	**Ashorobuto**	**7.34**	**247**	P	**Pn**	**08 02 25.1**	**-0.5**
JAR				*e*S	**Sn**	**08 03 47.2**	**-0.3**
JOB	**Onbets**	**7.50**	**245**	P	**Pn**	**08 02 25.9**	**-1.9**
JOB				*e*S	**Sn**	**08 03 47.9**	**-3.5**
ASAJ	**Asahikawa**	**7.75**	**256**	P	**Pn**	**08 02 33.3**	**+2.0**
	comp=Z,1.4nm,0.3s,baz=101,slow=17,SNR=8.6						
ASAJ	**Asahikawa**	**7.75**	**256**	PN	**Pn**	**08 02 33.3**	**+2.0**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
JCH	**Churui**	**7.95**	**244**	P	**Pn**	**08 02 32.1**	**-1.8**
JCH				*e*S	**Sn**	**08 03 57.7**	**-4.8**
ERM	**Erimo**	**8.41**	**241**	*e*PN	**Pn**	**08 02 42.7**	**+2.4**
ERM				pmax	pmax		
	comp=Z,16nm,0.5s						
ERM	**Erimo**	**8.41**	**241**	*e*Pn	**Pn**	**08 02 42.6**	**+2.4**
	comp=Z,16nm,0.5s						
HABR	**Khabarovsk**	**12.34**	**286**	PN	**Pn**	**08 03 36.2**	**+2.2**
HABR				MLR	MLR		
	comp=Z,76nm,15.0s						
FX1	**Attu Island--F**	**14.46**	**57**	P	**Pn**	**08 03 56.8**	**-6.1**
	comp=Z,0.7nm,0.3s,baz=243,slow=23,SNR=1.6						
MJAR	**Matsushiro Arr**	**14.91**	**233**	P	**Pn**	**08 04 10.8**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=185,slow=3.5,SNR=2.2						
KSRS	**Korea Array**	**20.69**	**253**	P	**P**	**08 05 19.2**	**+1.6**
	comp=Z,2.2nm,0.7s,baz=57,slow=11,SNR=9.5						
KSRS	**Korea Array**	**20.69**	**253**	*e*P	**P**	**08 05 19.2**	**+1.5**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
INK	**Inuvik**	**41.87**	**32**	P	**P**	**08 08 27.2**	**+0.4**
	comp=Z,1.3nm,0.8s,mb3.6,baz=264,slow=6.5,SNR=4.6						
ZALV	**Zalesovo Beam**	**42.72**	**306**	P	**P**	**08 08 33.3**	**-0.6**
	comp=Z,0.7nm,0.5s,mb3.6,baz=87,slow=6.5,SNR=2.4						
ZALV				LR	LR	08 27 42.9	
	comp=Z,38nm,19.1s,baz=74,slow=38						
MK31	**Makanchi Array**	**47.02**	**298**	*e*P	**P**	**08 09 08.0**	**-0.2**
MKAR	**Makanchi Array**	**47.02**	**298**	P	**P**	**08 09 07.9**	**-0.3**
	comp=Z,1.7nm,0.8s,mb4.0,baz=61,slow=13,SNR=12						
KURK	**Kurchatov**	**47.46**	**304**	P	**P**	**08 09 11.4**	**-0.2**
	comp=Z,2.2nm,0.8s,mb4.2,baz=69,slow=8.6,SNR=12						
BVAR	**Borovoye Array**	**50.98**	**310**	P	**P**	**08 09 38.2**	**-0.3**
	comp=Z,0.7nm,0.4s,mb4.0,baz=51,slow=9.6,SNR=3.3						
RES	**Resolute Bay**	**51.07**	**18**	P	**P**	**08 09 38.9**	**0.0**
	comp=Z,1.1nm,0.8s,mb3.9,baz=308,slow=8.4,SNR=2.8						
YKA	**Yellowknife Ar**	**51.13**	**37**	P	**P**	**08 09 39.7**	**+0.2**
	comp=Z,0.6nm,0.8s,mb3.6,baz=297,slow=6.8,SNR=4.9						
YKA	**Yellowknife Ar**	**51.13**	**37**	P	**P**	**08 09 39.7**	**+0.2**
ARCES	**ARCESS Array B**	**58.06**	**341**	P	**P**	**08 10 29.5**	**-0.1**
	comp=Z,3.5nm,1.0s,mb4.3,baz=29,slow=8.5,SNR=5.0						
ARCES	**ARCESS Array B**	**58.06**	**341**	P	**P**	**08 10 29.5**	**-0.1**
ABKAR	**Akbulak array**	**58.55**	**310**	*e*P	**P**	**08 10 32.8**	**-0.5**
	comp=Z,0.9nm,0.4s,mb4.2						
FINES	**FINESS Array B**	**64.23**	**335**	P	**P**	**08 11 11.2**	**-0.3**
	comp=Z,2.2nm,0.5s,mb4.4,baz=29,slow=8.1,SNR=11						
NB2	**NORSAR Subarra**	**68.44**	**341**	P	**P**	**08 11 38.4**	**0.0**
	comp=Z,1.2nm,0.5s,mb4.2,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**68.44**	**341**	P	**P**	**08 11 38.4**	**0.0**
	comp=Z,1.0nm,0.5s,mb4.1,baz=28,slow=6.3,SNR=7.2						
NOA	**NORSAR Array B**	**68.44**	**341**	P	**P**	**08 11 38.4**	**0.0**
AKASG	**Malin Array Be**	**71.72**	**326**	P	**P**	**08 11 58.2**	**-0.4**
	comp=Z,3.0nm,0.5s,mb4.5,baz=33,slow=6.3,SNR=13						
AKASG	**Malin Array Be**	**71.72**	**326**	*e*P	**P**	**08 11 58.2**	**-0.5**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BUR08	**Bucovina Ar. S**	**75.74**	**327**	*e*P	**P**	**08 12 22.9**	**+0.6**
ESK	**Eskdalemuir**	**76.58**	**346**	*i* P	**P**	**08 12 27.2**	**+0.3**
CLL	**Collm**	**76.66**	**336**	*e*P	**P**	**08 12 28.0**	**+0.5**
CLL				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
CLL	**Collm**	**76.66**	**336**	*e*P	**P**	**08 12 28.0**	**+0.5**
	comp=Z,4.0nm,0.9s,mb4.3						
TXAR	**Lajitas Array**	**77.64**	**60**	P	**P**	**08 12 32.5**	**-0.8**
	comp=Z,0.6nm,0.6s,mb3.7,baz=305,slow=4.1,SNR=10						
GERES	**GERESS Array B**	**78.65**	**334**	P	**P**	**08 12 37.0**	**-1.5**
	comp=Z,0.3nm,0.2s,mb3.8,baz=46,slow=7.6,SNR=4.1						
STKA	**Stephens Creek**	**78.72**	**190**	P	**P**	**08 12 40.6**	**+1.7**
	comp=Z,0.9nm,0.3s,mb4.2,baz=303,slow=23,SNR=1.8						

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*CSEM **16** 08:03:22.9±0.2, 42.″29N×19.″91E, h8km, ML2.5/9, Error ellipse: s-maj=3.5km s-min=3.0km az=118.0*
*ISCJB **16** 08:03:22.7±0.3, 42.″29N±0.″02×19.″93E±0.″02, h10km, Error ellipse: s-maj=2.8km s-min=2.2km az=44.2*
*PDG **16** 08:03:23.7±0.2, 42.″31N×19.″87E, h11km±2km, MD2.6/3, ML2.5/9, Error ellipse: s-maj=0.4km s-min=0.7km az=0.0*
*NEIC **16** 08:03:23.7, 42.″31N×19.″87E, h11km, ML2.5(PDG), After PDG.*
*BEO **16** 08:03:23.2±0.4, 42.″35N×19.″93E, h0km, ML2.3/4*
*SKO **16** 08:03:24.3, 42.″30N×19.″92E, h5km, M2.1, ML2.5*
ISC 16 08:03:23.4±0.3, 42.″30N±0.″02×19.″93E±0.″02, h5km±5km, n43,σ1§04/80, 16C-7D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCI	**Bajram Curri**	**0.12**	**55**	*e*PG	**Pg**	**08 03 26.2**	**+0.3**
BCI				*i* SG	**Sg**	**08 03 28.8**	**+1.2**
BCI	**Bajram Curri**	**0.12**	**55**	*e*Pg	**Pg**	**08 03 26.2**	**+0.3**
BCI				*i* Sg	**Sg**	**08 03 28.8**	**+1.2**
PUK	**Puka**	**0.26**	**187**	*e*PG	**Pg**	**08 03 27.7**	**-0.7**
PUK				*i* SG	**Sg**	**08 03 31.9**	**+0.2**
PUK	**Puka**	**0.26**	**187**	*e*Pg	**Pg**	**08 03 27.7**	**-0.7**
PUK				*i* Sg	**Sg**	**08 03 31.9**	**+0.2**
PVY	**Plav**	**0.30**	**6**	⇑*i*Pg	**Pg**	**08 03 29.1**	**-0.1**
PVY				*e*Sg	**Sg**	**08 03 34.2**	**+1.1**
PVY	**Plav**	**0.30**	**6**	⇑*i*Pg	**Pg**	**08 03 29.1**	**-0.1**
PVY				*e*Sg	**Sg**	**08 03 34.2**	**+1.1**
PDG	**Podgorica**	**0.52**	**285**	⇑*i*Pg	**Pg**	**08 03 31.9**	**-1.4**
PDG				*e*Sg	**Sg**	**08 03 40.0**	**0.0**
TTG	**Podgorica**	**0.52**	**285**	⇑*i*Pg	**Pg**	**08 03 31.9**	**-1.4**
TTG				*e*Sg	**Sg**	**08 03 40.0**	**0.0**
TTG	**Podgorica**	**0.52**	**285**	⇑*i*Pg	**Pg**	**08 03 31.9**	**-1.4**
TTG				*e*Sg	**Sg**	**08 03 40.0**	**0.0**
BEY	**Berane**	**0.57**	**357**	⇑*i*Pg	**Pg**	**08 03 34.4**	**0.0**
BEY				*e*Sg	**Sg**	**08 03 42.7**	**+0.8**
IVA	**Berane**	**0.57**	**357**	⇑*i*Pg	**Pg**	**08 03 34.4**	**0.0**
IVA				*e*Sg	**Sg**	**08 03 42.7**	**+0.8**
IVA	**Berane**	**0.57**	**357**	⇑*i*Pg	**Pg**	**08 03 34.4**	**0.0**
IVA				*e*Sg	**Sg**	**08 03 42.7**	**+0.8**
ULC	**Ulcinj**	**0.61**	**237**	⇑*i*Pg	**Pg**	**08 03 34.7**	**-0.4**
ULC				*e*Sg	**Sg**	**08 03 43.9**	**+0.9**
ULC	**Ulcinj**	**0.61**	**237**	⇑*i*Pg	**Pg**	**08 03 34.7**	**-0.4**
ULC				*e*Sg	**Sg**	**08 03 43.9**	**+0.9**
BUM	**Brajici-Budva**	**0.77**	**271**	⇑*i*Pg	**Pg**	**08 03 37.2**	**-0.9**
BUM				*e*Sg	**Sg**	**08 03 48.8**	**+0.7**
BUM	**Brajici-Budva**	**0.77**	**271**	⇑*i*Pg	**Pg**	**08 03 37.2**	**-0.9**
BUM				*e*Sg	**Sg**	**08 03 48.8**	**+0.7**
NKY	**Niksic**	**0.86**	**307**	⇓*i*Pg	**Pg**	**08 03 38.9**	**-1.0**
NKY				*e*Sg	**Sg**	**08 03 52.1**	**+1.0**
NKY	**Niksic**	**0.86**	**307**	⇓*i*Pg	**Pg**	**08 03 38.9**	**-1.0**
NKY				*e*Sg	**Sg**	**08 03 52.1**	**+1.0**
TIR	**Tirane**	**0.95**	**183**	*e*Pg	**Pg**	**08 03 41.0**	**-0.6**
TIR				*e*Sg	**Sg**	**08 03 55.1**	**+1.2**
TIR	**Tirane**	**0.95**	**183**	*e*Pg	**Pg**	**08 03 41.0**	**-0.6**
TIR				*e*Sg	**Sg**	**08 03 55.1**	**+1.2**
HCY	**Herceg Novi**	**1.07**	**278**	⇓*i*Pg	**Pg**	**08 03 42.5**	**-1.5**
HCY				*e*Sg	**Sg**	**08 03 59.3**	**+1.4**
HCY	**Herceg Novi**	**1.07**	**278**	⇓*i*Pg	**Pg**	**08 03 42.5**	**-1.5**
HCY				*e*Sg	**Sg**	**08 03 59.3**	**+1.4**
PLE	**Pljevlja**	**1.10**	**339**	⇑*i*Pg	**Pg**	**08 03 43.5**	**-1.1**
PLE				*e*Sg	**Sg**	**08 04 00.7**	**+1.8**
PLE	**Pljevlja**	**1.10**	**339**	⇑*i*Pg	**Pg**	**08 03 43.5**	**-1.1**
PLE				*e*Sg	**Sg**	**08 04 00.7**	**+1.8**
SKO	**Skopje**	**1.17**	**106**	*e*Pg	**Pg**	**08 03 44.7**	**-1.1**
SKO				*e*Sg	**Sg**	**08 04 02.7**	**+1.8**
SKO				*e*Lg		08 04 03.2	
	comp=E,70nm,0.7s						
SKO				*e*Lg		08 04 03.4	
	comp=N,69nm,0.3s						
UPM	**Unac-Piva**	**1.18**	**321**	⇓*i*Pg	**Pg**	**08 03 44.9**	**-1.1**
UPM				*e*Sg	**Sg**	**08 04 02.6**	**+1.4**
UPM	**Unac-Piva**	**1.18**	**321**	⇓*i*Pg	**Pg**	**08 03 44.9**	**-1.1**
UPM				*e*Sg	**Sg**	**08 04 02.6**	**+1.4**
BRY	**Bratogost**	**1.19**	**301**	⇑*i*Pg	**Pg**	**08 03 44.5**	**-1.7**
BRY				*e*Sg	**Sg**	**08 04 02.9**	**+1.3**
BRY	**Bratogost**	**1.19**	**301**	⇑*i*Pg	**Pg**	**08 03 44.5**	**-1.7**
BRY				*e*Sg	**Sg**	**08 04 02.9**	**+1.3**
OHR	**Ohrid**	**1.35**	**151**	*e*Pg	**Pg**	**08 03 48.7**	**-0.6**
OHR				*e*Sg	**Sg**	**08 04 06.8**	**0.0**
OHR				*e*Lg		08 04 08.2	
	comp=E,52nm,0.5s						
OHR				*e*Lg		08 04 08.3	
	comp=N,57nm,0.7s						
KRUS	**Krusevo**	**1.35**	**133**	*e*Pg	**Pg**	**08 03 48.4**	**-0.9**
KRUS				*e*Sg	**Sg**	**08 04 07.2**	**+0.4**
KRUS				*e*Lg		08 04 08.2	
	comp=E,28nm,0.3s						
KRUS				*e*Lg		08 04 09.0	
	comp=N,21nm,0.4s						
BARS	**Barje**	**1.48**	**69**	⇓*i*Pn	**Pn**	**08 03 50.6**	**-0.1**
BARS				*e*Sg	**Sg**	**08 04 10.1**	**-1.0**
BBLS	**Lazići**	**1.61**	**346**	*e*Pn	**Pn**	**08 03 52.8**	**+0.3**
BBLS				*e*Sg	**Sg**	**08 04 12.6**	**-2.7**
BBLS	**Lazići**	**1.61**	**346**	*e*Pn	**Pn**	**08 03 52.8**	**+0.3**
BBLS				*e*Sg	**Sg**	**08 04 12.6**	**-2.7**
BIA	**Bitola**	**1.65**	**140**	*e*Pn	**Pn**	**08 03 53.3**	**+0.3**
GRUS	**Gruza**	**1.69**	**20**	*e*Pn	**Pn**	**08 03 52.7**	**-0.8**
GRUS	**Gruza**	**1.69**	**20**	*e*Pn	**Pn**	**08 03 52.7**	**-0.8**
STON	**Ston**	**1.75**	**290**	*e*Pn	**Pn**	**08 03 54.1**	**-0.2**
STON				Sn	**Sn**	**08 04 21.1**	**+4.2**
STON	**Ston**	**1.75**	**290**	*e*Pn	**Pn**	**08 03 54.1**	**-0.2**
DIVS	**Divibare**	**1.80**	**1**	*e*Pn	**Pn**	**08 03 55.0**	**-0.1**
DIVS				*e*Sg	**Sg**	**08 04 18.0**	**-3.2**
DIVS	**Divibare**	**1.80**	**1**	*e*Pn	**Pn**	**08 03 55.0**	**-0.1**
DIVS				*e*Sg	**Sg**	**08 04 18.0**	**-3.2**
VAY	**Valandovo**	**2.20**	**115**	*e*Pn	**Pn**	**08 04 02.4**	**+1.8**
ZAPS	**Zavoj**	**2.21**	**63**	*e*Pn	**Pn**	**08 04 01.1**	**+0.4**

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*ISCJB **16** 08:05:57.9±0.5, 29.″55N±0.″05×139.″9E±0.″2, h355km±7km, mb3.4/7, Error ellipse: s-maj=23.5km s-min=5.9km az=166.0*
*IDC **16** 08:05:58.6±1.0, 29.″47N×139.″70E, h343km±13km, mb3.2/7, mb1 3.2/10, mb1mx3.0/27, mbtmp3.2/10, Error ellipse: s-maj=35.3km s-min=11.9km az=76.0*
*JMA **16** 08:05:58.5±0.1, 29.″58N×140.″08E, h362km, M3.7*
*NEIC **16** 08:05:59.6, 29.″65N×140.″34E, h357km, MG3.7(JMA), After JMA.*
ISC 16 08:05:58.8±0.5, 29.″57N±0.″05×139.″9E±0.″2, h346km±7km, n24,σ1§10/31, mb3.4/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.17**	**140**	P	**Pn**	**08 06 59.8**	**+0.3**
CBIJ				*e*S	**S**	**08 07 47.6**	**-0.6**
CBIJ	**Chichi jima**	**3.17**	**140**	P	**Pn**	**08 06 60.0**	**+0.5**
	31nm,0.3s,baz=305,slow=4.5,SNR=51						
CBIJ				S	**S**	**08 07 48.4**	**+0.2**
	78nm,0.3s,baz=273,slow=23,SNR=23						
JHJ2	**Mitsune**	**3.53**	**359**	P	**Pn**	**08 07 04.4**	**+1.7**
JHJ2				*e*S	**S**	**08 07 54.4**	**+0.2**
JHJ	**Hachijo jima 2**	**3.54**	**358**	P	**Pn**	**08 07 04.4**	**+1.6**
	23nm,0.3s,baz=251,slow=15,SNR=5.5						
JHHJ	**Haha-jima-NKT**	**3.54**	**145**	P	**Pn**	**08 07 03.1**	**+0.1**
JHHJ				*e*S	**S**	**08 07 53.5**	**-1.2**
BSO1	**Boso 1**	**5.14**	**10**	P	**Pn**	**08 07 20.9**	**+1.2**
BSO1				*e*S	**S**	**08 08 24.6**	**-0.5**
BSO3	**Boso 3**	**5.24**	**5**	P	**Pn**	**08 07 22.4**	**+1.7**
BSO3				*e*S	**S**	**08 08 25.8**	**-1.2**
BSO4	**Boso 4**	**5.41**	**4**	*e*S	**S**	**08 08 29.0**	**-1.6**
JIE	**Ise**	**5.53**	**331**	P	**Pn**	**08 07 26.0**	**+2.1**
JOD2	**Odawara 2**	**5.72**	**353**	*e*S	**S**	**08 08 36.2**	**-0.6**
JHU	**Hanno**	**6.29**	**355**	*e*S	**S**	**08 08 43.1**	**-5.6**
JRY	**Ryogami san**	**6.48**	**353**	*e*S	**S**	**08 08 49.9**	**-3.0**
JYT	**Yasato**	**6.64**	**2**	*e*S	**S**	**08 08 51.6**	**-4.7**
JAG	**Ashikaga**	**6.84**	**357**	P	**Pn**	**08 07 39.0**	**-0.1**
JAG				*e*S	**S**	**08 08 54.2**	**-6.4**
JHO	**Hitachi**	**7.04**	**4**	P	**Pn**	**08 07 41.8**	**+0.4**
KSRS	**Korea Array**	**12.72**	**311**	P	**Pn**	**08 08 48.5**	**-0.5**
	0.2nm,0.3s,baz=127,slow=12,SNR=6.3						
SONM	**Songino Array**	**31.55**	**315**	P	**P**	**08 11 49.5**	**-0.5**
	0.6nm,0.6s,mb3.0,baz=116,slow=8.4,SNR=3.9						
WRA	**Warramunga Arr**	**49.52**	**187**	P	**P**	**08 14 14.6**	**-1.0**
	1.7nm,0.3s,mb3.7,baz=2.9,slow=7.8,SNR=99						
WRA	**Warramunga Arr**	**49.52**	**187**	P	**P**	**08 14 14.6**	**-1.0**
ASAR	**Alice Springs**	**53.25**	**187**	P	**P**	**08 14 42.5**	**-0.4**
	0.7nm,0.6s,mb3.2,baz=16,slow=12,SNR=14						
BVAR	**Borovoye Array**	**54.88**	**316**	P	**P**	**08 14 53.2**	**-1.0**
	0.8nm,0.5s,mb3.3,baz=68,slow=9.7,SNR=3.5						
INK	**Inuvik**	**61.62**	**25**	P	**P**	**08 15 41.9**	**+1.6**
	0.2nm,0.4s,mb3.0,baz=264,slow=15,SNR=1.4						
ARCES	**ARCESS Array B**	**70.55**	**340**	P	**P**	**08 16 37.0**	**+0.5**
	1.6nm,0.8s,mb3.8,baz=74,slow=9.0,SNR=4.7						
FINES	**FINESS Array B**	**74.85**	**333**	P	**P**	**08 17 01.2**	**-0.5**
	0.4nm,0.4s,mb3.5,baz=66,slow=4.6,SNR=3.7						

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*NIED **16** 08:08:00, 39.″20N×141.″00E, h5km, Mw3.9 Best double couple: M0.90000×1014 NP1:φ0=19.00000°, δ55.00000°, λ97.00000°. NP2:φ0=188.00000°, δ36.00000°, λ81.00000°.*
*IDC **16** 08:08:20.8±0.8, 39.″16N×141.″05E, h0km, mb3.8/11, mb1 3.9/12, mb1mx3.8/28, mbtmp3.8/12, ML3.0/1, Error ellipse: s-maj=22.9km s-min=15.0km az=115.0*
*NEIC **16** 08:08:21.9, 39.″16N×140.″95E, h9km, MG3.9(JMA), After JMA.*
*JMA **16** 08:08:21.8, 39.″16N×140.″95E, h9km±1km, M3.8 Broadband fault plane solution: P waves. NP1: φ0=160.00000°, δ18.00000°, λ57.00000°. NP2:φ0=14.00000°, δ75.00000°, λ100.00000°. Principal axes: T Plg59.0000°, Azm298.0000°; N Plg10.0000°, Azm191.0000°; P Plg29.0000°, Azm96.0000°;*
JMA Felt II J1.
*ISCJB **16** 08:08:21.6±0.5, 39.″18N±0.″03×140.″99E±0.″04, h13km±4km, mb3.9/12 Error ellipse: s-maj=5.6km s-min=4.8km az=163.8*
ISC 16 08:08:22.1±0.5, 39.″17N±0.″03×140.″97E±0.″04, h4km±4km, n24,σ0§76/31, mb3.9/12, 2C-4D, Eastern Honshu

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

GUR	**Goura**	**0.65**	**107**	*e*PB	**Pb**	**08 24 04.4**	**-1.1**
GUR				*e*SN	**Sb**	**08 24 14.7**	**+0.5**
GUR	**Goura**	**0.65**	**107**	*e*Pb	**Pb**	**08 24 04.4**	**-1.1**
GUR				S	**Sb**	**08 24 14.8**	**+0.6**
VLS	**Valsamata**	**0.76**	**274**	*e*Pn	**Pb**	**08 24 06.1**	**-1.3**
VLS	**Valsamata**	**0.76**	**274**	P	**Pb**	**08 24 06.1**	**-1.3**
VLS				S	**Sb**	**08 24 18.7**	**+1.2**
VLS	**Valsamata**	**0.76**	**274**	*e*PN	**Pb**	**08 24 06.1**	**-1.3**
VLS	**Valsamata**	**0.76**	**274**	*e*Pn	**Pb**	**08 24 06.1**	**-1.3**
VLS				S	**Sb**	**08 24 18.7**	**+1.2**
DSF	**Desfina**	**0.82**	**69**	P	**Pb**	**08 24 07.2**	**-1.1**
DSF	**Desfina**	**0.82**	**69**	P	**Pb**	**08 24 07.2**	**-1.1**
EVR	**Evrytania**	**0.82**	**14**	*e*Pn	**Pn**	**08 24 07.4**	**-1.9**
EVR	**Evrytania**	**0.82**	**14**	*e*PN	**Pn**	**08 24 07.4**	**-1.9**
EVR	**Evrytania**	**0.82**	**14**	*e*Pn	**Pn**	**08 24 07.4**	**-1.9**
LKD2	**Lefkada island**	**0.97**	**314**	P	**Pb**	**08 24 10.3**	**-0.6**
LKD2				S	**Sb**	**08 24 25.1**	**+1.7**
LKD2	**Lefkada island**	**0.97**	**314**	P	**Pb**	**08 24 10.3**	**-0.6**
LKD2				S	**Sb**	**08 24 25.1**	**+1.7**
ITM	**Ithomi**	**0.99**	**163**	*e*Pn	**Pn**	**08 24 11.6**	**0.0**
ITM	**Ithomi**	**0.99**	**163**	P	**Pb**	**08 24 10.9**	**-0.4**
ITM				S	**Sb**	**08 24 26.0**	**+2.1**
ITM	**Ithomi**	**0.99**	**163**	*e*PN	**Pn**	**08 24 11.6**	**0.0**
ITM	**Ithomi**	**0.99**	**163**	*e*Pn	**Pn**	**08 24 11.6**	**0.0**
ITM				S	**Sb**	**08 24 26.0**	**+2.1**
AGG	**Agios Georgios**	**1.08**	**34**	P	**Pb**	**08 24 13.4**	**+0.5**
AGG	**Agios Georgios**	**1.08**	**34**	P	**Pb**	**08 24 13.4**	**+0.5**
LKR	**Lokris**	**1.25**	**65**	*e*Pb	**Pb**	**08 24 14.7**	**-1.0**
LKR	**Lokris**	**1.25**	**65**	*e*PB	**Pb**	**08 24 14.7**	**-1.0**
LKR	**Lokris**	**1.25**	**65**	*e*Pb	**Pb**	**08 24 14.7**	**-1.0**
ATH	**Athens Observa**	**1.71**	**94**	*e*Pb	**Pb**	**08 24 22.1**	**-1.5**
ATH	**Athens Observa**	**1.71**	**94**	*e*PB	**Pb**	**08 24 22.1**	**-1.5**
VLI	**Veliai**	**1.78**	**142**	*e*Pn	**Pn**	**08 24 24.7**	**+2.1**
VLI	**Veliai**	**1.78**	**142**	*e*PN	**Pn**	**08 24 24.7**	**+2.1**

*ISK **16** 08:23:52.4, 37°.02N×29°.14E, h12km, MD2.7*
*CSEM **16** 08:23:53.1±0.2, 37°.02N×29°.15E, h10km, MD2.7, Error ellipse: s-maj=4.7km s-min=4.4km az=2.0*
*DDA **16** 08:23:53.3, 37°.03N×29°.13E, h7km±3km, Md2.8*
*ISCJB **16** 08:23:53.2±0.6, 37°.01N±0°.03×29°.15E±0°.04, h10km, Error ellipse: s-maj=5.0km s-min=4.6km az=29.4*
ISC 16 08:23:53.5±0.6,**37°.02N**±0°.03×**29°.13E**±0°.06,**h6**km±14km,
n15,σ0**s75**/25,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.33**	**65**	*e*PG	**Pg**	**08 23 58.3**	**-1.6**
GLHS				*e*SG	**Sg**	**08 24 04.7**	**+0.4**
GLHS	**Glhisar (BURDU**	**0.33**	**65**	*e*Pg	**Pg**	**08 23 58.3**	**-1.6**
GLHS				*e*Sg	**Sg**	**08 24 04.7**	**+0.5**
FETY	**Fethiye**	**0.38**	**185**	*e*PG	**Pg**	**08 24 00.7**	**-0.2**
FETY				*e*SG	**Sg**	**08 24 06.5**	**+0.6**
FETY	**Fethiye**	**0.38**	**185**	*e*Pg	**Pg**	**08 24 00.7**	**-0.2**
FETY				*e*Sg	**Sg**	**08 24 06.5**	**+0.6**
GOLH	**Golhisar**	**0.41**	**58**	*i* P	**Pg**	**08 24 00.9**	**-0.6**
GOLH				*i* S	**Sg**	**08 24 08.1**	**+1.3**
GOLH	**Golhisar**	**0.41**	**58**	*i* P	**Pg**	**08 24 00.9**	**-0.6**
GOLH				*i* S	**Sg**	**08 24 08.1**	**+1.2**
DNZL	**Cakiroluk**	**0.68**	**355**	*i* P	**Pg**	**08 24 05.5**	**-0.9**
DNZL				*i* S	**Sg**	**08 24 15.9**	**+0.6**
ELL	**Elmali**	**0.68**	**113**	*e*PG	**Pg**	**08 24 06.2**	**-0.4**
ELL	**Elmali**	**0.68**	**113**	*e*Pg	**Pg**	**08 24 06.2**	**-0.4**
YER	**Yerkesik**	**0.68**	**280**	*e*PG	**Pg**	**08 24 06.5**	**-0.1**
YER	**Yerkesik**	**0.68**	**280**	*e*Pg	**Pg**	**08 24 06.5**	**-0.1**
AKAS	**Kas**	**0.87**	**154**	*e*P	**Pg**	**08 24 10.5**	**+0.3**
AKAS				*i* S	**Sg**	**08 24 28.3**	**+6.8**
AKAS	**Kas**	**0.87**	**154**	*e*P	**Pg**	**08 24 10.5**	**+0.3**
AYDN	**Tasoluk**	**1.18**	**303**	*i* P	**Pb**	**08 24 15.8**	**-0.5**
AYDN				*i* S	**Sb**	**08 24 32.6**	**+0.7**
AYDN	**Tasoluk**	**1.18**	**303**	*i* P	**Pb**	**08 24 15.8**	**-0.5**
AYDN				*i* S	**Sb**	**08 24 32.6**	**+0.7**

*HLW **16** 08:33:59.8, 36°.11N×25°.18E, h15km±15km, Md3.6, Ml3.2*
*ISCJB **16** 08:34:00.6±0.4, 36°.10N±0°.03×24°.83E±0°.04, h125km±4km, Error ellipse: s-maj=6.6km s-min=3.9km az=143.2*
*NEIC **16** 08:34:02.2, 36°.16N×24°.79E, h104km, MG2.8(ATH), After ATH.*
*ATH **16** 08:34:02.2, 36°.16N×24°.79E, h104km±1km, ML2.8*
*CSEM **16** 08:34:02.5±0.2, 36°.12N×24°.75E, h108km±2km, ML3.5/4, Error ellipse: s-maj=4.0km s-min=2.7km az=51.0*
*THE **16** 08:34:03.4, 36°.15N×24°.75E, h109km±3km, ML3.5/4, Error ellipse: s-maj=3.7km s-min=1.0km az=107.0*
ISC 16 08:34:01.6±0.4,**36°.11N**±0°.03×**24°.83E**±0°.04,**h120**km±5km,
n109,σ0**s84**/137,**Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THR5	**Thira Island,**	**0.52**	**53**	P	**Pn**	**08 34 19.9**	**+0.3**
THR5				S	**Sn**	**08 34 32.1**	**-1.2**
THR5	**Thira Island,**	**0.52**	**53**	P	**Pn**	**08 34 19.9**	**+0.3**
THR5				S	**Sn**	**08 34 32.1**	**-1.2**
THR6	**Thira Island,**	**0.53**	**61**	P	**Pn**	**08 34 20.5**	**+0.9**
THR6	**Thira Island,**	**0.53**	**61**	P	**Pn**	**08 34 20.5**	**+0.9**
THR3	**Thira Island,**	**0.55**	**57**	P	**Pn**	**08 34 20.0**	**+0.2**
THR3	**Thira Island,**	**0.55**	**57**	P	**Pn**	**08 34 20.0**	**+0.2**
THR1	**Thera Island**	**0.58**	**62**	P	**Pn**	**08 34 20.7**	**+0.7**
THR1				S	**Sn**	**08 34 32.8**	**-1.1**
THR1	**Thera Island**	**0.58**	**62**	P	**Pn**	**08 34 20.7**	**+0.7**
THR1				S	**Sn**	**08 34 32.8**	**-1.1**
THR2	**Thira island,**	**0.60**	**55**	P	**Pn**	**08 34 20.3**	**+0.2**
THR2	**Thira island,**	**0.60**	**55**	P	**Pn**	**08 34 20.3**	**+0.2**
VAM	**Vamos**	**0.86**	**216**	*e*P	**Pn**	**08 34 22.8**	**+0.5**
VAM				*e*S	**Sn**	**08 34 37.1**	**-0.9**
VAM	**Vamos**	**0.86**	**216**	*e*P	**Pn**	**08 34 22.8**	**+0.5**
VAM				*e*S	**Sn**	**08 34 37.1**	**-0.9**
VAM	**Vamos**	**0.86**	**216**	*e*P	**Pn**	**08 34 22.8**	**+0.5**
VAM				*e*S	**Sn**	**08 34 37.1**	**-0.9**
KARN	**Karanos**	**1.02**	**227**	P	**Pn**	**08 34 24.4**	**+0.6**
KARN				S	**Sn**	**08 34 39.4**	**-1.2**
KARN	**Karanos**	**1.02**	**227**	*e*P	**Pn**	**08 34 24.6**	**+0.8**
KARN				*e*S	**Sn**	**08 34 39.8**	**-0.8**
KARN	**Karanos**	**1.02**	**227**	P	**Pn**	**08 34 24.4**	**+0.6**
KARN				*e*S	**Sn**	**08 34 39.8**	**-0.8**
NPS	**Neapolis**	**1.06**	**143**	*e*P	**Pn**	**08 34 24.4**	**+0.2**
NPS				*e*S	**Sn**	**08 34 40.8**	**-0.4**
NPS	**Neapolis**	**1.06**	**143**	*e*P	**Pn**	**08 34 24.4**	**+0.2**
NPS				*e*S	**Sn**	**08 34 40.8**	**-0.4**
NPS	**Neapolis**	**1.06**	**143**	*e*P	**Pn**	**08 34 24.4**	**+0.2**
NPS				*e*S	**Sn**	**08 34 40.8**	**-0.4**
LAST	**Lasithi**	**1.08**	**150**	*e*P	**Pn**	**08 34 25.1**	**+0.7**
LAST	**Lasithi**	**1.08**	**150**	P	**Pn**	**08 34 25.1**	**+0.7**
LAST				S	**Sn**	**08 34 41.5**	**-0.2**
LAST	**Lasithi**	**1.08**	**150**	*e*P	**Pn**	**08 34 25.1**	**+0.7**
LAST	**Lasithi**	**1.08**	**150**	P	**Pn**	**08 34 25.1**	**+0.7**
LAST				S	**Sn**	**08 34 41.5**	**-0.2**
SIVA	**Sivas**	**1.09**	**181**	*e*P	**Pn**	**08 34 25.7**	**+1.2**
SIVA	**Sivas**	**1.09**	**181**	P	**Pn**	**08 34 26.3**	**+1.8**
SIVA				S	**Sn**	**08 34 41.6**	**-0.2**
SIVA	**Sivas**	**1.09**	**181**	*e*P	**Pn**	**08 34 25.7**	**+1.2**
SIVA	**Sivas**	**1.09**	**181**	*e*P	**Pn**	**08 34 25.7**	**+1.2**
SIVA				S	**Sn**	**08 34 41.6**	**-0.2**
APE	**Apeiranthos**	**1.12**	**30**	*e*P	**Pn**	**08 34 25.0**	**+0.2**
APE				*e*S	**Sn**	**08 34 41.2**	**-1.1**
APE	**Apeiranthos**	**1.12**	**30**	P	**Pn**	**08 34 24.8**	**+0.1**
APE				S	**Sn**	**08 34 41.2**	**-1.1**
APE	**Apeiranthos**	**1.12**	**30**	*e*P	**Pn**	**08 34 25.0**	**+0.2**
APE				*e*S	**Sn**	**08 34 41.2**	**-1.1**
APE	**Apeiranthos**	**1.12**	**30**	*e*P	**Pn**	**08 34 25.0**	**+0.2**
APE				S	**Sn**	**08 34 41.2**	**-1.1**
XRY	**Khrisi**	**1.42**	**150**	*e*P	**Pn**	**08 34 29.6**	**+1.5**
XRY	**Khrisi**	**1.42**	**150**	*e*P	**Pn**	**08 34 29.6**	**+1.5**
XRY	**Khrisi**	**1.42**	**150**	*e*P	**Pn**	**08 34 29.6**	**+1.5**
KYTH	**Kithira**	**1.46**	**277**	*e*P	**Pn**	**08 34 28.9**	**+0.4**
KYTH	**Kithira**	**1.46**	**277**	*e*P	**Pn**	**08 34 28.9**	**+0.4**
KYTH	**Kithira**	**1.46**	**277**	*e*P	**Pn**	**08 34 28.9**	**+0.4**
ZKR	**Zakros**	**1.50**	**131**	*e*P	**Pn**	**08 34 30.2**	**+1.2**
ZKR	**Zakros**	**1.50**	**131**	P	**Pn**	**08 34 30.4**	**+1.4**
ZKR				S	**Sn**	**08 34 50.8**	**+0.9**
ZKR	**Zakros**	**1.50**	**131**	*e*P	**Pn**	**08 34 30.2**	**+1.2**
ZKR	**Zakros**	**1.50**	**131**	P	**Pn**	**08 34 30.4**	**+1.4**
ZKR				S	**Sn**	**08 34 50.8**	**+0.9**
NAIG	**Nisos Aigina**	**1.97**	**327**	*e*P	**Pn**	**08 34 34.6**	**0.0**
NAIG	**Nisos Aigina**	**1.97**	**327**	*e*P	**Pn**	**08 34 34.6**	**0.0**
NAIG	**Nisos Aigina**	**1.97**	**327**	*e*P	**Pn**	**08 34 34.6**	**0.0**
KARP	**Karpathos**	**1.98**	**106**	*e*P	**Pn**	**08 34 36.0**	**+1.3**
KARP	**Karpathos**	**1.98**	**106**	*e*P	**Pn**	**08 34 36.0**	**+1.3**
KARP	**Karpathos**	**1.98**	**106**	*e*P	**Pn**	**08 34 36.0**	**+1.3**
ATHU	**Athens Univers**	**2.04**	**336**	P	**Pn**	**08 34 36.0**	**+0.5**
ATHU	**Athens Univers**	**2.04**	**336**	P	**Pn**	**08 34 36.0**	**+0.5**
ATH	**Athens Observa**	**2.06**	**335**	*e*P	**Pn**	**08 34 35.8**	**0.0**
ATH	**Athens Observa**	**2.06**	**335**	*e*P	**Pn**	**08 34 35.8**	**0.0**
ATH	**Athens Observa**	**2.06**	**335**	*e*P	**Pn**	**08 34 35.8**	**0.0**
VLX	**Vlachokerasia**	**2.34**	**303**	P	**Pn**	**08 34 39.6**	**+0.4**
VLX	**Vlachokerasia**	**2.34**	**303**	*e*P	**Pn**	**08 34 39.6**	**+0.4**
VLX	**Vlachokerasia**	**2.34**	**303**	P	**Pn**	**08 34 39.6**	**+0.4**
LTK	**Loutraki**	**2.42**	**323**	P	**Pn**	**08 34 40.8**	**+0.4**
LTK	**Loutraki**	**2.42**	**323**	*e*P	**Pn**	**08 34 40.7**	**+0.3**
LTK	**Loutraki**	**2.42**	**323**	*e*P	**Pn**	**08 34 40.7**	**+0.3**
ITM	**Ithomi**	**2.57**	**296**	*e*P	**Pn**	**08 34 43.0**	**+0.8**
ITM	**Ithomi**	**2.57**	**296**	P	**Pn**	**08 34 43.1**	**+0.9**
ITM	**Ithomi**	**2.57**	**296**	*e*P	**Pn**	**08 34 43.0**	**+0.8**
ITM	**Ithomi**	**2.57**	**296**	*e*P	**Pn**	**08 34 43.0**	**+0.8**
PYL	**PYLOS**	**2.61**	**289**	P	**Pn**	**08 34 42.6**	**-0.1**
PYL	**PYLOS**	**2.61**	**289**	*e*P	**Pn**	**08 34 42.5**	**-0.2**
PYL	**PYLOS**	**2.61**	**289**	P	**Pn**	**08 34 42.6**	**-0.1**
ARG	**Arkhangelos**	**2.67**	**87**	*e*P	**Pn**	**08 34 45.3**	**+1.7**
ARG	**Arkhangelos**	**2.67**	**87**	P	**Pn**	**08 34 45.4**	**+1.8**
ARG	**Arkhangelos**	**2.67**	**87**	*e*P	**Pn**	**08 34 45.3**	**+1.7**
ARG	**Arkhangelos**	**2.67**	**87**	*e*P	**Pn**	**08 34 45.3**	**+1.7**
GUR	**Goura**	**2.70**	**313**	P	**Pn**	**08 34 44.0**	**+0.1**
GUR	**Goura**	**2.70**	**313**	*e*P	**Pn**	**08 34 44.0**	**+0.1**
GUR	**Goura**	**2.70**	**313**	P	**Pn**	**08 34 44.0**	**+0.1**
LKR	**Lokris**	**2.93**	**331**	*e*P	**Pn**	**08 34 47.4**	**+0.5**
LKR	**Lokris**	**2.93**	**331**	P	**Pn**	**08 34 47.4**	**+0.5**
LKR	**Lokris**	**2.93**	**331**	*e*P	**Pn**	**08 34 47.4**	**+0.5**
LKR	**Lokris**	**2.93**	**331**	P	**Pn**	**08 34 47.4**	**+0.5**
DSF	**Desfina**	**2.94**	**322**	P	**Pn**	**08 34 47.2**	**+0.1**
DSF				S	**Sn**	**08 35 21.1**	**-1.1**
DSF	**Desfina**	**2.94**	**322**	P	**Pn**	**08 34 47.2**	**+0.1**
DSF				S	**Sn**	**08 35 21.1**	**-1.1**
LAKA	**Lakka**	**3.12**	**314**	P	**Pn**	**08 34 49.5**	**+0.1**
LAKA	**Lakka**	**3.12**	**314**	P	**Pn**	**08 34 49.5**	**+0.1**
KALE	**Kalithea**	**3.13**	**318**	P	**Pn**	**08 34 49.7**	**+0.2**
KALE	**Kalithea**	**3.13**	**318**	P	**Pn**	**08 34 49.7**	**+0.2**
AOS	**Alonnisos**	**3.15**	**346**	P	**Pn**	**08 34 50.3**	**+0.5**
AOS	**Alonnisos**	**3.15**	**346**	P	**Pn**	**08 34 50.3**	**+0.5**
AGG	**Agios Georgios**	**3.52**	**326**	*e*P	**Pn**	**08 34 55.7**	**+1.0**
AGG	**Agios Georgios**	**3.52**	**326**	P	**Pn**	**08 34 55.3**	**+0.6**
AGG				S	**Sn**	**08 35 32.7**	**-3.1**
AGG	**Agios Georgios**	**3.52**	**326**	*e*P	**Pn**	**08 34 55.7**	**+1.0**
AGG	**Agios Georgios**	**3.52**	**326**	P	**Pn**	**08 34 55.3**	**+0.6**
VLS	**Valsamata**	**3.97**	**303**	*e*P	**Pn**	**08 35 00.1**	**-0.5**
VLS	**Valsamata**	**3.97**	**303**	P	**Pn**	**08 34 59.9**	**-0.7**
VLS	**Valsamata**	**3.97**	**303**	*e*P	**Pn**	**08 35 00.1**	**-0.5**
VLS	**Valsamata**	**3.97**	**303**	*e*P	**Pn**	**08 35 00.1**	**-0.5**
THL	**Klokotos Trika**	**4.11**	**328**	*e*P	**Pn**	**08 35 02.6**	**+0.1**
THL	**Klokotos Trika**	**4.11**	**328**	*e*P	**Pn**	**08 35 02.6**	**+0.1**
LKD2	**Lefkada island**	**4.26**	**310**	P	**Pn**	**08 35 04.5**	**-0.1**
LKD2	**Lefkada island**	**4.26**	**310**	P	**Pn**	**08 35 04.5**	**-0.1**
SLUM		**4.61**	**176**	P	**Pn**	**08 35 08.9**	**-0.5**
	baz=179						
SLUM				S	**Sn**	**08 35 57.5**	**-4.4**
	baz=179						
SLUM				AMP		08 36 00.0	
	comp=E,20μm,0.2s,logA/T=5.0,baz=179						
SLUM		**4.61**	**176**	P	**Pn**	**08 35 08.9**	**-0.5**
IGT	**Igoumenitsa**	**4.94**	**315**	P	**Pn**	**08 35 12.6**	**-1.0**
IGT	**Igoumenitsa**	**4.94**	**315**	P	**Pn**	**08 35 12.6**	**-1.0**
SWA2		**6.86**	**175**	P	**Pn**	**08 35 39.9**	**+0.1**
	baz=177						
SWA2				S	**Sn**	**08 36 51.2**	**-5.1**
	baz=177						
SWA2				AMP		08 37 00.0	
	comp=E,20μm,0.3s,logA/T=4.8,baz=177						
SWA2		**6.86**	**175**	P	**Pn**	**08 35 39.9**	**+0.2**
KOT	**Kottamia**	**8.51**	**134**	P	**Pn**	**08 36 00.7**	**-1.4**
	baz=136						
HSAF	**As Saff**	**8.59**	**137**	P	**Pn**	**08 36 02.2**	**-0.9**
	baz=138						
GLL	**Jalalah**	**8.71**	**136**	P	**Pn**	**08 36 03.3**	**-1.4**
	baz=138						
AMAG	**Maghara**	**8.88**	**125**	P	**Pn**	**08 36 05.0**	**-1.9**
	baz=126						
HNKL	**Nakhl**	**9.85**	**126**	P	**Pn**	**08 36 19.2**	**-0.9**
	baz=127						
HKAT	**Jabal Katrina**	**10.82**	**132**	P	**Pn**	**08 36 32.4**	**-0.7**
	baz=133						
ARTV	**Artvin**	**14.29**	**64**	*i* S	**Sn**	**08 40 14.0**	**+18**

*CSEM **16** 09:01:11.6±0.1, 37°.25N×28°.23E, h2km, MD2.9, Error ellipse: s-maj=2.0km s-min=1.4km az=20.0*
*DDA **16** 09:01:11.2, 37°.23N×28°.21E, h10km±5km, Md2.9*
*ISK **16** 09:01:11.1, 37°.27N×28°.22E, h6km, MD2.9*
*ISCJB **16** 09:01:11.5±0.4, 37°.24N±0°.03×28°.22E±0°.03, h10km, Error ellipse: s-maj=4.5km s-min=3.3km az=14.4*
ISC 16 09:01:11.8±0.4,**37°.26N**±0°.03×**28°.23E**±0°.03,**h3**km±8km,
n30,σ0**s62**/46,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.13**	**162**	*e*PG	**Pg**	**09 01 13.8**	**-0.4**
YER	**Yerkesik**	**0.13**	**162**	*e*Pg	**Pg**	**09 01 13.8**	**-0.5**
MLSB	**Milas**	**0.37**	**276**	*e*PG	**Pg**	**09 01 18.3**	**-0.5**
MLSB				*e*SG	**Sg**	**09 01 23.8**	**+0.2**
MLSB	**Milas**	**0.37**	**276**	*e*Pg	**Pg**	**09 01 18.3**	**-0.5**
MLSB				*e*Sg	**Sg**	**09 01 23.8**	**+0.2**
TURN	**Turunc**	**0.48**	**142**	*i* P	**Pg**	**09 01 19.9**	**-1.2**
TURN				*i* S	**Sg**	**09 01 27.4**	**+0.1**
TURN	**Turunc**	**0.48**	**142**	*i* P	**Pg**	**09 01 19.9**	**-1.2**
TURN				*i* S	**Sg**	**09 01 27.4**	**+0.1**
AYDN	**Tasoluk**	**0.49**	**325**	*i* P	**Pg**	**09 01 21.0**	**-0.3**
AYDN				*i* S	**Sg**	**09 01 27.9**	**+0.3**
AYDN	**Tasoluk**	**0.49**	**325**	*i* P	**Pg**	**09 01 21.0**	**-0.2**
AYDN				*i* S	**Sg**	**09 01 27.9**	**+0.3**
BDRM	**Kayabasi**	**0.66**	**253**	*i* P	**Pg**	**09 01 23.6**	**-0.8**
BDRM				*i* S	**Sg**	**09 01 32.0**	**-0.9**
BDRM	**Kayabasi**	**0.66**	**253**	*i* P	**Pg**	**09 01 23.6**	**-0.8**
BDRM				*i* S	**Sg**	**09 01 32.0**	**-0.9**
DAT	**Datca**	**0.74**	**225**	*e*PG	**Pg**	**09 01 26.3**	**+0.3**
DAT				*e*SG	**Sg**	**09 01 37.5**	**+1.8**
DAT	**Datca**	**0.74**	**225**	*e*Pg	**Pg**	**09 01 26.3**	**+0.3**
DAT				*e*Sg	**Sg**	**09 01 37.5**	**+1.8**
DNZL	**Cakiroluk**	**0.78**	**56**	*i* P	**Pg**	**09 01 27.1**	**+0.4**
DNZL				*i* S	**Sg**	**09 01 37.0**	**+0.2**
DNZL	**Cakiroluk**	**0.78**	**56**	*i* P	**Pg**	**09 01 27.1**	**+0.4**
DNZL				*i* S	**Sg**	**09 01 37.0**	**+0.2**
GCAM	**G?zelcaml?**	**0.91**	**299**	*i* P	**Pg**	**09 01 29.3**	**+0.1**
GCAM				*i* S	**Sg**	**09 01 41.5**	**+0.4**
GCAM	**G?zelcaml?**	**0.91**	**299**	*i* P	**Pg**	**09 01 29.3**	**+0.1**
GCAM				*i* S	**Sg**	**09 01 41.5**	**+0.5**
FETY	**Fethiye**	**0.92**	**132**	*e*PG	**Pg**	**09 01 29.4**	**-0.1**
FETY	**Fethiye**	**0.92**	**132**	*e*Pg	**Pg**	**09 01 29.4**	**0.0**
GLHS	**Glhisar (BURDU**	**1.01**	**95**	*e*PG	**Pg**	**09 01 32.2**	**+0.9**
GLHS	**Glhisar (BURDU**	**1.01**	**95**	*e*Pg	**Pg**	**09 01 32.2**	**+0.9**
GOLH	**Golhisar**	**1.06**	**91**	*i* P	**Pg**	**09 01 31.9**	**-0.2**
GOLH				*i* S	**Sg**	**09 01 52.1**	**+6.2**
GOLH	**Golhisar**	**1.06**	**91**	*i* P	**Pg**	**09 01 31.9**	**-0.2**
KULA	**Kula-Manisa**	**1.30**	**15**	*e*PN	**Pn**	**09 01 36.6**	**-0.2**
KULA	**Kula-Manisa**	**1.30**	**15**	*e*Pn	**Pn**	**09 01 36.6**	**-0.2**
ELL	**Elmali**	**1.43**	**110**	*e*PN	**Pn**	**09 01 38.7**	**0.0**
ELL	**Elmali**	**1.43**	**110**	*e*Pn	**Pn**	**09 01 38.7**	**0.0**
KHL	**Karahalli**	**1.48**	**43**	*e*PN	**Pn**	**09 01 38.8**	**-0.5**
KHL	**Karahalli**	**1.48**	**43**	*e*Pn	**Pn**	**09 01 38.8**	**-0.5**
AKAS	**Kas**	**1.50**	**132**	*e*P	**Pn**	**09 01 40.2**	**+0.6**
AKAS				*e*S	**Sn**	**09 02 05.5**	**+5.8**
AKAS	**Kas**	**1.50**	**132**	*e*P	**Pn**	**09 01 40.2**	**+0.6**

*CSEM **16** 09:04:33.5±0.2, 40°.58N×34°.79E, h10km, MD3.4, Error ellipse: s-maj=7.2km s-min=4.5km az=63.0*
*DDA **16** 09:04:33.7, 40°.55N×34°.77E, h7km±2km, Md3.4*
*ISK **16** 09:04:33.1, 40°.61N×34°.80E, h5km, MD2.9*
*ISCJB **16** 09:04:33.8±0.6, 40°.59N±0°.03×34°.78E±0°.06, h11km±4km, Error ellipse: s-maj=8.0km s-min=4.9km az=155.8*
ISC 16 09:04:34.0±0.6,**40°.58N**±0°.03×**34°.78E**±0°.05,**h10**km±4km,
n22,σ1**s07**/35,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTKT	**Corum**	**0.05**	**13**	*i* P	**Pg**	**09 04 36.0**	**0.0**
CTKT				*i* S	**Sg**	**09 04 37.8**	**+0.5**
CTKT	**Corum**	**0.05**	**13**	*i* P	**Pg**	**09 04 36.0**	**0.0**
CTKT				*i* S	**Sg**	**09 04 37.8**	**+0.5**
CORM	**Corum**	**0.41**	**196**	*e*PG	**Pg**	**09 04 42.5**	**+0.4**
CORM				*e*SG	**Sg**	**09 04 49.2**	**+1.5**
CORM	**Corum**	**0.41**	**196**	*e*Pg	**Pg**	**09 04 42.5**	**+0.3**
CORM				*e*Sg	**Sg**	**09 04 49.2**	**+1.6**
TOS	**Tosya**	**0.73**	**309**	*e*PG	**Pg**	**09 04 47.9**	**-0.3**
TOS				*e*SG	**Sg**	**09 04 58.0**	**+0.3**
TOS	**Tosya**	**0.73**	**309**	*e*Pg	**Pg**	**09 04 47.9**	**-0.3**
TOS				*e*Sg	**Sg**	**09 04 58.0**	**+0.3**
ILGA	**Ilgaz**	**0.93**	**301**	*i* P	**Pg**	**09 04 51.3**	**-0.7**
ILGA				*i* S	**Sg**	**09 05 04.8**	**+0.7**
ILGA	**Ilgaz**	**0.93**	**301**	*i* P	**Pg**	**09 04 51.3**	**-0.7**
ILGA				*i* S	**Sg**	**09 05 04.8**	**+0.7**
CDAG	**Cicekdag**	**1.00**	**198**	*i* P	**Pg**	**09 04 52.6**	**-0.7**
CDAG				*i* S	**Sg**	**09 05 06.8**	**+0.4**
CDAG	**Cicekdag**	**1.00**	**198**	*i* P	**Pg**	**09 04 52.7**	**-0.6**
CDAG				*i* S	**Sg**	**09 05 06.8**	**+0.5**
YOZ	**Yozgat**	**1.03**	**156**	*e*PG	**Pg**	**09 04 52.9**	**-0.8**
YOZ	**Yozgat**	**1.03**	**156**	*e*Pg	**Pg**	**09 04 52.9**	**-0.9**
ELDT	**Eldivan**	**1.03**	**266**	*i* P	**Pg**	**09 04 53.9**	**0.0**
ELDT				*i* S	**Sg**	**09 05 04.9**	**-2.4**
ELDT	**Eldivan**	**1.03**	**266**	*i* P	**Pg**	**09 04 53.9**	**0.0**
DIKM	**Dikmen**	**1.13**	**19**	*e*PN	**Pn**	**09 04 55.1**	**-0.9**
DIKM	**Dikmen**	**1.13**	**19**	*e*Pn	**Pn**	**09 04 55.1**	**-0.9**
BALT	**Daday**	**1.42**	**313**	*i* P	**Pn**	**09 05 00.2**	**+0.3**
BALT				*i* S	**Sn**	**09 05 21.6**	**+3.0**
BALT	**Daday**	**1.42**	**313**	*i* P	**Pn**	**09 05 00.2**	**+0.3**
AVNT	**Avonos**	**1.80**	**178**	*e*P	**Pn**	**09 05 03.1**	**-2.0**
AVNT				*i* S	**Sn**	**09 05 31.5**	**+3.5**
AVNT	**Avonos**	**1.80**	**178**	*e*P	**Pn**	**09 05 03.1**	**-2.0**
SVSK	**Karacayir**	**1.82**	**111**	*e*PN	**Pn**	**09 05 06.1**	**+0.6**
SVSK	**Karacayir**	**1.82**	**111**	*e*Pn	**Pn**	**09 05 06.1**	**+0.6**

*IDC **16** 09:04:35.1±0.6, 45°.19N×83°.46E, h0km, mb4.1/16, mb1 4.3/22, mb1mx4.1/34, mbtmp4.1/22, ML3.9/5, MS3.0/6, Ms1 3.1/6, ms1mx2.8/40, Error ellipse: s-maj=13.9km s-min=8.3km az=59.0*
*ISCJB **16** 09:04:35.4±1.0, 45°.27N±0°.03×83°.36E±0°.05, h10km±6km, mb4.1/21, MS3.2/3, Error ellipse: s-maj=6.9km s-min=4.7km az=150.6*
*NNC **16** 09:04:37.8±1.5, 45°.16N×83°.29E, h0km, mb4.3, mpv4.2, Error ellipse: s-maj=14.2km s-min=7.0km az=103.0*
*NEIC **16** 09:04:37.0±0.3, 45°.24N×83°.46E, h10km,

ZRNK ⇑Lg 09 11 03.4
comp=Z,60nm,1.1s
ZAK Zakamensk 14.36 62 *eP* **Pn 09 08 04.7 +4.3**
ZAK pmax pmax
comp=Z,2.0nm,0.8s
KBL Kabul 15.27 231 P **Pn 09 08 19.3 +6.5**
KBL pmax pmax
comp=Z,8.0nm,0.8s
KBL Kabul 15.27 231 P **Pn 09 08 19.3 +6.5**
comp=Z,8.2nm,0.8s
SONM Songino Array 16.08 72 Pn **Pn 09 08 23.1 -0.1**
comp=Z,0.3nm,0.3s,baz=271,slow=16,SNR=4.7
SONM Lg 09 13 05.2
comp=Z,0.2nm,0.3s,baz=261,slow=28,SNR=6.1
AB31 Akbulak array 16.38 293 ⇓P **Pn 09 08 25.1 -2.0**
comp=Z,1.1nm,0.4s,baz=100,slow=16,SNR=48
ABKAR Akbulak array 16.38 293 *eP*n **Pn 09 08 25.0 -2.0**
comp=Z,2.5nm,0.4s
GUN Gumba 17.38 172 *eP* **Pn 09 08 41.0 +1.1**
KKN Kakani 17.45 174 *eP* **Pn 09 08 40.6 -0.2**
AKTK Aktyubinsk 17.75 296 P **Pn 09 08 45.4 +1.1**
AKTK Lg 09 14 07.8
AKTO Aktyubinsk 17.75 296 ⇓P **Pn 09 08 45.7 +1.3**
comp=Z,0.6nm,0.6s
AKTO Aktyubinsk 17.75 296 P **Pn 09 08 45.4 +1.1**
comp=Z,0.6nm,0.3s,baz=100,slow=13,SNR=20
AKTO Lg 09 14 07.8
comp=Z,0.1nm,0.3s,baz=324,slow=24,SNR=3.1
TAPN Taplejung 18.16 167 *eP* **Pn 09 08 51.6 +2.0**
RAMN Ramite 18.41 171 *eP* **Pn 09 08 50.2 -2.4**
comp=Z,13nm,0.4s
ODAN Odare 18.60 169 *eP* **Pn 09 08 53.8 -1.1**
CMAR Chiang Mai Arr 29.68 149 P **P 09 10 43.0 -0.5**
comp=Z,2.5nm,0.6s,mb4.1,baz=327,slow=8.6,SNR=11
AKASG Malin Array Be 35.96 299 P **P 09 11 37.1 -0.9**
comp=Z,0.2nm,0.3s,mb3.5,baz=63,slow=8.4,SNR=5.0
KIEV Kiev 35.98 299 *eP* **P 09 11 36.7 -1.5**
KIEV pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
KIEV Kiev 35.98 299 *eP* **P 09 11 36.7 -1.5**
comp=Z,2.6nm,0.7s,mb4.3
FINES FINESS Array B 36.48 317 P **P 09 11 42.3 -0.2**
comp=Z,0.5nm,0.4s,mb3.8,baz=76,slow=8.0,SNR=2.0
BRTR Keskin Array B 36.59 279 P **P 09 11 44.6 +1.0**
comp=Z,2.1nm,0.7s,mb4.1,baz=98,slow=8.6,SNR=10.0
ARCES ARCESS Array B 37.39 331 P **P 09 11 50.1 0.0**
comp=Z,1.6nm,0.8s,mb3.9,baz=74,slow=8.9,SNR=5.6
BUR08 Bucovina Ar. S 39.34 295 *eP* **P 09 12 05.6 -1.1**
ASAJ Asahikawa 41.33 70 LR LR 09 31 59.9
comp=Z,26nm,19.8s,MS3.1,baz=304,slow=40
HFS Hagfors 42.66 316 P **P 09 12 33.8 -0.1**
comp=Z,2.4nm,0.6s,mb4.1,baz=97,slow=11,SNR=8.0
NB2 NORSAR Subarra 43.66 318 P **P 09 12 41.2 -0.7**
comp=Z,2.2nm,0.5s,mb4.1,baz=75,slow=8.6
NOA NORSAR Array B 43.66 318 P **P 09 12 41.4 -0.6**
comp=Z,2.8nm,0.6s,mb4.2,baz=77,slow=7.9,SNR=14
NOA LR LR 09 31 21.1
comp=Z,30nm,18.7s,MS3.2,baz=250,slow=37
VRAC Vranov 44.16 300 LR LR 09 34 45.1
comp=Z,29nm,18.6s,MS3.2,baz=179,slow=41
IDI Anoyia 44.81 278 P **P 09 12 51.2 -0.3**
comp=Z,2.7nm,0.4s,mb4.4,baz=48,slow=12,SNR=1.8
GVD Gavdhos 45.61 278 P **P 09 12 54.8 -3.1**
comp=Z,97nm,0.7s
GERES GERESS Array B 46.09 301 P **P 09 13 02.0 +0.5**
comp=Z,0.3nm,0.2s,mb3.8,baz=276,slow=40,SNR=1.6
LPG La Plagne 51.82 300 *eP* **P 09 13 46.3 +0.8**
comp=Z,18nm,0.7s,mb4.8
LPG La Plagne 51.82 300 *eP* **P 09 13 46.3 +0.8**
LPG pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
LPG La Plagne 51.82 300 *eP* **P 09 13 46.3 +0.8**
comp=Z,9.3nm,0.7s,mb4.8
LPL La Plagne 51.82 300 *eP* **P 09 13 46.3 +0.8**
comp=Z,20nm,0.6s,mb4.9
LPL La Plagne 51.82 300 *eP* **P 09 13 46.3 +0.8**
LPL pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
LPL La Plagne 51.82 300 *eP* **P 09 13 46.3 +0.8**
comp=Z,9.9nm,0.6s,mb4.9
ORIF Oris-en-Rattie 52.64 299 *eP* **P 09 13 51.4 -0.2**
comp=Z,7.5nm,0.6s,mb4.5
ORIF Oris-en-Rattie 52.64 299 *eP* **P 09 13 51.4 -0.2**
ORIF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
ORIF Oris-en-Rattie 52.64 299 *eP* **P 09 13 51.4 -0.2**
comp=Z,3.8nm,0.6s,mb4.5
EKA Eskdalemuir Ar 52.76 314 P **P 09 13 52.0 -0.3**
comp=Z,3.3nm,0.6s,mb4.5,baz=63,slow=6.9,SNR=17
VIVF Saint-Julien-l 53.41 300 *eP* **P 09 13 57.0 -0.3**
comp=Z,6.5nm,0.7s,mb4.4
VIVF Saint-Julien-l 53.41 300 *eP* **P 09 13 57.0 -0.3**
VIVF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
VIVF Saint-Julien-l 53.41 300 *eP* **P 09 13 57.0 -0.3**
comp=Z,3.3nm,0.7s,mb4.4
TCF Toulx Ste Croi 54.18 302 *eP* **P 09 14 02.7 -0.2**
MTLF Montolieu 55.71 299 *eP* **P 09 14 14.0 0.0**
ETSF Etsaut 57.66 300 *eP* **P 09 14 28.1 +0.3**
ESDC Sonseca Array 61.61 299 P **P 09 14 54.9 -0.2**
comp=Z,0.2nm,0.3s,mb3.7,baz=59,slow=8.0,SNR=4.3
YKA Yellowknife Ar 71.69 9 P **P 09 15 57.8 -1.3**
comp=Z,0.7nm,0.5s,mb3.9,baz=13,slow=6.1,SNR=8.4
TORD Torodi Ar. Bea 74.93 274 P **P 09 16 17.8 -1.2**
comp=Z,1.1nm,0.7s,mb3.9,baz=35,slow=4.6,SNR=6.7
TORD Torodi Ar. Bea 74.93 274 P **P 09 16 17.8 -1.2**
WRA Warramunga Arr 79.71 132 P **P 09 16 44.0 -1.5**
comp=Z,1.1nm,0.5s,mb4.1,baz=339,slow=5.7,SNR=24
ASAR Alice Springs 82.57 134 P **P 09 16 59.3 -1.4**
comp=Z,0.9nm,0.6s,mb4.0,baz=324,slow=5.1,SNR=14
NVAR Mina Array Bea 94.49 17 P **P 09 17 58.2 +0.2**
comp=Z,0.9nm,0.8s,mb4.2,baz=291,slow=2.2,SNR=5.1
NVAR Mina Array Bea 94.49 17 P **P 09 17 58.2 +0.2**

*IDC **16** 09:08:12.2±0.8, 21°.48S×69°.39W, h72km±5km, mb3.8/7, mb1 4.0/9, mb1mx3.8/17, mbtmp3.9/9, MS3.3/2, Ms1 3.3/2, ms1mx2.7/24, Error ellipse: s-maj=27.9km s-min=18.8km az=32.0*

ISC 16 09:08:11.8±2.1, 21°.6S±0°.1×69°.5W±0°.2, h72km±20km, h77km±1.6km:pP-P, n16, σ1°07/11, mb3.9/7, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**5.46**	**14**	P	**Pn**	**09 09 35.3**	**+4.7**
	1.6nm,0.3s,baz=187,slow=6.1,SNR=49						
LPAZ				LR	LR	09 10 58.6	
	comp=Z,72nm,21.4s,baz=124,slow=31						
SIV	**San Ignacio**	**9.76**	**56**	P	**Pn**	**09 10 29.4**	**0.0**
	5.8nm,0.3s,baz=249,slow=12,SNR=134						
CFAA	**Coronel Fontan**	**10.02**	**174**	P	**Pn**	**09 10 30.8**	**-2.0**
	0.1nm,0.3s,baz=2.5,slow=11,SNR=6.1						
CPUP	**Villa Florida**	**12.10**	**115**	P	**Pn**	**09 11 02.4**	**+1.1**
	0.2nm,0.3s,baz=272,slow=12,SNR=4.7						
SDV	**Santo Domingo**	**30.33**	**358**	P	**P**	**09 14 15.8**	**-0.8**
	1.4nm,0.6s,mb3.8,baz=191,slow=10,SNR=2.5						
USHA	**Ushuaia**	**33.18**	**179**	LR	LR	09 30 41.7	
	comp=Z,265nm,18.9s,baz=96,slow=40						
TXAR	**Lajitas Array**	**60.39**	**326**	P	**P**	**09 18 13.8**	**+0.2**
	0.7nm,0.6s,mb3.9,baz=148,slow=8.5,SNR=13						
TXAR				pP	pP	09 18 32.8	+0.6
	0.2nm,0.6s,baz=142,slow=6.3,SNR=2.3						
DBIC	**Dimbokro**	**69.32**	**74**	P	**P**	**09 19 11.9**	**-0.1**
	3.2nm,0.9s,mb4.2,baz=83,slow=3.3,SNR=1.4						
NVAR	**Mina Array Bea**	**75.23**	**322**	P	**P**	**09 19 47.9**	**+1.2**
	0.7nm,0.8s,mb3.4,baz=153,slow=6.1,SNR=5.2						
NVAR				pP	pP	09 20 07.7	+1.7
	0.2nm,0.6s,baz=23,slow=21,SNR=2.5						
NVAR				sP	sP	09 20 14.0	+0.2
	0.3nm,0.7s,baz=125,slow=35,SNR=3.6						
TORD	**Torodi Ar. Bea**	**77.94**	**71**	P	**P**	**09 20 00.7**	**-1.8**
	1.7nm,0.6s,mb4.0,baz=252,slow=4.6,SNR=25						
TORD				pP	pP	09 20 21.8	0.0
	1.4nm,0.6s,baz=256,slow=5.4,SNR=3.4						
MAW	**Mawson**	**84.39**	**163**	P	**P**	**09 20 37.0**	**+1.1**
	1.3nm,0.9s,mb3.8,baz=272,slow=15,SNR=3.6						
YKA	**Yellowknife Ar**	**91.10**	**341**	P	**P**	**09 21 08.0**	**+0.1**
	1.2nm,0.5s,mb4.2,baz=142,slow=4.3,SNR=11						
ASAR	**Alice Springs**	**129.54**	**208**	PKP	PKPdf	09 27 14.2	+1.0
	0.1nm,0.4s,baz=130,slow=2.0,SNR=6.5						
ASAR				pPKP	pPKPdf	09 27 34.0	+0.3
	0.6nm,0.9s,baz=176,slow=3.4,SNR=3.5						
WRA	**Warramunga Arr**	**132.56**	**211**	PKP	PKPdf	09 27 19.0	+0.1
	1.9nm,0.9s,baz=159,slow=1.9,SNR=11						
WRA				pPKP	pPKPdf	09 27 39.1	-0.2
	0.3nm,0.6s,baz=153,slow=1.7,SNR=2.4						
ZALV	**Zalesovo Beam**	**142.30**	**25**	PKP	PKPdf	09 27 34.3	-1.5
	1.1nm,0.6s,baz=290,slow=3.4,SNR=5.1						
MKAR	**Makanchi Array**	**146.06**	**36**	PKPbc	PKPbc	09 27 42.7	-0.8
	2.4nm,0.9s,baz=23,slow=6.6,SNR=8.7						

*IDC **16** 09:22:05.0±1.4, 52°.05N×76°.07E, h0km, mb1 2.6/4, mb1mx2.6/29, mbtmp2.6/4, ML2.6/4, Error ellipse: s-maj=39.1km s-min=9.7km az=32.0*
*NNC **16** 09:22:06.2±0.9, 52°.00N×75°.80E, h0km, mb2.8, mpv2.4, Error ellipse: s-maj=19.4km s-min=5.6km az=25.0*
*ISCJB **16** 09:22:07.2±0.8, 52°.5N±0°.1×76°.20E±0°.09, h33km, Error ellipse: s-maj=16.3km s-min=4.7km az=25.6*

ISC 16 09:22:09.2±0.8, 52°.4N±0°.1×76°.2E±0°.1, h35km, n10, σ1°36/14, 5C-5D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURK	**Kurchatov**	**2.31**	**137**	⇑Pn	**Pn**	**09 22 43.2**	**-1.4**
	2.5nm,0.6s						
KURK				⇑Sn	**Sn**	**09 23 13.4**	**+1.6**
	9.3nm,0.6s						
KURK	**Kurchatov**	**2.31**	**137**	Pn	**Pn**	**09 22 41.5**	**-3.1**
	0.3nm,0.3s,baz=304,slow=18,SNR=16						
KURK				Pg	**Pn**	**09 22 43.5**	**-1.2**
	0.3nm,0.3s,baz=304,slow=18,SNR=36						
KURK				Lg		09 23 10.7	
	0.4nm,0.3s,baz=307,slow=30,SNR=16						
KURBB	**Kurchatov Arra**	**2.34**	**140**	⇓Pn	**Pn**	**09 22 43.5**	**-1.7**
	0.8nm,0.6s,baz=307,slow=17						
KURBB				⇓Sn	**Sn**	**09 23 13.4**	**+0.8**
	3.3nm,0.7s,baz=310,slow=30						
VOSK	**Vostochnaya**	**3.17**	**277**	⇓Pn	**Pn**	**09 22 56.0**	**-0.4**
	0.9nm,0.5s						
VOSK				⇑Sn	**Sn**	**09 23 32.5**	**-0.4**
	10nm,0.6s						
BVA0	**Borovoye Array**	**3.55**	**282**	⇓Sn	**Sn**	**09 23 44.2**	**+1.8**
	0.8nm,0.6s,baz=116,slow=25,SNR=5.1						
BVAR	**Borovoye Array**	**3.55**	**282**	Pn	**Pn**	**09 23 02.3**	**+0.6**
	0.2nm,0.3s,baz=108,slow=15,SNR=4.1						
BVAR				Lg		09 23 56.9	
	1.0nm,0.3s,baz=99,slow=24,SNR=6.6						
ZRNK	**Zerenda**	**4.38**	**280**	⇑Pn	**Pn**	**09 23 10.6**	**-2.4**
	0.4nm,0.4s						
ZRNK				⇓Sn	**Sn**	**09 24 06.7**	**+3.9**
	4.4nm,0.6s						
ZALV	**Zalesovo Beam**	**5.43**	**70**	Pn	**Pn**	**09 23 28.2**	**+0.7**
	0.7nm,0.3s,baz=256,slow=6.7,SNR=5.1						
MK31	**Makanchi Array**	**6.91**	**142**	⇑Lg		09 25 37.9	
	2.4nm,0.7s,baz=329,slow=27,SNR=5.4						
MKAR	**Makanchi Array**	**6.91**	**142**	Pn	**Pn**	**09 23 43.0**	**-4.9**
	0.2nm,0.3s,baz=309,slow=49,SNR=1.8						
MKAR				Lg		09 25 33.5	
	0.2nm,0.3s,baz=309,slow=23,SNR=3.9						

*IDC **16** 09:28:33.4±1.2, 31°.46S×71°.69W, h0km, mb4.6/3, mb1 4.1/7, mb1mx4.0/16, mbtmp4.1/7, ML3.9/4, Error ellipse: s-maj=34.3km s-min=29.3km az=45.0*
*GUC **16** 09:28:36.6±0.7, 31°.56S×71°.79W, h21km±3km, MD4.1, ML4.1*
*NEIC **16** 09:28:36.6, 31°.56S×71°.79W, h21km, ML4.1(GUC), After GUC.*

ISC 16 09:28:35.8±1.7, 31°.52S±0°.03×71°.8W±0°.1, h10km±12km, n36, σ0°91/53, mb4.5/3, 11C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JACH	**Jahuel**	**1.53**	**140**	⇑*i*P	**Pn**	**09 29 03.1**	**0.0**
JACH				*i* S	**Sn**	**09 29 22.3**	**-0.8**
JACH	**Jahuel**	**1.53**	**140**	⇑*i*P	**Pn**	**09 29 03.1**	**0.0**
JACH				*i* S	**Sn**	**09 29 22.3**	**-0.8**
TLL	**Tololo Astrono**	**1.58**	**32**	⇑*i*P	**Pn**	**09 29 04.8**	**+0.8**
TLL				*i* S	**Sn**	**09 29 26.0**	**+1.6**
TLL	**Tololo Astrono**	**1.58**	**32**	⇑*i*P	**Pn**	**09 29 04.8**	**+0.8**
TLL				*i* S	**Sn**	**09 29 26.0**	**+1.6**
TLL				AML	AML	09 29 29.5	
	comp=E,3μm,0.4s						
ROCH	**El Roble**	**1.58**	**156**	*e*P	**Pn**	**09 29 03.4**	**-0.5**
ROCH				*i* S	**Sn**	**09 29 23.7**	**-0.7**
ROCH	**El Roble**	**1.58**	**156**	*e*P	**Pn**	**09 29 03.4**	**-0.5**
ROCH				*i* S	**Sn**	**09 29 23.7**	**-0.7**
PEL	**Peldehue**	**1.86**	**151**	⇑*i*P	**Pn**	**09 29 07.5**	**-0.3**
PEL				*i* S	**Sn**	**09 29 31.1**	**-0.2**
PEL				AML	AML	09 29 38.0	
	comp=E,4μm,0.8s						
LCCH	**Las Cruces**	**1.96**	**175**	*e*P	**Pn**	**09 29 08.4**	**-0.7**
LCCH	**Las Cruces**	**1.96**	**175**	*e*P	**Pn**	**09 29 08.4**	**-0.7**
FCH	**Farellones**	**2.19**	**146**	⇓*i*P	**Pn**	**09 29 13.5**	**+1.2**
FCH				AML	AML	09 29 49.5	
	comp=E,1μm,0.3s						
FSR	**Penalolen**	**2.21**	**152**	*e*P	**Pn**	**09 29 13.1**	**+0.4**
FSR				*i* S	**Sn**	**09 29 41.1**	**+1.0**
FSR	**Penalolen**	**2.21**	**152**	*e*P	**Pn**	**09 29 13.1**	**+0.4**
FSR				*i* S	**Sn**	**09 29 41.1**	**+1.0**
FSR				AML	AML	09 29 49.9	
	comp=E,758nm,0.5s						
TACH	**Talagante**	**2.24**	**162**	⇑*i*P	**Pn**	**09 29 13.3**	**+0.3**
TACH				*i* S	**Sn**	**09 29 40.9**	**+0.2**
TACH	**Talagante**	**2.24**	**162**	⇑*i*P	**Pn**	**09 29 13.3**	**+0.3**
TACH				*i* S	**Sn**	**09 29 40.9**	**+0.2**
ANTU	**Antumapu**	**2.25**	**155**	*e*P	**Pn**	**09 29 13.5**	**+0.3**
ANTU				*i* S	**Sn**	**09 29 41.3**	**+0.2**
ANTU	**Antumapu**	**2.25**	**155**	*e*P	**Pn**	**09 29 13.5**	**+0.3**
ANTU				*i* S	**Sn**	**09 29 41.3**	**+0.2**
ANTU				AML	AML	09 29 50.0	
	comp=E,3μm,0.5s						
PCH	**Pirque**	**2.35**	**154**	*e*P	**Pn**	**09 29 14.8**	**+0.4**
PCH				*i* S	**Sn**	**09 29 44.1**	**+0.8**
PCH	**Pirque**	**2.35**	**154**	*e*P	**Pn**	**09 29 14.8**	**+0.4**
PCH				*i* S	**Sn**	**09 29 44.1**	**+0.8**
CHCH	**Chadas Angostu**	**2.58**	**159**	*e*P	**Pn**	**09 29 18.0**	**+0.3**
CHCH				*i* S	**Sn**	**09 29 49.5**	**+0.3**
CHCH	**Chadas Angostu**	**2.58**	**159**	*e*P	**Pn**	**09 29 18.0**	**+0.3**
CHCH				*i* S	**Sn**	**09 29 49.5**	**+0.3**
LCO	**Las Campanas**	**2.67**	**20**	⇑*i*P	**Pn**	**09 29 19.4**	**+0.6**
LCO				*i* S	**Sn**	**09 29 52.4**	**+1.2**
LCO	**Las Campanas**	**2.67**	**20**	⇑*i*P	**Pn**	**09 29 19.4**	**+0.6**
LCO				*i* S	**Sn**	**09 29 52.4**	**+1.2**
LCO				AML	AML	09 30 02.4	
	comp=E,843nm,0.4s						
CACH	**El Canelo**	**2.77**	**160**	⇑*i*P	**Pn**	**09 29 21.2**	**+1.0**
CACH	**El Canelo**	**2.77**	**160**	⇑*i*P	**Pn**	**09 29 21.2**	**+1.0**
CFAA	**Coronel Fontan**	**3.01**	**93**	Pn	**Pn**	**09 29 22.6**	**-1.0**
	comp=E,2.9nm,0.3s,baz=261,slow=9.4,SNR=57						
CFAA				Lg		09 30 09.4	
	comp=E,15nm,0.3s,baz=51,slow=3.6,SNR=3.7						
PLCA	**Paso Flores**	**9.25**	**174**	Pn	**Pn**	**09 30 49.9**	**+0.7**
	comp=E,0.4nm,0.3s,baz=336,slow=10,SNR=8.9						
TRQA	**Tornquist**	**10.35**	**132**	*e*Pn	**Pn**	**09 31 04.3**	**0.0**
	comp=E,6.8nm,0.6s						
CPUP	**Villa Florida**	**13.65**	**71**	Pn	**Pn**	**09 31 47.6**	**-2.0**
	comp=E,0.4nm,0.3s,baz=231,slow=16,SNR=5.1						
LPAZ	**La Paz**	**15.52**	**13**	Pn	**Pn**	**09 32 15.7**	**+0.8**
	comp=E,0.1nm,0.3s,baz=208,slow=8.0,SNR=4.8						
SIV	**San Ignacio**	**18.28**	**35**	P	**Pn**	**09 32 48.1**	**-1.5**
	comp=E,0.2nm,0.3s,baz=226,slow=7.1,SNR=6.2						
TXAR	**Lajitas Array**	**67.70**	**330**	P	**P**	**09 39 32.7**	**-0.6**
	comp=E,0.1nm,0.5s,baz=146,slow=9.1,SNR=2.5						
DBIC	**Dimbokro**	**74.18**	**72**	P	**P**	**09 40 11.6**	**-1.5**
	comp=E,5.1nm,0.6s,mb4.6,baz=211,slow=6.4,SNR=7.0						
BOSA	**Boshof**	**81.02**	**118**	P	**P**	**09 40 50.0**	**-1.1**
	comp=E,2.7nm,0.8s,mb4.2,baz=350,slow=10,SNR=3.6						
TORD	**Torodi Ar. Bea**	**83.15**	**70**	P	**P**	**09 41 00.4**	**-2.0**
	comp=E,4.1nm,0.7s,mb4.6,baz=263,slow=4.5,SNR=22						
BVAR	**Borovoye Array**	**145.28**	**41**	PKPbc	PKPbc	09 48 12.3	-0.7
	comp=E,4.9nm,0.5s,baz=292,slow=3.4,SNR=23						
ZALV	**Zalesovo Beam**	**151.99**	**30**	PKPbc	PKPbc	09 48 29.2	-1.4
	comp=E,11nm,0.4s,baz=315,slow=3.3,SNR=38						
ZALV				PKPab	PKPab	09 48 39.3	-0.7
	comp=E,1.9nm,0.6s,baz=322,slow=2.5,SNR=4.0						

IDC 16 09:31:21.3±2.9, 18°.85S×175°.82W, h0km, mb3.5/3, mb1 3.9/3, mb1mx3.6/16, mbtmp3.5/3, Error ellipse: s-maj=299.7km s-min=34.1km az=159.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**46.89**	**260**	P	P	09 39 53.6	-0.1
	0.2nm,0.3s,baz=96,slow=7.5,SNR=11						
ASAR	**Alice Springs**	**46.92**	**255**	P	P	09 39 54.0	0.0
	0.7nm,0.7s,baz=95,slow=8.2,SNR=10						
TXAR	**Lajitas Array**	**84.43**	**57**	P	P	09 43 56.2	+0.2
	0.5nm,1.1s,baz=214,slow=5.9,SNR=3.8						

*IDC **16** 09:31:46.8±1.9, 38°.92N×141°.25E, h0km, mb3.5/2, mb1 3.5/5, mb1mx3.3/27, mbtmp3.4/5, ML3.0/3, Error ellipse: s-maj=37.6km s-min=32.1km az=118.0*
*NEIC **16** 09:31:47.5, 39°.09N×140°.95E, h10km, MG3.3(JMA), After JMA.*
*JMA **16** 09:31:47.4, 39°.09N×140°.95E, h9km±1km, M3.3*
JMA Felt I J1.
*ISCJB **16** 09:31:47.2±0.5, 39°.07N±0°.03×140°.97E±0°.04, h7km±4km, mb3.6/2, Error ellipse: s-maj=4.9km s-min=4.4km az=20.6*

ISC 16 09:31:47.8±0.5, 39°.07N±0°.03×140°.95E±0°.04, h4km±5km, n16, σ0°77/24, mb3.6/2, 1C-2D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMK	**Ichinoseki**	**0.24**	**120**	⇓P	**Pg**	**09 31 52.4**	**-0.1**
JMK				S	**Sg**	**09 31 56.0**	**+0.4**
JRG	**Rokugo**	**0.41**	**323**	P	**Pg**	**09 31 55.3**	**-0.4**
JRG				*e*S	**Sg**	**09 32 00.9**	**-0.1**
JOM	**Ohasama**	**0.48**	**33**	P	**Pg**	**09 31 56.7**	**-0.4**
JOM				S	**Sg**	**09 32 02.9**	**-0.4**
JYK	**Kaneyama**	**0.49**	**252**	P	**Pg**	**09 31 57.1**	**-0.1**
JYK				S	**Sg**	**09 32 03.4**	**-0.1**
OFUJ	**Ofunato**	**0.56**	**89**	⇓P	**Pg**	**09 31 58.3**	**-0.2**
JIO	**Ouri**	**0.69**	**153**	P	**Pg**	**09 32 00.9**	**-0.2**
JIO				S	**Sg**	**09 32 10.2**	**+0.2**
JOU	**Okura**	**0.74**	**198**	⇑P	**Pg**	**09 32 02.0**	**0.0**
JOU				S	**Sg**	**09 32 12.2**	**+0.6**
MAJO	**Matsushiro**	**3.33**	**222**	*e*Pn	**Pn**	**09 32 40.7**	**0.0**
MJAR	**Matsushiro Arr**	**3.33**	**222**	Pn	**Pn**	**09 32 42.0**	**+1.2**
	0.7nm,0.3s,baz=220,slow=20,SNR=6.5						
ERM	**Erimo**	**3.39**	**29**	*e*Pn	**Pn**	**09 32 41.8**	**+0.3**
ERM				*e*Sn	**Sn**	**09 33 22.9**	**+0.9**
ASAJ	**Asahikawa**	**5.19**	**13**	Pn	**Pn**	**09 33 07.4**	**+1.2**
	0.5nm,0.3s,baz=110,slow=23,SNR=2.3						
KSRS	**Korea Array**	**10.38**	**265**	Pn	**Pn**	**09 34 20.7**	**+3.3**
	0.3nm,0.3s,baz=80,slow=14,SNR=8.8						
KSRS				Sn	**Sn**	**09 36 19.1**	**+4.9**
	0.2nm,0.3s,baz=76,slow=23,SNR=5.1						
WRAB	**Tennant Creek**	**59.02**	**187**	P	**P**	**09 41 47.7**	**-1.1**
WRA	**Warramunga Arr**	**59.03**	**187**	P	**P**	**09 41 47.7**	**-1.1**
	0.4nm,0.6s,mb3.6,baz=2.6,slow=7.5,SNR=5.2						
WRA	**Warramunga Arr**	**59.03**	**187**	P	**P**	**09 41 47.7**	**-1.1**
ASAR	**Alice Springs**	**62.76**	**187**	P	**P**	**09 42 12.5**	**-1.7**
	0.4nm,0.8s,mb3.6,baz=9.1,slow=5.5,SNR=4.5						

*GII **16** 09:32:54.4±0.4, 33°.31N×35°.43E, h3km±1km, Md2.1/5*
*ISCJB **16** 09:32:54.4±0.5, 33°.33N±0°.02×35°.41E±0°.04, h9km±7km, Error ellipse: s-maj=6.3km s-min=3.4km az=24.6*
*CSEM **16** 09:32:55.5, 33°.32N×35°.44E, h0km, ML3.1, After GRAL*
*GRAL **16** 09:32:55.5±0.3, 33°.32N×35°.44E, h0km±73km, MD3.1*

ISC 16 09:32:54.8±0.6, 33°.34N±0°.02×35°.42E±0°.04, h10km±10km, n18, σ0°53/31, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATL	**Matarih**	**0.17**	**333**	*e*P	**Pg**	**09 32 58.8**	**+0.4**
MATL	**Matarih**	**0.17**	**333**	*e*P	**Pg**	**09 32 58.8**	**+0.4**
KSDI	**Kefar Szold**	**0.25**	**126**	Pg	**Pg**	**09 32 59.4**	**-0.5**
KSDI				Sg	**Sg**	**09 33 03.1**	**-0.2**
HRI	**Mount Hermon**	**0.28**	**106**	Pg	**Pg**	**09 32 59.9**	**-0.4**
MMA0	**Mount Meron ar**	**0.32**	**182**	Pg	**Pg**	**09 33 00.5**	**-0.7**
MMA0				Sg	**Sg**	**09 33 05.9**	**+0.3**
MMB1	**Mount Meron ar**	**0.32**	**181**	Pg	**Pg**	**09 33 00.6**	**-0.6**
HNTI	**Hanita**	**0.33**	**219**	Pg	**Pg**	**09 33 01.3**	**0.0**
HNTI				Sg	**Sg**	**09 33 06.0**	**+0.3**
RCY	**Rachaya**	**0.36**	**67**	*e*P	**Pg**	**09 33 02.1**	**+0.1**
RCY				*e*S	**Sg**	**09 33 07.2**	**+0.3**
RCY	**Rachaya**	**0.36**	**67**	*e*P	**Pg**	**09 33 02.1**	**+0.1**
RCY				*e*S	**Sg**	**09 33 07.2**	**+0.3**
KSHT	**Keshet**	**0.49**	**137**	Pg	**Pg**	**09 33 04.5**	**+0.2**
KSHT				Sg	**Sg**	**09 33 11.6**	**+0.9**
BHL	**Bhannes**	**0.59**	**19**	*e*P	**Pg**	**09 33 06.3**	**0.0**
BHL				*e*S	**Sg**	**09 33 14.5**	**+0.3**
BHL	**Bhannes**	**0.59**	**19**	*e*P	**Pg**	**09 33 06.3**	**-0.1**
BHL				*e*S	**Sg**	**09 33 14.5**	**+0.3**
OFRI	**'Ofer**	**0.80**	**207**	Pg	**Pg**	**09 33 09.9**	**-0.4**
OFRI				Sg	**Sg**	**09 33 21.8**	**+1.0**
MMLI	**Mount Malkishu**	**0.90**	**180**	Pg	**Pg**	**09 33 11.4**	**-0.7**
MMLI				Sg	**Sg**	**09 33 23.9**	**+0.1**
HWQ	**Hawqa**	**1.03**	**25**	*e*P	**Pg**	**09 33 14.9**	**+0.2**
HWQ				*e*S	**Sg**	**09 33 28.0**	**-0.1**
HMDT	**Nahal Hemdat**	**1.09**	**175**	Pg	**Pg**	**09 33 14.6**	**-1.1**
HMDT				Sg	**Sg**	**09 33 30.7**	**+0.9**
SLTI	**Sal'it**

*DDA **16** 10:10:33.6, 40.′06N×35.′61E, h7km±2km, Md2.9*
*ISK **16** 10:10:33.4, 40.′03N×35.′60E, h5km, MD2.8*
*CSEM **16** 10:10:34.0±0.2, 40.′08N×35.′63E, h2km, MD2.8, Error ellipse: s-maj=4.0km s-min=3.1km az=141.0*
*ISCJB **16** 10:10:34.3±0.5, 40.′07N±0.′03×35.′62E±0.′04, h10km, Error ellipse: s-maj=4.8km s-min=4.0km az=144.6*

ISC 16 10:10:34.7±0.6, 40.′06N±0.′03×35.′62E±0.′04, h3km±9km, n21, σ0.98/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOZ	**Yozgat**	**0.48**	**209**	*e*PG	**Pg**	**10 10 43.4**	**-0.4**
YOZ				*e*SG	**Sg**	**10 10 50.9**	**+0.8**
YOZ	**Yozgat**	**0.48**	**209**	*e*Pg	**Pg**	**10 10 43.4**	**-0.5**
YOZ				*e*Sg	**Sg**	**10 10 50.9**	**+0.9**
CORM	**Corum**	**0.77**	**279**	*e*PG	**Pg**	**10 10 48.4**	**-1.0**
CORM				*e*SG	**Sg**	**10 11 00.7**	**+1.4**
CORM	**Corum**	**0.77**	**279**	*e*Pg	**Pg**	**10 10 48.4**	**-1.0**
CORM				*e*Sg	**Sg**	**10 11 00.7**	**+1.4**
CTKT	**Corum**	**0.85**	**312**	*i* P	**Pg**	**10 10 50.0**	**-0.9**
CTKT				*i* S	**Sg**	**10 11 02.1**	**+0.2**
CTKT	**Corum**	**0.85**	**312**	*i* P	**Pg**	**10 10 50.0**	**-1.0**
CTKT				*i* S	**Sg**	**10 11 02.1**	**+0.1**
CDAG	**Cicekdag**	**1.05**	**246**	*i* P	**Pg**	**10 10 52.8**	**-2.1**
CDAG				*i* S	**Sg**	**10 11 09.2**	**+0.7**
CDAG	**Cicekdag**	**1.05**	**246**	*i* P	**Pg**	**10 10 52.8**	**-2.1**
CDAG				*i* S	**Sg**	**10 11 09.2**	**+0.7**
ERBA	**Erbaa**	**1.07**	**54**	*i* P	**Pg**	**10 10 54.1**	**-1.2**
ERBA				*i* S	**Sg**	**10 11 11.2**	**+2.0**
ERBA	**Erbaa**	**1.07**	**54**	*i* P	**Pg**	**10 10 54.1**	**-1.2**
ERBA				*i* S	**Sg**	**10 11 11.2**	**+2.1**
SVSK	**Karacayir**	**1.07**	**97**	*e*PG	**Pg**	**10 10 54.6**	**-0.7**
SVSK	**Karacayir**	**1.07**	**97**	*e*Pg	**Pg**	**10 10 54.6**	**-0.7**
AVNT	**Avonos**	**1.41**	**205**	*i* P	**Pn**	**10 11 00.4**	**-0.9**
AVNT				*i* S	**Sg**	**10 11 20.2**	**+0.3**
AVNT	**Avonos**	**1.41**	**205**	*i* P	**Pn**	**10 11 00.4**	**-0.8**
AVNT				*i* S	**Sg**	**10 11 20.2**	**+0.3**
TOS	**Tosya**	**1.56**	**309**	*e*PN	**Pn**	**10 11 03.9**	**+0.6**
TOS	**Tosya**	**1.56**	**309**	*e*Pn	**Pn**	**10 11 03.9**	**+0.6**
DIKM	**Dikmen**	**1.61**	**350**	*e*PN	**Pb**	**10 11 05.4**	**+0.2**
DIKM	**Dikmen**	**1.61**	**350**	*e*Pn	**Pb**	**10 11 05.4**	**+0.3**
SARI	**SarD1z-Kayseri**	**1.61**	**148**	*e*PN	**Pg**	**10 11 06.4**	**+0.8**
SULT	**Sultanhani-AKS**	**2.47**	**222**	*e*PN	**Pn**	**10 11 16.1**	**+0.2**
SULT	**Sultanhani-AKS**	**2.47**	**222**	*e*Pn	**Pn**	**10 11 16.1**	**+0.2**

MEX 16 10:12:01.6±0.9, 17.′18N×99.′92W, h31km±8km, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.31**	**169**	*i* P	Pb	10 12 07.8	-1.5
ACX				*i* S	Sb	10 12 13.2	-1.2
CAIG	**El Cayaco**	**0.35**	**249**	*e*P	Pb	10 12 07.7	-2.2
CAIG				*i* S	Sb	10 12 13.8	-1.6
MEIG	**Mezcala**	**0.80**	**21**	*i* P	Pn	10 12 14.1	-2.7
MEIG				*i* S	Sb	10 12 25.0	-2.5
PLIG	**Platanillo**	**1.27**	**18**	*e*P	Pn	10 12 21.4	-1.9
PLIG				*i* S	Sn	10 12 37.4	-2.0
ZIIG	**Zihuatanejo**	**1.53**	**286**	*e*P	Pn	10 12 25.5	-1.4
ZIIG				*i* S	Sn	10 12 43.3	-2.4
PNIG	**Pinotepa**	**1.89**	**114**	*e*P	Pn	10 12 29.7	-2.1
PNIG				*i* S	Sn	10 12 52.2	-2.3
PPM	**Popocatepetl**	**2.25**	**33**	*i* P	Pn	10 12 34.7	-2.0
PPM				*i* S	Sn	10 13 04.0	+0.5
VHO	**Vista Hermosa**	**3.05**	**91**	*i* P	Pn	10 12 47.2	-0.6
VHO				*i* S	Sn	10 13 20.9	-2.4

KRSC 16 10:15:34.7±0.5, 53.′05N×160.′27E, h42km±31km, ML3.9, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLC	**Nalytchevo**	**0.57**	**283**	*e*P	Pn	10 15 46.6	+0.2
NLC				*i* S	Sn	10 15 55.0	+0.3
AVH	**Avacha**	**0.95**	**284**	*i* P	Pn	10 15 52.1	+0.6
AVH				*i* S	Sn	10 16 04.4	+0.6
PET	**Petropavlovsk**	**0.98**	**269**	*i* P	Pn	10 15 51.5	-0.4
PET				*i* S	Sn	10 16 03.5	-1.0
KII	**Karymskiy**	**1.10**	**334**	*e*P	Pn	10 15 54.4	+0.8
KII				*i* S	Sn	10 16 08.4	+0.8
GNL	**Ganaly**	**1.54**	**296**	*i* P	Pn	10 16 00.2	+0.6
GNL				*i* S	Sn	10 16 19.2	+0.9
MKZ	**Mys Kozlova**	**1.74**	**29**	*i* P	Pn	10 16 02.8	+0.4
MKZ				*i* S	Sn	10 16 22.9	-0.4
MIPR	**Malaya Ipel'ka**	**2.27**	**251**	*e*P	Pn	10 16 10.0	+0.3
MIPR				*e*S	Sn	10 16 35.3	-1.2
KMNR	**Kamenistaya**	**2.71**	**360**	*e*P	Pn	10 16 18.3	+2.6
KMNR				*e*S	Sn	10 16 49.5	+2.3
BZGR	**Bezymyannyi-Gr**	**2.91**	**5**	P	Pn	10 16 21.7	+3.3
ZLN	**Zelenaya**	**2.99**	**6**	P	Pn	10 16 22.8	+3.3
ZLN				*i* S	Sn	10 16 56.9	+2.9
SRDR	**Sredinnyy**	**3.29**	**355**	P	Pn	10 16 26.0	+2.4
KBTR	**Krutoberegovo**	**3.49**	**24**	*e*P	Pn	10 16 27.6	+1.2
KBTR				*e*S	Sn	10 17 06.3	-0.2
ALID	**Alaid**	**3.65**	**235**	P	Pn	10 16 29.3	+0.8
BKI	**Bering**	**3.99**	**55**	*e*P	Pn	10 16 33.4	+0.2
BKI				*i* S	Sn	10 17 15.0	-3.6

*IDC **16** 10:17:48.8±0.5, 49.′40S×116.′66E, h0km, mb4.7/14, mb1 4.9/15, mb1mx4.9/16, mbtmp4.8/15, ML3.2/1, MS4.3/7, Ms1 4.3/7, ms1mx4.1/13, Error ellipse: s-maj=23.9km s-min=13.6km az=116.0*
*ISCJB **16** 10:17:48.7±4.4, 49.′36S±0.′05×116.′6E±0.′1, h4km±27km, mb5.1/47, MS4.5/17, Error ellipse: s-maj=12.4km s-min=8.0km az=15.0*
*NEIC **16** 10:17:51.0±0.1, 49.′33S×116.′51E, h10km, mb5.3/25, Error ellipse: s-maj=6.8km s-min=5.6km az=103.0*
*GCMT **16** 10:17:52.4±0.2, 49.′38S×116.′62E, h12km, MW5.0, Moment Tensor Solution. s25,c33; s70,c116; Moment tensor: Scale 10^{16}Nm; M_{rr}3.59±.11; $M_{\theta\theta}$-3.39±.08; $M_{\phi\phi}$-0.21±.12; $M_{r\theta}$0.47±.32; $M_{\theta\phi}$0.70±.09; $M_{\phi r}$-1.06±.45; Best double couple: $M_0$3.70000×10^{16} NP1:ϕ_s269.00000°, δ41.00000°, λ70.00000°. NP2:ϕ_s115.00000°, δ52.00000°, λ107.00000°. Principal axes: T 3.8800, Plg76.0000°, Azm81.0000°; N -0.2800, Plg13.0000°, Azm285.0000°; P -3.6000, Plg6.0000°, Azm193.0000°; Data Used: II IU IC G CN.*
*DJA **16** 10:18:01, 49.′51S×117.′10E, h99km, mb5.0/33*

ISC 16 10:17:52.2±4.4, 49.′37S±0.′05×116.′6E±0.′1, h15km±27km, h13km±.8km: pP-P, n528, σ0.88/82, mb5.1/47, MS4.5/17, 167C-146D, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NWAO	**Narrogin (SRO)**	**16.43**	**2**	Pn	**Pn**	**10 21 41.6**	**-0.6**
	4.6nm,0.3s,baz=174,slow=13,SNR=28						
NWAO				LR	LR	10 26 27.4	
	comp=Z,16nm,21.6s,baz=115,slow=32						
NWAO	**Narrogin (SRO)**	**16.43**	**2**	*e*Pn	**Pn**	**10 21 42.4**	**+0.2**
	490nm,2.1s						
CASY	**Casey**	**17.25**	**188**	*e*P	**Pn**	**10 21 53.2**	**+1.0**
CASY	**Casey**	**17.25**	**188**	*e*Pn	**Pn**	**10 21 52.7**	**+0.5**
	175nm,1.8s						
KLBR	**Kellerberrin**	**17.78**	**3**	*e*P	**Pn**	**10 21 59.5**	**+0.5**
	99nm,1.4s						
MORW	**Morawa**	**20.27**	**359**	*e*P	**P**	**10 22 27.0**	**-0.1**
FORT	**Forrest**	**20.50**	**29**	*e*P	**P**	**10 22 31.4**	**+1.8**
	31nm,1.0s						
FORT	**Forrest**	**20.50**	**29**	*e*Pn	**P**	**10 22 30.8**	**+1.3**
	162nm,1.5s						
TAU	**Tasmania Unive**	**22.16**	**85**	*e*P	**P**	**10 22 47.5**	**+0.1**
	182nm,1.6s,mb5.3						
MEEK	**Meekatharra**	**22.75**	**5**	*e*P	**P**	**10 22 53.3**	**-0.4**
TOO	**Toolangi**	**23.92**	**71**	*e*P	**P**	**10 23 06.2**	**+0.8**
STKA	**Stephens Creek**	**25.63**	**56**	*e*P	**P**	**10 23 21.1**	**+0.1**
	13nm,1.1s,mb4.4						
STKA	**Stephens Creek**	**25.63**	**56**	P	**P**	**10 23 19.4**	**-1.6**
	15nm,1.1s,mb4.5,baz=200,slow=8.4,SNR=8.0						
STKA				LR	LR	10 31 39.9	
	comp=Z,731nm,19.1s,MS4.2,baz=211,slow=32						
STKA	**Stephens Creek**	**25.63**	**56**	*e*P	**P**	**10 23 20.6**	**-0.3**
	6.6nm,1.2s,mb4.0						
ASAR	**Alice Springs**	**29.05**	**34**	P	**P**	**10 23 49.9**	**-1.9**
	2.9nm,0.6s,mb4.2,baz=208,slow=7.7,SNR=55						
ASAR				PcP	PcP	10 26 57.4	-2.4
	1.8nm,0.9s,baz=203,slow=4.8,SNR=5.3						
FITZ	**Fitzroy Crossi**	**32.04**	**16**	*e*P	**P**	**10 24 18.7**	**+0.5**
	65nm,1.2s,mb5.3						
FITZ	**Fitzroy Crossi**	**32.04**	**16**	P	**P**	**10 24 18.3**	**+0.1**
	37nm,1.1s,mb5.1,baz=184,slow=9.2,SNR=23						
FITZ	**Fitzroy Crossi**	**32.04**	**16**	*e*P	**P**	**10 24 18.3**	**+0.2**
	109nm,1.4s,mb5.5						
MAW	**Mawson**	**32.08**	**216**	*e*P	**P**	**10 24 18.1**	**0.0**
	8.0nm,0.6s,mb4.7						
MAW	**Mawson**	**32.08**	**216**	P	**P**	**10 24 16.2**	**-2.0**
	16nm,1.0s,mb4.8,baz=81,slow=9.7,SNR=41						
MAW				PcP	PcP	10 27 05.9	-1.1
	6.8nm,1.0s,baz=9.7,slow=2.6,SNR=6.1						
MAW				LR	LR	10 35 29.5	
	comp=Z,774nm,18.7s,MS4.4,baz=81,slow=33						
MAW	**Mawson**	**32.08**	**216**	*e*P	**P**	**10 24 18.3**	**+0.1**
	17nm,1.7s,mb4.6						
MAW				*e*PcP	PcP	10 27 07.2	+0.2
ARMA	**Armidale**	**32.49**	**67**	*e*P	**P**	**10 24 23.1**	**+1.0**
ARMA	**Armidale**	**32.49**	**67**	*e*P	**P**	**10 24 22.2**	**+0.1**
	84nm,1.4s,mb5.4						
WRA	**Warramunga Arr**	**32.62**	**32**	P	**P**	**10 24 21.9**	**-1.4**
	11nm,1.1s,mb4.7,baz=201,slow=11,SNR=27						
WRA				PcP	PcP	10 27 06.9	-2.3
	2.2nm,0.8s,baz=212,slow=2.7,SNR=6.8						
WRA	**Warramunga Arr**	**32.62**	**32**	P	**P**	**10 24 21.9**	**-1.4**
WRA				PcP	PcP	10 27 06.9	-2.3
WRAB	**Tennant Creek**	**32.63**	**32**	*e*P	**P**	**10 24 22.2**	**-1.2**
	150nm,2.5s,mb5.5						
RMQ	**Roma**	**33.75**	**59**	*e*P	**P**	**10 24 33.2**	**+0.1**
	45nm,1.1s,mb5.3						
SBA	**Scott Base**	**34.09**	**163**	*e*P	**P**	**10 24 35.6**	**+0.1**
	51nm,1.5s,mb5.2						
EIDS	**Eidsvold**	**35.93**	**61**	*e*P	**P**	**10 24 52.2**	**+0.3**
	32nm,1.4s,mb5.0						
KAKA	**Kakadu**	**38.83**	**25**	*e*P	**P**	**10 25 16.8**	**+0.3**
	13nm,1.0s,mb4.6						
KAKA	**Kakadu**	**38.83**	**25**	*e*P	**P**	**10 25 16.2**	**-0.4**
SYO	**Syowa Base**	**40.63**	**213**	⇓*e*P	**P**	**10 25 26.0**	**-5.0**
QSPA	**South Pole Qui**	**40.76**	**180**	P	**P**	**10 25 32.0**	**0.0**
	8.2nm,0.6s,mb4.5,baz=328,slow=2.2,SNR=85						
QSPA				PcP	PcP	10 27 31.6	-1.2
	11nm,1.0s,baz=341,slow=0.8,SNR=4.2						
QSPA	**South Pole Qui**	**40.76**	**180**	*e*P	**P**	**10 25 31.6**	**-0.4**
	59nm,1.4s,mb5.0						
QSPA				*e*PcP	PcP	10 27 32.4	-0.4
DZM	**Mont Dzumac**	**47.66**	**74**	*e*LR	LR	10 40 00.1	
	291nm,23.8s						
MAIT	**Maitri**	**48.81**	**205**	*e*P	**P**	**10 26 35.8**	**-0.4**
KSM	**Kuching**	**50.93**	**352**	*e*P	**P**	**10 26 53.2**	**+0.4**
	79nm,1.6s,mb5.4						
VNA1	**Neumayer--Stat**	**53.91**	**200**	*e*P	**P**	**10 27 14.0**	**-0.4**
VNA1				*e*		10 27 15.1	
VNA1				*e*		10 28 19.3	
PSI	**Prapat**	**54.16**	**338**	P	**P**	**10 27 15.7**	**-1.2**
	2.9nm,0.5s,mb4.5,baz=151,slow=12,SNR=5.9						
KULM	**Kulim**	**56.17**	**341**	*e*P	**P**	**10 27 30.3**	**-1.1**
	72nm,1.5s,mb5.5						
MSVF	**Nonsavu**	**58.23**	**80**	*e*P	**P**	**10 27 45.9**	**0.0**
QIZ	**Qiongzhong**	**68.35**	**353**	P	**P**	**10 28 55.3**	**+2.5**
QIZ				sP	sP	10 29 00.8	+1.5
QIZ				S	S	10 37 58.8	+5.5
QIZ				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
QIZ				pmax	pmax		
	comp=Z,40nm,3.4s						
QIZ				LR	LR		
	comp=N,210nm,3.4s						
QIZ				LR	LR		
	comp=Z,260nm,23.1s,MS4.4						
CM31	**Chiang Mai Arr**	**69.31**	**342**	*e*P	**P**	**10 28 59.2**	**+0.5**
	comp=Z,4.4nm,0.5s,mb4.6						
CMAR	**Chiang Mai Arr**	**69.31**	**342**	P	**P**	**10 28 58.9**	**+0.1**
	comp=Z,9.3nm,0.8s,mb4.8,baz=192,slow=5.5,SNR=32						
CMAR				LR	LR	10 57 32.6	
	comp=Z,209nm,19.5s,MS4.4,baz=189,slow=34						
BOSA	**Boshof**	**69.67**	**250**	P	**P**	**10 28 59.8**	**-1.3**
	comp=Z,9.2nm,0.8s,mb4.7,baz=118,slow=9.9,SNR=12						
BOSA				LR	LR	10 53 49.4	
	comp=Z,246nm,18.6s,MS4.5,baz=270,slow=31						
LBTB	**Lobatse**	**72.05**	**252**	*e*P	**P**	**10 29 15.1**	**-0.5**
	comp=Z,10nm,0.9s,mb4.8						
KMI	**Kunming**	**75.17**	**347**	P	**P**	**10 29 35.9**	**+2.2**
KMI				pP	pP	10 29 39.5	+1.0
KMI				PcP	PcP	10 29 52.6	+5.5
KMI				PP	PP	10 32 27.5	+5.0
KMI				S	S	10 39 16.3	+4.6
KMI				SS	SS	10 44 08.8	+6.9
KMI				pmax	pmax		
	comp=Z,42nm,1.5s,mb5.2						
KMI				LR	LR		
	comp=N,330nm,23.0s,MS4.7						
KMI				LR	LR		
	comp=E,270nm,20.6s,MS4.7						
KMI				LR	LR		
	comp=Z,390nm,20.6s,MS4.7						
GYA	**Guiyang**	**76.00**	**351**	P	**P**	**10 29 41.8**	**+3.4**
GYA				PcP	PcP	10 29 54.3	+3.6
GYA				PP	PP	10 32 35.8	+6.4
GYA				S	S	10 39 25.6	+4.8
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
GYA				pmax	pmax		
	comp=Z,140nm,5.8s						
GYA				LR	LR		
	comp=N,620nm,21.8s,MS5.0						
GYA				LR	LR		
	comp=E,500nm,22.0s,MS5.0						
GYA				LR	LR		
	comp=Z,740nm,20.2s,MS5.0						
LSZ	**Lusaka**	**77.53**	**261**	*e*P	**P**	**10 29 48.2**	**+0.8**
	comp=Z,16nm,0.9s,mb5.0						
SHL	**Shillong**	**77.78**	**337**	⇑*i*P	**P**	**10 29 49.0**	**+0.5**
PPT	**Papeete**	**79.33**	**104**	*e*LR	LR	10 54 54.0	
	comp=Z,114nm,25.2s						
PPT	**Papeete**	**79.33**	**104**	LR	LR	10 56 31.9	
	comp=Z,144nm,20.0s,MS4.3,baz=170,slow=29						
ENH	**Enshi**	**79.53**	**354**	*e*P	**P**	**10 29 58.1**	**+0.1**
	comp=Z,32nm,1.2s,mb5.1						
WHN	**Wuhan**	**79.57**	**358**	P	**P**	**10 29 58.0**	**-0.2**
ODAN	**Odare**	**80.22**	**334**	*e*P	**P**	**10 30 00.8**	**-1.0**
RAMN	**Ramite**	**80.54**	**333**	*e*P	**P**	**10 30 03.0**	**-0.5**
TAPN	**Taplejung**	**80.59**	**334**	*e*P	**P**	**10 30 03.4**	**-0.4**
	comp=Z,97nm,1.0s,mb5.7						
CD2	**Chengdu**	**80.73**	**349**	*e*P	**P**	**10 30 05.3**	**+0.8**
CD2				pP	pP	10 30 09.9	+0.6
CD2				sP	sP	10 30 12.8	+1.7
CD2				PP	PP	10 33 12.8	+3.8
CD2				S	S	10 40 12.3	+0.9
CD2				sS	sS	10 40 20.5	+1.1
CD2				SS	SS	10 45 30.6	+5.1
CD2				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.1						
CD2				pmax	pmax		
	comp=Z,100nm,6.2s						
CD2				LR	LR		
	comp=N,330nm,19.0s,MS4.9						
CD2				LR	LR		
	comp=E,380nm,21.4s,MS4.9						
CD2				LR	LR		
	comp=Z,300nm,21.4s,MS4.6						
NJ2	**Nanjing**	**81.08**	**2**	*e*P	**P**	**10 30 07.1**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,50nm,0.5s,mb5.7						
TSUM	**Tsumeb**	**81.32**	**251**	*e*P	**P**	**10 30 08.9**	**+0.8**
	comp=Z,19nm,1.3s,mb4.9						
PKI	**Pulchoki**	**81.47**	**332**	*e*P	**P**	**10 30 07.7**	**-0.8**
PKI	**Pulchoki**	**81.47**	**332**	*e*P	**P**	**10 30 08.4**	**-0.1**
PKIN	**Phulchoki**	**81.48**	**332**	*e*P	**P**	**10 30 08.4**	**-0.2**
DMN	**Daman**	**81.60**	**332**	*e*P	**P**	**10 30 08.3**	**-0.9**
	comp=Z,59nm,1.1s,mb5.4						
GUN	**Gumba**	**81.65**	**333**	*e*P	**P**	**10 30 09.1**	**-0.3**
	comp=Z,116nm,1.0s,mb5.8						
KKN	**Kakani**	**81.72**	**332**	*e*P	**P**	**10 30 09.1**	**-0.7**
LSA	**Lhasa**	**81.91**	**338**	P	**P**	**10 30 06.8**	**-4.0**
LSA	**Lhasa**	**81.91**	**338**	*e*P	**P**	**10 30 11.3**	**+0.6**
	comp=Z,34nm,1.1s,mb5.2						
KMBO	**Kilima Mbogo**	**82.19**	**277**	P	**P**	**10 30 13.6**	**+0.9**
	comp=Z,10nm,1.0s,mb4.7,baz=121,slow=3.8,SNR=12						
KMBO	**Kilima Mbogo**	**82.19**	**277**	*e*P	**P**	**10 30 14.2**	**+1.5**
	comp=Z,109nm,2.0s,mb5.4						
XAN	**Xi'an**	**83.31**	**354**	P	**P**	**10 30 17.9**	**-0.1**
XAN				pP	pP	10 30 22.3	-0.5
XAN				sP	sP	10 30 24.8	+0.2
XAN				PP	PP	10 33 33.3	+3.0
XAN				S	S	10 40 42.6	+4.7
XAN				sS	sS	10 40 47.1	+1.2
XAN				SS	SS	10 46 11.4	+7.5
XAN				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.7						
XAN				pmax	pmax		
	comp=Z,22nm,3.6s						
LZH	**Lanzhou**	**85.83**	**350**	*e*P	**P**	**10 30 31.0**	**+0.4**
LZH				pP	pP	10 30 34.3	-1.2
LZH				PP	PP	10 33 53.5	+2.8
LZH				SKS		10 40 53.6	
LZH				*e*S	S	10 41 04.3	+1.5
LZH				sS	sS	10 41 12.3	+1.4
LZH				*e*SS	SS	10 46 46.5	+5.5
LZH				pmax	pmax		
	comp=Z,25nm,1.5s,mb5.2						
LZH				pmax	pmax		
	comp=Z,140nm,8.7s						
LZH				LR	LR		
	comp=E,470nm,17.8s						
LZH				LR	LR		
	comp=Z,560nm,19.6s,MS5.0						
KSRS	**Korea Array**	**87.03**	**9**	P	**P**	**10 30 35.8**	**-0.7**
	comp=Z,4.9nm,1.0s,mb4.7,baz=192,slow=4.7,SNR=13						
KSRS				LR	LR	11 12 09.9	
	comp=Z,73nm,20.8s,MS4.1,baz=354,slow=38						
MAJO	**Matsushiro**	**87.66**	**17**	*e*P	**P**	**10 30 39.0**	**-0.6**
	comp=Z,18nm,1.5s,mb5.1						
MAT	**Matsushiro**	**87.66**	**17**	P	**P**	**10 30 39.2**	**-0.4**
MAT				S	S	10 41 23.0	+2.4
MJAR	**Matsushiro Arr**	**87.66**	**17**	P	**P**	**10 30 38.2**	**-1.4**
	comp=Z,1.6nm,0.7s,mb4.4,baz=199,slow=5.5,SNR=8.7						
BJI	**Beijing**	**89.03**	**360**	P	**P**	**10 30 45.9**	**0.0**
BJI				S	S	10 41 39.0	+5.7
BJI				pmax	pmax		
	comp=Z,11nm,1.2s,mb5.1						
BJI				LR	LR		
	comp=N,170nm,20.6s,MS4.6						
BJI				LR	LR		
	comp=E,100nm,16.0s,MS4.6						
BJI				LR	LR		
	comp=Z,140nm,32.9s						
GTA	**Gaotai**	**89.63**	**347**	⇑P	**P**	**10 30 48.9**	**+0.1**
GTA				pP	pP	10 30 53.3	-0.4
GTA				sP	sP	10 30 55.5	+0.1
GTA				PP	PP	10 34 24.5	+3.2
GTA				SKS		10 41 17.1	
GTA				S	S	10 41 38.9	-0.1
GTA				sS	sS	10 41 46.8	-0.3
GTA				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.4						
GTA				pmax	pmax		
	comp=Z,110nm,4.5s						
GTA				LR	LR		
	comp=N,70nm,15.3s,MS4.5						
GTA				LR	LR		
	comp=E,130nm,20.1s,MS4.5						
GTA				LR	LR		
	comp=Z,110nm,21.0s,MS4.3						
HHC	**Hu-ho-hao-te**	**89.94**	**356**	*e*P	**P**	**10 30 50.3**	**+0.1**
HHC				pP	pP	10 30 55.0	-0.1
HHC				sP	sP	10 30 57.3	+0.4
HHC				PP	PP	10 34 27.3	+3.6
HHC				SKS		10 41 18.3	
HHC				S	S	10 41 42.8	+0.9
HHC				sS	sS	10 41 50.3	+0.3
HHC				SS	SS	10 47 46.3	+5.4
HHC				pmax	pmax		
	comp=Z,18nm,0.7s,mb5.5						
HHC				pmax	pmax		
	comp=Z,140nm,4.6s						
HHC				LR	LR		
	comp=N,180nm,20.2s,MS4.6						
HHC				LR	LR		
	comp=E,140nm,20.2s,MS4.6						
HHC				LR	LR		
	comp=Z,140nm,23.8s,MS4.3						
PLCA	**Paso Flores**	**90.06**	**175**	P	**P**	**10 30 50.8**	**-0.4**
	comp=Z,11nm,0.9s,mb5.2,baz=187,slow=3.8,SNR=18						
PLCA				LR	LR	11 06 27.2	
	comp=Z,375nm,21.8s,MS4.8,baz=99,slow=32						
CN2	**Changchun**	**93.11**	**6**	*e*P	**P**	**10 31 05.8**	**+1.0**
CN2				*e*S	S	10 42 11.9	+1.5
CN2				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.5						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
KBL	**Kabul**	**93.59**	**322**	*e*P	**P**	**10 31 08.3**	**+1.0**
	comp=Z,21nm,1.3s,mb5.4						
MDJ	**Mudanjiang**	**94.29**	**9**	P	**P**	**10 31 13.1**	**+2.9**
MDJ				pP	pP	10 31 16.4	+1.3
MDJ				sP	sP	10 31 17.8	+0.9
MDJ				PP	PP	10 35 00.4	+2.5
MDJ				S	S	10 42 26.3	+5.6
MDJ				sS	sS	10 42 31.9	+3.0
MDJ				SS	SS	10 48 45.1	+1.8
MDJ				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb5.1						
MDJ				pmax	pmax		
	comp=Z,51nm,4.1s						
MDJ				LR	LR		
	comp=N,65nm,30.3s,MS4.0						
MDJ				LR	LR		
	comp=E,31nm,28.0s,MS4.0						
MDJ				LR	LR		
	comp=Z,54nm,32.6s,MS3.8						
WMQ	**Urumqi**	**96.18**	**339**	*e*P	**P**	**10 31 20.0**	**+1.1**
WMQ				sP	sP	10 31 27.0	+1.4
WMQ				PP	PP	10 35 16.0	+3.3
WMQ				SKS		10 41 55.0	
WMQ				S	S	10 42 36.0	-1.2
WMQ				SS	SS	10 49 11.0	+0.7
WMQ				pmax	pmax		
	comp=Z,21nm,1.2s,mb5.4						
WMQ				pmax	pmax		
	comp=Z,26nm,9.0s						
WMQ				LR	LR		
	comp=N,110nm,20.0s,MS4.5						
WMQ				L

CDF	Champ du Feu	135.09	297	⇑P	PKP1	PKPdf	10 37 07.5	-2.5
HAU	Haudompre	135.43	296	⇓P	PKP1	PKPdf	10 37 08.4	-2.2
SSF	Saint Saulge	136.66	294	⇓P	PKP1	PKPdf	10 37 08.6	-4.4
SJPF	Ste Jean	137.61	286	⇓P	PKP1	PKPdf	10 37 13.9	-0.9
	comp=Z,21nm,1.0s							
NOA	NORSAR Array B	138.18	315		PKP	PKPdf	10 37 14.3	-1.0
	comp=Z,1.8nm,0.8s,baz=99,slow=3.5,SNR=4.9							
GSC	Goldstone	138.97	89		ePKPdf	PKPdf	10 37 16.9	-0.7
HUMO	Hull Mountain	139.04	76		ePKPdf	PKPdf	10 37 18.9	+1.4
NVAR	Mina Array Bea	139.81	84		PKhKP		10 37 12.2	
	comp=Z,1.8nm,0.9s,baz=235,slow=3.3,SNR=5.3							
NVAR					PKP	PKPdf	10 37 19.3	+0.3
	comp=Z,5.6nm,1.1s,baz=206,slow=3.6,SNR=10							
NVAR	Mina Array Bea	139.81	84		PKP	PKPdf	10 37 19.3	+0.3
MOD	Modoc	140.37	79		ePKPdf	PKPdf	10 37 20.5	+0.6
K05A	Summer Lake	140.41	77	⇓	P	PKPdf	10 37 14.3	-5.7
	baz=141							
V12A	Nelson	140.50	90	⇓	P	PKPdf	10 37 14.3	-6.1
	baz=141							
217A	Green Valley	140.67	99	⇓	P	PKPdf	10 37 14.5	-6.3
	baz=141							
W13A	Hualapai Mount	140.76	92	⇑	P	PKPdf	10 37 14.9	-6.0
	baz=141							
318A	Bisbee	140.99	100	⇑	P	PKPdf	10 37 15.0	-6.4
	baz=141							
X14A	Yava	141.02	93	⇓	P	PKPdf	10 37 15.1	-6.3
	baz=141							
TUC	Tucson	141.04	98		ePKPdf	PKPdf	10 37 21.4	-0.1
Y15A	Casa Rosa Ranc	141.07	95	⇓	P	PKPdf	10 37 15.9	-5.6
	baz=141							
V13A	Grand Canyon W	141.14	91	⇑	P	PKPdf	10 37 16.4	-5.1
	baz=141							
T11A	Corn Creek, Al	141.14	88	⇑	P	PKPdf	10 37 15.9	-5.6
	baz=141							
117A	Oracle	141.24	98	⇑	P	PKPdf	10 37 16.3	-5.5
	baz=141							
W14A	Seligman	141.35	92	⇑	P	PKPdf	10 37 16.9	-5.0
	baz=142							
319A	Douglas	141.40	100	⇓	P	PKPdf	10 37 16.6	-5.6
	baz=142							
X15A	Humboldt	141.46	94	⇓	P	PKPdf	10 37 16.7	-5.5
	baz=142							
U13A	Pakoon Wash	141.49	90	⇑	P	PKPdf	10 37 17.1	-5.0
	baz=142							
R11A	Troy Canyon, C	141.53	86	⇓	P	PKPdf	10 37 17.2	-4.9
	baz=142							
Y16A	Circle Bar Ran	141.58	95	⇑	P	PKPdf	10 37 17.8	-4.6
	baz=142							
V14A	Boquillas Ranc	141.59	92	⇓	P	PKPdf	10 37 18.2	-4.2
	baz=142							
S12A	Delamar Landin	141.59	88	⇓	P	PKPdf	10 37 18.7	-3.6
	baz=142							
P10A	Eureka	141.66	84	⇓	P	PKPdf	10 37 18.8	-3.5
	baz=142							
WVOR	Wild Horse Val	141.71	79		ePKPdf	PKPdf	10 37 22.1	-0.2
INK	Inuvik	141.74	34		ePKPdf	PKPdf	10 37 20.2	-1.4
Q11A	Duckwater	141.76	86	⇓	P	PKPdf	10 37 17.5	-5.0
	baz=142							
219A	White Tail Can	141.82	100	⇑	P	PKPdf	10 37 17.6	-5.3
	baz=142							
320A	Kipp Ranch, An	141.86	101	⇑	P	PKPdf	10 37 17.6	-5.4
	baz=142							
Y17A	Roosevelt	141.88	96	⇑	P	PKPdf	10 37 17.8	-5.1
	baz=142							
X16A	Lo Mia Camp, P	141.94	95	⇓	P	PKPdf	10 37 18.2	-4.8
	baz=142							
I07A	Izee	141.96	76	⇑	P	PKPdf	10 37 17.7	-5.1
	baz=142							
U14A	Mt Trumbull	142.00	91	⇓	P	PKPdf	10 37 18.1	-5.0
	baz=142							
R12A	Pony Springs,	142.16	87	⇑	P	PKPdf	10 37 19.6	-3.7
	baz=142							
220A	Playas Peak, P	142.23	100	⇑	P	PKPdf	10 37 19.7	-4.0
	baz=142							
J08A	Circle Bar Ran	142.27	78	⇑	P	PKPdf	10 37 19.1	-4.2
	baz=142							
W16A	Flagstaff	142.29	94	⇑	P	PKPdf	10 37 19.7	-4.0
	baz=142							
X17A	Forest Lakes	142.30	95	⇑	P	PKPdf	10 37 20.1	-3.6
	baz=142							
V15A	Kaibab Nationa	142.31	92	⇑	P	PKPdf	10 37 20.1	-3.6
	baz=142							
Q12A	Willow Creek R	142.41	86	⇑	P	PKPdf	10 37 20.5	-3.2
	baz=142							
T14A	Hurricane	142.44	90	⇑	P	PKPdf	10 37 20.4	-3.4
	baz=143							
O11A	Cowboy Ranch,	142.45	84	⇓	P	PKPdf	10 37 21.5	-2.3
	baz=143							
Y18A	Canyon Day Jun	142.46	97	⇑	P	PKPdf	10 37 20.7	-3.3
	baz=143							
R13A	O'Grain Ranch,	142.49	88	⇑	P	PKPdf	10 37 21.0	-2.8
	baz=143							
120A	U Bar Ranch, L	142.58	100	⇓	P	PKPdf	10 37 20.9	-3.3
	baz=143							
U15A	North Rim	142.59	91	⇑	P	PKPdf	10 37 20.7	-3.4
	baz=143							
P12A	McGill	142.59	85	⇑	P	PKPdf	10 37 21.3	-2.7
	baz=143							
WUAZ	Wupatki	142.65	93	⇑	P	PKPdf	10 37 21.3	-3.0
	baz=143							
S14A	Cedar City	142.78	89	⇑	P	PKPdf	10 37 21.4	-3.0
	baz=143							
G08A	Pilot Rock	142.86	75	⇑	P	PKPdf	10 37 21.6	-2.7
	baz=143,SNR=5.5							
T15A	Red Dirt Ranch	142.87	91	⇑	P	PKPdf	10 37 21.2	-3.4
	baz=143							
Q13A	Wheeler Ranch,	142.89	87	⇑	P	PKPdf	10 37 21.4	-3.2
	baz=143							
L10A	Juniper Basin	142.93	81	⇑	P	PKPdf	10 37 21.7	-2.8
	baz=143							
Z20A	Nine Sixteen R	142.97	99	⇓	P	PKPdf	10 37 21.5	-3.4
	baz=143							
X18A	Snowflake	142.98	96	⇑	P	PKPdf	10 37 21.6	-3.3
	baz=143							
K10A	MacKenzie Ranc	143.01	79	⇑	P	PKPdf	10 37 21.7	-2.9
	baz=143							
I09A	Lost Marbles R	143.03	77	⇓	P	PKPdf	10 37 21.8	-2.9
	baz=143							
Y19A	Nutrioso	143.07	97	⇑	P	PKPdf	10 37 22.0	-3.0
	baz=143							
V17A	Tonalea, Kykot	143.09	94	⇑	P	PKPdf	10 37 22.3	-2.7
	baz=143							
121A	Cookes Peak, D	143.12	100	⇓	P	PKPdf	10 37 22.5	-2.7
	baz=143							
O12A	Currie	143.12	84	⇓	P	PKPdf	10 37 22.1	-2.8
	baz=143							
P13A	Bates Ranch, G	143.16	86	⇓	P	PKPdf	10 37 23.0	-2.1
	baz=143							
N12A	Clover Valley,	143.23	83	⇓	P	PKPdf	10 37 22.1	-3.0
	baz=143,SNR=17							
N12A	Clover Valley,	143.23	83		ePKPdf	PKPdf	10 37 22.5	-2.6
S15A	Panguitch	143.26	90	⇓	P	PKPdf	10 37 23.1	-2.1
	baz=143							
222A	Williams Famil	143.28	101	⇑	P	PKPdf	10 37 22.4	-3.1
	baz=143							
X19A	St. Johns	143.34	97	⇓	P	PKPdf	10 37 22.4	-3.2
	baz=144							
Q14A	Sevier Lake (B	143.39	87	⇑	P	PKPdf	10 37 23.0	-2.5
	baz=144							
J10A	Berg Farm, Mel	143.39	79	⇓	P	PKPdf	10 37 23.3	-2.0
	baz=144							
H09A	Durkee	143.40	76	⇓	P	PKPdf	10 37 22.8	-2.5
	baz=144							
T16A	Glen Canyon Da	143.42	91	⇑	P	PKPdf	10 37 23.1	-2.4
	baz=144							
L11A	Cat Creek Banc	143.43	81	⇑	P	PKPdf	10 37 22.9	-2.5
	baz=144,SNR=11							
626A	Big Bend Ranch	143.44	107	⇓	P	PKPdf	10 37 22.1	-3.7
	baz=144,SNR=6.7							
W18A	Petrified Fore	143.47	95	⇑	P	PKPdf	10 37 23.1	-2.6
	baz=144							
O13A	Hicks Ranch, I	143.54	85	⇑	P	PKPdf	10 37 23.5	-2.2
	baz=144							
K11A	Parker Ranch,	143.55	80	⇓	P	PKPdf	10 37 23.4	-2.2
	baz=144,SNR=7.5							
A07A	Ashnola River,	143.56	68	⇑	P	PKPdf	10 37 22.6	-2.8
	baz=144							
TXAR	Lajitas Array	143.57	108		PKP	PKPdf	10 37 22.8	-3.3
	comp=Z,1.6nm,0.8s,baz=195,slow=5.7,SNR=24							
TXAR	Lajitas Array	143.57	108		PKP	PKPdf	10 37 22.8	-3.3
M12A	Wells	143.60	83	⇓	P	PKPdf	10 37 23.2	-2.5
	baz=144							
G09A	Cove	143.60	75	⇓	P	PKPdf	10 37 22.9	-2.7
	baz=144,SNR=18							
Y20A	Horse Springs,	143.61	98	⇑	P	PKPdf	10 37 23.2	-2.8
	baz=144							
R15A	Junction	143.62	89	⇑	P	PKPdf	10 37 23.6	-2.3
	baz=144							
D08A	Wollman Farm,	143.65	72	⇑	P	PKPdf	10 37 22.7	-2.9
	baz=144							
I10A	Payette	143.68	78	⇓	P	PKPdf	10 37 23.3	-2.5
	baz=144							
Z21A	St. Cloud Mine	143.69	99	⇓	P	PKPdf	10 37 23.2	-3.0
	baz=144,SNR=9.0							
V18A	Ganado	143.70	94	⇓	P	PKPdf	10 37 23.5	-2.6
	baz=144,SNR=5.8							
BMO	Blue Mountains	143.71	76		ePKPdf	PKPdf	10 37 22.6	-3.2
F09A	S2 Ranch, Elgi	143.71	74	⇓	P	PKPdf	10 37 23.1	-2.7
	baz=144							
122A	Conniff Cattle	143.73	101	⇓	P	PKPdf	10 37 23.3	-3.0
	baz=144							
425A	Indio Mountain	143.75	105	⇓	P	PKPdf	10 37 23.3	-3.1
	baz=144,SNR=9.8							
U17A	Shonto	143.75	92	⇓	P	PKPdf	10 37 23.5	-2.7
	baz=144							
N13A	Wendover, West	143.78	84	⇓	P	PKPdf	10 37 23.8	-2.3
	baz=144							
526A	Mary Lane Ranc	143.81	107	⇑	P	PKPdf	10 37 23.1	-3.4
	baz=144,SNR=10							
627A	Terlingua Ranc	143.83	108	⇑	P	PKPdf	10 37 23.5	-3.0
	baz=144,SNR=8.9							
MSU	Marysvale	143.85	89		ePKPdf	PKPdf	10 37 25.3	-1.0
P14A	Drum Mountains	143.85	86	⇑	P	PKPdf	10 37 23.9	-2.3
	baz=144,SNR=6.8							
324A	Moseley Ranch,	143.87	104	⇑	P	PKPdf	10 37 24.6	-1.9
	baz=144,SNR=9.1							
T17A	Navajo Res., N	143.89	92	⇑	P	PKPdf	10 37 24.1	-2.3
	baz=144,SNR=8.1							
L12A	House Creek Ra	143.90	81	⇑	P	PKPdf	10 37 24.1	-2.1
	baz=144,SNR=14							
E09A	Wood Farm, Sta	143.91	73	⇓	P	PKPdf	10 37 24.3	-1.8
	baz=144							
OD2	Odessa Site #2	143.92	72		P	PKPdf	10 37 24.5	-1.6
B08A	Colville Reser	143.93	70	⇓	P	PKPdf	10 37 24.2	-1.9
	baz=144							
X20A	Quemado	143.93	97	⇑	P	PKPdf	10 37 24.0	-2.5
	baz=144,SNR=12							
H10A	Noah's Angus R	143.95	77	⇓	P	PKPdf	10 37 23.2	-3.0
	baz=144,SNR=9.2							
Q15A	Fillmore	143.98	88	⇑	P	PKPdf	10 37 24.9	-1.6
	baz=144,SNR=16							
MFID	Camas Ranch	143.99	79	⇑	P	PKPdf	10 37 23.8	-2.6
	baz=144,SNR=13							
G10A	Bishop Farm, J	144.03	76	⇓	P	PKPdf	10 37 23.5	-2.9
	baz=144,SNR=9.2							
M13A	Montello	144.06	83	⇓	P	PKPdf	10 37 24.8	-1.8
	baz=144,SNR=19							
M13A	Montello	144.06	83		ePKPdf	PKPdf	10 37 25.1	-1.5
MNTX	Cornudas Mount	144.11	104		ePKPdf	PKPdf	10 37 25.1	-1.9
Z22A	Elephant Butte	144.11	100	⇓	P	PKPdf	10 37 24.1	-2.9
	baz=144,SNR=12							
Y21A	Point of Rocks	144.13	98	⇓	P	PKPdf	10 37 24.8	-2.1
	baz=144,SNR=16							
I11A	Placerville	144.14	78	⇓	P	PKPdf	10 37 24.3	-2.3
	baz=144,SNR=12							
325A	Bean Ranch, Si	144.15	104	⇓	P	PKPdf	10 37 24.0	-3.1
	baz=144,SNR=9.2							
123A	Bell Site, Whi	144.16	102	⇑	P	PKPdf	10 37 24.4	-2.6
	baz=144							
U18A	Rough Rock, Ch	144.16	93	⇑	P	PKPdf	10 37 23.9	-3.0
	baz=144,SNR=6.1							
527A	Woodward Ranch	144.17	107	⇓	P	PKPdf	10 37 24.2	-2.9
	baz=144,SNR=19							
R16A	Teasdale	144.18	89	⇓	P	PKPdf	10 37 25.3	-1.5
	baz=144,SNR=12							
K12A	Draper Farm, C	144.21	81	⇓	P	PKPdf	10 37 25.2	-1.6
	baz=144,SNR=9.1							
F10A	Beach Ranch, E	144.25	74	⇓	P	PKPdf	10 37 24.1	-2.6
	baz=144,SNR=13							
224A	Cornudas Mount	144.27	103	⇑	P	PKPdf	10 37 25.2	-2.0
	baz=144,SNR=8.2							
426A	McDonald Obser	144.27	106	⇓	P	PKPdf	10 37 24.9	-2.3
	baz=144							
W20A	Ramah	144.28	96	⇑	P	PKPdf	10 37 25.2	-1.9
	baz=144,SNR=17							
V19A	Window Rock	144.28	95	⇓	P	PKPdf	10 37 24.9	-2.3
	baz=144							
X21A	Alamocita Cree	144.33	98	⇓	P	PKPdf	10 37 25.2	-2.1
	baz=144,SNR=13							
DUG	Dugway	144.34	86	⇑	P	PKPdf	10 37 25.6	-1.5
	baz=144,SNR=16							
DUG	Dugway	144.34	86		ePKPdf	PKPdf	10 37 26.2	-0.9
P15A	Lemington	144.36	87	⇓	P	PKPdf	10 37 26.0	-1.1
	baz=144,SNR=7.1							
C09A	Chrisman Ranch	144.36	71	⇑	P	PKPdf	10 37 25.1	-1.8
	baz=144							
J12A	Stokes Ranch,	144.38	80	⇑	P	PKPdf	10 37 25.6	-1.5
	baz=144,SNR=41							
N14A	Grayback Hills	144.44	85	⇓	P	PKPdf	10 37 26.2	-1.1
	baz=145,SNR=16							
H11A	Donnelly	144.47	77	⇑	P	PKPdf	10 37 25.0	-2.1
	baz=145,SNR=32							
U19A	Dine' College,	144.52	94	⇑	P	PKPdf	10 37 25.5	-2.0
	baz=145,SNR=14							
Y22A	Socorro	144.54	99	⇓	P	PKPdf	10 37 25.1	-2.5
	baz=145,SNR=9.3							
E10A	Myers Farm, Un	144.55	74	⇑	P	PKPdf	10 37 25.3	-1.9
	baz=145,SNR=6.1							
L13A	Double Diamond	144.56	82	⇓	P	PKPdf	10 37 26.3	-1.1
	baz=145,SNR=11							
BGU	Big Grassy Mou	144.57	85		ePKPdf	PKPdf	10 37 26.5	-1.0
T18A	Mexican Hat	144.58	92	⇑	P	PKPdf	10 37 25.6	-2.0
	baz=145,SNR=42							
Z23A	Rita Site, Whi	144.59	101	⇓	P	PKPdf	10 37 26.0	-1.7
	baz=145							
O15A	The Old Anders	144.61	86	⇓	P	PKPdf	10 37 26.3	-1.2
	baz=145,SNR=12							
G11A	Walters Elk Ra	144.61	76	⇓	P	PKPdf	10 37 25.6	-1.7
	baz=145,SNR=41							
I12A	Atlanta	144.61	79	⇑	P	PKPdf	10 37 26.1	-1.3
	baz=145,SNR=17							
Y22D	IRIS PASSCAL I	144.66	99	⇓	P	PKPdf	10 37 26.3	-1.5
	baz=145							
M14A	Sheep Mountain	144.66	83	⇓	P	PKPdf	10 37 26.3	-1.3
	baz=145,SNR=24							
D10A	Wagner Farm, O	144.68	73	⇓	P	PKPdf	10 37 26.1	-1.3
	baz=145,SNR=21							
LENM	Lemitar	144.68	99		ePKPdf	PKPdf	10 37 28.0	+0.1
NLU	North Lily Min	144.69	87		ePKPdf	PKPdf	10 37 27.4	-0.3
528A	Cox Ranch, San	144.69	108	⇑	P	PKPdf	10 37 26.2	-1.8
	baz=145,SNR=25							
V20A	Brimhall	144.71	95	⇑	P	PKPdf	10 37 26.5	-1.4
	baz=145,SNR=7.4							
124A	Stringfield Ra	144.72	102	⇑	P	PKPdf	10 37 26.2	-1.8
	baz=145,SNR=9.1							
LAZ	Ladron	144.72	98		ePKPdf	PKPdf	10 37 26.8	-1.1
Q16A	Castle Valley	144.73	89	⇓	P	PKPdf	10 37 26.6	-1.2
	baz=145,SNR=24							
225A	Deer Hill, Car	144.74	104	⇓	P	PKPdf	10 37 26.4	-1.6
	baz=145,SNR=8.0							
326A	Caldwell Ranch	144.74	105	⇓	P	PKPdf	10 37 26.0	-2.1
	baz=145							
K13A	Stover Farm, H	144.75	81	⇑	P	PKPdf	10 37 26.8	-0.9
	baz=145,SNR=21							
R17A	Hanksville Air	144.75	90	⇑	P	PKPdf	10 37 26.8	-1.1
	baz=145,SNR=34							
P16A	Fountain Green	144.78	87	⇑	P	PKPdf	10 37 27.3	-0.6
	baz=145,SNR=10							
427A	Hayter Ranch,	144.79	107	⇑	P	PKPdf	10 37 26.5	-1.6
	baz=145,SNR=16							
TEIG	Tepich	144.80	137		ePKPdf	PKPdf	10 37 27.0	-1.5
S18A	Hurst Farm, Bl	144.81	91	⇑	P	PKPdf	10 37 27.0	-1.0
	baz=145,SNR=25							
W21A	San Fidel	144.83	97	⇓	P	PKPdf	10 37 27.1	-1.0
	baz=145							
X22A	Bernardo	144.87	98	⇑	P	PKPdf	10 37 27.5	-0.7
	baz=145							
N15A	Stansbury Isla	144.89	85	⇑	P	PKPdf	10 37 27.1	-0.9
	baz=145							
BNM	Barren Site	144.89	99		ePKPdf	PKPdf	10 37 27.3	-0.9
F11A	Grangeville	144.90	75	⇑	P	PKPdf	10 37 26.8	-1.0
	baz=145,SNR=11							
TMUT	Trail Mountain	144.91	88		ePKPdf	PKPdf	10 37 28.2	+0.1
T19A	Beclabito	144.96	93	⇑	P	PKPdf	10 37 26.9	-1.3
	baz=145,SNR=19							
HLID	Hailey	144.97	80	⇑	P	PKPdf	10 37 27.3	-0.7
	baz=145,SNR=24							
HLID	Hailey	144.97	80		P	PKPdf	10 37 27.9	-0.2
L14A	Malta	145.00	83	⇑	P	PKPdf	10 37 27.4	-0.8
	baz=145,SNR=77							
MPU	Maple Canyon	145.01	87		ePKPbc	PKPbc	10 37 28.1	+0.5
U20A	Newcomb	145.02	95	⇓	P	PKPbc	10 37 27.3	-0.5
	baz=145							
NOQ	North Oquirrh	145.03	86		ePKPbc	PKPbc	10 37 28.4	+0.7
J13A	Cove Ranch, Pi	145.05	80	⇑	P	PKPbc	10 37 27.5	-0.1
	baz=145,SNR=62							
327A	Balmorhea Ranc	145.08	106	⇑	P	PKPbc	10 37 27.6	-0.5
	baz=145							
GDL2	Guadalupe Moun	145.09	104		ePKPbc	PKPbc	10 37 27.8	-0.3
Y23A	Lovelace Mesa,	145.13	100	⇓	P	PKPbc	10 37 27.4	-0.8
	baz=145,SNR=29							
H12A	Diamond D Ranc	145.14	78	⇓	P	PKPbc	10 37 27.8	-0.1
	baz=145,SNR=26							
SPUT	South Promonto	145.15	84		ePKPdf	PKPdf	10 37 28.4	0.0
428A	Kincaid Ranch,	145.15	108	⇓	P	PKPbc	10 37 28.0	-0.4
	baz=145,SNR=34							
226A	Malaga, Loving	145.16	104	⇑	P	PKPbc	10 37 27.6	-0.7
	baz=145,SNR=20							
HVU	Hansel Valley	145.17	83		ePKPbc	PKPbc	10 37 28.7	+0.6
Z24A	Sheeppen Canyo	145.19	101	⇓	P	PKPbc	10 37 28.0	-0.4
	baz=145,SNR=27							
O16A	Springville	145.20	87	⇓	P	PKPbc	10 37 28.1	-0.1
	baz=145,SNR=44							
125A	Gardner Draw,	145.20	103	⇑	P	PKPbc	10 37 27.7	-0.8
	baz=145,SNR=30							
M15A	Larsen Ranch,	145.23	84	⇓	P	PKPbc	10 37 28.4	+0.1
	baz=145,SNR=18							
NEW	Newport	145.25	71		ePKPbc	PKPbc	10 37 27.3	-0.8
V21A	Milan	145.25	96	⇑	P	PKPbc	10 37 28.4	-0.2
	baz=145,SNR=6.4							
SRU	San Rafael	145.25	89	⇑	P	PKPbc	10 37 28.3	-0.2
	baz=145,SNR=79							
SRU	San Rafael	145.25	89		ePKPdf	PKPdf	10 37 28.4	-0.3
R18A	Canyonlands Na	145.27	91	⇑	P	PKPbc	10 37 28.1	-0.5
	baz=145,SNR=54							
K14A	Jones Ranch, D	145.28	82	⇓	P	PKPbc	10 37 28.6	+0.1
	baz=145,SNR=37							
P17A	Butcher Ranch,	145.31	88	⇓	P	PKPbc	10 37 29.0	+0.3
	baz=145,SNR=24							
W22A	Albuquerque	145.31	98	⇓	P	PKPbc	10 37 28.9	+0.1
	baz=145,SNR=7.3							
I13A	Wildhorse Cree	145.32	79	⇑	P	PKPbc	10 37 28.9	+0.4
	baz=146,SNR=48							
S19A	Harvey Farm, M	145.41	92	⇓	P	PKPdf	10 37 28.4	-0.6
	baz=145,SNR=84							
F12A	Elk City	145.41	76	⇑	P	PKPdf	10 37 28.6	-0.1
	baz=146,SNR=87							
J14A	Carey	145.43	81	⇑	P	PKPdf	10 37 29.3	+0.4
	baz=146,SNR=23							
CLNB	Carlsbad	145.44	104		ePKPdf	PKPdf	10 37 28.9	-0.3
JLU	Jordanelle	145.44	86		ePKPdf	PKPdf	10 37 29.5	+0.5
X23A	Hourglass Bar	145.45	99	⇑	P	PKPdf	10 37 28.7	-0.5
	baz=146,SNR=5.7							
DAU	Daniels Canyon	145.47	87		ePKPdf	PKPdf	10 37 29.9	+0.9
E12A	Beaver Dam Sad	145.49	75	⇓	P	PKPdf	10 37 28.6	-0.2
	baz=146							
ANMO	Albuquerque	145.50	98		ePKPdf	PKPdf	10 37 29.2	-0.1
Q18A	Rafter H Ranch	145.51	89	⇓	P	PKPdf	10 37 28.5	-0.7
	baz=146,SNR=28							
MVCO	Mesa Verde	145.52	93	⇑	P	PKPdf	10 37 29.2	0.0
	baz=146,SNR=60							
MVCO	Mesa Verde	145.52	93		ePKPdf	PKPdf	10 37 29.4	+0.2
328A	Wristen Ranch,	145.52	107	⇑	P	PKPdf	10 37 28.8	-0.6
	baz=146,SNR=42							
Y24A	Capitan	145.52	101	⇓	P	PKPdf	10 37 29.2	-0.1
	baz=146,SNR=102							
H13A	Challis	145.53	78	⇓	P	PKPdf	10 37 28.9	-0.1
	baz=146,SNR=54							
Z25A	Roswell	145.57	102	⇓	P	PKPdf	10 37 29.0	-0.4
	baz=146,SNR=46							
N16A	Rees Ranch, Co	145.59	86	⇑	P	PKPdf	10 37 29.6	+0.4
	baz=146,SNR=19							
126A	Clayton Basin,	145.60	104	⇑	P	PKPdf	10 37 29.1	-0.4
	baz=146,SNR=14							
U21A	Nageezi	145.61	95	⇑	P	PKPdf	10 37 29.6	+0.2
	baz=146,SNR=120							
C11A	Tepee Creek (N	145.62	72	⇑	P	PKPdf	10 37 29.4	+0.4
	baz=146							
R19A	Curley Farm, L	145.63	91	⇓	P	PKPdf	10 37 29.2	-0.2
	baz=146,SNR=38							
227A	Bennet, Jal	145.64	105	⇑	P	PKPdf	10 37 29.2	-0.3
	baz=146							
M16A	Huntsville	145.68	85	⇑	P	PKPdf	10 37 29.3	-0

C13A	Hot Springs	146.61	73	⇓P	PKPdf	10 37 31.0	+0.3
	baz=147,SNR=12						
Q20A	Ridgley Place,	146.63	91	⇓P	PKPdf	10 37 31.4	+0.4
	baz=147,SNR=18						
F14A	Wisdom	146.63	77	⇓P	PKPdf	10 37 32.0	+1.2
	baz=147						
MSO	Missoula	146.68	75	*e*PKPdf	PKPdf	10 37 31.0	+0.1
AHID	Auburn Hatcher	146.74	83	*e*PKPbc	PKPbc	10 37 33.1	+0.3
JCT	Junction City	146.76	111	*e*PKPdf	PKPdf	10 37 31.4	-0.2
M18A	Lyman	146.76	86	⇓P	PKPdf	10 37 32.5	+1.4
	baz=147,SNR=17						
N18A	Larsen Ranch,	146.79	87	⇑P	PKPdf	10 37 32.3	+1.1
	baz=147,SNR=19						
R21A	Cimarron	146.79	92	⇑P	PKPdf	10 37 33.2	+1.9
	baz=147,SNR=10.0						
E14A	Clinton	146.80	76	⇑P	PKPdf	10 37 32.5	+1.4
	baz=147,SNR=20						
O19A	Miners Draw (B	146.80	88	⇓P	PKPdf	10 37 32.7	+1.5
	baz=147,SNR=30						
JTMT	Jette	146.82	73	*e*PKPbc	PKPbc	10 37 32.5	-0.5
K17A	Gardner Place,	146.85	83	⇑P	PKPdf	10 37 32.8	+1.6
	baz=147,SNR=14						
P20A	De Beque	146.86	90	⇑P	PKPdf	10 37 32.7	+1.3
	baz=147,SNR=20						
RRI2	Red Ridge	146.87	82	*e*PKPbc	PKPbc	10 37 33.2	+0.1
SWMT	Swartz Lake	146.91	74	*e*PKPdf	PKPdf	10 37 30.4	-0.8
G15A	Dillon	146.92	78	⇓P	PKPdf	10 37 32.8	+1.5
	baz=147,SNR=24						
DLMT	Dillon	146.93	78	*e*PKPdf	PKPdf	10 37 32.1	+0.8
B13A	Whitefish	146.94	72	⇑P	PKPdf	10 37 32.7	+1.5
	baz=147,SNR=29						
Y27A	Causey	146.95	103	⇓P	PKPdf	10 37 32.7	+0.9
	baz=147,SNR=50						
W25A	X Bar L Ranch,	146.95	100	⇓P	PKPdf	10 37 33.0	+1.2
	baz=147,SNR=83						
X26A	CR and CF Fran	146.96	101	⇑P	PKPdf	10 37 33.1	+1.3
	baz=147,SNR=28						
I16A	Newdale	147.00	81	⇑P	PKPdf	10 37 33.8	+2.3
	baz=147,SNR=22						
L18A	Fontenelle, Gr	147.02	85	⇑P	PKPdf	10 37 33.4	+1.8
	baz=147,SNR=8.6						
YBMT	Yellow Bay	147.03	73	*e*PKPbc	PKPbc	10 37 32.8	-0.7
Q21A	Lamborn Mesa,	147.03	92	⇓P	PKPbc	10 37 33.7	-0.1
	baz=147,SNR=9.1						
D14A	Greenough	147.05	74	⇓P	PKPdf	10 37 32.8	+1.3
	baz=147,SNR=34						
N19A	John Jarvie Ra	147.07	87	⇑P	PKPdf	10 37 33.3	+1.6
	baz=147,SNR=5.5						
SLMT	Seeley Lake	147.12	74	*e*PKPbc	PKPbc	10 37 33.3	-0.5
U24A	Moreno Valley	147.15	97	⇓P	PKPdf	10 37 33.8	+1.8
	baz=147						
CHMT	Chamberlain Mo	147.15	75	P	PKPbc	10 37 34.2	+0.3
A13A	Flathead Natio	147.17	71	⇓P	PKPbc	10 37 33.6	-0.2
	baz=147						
TPAW	Teton Pass	147.17	82	*e*PKPdf	PKPdf	10 37 32.4	+0.6
REDW	Red Top Meadow	147.18	82	*e*PKPdf	PKPdf	10 37 32.5	+0.7
F15A	Butte	147.20	77	⇑P	PKPbc	10 37 34.2	+0.1
	baz=147,SNR=18						
LRM	Limekiln Ridge	147.22	77	*e*PKPdf	PKPdf	10 37 32.5	+0.7
LRM				*e*PKPbc	PKPbc	10 37 34.9	+0.8
R22A	Saguache, Gunn	147.23	93	⇓P	PKPbc	10 37 34.7	+0.3
	baz=147,SNR=20						
V25A	Rancho No Teng	147.23	99	⇓P	PKPbc	10 37 34.3	-0.2
	baz=147,SNR=39						
MSTX	Muleshoe	147.25	103	⇑P	PKPdf	10 37 34.1	+1.8
	baz=147,SNR=56						
J17A	Brown Place, J	147.27	82	⇓P	PKPbc	10 37 34.5	+0.2
	baz=147,SNR=22						
SNOW	Snow King Moun	147.28	82	*e*PKPdf	PKPdf	10 37 32.7	+0.7
SNOW				*e*PKPbc	PKPbc	10 37 35.1	+0.7
O20A	White River Ci	147.29	89	⇑P	PKPbc	10 37 34.5	0.0
	baz=147,SNR=52						
W26A	Owens Ranch, T	147.32	101	⇑P	PKPbc	10 37 34.3	-0.4
	baz=147,SNR=20						
E15A	Deer Lodge	147.34	76	⇓P	PKPbc	10 37 34.3	-0.1
	baz=148,SNR=20						
IMW	Indian Meadow	147.36	81	*e*PKPdf	PKPdf	10 37 33.1	+1.0
IMW				*e*PKPbc	PKPbc	10 37 35.4	+0.9
K18A	Toltan Ranch,	147.36	84	⇑P	PKPbc	10 37 34.5	-0.1
	baz=148,SNR=16						
G16A	Moss Hill, Enn	147.38	79	⇑P	PKPbc	10 37 34.8	+0.3
	baz=148,SNR=14						
M19A	Rock Springs	147.39	86	⇓P	PKPbc	10 37 34.5	-0.3
	baz=148,SNR=6.8						
LOHW	Long Hollow	147.45	82	*e*PKPdf	PKPdf	10 37 33.2	+0.9
QLMT	Earthquake Lak	147.46	79	*e*PKPbc	PKPbc	10 37 35.7	+1.0
X27A	F and S Farms,	147.47	102	⇓P	PKPbc	10 37 34.8	-0.4
	baz=148,SNR=21						
Q22A	Crested Butte,	147.48	92	⇓P	PKPbc	10 37 35.1	0.0
	baz=148,SNR=14						
DAG	Danmarks Havn	147.48	342	⇓*i*P	PKPdf	10 37 32.6	+1.2
	comp=Z,28nm,1.5s						
H16A	Russell Place,	147.52	80	⇑P	PKPbc	10 37 35.3	+0.3
	baz=148,SNR=16						
WALA	Waterton Lakes	147.52	71	*e*PKPbc	PKPbc	10 37 35.0	+0.1
L19A	Farson	147.55	85	⇓P	PKPbc	10 37 35.3	+0.2
	baz=148,SNR=12						
LCCM	Lewis and Clar	147.59	77	P	PKPbc	10 37 36.0	+0.8
I17A	Pilgrim Ck.	147.61	81	⇓P	PKPbc	10 37 35.2	0.0
	baz=148						
SMCO	Snowmass	147.61	92	*e*PKPdf	PKPdf	10 37 33.7	+1.0
SMCO				*e*PKPbc	PKPbc	10 37 36.2	+0.8
N20A	Spence Gulch,	147.64	88	⇑P	PKPbc	10 37 35.1	-0.3
	baz=148,SNR=44						
J18A	Kendall Valley	147.65	83	⇓P	PKPbc	10 37 35.1	-0.2
	baz=148,SNR=22						
D15A	Lincoln	147.66	75	⇓P	PKPbc	10 37 34.8	-0.5
	baz=148,SNR=13						
BOZ	Bozeman (W)	147.67	78	⇓P	PKPbc	10 37 35.5	+0.2
	baz=148,SNR=31						
BOZ	Bozeman (W)	147.67	78	*e*PKPdf	PKPdf	10 37 33.1	+0.5
BOZ				*e*PKPbc	PKPbc	10 37 36.0	+0.7
YFT	Old Faithful	147.67	80	*e*PKPbc	PKPbc	10 37 36.2	+0.8
B14A	Marquette Ranc	147.68	72	⇓P	PKPbc	10 37 34.9	-0.3
	baz=148						
YMR	Madison River	147.68	80	*e*PKPdf	PKPdf	10 37 33.3	+0.7
U25A	Circle Dot Ran	147.70	98	⇑P	PKPbc	10 37 35.7	-0.1
	baz=148,SNR=30						
F16A	Kennard Place,	147.73	78	⇓P	PKPbc	10 37 35.6	+0.1
	baz=148,SNR=9.7						
BW06	Boulder Array	147.74	84	⇑P	PKPbc	10 37 35.0	-0.6
	baz=148,SNR=12						
PDAR	Pinedale Array	147.74	84	PKP	PKPdf	10 37 32.9	+0.1
	comp=Z,5.8nm,0.8s,baz=270,slow=1.5,SNR=39						
PDAR				PKPbc	PKPbc	10 37 35.5	-0.1
	comp=Z,5.8nm,0.8s,baz=211,slow=2.6,SNR=39						
V26A	Tequesquite Ra	147.74	100	⇓P	PKPbc	10 37 35.5	-0.4
	baz=148,SNR=64						
W27A	Bowe Ranch, En	147.76	101	⇑P	PKPbc	10 37 35.3	-0.7
	baz=148,SNR=22						
SDCO	Great Sand Dun	147.78	95	*e*PKPdf	PKPdf	10 37 33.2	+0.3
SDCO				*e*PKPbc	PKPbc	10 37 36.4	+0.5
A14A	Double T Ranch	147.80	71	⇑P	PKPbc	10 37 35.1	-0.4
	baz=148						
H17A	Grant Village	147.82	81	⇑P	PKPdf	10 37 34.7	+1.8
	baz=148						
O21A	Pagoda	147.84	90	⇓P	PKPbc	10 37 35.9	-0.1
	baz=148						
C15A	Salmond Ranch,	147.88	74	⇑P	PKPbc	10 37 35.6	-0.2
	baz=148,SNR=20						
HRY	Holter Researc	147.97	76	*e*PKPbc	PKPbc	10 37 36.6	+0.5
E16A	East Helena	148.00	76	⇓P	PKPbc	10 37 36.2	0.0
	baz=148,SNR=11						
I18A	Diamond G Ranc	148.00	82	⇑P	PKPbc	10 37 36.4	+0.2
	baz=148,SNR=5.5						
LKWY	Lake	148.00	80	*e*PKPbc	PKPbc	10 37 36.1	-0.1
M20A	Sweetwater, Wa	148.02	87	⇑P	PKPbc	10 37 37.0	+0.6
	baz=148,SNR=20						
N21A	Black Mountain	148.09	89	⇓P	PKPbc	10 37 37.2	+0.6
	baz=148,SNR=47						
B15A	Bradely Ranch,	148.10	73	⇑P	PKPbc	10 37 35.6	-0.8
	baz=148						
G17A	Pierce Place,	148.11	79	⇑P	PKPbc	10 37 37.5	+1.0
	baz=148,SNR=10						
U26A	Atchley Ranch,	148.13	99	⇓P	PKPbc	10 37 36.6	-0.3
	baz=148,SNR=22						
T25A	Trinidad	148.14	97	⇑P	PKPbc	10 37 37.1	+0.3
	baz=148,SNR=25						
L20A	Wamsutter	148.17	86	⇑P	PKPbc	10 37 37.1	+0.3
	baz=148,SNR=18						
A15A	Johnson Ranch,	148.22	72	⇑P	PKPbc	10 37 36.1	-0.6
	baz=148						
K19A	Absolon Red Bu	148.23	84	⇓P	PKPbc	10 37 36.4	-0.5
	baz=148,SNR=10						
D16A	Dana Ranch, Ca	148.27	76	⇓P	PKPbc	10 37 36.8	-0.1
	baz=148,SNR=12						
F17A	Fitzpatrick Pl	148.40	78	⇑P	PKPbc	10 37 37.8	+0.6
	baz=148,SNR=54						
C16A	Fuhringer Ranc	148.43	74	⇓P	PKPbc	10 37 37.2	-0.1
	baz=149						
E17A	Martinsdale	148.49	77	⇑P	PKPbc	10 37 37.6	+0.1
	baz=149,SNR=9.7						
AMTX	Amarillo	148.53	103	*e*PKPdf	PKPdf	10 37 34.8	+0.5
AMTX				*e*PKPbc	PKPbc	10 37 38.2	+0.2
M21A	Separation Pea	148.61	87	⇑P	PKPbc	10 37 38.0	+0.1
	baz=149,SNR=12						
B16A	M & M Farms, S	148.67	73	⇑P	PKPbc	10 37 37.0	-0.8
	baz=149						
RWWY	Rawlins	148.75	87	*e*PKPbc	PKPbc	10 37 38.5	+0.1
HKT	Hockley	148.75	116	*e*PKPbc	PKPbc	10 37 38.5	-0.2
L21A	Rawlins	148.78	87	⇑P	PKPbc	10 37 38.7	+0.3
	baz=149,SNR=19						
N22A	Wattenberg Ran	148.80	89	⇓P	PKPbc	10 37 39.1	+0.6
	baz=149,SNR=25						
ISCO	Idaho Springs	148.83	92	*e*PKPbc	PKPbc	10 37 39.4	+0.9
G18A	Lazy EL Ranch,	148.86	80	⇓P	PKPbc	10 37 39.0	+0.5
	baz=149,SNR=13						
D17A	Six Diamond Ra	148.86	76	⇑P	PKPbc	10 37 38.3	-0.1
	baz=149,SNR=24						
RLMT	Red Lodge	148.97	80	⇑P	PKPbc	10 37 39.3	+0.5
	baz=149,SNR=8.7						
RLMT	Red Lodge	148.97	80	*e*PKPdf	PKPdf	10 37 35.5	+0.8
RLMT				*e*PKPbc	PKPbc	10 37 40.1	+1.3
GCMT	Greycliff	148.99	79	*e*PKPbc	PKPbc	10 37 39.9	+1.1
C17A	Wharram Farm,	148.99	75	⇓P	PKPbc	10 37 38.4	-0.3
	baz=149						
F18A	Big Timber	149.00	78	⇓P	PKPbc	10 37 39.5	+0.8
	baz=149,SNR=17						
EDM	Edmonton	149.06	64	*e*PKPbc	PKPbc	10 37 37.8	-0.9
E18A	Harlowton	149.13	77	⇓P	PKPbc	10 37 40.1	+1.0
	baz=149,SNR=33						
B17A	L&G Farms, Che	149.20	74	⇑P	PKPbc	10 37 38.9	-0.3
	baz=149						
YKA	Yellowknife Ar	149.37	45	PKPbc	PKPbc	10 37 38.4	-0.7
	comp=Z,5.8nm,0.8s,baz=284,slow=2.4,SNR=4.9						
L22A	Ellis Ranch, M	149.43	87	⇑P	PKPbc	10 37 41.1	+1.1
	baz=150						
D18A	Linhart Farms,	149.44	76	⇓P	PKPbc	10 37 40.0	+0.2
	baz=150						
PHWY	Pilot Hill	149.71	89	*e*PKPbc	PKPbc	10 37 41.3	+0.6
EGMT	Eagleton	149.76	75	⇓P	PKPbc	10 37 40.5	-0.1
	baz=150						
EGMT	Eagleton	149.76	75	*e*PKPbc	PKPbc	10 37 40.5	-0.1
B18A	Beardsley Farm	149.87	74	⇓P	PKPbc	10 37 40.7	-0.2
	baz=150						
A18A	Metzger Ranch,	150.00	73	⇑P	PKPbc	10 37 40.6	-0.5
	baz=150						
WMOK	Wichita Mounta	150.27	106	*e*PKPdf	PKPdf	10 37 36.8	-0.3
WMOK				*e*PKPbc	PKPbc	10 37 41.9	-0.4
NATX	Nacogdoches	150.76	115	*e*PKPbc	PKPbc	10 37 44.1	+0.6
SCO	Scoresbysund	151.32	332	*i* P	PKPbc	10 37 43.2	-0.4
	comp=Z,11nm,1.2s						
RES	Resolute Bay	151.37	17	*e*PKPdf	PKPdf	10 37 36.2	-1.4
RES				*e*PKPbc	PKPbc	10 37 42.7	-0.9
RES				*e*PKPab	PKPab	10 37 51.7	-0.3
LAO	LASA Array	151.54	79	*e*PKPbc	PKPbc	10 37 45.1	+0.2
RSSD	Black Hills	151.94	85	*e*PKPdf	PKPdf	10 37 38.9	-0.5
RSSD				*e*PKPbc	PKPbc	10 37 45.1	-0.7
RSSD				*e*PKPab	PKPab	10 37 55.1	-0.1
CBKS	Cedar Bluff	152.12	98	*e*PKPdf	PKPdf	10 37 39.5	-0.3
CBKS				*e*PKPbc	PKPbc	10 37 46.8	+0.4
DGMT	Dagmar	153.42	76	*e*PKPdf	PKPdf	10 37 41.3	-0.1
DGMT				*e*PKPbc	PKPbc	10 37 49.3	+0.3
SUMG	Summit	154.17	343	*i* P	PKPbc	10 37 50.0	+0.1
	comp=Z,5.1nm,0.9s						
UALR	University of	154.25	114	*e*PKPdf	PKPdf	10 37 42.6	-0.4
LRAL	Lakeview Retre	156.05	124	*e*PKPdf	PKPdf	10 37 44.8	-0.7
ECSD	EROS Data Cent	156.62	91	*e*PKPdf	PKPdf	10 37 45.2	-0.8
ULM	Lac du Bonnet	159.13	75	PKP	PKPdf	10 37 47.0	-1.8
	comp=Z,1.9nm,0.6s,baz=146,slow=6.2,SNR=3.5						
ULM				PKPab	PKPab	10 38 23.0	-2.8
	comp=Z,4.8nm,0.9s,baz=231,slow=2.2,SNR=3.4						
ULM	Lac du Bonnet	159.13	75	PKP	PKPdf	10 37 47.0	-1.8
ULM				PKPab	PKPab	10 38 23.0	-2.8
CPCT	Cooper Cave	159.22	124	*e*PKPdf	PKPdf	10 37 49.0	-0.4
EYMN	Ely	161.45	84	*e*PKPdf	PKPdf	10 37 50.9	-0.5
COWI	Conover	162.43	91	*e*PKPdf	PKPdf	10 37 51.8	-0.7

*ISCJB **16** 11:10:31.9±0.4, 43°.00N±0°.05×140°.71E±0°.06, h174km±3km, mb3.7/9, Error ellipse: s-maj=9.3km s-min=6.6km az=144.5*
*NEIC **16** 11:10:32.1±0.9, 42°.93N×140°.65E, h162km±11km, Error ellipse: s-maj=17.1km s-min=12.6km az=89.0*
*JMA **16** 11:10:33.6±0.1, 43°.06N×140°.63E, h162km±1km, M2.7*
*IDC **16** 11:10:33.2±1.4, 43°.06N×140°.81E, h170km±15km, mb3.5/9, mb1 3.5/9, mb1mx3.3/26, mbtmp3.5/9, MS2.7/1, Ms1 2.7/1, ms1mx2.1/36, Error ellipse: s-maj=25.5km s-min=17.7km az=67.0*

ISC 16 11:10:33.1±0.4, 43°.00N±0°.05×140°.71E±0°.06, h168km±3km, n33, σ0s69/43, mb3.7/9, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK	Shakotan	0.39	334	P	Pn	11 10 55.6	-0.4
JSK				*e*S	Sn	11 11 12.6	-1.1
JEW	Eniwo	0.57	106	P	Pn	11 10 57.4	+0.6
JNB	Noboribetsu	0.58	155	P	Pn	11 10 57.1	+0.2
JSH	Shimam	0.61	234	P	Pn	11 10 57.0	0.0
JSH				*e*S	Sn	11 11 14.6	-0.7
JYM2	Yakumo 2	0.92	196	P	Pn	11 10 59.2	+0.2
JYM2				*e*S	Sn	11 11 18.8	0.0
JHR	Hokuryu	1.05	45	P	Pn	11 11 00.5	+0.6
JHR				*e*S	Sn	11 11 21.2	+0.6
JKB	Kayabe	1.14	168	P	Pn	11 11 01.2	+0.5
JAB	Ashibetsu	1.22	65	P	Pn	11 11 02.1	+0.8
JAB				*e*S	Sn	11 11 24.0	+0.9
JOSM	Okushiri--Mats	1.29	225	P	Pn	11 11 02.1	0.0
JFR	Furan	1.39	83	P	Pn	11 11 03.3	+0.4
JFR				*e*S	Sn	11 11 26.3	+0.4
JYG	Yagishiri	1.52	20	P	Pn	11 11 03.7	-0.4
JOT	Ohata	1.64	171	P	Pn	11 11 05.7	+0.2
JNBK	Urakawa-nobuka	1.67	115	P	Pn	11 11 06.0	+0.2
JKK2	Kamakawa 2	1.72	59	P	Pn	11 11 06.8	+0.6
JKK2				*e*S	Sn	11 11 32.3	+0.4
ASAJ	Asahikawa	1.77	50	P	Pn	11 11 07.0	+0.3
	4.4nm,0.3s,baz=242,slow=10,SNR=43						
ASAJ				S	Sn	11 11 31.4	-1.3
	1.5nm,0.3s,baz=312,slow=28,SNR=13						
JCH	Churui	1.99	100	P	Pn	11 11 08.5	-0.7
JCH				*e*S	Sn	11 11 35.3	-1.7
ERM	Erimo	2.06	118	*e*Pn	Pn	11 11 10.1	+0.1
ERM				*e*Sn	Sn	11 11 33.1	-5.3
JAR	Ashorobuto	2.26	81	P	Pn	11 11 12.2	0.0
JAR				*e*S	Sn	11 11 42.3	-0.2
JSE	Soyaes	2.38	34	P	Pn	11 11 14.1	+0.5
YSS	Yuzh-Sakhalins	4.21	19	*e*Pn	Pn	11 11 36.0	-0.4
MAJO	Matsushiro	6.73	197	*e*Pn	Pn	11 12 05.8	-3.8
MJAR	Matsushiro Arr	6.73	197	LR	LR	11 14 53.6	
	comp=Z,54nm,18.2s,baz=215,slow=38						
SONM	Songino Array	24.44	293	P	P	11 15 35.8	-0.2
	0.7nm,0.6s,mb3.4,baz=85,slow=3.0,SNR=3.0						
ZALV	Zalesovo Beam	37.69	307	P	P	11 17 32.4	+0.5
	1.6nm,0.4s,mb4.0,baz=83,slow=8.0,SNR=4.1						
KURK	Kurchatov	42.02	303	P	P	11 18 08.0	+0.5
	3.5nm,0.3s,mb4.4,baz=77,slow=8.9,SNR=17						
KURK	Kurchatov	42.02	303	P	P	11 18 08.0	+0.5
BVAR	Borovoye Array	46.31	308	P	P	11 18 42.9	+1.4
	0.9nm,0.3s,mb3.9,baz=83,slow=10,SNR=8.7						
INK	Inuvik	49.39	29	P	P	11 19 05.0	+0.1
	1.1nm,0.7s,mb3.6,baz=298,slow=5.5,SNR=6.1						
STCH	Steam Cracks	58.26	93	P	P	11 20 09.5	-0.5
WRA	Warramunga Arr	62.90	187	P	P	11 20 41.1	-0.1
	0.4nm,0.8s,mb3.3,baz=8.5,slow=7.3,SNR=3.5						
FINES	FINESS Array B	63.32	331	P	P	11 20 42.2	-1.3
	1.1nm,0.4s,mb4.0,baz=46,slow=8.2,SNR=6.9						
ASAR	Alice Springs	66.63	187	P	P	11 21 05.7	+0.4
	0.1nm,0.4s,mb3.0,baz=360,slow=5.7,SNR=7.5						
NOA	NORSAR Array B	68.50	336	P	P	11 21 15.2	-1.4
	0.6nm,0.7s,mb3.4,baz=22,slow=6.2,SNR=2.6						

CASC 16 11:22:50.5±1.6, 8°.37N×82°.96W, h3km, MD3.8, 3C-4D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	Cerro Adams	0.35	323	⇑*e*P	Pg	11 22 57.6	+0.4
BRU2	Volcan	0.49	32	⇓*i*P	Pg	11 23 00.7	+0.7
BRU2				*e*S	Sg	11 23 09.8	+3.4
CTCR	Cotoan	0.56	21	⇑*i*P	Pg	11 23 01.9	+0.7
BAR1		0.93	338	⇓*e*P	Pg	11 23 07.9	-0.5
CNI	Changuinola	1.12	23	⇑*e*P	Pg	11 23 12.2	+0.1
BUS	Buena Vista	1.42	326	⇓*e*P	Pn	11 23 15.9	-1.3
QCR	Quepos	1.59	311	*e*P	Pn	11 23 19.2	-0.3
QCR				*e*S	Sn	11 23 40.4	-0.1
URSC	Urasca	1.66	331	⇓*e*P	Pn	11 23 19.7	-0.9
URSC				*e*S	Sn	11 23 43.7	+1.2
LAJ	Bijagual	1.87	322	*e*P	Pn	11 23 26.6	+3.1
LAJ				*e*S	Sn	11 23 55.0	+7.4
PRS1	Puriscal	2.08	320	*e*P	Pn	11 23 25.7	-0.6
CGA2	Cerro Gallo 2	2.21	318	*e*P	Pn	11 23 29.4	+1.3

*IDC **16** 11:26:58.7±1.8, 37°.31N×75°.59E, h0km, mb4.0/3, mb1 3.9/9, mb1mx3.6/30, mbtmp3.9/9, ML3.5/6, Error ellipse: s-maj=30.2km s-min=23.6km az=128.0*
*NEIC **16** 11:27:10.5±1.1, 37°.71N×75°.69E, h99km±14km, Error ellipse: s-maj=20.0km s-min=7.2km az=59.0*
*ISCJB **16** 11:27:11.0±0.5, 37°.83N±0°.03×75°.82E±0°.07, h120km±10km, mb3.9/3, Error ellipse: s-maj=9.5km s-min=4.8km az=168.0*
*NNC **16** 11:27:13.9±7.7, 38°.29N×75°.30E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=64.3km s-min=48.5km az=162.0*
*BJI **16** 11:27:16.0, 38°.13N×76°.58E, h15km, mB4.6/2, mb4.0/2, ML3.9/5, Ms3.6/2, Ms7 3.5/1*

ISC 16 11:27:12.1±0.4, 37°.85N±0°.03×75°.87E±0°.07, h116km±9km, n45, σ1s50/54, mb3.9/3, 2C-3D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	1.66	3	P	Pn	11 27 38.4	-2.7
KSH				Sg	Sn	11 27 57.5	-5.8
KSH				smax			
	comp=N,3μm,0.6s						
KSH				smax			
	comp=E,3μm,0.6s						
KZA	Kyzart	4.25	354	P	Pn	11 28 16.2	+1.4
	SNR=10.0						
UCH	Uchtor	4.49	347	P	Pn	11 28 19.8	+1.7
	SNR=22						
UCH	Uchtor	4.49	347	*e*Pn	Pn	11 28 19.0	+1.0
AML	Almayashu	4.59	339	P	Pn	11 28 20.4	+1.0
	SNR=7.8						
AML	Almayashu	4.59	339	*e*Pn	Pn	11 28 18.8	-0.6
CHCP	Chirah Chowk	4.69	208	⇓P	Pn	11 28 24.1	+3.3
KBK	Karagaybulak	4.85	352	P	Pn	11 28 25.6	+2.8
	SNR=9.6						
AAK	Ala-Archa	4.89	348	P	Pn	11 28 25.3	+1.9
	SNR=8.9						
AAK	Ala-Archa	4.89	348	Pn	Pn	11 28 25.2	+1.8
	comp=E,0.0nm,0.3s,baz=146,slow=6.1,SNR=24						
AAK				Sn	Sn	11 29 16.4	-2.5
	comp=E,0.0nm,0.3s,baz=352,slow=21,SNR=4.7						
AAK				Lg		11 29 39.2	
	comp=E,0.0nm,0.3s,baz=115,slow=24,SNR=2.5						
AAK	Ala-Archa	4.89	348	Pn	Pn	11 28 25.2	+1.8
AAK				Sn	Sn	11 29 16.4	-2.5
AAK				Lg		11 29 39.2	
EKS2	Erkin-Say	5.06	342	P	Pn	11 28 26.9	+1.2
	SNR=9.0						
EKS2	Erkin-Say	5.06	342	*e*Pn	Pn	11 28 26.6	+0.9
	comp=E,21nm,1.0s						
TKM2	Tokmak 2	5.07	358	⇓Pn	Pn	11 28 27.2	+1.4
	comp=E,7.3nm,0.5s						
TKM2				⇑Sn	Sn	11 29 20.4	-2.7
	comp=E,23nm,0.7s						
TKM2	Tokmak 2	5.07	358	P	Pn	11 28 27.7	+1.9
	SNR=20						
TKM2	Tokmak 2	5.07	358	*e*Pn	Pn	11 28 27.3	+1.5
	comp=E,13nm,0.5s						
CEP	Cherat	5.15	220	⇓P	Pn	11 28 28.9	+1.9
CEP				S	Sn	11 29 24.0	-1.2
THN	Thein Dam	5.41	181	*e*PKP	Pn	11 28 32.2	+1.7
THN				*ex*	x	11 29 30.5	
SDNR	Sundarnagar	6.40	172	*e*PKP	Pn	11 28 46.1	+2.2
SDNR				*e*S	Sn	11 29 51.1	-

n25,σ0°89/41, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.15**	**8**	*e*PB	**Pb**	**11 35 02.5**	**-1.0**
RLS				*e*SB	**Sb**	**11 35 06.4**	**-1.1**
RLS	**Riolos of Patr**	**0.15**	**8**	*e*Pb	**Pb**	**11 35 02.5**	**-1.0**
RLS				*e*Sb	**Sb**	**11 35 06.4**	**-1.1**
UPR	**University Cam**	**0.47**	**36**	*e*PN	**Pn**	**11 35 07.7**	**-0.7**
UPR	**University Cam**	**0.47**	**36**	*e*Pn	**Pn**	**11 35 07.7**	**-0.7**
LAKA	**Lakka**	**0.54**	**52**	P	**Pb**	**11 35 08.2**	**-0.7**
LAKA				S	**Sb**	**11 35 16.5**	**+0.1**
LAKA	**Lakka**	**0.54**	**52**	P	**Pb**	**11 35 08.2**	**-0.7**
LAKA				S	**Sb**	**11 35 16.5**	**+0.1**
KFL	**Anninata**	**0.55**	**292**	P	**Pb**	**11 35 08.8**	**-0.3**
KFL				S	**Sb**	**11 35 18.4**	**+1.6**
EFP	**Efpalio**	**0.64**	**35**	P	**Pb**	**11 35 10.0**	**-0.5**
EFP				S	**Sb**	**11 35 20.4**	**+1.3**
EFP	**Efpalio**	**0.64**	**35**	*e*PN	**Pb**	**11 35 10.0**	**-0.5**
EFP	**Efpalio**	**0.64**	**35**	P	**Pb**	**11 35 10.0**	**-0.5**
EFP				S	**Sb**	**11 35 20.4**	**+1.3**
GUR	**Goura**	**0.71**	**87**	P	**Pb**	**11 35 10.8**	**-0.9**
GUR				S	**Sb**	**11 35 22.1**	**+0.9**
GUR	**Goura**	**0.71**	**87**	P	**Pb**	**11 35 10.8**	**-0.9**
GUR				S	**Sb**	**11 35 22.1**	**+0.9**
VLS	**Valsamata**	**0.72**	**292**	P	**Pb**	**11 35 11.2**	**-0.7**
VLS				S	**Sb**	**11 35 22.4**	**+0.9**
VLS	**Valsamata**	**0.72**	**292**	*e*PN	**Pn**	**11 35 10.5**	**-1.4**
VLS	**Valsamata**	**0.72**	**292**	*e*Pn	**Pn**	**11 35 10.5**	**-1.4**
VLS	**Valsamata**	**0.72**	**292**	P	**Pb**	**11 35 11.2**	**-0.7**
VLS				S	**Sb**	**11 35 22.4**	**+0.9**
KALE	**Kalithea**	**0.73**	**48**	P	**Pb**	**11 35 11.5**	**-0.6**
KALE				S	**Sb**	**11 35 22.8**	**+1.0**
KALE	**Kalithea**	**0.73**	**48**	P	**Pb**	**11 35 11.5**	**-0.6**
KALE				S	**Sb**	**11 35 22.8**	**+1.0**
ITM	**Ithomi**	**0.82**	**152**	P	**Pn**	**11 35 12.8**	**-0.4**
ITM				S	**Sb**	**11 35 25.3**	**+1.1**
ITM	**Ithomi**	**0.82**	**152**	*e*PN	**Pn**	**11 35 13.0**	**-0.2**
ITM	**Ithomi**	**0.82**	**152**	*e*Pn	**Pn**	**11 35 13.0**	**-0.2**
ITM				S	**Sb**	**11 35 25.3**	**+1.1**
DSF	**Desfina**	**0.99**	**59**	P	**Pn**	**11 35 15.8**	**+0.2**
DSF	**Desfina**	**0.99**	**59**	P	**Pn**	**11 35 15.8**	**+0.2**
LKD2	**Lefkada island**	**1.08**	**325**	P	**Pn**	**11 35 17.6**	**+0.9**
LKD2				S	**Sn**	**11 35 35.2**	**+4.6**
LKD2	**Lefkada island**	**1.08**	**325**	P	**Pn**	**11 35 17.6**	**+0.9**

*IDC **16** 11:35:00.0±0.5, 39.°26N×140.°82E, h0km, mb4.2/26, mb1 4.3/28, mb1mx4.3/34, mbtmp4.2/28, ML3.4/2, MS3.2/4, Ms1 3.3/4, ms1mx2.9/36, Error ellipse: s-maj=14.6km s-min=10.9km az=112.0*

*NIED **16** 11:35:00, 39.°20N×141.°00E, h5km, Mw4.2 Best double couple: M=2.01000×10^15 NP1:φs=11.00000°, δ54.00000°, λ99.00000°. NP2:φs=175.00000°, δ37.00000°, λ77.00000°.*

*ISCJB **16** 11:35:01.2±0.4, 39.°22N±0.°02×140.°94E±0.°03, h18km±3km, mb4.3/48, MS3.2/3, Error ellipse: s-maj=4.5km s-min=3.9km az=40.2*

*JMA **16** 11:35:01.4, 39.°19N×140.°95E, h9km, M4.2 Broadband fault plane solution: P waves. NP1:φs=149.00000°, δ29.00000°, λ32.00000°. NP2:φs=30.00000°, δ75.00000°, λ115.00000°. Principal axes: T Plg53.0000°, Azm330.0000°; N Plg24.0000°, Azm204.0000°; P Plg26.0000°, Azm101.0000°;*

JMA Felt II J1.

*NEIC **16** 11:35:01.4, 39.°19N×140.°95E, h8km, mb4.7/16, MW4.1(NIED), After JMA.*

NEIC Recorded [2 JMA] in Akita and Iwate; [1 JMA] in Miyagi.

*MOS **16** 11:35:03.8±1.2, 39.°28N×140.°79E, h33km, mb4.7/11, Error ellipse: s-maj=9.7km s-min=6.0km az=87.5*

ISC 16 11:35:01.6±0.4, 39.°19N±0.°02×140.°94E±0.°03, h9km±3km, n103, σ1°07/112, mb4.3/48, MS3.2/3, 6C-8D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRG	**Rokugo**	**0.32**	**311**	⇑P	**Pg**	**11 35 07.9**	**0.0**
JRG				*e*S	**Sg**	**11 35 12.9**	**+0.8**
JMK	**Ichinoseki**	**0.32**	**137**	⇓P	**Pg**	**11 35 07.6**	**-0.4**
JMK				*e*S	**Sg**	**11 35 12.0**	**-0.3**
JOM	**Ohasama**	**0.40**	**44**	⇓P	**Pg**	**11 35 09.0**	**-0.4**
JOM				*e*S	**Sg**	**11 35 14.5**	**-0.1**
JYK	**Kaneyama**	**0.53**	**239**	⇓P	**Pg**	**11 35 11.6**	**-0.2**
JYK				*e*S	**Sg**	**11 35 18.8**	**+0.1**
OFUJ	**Ofunato**	**0.58**	**100**	⇓P	**Pg**	**11 35 12.3**	**-0.5**
OFUJ				*e*S	**Sg**	**11 35 20.8**	**+0.4**
JIO	**Ouri**	**0.80**	**156**	⇓P	**Pg**	**11 35 16.1**	**-0.9**
JIO				*e*S	**Sg**	**11 35 27.4**	**0.0**
JOU	**Okura**	**0.85**	**195**	⇑P	**Pg**	**11 35 17.5**	**-0.5**
JOU				*e*S	**Sg**	**11 35 28.9**	**-0.1**
ERM	**Erimo**	**3.29**	**30**	*d i*P	**Pn**	**11 35 55.5**	**+2.1**
MJAR	**Matsushiro Arr**	**3.41**	**220**	Pn	**Pn**	**11 35 56.2**	**+1.1**
	1.9nm,0.3s,baz=28,slow=13,SNR=32						
MJAR				Pg	**Pg**	**11 36 03.3**	**-3.7**
	4.9nm,0.3s,baz=26,slow=15,SNR=54						
MJAR				Lg		11 36 48.1	
	2.0nm,0.3s,baz=21,slow=23,SNR=5.2						
MJAR				LR	LR	11 37 24.5	
	comp=Z,326nm,18.8s,baz=80,slow=42						
MAJO	**Matsushiro**	**3.41**	**220**	*e*P	**Pn**	**11 35 56.6**	**+1.6**
MAT	**Matsushiro**	**3.41**	**220**	P	**Pn**	**11 35 56.3**	**+1.3**
MAT				S	**Sn**	**11 36 38.4**	**+2.8**
ASAJ	**Asahikawa**	**5.08**	**14**	Pn	**Pn**	**11 36 19.1**	**+1.2**
	2.0nm,0.3s,baz=229,slow=16,SNR=19						
ASAJ				Sn	**Sn**	**11 37 22.5**	**+5.8**
	0.6nm,0.3s,baz=204,slow=20,SNR=2.7						
ASAJ	**Asahikawa**	**5.08**	**14**	P	**Pn**	**11 36 19.2**	**+1.3**
ASAJ						11 37 22.5	
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**6.09**	**36**	⇑*i*P	**Pn**	**11 36 35.3**	**+3.5**
YUK				*i* S	**Sn**	**11 37 39.9**	**-1.6**
YUK				pmax	pmax		
	comp=Z,120nm,1.1s						
YUK				pmax	pmax		
	comp=N,63nm,1.1s						
YUK				pmax	pmax		
	comp=E,85nm,1.1s						
YUK				pmax	pmax		
	comp=Z,111nm,1.1s						
YUK				smax			
	comp=N,190nm,0.5s						
YUK				smax			
	comp=E,280nm,0.6s						
YUK				MLR	MLR		
	comp=N,286nm,14.6s						
YUK				MLR	MLR		
	comp=Z,228nm,14.6s						
JHJ	**Hachijo jima 2**	**6.13**	**189**	Pn	**Pn**	**11 36 33.6**	**+1.2**
	comp=Z,5.2nm,0.3s,baz=35,slow=3.9,SNR=7.7						
VLA	**Vladivostok**	**7.87**	**303**	P	**Pn**	**11 36 52.0**	**-4.3**
VLA				MLR	MLR		
	comp=Z,200nm,15.4s						
YSS	**Yuzh-Sakhalins**	**7.88**	**9**	*e*P	**Pn**	**11 36 57.5**	**+1.2**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS	**Yuzh-Sakhalins**	**7.88**	**9**	*e*Pn	**Pn**	**11 36 56.7**	**+0.4**
	comp=Z,31nm,0.8s						
HABR	**Khabarovsk**	**10.21**	**337**	*e*P	**Pn**	**11 37 28.9**	**+0.7**
HABR						11 39 23.1	
HABR				MLR	MLR		
	comp=Z,79nm,12.0s						
KSRS	**Korea Array**	**10.37**	**264**	Pn	**Pn**	**11 37 34.6**	**+4.0**
	comp=Z,1.3nm,0.3s,baz=75,slow=14,SNR=32						
KSRS				Sn	**Sn**	**11 39 33.1**	**+6.2**
	comp=Z,0.3nm,0.3s,baz=79,slow=24,SNR=5.4						
KSRS				LR	LR	11 41 15.9	
	comp=Z,180nm,18.1s,baz=177,slow=36						
KSRS	**Korea Array**	**10.37**	**264**	P	**Pn**	**11 37 34.6**	**+4.0**
KSRS						11 39 33.2	
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,180nm,18.1s						
KLR	**Kul'dur**	**12.00**	**330**	*e*P	**Pn**	**11 37 53.4**	**+0.6**
CBIJ	**Chichi jima**	**12.10**	**175**	Pn	**Pn**	**11 37 51.8**	**-2.5**
	comp=Z,1.8nm,0.3s,baz=300,slow=8.9,SNR=7.1						
PETK	**Petropavlovsk-**	**18.06**	**34**	LR	LR	11 45 31.2	
	comp=Z,64nm,20.1s,baz=62,slow=35						
PET	**Petropavlovsk**	**18.43**	**36**	*e*P	**Pn**	**11 39 18.1**	**+0.9**
PET				MLR	MLR		
	comp=Z,100nm,19.0s						
WHN	**Wuhan**	**23.40**	**257**	P	**P**	**11 40 13.0**	**+2.1**
YAK	**Yakutsk**	**23.89**	**347**	*e*P	**P**	**11 40 11.3**	**-4.0**
YAK				pmax	pmax		
	comp=Z,31nm,1.5s,mb4.5						
YAK				pmax	pmax		
	comp=N,20nm,1.5s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.2s						
SEY	**Seymchan**	**24.76**	**13**	*c*eP	**P**	**11 40 24.9**	**+1.6**
FX1	**Attu Island--F**	**25.97**	**48**	P	**P**	**11 40 35.4**	**+1.0**
	comp=E,20nm,1.1s,mb4.5,baz=289,slow=11,SNR=2.8						
FX1	**Attu Island--F**	**25.97**	**48**	P	**P**	**11 40 35.4**	**+1.0**
SONM	**Songino Array**	**26.32**	**300**	P	**P**	**11 40 37.0**	**-0.6**
	comp=E,0.6nm,0.7s,mb3.2,baz=108,slow=9.5,SNR=4.1						
ENH	**Enshi**	**27.23**	**261**	*e*P	**P**	**11 40 46.1**	**+0.1**
	comp=E,12nm,0.9s,mb4.4						
BILL	**Bilibino**	**32.08**	**18**	*e*P	**P**	**11 41 28.6**	**0.0**
BILL				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.4						
BILL	**Bilibino**	**32.08**	**18**	*e*P	**P**	**11 41 28.6**	**0.0**
	comp=Z,7.4nm,1.2s,mb4.4						
ZALV	**Zalesovo Beam**	**40.21**	**311**	P	**P**	**11 42 37.0**	**-1.2**
	comp=Z,4.7nm,0.9s,mb4.2,baz=79,slow=8.0,SNR=11						
NVS	**Novosibirsk**	**41.10**	**312**	*e*P	**P**	**11 42 45.1**	**-0.5**
CMAR	**Chiang Mai Arr**	**41.73**	**253**	P	**P**	**11 42 52.8**	**+1.6**
	comp=Z,0.4nm,0.4s,mb3.4,baz=126,slow=14,SNR=4.3						
CMAR				LR	LR	12 01 49.0	
	comp=Z,27nm,18.8s,MS3.1,baz=180,slow=39						
MK31	**Makanchi Array**	**42.69**	**300**	*e*P	**P**	**11 42 58.3**	**-0.3**
MKAR	**Makanchi Array**	**42.69**	**300**	P	**P**	**11 42 57.9**	**-0.8**
	comp=Z,2.4nm,0.8s,mb4.0,baz=73,slow=13,SNR=12						
MKAR	**Makanchi Array**	**42.69**	**300**	P	**P**	**11 42 57.9**	**-0.8**
KURK	**Kurchatov**	**44.33**	**306**	P	**P**	**11 43 11.2**	**-0.7**
	comp=Z,3.6nm,0.5s,mb4.4,baz=82,slow=8.5,SNR=19						
KURK	**Kurchatov**	**44.33**	**306**	*c i*P	**P**	**11 43 11.0**	**-0.9**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
KURK				MLR	MLR		
	comp=Z,46nm,15.0s,MS3.5						
KDAK	**Kodiak Island**	**45.77**	**43**	P	**P**	**11 43 23.1**	**-0.1**
	comp=Z,2.7nm,0.7s,mb4.3,baz=286,slow=16,SNR=2.6						
ODAN	**Odare**	**45.95**	**271**	*e*P	**P**	**11 43 20.0**	**-5.0**
	comp=Z,53nm,1.4s,mb5.3						
RAMN	**Ramite**	**46.52**	**272**	*e*P	**P**	**11 43 23.3**	**-6.2**
GUN	**Gumba**	**46.61**	**273**	*e*P	**P**	**11 43 28.7**	**-1.5**
	comp=Z,33nm,0.7s,mb5.4						
KKN	**Kakani**	**47.13**	**274**	*e*P	**P**	**11 43 32.7**	**-1.6**
	comp=Z,30nm,0.7s,mb5.3						
KKN	**Kakani**	**47.13**	**274**	*e*P	**P**	**11 43 32.7**	**-1.6**
KKN				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.3						
TKM2	**Tokmak 2**	**48.30**	**297**	*e*P	**P**	**11 43 44.2**	**+1.0**
TKM2				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.0						
TKM2	**Tokmak 2**	**48.30**	**297**	*e*P	**P**	**11 43 44.2**	**+1.0**
	comp=Z,13nm,0.9s,mb5.0						
BVAR	**Borovoye Array**	**48.87**	**311**	P	**P**	**11 43 47.3**	**0.0**
	comp=Z,1.3nm,0.6s,mb4.1,baz=78,slow=7.7,SNR=6.3						
BRVK	**Borovoye**	**48.92**	**311**	⇑*e*P	**P**	**11 43 47.1**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.4						
AAK	**Ala-Archa**	**49.17**	**297**	⇓*e*P	**P**	**11 43 50.5**	**+0.7**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.2						
AAK				MLR	MLR		
	comp=Z,16nm,17.0s,MS3.1						
MENT	**Mentasta**	**49.49**	**36**	*e*P	**P**	**11 43 53.1**	**+1.1**
INK	**Inuvik**	**52.65**	**28**	P	**P**	**11 44 15.8**	**+0.1**
	comp=Z,3.7nm,0.9s,mb4.3,baz=306,slow=6.7,SNR=4.8						
INK	**Inuvik**	**52.65**	**28**	P	**P**	**11 44 15.8**	**+0.1**
SVE	**Sverdlovsk**	**53.30**	**317**	*e*P	**P**	**11 44 20.1**	**-0.5**
ARU	**Arti**	**54.51**	**317**	*d i*P	**P**	**11 44 29.5**	**0.0**
ARU				*e*		11 46 27.7	
ARU				S	**S**	**11 52 09.1**	**+0.7**
ARU				SS	SS	11 55 44.0	-6.3
ARU				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.8						
ARU	**Arti**	**54.51**	**317**	*e*P	**P**	**11 44 29.1**	**-0.4**
	comp=Z,4.1nm,0.7s,mb4.6						
ABKAR	**Akbulak array**	**56.28**	**309**	*e*P	**P**	**11 44 41.8**	**-0.5**
	comp=Z,1.4nm,0.5s,mb4.2						
KBL	**Kabul**	**56.32**	**289**	*e*P	**P**	**11 44 42.9**	**0.0**
KBL				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.9						
KBL	**Kabul**	**56.32**	**289**	*e*P	**P**	**11 44 42.9**	**0.0**
	comp=Z,15nm,1.1s,mb5.0						
AKTK	**Aktyubinsk**	**56.97**	**311**	P	**P**	**11 44 45.5**	**-1.8**
AKTO	**Aktyubinsk**	**56.97**	**311**	P	**P**	**11 44 45.5**	**-1.8**
	comp=Z,2.7nm,0.8s,mb4.3,baz=57,slow=14,SNR=10						
SPITS	**Spitsbergen Ar**	**58.34**	**348**	P	**P**	**11 44 56.0**	**-0.5**
	comp=Z,3.4nm,0.6s,mb4.6,baz=293,slow=7.1,SNR=16						
WRA	**Warramunga Arr**	**59.14**	**187**	P	**P**	**11 45 02.2**	**-0.4**
	comp=Z,3.9nm,0.7s,mb4.5,baz=4.9,slow=7.1,SNR=46						
RES	**Resolute Bay**	**60.61**	**15**	P	**P**	**11 45 11.5**	**-0.7**
	comp=Z,4.7nm,0.8s,mb4.7,baz=317,slow=9.4,SNR=9.8						
RES	**Resolute Bay**	**60.61**	**15**	P	**P**	**11 45 11.5**	**-0.7**
ARCES	**ARCESS Array B**	**61.85**	**339**	P	**P**	**11 45 21.2**	**+0.6**
	comp=Z,3.2nm,1.1s,mb4.4,baz=54,slow=9.1,SNR=4.0						
YKA	**Yellowknife Ar**	**62.14**	**31**	P	**P**	**11 45 22.9**	**+0.2**
	comp=Z,0.7nm,0.6s,mb3.9,baz=296,slow=6.5,SNR=3.1						
ASAR	**Alice Springs**	**62.87**	**187**	P	**P**	**11 45 27.9**	**0.0**
	comp=Z,2.5nm,0.7s,mb4.4,baz=8.3,slow=4.7,SNR=28						
JOF	**Joensuu**	**63.89**	**331**	*e*P	**P**	**11 45 32.3**	**-2.0**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
JOF	**Joensuu**	**63.89**	**331**	*e*p	**P**	**11 45 32.3**	**-2.0**
	comp=Z,1.6nm,0.7s,mb4.2						
JCW	**Jim Creek**	**66.23**	**47**	*e*P	**P**	**11 45 50.1**	**+0.3**
	comp=Z,16nm,1.2s,mb4.9						
KAF	**Kangasniemi**	**66.23**	**332**	*e*P	**P**	**11 45 48.5**	**-1.0**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
KAF	**Kangasniemi**	**66.23**	**332**	*e*p	**P**	**11 45 48.5**	**-1.0**
	comp=Z,1.3nm,0.5s,mb4.2						
FINES	**FINESS Array B**	**66.74**	**332**	P	**P**	**11 45 52.5**	**-0.3**
	comp=Z,3.7nm,0.7s,mb4.5,baz=46,slow=8.2,SNR=9.9						
KIV	**Kislovodsk**	**69.22**	**310**	*e*P	**P**	**11 46 09.9**	**+1.2**
KIV				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
STKA	**Stephens Creek**	**70.70**	**179**	P	**P**	**11 46 18.1**	**+0.3**
	comp=Z,1.6nm,0.7s,mb4.1,baz=90,slow=7.1,SNR=2.5						
HFS	**Hagfors**	**71.98**	**335**	P	**P**	**11 46 23.5**	**-1.8**
	comp=Z,2.4nm,0.7s,mb4.2,baz=60,slow=3.6,SNR=5.0						
HFS	**Hagfors**	**71.98**	**335**	P	**P**	**11 46 23.4**	**-1.8**
NB2	**NORSAR Subarra**	**72.06**	**337**	P	**P**	**11 46 25.4**	**-0.3**
	comp=Z,1.3nm,0.6s,mb4.0,baz=40,slow=6.2						
NOA	**NORSAR Array B**	**72.06**	**337**	P	**P**	**11 46 24.7**	**-1.0**
	comp=Z,3.1nm,0.9s,mb4.3,baz=39,slow=6.1,SNR=7.6						
NOA	**NORSAR Array B**	**72.06**	**337**	P	**P**	**11 46 24.7**	**-1.0**
FFC	**Flin Flon**	**72.10**	**33**	*i* P	**P**	**11 46 27.9**	**+1.8**
AKASG	**Malin Array Be**	**72.37**	**322**	P	**P**	**11 46 26.4**	**-1.4**
	comp=Z,0.5nm,0.3s,mb3.9,baz=43,slow=6.5,SNR=6.4						
LRM	**Limekiln Ridge**	**72.87**	**45**	*e*P	**P**	**11 46 31.3**	**+0.4**
	comp=Z,22nm,1.1s,mb5.0						
DLMT	**Dillon**	**73.08**	**45**	*e*P	**P**	**11 46 33.3**	**+1.2**
	comp=Z,2.8nm,1.0s,mb4.2						
BOZ	**Bozeman (W)**	**73.43**	**44**	*e*P	**P**	**11 46 35.0**	**+0.9**
BOZ				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
BOZ	**Bozeman (W)**	**73.43**	**44**	*e*P	**P**	**11 46 35.0**	**+0.8**
	comp=Z,1.6nm,1.0s,mb3.9						
NVAR	**Mina Array Bea**	**74.00**	**53**	P	**P**	**11 46 38.4**	**+0.8**
	comp=Z,1.0nm,0.7s,mb3.8,baz=295,slow=5.6,SNR=8.6						
IMW	**Indian Meadow**	**74.93**	**45**	*e*P	**P**	**11 46 45.0**	**+2.1**
	comp=Z,1.3nm,0.6s,mb4.0						
BUR08	**Bucovina Ar. S**	**76.39**	**321**	*e*P	**P**	**11 46 51.5**	**+0.3**
PDAR	**Pinedale Array**	**76.43**	**46**	P	**P**	**11 46 50.2**	**-1.3**
	comp=Z,0.8nm,0.7s,mb3.8,baz=281,slow=2.5,SNR=6.2						
BRTR	**Keskin Array B**	**77.15**	**311**	P	**P**	**11 46 55.3**	**-0.4**
	comp=Z,1.0nm,0.7s,mb3.8,baz=96,slow=3.7,SNR=6.1						
SRU	**San Rafael**	**78.28**	**49**	*e*P	**P**	**11 47 02.3**	**+0.3**
SRU				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
SRU	**San Rafael**	**78.28**	**49**	*e*P	**P**	**11 47 02.3**	**+0.4**
	comp=Z,1.9nm,0.7s,mb4.1						
GERES	**GERESS Array B**	**80.69**	**328**	P	**P**	**11 47 12.5**	**-2.4**
	comp=Z,0.5nm,0.3s,mb3.9,baz=38,slow=5.0,SNR=5.1						
IDI	**Anoyia**	**85.26**	**312**	P	**P**	**11 47 37.1**	**-1.7**
	comp=Z,7.8nm,0.9s,mb4.8,baz=351,slow=13,SNR=3.3						
TXAR	**Lajitas Array**	**89.10**	**52**	P	**P**	**11 47 56.8**	**-0.8**
	comp=Z,0.5nm,0.8s,mb3.9,baz=298,slow=2.7,SNR=5.6						
LPAZ	**La Paz**	**145.87**	**56**	PKPbc	PKPbc	11 54 42.5	+0.7
	comp=Z,1.1nm,0.5s,baz=358,slow=7.8,SNR=5.6						
LPAZ	**La Paz**	**145.87**	**56**	PKP2	PKPab	11 54 42.5	+0.3
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SIV	**San Ignacio**	**149.91**	**46**	PKPbc	PKPbc	11 54 52.7	-0.1
	baz=292,slow=5.4						

*NEIC **16** 11:57:29.8±0.7, 3.°56S×141.°59E, h10km, Error ellipse: s-maj=16.4km s-min=11.8km az=94.0*

*IDC **16** 11:57:29.3±1.9, 3.°53S×141.°41E, h0km, mb3.8/6, mb1 4.1/7, mb1mx3.8/15, mbtmp3.9/7, ML3.9/1, MS3.8/2, Ms1 3.7/2, ms1mx3.0/17, Error ellipse: s-maj=64.0km s-min=23.4km az=94.0*

*ISCJB **16** 11:57:31.4±0.8, 3.°66S±0.°08×141.°62E±0.°09, h33km, mb3.8/6, MS3.7/2, Error ellipse: s-maj=14.4km s-min=9.9km az=31.3*

*DJA **16** 11:57:35, 3.°52S×141.°23E, h20km, mb4.7/10*

ISC 16 11:57:33.4±0.8, 3.°62S±0.°08×141.°64E±0.°09, h35km, n18, σ1°14/17, mb3.8/6, MS3.7/2, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**10.38**	**172**	*e*Pn	**Pn**	**12 00 00.5**	**+0.6**
KAKA	**Kakadu**	**12.82**	**225**	*e*P	**Pn**	**12 00 32.6**	**-0.6**
	20nm,0.4s						
KAKA				*e*S	**Sn**	**12 02 54.7**	**-0.1**
KAKA	**Kakadu**	**12.82**	**225**	*e*Pn	**Pn**	**12 00 31.6**	**-1.7**
	88nm,0.7s						
WRAB	**Tennant Creek**	**17.70**	**203**	*e*Pn	**Pn**	**12 01 37.0**	**-0.3**
WRA	**Warramunga Arr**	**17.71**	**203**	P	**Pn**	**12 01 38.2**	**+0.7**
	0.4nm,0.3s,baz=26,slow=11,SNR=31						
WRA	**Warramunga Arr**	**17.71**	**203**	P	**Pn**	**12 01 38.2**	**+0.7**
HNR	**Honiara**	**19.08**	**108**	P	**Pn**	**12 01 52.6**	**-1.5**
FITZ	**Fitzroy Crossi**	**21.27**	**226**	*e*P	**P**	**12 02 16.6**	**-0.3**
	12nm,0.9s,mb4.2						
FITZ	**Fitzroy Crossi**	**21.27**	**226**	P	**P**	**12 02 16.7**	**-0.3**
	2.8nm,0.6s,mb3.8,baz=38,slow=12,SNR=6.4						
FITZ				S	**S**	**12 06 06.7**	**-4.9**
	3.9nm,1.0s,baz=66,slow=20,SNR=2.4						
FITZ				LR	LR	12 11 22.9	
	comp=Z,424nm,20.4s,MS3.8,baz=357,slow=39						
ASAR	**Alice Springs**	**21.28**	**200**	P	**P**	**12 02 17.9**	**+1.0**
	2.9nm,0.8s,mb3.6,baz=27,slow=11,SNR=24						
EIDS	**Eidsvold**	**23.45**	**158**	*e*P	**P**	**12 02 44.3**	**+4.4**
STKA	**Stephens Creek**	**28.11**	**180**	LR	LR	12 14 59.5	
	comp=Z,118nm,19.1s,MS3.5,baz=205,slow=37						
CMAR	**Chiang Mai Arr**	**47.43**	**299**	P	**P**	**12 06 02.9**	**-2.0**
	0.5nm,0.5s,mb3.7,baz=224,slow=30,SNR=3.7						
MKAR	**Makanchi Array**	**72.30**	**322**	P	**P**	**12 08 55.0**	**-0.4**
	1.1nm,0.9s,mb3.8,baz=96,slow=11,SNR=6.5						
ZALV	**Zalesovo Beam**	**74.20**	**329**	P	**P**	**12 09 08.7**	**+2.3**
	0.3nm,0.3s,mb3.7,baz=217,slow=6.9,SNR=2.4						
BVAR	**Borovoye Array**	**81.73**	**325**	P	**P**	**12 09 49.4**	**+1.1**
	2.5nm,0.9s,mb4.2,baz=116,slow=6.8,SNR=8.8						
LPAZ	**La Paz**	**144.54**	**125**	PKP	PKPdf	12 17 08.0	+0.8
	1.8nm,0.7s,baz=52,slow=4.1,SNR=4.3						
DBIC	**Dimbokro**	**146.50**	**277**	PKPbc	PKPbc	12 17 11.3	-0.8
	3.3nm,0.7s,baz=74,slow=17,SNR=3.2						

IDC 16 12:24:14.6±1.2, 19.°55N×144.°50E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.6/23, mbtmp3.7/7, Error ellipse: s-maj=50.9km s-min=21.9km az=81.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**22.97**	**324**	P	P	12 29 21.2	+0.5
	1.0nm,0.7s,baz=148,slow=9.4,SNR=5.6						
WRA	**Warramunga Arr**	**40.49**	**195**	P	P	12 31 54.6	-0.8
	0.8nm,0.8s,baz=14,slow=8.9,SNR=6.7						
ASAR	**Alice Springs**	**44.18**	**194**	P	P	12 32 26.2	+0.8
	0.3nm,0.6s,baz=10.0,slow=7.5,SNR=5.4						
ZALV	**Zalesovo Beam**	**56.66**	**322**	P	P	12 33 59.8	+0.3
	0.3nm,0.4s,baz=99,slow=8.9,SNR=2.7						
**

*ISK **16** 12:40:54.5,34°.10N×32°.53E,h23km,MD3.5*
*ISCJB **16** 12:40:54.2±0.3,34°.10N±0°.01×32°.74E±0°.03,h10km,Error ellipse: s-maj=3.8km s-min=1.9km az=165.9*
*NIC **16** 12:40:57.4±0.3,34°.20N×32°.68E,h19km,ML3.3,MW3.2*
*NEIC **16** 12:40:57.4,34°.20N×32°.68E,h19km,ML3.3(NIC),After NIC.*
*CSEM **16** 12:40:57.6±0.1,34°.18N×32°.71E,h30km,Mw3.2,Error ellipse: s-maj=4.7km s-min=2.8km az=84.0*
*HLW **16** 12:40:58.6,34°.11N×32°.79E,h10km±13km,Md3.0,Ml2.9*
*NSSC **16** 12:40:58,34°.30N×32°.76E,h40km*
*GII **16** 12:40:59.4±1.0,34°.16N×32°.70E,h31km,Md2.8/2*

ISC 16 12:40:55.6±0.3,34°.13N±0°.01×32°.76E±0°.03,h10km,n93,σ0s98/127,Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SZAC	**Souni-Zanaja**	**0.64**	**9**	P	**Pg**	**12 41 09.1**	**+1.2**
SZAC				S	**Sg**	**12 41 17.6**	**+1.3**
SZAC	**Souni-Zanaja**	**0.64**	**9**	P	**Pg**	**12 41 09.1**	**+1.2**
SZAC				S	**Sg**	**12 41 17.6**	**+1.3**
PPCY	**Paphos**	**0.83**	**336**	P	**Pg**	**12 41 11.6**	**-0.1**
PPCY	**Paphos**	**0.83**	**336**	P	**Pg**	**12 41 11.6**	**-0.1**
CSS	**Prodhromos**	**0.96**	**29**	P	**Pg**	**12 41 13.9**	**-0.1**
	12nm,0.1s						
CSS				S	**Sg**	**12 41 27.7**	**+1.2**
CSS	**Prodhromos**	**0.96**	**29**	P	**Pg**	**12 41 13.9**	**-0.1**
	12nm,0.1s						
CSS				S	**Sg**	**12 41 27.7**	**+1.2**
CSS	**Prodhromos**	**0.96**	**29**	Pg	**Pg**	**12 41 12.8**	**-1.2**
CSS				Sg	**Sg**	**12 41 26.9**	**+0.4**
LEF	**Lefka**	**1.00**	**6**	*e*PG	**Pg**	**12 41 14.1**	**-0.7**
LEF				*e*SG	**Sg**	**12 41 28.3**	**+0.5**
ALFC	**Alevga**	**1.04**	**353**	P	**Pg**	**12 41 14.5**	**-1.1**
	53nm,0.2s						
ALFC				S	**Sg**	**12 41 28.2**	**-0.9**
ALFC	**Alevga**	**1.04**	**353**	P	**Pg**	**12 41 14.5**	**-1.1**
	53nm,0.2s						
ALFC				S	**Sg**	**12 41 28.2**	**-0.9**
MAMC	**Mammari**	**1.11**	**20**	P	**Pg**	**12 41 16.7**	**-0.2**
MAMC	**Mammari**	**1.11**	**20**	P	**Pg**	**12 41 16.7**	**-0.2**
LFK	**Lefkose**	**1.31**	**29**	*e*PN	**Pn**	**12 41 19.7**	**-0.3**
LFK				*e*SN	**Sn**	**12 41 38.8**	**+1.2**
LFK	**Lefkose**	**1.31**	**29**	*e*Pn	**Pn**	**12 41 19.7**	**-0.3**
LFK				*e*Sn	**Sn**	**12 41 38.8**	**+1.2**
EREN	**Erenkoy**	**1.82**	**39**	*e*PN	**Pn**	**12 41 27.3**	**+0.4**
EREN	**Erenkoy**	**1.82**	**39**	*e*Pn	**Pn**	**12 41 27.3**	**+0.4**
GAZI	**Gazipasa**	**2.13**	**350**	*i* P	**Pn**	**12 41 30.4**	**-0.9**
GAZI	**Gazipasa**	**2.13**	**350**	*i* P	**Pn**	**12 41 30.4**	**-0.9**
GAZI				*i* S	**Sn**	**12 41 54.2**	**-3.7**
IKL	**Isikli**	**2.24**	**19**	*e*PN	**Pn**	**12 41 32.4**	**-0.3**
IKL	**Isikli**	**2.24**	**19**	*e*Pn	**Pn**	**12 41 32.4**	**-0.3**
HNTI	**Hanita**	**2.27**	**117**	Sn	**Sn**	**12 42 00.1**	**-1.0**
OFRI	**'Ofer**	**2.39**	**128**	Sn	**Sn**	**12 42 03.6**	**-0.5**
BLGI	**Bet Lehem HaGe**	**2.46**	**124**	Sn	**Sn**	**12 42 04.9**	**-1.0**
MMA0	**Mount Meron ar**	**2.47**	**116**	Pn	**Pn**	**12 41 36.2**	**+0.3**
MMA0				Sn	**Sn**	**12 42 05.3**	**-0.8**
ERMK	**Ermenek**	**2.51**	**3**	*i* P	**Pn**	**12 41 37.9**	**+1.4**
ERMK	**Ermenek**	**2.51**	**3**	*i* P	**Pn**	**12 41 37.9**	**+1.4**
ERMK				*i* S	**Sn**	**12 42 09.7**	**+2.5**
KSDI	**Kefar Szold**	**2.59**	**110**	Pn	**Pn**	**12 41 37.9**	**+0.3**
KSDI				Sn	**Sn**	**12 42 08.3**	**-0.8**
RCY	**Rachaya**	**2.62**	**103**	*e*Pn	**Pn**	**12 41 38.6**	**+0.6**
RCY	**Rachaya**	**2.62**	**103**	*e*Pn	**Pn**	**12 41 38.6**	**+0.6**
HWQ	**Hawqa**	**2.64**	**86**	*e*Pn	**Pn**	**12 41 38.7**	**+0.5**
HWQ	**Hawqa**	**2.64**	**86**	*e*Pn	**Pn**	**12 41 38.7**	**+0.4**
SLTI	**Sal'it**	**2.68**	**134**	Sn	**Sn**	**12 42 10.4**	**-0.9**
BRBR	**Barbar**	**2.75**	**104**	⇑P	**Pn**	**12 41 40.0**	**+0.2**
BRBR				⇑S	**Sn**	**12 42 11.0**	**-2.0**
BRBR	**Barbar**	**2.75**	**104**	⇑*i*P	**Pn**	**12 41 40.8**	**+1.0**
BRBR				⇑*i*S	**Sn**	**12 42 11.7**	**-1.3**
KSHT	**Keshet**	**2.79**	**113**	Pn	**Pn**	**12 41 41.9**	**+1.6**
MMLI	**Mount Malkishu**	**2.79**	**126**	Pn	**Pn**	**12 41 40.7**	**+0.4**
MMLI				Sn	**Sn**	**12 42 13.6**	**-0.5**
HDMB	**Hadim**	**2.84**	**356**	*e*PN	**Pn**	**12 41 40.5**	**-0.5**
HDMB	**Hadim**	**2.84**	**356**	*e*Pn	**Pn**	**12 41 40.5**	**-0.5**
HMDT	**Nahal Hemdat**	**2.98**	**128**	Pn	**Pn**	**12 41 43.9**	**+1.0**
HMDT				Sn	**Sn**	**12 42 18.9**	**+0.3**
MERS	**Mersin**	**3.09**	**27**	*e*PN	**Pn**	**12 41 45.2**	**+0.7**
MERS	**Mersin**	**3.09**	**27**	*e*Pn	**Pn**	**12 41 45.2**	**+0.8**
TOTH	**TOTAH**	**3.15**	**103**	⇑P	**Pn**	**12 41 46.0**	**+0.8**
TOTH				⇑S	**Sn**	**12 42 22.0**	**-0.9**
TOTH	**TOTAH**	**3.15**	**103**	⇑*i*P	**Pn**	**12 41 46.9**	**+1.7**
TOTH				⇑*i*S	**Sn**	**12 42 22.5**	**-0.4**
SLNF	**Slenfeh**	**3.20**	**62**	⇑P	**Pn**	**12 41 45.0**	**-1.0**
SLNF	**Slenfeh**	**3.20**	**62**	⇑*i*P	**Pn**	**12 41 45.1**	**-0.9**
RSH	**Rosh**	**3.26**	**165**	P	**Pn**	**12 41 47.6**	**+0.8**
YAYL	**Yayladag**	**3.34**	**54**	*i* P	**Pn**	**12 41 47.1**	**-0.7**
YAYL	**Yayladag**	**3.34**	**54**	*i* P	**Pn**	**12 41 47.1**	**-0.8**
YAYL				*i* S	**Sn**	**12 42 23.5**	**-4.1**
DSI	**Dead Sea**	**3.37**	**138**	Pn	**Pn**	**12 41 48.7**	**+0.4**
RTMI	**Retamim**	**3.47**	**151**	Sn	**Sn**	**12 42 31.0**	**+0.2**
AMAG	**Maghara**	**3.49**	**174**	P	**Pn**	**12 41 50.8**	**+0.8**
	baz=174						
AMAG	**Maghara**	**3.49**	**174**	P	**Pn**	**12 41 50.8**	**+0.8**
KZIT	**Kziot**	**3.50**	**156**	Sn	**Sn**	**12 42 30.9**	**-0.5**
ELL	**Elmali**	**3.50**	**319**	*e*PN	**Pn**	**12 41 47.8**	**-2.3**
GULE	**Gulek**	**3.55**	**27**	*i* P	**Pn**	**12 41 51.8**	**+1.0**
GULE	**Gulek**	**3.55**	**27**	*i* P	**Pn**	**12 41 51.8**	**+1.0**
GULE				*i* S	**Sn**	**12 42 32.3**	**-0.5**
BTCH	**Batrach**	**3.58**	**57**	⇑P	**Pn**	**12 41 50.0**	**-1.2**
BTCH				⇑S	**Sn**	**12 42 29.0**	**-4.5**
BTCH	**Batrach**	**3.58**	**57**	⇑*i*P	**Pn**	**12 41 50.7**	**-0.5**
BTCH				⇑*i*S	**Sn**	**12 42 29.1**	**-4.4**
SALA	**Sala**	**3.61**	**112**	⇑P	**Pn**	**12 41 53.0**	**+1.4**
SALA				⇑S	**Sn**	**12 42 32.0**	**-2.2**
SALA	**Sala**	**3.61**	**112**	⇑*i*P	**Pn**	**12 41 53.8**	**+2.2**
SALA				⇑*i*S	**Sn**	**12 42 32.8**	**-1.4**
SUTC	**Sutluce-Ispart**	**3.64**	**337**	*e*PN	**Pn**	**12 41 50.8**	**-1.1**
SUTC	**Sutluce-Ispart**	**3.64**	**337**	*e*Pn	**Pn**	**12 41 50.8**	**-1.2**
KARA	**Karaisali**	**3.64**	**30**	*e*PN	**Pn**	**12 41 52.9**	**+0.9**
KARA	**Karaisali**	**3.64**	**30**	*e*Pn	**Pn**	**12 41 52.9**	**+0.9**
KONT	**Konya--Tatoy**	**3.83**	**355**	*e*PN	**Pn**	**12 41 54.0**	**-0.5**
KONT	**Konya--Tatoy**	**3.83**	**355**	*e*Pn	**Pn**	**12 41 54.1**	**-0.4**
GLHS	**Gihisar (BURDU**	**4.03**	**320**	*e*PN	**Pn**	**12 41 55.1**	**-2.1**
GLHS	**Gihisar (BURDU**	**4.03**	**320**	*e*Pn	**Pn**	**12 41 55.1**	**-2.2**
GOLH	**Golhisar**	**4.05**	**321**	*i* P	**Pn**	**12 41 57.9**	**+0.2**
GOLH	**Golhisar**	**4.05**	**321**	*i* P	**Pn**	**12 41 57.9**	**+0.2**
GOLH				*i* S	**Sn**	**12 42 41.0**	**-4.2**
ZFRI	**Zfri**	**4.11**	**149**	Sn	**Sn**	**12 42 46.2**	**-0.3**
HHAG	**Hagoal**	**4.20**	**188**	P	**Pn**	**12 42 00.5**	**+0.8**
	baz=189						
HHAG				AMP		12 43 00.0	
	comp=N,30μm,0.2s,logA/T=5.1,baz=189						
HHAG	**Hagoal**	**4.20**	**188**	P	**Pn**	**12 42 00.5**	**+0.8**
PRNI	**Paran**	**4.22**	**153**	Sn	**Sn**	**12 42 49.7**	**+0.5**
KOT	**Kottamia**	**4.26**	**191**	P	**Pn**	**12 42 01.5**	**+0.9**
	baz=192						
KOT				S	**Sn**	**12 42 49.2**	**-1.1**
	baz=192						
KOT	**Kottamia**	**4.26**	**191**	P	**Pn**	**12 42 01.5**	**+1.0**
KOT				S	**Sn**	**12 42 49.2**	**-1.1**
HNKL	**Nakhl**	**4.31**	**166**	P	**Pn**	**12 42 02.1**	**+0.9**
	baz=166						
HNKL				S	**Sn**	**12 42 49.9**	**-1.6**
	baz=166						
HNKL	**Nakhl**	**4.31**	**166**	P	**Pn**	**12 42 02.1**	**+0.9**
HNKL				S	**Sn**	**12 42 49.9**	**-1.6**
KRMI	**Paran Flat**	**4.33**	**157**	Pn	**Pn**	**12 42 02.3**	**+0.8**
KRMI				Sn	**Sn**	**12 42 51.7**	**-0.3**
HRFI	**Mount Harif**	**4.51**	**154**	Pn	**Pn**	**12 42 05.0**	**+1.0**
HRFI				Sn	**Sn**	**12 42 56.1**	**-0.4**
HSAF	**As Saff**	**4.61**	**193**	P	**Pn**	**12 42 06.2**	**+0.8**
	baz=194						
HSAF	**As Saff**	**4.61**	**193**	P	**Pn**	**12 42 06.2**	**+0.9**
GLL	**Jalalah**	**4.62**	**191**	P	**Pn**	**12 42 06.1**	**+0.6**
	baz=192						
GLL	**Jalalah**	**4.62**	**191**	P	**Pn**	**12 42 06.1**	**+0.6**
MBRI	**Mt Berech**	**4.69**	**156**	Pn	**Pn**	**12 42 07.8**	**+1.4**
MBRI				Sn	**Sn**	**12 43 00.7**	**-0.2**
KHL	**Karahalli**	**4.94**	**329**	*e*PN	**Pn**	**12 42 08.7**	**-1.2**
KHL	**Karahalli**	**4.94**	**329**	*e*Pn	**Pn**	**12 42 08.7**	**-1.1**
BDRM	**Kayabasi**	**5.23**	**306**	*i* P	**Pn**	**12 42 12.5**	**-1.4**
BDRM	**Kayabasi**	**5.23**	**306**	*i* S	**Sn**	**12 43 08.3**	**-5.9**
HKAT	**Jabal Katrina**	**5.68**	**169**	P	**Pn**	**12 42 20.9**	**+0.8**
	baz=169						
HKAT	**Jabal Katrina**	**5.68**	**169**	P	**Pn**	**12 42 20.9**	**+0.8**
TR2		**5.78**	**172**	P	**Pn**	**12 42 21.9**	**+0.4**
	baz=171						
TR2		**5.78**	**172**	P	**Pn**	**12 42 21.9**	**+0.4**

*IDC **16** 13:00:14.6±0.9,31°.50N×103°.45E,h0km,mb3.8/12, mb1 3.9/12,mb1mx3.8/24,mbtmp3.8/12,Error ellipse: s-maj=65.5km s-min=16.9km az=56.0*
*NEIC **16** 13:00:16.3±0.6,31°.71N×103°.79E,h10km,mb3.9/2,Error ellipse: s-maj=24.4km s-min=11.0km az=48.0*
*BJI **16** 13:00:18.1,31°.89N×104°.25E,h18km,mB4.4/2,mb4.0/3, ML3.8/16,Ms3.5/5,Ms7 3.5/5*

ISC 16 13:00:17.6±1.0,31°.81N±0°.03×104°.06E±0°.08,h17km±6km, n29,σ1s16/38,mb3.9/16,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.93**	**196**	Pg	**Pg**	**13 00 35.3**	**-0.4**
CD2				Sg	**Sg**	**13 00 48.5**	**+0.5**
CD2				smax			
	comp=N,2μm,0.7s						
CD2				smax			
	comp=E,6μm,0.7s						
LZH	**Lanzhou**	**4.27**	**358**	Pn	**Pn**	**13 01 23.8**	**+2.0**
LZH				Sn	**Sn**	**13 02 18.1**	**+6.9**
LZH				Sg	**Sg**	**13 02 34.5**	**-0.2**
LZH				smax			
	comp=N,250nm,1.1s						
LZH				smax			
	comp=E,140nm,1.0s						
LZH				LR	LR		
	comp=E,550nm,7.6s						
LZH				LR	LR		
	comp=Z,590nm,9.0s						
XAN	**Xi'an**	**4.66**	**60**	Pg	**Pg**	**13 01 41.6**	**-5.2**
XAN				Sn	**Sn**	**13 02 28.3**	**+7.5**
XAN				Sg	**Sg**	**13 02 39.1**	**-8.0**
XAN				smax			
	comp=N,150nm,0.9s						
XAN				smax			
	comp=E,77nm,0.8s						
ENH	**Enshi**	**4.91**	**107**	*e*P	**Pn**	**13 01 31.8**	**+1.2**
	comp=E,109nm,0.8s						
GYA	**Guiyang**	**5.80**	**156**	Pn	**Pn**	**13 01 45.3**	**+2.4**
GYA				Sn	**Sn**	**13 02 46.8**	**-2.2**
GYA				Sg	**Sg**	**13 03 15.8**	**-8.0**
GYA				smax			
	comp=N,110nm,0.7s						
GYA				smax			
	comp=E,110nm,0.7s						
KMI	**Kunming**	**6.76**	**190**	Pn	**Pn**	**13 02 02.8**	**+6.7**
KMI				Sn	**Sn**	**13 03 12.8**	**+0.1**
KMI				smax			
	comp=N,16nm,0.9s						
KMI				smax			
	comp=E,15nm,0.7s						
GTA	**Gaotai**	**8.33**	**337**	*e*P	**Pn**	**13 02 22.3**	**+4.7**
GTA				pP		13 02 26.1	
GTA				S	**Sn**	**13 03 59.4**	**+8.1**
GTA				sS		13 04 07.8	
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,35nm,3.6s						
GTA				LR	LR		
	comp=N,270nm,9.6s						
GTA				LR	LR		
	comp=E,190nm,8.7s						
GTA				LR	LR		
	comp=Z,220nm,12.9s						
SONM	**Songino Array**	**16.10**	**6**	Pn	**Pn**	**13 04 04.2**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=189,slow=11,SNR=4.7						
KSRS	**Korea Array**	**20.41**	**67**	P	**P**	**13 04 54.6**	**+0.9**
	comp=Z,1.7nm,0.7s,baz=256,slow=9.7,SNR=6.4						
MKAR	**Makanchi Array**	**22.42**	**318**	P	**P**	**13 05 14.4**	**-0.9**
	comp=Z,2.1nm,0.7s,mb3.7,baz=124,slow=12,SNR=12						
ZAA0	**Zalesovo Array**	**26.07**	**334**	*e*P	**P**	**13 05 50.1**	**0.0**
ZALV	**Zalesovo Beam**	**26.07**	**334**	P	**P**	**13 05 50.1**	**+0.1**
	comp=Z,2.0nm,0.6s,mb3.8,baz=134,slow=8.5,SNR=10.0						
KURK	**Kurchatov**	**26.66**	**323**	P	**P**	**13 05 55.5**	**+0.1**
	comp=Z,1.5nm,0.9s,mb3.5,baz=131,slow=9.0,SNR=7.9						
KURK	**Kurchatov**	**26.66**	**323**	P	**P**	**13 05 55.5**	**+0.1**
BVAR	**Borovoye Array**	**32.22**	**321**	P	**P**	**13 06 44.8**	**+0.2**
	comp=Z,0.3nm,0.4s,mb3.5,baz=126,slow=11,SNR=2.7						
ABKAR	**Akbulak array**	**37.18**	**311**	*e*P	**P**	**13 07 27.6**	**0.0**
	comp=Z,1.0nm,0.8s,mb3.7						
ARCES	**ARCESS Array B**	**56.60**	**336**	P	**P**	**13 09 57.5**	**-1.6**
	comp=Z,2.8nm,1.0s,mb4.2,baz=68,slow=7.3,SNR=5.1						
AKASG	**Malin Array Be**	**56.87**	**313**	P	**P**	**13 10 01.2**	**-0.1**
	comp=Z,1.0nm,0.4s,mb4.2,baz=102,slow=8.0,SNR=7.7						
FINES	**FINESS Array B**	**56.96**	**326**	P	**P**	**13 10 00.6**	**-1.1**
	comp=Z,0.8nm,0.6s,mb3.9,baz=329,slow=5.0,SNR=3.6						
FINES	**FINESS Array B**	**56.96**	**326**	P	**P**	**13 10 00.6**	**-1.1**
WRAB	**Tennant Creek**	**59.08**	**146**	*e*P	**P**	**13 10 18.9**	**+1.9**
	comp=Z,1.3nm,0.6s,mb4.1						
WRA	**Warramunga Arr**	**59.08**	**146**	P	**P**	**13 10 16.9**	**-0.2**
	comp=Z,0.6nm,0.6s,mb3.8,baz=340,slow=7.6,SNR=9.2						
ASAR	**Alice Springs**	**62.11**	**149**	P	**P**	**13 10 38.0**	**+0.3**
	comp=Z,0.2nm,0.5s,mb3.5,baz=333,slow=6.3,SNR=5.8						
NOA	**NORSAR Array B**	**64.04**	**327**	P	**P**	**13 10 48.1**	**-2.0**
	comp=Z,0.8nm,0.8s,mb3.8,baz=69,slow=6.7,SNR=3.0						
LPG	**La Plagne**	**72.74**	**313**	*e*P	**P**	**13 11 45.2**	**+0.4**
	comp=Z,10nm,0.8s,mb4.5						
LPL	**La Plagne**	**72.74**	**313**	*e*P	**P**	**13 11 45.1**	**+0.3**
	comp=Z,4.7nm,0.6s,mb4.3						
YKA	**Yellowknife Ar**	**81.03**	**17**	P	**P**	**13 12 34.5**	**+3.3**
	comp=Z,0.8nm,0.6s,mb3.9,baz=329,slow=5.0,SNR=3.6						
YKA	**Yellowknife Ar**	**81.03**	**17**	P	**P**	**13 12 34.5**	**+3.3**
TORD	**Torodi Ar. Bea**	**93.38**	**288**	P	**P**	**13 13 29.3**	**-3.1**
	comp=Z,0.3nm,0.8s,mb3.8,baz=83,slow=36,SNR=2.2						

*IDC **16** 13:28:45.8±0.6,71°.63N×53°.51W,h0km,mb3.7/11, mb1 4.1/16,mb1mx3.8/33,mbtmp3.9/16,ML3.9/5,MS2.8/4, Ms1 2.8/4,ms1mx2.6/39,Error ellipse: s-maj=17.7km s-min=13.2km az=136.0*
*NEIC **16** 13:28:46.8±0.5,71°.63N×53°.77W,h10km,mb3.7/3, ML4.5(OTT),Error ellipse: s-maj=11.7km s-min=7.4km az=153.0*

OTT 16 13:28:47.4±0.7,71°.54N×53°.96W,h18km,ML4.5/11, 1C-1D,Western Greenland. 545km east from Clyde River, Nu Eastern Arctic Background Seismic Zone., Western Kalaallit Nunaat

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFJD	**Kangerlussuaq**	**4.72**	**164**	Pn	Pn	13 29 57.5	0.0
	17nm,0.3s,baz=325,slow=12,SNR=42						
SFJD				Sn	Sn	13 30 48.4	-3.2
	27nm,0.3s,baz=50,slow=17,SNR=8.5						
SFJD				Lg		13 31 16.0	
	44nm,0.3s,baz=266,slow=5.0,SNR=18						
SFJD				LR	LR	13 32 15.8	
	comp=Z,100nm,19.8s,baz=69,slow=44						
SFJD	**Kangerlussuaq**	**4.72**	**164**	*e*Pn	Pn	13 29 57.5	0.0
SFJD				Sn	Sn	13 30 48.5	-3.2
SFJD				Lg		13 31 16.1	
SFJD				LR	LR	13 32 15.8	
SFJD	**Kangerlussuaq**	**4.72**	**164**	*i* P	Pn	13 29 57.2	-0.3
SFJD				*i* S	Sn	13 30 49.8	-1.8
SFJD							
	comp=Z,160nm,17.0s						
SFJD	**Kangerlussuaq**	**4.72**	**164**	PN	Pn	13 29 57.2	-0.3
SFJD				SN	Sn	13 30 47.4	-4.2
SFJD				LG		13 31 11.6	
SFJD				Trac		13 31 19.3	
	comp=Z,340nm,0.5s						
SUMG	**Summit**	**4.90**	**70**	*e*Pn	Pn	13 29 59.4	-0.6
SUMG	**Summit**	**4.90**	**70**	⇑*i*P	Pn	13 29 59.5	-0.6
SUMG				*i* S	Sn	13 30 53.5	-2.7
GIFN	**Gifford Fjord,**	**9.22**	**274**	Pn	Pn	13 30 57.9	-1.3
GIFN				Sn	Sn	13 32 34.9	-7.4
GIFN	**Gifford Fjord,**	**9.22**	**274**	PN	Pn	13 30 57.9	-1.3
GIFN				mb		13 31 03.3	
	comp=Z,5.0nm,0.3s						
GIFN				SN	Sn	13 32 34.9	-7.4
GIFN				Trac		13 32 37.3	
	comp=Z,18nm,0.4s						
ILON	**Igloolik, Nuna**	**9.54**	**270**	Pn	Pn	13 31 01.9	-1.7
ILON				Sn	Sn	13 32 42.2	-7.8
ILON	**Igloolik, Nuna**	**9.54**	**270**	PN	Pn	13 31 01.9	-1.7
ILON				mb		13 31 06.8	
	comp=Z,3.1nm,0.2s						
ILON				SN	Sn	13 32 42.2	-7.8
ILON				Trac		13 33 16.6	
	comp=Z,14nm,0.2s						
FRB	**Frobisher Bay**	**9.56**	**222**	Pn	Pn	13 31 05.5	+1.6
	comp=Z,7.6nm,0.3s,baz=24,slow=12,SNR=39						
FRB				Sn	Sn	13 32 45.4	-5.3
	comp=Z,5.0nm,0.3s,baz=223,slow=21,SNR=5.1						
FRB	**Frobisher Bay**	**9.56**	**222**	PN	Pn	13 31 05.3	+1.4
FRB				mb		13 31 08.1	
	comp=Z,18nm,0.3s						
FRB				SN	Sn	13 32 47.6	-3.0
FRB				Trac		13 33 04.0	
	comp=Z,18nm,0.3s						
LAIN	**Lailor River,**	**10.20**	**271**	Pn	Pn	13 31 10.4	-2.3
LAIN				Sn	Sn	13 32 58.0	-8.3
LAIN	**Lailor River,**	**10.20**	**271**	PN	Pn	13 31 10.4	-2.3
LAIN				SN	Sn	13 32 58.0	-8.3
LAIN				Trac		13 33 03.0	
	comp=Z,19nm,0.1s						
AP3N	**Apex site 3 Nu**	**10.34**	**273**	PN	Pn	13 31 13.8	-0.7
AP3N				SN	Sn	13 33 00.9	-8.8
AP3N				Trac		13 33 05.7	
	comp=Z,7.4nm,0.2s						
SRLN	**Sarcpa Lake, N**	**10.40**	**268**	PN	Pn	13 31 14.0	-1.4
SRLN				SN	Sn	13 33 02.9	-8.3
SRLN				Trac		13 33 35.3	
	comp=Z,19nm,0.5s						
SCO	**Scoresbysund**	**10.41**	**80**	*i* P	Pn	13 31 11.4	-4.0
SCO				*i* S	Sn	13 32 59.7	-12
SCO				*i* LG		13 34 02.6	
SCO							
	comp=Z,80nm,16.0s						
DAG	**Danmarks Havn**	**10.80**	**45**	‖ *i* P	Pn	13 31 23.2	+2.4
	comp=Z,16nm,0.4s						
EUNU	**Eureka**	**11.42**	**332**	PN	Pn	13 31 27.2	-2.1
EUNU				SN	Sn	13 33 27.0	-9.2
EUNU				Trac		13 33 31.1	
	comp=Z,13nm,0.3s						
RES	**Resolute Bay**	**12.11**	**304**	Pn	Pn	13 31 39.3	+0.7
	comp=Z,0.4nm,0.3s,baz=84,slow=6.7,SNR=5.4						
RES				Sn	Sn	13 33 43.3	-10
	comp=Z,0.9nm,0.3s,baz=264,slow=12,SNR=4.3						
RES	**Resolute Bay**	**12.11**	**304**	*e*Pn	Pn	13 31 39.2	+0.6
RES				Sn	Sn	13 33 43.3	-10
RES	**Resolute Bay**	**12.11**	**304**	PN	Pn	13 31 39.0	+0.4
RES				SN	Sn	13 33 43.8	-9.2
QILN	**Qililugaq Expl**	**12.43**	**263**	PN	Pn	13 31 41.2	-1.9
QILN				mb		13 31 45.1	
	comp=Z,8.0nm,0.3s						
QILN				SN	Sn	13 33 50.1	-11
QILN				Trac		13 33 54.1	
	comp=Z,18nm,0.4s						
IVKQ	**Ivujivik**	**12.98**	**237**	PN	Pn	13 31 49.0	-1.5
IVKQ				SN	Sn	13 34 04.4	-10
IVKQ				Trac		13 34 13.6	
	comp=Z,8.8nm,0.3s						
BORG	**Borgarnes**	**13.75**	**103**	LR	LR	13 37 29.1	
	comp=Z,13nm,19.4s,baz=32,slow=38						
WAGN	**Wager Bay**	**13.89**	**264**	SN	Sn	13 34 24.4	-12
BULN	**Bullion Camp,**	**14.74**	**269**	PN	Pn	13 32 11.5	-3.0
BULN				SN	Sn	13 34 44.3	-13
NUNN	**Nunuq Camp, NU**	**14.84**	**263**	Pn	Pn	13 32 13.2	-2.8
NUNN				Sn	Sn	13 34 45.9	-14
NUNN	**Nunuq Camp, NU**	**14.84**	**263**	PN	Pn	13 32 13.2	-2.8
NUNN				SN	Sn	13 34 45.9	-14
NUNN				Trac		13 34 58.6	
	comp=Z,8.0nm,0.5s						
SEDN	**First Sedna Si**	**16.25**	**258**	PN	Pn	13 32 31.8	-2.6
SEDN				SN	Sn	13 35 19.3	-15
JOSN	**Second Sedna S**	**16.42**	**258**	PN	Pn	13 32 32.7	-3.8
JOSN				SN	Sn	13 35 22.4	-16
JOSN				Trac		13 35 37.3	
	comp=Z,8.1nm,0.4s						
CB31	**Cambridge Bay**	**16.95**	**287**	PN	Pn	13 32 42.0	-1.2
CB31				mb		13 32 52.0	
	comp=Z,9.0nm,0.7s						
CB31				SN	Sn	13 35 39.5	-11
CB31				Trac		13 36 00.0	
	comp=Z,5.9nm,0.4s						
SCHQ	**Schefferville**	**17.67**	**205**	P	Pn	13 32 54.2	+2.0
	comp=Z,0.8nm,0.3s,baz=7.4,slow=12,SNR=6.4						
SCHQ	**Schefferville**	**17.67**	**205**	P	Pn	13 32 54.2	+2.0
SPITS	**Spitsbergen Ar**	**18.26**	**38**	P	Pn	13 32 57.0	-2.4
	baz=300,slow=8.3,SNR=8.3						
SPITS				LR	LR	13 40 29.4	
	comp=Z,55nm,19.5s,baz=180,slow=39						
SPITS	**Spitsbergen Ar**	**18.26**	**38**	P	Pn	13 32 57.0	-2.4
SPITS				LR	LR	13 40 29.4	
ARVN	**Arviat, NU**	**18.76**	**257**	Pn	Pn

1.4nm,0.7s,mb4.0,baz=129,slow=5.0,SNR=5.3
YKA Yellowknife Ar 86.40 341 P **P 13 44 52.2 +0.9**
MAW Mawson 89.16 164 P **P 13 45 04.7 +0.1**
0.7nm,0.2s,mb4.2,baz=27,slow=1.8,SNR=5.3
WRA Warramunga Arr 136.59 214 PKP PKPdf 13 51 32.1 +0.1
0.5nm,1.0s,baz=178,slow=2.5,SNR=3.5
KURK Kurchatov 137.65 30 PKP PKPdf 13 51 34.3 +1.4
0.5nm,0.8s,baz=287,slow=2.3,SNR=2.2
ZALV Zalesovo Beam 137.88 22 PKP PKPdf 13 51 34.0 +0.8
1.5nm,0.6s,baz=272,slow=2.3,SNR=5.9
MKAR Makanchi Array 142.09 32 PKP PKPdf 13 51 42.5 +1.4
0.5nm,0.7s,baz=329,slow=3.3,SNR=3.8
MJAR Matsushiro Arr 148.31 314 PKPbc PKPbc 13 51 56.5 +0.9
1.9nm,0.8s,baz=198,slow=1.0,SNR=6.4
SONM Songino Array 148.77 5 PKPbc PKPbc 13 51 57.4 +1.0
2.4nm,0.6s,baz=333,slow=2.6,SNR=13

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*ISCJB **16** 13:45:06.4±0.6, 33°.21N±0°.04×91°.53E±0°.10, h10km, mb3.5/5, Error ellipse: s-maj=11.7km s-min=5.4km az=10.1*
*NEIC **16** 13:45:08.6±0.7, 33°.18N×91°.54E, h10km, Error ellipse: s-maj=16.7km s-min=9.6km az=99.0*
*IDC **16** 13:45:08.4±0.9, 33°.20N×91°.95E, h0km, mb3.4/6, mb1 3.6/9, mb1mx3.4/28, mbtmp3.4/9, ML3.3/2, MS2.8/1, Ms1 2.8/1, ms1mx2.2/27, Error ellipse: s-maj=43.0km s-min=17.7km az=60.0*
*BJI **16** 13:45:08.4, 33°.27N×91°.67E, h15km, mb4.2/2, ML3.7/5, Ms3.5/2, Ms7 3.4/1*
ISC 16 13:45:09.2±0.6, 33°.27N±0°.04×91°.5E±0°.1, h10km, n21, σ1§30/22, mb3.5/5, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.56**	**185**	Pg	**Pg**	**13 46 11.8**	**-5.7**
LSA				Sg	**Sg**	**13 47 03.4**	**-0.3**
LSA				smax			
	comp=N,60nm,1.0s						
LSA				smax			
	comp=E,100nm,1.0s						
LSA	**Lhasa**	**3.56**	**185**	Pn	**Pn**	**13 46 06.3**	**+1.8**
GUN	**Gumba**	**7.19**	**224**	*e*P	**Pn**	**13 46 58.0**	**+3.6**
	comp=E,14nm,0.4s						
JIRN	**Jiri**	**7.21**	**221**	*e*P	**Pn**	**13 46 57.6**	**+3.0**
	comp=E,13nm,0.6s						
ODAN	**Odare**	**7.30**	**210**	*e*P	**Pn**	**13 46 55.9**	**+0.1**
RAMN	**Ramite**	**7.58**	**215**	*e*P	**Pn**	**13 46 58.2**	**-1.5**
	comp=E,25nm,0.6s						
SHL	**Shillong**	**7.68**	**177**	*e*PKP	**Pn**	**13 47 08.5**	**+7.4**
SHL				*e*S	**Sn**	**13 48 29.5**	**+1.3**
PKI	**Pulchoki**	**7.72**	**224**	*e*P	**Pn**	**13 47 00.6**	**-1.0**
	comp=E,17nm,0.7s						
PKIN	**Phulchoki**	**7.72**	**224**	*e*P	**Pn**	**13 47 00.6**	**-1.1**
	comp=E,17nm,0.7s						
DMN	**Daman**	**7.87**	**226**	*e*P	**Pn**	**13 47 01.4**	**-2.3**
GTA	**Gaotai**	**9.10**	**45**	*e*P	**Pn**	**13 47 20.4**	**-0.2**
GTA				pP		13 47 23.8	
GTA				sP		13 47 26.1	
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MKAR	**Makanchi Array**	**15.22**	**335**	Pn	**Pn**	**13 48 44.5**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=134,slow=12,SNR=2.8						
CMAR	**Chiang Mai Arr**	**16.20**	**154**	Pn	**Pn**	**13 48 52.8**	**-4.1**
	baz=330,slow=12,SNR=3.5						
AAK	**Ala-Archa**	**16.31**	**310**	LR	LR	13 57 03.7	
	comp=Z,30nm,20.1s,baz=297,slow=43						
SONM	**Songino Array**	**18.40**	**33**	P	**Pn**	**13 49 24.0**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=214,slow=12,SNR=9.6						
KURK	**Kurchatov**	**19.83**	**335**	P	**Pn**	**13 49 40.8**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=188,slow=3.5,SNR=4.1						
ZALV	**Zalesovo Beam**	**21.21**	**349**	P	**P**	**13 49 56.0**	**+1.2**
	comp=Z,0.5nm,0.3s,mb3.3,baz=158,slow=4.7,SNR=3.1						
BVAR	**Borovoye Array**	**24.87**	**329**	P	**P**	**13 50 35.9**	**+4.2**
	comp=Z,0.3nm,0.4s,mb3.1,baz=159,slow=8.5,SNR=2.6						
WRA	**Warramunga Arr**	**66.88**	**136**	P	**P**	**13 56 00.4**	**-1.2**
	comp=Z,1.3nm,1.2s,mb3.9,baz=315,slow=7.2,SNR=5.4						
ASAR	**Alice Springs**	**69.57**	**139**	P	**P**	**13 56 17.6**	**-0.8**
	comp=Z,0.7nm,0.5s,mb3.8,baz=325,slow=6.5,SNR=17						
TORD	**Torodi Ar. Bea**	**82.73**	**281**	P	**P**	**13 57 37.0**	**+3.4**
	comp=Z,0.3nm,0.6s,mb3.5,baz=304,slow=3.3,SNR=2.8						

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*NEIC **16** 13:49:37.2, 37°.89N×21°.43E, h28km, MD3.2(ATH), After ATH.*
*CSEM **16** 13:49:37.0±0.2, 37°.82N×21°.40E, h15km, MD3.2, Error ellipse: s-maj=4.0km s-min=3.3km az=93.0*
*ATH **16** 13:49:37.2, 37°.89N×21°.43E, h28km±2km, MD3.2/3*
*THE **16** 13:49:37.4, 37°.82N×21°.40E, h16km±1km, ML2.8/5, Error ellipse: s-maj=1.4km s-min=0.7km az=338.0*
*ISCJB **16** 13:49:37.5±0.5, 37°.81N±0°.04×21°.39E±0°.03, h22km±6km, Error ellipse: s-maj=6.0km s-min=4.4km az=8.2*
ISC 16 13:49:37.3±0.7, 37°.81N±0°.03×21°.39E±0°.03, h18km±4km, n40, σ0§67/61, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.26**	**14**	*e*Pb	**Pg**	**13 49 43.0**	**-0.1**
RLS				*e*Sb	**Sg**	**13 49 47.3**	**+0.2**
RLS	**Riolos of Patr**	**0.26**	**14**	*e*PB	**Pg**	**13 49 43.0**	**-0.1**
RLS				*e*SB	**Sg**	**13 49 47.3**	**+0.2**
RLS	**Riolos of Patr**	**0.26**	**14**	*e*Pb	**Pg**	**13 49 43.0**	**-0.1**
RLS				*e*Sb	**Sg**	**13 49 47.3**	**+0.2**
KFL	**Anninata**	**0.56**	**303**	P	**Pg**	**13 49 48.4**	**-0.1**
KFL				S	**Sg**	**13 49 56.4**	**+0.3**
UPR	**University Cam**	**0.57**	**33**	P	**Pg**	**13 49 48.4**	**-0.2**
UPR				S	**Sg**	**13 49 57.0**	**+0.7**
UPR	**University Cam**	**0.57**	**33**	P	**Pg**	**13 49 48.4**	**-0.2**
UPR				S	**Sg**	**13 49 57.0**	**+0.7**
LAKA	**Lakka**	**0.64**	**47**	P	**Pb**	**13 49 49.2**	**-0.6**
LAKA				S	**Sg**	**13 49 58.5**	**+0.1**
LAKA	**Lakka**	**0.64**	**47**	P	**Pb**	**13 49 49.2**	**-0.6**
LAKA				S	**Sg**	**13 49 58.5**	**+0.1**
VLS	**Valsamata**	**0.73**	**301**	*e*Pn	**Pb**	**13 49 51.0**	**-0.4**
VLS				*e*Sn	**Sn**	**13 50 02.9**	**-0.4**
VLS	**Valsamata**	**0.73**	**301**	P	**Pb**	**13 49 51.0**	**-0.4**
VLS				S	**Sb**	**13 50 02.0**	**+0.9**
VLS	**Valsamata**	**0.73**	**301**	*e*PN	**Pb**	**13 49 51.0**	**-0.4**
VLS				*e*SN	**Sn**	**13 50 02.9**	**-0.4**
VLS	**Valsamata**	**0.73**	**301**	P	**Pb**	**13 49 51.0**	**-0.4**
VLS				S	**Sb**	**13 50 02.0**	**+0.9**
VLS				*e*Sn	**Sn**	**13 50 02.9**	**-0.4**
EFP	**Efpalio**	**0.74**	**33**	P	**Pb**	**13 49 50.7**	**-0.9**
EFP				S	**Sb**	**13 50 02.4**	**+1.0**
EFP	**Efpalio**	**0.74**	**33**	*e*PN	**Pb**	**13 49 50.7**	**-0.9**
EFP	**Efpalio**	**0.74**	**33**	P	**Pb**	**13 49 50.7**	**-0.9**
EFP				S	**Sb**	**13 50 02.4**	**+1.0**
ITM	**Ithomi**	**0.76**	**145**	*e*Pn	**Pn**	**13 49 53.6**	**+0.6**
ITM	**Ithomi**	**0.76**	**145**	P	**Pb**	**13 49 51.7**	**-0.2**
ITM	**Ithomi**	**0.76**	**145**	*e*PN	**Pn**	**13 49 53.6**	**+0.6**
ITM	**Ithomi**	**0.76**	**145**	P	**Pb**	**13 49 51.7**	**-0.2**
ITM	**Ithomi**	**0.76**	**145**	*e*Pn	**Pn**	**13 49 53.6**	**+0.6**
GUR	**Goura**	**0.77**	**80**	P	**Pb**	**13 49 51.5**	**-0.5**
GUR				S	**Sb**	**13 50 02.7**	**+0.6**
GUR	**Goura**	**0.77**	**80**	*e*PN	**Pn**	**13 49 51.6**	**-1.5**
GUR	**Goura**	**0.77**	**80**	P	**Pb**	**13 49 51.5**	**-0.5**
GUR				S	**Sb**	**13 50 02.7**	**+0.6**
KALE	**Kalithea**	**0.83**	**45**	P	**Pb**	**13 49 52.1**	**-1.1**
KALE				S	**Sb**	**13 50 04.8**	**+0.8**
KALE	**Kalithea**	**0.83**	**45**	P	**Pb**	**13 49 52.1**	**-1.1**
KALE				S	**Sb**	**13 50 04.8**	**+0.8**
VLX	**Vlachokerasia**	**0.90**	**119**	*e*PN	**Pn**	**13 49 54.7**	**-0.3**
VLX	**Vlachokerasia**	**0.90**	**119**	*e*Pn	**Pn**	**13 49 54.7**	**-0.3**
PYL	**PYLOS**	**0.95**	**163**	P	**Pb**	**13 49 55.6**	**+0.4**
PYL	**PYLOS**	**0.95**	**163**	*e*PN	**Pn**	**13 49 57.1**	**+1.4**
PYL	**PYLOS**	**0.95**	**163**	P	**Pb**	**13 49 55.6**	**+0.4**
PYL	**PYLOS**	**0.95**	**163**	*e*Pn	**Pn**	**13 49 57.1**	**+1.4**
DSF	**Desfina**	**1.08**	**56**	P	**Pb**	**13 49 56.8**	**-0.6**
DSF				S	**Sb**	**13 50 11.5**	**+0.3**
DSF	**Desfina**	**1.08**	**56**	P	**Pb**	**13 49 56.8**	**-0.6**
DSF				S	**Sb**	**13 50 11.5**	**+0.3**
LKD2	**Lefkada island**	**1.14**	**330**	P	**Pn**	**13 49 58.0**	**-0.2**
LKD2	**Lefkada island**	**1.14**	**330**	P	**Pn**	**13 49 58.0**	**-0.2**
EVR	**Evrytania**	**1.16**	**16**	*e*Pn	**Pn**	**13 49 57.8**	**-0.7**
EVR	**Evrytania**	**1.16**	**16**	*e*PN	**Pn**	**13 49 57.8**	**-0.7**
EVR	**Evrytania**	**1.16**	**16**	*e*Pn	**Pn**	**13 49 57.8**	**-0.7**
AGG	**Agios Georgios**	**1.42**	**31**	P	**Pn**	**13 50 02.7**	**+0.6**
AGG	**Agios Georgios**	**1.42**	**31**	P	**Pn**	**13 50 02.7**	**+0.6**

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*IDC **16** 14:02:42.2±1.1, 31°.33N×138°.19E, h347km±13km, mb3.1/7, mb1 3.2/11, mb1mx3.0/29, mbtmp3.1/11, Error ellipse: s-maj=25.1km s-min=10.4km az=63.0*
*ISCJB **16** 14:02:42.4±0.5, 31°.41N±0°.05×138°.54E±0°.08, h386km±5km, mb3.3/9, Error ellipse: s-maj=11.6km s-min=7.4km az=153.9*
*NEIC **16** 14:02:43.3±1.4, 31°.25N×137°.94E, h355km±15km, mb3.8/3, Error ellipse: s-maj=24.3km s-min=16.4km az=61.0*
*JMA **16** 14:02:43.8±0.4, 31°.46N×138°.51E, h385km±4km, M3.2*
ISC 16 14:02:44.0±0.6, 31°.47N±0°.07×138°.51E±0°.08, h377km±5km, n30, σ1§03/39, mb3.3/9, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**1.97**	**33**	P	**Pn**	**14 03 38.8**	**+1.4**
	5.0nm,0.3s,baz=22,slow=16,SNR=25						
JHJ				S	**S**	**14 04 17.0**	**-3.6**
	17nm,0.3s,baz=80,slow=23,SNR=6.4						
JHJ2	**Mitsune**	**1.98**	**34**	P	**Pn**	**14 03 39.1**	**+1.6**
JWZ	**Kozaga**	**3.13**	**312**	P	**Pn**	**14 03 46.9**	**+0.5**
JIE	**Ise**	**3.29**	**333**	P	**Pn**	**14 03 49.2**	**+1.4**
JIE				*e*S	**S**	**14 04 39.9**	**+0.5**
JWY	**Kouya**	**3.68**	**319**	P	**Pn**	**14 03 52.7**	**+1.3**
JWY				*e*S	**S**	**14 04 45.6**	**-0.4**
BSO3	**Boso 3**	**3.72**	**26**	P	**Pn**	**14 03 51.9**	**+0.1**
BSO3				*e*S	**S**	**14 04 45.8**	**-0.9**
BSO1	**Boso 1**	**3.79**	**32**	P	**Pn**	**14 03 52.7**	**+0.3**
BSO1				*e*S	**S**	**14 04 46.3**	**-1.6**
JOD2	**Odawara 2**	**3.82**	**7**	P	**Pn**	**14 03 53.2**	**+0.5**
JOD2				*e*S	**S**	**14 04 48.3**	**0.0**
BSO4	**Boso 4**	**3.83**	**23**	*e*S	**S**	**14 04 47.7**	**-0.9**
JYN	**Shimob**	**4.02**	**0**	P	**Pn**	**14 03 55.8**	**+1.2**
JYN				*e*S	**S**	**14 04 50.8**	**-1.1**
JRY	**Ryogami san**	**4.55**	**4**	P	**Pn**	**14 04 00.8**	**+0.8**
JRY				*e*S	**S**	**14 05 01.3**	**-0.3**
JTO	**Tosashimizu**	**5.04**	**287**	P	**Pn**	**14 04 05.1**	**-0.1**
MJAR	**Matsushiro Arr**	**5.07**	**357**	P	**Pn**	**14 04 05.2**	**-0.2**
	1.8nm,0.3s,baz=165,slow=9.2,SNR=15						
MAJO	**Matsushiro**	**5.07**	**357**	*e*P	**Pn**	**14 04 05.9**	**+0.5**
	9.4nm,0.6s						
MAT	**Matsushiro**	**5.07**	**357**	P	**Pn**	**14 04 05.5**	**+0.1**
MAT				*e*S	**S**	**14 05 11.7**	**+0.1**
CBIJ	**Chichi jima**	**5.41**	**143**	P	**Pn**	**14 04 07.0**	**-2.3**
	15nm,0.3s,baz=320,slow=3.9,SNR=27						
CBIJ				S	**S**	**14 05 14.2**	**-4.3**
	31nm,0.3s,baz=286,slow=22,SNR=12						
KSRS	**Korea Array**	**10.58**	**307**	P	**Pn**	**14 05 06.7**	**-1.9**
	0.3nm,0.3s,baz=120,slow=11,SNR=9.5						
ASAJ	**Asahikawa**	**13.03**	**13**	P	**P**	**14 05 38.5**	**+2.9**
	1.0nm,0.3s,baz=220,slow=12,SNR=12						
YSS	**Yuzh-Sakhalins**	**15.81**	**11**	*e*P	**P**	**14 06 12.4**	**+6.5**
ULN	**Ulaanbaatar**	**28.97**	**313**	*e*P	**P**	**14 08 10.1**	**-0.1**
	1.9nm,0.4s,mb3.7						
SONM	**Songino Array**	**29.37**	**313**	P	**P**	**14 08 13.0**	**-0.7**
	0.9nm,0.5s,mb3.3,baz=116,slow=8.6,SNR=8.0						
ZALV	**Zalesovo Beam**	**44.11**	**317**	P	**P**	**14 10 15.7**	**-0.5**
	0.8nm,0.3s,mb3.3,baz=105,slow=3.3,SNR=3.4						
MK31	**Makanchi Array**	**45.26**	**306**	*e*P	**P**	**14 10 24.8**	**-0.5**
MKAR	**Makanchi Array**	**45.26**	**306**	P	**P**	**14 10 24.6**	**-0.7**
	1.3nm,0.8s,mb3.1,baz=95,slow=8.6,SNR=7.2						
KURK	**Kurchatov**	**47.66**	**312**	*e*P	**P**	**14 10 42.8**	**-0.9**
	2.2nm,0.5s,mb3.6						
WRA	**Warramunga Arr**	**51.27**	**185**	P	**P**	**14 11 10.7**	**-0.3**
	0.5nm,0.9s,mb2.7,baz=0.6,slow=7.8,SNR=100						
BVAR	**Borovoye Array**	**52.68**	**315**	P	**P**	**14 11 20.5**	**-0.3**
	1.9nm,0.4s,mb3.8,baz=101,slow=8.5,SNR=13						
ASAR	**Alice Springs**	**55.00**	**185**	P	**P**	**14 11 38.2**	**+0.5**
	0.2nm,0.5s,mb2.7,baz=20,slow=11,SNR=8.0						
TXAR	**Lajitas Array**	**95.45**	**51**	P	**P**	**14 15 29.2**	**+2.3**
	0.1nm,0.4s,mb3.2,baz=316,slow=5.0,SNR=2.8						
LPAZ	**La Paz**	**151.44**	**64**	PKPbc	PKPbc	14 21 57.5	+3.2
	0.4nm,0.3s,baz=0.0,slow=2.0,SNR=3.4						

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*NIED **16** 14:14:00, 39°.00N×140°.90E, h5km, Mw5.1 Best double couple: M0=4.97000×10^16 NP1:φs=348.00000°, δ80.00000°, λ43.00000°. NP2:φs=249.00000°, δ48.00000°, λ166.00000°.*
*ISCJB **16** 14:14:37.4±0.4, 39°.06N±0°.02×140°.69E±0°.02, h1km±2km, mb5.0/193, MS4.8/54, Error ellipse: s-maj=3.2km s-min=2.1km az=147.8*
*IDC **16** 14:14:37.5±0.5, 38°.99N×140°.69E, h0km, mb4.6/27, mb1 4.7/30, mb1mx4.7/33, mbtmp4.6/30, ML4.4/3, MS4.5/27, Ms1 4.5/27, ms1mx4.4/40, Error ellipse: s-maj=13.8km s-min=11.2km az=120.0*
*BJI **16** 14:14:37.3, 38°.96N×141°.04E, h25km, mB5.0/31, mb4.8/47, Ms5.0/50, Ms7 4.7/48*
*NEIC **16** 14:14:38.4, 39°.00N×140°.84E, h11km, mb5.0/135, MS4.8/3, MW5.1(NIED), After JMA.*
NEIC Recorded [4 JMA] in Iwate and Miyagi; [3 JMA] in Akita and Fukushima; [2 JMA] in Aomori; [1 JMA] in Ibaraki and Yamagata.
*JMA **16** 14:14:38.4, 39°.00N×140°.84E, h7km±1km, M5.3 Broadband fault plane solution: P waves. NP1: φs=77.00000°, δ66.00000°, λ-164.00000°. NP2: φs=340.00000°, δ75.00000°, λ-25.00000°. Principal axes: T Plg6.0000°, Azm30.0000°; N Plg61.0000°, Azm131.0000°; P Plg28.0000°, Azm297.0000°;*
JMA Felt IV J1.
*GCMT **16** 14:14:42.1±0.2, 39°.07N×140°.82E, h12km, MW5.1, Moment Tensor Solution. s53,c67; s97,c150; Moment tensor: Scale 10^16Nm; Mrr0.44±.11; Mθθ3.07±.10; Mφφ-3.52±.10; Mrθ0.50±.28; Mθφ-3.65±.09; Mφr-0.31±.28; Best double couple: M0=5.00000×10^16 NP1:φs=69.00000°, δ84.00000°, λ175.00000°. NP2:φs=159.00000°, δ85.00000°, λ6.00000°. Principal axes: T 4.7700, Plg8.0000°, Azm24.0000°; N 0.3700, Plg82.0000°, Azm198.0000°; P -5.1400, Plg1.0000°, Azm294.0000°; Data Used: II IU IC CN G.*
*MOS **16** 14:14:42.1±1.1, 39°.17N×140°.67E, h33km, mb5.2/72, MS4.8/23 Error ellipse: s-maj=6.9km s-min=4.6km az=92.6*
*DJA **16** 14:14:49, 38°.60N×138°.91E, h5km, mb5.0/22*
*SZGRF **16** 14:14:56.1, 40°.70N×139°.14E, h33km, mb5.0, MS4.8, Near west coast of eastern Honshu, Japan*
ISC 16 14:14:39.8±0.5, 39°.09N±0°.02×140°.66E±0°.02, h6km±2km, h6km±2.2km: pP-P, n790, σ0§97/813, mb4.9/193, MS4.8/54, 199C-172D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.29**	**234**	⇓P	**Pg**	**14 14 46.0**	**+0.7**
JYK				*e*S	**Sg**	**14 14 51.6**	**+2.5**
JRG	**Rokugo**	**0.31**	**357**	⇓P	**Pg**	**14 14 46.9**	**+1.1**
JRG				*e*S	**Sg**	**14 14 53.3**	**+3.4**
JMK	**Ichinoseki**	**0.46**	**107**	⇓P	**Pg**	**14 14 44.2**	**-4.4**
JMK				*e*S	**Sg**	**14 14 48.5**	**-6.1**
JYW	**Yuwa**	**0.57**	**323**	⇓P	**Pg**	**14 14 52.6**	**+1.8**
JOM	**Ohasama**	**0.63**	**52**	⇑P	**Pg**	**14 14 49.6**	**-2.3**
JOM				*e*S	**Sg**	**14 14 58.2**	**-1.8**
JOU	**Okura**	**0.72**	**180**	⇑P	**Pg**	**14 14 50.8**	**-2.8**
JOU				*e*S	**Sg**	**14 14 59.7**	**-3.2**
OFUJ	**Ofunato**	**0.79**	**90**	⇓P	**Pg**	**14 14 50.6**	**-4.3**
JIO	**Ouri**	**0.83**	**139**	⇓P	**Pg**	**14 14 50.9**	**-4.8**
JIO				*e*S	**Sg**	**14 15 00.2**	**-6.3**
JTB	**Tobi-shima**	**0.86**	**278**	⇓P	**Pg**	**14 14 57.5**	**+1.2**
JYA	**Atsumi**	**0.89**	**237**	⇓P	**Pg**	**14 14 56.8**	**0.0**
JYS	**Shiratake**	**0.98**	**208**	⇑P	**Pg**	**14 14 56.9**	**-1.7**
JYS				*e*S	**Sg**	**14 15 09.7**	**-1.6**
MIYJ	**Miyakonagasawa**	**1.03**	**61**	⇑P	**Pg**	**14 14 56.2**	**-3.3**
JKZ	**Kuzumaki**	**1.04**	**30**	⇑P	**Pg**	**14 14 58.0**	**-1.7**
JAW	**Awa shima**	**1.27**	**241**	⇓P	**Pn**	**14 15 03.7**	**-0.4**
JAW				S	**Sb**	**14 15 24.2**	**+3.6**
JANG	**Nango**	**1.45**	**27**	⇑P	**Pn**	**14 15 04.8**	**-1.7**
JFT	**Otama**	**1.58**	**189**	⇑P	**Pn**	**14 15 05.5**	**-2.9**
JNS	**Sasagawa**	**1.65**	**220**	⇑P	**Pn**	**14 15 08.4**	**-0.9**
JNS				S	**Sn**	**14 15 32.5**	**+1.8**
JTM	**Tenmabayashi**	**1.73**	**10**	⇑P	**Pn**	**14 15 10.3**	**-0.1**
ONAJ	**Iwakimizuishiy**	**1.98**	**177**	⇑P	**Pn**	**14 15 10.9**	**-3.0**
JSD	**Sado**	**2.15**	**242**	⇓P	**Pn**	**14 15 15.8**	**-0.4**
JSD				S	**Sn**	**14 15 47.2**	**+4.0**
JIZZ	**Izumozaki**	**2.18**	**225**	S	**Sn**	**14 15 52.7**	**+8.8**
JSB	**Shiboa**	**2.19**	**196**	S	**Sn**	**14 15 47.2**	**+3.0**
JHK	**Hiroka**	**2.24**	**216**	⇑P	**Pn**	**14 15 16.8**	**-0.7**
JHO	**Hitachi**	**2.47**	**182**	P	**Pn**	**14 15 18.1**	**-2.5**
JHO				S	**Sn**	**14 15 49.4**	**-1.7**
JJN	**Nakama**	**2.79**	**226**	⇑P	**Pn**	**14 15 25.3**	**+0.3**
JAG	**Ashikaga**	**2.82**	**200**	⇑P	**Pn**	**14 15 24.7**	**-0.7**
JAG				S	**Sn**	**14 16 05.0**	**+5.2**
MJAR	**Matsushiro Arr**	**3.19**	**218**	Pn	**Pn**	**14 15 30.3**	**-0.3**
	18nm,0.3s,baz=30,slow=13,SNR=111						
MAJO	**Matsushiro**	**3.19**	**218**	⇑*i*P	**Pn**	**14 15 30.4**	**-0.2**
MAT	**Matsushiro**	**3.19**	**218**	P	**Pn**	**14 15 30.5**	**-0.1**
MAT				*e*S	**Sn**	**14 16 10.7**	**+1.7**
JNG	**Nsakai**	**3.35**	**218**	⇑P	**Pn**	**14 15 33.1**	**+0.3**
JRY	**Ryogami san**	**3.37**	**205**	S	**Sn**	**14 16 22.7**	**+10**
ERM	**Erimo**	**3.49**	**32**	Pn	**Pn**	**14 15 35.2**	**+0.6**
	3μm,0.5s,SNR=47						
ERM	**Erimo**	**3.49**	**32**	*d i*P	**Pn**	**14 15 33.9**	**-0.7**
ERM	**Erimo**	**3.49**	**32**	*e*P	**Pn**	**14 15 32.9**	**-1.7**
JNT	**Takato**	**3.78**	**213**	S	**Sn**	**14 16 35.1**	**+12**
JGN	**Niukaw**	**3.90**	**224**	P	**Pn**	**14 15 41.1**	**+0.9**
JYN	**Shimob**	**3.96**	**206**	S	**Sn**	**14 16 35.8**	**+8.0**
JOD2	**Odawara 2**	**4.02**	**199**	S	**Sn**	**14 16 32.4**	**+3.2**
SHZ3	**Shizuoka 3**	**4.46**	**207**	P	**Pn**	**14 15 49.9**	**+1.9**
SHZ3				S	**Sn**	**14 16 49.4**	**+9.1**
JIZS	**Izushimoda**	**4.59**	**199**	S	**Sn**	**14 16 48.2**	**+4.9**
ASAJ	**Asahikawa**	**5.23**	**16**	Pn	**Pn**	**14 15 59.2**	**+0.6**
	14nm,0.3s,baz=221,slow=14,SNR=98						
ASAJ				Sn	**Sn**	**14 17 03.2**	**+4.0**
	12nm,0.3s,baz=302,slow=24,SNR=3.7						
ASAJ				LR	LR	14 18 06.6	
	comp=Z,3μm,20.8s,baz=209,slow=39						
ASAJ	**Asahikawa**	**5.23**	**16**	P	**Pn**	**14 15 59.2**	**+0.6**
ASAJ						14 17 03.2	
ASAJ				pmax	pmax		
	comp=Z,14nm,0.3s						
ASAJ				smax			
	comp=N,12nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,3μm,20.8s						
JHJ	**Hachijo jima 2**	**6.00**	**187**	Pn	**Pn**	**14 16 07.4**	**-1.7**
	comp=Z,34nm,0.3s,baz=255,slow=22,SNR=37						
JHJ				Sn	**Sn**	**14 17 15.9**	**-2.1**
	comp=Z,103nm,0.3s,baz=212,slow=23,SNR=11						
JHJ				LR	LR	14 18 32.0	
	comp=Z,2μm,20.5s,baz=307,slow=40						
JHJ2	**Mitsune**	**6.00**	**187**	S	**Sn**	**14 17 15.7**	**-2.5**
YUK	**Yuzh-Kuril'sk**	**6.30**	**37**	⇓*i*P	**Pn**	**14 16 12.1**	**-1.1**
YUK				*i* S	**Sn**	**14 17 20.2**	**-5.3**
YUK				pmax	pmax		
	comp=Z,548nm,1.1s						
YUK				pmax	pmax		
	comp=N,85nm,0.4s						
YUK				pmax	pmax		
	comp=E,96nm,0.4s						
YUK				pmax	pmax		
	comp=Z,481nm,1.1s						
YUK				smax			
	comp=E,910nm,0.5s						
YUK				smax			
	comp=N,1μm,0.6s						
YUK				smax			
	comp=N,5μm,1.0s						
YUK				smax			
	comp=E,2μm,0.8s						
YUK				MLR	MLR		
	comp=N,4μm,19.3s						
YUK				MLR	MLR		
	comp=E,9μm,19.3s						
YUK				MLR	MLR		
	comp=Z,5μm,19.3s						
VLA	**Vladivostok**	**7.75**	**304**	P	**Pn**	**14 16 35.0**	**+1.9**
VLA				MLR	MLR		
	comp=Z,2μm,15.4s						
YSS	**Yuzh-Sakhalins**	**8.01**	**10**	*αe*P	**Pn**	**14 16 37.1**	**+0.4**
YSS				*e*S	**Sn**	**14 18 10.0**	**+2.4**
YSS				pmax	pmax		
	comp=N,50nm,0.8s						
YSS				pmax	pmax		
	comp=Z,50nm,0.8s						
YSS				MLR	MLR		
	comp=Z,3μm,11.0s						
YSS				MLR	MLR		
	comp=N,4μm,12.0s						
YSS				MLR	MLR		
	comp=E,4μm,12.0s						
YSS	**Yuzh-Sakhalins**	**8.01**	**10**	*e*P	**Pn**	**14 16 37.2**	**+0.5**
	comp=E,84nm,0.9s						
KUR	**Kuril'sk**	**8.15**	**39**	P	**Pn**	**14 16 37.0**	**-1.6**
KUR				*e*S	**Sn**	**14 18 09.0**	**-1.9**
KUR				pmax	pmax		
	comp=N,2μm,3.0s						
KUR				pmax	pmax		
	comp=Z,2μm,3.0s						
KUR				pmax	pmax		
	comp=N,90nm,0.7s						
KUR				pmax	pmax		
	comp=E,70nm,0.7s						
KUR				pmax	pmax		
	comp=Z,170nm,0.7s						
KUR				smax			
	comp=N,190nm,0.8s						
KUR				smax			
	comp=E,290nm,0.8s						
KUR				smax			
	comp=N,3μm,3.0s						
KUR				smax			
	comp=E,2μm,3.0s						
KUR				MLR	MLR		

CBIJ Sn **Sn** **14 19 32.5 -14**
comp=Z,12nm,0.3s,baz=116,slow=23,SNR=7.0
CBIJ LR LR 14 21 32.0
comp=Z,1μm,20.3s,baz=358,slow=35
CN2 Changchun 12.34 297 *e*P **Pn** **14 17 39.5 +3.5**
CN2 *e*pP 14 17 42.8
CN2 *e*S **Sn** **14 19 57.5 +3.6**
CN2 SS 14 20 12.3
CN2 pmax pmax
comp=Z,60nm,1.5s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,2μm,10.0s
CN2 LR LR
comp=E,4μm,10.0s
CN2 LR LR
comp=Z,2μm,10.0s
SNY Shenyang 13.29 287 ⇑P **Pn** **14 17 56.1 +7.1**
SNY pmax pmax
comp=Z,30nm,1.7s
SNY pmax pmax
comp=Z,570nm,5.4s
SNY LR LR
comp=N,3μm,11.7s
SNY LR LR
comp=E,3μm,14.9s
SNY LR LR
comp=Z,3μm,14.1s
DL2 Dalian 14.80 275 P **Pn** **14 18 09.1 -0.5**
DL2 S **Sn** **14 20 54.8 +0.9**
DL2 pmax pmax
comp=Z,40nm,1.6s
DL2 pmax pmax
comp=Z,300nm,6.7s
DL2 LR LR
comp=N,2μm,12.8s
DL2 LR LR
comp=E,2μm,15.0s
DL2 LR LR
comp=Z,1μm,17.9s
SKR Severo-Kuril's 15.91 38 *e*P **Pn** **14 18 28.0 +3.8**
SKR S **Sn** **14 21 11.0 -10**
SKR pmax pmax
comp=N,800nm,4.0s
SKR pmax pmax
comp=Z,1μm,4.0s
SKR MLR MLR
comp=N,1μm,14.0s
SKR MLR MLR
comp=Z,2μm,14.0s
SSE Sheshan 17.79 249 *e*P **Pn** **14 18 46.9 -1.2**
SSE pP pP 14 18 51.0 +0.5
SSE S **Sn** **14 22 04.9 -1.8**
SSE pmax pmax
comp=Z,17nm,0.7s
SSE pmax pmax
comp=Z,250nm,4.1s
SSE LR LR
comp=N,3μm,15.2s
SSE LR LR
comp=E,2μm,15.2s
SSE LR LR
comp=Z,2μm,13.1s
PEA0B Petropavlovsk- 18.27 34 *e*P **Pn** **14 18 51.4 -2.4**
PETK Petropavlovsk- 18.27 34 P **Pn** **14 18 48.5 -5.3**
comp=Z,0.2nm,0.3s,baz=213,slow=8.0,SNR=8.4
PETK LR LR 14 26 29.9
comp=Z,953nm,18.5s,baz=223,slow=39
PET Petropavlovsk 18.64 36 *e*P **Pn** **14 18 57.1 -1.2**
PET *e*S **Sn** **14 22 26.8 -0.1**
PET pmax pmax
comp=Z,200nm,7.2s
PET pmax pmax
comp=Z,19nm,1.2s
PET MLR MLR
comp=Z,1μm,16.0s
PET MLR MLR
comp=Z,1μm,15.0s
TIA Tai'an 18.84 269 *e*P **Pn** **14 19 01.5 +0.6**
TIA S **Sn** **14 22 39.0 +7.0**
TIA LR LR
comp=N,5μm,14.0s
TIA LR LR
comp=E,3μm,16.4s
BJI Beijing 18.89 281 P **Pn** **14 19 01.3 -0.1**
BJI S **Sn** **14 22 38.4 +5.3**
BJI pmax pmax
comp=Z,36nm,1.2s
BJI pmax pmax
comp=Z,380nm,3.4s
BJI LR LR
comp=N,1μm,13.8s
BJI LR LR
comp=E,2μm,13.1s
BJI LR LR
comp=Z,890nm,23.6s
NJ2 Nanjing 19.05 255 *e*P **Pn** **14 19 03.1 -0.3**
NJ2 pP pP 14 19 06.8 +2.5
NJ2 sP sP 14 19 10.1 +5.1
NJ2 PP 14 19 19.6
NJ2 S **Sn** **14 22 29.0 -8.0**
NJ2 pmax pmax
comp=Z,110nm,0.8s
NJ2 LR LR
comp=N,770nm,19.3s
NJ2 LR LR
comp=E,750nm,21.4s
NJ2 LR LR
comp=Z,560nm,18.7s
CLNS Chul'man 20.57 335 *e*P **P** **14 19 15.2 -3.9**
CLNS *e* 14 19 29.8
CLNS *e*S **S** **14 23 04.5 -4.8**
CLNS *e* 14 23 18.7
CLNS *e*SS 14 23 38.2
CLNS pmax pmax
comp=E,8.0nm,1.1s
CLNS pmax pmax
comp=Z,22nm,1.5s
CLNS pmax pmax
comp=N,28nm,1.6s
CLNS smax
comp=E,115nm,9.9s
CLNS smax
comp=N,143nm,11.0s
CLNS MLR MLR
comp=Z,2μm,14.0s,MS4.5
CLNS MLR MLR
comp=N,1μm,12.0s,MS4.6
CLNS MLR MLR
comp=E,918nm,12.0s,MS4.6
HHC Hu-ho-hao-te 22.33 284 *e*P **P** **14 19 36.8 -1.3**
HHC PP 14 20 03.3
HHC PcP PcP 14 23 34.1 +0.5
HHC S **S** **14 23 36.3 -7.7**
HHC ScP ScP 14 27 10.8 -0.7
HHC PcS PcS 14 27 12.3 +0.1
HHC pmax pmax
comp=Z,14nm,0.9s,mb4.4
HHC pmax pmax
comp=Z,160nm,6.3s
HHC LR LR
comp=N,1μm,10.5s,MS4.9
HHC LR LR
comp=E,3μm,14.2s,MS4.9
HHC LR LR
comp=Z,3μm,13.8s,MS4.9
YULB Yu-li 22.70 232 *e*P **P** **14 19 38.5 -3.7**
comp=Z,25nm,0.8s,mb4.7
WHN Wuhan 23.16 256 P **P** **14 19 52.3 +5.3**
WHN S **S** **14 24 00.0 +1.1**
WHN LR LR
comp=N,12μm,15.7s,MS5.5
WHN LR LR
comp=E,7μm,17.0s,MS5.5
WHN LR LR
comp=Z,4μm,15.0s,MS5.0
TPUB Ta-pu 23.18 233 *e*P **P** **14 19 45.8 -1.5**
comp=Z,44nm,0.8s,mb4.9
TWG Pinlang 23.27 232 P **P** **14 19 47.6 -0.5**
comp=Z,78nm,1.0s,mb5.1
BTO Baotou 23.52 284 *e*P **P** **14 19 47.8 -2.9**
YAK Yakutsk 23.94 347 *e*P **P** **14 19 52.2 -2.2**
YAK *e**PP 14 19 56.4
YAK *e* 14 20 05.8
YAK *e*S **S** **14 24 06.7 -4.4**
YAK pmax pmax
comp=N,16nm,1.4s
YAK pmax pmax
comp=E,5.0nm,1.3s
YAK pmax pmax
comp=Z,21nm,1.4s,mb4.4
YAK smax
comp=E,342nm,3.1s
YAK smax
comp=N,529nm,2.6s
YAK MLR MLR
comp=Z,1μm,14.0s,MS4.6
YAK MLR MLR
comp=N,998nm,13.0s,MS4.5
YAK MLR MLR
comp=E,682nm,17.0s,MS4.5
YAK Yakutsk 23.94 347 *e*P **P** **14 19 52.7 -1.7**
comp=E,55nm,0.9s,mb5.0
SEY Seymchan 24.91 13*d i*P **P** **14 20 03.6 +0.3**
ULN Ulaanbaatar 25.75 301 *e*P **P** **14 20 10.0 -1.0**
ULN pmax pmax
comp=Z,48nm,1.6s,mb4.8
ULN Ulaanbaatar 25.75 301 *e*P **P** **14 20 10.0 -1.0**
comp=Z,48nm,1.6s,mb4.8
ULN Ulaanbaatar 25.75 301 P **P** **14 20 11.6 +0.6**
SNR=14
ULN P pP 14 20 11.6 -1.1
SNR=14
XAN Xi'an 25.91 269 P **P** **14 20 11.3 -1.3**
XAN S **S** **14 24 41.8 -1.2**
XAN pmax pmax
comp=Z,4.0nm,1.5s,mb3.7
XAN pmax pmax
comp=Z,51nm,3.7s
XAN LR LR
comp=N,1μm,15.4s,MS4.7
XAN LR LR
comp=E,790nm,14.5s,MS4.7
XAN LR LR
comp=Z,550nm,14.9s,MS4.2
SONM Songino Array 26.18 301 P **P** **14 20 13.7 -1.3**
comp=Z,2.7nm,0.7s,mb3.9,baz=104,slow=9.2,SNR=11
SONM LR LR 14 30 42.6
comp=Z,871nm,19.6s,MS4.3,baz=112,slow=37
FX1 Attu Island--F 26.20 48 P **P** **14 20 14.9 -0.1**
comp=Z,10nm,0.5s,mb4.6,baz=298,slow=2.2,SNR=7.2
FX1 LR LR 14 30 10.5
comp=Z,327nm,18.3s,MS3.9,baz=272,slow=36
ZAK Zakamensk 28.56 306 *e*P **P** **14 20 34.9 -1.4**
ZAK pmax pmax
comp=Z,3.0nm,1.6s,mb3.8
TLY Talaya 28.56 308 *e*P **P** **14 20 25.8 -10**
TLY *e* 14 21 31.9
TLY *e*S **S** **14 25 11.9 -13**
TLY pmax pmax
comp=Z,2.0nm,0.9s,mb3.9
TLY MLR MLR
comp=Z,2μm,16.0s,MS4.7
LZH Lanzhou 29.20 276 *e*P **P** **14 20 44.3 +2.2**
LZH pP pP 14 20 47.5 +3.7
LZH PP PP 14 21 38.3 -10
LZH *e*S **S** **14 25 34.0 -0.9**
LZH pmax pmax
comp=Z,49nm,1.5s,mb5.0
LZH pmax pmax
comp=Z,200nm,5.0s
LZH LR LR
comp=N,3μm,14.7s
LZH LR LR
comp=Z,3μm,17.6s,MS5.0
GYA Guiyang 31.05 256⇑*i*P **P** **14 20 56.9 -1.7**
GYA PP PP 14 22 01.0 -7.5
GYA S **S** **14 26 00.8 -3.3**
GYA SS SS 14 27 45.0 -32
GYA pmax pmax
comp=Z,20nm,1.0s,mb4.9
GYA pmax pmax
comp=Z,120nm,4.8s
GYA LR LR
comp=N,820nm,17.8s,MS4.5
GYA LR LR
comp=E,500nm,16.0s,MS4.5
GYA LR LR
comp=Z,640nm,16.2s,MS4.4
CD2 Chengdu 31.14 266 *e*P **P** **14 20 59.4 +0.1**
CD2 pP pP 14 21 03.8 +2.8
CD2 sP sP 14 21 06.5 +4.8
CD2 PP PP 14 22 01.5 -8.0
CD2 S **S** **14 26 02.9 -2.6**
CD2 SS SS 14 27 46.5 -32
CD2 pmax pmax
comp=Z,60nm,0.6s,mb5.6
CD2 pmax pmax
comp=Z,150nm,5.2s
CD2 LR LR
comp=N,3μm,11.8s,MS5.3
CD2 LR LR
comp=E,3μm,11.8s,MS5.3
CD2 LR LR
comp=Z,1μm,11.9s,MS4.9
GTA Gaotai 31.44 284 *e*P **P** **14 21 02.1 +0.2**
GTA pP pP 14 21 05.9 +2.3
GTA PP PP 14 22 05.3 -7.4
GTA PcP PcP 14 23 57.8 +2.7
GTA S **S** **14 26 07.5 -2.5**
GTA pmax pmax
comp=Z,3.0nm,1.6s,mb3.9
GTA pmax pmax
comp=Z,80nm,3.9s
GTA LR LR
comp=N,1μm,11.7s
GTA LR LR
comp=E,1μm,17.4s
GTA LR LR
comp=Z,2μm,21.3s
BILL Bilibino 32.24 18 *e*P **P** **14 21 08.7 +0.1**
BILL *i* 14 24 00.5
BILL pmax pmax
comp=Z,41nm,1.2s,mb5.1
BILL MLR MLR
comp=Z,1μm,14.0s,MS4.7
BILL Bilibino 32.24 18 *e*P **P** **14 21 07.2 -1.4**
comp=Z,50nm,1.4s,mb5.2
TIXI Tiksi 33.19 353 *e*P **P** **14 21 13.2 -3.6**
TIXI pmax pmax
comp=Z,17nm,1.3s,mb4.8
TIXI Tiksi 33.19 353 *e*P **P** **14 21 13.2 -3.6**
comp=Z,17nm,1.3s,mb4.8
QIZ Qiongzhong 33.30 242 P **P** **14 21 17.8 -0.5**
QIZ S **S** **14 26 41.1 +1.9**
QIZ pmax pmax
comp=Z,15nm,1.9s,mb4.6
QIZ pmax pmax
comp=Z,97nm,2.9s,mb5.2
QIZ LR LR
comp=N,2μm,14.1s,MS5.0
QIZ LR LR
comp=E,400nm,11.8s,MS5.0
QIZ LR LR
comp=Z,1μm,15.8s,MS4.8
KMI Kunming 34.74 258 P **P** **14 21 31.8 +0.9**
KMI pP pP 14 21 34.9 +2.3
KMI PP PP 14 22 48.6 -0.9
KMI PcP PcP 14 24 05.5 +0.9
KMI S **S** **14 27 00.8 -0.8**
KMI ScP ScP 14 27 49.5 -0.9
KMI PcS PcS 14 27 50.8 -0.5
KMI SS SS 14 29 13.0 -19
KMI ScS ScS 14 31 51.8 -2.0
KMI pmax pmax
comp=Z,12nm,0.7s,mb4.9
KMI LR LR
comp=N,2μm,15.0s,MS5.0
KMI LR LR
comp=E,830nm,13.3s,MS5.0
KMI LR LR
comp=Z,980nm,13.9s,MS4.7
WMQ Urumqi 39.41 294 *e*P **P** **14 22 18.0 +7.6**
WMQ pmax pmax
comp=Z,21nm,1.0s,mb4.8
WMQ Urumqi 39.41 294 P **P** **14 22 10.0 -0.4**
WMQ sP sP 14 22 17.0 +4.2
WMQ PP PP 14 23 45.0 +4.4
WMQ S **S** **14 28 11.0 -1.3**
WMQ SS SS 14 30 57.0 -8.9
WMQ pmax pmax
comp=Z,42nm,1.0s,mb5.1
WMQ pmax pmax
comp=Z,84nm,4.0s
WMQ LR LR
comp=N,720nm,15.0s,MS4.7
WMQ LR LR
comp=E,540nm,15.0s,MS4.7
WMQ LR LR
comp=Z,610nm,15.0s,MS4.6
ZAA0 Zalesovo Array 40.11 311 *e*P **P** **14 22 15.1 -0.9**
ZALV Zalesovo Beam 40.11 311 P **P** **14 22 15.4 -0.6**
comp=Z,3.9nm,0.5s,mb4.4,baz=80,slow=8.1,SNR=14
ZALV PcP PcP 14 24 19.6 -0.8
comp=Z,2.9nm,0.5s,baz=96,slow=3.8,SNR=3.9
ZALV LR LR 14 38 55.8
comp=Z,561nm,18.3s,MS4.5,baz=179,slow=36
ZALV Zalesovo Beam 40.11 311 P **P** **14 22 15.4 -0.6**
ZALV 14 24 19.6
NVS Novosibirsk 41.01 312 *e*P **P** **14 22 22.4 -1.0**
NVS pmax pmax
comp=Z,37nm,1.6s,mb4.8
NVS pmax pmax
comp=E,50nm,1.7s
CMAR Chiang Mai Arr 41.49 252 P **P** **14 22 28.0 +0.2**
comp=E,1.4nm,0.7s,mb3.7,baz=47,slow=5.6,SNR=8.5
CMAR PcP PcP 14 24 24.2 -1.2
comp=E,1.2nm,0.7s,baz=43,slow=1.9,SNR=2.6
CMAR LR LR 14 40 08.8
comp=E,523nm,18.5s,MS4.4,baz=54,slow=37
CMAR Chiang Mai Arr 41.49 252 P **P** **14 22 28.0 +0.2**
CMAR 14 24 24.3
MK31 Makanchi Array 42.55 300 *e*P **P** **14 22 35.5 -0.6**
MKAR Makanchi Array 42.55 300 P **P** **14 22 35.5 -0.7**
comp=E,3.2nm,0.7s,mb4.2,baz=86,slow=9.5,SNR=22
MKAR LR LR 14 40 50.3
comp=E,540nm,18.7s,MS4.5,baz=91,slow=37
TTA Tatalina 44.10 36 *e*P **P** **14 22 48.5 +0.1**
TTA pmax pmax
comp=Z,5.0nm,0.4s,mb4.6
TTA Tatalina 44.10 36 *e*P **P** **14 22 48.5 +0.1**
comp=Z,5.0nm,0.4s,mb4.6
KURK Kurchatov 44.22 306 P **P** **14 22 48.0 -1.6**
comp=Z,195nm,0.6s,mb6.0,SNR=16
KURK Kurchatov 44.22 306 P **P** **14 22 49.3 -0.3**
comp=Z,11nm,0.5s,mb4.9,baz=82,slow=8.5,SNR=59
KURK Kurchatov 44.22 306 *e*P **P** **14 22 48.4 -1.2**
KURK pmax pmax
comp=Z,15nm,0.5s,mb5.0
KURK Kurchatov 44.22 306 *e*P **P** **14 22 48.4 -1.1**
comp=Z,15nm,0.5s,mb5.0
KURK Kurchatov 44.22 306 P **P** **14 22 48.9 -0.6**
SNR=19
KURK P pP 14 22 48.9 -2.4
SNR=19
SVW2 Sparrevohn 44.28 39 *e*P **P** **14 22 50.5 +0.6**
TAPN Taplejung 45.24 272 *e*P **P** **14 23 01.4 +3.3**
OHAK Old Harbor 45.68 44 *e*P **P** **14 22 59.7 -1.4**
comp=Z,24nm,1.1s,mb5.0
RSO Redoubt South 45.68 39 *e*P **P** **14 23 01.6 +0.5**
ODAN Odare 45.73 271 *e*P **P** **14 23 03.6 +1.7**
comp=Z,45nm,1.2s,mb5.3
KDAK Kodiak Island 45.99 43 P **P** **14 23 01.0 -2.6**
comp=Z,212nm,1.4s,mb5.9,SNR=5.0
KDAK Kodiak Island 45.99 43 P **P** **14 23 02.8 -0.8**
comp=Z,21nm,0.9s,mb5.1,baz=261,slow=2.4,SNR=11
KDAK Kodiak Island 45.99 43 P **P** **14 23 02.8 -0.8**
KDAK pmax pmax
comp=Z,7.0nm,1.4s,mb4.4
JIRN Jiri 46.28 273 *e*P **P** **14 23 06.8 +0.6**
comp=Z,13nm,0.6s,mb5.0
RAMN Ramite 46.30 272 *e*P **P** **14 23 05.9 -0.5**
comp=Z,59nm,1.0s,mb5.5
GUN Gumba 46.40 273 *e*P **P** **14 23 07.4 +0.2**
comp=Z,109nm,0.9s,mb5.8
KSM Kuching 46.57 224 *e*P **P** **14 23 08.3 -0.4**
comp=Z,7.3nm,0.8s,mb4.7
COLD Coldfoot 46.66 30 *e*P **P** **14 23 07.6 -1.1**
comp=Z,36nm,1.4s,mb5.1
KKN Kakani 46.92 274 *e*P **P** **14 23 10.9 -0.4**
comp=Z,28nm,0.7s,mb5.3
KKN Kakani 46.92 274 *e*P **P** **14 23 10.9 -0.4**
KKN pmax pmax
comp=Z,28nm,0.6s,mb5.4
PKI Pulchoki 46.93 273 *e*P **P** **14 23 09.6 -1.7**
PKIN Phulchoki 46.93 273 *e*P **P** **14 23 09.6 -1.8**
RC01 Rabbit Creek A 47.11 38 *e*P **P** **14 23 11.3 -1.0**
comp=Z,43nm,1.2s,mb5.2
DMN Daman 47.15 273 *e*P **P** **14 23 11.9 -1.1**
MCK McKinley 47.28 35 P **P** **14 23 10.4 -3.2**
MCK pmax pmax
comp=Z,17nm,1.1s,mb4.9
MCK McKinley 47.28 35 P **P** **14 23 10.4 -3.2**
comp=Z,17nm,1.1s,mb4.9
PMR Palmer 47.35 38 *e*P **P** **14 23 14.2 0.0**
PMR pmax pmax
comp=Z,18nm,1.1s,mb4.9
PMR Palmer 47.35 38 *e*P **P** **14 23 14.2 0.0**
comp=Z,18nm,1.1s,mb4.9
COLA College 47.68 33 P **P** **14 23 16.6 -0.1**
COLA pmax pmax
comp=Z,14nm,1.0s,mb5.0
COLA College 47.68 33 P **P** **14 23 16.6 -0.1**
comp=Z,14nm,1.0s,mb4.9
KAPI Kappang 47.95 209 *e*P **P** **14 23 17.3 -2.0**
comp=Z,89nm,1.5s,mb5.6
KAPI Kappang 47.95 209 P **P** **14 23 18.0 -1.3**
SNR=6.2
KAPI P pP 14 23 18.0 -3.0
SNR=6.2
TKM2 Tokmak 2 48.15 297 *e*P **P** **14 23 21.0 +0.3**
TKM2 pmax pmax
comp=Z,43nm,1.2s,mb5.3
TKM2 Tokmak 2 48.15 297 *e*P **P** **14 23 21.0 +0.3**
comp=Z,43nm,1.2s,mb5.3
BVAR Borovoye Array 48.77 311 P **P** **14 23 24.6 -0.6**
comp=Z,3.3nm,0.5s,mb4.6,baz=73,slow=7.8,SNR=19
BRVK Borovoye 48.82 311 *e*P **P** **14 23 25.3 -0.3**
BRVK pmax pmax
comp=Z,19nm,1.2s,mb5.0
BRVK Borovoye 48.82 311 *e*P **P** **14 23 25.3 -0.3**
comp=Z,19nm,1.2s,mb5.0
BRVK Borovoye 48.82 311 P **P** **14 23 27.1 +1.4**
SNR=7.8
BRVK P pP 14 23 27.1 -0.4
SNR=7.8
FRU Bishkek 48.86 297 *e*P **P** **14 23 26.0 -0.1**
FRU pmax pmax
comp=Z,60nm,1.6s,mb5.4
AAK Ala-Archa 49.02 297 LR LR 14 44 21.9
comp=Z,503nm,21.3s,MS4.5,baz=64,slow=36
AAK Ala-Archa 49.02 297 *e*P **P** **14 23 26.6 -0.7**
AAK pmax pmax
comp=Z,16nm,1.1s,mb5.0
AAK Ala-Archa 49.02 297 *e*P **P** **14 23 26.6 -0.7**
comp=Z,16nm,1.1s,mb5.0
AAK Ala-Archa 49.02 297 P **P** **14 23 29.8 +2.5**
SNR=8.7
AAK P pP 14 23 29.8 +0.7
SNR=8.7
DIV Divide 49.02 38 *e*P **P** **14 23 26.4 -0.6**
comp=Z,42nm,1.3s,mb5.3
KSH Kashi 49.05 292 *e*P **P** **14 23 33.0 +5.4**
KSH pP pP 14 23 37.5 +8.1
KSH sP sP 14 23 40.0 +10
KSH PcP PcP 14 24 54.8 +3.4
KSH PP PP 14 25 28.1 +7.1
KSH ScP ScP 14 28 48.3 +1.3
KSH PcS PcS 14 28 50.1 +2.5
KSH S **S** **14 30 39.6 +6.9**
KSH ScS ScS 14 33 21.3 +0.8
KSH SS SS 14 34 08.0 +4.7
KSH pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
KSH pmax pmax
comp=Z,130nm,5.0s
KSH LR LR
comp=N,500nm,13.2s,MS4.9
KSH LR LR
comp=E,850nm,16.2s,MS4.9
KSH LR LR
comp=Z,430nm,12.8s,MS4.6
UCH Uchtor 49.14 296 *e*P **P** **14 23 28.4 +0.2**
comp=Z,9.9nm,1.2s,mb4.7
EKS2 Erkin-Say 49.50 297 *e*P **P** **14 23 30.9 -0.2**
comp=Z,7.3nm,0.9s,mb4.7
BMRM Bremner River 49.60 38 *e*P **P** **14 23 30.6 -0.9**
comp=Z,46nm,1.4s,mb5.3

MENT	Mentasta	49.70	36	eP	P		14 23 32.2	0.0
AML	Almayashu	49.74	296	eP	P		14 23 29.1	-3.8
	comp=Z,13nm,0.8s,mb5.0							
EGAK	Eagle	50.53	33	eP	P		14 23 37.1	-1.5
	comp=Z,10nm,1.0s,mb4.7							
KAKA	Kakadu	52.09	190	eP	P		14 23 50.0	-0.7
	comp=Z,42nm,1.1s,mb5.3							
KAKA	Kakadu	52.09	190	eP	P		14 23 49.8	-0.9
	comp=Z,165nm,1.3s,mb5.8							
INK	Inuvik	52.84	28	P	P		14 23 55.0	-0.7
	comp=Z,11nm,0.9s,mb4.8,baz=285,slow=8.4,SNR=17							
INK	Inuvik	52.84	28	eP	P		14 23 54.7	-1.0
INK				pmax	pmax			
	comp=Z,23nm,1.1s							
INK	Inuvik	52.84	28	eP	P		14 23 54.7	-1.1
	comp=Z,24nm,1.1s,mb5.0							
SVE	Sverdlovsk	53.23	317⇓	eP	P		14 23 58.8	+0.1
SVE				eS	S		14 31 26.7	-3.2
SVE				eSS	SS		14 34 58.2	-11
SVE				eSSS			14 36 56.6	
SVE				pmax	pmax			
	comp=Z,24nm,1.2s,mb5.0							
SVE				MLR	MLR			
	comp=Z,2μm,15.0s,MS5.2							
SOKR	Solikamsk	54.35	321	eP	P		14 24 09.1	+2.2
SOKR				pmax	pmax			
	comp=Z,7.0nm,0.6s,mb4.8							
SOKR				MLR	MLR			
	comp=Z,510nm,18.0s,MS4.6							
ARU	Arti	54.44	317	d iP	P		14 24 06.8	-0.8
ARU				e			14 25 06.0	
ARU				e			14 26 07.4	
ARU				PPP			14 27 16.5	
ARU				S	S		14 31 45.7	-0.7
ARU				SS	SS		14 35 24.8	-3.3
ARU				pmax	pmax			
	comp=Z,26nm,1.7s,mb4.9							
ARU				MLR	MLR			
	comp=Z,1μm,16.0s,MS5.1							
ARU	Arti	54.44	317	eP	P		14 24 05.7	-1.9
	comp=Z,31nm,1.1s,mb5.2							
SKAG	Skagway	54.46	39	eP	P		14 24 09.8	+2.1
	comp=Z,33nm,1.6s,mb5.0							
SIT	Sitka	55.23	41	eP	P		14 24 14.8	+1.5
SIT				pmax	pmax			
	comp=Z,51nm,2.1s,mb5.2							
SIT	Sitka	55.23	41	eP	P		14 24 14.8	+1.5
	comp=Z,51nm,2.1s,mb5.2							
KBL	Kabul	56.15	289	P	P		14 24 20.2	-0.1
KBL				pmax	pmax			
	comp=Z,18nm,1.0s,mb5.1							
KBL	Kabul	56.15	289	P	P		14 24 20.2	0.0
	comp=Z,18nm,1.0s,mb5.0							
ABKAR	Akbulak array	56.18	309	eP	P		14 24 19.5	-0.7
	comp=Z,7.5nm,0.5s,mb5.0							
AKTO	Aktyubinsk	56.87	311	LR	LR		14 50 21.5	
	comp=Z,494nm,18.0s,MS4.7,baz=58,slow=38							
CRAG	Craig	56.95	43	eP	P		14 24 27.8	+2.2
	comp=Z,50nm,1.6s,mb5.3							
DLBC	Dease Lake	57.39	39	P	P		14 24 29.2	+0.5
	comp=Z,10nm,1.2s,mb4.7,baz=318,slow=9.0,SNR=14							
DLBC	Dease Lake	57.39	39	eP	P		14 24 29.5	+0.8
ALE	Alert	58.10	3	P	P		14 24 34.4	+0.9
	comp=Z,170nm,1.5s,mb5.9,SNR=7.3							
FITZ	Fitzroy Crossi	58.60	197	eP	P		14 24 36.5	-1.1
	comp=Z,33nm,1.3s,mb5.2							
FITZ	Fitzroy Crossi	58.60	197	eP	P		14 24 35.9	-1.6
	comp=Z,58nm,1.5s,mb5.4							
WRAB	Tennant Creek	59.00	187	P	P		14 24 38.0	-2.3
	comp=Z,206nm,0.6s,SNR=16							
WRAB	Tennant Creek	59.00	187	eP	P		14 24 37.6	-2.7
WRAB				pmax	pmax			
	comp=Z,69nm,1.3s,mb5.5							
WRAB	Tennant Creek	59.00	187	eP	P		14 24 37.6	-2.7
	comp=Z,69nm,1.3s,mb5.5							
WRA	Warramunga Arr	59.01	187	P	P		14 24 37.4	-3.0
	comp=Z,14nm,0.5s,mb5.3,baz=5.1,slow=7.3,SNR=172							
APA	Apatity	60.58	335⇑	eP	P		14 24 42.0	-8.7
APA				pmax	pmax			
	comp=Z,78nm,2.0s,mb5.5							
APA				MLR	MLR			
	comp=Z,800nm,19.0s,MS4.9							
RES	Resolute Bay	60.77	15	P	P		14 24 50.3	-1.6
	comp=Z,14nm,0.8s,mb5.2,baz=304,slow=8.6,SNR=18							
RES	Resolute Bay	60.77	15	eP	P		14 24 50.3	-1.6
RES				pmax	pmax			
	comp=Z,39nm,1.2s,mb5.4							
RES	Resolute Bay	60.77	15	eP	P		14 24 50.3	-1.6
	comp=Z,39nm,1.2s,mb5.4							
KEV	Kevo	61.32	339	eP	P		14 24 56.0	+0.3
KEV				pmax	pmax			
	comp=Z,1.0nm,0.3s,mb4.4							
KEV	Kevo	61.32	339	ep	P		14 24 56.0	+0.3
	comp=Z,0.7nm,0.3s,mb4.3							
KEV	Kevo	61.32	339	ep	P		14 24 56.0	+0.3
	comp=Z,0.7nm,0.3s,mb4.3							
ARCES	ARCESS Array B	61.87	339	P	P		14 24 58.8	-0.7
	comp=Z,2.0nm,0.7s,mb4.4,baz=64,slow=8.2,SNR=13							
ARE0	ARCESS Array S	61.87	339	eP	P		14 24 58.9	-0.6
YKA	Yellowknife Ar	62.34	30	P	P		14 25 01.5	-1.2
	comp=Z,2.0nm,0.7s,mb4.3,baz=296,slow=6.6,SNR=8.7							
ASAR	Alice Springs	62.74	187	P	P		14 25 03.4	-2.4
	comp=Z,7.2nm,0.7s,mb4.9,baz=356,slow=4.4,SNR=55							
DAG	Danmarks Havn	63.68	355⇑	iP	P		14 25 12.0	+0.6
	comp=Z,7.6nm,0.9s,mb4.7							
JOF	Joensuu	63.88	331	eP	P		14 25 11.0	-1.9
JOF				pmax	pmax			
	comp=Z,3.0nm,0.4s,mb4.7							
JOF	Joensuu	63.88	331	ep	P		14 25 11.0	-1.9
	comp=Z,3.2nm,0.4s,mb4.7							
JOF	Joensuu	63.88	331	ep	P		14 25 11.0	-1.9
	comp=Z,3.2nm,0.4s,mb4.7							
EIDS	Eidsvold	64.85	170	P	P		14 25 19.6	0.0
	comp=Z,9.5nm,1.0s,mb4.8							
MOS	Moscow	65.25	323	eP	P		14 25 20.9	-1.1
MOS				e			14 25 36.6	
MOS				ePPP			14 29 19.2	
MOS				eS	S		14 34 08.1	+2.5
MOS				e			14 35 17.8	
MOS				pmax	pmax			
	comp=Z,61nm,1.2s,mb5.5							
MOS				MLR	MLR			
	comp=Z,800nm,15.0s,MS5.0							
DZM	Mont Dzumac	65.45	154	eLR	LR		14 45 04.3	
	comp=Z,535nm,21.9s							
NLWA	Neilton Lookou	65.78	48	⇓P	P		14 25 24.6	-0.9
	baz=66							
NLWA	Neilton Lookou	65.78	48	eP	P		14 25 27.4	+1.8
	comp=Z,52nm,1.3s,mb5.4							
A05A	Maple Falls	65.94	46	⇑P	P		14 25 26.5	0.0
	baz=66							
KAF	Kangasniemi	66.22	332	eP	P		14 25 26.4	-1.7
KAF				pmax	pmax			
	comp=Z,3.0nm,0.4s,mb4.7							
KAF	Kangasniemi	66.22	332	ep	P		14 25 26.4	-1.7
	comp=Z,3.4nm,0.4s,mb4.7							
KAF	Kangasniemi	66.22	332	ep	P		14 25 26.4	-1.7
	comp=Z,3.4nm,0.4s,mb4.7							
GNW	Green Mountain	66.29	47	eP	P		14 25 30.2	+1.4
	comp=Z,12nm,1.4s,mb4.7							
JCW	Jim Creek	66.46	46	eP	P		14 25 29.9	0.0
	comp=Z,39nm,1.1s,mb5.3							
B06A	Marblemount	66.53	46	⇑P	P		14 25 30.3	0.0
	baz=66							
RPW	Rockport	66.55	46	P	P		14 25 31.1	+0.6
	comp=Z,3.5nm,0.9s,mb4.4							
FINES	FINESS Array B	66.73	332	P	P		14 25 30.4	-1.0
	comp=Z,5.6nm,0.6s,mb4.8,baz=46,slow=8.2,SNR=18							
FINES				LR	LR		14 59 28.5	
	comp=Z,352nm,18.4s,MS4.6,baz=217,slow=40							
F03A	Seaside	66.74	49	⇓P	P		14 25 32.4	+0.7
	baz=66							
A07A	Ashnola River,	66.85	45	⇑P	P		14 25 32.1	-0.3
	baz=67,SNR=6.6							
D05A	Enumclaw	66.97	47	⇑P	P		14 25 33.9	+0.8
	baz=67							
VSR	Storozhevoye	67.00	318	eP	P		14 25 32.9	-0.4
VSR				pmax	pmax			
	comp=Z,30nm,1.5s,mb5.1							
VSR				pmax	pmax			
	comp=N,10.0nm,1.0s							
VSR				pmax	pmax			
	comp=E,6.0nm,0.4s							
VSR				MLR	MLR			
	comp=N,730nm,16.0s,MS5.2							
VSR				MLR	MLR			
	comp=E,780nm,16.0s,MS5.2							
VSR				MLR	MLR			
	comp=Z,2μm,16.0s,MS5.3							
VORD	Divnogorie	67.08	318	eP	P		14 25 33.6	-0.2
VORD				pmax	pmax			
	comp=Z,20nm,1.4s,mb5.0							
VORD				pmax	pmax			
	comp=N,10.0nm,0.7s							
VORD				pmax	pmax			
	comp=E,10.0nm,0.7s							
VORD				MLR	MLR			
	comp=N,920nm,18.0s,MS5.2							
VORD				MLR	MLR			
	comp=E,910nm,18.0s,MS5.2							
VORD				MLR	MLR			
	comp=Z,1μm,18.0s,MS5.2							
LON	Longmire	67.31	48	eP	P		14 25 35.1	-0.2
LON				pmax	pmax			
	comp=Z,11nm,1.2s,mb4.8							
LON	Longmire	67.31	48	eP	P		14 25 35.1	-0.3
	comp=Z,11nm,1.2s,mb4.8							
F04A	Amboy	67.41	49	⇓P	P		14 25 36.0	+0.1
	baz=67							
ETW	Entiat	67.68	46	eP	P		14 25 38.5	+0.9
	comp=Z,15nm,0.9s,mb5.0							
G04A	Mulino	67.77	49	⇓P	P		14 25 38.5	+0.2
	baz=68							
B08A	Colville Reser	67.81	45	⇑P	P		14 25 38.5	0.0
	baz=68,SNR=6.4							
EDM	Edmonton	68.11	39	eP	P		14 25 39.4	-0.9
H04A	Detroit Lake	68.23	50	⇑P	P		14 25 42.2	+1.0
	baz=68							
VSU	Vasula	68.39	329	i P	P		14 25 42.6	+0.7
VSU				pmax	pmax			
	comp=Z,31nm,1.6s,mb5.1							
VSU				MLR	MLR			
	comp=Z,582nm,15.0s,MS4.9							
E07A	Sunnyside	68.54	47	⇑P	P		14 25 43.8	+0.8
	baz=68							
SUMG	Summit	68.64	360	eP	P		14 25 43.1	-0.1
	comp=Z,22nm,0.9s,mb5.1							
SUMG	Summit	68.64	360	i P	P		14 25 45.9	+2.6
	comp=Z,15nm,0.9s,mb4.9							
OD2	Odessa Site #2	68.71	46	P	P		14 25 44.7	+0.6
	comp=Z,75nm,1.6s,mb5.4							
C09A	Chrisman Ranch	68.72	45	⇑P	P		14 25 44.5	+0.4
	baz=68							
RSW	Rattlesnake Hi	68.78	47	eP	P		14 25 44.5	-0.1
D08A	Wollman Farm,	68.78	46	⇑P	P		14 25 45.0	+0.4
	baz=69							
HAWA	Hanford	68.81	47	eP	P		14 25 46.6	+1.8
G06A	Carlson Farm,	68.83	49	⇑P	P		14 25 45.3	+0.3
	baz=69							
AFI	Afiamalu	68.90	130	LR	LR		14 53 32.2	
	comp=Z,265nm,20.1s,MS4.5,baz=102,slow=34							
E08A	Dider Farm, El	69.03	47	⇑P	P		14 25 46.1	0.0
	baz=69							
ZEI	Tsey	69.06	308	eP	P		14 25 42.9	-3.5
ZEI				pmax	pmax			
	comp=Z,9.0nm,0.6s,mb4.9							
NEW	Newport	69.08	44	eP	P		14 25 46.0	-0.4
NEW				pmax	pmax			
	comp=Z,31nm,1.6s							
NEW	Newport	69.08	44	eP	P		14 25 46.0	-0.4
	comp=Z,31nm,1.6s,mb5.0							
MTA	Mtatsminda	69.11	307	P	P		14 25 48.6	+1.9
KIV	Kislovodsk	69.12	310	P	P		14 25 48.4	+1.6
	comp=Z,237nm,0.9s,mb6.1,SNR=8.6							
KIV	Kislovodsk	69.12	310	eP	P		14 25 47.3	+0.5
KIV				eS	S		14 34 52.6	0.0
KIV				eSS	SS		14 39 21.9	+4.0
KIV				pmax	pmax			
	comp=Z,37nm,4.9s							
KIV				pmax	pmax			
	comp=Z,38nm,1.1s,mb5.2							
KIV				MLR	MLR			
	comp=Z,421nm,19.0s,MS4.7							
KIV	Kislovodsk	69.12	310	eP	P		14 25 48.0	+1.3
	comp=Z,44nm,1.0s,mb5.3							
KIV	Kislovodsk	69.12	310	P	P		14 25 47.4	+0.7
	SNR=24							
KIV				P	pP		14 25 47.4	-1.2
	SNR=24							
TBLG	Delisi	69.12	307	eP	P		14 25 48.6	+1.8
TBLG	Delisi	69.12	307	P	P		14 25 48.6	+1.8
KEH	Kehvi	69.30	308	P	P		14 25 49.2	+1.3
GOR	Gori	69.37	308	P	P		14 25 52.5	+4.1
ONI	Oni	69.43	309	P	P		14 25 50.8	+2.1
A12A	Yaak River Ran	69.48	43	⇑P	P		14 25 48.8	-0.1
	baz=69							
E09A	Wood Farm, Sta	69.53	46	⇓P	P		14 25 49.4	+0.1
	baz=69							
D10A	Wagner Farm, O	69.70	45	⇑P	P		14 25 49.9	-0.4
	baz=70							
G08A	Pilot Rock	69.77	48	⇑P	P		14 25 50.7	-0.1
	baz=70							
B12A	Libby	69.79	44	⇑P	P		14 25 50.6	-0.2
	baz=70							
C11A	Tepee Creek (N	69.80	44	⇑P	P		14 25 51.1	+0.2
	baz=70,SNR=9.0							
GNI	Garni	70.01	306	LR	LR		14 59 36.7	
	comp=Z,446nm,19.0s,MS4.7,baz=174,slow=38							
SCO	Scoresbysund	70.02	354	i P	P		14 25 53.6	+1.8
	comp=Z,4.3nm,1.1s,mb4.3							
K05A	Summer Lake	70.11	51	⇑P	P		14 25 52.8	-0.1
	baz=70							
E10A	Myers Farm, Un	70.13	46	⇑P	P		14 25 52.9	0.0
	baz=70							
F09A	S2 Ranch, Elgi	70.13	47	⇓P	P		14 25 53.2	+0.3
	baz=70							
I07A	Izee	70.16	49	⇑P	P		14 25 53.7	+0.6
	baz=70							
C12B	Naegeli Ranch,	70.30	44	⇓P	P		14 25 54.2	+0.2
	baz=70							
WALA	Waterton Lakes	70.32	42	eP	P		14 25 53.6	-0.4
	comp=Z,1.2nm,1.5s							
F10A	Beach Ranch, E	70.36	46	⇑P	P		14 25 54.9	+0.5
	baz=70							
IZAR	Zarasai	70.36	327	eP	P		14 25 54.0	-0.2
H08A	Prairie City	70.39	48	⇓P	P		14 25 55.4	+0.8
	baz=70							
IDID	Didziasalis	70.44	326	eP	P		14 25 54.8	+0.2
B13A	Whitefish	70.44	43	⇓P	P		14 25 55.6	+0.8
	baz=70,SNR=12							
G09A	Cove	70.46	47	⇓P	P		14 25 55.2	+0.3
	baz=70,SNR=5.5							
MICGM	Minsk	70.47	325	eP	P		14 25 54.0	-0.9
MNK	Minsk	70.49	325	eP	P		14 25 54.0	-1.0
ISAL	Salakas	70.53	327	eP	P		14 25 55.4	+0.2
BSMT	Bassoo Peak	70.59	44	eP	P		14 25 56.1	+0.4
	comp=Z,25nm,1.7s,mb4.9							
STKA	Stephens Creek	70.61	179	eP	P		14 25 53.9	-1.9
	comp=Z,3.7nm,0.9s,mb4.3							
STKA	Stephens Creek	70.61	179	P	P		14 25 53.8	-2.0
	comp=Z,2.8nm,0.7s,mb4.3,baz=340,slow=7.0,SNR=5.0							
STKA				LR	LR		14 55 16.3	
	comp=Z,254nm,19.8s,MS4.5,baz=15,slow=35							
A14A	Double T Ranch	70.63	42	⇑P	P		14 25 56.2	+0.3
	baz=70,SNR=11							
IIGN	Ignalina	70.64	327	eP	P		14 25 56.0	+0.2
C13A	Hot Springs	70.81	44	⇑P	P		14 25 57.6	+0.6
	baz=71,SNR=7.5							
G10A	Bishop Farm, J	70.83	47	⇑P	P		14 25 57.1	-0.1
	baz=71,SNR=5.7							
H09A	Durkee	70.89	48	⇓P	P		14 25 58.1	+0.5
	baz=71							
MOD	Modoc	70.94	51	eP	P		14 25 59.7	+1.7
	comp=Z,5.2nm,1.0s,mb4.4							
BMO	Blue Mountains	70.98	47	P	P		14 25 58.9	+0.8
BMO				pmax	pmax			
	comp=Z,10.0nm,1.5s,mb4.5							
BMO	Blue Mountains	70.98	47	P	P		14 25 58.9	+0.7
	comp=Z,9.5nm,1.5s,mb4.5							
A15A	Johnson Ranch,	70.99	42	⇓P	P		14 25 57.9	-0.2
	baz=71,SNR=14							
YBMT	Yellow Bay	71.00	43	eP	P		14 26 00.4	+2.2
	comp=Z,8.1nm,1.2s,mb4.5							
F11A	Grangeville	71.02	46	⇑P	P		14 25 58.1	-0.2
	baz=71							
E12A	Beaver Dam Sad	71.02	45	⇑P	P		14 25 59.0	+0.6
	baz=71,SNR=7.5							
B14A	Marquette Ranc	71.08	43	⇓P	P		14 25 59.1	+0.4
	baz=71,SNR=11							
SOC	Sochi	71.09	311	eP	P		14 25 57.7	-1.2
SOC				e			14 26 03.0	
SOC				eS	S		14 35 16.0	+0.3
SOC				pmax	pmax			
	comp=Z,62nm,1.8s,mb5.2							
SOC				MLR	MLR			
	comp=Z,644nm,18.0s,MS4.9							
J08A	Circle Bar Ran	71.19	49	⇑P	P		14 25 59.6	+0.2
	baz=71							
SWMT	Swartz Lake	71.22	44	eP	P		14 25 58.6	-0.9
	comp=Z,34nm,1.5s,mb5.0							
D13A	Huson	71.22	44	⇓P	P		14 25 59.4	-0.2
	baz=71							
G11A	Walters Elk Ra	71.24	46	⇑P	P		14 25 59.1	-0.6
	baz=71,SNR=8.9							
I09A	Lost Marbles R	71.25	48	⇑P	P		14 25 59.6	-0.2
	baz=71							
H10A	Noah's Angus R	71.46	47	⇓P	P		14 26 01.0	-0.1
	baz=71,SNR=6.5							
B15A	Bradely Ranch,	71.49	42	⇓P	P		14 26 00.9	-0.2
	baz=71,SNR=18							
F12A	Elk City	71.60	46	⇓P	P		14 26 01.6	-0.3
	baz=71,SNR=13							
WVOR	Wild Horse Val	71.64	50	eP	P		14 26 01.3	-0.8
WVOR				pmax	pmax			
	comp=Z,22nm,1.4s,mb4.9							
WVOR	Wild Horse Val	71.64	50	eP	P		14 26 01.3	-0.9
	comp=Z,22nm,1.4s,mb4.9							
SLMT	Seeley Lake	71.65	44	eP	P		14 26 01.1	-1.0
	comp=Z,30nm,1.3s,mb5.1							
MSO	Missoula	71.67	44	eP	P		14 26 02.8	+0.5
	comp=Z,16nm,1.5s,mb4.7							
ANN	Anapa	71.69	313	eP	P		14 25 58.5	-3.9
ANN				e			14 26 17.7	
ANN				e			14 28 36.7	
ANN				eS	S		14 35 15.5	-7.0
ANN				eSS	SS		14 39 50.8	-6.4
ANN				pmax	pmax			
	comp=Z,29nm,1.3s,mb5.0							
ANN				MLR	MLR			
	comp=N,330nm,18.0s,MS4.8							
ANN				MLR	MLR			
	comp=E,403nm,18.0s,MS4.8							
ANN				MLR	MLR			
	comp=Z,357nm,18.0s,MS4.7							
I10A	Payette	71.73	48	⇓P	P		14 26 02.7	+0.1
	baz=72							
D14A	Greenough	71.75	44	⇓P	P		14 26 02.9	+0.2
	baz=72,SNR=5.8							
E13A	Victor	71.77	45	⇓P	P		14 26 02.5	-0.4
	baz=72							
C15A	Salmond Ranch,	71.80	43	⇓P	P		14 26 03.6	+0.6
	baz=72,SNR=12							
H11A	Donnelly	71.81	47	⇑P	P		14 26 03.4	+0.3
	baz=72							
B16A	M & M Farms, S	71.87	42	⇑P	P		14 26 03.5	0.0
	baz=72							
CHMT	Chamberlain Mo	71.99	44	eP	P		14 26 02.4	-1.8
	comp=Z,6.3nm,1.5s,mb4.3							
NB2	NORSAR Subarra	72.07	337	P	P		14 26 03.3	-1.1
	comp=Z,24nm,1.1s,mb5.0,baz=38,slow=5.9							
NB2	NORSAR Subarra	72.07	337	P	P		14 26 03.3	-1.1
NB2	NORSAR Subarra	72.07	337	P	P		14 26 03.3	-1.1
NOA	NORSAR Array B	72.07	337	P	P		14 26 03.6	-0.8
	comp=Z,7.1nm,0.9s,mb4.6,baz=38,slow=6.1,SNR=19							
NOA				LR	LR		15 00 21.5	
	comp=Z,632nm,20.1s,MS4.9,baz=30,slow=38							
F13A	Darby	72.09	45	⇑P	P		14 26 04.8	0.0
	baz=72							
BEKR	Beckworth	72.10	53	⇑P	P		14 26 05.4	+0.4
	baz=72							
J10A	Berg Farm, Mel	72.14	48	⇑P	P		14 26 05.0	-0.2
	baz=72							
E14A	Clinton	72.16	44	⇓P	P		14 26 05.2	0.0
	baz=72							
C16A	Fuhringer Ranc	72.23	42	⇓P	P		14 26 05.9	+0.3
	baz=72,SNR=7.8							
D15A	Lincoln	72.30	43	⇑P	P		14 26 06.2	+0.2
	baz=72							
FFC	Flin Flon	72.31	33	i P	P		14 26 05.4	-0.5
FFC	Flin Flon	72.31	33	eP	P		14 26 04.3	-1.6
	comp=Z,12nm,1.1s,mb4.7							
AKASG	Malin Array Be	72.32	322	P	P		14 26 05.0	-1.0
	comp=Z,4.3nm,0.5s,mb4.7,baz=45,slow=6.1,SNR=22							
AKASG				LR	LR		15 00 25.2	
	comp=Z,524nm,20.1s,MS4.8,baz=60,slow=38							
AKBB	Malin Array Si	72.32	322	eP	P		14 26 04.6	-1.5
I11A	Placerville	72.32	48	⇑P	P		14 26 06.6	+0.4
	baz=72							
KIEV	Kiev	72.33	322	eP	P		14 26 04.2	-2.0
KIEV				pmax	pmax			
	comp=Z,8.0nm,0.9s,mb4.7							
KIEV	Kiev	72.33	322	eP	P		14 26 04.2	-2.0
	comp=Z,8.3nm,0.9s,mb4.7							
B17A	L&G Farms, Che	72.42	42	⇓P	P		14 26 06.8	0.0
	baz=72,SNR=11							
FCC	Fort Churchill	72.44	27	eP	P		14 26 04.6	-2.0
	comp=Z,0.9nm,1.3s							
K10A	MacKenzie Ranc	72.47	49	⇓P	P		14 26 07.9	+0.7
	baz=72,SNR=11							
A18A	Metzger Ranch,	72.51	41	⇑P	P		14 26 07.5	+0.3
	baz=72							
H12A	Diamond D Ranc	72.56	47	⇓P	P		14 26 07.8	+0.1
	baz=72,SNR=5.7							
G13A	Cobalt	72.57	46	⇓P	P		14 26 07.7	0.0
	baz=72							
F14A	Wisdom	72.60	45	⇓P	P		14 26 07.5	-0.4
	baz=72							
E15A	Deer Lodge	72.62	44	⇑P	P		14 26 08.1	+0.1
	baz=72,SNR=6.2							
MFID	Camas Ranch	72.69	48	⇑P	P		14 26 08.9	+0.4
	baz=72,SNR=6.2							
WCN	Washoe City	72.81	53	⇑P	P		14 26 09.9	+0.7
	baz=73							
D16A	Dana Ranch, Ca	72.82	43	⇓P	P		14 26 09.4	+0.2
	baz=73,SNR=7.0							
C17A	Wharram Farm,	72.86	42	⇓P	P		14 26 08.9	-0.5
	baz=73							
I12A	Atlanta	72.86	47	⇑P	P		14 26 09.8	+0.3
	baz=73,SNR=6.8							
HRY	Holter Researc	72.88	43	eP	P		14 26 11.6	+2.1
	comp=Z,3.8nm,0.5s,mb4.6							
B18A	Beardsley Farm	72.88	41	⇑P	P		14 26 09.6	+0.1
	baz=73,SNR=10							
H13A	Challis	72.89	46	⇑P	P		14 26 09.7	+0.1
	baz=73,SNR=8.8							

baz=73,SNR=6.4
J13A **Cove Ranch, Pi** 73.65 47 ⇓P P 14 26 14.8 +0.7
baz=73,SNR=6.1
BOZ **Bozeman (W)** 73.66 44 ⇓P P 14 26 14.5 +0.3
baz=73,SNR=10.0
BOZ **Bozeman (W)** 73.66 44 eP P 14 26 12.3 -1.8
BOZ pmax pmax
comp=Z,22nm,1.3s,mb4.9
BOZ **Bozeman (W)** 73.66 44 eP P 14 26 12.3 -1.9
comp=Z,22nm,1.3s,mb4.9
BMN **Battle Mountai** 73.69 51 eP P 14 26 16.2 +1.8
BMN pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
BMN **Battle Mountai** 73.69 51 eP P 14 26 16.2 +1.8
comp=Z,5.3nm,0.8s,mb4.5
K12A **Draper Farm, C** 73.71 48 ⇑P P 14 26 14.4 -0.1
baz=74
I14A **Mackay** 73.73 46 ⇑P P 14 26 15.4 +0.8
baz=74,SNR=12
H15A **Lima** 73.75 45 ⇓P P 14 26 14.8 +0.1
baz=74
G16A **Moss Hill, Enn** 73.83 45 ⇑P P 14 26 15.3 +0.2
baz=74
SFJD **Kangerlussuaq** 73.89 5 eP P 14 26 15.8 +0.7
SFJD pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
SFJD **Kangerlussuaq** 73.89 5 eP P 14 26 15.8 +0.7
comp=Z,7.2nm,0.8s,mb4.7
SFJD **Kangerlussuaq** 73.89 5 i P P 14 26 17.0 +1.9
comp=Z,10nm,0.9s,mb4.8
M11A **Holland Ranch,** 73.93 50 ⇓P P 14 26 16.8 +1.0
baz=74,SNR=6.6
L12A **House Creek Ra** 73.95 49 ⇓P P 14 26 16.1 +0.2
baz=74
E18A **Harlowton** 73.98 43 ⇑P P 14 26 16.3 +0.3
baz=74,SNR=9.5
F17A **Fitzpatrick Pl** 74.02 43 ⇑P P 14 26 16.9 +0.7
baz=74,SNR=6.3
J14A **Carey** 74.08 47 ⇑P P 14 26 17.9 +1.3
baz=74,SNR=12
K13A **Stover Farm, H** 74.17 48 ⇓P P 14 26 17.6 +0.4
baz=74
NVAR **Mina Array Bea** 74.24 53 P P 14 26 17.1 -0.6
comp=Z,12nm,1.1s,mb4.8,baz=281,slow=5.9,SNR=22
QLMT **Earthquake Lak** 74.28 45 eP P 14 26 18.9 +1.0
comp=Z,1.9nm,0.3s,mb4.5
G17A **Pierce Place,** 74.35 44 ⇑P P 14 26 18.6 +0.5
baz=74
M12A **Wells** 74.46 49 ⇑P P 14 26 20.1 +1.2
baz=74,SNR=14
H16A **Russell Place,** 74.47 45 ⇓P P 14 26 19.8 +1.0
baz=74,SNR=6.8
F18A **Big Timber** 74.52 43 ⇑P P 14 26 19.6 +0.4
baz=74,SNR=10
L13A **Double Diamond** 74.61 48 ⇓P P 14 26 19.9 +0.2
baz=74
GCMT **Greycliff** 74.62 43 eP P 14 26 19.1 -0.6
comp=Z,15nm,1.1s,mb4.8
J15A **Blackfoot** 74.64 46 ⇓P P 14 26 20.7 +0.8
baz=74,SNR=6.0
P10A **Eureka** 74.64 51 ⇑P P 14 26 20.2 +0.1
baz=74,SNR=6.6
N12A **Clover Valley,** 74.74 50 ⇑P P 14 26 20.9 +0.4
baz=74
N12A **Clover Valley,** 74.74 50 eP P 14 26 19.9 -0.6
comp=Z,30nm,1.4s,mb5.0
K14A **Jones Ranch, D** 74.76 47 ⇓P P 14 26 21.3 +0.7
baz=74,SNR=5.9
O11A **Cowboy Ranch,** 74.81 51 ⇓P P 14 26 21.7 +0.7
baz=75,SNR=5.2
I16A **Newdale** 74.86 45 ⇓P P 14 26 21.8 +0.6
baz=75,SNR=5.2
M13A **Montello** 74.93 49 ⇓P P 14 26 22.2 +0.6
baz=75
H17A **Grant Village** 75.03 45 ⇓P P 14 26 23.7 +1.6
baz=75,SNR=9.6
K15A **Arbon** 75.04 47 ⇓P P 14 26 22.9 +0.7
baz=75
L14A **Malta** 75.05 48 ⇓P P 14 26 22.5 +0.2
baz=75,SNR=5.4
P11A **Circle Ranch,** 75.12 51 ⇓P P 14 26 22.9 +0.1
baz=75
IMW **Indian Meadow** 75.16 45 eP P 14 26 22.7 -0.2
comp=Z,8.9nm,0.9s,mb4.7
Q10A **Clear Creek Ra** 75.17 52 ⇑P P 14 26 23.0 -0.1
baz=75,SNR=10
N13A **Wendover, West** 75.23 49 ⇓P P 14 26 22.9 -0.4
baz=75
N13A **Wendover, West** 75.23 49 eP P 14 26 24.9 +1.5
comp=Z,22nm,1.2s,mb5.0
RLMT **Red Lodge** 75.27 43 ⇑P P 14 26 23.6 +0.1
baz=75,SNR=6.3
RLMT **Red Lodge** 75.27 43 P P 14 26 22.4 -1.2
comp=Z,7.3nm,0.8s,mb4.7
O12A **Currie** 75.28 50 ⇓P P 14 26 23.8 +0.1
baz=75,SNR=16
RRI2 **Red Ridge** 75.30 46 eP P 14 26 24.3 +0.6
comp=Z,34nm,1.4s,mb5.1
M14A **Sheep Mountain** 75.32 48 ⇓P P 14 26 24.2 +0.3
baz=75,SNR=10
VES **Vestal, Richgr** 75.32 56 ⇓P P 14 26 24.1 +0.2
baz=75
I17A **Pilgrim Ck.** 75.34 45 ⇓P P 14 26 23.9 0.0
baz=75
LVV **L'vov** 75.38 323 eP P 14 26 25.2 +1.2
LVV MLR MLR
comp=N,300nm,16.0s,MS4.8
LVV MLR MLR
comp=Z,300nm,16.0s,MS4.7
LVV MLR MLR
comp=E,200nm,17.0s,MS4.8
TPAW **Teton Pass** 75.41 46 eP P 14 26 25.5 +1.2
comp=E,32nm,1.5s,mb5.0
PKM **Peak Mountain** 75.42 57 ⇑P P 14 26 24.7 +0.1
baz=75
HVU **Hansel Valley** 75.48 48 eP P 14 26 24.3 -0.5
HVU pmax pmax
comp=Z,19nm,1.3s,mb4.9
HVU **Hansel Valley** 75.48 48 eP P 14 26 24.2 -0.5
comp=Z,20nm,1.3s,mb4.9
K16A **Soda Springs** 75.48 46 ⇑P P 14 26 25.4 +0.6
baz=75,SNR=8.1
LOHW **Long Hollow** 75.52 45 eP P 14 26 25.7 +0.7
comp=Z,3.6nm,0.9s,mb4.3
REDW **Red Top Meadow** 75.55 46 eP P 14 26 26.8 +1.7
comp=Z,27nm,1.4s,mb5.0
S10A **Tonopah Range,** 75.61 53 ⇑P P 14 26 25.7 +0.1
baz=75,SNR=42
Q11A **Duckwater** 75.62 52 ⇑P P 14 26 25.7 0.0
baz=75,SNR=11
P12A **McGill** 75.68 51 ⇑P P 14 26 26.5 +0.5
baz=76,SNR=18
GRAC **Grapevine Rang** 75.70 54 ⇓P P 14 26 27.1 +1.0
baz=76,SNR=8.3
LAO **LASA Array** 75.81 41 eP P 14 26 26.9 +0.3
comp=Z,32nm,1.4s,mb5.0
ISA **Isabella** 75.82 56 ⇑P P 14 26 26.6 -0.2
baz=76
N14A **Grayback Hills** 75.83 49 ⇑P P 14 26 26.8 0.0
baz=76
M15A **Larsen Ranch,** 75.87 48 ⇓P P 14 26 26.8 -0.2
baz=76
BGU **Big Grassy Mou** 75.87 49 eP P 14 26 26.3 -0.7
comp=Z,24nm,1.7s,mb4.9
R11A **Troy Canyon, C** 75.97 52 ⇓P P 14 26 27.8 +0.2
baz=76,SNR=31
Q12A **Willow Creek R** 76.00 51 ⇓P P 14 26 28.8 +1.0
baz=76,SNR=8.3
L16A **Fish Haven** 76.09 47 ⇓P P 14 26 28.4 +0.2
baz=76
J18A **Kendall Valley** 76.11 45 ⇓P P 14 26 28.3 0.0
baz=76,SNR=6.4
MPMC **Manual Prospec** 76.20 55 ⇓P P 14 26 29.6 +0.5
baz=76
P13A **Bates Ranch, G** 76.22 50 ⇓P P 14 26 29.7 +0.6
baz=76,SNR=8.9
HWUT **Hardware Ranch** 76.28 47 eP P 14 26 29.4 0.0
comp=Z,44nm,1.4s,mb5.2
OSI **Osito Adit** 76.31 57 ⇑P P 14 26 30.2 +0.6
baz=76
BUR08 **Bucovina Ar. S** 76.33 321 eP P 14 26 28.9 -0.6
BURAR **Bucovina Array** 76.34 321 ⇑P P 14 26 29.3 -0.3
BURAR **Bucovina Array** 76.34 321 ⇑iP P 14 26 29.3 -0.3
FURC **Furnace Creek,** 76.35 54 ⇑P P 14 26 29.7 -0.1
baz=76
L17A **Cokeville** 76.36 47 ⇑P P 14 26 30.1 +0.3
baz=76
BLG **Laguna Peak** 76.39 57 ⇓P P 14 26 30.5 +0.3
baz=76
M16A **Huntsville** 76.43 48 ⇑P P 14 26 30.0 -0.2
baz=76
LRMC **Laurel Mountai** 76.44 55 ⇓P P 14 26 30.2 -0.2
baz=76
DUG **Dugway** 76.47 49 ⇑P P 14 26 31.5 +1.1
baz=76,SNR=8.1
DUG **Dugway** 76.47 49 eP P 14 26 30.6 +0.2
DUG pmax pmax
comp=Z,30nm,0.6s,mb5.4
DUG **Dugway** 76.47 49 eP P 14 26 30.6 +0.1
comp=Z,30nm,0.6s,mb5.4
K18A **Toltan Ranch,** 76.47 46 ⇑P P 14 26 30.6 +0.1
baz=76
Q13A **Wheeler Ranch,** 76.54 51 ⇑P P 14 26 31.4 +0.5
baz=76,SNR=6.2
NOQ **North Oquirrh** 76.58 48 P P 14 26 31.1 +0.1
R12A **Pony Springs,** 76.58 51 ⇓P P 14 26 31.3 +0.2
baz=76,SNR=7.8
EDW2 **Edwards Air Fo** 76.62 56 ⇑P P 14 26 31.0 -0.3
baz=76
BW06 **Boulder Array** 76.66 45 ⇓P P 14 26 31.7 +0.2
baz=76,SNR=12
PDAR **Pinedale Array** 76.66 45 P P 14 26 30.4 -1.0
comp=Z,3.0nm,0.7s,mb4.3,baz=288,slow=1.4,SNR=25
VRI **Vrincioaia** 76.78 319 ⇑⇑P P 14 26 31.2 -0.9
VRI **Vrincioaia** 76.78 319 ⇑iP P 14 26 31.2 -0.9
KOLS **Kolonicke sedl** 76.82 323 eP P 14 26 33.8 +1.5
KOLS pmax pmax
comp=Z,9.0nm,1.5s,mb4.5
KOLS **Kolonicke sedl** 76.82 323 eP P 14 26 33.8 +1.5
comp=Z,9.1nm,1.5s,mb4.5
KOLS **Kolonicke sedl** 76.82 323 eP P 14 26 33.8 +1.5
PLOR **Plostina** 76.83 319 ⇓P P 14 26 31.2 -1.2
PLOR **Plostina** 76.83 319 ⇓iP P 14 26 31.1 -1.3
M17A **Scullys Gap (B** 76.88 47 ⇓P P 14 26 33.0 +0.3
baz=77,SNR=7.8
S12A **Delamar Landin** 76.89 52 ⇑P P 14 26 33.8 +0.9
baz=77,SNR=9.7
T11A **Corn Creek, Al** 76.89 53 ⇑P P 14 26 33.2 +0.3
baz=77,SNR=24
L18A **Fontenelle, Gr** 76.94 46 ⇓P P 14 26 32.5 -0.6
baz=77
STHS **Stebnicka Huta** 76.94 324 eP P 14 26 33.8 +0.8
STHS pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
STHS **Stebnicka Huta** 76.94 324 eP P 14 26 33.8 +0.8
comp=Z,4.4nm,0.8s,mb4.4
STHS **Stebnicka Huta** 76.94 324 eP P 14 26 33.8 +0.8
Q14A **Sevier Lake (B** 76.96 50 ⇓P P 14 26 34.0 +0.7
baz=77,SNR=23
JLU **Jordanelle** 77.00 48 eP P 14 26 35.3 +1.9
comp=Z,14nm,1.3s,mb4.7
K19A **Absolon Red Bu** 77.01 45 ⇑P P 14 26 33.2 -0.3
baz=77
OJC **Ojcow** 77.01 326 eP P 14 26 33.0 -0.3
UZH **Uzhgorod** 77.02 323 eP P 14 26 33.0 -0.4
UZH e 14 26 43.0
BR131 **Keskin Array S** 77.05 311 eP P 14 26 33.4 -0.3
comp=Z,2.1nm,0.6s,mb4.2
BRTR **Keskin Array B** 77.05 311 P P 14 26 33.2 -0.6
comp=Z,2.5nm,0.6s,mb4.3,baz=87,slow=3.4,SNR=13
R13A **O'Grain Ranch,** 77.06 51 ⇓P P 14 26 34.6 +0.8
baz=77,SNR=7.2
GSC **Goldstone** 77.11 55 ⇓P P 14 26 34.2 0.0
baz=77
P15A **Leamington** 77.18 49 ⇑P P 14 26 34.6 +0.1
baz=77
L19A **Farson** 77.21 46 ⇓P P 14 26 34.8 +0.3
baz=77,SNR=5.3
CRVS **Cervenica-Dubn** 77.21 324 eP P 14 26 36.4 +1.9
CRVS pmax pmax
comp=Z,9.0nm,1.4s,mb4.5
CRVS **Cervenica-Dubn** 77.21 324 eP P 14 26 36.4 +1.9
comp=Z,9.1nm,1.4s,mb4.5
CRVS **Cervenica-Dubn** 77.21 324 eP P 14 26 36.4 +1.9
O16A **Springville** 77.22 48 ⇑P P 14 26 35.2 +0.4
baz=77
BFSC **Mount Baldy Ra** 77.23 56 ⇑P P 14 26 35.2 +0.3
baz=77
DAU **Daniels Canyon** 77.23 48 eP P 14 26 35.0 +0.2
DAU pmax pmax
comp=Z,21nm,1.3s,mb4.9
DAU **Daniels Canyon** 77.23 48 eP P 14 26 35.0 +0.3
comp=Z,21nm,1.3s,mb4.9
M18A **Lyman** 77.25 47 ⇑P P 14 26 34.8 -0.1
baz=77
MPU **Maple Canyon** 77.27 49 eP P 14 26 34.4 -0.6
comp=Z,24nm,1.2s,mb5.0
TUQ **Turquoise Moun** 77.59 54 ⇓P P 14 26 37.0 +0.1
baz=77
ARUT **Antelope Range** 77.63 51 eP P 14 26 37.1 0.0
ARUT pmax pmax
comp=Z,29nm,1.4s,mb5.0
ARUT **Antelope Range** 77.63 51 eP P 14 26 37.0 0.0
comp=Z,29nm,1.4s,mb5.0
O17A **Robinson Place** 77.68 48 ⇓P P 14 26 37.1 -0.2
baz=78
HEC **Hector,Ludlow** 77.71 55 ⇓P P 14 26 38.1 +0.5
baz=78
N18A **Larsen Ranch,** 77.77 47 ⇑P P 14 26 37.8 0.0
baz=78
U12A **Valley of Fire** 77.83 53 ⇑P P 14 26 38.5 +0.3
baz=78
CCUT **Cedar City** 77.83 51 eP P 14 26 37.7 -0.5
comp=Z,21nm,1.4s,mb4.9
L20A **Wamsutter** 77.83 45 ⇓P P 14 26 38.1 0.0
baz=78
T13A **Saint George** 77.84 52 ⇑P P 14 26 38.8 +0.6
baz=78,SNR=9.5
MSU **Marysvale** 77.93 50 eP P 14 26 38.0 -0.7
MSU pmax pmax
comp=Z,40nm,1.6s,mb5.1
MSU **Marysvale** 77.93 50 eP P 14 26 38.0 -0.7
comp=Z,40nm,1.6s,mb5.1
VOIR 77.93 320 ⇑P P 14 26 39.5 +0.9
VOIR 77.93 320 ⇑iP P 14 26 39.5 +0.9
KECS **Kecovo** 77.97 324 eP P 14 26 37.7 -1.0
KECS pmax pmax
comp=Z,5.0nm,1.4s,mb4.2
KECS **Kecovo** 77.97 324 eP P 14 26 37.7 -1.0
comp=Z,4.7nm,1.4s,mb4.2
KECS **Kecovo** 77.97 324 eP P 14 26 37.7 -1.0
OKC **Ostrava-Krasne** 78.01 326 eP P 14 26 41.1 +2.2
OKC MLR MLR
comp=Z,700nm,14.6s,MS5.1
OKC **Ostrava-Krasne** 78.01 326 eP P 14 26 41.1 +2.2
OKC AMS AMS 15 03 50.0
comp=Z,700nm,14.6s
KSP **Ksiaz** 78.05 328 eP P 14 26 39.2 +0.1
V12A **Nelson** 78.08 54 ⇓P P 14 26 40.6 +1.0
baz=78,SNR=7.8
ULM **Lac du Bonnet** 78.12 33 P P 14 26 39.6 +0.1
comp=Z,4.0nm,0.7s,mb4.5,baz=322,slow=9.9,SNR=6.4
ULM LR LR 15 03 36.2
comp=Z,264nm,18.2s,MS4.6,baz=350,slow=38
DRGR 78.13 322 ⇑⇑P P 14 26 41.2 +1.5
DRGR 78.13 322 ⇑iP P 14 26 41.2 +1.5
P17A **Butcher Ranch,** 78.15 49 ⇑⇑P P 14 26 40.1 +0.2
baz=78,SNR=7.0
GMRC **Granite Mounta** 78.17 55 ⇓P P 14 26 40.1 0.0
baz=78
U13A **Pakoon Wash** 78.19 53 ⇑P P 14 26 40.4 +0.2
baz=78,SNR=8.8
Q16A **Castle Valley** 78.26 49 ⇑P P 14 26 40.5 0.0
baz=78
M20A **Sweetwater, Wa** 78.27 46 ⇑P P 14 26 40.5 0.0
baz=78
T14A **Hurricane** 78.32 52 ⇓P P 14 26 41.2 +0.3
baz=78
MORC **Moravsky Berou** 78.32 326 eP P 14 26 40.1 -0.5
MORC pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
MORC **Moravsky Berou** 78.32 326 eP P 14 26 40.1 -0.6
comp=Z,9.7nm,1.0s,mb4.7
MORC **Moravsky Berou** 78.32 326 ⇑iP P 14 26 41.2 +0.6
P18A **Preston Nutter** 78.33 48 ⇑⇑P P 14 26 41.5 +0.6
baz=78,SNR=11
S15A **Panguitch** 78.36 51 ⇓P P 14 26 41.2 +0.1
baz=78
L21A **Rawlins** 78.40 45 ⇓P P 14 26 41.0 -0.3
baz=78,SNR=13
PFO **Pinyon Flat Ob** 78.40 56 ⇓P P 14 26 41.3 -0.1
baz=78
DPC **Dobruska-Polom** 78.41 327 eP P 14 26 42.6 +1.5
DPC MLR MLR
comp=Z,600nm,15.0s,MS5.0
DPC **Dobruska-Polom** 78.41 327 eP P 14 26 42.6 +1.5
DPC AMS AMS 15 04 00.0
comp=Z,600nm,15.0s
UPC **Upice** 78.42 328 eP P 14 26 43.5 +2.3
UPC **Upice** 78.42 328 eP P 14 26 43.5 +2.3
BELC **Belle Mtn. Jos** 78.45 56 ⇓P P 14 26 41.7 0.0
baz=78
R16A **Teasdale** 78.49 50 ⇓P P 14 26 42.4 +0.6
baz=78,SNR=7.8
SRU **San Rafael** 78.51 49 ⇑P P 14 26 42.1 +0.2
baz=78
SRU **San Rafael** 78.51 49 eP P 14 26 40.1 -1.8
SRU pmax pmax
comp=Z,37nm,1.4s,mb5.1
SRU **San Rafael** 78.51 49 eP P 14 26 40.1 -1.8
comp=Z,37nm,1.4s,mb5.1
O19A **Miners Draw (B** 78.53 47 ⇓P P 14 26 42.2 +0.2
baz=78
M21A **Separation Pea** 78.64 45 ⇓P P 14 26 43.0 +0.4
baz=78,SNR=6.9
N20A **Spence Gulch,** 78.66 46 ⇑P P 14 26 43.2 +0.5
baz=78,SNR=19
RWWY **Rawlins** 78.67 45 P P 14 26 42.2 -0.6
comp=Z,49nm,1.6s,mb5.2
U14A **Mt Trumbull** 78.67 52 ⇑P P 14 26 43.5 +0.7
baz=78,SNR=12
RSSD **Black Hills** 78.70 42 P P 14 26 42.1 -0.7
RSSD pmax pmax
comp=Z,33nm,1.8s,mb5.0
RSSD **Black Hills** 78.70 42 P P 14 26 42.1 -0.8
comp=Z,33nm,1.8s,mb5.0
VYHS **Vyhne** 78.70 325 eP P 14 26 43.8 +1.0
comp=Z,9.7nm,1.6s,mb4.5
VYHS eS S 14 36 33.8 -6.6
VYHS eSS SS 14 42 03.2 +20
VYHS LR LR
comp=Z,400nm,18.2s,MS4.8
VYHS **Vyhne** 78.70 325 eP P 14 26 43.8 +1.0
VYHS eS S 14 36 33.8 -6.6
VYHS eSS SS 14 42 03.2 +20
Q18A **Rafter H Ranch** 78.75 49 ⇑P P 14 26 43.2 0.0
baz=78
T15A **Red Dirt Ranch** 78.77 51 ⇓P P 14 26 43.8 +0.4
baz=79
R17A **Hanksville Air** 78.86 49 ⇓P P 14 26 44.2 +0.3
baz=79,SNR=8.3
MONP **Monument Peak** 78.88 57 ⇑P P 14 26 44.0 -0.1
baz=79
IRM **Iron Mountain** 78.89 55 ⇓P P 14 26 44.4 +0.3
baz=79,SNR=8.7
BRG **Bergqiesshubel** 78.99 329 eP P 14 26 43.3 -1.0
comp=Z,6.0nm,1.0s,mb4.5
BRG S S 14 36 45.0 +1.7
BRG
comp=Z,1μm,14.5s
BRG
comp=N,890nm,16.0s
BRG
comp=E,593nm,16.0s
PVCC **Panska Ves** 79.00 328 eP P 14 26 50.9 +6.5
BC3 **Big Chuckawall** 79.02 56 ⇓P P 14 26 44.9 +0.2
baz=79,SNR=7.0
CLL **Collm** 79.03 330 eP P 14 26 44.9 +0.4
comp=Z,20nm,1.4s,mb4.8
CLL **Collm** 79.03 330 i P P 14 26 44.6 +0.1
CLL eS S 14 36 41.0 -2.7
CLL pmax pmax
comp=Z,20nm,1.4s,mb4.8
CLL **Collm** 79.03 330 i P P 14 26 44.6 +0.1
comp=Z,20nm,1.4s,mb4.8
CLL i 14 27 06.8
CLL eS S 14 36 41.0 -2.7
CLL **Collm** 79.03 330 i P P 14 26 44.6 +0.1
comp=Z,20nm,1.4s,mb4.8
CLL ePcP PcP 14 26 51.0 -2.0
CLL i 14 27 06.8
CLL eS S 14 36 41.0 -2.7
CLL eSS SS 14 41 42.0 -5.9
CLL eSSS 14 45 06.0
P19A **Cripple Cowboy** 79.06 48 ⇓P P 14 26 44.6 -0.3
baz=79
W13A **Hualapai Mount** 79.09 54 ⇓P P 14 26 45.2 +0.1
baz=79,SNR=7.2
U15A **North Rim** 79.21 52 ⇓P P 14 26 46.5 +0.7
baz=79,SNR=25
V14A **Boquillas Ranc** 79.23 53 ⇑P P 14 26 46.6 +0.7
baz=79,SNR=17
DVTC **Desert V Tower** 79.23 57 ⇓P P 14 26 46.4 +0.4
baz=79
T16A **Glen Canyon Da** 79.33 51 ⇑P P 14 26 45.9 -0.5
baz=79
Q19A **Hogan Spring (** 79.35 48 ⇑P P 14 26 46.3 -0.2
baz=79,SNR=9.4
R18A **Canyonlands Na** 79.36 49 ⇓P P 14 26 45.9 -0.7
baz=79,SNR=11
PRU **Pruhonice** 79.43 328 eP P 14 26 49.5 +2.8
PRU MLR MLR
comp=Z,600nm,15.1s,MS5.0
PRU **Pruhonice** 79.43 328 eP P 14 26 49.5 +2.8
PRU AMS AMS 15 05 00.0
comp=Z,600nm,15.1s
PDMCI **Parker Dam,Lak** 79.44 54 ⇓P P 14 26 46.3 -0.8
baz=79
X13A **Yucca** 79.45 54 ⇓P P 14 26 46.2 -0.9
baz=79,SNR=9.6
W14A **Seligman** 79.51 53 ⇓P P 14 26 47.8 +0.3
baz=79,SNR=9.6
Y12C **Blythe** 79.55 55 ⇓P P 14 26 47.5 -0.2
baz=79
TREC **Trest** 79.56 327 AMS AMS 15 05 10.0
comp=Z,600nm,13.9s
CLZ **Clausthal** 79.61 331 eP P 14 26 49.2 +1.5
comp=Z,41nm,1.6s,mb5.1
CLZ **Clausthal** 79.61 331 eP P 14 26 49.2 +1.5
CLZ pmax pmax
comp=Z,41nm,1.6s,mb5.1
V15A **Kaibab Nationa** 79.68 52 ⇓P P 14 26 47.9 -0.4
baz=80,SNR=7.0
N22A **Wattenberg Ran** 79.69 45 ⇑P P 14 26 48.0 -0.4
baz=80,SNR=7.7
ZST **Bratislava** 79.70 325 eS S 14 36 54.9 +3.9
ZST eSS SS 14 42 11.3 +13
T17A **Navajo Res., N** 79.74 50 ⇑⇑P P 14 26 48.4 -0.2
baz=80,SNR=8.2
S18A **Hurst Farm, Bl** 79.76 50 ⇓P P 14 26 48.8 0.0
baz=80,SNR=14
GLA **Glamis** 79.81 56 ⇓P P 14 26 48.9 -0.2
baz=80
GLA **Glamis** 79.81 56 eP P 14 26 48.1 -1.0
GLA pmax pmax
comp=Z,38nm,1.5s,mb5.1
GLA **Glamis** 79.81 56 eP P 14 26 48.1 -1.0
comp=Z,38nm,1.5s,mb5.1
ASF **Jabal al Asfar** 79.88 303 LR LR 15 05 47.3
comp=Z,216nm,19.1s,MS4.5,baz=281,slow=38
PHWY **Pilot Hill** 79.90 44 eP P 14 26 50.2 +0.8
comp=Z,27nm,1.5s,mb5.0
Q20A **Ridgley Place,** 79.91 48 ⇑P P 14 26 49.0 -0.6
baz=80
PV04 **Paradox Valley** 79.93 48 eP P 14 26 49.5 -0.2
W15A **Williams** 80.04 53 ⇓P P 14 26 49.9 -0.4
baz=80
WERN **Wernitzgruen** 80.07 329 eP P 14 26 51.8 +1.6
NKC **Novy Kostel** 80.09 329 eP P 14 26 51.5 +1.2
NKC **Novy Kostel** 80.09 329 AMS AMS 15 05 40.0
comp=Z,600nm,15.3s
U17A **Shonto** 80.09 51 ⇓P P 14 26 50.1 -0.5
baz=80
MOX **Moxa** 80.09 330 eP P 14 26 51.5 +1.2
comp=Z,15nm,1.4s,mb4.7
X14A **Yava** 80.12 54 ⇑P P 14 26 51.5 +0.7
baz=80,SNR=7.5
T18A **Mexican Hat** 80.20 50 ⇓P P 14 26 51.3 +0.1
baz=80,SNR=12
S19A **Harvey Farm, M** 80.23 49 ⇓P P 14 26 51.9 +0.6
baz=80,SNR=9.7
MMAI **Mount Meron Ar** 80.30 305 P P 14 26 51.1 -0.7
comp=Z,1.9nm,0.5s,mb4.2,baz=20,slow=7.4,SNR=4.7
MMAI LR LR 15 05 07.4
comp=Z,263nm,21.8s,MS4.5,baz=80,slow=38
PV01 **Paradox Valley** 80.30 48 eP P 14 26 50.9 -0.8
comp=Z,2μm,1.5s
WUAZ **Wupatki** 80.37 52 ⇑P P 14 26 53.0 +0.9
baz=80,SNR=7.0
WUAZ **Wupatki** 80.37 52 eP P 14 26 51.6 -0.5
comp=Z,30nm,1.4s,mb5.0
R20A **Redvale** 80.38 48 ⇓P P 14 26 52.2 +0.1

	baz=80							
Y14A	Wickenburg	80.39	54	⇑P		P	14 26 52.5	+0.2
	baz=80							
CSNA	Conrad Observa	80.45	326	⇓iP		P	14 26 53.7	+1.4
	comp=Z,13nm,1.4s,mb4.7							
Z13A	Yuma Proving G	80.46	55	⇑P		P	14 26 53.5	+0.9
	baz=80,SNR=11							
KHC	Kasperske Hory	80.49	328	eP		P	14 26 52.0	-0.5
KHC					pmax	pmax		
	comp=Z,13nm,1.3s,mb4.7							
KHC	Kasperske Hory	80.49	328	eP		P	14 26 52.0	-0.5
	comp=Z,13nm,1.3s,mb4.7							
KHC	Kasperske Hory	80.49	328	eP		P	14 26 52.4	-0.1
KHC					AMS	AMS	15 03 50.0	
	comp=Z,600nm,17.9s							
X15A	Humboldt	80.52	53	⇑P		P	14 26 53.7	+0.8
	baz=80,SNR=10							
ROTZ	Rotzenmuhle	80.55	329	eP		P	14 26 54.2	+1.4
	comp=Z,35nm,1.8s,mb5.0							
UBBA	Unterbreizbach	80.57	331	eP		P	14 26 53.9	+1.0
	comp=Z,14nm,1.5s,mb4.7							
GEC2	GERESS Array S	80.66	328	eP		P	14 26 53.8	+0.4
	comp=Z,9.0nm,1.4s,mb4.5							
GEC2	GERESS Array S	80.66	328	eP		P	14 26 53.8	+0.4
GEC2					pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.5							
GERES	GERESS Array B	80.66	328	P		P	14 26 51.7	-1.7
	comp=Z,1.1nm,0.6s,mb4.0,baz=57,slow=4.9,SNR=9.3							
GERES					LR	LR	15 04 22.1	
	comp=Z,695nm,20.2s,MS5.0,baz=26,slow=37							
113A	Mohawk Valley,	80.67	55	⇓P		P	14 26 53.9	+0.1
	baz=80							
U18A	Rough Rock, Ch	80.68	50	⇓P		P	14 26 54.5	+0.7
	baz=80,SNR=16							
R21A	Cimarron	80.73	48	⇑P		P	14 26 54.4	+0.4
	baz=80							
WET	Wettzell	80.77	328	eP		P	14 26 54.9	+0.9
	comp=Z,14nm,1.4s,mb4.7							
WET	Wettzell	80.77	328	eP		P	14 26 54.9	+0.9
WET					pmax	pmax		
	comp=Z,14nm,1.4s,mb4.7							
Y15A	Casa Rosa Ranc	80.80	54	⇓P		P	14 26 55.1	+0.6
	baz=81,SNR=7.6							
ISCO	Idaho Springs	80.85	46	eP		P	14 26 55.1	+0.5
ISCO					pmax	pmax		
	comp=Z,27nm,1.5s,mb5.0							
ISCO	Idaho Springs	80.85	46	eP		P	14 26 55.1	+0.5
	comp=Z,27nm,1.5s,mb5.0							
T19A	Beclabito	80.91	50	⇓P		P	14 26 55.2	+0.2
	baz=81,SNR=12							
MVCO	Mesa Verde	80.97	49	⇑P		P	14 26 55.6	+0.3
	baz=81							
MVCO	Mesa Verde	80.97	49	eP		P	14 26 56.4	+1.2
	comp=Z,29nm,1.3s,mb5.0							
GRA1	Grafenberg Arr	81.00	329	eP		P	14 26 56.7	+1.5
	comp=Z,49nm,1.5s,mb5.2							
GRA1					LR	LR		
	comp=Z,400nm,18.6s,MS4.8							
GRF	Grafenberg Arr	81.00	329	eP		P	14 26 56.7	+1.5
	comp=Z,49nm,1.5s,mb5.2							
GRF				eL			15 05 41.3	
	comp=Z,433nm,18.6s							
GRF	Grafenberg Arr	81.00	329	eP		P	14 26 56.7	+1.5
GRF					pmax	pmax		
	comp=Z,49nm,1.5s,mb5.2							
GRF					MLR	MLR		
	comp=Z,400nm,18.6s,MS4.8							
GRF	Grafenberg Arr	81.00	329	eP		P	14 26 56.7	+1.5
GRF					pmax	pmax		
	comp=Z,49nm,1.5s,mb5.2							
GRF					MLR	MLR		
	comp=Z,400nm,18.6s,MS4.8							
ESK	Eskdalemuir	81.03	340	iP		P	14 26 57.2	+1.9
X16A	Lo Mia Camp, P	81.05	53	⇓P		P	14 26 56.7	+0.9
	baz=81,SNR=7.2							
W17A	Winslow	81.06	52	⇓P		P	14 26 56.0	+0.2
	baz=81							
S21A	Coal Bank Pass	81.08	48	⇑P		P	14 26 57.0	+1.2
	baz=81,SNR=6.0							
V18A	Ganado	81.12	51	⇑P		P	14 26 56.9	+0.8
	baz=81,SNR=7.7							
U19A	Dine' College,	81.17	50	⇑P		P	14 26 57.0	+0.6
	baz=81,SNR=14							
114A	Black Gap (USA	81.24	55	⇑P		P	14 26 56.8	0.0
	baz=81							
R22A	Saguache, Gunn	81.29	47	⇓P		P	14 26 57.9	+0.9
	baz=81,SNR=7.3							
Z15A	Gila River Ind	81.35	54	⇑P		P	14 26 57.2	-0.1
	baz=81							
Y16A	Circle Bar Ran	81.39	53	⇓P		P	14 26 57.8	+0.2
	baz=81,SNR=5.9							
X17A	Forest Lakes	81.50	52	⇑P		P	14 26 58.2	+0.1
	baz=81							
U20A	Newcomb	81.52	50	⇑P		P	14 26 58.2	0.0
	baz=81							
V19A	Window Rock	81.65	50	⇑P		P	14 26 58.9	0.0
	baz=81							
EYMN	Ely	81.73	32	P		P	14 26 57.2	-1.9
	comp=Z,50nm,1.7s,mb5.2							
PERS	Pernice	81.76	325	iP		P	14 27 00.6	+1.3
SOKA	Soboth	81.77	326	⇑iP		P	14 26 59.6	+0.3
	comp=Z,15nm,1.3s,mb4.8							
Z16A	Peralta Trail,	81.78	54	⇓P		P	14 26 59.6	0.0
	baz=82							
214A	Organ Pipe Nat	81.81	55	⇓P		P	14 26 59.9	0.0
	baz=82							
W19A	Sanders	81.85	51	⇑P		P	14 27 00.1	+0.1
	baz=82							
X18A	Snowflake	81.90	52	⇑P		P	14 27 00.3	0.0
	baz=82							
RJOB	Jochberg	81.90	327	eP		P	14 27 02.1	+2.1
	comp=Z,8.0nm,0.9s,mb4.7							
Y17A	Roosevelt	81.90	53	⇓P		P	14 27 00.3	-0.1
	baz=82,SNR=5.9							
V20A	Brimhall	81.94	50	⇑P		P	14 26 60.0	-0.5
	baz=82							
U21A	Nageezi	81.99	49	⇓P		P	14 27 00.5	-0.3
	baz=82							
T22A	Edith	82.03	48	⇓P		P	14 27 00.9	-0.1
	baz=82,SNR=9.1							
116A	Eloy	82.12	54	⇑P		P	14 27 01.8	+0.4
	baz=82							
VAY	Valandovo	82.12	318	eP		P	14 27 00.0	-1.3
KBA	Koelnbreinsper	82.19	327	⇑iP		P	14 27 03.5	+2.0
	comp=Z,9.7nm,0.7s,mb4.8							
SDCO	Great Sand Dun	82.34	47	eP		P	14 27 01.6	-0.9
	comp=Z,9.9nm,1.4s,mb4.5							
Y18A	Canyon Day Jun	82.35	52	⇑P		P	14 27 02.1	-0.6
	baz=82,SNR=6.7							
X19A	St. Johns	82.37	52	⇓P		P	14 27 03.3	+0.5
	baz=82,SNR=7.8							
W20A	Ramah	82.38	51	⇓P		P	14 27 02.3	-0.5
	baz=82							
V21A	Milan	82.43	50	⇓P		P	14 27 02.6	-0.4
	baz=82							
U22A	Llaves	82.50	49	⇓P		P	14 27 04.5	+1.1
	baz=82,SNR=6.9							
VISS	Visnje	82.52	325	iP		P	14 26 59.4	-3.9
BOJS	Bojanci	82.57	325	iP		P	14 27 08.0	+4.4
216A	Three Points,	82.64	55	⇑P		P	14 27 04.6	+0.4
	baz=82							
ECSD	EROS Data Cent	82.67	38	eP		P	14 27 04.5	+0.4
	comp=Z,5.0nm,0.8s,mb4.6							
Y19A	Nutrioso	82.71	52	⇓P		P	14 27 05.6	+1.0
	baz=82,SNR=6.2							
117A	Oracle	82.72	54	⇑P		P	14 27 05.4	+0.8
	baz=82,SNR=7.5							
EIL	Elat	82.77	302	LR		LR	15 08 06.7	
	comp=Z,318nm,18.3s,MS4.7,baz=101,slow=39							
KRUS	Krusevo	82.77	319	eP		P	14 27 02.7	-2.0
X20A	Quemado	82.77	51	⇑P		P	14 27 05.5	+0.6
	baz=83,SNR=8.6							
V22A	San Miguel Ran	82.79	49	⇑P		P	14 27 05.0	+0.1
	baz=83							
JAVS	Javornik	82.80	326	iP		P	14 27 06.2	+1.5
TUC	Tucson	82.86	54	eP		P	14 27 05.1	-0.2
TUC					pmax	pmax		
	comp=Z,19nm,1.5s,mb4.9							
TUC	Tucson	82.86	54	eP		P	14 27 05.1	-0.2
	comp=Z,19nm,1.5s,mb4.9							
U23A	El Rito	82.92	48	⇓P		P	14 27 06.4	+0.8
	baz=83,SNR=9.2							
217A	Green Valley	83.20	54	⇓P		P	14 27 07.8	+0.7
	baz=83,SNR=6.6							
BFO	Black Forest	83.23	330	eP		P	14 27 08.0	+1.1
	comp=Z,39nm,1.5s,mb5.2							
BFO	Black Forest	83.23	330	eP		P	14 27 08.0	+1.1
BFO					pmax	pmax		
	comp=Z,39nm,1.5s,mb5.2							
X21A	Alamocita Cree	83.27	51	⇑P		P	14 27 08.2	+0.7
	baz=83,SNR=14							
Y20A	Horse Springs,	83.28	51	⇑P		P	14 27 07.9	+0.4
	baz=83,SNR=15							
FETA	Feichten	83.33	328	⇑iP		P	14 27 06.8	-0.6
	comp=Z,7.2nm,1.0s,mb4.7							
T25A	Trinidad	83.38	47	⇑P		P	14 27 08.1	+0.1
	baz=83							
W22A	Albuquerque	83.39	50	⇓P		P	14 27 08.2	+0.2
	baz=83							
119A	Ashpeak Ranch,	83.48	53	⇓P		P	14 27 08.0	-0.6
	baz=83							
SCHQ	Schefferville	83.53	16	P		P	14 27 06.9	-1.4
	comp=Z,2.3nm,0.5s,mb4.6,baz=190,slow=0.7,SNR=6.9							
SCHQ					LR	LR	15 09 23.3	
	comp=Z,298nm,19.2s,MS4.7,baz=282,slow=39							
218A	Dragon	83.55	54	⇑P		P	14 27 09.0	+0.1
	baz=83							
CDF	Champ du Feu	83.56	331	eP		P	14 27 07.0	-1.7
Y21A	Point of Rocks	83.64	51	⇑P		P	14 27 10.1	+0.8
	baz=83,SNR=6.7							
Z20A	Nine Sixteen R	83.69	52	⇑P		P	14 27 10.0	+0.4
	baz=84,SNR=18							
X22A	Bernardo	83.69	50	⇓P		P	14 27 10.1	+0.5
	baz=84							
ANMO	Albuquerque	83.72	50	eP		P	14 27 09.5	-0.2
ANMO					pmax	pmax		
	comp=Z,6.0nm,1.5s							
ANMO	Albuquerque	83.72	50	eP		P	14 27 09.5	-0.2
	comp=Z,6.0nm,1.5s,mb4.5							
W23A	Werner Place,	83.75	49	⇑P		P	14 27 10.0	+0.1
	baz=84							
U25A	Circle Dot Ran	83.90	47	⇑P		P	14 27 10.5	-0.1
	baz=84,SNR=6.9							
318A	Bisbee	83.95	54	⇑P		P	14 27 10.8	-0.1
	baz=84,SNR=9.6							
219A	White Tail Can	84.03	53	⇑P		P	14 27 11.8	+0.5
	baz=84,SNR=9.8							
120A	U Bar Ranch, L	84.05	53	⇑P		P	14 27 12.0	+0.6
	baz=84,SNR=5.3							
Y22A	Socorro	84.11	51	⇓P		P	14 27 11.5	-0.3
	baz=84							
Z21A	St. Cloud Mine	84.12	51	⇓P		P	14 27 12.5	+0.8
	baz=84,SNR=6.1							
W24A	Lazy 6 Ranch,	84.15	49	⇓P		P	14 27 12.5	+0.6
	baz=84,SNR=22							
BNM	Barren Site	84.17	50	eP		P	14 27 11.4	-0.6
	comp=Z,11nm,1.4s,mb4.8							
V25A	Rancho No Teng	84.17	48	⇑P		P	14 27 12.8	+0.8
	baz=84,SNR=11							
U26A	Atchley Ranch,	84.28	47	⇓P		P	14 27 12.0	-0.6
	baz=84							
319A	Douglas	84.44	54	⇑P		P	14 27 13.8	+0.3
	baz=84,SNR=5.1							
220A	Playas Peak, P	84.55	53	⇑P		P	14 27 14.2	+0.2
	baz=84,SNR=8.8							
121A	Cookes Peak, D	84.58	52	⇓P		P	14 27 15.2	+1.0
	baz=84,SNR=5.3							
Z22A	Elephant Butte	84.58	51	⇓P		P	14 27 14.8	+0.6
	baz=84,SNR=11							
X24A	Lazy VL Ranch,	84.59	49	⇑P		P	14 27 15.0	+0.8
	baz=84,SNR=8.0							
Y23A	Lovelace Mesa,	84.66	50	⇓P		P	14 27 14.8	+0.2
	baz=84,SNR=9.0							
W25A	X Bar L Ranch,	84.70	48	⇑P		P	14 27 15.1	+0.4
	baz=84,SNR=23							
Z23A	Rita Site, Whi	85.02	51	⇑P		P	14 27 15.8	-0.5
	baz=85							
Y24A	Capitan	85.03	50	⇑P		P	14 27 16.5	+0.1
	baz=85							
X25A	Clemmons Ranch	85.07	49	⇑P		P	14 27 16.8	+0.2
	baz=85,SNR=9.4							
W26A	Owens Ranch, T	85.19	48	⇑P		P	14 27 17.1	-0.1
	baz=85							
222A	Williams Famil	85.29	52	⇑P		P	14 27 17.4	-0.3
	baz=85							
Y25A	Mesa, Roswell	85.48	49	⇓P		P	14 27 18.0	-0.7
	baz=85							
Z24A	Sheeppen Canyo	85.49	50	⇓P		P	14 27 18.3	-0.4
	baz=85							
CABF	La Chapelle	85.51	330	eP		P	14 27 16.6	-1.9
PMOR	Pomariorio Ree	85.54	113	eT			16 00 49.1	
	comp=Z,84nm,0.2s							
X26A	CR and CF Fran	85.55	48	⇑P		P	14 27 19.2	+0.2
	baz=85,SNR=7.7							
W27A	Bowe Ranch, En	85.62	48	⇓P		P	14 27 19.6	+0.3
	baz=85							
LOR	Lormes	85.79	332	eP		P	14 27 17.9	-2.0
	comp=Z,21nm,0.9s,mb5.1							
LOR	Lormes	85.79	332	eP		P	14 27 17.9	-2.0
LOR					pmax	pmax		
	comp=Z,11nm,0.9s,mb5.1							
LOR	Lormes	85.79	332	eP		P	14 27 17.9	-2.0
	comp=Z,11nm,0.9s,mb5.1							
124A	Stringfield Ra	85.88	51	⇑P		P	14 27 21.1	+0.5
	baz=86,SNR=6.1							
Z25A	Roswell	85.91	50	⇑P		P	14 27 21.3	+0.5
	baz=86,SNR=5.9							
Y26A	Elida	85.99	49	⇑P		P	14 27 20.7	-0.4
	baz=86							
PPT	Papeete	86.08	116	eLR		LR	14 54 14.2	
PPT				eT			16 01 26.8	
	comp=Z,24nm,0.3s							
PPT	Papeete	86.08	116	LR		LR	14 56 15.6	
	comp=Z,442nm,21.0s,MS4.8,baz=300,slow=29							
SSF	Saint Saulge	86.09	332	eP		P	14 27 19.7	-1.7
LPL	La Plagne	86.16	329	eP		P	14 27 20.1	-1.7
	comp=Z,7.7nm,0.7s,mb4.7							
LPL	La Plagne	86.16	329	eP		P	14 27 20.1	-1.7
LPL					pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.8							
LPL	La Plagne	86.16	329	eP		P	14 27 20.1	-1.7
	comp=Z,3.8nm,0.7s,mb4.7							
LPG	La Plagne	86.17	329	eP		P	14 27 20.3	-1.5
	comp=Z,12nm,0.8s,mb4.9							
LPG	La Plagne	86.17	329	eP		P	14 27 20.3	-1.5
LPG					pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.9							
LPG	La Plagne	86.17	329	eP		P	14 27 20.3	-1.5
	comp=Z,6.3nm,0.8s,mb4.9							
TIAR	Tiarei	86.23	116	eT			16 01 38.5	
	comp=Z,32nm,0.3s							
224A	Cornudas Mount	86.27	51	⇑P		P	14 27 23.1	+0.5
	baz=86,SNR=5.7							
SMF	Signal de Mont	86.32	332	eP		P	14 27 20.6	-2.0
	comp=Z,59nm,1.4s,mb5.3							
SMF	Signal de Mont	86.32	332	eP		P	14 27 20.6	-2.0
SMF					pmax	pmax		
	comp=Z,30nm,1.4s,mb5.3							
SMF	Signal de Mont	86.32	332	eP		P	14 27 20.6	-2.0
	comp=Z,30nm,1.4s,mb5.3							
Z26A	Caprock	86.36	49	⇑P		P	14 27 22.7	-0.3
	baz=86,SNR=8.5							
AVF	Avril sur Loir	86.38	332	eP		P	14 27 21.0	-1.8
	comp=Z,48nm,1.2s,mb5.3							
AVF	Avril sur Loir	86.38	332	eP		P	14 27 21.0	-1.8
AVF					pmax	pmax		
	comp=Z,24nm,1.2s,mb5.3							
AVF	Avril sur Loir	86.38	332	eP		P	14 27 21.0	-1.8
	comp=Z,24nm,1.2s,mb5.3							
125A	Gardner Draw,	86.39	50	⇓P		P	14 27 23.4	+0.2
	baz=86,SNR=8.2							
Y27A	Causey	86.40	48	⇓P		P	14 27 23.0	-0.2
	baz=86,SNR=6.3							
MSTX	Muleshoe	86.57	48	⇓P		P	14 27 23.4	-0.6
	baz=86							
225A	Deer Hill, Car	86.67	51	⇓P		P	14 27 23.7	-0.9
	baz=86							
324A	Moseley Ranch,	86.74	52	⇓P		P	14 27 23.9	-1.0
	baz=86							
Z27A	Tatum	86.78	49	⇑P		P	14 27 25.2	+0.2
	baz=87,SNR=12							
MBDF	Montbardon	86.80	329	eP		P	14 27 23.1	-1.9
GDL2	Guadalupe Moun	86.89	50	eP		P	14 27 24.7	-0.9
	comp=Z,5.4nm,1.0s,mb4.7							
325A	Bean Ranch, Si	87.10	51	⇓P		P	14 27 25.7	-1.0
	baz=87							
226A	Malaga, Loving	87.14	50	⇑P		P	14 27 26.0	-0.9
	baz=87							
TCF	Toulx Ste Croi	87.22	333	eP		P	14 27 25.5	-1.5
TAOE	Nuku Hiva Isla	87.24	104	eLR		LR	14 54 56.9	
	comp=Z,721nm,32.2s							
MEH	Mehetia	87.34	115	eT			16 03 02.5	
	comp=Z,549nm,0.3s							
425A	Indio Mountain	87.50	52	⇑P		P	14 27 28.7	0.0
	baz=87,SNR=9.6							
VIVF	Saint-Julien-l	87.52	330	eP		P	14 27 25.5	-2.9
326A	Caldwell Ranch	87.74	51	⇑P		P	14 27 28.8	-1.0
	baz=88							
426A	McDonald Obser	88.17	51	⇓P		P	14 27 30.3	-1.5
	baz=88							
WMOK	Wichita Mounta	88.27	45	eP		P	14 27 31.4	-0.8
WMOK					pmax	pmax		
	comp=Z,19nm,1.5s,mb5.1							
WMOK	Wichita Mounta	88.27	45	eP		P	14 27 31.4	-0.8
	comp=Z,19nm,1.5s,mb5.1							
328A	Wristen Ranch,	88.39	50	⇓P		P	14 27 31.5	-1.4
	baz=88							
427A	Hayter Ranch,	88.42	51	⇑P		P	14 27 31.5	-1.5
	baz=88							
HDIL	Hopedale	88.56	36	P		P	14 27 32.8	-0.7
526A	Mary Lane Ranc	88.56	52	⇑P		P	14 27 32.6	-1.1
	baz=88							
527A	Woodward Ranch	88.79	51	⇑P		P	14 27 33.8	-1.0
	baz=89							
626A	Big Bend Ranch	88.89	52	⇑P		P	14 27 34.3	-1.0
	baz=89							
428A	Kincaid Ranch,	88.94	50	⇓P		P	14 27 34.6	-0.9
	baz=89,SNR=5.8							
528A	Cox Ranch, San	89.28	51	⇑P		P	14 27 35.9	-1.1
	baz=89							
TXAR	Lajitas Array	89.34	52	P		P	14 27 35.9	-1.5
	comp=Z,1.7nm,0.9s,mb4.4,baz=300,slow=2.7,SNR=13							
627A	Terlingua Ranc	89.42	52	⇑P		P	14 27 36.9	-0.9
	baz=89							
JCT	Junction City	90.82	49	eP		P	14 27 42.3	-2.0
JCT					pmax	pmax		
	comp=Z,22nm,1.3s,mb5.3							
JCT	Junction City	90.82	49	eP		P	14 27 42.3	-2.0
	comp=Z,22nm,1.3s,mb5.3							
SIUC	Southern Illin	90.88	37	P		P	14 27 44.8	+0.4
MIAR	Mount Ida	91.21	42	eP		P	14 27 44.2	-1.8
MIAR					pmax	pmax		
	comp=Z,15nm,1.0s,mb5.3							
MIAR	Mount Ida	91.21	42	eP		P	14 27 44.2	-1.8
	comp=Z,15nm,1.0s,mb5.3							
KEST	Kesra	93.03	322	LR		LR	15 14 42.2	
	comp=Z,262nm,18.4s,MS4.7,baz=349,slow=39							
ESDC	Sonseca Array	95.19	333	LR		LR	15 15 19.9	
	comp=Z,326nm,18.8s,MS4.8,baz=330,slow=38							
RKT	Rikitea	100.07	111	eLR		LR	15 00 53.7	
	comp=Z,416nm,27.8s							
TORD	Torodi Ar. Bea	115.46	315	PKP		PKPdf	14 33 20.2	-2.9
	comp=Z,0.7nm,0.9s,baz=360,slow=2.0,SNR=3.3							
DBIC	Dimbokro	124.39	317	PKP		PKPdf	14 33 39.1	-1.2
	comp=Z,3.3nm,0.7s,baz=0.0,slow=3.0,SNR=3.3							
LPAZ	La Paz	146.11	56	PKPbc		PKPbc	14 34 20.0	-1.2
	comp=Z,6.9nm,0.8s,baz=358,slow=4.9,SNR=19							
LPAZ	La Paz	146.11	56	ePKPdf		PKPdf	14 34 20.0	-0.3

*JMA **16** 14:21:04.6, 39.°20N×140.°99E, h6km±1km, M3.3*
JMA Felt I J1.
*ISCJB **16** 14:21:04.5±0.6, 39.°20N±0.°03×140.°99E±0.°04, h10km, mb3.5/2, Error ellipse: s-maj=5.4km s-min=4.2km az=142.2*
*IDC **16** 14:21:05.2±1.8, 39.°14N×141.°15E, h0km, mb3.3/2, mb1 3.4/5, mb1mx3.2/27, mbtmp3.2/5, ML2.8/3, Error ellipse: s-maj=47.8km s-min=30.7km az=109.0*

ISC 16 14:21:05.5±0.6, 39.°18N±0.°03×141.°01E±0.°04, h10km, n11, σ1§07/18, mb3.5/2, 1C-2D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	Ichinoseki	0.28	144	P	Pg	14 21 10.6	-0.5
JMK				eS	Sg	14 21 15.4	+0.5
JOM	Ohasama	0.37	37	P	Pg	14 21 11.5	-1.2
JOM				eS	Sg	14 21 16.9	-0.7
OFUJ	Ofunato	0.52	101	⇓P	Pg	14 21 15.3	-0.4
OFUJ				eS	Sg	14 21 23.0	+0.4
JYK	Kaneyama	0.57	243	⇓P	Pg	14 21 15.4	-1.1
JYK				eS	Sg	14 21 23.1	-0.9
JIO	Ouri	0.77	160	P	Pg	14 21 19.7	-0.7
JIO				eS	Sg	14 21 30.7	+0.3
JOU	Okura	0.86	198	⇑P	Pg	14 21 21.1	-0.9
JOU				eS	Sg	14 21 32.7	-0.4
MJAR	Matsushiro Arr	3.44	221	Pn	Pn	14 22 00.8	+1.7
	0.4nm,0.3s,baz=23,slow=16,SNR=3.4						
ASAJ	Asahikawa	5.07	13	Pn	Pn	14 22 22.6	+1.0
	0.3nm,0.3s,baz=164,slow=18,SNR=4.0						
ASAJ				Sn	Sn	14 23 26.8	+6.6
	0.4nm,0.3s,baz=120,slow=20,SNR=2.2						
KSRS	Korea Array	10.43	265	Pn	Pn	14 23 37.6	+2.6
	0.3nm,0.3s,baz=80,slow=14,SNR=4.3						
WRA	Warramunga Arr	59.14	187	P	P	14 31 06.1	-0.2
	0.4nm,0.7s,mb3.6,baz=5.7,slow=7.5,SNR=5.6						
ASAR	Alice Springs	62.87	187	P	P	14 31 33.9	+2.4
	0.3nm,0.8s,mb3.5,baz=1.5,slow=6.0,SNR=2.7						

*LDG **16** 14:44:46.9±0.3, 43.°17N×80.°68E, h10km, Mb4.6/8, Error ellipse: s-maj=12.5km s-min=3.8km az=156.0*
*IDC **16** 14:44:47.2±0.6, 43.°24N×80.°95E, h0km, mb4.1/16, mb1 4.2/23, mb1mx4.1/33, mbtmp4.0/23, ML3.7/7, MS3.6/5, Ms1 3.7/5, ms1mx3.2/42, Error ellipse: s-maj=11.7km s-min=10.4km az=175.0*
*ISCJB **16** 14:44:47.2±0.3, 43.°29N±0.°04×80.°73E±0.°04, h10km, mb4.2/33, MS3.5/2, Error ellipse: s-maj=5.7km s-min=3.8km az=1.5*
*MOS **16** 14:44:50.9±0.8, 43.°45N×80.°93E, h33km, mb4.7/14, Error ellipse: s-maj=9.7km s-min=6.2km az=118.5*
*BJI **16** 14:44:51.8, 43.°33N×80.°99E, h23km, mB4.8/5, mb4.3/11, ML4.4/10, Ms4.3/1, Ms7 4.1/1*
*NNC **16** 14:44:52.5±2.0, 43.°55N×80.°78E, h0km, mb4.5, mpv4.5, Error ellipse: s-maj=22.0km s-min=12.5km az=142.0*
*NEIC **16** 14:44:

comp=E,1μm,1.4s
USP Ospenovka 4.58 272 P Pn 14 46 02.2 +3.7
SNR=10
AAK Ala-Archa 4.65 264 P Pg 14 46 18.1 -0.2
SNR=19
AAK Ala-Archa 4.65 264 Pn Pn 14 46 05.5 +6.0
comp=E,0.0nm,0.3s,baz=111,slow=4.8,SNR=4.4
AAK Pg **Pg 14 46 14.0 -4.3**
comp=E,0.2nm,0.3s,baz=110,slow=7.8,SNR=37
AAK Lg 14 47 17.9
comp=E,0.5nm,0.3s,baz=29,slow=23,SNR=7.3
AAK Ala-Archa 4.65 264 *ce*PN **Pn 14 46 05.6 +6.1**
AAK pmax pmax
comp=Z,2.0nm,0.7s
UCH Uchtor 4.73 259 P Pn 14 46 05.3 +4.8
SNR=17
UCH Uchtor 4.73 259 *e*Pn **Pn 14 46 05.2 +4.7**
UCH *e*Pg **Pg 14 46 18.2 -1.5**
WMQ Urumqi 5.06 81 Pn **Pn 14 46 07.6 +2.6**
WMQ smax
comp=N,310nm,0.9s
WMQ smax
comp=E,380nm,0.8s
EKS2 Erkin-Say 5.17 266 P Pn 14 46 10.3 +3.7
SNR=8.2
EKS2 Erkin-Say 5.17 266 *e*Pn **Pn 14 46 10.1 +3.5**
comp=E,114nm,0.7s
EKS2 *e*Pg **Pg 14 46 27.1 -1.1**
KSH Kashi 5.21 225 Pn **Pg 14 46 20.1 -8.8**
KSH Sn **Sg 14 47 26.8 -10**
KSH smax
comp=N,260nm,1.2s
KSH smax
comp=E,180nm,1.0s
AML Almayashu 5.34 260 P Pg 14 46 29.3 -2.2
SNR=12
AML Almayashu 5.34 260 *e*Pn **Pn 14 46 15.3 +6.4**
comp=E,146nm,0.7s
KK31 Karatay Array 7.50 272 ⇓Pn **Pn 14 46 46.1 +7.5**
comp=E,18nm,0.8s,baz=79,slow=13,SNR=17
KK31 ⇓Lg 14 48 46.7
comp=E,51nm,0.6s,baz=80,slow=23,SNR=9.3
KURBB Kurchatov Arra 7.51 349 ⇓Pn **Pn 14 46 39.0 +0.4**
comp=E,2.0nm,0.5s
KURBB Lg 14 48 41.7
KURK Kurchatov 7.58 350 ⇑Pn **Pn 14 46 38.9 -0.7**
comp=E,15nm,0.5s
KURK ⇓Lg 14 48 45.9
comp=E,476nm,0.9s
KURK Kurchatov 7.58 350 Pn **Pn 14 46 38.7 -0.9**
comp=E,0.2nm,0.3s,baz=173,slow=11,SNR=15
KURK Lg 14 48 42.0
comp=E,3.3nm,0.3s,baz=232,slow=31,SNR=7.4
KURK LR LR 14 49 59.3
comp=E,340nm,21.5s,baz=170,slow=41
KURK Kurchatov 7.58 350 *e*Pn **Pn 14 46 39.2 -0.5**
KURK Lg 14 48 42.0
KURK LR LR 14 49 59.3
ZAA0 Zalesovo Array 11.01 13 *e*Pn **Pn 14 47 26.1 -0.5**
ZALV Zalesovo Beam 11.01 13 Pn **Pn 14 47 26.4 -0.1**
comp=E,0.9nm,0.3s,baz=192,slow=13,SNR=18
ZALV Sn **Sn 14 49 20.9 -8.7**
baz=190,slow=20,SNR=3.0
ZALV Lg 14 50 32.5
comp=E,0.6nm,0.3s,baz=209,slow=26,SNR=3.2
ZALV LR LR 14 52 09.2
comp=E,182nm,18.2s,baz=61,slow=40
ZALV Zalesovo Beam 11.01 13 P **Pn 14 47 26.5 0.0**
ZALV 14 49 20.9
VOSK Vostochnaya 11.49 329 ⇓Pn **Pn 14 47 32.9 -0.3**
comp=E,3.2nm,0.6s
VOSK ⇓Lg 14 50 49.8
comp=E,76nm,0.8s
NVS Novosibirsk 11.68 7 *e*P **Pn 14 47 44.3 +8.5**
NVS *e* 14 49 52.9
BVA0 Borovoye Array 11.95 328 Pn **Pn 14 47 39.5 0.0**
comp=E,0.6nm,0.5s,baz=136,slow=13,SNR=11
BVA0 ⇑Lg 14 51 07.4
comp=E,9.0nm,0.8s,baz=136,slow=28,SNR=5.6
BVAR Borovoye Array 11.95 328 Pn **Pn 14 47 39.3 -0.2**
comp=E,0.5nm,0.3s,baz=133,slow=12,SNR=9.1
BVAR Lg 14 51 01.7
comp=E,1.4nm,0.3s,baz=130,slow=20,SNR=4.9
BRVK Borovoye 12.02 328 ⇑*e*P **Pn 14 47 40.8 +0.4**
BRVK pmax pmax
comp=Z,3.0nm,0.7s
BRVK Borovoye 12.02 328 *e*Pn **Pn 14 47 39.2 -1.2**
comp=Z,7.6nm,0.6s
ZRNK Zerenda 12.45 325 ⇑Pn **Pn 14 47 48.1 +1.8**
comp=Z,4.2nm,0.6s
ZRNK ⇓Lg 14 51 17.7
comp=Z,66nm,0.8s
AB31 Akbulak array 15.57 300 ⇑P **Pn 14 48 27.4 -1.3**
comp=Z,5.0nm,0.6s,baz=104,slow=2.4,SNR=53
ABKAR Akbulak array 15.57 300 *e*P **Pn 14 48 27.2 -1.4**
comp=Z,6.4nm,0.6s
GUN Gumba 15.88 163 *e*P **Pn 14 48 40.6 +7.9**
comp=Z,31nm,0.5s
MOY Mondy 16.00 51 *e*P **Pn 14 48 39.0 +4.9**
PKI Pulchoki 16.12 165 *e*P **Pn 14 48 39.5 +3.7**
JIRN Jiri 16.19 163 *e*P **Pn 14 48 42.7 +6.0**
comp=Z,78nm,0.8s
TAPN Taplejung 16.86 158 *e*P **Pn 14 48 49.4 +4.2**
comp=Z,89nm,1.1s
ZAK Zakamensk 16.92 57 *e*P **Pn 14 48 44.6 -1.3**
ZAK pmax pmax
comp=Z,7.0nm,1.1s
RAMN Ramite 16.96 162 *e*P **Pn 14 48 45.4 -1.1**
comp=Z,60nm,0.9s
AKTK Aktyubinsk 17.09 303 P **Pn 14 48 48.7 +0.7**
AKTK Lg 14 53 50.7
AKTO Aktyubinsk 17.09 303 ⇑P **Pn 14 48 51.0 +3.0**
comp=Z,2.5nm,0.9s
AKTO Aktyubinsk 17.09 303 P **Pn 14 48 48.7 +0.7**
comp=Z,0.4nm,0.3s,baz=93,slow=16,SNR=7.7
AKTO Lg 14 53 50.7
comp=Z,0.1nm,0.3s,baz=162,slow=20,SNR=3.1
ODAN Odare 17.24 160 *e*P **Pn 14 48 49.5 -0.5**
SONM Songino Array 18.48 67 P **Pn 14 49 04.8 -0.3**
comp=Z,0.6nm,0.3s,baz=266,slow=11,SNR=31
SONM LR LR 14 56 47.8
comp=Z,538nm,18.4s,baz=220,slow=39
SVE Sverdlovsk 18.64 324 *e*P **Pn 14 49 06.7 -0.3**
SVE pmax pmax
comp=Z,12nm,0.9s
ULN Ulaanbaatar 18.92 67 *e*P **Pn 14 49 09.5 -1.0**
ULN pmax pmax
comp=Z,4.0nm,0.8s
ULN Ulaanbaatar 18.92 67 *e*Pn **Pn 14 49 09.5 -1.0**
comp=Z,4.2nm,0.8s
LZH Lanzhou 19.12 104 *e*P **Pn 14 49 13.5 +0.5**
LZH pP pP 14 49 18.3 +3.3
LZH sP sP 14 49 20.6 +4.3
LZH pmax pmax
comp=Z,17nm,1.2s
ARU Arti 19.34 321 *c i*P **Pn 14 49 14.9 -0.5**
ARU S **Sn 14 52 51.4 -0.6**
ARU pmax pmax
comp=Z,7.0nm,0.8s
ARU Arti 19.34 321 *e*P **Pn 14 49 15.1 -0.3**
comp=Z,11nm,1.0s
SOKR Solikamsk 21.93 326 *c i*P **P 14 49 46.1 +3.7**
SOKR pmax pmax
comp=Z,10.0nm,0.8s,mb4.3
XAN Xi'an 23.75 103 P **P 14 50 02.6 +1.0**
XAN pP 14 50 10.5
XAN pmax pmax
comp=Z,2.0nm,1.4s,mb3.4
XAN pmax pmax
comp=Z,16nm,4.5s
ENH Enshi 26.27 110 *e*P **P 14 50 25.1 +0.6**
comp=Z,17nm,0.9s,mb4.6
KIV Kislovodsk 27.43 285 *e*P **P 14 50 35.9 +1.0**
KIV pmax pmax
comp=Z,3.0nm,0.7s,mb3.9
CMAR Chiang Mai Arr 29.12 143 P **P 14 50 50.0 -0.1**
comp=Z,0.7nm,0.5s,mb3.6,baz=313,slow=9.0,SNR=5.9
CMAR LR LR 15 04 56.4
comp=Z,58nm,18.2s,MS3.2,baz=190,slow=42
YAK Yakutsk 34.03 39 *e*P **P 14 51 31.7 -1.2**
BRTR Keskin Array B 35.12 281 P **P 14 51 44.5 +1.9**
comp=Z,0.8nm,0.5s,mb3.9,baz=94,slow=8.8,SNR=8.1
KLR Kul'dur 35.19 62 *e*P **P 14 51 40.0 -3.1**
AKASG Malin Array Be 35.32 301 P **P 14 51 44.5 +0.3**
comp=Z,3.3nm,0.6s,mb4.4,baz=69,slow=8.6,SNR=5.9
KIEV Kiev 35.33 301 *e*P **P 14 51 44.1 -0.2**
KIEV pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
KIEV Kiev 35.33 301 *e*P **P 14 51 44.1 -0.2**
comp=Z,3.5nm,1.0s,mb4.2
KSRS Korea Array 36.01 83 P **P 14 51 48.0 -2.3**
comp=Z,0.7nm,0.5s,mb3.9,baz=271,slow=7.7,SNR=6.2
KSRS Korea Array 36.01 83 P **P 14 51 48.0 -2.3**
KSRS pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
VSU Vasula 36.24 314 ⇑*e*P **P 14 51 53.2 +1.2**
VSU pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
TIXI Tiksi 36.64 23 *e*P **P 14 51 54.2 -1.1**
TIXI pmax pmax
comp=Z,12nm,0.8s,mb4.8
TIXI Tiksi 36.64 23 *e*P **P 14 51 54.2 -1.1**
comp=Z,12nm,0.8s,mb4.8
FINES FINESS Array B 36.69 319 P **P 14 51 56.1 +0.3**
comp=Z,1.8nm,0.7s,mb4.0,baz=114,slow=13,SNR=6.0
ARCES ARCESS Array B 38.21 332 P **P 14 52 08.6 0.0**
comp=Z,4.5nm,0.8s,mb4.3,baz=95,slow=7.7,SNR=14
ARCES ARCESS Array B 38.21 332 P **P 14 52 08.6 0.0**
ARE0 ARCESS Array S 38.21 332 P **P 14 52 09.1 +0.5**
BUR08 Bucovina Ar. S 38.52 296 *e*P **P 14 52 12.0 +0.6**
KWP Kalwaria Pacla 39.63 300 *e*P **P 14 52 22.4 +1.7**
ASAJ Asahikawa 43.76 67 LR LR 15 12 56.5
comp=Z,121nm,21.2s,MS3.8,baz=183,slow=39
NB2 NORSAR Subarra 43.88 319 P **P 14 52 54.9 -0.4**
comp=Z,3.0nm,0.7s,mb4.1,baz=80,slow=8.6
NOA NORSAR Array B 43.88 319 P **P 14 52 55.3 0.0**
comp=Z,3.0nm,0.7s,mb4.1,baz=82,slow=8.1,SNR=9.9
SEY Seymchan 44.53 38 *i*P **P 14 53 00.3 -0.3**
CLL Collm 45.16 305 ⇓*i*P **P 14 53 06.5 +0.8**
CLL *e* 14 54 47.0
GERES GERESS Array B 45.51 301 P **P 14 53 09.7 +1.2**
comp=Z,1.0nm,0.6s,mb3.9,baz=63,slow=9.6,SNR=7.8
BILL Biiibino 49.12 30 *e*P **P 14 53 36.7 +0.3**
BILL pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
BILL Biiibino 49.12 30 *e*P **P 14 53 36.7 +0.3**
comp=Z,2.5nm,0.8s,mb4.3
HINF Hinteralfeld 50.14 302 *e*P **P 14 53 44.7 +0.3**
LPG La Plagne 51.17 300 *e*P **P 14 53 53.4 +1.1**
comp=Z,15nm,0.7s,mb4.7
LPG La Plagne 51.17 300 *e*P **P 14 53 53.4 +1.1**
LPG pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
LPG La Plagne 51.17 300 *e*P **P 14 53 53.4 +1.1**
comp=Z,7.5nm,0.7s,mb4.7
LPL La Plagne 51.18 300 *e*P **P 14 53 53.3 +1.0**
comp=Z,18nm,0.8s,mb4.7
LPL La Plagne 51.18 300 *e*P **P 14 53 53.3 +1.0**
LPL pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
LPL La Plagne 51.18 300 *e*P **P 14 53 53.3 +1.0**
comp=Z,9.1nm,0.8s,mb4.8
MBDF Montbardon 51.50 299 *e*P **P 14 53 55.4 +0.7**
ORIF Oris-en-Rattie 51.98 299 *e*P **P 14 53 58.4 +0.1**
comp=Z,9.2nm,0.8s,mb4.5
ORIF Oris-en-Rattie 51.98 299 *e*P **P 14 53 58.4 +0.1**
ORIF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
ORIF Oris-en-Rattie 51.98 299 *e*P **P 14 53 58.4 +0.1**
comp=Z,4.6nm,0.8s,mb4.5
LOR Lormes 52.21 303 *e*P **P 14 54 00.3 +0.3**
SMF Signal de Mont 52.49 302 *e*P **P 14 54 02.1 0.0**
comp=Z,6.6nm,0.6s,mb4.4
SMF Signal de Mont 52.49 302 *e*P **P 14 54 02.1 0.0**
SMF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
SMF Signal de Mont 52.49 302 *e*P **P 14 54 02.1 0.0**
comp=Z,3.3nm,0.6s,mb4.4
AVF Avril sur Loir 52.73 303 *e*P **P 14 54 03.8 0.0**
comp=Z,15nm,1.0s,mb4.6
AVF Avril sur Loir 52.73 303 *e*P **P 14 54 03.8 0.0**
AVF pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
AVF Avril sur Loir 52.73 303 *e*P **P 14 54 03.8 0.0**
comp=Z,7.6nm,1.0s,mb4.6
VIVF Saint-Julien-l 52.78 300 *e*P **P 14 54 04.5 +0.3**
comp=Z,6.8nm,0.8s,mb4.3
VIVF Saint-Julien-l 52.78 300 *e*P **P 14 54 04.5 +0.3**
VIVF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
VIVF Saint-Julien-l 52.78 300 *e*P **P 14 54 04.5 +0.3**
comp=Z,3.4nm,0.8s,mb4.3
BGF Bois d'Agland 53.15 303 *e*P **P 14 54 06.8 -0.1**
TCF Toulx Ste Croi 53.66 302 *e*P **P 14 54 10.9 +0.2**
LDF La Druitiere 54.02 306 *e*P **P 14 54 13.8 +0.5**
MTLF Montolieu 55.05 299 *e*P **P 14 54 21.1 +0.3**
ETSF Etsaut 57.03 300 *e*P **P 14 54 35.6 +0.6**
SJPF Ste Jean 57.34 301 *e*P **P 14 54 37.6 +0.4**
ESDC Sonseca Array 60.92 298 P **P 14 55 01.6 -0.4**
comp=Z,0.3nm,0.3s,mb3.9,baz=39,slow=8.3,SNR=4.4
BPAW Bear Paw Mtn. 65.47 22 *e*P **P 14 55 31.6 -0.3**
comp=Z,7.9nm,1.3s,mb4.6
COLA College 65.70 21 *e*P **P 14 55 33.0 -0.3**
COLA pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
COLA College 65.70 21 *e*P **P 14 55 33.0 -0.3**
comp=Z,4.1nm,1.0s,mb4.4
KDAK Kodiak Island 69.92 27 P **P 14 55 59.1 -1.0**
comp=Z,2.9nm,0.6s,mb4.4,baz=304,slow=3.6,SNR=3.3
TORD Torodi Ar. Bea 73.19 272 P **P 14 56 19.7 -0.7**
comp=Z,1.2nm,0.5s,mb4.1,baz=44,slow=5.2,SNR=19
YKA Yellowknife Ar 73.86 7 P **P 14 56 22.9 -0.7**
comp=Z,3.1nm,0.7s,mb4.3,baz=346,slow=5.4,SNR=10
WRAB Tennant Creek 79.83 130 *e*P **P 14 56 57.4 -0.4**
WRAB pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
WRAB Tennant Creek 79.83 130 *e*P **P 14 56 57.4 -0.4**
comp=Z,3.6nm,0.9s,mb4.3
WRA Warramunga Arr 79.84 130 P **P 14 56 57.1 -0.7**
comp=Z,1.6nm,0.8s,mb4.0,baz=332,slow=5.5,SNR=11
DBIC Dimbokro 82.29 272 P **P 14 57 11.7 +0.5**
comp=Z,2.4nm,0.8s,mb4.2,baz=31,slow=11,SNR=4.4
FFC Flin Flon 82.34 2 *i*P **P 14 57 10.6 -0.2**
ASAR Alice Springs 82.58 132 P **P 14 57 11.7 -0.7**
comp=Z,1.7nm,0.8s,mb4.1,baz=321,slow=4.4,SNR=19
NVAR Mina Array Bea 96.85 15 P **P 14 58 18.8 -1.5**
comp=Z,0.1nm,0.4s,mb3.6,baz=331,slow=7.2,SNR=2.4

*IDC **16** 14:54:40.0±0.8, 33°.10N×92°.00E, h0km, mb3.8/9, mb1 4.0/12, mb1mx3.8/28, mbtmp3.8/12, ML3.5/3, MS3.7/1, Ms1 3.7/1, ms1mx2.5/41, Error ellipse: s-maj=37.6km s-min=15.9km az=56.0*
*ISCJB **16** 14:54:39.8±0.5, 33°.22N±0°.04×92°.20E±0°.09, h10km, mb3.9/8, Error ellipse: s-maj=10.8km s-min=5.6km az=4.2*
*BJI **16** 14:54:41.2, 33°.00N×92°.39E, h10km, mB4.5/1, mb4.0/1, ML4.0/3, Ms3.7/3, Ms7 3.4/3*
*NEIC **16** 14:54:41.7±0.6, 33°.21N×92°.26E, h10km, mb3.8/2, Error ellipse: s-maj=12.6km s-min=7.3km az=101.0*
*DMN **16** 14:55:42.1±10.0, 29°.51N×89°.04E, h10km, Error ellipse: s-maj=255.7km s-min=18.1km az=47.0*
ISC 16 14:54:42.0±0.5, 33°.26N±0°.04×92°.23E±0°.09, h10km, n35, σ1§25/36, mb3.9/8, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.67**	**195**	Pg	**Pn**	**14 55 41.6**	**+2.8**
LSA				Sg	**Sg**	**14 56 34.3**	**-5.5**
LSA	comp=N,280nm,1.0s			smax			
LSA	comp=E,640nm,0.9s			smax			
LSA				LR	LR		
LSA	comp=E,540nm,6.8s			LR	LR		
LSA	comp=Z,740nm,13.5s			LR	LR		
LSA	**Lhasa**	**3.67**	**195**	*e*Pg	**Pn**	**14 55 42.0**	**+3.2**
TAPN	**Taplejung**	**7.07**	**215**	*e*P	**Pn**	**14 56 23.1**	**-2.4**
	comp=Z,33nm,0.9s						
TAPN	**Taplejung**	**7.07**	**215**	*e*P	**Pn**	**14 56 23.1**	**-2.4**
	comp=Z,33nm,0.9s						
JIRN	**Jiri**	**7.64**	**225**	*e*P	**Pn**	**14 56 32.6**	**-0.7**
	comp=Z,36nm,0.9s						
JIRN	**Jiri**	**7.64**	**225**	*e*P	**Pn**	**14 56 32.6**	**-0.7**
	comp=Z,36nm,0.9s						
GUN	**Gumba**	**7.64**	**227**	*e*P	**Pn**	**14 56 34.5**	**+1.1**
GUN	**Gumba**	**7.64**	**227**	*e*P	**Pn**	**14 56 34.5**	**+1.1**
SHL	**Shillong**	**7.67**	**182**	*e*PKP	**Pn**	**14 56 36.0**	**+2.2**
SHL				*e*S	**Sn**	**14 58 00.5**	**-0.3**
SHL				*ex*	x	14 58 44.0	
RAMN	**Ramite**	**7.96**	**219**	*e*P	**Pn**	**14 56 36.1**	**-1.6**
	comp=Z,96nm,1.1s						
RAMN	**Ramite**	**7.96**	**219**	*e*P	**Pn**	**14 56 36.1**	**-1.6**
	comp=Z,96nm,1.1s						
KKN	**Kakani**	**8.10**	**230**	*e*P	**Pn**	**14 56 41.7**	**+2.0**
	comp=Z,24nm,0.7s						
KKN	**Kakani**	**8.10**	**230**	*e*P	**Pn**	**14 56 41.7**	**+2.0**
	comp=Z,24nm,0.7s						
PKI	**Pulchoki**	**8.17**	**228**	*e*P	**Pn**	**14 56 41.3**	**+0.6**
PKI	**Pulchoki**	**8.17**	**228**	*e*P	**Pn**	**14 56 41.3**	**+0.6**
PKIN	**Phulchoki**	**8.18**	**228**	*e*P	**Pn**	**14 56 41.5**	**+0.7**
	comp=Z,18nm,0.6s						
DMN	**Daman**	**8.34**	**229**	*e*P	**Pn**	**14 56 44.0**	**+1.0**
	comp=Z,21nm,0.6s						
DMN	**Daman**	**8.34**	**229**	*e*P	**Pn**	**14 56 44.0**	**+1.0**
	comp=Z,21nm,0.6s						
MK31	**Makanchi Array**	**15.50**	**334**	*e*P	**Pn**	**14 58 21.8**	**+1.2**
MKAR	**Makanchi Array**	**15.50**	**334**	Pn	**Pn**	**14 58 19.8**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=156,slow=12,SNR=3.5						
CMAR	**Chiang Mai Arr**	**15.92**	**156**	Pn	**Pn**	**14 58 24.6**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=336,slow=13,SNR=11						
UCH	**Uchtor**	**16.61**	**308**	P	**Pn**	**14 58 38.1**	**+3.3**
	comp=Z,5.5nm,0.9s						
AAK	**Ala-Archa**	**16.80**	**309**	LR	LR	15 05 43.4	
	comp=Z,256nm,18.1s,baz=142,slow=40						
SONM	**Songino Array**	**18.06**	**32**	P	**Pn**	**14 58 55.6**	**+2.6**
	comp=Z,0.2nm,0.3s,baz=215,slow=12,SNR=9.1						
KBL	**Kabul**	**19.29**	**280**	*e*P	**Pn**	**14 59 06.7**	**-1.3**
	comp=Z,6.1nm,0.7s						
KURK	**Kurchatov**	**20.11**	**334**	P	**P**	**14 59 15.4**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=139,slow=11,SNR=4.6						
ZAA0	**Zalesovo Array**	**21.34**	**348**	P	**P**	**14 59 28.8**	**-0.3**
ZALV	**Zalesovo Beam**	**21.34**	**348**	P	**P**	**14 59 29.6**	**+0.5**
	comp=Z,1.4nm,0.7s,mb3.4,baz=157,slow=8.0,SNR=4.2						
BVAR	**Borovoye Array**	**25.20**	**328**	P	**P**	**15 00 07.6**	**-0.1**
	comp=Z,1.0nm,0.6s,mb3.5,baz=125,slow=12,SNR=4.1						
BRTR	**Keskin Array B**	**46.83**	**296**	P	**P**	**15 03 11.2**	**-0.8**
	comp=Z,0.8nm,0.7s,mb3.7,baz=123,slow=3.7,SNR=4.7						
FINES	**FINESS Array B**	**50.10**	**325**	P	**P**	**15 03 35.8**	**-1.1**
	comp=Z,2.3nm,1.0s,mb4.1,baz=96,slow=9.9,SNR=2.4						
ARCES	**ARCESS Array B**	**51.14**	**335**	P	**P**	**15 03 44.5**	**-0.2**
	comp=Z,2.1nm,0.9s,mb4.1,baz=81,slow=7.5,SNR=6.1						
WRA	**Warramunga Arr**	**66.44**	**137**	P	**P**	**15 05 31.3**	**-0.3**
	comp=Z,1.9nm,0.9s,mb4.1,baz=328,slow=5.6,SNR=6.2						
ASAR	**Alice Springs**	**69.15**	**139**	P	**P**	**15 05 48.5**	**-0.2**
	comp=Z,1.7nm,0.5s,mb4.2,baz=322,slow=6.3,SNR=20						
TORD	**Torodi Ar. Bea**	**83.36**	**281**	P	**P**	**15 07 08.6**	**-1.1**
	comp=Z,0.4nm,0.7s,mb3.6,baz=56,slow=5.4,SNR=3.5						

*IDC **16** 14:56:35.3±0.8, 19°.54N×144°.86E, h0km, mb3.9/10, mb1 4.0/10, mb1mx3.8/24, mbtmp3.9/10, MS3.2/3, Ms1 3.2/3, ms1mx2.6/34, Error ellipse: s-maj=35.5km s-min=17.4km az=84.0*
*ISCJB **16** 14:56:38.8±0.8, 19°.5N±0°.1×144°.8E±0°.2, h33km, mb3.9/11, MS3.4/2, Error ellipse: s-maj=30.9km s-min=14.4km az=169.1*
*NEIC **16** 14:56:40.8±0.7, 19°.54N×144°.76E, h35km, Error ellipse: s-maj=32.5km s-min=15.8km az=88.0*
ISC 16 14:56:40.9±0.8, 19°.5N±0°.1×144°.8E±0°.2, h35km, n17, σ0§98/14, mb3.9/11, MS3.4/2, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**7.92**	**343**	LR	LR	15 01 11.6	
	comp=Z,67nm,20.0s,baz=186,slow=35						
KSRS	**Korea Array**	**23.17**	**324**	P	**P**	**15 01 44.0**	**-0.4**
	0.9nm,0.7s,mb3.3,baz=138,slow=9.4,SNR=5.9						
PETK	**Petropavlovsk-**	**34.98**	**14**	LR	LR	15 16 15.3	
	comp=Z,21nm,18.4s,MS2.9,baz=339,slow=34						
WRA	**Warramunga Arr**	**40.54**	**195**	P	**P**	**15 04 16.0**	**-0.9**
	1.0nm,0.7s,mb3.6,baz=12,slow=9.1,SNR=13						
GTA	**Gaotai**	**43.39**	**307**	*e*P	**P**	**15 04 41.4**	**+1.3**
GTA				pP	pP	15 04 45.3	-5.1
GTA				sP	sP	15 04 48.3	-6.3
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.0						
ASAR	**Alice Springs**	**44.22**	**194**	P	**P**	**15 04 46.5**	**-0.3**
	comp=Z,0.5nm,0.7s,mb3.4,baz=16,slow=9.5,SNR=12						
STKA	**Stephens Creek**	**51.20**	**184**	P	**P**	**15 05 41.3**	**+0.5**
	comp=Z,1.7nm,0.7s,mb4.1,baz=260,slow=21,SNR=4.8						
STKA	**Stephens Creek**	**51.20**	**184**	*e*P	**P**	**15 05 42.0**	**+1.2**
ZALV	**Zalesovo Beam**	**56.86**	**322**	P	**P**	**15 06 21.4**	**-0.5**
	comp=Z,0.8nm,0.6s,mb3.9,baz=72,slow=9.5,SNR=3.8						
ZALV	**Zalesovo Beam**	**56.86**	**322**	P	**P**	**15 06 21.4**	**-0.5**
KURK	**Kurchatov**	**60.11**	**318**	P	**P**	**15 06 44.7**	**+0.1**
	comp=Z,0.8nm,0.4s,mb4.1,baz=286,slow=28,SNR=5.3						
KURK	**Kurchatov**	**60.11**	**318**	P	**P**	**15 06 44.7**	**+0.1**
BVAR	**Borovoye Array**	**65.31**	**320**	P	**P**	**15 07 19.7**	**+0.4**
	comp=Z,2.6nm,0.6s,mb4.5,baz=94,slow=7.4,SNR=16						
YKA	**Yellowknife Ar**	**77.66**	**28**	P	**P**	**15 08 31.9**	**-1.6**
	comp=Z,0.6nm,0.6s,mb3.7,baz=292,slow=5.7,SNR=3.1						
NVAR	**Mina Array Bea**	**83.29**	**52**	P	**P**	**15 09 06.1**	**+1.9**
	comp=Z,0.6nm,0.8s,mb3.7,baz=251,slow=4.5,SNR=4.2						
FINES	**FINESS Array B**	**85.79**	**335**	P	**P**	**15 09 15.6**	**-0.8**
	comp=Z,1.6nm,0.7s,mb4.3,baz=23,slow=6.2,SNR=5.7						
VRAC	**Vranov**	**97.52**	**329**	LR	LR	15 58 15.0	
	comp=Z,38nm,18.5s,MS3.9,baz=342,slow=38						

*NIED **16** 15:03:00, 38°.90N×140°.90E, h8km, Mw3.6 Best double couple: M0=2.99000×10^14 NP1:φs=12.00000°, δ54.00000°, λ84.00000°. NP2:φs=202.00000°, δ37.00000°, λ99.00000°.*
*IDC **16** 15:03:17.8±1.6, 39°.03N×141°.25E, h0km, mb3.7/4, mb1 3.8/6, mb1mx3.6/26, mbtmp3.8/6, ML3.2/3, Error ellipse: s-maj=47.5km s-min=20.4km az=74.0*
*NEIC **16** 15:03:20.9, 38°.92N×140°.86E, h9km, mb4.6/1, MW3.6(NIED), After JMA.*
*JMA **16** 15:03:20.9, 38°.92N×140°.86E, h8km±1km, M3.5 Broadband fault plane solution: P waves. NP1: φs=192.00000°, δ18.00000°, λ75.00000°. NP2:φs=28.00000°, δ73.00000°, λ95.00000°. Principal axes: T Plg62.0000°, Azm305.0000°; N Plg5.0000°, Azm206.0000°; P Plg28.0000°, Azm114.0000°;*
JMA Felt II J1.
*ISCJB **16** 15:03:20.5±0.6, 38°.92N±0°.03×140°.88E±0°.03, h12km±4km, mb3.9/5 Error ellipse: s-maj=5.1km s-min=4.4km az=153.3*
ISC 16 15:03:21.0±0.4, 38°.91N±0°.03×140°.87E±0°.03, h7km±4km, n21, σ1§01/33, mb3.9/5, 3C-3D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.28**	**81**	⇓P	**Pg**	**15 03 26.6**	**0.0**
JMK				S	**Sg**	**15 03 30.6**	**+0.3**
JYK	**Kaneyama**	**0.40**	**271**	⇓P	**Pg**	**15 03 28.5**	**-0.2**
JYK				*i* S	**Sg**	**15 03 33.6**	**-0.3**
JRG	**Rokugo**	**0.52**	**340**	P	**Pg**	**15 03 30.9**	**-0.2**
JRG				S	**Sg**	**15 03 38.2**	**+0.3**
JOU	**Okura**	**0.56**	**196**	⇑P	**Pg**	**15 03 31.9**	**0.0**
JOU				S	**Sg**	**15 03 39.5**	**+0.2**
JIO	**Ouri**	**0.59**	**140**	⇓P	**Pg**	**15 03 32.0**	**-0.4**
JIO				S	**Sg**	**15 03 40.3**	**+0.2**
JOM	**Ohasama**	**0.65**	**30**	P	**Pg**	**15 03 33.2**	**-0.4**
JOM				S	**Sg**	**15 03 42.1**	**-0.1**
JYS	**Shiratake**	**0.93**	**223**	⇑P	**Pg**	**15 03 38.5**	**-0.4**
JYS				S	**Sg**	**15 03 51.1**	**+0.2**
JYA	**Atsumi**	**0.95**	**251**	⇑P	**Pg**	**15 03 38.8**	**-0.5**
JYA				S	**Sg**	**15 03 51.2**	**-0.5**
MAJO	**Matsushiro**	**3.17**	**223**	*e*Pn	**Pn**	**15 04 11.7**	**+0.5**
MAT	**Matsushiro**	**3.17**	**223**	P	**Pn**	**15 04 12.0**	**+0.8**
MAT				*e*S	**Sn**	**15 04 52.2**	**+3.0**
MJAR	**Matsushiro Arr**	**3.17**	**223**	Pn	**Pn**	**15 04 11.7**	**+0.5**
	0.6nm,0.3s,baz=302,slow=13,SNR=5.2						
MJAR				Sn	**Sn**	**15 04 58.9**	**+10**
	1.2nm,0.3s,baz=214,slow=25,SNR=5.0						
ERM	**Erimo**	**3.56**	**29**	Pn	**Pn**	**15 04 08.2**	**-8.5**
ASAJ	**Asahikawa**	**5.36**	**13**	Pn	**Pn**	**15 04 43.9**	**+2.4**
	0.5nm,0.3s,baz=242,slow=22,SNR=7.2						
JHJ	**Hachijo jima 2**	**5.84**	**189**	Pn	**Pn**	**15 04 50.0**	**+1.9**
	3.6nm,0.3s,baz=65,slow=19,SNR=2.4						
JHJ				Sn	**Sn**	**15 05 52.9**	**-2.4**
	3.3nm,0.3s,baz=105,slow=20,SNR=2.1					

2.2nm,0.3s,mb4.4
WRA Warramunga Arr 58.86 187 P P 15 13 19.1 -1.2
1.2nm,0.9s,mb3.9,baz=4.1,slow=7.3,SNR=11
ASAR Alice Springs 62.59 187 P P 15 13 44.6 -1.0
0.5nm,0.9s,mb3.7,baz=4.4,slow=4.1,SNR=7.1
AKASG Malin Array Be 72.56 322 P P 15 14 47.0 -1.5
0.3nm,0.4s,mb3.6,baz=46,slow=4.5,SNR=3.5

BJI 16 15:44:22.7,32°.59N×93°.09E,h14km,mb3.7/1,ML3.5/4, Ms3.3/1,Ms7 3.1/1,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.33**	**211**	Pg	Pg	15 45 21.6	-4.9
LSA				Sg	Sg	15 46 12.8	+3.2
LSA				smax			
	comp=N,30nm,1.1s						
LSA				smax			
	comp=E,110nm,1.0s						
GTA	**Gaotai**	**8.71**	**37**	*e*P	Pn	15 46 31.1	+2.8
GTA				pP		15 46 35.3	
GTA				sP		15 46 38.3	
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						

DDA ***16*** *15:47:57.2,39°.55N×28°.61E,h7km±3km,Md2.8*
ISK ***16*** *15:47:57.4,39°.56N×28°.61E,h6km,MD3.1*
ISCJB ***16*** *15:47:57.5±0.5,39°.55N±0°.02×28°.61E±0°.03,h3km±5km, Error ellipse: s-maj=4.1km s-min=3.6km az=34.1*
CSEM ***16*** *15:47:58.0±0.1,39°.55N×28°.60E,h5km,MD2.8,Error ellipse: s-maj=2.0km s-min=2.0km az=105.0*
ISC 16 15:47:58.3±0.4,39°.56N±0°.02×28°.60E±0°.03,h7km±4km, n52,σ0°57/72,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.11**	**296**	*i* P	**Pg**	**15 48 00.7**	**0.0**
DURS				*i* S	**Sg**	**15 48 02.7**	**+0.4**
DURS	**Dursunbey**	**0.11**	**296**	*i* P	**Pg**	**15 48 00.6**	**0.0**
DURS				*i* S	**Sg**	**15 48 02.7**	**+0.4**
DEMI	**Demirci**	**0.52**	**170**	*i* P	**Pg**	**15 48 07.9**	**-0.4**
DEMI				*i* S	**Sg**	**15 48 14.6**	**-0.5**
DEMI	**Demirci**	**0.52**	**170**	*i* P	**Pg**	**15 48 07.9**	**-0.4**
DEMI				*i* S	**Sg**	**15 48 14.6**	**-0.5**
BALB	**Balikesir**	**0.56**	**279**	*e*PG	**Pg**	**15 48 09.0**	**-0.1**
BALB				*e*SG	**Sg**	**15 48 17.7**	**+1.3**
BALB	**Balikesir**	**0.56**	**279**	*e*Pg	**Pg**	**15 48 09.0**	**-0.1**
BALB				*e*Sg	**Sg**	**15 48 17.7**	**+1.3**
KCT	**Karacabey**	**0.73**	**345**	*e*PG	**Pg**	**15 48 12.2**	**-0.1**
KCT				*e*SG	**Sg**	**15 48 21.6**	**-0.3**
KCT	**Karacabey**	**0.73**	**345**	*e*Pg	**Pg**	**15 48 12.2**	**-0.2**
KCT				*e*Sg	**Sg**	**15 48 21.6**	**-0.3**
BALY	**Balya**	**0.78**	**284**	*i* P	**Pg**	**15 48 12.2**	**-1.0**
BALY				*i* S	**Sg**	**15 48 23.2**	**-0.1**
BALY	**Balya**	**0.78**	**284**	*i* P	**Pg**	**15 48 12.2**	**-1.0**
BALY				*i* S	**Sg**	**15 48 23.2**	**-0.1**
AKHS	**Akhisar**	**0.91**	**222**	*i* P	**Pg**	**15 48 15.4**	**-0.3**
AKHS				*i* S	**Sg**	**15 48 28.5**	**+0.9**
AKHS	**Akhisar**	**0.91**	**222**	*i* P	**Pg**	**15 48 15.4**	**-0.3**
AKHS				*i* S	**Sg**	**15 48 28.5**	**+1.0**
AKS	**Akhisar**	**0.91**	**222**	*e*PG	**Pg**	**15 48 15.5**	**-0.3**
AKS				*e*SG	**Sg**	**15 48 27.9**	**+0.4**
AKS	**Akhisar**	**0.91**	**222**	*e*Pg	**Pg**	**15 48 15.5**	**-0.2**
AKS				*e*Sg	**Sg**	**15 48 27.9**	**+0.4**
BNT	**Bandirma**	**0.95**	**327**	*e*PG	**Pg**	**15 48 16.3**	**-0.3**
BNT				*e*SG	**Sg**	**15 48 29.1**	**+0.1**
BNT	**Bandirma**	**0.95**	**327**	*e*Pg	**Pg**	**15 48 16.3**	**-0.3**
BNT				*e*Sg	**Sg**	**15 48 29.1**	**+0.1**
EDC	**Edincik**	**0.97**	**325**	*e*PG	**Pg**	**15 48 16.6**	**-0.3**
EDC	**Edincik**	**0.97**	**325**	*e*Pg	**Pg**	**15 48 16.6**	**-0.3**
GEMT	**Gemlik**	**0.99**	**27**	*e*PG	**Pg**	**15 48 17.6**	**+0.3**
GEMT				*e*SG	**Sg**	**15 48 30.6**	**+0.5**
GEMT	**Gemlik**	**0.99**	**27**	*e*Pg	**Pg**	**15 48 17.6**	**+0.3**
GEMT				*e*Sg	**Sg**	**15 48 30.6**	**+0.5**
ARMT	**Armutlu**	**1.03**	**11**	*e*PG	**Pg**	**15 48 17.3**	**-0.7**
ARMT	**Armutlu**	**1.03**	**11**	*e*Pg	**Pg**	**15 48 17.3**	**-0.7**
KULA	**Kula-Manisa**	**1.04**	**177**	*e*PG	**Pg**	**15 48 17.8**	**-0.4**
KULA	**Kula-Manisa**	**1.04**	**177**	*e*Pg	**Pg**	**15 48 17.8**	**-0.4**
ADVT	**Abdulvahap**	**1.24**	**45**	*e*PN	**Pn**	**15 48 20.8**	**-1.1**
ADVT	**Abdulvahap**	**1.24**	**45**	*e*Pn	**Pn**	**15 48 20.8**	**-1.2**
ALT	**Altintas**	**1.27**	**113**	*e*PN	**Pn**	**15 48 21.7**	**-0.8**
ALT	**Altintas**	**1.27**	**113**	*e*Pn	**Pn**	**15 48 21.7**	**-0.8**
KHL	**Karahalli**	**1.43**	**149**	*e*PN	**Pn**	**15 48 24.4**	**-0.2**
KHL	**Karahalli**	**1.43**	**149**	*e*Pn	**Pn**	**15 48 24.4**	**-0.1**
AYVA	**Ayvalik**	**1.50**	**261**	*i* P	**Pn**	**15 48 24.9**	**-0.7**
AYVA				*i* S	**Sn**	**15 48 44.8**	**-0.5**
AYVA	**Ayvalik**	**1.50**	**261**	*i* P	**Pn**	**15 48 24.9**	**-0.6**
AYVA				*i* S	**Sn**	**15 48 44.8**	**-0.5**
GPA	**Golpazari**	**1.51**	**60**	*e*PN	**Pn**	**15 48 26.5**	**+0.8**
GPA	**Golpazari**	**1.51**	**60**	*e*Pn	**Pn**	**15 48 26.5**	**+0.9**
IZM	**Izmir**	**1.56**	**222**	*e*PN	**Pn**	**15 48 26.3**	**0.0**
RKY	**Sarkoy-Tekirda**	**1.57**	**317**	*e*PN	**Pn**	**15 48 27.2**	**+0.7**
RKY	**Sarkoy-Tekirda**	**1.57**	**317**	*e*Pn	**Pn**	**15 48 27.2**	**+0.7**
BLCB	**Balcova**	**1.68**	**227**	*e*PN	**Pn**	**15 48 27.9**	**-0.2**
BLCB	**Balcova**	**1.68**	**227**	*e*Pn	**Pn**	**15 48 27.9**	**-0.2**
GULT	**Gulveren**	**1.71**	**59**	*e*PN	**Pn**	**15 48 28.7**	**+0.2**
GULT	**Gulveren**	**1.71**	**59**	*e*Pn	**Pn**	**15 48 28.7**	**+0.2**
ESKT	**Eskisehir**	**1.74**	**90**	*e*PN	**Pn**	**15 48 28.7**	**-0.2**
ESKT	**Eskisehir**	**1.74**	**90**	*e*Pn	**Pn**	**15 48 28.7**	**-0.2**
SHUT	**Suhut-Afyon**	**1.82**	**123**	*e*PN	**Pn**	**15 48 30.1**	**+0.2**
SHUT	**Suhut-Afyon**	**1.82**	**123**	*e*Pn	**Pn**	**15 48 30.1**	**+0.1**
MDU	**Mudurnu**	**2.21**	**65**	*e*PN	**Pn**	**15 48 35.7**	**+0.5**
MDU	**Mudurnu**	**2.21**	**65**	*e*Pn	**Pn**	**15 48 35.7**	**+0.4**
SVRH	**Sivrihisar-ESK**	**2.27**	**92**	*e*PN	**Pn**	**15 48 36.5**	**+0.4**
SVRH	**Sivrihisar-ESK**	**2.27**	**92**	*e*Pn	**Pn**	**15 48 36.5**	**+0.4**
ISP	**Isparta**	**2.27**	**138**	*e*PN	**Pn**	**15 48 37.5**	**+1.3**
KIZT	**Kizilcal**	**2.64**	**104**	*e*PN	**Pn**	**15 48 41.7**	**+0.5**
KIZT	**Kizilcal**	**2.64**	**104**	*e*Pn	**Pn**	**15 48 41.7**	**+0.5**

DDA ***16*** *15:49:25.0,39°.57N×28°.60E,h22km±1km,Ml4.1*
NEIC ***16*** *15:49:24.0,39°.56N×28°.61E,h10km,MD3.4(ATH), ML4.0(ISK),After ISK.*
IDC ***16*** *15:49:24.3±1.3,39°.45N×28°.67E,h0km,mb3.5/6, mb1 3.6/12,mb1mx3.5/30,mbtmp3.5/12,ML3.6/6,MS3.1/4, Ms1 3.1/4,ms1mx2.6/33,Error ellipse: s-maj=21.0km s-min=13.8km az=50.0*
ISK ***16*** *15:49:25.3,39°.58N×28°.63E,h10km,MD3.5*
ISCJB ***16*** *15:49:25.6±0.4,39°.57N±0°.01×28°.59E±0°.02,h14km±3km, mb3.5/6,Error ellipse: s-maj=2.4km s-min=2.3km az=32.1*
CSEM ***16*** *15:49:25.8±0.1,39°.56N×28°.59E,h8km,MD3.5,Error ellipse: s-maj=2.2km s-min=1.9km az=48.0*
ATH ***16*** *15:49:26.0,39°.52N×28°.65E,h47km,MD3.3/5*
THE ***16*** *15:49:28.8,39°.49N×28°.58E,h43km±12km,ML5.0/4,Error ellipse: s-maj=12.9km s-min=1.3km az=222.0*
ISC 16 15:49:26.0±0.3,39°.55N±0°.01×28°.59E±0°.02,h10km±2km, n245,σ0°95/290,mb3.5/6,16C-21D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.10**	**302**	⇓*i*P	**Pg**	**15 49 28.7**	**+0.1**
DURS				*i* S	**Sg**	**15 49 30.7**	**+0.3**
DURS	**Dursunbey**	**0.10**	**302**	*i* P	**Pg**	**15 49 28.7**	**+0.1**
DURS				*i* S	**Sg**	**15 49 30.7**	**+0.3**
DEMI	**Demirci**	**0.51**	**169**	⇓*i*P	**Pg**	**15 49 35.8**	**-0.2**
DEMI				*i* S	**Sg**	**15 49 42.5**	**-0.3**
DEMI	**Demirci**	**0.51**	**169**	*i* P	**Pg**	**15 49 35.8**	**-0.2**
DEMI				*i* S	**Sg**	**15 49 42.5**	**-0.2**
BALB	**Balikesir**	**0.55**	**280**	*e*PG	**Pg**	**15 49 36.8**	**+0.1**
BALB				*e*SG	**Sg**	**15 49 45.6**	**+1.6**
BALB	**Balikesir**	**0.55**	**280**	*e*Pg	**Pg**	**15 49 36.8**	**0.0**
BALB				*e*Sg	**Sg**	**15 49 45.6**	**+1.6**
KCT	**Karacabey**	**0.74**	**346**	*e*PG	**Pg**	**15 49 40.1**	**-0.2**
KCT	**Karacabey**	**0.74**	**346**	*e*Pg	**Pg**	**15 49 40.1**	**-0.2**
BALY	**Balya**	**0.77**	**285**	⇓*i*P	**Pg**	**15 49 40.4**	**-0.5**
BALY				*i* S	**Sg**	**15 49 51.2**	**+0.3**
BALY	**Balya**	**0.77**	**285**	*i* P	**Pg**	**15 49 40.4**	**-0.5**
BALY				*i* S	**Sg**	**15 49 51.2**	**+0.3**
GDZ	**Gediz**	**0.83**	**123**	⇓*i*P	**Pg**	**15 49 41.5**	**-0.6**
GDZ				*i* S	**Sg**	**15 49 56.3**	**+3.4**
GDZ	**Gediz**	**0.83**	**123**	*i* P	**Pg**	**15 49 41.5**	**-0.5**
GDZ				*i* S	**Sg**	**15 49 56.3**	**+3.4**
AKHS	**Akhisar**	**0.90**	**222**	⇑*i*P	**Pg**	**15 49 43.2**	**-0.1**
AKHS				*i* S	**Sg**	**15 49 55.4**	**+0.5**
AKHS	**Akhisar**	**0.90**	**222**	*i* P	**Pg**	**15 49 43.2**	**-0.1**
AKHS				*i* S	**Sg**	**15 49 55.4**	**+0.5**
AKS	**Akhisar**	**0.90**	**222**	*e*PG	**Pg**	**15 49 43.3**	**0.0**
AKS				*e*SG	**Sg**	**15 49 57.6**	**+2.7**
AKS	**Akhisar**	**0.90**	**222**	*e*Pg	**Pg**	**15 49 43.3**	**0.0**
BNT	**Bandirma**	**0.96**	**328**	*e*PG	**Pg**	**15 49 44.1**	**-0.3**
BNT				*e*SG	**Sg**	**15 49 57.5**	**+0.6**
BNT	**Bandirma**	**0.96**	**328**	*e*Pg	**Pg**	**15 49 44.1**	**-0.3**
BNT				*e*Sg	**Sg**	**15 49 57.5**	**+0.6**
EDC	**Edincik**	**0.97**	**325**	*e*PG	**Pg**	**15 49 44.5**	**-0.3**
EDC	**Edincik**	**0.97**	**325**	*e*Pg	**Pg**	**15 49 44.5**	**-0.2**
GEMT	**Gemlik**	**1.00**	**27**	*e*PG	**Pg**	**15 49 44.5**	**-0.8**
GEMT				*e*SG	**Sg**	**15 49 57.5**	**-0.8**
GEMT	**Gemlik**	**1.00**	**27**	*e*Pg	**Pg**	**15 49 44.5**	**-0.8**
GEMT				*e*Sg	**Sg**	**15 49 57.5**	**-0.8**
KULA	**Kula-Manisa**	**1.03**	**177**	*e*PG	**Pg**	**15 49 45.6**	**-0.2**
KULA	**Kula-Manisa**	**1.03**	**177**	*e*Pg	**Pg**	**15 49 45.6**	**-0.3**
ARMT	**Armutlu**	**1.04**	**12**	*e*PG	**Pg**	**15 49 45.0**	**-1.0**
ARMT	**Armutlu**	**1.04**	**12**	*e*Pg	**Pg**	**15 49 45.0**	**-1.0**
MANT	**Manisa**	**1.05**	**181**	⇑*i*P	**Pg**	**15 49 46.0**	**-0.3**
MANT				*i* S	**Sg**	**15 49 58.8**	**-1.2**
MANT	**Manisa**	**1.05**	**181**	*i* P	**Pg**	**15 49 46.0**	**-0.3**
MANT				*i* S	**Sg**	**15 49 58.8**	**-1.2**
ADVT	**Abdulvahap**	**1.25**	**45**	*e*PN	**Pn**	**15 49 48.6**	**-1.0**
ADVT				*e*SN	**Sn**	**15 50 05.1**	**-1.4**
ADVT	**Abdulvahap**	**1.25**	**45**	*e*Pn	**Pn**	**15 49 48.6**	**-1.0**
ADVT				*e*Sn	**Sn**	**15 50 05.1**	**-1.4**
ALT	**Altintas**	**1.28**	**112**	*e*PN	**Pn**	**15 49 49.2**	**-0.8**
ALT	**Altintas**	**1.28**	**112**	*i* P	**Pn**	**15 49 53.4**	**+3.4**
ALT				*i* S	**Sb**	**15 50 14.7**	**+7.9**
ALT	**Altintas**	**1.28**	**112**	*e*Pn	**Pn**	**15 49 49.2**	**-0.8**
KHAL	**Karahalli**	**1.37**	**149**	⇓*i*P	**Pn**	**15 49 51.0**	**-0.2**
KHAL				*i* S	**Sb**	**15 50 08.6**	**-0.7**
KHAL	**Karahalli**	**1.37**	**149**	*i* P	**Pn**	**15 49 51.0**	**-0.2**
KHAL				*i* S	**Sb**	**15 50 08.6**	**-0.7**
KHL	**Karahalli**	**1.42**	**149**	*e*PN	**Pn**	**15 49 52.3**	**+0.4**
KHL	**Karahalli**	**1.42**	**149**	*e*Pn	**Pn**	**15 49 52.3**	**+0.3**
AYVA	**Ayvalik**	**1.49**	**261**	⇓*i*P	**Pn**	**15 49 52.7**	**-0.2**
AYVA				*i* S	**Sn**	**15 50 11.9**	**-0.5**
AYVA	**Ayvalik**	**1.49**	**261**	*i* P	**Pn**	**15 49 52.7**	**-0.1**
AYVA				*i* S	**Sn**	**15 50 11.9**	**-0.4**
GPA	**Golpazari**	**1.52**	**60**	*e*PN	**Pn**	**15 49 52.6**	**-0.7**
GPA	**Golpazari**	**1.52**	**60**	*e*Pn	**Pn**	**15 49 52.6**	**-0.7**
IZM	**Izmir**	**1.54**	**222**	*e*PN	**Pn**	**15 49 54.6**	**+1.0**
ISK	**Istanbul-Kandi**	**1.56**	**13**	*e*PN	**Pn**	**15 49 52.8**	**-1.0**
ISK	**Istanbul-Kandi**	**1.56**	**13**	*e*Pn	**Pn**	**15 49 52.8**	**-1.0**
RKY	**Sarkoy-Tekirda**	**1.57**	**317**	*e*PN	**Pn**	**15 49 54.2**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.57**	**317**	*e*Pn	**Pn**	**15 49 54.2**	**+0.2**
SART	**Tekirdag**	**1.57**	**317**	⇓*i*P	**Pn**	**15 49 53.4**	**-0.6**
SART				*i* S	**Sn**	**15 50 15.5**	**+1.2**
SART	**Tekirdag**	**1.57**	**317**	*i* P	**Pn**	**15 49 53.4**	**-0.6**
SART				*i* S	**Sn**	**15 50 15.5**	**+1.1**
ELBA	**Catalca**	**1.60**	**356**	*i* P	**Pn**	**15 49 53.6**	**-0.8**
ELBA				*i* S	**Sn**	**15 50 15.9**	**+0.7**
ELBA	**Catalca**	**1.60**	**356**	*i* P	**Pn**	**15 49 53.6**	**-0.8**
ELBA				*i* S	**Sn**	**15 50 15.9**	**+0.7**
TKR	**Tekirdag**	**1.65**	**331**	*e*PN	**Pn**	**15 49 54.8**	**-0.3**
TKR	**Tekirdag**	**1.65**	**331**	*e*Pn	**Pn**	**15 49 54.8**	**-0.3**
BLCB	**Balcova**	**1.67**	**227**	*e*PN	**Pn**	**15 49 54.9**	**-0.4**
BLCB	**Balcova**	**1.67**	**227**	P	**Pn**	**15 49 54.6**	**-0.8**
BLCB				S	**Sn**	**15 50 13.9**	**-3.0**
BLCB	**Balcova**	**1.67**	**227**	P	**Pn**	**15 49 54.6**	**-0.8**
BLCB	**Balcova**	**1.67**	**227**	*e*Pn	**Pn**	**15 49 54.9**	**-0.5**
BLCB				S	**Sn**	**15 50 13.9**	**-3.0**
CTKS	**Kestanelik-??a**	**1.69**	**358**	*e*PN	**Pn**	**15 49 55.5**	**-0.1**
CTKS	**Kestanelik-??a**	**1.69**	**358**	*e*Pn	**Pn**	**15 49 55.5**	**-0.1**
SLVT	**Silivri**	**1.71**	**350**	*e*PN	**Pn**	**15 49 55.9**	**0.0**
SLVT	**Silivri**	**1.71**	**350**	*e*Pn	**Pn**	**15 49 55.9**	**+0.1**
CRLT	**Corlu**	**1.71**	**338**	*e*PN	**Pn**	**15 49 56.4**	**+0.5**
CRLT	**Corlu**	**1.71**	**338**	*e*Pn	**Pn**	**15 49 56.4**	**+0.5**
GULT	**Gulveren**	**1.73**	**59**	*e*PN	**Pn**	**15 49 55.5**	**-0.6**
GULT	**Gulveren**	**1.73**	**59**	*e*Pn	**Pn**	**15 49 55.6**	**-0.5**
KLYT	**Kilyos**	**1.74**	**11**	*e*PN	**Pn**	**15 49 55.1**	**-1.2**
KLYT	**Kilyos**	**1.74**	**11**	*e*Pn	**Pn**	**15 49 55.1**	**-1.2**
ESKT	**Eskisehir**	**1.75**	**90**	*e*PN	**Pn**	**15 49 56.6**	**+0.2**
ESKT	**Eskisehir**	**1.75**	**90**	*e*Pn	**Pn**	**15 49 56.6**	**+0.1**
EZN	**Ezine**	**1.77**	**280**	*e*PN	**Pn**	**15 49 56.8**	**+0.2**
EZN	**Ezine**	**1.77**	**280**	*e*Pn	**Pn**	**15 49 56.8**	**+0.1**
SILT	**Sile**	**1.80**	**26**	*e*PN	**Pn**	**15 49 56.1**	**-1.0**
SILT	**Sile**	**1.80**	**26**	*e*Pn	**Pn**	**15 49 56.1**	**-1.0**
PRK	**Paraskevi**	**1.82**	**261**	*e*Pg	**Pn**	**15 49 57.5**	**+0.1**
PRK				*e*Sb	**Sb**	**15 50 20.7**	**-1.5**
PRK	**Paraskevi**	**1.82**	**261**	P	**Pn**	**15 49 57.5**	**+0.1**
PRK				S	**Sn**	**15 50 19.1**	**-1.4**
PRK	**Paraskevi**	**1.82**	**261**	*e*P	**Pn**	**15 49 57.2**	**-0.2**
PRK				*e*S	**Sn**	**15 50 19.0**	**-1.5**
PRK	**Paraskevi**	**1.82**	**261**	P	**Pn**	**15 49 57.5**	**+0.1**
PRK				S	**Sn**	**15 50 19.1**	**-1.4**
PRK				*e*Sb	**Sb**	**15 50 20.7**	**-1.5**
DENT	**Denizli**	**1.82**	**169**	*e*PN	**Pn**	**15 49 58.5**	**+1.0**
DENT	**Denizli**	**1.82**	**169**	*e*Pn	**Pn**	**15 49 58.5**	**+1.0**
SHUT	**Suhut-Afyon**	**1.82**	**122**	*e*PN	**Pn**	**15 49 57.9**	**+0.4**
SHUT	**Suhut-Afyon**	**1.82**	**122**	*e*Pn	**Pn**	**15 49 57.9**	**+0.4**
CTYL	**Yal??k??y-??at**	**1.94**	**353**	*e*PN	**Pn**	**15 49 59.2**	**+0.1**
CTYL	**Yal??k??y-??at**	**1.94**	**353**	*e*Pn	**Pn**	**15 49 59.2**	**+0.1**
SIGR	**SIGRI**	**2.14**	**262**	P	**Pn**	**15 50 01.7**	**-0.1**
SIGR				S	**Sn**	**15 50 27.8**	**-0.7**
SIGR	**SIGRI**	**2.14**	**262**	P	**Pn**	**15 50 01.7**	**-0.1**
SIGR				S	**Sn**	**15 50 27.8**	**-0.7**
ENEZ	**Enez**	**2.21**	**303**	*e*PN	**Pn**	**15 50 02.9**	**+0.1**
ENEZ	**Enez**	**2.21**	**303**	*e*Pn	**Pn**	**15 50 02.9**	**+0.1**
MDU	**Mudurnu**	**2.22**	**65**	*e*PN	**Pn**	**15 50 03.4**	**+0.6**
MDU	**Mudurnu**	**2.22**	**65**	*e*Pn	**Pn**	**15 50 03.4**	**+0.5**
SVRH	**Sivrihisar-ESK**	**2.27**	**92**	*e*PN	**Pn**	**15 50 04.0**	**+0.3**
SVRH	**Sivrihisar-ESK**	**2.27**	**92**	*e*Pn	**Pn**	**15 50 04.0**	**+0.3**
CHOS	**Chios island**	**2.29**	**240**	P	**Pn**	**15 50 03.3**	**-0.5**
CHOS				S	**Sn**	**15 50 30.1**	**-2.0**
CHOS	**Chios island**	**2.29**	**240**	*e*P	**Pn**	**15 50 03.2**	**-0.6**
CHOS	**Chios island**	**2.29**	**240**	P	**Pn**	**15 50 03.3**	**-0.5**
CHOS				S	**Sn**	**15 50 30.1**	**-2.0**
SMG	**Samos**	**2.29**	**217**	*e*PN	**Pn**	**15 50 07.5**	**+3.6**
SMG	**Samos**	**2.29**	**217**	*e*Pn	**Pn**	**15 50 07.5**	**+3.6**
ISP	**Isparta**	**2.29**	**138**	*e*PN	**Pn**	**15 50 03.5**	**-0.5**
ISP	**Isparta**	**2.29**	**138**	*e*P	**Pn**	**15 50 03.3**	**-0.7**
ISP	**Isparta**	**2.29**	**138**	P	**Pn**	**15 50 03.1**	**-0.8**
MLSB	**Milas**	**2.34**	**196**	*e*PN	**Pn**	**15 50 05.6**	**+1.1**
MLSB	**Milas**	**2.34**	**196**	*e*Pn	**Pn**	**15 50 05.6**	**+1.1**
ALN	**Alexandroupoli**	**2.37**	**306**	P	**Pn**	**15 50 04.5**	**-0.4**
ALN				S	**Sn**	**15 50 33.5**	**-0.5**
ALN	**Alexandroupoli**	**2.37**	**306**	*e*P	**Pn**	**15 50 04.2**	**-0.7**
ALN	**Alexandroupoli**	**2.37**	**306**	P	**Pn**	**15 50 04.5**	**-0.4**
ALN				S	**Sn**	**15 50 33.5**	**-0.5**
YER	**Yerkesik**	**2.42**	**186**	*e*PN	**Pn**	**15 50 07.2**	**+1.5**
YER	**Yerkesik**	**2.42**	**186**	*e*Pn	**Pn**	**15 50 07.2**	**+1.5**
GLHS	**Glhisar (BURDU**	**2.49**	**163**	*e*PN	**Pn**	**15 50 06.7**	**+0.1**
GLHS	**Glhisar (BURDU**	**2.49**	**163**	*e*Pn	**Pn**	**15 50 06.7**	**0.0**
BCK	**Bucak**	**2.61**	**142**	*e*PN	**Pn**	**15 50 08.5**	**+0.2**
BCK	**Bucak**	**2.61**	**142**	*e*Pn	**Pn**	**15 50 08.5**	**+0.2**
KIZT	**Kizilcal**	**2.64**	**104**	*e*PN	**Pn**	**15 50 09.3**	**+0.6**
KIZT	**Kizilcal**	**2.64**	**104**	*e*Pn	**Pn**	**15 50 09.3**	**+0.6**
LIA	**Limnos Island**	**2.65**	**279**	P	**Pn**	**15 50 08.8**	**0.0**
LIA	**Limnos Island**	**2.65**	**279**	*e*P	**Pn**	**15 50 08.4**	**-0.4**
LIA	**Limnos Island**	**2.65**	**279**	P	**Pn**	**15 50 08.8**	**0.0**
EDRB	**Edirne**	**2.69**	**329**	*e*PN	**Pn**	**15 50 09.9**	**+0.5**
EDRB	**Edirne**	**2.69**	**329**	*e*Pn	**Pn**	**15 50 09.9**	**+0.5**
SUTC	**Sutluce-Ispart**	**2.80**	**137**	*e*PN	**Pn**	**15 50 12.1**	**+1.2**
SUTC	**Sutluce-Ispart**	**2.80**	**137**	*e*Pn	**Pn**	**15 50 12.1**	**+1.2**
KDZE	**Karadeniz Ereo**	**2.81**	**50**	*e*PN	**Pn**	**15 50 11.0**	**0.0**
KDZE	**Karadeniz Ereo**	**2.81**	**50**	*e*Pn	**Pn**	**15 50 11.0**	**+0.1**
RDO	**Rodhopi**	**2.82**	**305**	P	**Pn**	**15 50 11.3**	**+0.1**
RDO	**Rodhopi**	**2.82**	**305**	*e*P	**Pn**	**15 50 11.3**	**+0.1**
RDO	**Rodhopi**	**2.82**	**305**	P	**Pn**	**15 50 11.3**	**+0.1**
DAT	**Datca**	**2.92**	**196**	*e*PN	**Pn**	**15 50 14.8**	**+2.2**
DAT	**Datca**	**2.92**	**196**	*e*Pn	**Pn**	**15 50 14.8**	**+2.2**
ELL	**Elmali**	**2.98**	**159**	*e*PN	**Pn**	**15 50 15.3**	**+1.9**
ELL	**Elmali**	**2.98**	**159**	*e*Pn	**Pn**	**15 50 15.3**	**+1.9**
LOD	**Lodumlu**	**3.24**	**83**	*e*PN	**Pn**	**15 50 17.4**	**+0.5**
LOD	**Lodumlu**	**3.24**	**83**	*e*Pn	**Pn**	**15 50 17.4**	**+0.5**
LADK	**Ladik-KONYA**	**3.24**	**113**	*e*PN	**Pn**	**15 50 17.3**	**+0.3**
LADK	**Ladik-KONYA**	**3.24**	**113**	*e*Pn	**Pn**	**15 50 17.3**	**+0.3**
JMB	**Yambol**	**3.29**	**333**	P	**Pn**	**15 50 18.9**	**+1.3**
JMB	**Yambol**	**3.29**	**333**	P	**Pn**	**15 50 18.9**	**+1.3**
ARG	**Arkhangelos**	**3.34**	**186**	P	**Pn**	**15 50 17.2**	**-1.2**
ARG	**Arkhangelos**	**3.34**	**186**	*e*P	**Pn**	**15 50 17.1**	**-1.3**
ARG	**Arkhangelos**	**3.34**	**186**	P	**Pn**	**15 50 17.2**	**-1.2**
KONT	**Konya--Tatoy**	**3.36**	**117**	*e*PN	**Pn**	**15 50 19.4**	**+0.9**
KONT	**Konya--Tatoy**	**3.36**	**117**	*e*Pn	**Pn**	**15 50 19.4**	**+0.9**
KAVA	**Kavala**	**3.44**	**296**	P	**Pn**	**15 50 19.4**	**-0.2**
KAVA	**Kavala**	**3.44**	**296**	P	**Pn**	**15 50 19.4**	**-0.2**
APE	**Apeiranthos**	**3.45**	**225**	*e*Pg	**Pg**	**15 50 29.0**	**-3.1**
APE	**Apeiranthos**	**3.45**	**225**	P	**Pn**	**15 50 19.9**	**+0.1**
APE	**Apeiranthos**	**3.45**	**225**	*e*P	**Pn**	**15 50 19.2**	**-0.6**
APE	**Apeiranthos**	**3.45**	**225**	P	**Pn**	**15 50 19.9**	**+0.1**
APE	**Apeiranthos**	**3.45**	**225**	*e*Pg	**Pg**	**15 50 29.0**	**-3.1**
SAFT	**Safranbolu**	**3.56**	**60**	*e*PN	**Pn**	**15 50 21.8**	**+0.4**
SAFT	**Safranbolu**	**3.56**	**60**	*e*Pn	**Pn**	**15 50 21.8**	**+0.5**
OUR	**Ouranopolis**	**3.62**	**284**	P	**Pn**	**15 50 21.6**	**-0.6**
OUR	**Ouranopolis**	**3.62**	**284**	P	**Pn**	**15 50 21.6**	**-0.6**
AOS	**Alonnisos**	**3.67**	**266**	P	**Pn**	**15 50 23.6**	**+0.8**
AOS	**Alonnisos**	**3.67**	**266**	P	**Pn**	**15 50 23.6**	**+0.8**
PAIG	**Paliouri**	**3.80**	**277**	P	**Pn**	**15 50 24.4**	**-0.2**
PAIG	**Paliouri**	**3.80**	**277**	P	**Pn**	**15 50 24.4**	**-0.2**
BR131	**Keskin Array S**	**3.91**	**86**	*e*Pn	**Pn**	**15 50 26.1**	**+0.1**
BR131	**Keskin Array S**	**3.91**	**86**	*e*Pn	**Pn**	**15 50 26.1**	**0.0**
BRTR	**Keskin Array B**	**3.91**	**86**	Pn	**Pn**	**15 50 26.3**	**+0.2**
	1.8nm,0.3s,baz=253,slow=12,SNR=18						
BRTR				Pg	**Pg**	**15 50 39.0**	**-1.9**
	6.0nm,0.3s,baz=267,slow=17,SNR=20						
BRTR				Sn	**Sn**	**15 51 10.2**	**-1.8**
	11nm,0.3s,baz=91,slow=27,SNR=29						
BRTR	

BALY				*i* S		**Sg**	**15 50 32.9**	**0.0**
BALY	**Balya**	**0.80**	**286**	*i* P		**Pg**	**15 50 21.5**	**-1.0**
BALY				*i* S		**Sg**	**15 50 32.9**	**0.0**
GDZ	**Gediz**	**0.80**	**123**	*i* P		**Pg**	**15 50 23.3**	**+0.8**
GDZ				*i* S		**Sg**	**15 50 37.9**	**+5.0**
GDZ	**Gediz**	**0.80**	**123**	*i* P		**Pg**	**15 50 23.3**	**+0.8**
AKHS	**Akhisar**	**0.90**	**224**	*i* P		**Pg**	**15 50 24.0**	**-0.4**
AKHS				*i* S		**Sg**	**15 50 36.6**	**+0.5**
AKHS	**Akhisar**	**0.90**	**224**	*i* P		**Pg**	**15 50 24.0**	**-0.5**
AKHS				*i* S		**Sg**	**15 50 36.7**	**+0.5**
AKS	**Akhisar**	**0.90**	**224**	*e*PG		**Pg**	**15 50 24.4**	**-0.1**
AKS	**Akhisar**	**0.90**	**224**	*e*Pg		**Pg**	**15 50 24.4**	**-0.1**
BNT	**Bandirma**	**0.98**	**327**	*e*PG		**Pg**	**15 50 26.2**	**+0.2**
BNT	**Bandirma**	**0.98**	**327**	*e*Pg		**Pg**	**15 50 26.2**	**+0.1**
EDC	**Edincik**	**1.00**	**325**	*e*PG		**Pg**	**15 50 25.6**	**-0.8**
EDC	**Edincik**	**1.00**	**325**	*e*Pg		**Pg**	**15 50 25.6**	**-0.8**
GEMT	**Gemlik**	**1.00**	**26**	*e*PG		**Pg**	**15 50 26.3**	**-0.1**
GEMT				*e*SG		**Sg**	**15 50 40.1**	**+0.6**
GEMT	**Gemlik**	**1.00**	**26**	*e*Pg		**Pg**	**15 50 26.3**	**-0.1**
GEMT				*e*Sg		**Sg**	**15 50 40.1**	**+0.6**
KULA	**Kula-Manisa**	**1.01**	**178**	*e*PG		**Pg**	**15 50 26.1**	**-0.5**
KULA	**Kula-Manisa**	**1.01**	**178**	*e*Pg		**Pg**	**15 50 26.1**	**-0.5**
MANT	**Manisa**	**1.04**	**183**	*i* P		**Pg**	**15 50 27.4**	**+0.3**
MANT				*i* S		**Sg**	**15 50 40.5**	**-0.1**
MANT	**Manisa**	**1.04**	**183**	*i* P		**Pg**	**15 50 27.4**	**+0.3**
MANT				*i* S		**Sg**	**15 50 40.5**	**0.0**
ARMT	**Armutlu**	**1.05**	**10**	*e*PG		**Pg**	**15 50 27.1**	**-0.2**
ARMT				*e*SG		**Sg**	**15 50 41.7**	**+0.7**
ARMT	**Armutlu**	**1.05**	**10**	*e*Pg		**Pg**	**15 50 27.1**	**-0.2**
ARMT				*e*Sg		**Sg**	**15 50 41.7**	**+0.7**
YLV	**Yalova**	**1.19**	**29**	*e*PN		**Pn**	**15 50 29.3**	**-0.7**
YLV	**Yalova**	**1.19**	**29**	*e*Pn		**Pn**	**15 50 29.3**	**-0.8**
ADVT	**Abdulvahap**	**1.25**	**43**	*e*PN		**Pn**	**15 50 30.4**	**-0.5**
ADVT	**Abdulvahap**	**1.25**	**43**	*e*Pn		**Pn**	**15 50 30.4**	**-0.5**
ALT	**Altintas**	**1.25**	**112**	*e*PN		**Pn**	**15 50 30.9**	**0.0**
ALT	**Altintas**	**1.25**	**112**	*e*Pn		**Pn**	**15 50 30.9**	**0.0**
KHAL	**Karahalli**	**1.34**	**149**	*i* P		**Pn**	**15 50 33.6**	**+1.5**
KHAL				*i* S		**Sb**	**15 50 49.5**	**-0.4**
KHAL	**Karahalli**	**1.34**	**149**	*i* P		**Pn**	**15 50 33.7**	**+1.5**
KHAL				*i* S		**Sb**	**15 50 49.5**	**-0.4**
KHL	**Karahalli**	**1.40**	**149**	*e*PN		**Pn**	**15 50 32.0**	**-0.9**
KHL	**Karahalli**	**1.40**	**149**	*e*Pn		**Pn**	**15 50 32.0**	**-0.9**
GPA	**Golpazari**	**1.50**	**59**	*e*PN		**Pn**	**15 50 33.6**	**-0.8**
GPA	**Golpazari**	**1.50**	**59**	*e*Pn		**Pn**	**15 50 33.6**	**-0.8**
IZM	**Izmir**	**1.55**	**224**	*e*PN		**Pn**	**15 50 35.2**	**+0.2**
ISK	**Istanbul-Kandi**	**1.57**	**12**	*e*PN		**Pn**	**15 50 35.2**	**-0.1**
ISK	**Istanbul-Kandi**	**1.57**	**12**	*e*Pn		**Pn**	**15 50 35.2**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.60**	**317**	*e*PN		**Pn**	**15 50 36.3**	**+0.6**
RKY	**Sarkoy-Tekirda**	**1.60**	**317**	*e*Pn		**Pn**	**15 50 36.3**	**+0.6**
MFT	**Murefte**	**1.62**	**321**	*e*PN		**Pn**	**15 50 35.3**	**-0.7**
MFT	**Murefte**	**1.62**	**321**	*e*Pn		**Pn**	**15 50 35.3**	**-0.7**
GULT	**Gulveren**	**1.71**	**58**	*e*PN		**Pn**	**15 50 37.4**	**+0.1**
GULT	**Gulveren**	**1.71**	**58**	*e*Pn		**Pn**	**15 50 37.4**	**+0.1**
KLYT	**Kilyos**	**1.75**	**10**	*e*PN		**Pn**	**15 50 38.5**	**+0.6**
KLYT	**Kilyos**	**1.75**	**10**	*e*Pn		**Pn**	**15 50 38.5**	**+0.7**
CTYL	**Yal??k??y-??at**	**1.96**	**353**	*e*PN		**Pn**	**15 50 41.7**	**+1.0**
CTYL	**Yal??k??y-??at**	**1.96**	**353**	*e*Pn		**Pn**	**15 50 41.7**	**+1.0**
GADA	**Gvkgeada**	**2.20**	**288**	*e*PN		**Pn**	**15 50 44.4**	**+0.5**
GADA	**Gvkgeada**	**2.20**	**288**	*e*Pn		**Pn**	**15 50 44.4**	**+0.5**

*IDC **16** 15:53:19.1±1.1, 28°.04N×55°.84E, h0km, mb3.8/13, mb1 3.9/13, mb1mx3.7/30, mbtmp3.8/13, Error ellipse: s-maj=24.1km s-min=20.4km az=2.0*
*ISCJB **16** 15:53:20.7±0.4, 28°.22N±0°.03×55°.87E±0°.04, h10km, mb3.7/13, Error ellipse: s-maj=5.3km s-min=4.1km az=137.9*
*THR **16** 15:53:22.7±0.3, 28°.24N×55°.79E, h15km, ML3.5*
*CSEM **16** 15:53:22.4±0.3, 28°.14N×55°.91E, h15km, mb3.6/1, Error ellipse: s-maj=7.8km s-min=7.6km az=101.0*
*NEIC **16** 15:53:22.9, 28°.23N×55°.77E, h14km, mb3.6/1, ML3.5(THR), After THR.*
*SGS **16** 15:53:24.6, 28°.08N×55°.81E, h14km*
*TEH **16** 15:53:25.8, 28°.06N×55°.73E, h26km*

ISC 16 15:53:21.7±0.5, 28°.12N±0°.04×55°.92E±0°.04, h10km, n60, σ1§20/67, mb3.7/13, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.76**	**163**	*e*Pg	**Pg**	**15 53 39.0**	**+2.7**
BNDS	**Bandar-Abbas**	**0.76**	**163**	*e*Pg	**Pg**	**15 53 39.9**	**+3.6**
BNDS				AML	AML	15 54 02.9	
	comp=N,2μm,0.4s						
BNDS	**Bandar-Abbas**	**0.76**	**163**	*e*Pg	**Pg**	**15 53 39.0**	**+2.7**
IBND	**Bandar-abas**	**0.87**	**141**	*e*Pg	**Pg**	**15 53 43.5**	**+5.0**
IBND				*e*Sg	**Sg**	**15 53 55.8**	**+6.0**
IBND				*e*		15 54 10.4	
	comp=Z,27μm,0.4s						
KRBR	**Kerman**	**1.99**	**21**	*e*Pn	**Pn**	**15 53 57.0**	**+1.5**
KRBR				*e*Sg	**Sg**	**15 54 24.0**	**-1.8**
KRBR	**Kerman**	**1.99**	**21**	*e*Pg	**Pg**	**15 53 58.1**	**-1.8**
KRBR				AML	AML	15 54 27.9	
	comp=E,483nm,0.6s						
KRBR				AML	AML	15 54 28.1	
	comp=N,423nm,0.4s						
KRBR	**Kerman**	**1.99**	**21**	*e*Pn	**Pn**	**15 53 57.0**	**+1.5**
KRBR				*e*Sg	**Sg**	**15 54 24.8**	**-1.0**
GHIR	**Ghir-Karzin**	**2.59**	**274**	*e*Pn	**Pn**	**15 54 04.0**	**+0.2**
GHIR	**Ghir-Karzin**	**2.59**	**274**	*e*Pn	**Pn**	**15 54 04.6**	**+0.8**
GHIR				AML	AML	15 54 55.5	
	comp=E,184nm,0.4s						
GHIR				AML	AML	15 55 07.1	
	comp=N,196nm,0.5s						
GHIR	**Ghir-Karzin**	**2.59**	**274**	*e*Pn	**Pn**	**15 54 04.0**	**+0.2**
ISRV	**Sarvestan**	**2.76**	**298**	*e*Sg	**Sg**	**15 54 48.6**	**-2.0**
ISRV				*e*Pn	**Pn**	**15 54 07.6**	**+1.5**
ISRV				*e*		15 54 52.8	
	comp=Z,4μm,0.4s						
IMOK	**Mouk**	**2.96**	**289**	*e*Pn	**Pn**	**15 54 09.3**	**+0.4**
IMOK				*e*		15 55 06.4	
	comp=Z,2μm,0.2s						
IMOK	**Mouk**	**2.96**	**289**	*e*Pn	**Pn**	**15 54 09.3**	**+0.4**
IPAR	**Pars**	**3.04**	**305**	*e*Pn	**Pn**	**15 54 10.9**	**+1.0**
IPAR				*e*Sg	**Sg**	**15 54 58.1**	**-1.4**
IPAR				*e*		15 55 04.8	
	comp=Z,1μm,0.3s						
IPAR	**Pars**	**3.04**	**305**	*e*Pn	**Pn**	**15 54 10.9**	**+1.0**
IPAR				*e*Sg	**Sg**	**15 54 58.1**	**-1.4**
IMEH	**Mehriz**	**3.45**	**341**	*e*Pn	**Pn**	**15 54 17.9**	**+2.4**
IMEH				*e*Sg	**Sg**	**15 55 14.3**	**+1.8**
IMEH				*e*		15 55 15.8	
	comp=Z,746nm,0.3s						
IMEH	**Mehriz**	**3.45**	**341**	*e*Pn	**Pn**	**15 54 17.9**	**+2.4**
IBAF	**Bafgh**	**3.47**	**355**	*e*Pn	**Pn**	**15 54 18.2**	**+2.4**
IBAF				*e*		15 55 15.9	
	comp=Z,1μm,0.3s						
IBAF	**Bafgh**	**3.47**	**355**	*e*Pn	**Pn**	**15 54 18.2**	**+2.4**
ISAD	**Sadrabad**	**4.24**	**333**	*e*Pn	**Pn**	**15 54 30.6**	**+4.2**
ISAD				*e*		15 55 46.3	
	comp=Z,485nm,0.2s						
ISAD	**Sadrabad**	**4.24**	**333**	*e*Pn	**Pn**	**15 54 30.6**	**+4.2**
IGAR	**Gharneh**	**5.42**	**323**	*e*Pn	**Pn**	**15 54 43.4**	**+0.7**
IGAR				*e*		15 55 46.8	
	comp=Z,422nm,0.3s						
IZEF	**Zefreh**	**5.67**	**328**	*e*Pn	**Pn**	**15 54 46.9**	**+0.8**
IZEF				*e*		15 54 51.4	
	comp=Z,113nm,0.1s						
IZEF	**Zefreh**	**5.67**	**328**	*e*Pn	**Pn**	**15 54 46.9**	**+0.8**
BTHS		**6.11**	**229**	P	**Pn**	**15 54 51.6**	**-0.5**
BTHS		**6.11**	**229**	P	**Pn**	**15 54 51.6**	**-0.5**
IPIR	**Pirpir**	**6.29**	**318**	*e*Pn	**Pn**	**15 54 56.1**	**+1.6**
IPIR				*e*		15 56 09.2	
	comp=Z,275nm,0.4s						
HRDDS		**7.80**	**230**	S	**Sn**	**15 56 37.6**	**-6.0**
HRDDS		**7.80**	**230**	P	**Pn**	**15 55 14.8**	**-0.5**
AAK	**Ala-Archa**	**20.89**	**41**	P	**P**	**15 58 04.4**	**+0.3**
	comp=Z,1.8nm,0.3s,baz=203,slow=7.7,SNR=2.7						
AAK	**Ala-Archa**	**20.89**	**41**	P	**P**	**15 58 04.4**	**+0.4**
ABKAR	**Abkulak array**	**21.33**	**7**	P	**P**	**15 58 08.2**	**-0.5**
	comp=Z,1.4nm,0.5s,mb3.5						
ABKAR	**Abkulak array**	**21.33**	**7**	P	**P**	**15 58 08.2**	**-0.5**
	comp=Z,1.4nm,0.5s,mb3.5						
BR131	**Keskin Array S**	**21.75**	**308**	*e*P	**P**	**15 58 13.2**	**-0.2**
BR131	**Keskin Array S**	**21.75**	**308**	*e*P	**P**	**15 58 13.2**	**-0.2**
BRTR	**Keskin Array B**	**21.75**	**308**	P	**P**	**15 58 12.8**	**-0.5**
	comp=Z,1.5nm,0.6s,mb3.6,baz=132,slow=14,SNR=7.4						
BRTR	**Keskin Array B**	**21.75**	**308**	P	**P**	**15 58 12.9**	**-0.5**
AKTK	**Aktyubinsk**	**22.34**	**4**	P	**P**	**15 58 19.7**	**+0.2**
AKTK	**Aktyubinsk**	**22.34**	**4**	P	**P**	**15 58 19.7**	**+0.2**
AKTO	**Aktyubinsk**	**22.34**	**4**	P	**P**	**15 58 19.7**	**+0.2**
	comp=Z,0.5nm,0.3s,mb3.4,baz=200,slow=14,SNR=4.5						
BVAR	**Borovoye Array**	**27.09**	**19**	P	**P**	**15 59 04.2**	**-0.2**
	comp=Z,0.3nm,0.5s,mb3.1,baz=284,slow=40,SNR=3.3						
BVAR	**Borovoye Array**	**27.09**	**19**	P	**P**	**15 59 04.2**	**-0.2**
KURK	**Kurchatov**	**28.36**	**31**	P	**P**	**15 59 14.8**	**-1.0**
	comp=Z,1.1nm,0.8s,mb3.5,baz=234,slow=9.2,SNR=6.6						
KURK	**Kurchatov**	**28.36**	**31**	P	**P**	**15 59 14.8**	**-1.0**
ZAA0	**Zalesovo Array**	**33.35**	**31**	*e*P	**P**	**15 59 59.5**	**-0.3**
ZAA0				*e*		16 00 05.1	
ZAA0	**Zalesovo Array**	**33.35**	**31**	*e*P	**P**	**15 59 59.5**	**-0.3**
ZALV	**Zalesovo Beam**	**33.35**	**31**	P	**P**	**15 59 59.2**	**-0.6**
	comp=Z,2.6nm,0.6s,mb4.3,baz=239,slow=9.0,SNR=13						
FINES	**FINESS Array B**	**38.80**	**338**	P	**P**	**16 00 46.3**	**0.0**
	comp=Z,1.0nm,0.8s,mb3.6,baz=110,slow=12,SNR=2.5						
FINES	**FINESS Array B**	**38.80**	**338**	P	**P**	**16 00 46.3**	**0.0**
HFS	**Hagfors**	**42.84**	**330**	P	**P**	**16 01 17.8**	**-1.9**
	comp=Z,0.4nm,0.4s,mb3.5,baz=132,slow=8.6,SNR=4.3						
HFS	**Hagfors**	**42.84**	**330**	P	**P**	**16 01 17.8**	**-1.9**
ARCES	**ARCESS Array B**	**45.02**	**345**	P	**P**	**16 01 37.0**	**-0.1**
	comp=Z,2.6nm,1.1s,mb4.0,baz=125,slow=11,SNR=3.0						
ARCES	**ARCESS Array B**	**45.02**	**345**	P	**P**	**16 01 37.0**	**-0.1**
TORD	**Torodi Ar. Bea**	**52.48**	**265**	P	**P**	**16 02 32.9**	**-2.3**
	comp=Z,1.2nm,0.6s,mb4.0,baz=61,slow=6.7,SNR=10.0						
TORD	**Torodi Ar. Bea**	**52.48**	**265**	P	**P**	**16 02 32.9**	**-2.3**
KSRS	**Korea Array**	**59.93**	**61**	P	**P**	**16 03 27.2**	**-0.9**
	comp=Z,0.7nm,0.6s,mb3.9,baz=275,slow=6.8,SNR=2.4						
WRA	**Warramunga Arr**	**89.55**	**113**	P	**P**	**16 06 19.3**	**-0.5**
	comp=Z,0.4nm,0.7s,mb3.9,baz=316,slow=4.1,SNR=4.7						
WRA	**Warramunga Arr**	**89.55**	**113**	P	**P**	**16 06 19.3**	**-0.5**
ASAR	**Alice Springs**	**91.06**	**116**	P	**P**	**16 06 26.6**	**-0.2**
	comp=Z,0.3nm,0.7s,mb3.8,baz=307,slow=4.9,SNR=5.5						
ASAR	**Alice Springs**	**91.06**	**116**	P	**P**	**16 06 26.6**	**-0.2**

*TAP **16** 15:56:49.0, 24°.84N×122°.50E, h126km, ML3.5, D*
*JMA **16** 15:56:49.3±0.2, 24°.89N×122°.55E, h125km, M2.3*
*ISCJB **16** 15:56:49.1±0.7, 24°.79N±0°.04×122°.50E±0°.02, h123km±5km, Error ellipse: s-maj=7.2km s-min=3.4km az=170.8*

ISC 16 15:56:49.5±0.7, 24°.81N±0°.04×122°.49E±0°.02, h123km±5km, n37, σ0§41/71, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.59**	**126**	P	**Pn**	**15 57 08.5**	**+0.2**
YOJ				S	**Sn**	**15 57 23.2**	**+0.7**
TWC	**Suao**	**0.62**	**251**	*i* P	**Pn**	**15 57 08.4**	**-0.1**
	baz=248						
TWC				*i* S	**Sn**	**15 57 22.8**	**0.0**
	baz=248						
ILA	**Ilan**	**0.68**	**266**	*i* P	**Pn**	**15 57 09.1**	**+0.2**
	baz=263						
ILA				S	**Sn**	**15 57 23.3**	**-0.3**
	baz=263						
NWF	**Wu-fen Shan**	**0.70**	**292**	*i* P	**Pn**	**15 57 09.2**	**+0.1**
	baz=289						
NWF				*i* S	**Sn**	**15 57 23.8**	**-0.1**
	baz=289						
TWE	**Neicheng**	**0.75**	**264**	P	**Pn**	**15 57 09.5**	**0.0**
	baz=260						
TWE				S	**Sn**	**15 57 24.7**	**0.0**
	baz=260						
ENA	**Nanau**	**0.78**	**241**	P	**Pn**	**15 57 10.1**	**+0.3**
	baz=238						
ENA				S	**Sn**	**15 57 25.4**	**+0.3**
	baz=238						
TWA	**Mucha**	**0.84**	**282**	P	**Pn**	**15 57 10.0**	**-0.3**
	baz=279						
TWA				S	**Sn**	**15 57 25.8**	**-0.3**
	baz=279						
ENTT	**Nioudou**	**0.86**	**259**	P	**Pn**	**15 57 10.7**	**+0.2**
	baz=256						
ENTT				S	**Sn**	**15 57 26.3**	**+0.1**
	baz=256						
TWS1	**Kuangyinshan**	**1.02**	**287**	P	**Pn**	**15 57 11.7**	**-0.2**
	baz=284						
TWS1				S	**Sn**	**15 57 28.8**	**-0.1**
	baz=284						
NSK	**Sanguang**	**1.04**	**263**	P	**Pn**	**15 57 12.1**	**0.0**
	baz=260						
NSK				S	**Sn**	**15 57 29.1**	**-0.2**
	baz=260						
NNS	**Nan Shan**	**1.08**	**250**	P	**Pn**	**15 57 12.9**	**+0.4**
	baz=248						
NNS				S	**Sn**	**15 57 30.1**	**0.0**
	baz=248						
TWD	**Chiawan**	**1.09**	**229**	*e*P	**Pn**	**15 57 12.5**	**-0.2**
	baz=227						
TWD				*e*S	**Sn**	**15 57 30.5**	**+0.3**
	baz=227						
HWA	**Hwalien**	**1.16**	**224**	*e*P	**Pn**	**15 57 13.5**	**+0.1**
	baz=223						
HWA				*e*S	**Sn**	**15 57 32.3**	**+0.9**
	baz=223						
IRIF	**Iriomote-Funau**	**1.22**	**112**	P	**Pn**	**15 57 13.9**	**-0.1**
IRIF				*e*S	**Sn**	**15 57 32.2**	**-0.4**
WHF	**Hehuan Shan**	**1.30**	**240**	*e*P	**Pn**	**15 57 15.4**	**+0.5**
	baz=238						
WHF				*e*S	**Sn**	**15 57 34.0**	**-0.1**
	baz=238						
TWT	**Tachien**	**1.32**	**245**	*e*P	**Pn**	**15 57 15.8**	**+0.7**
	baz=244						
TWT				*e*S	**Sn**	**15 57 35.1**	**+0.6**
	baz=244						
NSTT	**Nanjuang**	**1.37**	**263**	*e*P	**Pn**	**15 57 15.3**	**-0.3**
	baz=261						
NSTT				*e*S	**Sn**	**15 57 34.8**	**-0.6**
	baz=261						
ESL	**Shilin**	**1.38**	**224**	*e*P	**Pn**	**15 57 14.7**	**-1.1**
	baz=223						
ESL				*e*S	**Sn**	**15 57 35.3**	**-0.4**
	baz=223						
HATJ	**Hateruma jima**	**1.41**	**122**	*e*S	**Sn**	**15 57 37.0**	**+0.7**
JKRS	**Kuro-shima**	**1.50**	**112**	P	**Pn**	**15 57 17.3**	**+0.3**
JKRS				S	**Sn**	**15 57 38.8**	**+0.8**
JIJ	**Ishigaki jima**	**1.57**	**106**	P	**Pn**	**15 57 17.6**	**-0.3**
JIJ				S	**Sn**	**15 57 38.6**	**-0.9**
TWQ1	**Liyutan**	**1.63**	**254**	*e*P	**Pn**	**15 57 18.7**	**+0.1**
	baz=252						
TWQ1				*e*S	**Sn**	**15 57 40.6**	**-0.2**
	baz=252						
EHY	**Hungye**	**1.68**	**220**	*e*P	**Pn**	**15 57 18.8**	**-0.5**
	baz=218						
EHY				*e*S	**Sn**	**15 57 40.6**	**-1.2**
	baz=218						
SMLT	**Sun Moon Lake**	**1.72**	**238**	*e*P	**Pn**	**15 57 20.1**	**+0.5**
	baz=236						
SMLT				*e*S	**Sn**	**15 57 42.6**	**-0.1**
	baz=236						
TYC	**Yuchr**	**1.74**	**239**	P	**Pn**	**15 57 20.5**	**+0.5**
	baz=237						
TYC				*e*S	**Sn**	**15 57 43.2**	**+0.1**
	baz=237						
TWF1	**Yuli**	**1.81**	**217**	*e*P	**Pn**	**15 57 20.3**	**-0.6**
	baz=216						
TWF1				*e*S	**Sn**	**15 57 44.9**	**+0.1**
	baz=216						
YUS	**Yu-Shan**	**1.92**	**227**	*e*P	**Pn**	**15 57 22.4**	**+0.2**
	baz=226						
YUS				*e*S	**Sn**	**15 57 47.1**	**0.0**
	baz=226						
ALS	**Alishan**	**2.01**	**230**	*e*P	**Pn**	**15 57 23.8**	**+0.5**
	baz=229						
ALS				*e*S	**Sn**	**15 57 48.9**	**-0.2**
	baz=229						
JTJ	**Tarama**	**2.02**	**94**	P	**Pn**	**15 57 23.3**	**0.0**
JTJ				*e*S	**Sn**	**15 57 48.6**	**-0.6**
CHN5	**Tsauling**	**2.05**	**234**	*e*P	**Pn**	**15 57 23.7**	**0.0**
	baz=233						
CHN5				*e*S	**Sn**	**15 57 50.1**	**+0.2**
	baz=233						
WGK	**Gukeng**	**2.09**	**238**	*e*P	**Pn**	**15 57 24.6**	**+0.5**
	baz=236						
WGK				*e*S	**Sn**	**15 57 50.7**	**0.0**
	baz=236						
ELDTW	**Lidau**	**2.10**	**220**	*e*P	**Pn**	**15 57 24.3**	**-0.1**
	baz=219						
ELDTW				*e*S	**Sn**	**15 57 51.0**	**0.0**
	baz=219						
WTP	**Ta-pu**	**2.32**	**228**	*e*P	**Pn**	**15 57 27.0**	**-0.1**
	baz=227						
WTP				*e*S	**Sn**	**15 57 55.7**	**-0.2**
	baz=227						
TWG	**Pinlang**	**2.37**	**214**	*e*P	**Pn**	**15 57 27.6**	**-0.2**
	baz=212						
TWG				*e*S	**Sn**	**15 57 56.8**	**-0.3**
	baz=212						
CHN1	**Nanshi**	**2.42**	**228**	*e*P	**Pn**	**15 57 28.6**	**+0.3**
	baz=227						
CHN1				*e*S	**Sn**	**15 57 57.7**	**-0.4**
	baz=227						
JOGS	**Gusukube**	**2.65**	**90**	*e*S	**Sn**	**15 58 03.2**	**-0.3**
SSD	**Sandimen**	**2.67**	**220**	*e*P	**Pn**	**15 57 32.1**	**+0.5**
	baz=219						

*NIED **16** 15:59:00, 39°.10N×140°.80E, h8km, Mw3.8 Best double couple: M=4.96000×10^14 NP1:φs=355.00000°, δ66.00000°, λ52.00000°. NP2:φs237.00000°, δ44.00000°, λ144.00000°.*
*IDC **16** 15:59:47.2±1.1, 39°.14N×141°.01E, h0km, mb3.8/8, mb1 3.9/11, mb1mx3.7/29, mbtmp3.8/11, ML3.5/3, Error ellipse: s-maj=33.8km s-min=16.0km az=80.0*
*ISCJB **16** 15:59:49.9±0.4, 39°.06N±0°.03×140°.81E±0°.04, h23km±4km, mb3.8/8, Error ellipse: s-maj=5.3km s-min=4.4km az=35.1*
*NEIC **16** 15:59:50.2, 39°.06N×140°.77E, h12km, mb4.1/1, After JMA.*
*JMA **16** 15:59:50.2, 39°.06N×140°.77E, h10km±1km, M4.1 Broadband fault plane solution: P waves. NP1: φs244.00000°, δ52.00000°, λ161.00000°. NP2: φs346.00000°, δ75.00000°, λ40.00000°. Principal axes: T Plg38.0000°, Azm212.0000°; N Plg48.0000°, Azm3.0000°; P Plg15.0000°, Azm110.0000°;*
JMA Felt II J1.

ISC 16 15:59:50.2±0.4, 39°.05N±0°.03×140°.79E±0°.03, h10km±3km, n25, σ0§96/36, mb3.8/8, 4C-3D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.35**	**106**	⇓P	**Pg**	**15 59 57.1**	**0.0**
JMK				S	**Sg**	**16 00 01.9**	**+0.1**
JYK	**Kaneyama**	**0.36**	**249**	⇓P	**Pg**	**15 59 57.1**	**-0.2**
JYK				S	**Sg**	**16 00 01.9**	**-0.3**
JRG	**Rokugo**	**0.37**	**341**	P	**Pg**	**15 59 57.3**	**-0.1**
JRG				S	**Sg**	**16 00 02.8**	**+0.4**
JOM	**Ohasama**	**0.57**	**43**	⇑P	**Pg**	**16 00 01.2**	**-0.2**
JOM				S	**Sg**	**16 00 08.9**	**0.0**
JOU	**Okura**	**0.69**	**188**	⇑P	**Pg**	**16 00 03.6**	**0.0**
JIO	**Ouri**	**0.74**	**144**	⇓P	**Pg**	**16 00 04.1**	**-0.4**
JIO				S	**Sg**	**16 00 13.8**	**-0.3**
JYA	**Atsumi**	**0.96**	**242**	⇑P	**Pg**	**16 00 07.8**	**-0.8**
JYA				S	**Sg**	**16 00 21.2**	**+0.1**
JYS	**Shiratake**	**1.00**	**215**	⇑P	**Pg**	**16 00 08.9**	**-0.6**
JYS				*e*S	**Sg**	**16 00 23.1**	**+0.5**
MAJO	**Matsushiro**	**3.23**	**220**	*e*Pn	**Pn**	**16 00 40.6**	**-0.4**
MAT	**Matsushiro**	**3.23**	**220**	P	**Pn**	**16 00 42.0**	**+1.0**
MAT				*e*S	**Sn**	**16 01 19.0**	**-0.5**
MJAR	**Matsushiro Arr**	**3.23**	**220**	Pn	**Pn**	**16 00 42.0**	**+1.1**
	1.9nm,0.3s,baz=30,slow=12,SNR=25						
MJAR				Sn	**Sn**	**16 01 27.7**	**+8.2**
	1.4nm,0.3s,baz=204,slow=25,SNR=4.6						
ERM	**Erimo**	**3.47**	**31**	*e*Pn	**Pn**	**16 00 47.1**	**+3.0**
ASAJ	**Asahikawa**	**5.24**	**14**	Pn	**Pn**	**16 01 10.8**	**+2.3**
	0.6nm,0.3s,baz=252,slow=13,SNR=7.9						
JHJ	**Hachijo jima 2**	**5.97**	**188**	Pn	**Pn**	**16 01 20.3**	**+1.6**
	6.7nm,0.3s,baz=53,slow=23,SNR=5.3						
JHJ				Sn	**Sn**	**16 02 27.8**	**+0.6**
	1.6nm,0.3s,baz=244,slow=20,SNR=6.2						
KSRS	**Korea Array**	**10.25**	**265**	Pn	**Pn**	**16 02 19.9**	**+2.7**
	0.6nm,0.3s,baz=78,slow=15,SNR=13						
KSRS				Sn	**Sn**	**16 04 15.6**	**+3.5**
	0.6nm,0.3s,baz=72,slow=23,SNR=10.0						
ZALV	**Zalesovo Beam**	**40.21**	**311**	P	**P**	**16 07 25.5**	**-1.0**
	0.7nm,0.5s,mb3.6,baz=110,slow=8.0,SNR=2.8						
ZALV	**Zalesovo Beam**	**40.21**	**311**	P	**P**	**16 07 25.5**	**-1.0**
MKAR	**Makanchi Array**	**42.66**	**300**	P	**P**	**16 07 46.2**	**-0.5**
	0.3nm,0.2s,mb3.6,baz=88,slow=10,SNR=3.1						
KURK	**Kurchatov**	**44.32**	**306**	P	**P**	**16 07 58.9**	**-1.2**
	1.6nm,0.8s,mb3.8,baz=81,slow=8.3,SNR=7.1						
KURK	**Kurchatov**	**44.32**	**306**	P	**P**	**16 07 59.4**	**-0.7**
	2.4nm,0.8s,mb4.0						
WRA	**Warramunga Arr**	**58.99**	**187**	P	**P**	**16 09 49.0**	**-0.9**
	0.7nm,0.4s,mb4.0,baz=4.7,slow=7.2,SNR=30						
ASAR	**Alice Springs**	**62.72**	**

BSO1	Boso 1	4.89	16	eS		S	16 19 31.9	+0.6
BSO3	Boso 3	4.94	11	P		P	16 18 25.5	+1.0
BSO3				eS		S	16 19 32.5	+0.3
BSO4	Boso 4	5.10	9	S		S	16 19 35.4	+0.4
JOD2	Odawara 2	5.31	358	P		P	16 18 28.6	+0.5
JNY	Yasuok	5.55	347	P		P	16 18 31.6	+1.1
JHU	Hanno	5.89	359	P		P	16 18 34.0	-0.1
JHU				eS		S	16 19 47.1	-2.6
JRY	Ryogami san	6.07	356	P		P	16 18 36.6	+0.7
JYT	Yasato	6.31	6	P		P	16 18 37.9	-0.5
JYT				S		S	16 19 53.5	-4.1
JAG	Ashikaga	6.46	1	P		P	16 18 39.4	-0.6
JAG				S		S	16 19 55.9	-4.8
MJAR	Matsushiro Arr	6.65	352	P		P	16 18 42.3	+0.3
6.6nm,0.3s,baz=128,slow=30,SNR=5.1								
JHO	Hitachi	6.72	8	P		P	16 18 43.6	+0.8
JHO				S		S	16 20 03.8	-1.9
KSRS	Korea Array	12.11	311	P		P	16 19 40.5	-1.1
0.3nm,0.3s,baz=124,slow=10.0,SNR=9.4								
WRA	Warramunga Arr	49.83	186	P		P	16 25 12.2	-0.8
0.3nm,0.3s,mb3.1,baz=1.0,slow=7.7,SNR=13								
ASAR	Alice Springs	53.56	186	P		P	16 25 39.9	-0.2
0.3nm,0.7s,mb2.6,baz=19,slow=11,SNR=6.9								
BVAR	Borovoye Array	54.28	316	P		P	16 25 44.2	-0.6
0.5nm,0.4s,mb3.1,baz=96,slow=8.1,SNR=3.7								
STKA	Stephens Creek	61.52	178	P		P	16 26 35.9	+1.3
2.9nm,1.1s,mb3.7,baz=330,slow=8.1,SNR=4.0								

NIED ***16*** *16:27:00,30°.70N×142°.10E,h5km,Mw3.7 Best double couple: M0=4.23000×10^14 NP1:φ=346.00000°,δ66.00000°, λ34.00000°. NP2:φ=241.00000°,δ59.00000°,λ152.00000°.*
IDC ***16*** *16:27:42.0±1.0,30°.75N×142°.61E,h0km,mb3.8/6, mb1 3.8/10,mb1mx3.7/27,mbtmp3.8/10,ML3.3/4,Error ellipse: s-maj=35.6km s-min=16.3km az=72.0*
JMA ***16*** *16:27:45.9±0.2,30°.74N×142°.06E,h24km,M4.1*
ISCJB ***16*** *16:27:46.1±0.6,30°.73N±0°.04×142°.2E±0°.1,h33km, mb3.9/8,Error ellipse: s-maj=17.5km s-min=3.8km az=166.5*
NEIC ***16*** *16:27:47.5±0.8,30°.72N×142°.41E,h35km,mb4.2/2,Error ellipse: s-maj=24.3km s-min=11.7km az=75.0*

ISC 16 16:27:46.9±2.1,30°.73N±0°.04×142°.3E±0°.1,h27km±16km, n25,σ1§07/33,mb3.9/8,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	3.20	319	P	Pn	16 28 33.5	-1.9
JHJ	Hachijo jima 2	3.22	318	Pn	Pn	16 28 33.6	-2.1
3.3nm,0.3s,baz=61,slow=21,SNR=6.9							
JHJ				Sn	Sn	16 29 08.2	-5.1
21nm,0.3s,baz=254,slow=24,SNR=6.7							
CBIJ	Chichi jima	3.62	182	P	Pn	16 28 43.1	+1.9
CBIJ				eS	Sn	16 29 25.6	+2.6
CBIJ	Chichi jima	3.62	182	Pn	Pn	16 28 39.9	-1.4
5.0nm,0.3s,baz=277,slow=19,SNR=14							
CBIJ				Sn	Sn	16 29 21.8	-1.2
8.9nm,0.3s,baz=73,slow=23,SNR=7.1							
BSO1	Boso 1	4.08	344	eS	Sn	16 29 34.4	0.0
BSO3	Boso 3	4.34	340	P	Pn	16 28 52.2	+1.0
JOD2	Odawara 2	5.28	330	P	Pn	16 29 05.5	+1.5
JHU	Hanno	5.71	334	P	Pn	16 29 10.9	+0.9
JHU				S	Sn	16 30 14.7	0.0
JYT	Yasato	5.77	343	P	Pn	16 29 11.2	+0.4
JRY	Ryogami san	6.01	332	P	Pn	16 29 14.6	+0.6
JRY				eS	Sn	16 30 21.5	-0.4
JHO	Hitachi	6.05	346	P	Pn	16 29 13.6	-1.0
JHO				eS	Sn	16 30 19.4	-3.6
MJAR	Matsushiro Arr	6.74	330	Pn	Pn	16 29 24.3	+0.2
1.7nm,0.3s,baz=154,slow=11,SNR=25							
MJAR				Sn	Sn	16 30 40.4	+0.4
0.6nm,0.3s,baz=233,slow=33,SNR=4.5							
MAJO	Matsushiro	6.74	330	eP	Pn	16 29 22.9	-1.3
9.3nm,0.5s							
MAT	Matsushiro	6.74	330	P	Pn	16 29 24.9	+0.8
MAT				S	Sn	16 30 39.3	-0.7
KSRS	Korea Array	13.69	303	Pn	Pn	16 30 59.4	+0.1
0.1nm,0.3s,baz=109,slow=11,SNR=3.5							
YULB	Yu-li	20.09	254	eP	P	16 32 17.3	-1.2
ULN	Ulaanbaatar	31.87	313	eP	P	16 34 11.2	+1.5
1.4nm,0.7s,mb3.9							
SONM	Songino Array	32.28	312	P	P	16 34 14.6	+1.4
0.6nm,0.5s,mb3.7,baz=114,slow=7.3,SNR=6.2							
MK31	Makanchi Array	48.33	307	eP	P	16 36 26.7	+0.7
MKAR	Makanchi Array	48.33	307	P	P	16 36 26.4	+0.4
0.4nm,0.3s,mb3.9,baz=92,slow=10.0,SNR=7.7							
WRAB	Tennant Creek	50.95	190	eP	P	16 36 45.8	-0.3
4.2nm,0.8s,mb4.4							
WRA	Warramunga Arr	50.96	190	P	P	16 36 45.9	-0.3
1.6nm,0.6s,mb4.1,baz=8.6,slow=7.8,SNR=18							
ASAR	Alice Springs	54.68	189	P	P	16 37 13.2	-0.5
0.5nm,0.6s,mb3.7,baz=2.8,slow=5.5,SNR=19							
FINES	FINESS Array B	74.76	333	P	P	16 39 25.1	+0.9
1.1nm,0.7s,mb3.9,baz=20,slow=4.4,SNR=3.2							
PDAR	Pinedale Array	81.56	45	P	P	16 40 00.5	-1.7
0.2nm,0.4s,mb3.4,baz=348,slow=7.6,SNR=2.2							

TAP ***16*** *16:43:35.4,24°.57N×122°.79E,h109km±1km,ML3.2,C*
JMA ***16*** *16:43:35.7±0.2,24°.69N×122°.87E,h100km±2km,M2.1*
ISCJB ***16*** *16:43:36.0±0.7,24°.56N±0°.05×122°.82E±0°.02,h95km±7km, Error ellipse: s-maj=8.8km s-min=3.4km az=178.1*

ISC 16 16:43:36.5±0.7,24°.56N±0°.05×122°.82E±0°.02,h94km±7km, n30,σ0§64/55,1C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.20	119	P	Pn	16 43 50.1	+0.2
YOJ				S	Sn	16 44 01.4	+1.5
IRIF	Iriomote-Funau	0.86	105	P	Pn	16 43 54.6	-0.3
IRIF				eS	Sn	16 44 08.7	0.0
TWC	Suao	0.88	274	P	Pn	16 43 54.8	-0.4
baz=275							
TWC				eS	Sn	16 44 08.7	-0.4
baz=275							
ENA	Nanau	0.99	263	P	Pn	16 43 56.3	0.0
baz=256							
ENA				S	Sn	16 44 11.1	-0.2
baz=256							
HATJ	Hateruma jima	1.03	119	P	Pn	16 43 57.1	+0.3
HATJ				eS	Sn	16 44 12.8	+0.8
TWE	Neicheng	1.06	279	iP	Pn	16 43 57.1	0.0
baz=275							
TWE				S	Sn	16 44 12.4	-0.2
baz=275							
NWF	Wu-fen Shan	1.07	299	eP	Pn	16 43 57.1	-0.1
baz=299							
JKRS	Kuro-shima	1.13	106	P	Pn	16 43 58.1	+0.1
JKRS				eS	Sn	16 44 14.3	+0.2
ENTT	Nioudou	1.14	274	P	Pn	16 43 58.2	+0.1
baz=270							
ENTT				S	Sn	16 44 14.5	+0.2
baz=270							
TWA	Mucha	1.20	291	eP	Pn	16 43 58.5	-0.2
baz=283							
TWD	Chiawan	1.21	247	P	Pn	16 43 58.4	-0.5
baz=245							
TWD				eS	Sn	16 44 15.1	-0.7
baz=245							
JIJ	Ishigaki jima	1.22	99	P	Pn	16 43 58.5	-0.5
JIJ				S	Sn	16 44 14.8	-1.2
NNS	Nan Shan	1.32	265	eP	Pn	16 44 00.2	0.0
baz=258							
NNS				eS	Sn	16 44 18.2	+0.1
baz=258							
NSK	Sanguang	1.33	275	P	Pn	16 44 00.4	+0.1
baz=268							
NSK				eS	Sn	16 44 18.1	-0.3
baz=268							
TWS1	Kuangyinshan	1.38	293	eP	Pn	16 44 00.3	-0.6
baz=287							
ESL	Shilin	1.47	240	P	Pn	16 44 01.5	-0.5
baz=242							
ESL				eS	Sn	16 44 20.5	-0.7
baz=242							
WHF	Hehuan Shan	1.47	254	iP	Pn	16 44 02.2	+0.2
baz=257							
WHF				S	Sn	16 44 21.4	-0.1
baz=257							
TWT	Tachien	1.53	259	eP	Pn	16 44 03.3	+0.5
baz=255							
TWT				eS	Sn	16 44 22.9	+0.3
baz=255							
NSTT	Nanjuang	1.66	273	eP	Pn	16 44 04.0	-0.4
baz=276							
NSTT				eS	Sn	16 44 25.1	-0.5
baz=276							
JTJ	Tarama	1.72	87	P	Pn	16 44 04.8	-0.4
JTJ				eS	Sn	16 44 26.8	-0.2
EHY	Hungye	1.72	233	eP	Pn	16 44 04.5	-0.7
baz=230							
EHY				eS	Sn	16 44 26.2	-0.9
baz=230							
TWF1	Yuli	1.84	230	⇑iP	Pn	16 44 06.2	-0.5
baz=235							
TWF1				eS	Sn	16 44 28.8	-1.0
baz=235							
SMLT	Sun Moon Lake	1.88	249	P	Pn	16 44 07.5	+0.3
baz=243							
SMLT				eS	Sn	16 44 31.3	+0.7
baz=243							
TYC	Yuchr	1.91	250	eP	Pn	16 44 08.2	+0.6
baz=243							
TYC				eS	Sn	16 44 32.9	+1.6
baz=243							
YUS	Yu-Shan	2.01	238	eP	Pn	16 44 09.3	+0.3
baz=231							
ALS	Alishan	2.12	241	eP	Pn	16 44 10.8	+0.5
baz=233							
ALS				eS	Sn	16 44 36.4	+0.3
baz=233							
ELDTW	Lidau	2.14	231	eP	Pn	16 44 10.3	-0.3
baz=224							
ELDTW				eS	Sn	16 44 35.8	-0.9
baz=224							
CHN5	Tsauling	2.18	244	eP	Pn	16 44 12.4	+1.3
baz=236							
CHN5				eS	Sn	16 44 38.7	+1.1
baz=236							
WTP	Ta-pu	2.40	238	eP	Pn	16 44 15.3	+1.1
baz=229							
WTP				eS	Sn	16 44 41.9	-1.0
baz=229							
CHN1	Nanshi	2.50	237	eP	Pn	16 44 16.9	+1.5
baz=244							

IDC 16 16:44:28.6±8.2,3°.21N×127°.25E,h0km,mb3.6/3, mb1 3.8/3,mb1mx3.4/21,mbtmp3.6/3,Error ellipse: s-maj=214.5km s-min=130.0km az=76.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.04	163	P	P	16 49 46.5	+1.0
1.7nm,0.7s,baz=345,slow=10,SNR=6.5							
ASAR	Alice Springs	27.49	167	P	P	16 50 15.3	-1.5
0.1nm,0.4s,baz=339,slow=10,SNR=4.2							
STKA	Stephens Creek	37.46	160	P	P	16 51 44.5	+0.5
1.6nm,0.8s,baz=330,slow=8.1,SNR=3.4							

ISCJB ***16*** *16:50:26.2±0.7,9°.39N±0°.09×78°.79W±0°.06,h65km±9km, mb3.8/11,Error ellipse: s-maj=14.9km s-min=9.0km az=9.4*
NEIC ***16*** *16:50:28.1±0.8,9°.35N×78°.82W,h75km±8km,mb3.5/2, Error ellipse: s-maj=12.5km s-min=9.6km az=187.0*
IDC ***16*** *16:50:28.8±2.2,9°.37N×78°.73W,h76km±21km,mb3.7/10, mb1 4.0/13,mb1mx3.8/21,mbtmp3.8/13,Error ellipse: s-maj=24.3km s-min=13.9km az=21.0*
CASC ***16*** *16:50:28.4±1.0,9°.09N×78°.86W,h68km±7km,mb3.5(NEIC)*

ISC 16 16:50:27.7±0.6,9°.36N±0°.09×78°.81W±0°.05,h63km±8km, n30,σ1§08/33,mb3.9/11,2C-1D,Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPIG		0.81	243	eP	Pn	16 50 42.6	-0.8
UPIG				eS	Sn	16 50 53.9	-1.1
BCIP	Isla Barro Col	1.03	259	⇑iPn	Pn	16 50 46.3	0.0
BCIP				eSn	Sn	16 50 58.2	-1.9
BCIP	Isla Barro Col	1.03	259	⇑iP	Pn	16 50 46.5	+0.2
BCIP				eS	Sn	16 51 00.0	-0.1
BRU2	Volcan	3.88	262	⇓iP	Pn	16 51 25.8	+0.9
ACR	Cerro Adams	4.36	261	eP	Pn	16 51 29.6	-1.8
BAR1		4.45	269	eP	Pn	16 51 33.4	+0.8
BUS	Buena Vista	4.89	273	eP	Pn	16 51 39.7	+1.0
PRS1	Puriscal	5.46	277	eP	Pn	16 51 48.9	+2.3
JTS	JuntasAbangare	6.12	279	P	Pn	16 51 56.4	+0.8
6.2nm,0.3s,baz=296,slow=22,SNR=24							
JTS				S	Sn	16 53 11.7	+7.3
7.7nm,0.3s,baz=101,slow=23,SNR=9.5							
JTS	JuntasAbangare	6.12	279	ePn	Pn	16 51 56.5	+0.9
JTS				eSn	Sn	16 53 11.2	+6.8
JTS				S	Sn	16 53 11.7	+7.3
SDV	Santo Domingo	8.09	93	P	Pn	16 52 22.0	-0.5
2.8nm,0.3s,baz=303,slow=8.7,SNR=29							
SDV	Santo Domingo	8.09	93	ePn	Pn	16 52 22.1	-0.5
OTAV	Otavalo	9.07	178	Pn	Pn	16 52 38.5	+2.4
SDDR	Presa de Saban	12.02	36	ePn	Pn	16 53 17.5	+1.2
22nm,0.6s							
PCRV	Puerto La Cruz	13.99	86	P	Pn	16 53 41.8	-1.2
2.2nm,0.3s,baz=316,slow=7.2,SNR=5.5							
LPAZ	La Paz	27.59	157	P	P	16 56 09.0	-0.2
0.3nm,0.4s,mb3.3,baz=328,slow=9.5,SNR=2.9							
LPAZ	La Paz	27.59	157	eP	P	16 56 09.1	-0.1
0.3nm,0.5s,mb3.2							
TXAR	Lajitas Array	30.61	314	P	P	16 56 35.0	-0.9
0.4nm,0.7s,mb3.4,baz=133,slow=9.2,SNR=6.4							
PDAR	Pinedale Array	42.79	326	P	P	16 58 19.6	+0.4
0.8nm,0.9s,mb3.5,baz=126,slow=7.5,SNR=5.8							
ULM	Lac du Bonnet	43.15	344	P	P	16 58 20.1	-1.9
6.4nm,0.6s,mb4.5,baz=164,slow=7.5,SNR=5.6							
HLID	Hailey	46.03	324	eP	P	16 58 45.3	+0.2
0.6nm,0.5s,mb3.8							
YKA	Yellowknife Ar	59.02	342	P	P	17 00 19.9	-0.8
4.0nm,0.7s,mb4.5,baz=131,slow=7.2,SNR=11							
ESDC	Sonseca Array	72.43	51	P	P	17 01 48.5	+0.9
1.8nm,0.6s,mb4.2,baz=274,slow=6.2,SNR=9.9							
TORD	Torodi Ar. Bea	78.75	78	P	P	17 02 24.3	+0.1
0.2nm,0.5s,mb3.3,baz=290,slow=7.4,SNR=6.0							
NOA	NORSAR Array B	81.90	29	P	P	17 02 39.6	-0.5
1.1nm,0.8s,mb3.9,baz=275,slow=5.2,SNR=4.3							
GERES	GERESS Array B	84.68	42	P	P	17 02 55.4	+0.7
1.2nm,0.8s,mb4.1,baz=262,slow=3.9,SNR=7.7							
ARCES	ARCESS Array B	86.25	20	P	P	17 03 01.6	-0.5
1.2nm,0.6s,mb4.3,baz=268,slow=4.2,SNR=6.6							
FINES	FINESS Array B	88.86	28	pP	pP	17 03 21.6	-11
0.5nm,0.3s,baz=87,slow=8.2,SNR=2.0							
WRA	Warramunga Arr	146.31	248	PKPbc	PKPbc	17 10 00.4	-1.9
0.4nm,0.7s,baz=96,slow=3.1,SNR=6.9							
CMAR	Chiang Mai Arr	152.27	5	PKPbc	PKPbc	17 10 15.9	-1.4
0.7nm,0.7s,baz=291,slow=2.5,SNR=5.4							

IDC ***16*** *16:58:47.0±1.0,33°.04N×91°.58E,h0km,mb3.5/6, mb1 3.6/8,mb1mx3.5/27,mbtmp3.5/8,ML2.9/1,MS3.2/1, Ms1 3.2/1,ms1mx2.6/21,Error ellipse: s-maj=45.3km s-min=18.3km az=57.0*
ISCJB ***16*** *16:58:47.2±0.8,33°.42N±0°.05×92°.0E±0°.1,h10km,mb3.5/5, Error ellipse: s-maj=17.1km s-min=7.2km az=6.4*
NEIC ***16*** *16:58:52.5±1.1,33°.48N×91°.54E,h10km,Error ellipse: s-maj=28.5km s-min=10.8km az=108.0*

ISC 16 16:58:49.0±0.8,33°.41N±0°.05×92°.0E±0°.1,h10km,n19, σ1§31/20,mb3.5/5,Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	Lhasa	3.76	191	Pg	Pn	16 59 50.9	+3.8
LSA				Sg	Sb	17 00 40.8	-0.4
LSA				smax			
comp=N,60nm,1.1s							
LSA				smax			
comp=E,160nm,1.0s							
LSA	Lhasa	3.76	191	eP	Pn	16 59 50.9	+3.8
LSA				eS	Sb	17 00 41.3	+0.1
GUN	Gumba	7.60	226	eP	Pn	17 00 43.1	+3.2
JIRN	Jiri	7.61	223	eP	Pn	17 00 40.7	+0.7
KKN	Kakani	8.05	228	eP	Pn	17 00 47.5	+1.4
comp=E,9.5nm,0.5s							
PKI	Pulchoki	8.13	226	eP	Pn	17 00 45.5	-1.7
PKI	Pulchoki	8.13	226	eP	Pn	17 00 46.2	-1.0
comp=E,9.4nm,0.5s							
PKIN	Phulchoki	8.13	226	eP	Pn	17 00 46.2	-1.0
comp=E,9.4nm,0.5s							
MKAR	Makanchi Array	15.28	334	Pn	Pn	17 02 23.1	-1.6
comp=E,0.1nm,0.3s,baz=153,slow=13,SNR=2.2							
CMAR	Chiang Mai Arr	16.13	156	Pn	Pn	17 02 29.6	-6.4
comp=E,0.0nm,0.3s,baz=336,slow=12,SNR=3.3							
AAK	Ala-Archa	16.56	309	LR	LR	17 10 24.7	
comp=E,84nm,18.5s,baz=191,slow=42							
SONM	Songino Array	18.04	33	P	Pn	17 03 05.2	+5.5
baz=212,slow=5.3,SNR=3.6							
KURK	Kurchatov	19.89	334	P	Pn	17 03 23.1	+1.1
comp=E,0.3nm,0.2s,baz=142,slow=11,SNR=2.8							
ZALV	Zalesovo Beam	21.16	348	P	P	17 03 36.7	+2.5
comp=E,0.6nm,0.6s,mb3.1,baz=156,slow=7.9,SNR=2.0							
BVAR	Borovoye Array	24.98	328	P	P	17 04 12.0	-0.6
comp=E,0.2nm,0.4s,mb3.0,baz=134,slow=8.3,SNR=2.4							
BRTR	Keskin Array B	46.59	295	P	P	17 07 16.0	-1.1
comp=E,0.6nm,0.7s,mb3.6,baz=113,slow=9.5,SNR=4.1							
WRA	Warramunga Arr	66.68	136	P	P	17 09 40.6	+0.4
comp=E,0.5nm,0.8s,mb3.6,baz=313,slow=11,SNR=5.0							
ASAR	Alice Springs	69.38	139	P	P	17 09 56.1	-1.0
comp=E,1.1nm,0.7s,mb3.9,baz=326,slow=6.6,SNR=16							
ASAR	Alice Springs	69.38	139	P	P	17 09 56.1	-1.0

ISK ***16*** *17:11:34.4,37°.97N×37°.93E,h5km,MD2.9*
CSEM ***16*** *17:11:35.5±0.2,37°.93N×37°.96E,h3km±2km,MD2.8,Error ellipse: s-maj=4.8km s-min=2.9km az=128.0*
DDA ***16*** *17:11:35.2,37°.93N×37°.95E,h7km±3km,Md2.8*
ISCJB ***16*** *17:11:36.0±0.4,37°.95N±0°.03×37°.94E±0°.04,h10km,Error ellipse: s-maj=5.2km s-min=3.5km az=20.7*

ISC 16 17:11:35.8±0.6,37°.93N±0°.03×37°.95E±0°.05,h6km±6km, n27,σ1§07/40,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKCD	Akcadag	0.36	357	iP	Pg	17 11 42.6	-0.3
AKCD				iS	Sg	17 11 48.5	+0.8
AKCD	Akcadag	0.36	357	iP	Pg	17 11 42.6	-0.3
AKCD				iS	Sg	17 11 48.5	+0.9
ATAB	Bozova	0.54	149	iP	Pg	17 11 44.0	-2.1
ATAB				iS	Sg	17 11 57.7	+4.5
ATAB	Bozova	0.54	149	iP	Pg	17 11 44.0	-2.2
MYA	Malataya	0.55	44	ePG	Pg	17 11 45.5	-0.8
MYA				eSG	Sg	17 11 54.0	+0.6
MYA	Malataya	0.55	44	ePg	Pg	17 11 45.5	-0.8
MYA				eSg	Sg	17 11 54.0	+0.6
GZT	Gaziantep	0.65	208	iP	Pg	17 11 47.2	-1.1
GZT				iS	Sg	17 12 00.9	+4.2
URFA	Urfa	0.85	125	ePG	Pg	17 11 51.8	-0.4
URFA				eSG	Sg	17 12 05.9	+2.7
URFA	Urfa	0.85	125	ePg	Pg	17 11 51.8	-0.3
URFA				eSg	Sg	17 12 05.9	+2.7
KMRS	Kahramanmaras	0.93	243	ePG	Pg	17 11 53.2	-0.4
KMRS	Kahramanmaras	0.93	243	ePg	Pg	17 11 53.3	-0.4
GAZ	Gaziantep	0.96	218	ePG	Pg	17 11 54.5	+0.4
GAZ	Gaziantep	0.96	218	ePg	Pg	17 11 54.5	+0.3
DARE	Darende-Malaty	1.02	354	ePG	Pg	17 11 49.6	-5.9
DARE				eSG	Sg	17 11 59.1	-10
SVRC	Sivrice-ELAZID	1.16	67	ePN	Pn	17 11 57.4	-1.1
SVRC	Sivrice-ELAZID	1.16	67	ePn	Pn	17 11 57.4	-1.2
SARI	SarD1z-Kayseri	1.23	308	ePN	Pn	17 11 59.9	+0.3
KUZU	Kuzuini	1.35	211	iP	Pn	17 12 01.8	+0.7
KUZU				iS	Sb	17 12 19.7	+0.8
KUZU	Kuzuini	1.35	211	iP	Pn	17 12 01.8	+0.7
KUZU				iS	Sb	17 12 19.7	+0.8
KEMA	Kemaliye	1.40	18	iP	Pn	17 12 00.9	-0.9
KEMA				iS	Sb	17 12 21.8	+1.4
KEMA	Kemaliye	1.40	18	iP	Pn	17 12 00.9	-1.0
KEMA				iS	Sb	17 12 21.8	+1.3
PTK	Pertek	1.49	49	ePN	Pn	17 12 03.1	0.0
PTK	Pertek	1.49	49	ePn	Pn	17 12 03.1	+0.1
KOZT	Kozan	1.74	256	ePN	Pn	17 12 06.6	+0.1
SVSK	Karacayir	2.11	340	ePN	Pn	17 12 12.3	+0.6
SVSK	Karacayir	2.11	340	ePn	Pn	17 12 12.3	+0.6
EZC	Erzincan	2.33	38	ePN	Pn	17 12 12.1	-2.5

IDC ***16*** *18:02:03.7±2.4,39°.26N×140°.96E,h0km,mb3.2/2, mb1 3.3/4,mb1mx3.1/27,mbtmp3.1/4,ML2.8/2,Error ellipse: s-maj=46.5km s-min=29.9km az=84.0*
ISCJB ***16*** *18:02:03.8±0.5,39°.07N±0°.03×140°.97E±0°.04,h10km, mb3.2/2,Error ellipse: s-maj=4.3km s-min=3.9km az=8.7*
JMA ***16*** *18:02:04.2,39°.07N×140°.96E,h9km±1km,M3.2*
JMA Felt II J1.

ISC 16 18:02:04.5±0.5,39°.06N±0°.03×140°.98E±0°.04,h10km,n11, σ0§95/19,mb3.2/2,4C-3D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	Ichinoseki	0.22	119	⇑P	Pg	18 02 08.9	-0.1
JMK				eS	Sg	18 02 12.1	+0.1
JRG	Rokugo	0.43	322	⇑P	Pg	18 02 12.5	-0.4
JRG				eS	Sg	18 02 18.4	-0.2
JOM	Ohasama	0.48	31	⇓P	Pg	18 02 13.4	-0.5
JOM				eS	Sg	18 02 20.1	-0.1
JYK	Kaneyama	0.50	254	⇑P	Pg	18 02 13.9	-0.3
JYK				eS	Sg	18 02 20.5	-0.3
OFUJ	Ofunato	0.54	88	⇑P	Pg	18 02 14.8	-0.2
OFUJ				eS	Sg	18 02 22.2	+0.1
JIO	Ouri	0.67	154	⇓P	Pg	18 02 17.0	-0.4
JIO				eS	Sg	18 02 26.1	-0.1
JOU	Okura	0.73	199	⇓P	Pg	18 02 18.3	-0.3
JOU				eS	Sg	18 02 28.1	-0.1
MJAR	Matsushiro Arr	3.33	222	Pn	Pn	18 02 59.6	+2.9
0.3nm,0.3s,baz=23,slow=16,SNR=2.9							
MJAR				Pg	Pg	18 03 06.1	-2.2
0.5nm,0.3s,baz=24,slow=16,SNR=4.1							
KSRS	Korea Array	10.39	265	Pn	Pn	18 04 35.4	+1.9
0.2nm,0.3s,baz=82,slow=15,SNR=4.2							
KURK	Kurchatov	44.43	306	P	P	18 10 15.2	-0.1
0.2nm,0.4s,mb3.2,baz=79,slow=8.0,SNR=2.2							
WRA	Warramunga Arr	59.02	187	P	P	18 12 06.7	+2.3
0.2nm,0.8s,mb3.2,baz=5.3,slow=7.5,SNR=4.0							

IDC ***16*** *18:07:12.3±1.4,32°.43N×105°.66E,h0km,mb3.4/4, mb1 3.6/5,mb1mx3.3/27,mbtmp3.4/5,ML3.3/1,MS3.3/2, Ms1 3.3/2,ms1mx2.4/25,Error ellipse: s-maj=76.9km s-min=22.0km az=55.0*
NEIC ***16*** *18

WRA	**Warramunga Arr**	**58.95**	**148**	P	**P**	**18 17 13.7**	**-0.9**
	comp=E,1.0nm,0.9s,mb3.8,baz=340,slow=7.8,SNR=6.5						
ASAR	**Alice Springs**	**62.03**	**150**	P	**P**	**18 17 33.2**	**-2.3**
	comp=E,0.3nm,0.8s,mb3.5,baz=328,slow=6.6,SNR=3.3						

NIED ***16*** *18:08:00.21″.90N×120″.80E, h74km, Mw4.2 Best double couple: M0=2.30000×10^15 NP1:φs=39.00000°, δ=52.00000°, λ=70.00000°. NP2:φs=249.00000°, δ=42.00000°, λ=113.00000°.*
IDC ***16*** *18:08:21.3±0.9, 22″.06N×120″.51E, h0km, mb3.4/8, mb1 3.6/9, mb1mx3.5/26, mbtmp3.4/9, ML2.9/1, Error ellipse: s-maj=25.4km s-min=19.4km az=73.0*
ISCJB ***16*** *18:08:27.7±0.4, 22″.04N±0″.02×120″.50E±0″.03, h63km±2km, mb3.3/7, Error ellipse: s-maj=4.6km s-min=3.9km az=0.0*
TAP ***16*** *18:08:28.2, 22″.07N×120″.47E, h51km, ML4.4, D*
NEIC ***16*** *18:08:29.1±0.9, 22″.08N×120″.53E, h63km±9km, mb3.4/1, Error ellipse: s-maj=11.5km s-min=10.3km az=154.0*
JMA ***16*** *18:08:29.5±0.3, 21″.88N×120″.85E, h128km, M3.5*
ISC 16 18:08:28.7±0.4, 22.05N±0.02×120.47E±0.03, h54km±3km, n74, σ0.64/131, mb3.3/7, 1C-5D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEN	**Hengchun**	**0.26**	**99**	⇓*i*P	**Pn**	**18 08 37.2**	**-0.6**
	baz=104						
HEN				*i* S	**Sn**	**18 08 44.5**	**+0.1**
	baz=104						
TWP	**Hsiaoliuchiu**	**0.32**	**342**	*i* P	**Pn**	**18 08 38.1**	**-0.3**
	baz=342						
TWP				*i* S	**Sn**	**18 08 44.6**	**-0.7**
	baz=342						
SCZT	**Fangliau**	**0.36**	**24**	⇓*i*P	**Pn**	**18 08 37.9**	**-0.8**
	baz=26						
SCZT				*i* S	**Sn**	**18 08 45.1**	**-0.8**
	baz=26						
TSEB	**Hengchuen, Pin**	**0.43**	**110**	⇓*i*P	**Pn**	**18 08 38.5**	**-0.9**
	baz=114						
TSEB				*i* S	**Sn**	**18 08 46.9**	**-0.2**
	baz=114						
EAST	**Anshuo**	**0.49**	**46**	*i* P	**Pn**	**18 08 39.7**	**-0.4**
	baz=49						
EAST				*i* S	**Sn**	**18 08 48.4**	**+0.1**
	baz=49						
TAW	**Tawu**	**0.51**	**52**	P	**Pn**	**18 08 39.8**	**-0.4**
	baz=54						
TAW				S	**Sn**	**18 08 48.4**	**-0.2**
	baz=54						
KAU	**Kaohsiung**	**0.54**	**344**	P	**Pn**	**18 08 40.6**	**-0.1**
	baz=344						
KAU				S	**Sn**	**18 08 50.1**	**+0.7**
	baz=344						
SGLT	**Jiouru**	**0.68**	**2**	P	**Pn**	**18 08 42.7**	**+0.4**
	baz=2.0						
SGLT				*e*S	**Sn**	**18 08 54.6**	**+2.3**
	baz=2.0						
ECL	**Taimali**	**0.71**	**39**	P	**Pn**	**18 08 42.5**	**-0.2**
	baz=41						
ECL				*e*S	**Sn**	**18 08 52.3**	**-0.7**
	baz=41						
SSD	**Sandimen**	**0.71**	**12**	P	**Pn**	**18 08 42.4**	**-0.5**
	baz=13						
SSD				S	**Sn**	**18 08 52.7**	**-0.4**
	baz=13						
TTN	**Taitung**	**0.95**	**42**	P	**Pn**	**18 08 46.5**	**+0.7**
	baz=43						
TTN				S	**Sn**	**18 08 58.9**	**+0.4**
	baz=43						
TWG	**Pinlang**	**0.95**	**36**	*e*Pg	**Pn**	**18 08 45.8**	**-0.2**
TWG				*e*S	**Sn**	**18 08 58.9**	**+0.3**
TWG	**Pinlang**	**0.95**	**36**	⇓*i*P	**Pn**	**18 08 46.1**	**+0.2**
	baz=37						
TWG				S	**Sn**	**18 08 59.0**	**+0.4**
	baz=37						
TAI1	**Yung-k'ang**	**1.01**	**348**	P	**Pn**	**18 08 46.6**	**-0.1**
	baz=347						
TAI1				S	**Sn**	**18 08 59.8**	**-0.3**
	baz=347						
CHN3	**Shinhua**	**1.03**	**355**	P	**Pn**	**18 08 47.4**	**+0.5**
	baz=354						
CHN3				S	**Sn**	**18 09 00.4**	**0.0**
	baz=354						
SGST	**Jiashian**	**1.04**	**6**	P	**Pn**	**18 08 47.2**	**+0.1**
	baz=6.0						
SGST				S	**Sn**	**18 09 01.1**	**+0.5**
	baz=6.0						
CHN1	**Nanshi**	**1.14**	**3**	P	**Pn**	**18 08 48.2**	**-0.2**
	baz=3.0						
CHN1				S	**Sn**	**18 09 02.7**	**-0.2**
	baz=3.0						
STYT	**Tauyuan**	**1.15**	**14**	P	**Pn**	**18 08 48.5**	**+0.1**
	baz=14						
STYT				S	**Sn**	**18 09 03.7**	**+0.5**
	baz=14						
SCLT	**Jiali**	**1.15**	**347**	*e*P	**Pn**	**18 08 48.5**	**-0.1**
	baz=347						
SCLT				*e*S	**Sn**	**18 09 03.2**	**-0.1**
	baz=347						
WTP	**Ta-pu**	**1.20**	**7**	⇓*i*P	**Pn**	**18 08 48.9**	**-0.3**
	baz=7.0						
WTP				*e*S	**Sn**	**18 09 04.9**	**+0.3**
	baz=7.0						
TWK	**Hsinying**	**1.22**	**1**	*e*P	**Pn**	**18 08 49.3**	**-0.1**
	baz=1.0						
TWK				*e*S	**Sn**	**18 09 04.8**	**0.0**
	baz=1.0						
ELDTW	**Lidau**	**1.25**	**24**	*e*P	**Pn**	**18 08 50.2**	**+0.4**
	baz=24						
ELDTW				*e*S	**Sn**	**18 09 06.1**	**+0.5**
	baz=24						
TPUB	**Ta-pu**	**1.26**	**7**	*e*Pg	**Pn**	**18 08 49.1**	**-0.9**
TPUB				*e*S	**Sn**	**18 09 03.9**	**-2.0**
CHN8	**Yiju**	**1.32**	**350**	*e*P	**Pn**	**18 08 50.7**	**-0.1**
	baz=350						
CHN8				*e*S	**Sn**	**18 09 07.0**	**-0.3**
	baz=350						
CHY	**Chiayi**	**1.45**	**358**	*e*P	**Pn**	**18 08 52.1**	**-0.4**
	baz=358						
CHY				*e*S	**Sn**	**18 09 10.0**	**-0.4**
	baz=358						
ALS	**Alishan**	**1.49**	**12**	*e*P	**Pn**	**18 08 53.5**	**+0.4**
	baz=12						
ALS				*e*S	**Sn**	**18 09 11.7**	**+0.2**
	baz=12						
YUS	**Yu-Shan**	**1.51**	**17**	*e*P	**Pn**	**18 08 54.2**	**+0.9**
	baz=17						
YUS				*e*S	**Sn**	**18 09 11.9**	**0.0**
	baz=17						
TWF1	**Yuli**	**1.51**	**30**	*e*P	**Pn**	**18 08 53.8**	**+0.4**
	baz=31						
TWF1				*e*S	**Sn**	**18 09 13.0**	**+1.0**
	baz=31						
YULB	**Yu-li**	**1.54**	**30**	*e*P	**Pn**	**18 08 53.8**	**-0.1**
CHN5	**Tsauling**	**1.56**	**7**	*i* P	**Pn**	**18 08 53.8**	**-0.3**
	baz=7.0						
CHN5				*e*S	**Sn**	**18 09 13.0**	**-0.2**
	baz=7.0						
WSF	**Szhu**	**1.60**	**352**	*e*P	**Pn**	**18 08 53.9**	**-0.7**
	baz=352						
WSF				*e*S	**Sn**	**18 09 13.4**	**-0.8**
	baz=352						
WGK	**Gukeng**	**1.64**	**3**	*e*P	**Pn**	**18 08 54.9**	**-0.3**
	baz=3.0						
WGK				*e*S	**Sn**	**18 09 15.3**	**+0.2**
	baz=3.0						
EHY	**Hungye**	**1.66**	**28**	P	**Pn**	**18 08 55.7**	**+0.3**
	baz=29						
EHY				*e*S	**Sn**	**18 09 15.7**	**+0.1**
	baz=29						
SSLB	**Suanglung**	**1.79**	**14**	*e*P	**Pn**	**18 08 56.8**	**-0.4**
WTCT	**Ta-ch'eng**	**1.82**	**355**	*e*S	**Sn**	**18 09 18.6**	**-0.9**
	baz=354						
WNT	**Mingjian**	**1.84**	**6**	*e*P	**Pn**	**18 08 57.7**	**-0.2**
	baz=6.0						
WNT				*e*S	**Sn**	**18 09 20.4**	**+0.4**
	baz=6.0						
SMLT	**Sun Moon Lake**	**1.87**	**12**	⇑*i*P	**Pn**	**18 08 58.6**	**+0.3**
	baz=12						
SMLT				*e*S	**Sn**	**18 09 20.8**	**-0.1**
	baz=12						
TYC	**Yuchr**	**1.89**	**11**	*e*P	**Pn**	**18 08 58.8**	**+0.3**
	baz=11						
TYC				*e*S	**Sn**	**18 09 20.9**	**-0.2**
	baz=11						
ESL	**Shilin**	**1.97**	**27**	*e*P	**Pn**	**18 08 60.0**	**+0.2**
	baz=27						
ESL				*e*S	**Sn**	**18 09 22.9**	**-0.4**
	baz=27						
TCU	**Taichung**	**2.10**	**5**	*e*P	**Pn**	**18 09 01.6**	**+0.1**
	baz=5.0						
TCU				*e*S	**Sn**	**18 09 26.4**	**0.0**
	baz=5.0						
WHF	**Hehuan Shan**	**2.22**	**19**	*e*P	**Pn**	**18 09 04.2**	**+1.1**
	baz=19						
WHF				*e*S	**Sn**	**18 09 28.9**	**-0.4**
	baz=19						
TWD	**Chiawan**	**2.28**	**27**	*e*P	**Pn**	**18 09 04.3**	**+0.4**
	baz=27						
TWD				*e*S	**Sn**	**18 09 30.8**	**+0.1**
	baz=27						
TWT	**Tachien**	**2.29**	**16**	*e*P	**Pn**	**18 09 04.7**	**+0.6**
	baz=16						
TWT				*e*S	**Sn**	**18 09 30.9**	**-0.3**
	baz=16						
TWQ1	**Liyutan**	**2.31**	**7**	*e*P	**Pn**	**18 09 05.8**	**+1.5**
	baz=7.0						
TWQ1				*e*S	**Sn**	**18 09 31.8**	**+0.3**
	baz=7.0						
NACB	**Ninganchiao**	**2.36**	**26**	*e*P	**Pn**	**18 09 05.6**	**+0.6**
NSY	**Sanyi**	**2.38**	**7**	*e*P	**Pn**	**18 09 06.2**	**+1.0**
	baz=6.0						
NSY				*e*S	**Sn**	**18 09 32.9**	**-0.2**
	baz=6.0						
NNS	**Nan Shan**	**2.53**	**19**	*e*P	**Pn**	**18 09 08.6**	**+1.4**
	baz=19						
NNS				*e*S	**Sn**	**18 09 36.5**	**-0.3**
	baz=19						
NSTT	**Nanjuang**	**2.62**	**11**	P	**Pn**	**18 09 08.4**	**-0.2**
	baz=11						
NSTT				*e*S	**Sn**	**18 09 38.8**	**-0.4**
	baz=11						
ENA	**Nanau**	**2.65**	**26**	*e*P	**Pn**	**18 09 08.7**	**-0.2**
	baz=26						
ENA				*e*S	**Sn**	**18 09 39.5**	**-0.3**
	baz=26						
YHNB	**Yeheng**	**2.74**	**18**	*e*P	**Pn**	**18 09 10.6**	**+0.4**
NSK	**Sanguang**	**2.74**	**17**	*e*P	**Pn**	**18 09 10.4**	**+0.1**
	baz=17						
NSK				*e*S	**Sn**	**18 09 41.3**	**-0.9**
	baz=17						
ENTT	**Nioudou**	**2.77**	**21**	*e*P	**Pn**	**18 09 11.7**	**+1.1**
	baz=21						
ENTT				*e*S	**Sn**	**18 09 42.6**	**-0.4**
	baz=21						
TWC	**Suao**	**2.85**	**26**	*e*P	**Pn**	**18 09 12.6**	**+0.8**
	baz=26						
TWC				*e*S	**Sn**	**18 09 43.9**	**-1.0**
	baz=26						
TWE	**Neicheng**	**2.88**	**22**	*e*P	**Pn**	**18 09 12.8**	**+0.7**
	baz=22						
TWE				*e*S	**Sn**	**18 09 45.0**	**-0.6**
	baz=22						
TATO	**Taipei**	**3.06**	**18**	*e*P	**Pn**	**18 09 15.3**	**+0.7**
TWA	**Mucha**	**3.10**	**19**	*e*P	**Pn**	**18 09 16.1**	**+1.0**
	baz=19						
TWA				*e*S	**Sn**	**18 09 51.6**	**+0.7**
	baz=19						
NWF	**Wu-fen Shan**	**3.25**	**22**	*e*P	**Pn**	**18 09 17.4**	**+0.3**
	baz=21						
NWF				*e*S	**Sn**	**18 09 54.3**	**-0.2**
	baz=21						
YOJ	**Yonaguni jima**	**3.36**	**44**	P	**Pn**	**18 09 20.2**	**+1.6**
YOJ				S	**Sn**	**18 09 58.4**	**+1.1**
HATJ	**Hateruma jima**	**3.67**	**56**	P	**Pn**	**18 09 23.1**	**+0.2**
HATJ				*e*S	**Sn**	**18 10 04.3**	**-0.7**
IRIF	**Iriomote-Funau**	**3.77**	**52**	P	**Pn**	**18 09 24.8**	**+0.5**
IRIF				*e*S	**Sn**	**18 10 07.8**	**+0.4**
JKRS	**Kuro-shima**	**3.92**	**56**	P	**Pn**	**18 09 26.8**	**+0.4**
JKRS				*e*S	**Sn**	**18 10 11.6**	**+0.4**
JIJ	**Ishigaki jima**	**4.09**	**55**	P	**Pn**	**18 09 28.7**	**-0.1**
JIJ				S	**Sn**	**18 10 13.9**	**-1.5**
JTJ	**Tarama**	**4.67**	**56**	P	**Pn**	**18 09 36.8**	**+0.1**
JTJ				*e*S	**Sn**	**18 10 29.4**	**-0.2**
KSRS	**Korea Array**	**16.66**	**21**	Pn	**Pn**	**18 12 16.6**	**-1.8**
	0.1nm,0.3s,baz=192,slow=17,SNR=2.9						
CHTO	**Chiang Mai**	**20.42**	**265**	*e*P	**P**	**18 13 02.3**	**+0.8**
	1.6nm,0.7s						
CMAR	**Chiang Mai Arr**	**20.50**	**264**	P	**P**	**18 13 03.1**	**+0.7**
	1.5nm,0.9s,baz=75,slow=8.5,SNR=6.8						
MJAR	**Matsushiro Arr**	**21.12**	**43**	P	**P**	**18 13 07.5**	**-1.4**
	1.4nm,0.5s,mb3.5,baz=230,slow=9.5,SNR=5.5						
MKAR	**Makanchi Array**	**39.44**	**318**	P	**P**	**18 15 53.0**	**-0.5**
	0.1nm,0.5s,mb2.8,baz=104,slow=12,SNR=2.8						
ZALV	**Zalesovo Beam**	**41.70**	**329**	P	**P**	**18 16 12.2**	**+0.2**
	0.4nm,0.3s,mb3.5,baz=115,slow=6.5,SNR=3.3						
PETK	**Petropavlovsk-**	**42.01**	**33**	P	**P**	**18 16 14.2**	**-0.3**
	1.7nm,0.9s,mb3.7,baz=256,slow=11,SNR=3.0						
KURK	**Kurchatov**	**43.33**	**322**	P	**P**	**18 16 23.7**	**-1.5**
	0.3nm,0.7s,mb3.1,baz=110,slow=8.0,SNR=2.2						
WRA	**Warramunga Arr**	**43.88**	**161**	P	**P**	**18 16 29.8**	**-0.2**
	0.3nm,0.5s,mb3.3,baz=344,slow=9.0,SNR=4.7						
WRA	**Warramunga Arr**	**43.88**	**161**	P	**P**	**18 16 29.8**	**-0.2**
ASAR	**Alice Springs**	**47.28**	**163**	P	**P**	**18 16 56.0**	**-0.8**
	0.4nm,0.8s,mb3.4,baz=347,slow=7.6,SNR=4.9						

IDC ***16*** *18:11:03.2±4.0, 39″.85N×140″.04E, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.2/24, mbtmp3.4/2, ML2.4/1, Error ellipse: s-maj=104.7km s-min=50.9km az=129.0*
ISCJB ***16*** *18:11:10.6±0.6, 38″.91N±0″.03×140″.89E±0″.03, h13km±5km, mb3.6/2, Error ellipse: s-maj=5.5km s-min=4.1km az=152.7*
JMA ***16*** *18:11:11.0, 38″.92N×140″.87E, h7km±1km, M3.0*
JMA Felt I J1.
ISC 16 18:11:10.9±0.5, 38.91N±0.03×140.88E±0.03, h11km±6km, n12, σ0.40/22, mb3.6/2, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.27**	**80**	P	**Pg**	**18 11 16.4**	**0.0**
JMK				S	**Sg**	**18 11 20.3**	**+0.2**
JYK	**Kaneyama**	**0.41**	**272**	P	**Pg**	**18 11 18.9**	**0.0**
JYK				S	**Sg**	**18 11 24.2**	**-0.1**
JRG	**Rokugo**	**0.53**	**339**	P	**Pg**	**18 11 21.1**	**-0.1**
JRG				S	**Sg**	**18 11 28.6**	**+0.5**
JOU	**Okura**	**0.57**	**197**	P	**Pg**	**18 11 22.1**	**+0.2**
JOU				S	**Sg**	**18 11 29.7**	**+0.3**
JIO	**Ouri**	**0.58**	**141**	P	**Pg**	**18 11 22.1**	**-0.1**
JIO				S	**Sg**	**18 11 29.9**	**0.0**
OFUJ	**Ofunato**	**0.64**	**74**	P	**Pg**	**18 11 23.1**	**-0.2**
OFUJ				S	**Sg**	**18 11 31.8**	**+0.1**
JOM	**Ohasama**	**0.65**	**29**	P	**Pg**	**18 11 23.2**	**-0.4**
JOM				*e*S	**Sg**	**18 11 32.2**	**+0.1**
JYS	**Shirataka**	**0.94**	**223**	P	**Pg**	**18 11 28.7**	**-0.2**
JYS				S	**Sg**	**18 11 41.4**	**+0.3**
JYA	**Atsumi**	**0.96**	**251**	P	**Pg**	**18 11 29.2**	**-0.3**
JYA				S	**Sg**	**18 11 41.8**	**-0.2**
MJAR	**Matsushiro Arr**	**3.17**	**223**	Pn	**Pn**	**18 12 01.7**	**+0.9**
	0.3nm,0.3s,baz=22,slow=17,SNR=3.6						
MJAR				Pg	**Pg**	**18 12 08.0**	**-3.7**
	0.6nm,0.3s,baz=22,slow=15,SNR=5.4						
WRA	**Warramunga Arr**	**58.86**	**187**	P	**P**	**18 21 09.2**	**-0.5**
	0.3nm,0.5s,mb3.6,baz=4.9,slow=7.1,SNR=8.8						
ASAR	**Alice Springs**	**62.59**	**187**	P	**P**	**18 21 35.0**	**0.0**
	0.3nm,0.6s,mb3.6,baz=357,slow=4.3,SNR=6.8						

IDC ***16*** *18:17:06.5±0.8, 32″.36N×105″.03E, h0km, mb3.9/10, mb1 3.9/13, mb1mx3.8/29, mbtmp3.8/13, ML3.3/3, MS3.3/1, Ms1 3.3/1, ms1mx2.3/31, Error ellipse: s-maj=31.9km s-min=15.0km az=58.0*
ISCJB ***16*** *18:17:06.1±0.4, 32″.45N±0″.03×105″.11E±0″.05, h10km, mb4.0/13, Error ellipse: s-maj=5.9km s-min=4.1km az=5.2*
BJI ***16*** *18:17:08.2, 32″.41N×105″.28E, h17km, ML3.6/17, Ms3.8/3, Ms7 3.4/3*
NEIC ***16*** *18:17:08.7±3.4, 32″.42N×105″.13E, h14km±22km, mb4.1/3, Error ellipse: s-maj=11.3km s-min=6.0km az=59.0*
ISC 16 18:17:08.0±0.3, 32.44N±0.02×105.13E±0.04, h10km, n29, σ1.20/41, mb4.0/13, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.93**	**218**	Pn	**Pn**	**18 17 41.3**	**+0.5**
CD2				Pg	**Pg**	**18 17 43.3**	**-1.6**
CD2				Sn	**Sn**	**18 18 07.0**	**+2.0**
CD2				Sg	**Sg**	**18 18 09.4**	**-0.5**
CD2				smax			
	comp=N,4μm,0.8s						
CD2				smax			
	comp=E,3μm,0.8s						
XAN	**Xi'an**	**3.55**	**62**	Pn	**Pn**	**18 18 05.3**	**+2.1**
XAN				Pg	**Pg**	**18 18 13.8**	**-2.3**
XAN				Sn	**Sn**	**18 18 44.8**	**-0.4**
XAN				Sg	**Sg**	**18 18 56.5**	**-5.6**
XAN				smax			
	comp=N,300nm,0.6s						
XAN				smax			
	comp=E,160nm,0.7s						
XAN				LR	LR		
	comp=N,200nm,4.6s						
XAN				LR	LR		
	comp=E,48nm,4.2s						
XAN				LR	LR		
	comp=Z,99nm,4.5s						
LZH	**Lanzhou**	**3.79**	**344**	Pn	**Pn**	**18 18 09.4**	**+3.0**
LZH				Pg	**Pg**	**18 18 19.5**	**-1.1**
LZH				Sn	**Sn**	**18 18 50.3**	**-0.8**
LZH				Sg	**Sg**	**18 19 07.1**	**-2.6**
LZH				smax			
	comp=N,580nm,1.1s						
LZH				smax			
	comp=E,610nm,1.0s						
LZH				LR	LR		
	comp=E,880nm,5.4s						
LZH				LR	LR		
	comp=Z,1μm,9.1s						
ENH	**Enshi**	**4.31**	**119**	Pn	**Pn**	**18 18 14.2**	**+0.7**
GYA	**Guiyang**	**6.11**	**167**	Pn	**Pn**	**18 18 41.3**	**+2.9**
GYA				Sn	**Sn**	**18 19 48.3**	**0.0**
GYA				Sg	**Sg**	**18 20 21.4**	**-2.8**
GYA				smax			
	comp=N,50nm,0.9s						
GYA				smax			
	comp=E,50nm,0.8s						
KMI	**Kunming**	**7.59**	**197**	Pn	**Pn**	**18 18 59.6**	**+0.9**
KMI				Sn	**Sn**	**18 20 22.3**	**-2.4**
KMI				smax			
	comp=N,12nm,0.9s						
KMI				smax			
	comp=E,18nm,0.9s						
GTA	**Gaotai**	**8.18**	**330**	*e*P	**Pn**	**18 19 04.8**	**-1.9**
GTA				pP		18 19 08.8	
GTA				sP		18 19 11.3	
GTA				S	**Sn**	**18 20 39.9**	**+0.7**
GTA				sS		18 20 47.8	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GTA				LR	LR		
	comp=N,200nm,7.8s						
GTA				LR	LR		
	comp=E,140nm,9.0s						
GTA				LR	LR		
	comp=Z,210nm,8.7s						
CMAR	**Chiang Mai Arr**	**15.00**	**203**	Pn	**Pn**	**18 20 39.6**	**-0.5**
	comp=Z,0.0nm,0.3s,baz=27,slow=10,SNR=2.7						
SONM	**Songino Array**	**15.40**	**3**	Pn	**Pn**	**18 20 45.1**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=178,slow=12,SNR=4.7						
SONM				Lg		18 25 17.5	
	baz=183,slow=25,SNR=3.9						
KSRS	**Korea Array**	**19.33**	**69**	P	**Pn**	**18 21 35.8**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=256,slow=11,SNR=4.5						
MK31	**Makanchi Array**	**22.59**	**316**	*e*P	**P**	**18 22 09.1**	**+0.6**
MKAR	**Makanchi Array**	**22.59**	**316**	P	**P**	**18 22 09.3**	**+0.9**
	comp=Z,2.7nm,0.7s,mb3.8,baz=114,slow=12,SNR=21						
MKAR	**Makanchi Array**	**22.59**	**316**	P	**P**	**18 22 09.3**	**+0.9**
ZALV	**Zalesovo Beam**	**25.93**	**332**	P	**P**	**18 22 40.2**	**+0.1**
	comp=Z,1.0nm,0.5s,mb3.6,baz=134,slow=10,SNR=5.9						
UCH	**Uchtor**	**26.11**	**301**	*e*P	**P**	**18 22 42.5**	**+0.5**
	comp=Z,5.6nm,1.2s,mb4.0						
AAK	**Ala-Archa**	**26.21**	**302**	LR	LR	18 34 47.3	
	comp=Z,63nm,18.4s,baz=183,slow=40						
KURK	**Kurchatov**	**26.73**	**321**	P	**P**	**18 22 47.9**	**+0.4**
	comp=Z,1.0nm,0.5s,mb3.6,baz=130,slow=9.3,SNR=9.7						
KURK	**Kurchatov**	**26.73**	**321**	*e*P	**P**	**18 22 48.1**	**+0.6**
ABKAR	**Akbulak array**	**37.46**	**310**	*e*P	**P**	**18 24 22.5**	**+1.0**
	comp=Z,0.9nm,0.6s,mb3.8						
ARCES	**ARCESS Array B**	**56.41**	**335**	P	**P**	**18 26 49.7**	**+0.5**
	comp=Z,2.4nm,0.9s,mb4.2,baz=77,slow=7.7,SNR=7.8						
ARCES	**ARCESS Array B**	**56.41**	**335**	P	**P**	**18 26 49.7**	**+0.5**
BRTR	**Keskin Array B**	**56.85**	**299**	P	**P**	**18 26 53.1**	**+0.3**
	comp=Z,0.9nm,0.8s,mb3.9,baz=79,slow=6.4,SNR=6.5						
FINES	**FINESS Array B**	**56.95**	**326**	P	**P**	**18 26 53.2**	**0.0**
	comp=Z,1.9nm,0.6s,mb4.3,baz=89,slow=8.4,SNR=11						
AKASG	**Malin Array Be**	**57.12**	**313**	P	**P**	**18 26 54.3**	**-0.2**
	comp=Z,0.9nm,0.3s,mb4.2,baz=68,slow=7.8,SNR=5.7						
WRAB	**Tennant Creek**	**59.11**	**148**	*e*P	**P**	**18 27 08.8**	**0.0**
	comp=Z,2.3nm,0.6s,mb4.4						
WRA	**Warramunga Arr**	**59.11**	**148**	P	**P**	**18 27 08.6**	**-0.1**
	comp=Z,1.5nm,0.7s,mb4.2,baz=340,slow=7.8,SNR=18						
ASAR	**Alice Springs**	**62.19**	**150**	P	**P**	**18 27 29.4**	**-0.3**
	comp=Z,0.7nm,0.7s,mb3.9,baz=339,slow=5.9,SNR=9.6						
NB2	**NORSAR Subarra**	**64.01**	**327**	P	**P**	**18 27 40.5**	**-0.8**
	comp=Z,0.8nm,0.5s,mb4.0,baz=72,slow=6.9						
NOA	**NORSAR Array B**	**64.01**	**327**	P	**P**	**18 27 40.9**	**-0.5**
	comp=Z,1.4nm,0.6s,mb4.2,baz=73,slow=6.6,SNR=5.9						

NIED ***16*** *18:23:00.39″.10N×140″.90E, h5km, Mw4.1 Best double couple: M0=1.70000×10^15 NP1:φs=15.00000°, δ=46.00000°, λ=97.00000°. NP2:φs=185.00000°, δ=45.00000°, λ=83.00000°.*
BJI ***16*** *18:23:00.5, 38″.79N×141″.16E, h31km, mB4.9/9, mb4.4/9, Ms3.9/4, Ms7 4.0/5*
IDC ***16*** *18:23:00.4±0.6, 39″.08N×140″.86E, h0km, mb4.1/19, mb1 4.2/23, mb1mx4.1/32, mbtmp4.1/23, ML3.7/4, MS3.3/7, Ms1 3.3/7, ms1mx2.9/28, Error ellipse: s-maj=16.5km s-min=11.3km az=107.0*
ISCJB ***16*** *18:23:01.2±0.9, 39″.10N±0″.02×140″.94E±0″.04, h15km±6km, mb4.3/42, MS3.4/5, Error ellipse: s-maj=5.3km s-min=3.9km az=19.0*
NEIC ***16*** *18:23:01.7, 39″.09N×140″.93E, h11km, mb4.6/18, MW4.1(NIED), After JMA.*
NEIC Recorded [2 JMA] in Iwate and [2 JMA] in Akita and Miyagi.
JMA ***16*** *18:23:01.6, 39″.09N×140″.93E, h10km±1km, M4.2*
JMA Felt III J1.
MOS ***16*** *18:23:03.7±1.1, 39″.11N×140″.88E, h33km, mb4.6/16, Error ellipse: s-maj=9.5km s-min=6.2km az=98.7*
ISC 16 18:23:01.7±0.5, 39.10N±0.02×140.93E±0.04, h8km±3km, n108, σ1.09/116, mb4.3/42, MS3.4/5, 4C-6D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.27**	**122**	⇓P	**Pg**	**18 23 06.8**	**-0.3**
JMK				*e*S	**Sg**	**18 23 10.5**	**-0.2**
JRG	**Rokugo**	**0.38**	**323**	⇑P	**Pg**	**18 23 09.3**	**+0.2**
JOM	**Ohasama**	**0.47**	**37**	⇓P	**Pg**	**18 23 10.8**	**-0.1**
JOM				S	**Sg**	**18 23 17.2**	**+0.1**
JYK	**Kaneyama**	**0.48**	**248**	⇓P	**Pg**	**18 23 11.1**	**+0.2**
JYK				S	**Sg**	**18 23 17.5**	**+0.3**
OFUJ	**Ofunato**	**0.58**	**91**	⇓P	**Pg**	**18 23 12.

comp=Z,117nm,1.4s
YUK smax
comp=N,230nm,0.5s
YUK smax
comp=E,210nm,0.6s
YUK MLR MLR
comp=N,190nm,16.8s
YUK MLR MLR
comp=Z,131nm,16.8s
VLA Vladivostok 7.92 303 P **Pn 18 24 59.0 +2.0**
VLA MLR MLR
comp=Z,200nm,16.0s
YSS Yuzh-Sakhalins 7.97 9 *e*P **Pn 18 24 59.0 +1.3**
YSS Yuzh-Sakhalins 7.97 9 *e*P **Pn 18 24 59.2 +1.5**
HABR Khabarovsk 10.29 338 *e*P **Pn 18 25 27.6 -1.9**
HABR *e* 18 27 22.5
HABR MLR MLR
comp=Z,92nm,15.0s
KSRS Korea Array 10.36 265 Pn **Pn 18 25 34.6 +4.2**
comp=Z,1.6nm,0.3s,baz=79,slow=14,SNR=61
KSRS Sn **Sn 18 27 31.5 +4.8**
comp=Z,1.8nm,0.3s,baz=75,slow=23,SNR=16
KSRS LR LR 18 29 05.5
comp=Z,152nm,19.4s,baz=75,slow=35
KSRS Korea Array 10.36 265 P **Pn 18 25 34.7 +4.2**
KSRS 18 27 31.5
KSRS pmax pmax
comp=Z,2.0nm,0.3s
KSRS smax
comp=N,2.0nm,0.3s
KSRS MLR MLR
comp=Z,152nm,19.4s
CBIJ Chichi jima 12.01 175 Pn **Pn 18 25 52.2 -1.0**
comp=Z,2.9nm,0.3s,baz=311,slow=20,SNR=7.4
KLR Kul'dur 12.07 330 *e*P **Pn 18 25 54.2 +0.3**
PETK Petropavlovsk- 18.15 34 LR LR 18 33 34.6
comp=Z,23nm,19.8s,baz=47,slow=35
WHN Wuhan 23.36 257 *e*P **P 18 28 10.0 -0.8**
YAK Yakutsk 23.98 347 *e*P **P 18 28 13.2 -3.1**
YAK pmax pmax
comp=Z,10.0nm,0.9s,mb4.2
YAK pmax pmax
comp=N,6.0nm,1.3s
YAK pmax pmax
comp=E,2.0nm,1.2s
YAK Yakutsk 23.98 347 *e*P **P 18 28 14.3 -2.0**
comp=E,11nm,0.8s,mb4.3
SEY Seymchan 24.86 12⇓*e*P **P 18 28 24.6 +0.3**
ULN Ulaanbaatar 25.92 301 *e*P **P 18 28 34.7 +0.5**
ULN pmax pmax
comp=Z,5.0nm,1.4s,mb3.9
ULN Ulaanbaatar 25.92 301 *e*P **P 18 28 34.7 +0.6**
comp=Z,4.8nm,1.4s,mb3.8
SONM Songino Array 26.36 301 P **P 18 28 39.0 +0.9**
comp=Z,0.6nm,0.6s,mb3.3,baz=112,slow=8.7,SNR=5.3
SONM LR LR 18 38 18.4
comp=Z,64nm,19.3s,MS3.2,baz=73,slow=35
SONM Songino Array 26.36 301 P **P 18 28 39.0 +0.9**
SONM LR LR 18 38 18.4
ENH Enshi 27.20 261 *e*P **P 18 28 45.1 -0.8**
comp=Z,24nm,1.3s,mb4.6
BILL Bilibino 32.17 18 *e*P **P 18 29 31.0 +1.5**
BILL pmax pmax
comp=Z,4.0nm,1.0s,mb4.2
TIXI Tiksi 33.20 353 *e*P **P 18 29 37.6 -0.9**
ZAA0 Zalesovo Array 40.26 311 *e*P **P 18 30 38.2 -0.6**
ZALV Zalesovo Beam 40.26 311 P **P 18 30 38.5 -0.3**
comp=Z,3.1nm,0.6s,mb4.2,baz=79,slow=7.7,SNR=13
ZALV LR LR 18 47 49.7
comp=Z,35nm,20.4s,MS3.2,baz=59,slow=37
NVS Novosibirsk 41.16 312 *e*P **P 18 30 45.3 -0.9**
CMAR Chiang Mai Arr 41.70 253 P **P 18 30 50.3 -0.7**
comp=Z,0.4nm,0.6s,mb3.2,baz=40,slow=7.2,SNR=5.3
MK31 Makanchi Array 42.73 300 *e*P **P 18 30 58.7 -0.4**
MKAR Makanchi Array 42.73 300 P **P 18 30 58.9 -0.2**
comp=Z,1.7nm,0.6s,mb4.0,baz=87,slow=9.8,SNR=26
MKAR LR LR 18 49 25.6
comp=Z,41nm,20.0s,MS3.3,baz=168,slow=37
KURK Kurchatov 44.38 306 P **P 18 31 12.3 -0.1**
comp=Z,3.7nm,0.4s,mb4.5,baz=81,slow=8.4,SNR=31
KURK Kurchatov 44.38 306 *e*P **P 18 31 11.7 -0.7**
KURK pmax pmax
comp=Z,14nm,1.1s,mb4.6
KURK Kurchatov 44.38 306 *e*P **P 18 31 11.7 -0.7**
comp=Z,14nm,1.1s,mb4.6
TAPN Taplejung 45.45 272 *e*P **P 18 31 18.2 -3.1**
ODAN Odare 45.94 271 *e*P **P 18 31 21.6 -3.5**
JIRN Jiri 46.49 273 *e*P **P 18 31 27.3 -2.1**
RAMN Ramite 46.51 272 *e*P **P 18 31 27.0 -2.6**
GUN Gumba 46.61 273 *e*P **P 18 31 28.3 -2.1**
comp=Z,20nm,0.6s,mb5.2
KKN Kakani 47.13 274 *e*P **P 18 31 33.1 -1.4**
comp=Z,17nm,0.6s,mb5.1
KKN Kakani 47.13 274 *e*P **P 18 31 33.1 -1.4**
KKN pmax pmax
comp=Z,17nm,0.6s,mb5.2
TKM2 Tokmak 2 48.34 297 *e*P **P 18 31 44.3 +0.7**
TKM2 pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
TKM2 Tokmak 2 48.34 297 *e*P **P 18 31 44.3 +0.7**
comp=Z,7.9nm,0.9s,mb4.7
BVAR Borovoye Array 48.92 311 P **P 18 31 47.7 -0.2**
comp=Z,1.6nm,0.5s,mb4.3,baz=65,slow=8.8,SNR=8.5
BRVK Borovoye 48.97 311⇑*e*P **P 18 31 49.3 +1.0**
BRVK pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
AAK Ala-Archa 49.20 297 P **P 18 31 50.3 +0.1**
comp=Z,1.3nm,0.4s,mb4.3,baz=202,slow=8.3,SNR=3.7
AAK Ala-Archa 49.20 297 P **P 18 31 50.3 +0.1**
AML Almayashu 49.93 296 *e*P **P 18 31 57.0 +1.2**
comp=Z,9.4nm,1.2s,mb4.7
PSI Prapat 52.55 237 P **P 18 32 15.2 -0.6**
comp=Z,2.3nm,0.4s,mb4.5,baz=25,slow=8.5,SNR=3.6
INK Inuvik 52.74 28 P **P 18 32 16.6 +0.1**
comp=Z,1.6nm,0.9s,mb4.0,baz=295,slow=8.9,SNR=3.9
INK Inuvik 52.74 28 *e*P **P 18 32 16.3 -0.2**
SVE Sverdlovsk 53.36 318 *e*P **P 18 32 21.2 0.0**
SVE pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
ARU Arti 54.57 317*c i*P **P 18 32 29.9 -0.2**
ARU 18 34 31.2
ARU S **S 18 40 09.4 -0.1**
ARU SS SS 18 43 49.5 -2.0
ARU pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
ARU Arti 54.57 317 *e*P **P 18 32 29.7 -0.4**
comp=Z,10.0nm,1.1s,mb4.8
ABKAR Akbulak array 56.33 309 *e*P **P 18 32 42.3 -0.6**
comp=Z,2.6nm,0.6s,mb4.4
KBL Kabul 56.34 290 *e*P **P 18 32 43.6 +0.4**
KBL pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
KBL Kabul 56.34 290 *e*P **P 18 32 43.6 +0.4**
comp=Z,6.1nm,0.9s,mb4.6
WRA Warramunga Arr 59.05 187 P **P 18 33 01.6 -0.6**
comp=Z,1.8nm,0.5s,mb4.4,baz=5.0,slow=7.4,SNR=60
RES Resolute Bay 60.70 15 *e*P **P 18 33 12.6 -0.4**
RES pmax pmax
comp=Z,7.0nm,1.3s,mb4.6
RES Resolute Bay 60.70 15 *e*P **P 18 33 12.6 -0.4**
comp=Z,6.7nm,1.3s,mb4.6
ASAR Alice Springs 62.78 187 P **P 18 33 27.2 -0.2**
comp=Z,1.4nm,0.7s,mb4.2,baz=3.2,slow=4.9,SNR=20
JOF Joensuu 63.97 331 *e*P **P 18 33 33.5 -1.5**
JOF pmax pmax
comp=Z,1.0nm,0.5s,mb4.1
JOF Joensuu 63.97 331 *ep* **P 18 33 33.5 -1.5**
comp=Z,1.2nm,0.5s,mb4.2
KAF Kangasniemi 66.31 332 *e*P **P 18 33 48.0 -2.2**
KAF pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
KAF Kangasniemi 66.31 332 *ep* **P 18 33 48.0 -2.2**
comp=Z,1.6nm,0.6s,mb4.2
FINES FINESS Array B 66.82 332 P **P 18 33 53.2 -0.3**
comp=Z,3.0nm,0.7s,mb4.4,baz=54,slow=9.7,SNR=10
FINES LR LR 19 05 30.0
comp=Z,53nm,19.6s,MS3.8,baz=130,slow=38
FINES FINESS Array B 66.82 332 P **P 18 33 53.2 -0.3**
FINES LR LR 19 05 30.0
ZEI Tsey 69.22 309 *e*P **P 18 34 07.0 -1.9**
ZEI pmax pmax
comp=Z,5.0nm,0.4s,mb4.8
KIV Kislovodsk 69.28 310 *e*P **P 18 34 10.1 +0.9**
KIV pmax pmax
comp=Z,17nm,1.0s,mb4.9
KIV Kislovodsk 69.28 310 *e*P **P 18 34 10.6 +1.4**
comp=Z,19nm,1.0s,mb5.0
ANN Anapa 71.83 313 *e*P **P 18 34 18.3 -6.5**
ANN *e* 18 34 40.5
ANN *e*S S 18 43 32.9 -13
ANN pmax pmax
comp=Z,21nm,1.0s,mb5.0
NB2 NORSAR Subarra 72.14 337 P **P 18 34 26.1 -0.3**
comp=Z,14nm,1.4s,mb4.7,baz=39,slow=6.5
NOA NORSAR Array B 72.14 337 P **P 18 34 26.1 -0.3**
comp=Z,2.3nm,0.7s,mb4.2,baz=39,slow=6.0,SNR=7.8
NOA LR LR 19 09 23.6
comp=Z,19nm,18.9s,MS3.4,baz=45,slow=39
AKASG Malin Array Be 72.44 322 P **P 18 34 27.6 -0.7**
comp=Z,1.1nm,0.5s,mb4.1,baz=45,slow=6.3,SNR=9.1
NVAR Mina Array Bea 74.07 53 P **P 18 34 39.8 +1.6**
comp=Z,1.7nm,0.9s,mb4.0,baz=283,slow=5.6,SNR=8.7
PDAR Pinedale Array 76.50 46 P **P 18 34 52.5 +0.5**
comp=Z,0.5nm,0.5s,mb3.7,baz=304,slow=3.4,SNR=4.2
KOLS Kolonicke sedl 76.93 324 *e*P **P 18 34 55.6 +1.2**
KOLS pmax pmax
comp=Z,5.0nm,1.5s,mb4.2
KOLS Kolonicke sedl 76.93 324 *e*P **P 18 34 55.6 +1.2**
comp=Z,4.9nm,1.5s,mb4.2
STHS Stebnicka Huta 77.06 324 *e*P **P 18 34 56.5 +1.4**
STHS pmax pmax
comp=Z,5.0nm,1.8s,mb4.1
STHS Stebnicka Huta 77.06 324 *e*P **P 18 34 56.5 +1.4**
comp=Z,5.3nm,1.8s,mb4.2
OJC Ojcow 77.12 326 *e*P **P 18 34 54.7 -0.8**
BRTR Keskin Array B 77.21 311 P **P 18 34 56.5 +0.3**
comp=Z,0.8nm,0.6s,mb3.8,baz=46,slow=5.3,SNR=7.1
CRVS Cervenica-Dubn 77.33 324 *e*P **P 18 34 57.1 +0.4**
CRVS pmax pmax
comp=Z,3.0nm,1.3s,mb4.1
CRVS Cervenica-Dubn 77.33 324 *e*P **P 18 34 57.1 +0.4**
comp=Z,3.2nm,1.3s,mb4.1
NIE Niedzica 77.48 325 *e*P **P 18 34 58.6 +1.1**
DPC Dobruska-Polom 78.51 327 *e*P **P 18 35 03.8 +0.6**
DPC Dobruska-Polom 78.51 327 *e*P **P 18 35 03.8 +0.6**
VYHS Vyhne 78.82 325 *e*P **P 18 35 05.5 +0.6**
VYHS pmax pmax
comp=Z,4.0nm,1.8s,mb4.0
VYHS Vyhne 78.82 325 *e*P **P 18 35 05.5 +0.6**
comp=Z,3.6nm,1.8s,mb4.0
CLL Collm 79.12 330 *e*P **P 18 35 07.0 +0.5**
KHC Kasperske Hory 80.59 328 *e*P **P 18 35 15.2 +0.7**
KHC Kasperske Hory 80.59 328 *e*P **P 18 35 15.2 +0.7**
GERES GERESS Array B 80.76 328 P **P 18 35 15.9 +0.4**
comp=Z,0.4nm,0.5s,mb3.6,baz=29,slow=6.1,SNR=6.2
TXAR Lajitas Array 89.17 52 P **P 18 35 57.4 -0.6**
comp=Z,0.2nm,0.8s,mb3.5,baz=0.0,slow=0.5,SNR=3.5
TXAR Lajitas Array 89.17 52 P **P 18 35 57.4 -0.6**
TORD Torodi Ar. Bea 115.60 315 PKP PKPdf 18 41 43.4 -1.5
comp=Z,0.2nm,0.5s,baz=16,slow=0.4,SNR=4.1
LPAZ La Paz 145.93 56 PKPbc PKPbc 18 42 43.1 +1.0
comp=Z,0.7nm,0.5s,baz=320,slow=4.3,SNR=5.3

*ISK **16** 18:24:57.2, 39°.51N×28°.54E, h12km, MD2.9*
*ISCJB **16** 18:24:57.8±0.5, 39°.53N±0°.02×28°.60E±0°.04, h7km±4km, Error ellipse: s-maj=5.4km s-min=3.3km az=157.5*
*CSEM **16** 18:24:58.2±0.1, 39°.54N×28°.64E, h8km, MD2.8, Error ellipse: s-maj=2.0km s-min=1.4km az=70.0*
*DDA **16** 18:24:58.1, 39°.55N×28°.60E, h11km±2km, Md2.8*
ISC 16 18:24:58.4±0.4, 39°.53N±0°.02×28°.59E±0°.04, h13km±4km, n35, σ0s82/53, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.11**	**310**	*i* P	**Pg**	**18 25 01.3**	**-0.2**
DURS				*i* S	**Sg**	**18 25 03.3**	**-0.4**
DURS	**Dursunbey**	**0.11**	**310**	*i* P	**Pg**	**18 25 01.3**	**-0.2**
DURS				*i* S	**Sg**	**18 25 03.3**	**-0.4**
DEMI	**Demirci**	**0.49**	**168**	*i* P	**Pg**	**18 25 08.7**	**+0.6**
DEMI				*i* S	**Sg**	**18 25 15.4**	**+0.7**
DEMI	**Demirci**	**0.49**	**168**	*i* P	**Pg**	**18 25 08.7**	**+0.6**
DEMI				*i* S	**Sg**	**18 25 15.4**	**+0.7**
BALB	**Balikesir**	**0.56**	**282**	*e*PG	**Pg**	**18 25 07.9**	**-1.4**
BALB	**Balikesir**	**0.56**	**282**	*e*Pg	**Pg**	**18 25 07.9**	**-1.4**
KCT	**Karacabey**	**0.76**	**346**	*e*PG	**Pg**	**18 25 13.0**	**0.0**
KCT				*e*SG	**Sg**	**18 25 22.9**	**-0.1**
KCT	**Karacabey**	**0.76**	**346**	*e*Pg	**Pg**	**18 25 13.0**	**-0.1**
KCT				*e*Sg	**Sg**	**18 25 22.9**	**-0.1**
BALY	**Balya**	**0.78**	**286**	*i* P	**Pg**	**18 25 13.7**	**+0.2**
BALY				*i* S	**Sg**	**18 25 24.8**	**+1.1**
BALY	**Balya**	**0.78**	**286**	*i* P	**Pg**	**18 25 13.7**	**+0.2**
BALY				*i* S	**Sg**	**18 25 24.8**	**+1.2**
GDZ	**Gediz**	**0.82**	**122**	*i* P	**Pg**	**18 25 13.7**	**-0.5**
GDZ				*i* Pg	**Sg**	**18 25 25.5**	**+0.5**
GDZ	**Gediz**	**0.82**	**122**	*i* P	**Pg**	**18 25 13.7**	**-0.6**
AKHS	**Akhisar**	**0.89**	**223**	*i* P	**Pg**	**18 25 16.1**	**+0.6**
AKHS				*i* S	**Sg**	**18 25 28.5**	**+1.5**
AKHS	**Akhisar**	**0.89**	**223**	*i* P	**Pg**	**18 25 16.1**	**+0.6**
AKHS				*i* S	**Sg**	**18 25 28.5**	**+1.5**
AKS	**Akhisar**	**0.89**	**223**	*e*PG	**Pg**	**18 25 14.0**	**-1.4**
AKS	**Akhisar**	**0.89**	**223**	*e*Pg	**Pg**	**18 25 14.0**	**-1.5**
BNT	**Bandirma**	**0.97**	**328**	*e*PG	**Pg**	**18 25 17.1**	**-0.1**
BNT				*e*SG	**Sg**	**18 25 30.3**	**+0.4**
KULA	**Kula-Manisa**	**1.01**	**177**	*e*PG	**Pg**	**18 25 17.6**	**-0.4**
KULA				*e*SG	**Sg**	**18 25 30.7**	**-0.5**
KULA	**Kula-Manisa**	**1.01**	**177**	*e*Pg	**Pg**	**18 25 17.6**	**-0.3**
KULA				*e*Sg	**Sg**	**18 25 30.7**	**-0.5**
ARMT	**Armutlu**	**1.06**	**11**	*e*PN	**Pn**	**18 25 18.0**	**-0.9**
ARMT				*e*SN	**Sn**	**18 25 33.5**	**-0.1**
ARMT	**Armutlu**	**1.06**	**11**	*e*Pn	**Pn**	**18 25 18.0**	**-1.0**
ARMT				*e*Sn	**Sn**	**18 25 33.5**	**-0.1**
ADVT	**Abdulvahap**	**1.26**	**44**	*e*PN	**Pn**	**18 25 21.9**	**+0.1**
ADVT	**Abdulvahap**	**1.26**	**44**	*e*Pn	**Pn**	**18 25 21.9**	**+0.1**
ALT	**Altintas**	**1.27**	**111**	*e*PN	**Pn**	**18 25 22.0**	**+0.1**
ALT	**Altintas**	**1.27**	**111**	*e*Pn	**Pn**	**18 25 22.0**	**+0.1**
KHL	**Karahalli**	**1.41**	**148**	*e*PN	**Pn**	**18 25 22.7**	**-1.1**
KHL	**Karahalli**	**1.41**	**148**	*e*Pn	**Pn**	**18 25 22.7**	**-1.1**
RKY	**Sarkoy-Tekirda**	**1.58**	**317**	*e*PN	**Pn**	**18 25 25.1**	**-1.1**
RKY	**Sarkoy-Tekirda**	**1.58**	**317**	*e*Pn	**Pn**	**18 25 25.1**	**-1.1**
ELBA	**Catalca**	**1.62**	**356**	*i* P	**Pn**	**18 25 28.4**	**+1.7**
ELBA				*i* S	**Sn**	**18 25 48.5**	**+1.1**
ELBA	**Catalca**	**1.62**	**356**	*i* P	**Pn**	**18 25 28.4**	**+1.7**
ELBA				*i* S	**Sn**	**18 25 48.5**	**+1.0**
LPK	**Lapseki**	**1.64**	**302**	*e*PN	**Pn**	**18 25 25.9**	**-1.0**
LPK	**Lapseki**	**1.64**	**302**	*e*Pn	**Pn**	**18 25 25.9**	**-1.0**
GULT	**Gulveren**	**1.73**	**58**	*e*PN	**Pn**	**18 25 29.1**	**+0.8**
GULT	**Gulveren**	**1.73**	**58**	*e*Pn	**Pn**	**18 25 29.1**	**+0.8**

CASC 16 18:36:30.6±1.6, 10°.41N×86°.28W, h27km±14km, MD4.0, ML3.3, 1C-1D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VCR	**Vista de Mar**	**0.69**	**113**⇓	*e*P	Pb	18 36 43.5	-0.7
JCR	**Jicaral**	**1.27**	**116**⇓	*e*P	Pn	18 36 51.9	-0.7
JCR				*e*S	Sn	18 37 17.3	+8.5
JTS	**JuntasAbangare**	**1.31**	**95**	*e*P	Pn	18 36 52.5	-0.6
APON	**Apoyo**	**1.52**	**8**	*e*P	Pn	18 36 55.7	-0.3
CRUN	**El Crucero**	**1.57**	**359**	*e*P	Pn	18 36 58.1	+1.4
MGAN	**Managua**	**1.73**	**1**	*e*P	Pn	18 36 59.1	+0.2
XAVN	**Gruta Xavier**	**1.73**	**358**	*e*P	Pn	18 36 59.4	+0.5
CSAN		**1.77**	**355**	*e*P	Pn	18 36 59.2	-0.3
COPN	**Copaltepe**	**1.79**	**350**	*e*P	Pn	18 36 59.6	-0.2
APYN	**Apoyeque**	**1.82**	**358**	*e*P	Pn	18 37 00.4	+0.3
CGA2	**Cerro Gallo 2**	**1.83**	**102**	*e*P	Pn	18 37 00.8	+0.6
HUEN		**1.92**	**3**	*e*P	Pn	18 37 01.5	-0.1
PRS1	**Puriscal**	**1.98**	**102**	*e*P	Pn	18 37 02.4	+0.1
MOMN	**Momotombo**	**2.01**	**353**	*e*P	Pn	18 37 03.0	+0.3
CNGN	**Cerro Negro**	**2.12**	**349**	*e*P	Pn	18 37 04.2	0.0
CNGN				AML	AML	18 37 25.3
	comp=N,160nm,0.4s						
CNGN				*e*S	Sn	18 37 30.5	+0.7
LAJ	**Bijagual**	**2.19**	**104**	*e*P	Pn	18 37 00.7	-4.5
CRIN	**San Cristobal**	**2.40**	**342**	*e*P	Pn	18 37 07.2	-1.0
CRIN				AML	AML	18 37 30.5
	comp=E,289nm,0.4s						
URSC	**Urasca**	**2.53**	**103**	*e*P	Pn	18 37 11.6	+1.7
BUS	**Buena Vista**	**2.62**	**109**	*e*P	Pn	18 37 12.4	+1.3
BAR1		**3.14**	**111**	*e*P	Pn	18 37 18.9	+0.6
CNCH	**Conchagua**	**3.23**	**332**	*e*P	Pn	18 37 19.5	0.0
ACR	**Cerro Adams**	**3.53**	**119**	*e*P	Pn	18 37 22.8	-0.8

*IDC **16** 18:48:49.5±1.6, 39°.01N×141°.16E, h0km, mb3.3/3, mb1 3.4/7, mb1mx3.3/28, mbtmp3.4/7, ML3.0/4, Error ellipse: s-maj=35.5km s-min=23.0km az=97.0*
*ISCJB **16** 18:48:51.9±0.5, 39°.00N±0°.03×140°.89E±0°.06, h20km±6km, mb3.5/3, Error ellipse: s-maj=7.2km s-min=5.1km az=179.1*
*NEIC **16** 18:48:52.0, 39°.00N×140°.84E, h10km, MG3.2(JMA), After JMA.*
*JMA **16** 18:48:52.0, 39°.00N×140°.84E, h7km±1km, M3.3 Broadband fault plane solution: P waves. NP1: φs247.00000°, δ47.00000°, λ159.00000°. NP2: φs351.00000°, δ75.00000°, λ45.00000°. Principal axes: T Plg42.0000°, Azm219.0000°; N Plg43.0000°, Azm6.0000°; P Plg17.0000°, Azm113.0000°;*
JMA Felt I J1.
ISC 16 18:48:52.2±0.5, 38°.99N±0°.03×140°.86E±0°.05, h5km±6km, n17, σ1s10/24, mb3.5/3, 2C-4D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.28**	**98**	⇓P	**Pg**	**18 48 57.8**	**+0.1**
JMK				*e*S	**Sg**	**18 49 02.0**	**+0.5**
JYK	**Kaneyama**	**0.40**	**259**	⇓P	**Pg**	**18 48 59.5**	**-0.3**
JRG	**Rokugo**	**0.44**	**337**	⇓P	**Pg**	**18 49 00.5**	**-0.2**
JRG				S	**Sg**	**18 49 06.6**	**+0.2**
JOM	**Ohasama**	**0.59**	**35**	⇑P	**Pg**	**18 49 03.3**	**-0.2**
JOM				S	**Sg**	**18 49 11.3**	**+0.2**
JOU	**Okura**	**0.64**	**194**	⇑P	**Pg**	**18 49 04.4**	**-0.1**
JOU				S	**Sg**	**18 49 12.9**	**0.0**
JIO	**Ouri**	**0.66**	**144**	⇓P	**Pg**	**18 49 04.5**	**-0.4**
JIO				S	**Sg**	**18 49 13.5**	**+0.1**
MJAR	**Matsushiro Arr**	**3.22**	**221**	Pn	**Pn**	**18 49 44.3**	**+0.9**
	0.8nm,0.3s,baz=30,slow=12,SNR=6.1						
MJAR				Pg	**Pg**	**18 49 51.0**	**-2.9**
	0.8nm,0.3s,baz=26,slow=15,SNR=11						
MAJO	**Matsushiro**	**3.22**	**221**	*e*P	**Pn**	**18 49 44.4**	**+1.0**
MAT	**Matsushiro**	**3.22**	**221**	P	**Pn**	**18 49 44.5**	**+1.1**
MAT				*e*S	**Sn**	**18 50 26.1**	**+3.9**
ERM	**Erimo**	**3.49**	**29**	*e*P	**Pn**	**18 49 48.8**	**+1.7**
ASAJ	**Asahikawa**	**5.28**	**14**	Pn	**Pn**	**18 50 09.9**	**-1.8**
	0.3nm,0.3s,baz=228,slow=12,SNR=3.4						
JHJ	**Hachijo jima 2**	**5.92**	**189**	Pn	**Pn**	**18 50 21.1**	**+0.6**
	2.6nm,0.3s,baz=94,slow=14,SNR=3.0						
KSRS	**Korea Array**	**10.29**	**265**	Pn	**Pn**	**18 51 23.1**	**+2.6**
	0.2nm,0.3s,baz=76,slow=14,SNR=5.5						
MKAR	**Makanchi Array**	**42.73**	**300**	P	**P**	**18 56 49.2**	**-0.9**
	0.4nm,0.7s,mb3.2,baz=74,slow=8.9,SNR=4.2						
MKAR	**Makanchi Array**	**42.73**	**300**	P	**P**	**18 56 49.2**	**-0.9**
WRA	**Warramunga Arr**	**58.94**	**187**	P	**P**	**18 58 50.8**	**-1.6**
	0.7nm,0.7s,mb3.8,baz=4.8,slow=7.3,SNR=7.3						
ASAR	**Alice Springs**	**62.67**	**187**	P	**P**	**18 59 15.7**	**-2.0**
	0.3nm,0.9s,mb3.4,baz=10,slow=5.7,SNR=4.2						

NEIC 16 18:53:29.9, 40°.08S×176°.54E, h68km, ML3.8(WEL), After WEL., North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSZ	**Takapari Road**	**0.45**	**272**	P	Pn	18 53 41.1	-0.9
BFZ	**Birch Farm**	**0.64**	**200**	P	Pn	18 53 44.3	+0.3
MOVZ	**Moawhango**	**0.91**	**318**	P	Pn	18 53 46.7	-0.4
BKZ	**Black Stump Fm**	**0.91**	**358**	P	Pn	18 53 46.4	-0.8
MRZ	**Mangatainoka R**	**0.94**	**231**	P	Pn	18 53 47.2	-0.3
WNVZ	**Wahianoa**	**1.04**	**316**	P	Pn	18 53 49.0	+0.2
TUVZ	**Tukino**	**1.06**	**320**	P	Pn	18 53 49.2	+0.2
FWVZ	**Far West T-bar**	**1.12**	**317**	P	Pn	18 53 49.8	0.0
NGZ	**Ngauruhoe**	**1.16**	**321**	P	Pn	18 53 50.2	-0.1
WTVZ	**West Tongariro**	**1.21**	**322**	P	Pn	18 53 50.8	-0.2
WAZ	**Wanganui**	**1.24**	**285**	P	Pn	18 53 52.0	+0.7
TWVZ	**Taurewa**	**1.32**	**319**	P	Pn	18 53 52.0	-0.4
MTW	**Mount Morrison**	**1.34**	**216**	P	Pn	18 53 52.0	-0.6
KNZ	**Kokohu**	**1.37**	**40**	P	Pn	18 53 52.4	-0.7
KIW	**Kapiti Island**	**1.47**	**237**	P	Pn	18 53 53.9	-0.4
CAW	**Cannon Point**	**1.52**	**227**	P	Pn	18 53 54.3	-0.7
PAWZ	**Paruwai Farm**	**1.55**	**213**	P	Pn	18 53 54.8	-0.7
MSWZ	**Moikau Station**	**1.66**	**216**	P	Pn	18 53 55.7	-1.1
VRZ	**Vera Road**	**1.67**	**304**	P	Pn	18 53 56.8	-0.3
WEL	**Wellington**	**1.81**	**228**	P	Pn	18 53 57.9	-1.0
MRW	**Makara Radio**	**1.81**	**230**	P	Pn	18 53 57.9	-1.0
BHW	**Baring Head**	**1.84**	**223**	P	Pn	18 53 58.0	-1.2
RAEZ	**Rainy Point**	**1.84**	**295**	P	Pn	18 53 59.9	+0.7
SNZO	**South Karori**	**1.86**	**228**	P	Pn	18 53 58.4	-1.2
URZ	**Urewera**	**1.87**	**14**	P	Pn	18 53 58.3	-1.4
MWZ	**Matawai**	**1.90**	**24**	P	Pn	18 53 59.0	-1.2
DFE	**Dawson Falls**	**2.02**	**291**	P	Pn	18 54 02.8	+1.0
HIZ	**Hauiti**	**2.04**	**320**	P	Pn	18 54 01.4	-0.6
NEZ	**North Egmont**	**2.05**	**292**	P	Pn	18 54 03.3	+1.1
TCW	**Tory Channel**	**2.06**	**236**	P	Pn	18 54 01.1	-1.2
PKE	**Pukeiti**	**2.16**	**293**	P	Pn	18 54 04.4	+0.8
NWEZ	**Newall Road**	**2.21**	**290**	P	Pn	18 54 05.4	+1.0
PUZ	**Puketiti**	**2.41**	**34**	P	Pn	18 54 05.4	-1.6
BSWZ	**Blackbirch Sta**	**2.60**	**230**	P	Pn	18 54 08.0	-1.5
NNZ	**Nelson**	**2.66**	**244**	P	Pn	18 54 09.2	-1.2
QRZ	**Quartz Range**	**3.15**	**255**	P	Pn	18 54 15.5	-1.6
THZ	**Tophouse**	**3.23**	**237**	P	Pn	18 54 16.2	-1.9
KHZ	**Kahutara**	**3.25**	**223**	P	Pn	18 54 16.0	-2.4
DSZ	**Denniston Nort**	**3.96**	**244**	P	Pn	18 54 26.1	-2.0
LTZ	**Lake Taylor**	**4.20**	**229**	P	Pn	18 54 28.7	-2.6
MQZ	**McQueen's Vall**	**4.64**	**217**	P	Pn	18 54 34.9	-2.5
WVZ	**Waitaha Valley**	**5.28**	**234**	P	Pn	18 54 43.4	-2.8
RPZ	**Rata Peaks**	**5.47**	**227**	P	Pn	18 54 46.4	-2.4
ODZ	**Otahua Downs**	**6.60**	**219**	P	Pn	18 55 01.5	-2.7
WKZ	**Wanaka**	**7.31**	**227**	P	Pn	18 55 10.8	-3.1
TUZ	**Tuapeka**	**7.75**	**218**	P	Pn	18 55 17.8	-2.1

MEX 16 19:04:07.6±1.0, 14°.97N×92°.89W, h104km±11km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.61**	**96**	*e*P	Pn	19 04 23.4	-1.2
THIG				*e*S	Sn	19 04 35.3	-2.1
PCIG		**0.80**	**337**	*e*P	Pn	19 04 25.9	-0.4
PCIG				*i* S	Sn	19 04 38.5	-1.9
SCX	**San Cristobal**	**1.77**	**8**	*i* P	Pn	19 04 35.8	-1.7
SCX				*i* S	Sn	19 04 59.3	-0.9
TGIG		**1.81**	**353**	*i* P	Pn	19 04 37.2	-0.8
TGIG				*i* S	Sn	19 04 58.0	-3.1
HUIG	**Huatulco**	**3.21**	**285**	*e*P	Pn	19 04 55.0	-1.2
HUIG				*i* S	Sn	19 05 30.8	-2.9
SCIG	**Sabancuy**	**4.30**	**22**	*i* P	Pn	19 05 09.7	-1.2
SCIG				*i* S	Sn	19 05 57.

JRG Rokugo 0.34 321 ||P **Pg** **19 05 10.4 +0.2**
JRG S **Sg** **19 05 15.9 +1.1**
JOM Ohasama 0.45 40 ||P **Pg** **19 05 11.7 -0.5**
JOM S **Sg** **19 05 17.6 -0.5**
JYK Kaneyama 0.48 244 P **Pg** **19 05 13.1 +0.3**
JYK S **Sg** **19 05 19.7 +0.6**
OFUJ Ofunato 0.59 95 ||P **Pg** **19 05 14.3 -0.5**
JIO Ouri 0.76 153 ||P **Pg** **19 05 17.2 -0.8**
JIO S **Sg** **19 05 27.3 -0.5**
JOU Okura 0.79 195 ||P **Pg** **19 05 18.5 -0.1**
JOU S **Sg** **19 05 29.2 +0.3**
ERM Erimo 3.35 30 *i* P **Pn** **19 05 57.6 +1.6**
ERM Erimo 3.35 30 *eP* **Pn** **19 05 57.3 +1.3**
MAJO Matsushiro 3.36 221 *eP* **Pn** **19 05 57.6 +1.5**
MAT Matsushiro 3.36 221 P **Pn** **19 05 57.8 +1.7**
MAT *eS* **Sn** **19 06 39.6 +3.5**
MJAR Matsushiro Arr 3.36 221 Pn **Pn** **19 05 57.9 +1.8**
9.0nm,0.3s,baz=30,slow=13,SNR=139
MJAR Pg **Pg** **19 06 02.8 -5.0**
12nm,0.3s,baz=29,slow=14,SNR=36
MJAR Lg 19 06 49.4
8.6nm,0.3s,baz=351,slow=27,SNR=4.3
MJAR LR LR 19 07 24.2
comp=Z,702nm,19.7s,baz=90,slow=42
ASAJ Asahikawa 5.14 14 Pn **Pn** **19 06 22.2 +1.6**
7.6nm,0.3s,baz=225,slow=14,SNR=47
ASAJ Asahikawa 5.14 14 P **Pn** **19 06 22.3 +1.7**
ASAJ pmax pmax
comp=Z,8.0nm,0.3s
JHJ Hachijo jima 2 6.07 189 Pn **Pn** **19 06 34.0 +0.6**
comp=Z,27nm,0.3s,baz=318,slow=2.6,SNR=15
JHJ Sn **Sn** **19 07 43.0 0.0**
comp=Z,39nm,0.3s,baz=73,slow=19,SNR=7.9
YUK Yuzh-Kuril'sk 6.14 36 ||*iP* **Pn** **19 06 34.4 0.0**
YUK *i* S **Sn** **19 07 44.7 -0.1**
YUK pmax pmax
comp=N,20nm,0.5s
YUK pmax pmax
comp=E,30nm,0.5s
YUK pmax pmax
comp=Z,118nm,0.5s
YUK pmax pmax
comp=Z,327nm,1.5s
YUK smax
comp=N,500nm,0.5s
YUK smax
comp=E,250nm,0.5s
YUK MLR MLR
comp=N,566nm,13.8s
YUK MLR MLR
comp=E,252nm,13.8s
YUK MLR MLR
comp=Z,334nm,13.8s
VLA Vladivostok 7.89 303 *eP* **Pn** **19 06 57.7 -0.7**
VLA *e* 19 08 25.5
VLA pmax pmax
comp=Z,21nm,0.9s
VLA MLR MLR
comp=Z,500nm,16.2s
YSS Yuzh-Sakhalins 7.94 9 *eP* **Pn** **19 07 00.0 +1.0**
YSS *eS* **Sn** **19 08 30.0 +1.2**
YSS pmax pmax
comp=N,50nm,0.9s
YSS pmax pmax
comp=Z,50nm,0.9s
YSS MLR MLR
comp=Z,300nm,11.0s
YSS MLR MLR
comp=N,300nm,12.0s
YSS MLR MLR
comp=E,700nm,14.0s
YSS Yuzh-Sakhalins 7.94 9 *eP* **Pn** **19 06 59.9 +0.9**
comp=E,38nm,0.7s
KUR Kuril'sk 7.99 38 P **Pn** **19 07 00.5 +0.8**
KUR *eS* **Sn** **19 08 26.5 -3.6**
KUR pmax pmax
comp=Z,90nm,0.7s
KUR smax
comp=N,240nm,0.9s
KUR smax
comp=E,180nm,0.9s
MDJ Mudanjiang 10.06 307 P **Pn** **19 07 30.9 +2.7**
MDJ pmax pmax
comp=Z,4.0nm,0.7s
MDJ pmax pmax
comp=Z,110nm,5.4s
MDJ Mudanjiang 10.06 307 *eP* **Pn** **19 07 30.3 +2.2**
comp=Z,56nm,1.3s
HABR Khabarovsk 10.25 338 P **Pn** **19 07 28.9 -1.8**
HABR MLR MLR
comp=Z,229nm,14.0s
KSRS Korea Array 10.35 265 Pn **Pn** **19 07 36.5 +4.4**
comp=Z,4.8nm,0.3s,baz=78,slow=13,SNR=29
KSRS Sn **Sn** **19 09 34.9 +6.6**
comp=Z,3.8nm,0.3s,baz=75,slow=24,SNR=30
KSRS LR LR 19 11 07.9
comp=Z,384nm,19.6s,baz=270,slow=35
KSRS Korea Array 10.35 265 P **Pn** **19 07 36.5 +4.4**
KSRS 19 09 34.9
KSRS pmax pmax
comp=Z,5.0nm,0.3s
KSRS smax
comp=N,4.0nm,0.3s
KSRS MLR MLR
comp=Z,384nm,19.6s
KLR Kul'dur 12.04 330 *eP* **Pn** **19 07 55.7 +0.5**
KLR pmax pmax
comp=E,85nm,1.8s
KLR pmax pmax
comp=Z,78nm,1.8s
KLR MLR MLR
comp=N,500nm,12.5s
KLR MLR MLR
comp=Z,900nm,12.5s
CBIJ Chichi jima 12.05 175 Pn **Pn** **19 07 51.2 -4.1**
comp=Z,11nm,0.3s,baz=94,slow=16,SNR=22
CBIJ Sn **Sn** **19 10 01.1 -8.8**
comp=Z,3.2nm,0.3s,baz=287,slow=19,SNR=6.5
CN2 Changchun 12.50 297 *eP* **Pn** **19 08 05.9 +4.4**
CN2 *eS* **Sn** **19 10 24.5 +3.6**
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,400nm,10.0s
CN2 LR LR
comp=E,400nm,10.0s
CN2 LR LR
comp=Z,400nm,13.0s
PETK Petropavlovsk- 18.12 34 P **Pn** **19 09 13.9 -1.4**
comp=Z,0.1nm,0.3s,baz=216,slow=14,SNR=2.9
PETK LR LR 19 17 03.4
comp=Z,81nm,18.6s,baz=229,slow=40
BJI Beijing 19.08 281 P **Pn** **19 09 26.1 -0.9**
BJI pmax pmax
comp=Z,23nm,1.3s
BJI LR LR
comp=N,190nm,12.0s
BJI LR LR
comp=E,390nm,12.3s
BJI LR LR
comp=Z,140nm,14.2s
BJT Baijiatuau 19.09 281 *eP* **Pn** **19 09 26.0 -1.1**
BJT pmax pmax
comp=Z,26nm,0.8s
BJT Baijiatuau 19.09 281 *eP* **Pn** **19 09 26.0 -1.1**
comp=Z,26nm,0.8s
NJ2 Nanjing 19.26 255 *eP* **Pn** **19 09 27.8 -1.4**
NJ2 pP pP 19 09 32.0 +1.4
NJ2 PP 19 09 44.0
NJ2 S **Sn** **19 12 56.0 -9.2**
NJ2 pmax pmax
comp=Z,20nm,0.7s
NJ2 pmax pmax
comp=Z,60nm,3.6s
NJ2 LR LR
comp=N,660nm,14.3s
NJ2 LR LR
comp=E,390nm,14.6s
NJ2 LR LR
comp=Z,640nm,14.4s
WHN Wuhan 23.36 257 P **P** **19 10 11.8 -0.7**
YAK Yakutsk 23.94 347 *eP* **P** **19 10 14.5 -3.2**
YAK *e*PP 19 10 21.0
YAK *e*S **S** **19 14 29.7 -4.4**
YAK *e*SSS 19 15 14.8
YAK pmax pmax
comp=Z,65nm,1.3s,mb4.9
YAK pmax pmax
comp=E,12nm,1.4s
YAK pmax pmax
comp=N,37nm,1.4s
YAK smax
comp=E,67nm,2.3s
YAK smax
comp=N,150nm,3.0s
YAK MLR MLR
comp=Z,108nm,14.0s,MS3.5
YAK MLR MLR
comp=N,113nm,15.0s,MS3.6
YAK MLR MLR
comp=E,112nm,17.0s,MS3.6
YAK Yakutsk 23.94 347 *eP* **P** **19 10 15.4 -2.3**
comp=E,44nm,0.9s,mb4.9
SEY Seymchan 24.82 13 ||*eP* **P** **19 10 25.9 +0.2**
ULN Ulaanbaatar 25.90 301 *eP* **P** **19 10 34.2 -1.4**
ULN pmax pmax
comp=Z,12nm,1.3s,mb4.3
ULN Ulaanbaatar 25.90 301 *eP* **P** **19 10 34.2 -1.4**
comp=Z,12nm,1.3s,mb4.3
FX1 Attu Island--F 26.02 47 P **P** **19 10 37.7 +1.0**
comp=Z,12nm,0.6s,mb4.6,baz=17,slow=7.1,SNR=7.8
FX1 LR LR 19 22 31.2
comp=Z,36nm,18.2s,MS3.0,baz=318,slow=40
FX1 Attu Island--F 26.02 47 P **P** **19 10 37.7 +1.0**
FX1 LR LR 19 22 31.2
XAN Xi'an 26.11 269 P **P** **19 10 37.0 -0.7**
XAN pmax pmax
comp=Z,3.0nm,1.4s,mb3.6
XAN pmax pmax
comp=Z,16nm,4.8s
XAN LR LR
comp=N,96nm,8.6s
XAN LR LR
comp=E,68nm,9.8s
XAN LR LR
comp=Z,61nm,10.6s,MS3.4
SONM Songino Array 26.34 301 P **P** **19 10 38.6 -1.0**
comp=Z,4.3nm,1.0s,mb3.9,baz=92,slow=8.4,SNR=20
SONM PcP PcP 19 14 05.7 +0.4
comp=Z,0.6nm,0.5s,baz=130,slow=3.2,SNR=5.9
SONM LR LR 19 21 26.0
comp=Z,163nm,18.8s,MS3.6,baz=90,slow=38
SONM Songino Array 26.34 301 P **P** **19 10 38.6 -1.0**
SONM 19 14 05.7
ENH Enshi 27.20 261 *eP* **P** **19 10 46.3 -1.2**
comp=Z,29nm,0.8s,mb4.9
LZH Lanzhou 29.39 276 *eP* **P** **19 11 09.0 +1.9**
LZH pmax pmax
comp=Z,18nm,1.5s,mb4.6
TGY Tagaytay City 30.52 221 P **P** **19 11 17.3 +0.1**
comp=Z,36nm,0.3s,mb5.7,baz=283,slow=22,SNR=4.8
GTA Gaotai 31.63 284 *eP* **P** **19 11 28.5 +1.7**
GTA pP pP 19 11 35.3 +6.0
GTA sP sP 19 11 38.0 +7.6
GTA PcP PcP 19 14 19.9 +1.1
GTA S **S** **19 16 37.1 +1.2**
GTA SS SS 19 18 29.4 -22
GTA pmax pmax
comp=Z,4.0nm,1.3s,mb4.1
GTA pmax pmax
comp=Z,82nm,4.2s
GTA LR LR
comp=N,150nm,18.3s,MS4.1
GTA LR LR
comp=E,310nm,17.1s,MS4.1
GTA LR LR
comp=Z,400nm,18.0s,MS4.1
BILL Bilibino 32.14 18 *eP* **P** **19 11 30.4 -0.5**
BILL pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
BILL Bilibino 32.14 18 *eP* **P** **19 11 30.4 -0.6**
comp=Z,6.7nm,0.8s,mb4.5
TIXI Tiksi 33.16 353 *eP* **P** **19 11 38.6 -1.3**
TIXI pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
TIXI Tiksi 33.16 353 *eP* **P** **19 11 38.6 -1.3**
comp=Z,5.4nm,0.8s,mb4.5
CHRT Chiangrai 40.21 254 P **P** **19 12 41.0 +0.6**
ZAA0 Zalesovo Array 40.23 311 *eP* **P** **19 12 39.3 -1.0**
ZALV Zalesovo Beam 40.23 311 P **P** **19 12 39.9 -0.3**
comp=Z,15nm,0.8s,mb4.8,baz=79,slow=7.6,SNR=44
ZALV PcP PcP 19 14 43.7 -0.3
comp=Z,2.3nm,0.5s,baz=90,slow=3.6,SNR=5.7
ZALV LR LR 19 29 29.8
comp=Z,61nm,20.9s,MS3.4,baz=69,slow=36
ZALV Zalesovo Beam 40.23 311 P **P** **19 12 39.9 -0.4**
ZALV 19 14 43.7
ZALV Zalesovo Beam 40.23 311 P **P** **19 12 39.9 -0.4**
ZALV PcP PcP 19 14 43.7 -0.4
ZALV LR LR 19 29 29.8
NVS Novosibirsk 41.13 312 *i* P **P** **19 12 46.5 -1.1**
NVS pmax pmax
comp=Z,22nm,1.2s,mb4.7
NVS pmax pmax
comp=N,9.0nm,1.4s
NVS pmax pmax
comp=E,24nm,1.3s
CHG Chiang Mai 41.48 253 P **P** **19 12 51.4 +0.5**
comp=E,11nm,0.9s,mb4.5
CHTO Chiang Mai 41.48 253 *eP* **P** **19 12 50.6 -0.3**
CHTO pmax pmax
comp=Z,9.0nm,0.9s,mb4.4
CHTO Chiang Mai 41.48 253 *eP* **P** **19 12 50.6 -0.3**
comp=Z,9.3nm,0.9s,mb4.4
CMAR Chiang Mai Arr 41.70 253 P **P** **19 12 52.8 +0.1**
comp=Z,2.3nm,0.8s,mb3.8,baz=40,slow=7.1,SNR=8.6
CMAR PcP PcP 19 14 49.5 +0.1
comp=Z,1.6nm,0.8s,baz=9.4,slow=1.4,SNR=7.8
CMAR LR LR 19 31 05.8
comp=Z,73nm,18.1s,MS3.6,baz=312,slow=38
CMAR Chiang Mai Arr 41.70 253 P **P** **19 12 52.8 +0.1**
CMAR 19 14 49.5
MK31 Makanchi Array 42.70 300 *eP* **P** **19 13 00.2 -0.4**
MKAR Makanchi Array 42.70 300 P **P** **19 13 00.1 -0.5**
comp=Z,9.1nm,0.8s,mb4.5,baz=86,slow=9.8,SNR=86
MKAR LR LR 19 31 15.4
comp=Z,99nm,18.5s,MS3.7,baz=265,slow=37
SHL Shillong 43.09 267 *eP*KP **P** **19 13 05.0 +1.0**
TTA Tatalina 43.94 36 *eP* **P** **19 13 11.0 +0.6**
SVW2 Sparrevohn 44.12 39 *eP* **P** **19 13 12.6 +0.8**
KURK Kurchatov 44.35 306 *c i*P **P** **19 13 13.2 -0.7**
KURK pmax pmax
comp=Z,53nm,1.2s,mb5.2
KURK Kurchatov 44.35 306 *eP* **P** **19 13 12.5 -1.4**
comp=Z,42nm,1.0s,mb5.1
TAPN Taplejung 45.45 272 *eP* **P** **19 13 23.1 +0.2**
comp=Z,19nm,0.8s,mb5.0
KDAK Kodiak Island 45.82 43 P **P** **19 13 24.6 -0.8**
comp=Z,14nm,0.6s,mb5.1,baz=297,slow=4.2,SNR=10
KDAK Kodiak Island 45.82 43 *i* P **P** **19 13 27.7 +2.2**
KDAK Kodiak Island 45.82 43 *eP* **P** **19 13 25.8 +0.4**
comp=Z,15nm,0.8s,mb5.0
ODAN Odare 45.93 271 *eP* **P** **19 13 26.8 +0.1**
comp=Z,28nm,0.9s,mb5.2
BPAW Bear Paw Mtn. 46.20 34 *eP* **P** **19 13 29.1 +0.7**
comp=Z,8.0nm,1.2s,mb4.5
JIRN Jiri 46.48 273 *eP* **P** **19 13 30.9 -0.1**
RAMN Ramite 46.50 272 *eP* **P** **19 13 31.0 -0.2**
comp=Z,36nm,0.9s,mb5.3
COLD Coldfoot 46.53 30 *eP* **P** **19 13 31.9 +1.0**
comp=Z,1.9nm,0.5s,mb4.3
TRF Thorofare Moun 46.54 35 *eP* **P** **19 13 31.7 +0.7**
comp=Z,3.8nm,0.9s,mb4.3
GUN Gumba 46.60 273 *eP* **P** **19 13 31.4 -0.6**
comp=Z,94nm,0.9s,mb5.7
KKN Kakani 47.12 274 *eP* **P** **19 13 35.3 -0.8**
comp=Z,73nm,0.8s,mb5.6
KKN Kakani 47.12 274 *eP* **P** **19 13 35.3 -0.8**
KKN pmax pmax
comp=Z,73nm,0.8s,mb5.7
PKI Pulchoki 47.13 273 *eP* **P** **19 13 35.5 -0.6**
PKI Pulchoki 47.13 273 *eP* **P** **19 13 35.9 -0.2**
PKI pmax pmax
comp=Z,16nm,0.9s,mb5.0
PKI Pulchoki 47.13 273 *eP* **P** **19 13 35.9 -0.2**
comp=Z,16nm,0.9s,mb5.0
PKIN Phulchoki 47.13 273 *eP* **P** **19 13 35.9 -0.3**
comp=Z,16nm,0.9s,mb4.9
SEW Seward 47.19 40 *eP* **P** **19 13 36.1 -0.1**
comp=Z,16nm,1.3s,mb4.8
DMN Daman 47.34 274 *eP* **P** **19 13 37.3 -0.5**
comp=Z,26nm,0.9s,mb5.1
KAPI Kappang 48.09 209 P **P** **19 13 43.4 -0.2**
comp=Z,3.5nm,0.4s,mb4.7,baz=265,slow=6.6,SNR=6.6
TKM2 Tokmak 2 48.31 297 P **P** **19 13 46.0 +0.9**
SNR=54
TKM2 Tokmak 2 48.31 297 *eP* **P** **19 13 45.7 +0.6**
TKM2 pmax pmax
comp=Z,65nm,1.2s,mb5.5
TKM2 Tokmak 2 48.31 297 *eP* **P** **19 13 45.7 +0.6**
comp=Z,65nm,1.2s,mb5.5
PAX Paxson 48.75 36 *eP* **P** **19 13 48.6 +0.4**
PAX pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
PAX Paxson 48.75 36 *eP* **P** **19 13 48.5 +0.4**
comp=Z,3.0nm,0.9s,mb4.3
KZA Kyzart 48.84 296 P **P** **19 13 51.2 +2.0**
SNR=14
KBK Karagaybulak 48.85 297 P **P** **19 13 49.9 +0.7**
SNR=33
BVAR Borovoye Array 48.89 311 P **P** **19 13 49.2 -0.2**
comp=Z,5.9nm,0.5s,mb4.8,baz=73,slow=7.6,SNR=50
BVAR PcP PcP 19 15 13.8 +0.1
comp=Z,3.5nm,0.8s,baz=54,slow=2.6,SNR=5.0
BRVK Borovoye 48.94 311 *c i*P **P** **19 13 49.4 -0.4**
BRVK pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
BRVK MLR MLR
comp=Z,114nm,16.0s,MS4.0
BRVK Borovoye 48.94 311 *eP* **P** **19 13 49.7 -0.1**
comp=Z,15nm,1.1s,mb4.9
USP Ospenovka 48.96 297 P **P** **19 13 50.4 +0.3**
SNR=10
FRU Bishkek 49.02 297 *eP* **P** **19 13 51.0 +0.4**
FRU pmax pmax
comp=Z,60nm,1.6s,mb5.4
AAK Ala-Archa 49.18 297 P **P** **19 13 52.5 +0.7**
SNR=8.4
AAK Ala-Archa 49.18 297 *c i*P **P** **19 13 52.0 +0.2**
AAK pmax pmax
comp=Z,14nm,1.2s,mb4.9
AAK MLR MLR
comp=Z,44nm,19.0s,MS3.5
AAK Ala-Archa 49.18 297 *eP* **P** **19 13 51.8 0.0**
comp=Z,20nm,1.0s,mb5.1
UCH Uchtor 49.30 296 P **P** **19 13 53.7 +1.0**
SNR=7.4
UCH Uchtor 49.30 296 *eP* **P** **19 13 53.2 +0.5**
comp=Z,6.0nm,1.0s,mb4.6
BMRM Bremner River 49.45 38 *eP* **P** **19 13 54.2 +0.7**
comp=Z,7.3nm,0.9s,mb4.7
MENT Mentasta 49.55 36 *eP* **P** **19 13 56.0 +1.7**
EKS2 Erkin-Say 49.66 297 P **P** **19 13 55.7 +0.2**
SNR=16
EKS2 Erkin-Say 49.66 297 *eP* **P** **19 13 55.6 +0.1**
comp=Z,15nm,0.9s,mb5.0
AML Almayashu 49.91 296 P **P** **19 13 58.9 +1.5**
SNR=29
AML Almayashu 49.91 296 *eP* **P** **19 13 58.3 +1.0**
comp=Z,40nm,1.1s,mb5.4
EGAK Eagle 50.39 33 *eP* **P** **19 14 00.7 +0.1**
comp=Z,3.9nm,0.8s,mb4.5
PSI Prapat 52.56 237 P **P** **19 14 18.1 +0.5**
comp=Z,6.0nm,0.7s,mb4.6,baz=48,slow=3.5,SNR=7.3
INK Inuvik 52.71 28 P **P** **19 14 18.4 +0.4**
comp=Z,3.4nm,0.4s,mb4.7,baz=300,slow=7.2,SNR=25
INK Inuvik 52.71 28 *eP* **P** **19 14 18.5 +0.5**
INK pmax pmax
comp=Z,6.0nm,0.7s
INK Inuvik 52.71 28 *eP* **P** **19 14 18.5 +0.6**
comp=Z,6.3nm,0.7s,mb4.7
SVE Sverdlovsk 53.33 318 ||*eP* **P** **19 14 22.7 0.0**
SVE *eS* **S** **19 21 41.9 -12**
SVE pmax pmax
comp=Z,43nm,1.2s,mb5.2
SVE MLR MLR
comp=Z,248nm,17.0s,MS4.3
ARU Arti 54.54 317 *c i*P **P** **19 14 31.3 -0.3**
ARU *e* 19 16 31.1
ARU *e*PPP 19 17 39.5
ARU S **S** **19 22 09.7 -1.0**
ARU SS SS 19 25 45.7 -7.0
ARU pmax pmax
comp=Z,38nm,1.2s,mb5.3
ARU MLR MLR
comp=Z,199nm,17.0s,MS4.2
ARU Arti 54.54 317 *eP* **P** **19 14 31.0 -0.5**
comp=Z,32nm,1.0s,mb5.3
ABKAR Akbulak array 56.30 309 *eP* **P** **19 14 43.8 -0.6**
comp=Z,10nm,0.6s,mb5.0
KBL Kabul 56.32 289 *eP* **P** **19 14 44.3 -0.4**
KBL pmax pmax
comp=Z,23nm,0.9s,mb5.2
KBL Kabul 56.32 289 *eP* **P** **19 14 44.3 -0.4**
comp=Z,22nm,0.9s,mb5.2
WRA Warramunga Arr 59.08 187 P **P** **19 15 03.4 -0.7**
comp=Z,5.6nm,0.6s,mb4.8,baz=5.6,slow=7.0,SNR=7.0
RES Resolute Bay 60.67 15 *eP* **P** **19 15 13.7 -0.8**
RES pmax pmax
comp=Z,11nm,0.9s,mb5.0
RES Resolute Bay 60.67 15 *eP* **P** **19 15 13.7 -0.8**
comp=Z,11nm,0.9s,mb5.0
KEV Kevo 61.35 339 *ep* **P** **19 15 20.7 +1.6**
KEV Kevo 61.35 339 *ep* **P** **19 15 20.7 +1.6**
ARCES ARCESS Array B 61.90 339 P **P** **19 15 21.9 -0.9**
comp=Z,2.0nm,0.6s,mb4.4,baz=54,slow=8.2,SNR=13
ARCES LR LR 19 46 56.8
comp=Z,73nm,18.3s,MS3.9,baz=335,slow=41
ASAR Alice Springs 62.81 187 P **P** **19 15 29.1 -0.3**
comp=Z,3.5nm,0.7s,mb4.6,baz=5.4,slow=5.8,SNR=5.9
JOF Joensuu 63.94 331 *eP* **P** **19 15 35.1 -1.4**
JOF pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
JOF Joensuu 63.94 331 *ep* **P** **19 15 35.1 -1.4**
comp=Z,2.1nm,0.4s,mb4.5
JOF Joensuu 63.94 331 *ep* **P** **19 15 35.1 -1.4**
comp=Z,2.1nm,0.4s,mb4.5
PUL Pulkovo 66.20 329 *i* P **P** **19 15 51.7 +0.5**
PUL pmax pmax
comp=Z,60nm,0.8s,mb5.7
KAF Kangasniemi 66.27 332 *eP* **P** **19 15 49.4 -2.2**
KAF pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
KAF Kangasniemi 66.27 332 *ep* **P** **19 15 49.4 -2.2**
comp=Z,6.3nm,0.5s,mb4.9
KAF Kangasniemi 66.27 332 *ep* **P** **19 15 49.4 -2.2**
comp=Z,6.3nm,0.5s,mb4.9
FINES FINESS Array B 66.78 332 P **P** **19 15 54.4 -0.6**
comp=Z,9.2nm,0.6s,mb5.0,baz=48,slow=8.5,SNR=33
FINES LR LR 19 47 06.8
comp=Z,59nm,18.8s,MS3.8,baz=311,slow=38
VSU Vasula 68.46 329 ||*eP* **P** **19 16 05.5 0.0**
VSU pmax pmax
comp=Z,13nm,0.9s,mb5.0
SUMG Summit 68.59 360 *eP* **P** **19 16 06.8 +0.7**
comp=Z,15nm,0.9s,mb4.9
SUMG Summit 68.59 360 *i* P **P** **19 16 05.9 -0.3**
comp=Z,10nm,1.1s,mb4.7
ZEI Tsey 69.19 309 *eP* **P** **19 16 06.5 -3.9**
ZEI pmax pmax
comp=Z,26nm,1.4s,mb5.0
KIV Kislovodsk 69.25 310 *eP* **P** **19 16 11.3 +0.6**
KIV pmax pmax
comp=Z,62nm,1.0s,mb5.5
KIV MLR MLR
comp=Z,36nm,19.0s,MS3.6
KIV Kislovodsk 69.25 310 *eP* **P** **19 16 11.2 +0.5**
comp=Z,64nm,1.0s,mb5.5
SCO Scoresbysund 69.99 354 *i* P **P** **19 16 14.3 -0.6**
comp=Z,4.8nm,0.9s,mb4.4
GNI Garni 70.15 306 *i* P **P** **19 16 18.2 +1.8**
GNI pmax pmax
comp=Z,35nm,1.5s
IZAR Zarasai 70.44 327 *eP* **P** **19 16 17.9 0.0**
IZAR AMB AMB 19 16 20.4
comp=Z,3.8nm,0.6s,mb4.5
IDID Didziasalis 70.51 326 *eP* **P** **19 16 18.4 +0.1**
IDID AMB AMB 19 16 18.9
comp=Z,5.3nm,0.8s,mb4.5
MNK Minsk 70.57 325 *eP* **P** **19 16 17.0 -1.7**
ISAL Salakas 70.61 327 *eP* **P** **19 16 18.9 0.0**
ISAL AMB AMB 19 16 20.5
comp=Z,8.2nm,1.0s,mb4.6
IIGN Ignalina 70.71 327 *eP* **P** **19 16 19.5 0.0**
IIGN AMB AMB 19 16 20.6
comp=Z,5.5nm,0.6s,mb4.7
SOC Sochi 71.22 311 *eP* **P** **19 16 22.4 -0.4**

SOC eS S 19 25 42.2 +2.1
SOC pmax pmax
comp=Z,35nm,1.2s,mb5.2
SOC MLR MLR
comp=Z,121nm,16.0s,MS4.2
ANN Anapa 71.81 313 eP **P 19 16 19.4 -6.9**
ANN e 19 16 40.6
ANN eS S 19 25 32.9 -14
ANN pmax pmax
comp=Z,39nm,1.9s,mb5.0
NB2 NORSAR Subarra 72.11 337 P **P 19 16 27.3 -0.5**
comp=Z,6.6nm,0.7s,mb4.7,baz=39,slow=6.2
NOA NORSAR Array B 72.11 337 P **P 19 16 27.6 -0.3**
comp=Z,5.8nm,0.7s,mb4.6,baz=39,slow=6.0,SNR=28
NOA LR LR 19 51 25.9
comp=Z,43nm,19.8s,MS3.7,baz=30,slow=39
FFC Flin Flon 72.16 33 i P **P 19 16 28.9 +0.6**
AKASG Malin Array Be 72.41 322 P **P 19 16 29.2 -0.7**
comp=Z,3.4nm,0.4s,mb4.7,baz=44,slow=6.5,SNR=28
AKASG Malin Array Be 72.41 322 P **P 19 16 29.2 -0.7**
AKBB Malin Array Si 72.41 322 eP **P 19 16 29.1 -0.7**
KIEV Kiev 72.42 322 eP **P 19 16 29.1 -0.8**
KIEV pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
KIEV Kiev 72.42 322 eP **P 19 16 29.1 -0.8**
comp=Z,5.6nm,0.7s,mb4.6
CMB Columbia Colle 72.98 55 eP **P 19 16 34.1 +0.6**
CMB pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
CMB Columbia Colle 72.98 55 eP **P 19 16 34.1 +0.7**
comp=Z,3.9nm,0.7s,mb4.5
SIM Simferopol' 73.57 315 eP **P 19 16 30.0 -6.8**
SIM pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
SIM MLR MLR
comp=Z,50nm,16.9s,MS3.9
SFJD Kangerlussuaq 73.83 5 i P **P 19 16 37.4 -0.6**
comp=Z,10nm,0.8s,mb4.8
NVAR Mina Array Bea 74.05 53 P **P 19 16 40.6 +0.9**
comp=Z,3.2nm,0.8s,mb4.3,baz=284,slow=6.1,SNR=25
MIB Mutribah 74.42 296 eP **P 19 16 41.4 -0.6**
MIB AMb AMB 19 16 44.6
comp=Z,36nm,1.2s,mb5.2
M13A Montello 74.75 49 eP **P 19 16 44.3 +0.5**
comp=Z,4.6nm,1.1s,mb4.3
RDF Al-Radifah 74.79 295 eP **P 19 16 43.6 -0.6**
RDF AMb AMB 19 16 47.1
comp=Z,108nm,1.2s,mb5.7
NAY Al-Naaiem 74.81 295 eP **P 19 16 43.6 -0.7**
NAY AMb AMB 19 16 46.9
comp=Z,28nm,1.0s,mb5.1
KIS Kishinev 75.05 319 eP **P 19 16 43.0 -2.4**
KWP Kalwaria Pacla 76.20 324 eP **P 19 16 52.7 +0.7**
KWP Kalwaria Pacla 76.20 324 eP **P 19 16 52.5 +0.5**
comp=Z,26nm,1.3s,mb5.0
KWP Kalwaria Pacla 76.20 324⇑ iP **P 19 16 52.5 +0.5**
DUG Dugway 76.28 49 eP **P 19 16 53.3 +0.7**
DUG pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
DUG Dugway 76.28 49 eP **P 19 16 53.3 +0.7**
comp=Z,3.1nm,0.7s,mb4.3
BUR08 Bucovina Ar. S 76.42 321 eP **P 19 16 53.4 +0.1**
BURAR Bucovina Array 76.43 321⇑ iP **P 19 16 53.1 -0.2**
BURAR Bucovina Array 76.43 321⇑ iP **P 19 16 53.1 -0.2**
PDAR Pinedale Array 76.48 46 P **P 19 16 54.4 +0.7**
comp=Z,2.8nm,0.6s,mb4.3,baz=288,slow=2.1,SNR=22
VRI Vrincioaia 76.88 319⇑ iP **P 19 16 52.9 -3.0**
VRI Vrincioaia 76.88 319⇑ iP **P 19 16 52.9 -3.0**
KOLS Kolonicke sedl 76.90 324 eP **P 19 16 56.0 +0.1**
KOLS pmax pmax
comp=Z,5.0nm,1.3s,mb4.3
KOLS Kolonicke sedl 76.90 324 eP **P 19 16 56.0 +0.1**
comp=Z,5.3nm,1.3s,mb4.3
KOLS Kolonicke sedl 76.90 324 eP **P 19 16 56.0 +0.1**
TIRR Tirgusor 76.97 317⇑ iP **P 19 16 52.2 -4.2**
TIRR Tirgusor 76.97 317⇑ iP **P 19 16 52.2 -4.2**
STHS Stebnicka Huta 77.03 324 eP **P 19 16 58.0 +1.4**
STHS pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
STHS Stebnicka Huta 77.03 324 eP **P 19 16 58.0 +1.4**
comp=Z,6.0nm,0.9s,mb4.5
STHS Stebnicka Huta 77.03 324 eP **P 19 16 58.0 +1.4**
OJC Ojcow 77.09 326 eP **P 19 16 55.9 -1.1**
BR131 Keskin Array S 77.18 311 eP **P 19 16 57.5 -0.1**
comp=Z,1.9nm,0.6s,mb4.2
BRTR Keskin Array B 77.18 311 P **P 19 16 57.8 +0.1**
comp=Z,1.8nm,0.5s,mb4.3,baz=90,slow=3.8,SNR=19
CRVS Cervenica-Dubn 77.30 324 eP **P 19 16 58.5 +0.3**
CRVS pmax pmax
comp=Z,13nm,1.8s,mb4.6
CRVS Cervenica-Dubn 77.30 324 eP **P 19 16 58.5 +0.3**
comp=Z,13nm,1.8s,mb4.5
CRVS Cervenica-Dubn 77.30 324 eP **P 19 16 58.5 +0.3**
NIE Niedzica 77.44 325 eP **P 19 16 59.9 +0.9**
MLR Muntele Rosu 77.54 319⇑ iP **P 19 16 55.9 -3.7**
MLR Muntele Rosu 77.54 319⇑ iP **P 19 16 55.9 -3.7**
MSU Marysvale 77.74 50 eP **P 19 17 02.5 +1.6**
MSU pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
MSU Marysvale 77.74 50 eP **P 19 17 02.5 +1.6**
comp=Z,2.4nm,0.7s,mb4.2
BSEG Bad Segeberg 78.02 333 eP **P 19 17 02.1 0.0**
comp=Z,12nm,1.0s,mb4.8
VOIR 78.03 320⇑ iP **P 19 16 59.7 -2.6**
VOIR 78.03 320⇑ iP **P 19 16 59.7 -2.6**
KECS Kecovo 78.05 324 eP **P 19 17 03.3 +0.9**
KECS pmax pmax
comp=Z,2.0nm,1.5s,mb3.8
KECS Kecovo 78.05 324 eP **P 19 17 03.3 +0.9**
comp=Z,2.2nm,1.5s,mb3.9
KECS Kecovo 78.05 324 eP **P 19 17 03.3 +0.9**
OKC Ostrava-Krasne 78.09 326 eP **P 19 17 03.8 +1.2**
OKC e*PP pP 19 17 07.4 +2.1
OKC MLR MLR
comp=Z,100nm,11.3s,MS4.4
OKC Ostrava-Krasne 78.09 326 eP **P 19 17 03.8 +1.2**
OKC epP pP 19 17 07.4 +2.1
OKC AMS AMS 19 54 10.0
comp=Z,100nm,11.3s
DRGR 78.22 322⇑ iP **P 19 17 02.3 -1.1**
DRGR 78.22 322⇑ iP **P 19 17 02.3 -1.1**
SRU San Rafael 78.33 49 eP **P 19 17 04.9 +0.8**
SRU pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
SRU San Rafael 78.33 49 eP **P 19 17 04.9 +0.8**
comp=Z,3.9nm,0.6s,mb4.5
MORC Moravsky Berou 78.39 326 eP **P 19 17 04.5 +0.2**
MORC pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
MORC Moravsky Berou 78.39 326 eP **P 19 17 04.5 +0.2**
comp=Z,7.5nm,1.0s,mb4.6
MORC Moravsky Berou 78.39 326⇑ iP **P 19 17 04.1 -0.2**
DPC Dobruska-Polom 78.48 327 eP **P 19 17 05.6 +0.9**
DPC e*PP pP 19 17 09.8 +2.3
DPC Dobruska-Polom 78.48 327 eP **P 19 17 05.6 +0.9**
DPC epP pP 19 17 09.8 +2.3
DPC AMS AMS 19 54 10.0
UPC Upice 78.49 328 eP **P 19 17 05.1 +0.3**
UPC Upice 78.49 328 eP **P 19 17 05.1 +0.3**
VYHS Vyhne 78.78 325 eP **P 19 17 06.9 +0.5**
VYHS pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
VYHS Vyhne 78.78 325 eP **P 19 17 06.9 +0.5**
comp=Z,2.7nm,0.8s,mb4.2
VYHS Vyhne 78.78 325 eP **P 19 17 06.9 +0.5**
BRG Berggiesshubel 79.06 329 eP **P 19 17 07.7 -0.2**
comp=Z,3.0nm,0.8s,mb4.3
BRG Berggiesshubel 79.06 329 eP **P 19 17 07.7 -0.1**
comp=Z,12nm,1.5s,mb4.6
PVCC Panska Ves 79.07 328 eP **P 19 17 08.1 +0.2**
PVCC Panska Ves 79.07 328 eP **P 19 17 08.1 +0.2**
CLL Collm 79.09 330 eP **P 19 17 07.1 -0.9**
comp=Z,6.0nm,0.8s,mb4.6
CLL Collm 79.09 330 i P **P 19 17 07.2 -0.8**
CLL i 19 17 12.2
CLL pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
CLL Collm 79.09 330 i P **P 19 17 07.2 -0.8**
comp=Z,6.0nm,0.8s,mb4.6
CLL i 19 17 12.2
CLL Collm 79.09 330 i P **P 19 17 07.2 -0.8**
comp=Z,6.0nm,0.8s,mb4.6
CLL i sP sP 19 17 12.2 +0.4
GZR Gura Zlata 79.19 321⇑ iP **P 19 17 06.0 -2.7**
GZR Gura Zlata 79.19 321⇑ iP **P 19 17 06.0 -2.7**

PRU Pruhonice 79.50 328 eP **P 19 17 11.0 +0.7**
PRU e*PP pP 19 17 15.9 +2.8
PRU Pruhonice 79.50 328 eP **P 19 17 11.0 +0.7**
PRU epP pP 19 17 15.9 +2.8
PRU AMS AMS 19 54 00.0
BZS Buzias 79.60 322⇑ iP **P 19 17 08.5 -2.4**
BZS Buzias 79.60 322⇑ iP **P 19 17 08.5 -2.4**
TREC Trest 79.64 327 AMS AMS 19 54 50.0
NEUB Neuenburg 79.64 330 eP **P 19 17 11.0 -0.1**
CLZ Clausthal 79.67 331 eP **P 19 17 11.4 +0.2**
comp=Z,7.0nm,0.9s,mb4.6
CLZ Clausthal 79.67 331 eP **P 19 17 11.4 +0.2**
CLZ pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
ZST Bratislava 79.78 326 eP **P 19 17 12.4 +0.6**
ZST pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
ZST Bratislava 79.78 326 eP **P 19 17 12.4 +0.6**
comp=Z,5.6nm,0.7s,mb4.6
ZST Bratislava 79.78 326 eP **P 19 17 12.4 +0.6**
GUNZ Gunzen 80.09 329 eP **P 19 17 13.4 -0.1**
WERN Wernitzgruen 80.14 329 eP **P 19 17 13.7 -0.1**
NKC Novy Kostel 80.15 329 eP **P 19 17 13.9 +0.1**
NKC Novy Kostel 80.15 329 eP **P 19 17 14.1 +0.3**
MOX Moxa 80.15 330 eP **P 19 17 13.9 +0.1**
comp=Z,5.0nm,0.9s,mb4.4
CONA Conrad Observa 80.52 326⇓ iP **P 19 17 16.5 +0.6**
comp=Z,6.0nm,1.1s,mb4.4
KHC Kasperske Hory 80.56 328 eP **P 19 17 16.2 +0.1**
KHC MLR MLR
comp=Z,100nm,19.9s,MS4.2
KHC Kasperske Hory 80.56 328 eP **P 19 17 16.1 +0.1**
comp=Z,4.1nm,0.6s,mb4.5
KHC Kasperske Hory 80.56 328 eP **P 19 17 16.2 +0.1**
KHC epP pP 19 17 20.3 +1.5
KHC AMS AMS 19 55 40.0
comp=Z,100nm,19.9s
ROTZ Rotzenmuhle 80.61 329 eP **P 19 17 16.2 -0.1**
comp=Z,5.0nm,1.0s,mb4.4
GEC2 GERESS Array S 80.73 328 eP **P 19 17 16.7 -0.3**
comp=Z,2.0nm,0.7s,mb4.2
GEC2 GERESS Array S 80.73 328 eP **P 19 17 16.7 -0.3**
GEC2 pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
GERES GERESS Array B 80.73 328 P **P 19 17 17.1 +0.1**
comp=Z,1.6nm,0.6s,mb4.1,baz=32,slow=5.2,SNR=21
GERES LR LR 19 54 43.7
comp=Z,67nm,20.7s,MS4.0,baz=40,slow=37
WET Wettzell 80.83 328 eP **P 19 17 17.6 +0.1**
comp=Z,4.0nm,0.9s,mb4.3
WET Wettzell 80.83 328 eP **P 19 17 17.6 +0.1**
WET pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
GRA1 Grafenberg Arr 81.06 330 eP **P 19 17 19.0 +0.3**
comp=Z,17nm,1.0s,mb4.9
GRF Grafenberg Arr 81.06 330 eP **P 19 17 19.0 +0.3**
comp=Z,17nm,1.0s,mb4.9
GRF Grafenberg Arr 81.06 330 eP **P 19 17 19.0 +0.3**
GRF pmax pmax
comp=Z,17nm,1.0s,mb4.9
GRF Grafenberg Arr 81.06 330 eP **P 19 17 19.0 +0.3**
GRF pmax pmax
comp=Z,17nm,1.0s,mb4.9
SOKA Soboth 81.84 326⇑ iP **P 19 17 22.9 0.0**
comp=Z,9.9nm,1.2s,mb4.6
RJOB Jochberg 81.97 328 eP **P 19 17 24.0 +0.4**
comp=Z,7.0nm,0.9s,mb4.6
FUR Furstenfeldbru 82.26 329 eP **P 19 17 25.3 +0.2**
comp=Z,12nm,0.8s,mb4.9
FUR Furstenfeldbru 82.26 329 eP **P 19 17 25.3 +0.2**
FUR pmax pmax
comp=Z,12nm,0.8s,mb4.9
KBA Koelnbreinsper 82.26 327⇑ iP **P 19 17 25.7 +0.6**
comp=Z,6.5nm,0.9s,mb4.6
STU Stuttgart 82.60 330 eP **P 19 17 27.0 +0.2**
comp=Z,11nm,0.5s,mb5.1
RETA Reutte 83.01 329⇓ iP **P 19 17 29.2 +0.2**
comp=Z,11nm,0.8s,mb4.9,SNR=6.5
GIVF Givet 83.11 333 eP **P 19 17 28.1 -1.4**
BFO Black Forest 83.29 330 eP **P 19 17 31.3 +0.9**
comp=Z,12nm,1.3s,mb4.8
BFO Black Forest 83.29 330 eP **P 19 17 31.3 +0.9**
BFO pmax pmax
comp=Z,12nm,1.3s,mb4.8
BAIF Baives 83.36 334 eP **P 19 17 30.2 -0.6**
FETA Feichten 83.40 328⇑ iP **P 19 17 31.0 0.0**
comp=Z,6.6nm,0.9s,mb4.7
SCHQ Schefferville 83.43 16 P **P 19 17 31.2 +0.2**
comp=Z,3.5nm,0.6s,mb4.5,baz=11,slow=8.2,SNR=6.2
DAVA Damuels 83.53 329⇑ iP **P 19 17 31.6 -0.1**
comp=Z,8.5nm,0.8s,mb4.9
CDF Champ du Feu 83.62 331⇑ iP **P 19 17 31.9 -0.3**
comp=Z,7.7nm,0.8s,mb4.6
CDF Champ du Feu 83.62 331⇑ iP **P 19 17 31.9 -0.3**
CDF pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
CDF Champ du Feu 83.62 331⇑ iP **P 19 17 31.9 -0.3**
comp=Z,3.8nm,0.8s,mb4.6
HINF Hinteralfeld 84.28 331 eP **P 19 17 34.7 -0.8**
comp=Z,2.6nm,0.6s,mb4.2
HINF Hinteralfeld 84.28 331 eP **P 19 17 34.7 -0.8**
HINF pmax pmax
comp=Z,1.0nm,0.6s,mb4.1
HINF Hinteralfeld 84.28 331 eP **P 19 17 34.7 -0.8**
comp=Z,1.3nm,0.6s,mb4.2
HAU Haudompre 84.31 331⇑ iP **P 19 17 35.1 -0.6**
comp=Z,13nm,0.9s,mb4.7
HAU eMLR MLR
comp=Z,61nm,18.2s,MS3.7
HAU Haudompre 84.31 331⇑ iP **P 19 17 35.1 -0.6**
HAU pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
HAU MLR MLR
comp=Z,60nm,18.3s,MS4.0
HAU Haudompre 84.31 331⇑ iP **P 19 17 35.1 -0.6**
comp=Z,6.3nm,0.9s,mb4.8
HAU LR LR
comp=Z,60nm,18.3s,MS4.0
MEZF Maizieres J'vi 84.37 332 eP **P 19 17 35.9 -0.1**
PMOR Pomariorio Ree 85.37 113 eT 20 51 01.7
comp=Z,38nm,0.2s
CABF La Chapelle 85.57 331 eP **P 19 17 41.6 -0.4**
comp=Z,19nm,1.0s,mb5.0
CABF La Chapelle 85.57 331 eP **P 19 17 41.6 -0.4**
CABF pmax pmax
comp=Z,10.0nm,1.0s,mb5.0
CABF La Chapelle 85.57 331 eP **P 19 17 41.6 -0.4**
comp=Z,9.7nm,1.0s,mb5.0
LOR Lormes 85.84 332⇑ iP **P 19 17 42.9 -0.5**
comp=Z,27nm,1.2s,mb5.0
LOR eMLR MLR
comp=Z,66nm,21.5s,MS3.7
LOR Lormes 85.84 332⇑ iP **P 19 17 42.9 -0.5**
LOR pmax pmax
comp=Z,13nm,1.2s,mb5.0
LOR MLR MLR
comp=Z,70nm,21.5s,MS4.0
LOR Lormes 85.84 332⇑ iP **P 19 17 42.9 -0.5**
comp=Z,13nm,1.2s,mb5.0
LOR LR LR
comp=Z,70nm,21.5s,MS4.0
PPT Papeete 85.92 116 eLR LR 19 44 38.1
comp=Z,111nm,26.2s
FLN La Foliniere 86.04 336 eP **P 19 17 43.8 -0.5**
FLN eMLR MLR
comp=Z,83nm,23.0s,MS3.8
FLN La Foliniere 86.04 336 eP **P 19 17 43.8 -0.5**
FLN LR LR
comp=Z,80nm,23.0s,MS4.0
LDF La Druitiere 86.07 335 eP **P 19 17 43.9 -0.6**
SSF Saint Saulge 86.15 332 eP **P 19 17 44.5 -0.4**
comp=Z,9.5nm,0.8s,mb4.8
SSF Saint Saulge 86.15 332 eP **P 19 17 44.5 -0.4**
SSF pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
SSF Saint Saulge 86.15 332 eP **P 19 17 44.5 -0.4**
comp=Z,4.8nm,0.8s,mb4.8
LPL La Plagne 86.23 330⇑ iP **P 19 17 45.2 -0.1**
comp=Z,16nm,0.9s,mb4.9
LPL La Plagne 86.23 330⇑ iP **P 19 17 45.2 -0.1**
LPL pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
LPL La Plagne 86.23 330⇑ iP **P 19 17 45.2 -0.1**
comp=Z,7.8nm,0.9s,mb4.9
LPG La Plagne 86.24 330⇑ iP **P 19 17 45.4 0.0**
comp=Z,10nm,0.7s,mb4.8

LPG La Plagne 86.24 330⇑ iP **P 19 17 45.4 0.0**
LPG pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
LPG La Plagne 86.24 330⇑ iP **P 19 17 45.4 0.0**
comp=Z,5.2nm,0.7s,mb4.9
SMF Signal de Mont 86.38 332 eP **P 19 17 45.5 -0.5**
comp=Z,35nm,1.5s,mb5.1
SMF Signal de Mont 86.38 332 eP **P 19 17 45.5 -0.5**
SMF pmax pmax
comp=Z,17nm,1.5s,mb5.0
SMF Signal de Mont 86.38 332 eP **P 19 17 45.5 -0.5**
comp=Z,17nm,1.5s,mb5.1
AVF Avril sur Loir 86.43 332⇑ iP **P 19 17 46.1 -0.2**
comp=Z,23nm,0.8s,mb5.1
AVF Avril sur Loir 86.43 332⇑ iP **P 19 17 46.1 -0.2**
AVF pmax pmax
comp=Z,11nm,0.8s,mb5.1
AVF Avril sur Loir 86.43 332⇑ iP **P 19 17 46.1 -0.2**
comp=Z,11nm,0.8s,mb5.2
GRR Gorron 86.49 336 eP **P 19 17 46.3 -0.2**
comp=Z,31nm,1.0s,mb5.2
GRR Gorron 86.49 336 eP **P 19 17 46.3 -0.2**
GRR pmax pmax
comp=Z,16nm,1.0s,mb5.2
GRR Gorron 86.49 336 eP **P 19 17 46.3 -0.2**
comp=Z,16nm,1.0s,mb5.2
ORIF Oris-en-Rattie 87.06 330 eP **P 19 17 49.2 -0.2**
ORIF eMLR MLR
comp=Z,99nm,19.5s,MS3.9
SGMF Saint Gilles 87.14 337 eP **P 19 17 49.9 +0.2**
MEH Mehetia 87.18 116 eT 20 53 16.9
comp=Z,176nm,0.3s
MFF Saint Martin d 87.82 334 eP **P 19 17 53.1 +0.1**
SMRF Simiane la Rot 87.97 329 eP **P 19 17 53.6 -0.2**
RJF Les Rejaudoux 88.37 333 eP **P 19 17 55.6 -0.1**
comp=Z,19nm,1.1s,mb4.9
RJF eMLR MLR
comp=Z,68nm,20.5s,MS3.8
RJF Les Rejaudoux 88.37 333 eP **P 19 17 55.6 -0.1**
RJF pmax pmax
comp=Z,9.0nm,1.1s,mb4.9
RJF MLR MLR
comp=Z,70nm,20.5s,MS4.1
RJF Les Rejaudoux 88.37 333 eP **P 19 17 55.6 -0.1**
comp=Z,9.3nm,1.1s,mb4.9
RJF LR LR
comp=Z,70nm,20.5s,MS4.1
CAF Calviac 88.49 332 eP **P 19 17 56.8 +0.5**
comp=Z,11nm,1.0s,mb4.8
CAF Calviac 88.49 332 eP **P 19 17 56.8 +0.5**
CAF pmax pmax
comp=Z,6.0nm,1.0s,mb4.8
CAF Calviac 88.49 332 eP **P 19 17 56.8 +0.5**
comp=Z,5.7nm,1.0s,mb4.8
LFF La Frestale 88.96 333 eP **P 19 17 58.6 +0.2**
comp=Z,10nm,0.7s,mb5.0
LFF La Frestale 88.96 333 eP **P 19 17 58.6 +0.2**
LFF pmax pmax
comp=Z,5.0nm,0.6s,mb5.0
LFF La Frestale 88.96 333 eP **P 19 17 58.6 +0.2**
comp=Z,5.2nm,0.6s,mb5.0
TXAR Lajitas Array 89.15 52 P **P 19 18 00.2 +0.5**
comp=Z,1.0nm,0.7s,mb4.2,baz=284,slow=3.2,SNR=13
TXAR Lajitas Array 89.15 52 P **P 19 18 00.2 +0.5**
JCT Junction City 90.64 49 eP **P 19 18 06.6 0.0**
JCT pmax pmax
comp=Z,5.0nm,0.7s,mb5.0
JCT Junction City 90.64 49 eP **P 19 18 06.6 0.0**
comp=Z,5.4nm,0.7s,mb5.0
MIAR Mount Ida 91.04 42 eP **P 19 18 08.3 -0.1**
MIAR pmax pmax
comp=Z,8.0nm,1.1s,mb5.0
MIAR Mount Ida 91.04 42 eP **P 19 18 08.3 -0.1**
comp=Z,7.9nm,1.1s,mb5.0
ETSF Etsaut 91.20 333 eP **P 19 18 09.5 +0.6**
KEST Kesra 93.12 322 LR LR 20 02 04.6
comp=Z,32nm,21.4s,MS3.7,baz=299,slow=37
TORD Torodi Ar. Bea 115.57 315 PKP PKPdf 19 23 45.1 -1.4
comp=Z,0.5nm,0.6s,baz=11,slow=1.7,SNR=16
MAW Mawson 121.25 206 PKP PKPdf 19 23 55.2 -0.6
comp=Z,1.0nm,0.6s,baz=8.2,slow=8.9,SNR=3.5
SDV Santo Domingo 123.95 39 PKP PKPdf 19 24 02.1 -0.6
comp=Z,1.6nm,0.4s,baz=316,slow=4.4,SNR=3.7
DBIC Dimbokro 124.49 317 PKP PKPdf 19 24 02.7 -1.1
comp=Z,3.4nm,0.6s,baz=240,slow=6.8,SNR=6.9
DBIC Dimbokro 124.49 317 PKP PKPdf 19 24 02.7 -1.1
BOSA Boshof 126.55 261 PKP PKPdf 19 24 06.9 -0.3
comp=Z,3.3nm,1.0s,baz=236,slow=21,SNR=3.3
NVL N'lazarevskaya 139.07 203 ePKHKP PKPpre 19 24 00.0
NVL pmax pmax
comp=Z,19nm,0.8s
LPAZ La Paz 145.91 56 PKPbc PKPbc 19 24 44.2 +0.4
comp=Z,3.0nm,0.4s,baz=355,slow=4.9,SNR=20
LPAZ La Paz 145.91 56 PKPbc PKPbc 19 24 44.2 +0.4
SIV San Ignacio 149.97 46 PKPbc PKPbc 19 24 54.8 +0.1
comp=Z,7.7nm,0.8s,baz=296,slow=2.6,SNR=29
CFAA Coronel Fontan 155.14 81 PKPab PKPab 19 25 22.0 +0.2
comp=Z,0.2nm,0.7s,baz=0.0,slow=12,SNR=2.6
CFAA Coronel Fontan 155.14 81 PKPab PKPab 19 25 22.0 +0.2
PLCA Paso Flores 155.88 104 PKPab PKPab 19 25 25.2 +0.5
comp=Z,1.6nm,0.7s,baz=160,slow=21,SNR=3.2
PLCA Paso Flores 155.88 104 PKPab PKPab 19 25 25.2 +0.5

ISCJB ***16*** *19:05:55.9±3.3,5.1S±0.1°×131.1°E±0.1°,2,h57km±32km, mb4.0/6,MS3.4/1,Error ellipse: s-maj=31.2km s-min=13.0km az=146.1*
NEIC ***16*** *19:06:00.5±2.3,5.09S×131.1°18E,h83km±23km,mb4.1/1, Error ellipse: s-maj=28.0km s-min=10.0km az=51.0*
IDC ***16*** *19:06:01.7±6.7,5.13S×131.1°12E,h94km±64km,mb3.7/7, mb1 3.9/9,mb1mx3.7/17,mbtmp3.8/9,ML4.4/2,MS3.4/1, Ms1 3.4/1,ms1mx2.3/23,Error ellipse: s-maj=66.6km s-min=16.7km az=52.0*
ISC 16 19:05:59.2±2.6,5.2S±0.1°×130.9E±0.1°,2,h68km±27km,n25, σ0.66/26,mb3.9/7,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu** 15nm,0.2s	**7.63**	**169**	eP	**Pn**	**19 07 48.1**	**+0.4**
KAKA				eS	**Sn**	**19 09 13.5**	**+0.7**
KAKA	**Kakadu** 103nm,0.6s	**7.63**	**169**	eP	**Pn**	**19 07 48.2**	**+0.5**
KAKA				eS	**Sn**	**19 09 13.3**	**+0.5**
KAPI	**Kappang** 2.8nm,0.3s,baz=129,slow=6.5,SNR=12	**11.15**	**270**	P	**Pn**	**19 08 40.8**	**+5.0**
KAPI	**Kappang**	**11.15**	**270**	eP	**Pn**	**19 08 42.1**	**+6.3**
FITZ	**Fitzroy Crossi** 6.9nm,0.3s	**13.85**	**202**	eP	**Pn**	**19 09 11.9**	**-0.5**
FITZ				eS	Sx	19 11 40.0	
FITZ	**Fitzroy Crossi** 0.6nm,0.3s,baz=44,slow=12,SNR=27	**13.85**	**202**	P	**Pn**	**19 09 11.6**	**-0.8**
FITZ				S	Sx	19 11 40.3	
FITZ	**Fitzroy Crossi** 0.8nm,0.3s,baz=194,slow=17,SNR=4.1	**13.85**	**202**	ePn	**Pn**	**19 09 12.3**	**-0.1**
FITZ				S	Sx	19 11 40.3	
WRAB	**Tennant Creek** 6.2nm,0.4s	**15.04**	**168**	ePn	**Pn**	**19 09 24.3**	**-3.6**
WRAB				eS	Sx	19 12 02.2	
WRA	**Warramunga Arr** 1.0nm,0.3s,baz=349,slow=14,SNR=58	**15.04**	**168**	P	**Pn**	**19 09 23.1**	**-4.8**
WRA				S	Sx	19 12 05.3	
KKM	**Kota Kinabalu** 1.9nm,0.3s,baz=345,slow=21,SNR=8.6	**18.45**	**307**	eP	**Pn**	**19 10 10.2**	**-0.2**
ASAR	**Alice Springs** 1.0nm,0.3s,baz=348,slow=9.6,SNR=48	**18.60**	**171**	P	**Pn**	**19 10 11.6**	**-0.5**
ASAR				S	Sx	19 13 31.1	
MBWA	**Marble Bar** 0.5nm,0.3s,baz=356,slow=27,SNR=7.8	**19.25**	**213**	eP	**Pn**	**19 10 19.6**	**-0.2**
CTA	**Charters Tower** 8.6nm,1.0s,mb4.0,baz=327,slow=8.1,SNR=3.6	**21.02**	**136**	P	**P**	**19 10 36.8**	**-0.6**
STKA	**Stephens Creek** 1.8nm,0.9s,mb3.6,baz=340,slow=15,SNR=5.1	**28.38**	**161**	P	**P**	**19 11 47.4**	**+0.3**
STKA	**Stephens Creek**	**28.38**	**161**	eP	**P**	**19 11 49.2**	**+2.1**
CMAR	**Chiang Mai Arr** 1.4nm,0.5s,mb4.1,baz=130,slow=6.5,SNR=13	**39.33**	**307**	P	**P**	**19 13 22.6**	**+0.5**
KSRS	**Korea Array** 2.47nm,19.0s,baz=86,slow=36	**42.50**	**356**	LR	LR	19 31 21.2	
SONM	**Songino Array** 1.1nm,0.7s,mb4.0,baz=159,slow=7.0,SNR=6.4	**57.03**	**341**	P	**P**	**19 15 38.2**	**+0.2**
MK31	**Makanchi Array**	**67.23**	**326**	eP	**P**	**19 16 46.6**	**+0.3**
MKAR	**Makanchi Array** 1.4nm,0.4s,mb4.2,baz=112,slow=7.6,SNR=31	**67.23**	**326**	P	**P**	**19 16 46.8**	**+0.4**
MKAR				pP	pP	19 17 05.6	+1.1
	1.4nm,0.6s,baz=120,slow=8.4,SNR=3.9						

MKAR	**Makanchi Array**	**67.23 326**	P	**P**	**19 16 46.8**	**+0.4**
MKAR			pP	pP	19 17 05.6	+1.1
ZALV	**Zalesovo Beam**	**70.38 333**	P	**P**	**19 17 05.2**	**-0.5**
	1.4nm,0.6s,mb4.0,baz=117,slow=6.2,SNR=3.9					
ZALV	**Zalesovo Beam**	**70.38 333**	P	**P**	**19 17 05.2**	**-0.5**
KURK	**Kurchatov**	**71.47 328**	P	**P**	**19 17 11.9**	**-0.5**
BVAR	**Borovoye Array**	**77.03 327**	P	**P**	**19 17 44.8**	**+0.1**
	0.6nm,0.6s,mb3.5,baz=115,slow=6.8,SNR=3.6					

*CSEM **16** 19:10:17.5, 31°.49N×5°.75W, h6km, MD3.5, After CNRM*

CNRM 16 19:10:17.5, 31°.49N×5°.75W, h6km, MD3.5, Morocco

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TZC	**Tazercounte**	**0.91**	**316**	*i*	P	Pg	19 10 33.5	-1.5
TZC				*i*	S	Sg	19 10 46.0	-0.8
KIB	**El Ksiba**	**1.11**	**347**	*i*	P	Pg	19 10 37.0	-1.8
KIB				*i*	S	Sg	19 10 52.0	-1.2
ZFT	**Errachidia**	**1.31**	**65**	*i*	P	Pn	19 10 40.0	-2.3
ZFT				*i*	S	Sb	19 10 58.0	-1.5
CZD	**Col de Zad**	**1.65**	**21**	*i*	P	Pn	19 10 46.0	-1.0
CZD				*i*	S	Sn	19 11 05.0	-3.6
OUK	**Oukaimeden**	**1.83**	**262**	*i*	P	Pn	19 10 48.0	-1.5
OUK				*i*	S	Sn	19 11 10.0	-3.0
MIF	**Mishlifen**	**1.96**	**13**	*i*	P	Pn	19 10 51.0	-0.3
MIF				*i*	S	Sn	19 11 14.0	-2.3

ECX 16 19:41:02.1±0.8, 32°.68N×116°.05W, h3km±3km, MD2.4, ML2.5, 1D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RMX	**La Rumorosa**	**0.08**	**201**	*e*	P	Pg	19 41 03.9	+0.2
CBX	**Cerro Bola**	**0.64**	**235**	*e*	P	Pg	19 41 13.6	-0.7
CBX				*e*	S	Sg	19 41 22.3	-0.3
CPBX	**Cerro Prieto**	**0.68**	**112**	*e*	P	Pg	19 41 14.5	-0.6
CPBX				*e*	S	Sg	19 41 23.9	0.0
RDX	**Rancho Dawling**	**0.75**	**173**	⇓*e*	P	Pg	19 41 15.2	-1.4
RDX				*e*	S	Sg	19 41 25.6	-0.7
RDX				*e*			19 41 26.1	
	comp=N,121nm,0.2s							
EMX	**El Mayor**	**0.97**	**135**	*e*	P	Pg	19 41 18.8	-1.9
EMX				*e*	S	Sg	19 41 32.0	-1.2
PBX	**Punta Banda**	**1.10**	**212**	*e*	P	Pg	19 41 21.8	-1.3
PBX				*e*	S	Sg	19 41 36.7	-0.7
PBX				*e*			19 41 37.6	
	comp=N,146nm,0.1s							
ECNX	**Esteban Cantu**	**1.12**	**205**	*e*	P	Pg	19 41 22.2	-1.4
ECNX				*e*	S	Sg	19 41 32.2	-5.9
ECNX				*e*	S	Sg	19 41 36.9	-1.2
ECBX	**El Chinero**	**1.47**	**145**	*e*	P	Pn	19 41 26.0	-3.5
ECBX				*e*	S	Sb	19 41 46.4	-2.7
SPX	**San Pedro Mart**	**1.70**	**163**	*e*	PN	Pn	19 41 32.2	-0.5
SPX				*e*	S	Sn	19 41 54.8	-0.1

*NIED **16** 19:56:00, 39°.10N×140°.90E, h5km, Mw3.7 Best double couple: M0 3.63000×10^14 NP1:φ=216.00000°, δ56.00000°, λ98.00000°. NP2:φ=23.00000°, δ35.00000°, λ79.00000°.*
*IDC **16** 19:56:16.5±1.3, 39°.19N×141°.13E, h0km, mb3.6/4, mb1 3.7/6, mb1mx3.4/26, mbtmp3.6/6, ML3.2/2, Error ellipse: s-maj=29.6km s-min=17.8km az=104.0*
*NEIC **16** 19:56:19.6, 39°.15N×140°.94E, h11km, mb4.0/1, After JMA.*
*JMA **16** 19:56:19.5, 39°.15N×140°.94E, h10km±1km, M3.5*
JMA Felt II J1.
*ISCJB **16** 19:56:19.4±0.4, 39°.14N±0°.03×140°.95E±0°.04, h20km±5km, mb3.6/5, Error ellipse: s-maj=5.9km s-min=4.7km az=1.7*

ISC 16 19:56:19.8±0.5, 39°.14N±0°.03×140°.94E±0°.04, h9km±4km, n21, σ0°85/29, mb3.6/5, 1C-6D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.29**	**130**	⇓P		**Pg**	**19 56 25.4**	**-0.1**
JMK				*e*S		**Sg**	**19 56 29.5**	**+0.2**
JRG	**Rokugo**	**0.35**	**318**	⇓P		**Pg**	**19 56 26.5**	**-0.2**
JRG				*e*S		**Sg**	**19 56 31.4**	**0.0**
JOM	**Ohasama**	**0.43**	**39**	⇓P		**Pg**	**19 56 27.9**	**-0.4**
JOM				*e*S		**Sg**	**19 56 33.8**	**-0.2**
JYK	**Kaneyama**	**0.50**	**244**	⇓P		**Pg**	**19 56 29.4**	**-0.1**
JYK				S		**Sg**	**19 56 36.1**	**0.0**
OFUJ	**Ofunato**	**0.57**	**95**	⇓P		**Pg**	**19 56 30.7**	**-0.1**
JIO	**Ouri**	**0.75**	**155**	⇓P		**Pg**	**19 56 33.7**	**-0.6**
JIO				S		**Sg**	**19 56 44.3**	**+0.2**
JOU	**Okura**	**0.80**	**196**	⇑P		**Pg**	**19 56 35.0**	**-0.2**
JOU				S		**Sg**	**19 56 45.9**	**+0.3**
ERM	**Erimo**	**3.33**	**30**	*e*P		**Pn**	**19 57 13.7**	**+1.6**
MAJO	**Matsushiro**	**3.37**	**221**	*e*P		**Pn**	**19 57 11.4**	**-1.2**
MAT	**Matsushiro**	**3.37**	**221**	P		**Pn**	**19 57 14.2**	**+1.6**
MAT				S		**Sn**	**19 58 01.4**	**+8.7**
MJAR	**Matsushiro Arr**	**3.37**	**221**	Pn		**Pn**	**19 57 14.4**	**+1.8**
	1.0nm,0.3s,baz=28,slow=12,SNR=13							
MJAR				Pg		**Pg**	**19 57 19.9**	**-4.5**
	1.8nm,0.3s,baz=25,slow=15,SNR=16							
MJAR				Lg			19 58 06.2	
	0.9nm,0.3s,baz=18,slow=25,SNR=6.9							
ASAJ	**Asahikawa**	**5.13**	**13**	Pn		**Pn**	**19 57 37.9**	**+1.2**
	0.9nm,0.3s,baz=250,slow=11,SNR=7.4							
JHJ	**Hachijo jima 2**	**6.08**	**189**	Pn		**Pn**	**19 57 50.4**	**+0.6**
	4.3nm,0.3s,baz=244,slow=18,SNR=5.3							
JHJ				Sn		**Sn**	**19 58 59.2**	**-0.2**
	3.4nm,0.3s,baz=43,slow=14,SNR=2.2							
KSRS	**Korea Array**	**10.37**	**265**	Pn		**Pn**	**19 58 52.9**	**+4.3**
	0.4nm,0.3s,baz=74,slow=14,SNR=9.2							
ZALV	**Zalesovo Beam**	**40.24**	**311**	P		**P**	**20 03 55.5**	**-1.0**
	0.4nm,0.4s,mb3.5,baz=117,slow=5.2,SNR=2.9							
MK31	**Makanchi Array**	**42.71**	**300**	P		**P**	**20 04 17.0**	**+0.1**
MKAR	**Makanchi Array**	**42.71**	**300**	P		**P**	**20 04 15.8**	**-1.1**
	0.3nm,0.2s,mb3.6,baz=89,slow=9.8,SNR=6.3							
KURK	**Kurchatov**	**44.36**	**306**	*e*P		**P**	**20 04 30.2**	**+0.1**
	1.6nm,0.6s,mb3.9							
WRA	**Warramunga Arr**	**59.09**	**187**	P		**P**	**20 06 18.3**	**-2.0**
	0.6nm,0.8s,mb3.7,baz=5.1,slow=7.3,SNR=5.2							
ASAR	**Alice Springs**	**62.82**	**187**	P		**P**	**20 06 45.1**	**-0.5**
	0.3nm,0.7s,mb3.5,baz=1.9,slow=5.2,SNR=4.9							
LPAZ	**La Paz**	**145.90**	**56**	PKPbc		PKPbc	20 15 56.9	-3.0
	0.3nm,0.4s,baz=222,slow=4.5,SNR=3.8							

*IDC **16** 20:09:47.4±2.4, 26°.99N×53°.86E, h0km, mb3.6/8, mb1 3.6/9, mb1mx3.4/29, mbtmp3.6/9, ML1.1/1, Error ellipse: s-maj=50.9km s-min=24.3km az=158.0*
*ISCJB **16** 20:09:49.5±0.4, 27°.14N±0°.03×54°.04E±0°.05, h10km, mb3.5/10, Error ellipse: s-maj=6.8km s-min=3.0km az=144.9*
*CSEM **16** 20:09:50.9±0.2, 27°.14N×53°.97E, h15km, mb3.8/2, Error ellipse: s-maj=10.2km s-min=5.2km az=60.0*
*TEH **16** 20:09:51.2, 26°.95N×53°.87E, h28km*
*NEIC **16** 20:09:51.5±1.7, 26°.88N×53°.97E, h36km±12km, mb3.8/2, ML3.4(THR), Error ellipse: s-maj=21.3km s-min=9.8km az=184.0*
*OMAN **16** 20:10:19.1±99.0, 25°.60N×55°.23E, h35km±999km, Error ellipse: s-maj=428.0km s-min=22.5km az=337.0*

ISC 16 20:09:50.8±0.4, 27°.11N±0°.03×54°.03E±0°.05, h10km, n56, σ0°96/67, mb3.5/10, 5C-2D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GHIR	**Ghir-Karzin**	**1.49**	**322**	*e*P	g	**Pg**	**20 10 18.0**	**-1.4**
GHIR				*e*S	g	**Sg**	**20 10 40.0**	**+1.3**
GHIR	**Ghir-Karzin**	**1.49**	**322**	*e*P	g	**Pg**	**20 10 18.0**	**-1.4**
GHIR				*e*S	g	**Sg**	**20 10 40.2**	**+1.5**
BNDS	**Bandar-Abbas**	**1.93**	**81**	*e*Pn		**Pn**	**20 10 23.0**	**-0.6**
BNDS				*e*S	g	**Sg**	**20 10 53.0**	**+0.2**
BNDS	**Bandar-Abbas**	**1.93**	**81**	*e*Pn		**Pn**	**20 10 23.0**	**-0.6**
BNDS				*e*S	g	**Sg**	**20 10 53.2**	**+0.4**
IMOK	**Mouk**	**2.25**	**329**	*e*Pn		**Pn**	**20 10 27.5**	**-0.5**
IMOK				*e*S	g	**Sg**	**20 11 03.9**	**+0.8**
IMOK				*e*			20 11 22.5	
	comp=Z,3μm,0.3s							
IBND	**Bandar-abas**	**2.26**	**81**	*e*Pn		**Pn**	**20 10 28.2**	**0.0**
IBND				*e*			20 11 13.9	
	comp=Z,5μm,0.4s							
BANOM	**Banah**	**2.35**	**120**	Pn		**Pn**	**20 10 29.0**	**-0.5**
	SNR=11							
BANOM				Sn		**Sn**	**20 10 57.5**	**-0.9**
ISRV	**Sarvestan**	**2.40**	**341**	*e*Pn		**Pn**	**20 10 31.1**	**+1.0**
ISRV				*e*			20 11 39.4	
	comp=Z,2μm,0.4s							

NAZ	**Nazwa, Dubai**	**2.58**	**145**	⇑P		**Pn**	**20 10 32.9**	**+0.4**
NAZ				⇑P			20 10 32.9	
NAZ	**Nazwa, Dubai**	**2.58**	**145**	P		**Pn**	**20 10 32.9**	**+0.4**
NAZ	**Nazwa, Dubai**	**2.58**	**145**	Pn		**Pn**	**20 10 33.6**	**+1.1**
	SNR=8.7							
ASUD	**Al Ashush, Dub**	**2.74**	**154**	P		**Pn**	**20 10 36.2**	**+1.5**
	SNR=11							
ASUD	**Al Ashush, Dub**	**2.74**	**154**	Pn		**Pn**	**20 10 36.2**	**+1.4**
	SNR=11							
FAQ	**Al Faqa, Dubai**	**2.75**	**149**	Pn		**Pn**	**20 10 35.5**	**+0.6**
IPAR	**Pars**	**2.85**	**343**	*e*Pn		**Pn**	**20 10 36.8**	**+0.4**
IPAR				*e*Sg		**Sg**	**20 11 24.2**	**+1.7**
IPAR				*e*			20 11 29.7	
	comp=Z,866nm,0.4s							
HATD	**Hatta, Dubai**	**2.96**	**140**	⇑P		**Pn**	**20 10 38.7**	**+0.8**
HATD	**Hatta, Dubai**	**2.96**	**140**	Pn		**Pn**	**20 10 37.9**	**+0.1**
HATD	**Hatta, Dubai**	**2.96**	**140**	P		**Pn**	**20 10 38.7**	**+0.9**
ASHO	**Ashiyiah**	**3.03**	**142**	P		**Pn**	**20 10 39.1**	**+0.3**
	SNR=17							
ASHO	**Ashiyiah**	**3.03**	**142**	Pn		**Pn**	**20 10 39.1**	**+0.3**
	SNR=17							
KRBR	**Kerman**	**3.73**	**39**	*e*Pn		**Pn**	**20 10 50.0**	**+1.5**
KRBR	**Kerman**	**3.73**	**39**	*e*Pn		**Pn**	**20 10 50.0**	**+1.5**
IMEH	**Mehriz**	**4.29**	**7**	*e*Pn		**Pn**	**20 10 57.1**	**+1.0**
IMEH				*e*Sn		**Sn**	**20 11 46.1**	**-0.2**
IMEH				*e*			20 11 53.0	
	comp=Z,337nm,0.4s							
ARQ	**Araqi**	**4.38**	**148**	⇑P		**Pn**	**20 10 57.7**	**+0.3**
ARQ				⇑P			20 10 57.7	
ARQ	**Araqi**	**4.38**	**148**	P		**Pn**	**20 10 57.7**	**+0.3**
IBAF	**Bafgh**	**4.66**	**16**	*e*Pn		**Pn**	**20 11 02.0**	**+0.8**
IBAF				*e*			20 11 49.6	
	comp=Z,148nm,0.3s							
ISAD	**Sadrabad**	**4.79**	**357**	*e*Pn		**Pn**	**20 11 03.3**	**+0.3**
ISAD				*e*Sn		**Sn**	**20 11 56.5**	**-2.1**
ISAD				*e*			20 12 03.8	
	comp=Z,433nm,0.3s							
BSY	**Bisya**	**5.21**	**146**	⇓P		**Pn**	**20 11 09.1**	**+0.2**
BSY				⇓P			20 11 09.1	
BSYO	**Bisya**	**5.25**	**146**	P		**Pn**	**20 11 09.1**	**-0.2**
SMDO	**Samad**	**5.44**	**137**	P		**Pn**	**20 11 12.4**	**+0.6**
	SNR=7.0							
SMDO				P			20 11 12.4	
	SNR=7.0							
SMDO	**Samad**	**5.44**	**137**	P		**Pn**	**20 11 12.4**	**+0.5**
	SNR=7.0							
IZEF	**Zefreh**	**5.95**	**346**	*e*Pn		**Pn**	**20 11 18.3**	**-0.6**
IZEF				*e*			20 11 31.1	
	comp=Z,81nm,0.2s							
IPIR	**Pirpir**	**6.18**	**335**	*e*Pn		**Pn**	**20 11 21.5**	**-0.6**
IPIR				*e*			20 11 59.3	
	comp=Z,142nm,0.2s							
IPIR				*e*Sn		**Sn**	**20 12 27.6**	**-5.3**
IKLH	**Kolahrood**	**6.54**	**342**	*e*Pn		**Pn**	**20 11 26.3**	**-0.7**
IKLH				*e*Sn		**Sn**	**20 12 36.8**	**-4.8**
GNI	**Garni**	**15.12**	**332**	Pn		**Pn**	**20 13 25.5**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=275,slow=3.0,SNR=1.6							
GNI	**Garni**	**15.12**	**332**	Pn		**Pn**	**20 13 25.5**	**+1.2**
BRTR	**Keskin Array B**	**21.11**	**312**	P		**P**	**20 14 34.4**	**-1.1**
	comp=Z,0.6nm,0.7s,mb3.0,baz=130,slow=14,SNR=5.8							
BRTR	**Keskin Array B**	**21.11**	**312**	P		**P**	**20 14 34.3**	**-1.2**
AML	**Almayashu**	**21.98**	**42**	*e*P		**P**	**20 14 44.1**	**-0.7**
	comp=Z,3.8nm,0.8s,mb3.9							
AML	**Almayashu**	**21.98**	**42**	*e*P		**P**	**20 14 44.1**	**-0.7**
	comp=Z,3.8nm,0.8s,mb3.9							
ABKAR	**Akbulak array**	**22.58**	**10**	P		**P**	**20 14 50.2**	**-0.9**
	comp=Z,1.9nm,0.7s,mb3.6							
ABKAR	**Akbulak array**	**22.58**	**10**	P		**P**	**20 14 50.2**	**-0.9**
	comp=Z,1.9nm,0.7s,mb3.6							
AKTK	**Aktyubinsk**	**23.49**	**6**	P		**P**	**20 15 01.2**	**+0.5**
AKTK	**Aktyubinsk**	**23.49**	**6**	P		**P**	**20 15 01.2**	**+0.5**
AKTO	**Aktyubinsk**	**23.49**	**6**	P		**P**	**20 15 01.2**	**+0.5**
	comp=Z,1.7nm,0.5s,mb3.7,baz=127,slow=15,SNR=4.2							
BVAR	**Borovoye Array**	**28.61**	**21**	P		**P**	**20 15 46.3**	**-0.7**
	comp=Z,0.6nm,0.6s,mb3.5,baz=224,slow=10,SNR=4.9							
BVAR	**Borovoye Array**	**28.61**	**21**	P		**P**	**20 15 46.3**	**-0.8**
MKAR	**Makanchi Array**	**29.68**	**41**	P		**P**	**20 15 56.9**	**+0.3**
	comp=Z,0.2nm,0.2s,mb3.4,baz=240,slow=6.5,SNR=2.3							
MKAR	**Makanchi Array**	**29.68**	**41**	P		**P**	**20 15 56.9**	**+0.3**
MKAR	**Makanchi Array**	**29.68**	**41**	P		**P**	**20 15 56.9**	**+0.2**
KURK	**Kurchatov**	**30.10**	**32**	P		**P**	**20 15 60.0**	**-0.3**
	comp=Z,0.2nm,0.5s,mb3.1,baz=232,slow=8.7,SNR=3.0							
KURK	**Kurchatov**	**30.10**	**32**	P		**P**	**20 16 00.0**	**-0.3**
ZALV	**Zalesovo Beam**	**35.09**	**32**	P		**P**	**20 16 42.6**	**-1.3**
	comp=Z,0.8nm,0.4s,mb4.0,baz=250,slow=9.0,SNR=5.3							
FINES	**FINESS Array B**	**39.12**	**339**	P		**P**	**20 17 15.2**	**-2.8**
	comp=Z,0.8nm,0.7s,mb3.6,baz=152,slow=9.9,SNR=3.9							
FINES	**FINESS Array B**	**39.12**	**339**	P		**P**	**20 17 15.2**	**-2.8**
TORD	**Torodi Ar. Bea**	**50.73**	**265**	P		**P**	**20 18 48.1**	**-3.0**
	comp=Z,0.3nm,0.5s,mb3.5,baz=75,slow=8.2,SNR=5.5							

*IDC **16** 20:13:00.7±0.6, 64°.68S×177°.42E, h0km, mb4.2/11, mb1 4.3/11, mb1mx4.3/13, mbtmp4.2/11, MS4.6/9, Ms1 4.6/9, ms1mx4.3/17, Error ellipse: s-maj=28.1km s-min=16.7km az=53.0*
*ISCJB **16** 20:13:00.7±0.6, 64°.72S±0°.08×177°.2E±0°.3, h10km, mb4.4/13, MS4.6/9, Error ellipse: s-maj=18.7km s-min=10.6km az=168.2*
*NEIC **16** 20:13:01.7±0.4, 64°.73S×177°.40E, h10km, mb5.1/3, Error ellipse: s-maj=17.4km s-min=9.9km az=67.0*
*GCMT **16** 20:13:03.2±0.2, 64°.53S×177°.35E, h12km, MW5.2, Moment Tensor Solution. s34,c47; s69,c118; Moment tensor: Scale 10^16Nm; Mrr=5.48±.21; Mθθ7.74±.16; Mφφ=2.26±.21; Mrθ=6.57±.50; Mθφ0.51±.17; Mφr=1.28±.68; Best double couple: M0 9.40000×10^16 NP1:φ=279.00000°, δ23.00000°, λ=-72.00000°. NP2:φ=80.00000°, δ68.00000°, λ=-98.00000°. Principal axes: T 10.5000, Plg23.0000°, Azm175.0000°; N -2.2000, Plg7.0000°, Azm82.0000°; P -8.4000, Plg66.0000°, Azm336.0000°; Data Used: II IU IC G CN.*

ISC 16 20:13:02.3±0.6, 64°.73S±0°.08×177°.4E±0°.3, h10km, n66, σ1°03/26, mb4.4/13, MS4.6/9, 1D, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SBA	**Scott Base**	**13.58**	**190**	*e*P		**Pn**	**20 16 13.8**	**-0.8**
	154nm,1.9s							
RPZ	**Rata Peaks**	**21.35**	**347**	LR		LR	20 24 24.7	
	comp=Z,3μm,19.6s,MS4.6,baz=186,slow=32							
QSPA	**South Pole Qui**	**25.36**	**180**	P		**P**	**20 18 30.3**	**+1.5**
	5.0nm,1.0s,mb4.0,baz=74,slow=1.1,SNR=7.4							
QSPA				LR		LR	20 26 53.9	
	comp=Z,1μm,18.2s,MS4.4,baz=229,slow=33							
QSPA	**South Pole Qui**	**25.36**	**180**	*e*P		**P**	**20 18 29.8**	**+0.9**
	27nm,1.4s,mb4.6							
QSPA				LR		LR	20 26 53.9	
URZ	**Urewera**	**26.50**	**360**	LR		LR	20 27 06.8	
	comp=Z,2μm,21.6s,MS4.6,baz=345,slow=32							
CNB	**Canberra Magne**	**33.93**	**317**	*e*P		**P**	**20 19 52.6**	**+7.4**
STKA	**Stephens Creek**	**39.56**	**309**	*e*P		**P**	**20 20 40.5**	**+7.3**
	12nm,1.2s,mb4.5							
STKA	**Stephens Creek**	**39.56**	**309**	P		**P**	**20 20 34.3**	**+1.1**
	2.3nm,0.9s,mb3.9,baz=144,slow=11,SNR=2.8							
STKA				LR		LR	20 33 50.0	
	comp=Z,302nm,21.4s,MS4.1,baz=340,slow=32							
MAW	**Mawson**	**40.00**	**213**	*e*P		**P**	**20 20 37.5**	**+1.0**
	4.8nm,1.2s,mb4.1							
MAW	**Mawson**	**40.00**	**213**	P		**P**	**20 20 38.5**	**+2.0**
	5.6nm,1.1s,mb4.2,baz=136,slow=9.8,SNR=7.8							
MAW				LR		LR	20 37 13.9	
	comp=Z,2μm,18.8s,MS5.0,baz=142,slow=36							
MAW	**Mawson**	**40.00**	**213**	*e*P		**P**	**20 20 37.8**	**+1.3**
MAW				LR		LR	20 37 13.9	
DZM	**Mont Dzumac**	**43.25**	**345**	*e*P		**P**	**20 21 07.6**	**+4.1**
	57nm,1.2s,mb5.2							
DZM				*e*S		**S**	**20 27 31.9**	**+1.6**
	396nm,29.5s							
DZM				*e*LR		LR	20 33 03.1	
	3μm,23.9s							
SYO	**Syowa Base**	**43.28**	**201**	⇓*e*P		**P**	**20 21 02.9**	**-0.4**
NWAO	**Narrogin (SRO)**	**48.05**	**281**	LR		LR	20 36 11.8	
	comp=Z,3.8nm,19.4s,baz=221,slow=29							
CTA	**Charters Tower**	**49.17**	**320**	*e*P		**P**	**20 21 56.8**	**+6.7**
	15nm,1.0s,mb5.0							
CTA	**Charters Tower**	**49.17**	**320**	P		**P**	**20 21 50.9**	**+0.8**
	6.8nm,1.0s,mb4.6,baz=135,slow=7.1,SNR=3.0							
CTA				LR		LR	20 40 09.6	
	comp=Z,524nm,19.1s,MS4.5,baz=162,slow=33							
CTA	**Charters Tower**	**49.17**	**320**	P		**P**	**20 21 50.9**	**+0.8**
CTA				LR		LR	20 40 09.6	
ASAR	**Alice Springs**	**49.74**	**304**	P		**P**	**20 21 54.1**	**-0.3**
	1.3nm,1.0s,mb3.9,baz=160,slow=7.5,SNR=6.6							

PPT	**Papeete**	**52.11**	**41**	*e*S		**S**	**20 29 34.7**	**-1.5**
	200nm,27.8s							
PPT				*e*LQ			20 34 28.4	
	822nm,23.8s							
PPT				*e*LR		LR	20 37 01.1	
	1μm,25.8s,baz=203							
PPT	**Papeete**	**52.11**	**41**	LR		LR	20 37 53.2	
	comp=Z,433nm,19.5s,MS4.5,baz=192,slow=29							
WRA	**Warramunga Arr**	**53.02**	**307**	P		**P**	**20 22 17.5**	**-1.6**
	2.4nm,1.1s,mb4.0,baz=161,slow=6.1,SNR=9.5							
WRA				LR		LR	20 41 21.9	
	comp=Z,561nm,20.4s,MS4.6,baz=160,slow=32							
WRAB	**Tennant Creek**	**53.03**	**307**	*e*P		**P**	**20 22 18.8**	**-0.3**
	59nm,1.7s,mb5.2							
FITZ	**Fitzroy Crossi**	**57.87**	**298**	P		**P**	**20 22 53.8**	**-0.2**
	2.1nm,1.0s,mb4.1,baz=108,slow=7.0,SNR=3.7							
TAOE	**Nuku Hiva Isla**	**63.20**	**48**	*e*LR		LR	20 41 59.9	
	663nm,27.8s							
KAPI	**Kappang**	**72.09**	**298**	P		**P**	**20 24 26.2**	**-0.4**
	2.5nm,0.3s,mb4.5,baz=198,slow=9.8,SNR=3.1							
CPUP	**Villa Florida**	**79.88**	**132**	P		**P**	**20 25 09.5**	**-1.3**
	0.5nm,0.4s,mb3.8,baz=162,slow=3.2,SNR=3.3							
CPUP	**Villa Florida**	**79.88**	**132**	P		**P**	**20 25 09.5**	**-1.3**
BOSA	**Boshof**	**84.45**	**204**	P		**P**	**20 25 34.8**	**-0.1**
	7.3nm,1.0s,mb4.8,baz=253,slow=8.6,SNR=3.9							
BOSA				LR		LR	21 00 11.9	
	comp=Z,688nm,19.3s,MS5.0,baz=158,slow=34							
BOSA	**Boshof**	**84.45**	**204**	*e*P		**P**	**20 25 34.1**	**-0.7**
	15nm,1.1s,mb5.0							
BOSA				LR		LR	21 00 11.9	
LPAZ	**La Paz**	**85.37**	**119**	P		**P**	**20 25 41.0**	**+1.4**
	4.1nm,1.2s,mb4.4,baz=190,slow=2.7,SNR=9.0							
PDAR	**Pinedale Array**	**121.27**	**56**	PKP		PKPdf	20 31 54.8	+0.5
	0.2nm,0.3s,baz=316,slow=5.0,SNR=1.8							
TORD	**Torodi Ar. Bea**	**128.40**	**185**	PKP		PKPdf	20 32 08.2	-0.6
	2.0nm,1.3s,baz=163,slow=1.5,SNR=3.5							
MKAR	**Makanchi Array**	**133.02**	**291**	PKP		PKPdf	20 32 16.4	-0.1
	0.2nm,0.2s,baz=101,slow=4.6,SNR=3.4							
MKAR	**Makanchi Array**	**133.02**	**291**	PKP		PKPdf	20 32 16.4	-0.1
KURK	**Kurchatov**	**137.62**	**291**	PKP		PKPdf	20 32 24.2	-0.8
	0.6nm,0.8s,baz=128,slow=2.5,SNR=4.8							
ZALV	**Zalesovo Beam**	**137.71**	**299**	PKP		PKPdf	20 32 25.6	+0.5
	0.3nm,0.4s,baz=90,slow=2.9,SNR=2.4							
BVAR	**Borovoye Array**	**142.70**	**288**	PKP		PKPdf	20 32 33.2	-0.9
	1.3nm,0.9s,baz=294,slow=1.5,SNR=8.4							
BRVK	**Borovoye**	**142.77**	**288**	PKPdf		PKPdf	20 32 32.9	-1.4
GNI	**Garni**	**143.40**	**251**	*e*P		PKPdf	20 32 33.8	-2.1
ABKAR	**Akbulak array**	**144.27**	**275**	*e*PKPdf		PKPdf	20 32 34.0	-3.0
MTA	**Mtatsminda**	**144.68**	**253**	P		PKPdf	20 32 35.6	-2.4
TBLG	**Delisi**	**144.74**	**253**	P		PKPdf	20 32 37.1	-1.1
GOR	**Gori**	**145.21**	**252**	P		PKPbc	20 32 39.7	+1.1
KEH	**Kehvi**	**145.55**	**252**	P		PKPdf	20 32 38.9	-0.6
ONI	**Oni**	**145.98**	**252**	P		PKPdf	20 32 41.6	+1.4
AKTK	**Aktyubinsk**	**145.98**	**275**	PKPbc		PKPbc	20 32 40.5	-0.3
AKTO	**Aktyubinsk**	**145.98**	**275**	PKPbc		PKPbc	20 32 40.5	-0.3
	5.5nm,1.2s,baz=118,slow=4.6,SNR=21							
IDI	**Anoyia**	**146.19**	**223**	PKPbc		PKPbc	20 32 42.1	+0.2
	21nm,1.2s,baz=198,slow=12,SNR=3.2							
BR131	**Keskin Array S**	**147.33**	**238**	*e*PKPbc		PKPbc	20 32 44.0	-1.0
BRTR	**Keskin Array B**	**147.33**	**238**	PKPbc		PKPbc	20 32 44.7	-0.3
	3.9nm,0.8s,baz=143,slow=4.7,SNR=18							
KIV	**Kislovodsk**	**147.42**	**253**	*e*PKPbc		PKP

JACH Jahuel 0.50 127⇓iP Pn 21 02 47.0 +0.4
PEL Peldehue 0.82 157⇑iP Pn 21 02 50.6 -0.1
PEL iS Sn 21 03 02.3 +0.3
PEL AML AML 21 03 05.0
comp=N,90µm,0.4s
CLCH Cerro Calan 1.10 156⇓iP Pn 21 02 55.0 +0.5
CLCH iS Sn 21 03 09.9 +1.3
CLCH Cerro Calan 1.10 156⇓iP Pn 21 02 55.0 +0.5
CLCH iS Sn 21 03 09.9 +1.3
CLCH AML AML 21 03 17.7
comp=N,40µm,0.5s
SAN Santiago 1.12 162⇑eP Pn 21 02 54.3 -0.4
SAN iS Sn 21 03 09.3 +0.3
SAN Santiago 1.12 162⇑eP Pn 21 02 54.3 -0.4
SAN iS Sn 21 03 09.3 +0.3
FCH Farellones 1.15 146⇓iP Pn 21 02 53.5 -1.6
FCH iS Sn 21 03 09.9 +0.3
FCH AML AML 21 03 16.2
comp=E,34µm,0.3s
ANTU Antumapu 1.24 163 eP Pn 21 02 55.8 -0.4
ANTU iS Sn 21 03 12.6 +0.7
ANTU Antumapu 1.24 163 eP Pn 21 02 55.8 -0.4
ANTU iS Sn 21 03 12.6 +0.7
ANTU AML AML 21 03 17.0
comp=E,34µm,0.2s
TACH Talagante 1.27 175 eP Pn 21 02 56.0 -0.7
TACH Talagante 1.27 175 eP Pn 21 02 56.0 -0.7
PCH Pirque 1.32 160⇑iP Pn 21 02 57.1 -0.3
PCH Pirque 1.32 160⇑iP Pn 21 02 57.1 -0.3
LNV Longovilo 1.60 190⇑iP Pn 21 03 00.1 -1.0
LNV Longovilo 1.60 190⇑iP Pn 21 03 00.1 -1.0
CACH El Canelo 1.77 167⇓eP Pn 21 03 03.9 +0.4
CACH El Canelo 1.77 167⇓eP Pn 21 03 03.9 +0.4
CFAA Coronel Fontan 2.52 73 P Pn 21 03 17.2 +3.4
comp=E,41nm,0.3s,baz=251,slow=13,SNR=2179
CFAA S Sn 21 03 48.7 +5.4
comp=E,34nm,0.3s,baz=274,slow=9.5,SNR=6.0
CFAA LR LR 21 04 33.5
comp=E,326nm,20.1s,baz=263,slow=44
CFAA Coronel Fontan 2.52 73 P Pn 21 03 17.2 +3.4
CFAA S Sn 21 03 48.7 +5.3
CFAA LR LR 21 04 33.5
LCO Las Campanas 3.38 5 ePn Pn 21 03 26.1 +0.6
LCO eSn Sn 21 04 05.4 +1.1
PLCA Paso Flores 8.34 177 P Pn 21 04 33.5 0.0
comp=E,1.0nm,0.3s,baz=343,slow=15,SNR=11
PLCA LR LR 21 08 06.0
comp=E,366nm,21.7s,baz=300,slow=40
PLCA Paso Flores 8.34 177 ePn Pn 21 04 33.6 0.0
TRQA Tornquist 9.34 130 ePn Pn 21 04 47.8 +0.5
CPUP Villa Florida 13.41 67 P Pn 21 05 42.5 -0.3
comp=E,1.6nm,0.3s,baz=224,slow=13,SNR=16
CPUP S Sn 21 08 14.3 +4.0
comp=E,2.3nm,0.3s,baz=96,slow=5.5,SNR=3.6
CPUP LR LR 21 11 29.6
comp=E,490nm,18.2s,baz=228,slow=39
CPUP Villa Florida 13.41 67 ePn Pn 21 05 41.5 -1.3
comp=E,34nm,0.4s
CPUP eSn Sn 21 08 10.0 -0.3
LPAZ La Paz 16.24 10 P Pn 21 06 19.9 -0.1
comp=E,0.3nm,0.3s,baz=191,slow=6.8,SNR=31
LPAZ LR LR 21 12 52.2
comp=E,298nm,21.9s,baz=329,slow=38
LPAZ La Paz 16.24 10 ePn Pn 21 06 21.1 +1.1
comp=E,24nm,0.8s
SIV San Ignacio 18.67 31 P Pn 21 06 47.9 -2.1
comp=E,1.0nm,0.3s,baz=218,slow=12,SNR=24
SIV PcP PcP 21 11 15.6 -0.4
comp=E,0.2nm,0.3s,baz=262,slow=7.1,SNR=3.7
SIV LR LR 21 15 36.5
comp=E,215nm,20.4s,baz=179,slow=42
NNA Nana 20.98 344 LR LR 21 13 35.3
comp=E,364nm,20.0s,MS3.8,baz=166,slow=32
NNA Nana 20.98 344 eP P 21 07 13.9 -0.4
USHA Ushuaia 22.52 176 P P 21 07 30.4 0.0
comp=E,24nm,0.8s,mb4.7,baz=3.6,slow=3.7,SNR=6.7
USHA LR LR 21 15 35.5
comp=E,483nm,19.9s,MS3.9,baz=340,slow=35
SPB Sao Paulo 22.60 73 eP P 21 07 32.2 +0.7
ATAH Atahualpa 26.03 343 LR LR 21 16 10.3
comp=E,232nm,20.6s,MS3.7,baz=338,slow=31
OTAV Otavalo 33.19 346 P P 21 09 07.8 +0.6
SDV Santo Domingo 41.04 1 P P 21 10 12.5 -1.2
BCIP Isla Barro Col 42.16 347 eP P 21 10 23.1 +0.2
APG El Apazote 50.65 335 LR LR 21 28 41.6
comp=E,100nm,19.9s,MS3.8,baz=67,slow=31
CMIG Matias Romero 54.22 332 LR LR 21 29 50.8
comp=E,135nm,18.7s,MS4.0,baz=351,slow=30
TEIG Tepich 54.84 340 eP P 21 11 59.3 -1.0
comp=E,32nm,0.7s,mb5.5
RKT Rikitea 56.59 262 eT 22 12 56.4
comp=E,4.9nm,0.3s
SBA Scott Base 64.82 191 eP P 21 13 09.2 +1.0
comp=E,205nm,3.0s
SYO Syowa Base 67.07 159⇑eP P 21 13 20.6 -2.1
TAOE Nuku Hiva Isla 67.66 274 eLR LR 21 33 55.9
comp=E,235nm,26.4s
JCT Junction City 68.19 333 eP P 21 13 30.4 +0.2
SWET Sewanee 68.68 347 eP P 21 13 32.7 -0.4
SWET epP pP 21 13 47.5 -0.1
627A Terlingua Ranc 68.72 330 ⇓P P 21 13 33.0 -0.6
baz=69
TXAR Lajitas Array 68.74 330 P P 21 13 33.4 -0.3
comp=E,1.2nm,0.6s,mb4.0,baz=153,slow=8.3,SNR=17
TXAR pP pP 21 13 46.5 -1.6
comp=E,1.4nm,0.7s,baz=152,slow=7.5,SNR=4.3
TXAR PcP PcP 21 13 57.1 -1.0
comp=E,1.5nm,0.7s,baz=152,slow=6.8,SNR=5.5
TXAR LR LR 21 39 01.3
comp=E,131nm,20.6s,MS4.2,baz=130,slow=32
528A Cox Ranch, San 69.09 331 ⇓P P 21 13 35.1 -0.7
baz=69,SNR=9.0
626A Big Bend Ranch 69.13 329 ⇓P P 21 13 36.0 0.0
baz=69,SNR=10
527A Woodward Ranch 69.42 330 ⇓P P 21 13 37.4 -0.5
baz=70
428A Kincaid Ranch, 69.54 331 ⇑P P 21 13 38.4 -0.2
baz=70
526A Mary Lane Ranc 69.55 330 ⇑P P 21 13 38.7 +0.1
baz=70,SNR=6.9
TZTN Tazewell 69.56 349 eP P 21 13 37.7 -0.8
TZTN epP pP 21 13 59.2 +6.1
MIAR Mount Ida 69.86 340 eP P 21 13 38.8 -1.6
comp=E,12nm,1.1s,mb4.7
WVT Waverly 69.94 346 eP P 21 13 39.6 -1.3
427A Hayter Ranch, 69.95 331 ⇓P P 21 13 40.9 -0.2
baz=70
JSRW J. Sargeant Re 70.00 354 eP P 21 13 41.5 +0.2
426A McDonald Obser 70.05 330 ⇓P P 21 13 41.5 -0.2
baz=70,SNR=10
328A Wristen Ranch, 70.17 331 ⇑P P 21 13 41.6 -0.9
baz=70
425A Indio Mountain 70.56 329 ⇓P P 21 13 44.6 -0.3
baz=71
227A Bennet, Jal 70.92 331 ⇑P P 21 13 46.7 -0.4
baz=71
325A Bean Ranch, Si 71.06 330 ⇑P P 21 13 46.8 -1.0
baz=71,SNR=13
TIAR Tiarei 71.11 261 eT 22 31 05.6
comp=E,28nm,0.3s
226A Malaga, Loving 71.29 331 ⇓P P 21 13 48.7 -0.5
baz=72,SNR=6.2
PPT Papeete 71.30 261 eLR LR 21 35 25.6
comp=E,158nm,25.2s
PPT Papeete 71.30 261 LR LR 21 37 17.5
comp=E,193nm,18.5s,MS4.4,baz=76,slow=29
324A Moseley Ranch, 71.34 329 ⇑P P 21 13 49.1 -0.5
baz=72,SNR=5.4
MNTX Cornudas Mount 71.52 330 eP P 21 13 48.6 -2.0
comp=E,5.2nm,0.8s,mb4.5
225A Deer Hill, Car 71.64 330 ⇑P P 21 13 50.7 -0.6
baz=72
126A Clayton Basin, 71.77 331 ⇑P P 21 13 51.7 -0.4
baz=72
224A Cornudas Mount 71.90 330 ⇑P P 21 13 52.0 -0.9
baz=72,SNR=6.8
125A Gardner Draw, 72.04 331 ⇓P P 21 13 53.1 -0.6
baz=72
MCWV Mont Chateau 72.14 353 eP P 21 13 54.1 -0.1
MVL Millersville 72.18 356 eP P 21 13 54.8 +0.3
FVM French Village 72.29 344 eP P 21 13 54.3 -0.8
FVM epP pP 21 14 09.1 -0.6
Z26A Caprock 72.30 331 ⇓P P 21 13 54.8 -0.5
baz=73,SNR=16
124A Stringfield Ra 72.41 330 ⇑P P 21 13 55.8 -0.2
baz=73,SNR=8.5
MSTX Muleshoe 72.43 333 ⇑P P 21 13 55.3 -0.7
baz=73,SNR=6.0
Y27A Causey 72.51 332 ⇑P P 21 13 55.8 -0.7
baz=73
Z25A Roswell 72.61 331 ⇓P P 21 13 56.8 -0.3
baz=73
320A Kipp Ranch, An 72.61 327 ⇓P P 21 13 57.6 +0.4
baz=73
Y26A Elida 72.81 332 ⇑P P 21 13 58.0 -0.3
baz=73
221A Mesquite Ranch 72.84 328 ⇑P P 21 13 59.0 +0.5
baz=73
Z24A Sheeppen Canyo 72.92 330 ⇓P P 21 13 58.9 -0.1
baz=73,SNR=7.2
220A Playas Peak, P 73.09 327 ⇓P P 21 14 00.2 +0.2
baz=73,SNR=14
ACSO Alum Creek Sta 73.09 350 eP P 21 13 59.0 -0.8
comp=E,14nm,0.7s,mb5.0
ACSO e 21 14 06.5
Z23A Rita Site, Whi 73.23 330 ⇑P P 21 14 01.2 +0.5
baz=74
121A Cookes Peak, D 73.28 328 ⇓P P 21 14 01.6 +0.5
baz=74,SNR=12
X26A CR and CF Fran 73.35 332 ⇑P P 21 14 01.3 -0.2
baz=74
318A Bisbee 73.38 326 ⇑P P 21 14 01.8 +0.1
baz=74,SNR=9.6
Y24A Capitan 73.46 331 ⇑P P 21 14 02.3 +0.1
baz=74
LIC Lamto 73.49 71 eP P 21 14 06.0 +3.2
comp=E,64nm,1.6s,mb5.3
219A White Tail Can 73.50 327 ⇓P P 21 14 02.7 +0.3
baz=74,SNR=21
W27A Bowe Ranch, En 73.51 333 ⇑P P 21 14 01.9 -0.5
baz=74,SNR=6.0
Z22A Elephant Butte 73.53 329 ⇑P P 21 14 03.0 +0.4
baz=74,SNR=7.2
X25A Clemmons Ranch 73.67 332 ⇓P P 21 14 02.6 -0.7
baz=74
120A U Bar Ranch, L 73.68 328 ⇑P P 21 14 03.8 +0.3
baz=74,SNR=8.3
Y23A Lovelace Mesa, 73.73 330 ⇓P P 21 14 04.0 +0.3
baz=74,SNR=6.4
TIC Toumodi 73.74 71 eP P 21 14 06.9 +2.6
comp=E,4.5nm,0.2s,mb5.0
KIC Kosan Boka 73.80 71 eP P 21 14 04.1 -0.5
comp=E,32nm,0.9s,mb5.2
W26A Owens Ranch, T 73.81 333 ⇑P P 21 14 03.7 -0.4
baz=74,SNR=6.7
218A Dragoon 73.85 326 ⇑P P 21 14 04.9 +0.4
baz=74
DBIC Dimbokro 73.89 71 P P 21 14 04.5 -0.7
comp=E,6.1nm,0.7s,mb4.6,baz=206,slow=7.9,SNR=6.0
DBIC LR LR 21 42 02.5
comp=E,125nm,21.6s,MS4.2,baz=214,slow=32
DBIC Dimbokro 73.89 71 eP P 21 14 04.5 -0.7
comp=E,6.7nm,0.8s,mb4.6
Z21A St. Cloud Mine 73.89 329 ⇑P P 21 14 05.2 +0.6
baz=74
X24A Lazy VL Ranch, 74.02 331 ⇓P P 21 14 05.5 +0.1
baz=74
217A Green Valley 74.05 325 ⇓P P 21 14 05.7 0.0
baz=74,SNR=9.1
Z20A Nine Sixteen R 74.13 328 ⇓P P 21 14 06.6 +0.5
baz=74,SNR=8.8
BNM Barren Site 74.16 330 eP P 21 14 05.5 -0.8
comp=E,2.8nm,1.0s,mb4.2
119A Ashpeak Ranch, 74.17 327 ⇓P P 21 14 06.8 +0.5
baz=74
W25A X Bar L Ranch, 74.19 332 ⇓P P 21 14 06.0 -0.4
baz=74,SNR=5.2
X23A Hourglass Bar 74.34 330 ⇑P P 21 14 07.7 +0.4
baz=75
LPM Los Pinos Moun 74.30 330 eP P 21 14 07.7 +0.7
V26A Tequesquite Ra 74.43 333 ⇑P P 21 14 07.7 -0.1
baz=75
Y21A Point of Rocks 74.48 329 ⇑P P 21 14 09.0 +0.9
baz=75,SNR=14
MAW Mawson 74.50 163 eP P 21 14 07.4 -0.4
comp=E,8.0nm,1.0s,mb4.6
MAW Mawson 74.50 163 P P 21 14 07.9 0.0
comp=E,10nm,1.0s,mb4.7,baz=226,slow=8.4,SNR=17
MAW LR LR 21 48 25.1
comp=E,147nm,21.1s,MS4.2,baz=56,slow=37
MAW Mawson 74.50 163 eP P 21 14 07.8 0.0
216A Three Points, 74.55 325 ⇓P P 21 14 09.0 +0.4
baz=75,SNR=7.9
W24A Lazy 6 Ranch, 74.56 331 ⇓P P 21 14 08.2 -0.3
baz=75,SNR=6.6
Z19A T-Link Ranch, 74.59 328 ⇑P P 21 14 09.4 +0.7
baz=75
117A Oracle 74.67 326 ⇓P P 21 14 09.3 +0.1
baz=75
Y20A Horse Springs, 74.71 328 ⇓P P 21 14 10.0 +0.6
baz=75,SNR=7.8
ANMO Albuquerque 74.77 330 LR LR 21 42 57.9
comp=E,169nm,18.1s,MS4.4,baz=156,slow=32
ANMO Albuquerque 74.77 330 eP P 21 14 09.1 -0.7
TRY Troy 74.78 358 eP P 21 14 10.2 +0.6
V25A Rancho No Teng 74.79 332 ⇓P P 21 14 09.7 -0.2
baz=75,SNR=6.0
W23A Werner Place, 74.83 331 ⇓P P 21 14 10.7 +0.6
baz=75
X21A Alamocita Cree 74.91 329 ⇓P P 21 14 11.1 +0.5
baz=75,SNR=12
U26A Atchley Ranch, 74.94 333 ⇓P P 21 14 10.7 0.0
baz=75
Y19A Nutrioso 75.14 328 ⇓P P 21 14 12.9 +1.0
baz=75,SNR=23
214A Organ Pipe Nat 75.17 324 ⇓P P 21 14 12.5 +0.4
baz=75,SNR=5.6
X20A Quemado 75.30 329 ⇓P P 21 14 13.4 +0.6
baz=76,SNR=5.7
W21A San Fidel 75.42 330 ⇑P P 21 14 13.8 +0.3
baz=76,SNR=7.2
115A Sonoran Desert 75.49 325 ⇑P P 21 14 14.5 +0.6
baz=76,SNR=5.2
X19A St. Johns 75.55 328 ⇑P P 21 14 14.4 +0.1
baz=76
Y17A Roosevelt 75.65 327 ⇑P P 21 14 15.4 +0.5
baz=76,SNR=12
CBKS Cedar Bluff 75.68 337 eP P 21 14 15.0 +0.1
V22A San Miguel Ran 75.79 331 ⇓P P 21 14 16.2 +0.6
baz=76,SNR=14
W20A Ramah 75.79 329 ⇑P P 21 14 16.0 +0.4
baz=76,SNR=8.7
U23A El Rito 75.85 331 ⇓P P 21 14 16.7 +0.8
baz=76
T25A Trinidad 75.85 333 ⇑P P 21 14 16.6 +0.6
baz=76,SNR=11
114A Black Gap (USA 75.85 325 ⇓P P 21 14 16.5 +0.5
baz=76
Y16A Circle Bar Ran 76.10 326 ⇓P P 21 14 17.7 +0.3
baz=76,SNR=10.0
U22A Llaves 76.16 331 ⇑P P 21 14 18.4 +0.7
baz=76,SNR=6.1
X17A Forest Lakes 76.16 327 ⇑P P 21 14 18.1 +0.4
baz=76
W19A Sanders 76.17 328 ⇑P P 21 14 18.3 +0.5
baz=76
V20A Brimhall 76.35 329 ⇓P P 21 14 19.1 +0.4
baz=77
X16A Lo Mia Camp, P 76.53 327 ⇓P P 21 14 20.1 +0.3
baz=77,SNR=15
V19A Window Rock 76.53 329 ⇑P P 21 14 20.3 +0.5
baz=77
U21A Nageezi 76.54 330 ⇑P P 21 14 20.0 +0.1
baz=77,SNR=13
Y15A Casa Rosa Ranc 76.56 326 ⇑P P 21 14 20.2 +0.1
baz=77,SNR=5.0
Z13A Yuma Proving G 76.60 324 ⇓P P 21 14 20.5 +0.2
baz=77,SNR=8.1
LONY Lake Ozonia 76.70 357 eP P 21 14 20.4 -0.1
T22A Edith 76.73 331 ⇑P P 21 14 21.2 +0.3
baz=77,SNR=8.5
W17A Winslow 76.74 327 ⇓P P 21 14 21.4 +0.4
baz=77
SDCO Great Sand Dun 76.80 333 eP P 21 14 21.6 +0.3
U20A Newcomb 76.86 330 ⇑P P 21 14 21.2 -0.4
baz=77,SNR=9.0
Y14A Wickenburg 76.88 325 ⇑P P 21 14 21.5 -0.3
baz=77,SNR=5.2
V18A Ganado 76.91 328 ⇑P P 21 14 21.8 -0.1
baz=77
X15A Humboldt 76.95 326 ⇓P P 21 14 22.4 +0.2
baz=77,SNR=9.0
JFWS Jewell Farm 76.97 346 eP P 21 14 21.0 -1.1
comp=E,10nm,0.8s,mb4.8
T21A Navajo Lake 76.97 331 ⇓P P 21 14 22.6 +0.4
baz=77
GLA Glamis 77.06 323 ⇑P P 21 14 23.2 +0.3
baz=77
U19A Dine' College, 77.08 329 ⇑P P 21 14 22.9 0.0
baz=77
W16A Flagstaff 77.13 327 ⇑P P 21 14 23.7 +0.5
baz=77,SNR=8.2
V17A Tonalea, Kykot 77.22 328 ⇓P P 21 14 23.5 -0.2
baz=78,SNR=14
X14A Yava 77.25 326 ⇓P P 21 14 24.5 +0.6
baz=78
WUAZ Wupatki 77.40 327 ⇓P P 21 14 25.2 +0.5
baz=78,SNR=5.6
WUAZ Wupatki 77.40 327 eP P 21 14 25.4 +0.7
comp=E,10nm,1.0s,mb4.7
T19A Beclabito 77.46 330 ⇓P P 21 14 24.6 -0.4
baz=78,SNR=10
Y12C Blythe 77.47 324 ⇓P P 21 14 25.6 +0.5
baz=78
U18A Rough Rock, Ch 77.48 329 ⇑P P 21 14 25.8 +0.7
baz=78
W15A Williams 77.54 326 ⇑P P 21 14 26.4 +0.9
baz=78
MVCO Mesa Verde 77.56 330 ⇑P P 21 14 25.5 -0.1
baz=78,SNR=5.1
MVCO Mesa Verde 77.56 330 eP P 21 14 25.8 +0.3
S21A Coal Bank Pass 77.65 331 ⇓P P 21 14 26.5 +0.5
baz=78
R22A Saguache, Gunn 77.72 332 ⇓P P 21 14 26.8 +0.4
baz=78
MONP Monument Peak 77.75 322 ⇑P P 21 14 27.3 +0.6
baz=78
X13A Yucca 77.81 325 ⇑P P 21 14 27.0 0.0
baz=78,SNR=13
BC3 Big Chuckawall 77.86 323 ⇓P P 21 14 27.7 +0.4
baz=78
W14A Seligman 77.95 326 ⇑P P 21 14 28.5 +0.7
baz=78
U17A Shonto 77.98 328 ⇓P P 21 14 28.4 +0.5
baz=78
V15A Kaibab Nationa 78.02 327 ⇑P P 21 14 28.6 +0.5
baz=78,SNR=11
T18A Mexican Hat 78.08 329 ⇑P P 21 14 28.6 +0.1
baz=78
IRM Iron Mountain 78.11 324 ⇓P P 21 14 28.7 0.0
baz=78,SNR=5.5
R21A Cimarron 78.15 331 ⇑P P 21 14 29.4 +0.5
baz=78
W13A Hualapai Mount 78.24 325 ⇑P P 21 14 30.0 +0.6
baz=78
S19A Harvey Farm, M 78.28 330 ⇓P P 21 14 30.0 +0.4
baz=79
V14A Boquillas Ranc 78.30 326 ⇑P P 21 14 30.1 +0.4
baz=79,SNR=8.8
Q22A Crested Butte, 78.32 332 ⇓P P 21 14 30.5 +0.7
baz=79
PFO Pinyon Flat Ob 78.33 323 ⇓P P 21 14 30.7 +0.8
baz=79
R20A Redvale 78.34 331 ⇓P P 21 14 30.6 +0.7
baz=79
T17A Navajo Res., N 78.37 328 ⇓P P 21 14 30.5 +0.5
baz=79,SNR=8.4
BELC Belle Mtn. Jos 78.41 323 ⇓P P 21 14 30.8 +0.4
baz=79
U15A North Rim 78.57 327 ⇓P P 21 14 31.8 +0.6
baz=79,SNR=6.6
S18A Hurst Farm, Bl 78.60 329 ⇑P P 21 14 31.7 +0.4
baz=79,SNR=18
SMCO Snowmass 78.62 332 eP P 21 14 31.8 +0.4
comp=E,9.8nm,0.5s,mb5.0
ISCO Idaho Springs 78.63 334 eP P 21 14 31.8 +0.4
T16A Glen Canyon Da 78.67 328 ⇓P P 21 14 33.0 +1.2
baz=79
MURC Murrieta 78.71 322 ⇓P P 21 14 32.5 +0.5
baz=79
R19A Curley Farm, L 78.79 330 ⇑P P 21 14 32.3 -0.1
baz=79
GMRC Granite Mounta 78.85 324 ⇓P P 21 14 33.2 +0.4
baz=79,SNR=7.9
TSUM Tsumeb 78.87 106 eP P 21 14 33.4 +0.1
comp=E,13nm,1.2s,mb4.7
V13A Grand Canyon W 78.89 326 ⇓P P 21 14 33.3 +0.3
baz=79,SNR=5.0
S17A Black Ridge (B 78.90 329 ⇑P P 21 14 33.4 +0.4
baz=79
U14A Mt Trumbull 78.97 327 ⇑P P 21 14 34.3 +0.9
baz=79
T15A Red Dirt Ranch 79.10 327 ⇑P P 21 14 35.2 +1.2
baz=79
R18A Canyonlands Na 79.14 330 ⇓P P 21 14 34.2 -0.1
baz=79
V12A Nelson 79.21 325 ⇓P P 21 14 35.0 +0.3
baz=80
HEC Hector,Ludlow 79.23 323 ⇑P P 21 14 35.5 +0.7
baz=80,SNR=5.0
ECSD EROS Data Cent 79.27 341 eP P 21 14 34.0 -0.8
ECSD epP pP 21 14 48.7 -0.9
U13A Pakoon Wash 79.34 326 ⇑P P 21 14 36.0 +0.5
baz=80
Q19A Hogan Spring (79.35 331 ⇑P P 21 14 36.4 +1.0
baz=80
BFSC Mount Baldy Ra 79.44 322 ⇓P P 21 14 36.4 +0.4
baz=80
P20A De Beque 79.46 331 ⇓P P 21 14 36.3 +0.3
baz=80
R17A Hanksville Air 79.52 329 ⇓P P 21 14 36.2 -0.1
baz=80,SNR=9.2
V11A Goodsprings 79.58 325 ⇑P P 21 14 37.2 +0.4
baz=80
U12A Valley of Fire 79.63 326 ⇑P P 21 14 37.8 +0.8
baz=80
O21A Pagoda 79.70 332 ⇓P P 21 14 37.9 +0.6
baz=80
R16A Teasdale 79.74 329 ⇑P P 21 14 37.8 +0.3
baz=80
P19A Cripple Cowboy 79.81 331 ⇑P P 21 14 38.1 +0.2
baz=80,SNR=7.5
N22A Wattenberg Ran 79.82 333 ⇑P P 21 14 38.5 +0.6
baz=80
GSC Goldstone 79.84 323 ⇓P P 21 14 38.9 +0.8
baz=80
Q18A Rafter H Ranch 79.84 330 ⇑P P 21 14 38.6 +0.5
baz=80
PHWY Pilot Hill 79.89 334 eP P 21 14 38.8 +0.5
BLG Laguna Peak 80.08 321 ⇓P P 21 14 40.3 +0.8
baz=80
BOSA Boshof 80.10 117 P P 21 14 39.9 0.0
comp=E,8.7nm,0.9s,mb4.7,baz=261,slow=6.4,SNR=8.1
BOSA pP pP 21 14 53.0 -1.7
comp=E,8.8nm,0.7s,baz=234,slow=7.2,SNR=4.5
BOSA LR LR 21 44 47.6
comp=E,142nm,18.3s,MS4.3,baz=156,slow=32
BOSA Boshof 80.10 117 P P 21 14 39.9 0.0
BOSA pP pP 21 14 53.0 -1.7
BOSA LR LR 21 44 47.6
EDW2 Edwards Air Fo 80.11 322 ⇑P P 21 14 39.9 +0.2
baz=80
Q16A Castle Valley 80.13 329 ⇑P P 21 14 40.1 +0.5
baz=80
N21A Black Mountain 80.19 333 ⇑P P 21 14 40.7 +0.8
baz=80
P18A Preston Nutter 80.33 330 ⇑P P 21 14 40.6 -0.1
baz=81,SNR=11
P17A Butcher Ranch, 80.41 330 ⇑P P 21 14 41.7 +0.6
baz=81
O19A Miners Draw (B 80.43 331 ⇑P P 21 14 41.6 +0.4
baz=81
N20A Spence Gulch, 80.55 332 ⇑P P 21 14 41.8 0.0
baz=81
T11A Corn Creek, Al 80.60 326 ⇓P P 21 14 42.5 +0.3
baz=81,SNR=10
S12A Delamar Landin 80.72 326 ⇓P P 21 14 43.6 +0.8
baz=81
R13A O'Grain Ranch, 80.77 327 ⇓P P 21 14 43.8 +0.7
baz=81
MPMC Manual Prospec 80.78 324 ⇑P P 21 14 43.9 +0.7
baz=81
FURC Furnace Creek, 80.79 324 ⇑P P 21 14 43.9 +0.7
baz=81
M21A Separation Pea 80.86 333 ⇓P P 21 14 43.0 -0.5
baz=81,SNR=5.5
ISA Isabella 80.97 323 ⇓P P 21 14 44.9 +0.7
baz=81
ISA Isabella 80.97 323 eP P 21 14 43.7 -0.5
O17A Robinson Place 81.01 330 ⇑P P 21 14 44.7 +0.4
baz=81
M20A Sweetwater, Wa 81.08 333 ⇑P P 21 14 44.7 0.0

	baz=81					
PKM	Peak Mountain	81.08 321	⇑P	P	21 14 45.6	+0.8
	baz=81					
Q14A	Sevier Lake (B	81.11 328	⇑P	P	21 14 45.0	+0.1
	baz=81,SNR=8.4					
L21A	Rawlins	81.17 333	⇓P	P	21 14 44.6	-0.5
	baz=82,SNR=8.2					
R12A	Pony Springs,	81.19 327	⇑P	P	21 14 46.0	+0.7
	baz=82					
Q13A	Wheeler Ranch,	81.42 327	⇑P	P	21 14 46.7	+0.1
	baz=82					
M19A	Rock Springs	81.47 332	⇓P	P	21 14 46.4	-0.3
	baz=82					
P14A	Drum Mountains	81.52 328	⇑P	P	21 14 47.5	+0.5
	baz=82,SNR=8.8					
CASY	Casey	81.65 181	eP	P	21 14 47.5	0.0
CASY	Casey	81.65 181	eP	P	21 14 47.2	-0.3
	comp=E,20nm,1.4s,mb4.9					
R11A	Troy Canyon, C	81.66 326	⇑P	P	21 14 47.9	+0.1
	baz=82,SNR=7.4					
S10A	Tonopah Range,	81.80 325	⇓P	P	21 14 48.6	+0.1
	baz=82,SNR=5.4					
P13A	Bates Ranch, G	81.83 328	⇓P	P	21 14 49.1	+0.5
	baz=82					
Q12A	Willow Creek R	81.86 327	⇑P	P	21 14 49.1	+0.3
	baz=82					
RSSD	Black Hills	81.87 337	eP	P	21 14 47.6	-1.2
	comp=E,9.3nm,1.1s,mb4.6					
N16A	Rees Ranch, Co	81.88 330	⇓P	P	21 14 49.3	+0.4
	baz=82					
DUG	Dugway	81.90 329	⇑P	P	21 14 49.0	0.0
	baz=82,SNR=5.9					
DUG	Dugway	81.90 329	eP	P	21 14 48.1	-0.9
	comp=E,15nm,1.5s,mb4.7					
R10A	Warm Springs	81.95 326	⇑P	P	21 14 49.6	+0.3
	baz=82,SNR=5.8					
L19A	Farson	82.06 332	⇑P	P	21 14 49.5	-0.3
	baz=82,SNR=5.1					
Q11A	Duckwater	82.09 326	⇑P	P	21 14 50.5	+0.5
	baz=82					
K20A	Yellowstone Ra	82.14 333	⇑P	P	21 14 49.4	-0.7
	baz=82					
LBTB	Lobatse	82.24 115	eP	P	21 14 51.0	-0.4
	comp=E,37nm,1.4s,mb5.1					
N15A	Stansbury Isla	82.34 330	⇑P	P	21 14 51.3	-0.1
	baz=83					
Q10A	Clear Creek Ra	82.42 326	⇑P	P	21 14 52.3	+0.5
	baz=83					
K19A	Absolon Red Bu	82.47 333	⇑P	P	21 14 51.6	-0.4
	baz=83					
HWUT	Hardware Ranch	82.53 331	eP	P	21 14 51.6	-0.7
	comp=E,4.8nm,0.9s,mb4.5					
HWUT			ePcP	PcP	21 14 57.0	-0.3
HWUT			e	pP	21 15 06.0	-1.1
N14A	Grayback Hills	82.60 329	⇑P	P	21 14 52.6	0.0
	baz=83					
BW06	Boulder Array	82.70 332	⇑P	P	21 14 52.5	-0.6
	baz=83					
BW06	Boulder Array	82.70 332	eP	P	21 14 51.8	-1.3
PDAR	Pinedale Array	82.70 332	P	P	21 14 51.7	-1.4
	comp=E,1.7nm,0.9s,mb4.1,baz=129,slow=4.7,SNR=12					
PDAR			pP	pP	21 15 06.0	-1.9
	comp=E,1.1nm,0.8s,baz=104,slow=6.3,SNR=3.4					
PDAR			LR	LR	21 48 09.6	
	comp=E,112nm,19.1s,MS4.2,baz=333,slow=33					
K18A	Toltan Ranch,	82.78 332	⇓P	P	21 14 53.5	0.0
	baz=83,SNR=5.4					
M15A	Larsen Ranch,	82.79 330	⇑P	P	21 14 53.4	-0.2
	baz=83					
O12A	Currie	82.81 328	⇓P	P	21 14 53.7	0.0
	baz=83					
L16A	Fish Haven	82.82 331	⇑P	P	21 14 53.2	-0.6
	baz=83,SNR=5.3					
NVAR	Mina Array Bea	83.03 324	P	P	21 14 54.5	-0.5
	comp=E,2.9nm,0.8s,mb4.3,baz=158,slow=7.0,SNR=19					
NVAR			pP	pP	21 15 08.7	-1.1
	comp=E,1.7nm,0.8s,baz=156,slow=7.1,SNR=5.2					
NVAR	Mina Array Bea	83.03 324	P	P	21 14 54.5	-0.5
NVAR			pP	pP	21 15 08.7	-1.1
O11A	Cowboy Ranch,	83.12 327	⇑P	P	21 14 55.5	+0.1
	baz=83,SNR=6.6					
M14A	Sheep Mountain	83.20 329	⇑P	P	21 14 55.7	-0.1
	baz=84					
J18A	Kendall Valley	83.25 332	⇑P	P	21 14 55.5	-0.4
	baz=84					
AGMN	Agassiz Nation	83.33 344	eP	P	21 14 55.2	-1.0
	comp=E,5.7nm,0.8s,mb4.7					
N12A	Clover Valley,	83.42 328	⇑P	P	21 14 56.8	-0.1
	baz=84					
ELK	Elko	83.42 328	LR	LR	21 47 59.7	
	comp=E,132nm,18.2s,MS4.3,baz=336,slow=33					
K16A	Soda Springs	83.56 331	⇓P	P	21 14 57.2	-0.3
	baz=84					
I18A	Diamond G Ranc	83.59 333	⇓P	P	21 14 57.5	-0.2
	baz=84					
L14A	Malta	83.59 330	⇓P	P	21 14 57.5	-0.2
	baz=84					
CMB	Columbia Colle	83.77 323	eP	P	21 14 58.5	-0.3
M12A	Wells	83.82 328	⇓P	P	21 14 58.9	0.0
	baz=84					
K15A	Arbon	83.83 331	⇑P	P	21 14 58.6	-0.3
	baz=84					
TPAW	Teton Pass	83.86 332	eP	P	21 14 59.1	+0.1
L13A	Double Diamond	83.94 329	⇓P	P	21 14 59.3	-0.2
	baz=84,SNR=6.9					
IMW	Indian Meadow	84.19 332	eP	P	21 15 00.8	0.0
M11A	Holland Ranch,	84.22 328	⇓P	P	21 15 00.9	-0.1
	baz=84,SNR=6.7					
J15A	Blackfoot	84.38 331	⇓P	P	21 15 01.9	+0.2
	baz=85					
I16A	Newdale	84.39 332	⇑P	P	21 15 01.9	+0.1
	baz=85					
L12A	House Creek Ra	84.45 329	⇑P	P	21 15 02.5	+0.3
	baz=85					
RLMT	Red Lodge	84.59 334	⇓P	P	21 15 02.6	-0.1
	baz=85					
RLMT	Red Lodge	84.59 334	eP	P	21 15 02.0	-0.8
	comp=E,4.2nm,0.8s,mb4.6					
M10A	I.L. Ranch, Tu	84.63 327	⇓P	P	21 15 03.0	0.0
	baz=85					
L11A	Cat Creek Ranc	84.79 328	⇑P	P	21 15 03.7	-0.1
	baz=85,SNR=8.6					
K12A	Draper Farm, C	84.80 329	⇑P	P	21 15 04.4	+0.6
	baz=85					
G18A	Lazy EL Ranch,	84.86 334	⇑P	P	21 15 03.6	-0.5
	baz=85					
H16A	Russell Place,	84.99 332	⇓P	P	21 15 04.9	+0.2
	baz=85					
L10A	Juniper Basin	85.04 328	⇓P	P	21 15 05.5	+0.4
	baz=85					
J13A	Cove Ranch, Pi	85.10 330	⇓P	P	21 15 05.3	0.0
	baz=85,SNR=7.6					
ULM	Lac du Bonnet	85.16 344	P	P	21 15 04.3	-1.1
	comp=E,5.7nm,0.7s,mb4.8,baz=119,slow=3.3,SNR=5.4					
ULM			pP	pP	21 15 18.9	-1.4
	comp=E,3.2nm,0.6s,baz=179,slow=4.3,SNR=2.7					
I14A	Mackay	85.23 331	⇓P	P	21 15 05.9	-0.1
	baz=86					
HLID	Hailey	85.34 330	⇓P	P	21 15 06.3	-0.3
	baz=86,SNR=6.8					
HLID	Hailey	85.34 330	eP	P	21 15 06.8	+0.2
J12A	Stokes Ranch,	85.38 329	⇓P	P	21 15 06.3	-0.5
	baz=86,SNR=9.5					
K11A	Parker Ranch,	85.40 329	⇓P	P	21 15 06.7	-0.1
	baz=86					
F18A	Big Timber	85.42 334	⇑P	P	21 15 06.0	-0.9
	baz=86,SNR=10					
H15A	Lima	85.47 332	⇓P	P	21 15 07.5	+0.3
	baz=86					
I13A	Wildhorse Cree	85.50 330	⇓P	P	21 15 07.5	+0.2
	baz=86,SNR=8.9					
G16A	Moss Hill, Enn	85.64 332	⇓P	P	21 15 08.2	+0.1
	baz=86					
MCMT	McKenzie Canyo	85.73 332	eP	P	21 15 08.2	-0.2
	comp=E,4.6nm,0.9s,mb4.7					
MCMT			e	pP	21 15 23.2	-0.1
H14A	Leadore	85.76 331	⇑P	P	21 15 08.5	-0.1
	baz=86,SNR=6.6					
DGMT	Dagmar	85.77 339	⇑P	P	21 15 08.3	-0.3
	baz=86					
DGMT	Dagmar	85.77 339	eP	P	21 15 08.5	0.0
F17A	Fitzpatrick Pl	85.77 333	⇑P	P	21 15 08.6	-0.1
	baz=86					
K10A	MacKenzie Ranc	85.78 328	⇓P	P	21 15 08.9	+0.1
	baz=86					
MFID	Camas Ranch	85.83 329	⇓P	P	21 15 09.1	+0.2
	baz=86					
I12A	Atlanta	85.83 330	⇑P	P	21 15 09.2	+0.3
	baz=86					
G15A	Dillon	85.86 332	⇓P	P	21 15 09.3	+0.2
	baz=86					
BOZ	Bozeman (W)	85.93 333	⇓P	P	21 15 09.0	-0.4
	baz=86					
BOZ	Bozeman (W)	85.93 333	eP	P	21 15 09.0	-0.4
E18A	Harlowton	86.05 334	⇑P	P	21 15 09.7	-0.3
	baz=86					
DLMT	Dillon	86.07 332	eP	P	21 15 10.3	+0.2
I11A	Placerville	86.28 329	⇓P	P	21 15 11.0	-0.2
	baz=87					
WVOR	Wild Horse Val	86.31 327	eP	P	21 15 10.8	-0.6
	comp=E,2.2nm,0.9s,mb4.4					
H12A	Diamond D Ranc	86.32 330	⇓P	P	21 15 11.6	+0.2
	baz=87					
LRM	Limekiln Ridge	86.39 332	eP	P	21 15 11.9	+0.2
LRM			epP	pP	21 15 27.0	+0.4
F15A	Butte	86.42 332	⇓P	P	21 15 11.5	-0.3
	baz=87,SNR=9.0					
G13A	Cobalt	86.51 331	⇓P	P	21 15 11.8	-0.5
	baz=87,SNR=8.2					
D18A	Linhart Farms,	86.55 335	⇓P	P	21 15 11.7	-0.7
	baz=87,SNR=5.7					
J09A	Fry Pan Ranch,	86.62 328	⇑P	P	21 15 13.3	+0.4
	baz=87					
E16A	East Helena	86.68 333	⇓P	P	21 15 12.3	-0.8
	baz=87,SNR=5.0					
F14A	Wisdom	86.75 332	⇓P	P	21 15 13.7	+0.3
	baz=87					
I10A	Payette	86.79 329	⇓P	P	21 15 13.6	-0.1
	baz=87					
D17A	Six Diamond Ra	86.83 334	⇓P	P	21 15 12.9	-0.9
	baz=87,SNR=10					
SCHQ	Schefferville	86.93 2	P	P	21 15 12.7	-1.4
	comp=E,9.3nm,1.1s,mb4.9,baz=163,slow=4.7,SNR=4.4					
H11A	Donnelly	86.94 330	⇑P	P	21 15 14.0	-0.4
	baz=87,SNR=6.0					
J08A	Circle Bar Ran	86.96 327	⇑P	P	21 15 14.6	0.0
	baz=87,SNR=18					
E15A	Deer Lodge	86.96 333	⇑P	P	21 15 14.2	-0.3
	baz=87					
D16A	Dana Ranch, Ca	87.05 334	⇑P	P	21 15 14.3	-0.6
	baz=87,SNR=5.8					
I09A	Lost Marbles R	87.11 328	⇓P	P	21 15 14.7	-0.5
	baz=87,SNR=13					
F13A	Darby	87.11 331	⇑P	P	21 15 14.7	-0.5
	baz=87,SNR=7.2					
H10A	Noah's Angus R	87.16 329	⇑P	P	21 15 14.9	-0.6
	baz=88,SNR=5.5					
EGMT	Eagleton	87.23 335	⇓P	P	21 15 15.1	-0.6
	baz=88					
C17A	Wharram Farm,	87.26 334	⇑P	P	21 15 15.5	-0.4
	baz=88					
E14A	Clinton	87.29 332	⇓P	P	21 15 16.2	+0.1
	baz=88					
D15A	Lincoln	87.43 333	⇑P	P	21 15 16.1	-0.6
	baz=88,SNR=5.6					
F12A	Elk City	87.47 331	⇓P	P	21 15 16.1	-0.9
	baz=88,SNR=6.9					
B18A	Beardsley Farm	87.55 335	⇓P	P	21 15 16.4	-0.9
	baz=88,SNR=8.9					
E13A	Victor	87.59 332	⇓P	P	21 15 17.4	-0.1
	baz=88					
K05A	Summer Lake	87.60 326	⇑P	P	21 15 18.0	+0.4
	baz=88					
G11A	Walters Elk Ra	87.60 330	⇓P	P	21 15 17.0	-0.6
	baz=88,SNR=9.7					
CHMT	Chamberlain Mo	87.61 333	eP	P	21 15 17.6	0.0
C16A	Fuhringer Ranc	87.77 334	⇓P	P	21 15 17.9	-0.4
	baz=88					
B17A	L&G Farms, Che	87.83 335	⇑P	P	21 15 17.9	-0.7
	baz=88					
D14A	Greenough	87.84 333	⇓P	P	21 15 18.5	-0.1
	baz=88					
F11A	Grangeville	87.95 330	⇓P	P	21 15 18.5	-0.7
	baz=88					
H08A	Prairie City	87.95 328	⇓P	P	21 15 19.1	-0.2
	baz=88					
I07A	Izee	87.99 327	⇑P	P	21 15 19.5	0.0
	baz=88,SNR=7.4					
A18A	Metzger Ranch,	88.02 336	⇓P	P	21 15 18.6	-0.9
	baz=88					
C15A	Salmond Ranch,	88.07 333	⇑P	P	21 15 19.6	-0.1
	baz=88					
G09A	Cove	88.16 329	⇓P	P	21 15 19.8	-0.4
	baz=88,SNR=8.5					
D13A	Huson	88.23 332	⇓P	P	21 15 20.5	0.0
	baz=88					
F10A	Beach Ranch, E	88.47 330	⇑P	P	21 15 21.4	-0.3
	baz=89					
B15A	Bradely Ranch,	88.50 334	⇑P	P	21 15 20.9	-0.9
	baz=89,SNR=5.5					
G08A	Pilot Rock	88.68 328	⇑P	P	21 15 22.4	-0.3
	baz=89					
C13A	Hot Springs	88.75 332	⇓P	P	21 15 22.7	-0.3
	baz=89					
B14A	Marquette Ranc	88.81 333	⇑P	P	21 15 23.1	-0.1
	baz=89					
E10A	Myers Farm, Un	88.82 330	⇓P	P	21 15 23.4	0.0
	baz=89					
A14A	Double T Ranch	89.36 334	⇑P	P	21 15 25.2	-0.6
	baz=90					
LSZ	Lusaka	89.53 108	eP	P	21 15 27.0	-0.5
F07A	Phinny Hill Vi	89.58 328	⇓P	P	21 15 26.3	-0.6
	baz=90					
WALA	Waterton Lakes	89.62 333	eP	P	21 15 25.3	-1.7
	comp=E,0.4nm,1.3s,mb3.6					
WALA			e	pP	21 15 41.5	-0.5
OD2	Odessa Site #2	90.21 330	eP	P	21 15 29.4	-0.4
OD2			epP	pP	21 15 44.6	-0.2
NEW	Newport	90.24 331	eP	P	21 15 29.2	-0.7
AFI	Afiamalu	91.45 253	LR	LR	21 51 52.0	
	comp=E,69nm,18.2s,MS4.1,baz=82,slow=32					
FCC	Fort Churchill	92.81 348	P	P	21 15 40.5	-1.1
ASAR	Alice Springs	119.38 206	PKP	PKPdf	21 21 16.5	-2.9
	comp=E,0.7nm,0.8s,baz=146,slow=1.4,SNR=7.0					
BRTR	Keskin Array B	120.33 60	PKP	PKPdf	21 21 19.7	-0.9
	comp=E,1.2nm,0.8s,baz=181,slow=3.7,SNR=9.2					
BRTR			pPKP	pPKPdf	21 21 33.7	-2.4
	comp=E,0.6nm,0.7s,baz=163,slow=4.5,SNR=3.8					
AKASG	Malin Array Be	120.50 47	PKP	PKPdf	21 21 18.4	-2.2
	comp=E,0.5nm,0.5s,baz=254,slow=3.3,SNR=5.9					
WRA	Warramunga Arr	122.57 209	PKP	PKPdf	21 21 23.5	-2.2
	comp=E,1.8nm,0.8s,baz=169,slow=1.6,SNR=16					
WRAB	Tennant Creek	122.57 209	ePKPdf	PKPdf	21 21 23.9	-1.7
ARU	Arti	137.99 40	ePKPdf	PKPdf	21 21 52.8	-0.8
TIXI	Tiksi	139.25 350	ePKPdf	PKPdf	21 21 53.9	-1.5
PETK	Petropavlovsk-	139.59 316	PKP	PKPdf	21 21 54.2	-2.4
	comp=E,0.8nm,0.7s,baz=132,slow=4.2,SNR=3.7					
PETK	Petropavlovsk-	139.59 316	PKP	PKPdf	21 21 54.2	-2.4
ABKAR	Akbulak array	140.03 50	ePKPdf	PKPdf	21 21 57.1	-0.5
BVAR	Borovoye Array	145.54 42	PKPbc	PKPbc	21 22 07.5	+0.1
	comp=E,7.1nm,0.7s,baz=280,slow=3.4,SNR=43					
BVAR			pPKPbc	pPKPbc	21 22 21.6	-1.1
	comp=E,3.7nm,0.6s,baz=48,slow=2.2,SNR=6.7					
KBL	Kabul	146.80 75	ePKPdf	PKPdf	21 22 09.2	-0.7
PSI	Prapat	149.11 160	PKPbc	PKPbc	21 22 16.6	-2.0
	comp=E,4.7nm,0.5s,baz=210,slow=0.5,SNR=10					
KSM	Kuching	149.23 183	ePKPbc	PKPbc	21 22 17.1	-1.7
KSM			ePKPab	PKPab	21 22 22.7	-0.5
EKS2	Erkin-Say	150.48 60	P	PKPbc	21 22 21.3	+0.3
SNR=14						
EKS2	Erkin-Say	150.48 60	ePKPdf	PKPdf	21 22 15.3	-0.3
EKS2			ePKPbc	PKPbc	21 22 21.1	+0.1
USP	Ospenovka	150.90 58	P	PKPbc	21 22 21.9	0.0
SNR=9.0						
AAK	Ala-Archa	151.00 59	P	PKPbc	21 22 22.7	+0.5
SNR=13						
AAK	Ala-Archa	151.00 59	ePKPdf	PKPdf	21 22 16.8	+0.3
AAK			ePKPbc	PKPbc	21 22 22.7	+0.5
UCH	Uchtor	151.08 60	P	PKPbc	21 22 23.3	+0.9
SNR=21						
UCH	Uchtor	151.08 60	ePKPdf	PKPdf	21 22 17.0	+0.4
UCH			ePKPbc	PKPbc	21 22 23.3	+0.9
CHMS	Chumysh	151.13 59	P	PKPbc	21 22 22.4	-0.1
SNR=8.8						
KURK	Kurchatov	151.14 42	ePKPdf	PKPdf	21 22 15.9	-0.5
KURK			ePKPbc	PKPbc	21 22 21.4	-0.9
KBK	Karagaybulak	151.33 59	P	PKPbc	21 22 23.3	+0.4
SNR=5.3						
KZA	Kyzart	151.64 60	P	PKPbc	21 22 24.8	+1.1
SNR=5.2						
TKM2	Tokmak 2	151.75 59	P	PKPbc	21 22 23.8	-0.1
SNR=8.4						
TKM2	Tokmak 2	151.75 59	ePKPdf	PKPdf	21 22 17.1	-0.4
TKM2			ePKPbc	PKPbc	21 22 23.5	-0.4
TKM2			PKPab	PKPab	21 22 32.3	-0.7
ZAA0	Zalesovo Array	152.43 31	ePKPdf	PKPdf	21 22 16.6	-1.6
ZAA0			ePKPbc	PKPbc	21 22 23.6	-1.4
ZALV	Zalesovo Beam	152.43 31	PKP	PKPdf	21 22 17.2	-0.9
	comp=E,1.6nm,0.8s,baz=294,slow=1.5,SNR=8.0					
ZALV			PKPbc	PKPbc	21 22 24.5	-0.6
	comp=E,18nm,0.7s,baz=299,slow=3.1,SNR=60					
KSH	Kashi	152.49 66	ePKPbc	PKPbc	21 22 24.1	-1.6
KSH			pPKP	pPKPdf	21 22 34.8	+0.5
KSH			sPKP		21 22 38.4	
KSH			PKPab	pPKPab	21 22 53.3	+2.0
KSH			PKS		21 25 56.9	
KSH			PP	PP	21 26 15.3	+5.9
KSH			SKS	SKSdf	21 29 25.3	+3.7
KSH			SKKS	SKKSac	21 33 14.8	+20
KSH			SS	SS	21 46 13.8	+38
KSH			AMB	AMB		
	comp=Z,120nm,5.9s					
KSH			LR	LR		
	comp=N,32nm,3.4s					
KSH			LR	LR		
	comp=E,34nm,5.0s					
KSH			LR	LR		
	comp=Z,61nm,5.6s					
MK31	Makanchi Array	155.08 47	ePKPdf	PKPdf	21 22 20.5	-1.7
MK31			ePKPbc	PKPdf	21 22 29.9	+7.7
MKAR	Makanchi Array	155.08 47	PKP	PKPdf	21 22 21.0	-1.2
	comp=Z,0.3nm,0.3s,baz=0.0,slow=1.2,SNR=5.8					
MKAR			PKPbc	PKPdf	21 22 29.6	+7.4
	comp=Z,0.8nm,0.6s,baz=356,slow=1.7,SNR=3.8					
MKAR			PKPab	PKPab	21 22 46.4	-0.5
	comp=Z,2.7nm,0.7s,baz=299,slow=4.0,SNR=14					
MKAR			pPKPab	pPKPab	21 23 01.8	-0.2
	comp=Z,3.2nm,0.7s,baz=300,slow=3.7,SNR=6.1					
MKAR	Makanchi Array	155.08 47	PKP	PKPdf	21 22 21.0	-1.2
MKAR			PKPbc	PKPdf	21 22 29.6	+7.4
MKAR			PKPab	PKPab	21 22 46.4	-0.5
MKAR			pPKPab	pPKPab	21 23 01.8	-0.2
MJAR	Matsushiro Arr	155.55 288	PKPab	PKPab	21 22 48.4	-0.9
	comp=Z,1.2nm,0.8s,baz=132,slow=2.8,SNR=4.4					
WMQ	Urumqi	159.82 49	ePKP	PKPdf	21 22 29.0	+0.8
CN2	Changchun	162.75 316	ePKP	PKPdf	21 22 29.1	-2.2
CN2			PP	PP	21 27 05.3	+0.3
CMAR	Chiang Mai Arr	163.47 145	PKP	PKPdf	21 22 30.9	-1.9
	comp=Z,0.7nm,0.8s,baz=240,slow=2.8,SNR=5.1					
CMAR			PKPab	PKPab	21 23 23.1	-0.9
	comp=Z,1.8nm,1.0s,baz=225,slow=6.4,SNR=6.6					
KSRS	Korea Array	163.63 293	PKP	PKPdf	21 22 30.8	-1.6
	comp=Z,1.1nm,0.8s,baz=124,slow=1.3,SNR=6.3					
SONM	Songino Array	164.45 6	PKP	PKPdf	21 22 31.5	-1.2
	comp=Z,0.5nm,0.7s,baz=184,slow=1.5,SNR=4.1					
SONM			PKPab	PKPab	21 23 27.4	-0.1
	comp=Z,1.2nm,0.9s,baz=344,slow=3.4,SNR=6.5					
GTA	Gaotai	169.81 44	ePKP	PKPdf	21 22 37.0	0.0
KMI	Kunming	170.96 142	PKP	PKPdf	21 22 36.6	-1.5
KMI			pPKP	pPKPdf	21 22 49.8	-3.9
HHC	Hu-ho-hao-te	171.29 347	ePKP	PKPdf	21 22 35.4	-2.3
HHC			pPKP	pPKPdf	21 22 46.3	-7.0
HHC			PKS		21 26 06.5	
HHC			SKS	SKSdf	21 29 33.5	-3.2
HHC			SKKS	SKKSac	21 34 30.8	-0.1
HHC			AMB	AMB		
	comp=Z,69nm,4.8s					
HHC			LR	LR		
	comp=N,100nm,19.0s					
HHC			LR	LR		
	comp=E,120nm,19.0s					
HHC			LR	LR		
	comp=Z,69nm,21.4s					
NJ2	Nanjing	171.59 270	ePKP	PKPdf	21 22 40.4	+2.2
GYA	Guiyang	173.77 161	ePKP	PKPdf	21 22 37.6	-1.7
GYA			sPKP		21 22 58.0	
GYA			PKPab	PKPab	21 24 08.9	-0.4
GYA			PKS		21 26 08.4	
GYA			PP	PP	21 28 01.3	+0.9
GYA			AMB	AMB		
	comp=Z,90nm,8.0s					
LZH	Lanzhou	174.40 47	ePKP	PKPdf	21 22 35.0	-4.2
LZH			pPKP	pPKPdf	21 22 48.9	-5.9
LZH			LR	LR		
	comp=N,140nm,18.2s					
LZH			LR	LR		
	comp=Z,180nm,20.3s					
CD2	Chengdu	175.35 107	ePKP	PKPdf	21 22 36.3	-3.3

IDC 16 21:06:02.0±13.0, 22°.77S×178°.89W, h476km±129km, mb3.2/5, mb1 3.3/6, mb1mx3.1/18, mbtmp3.2/6, Error ellipse: s-maj=176.9km s-min=75.8km az=59.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	15.81	192	P	P	21 09 21.1	+0.2
	0.9nm,0.3s,baz=51,slow=6.5,SNR=4.0						
CTA	Charters Tower	32.51	268	P	P	21 11 53.8	+1.3
	1.9nm,0.3s,baz=98,slow=7.1,SNR=4.0						
STKA	Stephens Creek	36.09	247	P	P	21 12 21.7	-0.8
	1.0nm,0.4s,baz=82,slow=10,SNR=10						
ASAR	Alice Springs	43.23	259	P	P	21 13 19.9	-0.5
	0.8nm,0.4s,baz=95,slow=7.4,SNR=18						
WRA	Warramunga Arr	43.51	265	P	P	21 13 22.1	-0.5
	0.9nm,0.3s,baz=92,slow=8.5,SNR=64						
FITZ	Fitzroy Crossi	51.94	264	P	P	21 14 26.6	+0.6
	1.0nm,0.6s,baz=90,slow=20,SNR=4.4						

*IDC **16** 21:30:46.0±2.0, 16°.86N×100°.63W, h0km, mb3.6/2, mb1 3.8/5, mb1mx3.6/23, mbtmp3.5/5, ML3.3/3, Error ellipse: s-maj=52.5km s-min=26.4km az=33.0*
*ISCJB **16** 21:30:50.0±0.4, 17°.29N±0°.04×100°.38W±0°.03, h34km±8km, mb3.2/2, Error ellipse: s-maj=6.1km s-min=4.3km az=16.3*
*MEX **16** 21:30:51.9±0.7, 17°.27N×100°.41W, h42km±6km, MD4.2*
*NEIC **16** 21:30:52.0, 17°.30N×100°.45W, h30km, MD4.2(MEX), After MEX.*

ISC 16 21:30:50.7±0.6, 17°.29N±0°.04×100°.38W±0°.03, h31km±6km, n27, σ0°97/43, mb3.2/2, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.27	156	eP	Pb	21 30 58.0	+0.2
CAIG				i S	Sb	21 31 03.6	+1.1
ACX	Acapulco	0.65	130	eP	Pb	21 31 03.0	-0.7
ACX				i S	Sb	21 31 11.6	-0.9
MEIG	Mezcala	0.96	49	eP	Pn	21 31 07.6	-0.5
MEIG				i S	Sb	21 31 20.3	-0.9
ZIIG	Zihuatanejo	1.08	287	eP	Pn	21 31 08.5	-1.3
ZIIG				i S	Sn	21 31 22.6	-1.2
PLIG	Platanillo	1.38	37	eP	Pn	21 31 13.8	0.0
PLIG				i S	Sn	21 31 31.4	+0.3
YAIG	Yautepec	2.00	38	eP

MNTX	Cornudas Mount	15.04	343	*e*Pn		Pn	21 34 22.3 +1.2
	1.8nm,1.0s						
MIAR	Mount Ida	18.23	18	*e*P		Pn	21 35 01.3 -0.1
	2.7nm,0.6s						
ANMO	Albuquerque	18.41	344	*e*P		Pn	21 35 04.5 +0.9
SDCO	Great Sand Dun	20.87	349	*e*P		P	21 35 31.6 +1.4
	1.2nm,0.7s						
PV01	Paradox Valley	21.97	343	*e*P		P	21 35 44.2 +2.1
	373nm,0.9s						
NVAR	Mina Array Bea	26.26	327	P		P	21 36 25.1 +1.8
	0.5nm,0.6s,mb3.2,baz=152,slow=11,SNR=5.4						
PDAR	Pinedale Array	26.57	345	P		P	21 36 30.2 +4.2
	0.6nm,0.7s,mb3.2,baz=160,slow=11,SNR=3.7						
WRA	Warramunga Arr	128.26	258	PKP		PKPdf	21 49 54.2 -0.8
	0.5nm,0.7s,baz=101,slow=1.3,SNR=4.6						

IDC 16 21:33:47.9±3.6, 21°.87S×68°.66E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.6/24, mbtmp3.7/6, Error ellipse: s-maj=108.8km s-min=30.5km az=52.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	49.84	39	P	P	21 42 42.8	-0.2
	0.6nm,0.9s,baz=238,slow=8.4,SNR=3.9						
ASAR	Alice Springs	59.71	105	P	P	21 43 54.5	-0.2
	0.5nm,0.7s,baz=265,slow=6.0,SNR=5.6						
WRA	Warramunga Arr	60.96	101	P	P	21 44 03.6	+0.3
	0.4nm,0.7s,baz=257,slow=6.3,SNR=5.1						
MKAR	Makanchi Array	69.44	10	P	P	21 44 58.0	+0.4
	0.3nm,0.3s,baz=208,slow=6.9,SNR=7.7						
BVAR	Borovoye Array	74.59	1	P	P	21 45 28.1	-0.3
	0.5nm,0.5s,baz=188,slow=20,SNR=2.3						
ZALV	Zalesovo Beam	76.78	10	P	P	21 45 41.4	+0.5
	1.0nm,0.7s,baz=193,slow=6.1,SNR=4.7						

NIED ***16*** *21:39:00, 38°.80N×140°.80E, h5km, Mw4.0 Best double couple: M0 1.13000×10^15 NP1:φs181.00000°, δ53.00000°, λ92.00000°. NP2:φs358.00000°, δ38.00000°, λ87.00000°.*
NEIC ***16*** *21:39:23.6, 38°.79N×140°.80E, h3km, mb4.0/3, After JMA.*
IDC ***16*** *21:39:23.7±0.8, 38°.78N×140°.68E, h0km, mb3.7/7, mb1 3.9/10, mb1mx3.7/27, mbtmp3.7/10, ML3.4/3, MS2.9/4, Ms1 2.9/4, ms1mx2.6/27, Error ellipse: s-maj=26.0km s-min=13.6km az=115.0*
JMA ***16*** *21:39:23.5, 38°.79N×140°.80E, h2km±1km, M4.1*
JMA Felt II J1.
ISCJB ***16*** *21:39:23.4±0.5, 38°.79N±0°.02×140°.82E±0°.03, h13km±3km, mb3.8/10, Error ellipse: s-maj=4.8km s-min=3.8km az=37.1*

ISC 16 21:39:23.8±0.4, 38°.79N±0°.02×140°.81E±0°.03, h3km±3km, n42, σ0s88/48, mb3.8/10, 5D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	Ichinoseki	0.36	63	P	Pg	21 39 30.7	0.0
JMK				*e*S	Sg	21 39 36.1	+0.7
JYK	Kaneyama	0.37 291		⇓P	Pg	21 39 30.9	0.0
JYK				*e*S	Sg	21 39 36.4	+0.6
JOU	Okura	0.43 195		⇓P	Pg	21 39 32.1	0.0
JOU				S	Sg	21 39 38.3	+0.6
JIO	Ouri	0.54 128		⇓P	Pg	21 39 33.8	-0.3
JIO				*e*S	Sg	21 39 41.4	+0.3
JRG	Rokugo	0.62 348		P	Pg	21 39 36.0	+0.3
JOM	Ohasama	0.78	29	P	Pg	21 39 38.2	-0.6
JOM				*e*S	Sg	21 39 48.9	-0.1
JYS	Shirataka	0.81 226		⇓P	Pg	21 39 39.0	-0.3
JYS				S	Sg	21 39 50.0	+0.2
JYA	Atsumi	0.88 258		⇓P	Pg	21 39 40.1	-0.5
JYA				S	Sg	21 39 52.0	+0.1
JMM	Marumori	0.92 181		P	Pg	21 39 40.9	-0.5
JMM				S	Sg	21 39 52.7	-0.6
MJAR	Matsushiro Arr	3.04 223		Pn	Pn	21 40 13.7	+0.9
	1.4nm,0.3s,baz=25,slow=12,SNR=22						
MJAR				Pg	Pg	21 40 19.1	-3.0
	4.5nm,0.3s,baz=24,slow=14,SNR=86						
MJAR				Lg		21 40 58.1	
	2.1nm,0.3s,baz=316,slow=30,SNR=4.9						
MJAR				LR	LR	21 41 34.1	
	comp=Z,234nm,18.5s,baz=60,slow=44						
MAJO	Matsushiro	3.04 223		*e*Pn	Pn	21 40 13.9	+1.1
MAT	Matsushiro	3.04 223		P	Pn	21 40 14.2	+1.4
MAT				*e*S	Sn	21 40 52.3	+2.5
ASAJ	Asahikawa	5.49	14	Pn	Pn	21 40 49.0	+2.6
	1.3nm,0.3s,baz=224,slow=14,SNR=9.0						
JHJ	Hachijo jima 2	5.71 189		Pn	Pn	21 40 49.8	+0.2
	4.8nm,0.3s,baz=12,slow=9.2,SNR=2.8						
YSS	Yuzh-Sakhalins	8.29	9	Pn	Pn	21 41 26.1	+1.3
KSRS	Korea Array	10.24 267		Pn	Pn	21 41 55.4	+3.8
	0.7nm,0.3s,baz=80,slow=14,SNR=19						
KSRS				LR	LR	21 45 24.3	
	comp=Z,142nm,18.8s,baz=75,slow=35						
INCN	Inchon	11.24 268		Pn	Pn	21 42 05.5	+0.2
CBIJ	Chichi jima	11.71 174		LR	LR	21 47 09.5	
	comp=Z,29nm,18.1s,baz=118,slow=40						
HIA	Hailar	18.36 312		Pn	Pn	21 43 39.0	-0.3
PETK	Petropavlovsk-	18.45	34	LR	LR	21 51 14.3	
	comp=Z,22nm,18.4s,baz=87,slow=38						
PET	Petropavlovsk	18.82	35	P	Pn	21 43 43.7	-1.1
YULB	Yu-li	22.61 233		*e*P	P	21 44 25.2	-0.5
ZALV	Zalesovo Beam	40.39 311		P	P	21 47 02.3	-0.5
	0.4nm,0.4s,mb3.5,baz=87,slow=7.4,SNR=3.3						
CHTO	Chiang Mai	41.30 253		P	P	21 47 10.4	-0.2
CM31	Chiang Mai Arr	41.51 253		*e*P	P	21 47 11.1	-1.3
KURK	Kurchatov	44.49 307		*e*P	P	21 47 35.4	-0.8
	2.0nm,1.1s,mb3.8						
UCH	Uchtor	49.38 296		*e*P	P	21 48 14.1	-0.3
	1.1nm,0.8s,mb3.9						
AML	Almayashu	49.98 297		P	P	21 48 18.5	-0.6
ARU	Arti	54.74 318		*e*P	P	21 48 53.2	-1.0
	3.5nm,1.0s,mb4.3						
WRAB	Tennant Creek	58.72 187		P	P	21 49 21.8	-1.0
WRA	Warramunga Arr	58.73 187		P	P	21 49 21.9	-1.0
	1.1nm,0.8s,mb4.0,baz=4.2,slow=7.4,SNR=6.5						
ASAR	Alice Springs	62.46 187		P	P	21 49 48.2	0.0
	0.4nm,0.7s,mb3.7,baz=10,slow=4.8,SNR=5.0						
ASAR	Alice Springs	62.46 187		P	P	21 49 48.2	0.0
FINES	FINESS Array B	67.05 332		P	P	21 50 17.4	-0.4
	1.0nm,0.7s,mb4.0,baz=38,slow=5.3,SNR=2.9						
KIV	Kislovodsk	69.41 310		*e*P	P	21 50 32.5	-0.5
AKASG	Malin Array Be	72.62 322		P	P	21 50 52.2	-0.2
	0.6nm,0.5s,mb3.8,baz=47,slow=5.8,SNR=5.4						
AKASG	Malin Array Be	72.62 322		P	P	21 50 52.2	-0.2
NVAR	Mina Array Bea	74.33	53	P	P	21 51 04.2	+1.6
	0.5nm,0.8s,mb3.5,baz=274,slow=4.6,SNR=3.9						
NVAR	Mina Array Bea	74.33	53	P	P	21 51 04.2	+1.6
TXAR	Lajitas Array	89.43	52	P	P	21 52 22.8	+0.6
	0.3nm,0.8s,mb3.7,baz=350,slow=2.7,SNR=3.1						
LPAZ	La Paz	146.18	57	PKPbc	PKPbc	21 59 08.1	+2.2
	0.6nm,0.6s,baz=51,slow=6.6,SNR=3.5						
LPAZ	La Paz	146.18	57	PKPbc	PKPbc	21 59 08.1	+2.2

IDC 16 21:42:40.6±8.0, 33°.23S×179°.97E, h245km±85km, mb3.3/3, mb1 3.5/4, mb1mx3.3/16, mbtmp3.3/4, Error ellipse: s-maj=94.9km s-min=37.0km az=0.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	5.53	204	P	Pn	21 44 03.9	+1.3
	1.9nm,0.3s,baz=270,slow=5.2,SNR=9.4						
URZ				S	S	21 45 07.4	-0.8
	7.4nm,0.3s,baz=66,slow=21,SNR=12						
STKA	Stephens Creek	32.25	262	P	P	21 48 47.4	+1.2
	1.1nm,0.8s,baz=108,slow=19,SNR=2.4						
ASAR	Alice Springs	41.33	271	P	P	21 50 02.4	-0.3
	0.5nm,0.2s,baz=108,slow=7.9,SNR=12						
WRA	Warramunga Arr	42.58	276	P	P	21 50 12.2	-0.6
	1.0nm,0.3s,baz=116,slow=7.7,SNR=22						
FINES	FINESS Array B	147.13	337	PKPbc	PKPbc	22 01 53.0	-0.9
	0.8nm,0.4s,baz=46,slow=4.0,SNR=12						

IDC ***16*** *21:44:03.3±4.3, 38°.77N×140°.99E, h0km, mb3.4/1, mb1 3.5/3, mb1mx3.2/26, mbtmp3.3/3, ML2.9/2, Error ellipse: s-maj=73.4km s-min=43.5km az=173.0*
ISCJB ***16*** *21:44:03.9±0.4, 38°.79N±0°.03×140°.82E±0°.04, h10km, Error ellipse: s-maj=4.9km s-min=3.2km az=138.1*
JMA ***16*** *21:44:04.2, 38°.79N×140°.80E, h3km±1km, M3.1*
JMA Felt II J1.

ISC 16 21:44:04.4±0.4, 38°.78N±0°.03×140°.82E±0°.03, h10km, n14, σ0s89/24, 2C-4D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	Ichinoseki	0.35	61	P	Pg	21 44 11.3	-0.1
JMK				S	Sg	21 44 16.5	+0.4
JYK	Kaneyama	0.39 291		⇓P	Pg	21 44 11.7	-0.3
JOU	Okura	0.43 197		⇑P	Pg	21 44 12.7	-0.2
JOU				S	Sg	21 44 18.8	+0.2
JIO	Ouri	0.53 128		⇓P	Pg	21 44 14.4	-0.2
JIO				S	Sg	21 44 21.9	+0.4
JRG	Rokugo	0.63 347		⇑P	Pg	21 44 16.7	0.0
OFUJ	Ofunato	0.72	65	P	Pg	21 44 18.0	-0.4
OFUJ				S	Sg	21 44 27.9	+0.1
JOM	Ohasama	0.78	28	P	Pg	21 44 18.9	-0.6
JOM				*e*S	Sg	21 44 29.2	-0.5
JYS	Shirataka	0.82 227		⇓P	Pg	21 44 19.7	-0.4
JYS				S	Sg	21 44 30.5	-0.3
JYA	Atsumi	0.89 258		⇓P	Pg	21 44 20.7	-0.8
JYA				S	Sg	21 44 32.6	-0.5
JMM	Marumori	0.91 182		P	Pg	21 44 21.3	-0.7
JMM				S	Sg	21 44 33.0	-0.9
MAT	Matsushiro	3.05 224		P	Pn	21 44 54.4	+1.7
MAT				*e*S	Sn	21 45 33.7	+4.5
MJAR	Matsushiro Arr	3.05 224		Pn	Pn	21 44 55.2	+2.5
	0.5nm,0.3s,baz=31,slow=14,SNR=7.3						
MJAR				Pg	Pg	21 44 59.4	-3.4
	1.8nm,0.3s,baz=28,slow=16,SNR=8.9						
KSRS	Korea Array	10.25 267		Pn	Pn	21 46 33.7	+2.2
	0.3nm,0.3s,baz=74,slow=14,SNR=5.6						
WRA	Warramunga Arr	58.73 187		P	P	21 54 02.8	+0.4
	0.2nm,0.5s,baz=5.4,slow=7.3,SNR=5.6						

MEX 16 22:13:06.8±1.6, 15°.70N×91°.47W, h68km±62km, MD4.1, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		1.10	224	*i* P	Pn	22 13 24.1	-2.3
THIG				*i* S	Sn	22 13 40.2	-0.8
SCX	San Cristobal	1.52	313	*i* P	Pn	22 13 39.3	+7.4
SCX				*i* S	Sn	22 13 49.5	-1.4
PCIG		1.68	270	*i* P	Pn	22 13 33.2	-0.9
PCIG				*i* S	Sn	22 13 52.4	-2.4
TGIG		1.91	304	*i* P	Pn	22 13 37.3	+0.1
TGIG				*i* S	Sn	22 13 57.3	-3.1
HUIG	Huatulco	4.46	272	*i* P	Pn	22 14 12.2	+0.2
HUIG				*i* S	Sn	22 15 00.7	-2.0

ISCJB ***16*** *22:26:19.8±0.4, 33°.32N±0°.02×35°.46E±0°.03, h9km±3km, Error ellipse: s-maj=4.4km s-min=2.6km az=37.7*
CSEM ***16*** *22:26:20.0±0.2, 33°.32N×35°.45E, h2km, ML3.3, Error ellipse: s-maj=4.8km s-min=2.8km az=103.0*
GRAL ***16*** *22:26:20.4±0.3, 33°.31N×35°.44E, h5km±2km, MD3.3*
GII ***16*** *22:26:20.1±0.6, 33°.28N×35°.47E, h1km±1km, Md2.7/9*
NSSC ***16*** *22:26:21, 33°.23N×35°.59E, h4km±5km*

ISC 16 22:26:20.3±0.4, 33°.32N±0°.02×35°.47E±0°.03, h6km±4km, n36, σ0s73/65, 10D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	Matarih	0.20	325	*e*P	Pg	22 26 24.1	-0.2
MATL	Matarih	0.20	325	*e*P	Pg	22 26 24.1	-0.2
KSDI	Kefar Szold	0.21	129	Pg	Pg	22 26 24.4	0.0
KSDI				Sg	Sg	22 26 27.4	+0.3
HRI	Mount Hermon	0.23	104	Pg	Pg	22 26 24.6	-0.2
HRI				Sg	Sg	22 26 28.8	+0.9
MMA0	Mount Meron ar	0.31	190	Pg	Pg	22 26 26.0	-0.3
MMA0				Sg	Sg	22 26 30.8	+0.4
RCY	Rachaya	0.34	61	*e*P	Pg	22 26 27.2	+0.4
RCY				*e*S	Sg	22 26 32.4	+1.1
RCY	Rachaya	0.34	61	*e*P	Pg	22 26 27.2	+0.4
RCY				*e*S	Sg	22 26 32.4	+1.1
HNTI	Hanita	0.34	226	Pg	Pg	22 26 26.9	-0.1
HNTI				Sg	Sg	22 26 31.9	+0.5
BRBR	Barbar	0.41	77	⇓P	Pg	22 26 28.0	-0.3
BRBR				⇓S	Sg	22 26 34.0	+0.3
BRBR	Barbar	0.41	77	⇓P	Pg	22 26 28.5	+0.2
BRBR				⇓*i*S	Sg	22 26 34.1	+0.4
KSHT	Keshet	0.45	140	Pg	Pg	22 26 29.2	+0.3
KSHT				Sg	Sg	22 26 35.7	+1.0
BHL	Bhannes	0.60	15	*e*P	Pg	22 26 31.4	-0.5
BHL				*e*S	Sg	22 26 39.8	+0.1
BHL	Bhannes	0.60	15	*e*P	Pg	22 26 31.4	-0.5
BHL				*e*S	Sg	22 26 39.8	+0.1
BLGI	Bet Lehem HaGe	0.63	202	Pg	Pg	22 26 32.1	-0.3
BLGI				Sg	Sg	22 26 41.4	+0.8
QASN	Qassioun	0.71	72	⇑P	Pg	22 26 34.0	+0.1
QASN				⇓S	Sg	22 26 44.0	+0.9
QASN	Qassioun	0.71	72	⇑*i*P	Pg	22 26 34.4	+0.5
QASN				⇓*i*S	Sg	22 26 44.5	+1.4
TCHB	Talchebab	0.78	147	⇑P	Pg	22 26 34.0	-1.2
TCHB				⇑S	Sg	22 26 43.0	-2.3
TCHB	Talchebab	0.78	147	⇑*i*P	Pg	22 26 34.7	-0.5
TCHB				⇑*i*S	Sg	22 26 43.9	-1.4
TOTH	TOTAH	0.81	87	⇑P	Pg	22 26 36.0	+0.2
TOTH				⇑S	Sg	22 26 47.0	+0.8
TOTH	TOTAH	0.81	87	⇑*i*P	Pg	22 26 36.0	+0.2
TOTH				⇑*i*S	Sg	22 26 47.2	+1.0
OFRI	'Ofer	0.81	210	Pg	Pg	22 26 35.4	-0.4
OFRI				Sg	Sg	22 26 47.0	+0.7
MMLI	Mount Malkishu	0.88	183	Pg	Pg	22 26 36.1	-1.1
MMLI				Sg	Sg	22 26 49.0	+0.3
HWQ	Hawqa	1.03	23	*e*P	Pg	22 26 39.5	-0.6
HWQ				*e*S	Sg	22 26 53.2	-0.4
HMDT	Nahal Hemdat	1.07	177	Pg	Pg	22 26 39.8	-1.0
HMDT				Sg	Sg	22 26 55.0	+0.4
SLTI	Sal'it	1.14	199	Pg	Pg	22 26 41.1	-1.0
SLTI				Sg	Sg	22 26 57.1	+0.2
SALA	Sala	1.23	119	⇓P	Pg	22 26 42.0	-1.8
SALA				⇓S	Sg	22 26 57.0	-2.7
SALA	Sala	1.23	119	⇓*i*P	Pg	22 26 42.9	-0.9
SALA				⇓*i*S	Sg	22 26 57.8	-1.9
ZALF	Zalf	1.62	104	⇑P	Pn	22 26 49.0	-0.3
ZALF				⇑S	Sn	22 27 09.0	-1.4
ZALF	Zalf	1.62	104	⇑*i*P	Pn	22 26 49.6	+0.3
ZALF				⇑*i*S	Sn	22 27 09.6	-0.8
DSI	Dead Sea	1.75	182	Pn	Pn	22 26 50.8	-0.3
DSI				Sn	Sn	22 27 14.0	+0.3
YTIR	Yattir	1.98	189	Pn	Pn	22 26 54.8	+0.5
RTMI	Retamim	2.35	196	Pn	Pn	22 26 59.9	+0.4
KZIT	Kziot	2.57	201	Pn	Pn	22 27 02.9	+0.4
KZIT				Sn	Sn	22 27 35.3	+1.2
ZFRI	Zfri	2.77	185	Pn	Pn	22 27 05.1	-0.1
PRNI	Paran	2.99	188	Pn	Pn	22 27 08.3	+0.1
MBRI	Mt Berech	3.55	188	Pn	Pn	22 27 15.7	-0.2

ATH ***16*** *22:27:03.7, 39°.31N×21°.81E, h10km, MD3.0/3*
CSEM ***16*** *22:27:11.9±1.2, 38°.80N×21°.53E, h2km, MD3.0, Error ellipse: s-maj=31.0km s-min=11.1km az=21.0*
ISCJB ***16*** *22:27:11.6±1.9, 38°.8N±0°.1×21°.46E±0°.08, h10km, Error ellipse: s-maj=16.3km s-min=8.0km az=14.4*
THE ***16*** *22:27:18.2, 38°.83N×20°.16E, h7km±12km, Error ellipse: s-maj=13.1km s-min=0.7km az=93.0*

ISC 16 22:27:11.7±2.1, 38°.9N±0°.1×21°.49E±0°.08, h10km, n9, σ1s27/13, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	Efpalio	0.53	142	*e*PB	Pg	22 27 20.4	-1.6
EFP	Efpalio	0.53	142	*e*Pb	Pg	22 27 20.4	-1.6
LKD2	Lefkada island	0.65	265	P	Pg	22 27 25.6	+1.2
LKD2				S	Sg	22 27 31.4	-1.6
LKD2	Lefkada island	0.65	265	P	Pg	22 27 25.6	+1.2
LKD2				S	Sg	22 27 31.4	-1.6
RLS	Riolos of Patr	0.79	181	*e*PB	Pg	22 27 28.0	+1.1
RLS	Riolos of Patr	0.79	181	*e*Pb	Pg	22 27 28.0	+1.1
VLS	Valsamata	0.97	227	P	Pg	22 27 31.9	+1.4
VLS				S	Sg	22 27 42.6	-0.5
VLS	Valsamata	0.97	227	*e*PB	Pg	22 27 31.8	+1.3
VLS	Valsamata	0.97	227	*e*Pb	Pg	22 27 31.8	+1.3
VLS				S	Sg	22 27 42.6	-0.5

GII ***16*** *22:31:41.8±0.5, 33°.28N×35°.47E, h4km±1km, Md2.1/8*
ISCJB ***16*** *22:31:41.2±0.5, 33°.33N±0°.03×35°.45E±0°.04, h11km±6km, Error ellipse: s-maj=6.0km s-min=3.4km az=30.0*
GRAL ***16*** *22:31:42.4±0.3, 33°.34N×35°.46E, h2km±17km, MD3.1*

ISC 16 22:31:41.7±0.5, 33°.34N±0°.02×35°.45E±0°.04, h9km±8km, n16, σ0s56/28, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	Matarih	0.18	327	*e*P	Pg	22 31 45.9	+0.3
KSDI	Kefar Szold	0.23	129	Pg	Pg	22 31 46.1	-0.3
KSDI				Sg	Sg	22 31 49.4	-0.1
HRI	Mount Hermon	0.25	106	Pg	Pg	22 31 46.3	-0.5
HRI				Sg	Sg	22 31 50.8	+0.7
MMA0	Mount Meron ar	0.32	187	Pg	Pg	22 31 47.6	-0.5
MMA0				Sg	Sg	22 31 52.6	+0.2
HNTI	Hanita	0.34	222	Pg	Pg	22 31 48.9	+0.5
HNTI				Sg	Sg	22 31 53.7	+0.7
RCY	Rachaya	0.34	64	*e*P	Pg	22 31 48.6	+0.1
RCY				*e*S	Sg	22 31 53.5	+0.4
KSHT	Keshet	0.47	139	Pg	Pg	22 31 50.9	+0.1
KSHT				Sg	Sg	22 31 57.8	+0.9
BHL	Bhannes	0.59	17	*e*P	Pg	22 31 52.9	-0.3
BHL				*e*S	Sg	22 32 00.8	-0.2
BLGI	Bet Lehem HaGe	0.64	200	Pg	Pg	22 31 53.8	-0.2
BLGI				Sg	Sg	22 32 03.3	+0.9
OFRI	'Ofer	0.81	209	Pg	Pg	22 31 57.0	-0.3
OFRI				Sg	Sg	22 32 08.4	+0.5
MMLI	Mount Malkishu	0.90	181	Pg	Pg	22 31 58.3	-0.6
MMLI				Sg	Sg	22 32 10.4	-0.2
HWQ	Hawqa	1.03	24	*e*P	Pg	22 32 01.4	-0.1
HMDT	Nahal Hemdat	1.08	176	Pg	Pg	22 32 01.4	-1.1
HMDT				Sg	Sg	22 32 15.6	-0.9
SLTI	Sal'it	1.15	198	Pg	Pg	22 32 02.8	-0.9
SLTI				Sg	Sg	22 32 18.4	-0.2
DSI	Dead Sea	1.76	182	Pn	Pn	22 32 12.3	-0.1
PRNI	Paran	3.00	187	Pn	Pn	22 32 30.5	+1.1

DJA ***16*** *22:42:24, 0°.03N×124°.72E, h19km, MLv4.2/10*
ISCJB ***16*** *22:42:24.0±0.4, 0°.11N±0°.04×124°.62E±0°.03, h78km±5km, mb3.7/7, Error ellipse: s-maj=6.5km s-min=5.5km az=151.3*
IDC ***16*** *22:42:25.8±7.7, 0°.09N×124°.58E, h75km±77km, mb3.4/5, mb1 3.7/6, mb1mx3.4/20, mbtmp3.6/6, ML4.2/1, Error ellipse: s-maj=55.8km s-min=18.2km az=56.0*
NEIC ***16*** *22:42:25.3±5.4, 0°.17N×124°.63E, h73km±51km, mb3.2/2, Error ellipse: s-maj=54.4km s-min=8.8km az=54.0*

ISC 16 22:42:25.3±0.4, 0°.12N±0°.04×124°.63E±0°.03, h71km±5km, n29, σ1s08/37, mb3.7/7, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	Cibinong	0.79	305	P	Pn	22 42 40.7	-0.7
KMSI				S	Sn	22 42 52.0	-1.3
MNI	Manado	1.33	9	P	Pn	22 42 48.7	+0.6
MNI				S	Sn	22 43 06.1	+0.9
LUWI	Luwuk	2.19	238	P	Pn	22 43 01.1	+1.5
LUWI				S	Sn	22 43 29.9	+4.1
MRSI	Marisa	2.71	277	P	Pn	22 43 05.0	-1.7
TNTI	Ternate	2.81	77	P	Pn	22 43 08.5	+0.5
TNTI				S	Sn	22 43 41.5	+0.7
LBMI	Labuha	2.96	105	P	Pn	22 43 09.8	-0.3
LBMI				S	Sn	22 43 43.4	-1.2
NLAI	Namlea	4.15	144	P	Pn	22 43 24.2	-2.1
KDI	Kendari	4.52	206	P	Pn	22 43 31.4	0.0
KDI				S	Sn	22 44 20.4	-2.3
TTSI	Tana Toraja	5.75	237	P	Pn	22 43 50.0	+1.9
	1μm67nm,0.5s						
SPSI	Sidrap Palu	6.33	230	P	Pn	22 43 58.3	+2.2
	2μm76nm,0.5s						
BNSI	Bone	6.37	225	P	Pn	22 43 57.4	+0.7
	0.2nm49nm,0.7s						
BKSI	Bulukumba	7.04	220	P	Pn	22 44 06.2	+0.4
KAPI	Kappang	7.06	224	P	Pn	22 44 06.3	+0.3
	4.7nm,0.3s,baz=115,slow=1.8,SNR=32						
KAPI				S	Sn	22 45 24.4	-0.5
	1.8nm,0.3s,baz=195,slow=20,SNR=6.0						
KAPI	Kappang	7.06	224	P	Pn	22 44 06.3	+0.3
KAPI				S	Sn	22 45 24.4	-0.5
KSM	Kuching	14.39	275	*e*Pn	Pn	22 45 45.5	0.0
FITZ	Fitzroy Crossi	18.14	177	*e*P	Pn	22 46 33.5	+1.0
	0.4nm,0.6s						
WRAB	Tennant Creek	22.09	155	*e*P	P	22 47 15.5	+0.8
	1.6nm,0.6s,mb3.5						
WRA	Warramunga Arr	22.09	155	P	P	22 47 13.6	-1.1
	0.8nm,0.6s,mb3.2,baz=335,slow=11,SNR=16						
ASAR	Alice Springs	25.30	160	P	P	22 47 45.8	+0.4
	0.7nm,0.5s,mb3.4,baz=335,slow=10,SNR=9.8						
STKA	Stephens Creek	35.64	155	P	P	22 49 17.3	+0.8
	1.7nm,0.5s,mb4.2,baz=312,slow=8.5,SNR=8.3						
SONM	Songino Array	50.10	344	P	P	22 51 14.5	+1.4
	0.5nm,0.6s,mb3.6,baz=171,slow=8.9,SNR=4.3						
MKAR	Makanchi Array	59.38	327	P	P	22 52 19.4	-0.8
	0.8nm,0.5s,mb4.0,baz=120,slow=8.7,SNR=9.5						
MKAR	Makanchi Array	59.38	327	P	P	22 52 19.4	-0.8
AAK	Ala-Archa	61.68	320	P	P	22 52 36.1	+0.1
EKS2	Erkin-Say	62.16	320	P	P	22 52 38.6	-0.5
ZALV	Zalesovo Beam	62.89	335	P	P	22 52 42.9	-0.9
	0.4nm,0.3s,mb3.8,baz=126,slow=7.3,SNR=1.6						
ZALV	Zalesovo Beam	62.89	335	P	P	22 52 42.9	-0.9
KURK	Kurch

0.7nm,0.3s,baz=197,slow=11,SNR=15
MKAR Makanchi Array 39.09 314 P **P 22 50 59.6 -0.3**
0.4nm,0.3s,mb3.5,baz=100,slow=9.9,SNR=4.8
ZALV Zalesovo Beam 40.60 326 P **P 22 51 13.8 +1.6**
0.6nm,0.3s,mb3.6,baz=122,slow=10,SNR=4.4
ZALV Zalesovo Beam 40.60 326 P **P 22 51 13.8 +1.6**
WRA Warramunga Arr 46.00 166 P **P 22 51 55.6 -0.3**
0.3nm,0.7s,mb3.0,baz=348,slow=8.9,SNR=7.1

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*IDC **16** 22:47:07.9±1.6, 32°.56N×105°.89E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/24, mbtmp3.3/3, Error ellipse: s-maj=179.5km s-min=26.1km az=55.0*
*ISCJB **16** 22:47:10.0±1.0, 30°.84N±0°.07×103°.6E±0°.1, h10km, mb3.3/2, Error ellipse: s-maj=17.9km s-min=7.5km az=28.0*
ISC 16 22:47:11.8±1.0, 30°.90N±0°.07×103°.4E±0°.1, h10km, n5, σ1°.03/10, mb3.3/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.30**	**89**	Pg	**Pg**	**22 47 20.3**	**+2.4**
CD2				Sg	**Sg**	**22 47 27.3**	**+5.3**
CD2				smax			
	comp=N,3μm,0.5s						
XAN	**Xi'an**	**5.61**	**55**	Pn	**Pn**	**22 48 34.8**	**-0.5**
XAN				Pg	**Pg**	**22 48 55.0**	**-4.3**
XAN				Sn	**Sn**	**22 49 39.1**	**-0.8**
XAN				Sg	**Sg**	**22 50 06.9**	**-5.1**
XAN				smax			
	comp=N,56nm,0.9s						
XAN				smax			
	comp=E,26nm,0.9s						
XAN				LR	LR		
	comp=N,150nm,9.4s						
XAN				LR	LR		
	comp=E,49nm,8.4s						
XAN				LR	LR		
	comp=Z,44nm,9.1s						
KMI	**Kunming**	**5.79**	**186**	Pn	**Pn**	**22 48 38.4**	**+0.7**
KMI				Sn	**Sn**	**22 49 43.5**	**-0.7**
KMI				smax			
	comp=N,14nm,0.9s						
KMI				smax			
	comp=E,16nm,0.7s						
MKAR	**Makanchi Array**	**22.74**	**320**	P	**P**	**22 52 14.5**	**+0.5**
	comp=E,0.4nm,0.7s,mb3.0,baz=129,slow=11,SNR=3.7						
WRA	**Warramunga Arr**	**58.64**	**146**	P	**P**	**22 57 08.7**	**-0.7**
	comp=E,0.5nm,0.6s,mb3.7,baz=337,slow=7.5,SNR=5.1						

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*ISCJB **16** 23:20:48.4±0.8, 21°.5S±0°.1×69°.1E±0°.1, h10km, mb3.9/12, Error ellipse: s-maj=24.5km s-min=15.9km az=39.0*
*IDC **16** 23:20:49.5±3.1, 21°.42S×69°.23E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.7/23, mbtmp3.8/7, Error ellipse: s-maj=106.2km s-min=26.9km az=46.0*
*NEIC **16** 23:20:50.2±0.5, 21°.55S×69°.07E, h10km, mb4.2/5, Error ellipse: s-maj=14.8km s-min=9.6km az=219.0*
ISC 16 23:20:50.3±0.8, 21°.5S±0°.1×69°.1E±0°.1, h10km, n16, σ0°.57/16, mb3.9/12, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**40.15**	**251**	*e*P	**P**	**23 28 26.5**	**-0.2**
FITZ	**Fitzroy Crossi**	**53.08**	**97**	*e*P	**P**	**23 30 08.2**	**0.0**
	1.5nm,0.7s,mb4.0						
ASAR	**Alice Springs**	**59.41**	**105**	P	**P**	**23 30 53.6**	**+0.2**
	1.0nm,0.8s,mb3.9,baz=267,slow=6.2,SNR=7.1						
WRA	**Warramunga Arr**	**60.63**	**101**	P	**P**	**23 31 01.9**	**0.0**
	1.0nm,0.8s,mb4.0,baz=256,slow=6.6,SNR=5.9						
WRAB	**Tennant Creek**	**60.65**	**101**	*e*P	**P**	**23 31 01.8**	**-0.2**
	3.9nm,1.1s,mb4.5						
EKS2	**Erkin-Say**	**64.02**	**4**	P	**P**	**23 31 23.8**	**-0.2**
AAK	**Ala-Archa**	**64.04**	**4**	*e*P	**P**	**23 31 24.7**	**+0.6**
TKM2	**Tokmak 2**	**64.41**	**5**	*e*P	**P**	**23 31 23.4**	**-3.2**
	2.3nm,0.7s,mb4.3						
MKAR	**Makanchi Array**	**69.04**	**10**	P	**P**	**23 31 56.5**	**+0.5**
	0.8nm,0.6s,mb3.8,baz=193,slow=4.7,SNR=7.5						
BRTR	**Keskin Array B**	**69.35**	**331**	P	**P**	**23 31 59.0**	**+0.9**
	0.6nm,0.8s,mb3.6,baz=157,slow=7.3,SNR=4.9						
ABKAR	**Akbulak array**	**70.94**	**354**	*e*P	**P**	**23 32 07.3**	**-0.3**
	1.2nm,0.8s,mb3.9						
CTAO	**Charters Tower**	**71.40**	**105**	*e*P	**P**	**23 32 11.3**	**+0.1**
KURK	**Kurchatov**	**72.42**	**6**	*e*P	**P**	**23 32 16.1**	**-0.4**
	1.7nm,0.8s,mb4.0						
BVAR	**Borovoye Array**	**74.25**	**1**	P	**P**	**23 32 27.2**	**-0.1**
	0.4nm,0.5s,mb3.6,baz=170,slow=9.0,SNR=3.6						
ZALV	**Zalesovo Beam**	**76.39**	**9**	P	**P**	**23 32 39.5**	**0.0**
	0.9nm,0.6s,mb3.9,baz=200,slow=3.9,SNR=6.5						
SONM	**Songino Array**	**76.75**	**25**	P	**P**	**23 32 41.7**	**0.0**
	0.2nm,0.5s,mb3.3,baz=158,slow=4.2,SNR=2.2						

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*ISCJB **16** 23:58:31.6±0.2, 43°.28N±0°.02×0°.74W±0°.02, h27km±2km, Error ellipse: s-maj=2.9km s-min=2.4km az=162.4*
*CSEM **16** 23:58:31.9±0.1, 43°.25N×0°.69W, h15km, ML2.6/34, Error ellipse: s-maj=2.0km s-min=1.6km az=144.0*
*STR **16** 23:58:32.1±0.3, 42°.97N×0°.82W, h5km, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*NEIC **16** 23:58:33.0, 43°.20N×0°.69W, h10km, ML2.6(LDG), ML2.4(STR), MN2.5(MDD), After LDG.*
*LDG **16** 23:58:33.0±0.1, 43°.20N×0°.69W, h10km, Md2.8/4, Ml2.6/21, Error ellipse: s-maj=1.2km s-min=1.0km az=149.0*
*MDD **16** 23:58:33.2±0.2, 43°.21N×0°.71W, h10km, mbLg2.4/29, Error ellipse: s-maj=2.6km s-min=1.5km az=5.0, PRIMO*
*INMG **16** 23:58:34.1±1.2, 43°.21N×0°.77W, h12km±3km, ML2.1, Error ellipse: s-maj=2.7km s-min=2.4km az=168.0*
ISC 16 23:58:31.9±0.2, 43°.26N±0°.01×0°.70W±0°.02, h18km±1km, n280, σ1°.10/447, 9C-10D, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATE	**Arette**	**0.17**	**181**	Pg	**Pg**	**23 58 36.2**	**-0.3**
ATE				Sg	**Sg**	**23 58 38.7**	**-0.8**
ATE	**Arette**	**0.17**	**181**	Pg	**Pg**	**23 58 36.2**	**-0.3**
ATE				Sg	**Sg**	**23 58 38.7**	**-0.8**
ORDF	**Ordiarp**	**0.18**	**255**	Pg	**Pg**	**23 58 37.5**	**+0.9**
ORDF				Sg	**Sg**	**23 58 41.3**	**+1.6**
ORDF	**Ordiarp**	**0.18**	**255**	Pg	**Pg**	**23 58 37.5**	**+1.0**
ORDF				Lg		23 58 40.6	
ORDF	**Ordiarp**	**0.18**	**255**	Pg	**Pg**	**23 58 37.5**	**+1.0**
ORDF				Lg		23 58 40.6	
ORDF	**Ordiarp**	**0.18**	**255**	Pg	**Pg**	**23 58 37.5**	**+0.9**
ORDF				Sg	**Sg**	**23 58 41.3**	**+1.6**
REYF	**Montagne du Re**	**0.29**	**131**	Pg	**Pg**	**23 58 38.4**	**+0.1**
REYF				Sg	**Sg**	**23 58 42.5**	**-0.1**
REYF	**Montagne du Re**	**0.29**	**131**	Pg	**Pg**	**23 58 38.5**	**+0.2**
REYF				Lg		23 58 42.6	
REYF	**Montagne du Re**	**0.29**	**131**	Pg	**Pg**	**23 58 38.5**	**+0.2**
REYF				Lg		23 58 42.6	
REYF	**Montagne du Re**	**0.29**	**131**	Pg	**Pg**	**23 58 38.4**	**+0.1**
REYF				Sg	**Sg**	**23 58 42.5**	**-0.1**
ETSF	**Etsaut**	**0.37**	**165**	*e*Pg	**Pg**	**23 58 39.3**	**-0.4**
ETSF				*e*Sg	**Sg**	**23 58 42.9**	**-2.1**
	226nm,0.2s						
ETSF	**Etsaut**	**0.37**	**165**	Pg	**Pg**	**23 58 39.3**	**-0.4**
ETSF				Lg		23 58 42.9	
	113nm,0.2s						
ETSF	**Etsaut**	**0.37**	**165**	Pg	**Pg**	**23 58 39.3**	**-0.4**
ETSF				Lg		23 58 42.9	
	113nm,0.2s						
ETSF	**Etsaut**	**0.37**	**165**	*e*Pg	**Pg**	**23 58 39.3**	**-0.4**
ETSF				*e*Sg	**Sg**	**23 58 42.9**	**-2.1**
	113nm,0.2s						
OSSF	**Osses**	**0.41**	**270**	Pg	**Pg**	**23 58 40.9**	**+0.5**
OSSF				Sg	**Sg**	**23 58 45.8**	**-0.4**
OSSF	**Osses**	**0.41**	**270**	Pg	**Pg**	**23 58 40.7**	**+0.3**
OSSF				Lg		23 58 45.4	
OSSF	**Osses**	**0.41**	**270**	Pg	**Pg**	**23 58 40.7**	**+0.3**
OSSF				Lg		23 58 45.4	
OSSF	**Osses**	**0.41**	**270**	Pg	**Pg**	**23 58 40.9**	**+0.5**
OSSF				Sg	**Sg**	**23 58 45.8**	**-0.4**
SJPF	**Ste Jean**	**0.41**	**249**	*e*Pg	**Pg**	**23 58 40.6**	**+0.2**
SJPF				*e*Sg	**Sg**	**23 58 45.7**	**-0.5**
	165nm,0.3s						
SJPF	**Ste Jean**	**0.41**	**249**	Pg	**Pg**	**23 58 40.6**	**+0.2**
SJPF				Lg		23 58 45.7	
	82nm,0.3s						
SJPF	**Ste Jean**	**0.41**	**249**	Pg	**Pg**	**23 58 40.6**	**+0.2**
SJPF				Lg		23 58 45.7	
	82nm,0.3s						
SJPF	**Ste Jean**	**0.41**	**249**	*e*Pg	**Pg**	**23 58 40.6**	**+0.2**
SJPF				*e*Sg	**Sg**	**23 58 45.7**	**-0.5**
	82nm,0.3s						
FDAF	**Les Forges d'A**	**0.45**	**168**	Pg	**Pg**	**23 58 40.3**	**-0.8**
FDAF				Lg		23 58 45.0	
FDAF	**Les Forges d'A**	**0.45**	**168**	Pg	**Pg**	**23 58 40.3**	**-0.8**
FDAF				Lg		23 58 45.0	
EORO	**Oroz-Betelu**	**0.58**	**231**	⇓Pg	**Pg**	**23 58 43.0**	**-0.4**
	9.1nm,0.1s,SNR=18						
EORO				Lg		23 58 50.1	
	144nm,0.1s,SNR=7.9						
EORO	**Oroz-Betelu**	**0.58**	**231**	⇓Pg	**Pg**	**23 58 43.0**	**-0.4**
	9.1nm,0.1s,SNR=18						
EORO				Lg		23 58 50.1	
	144nm,0.1s,SNR=7.9						
EORO	**Oroz-Betelu**	**0.58**	**231**	Pg	**Pg**	**23 58 43.0**	**-0.5**
	9.1nm,0.1s,SNR=18						
EORO				Lg		23 58 50.1	
	144nm,0.1s,SNR=7.9						
EALK	**Alkurruntz**	**0.59**	**266**	⇑Pg	**Pg**	**23 58 43.8**	**+0.1**
EALK				Lg		23 58 50.9	
EALK	**Alkurruntz**	**0.59**	**266**	⇑Pg	**Pg**	**23 58 43.8**	**+0.1**
	11nm,0.1s,SNR=18						
EALK				Lg		23 58 50.9	
	124nm,0.3s,SNR=29						
EALK	**Alkurruntz**	**0.59**	**266**	⇑Pg	**Pg**	**23 58 43.8**	**+0.1**
	11nm,0.1s,SNR=18						
EALK				Lg		23 58 50.9	
	124nm,0.3s,SNR=29						
EALK	**Alkurruntz**	**0.59**	**266**	Pg	**Pg**	**23 58 43.8**	**+0.1**
	11nm,0.1s,SNR=18						
EALK				Lg		23 58 50.9	
	124nm,0.3s,SNR=29						
LABF	**Labassere**	**0.60**	**110**	Pg	**Pg**	**23 58 44.9**	**+1.1**
LABF				Sg	**Sg**	**23 58 53.6**	**+1.7**
LABF	**Labassere**	**0.60**	**110**	Pg	**Pg**	**23 58 44.4**	**+0.6**
LABF				Lg		23 58 53.3	
LABF	**Labassere**	**0.60**	**110**	Pg	**Pg**	**23 58 44.4**	**+0.6**
LABF				Lg		23 58 53.3	
LABF	**Labassere**	**0.60**	**110**	Pg	**Pg**	**23 58 44.9**	**+1.1**
LABF				Sg	**Sg**	**23 58 53.6**	**+1.7**
ELIZ	**Elizondo**	**0.62**	**261**	⇑Pg	**Pg**	**23 58 44.4**	**+0.3**
ELIZ				Lg		23 58 51.6	
ELIZ	**Elizondo**	**0.62**	**261**	⇑Pg	**Pg**	**23 58 44.4**	**+0.3**
	18nm,0.2s,SNR=18						
ELIZ				Lg		23 58 51.6	
	46nm,0.1s,SNR=5.0						
ELIZ	**Elizondo**	**0.62**	**261**	⇑Pg	**Pg**	**23 58 44.4**	**+0.3**
	18nm,0.2s,SNR=18						
ELIZ				Lg		23 58 51.6	
	46nm,0.1s,SNR=5.0						
ELIZ	**Elizondo**	**0.62**	**261**	Pg	**Pg**	**23 58 44.4**	**+0.3**
	18nm,0.2s,SNR=18						
ELIZ				Lg		23 58 51.6	
	46nm,0.1s,SNR=5.0						
VIEF	**Viey**	**0.65**	**125**	Pg	**Pg**	**23 58 44.8**	**+0.1**
VIEF				Sg	**Sg**	**23 58 52.8**	**-0.5**
VIEF	**Viey**	**0.65**	**125**	Pg	**Pg**	**23 58 44.7**	**+0.1**
VIEF				Lg		23 58 52.7	
VIEF	**Viey**	**0.65**	**125**	Pg	**Pg**	**23 58 44.7**	**+0.1**
VIEF				Lg		23 58 52.7	
VIEF	**Viey**	**0.65**	**125**	Pg	**Pg**	**23 58 44.8**	**+0.1**
VIEF				Sg	**Sg**	**23 58 52.8**	**-0.5**
IPRE	**Itoiz**	**0.66**	**227**	Pg	**Pg**	**23 58 44.7**	**-0.3**
	3.6nm,0.1s,SNR=7.2						
IPRE				Lg		23 58 52.9	
	84nm,0.4s,SNR=14					

0.2nm,0.1s,SNR=7.9
ERTA Pg **Pg** **23 59 16.5 -2.0**
2.4nm,0.1s,SNR=16
ERTA Sn **Sn** **23 59 39.6 -0.3**
1.7nm,0.3s,SNR=5.7
ERTA Lg 23 59 46.7
9.1nm,0.2s,SNR=6.4
ERTA Horta de San J 2.42 161 Pn **Pn** **23 59 10.1 -0.6**
0.2nm,0.1s,SNR=7.9
ERTA Pg **Pg** **23 59 16.5 -2.0**
2.4nm,0.1s,SNR=16
ERTA Sn **Sn** **23 59 39.6 -0.3**
1.7nm,0.3s,SNR=5.7
ERTA Lg 23 59 46.7
9.1nm,0.2s,SNR=6.4
ERTA Horta de San J 2.42 161 Pn **Pn** **23 59 10.1 -0.5**
0.2nm,0.1s,SNR=7.9
RJF Les Rejaudoux 2.59 37 *e*Pg **Pg** **23 59 22.1 +0.5**
RJF *e*Sn **Sn** **23 59 43.7 -0.2**
RJF *e*Sg **Sg** **23 59 55.7 +0.6**
11nm,0.3s
RJF Les Rejaudoux 2.59 37 *e*Pn **Pn** **23 59 13.7 +0.8**
RJF *e*Pg **Pg** **23 59 22.1 +0.5**
RJF *e*Sn **Sn** **23 59 43.7 -0.2**
RJF *e*Sg **Sg** **23 59 55.7 +0.6**
RJF Les Rejaudoux 2.59 37 Pn **Pn** **23 59 13.7 +0.8**
RJF Pg **Pg** **23 59 22.1 +0.5**
RJF Sn **Sn** **23 59 43.7 -0.2**
RJF Lg 23 59 55.7
5.3nm,0.3s
RJF Les Rejaudoux 2.59 37 Pn **Pn** **23 59 13.7 +0.8**
RJF Pg **Pg** **23 59 22.1 +0.5**
RJF Sn **Sn** **23 59 43.7 -0.2**
RJF Lg 23 59 55.7
5.3nm,0.3s
RJF Les Rejaudoux 2.59 37 *e*Pn **Pn** **23 59 13.7 +0.8**
RJF Les Rejaudoux 2.59 37 *e*Pg **Pg** **23 59 22.1 +0.5**
RJF *e*Sn **Sn** **23 59 43.7 -0.2**
RJF *e*Sg **Sg** **23 59 55.7 +0.6**
5.3nm,0.3s
CAF Calviac 2.59 49 *e*Pn **Pn** **23 59 14.2 +1.3**
CAF *e*Sn **Sn** **23 59 43.9 -0.1**
4.5nm,0.4s
CAF *e*Sg **Sg** **23 59 55.8 +0.5**
7.3nm,0.4s
CAF Calviac 2.59 49 Pn **Pn** **23 59 14.2 +1.3**
CAF Sn **Sn** **23 59 43.9 -0.1**
2.2nm,0.4s
CAF Lg 23 59 55.8
3.7nm,0.4s
CAF Calviac 2.59 49 Pn **Pn** **23 59 14.2 +1.3**
CAF Sn **Sn** **23 59 43.9 -0.1**
2.2nm,0.4s
CAF Lg 23 59 55.8
3.7nm,0.4s
CAF Calviac 2.59 49 *e*Pn **Pn** **23 59 14.2 +1.3**
CAF *e*Sn **Sn** **23 59 43.9 -0.1**
2.2nm,0.4s
CAF *e*Sg **Sg** **23 59 55.8 +0.5**
3.7nm,0.4s
ETOR Torete 2.64 203 ⇓Pn **Pn** **23 59 15.0 +1.4**
ETOR Pg **Pg** **23 59 20.5 -2.0**
ETOR Sn **Sn** **23 59 44.9 -0.3**
ETOR Lg 23 59 54.9
ETOR Torete 2.64 203 ⇓Pn **Pn** **23 59 15.0 +1.4**
8.2nm,0.1s,SNR=18
ETOR Pg **Pg** **23 59 20.5 -2.0**
13nm,0.2s,SNR=7.9
ETOR Sn **Sn** **23 59 44.9 -0.3**
14nm,0.2s,SNR=7.9
ETOR Lg 23 59 54.9
27nm,0.4s,SNR=7.9
ETOR Torete 2.64 203 ⇓Pn **Pn** **23 59 15.0 +1.4**
8.2nm,0.1s,SNR=18
ETOR Pg **Pg** **23 59 20.5 -2.0**
13nm,0.2s,SNR=7.9
ETOR Sn **Sn** **23 59 44.9 -0.3**
14nm,0.2s,SNR=7.9
ETOR Lg 23 59 54.9
27nm,0.4s,SNR=7.9
ETOR Torete 2.64 203 Pn **Pn** **23 59 15.0 +1.4**
8.2nm,0.1s,SNR=18
CFON Fontmartina 2.76 122 Pn **Pn** **23 59 17.9 +2.7**
CFON Pg **Pg** **23 59 22.8 -2.0**
CFON Lg 23 59 58.5
CFON Fontmartina 2.76 122 Pn **Pn** **23 59 17.9 +2.7**
2.4nm,0.1s,SNR=14
CFON Pg **Pg** **23 59 22.8 -2.0**
6.0nm,0.2s,SNR=15
CFON Lg 23 59 58.5
41nm,0.4s,SNR=6.4
CFON Fontmartina 2.76 122 Pn **Pn** **23 59 17.9 +2.7**
2.4nm,0.1s,SNR=14
CFON Pg **Pg** **23 59 22.8 -2.0**
6.0nm,0.2s,SNR=15
CFON Lg 23 59 58.5
41nm,0.4s,SNR=6.4
CFON Fontmartina 2.76 122 Pn **Pn** **23 59 17.9 +2.7**
2.4nm,0.1s,SNR=14
CFON Fontmartina 2.76 122 Pg **Pg** **23 59 22.8 -2.0**
6.0nm,0.2s,SNR=15
CFON Lg 23 59 58.5
41nm,0.4s,SNR=6.4
EJON La Jonquera 2.76 106 Pn **Pn** **23 59 17.6 +2.4**
EJON Pg **Pg** **23 59 23.6 -1.2**
EJON Lg 00 00 00.3
EJON La Jonquera 2.76 106 Pn **Pn** **23 59 17.6 +2.4**
0.2nm,0.1s,SNR=4.0
EJON Pg **Pg** **23 59 23.5 -1.2**
0.6nm,0.1s,SNR=7.9
EJON Lg 00 00 00.3
6.1nm,0.3s,SNR=7.9
EJON La Jonquera 2.76 106 Pn **Pn** **23 59 17.6 +2.4**
0.2nm,0.1s,SNR=4.0
EJON Pg **Pg** **23 59 23.5 -1.2**
0.6nm,0.1s,SNR=7.9
EJON Lg 00 00 00.3
6.1nm,0.3s,SNR=7.9
EJON La Jonquera 2.76 106 Pn **Pn** **23 59 17.6 +2.4**
0.2nm,0.1s,SNR=4.0
EMOS Mosqueruela 2.90 177 Pn **Pn** **23 59 18.7 +1.6**
EMOS Pg **Pg** **23 59 25.3 -2.1**
EMOS Sn **Sn** **23 59 50.2 -1.3**
EMOS Lg 00 00 00.6
EMOS Mosqueruela 2.90 177 Pn **Pn** **23 59 18.7 +1.6**
1.1nm,0.1s,SNR=8.0
EMOS Pg **Pg** **23 59 25.3 -2.1**
0.9nm,0.1s,SNR=7.9
EMOS Sn **Sn** **23 59 50.2 -1.3**
1.9nm,0.1s,SNR=7.9
EMOS Lg 00 00 00.6
4.2nm,0.3s,SNR=4.0
EMOS Mosqueruela 2.90 177 Pn **Pn** **23 59 18.7 +1.6**
1.1nm,0.1s,SNR=8.0
EMOS Pg **Pg** **23 59 25.3 -2.1**
0.9nm,0.1s,SNR=7.9
EMOS Sn **Sn** **23 59 50.2 -1.3**
1.9nm,0.1s,SNR=7.9
EMOS Lg 00 00 00.6
4.2nm,0.3s,SNR=4.0
EMOS Mosqueruela 2.90 177 Pn **Pn** **23 59 18.7 +1.6**
1.1nm,0.1s,SNR=8.0
EARI Arriondas 3.30 272 Pn **Pn** **23 59 24.1 +1.5**
EARI Sn **Sn** **00 00 01.9 +0.5**
EARI Arriondas 3.30 272 Pn **Pn** **23 59 24.1 +1.5**
1.0nm,0.2s,SNR=7.9
EARI Sn **Sn** **00 00 01.9 +0.5**
1.0nm,0.4s,SNR=7.9
EARI Arriondas 3.30 272 Pn **Pn** **23 59 24.1 +1.5**
1.0nm,0.2s,SNR=7.9
EARI Sn **Sn** **00 00 01.9 +0.5**
1.0nm,0.4s,SNR=7.9
EARI Arriondas 3.30 272 Sn **Sn** **00 00 01.9 +0.6**
1.0nm,0.4s,SNR=7.9
EARI Arriondas 3.30 272 Pn **Pn** **23 59 24.1 +1.5**
1.0nm,0.2s,SNR=7.9
MFF Saint Martin d 3.37 6 *e*Pn **Pn** **23 59 24.7 +1.2**
MFF *e*Sn **Sn** **00 00 02.6 -0.4**
MFF *e*Sg **Sg** **00 00 20.8 +0.8**
8.0nm,0.4s
MFF Saint Martin d 3.37 6 Pn **Pn** **23 59 24.7 +1.2**
MFF Saint Martin d 3.37 6 Pn **Pn** **23 59 24.7 +1.2**
MFF Saint Martin d 3.37 6 *e*Sn **Sn** **00 00 02.6 -0.4**
MFF Saint Martin d 3.37 6 *e*Pn **Pn** **23 59 24.7 +1.2**
MFF *e*Sg **Sg** **00 00 20.8 +0.8**
4.0nm,0.4s
LASF Ste Croix 3.40 75 *e*Pn **Pn** **23 59 24.7 +0.6**
LASF *e*Sn **Sn** **00 00 02.5 -1.4**
LASF *e*Sg **Sg** **00 00 20.3 -0.9**
4.2nm,0.4s
LASF Ste Croix 3.40 75 Pn **Pn** **23 59 24.7 +0.6**
LASF Ste Croix 3.40 75 Pn **Pn** **23 59 24.7 +0.6**
LASF Ste Croix 3.40 75 *e*Sn **Sn** **00 00 02.5 -1.4**
LASF Ste Croix 3.40 75 *e*Pn **Pn** **23 59 24.7 +0.6**
LASF *e*Sg **Sg** **00 00 20.3 -0.9**
2.1nm,0.4s
TCF Toulx Ste Croi 3.67 33 *e*Pn **Pn** **23 59 28.2 +0.5**
TCF *e*Sn **Sn** **00 00 09.4 -1.0**
1.7nm,0.4s
TCF *e*Sg **Sg** **00 00 29.8 +0.2**
3.6nm,0.3s
TCF Toulx Ste Croi 3.67 33 Pn **Pn** **23 59 28.2 +0.5**
TCF Toulx Ste Croi 3.67 33 Pn **Pn** **23 59 28.2 +0.5**
TCF Toulx Ste Croi 3.67 33 *e*Pn **Pn** **23 59 28.2 +0.5**
TCF *e*Sn **Sn** **00 00 09.4 -1.0**
0.9nm,0.4s
TCF *e*Sg **Sg** **00 00 29.8 +0.2**
1.8nm,0.3s
GUD Guadarrama 3.67 226 Pn **Pn** **23 59 29.3 +1.5**
GUD Sn **Sn** **00 00 09.8 -0.8**
GUD Guadarrama 3.67 226 Pn **Pn** **23 59 29.3 +1.5**
0.4nm,0.2s,SNR=7.9
GUD Sn **Sn** **00 00 09.8 -0.8**
1.6nm,0.2s,SNR=7.9
GUD Guadarrama 3.67 226 Pn **Pn** **23 59 29.3 +1.5**
0.4nm,0.2s,SNR=7.9
GUD Sn **Sn** **00 00 09.8 -0.8**
1.6nm,0.2s,SNR=7.9
GUD Guadarrama 3.67 226 Sn **Sn** **00 00 09.8 -0.8**
1.6nm,0.2s,SNR=7.9
GUD Guadarrama 3.67 226 Pn **Pn** **23 59 29.3 +1.5**
0.4nm,0.2s,SNR=7.9
BGF Bois d'Agland 4.15 36 *e*Pn **Pn** **23 59 34.7 +0.4**
BGF *e*Sn **Sn** **00 00 20.7 -1.6**
BGF *e*Sg **Sg** **00 00 44.4 -0.6**
17nm,0.4s
BGF Bois d'Agland 4.15 36 Pn **Pn** **23 59 34.7 +0.4**
BGF Bois d'Agland 4.15 36 Pn **Pn** **23 59 34.7 +0.4**
BGF Bois d'Agland 4.15 36 *e*Sn **Sn** **00 00 20.7 -1.6**
BGF Bois d'Agland 4.15 36 *e*Pn **Pn** **23 59 34.7 +0.4**
BGF *e*Sg **Sg** **00 00 44.4 -0.6**
8.5nm,0.4s
VIVF Saint-Julien-l 4.18 66 *e*Pn **Pn** **23 59 35.3 +0.5**
VIVF Saint-Julien-l 4.18 66 Pn **Pn** **23 59 35.3 +0.5**
VIVF Saint-Julien-l 4.18 66 Pn **Pn** **23 59 35.3 +0.5**
VIVF Saint-Julien-l 4.18 66 *e*Pn **Pn** **23 59 35.3 +0.5**
ESDC Sonseca Array 4.34 216 Pn **Pn** **23 59 37.2 +0.2**
ESDC Sn **Sn** **00 00 25.4 -1.7**
ESDC Lg 00 00 47.2
ESDC Sonseca Array 4.34 216 Pn **Pn** **23 59 37.2 +0.2**
0.6nm,0.1s,baz=38,slow=13,SNR=5.2
ESDC Sn **Sn** **00 00 25.4 -1.7**
0.6nm,0.1s,baz=39,slow=24,SNR=6.1
ESDC Lg 00 00 47.2
0.6nm,0.1s,baz=27,slow=28,SNR=4.0
ESDC Sonseca Array 4.34 216 Pn **Pn** **23 59 37.2 +0.2**
0.6nm,0.1s,baz=38,slow=13,SNR=5.2
ESDC Sn **Sn** **00 00 25.4 -1.7**
0.6nm,0.1s,baz=39,slow=24,SNR=6.1
ESDC Lg 00 00 47.2
0.6nm,0.1s,baz=27,slow=28,SNR=4.0
ESDC Sonseca Array 4.34 216 Sn **Sn** **00 00 25.4 -1.7**
0.6nm,0.1s,slow=24,SNR=6.1
ESDC Sonseca Array 4.34 216 Pn **Pn** **23 59 37.2 +0.2**
0.6nm,0.1s,slow=13,SNR=5.2
ETOS Mallorca 4.37 142 Pn **Pn** **23 59 38.1 +0.7**
ETOS Mallorca 4.37 142 Pn **Pn** **23 59 38.1 +0.7**
0.9nm,0.2s,SNR=7.9
ETOS Mallorca 4.37 142 Pn **Pn** **23 59 38.1 +0.7**
0.9nm,0.2s,SNR=7.9
ETOS Mallorca 4.37 142 Pn **Pn** **23 59 38.1 +0.7**
0.9nm,0.2s,SNR=7.9
EIBI Ibiza 4.50 159 Sn **Sn** **00 00 26.6 -4.4**
0.6nm,0.1s,SNR=7.9
EIBI Ibiza 4.50 159 Sn **Sn** **00 00 26.6 -4.4**
0.6nm,0.1s,SNR=7.9
AVF Avril sur Loir 4.55 38 *e*Pn **Pn** **23 59 40.4 +0.6**
AVF *e*Sn **Sn** **00 00 30.8 -1.4**
AVF *e*Sg **Sg** **00 00 57.3 -0.6**
2.8nm,0.4s
AVF Avril sur Loir 4.55 38 Pn **Pn** **23 59 40.4 +0.6**
AVF Avril sur Loir 4.55 38 Pn **Pn** **23 59 40.4 +0.6**
AVF Avril sur Loir 4.55 38 *e*Sn **Sn** **00 00 30.8 -1.4**
AVF Avril sur Loir 4.55 38 *e*Pn **Pn** **23 59 40.4 +0.6**
AVF *e*Sg **Sg** **00 00 57.3 -0.6**
1.4nm,0.4s
EBEN Beniarda 4.56 175 Sn **Sn** **00 00 31.5 -1.1**
0.5nm,0.4s,SNR=4.0
EBEN Beniarda 4.56 175 Sn **Sn** **00 00 31.5 -1.1**
0.5nm,0.4s,SNR=4.0
EBEN Beniarda 4.56 175 Sn **Sn** **00 00 31.5 -1.1**
0.5nm,0.4s,SNR=4.0
HYF Humbligny 4.65 29 *e*Pn **Pn** **23 59 42.1 +0.9**
HYF *e*Sn **Sn** **00 00 32.2 -2.4**
HYF *e*Sg **Sg** **00 01 01.6 +0.5**
HYF Humbligny 4.65 29 *e*Sn **Sn** **00 00 32.2 -2.4**
HYF Humbligny 4.65 29 *e*Pn **Pn** **23 59 42.1 +0.9**
HYF *e*Sg **Sg** **00 01 01.6 +0.5**
ECAL Calabor 4.65 256 Pn **Pn** **23 59 42.6 +1.4**
ECAL Sn **Sn** **00 00 33.6 -1.1**
ECAL Lg 00 00 57.3
ECAL Calabor 4.65 256 Pn **Pn** **23 59 42.6 +1.4**
0.5nm,0.1s,SNR=7.9
ECAL Sn **Sn** **00 00 33.6 -1.1**
1.7nm,0.1s,SNR=7.9
ECAL Lg 00 00 57.3
2.5nm,0.3s,SNR=4.0
ECAL Calabor 4.65 256 Pn **Pn** **23 59 42.6 +1.4**
0.5nm,0.1s,SNR=7.9
ECAL Sn **Sn** **00 00 33.6 -1.1**
1.7nm,0.1s,SNR=7.9
ECAL Lg 00 00 57.3
2.5nm,0.3s,SNR=4.0
ECAL Calabor 4.65 256 Sn **Sn** **00 00 33.6 -1.1**
1.7nm,0.1s,SNR=7.9
ECAL Calabor 4.65 256 Pn **Pn** **23 59 42.6 +1.4**
0.5nm,0.1s,SNR=7.9
ETOB Tobarra 4.66 188 Pn **Pn** **23 59 42.9 +1.6**
ETOB Tobarra 4.66 188 Pn **Pn** **23 59 42.9 +1.6**
0.4nm,0.1s,SNR=7.9
ETOB Tobarra 4.66 188 Pn **Pn** **23 59 42.9 +1.6**
0.4nm,0.1s,SNR=7.9
ETOB Tobarra 4.66 188 Pn **Pn** **23 59 42.9 +1.6**
0.4nm,0.1s,SNR=7.9
SMF Signal de Mont 4.67 42 *e*Pn **Pn** **23 59 42.2 +0.7**
SMF *e*Sg **Sg** **00 01 01.0 -0.8**
1.8nm,0.4s
SMF Signal de Mont 4.67 42 Pn **Pn** **23 59 42.2 +0.7**
SMF Signal de Mont 4.67 42 Pn **Pn** **23 59 42.2 +0.7**
SMF Signal de Mont 4.67 42 *e*Pn **Pn** **23 59 42.2 +0.7**
SMF *e*Sg **Sg** **00 01 01.0 -0.8**
0.9nm,0.4s
PBRG Braganca 4.70 254 *e*Sn **Sn** **00 00 36.1 +0.2**
PBRG Braganca 4.70 254 *e*Sn **Sn** **00 00 36.1 +0.2**
EPON Pontenova 4.71 273 Pn **Pn** **23 59 45.2 +3.1**
EPON Sn **Sn** **00 00 34.8 -1.4**
EPON Pontenova 4.71 273 Pn **Pn** **23 59 45.2 +3.1**
0.8nm,0.3s,SNR=4.0
EPON Sn **Sn** **00 00 34.8 -1.4**
1.1nm,0.4s,SNR=7.9
EPON Pontenova 4.71 273 Pn **Pn** **23 59 45.2 +3.1**
0.8nm,0.3s,SNR=4.0
EPON Sn **Sn** **00 00 34.8 -1.4**
1.1nm,0.4s,SNR=7.9
EPON Pontenova 4.71 273 Sn **Sn** **00 00 34.8 -1.4**
1.1nm,0.4s,SNR=7.9
EPON Pontenova 4.71 273 Pn **Pn** **23 59 45.2 +3.1**
0.8nm,0.3s,SNR=4.0
EVIA Vianos 4.81 197 Pn **Pn** **23 59 44.3 +0.8**
EVIA Vianos 4.81 197 Pn **Pn** **23 59 44.3 +0.8**
0.5nm,0.1s,SNR=7.9
EVIA Vianos 4.81 197 Pn **Pn** **23 59 44.3 +0.8**
0.5nm,0.1s,SNR=7.9
EVIA Vianos 4.81 197 Pn **Pn** **23 59 44.3 +0.8**
0.5nm,0.1s,SNR=7.9
SSF Saint Saulge 4.82 37 *e*Pn **Pn** **23 59 44.4 +0.8**
SSF *e*Sg **Sg** **00 01 06.0 -0.7**
2.8nm,0.4s
SSF Saint Saulge 4.82 37 Pn **Pn** **23 59 44.4 +0.8**
SSF Saint Saulge 4.82 37 Pn **Pn** **23 59 44.4 +0.8**
SSF Saint Saulge 4.82 37 *e*Pn **Pn** **23 59 44.4 +0.8**
SSF *e*Sg **Sg** **00 01 06.0 -0.7**
1.4nm,0.4s
QUIF Quistinic 4.97 340 *e*Pn **Pn** **23 59 46.0 +0.4**
QUIF *e*Sn **Sn** **00 00 41.2 -1.3**
1.3nm,0.2s
QUIF Quistinic 4.97 340 Pn **Pn** **23 59 46.0 +0.4**
QUIF Quistinic 4.97 340 Pn **Pn** **23 59 46.0 +0.4**
QUIF Quistinic 4.97 340 *e*Pn **Pn** **23 59 46.0 +0.4**
QUIF *e*Sn **Sn** **00 00 41.2 -1.3**
0.6nm,0.2s
GRR Gorron 5.13 359 *e*Pn **Pn** **23 59 48.0 +0.2**
GRR *e*Sn **Sn** **00 00 44.9 -1.6**
GRR *e*Sg **Sg** **00 01 15.9 -0.6**
2.9nm,0.4s
GRR Gorron 5.13 359 *e*Sn **Sn** **00 00 44.9 -1.6**
GRR Gorron 5.13 359 *e*Pn **Pn** **23 59 48.0 +0.2**
GRR *e*Sg **Sg** **00 01 15.9 -0.6**
1.5nm,0.4s
LOR Lormes 5.14 37 *e*Sg **Sg** **00 01 15.7 -1.0**
3.3nm,0.4s
LOR Lormes 5.14 37 *e*Sg **Sg** **00 01 15.7 -1.0**
1.6nm,0.4s
MVO Moncorvo 5.15 248 Pn **Pn** **23 59 49.3 +1.2**
MVO Sn **Sn** **00 00 44.3 -2.7**
MVO Lg 00 01 12.0
MVO Moncorvo 5.15 248 Pn **Pn** **23 59 49.3 +1.2**
0.7nm,0.1s,SNR=7.1
MVO Sn **Sn** **00 00 44.3 -2.7**
0.6nm,0.1s,SNR=7.9
MVO Lg 00 01 12.0
1.7nm,0.4s,SNR=7.9
MVO Moncorvo 5.15 248 Pn **Pn** **23 59 49.3 +1.2**
0.7nm,0.1s,SNR=7.1
MVO Sn **Sn** **00 00 44.3 -2.7**
0.6nm,0.1s,SNR=7.9
MVO Lg 00 01 12.0
1.7nm,0.4s,SNR=7.9
MVO Moncorvo 5.15 248 *e*Pn **Pn** **23 59 49.3 +1.2**
MVO *e*Sn **Sn** **00 00 46.8 -0.2**
MVO A 00 01 09.7
3.0nm,0.7s
MVO Moncorvo 5.15 248 Pn **Pn** **23 59 49.3 +1.2**
0.7nm,0.1s,SNR=7.1
MVO *e*Sn **Sn** **00 00 46.8 -0.2**
3.0nm,0.7s
SGMF Saint Gilles 5.16 346 *e*Pn **Pn** **23 59 49.1 +0.9**
SGMF *e*Sn **Sn** **00 00 45.7 -1.6**
0.9nm,0.3s
SGMF Saint Gilles 5.16 346 *e*Pn **Pn** **23 59 49.1 +0.9**
SGMF *e*Sn **Sn** **00 00 45.7 -1.6**
0.4nm,0.3s
LDF La Druitiere 5.35 4 *e*Pn **Pn** **23 59 51.5 +0.7**
LDF *e*Sn **Sn** **00 00 50.3 -1.6**
0.6nm,0.2s
LDF La Druitiere 5.35 4 *e*Pn **Pn** **23 59 51.5 +0.7**
LDF *e*Sn **Sn** **00 00 50.3 -1.6**
0.3nm,0.2s
ROSF Rostrenen 5.39 341 *e*Pn **Pn** **23 59 52.6 +1.3**
ROSF *e*Sn **Sn** **00 00 51.0 -1.8**
0.7nm,0.2s
ROSF Rostrenen 5.39 341 *e*Pn **Pn** **23 59 52.6 +1.3**
ROSF *e*Sn **Sn** **00 00 51.0 -1.8**
0.3nm,0.2s
FLN La Foliniere 5.51 1 *e*Pn **Pn** **23 59 54.3 +1.4**
FLN *e*Sn **Sn** **00 00 53.8 -1.9**
1.6nm,0.3s
FLN La Foliniere 5.51 1 *e*Pn **Pn** **23 59 54.3 +1.4**
FLN *e*Sn **Sn** **00 00 53.8 -1.9**
0.8nm,0.3s
EQES Quesada 5.74 199 Pn **Pn** **23 59 57.2 +0.9**
EQES Sn **Sn** **00 00 58.4 -3.3**
EQES Quesada 5.74 199 Pn **Pn** **23 59 57.2 +0.9**
0.6nm,0.2s,SNR=7.9
EQES Sn **Sn** **00 00 58.4 -3.3**
0.6nm,0.5s,SNR=7.9
EQES Quesada 5.74 199 Pn **Pn** **23 59 57.2 +0.9**
0.6nm,0.2s,SNR=7.9
EQES Sn **Sn** **00 00 58.4 -3.3**
0.6nm,0.5s,SNR=7.9
EQES Quesada 5.74 199 Pn **Pn** **23 59 57.2 +1.0**
0.6nm,0.2s,SNR=7.9
EADA Adamuz 5.88 211 Pn **Pn** **23 59 58.6 +0.5**
EADA Sn **Sn** **00 01 01.3 -3.8**
EADA Adamuz 5.88 211 Pn **Pn** **23 59 58.6 +0.5**
0.4nm,0.1s,SNR=7.9
EADA Sn **Sn** **00 01 01.3 -3.8**
0.5nm,0.2s,SNR=7.9
EADA Adamuz 5.88 211 Pn **Pn** **23 59 58.6 +0.5**
0.4nm,0.1s,SNR=7.9
EADA Sn **Sn** **00 01 01.3 -3.8**
0.5nm,0.2s,SNR=7.9
EADA Adamuz 5.88 211 Pn **Pn** **23 59 58.6 +0.5**
0.4nm,0.1s,SNR=7.9
PCBR Castelo Branco 6.13 238 *e*Pn **Pn** **00 00 02.4 +0.9**
PCBR *e*Sn **Sn** **00 01 08.0 -3.1**
PCBR Castelo Branco 6.13 238 *e*Pn **Pn** **00 00 02.4 +0.9**
ECAB El Cabril 6.30 216 Pn **Pn** **00 00 04.5 +0.6**
ECAB Sn **Sn** **00 01 10.9 -4.4**
ECAB El Cabril 6.30 216 Pn **Pn** **00 00 04.5 +0.6**
0.1nm,0.1s,SNR=7.9
ECAB Sn **Sn** **00 01 10.9 -4.4**
0.6nm,0.3s,SNR=7.9
ECAB El Cabril 6.30 216 Pn **Pn** **00 00 04.5 +0.6**
0.1nm,0.1s,SNR=7.9
ECAB Sn **Sn** **00 01 10.9 -4.4**
0.6nm,0.3s,SNR=7.9
ECAB El Cabril 6.30 216 Pn **Pn** **00 00 04.5 +0.6**
0.1nm,0.1s,SNR=7.9
PMRV Marv??o 6.33 235 *e*Pn **Pn** **00 00 05.4 +1.1**
PMRV *e*Sn **Sn** **00 01 12.1 -3.9**
PMRV A 00 01 15.5
1.8nm,0.5s
PMRV Marv??o 6.33 235 *e*Pn **Pn** **00 00 05.4 +1.1**
EQUE Quentar 6.40 200 Pn **Pn** **00 00 07.3 +2.0**
0.2nm,0.1s,SNR=7.9
EQUE Quentar 6.40 200 Pn **Pn** **00 00 07.3 +2.0**
0.2nm,0.1s,SNR=7.9
EQUE Quentar 6.40 200 Pn **Pn** **00 00 07.3 +2.0**
0.2nm,0.1s,SNR=7.9
EBAD Badajoz 6.56 229 Pn **Pn** **00 00 08.2 +0.7**
EBAD Sn **Sn** **00 01 18.2 -3.6**
EBAD Badajoz 6.56 229 Pn **Pn** **00 00 08.2 +0.7**
0.2nm,0.1s,SNR=7.9
EBAD Sn **Sn** **00 01 18.2 -3.6**
0.4nm,0.1s,SNR=7.9
EBAD Badajoz 6.56 229 Pn **Pn** **00 00 08.2 +0.7**
0.2nm,0.1s,SNR=7.9
EBAD Sn **Sn** **00 01 18.2 -3.6**
0.4nm,0.1s,SNR=7.9
EBAD Badajoz 6.56 229 Pn **Pn** **00 00 08.1 +0.6**
0.2nm,0.1s,SNR=7.9
PESTR Estremoz 6.81 232 *e*Pn **Pn** **00 00 11.9 +1.0**
PESTR Estremoz 6.81 232 *e*Pn **Pn** **00 00 11.9 +1.0**

DDA ***17*** *00:02:46.9, 38.'36N×27.'53E, h7km±5km, Md2.9*
ISK ***17*** *00:02:47.0, 38.'28N×27.'51E, h5km, MD2.7*
CSEM ***17*** *00:02:47.4±0.1, 38.'31N×27.'51E, h15km, MD2.7, Error ellipse: s-maj=2.0km s-min=1.5km az=177.0*
ISCJB ***17*** *00:02:47.6±0.5, 38.'32N±0.'03×27.'53E±0.'03, h11km±7km, Error ellipse: s-maj=6.1km s-min=4.0km az=21.7*
ISC 17 00:02:47.9±0.4, 38.'32N±0.'03×27.'50E±0.'03, h17km±5km, n25, σ0=89/46, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IZM	**Izmir**	**0.20**	**294**	*e*PG	**Pg**	**00 02 53.2**	**+0.5**
IZM				*e*SG	**Sg**	**00 02 56.0**	**-0.2**
BLCB	**Balcova**	**0.37**	**281**	*e*PG	**Pg**	**00 02 54.9**	**-0.6**
BLCB				*e*SG	**Sg**	**00 02 59.9**	**-0.7**
BLCB	**Balcova**	**0.37**	**281**	*e*Pg	**Pg**	**00 02 54.9**	**-0.6**
BLCB				*e*Sg	**Sg**	**00 02 59.9**	**-0.8**
GCAM	**G?zelcaml?**	**0.65**	**199**	*i* P	**Pg**	**00 03 00.1**	**-0.5**
GCAM				*i* S	**Sg**	**00 03 11.0**	**+1.7**
GCAM	**G?zelcaml?**	**0.65**	**199**	*i* P	**Pg**	**00 03 00.1**	**-0.6**
GCAM				*i* S	**Sg**	**00 03 11.0**	**+1.7**
URLA	**Izmir**	**0.71**	**274**	*i* P	**Pg**	**00 03 01.4**	**-0.4**
URLA				*i* S	**Sg**	**00 03 14.6**	**+3.3**
URLA	**Izmir**	**0.71**	**274**	*i* P	**Pg**	**00 03 01.4**	**-0.4**
URLA				*i* S	**Sg**	**00 03 14.6**	**+3.3**
AYDN	**Tasoluk**	**0.72**	**155**	*i* P	**Pg**	**00 03 01.9**	**0.0**
AYDN				*i* S	**Sg**	**00 03 11.3**	**-0.2**
AYDN	**Tasoluk**	**0.72**	**155**	*i* P	**Pg**	**00 03 02.0**	**0.0**
AYDN				*i* S	**Sg**	**00 03 11.3**	**-0.2**

MANT	**Manisa**	**0.85**	**78**	*i* P		**Pb**	**00 03 03.6**	**-0.5**
MANT				*i* S		**Sg**	**00 03 17.3**	**+1.6**
MANT	**Manisa**	**0.85**	**78**	*i* P		**Pb**	**00 03 03.6**	**-0.5**
MANT				*i* S		**Sg**	**00 03 17.3**	**+1.7**
KULA	**Kula-Manisa**	**0.93**	**77**	*e*PG		**Pg**	**00 03 05.3**	**-0.7**
KULA				*e*SG		**Sg**	**00 03 18.6**	**+0.3**
KULA	**Kula-Manisa**	**0.93**	**77**	*e*Pg		**Pg**	**00 03 05.3**	**-0.7**
KULA				*e*Sg		**Sg**	**00 03 18.6**	**+0.3**
MLSB	**Milas**	**1.04**	**168**	*e*PG		**Pg**	**00 03 06.8**	**-1.2**
MLSB	**Milas**	**1.04**	**168**	*e*Pg		**Pg**	**00 03 06.8**	**-1.3**
AYVA	**Ayvalik**	**1.18**	**328**	*i* P		**Pn**	**00 03 09.3**	**-0.2**
AYVA				*i* S		**Sb**	**00 03 24.9**	**+0.3**
AYVA	**Ayvalik**	**1.18**	**328**	*i* P		**Pn**	**00 03 09.3**	**-0.2**
AYVA				*i* S		**Sb**	**00 03 24.9**	**+0.3**
DEMI	**Demirci**	**1.20**	**52**	*i* P		**Pn**	**00 03 09.7**	**-0.1**
DEMI				*i* S		**Sb**	**00 03 23.8**	**-1.4**
DEMI	**Demirci**	**1.20**	**52**	*i* P		**Pn**	**00 03 09.7**	**-0.1**
DEMI				*i* S		**Sb**	**00 03 23.8**	**-1.4**
BALY	**Balya**	**1.43**	**4**	*i* P		**Pn**	**00 03 12.9**	**0.0**
BALY				*i* S		**Sn**	**00 03 31.4**	**+0.2**
BALY	**Balya**	**1.43**	**4**	*i* P		**Pn**	**00 03 12.9**	**0.0**
BALY				*i* S		**Sn**	**00 03 31.5**	**+0.3**
DURS	**Dursunbey**	**1.49**	**30**	*i* P		**Pn**	**00 03 13.0**	**-0.8**
DURS				*i* S		**Sn**	**00 03 33.3**	**+0.4**
DURS	**Dursunbey**	**1.49**	**30**	*i* P		**Pn**	**00 03 13.0**	**-0.8**
DURS				*i* S		**Sn**	**00 03 33.3**	**+0.5**
DST	**Dursunbey**	**1.56**	**34**	*e*PN		**Pn**	**00 03 16.7**	**+2.0**
DST	**Dursunbey**	**1.56**	**34**	*e*Pn		**Pn**	**00 03 16.7**	**+2.0**

JMA 17 00:18:56.9, 39°.10N×140°.88E, h11km±1km, M1.3, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.30**	**119**	P	Pg	00 19 02.9	-0.1
JMK				*e*S	Sg	00 19 07.2	+0.1
JRG	**Rokugo**	**0.35**	**327**	P	Pg	00 19 04.2	+0.3
JRG				*e*S	Sg	00 19 09.2	+0.5
JYK	**Kaneyama**	**0.45**	**246**	S	Sg	00 19 11.5	0.0
JOM	**Ohasama**	**0.49**	**41**	*e*S	Sg	00 19 13.0	0.0
OFUJ	**Ofunato**	**0.61**	**92**	P	Pg	00 19 08.6	-0.2
JIO	**Ouri**	**0.74**	**150**	P	Pg	00 19 11.2	0.0
JIO				S	Sg	00 19 20.8	-0.1
JOU	**Okura**	**0.75**	**193**	S	Sg	00 19 21.5	+0.2

NIED ***17*** *00:19:00, 38°.90N×140°.60E, h5km, Mw3.6 Best double couple: M0 3.22000×10^14 NP1:φ0=244.00000°, δ1.00000°, λ164.00000°. NP2:φ0=337.00000°, δ74.00000°, λ10.00000°.*
IDC ***17*** *00:19:19.6±1.6, 38°.92N×140°.85E, h0km, mb3.6/4, mb1 3.7/6, mb1mx3.5/26, mbtmp3.6/6, ML3.5/2, Error ellipse: s-maj=34.3km s-min=22.9km az=77.0*
ISCJB ***17*** *00:19:20.9±0.7, 38°.93N±0°.03×140°.60E±0°.04, h12km±4km, mb3.9/7, Error ellipse: s-maj=5.6km s-min=4.5km az=43.5*
JMA ***17*** *00:19:21.7, 38°.92N×140°.58E, h4km±1km, M4.0 Broadband fault plane solution: P waves. NP1: φ0=339.00000°, δ58.00000°, λ13.00000°. NP2: φ0=241.00000°, δ79.00000°, λ147.00000°. Principal axes: T Plg31.0000°, Azm195.0000°; N Plg55.0000°, Azm45.0000°; P Plg14.0000°, Azm294.0000°;*
JMA Felt II J1.
NEIC ***17*** *00:19:25.7±5.4, 38°.93N×140°.39E, h28km±29km, mb4.0/2 Error ellipse: s-maj=39.1km s-min=10.6km az=85.0*
NEIC Recorded [2 JMA] in Akita, Miyagi and Yamagata.

ISC 17 00:19:21.7±0.5, 38°.91N±0°.03×140°.59E±0°.04, h6km±3km, n28, σ0°.73/38, mb3.9/7, 5C-3D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.18**	**272**	⇓P	**Pg**	**00 19 25.2**	**-0.1**
JYK				S	**Sg**	**00 19 27.8**	**0.0**
JRG	**Rokugo**	**0.49**	**4**	⇑P	**Pg**	**00 19 31.1**	**+0.1**
JRG				S	**Sg**	**00 19 38.1**	**+0.7**
JMK	**Ichinoseki**	**0.49**	**85**	⇓P	**Pg**	**00 19 31.2**	**+0.1**
JMK				S	**Sg**	**00 19 37.8**	**+0.3**
JOU	**Okura**	**0.55**	**174**	⇑P	**Pg**	**00 19 32.4**	**+0.2**
JOU				S	**Sg**	**00 19 39.7**	**+0.4**
JIO	**Ouri**	**0.75**	**127**	⇓P	**Pg**	**00 19 35.6**	**-0.4**
JYA	**Atsumi**	**0.76**	**245**	⇑P	**Pg**	**00 19 35.9**	**-0.3**
JYA				S	**Sg**	**00 19 46.0**	**0.0**
JOM	**Ohasama**	**0.78**	**44**	⇑P	**Pg**	**00 19 36.6**	**-0.1**
JYS	**Shiratake**	**0.80**	**211**	⇑P	**Pg**	**00 19 36.8**	**-0.3**
JYS				S	**Sg**	**00 19 47.7**	**+0.2**
MAJO	**Matsushiro**	**3.03**	**219**	*e*Pn	**Pn**	**00 20 10.4**	**+0.3**
MAJO				*e*Sn	**Sn**	**00 20 49.8**	**+3.2**
MAT	**Matsushiro**	**3.03**	**219**	P	**Pn**	**00 20 10.8**	**+0.7**
MAT				S	**Sn**	**00 20 46.8**	**+0.2**
MJAR	**Matsushiro Arr**	**3.03**	**219**	Pn	**Pn**	**00 20 10.9**	**+0.9**
	6.2nm,0.3s,baz=29,slow=13,SNR=40						
MJAR				Pg	**Pg**	**00 20 16.7**	**-2.9**
	8.6nm,0.3s,baz=25,slow=16,SNR=32						
MDJ	**Mudanjiang**	**10.00**	**308**	*e*Pn	**Pn**	**00 21 45.8**	**0.0**
KSRS	**Korea Array**	**10.08**	**266**	Pn	**Pn**	**00 21 50.4**	**+3.5**
	0.3nm,0.3s,baz=76,slow=14,SNR=3.4						
KSRS				Sn	**Sn**	**00 23 44.2**	**+3.9**
	0.6nm,0.3s,baz=78,slow=23,SNR=5.2						
INCN	**Inchon**	**11.08**	**267**	*e*Pn	**Pn**	**00 21 59.8**	**-0.8**
ENH	**Enshi**	**26.92**	**261**	P	**P**	**00 25 03.6**	**0.0**
	8.9nm,0.3s,mb4.8						
ZALV	**Zalesovo Beam**	**40.19**	**311**	P	**P**	**00 26 57.9**	**-0.5**
	1.1nm,0.8s,mb3.7,baz=72,slow=9.7,SNR=4.9						
CHTO	**Chiang Mai**	**41.17**	**253**	P	**P**	**00 27 06.0**	**-1.0**
LSA	**Lhasa**	**41.43**	**273**	P	**P**	**00 27 09.9**	**+0.9**
KURK	**Kurchatov**	**44.28**	**307**	*e*P	**P**	**00 27 31.5**	**-0.4**
	2.8nm,1.0s,mb4.0						
TKM2	**Tokmak 2**	**48.19**	**297**	*e*P	**P**	**00 28 03.1**	**+0.4**
	0.7nm,0.4s,mb4.0						
BVAR	**Borovoye Array**	**48.84**	**311**	P	**P**	**00 28 07.8**	**+0.2**
	0.2nm,0.6s,mb3.4,baz=15,slow=12,SNR=2.3						
AAK	**Ala-Archa**	**49.05**	**297**	P	**P**	**00 28 09.2**	**-0.1**
UCH	**Uchtor**	**49.17**	**296**	P	**P**	**00 28 09.3**	**-1.0**
EKS2	**Erkin-Say**	**49.54**	**297**	P	**P**	**00 28 13.1**	**0.0**
AML	**Almayashu**	**49.78**	**296**	P	**P**	**00 28 15.2**	**+0.3**
KBL	**Kabul**	**56.16**	**289**	*e*P	**P**	**00 29 02.3**	**+0.2**
WRA	**Warramunga Arr**	**58.83**	**187**	P	**P**	**00 29 19.7**	**-1.3**
	0.5nm,0.5s,mb3.8,baz=4.3,slow=7.3,SNR=6.7						
ASAR	**Alice Springs**	**62.56**	**187**	P	**P**	**00 29 45.9**	**-0.5**
	0.2nm,0.3s,mb3.7,baz=2.7,slow=8.0,SNR=3.8						

SZGRF ***17*** *00:19:21.5, 20°.21S×169°.31E, h33km, Vanuatu Islands*
ISCJB ***17*** *00:19:33.6±2.0, 18°.65S±0°.09×168°.58E±0°.09, h102km±16km, mb4.3/15, Error ellipse: s-maj=17.1km s-min=11.4km az=35.3*
LDG ***17*** *00:19:34.2, 18°.47S×168°.44E, h90km*
IDC ***17*** *00:19:40.0±6.5, 18°.69S×168°.58E, h147km±57km, mb4.1/13, mb1 4.2/13, mb1mx4.1/18, mbtmp4.1/13, MS3.0/3, Ms1 3.0/3, ms1mx2.7/18, Error ellipse: s-maj=27.8km s-min=16.5km az=38.0*
NEIC ***17*** *00:19:41.3±1.1, 18°.70S×168°.58E, h162km±10km, mb4.7/7, Error ellipse: s-maj=8.0km s-min=6.1km az=185.0*

ISC 17 00:19:35.0±1.8, 18°.66S±0°.09×168°.60E±0°.08, h100km±15km, n98, σ0°.68/37, mb4.3/15, 4C-3D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.83**	**205**	*e*P	**Pn**	**00 20 32.3**	**+0.3**
BAYA				*e*S	**Sn**	**00 21 14.7**	**-1.4**
NOUC	**Port Laguerre**	**4.05**	**212**	*e*P	**Pn**	**00 20 35.0**	**+0.2**
NOUC				*e*S	**Sn**	**00 21 21.2**	**-0.1**
MSVF	**Nonsavu**	**9.03**	**86**	*e*P	**Pn**	**00 21 49.1**	**+6.7**
	24nm,0.9s						
EIDS	**Eidsvold**	**17.56**	**245**	*e*P	**Pn**	**00 23 35.1**	**+1.7**
EIDS	**Eidsvold**	**17.56**	**245**	*e*P	**Pn**	**00 23 34.7**	**+1.2**
AFI	**Afiamalu**	**19.41**	**79**	LR	LR	00 28 57.1	
	comp=Z,28nm,19.7s,baz=232,slow=29						
URZ	**Urewera**	**20.89**	**161**	P	**P**	**00 24 10.8**	**+1.5**
	14nm,0.7s,baz=347,slow=13,SNR=5.9						
CTA	**Charters Tower**	**21.13**	**262**	P	**P**	**00 24 13.8**	**+1.8**
	6.0nm,0.6s,mb4.1,baz=91,slow=11,SNR=9.8						
CTAO	**Charters Tower**	**21.13**	**262**	*e*P	**P**	**00 24 12.9**	**+0.9**
	6.5nm,0.6s,mb4.1						
SNZO	**South Karori**	**23.18**	**168**	*e*P	**P**	**00 24 33.0**	**+0.2**
KHZ	**Kahutara**	**24.05**	**171**	*e*P	**P**	**00 24 40.1**	**-0.7**
KHZ				*e*PcP	PcP	00 28 19.3	-0.6
RPZ	**Rata Peaks**	**25.07**	**176**	P	**P**	**00 24 50.5**	**+0.5**
	12nm,0.7s,mb4.4,baz=355,slow=11,SNR=2.6						
STKA	**Stephens Creek**	**27.66**	**236**	P	**P**	**00 25 13.9**	**+0.4**
	2.2nm,0.6s,mb3.9,baz=102,slow=23,SNR=8.2						
STKA	**Stephens Creek**	**27.66**	**236**	*e*P	**P**	**00 25 14.1**	**+0.6**
	0.4nm,0.5s,mb3.2						
RAR	**Rarotonga**	**29.81**	**100**	P	**P**	**00 25 32.4**	**-0.4**
WRAB	**Tennant Creek**	**32.32**	**262**	*e*P	**P**	**00 25 53.9**	**-1.0**
	2.1nm,0.4s,mb4.2						
WRA	**Warramunga Arr**	**32.33**	**262**	P	**P**	**00 25 53.9**	**-1.0**
	1.7nm,0.4s,mb4.1,baz=86,slow=8.4,SNR=66						
ASAR	**Alice Springs**	**32.69**	**255**	P	**P**	**00 25 57.8**	**-0.3**
	12nm,0.4s,mb5.1,baz=82,slow=8.4,SNR=147						
FITZ	**Fitzroy Crossi**	**40.70**	**264**	P	**P**	**00 27 06.5**	**+0.4**
	21nm,0.6s,mb5.1,baz=108,slow=7.2,SNR=85						
FITZ	**Fitzroy Crossi**	**40.70**	**264**	*e*P	**P**	**00 27 06.4**	**+0.3**
	14nm,0.4s,mb5.2						
MBWA	**Marble Bar**	**45.88**	**258**	*e*P	**P**	**00 27 47.8**	**+0.1**
	5.2nm,0.5s,mb4.5						
DAV	**Davao City (W)**	**49.53**	**297**	*e*P	**P**	**00 28 15.7**	**-0.3**
TGY	**Tagaytay City**	**57.14**	**301**	LR	LR	00 49 37.0	
	comp=Z,12nm,20.7s,baz=19,slow=31						
SBA	**Scott Base**	**59.24**	**180**	*e*P	**P**	**00 29 26.0**	**+0.6**
	34nm,1.2s,mb5.2						
SBA				*e*pP	pP	00 29 57.5	+7.5
CASY	**Casey**	**60.42**	**203**	*e*P	**P**	**00 29 33.2**	**-0.4**
TWG	**Pinlang**	**62.09**	**310**	*e*P	**P**	**00 29 45.0**	**-0.6**
YULB	**Yu-li**	**62.28**	**310**	P	**P**	**00 29 47.0**	**+0.2**
KSRS	**Korea Array**	**67.69**	**326**	LR	LR	00 59 36.9	
	comp=Z,18nm,18.4s,baz=250,slow=35						
KULM	**Kulim**	**71.02**	**283**	*e*P	**P**	**00 30 42.0**	**-0.6**
QSPA	**South Pole Qui**	**71.39**	**180**	P	**P**	**00 30 43.3**	**-0.4**
	20nm,0.8s,mb5.0,baz=16,slow=2.0,SNR=52						
QSPA	**South Pole Qui**	**71.39**	**180**	*e*P	**P**	**00 30 43.1**	**-0.6**
	14nm,0.7s,mb4.9						
ENH	**Enshi**	**74.84**	**310**	P	**P**	**00 31 04.9**	**+0.1**
BJT	**Baijiatuau**	**76.10**	**321**	P	**P**	**00 31 11.3**	**-0.5**
CMAR	**Chiang Mai Arr**	**77.72**	**294**	P	**P**	**00 31 21.9**	**+0.5**
	0.7nm,0.3s,mb3.8,baz=136,slow=4.5,SNR=4.6						
CMAR				pP	pP	00 31 47.5	+0.5
	1.1nm,0.5s,baz=135,slow=4.5,SNR=4.9						
MAW	**Mawson**	**78.75**	**202**	P	**P**	**00 31 26.3**	**+0.1**
	2.6nm,0.7s,mb4.2,baz=89,slow=5.7,SNR=8.2						
SONM	**Songino Array**	**86.39**	**323**	P	**P**	**00 32 06.7**	**+0.6**
	1.7nm,0.8s,mb4.0,baz=140,slow=4.9,SNR=9.3						
NVAR	**Mina Array Bea**	**88.87**	**49**	P	**P**	**00 32 17.9**	**-0.2**
	0.4nm,0.5s,mb3.7,baz=217,slow=7.4,SNR=3.3						
TXAR	**Lajitas Array**	**97.02**	**62**	P	**P**	**00 32 55.6**	**-0.3**
	0.4nm,0.8s,mb3.9,baz=241,slow=7.0,SNR=3.7						
BVAR	**Borovoye Array**	**109.59**	**321**	PKiKP	PKiKP	00 37 52.7	-1.0
	0.3nm,0.4s,baz=143,slow=2.9,SNR=4.8						
ARCES	**ARCESS Array B**	**124.35**	**345**	PKP	PKPdf	00 38 20.1	-1.5
	3.0nm,0.4s,baz=74,slow=1.9,SNR=58						
FINES	**FINESS Array B**	**129.82**	**338**	PKP	PKPdf	00 38 30.1	-2.1
	0.8nm,0.5s,baz=40,slow=3.6,SNR=11						
NB2	**NORSAR Subarra**	**134.73**	**345**	PKPdf	PKPdf	00 38 40.7	-0.8
	comp=Z,0.6nm,0.5s,baz=33,slow=1.9						
NOA	**NORSAR Array B**	**134.73**	**345**	PKP	PKPdf	00 38 41.3	-0.2
	comp=Z,0.8nm,0.6s,baz=32,slow=2.0,SNR=5.6						
GEC2	**GERESS Array S**	**143.70**	**332**	*e*PKPbc	PKPdf	00 38 55.8	-2.4
GERES	**GERESS Array B**	**143.70**	**332**	PKP	PKPdf	00 38 56.3	-2.0
	comp=Z,1.5nm,0.6s,baz=39,slow=1.6,SNR=15						
GRF	**Grafenberg Arr**	**144.11**	**335**	*e*PKPbc	PKPdf	00 38 56.6	-2.3
MOA	**Molln**	**144.16**	**330**	⇑*i*PKPdf	PKPdf	00 38 57.4	-1.7
	comp=Z,3.5nm,0.7s						
PERS	**Pernice**	**144.59**	**328**	*i* PKPbc	PKPdf	00 38 58.1	-1.8
SOKA	**Soboth**	**144.60**	**328**	⇑*i*PKPbc	PKPdf	00 38 58.2	-1.7
	comp=Z,3.6nm,0.4s						
TNS	**Taunus Mts**	**144.74**	**338**	*e*PKPbc	PKPdf	00 38 58.6	-1.4
RJOB	**Jochberg**	**144.92**	**331**	*e*PKPbc	PKPdf	00 38 59.3	-1.1
FUR	**Furstenfeldbru**	**145.27**	**333**	*e*PKPbc	PKPbc	00 39 00.7	-0.2
LJU	**Ljubljana**	**145.29**	**328**	*i* PKPbc	PKPbc	00 39 00.5	-0.6
VISS	**Visnje**	**145.30**	**327**	*i* PKPbc	PKPbc	00 39 00.5	-0.6
MYKA	**Terra Mystica**	**145.32**	**329**	⇑*i*PKPbc	PKPbc	00 39 00.0	-1.1
	comp=Z,9.2nm,0.9s						
STU	**Stuttgart**	**145.65**	**336**	*e*PKPbc	PKPbc	00 39 00.5	-1.6
WTTA	**Wattenberg**	**145.80**	**332**	⇓*i*PKPdf	PKPdf	00 39 02.2	+0.3
	comp=Z,3.5nm,0.6s						
MOTA	**Moosalm**	**145.97**	**332**	⇑*i*PKPdf	PKPdf	00 39 02.3	+0.1
	comp=Z,7.8nm,0.7s						
WLF	**Walferdange**	**146.00**	**339**	*e*PKPbc	PKPbc	00 39 03.0	-0.1
BAIF	**Baives**	**146.27**	**342**	*e*PKP1	PKPbc	00 39 03.4	-0.5
	comp=Z,11nm,0.6s						
BFO	**Black Forest**	**146.34**	**336**	*e*PKPbc	PKPbc	00 39 03.3	-0.9
FETA	**Feichten**	**146.39**	**332**	⇓*i*PKPdf	PKPdf	00 39 03.6	+0.7
	comp=Z,5.4nm,0.5s						
DAVA	**Damuels**	**146.55**	**333**	⇓*i*PKPdf	PKPbc	00 39 04.5	-0.3
	comp=Z,5.0nm,0.6s						
CDF	**Champ du Feu**	**146.67**	**337**	*e*PKP1	PKPbc	00 39 04.6	-0.5
	comp=Z,23nm,0.7s						
HINF	**Hinteralfeld**	**147.33**	**337**	*e*PKP1	PKPbc	00 39 06.1	-0.9
	comp=Z,5.8nm,0.6s						
HAU	**Haudompre**	**147.35**	**338**	*e*PKP1	PKPbc	00 39 06.4	-0.6
	comp=Z,7.0nm,0.5s						
MEZF	**Maizieres J'vi**	**147.37**	**340**	*e*PKP1	PKPbc	00 39 06.8	-0.3
	comp=Z,21nm,0.8s						
SFTF	**Sexfontaines**	**147.64**	**339**	*e*PKP1	PKPbc	00 39 07.4	-0.4
CABF	**La Chapelle**	**148.62**	**337**	*e*PKP1	PKPbc	00 39 10.3	-0.1
	comp=Z,29nm,0.6s						
FLN	**La Foliniere**	**148.69**	**346**	*e*PKP1	PKPbc	00 39 09.5	-1.0
	comp=Z,22nm,0.6s						
LDF	**La Druitiere**	**148.77**	**346**	*e*PKP1	PKPbc	00 39 09.7	-1.0
	comp=Z,10nm,0.6s						
LOR	**Lormes**	**148.84**	**340**	*e*PKP1	PKPbc	00 39 10.3	-0.7
	comp=Z,31nm,0.7s						
GRR	**Gorron**	**149.13**	**346**	*e*PKP1	PKPbc	00 39 10.7	-1.0
	comp=Z,10.0nm,0.5s						
SSF	**Saint Saulge**	**149.14**	**340**	*e*PKP1	PKPbc	00 39 11.2	-0.5
	comp=Z,20nm,0.6s						
HYF	**Humbligny**	**149.23**	**341**	*e*PKP1	PKPbc	00 39 11.7	-0.3
LPL	**La Plagne**	**149.27**	**335**	*e*PKP1	PKPbc	00 39 12.0	-0.1
	comp=Z,12nm,0.6s						
LPG	**La Plagne**	**149.28**	**335**	*e*PKP1	PKPbc	00 39 12.1	0.0
	comp=Z,14nm,0.6s						
SMF	**Signal de Mont**	**149.39**	**339**	*e*PKP1	PKPbc	00 39 11.5	-0.9
	comp=Z,6.0nm,0.6s						
AVF	**Avril sur Loir**	**149.43**	**340**	*e*PKP1	PKPbc	00 39 11.3	-1.2
	comp=Z,7.2nm,0.8s						
SGMF	**Saint Gilles**	**149.61**	**348**	*e*PKP1	PKPbc	00 39 11.7	-1.2
	comp=Z,11nm,0.6s						
ROSF	**Rostrenen**	**149.67**	**349**	*e*PKP1	PKPbc	00 39 11.8	-1.2
	comp=Z,9.7nm,0.7s						
BGF	**Bois d'Agland**	**149.80**	**340**	*e*PKP1	PKPbc	00 39 12.6	-0.8
	comp=Z,18nm,0.5s						
MBDF	**Montbardon**	**149.90**	**334**	*e*PKP1	PKPbc	00 39 12.9	-0.8
QUIF	**Quistinic**	**150.05**	**349**	*e*PKP1	PKPbc	00 39 12.6	-1.3
	comp=Z,5.4nm,0.4s						
ORIF	**Oris-en-Rattie**	**150.11**	**335**	*e*PKP1	PKPbc	00 39 13.7	-0.5
	comp=Z,29nm,0.6s						
TCF	**Toulx Ste Croi**	**150.24**	**341**	*e*PKP1	PKPbc	00 39 13.7	-0.7
	comp=Z,12nm,0.6s						
SBF	**Sospel**	**150.30**	**332**	*e*PKP1	PKPbc	00 39 14.3	-0.4
	comp=Z,45nm,0.9s						
PGF	**Pioggiola**	**150.56**	**328**	*e*PKP1	PKPbc	00 39 14.6	-0.7
	comp=Z,51nm,0.6s						
MFF	**Saint Martin d**	**150.63**	**344**	*e*PKP1	PKPbc	00 39 14.4	-1.0
	comp=Z,21nm,0.7s						
VIVF	**Saint-Julien-l**	**150.63**	**336**	*e*PKP1	PKPbc	00 39 14.8	-0.6
	comp=Z,10nm,0.6s						
FRF	**La Foret Royal**	**150.89**	**332**	*e*PKP1	PKPbc	00 39 15.0	-1.1
	comp=Z,17nm,0.5s						
SMRF	**Simiane la Rot**	**151.01**	**334**	*e*PKP1	PKPbc	00 39 16.0	-0.3
	comp=Z,20nm,0.6s						
LMR	**La Mourre**	**151.13**	**332**	*e*PKP1	PKPbc	00 39 15.7	-0.9
	comp=Z,21nm,0.7s						
RJF	**Les Rejaudoux**	**151.34**	**341**	*e*PKP1	PKPbc	00 39 16.2	-0.9
	comp=Z,10.0nm,0.7s						
CAF	**Calviac**	**151.50**	**340**	*e*PKP1	PKPbc	00 39 16.7	-0.7
	comp=Z,2.9nm,0.5s						
LASF	**Ste Croix**	**151.60**	**336**	*e*PKP1	PKPbc	00 39 17.2	-0.5
	comp=Z,16nm,0.7s						
LFF	**La Frestale**	**151.90**	**342**	*e*PKP1	PKPbc	00 39 17.5	-0.9
	comp=Z,11nm,0.6s						
MTLF	**Montolieu**	**152.84**	**338**	*e*PKP1	PKPbc	00 39 19.6	-0.9
	comp=Z,5.2nm,0.7s						

GII ***17*** *00:28:47.4±0.6, 33°.28N×35°.47E, h1km±1km, Md2.8/4, Mm2.4/8*
CSEM ***17*** *00:28:47.8±0.2, 33°.32N×35°.46E, h2km, ML3.4, Error ellipse: s-maj=5.0km s-min=3.1km az=102.0*
ISCJB ***17*** *00:28:47.4±0.4, 33°.33N±0°.02×35°.45E±0°.03, h6km±3km, Error ellipse: s-maj=4.6km s-min=2.7km az=30.9*
GRAL ***17*** *00:28:48.2±0.3, 33°.32N×35°.46E, h5km±2km, MD3.4*
NSSC ***17*** *00:28:49, 33°.29N×35°.54E, h15km±4km*

ISC 17 00:28:47.8±0.4, 33°.33N±0°.02×35°.45E±0°.03, h2km±5km, n38, σ0°.64/62, 8D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.19**	**327**	*e*P	**Pg**	**00 28 52.0**	**+0.5**
MATL	**Matarih**	**0.19**	**327**	*e*P	**Pg**	**00 28 52.0**	**+0.5**
KSDI	**Kefar Szold**	**0.22**	**129**	Pg	**Pg**	**00 28 51.9**	**-0.2**
KSDI				Sg	**Sg**	**00 28 55.5**	**+0.6**
HRI	**Mount Hermon**	**0.24**	**105**	Pg	**Pg**	**00 28 52.2**	**-0.3**
MMA0	**Mount Meron ar**	**0.32**	**188**	Pg	**Pg**	**00 28 53.6**	**-0.3**
MMA0				Sg	**Sg**	**00 28 58.8**	**+0.8**
MMA0B	**Mount Meron ar**	**0.32**	**188**	Pg	**Pg**	**00 28 53.6**	**-0.3**
MMA0B				Sg	**Sg**	**00 28 58.9**	**+0.9**
HNTI	**Hanita**	**0.34**	**224**	Pg	**Pg**	**00 28 54.9**	**+0.5**
HNTI				Sg	**Sg**	**00 28 59.3**	**+0.5**
RCY	**Rachaya**	**0.34**	**63**	*e*P	**Pg**	**00 28 54.8**	**+0.4**
RCY				*e*S	**Sg**	**00 28 59.8**	**+0.9**
RCY	**Rachaya**	**0.34**	**63**	*e*P	**Pg**	**00 28 54.8**	**+0.4**
RCY				*e*S	**Sg**	**00 28 59.8**	**+1.0**
BRBR	**Barbar**	**0.42**	**79**	⇑P	**Pg**	**00 28 56.0**	**0.0**
BRBR				⇑S	**Sg**	**00 29 01.0**	**-0.5**
BRBR	**Barbar**	**0.42**	**79**	⇑*i*P	**Pg**	**00 28 56.2**	**+0.2**
BRBR				⇑*i*S	**Sg**	**00 29 01.9**	**+0.4**
KSHT	**Keshet**	**0.46**	**139**	Pg	**Pg**	**00 28 56.8**	**+0.2**
BEYL	**Beirut**	**0.54**	**4**	*e*P	**Pg**	**00 28 58.2**	**0.0**
BEYL	**Beirut**	**0.54**	**4**	*e*P	**Pg**	**00 28 58.2**	**0.0**
BHL	**Bhannes**	**0.59**	**16**	*e*P	**Pg**	**00 28 59.0**	**-0.2**
BHL				*e*S	**Sg**	**00 29 07.0**	**+0.1**
BHL	**Bhannes**	**0.59**	**16**	*e*P	**Pg**	**00 28 59.0**	**-0.3**
BHL				*e*S	**Sg**	**00 29 07.1**	**+0.1**
BLGI	**Bet Lehem HaGe**	**0.64**	**200**	Pg	**Pg**	**00 28 59.9**	**-0.1**
QASN	**Qassioun**	**0.72**	**73**	⇓P	**Pg**	**00 29 01.0**	**-0.6**
QASN				⇑S	**Sg**	**00 29 12.0**	**+1.1**
QASN	**Qassioun**	**0.72**	**73**	⇓*i*P	**Pg**	**00 29 01.9**	**+0.3**
QASN				⇑*i*S	**Sg**	**00 29 12.0**	**+1.1**
TCHB	**Talchebab**	**0.79**	**147**	⇑P	**Pg**	**00 29 02.0**	**-1.0**
TCHB				⇑S	**Sg**	**00 29 13.0**	**-0.2**
TCHB	**Talchebab**	**0.79**	**147**	⇑*i*P	**Pg**	**00 29 02.8**	**-0.2**
TCHB				⇑*i*S	**Sg**	**00 29 13.2**	**0.0**
OFRI	**'Ofer**	**0.81**	**209**	Pg	**Pg**	**00 29 03.0**	**-0.4**
TOTH	**TOTAH**	**0.82**	**88**	⇓P	**Pg**	**00 29 03.0**	**-0.5**
TOTH				⇓S	**Sg**	**00 29 15.0**	**+0.9**
TOTH	**TOTAH**	**0.82**	**88**	⇓*i*P	**Pg**	**00 29 03.4**	**-0.1**
TOTH				⇓*i*S	**Sg**	**00 29 15.9**	**+1.8**
MMLI	**Mount Malkishu**	**0.89**	**182**	Pg	**Pg**	**00 29 04.0**	**-0.9**
MMLI				Sg	**Sg**	**00 29 16.6**	**+0.2**
HWQ	**Hawqa**	**1.03**	**23**	*e*

ADH	**Angra Heroismo**	**2.27 302**	*e*P	**Pn**	**00 36 36.9**	**+1.3**
ADH			*e*S	**Sn**	**00 37 03.7**	**+0.1**
ADH			A		00 37 09.9	
	36nm,0.3s					
ADH	**Angra Heroismo**	**2.27 302**	*e*P	**Pn**	**00 36 36.9**	**+1.3**
ADH			*e*S	**Sn**	**00 37 03.7**	**+0.1**
PMAN	**Manadas**	**2.85 295**	*e*S	**Sn**	**00 37 18.1**	**0.0**
PMAN			A		00 37 19.9	
	15nm,0.3s					
PMAN	**Manadas**	**2.85 295**	*e*S	**Sn**	**00 37 18.1**	**0.0**
ROSA	**Rosais**	**3.00 296**	*e*S	**Sn**	**00 37 21.2**	**-0.4**
ROSA	**Rosais**	**3.00 296**	*e*S	**Sn**	**00 37 21.2**	**-0.4**
PICO	**Pico**	**3.06 291**	*e*S	**Sn**	**00 37 22.3**	**-0.7**
PICO	**Pico**	**3.06 291**	*e*S	**Sn**	**00 37 22.3**	**-0.7**
PCAN	**Candelaria**	**3.09 290**	*e*S	**Sn**	**00 37 22.9**	**-1.0**
PCAN			A		00 37 27.3	
	12nm,0.3s					
PCAN	**Candelaria**	**3.09 290**	*e*S	**Sn**	**00 37 22.9**	**-1.0**
CALA	**Caldeira**	**3.29 291**	*e*S	**Sn**	**00 37 27.8**	**-0.9**
CALA	**Caldeira**	**3.29 291**	*e*S	**Sn**	**00 37 27.8**	**-0.9**
PCED	**Cedros**	**3.30 292**	*e*S	**Sn**	**00 37 28.6**	**-0.5**
PCED			A		00 37 30.8	
	9.9nm,0.3s					
PCED	**Cedros**	**3.30 292**	*e*S	**Sn**	**00 37 28.6**	**-0.5**
PMAR	**Madeira**	**8.00 124**	*e*P	**Pn**	**00 37 54.0**	**-0.4**
PMAR			*e*S	**Sn**	**00 39 16.4**	**-8.5**
PMAR			A		00 39 28.4	
	8.6nm,0.8s					
PMPS	**Porto Santo**	**8.19 120**	*e*P	**Pn**	**00 37 56.2**	**-0.8**
PMPS			A		00 38 51.3	
	12nm,0.7s					

ISK ***17*** *00:49:02.9, 40.45N×27.89E, h8km, MD3.0*
DDA ***17*** *00:49:02.7, 40.38N×27.90E, h7km±3km, Md3.2*
CSEM ***17*** *00:49:03.4±0.1, 40.44N×27.89E, h10km, MD3.0, Error ellipse: s-maj=3.1km s-min=2.7km az=30.0*
ISCJB ***17*** *00:49:03.2±0.3, 40.43N±0.02×27.90E±0.03, h8km±3km, Error ellipse: s-maj=3.5km s-min=3.2km az=27.4*
ISC 17 00:49:03.6±0.3,**40.43N**±0.02×**27.90E**±0.03,**h9**km±3km,
n76, σ0°**87**/97,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNT	**Bandirma**	**0.07**	**165**	PG	**Pg**	**00 49 05.9**	**+0.3**
BNT				*e*SG	**Sg**	**00 49 07.8**	**+0.6**
BNT	**Bandirma**	**0.07**	**165**	*i* Pg	**Pg**	**00 49 05.9**	**+0.2**
BNT				*e*Sg	**Sg**	**00 49 07.8**	**+0.6**
EDC	**Edincik**	**0.08**	**197**	PG	**Pg**	**00 49 05.9**	**+0.1**
EDC	**Edincik**	**0.08**	**197**	*i* Pg	**Pg**	**00 49 05.9**	**+0.1**
KCT	**Karacabey**	**0.39**	**114**	*e*PG	**Pg**	**00 49 10.5**	**-0.7**
KCT	**Karacabey**	**0.39**	**114**	*e*Pg	**Pg**	**00 49 10.5**	**-0.7**
MFT	**Murefte**	**0.59**	**308**	*e*PG	**Pg**	**00 49 14.8**	**-0.2**
MFT				*e*SG	**Sg**	**00 49 22.9**	**+0.2**
MFT	**Murefte**	**0.59**	**308**	*e*Pg	**Pg**	**00 49 14.8**	**-0.2**
MFT				*e*Sg	**Sg**	**00 49 23.0**	**+0.3**
SART	**Tekirdag**	**0.60**	**296**	*i* P	**Pg**	**00 49 15.2**	**-0.1**
SART				*i* S	**Sg**	**00 49 24.3**	**+1.1**
SART	**Tekirdag**	**0.60**	**296**	*i* P	**Pg**	**00 49 15.2**	**-0.1**
SART				*i* S	**Sg**	**00 49 24.3**	**+1.1**
RKY	**Sarkoy-Tekirda**	**0.61**	**296**	*e*PG	**Pg**	**00 49 15.0**	**-0.3**
RKY				*e*SG	**Sg**	**00 49 23.7**	**+0.5**
RKY	**Sarkoy-Tekirda**	**0.61**	**296**	*e*Pg	**Pg**	**00 49 15.0**	**-0.3**
RKY				*e*Sg	**Sg**	**00 49 23.7**	**+0.5**
TKR	**Tekirdag**	**0.63**	**334**	*e*PG	**Pg**	**00 49 14.8**	**-0.9**
TKR	**Tekirdag**	**0.63**	**334**	*e*Pg	**Pg**	**00 49 14.8**	**-0.9**
CRLT	**Corlu**	**0.71**	**350**	*e*PG	**Pg**	**00 49 16.6**	**-0.7**
CRLT	**Corlu**	**0.71**	**350**	*e*Pg	**Pg**	**00 49 16.6**	**-0.7**
BALY	**Balya**	**0.72**	**197**	*i* P	**Pg**	**00 49 16.0**	**-1.3**
BALY				*i* S	**Sg**	**00 49 29.4**	**+2.7**
BALY	**Balya**	**0.72**	**197**	*i* P	**Pg**	**00 49 16.0**	**-1.4**
BALY				*i* S	**Sg**	**00 49 29.4**	**+2.7**
ARMT	**Armutlu**	**0.75**	**79**	*e*PG	**Pg**	**00 49 18.1**	**+0.1**
ARMT				*e*SG	**Sg**	**00 49 28.4**	**+0.6**
ARMT	**Armutlu**	**0.75**	**79**	*e*Pg	**Pg**	**00 49 18.1**	**+0.1**
ARMT				*e*Sg	**Sg**	**00 49 28.4**	**+0.6**
BALB	**Balikesir**	**0.79**	**181**	*e*PG	**Pg**	**00 49 17.9**	**-0.8**
BALB	**Balikesir**	**0.79**	**181**	*e*Pg	**Pg**	**00 49 17.9**	**-0.8**
ELBA	**Catalca**	**0.83**	**29**	*i* P	**Sg**	**00 49 32.1**	**+1.8**
ELBA				*i* P	**Pg**	**00 49 19.7**	**+0.2**
ELBA	**Catalca**	**0.83**	**29**	*i* P	**Pg**	**00 49 19.7**	**+0.2**
SLVT	**Silivri**	**0.84**	**16**	*e*PG	**Pg**	**00 49 20.0**	**+0.3**
SLVT	**Silivri**	**0.84**	**16**	*e*Pg	**Pg**	**00 49 20.0**	**+0.3**
LPK	**Lapseki**	**0.87**	**267**	*e*PG	**Pg**	**00 49 19.7**	**-0.6**
LPK	**Lapseki**	**0.87**	**267**	*e*Pg	**Pg**	**00 49 19.7**	**-0.6**
CTKS	**Kestanelik-??a**	**0.93**	**30**	*e*PG	**Pg**	**00 49 21.0**	**-0.5**
CTKS	**Kestanelik-??a**	**0.93**	**30**	*e*Pg	**Pg**	**00 49 21.0**	**-0.5**
DURS	**Dursunbey**	**0.94**	**151**	*i* P	**Pg**	**00 49 21.0**	**-0.6**
DURS				*i* S	**Sg**	**00 49 32.9**	**-0.9**
DURS	**Dursunbey**	**0.94**	**151**	*i* P	**Pg**	**00 49 21.0**	**-0.6**
DURS				*i* S	**Sg**	**00 49 32.9**	**-0.8**
GEMT	**Gemlik**	**0.99**	**89**	*e*PG	**Pg**	**00 49 22.6**	**0.0**
GEMT	**Gemlik**	**0.99**	**89**	*e*Pg	**Pg**	**00 49 22.6**	**+0.1**
ULDT	**Uludag**	**0.99**	**106**	*i* P	**Pg**	**00 49 21.4**	**-1.2**
ULDT				*i* S	**Sg**	**00 49 34.5**	**-0.9**
ULDT	**Uludag**	**0.99**	**106**	*i* P	**Pg**	**00 49 21.4**	**-1.2**
ULDT				*i* S	**Sg**	**00 49 34.5**	**-1.0**
DST	**Dursunbey**	**0.99**	**146**	*e*PG	**Pg**	**00 49 23.1**	**+0.4**
DST	**Dursunbey**	**0.99**	**146**	*e*Pg	**Pg**	**00 49 23.1**	**+0.5**
ISK	**Istanbul-Kandi**	**1.09**	**54**	*e*PN	**Pn**	**00 49 23.7**	**-1.3**
ISK	**Istanbul-Kandi**	**1.09**	**54**	*e*Pn	**Pn**	**00 49 23.7**	**-1.3**
YLV	**Yalova**	**1.14**	**82**	*e*PN	**Pn**	**00 49 24.5**	**-1.1**
YLV	**Yalova**	**1.14**	**82**	*e*Pn	**Pn**	**00 49 24.5**	**-1.1**
KLYT	**Kilyos**	**1.20**	**46**	*e*PN	**Pn**	**00 49 25.8**	**-0.6**
KLYT	**Kilyos**	**1.20**	**46**	*e*Pn	**Pn**	**00 49 25.8**	**-0.7**
EZN	**Ezine**	**1.34**	**244**	*e*PN	**Pn**	**00 49 28.0**	**-0.5**
EZN	**Ezine**	**1.34**	**244**	*e*Pn	**Pn**	**00 49 28.0**	**-0.5**
ENEZ	**Enez**	**1.36**	**284**	*e*PN	**Pn**	**00 49 28.0**	**-0.7**
ENEZ	**Enez**	**1.36**	**284**	*e*Pn	**Pn**	**00 49 28.0**	**-0.7**
ADVT	**Abdulvahap**	**1.41**	**89**	*e*PN	**Pn**	**00 49 29.6**	**+0.3**
ADVT	**Abdulvahap**	**1.41**	**89**	*e*Pn	**Pn**	**00 49 29.6**	**+0.3**
AYVA	**Ayvalik**	**1.45**	**220**	*i* P	**Pn**	**00 49 28.5**	**-1.5**
AYVA				*i* S	**Sn**	**00 49 49.8**	**+0.8**
AYVA	**Ayvalik**	**1.45**	**220**	*i* P	**Pn**	**00 49 28.5**	**-1.4**
AYVA				*i* S	**Sn**	**00 49 49.8**	**+0.8**
SILT	**Sile**	**1.51**	**61**	*e*PN	**Pn**	**00 49 31.1**	**+0.3**
SILT	**Sile**	**1.51**	**61**	*e*Pn	**Pn**	**00 49 31.1**	**+0.3**
GADA	**Gvkgeada**	**1.54**	**262**	*e*PN	**Pn**	**00 49 30.9**	**-0.3**
GADA	**Gvkgeada**	**1.54**	**262**	*e*Pn	**Pn**	**00 49 30.9**	**-0.3**
AKS	**Akhisar**	**1.55**	**182**	*e*PN	**Pn**	**00 49 32.1**	**+0.9**
AKS	**Akhisar**	**1.55**	**182**	*e*Pn	**Pn**	**00 49 32.1**	**+0.9**
AKHS	**Akhisar**	**1.55**	**182**	*i* P	**Pn**	**00 49 30.9**	**-0.3**
AKHS				*i* S	**Sn**	**00 49 50.2**	**-1.2**
AKHS	**Akhisar**	**1.55**	**182**	*i* P	**Pn**	**00 49 30.9**	**-0.3**
AKHS				*i* S	**Sn**	**00 49 50.2**	**-1.2**
EDRB	**Edirne**	**1.67**	**329**	*e*PN	**Pn**	**00 49 32.0**	**-0.9**
EDRB	**Edirne**	**1.67**	**329**	*e*Pn	**Pn**	**00 49 32.0**	**-0.9**
GPA	**Golpazari**	**1.85**	**93**	*e*PN	**Pn**	**00 49 36.6**	**+1.2**
GPA	**Golpazari**	**1.85**	**93**	*e*Pn	**Pn**	**00 49 36.6**	**+1.2**
KULA	**Kula-Manisa**	**2.00**	**163**	*e*PN	**Pn**	**00 49 38.7**	**+1.2**
KULA	**Kula-Manisa**	**2.00**	**163**	*e*Pn	**Pn**	**00 49 38.7**	**+1.2**
GULT	**Gulveren**	**2.00**	**89**	*e*PN	**Pn**	**00 49 38.4**	**+1.0**
GULT	**Gulveren**	**2.00**	**89**	*e*Pn	**Pn**	**00 49 38.4**	**+0.9**
IZM	**Izmir**	**2.08**	**194**	*e*PN	**Pn**	**00 49 39.6**	**+1.0**
IZM	**Izmir**	**2.08**	**194**	*e*Pn	**Pn**	**00 49 39.6**	**+1.0**
BLCB	**Balcova**	**2.14**	**198**	*e*PN	**Pn**	**00 49 40.4**	**+1.0**
BLCB	**Balcova**	**2.14**	**198**	*e*Pn	**Pn**	**00 49 40.4**	**+1.0**
ALT	**Altintas**	**2.19**	**128**	*e*PN	**Pn**	**00 49 41.2**	**+1.2**
ALT	**Altintas**	**2.19**	**128**	*e*Pn	**Pn**	**00 49 41.2**	**+1.1**
ESKT	**Eskisehir**	**2.44**	**111**	*e*PN	**Pn**	**00 49 45.1**	**+1.5**
ESKT	**Eskisehir**	**2.44**	**111**	*e*Pn	**Pn**	**00 49 45.1**	**+1.5**

BJI ***17*** *01:09:10.1, 15.40N×146.30E, h35km, mB4.6/4, mb4.7/7, Ms4.2/2, Ms7 3.7/2*
NEIC ***17*** *01:09:15.2±0.9, 15.39N×146.29E, h35km, mb4.4/3, Error ellipse: s-maj=27.0km s-min=12.9km az=99.0*
NEIC Felt on Saipan.
IDC ***17*** *01:09:19.9±16.0, 15.29N×146.16E, h75km±145km, mb3.7/8, mb1 3.8/8, mb1mx3.6/21, mbtmp3.7/8, Error ellipse: s-maj=49.8km s-min=22.4km az=72.0*
ISCJB ***17*** *01:09:20.7±2.0, 15.3N±0.1×145.6E±0.2, h90km±18km, mb4.2/18, Error ellipse: s-maj=29.2km s-min=18.4km az=162.8*
ISC 17 01:09:21.2±2.1,**15.3N**±0.1×**145.6E**±0.2,**h80**km±19km,**n22,**
σ1°**37**/25,**mb4.2**/18,**Mariana Islands**

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

GUMO	**Guam**	**1.82 202**	*e*Pn	**Pn**	**01 09 50.4**	**-0.3**
GUMO			*e*S	**Sn**	**01 10 12.5**	**-0.6**
NJ2	**Nanjing**	**29.51 309**	*e*P	**P**	**01 15 14.3**	**-3.7**
NJ2			pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.5					
CN2	**Changchun**	**33.20 333**	*e*P	**P**	**01 15 54.4**	**+4.1**
BJI	**Beijing**	**35.58 320**	P	**P**	**01 16 10.8**	**-0.2**
BJI			S	**S**	**01 21 39.3**	**-1.8**
BJI			pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.6					
BJI			pmax	pmax		
	comp=Z,65nm,5.4s					
BJI			LR	LR		
	comp=N,140nm,13.9s					
BJI			LR	LR		
	comp=E,120nm,14.9s					
BJI			LR	LR		
	comp=Z,39nm,17.5s					
WRAB	**Tennant Creek**	**36.69 198**	*e*P	**P**	**01 16 21.7**	**+1.1**
	comp=Z,5.9nm,1.2s,mb4.4					
WRA	**Warramunga Arr**	**36.71 198**	P	**P**	**01 16 21.0**	**+0.3**
	comp=Z,0.6nm,0.5s,mb3.8,baz=16,slow=8.8,SNR=17					
WRA			PcP	PcP	01 18 42.2	+0.3
	comp=Z,0.4nm,1.1s,baz=17,slow=3.5,SNR=4.7					
KSM	**Kuching**	**37.41 252**	P	**P**	**01 16 20.2**	**-6.6**
GYA	**Guiyang**	**37.89 294**	P	**P**	**01 16 26.8**	**-4.0**
GYA			pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7					
HHC	**Hu-ho-hao-te**	**38.97 318**	*e*P	**P**	**01 16 39.3**	**-0.3**
HHC			pP	pP	01 16 49.0	-10
HHC			sP	sP	01 16 52.9	-15
HHC			PP	PP	01 18 10.3	0.0
HHC			S	**S**	**01 22 29.4**	**-3.1**
HHC			ScS	ScS	01 26 46.3	+5.1
HHC			pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.7					
HHC			pmax	pmax		
	comp=Z,100nm,6.9s					
HHC			LR	LR		
	comp=N,230nm,20.2s					
HHC			LR	LR		
	comp=E,180nm,21.4s					
HHC			LR	LR		
	comp=Z,400nm,23.8s					
CD2	**Chengdu**	**41.23 300**	*e*P	**P**	**01 16 54.9**	**-3.6**
CD2			pP	pP	01 17 04.8	-13
CD2			pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7					
CD2			pmax	pmax		
	comp=Z,30nm,5.2s					
LZH	**Lanzhou**	**42.53 307**	*e*P	**P**	**01 17 08.5**	**-0.5**
LZH			pmax	pmax		
	comp=Z,21nm,1.2s,mb4.7					
LZH			pmax	pmax		
	comp=Z,53nm,6.0s					
CMAR	**Chiang Mai Arr**	**44.65 281**	P	**P**	**01 17 30.6**	**+4.4**
	comp=Z,1.0nm,0.4s,mb3.9,baz=76,slow=5.9,SNR=5.7					
SONM	**Songino Array**	**45.77 324**	P	**P**	**01 17 37.1**	**+2.4**
	comp=Z,0.7nm,0.6s,mb3.5,baz=121,slow=5.5,SNR=3.6					
WMQ	**Urumqi**	**56.49 313**	*e*P	**P**	**01 18 56.0**	**+0.9**
ZALV	**Zalesovo Beam**	**60.67 324**	P	**P**	**01 19 24.6**	**+0.7**
	comp=Z,0.7nm,0.4s,mb4.1,baz=117,slow=8.0,SNR=2.7					
MKAR	**Makanchi Array**	**60.77 315**	P	**P**	**01 19 27.0**	**+2.3**
	comp=Z,0.7nm,0.4s,mb4.1,baz=88,slow=9.1,SNR=12					
KURK	**Kurchatov**	**63.75 319**	*e*P	**P**	**01 19 46.3**	**+1.7**
	comp=Z,2.4nm,0.8s,mb4.1					
BVAR	**Borovoye Array**	**69.04 321**	P	**P**	**01 20 19.4**	**+1.2**
	comp=Z,2.8nm,0.4s,mb4.4,baz=101,slow=7.9,SNR=17					
ABKAR	**Akbulak array**	**75.76 318**	*e*P	**P**	**01 20 58.9**	**+0.6**
	comp=Z,1.8nm,0.4s,mb4.2					
NVAR	**Mina Array Bea**	**85.33 52**	P	**P**	**01 21 48.0**	**-1.7**
	comp=Z,0.9nm,0.7s,mb3.8,baz=260,slow=5.9,SNR=4.7					
ARCES	**ARCESS Array B**	**85.69 342**	P	**P**	**01 21 49.5**	**-1.4**
	comp=Z,0.9nm,0.9s,mb3.7,baz=82,slow=8.7,SNR=4.7					
FINES	**FINESS Array B**	**89.92 335**	P	**P**	**01 22 09.3**	**-2.0**
	comp=Z,1.1nm,0.7s,mb4.1,baz=52,slow=7.5,SNR=3.7					

ISK ***17*** *01:16:17.4, 39.00N×28.01E, h18km, MD2.8*
ISCJB ***17*** *01:16:17.9±0.4, 39.01N±0.03×28.01E±0.03, h10km±5km, Error ellipse: s-maj=4.5km s-min=4.3km az=5.4*
DDA ***17*** *01:16:18.1, 39.02N×28.01E, h7km±3km, Md3.0*
CSEM ***17*** *01:16:18.1±0.1, 38.99N×27.99E, h15km, MD2.8, Error ellipse: s-maj=1.4km s-min=1.3km az=71.0*
ISC 17 01:16:18.2±0.4,**39.00N**±0.03×**27.99E**±0.03,**h16**km±5km,
n35, σ0°**81**/54,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.18**	**228**	*i* P	**Pg**	**01 16 21.9**	**-0.8**
AKHS				*i* S	**Sg**	**01 16 25.8**	**+0.1**
AKHS	**Akhisar**	**0.18**	**228**	*i* P	**Pg**	**01 16 21.9**	**-0.8**
AKHS				*i* S	**Sg**	**01 16 25.8**	**+0.1**
AKS	**Akhisar**	**0.19**	**228**	PG	**Pg**	**01 16 22.6**	**-0.1**
AKS				*e*SG	**Sg**	**01 16 26.1**	**+0.3**
AKS	**Akhisar**	**0.19**	**228**	*i* Pg	**Pg**	**01 16 22.6**	**-0.1**
AKS				*e*Sg	**Sg**	**01 16 26.1**	**+0.4**
DEMI	**Demirci**	**0.57**	**86**	*i* P	**Pg**	**01 16 29.4**	**0.0**
DEMI				*i* S	**Sg**	**01 16 36.5**	**-0.5**
DEMI	**Demirci**	**0.57**	**86**	*i* P	**Pg**	**01 16 29.4**	**0.0**
DEMI				*i* S	**Sg**	**01 16 36.5**	**-0.5**
BALB	**Balikesir**	**0.64**	**352**	*e*PG	**Pg**	**01 16 29.8**	**-1.1**
BALB				*e*SG	**Sg**	**01 16 40.2**	**+0.9**
BALB	**Balikesir**	**0.64**	**352**	*e*Pg	**Pg**	**01 16 29.8**	**-1.0**
BALB				*e*Sg	**Sg**	**01 16 40.2**	**+0.8**
MANT	**Manisa**	**0.68**	**139**	*i* P	**Pg**	**01 16 31.6**	**+0.1**
MANT				*i* S	**Sg**	**01 16 41.8**	**+1.3**
MANT	**Manisa**	**0.68**	**139**	*i* P	**Pg**	**01 16 31.6**	**+0.1**
MANT				*i* S	**Sg**	**01 16 41.8**	**+1.3**
DURS	**Dursunbey**	**0.70**	**32**	*i* P	**Pb**	**01 16 32.1**	**-0.1**
DURS				*i* S	**Sb**	**01 16 44.3**	**+2.6**
DURS	**Dursunbey**	**0.70**	**32**	*i* P	**Pb**	**01 16 32.1**	**-0.1**
DURS				*i* S	**Sb**	**01 16 44.3**	**+2.6**
KULA	**Kula-Manisa**	**0.72**	**133**	*e*PG	**Pg**	**01 16 32.1**	**-0.1**
KULA				*e*SG	**Sg**	**01 16 41.5**	**-0.2**
KULA	**Kula-Manisa**	**0.72**	**133**	*e*Pg	**Pg**	**01 16 32.1**	**-0.1**
KULA				*e*Sg	**Sg**	**01 16 41.5**	**-0.2**
DST	**Dursunbey**	**0.78**	**39**	*e*PG	**Pg**	**01 16 33.5**	**+0.1**
DST	**Dursunbey**	**0.78**	**39**	*e*Pg	**Pg**	**01 16 33.5**	**+0.1**
BALY	**Balya**	**0.79**	**339**	*i* P	**Pb**	**01 16 33.6**	**0.0**
BALY				*i* S	**Sb**	**01 16 44.6**	**+0.4**
BALY	**Balya**	**0.79**	**339**	*i* P	**Pb**	**01 16 33.7**	**+0.1**
BALY				*i* S	**Sb**	**01 16 44.6**	**+0.5**
IZM	**Izmir**	**0.83**	**224**	*e*PG	**Pg**	**01 16 33.0**	**-1.3**
IZM				*e*SG	**Sg**	**01 16 46.8**	**+1.5**
BLCB	**Balcova**	**0.96**	**231**	*e*PG	**Pg**	**01 16 36.5**	**-0.4**
BLCB	**Balcova**	**0.96**	**231**	*e*Pg	**Pg**	**01 16 36.5**	**-0.4**
AYVA	**Ayvalik**	**1.06**	**287**	*i* P	**Pb**	**01 16 38.6**	**+0.5**
AYVA				*i* S	**Sb**	**01 16 55.2**	**+3.4**
AYVA	**Ayvalik**	**1.06**	**287**	*i* P	**Pb**	**01 16 38.6**	**+0.4**
AYVA				*i* S	**Sb**	**01 16 55.2**	**+3.5**
KCT	**Karacabey**	**1.29**	**13**	*e*PN	**Pn**	**01 16 41.6**	**-0.1**
KCT	**Karacabey**	**1.29**	**13**	*e*Pn	**Pn**	**01 16 41.6**	**-0.1**
BNT	**Bandirma**	**1.35**	**358**	*e*PN	**Pn**	**01 16 41.8**	**-0.7**
BNT	**Bandirma**	**1.35**	**358**	*e*Pn	**Pn**	**01 16 41.8**	**-0.7**
EZN	**Ezine**	**1.53**	**303**	*e*PN	**Pn**	**01 16 45.0**	**0.0**
EZN	**Ezine**	**1.53**	**303**	*e*Pn	**Pn**	**01 16 45.0**	**+0.1**
ARMT	**Armutlu**	**1.70**	**23**	*e*PN	**Pn**	**01 16 46.4**	**-0.8**
ARMT	**Armutlu**	**1.70**	**23**	*e*Pn	**Pn**	**01 16 46.4**	**-0.9**
RKY	**Sarkoy-Tekirda**	**1.79**	**340**	*e*PN	**Pn**	**01 16 48.5**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.79**	**340**	*e*Pn	**Pn**	**01 16 48.5**	**-0.1**
GADA	**Gvkgeada**	**2.00**	**307**	*e*PN	**Pn**	**01 16 50.6**	**-0.9**
GADA	**Gvkgeada**	**2.00**	**307**	*e*Pn	**Pn**	**01 16 50.6**	**-0.9**

KRSC 17 01:35:43.0±0.3,**56.38N×161.47E,h20**km±15km,**ML3.8,**
Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMKR	**Semkarok**	**0.20**	**360**	*i* P	Pb	01 35 48.3	+0.1
SMKR				*i* S	Sb	01 35 52.2	+0.5
BDR	**Baidarnaya**	**0.24**	**322**	*i* P	Pb	01 35 49.3	+0.6
BDR				*i* S	Sb	01 35 53.7	+1.2
SRKR	**Sorokina**	**0.32**	**329**	*i* P	Pb	01 35 50.2	+0.2
SRKR				*i* S	Sb	01 35 54.8	0.0
KLY	**Klyuchi**	**0.46**	**262**	*i* P	Pb	01 35 50.7	-1.7
KLY				*i* S	Sb	01 35 56.4	-2.4
KRSR	**Krestovskiy**	**0.53**	**252**	*i* P	Pb	01 35 53.5	-0.1
KRSR				*i* S	Sb	01 36 00.9	+0.1
BZGR	**Bezymyannyi-Gr**	**0.62**	**225**	*i* P	Pb	01 35 55.6	+0.5
BZGR				*i* S	Sb	01 36 04.7	+1.4
KBTR	**Krutoberegovo**	**0.77**	**102**	*i* P	Pb	01 35 56.4	-1.3
KBTR				*i* S	Sb	01 36 05.9	-1.8
KPT	**Kopyto**	**0.81**	**240**	*i* P	Pb	01 35 58.3	-0.1
KPT				*i* S	Sb	01 36 09.3	+0.4
KMNR	**Kamenistaya**	**0.93**	**228**	*i* P	Pb	01 36 00.6	+0.2
KMNR				*i* S	Sb	01 36 13.4	+1.1
KOZ	**Kozyrevsk**	**0.95**	**251**	*i* P	Pb	01 36 01.1	+0.4
KOZ				*i* S	Sb	01 36 14.1	+1.3
SRDR	**Sredinnyy**	**0.98**	**267**	*i* P	Pb	01 36 01.1	-0.1
SRDR				*i* S	Sb	01 36 13.7	+0.1
MKZ	**Mys Kozlova**	**1.83**	**175**	P	Pn	01 36 13.3	0.0
MKZ				*i* S	Sn	01 36 35.2	-0.7
BKI	**Bering**	**2.80**	**113**	P	Pn	01 36 26.6	0.0
BKI				*i* S	Sn	01 36 58.9	-0.8
GNL	**Ganaly**	**3.37**	**218**	P	Pn	01 36 36.0	+1.6
NLC	**Nalytchevo**	**3.44**	**202**	P	Pn	01 36 37.7	+2.3
NLC				*i* S	Sn	01 37 18.2	+2.6
AVH	**Avacha**	**3.50**	**208**	P	Pn	01 36 38.6	+2.4
AVH				*i* S	Sn	01 37 19.4	+2.5

DDA ***17*** *02:24:51.5, 40.38N×27.88E, h7km±1km, Md2.8*
ISK ***17*** *02:24:51.2, 40.47N×27.93E, h5km, MD2.6*
ISCJB ***17*** *02:24:51.7±0.5, 40.44N±0.03×27.93E±0.03, h7km±4km, Error ellipse: s-maj=5.1km s-min=4.1km az=23.3*
CSEM ***17*** *02:24:52.0±0.1, 40.41N×27.92E, h8km, MD2.6, Error ellipse: s-maj=3.0km s-min=2.0km az=21.0*
ISC 17 02:24:52.2±0.5,**40.43N**±0.03×**27.93E**±0.03,**h9**km±7km,
n24, σ0°**84**/40,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNT	**Bandirma**	**0.07**	**185**	PG	**Pg**	**02 24 54.4**	**+0.1**
BNT				*e*SG	**Sg**	**02 24 56.3**	**+0.5**
BNT	**Bandirma**	**0.07**	**185**	*i* Pg	**Pg**	**02 24 54.4**	**+0.1**
BNT				*e*Sg	**Sg**	**02 24 56.3**	**+0.5**
KCT	**Karacabey**	**0.37**	**116**	*e*PG	**Pg**	**02 24 59.1**	**-0.2**
KCT	**Karacabey**	**0.37**	**116**	*e*Pg	**Pg**	**02 24 59.1**	**-0.2**
SART	**Tekirdag**	**0.63**	**295**	*i* P	**Pg**	**02 25 03.7**	**-0.6**
SART				*i* S	**Sg**	**02 25 12.8**	**+0.3**
SART	**Tekirdag**	**0.63**	**295**	*i* P	**Pg**	**02 25 03.7**	**-0.6**
SART				*i* S	**Sg**	**02 25 12.8**	**+0.3**
RKY	**Sarkoy-Tekirda**	**0.63**	**295**	*e*PG	**Pg**	**02 25 03.8**	**-0.5**
RKY				*e*SG	**Sg**	**02 25 12.2**	**-0.3**
RKY	**Sarkoy-Tekirda**	**0.63**	**295**	*e*Pg	**Pg**	**02 25 03.8**	**-0.5**
RKY				*e*Sg	**Sg**	**02 25 12.2**	**-0.3**
CRLT	**Corlu**	**0.72**	**348**	*e*PG	**Pg**	**02 25 04.6**	**-1.4**
CRLT	**Corlu**	**0.72**	**348**	*e*Pg	**Pg**	**02 25 04.6**	**-1.4**
ARMT	**Armutlu**	**0.72**	**79**	*e*PG	**Pg**	**02 25 05.8**	**-0.4**
ARMT				*e*SG	**Sg**	**02 25 16.1**	**+0.5**
ARMT	**Armutlu**	**0.72**	**79**	*e*Pg	**Pg**	**02 25 05.8**	**-0.4**
ARMT				*e*Sg	**Sg**	**02 25 16.1**	**+0.5**
BALY	**Balya**	**0.73**	**199**	*i* P	**Pg**	**02 25 04.7**	**-1.5**
BALY				*i* S	**Sg**	**02 25 18.0**	**+2.4**
BALY	**Balya**	**0.73**	**199**	*i* P	**Pg**	**02 25 04.7**	**-1.5**
BALY				*i* S	**Sg**	**02 25 18.0**	**+2.4**
ELBA	**Catalca**	**0.81**	**28**	*i*

IDC 17 02:55:25.4±1.5, 31°58′N×104°13′E, $h0^{km}$, mb3.5/5, mb1 3.6/6, mb1mx3.4/27, mbtmp3.5/6, Error ellipse: s-maj=47.1km s-min=24.1km az=48.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**16.33**	**5**	Pn	Pn	02 59 16.2	+0.2
	baz=204,slow=13,SNR=2.7						
KSRS	**Korea Array**	**20.44**	**67**	P	P	03 00 04.0	-0.3
	0.9nm,0.7s,baz=252,slow=10,SNR=3.8						
MKAR	**Makanchi Array**	**22.64**	**318**	P	P	03 00 28.0	+0.1
	0.5nm,0.7s,baz=119,slow=9.9,SNR=4.5						
ZALV	**Zalesovo Beam**	**26.31**	**334**	P	P	03 01 02.9	+0.3
	0.9nm,0.6s,baz=128,slow=9.6,SNR=4.1						
KURK	**Kurchatov**	**26.88**	**323**	P	P	03 01 07.3	-0.4
	0.2nm,0.4s,baz=130,slow=8.6,SNR=3.2						
WRA	**Warramunga Arr**	**58.85**	**146**	P	P	03 05 26.0	0.0
	0.5nm,0.5s,baz=340,slow=7.6,SNR=4.5						

*IDC **17** 03:10:47.0±1.1, 4°94S×133°61E, $h0^{km}$, mb3.7/5, mb1 4.1/8, mb1mx4.0/14, mbtmp3.9/8, ML4.3/3, MS3.9/12, Ms1 3.9/12, ms1mx3.5/27, Error ellipse: s-maj=62.2km s-min=22.0km az=69.0*

*NEIC **17** 03:10:52.0±0.8, 4°99S×133°74E, $h35^{km}$, mb4.0/1, Error ellipse: s-maj=28.5km s-min=11.3km az=79.0*

*ISCJB **17** 03:10:52.8±0.9, 5°09S±0°04×133°91E±0°07, $h70^{km}\pm10^{km}$, mb3.8/8, Error ellipse: s-maj=12.1km s-min=6.1km az=167.9*

*DJA **17** 03:10:56, 4°95S×133°78E, $h55^{km}$, mb4.8/7*

ISC 17 03:10:54.1±0.8, 5°17S±0°04×133°91E±0°07, $h69^{km}\pm9^{km}$, n48, σ1°33/44, mb3.8/8, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**1.25**	**248**	P	Pn	03 11 18.0	+2.2
SWI	**Sorong**	**5.03**	**328**	P	Pn	03 12 06.1	-1.0
SMPI	**Sarmi**	**5.74**	**57**	P	Pn	03 12 16.4	-0.4
AAI	**Ambon**	**5.88**	**284**	P	Pn	03 12 16.3	-2.4
	0.4nm87nm,0.5s						
NLAI	**Namlea**	**7.06**	**286**	P	Pn	03 12 34.8	0.0
	0.2nm974nm56nm,0.9s						
KAKA	**Kakadu**	**7.63**	**191**	*e*P	Pn	03 12 45.8	+3.2
	15nm,0.3s						
KAKA	**Kakadu**	**7.63**	**191**	*e*Pn	Pn	03 12 45.4	+2.7
	258nm,0.9s						
KAKA				*e*S	Sn	03 14 12.4	+4.8
KAKA	**Kakadu**	**7.63**	**191**	P	Pn	03 12 47.2	+4.6
	0.7nm1μm71nm,0.6s						
LBMI	**Labuha**	**7.82**	**305**	P	Pn	03 12 44.1	-1.2
	0.3nm1μm74nm,1.1s						
KDI	**Kendari**	**11.32**	**276**	P	Pn	03 13 34.5	+1.5
	16nm,1.1s						
KNA	**Kununurra**	**11.66**	**205**	P	Pn	03 13 39.1	+1.4
COEN	**Coen**	**12.63**	**134**	*e*Pn	Pn	03 13 46.9	-4.1
	162nm,1.0s						
COEN				*e*S	Sn	03 16 05.4	-4.5
COEN	**Coen**	**12.63**	**134**	P	Pn	03 13 55.5	+4.6
	78nm,1.0s						
APSI	**Ampana**	**12.95**	**289**	P	Pn	03 13 55.3	0.0
MRSI	**Marisa**	**13.20**	**295**	P	Pn	03 13 59.5	+0.7
TTSI	**Tana Toraja**	**14.21**	**278**	P	Pn	03 14 21.1	+9.1
WRAB	**Tennant Creek**	**14.68**	**178**	*e*Pn	Pn	03 14 17.7	-0.3
	14nm,0.8s						
WRAB				*e*S	Sn	03 16 49.1	-11
WRAB	**Tennant Creek**	**14.68**	**178**	P	Pn	03 14 25.0	+6.9
WRA	**Warramunga Arr**	**14.69**	**178**	Pn	Pn	03 14 16.0	-2.2
	0.8nm,0.3s,baz=355,slow=13,SNR=42						
WRA				Sn	Sn	03 16 59.8	0.0
	1.0nm,0.3s,baz=359,slow=23,SNR=4.6						
WRA				Lg		03 18 39.0	
	0.2nm,0.3s,baz=3.9,slow=30,SNR=3.4						
WRA				LR	LR	03 20 38.3	
	comp=Z,805nm,18.6s,baz=5.0,slow=40						
WRA	**Warramunga Arr**	**14.69**	**178**	Pn	Pn	03 14 16.0	-2.2
WRA				Sn	Sn	03 16 59.8	0.0
FITZ	**Fitzroy Crossi**	**15.18**	**211**	*e*P	Pn	03 14 24.0	-0.6
	19nm,1.0s						
FITZ				*e*S	S	03 17 05.8	-19
FITZ	**Fitzroy Crossi**	**15.18**	**211**	Pn	Pn	03 14 23.7	-0.9
	1.1nm,0.3s,baz=41,slow=11,SNR=42						
FITZ				Sn	Sn	03 17 09.3	-2.6
	2.0nm,0.3s,baz=353,slow=12,SNR=6.6						
FITZ	**Fitzroy Crossi**	**15.18**	**211**	*e*Pn	Pn	03 14 24.1	-0.5
	4.3nm,0.5s						
FITZ				*e*S	S	03 17 05.4	-19
FITZ	**Fitzroy Crossi**	**15.18**	**211**	P	Pn	03 14 27.2	+2.6
ASAR	**Alice Springs**	**18.39**	**180**	P	Pn	03 15 05.4	+1.1
	2.1nm,0.3s,baz=5.4,slow=10,SNR=29						
ASAR				S	S	03 18 26.2	-3.7
	baz=359,slow=27,SNR=3.2						
ASAR				Lg		03 20 24.3	
	1.0nm,0.3s,baz=2.0,slow=29,SNR=9.9						
CTA	**Charters Tower**	**19.08**	**142**	*e*P	Pn	03 15 15.4	+2.7
	10nm,0.6s						
CTA	**Charters Tower**	**19.08**	**142**	P	Pn	03 15 15.2	+2.5
	0.3nm,0.3s,baz=322,slow=11,SNR=5.9						
CTA				Lg		03 20 50.2	
	0.3nm,0.3s,baz=253,slow=19,SNR=3.9						
STKA	**Stephens Creek**	**27.52**	**166**	P	P	03 16 41.3	+7.0
	2.4nm,0.9s,mb3.7,baz=338,slow=11,SNR=1.8						
STKA				LR	LR	03 28 27.0	
	comp=Z,617nm,18.4s,baz=164,slow=38						
CBIJ	**Chichi jima**	**33.06**	**14**	LR	LR	03 28 57.1	
	comp=Z,160nm,19.5s,baz=271,slow=33						
DZM	**Mont Dzumac**	**35.68**	**121**	*e*LR	LR	03 27 25.7	
	370nm,24.8s						
PSI	**Prapat**	**35.83**	**282**	LR	LR	03 33 59.4	
	comp=Z,252nm,19.5s,baz=302,slow=39						
MJAR	**Matsushiro Arr**	**41.69**	**5**	LR	LR	03 34 31.5	
	comp=Z,183nm,18.4s,baz=155,slow=34						
CMAR	**Chiang Mai Arr**	**41.71**	**305**	P	P	03 18 37.4	+0.9
	0.5nm,0.3s,mb3.7,baz=127,slow=6.9,SNR=3.8						
KSRS	**Korea Array**	**42.77**	**353**	LR	LR	03 34 50.2	
	comp=Z,80nm,19.2s,baz=170,slow=34						
AFI	**Afiamalu**	**54.16**	**103**	LR	LR	03 41 22.9	
	comp=Z,82nm,21.1s,baz=267,slow=34						
GTA	**Gaotai**	**54.38**	**328**	*e*P	P	03 20 18.1	+4.1
GTA				pP	pP	03 20 22.5	-9.2
GTA				sP	sP	03 20 25.8	-14
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.1						
SONM	**Songino Array**	**58.06**	**338**	P	P	03 20 39.1	-1.0
	comp=Z,0.4nm,0.5s,mb3.7,baz=140,slow=7.4,SNR=2.7						
SONM				LR	LR	03 47 49.8	
	comp=Z,111nm,19.1s,baz=129,slow=38						
FX1	**Attu Island--F**	**66.66**	**25**	LR	LR	03 48 45.0	
	comp=Z,154nm,20.4s,baz=44,slow=34						
MKAR	**Makanchi Array**	**68.91**	**325**	P	P	03 21 52.3	+0.7
	comp=Z,0.8nm,0.5s,mb3.8,baz=138,slow=5.8,SNR=5.0						
ZALV	**Zalesovo Beam**	**71.74**	**332**	P	P	03 22 08.3	-0.5
	comp=Z,0.3nm,0.3s,mb3.6,baz=118,slow=5.2,SNR=2.3						
KURK	**Kurchatov**	**73.06**	**327**	P	P	03 22 17.0	+0.3
	comp=Z,0.9nm,0.4s,mb3.9,baz=123,slow=4.8,SNR=3.3						
PPT	**Papeete**	**75.62**	**107**	*e*LR	LR	03 45 54.2	
	comp=Z,91nm,24.8s						
PPT	**Papeete**	**75.62**	**107**	LR	LR	03 53 29.2	
	comp=Z,9.1nm,19.1s,baz=283,slow=34						
MAW	**Mawson**	**78.07**	**202**	LR	LR	03 54 31.9	
	comp=Z,273nm,20.6s,baz=222,slow=34						
BVAR	**Borovoye Array**	**78.64**	**327**	P	P	03 22 48.6	+0.1
	comp=Z,0.4nm,0.5s,mb3.5,baz=108,slow=4.7,SNR=4.1						
TAOE	**Nuku Hiva Isla**	**85.22**	**98**	*e*LR	LR	03 50 30.8	
	comp=Z,134nm,27.2s						
INK	**Inuvik**	**95.73**	**22**	LR	LR	04 03 16.4	
	comp=Z,21nm,20.1s,baz=278,slow=33						
LPAZ	**La Paz**	**149.50**	**135**	PKPbc	PKPbc	03 30 41.3	+4.8
	comp=Z,2.0nm,0.8s,baz=201,slow=14,SNR=3.6						

*CSEM **17** 03:23:02.9±0.3, 38°04N×21°55E, $h30^{km}$, MD3.0, Error ellipse: s-maj=9.2km s-min=7.2km az=143.0*

*ATH **17** 03:23:03.1, 38°04N×21°53E, $h23^{km}\pm1^{km}$, MD3.0/4*

*ISCJB **17** 03:23:03.4±0.8, 38°04N±0°08×21°54E±0°05, $h28^{km}\pm8^{km}$, Error ellipse: s-maj=13.2km s-min=6.8km az=175.7*

*THE **17** 03:23:04.2, 38°05N×21°58E, $h17^{km}\pm1^{km}$, ML2.7/4, Error ellipse: s-maj=2.5km s-min=0.5km az=4.0*

ISC 17 03:23:03.4±0.8, 38°04N±0°08×21°54E±0°05, $h27^{km}\pm8^{km}$, n15, σ0°52/26, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.07**	**289**	*e*PB	Pb	03 23 07.3	-0.8
RLS	**Riolos of Patr**	**0.07**	**289**	*e*Pb	Pb	03 23 07.3	-0.8
LAKA	**Lakka**	**0.40**	**59**	P	Pb	03 23 11.8	-0.3
LAKA				S	Sb	03 23 17.5	-0.5
LAKA	**Lakka**	**0.40**	**59**	P	Pb	03 23 11.8	-0.3
LAKA				S	Sb	03 23 17.5	-0.5
EFP	**Efpalio**	**0.48**	**36**	P	Pb	03 23 13.3	-0.1
EFP				S	Sb	03 23 20.4	+0.2
EFP	**Efpalio**	**0.48**	**36**	*e*PB	Pb	03 23 13.1	-0.3
EFP				*e*SB	Sb	03 23 20.7	+0.5
EFP	**Efpalio**	**0.48**	**36**	P	Pb	03 23 13.3	-0.1
EFP				S	Sb	03 23 20.4	+0.2
EFP				*e*Sb	Sb	03 23 20.7	+0.5
KALE	**Kalithea**	**0.59**	**53**	P	Pb	03 23 15.0	-0.2
KALE				S	Sb	03 23 23.6	+0.4
KALE	**Kalithea**	**0.59**	**53**	P	Pb	03 23 15.0	-0.2
KALE				S	Sb	03 23 23.6	+0.4
KFL	**Anninata**	**0.60**	**277**	P	Pb	03 23 16.4	+1.0
GUR	**Goura**	**0.64**	**99**	P	Pb	03 23 16.0	0.0
GUR				S	Sb	03 23 25.4	+0.8
GUR	**Goura**	**0.64**	**99**	*e*PN	Pb	03 23 16.0	0.0
GUR				*e*SN	Sn	03 23 25.5	-0.4
GUR	**Goura**	**0.64**	**99**	P	Pb	03 23 16.0	0.0
GUR				*e*Sn	Sn	03 23 25.5	-0.4
VLS	**Valsamata**	**0.77**	**281**	*e*PN	Pn	03 23 18.2	-0.2
VLS	**Valsamata**	**0.77**	**281**	*e*Pn	Pn	03 23 18.2	-0.2

*DDA **17** 03:23:34.9, 35°26N×26°97E, $h7^{km}$, Md3.8*

*IDC **17** 03:23:38.3±0.9, 35°53N×27°37E, $h0^{km}$, mb3.9/8, mb1 3.9/15, mb1mx3.8/30, mbtmp3.8/15, ML3.5/6, Error ellipse: s-maj=18.4km s-min=12.6km az=176.0*

*ISCJB **17** 03:23:39.5±0.5, 35°39N±0°02×27°32E±0°02, $h18^{km}\pm4^{km}$, mb3.8/11, Error ellipse: s-maj=3.3km s-min=2.8km az=166.4*

*ISK **17** 03:23:39.0, 35°52N×27°06E, $h10^{km}$, ML3.6*

*MOS **17** 03:23:40.1±1.3, 35°36N×27°38E, $h33^{km}$, mb4.0/9, Error ellipse: s-maj=9.4km s-min=6.7km az=101.2*

*NEIC **17** 03:23:40.8, 35°59N×27°23E, $h19^{km}$, mb3.8/4, ML3.8(ATH), After ATH.*

*ATH **17** 03:23:40.7, 35°58N×27°23E, $h20^{km}\pm1^{km}$, MD4.0/13, ML3.8*

*CSEM **17** 03:23:40.7±0.1, 35°43N×27°32E, $h15^{km}$, mb3.8/6, Error ellipse: s-maj=3.9km s-min=3.3km az=174.0*

*HLW **17** 03:23:41.6, 35°52N×27°49E, $h33^{km}\pm29^{km}$, Md3.6, MI3.4*

*THE **17** 03:23:44.0, 35°59N×27°31E, $h22^{km}\pm1^{km}$, ML4.5/1, Error ellipse: s-maj=2.0km s-min=0.4km az=156.0*

ISC 17 03:23:40.1±0.5, 35°43N±0°02×27°28E±0°02, $h8^{km}\pm3^{km}$, n269, σ1°23/322, mb3.8/11, 2C, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.15**	**321**	*e*Pb	Pg	03 23 44.2	+0.8
KARP				*e*Sb	Sg	03 23 46.8	+1.2
KARP	**Karpathos**	**0.15**	**321**	*e*PB	Pg	03 23 44.2	+0.8
KARP				*e*SB	Sg	03 23 46.8	+1.2
KARP	**Karpathos**	**0.15**	**321**	*e*Pb	Pg	03 23 44.2	+0.8
KARP				*e*Sb	Sg	03 23 46.8	+1.2
ZKR	**Zakros**	**0.92**	**250**	*e*Pb	Pb	03 23 58.1	-0.3
ZKR				*e*Sn	Sn	03 24 12.5	-0.3
ZKR	**Zakros**	**0.92**	**250**	*e*PB	Pb	03 23 58.1	-0.3
ZKR				*e*SN	Sn	03 24 12.5	-0.3
ZKR	**Zakros**	**0.92**	**250**	*e*Pb	Pb	03 23 58.1	-0.3
ZKR				*e*Sn	Sn	03 24 12.5	-0.3
ARG	**Arkhangelos**	**1.04**	**41**	P	Pg	03 23 59.8	-0.4
ARG				S	Sg	03 24 12.8	-1.0
ARG	**Arkhangelos**	**1.04**	**41**	P	Pg	03 23 59.8	-0.4
ARG				S	Sg	03 24 12.8	-1.0
ARG	**Arkhangelos**	**1.04**	**41**	*e*PN	Pg	03 23 59.7	-0.5
ARG				*e*SN	Sg	03 24 12.5	-1.3
ARG	**Arkhangelos**	**1.04**	**41**	P	Pg	03 23 59.8	-0.4
ARG				*e*Sn	Sg	03 24 12.5	-1.3
ARG				S	Sg	03 24 12.8	-1.0
NIS1	**Nisyros Isl.**	**1.17**	**356**	P	Pb	03 24 01.7	-1.0
NIS1				S	Sb	03 24 15.2	-2.8
NIS1	**Nisyros Isl.**	**1.17**	**356**	P	Pb	03 24 01.7	-1.0
NIS1				S	Sb	03 24 15.2	-2.8
DAT	**Datca**	**1.32**	**10**	*e*PN	Pn	03 24 04.1	-0.8
DAT				*e*SN	Sn	03 24 21.2	-1.3
DAT	**Datca**	**1.32**	**10**	*e*Pn	Pn	03 24 04.1	-0.7
DAT				*e*Sn	Sn	03 24 21.2	-1.4
NPS	**Neapolis**	**1.37**	**264**	*e*PN	Pn	03 24 06.4	+0.9
NPS	**Neapolis**	**1.37**	**264**	*e*Pn	Pn	03 24 06.4	+0.9
LAST	**Lasithi**	**1.50**	**260**	P	Pn	03 24 08.9	+1.7
LAST				S	Sn	03 24 28.3	+1.4
LAST	**Lasithi**	**1.50**	**260**	*e*PN	Pn	03 24 08.8	+1.6
LAST	**Lasithi**	**1.50**	**260**	*e*Pn	Pn	03 24 08.8	+1.6
LAST				S	Sn	03 24 28.3	+1.4
BDRM	**Kayabasi**	**1.64**	**5**	*i* P	Pn	03 24 08.3	-0.9
BDRM				*i* S	Sn	03 24 35.3	+4.8
BDRM	**Kayabasi**	**1.64**	**5**	*i* P	Pn	03 24 08.3	-0.9
THR1	**Thera Island**	**1.75**	**303**	P	Pn	03 24 11.0	+0.3
THR1				S	Sn	03 24 31.9	-1.3
THR1	**Thera Island**	**1.75**	**303**	P	Pn	03 24 11.0	+0.3
THR1				S	Sn	03 24 31.9	-1.3
THR6	**Thira Island,**	**1.79**	**302**	P	Pn	03 24 11.5	+0.3
THR6	**Thira Island,**	**1.79**	**302**	P	Pn	03 24 11.5	+0.3
THR6	**Thira Island,**	**1.79**	**302**	P	Pn	03 24 11.5	+0.3
TURN	**Turunc**	**1.80**	**36**	*i* P	Pn	03 24 07.7	-3.7
TURN				*i* S	Sn	03 24 27.9	-6.4
TURN	**Turunc**	**1.80**	**36**	*i* P	Pn	03 24 07.7	-3.7
THR2	**Thira island,**	**1.81**	**305**	P	Pn	03 24 11.6	+0.1
THR2	**Thira island,**	**1.81**	**305**	P	Pn	03 24 11.6	+0.1
THR3	**Thira Island,**	**1.81**	**303**	P	Pn	03 24 11.6	0.0
THR3	**Thira Island,**	**1.81**	**303**	P	Pn	03 24 11.6	0.0
THR3	**Thira Island,**	**1.81**	**303**	P	Pn	03 24 11.6	0.0
THR5	**Thira Island,**	**1.85**	**303**	P	Pn	03 24 12.3	+0.2
THR5	**Thira Island,**	**1.85**	**303**	P	Pn	03 24 12.3	+0.2
THR5	**Thira Island,**	**1.85**	**303**	P	Pn	03 24 12.3	+0.2
YER	**Yerkesik**	**1.89**	**25**	*e*PN	Pn	03 24 12.3	-0.3
YER	**Yerkesik**	**1.89**	**25**	*e*Pn	Pn	03 24 12.3	-0.3
MLSB	**Milas**	**1.91**	**12**	*e*PN	Pn	03 24 11.8	-1.0
MLSB				*e*SN	Sn	03 24 36.0	-1.0
MLSB	**Milas**	**1.91**	**12**	*e*Pn	Pn	03 24 11.8	-1.1
MLSB				*e*Sn	Sn	03 24 36.0	-1.0
IDI	**Anoyia**	**1.96**	**267**	Pn	Pn	03 24 14.0	+0.4
	33nm,0.3s,baz=65,slow=18,SNR=114						
IDI				Pg	Pg	03 24 16.7	-1.0
	59nm,0.3s,baz=98,slow=18,SNR=118						
IDI				Sn	Sn	03 24 40.9	+2.6
	89nm,0.3s,baz=111,slow=7.3,SNR=9.9						
IDI	**Anoyia**	**1.96**	**267**	*e*Pb	Pb	03 24 14.1	-1.9
IDI	**Anoyia**	**1.96**	**267**	*e*PB	Pb	03 24 14.1	-1.9
AKAS	**Kas**	**2.05**	**66**	*i* P	Pn	03 24 15.1	+0.2
AKAS				*i* S	Sn	03 24 43.3	+2.6
AKAS	**Kas**	**2.05**	**66**	*i* P	Pn	03 24 15.1	+0.2
AKAS				*i* S	Sn	03 24 43.3	+2.6
SIVA	**Sivas**	**2.06**	**259**	P	Pn	03 24 17.0	+2.0
SIVA	**Sivas**	**2.06**	**259**	P	Pn	03 24 17.0	+2.0
SIVA	**Sivas**	**2.06**	**259**	*e*PN	Pn	03 24 16.7	+1.7
SIVA	**Sivas**	**2.06**	**259**	*e*Pn	Pn	03 24 16.7	+1.7
SIVA	**Sivas**	**2.06**	**259**	P	Pn	03 24 17.0	+2.0
APE	**Apeiranthos**	**2.16**	**320**	P	Pn	03 24 16.1	-0.3
APE				S	Sn	03 24 40.9	-2.5
APE	**Apeiranthos**	**2.16**	**320**	P	Pn	03 24 16.1	-0.3
APE				S	Sn	03 24 40.9	-2.5
APE	**Apeiranthos**	**2.16**	**320**	*e*PN	Pn	03 24 15.9	-0.5
APE	**Apeiranthos**	**2.16**	**320**	P	Pn	03 24 16.1	-0.3
APE				S	Sn	03 24 40.9	-2.5
AYDN	**Tasoluk**	**2.28**	**12**	*i* P	Pn	03 24 18.1	+0.1
AYDN				*i* S	Sn	03 24 49.0	+2.8
AYDN	**Tasoluk**	**2.28**	**12**	*i* P	Pn	03 24 18.1	+0.1
SMG	**Samos**	**2.30**	**351**	*e*Pn	Pn	03 24 17.8	-0.5
SMG	**Samos**	**2.30**	**351**	*e*PN	Pn	03 24 17.8	-0.5
SMG	**Samos**	**2.30**	**351**	*e*Pn	Pn	03 24 17.8	-0.5
GLHS	**Glhisar (BURDU**	**2.49**	**45**	*e*PN	Pn	03 24 21.7	+0.9
GLHS	**Glhisar (BURDU**	**2.49**	**45**	*e*Pn	Pn	03 24 21.7	+0.8
ELL	**Elmali**	**2.50**	**58**	*e*PN	Pn	03 24 22.6	+1.5
ELL	**Elmali**	**2.50**	**58**	*e*Pn	Pn	03 24 22.6	+1.5
VAM	**Vamos**	**2.52**	**270**	*e*P	Pn	03 24 23.0	+1.7
VAM	**Vamos**	**2.52**	**270**	*e*PB	Pn	03 24 23.0	+1.7
GOLH	**Golhisar**	**2.58**	**45**	*i* P	Pn	03 24 24.4	+2.2
GOLH				*i* S	Sg	03 25 02.5	-0.5
GOLH	**Golhisar**	**2.58**	**45**	*i* P	Pn	03 24 24.4	+2.3
DNZL	**Cakiroluk**	**2.67**	**32**	*i* P	Pn	03 24 24.7	+1.3
DNZL				*i* S	Sg	03 25 05.9	+0.1
DNZL	**Cakiroluk**	**2.67**	**32**	*i* P	Pn	03 24 24.7	+1.4
GVD	**Gavdhos**	**2.68**	**258**	P	Pn	03 24 25.6	+2.1
GVD	**Gavdhos**	**2.68**	**258**	P	Pn	03 24 25.6	+2.1
GVD	**Gavdhos**	**2.68**	**258**	*e*PB	Pb	03 24 26.5	-1.8
GVD	**Gavdhos**	**2.68**	**258**	P	Pn	03 24 25.6	+2.1
DENT	**Denizli**	**2.72**	**31**	*e*PN	Pn	03 24 24.4	+0.3
DENT	**Denizli**	**2.72**	**31**	*e*Pn	Pn	03 24 24.4	+0.4
KARN	**Karanos**	**2.75**	**270**	P	Pn	03 24 26.1	+1.7
KARN	**Karanos**	**2.75**	**270**	*e*PN	Pn	03 24 25.3	+0.9
KARN	**Karanos**	**2.75**	**270**	*e*Pn	Pn	03 24 25.3	+0.9
KARN	**Karanos**	**2.75**	**270**	P	Pn	03 24 26.1	+1.7
KORT	**Korkueli**	**2.94**	**57**	*i* P	Pn	03 24 29.0	+2.0
KORT				*i* S	Sg	03 25 20.6	+6.1
KORT	**Korkueli**	**2.94**	**57**	*i* P	Pn	03 24 29.0	+1.9
BLCB	**Balcova**	**2.96**	**356**	*e*PN	Pn	03 24 26.3	-1.0
BLCB	**Balcova**	**2.96**	**356**	*e*Pn	Pn	03 24 26.3	-1.0
IZM	**Izmir**	**2.96**	**360**	*e*PN	Pn	03 24 26.3	-1.2
IZM	**Izmir**	**2.96**	**360**	*e*Pn	Pn	03 24 26.3	-1.1
ANTB	**Antalya**	**3.10**	**61**	*e*PN	Pn	03 24 31.1	+1.9
ANTB	**Antalya**	**3.10**	**61**	*e*Pn	Pn	03 24 31.2	+1.9
KULA	**Kula-Manisa**	**3.27**	**19**	*e*PN	Pn	03 24 30.9	-0.8
KULA	**Kula-Manisa**	**3.27**	**19**	*e*Pn	Pn	03 24 30.9	-0.8
BCK	**Bucak**	**3.35**	**52**	*e*PN	Pn	03 24 34.4	+1.7
BCK	**Bucak**	**3.35**	**52**	*e*Pn	Pn	03 24 34.4	+1.7
KHL	**Karahalli**	**3.40**	**31**	*e*PN	Pn	03 24 34.1	+0.7
KHL	**Karahalli**	**3.40**	**31**	*e*Pn	Pn	03 24 34.2	+0.7
AKHS	**Akhisar**	**3.47**	**7**	*i* P	Pn	03 24 34.9	+0.5
AKHS				*i* S	Sn	03 25 17.2	+1.6
AKHS	**Akhisar**	**3.47**	**7**	*i* P	Pn	03 24 34.9	+0.5
AKHS				*i* S	Sn	03 25 17.2	+1.6
AKS	**Akhisar**	**3.47**	**7**	*e*PN	Pn	03 24 33.9	-0.5
AKS	**Akhisar**	**3.47**	**7**	*e*Pn	Pn	03 24 33.9	-0.5
ISP	**Isparta**	**3.54**	**47**	*e*PN	Pn	03 24 37.6	+2.3
ISP	**Isparta**	**3.54**	**47**	*e*Pn	Pn	03 24 36.2	+1.0
ISP	**Isparta**	**3.54**	**47**	*e*Pn	Pn	03 24 36.2	+0.9
KYTH	**Kithira**	**3.55**	**285**	*e*PN	Pn	03 24 36.1	+0.6
KYTH	**Kithira**	**3.55**	**285**	*e*PN	Pn	03 24 36.1	+0.6
KYTH	**Kithira**	**3.55**	**285**	*e*Pn	Pn	03 24 36.1	+0.6
SUTC	**Sutluce-Ispart**	**3.63**	**55**	*e*PN	Pn	03 24 38.5	+1.9
SUTC	**Sutluce-Ispart**	**3.63**	**55**	*e*Pn	Pn	03 24 38.5	+1.9
VLI	**Veliai**	**3.75**	**291**	*e*Pn	Pn	03 24 38.8	+0.6
VLI	**Veliai**	**3.75**	**291**	*e*PN	Pn	03 24 38.8	+0.6
VLI	**Veliai**	**3.75**	**291**	*e*Pn	Pn	03 24 38.8	+0.6
ATH	**Athens Observa**	**3.83**	**313**	*e*P	Pn	03 24 39.8	+0.5
ATH	**Athens Observa**	**3.83**	**313**	*e*PN	Pn	03 24 39.8	+0.5
ATH	**Athens Observa**	**3.83**	**313**	*e*Pn	Pn	03 24 39.8	+0.5
NAIG	**Nisos Aigina**	**3.83**	**308**	*e*Pn	Pn	03 24 40.2	+0.8
NAIG	**Nisos Aigina**	**3.83**	**308**	*e*PN	Pn	03 24 40.2	+0.8
NAIG	**Nisos Aigina**	**3.83**	**308**	*e*Pn	Pn	03 24 40.2	+0.8
PRK	**Paraskevi**	**3.89**	**348**	*e*P	Pn	03 24 39.7	-0.5
PRK	**Paraskevi**	**3.89**	**348**	*e*PN	Pn	03 24 39.7	-0.5
PRK	**Paraskevi**	**3.89**	**348**	*e*Pn	Pn	03 24 39.7	-0.5
GDZ	**Gediz**	**4.05**	**25**	*i* P	Pn	03 24 42.7	+0.3
GDZ				*i* S	Sg	03 25 48.7	-1.6
GDZ	**Gediz**	**4.05**	**25**	*i* P	Pn	03 24 42.7	+0.3
SHUT	**Suhut-Afyon**	**4.07**	**39**	*e*PN	Pn	03 24 43.6	+1.0
SHUT	**Suhut-Afyon**	**4.07**	**39**	*e*Pn	Pn	03 24 43.6	+1.0
GAZI	**Gazipasa**	**4.17**	**77**	*i* P	Pn	03 24 43.5	-0.5
GAZI				*i* S	Sn	03 25 27.6	-5.3
GAZI	**Gazipasa**	**4.17**	**77**	*i* P	Pn	03 24 43.5	-0.5
GAZI				*i* S	Sn	03 25 27.6	-5.3
BALB	**Balikesir**	**4.23**	**6**	*e*PN	Pn

ASF Jabal al Asfar 8.64 109 Pn Pn 03 25 42.2 -3.1
comp=E,0.2nm,0.3s,baz=198,slow=20,SNR=3.9
ASF Sn **Sn 03 27 23.8 +0.8**
comp=E,0.3nm,0.3s,baz=270,slow=6.1,SNR=2.6
EIL Elat 8.65 129 Pn **Pn 03 25 44.3 -1.3**
comp=E,0.9nm,0.3s,baz=340,slow=14,SNR=11
EIL Sn **Sn 03 27 16.1 -7.2**
comp=E,1.7nm,0.3s,baz=331,slow=19,SNR=6.5
EIL Elat 8.65 129 Pn **Pn 03 25 44.3 -1.3**
HKAT Jabal Katrina 8.94 139 P **Pn 03 25 49.0 -0.4**
baz=139
HKAT Jabal Katrina 8.94 139 P **Pn 03 25 49.0 -0.5**
TIP Timpagrande 9.18 297 *e*Pn **Pn 03 25 52.7 -0.1**
comp=E,7.8nm,0.8s
TIP *e*S **Sn 03 27 29.6 -6.6**
TIP Timpagrande 9.18 297 *e*Pn **Pn 03 25 52.7 -0.1**
comp=E,7.8nm,0.8s
MLR Muntele Rosu 10.10 355 Pn **Pn 03 26 05.5 +0.1**
comp=E,0.1nm,0.3s,baz=153,slow=16,SNR=4.2
MLR Muntele Rosu 10.10 355 P **Pn 03 26 05.5 +0.1**
STON Ston 10.51 318 *e*Pn **Pn 03 26 09.3 -1.6**
STON Sn **Sn 03 28 03.5 -5.3**
STON Ston 10.51 318 *e*Pn **Pn 03 26 09.3 -1.7**
SOC Sochi 12.58 46 *e*P **Pn 03 26 39.4 +0.1**
SOC *e* 03 28 51.2
SOC MLR MLR
comp=Z,136nm,16.0s
SOC Sochi 12.58 46 *e*P **Pn 03 26 39.4 +0.1**
NVLJ Novalja 13.17 318 *e*Pn **Pn 03 26 44.7 -2.6**
NVLJ Sn **Sn 03 29 07.7 -6.1**
NVLJ Novalja 13.17 318 *e*Pn **Pn 03 26 44.7 -2.6**
KIV Kislovodsk 14.58 50 *e*P **Pn 03 27 04.4 -2.2**
KIV pmax pmax
comp=Z,6.0nm,1.1s
KIV MLR MLR
comp=Z,11nm,10.0s
KEST Kesra 14.60 276 Pn **Pn 03 27 07.2 +0.3**
comp=Z,0.0nm,0.3s,baz=162,slow=20,SNR=2.3
ZEI Tsey 14.83 55 *e*P **Pn 03 27 17.9 +8.0**
ZEI pmax pmax
comp=Z,4.0nm,0.4s
AKASG Malin Array Be 15.33 5 Pn **Pn 03 27 20.4 +3.7**
comp=Z,0.9nm,0.3s,baz=191,slow=10,SNR=7.8
AKASG Malin Array Be 15.33 5 P **Pn 03 27 20.4 +3.8**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKASG Malin Array Be 15.33 5 P **Pn 03 27 20.4 +3.8**
comp=Z,1.0nm,0.3s
PGF Pioggiola 15.88 302 *e*P **Pn 03 27 27.5 +3.7**
comp=Z,8.7nm,0.7s
PGF Pioggiola 15.88 302 *e*P **Pn 03 27 27.5 +3.7**
PGF pmax pmax
comp=Z,4.0nm,0.7s
PGF Pioggiola 15.88 302 *e*P **Pn 03 27 27.5 +3.7**
comp=Z,4.3nm,0.7s
PGF Pioggiola 15.88 302 *e*P **Pn 03 27 27.5 +3.7**
comp=Z,4.3nm,0.7s
GERES GERESS Array B 16.73 327 Pn **Pn 03 27 34.4 -0.3**
comp=Z,0.1nm,0.3s,baz=148,slow=11,SNR=6.5
GERES GERESS Array B 16.73 327 P **Pn 03 27 34.4 -0.3**
LPG La Plagne 18.53 309 *e*P **Pn 03 27 58.1 +1.1**
comp=Z,7.8nm,0.8s
LPG La Plagne 18.53 309 *e*P **Pn 03 27 58.1 +1.1**
LPG pmax pmax
comp=Z,4.0nm,0.8s
LPG La Plagne 18.53 309 *e*P **Pn 03 27 58.1 +1.1**
comp=Z,3.9nm,0.8s
LPG La Plagne 18.53 309 *e*P **Pn 03 27 58.1 +1.1**
comp=Z,3.9nm,0.8s
LPL La Plagne 18.55 309 *e*P **Pn 03 27 58.1 +0.8**
LPL La Plagne 18.55 309 *e*P **Pn 03 27 58.1 +0.8**
CLL Collm 18.91 331 *e*P **Pn 03 28 11.0 +9.4**
CLL Collm 18.91 331 *e*PP 03 28 11.0
CABF La Chapelle 19.44 312 *e*P **Pn 03 28 06.9 -1.1**
comp=Z,8.7nm,0.8s
CABF La Chapelle 19.44 312 *e*P **Pn 03 28 06.9 -1.1**
CABF pmax pmax
comp=Z,4.0nm,0.8s
CABF La Chapelle 19.44 312 *e*P **Pn 03 28 06.9 -1.1**
comp=Z,4.3nm,0.8s
CABF La Chapelle 19.44 312 *e*P **Pn 03 28 06.9 -1.1**
comp=Z,4.3nm,0.8s
OBN Obninsk 20.71 15 *i*P **P 03 28 19.2 -1.4**
OBN pmax pmax
comp=Z,13nm,0.9s
OBN Obninsk 20.71 15 *i*P **P 03 28 19.2 -1.4**
comp=Z,13nm,0.9s
SSF Saint Saulge 21.23 310 *e*P **P 03 28 24.1 -2.2**
comp=Z,12nm,1.0s,mb3.9
SSF Saint Saulge 21.23 310 *e*P **P 03 28 24.1 -2.2**
SSF pmax pmax
comp=Z,6.0nm,1.0s,mb3.9
SSF Saint Saulge 21.23 310 *e*P **P 03 28 24.1 -2.2**
comp=Z,6.1nm,1.0s,mb3.9
SSF Saint Saulge 21.23 310 *e*P **P 03 28 24.1 -2.2**
comp=Z,6.1nm,1.0s,mb3.9
VSU Vasula 23.05 359⇑ *e*P **P 03 28 45.3 -0.2**
VSU pmax pmax
comp=Z,14nm,1.5s,mb4.2
VSU MLR MLR
comp=Z,38nm,17.0s
VSU Vasula 23.05 359 *e*P **P 03 28 45.3 -0.2**
comp=Z,38nm,17.0s
LDF La Druitiere 24.09 312 *e*P **P 03 28 53.8 -2.1**
LDF La Druitiere 24.09 312 *e*P **P 03 28 53.8 -2.1**
FLN La Foliniere 24.37 312 *e*P **P 03 28 57.5 -1.0**
FLN La Foliniere 24.37 312 *e*P **P 03 28 57.5 -1.0**
GRR Gorron 24.46 311 *e*P **P 03 28 57.9 -1.4**
GRR Gorron 24.46 311 *e*P **P 03 28 57.9 -1.4**
ESDC Sonseca Array 25.06 289 P **P 03 29 04.7 -0.2**
comp=Z,1.4nm,0.5s,mb3.7,baz=82,slow=9.7,SNR=11
ESDC Sonseca Array 25.06 289 P **P 03 29 04.7 -0.1**
FINES FINESS Array B 26.05 359 P **P 03 29 10.5 -3.0**
comp=Z,0.6nm,0.4s,mb3.4,baz=159,slow=11,SNR=5.6
FINES FINESS Array B 26.05 359 P **P 03 29 10.5 -3.0**
FINES pmax pmax
comp=Z,1.0nm,0.4s
HFS Hagfors 26.24 345 P **P 03 29 14.5 -0.9**
comp=Z,0.6nm,0.4s,mb3.4,baz=163,slow=11,SNR=7.0
HFS Hagfors 26.24 345 P **P 03 29 14.5 -0.8**
HFS pmax pmax
comp=Z,1.0nm,0.4s
HFS Hagfors 26.24 345 P **P 03 29 14.5 -0.8**
comp=Z,1.0nm,0.4s,mb3.7
AKTK Aktyubinsk 26.80 46 P **P 03 29 19.8 -0.7**
AKTK Aktyubinsk 26.80 46 P **P 03 29 19.8 -0.7**
comp=Z,1.0nm,0.6s,mb3.5
AKTO Aktyubinsk 26.80 46 P **P 03 29 19.8 -0.7**
comp=Z,1.2nm,0.6s,mb3.6,baz=262,slow=8.3,SNR=4.9
AKTO Aktyubinsk 26.80 46 P **P 03 29 19.8 -0.7**
AKTO pmax pmax
comp=Z,1.0nm,0.6s,mb3.5
TORD Torodi Ar. Bea 32.01 233 P **P 03 30 07.0 0.0**
comp=Z,1.1nm,0.5s,mb4.0,baz=37,slow=7.5,SNR=21
ARCES ARCESS Array B 34.18 359 P **P 03 30 22.0 -3.4**
comp=Z,1.1nm,0.8s,mb3.9,baz=171,slow=8.6,SNR=5.0
ARCES ARCESS Array B 34.18 359 P **P 03 30 22.0 -3.4**
ARCES pmax pmax
comp=Z,1.0nm,0.8s
ZALV Zalesovo Beam 43.57 46 P **P 03 31 42.9 -1.4**
comp=Z,1.1nm,0.6s,mb3.8,baz=249,slow=8.4,SNR=3.9
ZALV Zalesovo Beam 43.57 46 P **P 03 31 42.9 -1.3**
ZALV pmax pmax
comp=Z,1.0nm,0.6s,mb3.7
SONM Songino Array 57.97 51 P **P 03 33 33.6 +0.7**
comp=Z,0.5nm,0.6s,mb3.7,baz=280,slow=9.5,SNR=3.4
SONM Songino Array 57.97 51 P **P 03 33 33.6 +0.7**
SONM pmax pmax
comp=Z,1.0nm,0.6s
SONM Songino Array 57.97 51 P **P 03 33 33.6 +0.7**
comp=Z,1.0nm,0.6s,mb4.0

THE ***17*** *03:41:32.8,35°.51N×27°.32E,h0km,ML4.1/1, Error ellipse: s-maj=1.4km s-min=0.4km az=163.0*
CSEM ***17*** *03:41:33.1±0.6,35°.51N×27°.33E,h10km,MD3.7, Error ellipse: s-maj=15.7km s-min=7.2km az=139.0*
ISCJB ***17*** *03:41:34.7±1.0,35°.71N±0°.05×27°.17E±0°.04,h3km±8km, Error ellipse: s-maj=9.7km s-min=5.3km az=158.0*
ATH ***17*** *03:41:35.8,35°.91N×27°.21E,h5km,MD3.7/6*
NEIC ***17*** *03:41:35.8,35°.91N×27°.21E,h5km,MD3.7(ATH), After ATH.*
ISC 17 03:41:36.3±0.8,35°.73N±0°.05×27°.19E±0°.05,h18km±6km, n39,σ1§23/48,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.18**	**187**	*e*Pb	**Pg**	**03 41 43.4**	**+2.4**
KARP	**Karpathos**	**0.18**	**187**	*e*PB	**Pg**	**03 41 43.4**	**+2.4**
KARP	**Karpathos**	**0.18**	**187**	*e*Pb	**Pg**	**03 41 43.4**	**+2.4**
NIS1	**Nisyros Isl.**	**0.87**	**360**	P	**Pb**	**03 41 53.6**	**+0.7**
NIS1				S	**Sb**	**03 42 09.9**	**+5.7**
NIS1	**Nisyros Isl.**	**0.87**	**360**	P	**Pb**	**03 41 53.6**	**+0.7**
NIS1				S	**Sb**	**03 42 09.9**	**+5.7**
ARG	**Arkhangelos**	**0.90**	**57**	*e*Pb	**Pg**	**03 41 51.3**	**-2.7**
ARG	**Arkhangelos**	**0.90**	**57**	P	**Pg**	**03 41 51.5**	**-2.5**
ARG				S	**Sg**	**03 42 06.4**	**+0.5**
ARG	**Arkhangelos**	**0.90**	**57**	*e*PB	**Pg**	**03 41 51.3**	**-2.7**
ARG	**Arkhangelos**	**0.90**	**57**	*e*Pb	**Pg**	**03 41 51.3**	**-2.7**
ARG				S	**Sg**	**03 42 06.4**	**+0.5**
NPS	**Neapolis**	**1.37**	**251**	*e*Pn	**Pn**	**03 42 01.7**	**+1.3**
NPS	**Neapolis**	**1.37**	**251**	*e*PN	**Pn**	**03 42 01.7**	**+1.3**
NPS	**Neapolis**	**1.37**	**251**	*e*Pn	**Pn**	**03 42 01.7**	**+1.3**
LAST	**Lasithi**	**1.50**	**248**	P	**Pn**	**03 42 00.2**	**-2.1**
LAST	**Lasithi**	**1.50**	**248**	P	**Pn**	**03 42 00.2**	**-2.1**
THR1	**Thera Island**	**1.54**	**295**	P	**Pn**	**03 42 02.8**	**0.0**
THR1				S	**Sg**	**03 42 26.4**	**+0.3**
THR1	**Thera Island**	**1.54**	**295**	P	**Pn**	**03 42 02.8**	**0.0**
THR1				S	**Sg**	**03 42 26.4**	**+0.3**
THR6	**Thira Island,**	**1.58**	**294**	P	**Pn**	**03 42 03.3**	**-0.1**
THR6	**Thira Island,**	**1.58**	**294**	P	**Pn**	**03 42 03.3**	**-0.1**
THR5	**Thira Island,**	**1.64**	**295**	P	**Pn**	**03 42 04.4**	**+0.2**
THR5	**Thira Island,**	**1.64**	**295**	P	**Pn**	**03 42 04.4**	**+0.2**
APE	**Apeiranthos**	**1.89**	**316**	*e*Pn	**Pn**	**03 42 09.2**	**+1.5**
APE	**Apeiranthos**	**1.89**	**316**	P	**Pn**	**03 42 08.2**	**+0.5**
APE				S	**Sg**	**03 42 36.1**	**-1.2**
APE	**Apeiranthos**	**1.89**	**316**	*e*PN	**Pn**	**03 42 09.2**	**+1.5**
APE	**Apeiranthos**	**1.89**	**316**	P	**Pn**	**03 42 08.2**	**+0.5**
APE	**Apeiranthos**	**1.89**	**316**	*e*Pn	**Pn**	**03 42 09.2**	**+1.5**
APE				S	**Sg**	**03 42 36.1**	**-1.2**
IDI	**Anoyia**	**1.93**	**258**	*e*Pn	**Pn**	**03 42 09.4**	**+1.3**
IDI				*e*S	**Sg**	**03 42 39.6**	**+1.2**
IDI	**Anoyia**	**1.93**	**258**	*e*PN	**Pg**	**03 42 13.3**	**0.0**
IDI	**Anoyia**	**1.93**	**258**	*e*Pn	**Pg**	**03 42 13.3**	**0.0**
SMG	**Samos**	**2.00**	**352**	*e*Pn	**Pn**	**03 42 10.6**	**+1.5**
SMG	**Samos**	**2.00**	**352**	*e*PN	**Pn**	**03 42 10.6**	**+1.5**
SMG	**Samos**	**2.00**	**352**	*e*Pn	**Pn**	**03 42 10.6**	**+1.5**
SIVA	**Sivas**	**2.07**	**251**	P	**Pn**	**03 42 08.2**	**-1.9**
SIVA	**Sivas**	**2.07**	**251**	P	**Pn**	**03 42 08.2**	**-1.9**
VAM	**Vamos**	**2.46**	**263**	*e*Pg	**Pg**	**03 42 22.2**	**-1.3**
VAM	**Vamos**	**2.46**	**263**	*e*PG	**Pg**	**03 42 22.2**	**-1.3**
VAM	**Vamos**	**2.46**	**263**	*e*Pg	**Pg**	**03 42 22.2**	**-1.3**
KARN	**Karanos**	**2.69**	**264**	P	**Pn**	**03 42 17.4**	**-1.2**
KARN	**Karanos**	**2.69**	**264**	P	**Pn**	**03 42 17.4**	**-1.2**
GVD	**Gavdhos**	**2.69**	**252**	*e*Pn	**Pb**	**03 42 24.0**	**+0.2**

NIED ***17*** *03:42:00,38°.80N×140°.80E,h5km,Mw3.8 Best double couple: Mo6.16000×1014 NP1:φs357.00000°,δ55.00000°, λ81.00000°. NP2:φs193.00000°,δ36.00000°,λ103.00000°.*
IDC ***17*** *03:42:51.1±0.6,38°.84N×140°.73E,h0km,mb4.0/20, mb1 4.2/21,mb1mx4.1/30,mbtmp4.1/21,ML3.4/2,MS2.9/1, Ms1 2.9/1,ms1mx2.1/34,Error ellipse: s-maj=17.4km s-min=13.2km az=103.0*
ISCJB ***17*** *03:42:52.5±0.4,38°.82N±0°.03×140°.82E±0°.04,h20km±3km, mb4.0/23,Error ellipse: s-maj=5.6km s-min=4.1km az=20.5*
NEIC ***17*** *03:42:52.7,38°.85N×140°.82E,h8km,mb4.5/4, MW3.8(NIED),After JMA.*
NEIC Recorded [2 JMA] in Miyagi and [1 JMA] in Iwate and Yamagata.
JMA ***17*** *03:42:52.7,38°.85N×140°.82E,h7km±1km,M3.9 Broadband fault plane solution: P waves. NP1: φs218.00000°,δ25.00000°,λ126.00000°. NP2: φs359.00000°,δ70.00000°,λ74.00000°. Principal axes: T Plg62.0000°, Azm245.0000°; N Plg15.0000°, Azm5.0000°; P Plg23.0000°, Azm101.0000°;*
JMA Felt II J1.
MOS ***17*** *03:42:54.3±0.9,38°.82N×140°.76E,h33km,mb4.3/17 Error ellipse: s-maj=14.1km s-min=9.3km az=85.4*
ISC 17 03:42:52.6±0.4,38°.83N±0°.02×140°.81E±0°.04,h9km±3km, n65,σ0§85/71,mb4.0/23,1C-4D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.34**	**68**	⇓P	**Pg**	**03 42 59.0**	**-0.3**
JMK				S	**Sg**	**03 43 03.8**	**-0.1**
JYK	**Kaneyama**	**0.37**	**285**	⇓P	**Pg**	**03 43 00.0**	**+0.2**
JYK				S	**Sg**	**03 43 05.0**	**+0.3**
JOU	**Okura**	**0.47**	**194**	⇑P	**Pg**	**03 43 02.3**	**+0.5**
JOU				S	**Sg**	**03 43 09.0**	**+0.9**
JIO	**Ouri**	**0.56**	**131**	⇓P	**Pg**	**03 43 03.1**	**-0.3**
JIO				S	**Sg**	**03 43 10.8**	**0.0**
JRG	**Rokugo**	**0.59**	**346**	P	**Pg**	**03 43 04.0**	**0.0**
JOM	**Ohasama**	**0.75**	**30**	⇓P	**Pg**	**03 43 06.3**	**-0.7**
JOM				S	**Sg**	**03 43 16.1**	**-0.6**
JMM	**Marumori**	**0.96**	**181**	S	**Sg**	**03 43 23.0**	**-0.5**
MAJO	**Matsushiro**	**3.08**	**223**	*e*P	**Pn**	**03 43 42.8**	**+1.4**
MAT	**Matsushiro**	**3.08**	**223**	P	**Pn**	**03 43 42.7**	**+1.3**
MAT				S	**Sn**	**03 44 28.0**	**+10**
MJAR	**Matsushiro Arr**	**3.08**	**223**	Pn	**Pn**	**03 43 42.3**	**+1.0**
	2.2nm,0.3s,baz=31,slow=13,SNR=19						
MJAR				Pg	**Pg**	**03 43 49.8**	**-1.7**
	6.3nm,0.3s,baz=26,slow=16,SNR=38						
MJAR				Lg		03 44 27.9	
	5.3nm,0.3s,baz=18,slow=24,SNR=6.7						
ERM	**Erimo**	**3.65**	**29**	*e*Pn	**Pn**	**03 43 51.6**	**+2.3**
ERM				*e*Sn	**Sn**	**03 44 33.0**	**+0.5**
ASAJ	**Asahikawa**	**5.45**	**14**	Pn	**Pn**	**03 44 16.9**	**+2.8**
	0.8nm,0.3s,baz=180,slow=17,SNR=4.1						
ASAJ	**Asahikawa**	**5.45**	**14**	P	**Pn**	**03 44 16.9**	**+2.9**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
JHJ	**Hachijo jima 2**	**5.75**	**189**	Pn	**Pn**	**03 44 19.2**	**+1.0**
	comp=Z,8.4nm,0.3s,baz=18,slow=20,SNR=3.6						
JHJ				Sn	**Sn**	**03 45 22.8**	**-1.6**
	comp=Z,7.6nm,0.3s,baz=73,slow=19,SNR=2.4						
KSRS	**Korea Array**	**10.25**	**266**	Pn	**Pn**	**03 45 23.4**	**+3.5**
	comp=Z,0.7nm,0.3s,baz=81,slow=14,SNR=23						
KSRS				LR	LR	03 48 52.7	
	comp=Z,61nm,18.2s,baz=170,slow=35						
KSRS	**Korea Array**	**10.25**	**266**	P	**Pn**	**03 45 23.4**	**+3.6**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,61nm,18.2s						
SONM	**Songino Array**	**26.42**	**301**	P	**P**	**03 48 29.2**	**-0.2**
	comp=Z,0.5nm,0.6s,mb3.2,baz=67,slow=11,SNR=3.5						
SONM	**Songino Array**	**26.42**	**301**	P	**P**	**03 48 29.2**	**-0.3**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZALV	**Zalesovo Beam**	**40.37**	**311**	P	**P**	**03 50 30.1**	**-0.4**
	comp=Z,2.8nm,0.7s,mb4.1,baz=93,slow=7.9,SNR=9.8						
ZALV	**Zalesovo Beam**	**40.37**	**311**	P	**P**	**03 50 30.1**	**-0.4**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
MKAR	**Makanchi Array**	**42.79**	**300**	P	**P**	**03 50 50.3**	**-0.1**
	comp=Z,0.6nm,0.6s,mb3.5,baz=82,slow=8.2,SNR=5.8						
MKAR	**Makanchi Array**	**42.79**	**300**	P	**P**	**03 50 50.3**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	**Kurchatov**	**44.47**	**307**	P	**P**	**03 51 04.2**	**+0.3**
	comp=Z,3.1nm,0.5s,mb4.3,baz=83,slow=8.5,SNR=17						
KURK	**Kurchatov**	**44.47**	**307**	*e*P	**P**	**03 51 03.5**	**-0.4**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.3						
KURK	**Kurchatov**	**44.47**	**307**	*e*P	**P**	**03 51 03.5**	**-0.4**
	comp=Z,4.5nm,0.6s,mb4.4						
BVAR	**Borovoye Array**	**49.03**	**311**	P	**P**	**03 51 38.6**	**-0.9**
	comp=Z,1.0nm,0.5s,mb4.1,baz=56,slow=8.9,SNR=8.0						
BVAR	**Borovoye Array**	**49.03**	**311**	P	**P**	**03 51 38.6**	**-0.9**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
INK	**Inuvik**	**53.02**	**28**	P	**P**	**03 52 09.4**	**+0.1**
	comp=Z,0.8nm,0.5s,mb3.9,baz=287,slow=4.7,SNR=6.3						
INK	**Inuvik**	**53.02**	**28**	P	**P**	**03 52 09.4**	**+0.1**
INK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARU	**Arti**	**54.71**	**318**	P	**P**	**03 52 21.6**	**-0.3**
ARU	**Arti**	**54.71**	**318**	*e*P	**P**	**03 52 21.8**	**-0.1**
	comp=Z,3.0nm,0.6s,mb4.5						
ABKAR	**Akbulak array**	**56.43**	**309**	*e*P	**P**	**03 52 34.1**	**-0.3**
	comp=Z,4.8nm,0.6s,mb4.7						
AKTK	**Aktyubinsk**	**57.14**	**311**	P	**P**	**03 52 38.2**	**-1.1**
AKTO	**Aktyubinsk**	**57.14**	**311**	P	**P**	**03 52 38.2**	**-1.1**
	comp=Z,2.8nm,0.6s,mb4.5,baz=61,slow=12,SNR=12						
AKTO	**Aktyubinsk**	**57.14**	**311**	P	**P**	**03 52 38.3**	**-1.0**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
WRAB	**Tennant Creek**	**58.76**	**187**	*e*P	**P**	**03 52 50.6**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
WRAB	**Tennant Creek**	**58.76**	**187**	*e*P	**P**	**03 52 50.6**	**-0.4**
	comp=Z,4.0nm,1.0s,mb4.4						
WRA	**Warramunga Arr**	**58.77**	**187**	P	**P**	**03 52 50.0**	**-1.0**
	comp=Z,2.0nm,0.6s,mb4.3,baz=4.3,slow=7.1,SNR=32						
WRA	**Warramunga Arr**	**58.77**	**187**	P	**P**	**03 52 50.0**	**-1.0**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ARCES	**ARCESS Array B**	**62.16**	**339**	P	**P**	**03 53 13.3**	**-0.3**
	comp=Z,3.4nm,1.1s,mb4.4,baz=58,slow=7.3,SNR=7.3						
ARCES	**ARCESS Array B**	**62.16**	**339**	P	**P**	**03 53 13.3**	**-0.3**
ARCES				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ASAR	**Alice Springs**	**62.50**	**187**	P	**P**	**03 53 16.4**	**0.0**
	comp=Z,1.1nm,0.7s,mb4.1,baz=8.0,slow=5.4,SNR=10						
ASAR	**Alice Springs**	**62.50**	**187**	P	**P**	**03 53 16.4**	**0.0**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**67.01**	**332**	P	**P**	**03 53 44.9**	**-0.5**
	comp=Z,2.2nm,0.7s,mb4.3,baz=45,slow=8.6,SNR=8.6						
FINES	**FINESS Array B**	**67.01**	**332**	P	**P**	**03 53 44.9**	**-0.6**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
HFS	**Hagfors**	**72.27**	**335**	P	**P**	**03 54 17.7**	**-0.2**
	comp=Z,1.0nm,0.4s,mb4.1,baz=28,slow=6.7,SNR=14						
HFS	**Hagfors**	**72.27**	**335**	P	**P**	**03 54 17.7**	**-0.2**
HFS				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NB2	**NORSAR Subarra**	**72.36**	**337**	P	**P**	**03 54 18.0**	**-0.4**
	comp=Z,0.9nm,0.6s,mb3.9,baz=39,slow=6.2						
NOA	**NORSAR Array B**	**72.36**	**337**	P	**P**	**03 54 18.1**	**-0.3**
	comp=Z,1.4nm,0.7s,mb4.0,baz=39,slow=6.0,SNR=9.9						
NOA	**NORSAR Array B**	**72.36**	**337**	P	**P**	**03 54 18.2**	**-0.2**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**72.60**	**322**	P	**P**	**03 54 19.6**	**-0.4**
	comp=Z,1.0nm,0.4s,mb4.1,baz=47,slow=5.6,SNR=8.9						
AKASG	**Malin Array Be**	**72.60**	**322**	P	**P**	**03 54 19.6**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NVAR	**Mina Array Bea**	**74.30**	**53**	P	**P**	**03 54 31.7**	**+1.4**
	comp=Z,0.4nm,0.4s,mb3.7,baz=272,slow=5.5,SNR=5.1						
PDAR	**Pinedale Array**	**76.75**	**45**	P	**P**	**03 54 44.9**	**+0.6**
	comp=Z,0.4nm,0.5s,mb3.6,baz=101,slow=0.9,SNR=4.1						
BRTR	**Keskin Array B**	**77.32**	**311**	P	**P**	**03 54 47.5**	**0.0**
	comp=Z,0.9nm,0.6s,mb3.9,baz=77,slow=5.6,SNR=5.9						
BRTR	**Keskin Array B**	**77.32**	**311**	P	**P**	**03 54 47.5**	**0.0**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MLR	**Muntele Rosu**	**77.72**	**319**	P	**P**	**03 54 49.4**	**-0.3**
	comp=Z,1.0nm,0.5s,mb4.0,baz=3.4,slow=17,SNR=3.6						
MLR	**Muntele Rosu**	**77.72**	**319**	P	**P**	**03 54 49.4**	**-0.3**
MLR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GERES	**GERESS Array B**	**80.94**	**328**	P	**P**	**03 55 07.0**	**-0.2**
	comp=Z,0.6nm,0.5s,mb3.8,baz=7.1,slow=5.4,SNR=6.4						
GERES	**GERESS Array B**	**80.94**	**328**	P	**P**	**03 55 07.0**	**-0.2**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TXAR	**Lajitas Array**	**89.40**	**52**	P	**P**	**03 55 50.7**	**+0.8**
	comp=Z,0.4nm,0.8s,mb3.8,baz=288,slow=2.7,SNR=6.4						
TXAR	**Lajitas Array**	**89.40**	**52**	P	**P**	**03 55 50.7**	**+0.8**
TORD	**Torodi Ar. Bea**	**115.73**	**315**	PKP	PKPdf	04 01 34.0	-1.9
	comp=Z,0.5nm,1.0s,baz=358,slow=1.9,SNR=4.6						
LPAZ	**La Paz**	**146.15**	**57**	PKPbc	PKPbc	04 02 34.3	+0.7
	comp=Z,1.6nm,0.7s,baz=318,slow=4.2,SNR=9.8						
LPAZ	**La Paz**	**146.15**	**57**	PKP2	PKPab	04 02 34.3	+0.1
LPAZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						

IDC ***17*** *03:46:33.5±1.1,31°.27N×103°.51E,h0km,mb3.5/7, mb1 3.7/8,mb1mx3.5/25,mbtmp3.6/8,ML3.6/1,Error ellipse: s-maj=42.7km s-min=19.1km az=53.0*
ISCJB ***17*** *03:46:34.3±0.9,31°.49N±0°.06×103°.6E±0°.1,h10km, mb3.5/6,Error ellipse: s-maj=13.1km s-min=9.1km az=176.4*
ISC 17 03:46:35.6±0.8,31°.37N±0°.06×103°.42E±0°.08,h10km,n11, σ1§17/14,mb3.5/7,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.72**	**4**	Pg	**Pg**	**03 48 04.0**	**-2.0**
LZH				Sg	**Sg**	**03 49 06.8**	**-0.3**
LZH				smax			
	comp=N,78nm,0.9s						
LZH				smax			
	comp=E,81nm,1.0s						
LZH				LR	LR		
	comp=N,440nm,7.4s						
LZH				LR	LR		
	comp=Z,480nm,9.6s						
XAN	**Xi'an**	**5.34**	**59**	Pn	**Pn**	**03 48 01.0**	**+5.6**
XAN				Pg	**Pg**	**03 48 18.0**	**0.0**
XAN				Sn	**Sn**	**03 48 58.8**	**+1.8**
XAN				Sg	**Sg**	**03 49 21.0**	**-6.2**
XAN				smax			
	comp=N,66nm,0.8s						
XAN				smax			
	comp=E,48nm,0.8s						
XAN				LR	LR		
	comp=N,220nm,9.4s						
XAN				LR	LR		
	comp=E,69nm,10.1s						
XAN				LR	LR		
	comp=Z,59nm,6.7s						
GTA	**Gaotai**	**8.54**	**341**	*e*P	Px	03 49 13.8	
GTA				pP		03 49 17.9	
GTA				sP		03 49 21.4	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
SONM	**Songino Array**	**16.60**	**7**	Pn	**Pn**	**03 50 27.9**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=194,slow=12,SNR=4.4						
KSRS	**Korea Array**	**21.08**	**67**	P	**P**	**03 51 19.2**	**-0.8**
	comp=Z,1.5nm,0.8s,mb3.4,baz=255,slow=9.2,SNR=4.7						
MKAR	**Makanchi Array**	**22.40**	**319**	P	**P**	**03 51 35.4**	**+1.3**
	comp=Z,0.6nm,0.8s

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     3.0nm,0.8s,mb4.4
QSPA South Pole Qui     64.20 180  P      P      04 29 13.6 -0.3
     2.7nm,0.9s,mb4.3,baz=283,slow=3.0,SNR=6.5
CTA  Charters Tower     68.62 103  LR     LR     04 56 54.7
     comp=Z,105nm,21.6s,MS4.0,baz=51,slow=34
GTA  Gaotai             70.33  23  eP     P      04 29 54.3 +1.0
GTA                                pP     pP     04 29 58.4 +1.9
GTA                                sP     sP     04 30 01.3 +3.6
GTA                                pmax   pmax
     comp=Z,3.0nm,1.4s,mb4.0
MKAR Makanchi Array     73.09   8  P      P      04 30 09.0 -0.6
     comp=Z,1.3nm,0.8s,mb3.9,baz=186,slow=4.4,SNR=6.3
MKAR Makanchi Array     73.09   8  P      P      04 30 09.0 -0.7
KURK Kurchatov          76.60   5  P      P      04 30 29.6 -0.3
     comp=Z,0.4nm,0.3s,mb3.9,baz=200,slow=6.1,SNR=4.1
SONM Songino Array      80.01  23  P      P      04 30 48.4 -0.4
     comp=Z,0.6nm,0.6s,mb3.7,baz=207,slow=4.8,SNR=5.1
ZALV Zalesovo Beam      80.43   8  P      P      04 30 50.0 -1.0
     comp=Z,0.5nm,0.4s,mb3.8,baz=205,slow=6.4,SNR=2.8
ZALV Zalesovo Beam      80.43   8  P      P      04 30 50.0 -1.0
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IDC 17 04:42:20.1±1.2, 15°.20S×173°.03W, h0km, mb4.2/4, mb1 4.3/4, mb1mx3.9/18, mbtmp4.2/4, MS3.7/3, Ms1 3.7/3, ms1mx3.2/23, Error ellipse: s-maj=49.9km s-min=22.9km az=134.0, Tonga Islands

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Code Station Name        Δ°   AZ°  Phase ID                Time     Res
                                   Op     ISC             h m s    ISC
AFI  Afiamalu           1.77  43  Pn     Pn     04 42 50.3 -1.6
     135nm,0.3s,baz=225,slow=8.6,SNR=77
AFI                                Sn     Sn     04 43 07.1 -8.0
     910nm,0.3s,baz=227,slow=18,SNR=38
URZ  Urewera           24.56 199  P      P      04 47 40.7 -1.0
     6.8nm,0.5s,baz=40,slow=12,SNR=2.9
WRA  Warramunga Arr    50.24 257  P      P      04 51 17.8 -0.6
     0.4nm,0.5s,baz=92,slow=6.8,SNR=9.8
ASAR Alice Springs     50.51 252  P      P      04 51 19.7 -0.8
     1.0nm,0.5s,baz=86,slow=8.7,SNR=13
TXAR Lajitas Array     80.20  56  LR     LR     05 21 41.5
     comp=Z,30nm,20.3s,baz=5.0,slow=29
CN2  Changchun         81.17 320  eP     P      04 54 37.3 -0.3
CN2                                pmax   pmax
     comp=Z,20nm,1.0s
MAW  Mawson            88.09 199  P      P      04 55 13.2 +0.9
     comp=Z,2.6nm,0.7s,baz=98,slow=7.1,SNR=5.8
ULM  Lac du Bonnet     93.55  39  LR     LR     05 30 37.3
     comp=Z,36nm,18.4s,baz=282,slow=31
ROSC El Rosal          99.64  88  LR     LR     05 34 59.9
     comp=Z,54nm,19.1s,baz=344,slow=32
GERES GERESS Array B  146.00 352  PKPbc  PKPbc  05 02 02.2 +0.4
     comp=Z,0.3nm,0.3s,baz=20,slow=3.1,SNR=3.7
BRTR Keskin Array B    146.23 321  PKPbc  PKPbc  05 02 03.9 +1.0
     comp=Z,1.0nm,0.8s,baz=52,slow=2.1,SNR=5.0
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NIED ***17*** *04:51:00, 33°.00N×136°.90E, h5km, Mw4.2 Best double couple: M0 1.92000×10^15 NP1:φs 132.00000°, δ60.00000°, λ73.00000°. NP2:φs 343.00000°, δ34.00000°, λ116.00000°.*
ISCJB ***17*** *04:51:07.8±0.9, 33°.04N±0°.03×136°.92E±0°.03, h15km±5km, mb4.3/37, Error ellipse: s-maj=5.4km s-min=4.2km az=168.3*
JMA ***17*** *04:51:08.8±0.2, 33°.02N×136°.91E, h35km, M4.1*
IDC ***17*** *04:51:10.9±0.6, 32°.95N×137°.04E, h28km±3km, mb4.0/19, mb1 4.2/23, mb1mx4.1/30, mbtmp4.0/23, ML3.6/4, Error ellipse: s-maj=15.1km s-min=12.2km az=62.0*
MOS ***17*** *04:51:10.2±1.1, 32°.99N×136°.88E, h33km, mb4.6/24, Error ellipse: s-maj=16.2km s-min=8.2km az=106.3*
NEIC ***17*** *04:51:12.0±0.3, 32°.98N×136°.96E, h35km, mb4.6/13, MW4.1(NIED), Error ellipse: s-maj=9.4km s-min=6.8km az=96.0*
SZGRF ***17*** *04:51:27.5, 34°.83N×134°.36E, h33km, mb4.6, Near south coast of western Honshu, Japan*

ISC 17 04:51:08.1±0.8, 33°.10N±0°.03×136°.88E±0°.03, h6km±4km, h31km±.5km: pP-P, n98, σ1§01/110, mb4.3/37, 7C-3D, Near south coast of western Honshu

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Code Station Name        Δ°   AZ°  Phase ID                Time     Res
                                   Op     ISC             h m s    ISC
TK01 Tokai 1            0.89  42  eS     Sg     04 51 37.4 +0.6
JWZ  Kozaga             1.07 294  ⇑P     Pg     04 51 28.4 -0.2
JWZ                                eS     Sg     04 51 42.0 -0.4
TK02 Tokai 2            1.12  41  ⇓P     Pg     04 51 28.7 -0.9
TK02                               S      Sg     04 51 43.6 -0.5
JKN2 Miekihoku          1.24 336  ⇑P     Pg     04 51 31.7 -0.3
JKN2                               S      Sg     04 51 47.6 -0.5
JIE  Ise                1.29 354  ⇑P     Pn     04 51 32.7 -0.1
JIE                                eS     Sg     04 51 50.2 +0.4
JWM  Minabe             1.48 301  ⇑P     Pn     04 51 34.7 -0.6
JWM                                eS     Sn     04 51 52.8 -2.2
TK04 Tokai 4            1.52  33  ⇓P     Pn     04 51 34.9 -1.1
TK04                               eS     Sn     04 51 54.0 -2.1
JWY  Kouya              1.55 316  ⇑P     Pn     04 51 36.7 +0.4
JWY                                eS     Sn     04 51 55.9 -0.8
TSUJ Tsu 2              1.65 347  P      Pn     04 51 37.8 +0.1
TSUJ                               S      Sn     04 51 58.4 -0.8
JHE  Heguri             1.84 328  ⇑P     Pn     04 51 40.6 +0.3
JHE                                eS     Sn     04 52 03.1 -0.8
JAJ2 Tsuna              2.12 309  ⇑P     Pn     04 51 44.5 +0.4
JAJ2                               eS     Sn     04 52 10.1 -0.7
JAI  Aioi               2.14 289  ⇓P     Pn     04 51 44.0 -0.5
JAI                                eS     Sn     04 52 09.1 -2.3
SHZ3 Shizuoka 3         2.25  29  P      Pn     04 51 44.9 -1.0
SHZ3                               eS     Sn     04 52 12.4 -1.6
JHJ  Hachijo jima 2     2.44  89  Pn     Pn     04 51 45.7 -2.8
     65nm,0.3s,baz=225,slow=9.4,SNR=13
JHJ                                Sn     Sn     04 52 14.0 -4.7
     55nm,0.3s,baz=249,slow=21,SNR=8.1
MAJO Matsushiro         3.60  17  eP     Pn     04 52 05.7 +1.2
MAJO                               eS     Sn     04 52 47.0 -0.4
MAT  Matsushiro         3.60  17  P      Pn     04 52 05.4 +0.9
MAT                                S      Sn     04 52 47.5 +0.1
MJAR Matsushiro Arr     3.60  17  Pn     Pn     04 52 05.4 +0.9
     15nm,0.3s,baz=206,slow=16,SNR=31
MJAR                               Sn     Sn     04 52 48.5 +1.2
     28nm,0.3s,baz=202,slow=22,SNR=17
MJAR Matsushiro Arr     3.60  17  P      Pn     04 52 05.4 +0.9
MJAR                                              04 52 48.5
MJAR                               pmax   pmax
     comp=Z,15nm,0.3s
MJAR                               smax
     comp=N,28nm,0.3s
CBIJ Chichi jima        7.54 141  Pn     Pn     04 52 54.4 -4.3
     comp=N,2.1nm,0.3s,baz=285,slow=20,SNR=3.1
KSRS Korea Array        8.51 303  Pn     Pn     04 53 13.6 +1.6
     comp=N,0.4nm,0.3s,baz=120,slow=14,SNR=4.6
KLR  Kul'dur           16.56 348  eP     Pn     04 55 02.2 +1.3
KLR                                MLR    MLR
     comp=Z,600nm,13.0s
XAN  Xi'an             23.29 280  P      P      04 56 18.3 +1.5
XAN                                pP            04 56 26.8
XAN                                pmax   pmax
     comp=Z,4.0nm,0.7s,mb4.0
ULN  Ulaanbaatar       26.85 312  eP     P      04 56 49.2 -0.2
ULN                                pmax   pmax
     comp=Z,8.0nm,1.1s,mb4.2
ULN  Ulaanbaatar       26.85 312  eP     P      04 56 49.2 -0.2
     comp=Z,7.9nm,1.1s,mb4.2
SONM Songino Array     27.25 312  P      P      04 56 54.0 +1.0
     comp=Z,2.6nm,0.8s,mb3.8,baz=127,slow=6.7,SNR=12
SONM                               pP     pP     04 57 03.2 +8.4
     comp=Z,3.9nm,0.8s,baz=118,slow=9.4,SNR=11
SONM                               PcP    PcP    05 00 11.9 -0.9
     comp=Z,0.6nm,0.6s,baz=116,slow=3.4,SNR=3.7
SONM Songino Array     27.25 312  P      P      04 56 54.0 +1.0
SONM                               *PP    pP     04 57 03.2 +8.5
SONM                                              05 00 11.9
SONM                               pmax   pmax
     comp=Z,3.0nm,0.8s
ZAK  Zakamensk         30.10 315  eP     P      04 57 20.7 +2.4
ZAK                                e             04 58 33.2
ZAK                                pmax   pmax
     comp=Z,1.0nm,1.4s,mb3.4
CMAR Chiang Mai Arr    36.92 256  P      P      04 58 18.6 +0.5
     comp=Z,1.0nm,0.5s,mb3.9,baz=51,slow=8.1,SNR=3.1
CMAR Chiang Mai Arr    36.92 256  P      P      04 58 18.6 +0.5
CMAR                               pmax   pmax
     comp=Z,1.0nm,0.5s
TIXI Tiksi             38.85 356  eP     P      04 58 32.7 -1.0
TIXI                               pmax   pmax
     comp=Z,5.0nm,0.8s,mb4.3
TIXI Tiksi             38.85 356  eP     P      04 58 32.7 -0.9
     comp=Z,4.7nm,0.8s,mb4.3
ZALV Zalesovo Beam     41.97 316  P      P      04 59 00.8 +1.1
     comp=Z,0.7nm,0.6s,mb3.5,baz=94,slow=6.2,SNR=3.5
ZALV                               pP     pP     04 59 08.5 +7.0
     comp=Z,1.8nm,0.5s,baz=94,slow=7.4,SNR=4.0
ZALV                               PcP    PcP    05 00 54.5 -0.4
     comp=Z,3.3nm,0.6s,baz=86,slow=3.7,SNR=9.7
ZALV                               pPcP          05 01 03.7
     comp=Z,2.6nm,0.6s,baz=88,slow=3.1,SNR=6.4
MKAR Makanchi Array    43.19 305  P      P      04 59 11.1 +1.3
     comp=Z,4.0nm,0.8s,mb4.2,baz=87,slow=10.0,SNR=12
MKAR                               pP     pP     04 59 20.0 +8.5
     comp=Z,7.1nm,0.9s,baz=87,slow=10,SNR=11
MKAR Makanchi Array    43.19 305  P      P      04 59 11.1 +1.3
MKAR                               *PP    pP     04 59 20.0 +8.5
MKAR                               pmax   pmax
     comp=Z,4.0nm,0.8s
MKAR Makanchi Array    43.19 305  P      P      04 59 11.1 +1.3
MKAR                               pP     pP     04 59 20.0 +8.5
KURK Kurchatov         45.55 311  eP     P      04 59 29.1 +0.5
KURK                               pmax   pmax
     comp=Z,16nm,1.0s,mb4.9
KURK Kurchatov         45.55 311  eP     P      04 59 29.1 +0.5
     comp=Z,16nm,1.0s,mb4.9
BVAR Borovoye Array    50.55 314  P      P      05 00 07.7 +0.5
     comp=Z,2.4nm,0.7s,mb4.2,baz=96,slow=8.9,SNR=9.1
BVAR                               pP     pP     05 00 16.7 +7.6
     comp=Z,4.2nm,0.6s,baz=99,slow=9.2,SNR=11
BVAR                               PcP    PcP    05 01 24.8 -0.2
     comp=Z,1.4nm,0.7s,baz=91,slow=5.8,SNR=3.3
BVAR Borovoye Array    50.55 314  P      P      05 00 07.7 +0.5
BVAR                               *PP    pP     05 00 16.7 +7.7
BVAR                                              05 01 24.8
BVAR                               pmax   pmax
     comp=Z,2.0nm,0.7s
FITZ Fitzroy Crossi    52.03 194  P      P      05 00 17.6 -1.1
     comp=Z,2.3nm,0.7s,mb4.2,baz=4.9,slow=6.6,SNR=7.9
WRAB Tennant Creek     52.79 183  eP     P      05 00 22.1 -2.1
WRAB                               pmax   pmax
     comp=Z,3.0nm,0.9s,mb4.2
WRAB Tennant Creek     52.79 183  eP     P      05 00 22.1 -2.2
     comp=Z,3.5nm,0.9s,mb4.3
WRA  Warramunga Arr    52.80 183  P      P      05 00 22.5 -1.8
     comp=Z,2.3nm,0.7s,mb4.2,baz=0.7,slow=7.8,SNR=21
WRA  Warramunga Arr    52.80 183  P      P      05 00 22.5 -1.8
WRA                                pmax   pmax
     comp=Z,2.0nm,0.7s
BMRM Bremner River     56.22  35  eP     P      05 00 49.9 +1.1
     comp=Z,5.3nm,0.7s,mb4.7
ASAR Alice Springs     56.52 183  P      P      05 00 49.7 -1.6
     comp=Z,1.5nm,0.9s,mb4.0,baz=10,slow=10.0,SNR=9.6
ASAR Alice Springs     56.52 183  P      P      05 00 49.7 -1.6
ASAR                               pmax   pmax
     comp=Z,2.0nm,0.9s
STKA Stephens Creek    64.78 176  P      P      05 01 45.1 -2.3
     comp=Z,3.2nm,0.8s,mb4.4,baz=342,slow=9.8,SNR=4.4
ARCES ARCESS Array B   66.35 339  P      P      05 01 58.2 +1.0
     comp=Z,2.6nm,0.6s,mb4.4,baz=62,slow=9.1,SNR=20
ARCES ARCESS Array B   66.35 339  P      P      05 01 58.2 +1.0
ARCES                              pmax   pmax
     comp=Z,3.0nm,0.6s
YKA  Yellowknife Ar    69.05  28  P      P      05 02 14.4 +0.1
     comp=Z,2.1nm,0.8s,mb4.1,baz=298,slow=5.8,SNR=4.6
YKA  Yellowknife Ar    69.05  28  P      P      05 02 14.4  0.0
YKA                                pmax   pmax
     comp=Z,2.0nm,0.8s
YKA  Yellowknife Ar    69.05  28  P      P      05 02 14.4 +0.1
FINES FINESS Array B   70.52 332  P      P      05 02 23.7 +0.2
     comp=Z,3.5nm,0.7s,mb4.4,baz=74,slow=6.8,SNR=12
FINES                              pP     pP     05 02 32.5 +7.2
     comp=Z,2.8nm,0.5s,baz=61,slow=5.3,SNR=6.8
FINES FINESS Array B   70.52 332  P      P      05 02 23.7 +0.2
FINES                              *PP    pP     05 02 32.6 +7.3
FINES                              pmax   pmax
     comp=Z,4.0nm,0.7s
SUMG Summit            74.56 359  eP     P      05 02 47.1 -0.3
     comp=Z,7.9nm,0.8s,mb4.7
SUMG Summit            74.56 359  i P    P      05 02 49.2 +1.8
     comp=Z,6.6nm,0.9s,mb4.6
AKASG Malin Array Be   75.07 321  P      P      05 02 50.6 -0.1
     comp=Z,2.5nm,0.5s,mb4.4,baz=52,slow=5.7,SNR=11
AKASG                              pP     pP     05 02 60.0 +7.4
     comp=Z,3.3nm,0.6s,baz=52,slow=6.0,SNR=5.2
AKASG Malin Array Be   75.07 321  P      P      05 02 50.6 -0.1
AKASG                              *PP    pP     05 03 00.0 +7.4
AKASG                              pmax   pmax
     comp=Z,3.0nm,0.5s
AKASG Malin Array Be   75.07 321  P      P      05 02 50.6 -0.1
AKASG                              pP     pP     05 02 60.0 +7.4
NB2  NORSAR Subarra    76.31 336  P      P      05 02 57.1 -0.5
     comp=Z,8.2nm,1.2s,mb4.5,baz=43,slow=5.6
NOA  NORSAR Array B    76.31 336  P      P      05 02 57.6  0.0
     comp=Z,3.5nm,0.9s,mb4.3,baz=45,slow=5.7,SNR=11
NOA                                pP     pP     05 03 07.0 +7.5
     comp=Z,2.9nm,0.9s,baz=45,slow=5.6,SNR=7.0
NOA  NORSAR Array B    76.31 336  P      P      05 02 57.6  0.0
NOA                                *PP    pP     05 03 07.0 +7.5
NOA                                pmax   pmax
     comp=Z,4.0nm,0.9s
BRTR Keskin Array B    78.60 310  P      P      05 03 11.6 +0.7
     comp=Z,1.7nm,0.7s,mb4.1,baz=104,slow=5.2,SNR=5.2
BRTR                               pP     pP     05 03 20.1 +7.5
     comp=Z,2.1nm,0.9s,baz=119,slow=4.4,SNR=4.1
BRTR Keskin Array B    78.60 310  P      P      05 03 11.6 +0.8
BRTR                               *PP    pP     05 03 20.2 +7.5
BRTR                               pmax   pmax
     comp=Z,2.0nm,0.7s
FFC  Flin Flon         78.99  30  eP     P      05 03 12.7  0.0
FFC                                pmax   pmax
     comp=Z,1.0nm,0.5s,mb4.0
FFC  Flin Flon         78.99  30  eP     P      05 03 12.7  0.0
     comp=Z,1.3nm,0.5s,mb4.1
NVAR Mina Array Bea    80.34  50  P      P      05 03 20.4 +0.1
     comp=Z,0.7nm,0.6s,mb3.8,baz=301,slow=5.9,SNR=6.3
CLL  Collm             82.56 328  eP     P      05 03 32.2 +0.3
     comp=Z,5.0nm,0.9s,mb4.5
CLL  Collm             82.56 328  eP     P      05 03 32.0 +0.1
CLL                                epP    pP     05 03 41.0 +7.3
PDAR Pinedale Array    83.07  43  P      P      05 03 35.3 +0.6
     comp=Z,0.5nm,0.6s,mb3.7,baz=21,slow=4.9,SNR=4.4
CLZ  Clausthal         83.31 330  eP     P      05 03 36.1 +0.4
     comp=Z,13nm,1.3s,mb4.8
CLZ  Clausthal         83.31 330  eP     P      05 03 36.1 +0.4
CLZ                                pmax   pmax
     comp=Z,13nm,1.3s,mb4.8
CLZ  Clausthal         83.31 330  eP     P      05 03 36.1 +0.4
     comp=Z,13nm,1.3s,mb4.8
WERD Werda             83.49 328  eP     P      05 03 37.0 +0.3
     comp=Z,14nm,1.8s,mb4.7
GUNZ Gunzen            83.54 328  eP     P      05 03 37.2 +0.3
     comp=Z,3.0nm,0.7s,mb4.5
WERN Wernitzgruen      83.57 328  eP     P      05 03 38.3 +1.2
     comp=Z,6.0nm,1.2s,mb4.6
KHC  Kasperske Hory    83.85 326  eP     P      05 03 39.0 +0.4
KHC                                pmax   pmax
     comp=Z,8.0nm,1.4s,mb4.7
KHC  Kasperske Hory    83.85 326  eP     P      05 03 39.0 +0.4
     comp=Z,8.5nm,1.4s,mb4.7
GEC2 GERESS Array S    84.00 326  eP     P      05 03 39.3  0.0
     comp=Z,4.0nm,1.1s,mb4.5
GEC2 GERESS Array S    84.00 326  eP     P      05 03 39.3  0.0
GEC2                               pmax   pmax
     comp=Z,4.0nm,1.1s,mb4.5
GEC2 GERESS Array S    84.00 326  eP     P      05 03 39.3  0.0
     comp=Z,4.0nm,1.1s,mb4.5
GERES GERESS Array B   84.00 326  P      P      05 03 39.3  0.0
     comp=Z,1.7nm,0.7s,mb4.3,baz=46,slow=3.9,SNR=11
GERES GERESS Array B   84.00 326  P      P      05 03 39.3  0.0
GERES                              pmax   pmax
     comp=Z,2.0nm,0.7s
ROTZ Rotzenmuhle       84.02 328  eP     P      05 03 40.2 +0.8
     comp=Z,16nm,1.5s,mb4.9
GRA1 Grafenberg Arr    84.52 328  eP     P      05 03 42.7 +0.8
     comp=Z,8.0nm,1.0s,mb4.8
GRA1                               epP    pP     05 03 52.1 +8.3
GRF  Grafenberg Arr    84.52 328  eP     P      05 03 42.7 +0.8
     comp=Z,8.0nm,1.0s,mb4.8
GRF                                epP    pP     05 03 52.1 +8.3
GRF  Grafenberg Arr    84.52 328  eP     P      05 03 42.7 +0.8
GRF                                e*PP   pP     05 03 52.1 +8.3
GRF                                pmax   pmax
     comp=Z,8.0nm,1.0s,mb4.8
GRF  Grafenberg Arr    84.52 328  eP     P      05 03 42.7 +0.8
GRF                                e*PP   pP     05 03 52.1 +8.3
GRF                                pmax   pmax
     comp=Z,8.0nm,1.0s,mb4.8
GRF  Grafenberg Arr    84.52 328  eP     P      05 03 42.7 +0.8
     comp=Z,8.0nm,1.0s,mb4.8
GRF                                epP    pP     05 03 52.1 +8.3
SRU  San Rafael        84.80  46  eP     P      05 03 44.2 +0.6
SRU                                pmax   pmax
     comp=Z,6.0nm,1.0s,mb4.7
SRU  San Rafael        84.80  46  eP     P      05 03 44.2 +0.6
     comp=Z,5.9nm,1.0s,mb4.7
TXAR Lajitas Array     95.48  50  P      P      05 04 34.9 +0.7
     comp=Z,2.0nm,0.9s,mb4.6,baz=293,slow=3.0,SNR=20
TXAR Lajitas Array     95.48  50  P      P      05 04 34.9 +0.7
TXAR                               pmax   pmax
     comp=Z,2.0nm,0.9s
TORD Torodi Ar. Bea   117.21 309  PKP    PKPdf  05 09 53.0 -2.1
     comp=Z,0.4nm,0.8s,baz=31,slow=3.0,SNR=2.7
LPAZ La Paz            151.89  60  PKP    PKPdf  05 10 58.8 +0.7
     comp=Z,0.9nm,1.0s,baz=288,slow=9.6,SNR=2.0
LPAZ                               PKPbc  PKPbc  05 11 03.4 -1.2
     comp=Z,0.6nm,0.6s,baz=332,slow=3.5,SNR=5.1
LPAZ La Paz            151.89  60  PKIKP  PKPdf  05 10 58.8 +0.7
LPAZ                                              05 11 03.4
LPAZ                               pmax   pmax
     comp=Z,1.0nm,1.0s
SIV  San Ignacio       156.47  48  PKPab  PKPab  05 11 31.8 -1.2
     comp=Z,0.4nm,0.6s,baz=286,slow=1.9,SNR=7.4
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ISCJB ***17*** *05:14:33.0±0.8, 31°.63N±0°.03×104°.30E±0°.03, h15km±5km, mb4.6/76, MS3.7/19, Error ellipse: s-maj=4.3km s-min=3.9km az=179.1*
IDC ***17*** *05:14:32.3±0.5, 31°.62N×104°.25E, h0km, mb4.4/23, mb1 4.5/25, mb1mx4.4/34, mbtmp4.4/25, ML3.7/1, MS3.6/12, Ms1 3.6/12, ms1mx3.3/37, Error ellipse: s-maj=19.0km s-min=11.2km az=59.0*
BJI ***17*** *05:14:33.4, 31°.65N×104°.31E, h11km, mB4.7/19, mb4.5/27, ML4.5/22, Ms4.3/31, Ms7 4.2/29*
SZGRF ***17*** *05:14:34.3, 31°.86N×104°.90E, h13km, mb5.0, Sichuan, China*
NEIC ***17*** *05:14:34.1±0.3, 31°.64N×104°.16E, h10km, mb4.7/47, Error ellipse: s-maj=6.6km s-min=5.7km az=133.0*
MOS ***17*** *05:14:35.3±0.8, 31°.61N×104°.30E, h33km, mb4.8/48, Error ellipse: s-maj=9.2km s-min=5.4km az=109.0*

ISC 17 05:14:34.3±0.7, 31°.67N±0°.02×104°.26E±0°.03, h11km±4km, h12km±.7km: pP-P, n217, σ1§19/229, mb4.6/76, MS3.7/19, 3C-5D, Sichuan

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Code Station Name        Δ°   AZ°  Phase ID                Time     Res
                                   Op     ISC             h m s    ISC
CD2  Chengdu            0.87 210  Pg     Pg     05 14 50.6 -0.4
CD2                                Sg     Sg     05 15 03.5 +1.2
CD2                                smax
     comp=N,16μm,1.1s
CD2                                smax
     comp=E,18μm,0.7s
LZH  Lanzhou            4.42 356  Pn     Pn     05 15 44.3 +3.0
LZH                                Sn     Sn     05 16 36.3 +3.5
LZH                                Sg     Sg     05 16 55.5 -0.9
LZH                                smax
     comp=N,510nm,1.1s
LZH                                smax
     comp=E,1μm,1.0s
LZH                                LR     LR
     comp=E,4μm,7.3s
LZH                                LR     LR
     comp=Z,4μm,9.2s
XAN  Xi'an              4.58  58  Pn     Pn     05 15 43.8 +0.3
XAN                                Sn     Sn     05 16 36.4 -0.4
XAN                                Sg     Sg     05 16 58.8 -2.7
XAN                                smax
     comp=N,830nm,1.0s
XAN                                smax
     comp=E,350nm,1.1s
XAN                                LR     LR
     comp=N,900nm,6.7s
XAN                                LR     LR
     comp=E,500nm,9.6s
XAN                                LR     LR
     comp=Z,520nm,8.9s
ENH  Enshi              4.70 106  ePn    Pn     05 15 46.9 +1.7
ENH                                ePg    Pg     05 16 02.0 -2.4
ENH                                eSg    Sg     05 17 05.8 +0.5
GYA  Guiyang            5.60 157  Pn     Pn     05 15 58.1 +0.6
GYA                                Sn     Sn     05 17 01.8 -0.1
GYA                                Sg     Sg     05 17 28.3 -5.8
GYA                                smax
     comp=N,1μm,0.9s
GYA                                smax
     comp=E,1μm,0.9s
GYA                                LR     LR
     comp=N,2μm,6.2s
GYA                                LR     LR
     comp=E,2μm,7.8s
GYA                                LR     LR
     comp=Z,2μm,8.2s
KMI  Kunming            6.65 192  Pn     Pn     05 16 13.4 +1.4
KMI                                Sn     Sn     05 17 25.5 -2.3
KMI                                smax
     comp=N,130nm,0.9s
KMI                                smax
     comp=E,140nm,0.8s
KMI                                LR     LR
     comp=N,1μm,10.0s
KMI                                LR     LR
     comp=E,1μm,6.4s
KMI                                LR     LR
     comp=Z,1μm,12.5s
GTA  Gaotai             8.53 336  eP     Pn     05 16 37.8 +0.1
GTA                                pP            05 16 41.9
GTA                                sP            05 16 45.3
GTA                                S      Sn     05 18 12.0 -2.0
GTA                                pmax   pmax
     comp=Z,2.0nm,0.8s
GTA                                pmax   pmax
     comp=Z,65nm,5.1s
GTA                                LR     LR
     comp=N,2μm,10.4s
GTA                                LR     LR
     comp=E,1μm,12.8s
GTA                                LR     LR
     comp=Z,2μm,11.6s
WHN  Wuhan              8.73  95  P      Pn     05 16 43.4 +3.0
WHN                                S      Sn     05 18 15.6 -3.2
WHN                                LR     LR
     comp=Z,2μm,10.8s
HHC  Hu-ho-hao-te      10.89  31  eP     Pn     05 17 15.6 +5.5
HHC                                pP            05 17 18.9
HHC                                sP            05 17 21.9
HHC                                PP            05 17 24.4
HHC                                S      Sn     05 19 20.8 +8.9
HHC                                sS            05 19 24.8
HHC                                PcS    PcS    05 26 46.3 +3.0
HHC                                ScS    ScS    05 30 17.8 +0.6
HHC                                pmax   pmax
     comp=Z,16nm,0.6s
HHC                                pmax   pmax
     comp=Z,66nm,5.5s
HHC                                LR     LR
     comp=N,820nm,8.5s
HHC                                LR     LR
     comp=E,600nm,7.8s
HHC                                LR     LR
     comp=Z,440nm,7.4s
LSA  Lhasa             11.45 264  P      Pn     05 17 19.8 +2.0
LSA                                LR     LR
     comp=E,560nm,11.4s
LSA                                LR     LR
     comp=Z,950nm,11.1s
LSA  Lhasa             11.45 264  eP     Pn     05 17 18.4 +0.6
LSA                                pmax   pmax
     comp=Z,14nm,0.9s
LSA  Lhasa             11.45 264  ePn    Pn     05 17 18.4 +0.6
     comp=Z,14nm,0.9s
GZH  Guangzhou         11.75 134  P      Pn     05 17 15.4 -6.5
GZH                                S      Sn     05 19 20.1 -13
GZH                                LR     LR
     comp=N,1μm,9.6s
GZH                                LR     LR
     comp=E,1μm,8.1s
GZH                                LR     LR
     comp=Z,2μm,10.2s
NJ2  Nanjing           12.42  84  eP     Pn     05 17 30.0 -1.0
NJ2                                pP            05 17 33.8
NJ2                                sP            05 17 37.1
NJ2                                PP            05 17 39.9
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NJ2 S **Sn** **05 19 49.3 0.0**
NJ2 sS 05 19 54.5
NJ2 pmax pmax
comp=Z,10.0nm,0.8s
NJ2 pmax pmax
comp=Z,270nm,4.2s
NJ2 LR LR
comp=N,680nm,9.4s
NJ2 LR LR
comp=E,840nm,8.8s
SHL Shillong 12.45 244 *e*PKP **Pn** **05 17 36.0 +4.5**
SHL *e*S 05 21 16.0
BJI Beijing 12.77 46 P **Pn** **05 17 34.8 -0.9**
BJI S **Sn** **05 19 57.3 -0.5**
BJI pmax pmax
comp=Z,5.0nm,0.5s
BJI pmax pmax
comp=Z,120nm,5.0s
BJI LR LR
comp=N,1μm,14.4s
BJI LR LR
comp=E,700nm,16.3s
QIZ Qiongzhong 13.55 157 P **Pn** **05 17 47.3 +0.7**
QIZ S **Sn** **05 20 20.5 +3.3**
QIZ pmax pmax
comp=Z,20nm,2.0s
QIZ LR LR
comp=N,670nm,6.9s
QIZ LR LR
comp=E,260nm,7.3s
QIZ LR LR
comp=Z,770nm,7.2s
CHTO Chiang Mai 13.67 202 *e*P **Pn** **05 17 50.2 +2.1**
CHTO pmax pmax
comp=Z,11nm,0.8s
CHTO Chiang Mai 13.67 202 *e*Pn **Pn** **05 17 50.1 +2.0**
comp=Z,11nm,0.8s
CM31 Chiang Mai Arr 14.00 201 *e*P **Pn** **05 17 56.1 +3.4**
comp=Z,20nm,0.7s
CMAR Chiang Mai Arr 14.00 201 Pn **Pn** **05 17 53.4 +0.8**
baz=12,slow=10,SNR=26
CMAR LR LR 05 24 05.7
comp=Z,91nm,21.9s,baz=25,slow=41
TAPN Taplejung 15.03 258 *e*P **Pn** **05 18 04.8 -1.9**
comp=Z,45nm,0.9s
ODAN Odare 15.48 256 *e*P **Pn** **05 18 10.2 -2.4**
comp=Z,52nm,0.9s
RAMN Ramite 16.10 258 *e*P **Pn** **05 18 18.4 -2.2**
comp=Z,71nm,1.2s
SONM Songino Array 16.23 5 Pn **Pn** **05 18 23.5 +1.3**
comp=Z,0.3nm,0.3s,baz=185,slow=10,SNR=20
SONM Lg 05 23 07.8
comp=Z,0.2nm,0.3s,baz=167,slow=27,SNR=2.5
SONM LR LR 05 25 33.8
comp=Z,194nm,21.6s,baz=43,slow=41
ULN Ulaanbaatar 16.32 7 *e*P **Pn** **05 18 25.3 +2.0**
ULN pmax pmax
comp=Z,18nm,1.2s
ULN Ulaanbaatar 16.32 7 *e*P **Pn** **05 18 25.3 +2.0**
comp=Z,18nm,1.2s
GUN Gumba 16.39 262 *e*P **Pn** **05 18 21.6 -2.7**
comp=Z,109nm,0.9s
PKI Pulchoki 16.89 261 *e*P **Pn** **05 18 27.9 -2.8**
comp=Z,36nm,0.7s
PKI Pulchoki 16.89 261 *e*P **Pn** **05 18 27.9 -2.8**
PKI pmax pmax
comp=Z,36nm,0.7s
PKIN Phulchoki 16.90 261 *e*P **Pn** **05 18 27.7 -3.1**
comp=Z,67nm,0.7s
KKN Kakani 16.93 262 *e*P **Pn** **05 18 27.9 -3.3**
comp=Z,62nm,0.8s
KKN Kakani 16.93 262 *e*P **Pn** **05 18 27.9 -3.3**
KKN pmax pmax
comp=Z,62nm,0.8s
DMN Daman 17.13 261 *e*P **Pn** **05 18 30.8 -2.9**
comp=Z,90nm,0.9s
WMQ Urumqi 17.82 318 P **Pn** **05 18 43.0 +0.9**
WMQ sP sP 05 18 50.0 +2.5
WMQ PP 05 18 58.0
WMQ S **Sn** **05 21 59.0 -1.6**
WMQ SS 05 22 23.0
WMQ pmax pmax
comp=Z,48nm,2.0s
WMQ LR LR
comp=N,270nm,5.0s
WMQ LR LR
comp=E,250nm,5.0s
WMQ LR LR
comp=Z,220nm,5.0s
ZAK Zakamensk 18.71 358 *e*P **Pn** **05 18 53.5 +0.5**
ZAK pmax pmax
comp=Z,5.0nm,1.2s
TLY Talaya 20.00 359 *e*P **P** **05 19 11.1 +4.3**
TLY pmax pmax
comp=Z,11nm,1.0s
TLY MLR MLR
comp=Z,330nm,12.0s,MS3.9
TLY Talaya 20.00 359 *e*Pn **P** **05 19 10.0 +3.3**
comp=Z,7.9nm,0.9s
MOY Mondy 20.13 354 *e*P **P** **05 19 14.0 +5.9**
MOY pmax pmax
comp=Z,31nm,1.5s
KSRS Korea Array 20.30 67 P **P** **05 19 11.3 +1.1**
comp=Z,17nm,0.8s,baz=256,slow=9.9,SNR=28
KSRS LR LR 05 26 49.6
comp=Z,65nm,20.8s,MS3.0,baz=245,slow=36
KSRS Korea Array 20.30 67 P **P** **05 19 11.3 +1.1**
KSRS pmax pmax
comp=Z,17nm,0.8s
KSRS MLR MLR
comp=Z,65nm,20.8s,MS3.0
IRK Irkutsk 20.56 0 *e*P **P** **05 19 14.8 +2.0**
IRK pmax pmax
comp=Z,45nm,1.3s
CN2 Changchun 20.61 48 *e*P **P** **05 19 16.0 +2.5**
CN2 *es*P sP 05 19 23.0 +4.9
CN2 *e*S **S** **05 23 00.1 -3.6**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,16.0s,MS3.7
CN2 LR LR
comp=E,200nm,16.0s,MS3.7
CN2 LR LR
comp=Z,200nm,14.0s,MS3.6
HIA Hailar 21.09 29 *e*P **P** **05 19 19.3 +0.7**
HIA pmax pmax
comp=Z,10.0nm,0.6s
HIA Hailar 21.09 29 *e*P **P** **05 19 19.3 +0.7**
comp=Z,9.9nm,0.6s,mb4.3
MK31 Makanchi Array 22.65 318 *e*P **P** **05 19 36.5 +1.3**
MKAR Makanchi Array 22.65 318 P **P** **05 19 36.2 +1.0**
comp=Z,5.2nm,0.8s,mb4.0,baz=113,slow=12,SNR=18
MKAR Makanchi Array 22.65 318 P **P** **05 19 36.3 +1.1**
MKAR pmax pmax
comp=Z,5.0nm,0.8s
MDJ Mudanjiang 23.64 50 P **P** **05 19 46.8 +1.2**
MDJ pmax pmax
comp=Z,14nm,1.3s,mb4.2
MDJ pmax pmax
comp=Z,87nm,7.4s
MDJ LR LR
comp=N,44nm,15.2s,MS3.1
MDJ LR LR
comp=E,27nm,13.6s,MS3.1
MDJ Mudanjiang 23.64 50 *e*P **P** **05 19 47.0 +1.4**
comp=E,11nm,0.9s,mb4.3
KSH Kashi 24.23 297 *e*P **P** **05 19 54.1 +3.1**
KSH pP 05 19 58.3
KSH sP sP 05 20 01.1 +5.3
KSH PP 05 20 30.3
KSH PcP PcP 05 23 32.9 +1.6
KSH S **S** **05 24 11.0 +1.6**
KSH sS sS 05 24 18.8 +3.8
KSH SS 05 25 07.4
KSH ScP ScP 05 27 09.8 0.0
KSH PcS PcS 05 27 11.5 +0.5
KSH ScS ScS 05 30 56.4 -0.7
KSH pmax pmax
comp=Z,3.0nm,0.8s,mb3.8
KSH pmax pmax
comp=Z,56nm,5.1s
KSH LR LR
comp=N,290nm,8.0s
KSH LR LR
comp=E,450nm,15.7s
KSH LR LR
comp=Z,220nm,8.7s
AAK Ala-Archa 26.00 303 P **P** **05 20 08.6 +1.5**
comp=Z,2.1nm,0.3s,mb4.1,baz=82,slow=7.1,SNR=2.6
AAK LR LR 05 32 12.3
comp=Z,269nm,18.5s,MS3.8,baz=86,slow=41
AAK Ala-Archa 26.00 303 *i* P **P** **05 20 08.3 +1.2**
AAK Ala-Archa 26.00 303 *e*P **P** **05 20 08.2 +1.1**
comp=Z,3.5nm,0.4s,mb4.2
ZALV Zalesovo Beam 26.28 334 P **P** **05 20 09.8 +0.3**
comp=Z,5.0nm,0.6s,mb4.2,baz=130,slow=9.6,SNR=18
ZALV LR LR 05 30 07.0
comp=Z,64nm,20.8s,MS3.1,baz=201,slow=36
ZALV Zalesovo Beam 26.28 334 P **P** **05 20 09.8 +0.3**
ZALV pmax pmax
comp=Z,5.0nm,0.6s,mb4.2
ZALV MLR MLR
comp=Z,64nm,20.8s,MS3.1
KURK Kurchatov 26.88 323 P **P** **05 20 14.6 -0.3**
comp=Z,3.6nm,0.8s,mb3.9,baz=129,slow=10,SNR=12
KURK PcP PcP 05 23 36.2 -0.8
comp=Z,0.8nm,0.5s,baz=119,slow=2.2,SNR=3.2
KURK LR LR 05 31 35.8
comp=Z,186nm,19.1s,MS3.7,baz=125,slow=38
KURK Kurchatov 26.88 323 *d* *i*P **P** **05 20 15.4 +0.5**
KURK pmax pmax
comp=Z,2.0nm,0.9s,mb3.6
KURK MLR MLR
comp=Z,257nm,18.0s,MS3.8
KURK Kurchatov 26.88 323 *e*P **P** **05 20 15.3 +0.3**
comp=Z,24nm,1.5s,mb4.5
KLR Kul'dur 27.08 42 *e*P **P** **05 20 14.7 -2.1**
KLR MLR MLR
comp=Z,900nm,11.5s,MS4.6
NVS Novosibirsk 27.56 333 *e*P **P** **05 20 19.1 -1.9**
PSI Prapat 29.15 191 P **P** **05 20 35.0 -0.6**
comp=Z,3.0nm,0.5s,mb4.3,baz=355,slow=11,SNR=6.8
PSI Prapat 29.15 191 P **P** **05 20 35.0 -0.5**
PSI pmax pmax
comp=Z,3.0nm,0.5s,mb4.3
KBL Kabul 29.55 285 *e*P **P** **05 20 40.1 +1.1**
KBL pmax pmax
comp=Z,7.0nm,0.6s,mb4.6
KBL Kabul 29.55 285 *e*P **P** **05 20 40.1 +1.1**
comp=Z,7.1nm,0.6s,mb4.6
JHJ Hachijo jima 2 29.95 78 LR LR 05 34 15.4
comp=Z,83nm,18.8s,MS3.4,baz=271,slow=39
BVAR Borovoye Array 32.44 321 P **P** **05 21 04.9 +0.7**
comp=Z,1.7nm,0.6s,mb4.1,baz=112,slow=9.0,SNR=10
BVAR PcP PcP 05 23 50.6 -0.6
comp=Z,1.1nm,0.5s,baz=131,slow=4.1,SNR=4.6
BVAR Borovoye Array 32.44 321 P **P** **05 21 04.9 +0.7**
BVAR 05 23 50.6
BVAR pmax pmax
comp=Z,2.0nm,0.6s
BRVK Borovoye 32.51 321⇑ *e*P **P** **05 21 05.4 +0.6**
BRVK pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
BRVK MLR MLR
comp=Z,81nm,13.0s,MS3.6
YSS Yuzh-Sakhalins 33.10 51 *e*P **P** **05 21 08.5 -1.6**
YAK Yakutsk 34.53 21 *e*P **P** **05 21 24.9 +2.5**
YAK pmax pmax
comp=Z,11nm,1.1s,mb4.7
ABKAR Akbulak array 37.40 311 *e*P **P** **05 21 47.3 +0.2**
comp=Z,1.6nm,0.6s,mb4.0
AKTK Aktyubinsk 38.85 313 P **P** **05 21 58.6 -0.7**
AKTO Aktyubinsk 38.85 313 P **P** **05 21 58.6 -0.7**
comp=Z,1.8nm,0.5s,mb4.0,baz=96,slow=13,SNR=7.9
AKTO Aktyubinsk 38.85 313 P **P** **05 21 58.6 -0.7**
AKTO pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
KAPI Kappang 39.35 155 P **P** **05 22 02.7 -1.2**
comp=Z,9.4nm,0.9s,mb4.5,baz=5.4,slow=15,SNR=4.8
KAPI Kappang 39.35 155 P **P** **05 22 02.6 -1.2**
ARU Arti 40.07 322 *d* *i*P **P** **05 22 09.9 +0.5**
ARU S **S** **05 28 14.8 -0.3**
ARU SS SS 05 31 05.7 -6.5
ARU pmax pmax
comp=Z,31nm,1.7s,mb4.8
ARU Arti 40.07 322 *e*P **P** **05 22 09.6 +0.2**
comp=Z,40nm,1.5s,mb4.9
SOKR Solikamsk 42.01 326 *e*P **P** **05 22 25.3 0.0**
SOKR pmax pmax
comp=Z,20nm,1.4s,mb4.5
SOKR MLR MLR
comp=Z,160nm,16.0s,MS4.0
TIXI Tiksi 42.18 11 *e*P **P** **05 22 27.4 +0.9**
TIXI pmax pmax
comp=Z,2.0nm,0.4s,mb4.1
TIXI Tiksi 42.18 11 *e*P **P** **05 22 27.4 +0.8**
comp=Z,2.4nm,0.4s,mb4.2
SEY Seymchan 43.54 30⇓ *e*P **P** **05 22 41.4 +3.7**
ZEI Tsey 48.40 301 *e*P **P** **05 23 16.9 +0.6**
ZEI pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
KIV Kislovodsk 49.12 303 *e*P **P** **05 23 20.4 -1.4**
KIV pmax pmax
comp=Z,11nm,0.9s,mb4.9
KIV MLR MLR
comp=Z,62nm,17.0s,MS3.7
BILL Bilibino 50.61 25⇑ *i*P **P** **05 23 36.1 +3.3**
BILL pmax pmax
comp=Z,11nm,1.6s,mb4.5
BILL Bilibino 50.61 25 *e*P **P** **05 23 33.9 +1.1**
comp=Z,2.2nm,0.6s,mb4.3
VSR Storozhevoye 50.80 313 *e*P **P** **05 23 34.4 -0.1**
VSR pmax pmax
comp=N,8.0nm,0.6s
VSR pmax pmax
comp=E,8.0nm,0.6s
VSR pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
OBN Obninsk 52.15 318⇑ *i*P **P** **05 23 45.1 +0.6**
OBN pmax pmax
comp=Z,15nm,1.1s,mb4.8
OBN MLR MLR
comp=Z,100nm,17.0s,MS3.9
FITZ Fitzroy Crossi 53.57 154 *e*P **P** **05 23 54.5 -0.9**
comp=Z,7.5nm,1.1s,mb4.5
JOF Joensuu 54.62 328 *e*P **P** **05 24 02.0 -0.6**
JOF pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
JOF Joensuu 54.62 328 *ep* **P** **05 24 02.0 -0.6**
comp=Z,3.4nm,0.6s,mb4.5
JOF Joensuu 54.62 328 *ep* **P** **05 24 02.0 -0.6**
comp=Z,3.4nm,0.6s,mb4.5
KEV Kevo 56.27 336 *e*P **P** **05 24 09.1 -5.3**
KEV pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
KEV Kevo 56.27 336 *ep* **P** **05 24 09.1 -5.3**
comp=Z,4.3nm,0.7s,mb4.6
KEV Kevo 56.27 336 *ep* **P** **05 24 09.1 -5.3**
comp=Z,4.3nm,0.7s,mb4.6
BR131 Keskin Array S 56.58 299 *e*P **P** **05 24 17.3 +0.2**
comp=Z,2.0nm,0.8s,mb4.2
BRTR Keskin Array B 56.58 299 P **P** **05 24 16.9 -0.1**
comp=Z,2.1nm,0.8s,mb4.2,baz=98,slow=7.7,SNR=13
BRTR Keskin Array B 56.58 299 P **P** **05 24 17.0 0.0**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
ARCES ARCESS Array B 56.80 336 P **P** **05 24 17.9 -0.3**
comp=Z,2.7nm,0.8s,mb4.3,baz=80,slow=7.6,SNR=12
ARCES PcP PcP 05 25 13.8 0.0
comp=Z,1.0nm,0.7s,baz=69,slow=4.9,SNR=2.3
ARCES LR LR 05 50 17.3
comp=Z,46nm,19.1s,MS3.6,baz=280,slow=38
ARCES ARCESS Array B 56.80 336 P **P** **05 24 17.9 -0.2**
ARCES 05 25 13.8
ARCES pmax pmax
comp=Z,3.0nm,0.8s
ARCES MLR MLR
comp=Z,46nm,19.1s
ARCES ARCESS Array B 56.80 336 P **P** **05 24 17.9 -0.3**
ARCES PcP PcP 05 25 13.8 0.0
ARCES LR LR 05 50 17.3
KAF Kangasniemi 56.99 327 *e*P **P** **05 24 18.8 -0.8**
KAF pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
KAF Kangasniemi 56.99 327 *ep* **P** **05 24 18.8 -0.8**
comp=Z,3.2nm,0.6s,mb4.5,baz=84,slow=6.9
KAF Kangasniemi 56.99 327 *ep* **P** **05 24 18.8 -0.8**
comp=Z,3.2nm,0.6s,mb4.5,baz=84,slow=6.9
AKASG Malin Array Be 57.10 313 P **P** **05 24 19.9 -0.6**
comp=Z,4.1nm,0.6s,mb4.6,baz=70,slow=6.8,SNR=7.7
AKASG Malin Array Be 57.10 313 P **P** **05 24 20.0 -0.5**
AKASG pmax pmax
comp=Z,4.0nm,0.6s
FINES FINESS Array B 57.18 326 P **P** **05 24 20.8 -0.1**
comp=Z,3.7nm,0.6s,mb4.6,baz=77,slow=8.6,SNR=12
FINES FINESS Array B 57.18 326 P **P** **05 24 20.8 -0.1**
FINES pmax pmax
comp=Z,4.0nm,0.6s
VSU Vasula 57.23 322 *i* P **P** **05 24 23.5 +2.2**
VSU pmax pmax
comp=Z,27nm,1.2s,mb5.2
WRAB Tennant Creek 58.86 147 *e*P **P** **05 24 32.8 -0.4**
WRAB pmax pmax
comp=Z,14nm,0.8s,mb5.0
WRAB Tennant Creek 58.86 147 *e*P **P** **05 24 32.8 -0.4**
comp=Z,14nm,0.8s,mb5.0
WRA Warramunga Arr 58.87 147 P **P** **05 24 33.1 -0.1**
comp=Z,9.2nm,0.8s,mb4.9,baz=341,slow=7.9,SNR=36
WRA Warramunga Arr 58.87 147 P **P** **05 24 33.1 -0.1**
WRA pmax pmax
comp=Z,9.0nm,0.8s
LVV L'vov 60.54 313 *e*P pP 05 24 56.2 +8.1
KWP Kalwaria Pacla 61.42 313 *e*P **P** **05 24 50.7 +0.2**
KWP pmax pmax
comp=Z,21nm,0.9s,mb5.3
KWP Kalwaria Pacla 61.42 313 *e*P **P** **05 24 50.7 +0.3**
comp=Z,21nm,0.9s,mb5.3
KOLS Kolonicke sedl 61.89 312 *e*P **P** **05 24 54.1 +0.5**
KOLS pmax pmax
comp=Z,8.0nm,1.5s,mb4.6
KOLS Kolonicke sedl 61.89 312 *e*P **P** **05 24 54.1 +0.5**
comp=Z,8.0nm,1.5s,mb4.6
KOLS *e*PP pP 05 24 57.2 -0.1
KOLS Kolonicke sedl 61.89 312 *e*P **P** **05 24 54.1 +0.5**
KOLS *ep*P pP 05 24 57.2 -0.1
ASAR Alice Springs 61.90 149 P **P** **05 24 54.3 +0.4**
comp=Z,3.3nm,0.5s,mb4.7,baz=334,slow=6.5,SNR=27
ASAR Alice Springs 61.90 149 P **P** **05 24 54.3 +0.4**
ASAR pmax pmax
comp=Z,3.0nm,0.5s
STHS Stebnicka Huta 62.40 313 *e*P **P** **05 24 57.3 +0.3**
STHS pmax pmax
comp=Z,3.0nm,0.7s,mb4.5
STHS Stebnicka Huta 62.40 313 *e*P **P** **05 24 57.3 +0.3**
comp=Z,2.9nm,0.7s,mb4.5
STHS *e*PP pP 05 25 01.5 +0.9
STHS Stebnicka Huta 62.40 313 *e*P **P** **05 24 57.3 +0.3**
STHS *ep*P pP 05 25 01.4 +0.8
CRVS Cervenica-Dubn 62.41 312 *e*P **P** **05 24 58.2 +1.1**
CRVS pmax pmax
comp=Z,4.0nm,1.2s,mb4.4
CRVS Cervenica-Dubn 62.41 312 *e*P **P** **05 24 58.2 +1.1**
comp=Z,3.9nm,1.2s,mb4.4
CRVS *e*PP pP 05 25 00.9 +0.1
CRVS Cervenica-Dubn 62.41 312 *e*P **P** **05 24 58.2 +1.1**
CRVS *ep*P pP 05 25 00.9 +0.1
OKC Ostrava-Krasne 64.18 314 *ep*P pP 05 25 12.6 +0.2
VYHS Vyhne 64.19 313 *e*P **P** **05 25 09.2 +0.3**
VYHS pmax pmax
comp=Z,5.0nm,1.3s,mb4.4
VYHS Vyhne 64.19 313 *e*P **P** **05 25 09.2 +0.3**
comp=Z,5.2nm,1.3s,mb4.4
VYHS *e*PP pP 05 25 12.2 -0.4
VYHS Vyhne 64.19 313 *e*P **P** **05 25 09.2 +0.3**
VYHS *ep*P pP 05 25 12.2 -0.4
NB2 NORSAR Subarra 64.26 327 P **P** **05 25 07.8 -1.3**
comp=Z,10nm,1.2s,mb4.7,baz=73,slow=6.9
NOA NORSAR Array B 64.26 327 P **P** **05 25 08.3 -0.8**
comp=Z,1.8nm,0.7s,mb4.2,baz=72,slow=6.8,SNR=9.5
NOA NORSAR Array B 64.26 327 P **P** **05 25 08.3 -0.8**
NOA pmax pmax
comp=Z,2.0nm,0.7s
MORC Moravsky Berou 64.57 314 *e*P **P** **05 25 11.3 -0.1**
MORC pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
MORC Moravsky Berou 64.57 314 *e*P **P** **05 25 11.2 -0.1**
comp=Z,5.4nm,0.8s,mb4.6
DPC Dobruska-Polom 65.11 315 *e*P **P** **05 25 15.6 +0.7**
DPC Dobruska-Polom 65.11 315 *e*P **P** **05 25 15.6 +0.7**
DPC *ep*P pP 05 25 18.6 0.0
UPC Upice 65.25 315 *e*P **P** **05 25 16.6 +0.8**
UPC Upice 65.25 315 *e*P **P** **05 25 16.6 +0.8**
UPC *ep*P pP 05 25 20.0 +0.6
VRAC Vranov 65.31 314 LR LR 05 55 28.5
comp=Z,104nm,18.2s,MS4.1,baz=325,slow=38
CSNA Conrad Observa 66.26 313⇓ *i*P **P** **05 25 22.7 +0.4**
comp=Z,5.2nm,0.9s,mb4.6
PRU Pruhonice 66.31 315 *e*P **P** **05 25 23.5 +0.8**
PRU Pruhonice 66.31 315 *e*P **P** **05 25 23.5 +0.8**
PRU *ep*P pP 05 25 27.3 +1.0
BRG Berggiesshubel 66.35 316 *e*P **P** **05 25 22.6 -0.3**
comp=Z,8.0nm,1.0s,mb4.7
BRG Berggiesshubel 66.35 316 *e*P **P** **05 25 22.6 -0.3**
comp=Z,8.2nm,1.0s,mb4.7
BRG Berggiesshubel 66.35 316 *e*P **P** **05 25 22.6 -0.3**
BRG pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
TTA Tatalina 66.51 29 *e*P **P** **05 25 23.4 -0.3**
CLL Collm 66.74 317 *e*P **P** **05 25 29.0 +3.7**
CLL *e* 05 25 35.0
CLL MLR MLR
comp=Z,100nm,20.0s,MS4.0
CLL Collm 66.74 317 *ep*P pP 05 25 29.0 0.0
CLL *e*PP PP 05 27 55.0 +3.0
COLD Coldfoot 66.91 24 *e*P **P** **05 25 28.6 +2.4**
comp=Z,4.6nm,0.9s,mb4.5
GEC2 GERESS Array S 67.25 314 *e*P **P** **05 25 28.6 -0.1**
comp=Z,8.0nm,1.1s,mb4.7
GEC2 GERESS Array S 67.25 314 *e*P **P** **05 25 28.6 -0.1**
GEC2 pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
GERES GERESS Array B 67.25 314 P **P** **05 25 29.0 +0.3**
comp=Z,1.4nm,0.7s,mb4.1,baz=64,slow=6.1,SNR=12
GERES LR LR 05 56 27.3
comp=Z,84nm,20.2s,MS4.0,baz=59,slow=37
GERES GERESS Array B 67.25 314 P **P** **05 25 29.0 +0.3**
GERES pmax pmax
comp=Z,1.0nm,0.7s
GERES MLR MLR
comp=Z,84nm,20.2s
BSEG Bad Segeberg 67.25 320 *e*P **P** **05 25 29.0 +0.4**
comp=Z,12nm,0.8s,mb5.0
JMIC Jan Mayen 67.33 341 LR LR 05 57 43.4
comp=Z,33nm,21.3s,MS3.5,baz=88,slow=38
TANN Tannenbergstha 67.39 316 *e*P **P** **05 25 29.4 -0.1**
comp=Z,9.0nm,1.1s,mb4.7
SVW2 Sparrevohn 67.45 31 *e*P **P** **05 25 30.3 +0.7**
NKC Novy Kostel 67.47 316 *e*P **P** **05 25 30.0 0.0**
comp=Z,9.0nm,1.1s,mb4.7
WERD Werda 67.47 316 *e*P **P** **05 25 29.8 -0.2**
comp=Z,8.0nm,1.1s,mb4.7
GUNZ Gunzen 67.49 316 *e*P **P** **05 25 30.1 0.0**
comp=Z,10.0nm,0.9s,mb4.8
WERN Wernitzgruen 67.49 316 *e*P **P** **05 25 30.2 0.0**
comp=Z,8.0nm,0.9s,mb4.8
ROTZ Rotzenmuhle 67.80 316 *e*P **P** **05 25 32.3 +0.2**
comp=Z,12nm,1.0s,mb4.9
NRDL Niedersach Rie 67.94 319 *e*P **P** **05 25 33.5 +0.6**
comp=Z,15nm,1.3s,mb4.9
BPAW Bear Paw Mtn. 68.04 27 *e*P **P** **05 25 33.1 -0.3**
comp=Z,3.9nm,0.8s,mb4.5
CLZ Clausthal 68.05 318 *e*P **P** **05 25 33.8 +0.2**
comp=Z,12nm,0.9s,mb4.9
CLZ Clausthal 68.05 318 *e*P **P** **05 25 33.8 +0.2**
CLZ pmax pmax
comp=Z,12nm,0.9s,mb4.9
GRA1 Grafenberg Arr 68.41 316 *e*P **P** **05 25 36.3 +0.3**
comp=Z,15nm,0.8s,mb5.1
GRA1 *ep*P pP 05 25 40.2 +0.6
GRF Grafenberg Arr 68.41 316 *e*P **P** **05 25 36.3 +0.3**
comp=Z,15nm,0.8s,mb5.1
GRF *ep*P pP 05 25 40.2 +0.6
GRF Grafenberg Arr 68.41 316 *e*P **P** **05 25 36.3 +0.3**
GRF pmax pmax
comp=Z,15nm,0.8s,mb5.1
GRF Grafenberg Arr 68.41 316 *e*P **P** **05 25 36.3 +0.3**
GRF pmax pmax
comp=Z,15nm,0.8s,mb5.1
COLA College 68.87 26 *e*P **P** **05 25 37.2 -1.3**
COLA pmax pmax
comp=Z,65nm,1.2s,mb5.4
COLA College 68.87 26 *e*P **P** **05 25 37.2 -1.3**
comp=Z,65nm,1.2s,mb5.4
FETA Feichten 69.81 313⇓ *i*P **P** **05 25 44.5 -0.2**
comp=Z,15nm,1.2s,mb4.8

RC01	**Rabbit Creek A**	69.98	30	*e*P	P	05 25 43.9	-1.6
	comp=Z,3.1nm,0.8s,mb4.3						
PMR	**Palmer**	69.99	29	*e*P	P	05 25 44.9	-0.6
PMR				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
PMR	**Palmer**	69.99	29	*e*P	P	05 25 44.9	-0.6
	comp=Z,3.6nm,0.7s,mb4.4						
KDAK	**Kodiak Island**	70.30	34	P	P	05 25 47.2	-0.2
	comp=Z,6.1nm,0.9s,mb4.5,baz=323,slow=5.6,SNR=3.4						
KDAK	**Kodiak Island**	70.30	34	*e*P	P	05 25 46.7	-0.8
KDAK				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
KDAK	**Kodiak Island**	70.30	34	*e*P	P	05 25 46.7	-0.8
	comp=Z,8.6nm,0.9s,mb4.7						
DAVOX	**Davos/Dischmat**	70.44	313	LR	LR	05 57 54.1	
	comp=Z,75nm,18.2s,MS4.0,baz=260,slow=37						
KMBO	**Kilima Mbogo**	71.17	257	P	P	05 25 54.0	+0.6
	comp=Z,1.5nm,0.3s,mb4.4,baz=46,slow=10,SNR=4.6						
KMBO	**Kilima Mbogo**	71.17	257	P	P	05 25 54.1	+0.6
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
EGAK	**Eagle**	71.34	24	*e*P	P	05 25 52.8	-0.9
WLF	**Walferdange**	71.40	317	*e*P	P	05 25 54.6	+0.3
WLF				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.0						
WLF	**Walferdange**	71.40	317	*e*P	P	05 25 54.6	+0.3
	comp=Z,12nm,0.6s,mb5.0						
INK	**Inuvik**	71.58	19	P	P	05 25 54.9	-0.2
	comp=Z,7.4nm,0.9s,mb4.6,baz=358,slow=4.9,SNR=10						
INK	**Inuvik**	71.58	19	*e*P	P	05 25 54.2	-0.9
INK				pmax	pmax		
	comp=Z,12nm,1.0s						
INK	**Inuvik**	71.58	19	*e*P	P	05 25 54.1	-1.0
	comp=Z,12nm,1.0s,mb4.8						
BMRM	**Bremner River**	72.18	29	*e*P	P	05 25 58.3	-0.5
	comp=Z,12nm,1.0s,mb4.8						
STKA	**Stephens Creek**	72.41	147	P	P	05 26 00.1	-0.3
	comp=Z,2.4nm,0.5s,mb4.4,baz=345,slow=12,SNR=3.0						
LPG	**La Plagne**	72.96	313	*e*P	P	05 26 03.8	0.0
	comp=Z,27nm,0.8s,mb4.9						
LPG	**La Plagne**	72.96	313	*e*P	P	05 26 03.8	0.0
LPG				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
LPG	**La Plagne**	72.96	313	*e*P	P	05 26 03.8	0.0
	comp=Z,13nm,0.8s,mb4.9						
LPL	**La Plagne**	72.97	313	*e*P	P	05 26 03.7	-0.1
	comp=Z,29nm,0.8s,mb4.9						
LPL	**La Plagne**	72.97	313	*e*P	P	05 26 03.7	-0.1
LPL				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
LPL	**La Plagne**	72.97	313	*e*P	P	05 26 03.7	-0.1
	comp=Z,15nm,0.8s,mb5.0						
BNI	**Bardonecchia**	73.22	313	*e*P	P	05 26 04.6	-0.7
BNI				pmax	pmax		
	comp=Z,17nm,1.4s,mb4.8						
BNI	**Bardonecchia**	73.22	313	*e*P	P	05 26 04.6	-0.7
	comp=Z,17nm,1.4s,mb4.8						
SMF	**Signal de Mont**	74.19	315	*e*P	P	05 26 10.0	-1.0
	comp=Z,28nm,1.1s,mb4.8						
SMF	**Signal de Mont**	74.19	315	*e*P	P	05 26 10.0	-1.0
SMF				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
SMF	**Signal de Mont**	74.19	315	*e*P	P	05 26 10.0	-1.0
	comp=Z,14nm,1.1s,mb4.8						
PNL	**Peninsula**	75.05	28	*e*P	P	05 26 19.1	+3.4
	comp=Z,13nm,0.7s,mb5.0						
TCF	**Toulx Ste Croi**	75.35	315	*e*P	P	05 26 17.0	-0.7
CAF	**Calviac**	76.13	314	*e*P	P	05 26 21.9	-0.3
SKAG	**Skagway**	76.78	27	*e*P	P	05 26 24.1	-1.5
	comp=Z,21nm,1.1s,mb5.0						
YKA	**Yellowknife Ar**	81.12	17	P	P	05 26 49.5	+0.2
	comp=Z,3.4nm,0.8s,mb4.3,baz=327,slow=4.9,SNR=7.9						
YKA	**Yellowknife Ar**	81.12	17	P	P	05 26 49.5	+0.2
YKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
YKA	**Yellowknife Ar**	81.12	17	P	P	05 26 49.5	+0.2
FCC	**Fort Churchill**	88.62	9	*e*P	P	05 27 24.8	-2.3
FCC				pmax	pmax		
	comp=Z,1.0nm,1.9s,mb3.8						
FCC	**Fort Churchill**	88.62	9	*e*P	P	05 27 24.8	-2.4
	comp=Z,1.3nm,1.9s,mb3.9						
EDM	**Edmonton**	89.36	22	*e*P	P	05 27 31.0	+0.3
TORD	**Torodi Ar. Bea**	93.59	288	P	P	05 27 51.0	-0.1
	comp=Z,0.7nm,0.9s,mb4.1,baz=38,slow=7.1,SNR=3.7						
QSPA	**South Pole Qui**	121.44	180	PKP	PKPdf	05 33 25.9	-0.6
	comp=Z,0.8nm,0.6s,baz=339,slow=2.5,SNR=4.2						
OTAV	**Otavalo**	148.17	5	*e*PKPdf	PKPdf	05 34 17.9	+0.2

GUC 17 05:24:51.1±0.6, 30°.16S×71°.57W, h4km±4km, ML3.5, 1C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLL	**Tololo Astrono**	0.66	91	⇓*i*P	Pg	05 25 05.2	+1.3
TLL				*i* S	Sg	05 25 15.3	+2.9
TLL				AML	AML	05 25 19.2	
	comp=N,1μm,0.3s						
LCO	**Las Campanas**	1.37	34	*e*P	Pn	05 25 16.1	-0.9
LCO				*i* S	Sg	05 25 36.0	+0.9
LCO				AML	AML	05 25 44.6	
	comp=E,658nm,0.5s						
PEL	**Peldehue**	3.07	166	*i* S	Sn	05 26 20.0	+2.3
PEL				AML	AML	05 26 30.7	
	comp=E,462nm,0.8s						
FCH	**Farellones**	3.34	161	⇑*i*P	Pn	05 25 42.8	-1.4
FCH				*i* S	Sn	05 26 24.6	+0.2
FCH				AML	AML	05 26 33.8	
	comp=E,129nm,0.4s						

*IDC **17** 05:42:01.9±1.3, 21°.55N×62°.02E, h0km, mb3.8/9, mb1 3.8/9, mb1mx3.6/28, mbtmp3.8/9, MS3.6/2, Ms1 3.6/2, ms1mx2.6/33, Error ellipse: s-maj=31.3km s-min=22.1km az=167.0*

*ISCJB **17** 05:42:04.5±3.6, 21°.6N±0°.1×62°.07E±0°.07, h30km±29km, mb4.1/15, MS3.6/2, Error ellipse: s-maj=20.8km s-min=11.6km az=177.9*

*OMAN **17** 05:42:09.0±99.0, 21°.67N×61°.60E, h0km±999km, Error ellipse: s-maj=265.0km s-min=37.6km az=278.0*

*CSEM **17** 05:42:09.0, 21°.67N×61°.60E, h0km, After OMAN*

ISC 17 05:42:05.4±3.4, 21°.6N±0°.1×62°.09E±0°.06, h21km±28km, n38, σ0°67/37, mb4.1/15, MS3.6/2, 1C-1D, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBK	**Wadi Bani Khal**	3.07	290	P	Pn	05 42 52.5	-0.1
	SNR=26						
WBK				P		05 42 52.5	
	SNR=26						
JMDO	**Jabal Madar**	3.78	283	P	Pn	05 43 02.2	-0.3
	SNR=111						
JMDO				P		05 43 02.2	
	SNR=111						
JMDO	**Jabal Madar**	3.78	283	P	Pn	05 43 02.2	-0.3
	SNR=111						
JMDO	**Jabal Madar**	3.78	283	P	Pn	05 43 02.2	-0.3
	SNR=111						
SMDO	**Samad**	4.02	292	P	Pn	05 43 05.3	-0.4
	SNR=30						
SMDO				P		05 43 05.3	
	SNR=30						
SMDO	**Samad**	4.02	292	P	Pn	05 43 05.3	-0.4
	SNR=30						
SMDO	**Samad**	4.02	292	P	Pn	05 43 05.3	-0.4
	SNR=30						
BSYO	**Bisya**	4.64	285	P	Pn	05 43 14.0	-0.2
	SNR=13						
BSYO	**Bisya**	4.64	285	P	Pn	05 43 14.0	-0.2
	SNR=13						
BSY	**Bisya**	4.68	285	P	Pn	05 43 14.0	-0.8
	SNR=13						
BSY				P		05 43 14.0	
	SNR=13						
HOQ	**Hoqain**	4.84	295	P	Pn	05 43 16.9	-0.2
	SNR=17						
HOQ				P		05 43 16.9	
	SNR=17						
HOQ	**Hoqain**	4.84	295	P	Pn	05 43 16.9	-0.1
	SNR=17						
HOQ	**Hoqain**	4.84	295	P	Pn	05 43 16.9	-0.1
	SNR=17						
ARQ	**Araqi**	5.44	290	P	Pn	05 43 25.3	0.0
	SNR=7.2						
ARQ				P		05 43 25.3	
	SNR=7.2						
ARQ	**Araqi**	5.44	290	P	Pn	05 43 25.3	+0.1
	SNR=7.2						
ARQ	**Araqi**	5.44	290	P	Pn	05 43 25.3	+0.1
	SNR=7.2						
ASHO	**Ashiyiah**	6.35	300	⇓P	Pn	05 43 38.2	+0.4
ASHO	**Ashiyiah**	6.35	300	P	Pn	05 43 38.2	+0.4
HATD	**Hatta, Dubai**	6.36	302	⇑P	Pn	05 43 38.9	+1.1
HATD	**Hatta, Dubai**	6.36	302	P	Pn	05 43 38.9	+1.0
WHFO	**Wadi Hawf**	8.65	246	P	Pn	05 44 10.1	+0.7
	SNR=11						
WHFO	**Wadi Hawf**	8.65	246	P	Pn	05 44 10.1	+0.8
	SNR=11						
DMN	**Daman**	21.75	69	*e*P	P	05 46 55.3	-0.3
	22nm,0.8s,mb4.6						
KKN	**Kakani**	21.93	69	*e*P	P	05 46 57.1	-0.5
	19nm,0.6s,mb4.7						
PKIN	**Phulchoki**	22.00	70	*e*P	P	05 46 58.1	-0.1
	18nm,0.6s,mb4.7						
PKI	**Pulchoki**	22.01	70	*e*P	P	05 46 58.1	-0.2
	17nm,0.6s,mb4.7						
GUN	**Gumba**	22.48	69	*e*P	P	05 47 02.9	-0.5
	68nm,1.0s,mb5.0						
RAMN	**Ramite**	22.95	72	*e*P	P	05 47 08.8	+0.4
	15nm,0.7s,mb4.5						
ASF	**Jabal al Asfar**	24.77	300	P	P	05 47 27.0	+1.3
	1.3nm,0.4s,mb3.8,baz=99,slow=2.2,SNR=2.3						
MKAR	**Makanchi Array**	30.01	28	P	P	05 48 12.7	+0.2
	0.6nm,0.6s,mb3.5,baz=208,slow=9.1,SNR=5.5						
BRTR	**Keskin Array B**	30.24	313	P	P	05 48 13.3	-1.3
	0.4nm,0.6s,mb3.3,baz=132,slow=12,SNR=2.8						
KURK	**Kurchatov**	31.83	20	P	P	05 48 27.6	-0.8
	0.7nm,0.3s,mb4.0,baz=215,slow=8.6,SNR=7.1						
BVAR	**Borovoye Array**	32.02	9	P	P	05 48 31.1	+1.0
	0.4nm,0.5s,mb3.5,baz=178,slow=8.7,SNR=2.8						
ZALV	**Zalesovo Beam**	36.63	23	P	P	05 49 09.9	-0.1
	0.6nm,0.3s,mb3.9,baz=221,slow=10,SNR=5.8						
ZALV				LR	LR	06 06 57.4	
	comp=Z,54nm,19.1s,MS3.3,baz=65,slow=41						
SONM	**Songino Array**	44.02	43	P	P	05 50 12.5	+1.1
	1.2nm,0.8s,mb3.6,baz=239,slow=8.9,SNR=5.7						
TORD	**Torodi Ar. Bea**	57.96	272	P	P	05 51 55.6	-1.1
	0.6nm,0.9s,mb3.6,baz=87,slow=5.9,SNR=6.2						
DBIC	**Dimbokro**	66.16	268	LR	LR	06 21 45.4	
	comp=Z,54nm,18.1s,MS3.8,baz=86,slow=36						
WRA	**Warramunga Arr**	81.78	115	P	P	05 54 23.5	+0.5
	0.6nm,1.0s,mb3.5,baz=310,slow=4.6,SNR=3.8						

*IDC **17** 05:51:41.4±0.5, 32°.72N×105°.54E, h0km, mb4.5/25, mb1 4.6/28, mb1mx4.5/35, mbtmp4.5/28, ML4.0/2, MS3.6/11, Ms1 3.6/11, ms1mx3.3/30, Error ellipse: s-maj=20.2km s-min=10.6km az=52.0*

*ISCJB **17** 05:51:41.0±0.2, 32°.75N±0°.02×105°.68E±0°.03, h10km, mb4.6/85, MS3.7/15, Error ellipse: s-maj=3.1km s-min=3.0km az=4.6*

*BJI **17** 05:51:41.8, 32°.76N×105°.57E, h9km, mB4.7/18, mb4.6/29, ML4.7/21, Ms4.3/35, Ms7 4.1/33*

*NEIC **17** 05:51:43.3±0.2, 32°.76N×105°.55E, h10km, mb4.8/59, Error ellipse: s-maj=5.0km s-min=4.8km az=136.0*

NEIC Two people killed and one injured in Shaanxi.

*MOS **17** 05:51:44.4±0.9, 32°.77N×105°.70E, h33km, mb4.8/57, Error ellipse: s-maj=7.8km s-min=4.7km az=110.4*

*SZGRF **17** 05:52:05.2, 34°.50N×102°.71E, h33km, mb4.9, Gansu, China*

ISC 17 05:51:43.3±0.2, 32°.76N±0°.02×105°.63E±0°.02, h10km, (h15km±4.1km:pP-P), n267, σ1§12/285, mb4.6/85, MS3.7/15, 16C-17D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	2.44	221	⇑*i*Pn	Pn	05 52 22.8	-0.4
CD2				Pg	Pg	05 52 26.8	-3.3
CD2				Sg	Sg	05 52 58.4	-3.4
CD2				smax			
	comp=N,17μm,1.0s						
CD2				smax			
	comp=E,14μm,0.8s						
XAN	**Xi'an**	3.03	64	Pn	Pn	05 52 33.1	+1.8
XAN				Pg	Pg	05 52 40.5	-0.9
XAN				Sn	Sn	05 53 10.3	+2.7
XAN				Sg	Sg	05 53 18.3	-2.3
XAN				smax			
	comp=N,3μm,0.8s						
XAN				smax			
	comp=E,2μm,0.9s						
XAN				LR	LR		
	comp=N,4μm,7.0s						
XAN				LR	LR		
	comp=E,840nm,7.3s						
XAN				LR	LR		
	comp=Z,1μm,6.8s						
LZH	**Lanzhou**	3.63	336	Pn	Pn	05 52 41.6	+2.1
LZH				Pg	Pg	05 52 50.3	-2.6
LZH				Sn	Sn	05 53 23.4	+1.0
LZH				Sg	Sg	05 53 36.3	-3.6
LZH				smax			
	comp=N,5μm,1.0s						
LZH				smax			
	comp=E,5μm,1.0s						
LZH				LR	LR		
	comp=E,11μm,7.7s						
LZH				LR	LR		
	comp=Z,11μm,8.5s						
ENH	**Enshi**	4.12	126	*e*Pn	Pn	05 52 48.2	+1.9
ENH				*e*Sg	Sg	05 53 56.0	+0.3
GYA	**Guiyang**	6.35	172	Pn	Pn	05 53 17.1	+0.2
GYA				Pg	Pg	05 53 37.0	-7.8
GYA				Sn	Sn	05 54 27.3	-2.1
GYA				Sg	Sg	05 54 56.8	-10
GYA				smax			
	comp=N,430nm,0.7s						
GYA				smax			
	comp=E,430nm,0.7s						
GYA				LR	LR		
	comp=N,930nm,6.2s						
GYA				LR	LR		
	comp=E,650nm,7.8s						
GYA				LR	LR		
	comp=Z,830nm,8.2s						
WHN	**Wuhan**	7.75	104	Pn	Pn	05 53 36.8	+0.6
WHN				Sn	Sn	05 55 01.0	-3.1
WHN				LR	LR		
	comp=Z,3μm,4.2s						
KMI	**Kunming**	8.02	199	P	Pn	05 53 40.6	+0.7
KMI				S	Sn	05 55 10.8	+0.1
KMI				smax			
	comp=N,80nm,0.8s						
KMI				smax			
	comp=E,78nm,0.8s						
KMI				LR	LR		
	comp=N,1μm,7.9s						
KMI				LR	LR		
	comp=E,2μm,6.4s						
KMI				LR	LR		
	comp=Z,440nm,6.9s						
GTA	**Gaotai**	8.13	326	⇑P	Pn	05 53 41.1	-0.3
GTA				pP		05 53 45.4	
GTA				sP		05 53 48.5	
GTA				S	Sn	05 55 13.9	+0.5
GTA				pmax	pmax		
	comp=Z,44nm,0.7s						
GTA				pmax	pmax		
	comp=Z,110nm,5.3s						
GTA				LR	LR		
	comp=N,2μm,8.9s						
GTA				LR	LR		
	comp=E,2μm,11.9s						
GTA				LR	LR		
	comp=Z,2μm,9.8s						
BTO	**Baotou**	8.58	23	*e*P	Pn	05 53 46.6	-0.9
BTO				S	Sn	05 55 19.4	-5.0
BTO				LR	LR		
	comp=N,400nm,7.8s						
BTO				LR	LR		
	comp=E,210nm,6.4s						
HHC	**Hu-ho-hao-te**	9.36	29	*e*P	Pn	05 53 57.4	-0.9
HHC				pP		05 54 00.8	
HHC				sP		05 54 03.5	
HHC				S	Sn	05 55 45.0	+1.4
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,4.8s						
HHC				LR	LR		
	comp=N,830nm,7.2s						
HHC				LR	LR		
	comp=E,990nm,6.1s						
HHC				LR	LR		
	comp=Z,540nm,6.0s						
TIA	**Tai'an**	10.09	67	*e*P	Pn	05 54 10.8	+2.6
TIA				LR	LR		
	comp=N,450nm,5.0s						
BJT	**Baijiatuau**	11.15	47	*e*P	Pn	05 54 22.4	-0.3
BJI	**Beijing**	11.17	46	P	Pn	05 54 22.0	-1.0
NJ2	**Nanjing**	11.20	90	*e*P	Pn	05 54 19.8	-3.6
NJ2				pP		05 54 25.6	
NJ2				PP		05 54 28.6	
NJ2				sP		05 54 32.5	
NJ2				S	Sn	05 56 24.0	-4.7
NJ2				sS		05 56 36.3	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,460nm,3.7s						
NJ2				LR	LR		
	comp=N,620nm,7.6s						
NJ2				LR	LR		
	comp=E,410nm,8.6s						
NJ2				LR	LR		
	comp=Z,6μm,9.7s						
GZH	**Guangzhou**	11.80	143	P	Pn	05 54 27.3	-4.4
GZH				S	Sn	05 56 31.6	-12
GZH				LR	LR		
	comp=N,2μm,8.4s						
GZH				LR	LR		
	comp=E,2μm,10.2s						
LSA	**Lhasa**	12.77	260	P	Pn	05 54 47.1	+2.2
LSA				LR	LR		
	comp=E,220nm,8.1s						
LSA				LR	LR		
	comp=Z,270nm,6.5s						
LSA	**Lhasa**	12.77	260	*e*P	Pn	05 54 47.0	+2.1
LSA				pmax	pmax		
	comp=Z,15nm,0.8s						
LSA	**Lhasa**	12.77	260	*e*Pn	Pn	05 54 47.0	+2.1
	comp=Z,15nm,0.8s						
SHL	**Shillong**	13.98	243	*e*PKP	Pn	05 55 02.5	+1.0
SHL				*e*S	x	05 59 10.0	
QIZ	**Qiongzhong**	14.19	164	P	Pn	05 55 05.3	+1.0
QIZ				S	Sn	05 57 44.3	+2.4
QIZ				pmax	pmax		
	comp=Z,22nm,1.1s						
QIZ				LR	LR		
	comp=N,730nm,8.4s						
QIZ				LR	LR		
	comp=E,300nm,6.7s						
QIZ				LR	LR		
	comp=Z,800nm,10.2s						
QIZ	**Qiongzhong**	14.19	164	*e*Pn	Pn	05 55 03.3	-1.0
SONM	**Songino Array**	15.07	2	Pn	Pn	05 55 14.9	-1.2
	comp=Z,0.5nm,0.3s,baz=184,slow=14,SNR=22						
SONM				LR	LR	06 02 08.3	
	comp=Z,74nm,21.6s,baz=141,slow=42						
ULN	**Ulaanbaatar**	15.12	4	*e*P	Pn	05 55 17.0	+0.1
ULN				pmax	pmax		
	comp=Z,19nm,1.0s						
ULN	**Ulaanbaatar**	15.12	4	*e*P	Pn	05 55 17.0	+0.1
	comp=Z,19nm,1.0s						
CHTO	**Chiang Mai**	15.13	205	*e*P	Pn	05 55 19.5	+2.3
CHTO				pmax	pmax		
	comp=Z,15nm,1.0s						
CHTO	**Chiang Mai**	15.13	205	*e*P	Pn	05 55 19.5	+2.3
	comp=Z,15nm,1.0s						
CM31	**Chiang Mai Arr**	15.46	205	*e*P	Pn	05 55 22.4	+0.9
	comp=Z,6.1nm,0.6s						
CMAR	**Chiang Mai Arr**	15.46	205	Pn	Pn	05 55 20.7	-0.8
	baz=14,slow=12,SNR=9.8						
CMAR				PcP	PcP	06 00 24.9	0.0
	comp=Z,0.2nm,0.3s,baz=293,slow=1.9,SNR=6.8						
YHNB	**Yeheng**	15.98	116	*e*P	Pn	05 55 34.3	+6.1
	comp=Z,43nm,1.0s						
SSLB	**Suanglung**	16.17	120	*e*P	Pn	05 55 34.0	+3.3
	comp=Z,40nm,0.9s						
TAPN	**Taplejung**	16.42	256	*e*P	Pn	05 55 33.5	-0.4
	comp=Z,202nm,1.1s						
SNY	**Shenyang**	16.88	52	⇑P	Pn	05 55 45.1	+5.5
SNY				pmax	pmax		
	comp=Z,10.0nm,1.3s						
SNY				pmax	pmax		
	comp=Z,170nm,3.5s						
SNY				LR	LR		
	comp=Z,210nm,15.3s						
SNY				LR	LR		
	comp=N,450nm,16.5s						
ODAN	**Odare**	16.88	254	*e*P	Pn	05 55 37.6	-2.1
	comp=N,66nm,0.6s						
RAMN	**Ramite**	17.49	256	*e*P	Pn	05 55 43.9	-3.4
	comp=N,194nm,1.1s						
ZAK	**Zakamensk**	17.69	355	*e*P	Pn	05 55 49.6	0.0
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GUN	**Gumba**	17.72	259	*e*P	Pn	05 55 48.8	-1.4
	comp=Z,107nm,0.8s						
WMQ	**Urumqi**	17.85	313	*e*P	Pn	05 55 53.0	+1.3
WMQ				sP	sP	05 56 00.0	+3.5
WMQ				PP		05 56 08.0	
WMQ				S	Sn	05 59 09.0	-1.7
WMQ				SS		05 59 33.0	
WMQ				pmax	pmax		
	comp=Z,52nm,2.0s						
WMQ				LR	LR		
	comp=N,690nm,6.0s						
WMQ				LR	LR		
	comp=E,350nm,6.0s						
WMQ				LR	LR		
	comp=Z,260nm,6.0s						
PKI	**Pulchoki**	18.23	259	*e*P	Pn	05 55 53.7	-2.8
	comp=Z,46nm,0.5s						
PKI	**Pulchoki**	18.23	259	*e*P	Pn	05 55 53.7	-2.8
PKI				pmax	pmax		
	comp=Z,46nm,0.5s						
PKIN	**Phulchoki**	18.24	259	*e*P	Pn	05 55 53.5	-3.1
	comp=Z,92nm,0.7s						
KKN	**Kakani**	18.26	260	*e*P	Pn	05 55 53.9	-2.9
	comp=Z,106nm,0.7s						
KKN	**Kakani**	18.26	260	*e*P	Pn	05 55 53.9	-2.9
KKN				pmax	pmax		
	comp=Z,106nm,0.7s						
DMN	**Daman**	18.47	259	*e*P	Pn	05 55 56.3	-3.1
	comp=Z,75nm,0.8s						
KSRS	**Korea Array**	18.82	69	P	Pn	05 56 04.3	+0.8
	comp=Z,0.7nm,0.3s,baz=256,slow=10,SNR=41						
KSRS				S	Sn	05 59 44.2	+10
	comp=Z,0.1nm,0.3s,baz=253,slow=18,SNR=4.3						
KSRS				LR	LR	06 03 59.4	
	comp=Z,180nm,19.0s,baz=43,slow=39						
TLY	**Talaya**	18.96	356	*e*P	Pn	05 56 07.4	+2.3
TLY				pmax	pmax		
	comp=Z,11nm,1.3s						
TLY				MLR	MLR		
	comp=Z,143nm,12.0s						
TLY	**Talaya**	18.96	356	*e*P	Pn	05 56 05.4	+0.2
	comp=Z,4.6nm,0.6s						
CN2	**Changchun**	19.01	49	*e*P	Pn	05 56 06.4	+0.5
CN2				*e*pP	pP	05 56 14.3	+6.3
CN2				*e*sP	sP	05 56 18.9	+10
CN2				*e*S	Sn	05 59 33.4	-5.3
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,300nm,6.0s						
CN2				LR	LR		
	comp=N,200nm,17.0s						
CN2				LR	LR		
	comp=E,400nm,17.0s						
CN2				LR	LR		
	comp=Z,400nm,20.0s						
MOY	**Mondy**	19.19	351	*e*P	Pn	05 56 09.5	+1.6
HIA	**Hailar**	19.57	28	*e*P	Pn	05 56 12.1	-0.4
HIA				pmax	pmax		
	comp=Z,7.0nm,0.5s						
HIA	**Hailar**	19.57	28	*e*P	Pn	05 56 12.1	-0.3
	comp=Z,7.1nm,0.5s						
MDJ	**Mudanjiang**	22.04	51	P	P	05 56 41.8	+3.8
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.1						
MDJ				pmax	pmax		
	comp=Z,91nm,5.5s						

MDJ LR LR
comp=N,90nm,17.7s,MS3.4
MDJ LR LR
comp=E,71nm,14.9s,MS3.4
MDJ LR LR
comp=Z,66nm,16.8s,MS3.1
MK31 Makanchi Array 22.65 315 *e*P **P 05 56 44.4 0.0**
MKAR Makanchi Array 22.65 315 P P **05 56 44.5 0.0**
comp=Z,18nm,0.9s,mb4.5,baz=111,slow=10,SNR=42
MKAR LR LR 06 05 12.1
comp=Z,161nm,19.1s,MS3.5,baz=113,slow=36
MKAR Makanchi Array 22.65 315 P **P 05 56 44.5 +0.1**
MKAR pmax pmax
comp=Z,18nm,0.9s
MKAR MLR MLR
comp=Z,161nm,19.1s
DDI Dehra Dun 23.61 271 *ex* x 05 56 53.0
KSH Kashi 24.81 294 P **P 05 57 08.8 +3.3**
KSH pP 05 57 13.1
KSH sP sP 05 57 15.8 +6.0
KSH PP 05 57 47.0
KSH PcP PcP 06 00 43.3 +1.6
KSH S **S 06 01 30.3 +2.2**
KSH sS sS 06 01 38.3 +5.2
KSH SS 06 02 31.3
KSH ScP ScP 06 04 20.6 -0.1
KSH PcS PcS 06 04 22.3 +0.6
KSH ScS ScS 06 08 07.8 -0.9
KSH pmax pmax
comp=Z,31nm,1.1s,mb4.8
KSH pmax pmax
comp=Z,88nm,3.9s
KSH LR LR
comp=N,230nm,8.6s
KSH LR LR
comp=E,140nm,9.5s
KSH LR LR
comp=Z,130nm,5.3s
ULHL Ulahol 25.06 301 P **P 05 57 09.8 +2.1**
SNR=8.5
KLR Kul'dur 25.49 42 *e*P **P 05 57 08.5 -3.0**
KLR MLR MLR
comp=N,900nm,14.0s,MS4.5
KLR MLR MLR
comp=E,500nm,14.0s,MS4.5
TKM2 Tokmak 2 25.68 302 P **P 05 57 16.4 +3.1**
SNR=15
KZA Kyzart 25.75 300 P **P 05 57 15.7 +1.7**
SNR=12
ZALV Zalesovo Beam 25.85 331 P **P 05 57 13.8 -0.9**
comp=E,4.4nm,0.7s,mb4.1,baz=133,slow=8.9,SNR=21
ZALV Zalesovo Beam 25.85 331 P **P 05 57 13.8 -0.9**
ZALV pmax pmax
comp=Z,4.0nm,0.7s,mb4.1
KBK Karagaybulak 26.09 301 P **P 05 57 18.3 +1.3**
SNR=16
UCH Uchtor 26.32 300 P **P 05 57 20.8 +1.7**
SNR=36
AAK Ala-Archa 26.41 301 P **P 05 57 21.0 +1.1**
comp=Z,2.8nm,0.5s,mb4.0,baz=154,slow=7.9,SNR=9.6
AAK LR LR 06 08 57.4
comp=Z,315nm,19.8s,MS3.9,baz=292,slow=39
AAK Ala-Archa 26.41 301⇓ *e*P **P 05 57 21.1 +1.2**
AAK pmax pmax
comp=Z,9.0nm,1.2s,mb4.2
AAK MLR MLR
comp=Z,141nm,19.0s,MS3.5
AAK Ala-Archa 26.41 301 *e*P **P 05 57 20.2 +0.3**
comp=Z,11nm,0.9s,mb4.4
USP Ospenovka 26.54 302 P **P 05 57 21.9 +0.8**
SNR=25
KURK Kurchatov 26.75 320 P **P 05 57 22.9 -0.1**
comp=Z,12nm,0.9s,mb4.4,baz=132,slow=9.0,SNR=29
KURK ScP ScP 06 04 26.8 +0.7
comp=Z,0.3nm,0.2s,baz=116,slow=2.2,SNR=3.6
KURK LR LR 06 08 27.0
comp=Z,64nm,19.9s,MS3.2,baz=150,slow=38
KURK Kurchatov 26.75 320⇓ *e*P **P 05 57 23.1 +0.1**
KURK pmax pmax
comp=Z,31nm,1.2s,mb4.7
KURK Kurchatov 26.75 320 *e*P **P 05 57 22.4 -0.6**
comp=Z,31nm,1.2s,mb4.7
AML Almayashu 26.90 300 P **P 05 57 25.8 +1.5**
SNR=14
MJAR Matsushiro Arr 26.99 73 P **P 05 57 27.8 +2.6**
comp=Z,4.2nm,0.9s,mb4.0,baz=277,slow=10,SNR=7.2
MJAR LR LR 06 09 26.0
comp=Z,106nm,18.1s,MS3.4,baz=270,slow=39
MJAR Matsushiro Arr 26.99 73 P **P 05 57 27.8 +2.5**
MJAR pmax pmax
comp=Z,4.0nm,0.9s
MJAR MLR MLR
comp=Z,107nm,18.1s
HABR Khabarovsk 27.07 46 P **P 05 57 24.3 -1.6**
HABR *e* 05 58 07.4
HABR 06 00 45.4
HABR S **S 06 02 01.0 -2.7**
HABR *e**SS sS 06 02 17.1 +8.4
HABR *e*SS 06 03 09.2
HABR *e*SSS 06 03 25.0
HABR *e* 06 08 13.1
HABR MLR MLR
comp=Z,107nm,14.0s,MS3.6
NVS Novosibirsk 27.13 331 *e*P **P 05 57 20.6 -5.7**
NVS *e*S **S 06 01 56.9 -7.6**
NVS pmax pmax
comp=Z,10.0nm,1.2s,mb4.2
NVS pmax pmax
comp=N,11nm,1.6s
NVS pmax pmax
comp=E,15nm,1.6s
NVS smax
comp=N,13nm,1.5s
JHJ Hachijo jima 2 28.59 80 LR LR 06 09 58.1
comp=N,110nm,18.2s,MS3.5,baz=63,slow=38
KBL Kabul 30.41 284 *e*P **P 05 57 56.8 +1.1**
KBL pmax pmax
comp=Z,24nm,1.1s,mb4.8
KBL Kabul 30.41 284 *e*P **P 05 57 56.8 +1.1**
comp=Z,24nm,1.1s,mb4.8
PSI Prapat 30.46 193 P **P 05 57 56.5 +0.2**
comp=Z,4.7nm,0.6s,mb4.4,baz=316,slow=1.7,SNR=6.8
PSI Prapat 30.46 193 P **P 05 57 56.5 +0.2**
PSI pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
BVAR Borovoye Array 32.34 319 P **P 05 58 12.2 -0.3**
comp=Z,2.5nm,0.6s,mb4.2,baz=116,slow=10,SNR=12
BVAR PcP PcP 06 00 58.7 -1.4
comp=Z,2.1nm,0.9s,baz=202,slow=1.6,SNR=3.9
BVAR ScP ScP 06 04 42.6 -1.3
comp=Z,0.8nm,0.7s,baz=164,slow=2.6,SNR=4.9
BRVK Borovoye 32.41 319⇓ *e*P **P 05 58 13.5 +0.4**
BRVK pmax pmax
comp=Z,12nm,1.2s,mb4.6
BRVK MLR MLR
comp=Z,129nm,18.0s,MS3.7
BRVK Borovoye 32.41 319 *e*P **P 05 58 13.7 +0.5**
comp=Z,7.0nm,0.8s,mb4.5
YAK Yakutsk 33.10 21 *e*P **P 05 58 18.1 -0.9**
YAK pmax pmax
comp=Z,13nm,0.9s,mb4.9
ABKAR Akbulak array 37.58 310 *e*P **P 05 58 57.9 +0.2**
comp=Z,9.0nm,0.9s,mb4.5
SVE Sverdlovsk 38.97 322 *e*P **P 05 59 07.1 -2.3**
SVE pmax pmax
comp=Z,31nm,1.1s,mb5.0
AKTK Aktyubinsk 38.99 311 P **P 05 59 09.2 -0.4**
AKTO Aktyubinsk 38.99 311 P **P 05 59 09.2 -0.4**
comp=Z,2.2nm,0.5s,mb4.1,baz=63,slow=8.2,SNR=8.4
AKTO Aktyubinsk 38.99 311 P **P 05 59 09.2 -0.4**
AKTO pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
KAPI Kappang 39.89 158 P **P 05 59 17.4 0.0**
comp=Z,14nm,0.7s,mb4.8,baz=313,slow=7.0,SNR=8.2
KAPI Kappang 39.89 158 *e*P **P 05 59 16.4 -1.0**
comp=Z,24nm,1.0s,mb4.9
ARU Arti 39.95 321 *d i*P **P 05 59 17.4 -0.1**
ARU S **S 06 05 21.0 -1.5**
ARU pmax pmax
comp=Z,33nm,1.2s,mb4.9
ARU Arti 39.95 321 *e*P **P 05 59 17.6 +0.1**
comp=Z,19nm,0.9s,mb4.8
TIXI Tiksi 40.88 11 *e*P **P 05 59 24.4 -0.6**
TIXI pmax pmax
comp=Z,21nm,1.3s,mb4.6
TIXI Tiksi 40.88 11 *e*P **P 05 59 24.4 -0.7**
comp=Z,22nm,1.3s,mb4.6
SOKR Solikamsk 41.77 325 *c i*P **P 05 59 32.6 +0.1**
SOKR pmax pmax
comp=Z,20nm,1.3s,mb4.6
SEY Seymchan 42.01 30⇓ *e*P **P 05 59 35.3 +0.9**
PETK Petropavlovsk- 42.10 45 LR LR 06 18 45.9
comp=Z,94nm,19.2s,MS3.7,baz=100,slow=38
GNI Garni 48.70 297 P **P 06 00 29.7 +1.9**
comp=Z,4.1nm,0.5s,mb4.8,baz=23,slow=23,SNR=3.0
GNI Garni 48.70 297 *i* P **P 06 00 30.1 +2.3**
GNI pmax pmax
comp=Z,16nm,1.3s
ZEI Tsey 48.84 301 *e*P **P 06 00 28.2 -0.6**
ZEI pmax pmax
comp=Z,17nm,1.5s,mb4.8
BILL Bilibino 49.12 26⇓ *i*P **P 06 00 30.7 +0.1**
BILL pmax pmax
comp=Z,13nm,1.0s,mb4.9
BILL MLR MLR
comp=Z,100nm,17.0s,MS3.9
BILL Bilibino 49.12 26 *e*P **P 06 00 30.8 +0.1**
comp=Z,7.7nm,0.5s,mb5.0
KIV Kislovodsk 49.51 302 *e*P **P 06 00 34.5 +0.5**
KIV pmax pmax
comp=Z,14nm,1.1s,mb4.9
KIV MLR MLR
comp=Z,81nm,16.0s,MS3.8
OBN Obninsk 52.14 317⇑ *i*P **P 06 00 53.7 +0.1**
OBN pmax pmax
comp=Z,13nm,1.2s,mb4.7
JOF Joensuu 54.33 327 *e*P **P 06 01 08.9 -0.7**
JOF pmax pmax
comp=Z,14nm,0.9s,mb4.9
JOF Joensuu 54.33 327 *ep* **P 06 01 08.9 -0.7**
comp=Z,14nm,0.9s,mb4.9
KEV Kevo 55.76 336 *e*P **P 06 01 18.9 -0.9**
KEV pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
KEV Kevo 55.76 336 *ep* **P 06 01 18.9 -0.9**
comp=Z,5.7nm,0.9s,mb4.6
ARCES ARCESS Array B 56.29 335 P **P 06 01 23.1 -0.5**
comp=Z,2.9nm,0.8s,mb4.4,baz=79,slow=8.1,SNR=17
ARCES LR LR 06 27 12.0
comp=Z,48nm,18.8s,MS3.6,baz=109,slow=38
ARCES ARCESS Array B 56.29 335 P **P 06 01 23.1 -0.5**
ARCES pmax pmax
comp=Z,3.0nm,0.8s
ARCES MLR MLR
comp=Z,48nm,18.8s
KAF Kangasniemi 56.72 326 *e*P **P 06 01 25.5 -1.3**
KAF pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
KAF Kangasniemi 56.72 326 *ep* **P 06 01 25.5 -1.3**
comp=Z,7.3nm,0.7s,mb4.8,baz=81,slow=6.7
FINES FINESS Array B 56.93 326 P **P 06 01 27.7 -0.6**
comp=Z,6.4nm,0.5s,mb5.0,baz=89,slow=7.4,SNR=48
FINES FINESS Array B 56.93 326 P **P 06 01 27.7 -0.6**
FINES pmax pmax
comp=Z,6.0nm,0.5s
ASF Jabal al Asfar 57.01 290 P **P 06 01 29.1 -0.2**
baz=13,slow=9.1
BR131 Keskin Array S 57.06 299 *e*P **P 06 01 29.4 -0.2**
comp=Z,0.9nm,0.5s,mb4.1
BRTR Keskin Array B 57.06 299 P **P 06 01 29.0 -0.6**
comp=Z,1.6nm,0.7s,mb4.2,baz=102,slow=6.7,SNR=11
BRTR Keskin Array B 57.06 299 P **P 06 01 29.0 -0.6**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 57.21 313 P **P 06 01 29.6 -0.9**
comp=Z,4.2nm,0.5s,mb4.7,baz=68,slow=6.4,SNR=18
AKASG Malin Array Be 57.21 313 P **P 06 01 29.6 -0.8**
AKASG pmax pmax
comp=Z,4.0nm,0.5s
KIEV Kiev 57.22 313 *e*P **P 06 01 28.8 -1.7**
KIEV pmax pmax
comp=Z,11nm,0.9s,mb4.9
KIEV Kiev 57.22 313 *e*P **P 06 01 28.8 -1.8**
comp=Z,11nm,0.9s,mb4.9
WRAB Tennant Creek 59.16 148 *e*P **P 06 01 44.7 +0.4**
WRAB pmax pmax
comp=Z,19nm,0.8s,mb5.2
WRAB Tennant Creek 59.16 148 *e*P **P 06 01 44.7 +0.4**
comp=Z,19nm,0.8s,mb5.2
WRA Warramunga Arr 59.16 148 P **P 06 01 43.8 -0.6**
comp=Z,13nm,0.7s,mb5.1,baz=342,slow=7.5,SNR=68
WRA Warramunga Arr 59.16 148 P **P 06 01 43.8 -0.6**
WRA pmax pmax
comp=Z,13nm,0.7s
CFR Carcaliu 59.35 307⇑ *i*P **P 06 01 45.3 -0.2**
CFR Carcaliu 59.35 307⇑ *i*P **P 06 01 45.3 -0.2**
TIRR Tirgusor 59.38 306⇑ *i*P **P 06 01 45.4 -0.3**
TIRR Tirgusor 59.38 306⇑ *i*P **P 06 01 45.4 -0.3**
HARR Harsova 59.64 306⇓ *i*P **P 06 01 47.7 +0.2**
HARR Harsova 59.64 306⇓ *i*P **P 06 01 47.7 +0.2**
VRI Vrincioaia 60.09 308⇓ *i*P **P 06 01 51.2 +0.6**
VRI Vrincioaia 60.09 308⇓ *i*P **P 06 01 51.2 +0.6**
BURAR Bucovina Array 60.56 310⇓ *i*P **P 06 01 53.8 0.0**
BURAR Bucovina Array 60.56 310⇓ *i*P **P 06 01 53.8 0.0**
BUR08 Bucovina Ar. S 60.56 310 *e*P **P 06 01 53.5 -0.2**
LVV L'vov 60.66 313 *e*P **P 06 01 53.9 -0.5**
MLR Muntele Rosu 60.73 308 P **P 06 01 55.2 +0.2**
comp=Z,3.5nm,0.5s,mb4.8,baz=167,slow=19,SNR=6.5
MLR Muntele Rosu 60.73 308 P **P 06 01 55.2 +0.2**
MLR pmax pmax
comp=Z,4.0nm,0.5s
MLR Muntele Rosu 60.73 308⇓ *i*P **P 06 01 55.4 +0.4**
MLR Muntele Rosu 60.73 308⇓ *i*P **P 06 01 55.4 +0.4**
VOIR 61.35 308⇑ *i*P **P 06 01 59.7 +0.5**
KWP Kalwaria Pacla 61.53 313 *e*P **P 06 02 00.5 +0.1**
KWP Kalwaria Pacla 61.53 313⇑ *i*P **P 06 02 00.6 +0.3**
KWP Kalwaria Pacla 61.53 313 *e*P **P 06 02 00.5 +0.1**
comp=Z,36nm,1.0s,mb5.5
KWP Kalwaria Pacla 61.53 313⇑ *i*P **P 06 02 00.6 +0.3**
KOLS Kolonicke sedl 62.02 312 *e*P **P 06 02 04.2 +0.5**
KOLS pmax pmax
comp=Z,8.0nm,1.3s,mb4.7
KOLS Kolonicke sedl 62.02 312 *e*P **P 06 02 04.2 +0.5**
comp=Z,8.4nm,1.3s,mb4.7
KOLS Kolonicke sedl 62.02 312 *e*P **P 06 02 04.2 +0.5**
KOLS *ep*P pP 06 02 10.4 +3.5
ASAR Alice Springs 62.26 151 P **P 06 02 05.2 -0.3**
comp=Z,6.7nm,0.7s,mb4.9,baz=332,slow=6.2,SNR=47
ASAR Alice Springs 62.26 151 P **P 06 02 05.2 -0.2**
ASAR pmax pmax
comp=Z,7.0nm,0.7s
DRGR 62.44 310⇓ *i*P **P 06 02 06.9 +0.4**
STHS Stebnicka Huta 62.51 313 *e*P **P 06 02 07.8 +0.9**
STHS pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
STHS Stebnicka Huta 62.51 313 *e*P **P 06 02 07.8 +0.9**
comp=Z,5.3nm,1.0s,mb4.6
STHS Stebnicka Huta 62.51 313 *e*P **P 06 02 07.8 +0.9**
CRVS Cervenica-Dubn 62.54 312 *e*P **P 06 02 09.1 +2.0**
CRVS pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
CRVS Cervenica-Dubn 62.54 312 *e*P **P 06 02 09.1 +2.0**
comp=Z,2.3nm,0.8s,mb4.4
CRVS Cervenica-Dubn 62.54 312 *e*P **P 06 02 09.1 +2.0**
CRVS *ep*P pP 06 02 16.1 +5.8
GZR Gura Zlata 62.87 308⇓ *i*P **P 06 02 13.2 +3.8**
GZR Gura Zlata 62.87 308⇓ *i*P **P 06 02 13.2 +3.8**
NIE Niedzica 63.08 313 *e*P **P 06 02 11.4 +0.7**
OJC Ojcow 63.12 314 *e*P **P 06 02 09.7 -1.3**
KECS Kecovo 63.29 312 *e*P **P 06 02 13.7 +1.6**
KECS pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
KECS Kecovo 63.29 312 *e*P **P 06 02 13.7 +1.6**
comp=Z,2.1nm,0.8s,mb4.3
NB2 NORSAR Subarra 63.97 327 P **P 06 02 15.0 -1.4**
comp=Z,8.1nm,0.9s,mb4.8,baz=72,slow=6.9
NOA NORSAR Array B 63.97 327 P **P 06 02 15.1 -1.3**
comp=Z,5.8nm,0.8s,mb4.7,baz=71,slow=6.7,SNR=18
NOA NORSAR Array B 63.97 327 P **P 06 02 15.1 -1.3**
NOA pmax pmax
comp=Z,6.0nm,0.8s
OKC Ostrava-Krasne 64.25 314 *e*P **P 06 02 18.7 +0.2**
OKC Ostrava-Krasne 64.25 314 *e*P **P 06 02 18.7 +0.2**
VYHS Vyhne 64.31 313 *e*P **P 06 02 19.1 +0.2**
VYHS pmax pmax
comp=Z,6.0nm,1.2s,mb4.5
VYHS Vyhne 64.31 313 *e*P **P 06 02 19.1 +0.2**
comp=Z,5.6nm,1.2s,mb4.5
MORC Moravsky Berou 64.64 314 *e*P **P 06 02 20.8 -0.2**
MORC pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
MORC Moravsky Berou 64.64 314 *e*P **P 06 02 20.8 -0.2**
comp=Z,7.2nm,0.9s,mb4.7
TTA Tatalina 64.98 30 *e*P **P 06 02 22.8 -0.2**
TTA pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
TTA Tatalina 64.98 30 *e*P **P 06 02 22.8 -0.2**
comp=Z,3.5nm,0.7s,mb4.5
DPC Dobruska-Polom 65.16 315 *e*P **P 06 02 24.7 +0.3**
DPC Dobruska-Polom 65.16 315 *e*P **P 06 02 24.7 +0.3**
DPC *ep*P pP 06 02 27.2 -0.4
PKSM Moragy 65.28 310⇑ *i*P **P 06 02 25.0 -0.2**
UPC Upice 65.29 315 *e*P **P 06 02 25.6 +0.4**
UPC Upice 65.29 315 *e*P **P 06 02 25.6 +0.4**
VRAC Vranov 65.39 314 P **P 06 02 25.9 +0.1**
comp=Z,3.2nm,0.3s,mb4.8,baz=32,slow=9.7,SNR=3.4
VRAC Vranov 65.39 314 P **P 06 02 25.9 0.0**
VRAC pmax pmax
comp=Z,3.0nm,0.4s
COLD Coldfoot 65.43 25 *e*P **P 06 02 25.9 +0.1**
comp=Z,5.9nm,0.9s,mb4.6
ZST Bratislava 65.50 313 *e*P **P 06 02 27.7 +1.1**
ZST pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
ZST Bratislava 65.50 313 *e*P **P 06 02 27.7 +1.1**
comp=Z,5.3nm,0.7s,mb4.7
SVW2 Sparrevohn 65.91 32 *e*P **P 06 02 29.8 +0.8**
PRU Pruhonice 66.36 315 *e*P **P 06 02 34.6 +2.5**
PRU Pruhonice 66.36 315 *e*P **P 06 02 34.6 +2.5**
BRG Berggiesshubel 66.36 316 *e*P **P 06 02 31.7 -0.4**
comp=Z,4.0nm,0.7s,mb4.6
BRG Berggiesshubel 66.36 316 *e*P **P 06 02 31.9 -0.2**
BRG pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
BPAW Bear Paw Mtn. 66.53 28 *e*P **P 06 02 32.6 -0.3**
comp=Z,6.6nm,0.8s,mb4.7
CLL Collm 66.73 317 *e*P **P 06 02 34.0 -0.5**
CLL pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
CLL Collm 66.73 317 *e*P **P 06 02 34.0 -0.5**
comp=Z,5.0nm,0.8s,mb4.6
CLL *e* pP 06 02 36.0 -1.7
TRF Thorofare Moun 67.11 28 *e*P **P 06 02 36.6 0.0**
comp=Z,5.0nm,0.9s,mb4.5
BSEG Bad Segeberg 67.16 320 *e*P **P 06 02 37.3 +0.2**
comp=Z,12nm,0.8s,mb5.0
BSEG Bad Segeberg 67.16 320 *e*P **P 06 02 37.3 +0.2**
BSEG Bad Segeberg 67.16 320 *e*P **P 06 02 37.3 +0.2**
KHC Kasperske Hory 67.28 315 *e*P **P 06 02 37.9 -0.1**
KHC Kasperske Hory 67.28 315 *e*P **P 06 02 37.9 -0.1**
GEC2 GERESS Array S 67.32 314 *e*P **P 06 02 37.9 -0.3**
comp=Z,6.0nm,1.1s,mb4.5
GEC2 GERESS Array S 67.32 314 *e*P **P 06 02 37.9 -0.3**
GEC2 pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
GEC2 GERESS Array S 67.32 314 *e*P **P 06 02 37.9 -0.3**
comp=Z,6.0nm,1.1s,mb4.5
GERES GERESS Array B 67.32 314 P **P 06 02 37.9 -0.4**
comp=Z,1.7nm,0.7s,mb4.2,baz=70,slow=5.8,SNR=11
GERES LR LR 06 32 38.6
comp=Z,40nm,18.1s,MS3.7,baz=268,slow=36
GERES GERESS Array B 67.32 314 P **P 06 02 37.9 -0.3**
GERES pmax pmax
comp=Z,2.0nm,0.7s
GERES MLR MLR
comp=Z,40nm,18.1s
COLA College 67.37 26 *e*P **P 06 02 38.3 0.0**
COLA pmax pmax
comp=Z,16nm,0.9s,mb5.0
COLA College 67.37 26 *e*P **P 06 02 38.3 0.0**
comp=Z,16nm,0.9s,mb5.0
TANN Tannenbergstha 67.41 316 *e*P **P 06 02 38.5 -0.3**
comp=Z,5.0nm,1.0s,mb4.5
RSO Redoubt South 67.43 32 *e*P **P 06 02 39.3 +0.5**
MCK McKinley 67.51 28 *e*P **P 06 02 38.5 -0.7**
MCK pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
MCK McKinley 67.51 28 *e*P **P 06 02 38.5 -0.6**
comp=Z,4.5nm,0.7s,mb4.6
GUNZ Gunzen 67.51 316 *e*P **P 06 02 39.1 -0.3**
comp=Z,10.0nm,1.4s,mb4.7
PLN Plauen 67.56 316 *e*P **P 06 02 39.3 -0.4**
comp=Z,26nm,1.2s,mb5.1
MOX Moxa 67.81 317 *e*P **P 06 02 40.9 -0.4**
comp=Z,4.0nm,0.9s,mb4.5
ROTZ Rotzenmuhle 67.83 316 *e*P **P 06 02 41.6 +0.2**
comp=Z,9.0nm,1.1s,mb4.7
NRDL Niedersach Rie 67.88 319 *e*P **P 06 02 41.9 +0.2**
comp=Z,12nm,1.0s,mb4.9
CLZ Clausthal 68.01 318 *e*P **P 06 02 42.5 0.0**
comp=Z,14nm,1.2s,mb4.9
CLZ Clausthal 68.01 318 *e*P **P 06 02 42.5 0.0**
CLZ pmax pmax
comp=Z,14nm,1.2s,mb4.9
CLZ Clausthal 68.01 318 *e*P **P 06 02 42.5 0.0**
comp=Z,14nm,1.2s,mb4.9
GRA1 Grafenberg Arr 68.44 316 *e*P **P 06 02 47.7 +2.4**
comp=Z,4.0nm,1.1s,mb4.4
GRF Grafenberg Arr 68.44 316 *e*P **P 06 02 47.7 +2.4**
comp=Z,4.0nm,1.1s,mb4.4
GRF Grafenberg Arr 68.44 316 *e*P **P 06 02 47.7 +2.4**
GRF pmax pmax
comp=Z,4.0nm,1.1s,mb4.4
GRF Grafenberg Arr 68.44 316 *e*P **P 06 02 47.7 +2.4**
GRF pmax pmax
comp=Z,4.0nm,1.1s,mb4.4
GRF Grafenberg Arr 68.44 316 *e*P **P 06 02 47.7 +2.4**
comp=Z,4.0nm,1.1s,mb4.4
PMR Palmer 68.46 30 *e*P **P 06 02 44.4 -0.8**
PMR pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
PMR Palmer 68.46 30 *e*P **P 06 02 44.4 -0.8**
comp=Z,8.4nm,0.6s,mb5.0
KDAK Kodiak Island 68.74 34 *ce*P **P 06 02 46.8 -0.2**
KDAK Kodiak Island 68.74 34 *e*P **P 06 02 46.4 -0.6**
comp=Z,7.0nm,0.8s,mb4.6
EGAK Eagle 69.86 25 *e*P **P 06 02 53.1 -0.6**
comp=Z,2.5nm,0.8s,mb4.2
FETA Feichten 69.91 313⇑ *i*P **P 06 02 53.6 -0.9**
comp=Z,9.2nm,1.0s,mb4.7
INK Inuvik 70.16 20 *e*P **P 06 02 54.6 -1.0**
INK pmax pmax
comp=Z,5.0nm,0.7s
INK Inuvik 70.16 20 *e*P **P 06 02 54.6 -1.0**
comp=Z,5.4nm,0.7s,mb4.6
DAVOX Davos/Dischmat 70.54 314 P **P 06 02 58.4 +0.1**
comp=Z,2.4nm,0.4s,mb4.5,baz=49,slow=13,SNR=5.2
BMRM Bremner River 70.66 29 *e*P **P 06 02 58.6 -0.2**
comp=Z,12nm,0.8s,mb4.9
CDF Champ du Feu 71.33 316 *e*P **P 06 03 02.9 -0.2**
RES Resolute Bay 71.97 6 *e*P **P 06 03 05.9 -0.6**
RES pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
RES Resolute Bay 71.97 6 *e*P **P 06 03 05.8 -0.6**
comp=Z,3.2nm,0.8s,mb4.3
KMBO Kilima Mbogo 72.55 257 *e*P **P 06 03 11.2 +0.3**
KMBO pmax pmax
comp=Z,5.0nm,1.0s
KMBO Kilima Mbogo 72.55 257 *e*P **P 06 03 11.2 +0.2**
comp=Z,5.2nm,1.0s,mb4.4
STKA Stephens Creek 72.71 148 P **P 06 03 10.4 -1.0**
comp=Z,4.9nm,0.8s,mb4.5,baz=301,slow=2.4,SNR=5.8
STKA Stephens Creek 72.71 148 *e*P **P 06 03 11.0 -0.4**
comp=Z,1.1nm,0.9s,mb3.8
LPG La Plagne 73.06 313 *e*P **P 06 03 13.9 +0.4**
comp=Z,25nm,0.9s,mb4.8
LPG La Plagne 73.06 313 *e*P **P 06 03 13.9 +0.4**
LPG pmax pmax
comp=Z,12nm,0.9s,mb4.8
LPG La Plagne 73.06 313 *e*P **P 06 03 13.9 +0.4**
comp=Z,12nm,0.9s,mb4.8
LPL La Plagne 73.06 313 *e*P **P 06 03 13.9 +0.4**
EKA Eskdalemuir Ar 73.33 326 P **P 06 03 14.4 -0.5**
comp=Z,1.8nm,0.8s,mb4.1,baz=56,slow=3.4,SNR=4.1
EKA Eskdalemuir Ar 73.33 326 P **P 06 03 14.4 -0.5**
EKA pmax pmax
comp=Z,2.0nm,0.8s
PNL Peninsula 73.53 29 *e*P **P 06 03 16.8 +0.8**
comp=Z,15nm,0.9s,mb4.9
SMF Signal de Mont 74.23 316 *e*P **P 06 03 19.7 -0.7**
SKAG Skagway 75.27 27 *e*P **P 06 03 26.4 +0.2**
comp=Z,16nm,0.8s,mb5.0
DLBC Dease Lake 77.99 26 *e*P **P 06 03 41.8 +0.3**
YKA Yellowknife Ar 79.72 18 P **P 06 03 50.3 -0.6**
comp=Z,2.7nm,0.7s,mb4.3,baz=328,slow=5.4,SNR=7.5
YKA Yellowknife Ar 79.72 18 P **P 06 03 50.3 -0.7**
YKA pmax pmax

comp=Z,3.0nm,0.7s
FCC Fort Churchill 87.35 10 *e*P **P 06 04 29.1 -1.1**
comp=Z,0.2nm,0.9s,mb3.4
FFC Flin Flon 89.68 16 *c e*P **P 06 04 41.5 +0.2**
FFC Flin Flon 89.68 16 *e*P **P 06 04 40.9 -0.4**
comp=Z,4.2nm,0.8s,mb4.8
SCHQ Schefferville 92.52 356 P **P 06 04 54.0 -0.5**
comp=Z,4.7nm,0.9s,mb4.9,baz=63,slow=7.4,SNR=4.1
TORD Torodi Ar. Bea 94.36 289 P **P 06 05 02.8 -0.9**
comp=Z,0.3nm,0.5s,mb4.0,baz=59,slow=3.9,SNR=14
TORD LR LR 06 50 35.6
comp=Z,43nm,18.2s,MS4.0,baz=140,slow=38
NVAR Mina Array Bea 98.23 33 P **P 06 05 24.6 +3.7**
comp=Z,0.7nm,0.9s,mb4.2,baz=326,slow=2.6,SNR=3.4
QSPA South Pole Qui 122.53 180 *e*PKPdf PKPdf 06 10 38.1 +0.4
OTAV Otavalo 146.95 8 *e*PKPbc PKPbc 06 11 27.7 +1.0
LPAZ La Paz 162.65 340 PKP PKPdf 06 11 46.5 +0.5
comp=Z,0.9nm,0.9s,baz=26,slow=7.7,SNR=4.1
LPAZ La Paz 162.65 340 PKIKP PKPdf 06 11 46.5 +0.4
LPAZ pmax pmax
comp=Z,1.0nm,0.9s
PLCA Paso Flores 171.48 200 PKP PKPdf 06 11 52.4 +0.5
comp=Z,1.1nm,1.0s,baz=169,slow=5.2,SNR=3.2
PLCA Paso Flores 171.48 200 PKIKP PKPdf 06 11 52.4 +0.5
PLCA pmax pmax
comp=Z,1.0nm,1.0s

*NEIC **17** 06:49:13.8, 36°.78N×11°.02W, h0km, MG4.2(MDD), After MDD.*
*MDD **17** 06:49:13.9±2.2, 36°.78N×11°.02W, h0km, mb4.2/7, Error ellipse: s-maj=19.8km s-min=13.7km az=48.0, PRIMO*
*INMG **17** 06:49:14.4±1.0, 36°.71N×11°.12W, h10km, ML2.2, Error ellipse: s-maj=5.0km s-min=3.9km az=81.0*
*CSEM **17** 06:49:15.1±0.3, 36°.87N×10°.94W, h10km, ML2.8/11, Error ellipse: s-maj=5.3km s-min=4.2km az=53.0*
ISC 17 06:49:15.0±1.0, 36°.87N±0°.05×10°.95W±0°.06, h10km, n79, σ0°76/149, 3C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.71**	**81**	⇑P	**Pn**	**06 49 44.6**	**-0.4**
PFVI				S	**Sn**	**06 50 06.6**	**-0.3**
PFVI	**Vila Bisbo**	**1.71**	**81**	⇑P	**Pn**	**06 49 44.6**	**-0.4**
	15nm,0.1s,SNR=18						
PFVI				S	**Sn**	**06 50 06.6**	**-0.3**
	6.9nm,0.4s,SNR=10						
PFVI	**Vila Bisbo**	**1.71**	**81**	⇑P	**Pn**	**06 49 44.6**	**-0.4**
	15nm,0.1s,SNR=18						
PFVI				S	**Sn**	**06 50 06.6**	**-0.3**
	6.9nm,0.4s,SNR=10						
PFVI	**Vila Bisbo**	**1.71**	**81**	*i* Pn	**Pn**	**06 49 44.6**	**-0.4**
PFVI				*e*Sn	**Sn**	**06 50 06.6**	**-0.3**
PFVI				A		06 50 08.1	
	12nm,0.2s						
PFVI	**Vila Bisbo**	**1.71**	**81**	P	**Pn**	**06 49 44.6**	**-0.4**
	15nm,0.1s,SNR=18						
PFVI				S	**Sn**	**06 50 06.6**	**-0.3**
	6.9nm,0.4s,SNR=10						
MORF	**Marmelete**	**1.88**	**76**	P	**Pn**	**06 49 47.4**	**+0.1**
MORF				S	**Sn**	**06 50 12.0**	**+0.9**
MORF	**Marmelete**	**1.88**	**76**	P	**Pn**	**06 49 47.4**	**+0.1**
MORF				S	**Sn**	**06 50 12.0**	**+0.9**
MORF	**Marmelete**	**1.88**	**76**	*e*Pn	**Pn**	**06 49 47.3**	**0.0**
MORF				*e*Sn	**Sn**	**06 50 11.9**	**+0.8**
MORF				A		06 50 17.4	
	9.2nm,0.3s						
MORF	**Marmelete**	**1.88**	**76**	*e*Pn	**Pn**	**06 49 47.3**	**0.0**
MORF				*e*Sn	**Sn**	**06 50 11.9**	**+0.8**
	9.2nm,0.3s						
PTEO	**Sao Teotonio**	**1.90**	**69**	*e*Pn	**Pn**	**06 49 47.7**	**+0.3**
PTEO				*e*Sn	**Sn**	**06 50 12.3**	**+0.9**
PTEO				A		06 50 13.9	
	6.9nm,0.5s						
PTEO	**Sao Teotonio**	**1.90**	**69**	*e*Pn	**Pn**	**06 49 47.7**	**+0.3**
PTEO				*e*Sn	**Sn**	**06 50 12.3**	**+0.9**
	6.9nm,0.5s						
PBDV	**Barranco-do-Ve**	**2.44**	**80**	*e*Pn	**Pn**	**06 49 54.9**	**0.0**
PBDV				*e*Sn	**Sn**	**06 50 25.0**	**+0.2**
PBDV				A		06 50 34.1	
	5.4nm,0.6s						
PBDV	**Barranco-do-Ve**	**2.44**	**80**	*e*Pn	**Pn**	**06 49 54.9**	**0.0**
PBDV				*e*Sn	**Sn**	**06 50 25.0**	**+0.2**
	5.4nm,0.6s						
PCVE	**Castro Verde**	**2.44**	**71**	*e*Pn	**Pn**	**06 49 47.6**	**-7.3**
PCVE				*e*Sn	**Sn**	**06 50 18.0**	**-6.8**
PCVE				A		06 50 26.2	
	3.0nm,0.5s						
PMAFR	**Mafra**	**2.46**	**32**	P	**Pn**	**06 49 55.5**	**+0.3**
	1.1nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**06 50 26.8**	**+1.6**
	20nm,0.3s,SNR=9.3						
PMAFR	**Mafra**	**2.46**	**32**	P	**Pn**	**06 49 55.5**	**+0.3**
	1.1nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**06 50 26.8**	**+1.6**
	20nm,0.3s,SNR=9.3						
PMAFR	**Mafra**	**2.46**	**32**	*e*Pn	**Pn**	**06 49 55.1**	**-0.1**
PMAFR				*e*Sn	**Sn**	**06 50 26.3**	**+1.0**
PMAFR				A		06 50 29.9	
	33nm,0.4s						
PMAFR	**Mafra**	**2.46**	**32**	*e*Pn	**Pn**	**06 49 55.1**	**-0.1**
PMAFR	**Mafra**	**2.46**	**32**	P	**Pn**	**06 49 55.5**	**+0.3**
	1.1nm,0.1s,SNR=7.9						
PMAFR				*e*Sn	**Sn**	**06 50 26.3**	**+1.0**
	33nm,0.4s						
PMAFR				S	**Sn**	**06 50 26.8**	**+1.5**
	20nm,0.3s,SNR=9.3						
PVAQ	**Vaqueiros**	**2.63**	**77**	*e*Pn	**Pn**	**06 49 57.6**	**0.0**
PVAQ				*e*Sn	**Sn**	**06 50 29.2**	**-0.4**
PVAQ				A		06 50 41.6	
	4.1nm,0.4s						
PVAQ	**Vaqueiros**	**2.63**	**77**	*e*Pn	**Pn**	**06 49 57.6**	**0.0**
PVAQ				*e*Sn	**Sn**	**06 50 29.2**	**-0.4**
	4.1nm,0.4s						
MOE	**Montemor**	**2.63**	**51**	*e*Pn	**Pn**	**06 49 58.1**	**+0.5**
MOE				*e*Sn	**Sn**	**06 50 30.5**	**+0.9**
MOE	**Montemor**	**2.63**	**51**	*e*Pn	**Pn**	**06 49 58.1**	**+0.5**
MOE				*e*Sn	**Sn**	**06 50 30.5**	**+0.9**
PBEJ	**Beja**	**2.71**	**64**	*e*Sn	**Sn**	**06 50 32.3**	**+0.9**
PBEJ				A		06 50 33.2	
	3.3nm,0.2s						
PBEJ	**Beja**	**2.71**	**64**	*e*Sn	**Sn**	**06 50 32.3**	**+0.9**
	3.3nm,0.2s						
EGRO	**El Granado**	**2.84**	**76**	P	**Pn**	**06 50 00.7**	**+0.2**
EGRO				S	**Sn**	**06 50 34.5**	**-0.2**
EGRO	**El Granado**	**2.84**	**76**	P	**Pn**	**06 50 00.7**	**+0.2**
	0.5nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**06 50 34.5**	**-0.2**
	31nm,1.1s,SNR=7.9						
EGRO	**El Granado**	**2.84**	**76**	P	**Pn**	**06 50 00.7**	**+0.2**
	0.5nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**06 50 34.5**	**-0.2**
	31nm,1.1s,SNR=7.9						
EGRO	**El Granado**	**2.84**	**76**	P	**Pn**	**06 50 00.7**	**+0.3**
	0.5nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**06 50 34.5**	**-0.2**
	31nm,1.1s,SNR=7.9						
EVO	**Evora**	**2.85**	**54**	*e*Pn	**Pn**	**06 50 00.9**	**+0.3**
EVO				*e*Sn	**Sn**	**06 50 36.3**	**+1.3**
EVO				A		06 50 37.8	
	15nm,0.1s						
EVO	**Evora**	**2.85**	**54**	*e*Pn	**Pn**	**06 50 00.9**	**+0.3**
EVO				*e*Sn	**Sn**	**06 50 36.3**	**+1.3**
	15nm,0.1s						
PESTR	**Estremoz**	**3.32**	**52**	*e*Pn	**Pn**	**06 50 07.5**	**+0.5**
PESTR				*e*Sn	**Sn**	**06 50 47.5**	**+1.0**
PESTR				A		06 51 00.0	
	3.3nm,0.6s						
PESTR	**Estremoz**	**3.32**	**52**	*e*Pn	**Pn**	**06 50 07.5**	**+0.5**
PESTR				*e*Sn	**Sn**	**06 50 47.5**	**+1.0**
	3.3nm,0.6s						
PBAR	**Barrancos**	**3.37**	**66**	*e*Pn	**Pn**	**06 50 07.6**	**-0.1**
PBAR				*e*Sn	**Sn**	**06 50 47.7**	**+0.1**
PBAR				A		06 50 53.4	
	2.5nm,0.4s						
PBAR	**Barrancos**	**3.37**	**66**	*e*Pn	**Pn**	**06 50 07.6**	**-0.1**
PBAR				*e*Sn	**Sn**	**06 50 47.7**	**+0.1**
	2.5nm,0.4s						
EMIN	**Mina Concepcio**	**3.52**	**74**	P	**Pn**	**06 50 09.7**	**-0.1**
EMIN				S	**Sn**	**06 50 50.6**	**-0.8**
EMIN	**Mina Concepcio**	**3.52**	**74**	P	**Pn**	**06 50 09.7**	**-0.1**
	2.4nm,0.8s,SNR=12						
EMIN				S	**Sn**	**06 50 50.6**	**-0.8**
	8.4nm,0.9s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.52**	**74**	P	**Pn**	**06 50 09.7**	**-0.1**
	2.4nm,0.8s,SNR=12						
EMIN				S	**Sn**	**06 50 50.6**	**-0.9**
	8.4nm,0.9s,SNR=7.9						
EBAD	**Badajoz**	**3.64**	**58**	P	**Pn**	**06 50 11.6**	**+0.3**
EBAD				S	**Sn**	**06 50 54.5**	**+0.2**
EBAD	**Badajoz**	**3.64**	**58**	P	**Pn**	**06 50 11.6**	**+0.3**
	1.6nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**06 50 54.5**	**+0.2**
	6.8nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**3.64**	**58**	P	**Pn**	**06 50 11.6**	**+0.3**
	1.6nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**06 50 54.5**	**+0.2**
	6.8nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**3.64**	**58**	P	**Pn**	**06 50 11.6**	**+0.2**
	1.6nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**06 50 54.5**	**+0.2**
	6.8nm,0.2s,SNR=7.9						
PMRV	**Marv??o**	**3.79**	**47**	*e*Pn	**Pn**	**06 50 13.3**	**-0.2**
PMRV				*e*Sn	**Sn**	**06 50 57.9**	**-0.2**
PMRV				A		06 50 59.1	
	4.1nm,0.2s						
PMRV	**Marv??o**	**3.79**	**47**	*e*Pn	**Pn**	**06 50 13.3**	**-0.2**
PMRV				*e*Sn	**Sn**	**06 50 57.9**	**-0.2**
	4.1nm,0.2s						
PCBR	**Castelo Branco**	**4.03**	**42**	*e*Pn	**Pn**	**06 50 17.2**	**+0.5**
PCBR				*e*Sn	**Sn**	**06 51 04.7**	**+0.8**
PCBR				A		06 51 05.3	
	2.2nm,0.6s						
PCBR	**Castelo Branco**	**4.03**	**42**	*e*Pn	**Pn**	**06 50 17.2**	**+0.5**
PCBR				*e*Sn	**Sn**	**06 51 04.7**	**+0.8**
	2.2nm,0.6s						
ESPR	**Espera**	**4.08**	**89**	P	**Pn**	**06 50 17.0**	**-0.5**
ESPR				S	**Sn**	**06 51 03.7**	**-1.6**
ESPR	**Espera**	**4.08**	**89**	P	**Pn**	**06 50 17.0**	**-0.5**
	4.2nm,0.1s,SNR=5.1						
ESPR				S	**Sn**	**06 51 03.7**	**-1.6**
	13nm,0.4s,SNR=7.9					

mb1 4.3/22, mb1mx4.2/29, mbtmp4.1/22, ML3.9/2, MS3.4/2, Ms1 3.4/2, ms1mx2.7/32, Error ellipse: s-maj=17.6km s-min=12.2km az=99.0

*ISCJB **17** 07:38:07.5±0.9, 27°.96N±0°.03×142°.82E±0°.06, h16km±6km, mb4.4/37, MS3.8/10, Error ellipse: s-maj=9.4km s-min=4.5km az=8.1*

*NEIC **17** 07:38:07.0±0.3, 27°.71N×142°.89E, h10km, mb4.5/10, MW4.3(NIED), Error ellipse: s-maj=9.5km s-min=6.3km az=81.0*

*MOS **17** 07:38:08.9±1.2, 27°.78N×142°.75E, h33km, mb4.4/15, Error ellipse: s-maj=19.6km s-min=7.9km az=112.4*

ISC 17 07:38:09.5±1.0, 27°.86N±0°.03×142°.87E±0°.06, h23km±6km, h35km±.3km: pP-P, n87, σ1§15/95, mb4.4/37, MS3.8/10, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**0.97**	**219**	P	**Pb**	**07 38 26.4**	**-1.2**
CBIJ				S	**Sb**	**07 38 41.2**	**+1.2**
CBIJ	**Chichi jima**	**0.97**	**219**	Pn	**Pn**	**07 38 26.5**	**-1.2**
	127nm,0.3s,baz=53,slow=6.9,SNR=89						
CBIJ				Sn	**Sn**	**07 38 41.3**	**+0.5**
	259nm,0.3s,baz=287,slow=19,SNR=17						
JHHJ	**Haha-jima-NKT**	**1.37**	**207**	P	**Pn**	**07 38 31.3**	**-1.9**
JHHJ				S	**Sn**	**07 38 51.1**	**+0.5**
BSO1	**Boso 1**	**6.97**	**347**	P	**Pn**	**07 39 49.2**	**-1.0**
BSO1				*e*S	**Sn**	**07 41 08.0**	**-0.7**
BSO2	**Boso 2**	**7.11**	**346**	S	**Sn**	**07 41 11.7**	**-0.5**
BSO3	**Boso 3**	**7.21**	**344**	S	**Sn**	**07 41 13.8**	**-0.9**
BSO4	**Boso 4**	**7.43**	**344**	P	**Pn**	**07 39 56.6**	**0.0**
BSO4				S	**Sn**	**07 41 20.0**	**-0.2**
JHU	**Hanno**	**8.54**	**340**	P	**Pn**	**07 40 11.3**	**-0.4**
JRY	**Ryogami san**	**8.81**	**339**	P	**Pn**	**07 40 15.6**	**+0.2**
JAG	**Ashikaga**	**9.02**	**342**	P	**Pn**	**07 40 16.5**	**-1.8**
MJAR	**Matsushiro Arr**	**9.52**	**337**	Pn	**Pn**	**07 40 24.9**	**-0.2**
	1.8nm,0.3s,baz=158,slow=10,SNR=7.8						
MJAR	**Matsushiro Arr**	**9.52**	**337**	P	**Pn**	**07 40 24.9**	**-0.2**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MAJO	**Matsushiro**	**9.52**	**337**	*e*P	**Pn**	**07 40 25.6**	**+0.5**
MAT	**Matsushiro**	**9.52**	**337**	P	**Pn**	**07 40 25.0**	**-0.1**
MAT				S	**Sn**	**07 42 08.8**	**-2.6**
ERM	**Erimo**	**14.13**	**1**	*e*P	**Pn**	**07 41 28.6**	**+0.4**
KSRS	**Korea Array**	**15.79**	**311**	Pn	**Pn**	**07 41 51.5**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=119,slow=12,SNR=7.0						
MDJ	**Mudanjiang**	**19.82**	**331**	P	**Pn**	**07 42 39.6**	**-0.4**
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,80nm,4.9s						
YULB	**Yu-li**	**19.95**	**262**	*e*P	**Pn**	**07 42 40.3**	**-1.4**
	comp=Z,19nm,0.9s						
CN2	**Changchun**	**21.21**	**323**	*e*P	**P**	**07 42 55.9**	**+2.4**
CN2				*ep*P		07 43 04.9	
CN2				*e*S	**S**	**07 46 44.8**	**-3.3**
CN2				pmax	pmax		
	comp=Z,20nm,0.6s,mb4.6						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,16.0s,MS3.8						
CN2				LR	LR		
	comp=E,200nm,16.0s,MS3.8						
CN2				LR	LR		
	comp=Z,200nm,16.0s,MS3.6						
NJ2	**Nanjing**	**21.21**	**287**	*e*P	**P**	**07 42 54.5**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2						
KLR	**Kul'dur**	**23.00**	**341**	*e*P	**P**	**07 43 09.7**	**-2.8**
BJI	**Beijing**	**25.16**	**306**	P	**P**	**07 43 33.8**	**+0.8**
BJI				S	**S**	**07 47 57.8**	**+1.1**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.2						
BJI				pmax	pmax		
	comp=Z,52nm,4.2s						
BJI				LR	LR		
	comp=N,170nm,18.6s,MS3.7						
BJI				LR	LR		
	comp=E,120nm,18.1s,MS3.7						
BJI				LR	LR		
	comp=Z,52nm,18.9s,MS3.1						
HHC	**Hu-ho-hao-te**	**28.75**	**305**	*e*P	**P**	**07 44 06.1**	**+0.8**
HHC				pP	pP	07 44 15.6	+3.4
HHC				sP	sP	07 44 19.6	+4.6
HHC				PP	PP	07 44 59.5	-11
HHC				PcP	PcP	07 47 16.3	+1.2
HHC				S	**S**	**07 48 51.3**	**-2.1**
HHC				ScP	ScP	07 50 53.4	-1.7
HHC				PcS	PcS	07 50 57.5	-0.1
HHC				ScS	ScS	07 54 45.3	-3.2
HHC				pmax	pmax		
	comp=Z,16nm,0.6s,mb4.9						
HHC				pmax	pmax		
	comp=Z,93nm,5.6s						
HHC				LR	LR		
	comp=N,95nm,14.3s,MS3.8						
HHC				LR	LR		
	comp=E,120nm,13.1s,MS3.8						
HHC				LR	LR		
	comp=Z,110nm,11.9s,MS3.7						
GYA	**Guiyang**	**32.17**	**276**	P	**P**	**07 44 37.0**	**+1.3**
GYA				pP	pP	07 44 46.8	+4.2
GYA				sP	sP	07 44 52.3	+6.8
GYA				PP	PP	07 45 45.0	-3.5
GYA				S	**S**	**07 49 45.6**	**-1.7**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
GYA				pmax	pmax		
	comp=Z,80nm,4.8s						
GYA				LR	LR		
	comp=N,450nm,16.5s,MS4.4						
GYA				LR	LR		
	comp=E,410nm,17.0s,MS4.4						
GYA				LR	LR		
	comp=Z,470nm,16.4s,MS4.3						
LZH	**Lanzhou**	**33.93**	**294**	*e*P	**P**	**07 44 51.8**	**+0.9**
LZH				pP	pP	07 45 01.5	+3.6
LZH				sP	sP	07 45 05.4	+4.7
LZH				PP	PP	07 46 05.9	-2.0
LZH				pmax	pmax		
	comp=Z,20nm,1.4s,mb4.8						
LZH				pmax	pmax		
	comp=Z,76nm,5.2s						
LZH				LR	LR		
	comp=N,530nm,13.2s						
LZH				LR	LR		
	comp=Z,820nm,17.6s,MS4.5						
CD2	**Chengdu**	**34.10**	**285**	*e*P	**P**	**07 44 53.9**	**+1.4**
CD2				pP	pP	07 45 03.4	+4.0
CD2				sP	sP	07 45 07.6	+5.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
CD2				pmax	pmax		
	comp=Z,50nm,4.2s						
ULN	**Ulaanbaatar**	**34.20**	**315**	*e*P	**P**	**07 44 53.4**	**+0.3**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
ULN	**Ulaanbaatar**	**34.20**	**315**	*e*P	**P**	**07 44 53.4**	**+0.3**
	comp=Z,3.9nm,0.9s,mb4.3						
SONM	**Songino Array**	**34.60**	**315**	P	**P**	**07 44 56.9**	**+0.3**
	comp=Z,1.4nm,0.8s,mb4.0,baz=121,slow=8.6,SNR=6.9						
SONM	**Songino Array**	**34.60**	**315**	P	**P**	**07 44 56.9**	**+0.3**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KMI	**Kunming**	**35.91**	**275**	P	**P**	**07 45 09.5**	**+1.3**
KMI				pP	pP	07 45 19.3	+4.2
KMI				sP	sP	07 45 23.8	+5.9
KMI				PP	PP	07 46 31.6	+1.7
KMI				S	**S**	**07 50 44.3**	**-0.9**
KMI				sS	sS	07 51 01.4	+4.8
KMI				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
KMI				pmax	pmax		
	comp=Z,53nm,4.4s						
KMI				LR	LR		
	comp=N,200nm,10.7s,MS4.2						
KMI				LR	LR		
	comp=E,120nm,11.7s,MS4.2						
KMI				LR	LR		
	comp=Z,90nm,11.7s,MS3.8						
GTA	**Gaotai**	**37.33**	**299**	*e*P	**P**	**07 45 19.1**	**-1.0**
GTA				pP	pP	07 45 28.4	+1.3
GTA				sP	sP	07 45 32.8	+2.9
GTA				PP	PP	07 46 47.8	+2.4
GTA				S	**S**	**07 51 02.9**	**-3.7**
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
GTA				pmax	pmax		
	comp=Z,55nm,5.4s						
GTA				LR	LR		
	comp=N,98nm,19.6s,MS3.8						
GTA				LR	LR		
	comp=E,120nm,19.3s,MS3.8						
GTA				LR	LR		
	comp=Z,67nm,12.8s						
TLY	**Talaya**	**37.74**	**320**	*e*P	**P**	**07 45 25.1**	**+1.7**
TLY				*e*		07 54 15.8	
TLY				pmax	pmax		
	comp=Z,12nm,1.7s,mb4.3						
TLY				MLR	MLR		
	comp=Z,65nm,16.0s,MS3.5						
TLY	**Talaya**	**37.74**	**320**	*e*P	**P**	**07 45 25.3**	**+1.9**
	comp=Z,8.7nm,1.2s,mb4.4						
WMQ	**Urumqi**	**46.63**	**305**	*e*P	**P**	**07 46 38.0**	**+2.0**
WRAB	**Tennant Creek**	**48.22**	**191**	*e*P	**P**	**07 46 46.9**	**-1.5**
WRAB				*e*		07 46 57.7	
WRAB				pmax	pmax		
	comp=Z,11nm,0.7s,mb5.0						
WRAB	**Tennant Creek**	**48.22**	**191**	*e*P	**P**	**07 46 46.9**	**-1.6**
	comp=Z,11nm,0.7s,mb5.0						
WRAB				*e*		07 46 57.7	
WRA	**Warramunga Arr**	**48.23**	**191**	P	**P**	**07 46 46.6**	**-1.9**
	comp=Z,7.5nm,0.6s,mb4.9,baz=12,slow=8.5,SNR=94						
WRA	**Warramunga Arr**	**48.23**	**191**	P	**P**	**07 46 46.6**	**-1.9**
WRA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
FITZ	**Fitzroy Crossi**	**48.64**	**202**	P	**P**	**07 46 50.2**	**-1.5**
	comp=Z,2.6nm,0.7s,mb4.3,baz=349,slow=6.7,SNR=8.4						
ZALV	**Zalesovo Beam**	**49.32**	**319**	P	**P**	**07 46 57.3**	**+0.7**
	comp=Z,3.7nm,0.8s,mb4.5,baz=94,slow=7.6,SNR=11						
ZALV				PcP	PcP	07 48 18.8	-0.3
	comp=Z,1.2nm,0.4s,baz=84,slow=4.5,SNR=3.4						
ZALV				LR	LR	08 08 28.4	
	comp=Z,44nm,18.2s,MS3.5,baz=88,slow=37						
ZALV	**Zalesovo Beam**	**49.32**	**319**	P	**P**	**07 46 57.3**	**+0.7**
ZALV						07 48 18.8	
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
ZALV				MLR	MLR		
	comp=Z,45nm,18.2s,MS3.5						
NVS	**Novosibirsk**	**50.35**	**320**	*e*P	**P**	**07 47 03.2**	**-1.3**
MK31	**Makanchi Array**	**50.47**	**309**	*e*P	**P**	**07 47 05.8**	**+0.3**
MKAR	**Makanchi Array**	**50.47**	**309**	P	**P**	**07 47 05.5**	**0.0**
	comp=Z,1.4nm,0.6s,mb4.1,baz=85,slow=9.2,SNR=11						
MKAR	**Makanchi Array**	**50.47**	**309**	P	**P**	**07 47 05.5**	**0.0**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**51.95**	**190**	P	**P**	**07 47 14.6**	**-2.1**
	comp=Z,1.2nm,0.5s,mb4.1,baz=5.2,slow=6.2,SNR=21						
ASAR	**Alice Springs**	**51.95**	**190**	P	**P**	**07 47 14.6**	**-2.1**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURK	**Kurchatov**	**52.89**	**314**	P	**P**	**07 47 24.2**	**+0.7**
	comp=Z,8.5nm,0.7s,mb4.8,baz=90,slow=7.9,SNR=28						
KURK	**Kurchatov**	**52.89**	**314**	P	**P**	**07 47 24.2**	**+0.7**
KURK				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
KURK	**Kurchatov**	**52.89**	**314**	*e*P	**P**	**07 47 23.8**	**+0.2**
	comp=Z,12nm,0.9s,mb4.8						
KURK				*e*		07 47 34.7	
KSH	**Kashi**	**55.71**	**301**	*e*P	**P**	**07 47 46.5**	**+2.2**
KSH				pP	pP	07 47 56.6	+5.1
KSH				sP	sP	07 48 00.5	+6.3
KSH				PcP	PcP	07 48 45.3	+1.9
KSH				PP	PP	07 49 52.5	+3.9
KSH				ScP	ScP	07 52 40.3	-0.8
KSH				PcS	PcS	07 52 44.1	+0.5
KSH				S	**S**	**07 55 27.9**	**-1.6**
KSH				ScS	ScS	07 57 29.5	-2.7
KSH				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
KSH				pmax	pmax		
	comp=Z,65nm,3.8s						
KSH				LR	LR		
	comp=N,85nm,5.1s						
KSH				LR	LR		
	comp=E,55nm,4.7s						
KSH				LR	LR		
	comp=Z,130nm,5.4s						
BVAR	**Borovoye Array**	**57.90**	**317**	P	**P**	**07 48 00.3**	**+0.8**
	comp=Z,3.8nm,0.6s,mb4.6,baz=93,slow=8.8,SNR=17						
BVAR	**Borovoye Array**	**57.90**	**317**	P	**P**	**07 48 00.3**	**+0.8**
BVAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
STKA	**Stephens Creek**	**59.41**	**181**	P	**P**	**07 48 08.4**	**-1.7**
	comp=Z,1.6nm,0.8s,mb4.1,baz=355,slow=6.1,SNR=3.8						
STKA	**Stephens Creek**	**59.41**	**181**	*e*P	**P**	**07 48 08.5**	**-1.7**
	comp=Z,3.7nm,1.4s,mb4.2						
INK	**Inuvik**	**62.09**	**25**	P	**P**	**07 48 28.6**	**+0.6**
	comp=Z,1.2nm,1.0s,mb4.0,baz=268,slow=3.7,SNR=2.9						
INK	**Inuvik**	**62.09**	**25**	P	**P**	**07 48 28.6**	**+0.6**
INK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ABKAR	**Akbulak array**	**65.00**	**314**	*e*P	**P**	**07 48 48.7**	**+1.1**
	comp=Z,7.6nm,0.8s,mb4.8						
AKTK	**Aktyubinsk**	**65.91**	**316**	P	**P**	**07 48 54.7**	**+1.2**
AKTO	**Aktyubinsk**	**65.91**	**316**	P	**P**	**07 48 54.7**	**+1.2**
	comp=Z,5.0nm,0.7s,mb4.6,baz=71,slow=13,SNR=16						
AKTO	**Aktyubinsk**	**65.91**	**316**	P	**P**	**07 48 54.7**	**+1.2**
AKTO				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
ARCES	**ARCESS Array B**	**73.03**	**341**	P	**P**	**07 49 37.2**	**+0.2**
	comp=Z,2.0nm,0.9s,mb4.1,baz=66,slow=7.1,SNR=3.7						
ARCES	**ARCESS Array B**	**73.03**	**341**	P	**P**	**07 49 37.3**	**+0.2**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FINES	**FINESS Array B**	**77.54**	**334**	P	**P**	**07 50 02.7**	**-0.5**
	comp=Z,0.7nm,0.4s,mb4.0,baz=50,slow=3.0,SNR=3.8						
FINES	**FINESS Array B**	**77.54**	**334**	P	**P**	**07 50 02.7**	**-0.5**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NVAR	**Mina Array Bea**	**79.57**	**52**	P	**P**	**07 50 15.5**	**+0.6**
	comp=Z,0.9nm,0.8s,mb3.8,baz=258,slow=7.1,SNR=5.7						
BOZ	**Bozeman (W)**	**80.49**	**43**	*e*P	**P**	**07 50 21.6**	**+1.9**
BOZ				pmax	pmax		
	comp=Z,24nm,3.0s						
BOZ	**Bozeman (W)**	**80.49**	**43**	*e*P	**P**	**07 50 21.6**	**+1.9**
	comp=Z,24nm,3.0s						
FFC	**Flin Flon**	**80.78**	**32**	*e*P	**P**	**07 50 20.8**	**-0.2**
FFC				*e*		07 50 31.4	
FFC				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
FFC	**Flin Flon**	**80.78**	**32**	*e*P	**P**	**07 50 20.8**	**-0.2**
	comp=Z,3.1nm,1.0s,mb4.2						
FFC				*e*		07 50 31.4	
AKASG	**Malin Array Be**	**82.36**	**324**	P	**P**	**07 50 29.1**	**-0.3**
	comp=Z,0.4nm,0.3s,mb3.9,baz=50,slow=5.8,SNR=3.7						
DUG	**Dugway**	**82.47**	**48**	*e*P	**P**	**07 50 31.3**	**+1.0**
DUG				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
DUG	**Dugway**	**82.47**	**48**	*e*P	**P**	**07 50 31.3**	**+1.0**
	comp=Z,1.3nm,0.6s,mb4.0						
NOA	**NORSAR Array B**	**83.13**	**339**	P	**P**	**07 50 32.4**	**-0.9**
	comp=Z,0.5nm,0.6s,mb3.7,baz=44,slow=4.9,SNR=3.0						
NOA				LR	LR	08 33 29.0	
	comp=Z,13nm,18.9s,MS3.3,baz=85,slow=40						
PDAR	**Pinedale Array**	**83.25**	**45**	P	**P**	**07 50 33.5**	**-0.7**
	comp=Z,0.9nm,0.9s,mb3.8,baz=268,slow=4.5,SNR=5.5						
PV10	**Paradox Valley**	**85.92**	**49**	*e*P	**P**	**07 50 48.4**	**+0.5**
	comp=Z,32nm,0.7s,mb5.7						
PV10				*e*		07 50 58.8	
BRTR	**Keskin Array B**	**85.93**	**313**	P	**P**	**07 50 48.9**	**+1.0**
	comp=Z,1.0nm,0.6s,mb4.2,baz=94,slow=3.7,SNR=5.8						
BRTR	**Keskin Array B**	**85.93**	**313**	P	**P**	**07 50 48.9**	**+1.0**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GERES	**GERESS Array B**	**91.17**	**329**	P	**P**	**07 51 12.3**	**-0.3**
	comp=Z,0.4nm,0.5s,mb4.0,baz=0.0,slow=1.3,SNR=3.9						
TXAR	**Lajitas Array**	**94.67**	**53**	P	**P**	**07 51 29.4**	**+0.2**
	comp=Z,0.5nm,0.9s,mb4.0,baz=298,slow=2.7,SNR=5.9						
TXAR	**Lajitas Array**	**94.67**	**53**	P	**P**	**07 51 29.4**	**+0.3**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TORD	**Torodi Ar. Bea**	**124.53**	**312**	PKP	PKPdf	07 57 07.0	-0.7
	comp=Z,0.6nm,0.8s,baz=0.0,slow=3.5,SNR=3.7						
LPAZ	**La Paz**	**149.14**	**75**	PKPbc	PKPbc	07 57 57.4	+0.7
	comp=Z,1.4nm,0.8s,baz=295,slow=2.1,SNR=6.8						
LPAZ	**La Paz**	**149.14**	**75**	*e*PKPbc	PKPbc	07 57 56.3	-0.4
PLCA	**Paso Flores**	**149.74**	**124**	PKPbc	PKPbc	07 57 57.6	+0.1
	comp=Z,1.3nm,0.8s,baz=239,slow=5.9,SNR=2.8						
PLCA	**Paso Flores**	**149.74**	**124**	PKP2	PKPab	07 57 57.6	-5.2
PLCA				pmax	pmax		
	comp=Z,1.0nm,0.8s						

MAN 17 07:53:50, 7°.11N×123°.75E, h33km, mb4.4, ML3.2, MS3.0, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.51**	**77**	⇓*i*P	Pb	07 54 02.5	+1.8
CTBH				*i* S	Sb	07 54 10.4	+2.3
PAGZ	**Pagadian**	**0.82**	**334**	*e*P	Pn	07 54 05.7	+0.4
PAGZ				*e*S	Sn	07 54 08.9	-7.4
IPIL	**Ipil**	**1.35**	**300**	*e*P	Pn	07 54 14.2	+1.6
IPIL				*e*S	Sn	07 54 26.9	-2.4
ZMPH	**Zamboanga City**	**1.68**	**265**	⇓*i*P	Pn	07 54 17.8	+0.8
ZMPH				*i* S	Sn	07 54 37.5	+0.1

CSEM 17 07:55:48.4, 45°.98N×15°.48E, h0km, ML0.5, 2C, Mining explosion. After LJU, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CESS	**Cesta pri Krsk**	**0.01**	**241**	⇑*i*Pg	Pg	07 55 48.2	-0.5
CESS				*i* Sg	Sg	07 55 48.8	0.0
CESS							
	comp=Z,3μm,0.2s						
CESS	**Cesta pri Krsk**	**0.01**	**241**	⇑*i*Pg	Pg	07 55 48.2	-0.4
CESS				*i* Sg	Sg	07 55 48.8	0.0
	comp=Z,3μm,0.2s						
GOLS	**Golise**	**0.10**	**73**	*i* Pg	Pg	07 55 50.6	+0.2
GOLS				*i* Sg	Sg	07 55 53.6	+1.8
GOLS							
	comp=Z,9.0nm,0.2s						
GOLS	**Golise**	**0.10**	**73**	*i* Pg	Pg	07 55 50.6	+0.2
GOLS				*i* Sg	Sg	07 55 53.6	+1.8
	comp=Z,9.0nm,0.2s						
LEGS	**Legarje**	**0.12**	**255**	*i* Pg	Pg	07 55 50.4	-0.2
LEGS	**Legarje**	**0.12**	**255**	*i* Pg	Pg	07 55 50.4	-0.2
CRES	**Cresnjev**	**0.15**	**186**	*i* Pg	Pg	07 55 50.9	-0.5
CRES				*i* Sg	Sg	07 55 53.8	+0.4
CRES							
	comp=Z,6.0nm,0.1s						
CRES	**Cresnjev**	**0.15**	**186**	*i* Pg	Pg	07 55 50.9	-0.4
CRES				*i* Sg	Sg	07 55 53.8	+0.5
	comp=Z,6.0nm,0.1s						

IDC 17 08:01:47.0±1.3, 16°.10N×147°.90E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.7/24, mbtmp3.9/6, Error ellipse: s-maj=55.3km s-min=20.8km az=84.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**22.11**	**339**	P	P	08 06 44.5	+0.5
	0.9nm,0.5s,baz=166,slow=8.9,SNR=4.2						
KSRS	**Korea Array**	**27.65**	**324**	P	P	08 07 36.5	0.0
	0.7nm,0.7s,baz=152,slow=9.0,SNR=3.8						
WRA	**Warramunga Arr**	**38.22**	**201**	P	P	08 09 08.9	+0.1
	1.5nm,0.9s,baz=25,slow=9.1,SNR=10						
ASAR	**Alice Springs**	**41.82**	**199**	P	P	08 09 38.6	-0.1
	0.7nm,0.6s,baz=24,slow=7.1,SNR=13						
KURK	**Kurchatov**	**64.60**	**319**	P	P	08 12 27.0	+0.8
	1.3nm,0.8s,baz=99,slow=7.1,SNR=4.3						
FINES	**FINESS Array B**	**90.11**	**336**	P	P	08 14 47.3	-1.4
	0.3nm,0.4s,baz=45,slow=5.7,SNR=3.6						
LPAZ	**La Paz**	**145.42**	**95**	PKPbc	PKPbc	08 21 28.1	+0.3
	0.7nm,0.5s,baz=254,slow=3.0,SNR=8.7						
LPAZ	**La Paz**	**145.42**	**95**	P	PKPbc	08 21 28.1	+0.2
LPAZ	**La Paz**	**145.42**	**95**	PKPbc	PKPbc	08 21 28.1	+0.3

*IDC **17** 08:04:39.4±2.5, 54°.45N×86°.53E, h0km, mb1 3.6/3, mb1mx3.3/29, mbtmp3.6/3, ML3.5/3, Error ellipse: s-maj=21.4km s-min=17.6km az=37.0*

*NNC **17** 08:04:41.2±3.3, 54°.15N×86°.51E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=32.4km s-min=23.8km az=3.0*

ISC 17 08:04:43.2±2.0, 54°.40N±0°.09×86°.3E±0°.2, h10km, n9, σ0§94/13, 5C-5D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**0.96**	**243**	Pg	**Pg**	**08 04 59.1**	**-2.5**
	6.3nm,0.3s,baz=58,slow=17,SNR=36						
ZALV				Lg		08 05 16.9	
	6.7nm,0.3s,baz=56,slow=28,SNR=21						
KURK	**Kurchatov**	**5.94**	**235**	⇑Pn	**Pn**	**08 06 10.6**	**-0.5**
	1.6nm,0.4s						
KURK				⇑Sn	**Sn**	**08 07 17.8**	**-1.4**
	3.5nm,1.6s						
KURK				⇑Lg		08 07 56.3	
	6.9nm,0.8s						
KURK	**Kurchatov**	**5.94**	**235**	Pn	**Pn**	**08 06 12.6**	**+1.5**
	0.6nm,0.3s,baz=52,slow=14,SNR=27						
KURK				Sn	**Sn**	**08 07 23.1**	**+4.0**
	0.1nm,0.3s,baz=120,slow=16,SNR=2.4						
KURK				Lg		08 07 57.4	
	0.1nm,0.3s,baz=53,slow=34,SNR=3.5						
KURBB	**Kurchatov Arra**	**6.05**	**234**	⇑Pn	**Pn**	**08 06 12.7**	**+0.2**
	0.6nm,0.3s,baz=53,slow=14						
KURBB				⇓Sn	**Sn**	**08 07 22.6**	**+0.9**
	0.8nm,0.6s						
KURBB				⇓Lg		08 07 58.4	
	1.7nm,0.8s						
MK31	**Makanchi Array**	**8.02**	**200**	⇓Pn	**Pn**	**08 06 39.2**	**-0.4**
	0.5nm,0.5s,baz=26,slow=14,SNR=15						
MK31				⇓Lg		08 08 43.7	
	4.9nm,0.9s,baz=143,slow=17,SNR=5.8						
MKAR	**Makanchi Array**	**8.02**	**200**	Pn	**Pn**	**08 06 39.3**	**-0.3**
	0.5nm,0.3s,baz=23,slow=13,SNR=22						
MKAR				Sn	**Sn**	**08 08 10.9**	**+0.5**
	1.0nm,0.3s,baz=26,slow=23,SNR=30						
VOSK	**Vostochnaya**	**9.25**	**266**	⇑Pn	**Pn**	**08 06 57.1**	**+0.6**
	0.9nm,0.3s						
BVAR	**Borovoye Array**	**9.51**	**268**	Pn	**Pn**	**08 06 59.7**	**-0.4**
	0.3nm,0.3s,baz=57,slow=16,SNR=3.7						
ZRNK	**Zerenda**	**10.34**	**269**	⇓Pn	**Pn**	**08 07 11.9**	**+0.5**
	0.4nm,0.3s						

*IDC **17** 08:05:06.1±3.1, 36°.34N×70°.77E, h181km±28km, mb3.9/10, mb1 3.9/15, mb1mx3.6/30, mbtmp3.8

UCH	**Uchtor**	6.43	25	*e*Pn	Pn	08 06 41.1	+0.8
	comp=E,110nm,0.5s						
UCH				*e*Sn	Sn	08 07 51.5	-2.1
KZA	**Kyzart**	6.58	30	P	Pn	08 06 42.8	+0.6
	SNR=24						
EKS2	**Erkin-Say**	6.60	19	P	Pn	08 06 43.4	+0.9
	SNR=61						
EKS2	**Erkin-Say**	6.60	19	*e*Pn	Pn	08 06 43.1	+0.6
	comp=E,45nm,0.4s						
EKS2				*e*Sn	Sn	08 07 54.9	-2.7
KK31	**Karatay Array**	6.64	358	⇓Pn	Pn	08 06 43.1	+0.1
	comp=E,69nm,0.6s,baz=175,slow=13,SNR=3.5						
KK31				⇑Sn	Sn	08 07 53.5	-5.0
	comp=E,44nm,0.4s,baz=164,slow=21,SNR=4.3						
AAK	**Ala-Archa**	6.79	24	P	Pn	08 06 45.7	+0.8
	SNR=42						
AAK	**Ala-Archa**	6.79	24	P	Pn	08 06 45.9	+0.9
	comp=E,0.4nm,0.3s,baz=177,slow=5.4,SNR=62						
AAK				S	Sn	08 08 00.1	-1.9
	comp=E,0.1nm,0.3s,baz=344,slow=21,SNR=4.0						
AAK	**Ala-Archa**	6.79	24	*e*Pn	Pn	08 06 45.7	+0.8
AAK				*e*Sn	Sn	08 08 01.4	-0.6
BHK	**Bhakra**	6.84	136	*ex*	x	08 07 49.6	
KBK	**Karagaybulak**	6.96	26	P	Pn	08 06 48.5	+1.3
	SNR=33						
SDNR	**Sundarnagar**	7.11	132	*e*PKP	Pn	08 06 49.0	-0.2
SDNR				*e*S	Sn	08 08 06.0	-3.6
ULHL	**Ulahol**	7.14	34	P	Pn	08 06 50.9	+1.3
	SNR=5.1						
CHMS	**Chumysh**	7.20	24	P	Pn	08 06 51.1	+0.8
	SNR=28						
USP	**Ospenovka**	7.37	21	P	Pn	08 06 52.9	+0.5
	SNR=14						
TKM2	**Tokmak 2**	7.43	28	⇓Pn	Pn	08 06 54.2	+1.0
	comp=E,54nm,0.5s						
TKM2				⇑Sn	Sn	08 08 16.0	-1.2
	comp=E,40nm,0.8s						
TKM2	**Tokmak 2**	7.43	28	P	Pn	08 06 54.3	+1.0
	SNR=48						
TKM2	**Tokmak 2**	7.43	28	*e*PN	Pn	08 06 53.9	+0.6
TKM2				pmax	pmax		
	comp=Z,82nm,0.5s						
TKM2	**Tokmak 2**	7.43	28	*e*Pn	Pn	08 06 53.9	+0.6
	comp=Z,82nm,0.5s						
KLP	**Kalpa**	7.88	126	*e*PKP	Pn	08 06 60.0	+0.6
KLP				*e*S	Sn	08 08 24.4	-3.7
KLP				*e*S	Sn	08 08 24.6	-3.5
DDI	**Dehra Dun**	8.60	133	*e*PKP	Pn	08 07 08.0	-0.7
DDI				*ex*	x	08 08 45.0	
KHET	**Khetri**	9.36	152	*e*PKP	Pn	08 07 17.3	-1.4
KHET				*e*S	Sn	08 08 56.4	-7.0
JOSI	**Joshimath**	9.37	126	*e*PKP	Pn	08 07 19.1	+0.3
JOSI				AMb	AMB	08 07 20.4	
	comp=Z,249nm,0.9s						
JOSI				*e*S	Sn	08 08 58.6	-4.9
NDI	**New Delhi**	9.44	143	*e*PKP	Pn	08 07 17.0	-2.7
NDI				*ex*	x	08 08 53.0	
JASL	**Jaisalmer**	9.50	180	*e*PKP	Pn	08 07 19.2	-1.4
AYAN	**Aya Nagar**	9.57	144	*e*PKP	Pn	08 07 21.0	-0.4
SONA	**Sohna**	9.74	145	*e*PKP	Pn	08 07 23.2	-0.4
AJM	**Ajmer**	10.47	161	*e*PKP	Pn	08 07 31.6	-1.5
AJM				*e*S	Sn	08 09 19.4	-10
AGRA	**Agra**	11.01	145	*e*PKP	Pn	08 07 38.1	-1.9
AGRA				AMb	AMB	08 07 40.0	
	comp=Z,54nm,0.3s						
AGRA				*e*S	Sn	08 09 34.8	-7.8
BHJ	**Bhuj**	13.20	185	*e*PKP	Pn	08 08 07.8	-0.1
BHJ				*e*S	Sn	08 10 22.6	-12
MK31	**Makanchi Array**	13.41	36	Pn	Pn	08 08 11.0	+0.7
	comp=Z,14nm,0.9s,baz=232,slow=12,SNR=28						
MK31	**Makanchi Array**	13.41	36	*e*Pn	Pn	08 08 11.4	+1.1
MKAR	**Makanchi Array**	13.41	36	P	Pn	08 08 12.2	+1.9
	comp=Z,1.2nm,0.3s,baz=217,slow=8.1,SNR=29						
MKAR	**Makanchi Array**	13.41	36	P	Pn	08 08 12.2	+1.9
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BHPL	**Bhopal**	14.36	155	*ex*	Pn	08 08 26.2	+3.9
BHPL				*ex*	x	08 10 54.4	
DMN	**Daman**	14.97	122	*e*P	Pn	08 08 29.9	+0.1
	comp=Z,34nm,0.5s						
KKN	**Kakani**	14.98	121	*e*P	Pn	08 08 29.8	-0.1
	comp=Z,59nm,0.6s						
KKN	**Kakani**	14.98	121	*e*P	Pn	08 08 29.8	-0.1
KKN				pmax	pmax		
	comp=Z,59nm,0.6s						
AB31	**Akbulak array**	15.05	332	⇑Pn	Pn	08 08 29.7	-0.9
	comp=Z,7.2nm,0.5s,baz=144,slow=11,SNR=184						
AB31				⇓Sn	Sn	08 11 09.1	-10
	comp=Z,4.1nm,0.8s,baz=157,slow=22,SNR=3.7						
ABKAR	**Akbulak array**	15.05	332	*e*P	Pn	08 08 29.8	-0.8
	comp=Z,11nm,0.5s						
PKIN	**Phulchoki**	15.19	122	*e*P	Pn	08 08 32.7	+0.2
PKI	**Pulchoki**	15.20	122	*e*P	Pn	08 08 32.9	+0.3
	comp=Z,60nm,0.6s						
PKI	**Pulchoki**	15.20	122	*e*P	Pn	08 08 32.9	+0.3
PKI				pmax	pmax		
	comp=Z,60nm,0.6s						
KURK	**Kurchatov**	15.32	19	P	Pn	08 08 34.3	+0.5
	comp=Z,0.3nm,0.3s,baz=202,slow=11,SNR=7.6						
KURK				S	S	08 11 23.8	0.0
	comp=Z,0.1nm,0.3s,baz=27,slow=42,SNR=3.7						
GUN	**Gumba**	15.32	120	*e*P	Pn	08 08 34.2	+0.2
	comp=Z,26nm,0.3s						
JIRN	**Jiri**	15.69	120	*e*P	Pn	08 08 39.1	+0.6
	comp=Z,22nm,0.2s						
VOSK	**Vostochnaya**	16.27	0	⇑Pn	Pn	08 08 46.1	+0.9
	comp=Z,4.3nm,0.8s						
VOSK				⇑Sn	S	08 11 38.1	-6.9
	comp=Z,6.2nm,1.2s						
RAMN	**Ramite**	16.41	121	*e*P	Pn	08 08 47.9	+0.6
	comp=Z,32nm,0.4s						
ZRNK	**Zerenda**	16.54	356	⇑Pn	Pn	08 08 48.8	+0.3
	comp=Z,5.7nm,0.7s						
ZRNK				⇑Sn	S	08 11 44.0	-6.7
	comp=Z,4.3nm,0.9s						
BVA0	**Borovoye Array**	16.57	359	⇑Pn	Pn	08 08 49.0	+0.1
	comp=Z,1.2nm,1.1s,baz=180,slow=13,SNR=24						
BVA0				⇑Sn	S	08 11 47.1	-4.1
	comp=Z,0.8nm,0.8s,baz=232,slow=40,SNR=5.3						
BVAR	**Borovoye Array**	16.57	359	P	Pn	08 08 49.1	+0.3
	comp=Z,1.4nm,0.3s,baz=193,slow=10.0,SNR=17						
BVAR				S	S	08 11 49.9	-1.3
	comp=Z,0.5nm,0.3s,baz=176,slow=21,SNR=5.8						
BVAR	**Borovoye Array**	16.57	359	P	Pn	08 08 49.1	+0.2
BVAR				S	S	08 11 49.9	-1.3
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BVAR				smax			
	comp=N,1.0nm,0.3s						
BRVK	**Borovoye**	16.61	359	*e*P	Pn	08 08 48.7	-0.6
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BRVK	**Borovoye**	16.61	359	*e*P	Pn	08 08 48.7	-0.6
	comp=Z,3.6nm,0.6s						
AKTO	**Aktyubinsk**	16.75	331	⇓Pn	Pn	08 08 51.3	+0.3
	comp=Z,1.8nm,0.8s						
AKTO				⇓Sn	S	08 11 52.3	-2.5
	comp=Z,1.6nm,1.7s						
AKTO	**Aktyubinsk**	16.75	331	P	Pn	08 08 51.3	+0.3
	comp=Z,0.8nm,0.3s,baz=140,slow=11,SNR=29						
AKTO				S	S	08 11 53.6	-1.2
	comp=Z,0.2nm,0.3s,baz=166,slow=23,SNR=1.8						
AKTO	**Aktyubinsk**	16.75	331	P	Pn	08 08 51.3	+0.3
AKTO				S	S	08 11 53.6	-1.2
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TAPN	**Taplejung**	16.95	118	*e*P	Pn	08 08 55.3	+1.6
	comp=Z,30nm,0.5s						
ODAN	**Odare**	17.02	120	*e*P	Pn	08 08 56.2	+1.7
	comp=Z,17nm,0.4s						
ZALV	**Zalesovo Beam**	20.01	25	P	P	08 09 26.1	+0.7
	comp=Z,13nm,0.3s,baz=221,slow=11,SNR=41						
ZALV	**Zalesovo Beam**	20.01	25	P	P	08 09 26.1	+0.7
ZALV				pmax	pmax		
	comp=Z,13nm,0.3s						
NVS	**Novosibirsk**	20.27	21	*e*P	P	08 09 28.2	+0.1
NVS				*e*S	S	08 13 02.9	-1.6
NVS				pmax	pmax		
	comp=Z,15nm,0.6s						
NVS				pmax	pmax		
	comp=N,20nm,0.9s						
NVS				smax			
	comp=E,16nm,1.4s						
NVS				smax			
	comp=N,4.0nm,1.0s						
ARU	**Arti**	21.63	341	*e*P	P	08 09 43.1	+0.7
ARU				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.2						
ARU	**Arti**	21.63	341	*e*P	P	08 09 43.1	+0.6
	comp=Z,3.1nm,0.4s,mb4.2						
GTA	**Gaotai**	23.01	74	*e*P	P	08 09 49.8	-5.8
GTA				pP		08 09 54.3	
GTA				sP	sP	08 09 57.8	-57
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.8						
SONM	**Songino Array**	28.48	55	P	P	08 10 46.4	+1.9
	comp=Z,1.4nm,0.7s,mb3.7,baz=253,slow=10,SNR=5.3						
SONM	**Songino Array**	28.48	55	P	P	08 10 46.4	+1.8
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
JOF	**Joensuu**	35.84	330	*e*P	P	08 11 49.0	+0.6
JOF				pmax	pmax		
	comp=Z,6.0nm,0.3s,mb4.6						
JOF	**Joensuu**	35.84	330	*e*p	P	08 11 49.0	+0.6
	comp=Z,5.6nm,0.3s,mb4.6						
JOF	**Joensuu**	35.84	330	*e*p	P	08 11 49.0	+0.6
	comp=Z,5.6nm,0.3s,mb4.6						
FINES	**FINESS Array B**	37.44	326	P	P	08 12 02.6	+0.6
	comp=Z,2.7nm,0.4s,mb4.1,baz=120,slow=9.0,SNR=26						
FINES	**FINESS Array B**	37.44	326	P	P	08 12 02.6	+0.7
FINES				pmax	pmax		
	comp=Z,3.0nm,0.4s						
KAF	**Kangasniemi**	37.59	327	*e*P	P	08 12 02.2	-0.9
KAF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.1						
KAF	**Kangasniemi**	37.59	327	*e*p	P	08 12 02.2	-0.9
	comp=Z,6.0nm,1.0s,mb4.1,baz=112,slow=8.4						
KAF	**Kangasniemi**	37.59	327	*e*p	P	08 12 02.2	-0.9
	comp=Z,6.0nm,1.0s,mb4.1,baz=112,slow=8.4						
ARCES	**ARCESS Array B**	41.13	338	P	P	08 12 33.4	+1.0
	comp=Z,5.0nm,0.8s,mb4.0,baz=113,slow=7.6,SNR=30						
ARCES	**ARCESS Array B**	41.13	338	P	P	08 12 33.4	+1.1
ARCES				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NB2	**NORSAR Subarra**	44.33	323	P	P	08 12 57.9	-0.2
	comp=Z,5.1nm,0.9s,mb3.9,baz=97,slow=7.9						
NOA	**NORSAR Array B**	44.33	323	P	P	08 12 58.0	-0.2
	comp=Z,2.2nm,0.6s,mb3.7,baz=97,slow=7.8,SNR=11						
NOA	**NORSAR Array B**	44.33	323	P	P	08 12 58.0	-0.1
NOA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TIXI	**Tiksi**	45.87	22	*e*P	P	08 13 10.9	+0.8
TIXI				pmax	pmax		
	comp=Z,14nm,0.3s,mb4.8						
TIXI	**Tiksi**	45.87	22	*e*P	P	08 13 10.9	+0.8
	comp=Z,14nm,0.3s,mb4.8						
HAU	**Haudompre**	47.80	305	*e*P	P	08 13 25.0	-0.4
	comp=Z,2.4nm,0.3s,mb3.7						
BAIF	**Baives**	48.81	308	*e*P	P	08 13 32.6	-0.5
	comp=Z,4.4nm,0.4s,mb3.9						
RJF	**Les Rejaudoux**	51.67	303	*e*P	P	08 13 54.8	+0.2
TORD	**Torodi Ar. Bea**	65.58	269	P	P	08 15 29.2	-1.8
	comp=Z,3.0nm,0.6s,mb4.1,baz=50,slow=6.0,SNR=40						
INK	**Inuvik**	73.97	9	*e*P	P	08 16 21.8	+0.5
INK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
INK	**Inuvik**	73.97	9	*e*P	P	08 16 21.8	+0.4
	comp=Z,2.2nm,0.4s,mb4.1						
COLA	**College**	74.56	16	*e*P	P	08 16 25.9	+1.1
COLA				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.6						
COLA	**College**	74.56	16	*e*P	P	08 16 25.9	+1.1
	comp=Z,1.4nm,0.6s,mb3.8						
BOSA	**Boshof**	77.62	220	P	P	08 16 42.8	+0.3
	comp=Z,4.9nm,1.0s,mb4.1,baz=3.6,slow=9.8,SNR=3.7						
BOSA	**Boshof**	77.62	220	P	P	08 16 42.8	+0.3
BOSA				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.1						
YKA	**Yellowknife Ar**	81.30	3	P	P	08 17 02.2	+0.3
	comp=Z,1.3nm,0.3s,mb4.0,baz=349,slow=5.4,SNR=24						
YKA	**Yellowknife Ar**	81.30	3	P	P	08 17 02.2	+0.3
YKA				pmax	pmax		
	comp=Z,1.0nm,0.3s						
WRA	**Warramunga Arr**	82.09	122	P	P	08 17 05.7	-1.0
	comp=Z,1.3nm,0.6s,mb3.7,baz=326,slow=5.0,SNR=24						
WRA	**Warramunga Arr**	82.09	122	P	P	08 17 05.7	-1.0
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRAB	**Tennant Creek**	82.09	122	*e*P	P	08 17 05.8	-0.9
WRAB				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.5						
WRAB	**Tennant Creek**	82.09	122	*e*P	P	08 17 05.8	-0.9
	comp=Z,1.4nm,0.7s,mb3.7						
ASAR	**Alice Springs**	84.35	125	P	P	08 17 17.3	-0.9
	comp=Z,1.1nm,0.7s,mb3.7,baz=311,slow=4.9,SNR=18						
ASAR	**Alice Springs**	84.35	125	P	P	08 17 17.3	-0.8
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WMOK	**Wichita Mounta**	108.51	351	*e*PKPdf	PKiKP	08 23 12.9	-0.4
PLCA	**Paso Flores**	149.68	250	PKPbc	PKPbc	08 24 35.3	+1.2
	comp=Z,2.8nm,1.1s,baz=189,slow=15,SNR=3.7						

IDC 17 08:29:17.2±1.4, 3°.92S×130°.89E, h0km, mb4.0/2, mb1 4.0/4, mb1mx3.7/17, mbtmp3.9/4, ML3.5/1, MS3.3/1, Ms1 3.2/1, ms1mx2.5/24, Error ellipse: s-maj=90.5km s-min=25.1km az=71.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	15.00	200	Pn	Pn	08 32 49.6	-1.0
	0.1nm,0.3s,baz=48,slow=14,SNR=9.0						
FITZ				Sn	Sn	08 35 30.9	-6.7
	0.2nm,0.3s,baz=98,slow=22,SNR=2.4						
WRA	**Warramunga Arr**	16.27	168	Pn	Pn	08 33 01.8	-5.6
	0.2nm,0.3s,baz=346,slow=14,SNR=19						
WRA				Sn	Sn	08 35 56.0	-13
	0.2nm,0.3s,baz=337,slow=22,SNR=2.2						
ASAR	**Alice Springs**	19.84	172	P	Pn	08 33 50.6	-0.7
	0.7nm,0.3s,baz=350,slow=9.6,SNR=76						
ASAR				S	Sn	08 37 24.8	-10
	0.1nm,0.3s,baz=357,slow=28,SNR=2.0						
STKA	**Stephens Creek**	29.57	161	P	P	08 35 23.7	-0.2
	2.0nm,0.7s,baz=356,slow=14,SNR=6.6						
STKA				LR	LR	08 46 12.6	
	comp=Z,59nm,20.2s,baz=26,slow=34						
MKAR	**Makanchi Array**	66.17	326	P	P	08 40 06.8	+0.2
	0.8nm,0.6s,baz=113,slow=8.2,SNR=8.7						
LPAZ	**La Paz**	152.49	137	PKPbc	PKPbc	08 49 17.1	+0.6
	0.5nm,0.4s,baz=236,slow=3.6,SNR=4.6						

*DJA **17** 08:53:15, 8°.10S×120°.35E, h14km, MLv4.3/8*
*IDC **17** 08:53:15.7±4.9, 8°.12S×120°.29E, h27km±33km, mb4.0/5, mb1 4.2/8, mb1mx3.9/23, mbtmp4.1/8, ML4.1/3, MS3.8/4, Ms1 3.7/4, ms1mx2.9/29, Error ellipse: s-maj=47.3km s-min=14.4km az=60.0*
*NEIC **17** 08:53:16.3±0.6, 8°.14S×120°.26E, h35km, mb3.8/2, Error ellipse: s-maj=23.7km s-min=9.6km az=59.0*
ISC 17 08:53:16.8±2.0, 8°.10S±0°.03×120°.36E±0°.06, h34km±17km, n35, σ1s13/38, mb4.2/5, MS3.9/3, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	1.56	182	P	Pn	08 53 41.5	-0.7
WSI				S	Sn	08 54 02.8	+1.6
MMRI	**Maumere**	1.93	106	P	Pn	08 53 47.7	+0.5
MMRI				S	Sn	08 54 13.0	+2.7
BKSI	**Bulukumba**	2.77	355	P	Pn	08 53 58.3	-0.4
BKSI				S	Sn	08 54 29.9	-1.1
KAPI	**Kappang**	3.12	349	Pn	Pn	08 54 02.8	-0.8
	32nm,0.3s,baz=144,slow=12,SNR=34						
KAPI				Sn	Sn	08 54 38.3	-1.4
	16nm,0.3s,baz=54,slow=22,SNR=2.4						
KAPI				LR	LR	08 55 47.9	
	comp=Z,617nm,18.3s,baz=181,slow=49						
KAPI	**Kappang**	3.12	349	*e*Pn	Pn	08 54 02.6	-1.0
KAPI				LR	LR	08 55 47.9	
KAPI	**Kappang**	3.12	349	P	Pn	08 54 03.1	-0.5
BNSI	**Bone**	3.68	356	P	Pn	08 54 12.3	+1.0
BNSI				S	Sn	08 54 59.8	+6.3
SPSI	**Sidrap Palu**	4.15	352	P	Pn	08 54 18.5	+0.8
TTSI	**Tana Toraja**	5.05	354	P	Pn	08 54 32.4	+2.3
	0.2nm41nm,0.7s						
IGBI	**Denpasar**	5.21	262	P	Pn	08 54 33.6	+1.3
	2.5nm8μm570nm,0.8s						
KMMI	**Kalianget**	6.42	279	P	Pn	08 54 49.1	+0.1
	65nm,1.4s						
FITZ	**Fitzroy Crossi**	11.19	153	*e*P	Pn	08 55 53.2	-1.2
	5.2nm,0.4s						
FITZ	**Fitzroy Crossi**	11.19	153	Pn	Pn	08 55 53.8	-0.6
	0.4nm,0.3s,baz=326,slow=10,SNR=13						
FITZ				Sn	Sn	08 57 56.4	-2.0
	0.6nm,0.3s,baz=1.0,slow=23,SNR=2.7						
FITZ	**Fitzroy Crossi**	11.19	153	*e*Pn	Pn	08 55 53.2	-1.2
FITZ				Sn	Sn	08 57 56.4	-2.0
FITZ	**Fitzroy Crossi**	11.19	153	P	Pn	08 55 53.6	-0.8
	24nm,2.3s						
KNA	**Kununurra**	11.20	134	P	Pn	08 55 52.8	-1.7
	512nm49nm,1.0s						
KAKA	**Kakadu**	12.73	112	*e*P	Pn	08 56 16.1	+0.6
	5.4nm,0.3s						
KAKA	**Kakadu**	12.73	112	*e*Pn	Pn	08 56 16.3	+0.8
	23nm,0.6s						
KAKA	**Kakadu**	12.73	112	P	Pn	08 56 15.9	+0.4
WRA	**Warramunga Arr**	17.94	132	Pn	Pn	08 57 23.2	-0.5
	0.9nm,0.3s,baz=306,slow=13,SNR=8.9						
WRA				Sn	Sn	09 00 37.7	-5.1
	0.2nm,0.3s,baz=289,slow=23,SNR=3.0						
WRAB	**Tennant Creek**	17.94	132	*e*P	Pn	08 57 23.1	-0.6
	4.1nm,0.4s						
ASAR	**Alice Springs**	20.20	142	P	P	08 57 48.5	-0.3
	6.5nm,0.4s,baz=317,slow=11,SNR=161						
ASAR				S	S	09 01 35.2	+1.5
	0.8nm,0.9s,baz=295,slow=18,SNR=4.1						
NWAO	**Narrogin (SRO)**	24.88	186	P	P	08 58 36.1	-0.2
	13nm,0.8s,mb4.5,baz=32,slow=8.0,SNR=3.6						
MTSU	**Mount Surprise**	25.34	116	*e*P	P	08 58 41.1	+0.4
	95nm,1.9s,mb5.0						
STKA	**Stephens Creek**	30.82	143	*e*P	P	08 59 29.2	-0.4
	10nm,2.0s,mb4.3						
STKA	**Stephens Creek**	30.82	143	P	P	08 59 29.4	-0.1
	3.9nm,0.5s,mb4.5,baz=313,slow=9.4,SNR=13						
STKA				LR	LR	09 13 44.6	
	comp=Z,112nm,18.4s,MS3.6,baz=316,slow=40						
STKA	**Stephens Creek**	30.82	143	*e*P	P	08 59 29.1	-0.5
	1.0nm,0.6s,mb3.8						
STKA				LR	LR	09 13 44.6	
SONM	**Songino Array**	57.04	349	P	P	09 03 00.7	+1.5
	0.7nm,0.8s,mb3.7,baz=169,slow=8.2,SNR=3.0						
URZ	**Urewera**	59.09	130	LR	LR	09 28 39.9	
	comp=Z,138nm,21.9s,MS4.0,baz=10,slow=36						
MKAR	**Makanchi Array**	64.28	332	P	P	09 03 47.5	-1.1
	0.6nm,0.6s,mb3.8,baz=144,slow=6.9,SNR=4.0						
BOSA	**Boshof**	90.62	241	LR	LR	09 39 34.6	
	comp=Z,68nm,18.9s,MS4.1,baz=341,slow=31						
TORD	**Torodi Ar. Bea**	119.63	280	PKP	PKPdf	09 12 01.4	-2.7
	0.3nm,0.5s,baz=84,slow=1.7,SNR=4.0						
CPUP	**Villa Florida**	145.71	184	PKPbc	PKPbc	09 12 53.1	+0.3
	0.8nm,0.5s,baz=206,slow=6.0,SNR=5.7						
LPAZ	**La Paz**	154.35	161	PKPbc	PKPbc	09 13 16.0	+1.5
	0.2nm,0.4s,baz=27,slow=2.3,SNR=2.4						
LPAZ				PKPab	PKPab	09 13 29.8	+1.3
	1.2nm,0.7s,baz=145,slow=5.3,SNR=6.5						
LPAZ	**La Paz**	154.35	161	PKPbc	PKPbc	09 13 16.0	+1.5
LPAZ				PKPab	PKPab	09 13 29.8	+1.3

IDC 17 09:14:04.4±1.0, 57°.31S×25°.85W, h0km, mb4.1/5, mb1 4.2/5, mb1mx4.0/16, mbtmp4.1/5, Error ellipse: s-maj=36.3km s-min=25.0km az=63.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QSPA	**South Pole Qui**	32.94	180	P	P	09 20 40.8	+0.9
	3.2nm,0.5s,baz=209,slow=2.3,SNR=60						
CPUP	**Villa Florida**	38.20	111	P	P	09 21 25.5	0.0
	0.6nm,0.5s,baz=121,slow=7.9,SNR=3.7						
SIV	**San Ignacio**	48.98	313	P	P	09 22 52.3	-0.2
	1.0nm,0.5s,baz=178,slow=9.5,SNR=5.7						
LPAZ	**La Paz**	51.70	305	P	P	09 23 13.9	+0.8
	2.4nm,0.5s,baz=138,slow=4.2,SNR=23						
TORD	**Torodi Ar. Bea**	73.81	28	P	P	09 25 41.0	+0.6
	1.1nm,0.6s,baz=201,slow=6.9,SNR=15						
YKA	**Yellowknife Ar**	137.60	316	PKP	PKPdf	09 33 27.8	-0.8
	0.5nm,0.3s,baz=134,slow=2.0,SNR=14						
SONM	**Songino Array**	150.06	88	PKPbc	PKPbc	09 33 54.4	-1.3
	0.8nm,0.6s,baz=208,slow=2.6,SNR=4.9						
KDAK	**Kodiak Island**	152.02	294	PKPbc	PKPbc	09 33 59.4	-0.6
	4.2nm,0.5s,baz=152,slow=4.4,SNR=3.9						

IDC 17 09:15:48.2±38.0, 16°.87S×178°.41W, h458km±341km, mb3.5/4, mb1 3.6/4, mb1mx3.1/17, mbtmp3.5/4, Error ellipse: s-maj=279.0km s-min=43.1km az=44.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	39.14	240	P	P	09 22 35.3	+0.2
	2.7nm,0.5s,baz=81,slow=7.6,SNR=12						
WRA	**Warramunga Arr**	44.83	259	P	P	09 23 19.9	-0.5
	1.3nm,0.7s,baz=95,slow=8.0,SNR=41						
ASAR	**Alice Springs**	45.08	253	P	P	09 23 22.3	0.0
	7.2nm,0.4s,baz=89,slow=7.8,SNR=220						
ASAR				PcP	PcP	09 24 53.8	0.0
	0.5nm,0.5s,baz=101,slow=4.0,SNR=4.1						
QSPA	**South Pole Qui**	73.18	180	P	P	09 26 31.2	+

NAIG	Nisos Aigina	2.06	44	ePn	Pb	09 19 19.2	0.0
NAIG	Nisos Aigina	2.06	44	ePN	Pb	09 19 19.2	0.0
NAIG	Nisos Aigina	2.06	44	ePn	Pb	09 19 19.2	0.0
VLS	Valsamata	2.07	336	ePn	Pn	09 19 18.0	+1.1
VLS	Valsamata	2.07	336	ePN	Pn	09 19 18.0	+1.1
VLS	Valsamata	2.07	336	ePn	Pn	09 19 18.0	+1.1
VAM	Vamos	2.23	113	ePn	Pn	09 19 20.0	+0.9
VAM	Vamos	2.23	113	ePN	Pn	09 19 20.0	+0.9
VAM	Vamos	2.23	113	ePn	Pn	09 19 20.0	+0.9
VLY	Voula,Athens	2.30	47	ePn	Pb	09 19 22.8	-0.5
VLY	Voula,Athens	2.30	47	ePn	Pb	09 19 22.8	-0.5
VLY	Voula,Athens	2.30	47	ePn	Pb	09 19 22.8	-0.5
LKR	Lokris	2.58	24	ePb	Pn	09 19 24.2	+0.4
LKR	Lokris	2.58	24	ePB	Pn	09 19 24.2	+0.4
LKR	Lokris	2.58	24	ePb	Pn	09 19 24.2	+0.4

*ISCJB **17** 10:19:28.6±0.5, 6°.82N±0°.07×72°.96W±0°.07, h172km±6km, mb3.0/2, Error ellipse: s-maj=14.7km s-min=6.4km az=43.7*
*FUNV **17** 10:19:29.5, 6°.80N×73°.10W, h171km, MW3.4*
*NEIC **17** 10:19:29.8±0.7, 6°.65N×72°.87W, h174km±9km, Error ellipse: s-maj=25.2km s-min=9.3km az=137.0*
*IDC **17** 10:19:29.0±0.8, 6°.72N×72°.90W, h160km±9km, mb2.8/2, mb1 3.3/4, mb1mx3.0/22, mbtmp3.0/4, Error ellipse: s-maj=35.8km s-min=7.5km az=131.0*

ISC 17 10:19:29.6±0.5, 6°.80N±0°.07×72°.94W±0°.07, h167km±6km, n28, σ0s72/36, mb3.0/2, 2C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	Capacho	1.23	30	⇓iP	Pn	10 19 58.3	+0.5
CAPV				eS	Sn	10 20 19.7	0.0
ROSC	El Rosal	2.37	216	P	Pn	10 20 09.8	-0.2
ROSC	13nm,0.3s,baz=88,slow=22,SNR=35			S	Sn	10 20 40.3	-1.1
ROSC	18nm,0.3s,baz=80,slow=22,SNR=14						
ROSC	El Rosal	2.37	216	ePn	Pn	10 20 10.6	+0.5
ROSC				S	Sn	10 20 40.3	-1.1
ROSC				eSn	Sn	10 20 43.4	+2.0
SOCV	Socops	2.54	54	⇑eP	Pn	10 20 13.0	+0.9
SOCV				eS	Sn	10 20 44.9	0.0
VIGV	El Vigia	2.56	37	eP	Pn	10 20 12.6	+0.3
VIGV				eS	Sn	10 20 44.6	-0.7
SDV	Santo Domingo	3.09	48	P	Pn	10 20 19.8	+1.1
SDV	12nm,0.3s,baz=270,slow=6.3,SNR=148			S	Sn	10 20 56.8	-0.1
SDV	17nm,0.3s,baz=270,slow=21,SNR=29						
SDV	Santo Domingo	3.09	48	ePn	Pn	10 20 20.5	+1.8
SDV				S	Sn	10 20 56.8	-0.1
SDV				eSn	Sn	10 20 58.2	+1.3
ELOV	Elorza	3.44	86	eP	Pn	10 20 24.4	+1.3
VIRV	Villa del Rosa	3.72	8	eP	Pn	10 20 25.6	-1.1
VIRV				eS	Sn	10 21 07.0	-4.3
QARV	Quebrada Arrib	4.15	35	eP	Pn	10 20 32.6	+0.4
SANV	Sanarito	4.31	51	eP	Pn	10 20 34.8	+0.5
CURV	Curarigua	4.35	42	eP	Pn	10 20 34.9	+0.1
DABV	Dabajuro	4.69	29	eP	Pn	10 20 39.4	+0.2
TEPV	Terepaima	4.86	49	eP	Pn	10 20 41.4	-0.1
SIQV	Siquisique	4.92	39	eP	Pn	10 20 42.0	-0.2
BAUV	El Baul	5.30	66	⇑eP	Pn	10 20 46.5	-0.8
MONV	Montecano	5.90	30	eP	Pn	10 20 54.3	-0.8
TURV	Turiamo	6.21	54	eP	Pn	10 20 58.6	-0.6
CAOV	Caicara del Or	6.59	85	eP	Pn	10 21 03.8	-0.5
BIRV	Birongo	7.54	61	eP	Pn	10 21 16.0	-0.8
CUPV	Cupira	7.78	65	eP	Pn	10 21 19.8	-0.3
OTAV	Otavalo	8.53	220	Pn	Pn	10 21 29.1	-0.8
GRGR	Grenville	12.33	64	ePn	Pn	10 22 19.3	-0.4
TXAR	Lajitas Array	36.61	312	P	P	10 26 20.7	+0.8
	0.1nm,0.4s,mb2.8,baz=135,slow=13,SNR=3.5						
YKA	Yellowknife Ar	63.35	340	P	P	10 29 41.2	+0.6
	0.2nm,0.5s,mb3.2,baz=128,slow=6.4,SNR=4.2						
YKA	Yellowknife Ar	63.35	340	P	P	10 29 41.2	+0.5
ASAR	Alice Springs	149.24	234	PKPbc	PKPbc	10 38 59.2	-0.1
	0.5nm,0.6s,baz=122,slow=3.4,SNR=9.3						
WRA	Warramunga Arr	150.48	241	PKPbc	PKPbc	10 39 02.1	-0.3
	0.4nm,0.5s,baz=107,slow=2.6,SNR=13						

*ISCJB **17** 10:41:50.8±0.8, 37°.84N±0°.03×21°.38E±0°.03, h10km±6km, Error ellipse: s-maj=5.3km s-min=3.9km az=4.7*
*ATH **17** 10:41:51.1, 37°.89N×21°.41E, h25km±1km, MD2.9/6*
*THE **17** 10:41:51.5, 37°.87N×21°.40E, h13km, ML2.9/7, Error ellipse: s-maj=0.8km s-min=0.3km az=41.0*
*CSEM **17** 10:41:51.5±0.1, 37°.86N×21°.40E, h20km, MD2.9, Error ellipse: s-maj=3.1km s-min=2.9km az=116.0*

ISC 17 10:41:51.2±0.6, 37°.85N±0°.03×21°.39E±0°.03, h18km±4km, n43, σ0s81/75, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.22	16	ePB	Pg	10 41 56.4	0.0
RLS				eSB	Sg	10 42 00.3	+0.3
RLS	Riolos of Patr	0.22	16	ePb	Pg	10 41 56.4	0.0
RLS				eSb	Sg	10 42 00.3	+0.3
KFL	Anninata	0.54	299	P	Pg	10 42 01.8	-0.2
KFL				S	Sg	10 42 09.7	+0.3
KFL	Anninata	0.54	299	P	Pg	10 42 01.8	-0.2
KFL				S	Sg	10 42 09.7	+0.3
LAKA	Lakka	0.61	50	P	Pg	10 42 02.8	-0.5
LAKA				S	Sg	10 42 11.2	-0.3
LAKA	Lakka	0.61	50	P	Pg	10 42 02.8	-0.5
LAKA				S	Sg	10 42 11.2	-0.3
LAKA	Lakka	0.61	50	P	Pg	10 42 02.8	-0.5
LAKA				S	Sg	10 42 11.2	-0.3
EFP	Efpalio	0.71	35	P	Pb	10 42 04.6	-0.4
EFP				S	Sb	10 42 14.5	0.0
EFP	Efpalio	0.71	35	P	Pb	10 42 04.6	-0.4
EFP				S	Sb	10 42 14.5	0.0
EFP	Efpalio	0.71	35	ePN	Pb	10 42 04.6	-0.4
EFP				eSN	Sn	10 42 14.1	-2.7
EFP	Efpalio	0.71	35	P	Pb	10 42 04.6	-0.4
EFP				eSn	Sn	10 42 14.1	-2.7
EFP				S	Sb	10 42 14.5	0.0
VLS	Valsamata	0.71	298	P	Pb	10 42 04.8	-0.3
VLS				S	Sb	10 42 15.8	+1.3
VLS	Valsamata	0.71	298	P	Pb	10 42 04.8	-0.3
VLS				S	Sb	10 42 15.8	+1.3
VLS	Valsamata	0.71	298	ePN	Pn	10 42 04.9	-1.5
VLS				eSN	Sn	10 42 16.1	-0.8
VLS	Valsamata	0.71	298	P	Pb	10 42 04.8	-0.3
VLS				S	Sb	10 42 15.8	+1.3
VLS				eSn	Sn	10 42 16.1	-0.8
TRIZ	Trizonia	0.75	46	P	Pb	10 42 05.2	-0.5
TRIZ				S	Sb	10 42 16.0	+0.4
TRIZ	Trizonia	0.75	46	P	Pb	10 42 05.2	-0.5
TRIZ				S	Sb	10 42 16.0	+0.4
TRIZ	Trizonia	0.75	46	P	Pb	10 42 05.2	-0.5
TRIZ				S	Sb	10 42 16.0	+0.4
GUR	Goura	0.76	83	P	Pb	10 42 05.3	-0.6
GUR				S	Sb	10 42 17.0	+1.1
GUR	Goura	0.76	83	P	Pb	10 42 05.3	-0.6
GUR				S	Sb	10 42 17.0	+1.1
GUR	Goura	0.76	83	ePN	Pn	10 42 05.4	-1.6
GUR	Goura	0.76	83	P	Pb	10 42 05.3	-0.6
GUR				S	Sb	10 42 17.0	+1.1
ITM	Ithomi	0.79	147	P	Pb	10 42 06.8	+0.4
ITM	Ithomi	0.79	147	P	Pb	10 42 06.8	+0.4
ITM	Ithomi	0.79	147	ePN	Pn	10 42 07.5	+0.1
ITM	Ithomi	0.79	147	P	Pb	10 42 06.8	+0.4
ITM	Ithomi	0.79	147	ePn	Pn	10 42 07.5	+0.1
KALE	Kalithea	0.81	47	P	Pb	10 42 06.2	-0.5
KALE				S	Sb	10 42 17.8	+0.6
KALE	Kalithea	0.81	47	P	Pb	10 42 06.2	-0.5
KALE				S	Sb	10 42 17.8	+0.6
KALE	Kalithea	0.81	47	P	Pb	10 42 06.2	-0.5
KALE				S	Sb	10 42 17.8	+0.6
PYL	PYLOS	0.99	163	P	Pb	10 42 10.0	+0.2
PYL	PYLOS	0.99	163	P	Pb	10 42 10.0	+0.2
PYL	PYLOS	0.99	163	ePN	Pn	10 42 10.8	+0.6
PYL	PYLOS	0.99	163	P	Pb	10 42 10.0	+0.2
PYL	PYLOS	0.99	163	ePn	Pn	10 42 10.8	+0.6
DSF	Desfina	1.06	57	P	Pb	10 42 10.8	-0.2
DSF				S	Sb	10 42 25.9	+1.3
DSF	Desfina	1.06	57	P	Pb	10 42 10.8	-0.2
DSF				S	Sb	10 42 25.9	+1.3
DSF	Desfina	1.06	57	P	Pb	10 42 10.8	-0.2
DSF				S	Sb	10 42 25.9	+1.3
LKD2	Lefkada island	1.10	329	P	Pb	10 42 11.9	+0.1
LKD2				S	Sb	10 42 27.1	+1.3
LKD2	Lefkada island	1.10	329	P	Pb	10 42 11.9	+0.1
LKD2				S	Sb	10 42 27.1	+1.3
LKD2	Lefkada island	1.10	329	P	Pb	10 42 11.9	+0.1
LKD2				S	Sb	10 42 27.1	+1.3
LTK	Loutraki	1.26	81	ePN	Pn	10 42 14.6	+0.7
LTK	Loutraki	1.26	81	ePn	Pn	10 42 14.6	+0.7

*ATH **17** 10:48:20.0, 36°.77N×29°.31E, h112km±8km*
*NEIC **17** 10:48:20.0, 37°.01N×29°.16E, h6km, MD3.1(ISK), After ISK.*
*CSEM **17** 10:48:21.4±0.1, 36°.97N×29°.26E, h5km, MD3.2, Error ellipse: s-maj=3.5km s-min=3.0km az=161.0*
*ISK **17** 10:48:21.0, 36°.95N×29°.27E, h7km, MD3.2*
*DDA **17** 10:48:21.7, 37°.02N×29°.19E, h9km±7km, Md3.1*
*ISCJB **17** 10:48:21.3±0.5, 36°.97N±0°.02×29°.27E±0°.03, h5km±5km, Error ellipse: s-maj=4.3km s-min=3.7km az=160.4*

ISC 17 10:48:21.8±0.4, 36°.96N±0°.03×29°.26E±0°.03, h8km±4km, n58, σ0s85/77, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.27	44	PG	Pg	10 48 26.9	-0.3
GLHS				eSG	Sg	10 48 31.9	+1.0
GLHS	Glhisar (BURDU	0.27	44	iPg	Pg	10 48 26.9	-0.3
GLHS				eSg	Sg	10 48 31.9	+1.0
FETY	Fethiye	0.35	204	PG	Pg	10 48 28.0	-0.7
FETY				eSG	Sg	10 48 34.3	+0.8
FETY	Fethiye	0.35	204	iPg	Pg	10 48 28.0	-0.8
FETY				eSg	Sg	10 48 34.3	+0.8
TURN	Turunc	0.54	261	iP	Pg	10 48 36.1	+3.9
TURN				iS	Sg	10 48 48.2	+9.0
TURN	Turunc	0.54	261	iP	Pg	10 48 36.1	+3.9
TURN				iS	Sg	10 48 48.2	+9.0
ELL	Elmali	0.56	112	ePG	Pg	10 48 32.2	-0.4
ELL	Elmali	0.56	112	ePg	Pg	10 48 32.2	-0.5
DNZL	Cakiroluk	0.75	347	iP	Pg	10 48 34.6	-1.7
DNZL				iS	Sg	10 48 45.9	0.0
DNZL	Cakiroluk	0.75	347	iP	Pg	10 48 34.6	-1.6
DNZL				iS	Sg	10 48 45.9	-0.1
AKAS	Kas	0.78	159	iP	Pg	10 48 36.9	+0.1
AKAS				iS	Sg	10 48 52.2	+5.4
AKAS	Kas	0.78	159	iP	Pg	10 48 36.9	+0.1
AKAS				iS	Sg	10 48 52.2	+5.4
YER	Yerkesik	0.80	283	ePG	Pg	10 48 37.5	+0.2
YER				eSG	Sg	10 48 48.2	+0.6
YER	Yerkesik	0.80	283	ePg	Pg	10 48 37.5	+0.2
YER				eSg	Sg	10 48 48.3	+0.6
KSL	Kastellorizon	0.85	162	eP	Pg	10 48 38.7	+0.5
KSL	Kastellorizon	0.85	162	eP	Pg	10 48 38.7	+0.5
KORT	Korkueli	0.87	87	iP	Pg	10 48 37.9	-0.7
KORT				iS	Sg	10 48 54.0	+4.1
KORT	Korkueli	0.87	87	iP	Pg	10 48 37.9	-0.7
KORT				iS	Sg	10 48 54.0	+4.0
ANTB	Antalya	1.12	93	ePN	Pn	10 48 42.3	-1.4
ANTB	Antalya	1.12	93	ePn	Pn	10 48 42.3	-1.4
BCK	Bucak	1.17	64	ePN	Pn	10 48 44.0	-0.5
BCK	Bucak	1.17	64	ePn	Pn	10 48 44.0	-0.4
ARG	Arkhangelos	1.18	231	eP	Pb	10 48 42.5	-1.9
ARG				eS	Sg	10 49 00.2	+0.5
ARG	Arkhangelos	1.18	231	eP	Pb	10 48 42.5	-1.9
ARG				eS	Sg	10 49 00.2	+0.5
ARG	Arkhangelos	1.18	231	eP	Pb	10 48 42.5	-1.9
ARG				eS	Sg	10 49 00.2	+0.5
MLSB	Milas	1.23	286	ePN	Pn	10 48 45.0	-0.3
MLSB	Milas	1.23	286	ePn	Pn	10 48 45.0	-0.3
AYDN	Tasoluk	1.30	303	iP	Pn	10 48 45.7	-0.6
AYDN				iS	Sb	10 49 04.5	+1.0
ISP	Isparta	1.33	48	ePN	Pn	10 48 46.8	+0.2
ISP	Isparta	1.33	48	ePn	Pn	10 48 46.9	+0.3
ISP				eSn	Sn	10 49 09.7	+5.3
ISP	Isparta	1.33	48	ePn	Pn	10 48 46.8	+0.2
DAT	Datca	1.37	261	ePN	Pn	10 48 47.9	+0.7
DAT	Datca	1.37	261	ePn	Pn	10 48 47.9	+0.7
KHL	Karahalli	1.38	9	ePN	Pn	10 48 46.6	-0.6
KHL	Karahalli	1.38	9	ePn	Pn	10 48 46.7	-0.6
BDRM	Kayabasi	1.46	275	iP	Pn	10 48 49.0	+0.6
BDRM				iS	Sn	10 49 08.0	+0.3
SUTC	Sutluce-Ispart	1.48	69	ePN	Pn	10 48 49.0	+0.4
SUTC	Sutluce-Ispart	1.48	69	ePn	Pn	10 48 49.1	+0.4
KULA	Kula-Manisa	1.62	343	ePN	Pn	10 48 51.0	+0.4
KULA	Kula-Manisa	1.62	343	ePn	Pn	10 48 51.1	+0.5
MANT	Manisa	1.63	340	iP	Pn	10 48 49.4	-1.3
MANT				iS	Sn	10 49 11.9	+0.1
SHUT	Suhut-Afyon	1.89	32	ePN	Pn	10 48 54.2	-0.1
SHUT	Suhut-Afyon	1.89	32	ePn	Pn	10 48 54.2	-0.1
SMG	Samos	2.07	292	eP	Pn	10 48 56.5	-0.3
SMG	Samos	2.07	292	eP	Pn	10 48 56.5	-0.3
SMG	Samos	2.07	292	eP	Pn	10 48 56.5	-0.3
ALT	Altintas	2.20	18	ePN	Pn	10 48 59.0	+0.5
ALT	Altintas	2.20	18	ePn	Pn	10 48 59.0	+0.5
KARP	Karpathos	2.21	231	eP	Pn	10 48 55.8	-2.9
KARP	Karpathos	2.21	231	eP	Pn	10 48 55.8	-2.9
HDMB	Hadim	2.58	89	ePN	Pn	10 49 04.6	+0.8
HDMB	Hadim	2.58	89	ePn	Pn	10 49 04.6	+0.8
KONT	Konya--Tatoy	2.66	67	ePN	Pn	10 49 05.4	+0.6
KONT	Konya--Tatoy	2.66	67	ePn	Pn	10 49 05.4	+0.6
KIZT	Kizilcal	2.82	46	ePN	Pn	10 49 08.1	+1.0
KIZT	Kizilcal	2.82	46	ePn	Pn	10 49 08.1	+1.0
IKL	Isikli	3.63	100	ePN	Pn	10 49 19.4	+1.1
IKL	Isikli	3.63	100	ePn	Pn	10 49 19.4	+1.1

*ISK **17** 10:57:11.7, 38°.08N×42°.98E, h5km, MD3.1*
*DDA **17** 10:57:11.3, 38°.09N×43°.06E, h2km±1km, Md3.2*
*CSEM **17** 10:57:12.3±0.1, 38°.07N×43°.05E, h5km, MD3.1, Error ellipse: s-maj=2.3km s-min=1.9km az=83.0*
*ISCJB **17** 10:57:12.9±0.4, 38°.09N±0°.03×43°.11E±0°.03, h10km, Error ellipse: s-maj=4.0km s-min=3.9km az=154.7*

ISC 17 10:57:12.9±0.7, 38°.10N±0°.03×43°.05E±0°.05, h1km±8km, n25, σ0s99/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANT	Van	0.36	27	ePG	Pg	10 57 20.8	+0.9
TVAN	Van	0.51	33	iP	Pg	10 57 22.3	-0.5
TVAN				iS	Sg	10 57 29.9	+0.4
TVAN	Van	0.51	33	iP	Pg	10 57 22.3	-0.4
TVAN				iS	Sg	10 57 29.9	+0.5
VANB	Van	0.56	28	ePG	Pg	10 57 23.7	0.0
VANB				eSG	Sg	10 57 32.3	+1.2
VANB	Van	0.56	28	ePg	Pg	10 57 23.7	0.0
VANB				eSg	Sg	10 57 32.3	+1.3
HAKT	HAKKARI	0.75	136	iP	Pg	10 57 25.2	-2.0
HAKT				iS	Sg	10 57 37.6	+0.7
HAKT	HAKKARI	0.75	136	iP	Pg	10 57 25.2	-2.0
HAKT				iS	Sg	10 57 37.6	+0.7
HKR	Hakkari	0.75	133	ePG	Pg	10 57 26.8	-0.5
HKR				eSG	Sg	10 57 38.9	+1.8
HKR	Hakkari	0.75	133	ePg	Pg	10 57 26.8	-0.5
CUKT	Cukurca	0.96	152	ePG	Pg	10 57 30.3	-0.9
CUKT	Cukurca	0.96	152	ePg	Pg	10 57 30.3	-0.9
BTMT	Batman	1.24	275	ePN	Pn	10 57 37.0	-0.3
CLDR	Caldiran	1.25	33	ePN	Pn	10 57 36.9	-0.5
CLDR	Caldiran	1.25	33	ePn	Pn	10 57 36.9	-0.5
BEST	Besiri	1.42	262	iP	Pn	10 57 39.3	-0.6
BEST				iS	Sg	10 57 58.9	+0.3
AGRB	Hanur-Agry	1.48	358	ePN	Pn	10 57 39.9	-0.8
AGRB	Hanur-Agry	1.48	358	ePn	Pn	10 57 39.9	-0.7
MARD	Mardin	1.96	247	iP	Pn	10 57 47.1	-0.2
MARD				iS	Sn	10 58 14.4	+1.8
EZM	Erzurum	2.23	324	ePN	Pn	10 57 50.1	-1.0
DIYA	Diyarbakir	2.32	267	iP	Pn	10 57 52.1	-0.2
DIYA				iS	Sn	10 58 23.6	+2.2
DIYA	Diyarbakir	2.32	267	iP	Pn	10 57 52.1	-0.1
DIYA				iS	Sn	10 58 23.6	+2.2
SVRC	Sivrice-ELAZID	2.96	277	ePN	Pn	10 58 00.3	-0.8
SVRC	Sivrice-ELAZID	2.96	277	ePn	Pn	10 58 00.3	-0.8
PTK	Pertek	2.98	287	ePN	Pn	10 58 00.6	-0.7
PTK	Pertek	2.98	287	ePn	Pn	10 58 00.6	-0.7

*IDC **17** 11:09:12.0±1.8, 38°.79N×141°.40E, h0km, mb3.6/2, mb1 3.6/3, mb1mx3.3/25, mbtmp3.4/3, ML2.5/2, Error ellipse: s-maj=55.2km s-min=28.0km az=120.0*
*ISCJB **17** 11:09:12.7±0.5, 38°.95N±0°.03×140°.94E±0°.04, h22km±5km, mb3.7/2, Error ellipse: s-maj=5.9km s-min=4.5km az=17.8*
*NEIC **17** 11:09:13.2, 38°.94N×140°.91E, h10km, MG3.1(JMA), After JMA.*
*JMA **17** 11:09:13.1, 38°.94N×140°.91E, h10km±1km, M3.1*
JMA Felt I J1.

ISC 17 11:09:13.0±0.5, 38°.93N±0°.03×140°.91E±0°.04, h9km±5km, n14, σ0s60/24, mb3.7/2, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	Ichinoseki	0.24	84	P	Pg	11 09 18.0	+0.1
JMK				S	Sg	11 09 21.5	+0.3
JYK	Kaneyama	0.43	269	P	Pg	11 09 21.6	+0.2
JYK				S	Sg	11 09 27.3	+0.2
JRG	Rokugo	0.52	335	P	Pg	11 09 23.0	0.0
JRG				S	Sg	11 09 30.2	+0.4
JIO	Ouri	0.58	144	P	Pg	11 09 24.2	-0.1
JIO				S	Sg	11 09 32.1	+0.2
JOU	Okura	0.59	199	P	Pg	11 09 24.9	+0.4
JOU				S	Sg	11 09 32.9	+0.7
JOM	Ohasama	0.62	28	P	Pg	11 09 24.7	-0.3
JOM				S	Sg	11 09 32.6	-0.5
JYS	Shirataka	0.97	224	P	Pg	11 09 31.5	-0.1
JYS				S	Sg	11 09 44.7	+0.5
JYA	Atsumi	0.99	251	P	Pg	11 09 31.9	-0.2
JMM	Marumori	1.06	185	P	Pg	11 09 32.5	-0.9
JMM				S	Sg	11 09 47.2	0.0
MJAR	Matsushiro Arr	3.20	223	Pn	Pn	11 10 07.2	+3.8
	0.3nm,0.3s,baz=37,slow=12,SNR=3.5						
MJAR				Pg	Pg	11 10 12.5	-1.9
	0.8nm,0.3s,baz=24,slow=15,SNR=6.2						
MAJO	Matsushiro	3.20	223	ePn	Pn	11 10 02.8	-0.6
MAJO				eSn	Sn	11 10 42.0	+0.2
ASAJ	Asahikawa	5.34	13	Pn	Pn	11 10 33.6	+0.8
	0.2nm,0.3s,baz=195,slow=18,SNR=2.6						
WRA	Warramunga Arr	58.88	187	P	P	11 19 11.8	-0.4
	0.5nm,0.5s,mb3.8,baz=5.5,slow=7.3,SNR=16						
ASAR	Alice Springs	62.61	187	P	P	11 19 37.6	+0.2
	0.3nm,0.7s,mb3.5,baz=355,slow=4.6,SNR=6.8						

*ISCJB **17** 11:16:34.9±0.6, 4°.89N±0°.03×127°.52E±0°.06, h119km±6km, mb4.6/33, Error ellipse: s-maj=9.6km s-min=4.1km az=168.9*
*NEIC **17** 11:16:37.0±0.2, 4°.82N×127°.56E, mb4.7/19, Error ellipse: s-maj=10.4km s-min=5.4km az=72.0*
*IDC **17** 11:16:36.8±0.6, 4°.82N×127°.50E, h124km±5km, mb4.1/17, mb1 4.2/18, mb1mx4.1/27, mbtmp4.1/18, MS3.2/6, Ms1 3.3/6, ms1mx2.9/22, Error ellipse: s-maj=18.0km s-min=8.3km az=63.0*
*DJA **17** 11:16:38, 4°.81N×127°.51E, h103km, Mw5.2/10*
*MAN **17** 11:16:40, 5°.15N×127°.29E, h58km, mb5.1, ML4.0, MS4.2*

ISC 17 11:16:36.1±0.5, 4°.90N±0°.03×127°.52E±0°.06, h114km±5km, h125km±1.0km: pP-P, n88, σ1s08/92, mb4.6/33, 3C-1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	Sangihe	2.32	239	P	Pn	11 17 12.4	-0.9
MATI	Mati	2.39	328	eP	Pn	11 17 13.8	-0.6
MATI				eS	Sn	11 17 38.0	-5.6
GSPH	General Santos	2.82	295	eP	Pn	11 17 17.6	-2.2
GSPH				eS	Sn	11 17 51.1	-2.4
DAV	Davao City (W)	2.89	318	P	Pn	11 17 20.9	0.0
	20nm,0.3s,baz=60,slow=6.3,SNR=9.7						
DAV				S	Sn	11 17 57.4	+2.1
	64nm,0.3s,baz=251,slow=20,SNR=14						
DAV	Davao City (W)	2.89	318	ePn	Pn	11 17 21.8	+0.9
DAV				S	Sn	11 17 57.4	+2.1
DAV				eSn	Sn	11 17 58.5	+3.2
DAV	Davao City (W)	2.89	318	P	Pn	11 17 20.9	0.0
DMPH	Davao City--Mi	2.95	318	⇑eP	Pn	11 17 21.1	-0.5
DMPH				eS	Sn	11 17 56.0	-0.7
BUKP	Musuan	3.84	321	eP	Pn	11 17 35.4	+2.0
BUKP				eS	Sn	11 18 14.1	-3.7
TNTI	Ternate	4.10	182	P	Pn	11 17 37.3	+0.4
TNTI				S	Sn	11 18 24.2	+0.1
MNI	Manado	4.35	218	P	Pn	11 17 39.9	-0.3
MNI				S	Sn	11 18 28.8	-1.2
BUTP	Butuan	4.46	335	eP	Pn	11 17 43.4	+1.6
BUTP				eS	Sn	11 18 30.8	-2.0
CGP	Cagayan de Oro	4.51	322	⇓eP	Pn	11 17 43.3	+0.9
CGP				eS	Sn	11 18 32.1	-1.9
PAGZ	Pagadian	5.05	306	eP	Pn	11 17 49.5	-0.1
LBMI	Labuha	5.50	180	P	Pn	11 17 56.3	+0.5
	0.9nm3μm191nm,1.0s						
KMSI	Cibinong	5.56	220	P	Pn	11 17 57.0	+0.4
	4.9nm817nm,0.8s						
MRSI	Marisa	7.09	232	P	Pn	11 18 17.5	+0.2
LUWI	Luwuk	7.56	219	P	Pn	11 18 26.6	+2.8
	0.9nm2μm213nm,0.9s						
APSI	Ampana	8.22	226	P	Pn	11 18 36.2	+3.5
	0.6nm8μm161nm,0.9s						
MYLDM	Lahad Datu	8.98	272	P	Pn	11 18 45.1	+2.0
	120nm,1.4s						
KDI	Kendari	10.06	209	P	Pn	11 19 00.2	+2.5
	809nm40nm,0.8s						
SPSI	Sidrap Palu	11.72	221	P	Pn	11 19 20.1	+0.3
	26nm,0.8s						
KAPI	Kappang	12.53

EIDS	**Eidsvold**	**37.80**	**144**	*e*P	**P**	**11 23 40.4**	**-1.2**
	12nm,0.7s,mb4.8						
STKA	**Stephens Creek**	**38.95**	**161**	⇑*i*P	**P**	**11 23 50.2**	**-0.9**
	11nm,0.4s,mb5.0						
STKA	**Stephens Creek**	**38.95**	**161**	P	**P**	**11 23 50.3**	**-0.8**
	15nm,0.4s,mb5.1,baz=338,slow=8.6,SNR=80						
STKA	**Stephens Creek**	**38.95**	**161**	*e*P	**P**	**11 23 50.3**	**-0.8**
	4.7nm,1.0s,mb4.3						
ARMA	**Armidale**	**42.02**	**148**	⇑*i*P	**P**	**11 24 16.0**	**-0.4**
ARPS	**Mount Arapiles**	**43.56**	**163**	*e*P	**P**	**11 24 28.3**	**-0.4**
	14nm,0.4s,mb5.0						
SONM	**Songino Array**	**46.46**	**340**	P	**P**	**11 24 52.4**	**+0.9**
	0.9nm,0.6s,mb3.7,baz=152,slow=6.6,SNR=4.7						
PETK	**Petropavlovsk-**	**54.06**	**22**	P	**P**	**11 25 48.8**	**+0.1**
	9.9nm,0.8s,mb4.9,baz=191,slow=4.9,SNR=14						
PETK				pP	pP	11 26 18.3	+2.4
	2.9nm,0.7s,baz=206,slow=5.7,SNR=3.3						
PETK	**Petropavlovsk-**	**54.06**	**22**	P	**P**	**11 25 48.8**	**+0.1**
PETK				pP	pP	11 26 18.3	+2.3
MK31	**Makanchi Array**	**57.06**	**324**	*e*P	**P**	**11 26 11.3**	**+1.0**
MKAR	**Makanchi Array**	**57.06**	**324**	P	**P**	**11 26 11.2**	**+0.9**
	2.0nm,0.5s,mb4.4,baz=118,slow=7.9,SNR=16						
MKAR				pP	pP	11 26 41.2	+3.5
	4.3nm,0.7s,baz=123,slow=8.8,SNR=6.7						
UCH	**Uchtor**	**59.86**	**317**	*e*P	**P**	**11 26 32.3**	**+2.5**
	7.4nm,1.0s,mb4.7						
ZALV	**Zalesovo Beam**	**59.92**	**332**	P	**P**	**11 26 29.8**	**-0.2**
	1.0nm,0.5s,mb4.1,baz=139,slow=7.6,SNR=4.7						
ZALV				pP	pP	11 27 00.5	+2.8
	1.2nm,0.6s,baz=108,slow=4.8,SNR=2.7						
ZALV	**Zalesovo Beam**	**59.92**	**332**	P	**P**	**11 26 29.8**	**-0.1**
ZALV				pP	pP	11 27 00.5	+2.8
KURK	**Kurchatov**	**61.19**	**327**	P	**P**	**11 26 39.1**	**+0.4**
	4.5nm,0.5s,mb4.7,baz=126,slow=6.0,SNR=15						
KURK				pP	pP	11 27 08.4	+1.9
	6.6nm,0.8s,baz=126,slow=6.6,SNR=6.5						
KURK	**Kurchatov**	**61.19**	**327**	*e*P	**P**	**11 26 39.0**	**+0.3**
	6.1nm,0.6s,mb4.8						
TIXI	**Tiksi**	**66.68**	**0**	*e*P	**P**	**11 27 14.0**	**-0.3**
BVAR	**Borovoye Array**	**66.78**	**326**	P	**P**	**11 27 15.6**	**+0.3**
	4.3nm,0.7s,mb4.4,baz=120,slow=8.8,SNR=17						
BVAR				pP	pP	11 27 45.6	+2.1
	3.3nm,0.7s,baz=116,slow=6.9,SNR=4.6						
ABKAR	**Abkulak array**	**71.75**	**320**	*e*P	**P**	**11 27 46.0**	**0.0**
	2.6nm,0.8s,mb4.1						
CASY	**Casey**	**72.06**	**187**	*e*P	**P**	**11 27 47.5**	**+0.1**
	9.5nm,0.5s,mb4.9						
AKTK	**Aktyubinsk**	**73.24**	**321**	P	**P**	**11 27 54.6**	**-0.2**
AKTK				pP	pP	11 28 25.4	+1.9
AKTO	**Aktyubinsk**	**73.24**	**321**	P	**P**	**11 27 54.6**	**-0.2**
	2.5nm,0.7s,mb4.2,baz=133,slow=4.8,SNR=10						
AKTO				pP	pP	11 28 25.4	+1.9
	2.9nm,0.7s,baz=83,slow=11,SNR=3.9						
ARU	**Arti**	**74.38**	**327**	*e*P	**P**	**11 28 04.4**	**+3.1**
	7.7nm,0.5s,mb4.7						
TTA	**Tatalina**	**79.51**	**27**	*e*P	**P**	**11 28 30.6**	**+0.7**
KDAK	**Kodiak Island**	**80.49**	**32**	*e*P	**P**	**11 28 35.7**	**+0.4**
	6.4nm,0.6s,mb4.6						
BPAW	**Bear Paw Mtn.**	**81.90**	**26**	*e*P	**P**	**11 28 43.1**	**+0.5**
	5.3nm,0.9s,mb4.4						
RC01	**Rabbit Creek A**	**82.23**	**29**	*e*P	**P**	**11 28 37.9**	**-6.6**
	11nm,0.7s,mb4.8						
MCK	**McKinley**	**82.78**	**26**	*e*P	**P**	**11 28 47.0**	**-0.2**
	4.9nm,0.7s,mb4.5						
DIV	**Divide**	**84.16**	**29**	*e*P	**P**	**11 28 55.1**	**+0.8**
	14nm,0.7s,mb4.9						
BMRM	**Bremner River**	**84.72**	**29**	*e*P	**P**	**11 28 55.9**	**-1.3**
	10nm,0.8s,mb4.8						
MENT	**Mentasta**	**85.11**	**27**	*e*P	**P**	**11 28 59.7**	**+0.6**
ARCES	**ARCESS Array B**	**89.63**	**340**	P	**P**	**11 29 19.3**	**-1.4**
	1.0nm,0.5s,mb4.2,baz=86,slow=7.4,SNR=8.3						
NOA	**NORSAR Array B**	**98.10**	**334**	LR	LR	12 17 07.6	
	comp=Z,26nm,20.7s,baz=90,slow=37						
YKA	**Yellowknife Ar**	**98.12**	**24**	P	**P**	**11 29 59.0**	**-0.7**
	0.6nm,0.7s,mb4.2,baz=309,slow=5.0,SNR=3.5						
TXAR	**Lajitas Array**	**120.27**	**52**	PKP	PKPdf	11 35 14.4	-0.2
	0.4nm,0.7s,baz=167,slow=0.9,SNR=5.6						
TORD	**Torodi Ar. Bea**	**123.29**	**289**	PKP	PKPdf	11 35 19.8	-0.8
	0.5nm,0.7s,baz=83,slow=3.3,SNR=3.4						
LPAZ	**La Paz**	**160.92**	**128**	PKPab	PKPab	11 37 08.6	+1.7
	0.7nm,0.5s,baz=256,slow=2.6,SNR=5.9						

*ISCJB **17** 11:28:32.9±0.6,51°.4N±0°.1×75°.7E±0°.1,h10km, Error ellipse: s-maj=21.4km s-min=5.4km az=24.9*
*IDC **17** 11:28:33.5±0.9,51°.39N×75°.69E,h0km,mb1 2.8/3, mb1mx2.7/29,mbtmp2.8/3,ML2.7/3,Error ellipse: s-maj=32.7km s-min=7.3km az=29.0*
*NNC **17** 11:28:33.8±1.7,51°.42N×75°.82E,h0km,mb3.0,mpv2.6, Error ellipse: s-maj=53.8km s-min=11.4km az=29.0*
ISC 17 11:28:34.4±0.6,51°.4N±0°.1×75°.7E±0°.1,h10km,n10, σ0s44/16,6C-6D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**1.96**	**113**	Pn	**Pn**	**11 29 08.7**	**+0.9**
	baz=301,slow=18						
KURK	**Kurchatov**	**1.98**	**110**	⇑Pn	**Pn**	**11 29 08.0**	**+0.1**
	9.6nm,0.9s						
KURK				⇓Lg		11 29 34.6	
	7.2nm,0.4s						
KURK	**Kurchatov**	**1.98**	**110**	Pn	**Pn**	**11 29 07.8**	**-0.1**
	1.3nm,0.3s,baz=296,slow=18,SNR=25						
KURK				Lg		11 29 35.4	
	2.0nm,0.3s,baz=304,slow=30,SNR=20						
VOSK	**Vostochnaya**	**3.19**	**296**	⇑Pn	**Pn**	**11 29 24.0**	**-0.6**
	0.7nm,0.3s						
VOSK				⇑Sn	**Sn**	**11 30 08.0**	**+5.5**
	2.0nm,0.4s						
BVA0	**Borovoye Array**	**3.63**	**298**	⇑Pn	**Pn**	**11 29 30.5**	**-0.2**
	0.2nm,0.6s,baz=26,slow=23,SNR=3.2						
BVA0				⇓Sn	**Sn**	**11 30 22.9**	**+9.4**
	0.7nm,0.5s,baz=113,slow=30,SNR=4.6						
BVAR	**Borovoye Array**	**3.63**	**298**	Pn	**Pn**	**11 29 30.6**	**-0.1**
	0.3nm,0.3s,baz=117,slow=15,SNR=4.3						
BVAR				Pg	**Pg**	**11 29 38.3**	**-5.7**
	0.6nm,0.3s,baz=116,slow=15,SNR=6.3						
BVAR				Sn	**Sn**	**11 30 13.5**	**0.0**
	1.2nm,0.3s,baz=104,slow=23,SNR=6.6						
BVAR				Lg		11 30 24.7	
	1.3nm,0.3s,baz=115,slow=28,SNR=6.4						
ZRNK	**Zerenda**	**4.39**	**293**	⇑Pn	**Pn**	**11 29 41.1**	**0.0**
	0.8nm,0.4s						
ZRNK				⇑Sn	**Sn**	**11 30 32.9**	**+0.7**
	1.2nm,0.5s						
ZRNK				⇓Lg		11 30 50.1	
	2.6nm,0.4s						
ZALV	**Zalesovo Beam**	**6.09**	**62**	Pn	**Pn**	**11 30 04.2**	**-0.2**
	0.6nm,0.3s,baz=255,slow=14,SNR=6.7						
MK31	**Makanchi Array**	**6.35**	**135**	⇓Pn	**Pn**	**11 30 08.0**	**+0.1**
	0.3nm,0.5s						
MK31				⇓Sn	**Sn**	**11 31 27.5**	**+7.1**
	0.3nm,0.5s,baz=324,slow=27,SNR=4.5						
MK31				⇓Lg		11 31 50.2	
	1.0nm,0.5s,baz=319,slow=26,SNR=3.6						
MKAR	**Makanchi Array**	**6.35**	**135**	Pn	**Pn**	**11 30 07.3**	**-0.6**
	0.1nm,0.3s,baz=331,slow=12,SNR=3.3						
MKAR				Lg		11 31 52.4	
	0.7nm,0.3s,baz=322,slow=22,SNR=6.0						

*CSEM **17** 11:39:55.2±0.3,39°.01N×27°.58E,h23km±4km,MD2.8, Error ellipse: s-maj=8.2km s-min=4.7km az=116.0*
*ISCJB **17** 11:39:55.8±0.8,39°.05N±0°.03×27°.58E±0°.06,h10km, Error ellipse: s-maj=7.1km s-min=4.7km az=165.6*
*DDA **17** 11:39:56.8,39°.08N×27°.72E,h7km±2km,Md2.8*
*ISK **17** 11:39:57.3,38°.83N×27°.76E,h24km,MD2.7*
ISC 17 11:39:56.3±0.8,39°.05N±0°.03×27°.59E±0°.06,h10km,n15, σ0s95/27,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.25**	**135**	*e*P	**Pg**	**11 40 01.4**	**0.0**
AKHS				*e*S	**Sg**	**11 40 05.3**	**+0.6**
AKHS	**Akhisar**	**0.25**	**135**	*e*P	**Pg**	**11 40 01.4**	**+0.1**
AKHS				*e*S	**Sg**	**11 40 05.3**	**+0.6**
AKS	**Akhisar**	**0.25**	**135**	*e*PG	**Pg**	**11 40 01.2**	**-0.1**
AKS				*e*PG	**Pg**	**11 40 01.6**	**+0.3**
AKS				*e*SG	**Sg**	**11 40 05.3**	**+0.6**
AKS				*e*SG	**Sg**	**11 40 06.0**	**+1.3**
AKS	**Akhisar**	**0.25**	**135**	*e*Pg	**Pg**	**11 40 01.6**	**+0.3**
AKS				*e*Sg	**Sg**	**11 40 05.3**	**+0.6**
BALY	**Balya**	**0.69**	**2**	*e*P	**Pg**	**11 40 09.3**	**-0.3**
BALY				*e*S	**Sg**	**11 40 19.6**	**+1.1**
BALY	**Balya**	**0.69**	**2**	*e*P	**Pg**	**11 40 09.3**	**-0.3**
BALY				*e*S	**Sg**	**11 40 19.6**	**+1.0**
IZM	**Izmir**	**0.70**	**201**	*e*PG	**Pg**	**11 40 08.5**	**-1.4**
IZM	**Izmir**	**0.70**	**201**	*e*Pg	**Pg**	**11 40 08.5**	**-1.4**
BLCB	**Balcova**	**0.79**	**213**	*e*PG	**Pg**	**11 40 12.8**	**+1.3**
BLCB	**Balcova**	**0.79**	**213**	*e*Pg	**Pg**	**11 40 12.8**	**+1.2**
DURS	**Dursunbey**	**0.88**	**51**	*e*P	**Pg**	**11 40 12.1**	**-1.2**
DURS				*e*S	**Sg**	**11 40 24.8**	**+0.2**
DURS	**Dursunbey**	**0.88**	**51**	*e*P	**Pg**	**11 40 12.1**	**-1.1**
DURS				*e*S	**Sg**	**11 40 24.8**	**+0.1**
KULA	**Kula-Manisa**	**1.00**	**122**	*e*PG	**Pg**	**11 40 13.2**	**-2.2**
KULA	**Kula-Manisa**	**1.00**	**122**	*e*PG	**Pg**	**11 40 13.8**	**-1.7**
KULA				*e*SG	**Sg**	**11 40 28.8**	**+0.4**
KULA	**Kula-Manisa**	**1.00**	**122**	*e*Pg	**Pg**	**11 40 13.2**	**-2.3**
KULA				*e*Sg	**Sg**	**11 40 28.8**	**+0.4**

*NEIC **17** 11:51:52.6, 19°.53N×64°.41W,h15km,MD3.5(RSPR), After RSPR.*
*RSPR **17** 11:51:52.6, 19°.53N×64°.41W,h15km±15km,MD3.5/5, MD3.5/5*
TRN 17 11:51:51.2,19°.44N×64°.41W,h35km,10C-6D,Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**1.03**	**191**	⇑*e*P	Pn	11 52 11.1	+1.9
TBVI	**Tortola**	**1.03**	**191**	⇓*e*P	Pn	11 52 11.1	+1.9
STVI	**Saint Thomas**	**1.20**	**206**	⇓*e*P	Pn	11 52 12.8	+1.4
STVI				*e*S	Sn	11 52 28.7	+2.2
STVI	**Saint Thomas**	**1.20**	**206**	⇓*e*P	Pn	11 52 12.8	+1.4
STVI				*e*S	Sn	11 52 28.7	+2.2
MTP	**Monte Pirata**	**1.72**	**219**	⇑*e*P	Pn	11 52 20.3	+1.7
MTP				*e*S	Sn	11 52 41.6	+2.3
MTP	**Monte Pirata**	**1.72**	**219**	⇑*e*P	Pn	11 52 20.3	+1.7
MTP				*e*S	Sn	11 52 41.6	+2.3
CBYP	**Canovanas**	**1.80**	**230**	⇓*e*P	Pn	11 52 21.2	+1.5
CBYP				*e*S	Sn	11 52 43.5	+2.2
CBYP	**Canovanas**	**1.80**	**230**	⇓*e*P	Pn	11 52 21.2	+1.5
CBYP				*e*S	Sn	11 52 43.5	+2.2
HUMP	**Col San Antoni**	**1.88**	**227**	⇑*e*P	Pn	11 52 22.0	+1.2
HUMP				*e*S	Sn	11 52 45.7	+2.4
HUMP	**Col San Antoni**	**1.88**	**227**	⇑*e*P	Pn	11 52 22.0	+1.2
HUMP				*e*S	Sn	11 52 45.7	+2.4
CPD	**Cerro la Pandu**	**2.00**	**226**	⇑*e*P	Pn	11 52 24.1	+1.6
CPD	**Cerro la Pandu**	**2.00**	**226**	⇑*e*P	Pn	11 52 24.6	+2.2
CELP	**Cerrillos**	**2.46**	**237**	⇓*e*P	Pn	11 52 30.2	+1.3
CELP	**Cerrillos**	**2.46**	**237**	⇓*e*P	Pn	11 52 30.2	+1.3
CRPR	**Cabo Rojo, PR**	**2.93**	**241**	⇑*e*P	Pn	11 52 37.6	+2.3
CRPR	**Cabo Rojo, PR**	**2.93**	**241**	⇑*e*P	Pn	11 52 37.6	+2.3
SDDR	**Presa de Saban**	**6.52**	**267**	*e*Pn	Pn	11 53 26.4	+1.8
	19nm,0.6s						
SDDR				*e*Sn	Sn	11 54 42.3	+4.5

*DJA **17** 11:55:41, 1°.26S×126°.90E,h9km,MLv3.7/6*
*ISCJB **17** 11:55:41.9±0.7, 1°.15S±0°.05×126°.89E±0°.07,h56km±9km, mb3.6/3, Error ellipse: s-maj=11.4km s-min=8.4km az=9.5*
*NEIC **17** 11:55:46.4±2.5, 1°.33S×126°.83E,h78km±24km,mb3.7/2, Error ellipse: s-maj=31.1km s-min=10.2km az=45.0*
*IDC **17** 11:55:46.2±9.9, 1°.32S×126°.91E,h82km±88km,mb3.0/2, mb1 3.3/4,mb1mx3.1/21,mbtmp3.2/4,ML3.9/1,Error ellipse: s-maj=105.4km s-min=24.8km az=55.0*
ISC 17 11:55:43.3±0.6,1°.18S±0°.05×126°.95E±0°.07,h52km±9km, n16,σ1s07/18,mb3.6/3,Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**0.77**	**46**	P	**Pn**	**11 55 57.2**	**-0.8**
LBMI				S	**Sn**	**11 56 08.4**	**-0.2**
TNTI	**Ternate**	**1.98**	**12**	P	**Pn**	**11 56 18.4**	**+4.0**
NLAI	**Namlea**	**2.06**	**176**	P	**Pn**	**11 56 16.0**	**+0.6**
NLAI				S	**Sn**	**11 56 40.2**	**+0.3**
AAI	**Ambon**	**2.79**	**154**	P	**Pn**	**11 56 26.9**	**+1.4**
LUWI	**Luwuk**	**4.18**	**272**	P	**Pn**	**11 56 42.9**	**-1.7**
KDI	**Kendari**	**5.13**	**237**	P	**Pn**	**11 56 57.7**	**0.0**
KAPI	**Kappang**	**8.14**	**242**	P	**Pn**	**11 57 39.1**	**+0.3**
	1.8nm,0.3s,baz=31,slow=5.9,SNR=17						
KAPI	**Kappang**	**8.14**	**242**	*e*Pn	**Pn**	**11 57 39.4**	**+0.5**
KAKA	**Kakadu**	**12.69**	**155**	*e*Pn	**Pn**	**11 58 42.3**	**+1.2**
WRAB	**Tennant Creek**	**20.00**	**159**	*e*P	**Pn**	**12 00 11.9**	**-2.0**
	1.7nm,0.9s						
WRA	**Warramunga Arr**	**20.00**	**159**	P	**Pn**	**12 00 11.8**	**-2.1**
	0.1nm,0.3s,baz=340,slow=11,SNR=17						
WRA	**Warramunga Arr**	**20.00**	**159**	P	**Pn**	**12 00 11.8**	**-2.1**
ASAR	**Alice Springs**	**23.35**	**164**	P	**P**	**12 00 47.0**	**-0.4**
	0.5nm,0.8s,mb3.0,baz=345,slow=12,SNR=6.6						
ASAR				PcP	PcP	12 04 30.2	-2.8
	0.2nm,0.5s,baz=354,slow=2.4,SNR=4.1						
MK31	**Makanchi Array**	**61.72**	**327**	*e*P	**P**	**12 05 56.7**	**+0.4**
MKAR	**Makanchi Array**	**61.72**	**327**	P	**P**	**12 05 57.3**	**+1.0**
	0.3nm,0.4s,mb3.7,baz=119,slow=8.2,SNR=5.0						
KURK	**Kurchatov**	**65.99**	**329**	*e*P	**P**	**12 06 24.9**	**+0.6**
	1.1nm,0.4s,mb4.2						

*IDC **17** 12:18:09.5±1.3, 32°.57N×103°.45E,h0km,mb3.5/6, mb1 3.7/8,mb1mx3.5/29,mbtmp3.5/8,ML3.8/2,Error ellipse: s-maj=36.3km s-min=23.0km az=52.0*
*ISCJB **17** 12:18:09.4±0.5, 32°.68N±0°.04×103°.64E±0°.05,h10km, mb3.6/6, Error ellipse: s-maj=6.4km s-min=5.0km az=169.7*
*NEIC **17** 12:18:11.6±0.7, 32°.55N×103°.35E,h10km,mb4.0/2,Error ellipse: s-maj=18.3km s-min=10.6km az=63.0*
*BJI **17** 12:18:11.4, 32°.68N×103°.66E,h13km,ML3.5/17,Ms3.7/4, Ms7 3.3/5*
ISC 17 12:18:11.3±0.5,32°.69N±0°.03×103°.53E±0°.06,h10km,n18, σ1s41/28,mb3.6/6,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.78**	**174**	Pg	**Pg**	**12 18 42.9**	**-2.6**
CD2				Sg	**Sg**	**12 19 08.3**	**-0.3**
CD2				smax			
	comp=N,2μm,0.7s						
CD2				smax			
	comp=E,2μm,1.0s						
LZH	**Lanzhou**	**3.40**	**4**	Pg	**Pg**	**12 19 14.6**	**-1.9**
LZH				Sg	**Sg**	**12 19 59.1**	**-1.5**
LZH				smax			
	comp=N,200nm,0.9s						
LZH				smax			
	comp=E,680nm,0.8s						
LZH				LR	LR		
	comp=N,650nm,4.8s						
LZH				LR	LR		
	comp=Z,700nm,8.7s						
XAN	**Xi'an**	**4.71**	**72**	Pn	**Pn**	**12 19 22.5**	**+0.1**
XAN				Pg	**Pb**	**12 19 35.8**	**+1.8**
XAN				Sn	**Sb**	**12 20 25.3**	**-5.5**
XAN				Sg	**Sg**	**12 20 37.6**	**-5.0**
XAN				smax			
	comp=N,290nm,0.8s						
XAN				smax			
	comp=E,98nm,0.9s						
XAN				LR	LR		
	comp=N,470nm,10.5s						
XAN				LR	LR		
	comp=E,94nm,11.8s						
XAN				LR	LR		
	comp=Z,77nm,10.1s						
ENH	**Enshi**	**5.63**	**114**	*e*Pn	**Pn**	**12 19 37.6**	**+2.5**
	comp=Z,82nm,0.7s						
ENH				*e*Sn	**Sn**	**12 20 40.2**	**+0.4**
GYA	**Guiyang**	**6.78**	**155**	Pn	**Pn**	**12 19 52.8**	**+1.9**
GYA				Sn	**Sn**	**12 21 09.1**	**+0.9**
GYA				Sg	**Sg**	**12 21 44.8**	**-4.2**
GYA				smax			
	comp=N,80nm,1.0s						
GYA				smax			
	comp=E,60nm,0.9s						
GTA	**Gaotai**	**7.35**	**337**	*e*P	**Pn**	**12 20 06.6**	**+7.9**
GTA				pP		12 20 10.9	
GTA				sP		12 20 14.3	
GTA				S	**Sn**	**12 21 29.9**	**+7.7**
GTA				sS		12 21 33.8	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,45nm,5.7s						
GTA				LR	LR		
	comp=N,330nm,12.8s						
GTA				LR	LR		
	comp=E,500nm,12.2s						
GTA				LR	LR		
	comp=Z,210nm,10.4s						
WHN	**Wuhan**	**9.47**	**100**	P	**Pn**	**12 20 27.4**	**-0.4**
WHN				S	**Sn**	**12 22 11.9**	**-2.5**
CMAR	**Chiang Mai Arr**	**14.76**	**197**	Pn	**Pn**	**12 21 38.5**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=21,slow=7.7,SNR=3.6						
SONM	**Songino Array**	**15.29**	**7**	Pn	**Pn**	**12 21 49.6**	**+2.5**
	comp=Z,0.2nm,0.3s,baz=185,slow=14,SNR=2.8						
KSRS	**Korea Array**	**20.50**	**70**	P	**P**	**12 22 49.5**	**0.0**
	comp=Z,1.5nm,0.8s,baz=251,slow=10,SNR=6.0						
MK31	**Makanchi Array**	**21.48**	**317**	*e*P	**P**	**12 23 02.9**	**+2.9**
MKAR	**Makanchi Array**	**21.48**	**317**	P	**P**	**12 22 59.6**	**-0.3**
	comp=Z,2.1nm,0.8s,mb3.5,baz=119,slow=13,SNR=18						
ZALV	**Zalesovo Beam**	**25.09**	**333**	P	**P**	**12 23 35.8**	**-0.1**
	comp=Z,0.5nm,0.3s,mb3.5,baz=145,slow=10,SNR=5.6						
KURK	**Kurchatov**	**25.70**	**322**	P	**P**	**12 23 42.0**	**+0.6**
	comp=Z,0.5nm,0.3s,mb3.5,baz=127,slow=9.7,SNR=5.0						
KURK	**Kurchatov**	**25.70**	**322**	*e*P	**P**	**12 23 40.8**	**-0.6**
	comp=Z,1.9nm,0.9s,mb3.6						
WRAB	**Tennant Creek**	**60.05**	**146**	P	**P**	**12 28 18.1**	**-0.5**
	comp=Z,2.3nm,1.1s,mb4.1						
WRA	**Warramunga Arr**	**60.06**	**146**	P	**P**	**12 28 17.8**	**-0.8**
	comp=Z,0.4nm,0.8s,mb3.5,baz=340,slow=7.4,SNR=3.4						
YKA	**Yellowknife Ar**	**80.33**	**17**	P	**P**	**12 30 23.4**	**+1.1**
	comp=Z,0.4nm,0.8s,mb3.4,baz=330,slow=5.9,SNR=2.7						

*IDC **17** 12:20:15.0±1.1, 0°.77S×127°.71E,h0km,mb3.9/6, mb1 4.0/8,mb1mx3.8/22,mbtmp4.0/8,ML3.7/2,Error ellipse: s-maj=47.3km s-min=17.2km az=71.0*
*NEIC **17** 12:20:20.0±0.7, 0°.79S×127°.57E,h35km,mb3.8/3,Error ellipse: s-maj=22.3km s-min=10.0km az=68.0*
*ISCJB **17** 12:20:19.0±0.6, 0°.79S±0°.04×127°.52E±0°.07,h44km±5km, mb4.1/5,Error ellipse: s-maj=11.4km s-min=7.3km az=168.3*
*DJA **17** 12:20:20, 0°.87S×127°.47E,h15km,MLv4.1/9*
ISC 17 12:20:20.1±0.7,0°.80S±0°.05×127°.59E±0°.07,h33km±5km, n29,σ1s16/31,mb4.1/5,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**0.18**	**332**	P	**Pb**	**12 20 25.9**	**-0.6**
LBMI				S	**Sb**	**12 20 30.8**	**-0.1**
TNTI	**Ternate**	**1.57**	**352**	P	**Pn**	**12 20 48.1**	**+2.4**
NLAI	**Namlea**	**2.47**	**191**	P	**Pn**	**12 20 58.0**	**-0.1**
NLAI				S	**Sn**	**12 21 26.9**	**-0.2**
AAI	**Ambon**	**2.93**	**168**	P	**Pn**	**12 21 06.3**	**+1.9**
MNI	**Manado**	**3.54**	**309**	P	**Pn**	**12 21 14.2**	**+1.5**
LUWI	**Luwuk**	**4.82**	**267**	P	**Pn**	**12 21 29.1**	**-1.3**
MRSI	**Marisa**	**5.79**	**283**	P	**Pn**	**12 21 41.8**	**-1.9**
	0.1nm454nm18nm,0.7s						
KDI	**Kendari**	**5.87**	**238**	P	**Pn**	**12 21 44.9**	**+0.1**
	0.1nm15nm,0.5s						
APSI	**Ampana**	**5.94**	**269**	P	**Pn**	**12 21 44.9**	**-0.8**
	9μm160nm,0.5s						
TTSI	**Tana Toraja**	**8.07**	**254**	P	**Pn**	**12 22 16.6**	**+1.5**
	23nm,0.9s						
SPSI	**Sidrap Palu**	**8.42**	**248**	P	**Pn**	**12 22 20.7**	**+0.9**
	922nm56nm,0.6s						
BKSI	**Bulukumba**	**8.70**	**239**	P	**Pn**	**12 22 26.0**	**+2.3**
	19nm,0.6s						
KAPI	**Kappang**	**8.87**	**242**	Pn	**Pn**	**12 22 25.9**	**-0.2**
	1.4nm,0.3s,baz=106,slow=4.1,SNR=7.1						
KAPI	**Kappang**	**8.87**	**242**	P	**Pn**	**12 22 26.2**	**+0.1**
FITZ	**Fitzroy Crossi**	**17.30**	**186**	P	**Pn**	**12 24 19.0**	**-0.2**
	0.1nm,0.3s,baz=28,slow=12,SNR=6.3						
FITZ	**Fitzroy Crossi**	**17.30**	**186**	*e*P	**Pn**	**12 24 20.3**	**+1.1**
	1.6nm,0.7s						
WRAB	**Tennant Creek**	**20.14**	**161**	*e*P	**P**	**12 24 50.8**	**-0.7**
WRAB				*e*P		12 24 51.0	
WRA	**Warramunga Arr**	**20.14**	**161**	P	**P**	**12 24 50.3**	**-1.3**
	0.9nm,0.4s,baz=341,slow=12,SNR=30						
ASAR	**Alice Springs**	**23.54**	**165**	P	**P**	**12 25 26.6**	**-1.1**
	1.9nm,0.6s,mb3.7,baz=342,slow=10,SNR=36						
STKA	**Stephens Creek**	**33.63**	**158**	P	**P**	**12 26 58.1**	**+0.5**
	1.7nm,0.7s,mb4.1,baz=305,slow=12,SNR=2.6						
TAPN	**Taplejung**	**47.45**	**309**	*e*P	**P**	**12 28 49.7**	**-2.2**
	10nm,0.6s						
ODAN	**Odare**	**47.46**	**309**	*e*P	**P**	**12 28 51.4**	**-0.6**
	6.5nm,0.3s						
RAMN	**Ramite**	**48.12**	**308**	*e*P	**P**	**12 28 55.6**	**-1.5**
	39nm,1.0s						
GUN	**Gumba**	**49.14**	**309**	*e*P	**P**	**12 29 01.0**	**-4.0**
	16nm,0.4s						
SONM	**Songino Array**	**51.84**	**342**	P	**P**	**12 29 25.0**	**0.0**
	0.7nm,0.3s,mb4.0,baz=157,slow=7.7,SNR=4.5						
MK31	**Makanchi Array**	**61.76**	**326**	*e*P

az=12.3
*MOS **17** 12:30:59.6±1.1, 39.°08N×140.°92E, h33km, mb4.3/17, Error ellipse: s-maj=13.3km s-min=7.8km az=87.3*
ISC 17 12:30:58.2±0.5, 39.°09N±0.°02×140.°94E±0.°04, h8km±3km, n61, σ0§93/70, mb4.1/20, 5C-8D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.26**	**122**	P	**Pg**	**12 31 03.1**	**-0.1**
JMK				S	**Sg**	**12 31 06.9**	**+0.2**
JRG	**Rokugo**	**0.39**	**322**	||P	**Pg**	**12 31 05.3**	**-0.5**
JRG				S	**Sg**	**12 31 11.3**	**+0.4**
JOM	**Ohasama**	**0.47**	**35**	||P	**Pg**	**12 31 06.7**	**-0.6**
JOM				S	**Sg**	**12 31 13.1**	**-0.4**
JYK	**Kaneyama**	**0.48**	**250**	||P	**Pg**	**12 31 07.4**	**-0.1**
OFUJ	**Ofunato**	**0.57**	**90**	||P	**Pg**	**12 31 08.9**	**-0.2**
JIO	**Ouri**	**0.71**	**153**	||P	**Pg**	**12 31 11.5**	**-0.3**
JIO				S	**Sg**	**12 31 20.9**	**-0.1**
JOU	**Okura**	**0.75**	**197**	||P	**Pg**	**12 31 12.7**	**+0.1**
JOU				S	**Sg**	**12 31 22.8**	**+0.4**
MAJO	**Matsushiro**	**3.34**	**221**	*e*P	**Pn**	**12 31 52.2**	**+1.5**
MJAR	**Matsushiro Arr**	**3.34**	**221**	Pn	**Pn**	**12 31 51.6**	**+0.9**
	4.0nm,0.3s,baz=39,slow=24,SNR=26						
MJAR				Lg		12 32 42.9	
	2.8nm,0.3s,baz=155,slow=33,SNR=4.1						
MJAR				LR	LR	12 33 18.3	
	comp=Z,215nm,19.3s,baz=45,slow=43						
MAT	**Matsushiro**	**3.34**	**221**	P	**Pn**	**12 31 52.0**	**+1.3**
MAT				S	**Sn**	**12 32 35.5**	**+5.0**
ERM	**Erimo**	**3.38**	**29**	*e*Pn	**Pn**	**12 31 51.0**	**-0.2**
ERM				*e*Sn	**Sn**	**12 32 30.9**	**-0.6**
ASAJ	**Asahikawa**	**5.18**	**13**	Pn	**Pn**	**12 32 17.3**	**+1.4**
	2.9nm,0.3s,baz=226,slow=9.6,SNR=19						
ASAJ				Sn	**Sn**	**12 33 16.8**	**+1.0**
	0.2nm,0.3s,baz=311,slow=20,SNR=2.4						
ASAJ	**Asahikawa**	**5.18**	**13**	P	**Pn**	**12 32 17.3**	**+1.4**
ASAJ						12 33 16.8	
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
JHJ	**Hachijo jima 2**	**6.03**	**189**	Pn	**Pn**	**12 32 28.1**	**+0.4**
	comp=Z,7.7nm,0.3s,baz=77,slow=22,SNR=9.1						
JHJ				Sn	**Sn**	**12 33 37.4**	**+0.5**
	comp=Z,5.7nm,0.3s,baz=63,slow=22,SNR=7.6						
YSS	**Yuzh-Sakhalins**	**7.97**	**9**⇑	*e*P	**Pn**	**12 32 56.8**	**+2.5**
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
KSRS	**Korea Array**	**10.37**	**265**	Pn	**Pn**	**12 33 31.1**	**+4.0**
	comp=Z,1.4nm,0.3s,baz=75,slow=14,SNR=55						
KSRS				Sn	**Sn**	**12 35 28.5**	**+5.0**
	comp=Z,1.5nm,0.3s,baz=76,slow=24,SNR=21						
KSRS				LR	LR	12 37 03.2	
	comp=Z,52nm,20.4s,baz=166,slow=36						
KSRS	**Korea Array**	**10.37**	**265**	P	**Pn**	**12 33 31.2**	**+4.0**
KSRS						12 35 28.5	
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS				smax			
	comp=N,2.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,52nm,20.4s						
CBIJ	**Chichi jima**	**12.00**	**175**	Pn	**Pn**	**12 33 47.0**	**-2.6**
	comp=Z,2.3nm,0.3s,baz=290,slow=18,SNR=5.6						
KLR	**Kul'dur**	**12.09**	**330**	*e*P	**Pn**	**12 33 50.7**	**+0.1**
YAK	**Yakutsk**	**23.99**	**347**	*e*P	**P**	**12 36 12.3**	**-0.7**
YAK				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.3						
SEY	**Seymchan**	**24.86**	**12**⇓	*e*P	**P**	**12 36 23.5**	**+2.6**
BILL	**Bilibino**	**32.17**	**18**⇑	*e*P	**P**	**12 37 26.9**	**+0.8**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb3.9						
ZALV	**Zalesovo Beam**	**40.28**	**311**	P	**P**	**12 38 34.5**	**-1.0**
	comp=Z,1.3nm,0.7s,mb3.8,baz=86,slow=9.1,SNR=7.4						
ZALV				PcP	PcP	12 40 37.8	-1.2
	comp=Z,0.8nm,0.5s,baz=29,slow=3.3,SNR=4.6						
ZALV	**Zalesovo Beam**	**40.28**	**311**	P	**P**	**12 38 34.5**	**-1.0**
ZALV						12 40 37.8	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.6						
MK31	**Makanchi Array**	**42.74**	**300**	*e*P	**P**	**12 38 54.9**	**-0.9**
MKAR	**Makanchi Array**	**42.74**	**300**	P	**P**	**12 38 54.9**	**-0.9**
	comp=Z,1.1nm,0.7s,mb3.7,baz=86,slow=10,SNR=11						
MKAR	**Makanchi Array**	**42.74**	**300**	P	**P**	**12 38 54.9**	**-0.9**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**42.74**	**300**	P	**P**	**12 38 54.9**	**-0.9**
KURK	**Kurchatov**	**44.39**	**306**	P	**P**	**12 39 08.5**	**-0.6**
	comp=Z,3.6nm,0.6s,mb4.3,baz=83,slow=8.8,SNR=16						
KURK	**Kurchatov**	**44.39**	**306***c*	*i*P	**P**	**12 39 07.6**	**-1.5**
KURK				pmax	pmax		
	comp=Z,10.0nm,1.7s,mb4.3						
KDAK	**Kodiak Island**	**45.84**	**43**	*i*P	**P**	**12 39 21.4**	**+0.9**
BVAR	**Borovoye Array**	**48.93**	**311**	P	**P**	**12 39 43.8**	**-0.8**
	comp=Z,1.3nm,0.5s,mb4.2,baz=72,slow=7.7,SNR=8.4						
BVAR				PcP	PcP	12 41 08.4	-0.3
	comp=Z,0.6nm,0.5s,baz=112,slow=2.3,SNR=3.7						
BVAR	**Borovoye Array**	**48.93**	**311**	P	**P**	**12 39 43.8**	**-0.8**
BVAR						12 41 08.4	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRVK	**Borovoye**	**48.99**	**311**⇑	*e*P	**P**	**12 39 45.1**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
AAK	**Ala-Archa**	**49.21**	**297**⇓	*e*P	**P**	**12 39 47.0**	**+0.1**
AAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb4.0						
INK	**Inuvik**	**52.74**	**28**	P	**P**	**12 40 13.3**	**+0.2**
	comp=Z,1.3nm,0.5s,mb4.2,baz=283,slow=6.6,SNR=15						
INK	**Inuvik**	**52.74**	**28**	P	**P**	**12 40 13.3**	**+0.3**
INK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
INK	**Inuvik**	**52.74**	**28**	P	**P**	**12 40 13.3**	**+0.2**
ARU	**Arti**	**54.59**	**317***c*	*i*P	**P**	**12 40 26.1**	**-0.6**
ARU						12 42 24.8	
ARU				S	**S**	**12 48 05.6**	**-0.6**
ARU				SS	SS	12 51 43.9	-4.4
ARU				pmax	pmax		
	comp=Z,7.0nm,1.7s,mb4.4						
WRAB	**Tennant Creek**	**59.03**	**187**	*e*P	**P**	**12 40 56.7**	**-1.9**
WRAB				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
WRAB	**Tennant Creek**	**59.03**	**187**	*e*P	**P**	**12 40 56.7**	**-1.9**
	comp=Z,5.6nm,1.1s,mb4.5						
WRA	**Warramunga Arr**	**59.04**	**187**	P	**P**	**12 40 57.6**	**-1.0**
	comp=Z,1.7nm,0.5s,mb4.3,baz=5.0,slow=7.3,SNR=54						
WRA	**Warramunga Arr**	**59.04**	**187**	P	**P**	**12 40 57.7**	**-1.0**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ARCES	**ARCESS Array B**	**61.95**	**339**	P	**P**	**12 41 17.2**	**-0.8**
	comp=Z,1.7nm,1.0s,mb4.2,baz=80,slow=7.5,SNR=4.9						
ARCES	**ARCESS Array B**	**61.95**	**339**	P	**P**	**12 41 17.2**	**-0.8**
ARCES				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ASAR	**Alice Springs**	**62.77**	**187**	P	**P**	**12 41 23.7**	**-0.3**
	comp=Z,1.0nm,0.7s,mb4.1,baz=5.4,slow=4.9,SNR=18						
ASAR	**Alice Springs**	**62.77**	**187**	P	**P**	**12 41 23.7**	**-0.3**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**66.83**	**332**	P	**P**	**12 41 49.2**	**-0.9**
	comp=Z,1.9nm,0.7s,mb4.3,baz=40,slow=9.9,SNR=5.4						
FINES	**FINESS Array B**	**66.83**	**332**	P	**P**	**12 41 49.2**	**-0.9**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	**FINESS Array B**	**66.83**	**332**	P	**P**	**12 41 49.2**	**-0.9**
KIV	**Kislovodsk**	**69.29**	**310**	*e*P	**P**	**12 42 06.9**	**+1.0**
KIV				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
NB2	**NORSAR Subarra**	**72.15**	**337**	P	**P**	**12 42 22.2**	**-0.8**
	comp=Z,1.1nm,0.6s,mb4.0,baz=42,slow=6.2						
NOA	**NORSAR Array B**	**72.15**	**337**	P	**P**	**12 42 22.4**	**-0.6**
	comp=Z,0.8nm,0.5s,mb3.9,baz=39,slow=6.1,SNR=4.6						
NOA	**NORSAR Array B**	**72.15**	**337**	P	**P**	**12 42 22.4**	**-0.6**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NOA	**NORSAR Array B**	**72.15**	**337**	P	**P**	**12 42 22.4**	**-0.6**
NVAR	**Mina Array Bea**	**74.06**	**53**	P	**P**	**12 42 36.5**	**+1.8**
	comp=Z,0.7nm,0.8s,mb3.7,baz=288,slow=5.8,SNR=5.6						
PDAR	**Pinedale Array**	**76.50**	**46**	P	**P**	**12 42 48.6**	**0.0**
	comp=Z,0.5nm,0.6s,mb3.6,baz=336,slow=2.0,SNR=3.5						
BRTR	**Keskin Array B**	**77.22**	**311**	P	**P**	**12 42 52.6**	**-0.2**
	comp=Z,0.5nm,0.6s,mb3.6,baz=59,slow=4.8,SNR=4.4						
BRTR	**Keskin Array B**	**77.22**	**311**	P	**P**	**12 42 52.6**	**-0.2**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
LPAZ	**La Paz**	**145.92**	**56**	PKPbc	PKPbc	12 50 39.5	+0.8
	comp=Z,1.2nm,0.9s,baz=355,slow=5.6,SNR=4.3						
LPAZ	**La Paz**	**145.92**	**56**	PKP2	PKPab	12 50 39.5	+0.4
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						

*IDC **17** 12:39:23.1±2.7, 6.°92S×150.°73E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.7/16, mbtmp3.9/4, Error ellipse: s-maj=66.5km s-min=42.9km az=112.0*
*NEIC **17** 12:39:24.5±1.8, 6.°91S×150.°72E, h10km, mb3.8/1, Error ellipse: s-maj=43.8km s-min=27.7km az=120.0*
ISC 17 12:39:31.0±4.3, 7.°2S±0.°4×150.°5E±0.°4, h35km, n7, σ0§37/7, mb3.8/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRAB	**Tennant Creek**	**20.16**	**229**	*e*P	**P**	**12 44 03.0**	**+0.5**
	5.3nm,1.0s						
WRA	**Warramunga Arr**	**20.18**	**229**	P	**P**	**12 44 02.5**	**-0.1**
	1.8nm,0.6s,baz=55,slow=11,SNR=24						
ASAR	**Alice Springs**	**22.87**	**222**	P	**P**	**12 44 32.0**	**+0.4**
	1.4nm,0.5s,mb3.7,baz=57,slow=9.0,SNR=22						
ASAR				S	**S**	**12 48 38.6**	**-0.4**
	0.8nm,1.0s,baz=36,slow=26,SNR=4.7						
STKA	**Stephens Creek**	**25.95**	**198**	P	**P**	**12 45 00.1**	**-0.2**
	1.7nm,0.6s,mb3.7,baz=14,slow=13,SNR=3.8						
FITZ	**Fitzroy Crossi**	**26.54**	**243**	P	**P**	**12 45 05.1**	**-0.7**
	1.9nm,0.5s,mb3.9,baz=61,slow=9.4,SNR=18						
FITZ	**Fitzroy Crossi**	**26.54**	**243**	*e*P	**P**	**12 45 05.8**	**0.0**
TORD	**Torodi Ar. Bea**	**148.74**	**283**	PKPbc	PKPbc	12 59 14.0	-1.8
	0.7nm,0.6s,baz=60,slow=2.5,SNR=9.2						

*ISCJB **17** 13:04:23.9±0.5, 32.°56N±0.°03×105.°38E±0.°05, h10km, mb3.4/4, Error ellipse: s-maj=6.1km s-min=4.5km az=3.8*
*IDC **17** 13:04:24.7±1.2, 32.°25N×104.°96E, h0km, mb3.3/4, mb1 3.5/5, mb1mx3.3/27, mbtmp3.3/5, ML3.5/1, Error ellipse: s-maj=50.1km s-min=22.1km az=50.0*
*BJI **17** 13:04:25.4, 32.°53N×105.°39E, h10km, mB4.3/1, mb3.7/1, ML3.9/14, Ms3.6/6, Ms7 3.2/5*
*NEIC **17** 13:04:26.1±0.8, 32.°41N×105.°19E, h10km, Error ellipse: s-maj=55.3km s-min=11.6km az=223.0*
ISC 17 13:04:25.8±0.4, 32.°55N±0.°03×105.°42E±0.°04, h10km, n12, σ1§23/25, mb3.4/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.16**	**221**	Pn	**Pn**	**13 05 02.1**	**+0.2**
CD2				Pg	**Pg**	**13 05 05.4**	**-1.9**
CD2				Sg	**Sg**	**13 05 34.3**	**-1.0**
CD2				smax			
	comp=N,750nm,1.0s						
CD2				smax			
	comp=E,2μm,0.6s						
XAN	**Xi'an**	**3.29**	**62**	Pn	**Pn**	**13 05 19.5**	**+2.1**
XAN				Pg	**Pg**	**13 05 27.6**	**-1.3**
XAN				Sn	**Sn**	**13 05 56.1**	**-0.5**
XAN				Sg	**Sg**	**13 06 07.3**	**-4.2**
XAN				smax			
	comp=N,290nm,0.8s						
XAN				smax			
	comp=E,180nm,0.7s						
XAN				LR	LR		
	comp=N,92nm,9.1s						
XAN				LR	LR		
	comp=E,77nm,10.0s						
XAN				LR	LR		
	comp=Z,71nm,7.1s						
LZH	**Lanzhou**	**3.76**	**340**	Pn	**Pn**	**13 05 24.8**	**+0.9**
LZH				Pg	**Pg**	**13 05 36.1**	**-1.8**
LZH				Sn	**Sn**	**13 06 09.0**	**+0.8**
LZH				Sg	**Sg**	**13 06 22.8**	**-3.9**
LZH				smax			
	comp=N,1μm,1.1s						
LZH				smax			
	comp=E,1μm,1.0s						
LZH				LR	LR		
	comp=E,1μm,5.2s						
LZH				LR	LR		
	comp=Z,1μm,8.6s						
ENH	**Enshi**	**4.15**	**122**	Pn	**Pn**	**13 05 31.0**	**+1.7**
GYA	**Guiyang**	**6.17**	**170**	Pn	**Pn**	**13 05 58.1**	**+1.1**
GYA				Pg	**Pb**	**13 06 17.8**	**+4.5**
GYA				Sn	**Sn**	**13 07 06.3**	**-1.2**
GYA				Sg	**Sb**	**13 07 29.3**	**+2.1**
GYA				smax			
	comp=N,160nm,0.7s						
GYA				smax			
	comp=E,60nm,0.8s						
WHN	**Wuhan**	**7.88**	**102**	P	**Pn**	**13 06 16.5**	**-4.0**
WHN				S	**Sn**	**13 07 48.0**	**-1.7**
WHN				LR	LR		
	comp=N,250nm,2.4s						
WHN				LR	LR		
	comp=E,700nm,3.3s						
WHN				LR	LR		
	comp=Z,760nm,3.8s						
GTA	**Gaotai**	**8.21**	**328**	*e*P	**Pn**	**13 06 25.4**	**+0.4**
GTA				pP		13 06 30.0	
GTA				sP		13 06 33.0	
GTA				S	**Sn**	**13 07 58.3**	**+0.4**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,81nm,4.8s						
GTA				LR	LR		
	comp=N,210nm,11.0s						
GTA				LR	LR		
	comp=E,220nm,10.4s						
GTA				LR	LR		
	comp=Z,130nm,10.1s						
KSRS	**Korea Array**	**19.06**	**69**	P	**Pn**	**13 08 53.5**	**+4.5**
	comp=Z,0.1nm,0.3s,baz=253,slow=10,SNR=4.3						
MKAR	**Makanchi Array**	**22.68**	**316**	P	**P**	**13 09 27.6**	**+0.4**
	comp=Z,0.3nm,0.5s,mb3.0,baz=140,slow=9.6,SNR=3.6						
KURK	**Kurchatov**	**26.80**	**321**	P	**P**	**13 10 05.8**	**-0.2**
	comp=Z,0.3nm,0.4s,mb3.2,baz=123,slow=10,SNR=2.5						
WRA	**Warramunga Arr**	**59.08**	**148**	P	**P**	**13 14 26.4**	**+0.1**
	comp=Z,0.3nm,0.5s,mb3.6,baz=340,slow=7.3,SNR=5.1						
ASAR	**Alice Springs**	**62.17**	**150**	P	**P**	**13 14 47.6**	**+0.3**
	comp=Z,0.3nm,0.5s,mb3.6,baz=331,slow=6.4,SNR=4.2						

*IDC **17** 13:15:38.0±2.2, 3.°63S×141.°61E, h0km, mb3.7/4, mb1 4.0/5, mb1mx3.7/15, mbtmp3.8/5, ML4.2/1, MS3.8/1, Ms1 3.8/1, ms1mx2.5/20, Error ellipse: s-maj=82.4km s-min=26.1km az=98.0*
*NEIC **17** 13:15:47.4±3.2, 3.°68S×141.°14E, h56km±27km, mb4.2/2, Error ellipse: s-maj=27.1km s-min=19.5km az=219.0*
ISC 17 13:15:47.3±3.5, 3.°7S±0.°2×141.°1E±0.°2, h51km±31km, n17, σ0§82/13, mb3.9/4, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**10.43**	**169**	P	**Pn**	**13 18 14.2**	**0.0**
KAKA	**Kakadu**	**12.42**	**223**	*e*P	**Pn**	**13 18 42.0**	**+0.6**
	22nm,0.5s						
KAKA	**Kakadu**	**12.42**	**223**	*e*Pn	**Pn**	**13 18 41.8**	**+0.4**
	67nm,0.6s						
WRAB	**Tennant Creek**	**17.46**	**202**	*e*P	**Pn**	**13 19 47.7**	**+0.4**
	13nm,0.9s						
WRA	**Warramunga Arr**	**17.47**	**202**	P	**Pn**	**13 19 45.4**	**-2.0**
	0.8nm,0.3s,baz=22,slow=12,SNR=25						
WRA	**Warramunga Arr**	**17.47**	**202**	P	**Pn**	**13 19 45.4**	**-2.0**
FITZ	**Fitzroy Crossi**	**20.86**	**225**	*e*P	**P**	**13 20 26.5**	**+1.3**
	6.8nm,0.6s						
FITZ	**Fitzroy Crossi**	**20.86**	**225**	P	**P**	**13 20 26.0**	**+0.8**
	3.1nm,0.9s,baz=59,slow=14,SNR=4.1						
FITZ				LR	LR	13 29 14.3	
	comp=Z,222nm,18.1s,baz=359,slow=38						
FITZ	**Fitzroy Crossi**	**20.86**	**225**	*e*P	**P**	**13 20 26.0**	**+0.9**
FITZ				LR	LR	13 29 14.3	
ASAR	**Alice Springs**	**21.07**	**199**	P	**P**	**13 20 26.8**	**-0.5**
	1.7nm,0.6s,mb3.6,baz=30,slow=10,SNR=18						
EIDS	**Eidsvold**	**23.61**	**157**	*e*P	**P**	**13 20 54.6**	**+0.8**
	18nm,1.3s,mb4.3						
MKAR	**Makanchi Array**	**72.01**	**322**	P	**P**	**13 27 05.4**	**-0.4**
	0.5nm,0.6s,mb3.6,baz=106,slow=9.2,SNR=4.3						
BVAR	**Boroyoye Array**	**81.46**	**325**	P	**P**	**13 27 59.0**	**0.0**
	1.5nm,0.8s,mb4.0,baz=101,slow=6.2,SNR=7.2						
LPAZ	**La Paz**	**144.95**	**125**	PKP	PKPdf	13 35 17.8	-2.1
	1.1nm,0.8s,baz=264,slow=1.9,SNR=5.1						
LPAZ	**La Paz**	**144.95**	**125**	PKP	PKPdf	13 35 17.8	-2.1
LPAZ				*e*PKPdf	PKPdf	13 35 19.1	-0.8
DBIC	**Dimbokro**	**145.98**	**276**	PKPbc	PKPbc	13 35 20.3	-2.3
	5.5nm,0.9s,baz=108,slow=3.2,SNR=3.4						
DBIC	**Dimbokro**	**145.98**	**276**	*e*PKPbc	PKPbc	13 35 22.3	-0.3

*IDC **17** 13:19:50.9±1.6, 39.°00N×140.°68E, h0km, mb3.6/3, mb1 3.5/5, mb1mx3.3/27, mbtmp3.4/5, ML2.7/1, Error ellipse: s-maj=52.7km s-min=26.2km az=91.0*
*JMA **17** 13:19:51.6, 39.°11N×140.°94E, h12km±1km, M3.4*
JMA Felt II J1.
*ISCJB **17** 13:19:51.2±0.6, 39.°10N±0.°04×140.°96E±0.°05, h12km±5km, mb3.6/3, Error ellipse: s-maj=6.5km s-min=5.6km az=136.9*
ISC 17 13:19:51.8±0.6, 39.°09N±0.°03×140.°95E±0.°05, h8km±5km, n14, σ0§90/20, mb3.6/3, 1C-6D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.26**	**123**	||P	**Pg**	**13 19 56.9**	**0.0**
JMK				S	**Sg**	**13 20 00.6**	**+0.3**
JRG	**Rokugo**	**0.39**	**322**	||P	**Pg**	**13 19 59.1**	**-0.3**
JOM	**Ohasama**	**0.47**	**35**	||P	**Pg**	**13 20 00.4**	**-0.5**
JOM				S	**Sg**	**13 20 06.5**	**-0.5**
JYK	**Kaneyama**	**0.49**	**249**	||P	**Pg**	**13 20 01.2**	**-0.1**
JYK				S	**Sg**	**13 20 07.7**	**0.0**
OFUJ	**Ofunato**	**0.56**	**91**	||P	**Pg**	**13 20 02.5**	**-0.2**
JIO	**Ouri**	**0.71**	**154**	||P	**Pg**	**13 20 05.3**	**-0.2**
JOU	**Okura**	**0.76**	**197**	||P	**Pg**	**13 20 06.4**	**0.0**
JOU				S	**Sg**	**13 20 16.7**	**+0.5**
MAT	**Matsushiro**	**3.34**	**221**	P	**Pn**	**13 20 45.7**	**+1.3**
MAT				S	**Sn**	**13 21 23.3**	**-0.9**
MJAR	**Matsushiro Arr**	**3.34**	**221**	Pn	**Pn**	**13 20 41.5**	**-2.9**
	0.8nm,0.3s,baz=89,slow=9.1,SNR=7.9						
ASAJ	**Asahikawa**	**5.17**	**13**	Pn	**Pn**	**13 21 11.4**	**+2.0**
	0.2nm,0.3s,baz=193,slow=18,SNR=3.5						
KSRS	**Korea Array**	**10.37**	**265**	Pn	**Pn**	**13 22 24.1**	**+3.3**
	0.2nm,0.3s,baz=74,slow=14,SNR=12						
KSRS				Sn	**Sn**	**13 24 23.1**	**+5.8**
	0.4nm,0.3s,baz=78,slow=23,SNR=5.7						
KURK	**Kurchatov**	**44.40**	**306**	P	**P**	**13 28 02.5**	**-0.2**
	0.5nm,0.5s,mb3.5,baz=82,slow=8.4,SNR=4.1						
WRA	**Warramunga Arr**	**59.05**	**187**	P	**P**	**13 29 51.5**	**-0.8**
	0.7nm,0.7s,mb3.8,baz=5.2,slow=7.4,SNR=8.1						
ASAR	**Alice Springs**	**62.77**	**187**	P	**P**	**13 30 17.6**	**0.0**
	0.4nm,0.8s,mb3.6,baz=10,slow=5.0,SNR=4.5						

*DDA **17** 13:27:22.5, 37.°49N×27.°97E, h46km±1km, Md2.8*
*CSEM **17** 13:27:23.1±0.3, 37.°33N×28.°06E, h15km, MD2.8, Error ellipse: s-maj=10.2km s-min=9.1km az=132.0*
*ISCJB **17** 13:27:23.1±0.8, 37.°34N±0.°05×28.°13E±0.°09, h10km±13km, Error ellipse: s-maj=12.8km s-min=7.9km az=167.2*
ISC 17 13:27:23.3±0.7, 37.°32N±0.°05×28.°07E±0.°10, h15km±10km, n16, σ0§86/19, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSB	**Milas**	**0.23**	**265**	*e*PG	**Pg**	**13 27 27.2**	**-1.2**
MLSB	**Milas**	**0.23**	**265**	*e*Pg	**Pg**	**13 27 27.3**	**-1.1**
YER	**Yerkesik**	**0.25**	**136**	*e*PG	**Pg**	**13 27 28.6**	**-0.1**
YER	**Yerkesik**	**0.25**	**136**	*e*Pg	**Pg**	**13 27 28.6**	**-0.1**
AYDN	**Tasoluk**	**0.38**	**337**	*i*P	**Pg**	**13 27 30.8**	**-0.1**
AYDN				*i*S	**Sg**	**13 27 36.8**	**+0.7**
AYDN	**Tasoluk**	**0.38**	**337**	*i*P	**Pg**	**13 27 30.8**	**-0.1**
AYDN				*i*S	**Sg**	**13 27 36.8**	**+0.8**
BDRM	**Kayabasi**	**0.56**	**243**	*i*P	**Pg**	**13 27 35.7**	**+1.4**
BDRM				*i*S	**Sg**	**13 27 46.7**	**+5.1**
BDRM	**Kayabasi**	**0.56**	**243**	*i*P	**Pg**	**13 27 35.7**	**+1.5**
DAT	**Datca**	**0.70**	**214**	*e*PG	**Pg**	**13 27 36.4**	**-0.7**
DAT	**Datca**	**0.70**	**214**	*e*Pg	**Pg**	**13 27 36.4**	**-0.6**
KULA	**Kula-Manisa**	**1.28**	**21**	*e*PN	**Pn**	**13 27 45.7**	**-1.1**
KULA	**Kula-Manisa**	**1.28**	**21**	*e*Pn	**Pn**	**13 27 45.7**	**-1.1**
KHL	**Karahalli**	**1.53**	**48**	*e*PN	**Pn**	**13 27 50.0**	**-0.2**
KHL	**Karahalli**	**1.53**	**48**	*e*Pn	**Pn**	**13 27 50.0**	**-0.1**
ELL	**Elmali**	**1.58**	**110**	*e*PN	**Pn**	**13 27 51.9**	**+1.1**
ELL	**Elmali**	**1.58**	**110**	*e*Pn	**Pn**	**13 27 51.9**	**+1.1**

*ISK **17** 13:32:01.7, 38.°57N×43.°54E, h5km, MD2.5*
*CSEM **17** 13:32:01.6±0.6, 38.°52N×43.°56E, h10km, MD3.0, Error ellipse: s-maj=15.1km s-min=11.4km az=110.0*
*ISCJB **17** 13:32:03.1±0.9, 38.°68N±0.°05×43.°42E±0.°09, h5km±6km, Error ellipse: s-maj=12.5km s-min=7.0km az=17.4*
*DDA **17** 13:32:06.6, 38.°49N×43.°31E, h2km, Md3.0*
ISC 17 13:32:03.3±0.9, 38.°67N±0.°05×43.°4E±0.°1, h5km±8km, n13, σ1§10/21, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.08**	**201**	*e*PG	**Pg**	**13 32 03.9**	**-1.2**
VANB				*e*SG	**Sg**	**13 32 07.1**	**+0.8**
VANB	**Van**	**0.08**	**201**	*e*Pg	**Pg**	**13 32 03.9**	**-1.2**
VANB				*e*Sg	**Sg**	**13 32 07.1**	**+0.8**
TVAN	**Van**	**0.14**	**187**	*i*P	**Pg**	**13 32 03.4**	**-2.8**
TVAN				*i*S	**Sg**	**13 32 09.4**	**+1.3**
TVAN	**Van**	**0.14**	**187**	*i*P	**Pg**	**13 32 03.4**	**-2.8**
TVAN				*i*S	**Sg**	**13 32 09.4**	**+1.3**
VANT	**

GYA smax
comp=N,330nm,0.8s
GYA smax
comp=E,310nm,0.8s
KMI Kunming 6.91 192 Pn Pn 13 33 54.3 +6.0
KMI Sn **Sn 13 35 07.3 +0.2**
KMI smax
comp=N,57nm,1.4s
KMI smax
comp=E,52nm,1.2s
KMI LR LR
comp=N,730nm,10.9s
KMI LR LR
comp=E,510nm,7.3s
KMI LR LR
comp=Z,420nm,8.3s
GTA Gaotai 8.30 335 *e*P **Pn 13 34 08.8 +1.4**
GTA pP 13 34 13.1
GTA sP 13 34 15.8
GTA S **Sn 13 35 41.4 -0.1**
GTA pmax pmax
comp=Z,3.0nm,0.8s
GTA pmax pmax
comp=Z,97nm,5.9s
GTA LR LR
comp=N,470nm,12.2s
GTA LR LR
comp=E,370nm,12.8s
GTA LR LR
comp=Z,400nm,9.8s
WHN Wuhan 8.74 96 P **Pn 13 34 19.3 +5.9**
WHN S **Sn 13 35 44.9 -7.3**
WHN LR LR
comp=E,1μm,3.5s
WHN LR LR
comp=Z,940nm,4.3s
CMAR Chiang Mai Arr 14.24 201 Pn **Pn 13 35 30.3 +1.5**
comp=Z,0.6nm,0.3s,baz=7.5,slow=12,SNR=6.3
CMAR Chiang Mai Arr 14.24 201 P **Pn 13 35 30.3 +1.5**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
SONM Songino Array 15.98 5 Pn **Pn 13 35 52.0 +0.3**
comp=Z,0.2nm,0.3s,baz=188,slow=14,SNR=9.8
SONM Lg 13 40 34.4
comp=Z,0.2nm,0.3s,baz=192,slow=25,SNR=3.4
ZAK Zakamensk 18.46 358 *e*P **Pn 13 36 23.3 +0.5**
ZAK pmax pmax
comp=Z,2.0nm,1.0s
KSRS Korea Array 20.20 68 P **P 13 36 42.5 +0.6**
comp=Z,2.2nm,0.7s,baz=255,slow=11,SNR=11
KSRS LR LR 13 45 41.0
comp=Z,41nm,18.3s,MS2.8,baz=230,slow=40
MK31 Makanchi Array 22.46 318 *e*P **P 13 37 06.5 +0.3**
MKAR Makanchi Array 22.46 318 P **P 13 37 07.4 +1.1**
comp=Z,7.1nm,0.8s,mb4.2,baz=112,slow=12,SNR=39
MKAR LR LR 13 46 44.6
comp=Z,126nm,18.9s,MS3.4,baz=169,slow=39
MKAR Makanchi Array 22.46 318 P **P 13 37 07.4 +1.2**
MKAR pmax pmax
comp=Z,7.0nm,0.8s
MKAR MLR MLR
comp=Z,126nm,18.9s
ZAA0 Zalesovo Array 26.05 333 *e*P **P 13 37 40.2 -0.2**
ZALV Zalesovo Beam 26.05 333 P **P 13 37 40.6 +0.2**
comp=Z,2.5nm,0.6s,mb3.9,baz=137,slow=9.5,SNR=14
ZALV LR LR 13 48 11.7
comp=Z,32nm,19.4s,MS2.9,baz=72,slow=37
ZALV Zalesovo Beam 26.05 333 P **P 13 37 40.6 +0.2**
ZALV pmax pmax
comp=Z,3.0nm,0.6s,mb4.0
ZALV MLR MLR
comp=Z,32nm,19.4s,MS2.9
KURK Kurchatov 26.68 322 P **P 13 37 46.5 +0.3**
comp=Z,3.5nm,0.8s,mb4.0,baz=123,slow=10,SNR=14
KURK Kurchatov 26.68 322 *e*P **P 13 37 46.3 +0.2**
BVAR Borovoye Array 32.24 321 P **P 13 38 36.0 +0.5**
comp=Z,0.8nm,0.5s,mb3.8,baz=119,slow=8.6,SNR=5.8
BVAR Borovoye Array 32.24 321 P **P 13 38 36.0 +0.5**
BVAR pmax pmax
comp=Z,1.0nm,0.5s
ABKAR Akbulak array 37.24 311 *e*P **P 13 39 19.2 +0.5**
comp=Z,0.5nm,0.4s,mb3.7
ARU Arti 39.88 322 P **P 13 39 41.3 +0.6**
ARU Arti 39.88 322 *e*P **P 13 39 41.4 +0.7**
comp=Z,4.8nm,0.5s,mb4.5
TIXI Tiksi 41.93 11 *e*P **P 13 39 56.5 -0.9**
TIXI pmax pmax
comp=Z,2.0nm,0.2s,mb4.4
TIXI Tiksi 41.93 11 *e*P **P 13 39 56.5 -0.9**
comp=Z,1.8nm,0.2s,mb4.3
KEV Kevo 56.05 336 *e*P **P 13 41 44.9 -0.8**
KEV pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
KEV Kevo 56.05 336 *e*p **P 13 41 44.9 -0.8**
comp=Z,3.6nm,0.9s,mb4.4
BRTR Keskin Array B 56.47 299 P **P 13 41 49.6 +0.4**
comp=Z,0.8nm,0.6s,mb4.0,baz=116,slow=5.1,SNR=2.9
BRTR Keskin Array B 56.47 299 P **P 13 41 49.6 +0.4**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
ARCES ARCESS Array B 56.58 336 P **P 13 41 48.5 -1.0**
comp=Z,0.8nm,0.5s,mb4.0,baz=78,slow=7.9,SNR=14
ARCES ARCESS Array B 56.58 336 P **P 13 41 48.5 -1.0**
ARCES pmax pmax
comp=Z,1.0nm,0.5s
ARCES ARCESS Array B 56.58 336 P **P 13 41 48.5 -1.0**
KAF Kangasniemi 56.79 327 *e*P **P 13 41 50.5 -0.6**
KAF pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
KAF Kangasniemi 56.79 327 *e*p **P 13 41 50.5 -0.6**
comp=Z,1.6nm,0.4s,mb4.4
AKASG Malin Array Be 56.93 313 P **P 13 41 51.7 -0.6**
comp=Z,1.5nm,0.4s,mb4.3,baz=67,slow=7.4,SNR=4.0
AKASG Malin Array Be 56.93 313 P **P 13 41 51.7 -0.6**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKASG Malin Array Be 56.93 313 P **P 13 41 51.7 -0.6**
FINES FINESS Array B 56.97 326 P **P 13 41 52.4 0.0**
comp=Z,3.5nm,0.4s,mb4.7,baz=84,slow=7.2,SNR=23
FINES FINESS Array B 56.97 326 P **P 13 41 52.4 0.0**
FINES pmax pmax
comp=Z,4.0nm,0.4s
WRAB Tennant Creek 59.07 147 *e*P **P 13 42 06.7 -0.9**
WRAB pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
WRAB Tennant Creek 59.07 147 *e*P **P 13 42 06.7 -0.9**
comp=Z,3.4nm,0.6s,mb4.5
WRA Warramunga Arr 59.07 147 P **P 13 42 06.8 -0.8**
comp=Z,2.9nm,0.7s,mb4.4,baz=340,slow=7.6,SNR=27
WRA Warramunga Arr 59.07 147 P **P 13 42 06.8 -0.8**
WRA pmax pmax
comp=Z,3.0nm,0.7s
ASAR Alice Springs 62.12 149 P **P 13 42 27.9 -0.4**
comp=Z,1.0nm,0.5s,mb4.2,baz=337,slow=6.9,SNR=13
ASAR Alice Springs 62.12 149 P **P 13 42 27.9 -0.4**
ASAR pmax pmax
comp=Z,1.0nm,0.5s
NB2 NORSAR Subarra 64.05 327 P **P 13 42 39.6 -1.1**
comp=Z,1.2nm,0.5s,mb4.2,baz=76,slow=6.9
NOA NORSAR Array B 64.05 327 P **P 13 42 39.6 -1.1**
comp=Z,1.0nm,0.5s,mb4.1,baz=72,slow=9.0,SNR=7.6
NOA NORSAR Array B 64.05 327 P **P 13 42 39.7 -1.0**
NOA pmax pmax
comp=Z,1.0nm,0.5s
BPAW Bear Paw Mtn. 67.81 27 *e*P **P 13 43 04.6 -0.3**
comp=Z,1.3nm,0.7s,mb4.1
STKA Stephens Creek 72.61 147 P **P 13 43 35.4 +0.7**
comp=Z,2.6nm,0.7s,mb4.3,baz=319,slow=7.2,SNR=4.1
YKA Yellowknife Ar 80.87 17 P **P 13 44 20.0 -0.9**
comp=Z,0.8nm,0.7s,mb3.8,baz=327,slow=4.6,SNR=7.3
YKA Yellowknife Ar 80.87 17 P **P 13 44 20.0 -1.0**
YKA pmax pmax
comp=Z,1.0nm,0.7s

*IDC **17** 13:40:42.4±0.6, 32°.25N×104°.98E, h0km, mb4.2/14, mb1 4.3/17, mb1mx4.1/29, mbtmp4.1/17, ML3.5/2, MS3.1/1, Ms1 3.1/1, ms1mx2.2/31, Error ellipse: s-maj=28.4km s-min=12.4km az=58.0*
*NEIC **17** 13:40:44.0±0.4, 32°.23N×104°.86E, h10km, mb4.5/17, Error ellipse: s-maj=7.8km s-min=6.9km az=66.0*
*BJI **17** 13:40:43.8, 32°.28N×105°.09E, h13km, mB4.7/7, mb4.1/11, ML4.1/19, Ms4.1/16, Ms7 3.7/14*
*MOS **17** 13:40:44.8±1.1, 32°.14N×104°.85E, h33km, mb4.7/24, Error ellipse: s-maj=13.6km s-min=7.5km az=111.1*

ISC 17 13:40:42.9±0.7, 32°.29N±0°.03×105°.00E±0°.04, h1km±5km, n92, σ1§13/107, mb4.4/30, 2C-2D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.74**	**218**	Pg	**Pg**	**13 41 15.6**	**-0.6**
CD2				Sg	**Sg**	**13 41 39.3**	**+0.6**
CD2				smax			
	comp=N,13μm,0.7s						
CD2				smax			
	comp=E,5μm,0.8s						
XAN	**Xi'an**	**3.72**	**61**	Pn	**Pn**	**13 41 42.5**	**+1.0**
XAN				Pg	**Pg**	**13 41 53.0**	**-1.2**
XAN				Sn	**Sn**	**13 42 28.8**	**+2.8**
XAN				Sg	**Sg**	**13 42 40.8**	**-1.7**
XAN				smax			
	comp=N,670nm,0.8s						
XAN				smax			
	comp=E,340nm,0.7s						
XAN				LR	LR		
	comp=N,600nm,10.1s						
XAN				LR	LR		
	comp=E,260nm,11.6s						
XAN				LR	LR		
	comp=Z,230nm,9.1s						
LZH	**Lanzhou**	**3.90**	**346**	Pn	**Pn**	**13 41 46.8**	**+2.8**
LZH				Pg	**Pg**	**13 41 56.9**	**-0.8**
LZH				Sn	**Sn**	**13 42 34.1**	**+3.6**
LZH				Sg	**Sg**	**13 42 46.8**	**-1.5**
LZH				smax			
	comp=N,880nm,1.1s						
LZH				smax			
	comp=E,1μm,1.0s						
LZH				LR	LR		
	comp=E,3μm,5.0s						
LZH				LR	LR		
	comp=Z,3μm,9.2s						
ENH	**Enshi**	**4.34**	**116**	*e*Pn	**Pn**	**13 41 51.6**	**+1.6**
GYA	**Guiyang**	**5.99**	**166**	Pn	**Pn**	**13 42 18.4**	**+5.7**
GYA				Pg	**Pg**	**13 42 39.8**	**+2.1**
GYA				Sn	**Sn**	**13 43 29.9**	**+7.9**
GYA				Sg	**Sg**	**13 43 45.8**	**-10**
GYA				smax			
	comp=N,220nm,0.8s						
GYA				smax			
	comp=E,270nm,0.9s						
KMI	**Kunming**	**7.41**	**196**	Pn	**Pn**	**13 42 33.0**	**+0.7**
KMI				Sn	**Sn**	**13 43 54.4**	**-2.6**
KMI				smax			
	comp=N,27nm,1.1s						
KMI				smax			
	comp=E,29nm,0.8s						
KMI				LR	LR		
	comp=N,230nm,3.8s						
KMI				LR	LR		
	comp=E,300nm,4.7s						
KMI				LR	LR		
	comp=Z,220nm,6.2s						
WHN	**Wuhan**	**8.18**	**100**	P	**Pn**	**13 42 43.0**	**+0.2**
WHN				S	**Sn**	**13 44 09.8**	**-6.1**
WHN				LR	LR		
	comp=N,2μm,8.4s						
WHN				LR	LR		
	comp=E,1μm,4.6s						
WHN				LR	LR		
	comp=Z,1μm,4.2s						
GTA	**Gaotai**	**8.25**	**331**	*e*P	**Pn**	**13 42 44.8**	**+1.1**
GTA				pP		13 42 49.0	
GTA				sP		13 42 52.3	
GTA				S	**Sn**	**13 44 16.9**	**-0.7**
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,35nm,4.8s						
GTA				LR	LR		
	comp=N,470nm,10.4s						
GTA				LR	LR		
	comp=E,200nm,10.4s						
GTA				LR	LR		
	comp=Z,470nm,11.6s						
LSA	**Lhasa**	**12.16**	**261**	P	**Pn**	**13 43 38.8**	**+1.5**
CMAR	**Chiang Mai Arr**	**14.82**	**203**	Pn	**Pn**	**13 44 14.6**	**+1.0**
	baz=16,slow=12,SNR=9.0						
SONM	**Songino Array**	**15.56**	**4**	Pn	**Pn**	**13 44 24.6**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=190,slow=15,SNR=4.4						
SONM				Lg		13 48 59.7	
	comp=Z,0.2nm,0.3s,baz=207,slow=26,SNR=3.2						
ULN	**Ulaanbaatar**	**15.63**	**5**	*e*P	**Pn**	**13 44 25.7**	**+1.4**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ULN	**Ulaanbaatar**	**15.63**	**5**	*e*P	**Pn**	**13 44 25.7**	**+1.4**
	comp=Z,5.2nm,1.0s						
TAPN	**Taplejung**	**15.79**	**256**	*e*P	**Pn**	**13 44 31.4**	**+4.9**
	comp=Z,38nm,1.1s						
ODAN	**Odare**	**16.24**	**255**	*e*P	**Pn**	**13 44 32.5**	**+0.1**
	comp=Z,11nm,0.5s						
RAMN	**Ramite**	**16.86**	**256**	*e*P	**Pn**	**13 44 37.7**	**-2.5**
GUN	**Gumba**	**17.11**	**260**	*e*P	**Pn**	**13 44 42.6**	**-0.7**
	comp=Z,18nm,0.5s						
PKI	**Pulchoki**	**17.61**	**260**	*e*P	**Pn**	**13 44 45.3**	**-4.4**
	comp=Z,21nm,0.5s						
PKI	**Pulchoki**	**17.61**	**260**	*e*P	**Pn**	**13 44 45.7**	**-4.0**
PKI				pmax	pmax		
	comp=Z,32nm,0.7s						
PKI	**Pulchoki**	**17.61**	**260**	*e*P	**Pn**	**13 44 45.7**	**-4.0**
	comp=Z,32nm,0.7s						
PKIN	**Phulchoki**	**17.62**	**260**	*e*P	**Pn**	**13 44 45.7**	**-4.1**
	comp=Z,32nm,0.7s						
KKN	**Kakani**	**17.65**	**260**	*e*P	**Pn**	**13 44 46.1**	**-4.0**
	comp=Z,18nm,0.7s						
KKN	**Kakani**	**17.65**	**260**	*e*P	**Pn**	**13 44 46.1**	**-4.0**
KKN				pmax	pmax		
	comp=Z,19nm,0.7s						
DMN	**Daman**	**17.85**	**260**	*e*P	**Pn**	**13 44 47.2**	**-5.4**
	comp=Z,33nm,0.9s						
ZAK	**Zakamensk**	**18.12**	**356**	*e*P	**Pn**	**13 44 58.4**	**+2.7**
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KSRS	**Korea Array**	**19.48**	**68**	P	**Pn**	**13 45 11.8**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=249,slow=10,SNR=5.3						
MOY	**Mondy**	**19.58**	**353**	*e*P	**Pn**	**13 45 17.7**	**+4.3**
CN2	**Changchun**	**19.73**	**49**	*e*P	**Pn**	**13 45 19.5**	**+4.3**
CN2				*es*P	sP	13 45 26.5	+12
CN2				*e*S	**Sn**	**13 48 56.5**	**-0.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,16.0s						
CN2				LR	LR		
	comp=E,200nm,16.0s						
CN2				LR	LR		
	comp=Z,200nm,15.0s						
IRK	**Irkutsk**	**19.94**	**359**	*e*P	**Pn**	**13 45 18.5**	**+0.8**
IRK				pmax	pmax		
	comp=Z,27nm,0.8s						
MK31	**Makanchi Array**	**22.61**	**316**	*e*P	**P**	**13 45 45.5**	**+0.6**
MKAR	**Makanchi Array**	**22.61**	**316**	P	**P**	**13 45 45.5**	**+0.6**
	comp=Z,4.2nm,0.5s,mb4.2,baz=108,slow=12,SNR=33						
MKAR				LR	LR	13 55 30.8	
	comp=Z,54nm,21.2s,baz=194,slow=39						
MKAR	**Makanchi Array**	**22.61**	**316**	*i* P	**P**	**13 45 45.5**	**+0.6**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ZAA0	**Zalesovo Array**	**26.00**	**332**	*e*P	**P**	**13 46 17.5**	**+0.4**
ZALV	**Zalesovo Beam**	**26.00**	**332**	P	**P**	**13 46 17.1**	**0.0**
	comp=Z,3.8nm,0.4s,mb4.4,baz=132,slow=10.0,SNR=15						
ZALV	**Zalesovo Beam**	**26.00**	**332**	P	**P**	**13 46 17.1**	**-0.1**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.4						
UCH	**Uchtor**	**26.09**	**301**	P	**P**	**13 46 18.7**	**+0.6**
	comp=Z,12nm,1.1s,mb4.4						
AAK	**Ala-Archa**	**26.19**	**302**	⇓*e*P	**P**	**13 46 22.6**	**+3.6**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.5s,mb3.7						
KURK	**Kurchatov**	**26.77**	**321**	P	**P**	**13 46 24.3**	**+0.2**
	comp=Z,3.7nm,0.6s,mb4.3,baz=121,slow=12,SNR=21						
KURK	**Kurchatov**	**26.77**	**321**	*e*P	**P**	**13 46 24.8**	**+0.6**
KURK				pmax	pmax		
	comp=Z,11nm,1.4s,mb4.4						
KURK	**Kurchatov**	**26.77**	**321**	*e*P	**P**	**13 46 24.1**	**0.0**
BVAR	**Borovoye Array**	**32.35**	**320**	P	**P**	**13 47 14.2**	**+0.6**
	comp=Z,2.0nm,0.5s,mb4.3,baz=108,slow=9.5,SNR=13						
BVAR				PcP	PcP	13 50 00.4	-0.9
	comp=Z,0.6nm,0.5s,baz=112,slow=5.3,SNR=3.8						
BVAR	**Borovoye Array**	**32.35**	**320**	P	**P**	**13 47 14.2**	**+0.6**
BVAR						13 50 00.4	
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BRVK	**Borovoye**	**32.42**	**320**	*i* P	**P**	**13 47 14.4**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
BRVK	**Borovoye**	**32.42**	**320**	*e*P	**P**	**13 47 13.8**	**-0.5**
ABKAR	**Akbulak array**	**37.47**	**310**	*e*P	**P**	**13 47 58.1**	**+0.3**
	comp=Z,4.2nm,0.8s,mb4.2						
SVE	**Sverdlovsk**	**39.01**	**322**	*e*P	**P**	**13 48 11.5**	**+0.8**
SVE				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.4						
ARU	**Arti**	**39.97**	**321**	*d i* P	**P**	**13 48 18.9**	**+0.2**
ARU				S	**S**	**13 54 18.8**	**-6.0**
ARU				SS	SS	13 57 11.5	-10
ARU				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.6						
TIXI	**Tiksi**	**41.44**	**11**	P	**P**	**13 48 29.4**	**-1.3**
ZEI	**Tsey**	**48.61**	**301**	*e*P	**P**	**13 49 30.7**	**+2.5**
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.9						
FITZ	**Fitzroy Crossi**	**53.87**	**155**	P	**P**	**13 50 06.5**	**-1.2**
	comp=Z,1.2nm,0.8s,mb4.0,baz=333,slow=4.5,SNR=2.7						
JOF	**Joensuu**	**54.44**	**327**	*e*P	**P**	**13 50 10.4**	**-1.0**
JOF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
JOF	**Joensuu**	**54.44**	**327**	*e*p	**P**	**13 50 10.4**	**-1.0**
	comp=Z,5.2nm,0.8s,mb4.6						
KEV	**Kevo**	**55.96**	**336**	*e*P	**P**	**13 50 20.9**	**-1.4**
KEV				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.9						
KEV	**Kevo**	**55.96**	**336**	*e*p	**P**	**13 50 20.9**	**-1.4**
	comp=Z,4.6nm,0.4s,mb4.9						
ARCES	**ARCESS Array B**	**56.49**	**335**	P	**P**	**13 50 26.1**	**0.0**
	comp=Z,3.1nm,0.6s,mb4.5,baz=81,slow=7.7,SNR=24						
ARCES	**ARCESS Array B**	**56.49**	**335**	P	**P**	**13 50 26.2**	**+0.1**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KAF	**Kangasniemi**	**56.82**	**327**	*e*P	**P**	**13 50 27.2**	**-1.3**
KAF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
KAF	**Kangasniemi**	**56.82**	**327**	*e*p	**P**	**13 50 27.2**	**-1.3**
	comp=Z,4.9nm,0.8s,mb4.6,baz=81,slow=6.7						
BRTR	**Keskin Array B**	**56.82**	**299**	P	**P**	**13 50 28.9**	**0.0**
	comp=Z,1.4nm,0.8s,mb4.0,baz=100,slow=6.6,SNR=6.6						
BRTR	**Keskin Array B**	**56.82**	**299**	P	**P**	**13 50 29.0**	**0.0**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FINES	**FINESS Array B**	**57.01**	**326**	P	**P**	**13 50 29.5**	**-0.4**
	comp=Z,4.2nm,0.6s,mb4.6,baz=89,slow=8.6,SNR=12						
FINES	**FINESS Array B**	**57.01**	**326**	P	**P**	**13 50 29.5**	**-0.4**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.6s						
FINES	**FINESS Array B**	**57.01**	**326**	P	**P**	**13 50 29.5**	**-0.4**
AKASG	**Malin Array Be**	**57.13**	**313**	P	**P**	**13 50 29.9**	**-1.1**
	comp=Z,1.0nm,0.4s,mb4.2,baz=73,slow=5.9,SNR=5.2						
AKASG	**Malin Array Be**	**57.13**	**313**	*i* P	**P**	**13 50 29.0**	**-2.0**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WRAB	**Tennant Creek**	**59.05**	**147**	*e*P	**P**	**13 50 44.5**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
WRAB	**Tennant Creek**	**59.05**	**147**	*e*P	**P**	**13 50 44.5**	**-0.2**
	comp=Z,6.6nm,0.8s,mb4.7						
WRA	**Warramunga Arr**	**59.05**	**147**	P	**P**	**13 50 44.2**	**-0.4**
	comp=Z,3.9nm,0.8s,mb4.5,baz=340,slow=7.3,SNR=29						
WRA	**Warramunga Arr**	**59.05**	**147**	P	**P**	**13 50 44.3**	**-0.4**
WRA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ASAR	**Alice Springs**	**62.12**	**150**	P	**P**	**13 51 05.5**	**-0.1**
	comp=Z,1.7nm,0.6s,mb4.5,baz=337,slow=7.0,SNR=15						
ASAR	**Alice Springs**	**62.12**	**150**	P	**P**	**13 51 05.5**	**-0.1**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NB2	**NORSAR Subarra**	**64.07**	**327**	P	**P**	**13 51 16.6**	**-1.5**
	comp=Z,1.7nm,0.5s,mb4.5,baz=71,slow=6.9						
NOA	**NORSAR Array B**	**64.07**	**327**	P	**P**	**13 51 17.1**	**-1.0**
	comp=Z,1.8nm,0.6s,mb4.5,baz=72,slow=6.8,SNR=9.9						
NOA	**NORSAR Array B**	**64.07**	**327**	P	**P**	**13 51 17.2**	**-0.9**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BPAW	**Bear Paw Mtn.**	**67.20**	**28**	*e*P	**P**	**13 51 38.2**	**0.0**
	comp=Z,1.5nm,0.6s,mb4.4						
KDAK	**Kodiak Island**	**69.43**	**34**	*i* P	**P**	**13 51 52.2**	**-0.2**
STKA	**Stephens Creek**	**72.60**	**148**	P	**P**	**13 52 11.1**	**-0.8**
	comp=Z,2.0nm,0.8s,mb4.3,baz=0.8,slow=15,SNR=4.3						
LPG	**La Plagne**	**72.99**	**313**	*e*P	**P**	**13 52 14.6**	**+0.4**
	comp=Z,6.7nm,0.5s,mb4.7						
LPG	**La Plagne**	**72.99**	**313**	*e*P	**P**	**13 52 14.6**	**+0.4**
LPG				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.7						
LPG	**La Plagne**	**72.99**	**313**	*e*P	**P**	**13 52 14.6**	**+0.4**
	comp=Z,3.3nm,0.5s,mb4.7						
LPL	**La Plagne**	**73.00**	**313**	*e*P	**P**	**13 52 14.5**	**+0.3**
	comp=Z,9.3nm,0.6s,mb4.8						
LPL	**La Plagne**	**73.00**	**313**	*e*P	**P**	**13 52 14.5**	**+0.3**
LPL				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.8						
LPL	**La Plagne**	**73.00**	**313**	*e*P	**P**	**13 52 14.5**	**+0.3**
	comp=Z,4.7nm,0.6s,mb4.8						
SMF	**Signal de Mont**	**74.19**	**315**	*e*P	**P**	**13 52 20.4**	**-0.8**
	comp=Z,9.3nm,0.7s,mb4.6						
SMF	**Signal de Mont**	**74.19**	**315**	*e*P	**P**	**13 52 20.4**	**-0.8**
SMF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
SMF	**Signal de Mont**	**74.19**	**315**	*e*P	**P**	**13 52 20.4**	**-0.8**
	comp=Z,4.7nm,0.7s,mb4.6						
AVF	**Avril sur Loir**	**74.41**	**316**	*e*P	**P**	**13 52 21.8**	**-0.7**
	comp=Z,4.2nm,0.6s,mb4.3						
AVF	**Avril sur Loir**	**74.41**	**316**	*e*P	**P**	**13 52 21.8**	**-0.7**
AVF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
AVF	**Avril sur Loir**	**74.41**	**316**	*e*P	**P**	**13 52 21.8**	**-0.7**
	comp=Z,2.1nm,0.6s,mb4.3						
YKA	**Yellowknife Ar**	**80.33**	**17**	P	**P**	**13 52 55.0**	**-0.4**
	comp=Z,1.2nm,0.5s,mb4.0,baz=328,slow=5.2,SNR=12						
YKA	**Yellowknife Ar**	**80.33**	**17**	P	**P**	**13 52 55.0**	**-0.4**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA	**Yellowknife Ar**	**80.33**	**17**	P	**P**	**13 52 55.0**	**-0.4**

*NEIC **17** 13:42:45.8±1.1, 42°.90N×11°.08W, h10km, MN3.2(MDD), Error ellipse: s-maj=14.0km s-min=4.2km az=98.0*
*ISCJB **17** 13:42:48.1±0.6, 42°.80N±0°.02×10°.43W±0°.05, h10km, Error ellipse: s-maj=5.2km s-min=3.2km az=20.2*
*CSEM **17** 13:42:49.9±0.4, 42°.77N×10°.56W, h10km, ML3.7/15, Error ellipse: s-maj=8.9km s-min=4.5km az=104.0*
*MDD **17** 13:42:50.9±1.5, 42°.81N×10°.87W, h26km±33km, mbLg3.2/34, Error ellipse: s-maj=30.9km s-min=8.5km az=113.0, PRIMO*
*LDG **17** 13:42:51.5±0.3, 42°.87N×10°.84W, h25km, Ml3.8/24, Error ellipse: s-maj=5.4km s-min=2.6km az=104.0*
*INMG **17** 13:42:52.4±1.1, 42°.91N×10°.98W, h10km, ML2.9, Error ellipse: s-maj=5.4km s-min=2.7km az=106.0*

ISC 17 13:42:50.7±0.5, 42.72N±0°.02×10.49W±0°.04, h10km, n215, σ1§48/383, 3C-6D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMAZ	**Mazaricos**	**1.13**	**78**	⇓P	**Pb**	**13 43 13.2**	**+0.8**
EMAZ				S	**Sb**	**13 43 28.9**	**+1.8**
EMAZ	**Mazaricos**	**1.13**	**78**	⇓P	**Pb**	**13 43 13.2**	**+0.8**
	17nm,0.2s,SNR=18						
EMAZ				S	**Sb**	**13 43 28.9**	**+1.8**
	247nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**1.13**	**78**	⇓P	**Pb**	**13 43 13.2**	**+0.8**
	17nm,0.2s,SNR=18						
EMAZ				S	**Sb**	**13 43 28.9**	**+1.8**
	247nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**1.13**	**78**	P	**Pb**	**13 43 13.2**	**+0.9**
	17nm,0.2s,SNR=18						
STS	**Santiago**	**1.43**	**83**	⇑P	**Pn**	**13 43 17.7**	**+1.0**
STS				S	**Sn**	**13 43 35.8**	**+0.2**
STS	**Santiago**	**1.43**	**83**	⇑P	**Pn**	**13 43 17.7**	**+1.0**
	11nm,0.1s,SNR=18						
STS				S	**Sn**	**13 43 35.8**	**+0.2**
	25nm,0.1s,SNR=7.9						
STS	**Santiago**	**1.43**	**83**	⇑P	**Pn**	**13 43 17.7**	**+1.0**
	11nm,0.1s,SNR=18						
STS				S	**Sn**	**13 43 35.8**	**+0.2**
	25nm,0.1s,SNR=7.9						
**

EZAM	**Zamans**	**1.45 113**	⇓P	**Pn**	**13 43 18.4**	**+1.5**
EZAM			S	**Sn**	**13 43 37.8**	**+1.9**
EZAM	**Zamans**	**1.45 113**	⇓P	**Pn**	**13 43 18.4**	**+1.5**
	13nm,0.1s,SNR=18					
EZAM			S	**Sn**	**13 43 37.8**	**+1.9**
	123nm,0.4s,SNR=7.9					
EZAM	**Zamans**	**1.45 113**	⇓P	**Pn**	**13 43 18.4**	**+1.5**
	13nm,0.1s,SNR=18					
EZAM			S	**Sn**	**13 43 37.8**	**+1.9**
	123nm,0.4s,SNR=7.9					
EZAM	**Zamans**	**1.45 113**	P	**Pn**	**13 43 18.4**	**+1.5**
	13nm,0.1s,SNR=18					
EZAM			S	**Sn**	**13 43 37.8**	**+1.9**
	123nm,0.4s,SNR=7.9					
ELOB	**Lobios**	**1.99 115**	P	**Pn**	**13 43 26.0**	**+1.6**
ELOB			S	**Sn**	**13 43 52.3**	**+2.9**
ELOB	**Lobios**	**1.99 115**	P	**Pn**	**13 43 26.0**	**+1.6**
	13nm,0.2s,SNR=85					
ELOB			S	**Sn**	**13 43 52.3**	**+2.9**
	18nm,0.1s,SNR=7.6				

1.0nm,0.2s,SNR=7.9
EMOS S **Sn** **13 46 13.1 -1.2**
5.3nm,0.7s,SNR=7.9
EMOS Mosqueruela 7.87 104 P **Pn** **13 44 45.4 +0.2**
EMOS S **Sn** **13 46 13.1 -1.2**
5.3nm,0.7s,SNR=7.9
ETOB Tobarra 7.92 118 P **Pn** **13 44 48.1 +2.3**
ETOB Tobarra 7.92 118 P **Pn** **13 44 48.1 +2.3**
1.1nm,0.1s,SNR=5.8
ETOB Tobarra 7.92 118 P **Pn** **13 44 48.1 +2.3**
1.1nm,0.1s,SNR=5.8
ETOB Tobarra 7.92 118 P **Pn** **13 44 48.1 +2.3**
1.1nm,0.1s,SNR=5.8
EPF Esparros 7.96 84 *e*Pn **Pn** **13 44 46.4 +0.1**
EPF *e*Sn **Sn** **13 46 12.7 -3.7**
4.2nm,0.3s
EPF Esparros 7.96 84 P **Pn** **13 44 46.4 +0.1**
EPF S **Sn** **13 46 12.7 -3.7**
2.1nm,0.3s
EPF Esparros 7.96 84 P **Pn** **13 44 46.4 +0.1**
EPF S **Sn** **13 46 12.7 -3.7**
2.1nm,0.3s
EPF Esparros 7.96 84 *e*Pn **Pn** **13 44 46.4 +0.1**
EBER Berja 8.25 132 P **Pn** **13 44 51.8 +1.5**
EBER Berja 8.25 132 P **Pn** **13 44 51.8 +1.5**
MFF Saint Martin d 8.33 59 *e*Pn **Pn** **13 44 50.6 -0.8**
SNR=1.0
MFF *e*Sn **Sn** **13 46 16.4 -9.0**
6.4nm,0.3s,SNR=1.0
MFF Saint Martin d 8.33 59 P **Pn** **13 44 50.6 -0.8**
MFF S **Sn** **13 46 16.4 -9.0**
3.2nm,0.3s
MFF Saint Martin d 8.33 59 P **Pn** **13 44 50.6 -0.8**
MFF S **Sn** **13 46 16.4 -9.0**
3.2nm,0.3s
MFF Saint Martin d 8.33 59 *e*Pn **Pn** **13 44 50.6 -0.8**
SNR=1.0
LFF La Frestale 8.41 71 *e*Sn **Sn** **13 46 22.5 -5.0**
8.7nm,0.3s
LFF La Frestale 8.41 71 S **Sn** **13 46 22.5 -5.0**
4.3nm,0.3s
LFF La Frestale 8.41 71 S **Sn** **13 46 22.5 -5.0**
4.3nm,0.3s
CSOR Sort 8.59 88 P **Pn** **13 44 54.3 -0.7**
CSOR S **Sn** **13 46 29.1 -2.8**
CSOR Sort 8.59 88 S **Sn** **13 46 29.1 -2.8**
1.7nm,0.3s,SNR=7.9
CSOR Sort 8.59 88 S **Sn** **13 46 29.1 -2.8**
1.7nm,0.3s,SNR=7.9
CSOR Sort 8.59 88 P **Pn** **13 44 54.3 -0.7**
CSOR S **Sn** **13 46 29.0 -2.8**
1.7nm,0.3s,SNR=7.9
EPOB Poblet 8.72 95 S **Sn** **13 46 31.9 -3.1**
1.5nm,0.3s,SNR=7.9
EPOB Poblet 8.72 95 S **Sn** **13 46 31.9 -3.1**
1.5nm,0.3s,SNR=7.9
EPOB Poblet 8.72 95 S **Sn** **13 46 31.9 -3.1**
1.5nm,0.3s,SNR=7.9
GRR Gorron 8.81 47 *e*Pn **Pn** **13 44 56.1 -1.9**
SNR=1.0
GRR *e*Sn **Sn** **13 46 25.4 -12**
6.6nm,0.4s,SNR=1.0
GRR Gorron 8.81 47 *e*Pn **Pn** **13 44 56.1 -1.9**
SNR=1.0
RJF Les Rejaudoux 9.03 69 *e*Sn **Sn** **13 46 34.9 -7.7**
7.5nm,0.2s,SNR=1.0
FLN La Foliniere 9.24 46 *e*Pn **Pn** **13 45 01.6 -2.2**
FLN *e*Sn **Sn** **13 46 36.4 -11**
3.0nm,0.2s,SNR=1.0
FLN La Foliniere 9.24 46 *e*Pn **Pn** **13 45 01.6 -2.2**
MTLF Montolieu 9.33 82 *e*Pn **Pn** **13 45 05.2 +0.1**
MTLF *e*Sn **Sn** **13 46 44.5 -5.5**
4.5nm,0.3s,SNR=1.0
MTLF Montolieu 9.33 82 *e*Pn **Pn** **13 45 05.2 +0.1**
LDF La Druitiere 9.33 47 *e*Pn **Pn** **13 45 03.4 -1.7**
SNR=1.0
LDF *e*Sn **Sn** **13 46 39.5 -10**
3.2nm,0.3s
LDF La Druitiere 9.33 47 *e*Pn **Pn** **13 45 03.4 -1.7**
SNR=1.0
CAF Calviac 9.34 72 *e*Pn **Pn** **13 45 04.7 -0.5**
CAF *e*Sn **Sn** **13 46 43.0 -7.2**
4.8nm,0.3s,SNR=1.0
CAF Calviac 9.34 72 *e*Pn **Pn** **13 45 04.7 -0.5**
TCF Toulx Ste Croi 9.74 64 *e*Pn **Pn** **13 45 10.4 -0.4**
TCF *e*Sn **Sn** **13 46 49.0 -11**
6.3nm,0.2s,SNR=1.0
TCF Toulx Ste Croi 9.74 64 *e*Pn **Pn** **13 45 10.4 -0.4**
BGF Bois d'Agland 10.24 63 *e*Pn **Pn** **13 45 16.6 -1.0**
SNR=1.0
BGF *e*Sn **Sn** **13 47 02.8 -10**
9.9nm,0.3s
BGF Bois d'Agland 10.24 63 *e*Pn **Pn** **13 45 16.6 -1.0**
SNR=1.0
LASF Ste Croix 10.53 78 *e*Pn **Pn** **13 45 22.1 +0.6**
LASF *e*Sn **Sn** **13 47 13.0 -6.5**
8.2nm,0.3s
LASF Ste Croix 10.53 78 *e*Pn **Pn** **13 45 22.1 +0.6**
AVF Avril sur Loir 10.65 63 *e*Pn **Pn** **13 45 22.2 -0.9**
SNR=1.0
AVF *e*Sn **Sn** **13 47 12.1 -10**
2.9nm,0.3s,SNR=1.0
AVF Avril sur Loir 10.65 63 *e*Pn **Pn** **13 45 22.2 -0.9**
SNR=1.0
SSF Saint Saulge 10.83 62 *e*Pn **Pn** **13 45 24.7 -1.0**
SSF *e*Sn **Sn** **13 47 17.6 -9.2**
2.9nm,0.2s,SNR=1.0
SSF Saint Saulge 10.83 62 *e*Pn **Pn** **13 45 24.7 -1.0**
SMF Signal de Mont 10.93 64 *e*Sn **Sn** **13 47 19.1 -10**
1.8nm,0.2s,SNR=1.0
LOR Lormes 11.12 61 *e*Pn **Pn** **13 45 28.2 -1.5**
SNR=1.0
LOR *e*Sn **Sn** **13 47 23.1 -11**
3.3nm,0.4s,SNR=1.0
LOR Lormes 11.12 61 *e*Pn **Pn** **13 45 28.2 -1.5**
SNR=1.0
VIVF Saint-Julien-l 11.17 74 *e*Pn **Pn** **13 45 30.2 -0.1**
VIVF *e*Sn **Sn** **13 47 28.8 -6.3**
10nm,0.5s
VIVF Saint-Julien-l 11.17 74 *e*Pn **Pn** **13 45 30.2 -0.1**
CLL Collm 18.11 54 *e*P **Pn** **13 47 04.0 +1.9**

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*IDC **17** 13:45:02.3±0.9, 25°.72S×65°.00W, h23km±4km, mb3.9/2, mb1 3.9/5, mb1mx3.8/17, mbtmp3.8/5, ML4.6/2, MS3.1/1, Ms1 3.1/1, ms1mx2.4/19, Error ellipse: s-maj=27.1km s-min=24.9km az=153.0*
*ISCJB **17** 13:45:02.5±1.4, 25°.70S±0°.07×64°.8W±0°.1, h33km±18km, mb4.0/2, Error ellipse: s-maj=19.1km s-min=10.0km az=16.4*
*NEIC **17** 13:45:05.1±1.0, 25°.82S×64°.81W, h40km±11km, MD4.5(SJA), Error ellipse: s-maj=17.0km s-min=10.5km az=100.0*
NEIC Felt [IV] in the Rosario de la Frontera area.
ISC 17 13:45:05.1±0.9,**25°.79S**±0°.06×**64°.8W**±0°.1,**h39**km±14km, **n17**,σ1º**19**/12,**mb4.0**/2,**Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**6.54**	**207**	Pn	**Pn**	**13 46 37.8**	**-0.9**
	0.1nm,0.3s,baz=22,slow=13,SNR=6.8						
CFAA				Lg		13 48 19.1	
	0.6nm,0.3s,baz=319,slow=19,SNR=2.7						
CPUP	**Villa Florida**	**6.74**	**96**	Pn	**Pn**	**13 46 42.8**	**+1.3**
	4.7nm,0.3s,baz=249,slow=11,SNR=25						
CPUP				Lg		13 48 38.9	
	46nm,0.3s,baz=176,slow=17,SNR=5.8						
CPUP				LR	LR	13 49 15.7	
	comp=Z,146nm,20.2s,baz=349,slow=37						
CPUP	**Villa Florida**	**6.74**	**96**	*e*Pn	**Pn**	**13 46 42.5**	**+1.0**
CPUP				*e*		13 46 48.1	
CPUP				Lg		13 48 38.9	
CPUP				LR	LR	13 49 15.8	
LPAZ	**La Paz**	**9.95**	**341**	Pn	**Pn**	**13 47 27.4**	**+1.8**
	0.1nm,0.3s,baz=135,slow=7.1,SNR=3.8						
SIV	**San Ignacio**	**10.35**	**20**	Pn	**Pn**	**13 47 30.6**	**-0.4**
	1.0nm,0.3s,baz=210,slow=13,SNR=14						
SIV				Sn	**Sn**	**13 49 24.8**	**-1.0**
	1.0nm,0.3s,baz=233,slow=20,SNR=2.1						
TRQA	**Tornquist**	**12.47**	**170**	*e*P	**Pn**	**13 47 58.0**	**-1.9**
PLCA	**Paso Flores**	**15.66**	**196**	Pn	**Pn**	**13 48 44.7**	**+1.9**
	0.1nm,0.3s,baz=8.7,slow=13,SNR=3.0						
PLCA				Lg		13 53 17.6	
	0.0nm,0.3s,baz=257,slow=14,SNR=2.9						
PLCA	**Paso Flores**	**15.66**	**196**	Pn	**Pn**	**13 48 44.7**	**+1.9**
PLCA				Lg		13 53 17.6	
TXAR	**Lajitas Array**	**66.29**	**323**	P	**P**	**13 55 48.6**	**-0.9**
	0.3nm,0.5s,mb3.6,baz=148,slow=7.3,SNR=5.9						
TXAR				pP	pP	13 55 55.3	-5.8
	0.6nm,0.8s,baz=144,slow=8.8,SNR=4.5						
TOA0	**Torodi Ar. Sit**	**75.38**	**67**	*e*P	**P**	**13 56 45.3**	**+0.2**
TORD	**Torodi Ar. Bea**	**75.38**	**67**	P	**P**	**13 56 45.4**	**+0.3**
	3.2nm,0.5s,mb4.5,baz=258,slow=5.8,SNR=68						
TORD				pP	pP	13 56 52.6	-4.2
	1.9nm,0.5s,baz=259,slow=5.8,SNR=7.1						
ASAR	**Alice Springs**	**127.61**	**202**	PKP	PKPdf	14 04 05.2	-1.5
	0.4nm,0.6s,baz=145,slow=1.8,SNR=6.3						
ASAR				pPKP	pPKPdf	14 04 13.5	-5.6
	0.5nm,0.7s,baz=143,slow=1.8,SNR=3.7						
ZALV	**Zalesovo Beam**	**143.97**	**31**	PKP	PKPdf	14 04 38.1	+2.2
	0.4nm,0.3s,baz=336,slow=3.2,SNR=3.8						
MK31	**Makanchi Array**	**146.55**	**43**	*e*PKPbc	PKPbc	14 04 41.9	-0.2
MKAR	**Makanchi Array**	**146.55**	**43**	PKPbc	PKPbc	14 04 41.9	-0.2
	0.7nm,0.6s,baz=292,slow=3.1,SNR=7.1						
MKAR				pPKPbc	pPKPbc	14 04 49.1	-5.3
	0.8nm,0.7s,baz=311,slow=2.8,SNR=5.3						
SONM	**Songino Array**	**156.92**	**15**	PKPab	PKPab	14 05 23.2	-2.9
	0.5nm,0.3s,baz=336,slow=6.6,SNR=3.7						
MAJO	**Matsushiro**	**157.63**	**304**	*e*PKPdf	PKPdf	14 04 57.6	+0.1

IDC 17 13:58:32.1±6.0,**7°.01S**×**129°.71E**,**h171**km±59km,**mb3.3**/1, **mb1 3.0**/4,**mb1mx2.9**/18,**mbtmp2.9**/4,**Error ellipse: s-maj=63.7km s-min=26.8km az=68.0**,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.71**	**199**	P	Pn	14 01 15.2	+1.1
	0.3nm,0.3s,baz=29,slow=12,SNR=13						
FITZ				S	Sn	14 03 21.2	-2.8
	0.5nm,0.3s,baz=108,slow=19,SNR=7.9						
WRA	**Warramunga Arr**	**13.62**	**161**	P	Pn	14 01 38.1	-0.3
	0.2nm,0.3s,baz=346,slow=14,SNR=15						
WRA				S	Sn	14 04 02.2	-7.5
	0.5nm,0.3s,baz=332,slow=23,SNR=7.8						
ASAR	**Alice Springs**	**17.04**	**167**	P	Pn	14 02 21.4	+1.1
	0.1nm,0.3s,baz=343,slow=9.1,SNR=3.8						
ASAR				S	S	14 05 27.6	-0.7
	0.1nm,0.3s,baz=353,slow=28,SNR=4.7						
MKAR	**Makanchi Array**	**68.08**	**327**	P	P	14 09 13.1	-0.1
	0.5nm,0.5s,baz=111,slow=9.4,SNR=7.2						

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*IDC **17** 14:04:06.1±2.1, 36°.38N×142°.08E, h0km, mb3.7/2, mb1 3.6/5, mb1mx3.4/26, mbtmp3.7/5, ML3.5/3, MS2.8/1, Ms1 2.8/1, ms1mx2.1/22, Error ellipse: s-maj=45.4km s-min=26.3km az=83.0*
*ISCJB **17** 14:04:09.9±1.0, 36°.37N±0°.04×141°.99E±0°.09, h46km±13km, mb3.6/2, Error ellipse: s-maj=12.2km s-min=7.2km az=6.8*
*JMA **17** 14:04:10.6±0.2, 36°.39N×141°.81E, h68km±4km, M3.4*
ISC 17 14:04:10.6±2.2,**36°.36N**±0°.04×**141°.94E**±0°.09,**h30**km±22km, **n19**,σ0º**81**/25,**mb3.6**/2,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.09**	**233**	P	**Pn**	**14 04 29.7**	**-0.2**
CHOJ				S	**Sn**	**14 04 44.8**	**+0.8**
JHO	**Hitachi**	**1.13**	**283**	P	**Pn**	**14 04 29.0**	**-1.4**
JHO				*e*S	**Sn**	**14 04 44.5**	**-0.4**
ONAJ	**Iwakimizuishiy**	**1.18**	**309**	P	**Pn**	**14 04 30.0**	**-1.0**
JFK	**Kawauchi**	**1.31**	**320**	P	**Pn**	**14 04 32.5**	**-0.4**
JFT	**Otama**	**1.72**	**312**	P	**Pn**	**14 04 38.9**	**+0.4**
JMM	**Marumori**	**1.76**	**329**	P	**Pn**	**14 04 38.7**	**-0.3**
JMM				*e*S	**Sn**	**14 05 00.6**	**+0.3**
BSO1	**Boso 1**	**1.88**	**205**	P	**Pn**	**14 04 41.6**	**+1.0**
BSO3	**Boso 3**	**1.94**	**217**	P	**Pn**	**14 04 41.6**	**0.0**
JAG	**Ashikaga**	**2.00**	**273**	P	**Pn**	**14 04 41.7**	**-0.7**
JFY	**Yanaizu**	**2.07**	**301**	P	**Pn**	**14 04 43.9**	**+0.6**
JIO	**Ouri**	**2.14**	**348**	P	**Pn**	**14 04 43.9**	**-0.4**
JKT	**Katashina**	**2.20**	**281**	P	**Pn**	**14 04 45.4**	**+0.3**
JOU	**Okura**	**2.24**	**333**	P	**Pn**	**14 04 47.1**	**+1.4**
MJAR	**Matsushiro Arr**	**3.01**	**275**	Pn	**Pn**	**14 04 56.9**	**+0.7**
	7.8nm,0.3s,baz=84,slow=10,SNR=66						
MJAR				Sn	**Sn**	**14 05 31.0**	**-0.3**
	3.4nm,0.3s,baz=274,slow=26,SNR=5.5						
MJAR				LR	LR	14 06 19.7	
	comp=Z,142nm,18.2s,baz=110,slow=43						
MAT	**Matsushiro**	**3.01**	**275**	P	**Pn**	**14 04 57.4**	**+1.2**
MAT				S	**Sn**	**14 05 35.6**	**+4.3**
JHJ	**Hachijo jima 2**	**3.69**	**209**	Pn	**Pn**	**14 05 05.1**	**-0.4**
	17nm,0.3s,baz=221,slow=15,SNR=20						
JHJ				Sn	**Sn**	**14 05 45.1**	**-2.9**
	41nm,0.3s,baz=231,slow=23,SNR=10.0						
ASAJ	**Asahikawa**	**7.76**	**4**	Pn	**Pn**	**14 06 00.7**	**-0.8**
	0.4nm,0.3s,baz=287,slow=19,SNR=6.8						
SONM	**Songino Array**	**28.51**	**305**	P	**P**	**14 10 03.4**	**+0.3**
	1.0nm,0.5s,mb3.8,baz=102,slow=8.6,SNR=4.3						
WRA	**Warramunga Arr**	**56.46**	**189**	P	**P**	**14 13 50.0**	**+0.4**
	0.3nm,0.7s,mb3.4,baz=8.3,slow=7.4,SNR=4.2						

IDC 17 14:21:09.4±2.0,**2°.60N**×**127°.52E**,**h0**km,**mb3.8**/4, **mb1 4.0**/4,**mb1mx3.6**/19,**mbtmp3.8**/4,**Error ellipse: s-maj=154.4km s-min=25.2km az=66.0**,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.38**	**164**	P	P	14 26 20.2	+0.2
	0.7nm,0.3s,baz=342,slow=10,SNR=32						
ASAR	**Alice Springs**	**26.84**	**167**	P	P	14 26 52.3	+0.6
	0.8nm,0.4s,baz=351,slow=7.6,SNR=37						
STKA	**Stephens Creek**	**36.80**	**160**	P	P	14 28 18.2	-0.9
	0.9nm,0.3s,baz=349,slow=8.0,SNR=9.8						
MKAR	**Makanchi Array**	**58.93**	**325**	P	P	14 31 10.6	+0.2
	0.2nm,0.4s,baz=111,slow=7.9,SNR=4.0						

OTT 17 14:59:33.3±0.3,**44°.61N**×**56°.84W**,**h18**km,**ML3.5**/3, **Laurentian Slope Seismic Zone. 285km southeast from Louisbourg, Ns**,**North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBN	**Guysborough**	**3.41**	**285**	PN	Pn	15 00 24.9	-0.6
GBN				SN	Sn	15 01 04.0	-1.4
GBN				Trac		15 01 08.5	
	comp=Z,1.7nm,0.1s						
CHEG	**Cheticamp, Nov**	**3.47**	**311**	PN	Pn	15 00 25.9	-0.4
CHEG				SN	Sn	15 01 05.1	-1.9
CHEG				Trac		15 01 12.2	
	comp=Z,1.3nm,0.1s						
CODG	**Codroy Newfoun**	**3.64**	**333**	PN	Pn	15 00 28.2	-0.5
CODG				SN	Sn	15 01 08.2	-2.9
CODG				Trac		15 01 14.7	
	comp=Z,3.7nm,0.1s						
MADG	**Magdalen Islan**	**4.31**	**310**	PN	Pn	15 00 37.3	-0.5
MADG				SN	Sn	15 01 24.7	-2.8
MADG				Trac		15 01 31.1	
	comp=Z,4.2nm,0.2s						
DRLN	**Deer Lake**	**4.67**	**355**	PN	Pn	15 00 42.5	-0.4
DRLN				SN	Sn	15 01 34.0	-2.6
DRLN				Trac		15 02 18.5	
	comp=Z,138nm,1.6s						
MALG	**Malagash, Nova**	**4.74**	**287**	PN	Pn	15 00 44.2	+0.5
LMN	**Caledonia Moun**	**5.76**	**285**	PN	Pn	15 00 57.0	-0.9
LMN				SN	Sn	15 01 59.7	-3.8
LMN				Trac		15 02 27.8	
	comp=Z,44nm,1.4s						
BATG	**Bathurst New B**	**6.96**	**296**	PN	Pn	15 01 13.4	-0.8
BATG				SN	Sn	15 02 28.6	-4.3
BATG				Trac		15 02 31.5	
	comp=Z,0.4nm,0.0s						
NATG	**Natashquan Que**	**6.97**	**327**	PN	Pn	15 01 14.1	-0.4
NATG				SN	Sn	15 02 29.0	-4.2
NATG				Trac		15 02 45.2	
	comp=Z,2.2nm,0.2s						
GSQ	**Grosses Roches**	**8.26**	**305**	PN	Pn	15 01 31.3	-0.8
SMQ	**Clarke City**	**8.73**	**314**	SN	Sn	15 02 52.6	-24

IDC 17 15:00:17.1±3.5,**6°.48S**×**154°.85E**,**h0**km,**mb3.6**/3, **mb1 3.9**/3,**mb1mx3.6**/14,**mbtmp3.7**/3,**MS3.4**/2,**Ms1 3.4**/2, **ms1mx2.7**/25,**Error ellipse: s-maj=101.8km s-min=37.7km az=116.0**,**Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**15.89**	**211**	LR	LR	15 09 01.8	
	comp=Z,49nm,21.7s,baz=69,slow=33						
WRA	**Warramunga Arr**	**24.00**	**234**	P	P	15 05 35.2	+1.6
	2.0nm,0.6s,baz=61,slow=9.8,SNR=22						
ASAR	**Alice Springs**	**26.41**	**227**	P	P	15 05 54.8	-0.7
	0.5nm,0.7s,baz=57,slow=9.8,SNR=16						
SONM	**Songino Array**	**68.83**	**327**	LR	LR	15 41 50.6	
	comp=Z,74nm,19.3s,baz=254,slow=36						
MKAR	**Makanchi Array**	**82.93**	**319**	P	P	15 12 43.4	-0.5
	0.2nm,0.7s,baz=101,slow=7.8,SNR=3.7						

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*IDC **17** 15:07:47.0±3.4, 37°.86S×177°.82E, h44km±25km, mb4.0/5, mb1 4.1/5, mb1mx3.8/14, mbtmp3.9/5, MS3.5/1, Ms1 3.4/1, ms1mx2.9/19, Error ellipse: s-maj=41.8km s-min=27.0km az=40.0*
*ISCJB **17** 15:07:47.5±0.7, 38°.44S±0°.04×177°.87E±0°.08, h76km±5km, mb4.2/7, Error ellipse: s-maj=10.4km s-min=5.8km az=9.0*
*NEIC **17** 15:07:51.0, 38°.27S×177°.66E, h64km, mb4.3/3, ML4.5(WEL), After WEL.*
ISC 17 15:07:48.0±0.7,**38°.47S**±0°.03×**177°.92E**±0°.08,**h67**km±5km, **n82**,σ1º**40**/80,**mb4.2**/7,**North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MWZ	**Matawai**	**0.34**	**294**	P	**Pn**	**15 08 00.3**	**+1.1**
PUZ	**Puketiti**	**0.48**	**34**	P	**Pn**	**15 08 02.7**	**+2.3**
KNZ	**Kokohu**	**0.58**	**199**	P	**Pn**	**15 08 05.9**	**+4.5**
URZ	**Urewera**	**0.67**	**288**	P	**Pn**	**15 08 02.3**	**0.0**
	723nm,0.3s,baz=242,slow=0.9,SNR=2141						
URZ				S	**Sn**	**15 08 11.0**	**-1.9**
	1μm,0.3s,baz=246,slow=20,SNR=78						
URZ	**Urewera**	**0.67**	**288**	P	**Pn**	**15 08 02.4**	**0.0**
MXZ	**Matakaoa Point**	**0.95**	**19**	P	**Pn**	**15 08 07.1**	**+1.3**
EDRZ	**Edgecumbe**	**1.00**	**291**	P	**Pn**	**15 08 05.9**	**-0.4**
MARZ	**Manawahe**	**1.09**	**296**	P	**Pn**	**15 08 06.5**	**-1.0**
WIZ	**White Island**	**1.10**	**328**	P	**Pn**	**15 08 06.1**	**-1.6**
LIRZ	**Lichensteins R**	**1.29**	**291**	P	**Pn**	**15 08 09.4**	**-0.8**
BKZ	**Black Stump Fm**	**1.31**	**238**	P	**Pn**	**15 08 12.6**	**+2.2**
UTU	**Utuhina**	**1.39**	**282**	P	**Pn**	**15 08 11.5**	**+0.1**
KARZ	**Kaharoa**	**1.39**	**288**	P	**Pn**	**15 08 10.6**	**-0.9**
HATZ	**Hinemaiaia**	**1.49**	**253**	P	**Pn**	**15 08 13.8**	**+1.1**
HATZ				S	**Sn**	**15 08 31.3**	**-0.1**
TGRZ	**Tauranga**	**1.50**	**299**	P	**Pn**	**15 08 11.3**	**-1.6**
WHTZ	**Whakaora**	**1.55**	**262**	P	**Pn**	**15 08 14.8**	**+1.3**
RITZ	**Rihia Road**	**1.69**	**252**	P	**Pn**	**15 08 17.0**	**+1.6**
RATZ	**Rangitukua**	**1.73**	**256**	P	**Pn**	**15 08 17.2**	**+1.3**
WATZ	**Wairara**	**1.73**	**261**	P	**Pn**	**15 08 16.7**	**+0.8**
KATZ	**Kakaramea**	**1.81**	**253**	P	**Pn**	**15 08 18.4**	**+1.4**
MOVZ	**Moawhango**	**1.93**	**240**	P	**Pn**	**15 08 20.2**	**+1.5**
MOVZ				S	**Sn**	**15 08 42.7**	**+0.7**
TUVZ	**Tukino**	**1.94**	**245**	P	**Pn**	**15 08 20.5**	**+1.7**
NGZ	**Ngauruhoe**	**1.94**	**248**	P	**Pn**	**15 08 20.4**	**+1.6**
DRZ	**Dome Shelter**	**2.01**	**246**	P	**Pn**	**15 08 21.4**	**+1.7**
FWVZ	**Far West T-bar**	**2.01**	**246**	P	**Pn**	**15 08 21.2**	**+1.5**
TOZ	**Tahuroa Road**	**2.04**	**290**	P	**Pn**	**15 08 19.0**	**-1.2**
TSZ	**Takapari Road**	**2.20**	**223**	P	**Pn**	**15 08 23.4**	**+1.1**
HIZ	**Hauiti**	**2.40**	**268**	P	**Pn**	**15 08 25.4**	**+0.3**
KUTZ	**Kuautunu**	**2.45**	**314**	P	**Pn**	**15 08 23.5**	**-2.2**
VRZ	**Vera Road**	**2.56**	**254**	P	**Pn**	**15 08 28.5**	**+1.4**
BFZ	**Birch Farm**	**2.56**	**210**	P	**Pn**	**15 08 28.7**	**+1.6**
MKAZ	**Moumakai**	**2.57**	**301**	P	**Pn**	**15 08 25.8**	**-1.5**
WAZ	**Wanganui**	**2.62**	**240**	P	**Pn**	**15 08 29.9**	**+1.9**
OTAZ	**Otara**	**2.82**	**302**	P	**Pn**	**15 08 29.9**	**-0.8**
MRZ	**Mangatainoka R**	**2.84**	**219**	P	**Pn**	**15 08 31.6**	**+0.6**
RAEZ	**Rainy Point**	**2.87**	**252**	P	**Pn**	**15 08 33.6**	**+2.2**
KAAZ	**Kauri Point**	**3.04**	**302**	P	**Pn**	**15 08 33.2**	**-0.4**
WTAZ	**Waiatarua**	**3.06**	**299**	P	**Pn**	**15 08 33.5**	**-0.5**
NEZ	**North Egmont**	**3.09**	**254**	P	**Pn**	**15 08 36.8**	**+2.4**
DFE	**Dawson Falls**	**3.10**	**253**	P	**Pn**	**15 08 36.9**	**+2.4**
PKE	**Pukeiti**	**3.15**	**256**	P	**Pn**	**15 08 37.1**	**+1.8**
MTW	**Mount Morrison**	**3.27**	**214**	P	**Pn**	**15 08 36.9**	**+0.1**
KIW	**Kapiti Island**	**3.33**	**223**	P	**Pn**	**15 08 38.0**	**+0.3**
CAW	**Cannon Point**	**3.43**	**219**	P	**Pn**	**15 08 38.8**	**-0.2**
PAWZ	**Paruwai Farm**	**3.48**	**213**	P	**Pn**	**15 08 39.7**	**0.0**
MSWZ	**Moikau Station**	**3.59**	**214**	P	**Pn**	**15 08 40.7**	**-0.4**
WEL	**Wellington**	**3.71**	**220**	P	**Pn**	**15 08 42.4**	**-0.5**
SNZO	**South Karori**	**3.76**	**220**	P	**Pn**	**15 08 42.9**	**-0.6**
WCZ	**Waipu Caves**	**3.81**	**310**	P	**Pn**	**15 08 43.0**	**-1.2**
TCW	**Tory Channel**	**3.92**	**225**	P	**Pn**	**15 08 45.0**	**-0.7**
NNZ	**Nelson**	**4.44**	**230**	P	**Pn**	**15 08 51.1**	**-1.7**
BSWZ	**Blackbirch Sta**	**4.49**	**222**	P	**Pn**	**15 08 52.3**	**-1.1**
OUZ	**Omahuta**	**4.75**	**312**	*e*P	**Pn**	**15 08 56.5**	**-0.5**
THZ	**Tophouse**	**5.06**	**228**	P	**Pn**	**15 08 59.8**	**-1.5**
KHZ	**Kahutara**	**5.17**	**219**	P	**Pn**	**15 09 01.2**	**-1.5**
DSZ	**Denniston Nort**	**5.72**	**233**	P	**Pn**	**15 09 08.1**	**-2.2**
LTZ	**Lake Taylor**	**6.08**	**223**	P	**Pn**	**15 09 12.8**	**-2.5**
CRLZ	**Canterbury Las**	**6.49**	**216**	P	**Pn**	**15 09 18.9**	**-1.8**
MQZ	**McQueen's Vall**	**6.57**	**216**	P	**Pn**	**15 09 19.3**	**-2.6**
WVZ	**Waitaha Valley**	**7.13**	**228**	P	**Pn**	**15 09 28.0**	**-1.6**
RPZ	**Rata Peaks**	**7.37**	**223**	P	**Pn**	**15 09 31.8**	**-1.1**
	5.9nm,0.3s,baz=48,slow=2.5,SNR=49						
RPZ				S	**Sn**	**15 10 49.0**	**-5.9**
	8.7nm,0.3s,baz=24,slow=20,SNR=19						
RPZ	**Rata Peaks**	**7.37**	**223**	P	**Pn**	**15 09 31.0**	**-1.8**
LBZ	**Lake Benmore**	**8.29**	**222**	P	**Pn**	**15 09 42.9**	**-2.5**
ODZ	**Otahua Downs**	**8.52**	**217**	P	**Pn**	**15 09 46.3**	**-2.3**
TUZ	**Tuapeka**	**9.68**	**217**	P	**Pn**	**15 10 02.4**	**-1.9**
WHZ	**Wether Hill Ro**	**10.47**	**222**	P	**Pn**	**15 10 12.8**	**-2.4**
STKA	**Stephens Creek**	**30.27**	**271**	P	**P**	**15 13 54.7**	**+2.1**
	2.9nm,0.8s,mb4.0,baz=104,slow=4.2,SNR=5.4						
STKA				LR	LR	15 24 12.4	
	comp=Z,75nm,19.0s,baz=33,slow=33						
STKA	**Stephens Creek**	**30.27**	**271**	P	**P**	**15 13 54.7**	**+2.1**
STKA				LR	LR	15 24 12.4	
CTA	**Charters Tower**	**32.91**	**295**	P	**P**	**15 14 17.5**

0.4nm,0.3s,mb3.2,baz=90,slow=6.3,SNR=37
ASAR Alice Springs 46.33 252 P **P 15 21 11.9 -0.2**
5.1nm,0.5s,mb4.1,baz=84,slow=7.7,SNR=125
SBA Scott Base 62.86 184 *eP* **P 15 23 09.0 +0.8**
0.8nm,0.6s,mb3.4
TXAR Lajitas Array 83.97 57 P **P 15 25 12.9 +2.5**
0.6nm,0.7s,mb3.4,baz=221,slow=7.2,SNR=8.0
ARCES ARCESS Array B 124.11 350 PKP PKPdf 15 31 34.7 +0.3
1.4nm,0.9s,baz=75,slow=1.9,SNR=5.9
ARCES ARCESS Array B 124.11 350 PKP PKPdf 15 31 34.7 +0.3
BRTR Keskin Array B 143.67 318 PKP PKPdf 15 32 11.2 -0.4
1.8nm,0.8s,baz=111,slow=1.6,SNR=11

*ISK **17** 15:20:54.0, 37.°01N×29.°23E, h10km, MD3.1*
*IDC **17** 15:20:54.0±2.2, 36.°91N×29.°12E, h0km, mb3.5/1, mb1 3.3/3, mb1mx3.1/23, mbtmp3.3/3, ML2.7/1, Error ellipse: s-maj=53.4km s-min=26.7km az=147.0*
*CSEM **17** 15:20:54.7±0.1, 37.°01N×29.°24E, h10km, MD3.1, Error ellipse: s-maj=3.1km s-min=2.4km az=22.0*
*ISCJB **17** 15:20:54.5±0.5, 36.°99N±0.°03×29.°23E±0.°03, h11km±4km, Error ellipse: s-maj=4.6km s-min=3.8km az=20.2*
*DDA **17** 15:20:55.4, 37.°04N×29.°17E, h7km±5km, Md3.4*
ISC 17 15:20:55.0±0.4, 37.°00N±0.°03×29.°22E±0.°03, h11km±4km, n53, σ0.86/72, 2C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.27**	**55**	*e*PG	**Pg**	**15 20 59.9**	**-0.7**
GLHS	**Glhisar (BURDU**	**0.27**	**55**	*e*Pg	**Pg**	**15 20 59.9**	**-0.7**
GOLH	**Golhisar**	**0.36**	**49**	⇑*i*P	**Pg**	**15 21 01.8**	**-0.4**
GOLH				*i* S	**Sg**	**15 21 09.2**	**+2.1**
GOLH	**Golhisar**	**0.36**	**49**	*i* P	**Pg**	**15 21 01.8**	**-0.4**
GOLH				*i* S	**Sg**	**15 21 09.2**	**+2.1**
FETY	**Fethiye**	**0.38**	**197**	*e*PG	**Pg**	**15 21 01.5**	**-1.1**
FETY				*e*SG	**Sg**	**15 21 07.5**	**-0.1**
FETY	**Fethiye**	**0.38**	**197**	*e*Pg	**Pg**	**15 21 01.5**	**-1.1**
FETY				*e*Sg	**Sg**	**15 21 07.5**	**-0.1**
ELL	**Elmali**	**0.61**	**114**	*e*PG	**Pg**	**15 21 06.8**	**-0.1**
ELL				*e*SG	**Sg**	**15 21 15.8**	**+1.0**
ELL	**Elmali**	**0.61**	**114**	*e*Pg	**Pg**	**15 21 06.8**	**0.0**
ELL				*e*Sg	**Sg**	**15 21 15.8**	**+1.0**
DNZL	**Cakiroluk**	**0.70**	**349**	⇑*i*P	**Pg**	**15 21 07.4**	**-1.3**
DNZL				*i* S	**Sg**	**15 21 18.1**	**+0.2**
DNZL	**Cakiroluk**	**0.70**	**349**	*i* P	**Pg**	**15 21 07.4**	**-1.3**
DNZL				*i* S	**Sg**	**15 21 18.1**	**+0.2**
YER	**Yerkesik**	**0.76**	**281**	*e*PG	**Pg**	**15 21 09.4**	**-0.4**
YER				*e*SG	**Sg**	**15 21 21.2**	**+1.5**
YER	**Yerkesik**	**0.76**	**281**	*e*Pg	**Pg**	**15 21 09.4**	**-0.4**
YER				*e*Sg	**Sg**	**15 21 21.2**	**+1.4**
DENT	**Denizli**	**0.77**	**349**	*e*PG	**Pg**	**15 21 08.6**	**-1.4**
DENT				*e*SG	**Sg**	**15 21 20.2**	**+0.2**
DENT	**Denizli**	**0.77**	**349**	*e*Pg	**Pg**	**15 21 08.6**	**-1.3**
DENT				*e*Sg	**Sg**	**15 21 20.2**	**+0.2**
AKAS	**Kas**	**0.82**	**158**	*e*P	**Pg**	**15 21 11.3**	**+0.3**
AKAS				*e*S	**Sg**	**15 21 26.2**	**+4.5**
AKAS	**Kas**	**0.82**	**158**	*e*P	**Pg**	**15 21 11.3**	**+0.4**
AKAS				*e*S	**Sg**	**15 21 26.2**	**+4.5**
KORT	**Korkueli**	**0.91**	**90**	*e*P	**Pg**	**15 21 11.6**	**-0.9**
KORT				*e*S	**Sg**	**15 21 27.7**	**+3.4**
KORT	**Korkueli**	**0.91**	**90**	*e*P	**Pg**	**15 21 11.6**	**-0.9**
KORT				*e*S	**Sg**	**15 21 27.7**	**+3.4**
ANTB	**Antalya**	**1.15**	**94**	*e*PN	**Pn**	**15 21 16.0**	**-1.1**
ANTB	**Antalya**	**1.15**	**94**	*e*Pn	**Pn**	**15 21 16.0**	**-1.0**
BCK	**Bucak**	**1.19**	**67**	*e*PN	**Pn**	**15 21 16.6**	**-0.9**
BCK	**Bucak**	**1.19**	**67**	*e*Pn	**Pn**	**15 21 16.6**	**-0.9**
MLSB	**Milas**	**1.19**	**285**	*e*PN	**Pn**	**15 21 17.3**	**-0.3**
MLSB	**Milas**	**1.19**	**285**	*e*Pn	**Pn**	**15 21 17.3**	**-0.3**
AYDN	**Tasoluk**	**1.26**	**302**	*e*P	**Pn**	**15 21 19.2**	**+0.7**
AYDN				*e*S	**Sb**	**15 21 35.4**	**+0.6**
AYDN	**Tasoluk**	**1.26**	**302**	*e*P	**Pn**	**15 21 19.2**	**+0.7**
AYDN				*e*S	**Sb**	**15 21 35.4**	**+0.5**
ISP	**Isparta**	**1.32**	**51**	*e*PN	**Pn**	**15 21 19.9**	**+0.5**
ISP	**Isparta**	**1.32**	**51**	*e*Pn	**Pn**	**15 21 19.9**	**+0.5**
KHL	**Karahalli**	**1.34**	**10**	*e*PN	**Pn**	**15 21 19.0**	**-0.7**
KHL	**Karahalli**	**1.34**	**10**	*e*Pn	**Pn**	**15 21 19.0**	**-0.7**
DAT	**Datca**	**1.34**	**259**	*e*PN	**Pn**	**15 21 20.2**	**+0.6**
DAT	**Datca**	**1.34**	**259**	*e*Pn	**Pn**	**15 21 20.3**	**+0.6**
SUTC	**Sutluce-Ispart**	**1.50**	**71**	*e*PN	**Pn**	**15 21 21.0**	**-0.8**
SUTC	**Sutluce-Ispart**	**1.50**	**71**	*e*Pn	**Pn**	**15 21 21.0**	**-0.8**
KULA	**Kula-Manisa**	**1.58**	**344**	*e*PN	**Pn**	**15 21 22.7**	**-0.2**
KULA	**Kula-Manisa**	**1.58**	**344**	*e*Pn	**Pn**	**15 21 22.7**	**-0.2**
SHUT	**Suhut-Afyon**	**1.88**	**34**	*e*PN	**Pn**	**15 21 26.6**	**-0.4**
SHUT	**Suhut-Afyon**	**1.88**	**34**	*e*Pn	**Pn**	**15 21 26.6**	**-0.4**
ALT	**Altintas**	**2.17**	**19**	*e*PN	**Pn**	**15 21 30.6**	**-0.4**
ALT	**Altintas**	**2.17**	**19**	*e*Pn	**Pn**	**15 21 30.6**	**-0.4**
AKS	**Akhisar**	**2.18**	**330**	*e*PN	**Pn**	**15 21 31.4**	**+0.2**
AKS	**Akhisar**	**2.18**	**330**	*e*Pn	**Pn**	**15 21 31.4**	**+0.2**
BLCB	**Balcova**	**2.21**	**309**	*e*PN	**Pn**	**15 21 32.3**	**+0.6**
BLCB	**Balcova**	**2.21**	**309**	*e*Pn	**Pn**	**15 21 32.3**	**+0.7**
HDMB	**Hadim**	**2.62**	**90**	*e*PN	**Pn**	**15 21 37.6**	**+0.4**
HDMB	**Hadim**	**2.62**	**90**	*e*Pn	**Pn**	**15 21 37.6**	**+0.4**
KONT	**Konya--Tatoy**	**2.67**	**68**	*e*PN	**Pn**	**15 21 37.7**	**-0.2**
KONT	**Konya--Tatoy**	**2.67**	**68**	*e*Pn	**Pn**	**15 21 37.7**	**-0.2**
LADK	**Ladik-KONYA**	**2.77**	**63**	*e*PN	**Pn**	**15 21 39.1**	**-0.2**
LADK	**Ladik-KONYA**	**2.77**	**63**	*e*Pn	**Pn**	**15 21 39.1**	**-0.2**
BRTR	**Keskin Array B**	**4.41**	**51**	Pn	**Pn**	**15 22 04.0**	**+2.2**
	0.4nm,0.3s,baz=230,slow=15,SNR=12						
BRTR				Sn	**Sn**	**15 22 58.1**	**+4.9**
	0.2nm,0.3s,baz=225,slow=25,SNR=5.8						
MMAI	**Mount Meron Ar**	**6.44**	**126**	Pn	**Pn**	**15 22 30.5**	**+0.7**
	baz=303,slow=12						
TORD	**Torodi Ar. Bea**	**34.21**	**233**	P	**P**	**15 27 40.3**	**-0.4**
	0.5nm,0.6s,baz=37,slow=8.5,SNR=4.1						

DJA 17 15:21:05, 6.°41S×105.°13E, h21km, MLv3.7/6, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGJI	**Cibinong**	**0.59**	**110**	P	Pb	15 21 17.6	+0.9
CGJI				S	Sb	15 21 27.2	+2.5
RBSI	**Rajabasa**	**0.83**	**47**	P	Pb	15 21 21.3	+0.6
RBSI				S	Sb	15 21 33.0	+1.6
BLSI	**Bandar Lampung**	**1.04**	**6**	P	Pb	15 21 24.1	-0.3
BLSI				S	Sb	15 21 38.4	+0.8
KASI	**Kota Agung**	**1.08**	**324**	P	Pn	15 21 24.6	-0.4
KASI				S	Sb	15 21 39.9	+1.1
KLI	**Kotabumi**	**1.56**	**350**	P	Pn	15 21 32.3	+0.8
CBJI	**Citeko**	**1.71**	**90**	P	Pn	15 21 35.9	+2.3
LWLI	**Liwa**	**1.75**	**322**	P	Pn	15 21 34.8	+0.7
MDSI	**Maura Dua**	**2.13**	**334**	P	Pn	15 21 39.8	+0.4

*SKO **17** 15:24:01.8, 42.°23N×20.°17E, h0km*
*ISCJB **17** 15:24:02.0±0.3, 42.°21N±0.°02×20.°24E±0.°02, h10km, Error ellipse: s-maj=2.7km s-min=2.2km az=26.9*
*PDG **17** 15:24:02.4±0.1, 42.°25N×20.°21E, h14km, MD2.4/1, ML2.3/9, Error ellipse: s-maj=0.3km s-min=0.7km az=0.0*
*CSEM **17** 15:24:02.4±0.2, 42.°23N×20.°22E, h2km, ML2.3/9, Error ellipse: s-maj=4.5km s-min=3.7km az=5.0*
*BEO **17** 15:24:03.9±0.3, 42.°24N×20.°25E, h3km±3km, ML2.0/7*
ISC 17 15:24:02.6±0.4, 42.°22N±0.°02×20.°25E±0.°02, h2km±4km, n46, σ1.912/91, 18C-2D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCI	**Bajram Curri**	**0.20**	**318**	*e*PG	**Pg**	**15 24 06.1**	**-0.4**
BCI				*i* SG	**Sg**	**15 24 09.2**	**0.0**
BCI	**Bajram Curri**	**0.20**	**318**	*e*Pg	**Pg**	**15 24 06.1**	**-0.4**
BCI				*i* Sg	**Sg**	**15 24 09.2**	**0.0**
PUK	**Puka**	**0.32**	**237**	*e*PG	**Pg**	**15 24 08.4**	**-0.3**
PUK				*i* SG	**Sg**	**15 24 14.0**	**+1.2**
PUK	**Puka**	**0.32**	**237**	*e*Pg	**Pg**	**15 24 08.4**	**-0.3**
PUK				*i* Sg	**Sg**	**15 24 14.0**	**+1.2**
PVY	**Plav**	**0.43**	**332**	⇑*i*Pg	**Pg**	**15 24 09.9**	**-1.0**
PVY				*e*Sg	**Sg**	**15 24 16.3**	**-0.2**
PVY	**Plav**	**0.43**	**332**	⇑*i*Pg	**Pg**	**15 24 09.9**	**-1.0**
PVY				*e*Sg	**Sg**	**15 24 16.3**	**-0.2**
BEY	**Berane**	**0.71**	**338**	⇑*i*Pg	**Pg**	**15 24 14.5**	**-1.7**
BEY				*e*Sg	**Sg**	**15 24 25.3**	**0.0**
IVA	**Berane**	**0.71**	**338**	⇑*i*Pg	**Pg**	**15 24 14.5**	**-1.7**
IVA				*e*Sg	**Sg**	**15 24 25.3**	**0.0**
PDG	**Podgorica**	**0.77**	**287**	⇑*i*Pg	**Pg**	**15 24 15.6**	**-1.7**
PDG				*e*Sg	**Sg**	**15 24 27.4**	**+0.2**
TTG	**Podgorica**	**0.77**	**287**	⇑*i*Pg	**Pg**	**15 24 15.6**	**-1.7**
TTG				*e*Sg	**Sg**	**15 24 27.4**	**+0.2**
ULC	**Ulcinj**	**0.79**	**252**	⇑*i*Pg	**Pg**	**15 24 16.7**	**-1.0**
ULC				*e*Sg	**Sg**	**15 24 28.6**	**+0.7**
ULC	**Ulcinj**	**0.79**	**252**	⇑*i*Pg	**Pg**	**15 24 16.7**	**-1.0**
ULC				*e*Sg	**Sg**	**15 24 28.6**	**+0.7**
TIR	**Tirane**	**0.91**	**199**	*e*Pg	**Pg**	**15 24 20.3**	**+0.2**
TIR				*e*Sg	**Sg**	**15 24 34.2**	**+2.3**
TIR	**Tirane**	**0.91**	**199**	*e*Pg	**Pg**	**15 24 20.3**	**+0.2**
TIR				*e*Sg	**Sg**	**15 24 34.2**	**+2.3**
SKO	**Skopje**	**0.92**	**105**	*e*Pg	**Pg**	**15 24 19.9**	**-0.3**
SKO				*e*Sg	**Sg**	**15 24 33.9**	**+1.9**
SKO	**Skopje**	**0.92**	**105**	*e*Pg	**Pg**	**15 24 19.5**	**-0.7**
SKO				*e*Sg	**Sg**	**15 24 32.7**	**+0.6**
SKO	**Skopje**	**0.92**	**105**	*e*Pg	**Pg**	**15 24 19.9**	**-0.3**
SKO				*e*Sg	**Sg**	**15 24 33.9**	**+1.9**
BUM	**Brajici-Budva**	**1.01**	**275**	⇑*i*Pg	**Pg**	**15 24 20.4**	**-1.5**
BUM				*e*Sg	**Sg**	**15 24 36.0**	**+1.0**
BUM	**Brajici-Budva**	**1.01**	**275**	⇑*i*Pg	**Pg**	**15 24 20.4**	**-1.5**
BUM				*e*Sg	**Sg**	**15 24 36.0**	**+1.0**
NKY	**Niksic**	**1.10**	**303**	⇑*i*Pg	**Pg**	**15 24 22.2**	**-1.5**
NKY				*e*Sg	**Sg**	**15 24 38.7**	**+0.7**
NKY	**Niksic**	**1.10**	**303**	⇑*i*Pg	**Pg**	**15 24 22.2**	**-1.5**
NKY				*e*Sg	**Sg**	**15 24 38.7**	**+0.7**
KRUS	**Krusevo**	**1.13**	**138**	*e*Pg	**Pg**	**15 24 22.7**	**-1.5**
KRUS				*e*Sg	**Sg**	**15 24 39.4**	**+0.6**
OHR	**Ohrid**	**1.18**	**159**	*e*Pg	**Pn**	**15 24 23.6**	**-2.4**
OHR				*e*Sg	**Sg**	**15 24 40.0**	**-0.4**
PLE	**Pljevlja**	**1.28**	**331**	⇑*i*Pg	**Pn**	**15 24 25.3**	**-2.3**
PLE				*e*Sg	**Sg**	**15 24 44.7**	**+0.9**
PLE	**Pljevlja**	**1.28**	**331**	⇑*i*Pg	**Pn**	**15 24 25.3**	**-2.3**
PLE				*e*Sg	**Sg**	**15 24 44.7**	**+0.9**
BARS	**Barje**	**1.30**	**62**	*e*Pg	**Pn**	**15 24 26.6**	**-1.3**
BARS				*e*Sg	**Sg**	**15 24 45.0**	**+0.5**
BARS	**Barje**	**1.30**	**62**	*e*Pg	**Pn**	**15 24 26.6**	**-1.3**
BARS				*e*Sg	**Sg**	**15 24 45.0**	**+0.5**
HCY	**Herceg Novi**	**1.32**	**281**	⇑*i*Pg	**Pn**	**15 24 26.2**	**-1.9**
HCY				*e*Sg	**Sg**	**15 24 46.5**	**+1.5**
HCY	**Herceg Novi**	**1.32**	**281**	⇑*i*Pg	**Pn**	**15 24 26.2**	**-1.9**
HCY				*e*Sg	**Sg**	**15 24 46.5**	**+1.5**
UPM	**Unac-Piva**	**1.40**	**315**	⇓*i*Pg	**Pn**	**15 24 27.8**	**-1.4**
UPM				*e*Sg	**Sg**	**15 24 48.4**	**+0.9**
UPM	**Unac-Piva**	**1.40**	**315**	⇓*i*Pg	**Pn**	**15 24 27.8**	**-1.4**
UPM				*e*Sg	**Sg**	**15 24 48.4**	**+0.9**
BRY	**Bratogost**	**1.44**	**299**	⇑*i*Pg	**Pn**	**15 24 27.9**	**-1.8**
BRY				*e*Sg	**Sg**	**15 24 49.1**	**+0.4**
BRY	**Bratogost**	**1.44**	**299**	⇑*i*Pg	**Pn**	**15 24 27.9**	**-1.8**
BRY				*e*Sg	**Sg**	**15 24 49.1**	**+0.4**
TREB	**Trebinje**	**1.49**	**290**	*e*Pg	**Pg**	**15 24 30.9**	**-0.3**
TREB				*e*Sg	**Sg**	**15 24 50.6**	**0.0**
TREB	**Trebinje**	**1.49**	**290**	*e*Pg	**Pg**	**15 24 30.9**	**-0.3**
TREB				*e*Sg	**Sg**	**15 24 50.6**	**0.0**
GRUS	**Gruza**	**1.71**	**11**	*e*Pn	**Pn**	**15 24 34.9**	**+1.5**
GRUS				*e*Sg	**Sg**	**15 24 58.0**	**+0.5**
GRUS	**Gruza**	**1.71**	**11**	*e*Pn	**Pn**	**15 24 34.9**	**+1.5**
BBLS	**Lazići**	**1.76**	**340**	*e*Pn	**Pn**	**15 24 34.3**	**+0.1**
BBLS				*e*Sn	**Sn**	**15 24 57.2**	**0.0**
BBLS	**Lazići**	**1.76**	**340**	*e*Pn	**Pn**	**15 24 34.3**	**+0.1**
BBLS				*e*Sn	**Sn**	**15 24 57.2**	**0.0**
DIVS	**Divibare**	**1.89**	**354**	*e*Pn	**Pn**	**15 24 37.1**	**+1.1**
DIVS				*e*Sn	**Sn**	**15 25 01.2**	**+0.8**
DIVS	**Divibare**	**1.89**	**354**	*e*Pn	**Pn**	**15 24 37.1**	**+1.1**
DIVS				*e*Sn	**Sn**	**15 25 01.2**	**+0.8**
STON	**Ston**	**2.00**	**290**	*e*Pn	**Pn**	**15 24 37.4**	**0.0**
STON				Sn	**Sn**	**15 25 05.1**	**+2.2**
STON	**Ston**	**2.00**	**290**	*e*Pn	**Pn**	**15 24 37.4**	**0.0**
STON				Sn	**Sn**	**15 25 05.1**	**+2.1**
ZAPS	**Zavoj**	**2.05**	**58**	*e*Pn	**Pn**	**15 24 39.1**	**+1.0**
ZAPS				*e*Sg	**Sg**	**15 25 08.7**	**+0.3**
VTS	**Vitosha**	**2.22**	**79**	*e*Pn	**Pn**	**15 24 42.0**	**+1.5**
VTS				*e*Sn	**Sn**	**15 25 08.7**	**+0.2**
VTS	**Vitosha**	**2.22**	**79**	*e*Pn	**Pn**	**15 24 42.0**	**+1.5**
VTS				*e*Sn	**Sn**	**15 25 08.7**	**+0.2**

*CSEM **17** 15:29:04.4±0.3, 41.°60N×1.°86E, h2km, ML2.3, Error ellipse: s-maj=5.7km s-min=2.8km az=146.0, Mining explosion.*
*STR **17** 15:29:05.8±0.2, 41.°60N×2.°02E, h10km, Ml2.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
MDD 17 15:29:05.4±0.3, 41.°58N×1.°92E, h0km, mbLg2.5/25, 1C-1D, Error ellipse: s-maj=2.5km s-min=2.0km az=139.0, PRXIMO, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFON	**Fontmartina**	**0.43**	**64**	Pg	Pg	15 29 13.3	-0.3
	9.8nm,0.2s,SNR=51						
CFON				Lg		15 29 18.7	
	99nm,0.2s,SNR=58						
CFON	**Fontmartina**	**0.43**	**64**	Pg	Pg	15 29 13.3	-0.3
	9.8nm,0.2s,SNR=51						
CFON				Lg		15 29 18.7	
	99nm,0.2s,SNR=58						
CGAR	**Garraf**	**0.66**	**245**	Pg	Pg	15 29 10.5	-7.5
CGAR				Lg		15 29 14.7	
	19nm,0.1s						
EPOB	**Poblet**	**0.67**	**251**	⇑Pg	Pg	15 29 17.8	-0.5
	12nm,0.1s,SNR=18						
EPOB				Lg		15 29 26.6	
	44nm,0.1s,SNR=49						
EPOB	**Poblet**	**0.67**	**251**	Pg	Pg	15 29 17.8	-0.5
	9.0nm,0.2s,SNR=64						
EPOB				Lg		15 29 26.6	
	44nm,0.1s,SNR=49						
CBRU	**Bruguera**	**0.73**	**15**	Pg	Pg	15 29 19.0	-0.5
CBRU				Lg		15 29 29.3	
	30nm,0.2s						
CORG	**Organya**	**0.80**	**326**	Pg	Pg	15 29 20.1	-0.5
CORG				Lg		15 29 31.4	
	25nm,0.2s						
CCAS	**Cassa de la Se**	**0.80**	**67**	Pg	Pg	15 29 19.9	-0.8
CCAS				Lg		15 29 30.8	
	84nm,0.2s						
VALF	**Valcebollere**	**0.83**	**5**	Pg	Pg	15 29 21.0	-0.3
VALF				Sg	Sg	15 29 32.3	+0.3
VALF	**Valcebollere**	**0.83**	**5**	Pg	Pg	15 29 21.0	-0.3
VALF				Lg		15 29 32.3	
VALF	**Valcebollere**	**0.83**	**5**	Pg	Pg	15 29 21.0	-0.3
VALF				Sg	Sg	15 29 32.3	+0.3
CBEU	**Beuda**	**0.88**	**39**	Pg	Pg	15 29 21.6	-0.7
CBEU				Lg		15 29 33.8	
	152nm,0.2s						
CLLI	**Llivia**	**0.90**	**2**	Pg	Pg	15 29 22.4	-0.3
	9.1nm,0.3s,SNR=34						
CLLI				Lg		15 29 34.3	
	17nm,0.2s,SNR=7.2						
CLLI	**Llivia**	**0.90**	**2**	Pg	Pg	15 29 22.4	-0.3
	9.1nm,0.3s,SNR=34						
CLLI				Lg		15 29 34.3	
	17nm,0.2s,SNR=7.2						
CAVN	**Les Avellanes**	**0.93**	**290**	Pg	Pg	15 29 22.6	-0.6
CAVN				Lg		15 29 35.6	
	73nm,0.1s						
COBS	**Casablanca**	**0.96**	**207**	Pg	Pg	15 29 23.2	-0.6
COBS				Lg		15 29 35.8	
CSOR	**Sort**	**0.99**	**324**	Pg	Pg	15 29 24.2	-0.2
	5.9nm,0.2s,SNR=33						
CSOR				Lg		15 29 36.8	
	80nm,0.3s,SNR=35						
CSOR	**Sort**	**0.99**	**324**	Pg	Pg	15 29 24.2	-0.2
	5.9nm,0.2s,SNR=33						
CSOR				Lg		15 29 36.8	
	80nm,0.3s,SNR=35						
FILF	**Fillols**	**1.09**	**26**	Pg	Pg	15 29 24.9	-1.5
FILF				Sg	Sg	15 29 38.6	-1.9
FILF	**Fillols**	**1.09**	**26**	Pg	Pg	15 29 24.9	-1.5
FILF				Lg		15 29 38.6	
FILF	**Fillols**	**1.09**	**26**	Pg	Pg	15 29 24.9	-1.5
FILF				Sg	Sg	15 29 38.6	-1.9
EJON	**La Jonquera**	**1.13**	**39**	⇓Pg	Pg	15 29 26.1	-1.0
	3.6nm,0.1s,SNR=18						
EJON				Lg		15 29 40.9	
	24nm,0.1s,SNR=20						
EJON	**La Jonquera**	**1.13**	**39**	Pg	Pg	15 29 26.1	-1.0
	4.1nm,0.4s,SNR=11						
EJON				Lg		15 29 40.9	
	24nm,0.1s,SNR=20						
CTRE	**Tremp**	**1.14**	**311**	Pg	Pg	15 29 26.3	-0.9
CTRE				Lg		15 29 41.8	
	39nm,0.2s						
CEST	**Esterri de Car**	**1.14**	**334**	Pg	Pg	15 29 26.4	-0.8
CEST				Lg		15 29 42.1	
	28nm,0.1s						
CARF	**Carcanieres**	**1.15**	**7**	Pg	Pg	15 29 26.9	-0.5
CARF				Sg	Sg	15 29 42.3	0.0
CARF	**Carcanieres**	**1.15**	**7**	Pg	Pg	15 29 26.9	-0.5
CARF				Lg		15 29 42.3	
CARF	**Carcanieres**	**1.15**	**7**	Sg	Sg	15 29 42.3	0.0
CARF	**Carcanieres**	**1.15**	**7**	Pg	Pg	15 29 26.9	-0.5
SJAF	**Saint Jean de**	**1.16**	**38**	Pg	Pg	15 29 26.2	-1.4
SJAF				Sg	Sg	15 29 41.7	-0.8
SJAF	**Saint Jean de**	**1.16**	**38**	Pg	Pg	15 29 26.2	-1.4
SJAF				Lg		15 29 41.7	
SJAF	**Saint Jean de**	**1.16**	**38**	Pg	Pg	15 29 26.2	-1.4
SJAF				Sg	Sg	15 29 41.7	-0.8
CPAL	**Palau Saverder**	**1.18**	**51**	Pg	Pg	15 29 26.4	-1.7
CPAL				Lg		15 29 42.4	
	43nm,0.1s						
GRBF	**Gourbit**	**1.30**	**347**	Pg	Pg	15 29 29.6	-0.7
GRBF				Lg		15 29 46.7	
ERTA	**Horta de San J**	**1.35**	**243**	Pg	Pg	15 29 30.5	-0.8
	2.2nm,0.1s,SNR=8.9						
ERTA				Lg		15 29 48.1	
	28nm,0.2s,SNR=26						
ERTA	**Horta de San J**	**1.35**	**243**	Pg	Pg	15 29 30.5	-0.7
	7.1nm,0.6s,SNR=8.9						
ERTA				Lg		15 29 48.1	
	28nm,0.2s,SNR=26						
CMAS	**Mas de Barbera**	**1.48**	**236**	Pg	Pg	15 29 31.9	-1.9
CMAS				Lg		15 29 51.8	
	36nm,0.1s						
MELF	**Melles**	**1.56**	**327**	Lg		15 29 54.3	
RESF	**Ens**	**1.70**	**317**	Lg		15 29 58.4	
EBIE	**Bielsa**	**1.73**	**311**	Pg	Pg	15 29 36.7	-1.8
	1.1nm,0.1s,SNR=7.1						
EBIE				Lg		15 29 59.5	
	14nm,0.2s,SNR=24						
EBIE	**Bielsa**	**1.73**	**311**	Pg	Pg	15 29 36.7	-1.8
	2.3nm,0.3s,SNR=7.1						
EBIE				Lg		15 29 59.5	
	14nm,0.2s,SNR=24						
ESAC	**San Caprasio**	**1.80**	**275**	Pg	Pg	15 29 38.0	-1.9
	17nm,0.2s,SNR=8.9						
ESAC				Lg		15 30 02.0	
	34nm,0.2s,SNR=4.8						
ESAC	**San Caprasio**	**1.80**	**275**	Pg	Pg	15 29 38.0	-1.9
	19nm,0.3s,SNR=8.9						
ESAC				Lg		15 30 02.0	
	34nm,0.2s,SNR=4.8						
VIEF	**Viey**	**1.92**	**313**	Lg		15 30 04.9	
LABF	**Labassere**	**2.01**	**318**	Lg		15 30 07.8	
EMOS	**Mosqueruela**	**2.18**	**237**	Pg	Pg	15 29 44.9	-2.3
	0.1nm,0.1s,SNR=7.9						
EMOS				Sn	Sn	15 30 06.4	-4.2
	SNR=7.9						
EMOS				Lg		15 30 14.7	
	3.0nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**2.18**	**237**	Pg	Pg	15 29 44.9	-2.3
	SNR=7.9						
EMOS				Sn	Sn	15 30 06.4	-4.2
	SNR=7.9						
EMOS				Lg		15 30 14.7	
	3.0nm,0.2s,SNR=7.9						
EORO	**Oroz-Betelu**	**2.74**	**300**	Pg	Pg	15 29 56.1	-1.8
	SNR=7.9						
EORO				Lg		15 30 32.2	
	2.9nm,0.2s,SNR=7.9						
EORO	**Oroz-Betelu**	**2.74**	**300**	Pg	Pg	15 29 56.1	-1.8
	SNR=7.9						
EORO				Lg		15 30 32.2	
	2.9nm,0.2s,SNR=7.9						
IZUN	**Zunzarren**	**2.82**	**298**	Pg	Pg	15 29 55.9	-3.6
	0.1nm,0.1s,SNR=7.9						
IZUN				Lg		15 30 35.6	
	1.9nm,0.2s,SNR=7.9						
IZUN	**Zunzarren**	**2.82**	**298**	Pg	Pg	15 29 55.9	-3.5
	SNR=7.9						
IZUN				Lg		15 30 35.7	
	1.9nm,0.2s,SNR=7.9						
IUSE	**Utxeti**	**2.92**	**299**	Pg	Pg	15 29 58.1	-3.2
	0.3nm,0.1s,SNR=7.9						
IUSE				Lg		15 30

s-min=13.6km az=54.0
*NEIC **17** 15:42:38.9±2.3, 4°.09N×96°.52E, h40km±18km, mb4.7/2, Error ellipse: s-maj=28.4km s-min=8.0km az=57.0*
*DJA **17** 15:42:39, 4°.40N×96°.76E, h13km, MLv4.9/9*
*ISCJB **17** 15:42:40.5±0.6, 4°.23N±0°.05×96°.73E±0°.05, h66km±7km, mb4.1/15, Error ellipse: s-maj=10.7km s-min=6.0km az=42.7*

ISC 17 15:42:41.7±0.6, **4°.22N**±0°.05×**96°.69E**±0°.05, **h59**km±6km, **n55**, σ1°**16**/57, **mb4.1**/15, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**1.88**	**312**	P	**Pn**	**15 43 10.2**	**-1.4**
BSI				S	**Sn**	**15 43 34.7**	**+0.5**
PSI	**Prapat**	**2.64**	**122**	Pn	**Pn**	**15 43 21.4**	**-0.5**
	24nm,0.3s,baz=315,slow=14,SNR=68						
PSI				Lg		15 44 02.5	
	143nm,0.3s,baz=136,slow=9.1,SNR=16						
PSI				LR	LR	15 44 26.6	
	comp=Z,260nm,21.6s,baz=110,slow=38						
PSI	**Prapat**	**2.64**	**122**	Pn	**Pn**	**15 43 21.4**	**-0.5**
PSI				Lg		15 44 02.5	
PSI				LR	LR	15 44 26.6	
GSI	**Gunungsitoli**	**3.03**	**163**	P	**Pn**	**15 43 27.5**	**+0.2**
TRSI	**Tarutung**	**3.14**	**134**	P	**Pn**	**15 43 29.9**	**+1.1**
TRSI				S	**Sn**	**15 44 11.4**	**+6.2**
KULM	**Kulim**	**4.08**	**75**	P	**Pn**	**15 43 40.6**	**-1.1**
KULM	**Kulim**	**4.08**	**75**	P	**Pn**	**15 43 40.6**	**-1.1**
KULM	**Kulim**	**4.08**	**75**	P	**Pn**	**15 43 40.6**	**-1.1**
KULM	**Kulim**	**4.08**	**75**	*e*P	**Pn**	**15 43 39.9**	**-1.8**
KULM	**Kulim**	**4.08**	**75**	P	**Pn**	**15 43 39.9**	**-1.8**
KULM				S	**Sn**	**15 44 29.3**	**+1.0**
IPM	**Ipoh**	**4.33**	**86**	P	**Pn**	**15 43 45.1**	**+0.1**
IPM	**Ipoh**	**4.33**	**86**	P	**Pn**	**15 43 45.1**	**+0.1**
IPM	**Ipoh**	**4.33**	**86**	P	**Pn**	**15 43 43.7**	**-1.3**
IPM	**Ipoh**	**4.33**	**86**	P	**Pn**	**15 43 43.3**	**-1.7**
MNSI	**Mandailing Nat**	**4.46**	**140**	P	**Pn**	**15 43 47.5**	**+0.6**
FRIM	**Kepong**	**5.02**	**101**	P	**Pn**	**15 43 52.9**	**-1.6**
FRIM	**Kepong**	**5.02**	**101**	P	**Pn**	**15 43 52.9**	**-1.6**
FRIM	**Kepong**	**5.02**	**101**	P	**Pn**	**15 43 52.9**	**-1.6**
BKNI	**Bangkinang**	**5.82**	**132**	P	**Pn**	**15 44 07.9**	**+2.4**
	1.7nm2μm203nm,0.8s						
PPI	**Padang Panjang**	**5.94**	**141**	P	**Pn**	**15 44 07.7**	**+0.5**
	0.3nm2μm44nm,0.7s						
KTGM	**Kuala Trenggan**	**6.51**	**80**	P	**Pn**	**15 44 13.8**	**-1.2**
KTGM	**Kuala Trenggan**	**6.51**	**80**	P	**Pn**	**15 44 14.0**	**-1.0**
KTGM	**Kuala Trenggan**	**6.51**	**80**	P	**Pn**	**15 44 13.8**	**-1.2**
KGM	**Kluang**	**6.97**	**108**	P	**Pn**	**15 44 20.2**	**-1.1**
SDSI	**Sungai Dareh**	**6.97**	**137**	P	**Pn**	**15 44 24.1**	**+2.8**
	0.3nm13nm,0.7s						
MYKOM	**Kota Tinggi**	**7.54**	**108**	P	**Pn**	**15 44 28.5**	**-0.7**
MYKOM	**Kota Tinggi**	**7.54**	**108**	P	**Pn**	**15 44 28.5**	**-0.7**
MYKOM	**Kota Tinggi**	**7.54**	**108**	P	**Pn**	**15 44 28.5**	**-0.7**
MYKOM	**Kota Tinggi**	**7.54**	**108**	P	**Pn**	**15 44 28.7**	**-0.4**
KSM	**Kuching**	**13.87**	**101**	P	**Pn**	**15 45 54.5**	**-1.1**
CM31	**Chiang Mai Arr**	**14.32**	**9**	*e*P	**Pn**	**15 46 09.2**	**+7.8**
	4.7nm,0.7s						
CMAR	**Chiang Mai Arr**	**14.32**	**9**	Pn	**Pn**	**15 46 02.9**	**+1.5**
	0.1nm,0.3s,baz=187,slow=14,SNR=5.6						
CHTO	**Chiang Mai**	**14.67**	**8**	*e*P	**Pn**	**15 46 11.3**	**+5.3**
	3.0nm,0.7s						
KKM	**Kota Kinabalu**	**19.53**	**84**	P	**Pn**	**15 47 08.8**	**+2.5**
KKM	**Kota Kinabalu**	**19.53**	**84**	*e*P	**Pn**	**15 47 05.4**	**-0.9**
SHL	**Shillong**	**21.72**	**348**	*e*PKP	**P**	**15 47 31.5**	**+3.4**
SHL				*e*S	x	15 50 51.0	
LSA	**Lhasa**	**25.88**	**349**	P	**P**	**15 48 09.8**	**+1.8**
LSA	**Lhasa**	**25.88**	**349**	P	**P**	**15 48 07.9**	**-0.1**
	3.3nm,0.4s,mb4.2						
GTA	**Gaotai**	**35.14**	**4**	*e*P	**P**	**15 49 31.1**	**+1.4**
GTA				pP	pP	15 49 35.5	-9.1
GTA				sP	sP	15 49 38.6	-13
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
FITZ	**Fitzroy Crossi**	**36.15**	**129**	P	**P**	**15 49 37.8**	**-0.8**
	comp=Z,1.9nm,0.6s,mb4.2,baz=300,slow=8.8,SNR=8.2						
FITZ				LR	LR	16 05 27.5	
	comp=Z,90nm,19.5s,baz=289,slow=38						
FITZ	**Fitzroy Crossi**	**36.15**	**129**	*e*P	**P**	**15 49 37.6**	**-1.0**
FITZ				LR	LR	16 05 27.5	
KSRS	**Korea Array**	**43.70**	**37**	P	**P**	**15 50 42.4**	**+1.4**
	comp=Z,1.0nm,0.6s,mb3.7,baz=225,slow=9.1,SNR=5.3						
WRA	**Warramunga Arr**	**44.10**	**124**	P	**P**	**15 50 44.6**	**+0.2**
	comp=Z,12nm,0.5s,mb4.9,baz=301,slow=9.2,SNR=168						
WRAB	**Tennant Creek**	**44.11**	**124**	*e*P	**P**	**15 50 44.6**	**+0.1**
	comp=Z,16nm,0.4s,mb5.1						
MK31	**Makanchi Array**	**44.21**	**346**	P	**P**	**15 50 46.1**	**+1.3**
MKAR	**Makanchi Array**	**44.21**	**346**	P	**P**	**15 50 44.4**	**-0.5**
	comp=Z,0.6nm,0.4s,mb3.7,baz=159,slow=7.3,SNR=5.5						
SONM	**Songino Array**	**44.24**	**9**	P	**P**	**15 50 46.2**	**+1.1**
	comp=Z,0.9nm,0.5s,mb3.7,baz=188,slow=9.9,SNR=4.2						
ASAR	**Alice Springs**	**45.65**	**129**	P	**P**	**15 50 57.0**	**+0.4**
	comp=Z,3.7nm,0.8s,mb4.3,baz=306,slow=7.8,SNR=28						
KURK	**Kurchatov**	**48.76**	**345**	P	**P**	**15 51 19.9**	**-0.5**
	comp=Z,0.5nm,0.5s,mb3.8,baz=161,slow=7.0,SNR=4.1						
ZALV	**Zalesovo Beam**	**50.51**	**351**	P	**P**	**15 51 33.1**	**-0.6**
	comp=Z,0.7nm,0.4s,mb4.0,baz=173,slow=5.5,SNR=5.1						
BVAR	**Borovoye Array**	**53.25**	**340**	P	**P**	**15 51 52.9**	**-1.2**
	comp=Z,0.5nm,0.5s,mb3.7,baz=128,slow=8.1,SNR=4.2						
STKA	**Stephens Creek**	**55.77**	**133**	P	**P**	**15 52 12.0**	**-0.8**
	comp=Z,2.4nm,0.7s,mb4.3,baz=312,slow=8.0,SNR=6.7						
BRTR	**Keskin Array B**	**66.73**	**312**	P	**P**	**15 53 25.1**	**-1.8**
	comp=Z,1.3nm,0.9s,mb4.0,baz=127,slow=7.4,SNR=7.1						
ARCES	**ARCESS Array B**	**79.54**	**340**	P	**P**	**15 54 41.1**	**-0.8**
	comp=Z,0.5nm,0.5s,mb3.7,baz=92,slow=6.3,SNR=13						
TXAR	**Lajitas Array**	**141.33**	**29**	PKP	PKPdf	16 02 08.0	+1.4
	comp=Z,0.1nm,0.5s,baz=49,slow=1.1,SNR=3.5						

JMA 17 15:54:19.8, 38°.89N×140°.76E, h7km±1km, **M2.1, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.31**	**275**	P	Pg	15 54 26.1	+0.2
JYK				S	Sg	15 54 30.3	+0.2
JMK	**Ichinoseki**	**0.36**	**80**	P	Pg	15 54 26.8	-0.1
JMK				S	Sg	15 54 31.8	+0.1
JOU	**Okura**	**0.53**	**188**	P	Pg	15 54 29.9	-0.1
JOU				S	Sg	15 54 37.1	+0.2
JYS	**Shiratake**	**0.86**	**219**	P	Pg	15 54 36.1	-0.2
JYS				*e*S	Sg	15 54 47.5	0.0

*NIED **17** 15:54:00, 39°.20N×141°.00E, h5km, Mw3.8 Best double couple: M=4.83000×10^14 NP1:φ=185.00000°, δ49.00000°, λ87.00000°. NP2:φ=10.00000°, δ41.00000°, λ94.00000°.*
*IDC **17** 15:54:35.5±0.7, 39°.21N×140°.96E, h0km, mb3.8/13, mb1 4.0/15, mb1mx3.8/27, mbtmp3.8/15, ML3.4/2, MS3.7/2, Ms1 3.7/2, ms1mx2.6/39, Error ellipse: s-maj=23.0km s-min=16.0km az=87.0*
*JMA **17** 15:54:36.9, 39°.17N×140°.97E, h9km, M3.8 Broadband fault plane solution: P waves. NP1:φ=345.00000°, δ31.00000°, λ51.00000°. NP2:φ=208.00000°, δ66.00000°, λ110.00000°. Principal axes: T Plg63.0000°, Azm151.0000°; N Plg19.0000°, Azm20.0000°; P Plg19.0000°, Azm283.0000°;*
JMA Felt II J1.
*ISCJB **17** 15:54:36.8±0.4, 39°.17N±0°.03×140°.99E±0°.04, h19km±4km, mb3.8/13, MS3.7/2 Error ellipse: s-maj=5.3km s-min=4.5km az=34.8*
*NEIC **17** 15:54:42.2±0.7, 39°.15N×140°.89E, h50km±6km, mb4.0/2, Error ellipse: s-maj=9.1km s-min=5.9km az=115.0*

ISC 17 15:54:37.2±0.5, **39°.16N**±0°.03×**140°.97E**±0°.04, **h8**km±3km, **n37**, σ0°**87**/42, **mb3.8**/13, **MS3.7**/2, **1C-5D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.28**	**137**	⇓P	**Pg**	**15 54 42.8**	**+0.1**
JMK				S	**Sg**	**15 54 46.8**	**+0.3**
JRG	**Rokugo**	**0.35**	**312**	⇓P	**Pg**	**15 54 43.9**	**-0.2**
JRG				*e*S	**Sg**	**15 54 49.1**	**+0.3**
JOM	**Ohasama**	**0.40**	**38**	⇓P	**Pg**	**15 54 44.7**	**-0.3**
JOM				S	**Sg**	**15 54 50.1**	**-0.1**
JYK	**Kaneyama**	**0.54**	**243**	⇓P	**Pg**	**15 54 47.2**	**-0.3**
JYK				*e*S	**Sg**	**15 54 54.3**	**-0.2**
OFUJ	**Ofunato**	**0.55**	**98**	⇓P	**Pg**	**15 54 47.7**	**0.0**
OFUJ				S	**Sg**	**15 54 54.4**	**-0.5**
JIO	**Ouri**	**0.76**	**157**	P	**Pg**	**15 54 51.5**	**-0.3**
JOU	**Okura**	**0.83**	**197**	⇑P	**Pg**	**15 54 52.8**	**-0.3**
JOU				S	**Sg**	**15 55 03.8**	**-0.1**
ERM	**Erimo**	**3.30**	**30**	*e*Pn	**Pn**	**15 55 32.0**	**+2.9**
MAJO	**Matsushiro**	**3.41**	**221**	*e*Pn	**Pn**	**15 55 32.2**	**+1.7**
MAT	**Matsushiro**	**3.41**	**221**	P	**Pn**	**15 55 31.9**	**+1.4**
MAT				*e*S	**Sn**	**15 56 11.1**	**0.0**
MJAR	**Matsushiro Arr**	**3.41**	**221**	Pn	**Pn**	**15 55 31.9**	**+1.4**
	1.6nm,0.3s,baz=25,slow=14,SNR=11						
ASAJ	**Asahikawa**	**5.10**	**13**	Pn	**Pn**	**15 55 55.6**	**+1.9**
	1.4nm,0.3s,baz=202,slow=16,SNR=17						
ASAJ				Sn	**Sn**	**15 56 55.8**	**+3.0**
	0.7nm,0.3s,baz=114,slow=12,SNR=2.2						
JHJ	**Hachijo jima 2**	**6.10**	**189**	Pn	**Pn**	**15 56 08.6**	**+1.0**
	5.2nm,0.3s,baz=177,slow=23,SNR=7.3						
KSRS	**Korea Array**	**10.40**	**265**	Pn	**Pn**	**15 57 10.8**	**+4.3**
	1.2nm,0.3s,baz=72,slow=14,SNR=19						
KSRS				Sn	**Sn**	**15 59 09.3**	**+6.2**
	0.1nm,0.3s,baz=82,slow=25,SNR=4.7						
SONM	**Songino Array**	**26.36**	**301**	LR	LR	16 10 18.5	
	comp=Z,48nm,19.0s,MS3.1,baz=253,slow=36						
ZALV	**Zalesovo Beam**	**40.25**	**311**	P	**P**	**16 02 13.7**	**-0.4**
	0.8nm,0.6s,mb3.6,baz=81,slow=9.2,SNR=4.4						
MK31	**Makanchi Array**	**42.73**	**300**	*e*P	**P**	**16 02 33.8**	**-0.7**
MKAR	**Makanchi Array**	**42.73**	**300**	P	**P**	**16 02 34.0**	**-0.5**
	0.3nm,0.3s,mb3.5,baz=89,slow=8.0,SNR=5.8						
KURK	**Kurchatov**	**44.37**	**306**	P	**P**	**16 02 47.6**	**-0.2**
	1.1nm,0.5s,mb3.9,baz=81,slow=8.2,SNR=9.5						
KURK	**Kurchatov**	**44.37**	**306**	*e*P	**P**	**16 02 47.0**	**-0.7**
	1.1nm,0.4s,mb3.9						
BVAR	**Borovoye Array**	**48.90**	**311**	P	**P**	**16 03 22.9**	**-0.3**
	0.6nm,0.5s,mb3.9,baz=92,slow=8.1,SNR=5.1						
INK	**Inuvik**	**52.66**	**28**	P	**P**	**16 03 51.6**	**+0.2**
	0.5nm,0.4s,mb3.8,baz=268,slow=5.8,SNR=3.9						
INK	**Inuvik**	**52.66**	**28**	*e*P	**P**	**16 03 51.3**	**0.0**
	0.6nm,0.4s,mb3.9						
WRAB	**Tennant Creek**	**59.11**	**187**	*e*P	**P**	**16 04 37.0**	**-0.9**
WRA	**Warramunga Arr**	**59.12**	**187**	P	**P**	**16 04 37.3**	**-0.7**
	1.3nm,0.5s,mb4.2,baz=5.0,slow=7.4,SNR=32						
ARCES	**ARCESS Array B**	**61.89**	**339**	P	**P**	**16 04 55.3**	**-1.2**
	1.4nm,1.0s,mb4.0,baz=42,slow=9.6,SNR=4.3						
ASAR	**Alice Springs**	**62.84**	**187**	P	**P**	**16 05 03.2**	**-0.1**
	1.0nm,0.7s,mb4.0,baz=4.8,slow=4.9,SNR=12						
FINES	**FINESS Array B**	**66.78**	**332**	P	**P**	**16 05 27.6**	**-1.0**
	3.3nm,0.8s,mb4.4,baz=76,slow=8.0,SNR=6.1						
NB2	**NORSAR Subarra**	**72.10**	**337**	P	**P**	**16 06 01.1**	**-0.4**
	comp=Z,0.6nm,0.5s,mb3.8,baz=38,slow=6.2						
NOA	**NORSAR Array B**	**72.10**	**337**	P	**P**	**16 06 00.4**	**-1.1**
	comp=Z,0.9nm,0.9s,mb3.7,baz=41,slow=5.9,SNR=3.7						
AKASG	**Malin Array Be**	**72.41**	**322**	P	**P**	**16 06 02.7**	**-0.8**
	comp=Z,0.5nm,0.3s,mb3.9,baz=45,slow=5.9,SNR=4.2						
AKASG	**Malin Array Be**	**72.41**	**322**	P	**P**	**16 06 02.7**	**-0.8**
NVAR	**Mina Array Bea**	**74.00**	**53**	P	**P**	**16 06 12.6**	**-0.6**
	comp=Z,0.2nm,0.5s,mb3.3,baz=306,slow=5.4,SNR=2.9						
PDAR	**Pinedale Array**	**76.43**	**46**	P	**P**	**16 06 27.5**	**+0.4**
	comp=Z,0.5nm,0.6s,mb3.6,baz=328,slow=4.7,SNR=3.5						
RAO	**Raoul Island**	**78.10**	**144**	LR	LR	16 37 42.0	
	comp=Z,143nm,18.2s,MS4.3,baz=54,slow=33						
LPAZ	**La Paz**	**145.86**	**56**	PKPbc	PKPbc	16 14 17.4	+0.1
	comp=Z,0.5nm,0.5s,baz=270,slow=2.0,SNR=2.6						
LPAZ	**La Paz**	**145.86**	**56**	PKPbc	PKPbc	16 14 17.4	+0.1

*NEIC **17** 16:02:23.6±0.8, 2°.97S×100°.04E, mb4.2/3, Error ellipse: s-maj=34.7km s-min=9.4km az=52.0*
*DJA **17** 16:02:23, 3°.02S×100°.00E, h27km, MLv4.3/9*
*IDC **17** 16:02:23.4±1.0, 3°.02S×100°.03E, h25km±3km, mb3.7/10, mb1 3.8/10, mb1mx3.6/22, mbtmp3.7/10, Error ellipse: s-maj=39.2km s-min=15.0km az=50.0*
*ISCJB **17** 16:02:23.1±1.1, 3°.01S±0°.10×100°.1E±0°.1, h40km±6km, mb3.9/13, Error ellipse: s-maj=23.9km s-min=6.3km az=138.3*

ISC 17 16:02:24.5±1.1, **2°.98S**±0°.09×**100°.07E**±0°.10, **h33**km±5km, **h26**km±.4km:**pP-P**, **n29**, σ0°**68**/29, **mb3.9**/13, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.23**	**345**	P	**Pb**	**16 02 30.6**	**-0.7**
PPSI				S	**Sb**	**16 02 36.8**	**+0.8**
SISI	**Saibi**	**1.91**	**329**	P	**Pn**	**16 02 54.1**	**-0.7**
SISI				S	**Sn**	**16 03 18.3**	**+0.5**
PDSI	**Padang**	**2.09**	**11**	P	**Pn**	**16 02 57.0**	**-0.3**
SDSI	**Sungai Dareh**	**2.45**	**34**	P	**Pn**	**16 03 02.9**	**+0.7**
PPI	**Padang Panjang**	**2.53**	**7**	P	**Pn**	**16 03 03.5**	**+0.2**
KSI	**Kapahiang**	**2.61**	**105**	P	**Pn**	**16 03 03.9**	**-0.5**
MNAI	**Manna**	**3.19**	**115**	P	**Pn**	**16 03 12.4**	**0.0**
MNSI	**Mandailing Nat**	**3.78**	**353**	P	**Pn**	**16 03 20.1**	**-0.5**
MDSI	**Maura Dua**	**4.37**	**110**	P	**Pn**	**16 03 29.3**	**+0.7**
LWLI	**Liwa**	**4.46**	**117**	P	**Pn**	**16 03 29.6**	**-0.3**
GSI	**Gunungsitoli**	**4.93**	**330**	P	**Pn**	**16 03 36.1**	**-0.3**
KASI	**Kota Agung**	**5.09**	**120**	P	**Pn**	**16 03 38.3**	**-0.2**
CMAR	**Chiang Mai Arr**	**21.33**	**357**	P	**P**	**16 07 07.3**	**-1.6**
	1.6nm,0.8s,mb3.4,baz=188,slow=9.5,SNR=9.9						
WRA	**Warramunga Arr**	**37.45**	**119**	P	**P**	**16 09 35.0**	**-0.1**
	0.6nm,0.6s,mb3.6,baz=308,slow=8.6,SNR=6.0						
WRA				pP	pP	16 09 42.0	-2.7
	0.5nm,0.4s,baz=306,slow=9.1,SNR=5.2						
WRAB	**Tennant Creek**	**37.45**	**119**	*e*P	**P**	**16 09 36.0**	**+0.8**
	2.3nm,0.7s,mb4.1						
ASAR	**Alice Springs**	**38.63**	**125**	P	**P**	**16 09 44.9**	**-0.1**
	0.3nm,0.3s,mb3.5,baz=302,slow=8.1,SNR=11						
KSRS	**Korea Array**	**47.83**	**30**	P	**P**	**16 10 57.7**	**-1.4**
	0.9nm,1.0s,mb3.8,baz=231,slow=7.7,SNR=4.2						
SONM	**Songino Array**	**50.91**	**5**	P	**P**	**16 11 23.6**	**+1.1**
	2.2nm,0.7s,mb4.2,baz=188,slow=10,SNR=8.5						
SONM				pP	pP	16 11 31.4	-0.9
	2.3nm,0.8s,baz=190,slow=9.5,SNR=5.8						
MK31	**Makanchi Array**	**51.99**	**345**	*e*P	**P**	**16 11 31.5**	**+1.0**
MK31				*e*pP	pP	16 11 38.7	-1.7
MKAR	**Makanchi Array**	**51.99**	**345**	P	**P**	**16 11 31.6**	**+1.0**
	2.2nm,0.6s,mb4.3,baz=146,slow=8.4,SNR=22						
MKAR				pP	pP	16 11 38.9	-1.6
	3.5nm,0.7s,baz=146,slow=7.8,SNR=7.4						
KURK	**Kurchatov**	**56.56**	**344**	P	**P**	**16 12 03.3**	**-0.5**
	1.7nm,0.9s,mb4.1						
ZAA0	**Zalesovo Array**	**58.14**	**349**	*e*P	**P**	**16 12 15.4**	**+0.5**
ZALV	**Zalesovo Beam**	**58.14**	**349**	P	**P**	**16 12 15.0**	**+0.2**
	0.8nm,0.3s,mb4.2,baz=173,slow=6.0,SNR=8.1						
BVAR	**Borovoye Array**	**61.12**	**340**	P	**P**	**16 12 35.2**	**-0.2**
	0.2nm,0.3s,mb3.7,baz=152,slow=9.4,SNR=3.5						
BVAR				pP	pP	16 12 42.7	-2.8
	0.5nm,0.5s,baz=155,slow=8.0,SNR=4.6						
ABKAR	**Akbulak array**	**62.53**	**332**	*e*P	**P**	**16 12 44.5**	**-0.4**
	2.6nm,0.7s,mb4.5						
ABKAR				*e*pP	pP	16 12 52.7	-2.4
BRTR	**Keskin Array B**	**74.03**	**313**	P	**P**	**16 13 57.1**	**-0.2**
	0.2nm,0.5s,mb3.3,baz=159,slow=4.5,SNR=2.9						
BRTR				pP	pP	16 14 05.0	-2.5
	0.9nm,0.8s,baz=135,slow=6.4,SNR=5.2						
ARCES	**ARCESS Array B**	**87.41**	**340**	P	**P**	**16 15 08.7**	**+0.5**
	1.0nm,0.8s,mb4.1,baz=101,slow=7.6,SNR=3.4						
ARCES				pP	pP	16 15 17.0	-1.6
	1.4nm,0.7s,baz=123,slow=4.5,SNR=3.4						
TXAR	**Lajitas Array**	**145.43**	**38**	PKPbc	PKPbc	16 22 00.9	+1.0
	2.4nm,0.8s,baz=284,slow=0.9,SNR=24						
TXAR				pPKPbc	pPKPbc	16 22 08.1	-2.4
	2.4nm,0.7s,baz=292,slow=1.1,SNR=15						
JCT	**Junction City**	**146.81**	**32**	*e*PKPbc	PKPbc	16 22 04.5	+0.5

*SOF **17** 16:17:43.1, 41°.82N×23°.70E, h2km, MD2.6*
*CSEM **17** 16:17:43.3±0.1, 41°.77N×23°.66E, h10km, MD2.6, Error ellipse: s-maj=4.4km s-min=2.4km az=55.0*
*THE **17** 16:17:43.7, 41°.76N×23°.71E, h2km±4km, Error ellipse: s-maj=4.3km s-min=0.7km az=252.0*
*BEO **17** 16:17:45.7±1.3, 41°.76N×23°.57E, h0km, ML1.7/2*
*ISCJB **17** 16:17:45.2±0.5, 41°.71N±0°.04×23°.72E±0°.08, h33km, Error ellipse: s-maj=9.3km s-min=4.6km az=157.2*

ISC 17 16:17:43.6±0.5, **41°.76N**±0°.04×**23°.65E**±0°.07, **h13**km±11km, **n23**, σ0°**64**/33, **Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMB	**Musomiste**	**0.18**	**161**	*e*P	**Pg**	**16 17 48.5**	**+0.8**
MMB	**Musomiste**	**0.18**	**161**	*e*P	**Pg**	**16 17 48.5**	**+0.8**
KKB	**Krupnik**	**0.44**	**285**	P	**Pg**	**16 17 51.6**	**-0.7**
KKB	**Krupnik**	**0.44**	**285**	P	**Pg**	**16 17 51.6**	**-0.7**
SRS	**Serrai**	**0.64**	**184**	P	**Pg**	**16 17 55.9**	**-0.2**
SRS				S	**Sg**	**16 18 05.6**	**+1.1**
SRS	**Serrai**	**0.64**	**184**	P	**Pg**	**16 17 55.9**	**-0.2**
SRS				S	**Sg**	**16 18 05.6**	**+1.1**
RZN	**Rozhen**	**0.80**	**94**	P	**Pg**	**16 17 58.7**	**-0.4**
RZN	**Rozhen**	**0.80**	**94**	P	**Pg**	**16 17 58.7**	**-0.4**
VTS	**Vitosha**	**0.90**	**339**	*e*Pg	**Pg**	**16 18 00.6**	**-0.4**
VTS				*e*Sg	**Sg**	**16 18 14.0**	**+1.3**
VTS	**Vitosha**	**0.90**	**339**	P	**Pg**	**16 18 00.2**	**-0.8**
VTS				S	**Sg**	**16 18 14.0**	**+1.3**
VTS	**Vitosha**	**0.90**	**339**	P	**Pg**	**16 18 00.3**	**-0.7**
VTS	**Vitosha**	**0.90**	**339**	P	**Pg**	**16 18 00.3**	**-0.7**
VTS	**Vitosha**	**0.90**	**339**	*e*Pg	**Pg**	**16 18 00.6**	**-0.4**
VTS				S	**Sg**	**16 18 14.0**	**+1.3**
SOH	**Sokhos**	**0.96**	**194**	P	**Pg**	**16 18 02.0**	**-0.1**
SOH	**Sokhos**	**0.96**	**194**	P	**Pg**	**16 18 02.0**	**-0.1**
KAVA	**Kavala**	**1.00**	**139**	P	**Pg**	**16 18 02.0**	**-0.9**
KAVA				S	**Sg**	**16 18 15.5**	**-0.4**
KAVA	**Kavala**	**1.00**	**139**	P	**Pg**	**16 18 02.0**	**-0.9**
KAVA				S	**Sg**	**16 18 15.5**	**-0.4**
RDO	**Rodhopi**	**1.54**	**113**	P	**Pn**	**16 18 11.3**	**+0.5**
RDO	**Rodhopi**	**1.54**	**113**	P	**Pn**	**16 18 11.3**	**+0.5**
MPEP	**Malo Peshtene**	**1.60**	**2**	P	**Pb**	**16 18 13.2**	**+0.2**
ZAPS	**Zavoj**	**1.69**	**334**	*e*Pn	**Pg**	**16 18 16.1**	**0.0**
ZAPS				*e*Sg	**Sg**	**16 18 38.5**	**+0.4**
BARS	**Barje**	**1.73**	**309**	*e*Pg	**Pg**	**16 18 16.3**	**-0.4**
BARS				*e*Sg	**Sg**	**16 18 38.5**	**-0.6**
BARS	**Barje**	**1.73**	**309**	*e*Pg	**Pg**	**16 18 16.3**	**-0.4**
BARS				*e*Sg	**Sg**	**16 18 38.5**	**-0.6**

*NNC **17** 16:32:08.7±4.8, 38°.11N×70°.26E, h0km, mb3.8, mpv4.1, Error ellipse: s-maj=36.8km s-min=34.7km az=21.0*
*IDC **17** 16:32:17.6±1.8, 38°.74N×70°.56E, h0km, mb3.7/5, mb1 3.8/11, mb1mx3.6/30, mbtmp3.7/11, ML3.5/4, Error ellipse: s-maj=28.4km s-min=14.6km az=159.0*
*ISCJB **17** 16:32:24.0±1.0, 39°.10N±0°.06×70°.26E±0°.07, h48km±13km, mb3.7/6, Error ellipse: s-maj=9.8km s-min=9.4km az=35.6*
*NEIC **17** 16:32:25.3±0.9, 39°.11N×70°.26E, h38km±12km, mb4.1/1, Error ellipse: s-maj=13.2km s-min=9.6km az=131.0*

ISC 17 16:32:25.6±0.9, **39°.10N**±0°.06×**70°.25E**±0°.06, **h41**km±11km, **n40**, σ1°**21**/47, **mb3.7**/6, **8C-5D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.01**	**40**	P	**Pn**	**16 33 24.9**	**+0.4**
	SNR=32						
AML	**Almayashu**	**4.01**	**40**	*e*Pn	**Pn**	**16 33 24.6**	**+0.1**
AML				*e*S	**Sn**	**16 34 13.2**	**+3.0**
KK31	**Karatay Array**	**4.01**	**3**	⇑Pn	**Pn**	**16 33 27.1**	**+2.6**
	8.1nm,0.3s,baz=185,slow=12,SNR=75						
KK31				⇑Sn	Sn	16 34 30.8	+21
	34nm,0.4s,baz=183,slow=30,SNR=7.3						
EKS2	**Erkin-Say**	**4.46**	**36**	P	**Pn**	**16 33 31.6**	**+1.0**
	SNR=12						
EKS2	**Erkin-Say**	**4.46**	**36**	*e*P	**Pn**	**16 33 31.4**	**+0.8**
UCH	**Uchtor**	**4.51**	**45**	P	**Pn**	**16 33 31.7**	**+0.4**
	SNR=32						
UCH	**Uchtor**	**4.51**	**45**	*e*P	**Pn**	**16 33 31.6**	**+0.3**
KBL	**Kabul**	**4.65**	**192**	*e*P	**Pn**	**16 33 33.0**	**-0.2**
AAK	**Ala-Archa**	**4.78**	**41**	P	**Pn**	**16 33 36.2**	**+1.1**
	SNR=9.9						
AAK	**Ala-Archa**	**4.78**	**41**	Pn	**Pn**	**16 33 35.4**	**+0.4**
	0.1nm,0.3s,baz=193

KSRS	Korea Array	23.65 323	P	P	16 41 13.8	+0.9
	1.3nm,0.6s,mb3.6,baz=144,slow=9.7,SNR=4.7					
WRAB	Tennant Creek	40.56 196	*e*P	P	16 43 38.8	-1.0
	4.3nm,0.9s,mb4.1					
WRA	Warramunga Arr	40.57 196	P	P	16 43 39.1	-0.9
	4.6nm,0.9s,mb4.1,baz=7.0,slow=8.7,SNR=47					
FITZ	Fitzroy Crossi	42.03 209	P	P	16 43 51.8	-0.1
	1.3nm,0.2s,mb4.1,baz=28,slow=14,SNR=30					
ULN	Ulaanbaatar	42.11 321	*e*P	P	16 43 52.6	+0.3
	1.0nm,0.7s,mb3.5					
SONM	Songino Array	42.49 321	P	P	16 43 56.1	+0.8
	0.9nm,0.4s,mb3.7,baz=134,slow=8.3,SNR=4.3					
CMAR	Chiang Mai Arr	43.93 277	P	P	16 44 08.5	+1.3
	0.7nm,0.8s,mb3.4,baz=75,slow=6.0,SNR=4.3					
ASAR	Alice Springs	44.24 195	P	P	16 44 08.8	-0.7
	0.5nm,0.4s,mb3.5,baz=13,slow=7.0,SNR=33					
ZALV	Zalesovo Beam	57.36 322	P	P	16 45 47.0	-0.1
	1.3nm,0.6s,mb3.9,baz=108,slow=9.2,SNR=5.4					
MKAR	Makanchi Array	57.85 314	P	P	16 45 50.3	-0.5
	0.2nm,0.4s,mb3.3,baz=89,slow=8.6,SNR=5.9					
KURK	Kurchatov	60.63 318	P	P	16 46 10.0	+0.2
	1.0nm,0.4s,mb4.0,baz=92,slow=7.5,SNR=11					
BVAR	Borovoye Array	65.83 320	P	P	16 46 44.0	+0.2
	1.2nm,0.5s,mb4.0,baz=104,slow=8.0,SNR=9.2					
YKA	Yellowknife Ar	77.49 28	P	P	16 47 54.1	+0.8
	0.5nm,0.6s,mb3.3,baz=290,slow=5.9,SNR=3.4					
ARCES	ARCESS Array B	81.79 342	P	P	16 48 16.3	-0.1
	1.0nm,0.6s,mb3.6,baz=72,slow=8.0,SNR=8.5					
NVAR	Mina Array Bea	82.89 52	P	P	16 48 22.8	+0.1
	0.6nm,0.7s,mb3.4,baz=263,slow=5.8,SNR=3.9					
JOF	Joensuu	83.32 335	*e*p	P	16 48 23.1	-1.3
	1.7nm,0.5s,mb4.0					
JOF	Joensuu	83.32 335	*e*p	P	16 48 23.1	-1.3
	1.7nm,0.5s,mb4.0					
FINES	FINESS Array B	86.19 335	P	P	16 48 37.3	-1.5
	1.1nm,0.4s,mb4.0,baz=74,slow=3.4,SNR=16					

ISCJB ***17*** *16:42:35.7±0.6,36°.06N±0°.03×140°.01E±0°.06,h56km±5km, mb3.4/3,Error ellipse: s-maj=7.9km s-min=5.8km az=177.5*
JMA ***17*** *16:42:36.9±0.1,36°.10N×139°.97E,h48km±1km,M3.4 Broadband fault plane solution: P waves. NP1: ϕ_s=256.00000°,δ13.00000°,λ137.00000°. NP2: ϕ_s=29.00000°,δ81.00000°,λ80.00000°. Principal axes: T Plg53.0000°, Azm287.0000°; N Plg10.0000°, Azm30.0000°; P Plg35.0000°, Azm127.0000°;*
JMA Felt II J1.
IDC ***17*** *16:42:36.5±4.2,36°.05N×140°.07E,h48km±31km,mb3.2/3, mb1 3.4/4,mb1mx3.1/25,mbtmp3.4/4,ML3.7/1 Error ellipse: s-maj=50.6km s-min=8.6km az=56.0*

ISC 17 16:42:36.8±0.6,36°.07N±0°.03×139°.99E±0°.06,h48km±6km, n15,σ0°67/26,mb3.4/3,1C-6D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYT	Yasato	0.23	46	⇑P	Pn	16 42 45.2	+0.1
JYT				S	Sn	16 42 50.9	-0.1
JAG	Ashikaga	0.56	310	⇓P	Pn	16 42 48.6	0.0
JAG				S	Sn	16 42 56.4	-0.7
JHU	Hanno	0.61	250	⇓P	Pn	16 42 49.1	-0.2
JHU				S	Sn	16 42 57.6	-0.6
JRY	Ryogami san	0.88	267	⇓P	Pn	16 42 52.7	-0.1
JRY				S	Sn	16 43 04.0	-0.6
JKT	Katashina	0.92	320	⇓P	Pn	16 42 53.1	-0.2
JKT				S	Sn	16 43 05.0	-0.5
JOD2	Odawara 2	1.08	223	P	Pn	16 42 56.6	+1.0
JOD2				S	Sn	16 43 10.1	+0.6
JYN	Shimob	1.30	245	P	Pn	16 43 00.0	+1.4
JFY	Yanaizu	1.36	350	⇓P	Pn	16 42 59.5	+0.2
JFY				S	Sn	16 43 16.1	0.0
JHK	Hiroka	1.41	327	⇓P	Pn	16 43 00.2	+0.1
JHK				S	Sn	16 43 19.5	+2.0
MJAR	Matsushiro Arr	1.51	289	P	Pn	16 43 01.2	-0.2
	26nm,0.3s,baz=93,slow=8.7,SNR=238						
MJAR				S	Sn	16 43 20.8	+0.8
	9.7nm,0.3s,baz=290,slow=16,SNR=13						
MAT	Matsushiro	1.51	289	P	Pn	16 43 00.4	-1.0
MAT				S	Sn	16 43 19.7	-0.3
JHJ	Hachijo jima 2	2.95	183	P	Pn	16 43 21.5	+0.4
	29nm,0.3s,baz=72,slow=6.1,SNR=29						
JHJ				S	Sn	16 43 54.7	-0.5
	19nm,0.3s,baz=62,slow=22,SNR=4.5						
ZALV	Zalesovo Beam	41.73 313	P	P	16 50 20.1	-0.7
	0.6nm,0.5s,mb3.5,baz=99,slow=7.6,SNR=2.8						
WRA	Warramunga Arr	55.96 186	P	P	16 52 09.6	-0.6
	0.2nm,0.3s,mb3.6,baz=0.7,slow=7.7,SNR=11						
ASAR	Alice Springs	59.69 186	P	P	16 52 36.5	+0.2
	0.2nm,0.8s,mb3.2,baz=349,slow=3.9,SNR=3.6						

THR ***17*** *16:53:29.4±0.3,26°.98N×57°.12E,h17km±5km,ML3.7*
IDC ***17*** *16:53:34.0±1.2,27°.30N×56°.56E,h0km,mb3.6/7, mb1 3.7/7,mb1mx3.5/26,mbtmp3.7/7,Error ellipse: s-maj=32.5km s-min=27.0km az=33.0*
TEH ***17*** *16:53:33.7,27°.38N×57°.02E,h5km*
ISCJB ***17*** *16:53:36.6±1.1,27°.43N±0°.08×56°.78E±0°.08,h26km±7km, mb3.6/8,Error ellipse: s-maj=14.7km s-min=10.9km az=38.5*
CSEM ***17*** *16:53:37.5±0.6,27°.43N×56°.69E,h20km,mb3.3/1,Error ellipse: s-maj=21.8km s-min=13.8km az=169.0*
NEIC ***17*** *16:53:38.1±2.3,27°.43N×56°.64E,h26km±16km,mb3.3/1, ML3.7(THR),Error ellipse: s-maj=19.6km s-min=15.4km az=125.0*

ISC 17 16:53:36.7±1.2,27°.41N±0°.08×56°.82E±0°.07,h17km±7km, n29,σ1°05/35,mb3.6/8,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBND	Bandar-abas	0.25	280	*e*Pg	Pg	16 53 41.9	-0.4
IBND				*e*Sg	Sg	16 53 47.2	+1.1
IBND				*e*		16 53 55.7	
	comp=Z,60μm,0.2s						
BNDS	Bandar-Abbas	0.58	269	*e*Pg	Pg	16 53 47.0	-1.1
BNDS	Bandar-Abbas	0.58	269	*e*Pg	Pg	16 53 47.2	-0.9
BNDS				AML	AML	16 54 00.4	
	comp=N,2μm,0.6s						
BNDS	Bandar-Abbas	0.58	269	*e*Pg	Pg	16 53 47.2	-0.9
KRBR	Kerman	2.57	359	*e*Pn	Pn	16 54 18.0	+0.5
KRBR	Kerman	2.57	359	*e*Pn	Pn	16 54 18.6	+1.1
KRBR				AML	AML	16 54 54.5	
	comp=E,300nm,0.5s						
KRBR				AML	AML	16 54 55.1	
	comp=N,453nm,0.7s						
KRBR	Kerman	2.57	359	*e*Pn	Pn	16 54 18.6	+1.1
GHIR	Ghir-Karzin	3.50	285	*e*Pn	Pn	16 54 30.0	-0.4
GHIR				*e*Sg	Sg	16 55 29.0	-0.3
GHIR	Ghir-Karzin	3.50	285	*e*Pn	Pn	16 54 30.6	+0.2
GHIR				*e*Sg	Sg	16 55 30.3	+1.0
GHIR				AML	AML	16 55 42.6	
	comp=N,59nm,0.6s						
GHIR	Ghir-Karzin	3.50	285	*e*Pn	Pn	16 54 30.0	-0.4
GHIR				*e*Sg	Sg	16 55 29.0	-0.3
ISRV	Sarvestan	3.81	302	*e*Pn	Pn	16 54 35.2	+0.5
ISRV				*e*Sn	Sn	16 55 20.8	+1.7
IMOK	Mouk	3.97	295	*e*Pn	Pn	16 54 37.1	+0.2
IMOK				*e*		16 55 54.2	
	comp=Z,623nm,0.3s						
IMEH	Mehriz	4.41	335	*e*Pn	Pn	16 54 42.2	-0.7
IMEH				*e*Sn	Sn	16 55 33.1	-0.8
IMEH				*e*		16 56 10.7	
	comp=Z,242nm,0.3s						
ABKAR	Akbulak array	21.95	5	*e*P	P	16 58 27.6	-1.8
	comp=Z,0.7nm,0.6s,mb3.3						
ABKAR	Akbulak array	21.95	5	*e*P	P	16 58 27.6	-1.8
	comp=Z,0.7nm,0.6s,mb3.3						
BRTR	Keskin Array B	22.82	308	P	P	16 58 37.0	-1.7
	comp=Z,1.5nm,0.9s,mb3.4,baz=125,slow=11,SNR=8.6						
BRTR	Keskin Array B	22.82	308	P	P	16 58 37.0	-1.7
AKTK	Aktyubinsk	23.01	2	P	P	16 58 40.5	-0.1
AKTK	Aktyubinsk	23.01	2	P	P	16 58 40.5	-0.2
AKTO	Aktyubinsk	23.01	2	P	P	16 58 40.5	-0.1
	comp=Z,1.3nm,0.7s,mb3.5,baz=181,slow=7.8,SNR=5.4						
ZALV	Zalesovo Beam	33.56	30	P	P	17 00 18.1	+2.5
	comp=Z,0.4nm,0.3s,mb3.8,baz=236,slow=10,SNR=2.0						
FINES	FINESS Array B	39.76	337	P	P	17 01 08.9	+0.6
	comp=Z,1.2nm,0.7s,mb3.7,baz=123,slow=10,SNR=3.3						
FINES	FINESS Array B	39.76	337	P	P	17 01 08.9	+0.6
TORD	Torodi Ar. Bea	53.23	266	P	P	17 02 52.9	-1.7
	comp=Z,0.7nm,0.7s,mb3.7,baz=71,slow=7.4,SNR=6.1						
TORD	Torodi Ar. Bea	53.23	266	P	P	17 02 52.9	-1.7
WRA	Warramunga Arr	88.54	113	P	P	17 06 29.6	+0.7
	comp=Z,0.7nm,1.0s,mb4.0,baz=319,slow=3.8,SNR=4.5						
WRA	Warramunga Arr	88.54	113	P	P	17 06 29.6	+0.7
ASAR	Alice Springs	90.03	117	P	P	17 06 36.5	+0.7
	comp=Z,0.2nm,0.9s,mb3.5,baz=310,slow=5.3,SNR=3.2						
ASAR	Alice Springs	90.03	117	P	P	17 06 36.5	+0.7

IDC ***17*** *17:03:35.1±2.0,13°.05N×51°.31E,h0km,mb3.7/7, mb1 3.8/8,mb1mx3.6/26,mbtmp3.7/8,ML4.2/1,MS3.0/3, Ms1 3.0/3,ms1mx2.7/32,Error ellipse: s-maj=57.6km s-min=21.4km az=161.0*
NEIC ***17*** *17:03:36.5±1.2,13°.09N×51°.28E,h10km,mb4.2/1,Error ellipse: s-maj=35.4km s-min=10.6km az=156.0*
CSEM ***17*** *17:03:37.3±0.5,13°.22N×51°.24E,h10km,mb4.2/1,Error ellipse: s-maj=26.4km s-min=10.5km az=166.0*
ISCJB ***17*** *17:03:38.2±4.5,13°.2N±0°.1×51°.17E±0°.08,h30km±35km, mb3.7/8,MS3.0/2,Error ellipse: s-maj=23.9km s-min=13.0km az=5.3*

ISC 17 17:03:40.2±4.7,13°.3N±0°.2×51°.17E±0°.08,h27km±37km, n25,σ0°98/24,mb3.7/8,MS3.0/2,1C,Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MUKL	Al Mukalla	2.37	299	*i*P	Pn	17 04 17.3	+0.1
MUKL				*e*		17 04 17.6	
	baz=66,slow=1.3						
MUKL				*i*S	Sn	17 04 44.3	-1.1
MUKL				AML	AML	17 04 45.2	
	comp=N,343nm,0.3s						
LBOS		5.78	276	⇑*i*P	Pn	17 05 05.5	+1.3
LBOS				*e*		17 05 05.9	
	baz=195,slow=9.3						
ATD	Arta Tunnel	8.32	259	Pn	Pn	17 05 37.9	-1.2
	comp=N,3.2nm,0.3s,baz=60,slow=20,SNR=8.5						
ATD				LR	LR	17 08 04.6	
	comp=N,44nm,20.0s,baz=177,slow=32						
ATD	Arta Tunnel	8.32	259	Pn	Pn	17 05 37.9	-1.2
ASF	Jabal al Asfar	22.87	327	LR	LR	17 17 07.2	
	comp=N,40nm,19.2s,MS2.9,baz=299,slow=35						
GNI	Garni	27.31	349	LR	LR	17 22 37.2	
	comp=N,65nm,19.1s,MS3.2,baz=264,slow=41						
MK31	Makanchi Array	42.36	32	*e*P	P	17 11 32.4	+0.4
MK31	Makanchi Array	42.36	32	*e*P	P	17 11 32.4	+0.4
MKAR	Makanchi Array	42.36	32	P	P	17 11 32.5	+0.5
	comp=N,0.5nm,0.4s,mb3.5,baz=225,slow=8.9,SNR=4.7						
MKAR	Makanchi Array	42.36	32	P	P	17 11 32.5	+0.5
BRVK	Borovoye	42.46	17	*e*P	P	17 11 31.9	-0.8
	comp=N,3.7nm,0.8s,mb4.1						
BRVK	Borovoye	42.46	17	*e*P	P	17 11 31.9	-0.8
	comp=N,3.7nm,0.8s,mb4.1						
BVAR	Borovoye Array	42.46	17	P	P	17 11 34.0	+1.4
	comp=N,0.5nm,0.7s,mb3.2,baz=270,slow=7.2,SNR=4.1						
BVAR	Borovoye Array	42.46	17	P	P	17 11 34.0	+1.3
KURK	Kurchatov	43.46	25	P	P	17 11 40.4	-0.4
	comp=N,0.3nm,0.7s,mb3.2,baz=224,slow=8.6,SNR=3.7						
KURK	Kurchatov	43.46	25	P	P	17 11 40.3	-0.5
CMAR	Chiang Mai Arr	46.13	77	P	P	17 12 01.4	-1.2
	comp=N,0.7nm,0.8s,mb3.7,baz=276,slow=9.5,SNR=4.6						
CMAR	Chiang Mai Arr	46.13	77	P	P	17 12 01.4	-1.2
TOA0	Torodi Ar. Sit	48.09	276	*e*P	P	17 12 18.2	+0.2
TOA0	Torodi Ar. Sit	48.09	276	*e*P	P	17 12 18.2	+0.2
TORD	Torodi Ar. Bea	48.09	276	P	P	17 12 18.0	0.0
	comp=N,2.4nm,0.7s,mb4.3,baz=86,slow=7.4,SNR=13						
TORD	Torodi Ar. Bea	48.09	276	P	P	17 12 18.0	0.0
ZALV	Zalesovo Beam	48.42	26	P	P	17 12 18.9	-0.9
	comp=N,0.5nm,0.6s,mb3.7,baz=224,slow=7.3,SNR=5.0						
ESDC	Sonseca Array	54.89	309	P	P	17 13 10.6	+2.1
	comp=N,0.2nm,0.3s,mb3.7,baz=91,slow=6.8,SNR=2.1						
ESDC	Sonseca Array	54.89	309	P	P	17 13 10.6	+2.1

IDC ***17*** *17:05:21.0±0.6,12°.16S×117°.31E,h0km,mb4.3/18, mb1 4.5/21,mb1mx4.4/26,mbtmp4.4/21,ML5.0/4,MS3.9/5, Ms1 3.9/5,ms1mx3.3/34,Error ellipse: s-maj=19.5km s-min=13.6km az=69.0*
NEIC ***17*** *17:05:22.0±0.3,12°.14S×117°.38E,h10km,mb4.8/28,Error ellipse: s-maj=9.9km s-min=5.2km az=54.0*
ISCJB ***17*** *17:05:23.0±0.3,12°.31S±0°.03×117°.29E±0°.03,h33km, mb4.6/43,MS4.1/4,Error ellipse: s-maj=5.7km s-min=3.8km az=135.2*
DJA ***17*** *17:05:25,12°.36S×117°.22E,h39km,Mw5.5/19*

ISC 17 17:05:21.7±1.6,12°.34S±0°.03×117°.26E±0°.04,h6km±11km, n132,σ1°30/144,mb4.6/43,MS4.1/4,1C,South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	Waingapu	4.00	49	P	Pn	17 06 23.1	-0.4
IGBI	Denpasar	4.07	329	P	Pn	17 06 23.0	-1.5
DNP	Denpasar	4.16	331	P	Pn	17 06 25.5	-0.2
KHKI	Kahang-Kahang	4.27	338	P	Pn	17 06 27.0	-0.3
SRBI	Singaraja	4.68	334	P	Pn	17 06 33.2	+0.3
NBBI	Negara	4.72	326	P	Pn	17 06 32.9	-0.6
BYJI	Banyuwangi	5.00	325	P	Pn	17 06 36.5	-0.8
ABJI	Asem Bagus	5.41	326	P	Pn	17 06 42.5	-0.4
	5.7nm1μm,0.9s						
GMJI	Gumukmas	5.51	317	P	Pn	17 06 42.5	-1.9
	4.4nm647nm,0.6s						
MMRI	Maumere	6.13	54	P	Pn	17 06 51.7	-1.1
	3.6nm454nm,0.6s						
KMMI	Kalianget	6.18	328	P	Pn	17 06 53.9	+0.4
	1.4nm442nm,0.7s						
KRKI	Karangkates	6.30	311	P	Pn	17 06 53.7	-1.4
PWJI	Pagerwojo	6.87	308	P	Pn	17 07 02.3	-0.7
	5.2nm458nm,0.6s						
SJI	Sawahan	7.08	310	P	Pn	17 07 05.9	0.0
	4.4nm474nm,0.7s						
GRJI	Gresik	7.16	318	P	Pn	17 07 05.4	-1.6
	1.6nm209nm,0.7s						
PCJI	Pacitan	7.26	304	P	Pn	17 07 09.0	+0.6
BKSI	Bulukumba	7.53	22	P	Pn	17 07 13.0	+1.0
	2.3nm6μm376nm,0.6s						
NGJI	Ngawi	7.55	310	P	Pn	17 07 14.2	+1.8
	1.8nm267nm,0.9s						
KAPI	Kappang	7.69	19	Pn	Pn	17 07 13.7	-0.5
	25nm,0.3s,baz=208,slow=8.6,SNR=44						
KAPI				Sn	Sn	17 08 30.8	-11
	90nm,0.3s,baz=334,slow=22,SNR=32						
KAPI				LR	LR	17 11 00.8	
	comp=Z,163nm,18.5s,baz=165,slow=45						
KAPI	Kappang	7.69	19	Pn	Pn	17 07 13.7	-0.6
KAPI				Sn	Sn	17 08 30.8	-11
KAPI				LR	LR	17 11 00.8	
UGM	Wanagama	7.96	303	P	Pn	17 07 17.4	-0.5
	5.1nm421nm,0.7s						
BNSI	Bone	8.38	20	P	Pn	17 07 26.1	+2.4
	2μm221nm,0.7s						
SMRI	Semarang	8.53	307	P	Pn	17 07 25.7	-0.1
	370nm,0.8s						
SPSI	Sidrap Palu	8.69	17	P	Pn	17 07 29.4	+1.5
	931nm102nm,0.7s						
KBKI	Kotabaru	9.05	353	P	Pn	17 07 33.8	+0.9
	2μm177nm,0.7s						
MBWA	Marble Bar	9.08	165	*e*P	Pn	17 07 32.8	-0.6
MBWA				*e*S	Sn	17 09 06.0	-10
MBWA	Marble Bar	9.08	165	*e*Pn	Pn	17 07 32.9	-0.5
	213nm,0.3s						
MBWA				*e*Sn	Sn	17 08 58.6	-17
MBWA	Marble Bar	9.08	165	P	Pn	17 07 33.1	-0.3
	209nm,0.6s						
TTSI	Tana Toraja	9.58	16	P	Pn	17 07 42.8	+2.6
KDI	Kendari	9.88	33	P	Pn	17 07 45.4	+1.1
	36nm,1.3s						
FITZ	Fitzroy Crossi	9.91	126	*e*P	Pn	17 07 42.9	-1.8
	121nm,0.3s						
FITZ				*e*S	Sn	17 09 26.3	-10
FITZ	Fitzroy Crossi	9.91	126	Pn	Pn	17 07 43.8	-0.9
	28nm,0.3s,baz=298,slow=7.6,SNR=200						
FITZ				Sn	Sn	17 09 29.0	-7.3
	29nm,0.3s,baz=212,slow=20,SNR=12						
FITZ	Fitzroy Crossi	9.91	126	P	Pn	17 07 44.2	-0.5
	182nm,0.6s						
LEM	Lembang	10.97	299	P	Pn	17 07 59.3	0.0
	77nm,1.0s						
KNA	Kununurra	11.67	108	P	Pn	17 08 07.9	-0.9
	2μm244nm,0.7s						
NLAI	Namlea	13.29	48	P	Pn	17 08 32.2	+1.1
	684nm65nm,1.1s						
TPI	Tanjungpandan	13.46	314	P	Pn	17 08 34.2	+0.9
	28nm,1.1s						
MRSI	Marisa	13.56	20	P	Pn	17 08 43.2	+8.5
STKI	Sintang	13.60	335	P	Pn	17 08 36.0	+0.8
	4μm155nm,1.0s						
MEEK	Meekatharra	14.28	175	⇑*i*P	Pn	17 08 43.7	-0.8
KAKA	Kakadu	14.83	93	*e*P	Pn	17 08 51.7	-0.3
	33nm,0.5s						
KAKA				*e*S	Sn	17 11 26.3	-10
KAKA	Kakadu	14.83	93	*e*Pn	Pn	17 08 50.3	-1.7
	107nm,0.6s						
KAKA				*e*Sn	Sn	17 11 25.7	-11
KAKA	Kakadu	14.83	93	P	Pn	17 08 52.2	+0.2
	815nm97nm,0.7s						
MDSI	Maura Dua	15.10	300	P	Pn	17 08 55.2	-0.6
	20nm,1.0s						
KSM	Kuching	15.36	333	P	Pn	17 09 05.8	+6.6
KSM	Kuching	15.36	333	*e*Pn	Pn	17 08 57.1	-2.1
	18nm,0.9s						
KSM	Kuching	15.36	333	P	Pn	17 08 57.7	-1.5
	20nm,1.0s						
SBUM	Sibu	15.52	341	P	Pn	17 09 07.1	+5.8
SBUM	Sibu	15.52	341	P	Pn	17 09 01.9	+0.6
	868nm89nm,1.0s						
BTM	Bintulu	15.99	345	P	Pn	17 09 12.1	+4.7
TLE	Tual	16.67	68	P	Pn	17 09 12.2	-3.9
MYLDM	Lahad Datu	17.45	4	P	Px	17 09 36.9	
MYLDM	Lahad Datu	17.45	4	P	Pn	17 09 29.1	+3.2
SDKM	Sandakan	17.86	360	P	Pn	17 09 33.2	+2.2
WRA	Warramunga Arr	18.05	117	Pn	Pn	17 09 32.3	-1.1
	4.3nm,0.3s,baz=293,slow=15,SNR=218						
WRA				Sn	Sn	17 12 37.7	-17
	6.0nm,0.3s,baz=292,slow=22,SNR=9.9						
WRAB	Tennant Creek	18.06	117	*e*Pn	Pn	17 09 31.7	-1.7
	6μm,0.6s						
WRAB	Tennant Creek	18.06	117	P	Pn	17 09 31.9	-1.5
	64nm,0.7s						
KKM	Kota Kinabalu	18.29	357	P	Pn	17 09 38.7	+2.4
KKM	Kota Kinabalu	18.29	357	*e*Pn	Pn	17 09 33.8	-2.4
	43nm,0.8s						
KKM				*e*Sn	Sn	17 13 04.2	+3.3
KKM	Kota Kinabalu	18.29	357	P	Pn	17 09 34.7	-1.6
	482nm50nm,0.9s						
KDM	Kudat	19.14	359	P	Pn	17 09 47.6	+1.1
KLBR	Kellerberrin	19.16	179	*e*P	Pn	17 09 46.5	-0.2
	57nm,0.4s						
KLBR				*e*S	Sn	17 12 58.9	-23
MYKOM	Kota Tinggi	19.35	316	P	Pn	17 09 50.1	+0.9
MYKOM	Kota Tinggi	19.35	316	P	Pn	17 09 47.7	-1.4
	45nm,1.0s						
SDSI	Sungai Dareh	19.36	305	P	Pn	17 09 49.0	-0.3
ASAR	Alice Springs	19.41	128	P	Pn	17 09 50.5	+0.8
	2.4nm,0.3s,baz=306,slow=11,SNR=96						
ASAR				S	Sn	17 13 14.0	-14
	3.4nm,0.3s,baz=302,slow=24,SNR=10.0						
KGM	Kluang	19.88	315	P	Pn	17 09 55.8	+0.3
NWAO	Narrogin (SRO)	20.49	180	P	P	17 10 03.0	+2.6
	82nm,0.4s,baz=2.2,slow=13,SNR=64						
NWAO				S	S	17 13 34.9	-15
	99nm,0.5s,baz=281,slow=17,SNR=11						
NWAO	Narrogin (SRO)	20.49	180	P	P	17 10 03.0	+2.6
NWAO				*e*S	S	17 13 31.2	-19
NWAO				S	S	17 13 34.9	-15
FORT	Forrest	20.89	153	*e*P	P	17 10 07.0	+2.3
	118nm,0.6s						
FORT				*e*S	S	17 13 44.6	-13
FORT	Forrest	20.89	153	*e*P	P	17 10 07.0	+2.3
	116nm,0.6s						
FORT				*e*S	S	17 13 45.9	-12
FRIM	Kepong	21.93	314	P	P	17 10 17.7	+1.7
KTGM	Kuala Trenggan	22.48	321	P	P	17 10 23.6	+1.7
IPM	Ipoh	23.23	315	P	P	17 10 30.8	+1.0
PSI	Prapat	23.62	308	P	P	17 10 33.4	-0.6
	3.5nm,0.4s,mb4.1,baz=156,slow=10.0,SNR=4.2						
PSI				LR	LR	17 19 58.9	
	comp=Z,500nm,18.8s,MS4.0,baz=270,slow=37						
KULM	Kulim	24.07	316	P	P	17 10 40.0	+1.9
KULM	Kulim	24.07	316	*e*P	P	17 10 37.3	-0.8
	43nm,0.8s,mb4.9						
TGY	Tagaytay City	26.52	8	P	P	17 10 59.3	-1.0
	95nm,0.3s,baz=147,slow=23,SNR=4.5						
CTA	Charters Tower	28.86	109	LR	LR	17 21 38.5	
	comp=Z,186nm,20.3s,MS3.7,baz=283,slow=34						
CTAO	Charters Tower	28.86	109	P	P	17 11 21.0	-0.2
	12nm,0.9s,mb4.6						
STKA	Stephens Creek	29.65	135	*e*P	P	17 11 29.7	+1.6
	12nm,0.9s,mb4.6						
STKA				*e*		17 11 58.5	
STKA	Stephens Creek	29.65	135	P	P	17 11 29.9	+1.8
	14nm,0.7s,mb4.8,baz=305,slow=8.4,SNR=21						
STKA				LR	LR	17 24 28.7	
	comp=Z,203nm,18.1s,MS3.8,baz=200,slow=39						
STKA	Stephens Creek	29.65	135	*e*P	P	17 11 29.5	+1.5
	3.7nm,0.8s,mb4.2						
STKA				LR	LR	17 24 28.7	
CM31	Chiang Mai Arr	35.54	329	*e*P	P	17 12 18.6	-1.1
	3.2nm,0.6s,mb4.4						
CMAR	Chiang Mai Arr	35.54	329	P	P	17 12 20.1	+0.4
	0.7nm,0.5s,mb3.8,baz=160,slow=6.4,SNR=12						
CHTO	Chiang Mai	35.84	329	*e*P	P	17 12 19.6	-2.7
	6.7nm,1.1s,mb4.5						
KMI	Kunming	39.84	339	P	P	17 13 03.3	+7.3
KMI				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb

BRVK	**Borovoye**	**76.52**	**333**	P	**P**	**17 17 14.2**	**+1.8**
ABKAR	**Akbulak array**	**79.32**	**326**	*e*P	**P**	**17 17 27.4**	**-0.7**
comp=Z,4.2nm,0.8s,mb4.4							
KMBO	**Kilima Mbogo**	**80.00**	**271**	P	**P**	**17 17 34.5**	**+1.9**
comp=Z,2.6nm,0.7s,mb4.3,baz=76,slow=7.0,SNR=6.6							
KMBO	**Kilima Mbogo**	**80.00**	**271**	*e*P	**P**	**17 17 34.4**	**+1.7**
comp=Z,3.5nm,0.8s,mb4.3							
AKTK	**Aktyubinsk**	**81.01**	**326**	P	**P**	**17 17 36.6**	**-0.5**
AKTO	**Aktyubinsk**	**81.01**	**326**	P	**P**	**17 17 36.6**	**-0.5**
comp=Z,1.4nm,0.8s,mb4.0,baz=121,slow=7.1,SNR=5.1							
TIXI	**Tiksi**	**84.16**	**4**	*e*P	**P**	**17 17 51.5**	**-1.7**
comp=Z,32nm,1.9s,mb5.1							
BOSA	**Boshof**	**85.92**	**242**	P	**P**	**17 18 03.8**	**+0.7**
comp=Z,2.8nm,0.7s,mb4.6,baz=78,slow=9.3,SNR=8.7							
LSZ	**Lusaka**	**85.93**	**255**	P	**P**	**17 18 04.6**	**+1.3**
comp=Z,2.7nm,0.5s,mb4.7,baz=84,slow=5.1,SNR=8.3							
LBTB	**Lobatse**	**86.35**	**245**	P	**P**	**17 18 05.9**	**+0.6**
comp=Z,5.9nm,0.8s,mb4.9,baz=116,slow=9.0,SNR=5.5							
BRTR	**Keskin Array B**	**92.95**	**310**	P	**P**	**17 18 34.6**	**-1.3**
comp=Z,1.2nm,0.9s,mb4.3,baz=124,slow=6.7,SNR=6.2							
BRTR				LR	LR	18 04 34.0	
comp=Z,289nm,18.1s,MS4.8,baz=196,slow=38							
TORD	**Torodi Ar. Bea**	**117.31**	**279**	PKP	PKPdf	17 24 08.5	-0.5
comp=Z,0.7nm,0.6s,baz=82,slow=1.9,SNR=4.3							
LPAZ	**La Paz**	**151.06**	**169**	PKPbc	PKPbc	17 25 19.1	+2.4
comp=Z,1.1nm,0.7s,baz=120,slow=2.3,SNR=5.6							

ISCJB ***17*** *17:26:10.8±0.1, 54°.07N±0°.02×127°.99E±0°.03, h10km, mb4.7/141, MS4.8/46, Error ellipse: s-maj=2.8km s-min=2.5km az=161.7*

SKHL ***17*** *17:26:11.9±1.0, 54°.00N×127°.99E, h16km±6km, mb5.7/1, mbh5.8/1, Ms5.4/8, msh5.8/3, (5.3)/8*

SKHL Felt (IV-V) at Zea, (IV) at Gorny, Ovsyanka, Kirovsky, Bomnak, Oktyabrsky.

NEIC ***17*** *17:26:11.7±0.2, 53°.97N×127°.99E, h10km, mb4.9/90, MS4.8/4, Error ellipse: s-maj=5.8km s-min=4.2km az=162.0*

MOS ***17*** *17:26:11.5±2.5, 53°.98N×128°.12E, h10km, mb4.9/54, MS4.6/42, Error ellipse: s-maj=7.4km s-min=4.2km az=106.8*

MOS Felt (IV) at Zeya.

IDC ***17*** *17:26:12.8±0.6, 53°.93N×128°.01E, h17km±3km, mb3.9/23, mb1 4.1/28, mb1mx4.0/34, mbtmp3.9/28, ML3.9/4, MS4.3/15, Ms1 4.3/15, ms1mx4.0/48, Error ellipse: s-maj=12.7km s-min=11.3km az=34.0*

BJI ***17*** *17:26:14.7, 53°.60N×127°.96E, h10km, mB4.9/23, mb4.7/34, ML5.5/6, Ms5.3/36, Ms7 5.0/34*

GCMT ***17*** *17:26:14.4±0.2, 53°.99N×127°.94E, h25km, MW5.1, Moment Tensor Solution. s47,c74; s72,c140; Moment tensor: Scale 10^{16}Nm; M_{rr}0.01±.14; $M_{\theta\theta}$3.71±.12; $M_{\phi\phi}$-3.72±.13; $M_{r\theta}$-0.49±.25; $M_{\theta\phi}$4.88±.11; $M_{\phi r}$-0.92±.27; Best double couple: $M_0$6.20000×10^{16} NP1:ϕ_s289.00000°, δ80.00000°, λ1.00000°. NP2:ϕ_s199.00000°, δ89.00000°, λ170.00000°. Principal axes: T 6.2400, Plg8.0000°, Azm153.0000°; N -0.0500, Plg80.0000°, Azm10.0000°; P -6.2000, Plg6.0000°, Azm244.0000°; Data Used: II IC G IU CN.*

SZGRF ***17*** *17:26:26.9, 54°.87N×127°.12E, h33km, mb4.9, MS4.8, Southeastern Siberia, Russia*

ISC 17 17:26:12.6±0.1, 54°.08N±0°.02×128°.01E±0°.03, h10km, (h19km±.7km:pP-P), n397, σ1§25/440, mb4.6/141, MS4.8/46, 32C-20D, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZEA	**Zeya**	**0.57**	**233**	⇓*i*Pg	**Pg**	**17 26 21.5**	**-2.0**
ZEA				*e*Sg	**Sg**	**17 26 28.0**	**-2.9**
KROS	**Kirovskiy**	**0.70**	**300**	⇑*i*Pg	**Pg**	**17 26 25.3**	**-0.9**
KROS				AMB	AMB	17 26 25.6	
440nm,0.2s							
KROS				*e*Sg	**Sg**	**17 26 32.9**	**-2.5**
BMKR	**Bomnak**	**0.80**	**37**	*i* Pg	**Pg**	**17 26 28.2**	**+0.3**
CLNS	**Chul'man**	**3.28**	**329**	*e*P	**Pn**	**17 27 04.7**	**+0.7**
CLNS				*e*S	**Sn**	**17 27 41.8**	**-1.2**
CLNS				pmax	pmax		
comp=Z,138nm,0.3s							
CLNS				pmax	pmax		
comp=N,96nm,0.3s							
CLNS				pmax	pmax		
comp=E,60nm,0.3s							
CLNS				smax			
comp=N,1μm,0.4s							
CLNS				smax			
comp=E,2μm,0.5s							
CLNS				smax			
comp=Z,883nm,0.4s							
CLNS	**Chul'man**	**3.28**	**329**	*e*Pn	**Pn**	**17 27 04.7**	**+0.7**
CLNS				*e*Pg	**Pg**	**17 27 12.7**	**-2.7**
CLNS				AMB	AMB	17 27 14.6	
comp=Z,2μm,0.4s							
CLNS				AMB	AMB	17 27 14.6	
comp=Z,2μm,0.4s							
CLNS				AMB	AMB	17 27 14.6	
comp=Z,3μm,0.4s							
CLNS				*e*Sn	**Sn**	**17 27 41.8**	**-1.2**
CLNS				*e*Sg	**Sg**	**17 27 55.2**	**-2.7**
CLNS				A		17 28 04.6	
comp=Z,7μm,0.6s							
CLNS				A		17 28 04.6	
comp=Z,7μm,0.6s							
CLNS				A		17 28 04.6	
comp=Z,7μm,0.6s							
TUP	**Tupik**	**4.74**	**277**	*e*Pn	**Pn**	**17 27 23.0**	**-1.0**
TUP				*e*Pg	**Pb**	**17 27 36.9**	**+1.3**
TUP				AMB	AMB	17 27 51.0	
comp=Z,1μm,0.7s							
TUP				*e*Sg	**Sg**	**17 28 38.7**	**-5.8**
TUP				A		17 28 43.9	
comp=Z,64μm,1.5s							
KLR	**Kul'dur**	**5.39**	**153**	⇓*i*P	**Pn**	**17 27 27.3**	**-5.6**
KLR				*e*		17 28 38.5	
KLR				MLR	MLR		
comp=N,11μm,11.5s							
KLR				MLR	MLR		
comp=Z,23μm,11.5s							
KLR	**Kul'dur**	**5.39**	**153**	⇓*i*Pn	**Pn**	**17 27 27.3**	**-5.6**
KLR				*e*rx	rx	17 28 38.5	
KLR				AMS	AMS	17 29 23.5	
comp=Z,11μm,12.0s							
KLR				AMS	AMS	17 29 23.5	
comp=Z,23μm,12.0s							
GRNR	**Gornyy**	**6.12**	**119**	*e*Pn	**Pn**	**17 27 42.4**	**-0.6**
GRNR				pP		17 27 46.7	
GRNR				sP		17 27 49.2	
GRNR				*e*Pg	**Pb**	**17 28 00.8**	**+1.6**
GRNR				AMB	AMB	17 28 03.1	
comp=Z,150nm,0.6s							
GRNR				*e*Sn	**Sn**	**17 28 50.0**	**-3.0**
GRNR				*e*Sg	**Sg**	**17 29 21.1**	**-7.8**
GRNR				A		17 29 22.9	
comp=Z,550nm,0.6s							
GRNR				A		17 29 22.9	
comp=Z,450nm,0.6s							
HIA	**Hailar**	**7.04**	**230**	*e*P	**Pn**	**17 27 51.6**	**-4.1**
HIA				pmax	pmax		
comp=Z,343nm,0.9s							
HIA	**Hailar**	**7.04**	**230**	*e*Pn	**Pn**	**17 27 51.5**	**-4.1**
comp=Z,343nm,0.9s							
HABR	**Khabarovsk**	**7.14**	**139**	*d i*P	**Pn**	**17 27 56.1**	**-0.9**
HABR				*e*		17 29 18.4	
HABR				pmax	pmax		
comp=E,25nm,0.7s							
HABR				pmax	pmax		
comp=Z,31nm,0.5s							
HABR				pmax	pmax		
comp=N,20nm,0.8s							
HABR				smax			
comp=E,324nm,0.4s							
HABR				MLR	MLR		
comp=Z,5μm,9.0s							
HABR	**Khabarovsk**	**7.14**	**139**	*i* Pn	**Pn**	**17 27 56.2**	**-0.8**
HABR				sP		17 28 03.8	
HABR				*e*Pg	**Pg**	**17 28 23.3**	**-5.9**
HABR				*e*Sg	**Sg**	**17 29 52.9**	**-8.7**
HABR				AMS	AMS	17 30 39.1	
comp=Z,5μm,9.0s							
NKL	**Nikolayevsk**	**7.60**	**92**	⇑*e*Pn	**Pn**	**17 27 56.7**	**-6.5**
NKL				AMB	AMB	17 27 57.9	
comp=Z,35nm,0.4s							
NKL				AMB	AMB	17 27 57.9	
comp=Z,50nm,0.4s							
NKL				*e*Sn	**Sn**	**17 29 28.0**	**-1.2**
NKL				*i* Sg	**Sg**	**17 30 08.0**	**-8.1**
NKL				A		17 30 29.0	
comp=Z,2μm,0.9s							
NKL				A		17 30 29.0	
comp=Z,2μm,0.9s							
NKL				AMS	AMS	17 31 06.0	
comp=Z,9μm,6.0s							
NKL				AMS	AMS	17 31 06.0	
comp=Z,10μm,6.0s							
NKL				AMS	AMS	17 31 06.0	
comp=Z,11μm,6.0s							
YAK	**Yakutsk**	**8.02**	**6**	*e*P	**Pn**	**17 28 08.6**	**-0.4**
YAK				*e*		17 29 37.0	
YAK				pmax	pmax		
comp=E,2.0nm,0.3s							
YAK				pmax	pmax		
comp=Z,19nm,0.3s							
YAK				pmax	pmax		
comp=N,8.0nm,0.4s							
YAK				smax			
comp=N,193nm,0.7s							
YAK				smax			
comp=E,493nm,1.4s							
YAK				smax			
comp=N,7μm,1.1s							
YAK				smax			
comp=E,22μm,1.4s							
YAK				smax			
comp=Z,751nm,8.4s							
YAK	**Yakutsk**	**8.02**	**6**	*e*Pn	**Pn**	**17 28 08.5**	**-0.5**
comp=Z,244nm,0.6s							
YAK				*e*S	Sn	17 30 15.8	+36
YAK	**Yakutsk**	**8.02**	**6**	*e*P	**Pn**	**17 28 08.5**	**-0.5**
OKH	**Okha**	**8.85**	**87**	*e*Pn	**Pn**	**17 28 21.0**	**+0.6**
OKH				*e*Sg	Sn	17 30 48.5	+48
OKH				AMS	AMS	17 33 48.0	
comp=Z,11μm,6.0s							
OKH				AMS	AMS	17 33 48.0	
comp=Z,7μm,6.0s							
OKH				AMS	AMS	17 33 48.0	
comp=Z,4μm,6.0s							
TYV	**Tymovskoe**	**9.50**	**104**	*e*P	**Pn**	**17 28 33.6**	**+4.3**
TYV				AMB	AMB	17 28 36.0	
comp=Z,30nm,1.0s							
MDJ	**Mudanjiang**	**9.53**	**173**	P	**Pn**	**17 28 28.0**	**-1.7**
MDJ				S	**Sn**	**17 30 17.3**	**+0.5**
MDJ				PcP	PcP	17 34 45.6	-0.7
MDJ				ScP	ScP	17 38 17.6	-0.6
MDJ				PcS	PcS	17 38 19.5	0.0
MDJ				ScS	ScS	17 41 52.0	-0.5
MDJ				pmax	pmax		
comp=Z,61nm,0.7s							
MDJ				LR	LR		
comp=N,3μm,4.9s							
MDJ				LR	LR		
comp=E,20μm,6.3s							
MDJ				LR	LR		
comp=Z,7μm,8.0s							
MDJ	**Mudanjiang**	**9.53**	**173**	*e*Pn	**Pn**	**17 28 26.4**	**-3.3**
comp=Z,123nm,0.8s							
MDJ				*e*Sn	**Sn**	**17 30 18.3**	**+1.5**
UGL	**Uglegorsk**	**10.08**	**114**	*e*P	**Pn**	**17 28 41.0**	**+3.8**
UGL				*e*S	**Sn**	**17 30 40.0**	**+10**
UGL				*e*Sg	Sn	17 31 26.0	+56
CN2	**Changchun**	**10.43**	**190**	*e*P	**Pn**	**17 28 43.8**	**+1.8**
CN2				*es*P		17 28 49.1	
CN2				*e*S	**Sn**	**17 30 41.4**	**+2.7**
CN2				pmax	pmax		
comp=Z,10.0nm,0.6s							
CN2				pmax	pmax		
comp=Z,200nm,3.0s							
CN2				LR	LR		
comp=N,8μm,13.0s							
CN2				LR	LR		
comp=E,24μm,13.0s							
CN2				LR	LR		
comp=Z,10μm,10.0s							
TEY	**Ternei**	**10.63**	**145**	*e*P	**Pn**	**17 28 44.2**	**-0.5**
TEY				pP		17 28 48.9	
TEY				*e*Sg	Sn	17 31 39.9	+56
TEY				A		17 31 43.0	
comp=Z,79nm,1.4s							
TEY				A		17 31 43.0	
comp=Z,1μm,1.4s							
TEY				A		17 31 43.0	
comp=Z,583nm,1.4s							
TEY				A		17 31 48.0	
comp=Z,2μm,3.0s							
TEY				A		17 31 48.0	
comp=Z,4μm,3.0s							
TEY				AMS	AMS	17 32 44.0	
comp=Z,5μm,8.0s							
TEY				AMS	AMS	17 32 44.0	
comp=Z,2μm,8.0s							
TEY				AMS	AMS	17 32 44.0	
comp=Z,8μm,8.0s							
VLA	**Vladivostok**	**11.26**	**165**	P	**Pn**	**17 28 52.0**	**-1.5**
VLA				*e*		17 30 58.5	
VLA				pmax	pmax		
comp=Z,9.0nm,0.8s							
VLA				MLR	MLR		
comp=Z,4μm,9.0s							
VLA	**Vladivostok**	**11.26**	**165**	*e*P	**Pn**	**17 28 54.8**	**+1.3**
YSS	**Yuzh-Sakhalins**	**11.77**	**121**	⇑*i*P	**Pn**	**17 29 04.9**	**+4.5**
YSS				*e*S	**Sn**	**17 31 20.0**	**+8.3**
YSS				pmax	pmax		
comp=Z,40nm,1.0s							
YSS				MLR	MLR		
comp=Z,2μm,14.0s							
YSS				MLR	MLR		
comp=N,4μm,12.0s							
YSS	**Yuzh-Sakhalins**	**11.77**	**121**	*e*Pn	**Pn**	**17 29 00.5**	**+0.1**
comp=N,56nm,1.0s							
YSS	**Yuzh-Sakhalins**	**11.77**	**121**	*e*P	**Pn**	**17 29 02.5**	**+2.1**
YSS				AMB	AMB	17 29 05.5	
comp=N,40nm,1.0s							
YSS				sP		17 29 12.2	
YSS				*e*S	**Sn**	**17 31 20.0**	**+8.3**
YSS				*e*Sg	Sn	17 32 14.5	+63
YSS				AMS	AMS	17 33 57.0	
comp=N,4μm,13.0s							
YSS				AMS	AMS	17 33 57.0	
comp=N,4μm,13.0s							
YSS				AMS	AMS	17 33 57.0	
comp=N,2μm,13.0s							
SNY	**Shenyang**	**12.61**	**195**	⇑P	**Pn**	**17 29 17.0**	**+5.1**
SNY				S	**Sn**	**17 31 42.5**	**+10**
SNY				pmax	pmax		
comp=Z,9.0nm,0.5s							
SNY				pmax	pmax		
comp=Z,79nm,3.5s							
SNY				LR	LR		
comp=N,12μm,11.8s							
SNY				LR	LR		
comp=E,29μm,15.4s							
SNY				LR	LR		
comp=Z,5μm,9.6s							
ASAJ	**Asahikawa**	**13.78**	**130**	Pn	**Pn**	**17 29 27.9**	**0.0**
comp=Z,0.1nm,0.3s,baz=327,slow=16,SNR=2.1							
ASAJ				LR	LR	17 35 48.7	
comp=Z,760nm,18.4s,baz=158,slow=42							
IRK	**Irkutsk**	**14.34**	**272**	*e*P	**Pn**	**17 29 37.1**	**+1.7**
IRK				pmax	pmax		
comp=Z,46nm,1.5s							
IRK	**Irkutsk**	**14.34**	**272**	*e*P	**Pn**	**17 29 37.1**	**+1.7**
ULN	**Ulaanbaatar**	**14.57**	**253**	*e*P	**Pn**	**17 29 36.3**	**-2.2**
ULN				*e*		17 32 22.5	
ULN				pmax	pmax		
comp=Z,120nm,1.3s							
ULN	**Ulaanbaatar**	**14.57**	**253**	*e*Pn	**Pn**	**17 29 36.3**	**-2.2**
comp=Z,120nm,1.3s							
ULN				*e*Sn	**Sn**	**17 32 22.5**	**+2.6**
TLY	**Talaya**	**14.88**	**271**	*e*P	**Pn**	**17 29 47.7**	**+4.9**
TLY				pmax	pmax		
comp=Z,15nm,0.9s							
SONM	**Songino Array**	**14.96**	**254**	Pn	**Pn**	**17 29 40.9**	**-2.9**
comp=Z,1.7nm,0.3s,baz=57,slow=13,SNR=24							
SONM				Sn	**Sn**	**17 32 20.3**	**-9.0**
comp=Z,1.4nm,0.3s,baz=66,slow=18,SNR=4.5							
SONM				Lg		17 33 55.4	
comp=Z,8.0nm,0.3s,baz=50,slow=28,SNR=9.2							
SONM				LR	LR	17 36 07.8	
comp=Z,704nm,21.4s,baz=55,slow=40							
YUK	**Yuzh-Kuril'sk**	**15.38**	**124**	⇑*i*P	**Pn**	**17 29 59.2**	**+10**
YUK				pmax	pmax		
comp=Z,598nm,1.6s							
YUK				pmax	pmax		
comp=N,450nm,1.5s							
YUK				pmax	pmax		
comp=Z,463nm,1.5s							
YUK				pmax	pmax		
comp=E,101nm,0.8s							
YUK				MLR	MLR		
comp=N,4μm,15.7s							
YUK				MLR	MLR		
comp=E,1μm,15.7s							
YUK				MLR	MLR		
comp=Z,2μm,15.7s							
YUK	**Yuzh-Kuril'sk**	**15.38**	**124**	*e*P	**Pn**	**17 29 54.0**	**+4.5**
YUK				*e*S	**Sn**	**17 32 46.0**	**+6.2**
YUK				AMS	AMS	17 36 23.0	
comp=Z,5μm,13.0s							
YUK				AMS	AMS	17 36 23.0	
comp=Z,3μm,14.0s							
SEY	**Seymchan**	**15.42**	**45**	⇑*i*P	**Pn**	**17 29 51.4**	**+1.5**
SEY	**Seymchan**	**15.42**	**45**	⇑*i*P	**Pn**	**17 29 51.4**	**+1.5**
KUR	**Kuril'sk**	**15.57**	**117**	P	**Pn**	**17 30 00.5**	**+8.6**
KUR				pmax	pmax		
comp=E,60nm,1.0s							
KUR				pmax	pmax		
comp=Z,170nm,1.0s							
KUR				MLR	MLR		
comp=N,2μm,10.0s							
KUR				MLR	MLR		
comp=E,2μm,10.0s							
KUR				MLR	MLR		
comp=Z,3μm,10.0s							
KUR	**Kuril'sk**	**15.57**	**117**	*e*P	**Pn**	**17 29 54.0**	**+2.1**
KUR				AMB	AMB	17 30 05.0	
comp=Z,60nm,1.0s							
KUR				AMB	AMB	17 30 05.0	
comp=Z,170nm,1.0s							
KUR				*e*S	**Sn**	**17 32 46.0**	**+1.8**
KUR				A		17 33 10.0	
comp=Z,2μm,8.0s							
KUR				AMS	AMS	17 38 34.0	
comp=Z,2μm,10.0s							
KUR				AMS	AMS	17 38 34.0	
comp=Z,2μm,10.0s							
KUR				AMS	AMS	17 38 34.0	
comp=Z,3μm,10.0s							
ZAK	**Zakamensk**	**15.57**	**266**	*e*P	**Pn**	**17 29 49.1**	**-2.8**
ZAK				pmax	pmax		
comp=Z,21nm,1.3s							
ERM	**Erimo**	**15.71**	**134**	⇑*e*P	**Pn**	**17 29 54.7**	**+0.9**
ERM				pmax	pmax		
comp=Z,48nm,1.2s							
DL2	**Dalian**	**15.79**	**199**	P	**Pn**	**17 29 58.3**	**+3.5**
DL2				S	**Sn**	**17 32 55.1**	**+5.3**
DL2				pmax	pmax		
comp=Z,20nm,0.9s							
DL2				LR	LR		
comp=N,3μm,12.9s							
DL2				LR	LR		
comp=E,8μm,13.4s							
DL2				LR	LR		
comp=Z,2μm,12.5s							
BJI	**Beijing**	**16.16**	**214**	P	**Pn**	**17 29 59.1**	**-0.5**
BJI				S	**Sn**	**17 32 58.4**	**-0.4**
BJI				pmax	pmax		
comp=Z,9.0nm,0.5s							
BJI				pmax	pmax		
comp=Z,120nm,3.9s							
BJI				LR	LR		
comp=N,12μm,16.9s							
BJI				LR	LR		
comp=E,11μm,15.8s							
BJI				LR	LR		
comp=Z,980nm,15.6s							
BJT	**Baijiatuau**	**16.18**	**214**	*e*P	**Pn**	**17 29 58.4**	**-1.5**
BJT				pmax	pmax		
comp=Z,16nm,0.4s							
BJT	**Baijiatuau**	**16.18**	**214**	*e*Pn	**Pn**	**17 29 58.4**	**-1.5**
comp=Z,16nm,0.4s							
MOY	**Mondy**	**16.45**	**273**	*e*P	**Pn**	**17 30 03.1**	**-0.1**
MOY				pmax	pmax		
comp=Z,149nm,1.9s							
INCN	**Inchon**	**16.63**	**184**	Pn	**Pn**	**17 30 09.6**	**+4.0**
comp=Z,94nm,1.1s							
KSRS	**Korea Array**	**16.63**	**180**	Pn	**Pn**	**17 30 04.6**	**-1.0**
comp=Z,0.1nm,0.3s,baz=4.6,slow=11,SNR=14							
KSRS				Lg		17 34 51.0	
comp=Z,0.5nm,0.3s,baz=358,slow=30,SNR=11							
KSRS				LR	LR	17 35 31.7	
comp=Z,438nm,18.6s,baz=6.4,slow=34							
HHC	**Hu-ho-hao-te**	**17.23**	**226**	*e*P	**Pn**	**17 30 13.9**	**+0.8**
HHC				pP	pP	17 30 17.4	0.0
HHC				sP	sP	17 30 20.9	+2.2
HHC				PP		17 30 28.3	
HHC				S	**Sn**	**17 33 26.1**	**+1.5**
HHC				sS	sS	17 33 30.8	-7.4
HHC				SS		17 33 44.9	
HHC				PcP	PcP	17 34 57.9	+1.8
HHC				ScS	ScS	17 42 10.0	-0.4
HHC				pmax	pmax		
comp=Z,20nm,0.9s							
HHC				pmax	pmax		
comp=Z,210nm,5.5s							
HHC				LR	LR		
comp=N,3μm,6.0s							
HHC				LR	LR		
comp=E,5μm,6.2s							
HHC				LR	LR		
comp=Z,5μm,10.6s							
SKR	**Severo-Kuril's**	**17.44**	**90**	*e*P	**Pn**	**17 30 18.0**	**+2.3**
SKR				pmax	pmax		
comp=N,800nm,6.0s							
SKR				pmax	pmax		
comp=E,1μm,6.0s							
SKR				pmax	pmax		
comp=Z,1μm,6.0s							
SKR				MLR	MLR		
comp=Z,2μm,12.0s							
SKR				MLR	MLR		
comp=N,2μm,14.0s							
SKR				MLR	MLR		
comp=E,2μm,14.0s							
SKR	**Severo-Kuril's**	**17.44**	**90**	*e*P	**Pn**	**17 30 16.0**	**+0.3**
SKR				AMB	AMB	17 30 22.0	
comp=E,800nm,6.0s							
SKR				AMB	AMB	17 30 22.0	
comp=E,1μm,6.0s							
SKR				AMB	AMB	17 30 22.0	
comp=E,1μm,6.0s							
SKR				*e*S	**Sn**	**17 33 35.0**	**+5.4**
SKR				A		17 33 56.0	
comp=E,1μm,10.0s							
SKR				AMS	AMS	17 39 08.0	
comp=E,2μm,13.0s							
SKR				AMS	AMS	17 39 08.0	
comp=E,2μm,13.0s							
PEA0B	**Petropavlovsk-**	**17.59**	**81**	*e*Pn	**Pn**	**17 30 17.5**	**0.0**
PETK	**Petropavlovsk-**	**17.59**	**81**	P	**Pn**	**17 30 17.3**	**-0.3**
comp=E,0.7nm,0.3s,baz=310,slow=5.5,SNR=25							
PETK				LR	LR	17 37 13.2	
comp=E,494nm,18.5s,baz=282,slow=38							
PETK	**Petropavlovsk-**	**17.59**	**81**	P	**Pn**	**17 30 17.3**	**-0.3**
PETK				pmax	pmax		
comp=Z,1.0nm,0.3s							
PETK				MLR	MLR		
comp=Z,494nm,18.5s							
PETK	**Petropavlovsk-**	**17.59**	**81**	P	**Pn**	**17 30 17.3**	**-0.3**
PETK				LR	LR	17 37 13.2	
TIXI	**Tiksi**	**17.64**	**1**	⇑*e*P	**Pn**	**17 30 17.5**	**-0.5**
TIXI				pmax	pmax		
comp=Z,115nm,1.1s							
TIXI	**Tiksi**	**17.64**	**1**	⇑*e*Pn	**Pn**	**17 30 17.4**	**-0.6**
comp=Z,115nm,1.1s							
TIXI				*e*Sn	**Sn**	**17 33 46.1**	**+12**
TIXI	**Tiksi**	**17.64**	**1**	⇑*e*P	**Pn**	**17 30 17.5**	**-0.5**
BTO	**Baotou**	**18.10**	**229**	*e*P	**Pn**	**17 30 23.0**	**-0.9**
PET	**Petropavlovsk**	**18.17**	**81**	κ *i*P	**Pn**	**17 30 25.2**	**+0.5**
PET				*e*S	**Sn**	**17 33 45.5**	**-1.8**
PET				pmax	pmax		
comp=Z,800nm,5.7s							
PET				pmax	pmax		
comp=Z,300nm,5.6s							
PET				pmax	pmax		
comp=Z,142nm,1.1s							
PET				MLR	MLR		

comp=Z,1μm,14.0s
PET MLR MLR
comp=Z,1μm,13.0s
PET Petropavlovsk 18.17 81 *e*Pn **Pn 17 30 25.6 +0.9**
comp=Z,128nm,1.0s
PET Petropavlovsk 18.17 81⇓ *i*P **Pn 17 30 25.2 +0.5**
MAJO Matsushiro 18.91 154 *e*P **Pn 17 30 32.6 -1.2**
MAJO pmax pmax
comp=Z,56nm,1.4s
MAJO Matsushiro 18.91 154 *e*P **Pn 17 30 32.6 -1.2**
comp=Z,56nm,1.4s
MAT Matsushiro 18.91 154 P **Pn 17 30 33.2 -0.6**
MAT S **Sn 17 34 04.0 -1.4**
MJAR Matsushiro Arr 18.91 154 P **Pn 17 30 31.1 -2.8**
comp=Z,0.2nm,0.3s,baz=339,slow=12,SNR=15
MJAR LR LR 17 37 38.5
comp=Z,515nm,18.5s,baz=325,slow=36
TIA Tai'an 19.41 207 *e*P **Pn 17 30 45.3 +5.5**
TIA S **Sn 17 34 19.0 +1.7**
TIA LR LR
comp=N,3μm,10.0s
TIA LR LR
comp=E,2μm,8.0s
JHJ Hachijo jima 2 22.56 153 P **P 17 31 11.9 -0.7**
comp=E,55nm,0.8s,mb5.0,baz=54,slow=12,SNR=3.5
BILL Bilibino 22.68 37⇑ *e*P **P 17 31 15.0 +1.3**
BILL *i* 17 31 37.3
BILL pmax pmax
comp=Z,11nm,1.6s,mb4.0
BILL MLR MLR
comp=Z,2μm,17.0s,MS4.6
BILL Bilibino 22.68 37⇑ *e*P **P 17 31 15.0 +1.3**
comp=Z,55nm,1.2s,mb4.9
BILL Bilibino 22.68 37⇑ *e*P **P 17 31 15.0 +1.3**
NJ2 Nanjing 22.97 200 *e*P **P 17 31 15.3 -1.8**
NJ2 pP 17 31 19.5
NJ2 sP sP 17 31 22.6 +1.4
NJ2 PP 17 31 45.1
NJ2 S **S 17 35 19.0 -8.3**
NJ2 sS sS 17 35 25.6 -6.6
NJ2 pmax pmax
comp=Z,20nm,1.1s,mb4.5
NJ2 pmax pmax
comp=Z,180nm,3.6s
NJ2 LR LR
comp=N,2μm,12.2s,MS5.2
NJ2 LR LR
comp=E,4μm,10.2s,MS5.2
NJ2 LR LR
comp=Z,11μm,13.7s,MS5.5
SSE Sheshan 23.49 195 *e*P **P 17 31 22.0 -0.5**
SSE sP sP 17 31 30.5 +3.8
SSE S **S 17 35 36.8 +1.1**
SSE pmax pmax
comp=Z,24nm,0.7s,mb4.7
SSE pmax pmax
comp=Z,59nm,3.5s
SSE LR LR
comp=N,5μm,16.0s,MS5.4
SSE LR LR
comp=E,9μm,16.0s,MS5.4
SSE LR LR
comp=Z,2μm,10.6s
GTA Gaotai 24.05 244 P **P 17 31 27.6 0.0**
GTA pP 17 31 32.1
GTA sP sP 17 31 35.5 +3.6
GTA S **S 17 35 44.3 -0.3**
GTA sS sS 17 35 51.1 +1.5
GTA pmax pmax
comp=Z,7.0nm,1.7s,mb3.8
GTA pmax pmax
comp=Z,250nm,5.1s
GTA LR LR
comp=N,3μm,10.4s,MS5.2
GTA LR LR
comp=E,3μm,12.2s,MS5.2
GTA LR LR
comp=Z,4μm,10.1s,MS5.2
XAN Xi'an 24.14 222 P **P 17 31 26.5 -2.0**
XAN pP 17 31 30.1
XAN S **S 17 35 46.9 +0.8**
XAN sS sS 17 35 52.1 +1.0
XAN pmax pmax
comp=Z,46nm,7.0s
LZH Lanzhou 24.60 233 *e*P **P 17 31 32.6 0.0**
LZH pP 17 31 36.8
LZH sP sP 17 31 39.8 +2.9
LZH PP 17 32 08.5
LZH *e*S **S 17 35 50.6 -2.9**
LZH sS sS 17 35 57.3 -1.2
LZH SS 17 36 46.0
LZH pmax pmax
comp=Z,58nm,1.3s,mb5.0
LZH pmax pmax
comp=Z,170nm,4.5s
LZH LR LR
comp=N,3μm,12.5s
LZH LR LR
comp=Z,3μm,13.6s,MS5.0
ZAA0 Zalesovo Array 25.09 287 *e*P **P 17 31 36.5 -0.5**
ZALV Zalesovo Beam 25.09 287 P **P 17 31 36.1 -0.8**
comp=Z,0.5nm,0.4s,mb3.4,baz=77,slow=7.8,SNR=4.9
ZALV Lg 17 39 20.2
comp=Z,13nm,1.1s,baz=66,slow=29,SNR=6.2
ZALV LR LR 17 41 27.4
comp=Z,700nm,19.9s,MS4.2,baz=256,slow=36
ZALV Zalesovo Beam 25.09 287 P **P 17 31 36.1 -0.8**
ZALV Lg 17 39 20.2
ZALV LR LR 17 41 27.4
NVS Novosibirsk 25.71 290 *e*P **P 17 31 43.6 +1.0**
NVS pmax pmax
comp=N,50nm,1.6s
NVS pmax pmax
comp=E,83nm,1.6s
NVS pmax pmax
comp=Z,74nm,1.6s,mb5.0
FX1 Attu Island--F 26.55 74 P **P 17 31 48.2 -2.1**
comp=Z,8.0nm,0.4s,mb4.6,baz=286,slow=7.4,SNR=12
FX1 Attu Island--F 26.55 74 P **P 17 31 48.2 -2.1**
FX1 pmax pmax
comp=Z,8.0nm,0.4s
FX1 Attu Island--F 26.55 74 P **P 17 31 48.2 -2.1**
ENH Enshi 27.30 217 *e*P **P 17 31 53.3 -3.9**
comp=Z,27nm,0.9s,mb4.8
WMQ Urumqi 28.03 265 P **P 17 32 10.0 +6.4**
WMQ sP sP 17 32 17.0 +9.1
WMQ PP 17 33 00.0
WMQ S **S 17 36 54.0 +6.2**
WMQ SS 17 38 15.0
WMQ pmax pmax
comp=Z,16nm,0.8s,mb4.7
WMQ LR LR
comp=N,3μm,10.0s
WMQ LR LR
comp=E,1μm,9.0s
WMQ LR LR
comp=Z,1μm,8.0s
CD2 Chengdu 28.99 227 P **P 17 32 16.3 +4.1**
CD2 pP pP 17 32 20.5 +5.3
CD2 sP sP 17 32 23.5 +7.0
CD2 PP PP 17 33 10.0 -7.5
CD2 S **S 17 37 05.5 +2.5**
CD2 sS sS 17 37 12.8 +4.8
CD2 pmax pmax
comp=Z,30nm,0.6s,mb5.2
CD2 pmax pmax
comp=Z,40nm,4.2s
CD2 LR LR
comp=N,3μm,16.7s,MS5.2
CD2 LR LR
comp=E,4μm,15.5s,MS5.2
CD2 LR LR
comp=Z,2μm,10.7s,MS5.1
MK31 Makanchi Array 29.57 275 *e*P **P 17 32 16.5 -0.8**
MKAR Makanchi Array 29.57 275 P **P 17 32 16.4 -0.9**
comp=Z,0.7nm,0.3s,mb3.8,baz=64,slow=9.3,SNR=11
MKAR Lg 17 41 52.0
comp=Z,1.9nm,0.8s,baz=86,slow=33,SNR=6.4
MKAR LR LR 17 43 22.1
comp=Z,742nm,19.6s,MS4.3,baz=236,slow=35
KURK Kurchatov 29.83 284 P **P 17 32 19.7 +0.2**
comp=Z,2.0nm,0.8s,mb3.9,baz=65,slow=9.1,SNR=15
KURK LR LR 17 44 17.5
comp=Z,434nm,18.8s,MS4.1,baz=60,slow=36
KURK Kurchatov 29.83 284 *d i*P **P 17 32 19.2 -0.3**
KURK pmax pmax
comp=Z,14nm,2.5s,mb4.2
KURK MLR MLR
comp=Z,768nm,15.0s,MS4.5
KURK Kurchatov 29.83 284 *e*P **P 17 32 18.6 -0.9**
comp=Z,24nm,1.0s,mb4.9
SSLB Suanglung 30.71 193 *e*P **P 17 32 31.1 +3.6**
comp=Z,84nm,1.6s,mb5.3
GYA Guiyang 31.79 218⇑ *i*P **P 17 32 37.1 +0.2**
GYA S **S 17 37 47.5 +0.6**
GYA ScP ScP 17 39 11.9 +0.9
GYA pmax pmax
comp=Z,20nm,0.8s,mb5.0
GYA pmax pmax
comp=Z,130nm,4.6s
GYA LR LR
comp=N,530nm,16.0s,MS4.5
GYA LR LR
comp=E,620nm,17.2s,MS4.5
GYA LR LR
comp=Z,570nm,16.3s,MS4.3
BVAR Borovoye Array 33.44 292 P **P 17 32 51.4 +0.3**
comp=Z,2.5nm,0.5s,mb4.4,baz=71,slow=8.8,SNR=22
BVAR PP PP 17 34 04.6 -2.0
comp=Z,4.1nm,0.7s,baz=58,slow=12,SNR=5.6
BVAR Borovoye Array 33.44 292 P **P 17 32 51.4 +0.2**
BVAR 17 34 04.6
BVAR pmax pmax
comp=Z,3.0nm,0.5s
BVAR pmax pmax
comp=Z,4.0nm,0.7s
BRVK Borovoye 33.48 292 *ce*P **P 17 32 51.5 0.0**
BRVK pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
BRVK MLR MLR
comp=Z,2μm,16.0s,MS4.8
BRVK Borovoye 33.48 292 *e*P **P 17 32 51.2 -0.4**
comp=Z,23nm,0.8s,mb5.2
KMI Kunming 34.50 223 P **P 17 33 02.3 +1.7**
KMI pP pP 17 33 06.3 +2.6
KMI sP sP 17 33 07.5 +2.6
KMI PP PP 17 34 18.1 -0.6
KMI S **S 17 38 29.0 0.0**
KMI sS sS 17 38 35.5 +1.4
KMI SS SS 17 40 39.3 -19
KMI pmax pmax
comp=Z,13nm,1.3s,mb4.7
KMI pmax pmax
comp=Z,160nm,6.0s
KMI LR LR
comp=N,5μm,15.4s,MS5.6
KMI LR LR
comp=E,6μm,15.8s,MS5.6
KMI LR LR
comp=Z,2μm,15.1s,MS4.9
TKM2 Tokmak 2 35.69 274 P **P 17 33 17.5 +6.7**
SNR=7.3
TKM2 Tokmak 2 35.69 274 *e*P **P 17 33 12.5 +1.8**
TKM2 pmax pmax
comp=Z,13nm,1.0s,mb4.8
TKM2 Tokmak 2 35.69 274 *e*P **P 17 33 12.5 +1.7**
comp=Z,13nm,1.0s,mb4.8
LSA Lhasa 36.05 242 P **P 17 33 19.8 +5.8**
LSA Lhasa 36.05 242 *e*P **P 17 33 12.8 -1.2**
LSA pmax pmax
comp=Z,14nm,1.1s,mb4.8
LSA Lhasa 36.05 242 *e*P **P 17 33 12.8 -1.2**
comp=Z,14nm,1.1s,mb4.8
USP Ospenovka 36.12 275 P **P 17 33 20.5 +6.0**
SNR=6.3
KBK Karagaybulak 36.23 274 P **P 17 33 24.8 +9.4**
SNR=5.8
KZA Kyzart 36.40 273 P **P 17 33 26.2 +9.3**
SNR=5.9
AAK Ala-Archa 36.51 274 P **P 17 33 18.3 +0.6**
comp=Z,0.9nm,0.3s,mb4.1,baz=90,slow=7.1,SNR=1.9
AAK LR LR 17 49 00.9
comp=Z,296nm,19.5s,MS4.1,baz=32,slow=38
AAK Ala-Archa 36.51 274 *ce*P **P 17 33 18.1 +0.4**
AAK pmax pmax
comp=Z,5.0nm,1.1s,mb4.3
AAK MLR MLR
comp=Z,493nm,16.0s,MS4.4
AAK Ala-Archa 36.51 274 P **P 17 33 17.4 -0.4**
comp=Z,7.0nm,0.9s,mb4.5
EKS2 Erkin-Say 36.91 275 P **P 17 33 30.5 +9.3**
SNR=6.3
EKS2 Erkin-Say 36.91 275 *e*P **P 17 33 23.2 +2.0**
comp=Z,11nm,1.0s,mb4.6
SVE Sverdlovsk 36.91 302 *e*P **P 17 33 22.7 +1.6**
SVE *e* 17 35 46.0
SVE *e*S **S 17 39 05.3 -0.2**
SVE pmax pmax
comp=Z,24nm,0.9s,mb5.0
SVE MLR MLR
comp=Z,1μm,15.0s,MS4.7
AML Almayashu 37.28 274 *e*P **P 17 33 25.0 +0.6**
comp=Z,15nm,0.6s,mb5.0
KSH Kashi 37.59 269 P **P 17 33 32.6 +5.6**
KSH pP pP 17 33 37.1 +7.0
KSH sP sP 17 33 39.6 +8.3
KSH PP PP 17 35 03.3 +11
KSH PcP PcP 17 35 47.5 +3.0
KSH S **S 17 39 24.8 +8.7**
KSH ScP ScP 17 39 33.4 +1.8
KSH PcS PcS 17 39 35.3 +2.2
KSH SS SS 17 42 03.3 +2.6
KSH ScS ScS 17 43 41.6 +1.6
KSH pmax pmax
comp=Z,2.0nm,0.9s,mb3.9
KSH pmax pmax
comp=Z,13nm,3.2s
KSH LR LR
comp=N,340nm,3.5s
KSH LR LR
comp=E,400nm,4.2s
KSH LR LR
comp=Z,500nm,4.9s
SOKR Solikamsk 37.62 308 *c i*P **P 17 33 33.0 +5.9**
SOKR pmax pmax
comp=Z,20nm,1.0s,mb4.8
SOKR MLR MLR
comp=Z,450nm,13.0s,MS4.5
QIZ Qiongzhong 37.67 209 P **P 17 33 27.8 0.0**
QIZ S **S 17 39 15.0 -2.7**
QIZ pmax pmax
comp=Z,91nm,4.0s
QIZ LR LR
comp=N,1μm,14.8s
QIZ LR LR
comp=Z,940nm,11.2s,MS4.8
ARU Arti 38.12 303 *d i*P **P 17 33 32.0 +0.7**
ARU *e* 17 34 57.3
ARU S **S 17 39 27.3 +3.5**
ARU SS SS 17 42 11.7 +0.8
ARU SSS 17 42 36.9
ARU pmax pmax
comp=Z,14nm,2.5s,mb4.2
ARU MLR MLR
comp=Z,1μm,18.0s,MS4.7
ARU Arti 38.12 303 *e*P **P 17 33 30.6 -0.7**
comp=Z,9.5nm,0.8s,mb4.6
TTA Tatalina 38.39 46 *e*P **P 17 33 33.7 +0.2**
COLD Coldfoot 39.02 38 *e*P **P 17 33 36.4 -2.3**
comp=Z,6.3nm,1.0s,mb4.3
SHL Shillong 39.05 238 *e*PKP **P 17 33 38.0 -1.4**
SVW2 Sparrevohn 39.33 48 *e*P **P 17 33 41.0 -0.4**
BPAW Bear Paw Mtn. 39.98 42 *e*P **P 17 33 46.2 -0.5**
comp=Z,6.5nm,1.2s,mb4.2
TRF Thorofare Moun 40.54 43 *e*P **P 17 33 51.2 -0.1**
comp=Z,42nm,0.9s,mb5.1
MCK McKinley 40.95 42 *e*P **P 17 33 53.8 -1.0**
MCK pmax pmax
comp=Z,9.0nm,1.0s,mb4.3
MCK McKinley 40.95 42 *e*P **P 17 33 53.8 -1.0**
comp=Z,9.5nm,1.0s,mb4.4
ABKAR Akbulak array 41.01 292 *e*P **P 17 33 55.3 -0.2**
comp=Z,18nm,0.8s,mb4.8
AKTK Aktyubinsk 41.40 295 P **P 17 33 59.1 +0.5**
AKTO Aktyubinsk 41.40 295 P **P 17 33 59.1 +0.5**
comp=Z,1.5nm,0.6s,mb3.8,baz=65,slow=11,SNR=5.3
AKTO Aktyubinsk 41.40 295 P **P 17 33 59.1 +0.5**
AKTO pmax pmax
comp=Z,2.0nm,0.6s,mb3.9
CHTO Chiang Mai 41.68 224 *e*P **P 17 34 02.8 +1.6**
CHTO pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
CHTO Chiang Mai 41.68 224 *e*P **P 17 34 02.8 +1.5**
comp=Z,9.5nm,0.9s,mb4.4
SPITS Spitsbergen Ar 41.77 343 P **P 17 34 03.2 +1.9**
comp=Z,2.4nm,0.7s,mb4.0,baz=298,slow=8.2,SNR=3.6
SPITS Spitsbergen Ar 41.77 343 P **P 17 34 03.2 +1.8**
SPITS pmax pmax
comp=Z,2.0nm,0.7s
PMR Palmer 41.88 45 *e*P **P 17 34 02.4 0.0**
PMR pmax pmax
comp=Z,11nm,0.8s,mb4.5
PMR Palmer 41.88 45 *e*P **P 17 34 02.4 0.0**
comp=Z,11nm,0.8s,mb4.5
CMAR Chiang Mai Arr 42.00 224 P **P 17 34 02.6 -1.3**
comp=Z,0.4nm,0.6s,baz=20,slow=8.0,SNR=4.4
CMAR pP pP 17 34 07.2 +0.2
comp=Z,3.6nm,0.9s,baz=21,slow=7.5,SNR=10
CMAR PP PP 17 35 39.5 -1.5
comp=Z,1.0nm,0.8s,baz=7.0,slow=8.2,SNR=2.5
CMAR LR LR 17 52 51.6
comp=Z,596nm,20.3s,baz=32,slow=38
CMAR Chiang Mai Arr 42.00 224 P **P 17 34 02.6 -1.3**
CMAR *PP pP 17 34 07.2 +0.2
CMAR 17 35 39.5
CMAR pmax pmax
comp=Z,1.0nm,0.8s
CMAR MLR MLR
comp=Z,596nm,20.3s
OHAK Old Harbor 42.20 53 *e*P **P 17 34 03.1 -2.0**
comp=Z,10.0nm,0.8s,mb4.5
PAX Paxson 42.69 42 *e*P **P 17 34 08.2 -0.8**
PAX pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
PAX Paxson 42.69 42 *e*P **P 17 34 08.2 -0.8**
comp=Z,3.7nm,0.6s,mb4.3
DDI Dehra Dun 42.80 257 *ex* **P 17 34 16.0 +5.7**
APA Apatity 43.29 326⇑ *e*P **P 17 34 09.0 -4.8**
APA pmax pmax
comp=Z,18nm,1.2s,mb4.7
APA MLR MLR
comp=Z,300nm,12.0s,MS4.4
EGAK Eagle 43.42 39 *e*P **P 17 34 13.7 -1.1**
comp=Z,9.4nm,1.0s,mb4.5
BMRM Bremner River 44.08 44 *e*P **P 17 34 19.9 -0.3**
comp=Z,28nm,1.1s,mb4.9
KEV Kevo 44.09 331 *e*P **P 17 34 19.4 -0.8**
KEV pmax pmax
comp=Z,16nm,1.0s,mb4.7
KEV Kevo 44.09 331 *ep* **P 17 34 19.4 -0.8**
comp=Z,16nm,1.0s,mb4.7
KEV Kevo 44.09 331 *ep* **P 17 34 19.4 -0.8**
comp=Z,16nm,1.0s,mb4.7
INK Inuvik 44.13 32 P **P 17 34 20.7 +0.1**
comp=Z,2.8nm,0.9s,mb4.0,baz=319,slow=9.6,SNR=3.4
INK Inuvik 44.13 32 P **P 17 34 20.7 +0.2**
INK pmax pmax
comp=Z,3.0nm,0.9s
INK Inuvik 44.13 32 *e*P **P 17 34 17.9 -2.7**
comp=Z,22nm,1.4s,mb4.7
ARCES ARCESS Array B 44.65 331 P **P 17 34 25.0 +0.4**
comp=Z,1.7nm,0.7s,mb4.0,baz=52,slow=8.3,SNR=7.9
ARCES LR LR 17 57 00.8
comp=Z,714nm,18.1s,MS4.6,baz=25,slow=41
ARCES ARCESS Array B 44.65 331 P **P 17 34 25.0 +0.4**
ARCES pmax pmax
comp=Z,2.0nm,0.7s
ARCES MLR MLR
comp=Z,714nm,18.1s
KTK1 Kautokeino 45.61 331 *e* **P 17 34 39.8 +7.5**
KTK1 *e*ScP ScP 17 40 02.6 -0.4
TRO Tromso 46.42 333 *e*SS SS 17 44 58.8 +8.0
TRO AMS AMS 18 29 00.3
comp=Z,979nm,22.5s,MS4.7
JOF Joensuu 46.61 321 *e*P **P 17 34 38.7 -1.6**
JOF pmax pmax
comp=Z,16nm,1.1s,mb4.9
JOF Joensuu 46.61 321 *ep* **P 17 34 38.7 -1.6**
comp=Z,16nm,1.1s,mb4.9
JOF Joensuu 46.61 321 *ep* **P 17 34 38.7 -1.6**
comp=Z,16nm,1.1s,mb4.9
PNL Peninsula 46.95 44 *e*P **P 17 34 41.8 -1.2**
comp=Z,11nm,0.8s,mb4.8
DAG Danmarks Havn 47.71 350⇑ *e*P **P 17 34 49.3 +0.6**
DAG pmax pmax
comp=Z,12nm,1.2s,mb4.8
DAG Danmarks Havn 47.71 350⇑ *i*P **P 17 34 49.3 +0.6**
comp=Z,12nm,1.2s,mb4.8
RES Resolute Bay 48.38 14 *e*P **P 17 34 53.3 -0.6**
RES pmax pmax
comp=Z,11nm,0.9s,mb4.9
RES Resolute Bay 48.38 14 *e*P **P 17 34 53.3 -0.5**
comp=Z,11nm,0.9s,mb4.9
MOS Moscow 48.39 311 *e*P **P 17 34 52.5 -1.7**
MOS *e* 17 34 59.2
MOS *e* 17 36 46.5
MOS pmax pmax
comp=Z,39nm,1.0s,mb5.4
MOS MLR MLR
comp=Z,1μm,18.0s,MS4.9
SKAG Skagway 48.72 42 *e*P **P 17 34 54.4 -2.3**
comp=Z,23nm,0.9s,mb5.2
KAF Kangasniemi 48.94 322 *e*P **P 17 35 00.9 +2.6**
KAF pmax pmax
comp=Z,14nm,1.2s,mb4.9
KAF Kangasniemi 48.94 322 *ep* **P 17 35 00.9 +2.6**
comp=Z,14nm,1.2s,mb4.9
KAF Kangasniemi 48.94 322 *ep* **P 17 35 00.9 +2.6**
comp=Z,14nm,1.2s,mb4.9
OBN Obninsk 49.25 311⇓ *e*P **P 17 35 00.8 0.0**
OBN pmax pmax
comp=Z,12nm,1.0s,mb4.9
OBN MLR MLR
comp=Z,700nm,16.0s,MS4.8
FINES FINESS Array B 49.46 322 P **P 17 35 01.8 -0.5**
comp=Z,3.0nm,0.5s,mb4.5,baz=47,slow=8.1,SNR=23
FINES pP pP 17 35 06.7 +1.3
comp=Z,8.5nm,0.7s,baz=51,slow=8.9,SNR=12
FINES FINESS Array B 49.46 322 P **P 17 35 01.8 -0.5**
FINES *PP pP 17 35 06.7 +1.3
FINES pmax pmax
comp=Z,3.0nm,0.5s
FINES FINESS Array B 49.46 322 P **P 17 35 01.8 -0.4**
FINES pP pP 17 35 06.7 +1.3
VSR Storozhevoye 50.53 305 *e*P **P 17 35 10.6 0.0**
VSR pmax pmax
comp=N,4.0nm,0.5s
VSR pmax pmax
comp=E,4.0nm,0.5s
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
VSR MLR MLR
comp=N,550nm,14.0s,MS4.8
VSR MLR MLR
comp=E,280nm,14.0s,MS4.8
VSR MLR MLR
comp=Z,810nm,14.0s,MS4.9
VSU Vasula 51.19 319⇓ *e*P **P 17 35 16.6 +1.2**
VSU pmax pmax
comp=Z,15nm,1.0s,mb4.9
DLBC Dease Lake 51.47 41 *e*P **P 17 35 18.9 +1.4**
NSS Namsos 51.93 330 *e* **P 17 35 25.1 +4.2**
HYB Hyderabad 52.70 246 *i*P **P 17 35 24.0 -3.1**
SUMG Summit 53.29 355 *e*P **P 17 35 31.5 +0.7**
comp=Z,11nm,0.9s,mb4.8
SUMG Summit 53.29 355 *i*P **P 17 35 36.2 +5.4**
comp=Z,6.0nm,0.7s,mb4.6
MICGM Minsk 53.43 314 *e* **P 17 35 36.0 +3.9**
MNK Minsk 53.45 314 *e*P **P 17 35 36.0 +3.7**
KIV Kislovodsk 53.59 297 *e*P **P 17 35 34.5 +1.0**
KIV *e* 17 36 43.1
KIV *e*S **S 17 43 05.6 -0.9**
KIV *e*SS SS 17 46 49.7 +3.4
KIV pmax pmax
comp=Z,65nm,1.0s,mb5.5
KIV MLR MLR
comp=Z,853nm,17.0s,MS4.9
KIV Kislovodsk 53.59 297 *e*P **P 17 35 34.8 +1.3**
comp=Z,56nm,0.9s,mb5.5
ZEI Tsey 53.76 295 *e*P **P 17 35 42.1 +7.4**
ZEI pmax pmax
comp=Z,12nm,0.9s,mb4.8
YKA Yellowknife Ar 53.86 31 P **P 17 35 35.3 +0.2**
comp=Z,0.4nm,0.7s,mb3.5,baz=319,slow=6.5,SNR=4.2
YKA pP pP 17 35 41.6 +3.3
comp=Z,2.8nm,0.9s,baz=320,slow=7.1,SNR=8.9
YKA Yellowknife Ar 53.86 31 P **P 17 35 35.3 +0.1**

YKA *PP pP 17 35 41.6 +3.3
YKA pmax pmax
comp=Z,3.0nm,0.9s
SCO Scoresbysund 53.88 348 *i* P **P 17 35 35.7 +0.5**
SCO pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
SCO Scoresbysund 53.88 348 *i* P **P 17 35 35.7 +0.5**
comp=Z,7.8nm,0.9s,mb4.6
MOL Molde 54.71 331 AMS AMS 18 24 20.1
comp=Z,2µm,32.1s,MS5.1
NB2 NORSAR Subarra 54.79 328 P **P 17 35 41.6 -0.4**
comp=Z,16nm,1.0s,mb5.0,baz=38,slow=6.9
NB2 NORSAR Subarra 54.79 328 P **P 17 35 41.6 -0.4**
baz=38,slow=6.9
NB2 NORSAR Subarra 54.79 328 P **P 17 35 41.6 -0.4**
NB2 NORSAR Subarra 54.79 328 P **P 17 35 41.6 -0.4**
NOA NORSAR Array B 54.79 328 P **P 17 35 41.7 -0.2**
comp=Z,0.7nm,0.7s,mb3.8,baz=44,slow=6.2,SNR=3.4
NOA pP pP 17 35 47.0 +1.9
comp=Z,5.4nm,0.8s,baz=39,slow=6.9,SNR=14
NOA LR LR 18 00 19.6
comp=Z,215nm,19.4s,MS4.2,baz=20,slow=37
NOA NORSAR Array B 54.79 328 P **P 17 35 41.7 -0.2**
NOA pP pP 17 35 47.0 +1.9
NOA LR LR 18 00 19.6
SOC Sochi 55.40 298 *e*P **P 17 35 54.4 +7.8**
SOC *e* 17 43 22.8
SOC pmax pmax
comp=Z,34nm,0.9s,mb5.4
SOC MLR MLR
comp=Z,502nm,15.0s,MS4.7
AKASG Malin Array Be 55.51 310 P **P 17 35 46.5 -0.8**
comp=Z,3.1nm,0.5s,mb4.6,baz=41,slow=8.1,SNR=13
AKASG pP pP 17 35 52.0 +1.5
comp=Z,5.2nm,0.4s,baz=41,slow=8.2,SNR=14
AKASG LR LR 18 00 17.4
comp=Z,551nm,19.1s,MS4.7,baz=40,slow=37
AKASG Malin Array Be 55.51 310 P **P 17 35 46.5 -0.8**
AKASG *PP pP 17 35 52.0 +1.5
AKASG pmax pmax
comp=Z,3.0nm,0.5s
AKASG MLR MLR
comp=Z,551nm,19.1s
AKASG Malin Array Be 55.51 310 P **P 17 35 46.5 -0.8**
AKASG pP pP 17 35 52.0 +1.5
AKASG LR LR 18 00 17.4
AKBB Malin Array Si 55.51 310 *e*P **P 17 35 45.7 -1.6**
KIEV Kiev 55.52 310 *e*P **P 17 35 45.8 -1.5**
KIEV pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
KIEV Kiev 55.52 310 *e*P **P 17 35 45.8 -1.5**
comp=Z,5.9nm,0.5s,mb4.9
ANN Anapa 55.73 301 *e*P **P 17 35 47.4 -1.5**
ANN *e*S **S 17 43 34.1 -1.1**
ANN pmax pmax
comp=Z,35nm,0.7s,mb5.5
ANN MLR MLR
comp=Z,870nm,16.0s,MS4.9
FOO Floro 56.20 331 AMS AMS 18 23 19.3
comp=Z,1µm,29.5s,MS4.8
KONO Kongsberg 56.38 328 AMS AMS 18 26 04.5
comp=Z,2µm,23.7s,MS5.1
BER Bergen 57.10 330 AMS AMS 18 24 10.9
comp=Z,1µm,27.8s,MS4.9
KIS Kishinev 58.36 307 *e*P **P 17 36 14.0 +6.5**
KIS MLR MLR
comp=Z,600nm,13.0s,MS4.9
KIS MLR MLR
comp=Z,700nm,14.0s
LVV L'vov 58.44 312 *e*P **P 17 36 15.9 +7.8**
LVV *e* 17 36 54.5
LVV *e*S **S 17 44 24.3 +13**
LVV *e*SS SS 17 48 01.0 -1.3
KWP Kalwaria Pacla 59.16 313 ⇓P **P 17 36 18.6 +5.6**
KWP Kalwaria Pacla 59.16 313 ⇓*i*P **P 17 36 18.6 +5.6**
BUR08 Bucovina Ar. S 59.54 310 *e*P **P 17 36 15.3 -0.5**
KOLS Kolonicke sedl 59.87 313 *e*P **P 17 36 18.4 +0.4**
KOLS *e* 17 36 23.5
KOLS *e*S **S 17 44 24.5 -4.8**
KOLS pmax pmax
comp=Z,9.0nm,1.2s,mb4.7
KOLS MLR MLR
comp=Z,700nm,15.4s,MS4.9
KOLS Kolonicke sedl 59.87 313 *e*P **P 17 36 18.4 +0.4**
comp=Z,9.2nm,1.2s,mb4.7
KOLS *e* 17 36 23.5
KOLS *e*S **S 17 44 24.5 -4.8**
KOLS *e*SS SS 17 49 29.6 +65
KOLS LR LR
comp=Z,700nm,15.4s,MS4.9
KOLS Kolonicke sedl 59.87 313 *e*P **P 17 36 18.4 +0.4**
KOLS *e*pP pP 17 36 23.5 +2.3
KOLS *e*S **S 17 44 24.5 -4.8**
KOLS *e* 17 49 29.6
STHS Stebnicka Huta 59.94 314 *e*P **P 17 36 20.5 +2.0**
STHS *e* 17 36 26.1
STHS pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
STHS Stebnicka Huta 59.94 314 *e*P **P 17 36 20.5 +2.0**
comp=Z,5.2nm,0.9s,mb4.6
STHS *e* 17 36 26.1
STHS Stebnicka Huta 59.94 314 *e*P **P 17 36 20.5 +2.0**
STHS *e*pP pP 17 36 26.1 +4.4
UZH Uzhgorod 60.09 313 *e*P **P 17 36 14.8 -4.7**
VRI Vrincioaia 60.17 308 ⇓P **P 17 36 25.4 +5.3**
VRI Vrincioaia 60.17 308 ⇓*i*P **P 17 36 25.4 +5.3**
PLOR Plostina 60.22 308 ⇑P **P 17 36 26.3 +5.9**
PLOR Plostina 60.22 308 ⇑*i*P **P 17 36 26.3 +5.9**
CRVS Cervenica-Dubn 60.24 313 *e*P **P 17 36 20.2 -0.3**
CRVS *e* 17 36 27.1
CRVS pmax pmax
comp=Z,9.0nm,1.3s,mb4.6
CRVS MLR MLR
comp=Z,500nm,15.9s,MS4.8
CRVS Cervenica-Dubn 60.24 313 *e*P **P 17 36 20.2 -0.3**
comp=Z,9.4nm,1.3s,mb4.7
CRVS *e* 17 36 27.1
CRVS LR LR
comp=Z,500nm,15.9s,MS4.8
CRVS Cervenica-Dubn 60.24 313 *e*P **P 17 36 20.2 -0.3**
CRVS *e*pP pP 17 36 27.1 +3.4
NIE Niedzica 60.34 314 *e*P **P 17 36 22.1 +0.9**
NIE *e*pP pP 17 36 27.4 +3.0
BSEG Bad Segeberg 60.68 323 *e*P **P 17 36 28.5 +5.1**
comp=Z,24nm,1.6s,mb5.1
MLR Muntele Rosu 60.81 308 ⇑P **P 17 36 25.3 +0.8**
MLR Muntele Rosu 60.81 308 ⇑*i*P **P 17 36 25.3 +0.8**
OKC Ostrava-Krasne 60.92 316 *e*P **P 17 36 25.3 +0.2**
OKC *e**PP pP 17 36 30.8 +2.5
OKC MLR MLR
comp=Z,600nm,15.8s,MS4.8
OKC Ostrava-Krasne 60.92 316 *e*P **P 17 36 25.3 +0.2**
OKC *e*pP pP 17 36 30.8 +2.5
OKC AMS AMS 18 07 20.0
comp=Z,600nm,15.8s
KECS Kecovo 60.98 313 *e*P **P 17 36 26.0 +0.4**
KECS *e* 17 36 32.2
KECS pmax pmax
comp=Z,4.0nm,1.3s,mb4.4
KECS Kecovo 60.98 313 *e*P **P 17 36 26.0 +0.4**
comp=Z,4.1nm,1.3s,mb4.4
KECS *e* 17 36 32.2
KECS Kecovo 60.98 313 *e*P **P 17 36 26.0 +0.4**
KECS *e*pP pP 17 36 32.2 +3.4
MORC Moravsky Berou 61.21 316 *e*P **P 17 36 32.5 +5.4**
MORC pmax pmax
comp=Z,12nm,1.0s,mb5.0
MORC Moravsky Berou 61.21 316 *e*P **P 17 36 32.5 +5.4**
comp=Z,12nm,1.0s,mb5.0
MORC Moravsky Berou 61.21 316 ⇑*i*P **P 17 36 32.8 +5.7**
DPC Dobruska-Polom 61.26 317 *e*P **P 17 36 27.7 +0.3**
DPC *e**PP pP 17 36 33.4 +2.8
DPC MLR MLR
comp=Z,800nm,14.1s,MS5.0
DPC Dobruska-Polom 61.26 317 *e*P **P 17 36 27.7 +0.3**
DPC *e*pP pP 17 36 33.4 +2.8
DPC AMS AMS 18 07 20.0
comp=Z,800nm,14.1s
UPC Upice 61.26 318 *e*pP pP 17 36 33.3 +2.7
VOIR 61.27 309 ⇑P **P 17 36 30.0 +2.4**
VOIR 61.27 309 ⇑*i*P **P 17 36 30.0 +2.4**
BR131 Keskin Array S 61.34 299 *e*P **P 17 36 28.2 +0.1**
comp=Z,2.5nm,0.9s,mb4.3
BRTR Keskin Array B 61.34 299 P **P 17 36 27.6 -0.5**
comp=Z,0.4nm,0.4s,mb3.9,baz=40,slow=6.7,SNR=4.0
BRTR pP pP 17 36 34.0 +2.7
comp=Z,2.2nm,0.7s,baz=76,slow=4.2,SNR=9.1
BRTR Keskin Array B 61.34 299 *i* P **P 17 36 28.2 +0.1**
EDM Edmonton 61.59 37 *e*P **P 17 36 27.5 -2.1**
PSZ Piszkesteto 61.67 313 P **P 17 36 29.7 -0.5**
PSZ pmax pmax
comp=Z,19nm,1.3s,mb5.1
PSZ Piszkesteto 61.67 313 P **P 17 36 29.7 -0.6**
comp=Z,19nm,1.3s,mb5.1
PSZ Piszkesteto 61.67 313 ⇑*i*P **P 17 36 36.3 +6.1**
VYHS Vyhne 61.67 314 *e*P **P 17 36 30.3 +0.1**
VYHS *e* 17 36 36.2
VYHS *e*S **S 17 44 56.9 +4.6**
VYHS pmax pmax
comp=Z,9.0nm,1.2s,mb4.8
VYHS Vyhne 61.67 314 *e*P **P 17 36 30.3 +0.1**
comp=Z,8.5nm,1.2s,mb4.8
VYHS *e* 17 36 36.2
VYHS *e*S **S 17 44 56.9 +4.6**
VYHS *e*SS SS 17 49 09.7 +17
VYHS Vyhne 61.67 314 *e*P **P 17 36 30.3 +0.1**
VYHS *e*pP pP 17 36 36.1 +2.6
VYHS *e*S **S 17 44 56.9 +4.6**
VYHS *e*SS SS 17 49 09.7 +17
BRG Berggiesshubel 61.78 319 *e*P **P 17 36 35.9 +5.0**
comp=Z,13nm,1.4s,mb4.9
BRG Berggiesshubel 61.78 319 *e*P **P 17 36 36.1 +5.1**
comp=Z,13nm,1.3s,mb4.9
BRG
comp=Z,663nm,12.8s
BRG
comp=N,615nm,13.4s
BRG
comp=E,965nm,13.4s
BRG Berggiesshubel 61.78 319 *e*P **P 17 36 36.1 +5.2**
BRG pmax pmax
comp=Z,8.0nm,1.3s,mb4.7
BRG MLR MLR
comp=Z,397nm,12.8s,MS4.8
BRG MLR MLR
comp=N,368nm,13.4s,MS5.0
BRG MLR MLR
comp=E,578nm,13.4s,MS5.0
CLL Collm 61.80 320 *e*P **P 17 36 36.0 +5.0**
comp=Z,14nm,0.9s,mb5.1
CLL Collm 61.80 320 *e*P **P 17 36 30.0 -1.0**
CLL *i* 17 36 36.0
CLL *e*S **S 17 45 10.0 +16**
CLL MLR MLR
comp=Z,600nm,18.7s,MS4.8
CLL Collm 61.80 320 *e*P **P 17 36 30.0 -1.0**
CLL *i* 17 36 36.0
CLL *i* 17 36 38.8
CLL *e*S **S 17 45 10.0 +16**
CLL LR LR
comp=Z,600nm,18.7s,MS4.8
CLL Collm 61.80 320 *e*P **P 17 36 30.0 -1.0**
CLL *i* (sP) sP 17 36 36.0 +0.5
CLL *i* 17 36 38.8
CLL *e*S **S 17 44 56.0 +2.2**
CLL *e*SS SS 17 49 06.0 +11
CLL LmH 18 01 00.0
comp=N,600nm,18.1s
CLL LmH 18 01 00.0
comp=E,700nm,18.4s
CLL LmV 18 06 00.0
comp=Z,600nm,18.7s
PVCC Panska Ves 61.81 318 *e*pP pP 17 36 36.8 +2.4
PVCC AMS AMS 18 07 20.0
comp=Z,900nm,11.9s
NRDL Niedersach Rie 61.92 322 *e*P **P 17 36 38.0 +6.2**
comp=Z,31nm,1.7s,mb5.2
VRAC Vranov 61.96 316 LR LR 18 06 32.4
comp=Z,508nm,18.2s,MS4.7,baz=34,slow=39
PRU Pruhonice 62.25 318 *e*P **P 17 36 35.5 +1.4**
PRU *e**PP pP 17 36 40.2 +2.9
PRU MLR MLR
comp=Z,600nm,14.1s,MS4.9
PRU Pruhonice 62.25 318 *e*P **P 17 36 35.5 +1.4**
PRU *e*pP pP 17 36 40.2 +2.9
PRU AMS AMS 18 06 00.0
comp=Z,600nm,14.1s
JCW Jim Creek 62.28 45 P **P 17 36 31.2 -3.1**
comp=Z,12nm,0.8s,mb5.1
GZR Gura Zlata 62.34 310 ⇓P **P 17 36 41.2 +6.4**
GZR Gura Zlata 62.34 310 ⇓*i*P **P 17 36 41.2 +6.4**
CLZ Clausthal 62.35 322 *e*P **P 17 36 40.4 +5.7**
comp=Z,17nm,1.3s,mb5.0
CLZ Clausthal 62.35 322 *e*P **P 17 36 40.4 +5.7**
CLZ pmax pmax
comp=Z,17nm,1.3s,mb5.0
TREC Trest 62.42 317 AMS AMS 18 07 40.0
comp=Z,700nm,13.0s
FCC Fort Churchill 62.50 23 *e*P **P 17 36 36.0 +0.3**
comp=Z,0.4nm,1.2s,mb3.4
ZST Bratislava 62.63 315 *e*P **P 17 36 36.2 -0.5**
ZST *e* 17 36 43.2
ZST pmax pmax
comp=Z,6.0nm,0.5s,mb5.0
ZST MLR MLR
comp=Z,800nm,14.9s,MS5.0
ZST Bratislava 62.63 315 *e*P **P 17 36 36.2 -0.5**
comp=Z,5.6nm,0.5s,mb5.0
ZST *e* 17 36 43.2
ZST LR LR
comp=Z,800nm,14.9s,MS5.0
ZST Bratislava 62.63 315 *e*P **P 17 36 36.2 -0.5**
ZST *e*pP pP 17 36 43.2 +3.3
BZS Buzias 62.69 311 ⇓P **P 17 36 42.7 +5.6**
BZS Buzias 62.69 311 ⇓*i*P **P 17 36 42.7 +5.6**
TANN Tannenbergstha 62.72 319 *e*P **P 17 36 42.6 +5.4**
comp=Z,6.0nm,1.1s,mb4.6
MOX Moxa 62.85 320 *e*P **P 17 36 43.9 +5.8**
comp=Z,26nm,1.6s,mb5.1
MOX
comp=Z,400nm,18.0s
MOX Moxa 62.85 320 *e*P **P 17 36 43.5 +5.4**
comp=Z,15nm,1.2s,mb5.0
MOX Moxa 62.85 320 *e*P **P 17 36 43.9 +5.8**
MOX pmax pmax
comp=Z,26nm,1.6s,mb5.1
MOX MLR MLR
comp=Z,400nm,18.0s,MS4.6
NKC Novy Kostel 62.87 319 AMS AMS 18 06 50.0
comp=Z,700nm,14.9s
KHC Kasperske Hory 63.31 318 *e*P **P 17 36 41.7 +0.5**
KHC *e**PP pP 17 36 47.1 +2.7
KHC MLR MLR
comp=Z,700nm,12.1s,MS5.0
KHC Kasperske Hory 63.31 318 *e*P **P 17 36 41.6 +0.4**
comp=Z,15nm,1.1s,mb5.0
KHC Kasperske Hory 63.31 318 *e*P **P 17 36 41.7 +0.5**
KHC *e*pP pP 17 36 47.1 +2.7
KHC AMS AMS 18 08 50.0
comp=Z,700nm,12.1s
ROTZ Rotzenmuhle 63.34 319 *e*P **P 17 36 47.0 +5.7**
comp=Z,22nm,1.6s,mb5.0
CSNA Conrad Observa 63.35 316 ⇓*i*P **P 17 36 41.3 -0.2**
comp=Z,19nm,1.4s,mb5.0
GEC2 GERESS Array S 63.49 318 *e*P **P 17 36 47.8 +5.4**
comp=Z,12nm,1.2s,mb4.9
GEC2 GERESS Array S 63.49 318 *e*P **P 17 36 47.8 +5.4**
GEC2 pmax pmax
comp=Z,12nm,1.2s,mb4.9
PKSM Moragy 63.53 313 ⇑P **P 17 36 47.9 +5.2**
PKSM Moragy 63.53 313 ⇑*i*P **P 17 36 47.8 +5.1**
WET Wettzell 63.58 318 *e*P **P 17 36 48.9 +6.0**
comp=Z,17nm,1.3s,mb4.9
WET Wettzell 63.58 318 *e*P **P 17 36 48.9 +6.0**
WET pmax pmax
comp=Z,17nm,1.3s,mb4.9
GRA1 Grafenberg Arr 63.77 320 *e*P **P 17 36 49.9 +5.7**
comp=Z,42nm,1.8s,mb5.2
GRA1 LR LR
comp=Z,700nm,19.6s,MS4.8
GRF Grafenberg Arr 63.77 320 *e*P **P 17 36 49.9 +5.7**
comp=Z,42nm,1.8s,mb5.2
GRF *e*L 18 07 32.9
comp=Z,653nm,19.6s
GRF Grafenberg Arr 63.77 320 *e*P **P 17 36 49.9 +5.7**
GRF pmax pmax
comp=Z,42nm,1.8s,mb5.2
GRF MLR MLR
comp=Z,700nm,19.6s,MS4.8
GRF Grafenberg Arr 63.77 320 *e*P **P 17 36 49.9 +5.7**
GRF pmax pmax
comp=Z,42nm,1.8s,mb5.2
GRF MLR MLR
comp=Z,700nm,19.6s,MS4.8
FFC Flin Flon 64.00 30 P **P 17 36 45.1 -0.5**
FFC pmax pmax
comp=Z,12nm,1.2s,mb4.8
FFC Flin Flon 64.00 30 P **P 17 36 45.1 -0.6**
comp=Z,12nm,1.2s,mb4.8
TNS Taunus Mts 64.38 322 *e*P **P 17 36 53.7 +5.5**
comp=Z,20nm,1.5s,mb4.9
TNS Taunus Mts 64.38 322 *e*P **P 17 36 53.7 +5.5**
TNS pmax pmax
comp=Z,20nm,1.5s,mb4.9
RJOB Jochberg 64.74 318 *e*P **P 17 36 56.6 +6.0**
comp=Z,10.0nm,1.0s,mb4.8
WALA Waterton Lakes 64.78 40 *e*P **P 17 36 49.8 -1.0**
comp=Z,0.7nm,1.1s,mb3.6
MEM Membach 64.93 323 P **P 17 36 51.8 0.0**
KBA Koelnbreinsper 65.06 317 ⇑*i*P **P 17 36 54.2 +1.5**
comp=Z,14nm,0.8s,mb5.1
BSMT Bassoo Peak 65.43 41 *e*P **P 17 36 52.6 -2.5**
comp=Z,7.6nm,1.0s,mb4.7
YBMT Yellow Bay 65.72 41 *e*P **P 17 36 57.2 +0.2**
comp=Z,4.8nm,0.9s,mb4.5
GIVF Givet 65.77 324 *e*P **P 17 37 02.5 +5.3**
BFO Black Forest 65.98 321 *e*P **P 17 37 03.7 +5.1**
comp=Z,13nm,1.5s,mb4.7
BFO Black Forest 65.98 321 *e*P **P 17 36 57.8 -0.8**
BFO pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
BFO Black Forest 65.98 321 *e*P **P 17 36 57.8 -0.8**
comp=Z,7.0nm,1.1s,mb4.6
BAIF Baives 66.02 324 *e*P **P 17 37 04.0 +5.2**
comp=Z,11nm,0.7s,mb4.7
SWMT Swartz Lake 66.02 41 *e*P **P 17 37 00.2 +1.4**
comp=Z,9.8nm,1.0s,mb4.8
CDF Champ du Feu 66.31 321 *e*P **P 17 37 06.2 +5.5**
SLMT Seeley Lake 66.43 41 *e*P **P 17 37 00.6 -1.0**
comp=Z,9.8nm,0.9s,mb4.8
MSO Missoula 66.60 41 *e*P **P 17 37 00.5 -2.1**
comp=Z,8.5nm,1.1s,mb4.7
KAKA Kakadu 66.63 175 *e*P **P 17 37 02.0 -1.1**
comp=Z,24nm,0.7s,mb5.3
DAVOX Davos/Dischmat 66.67 319 LR LR 18 07 37.0
comp=Z,579nm,18.1s,MS4.8,baz=12,slow=37
CHMT Chamberlain Mo 66.80 41 *e*P **P 17 37 04.2 +0.3**
comp=Z,17nm,1.6s,mb4.8
BMO Blue Mountains 66.87 45 *e*P **P 17 37 04.5 +0.1**
comp=Z,11nm,1.2s,mb4.8
HINF Hinteralfeld 66.96 321 *e*P **P 17 37 10.1 +5.2**
comp=Z,3.6nm,0.5s,mb4.3
MEZF Maizieres J'vi 67.04 323 *e*P **P 17 37 11.0 +5.6**
EGMT Eagleton 67.18 38 *e*P **P 17 37 06.2 0.0**
comp=Z,35nm,1.5s,mb5.2
HRY Holter Researc 67.51 40 P **P 17 37 08.7 +0.3**
comp=Z,13nm,0.7s,mb5.1
MOD Modoc 67.97 48 P **P 17 37 09.8 -1.6**
comp=Z,6.9nm,1.0s,mb4.6
LRM Limekiln Ridge 68.01 41 P **P 17 37 13.1 +1.6**
comp=Z,49nm,1.3s,mb5.4
WVOR Wild Horse Val 68.27 47 *e*P **P 17 37 14.3 +1.0**
WVOR pmax pmax
comp=Z,9.0nm,1.3s,mb4.6
WVOR Wild Horse Val 68.27 47 *e*P **P 17 37 14.3 +1.1**
comp=Z,9.5nm,1.3s,mb4.7
DLMT Dillon 68.34 41 *e*P **P 17 37 14.1 +0.4**
comp=Z,16nm,1.1s,mb5.0
BOZ Bozeman (W) 68.47 41 *e*P **P 17 37 15.1 +0.6**
BOZ pmax pmax
comp=Z,11nm,1.4s,mb4.7
BOZ Bozeman (W) 68.47 41 *e*P **P 17 37 15.1 +0.6**
comp=Z,11nm,1.4s,mb4.7
LOR Lormes 68.51 323 *e*P **P 17 37 20.6 +5.9**
comp=Z,30nm,1.3s,mb4.8
MCMT McKenzie Canyo 68.69 42 *e*P **P 17 37 16.3 +0.5**
comp=Z,8.9nm,1.0s,mb4.7
FLN La Foliniere 68.71 326 *e*P **P 17 37 20.3 +4.4**
LDF La Druitiere 68.74 326 *e*P **P 17 37 20.8 +4.7**
comp=Z,32nm,1.2s,mb4.8
SSF Saint Saulge 68.81 323 *e*P **P 17 37 21.7 +5.1**
comp=Z,8.6nm,0.9s,mb4.4
SSF Saint Saulge 68.81 323 *e*P **P 17 37 21.7 +5.1**
SSF pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
SSF Saint Saulge 68.81 323 *e*P **P 17 37 21.7 +5.1**
comp=Z,4.3nm,0.9s,mb4.4
LPL La Plagne 68.94 320 *e*P **P 17 37 23.5 +6.1**
LPG La Plagne 68.94 320 *e*P **P 17 37 23.6 +6.2**
SMF Signal de Mont 69.05 322 *e*P **P 17 37 22.6 +4.6**
comp=Z,17nm,1.0s,mb4.6
SMF Signal de Mont 69.05 322 *e*P **P 17 37 22.6 +4.6**
SMF pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
SMF Signal de Mont 69.05 322 *e*P **P 17 37 22.6 +4.6**
comp=Z,8.5nm,1.0s,mb4.6
AVF Avril sur Loir 69.10 323 *e*P **P 17 37 23.5 +5.2**
HLID Hailey 69.11 44 *e*P **P 17 37 19.4 +0.9**
comp=Z,16nm,1.5s,mb4.7
GRR Gorron 69.16 326 *e*P **P 17 37 23.8 +5.1**
QLMT Earthquake Lak 69.24 41 *e*P **P 17 37 19.7 +0.4**
BGF Bois d'Agland 69.48 323 *e*P **P 17 37 26.0 +5.3**
comp=Z,5.0nm,0.5s,mb4.4
BGF Bois d'Agland 69.48 323 *e*P **P 17 37 26.0 +5.3**
BGF pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
BGF Bois d'Agland 69.48 323 *e*P **P 17 37 26.0 +5.3**
comp=Z,2.5nm,0.5s,mb4.4
ORIF Oris-en-Rattie 69.76 320 *e*P **P 17 37 28.2 +5.7**
RLMT Red Lodge 69.81 39 *e*P **P 17 37 24.6 +1.8**
comp=Z,36nm,1.5s,mb5.1
SGMF Saint Gilles 69.82 327 *e*P **P 17 37 28.0 +5.2**
TCF Toulx Ste Croi 69.93 323 *e*P **P 17 37 28.9 +5.4**
comp=Z,2.8nm,0.5s,mb4.1
TCF Toulx Ste Croi 69.93 323 *e*P **P 17 37 28.9 +5.4**
TCF pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
TCF Toulx Ste Croi 69.93 323 *e*P **P 17 37 28.9 +5.4**
comp=Z,1.4nm,0.5s,mb4.2
IMW Indian Meadow 70.21 41 P **P 17 37 27.0 +1.7**
comp=Z,6.3nm,1.1s,mb4.5
VIVF Saint-Julien-l 70.27 321 *e*P **P 17 37 31.2 +5.6**
MFF Saint Martin d 70.48 325 *e*P **P 17 37 32.1 +5.3**
RRI2 Red Ridge 70.53 42 P **P 17 37 27.2 0.0**
comp=Z,10nm,1.3s,mb4.6
TPAW Teton Pass 70.55 41 P **P 17 37 28.6 +1.2**
comp=Z,12nm,1.3s,mb4.7
SMRF Simiane la Rot 70.68 320 *e*P **P 17 37 33.8 +5.7**
RJF Les Rejaudoux 71.03 323 *e*P **P 17 37 34.4 +4.2**
N12A Clover Valley, 71.10 46 *e*P **P 17 37 30.1 -0.7**
comp=Z,19nm,1.3s,mb4.9
NVAR Mina Array Bea 71.69 49 P **P 17 37 34.6 +0.2**
comp=Z,0.5nm,0.6s,mb3.6,baz=318,slow=4.5,SNR=6.5
PDAR Pinedale Array 71.70 41 P **P 17 37 34.2 -0.2**
comp=Z,1.2nm,0.6s,mb4.0,baz=88,slow=4.7,SNR=4.0
HWUT Hardware Ranch 71.90 43 *e*P **P 17 37 36.1 +0.6**
comp=Z,24nm,1.2s,mb5.0
DUG Dugway 72.58 45 *e*P **P 17 37 40.2 +0.6**
DUG pmax pmax
comp=Z,22nm,1.6s,mb4.8
DUG Dugway 72.58 45 *e*P **P 17 37 40.2 +0.5**
comp=Z,22nm,1.6s,mb4.8
WRA Warramunga Arr 73.92 174 P **P 17 37 44.8 -2.7**
comp=Z,0.5nm,0.6s,mb3.6,baz=353,slow=6.6,SNR=15
WRA PP PP 17 40 47.7 +15
comp=Z,0.8nm,1.0s,baz=345,slow=6.7,SNR=4.6
WRA Warramunga Arr 73.92 174 P **P 17 37 44.8 -2.7**
WRA PP PP 17 40 47.7 +15
MSU Marysvale 74.26 45 *e*P **P 17 37 51.5 +1.9**
MSU pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
MSU Marysvale 74.26 45 *e*P **P 17 37 51.5 +1.9**
comp=Z,4.1nm,1.2s,mb4.2
PV04 Paradox Valley 75.70 43 P **P 17 37 59.5 +1.7**
ISCO Idaho Springs 75.77 40 *e*P **P 17 37 59.7 +1.5**
ISCO pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
ISCO Idaho Springs 75.77 40 *e*P **P 17 37 59.7 +1.5**
comp=Z,3.8nm,1.0s,mb4.3
PV01 Paradox Valley 76.06 43 *e*P **P 17 38 00.8 +0.8**
comp=Z,509nm,0.9s
ASAR Alice Springs 77.59 174 P **P 17 38 07.0 -1.5**
comp=Z,0.6nm,0.7s,mb3.6,baz=3.6,slow=6.3,SNR=10
ASAR Alice Springs 77.59 174 P **P 17 38 07.0 -1.5**
ASAR pmax pmax
comp=Z,1.0nm,0.7s

SDCO	Great Sand Dun	77.60	41	eP		P		17 38 08.8	+0.2
	comp=Z,0.9nm,0.4s,mb4.0								
ESDC	Sonseca Array	77.90	324	P		P		17 38 10.3	0.0
	comp=Z,0.2nm,0.3s,mb3.5,baz=14,slow=5.7,SNR=3.0								
ESDC	Sonseca Array	77.90	324	P		P		17 38 10.3	0.0
LAZ	Ladron	79.86	44	eP		P		17 38 22.8	+1.6
	comp=Z,7.1nm,1.5s,mb4.4								
NCB	Newcomb	80.49	16	P		P		17 38 26.5	+2.2
	comp=Z,14nm,1.3s,mb4.7								
WMOK	Wichita Mounta	82.76	37	P		P		17 38 37.5	+1.0
WMOK				pmax	pmax				
	comp=Z,5.0nm,1.1s,mb4.5								
WMOK	Wichita Mounta	82.76	37	P		P		17 38 37.5	+1.0
	comp=Z,4.9nm,1.1s,mb4.5								
TXAR	Lajitas Array	85.71	43	P		P		17 38 52.5	+0.9
	comp=Z,0.2nm,0.7s,mb3.5,baz=270,slow=2.7,SNR=2.1								
STKA	Stephens Creek	86.41	168	P		P		17 38 53.9	-0.8
	comp=Z,6.2nm,1.3s,mb4.7,baz=63,slow=11,SNR=2.2								
TORD	Torodi Ar. Bea	99.05	307	PP		PP		17 43 57.9	+2.7
	comp=Z,0.6nm,0.8s,baz=46,slow=4.2,SNR=4.0								
QSPA	South Pole Qui	143.83	180	PKP		PKPdf		17 45 43.3	-2.7
	comp=Z,1.0nm,0.7s,baz=299,slow=4.3,SNR=8.1								
NVL	N'lazarevskaya	148.04	214	ePKP2		PKPab		17 46 04.6	+5.1
CPUP	Villa Florida	152.00	10	PKPbc		PKPbc		17 46 07.6	0.0
	comp=Z,0.8nm,0.5s,baz=65,slow=5.0,SNR=4.2								
CPUP	Villa Florida	152.00	10	PKPbc		PKPbc		17 46 07.6	0.0

TAP ***17*** *17:38:08.9, 24.°27N×122.°40E, h48km, ML3.9, C*
ISCJB ***17*** *17:38:09.0±0.5, 24.°26N±0.°02×122.°46E±0.°01, h33km±4km, Error ellipse: s-maj=3.6km s-min=2.1km az=171.0*
JMA ***17*** *17:38:09.4±0.1, 24.°43N×122.°48E, h56km±1km, M3.1*
ISC 17 17:38:09.1±0.4, 24.°27N±0.°02×122.°45E±0.°01, h29km±3km, n60, σ0.96°/110, 8C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.55	69	P	Pb	17 38 20.9	+0.7
YOJ				S	Sb	17 38 29.2	+1.4
TWC	Suao	0.64	302	i P	Pb	17 38 21.6	-0.3
TWC	baz=304			S	Sb	17 38 30.3	-0.2
ENA	Nanau	0.67	284	⇑iP	Pb	17 38 21.8	-0.4
ENA	baz=289			eS	Sb	17 38 31.4	+0.2
TWD	Chiawan	0.80	257	⇑iP	Pn	17 38 23.3	-1.1
TWD	baz=245			eS	Sb	17 38 33.4	-1.6
ILA	Ilan	0.81	308	eP	Pn	17 38 24.7	+0.2
ILA	baz=318			eS	Sb	17 38 36.0	+0.9
HWA	Hwalien	0.82	250	P	Pn	17 38 23.8	-0.9
HWA	baz=248			eS	Sb	17 38 35.2	-0.4
TWE	Neicheng	0.84	302	i P	Pn	17 38 24.7	-0.3
TWE	baz=298			S	Sb	17 38 36.4	+0.2
TWB1	Santiao Chiao	0.85	330	P	Pn	17 38 24.5	-0.5
TWB1	baz=342			S	Sb	17 38 35.1	-1.2
ENTT	Nioudou	0.89	295	⇑iP	Pn	17 38 25.5	-0.1
ENTT	baz=289			eS	Sb	17 38 37.7	+0.3
NNS	Nan Shan	1.00	280	⇑iP	Pn	17 38 26.6	-0.5
NNS	baz=271			eS	Sn	17 38 40.3	+0.1
NWF	Wu-fen Shan	1.00	323	P	Pn	17 38 26.9	-0.3
NWF	baz=324			S	Sn	17 38 39.3	-1.1
ESL	Shilin	1.03	244	i P	Pn	17 38 26.1	-1.5
ESL	baz=233			eS	Sn	17 38 39.3	-1.8
TWA	Mucha	1.06	312	P	Pn	17 38 27.7	-0.2
TWA	baz=325			eS	Sn	17 38 40.9	-0.8
NSK	Sanguang	1.07	292	⇑iP	Pn	17 38 28.0	-0.1
NSK	baz=281			S	Sn	17 38 42.1	0.0
WHF	Hehuan Shan	1.09	264	P	Pn	17 38 27.7	-0.7
WHF	baz=252			eS	Sn	17 38 41.2	-1.3
TAP1	Taipei	1.14	312	eP	Pn	17 38 28.8	-0.3
TAP1	baz=325			eS	Sn	17 38 43.0	-0.7
TWT	Tachien	1.16	269	i P	Pn	17 38 29.5	+0.2
TWT	baz=269			eS	Sn	17 38 44.7	+0.5
IRIF	Iriomote-Funau	1.17	87	P	Pn	17 38 29.2	-0.3
IRIF				eS	Sn	17 38 44.3	-0.2
TWS1	Kuangyinshan	1.25	312	P	Pn	17 38 30.2	-0.4
TWS1	baz=323			eS	Sn	17 38 47.0	+0.5
HATJ	Hateruma jima	1.26	99	P	Pn	17 38 31.2	+0.5
HATJ				eS	Sn	17 38 47.5	+0.9
TWY	Chenhua	1.27	323	P	Pn	17 38 30.4	-0.4
TWY	baz=323			eS	Sn	17 38 46.9	0.0
EHY	Hungye	1.28	234	i P	Pn	17 38 29.8	-1.3
EHY	baz=242			eS	Sn	17 38 45.4	-1.8
NCU	National Centr	1.34	302	eP	Pn	17 38 32.1	+0.2
NCU	baz=301			eS	Sn	17 38 49.0	+0.3
NSTT	Nanjuang	1.37	286	⇑iP	Pn	17 38 32.5	+0.3
NSTT	baz=285			S	Sn	17 38 49.8	+0.4
TWF1	Yuli	1.40	229	P	Pn	17 38 31.5	-1.1
TWF1	baz=241			eS	Sn	17 38 48.1	-1.9
JKRS	Kuro-shima	1.42	91	P	Pn	17 38 33.4	+0.4
JKRS				eS	Sn	17 38 51.1	+0.4
SMLT	Sun Moon Lake	1.47	255	⇑iP	Pn	17 38 33.3	-0.3
SMLT	baz=254			S	Sn	17 38 50.6	-1.2
TYC	Yuchr	1.50	256	⇑iP	Pn	17 38 33.6	-0.4
TYC	baz=248			S	Sn	17 38 51.5	-1.1
TWQ1	Liyutan	1.53	273	P	Pn	17 38 35.1	+0.6
TWQ1	baz=273			eS	Sn	17 38 54.4	+1.0
NSY	Sanyi	1.55	276	eP	Pn	17 38 35.4	+0.8
NSY	baz=275			eS	Sn	17 38 55.2	+1.4
JIJ	Ishigaki jima	1.55	86	P	Pn	17 38 34.3	-0.4
JIJ				eS	Sn	17 38 52.9	-0.9
YUS	Yu-Shan	1.57	241	P	Pn	17 38 35.2	+0.2
YUS	baz=240			S	Sn	17 38 53.0	-1.5
TCU	Taichung	1.62	266	P	Pn	17 38 36.4	+0.7
TCU	baz=265			eS	Sn	17 38 57.3	+1.6
WNT	Mingjian	1.66	257	P	Pn	17 38 37.2	+0.9
WNT	baz=256			eS	Sn	17 38 57.5	+0.9
ALS	Alishan	1.68	244	i P	Pn	17 38 36.9	+0.4
ALS	baz=234			S	Sn	17 38 56.4	-0.7
ELDTW	Lidau	1.70	231	eP	Pn	17 38 35.6	-1.1
ELDTW	baz=230			eS	Sn	17 38 55.3	-2.2
CHN5	Tsauling	1.75	248	i P	Pn	17 38 38.0	+0.5
CHN5	baz=236			eS	Sn	17 38 59.8	+0.9
WGK	Gukeng	1.82	252	eP	Pn	17 38 39.4	+0.9
WGK	baz=251			eS	Sn	17 39 01.2	+0.7
TWG	Pinlang	1.92	222	eP	Pn	17 38 38.2	-1.5
WTP	Ta-pu	1.97	239	P	Pn	17 38 40.9	+0.4
WTP	baz=238			eS	Sn	17 39 04.8	+0.7
CHY	Chiayi	2.01	248	P	Pn	17 38 42.1	+1.2
CHY	baz=247			eS	Sn	17 39 06.7	+1.6
TWK	Hsinying	2.06	241	P	Pn	17 38 42.5	+0.8
TWK	baz=240			eS	Sn	17 39 07.3	+1.0
CHN1	Nanshi	2.06	239	P	Pn	17 38 42.6	+0.8
CHN1	baz=238			eS	Sn	17 39 07.2	+0.6
SGST	Jiashian	2.08	236	P	Pn	17 38 43.1	+1.1
SGST	baz=235			eS	Sn	17 39 08.4	+1.4
JTJ	Tarama	2.09	79	P	Pn	17 38 42.3	+0.2
JTJ				eS	Sn	17 39 06.3	-0.8
WSF	Szhu	2.13	253	eP	Pn	17 38 43.4	+0.7
WSF	baz=265			eS	Sn	17 39 09.9	+1.6
ECL	Taimali	2.16	220	P	Pn	17 38 41.3	-1.8
CHN8	Yiju	2.25	246	P	Pn	17 38 44.8	+0.5
CHN8	baz=246			S	Sn	17 39 11.7	+0.7
CHN3	Shinhua	2.25	239	eP	Pn	17 38 46.5	+2.2
CHN3	baz=238			eS	Sn	17 39 13.6	+2.5
SSD	Sandimen	2.25	228	eP	Pn	17 38 45.3	+0.9
EAST	Anshuo	2.39	218	P	Pn	17 38 45.1	-1.1
EAST	baz=218			eS	Sn	17 39 11.8	-2.7
SCZT	Fangliau	2.53	222	eP	Pn	17 38 49.7	+1.5
JMJ	Miyako jima 2	2.65	78	P	Pn	17 38 51.0	+1.2
JMJ				eS	Sn	17 39 20.9	0.0
JOGS	Gusukube	2.74	79	P	Pn	17 38 52.3	+1.3
JOGS				eS	Sn	17 39 23.3	+0.1
JKE	Kume jima 2	4.43	62	P	Pn	17 39 14.7	+0.4
JAGN	Aguni-jima	4.91	61	P	Pn	17 39 21.1	+0.2
JIH	Iheya	5.69	60	P	Pn	17 39 31.8	+0.2
JOW	Kunigami	5.85	63	P	Pn	17 39 33.0	-0.8
JTK	Tokunoshima	6.82	58	P	Pn	17 39 45.7	-1.4
JAM	Amami Oshima	7.63	56	P	Pn	17 39 56.5	-1.8

IDC ***17*** *17:41:47.3±3.0, 5.°28N×83.°00W, h0km, mb4.0/3, mb1 4.3/6, mb1mx4.0/20, mbtmp4.3/6, ML2.8/2, Error ellipse: s-maj=56.9km s-min=6.3km az=174.0*
NEIC ***17*** *17:41:49.5±1.1, 5.°31N×82.°72W, h10km, mb4.5/7, Error ellipse: s-maj=19.9km s-min=12.2km az=211.0*
ISCJB ***17*** *17:41:50.4±3.2, 5.°3N±0.°1×82.°58W±0.°08, h25km±25km, mb4.1/7, Error ellipse: s-maj=19.1km s-min=10.6km az=27.5*
ISC 17 17:41:53.9±1.2, 5.°3N±0.°1×82.°57W±0.°08, h37km±12km, n29, σ1.9°12/29, mb4.1/7, 1C, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCIP	Isla Barro Col	4.69	35	ePn	Pn	17 43 01.0	-1.3
JTS	JuntasAbangare	5.48	335	Pn	Pn	17 43 08.9	-4.2
	40nm,0.3s,baz=123,slow=11,SNR=66						
JTS	JuntasAbangare	5.48	335	⇑ePn	Pn	17 43 08.2	-4.9
OTAV	Otavalo	6.51	141	ePn	Pn	17 43 27.1	-0.2
ROSC	El Rosal	8.22	93	Pn	Pn	17 43 55.4	+4.6
	1.4nm,0.3s,baz=287,slow=19,SNR=2.4						
ROSC	El Rosal	8.22	93	ePn	Pn	17 43 55.6	+4.8
PAYG	Puerto Ayora	9.73	233	Pn	Pn	17 44 05.2	-6.4
	62nm,1.1s						
TGUH	Tegucigalpa,Un	9.84	332	P	Pn	17 44 14.2	+1.2
APG	El Apazote	12.37	322	Pn	Pn	17 44 46.9	-0.6
	0.2nm,0.3s,baz=148,slow=15,SNR=2.4						
SDV	Santo Domingo	12.37	73	Pn	Pn	17 44 49.0	+1.4
	0.1nm,0.3s,baz=264,slow=9.2,SNR=12						
SDV	Santo Domingo	12.37	73	ePn	Pn	17 44 48.9	+1.3
	469nm,0.8s						
TEIG	Tepich	15.83	340	ePn	Pn	17 45 33.3	-0.8
	13nm,1.1s						
CMIG	Matias Romero	16.80	315	Pn	Pn	17 45 46.2	-0.3
	0.2nm,0.3s,baz=39,slow=3.2,SNR=4.8						
CMIG	Matias Romero	16.80	315	Pn	Pn	17 45 46.2	-0.3
SDDR	Presa de Saban	17.48	38	ePn	Pn	17 45 55.6	+0.6
SJG	San Juan	20.48	50	P	P	17 46 30.3	+1.6
	8.2nm,0.3s,baz=264,slow=8.7,SNR=5.0						
SJG	San Juan	20.48	50	eP	P	17 46 29.7	+1.0
	16nm,0.8s						
MTP	Monte Pirata	20.93	51	eP	P	17 46 33.0	-0.6
	55nm,1.3s						
BBGH	Gun Hill	23.99	69	eP	P	17 47 03.9	-1.5
	1μm,1.6s						
LAZ	Ladron	36.81	325	eP	P	17 48 59.7	+1.2
	1.1nm,0.9s,mb3.7						
SDCO	Great Sand Dun	38.46	330	eP	P	17 49 13.2	+0.9
	6.5nm,0.2s,mb5.0						
PDAR	Pinedale Array	44.30	331	P	P	17 49 57.4	-2.8
	0.3nm,0.4s,mb3.4,baz=132,slow=8.8,SNR=4.5						
PDAR	Pinedale Array	44.30	331	P	P	17 49 57.4	-2.8
NVAR	Mina Array Bea	46.23	321	P	P	17 50 17.1	+1.5
	1.6nm,0.9s,mb3.9,baz=151,slow=8.3,SNR=8.5						
NVAR	Mina Array Bea	46.23	321	P	P	17 50 17.1	+1.5
BOZ	Bozeman (W)	47.45	332	eP	P	17 50 25.8	+0.8
	2.4nm,1.2s,mb4.0						
WVOR	Wild Horse Val	48.87	325	eP	P	17 50 35.6	-0.4
	17nm,1.8s,mb4.8						
YKA	Yellowknife Ar	61.74	344	P	P	17 52 07.0	-1.3
	1.4nm,0.9s,mb4.1,baz=139,slow=7.0,SNR=7.7						
YKA	Yellowknife Ar	61.74	344	P	P	17 52 07.0	-1.3

BJI ***17*** *17:42:07.8, 4.°56N×83.°23W, h10km, mB5.6/26, Ms5.8/28, Ms7 5.5/29*
MOS ***17*** *17:42:08.7±1.2, 5.°15N×82.°58W, h10km, mb5.7/131, MS5.2/74, Error ellipse: s-maj=12.7km s-min=5.4km az=108.7*
IDC ***17*** *17:42:08.0±0.5, 5.°04N×82.°66W, h0km, mb5.2/22, mb1 5.4/29, mb1mx5.4/30, mbtmp5.3/29, ML5.0/5, MS5.7/3, Ms1 5.7/3, ms1mx5.2/7, Error ellipse: s-maj=18.7km s-min=11.2km az=60.0*
NEIC ***17*** *17:42:09.7±0.2, 5.°01N×82.°65W, h10km, mb5.6/295, MS5.3/194, MW5.9, MW5.9, Error ellipse: s-maj=4.3km s-min=2.7km az=214.0, Moment Tensor Solution. s50 Moment tensor: Scale 10^17 Nm; Mrr2.44; Mθθ1.65; Mφφ-4.09; Mrθ0.34; Mrφ6.69; Mθφ2.29; Best double couple: M07.90000×10^17 NP1:φs9.00000°, δ82.00000°, λ159.00000°. NP2:φs103.00000°, δ69.00000°, λ9.00000°. Principal axes: T 6.6500, Plg21.0000°, Azm324.0000°; N 2.1100, Plg67.0000°, Azm169.0000°; P -8.7700, Plg8.0000°, Azm57.0000°;*
NEIC Felt at David. Also felt in southern Costa Rica and in the Valle Central.
BGS ***17*** *17:42:09.3±3.3, 5.°01N×82.°65W, h10km, mb5.5, MS5.3*
ISCJB ***17*** *17:42:13.8±0.2, 5.°34N±0.°03×82.°55W±0.°02, h33km, mb5.5/351, MS5.3/230, Error ellipse: s-maj=4.7km s-min=2.1km az=18.6*
GCMT ***17*** *17:42:14.5±0.1, 4.°94N×82.°62W, h25km, MW5.9, Moment Tensor Solution. s99,c208; s80,c112; Moment tensor: Scale 10^18 Nm; Mrr0.00; Mθθ0.00; Mφφ0.00; Mrθ0.00; Mθφ0.00; Mrφ0.00; Best double couple: M0 1.00000×10^18 NP1:φs4.00000°, δ83.00000°, λ178.00000°. NP2: φs94.00000°, δ88.00000°, λ7.00000°. Principal axes: T 1.0500, Plg6.0000°, Azm319.0000°; N -0.0900, Plg83.0000°, Azm107.0000°; P -0.9600, Plg4.0000°, Azm229.0000°; Data Used: II IU IC G CN. Surface waves: sta=108, comp=235, per= 50.*
SZGRF ***17*** *17:42:17.9, 6.°39N×82.°97W, h33km, mb5.6, MS5.5, South of Panama*
ISC 17 17:42:14.9±0.2, 5.°17N±0.°03×82.°55W±0.°02, h35km, n1359, σ0.94°/1180, mb5.5/352, MS5.3/230, 224C-224D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVD	David	3.25	2	i P	Pn	17 42 55.5	-7.9
ACR	Cerro Adams	3.52	350	i P	Pn	17 43 01.4	-5.7
BAR1		4.12	349	i P	Pn	17 43 10.8	-4.6
CNI	Changuinola	4.22	0	⇑iP	Pn	17 43 12.9	-3.9
BUS	Buena Vista	4.52	345	i P	Pn	17 43 17.0	-3.9
QCR	Quepos	4.52	339	i P	Pn	17 43 15.4	-5.5
URSC	Urasca	4.79	345	i P	Pn	17 43 20.8	-3.9
BCIP	Isla Barro Col	4.80	34	ePn	Pn	17 43 23.1	-1.7
BCIP	Isla Barro Col	4.80	34	⇓iPg	Pn	17 43 23.0	-1.7
BCIP				⇓iP		17 43 23.0	
BCIP				eS	Sn	17 44 23.2	+4.1
BCIP				AML	AML	17 44 29.2	
	comp=N,3μm,0.6s						
UPIG		4.84	38	eP	Pn	17 43 23.7	-1.5
UPIG				eS	Sn	17 44 19.4	-0.6
LAJ	Bijagual	4.92	342	i P	Pn	17 43 20.9	-5.4
PRS1	Puriscal	5.09	340	i P	Pn	17 43 22.5	-6.2
CGA2	Cerro Gallo 2	5.18	339	i P	Pn	17 43 25.1	-4.9
JTS	JuntasAbangare	5.62	335	Pn	Pn	17 43 32.7	-3.3
	comp=N,40μm,0.4s,SNR=54						
JTS	JuntasAbangare	5.62	335	Pn	Pn	17 43 31.4	-4.6
	comp=N,1μm,0.3s,baz=152,slow=8.8,SNR=190						
JTS				Sn	Sn	17 44 35.8	-3.5
	comp=N,281nm,0.3s,baz=304,slow=23,SNR=7.8						
JTS				LR	LR	17 45 44.7	
	comp=N,41μm,21.3s,baz=160,slow=38						
JTS	JuntasAbangare	5.62	335	P	Pn	17 43 31.4	-4.6
JTS						18 44 35.8	
JTS				smax			
	comp=N,281nm,0.3s						
JTS				MLR	MLR		
	comp=Z,41μm,21.3s						
JTS	JuntasAbangare	5.62	335	⇑ePn	Pn	17 43 31.2	-4.8
	comp=Z,4μm,0.5s						
JTS	JuntasAbangare	5.62	335	eP	Pn	17 43 31.1	-4.9
OTAV	Otavalo	6.38	140	⇑iPn	Pn	17 43 41.1	-5.4
	comp=Z,466nm,0.8s						
OTAV	Otavalo	6.38	140	⇑iPn	Pn	17 43 41.1	-5.4
OTAV				AMS	AMS	17 46 06.7	
	comp=Z,45μm,17.7s						
SSN	San Juan del S	6.92	332	eP	Pn	17 43 51.1	-2.7
CONN	Concepcion	7.05	335	eP	Pn	17 43 53.2	-2.4
MGAN	Managua	7.84	332	eP	Pn	17 44 02.4	-4.0
CSAN		7.95	331	eP	Pn	17 44 04.9	-3.1
HUEN		7.97	334	eP	Pn	17 44 05.5	-2.8
COPN	Copaltepe	8.03	330	eP	Pn	17 44 06.4	-2.7
ROSC	El Rosal	8.20	92	Pn	Pn	17 44 11.8	+0.4
	comp=Z,11nm,0.3s,baz=284,slow=2.8,SNR=22						
ROSC	El Rosal	8.20	92	⇑ePn	Pn	17 44 13.1	+1.7
ROSC	El Rosal	8.20	92	⇑ePn	Pn	17 44 13.1	+1.7
MOMN	Momotombo	8.20	332	eP	Pn	17 44 11.1	-0.4
CNGN	Cerro Negro	8.36	331	eP	Pn	17 44 10.3	-3.3
CRIN	San Cristobal	8.70	330	eP	Pn	17 44 15.2	-3.2
CNCH	Conchagua	9.60	327	eP	Pn	17 44 29.9	-0.7
PAYG	Puerto Ayora	9.66	233	⇓iPn	Pn	17 44 29.4	-2.1
	comp=Z,4μm,1.3s						
PAYG	Puerto Ayora	9.66	233	⇓iPn	Pn	17 44 29.4	-2.1
BLLM	Bellamira	9.95	326	eP	Pn	17 44 35.3	-0.2
TGUH	Tegucigalpa,Un	9.98	333	eP	Pn	17 44 34.4	-1.5
	comp=Z,586nm,0.6s						
TGUH	Tegucigalpa,Un	9.98	333	eP	Pn	17 44 34.1	-1.8
TGUH				AMb	AMB	17 44 40.5	
	comp=Z,3μm,1.1s						
CAHU	Cacacuatique	10.21	327	eP	Pn	17 44 37.5	-1.5
LFRS	El Faro	10.57	323	eP	Pn	17 44 44.6	+0.6
BOQS	Boqueron	10.79	323	eP	Pn	17 44 48.0	+1.0
SBLS	San Blas	11.08	322	eP	Pn	17 44 51.3	+0.3
MTO2	Montecristo 2	11.36	324	eP	Pn	17 44 56.3	+1.5
SDV	Santo Domingo	12.39	72	Pn	Pn	17 45 09.4	+0.6
	comp=Z,5.3nm,0.3s,baz=264,slow=9.9,SNR=81						
SDV				Sn	Sn	17 47 25.8	0.0
	comp=Z,5.1nm,0.3s,baz=120,slow=20,SNR=2.4						
SDV	Santo Domingo	12.39	72	ePn	Pn	17 45 09.1	+0.2
	comp=Z,497nm,0.8s						
SDV	Santo Domingo	12.39	72	eP	Pn	17 45 09.4	+0.6
APG	El Apazote	12.49	322	Pn	Pn	17 45 08.0	-2.3
	comp=Z,31nm,0.3s,baz=145,slow=12,SNR=63						
ATAH	Atahualpa	12.90	161	Pn	Pn	17 45 13.6	-2.3
	comp=Z,36nm,0.3s,baz=2.9,slow=8.7,SNR=71						
ATAH				LR	LR	17 49 36.6	
	comp=Z,59μm,21.6s,baz=334,slow=35						
MCJ	Malvern	13.54	20	⇑iP	Pn	17 45 25.7	+1.1
MTDJ	Mount Denham	13.87	20	ePn	Pn	17 45 27.9	-1.3
	comp=Z,427nm,1.1s						
MTDJ	Mount Denham	13.87	20	eP	Pn	17 45 28.4	-0.7
HOJ	Hope	13.96	23	i P	Pn	17 45 31.8	+1.5
STH	Stony Hill	14.00	23	⇑eP	Pn	17 45 31.8	+0.9
STH	Stony Hill	14.00	23	i P	Pn	17 45 32.1	+1.2
STH				i S		17 45 41.7	
GWJ	Greenwich	14.03	23	i P	Pn	17 45 32.2	+0.9
CMJ	Castle Mountai	14.23	25	i P	Pn	17 45 35.8	+1.8
LMGC	Las Mercedes	15.76	20	ePN	Pn	17 45 55.3	+1.0
	baz=202						
LMGC				eSN	Sn	17 48 57.6	+10
	comp=N,6μm,16.2s						
LMGC				e			
	comp=E,15μm,20.0s						
TEIG	Tepich	15.97	340	⇑iPn	Pn	17 45 55.1	-1.9
	comp=E,199nm,1.0s						
TEIG	Tepich	15.97	340	⇑iP	Pn	17 45 55.8	-1.2
RCC	Rio Carpintero	16.18	24	ePN	Pn	17 45 59.6	0.0
	baz=203						
RCC				eSN	Sn	17 48 35.3	-23
	comp=N,7μm,18.2s						
RCC				e			
	comp=E,17μm,20.0s						
GTBY	Guantanamo Bay	16.36	26	⇓iPn	Pn	17 46 02.8	+0.9
	comp=E,719nm,1.2s						
GTBY	Guantanamo Bay	16.36	26	eP	Pn	17 46 02.8	+0.8
CMIG	Matias Romero	16.92	315	Pn	Pn	17 46 05.6	-3.5
	comp=E,1.1nm,0.3s,baz=119,slow=10.0,SNR=37						
MASC	Masc	16.97	28	eP	Pn	17 46 11.6	+1.9
MOAC	Moa	17.07	25	eP	Pn	17 46 13.1	+2.1
SOR	Soroa	17.53	359	ePN	Pn	17 46 15.6	-1.0
	baz=178						
SOR				eSN	Sn	17 49 34.6	+3.8
	comp=N,415nm,3.6s						
SOR				e			
	comp=E,971nm,16.2s						
SDDR	Presa de Saban	17.59	38	ePn	Pn	17 46 17.8	+0.4
	comp=E,455nm,0.7s						
SDDR	Presa de Saban	17.59	38	eP	Pn	17 46 18.4	+1.1
NNA	Nana	17.96	162	Pn	Pn	17 46 19.0	-3.0
	comp=E,5μm,0.9s,SNR=66						
NNA	Nana	17.96	162	P	Pn	17 46 18.1	-3.8
	comp=E,39nm,0.3s,baz=333,slow=9.8,SNR=106						
NNA	Nana	17.96	162	ePn	Pn	17 46 17.5	-4.5
	comp=E,904nm,0.9s						
PCRV	Puerto La Cruz	18.43	73	P	Pn	17 46 26.5	-1.3
	comp=E,1.7nm,0.3s,baz=227,slow=4.5,SNR=34						
GRTK	Grand Turk	19.66	33	eP	Pn	17 46 41.2	-1.3
	comp=E,625nm,1.1s						
AGPR	Aguadilla, PR	20.05	47	eP	P	17 46 46.2	+1.0
	comp=E,756nm,1.1s						
ICM	Isla Caja Muer	20.14	50	eP	P	17 46 44.1	-2.0
SJG	San Juan	20.55	50	P	P	17 46 50.4	-0.2
	comp=E,545nm,0.8s,baz=246,slow=8.3,SNR=60						
SJG	San Juan	20.55	50	eP	P	17 46 50.7	+0.1
SJG				pmax	pmax		
	comp=Z,973nm,1.1s						
SJG				MLR	MLR		
	comp=Z,8μm,22.0s						
SJG	San Juan	20.55	50	ePn	P	17 46 50.7	+0.1
	comp=Z,973nm,1.1s						
SJG				LR	LR		
	comp=Z,8μm,22.0s,MS5.0						
CBYP	Canovanas	20.87	50	eP	P	17 46 55.3	+1.2
	comp=Z,930nm,1.1s						
MTP	Monte Pirata	21.00	51	eP	P	17 46 55.4	-0.1

comp=Z,1µm,1.1s,mb6.1
GRGR Grenville 21.77 70 *e*P **P 17 47 04.6 +0.8**
comp=Z,458nm,1.0s,mb5.9
GRGR LR LR
comp=Z,6µm,20.0s,MS5.0
GRGR Grenville 21.77 70⇑*i*Pg **P 17 47 00.6 -3.2**
DWPF Disney 22.84 3 *e*P **P 17 47 15.2 +0.1**
comp=Z,380nm,1.0s,mb5.8
DWPF LR LR
comp=Z,4µm,19.0s,MS4.8
BIM Bigot 23.09 65 *e*P **P 17 47 18.3 +0.5**
FDF Fort de France 23.10 64 *e*P **P 17 47 17.1 -0.8**
FDF pmax pmax
comp=Z,517nm,1.1s,mb5.9
FDF MLR MLR
comp=Z,7µm,20.0s,MS5.1
FDF Fort de France 23.10 64 *e*P **P 17 47 17.1 -0.8**
comp=Z,517nm,1.1s,mb5.9
FDF LR LR
comp=Z,7µm,20.0s,MS5.1
FDF Fort de France 23.10 64 *e*P **P 17 47 16.6 -1.3**
MVM Montagne Vaucl 23.26 65 *e*P **P 17 47 20.2 +0.6**
ANWB Willy Bob 23.81 57 *e*P **P 17 47 22.4 -2.4**
comp=Z,150nm,0.8s,mb5.5
ANWB LR LR
comp=Z,4µm,20.0s,MS4.9
BBGH Gun Hill 24.02 69 *e*P **P 17 47 27.6 +0.8**
comp=Z,1µm,1.4s,mb6.1
BBGH LR LR
comp=Z,12µm,20.0s,MS5.4
ARE Arequipa 24.11 153⇑*i*P **P 17 47 27.0 -0.5**
LPAZ La Paz 25.65 146 P **P 17 47 40.3 -1.2**
comp=Z,45nm,0.6s,mb5.2,baz=338,slow=8.6,SNR=109
LPAZ LR LR 17 58 53.5
comp=Z,18µm,19.7s,MS5.6,baz=304,slow=39
LPAZ La Paz 25.65 146 P **P 17 47 40.3 -1.2**
LPAZ pmax pmax
comp=Z,45nm,0.6s
LPAZ MLR MLR
comp=Z,18µm,19.7s
LPAZ La Paz 25.65 146 *e*P **P 17 47 39.9 -1.6**
comp=Z,878nm,1.8s,mb6.0
LPAZ LR LR
comp=Z,19µm,19.0s,MS5.6
BRAL Brewton 26.06 351 *e*P **P 17 47 46.5 +1.5**
comp=Z,341nm,0.9s,mb5.9
BRAL LR LR
comp=Z,5µm,19.0s,MS5.0
KVTX Kingsville 26.62 328 *e*P **P 17 47 50.6 +0.4**
comp=Z,375nm,1.2s,mb5.8
KVTX LR LR
comp=Z,9µm,20.0s,MS5.3
HKT Hockley 27.66 335 *e*P **P 17 47 58.2 -1.3**
HKT pmax pmax
comp=Z,123nm,1.4s,mb5.3
HKT MLR MLR
comp=Z,4µm,22.0s,MS4.9
HKT Hockley 27.66 335 *e*P **P 17 47 58.2 -1.3**
comp=Z,123nm,1.4s,mb5.3
HKT LR LR
comp=Z,4µm,22.0s,MS4.9
NHSC New Hope 27.89 4 PFAKE 17 48 10.0 +8.5
NHSC LR LR
comp=Z,4µm,19.0s,MS5.1
VBMS Vicksburg 27.93 345 *e*P **P 17 48 00.6 -1.3**
comp=Z,53nm,0.4s,mb5.5
VBMS LR LR
comp=Z,3µm,21.0s,MS4.8
LRAL Lakeview Retre 28.04 352 *e*P **P 17 48 01.8 -1.1**
comp=Z,150nm,0.8s,mb5.7
LRAL LR LR
comp=Z,3µm,21.0s,MS4.8
GOGA Godfrey 28.11 358 *e*P **P 17 48 02.8 -0.7**
GOGA pmax pmax
comp=Z,68nm,0.9s,mb5.3
GOGA MLR MLR
comp=Z,4µm,20.0s,MS5.0
GOGA Godfrey 28.11 358 *e*P **P 17 48 02.8 -0.8**
comp=Z,68nm,0.9s,mb5.3
GOGA LR LR
comp=Z,4µm,20.0s,MS5.0
COW Cow Castle Cre 28.12 3 *e*P **P 17 48 03.6 0.0**
NATX Nacogdoches 28.79 338 *e*P **P 17 48 08.7 -0.8**
comp=Z,157nm,0.9s,mb5.7
NATX LR LR
comp=Z,4µm,21.0s,MS5.0
JSC Jenkinsville 28.99 2 *e*P **P 17 48 11.0 -0.4**
OXF Oxford 29.88 349 *e*P **P 17 48 17.4 -1.8**
OXF pmax pmax
comp=Z,375nm,1.1s,mb6.0
OXF MLR MLR
comp=Z,3µm,21.0s,MS4.9
OXF Oxford 29.88 349 *e*P **P 17 48 17.4 -1.8**
comp=Z,375nm,1.1s,mb6.0
OXF LR LR
comp=Z,3µm,21.0s,MS4.9
SIV San Ignacio 29.90 135 P **P 17 48 17.1 -2.4**
comp=Z,49nm,1.1s,mb5.2,baz=316,slow=9.8,SNR=72
JCT Junction City 29.97 329 *e*P **P 17 48 19.3 -0.8**
JCT pmax pmax
comp=Z,52nm,1.0s,mb5.2
JCT MLR MLR
comp=Z,4µm,20.0s,MS5.0
JCT Junction City 29.97 329 *e*P **P 17 48 19.3 -0.7**
comp=Z,52nm,1.0s,mb5.2
JCT LR LR
comp=Z,4µm,20.0s,MS5.0
SWET Sewanee 30.07 354 *e*P **P 17 48 19.6 -1.3**
CPCT Cooper Cave 30.19 357 *e*P **P 17 48 21.2 -0.7**
CNNC Cliffs of the 30.23 8 *e*P **P 17 48 22.2 -0.1**
comp=Z,130nm,1.1s,mb5.6
CNNC LR LR
comp=Z,6µm,20.0s,MS5.2
TKL Tuckaleechee C 30.36 358 *e*P **P 17 48 22.4 -1.1**
UALR University of 30.82 344 *e*P **P 17 48 25.9 -1.7**
comp=Z,128nm,0.8s,mb5.8
628A Black Gap, Mar 30.90 324⇓P **P 17 48 28.3 0.0**
baz=31,SNR=31
628A ⇓S **S 17 53 38.3 +8.1**
baz=31
MIAR Mount Ida 30.97 342 *e*P **P 17 48 27.0 -1.8**
MIAR pmax pmax
comp=Z,92nm,1.1s,mb5.5
MIAR MLR MLR
comp=Z,2µm,21.0s,MS4.7
MIAR Mount Ida 30.97 342 *e*P **P 17 48 27.0 -1.8**
comp=Z,92nm,1.1s,mb5.5
MIAR LR LR
comp=Z,2µm,21.0s,MS4.7
HBAR Harrisburg 31.15 347 *e*P **P 17 48 29.1 -1.3**
627A Terlingua Ranc 31.17 323⇓P **P 17 48 30.9 +0.2**
baz=31,SNR=36
627A ⇓S **S 17 53 41.3 +6.8**
baz=31
WVT Waverly 31.19 352 *e*P **P 17 48 28.6 -2.2**
WVT pmax pmax
comp=Z,202nm,0.9s,mb6.0
WVT MLR MLR
comp=Z,2µm,21.0s,MS4.8
WVT Waverly 31.19 352 *e*P **P 17 48 28.6 -2.2**
comp=Z,202nm,0.9s,mb6.0
WVT LR LR
comp=Z,2µm,21.0s,MS4.8
HALT Halls 31.23 349 *e*P **P 17 48 29.8 -1.3**
TXAR Lajitas Array 31.25 323 P **P 17 48 30.8 -0.7**
comp=Z,10nm,1.0s,mb4.6,baz=146,slow=9.1,SNR=57
TXAR Lajitas Array 31.25 323 P **P 17 48 30.8 -0.6**
TXAR pmax pmax
comp=Z,10.0nm,1.0s
528A Cox Ranch, San 31.34 325⇓P **P 17 48 31.9 -0.3**
baz=32,SNR=23
528A ⇓S **S 17 53 44.3 +7.1**
baz=32
GNAR Gosnell 31.41 348 *e*P **P 17 48 31.5 -1.2**
comp=Z,6µm,1.1s
UTMT University of 31.56 350 *e*P **P 17 48 32.6 -1.5**
comp=Z,1µm,1.0s,mb6.6
GLAT Glass 31.57 350 *e*P **P 17 48 32.2 -1.9**
626A Big Bend Ranch 31.69 322⇓P **P 17 48 35.4 +0.1**
baz=32,SNR=57
626A ⇓S **S 17 53 48.6 +6.0**
baz=32
428A Kincaid Ranch, 31.71 326⇓P **P 17 48 35.5 +0.1**
baz=32,SNR=32
428A ⇓S **S 17 53 49.6 +6.7**
baz=32
BBSR BB Station 31.80 29 *e*P **P 17 48 37.0 +0.8**
comp=Z,46nm,0.8s,mb5.4
BBSR LR LR
comp=Z,6µm,22.0s,MS5.2
527A Woodward Ranch 31.81 324⇑P **P 17 48 36.4 +0.1**
baz=32,SNR=55
BLA Blacksburg 31.95 3 *e*P **P 17 48 37.4 -0.1**
BLA pmax pmax
comp=Z,134nm,0.9s,mb5.8
BLA MLR MLR
comp=Z,3µm,20.0s,MS5.0
BLA Blacksburg 31.95 3 *e*P **P 17 48 37.4 -0.1**
comp=Z,134nm,0.9s,mb5.8
BLA LR LR
comp=Z,3µm,20.0s,MS5.0
ELN Prospectdale 31.95 3 *e*P **P 17 48 37.6 +0.2**
526A Mary Lane Ranc 32.03 323⇑P **P 17 48 38.4 +0.1**
baz=32,SNR=62
PARMO Parma 32.03 349 *e*P **P 17 48 37.0 -1.2**
427A Hayter Ranch, 32.21 325⇑P **P 17 48 39.1 -0.7**
baz=32,SNR=31
328A Wristen Ranch, 32.27 326⇓P **P 17 48 40.0 -0.4**
baz=32,SNR=60
426A McDonald Obser 32.44 324⇓P **P 17 48 41.8 0.0**
baz=33,SNR=48
327A Balmorhea Ranc 32.65 325⇑P **P 17 48 43.4 -0.3**
baz=33
326A Caldwell Ranch 32.88 325⇓P **P 17 48 45.6 -0.1**
baz=33
SIUC Southern Illin 32.96 350 *e*P **P 17 48 44.8 -1.5**
comp=Z,365nm,0.9s,mb6.3
USIN University of 32.98 353 *e*P **P 17 48 44.7 -1.8**
comp=Z,399nm,0.9s,mb6.3
227A Bennet, Jal 33.02 326⇑P **P 17 48 46.7 -0.2**
baz=33,SNR=10
WMOK Wichita Mounta 33.04 335 *e*P **P 17 48 44.7 -2.3**
WMOK pmax pmax
comp=Z,57nm,0.9s,mb5.5
WMOK MLR MLR
comp=Z,2µm,19.0s,MS4.9
WMOK Wichita Mounta 33.04 335 *e*P **P 17 48 44.7 -2.3**
comp=Z,57nm,0.9s,mb5.5
WMOK LR LR
comp=Z,2µm,19.0s,MS4.9
WCI Wyandotte Cave 33.09 355 *e*P **P 17 48 45.7 -1.7**
WCI pmax pmax
comp=Z,190nm,0.9s,mb6.0
WCI MLR MLR
comp=Z,2µm,20.0s,MS4.9
WCI Wyandotte Cave 33.09 355 *e*P **P 17 48 45.7 -1.7**
comp=Z,190nm,0.9s,mb6.0
WCI LR LR
comp=Z,2µm,20.0s,MS4.9
425A Indio Mountain 33.09 323⇑P **P 17 48 47.5 0.0**
baz=33,SNR=106
CBN Corbin 33.22 7 *e*P **P 17 48 48.9 +0.3**
comp=Z,133nm,1.1s,mb5.8
CBN LR LR
comp=Z,7µm,19.0s,MS5.4
FVM French Village 33.44 349 *e*P **P 17 48 48.2 -2.3**
FVM pmax pmax
comp=Z,226nm,1.1s,mb6.0
FVM French Village 33.44 349 *e*P **P 17 48 48.2 -2.3**
comp=Z,226nm,1.1s,mb6.0
325A Bean Ranch, Si 33.50 324⇓P **P 17 48 50.8 -0.3**
baz=34,SNR=47
226A Malaga, Loving 33.51 326⇓P **P 17 48 51.2 +0.1**
baz=34,SNR=40
CLNB Carlsbad 33.53 326 *e*P **P 17 48 51.0 -0.4**
comp=Z,7.5nm,0.7s,mb4.7
127A Arkansas Junct 33.56 327⇓P **P 17 48 50.7 -1.0**
baz=34
GDL2 Guadalupe Moun 33.76 325 *e*P **P 17 48 53.2 -0.2**
comp=Z,18nm,0.7s,mb5.1
OLIL Olney 33.79 352 *e*P **P 17 48 52.0 -1.5**
comp=Z,376nm,0.8s,mb6.4
324A Moseley Ranch, 33.85 323⇓P **P 17 48 53.6 -0.5**
baz=34,SNR=89
126A Clayton Basin, 33.90 326⇓P **P 17 48 54.1 -0.5**
baz=34,SNR=12
225A Deer Hill, Car 33.95 325⇑P **P 17 48 55.2 +0.2**
baz=34,SNR=28
MNTX Cornudas Mount 33.98 324 *e*P **P 17 48 54.1 -1.2**
comp=Z,93nm,1.2s,mb5.6
MNTX LR LR
comp=Z,3µm,21.0s,MS4.9
Z27A Tatum 33.98 328⇓P **P 17 48 54.0 -1.3**
baz=34,SNR=16
SLM Saint Louis 34.04 349 *e*P **P 17 48 54.2 -1.5**
SLM pmax pmax
comp=Z,365nm,0.9s,mb6.3
SLM Saint Louis 34.04 349 *e*P **P 17 48 54.2 -1.5**
comp=Z,365nm,0.9s,mb6.3
BLO Bloomington 34.04 354 *e*P **P 17 48 53.4 -2.3**
BLO pmax pmax
comp=Z,181nm,0.9s,mb6.0
BLO Bloomington 34.04 354 *e*P **P 17 48 53.4 -2.3**
comp=Z,181nm,0.9s,mb6.0
CPRX Cap Rock 34.11 327 *e*P **P 17 48 55.2 -1.2**
comp=Z,16nm,0.8s,mb5.0
MSTX Muleshoe 34.26 329⇓P **P 17 48 56.6 -1.1**
baz=34,SNR=18
125A Gardner Draw, 34.27 326⇑P **P 17 48 57.9 +0.2**
baz=34,SNR=79
224A Cornudas Mount 34.33 324⇓P **P 17 48 58.1 -0.3**
baz=34,SNR=37
Z26A Caprock 34.35 327⇑P **P 17 48 57.8 -0.7**
baz=35,SNR=17
Y27A Causey 34.40 329⇓P **P 17 48 57.8 -1.0**
baz=35,SNR=30
MCWV Mont Chateau 34.42 4 *e*P **P 17 48 58.5 -0.4**
comp=Z,134nm,1.3s,mb5.7
MCWV LR LR
comp=Z,2µm,19.0s,MS5.0
AMTX Amarillo 34.46 332 *e*P **P 17 48 58.2 -1.2**
comp=Z,55nm,1.0s,mb5.4
AMTX LR LR
comp=Z,5µm,22.0s,MS5.2
124A Stringfield Ra 34.75 325⇓P **P 17 49 02.4 +0.5**
baz=35,SNR=58
Z25A Roswell 34.76 326⇑P **P 17 49 02.0 0.0**
baz=35,SNR=30
Y26A Elida 34.77 328⇑P **P 17 49 01.4 -0.7**
baz=35,SNR=13
223A Chaparral, Ant 34.82 323⇓P **P 17 49 02.0 -0.6**
baz=35
ACSO Alum Creek Sta 34.91 359 *e*P **P 17 49 01.9 -1.3**
comp=Z,108nm,1.0s,mb5.7
ACSO LR LR
comp=Z,4µm,19.0s,MS5.2
X27A F and S Farms, 34.96 330⇓P **P 17 49 03.0 -0.7**
baz=35,SNR=74
Z24A Sheeppen Canyo 35.16 326⇑P **P 17 49 06.0 +0.6**
baz=35,SNR=40
123A Bell Site, Whi 35.17 324⇑P **P 17 49 06.0 +0.5**
baz=35,SNR=7.7
Y25A Mesa, Roswell 35.23 327⇑P **P 17 49 06.4 +0.3**
baz=35,SNR=69
X26A CR and CF Fran 35.25 329⇑P **P 17 49 05.7 -0.5**
baz=36
W27A Bowe Ranch, En 35.27 330⇓P **P 17 49 05.4 -1.1**
baz=36,SNR=23
222A Williams Famil 35.30 322⇑P **P 17 49 06.8 +0.1**
baz=36,SNR=24
SSPA Standing Stone 35.56 6 *e*P **P 17 49 08.3 -0.5**
comp=Z,164nm,1.1s,mb5.9
SSPA LR LR
comp=Z,4µm,20.0s,MS5.2
Z23A Rita Site, Whi 35.60 325⇓P **P 17 49 10.2 +0.9**
baz=36,SNR=26
Y24A Capitan 35.64 326⇑P **P 17 49 09.8 +0.2**
baz=36,SNR=92
221A Mesquite Ranch 35.65 322⇑P **P 17 49 11.0 +1.3**
baz=36,SNR=20
W26A Owens Ranch, T 35.65 329⇓P **P 17 49 09.3 -0.3**
baz=36
122A Conniff Cattle 35.65 323⇓P **P 17 49 10.6 +0.9**
baz=36,SNR=7.9
320A Kipp Ranch, An 35.67 320⇑P **P 17 49 10.8 +1.0**
baz=36,SNR=76
X25A Clemmons Ranch 35.68 328⇓P **P 17 49 10.2 +0.3**
baz=36,SNR=12
HDIL Hopedale 35.75 351 *e*P **P 17 49 08.2 -2.3**
comp=Z,308nm,0.9s,mb6.2
HDIL LR LR
comp=Z,2µm,20.0s,MS5.0
LCO Las Campanas 35.84 162 *e*P **P 17 49 09.6 -1.7**
comp=Z,51nm,0.9s,mb5.5
LCO LR LR
comp=Z,5µm,22.0s,MS5.3
Y23A Lovelace Mesa, 35.99 326⇑P **P 17 49 13.4 +0.8**
baz=36,SNR=63
121A Cookes Peak, D 36.01 322⇓P **P 17 49 14.4 +1.6**
baz=36,SNR=68
Z22A Elephant Butte 36.02 324⇑P **P 17 49 13.9 +1.0**
baz=36,SNR=68
220A Playas Peak, P 36.04 321⇑P **P 17 49 14.0 +0.9**
baz=36,SNR=86
KSU1 Kansas State U 36.10 341 *e*P **P 17 49 12.1 -1.4**
comp=Z,153nm,1.1s,mb5.8
KSU1 LR LR
comp=Z,3µm,20.0s,MS5.0
W25A X Bar L Ranch, 36.10 329⇓P **P 17 49 13.6 +0.1**
baz=36
319A Douglas 36.18 319⇑P **P 17 49 14.9 +0.7**
baz=36,SNR=29
V26A Tequesquite Ra 36.21 330⇑P **P 17 49 14.3 -0.2**
baz=36,SNR=22
BNM Barren Site 36.48 325 *e*P **P 17 49 17.3 +0.6**
comp=Z,89nm,1.3s,mb5.5
BNM *e*PP PP 17 50 40.7 +0.6
Z21A St. Cloud Mine 36.48 323⇓P **P 17 49 18.0 +1.2**
baz=37,SNR=18
Y22A Socorro 36.51 325⇓P **P 17 49 18.2 +1.1**
baz=37,SNR=62
120A U Bar Ranch, L 36.54 321⇓P **P 17 49 18.5 +1.2**
baz=37,SNR=54
X23A Hourglass Bar 36.55 326⇑P **P 17 49 17.9 +0.6**
baz=37,SNR=13
219A White Tail Can 36.57 320⇑P **P 17 49 18.1 +0.5**
baz=37,SNR=105
W24A Lazy 6 Ranch, 36.59 328⇑P **P 17 49 18.4 +0.7**
baz=37,SNR=59
V25A Rancho No Teng 36.66 329⇓P **P 17 49 18.8 +0.5**
baz=37,SNR=93
U26A Atchley Ranch, 36.67 331⇑P **P 17 49 18.2 -0.2**
baz=37,SNR=29
318A Bisbee 36.68 319⇑P **P 17 49 19.1 +0.6**
baz=37,SNR=80
LENM Lemitar 36.68 325 *e*P **P 17 49 19.0 +0.5**
comp=Z,267nm,2.0s,mb5.7
LENM *e*PP PP 17 50 43.0 +0.6
ERPA Erie 36.86 3 PFAKE 17 49 30.0 +10
ERPA LR LR
comp=Z,3µm,19.0s,MS5.2
Z20A Nine Sixteen R 36.90 322⇓P **P 17 49 21.9 +1.5**
baz=37
CBKS Cedar Bluff 36.95 337 *e*P **P 17 49 19.9 -0.7**
CBKS pmax pmax
comp=Z,232nm,1.0s,mb6.0
CBKS Cedar Bluff 36.95 337 *e*P **P 17 49 19.9 -0.8**
comp=Z,232nm,1.0s,mb6.0
LAZ Ladron 36.95 325 *e*P **P 17 49 21.4 +0.6**
comp=Z,55nm,1.2s,mb5.3
LAZ *e*PP PP 17 50 45.2 -0.2
X22A Bernardo 36.95 325⇑P **P 17 49 22.3 +1.5**
baz=37,SNR=36
W23A Werner Place, 36.95 327⇓P **P 17 49 21.9 +1.1**
baz=37
ANMO Albuquerque 36.97 326 *e*P **P 17 49 21.2 +0.3**
ANMO pmax pmax
comp=Z,35nm,1.2s
ANMO MLR MLR
comp=Z,4µm,21.0s
ANMO Albuquerque 36.97 326 *e*P **P 17 49 21.2 +0.3**
comp=Z,36nm,1.2s,mb5.1
ANMO LR LR
comp=Z,4µm,21.0s,MS5.2
Y21A Point of Rocks 36.98 324⇓P **P 17 49 22.3 +1.4**
baz=37,SNR=46
AAM Ann Arbor 36.99 359 *e*P **P 17 49 19.1 -1.9**
AAM MLR MLR
comp=Z,5µm,19.0s,MS5.3
U25A Circle Dot Ran 37.00 330⇑P **P 17 49 21.6 +0.4**
baz=37
218A Dragoon 37.06 319⇓P **P 17 49 22.5 +0.7**
baz=37,SNR=86
119A Ashpeak Ranch, 37.11 321⇓P **P 17 49 23.1 +0.9**
baz=37,SNR=47
W22A Albuquerque 37.28 326⇓P **P 17 49 24.8 +1.2**
baz=38,SNR=21
Y20A Horse Springs, 37.32 323⇑P **P 17 49 25.2 +1.3**
baz=38,SNR=30
BINY Binghamton 37.34 8 *e*P **P 17 49 23.6 -0.3**
comp=Z,224nm,1.0s,mb6.0
BINY LR LR
comp=Z,3µm,19.0s,MS5.1
X21A Alamocita Cree 37.35 324⇓P **P 17 49 25.7 +1.5**
baz=38
V23A Ortiz Mt. (NFS 37.41 328⇑P **P 17 49 25.4 +0.8**
baz=38,SNR=9.3
Z19A T-Link Ranch, 37.44 322⇑P **P 17 49 25.8 +0.9**
baz=38,SNR=11
118A Homack Ranch, 37.44 320⇑P **P 17 49 25.8 +0.8**
baz=38,SNR=94
U24A Moreno Valley 37.44 329⇓P **P 17 49 26.0 +1.1**
baz=38
T25A Trinidad 37.58 331⇑P **P 17 49 27.0 +1.0**
baz=38
W21A San Fidel 37.75 325⇓P **P 17 49 28.6 +1.1**
baz=38
TUC Tucson 37.76 319 *e*P **P 17 49 27.5 -0.1**
TUC pmax pmax
comp=Z,110nm,1.1s,mb5.5
TUC MLR MLR
comp=Z,11µm,19.0s,MS5.7
TUC Tucson 37.76 319 *e*P **P 17 49 27.5 -0.2**
comp=Z,110nm,1.1s,mb5.5
TUC LR LR
comp=Z,11µm,19.0s,MS5.7
Z18A Geronimo 37.78 321⇓P **P 17 49 28.5 +0.7**
baz=38
SCIA State Center 37.80 347 *e*P **P 17 49 25.0 -2.8**
comp=Z,131nm,0.8s,mb5.7
SCIA LR LR
comp=Z,2µm,19.0s,MS5.0
X20A Quemado 37.83 324⇑P **P 17 49 29.9 +1.6**
baz=38
U23A El Rito 37.86 328⇑P **P 17 49 29.7 +1.3**
baz=38
Y19A Nutrioso 37.88 323⇑P **P 17 49 29.9 +1.3**
baz=38
117A Oracle 37.89 320⇑P **P 17 49 29.3 +0.5**
baz=38,SNR=94
V22A San Miguel Ran 37.93 327⇑P **P 17 49 29.9 +0.9**
baz=38
216A Three Points, 38.00 318⇑P **P 17 49 30.1 +0.4**
baz=38
Z17A San Carlos Hig 38.19 321⇑P **P 17 49 32.1 +0.8**
baz=38
JFWS Jewell Farm 38.20 351 *e*P **P 17 49 28.5 -2.7**
JFWS pmax pmax
comp=Z,96nm,0.8s,mb5.6
JFWS MLR MLR
comp=Z,2µm,20.0s,MS5.0
JFWS Jewell Farm 38.20 351 *e*P **P 17 49 28.5 -2.8**
comp=Z,96nm,0.8s,mb5.6
JFWS LR LR
comp=Z,2µm,20.0s,MS5.0
X19A St. Johns 38.22 323⇓P **P 17 49 33.1 +1.5**
baz=38
Y18A Canyon Day Jun 38.24 322⇑P **P 17 49 32.4 +0.7**
baz=38
U22A Llaves 38.24 328⇓P **P 17 49 33.1 +1.4**
baz=38
W20A Ramah 38.25 325⇓P **P 17 49 33.1 +1.4**
baz=38
V21A Milan 38.25 326⇓P **P 17 49 33.2 +1.5**
baz=38
116A Eloy 38.52 319⇓P **P 17 49 34.5 +0.4**
baz=39
SDCO Great Sand Dun 38.59 330 *e*P **P 17 49 34.8 +0.1**
comp=Z,134nm,1.1s,mb5.6
SDCO *e*PP PP 17 51 01.6 -1.7
SDCO LR LR
comp=Z,3µm,20.0s,MS5.0
Y17A Roosevelt 38.69 321⇑P **P 17 49 35.6 +0.2**
baz=39
X18A Snowflake 38.69 323⇑P **P 17 49 36.7 +1.3**
baz=39
V20A Brimhall 38.71 325⇑P **P 17 49 36.8 +1.2**
baz=39
U21A Nageezi 38.72 327⇑P **P 17 49 37.1 +1.5**
baz=39
T22A Edith 38.75 328⇓P **P 17 49 37.0 +1.1**
baz=39
W19A Sanders 38.76 324⇓P **P 17 49 37.1 +1.1**

	baz=39					
Z16A	Peralta Trail,	38.83	320	⇓P	P	17 49 36.9 +0.2
	baz=39					
214A	Organ Pipe Nat	38.89	317	⇓P	P	17 49 37.7 +0.6
	baz=39					
115A	Sonoran Desert	38.95	318	⇑P	P	17 49 38.3 +0.7
	baz=39					
W18A	Petrified Fore	38.97	323	⇑P	P	17 49 39.0 +1.2
	baz=39					
V19A	Window Rock	38.98	325	⇑P	P	17 49 39.0 +1.1
	baz=39					
T21A	Navajo Lake	39.06	328	⇓P	P	17 49 39.9 +1.3
	baz=39					
X17A	Forest Lakes	39.09	322	⇑P	P	17 49 40.0 +1.2
	baz=39					
U20A	Newcomb	39.15	326	⇓P	P	17 49 40.4 +1.1
	baz=39					
Y16A	Circle Bar Ran	39.21	320	⇓P	P	17 49 40.6 +0.8
	baz=39					
Z15A	Gila River Ind	39.27	319	⇓P	P	17 49 40.5 +0.2
	baz=39					
NCB	Newcomb	39.34	9	eP	P	17 49 40.7 0.0
	comp=Z,89nm,1.2s,mb5.4					
NCB				LR	LR	
	comp=Z,3µm,22.0s,MS5.1					
114A	Black Gap (USA	39.41	318	⇑P	P	17 49 42.2 +0.6
	baz=40					
U19A	Dine' College,	39.48	325	⇑P	P	17 49 42.5 +0.4
	baz=40					
W17A	Winslow	39.52	323	⇓P	P	17 49 43.1 +0.6
	baz=40					
X16A	Lo Mia Camp, P	39.53	321	⇓P	P	17 49 43.6 +1.1
	baz=40					
R22A	Saguache, Gunn	39.59	330	⇑P	P	17 49 44.1 +1.1
	baz=40					
OGNE	Ogallala	39.67	337	eP	P	17 49 43.6 0.0
	comp=Z,222nm,0.8s,mb5.9					
OGNE				LR	LR	
	comp=Z,4µm,22.0s,MS5.2					
S21A	Coal Bank Pass	39.70	328	⇓P	P	17 49 44.6 +0.7
	baz=40					
CPUP	Villa Florida	39.72	143	P	P	17 49 40.4 -3.8
	comp=Z,12nm,0.8s,mb4.7,baz=306,slow=8.4,SNR=9.5					
CPUP	Villa Florida	39.72	143	P	P	17 49 40.4 -3.8
CPUP				pmax	pmax	
	comp=Z,12nm,0.8s					
CPUP	Villa Florida	39.72	143	eP	P	17 49 40.3 -3.9
CPUP				ePP	PP	17 51 12.5 -3.4
CPUP				LR	LR	
	comp=Z,1µm,19.0s,MS4.7					
MVCO	Mesa Verde	39.75	327	⇓P	P	17 49 45.0 +0.8
	baz=40					
MVCO	Mesa Verde	39.75	327	eP	P	17 49 44.3 0.0
	comp=Z,214nm,1.0s,mb5.8					
MVCO				LR	LR	
	comp=Z,4µm,20.0s,MS5.2					
T19A	Beclabito	39.76	326	⇑P	P	17 49 45.0 +0.6
	baz=40					
Y15A	Casa Rosa Ranc	39.80	320	⇑P	P	17 49 45.4 +0.6
	baz=40					
Z14A	Wintersburg	39.83	319	⇓P	P	17 49 45.6 +0.6
	baz=40					
LONY	Lake Ozonia	39.91	9	eP	P	17 49 44.3 -1.2
	comp=Z,128nm,1.0s,mb5.6					
LONY				LR	LR	
	comp=Z,4µm,19.0s,MS5.2					
U18A	Rough Rock, Ch	39.95	325	⇑P	P	17 49 46.7 +0.8
	baz=40					
FCH	Farellones	40.01	164	⇑iP	P	17 49 47.4 +0.9
LBNH	Lisbon	40.02	12	eP	P	17 49 46.4 0.0
LBNH				pmax	pmax	
	comp=Z,100nm,1.2s,mb5.4					
LBNH				MLR	MLR	
	comp=Z,2µm,22.0s,MS5.0					
LBNH	Lisbon	40.02	12	eP	P	17 49 46.4 -0.1
	comp=Z,100nm,1.2s,mb5.4					
LBNH				LR	LR	
	comp=Z,2µm,22.0s,MS5.0					
W16A	Flagstaff	40.03	322	⇓P	P	17 49 47.8 +1.1
	baz=40					
X15A	Humboldt	40.08	321	⇓P	P	17 49 48.0 +0.9
	baz=40					
R21A	Cimarron	40.10	329	⇓P	P	17 49 48.0 +0.7
	baz=40					
Q22A	Crested Butte,	40.16	330	⇓P	P	17 49 48.8 +1.2
	baz=40					
Z13A	Yuma Proving G	40.20	318	⇓P	P	17 49 48.6 +0.5
	baz=40					
WUAZ	Wupatki	40.22	322	⇑P	P	17 49 49.2 +1.0
	baz=40					
WUAZ	Wupatki	40.22	322	eP	P	17 49 48.8 +0.6
	comp=Z,192nm,1.1s,mb5.7					
WUAZ				LR	LR	
	comp=Z,5µm,20.0s,MS5.4					
Y14A	Wickenburg	40.23	319	⇓P	P	17 49 48.6 +0.3
	baz=40					
ISCO	Idaho Springs	40.27	332	eP	P	17 49 49.0 +0.5
ISCO				pmax	pmax	
	comp=Z,116nm,1.4s,mb5.4					
ISCO				MLR	MLR	
	comp=Z,4µm,21.0s,MS5.2					
ISCO	Idaho Springs	40.27	332	eP	P	17 49 49.0 +0.4
	comp=Z,116nm,1.4s,mb5.4					
ISCO				LR	LR	
	comp=Z,4µm,21.0s,MS5.2					
ECSD	EROS Data Cent	40.36	344	eP	P	17 49 46.5 -2.8
	comp=Z,83nm,1.3s,mb5.3					
ECSD				LR	LR	
	comp=Z,2µm,20.0s,MS5.0					
R20A	Redvale	40.40	328	⇑P	P	17 49 50.7 +1.1
	baz=41					
SMCO	Snowmass	40.43	330	eP	P	17 49 51.0 +1.0
	comp=Z,138nm,0.9s,mb5.7					
T18A	Mexican Hat	40.45	326	⇓P	P	17 49 50.3 +0.2
	baz=41					
PV01	Paradox Valley	40.46	328	eP	P	17 49 50.7 +0.5
	comp=Z,6µm,1.1s					
Q21A	Lamborn Mesa,	40.47	329	⇑P	P	17 49 50.9 +0.6
	baz=41					
S19A	Harvey Farm, M	40.48	327	⇑P	P	17 49 50.7 +0.4
	baz=41					
X14A	Yava	40.48	320	⇑P	P	17 49 51.2 +0.8
	baz=41					
U17A	Shonto	40.53	324	⇓P	P	17 49 51.4 +0.6
	baz=41					
W15A	Williams	40.54	321	⇑P	P	17 49 52.2 +1.3
	baz=41					
PV04	Paradox Valley	40.83	328	eP	P	17 49 53.4 +0.2
T17A	Navajo Res., N	40.89	325	⇑P	P	17 49 54.6 +0.9
	baz=41					
V15A	Kaibab Nationa	40.91	322	⇑P	P	17 49 55.1 +1.2
	baz=41					
GLA	Glamis	40.91	317	⇓P	P	17 49 54.5 +0.6
	baz=41					
GLA	Glamis	40.91	317	eP	P	17 49 54.0 +0.1
GLA				pmax	pmax	
	comp=Z,130nm,1.1s,mb5.5					
GLA	Glamis	40.91	317	eP	P	17 49 54.0 +0.1
	comp=Z,130nm,1.1s,mb5.5					
S18A	Hurst Farm, Bl	40.92	326	⇓P	P	17 49 54.3 +0.3
	baz=41					
Q20A	Ridgley Place,	40.93	329	⇑P	P	17 49 54.4 +0.4
	baz=41					
R19A	Curley Farm, L	40.95	327	⇑P	P	17 49 54.5 +0.3
	baz=41					
W14A	Seligman	41.08	321	⇓P	P	17 49 56.2 +0.9
	baz=41					
Y12C	Blythe	41.11	318	⇓P	P	17 49 55.9 +0.3
	baz=41					
COWI	Conover	41.17	353	eP	P	17 49 53.4 -2.5
	comp=Z,47nm,1.1s,mb5.0					
COWI				LR	LR	
	comp=Z,3µm,19.0s,MS5.2					
PDMCI	Parker Dam,Lak	41.19	319	⇓P	P	17 49 56.4 +0.2
	baz=41					
RPN	Rapa Nui	41.25	218	PFAKE		17 50 10.0 +13
RPN				LR	LR	
	comp=Z,6µm,19.0s,MS5.5					
S17A	Black Ridge (B	41.33	325	⇑P	P	17 49 57.8 +0.4
	baz=42					
R18A	Canyonlands Na	41.36	327	⇓P	P	17 49 57.3 -0.2
	baz=42					
V14A	Boquillas Ranc	41.36	321	⇓P	P	17 49 59.1 +1.4
	baz=42					
U15A	North Rim	41.38	323	⇑P	P	17 49 59.2 +1.4
	baz=42					
P20A	De Beque	41.39	329	⇑P	P	17 49 58.2 +0.4
	baz=42					
PHWY	Pilot Hill	41.40	334	eP	P	17 49 57.9 +0.1
	comp=Z,116nm,1.4s,mb5.3					
Q19A	Hogan Spring (	41.44	328	⇑P	P	17 49 58.6 +0.4
	baz=42					
N22A	Wattenberg Ran	41.45	332	⇓P	P	17 49 59.0 +0.7
	baz=42					
O21A	Pagoda	41.48	331	⇓P	P	17 49 59.8 +1.3
	baz=42					
SWSC	Sam W. Stewart	41.51	316	⇓P	P	17 49 59.4 +0.5
	baz=42					
W13A	Hualapai Mount	41.52	320	⇓P	P	17 50 00.1 +1.2
	baz=42					
DVTC	Desert V Tower	41.56	315	⇑P	P	17 50 00.1 +0.7
	baz=42					
PKME	Peaks-Kenny Pk	41.58	14	eP	P	17 49 59.5 +0.2
	comp=Z,206nm,1.4s,mb5.6					
PKME				LR	LR	
	comp=Z,2µm,20.0s,MS5.1					
BC3	Big Chuckawall	41.68	317	⇓P	P	17 50 00.8 +0.5
	baz=42					
IRM	Iron Mountain	41.77	318	⇑P	P	17 50 01.3 +0.2
	baz=42					
NEE2	Needles Airpor	41.79	319	⇑P	P	17 50 01.4 +0.3
	baz=42					
P19A	Cripple Cowboy	41.79	329	⇓P	P	17 50 01.2 +0.1
	baz=42					
O20A	White River Ci	41.79	330	⇑P	P	17 50 01.8 +0.7
	baz=42					
T15A	Red Dirt Ranch	41.83	323	⇓P	P	17 50 02.5 +1.1
	baz=42					
R17A	Hanksville Air	41.83	326	⇓P	P	17 50 01.8 +0.3
	baz=42					
U14A	Mt Trumbull	41.91	322	⇑P	P	17 50 03.4 +1.2
	baz=42					
MONP	Monument Peak	41.91	315	⇑P	P	17 50 02.7 +0.5
	baz=42					
N21A	Black Mountain	41.92	331	⇑P	P	17 50 03.2 +1.1
	baz=42					
BAR	Barrett	41.98	315	eP	P	17 50 02.2 -0.5
	comp=Z,42nm,1.1s,mb5.0					
Q18A	Rafter H Ranch	42.01	327	⇑P	P	17 50 03.2 +0.4
	baz=42					
V13A	Grand Canyon W	42.05	321	⇓P	P	17 50 04.2 +0.9
	baz=42					
R16A	Teasdale	42.17	325	⇑P	P	17 50 05.0 +0.8
	baz=42					
SRU	San Rafael	42.22	327	⇓P	P	17 50 05.1 +0.5
	baz=42					
SRU	San Rafael	42.22	327	eP	P	17 50 04.8 +0.2
SRU				pmax	pmax	
	comp=Z,145nm,1.0s,mb5.6					
SRU	San Rafael	42.22	327	eP	P	17 50 04.8 +0.2
	comp=Z,146nm,1.0s,mb5.6					
BELC	Belle Mtn. Jos	42.25	317	⇓P	P	17 50 05.2 +0.2
	baz=42					
S15A	Panguitch	42.26	324	⇓P	P	17 50 05.9 +1.0
	baz=42					
T14A	Hurricane	42.27	323	⇑P	P	17 50 06.1 +1.0
	baz=42					
W12A	Cal Nev Ari	42.27	319	⇓P	P	17 50 05.5 +0.4
	baz=42					
LDFC	Landfair	42.30	319	eP	P	17 50 05.3 0.0
	comp=Z,194nm,1.3s,mb5.6					
N20A	Spence Gulch,	42.34	331	⇓P	P	17 50 06.2 +0.7
	baz=43					
PFO	Pinyon Flat Ob	42.34	316	⇓P	P	17 50 06.2 +0.6
	baz=42					
PFO	Pinyon Flat Ob	42.34	316	eP	P	17 50 05.7 0.0
PFO				pmax	pmax	
	comp=Z,108nm,1.2s,mb5.3					
PFO				MLR	MLR	
	comp=Z,5µm,19.0s,MS5.4					
PFO	Pinyon Flat Ob	42.34	316	eP	P	17 50 05.7 +0.1
	comp=Z,108nm,1.2s,mb5.3					
PFO				LR	LR	
	comp=Z,5µm,19.0s,MS5.4					
O19A	Miners Draw (B	42.36	329	⇑P	P	17 50 05.6 -0.1
	baz=43					
109C	Camp Elliot, M	42.39	315	⇓P	P	17 50 06.1 0.0
	baz=42					
U13A	Pakoon Wash	42.40	321	⇑P	P	17 50 07.0 +1.0
	baz=43					
L22A	Ellis Ranch, M	42.42	333	⇓P	P	17 50 07.2 +1.0
	baz=43					
Q16A	Castle Valley	42.44	326	⇓P	P	17 50 07.0 +0.6
	baz=43					
P18A	Preston Nutter	42.45	328	⇑P	P	17 50 07.1 +0.7
	baz=43					
GMRC	Granite Mounta	42.48	318	⇑P	P	17 50 07.2 +0.4
	baz=43					
RWWY	Rawlins	42.50	332	eP	P	17 50 07.1 +0.3
	comp=Z,149nm,1.0s,mb5.7					
M21A	Separation Pea	42.51	332	⇓P	P	17 50 07.3 +0.4
	baz=43					
V12A	Nelson	42.52	320	⇑P	P	17 50 07.7 +0.6
	baz=43					
R15A	Junction	42.57	325	⇑P	P	17 50 08.1 +0.6
	baz=43					
P17A	Butcher Ranch,	42.60	327	⇑P	P	17 50 07.9 +0.3
	baz=43					
MSU	Marysvale	42.72	325	eP	P	17 50 09.2 +0.5
MSU				pmax	pmax	
	comp=Z,62nm,1.1s,mb5.2					
MSU	Marysvale	42.72	325	eP	P	17 50 09.2 +0.6
	comp=Z,62nm,1.1s,mb5.2					
TMUT	Trail Mountain	42.73	327	eP	P	17 50 08.8 +0.1
	comp=Z,40nm,1.2s,mb5.0					
MVU	Marysvale	42.73	325	PFAKE		17 50 20.0 +11
MVU				LR	LR	
	comp=Z,10µm,19.0s,MS5.7					
T13A	Saint George	42.75	322	⇓P	P	17 50 10.0 +1.1
	baz=43					
CCUT	Cedar City	42.76	323	eP	P	17 50 09.6 +0.6
	comp=Z,109nm,1.4s,mb5.4					
U12A	Valley of Fire	42.76	321	⇑P	P	17 50 09.9 +0.8
	baz=43					
S14A	Cedar City	42.79	324	⇑P	P	17 50 09.8 +0.6
	baz=43					
O18A	Roosevelt	42.79	329	⇑P	P	17 50 09.9 +0.7
	baz=43					
L21A	Rawlins	42.79	333	⇓P	P	17 50 09.4 +0.2
	baz=43					
M20A	Sweetwater, Wa	42.81	331	⇓P	P	17 50 09.7 +0.4
	baz=43					
N19A	John Jarvie Ra	42.83	330	⇓P	P	17 50 09.5 -0.1
	baz=43					
MURC	Murrieta	42.85	316	⇑P	P	17 50 10.3 +0.5
	baz=43					
HEC	Hector,Ludlow	42.95	318	⇓P	P	17 50 11.2 +0.5
	baz=43					
V11A	Goodsprings	42.96	320	⇑P	P	17 50 11.2 +0.5
	baz=43					
ARUT	Antelope Range	42.97	323	eP	P	17 50 11.3 +0.6
ARUT				pmax	pmax	
	comp=Z,58nm,0.8s,mb5.4					
ARUT	Antelope Range	42.97	323	eP	P	17 50 11.2 +0.6
	comp=Z,58nm,0.8s,mb5.4					
BBRC	Big Bear Solar	43.03	317	⇑P	P	17 50 12.2 +1.0
	baz=43					
TUQ	Turquoise Moun	43.04	319	⇓P	P	17 50 11.5 +0.2
	baz=43					
T12A	Moapa	43.06	321	⇑P	P	17 50 12.0 +0.6
	baz=43					
R14A	James Farms, M	43.06	324	⇑P	P	17 50 11.6 +0.2
	baz=43					
O17A	Robinson Place	43.12	328	⇑P	P	17 50 12.3 +0.4
	baz=43					
N18A	Larsen Ranch,	43.14	330	⇓P	P	17 50 12.3 +0.3
	baz=43					
RSSD	Black Hills	43.15	337	eP	P	17 50 11.8 -0.3
RSSD				pmax	pmax	
	comp=Z,207nm,1.4s,mb5.7					
RSSD				MLR	MLR	
	comp=Z,3µm,20.0s,MS5.2					
RSSD	Black Hills	43.15	337	eP	P	17 50 11.8 -0.3
	comp=Z,207nm,1.4s,mb5.7					
RSSD				LR	LR	
	comp=Z,3µm,20.0s,MS5.2					
Q15A	Fillmore	43.17	325	⇓P	P	17 50 13.0 +0.7
	baz=43					
P16A	Fountain Green	43.19	327	⇓P	P	17 50 13.2 +0.7
	baz=43					
L20A	Wamsutter	43.28	332	⇑P	P	17 50 13.4 +0.3
	baz=44					
M19A	Rock Springs	43.29	331	⇓P	P	17 50 12.6 -0.6
	baz=44					
U11A	Corn Creek	43.29	320	⇓P	P	17 50 14.1 +0.8
	baz=44					
EYMN	Ely	43.31	351	eP	P	17 50 10.4 -2.8
	comp=Z,37nm,0.9s,mb5.1					
EYMN				LR	LR	
	comp=Z,2µm,19.0s,MS5.1					
RRX	Edison Barstow	43.43	317	⇓P	P	17 50 15.1 +0.5
	baz=44					
MPU	Maple Canyon	43.47	327	eP	P	17 50 14.8 +0.1
	comp=Z,64nm,0.9s,mb5.3					
SCI	San Clemente I	43.47	314	⇓P	P	17 50 14.9 0.0
	baz=44					
P15A	Leamington	43.51	326	⇑P	P	17 50 15.2 +0.2
	baz=44					
BFSC	Mount Baldy Ra	43.52	316	⇑P	P	17 50 15.4 +0.2
	baz=44					
R13A	O'Grain Ranch,	43.54	323	⇓P	P	17 50 16.7 +1.4
	baz=44					
GSC	Goldstone	43.55	318	⇓P	P	17 50 16.1 +0.6
	baz=44					
GSC	Goldstone	43.55	318	eP	P	17 50 15.1 -0.3
GSC				pmax	pmax	
	comp=Z,169nm,1.3s,mb5.6					
GSC	Goldstone	43.55	318	eP	P	17 50 15.1 -0.3
	comp=Z,169nm,1.3s,mb5.6					
DAU	Daniels Canyon	43.55	328	eP	P	17 50 15.7 +0.4
DAU				e		17 52 01.8
DAU				pmax	pmax	
	comp=Z,246nm,1.6s,mb5.7					
DAU	Daniels Canyon	43.55	328	eP	P	17 50 15.7 +0.4
	comp=Z,246nm,1.6s,mb5.7					
DAU				ePP	PP	17 52 01.8 +4.8
SHOC	Shoshone	43.55	319	⇓P	P	17 50 15.6 +0.2
	baz=44					
CIS	Catalina Islan	43.59	315	⇑P	P	17 50 16.2 +0.4
	baz=44					
NLU	North Lily Min	43.66	327	eP	P	17 50 15.7 -0.6
	comp=Z,28nm,1.2s,mb4.9					
Q14A	Sevier Lake (B	43.67	325	⇑P	P	17 50 17.2 +0.9
	baz=44					
FMP	Fort Macarthur	43.68	315	⇑P	P	17 50 16.6 +0.1
	baz=44					
M18A	Lyman	43.68	330	⇓P	P	17 50 16.1 -0.2
	baz=44					
T11A	Corn Creek, Al	43.70	321	⇓P	P	17 50 17.4 +0.8
	baz=44					
S12A	Delamar Landin	43.70	322	⇑P	P	17 50 17.6 +1.0
	baz=44					
N17A	Moffit Pass	43.71	329	⇑P	P	17 50 17.2 +0.5
	baz=44					
K20A	Yellowstone Ra	43.79	332	⇓P	P	17 50 17.1 -0.1
	baz=44					
JLU	Jordanelle	43.79	328	eP	P	17 50 17.0 -0.2
	comp=Z,123nm,1.5s,mb5.4					
MWC	Mount Wilson	43.79	316	eP	P	17 50 17.0 -0.4
MWC				pmax	pmax	
	comp=Z,158nm,1.3s,mb5.6					
MWC	Mount Wilson	43.79	316	eP	P	17 50 17.0 -0.4
	comp=Z,158nm,1.3s,mb5.6					
L19A	Farson	43.84	331	⇑P	P	17 50 17.7 +0.1
	baz=44					
PASC	Pasadena Art C	43.85	316	eP	P	17 50 17.4 -0.5
	comp=Z,786nm,1.4s,mb6.2					
U10A	Ash Meadows, A	43.89	320	⇓P	P	17 50 19.0 +0.9
	baz=44					
P14A	Drum Mountains	43.96	326	⇑P	P	17 50 19.6 +0.9
	baz=44					
N16A	Rees Ranch, Co	43.99	328	⇑P	P	17 50 19.4 +0.6
	baz=44					
DECC	Green Verdugo	43.99	316	⇓P	P	17 50 19.6 +0.6
	baz=44					
CTU	Camp Tracy	44.01	328	eP	P	17 50 19.1 0.0
	comp=Z,85nm,1.0s,mb5.4					
M17A	Scullys Gap (B	44.02	329	⇑P	P	17 50 19.2 +0.1
	baz=44					
R12A	Pony Springs,	44.02	323	⇑P	P	17 50 19.9 +0.8
	baz=44					
L18A	Fontenelle, Gr	44.03	330	⇓P	P	17 50 19.4 +0.2
	baz=44					
Q13A	Wheeler Ranch,	44.08	324	⇑P	P	17 50 20.5 +0.9
	baz=44					
EDW2	Edwards Air Fo	44.10	317	⇓P	P	17 50 19.8 -0.1
	baz=44					
O15A	The Old Anders	44.11	327	⇑P	P	17 50 20.3 +0.5
	baz=44					
K19A	Absolon Red Bu	44.15	332	⇑P	P	17 50 19.8 -0.3
	baz=44					
NOQ	North Oquirrh	44.18	327	eP	P	17 50 20.5 +0.1
	comp=Z,106nm,1.1s,mb5.5					
DUG	Dugway	44.24	326	⇓P	P	17 50 21.1 +0.2
	baz=44					
DUG	Dugway	44.24	326	eP	P	17 50 21.1 +0.2
DUG				pmax	pmax	
	comp=Z,38nm,1.0s,mb5.1					
DUG				MLR	MLR	
	comp=Z,8µm,19.0s,MS5.7					
DUG	Dugway	44.24	326	eP	P	17 50 21.1 +0.2
	comp=Z,38nm,1.0s,mb5.1					
DUG				LR	LR	
	comp=Z,8µm,19.0s,MS5.7					
LRMC	Laurel Mountai	44.24	318	⇓P	P	17 50 21.4 +0.5
	baz=44					
FURC	Furnace Creek,	44.27	319	⇓P	P	17 50 21.6 +0.5
	baz=44					
S11A	Rachel	44.27	321	⇓P	P	17 50 22.2 +1.0
	baz=44					
SNCC	San Nicolas Is	44.31	314	⇑P	P	17 50 21.8 +0.2
	baz=44					
M16A	Huntsville	44.40	328	⇓P	P	17 50 22.2 +0.1
	baz=45					
P13A	Bates Ranch, G	44.41	325	⇓P	P	17 50 23.2 +0.9
	baz=45					
BLG	Laguna Peak	44.43	315	⇓P	P	17 50 22.6 +0.1
	baz=45					
MPMC	Manual Prospec	44.44	318	⇑P	P	17 50 22.6 0.0
	baz=45					
BW06	Boulder Array	44.44	331	⇑P	P	17 50 22.2 -0.3
	baz=45					
BW06	Boulder Array	44.44	331	eP	P	17 50 21.9 -0.6
	comp=Z,45nm,1.0s,mb5.2					
BW06				LR	LR	
	comp=Z,4µm,20.0s,MS5.3					
PDAR	Pinedale Array	44.44	331	P	P	17 50 21.2 -1.2
	comp=Z,28nm,0.8s,mb5.0,baz=133,slow=8.2,SNR=110					
AGMN	Agassiz Nation	44.45	347	eP	P	17 50 20.1 -2.4
	comp=Z,50nm,0.9s,mb5.2					
AGMN				LR	LR	
	comp=Z,3µm,21.0s,MS5.2					
OSI	Osito Adit	44.46	316	⇑P	P	17 50 22.5 -0.3
	baz=45					
N15A	Stansbury Isla	44.56	327	⇓P	P	17 50 23.5 0.0
	baz=45					
HWUT	Hardware Ranch	44.57	329	eP	P	17 50 22.8 -0.7
	comp=Z,113nm,0.9s,mb5.7					
HWUT				ePP	PP	17 52 07.8 -0.2
HWUT				LR	LR	
	comp=Z,6µm,19.0s,MS5.5					
K18A	Toltan Ranch,	44.57	331	⇓P	P	17 50 24.2 +0.7
	baz=45					
L17A	Cokeville	44.58	330	⇑P	P	17 50 23.0 -0.6
	baz=45					
Q12A	Willow Creek R	44.61	324	⇑P	P	17 50 24.3 +0.5
	baz=45					
R11A	Troy Canyon, C	44.62	322	⇓P	P	17 50 24.5 +0.5
	baz=45					
SPB	Sao Paulo	44.62	131	eP	P	17 50 21.6 -2.5
	comp=Z,29nm,0.9s,mb5.1					
SPB				LR	LR	
	comp=Z,8µm,22.0s,MS5.6					
DAC	Darwin (Calif)	44.63	319	PFAKE		17 50 30.0 +5.9
DAC				LR	LR	
	comp=Z,5µm,20.0s,MS5.5					
BSC	Santa Cruz Isl	44.77	315	⇓P	P	17 50 25.1 -0.1
	baz=45					
L16A	Fish Haven	44.80	329	⇓P	P	17 50 25.0 -0.4
	baz=45					
ARVC	Arvin	44.81	317	⇓P	P	17 50 25.8 +0.2
	baz=45					
SPUT	South Promonto	44.82	328	eP	P	17 50 25.1 -0.4
	comp=Z,113nm,1.2s,mb5.6					
O13A	Hicks Ranch, I	44.84	325	⇓P	P	17 50 26.3 +0.6
	baz=45					
BGU	Big Grassy Mou	44.86	327	eP	P	17 50 25.8 0.0
	comp=Z,104nm,1.1s,mb5.6					
ISA	Isabella	44.87	317	⇓P	P	17 50 26.2 +0.2
	baz=45					
ISA	Isabella	44.87	317	eP	P	17 50 25.9 -0.1
ISA				pmax	pmax	
	comp=Z,96nm,1.3s,mb5.5					
ISA	Isabella	44.87	317	eP	P	17 50 25.9 -0.1

comp=Z,96nm,1.3s,mb5.5
N14A Grayback Hills 44.90 327 ⇓P P 17 50 26.6 +0.5
baz=45
GRAC Grapevine Rang 44.91 320 ⇑P P 17 50 27.1 +0.8
baz=45
M15A Larsen Ranch, 44.93 328 ⇓P P 17 50 26.6 +0.2
baz=45
P12A McGill 44.94 324 ⇑P P 17 50 27.3 +0.8
baz=45
S10A Tonopah Range, 44.98 321 ⇓P P 17 50 27.5 +0.7
baz=45
Q11A Duckwater 44.98 323 ⇓P P 17 50 27.1 +0.3
baz=45
J18A Kendall Valley 45.00 332 ⇑P P 17 50 26.9 0.0
baz=45
R10A Warm Springs 45.02 322 ⇓P P 17 50 28.4 +1.2
baz=45
CWC Cottonwood Cre 45.05 319 ⇓P P 17 50 27.8 +0.4
baz=45
SBC Santa Barbara 45.06 315 ⇑P P 17 50 27.4 -0.1
baz=45
K17A Gardner Place, 45.09 330 ⇑P P 17 50 27.4 -0.2
baz=45
AHID Auburn Hatcher 45.19 330 eP P 17 50 27.9 -0.4
comp=Z,38nm,0.9s,mb5.2
AHID LR LR
comp=Z,4µm,19.0s,MS5.4
I18A Diamond G Ranc 45.28 332 ⇑P P 17 50 29.1 0.0
baz=46
L15A Malad City 45.28 329 ⇑P P 17 50 28.9 -0.3
baz=46
HVU Hansel Valley 45.33 328 eP P 17 50 28.8 -0.7
HVU pmax pmax
comp=Z,31nm,0.8s,mb5.2
HVU Hansel Valley 45.33 328 eP P 17 50 28.8 -0.7
comp=Z,31nm,0.8s,mb5.2
O12A Currie 45.37 325 ⇑P P 17 50 30.3 +0.4
baz=46
PKM Peak Mountain 45.37 316 ⇑P P 17 50 30.1 +0.1
baz=46
VES Vestal, Richgr 45.38 317 ⇑P P 17 50 30.3 +0.2
baz=46
Q10A Clear Creek Ra 45.41 322 ⇓P P 17 50 31.0 +0.8
baz=46
M14A Sheep Mountain 45.44 327 ⇓P P 17 50 30.3 -0.1
baz=46
J17A Brown Place, J 45.44 331 ⇓P P 17 50 30.5 +0.1
baz=46
TPH Tonopah 45.46 321 PFAKE 17 50 40.0 +9.3
TPH LR LR
comp=Z,5µm,20.0s,MS5.5
N13A Wendover, West 45.46 326 ⇓P P 17 50 31.2 +0.6
baz=46
N13A Wendover, West 45.46 326 eP P 17 50 30.3 -0.3
comp=Z,282nm,0.9s,mb6.1
K16A Soda Springs 45.48 330 ⇑P P 17 50 30.7 0.0
baz=46
P11A Circle Ranch, 45.49 324 ⇑P P 17 50 31.2 +0.3
baz=46
TIN Tinemaha 45.50 319 ⇓P P 17 50 31.6 +0.6
baz=46
REDW Red Top Meadow 45.51 331 eP P 17 50 30.6 -0.4
comp=Z,87nm,1.0s,mb5.6
SNOW Snow King Moun 45.54 331 eP P 17 50 31.0 -0.1
comp=Z,92nm,1.1s,mb5.6
LOHW Long Hollow 45.58 331 eP P 17 50 31.2 -0.3
comp=Z,22nm,0.8s,mb5.1
TPAW Teton Pass 45.65 331 eP P 17 50 31.8 -0.2
comp=Z,84nm,0.9s,mb5.7
SMMC Simmler 45.72 316 ⇓P P 17 50 33.2 +0.4
baz=46
RRI2 Red Ridge 45.73 331 eP P 17 50 32.4 -0.3
comp=Z,66nm,0.8s,mb5.6
RCTC Rector, Farmer 45.75 318 ⇓P P 17 50 32.8 -0.1
baz=46
L14A Malta 45.75 328 ⇓P P 17 50 32.2 -0.7
baz=46
M13A Montello 45.78 327 ⇑P P 17 50 32.9 -0.3
baz=46
M13A Montello 45.78 327 eP P 17 50 31.7 -1.4
comp=Z,45nm,1.0s,mb5.3
I17A Pilgrim Ck. 45.80 332 ⇑P P 17 50 33.6 +0.4
baz=46
O11A Cowboy Ranch, 45.81 324 ⇓P P 17 50 33.6 +0.2
baz=46
K15A Arbon 45.85 329 ⇑P P 17 50 33.4 -0.3
baz=46
N12A Clover Valley, 45.93 325 ⇑P P 17 50 34.5 +0.2
baz=46
N12A Clover Valley, 45.93 325 eP P 17 50 33.8 -0.5
comp=Z,108nm,1.1s,mb5.7
P10A Eureka 45.95 323 ⇑P P 17 50 34.9 +0.4
baz=46
IMW Indian Meadow 45.95 331 eP P 17 50 34.2 -0.3
comp=Z,39nm,0.8s,mb5.4
ELK Elko 45.97 325 eP P 17 50 34.5 -0.1
ELK pmax pmax
comp=Z,52nm,0.9s
ELK MLR MLR
comp=Z,6µm,22.0s
ELK Elko 45.97 325 eP P 17 50 34.5 -0.1
comp=Z,52nm,0.9s,mb5.5
ELK LR LR
comp=Z,6µm,22.0s,MS5.5
K14A Jones Ranch, D 46.08 328 ⇓P P 17 50 35.3 -0.2
baz=46
LPA La Plata 46.12 152 ceP P 17 50 32.0 -3.8
LPA eS S 17 57 18.0 -1.4
LPA
comp=Z,8µm,20.0s
RLMT Red Lodge 46.13 334 ⇓P P 17 50 35.4 -0.4
baz=46
RLMT Red Lodge 46.13 334 eP P 17 50 35.5 -0.3
comp=Z,100nm,1.2s,mb5.6
RLMT LR LR
comp=Z,3µm,21.0s,MS5.2
LAO LASA Array 46.15 337 eP P 17 50 35.1 -0.8
comp=Z,187nm,1.1s,mb5.9
LAO LR LR
comp=Z,2µm,19.0s,MS5.0
H17A Grant Village 46.16 332 ⇓P P 17 50 36.3 +0.3
baz=46
L13A Double Diamond 46.17 327 ⇓P P 17 50 35.7 -0.5
baz=46
I16A Newdale 46.20 331 ⇓P P 17 50 36.3 -0.1
baz=46
LKWY Lake 46.21 332 eP P 17 50 37.4 +1.0
LKWY pmax pmax
comp=Z,21nm,0.7s,mb5.2
LKWY MLR MLR
comp=Z,4µm,20.0s,MS5.4
LKWY Lake 46.21 332 eP P 17 50 37.4 +0.9
comp=Z,21nm,0.7s,mb5.2
LKWY LR LR
comp=Z,4µm,20.0s,MS5.4
MLAC Mammoth Lakes 46.23 319 ⇑P P 17 50 36.4 -0.4
baz=46
M12A Wells 46.23 326 ⇓P P 17 50 36.4 -0.3
baz=46
N11A Elko Archery C 46.30 325 ⇓P P 17 50 37.5 +0.3
baz=46
ULM Lac du Bonnet 46.31 348 P P 17 50 34.6 -2.5
comp=Z,51nm,0.8s,mb5.5,baz=159,slow=8.2,SNR=23
J15A Blackfoot 46.31 330 ⇓P P 17 50 37.3 0.0
baz=46
YFT Old Faithful 46.32 332 eP P 17 50 38.5 +1.2
comp=Z,113nm,1.1s,mb5.7
NVAR Mina Array Bea 46.35 321 P P 17 50 37.4 -0.3
comp=Z,61nm,0.9s,mb5.5,baz=134,slow=6.3,SNR=219
O10A Cortez Mining, 46.40 324 ⇑P P 17 50 38.5 +0.5
baz=47
G18A Lazy EL Ranch, 46.41 334 ⇑P P 17 50 37.7 -0.3
baz=47
YMR Madison River 46.55 332 eP P 17 50 39.5 +0.4
K13A Stover Farm, H 46.63 328 ⇓P P 17 50 39.1 -0.7
baz=47
N10A Dunphy 46.68 324 ⇑P P 17 50 40.1 -0.1
baz=47
H16A Russell Place, 46.71 332 ⇑P P 17 50 40.7 +0.4
baz=47
M11A Holland Ranch, 46.73 326 ⇓P P 17 50 40.2 -0.4
baz=47
I15A Monteview 46.78 330 ⇑P P 17 50 41.3 +0.3
baz=47
L12A House Creek Ra 46.78 327 ⇓P P 17 50 40.9 -0.1
baz=47
J14A Carey 46.81 329 ⇓P P 17 50 41.3 +0.1
baz=47

GCMT Greycliff 46.83 334 eP P 17 50 40.8 -0.5
comp=Z,27nm,0.7s,mb5.3
QLMT Earthquake Lak 46.89 332 eP P 17 50 42.5 +0.7
comp=Z,79nm,1.4s,mb5.5
BMN Battle Mountai 46.92 324 eP P 17 50 42.1 0.0
BMN pmax pmax
comp=Z,175nm,1.3s,mb5.8
BMN MLR MLR
comp=Z,6µm,19.0s,MS5.6
BMN Battle Mountai 46.92 324 eP P 17 50 42.1 +0.1
comp=Z,175nm,1.3s,mb5.8
BMN LR LR
comp=Z,6µm,19.0s,MS5.6
DGMT Dagmar 46.93 340 ⇓P P 17 50 42.2 +0.1
baz=47
DGMT Dagmar 46.93 340 eP P 17 50 41.8 -0.3
comp=Z,190nm,0.9s,mb6.0
DGMT LR LR
comp=Z,3µm,19.0s,MS5.2
F18A Big Timber 46.94 334 ⇑P P 17 50 42.0 -0.1
baz=47
G17A Pierce Place, 46.94 333 ⇑P P 17 50 43.3 +1.2
baz=47
PLCA Paso Flores 46.98 168 P P 17 50 40.1 -2.4
comp=Z,86nm,1.1s,mb5.6,baz=340,slow=8.9,SNR=43
PLCA Paso Flores 46.98 168 P P 17 50 40.1 -2.4
PLCA pmax pmax
comp=Z,86nm,1.1s
PLCA Paso Flores 46.98 168 eP P 17 50 39.8 -2.7
comp=Z,198nm,1.3s,mb5.9
PLCA LR LR
comp=Z,2µm,21.0s,MS5.0
K12A Draper Farm, C 47.06 327 ⇑P P 17 50 43.0 -0.1
baz=47
TRQA Tornquist 47.06 158 eP P 17 50 40.1 -3.0
comp=Z,117nm,1.4s,mb5.6
TRQA LR LR
comp=Z,4µm,21.0s,MS5.3
J13A Cove Ranch, Pi 47.20 329 ⇓P P 17 50 44.2 0.0
baz=47
L11A Cat Creek Ranc 47.20 326 ⇑P P 17 50 44.1 -0.2
baz=47
I14A Mackay 47.21 330 ⇑P P 17 50 44.8 +0.5
baz=47
M10A I.L. Ranch, Tu 47.22 325 ⇓P P 17 50 44.3 -0.1
baz=47
H15A Lima 47.31 331 ⇑P P 17 50 46.1 +1.1
baz=48
F17A Fitzpatrick Pl 47.35 333 ⇑P P 17 50 45.7 +0.3
baz=48
G16A Moss Hill, Enn 47.36 332 ⇑P P 17 50 45.7 +0.3
baz=48
HLID Hailey 47.44 329 ⇑P P 17 50 46.2 +0.1
baz=48
HLID Hailey 47.44 329 eP P 17 50 45.6 -0.5
comp=Z,39nm,0.9s,mb5.3
HLID LR LR
comp=Z,8µm,21.0s,MS5.7
CMB Columbia Colle 47.47 319 eP P 17 50 45.3 -1.1
CMB pmax pmax
comp=Z,42nm,1.1s,mb5.3
CMB MLR MLR
comp=Z,5µm,19.0s,MS5.5
CMB Columbia Colle 47.47 319 eP P 17 50 45.3 -1.1
comp=Z,42nm,1.1s,mb5.3
CMB LR LR
comp=Z,5µm,19.0s,MS5.5
I13A Wildhorse Cree 47.54 329 ⇑P P 17 50 47.1 +0.2
baz=48
E18A Harlowton 47.54 335 ⇓P P 17 50 47.0 +0.1
baz=48
L10A Juniper Basin 47.54 326 ⇓P P 17 50 46.6 -0.3
baz=48
MCMT McKenzie Canyo 47.56 331 eP P 17 50 47.3 +0.3
comp=Z,8,4nm,0.8s,mb4.8
J12A Stokes Ranch, 47.58 328 ⇑P P 17 50 47.0 -0.2
baz=48
BOZ Bozeman (W) 47.60 333 ⇓P P 17 50 47.3 0.0
baz=48
BOZ Bozeman (W) 47.60 333 eP P 17 50 46.6 -0.7
BOZ pmax pmax
comp=Z,72nm,1.1s,mb5.6
BOZ MLR MLR
comp=Z,2µm,20.0s,MS5.2
BOZ Bozeman (W) 47.60 333 eP P 17 50 46.6 -0.6
comp=Z,72nm,1.1s,mb5.6
BOZ LR LR
comp=Z,2µm,20.0s,MS5.2
G15A Dillon 47.64 331 ⇑P P 17 50 48.1 +0.5
baz=48
H14A Leadore 47.66 330 ⇓P P 17 50 48.0 +0.2
baz=48
F16A Kennard Place, 47.70 333 ⇓P P 17 50 47.8 -0.2
baz=48
K11A Parker Ranch, 47.76 327 ⇑P P 17 50 48.3 -0.3
baz=48
WCN Washoe City 47.78 321 ⇓P P 17 50 49.0 +0.2
baz=48
DLMT Dillon 47.84 332 eP P 17 50 48.8 -0.3
comp=Z,41nm,1.1s,mb5.4
RCBR Riachuelo 47.84 103 eP P 17 50 47.8 -1.8
RCBR LR LR
comp=Z,3µm,19.0s,MS5.3
E17A Martinsdale 47.87 334 ⇓P P 17 50 49.5 +0.1
baz=48
I12A Atlanta 47.98 328 ⇑P P 17 50 50.2 0.0
baz=48
D18A Linhart Farms, 47.99 335 ⇑P P 17 50 50.3 0.0
baz=48
H13A Challis 48.07 330 ⇓P P 17 50 50.7 -0.2
baz=48
MFID Camas Ranch 48.09 327 ⇑P P 17 50 50.8 -0.3
baz=48
LRM Limekiln Ridge 48.11 332 eP P 17 50 50.8 -0.4
comp=Z,188nm,1.1s,mb6.0
F15A Butte 48.14 332 ⇓P P 17 50 51.0 -0.5
baz=48
G14A Jackson 48.16 331 ⇓P P 17 50 51.2 -0.4
baz=48
K10A MacKenzie Ranc 48.23 326 ⇑P P 17 50 51.9 -0.3
baz=48
E16A East Helena 48.29 333 ⇓P P 17 50 52.6 -0.1
baz=48
D17A Six Diamond Ra 48.33 334 ⇑P P 17 50 52.6 -0.4
baz=49
H12A Diamond D Ranc 48.36 329 ⇓P P 17 50 52.8 -0.4
baz=49
G13A Cobalt 48.43 330 ⇓P P 17 50 53.3 -0.5
baz=49
BEKR Beckworth 48.49 321 ⇓P P 17 50 54.3 +0.1
baz=49
I11A Placerville 48.49 328 ⇑P P 17 50 54.0 -0.2
baz=49
HRY Holter Researc 48.49 333 eP P 17 50 53.9 -0.3
comp=Z,32nm,0.7s,mb5.5
F14A Wisdom 48.53 331 ⇓P P 17 50 54.4 -0.1
baz=49
J10A Berg Farm, Mel 48.60 327 ⇑P P 17 50 54.6 -0.4
baz=49
D16A Dana Ranch, Ca 48.61 334 ⇓P P 17 50 55.2 +0.1
baz=49
EGMT Eagleton 48.63 336 ⇓P P 17 50 55.0 -0.2
baz=49
EGMT Eagleton 48.63 336 eP P 17 50 54.3 -0.9
comp=Z,56nm,0.9s,mb5.6
EGMT LR LR
comp=Z,3µm,22.0s,MS5.2
E15A Deer Lodge 48.65 332 ⇓P P 17 50 54.9 -0.5
baz=49
C17A Wharram Farm, 48.74 335 ⇑P P 17 50 55.9 -0.1
baz=49
B18A Beardsley Farm 48.93 336 ⇑P P 17 50 57.7 +0.2
baz=49
F13A Darby 48.98 331 ⇑P P 17 50 57.5 -0.4
baz=49
WVOR Wild Horse Val 49.00 325 eP P 17 50 57.4 -0.8
WVOR pmax pmax
comp=Z,271nm,1.2s,mb6.2
WVOR MLR MLR
comp=Z,6µm,19.0s,MS5.6
WVOR Wild Horse Val 49.00 325 eP P 17 50 57.4 -0.8
comp=Z,271nm,1.2s,mb6.2
WVOR LR LR
comp=Z,6µm,19.0s,MS5.6
E14A Clinton 49.03 332 ⇑P P 17 50 58.0 -0.4
baz=49
D15A Lincoln 49.05 333 ⇓P P 17 50 58.2 -0.3
baz=49

I10A Payette 49.06 328 ⇑P P 17 50 58.2 -0.4
baz=49
H11A Donnelly 49.06 329 ⇑P P 17 50 57.9 -0.7
baz=49
J09A Fry Pan Ranch, 49.09 326 ⇓P P 17 50 58.4 -0.4
baz=49
MCCM Marconi Confer 49.18 318 PFAKE 17 51 10.0 +10
MCCM LR LR
comp=Z,4µm,22.0s,MS5.4
B17A L&G Farms, Che 49.27 335 ⇑P P 17 50 59.6 -0.5
baz=50
C16A Fuhringer Ranc 49.29 334 ⇑P P 17 51 00.0 -0.3
baz=50
CHMT Chamberlain Mo 49.29 332 eP P 17 50 59.2 -1.1
comp=Z,6.9nm,0.9s,mb4.7
H10A Noah's Angus R 49.37 328 ⇑P P 17 50 59.6 -1.3
baz=50
A18A Metzger Ranch, 49.38 337 ⇑P P 17 51 00.6 -0.3
baz=50
E13A Victor 49.38 331 ⇑P P 17 51 00.6 -0.4
baz=50
F12A Elk City 49.41 330 ⇑P P 17 51 00.9 -0.3
baz=50
I09A Lost Marbles R 49.49 327 ⇓P P 17 51 01.3 -0.6
baz=50
J08A Circle Bar Ran 49.50 326 ⇓P P 17 51 01.4 -0.6
baz=50
D14A Greenough 49.53 332 ⇑P P 17 51 01.3 -0.8
baz=50
MSO Missoula 49.55 332 eP P 17 51 01.5 -0.8
comp=Z,56nm,1.2s,mb5.5
MSO LR LR
comp=Z,3µm,19.0s,MS5.3
SLMT Seeley Lake 49.64 333 eP P 17 51 02.0 -1.0
comp=Z,14nm,0.9s,mb5.0
C15A Salmond Ranch, 49.65 334 ⇓P P 17 51 03.2 +0.2
baz=50
MOD Modoc 49.65 323 eP P 17 51 02.2 -0.9
comp=Z,48nm,1.2s,mb5.4
MOD LR LR
comp=Z,6µm,19.0s,MS5.6
LBCM Butte Creek Ri 49.67 321 P P 17 51 02.7 -0.6
G11A Walters Elk Ra 49.67 329 ⇑P P 17 51 02.1 -1.1
baz=50
B16A M & M Farms, S 49.74 335 ⇓P P 17 51 03.1 -0.6
baz=50
HOPS Hopland 49.75 318 eP P 17 51 03.5 -0.5
comp=Z,96nm,1.3s,mb5.7
HOPS LR LR
comp=Z,4µm,21.0s,MS5.4
BMO Blue Mountains 49.84 328 eP P 17 51 02.7 -1.9
comp=Z,14nm,1.0s,mb4.9
H09A Durkee 49.91 328 ⇓P P 17 51 03.9 -1.1
baz=50
F11A Grangeville 49.95 330 ⇑P P 17 51 04.3 -1.1
baz=50
D13A Huson 49.98 332 ⇓P P 17 51 05.1 -0.5
baz=50
E12A Beaver Dam Sad 50.03 331 ⇓P P 17 51 05.1 -0.8
baz=50
B15A Bradely Ranch, 50.03 334 ⇑P P 17 51 05.5 -0.4
baz=50
G10A Bishop Farm, J 50.04 328 ⇑P P 17 51 04.9 -1.2
baz=50
SWMT Swartz Lake 50.07 333 eP P 17 51 05.2 -1.0
comp=Z,12nm,0.8s,mb5.0
WDC Whiskeytown Da 50.27 320 eP P 17 51 04.6 -3.3
WDC pmax pmax
comp=Z,58nm,1.4s,mb5.4
WDC MLR MLR
comp=Z,3µm,21.0s,MS5.2
WDC Whiskeytown Da 50.27 320 eP P 17 51 04.6 -3.2
comp=Z,58nm,1.4s,mb5.4
WDC LR LR
comp=Z,3µm,21.0s,MS5.2
YBMT Yellow Bay 50.34 333 eP P 17 51 07.8 -0.5
comp=Z,19nm,0.9s,mb5.1
H08A Prairie City 50.35 327 ⇓P P 17 51 07.4 -1.0
baz=50
G09A Cove 50.37 328 ⇑P P 17 51 07.5 -1.1
baz=51
JTMT Jette 50.38 333 eP P 17 51 08.1 -0.5
comp=Z,23nm,1.1s,mb5.1
B14A Marquette Ranc 50.38 334 ⇑P P 17 51 08.6 +0.1
baz=51
C13A Hot Springs 50.46 332 ⇑P P 17 51 08.8 -0.4
baz=51
K05A Summer Lake 50.50 324 ⇑P P 17 51 09.1 -0.4
baz=51
I07A Izee 50.53 326 ⇓P P 17 51 08.9 -0.9
baz=51
F10A Beach Ranch, E 50.55 329 ⇑P P 17 51 09.2 -0.8
baz=51
A15A Johnson Ranch, 50.61 335 ⇓P P 17 51 09.8 -0.5
baz=51
BSMT Bassoo Peak 50.69 332 eP P 17 51 10.5 -0.4
comp=Z,16nm,0.8s,mb5.0
F09A S2 Ranch, Elgi 50.73 328 ⇑P P 17 51 10.5 -0.8
baz=51
E10A Myers Farm, Un 50.84 330 ⇑P P 17 51 11.0 -1.1
baz=51
A14A Double T Ranch 50.91 334 ⇑P P 17 51 12.1 -0.4
baz=51
C12B Naegeli Ranch, 50.91 332 ⇓P P 17 51 12.4 -0.1
baz=51
B13A Whitefish 50.92 333 ⇓P P 17 51 12.5 -0.2
baz=51
G08A Pilot Rock 51.01 327 ⇑P P 17 51 12.5 -0.9
baz=51
YBH Yreka Blue Hor 51.02 322 eP P 17 51 11.6 -1.9
YBH pmax pmax
comp=Z,30nm,0.9s
YBH MLR MLR
comp=Z,4µm,20.0s
YBH Yreka Blue Hor 51.02 322 eP P 17 51 11.6 -1.9
comp=Z,30nm,0.9s,mb5.2
YBH LR LR
comp=Z,4µm,20.0s,MS5.5
LNOR Lincton Mounta 51.03 328 eP P 17 51 12.3 -1.2
LNOR pmax pmax
comp=Z,43nm,1.2s,mb5.2
LNOR Lincton Mounta 51.03 328 eP P 17 51 12.3 -1.2
comp=Z,43nm,1.2s,mb5.2
SCHQ Schefferville 51.12 12 P P 17 51 12.4 -1.6
comp=Z,118nm,0.9s,mb5.8,baz=196,slow=6.0,SNR=22
WALA Waterton Lakes 51.18 334 eP P 17 51 14.2 -0.4
comp=Z,1.6nm,0.9s
D10A Wagner Farm, O 51.32 330 ⇓P P 17 51 14.6 -1.1
baz=52
E09A Wood Farm, Sta 51.39 329 ⇓P P 17 51 15.3 -0.9
baz=52
HUMO Hull Mountain 51.66 322 eP P 17 51 15.9 -2.4
comp=Z,9.8nm,0.8s,mb4.8
HUMO LR LR
comp=Z,5µm,20.0s,MS5.5
E08A Dider Farm, El 51.85 328 ⇓P P 17 51 18.4 -1.2
baz=52
FFC Flin Flon 51.85 346 eP P 17 51 17.9 -1.6
FFC pmax pmax
comp=Z,86nm,1.3s,mb5.5
FFC MLR MLR
comp=Z,2µm,20.0s,MS5.2
FFC Flin Flon 51.85 346 eP P 17 51 17.9 -1.5
comp=Z,86nm,1.3s,mb5.5
FFC LR LR
comp=Z,2µm,20.0s,MS5.2
A12A Yaak River Ran 51.87 333 ⇓P P 17 51 19.7 0.0
baz=52
F07A Phinny Hill Vi 51.92 327 ⇓P P 17 51 20.2 0.0
baz=52
HAWA Hanford 52.03 328 eP P 17 51 19.9 -1.1
comp=Z,53nm,1.3s,mb5.3
HAWA LR LR
comp=Z,3µm,20.0s,MS5.4
RSW Rattlesnake Hi 52.06 328 eP P 17 51 20.7 -0.5
comp=Z,104nm,1.4s,mb5.6
NEW Newport 52.08 331 eP P 17 51 19.7 -1.6
NEW pmax pmax
comp=Z,25nm,1.2s
NEW MLR MLR
comp=Z,3µm,20.0s
NEW Newport 52.08 331 eP P 17 51 19.7 -1.6
comp=Z,25nm,1.2s,mb5.0
NEW LR LR
comp=Z,3µm,20.0s,MS5.3
D08A Wollman Farm, 52.15 329 ⇑P P 17 51 21.3 -0.5
baz=52
OD2 Odessa Site #2 52.27 330 P P 17 51 22.1 -0.6

E07A Sunnyside 52.31 328 ⇑P P 17 51 22.6 -0.4
baz=52
C09A Chrisman Ranch 52.32 330 ⇓P P 17 51 22.5 -0.6
baz=52
VFP Flag Point 52.40 326 P P 17 51 24.2 +0.4
H04A Detroit Lake 52.42 325 ⇑P P 17 51 23.1 -0.9
baz=53
HOOD Mount Hood Mea 52.50 326 *e*P **P 17 51 24.8 +0.2**
comp=Z,159nm,0.8s,mb6.0
EUO Eugene 52.55 324 P P 17 51 23.7 -1.2
VLL Laurance Lake 52.61 326 P P 17 51 25.8 +0.5
G04A Mulino 52.90 325 ⇑P P 17 51 26.7 -0.8
baz=53
COR Corvallis 53.01 324 *e*P **P 17 51 27.8 -0.4**
COR pmax pmax
comp=Z,182nm,1.4s,mb5.8
COR MLR MLR
comp=Z,2μm,22.0s,MS5.2
COR Corvallis 53.01 324 *e*P **P 17 51 27.8 -0.4**
comp=Z,182nm,1.4s,mb5.8
COR LR LR
comp=Z,2μm,22.0s,MS5.2
LTY Liberty 53.19 328 P P 17 51 29.1 -0.4
B08A Colville Reser 53.22 330 ⇑P P 17 51 29.0 -0.7
baz=53
ETW Entiat 53.23 329 *e*P **P 17 51 29.4 -0.4**
comp=Z,218nm,1.6s,mb5.8
F04A Amboy 53.30 326 ⇓P P 17 51 29.6 -0.8
baz=54
LON Longmire 53.47 327 *e*P **P 17 51 30.8 -0.8**
LON pmax pmax
comp=Z,32nm,0.9s,mb5.2
LON Longmire 53.47 327 *e*P **P 17 51 30.8 -0.8**
comp=Z,32nm,0.9s,mb5.2
HEBO Mount Hebo 53.63 325 *e*P **P 17 51 32.5 -0.4**
comp=Z,132nm,1.1s,mb5.8
D05A Enumclaw 53.84 328 ⇑P P 17 51 33.7 -0.6
baz=54
F03A Seaside 53.94 325 ⇓P P 17 51 35.0 -0.1
baz=54
EDM Edmonton 54.13 338 *e*P **P 17 51 35.1 -1.2**
A07A Ashnola River, 54.20 330 ⇑P P 17 51 37.2 +0.3
baz=54
FCC Fort Churchill 54.20 353 *e*P **P 17 51 34.7 -2.0**
RPW Rockport 54.38 329 P P 17 51 37.4 -0.8
B06A Marblemount 54.41 329 ⇑P P 17 51 37.8 -0.7
baz=55
JCW Jim Creek 54.44 329 *e*P **P 17 51 37.3 -1.3**
comp=Z,82nm,1.2s,mb5.5
GNW Green Mountain 54.52 327 *e*P **P 17 51 37.5 -1.7**
comp=Z,37nm,1.1s,mb5.3
NLWA Neilton Lookou 54.98 327 ⇑P P 17 51 42.7 +0.1
baz=55
NLWA Neilton Lookou 54.98 327 *e*P **P 17 51 42.1 -0.5**
comp=Z,38nm,0.5s,mb5.7
NLWA LR LR
comp=Z,4μm,19.0s,MS5.5
A05A Maple Falls 55.02 329 ⇓P P 17 51 42.1 -0.8
baz=55
PGC Sidney 55.52 328 *e*P **P 17 51 46.0 -0.5**
RKT Rikitea 58.38 239 *e*S **S 18 00 03.0 -5.0**
comp=Z,5μm,29.8s
RKT *e*LR LR 18 09 13.0
comp=Z,8μm,28.2s,baz=69
SACV Santiago Islan 58.70 76 PFAKE 17 52 20.0 +10
SACV LR LR
comp=Z,1μm,20.0s,MS5.1
TAOE Nuku Hiva Isla 59.09 257 *e*S **S 18 00 12.3 -5.1**
comp=Z,916nm,27.0s
TAOE *e*LQ 18 07 01.9
comp=Z,9μm,30.1s
TAOE *e*LR LR 18 09 38.2
comp=Z,4μm,25.5s,baz=84
CMLA Cha da Macela 61.04 49 PFAKE 17 52 40.0 +15
CMLA LR LR
comp=Z,946nm,20.0s,MS4.9
YKA Yellowknife Ar 61.89 344 P P 17 52 29.5 -1.0
comp=Z,40nm,1.0s,mb5.5,baz=137,slow=6.5,SNR=76
YKA Yellowknife Ar 61.89 344 P **P 17 52 29.5 -1.0**
YKA pmax pmax
comp=Z,40nm,1.0s
CRAG Craig 64.30 331 *e*P **P 17 52 47.2 +0.6**
comp=Z,72nm,1.0s,mb5.7
DLBC Dease Lake 64.52 335 *e*P **P 17 52 47.9 -0.1**
SFJD Kangerlussuaq 65.51 13 *i* P **P 17 52 53.8 -0.5**
SFJD pmax pmax
comp=Z,26nm,1.0s,mb5.2
SFJD MLR MLR
comp=Z,2μm,17.0s,MS5.4
SFJD Kangerlussuaq 65.51 13 *e*P **P 17 52 52.4 -2.0**
comp=Z,73nm,1.3s,mb5.5
SFJD LR LR
comp=Z,2μm,21.0s,MS5.3
SFJD Kangerlussuaq 65.51 13 *i* P **P 17 52 53.8 -0.5**
comp=Z,26nm,1.0s,mb5.2
SFJD
comp=Z,2μm,17.0s
SIT Sitka 66.16 332 *e*P **P 17 52 58.9 +0.2**
SIT pmax pmax
comp=Z,53nm,1.2s,mb5.5
SIT Sitka 66.16 332 *e*P **P 17 52 58.9 +0.2**
comp=Z,53nm,1.2s,mb5.5
SKAG Skagway 67.38 334 *e*P **P 17 53 06.2 -0.2**
comp=Z,78nm,1.5s,mb5.5
PNL Peninsula 69.30 333 *e*P **P 17 53 18.5 +0.1**
comp=Z,66nm,1.1s,mb5.5
RES Resolute Bay 69.83 357 *e*P **P 17 53 19.6 -1.8**
RES pmax pmax
comp=Z,71nm,1.0s,mb5.5
RES Resolute Bay 69.83 357 *e*P **P 17 53 19.6 -1.9**
comp=Z,71nm,1.0s,mb5.5
PPT Papeete 69.88 249 *e*S S 18 02 26.5 -4.1
comp=Z,2μm,29.0s
PPT *e*SS SS 18 06 52.2 -8.0
comp=Z,1μm,29.8s
PPT *e*LQ 18 11 31.2
comp=Z,4μm,26.0s
PPT *e*LR LR 18 14 36.9
comp=Z,4μm,27.0s,baz=76
INK Inuvik 71.56 342 *e*P **P 17 53 31.6 -0.5**
INK pmax pmax
comp=Z,123nm,1.1s
INK Inuvik 71.56 342 *e*P **P 17 53 31.6 -0.5**
comp=Z,123nm,1.1s,mb5.8
BMRM Bremner River 72.19 333 *e*P **P 17 53 36.1 +0.1**
comp=Z,137nm,1.1s,mb5.8
POHA Pohakuloa 72.27 289 PFAKE 17 53 50.0 +13
POHA LR LR
comp=Z,2μm,22.0s,MS5.4
EGAK Eagle 72.35 337 *e*P **P 17 53 35.8 -1.1**
comp=Z,57nm,0.9s,mb5.5
EGAK LR LR
comp=Z,2μm,19.0s,MS5.4
SUMG Summit 72.49 13 *e*P **P 17 53 36.7 -0.9**
comp=Z,151nm,1.1s,mb5.8
SUMG Summit 72.49 13 *i* P **P 17 53 39.2 +1.6**
comp=Z,81nm,1.0s,mb5.6
DIV Divide 72.78 333 *e*P **P 17 53 38.5 -1.0**
comp=Z,75nm,1.1s,mb5.5
PAX Paxson 73.34 335 *e*P **P 17 53 41.7 -1.1**
PAX pmax pmax
comp=Z,66nm,1.3s,mb5.4
PAX Paxson 73.34 335 *e*P **P 17 53 41.7 -1.1**
comp=Z,66nm,1.3s,mb5.4
LIS Lisbon 73.84 51 *e*P **P 17 53 45.7 -0.5**
LIS AMb AMB 17 54 07.8
comp=Z,250nm,1.7s,mb5.9
PFVI Vila Bisbo 73.93 53 *e*S S 18 03 22.9 +6.3
PFVI Vila Bisbo 73.93 53 *e*LR LR 18 16 25.9
comp=Z,1μm,22.0s
PTEO Sao Teotonio 74.05 53 *e*P **P 17 53 48.7 +1.2**
comp=Z,166nm,1.4s,mb5.8
MORF Marmelete 74.08 53 *e*P **P 17 53 47.3 -0.4**
MORF *e*S S 18 03 21.1 +2.7
MORF Marmelete 74.08 53 *e*P **P 17 53 48.4 +0.7**
comp=Z,288nm,1.7s,mb5.9
MORF *e*S S 18 03 29.6 +11
MORF Marmelete 74.08 53 *e*LR LR 18 15 28.6
comp=Z,2μm,20.0s
SEW Seward 74.15 331 *e*P **P 17 53 46.3 -1.2**
comp=Z,58nm,1.0s,mb5.5
PMR Palmer 74.46 333 *e*P **P 17 53 48.6 -0.8**
PMR pmax pmax
comp=Z,27nm,0.9s,mb5.2
PMR Palmer 74.46 333 *e*P **P 17 53 48.6 -0.8**
comp=Z,27nm,0.9s,mb5.2
EMAZ Mazaricos 74.48 47 P **P 17 53 48.6 -1.3**
comp=Z,66nm,1.0s,mb5.5
PTOM Tomar 74.51 50 *e*P **P 17 53 50.9 +0.8**
comp=Z,167nm,1.5s,mb5.8
PTO Porto 74.54 49 *e*P **P 17 53 50.9 +0.7**
comp=Z,222nm,1.3s,mb5.9
EZAM Zamans 74.59 48 P **P 17 53 50.3 -0.2**
comp=Z,188nm,1.0s,mb6.0
PCVE Castro Verde 74.60 53 *e*P **P 17 53 43.7 -7.0**
comp=Z,131nm,1.6s,mb5.6
PCVE *e*S S 18 03 29.3 +5.2
PCVE *e*LR LR 18 11 05.0
KIP Kipapa 74.61 291 PFAKE 17 54 00.0 +9.0
KIP LR LR
comp=Z,1μm,19.0s,MS5.3
EVOP Sao Brissos 74.62 52 *e*P **P 17 53 50.5 -0.2**
EVOP AMb AMB 17 53 54.2
comp=Z,169nm,1.9s,mb5.6
EVOP *e*S S 18 03 27.3 +3.0
EVOP *e*S S 18 03 27.9 +3.6
PBDV Barranco-do-Ve 74.65 53 *e*P **P 17 53 52.0 +1.0**
comp=Z,108nm,1.6s,mb5.5
PBDV *e*S S 18 03 31.3 +6.6
PBDV Barranco-do-Ve 74.65 53 *e*LR LR 18 16 48.4
comp=Z,2μm,22.0s
EVO Evora 74.71 52 *e*P **P 17 53 49.4 -1.9**
comp=Z,218nm,1.2s,mb5.7
EVO *e*MLR MLR
comp=Z,2μm,21.5s,MS5.0
EVO Evora 74.71 52 *e*P **P 17 53 51.0 -0.3**
comp=Z,120nm,1.7s,mb5.5
PBEJ Beja 74.77 52 *e*P **P 17 53 51.6 -0.1**
comp=Z,108nm,1.7s,mb5.5
STS Santiago 74.78 47 P **P 17 53 50.9 -0.7**
STS pmax pmax
comp=Z,107nm,1.3s,mb5.6
STS Santiago 74.78 47 P **P 17 53 50.9 -0.7**
comp=Z,107nm,1.3s,mb5.6
FIB Fire Island 74.81 332 P **P 17 53 49.6 -1.8**
PVAQ Vaqueiros 74.83 53 *e*P **P 17 53 52.6 +0.6**
comp=Z,99nm,1.6s,mb5.5
PVAQ *e*S S 18 03 33.5 +6.8
PVAQ Vaqueiros 74.83 53 *e*LR LR 18 16 54.8
comp=Z,2μm,22.0s
COLA College 75.01 336 *e*P **P 17 53 51.2 -1.3**
COLA pmax pmax
comp=Z,46nm,1.3s,mb5.2
COLA MLR MLR
comp=Z,2μm,22.0s,MS5.4
COLA College 75.01 336 *e*P **P 17 53 51.2 -1.3**
comp=Z,46nm,1.3s,mb5.2
COLA LR LR
comp=Z,2μm,22.0s,MS5.4
PVIS Viseu 75.02 49 *e*P **P 17 53 53.0 -0.1**
comp=Z,150nm,1.3s,mb5.8
ELOB Lobios 75.02 48 P **P 17 53 54.3 +1.2**
comp=Z,30nm,0.8s,mb5.3
EGRO El Granado 75.03 53 P **P 17 53 52.7 -0.5**
comp=Z,70nm,1.2s,mb5.5
PCAB Cabril 75.03 48 *e*P **P 17 53 55.1 +2.0**
comp=Z,116nm,1.8s,mb5.5
KDAK Kodiak Island 75.06 329 *e*P **P 17 53 51.9 -1.0**
KDAK pmax pmax
comp=Z,37nm,1.1s,mb5.2
KDAK MLR MLR
comp=Z,2μm,21.0s,MS5.3
KDAK Kodiak Island 75.06 329 *e*P **P 17 53 51.9 -1.0**
comp=Z,37nm,1.1s,mb5.2
KDAK LR LR
comp=Z,2μm,21.0s,MS5.3
PESTR Estremoz 75.07 51 *e*P **P 17 53 53.5 +0.1**
comp=Z,241nm,1.2s,mb6.0
PESTR *e*S S 18 03 35.8 +6.5
PESTR Estremoz 75.07 51 *e*LR LR 18 17 09.8
comp=Z,949nm,20.0s
MCK McKinley 75.07 335 *e*P **P 17 53 51.8 -1.0**
MCK pmax pmax
comp=Z,51nm,0.9s,mb5.5
MCK McKinley 75.07 335 *e*P **P 17 53 51.8 -1.1**
comp=Z,51nm,0.9s,mb5.5
PVRL Vila Real 75.22 49 *e*P **P 17 53 54.2 0.0**
comp=Z,122nm,1.6s,mb5.6
PCBR Castelo Branco 75.25 50 *e*P **P 17 53 54.4 0.0**
comp=Z,137nm,1.3s,mb5.7
MTE Manteigas 75.25 50 *e*P **P 17 53 54.0 -0.4**
comp=Z,118nm,1.5s,mb5.6
MTE LR LR
comp=Z,2μm,22.0s,MS5.4
MTE Manteigas 75.25 50 *e*P **P 17 53 55.1 +0.7**
comp=Z,120nm,1.6s,mb5.6
MTE *e*S S 18 03 36.1 +4.8
MTE Manteigas 75.25 50 *e*LR LR 18 16 37.0
comp=Z,2μm,22.0s
PMRV Marv??o 75.28 51 *e*P **P 17 53 54.3 -0.2**
comp=Z,118nm,1.8s,mb5.5
PMRV *e*S S 18 03 35.8 +4.2
PMRV Marv??o 75.28 51 *e*LR LR 18 16 54.5
comp=Z,1μm,22.0s
OHAK Old Harbor 75.30 328 *e*P **P 17 53 54.1 -0.2**
comp=Z,92nm,1.0s,mb5.7
PBAR Barrancos 75.44 52 *e*P **P 17 53 55.6 +0.1**
comp=Z,119nm,1.8s,mb5.5
PBAR *e*S S 18 03 43.0 +10
PBAR Barrancos 75.44 52 *e*LR LR 18 16 53.1
comp=Z,1μm,22.0s
EBAD Badajoz 75.51 51 P **P 17 53 55.1 -0.8**
comp=Z,53nm,1.1s,mb5.4
TRF Thorofare Moun 75.55 335 *e*P **P 17 53 54.6 -1.0**
comp=Z,58nm,0.9s,mb5.5
TRF *e*PP PP 17 56 46.7 +1.6
SCO Scoresbysund 75.61 18 *e*P **P 17 53 54.8 -1.0**
SCO pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
SCO MLR MLR
comp=Z,1μm,19.0s,MS5.2
SCO Scoresbysund 75.61 18 *i* P **P 17 53 54.8 -1.0**
comp=Z,9.9nm,1.0s,mb4.7
SCO
comp=Z,1μm,19.0s
EMIN Mina Concepcio 75.69 52 P **P 17 53 55.3 -1.7**
comp=Z,50nm,1.1s,mb5.4
MVO Moncorvo 75.72 49 P **P 17 53 56.4 -0.7**
MVO Moncorvo 75.72 49 *e*P **P 17 53 57.2 +0.1**
comp=Z,117nm,1.4s,mb5.6
MVO *e*S S 18 03 43.0 +6.6
MVO Moncorvo 75.72 49 *e*LR LR 18 17 24.4
comp=Z,2μm,22.0s
ERUA La Rua 75.76 48 P **P 17 53 57.3 0.0**
ERUA pmax pmax
comp=Z,58nm,1.2s,mb5.4
ERUA La Rua 75.76 48 P **P 17 53 57.3 +0.1**
comp=Z,58nm,1.2s,mb5.4
RSO Redoubt South 75.83 331 *e*P **P 17 53 56.2 -1.0**
EPON Pontenova 75.86 47 P **P 17 53 58.5 +0.7**
comp=Z,67nm,1.1s,mb5.5
SFS San Fernando 75.97 54 PFAKE 17 54 10.0 +11
SFS LR LR
comp=Z,1μm,21.0s,MS5.2
PBRG Braganca 76.00 48 *e*P **P 17 53 59.0 +0.4**
comp=Z,102nm,1.5s,mb5.5
ECAL Calabor 76.01 48 P **P 17 53 57.9 -0.8**
comp=Z,101nm,1.2s,mb5.6
BPAW Bear Paw Mtn. 76.05 335 *e*P **P 17 53 56.4 -2.0**
comp=Z,65nm,0.9s,mb5.6
ESPR Espera 76.28 53 P **P 17 54 00.1 -0.3**
comp=Z,41nm,0.9s,mb5.4
EJIF Jimena Fronter 76.56 54 P **P 17 54 04.6 +2.7**
EJIF pmax pmax
comp=Z,35nm,1.0s,mb5.2
EJIF Jimena Fronter 76.56 54 P **P 17 54 04.6 +2.6**
comp=Z,34nm,1.0s,mb5.2
ECAB El Cabril 76.70 52 P **P 17 54 01.8 -0.9**
comp=Z,129nm,1.2s,mb5.7
COLD Coldfoot 76.71 338 *e*P **P 17 54 02.1 -0.1**
comp=Z,58nm,1.0s,mb5.5
TIC Toumodi 77.06 84 *e*P **P 17 54 07.6 +2.4**
comp=Z,105nm,1.2s,mb5.6
TIC Toumodi 77.06 84 *e*P **P 17 54 07.6 +2.4**
TIC pmax pmax
comp=Z,105nm,1.2s,mb5.6
LIC Lamto 77.08 85 *e*P **P 17 54 07.6 +2.3**
comp=Z,130nm,1.3s,mb5.7
LIC Lamto 77.08 85 *e*P **P 17 54 03.8 -1.5**
comp=Z,126nm,1.3s,mb5.4,baz=262
LIC *e*MLR MLR
comp=Z,1μm,19.5s,MS5.0
LIC Lamto 77.08 85 *e*P **P 17 54 03.8 -1.5**
comp=Z,63nm,1.3s,mb5.4
LIC LR LR
comp=Z,710nm,19.5s,MS5.0
EMIJ Mijas 77.12 54 P **P 17 54 04.1 -1.1**
comp=Z,32nm,1.0s,mb5.2
DBIC Dimbokro 77.22 84 P **P 17 54 06.2 +0.1**
comp=Z,8.1nm,0.8s,mb4.7,baz=281,slow=8.8,SNR=4.3
DBIC Dimbokro 77.22 84 P **P 17 54 06.2 +0.1**
DBIC pmax pmax
comp=Z,8.0nm,0.8s
DBIC Dimbokro 77.22 84 *e*P **P 17 54 04.4 -1.7**
comp=Z,42nm,1.2s,mb5.2
DBIC LR LR
comp=Z,901nm,19.0s,MS5.1
EARI Arriondas 77.26 47 P **P 17 54 06.4 +0.6**
comp=Z,79nm,1.3s,mb5.5
SVW2 Sparrevohn 77.33 332 *e*P **P 17 54 04.4 -1.3**
KIC Kosan Boka 77.36 85 *e*P **P 17 54 05.6 -1.3**
comp=Z,60nm,0.9s,mb5.5
EADA Adamuz 77.37 52 P **P 17 54 05.8 -0.7**
comp=Z,68nm,1.3s,mb5.4
TRIS Tristan da Cun 77.54 130 PFAKE 17 54 20.0 +13
TRIS LR LR
comp=Z,4μm,20.0s,MS5.8
ELUQ Luque 77.58 53 P **P 17 54 08.0 +0.3**
ELUQ pmax pmax
comp=Z,49nm,1.2s,mb5.3
ELUQ Luque 77.58 53 P **P 17 54 08.0 +0.4**
comp=Z,49nm,1.2s,mb5.3
PAB San Pablo 77.63 51 *e*P **P 17 54 08.0 +0.1**
PAB pmax pmax
comp=Z,76nm,1.4s,mb5.4
PAB MLR MLR
comp=Z,2μm,22.0s,MS5.3
PAB San Pablo 77.63 51 *e*P **P 17 54 08.0 +0.1**
comp=Z,76nm,1.4s,mb5.4
PAB LR LR
comp=Z,2μm,22.0s,MS5.3
ELOJ Sierra Loja 77.65 53 P **P 17 54 08.8 +0.7**
ELOJ pmax pmax
comp=Z,118nm,1.2s,mb5.7
ELOJ Sierra Loja 77.65 53 P **P 17 54 08.8 +0.7**
comp=Z,118nm,1.2s,mb5.7
ALE Alert 77.79 3 P **P 17 54 06.0 -2.0**
comp=Z,247nm,1.0s,mb6.1,SNR=18
GUD Guadarrama 77.85 50 P **P 17 54 09.5 +0.4**
GUD pmax pmax
comp=Z,56nm,1.0s,mb5.5
GUD Guadarrama 77.85 50 P **P 17 54 09.5 +0.5**
comp=Z,56nm,1.0s,mb5.5
CHGN Chignik 77.89 326 *e*P **P 17 54 08.8 -0.1**
TTA Tatalina 77.92 333 *e*P **P 17 54 07.3 -1.7**
ERON Agron 77.92 53 P **P 17 54 10.5 +0.9**
comp=Z,16nm,0.8s,mb5.0
CCA1 Carnmenellis 77.93 40 *e*P **P 17 54 10.5 +1.1**
CCA1 AMb AMB 17 54 12.2
comp=Z,83nm,2.5s,mb5.2
ESDC Sonseca Array 77.94 51 P **P 17 54 09.6 0.0**
comp=Z,31nm,1.0s,mb5.2,baz=270,slow=5.3,SNR=40
ESDC Sonseca Array 77.94 51 P **P 17 54 09.3 -0.3**
comp=Z,25nm,1.1s,mb5.0
ESLA Sonseca Array 77.94 51 *e*P **P 17 54 09.7 +0.1**
comp=Z,34nm,1.3s,mb5.1
ESLA LR LR
comp=Z,7μm,22.0s,MS6.0
EBAN Banos Encina 77.99 52 P **P 17 54 09.1 -0.8**
EBAN pmax pmax
comp=Z,43nm,1.1s,mb5.3
EBAN Banos Encina 77.99 52 P **P 17 54 09.1 -0.9**
comp=Z,43nm,1.1s,mb5.3
EGUA Guajares 78.11 54 P **P 17 54 08.9 -1.7**
EGUA pmax pmax
comp=Z,193nm,1.4s,mb5.8
EGUA Guajares 78.11 54 P **P 17 54 08.9 -1.7**
comp=Z,192nm,1.4s,mb5.8
ECOG Cogollos-Vega 78.13 53 P **P 17 54 09.5 -1.2**
ECOG pmax pmax
comp=Z,26nm,0.8s,mb5.2
ECOG Cogollos-Vega 78.13 53 P **P 17 54 09.5 -1.2**
comp=Z,26nm,0.8s,mb5.2
HTL Hartland 78.49 39 *e*P **P 17 54 12.8 +0.4**
HTL AMb AMB 17 54 14.8
comp=Z,50nm,1.2s,mb5.3
HTL AMS AMS 18 21 39.7
comp=Z,2μm,25.1s,MS5.3
EQES Quesada 78.54 53 P **P 17 54 13.7 +0.7**
comp=Z,127nm,1.2s,mb5.7
ELAN Lanestosa 78.55 47 P **P 17 54 12.3 -0.6**
comp=Z,60nm,1.2s,mb5.4
KPL Plockton 78.60 33 AMS AMS 18 19 55.3
comp=Z,2μm,28.2s,MS5.3
KPL Plockton 78.60 33 AMS AMS 18 19 55.3
comp=Z,2μm,28.2s
EBER Berja 78.65 54 P **P 17 54 13.2 -0.4**
comp=Z,109nm,1.2s,mb5.7
KSB Sheil Bridge 78.71 33 *e*P **P 17 54 13.4 -0.1**
DYA Yadsworthy 78.79 40 AMS AMS 18 21 35.7
comp=Z,2μm,23.8s,MS5.3
GAL1 Galloway 78.80 35 *e*P **P 17 54 13.5 -0.5**
GAL1 AMb AMB 17 54 16.9
comp=Z,89nm,1.4s,mb5.5
GAL1 AMS AMS 18 21 16.2
comp=Z,2μm,25.0s,MS5.2
KAC Achnashellach 78.82 32 *e*P **P 17 54 14.1 0.0**
SDPT Sand Point 78.91 325 *e*P **P 17 54 14.2 -0.4**
comp=Z,129nm,1.3s,mb5.7
EHUE Huescar 78.92 53 P **P 17 54 15.8 +0.7**
EHUE pmax pmax
comp=Z,127nm,1.2s,mb5.7
EHUE Huescar 78.92 53 P **P 17 54 15.8 +0.7**
comp=Z,127nm,1.2s,mb5.7
EVIA Vianos 79.02 52 P **P 17 54 16.6 +1.0**
EVIA pmax pmax
comp=Z,70nm,1.2s,mb5.5
EVIA Vianos 79.02 52 P **P 17 54 16.6 +1.0**
comp=Z,70nm,1.2s,mb5.5
ROSF Rostrenen 79.03 42 *e*P **P 17 54 15.4 0.0**
comp=Z,184nm,1.6s,mb5.5
ROSF Rostrenen 79.03 42 *e*P **P 17 54 15.4 0.0**
ROSF pmax pmax
comp=Z,92nm,1.6s,mb5.5
ROSF Rostrenen 79.03 42 *e*P **P 17 54 15.4 0.0**
comp=Z,92nm,1.6s,mb5.5
PGBU Glenifferbraes 79.04 34 *e*P **P 17 54 16.1 +0.8**
PGBU AMb AMB 17 54 17.6
comp=Z,134nm,2.7s,mb5.4
PGBU AMS AMS 18 21 11.4
comp=Z,1μm,26.7s,MS5.2
QUIF Quistinic 79.07 42 *e*P **P 17 54 15.6 -0.1**
comp=Z,248nm,1.8s,mb5.5
QUIF Quistinic 79.07 42 *e*P **P 17 54 15.6 -0.1**
QUIF pmax pmax
comp=Z,124nm,1.8s,mb5.5
QUIF Quistinic 79.07 42 *e*P **P 17 54 15.6 -0.1**
comp=Z,124nm,1.8s,mb5.5
DAG Danmarks Havn 79.17 12⇓ *e*P **P 17 54 14.0 -1.6**
DAG pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
DAG MLR MLR
comp=Z,2μm,20.0s,MS5.5
DAG Danmarks Havn 79.17 12⇓ *i*P **P 17 54 14.0 -1.6**
comp=Z,6.7nm,0.6s,mb4.8
DAG
comp=Z,2μm,20.0s
ENIJ Nijar 79.20 53 P **P 17 54 16.3 -0.3**
ENIJ pmax pmax
comp=Z,19nm,0.6s,mb5.2
ENIJ Nijar 79.20 53 P **P 17 54 16.3 -0.4**
comp=Z,19nm,0.6s,mb5.2
MDO Dochfour 79.31 33 *e*P **P 17 54 14.2 -2.6**
HTR Trewern Hill 79.36 38 *e*P **P 17 54 17.9 +0.7**
ETOR Torete 79.45 50 P **P 17 54 17.5 -0.4**
ETOR pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
ETOR Torete 79.45 50 P **P 17 54 17.5 -0.4**
comp=Z,10.0nm,1.2s,mb4.6
MVH1 Achvaich 79.47 32 *e*P **P 17 54 17.6 +0.1**
SGMF Saint Gilles 79.50 42 *e*P **P 17 54 17.8 -0.2**
comp=Z,205nm,1.6s,mb5.5
SGMF Saint Gilles 79.50 42 *e*P **P 17 54 17.8 -0.2**
SGMF pmax pmax
comp=Z,102nm,1.6s,mb5.5
SGMF Saint Gilles 79.50 42 *e*P **P 17 54 17.8 -0.2**
comp=Z,102nm,1.6s,mb5.5
HLM1 Long Mynd 79.63 38 *e*P **P 17 54 15.9 -2.7**
EBH Black Hill 79.64 34 *e*P **P 17 54 19.2 +0.6**
ESK Eskdalemuir 79.71 35 *e*P **P 17 54 19.2 +0.2**
ESK AMb AMB 17 54 20.4

comp=Z,77nm,1.4s,mb5.5
ESK Eskdalemuir 79.71 35 *i* P **P 17 54 20.2 +1.2**
ESK Eskdalemuir 79.71 35 *e*P **P 17 54 17.4 -1.6**
comp=Z,75nm,1.2s,mb5.5
ESK LR LR
comp=Z,1µm,22.0s,MS5.2
ECK Cauldkaine Hil 79.74 35 *e*P **P 17 54 18.5 -0.7**
ETOB Tobarra 79.77 52 P **P 17 54 19.5 -0.2**
comp=Z,104nm,1.2s,mb5.6
JSA Saint Aubin 79.82 41 AMS AMS 18 21 52.5
comp=Z,2µm,24.2s,MS5.4
MCD Coleburn Disti 79.92 33 *e*P **P 17 54 18.7 -1.3**
EALK Alkurruntz 79.96 47 P **P 17 54 20.6 0.0**
comp=Z,173nm,1.6s,mb5.7
MME1 Meikle Cairn 80.05 33 *e*P **P 17 54 17.9 -2.8**
ESY Stoneypath 80.10 34 *e*P **P 17 54 20.0 -1.1**
SJPF Ste Jean 80.16 47 *e*P **P 17 54 22.2 +0.5**
comp=Z,175nm,1.2s,mb5.6
SJPF Ste Jean 80.16 47 *e*P **P 17 54 22.2 +0.5**
SJPF pmax pmax
comp=Z,88nm,1.2s,mb5.6
SJPF Ste Jean 80.16 47 *e*P **P 17 54 22.2 +0.5**
comp=Z,88nm,1.2s,mb5.6
SWN1 Swindon 80.22 39 AMS AMS 18 22 17.4
comp=Z,2µm,25.7s,MS5.4
ECHE Chera 80.24 51 P **P 17 54 23.1 +0.9**
ECHE pmax pmax
comp=Z,52nm,1.4s,mb5.3
ECHE Chera 80.24 51 P **P 17 54 23.1 +0.9**
comp=Z,52nm,1.4s,mb5.3
LARF Larrau 80.33 47 *e*P **P 17 54 21.6 -1.0**
LHO Holmfirth 80.33 37 *e*P **P 17 54 21.1 -1.3**
HPK Haverah Park 80.50 36 AMS AMS 18 22 19.7
comp=Z,1µm,22.9s,MS5.2
KBI1 Birley Grange 80.51 37 *e*P **P 17 54 24.0 +0.7**
ETSF Etsaut 80.64 48 *e*P **P 17 54 24.8 +0.5**
comp=Z,113nm,1.4s,mb5.3
ETSF Etsaut 80.64 48 *e*P **P 17 54 24.8 +0.5**
ETSF pmax pmax
comp=Z,57nm,1.4s,mb5.3
ETSF Etsaut 80.64 48 *e*P **P 17 54 24.8 +0.5**
comp=Z,56nm,1.4s,mb5.3
GRR Gorron 80.64 42 *e*P **P 17 54 23.9 -0.3**
comp=Z,140nm,1.2s,mb5.5
GRR Gorron 80.64 42 *e*P **P 17 54 23.9 -0.3**
GRR pmax pmax
comp=Z,70nm,1.2s,mb5.5
GRR Gorron 80.64 42 *e*P **P 17 54 23.9 -0.3**
comp=Z,70nm,1.2s,mb5.5
EMOS Mosqueruela 80.64 50 P **P 17 54 24.1 -0.3**
comp=Z,28nm,1.0s,mb5.1
ESAC San Caprasio 80.67 49 P **P 17 54 25.9 +1.4**
comp=Z,57nm,0.8s,mb5.5
REYF Montagne du Re 80.77 47 *e*P **P 17 54 25.5 +0.5**
EBEN Beniarda 80.81 52 P **P 17 54 25.1 -0.2**
comp=Z,77nm,1.5s,mb5.4
FLN La Foliniere 80.91 42 *e*P **P 17 54 25.5 -0.1**
comp=Z,204nm,1.4s,mb5.6
FLN *e*MLR MLR
comp=Z,2µm,22.8s,MS5.2
FLN La Foliniere 80.91 42 *e*P **P 17 54 25.5 -0.1**
FLN pmax pmax
comp=Z,102nm,1.4s,mb5.6
FLN MLR MLR
comp=Z,2µm,22.8s,MS5.5
FLN La Foliniere 80.91 42 *e*P **P 17 54 25.5 -0.1**
comp=Z,102nm,1.4s,mb5.6
FLN LR LR
comp=Z,2µm,22.8s,MS5.5
MFF Saint Martin d 81.05 44 *e*P **P 17 54 26.2 -0.2**
comp=Z,78nm,1.1s,mb5.2
MFF Saint Martin d 81.05 44 *e*P **P 17 54 26.2 -0.2**
MFF pmax pmax
comp=Z,39nm,1.1s,mb5.2
MFF Saint Martin d 81.05 44 *e*P **P 17 54 26.2 -0.2**
comp=Z,39nm,1.1s,mb5.2
LABF Labassere 81.11 47 *e*P **P 17 54 27.0 +0.2**
LDF La Druitiere 81.14 42 *e*P **P 17 54 26.6 -0.2**
comp=Z,184nm,1.3s,mb5.5
LDF La Druitiere 81.14 42 *e*P **P 17 54 26.6 -0.2**
LDF pmax pmax
comp=Z,92nm,1.3s,mb5.5
LDF La Druitiere 81.14 42 *e*P **P 17 54 26.6 -0.2**
comp=Z,92nm,1.3s,mb5.5
EBIE Bielsa 81.15 48 P **P 17 54 28.3 +1.3**
comp=Z,16nm,0.6s,mb5.1
LRW Lerwick 81.24 30 AMS AMS 18 21 22.6
comp=Z,955nm,12.8s,MS5.3
ERTA Horta de San J 81.27 49 P **P 17 54 27.0 -0.6**
comp=Z,96nm,1.2s,mb5.6
RESF Ens 81.30 48 *e*P **P 17 54 28.6 +0.8**
EPF Esparros 81.30 47 *e*P **P 17 54 28.2 +0.4**
comp=Z,158nm,1.3s,mb5.5
EPF Esparros 81.30 47 *e*P **P 17 54 28.2 +0.4**
EPF pmax pmax
comp=Z,79nm,1.3s,mb5.5
EPF Esparros 81.30 47 *e*P **P 17 54 28.2 +0.4**
comp=Z,79nm,1.3s,mb5.5
MELF Melles 81.61 48 *e*P **P 17 54 31.8 +2.4**
LFF La Frestale 81.63 45 *e*P **P 17 54 29.5 0.0**
comp=Z,296nm,1.7s,mb5.6
LFF La Frestale 81.63 45 *e*P **P 17 54 29.5 0.0**
LFF pmax pmax
comp=Z,148nm,1.7s,mb5.6
LFF La Frestale 81.63 45 *e*P **P 17 54 29.5 0.0**
comp=Z,148nm,1.7s,mb5.6
EPOB Poblet 81.83 49 P **P 17 54 29.7 -0.9**
comp=Z,45nm,1.4s,mb5.2
EANR 'Ain N'Sour 81.86 55 P **P 17 54 32.2 +1.3**
CSOR Sort 81.88 48 P **P 17 54 32.1 +1.3**
comp=Z,186nm,1.4s,mb5.8
ETRT Tiaret 82.02 55 P **P 17 54 34.0 +2.2**
RJF Les Rejaudoux 82.18 45 *e*P **P 17 54 32.3 -0.1**
comp=Z,280nm,1.7s,mb5.6
RJF *e*MLR MLR
comp=Z,2µm,22.2s,MS5.0
RJF Les Rejaudoux 82.18 45 *e*P **P 17 54 32.3 -0.1**
RJF pmax pmax
comp=Z,140nm,1.7s,mb5.6
RJF MLR MLR
comp=Z,2µm,22.3s,MS5.3
RJF Les Rejaudoux 82.18 45 *e*P **P 17 54 32.3 -0.1**
comp=Z,140nm,1.7s,mb5.6
RJF LR LR
comp=Z,2µm,22.3s,MS5.3
UNV Unalaska Valle 82.28 324 *e*P **P 17 54 32.1 -0.6**
comp=Z,41nm,0.9s,mb5.4
CLLI Llivia 82.50 48 P **P 17 54 34.2 0.0**
CAF Calviac 82.57 46 *e*P **P 17 54 34.3 -0.1**
comp=Z,65nm,1.2s,mb5.2
CAF Calviac 82.57 46 *e*P **P 17 54 34.3 -0.1**
CAF pmax pmax
comp=Z,33nm,1.2s,mb5.2
CAF Calviac 82.57 46 *e*P **P 17 54 34.3 -0.1**
comp=Z,32nm,1.2s,mb5.2
TCF Toulx Ste Croi 82.67 44 *e*P **P 17 54 34.4 -0.5**
comp=Z,99nm,1.4s,mb5.3
TCF Toulx Ste Croi 82.67 44 *e*P **P 17 54 34.4 -0.5**
TCF pmax pmax
comp=Z,50nm,1.4s,mb5.3
TCF Toulx Ste Croi 82.67 44 *e*P **P 17 54 34.4 -0.5**
comp=Z,50nm,1.4s,mb5.3
MENF Mencas 82.67 40 *e*P **P 17 54 35.9 +1.1**
MTLF Montolieu 82.68 47 *e*P **P 17 54 34.8 -0.2**
comp=Z,136nm,1.3s,mb5.5
MTLF Montolieu 82.68 47 *e*P **P 17 54 34.8 -0.2**
MTLF pmax pmax
comp=Z,68nm,1.3s,mb5.5
MTLF Montolieu 82.68 47 *e*P **P 17 54 34.8 -0.2**
comp=Z,68nm,1.3s,mb5.5
HYF Humbligny 82.97 43 *e*P **P 17 54 36.3 -0.2**
BGF Bois d'Agland 83.11 44 *e*P **P 17 54 36.8 -0.4**
comp=Z,123nm,1.4s,mb5.5
BGF Bois d'Agland 83.11 44 *e*P **P 17 54 36.8 -0.4**
BGF pmax pmax
comp=Z,61nm,1.4s,mb5.4
BGF Bois d'Agland 83.11 44 *e*P **P 17 54 36.8 -0.4**
comp=Z,62nm,1.4s,mb5.4
EJON La Jonquera 83.18 48 P **P 17 54 38.8 +1.1**
comp=Z,24nm,1.0s,mb5.2
PYM Petit Puy Mans 83.23 45 *e*P **P 17 54 37.6 -0.2**
TOA0 Torodi Ar. Sit 83.25 77 *e*P **P 17 54 37.3 -1.2**
TORD Torodi Ar. Bea 83.25 77 P **P 17 54 36.4 -2.2**
comp=Z,8.2nm,1.0s,mb4.7,baz=284,slow=2.7,SNR=25
TORD PKKPbc PKKPbc 18 12 57.2 -1.5
comp=Z,0.8nm,0.7s,baz=70,slow=1.6,SNR=6.3
TORD Torodi Ar. Bea 83.25 77 P **P 17 54 36.4 -2.2**
TORD PKKPbc PKKPbc 18 12 57.2 -1.5
AGO Saint Agoulin 83.31 44 *e*P **P 17 54 37.6 -0.7**
EMHD Djebel Mahouad 83.35 54 P **P 17 54 37.5 -1.2**
LBL Lubilhac 83.40 45 *e*P **P 17 54 39.5 +0.8**
AVF Avril sur Loir 83.46 44 *e*P **P 17 54 38.2 -0.8**
comp=Z,58nm,1.3s,mb5.2
AVF Avril sur Loir 83.46 44 *e*P **P 17 54 38.2 -0.8**
AVF pmax pmax
comp=Z,29nm,1.3s,mb5.2
AVF Avril sur Loir 83.46 44 *e*P **P 17 54 38.2 -0.8**
comp=Z,29nm,1.3s,mb5.2
SSF Saint Saulge 83.56 43 *e*P **P 17 54 38.6 -0.9**
comp=Z,55nm,1.3s,mb5.2
SSF Saint Saulge 83.56 43 *e*P **P 17 54 38.6 -0.9**
SSF pmax pmax
comp=Z,27nm,1.3s,mb5.2
SSF Saint Saulge 83.56 43 *e*P **P 17 54 38.6 -0.9**
comp=Z,27nm,1.3s,mb5.2
PLDF La Plantade 83.66 44 *e*P **P 17 54 41.3 +1.3**
COLF Collangettes 83.72 45 *e*P **P 17 54 40.4 +0.1**
SMF Signal de Mont 83.80 44 *e*P **P 17 54 40.0 -0.7**
comp=Z,166nm,1.7s,mb5.6
SMF Signal de Mont 83.80 44 *e*P **P 17 54 40.0 -0.7**
SMF pmax pmax
comp=Z,83nm,1.7s,mb5.6
SMF Signal de Mont 83.80 44 *e*P **P 17 54 40.0 -0.7**
comp=Z,83nm,1.7s,mb5.6
LOR Lormes 83.80 43 *e*P **P 17 54 40.0 -0.7**
comp=Z,145nm,1.7s,mb5.5
LOR *e*MLR MLR
comp=Z,1µm,21.2s,MS5.0
LOR Lormes 83.80 43 *e*P **P 17 54 40.0 -0.7**
LOR pmax pmax
comp=Z,73nm,1.7s,mb5.5
LOR MLR MLR
comp=Z,1µm,21.3s,MS5.3
LOR Lormes 83.80 43 *e*P **P 17 54 40.0 -0.7**
comp=Z,73nm,1.7s,mb5.5
LOR LR LR
comp=Z,1µm,21.3s,MS5.3
LASF Ste Croix 83.86 46 *e*P **P 17 54 41.5 +0.4**
comp=Z,155nm,1.7s,mb5.5
BAIF Baives 83.99 40 *e*P **P 17 54 41.1 -0.5**
comp=Z,39nm,1.2s,mb5.1
BAIF Baives 83.99 40 *e*P **P 17 54 41.1 -0.5**
BAIF pmax pmax
comp=Z,19nm,1.2s,mb5.1
BAIF Baives 83.99 40 *e*P **P 17 54 41.1 -0.5**
comp=Z,19nm,1.2s,mb5.1
SNF Seneffe 84.03 40 P **P 17 54 41.0 -0.8**
UCC Uccle 84.08 40 P **P 17 54 41.7 -0.4**
DOU Dourbes 84.24 40 P **P 17 54 42.3 -0.6**
comp=Z,14nm,1.4s,mb4.9
SSB Saint Sauveur 84.32 45 *e*P **P 17 54 42.7 -0.7**
SSB pmax pmax
comp=Z,30nm,1.3s,mb5.3
SSB MLR MLR
comp=Z,976nm,20.0s,MS5.2
SSB Saint Sauveur 84.32 45 *e*P **P 17 54 42.7 -0.7**
comp=Z,30nm,1.3s,mb5.3
SSB LR LR
comp=Z,976nm,20.0s,MS5.2
GIVF Givet 84.39 40 *e*P **P 17 54 43.3 -0.3**
VIVF Saint-Julien-l 84.42 46 *e*P **P 17 54 44.5 +0.6**
comp=Z,179nm,1.4s,mb5.7
VIVF Saint-Julien-l 84.42 46 *e*P **P 17 54 44.5 +0.6**
VIVF pmax pmax
comp=Z,90nm,1.4s,mb5.7
VIVF Saint-Julien-l 84.42 46 *e*P **P 17 54 44.5 +0.6**
comp=Z,90nm,1.4s,mb5.7
MEZF Maizieres J'vi 84.58 42 *e*P **P 17 54 44.3 -0.3**
comp=Z,95nm,1.2s,mb5.5
MEZF Maizieres J'vi 84.58 42 *e*P **P 17 54 44.3 -0.3**
comp=Z,95nm,1.2s,mb5.8
BCLA Clavier 84.69 40 P **P 17 54 44.6 -0.6**
comp=Z,32nm,2.0s,mb5.1
OCF Saint Nazaire 84.88 46 *e*P **P 17 54 48.6 +2.3**
OG26 St.-Nazaire-De 84.88 46 *e*P **P 17 54 48.6 +2.3**
BEBN Eben Emael 84.91 40 P **P 17 54 46.5 +0.2**
GAMB Gambell 85.03 334 *e*P **P 17 54 46.2 -0.4**
comp=Z,43nm,1.1s,mb5.5
HGN Heimansgroeve 85.08 40 *e*P **P 17 54 46.4 -0.7**
comp=Z,57nm,2.1s,mb5.3
SMRF Simiane la Rot 85.10 46 *e*P **P 17 54 47.9 +0.5**
comp=Z,92nm,1.4s,mb5.4
SMRF Simiane la Rot 85.10 46 *e*P **P 17 54 47.9 +0.5**
comp=Z,92nm,1.4s,mb5.7
MEM Membach 85.13 40 P **P 17 54 46.5 -0.8**
comp=Z,32nm,1.6s,mb5.2
WLF Walferdange 85.26 41 P **P 17 54 48.1 +0.1**
comp=Z,41nm,1.3s,mb5.4
WLF Walferdange 85.26 41 *e*P **P 17 54 49.2 +1.2**
comp=Z,108nm,1.4s,mb5.8
WLF Walferdange 85.26 41 *e*P **P 17 54 46.9 -1.1**
WLF pmax pmax
comp=Z,71nm,1.2s,mb5.7
WLF MLR MLR
comp=Z,1µm,21.0s,MS5.2
WLF Walferdange 85.26 41 *e*P **P 17 54 46.9 -1.2**
comp=Z,72nm,1.2s,mb5.7
WLF LR LR
comp=Z,1µm,21.0s,MS5.2
ORIF Oris-en-Rattie 85.28 45 *e*P **P 17 54 48.9 +0.7**
comp=Z,209nm,1.4s,mb5.8
ORIF *e*MLR MLR
comp=Z,795nm,21.8s,MS4.8
ORIF Oris-en-Rattie 85.28 45 *e*P **P 17 54 48.9 +0.7**
ORIF pmax pmax
comp=Z,105nm,1.4s,mb5.8
ORIF Oris-en-Rattie 85.28 45 *e*P **P 17 54 48.9 +0.7**
comp=Z,105nm,1.4s,mb5.8
CABF La Chapelle 85.35 44 *e*P **P 17 54 48.4 -0.2**
comp=Z,160nm,1.3s,mb5.7
CABF La Chapelle 85.35 44 *e*P **P 17 54 48.4 -0.2**
CABF pmax pmax
comp=Z,80nm,1.3s,mb5.7
CABF La Chapelle 85.35 44 *e*P **P 17 54 48.4 -0.2**
comp=Z,80nm,1.3s,mb5.7
HAU Haudompre 85.46 42 *e*P **P 17 54 48.6 -0.5**
comp=Z,186nm,1.6s,mb5.7
HAU *e*MLR MLR
comp=Z,1µm,21.8s,MS5.0
HAU Haudompre 85.46 42 *e*P **P 17 54 48.6 -0.5**
HAU pmax pmax
comp=Z,93nm,1.6s,mb5.7
HAU MLR MLR
comp=Z,1µm,21.8s,MS5.3
HAU Haudompre 85.46 42 *e*P **P 17 54 48.6 -0.5**
comp=Z,93nm,1.6s,mb5.7
HAU LR LR
comp=Z,1µm,21.8s,MS5.3
WTSB Winterswijk 85.57 38⇑ *e*P **P 17 54 49.1 -0.4**
comp=Z,120nm,1.3s,mb6.0
JOHN Johnston Islan 85.65 286 PFAKE 17 55 00.0 +9.3
JOHN LR LR
comp=Z,2µm,20.0s,MS5.5
RSL Roselend 85.77 45 *e*P **P 17 54 52.5 +1.8**
LMR La Mourre 85.81 47 *e*P **P 17 54 50.9 0.0**
comp=Z,149nm,1.4s,mb5.7
LMR La Mourre 85.81 47 *e*P **P 17 54 50.9 0.0**
LMR pmax pmax
comp=Z,75nm,1.4s,mb5.7
LMR La Mourre 85.81 47 *e*P **P 17 54 50.9 0.0**
comp=Z,75nm,1.4s,mb5.7
HINF Hinteralfeld 85.81 43 *e*P **P 17 54 50.1 -0.7**
comp=Z,109nm,1.4s,mb5.6
HINF Hinteralfeld 85.81 43 *e*P **P 17 54 50.1 -0.7**
HINF pmax pmax
comp=Z,55nm,1.4s,mb5.6
HINF Hinteralfeld 85.81 43 *e*P **P 17 54 50.1 -0.7**
comp=Z,55nm,1.4s,mb5.6
LOMF Lomont 85.82 43 *e*P **P 17 54 52.4 +1.5**
KBS Kingsbay 85.83 11*d i*P **P 17 54 52.1 +1.7**
KBS pmax pmax
comp=Z,105nm,1.6s,mb5.8
KBS MLR MLR
comp=Z,2µm,18.0s,MS5.5
KBS Kingsbay 85.83 11 *e*P **P 17 54 51.1 +0.7**
comp=Z,100nm,1.4s,mb5.9
KBS LR LR
comp=Z,2µm,19.0s,MS5.5
BNI Bardonecchia 85.84 45 *e*P **P 17 54 51.9 +0.9**
BNI pmax pmax
comp=Z,47nm,1.3s,mb5.6
BNI MLR MLR
comp=Z,1µm,22.0s,MS5.2
BNI Bardonecchia 85.84 45 *e*P **P 17 54 51.9 +0.9**
comp=Z,47nm,1.3s,mb5.6
BNI LR LR
comp=Z,1µm,22.0s,MS5.2
LPL La Plagne 85.85 45 *e*P **P 17 54 51.8 +0.7**
comp=Z,71nm,1.2s,mb5.5
LPL La Plagne 85.85 45 *e*P **P 17 54 51.8 +0.7**
LPL pmax pmax
comp=Z,36nm,1.2s,mb5.5
LPL La Plagne 85.85 45 *e*P **P 17 54 51.8 +0.7**
comp=Z,36nm,1.2s,mb5.5
LPG La Plagne 85.86 45 *e*P **P 17 54 52.0 +0.8**
comp=Z,61nm,1.0s,mb5.5
LPG La Plagne 85.86 45 *e*P **P 17 54 52.0 +0.8**
LPG pmax pmax
comp=Z,31nm,1.0s,mb5.5
LPG La Plagne 85.86 45 *e*P **P 17 54 52.0 +0.8**
comp=Z,30nm,1.0s,mb5.5
BUG Bochum-Univer 85.89 39 *e*P **P 17 54 51.2 +0.1**
comp=Z,81nm,1.3s,mb5.8
FRF La Foret Royal 85.90 47 *e*P **P 17 54 51.2 -0.2**
comp=Z,152nm,1.3s,mb5.8
FRF La Foret Royal 85.90 47 *e*P **P 17 54 51.2 -0.2**
FRF pmax pmax
comp=Z,76nm,1.3s,mb5.8
FRF La Foret Royal 85.90 47 *e*P **P 17 54 51.2 -0.2**
comp=Z,76nm,1.3s,mb5.8
MBDF Montbardon 85.92 46 *e*P **P 17 54 52.0 +0.5**
comp=Z,85nm,1.2s,mb5.5
MBDF Montbardon 85.92 46 *e*P **P 17 54 52.0 +0.5**
MBDF pmax pmax
comp=Z,43nm,1.2s,mb5.5
MBDF Montbardon 85.92 46 *e*P **P 17 54 52.0 +0.5**
comp=Z,43nm,1.2s,mb5.5
ECH Echery 85.99 42 *e*P **P 17 54 51.2 -0.5**
ECH Echery 85.99 42 *e*P **P 17 54 50.9 -0.8**
ECH pmax pmax
comp=Z,56nm,1.2s,mb5.7
ECH MLR MLR
comp=Z,990nm,22.0s,MS5.2
ECH Echery 85.99 42 *e*P **P 17 54 50.9 -0.8**
comp=Z,56nm,1.2s,mb5.7
ECH LR LR
comp=Z,990nm,22.0s,MS5.2
MOF Molkenrain 86.00 42 *e*P **P 17 54 52.9 +1.1**
CALN Calern 86.06 47 *e*P **P 17 54 54.9 +2.7**
CDF Champ du Feu 86.06 42 *e*P **P 17 54 51.6 -0.5**
comp=Z,180nm,1.6s,mb5.7
CDF Champ du Feu 86.06 42 *e*P **P 17 54 51.6 -0.5**
CDF pmax pmax
comp=Z,90nm,1.6s,mb5.8
CDF Champ du Feu 86.06 42 *e*P **P 17 54 51.6 -0.5**
comp=Z,90nm,1.6s,mb5.8
HLG Helgoland 86.10 36 *e*P **P 17 54 53.0 +0.9**
comp=Z,241nm,1.5s,mb6.2
IBBN Ibbenburen 86.14 38 *e*P **P 17 54 53.3 +0.9**
comp=Z,172nm,1.7s,mb6.0
ABH Alteburg 86.15 40 *e*P **P 17 54 54.2 +1.7**
MVIF Mont Vial 86.24 46 *e*P **P 17 54 54.2 +1.1**
TAM Tamanrasset 86.25 68 *e*P **P 17 54 53.8 +0.2**
TAM pmax pmax
comp=Z,77nm,1.9s,mb5.6
TAM MLR MLR
comp=Z,958nm,19.0s,MS5.2
TAM Tamanrasset 86.25 68 *e*P **P 17 54 53.8 +0.2**
comp=Z,77nm,1.9s,mb5.6
TAM LR LR
comp=Z,958nm,19.0s,MS5.2
BBS Basel-Blauen 86.27 43 *e*P **P 17 54 52.5 -0.6**
LIBD Limburg 86.29 42 *e*P **P 17 54 54.6 +1.4**
LANF Langenberg 86.38 41 *e*P **P 17 54 55.2 +1.6**
SBF Sospel 86.45 46 *e*P **P 17 54 53.9 -0.2**
comp=Z,150nm,1.4s,mb5.7
SBF Sospel 86.45 46 *e*P **P 17 54 53.9 -0.2**
SBF pmax pmax
comp=Z,75nm,1.4s,mb5.7
SBF Sospel 86.45 46 *e*P **P 17 54 53.9 -0.2**
comp=Z,75nm,1.4s,mb5.7
FELD Feldberg im Sc 86.58 42 *e*P **P 17 54 55.7 +1.1**
KONO Kongsberg 86.67 31⇑ *e*P **P 17 54 54.5 -0.3**
KONO MLR MLR
comp=Z,2µm,22.0s,MS5.4
MUD Monsted U'grnd 86.69 34 *i*P **P 17 54 56.5 +1.5**
MUD MLR MLR
comp=Z,770nm,23.0s,MS5.0
MUD Monsted U'grnd 86.69 34 *i*P **P 17 54 56.5 +1.5**
MUD
comp=Z,770nm,23.0s
TNS Taunus Mts 86.71 40 *e*P **P 17 54 55.0 -0.2**
comp=Z,176nm,1.7s,mb6.0
TNS Taunus Mts 86.71 40 *e*P **P 17 54 55.0 -0.2**
TNS pmax pmax
comp=Z,176nm,1.7s,mb6.0
BFO Black Forest 86.77 42 *e*P **P 17 54 55.7 +0.2**
BFO pmax pmax
comp=Z,28nm,1.3s,mb5.3
BFO MLR MLR
comp=Z,1µm,22.0s,MS5.2
BFO Black Forest 86.77 42 *e*P **P 17 54 55.7 +0.2**
comp=Z,28nm,1.3s,mb5.3
BFO LR LR
comp=Z,1µm,22.0s,MS5.2
TOD Tromm 86.98 41 *e*P **P 17 54 57.7 +1.1**
SPAK Spaichingen-Ko 87.09 42 *e*P **P 17 54 58.3 +1.2**
NAO01 NORSAR Array S 87.20 29 *e*P **P 17 54 57.6 +0.2**
comp=Z,119nm,1.5s,mb5.9
NAO01 LR LR
comp=Z,1µm,22.0s,MS5.3
STU Stuttgart 87.31 41 *e*P **P 17 54 58.5 +0.4**
comp=Z,83nm,1.4s,mb5.8
NB2 NORSAR Subarra 87.34 29 P **P 17 54 58.9 +0.8**
comp=Z,0.8nm,0.8s,baz=276,slow=4.6
NOA NORSAR Array B 87.34 29 P **P 17 54 57.7 -0.4**
comp=Z,22nm,1.1s,mb5.3,baz=275,slow=4.5,SNR=16
NOA NORSAR Array B 87.34 29 P **P 17 54 57.7 -0.4**
NOA pmax pmax
comp=Z,22nm,1.1s
NOA NORSAR Array B 87.34 29 P **P 17 54 57.7 -0.4**
BSEG Bad Segeberg 87.55 36 *e*P **P 17 54 59.1 -0.1**
comp=Z,87nm,1.5s,mb5.8
NRDL Niedersach Rie 87.56 38 *e*P **P 17 54 59.8 +0.5**
comp=Z,102nm,1.6s,mb5.8
UBBA Unterbreizbach 87.65 39 *e*P **P 17 55 00.4 +0.7**
comp=Z,58nm,1.7s,mb5.5
PGF Pioggiola 87.69 48 *e*P **P 17 54 59.9 -0.2**
comp=Z,93nm,1.3s,mb5.5
PGF Pioggiola 87.69 48 *e*P **P 17 54 59.9 -0.2**
PGF pmax pmax
comp=Z,47nm,1.3s,mb5.6
PGF Pioggiola 87.69 48 *e*P **P 17 54 59.9 -0.2**
comp=Z,47nm,1.3s,mb5.6
CLZ Clausthal 87.78 38 *e*P **P 17 55 00.8 +0.4**
comp=Z,100nm,1.4s,mb5.8
CLZ Clausthal 87.78 38 *e*P **P 17 55 00.8 +0.4**
CLZ pmax pmax
comp=Z,100nm,1.4s,mb5.8
DAVA Damuels 87.89 43⇑ *i*P **P 17 55 01.0 0.0**
comp=Z,47nm,1.3s,mb5.5,SNR=16
DAVOX Davos/Dischmat 87.94 43 P **P 17 55 01.8 +0.6**
comp=Z,12nm,1.0s,mb5.0,baz=262,slow=6.3,SNR=14
VSL Villasalto 88.24 51 PFAKE 17 55 10.0 +7.2
VSL LR LR
comp=Z,1µm,22.0s,MS5.2
FETA Feichten 88.50 43⇓ *i*P **P 17 55 04.5 +0.7**
comp=Z,30nm,1.2s,mb5.4,SNR=12
GRA1 Grafenberg Arr 88.54 40 *e*P **P 17 55 04.9 +0.9**
comp=Z,84nm,1.5s,mb5.8
GRA1 *e*S S 18 05 44.5 -3.2
GRA1 LR LR
comp=Z,2µm,21.8s,MS5.5
GRF Grafenberg Arr 88.54 40 *e*P **P 17 55 04.9 +0.9**
comp=Z,84nm,1.5s,mb5.8
GRF *e*S S 18 05 44.5 -3.2
GRF *e*L 18 28 20.9
comp=Z,2µm,21.8s
GRF Grafenberg Arr 88.54 40 *e*P **P 17 55 04.9 +0.9**
GRF *e*S S 18 05 44.5 -3.2
GRF pmax pmax
comp=Z,84nm,1.5s,mb5.8
GRF MLR MLR
comp=Z,2µm,21.8s,MS5.5
GRF Grafenberg Arr 88.54 40 *e*P **P 17 55 04.9 +0.9**
GRF *e*S S 18 05 44.5 -3.2
GRF pmax pmax
comp=Z,84nm,1.5s,mb5.8
GRF MLR MLR
comp=Z,2µm,21.8s,MS5.5

VLC Villacollemand 88.55 46 PFAKE 17 55 10.0 +5.8
VLC LR LR
comp=Z,691nm,21.0s,MS5.0
KEST Kesra 88.56 54 P **P** **17 55 05.7 +1.3**
comp=Z,5.4nm,1.1s,mb4.8,baz=201,slow=5.7,SNR=4.6
KEST Kesra 88.56 54 *e*P **P** **17 55 05.2 +0.8**
COP Copenhagen 88.58 34 *e*P **P** **17 55 13.0 +8.9**
COP MLR MLR
comp=Z,270nm,22.0s,MS4.6
COP Copenhagen 88.58 34 *i* P **P** **17 55 13.0 +8.9**
COP
comp=Z,260nm,22.0s
MOX Moxa 88.69 39 *e*P **P** **17 55 04.4 -0.3**
MOX
comp=Z,1µm,22.0s
MOX Moxa 88.69 39 *e*P **P** **17 55 05.0 +0.3**
comp=Z,63nm,1.8s,mb5.6
WTTA Wattenberg 89.08 43⇓ *i*P **P** **17 55 07.3 +0.7**
comp=Z,26nm,1.5s,mb5.3
ROTZ Rotzenmuhle 89.17 40 *e*P **P** **17 55 06.9 0.0**
comp=Z,21nm,1.4s,mb5.3
TANN Tannenbergstha 89.25 40 *e*P **P** **17 55 07.9 +0.6**
comp=Z,35nm,1.2s,mb5.6
NKC Novy Kostel 89.26 40 *e*P **P** **17 55 07.4 0.0**
NKC MLR MLR
comp=Z,3µm,23.7s,MS5.7
NKC Novy Kostel 89.26 40 *e*P **P** **17 55 07.4 0.0**
NKC *e*SS SS 18 12 07.7 +19
NKC AMS AMS 18 27 20.0
comp=Z,3µm,23.7s
CLL Collm 89.48 39 *e*P **P** **17 55 08.4 0.0**
comp=Z,38nm,1.3s,mb5.6
CLL Collm 89.48 39 *e*P **P** **17 55 07.0 -1.4**
CLL *e*S S 18 05 52.0 -4.4
CLL pmax pmax
comp=Z,38nm,1.3s,mb5.6
CLL Collm 89.48 39 *e*P **P** **17 55 07.0 -1.4**
comp=Z,38nm,1.3s,mb5.6
CLL *e* pP 17 55 18.0 -1.5
CLL *e*S S 18 05 52.0 -4.4
CLL Collm 89.48 39 *e*P **P** **17 55 07.0 -1.4**
comp=Z,38nm,1.3s,mb5.6
CLL *e* pP 17 55 18.0 -1.5
CLL *e*S S 18 05 52.0 -4.4
CLL *e*PS PS 18 07 06.0 +0.3
CLL *e*SS SS 18 12 01.0 +9.0
CLL *e*SSS 18 15 18.0
CLL *e*SSSS 18 18 30.0
WET Wettzell 89.68 41 *e*P **P** **17 55 09.8 +0.4**
comp=Z,37nm,1.2s,mb5.6
WET Wettzell 89.68 41 *e*P **P** **17 55 09.8 +0.4**
WET pmax pmax
comp=Z,37nm,1.2s,mb5.6
VNA1 Neumayer--Stat 89.68 161 *e*P **P** **17 55 07.0 -1.9**
RUE Ruedersdorf 89.79 37 *e*P **P** **17 55 10.8 +1.0**
comp=Z,29nm,1.2s,mb5.5
RJOB Jochberg 89.81 42 *e*P **P** **17 55 11.3 +1.3**
comp=Z,27nm,1.4s,mb5.4
BSD Bornholm Skovb 90.06 35 *e*P **P** **17 55 07.4 -3.6**
BSD Bornholm Skovb 90.06 35 *i* P **P** **17 55 07.4 -3.6**
BRG Berggiesshubel 90.12 39 *e*P **P** **17 55 11.8 +0.4**
comp=Z,32nm,1.6s,mb5.4
BRG Berggiesshubel 90.12 39 *i* P **P** **17 55 12.8 +1.4**
comp=Z,33nm,1.6s,mb5.4
BRG
comp=Z,2µm,25.0s
BRG
comp=N,2µm,21.5s
BRG
comp=E,1µm,25.1s
BRG Berggiesshubel 90.12 39 *i* P **P** **17 55 12.8 +1.4**
BRG pmax pmax
comp=Z,20nm,1.6s,mb5.2
BRG MLR MLR
comp=Z,1µm,25.0s,MS5.3
BRG MLR MLR
comp=N,890nm,21.5s,MS5.3
BRG MLR MLR
comp=E,840nm,25.1s,MS5.3
KHC Kasperske Hory 90.14 41 *e*P **P** **17 55 12.1 +0.6**
KHC pmax pmax
comp=Z,22nm,1.3s,mb5.3
KHC Kasperske Hory 90.14 41 *e*P **P** **17 55 12.1 +0.6**
comp=Z,22nm,1.3s,mb5.3
KHC Kasperske Hory 90.14 41 *e*P **P** **17 55 13.0 +1.5**
KHC *e*SS SS 18 12 22.9 +21
KHC AMS AMS 18 27 30.0
comp=Z,2µm,24.1s
GEC2 GERESS Array S 90.26 41 *e*P **P** **17 55 12.9 +0.8**
comp=Z,21nm,1.2s,mb5.3
GEC2 GERESS Array S 90.26 41 *e*P **P** **17 55 12.9 +0.8**
GEC2 pmax pmax
comp=Z,21nm,1.2s,mb5.3
AFI Afiamalu 90.48 256 PFAKE 17 55 20.0 +6.2
AFI LR LR
comp=Z,2µm,20.0s,MS5.5
PRA Prague 90.55 40 P **P** **17 55 15.0 +1.6**
PVCC Panska Ves 90.57 39 *e*P **P** **17 55 15.3 +1.8**
PVCC *e*SS SS 18 12 20.0 +12
PVCC MLR MLR
comp=Z,3µm,26.5s,MS5.6
PVCC Panska Ves 90.57 39 *e*P **P** **17 55 15.3 +1.8**
PVCC *e*SS SS 18 12 20.0 +12
PVCC AMS AMS 18 28 00.0
comp=Z,3µm,26.5s
PRU Pruhonice 90.63 40 *e*P **P** **17 55 16.0 +2.2**
PRU *e*SS SS 18 12 21.6 +13
PRU MLR MLR
comp=Z,3µm,23.9s,MS5.7
PRU Pruhonice 90.63 40 *e*P **P** **17 55 16.0 +2.2**
PRU *e*SS SS 18 12 21.6 +13
PRU AMS AMS 18 28 00.0
comp=Z,3µm,23.9s
TRI Trieste 90.74 44 PFAKE 17 55 30.0 +16
TRI LR LR
comp=Z,632nm,20.0s,MS5.0
MOA Molln 90.77 42⇑ *i*P **P** **17 55 15.3 +0.8**
comp=Z,14nm,1.2s,mb5.2
CRNS Crni Vrh 91.03 44 *e*P **P** **17 55 18.0 +2.2**
MOZS Mozjanca 91.12 44 *e*P **P** **17 55 18.5 +2.4**
TREC Trest 91.35 40 *e*P **P** **17 55 18.6 +1.5**
TREC *e*SS SS 18 12 29.4 +10
TREC MLR MLR
comp=Z,3µm,24.4s,MS5.6
TREC Trest 91.35 40 *e*P **P** **17 55 18.6 +1.5**
TREC *e*SS SS 18 12 29.4 +10
TREC AMS AMS 18 28 10.0
comp=Z,3µm,24.4s
ARCES ARCESS Array B 91.42 20 P **P** **17 55 17.1 0.0**
comp=Z,2.9nm,0.8s,mb4.7,baz=296,slow=3.6,SNR=8.0
ARCES PP PP 17 58 53.0 -1.6
comp=Z,3.1nm,0.9s,baz=317,slow=8.7,SNR=4.1
ARCES ARCESS Array B 91.42 20 P **P** **17 55 17.1 0.0**
ARCES 17 58 53.0
ARCES pmax pmax
comp=Z,3.0nm,0.8s
ARCES pmax pmax
comp=Z,3.0nm,0.9s
UPC Upice 91.48 39 *e*P **P** **17 55 19.5 +1.8**
UPC Upice 91.48 39 *e*P **P** **17 55 19.5 +1.8**
DPC Dobruska-Polom 91.70 39 *e*P **P** **17 55 20.8 +2.0**
DPC *e*SS SS 18 12 39.4 +15
DPC MLR MLR
comp=Z,3µm,24.7s,MS5.6
DPC Dobruska-Polom 91.70 39 *e*P **P** **17 55 20.8 +2.0**
DPC *e*SS SS 18 12 39.4 +15
DPC AMS AMS 18 28 30.0
comp=Z,3µm,24.7s
LEGS Legarje 91.78 44 *e*P **P** **17 55 21.7 +2.5**
MIDW Midway 91.82 298 PFAKE 17 55 30.0 +10
MIDW LR LR
comp=Z,1µm,20.0s,MS5.4
CONA Conrad Observa 91.82 42⇑ *i*P **P** **17 55 20.1 +0.7**
comp=Z,27nm,1.4s,mb5.4
KEV Kevo 91.84 19 PFAKE 17 55 30.0 +11
KEV LR LR
comp=Z,985nm,21.0s,MS5.2
VRAC Vranov 92.06 40 P **P** **17 55 20.3 -0.1**
comp=Z,8.6nm,1.0s,mb5.0,baz=283,slow=7.2,SNR=17
VRAC Vranov 92.06 40 P **P** **17 55 20.3 -0.1**
VRAC pmax pmax
comp=Z,9.0nm,1.0s
VRAC Vranov 92.06 40⇓ *i*P **P** **17 55 22.8 +2.4**
MORC Moravsky Berou 92.58 40 *e*P **P** **17 55 21.4 -1.4**
MORC pmax pmax
comp=Z,35nm,1.6s,mb5.5
MORC Moravsky Berou 92.58 40 *e*P **P** **17 55 21.4 -1.4**
comp=Z,35nm,1.6s,mb5.5
MORC Moravsky Berou 92.58 40⇓ *i*P **P** **17 55 25.1 +2.3**
ZST Bratislava 92.59 41 *e*P **P** **17 55 25.3 +2.4**
comp=Z,8.7nm,1.0s,mb5.1
ZST *e* 18 07 37.2
ZST *e*SS SS 18 12 48.4 +11
ZST LR LR
comp=Z,500nm,25.5s,MS4.9
ZST Bratislava 92.59 41 *e*P **P** **17 55 25.3 +2.4**
ZST *e*SP SP 18 07 37.2 +1.5
ZST *e*SS SS 18 12 48.4 +11
WDD Wield Dalam 92.72 54 PFAKE 17 55 30.0 +6.2
WDD LR LR
comp=Z,661nm,20.0s,MS5.1
OKC Ostrava-Krasne 92.95 40 *e*P **P** **17 55 26.1 +1.6**
OKC MLR MLR
comp=Z,2µm,24.4s,MS5.5
OKC Ostrava-Krasne 92.95 40 *e*P **P** **17 55 26.1 +1.6**
OKC *e*SS SS 18 13 03.2 +21
OKC AMS AMS 18 29 20.0
comp=Z,2µm,24.4s
BILL Bilibino 93.01 339⇑ *i*P **P** **17 55 23.7 -0.7**
BILL *i* 17 59 06.0
BILL *e* 18 05 59.6
BILL *i* S S 18 06 36.6 +8.7
BILL *e*SS SS 18 12 45.5 +3.6
BILL pmax pmax
comp=Z,40nm,1.5s,mb5.6
BILL MLR MLR
comp=Z,2µm,21.0s,MS5.6
BILL Bilibino 93.01 339 *e*P **P** **17 55 22.9 -1.6**
comp=Z,36nm,1.3s,mb5.7
BILL LR LR
comp=Z,2µm,22.0s,MS5.5
KOLL Kolacno 93.37 41 *e*P **P** **17 55 28.8 +2.3**
KOLL Kolacno 93.37 41 *e*P **P** **17 55 28.8 +2.3**
CEL Celeste 93.44 51 PFAKE 17 55 40.0 +13
CEL LR LR
comp=Z,439nm,21.0s,MS4.9
VYHS Vyhne 93.67 41 *e*P **P** **17 55 29.4 +1.5**
comp=Z,20nm,1.9s,mb5.2
VYHS *e*S SKSac 18 06 10.3 +10
VYHS *e* 18 07 48.3
VYHS *e*SS SS 18 13 06.1 +14
VYHS LR LR
comp=Z,1µm,25.7s,MS5.2
VYHS Vyhne 93.67 41 *e*P **P** **17 55 29.3 +1.4**
OJC Ojcow 93.92 39 *e*P **P** **17 55 28.4 -0.6**
TIP Timpagrande 93.95 50 PFAKE 17 55 40.0 +11
TIP LR LR
comp=Z,555nm,21.0s,MS5.0
FINES FINESS Array B 94.27 27 P **P** **17 55 30.0 -0.3**
comp=Z,1.8nm,0.9s,mb4.5,baz=270,slow=1.9,SNR=4.7
FINES PP PP 17 59 19.1 +1.9
comp=Z,4.6nm,1.0s,baz=228,slow=5.4,SNR=4.9
FINES FINESS Array B 94.27 27 P **P** **17 55 30.0 -0.3**
FINES 17 59 19.1
FINES pmax pmax
comp=Z,2.0nm,0.9s
FINES pmax pmax
comp=Z,5.0nm,1.0s
FINES FINESS Array B 94.27 27 P **P** **17 55 30.0 -0.3**
FINES PP PP 17 59 19.1 +1.9
NIE Niedzica 94.42 40 *e*P **P** **17 55 33.9 +2.6**
PSZ Piszkesteto 94.48 41 *e*P **P** **17 55 31.3 -0.3**
PSZ pmax pmax
comp=Z,12nm,1.3s,mb5.2
PSZ MLR MLR
comp=Z,605nm,22.0s,MS5.0
PSZ Piszkesteto 94.48 41 *e*P **P** **17 55 31.3 -0.4**
comp=Z,12nm,1.3s,mb5.2
PSZ LR LR
comp=Z,605nm,22.0s,MS5.0
PSZ Piszkesteto 94.48 41⇓ *e*PcP PcP 17 55 32.9 +0.9
KECS Kecovo 94.74 41 *e*P **P** **17 55 35.6 +2.8**
KECS pmax pmax
comp=Z,8.0nm,1.8s,mb4.8
KECS Kecovo 94.74 41 *e*P **P** **17 55 35.6 +2.8**
comp=Z,7.5nm,1.8s,mb4.8
KECS Kecovo 94.74 41 *e*P **P** **17 55 35.6 +2.8**
STHS Stebnicka Huta 95.01 40 *e*P **P** **17 55 36.3 +2.3**
STHS pmax pmax
comp=Z,3.0nm,1.1s,mb4.6
STHS Stebnicka Huta 95.01 40 *e*P **P** **17 55 36.3 +2.3**
comp=Z,2.9nm,1.1s,mb4.6
STHS Stebnicka Huta 95.01 40 *e*P **P** **17 55 36.3 +2.3**
LVZ Lovozero 95.14 20 PFAKE 17 55 50.0 +16
LVZ LR LR
comp=Z,867nm,21.0s,MS5.2
QSPA South Pole Qui 95.18 180 P **P** **17 55 33.8 -0.3**
comp=Z,32nm,0.9s,mb5.7,baz=150,slow=2.1,SNR=38
QSPA South Pole Qui 95.18 180 P **P** **17 55 33.8 -0.3**
QSPA LR LR
comp=Z,2µm,22.0s,MS5.5
CRVS Cervenica-Dubn 95.27 40 *e*P **P** **17 55 36.9 +1.7**
comp=Z,13nm,1.5s,mb5.2
CRVS *e* 18 04 02.9
CRVS *e* 18 08 14.2
CRVS *e*SS SS 18 13 31.0 +16
CRVS LR LR
comp=Z,2µm,24.7s,MS5.4
CRVS Cervenica-Dubn 95.27 40 *e*P **P** **17 55 36.8 +1.6**
CRVS *e* 18 04 02.9
CRVS *e*PS PS 18 08 14.2 +4.3
CRVS *e*SS SS 18 13 31.0 +16
KOLS Kolonicke sedl 95.78 40 *e*P **P** **17 55 38.1 +0.5**
KOLS *e* 18 08 21.8
KOLS pmax pmax
comp=Z,22nm,2.1s,mb5.2
KOLS Kolonicke sedl 95.78 40 *e*P **P** **17 55 38.1 +0.5**
comp=Z,22nm,2.1s,mb5.2
KOLS *e* 18 03 36.0
KOLS *e* 18 08 21.8
KOLS *e*SS SS 18 13 45.5 +23
KOLS LR LR
comp=Z,2µm,24.9s,MS5.4
KOLS Kolonicke sedl 95.78 40 *e*P **P** **17 55 38.1 +0.5**
KOLS *e* 18 03 36.0
KOLS *e*PS PS 18 08 21.8 +6.3
KOLS *e*SS SS 18 13 45.5 +23
UZH Uzhgorod 95.87 40 *e*P **P** **17 55 38.2 +0.2**
UZH *e* 17 59 28.4
TIR Tirane 95.88 48 PFAKE 17 55 50.0 +12
TIR LR LR
comp=Z,843nm,20.0s,MS5.2
KWP Kalwaria Pacla 95.88 39 PFAKE 17 55 50.0 +12
KWP LR LR
comp=Z,1µm,22.0s,MS5.3
MAIT Maitri 96.26 161 *e*P **P** **17 55 38.0 -1.2**
MLR Muntele Rosu 99.13 43⇑ *i*P **P** **17 55 54.6 +1.9**
SBA Scott Base 99.32 192 P **P** **17 55 51.3 -1.6**
SBA MLR MLR
comp=Z,908nm,22.0s,MS5.2
KIEV Kiev 99.54 37 PFAKE 17 56 10.0 +16
KIEV LR LR
comp=Z,830nm,21.0s,MS5.2
AKASG Malin Array Be 99.55 37 P **P** **17 55 54.3 -0.1**
comp=Z,0.2nm,0.3s,baz=268,slow=3.7,SNR=5.2
AKASG PP PP 18 00 04.5 +6.3
comp=Z,0.8nm,0.7s,baz=292,slow=6.7,SNR=7.3
AKASG Malin Array Be 99.55 37 *i* P **P** **17 55 54.2 -0.3**
MSVF Nonsavu 100.49 253 PFAKE 17 56 10.0 +11
MSVF LR LR
comp=Z,955nm,22.0s,MS5.3
SEY Seymchan 100.50 338⇓ *i*P Pdif 17 55 57.8 -0.8
SEY Seymchan 100.50 338⇓ *i*P Pdif 17 55 57.9 -0.7
TIXI Tiksi 100.62 350 *e*P Pdif 17 55 57.1 -2.0
TIXI pmax pmax
comp=Z,12nm,1.0s
TIXI MLR MLR
comp=Z,2µm,22.0s,MS5.6
TIXI Tiksi 100.62 350 *e*Pdif Pdif 17 55 57.1 -2.0
comp=Z,12nm,1.0s
TIXI LR LR
comp=Z,2µm,22.0s,MS5.6
TSUM Tsumeb 101.24 108 *e*Pdif Pdif 17 56 01.5 -0.3
comp=Z,12nm,1.3s
TSUM LR LR
comp=Z,2µm,20.0s,MS5.6
OBN Obninsk 101.84 31⇑ *e*P Pdif 17 56 05.0 +0.5
OBN *i* 18 00 16.7
OBN pmax pmax
comp=Z,13nm,1.1s
OBN Obninsk 101.84 31⇑ *e*P Pdif 17 56 05.1 +0.6
OBN LR LR
comp=Z,2µm,20.0s,MS5.6
PET Petropavlovsk 102.62 327 PFAKE 17 56 20.0 +12
PET LR LR
comp=Z,530nm,21.0s,MS5.0
PETK Petropavlovsk- 103.10 327 PP PP 18 00 28.9 +4.2
comp=Z,9.4nm,1.3s,baz=88,slow=7.6,SNR=3.5
SUR Sutherland 104.03 122 PFAKE 17 56 30.0 +16
SUR LR LR
comp=Z,4µm,21.0s,MS6.0
ISP Isparta 104.74 49 PFAKE 17 56 30.0 +13
ISP LR LR
comp=Z,561nm,20.0s,MS5.1
BR131 Keskin Array S 106.38 46 PFAKE 18 00 50.0 +14
BR131 LR LR
comp=Z,268nm,19.0s,MS4.8
BRTR Keskin Array B 106.38 46 PKKPbc PKKPbc 18 11 57.4 -0.5
comp=Z,0.9nm,0.9s,baz=150,slow=7.9,SNR=4.4
WAKE Wake Island 107.74 292 PFAKE 18 00 50.0 +11
WAKE LR LR
comp=Z,1µm,19.0s,MS5.5
CSS Prodhromos 107.82 51 PFAKE 18 00 50.0 +11
CSS LR LR
comp=Z,336nm,21.0s,MS4.9
BOSA Boshof 108.08 118 PFAKE 18 00 50.0 +10
BOSA LR LR
comp=Z,3µm,20.0s,MS5.8
YAK Yakutsk 108.56 345 PFAKE 18 00 50.0 +10
YAK LR LR
comp=Z,1µm,19.0s,MS5.5
LBTB Lobatse 108.61 115 PFAKE 18 00 50.0 +9.2
LBTB LR LR
comp=Z,2µm,21.0s,MS5.7
KIV Kislovodsk 110.68 39 *i* PKIKP PKiKP 18 00 44.5 +0.3
KIV pmax pmax
comp=Z,3.0nm,0.6s
KIV Kislovodsk 110.68 39 PFAKE 18 01 00.0 +16
KIV LR LR
comp=Z,1µm,22.0s,MS5.4
ARU Arti 110.87 22 PFAKE 18 00 50.0 +5.8
ARU LR LR
comp=Z,990nm,20.0s,MS5.4
LSZ Lusaka 111.33 104 PFAKE 18 01 00.0 +14
LSZ LR LR
comp=Z,2µm,20.0s,MS5.6
DZM Mont Dzumac 111.38 248 *e*SP SP 18 10 46.9 -8.0
comp=Z,986nm,34.1s
DZM *e*SS SS 18 16 54.2 -4.8
comp=Z,2µm,29.1s
DZM *e*LQ 18 29 00.3
comp=Z,2µm,33.0s
DZM *e*LR LR 18 33 52.8
comp=Z,1µm,34.1s
MAW Mawson 113.38 166 PFAKE 18 01 00.0 +11
MAW LR LR
comp=Z,1µm,19.0s,MS5.5
GNI Garni 113.90 42 PFAKE 18 01 00.0 +10
GNI LR LR
comp=Z,399nm,20.0s,MS5.0
YSS Yuzh-Sakhalins 114.50 328 PFAKE 18 01 00.0 +8.6
YSS LR LR
comp=Z,321nm,20.0s,MS4.9
ABKAR Akbulak array 116.75 27 *e*PKPdf PKPdf 18 00 54.0 -1.6
HABR Khabarovsk 117.28 333 *i* PKIKP PKPdf 18 00 55.2 -1.5
HABR *e* 18 02 04.5
HABR PPP 18 04 32.5
HABR *e* 18 08 04.7
HABR *e*PS PS 18 11 42.6 -9.2
HABR MLR MLR
comp=Z,822nm,22.0s,MS5.3
ERM Erimo 117.30 323 PFAKE 18 01 10.0 +13
ERM LR LR
comp=Z,667nm,21.0s,MS5.2
BRVK Borovoye 117.61 18⇓ *i*PKIKP PKPdf 18 00 58.1 +0.9
BRVK MLR MLR
comp=Z,1µm,22.0s,MS5.5
BVAR Borovoye Array 117.68 18 PKP PKPdf 18 00 57.5 +0.2
comp=Z,1.3nm,0.8s,baz=347,slow=2.0,SNR=7.2
BVAR PP PP 18 02 06.5 -2.9
comp=Z,2.7nm,0.8s,baz=328,slow=5.3,SNR=7.0
BVAR Borovoye Array 117.68 18 PKIKP PKPdf 18 00 57.5 +0.2
BVAR 18 02 06.5
BVAR pmax pmax
comp=Z,1.0nm,0.8s
BVAR pmax pmax
comp=Z,3.0nm,0.8s
HNR Honiara 117.93 262 PFAKE 18 01 10.0 +11
HNR LR LR
comp=Z,811nm,20.0s,MS5.3
CASY Casey 118.31 186 PFAKE 18 01 10.0 +12
CASY LR LR
comp=Z,2µm,21.0s,MS5.7
KMBO Kilima Mbogo 119.78 88 PFAKE 18 01 10.0 +7.5
KMBO LR LR
comp=Z,1µm,21.0s,MS5.5
ZAA0 Zalesovo Array 120.16 9 *e*PKPdf PKPdf 18 01 00.8 -1.3
ZAA0 *e*PP PP 18 02 23.4 -3.0
ZALV Zalesovo Beam 120.16 9 PKP PKPdf 18 01 01.3 -0.8
comp=Z,2.7nm,0.4s,baz=318,slow=2.0,SNR=13
ZALV PP PP 18 02 24.7 -1.6
comp=Z,3.7nm,0.8s,baz=334,slow=7.9,SNR=4.6
ZALV Zalesovo Beam 120.16 9 PKIKP PKPdf 18 01 01.3 -0.8
ZALV 18 02 24.7
ZALV pmax pmax
comp=Z,3.0nm,0.4s
ZALV pmax pmax
comp=Z,4.0nm,0.8s
KURK Kurchatov 122.02 14 *c* *i*PKIKP PKPdf 18 01 04.1 -1.7
KURK pmax pmax
comp=Z,9.0nm,1.2s
KURK Kurchatov 122.02 14 *e*PKPdf PKPdf 18 01 03.9 -1.9
KURK *e*PP PP 18 02 28.4 -11
KURK LR LR
comp=Z,1µm,20.0s,MS5.5
HIA Hailar 122.42 343 PFAKE 18 01 20.0 +13
HIA LR LR
comp=Z,2µm,22.0s,MS5.6
MDJ Mudanjiang 122.66 333 PKP PKPdf 18 01 05.9 -1.3
MDJ sPKP 18 01 10.5
MDJ PP PP 18 02 43.8 -0.1
MDJ PKS 18 04 42.3
MDJ SKS SKSdf 18 08 17.5 +0.8
MDJ AMB AMB
comp=Z,220nm,7.7s
MDJ LR LR
comp=N,620nm,27.7s,MS5.5
MDJ LR LR
comp=E,2µm,29.3s,MS5.5
MDJ LR LR
comp=Z,820nm,22.8s
MDJ Mudanjiang 122.66 333 PFAKE 18 01 20.0 +13
MDJ LR LR
comp=Z,845nm,22.0s,MS5.3
TLY Talaya 123.13 355 PFAKE 18 01 20.0 +12
TLY LR LR
comp=Z,787nm,22.0s,MS5.3
MAJO Matsushiro 123.68 321 PFAKE 18 01 20.0 +11
MAJO LR LR
comp=Z,441nm,20.0s,MS5.1
MAT Matsushiro 123.68 321 *e*PKP PKPdf 18 01 07.7 -1.7
MJAR Matsushiro Arr 123.68 321 PKP PKPdf 18 01 09.2 -0.2
comp=Z,1.8nm,0.7s,baz=83,slow=1.0,SNR=8.6
MJAR Matsushiro Arr 123.68 321 PKIKP PKPdf 18 01 09.2 -0.2
MJAR pmax pmax
comp=Z,2.0nm,0.7s
CAN Canberra 123.92 231 PFAKE 18 01 20.0 +10
CAN LR LR
comp=Z,377nm,19.0s,MS5.1
ZAK Zakamensk 124.45 355 *e*PKIKP PKPdf 18 01 10.7 +0.3
CN2 Changchun 125.10 335 *e*PKP PKPdf 18 01 12.4 +0.5
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,700nm,22.0s,MS5.4
CN2 LR LR
comp=E,500nm,22.0s,MS5.4
CN2 LR LR
comp=Z,600nm,20.0s,MS5.3
TOO Toolangi 125.69 227 *e*PKP PKPdf 18 01 14.3 +1.1
ULN Ulaanbaatar 126.52 352 *e*PKIKP PKPdf 18 01 13.9 -0.6
ULN *e* 18 03 07.6
ULN MLR MLR
comp=Z,778nm,20.0s,MS5.4
MK31 Makanchi Array 126.55 13 *e*PKIKP PKPdf 18 01 12.8 -1.8

MKAR	**Makanchi Array**	**126.55**	**13**	PKP	PKPdf	18 01 12.6	-2.0
	comp=Z,4.0nm,0.9s,baz=321,slow=1.6,SNR=7.8						
MKAR	**Makanchi Array**	**126.55**	**13**	PKIKP	PKPdf	18 01 12.6	-2.0
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MKAR	**Makanchi Array**	**126.55**	**13**	PKP	PKPdf	18 01 12.6	-2.0
SONM	**Songino Array**	**126.64**	**352**	PKP	PKPdf	18 01 13.0	-1.7
	comp=Z,2.7nm,0.9s,baz=346,slow=1.2,SNR=3.5						
SONM				PP	PP	18 03 07.2	-2.8
	comp=Z,1.4nm,0.6s,baz=17,slow=4.2,SNR=4.9						
SONM	**Songino Array**	**126.64**	**352**	PKIKP	PKPdf	18 01 13.0	-1.7
SONM						18 03 07.2	
SONM				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
USP	**Ospenovka**	**127.51**	**21**	P	PKPdf	18 01 16.3	-0.2
	SNR=9.3						
EKS2	**Erkin-Say**	**127.77**	**22**	P	PKPdf	18 01 19.5	+2.5
	SNR=12						
EKS2	**Erkin-Say**	**127.77**	**22**	*e*PKPdf	PKPdf	18 01 17.1	0.0
EKS2				LR	LR		
	comp=Z,901nm,22.0s,MS5.4						
CHMS	**Chumysh**	**127.83**	**21**	P	PKPdf	18 01 16.5	-0.6
	SNR=5.4						
AAK	**Ala-Archa**	**128.06**	**21**	*c i*PKIKP	PKPdf	18 01 18.8	+1.2
AAK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
AAK	**Ala-Archa**	**128.06**	**21**	*e*PKPdf	PKPdf	18 01 19.2	+1.6
AAK				LR	LR		
	comp=Z,752nm,21.0s,MS5.3						
AML	**Almayashu**	**128.19**	**22**	P	PKPdf	18 01 17.5	-0.4
	SNR=16						
AML	**Almayashu**	**128.19**	**22**	*e*PKPdf	PKPdf	18 01 17.5	-0.4
AML				LR	LR		
	comp=Z,1μm,21.0s,MS5.5						
TKM2	**Tokmak 2**	**128.20**	**20**	P	PKPdf	18 01 17.7	-0.1
	SNR=9.2						
TKM2	**Tokmak 2**	**128.20**	**20**	*e*PKIKP	PKPdf	18 01 18.0	+0.2
TKM2				MLR	MLR		
	comp=Z,741nm,21.0s,MS5.3						
TKM2	**Tokmak 2**	**128.20**	**20**	*e*PKPdf	PKPdf	18 01 18.0	+0.2
TKM2				LR	LR		
	comp=Z,741nm,21.0s,MS5.3						
KBK	**Karagaybulak**	**128.20**	**21**	P	PKPdf	18 01 19.7	+1.9
	SNR=5.6						
UCH	**Uchtor**	**128.42**	**22**	P	PKPdf	18 01 19.3	+1.0
	SNR=20						
UCH	**Uchtor**	**128.42**	**22**	*e*PKPdf	PKPdf	18 01 18.8	+0.5
UCH				LR	LR		
	comp=Z,766nm,21.0s,MS5.4						
KSRS	**Korea Array**	**128.97**	**329**	PKP	PKPdf	18 01 17.5	-2.0
	comp=Z,4.7nm,0.9s,baz=25,slow=1.5,SNR=14						
KSRS	**Korea Array**	**128.97**	**329**	PKIKP	PKPdf	18 01 17.5	-2.0
KSRS				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ABPO	**Ambohimpanom**	**129.19**	**110**	PFAKE		18 01 30.0	+10
ABPO				LR	LR		
	comp=Z,2μm,20.0s,MS5.8						
GUMO	**Guam**	**129.38**	**292**	PFAKE		18 01 30.0	+9.2
GUMO				LR	LR		
	comp=Z,633nm,20.0s,MS5.3						
INCN	**Inchon**	**129.61**	**330**	PFAKE		18 01 30.0	+9.3
INCN				LR	LR		
	comp=Z,750nm,20.0s,MS5.4						
CTA	**Charters Tower**	**130.32**	**248**	*e*PKP	PKPdf	18 01 25.2	+2.7
	comp=Z,5.6nm,0.8s						
CTAO	**Charters Tower**	**130.32**	**248**	PFAKE		18 01 30.0	+7.5
CTAO				LR	LR		
	comp=Z,842nm,22.0s,MS5.4						
WMQ	**Urumqi**	**130.45**	**9**	PKP	PKPdf	18 01 22.0	-0.1
WMQ				PP	PP	18 03 41.0	+5.9
WMQ				SKS	SKSdf	18 08 32.0	+0.8
WMQ				AMB	AMB		
	comp=Z,110nm,10.0s						
WMQ				LR	LR		
	comp=N,1μm,25.0s,MS5.7						
WMQ				LR	LR		
	comp=E,1μm,25.0s,MS5.7						
WMQ				LR	LR		
	comp=Z,1μm,25.0s,MS5.5						
DL2	**Dalian**	**130.77**	**335**	PKP	PKPdf	18 01 22.3	-0.6
DL2				PP	PP	18 03 40.4	+2.9
DL2				AMB	AMB		
	comp=Z,200nm,5.5s						
DL2				LR	LR		
	comp=N,330nm,22.4s,MS5.2						
DL2				LR	LR		
	comp=E,430nm,18.0s,MS5.2						
DL2				LR	LR		
	comp=Z,510nm,19.8s,MS5.2						
STKA	**Stephens Creek**	**130.92**	**232**	*e*PKP	PKPdf	18 01 22.0	-1.3
	comp=Z,8.2nm,0.9s						
STKA	**Stephens Creek**	**130.92**	**232**	PKP	PKPdf	18 01 21.9	-1.5
	comp=Z,6.0nm,0.9s,baz=89,slow=5.6,SNR=7.0						
STKA	**Stephens Creek**	**130.92**	**232**	*e*PKPdf	PKPdf	18 01 22.3	-1.0
KSH	**Kashi**	**131.32**	**22**	*e*PKP	PKPdf	18 01 26.6	+2.7
KSH				PKS		18 05 01.5	
KSH				SKS	SKSdf	18 08 32.3	-0.6
KSH				AMB	AMB		
	comp=Z,260nm,7.0s						
KSH				LR	LR		
	comp=N,220nm,8.2s						
KSH				LR	LR		
	comp=E,160nm,8.3s						
KSH				LR	LR		
	comp=Z,260nm,6.5s						
BJI	**Beijing**	**131.82**	**341**	PKP	PKPdf	18 01 22.8	-2.0
BJI				LR	LR		
	comp=N,450nm,30.9s,MS5.3						
BJI				LR	LR		
	comp=E,810nm,30.4s,MS5.3						
BJI				LR	LR		
	comp=Z,790nm,34.1s,MS5.2						
BJT	**Baijiatuau**	**131.85**	**341**	PFAKE		18 01 40.0	+15
BJT				LR	LR		
	comp=Z,768nm,20.0s,MS5.4						
GTA	**Gaotai**	**135.59**	**357**	*e*PKP	PKPdf	18 01 31.8	-0.1
GTA				PKS		18 05 05.3	
GTA				SKS	SKSdf	18 08 41.1	+0.6
GTA				SKKS	SKKSac	18 11 02.3	+0.4
GTA				AMB	AMB		
	comp=Z,340nm,5.1s						
GTA				LR	LR		
	comp=N,420nm,24.6s,MS5.4						
GTA				LR	LR		
	comp=E,680nm,21.0s,MS5.4						
GTA				LR	LR		
	comp=Z,970nm,29.7s						
SSE	**Sheshan**	**137.40**	**329**	*e*PKP	PKPdf	18 01 34.3	-1.2
SSE				AMB	AMB		
	comp=Z,59nm,12.0s						
SSE				LR	LR		
	comp=N,510nm,30.2s,MS5.5						
SSE				LR	LR		
	comp=E,1μm,30.2s,MS5.5						
SSE				LR	LR		
	comp=Z,660nm,25.1s						
MSEY	**Mahe Island**	**138.19**	**91**	PFAKE		18 01 50.0	+13
MSEY				LR	LR		
	comp=Z,1μm,20.0s,MS5.7						
LZH	**Lanzhou**	**138.53**	**352**	*e*PKP	PKPdf	18 01 36.5	-1.0
LZH				sPKP		18 01 41.3	
LZH				PP	PP	18 04 29.0	+2.7
LZH				SKKS	SKKSac	18 11 18.6	-0.9
LZH				AMB	AMB		
	comp=Z,330nm,7.0s						
LZH				LR	LR		
	comp=E,910nm,18.5s						
LZH				LR	LR		
	comp=Z,1μm,20.3s,MS5.7						
ASAR	**Alice Springs**	**140.38**	**239**	PKhKP		18 01 31.3	
	comp=Z,1.1nm,0.7s,baz=122,slow=3.4,SNR=22						
ASAR				PKP	PKPdf	18 01 39.0	-2.2
	comp=Z,4.9nm,0.8s,baz=110,slow=2.4,SNR=26						
ASAR	**Alice Springs**	**140.38**	**239**	PKHKP		18 01 31.3	
ASAR						18 01 39.0	
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KHET	**Khetri**	**140.91**	**31**	*e*PKP	PKPdf	18 01 41.5	-0.5
KHET				AMb	AMB	18 01 45.1	
	comp=Z,15nm,1.4s						
WRAB	**Tennant Creek**	**141.23**	**244**	PFAKE		18 01 50.0	+7.2
WRAB				LR	LR		
	comp=Z,1μm,20.0s,MS5.6						
WRA	**Warramunga Arr**	**141.24**	**244**	PKhKP		18 01 33.9	
	comp=Z,8.8nm,1.1s,baz=108,slow=3.0,SNR=30						
WRA				PKP	PKPdf	18 01 38.6	-4.2
	comp=Z,8.4nm,1.1s,baz=104,slow=2.5,SNR=36						
WRA	**Warramunga Arr**	**141.24**	**244**	PKHKP		18 01 33.9	
WRA						18 01 38.6	
WRA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
WRA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
WRA	**Warramunga Arr**	**141.24**	**244**	PKP		18 01 33.9	
WRA				PKP	PKPdf	18 01 38.6	-4.2
AYAN	**Aya Nagar**	**141.24**	**29**	*e*PKP	PKPdf	18 01 42.4	-0.2
AYAN				*ex*	x	18 01 43.4	
AYAN				AMS	AMS	18 07 24.3	
	comp=Z,706nm,19.0s,MS5.4						
BISR	**Bishrakh**	**141.31**	**29**	*ex*	PKPdf	18 01 49.7	+7.0
SONA	**Sohna**	**141.41**	**29**	*e*PKP	PKPdf	18 01 40.4	-2.5
SONA				AMb	AMB	18 01 52.5	
	comp=Z,13nm,0.7s						
TATO	**Taipei**	**142.00**	**323**	PFAKE		18 01 50.0	+6.0
TATO				LR	LR		
	comp=Z,744nm,19.0s,MS5.5						
YHNB	**Yeheng**	**142.29**	**323**	PFAKE		18 02 00.0	+15
YHNB				LR	LR		
	comp=Z,865nm,20.0s,MS5.5						
AGRA	**Agra**	**142.68**	**29**	*ex*	PKPdf	18 01 40.7	-4.5
ENH	**Enshi**	**142.92**	**343**	*e*PKPpre		18 01 40.2	
ENH				LR	LR		
	comp=Z,1μm,21.0s,MS5.6						
SSLB	**Suanglung**	**143.21**	**322**	PKPdf	PKPdf	18 01 44.9	-1.3
CD2	**Chengdu**	**143.62**	**351**	*e*PKP	PKPdf	18 01 42.9	-3.9
CD2				pPKP	pPKPdf	18 01 46.3	-12
CD2				sPKP		18 01 51.0	
CD2				PP	PP	18 04 58.3	+0.9
CD2				PKS		18 05 17.3	
CD2				SKS	SKSdf	18 08 47.1	-7.0
CD2				SKKS	SKKSac	18 11 44.5	-4.8
CD2				AMB	AMB		
	comp=Z,340nm,10.2s						
CD2				LR	LR		
	comp=N,940nm,22.6s,MS5.7						
CD2				LR	LR		
	comp=E,1μm,22.6s,MS5.7						
CD2				LR	LR		
	comp=Z,1μm,23.8s,MS5.5						
KAKA	**Kakadu**	**144.66**	**255**	*e*PKP	PKPdf	18 01 47.0	-2.0
	comp=Z,73nm,0.9s						
LSA	**Lhasa**	**144.81**	**10**	PKPbc	PKPdf	18 01 42.9	-6.0
LSA	**Lhasa**	**144.81**	**10**	*e*PKIKP	PKPdf	18 01 48.5	-0.4
LSA				*e*		18 05 04.6	
LSA				MLR	MLR		
	comp=Z,831nm,22.0s,MS5.5						
LSA	**Lhasa**	**144.81**	**10**	*e*PKPdf	PKPdf	18 01 48.5	-0.3
LSA				*e*PP	PP	18 05 04.6	+0.1
LSA				LR	LR		
	comp=Z,831nm,22.0s,MS5.5						
KKN	**Kakani**	**145.19**	**19**	*e*P	PKPbc	18 01 47.0	-2.2
	comp=Z,210nm,0.6s						
GUN	**Gumba**	**145.27**	**18**	*e*P	PKPbc	18 01 46.9	-2.5
	comp=Z,1μm,1.3s						
DMN	**Daman**	**145.30**	**19**	*e*P	PKPbc	18 01 47.6	-1.9
	comp=Z,191nm,0.8s						
PKIN	**Phulchoki**	**145.43**	**19**	*e*P	PKPbc	18 01 47.4	-2.5
	comp=Z,124nm,0.8s						
PKI	**Pulchoki**	**145.44**	**19**	*e*P	PKPbc	18 01 47.4	-2.5
	comp=Z,301nm,1.3s						
JIRN	**Jiri**	**145.60**	**18**	*e*P	PKPdf	18 01 47.6	-2.7
	comp=Z,152nm,1.1s						
BHPL	**Bhopal**	**145.65**	**34**	*e*PKP	PKPdf	18 01 50.0	-0.5
BHPL				*e*PP	PP	18 05 12.1	+1.8
TAPN	**Taplejung**	**146.33**	**16**	*e*P	PKPdf	18 01 47.9	-3.6
	comp=Z,121nm,0.8s						
RAMN	**Ramite**	**146.39**	**18**	*e*P	PKPdf	18 01 48.6	-3.1
	comp=Z,105nm,0.8s						
ODAN	**Odare**	**146.71**	**17**	*e*P	PKPdf	18 01 48.3	-3.9
	comp=Z,112nm,1.2s						
NWAO	**Narrogin (SRO)**	**146.78**	**211**	*e*PKIKP	PKPdf	18 01 50.8	-1.3
NWAO				MLR	MLR		
	comp=Z,894nm,19.0s						
POO	**Poona**	**146.90**	**44**	*e*PKP	PKPdf	18 01 55.1	+2.4
POO				AMb	AMB	18 02 04.1	
	comp=Z,117nm,0.9s						
GYA	**Guiyang**	**147.32**	**345**	⇑*i*PKPbc	PKPdf	18 01 53.1	-0.1
GYA				PP	PP	18 05 21.0	+1.5
GYA				PKS		18 05 26.4	
GYA				SKKS	SKKSac	18 12 11.9	+1.5
GYA				AMB	AMB		
	comp=Z,280nm,7.8s						
GYA				LR	LR		
	comp=N,3μm,22.0s,MS6.0						
GYA				LR	LR		
	comp=E,2μm,24.2s,MS6.0						
GYA				LR	LR		
	comp=Z,3μm,25.3s,MS5.9						
KLBR	**Kellerberrin**	**147.54**	**213**	*e*PKP	PKPdf	18 01 53.8	+0.4
	comp=Z,33nm,0.9s						
KAD	**Karad**	**147.96**	**45**	*e*PKP	PKPdf	18 01 52.3	-2.1
BCPH	**Baguio City Da**	**148.66**	**314**	⇓*e*P	PKPdf	18 01 57.2	+1.6
SHL	**Shillong**	**148.98**	**10**	*ex*	PKPbc	18 02 00.0	0.0
SHL				*e*PP	PP	18 05 30.0	+0.9
DAV	**Davao City (W)**	**149.41**	**293**	PFAKE		18 02 10.0	+13
DAV				LR	LR		
	comp=Z,636nm,20.0s,MS5.4						
KMI	**Kunming**	**149.46**	**351**	PKPbc	PKPdf	18 01 56.4	-0.3
FITZ	**Fitzroy Crossi**	**149.61**	**243**	*e*PKP	PKPdf	18 01 54.9	-2.2
	comp=Z,38nm,0.7s						
FITZ	**Fitzroy Crossi**	**149.61**	**243**	*e*PKPbc	PKPdf	18 01 59.1	+1.9
HYB	**Hyderabad**	**150.81**	**39**	*i* PKP	PKPdf	18 02 01.0	+2.0
QIZ	**Qiongzhong**	**153.03**	**333**	PKPbc	PKPdf	18 01 58.1	-4.2
QIZ				PP	PP	18 05 51.3	-1.5
QIZ				AMB	AMB		
	comp=Z,210nm,6.7s						
QIZ				LR	LR		
	comp=N,410nm,22.4s,MS5.2						
QIZ				LR	LR		
	comp=E,210nm,22.4s,MS5.2						
QIZ				LR	LR		
	comp=Z,480nm,37.2s						
QIZ	**Qiongzhong**	**153.03**	**333**	PFAKE		18 02 10.0	+7.7
QIZ				LR	LR		
	comp=Z,538nm,21.0s,MS5.3						
MBWA	**Marble Bar**	**153.17**	**232**	*e*PKPdf	PKPdf	18 01 58.3	-4.1
MBWA				*e*PKPbc	PKPbc	18 02 07.7	-2.2
MBWA				LR	LR		
	comp=Z,1μm,20.0s,MS5.7						
CHTO	**Chiang Mai**	**156.13**	**357**	*e*PKIKP	PKPdf	18 02 06.6	0.0
CHTO				MLR	MLR		
	comp=Z,621nm,21.0s,MS5.4						
CM31	**Chiang Mai Arr**	**156.48**	**356**	PFAKE		18 02 20.0	+13
CM31				LR	LR		
	comp=Z,719nm,19.0s,MS5.5						
CMAR	**Chiang Mai Arr**	**156.48**	**356**	PKP	PKPdf	18 02 05.5	-1.6
	comp=Z,2.9nm,0.9s,baz=305,slow=1.5,SNR=13						
CMAR				PKPab	PKPab	18 02 33.6	-1.8
	comp=Z,11nm,1.1s,baz=343,slow=3.2,SNR=12						
CMAR	**Chiang Mai Arr**	**156.48**	**356**	PKIKP	PKPdf	18 02 05.5	-1.6
CMAR						18 02 33.7	
CMAR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KAPI	**Kappang**	**157.78**	**269**	PFAKE		18 02 20.0	+11
KAPI				LR	LR		
	comp=Z,609nm,20.0s,MS5.4						
KKM	**Kota Kinabalu**	**158.21**	**300**	PFAKE		18 02 20.0	+11
KKM				LR	LR		
	comp=Z,807nm,22.0s,MS5.5						
KSM	**Kuching**	**165.56**	**297**	PFAKE		18 02 30.0	+13
KSM				LR	LR		
	comp=Z,633nm,20.0s						

MAN 17 17:50:02, 7°.67N×121°.76E, h11km, mb4.6, ML3.5, MS3.4, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZMPH	**Zamboanga City**	**0.77**	**157**	⇑*i*P	Pg	17 50 10.0	-6.9
ZMPH				*i* S	Sg	17 50 16.1	-11
IPIL	**Ipil**	**0.81**	**81**	*e*P	Pg	17 50 17.1	-0.6
IPIL				*e*S	Sg	17 50 25.3	-3.0
PAGZ	**Pagadian**	**1.62**	**84**	*e*P	Pn	17 50 30.4	0.0
PAGZ				*e*S	Sn	17 50 43.5	-7.8
GUIM	**Jordan**	**3.05**	**15**	*e*P	Pn	17 50 51.7	+1.5
GUIM				*e*S	Sn	17 51 14.6	-12
CUYO	**Cuyo Island**	**3.25**	**347**	*e*P	Pn	17 50 53.6	+0.7

GII ***17*** *17:52:37.8±0.5, 33°.32N×35°.45E, h1km±1km, Md2.3/6, Mm2.3/4*
ISCJB ***17*** *17:52:38.5±0.5, 33°.33N±0°.03×35°.46E±0°.03, h12km±3km, Error ellipse: s-maj=5.5km s-min=3.6km az=37.5*
GRAL ***17*** *17:52:39.1±0.3, 33°.31N×35°.45E, h9km±2km, MD3.2*
CSEM ***17*** *17:52:39.4±0.4, 33°.32N×35°.50E, h2km, ML3.2, Error ellipse: s-maj=9.2km s-min=5.0km az=115.0*
NSSC ***17*** *17:52:41, 33°.24N×35°.68E, h4km±6km*

ISC 17 17:52:38.9±0.5, 33°.33N±0°.03×35°.47E±0°.03, h12km±4km, n27, σ0°.84/43, 6D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.19**	**323**	*e*P	**Pg**	**17 52 43.1**	**-0.1**
KSDI	**Kefar Szold**	**0.21**	**131**	Pg	**Pg**	**17 52 43.2**	**-0.3**
KSDI				Sg	**Sg**	**17 52 46.8**	**+0.2**
HRI	**Mount Hermon**	**0.23**	**107**	Pg	**Pg**	**17 52 43.5**	**-0.3**
MMA0B	**Mount Meron ar**	**0.32**	**190**	Pg	**Pg**	**17 52 44.3**	**-1.1**
MMA0B				Sg	**Sg**	**17 52 50.6**	**+0.9**
MMC5	**Mount Meron ar**	**0.33**	**188**	Pg	**Pg**	**17 52 44.9**	**-0.6**
RCY	**Rachaya**	**0.33**	**63**	*e*P	**Pg**	**17 52 45.9**	**+0.4**
RCY				*e*S	**Sg**	**17 52 51.1**	**+1.1**
HNTI	**Hanita**	**0.35**	**225**	Pg	**Pg**	**17 52 45.6**	**-0.3**
HNTI				Sg	**Sg**	**17 52 51.0**	**+0.4**
BRBR	**Barbar**	**0.41**	**79**	⇓P	**Pg**	**17 52 47.0**	**0.0**
BRBR				⇑S	**Sg**	**17 52 53.0**	**+0.5**
BRBR	**Barbar**	**0.41**	**79**	⇓*i*P	**Pg**	**17 52 47.3**	**+0.3**
KSHT	**Keshet**	**0.45**	**141**	Pg	**Pg**	**17 52 47.8**	**0.0**
BHL	**Bhannes**	**0.59**	**15**	*e*P	**Pg**	**17 52 50.2**	**-0.2**
BHL				*e*S	**Sg**	**17 52 58.6**	**+0.4**
BHL	**Bhannes**	**0.59**	**15**	*e*P	**Pg**	**17 52 50.2**	**-0.2**
BHL				*e*S	**Sg**	**17 52 58.6**	**+0.4**
QASN	**Qassioun**	**0.70**	**73**	⇑P	**Pg**	**17 52 53.0**	**+0.5**
QASN				⇑S	**Sg**	**17 53 02.0**	**+0.2**
QASN	**Qassioun**	**0.70**	**73**	⇑*i*P	**Pg**	**17 52 53.2**	**+0.7**
QASN				⇑*i*S	**Sg**	**17 53 02.7**	**+0.9**
TOTH	**TOTAH**	**0.80**	**88**	⇑P	**Pg**	**17 52 54.0**	**-0.4**
TOTH				⇑S	**Sg**	**17 53 03.0**	**-2.0**
TOTH	**TOTAH**	**0.80**	**88**	⇑*i*P	**Pg**	**17 52 54.8**	**+0.4**
OFRI	**'Ofer**	**0.82**	**210**	Pg	**Pg**	**17 52 54.2**	**-0.5**
MMLI	**Mount Malkishu**	**0.89**	**183**	Pg	**Pg**	**17 52 55.1**	**-1.0**
MMLI				Sg	**Sg**	**17 53 09.6**	**+1.8**
HWQ	**Hawqa**	**1.02**	**23**	*e*P	**Pb**	**17 52 57.7**	**-0.9**
HMDT	**Nahal Hemdat**	**1.08**	**177**	Pg	**Pg**	**17 52 58.6**	**-1.0**
HMDT				Sg	**Sg**	**17 53 14.5**	**+0.8**
SLTI	**Sal'it**	**1.15**	**198**	Pg	**Pg**	**17 52 59.9**	**-1.1**
SALA	**Sala**	**1.23**	**120**	⇓P	**Pn**	**17 53 01.0**	**-0.9**
SALA				⇓S	**Sb**	**17 53 16.0**	**-1.8**
SALA	**Sala**	**1.23**	**120**	⇓*i*P	**Pn**	**17 53 01.9**	**0.0**
SALA				⇓*i*S	**Sb**	**17 53 16.3**	**-1.5**
ZALF	**Zalf**	**1.62**	**104**	⇑P	**Pn**	**17 53 08.0**	**+0.8**
ZALF				⇑S	**Sn**	**17 53 28.0**	**0.0**
ZALF	**Zalf**	**1.62**	**104**	⇑*i*P	**Pn**	**17 53 08.4**	**+1.2**
ZALF				⇑*i*S	**Sn**	**17 53 28.8**	**+0.8**
YTIR	**Yattir**	**1.99**	**189**	Pn	**Pn**	**17 53 13.3**	**+1.0**
PRNI	**Paran**	**3.00**	**188**	Pn	**Pn**	**17 53 27.2**	**+1.0**

IPEC ***17*** *17:58:35.2±0.2, 51°.64N×16°.21E, h0km, ML3.0/4, Error ellipse: s-maj=1.5km s-min=1.4km az=104.0*
ISCJB ***17*** *17:58:35.0±0.3, 51°.50N±0°.02×16°.15E±0°.02, h0km, Error ellipse: s-maj=2.6km s-min=1.7km az=20.8*
CSEM ***17*** *17:58:35.9±0.1, 51°.60N×16°.15E, h2km, ML3.9/9, Ms3.5, Error ellipse: s-maj=2.8km s-min=2.4km az=9.0*
NEIC ***17*** *17:58:36.1±0.4, 51°.62N×16°.12E, h5km, ML3.6(SZGRF), Error ellipse: s-maj=6.2km s-min=4.9km az=197.0*
IDC ***17*** *17:58:37.6±0.8, 51°.49N×16°.03E, h0km, mb1 3.5/7, mb1mx3.3/28, mbtmp3.5/7, ML3.4/7, Error ellipse: s-maj=12.9km s-min=7.8km az=85.0*
PRU ***17*** *17:58:37.5, 51°.54N×16°.15E, h0km*
BGR ***17*** *17:58:38.3±0.4, 51°.46N×16°.13E, h1km, ML3.6, Error ellipse: s-maj=4.4km s-min=2.2km az=15.0*
WAR ***17*** *17:58:38.1, 51°.51N×16°.11E, ML3.2, Mining Induced*
VIE ***17*** *17:58:39.7±0.9, 51°.28N×16°.07E, h0km±4km, mb3.0/9, ML3.2/10, Ms3.5/1, Error ellipse: s-maj=4.6km s-min=2.7km az=8.0 68 km WNW of Wroclaw Suspected Mining induced.*
LDG ***17*** *17:58:40.6±0.2, 51°.24N×15°.87E, h1km, Ml4.0/12, Error ellipse: s-maj=5.0km s-min=2.4km az=1.0, Suspected Mining induced.*

ISC 17 17:58:35.9±0.2, 51°.58N±0°.01×16°.17E±0°.02, h0km, n168, σ1°.10/262, 12C-3D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.75**	**174**	*e*Pg	**Pg**	**17 58 50.6**	**+0.4**
KSP				*e*Sg	**Sg**	**17 59 01.3**	**+1.4**
KSP	**Ksiaz**	**0.75**	**174**	*i* Pg	**Pg**	**17 58 50.6**	**+0.4**
KSP				*e*Sg	**Sg**	**17 59 00.2**	**+0.3**
KSP				*e*L		17 59 04.9	
KSP	**Ksiaz**	**0.75**	**174**	*e*Pg	**Pg**	**17 58 50.6**	**+0.4**
KSP				*e*Sg	**Sg**	**17 58 58.6**	**-1.3**
KSP	**Ksiaz**	**0.75**	**174**	*i* Pg	**Pg**	**17 58 50.5**	**+0.3**
	baz=356						
KSP				*e*Sg	**Sg**	**17 59 00.2**	**+0.3**
	baz=356						
UPC	**Upice**	**1.08**	**185**	*e*PG	**Pg**	**17 58 56.7**	**+0.1**
UPC				*e*SG	**Sg**	**17 59 11.9**	**+1.3**
UPC	**Upice**	**1.08**	**185**	*e*	**Pg**	**17 58 56.7**	**+0.1**
DPC	**Dobruska-Polom**	**1.24**	**175**	*e*Pn	**Pn**	**17 58 59.4**	**-1.0**
DPC				*e*Sg	**Sg**	**17 59 15.7**	**0.0**
DPC	**Dobruska-Polom**	**1.24**	**175**	*e*PG	**Pn**	**17 58 59.5**	**-1.0**
DPC				*e*SG	**Sg**	**17 59 16.5**	**+0.8**
	comp=Z,191nm,0.4s						
DPC	**Dobruska-Polom**	**1.24**	**175**	*i* Pg	**Pn**	**17 58 59.3**	**-1.2**
	baz=357						
DPC				Sg	**Sg**	**17 59 15.7**	**0.0**
PVCC	**Panska Ves**	**1.46**	**224**	*e*PG	**Pn**	**17 59 03.4**	**-0.1**
PVCC	**Panska Ves**	**1.46**	**224**	*i* Pn	**Pn**	**17 59 03.3**	**-0.2**
	baz=42						
PVCC				*e*Sg	**Sg**	**17 59 22.9**	**+0.1**
	baz=42						
BRG	**Berggiesshubel**	**1.57**	**244**	*e*Pn	**Pn**	**17 59 04.7**	**-0.3**
BRG				*e*Sg	**Sg**	**17 59 26.4**	**+0.2**
BRG	**Berggiesshubel**	**1.57**	**244**	PN	**Pn**	**17 59 04.2**	**-0.8**
BRG				PG	**P

OKC				*e*Pg	**Pg**	17 59 17.6	+0.4
OKC				*e*Sg	**Sg**	17 59 44.8	-0.4
OKC	**Ostrava-Krasne**	**2.15 143**		*e*PN	**Pn**	17 59 13.1	0.0
OKC				*e*PG	**Pg**	17 59 16.4	-0.8
OKC				*e*SG	**Sg**	17 59 44.5	-0.6
	comp=Z,163nm,0.6s						
OKC	**Ostrava-Krasne**	**2.15 143**		Pn	**Pn**	17 59 12.5	-0.6
OKC	**Ostrava-Krasne**	**2.15 143**		Pg	**Pg**	17 59 17.6	+0.4
OKC				Sg	**Sg**	17 59 44.8	-0.3
VRAC	**Vranov**	**2.29 173**		Pn	**Pn**	17 59 15.6	+0.7
	comp=Z,5.4nm,0.3s,baz=342,slow=13,SNR=22						
VRAC				Lg		17 59 48.6	
	comp=Z,23nm,0.3s,baz=253,slow=9.7,SNR=9.4						
VRAC	**Vranov**	**2.29 173**		*i* Pn	**Pn**	17 59 15.3	+0.3
VRAC				Lg		17 59 48.5	
VRAC				*e*Sg	**Sg**	17 59 48.5	-1.1
	comp=Z,64nm,0.3s,baz=354						
TREC	**Trest**	**2.33 191**		*e*PN	**Pn**	17 59 15.7	+0.2
TREC				*e*PG	**Pg**	17 59 19.3	-1.3
KRUC	**Moravsky**	**2.53 177**		*i* Pn	**Pn**	17 59 18.6	+0.4
	baz=357						
KRUC				*e*Sg	**Sg**	17 59 56.9	-0.2
	comp=Z,68nm,0.4s,baz=357						
TANN	**Tannenbergstha**	**2.62 245**		*e*Pn	**Pn**	17 59 19.5	+0.1
TANN				*e*Pg	**Pg**	17 59 26.3	+0.2
TANN				*e*Sg	**Sg**	18 00 00.3	+0.4
TANN	**Tannenbergstha**	**2.62 245**		Pn	**Pn**	17 59 19.5	+0.1
OJC	**Ojcow**	**2.67 119**		*e*Pg	**Pn**	17 59 26.1	+5.9
OJC				*e*Sg	**Sn**	18 00 01.2	+7.9
OJC	**Ojcow**	**2.67 119**		*e*Pn	**Pn**	17 59 20.5	+0.3
OJC				*e*Pg	**Pg**	17 59 27.6	+0.5
OJC				*e*Sg	**Sg**	18 00 02.2	+0.4
OJC	**Ojcow**	**2.67 119**		Pn	**Pn**	17 59 20.5	+0.3
WERD	**Werda**	**2.69 246**		*e*Pn	**Pn**	17 59 20.5	+0.1
WERD				*e*Pg	**Pg**	17 59 27.0	-0.4
WERD				*e*Sg	**Sg**	18 00 02.1	-0.2
WERD	**Werda**	**2.69 246**		Pn	**Pn**	17 59 20.5	+0.1
NKC	**Novy Kostel**	**2.71 242**		*e*PN	**Pn**	17 59 21.3	+0.6
NKC				*e*PG	**Pg**	17 59 27.5	-0.4
NKC				*e*SG	**Sg**	18 00 04.4	+1.3
	comp=Z,507nm,0.9s						
JAVC	**Velka Javorina**	**2.89 160**		*e*Sg	**Sg**	18 00 09.9	+1.1
	comp=Z,83nm,0.6s						
KHC	**Kasperske Hory**	**2.96 215**		*e*Pn	**Pn**	17 59 23.5	-0.6
KHC				*e*Pb	**Pb**	17 59 30.3	+0.7
KHC				*e*Pg	**Pg**	17 59 34.7	+2.0
KHC				*e*Sn	**Sn**	17 59 55.6	-4.7
KHC	**Kasperske Hory**	**2.96 215**		*e*PN	**Pn**	17 59 24.2	+0.1
KHC				*e*PG	**Pb**	17 59 30.3	+0.8
KHC				*e*SN	**Sn**	18 00 01.7	+1.4
KHC				*e*SG	**Sg**	18 00 12.4	+1.4
	comp=Z,171nm,1.2s						
KHC	**Kasperske Hory**	**2.96 215**		*e*Pn	**Pn**	17 59 23.5	-0.6
KHC	**Kasperske Hory**	**2.96 215**		*e*Pb	**Pb**	17 59 30.3	+0.8
MOX	**Moxa**	**3.02 254**		*e*PN	**Pn**	17 59 25.2	+0.3
MOX				*e*PG	**Pg**	17 59 32.9	-0.8
MOX				*i* SG	**Sg**	18 00 13.5	+0.7
MOX	**Moxa**	**3.02 254**		*e*Pn	**Pn**	17 59 24.9	-0.1
MOX				*e*Pg	**Pg**	17 59 32.9	-0.8
MOX				*e*Sg	**Sg**	18 00 13.2	+0.4
MOX	**Moxa**	**3.02 254**		Pn	**Pn**	17 59 24.9	0.0
ROTZ	**Rotzenmuhle**	**3.11 236**		*e*Pn	**Pn**	17 59 26.0	-0.2
ROTZ				*e*Sg	**Sg**	18 00 14.5	-1.1
ROTZ	**Rotzenmuhle**	**3.11 236**		Pn	**Pn**	17 59 26.0	-0.1
ROTZ				Sg	**Sg**	18 00 14.5	-1.1
LIKS	**Likavka**	**3.16 142**		*e*	**Pg**	17 59 39.7	+3.2
LIKS	**Likavka**	**3.16 142**		*e*SG	**Sg**	18 00 18.3	+0.9
GEC2	**GERESS Array S**	**3.17 211**		*e*Pn	**Pn**	17 59 28.0	+1.0
GEC2	**GERESS Array S**	**3.17 211**		*e*Pn	**Pn**	17 59 28.0	+1.1
GEC2	**GERESS Array S**	**3.17 211**		Pn	**Pn**	17 59 28.0	+1.1
SMOL	**Smolenice**	**3.18 165**		*e*P	**Pg**	17 59 36.2	-0.6
SMOL				*e*Sg	**Sg**	18 00 16.8	-1.2
SMOL	**Smolenice**	**3.18 165**		*e*	**Pg**	17 59 36.2	-0.6
SMOL	**Smolenice**	**3.18 165**		*e*SG	**Sg**	18 00 16.8	-1.2
WET	**Wettzell**	**3.22 222**		*e*Pn	**Pn**	17 59 27.7	0.0
WET	**Wettzell**	**3.22 222**		*e*Pn	**Pn**	17 59 27.7	0.0
WET	**Wettzell**	**3.22 222**		Pn	**Pn**	17 59 27.7	0.0
KOLL	**Kolacno**	**3.33 154**		*e*Pn	**Pn**	17 59 30.3	+1.0
KOLL				*e*		17 59 40.4	
KOLL				*e*Sg	**Sg**	18 00 22.0	-1.0
KOLL	**Kolacno**	**3.33 154**		*e*PN	**Pn**	17 59 30.3	+1.0
KOLL				*e*		17 59 40.4	
KOLL	**Kolacno**	**3.33 154**		*e*SG	**Sg**	18 00 22.0	-1.0
KOLL	**Kolacno**	**3.33 154**		*e*Pn	**Pn**	17 59 30.3	+1.0
NIE	**Niedzica**	**3.42 128**		*e*P	**Pg**	17 59 40.8	-0.7
NIE				*e*S	**Sg**	18 00 26.1	+0.3
RGN	**Rugen**	**3.43 331**		*e*Pn	**Pn**	17 59 33.0	+2.5
RGN	**Rugen**	**3.43 331**		*e*Pn	**Pn**	17 59 33.0	+2.4
ZST	**Bratislava**	**3.44 169**		*e*Pn	**Pn**	17 59 32.8	+2.0
ZST				*e*		17 59 41.2	
ZST				*e*Sg	**Sg**	18 00 25.1	-1.4
ZST	**Bratislava**	**3.44 169**		*e*PN	**Pn**	17 59 32.8	+2.0
ZST				*e*		17 59 41.2	
ZST	**Bratislava**	**3.44 169**		*e*SG	**Sg**	18 00 25.1	-1.4
ZST	**Bratislava**	**3.44 169**		*e*Pn	**Pn**	17 59 32.8	+2.0
VYHS	**Vyhne**	**3.54 150**		*e*Pn	**Pn**	17 59 32.3	+0.2
VYHS				*e*		17 59 44.5	
VYHS				*e*Sg	**Sg**	18 00 27.9	-1.7
VYHS	**Vyhne**	**3.54 150**		*e*PN	**Pn**	17 59 32.3	+0.2
VYHS				*e*		17 59 44.5	
VYHS	**Vyhne**	**3.54 150**		*e*SG	**Sg**	18 00 27.9	-1.7
VYHS	**Vyhne**	**3.54 150**		*e*Pn	**Pn**	17 59 32.3	+0.2
CLZ	**Clausthal**	**3.61 276**		*e*Pn	**Pn**	17 59 34.5	+1.5
CLZ				*e*Sg	**Sg**	18 00 33.0	+1.1
CLZ	**Clausthal**	**3.61 276**		*e*Pn	**Pn**	17 59 34.5	+1.4
CLZ				*e*Sg	**Sg**	18 00 33.0	+1.1
CLZ	**Clausthal**	**3.61 276**		Pn	**Pn**	17 59 34.5	+1.4
CLZ				Sg	**Sg**	18 00 33.0	+1.1
BSD	**Bornholm Skovb**	**3.62 349**		*i* P	**Pn**	17 59 33.5	+0.4
BSD				*i* S	**Sn**	18 00 14.4	-2.1
BSD				*i* S	**Sn**	18 00 16.8	+0.3
BSD							
	comp=Z,750nm,20.0s						
BSD	**Bornholm Skovb**	**3.62 349**		*i* P	**Pn**	17 59 33.5	+0.4
BSD				*i* S	**Sn**	18 00 14.5	-2.0
CONA	**Conrad Observa**	**3.66 183**	⇑	*i*Pn	**Pn**	17 59 34.3	+0.5
	SNR=15						
CONA			⇑	*i*Sg	**Sg**	18 00 31.3	-2.2
	comp=Z,122nm,0.5s						
GRA1	**Grafenberg Arr**	**3.67 241**		*e*Pn	**Pn**	17 59 34.5	+0.6
GRA1				*e*Sg	**Sg**	18 00 33.3	-0.5
GRA1	**Grafenberg Arr**	**3.67 241**		Pn	**Pn**	17 59 34.5	+0.6
GRA1				Sg	**Sg**	18 00 33.3	-0.5
GRF	**Grafenberg Arr**	**3.67 241**		*e*Pn	**Pn**	17 59 34.5	+0.6
GRF				*e*Sg	**Sg**	18 00 33.3	-0.6
GRF	**Grafenberg Arr**	**3.67 241**		*e*Pn	**Pn**	17 59 34.5	+0.6
GRF				*e*Sg	**Sg**	18 00 33.3	-0.5
GRF	**Grafenberg Arr**	**3.67 241**		*e*Pn	**Pn**	17 59 34.5	+0.6
GRF				*e*Sg	**Sg**	18 00 33.3	-0.5
STHS	**Stebnicka Huta**	**3.90 122**		*e*Pn	**Pn**	17 59 39.6	+2.6
STHS				*e*		17 59 52.8	
STHS				*e*Sg	**Sg**	18 00 43.3	+2.1
STHS	**Stebnicka Huta**	**3.90 122**		*e*PN	**Pn**	17 59 39.5	+2.5
STHS				*e*		17 59 52.8	
STHS	**Stebnicka Huta**	**3.90 122**		*e*SG	**Sg**	18 00 43.3	+2.1
STHS	**Stebnicka Huta**	**3.90 122**		*e*Pn	**Pn**	17 59 39.6	+2.6
MOA	**Molln**	**3.94 199**	⇑	*i*Pn	**Pn**	17 59 37.9	+0.4
	SNR=8.9						
MOA			⇑	*i*Sg	**Sg**	18 00 40.9	-1.4
	comp=Z,78nm,0.5s						
MOA	**Molln**	**3.94 199**		Pn	**Pn**	17 59 37.9	+0.4
	SNR=8.9						
MOA				Sg	**Sg**	18 00 40.9	-1.4
	comp=Z,78nm,0.5s						
KECS	**Kecovo**	**4.17 136**		*e*Pn	**Pn**	17 59 41.1	+0.4
KECS				*e*		17 59 57.0	
KECS				*e*Sg	**Sg**	18 00 49.7	-0.1
KECS	**Kecovo**	**4.17 136**		*e*PN	**Pn**	17 59 41.1	+0.4
KECS				*e*		17 59 57.0	
KECS	**Kecovo**	**4.17 136**		*e*SG	**Sg**	18 00 49.7	-0.1
CRVS	**Cervenica-Dubn**	**4.33 126**		*e*Pn	**Pn**	17 59 44.4	+1.4
CRVS				*e*		18 00 00.7	
CRVS				*e*Sg	**Sg**	18 00 56.7	+1.7
CRVS	**Cervenica-Dubn**	**4.33 126**		*e*PN	**Pn**	17 59 44.3	+1.3
CRVS				*e*		18 00 00.7	
CRVS	**Cervenica-Dubn**	**4.33 126**		*e*SG	**Sg**	18 00 56.7	+1.7
CRVS	**Cervenica-Dubn**	**4.33 126**		*e*Pn	**Pn**	17 59 44.4	+1.4
ARSA	**Arzberg**	**4.36 186**	⇑	*i*Pn	**Pn**	17 59 43.4	+0.1
ARSA			⇑	*i*Sg	**Sg**	18 00 53.8	-2.0
	comp=Z,53nm,0.6s						
ARSA	**Arzberg**	**4.36 186**		Pn	**Pn**	17 59 43.4	+0.1
PSZ	**Piszkesteto**	**4.39 145**		*e*Pn	**Pn**	17 59 43.4	-0.4
PSZ	**Piszkesteto**	**4.39 145**		*e*Pn	**Pn**	17 59 43.4	-0.4
KOLS	**Kolonicke sedl**	**4.73 122**		*e*Pn	**Pn**	17 59 49.6	+1.1
KOLS				*e*		18 00 07.4	
KOLS				*e*		18 01 21.8	
KOLS	**Kolonicke sedl**	**4.73 122**		*e*PN	**Pn**	17 59 49.6	+1.1
KOLS				*e*		18 00 07.4	
KOLS				*e*		18 01 21.8	
KOLS	**Kolonicke sedl**	**4.73 122**		*e*Pn	**Pn**	17 59 49.6	+1.1
KBA	**Koelnbreinsper**	**4.87 203**		*i* Pn	**Pn**	17 59 51.3	+0.9
	SNR=16						
KBA			⇓	*i*Sg	**Sg**	18 01 09.3	-3.0
	comp=Z,49nm,0.6s						
KBA	**Koelnbreinsper**	**4.87 203**		Pn	**Pn**	17 59 51.3	+0.9
	SNR=16						
KBA				Sg	**Sg**	18 01 09.3	-3.0
	comp=Z,49nm,0.6s						
WATA	**Walderalm**	**5.20 217**	⇑	*i*Pn	**Pn**	17 59 55.2	+0.3
WATA			⇓	*i*Sg	**Sg**	18 01 21.6	-1.2
	comp=Z,26nm,0.7s						
WTTA	**Wattenberg**	**5.24 216**	⇑	*i*Pn	**Pn**	17 59 55.7	+0.3
WTTA			⇑	*i*Sg	**Sg**	18 01 23.8	-0.3
	comp=Z,32nm,0.7s						
MOTA	**Moosalm**	**5.37 220**	⇑	*i*Pn	**Pn**	17 59 57.1	-0.2
MOTA			⇑	*i*Sg	**Sg**	18 01 28.5	0.0
	comp=Z,22nm,0.5s						
WTSB	**Winterswijk**	**5.83 277**		*e*P	**Sg**	18 01 46.6	+3.6
DAVA	**Damuels**	**5.94 226**	⇑	*i*Pn	**Pn**	18 00 04.7	-0.3
DAVA			⇓	*i*Sg	**Sg**	18 01 47.5	+0.9
	comp=Z,59nm,1.1s						
BFO	**Black Forest**	**6.01 240**		*e*Pn	**Pn**	18 00 05.2	-0.9
	comp=Z,8.6nm,0.6s						
BFO				*e*Sg	**Sg**	18 01 43.6	-5.3
BFO	**Black Forest**	**6.01 240**		*e*Pn	**Pn**	18 00 05.2	-0.9
	comp=Z,8.6nm,0.6s						
DAVOX	**Davos/Dischmat**	**6.33 223**		Pn	**Pn**	18 00 10.3	-0.1
	comp=Z,0.9nm,0.3s,baz=28,slow=14,SNR=6.6						
DAVOX				Lg		18 01 51.8	
	comp=Z,0.6nm,0.3s,baz=224,slow=22,SNR=3.6						
DAVOX	**Davos/Dischmat**	**6.33 223**		Pn	**Pn**	18 00 10.3	-0.1
CDF	**Champ du Feu**	**6.55 244**		*e*Pn	**Pn**	18 00 11.9	-1.5
CDF				*e*Sg	**Sb**	18 01 55.9	+6.5
	comp=Z,67nm,1.0s						
CDF	**Champ du Feu**	**6.55 244**		*e*Pn	**Pn**	18 00 11.9	-1.5
BUR08	**Bucovina Ar. S**	**7.07 120**		*e*Pn	**Pn**	18 00 19.4	-1.1
BUR08	**Bucovina Ar. S**	**7.07 120**		*e*Pn	**Pn**	18 00 19.5	-1.1
HINF	**Hinteralfeld**	**7.12 242**		*e*Sg	**Sb**	18 02 12.3	+6.6
	comp=Z,28nm,0.6s						
HAU	**Haudompre**	**7.29 244**		*e*Pn	**Pn**	18 00 21.9	-1.7
HAU				*e*Sg	**Sb**	18 02 18.8	+8.1
	comp=Z,52nm,0.8s						
HAU	**Haudompre**	**7.29 244**		*e*Pn	**Pn**	18 00 21.9	-1.7
GIVF	**Givet**	**7.33 263**		*e*Sg	**Sg**	18 02 23.2	-8.1
	comp=Z,60nm,1.0s						
RFYF	**Reffroy**	**7.48 251**		*e*Pn	**Pn**	18 00 23.8	-2.4
	baz=78						
RFYF				*e*Sg	**Sb**	18 02 25.6	+9.4
	comp=Z,39nm,0.8s						
RFYF	**Reffroy**	**7.48 251**		*e*Pn	**Pn**	18 00 23.8	-2.4
	baz=78						
BAIF	**Baives**	**7.73 263**		*e*Sg	**Sg**	18 02 35.5	-8.4
	comp=Z,36nm,1.0s						
SFTF	**Sexfontaines**	**7.94 249**		*e*Sg		18 02 40.1	
	comp=Z,90nm,1.2s						
KIEV	**Kiev**	**8.25 91**		*e*Pn	**Pn**	18 00 36.4	-0.4
	comp=Z,3.6nm,0.6s						
KIEV	**Kiev**	**8.25 91**		*e*Pn	**Pn**	18 00 36.4	-0.4
	comp=Z,3.6nm,0.6s						
AKASG	**Malin Array Be**	**8.26 91**		Pn	**Pn**	18 00 36.5	-0.4
	comp=Z,1.5nm,0.3s,baz=278,slow=12,SNR=8.8						
AKASG				Sn	**Sn**	18 02 05.0	-5.9
	comp=Z,1.8nm,0.3s,baz=275,slow=23,SNR=5.4						
AKASG				Lg		18 03 11.0	
	comp=Z,0.8nm,0.3s,baz=270,slow=26,SNR=4.6						
AKASG	**Malin Array Be**	**8.26 91**		Pn	**Pn**	18 00 36.5	-0.4
AKASG				Sn	**Sn**	18 02 05.0	-5.9
AKASG				Lg		18 03 11.0	
AKASG	**Malin Array Be**	**8.26 91**		Pn	**Pn**	18 00 36.5	-0.4
CABF	**La Chapelle**	**8.27 237**		*e*Sg	**Sb**	18 02 48.2	+9.3
	comp=Z,73nm,1.2s						
HFS	**Hagfors**	**8.68 352**		Pn	**Pn**	18 00 42.7	+0.1
	comp=Z,0.3nm,0.3s,baz=168,slow=15,SNR=6.0						
HFS				Sn	**Sn**	18 02 19.3	-1.8
	comp=Z,0.5nm,0.3s,baz=174,slow=28,SNR=4.3						
HFS	**Hagfors**	**8.68 352**		Pn	**Pn**	18 00 42.7	+0.1
HFS				Sn	**Sn**	18 02 19.3	-1.8
LPG	**La Plagne**	**8.72 229**		*e*Sg		18 03 01.7	
	comp=Z,20nm,1.0s						
BNI	**Bardonecchia**	**9.09 228**		*e*Pn	**Pn**	18 00 50.3	+2.1
	comp=Z,3.2nm,0.8s						
BNI	**Bardonecchia**	**9.09 228**		*e*Pn	**Pn**	18 00 50.3	+2.1
	comp=Z,3.2nm,0.8s						
LOR	**Lormes**	**9.11 247**		*e*Pn	**Pn**	18 00 46.8	-1.7
	baz=72						
LOR				*e*Sg		18 03 15.9	
	comp=Z,24nm,0.9s						
LOR	**Lormes**	**9.11 247**		*e*Pn	**Pn**	18 00 46.8	-1.7
	baz=72						
MBDF	**Montbardon**	**9.29 226**		*e*P	**Pn**	18 00 53.6	+2.5
MBDF	**Montbardon**	**9.29 226**		*e*P	**Pn**	18 00 53.6	+2.5
SMF	**Signal de Mont**	**9.47 243**		*e*Sg	Sx	18 03 27.1	
	comp=Z,43nm,1.2s						
SBF	**Sospel**	**9.70 221**		*e*Pn	**Pn**	18 00 53.7	-3.0
NOA	**NORSAR Array B**	**9.87 346**		Pn	**Pn**	18 00 58.8	0.0
	comp=Z,0.2nm,0.3s,baz=171,slow=16,SNR=4.8						
NOA	**NORSAR Array B**	**9.87 346**		Pn	**Pn**	18 00 58.8	0.0
FRF	**La Foret Royal**	**10.28 222**		*e*P	**Pn**	18 01 06.3	+1.8
FRF	**La Foret Royal**	**10.28 222**		*e*P	**Pn**	18 01 06.3	+1.8
FINES	**FINESS Array B**	**11.28 25**		Pn	**Pn**	18 01 17.6	-0.6
	comp=Z,0.5nm,0.3s,baz=206,slow=11,SNR=11						
FINES				Sn	**Sn**	18 03 18.7	-6.2
	comp=Z,0.6nm,0.3s,baz=215,slow=21,SNR=5.2						
FINES	**FINESS Array B**	**11.28 25**		Pn	**Pn**	18 01 17.6	-0.6
KAF	**Kangasniemi**	**11.91 24**		*ep*	**Pn**	18 01 27.2	+0.5
	comp=Z,1.6nm,0.4s						
KAF	**Kangasniemi**	**11.91 24**		*ep*	**Pn**	18 01 27.2	+0.5
	comp=Z,1.6nm,0.4s						
KAF	**Kangasniemi**	**11.91 24**		*eP*	**Pn**	18 01 27.2	+0.5
	comp=Z,1.6nm,0.4s						
EKA	**Eskdalemuir Ar**	**12.11 296**		Pn	**Pn**	18 01 26.9	-2.5
	baz=104,slow=14,SNR=3.3						
EKA				Sn	**Sn**	18 03 39.1	-5.9
	baz=101,slow=25,SNR=4.7						
JOF	**Joensuu**	**13.96 30**		*ep*	**Pn**	18 01 53.1	-1.6
	comp=Z,1.4nm,0.4s						
JOF	**Joensuu**	**13.96 30**		*ep*	**Pn**	18 01 53.1	-1.6
	comp=Z,1.4nm,0.4s						
JOF	**Joensuu**	**13.96 30**		*eP*	**Pn**	18 01 53.1	-1.6
	comp=Z,1.4nm,0.4s						
ARCES	**ARCESS Array B**	**18.55 10**		Pn	**Pn**	18 02 51.0	-2.8
	comp=Z,0.4nm,0.3s,baz=195,slow=12,SNR=12						
KEV	**Kevo**	**18.93 12**		*ep*	**Pn**	18 02 56.3	-2.2
	comp=Z,1.4nm,0.3s						
KEV	**Kevo**	**18.93 12**		*ep*	**Pn**	18 02 56.3	-2.2
	comp=Z,1.4nm,0.3s						
KEV	**Kevo**	**18.93 12**		*eP*	**Pn**	18 02 56.3	-2.2
	comp=Z,1.4nm,0.3s						

GUC 17 18:01:58.6±0.9, 33°.19S×70°.26W, h2km±5km, MD3.5, ML2.0, 2C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FCH	**Farellones**	**0.14**	**192**	⇑ *iP*	Pg	18 02 02.0	+0.6
FCH				AML	AML	18 02 07.2	
	comp=N,506nm,0.3s						
CLCH	**Cerro Calan**	**0.31**	**229**	*i* P	Pg	18 02 07.0	+2.3
CLCH				*i* S	Sg	18 02 12.4	+3.7
CLCH				AML	AML	18 02 14.0	
	comp=N,504nm,0.3s						
PEL	**Peldehue**	**0.36**	**277**	⇑ *iP*	Pg	18 02 06.0	+0.5
PEL				*i* S	Sg	18 02 11.8	+1.5
PEL				AML	AML	18 02 14.8	
	comp=N,178nm,0.4s						
CHCH	**Chadas Angostu**	**0.81**	**204**	⇓ *iP*	Pg	18 02 15.2	+1.0
CACH	**El Canelo**	**0.97**	**197**	⇓ *iP*	Pg	18 02 18.4	+1.2
CACH				*e*S	Sg	18 02 32.1	+2.3
LNV	**Longovilo**	**1.23**	**231**	*eP*	Pg	18 02 21.4	-0.9
LNV				*i* S	Sg	18 02 37.7	-0.5

*ATH **17** 18:39:58.3, 38°.00N×19°.70E, h10km±5km, MD3.3/7*
*NEIC **17** 18:39:58.3, 38°.00N×19°.70E, h10km, MD3.3(ATH), After ATH.*

*CSEM **17** 18:39:59.8±0.5, 37°.92N×19°.78E, h2km, ML3.5/3, Error ellipse: s-maj=10.2km s-min=6.3km az=51.0*
*ISCJB **17** 18:39:59.5±0.9, 38°.04N±0°.05×19°.78E±0°.06, h10km, Error ellipse: s-maj=8.5km s-min=5.1km az=33.4*
*THE **17** 18:40:00.6, 37°.91N×19°.82E, h0km±3km, ML3.5/3, Error ellipse: s-maj=4.5km s-min=2.2km az=251.0*

ISC 17 18:39:58.8±1.5, 37°.96N±0°.06×19°.75E±0°.07, h1km±8km, n44, σ1°.05/61, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.70**	**71**	*e*Pb	**Pg**	**18 40 12.8**	**+0.6**
VLS				*e*Sb	**Sg**	**18 40 22.3**	**+1.1**
VLS	**Valsamata**	**0.70**	**71**	P	**Pg**	**18 40 12.7**	**+0.5**
VLS				S	**Sg**	**18 40 21.8**	**+0.6**
VLS	**Valsamata**	**0.70**	**71**	*e*PB	**Pg**	**18 40 12.8**	**+0.6**
VLS				*e*SB	**Sg**	**18 40 22.3**	**+1.1**
VLS	**Valsamata**	**0.70**	**71**	*e*Pb	**Pg**	**18 40 12.8**	**+0.6**
VLS				S	**Sg**	**18 40 21.8**	**+0.6**
VLS				*e*Sb	**Sg**	**18 40 22.3**	**+1.1**
KFL	**Anninata**	**0.83**	**79**	P	**Pg**	**18 40 14.5**	**-0.3**
LKD2	**Lefkada island**	**1.10**	**40**	P	**Pg**	**18 40 21.8**	**+2.0**
LKD2				S	**Sg**	**18 40 38.0**	**+4.0**
LKD2	**Lefkada island**	**1.10**	**40**	P	**Pg**	**18 40 21.8**	**+2.0**
LKD2				S	**Sg**	**18 40 38.0**	**+4.0**
RLS	**Riolos of Patr**	**1.36**	**85**	*e*Pg	**Pn**	**18 40 24.0**	**-0.9**
RLS				*e*Sb	**Sg**	**18 40 44.5**	**+2.0**
RLS	**Riolos of Patr**	**1.36**	**85**	*e*PG	**Pn**	**18 40 24.0**	**-0.9**
RLS				*e*SB	**Sg**	**18 40 44.5**	**+2.0**
RLS	**Riolos of Patr**	**1.36**	**85**	*e*Pg	**Pn**	**18 40 24.0**	**-0.9**
RLS				*e*Sb	**Sg**	**18 40 44.5**	**+2.0**
IGT	**Igoumenitsa**	**1.64**	**16**	P	**Pg**	**18 40 29.7**	**-0.5**
IGT	**Igoumenitsa**	**1.64**	**16**	P	**Pg**	**18 40 29.7**	**-0.5**
KEK	**Kerkira**	**1.75**	**1**	P	**Pg**	**18 40 31.3**	**-1.1**
KEK	**Kerkira**	**1.75**	**1**	P	**Pg**	**18 40 31.3**	**-1.1**
EFP	**Efpalio**	**1.76**	**74**	P	**Pb**	**18 40 31.1**	**-0.8**
EFP				S	**Sg**	**18 40 55.3**	**-0.1**
EFP	**Efpalio**	**1.76**	**74**	*e*PG	**Pg**	**18 40 31.9**	**-0.7**
EFP				*e*SN	**Sg**	**18 40 55.1**	**-0.3**
EFP	**Efpalio**	**1.76**	**74**	P	**Pb**	**18 40 31.1**	**-0.8**
EFP	**Efpalio**	**1.76**	**74**	*e*Pg	**Pg**	**18 40 31.9**	**-0.7**
EFP				*e*Sn	**Sg**	**18 40 55.1**	**-0.3**
ITM	**Ithomi**	**1.90**	**113**	*e*Pg	**Pb**	**18 40 34.5**	**+0.4**
ITM	**Ithomi**	**1.90**	**113**	*e*PG	**Pb**	**18 40 34.5**	**+0.4**
ITM	**Ithomi**	**1.90**	**113**	*e*Pg	**Pb**	**18 40 34.5**	**+0.4**
PYL	**PYLOS**	**1.91**	**123**	*e*PN	**Pn**	**18 40 33.2**	**+0.8**
PYL	**PYLOS**	**1.91**	**123**	*e*Pn	**Pn**	**18 40 33.2**	**+0.8**
KALE	**Kalithea**	**1.93**	**76**	P	**Pb**	**18 40 34.0**	**-0.8**
KALE				S	**Sb**	**18 40 59.2**	**-0.2**
KALE	**Kalithea**	**1.93**	**76**	P	**Pb**	**18 40 34.0**	**-0.8**
KALE				S	**Sb**	**18 40 59.2**	**-0.2**
GUR	**Goura**	**2.05**	**90**	P	**Pb**	**18 40 35.3**	**-1.5**
GUR	**Goura**	**2.05**	**90**	*e*PN	**Pb**	**18 40 35.6**	**-1.2**
GUR	**Goura**	**2.05**	**90**	P	**Pb**	**18 40 35.3**	**-1.5**
GUR

ELIZ	**Elizondo**	**0.41 276**	Pg	Pg	18 43 23.2	-0.1
	32nm,0.2s,SNR=25					
ELIZ			Lg		18 43 28.9	
	66nm,0.2s,SNR=43					

5.7nm,0.3s,baz=162,slow=21,SNR=6.1
SJG Sn **Sn** 18 52 31.3 -4.9
13nm,0.3s,baz=292,slow=19,SNR=3.8
SJG San Juan 4.89 298 Pn **Pn** 18 51 36.6 -3.1
SJG Sn **Sn** 18 52 31.3 -4.9
CELP Cerrillos 5.24 296 ⇑*iP* **Pn** 18 51 43.0 -1.5
CELP Cerrillos 5.24 296 ⇑*iP* **Pn** 18 51 43.2 -1.4
CRPR Cabo Rojo, PR 5.68 293⇓*eP* **Pn** 18 51 49.5 -1.1
CRPR Cabo Rojo, PR 5.68 293⇓*eP* **Pn** 18 51 49.5 -1.1
PCRV Puerto La Cruz 6.35 208 Pn **Pn** 18 51 57.1 -2.7
1.0nm,0.3s,baz=56,slow=3.6,SNR=4.0
PCRV Sn **Sn** 18 53 08.6 -3.5
1.3nm,0.3s,baz=132,slow=4.5,SNR=3.1
PCRV LR LR 18 54 24.4
comp=Z,212nm,19.9s,baz=45,slow=38
SDDR Presa de Saban 9.74 290 *e*Pn **Pn** 18 52 49.6 +3.2
SDV Santo Domingo 11.19 233 Pn **Pn** 18 53 02.7 -3.5
0.9nm,0.3s,baz=70,slow=6.8,SNR=5.9
SDV Santo Domingo 11.19 233 Pn **Pn** 18 53 00.3 -5.9
TEIG Tepich 25.71 284 Pn **P** 18 55 54.7 -2.0
ATAH Atahualpa 28.23 217 P **P** 18 56 18.7 -0.6
10nm,0.9s,mb4.5,baz=17,slow=2.7,SNR=5.6
WVT Waverly 30.87 316 P **P** 18 56 40.6 -2.1
3.1nm,0.8s,mb4.2
SIV San Ignacio 31.63 179 P **P** 18 56 49.6 +0.2
6.6nm,0.8s,mb4.5,baz=17,slow=9.2,SNR=32
LPAZ La Paz 32.56 192 P **P** 18 56 55.8 -1.8
3.8nm,1.4s,mb4.1
MIAR Mount Ida 34.19 309 P **P** 18 57 10.7 -1.0
3.4nm,0.8s,mb4.3
JCT Junction City 37.81 299 *e*P **P** 18 57 41.9 -0.9
13nm,1.0s,mb4.6
WMOK Wichita Mounta 38.23 306 *e*P **P** 18 57 44.5 -1.7
1.9nm,0.8s,mb3.9
628A Black Gap, Mar 40.22 297 ⇓P **P** 18 58 02.4 -0.6
baz=40,SNR=6.7
528A Cox Ranch, San 40.26 298 ⇑P **P** 18 58 03.0 -0.3
baz=40
428A Kincaid Ranch, 40.29 299 ⇓P **P** 18 58 03.3 -0.2
baz=40
328A Wristen Ranch, 40.53 300 ⇓P **P** 18 58 05.0 -0.5
baz=40
627A Terlingua Ranc 40.64 297 ⇑P **P** 18 58 06.0 -0.5
baz=41
TXAR Lajitas Array 40.86 297 P **P** 18 58 07.7 -0.6
0.8nm,0.7s,mb3.5,baz=124,slow=8.9,SNR=11
TXAR PcP PcP 19 00 09.8 +0.8
0.7nm,0.8s,baz=126,slow=6.4,SNR=6.1
TXAR Lajitas Array 40.86 297 P **P** 18 58 07.7 -0.6
TXAR PcP PcP 19 00 09.8 +0.8
427A Hayter Ranch, 40.92 299 ⇑P **P** 18 58 08.1 -0.7
baz=41
527A Woodward Ranch 40.96 298 ⇓P **P** 18 58 08.6 -0.5
baz=41,SNR=6.0
MSTX Muleshoe 41.14 304 ⇓P **P** 18 58 10.0 -0.5
baz=41
626A Big Bend Ranch 41.30 297 ⇑P **P** 18 58 11.0 -0.9
baz=41
526A Mary Lane Ranc 41.35 298 ⇑P **P** 18 58 12.0 -0.3
baz=41,SNR=5.6
426A McDonald Obser 41.41 299 ⇑P **P** 18 58 12.4 -0.5
baz=41
Y27A Causey 41.43 304 ⇓P **P** 18 58 12.2 -0.7
baz=41
W27A Bowe Ranch, En 41.67 305 ⇓P **P** 18 58 14.5 -0.4
baz=42
CPUP Villa Florida 42.12 174 P **P** 18 58 17.7 -0.8
1.2nm,0.5s,mb3.8,baz=330,slow=9.8,SNR=4.5
X26A CR and CF Fran 42.12 304 ⇓P **P** 18 58 17.6 -0.9
baz=42
W26A Owens Ranch, T 42.23 305 ⇑P **P** 18 58 19.0 -0.5
baz=42
425A Indio Mountain 42.24 298 ⇓P **P** 18 58 19.6 0.0
baz=42,SNR=9.2
325A Bean Ranch, Si 42.34 299 ⇓P **P** 18 58 20.3 -0.1
baz=42,SNR=9.5
225A Deer Hill, Car 42.36 300 ⇓P **P** 18 58 20.2 -0.4
baz=42
V26A Tequesquite Ra 42.45 306 ⇑P **P** 18 58 20.7 -0.5
baz=42
U26A Atchley Ranch, 42.59 307 ⇑P **P** 18 58 22.1 -0.3
baz=42
Y25A Mesa, Roswell 42.67 303 ⇓P **P** 18 58 22.8 -0.2
baz=43
MNTX Cornudas Mount 42.75 300 *e*P **P** 18 58 22.7 -1.0
2.1nm,0.9s,mb3.9
324A Moseley Ranch, 42.78 299 ⇓P **P** 18 58 23.6 -0.4
baz=43
W25A X Bar L Ranch, 42.81 305 ⇓P **P** 18 58 23.8 -0.4
baz=43
224A Cornudas Mount 42.94 300 ⇓P **P** 18 58 25.2 0.0
baz=43,SNR=5.3
124A Stringfield Ra 43.01 301 ⇑P **P** 18 58 26.1 +0.2
baz=43
Z24A Sheeppen Canyo 43.07 302 ⇓P **P** 18 58 26.6 +0.3
baz=43
U25A Circle Dot Ran 43.10 307 ⇓P **P** 18 58 26.3 -0.2
baz=43
V25A Rancho No Teng 43.10 306 ⇑P **P** 18 58 26.5 0.0
baz=43,SNR=8.2
Y24A Capitan 43.27 303 ⇓P **P** 18 58 28.6 +0.7
baz=43
W24A Lazy 6 Ranch, 43.56 305 ⇑P **P** 18 58 30.6 +0.4
baz=44,SNR=5.7
Z23A Rita Site, Whi 43.77 302 ⇑P **P** 18 58 32.4 +0.5
baz=44
Y23A Lovelace Mesa, 43.77 303 ⇓P **P** 18 58 32.1 +0.2
baz=44,SNR=5.7
ULM Lac du Bonnet 44.05 329 P **P** 18 58 33.0 -0.9
3.0nm,0.5s,mb4.3,baz=116,slow=6.9,SNR=3.3
222A Williams Famil 44.26 300 ⇓P **P** 18 58 36.2 +0.3
baz=44
BNM Barren Site 44.28 303 *e*P **P** 18 58 36.2 +0.1
8.6nm,1.3s,mb4.3
122A Conniff Cattle 44.29 301 ⇓P **P** 18 58 37.4 +1.2
baz=44
SDCO Great Sand Dun 44.33 308 *e*P **P** 18 58 36.0 -0.4
3.0nm,1.0s,mb4.0
Z22A Elephant Butte 44.37 302 ⇑P **P** 18 58 37.7 +0.9
baz=44
121A Cookes Peak, D 44.91 300 ⇑P **P** 18 58 41.9 +0.8
baz=45
V22A San Miguel Ran 44.92 305 ⇑P **P** 18 58 41.7 +0.5
baz=45
Z21A St. Cloud Mine 44.96 301 ⇑P **P** 18 58 42.3 +0.9
baz=45
Y21A Point of Rocks 45.10 302 ⇑P **P** 18 58 43.3 +0.7
baz=45,SNR=7.1
X21A Alamocita Cree 45.28 303 ⇑P **P** 18 58 44.6 +0.6
baz=45
220A Playas Peak, P 45.42 299 ⇓P **P** 18 58 46.0 +0.9
baz=45,SNR=5.3
R22A Saguache, Gunn 45.42 308 ⇓P **P** 18 58 45.3 +0.2
baz=45
120A U Bar Ranch, L 45.61 300 ⇓P **P** 18 58 47.6 +0.9
baz=46
U21A Nageezi 45.63 306 ⇑P **P** 18 58 47.2 +0.4
baz=46
Y20A Horse Springs, 45.65 302 ⇓P **P** 18 58 47.6 +0.6
baz=46
Z20A Nine Sixteen R 45.68 301 ⇑P **P** 18 58 46.9 -0.3
baz=46
219A White Tail Can 46.05 299 ⇓P **P** 18 58 50.9 +0.8
baz=46,SNR=7.1
119A Ashpeak Ranch, 46.21 300 ⇑P **P** 18 58 52.2 +0.8
baz=46
Y19A Nutrioso 46.38 302 ⇑P **P** 18 58 53.4 +0.7
baz=46
L22A Ellis Ranch, M 46.40 314 ⇓P **P** 18 58 54.4 +1.6
baz=46
318A Bisbee 46.58 298 ⇑P **P** 18 58 55.0 +0.7
baz=46,SNR=5.2
218A Dragoon 46.70 299 ⇓P **P** 18 58 55.9 +0.6
baz=47
118A Homack Ranch, 46.74 300 ⇓P **P** 18 58 56.4 +0.8
baz=47,SNR=5.1
T19A Beclabito 46.80 306 ⇑P **P** 18 58 56.4 +0.4
baz=47
L21A Rawlins 47.03 313 ⇑P **P** 18 58 58.1 +0.4
baz=47
S19A Harvey Farm, M 47.11 307 ⇑P **P** 18 58 58.4 0.0
baz=47
T18A Mexican Hat 47.53 306 ⇑P **P** 18 59 01.7 0.0
baz=48
R18A Canyonlands Na 47.84 308 ⇓P **P** 18 59 03.8 -0.3
baz=48
V17A Tonalea, Kykot 47.94 304 ⇓P **P** 18 59 04.2 -0.6
baz=48
K20A Yellowstone Ra 47.94 314 ⇓P **P** 18 59 04.7 -0.1
baz=48
Y16A Circle Bar Ran 48.19 301 ⇓P **P** 18 59 06.5 -0.3
baz=48
WUAZ Wupatki 48.38 304 ⇑P **P** 18 59 09.0 +0.7
baz=48
P18A Preston Nutter 48.42 309 ⇑P **P** 18 59 08.7 +0.2
baz=48
W16A Flagstaff 48.43 303 ⇓P **P** 18 59 09.2 +0.5
baz=48
L19A Farson 48.48 313 ⇑P **P** 18 59 09.5 +0.6
baz=48
115A Sonoran Desert 48.63 300 ⇑P **P** 18 59 11.8 +1.5
baz=49
BW06 Boulder Array 48.83 313 ⇓P **P** 18 59 11.5 -0.1
baz=49,SNR=5.5
PDAR Pinedale Array 48.83 313 P **P** 18 59 11.3 -0.3
2.8nm,0.9s,mb4.3,baz=108,slow=9.5,SNR=17
FCC Fort Churchill 49.10 338 *e*P **P** 18 59 11.9 -1.5
K18A Toltan Ranch, 49.13 313 ⇑P **P** 18 59 14.8 +0.9
baz=49
114A Black Gap (USA 49.19 300 ⇓P **P** 18 59 15.2 +0.7
baz=49
I18A Diamond G Ranc 49.30 315 ⇓P **P** 18 59 15.8 +0.5
baz=49
RLMT Red Lodge 49.41 316 ⇓P **P** 18 59 16.4 +0.4
baz=49
T15A Red Dirt Ranch 49.47 305 ⇓P **P** 18 59 17.2 +0.6
baz=49
M16A Huntsville 49.88 311 ⇑P **P** 18 59 19.5 -0.2
baz=50
Z13A Yuma Proving G 49.89 300 ⇓P **P** 18 59 20.8 +0.9
baz=50
HWUT Hardware Ranch 49.92 311 P **P** 18 59 19.4 -0.5
F18A Big Timber 49.98 317 ⇓P **P** 18 59 20.5 +0.2
baz=50,SNR=6.1
E18A Harlowton 50.35 318 ⇓P **P** 18 59 23.7 +0.6
baz=50
DUG Dugway 50.48 309 ⇑P **P** 18 59 24.4 +0.2
baz=50
D18A Linhart Farms, 50.51 319 ⇑P **P** 18 59 25.0 +0.7
baz=50
M15A Larsen Ranch, 50.52 311 ⇑P **P** 18 59 24.9 +0.4
baz=50
P14A Drum Mountains 50.53 308 ⇑P **P** 18 59 25.4 +0.8
baz=50
Q14A Sevier Lake (B 50.56 308 ⇓P **P** 18 59 25.4 +0.6
baz=50
F17A Fitzpatrick Pl 50.60 317 ⇑P **P** 18 59 25.3 +0.2
baz=51
H16A Russell Place, 50.60 315 ⇓P **P** 18 59 25.9 +0.8
baz=51
N14A Grayback Hills 50.91 310 ⇓P **P** 18 59 28.0 +0.6
baz=51
B18A Beardsley Farm 50.94 320 ⇑P **P** 18 59 28.4 +0.8
baz=51
J15A Blackfoot 51.03 313 ⇓P **P** 18 59 27.9 -0.4
baz=51
BOZ Bozeman (W) 51.16 316 ⇑P **P** 18 59 29.5 +0.2
baz=51
A18A Metzger Ranch, 51.19 321 ⇓P **P** 18 59 29.3 -0.1
baz=51
P13A Bates Ranch, G 51.22 308 ⇓P **P** 18 59 30.6 +0.8
baz=51
L14A Malta 51.23 311 ⇑P **P** 18 59 30.3 +0.4
baz=51
IRM Iron Mountain 51.24 301 ⇑P **P** 18 59 31.0 +0.9
baz=51
C17A Wharram Farm, 51.27 319 ⇓P **P** 18 59 30.3 +0.3
baz=51
K14A Jones Ranch, D 51.32 312 ⇑P **P** 18 59 30.8 +0.3
baz=51
G15A Dillon 51.58 316 ⇑P **P** 18 59 33.0 +0.5
baz=52
F15A Butte 51.79 316 ⇓P **P** 18 59 34.2 +0.3
baz=52
I14A Mackay 51.88 314 ⇓P **P** 18 59 35.2 +0.5
baz=52
C16A Fuhringer Ranc 51.95 319 ⇑P **P** 18 59 35.5 +0.3
baz=52
H14A Leadore 52.02 315 ⇑P **P** 18 59 36.3 +0.6
baz=52
MONP Monument Peak 52.16 299 ⇑P **P** 18 59 38.2 +1.2
baz=52
D15A Lincoln 52.19 318 ⇓P **P** 18 59 37.4 +0.5
baz=52
R11A Troy Canyon, C 52.21 306 ⇓P **P** 18 59 38.1 +0.8
baz=52
J13A Cove Ranch, Pi 52.25 313 ⇑P **P** 18 59 37.7 +0.3
baz=52
HLID Hailey 52.46 313 ⇑P **P** 18 59 39.3 +0.3
baz=52
C15A Salmond Ranch, 52.49 319 ⇓P **P** 18 59 39.4 +0.2
baz=52,SNR=7.6
J12A Stokes Ranch, 52.86 313 ⇑P **P** 18 59 42.2 +0.2
baz=53
S10A Tonopah Range, 52.92 306 ⇓P **P** 18 59 43.4 +0.8
baz=53
A15A Johnson Ranch, 52.98 320 ⇓P **P** 18 59 42.8 +0.1
baz=53,SNR=6.0
A14A Double T Ranch 53.40 320 ⇓P **P** 18 59 46.5 +0.6
baz=53
MFID Camas Ranch 53.42 313 ⇓P **P** 18 59 46.9 +0.8
baz=53
C13A Hot Springs 53.72 318 ⇓P **P** 18 59 48.8 +0.6
baz=54
B13A Whitefish 53.86 319 ⇓P **P** 18 59 49.0 -0.2
baz=54
NVAR Mina Array Bea 54.33 306 P **P** 18 59 53.1 +0.2
0.7nm,0.8s,mb3.6,baz=129,slow=6.3,SNR=4.8
NVAR PcP PcP 19 00 58.1 +1.3
0.2nm,0.4s,baz=142,slow=3.1,SNR=3.7
YKA Yellowknife Ar 59.39 334 P **P** 19 00 27.3 -1.0
3.2nm,0.8s,mb4.4,baz=110,slow=7.5,SNR=11
YKA Yellowknife Ar 59.39 334 P **P** 19 00 27.3 -1.0
TOA0 Torodi Ar. Sit 61.16 84 *e*P **P** 19 00 40.9 -0.4
TORD Torodi Ar. Bea 61.16 84 P **P** 19 00 41.4 +0.2
1.6nm,0.8s,mb4.2,baz=290,slow=6.6,SNR=6.3
TORD Torodi Ar. Bea 61.16 84 P **P** 19 00 41.4 +0.2
DLBC Dease Lake 65.36 327 P **P** 19 01 07.8 -0.5
0.9nm,0.4s,mb4.2,baz=101,slow=12,SNR=3.9
NB2 NORSAR Subarra 67.97 30 P **P** 19 01 25.6 +0.6
comp=Z,0.7nm,0.7s,mb3.8,baz=265,slow=6.5
NOA NORSAR Array B 67.97 30 P **P** 19 01 26.1 +1.2
comp=Z,0.9nm,0.7s,mb3.9,baz=262,slow=6.2,SNR=4.1
INK Inuvik 68.72 338 P **P** 19 01 28.0 -1.6
comp=Z,2.7nm,0.9s,mb4.2,baz=97,slow=10,SNR=5.5
ARCES ARCESS Array B 74.29 21 P **P** 19 02 03.8 +0.7
comp=Z,1.6nm,0.9s,mb4.0,baz=302,slow=2.7,SNR=4.0
FINES FINESS Array B 75.14 30 P **P** 19 02 09.3 +1.1
comp=Z,0.8nm,0.6s,mb3.8,baz=1.8,slow=5.9,SNR=3.9
TRF Thorofare Moun 75.39 332 *e*P **P** 19 02 09.4 -0.1
comp=Z,7.1nm,0.7s,mb4.7
BPAW Bear Paw Mtn. 75.62 333 *e*P **P** 19 02 09.4 -1.5
comp=Z,2.4nm,0.8s,mb4.2
BUR08 Bucovina Ar. S 76.36 44 *e*P **P** 19 02 17.3 +1.8
MLR Muntele Rosu 77.20 46 P **P** 19 02 21.5 +1.2
comp=Z,1.1nm,0.7s,mb3.9,baz=132,slow=16
KDAK Kodiak Island 77.27 327 P **P** 19 02 18.4 -2.0
comp=Z,1.1nm,0.4s,mb4.1,baz=18,slow=9.6,SNR=2.7
BJI Beijing 124.38 2 PKP PKPdf 19 09 19.6 -6.0
BJI LR LR
comp=N,130nm,15.6s,MS5.0
BJI LR LR
comp=E,210nm,14.0s,MS5.0
BJI LR LR
comp=Z,210nm,21.9s
LZH Lanzhou 126.56 15 *e*PKP PKPdf 19 09 26.3 -3.6
LZH LR LR
comp=E,120nm,18.3s
LZH LR LR
comp=Z,170nm,20.1s,MS4.7
NJ2 Nanjing 132.38 359 *e*PKP PKPdf 19 09 36.9 -4.2
GYA Guiyang 136.44 15 *e*Pdif Pdif 19 06 47.0 -6.4
GYA PKP PKPdf 19 09 43.3 -5.6
GYA PP PP 19 12 29.5 +1.2
GYA AMB AMB
comp=Z,70nm,7.8s

*ISCJB **17** 18:59:36.2±3.1, 44°.27N±0°.07×128°.7W±0°.1, h0km±21km, mb3.3/2, Error ellipse: s-maj=18.3km s-min=10.2km az=154.8*
*IDC **17** 18:59:37.2±2.9, 44°.15N×128°.94W, h0km, mb3.2/3, mb1 3.6/5, mb1mx3.4/26, mbtmp3.3/5, ML3.3/2, Error ellipse: s-maj=81.0km s-min=23.1km az=50.0*
*NEIC **17** 18:59:38.3±1.7, 44°.18N×128°.81W, h10km, mb3.8/1, Error ellipse: s-maj=20.3km s-min=10.7km az=74.0*

ISC 17 18:59:38.8±3.7, 44°.25N±0°.07×128°.8W±0°.1, h7km±24km, n33, σ1§26/34, mb3.1/2, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RNO	**Roman Nose**	**3.63**	**94**	P	**Pn**	**19 00 35.4**	**-0.1**
COR	**Corvallis**	**3.92**	**83**	*e*Pn	**Pn**	**19 00 38.5**	**-1.0**
DBO	**Dodson Butte**	**4.16**	**104**	P	**Pn**	**19 00 40.7**	**-2.0**
HUMO	**Hull Mountain**	**4.53**	**109**	*e*Pn	**Pn**	**19 00 45.0**	**-2.8**
HUMO				*e*Sn	**Sn**	**19 01 40.3**	**-0.5**
BBOR	**Butler Butte**	**4.62**	**105**	P	**Pn**	**19 00 47.6**	**-1.5**
NLWA	**Neilton Lookou**	**4.64**	**46**	*e*Pn	**Pn**	**19 00 47.8**	**-1.6**
IRO	**Indian Ridge**	**4.69**	**91**	P	**Pn**	**19 00 51.2**	**+1.2**
YBH	**Yreka Blue Hor**	**5.10**	**117**	Pn	**Pn**	**19 00 57.2**	**+1.5**
0.2nm,0.3s,baz=302,slow=8.1,SNR=5.5							
YBH	**Yreka Blue Hor**	**5.10**	**117**	*e*Pn	**Pn**	**19 00 52.2**	**-3.4**
HOOD	**Mount Hood Mea**	**5.17**	**76**	*e*Pn	**Pn**	**19 00 56.8**	**+0.1**
57nm,0.7s							
GNW	**Green Mountain**	**5.31**	**49**	*e*Pn	**Pn**	**19 00 56.8**	**-1.6**
5.8nm,0.8s							
LON	**Longmire**	**5.49**	**60**	*e*Pn	**Pn**	**19 01 00.8**	**-0.2**
8.1nm,0.7s							
JCW	**Jim Creek**	**6.17**	**48**	*e*Pn	**Pn**	**19 01 09.6**	**-0.7**
14nm,0.5s							
RPW	**Rockport**	**6.54**	**47**	*e*Pn	**Pn**	**19 01 14.3**	**-1.2**
6.8nm,0.4s							
NEW	**Newport**	**9.01**	**59**	*e*Pn	**Pn**	**19 01 50.0**	**+0.8**
NVAR	**Mina Array Bea**	**9.77**	**123**	Pn	**Pn**	**19 02 00.5**	**+0.8**
0.1nm,0.3s,baz=282,slow=13,SNR=9.4							
NVAR	**Mina Array Bea**	**9.77**	**123**	Pn	**Pn**	**19 02 00.5**	**+0.8**
BSMT	**Bassoo Peak**	**10.36**	**65**	*e*Pn	**Pn**	**19 02 09.1**	**+1.3**
HLID	**Hailey**	**10.38**	**89**	*e*Pn	**Pn**	**19 02 11.3**	**+3.3**
5.7nm,1.0s							
SWMT	**Swartz Lake**	**10.80**	**67**	*e*Pn	**Pn**	**19 02 14.8**	**+1.1**
SLMT	**Seeley Lake**	**11.08**	**69**	*e*Pn	**Pn**	**19 02 19.6**	**+2.0**
7.5nm,1.0s							
CHMT	**Chamberlain Mo**	**11.19**	**71**	*e*Pn	**Pn**	**19 02 20.9**	**+1.7**
WALA	**Waterton Lakes**	**11.28**	**60**	Pn	**Pn**	**19 02 20.1**	**-0.2**
MCMT	**McKenzie Canyo**	**11.38**	**82**	*e*Pn	**Pn**	**19 02 22.4**	**+0.8**
DLMT	**Dillon**	**11.54**	**79**	Pn	**Pn**	**19 02 24.9**	**+1.0**
ISA	**Isabella**	**11.64**	**134**	*e*Pn	**Pn**	**19 02 24.7**	**-0.7**
PV01	**Paradox Valley**	**16.36**	**105**	*e*Pn	**Pn**	**19 03 29.0**	**+0.1**
YKA	**Yellowknife Ar**	**20.05**	**19**	P	**P**	**19 04 13.0**	**+0.8**
1.2nm,1.0s,baz=210,slow=10.0,SNR=3.9							
FFC	**Flin Flon**	**20.19**	**49**	*e*P	**P**	**19 04 11.6**	**-2.2**
4.0nm,0.8s							
TXAR	**Lajitas Array**	**24.88**	**118**	P	**P**	**19 05 03.7**	**+1.6**
0.3nm,0.7s,mb2.9,baz=316,slow=6.4,SNR=4.0							
TXAR	**Lajitas Array**	**24.88**	**118**	P	**P**	**19 05 03.7**	**+1.6**
KURK	**Kurchatov**	**82.47**	**343**	P	**P**	**19 12 01.8**	**+0.1**
0.3nm,0.8s,mb3.3,baz=18,slow=4.3,SNR=3.6							
KURK	**Kurchatov**	**82.47**	**343**	P	**P**	**19 12 01.8**	**+0.1**

*IDC **17** 19:10:26.9±2.4, 39°.03N×141°.15E, h0km, mb3.3/2, mb1 3.3/4, mb1mx3.2/26, mbtmp3.2/4, ML2.9/2, MS3.1/1, Ms1 3.1/1, ms1mx2.5/33, Error ellipse: s-maj=44.1km s-min=33.0km az=85.0*
*JMA **17** 19:10:28.2, 39°.14N×140°.93E, h11km±1km, M2.8*
*ISCJB **17** 19:10:28.0±0.5, 39°.12N±0°.04×140°.94E±0°.04, h10km±6km, mb3.1/2, Error ellipse: s-maj=6.2km s-min=5.2km az=30.6*

ISC 17 19:10:28.7±0.5, 39°.12N±0°.03×140°.95E±0°.04, h2km±7km, n12, σ0§68/18, mb3.1/2, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.27**	**128**	P	**Pg**	**19 10 33.9**	**0.0**
JMK				S	**Sg**	**19 10 37.9**	**+0.5**
JRG	**Rokugo**	**0.37**	**319**	P	**Pg**	**19 10 35.3**	**-0.4**
JRG				S	**Sg**	**19 10 40.5**	**0.0**
JOM	**Ohasama**	**0.44**	**37**	P	**Pg**	**19 10 36.8**	**-0.4**
JOM				S	**Sg**	**19 10 43.3**	**+0.4**
JYK	**Kaneyama**	**0.50**	**246**	P	**Pg**	**19 10 37.9**	**-0.3**
JYK				S	**Sg**	**19 10 44.6**	**-0.1**
OFUJ	**Ofunato**	**0.56**	**94**	P	**Pg**	**19 10 39.4**	**-0.1**
JIO	**Ouri**	**0.74**	**155**	P	**Pg**	**19 10 42.3**	**-0.5**
JIO				S	**Sg**	**19 10 52.5**	**+0.2**
JOU	**Okura**	**0.79**	**196**	P	**Pg**	**19 10 43.5**	**-0.2**
JOU				S	**Sg**	**19 10 54.2**	**+0.3**
MJAR	**Matsushiro Arr**	**3.37**	**221**	Pn	**Pn**	**19 11 22.2**	**0.0**
0.4nm,0.3s,baz=29,slow=11,SNR=4.8							
MJAR				Pg	**Pg**	**19 11 27.7**	**-5.4**
0.6nm,0.3s,baz=27,slow=15,SNR=5.9							
ASAJ	**Asahikawa**	**5.14**	**13**	LR	LR	19 13 50.1	
comp=Z,168nm,19.0s,baz=153,slow=39							
KSRS	**Korea Array**	**10.37**	**265**	Pn	**Pn**	**19 13 00.6**	**+2.2**
0.2nm,0.3s,baz=77,slow=14,SNR=5.3							
KURK	**Kurchatov**	**44.38**	**306**	P	**P**	**19 18 40.5**	**+0.3**
0.1nm,0.5s,mb2.8,baz=81,slow=7.7,SNR=3.8							
WRA	**Warramunga Arr**	**59.08**	**187**	P	**P**	**19 20 28.5**	**-1.7**
0.3nm,0.9s,mb3.3,baz=5.1,slow=7.5,SNR=2.8							

*TRN **17** 19:17:56.7, 15°.88N×61°.55W, h9km, MD3.4, M3.1(FDF)*
TRN Felt IV, V, Guadeloupe.
*IDC **17** 19:17:59.8±1.1, 15°.89N×61°.60W, h0km, mb3.7/5, mb1 4.0/7, mb1mx3.7/26, mbtmp3.8/7, ML3.3/1, MS3.2/2, Ms1 3.2/2, ms1mx2.9/43, Error ellipse: s-maj=31.7km s-min=22.3km az=61.0*
*ISCJB **17** 19:17:59.0±0.5, 15°.87N±0°.03×61°.67W±0°.06, h8km±3km, mb3.8/5, Error ellipse: s-maj=10.7km s-min=3.0km az=159.4*
*NEIC **17** 19:18:00.9±0.7, 15°.89N×61°.48W, h10km, Error ellipse: s-maj=17.1km s-min=9.5km az=73.0*

ISC 17 19:17:59.3±0.5, 15°.86N±0°.02×61°.70W±0°.06, h5km±3km, n35, σ1§19/51, mb3.8/5, 6C-1D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBG	**Guadaloupe-3**	**0.05**	**103**	⇓*iP*	**Pg**	**19 17 59.6**	**-1.0**
HMG	**Houelmont**	**0.12**	**359**	⇑*eP*	**Pg**	**19 18 01.9**	**+0.2**
PHG	**Guadaloupe-2**	**0.16**	**19**	⇑*iP*	**Pg**	**19 18 02.4**	**-0.1**
SCG	**Saint Claude**	**0.17**	**6**	⇑*iP*	**Pg**	**19 18 02.6**	**0.0**
BCG	**Bois Riant Cap**	**0.23**	**19**	*e*P	**Pg**	**19 18 03.2**	**-0.7**
LZG	**Guadaloupe-1**	**0.29**	**345**	⇑*eP*	**Pg**	**19 18 04.8**	**-0.1**
MGG	**Marie-Galante**	**0.37**	**82**	⇑*iP*	**Pg**	**19 18 04.6**	**-1.9**
MGG				⇑*eS*	**Sg**	**19 18 06.8**	**-4.5**
DWS	**Wesley**	**0.47**	**128**	*e*P	**Pg**	**19 18 09.6**	**+1.2**
DWS				*e*S	**Sg**	**19 18 14.8**	**+0.2**
MDN	**Morne-Daniel**	**0.62**	**151**	*e*P	**Pg**	**19 18 09.0**	**-2.1**
MDN				*e*S	**Sg**	**19 18 20.8**	**+1.6**
DPMT	**Pointe Michel**	**0.67**	**153**	*e*P	**Pg**	**19 18 12.6**	**+0.3**
DPMT				*e*S	**Sg**	**19 18 22.3**	**+1.3**
DLPL	**La Plaine**	**0.68**	**140**	*e*P	**Pg**	**19 18 12.5**	**+0.1**
DLPL				*e*S	**Sg**	**19 18 22.4**	**+1.1**
DFBT	**Forest Bistro**	**0.70**	**152**	*e*P	**Pg**	**19 18 13.0**	**+0.2**
DFBT				*e*S	**Sg**	**19 18 23.6**	**+1.7**
DSHT	**Scott's Head**	**0.72**	**154**	*e*P	**Pg**	**19 18 11.8**	**-1.3**
DSHT				*e*S	**Sg**	**19 18 23.2**	**+0.8**
DSTT	**Stowe**	**0.72**	**148**	*e*P	**Pg**	**19 18 14.1**	**+0.9**
DSTT				*e*S	**Sg**	**19 18 23.0**	**+0.5**
BPA	**Boggy Peak**	**1.19**	**353**	*e*P	**Pg**	**19 18 21.1**	**-1.0**
BPA				*e*S	**Sg**	**19 18 40.9**	**+3.4**
FDF	**Fort de France**	**1.24**	**155**	*e*Pn	**Pn**	**19 18 22.3**	**-1.0**
FDF				*e*S	**Sg**	**19 18 38.1**	**-1.2**
FDF	**Fort de France**	**1.24**	**155**	*e*P	**Pg**	**19 18 22.2**	**-0.9**
FDF				*e*S	**Sg**	**19 18 38.2**	**-1.0**
BIM	**Bigot**	**1.47**	**156**	*e*P	**Pn**	**19 18 26.2**	**-0.3**
MVM	**Montagne Vaucl**	**1.52**	**149**	*e*P	**Pn**	**19 18 27.0**	**-0.2**
ANWB	**Willy Bob**	**1.80**	**357**	*e*Pn	**Pn**	**19 18 31.3**	**+0.3**
ANWB				*e*Sn	**Sn**	**19 18 54.8**	**+0.5**
SLB	**Belfond**	**2.12**	**162**	*e*P	**Pn**	**19 18 33.9**	**-1.6**
SLB				*e*S	**Sn**	**19 19 02.2**	**-0.1**
MCLT	**Moule a Chique**	**2.26**	**161**	*e*P	**Pn**	**19 18 37.1**	**-0.3**
MCLT				*e*S	**Sn**	**19 19 04.4**	**-1.4**
SVV	**Soufriere Volc**	**2.57**	**169**	*e*P	**Pn**	**19 18 39.7**	**-2.0**
SVV				*e*S	**Sn**	**19 19 13.2**	**-0.2**
SVB	**Belmont**	**2.61**	**170**	*e*P	**Pn**	**19 18 40.0**	**-2.3**
SJG	**San Juan**	**4.81**	**298**	Pn	**Pn**	**19 19 16.5**	**+4.0**
4.7nm,0.3s,baz=158,slow=18,SNR=2.6							
SJG				Sn	**Sn**	**19 20 06.6**	**-2.0**
2.8nm,0.3s,baz=2.4,slow=18,SNR=2.2							
SJG	**San Juan**	**4.81**	**298**	Pn	**Pn**	**19 19 16.5**	**+4.0**
SJG				Sn	**Sn**	**19 20 06.6**	**-2.0**
PCRV	**Puerto La Cruz**	**6.34**	**207**	Pn	**Pn**	**19 19 36.6**	**+3.1**
0.7nm,0.3s,baz=23,slow=7.7,SNR=3.0							
PCRV				Sn	**Sn**	**19 20 45.2**	**-1.2**
1.5nm,0.3s,baz=8.1,slow=7.1,SNR=3.1							
PCRV				LR	LR	19 22 11.1	

comp=Z,222nm,20.1s,baz=57,slow=39
SDV Santo Domingo 11.14 233 LR LR 19 24 43.9
comp=Z,113nm,18.7s,baz=350,slow=36
SIV San Ignacio 31.66 179 P **P 19 24 25.1 +1.4**
2.9nm,0.8s,mb4.2,baz=13,slow=15,SNR=13
TXAR Lajitas Array 40.78 297 P **P 19 25 44.2 +2.4**
0.2nm,0.6s,mb2.9,baz=108,slow=15,SNR=3.2
PDAR Pinedale Array 48.76 313 P **P 19 26 47.0 +1.9**
1.0nm,0.7s,mb4.0,baz=111,slow=8.1,SNR=6.8
YKA Yellowknife Ar 59.33 334 P **P 19 28 02.7 +0.7**
1.1nm,0.7s,mb4.0,baz=111,slow=7.8,SNR=4.1
YKA Yellowknife Ar 59.33 334 P **P 19 28 02.7 +0.6**
TORD Torodi Ar. Bea 61.23 84 P **P 19 28 17.2 +1.3**
0.6nm,1.0s,mb3.7,baz=271,slow=7.5,SNR=3.7
ASAR Alice Springs 163.40 240 PKPab PKPab 19 38 54.9 -0.1
0.2nm,0.6s,baz=122,slow=4.6,SNR=4.2

*IDC **17** 19:29:19.6±2.0, 36°.83N×29°.19E, h0km, mb3.7/1, mb1 3.4/3, mb1mx3.2/24, mbtmp3.4/3, ML3.3/2, Error ellipse: s-maj=38.3km s-min=25.0km az=156.0*
*NEIC **17** 19:29:20.0, 37°.07N×29°.18E, h4km, MD3.4(ISK), ML3.0(ATH), After ISK.*
*ISK **17** 19:29:20.6, 37°.05N×29°.19E, h5km, MD3.3*
*DDA **17** 19:29:20.2, 37°.02N×29°.20E, h7km±3km, Md3.4*
*CSEM **17** 19:29:20.8±0.2, 37°.02N×29°.18E, h2km, MD3.3, Error ellipse: s-maj=4.6km s-min=3.5km az=2.0*
*ISCJB **17** 19:29:20.8±0.5, 37°.02N±0°.03×29°.19E±0°.03, h5km±4km, Error ellipse: s-maj=4.3km s-min=3.4km az=178.7*
ISC 17 19:29:21.2±0.5, 37°.02N±0°.03×29°.19E±0°.03, h1km±4km, n87, σ1§01/103, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.28**	**61**	*e*PG	**Pg**	**19 29 26.1**	**-0.4**
GLHS	**Glhisar (BURDU**	**0.28**	**61**	*e*Pg	**Pg**	**19 29 26.2**	**-0.4**
GOLH	**Golhisar**	**0.37**	**54**	*i* P	**Pg**	**19 29 27.9**	**-0.3**
GOLH				*i* S	**Sg**	**19 29 34.8**	**+1.8**
GOLH	**Golhisar**	**0.37**	**54**	*i* P	**Pg**	**19 29 27.9**	**-0.3**
GOLH				*i* S	**Sg**	**19 29 34.8**	**+1.8**
TURN	**Turunc**	**0.49**	**253**	*i* P	**Pg**	**19 29 35.1**	**+4.6**
TURN				*i* S	**Sg**	**19 29 47.6**	**+11**
ELL	**Elmali**	**0.64**	**115**	*e*PG	**Pg**	**19 29 33.2**	**-0.2**
ELL				*e*SG	**Sg**	**19 29 42.5**	**+0.9**
ELL	**Elmali**	**0.64**	**115**	*e*Pg	**Pg**	**19 29 33.2**	**-0.2**
ELL				*e*Sg	**Sg**	**19 29 42.5**	**+0.9**
DNZL	**Cakiroluk**	**0.68**	**350**	*i* P	**Pg**	**19 29 33.2**	**-1.0**
DNZL				*i* S	**Sg**	**19 29 45.7**	**+2.7**
DNZL	**Cakiroluk**	**0.68**	**350**	*i* P	**Pg**	**19 29 33.2**	**-1.0**
DNZL				*i* S	**Sg**	**19 29 45.7**	**+2.7**
YER	**Yerkesik**	**0.73**	**279**	*e*PG	**Pg**	**19 29 35.3**	**+0.1**
YER				*e*SG	**Sg**	**19 29 45.9**	**+1.1**
YER	**Yerkesik**	**0.73**	**279**	*e*Pg	**Pg**	**19 29 35.3**	**+0.1**
DENT	**Denizli**	**0.74**	**350**	*e*PG	**Pg**	**19 29 34.5**	**-0.9**
DENT	**Denizli**	**0.74**	**350**	*e*Pg	**Pg**	**19 29 34.5**	**-0.9**
AKAS	**Kas**	**0.85**	**157**	*i* P	**Pg**	**19 29 36.3**	**-1.2**
AKAS				*i* S	**Sg**	**19 29 49.9**	**+1.4**
AKAS	**Kas**	**0.85**	**157**	*i* P	**Pg**	**19 29 36.3**	**-1.2**
AKAS				*i* S	**Sg**	**19 29 49.9**	**+1.4**
KSL	**Kastellorizon**	**0.92**	**160**	*e*P	**Pg**	**19 29 38.0**	**-0.9**
KORT	**Korkueli**	**0.93**	**91**	*i* P	**Pg**	**19 29 37.4**	**-1.5**
KORT				*i* S	**Sg**	**19 29 54.6**	**+3.6**
KORT	**Korkueli**	**0.93**	**91**	*i* P	**Pg**	**19 29 37.4**	**-1.6**
KORT				*i* S	**Sg**	**19 29 54.6**	**+3.6**
MLSB	**Milas**	**1.16**	**284**	*e*PN	**Pn**	**19 29 43.2**	**-1.3**
MLSB	**Milas**	**1.16**	**284**	*e*Pn	**Pn**	**19 29 43.2**	**-1.3**
ARG	**Arkhangelos**	**1.17**	**227**	P	**Pg**	**19 29 43.1**	**-0.5**
ARG	**Arkhangelos**	**1.17**	**227**	*e*P	**Pg**	**19 29 42.0**	**-1.6**
ARG	**Arkhangelos**	**1.17**	**227**	P	**Pg**	**19 29 43.1**	**-0.5**
ANTB	**Antalya**	**1.18**	**95**	*e*PN	**Pn**	**19 29 43.9**	**-0.8**
ANTB	**Antalya**	**1.18**	**95**	*e*Pn	**Pn**	**19 29 43.9**	**-0.8**
BCK	**Bucak**	**1.20**	**68**	*e*PN	**Pn**	**19 29 43.6**	**-1.4**
BCK	**Bucak**	**1.20**	**68**	*e*Pn	**Pn**	**19 29 43.7**	**-1.3**
DAT	**Datca**	**1.32**	**258**	*e*PN	**Pn**	**19 29 46.4**	**-0.3**
DAT	**Datca**	**1.32**	**258**	*e*Pn	**Pn**	**19 29 46.4**	**-0.3**
KHL	**Karahalli**	**1.33**	**11**	*e*PN	**Pn**	**19 29 45.7**	**-1.0**
KHL	**Karahalli**	**1.33**	**11**	*e*Pn	**Pn**	**19 29 45.7**	**-1.1**
ISP	**Isparta**	**1.33**	**53**	*e*PN	**Pn**	**19 29 46.4**	**-0.4**
ISP	**Isparta**	**1.33**	**53**	*e*Pg	**Pg**	**19 29 41.9**	**-4.7**
ISP	**Isparta**	**1.33**	**53**	*e*Pg	**Pg**	**19 29 41.9**	**-4.8**
ISP	**Isparta**	**1.33**	**53**	*e*Pn	**Pn**	**19 29 46.4**	**-0.4**
SUTC	**Sutluce-Ispart**	**1.52**	**72**	*e*PN	**Pn**	**19 29 49.2**	**-0.2**
SUTC	**Sutluce-Ispart**	**1.52**	**72**	*e*Pn	**Pn**	**19 29 49.2**	**-0.1**
KULA	**Kula-Manisa**	**1.55**	**344**	*e*PN	**Pn**	**19 29 48.8**	**-1.0**
KULA	**Kula-Manisa**	**1.55**	**344**	*e*Pn	**Pn**	**19 29 48.8**	**-1.0**
SHUT	**Suhut-Afyon**	**1.87**	**35**	*e*PN	**Pn**	**19 29 53.8**	**-0.4**
SHUT	**Suhut-Afyon**	**1.87**	**35**	*e*Pn	**Pn**	**19 29 53.8**	**-0.5**
SMG	**Samos**	**2.00**	**291**	P	**Pn**	**19 29 55.8**	**-0.2**
SMG	**Samos**	**2.00**	**291**	*e*P	**Pn**	**19 29 55.3**	**-0.7**
SMG	**Samos**	**2.00**	**291**	P	**Pn**	**19 29 55.8**	**-0.2**
IZM	**Izmir**	**2.06**	**313**	*e*PN	**Pn**	**19 29 56.5**	**-0.3**
AKS	**Akhisar**	**2.15**	**330**	*e*PN	**Pn**	**19 29 57.0**	**-1.1**
AKS	**Akhisar**	**2.15**	**330**	*e*Pn	**Pn**	**19 29 57.0**	**-1.1**
ALT	**Altintas**	**2.16**	**19**	*e*PN	**Pn**	**19 29 57.5**	**-0.7**
ALT	**Altintas**	**2.16**	**19**	*e*Pn	**Pn**	**19 29 57.5**	**-0.7**
BLCB	**Balcova**	**2.18**	**309**	*e*PN	**Pn**	**19 29 57.8**	**-0.7**
BLCB	**Balcova**	**2.18**	**309**	*e*Pn	**Pn**	**19 29 57.8**	**-0.7**
KARP	**Karpathos**	**2.20**	**229**	*e*P	**Pn**	**19 29 59.5**	**+0.7**
HDMB	**Hadim**	**2.64**	**90**	*e*PN	**Pn**	**19 30 05.4**	**+0.6**
HDMB	**Hadim**	**2.64**	**90**	*e*Pn	**Pn**	**19 30 05.4**	**+0.6**
KONT	**Konya--Tatoy**	**2.69**	**69**	*e*PN	**Pn**	**19 30 05.8**	**+0.3**
KONT	**Konya--Tatoy**	**2.69**	**69**	*e*Pn	**Pn**	**19 30 05.8**	**+0.3**
LADK	**Ladik-KONYA**	**2.78**	**64**	*e*PN	**Pn**	**19 30 07.2**	**+0.4**
LADK	**Ladik-KONYA**	**2.78**	**64**	*e*Pn	**Pn**	**19 30 07.2**	**+0.4**
ESKT	**Eskisehir**	**2.82**	**27**	*e*PN	**Pn**	**19 30 07.4**	**+0.1**
ESKT	**Eskisehir**	**2.82**	**27**	*e*Pn	**Pn**	**19 30 07.4**	**+0.1**
KIZT	**Kizilcal**	**2.82**	**48**	*e*PN	**Pn**	**19 30 07.5**	**+0.2**
KIZT	**Kizilcal**	**2.82**	**48**	*e*Pn	**Pn**	**19 30 07.5**	**+0.2**
SVRH	**Sivrihisar-ESK**	**3.04**	**36**	*e*PN	**Pn**	**19 30 10.6**	**+0.2**
SVRH	**Sivrihisar-ESK**	**3.04**	**36**	*e*Pn	**Pn**	**19 30 10.6**	**+0.3**
ZKR	**Zakros**	**3.07**	**233**	*e*P	**Pn**	**19 30 10.9**	**+0.2**
NPS	**Neapolis**	**3.38**	**240**	P	**Pn**	**19 30 16.9**	**+1.9**
NPS	**Neapolis**	**3.38**	**240**	P	**Pn**	**19 30 16.9**	**+1.9**
LAST	**Lasithi**	**3.53**	**239**	*e*P	**Pn**	**19 30 17.9**	**+0.8**
ARMT	**Armutlu**	**3.55**	**356**	*e*PN	**Pn**	**19 30 17.7**	**+0.3**
ARMT	**Armutlu**	**3.55**	**356**	*e*Pn	**Pn**	**19 30 17.7**	**+0.4**
GULT	**Gulveren**	**3.56**	**17**	*e*PN	**Pn**	**19 30 17.9**	**+0.4**
GULT	**Gulveren**	**3.56**	**17**	*e*Pn	**Pn**	**19 30 17.9**	**+0.4**
SULT	**Sultanhani-AKS**	**3.63**	**70**	*e*PN	**Pn**	**19 30 19.3**	**+0.9**
SULT	**Sultanhani-AKS**	**3.63**	**70**	*e*Pn	**Pn**	**19 30 19.3**	**+0.9**
IKL	**Isikli**	**3.70**	**101**	*e*PN	**Pn**	**19 30 20.6**	**+1.2**
IKL	**Isikli**	**3.70**	**101**	*e*Pn	**Pn**	**19 30 20.6**	**+1.2**
IDI	**Anoyia**	**3.88**	**245**	*e*P	**Pn**	**19 30 22.6**	**+0.7**
LIA	**Limnos Island**	**4.26**	**314**	P	**Pn**	**19 30 27.6**	**+0.5**
LIA	**Limnos Island**	**4.26**	**314**	P	**Pn**	**19 30 27.6**	**+0.5**
BR131	**Keskin Array S**	**4.42**	**51**	*e*Pn	**Pn**	**19 30 23.9**	**-5.4**
BR131				*e*Sn	**Sn**	**19 31 22.3**	**+1.0**
BRTR	**Keskin Array B**	**4.42**	**51**	Pn	**Pn**	**19 30 29.9**	**+0.7**
	0.4nm,0.3s,baz=238,slow=16,SNR=11						
BRTR				Sn	**Sn**	**19 31 22.4**	**+1.0**
	0.5nm,0.3s,baz=228,slow=24,SNR=9.1						
BRTR	**Keskin Array B**	**4.42**	**51**	Pn	**Pn**	**19 30 30.0**	**+0.7**
BRTR				Sn	**Sn**	**19 31 22.4**	**+1.1**
KARN	**Karanos**	**4.56**	**251**	*e*P	**Pn**	**19 30 33.0**	**+1.8**
NVR	**Nevrokopi**	**5.99**	**318**	P	**Pn**	**19 30 51.6**	**+0.8**
NVR	**Nevrokopi**	**5.99**	**318**	P	**Pn**	**19 30 51.6**	**+0.8**
MMAI	**Mount Meron Ar**	**6.48**	**126**	Pn	**Pn**	**19 30 55.9**	**-1.7**
	2.1nm,0.3s,baz=304,slow=11,SNR=9.3						
MMAI				Sn	**Sn**	**19 32 08.0**	**-4.1**
	3.0nm,0.3s,baz=306,slow=25,SNR=6.1						
TORD	**Torodi Ar. Bea**	**34.20**	**233**	P	**P**	**19 36 05.7**	**-2.5**
	1.0nm,0.8s,baz=26,slow=8.9,SNR=7.4						

*MOS **17** 19:41:06.3±0.7, 54°.54N×161°.73E, h55km, mb4.3/3, Error ellipse: s-maj=0.1km s-min=0.0km az=85.2*
*ISCJB **17** 19:41:06.4±0.4, 54°.56N±0°.02×161°.74E±0°.05, h54km±5km, mb3.6/5, Error ellipse: s-maj=5.5km s-min=3.5km az=22.6*
*NEIC **17** 19:41:07.5±1.1, 54°.64N×161°.67E, h49km±12km, Error ellipse: s-maj=17.2km s-min=10.5km az=171.0*
*KRSC **17** 19:41:07.2±0.7, 54°.59N×161°.61E, h41km±30km, ML4.1*
*IDC **17** 19:41:08.4±2.4, 54°.71N×161°.68E, h57km±23km, mb3.4/5, mb1 3.7/7, mb1mx3.3/27, mbtmp3.5/7, ML3.8/2, Error ellipse: s-maj=27.2km s-min=16.4km az=153.0*
ISC 17 19:41:07.5±0.4, 54°.57N±0°.02×161°.73E±0°.05, h47km±5km, n39, σ0§80/62, mb3.6/5, 1C, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.01**	**192**	*i* P	**Pn**	**19 41 14.1**	**-0.6**
MKZ				*i* S	**Sn**	**19 41 19.1**	**-0.7**
KII	**Karymskiy**	**1.44**	**249**	*e*P	**Pn**	**19 41 30.6**	**-0.4**
KII				*i* S	**Sn**	**19 41 47.9**	**-0.8**
KMNR	**Kamenistaya**	**1.47**	**325**	*i* P	**Pn**	**19 41 31.8**	**+0.3**
KMNR				*e*S	**Sn**	**19 41 49.6**	**+0.1**
BZGR	**Bezymyannyi-Gr**	**1.50**	**337**	*i* P	**Pn**	**19 41 32.2**	**+0.3**
BZGR				*i* S	**Sn**	**19 41 50.1**	**-0.1**
ZLN	**Zelenaya**	**1.55**	**340**	*i* P	**Pn**	**19 41 33.1**	**+0.6**
ZLN				*i* S	**Sn**	**19 41 51.7**	**+0.3**
KPT	**Kopyto**	**1.65**	**329**	*e*P	**Pn**	**19 41 34.3**	**+0.4**
KPT				*e*S	**Sn**	**19 41 53.9**	**0.0**
KBTR	**Krutoberegovo**	**1.76**	**20**	*e*P	**Pn**	**19 41 36.1**	**+0.7**
KBTR				*i* S	**Sn**	**19 41 57.1**	**+0.5**
KRSR	**Krestovskiy**	**1.79**	**339**	*e*P	**Pn**	**19 41 35.6**	**-0.2**
KRSR				*e*S	**Sn**	**19 41 55.9**	**-1.3**
KOZR	**Kozyr**	**1.83**	**326**	PN	**Pn**	**19 41 36.9**	**+0.5**
KOZR				S	**Sn**	**19 41 58.4**	**0.0**
KOZ	**Kozyrevsk**	**1.84**	**325**	*e*P	**Pn**	**19 41 36.9**	**+0.4**
KOZ				*e*S	**Sn**	**19 41 58.4**	**0.0**
KLY	**Klyuchi**	**1.86**	**341**	*e*P	**Pn**	**19 41 36.5**	**-0.2**
KLY				*e*S	**Sn**	**19 41 57.9**	**-1.1**
NLC	**Nalytchevo**	**1.99**	**226**	*e*P	**Pn**	**19 41 38.3**	**-0.2**
NLC				*i* S	**Sn**	**19 42 01.0**	**-1.2**
SRDR	**Sredinnyy**	**2.10**	**328**	*e*P	**Pn**	**19 41 40.1**	**+0.1**
SRDR				*e*S	**Sn**	**19 42 04.3**	**-0.6**
SRKR	**Sorokina**	**2.12**	**352**	*e*P	**Pn**	**19 41 41.2**	**+0.9**
SRKR				*i* S	**Sn**	**19 42 06.2**	**+0.8**
AVH	**Avacha**	**2.20**	**235**	*i* P	**Pn**	**19 41 42.1**	**+0.7**
AVH				*i* S	**Sn**	**19 42 07.8**	**+0.4**
PET	**Petropavlovsk**	**2.39**	**231**	*e*PN	**Pn**	**19 41 44.1**	**0.0**
PET				*e*S	**Sn**	**19 42 11.5**	**-0.6**
PET				pmax	pmax		
	comp=Z,72nm,0.4s						
PET				smax			
	comp=N,367nm,0.5s						
PET				smax			
	comp=E,340nm,0.4s						
PET	**Petropavlovsk**	**2.39**	**231**	P	**Pn**	**19 41 44.6**	**+0.5**
PET				*i* S	**Sn**	**19 42 11.5**	**-0.6**
PET	**Petropavlovsk**	**2.39**	**231**	*e*Pn	**Pn**	**19 41 44.5**	**+0.4**
GNL	**Ganaly**	**2.40**	**250**	*i* P	**Pn**	**19 41 44.6**	**+0.5**
GNL				*e*S	**Sn**	**19 42 11.7**	**-0.5**
BKI	**Bering**	**2.53**	**74**	*i* P	**Pn**	**19 41 46.7**	**+0.7**
BKI				*i* S	**Sn**	**19 42 15.1**	**-0.4**
PEA0B	**Petropavlovsk-**	**2.80**	**240**	*e*Pn	**Pn**	**19 41 49.6**	**-0.1**
PEA0B				*e*Sn	**Sn**	**19 42 25.4**	**+3.2**
PETK	**Petropavlovsk-**	**2.80**	**240**	P	**Pn**	**19 41 50.0**	**+0.3**
	comp=E,2.9nm,0.3s,baz=66,slow=19,SNR=23						
PETK				S	**Sn**	**19 42 25.8**	**+3.6**
	comp=E,5.6nm,0.3s,baz=60,slow=32,SNR=7.9						
PETK	**Petropavlovsk-**	**2.80**	**240**	PN	**Pn**	**19 41 50.0**	**+0.3**
PETK				S	**Sn**	**19 42 25.8**	**+3.6**
PETK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
PETK				smax			
	comp=N,6.0nm,0.3s						
GRL	**Gorelyy**	**2.97**	**229**	P	**Pn**	**19 41 53.3**	**+1.3**
MIPR	**Malaya Ipel'ka**	**3.76**	**234**	P	**Pn**	**19 42 03.9**	**+1.1**
FX1	**Attu Island--F**	**6.99**	**99**	P	**Pn**	**19 42 47.4**	**+0.3**
	comp=N,12nm,0.3s,baz=311,slow=5.1,SNR=69						
FX1				S	**Sn**	**19 44 02.2**	**-2.9**
	comp=N,2.3nm,0.3s,baz=144,slow=23,SNR=6.0						
BILL	**Bilibino**	**13.69**	**7**	*e*P	**Pn**	**19 44 22.8**	**+4.3**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.6s						
ERM	**Erimo**	**17.55**	**232**	*ce*P	**Pn**	**19 45 07.7**	**-0.7**
ERM				pmax	pmax		
	comp=Z,16nm,1.6s						
YAK	**Yakutsk**	**18.27**	**307**	P	**Pn**	**19 45 16.5**	**-0.5**
FINES	**FINESS Array B**	**59.15**	**337**	P	**P**	**19 51 01.1**	**-1.6**
	comp=Z,0.7nm,0.4s,mb4.1,baz=30,slow=8.2,SNR=9.1						
FINES	**FINESS Array B**	**59.15**	**337**	P	**P**	**19 51 01.1**	**-1.6**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NOA	**NORSAR Array B**	**62.39**	**344**	P	**P**	**19 51 23.4**	**-1.3**
	comp=Z,0.3nm,0.4s,mb3.8,baz=21,slow=6.9,SNR=4.3						
NOA	**NORSAR Array B**	**62.39**	**344**	P	**P**	**19 51 23.4**	**-1.3**
TXAR	**Lajitas Array**	**69.18**	**69**	P	**P**	**19 52 10.5**	**+1.6**
	comp=Z,0.1nm,0.4s,mb3.1,baz=297,slow=6.0,SNR=3.7						
WRA	**Warramunga Arr**	**77.83**	**206**	P	**P**	**19 52 59.2**	**-0.4**
	comp=Z,0.7nm,1.2s,mb3.5,baz=24,slow=6.1,SNR=4.5						
WRA	**Warramunga Arr**	**77.83**	**206**	P	**P**	**19 52 59.2**	**-0.4**
WRA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
WRA	**Warramunga Arr**	**77.83**	**206**	P	**P**	**19 52 59.2**	**-0.4**
ASAR	**Alice Springs**	**81.50**	**206**	P	**P**	**19 53 19.7**	**+0.3**
	comp=Z,0.5nm,0.8s,mb3.5,baz=19,slow=5.3,SNR=7.2						
ASAR	**Alice Springs**	**81.50**	**206**	P	**P**	**19 53 19.7**	**+0.3**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						

*ISCJB **17** 19:48:06.5±0.2, 46°.334N±0°.009×7°.22E±0°.01, h8km±1km, Error ellipse: s-maj=1.7km s-min=1.4km az=15.2*
*CSEM **17** 19:48:07.4±0.1, 46°.30N×7°.30E, h5km, ML3.5/36, Ms3.5, Error ellipse: s-maj=1.7km s-min=1.4km az=108.0*
*ZUR **17** 19:48:07.9, 46°.32N×7°.33E, h7km, ML3.3/20*
*LDG **17** 19:48:08.0±0.1, 46°.32N×7°.31E, h5km, Md3.2/2, Ml3.4/46, Error ellipse: s-maj=1.3km s-min=1.0km az=106.0*
*GEN **17** 19:48:08.6, 46°.27N×7°.27E, h3km, ML3.0*
*NEIC **17** 19:48:08.0, 46°.32N×7°.33E, h5km, ML3.5(SZGRF), ML3.1(ZUR), ML3.4(LDG), ML3.2(STR), After ZUR.*
*BNS **17** 19:48:09.5±0.4, 46°.29N×7°.40E, h10km, ML2.8*
*ROM **17** 19:48:09.3±0.3, 46°.22N×7°.26E, h6km±2km, Md3.2/22, Ml2.9/17, Error ellipse: s-maj=4.1km s-min=2.5km az=163.0*
*STR **17** 19:48:10.1±0.3, 46°.34N×7°.24E, h5km, Ml3.2, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*PRU **17** 19:48:10.3, 46°.52N×7°.28E, h0km*
*SZGRF **17** 19:48:10.7, 46°.38N×7°.37E, h10km, mb3.5, Switzerland*
*BGR **17** 19:48:10.7±0.8, 46°.38N×7°.37E, h10km, ML3.5, Error ellipse: s-maj=11.1km s-min=10.0km az=48.0*
*VIE **17** 19:48:10.4±0.7, 46°.43N×7°.36E, h8km±2km, mb2.9/9, ML3.3/10, Ms3.5/1, Error ellipse: s-maj=8.7km s-min=4.1km az=155.0 20 km NW of Sierre*
ISC 17 19:48:07.6±0.1, 46°.315N±0°.008×7°.25E±0°.01, h10km±1km, n337, σ1§38/575, 33C-20D, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SENIN	**Lac Senin/Sane**	**0.06**	**34**	*i*Pg	**Pg**	**19 48 09.8**	**+0.2**
	74µm,0.3s						
SENIN				*i* Sg	**Sg**	**19 48 10.8**	**-0.3**
	74µm,0.3s						
SENIN	**Lac Senin/Sane**	**0.06**	**34**	*i*Pg	**Pg**	**19 48 09.7**	**+0.1**
SENIN				*i* Sg	**Sg**	**19 48 10.8**	**-0.3**
SENIN	**Lac Senin/Sane**	**0.06**	**34**	*i*Pg	**Pg**	**19 48 09.8**	**+0.2**
	74µm,0.3s						
SENIN				*i* Sg	**Sg**	**19 48 10.8**	**-0.3**
	74µm,0.3s						
GRYON	**Gryon**	**0.12**	**237**	*i*Pg	**Pg**	**19 48 11.5**	**+1.2**
	2µm,0.3s						
GRYON				*i* Sg	**Sg**	**19 48 14.0**	**+1.7**
	2µm,0.3s						
GRYON	**Gryon**	**0.12**	**237**	*i*Pg	**Pg**	**19 48 11.5**	**+1.2**
	2µm,0.3s						
GRYON				*i* Sg	**Sg**	**19 48 14.0**	**+1.7**
	2µm,0.3s						
AIGLE	**Aigle**	**0.21**	**277**	*i*Pg	**Pg**	**19 48 13.3**	**+1.4**
	7µm,0.5s						
AIGLE	**Aigle**	**0.21**	**277**	*i*Pg	**Pg**	**19 48 13.3**	**+1.4**
	7µm,0.5s						
SALAN	**Lac Salanfe**	**0.26**	**229**	*i*Pg	**Pg**	**19 48 14.1**	**+1.3**
	629nm,0.3s						
SALAN				*e*Sg	**Sg**	**19 48 18.4**	**+2.1**
	629nm,0.3s						
SALAN	**Lac Salanfe**	**0.26**	**229**	*i*Pg	**Pg**	**19 48 14.1**	**+1.3**
SALAN				*e*Sg	**Sg**	**19 48 16.7**	**+0.4**
SALAN	**Lac Salanfe**	**0.26**	**229**	*i*Pg	**Pg**	**19 48 14.1**	**+1.3**
	629nm,0.3s						
SALAN				*e*Sg	**Sg**	**19 48 16.7**	**+0.4**
DIX	**Grande Dixence**	**0.26**	**155**	*i*Pg	**Pg**	**19 48 13.3**	**+0.5**
DIX				Sg	**Sg**	**19 48 16.8**	**+0.5**
DIX	**Grande Dixence**	**0.26**	**155**	*i*Pg	**Pg**	**19 48 13.3**	**+0.5**
	9µm,0.2s						
DIX	**Grande Dixence**	**0.26**	**155**	*i*Pg	**Pg**	**19 48 12.8**	**0.0**
DIX				*i* Sg	**Pg**	**19 48 13.3**	**+0.5**
DIX	**Grande Dixence**	**0.26**	**155**	*i*Pg	**Pg**	**19 48 12.8**	**0.0**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DIX				Sg	**Sg**	**19 48 16.8**	**+0.5**
LKBD	**Leukerbad**	**0.27**	**74**	*i*Pg	**Pg**	**19 48 12.5**	**-0.5**
	2µm,0.3s						
LKBD				*e*Sg	**Sg**	**19 48 15.7**	**-0.9**
	2µm,0.3s						
LKBD	**Leukerbad**	**0.27**	**74**	*i*Pg	**Pg**	**19 48 12.5**	**-0.5**
	2µm,0.3s						
LKBD				*e*Sg	**Sg**	**19 48 15.7**	**-0.9**
	2µm,0.3s						
LKBD2	**Leukerbad 2**	**0.28**	**77**	*i*Pg	**Pg**	**19 48 12.8**	**-0.3**
LKBD2	**Leukerbad 2**	**0.28**	**77**	*i*Pg	**Pg**	**19 48 12.8**	**-0.3**
EMV	**Vieux Emosson**	**0.35**	**224**	Pg	**Pg**	**19 48 15.8**	**+1.3**
EMV				Sg	**Sg**	**19 48 21.5**	**+2.3**
EMV	**Vieux Emosson**	**0.35**	**224**	*i*Pg	**Pg**	**19 48 15.7**	**+1.2**
	2µm,0.4s						
EMV	**Vieux Emosson**	**0.35**	**224**	*i*Pg	**Pg**	**19 48 18.4**	**+3.9**
EMV	**Vieux Emosson**	**0.35**	**224**	*i*Pg	**Pg**	**19 48 15.7**	**+1.2**
	2µm,0.4s						
EMV				Sg	**Sg**	**19 48 21.5**	**+2.3**
WIMIS	**Wimmis**	**0.43**	**36**	*i*Pg	**Pg**	**19 48 16.0**	**0.0**
	3µm,0.5s						
WIMIS	**Wimmis**	**0.43**	**36**	*i*Pg	**Pg**	**19 48 15.7**	**-0.3**
WIMIS	**Wimmis**	**0.43**	**36**	*i*Pg	**Pg**	**19 48 15.7**	**-0.3**
TORNY	**Torny/Romont**	**0.50**	**336**	*i*Pg	**Pg**	**19 48 18.7**	**+1.4**
	3µm,0.6s						
TORNY	**Torny/Romont**	**0.50**	**336**	*e*Pg	**Pg**	**19 48 16.0**	**-1.3**
TORNY	**Torny/Romont**	**0.50**	**336**	*i*Pg	**Pg**	**19 48 18.7**	**+1.4**
	3µm,0.6s						
MRGE	**Morge**	**0.56**	**194**	Pg	**Pg**	**19 48 19.1**	**+0.7**
MRGE				Sg	**Sg**	**19 48 27.0**	**+1.2**
	486nm,0.4s						
MRGE	**Morge**	**0.56**	**194**	Pg	**Pg**	**19 48 19.1**	**+0.7**
MRGE				Sg	**Sg**	**19 48 27.0**	**+1.2**
	486nm,0.4s						
GIMEL	**St. Georges /**	**0.72**	**288**	*e*Pg	**Pg**	**19 48 23.4**	**+2.0**
	2µm,0.4s						
GIMEL	**St. Georges /**	**0.72**	**288**	*e*Pg	**Pg**	**19 48 23.4**	**+2.0**
	2µm,0.4s						
HASLI	**Hasliberg/Brie**	**0.76**	**54**	*e*Pg	**Pg**	**19 48 22.0**	**-0.2**
	1µm,0.5s						
HASLI	**Hasliberg/Brie**	**0.76**	**54**	*e*Pn	**Pn**	**19 48 18.6**	**-5.8**
HASLI	**Hasliberg/Brie**	**0.76**	**54**	*e*Pg	**Pg**	**19 48 22.0**	**-0.2**
	1µm,0.5s						
RSL	**Roselend**	**0.76**	**215**	Pg	**Pg**	**19 48 23.1**	**+0.8**
RSL				Sg	**Sg**	**19 48 33.7**	**+1.5**
RSL	**Roselend**	**0.76**	**215**	Pg	**Pg**	**19 48 23.1**	**+0.8**
RSL				Sg	**Sg**	**19 48 33.7**	**+1.5**
BRANT	**Les Verrieres**	**0.82**	**320**	*i*Pg	**Pg**	**19 48 24.8**	**+1.4**
	2µm,0.7s						
BRANT	**Les Verrieres**	**0.82**	**320**	*i*Pg	**Pg**	**19 48 24.8**	**+1.4**
	2µm,0.7s						
ORO	**Oropa**	**0.85**	**143**	Pg	**Pg**	**19 48 23.4**	**-0.6**
	364nm,0.2s						
ORO	**Oropa**	**0.85**	**143**	Pg	**Pg**	**19 48 23.4**	**-0.6**
	364

SNR=1.0
PLONS **Plons/SG** 1.64 63⇓*i*Pn Pn 19 48 36.7 +0.3
584nm,0.3s
FELD **Feldberg im Sc** 1.64 18 Pn Pn 19 48 36.3 -0.2
FELD Pg Pg 19 48 39.3 +0.2
FELD Sg Sg 19 49 00.3 -0.1
FELD **Feldberg im Sc** 1.64 18 Pn Pn 19 48 36.3 -0.2
FELD **Feldberg im Sc** 1.64 18 Pg Pg 19 48 39.3 +0.2
FELD Sg Sg 19 49 00.3 -0.1
ROTM **Rocchetta Tana** 1.66 152 P Pn 19 48 39.4 +2.7
SLE **Schleitheim** 1.68 30⇓*i*Pn Pn 19 48 37.9 +0.9
2µm,0.4s
SLE **Schleitheim** 1.68 30⇓*i*Pn Pn 19 48 37.9 +0.9
2µm,0.4s
ORIF **Oris-en-Rattie** 1.70 215 *e*Pg Pg 19 48 40.5 +0.4
ORIF *e*Sn Sn 19 48 58.1 -0.8
SNR=1.0
ORIF *e*Sg Sg 19 49 03.0 +0.9
113nm,0.3s,SNR=1.0
ORIF **Oris-en-Rattie** 1.70 215 *e*Pn Pn 19 48 36.9 -0.3
ORIF *e*Pg Pg 19 48 40.5 +0.4
ORIF *e*Sn Sn 19 48 58.1 -0.8
ORIF *e*Sg Sg 19 49 03.0 +0.9
ORIF **Oris-en-Rattie** 1.70 215 *e*Pn Pn 19 48 36.9 -0.3
SNR=1.0
ORIF **Oris-en-Rattie** 1.70 215 *e*Pg Pg 19 48 40.5 +0.4
ORIF *e*Sn Sn 19 48 58.1 -0.8
SNR=1.0
ORIF *e*Sg Sg 19 49 03.0 +0.9
56nm,0.3s,SNR=1.0
MDI **Monti di Nese** 1.79 107 Pg Pg 19 48 41.0 -1.0
192nm,0.5s
MDI **Monti di Nese** 1.79 107 Pg Pg 19 48 41.0 -1.0
192nm,0.5s
HAU **Haudompre** 1.80 340 *e*Pg Pg 19 48 41.9 -0.2
HAU *e*Sg Sg 19 49 05.5 +0.1
193nm,0.3s,SNR=1.0
HAU **Haudompre** 1.80 340 *e*P Pn 19 48 39.7 +1.1
HAU *e*Pg Pg 19 48 41.9 -0.2
HAU *e*Sg Sg 19 49 05.5 +0.1
HAU **Haudompre** 1.80 340 *e*P Pn 19 48 39.7 +1.1
SNR=1.0
HAU **Haudompre** 1.80 340 *e*Pg Pg 19 48 41.9 -0.2
HAU *e*Sg Sg 19 49 05.5 +0.1
96nm,0.3s,SNR=1.0
DOI **San Damiano** 1.81 180 Pg Pg 19 48 39.9 -2.4
92nm,0.3s
DOI **San Damiano** 1.81 180 Pg Pg 19 48 39.9 -2.4
92nm,0.3s
PZZ **Stroppo** 1.81 183 Pg Pg 19 48 40.9 -1.4
235nm,0.6s
PZZ **Stroppo** 1.81 183 Pg Pg 19 48 40.9 -1.4
235nm,0.6s
LIENZ **Kamor/St.Gall** 1.82 57⇓*i*Pn Pn 19 48 40.1 +1.1
709nm,0.6s
LIENZ **Kamor/St.Gall** 1.82 57⇓*i*Pn Pn 19 48 40.1 +1.1
709nm,0.6s
DAVOX **Davos/Dischmat** 1.87 75 Pg Pg 19 48 42.1 -1.3
DAVOX **Davos/Dischmat** 1.87 75 Pg Pg 19 48 42.1 -1.3
ECH **Echery** 1.90 358 Pg Pg 19 48 43.9 -0.1
ECH Sg Sg 19 49 08.9 +0.2
ECH **Echery** 1.90 358 Pn Pn 19 48 40.2 +0.2
ECH Pg Pg 19 48 43.9 -0.1
ECH Sg Sg 19 49 08.9 +0.2
ECH **Echery** 1.90 358 Pn Pn 19 48 40.2 +0.2
ECH **Echery** 1.90 358 Pg Pg 19 48 43.9 -0.1
ECH Sg Sg 19 49 08.9 +0.2
BERNI **Berninapass** 1.92 86 Pg Pg 19 48 43.2 -1.2
BERNI **Berninapass** 1.92 86 Pg Pg 19 48 43.2 -1.2
PCP **Piancastagn** 1.99 152 Pg Pg 19 48 44.0 -1.8
144nm,1.0s
PCP **Piancastagn** 1.99 152 Pg Pg 19 48 44.0 -1.8
144nm,1.0s
DAVA **Damuels** 2.05 61 *e*Pn Pn 19 48 43.5 +1.5
SNR=25
DAVA ⇑*i*Pg Pg 19 48 46.9 0.0
DAVA ⇓*i*Sn Sn 19 49 08.7 +1.0
DAVA ⇑*i*Sg Sg 19 49 14.4 +1.0
163nm,0.3s
DAVA **Damuels** 2.05 61 Pn Pn 19 48 43.5 +1.4
SNR=25
ENR **Entracque** 2.09 177 P Pn 19 48 42.8 +0.2
CDF **Champ du Feu** 2.10 0 *e*Pg Pg 19 48 47.4 -0.4
CDF *e*Sn Sn 19 49 07.1 -1.8
SNR=1.0
CDF *e*Sg Sg 19 49 14.0 -1.0
58nm,0.3s
CDF **Champ du Feu** 2.10 0 *e*Pn Pn 19 48 42.8 +0.1
CDF *e*P 19 48 44.3
CDF *e*Pg Pg 19 48 47.4 -0.4
CDF *e*Sn Sn 19 49 07.1 -1.8
CDF *e*Sg Sg 19 49 14.0 -1.0
CDF **Champ du Feu** 2.10 0 *e*Pn Pn 19 48 42.8 +0.1
SNR=1.0
CDF **Champ du Feu** 2.10 0 *e*Pg Pg 19 48 47.4 -0.4
CDF *e*Sn Sn 19 49 07.1 -1.8
SNR=1.0
CDF *e*Sg Sg 19 49 14.0 -1.0
29nm,0.3s
FUORN **Ofenpass-Fuorn** 2.10 81 Pg Pg 19 48 46.3 -1.6
FUORN **Ofenpass-Fuorn** 2.10 81 Pg Pg 19 48 46.3 -1.6
QLNO **Quiliano** 2.13 158 Pg Pg 19 48 45.9 -2.6
66nm,0.6s
QLNO **Quiliano** 2.13 158 Pg Pg 19 48 45.9 -2.6
66nm,0.6s
BFO **Black Forest** 2.15 20 *e*Pn Pn 19 48 42.8 -0.6
BFO *e*Sg Sg 19 49 14.9 -1.6
BFO **Black Forest** 2.15 20 Pn Pn 19 48 42.8 -0.6
BFO Sg Sg 19 49 14.9 -1.6
SSB **Saint Sauveur** 2.16 242 *e*Pn Pn 19 48 48.0 +4.4
SSB **Saint Sauveur** 2.16 242 *e*Pn Pn 19 48 48.0 +4.4
BRMO **Bormio** 2.17 85 Pg Pg 19 48 47.7 -1.4
41nm,0.5s
BRMO **Bormio** 2.17 85 Pg Pg 19 48 47.7 -1.4
41nm,0.5s
BOB **Bobbio (Coli)** 2.19 134 Pg Pg 19 48 48.2 -1.2
BOB **Bobbio (Coli)** 2.19 134 Pg Pg 19 48 48.2 -1.2
MONE **Monesi** 2.26 171 P Pn 19 48 45.4 +0.4
RORO **Rocca Rossa** 2.28 165 P Pn 19 48 45.3 +0.1
MABI **Malga Bissina** 2.28 95 Pg Pg 19 48 49.2 -2.0
39nm,0.4s
MABI **Malga Bissina** 2.28 95 Pg Pg 19 48 49.2 -2.0
39nm,0.4s
TOUF **Mont Tournerai** 2.30 180 Pn Pn 19 48 49.9 +4.4
TOUF **Mont Tournerai** 2.30 180 Pn Pn 19 48 49.9 +4.4
AUTN **L'Aution** 2.32 177 Pn Pn 19 48 49.8 +4.0
AUTN **L'Aution** 2.32 177 Pn Pn 19 48 49.8 +4.0
VIVF **Saint-Julien-I** 2.33 232 *e*Pg Pg 19 48 51.4 -0.7
VIVF *e*Sn Sn 19 49 12.9 -1.6
VIVF *e*Sg Sg 19 49 22.6 +0.4
56nm,0.2s,SNR=1.0
VIVF **Saint-Julien-I** 2.33 232 *e*Pn Pn 19 48 45.5 -0.4
VIVF *e*P 19 48 47.6
VIVF *e*Pg Pg 19 48 51.4 -0.7
VIVF *e*Sn Sn 19 49 12.9 -1.6
VIVF *e*Sg Sg 19 49 22.6 +0.4
VIVF **Saint-Julien-I** 2.33 232 *e*Pn Pn 19 48 45.5 -0.4
SNR=1.0
VIVF **Saint-Julien-I** 2.33 232 *e*Pg Pg 19 48 51.4 -0.7
VIVF *e*Sn Sn 19 49 12.9 -1.6
VIVF *e*Sg Sg 19 49 22.6 +0.4
28nm,0.2s,SNR=1.0
SAOF **Saorge** 2.34 175 Pn Pn 19 48 49.3 +3.3
SAOF **Saorge** 2.34 175 Pn Pn 19 48 49.3 +3.3
SMF **Signal de Mont** 2.38 279 *e*Pg Pg 19 48 52.9 -0.2
SMF *e*Sn Sn 19 49 14.6 -1.2
SNR=1.0
SMF *e*Sg Sg 19 49 24.1 +0.1
71nm,0.2s,SNR=1.0
SMF **Signal de Mont** 2.38 279 *e*P Pn 19 48 48.3 +1.7
SMF *e*Pg Pg 19 48 52.9 -0.2
SMF *e*Sn Sn 19 49 14.6 -1.2
SMF *e*Sg Sg 19 49 24.1 +0.1
SMF **Signal de Mont** 2.38 279 *e*P Pn 19 48 48.3 +1.7
SNR=1.0
SMF **Signal de Mont** 2.38 279 *e*Pg Pg 19 48 52.9 -0.2
SMF *e*Sn Sn 19 49 14.6 -1.2
SNR=1.0
SMF *e*Sg Sg 19 49 24.1 +0.1
36nm,0.2s,SNR=1.0
SALO **Salr** 2.39 106 Pg Pg 19 48 49.5 -3.8
131nm,0.8s
SALO **Salr** 2.39 106 Pg Pg 19 48 49.5 -3.8
131nm,0.8s
MAGA **Magasa** 2.41 102 Pg Pg 19 48 50.1 -3.7
235nm,0.5s
MAGA **Magasa** 2.41 102 Pg Pg 19 48 50.1 -3.7
235nm,0.5s
SFTF **Sexfontaines** 2.42 322 *e*P Pn 19 48 49.0 +1.9
baz=132
SFTF **Sexfontaines** 2.42 322 *e*Pg Pg 19 48 53.6 -0.3
baz=139
SFTF *e*Sn Sn 19 49 15.1 -1.7
baz=135
SFTF *e*Sg Sg 19 49 24.9 -0.3
60nm,0.2s,baz=130
SFTF **Sexfontaines** 2.42 322 *e*P Pn 19 48 49.0 +1.9
SFTF *e*Pg Pg 19 48 53.6 -0.3
SFTF *e*Sn Sn 19 49 15.1 -1.7
SFTF *e*Sg Sg 19 49 24.9 -0.3
SFTF **Sexfontaines** 2.42 322 *e*P Pn 19 48 49.0 +1.9
baz=132
SFTF **Sexfontaines** 2.42 322 *e*Pg Pg 19 48 53.6 -0.3
baz=139
SFTF *e*Sn Sn 19 49 15.1 -1.7
baz=135
SFTF *e*Sg Sg 19 49 24.9 -0.3
30nm,0.2s,baz=130
MVIF **Mont Vial** 2.42 182 Pn Pn 19 48 51.1 +4.0
MVIF **Mont Vial** 2.42 182 Pn Pn 19 48 51.1 +4.0
LUCF **Luceram** 2.42 178 Pn Pn 19 48 50.8 +3.6
LUCF **Luceram** 2.42 178 Pn Pn 19 48 50.8 +3.6
IMI **Imperia** 2.45 169 Pg Pg 19 48 50.6 -3.8
IMI **Imperia** 2.45 169 P Pn 19 48 47.9 +0.4
IMI **Imperia** 2.45 169 Pg Pg 19 48 50.6 -3.8
RONM **Roccetta Nervi** 2.45 174 P Pn 19 48 48.5 +0.9
SBF **Sospel** 2.46 177 *e*Pg Pg 19 48 53.4 -1.2
SBF *e*Sg Sg 19 49 24.9 -1.5
127nm,0.4s
SBF **Sospel** 2.46 177 *e*Pn Pn 19 48 46.6 -1.0
SBF *e*P 19 48 49.6
SBF *e*Pg Pg 19 48 53.4 -1.2
SBF *e*Sg Sg 19 49 24.9 -1.5
SBF **Sospel** 2.46 177 *e*Pn Pn 19 48 46.6 -1.0
SNR=1.0
SBF **Sospel** 2.46 177 *e*Pg Pg 19 48 53.4 -1.2
SBF *e*Sg Sg 19 49 24.9 -1.5
64nm,0.4s
NEGI **Seborga** 2.49 172 P Pn 19 48 48.8 +0.7
FETA **Feichten** 2.50 72 *e*Pn Pn 19 48 51.0 +2.8
SNR=25
FETA ⇓*i*Pg Pg 19 48 55.3 -0.1
FETA ⇓*i*Sg Sg 19 49 29.0 +1.3
48nm,0.6s
FETA **Feichten** 2.50 72 Pn Pn 19 48 51.0 +2.8
SNR=25
SC2M **Scurtabo** 2.50 139 P Pn 19 48 48.3 +0.1
LOR **Lormes** 2.52 293 *e*P Pn 19 48 50.2 +1.7
baz=118,SNR=1.0
LOR **Lormes** 2.52 293 *e*Pg Pg 19 48 55.6 -0.2
baz=114
LOR *e*Sn Sn 19 49 17.8 -1.4
SNR=1.0
LOR *e*Sg Sg 19 49 28.4 0.0
37nm,0.2s,baz=118,SNR=1.0
LOR **Lormes** 2.52 293 *e*P Pn 19 48 50.2 +1.7
LOR *e*Pg Pg 19 48 55.6 -0.2
LOR *e*Sn Sn 19 49 17.8 -1.4
LOR *e*Sg Sg 19 49 28.4 0.0
LOR **Lormes** 2.52 293 *e*P Pn 19 48 50.2 +1.7
baz=118,SNR=1.0
LOR **Lormes** 2.52 293 *e*Pg Pg 19 48 55.6 -0.2
baz=114
LOR *e*Sn Sn 19 49 17.8 -1.4
SNR=1.0
LOR *e*Sg Sg 19 49 28.4 0.0
19nm,0.2s,baz=118,SNR=1.0
PLDF **La Plantade** 2.55 264 Pg Pg 19 48 51.5 -4.9
REVF **Revere** 2.58 178 Pn Pn 19 48 54.9 +5.6
COLF **Collangettes** 2.61 253 Pg Pg 19 48 51.2 -6.3
RFYF **Reffroy** 2.61 333 *e*P Pn 19 48 51.7 +1.9
baz=138
RFYF **Reffroy** 2.61 333 *e*Pg Pg 19 48 56.2 -1.4
baz=150
RFYF *e*Sn Sn 19 49 19.1 -2.4
RFYF *e*Sg Sg 19 49 30.4 -1.0
75nm,0.3s,baz=155
RFYF **Reffroy** 2.61 333 *e*P Pn 19 48 51.7 +1.9
RFYF *e*Pg Pg 19 48 56.2 -1.4
RFYF *e*Sn Sn 19 49 19.1 -2.4
RFYF *e*Sg Sg 19 49 30.4 -1.0
RFYF **Reffroy** 2.61 333 *e*P Pn 19 48 51.7 +1.9
baz=138
RFYF **Reffroy** 2.61 333 *e*Pg Pg 19 48 56.2 -1.4
baz=150
RFYF *e*Sn Sn 19 49 19.1 -2.4
RFYF *e*Sg Sg 19 49 30.4 -1.0
37nm,0.3s,baz=155
SMRF **Simiane la Rot** 2.62 208 *e*Pg Pg 19 48 57.8 0.0
SMRF *e*Sn Sn 19 49 19.8 -2.0
SMRF *e*Sg Sg 19 49 31.5 -0.3
21nm,0.5s
SMRF **Simiane la Rot** 2.62 208 *e*P Pn 19 48 52.2 +2.3
SMRF *e*Pg Pg 19 48 57.8 0.0
SMRF *e*Sn Sn 19 49 19.8 -2.0
SMRF *e*Sg Sg 19 49 31.5 -0.3
SMRF **Simiane la Rot** 2.62 208 *e*P Pn 19 48 52.2 +2.3
SNR=1.0
SMRF **Simiane la Rot** 2.62 208 *e*Pg Pg 19 48 57.8 0.0
SMRF *e*Sn Sn 19 49 19.8 -2.0
SMRF *e*Sg Sg 19 49 31.5 -0.3
10nm,0.5s
MEZF **Maizieres J'vi** 2.65 326 *e*P Pn 19 48 52.1 +1.8
baz=143,SNR=1.0
MEZF **Maizieres J'vi** 2.65 326 *e*Pg Pg 19 48 57.2 -1.1
baz=147
MEZF *e*Sn Sn 19 49 20.3 -2.2
baz=126,SNR=1.0
MEZF *e*Sg Sg 19 49 32.6 0.0
69nm,0.4s,SNR=1.0
MEZF **Maizieres J'vi** 2.65 326 *e*P Pn 19 48 52.1 +1.8
MEZF *e*Pg Pg 19 48 57.2 -1.1
MEZF *e*Sn Sn 19 49 20.3 -2.2
MEZF *e*Sg Sg 19 49 32.6 0.0
MEZF **Maizieres J'vi** 2.65 326 *e*P Pn 19 48 52.1 +1.8
baz=143,SNR=1.0
MEZF **Maizieres J'vi** 2.65 326 *e*Pg Pg 19 48 57.2 -1.1
baz=147
MEZF *e*Sn Sn 19 49 20.3 -2.2
baz=126,SNR=1.0
MEZF *e*Sg Sg 19 49 32.6 0.0
34nm,0.4s,SNR=1.0
SSF **Saint Saulge** 2.69 288 *e*Pg Pg 19 48 58.6 -0.4
SSF *e*Sn Sn 19 49 21.5 -1.8
SSF *e*Sg Sg 19 49 33.2 -0.5
35nm,0.2s
SSF **Saint Saulge** 2.69 288 *e*P Pn 19 48 52.5 +1.7
SSF *e*Pg Pg 19 48 58.6 -0.4
SSF *e*Sn Sn 19 49 21.5 -1.8
SSF *e*Sg Sg 19 49 33.2 -0.5
SSF **Saint Saulge** 2.69 288 *e*P Pn 19 48 52.5 +1.7
SNR=1.0
SSF **Saint Saulge** 2.69 288 *e*Pg Pg 19 48 58.6 -0.4
SSF *e*Sn Sn 19 49 21.5 -1.8
SSF *e*Sg Sg 19 49 33.2 -0.5
18nm,0.2s
GRAM **Graiana** 2.69 132 P Pn 19 48 51.6 +0.7
AVF **Avril sur Loir** 2.73 281 *e*P Pn 19 48 53.3 +1.9
SNR=1.0
AVF *e*Sn Sn 19 49 22.9 -1.6
AVF *e*Sg Sg 19 49 35.3 0.0
18nm,0.2s,SNR=1.0
AVF **Avril sur Loir** 2.73 281 *e*P Pn 19 48 53.3 +1.9
SNR=1.0
AVF *e*Sn Sn 19 49 22.9 -1.6
AVF *e*Sg Sg 19 49 35.3 0.0
9.0nm,0.2s,SNR=1.0
APPI **Appiano** 2.76 85 Pg Pg 19 48 56.0 -4.3
49nm,0.5s
APPI **Appiano** 2.76 85 Pg Pg 19 48 56.0 -4.3
49nm,0.5s
FRF **La Foret Royal** 2.79 189 *e*Pg Pg 19 48 59.9 -1.0
FRF *e*Sn Sn 19 49 23.4 -2.5
SNR=1.0
FRF *e*Sg Sg 19 49 35.9 -1.1
41nm,0.4s,SNR=1.0
FRF **La Foret Royal** 2.79 189 *e*P Pn 19 48 54.6 +2.4
FRF *e*Pg Pg 19 48 59.9 -1.0
FRF *e*Sn Sn 19 49 23.4 -2.5
FRF *e*Sg Sg 19 49 35.9 -1.1
FRF **La Foret Royal** 2.79 189 *e*P Pn 19 48 54.6 +2.4
SNR=1.0
FRF **La Foret Royal** 2.79 189 *e*Pg Pg 19 48 59.9 -1.0
FRF *e*Sn Sn 19 49 23.4 -2.5
SNR=1.0
FRF *e*Sg Sg 19 49 35.9 -1.1
20nm,0.4s,SNR=1.0
STU **Stuttgart** 2.79 27 *e*Pn Pn 19 48 50.6 -1.6
STU *e*Sg Sg 19 49 36.8 -0.3
STU **Stuttgart** 2.79 27 Pn Pn 19 48 50.6 -1.6
STU Sg Sg 19 49 36.8 -0.3
MOTA **Moosalm** 2.84 67⇓*e*Pn Pn 19 48 54.7 +1.9
SNR=18
MOTA ⇓*i*Sn Sn 19 49 28.6 +1.5
MOTA **Moosalm** 2.84 67 Pn Pn 19 48 54.7 +1.8
SNR=18
MOTA Sn Sn 19 49 28.6 +1.5
AGO **Saint Agoulin** 2.88 266 Pg Pg 19 48 55.9 -6.7
PYM **Petit Puy Mans** 3.01 261 Pg Pg 19 48 57.5 -7.7
LMR **La Mourre** 3.03 190 *e*Pg Pg 19 49 03.9 -1.6
LMR *e*Sn Sn 19 49 29.4 -2.4
21nm,0.4s,SNR=1.0
LMR *e*Sg Sg 19 49 43.9 -0.8
12nm,0.3s
LMR **La Mourre** 3.03 190 *e*P Pn 19 48 57.6 +2.1
LMR *e*Pg Pg 19 49 03.9 -1.6
LMR *e*Sn Sn 19 49 29.4 -2.4
LMR *e*Sg Sg 19 49 43.9 -0.8
LMR **La Mourre** 3.03 190 *e*P Pn 19 48 57.6 +2.1
SNR=1.0
LMR **La Mourre** 3.03 190 *e*Pg Pg 19 49 03.9 -1.6
LMR *e*Sn Sn 19 49 29.4 -2.4
11nm,0.4s,SNR=1.0
LMR *e*Sg Sg 19 49 43.9 -0.8
6.2nm,0.3s
BGF **Bois d'Agland** 3.06 276 *e*P Pn 19 48 57.8 +1.9
SNR=1.0
BGF *e*Sn Sn 19 49 30.3 -2.2
BGF *e*Sg Sg 19 49 45.8 +0.1
62nm,0.4s
BGF **Bois d'Agland** 3.06 276 *e*P Pn 19 48 57.8 +1.9
SNR=1.0
BGF *e*Sn Sn 19 49 30.3 -2.2
BGF *e*Sg Sg 19 49 45.8 +0.1
31nm,0.4s
SARO **Sassorosso** 3.08 133 P Pn 19 48 57.5 +1.3
WATA **Walderalm** 3.14 69⇓*i*Pn Pn 19 48 58.8 +1.7
SNR=7.6
WATA **Walderalm** 3.14 69 Pn Pn 19 48 58.8 +1.8
SNR=7.6
WTTA **Wattenberg** 3.16 71 *i*Pn Pn 19 48 59.9 +2.6
SNR=17
WTTA **Wattenberg** 3.16 71 Pn Pn 19 48 59.9 +2.6
SNR=17
LASF **Ste Croix** 3.28 228 *e*Pg Pg 19 49 10.1 -0.3
LASF *e*Sn Sn 19 49 36.1 -2.0
30nm,0.5s,SNR=1.0
LASF *e*Sg Sg 19 49 51.7 -1.2
31nm,0.5s
LASF **Ste Croix** 3.28 228 *e*Pn Pn 19 48 58.4 -0.6
LASF *e*P 19 49 01.4
LASF *e*Pg Pg 19 49 10.1 -0.3
LASF *e*Sn Sn 19 49 36.1 -2.0
LASF *e*Sg Sg 19 49 51.7 -1.2
LASF **Ste Croix** 3.28 228 *e*Pn Pn 19 48 58.4 -0.6
SNR=1.0
LASF **Ste Croix** 3.28 228 *e*Pg Pg 19 49 10.1 -0.3
LASF *e*Sn Sn 19 49 36.1 -2.0
15nm,0.5s,SNR=1.0
LASF *e*Sg Sg 19 49 51.7 -1.2
16nm,0.5s
FUR **Furstenfeldbru** 3.31 55 *e*Pn Pn 19 49 00.0 +0.7
FUR **Furstenfeldbru** 3.31 55 Pn Pn 19 49 00.0 +0.7
HYF **Humbligny** 3.31 288 *e*P Pn 19 49 01.8 +2.4
HYF *e*Sn Sn 19 49 36.7 -2.0
HYF **Humbligny** 3.31 288 *e*P Pn 19 49 01.8 +2.4
HYF *e*Sn Sn 19 49 36.7 -2.0
MAIM **Mastiano** 3.32 135 P Pn 19 49 00.8 +1.3
MAIM S Sn 19 49 35.4 -3.6
WLF **Walferdange** 3.43 348 *e*Pn Pn 19 49 03.1 +2.0
WLF *e*Sn Sn 19 49 41.2 -0.6
WLF **Walferdange** 3.43 348 *e*Pn Pn 19 49 02.6 +1.6
WLF **Walferdange** 3.43 348 PN Pn 19 49 03.0 +2.0
WLF **Walferdange** 3.43 348 *e*Pn Pn 19 49 02.6 +1.5
WLF Sn Sn 19 49 41.2 -0.6
TCF **Toulx Ste Croi** 3.50 271 *e*P Pn 19 49 03.9 +2.0
SNR=1.0
TCF *e*Sn Sn 19 49 42.2 -1.1
SNR=1.0
TCF *e*Sg Sg 19 49 59.5 -0.2
32nm,0.6s,SNR=1.0
TCF **Toulx Ste Croi** 3.50 271 *e*P Pn 19 49 03.9 +2.0
SNR=1.0
TCF *e*Sn Sn 19 49 42.2 -1.1
SNR=1.0
TCF *e*Sg Sg 19 49 59.5 -0.2
16nm,0.6s,SNR=1.0
BGG **Burgeitz** 3.89 1 *e*Pn Pn 19 49 08.6 +1.2
BGG **Burgeitz** 3.89 1 Pn Pn 19 49 08.6 +1.2
CAF **Calviac** 3.90 251 *e*Pn Pn 19 49 08.1 +0.7
CAF *e*Sn Sn 19 49 50.7 -2.5
CAF *e*Sg Sg 19 50 11.0 -1.6
13nm,0.3s,SNR=1.0
CAF **Calviac** 3.90 251 *e*Pn Pn 19 49 08.1 +0.7
CAF *e*Sn Sn 19 49 50.7 -2.5
CAF *e*Sg Sg 19 50 11.0 -1.6
6.4nm,0.3s,SNR=1.0
PGF **Pioggiola** 3.97 161 *e*P Pn 19 49 10.5 +2.1
SNR=1.0
PGF *e*Sn Sn 19 49 51.3 -3.7
4.9nm,0.3s
PGF **Pioggiola** 3.97 161 *e*P Pn 19 49 10.5 +2.1
SNR=1.0
PGF *e*Sn Sn 19 49 51.3 -3.7
2.5nm,0.3s
TNS **Taunus Mts** 3.99 11 *e*Pn Pn 19 49 08.3 -0.4
TNS *e*Sn Sn 19 49 53.9 -1.6
TNS **Taunus Mts** 3.99 11 Pn Pn 19 49 08.3 -0.4
TNS Sn Sn 19 49 53.9 -1.6
RJOB **Jochberg** 4.05 67 *e*Pn Pn 19 49 11.2 +1.7
RJOB **Jochberg** 4.05 67 Pn Pn 19 49 11.2 +1.7
GIVF **Givet** 4.12 338 *e*P Pn 19 49 12.6 +2.1
SNR=1.0
GIVF *e*Sn Sn 19 49 54.9 -3.9
12nm,0.3s,SNR=1.0
GIVF *e*Sg Sg 19 50 17.8 -2.1
8.2nm,0.2s
GIVF **Givet** 4.12 338 *e*P Pn 19 49 12.6 +2.1
SNR=1.0
GIVF *e*Sn Sn 19 49 54.9 -3.9
5.8nm,0.3s,SNR=1.0
GIVF *e*Sg Sg 19 50 17.8 -2.1
4.1nm,0.2s
RJF **Les Rejaudoux** 4.14 258 *e*Pn Pn 19 49 12.1 +1.4
SNR=1.0
RJF *e*Sn Sn 19 49 56.4 -2.7
RJF *e*Sg Sg 19 50 18.6 -1.7
14nm,0.4s,SNR=1.0
RJF **Les Rejaudoux** 4.14 258 *e*Pn Pn 19 49 12.1 +1.4
SNR=1.0
RJF *e*Sn Sn 19 49 56.4 -2.7
RJF *e*Sg Sg 19 50 18.6 -1.7
7.1nm,0.4s,SNR=1.0
DOU **Dourbes** 4.18 336 PN Pn 19 49 13.1 +1.8
DOU **Dourbes** 4.18 336 Pn Pn 19 49 13.1 +1.8
KBA **Koelnbreinsper** 4.26 77 *i*Pn Pn 19 49 15.3 +2.8
SNR=12
KBA **Koelnbreinsper** 4.26 77 Pn Pn 19 49 15.3 +2.8
SNR=12
BAIF **Baives** 4.26 333 *e*P Pn 19 49 14.7 +2.2
SNR=1.0
BAIF *e*Sn Sn 19 49 58.7 -3.6
3.4nm,0.2s
BAIF **Baives** 4.26 333 *e*P Pn 19 49 14.7 +2.2
SNR=1.0
BAIF *e*Sn Sn 19 49 58.7 -3.6
1.7nm,0.2s
STB **Steinbach** 4.29 356 *e*Pn Pn 19 49 13.7 +0.8
STB *e*Sn Sn 19 50 03.0 +0.1
9.6nm,0.5s
STB **Steinbach** 4.29 356 Pn Pn 19 49 13.7 +0.8
STB Sn Sn 19 50 03.0 +0.1
9.6nm,0.5s
GRA1 **Grafenberg Arr** 4.30 37 Pg Pg 19 49 26.8 -3.1

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GRA1				Sg	Sg	19 50 23.1	-2.5
GRF	**Grafenberg Arr**	4.30	37	*e*Pg	Pg	19 49 26.8	-3.1
GRF				*e*Sg	Sg	19 50 23.1	-2.5
BCLA	**Clavier**	4.31	343	PN	Pn	19 49 15.2	+2.1
BCLA	**Clavier**	4.31	343	Pn	Pn	19 49 15.2	+2.1
MEM	**Membach**	4.38	350	PN	Pn	19 49 15.4	+1.4
MEM	**Membach**	4.38	350	Pn	Pn	19 49 15.4	+1.4
KLL	**Kalltalsperre**	4.38	352	*e*Pn	Pn	19 49 15.2	+1.1
KLL	**Kalltalsperre**	4.38	352	Pn	Pn	19 49 15.2	+1.1
DREG	**Dreilaegerbach**	4.40	352	*e*Pn	Pn	19 49 15.9	+1.5
DREG	**Dreilaegerbach**	4.40	352	Pn	Pn	19 49 15.9	+1.5
SNF	**Seneffe**	4.64	336	PN	Pn	19 49 20.0	+2.4
SNF	**Seneffe**	4.64	336	Pn	Pn	19 49 19.9	+2.3
MTLF	**Montolieu**	4.65	232	*e*Pn	Pn	19 49 19.1	+1.2
	SNR=1.0						
MTLF				*e*Sn	Sn	19 50 09.3	-2.6
	3.3nm,0.3s,SNR=1.0						
MTLF				*e*Sg	Sg	19 50 34.8	-2.1
	8.8nm,0.4s						
MTLF	**Montolieu**	4.65	232	*e*Pn	Pn	19 49 19.1	+1.2
	SNR=1.0						
MTLF				*e*Sn	Sn	19 50 09.3	-2.6
	1.6nm,0.3s,SNR=1.0						
MTLF				*e*Sg	Sg	19 50 34.8	-2.1
	4.4nm,0.4s						
HOBG	**Hohbusch**	4.67	1	*e*Pn	Pn	19 49 19.4	+1.3
HOBG	**Hohbusch**	4.67	1	Pn	Pn	19 49 19.4	+1.3
WET	**Wettzell**	4.74	51	*e*Pn	Pn	19 49 18.2	-0.7
WET				*e*Sn	Sn	19 50 09.9	-4.0
WET	**Wettzell**	4.74	51	Pn	Pn	19 49 18.2	-0.8
WET				Sn	Sn	19 50 09.9	-4.0
LFF	**La Frestale**	4.77	256	*e*Pn	Pn	19 49 19.8	+0.3
	SNR=1.0						
LFF				*e*Sg	Sg	19 50 38.8	-1.9
	23nm,0.6s						
LFF	**La Frestale**	4.77	256	*e*Pn	Pn	19 49 19.8	+0.3
	SNR=1.0						
LFF				*e*Sg	Sg	19 50 38.8	-1.9
	11nm,0.6s						
MOA	**Molln**	5.03	70⇑	*i*Pn	Pn	19 49 24.1	+1.0
	SNR=13						
MOA	**Molln**	5.03	70	Pn	Pn	19 49 24.1	+1.1
	SNR=13						
GEC2	**GERESS Array S**	5.04	58	*e*Pn	Pn	19 49 23.4	+0.2
GEC2	**GERESS Array S**	5.04	58	Pn	Pn	19 49 23.4	+0.2
KHC	**Kasperske Hory**	5.11	54	*e*Pn	Pn	19 49 23.9	-0.3
	4.8nm,0.5s						
KHC	**Kasperske Hory**	5.11	54	*e*PN	Pn	19 49 24.4	+0.2
KHC				*e*PG	Pg	19 49 42.9	-2.6
KHC				*e*SN	Sn	19 50 19.5	-3.7
KHC				*e*SG	Sg	19 50 48.8	-2.9
KHC	**Kasperske Hory**	5.11	54	*e*Pn	Pn	19 49 23.9	-0.3
	4.8nm,0.5s						
MFF	**Saint Martin d**	5.12	276	*e*Pn	Pn	19 49 26.0	+1.7
	SNR=1.0						
MFF				*e*Sn	Sn	19 50 20.8	-2.6
	12nm,0.3s,SNR=1.0						
MFF	**Saint Martin d**	5.12	276	*e*Pn	Pn	19 49 26.0	+1.7
	SNR=1.0						
MFF				*e*Sn	Sn	19 50 20.8	-2.6
	5.8nm,0.3s,SNR=1.0						
MOX	**Moxa**	5.21	32	*e*PG	Pg	19 49 44.3	-3.0
MOX				*e*SG	Sg	19 50 52.3	-2.5
MOX	**Moxa**	5.21	32	Pg	Pg	19 49 44.3	-3.0
MOX				Sg	Sg	19 50 52.3	-2.5
NKC	**Novy Kostel**	5.23	40	*e*PN	Pn	19 49 28.2	+2.4
NKC				*e*PG	Pg	19 49 46.5	-1.2
NKC				*e*SN	Sn	19 50 23.3	-2.9
NKC				*e*SG	Sg	19 50 52.3	-3.2
TANN	**Tannenbergstha**	5.37	38	*e*Pg	Pg	19 49 47.9	-2.5
TANN	**Tannenbergstha**	5.37	38	Pg	Pg	19 49 47.9	-2.5
LDF	**La Druitiere**	5.50	297	*e*Pn	Pn	19 49 30.9	+1.5
	SNR=1.0						
LDF				*e*Sn	Sn	19 50 28.3	-4.3
	SNR=1.0						
LDF				*e*Sg	Sg	19 51 01.2	-2.7
	15nm,0.5s						
LDF	**La Druitiere**	5.50	297	*e*Pn	Pn	19 49 30.9	+1.5
	SNR=1.0						
FLN	**La Foliniere**	5.78	298	*e*Pn	Pn	19 49 34.7	+1.4
	baz=115,SNR=1.0						
FLN				*e*Sn	Sn	19 50 35.1	-4.5
	baz=114,SNR=1.0						
FLN				*e*Sg	Sg	19 51 10.7	-2.3
	20nm,0.6s						
FLN	**La Foliniere**	5.78	298	*e*Pn	Pn	19 49 34.7	+1.4
	baz=115,SNR=1.0						
GRR	**Gorron**	5.89	294	*e*Pn	Pn	19 49 36.3	+1.5
	SNR=1.0						
GRR				*e*Sn	Sn	19 50 38.3	-4.0
	10nm,0.3s						
GRR	**Gorron**	5.89	294	*e*Pn	Pn	19 49 36.3	+1.5
	SNR=1.0						
EPF	**Esparros**	5.92	239	*e*P	Pn	19 49 39.1	+3.8
EPF				*e*Sn	Sn	19 50 39.0	-4.1
EPF				*e*Sg	Sg	19 51 15.6	-2.0
	7.5nm,0.5s						
CONA	**Conrad Observa**	6.09	72	*i*Pn	Pn	19 49 38.3	+0.7
	SNR=6.2						
CONA	**Conrad Observa**	6.09	72	Pn	Pn	19 49 38.3	+0.7
	SNR=6.2						
PRU	**Pruhonice**	6.11	50	*e*SG	Sg	19 51 20.3	-3.1
CLL	**Collm**	6.28	35	*e*Pg	Pg	19 50 05.0	-2.6
CLL				*e*Sg	Sg	19 51 31.0	+2.2
CLL	**Collm**	6.28	35	*e*Pg	Pg	19 50 05.0	-2.6
CLL				*e*		19 51 24.0	
CLL				*e*Sg	Sg	19 51 31.0	+2.2
	comp=Z,9.0nm,0.8s						
CLL	**Collm**	6.28	35	Pg	Pg	19 50 05.0	-2.6
CLL				Sg	Sg	19 51 31.0	+2.2
BRG	**Berggiesshubel**	6.36	42	PN	Pg	19 50 11.0	+1.7
	comp=Z,2.0nm,0.6s						
BRG				SN	Sn	19 50 51.9	-2.0
BRG				*e*		19 51 15.6	
BRG				*e*		19 51 26.1	
	comp=Z,6.5nm,0.6s						
ETSF	**Etsaut**	6.54	241	*e*Pn	Pn	19 49 43.8	+0.1
ETSF	**Etsaut**	6.54	241	*e*Pn	Pn	19 49 43.8	+0.1
SGMF	**Saint Gilles**	6.95	290	*e*Pn	Pn	19 49 50.4	+1.1
	SNR=1.0						
SGMF				*e*Sn	Sn	19 51 04.2	-4.2
	comp=Z,6.7nm,0.3s						
SGMF	**Saint Gilles**	6.95	290	*e*Pn	Pn	19 49 50.4	+1.1
	SNR=1.0						
ZST	**Bratislava**	6.96	71	*e*PN	Pn	19 49 41.5	-8.0
VRAC	**Vranov**	6.97	61	*e*Pn	Pn	19 49 49.8	+0.2
QUIF	**Quistinic**	7.29	286	*e*Pn	Pn	19 49 54.9	+0.9
	SNR=1.0						
QUIF				*e*Sn	Sn	19 51 11.8	-4.9
	comp=Z,7.1nm,0.4s						
QUIF	**Quistinic**	7.29	286	*e*Pn	Pn	19 49 54.9	+0.9
	SNR=1.0						
ROSF	**Rostrenen**	7.43	290	*e*Pn	Pn	19 49 56.8	+0.8
	SNR=1.0						
ROSF				*e*Sn	Sn	19 51 15.1	-5.2
	comp=Z,4.6nm,0.4s						
ROSF	**Rostrenen**	7.43	290	*e*Pn	Pn	19 49 56.8	+0.8
	SNR=1.0						
PKSG		7.71	78	*e*Sn	Sn	19 51 25.7	-1.5
MORC	**Moravsky Berou**	7.72	60	*e*Pn	Pn	19 49 59.7	-0.2
VYHS	**Vyhne**	8.16	70	*e*Pn	Pn	19 50 05.3	-0.6
VYHS	**Vyhne**	8.16	70	*e*PN	Pn	19 50 05.3	-0.6
VYHS	**Vyhne**	8.16	70	*e*Pn	Pn	19 50 05.3	-0.6
KECS	**Kecovo**	9.23	72	*e*Pn	Pn	19 50 18.2	-2.5
KECS	**Kecovo**	9.23	72	*e*PN	Pn	19 50 18.2	-2.5
STHS	**Stebnicka Huta**	9.90	67	*e*Pn	Pn	19 50 23.6	-6.2
STHS	**Stebnicka Huta**	9.90	67	*e*PN	Pn	19 50 23.5	-6.3

ROM ***17*** *19:49:23.7±0.7, 44°.04N×17°.39E, h10km, MI3.6/17, Error ellipse: s-maj=11.3km s-min=4.6km az=43.0*
NEIC ***17*** *19:49:26.2, 43°.93N×17°.15E, h2km, ML3.9(PDG), ML3.6(ZAG), After PDG.*
NEIC Felt at Livno.
ISCJB ***17*** *19:49:26.4±0.4, 43°.92N±0°.01×17°.04E±0°.02, h8km±3km, Error ellipse: s-maj=2.4km s-min=1.8km az=40.4*
PDG ***17*** *19:49:26.2±0.8, 43°.93N×17°.15E, h2km±2km, MD3.9/8, ML3.9/10, Error ellipse: s-maj=1.0km s-min=1.2km az=0.0*
LDG ***17*** *19:49:26.9±0.1, 43°.94N×17°.17E, h10km, Ml3.8/16, Error ellipse: s-maj=2.8km s-min=2.2km az=29.0*
BEO ***17*** *19:49:27.1±0.6, 43°.94N×16°.87E, h19km±3km, ML3.9/11*
CSEM ***17*** *19:49:27.5±0.1, 43°.94N×16°.98E, h10km, ML3.9, Ms3.5,*

Error ellipse: s-maj=3.3km s-min=2.7km az=13.0
VIE ***17*** *19:49:29.4±0.4, 44°.10N×17°.24E, h10km, mb3.4/10, ML3.4/11, Ms3.5/1, Error ellipse: s-maj=3.6km s-min=2.9km az=14.0*
ISC 17 19:49:26.9±0.4, 43°.94N±0°.01×16°.98E±0°.02, h4km±3km, n282, σ1°35/404, 33C-33D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLY	**Banja Luka**	0.82	10	⇓*i*Pg	Pg	19 49 43.6	+0.8
BLY				*i*Sg	Sg	19 49 56.4	+2.9
BLY	**Banja Luka**	0.82	10	⇓*i*Pg	Pg	19 49 43.6	+0.8
BLY				*i*Sg	Sg	19 49 56.4	+2.9
STON	**Ston**	1.19	154	*i*Pg	Pn	19 49 46.2	-4.0
STON				Sg	Sg	19 50 03.7	-1.3
BRY	**Bratogost**	1.54	132	⇑*i*Pg	Pn	19 49 52.4	-2.6
BRY				*e*Sg	Sg	19 50 16.2	-0.1
BRY	**Bratogost**	1.54	132	*e*Sg	Sg	19 50 16.2	-0.1
BRY	**Bratogost**	1.54	132	*e*Sg	Sg	19 50 16.2	-0.1
TREB	**Trebinje**	1.57	140	⇓*i*Pn	Pn	19 49 54.3	-1.3
TREB				*i*Sg	Sg	19 50 19.4	+1.9
TREB	**Trebinje**	1.57	140	⇓*i*Pn	Pn	19 49 54.3	-1.3
TREB				*i*Sg	Sg	19 50 19.4	+1.9
UPM	**Unac-Piva**	1.58	117	⇑*i*Pg	Pn	19 49 53.9	-1.7
UPM				*e*Sg	Sg	19 50 17.1	-0.6
UPM	**Unac-Piva**	1.58	117	*e*Sg	Sg	19 50 17.1	-0.6
UPM	**Unac-Piva**	1.58	117	*e*Sg	Sg	19 50 17.1	-0.6
SISC	**Sisak**	1.59	344	*e*Pn	Pn	19 49 57.1	+1.3
SISC				Sn	Sn	19 50 19.6	+2.7
SISC	**Sisak**	1.59	344	*e*Pn	Pn	19 49 57.1	+1.3
SISC				Sn	Sn	19 50 19.5	+2.6
NVLJ	**Novalja**	1.64	293	*e*Pn	Pn	19 49 58.6	+2.1
NVLJ	**Novalja**	1.64	293	*e*Pn	Pn	19 49 58.6	+2.1
BBLS	**Lazići**	1.75	91	*e*Pn	Pn	19 49 56.9	-1.1
BBLS				*i*Sn	Sn	19 50 20.6	-0.1
BBLS	**Lazići**	1.75	91	*e*Pn	Pn	19 49 56.9	-1.1
BBLS				*i*Sn	Sn	19 50 20.6	-0.1
NKY	**Niksic**	1.85	127	⇓*i*Pn	Pn	19 49 57.8	-1.5
NKY				*e*Sn	Sn	19 50 25.2	+2.1
NKY	**Niksic**	1.85	127	*e*Sn	Sn	19 50 25.2	+2.1
NKY	**Niksic**	1.85	127	⇓*i*Pn	Pn	19 49 57.8	-1.5
NKY				*e*Sn	Sn	19 50 25.2	+2.1
PLE	**Pljevlja**	1.85	108	⇑*i*Pn	Pn	19 49 58.2	-1.2
PLE				*e*Sn	Sn	19 50 24.1	+0.9
PLE	**Pljevlja**	1.85	108	*e*Sn	Sn	19 50 24.1	+0.9
PLE	**Pljevlja**	1.85	108	⇑*i*Pn	Pn	19 49 58.2	-1.2
PLE				*e*Sn	Sn	19 50 24.1	+0.9
HCY	**Herceg Novi**	1.86	143	⇑*i*Pn	Pn	19 49 58.1	-1.3
HCY				*e*Sn	Sn	19 50 25.1	+1.8
HCY	**Herceg Novi**	1.86	143	*e*Sn	Sn	19 50 25.1	+1.8
HCY	**Herceg Novi**	1.86	143	⇑*i*Pn	Pn	19 49 58.1	-1.3
HCY				*e*Sn	Sn	19 50 25.1	+1.8
BOJS	**Bojanci**	2.00	322	*e*Pn	Pn	19 50 03.0	+1.7
BOJS				*e*Sn	Sn	19 50 32.4	+5.7
BOJS	**Bojanci**	2.00	322	*e*Pn	Pn	19 50 03.0	+1.7
BOJS				*e*Sn	Sn	19 50 32.4	+5.7
RHK3	**Tenkes**	2.15	24	⇓*e*Pn	Pn	19 50 03.2	-0.3
BUM	**Brajici-Budva**	2.15	139	⇓*i*Pn	Pn	19 50 03.5	0.0
BUM				*e*Sn	Sn	19 50 32.3	+1.7
BUM	**Brajici-Budva**	2.15	139	⇓*i*Pn	Pn	19 50 03.5	0.0
BUM				*e*Sn	Sn	19 50 32.3	+1.7
DIVS	**Divibare**	2.18	85	⇑*i*Pn	Pn	19 50 03.5	-0.3
DIVS				*i*Sn	Sn	19 50 31.2	0.0
DIVS	**Divibare**	2.18	85	⇑*i*Pn	Pn	19 50 03.5	-0.3
DIVS				*i*Sn	Sn	19 50 31.2	0.0
PDG	**Podgorica**	2.25	131	⇑*i*Pn	Pn	19 50 04.6	-0.2
PDG				*e*Sn	Sn	19 50 34.7	+1.8
TTG	**Podgorica**	2.25	131	⇑*i*Pn	Pn	19 50 04.6	-0.2
TTG				*e*Sn	Sn	19 50 34.7	+1.8
TTG	**Podgorica**	2.25	131	⇑*i*Pn	Pn	19 50 04.6	-0.2
TTG				*e*Sn	Sn	19 50 34.7	+1.8
SJES	**Sjenica**	2.27	106	*e*Pn	Pn	19 50 04.9	-0.3
SJES				*e*Sn	Sn	19 50 33.7	+0.1
MSAG	**Monte S. Angel**	2.36	200	Pn	Pn	19 50 05.8	-0.5
	424nm,0.5s						
MSAG	**Monte S. Angel**	2.36	200	Pn	Pn	19 50 05.8	-0.5
	424nm,0.5s						
FRGS	**Fruska Gora**	2.36	58	⇑*i*Pn	Pn	19 50 05.2	-1.2
FRGS				*i*Sn	Sn	19 50 36.1	+0.4
SGRT	**San Giovanni R**	2.36	203	Pn	Pn	19 50 05.8	-0.6
	243nm,0.6s						
SGRT	**San Giovanni R**	2.36	203	Pn	Pn	19 50 05.8	-0.6
	243nm,0.6s						
BEY	**Berane**	2.38	116	⇑*i*Pn	Pn	19 50 06.6	0.0
BEY				*e*Sn	Sn	19 50 37.0	+0.9
IVA	**Berane**	2.38	116	⇑*i*Pn	Pn	19 50 06.6	0.0
IVA				*e*Sn	Sn	19 50 37.0	+0.9
IVA	**Berane**	2.38	116	⇑*i*Pn	Pn	19 50 06.6	0.0
IVA				*e*Sn	Sn	19 50 37.0	+0.9
VISS	**Visnje**	2.41	322	*e*Pn	Pb	19 50 10.9	+0.1
VISS				*e*Sn	Sb	19 50 42.3	+1.5
VISS	**Visnje**	2.41	322	*e*Pn	Pb	19 50 10.9	+0.1
VISS				*e*Sn	Sb	19 50 42.3	+1.5
KNDS	**Knezji Dol**	2.44	312	*e*Pn	Pb	19 50 11.3	-0.1
KNDS				*e*Sn	Sb	19 50 44.9	+3.1
KNDS	**Knezji Dol**	2.44	312	*e*Pn	Pn	19 50 11.3	+3.8
RGNG	**Rignano Grg**	2.48	205	Pn	Pn	19 50 08.0	-0.1
RGNG	**Rignano Grg**	2.48	205	Pn	Pn	19 50 08.0	-0.1
TRUS	**Trudelj**	2.48	82	*e*Pn	Pn	19 50 08.9	+0.8
TRUS				*i*Sg	Sg	19 50 48.8	+2.1
TRUS	**Trudelj**	2.48	82	*e*Pn	Pn	19 50 08.9	+0.8
TRUS				*i*Sg	Sg	19 50 48.8	+2.1
PKSM	**Moragy**	2.56	27	⇑*i*Pn	Pn	19 50 08.5	-0.6
PKSM	**Moragy**	2.56	27	⇓P	Pn	19 50 08.4	-0.7
PKSM				S	Sn	19 50 40.3	-0.4
PKSM	**Moragy**	2.56	27	⇑*i*Pn	Pn	19 50 08.5	-0.6
PKSM				S	Sn	19 50 40.3	-0.4
PVY	**Plav**	2.56	121	⇓*i*Pn	Pn	19 50 09.3	+0.2
PVY				*e*Sn	Sn	19 50 42.3	+1.6
PVY	**Plav**	2.56	121	⇓*i*Pn	Pn	19 50 09.3	+0.2
PVY				*e*Sn	Sn	19 50 42.3	+1.6
ULC	**Ulcinj**	2.58	139	⇓*i*Pn	Pn	19 50 10.1	+0.7
ULC				*e*Sn	Sn	19 50 43.0	+1.9
ULC	**Ulcinj**	2.58	139	⇓*i*Pn	Pn	19 50 10.1	+0.7
ULC				*e*Sn	Sn	19 50 43.0	+1.9
BEO	**Beograd**	2.65	70	*e*Pn	Pn	19 50 10.6	+0.3
BEO				*e*Sg	Sg	19 50 52.7	+0.7
GRUS	**Gruza**	2.70	90	*e*Pn	Pn	19 50 10.6	-0.4
GRUS				*e*Sg	Sg	19 50 54.5	+0.9
GRUS	**Gruza**	2.70	90	*e*Pn	Pn	19 50 10.6	-0.4
GRUS				*e*Sg	Sg	19 50 54.5	+0.9
LJU	**Ljubljana**	2.73	321	*e*Pn	Pg	19 50 19.2	-0.1
LJU				*e*Sn	Sg	19 50 54.0	-0.7
BCI	**Bajram Curri**	2.75	124	*i*PN	Pn	19 50 14.1	+2.4
BCI				*i*SN	Sn	19 50 49.9	+4.6
BCI	**Bajram Curri**	2.75	124	*i*Pn	Pn	19 50 14.1	+2.4
LPEL	**Lama dei Pelig**	2.79	228	Pn	Pn	19 50 13.4	+1.1
	130nm,0.7s						
LPEL	**Lama dei Pelig**	2.79	228	Pn	Pn	19 50 13.4	+1.1
	130nm,0.7s						
TERO	**Teramo**	2.79	243	Pn	Pn	19 50 13.3	+1.0
	159nm,0.5s						
TERO	**Teramo**	2.79	243	Pn	Pn	19 50 13.3	+1.0
	159nm,0.5s						
PKS9	**Tamasi**	2.80	19	⇓*e*Pn	Pn	19 50 12.9	+0.4
CING	**Cingoli**	2.81	260	Pn	Pn	19 50 13.1	+0.6
CING	**Cingoli**	2.81	260	Pn	Pn	19 50 13.1	+0.6
PUK	**Puka**	2.85	131	*e*PN	Pn	19 50 15.7	+2.6
PUK				*i*SN	Sn	19 50 54.5	+6.6
PUK	**Puka**	2.85	131	*e*Pn	Pn	19 50 15.7	+2.6
ZAVS	**Zavodnje**	2.86	332	*e*Pn	Pg	19 50 30.6	+9.0
TRI	**Trieste**	2.90	309	*e*Pn	Pn	19 50 14.9	+1.2
TRI				*e*Pg	Pg	19 50 20.8	-1.6
TRI	**Trieste**	2.90	309	*e*Pn	Pn	19 50 14.9	+1.2
CAMP	**Campotosto**	2.96	243	Pn	Pn	19 50 15.7	+1.1
CAMP				Sn	Sn	19 50 53.1	+2.5
	43nm,0.7s						
CAMP	**Campotosto**	2.96	243	Pn	Pn	19 50 15.7	+1.1
CAMP				Sn	Sn	19 50 53.1	+2.5
	43nm,0.7s						
FDMO	**Fiordimonte**	2.97	254	Pn	Pn	19 50 15.8	+1.0
	341nm,1.4s						
FDMO	**Fiordimonte**	2.97	254	Pn	Pn	19 50 15.8	+1.0
	341nm,1.4s						
FAGN	**Fagnano**	3.00	237	Pn	Pn	19 50 16.0	+0.9
	394nm,0.5s						
FAGN	**Fagnano**	3.00	237	Pn	Pn	19 50 16.0	+0.9
	394nm,0.5s						
PKS2	**Kecel**	3.00	31	⇑*e*Pn	Pn	19 50 16.0	+0.8
SNTG	**Esanatoglia**	3.02	258	Pn	Pn	19 50 16.8	+1.4
SNTG	**Esanatoglia**	3.02	258	Pn	Pn	19 50 16.8	+1.4
NRCA	**Norcia**	3.03	250	Pn	Pn	19 50 16.8	+1.3
	43nm,0.5s						
NRCA	**Norcia**	3.03	250	Pn	Pn	19 50 16.8	+1.3
	43nm,0.5s						
VOY	**Vojsko**	3.03	315	*e*Pn	Pn	19 50 18.3	+2.7
VOY				*e*Sn	Sn	19 50 59.0	+6.7
VOY	**Vojsko**	3.03	315	*e*Pn	Pn	19 50 18.3	+2.7
SGTA	**Sant Agata di**	3.04	204	Pn	Pn	19 50 15.6	-0.2
	117nm,0.4s						
SGTA	**Sant Agata di**	3.04	204	Pn	Pn	19 50 15.6	-0.2
	117nm,0.4s						
FSSB	**Fossombrone**	3.05	267	Pn	Pn	19 50 15.5	-0.4
	48nm,0.4s						
FSSB	**Fossombrone**	3.05	267	Pn	Pn	19 50 15.5	-0.4
	48nm,0.4s						
AQU	**L'Aquila**	3.06	240	Pn	Pn	19 50 17.2	+1.2
	85nm,0.6s						
AQU	**L'Aquila**	3.06	240	Pn	Pn	19 50 17.2	+1.2
	85nm,0.6s						
SOKA	**Soboth**	3.07	334	⇑*i*Pn	Pn	19 50 17.0	+1.0
SOKA				⇓*i*Sn	Sn	19 50 54.6	+1.4
SOKA	**Soboth**	3.07	334	Pn	Pn	19 50 17.0	+0.9
SOKA				Sn	Sn	19 50 54.6	+1.4
CESI	**CESI - Serrava**	3.11	254	Pn	Pn	19 50 17.5	+0.8
	83nm,0.5s						
CESI	**CESI - Serrava**	3.11	254	Pn	Pn	19 50 17.5	+0.8
	83nm,0.5s						
LNSS	**Leonessa**	3.17	247	Pn	Pn	19 50 18.9	+1.4
	372nm,0.6s						
LNSS	**Leonessa**	3.17	247	Pn	Pn	19 50 18.9	+1.4
	372nm,0.6s						
SGG	**Gregorio Mates**	3.19	218	Pn	Pn	19 50 20.0	+2.2
	88nm,0.5s						
SGG	**Gregorio Mates**	3.19	218	Pn	Pn	19 50 20.0	+2.2
	88nm,0.5s						
VVLD	**Villa Vallelon**	3.22	231	Pn	Pn	19 50 19.1	+0.9
	144nm,0.6s						
VVLD	**Villa Vallelon**	3.22	231	Pn	Pn	19 50 19.1	+0.9
	144nm,0.6s						
SDI	**San Donato**	3.23	227	Pn	Pn	19 50 18.4	+0.2
	32nm,0.3s						
SDI	**San Donato**	3.23	227	Pn	Pn	19 50 18.4	+0.2
	32nm,0.3s						
VAGA	**Valle Agricola**	3.23	220	Pn	Pn	19 50 19.5	+1.1
	91nm,0.4s						
VAGA	**Valle Agricola**	3.23	220	Pn	Pn	19 50 19.5	+1.1
	91nm,0.4s						
FIAM	**Fiamignano**	3.29	241	Pn	Pn	19 50 20.9	+1.8
	212nm,0.7s						
FIAM	**Fiamignano**	3.29	241	Pn	Pn	19 50 20.9	+1.8
	212nm,0.7s						
LTRZ	**Laterza**	3.33	182	Pn	Pn	19 50 17.7	-2.0
	119nm,0.5s						
LTRZ	**Laterza**	3.33	182	Pn	Pn	19 50 17.7	-2.0
	119nm,0.5s						
TIR	**Tirane**	3.35	140	*e*Pn	Pn	19 50 19.1	-0.9
TIR	**Tirane**	3.35	140	*e*Pn	Pn	19 50 19.0	-0.9
ARSA	**Arzberg**	3.47	343	*i*Pn	Pn	19 50 22.7	+1.1
	SNR=34						
ARSA				⇓*i*Sn	Sn	19 51 02.4	-0.6
ARSA	**Arzberg**	3.47	343	Pn	Pn	19 50 22.7	+1.1
	SNR=34						
ARSA				Sn	Sn	19 51 02.4	-0.7
MNS	**Montasola**	3.51	245	Pn	Pn	19 50 22.9	+0.8
	80nm,0.5s						
MNS	**Montasola**	3.51	245	Pn	Pn	19 50 22.9	+0.8
	80nm,0.5s						
PKSG		3.59	15	⇑*e*Pn	Pn	19 50 24.3	+1.0
NISS		3.64	97	*e*Pn	Pn	19 50

KZN	Kozani	5.08	134	*e*P	Pn	19 50 44.1	+0.3
WATA	Walderalm	5.09	314	⇓*i*Pn	Pn	19 50 46.2	+2.3
	SNR=19						
WATA				⇓*i*Sn	Sn	19 51 46.5	+3.5
WATA	Walderalm	5.09	314	Pn	Pn	19 50 46.2	+2.3
	SNR=19						
WATA				Sn	Sn	19 51 46.5	+3.5
KECS	Kecovo	5.16	27	*e*Pn	Pn	19 50 47.7	+2.9
	2.4nm,0.4s						
KECS				*e*Sn	Sn	19 51 42.6	-2.0
KECS	Kecovo	5.16	27	*e*PN	Pn	19 50 47.7	+2.9
KECS				*e*SN	Sn	19 51 42.6	-2.0
MEV	Metsovon	5.22	141	P	Pn	19 50 44.9	-0.8
MEV	Metsovon	5.22	141	P	Pn	19 50 44.9	-0.8
MOTA	Moosalm	5.35	312	⇑*i*Pn	Pn	19 50 50.5	+3.1
	SNR=10						
MOTA				⇓*i*Sn	Sn	19 51 52.9	+3.6
MOTA	Moosalm	5.35	312	Pn	Pn	19 50 50.5	+3.1
	SNR=10						
MOTA				Sn	Sn	19 51 52.9	+3.5
FETA	Feichten	5.37	307	⇑*i*Pn	Pn	19 50 50.7	+3.0
	SNR=12						
FETA				⇑*i*Sn	Sn	19 51 53.6	+3.7
VRAC	Vranov	5.38	357	*e*Pn	Pn	19 50 49.5	+1.7
VRAC				*e*Sn	Sn	19 51 49.2	-0.9
MMB	Musomiste	5.49	113	P	Pn	19 50 51.1	+1.7
NVR	Nevrokopi	5.69	115	*e*P	Pn	19 50 53.3	+1.1
KHC	Kasperske Hory	5.70	337	*e*SN	Sn	19 51 57.0	-1.1
THL	Klokotos Trika	5.76	138	*e*P	Pn	19 50 52.7	-0.4
CRVS	Cervenica-Dubn	5.85	30	*e*Pn	Pn	19 50 55.1	+0.8
	82nm,3.7s						
CRVS				*e*Sn	Sn	19 51 54.3	-7.5
CRVS	Cervenica-Dubn	5.85	30	*e*PN	Pn	19 50 55.1	+0.8
CRVS				*e*SN	Sn	19 51 54.3	-7.5
CRVS	Cervenica-Dubn	5.85	30	*e*Pn	Pn	19 50 55.1	+0.8
	82nm,3.7s						
MORC	Moravsky Berou	5.86	4	⇑P	Pn	19 50 56.1	+1.8
MORC				S	Sn	19 52 04.5	+2.7
MORC	Moravsky Berou	5.86	4	*e*Pn	Pn	19 50 55.7	+1.3
VOIR		5.94	73	⇓P	Pn	19 50 54.6	-1.0
VOIR		5.94	73	⇑*i*P	Pn	19 50 57.5	+1.9
VOIR		5.94	73	⇓P	Pn	19 50 54.6	-1.0
PLG	Polygyros	5.98	124	*e*P	Pn	19 50 56.8	+0.7
PGF	Pioggiola	5.99	259	*e*Pn	Pn	19 50 55.9	-0.4
PGF				*e*Sn	Sn	19 52 01.3	-4.0
	5.6nm,0.7s						
PGF	Pioggiola	5.99	259	*e*Pn	Pn	19 50 55.9	-0.4
DAVA	Damuels	6.00	306	⇑*i*Pn	Pn	19 50 59.4	+3.0
EVR	Evrytania	6.19	142	*e*P	Pn	19 50 59.9	+0.9
KOLS	Kolonicke sedl	6.19	34	*e*Pn	Pn	19 51 03.8	+4.8
KOLS				*e*Sn	Sn	19 52 03.9	-6.2
KOLS	Kolonicke sedl	6.19	34	*e*PN	Pn	19 51 03.8	+4.8
KOLS				*e*SN	Sn	19 52 03.9	-6.2
STHS	Stebnicka Huta	6.21	27	*e*Pn	Pn	19 51 03.3	+4.0
STHS				*e*Sn	Sn	19 52 10.4	-0.3
STHS	Stebnicka Huta	6.21	27	*e*PN	Pn	19 51 03.3	+4.0
STHS				*e*SN	Sn	19 52 10.4	-0.3
AGG	Agios Georgios	6.34	139	P	Pn	19 50 59.8	-1.3
AGG	Agios Georgios	6.34	139	P	Pn	19 50 59.8	-1.3
VLS	Valsamata	6.37	153	P	Pn	19 50 56.6	-4.8
VLS	Valsamata	6.37	153	*e*P	Pn	19 50 59.1	-2.3
PAIG	Paliouri	6.40	126	P	Pn	19 51 01.4	-0.5
PAIG	Paliouri	6.40	126	P	Pn	19 51 01.4	-0.5
XOR	Xorichti	6.52	132	P	Pn	19 51 01.8	-1.7
XOR	Xorichti	6.52	132	P	Pn	19 51 01.8	-1.7
MLR	Muntele Rosu	6.57	73	⇓P	Pn	19 51 02.2	-2.0
MLR	Muntele Rosu	6.57	73	⇓P	Pn	19 51 02.2	-2.0
RLS	Riolos of Patr	6.78	148	*e*P	Pn	19 51 05.7	-1.4
SBF	Sospel	6.90	273	*e*Pn	Pn	19 51 08.9	+0.2
SBF				*e*Sn	Sn	19 52 22.3	-5.3
	27nm,0.5s						
SBF	Sospel	6.90	273	*e*Pn	Pn	19 51 08.9	+0.2
RDO	Rodhopi	6.91	111	*e*P	Pn	19 51 08.0	-0.8
BRG	Berggiesshubel	7.24	345	SG	Sb	19 52 57.8	-1.9
	6.5nm,0.7s						
MBDF	Montbardon	7.37	280	*e*Pn	Pn	19 51 13.4	-1.7
MBDF				*e*Sn	Sn	19 52 33.9	-5.2
	22nm,0.6s						
MBDF	Montbardon	7.37	280	*e*Pn	Pn	19 51 13.4	-1.7
LPG	La Plagne	7.45	286	*e*Pn	Pn	19 51 15.7	-0.6
LPG				*e*Sn	Sn	19 52 35.1	-6.1
	60nm,0.8s						
LPG	La Plagne	7.45	286	*e*Pn	Pn	19 51 15.7	-0.6
LPL	La Plagne	7.47	286	*e*Pn	Pn	19 51 15.9	-0.6
LPL				*e*Sn	Sn	19 52 36.0	-5.6
	56nm,0.6s						
LPL	La Plagne	7.47	286	*e*Pn	Pn	19 51 15.9	-0.6
FRF	La Foret Royal	7.50	271	*e*Pn	Pn	19 51 16.8	-0.1
FRF				*e*Sn	Sn	19 52 37.0	-5.2
	7.6nm,0.6s						
FRF	La Foret Royal	7.50	271	*e*Pn	Pn	19 51 16.8	-0.1
LMR	La Mourre	7.62	269	*e*Pn	Pn	19 51 18.0	-0.6
LMR				*e*Sn	Sn	19 52 40.0	-5.4
	4.9nm,0.6s						
LMR	La Mourre	7.62	269	*e*Pn	Pn	19 51 18.0	-0.6
ITM	Ithomi	7.73	149	*e*P	Pn	19 51 19.9	-0.2
CLL	Collm	7.85	341	*e*Pn	Pn	19 51 18.0	-3.7
CLL				*e*		19 53 21.0	
CLL				*e*Sg	Sg	19 53 38.0	-0.7
CLL	Collm	7.85	341	*e*(Pn)	Pn	19 51 18.0	-3.7
CLL				*e*		19 52 42.0	
CLL				*e*Sb	Sb	19 53 21.0	+3.9
CLL				*e*Sg	Sg	19 53 38.0	-0.7
CLL	Collm	7.85	341	*e*Pn	Pn	19 51 18.0	-3.7
NAIG	Nisos Aigina	7.90	139	*e*P	Pn	19 51 21.1	-1.3
VLY	Voula,Athens	7.97	137	*e*P	Pn	19 51 22.1	-1.3
ORIF	Oris-en-Rattie	8.01	281	*e*Pn	Pn	19 51 23.3	-0.6
ORIF				*e*Sn	Sn	19 52 48.0	-6.9
	36nm,0.7s						
ORIF	Oris-en-Rattie	8.01	281	*e*Pn	Pn	19 51 23.3	-0.6
HINF	Hinteralfeld	8.06	302	*e*P	Pn	19 51 28.5	+3.9
HINF				*e*Sn	Sn	19 52 48.9	-7.3
	7.4nm,0.4s						
CDF	Champ du Feu	8.09	307	*e*Pn	Pn	19 51 23.3	-1.7
CDF	Champ du Feu	8.09	307	*e*Pn	Pn	19 51 23.3	-1.7
CABF	La Chapelle	8.14	293	*e*Pn	Pn	19 51 23.7	-2.0
CABF				*e*Sn	Sn	19 52 52.8	-5.2
	4.7nm,0.5s						
CABF	La Chapelle	8.14	293	*e*Pn	Pn	19 51 23.7	-2.0
SMRF	Simiane la Rot	8.23	274	*e*Pn	Pn	19 51 26.1	-0.9
SMRF	Simiane la Rot	8.23	274	*e*Pn	Pn	19 51 26.1	-0.9
HAU	Haudompre	8.45	302	*e*P	Pn	19 51 33.4	+3.4
HAU				*e*Sn	Sn	19 52 59.4	-6.3
	11nm,0.5s						
HAU	Haudompre	8.45	302	*e*Pn	Pn	19 51 28.0	-2.0
HAU				*e*P		19 51 33.4	
HAU				*e*Sn	Sn	19 52 59.4	-6.3
HAU	Haudompre	8.45	302	*e*Pn	Pn	19 51 28.0	-2.0
VIVF	Saint-Julien-l	8.86	280	*e*Pn	Pn	19 51 34.1	-1.6
VIVF	Saint-Julien-l	8.86	280	*e*Pn	Pn	19 51 34.1	-1.6
SFTF	Sexfontaines	9.33	301	*e*Pn	Pn	19 51 40.3	-1.8
SFTF				*e*Sn	Sn	19 53 20.1	-7.3
	2.6nm,0.4s						
SFTF	Sexfontaines	9.33	301	*e*Pn	Pn	19 51 40.3	-1.8
MEZF	Maizieres J'vi	9.44	303	*e*Pn	Pn	19 51 41.3	-2.3
MEZF				*e*Sn	Sn	19 53 22.1	-8.0
	4.3nm,0.4s						
MEZF	Maizieres J'vi	9.44	303	*e*Pn	Pn	19 51 41.3	-2.3
LASF	Ste Croix	9.46	275	*e*Pn	Pn	19 51 42.5	-1.4
LASF	Ste Croix	9.46	275	*e*Pn	Pn	19 51 42.5	-1.4
SMF	Signal de Mont	9.65	291	*e*Pn	Pn	19 51 45.0	-1.4
SMF				*e*Sn	Sn	19 53 28.6	-6.6
	13nm,0.5s						
SMF	Signal de Mont	9.65	291	*e*Pn	Pn	19 51 45.0	-1.4
LOR	Lormes	9.78	294	*e*Sn	Sn	19 53 31.4	-7.0
	9.1nm,0.4s						
SSF	Saint Saulge	9.96	293	*e*Pn	Pn	19 51 49.1	-1.6
SSF	Saint Saulge	9.96	293	*e*Pn	Pn	19 51 49.1	-1.6
AVF	Avril sur Loir	10.01	291	*e*Pn	Pn	19 51 49.8	-1.5
AVF				*e*Sn	Sn	19 53 36.6	-7.4
	6.2nm,0.7s						
AVF	Avril sur Loir	10.01	291	*e*Pn	Pn	19 51 49.8	-1.5
BGF	Bois d'Agland	10.31	290	*e*Pn	Pn	19 51 54.3	-1.1
BGF	Bois d'Agland	10.31	290	*e*Pn	Pn	19 51 54.3	-1.1
GIVF	Givet	10.34	311	*e*Pn	Pn	19 51 54.6	-1.2
GIVF	Givet	10.34	311	*e*Pn	Pn	19 51 54.6	-1.2
TCF	Toulx Ste Croi	10.71	288	*e*Pn	Pn	19 51 59.2	-1.7
TCF	Toulx Ste Croi	10.71	288	*e*Pn	Pn	19 51 59.2	-1.7
RJF	Les Rejaudoux	11.11	282	*e*Pn	Pn	19 52 04.5	-1.9
RJF	Les Rejaudoux	11.11	282	*e*Pn	Pn	19 52 04.5	-1.9
MFF	Saint Martin d	12.36	288	*e*Pn	Pn	19 52 21.5	-2.0
MFF	Saint Martin d	12.36	288	*e*Pn	Pn	19 52 21.5	-2.0
GRR	Gorron	13.14	296	*e*Pn	Pn	19 52 32.0	-2.1
GRR	Gorron	13.14	296	*e*Pn	Pn	19 52 32.0	-2.1

IDC 17 19:58:49.5±44.0, 28°32S×63°06E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.4/23, mbtmp3.6/3, MS3.6/2, Ms1 3.6/2, ms1mx3.0/33, Error ellipse: s-maj=1103.0km s-min=59.4km az=75.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMBO	Kilima Mbogo	36.60	313	LR	LR	20 16 58.9	
	comp=Z,67nm,20.2s,baz=94,slow=30						
CMAR	Chiang Mai Arr	58.03	41	P	P	20 08 44.2	-0.2
	0.6nm,0.8s,baz=218,slow=6.7,SNR=4.2						
ASAR	Alice Springs	63.03	104	P	P	20 09 18.9	+0.3
	0.7nm,0.8s,baz=242,slow=7.2,SNR=8.1						
WRA	Warramunga Arr	64.78	100	P	P	20 09 30.1	0.0
	0.6nm,0.9s,baz=236,slow=5.9,SNR=2.9						
MKAR	Makanchi Array	76.76	13	LR	LR	20 40 23.6	
	comp=Z,48nm,18.6s,baz=346,slow=32						

IDC 17 20:00:03.4±1.7, 43°37N×105°28W, h0km, mb3.7/2, mb1 3.7/7, mb1mx3.5/28, mbtmp3.5/7, ML3.0/4, MS3.6/1, Ms1 3.6/1, ms1mx2.5/48, Error ellipse: s-maj=42.9km s-min=7.2km az=152.0
ISCJB 17 20:00:04.0±0.4, 43°72N×105°04×105°15W±0°05, h0km, mb3.9/2, Error ellipse: s-maj=5.3km s-min=4.8km az=147.5
NEIC 17 20:00:06.1±0.4, 43°69N×105°22W, h0km, ML3.4, Error ellipse: s-maj=6.3km s-min=5.4km az=161.0, Suspected Mining explosion.
NEIC 70 km [45 miles] SSE of Gillette.

ISC 17 20:00:06.1±0.3, 43°71N±0°03×105°16W±0°04, h0km, n56, σ1°22/58, mb3.9/2, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.91	63	*e*Pg	Pg	20 00 25.4	+1.8
PHWY	Pilot Hill	2.41	185	*e*Pn	Pn	20 00 47.0	+0.2
RWWY	Rawlins	2.52	217	*e*Pn	Pn	20 00 48.7	+0.5
LAO	LASA Array	3.07	346	*e*Pn	Pn	20 00 58.6	+2.8
RLMT	Red Lodge	3.26	297	*e*Pn	Pn	20 00 58.7	+0.3
BW06	Boulder Array	3.35	255	*e*Pn	Pn	20 00 58.6	-1.0
PDAR	Pinedale Array	3.35	255	Pn	Pn	20 00 58.9	-0.7
	6.5nm,0.3s,baz=76,slow=16,SNR=57						
PDAR				Pg	Pg	20 01 02.6	-7.6
	18nm,0.3s,baz=80,slow=17,SNR=87						
PDAR				Lg		20 01 44.2	
	20nm,0.3s,baz=74,slow=32,SNR=21						
OGNE	Ogallala	3.61	139	*e*Pn	Pn	20 01 03.3	+0.2
GCMT	Greycliff	3.83	305	*e*Pn	Pn	20 01 06.2	0.0
ISCO	Idaho Springs	3.92	185	*e*Pn	Pn	20 01 07.5	+0.1
LOHW	Long Hollow	3.95	270	*e*Pn	Pn	20 01 09.5	+1.6
SNOW	Snow King Moun	4.07	268	Pn	Pn	20 01 08.3	-1.2
YNR	Norris Junctio	4.09	286	Pn	Pn	20 01 06.0	-3.8
REDW	Red Top Meadow	4.15	267	*e*Pn	Pn	20 01 13.1	+2.4
YFT	Old Faithful	4.15	282	Pn	Pn	20 01 16.1	+5.4
IMW	Indian Meadow	4.18	275	*e*Pn	Pn	20 01 12.5	+1.4
TPAW	Teton Pass	4.21	269	*e*Pn	Pn	20 01 11.4	0.0
YMR	Madison River	4.28	285	*e*Pn	Pn	20 01 13.7	+1.2
DCID1	Drake Creek	4.37	271	*e*Pn	Pn	20 01 11.9	-1.7
RRI2	Red Ridge	4.49	268	*e*Pn	Pn	20 01 16.6	+1.3
QLMT	Earthquake Lak	4.64	286	*e*Pn	Pn	20 01 23.2	+5.9
SMCO	Snowmass	4.73	197	*e*Pn	Pn	20 01 23.7	+5.1
DGMT	Dagmar	4.81	8	*e*Pn	Pn	20 01 21.3	+1.6
BOZ	Bozeman (W)	5.00	295	*e*Pn	Pn	20 01 20.9	-1.4
HWUT	Hardware Ranch	5.17	248	*e*Pn	Pn	20 01 24.0	-0.6
	13nm,0.6s						
EGMT	Eagleton	5.38	325	*e*Pn	Pn	20 01 21.9	-5.5
	10nm,0.4s						
DLMT	Dillon	5.56	290	*e*Pn	Pn	20 01 28.9	-1.1
	10nm,0.9s						
DAU	Daniels Canyon	5.60	236	*e*Pn	Pn	20 01 32.8	+2.2
	11nm,0.4s						
LRM	Limekiln Ridge	5.60	295	*e*Pn	Pn	20 01 30.4	-0.1
	18nm,0.3s						
JLU	Jordanelle	5.61	239	*e*Pn	Pn	20 01 32.2	+1.6
	9.8nm,0.7s						
MCMT	McKenzie Canyo	5.63	284	*e*Pn	Pn	20 01 34.9	+3.9
	1.9nm,0.3s						
SPUT	South Promonto	5.89	248	*e*Pn	Pn	20 01 34.5	-0.1
	7.0nm,0.6s						
SDCO	Great Sand Dun	5.96	183	*e*Pn	Pn	20 01 36.9	+1.3
	3.4nm,0.8s						
PV04	Paradox Valley	6.01	209	*e*Pn	Pn	20 01 36.1	-0.2
MPU	Maple Canyon	6.08	235	*e*Pn	Pb	20 01 48.6	-4.1
SRU	San Rafael	6.11	223	*e*Pn	Pn	20 01 36.3	-1.2
	14nm,0.6s						
PV01	Paradox Valley	6.13	206	*e*Pn	Pn	20 01 38.6	+0.7
	307nm,0.6s						
ECSD	EROS Data Cent	6.20	87	*e*Pn	Pn	20 01 39.4	+0.6
	0.9nm,0.6s						
TMUT	Trail Mountain	6.32	228	*e*Pn	Pn	20 01 38.3	-2.2
	11nm,0.5s						
CBKS	Cedar Bluff	6.37	138	*e*Pn	Pn	20 01 39.8	-1.4
	16nm,0.6s						
BGU	Big Grassy Mou	6.46	247	*e*Pn	Pn	20 01 40.7	-1.6
	2.2nm,0.6s						
CHMT	Chamberlain Mo	6.54	302	*e*Pn	Pn	20 01 43.5	+0.1
	1.2nm,0.3s						
DUG	Dugway	6.70	241	*e*Pn	Pn	20 01 44.6	-1.0
	3.8nm,0.6s						
HLID	Hailey	6.71	272	*e*Pn	Pn	20 01 47.0	+1.1
	2.9nm,1.0s						
MSU	Marysvale	7.41	228	*e*Pn	Pn	20 01 55.3	-0.1
	9.0nm,1.0s						
YBMT	Yellow Bay	7.45	307	*e*Pn	Pn	20 01 57.0	+1.1
	6.6nm,0.3s						
AGMN	Agassiz Nation	7.94	51	*e*Pn	Pn	20 02 02.6	0.0
	7.5nm,0.4s						
ELK	Elko	8.04	252	Pn	Pn	20 02 03.4	-0.7
	0.2nm,0.3s,baz=73,slow=15,SNR=3.4						
ULM	Lac du Bonnet	9.11	41	Pn	Pn	20 02 18.7	0.0
ULM				Sn	Sn	20 03 59.8	-2.2
ULM				Lg		20 04 47.7	
ULM	Lac du Bonnet	9.11	41	Pn	Pn	20 02 18.7	0.0
	1.8nm,0.3s,baz=232,slow=13,SNR=7.8						
ULM				Sn	Sn	20 03 59.8	-2.2
	1.1nm,0.3s,baz=171,slow=3.5,SNR=3.9						
ULM				Lg		20 04 47.7	
	0.1nm,0.3s,baz=176,slow=16,SNR=2.2						
FFC	Flin Flon	11.22	10	*e*Pn	Pn	20 02 46.0	-1.6
	2.2nm,0.6s						
NVAR	Mina Array Bea	11.23	246	Pn	Pn	20 02 43.8	-4.0
	0.1nm,0.3s,baz=72,slow=12,SNR=2.5						
YKA	Yellowknife Ar	19.61	347	P	Pn	20 04 35.9	-1.1
	0.1nm,0.3s,baz=153,slow=9.2,SNR=3.0						
JMIC	Jan Mayen	51.46	25	LR	LR	20 32 54.8	
	comp=Z,57nm,18.9s,baz=75,slow=38						
ARCES	ARCESS Array B	61.42	18	P	P	20 10 21.9	-1.6
	0.5nm,0.5s,mb3.9,baz=339,slow=9.7,SNR=7.5						
FINES	FINESS Array B	68.03	23	P	P	20 11 07.3	+0.6
	0.6nm,0.6s,mb4.0,baz=335,slow=6.3,SNR=4.2						

VIE 17 20:00:06.1±0.7, 43°46N×17°35E, h10km, mb2.7/3, ML2.6/3, Error ellipse: s-maj=9.0km s-min=5.8km az=54.0 72 km E of Split
NEIC 17 20:00:11.1, 43°94N×17°15E, h2km, ML2.9(PDG), ML2.8(ZAG), After PDG.
BEO 17 20:00:11.6±0.8, 43°89N×16°88E, h7km±4km, ML3.3/4
CSEM 17 20:00:11.7±0.2, 43°90N×16°98E, h2km, ML3.3, Error ellipse: s-maj=5.9km s-min=2.7km az=57.0
PDG 17 20:00:11.1±0.4, 43°94N×17°15E, h2km±1km, ML2.9/9, Error ellipse: s-maj=1.4km s-min=2.4km az=0.0
ISCJB 17 20:00:11.5±0.4, 43°90N±0°02×16°94E±0°04, h10km, Error ellipse: s-maj=5.1km s-min=2.2km az=142.6

ISC 17 20:00:11.1±0.6, 43°88N±0°03×16°92E±0°04, h0km±4km, n58, σ0°94/97, 18C-18D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLY	Banja Luka	0.89	12	⇑*i*Pg	Pg	20 00 28.2	-0.1
BLY				*i* Sg	Sg	20 00 41.0	+1.1
BLY	Banja Luka	0.89	12	⇑*i*Pg	Pg	20 00 28.2	-0.1
BLY				*i* Sg	Sg	20 00 41.0	+1.1
STON	Ston	1.16	150	*e*Pg	Pg	20 00 30.6	-2.6
STON				Sg	Sg	20 00 48.4	+0.2
STON	Ston	1.16	150	*e*Pg	Pg	20 00 30.6	-2.6
STON				Sg	Sg	20 00 48.3	+0.1
BRY	Bratogost	1.54	129	⇑*i*Pg	Pn	20 00 37.9	-1.8
BRY				*e*Sg	Sn	20 00 59.8	-0.5
BRY	Bratogost	1.54	129	⇑*i*Pg	Pn	20 00 37.9	-1.8
BRY				*e*Sg	Sn	20 00 59.8	-0.5
TREB	Trebinje	1.56	137	*e*Pn	Pn	20 00 39.4	-0.6
TREB				*i* Sg	Sg	20 01 02.5	+1.3
TREB	Trebinje	1.56	137	*e*Pn	Pn	20 00 39.4	-0.6
TREB				*i* Sg	Sg	20 01 02.5	+1.3
UPM	Unac-Piva	1.60	114	⇓*i*Pg	Pn	20 00 38.2	-2.4
UPM				*e*Sg	Sn	20 01 00.6	-1.3
UPM	Unac-Piva	1.60	114	⇓*i*Pg	Pn	20 00 38.2	-2.4
UPM				*e*Sg	Sn	20 01 00.6	-1.3
NVLJ	Novalja	1.62	296	*i* Pn	Pg	20 00 43.1	+0.9
NVLJ	Novalja	1.62	296	*i* Pn	Pg	20 00 43.1	+0.9
BBLS	Lazići	1.80	89	⇑*i*Pn	Pn	20 00 43.1	-0.2
BBLS				*i* Sg	Sg	20 01 09.1	+0.2
BBLS	Lazići	1.80	89	⇑*i*Pn	Pn	20 00 43.1	-0.2
BBLS				*i* Sg	Sg	20 01 09.1	+0.2
HCY	Herceg Novi	1.84	140	⇓*i*Pn	Pn	20 00 43.5	-0.4
HCY				*e*Sn	Sn	20 01 09.3	+1.5
HCY	Herceg Novi	1.84	140	⇓*i*Pn	Pn	20 00 43.5	-0.4
HCY				*e*Sn	Sn	20 01 09.3	+1.5
PLE	Pljevlja	1.88	106	⇑*i*Pn	Pn	20 00 43.1	-1.4
PLE				*e*Sn	Sn	20 01 08.9	+0.1
PLE	Pljevlja	1.88	106	⇑*i*Pn	Pn	20 00 43.1	-1.4
PLE				*e*Sn	Sn	20 01 08.9	+0.1
BOJS	Bojanci	2.02	325	*e*Pn	Pg	20 00 49.6	-0.1
BOJS	Bojanci	2.02	325	*e*Pn	Pg	20 00 49.6	-0.1
BUM	Brajici-Budva	2.14	137	⇓*i*Pn	Pn	20 00 48.1	+0.1
BUM				*e*Sn	Sn	20 01 16.4	+1.1
BUM	Brajici-Budva	2.14	137	⇓*i*Pn	Pn	20 00 48.1	+0.1
BUM				*e*Sn	Sn	20 01 16.4	+1.1
RHK3	Tenkes	2.23	25	⇓*e*Pn	Pn	20 00 47.8	-1.4
RHK3				*e*Sn	Sg	20 01 23.0	+0.4
DIVS	Divibare	2.23	83	⇓*i*Pn	Pn	20 00 49.9	+0.6
DIVS				*e*Sn	Sn	20 01 17.3	-0.2
DIVS	Divibare	2.23	83	⇓*i*Pn	Pn	20 00 49.9	+0.6
DIVS				*e*Sn	Sn	20 01 17.3	-0.2
PDG	Podgorica	2.24	129	⇑*i*Pn	Pn	20 00 49.7	+0.3
PDG				*e*Sn	Sn	20 01 19.1	+1.3
TTG	Podgorica	2.24	129	⇑*i*Pn	Pn	20 00 49.7	+0.3
TTG				*e*Sn	Sn	20 01 19.1	+1.3
TTG	Podgorica	2.24	129	⇑*i*Pn	Pn	20 00 49.7	+0.3
TTG				*e*Sn	Sn	20 01 19.1	+1.3
BEY	Berane	2.40	114	⇑*i*Pn	Pn	20 00 51.2	-0.3
BEY				*e*Sn	Sn	20 01 22.1	+0.6
IVA	Berane	2.40	114	⇑*i*Pn	Pn	20 00 51.2	-0.3
IVA				*e*Sn	Sn	20 01 22.1	+0.6
IVA	Berane	2.40	114	⇑*i*Pn	Pn	20 00 51.2	-0.3
IVA				*e*Sn	Sn	20 01 22.1	+0.6
VISS	Visnje	2.43	323	*e*Pn	Pb	20 00 55.4	-0.2
VISS	Visnje	2.43	323	*e*Pn	Pb	20 00 55.4	-0.2
KNDS	Knezji Dol	2.45	313	*e*Pn	Pg	20 00 59.4	+1.3
KNDS	Knezji Dol	2.45	313	*e*Pn	Pg	20 00 59.4	+1.4
ULC	Ulcinj	2.57	137	⇓*i*Pn	Pn	20 00 53.9	0.0
ULC				*e*Sn	Sn	20 01 26.7	+0.9
ULC	Ulcinj	2.57	137	⇓*i*Pn	Pn	20 00 53.9	0.0
ULC				*e*Sn	Sn	20 01 26.7	+0.9
PVY	Plav	2.58	119	*e*Pn	Pn	20 00 54.1	+0.1
PVY				*e*Sn	Sn	20 01 26.4	+0.4
PVY	Plav	2.58	119	*e*Pn	Pn	20 00 54.1	+0.1
PVY				*e*Sn	Sn	20 01 26.4	+0.4
PKSM	Moragy	2.64	27	*e*Pn	Pn	20 00 54.4	-0.5
PKSM	Moragy	2.64	27	*e*Pn	Pn	20 00 54.4	-0.5
GRUS	Gruza	2.75	88	*e*Pn	Pn	20 00 55.8	-0.6
GRUS	Gruza	2.75	88	*e*Pn	Pn	20 00 55.8	-0.6
VOY	Vojsko	3.04	316	*e*Pn	Pb	20 01 03.6	-2.5
VOY				*e*Sn	Sb	20 01 43.7	0.0
VOY	Vojsko	3.04	316	*e*Pn	Pb	20 01 03.6	-2.5

*IDC **17** 20:01:47.8±1.1, 35°.42N×27°.31E, h0km, mb3.7/6, mb1 3.7/10, mb1mx3.6/27, mbtmp3.6/10, ML3.4/3, MS3.0/1, Ms1 3.0/1, ms1mx2.3/48, Error ellipse: s-maj=24.4km s-min=14.8km az=167.0*
*DDA **17** 20:01:47.1, 35°.40N×27°.03E, h17km, Md3.7*
*ISK **17** 20:01:48.5, 35°.36N×27°.10E, h58km, MD3.7*
*ISCJB **17** 20:01:49.9±0.5, 35°.46N±0°.03×27°.29E±0°.02, h22km±4km, mb3.6/6, Error ellipse: s-maj=4.4km s-min=2.8km az=167.6*
*NEIC **17** 20:01:49.7, 35°.54N×27°.22E, h21km, MD3.4(ATH), After ATH.*
*ATH **17** 20:01:49.7, 35°.54N×27°.22E, h21km, MD3.4/5*
*CSEM **17** 20:01:50.6±0.2, 35°.49N×27°.25E, h15km, MD3.4, Error ellipse: s-maj=4.4km s-min=2.5km az=159.0*
*THE **17** 20:01:51.2, 35°.38N×27°.34E, h23km±4km, ML4.5/1, Error ellipse: s-maj=4.6km s-min=1.1km az=150.0*

ISC 17 20:01:50.6±0.5, 35°.48N±0°.03×27°.26E±0°.02, h15km±3km, n161, σ0°.93/218, mb3.6/6, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.11**	**310**	*e*Pb	**Pg**	**20 01 53.5**	**-0.5**
KARP				*e*Sb	**Sg**	**20 01 56.3**	**+0.1**
KARP	**Karpathos**	**0.11**	**310**	*e*PB	**Pg**	**20 01 53.5**	**-0.5**
KARP				*e*SB	**Sg**	**20 01 56.2**	**0.0**
KARP	**Karpathos**	**0.11**	**310**	*e*Pb	**Pg**	**20 01 53.5**	**-0.5**
KARP				*e*Sb	**Sg**	**20 01 56.3**	**+0.1**
ZKR	**Zakros**	**0.93**	**248**	P	**Pb**	**20 02 07.0**	**-1.4**
ZKR				S	**Sb**	**20 02 21.0**	**+0.5**
ZKR	**Zakros**	**0.93**	**248**	P	**Pb**	**20 02 07.0**	**-1.4**
ZKR				S	**Sb**	**20 02 21.0**	**+0.5**
ARG	**Arkhangelos**	**1.02**	**43**	*e*Pn	**Pn**	**20 02 08.9**	**-1.4**
ARG				*e*Sn	**Sn**	**20 02 23.0**	**-1.3**
ARG	**Arkhangelos**	**1.02**	**43**	P	**Pb**	**20 02 08.8**	**-1.1**
ARG				S	**Sb**	**20 02 22.8**	**-0.3**
ARG	**Arkhangelos**	**1.02**	**43**	*e*PN	**Pn**	**20 02 08.9**	**-1.4**
ARG				*e*SN	**Sn**	**20 02 23.0**	**-1.3**
ARG	**Arkhangelos**	**1.02**	**43**	P	**Pb**	**20 02 08.8**	**-1.1**
ARG				S	**Sb**	**20 02 22.8**	**-0.3**
NIS1	**Nisyros Isl.**	**1.13**	**356**	P	**Pb**	**20 02 11.1**	**-0.6**
NIS1				S	**Sb**	**20 02 27.9**	**+1.7**
NIS1	**Nisyros Isl.**	**1.13**	**356**	P	**Pb**	**20 02 11.1**	**-0.6**
NIS1				S	**Sb**	**20 02 27.9**	**+1.7**
DAT	**Datca**	**1.28**	**11**	PN	**Pn**	**20 02 13.1**	**-0.8**
DAT				*e*SN	**Sn**	**20 02 30.7**	**0.0**
DAT	**Datca**	**1.28**	**11**	*i* Pn	**Pn**	**20 02 13.1**	**-0.8**
DAT				*e*Sn	**Sn**	**20 02 30.7**	**0.0**
NPS	**Neapolis**	**1.37**	**262**	*e*Pn	**Pn**	**20 02 15.6**	**+0.5**
NPS				*e*Sn	**Sn**	**20 02 32.5**	**-0.4**
NPS	**Neapolis**	**1.37**	**262**	*e*PN	**Pn**	**20 02 15.6**	**+0.5**
NPS				*e*SN	**Sn**	**20 02 32.5**	**-0.4**
NPS	**Neapolis**	**1.37**	**262**	*e*Pn	**Pn**	**20 02 15.6**	**+0.5**
NPS				*e*Sn	**Sn**	**20 02 32.5**	**-0.4**
BDRM	**Kayabasi**	**1.59**	**5**	*i* P	**Pn**	**20 02 17.4**	**-0.8**
BDRM				*i* S	**Sn**	**20 02 36.5**	**-2.0**
BDRM	**Kayabasi**	**1.59**	**5**	*i* P	**Pn**	**20 02 17.4**	**-0.8**
BDRM				*i* S	**Sn**	**20 02 36.5**	**-2.0**
THR1	**Thera Island**	**1.72**	**302**	P	**Pn**	**20 02 19.9**	**0.0**
THR1				S	**Sn**	**20 02 41.4**	**-0.1**
TURN	**Turunc**	**1.77**	**37**	*i* P	**Pn**	**20 02 16.9**	**-3.7**
TURN				*i* S	**Sn**	**20 02 35.1**	**-7.6**
TURN	**Turunc**	**1.77**	**37**	*i* P	**Pn**	**20 02 16.9**	**-3.7**
THR2	**Thira island,**	**1.77**	**304**	P	**Pn**	**20 02 20.7**	**0.0**
THR3	**Thira Island,**	**1.78**	**302**	P	**Pn**	**20 02 20.9**	**+0.2**
THR5	**Thira Island,**	**1.82**	**302**	P	**Pn**	**20 02 21.4**	**+0.1**
YER	**Yerkesik**	**1.85**	**26**	*e*PN	**Pn**	**20 02 21.4**	**-0.3**
YER	**Yerkesik**	**1.85**	**26**	*e*Pn	**Pn**	**20 02 21.4**	**-0.3**
MLSB	**Milas**	**1.86**	**13**	PN	**Pn**	**20 02 21.4**	**-0.5**
MLSB				*e*SN	**Sn**	**20 02 45.4**	**+0.2**
MLSB	**Milas**	**1.86**	**13**	*i* Pn	**Pn**	**20 02 21.4**	**-0.5**
MLSB				*e*Sn	**Sn**	**20 02 45.4**	**+0.2**
IDI	**Anoyia**	**1.95**	**265**	Pn	**Pn**	**20 02 23.1**	**0.0**
	25nm,0.3s,baz=63,slow=19,SNR=92						
IDI				Sn	**Sn**	**20 02 47.5**	**+0.2**
	58nm,0.3s,baz=267,slow=15,SNR=6.0						
IDI	**Anoyia**	**1.95**	**265**	Pn	**Pn**	**20 02 23.1**	**0.0**
IDI				Sn	**Sn**	**20 02 47.5**	**+0.2**
AKAS	**Kas**	**2.05**	**68**	*i* P	**Pn**	**20 02 24.9**	**+0.4**
AKAS				*i* S	**Sn**	**20 02 52.2**	**+2.5**
AKAS	**Kas**	**2.05**	**68**	*i* P	**Pn**	**20 02 24.9**	**+0.5**
AKAS				*i* S	**Sn**	**20 02 52.2**	**+2.5**
APE	**Apeiranthos**	**2.12**	**319**	*e*Pn	**Pn**	**20 02 25.2**	**-0.2**
APE	**Apeiranthos**	**2.12**	**319**	P	**Pn**	**20 02 25.1**	**-0.3**
APE				S	**Sn**	**20 02 52.0**	**+0.5**
APE	**Apeiranthos**	**2.12**	**319**	*e*PN	**Pn**	**20 02 25.2**	**-0.2**
APE	**Apeiranthos**	**2.12**	**319**	*e*Pn	**Pn**	**20 02 25.2**	**-0.2**
APE				S	**Sn**	**20 02 52.0**	**+0.5**
AYDN	**Tasoluk**	**2.24**	**13**	*i* P	**Pn**	**20 02 27.0**	**-0.1**
AYDN				*i* S	**Sn**	**20 02 54.4**	**0.0**
SMG	**Samos**	**2.25**	**351**	*e*Pb	**Pb**	**20 02 26.8**	**-4.2**
SMG	**Samos**	**2.25**	**351**	*e*PB	**Pb**	**20 02 26.8**	**-4.2**
GLHS	**Gihisar (BURDU**	**2.46**	**46**	*e*PN	**Pn**	**20 02 30.3**	**+0.1**
GLHS	**Gihisar (BURDU**	**2.46**	**46**	*e*Pn	**Pn**	**20 02 30.3**	**+0.1**
ELL	**Elmali**	**2.49**	**59**	*e*PN	**Pn**	**20 02 31.1**	**+0.6**
ELL	**Elmali**	**2.49**	**59**	*e*Pn	**Pn**	**20 02 31.1**	**+0.6**
VAM	**Vamos**	**2.50**	**269**	*e*Pn	**Pn**	**20 02 31.1**	**+0.4**
VAM	**Vamos**	**2.50**	**269**	*e*PN	**Pn**	**20 02 31.1**	**+0.4**
VAM	**Vamos**	**2.50**	**269**	*e*Pn	**Pn**	**20 02 31.1**	**+0.4**
GOLH	**Golhisar**	**2.56**	**46**	*i* P	**Pn**	**20 02 33.6**	**+2.2**
GOLH				*i* S	**Sn**	**20 03 06.8**	**+4.6**
GOLH	**Golhisar**	**2.56**	**46**	*i* P	**Pn**	**20 02 33.6**	**+2.2**
GOLH				*i* S	**Sn**	**20 03 06.8**	**+4.6**
DNZL	**Cakiroluk**	**2.63**	**32**	*i* P	**Pn**	**20 02 33.9**	**+1.4**
DNZL				*i* S	**Sn**	**20 03 10.6**	**+6.4**
DNZL	**Cakiroluk**	**2.63**	**32**	*i* P	**Pn**	**20 02 33.9**	**+1.4**
GVD	**Gavdhos**	**2.68**	**257**	*e*Pn	**Pn**	**20 02 36.0**	**+2.8**
GVD	**Gavdhos**	**2.68**	**257**	*e*Pn	**Pn**	**20 02 36.0**	**+2.9**
DENT	**Denizli**	**2.68**	**32**	*e*PN	**Pn**	**20 02 33.4**	**+0.2**
KARN	**Karanos**	**2.73**	**269**	P	**Pn**	**20 02 33.9**	**0.0**
KARN	**Karanos**	**2.73**	**269**	P	**Pn**	**20 02 33.9**	**0.0**
BLCB	**Balcova**	**2.91**	**357**	*e*PN	**Pn**	**20 02 36.0**	**-0.4**
BLCB	**Balcova**	**2.91**	**357**	*e*Pn	**Pn**	**20 02 36.0**	**-0.3**
IZM	**Izmir**	**2.92**	**360**	*e*PN	**Pn**	**20 02 36.0**	**-0.4**
IZM	**Izmir**	**2.92**	**360**	*e*Pn	**Pn**	**20 02 36.0**	**-0.4**
KORT	**Korkueli**	**2.92**	**58**	*i* P	**Pn**	**20 02 38.0**	**+1.6**
KORT				*i* S	**Sn**	**20 03 12.4**	**+1.1**
KORT	**Korkueli**	**2.92**	**58**	*i* P	**Pn**	**20 02 38.0**	**+1.5**
KORT				*i* S	**Sn**	**20 03 12.4**	**+1.1**
CHOS	**Chios island**	**3.06**	**342**	*e*PN	**Pn**	**20 02 38.3**	**-0.1**
CHOS	**Chios island**	**3.06**	**342**	*e*Pn	**Pn**	**20 02 38.3**	**-0.1**
ANTB	**Antalya**	**3.09**	**62**	*e*PN	**Pn**	**20 02 39.9**	**+1.1**
ANTB	**Antalya**	**3.09**	**62**	*e*Pn	**Pn**	**20 02 39.9**	**+1.1**
MANT	**Manisa**	**3.18**	**19**	*i* P	**Pn**	**20 02 39.5**	**-0.5**
MANT				*i* S	**Sn**	**20 03 15.8**	**-1.9**
MANT	**Manisa**	**3.18**	**19**	*i* P	**Pn**	**20 02 39.5**	**-0.6**
MANT				*i* S	**Sn**	**20 03 15.8**	**-1.9**
KULA	**Kula-Manisa**	**3.23**	**20**	*e*PN	**Pn**	**20 02 40.4**	**-0.4**
KULA	**Kula-Manisa**	**3.23**	**20**	*e*Pn	**Pn**	**20 02 40.4**	**-0.3**
BCK	**Bucak**	**3.33**	**53**	*e*PN	**Pn**	**20 02 42.8**	**+0.7**
BCK	**Bucak**	**3.33**	**53**	*e*Pn	**Pn**	**20 02 42.8**	**+0.7**
KHL	**Karahalli**	**3.37**	**32**	*e*PN	**Pn**	**20 02 43.3**	**+0.7**
KHL	**Karahalli**	**3.37**	**32**	*e*Pn	**Pn**	**20 02 43.3**	**+0.7**
KHAL	**Karahalli**	**3.40**	**31**	*i* P	**Pn**	**20 02 43.3**	**+0.3**
KHAL				*i* S	**Sn**	**20 03 22.8**	**-0.2**
KHAL	**Karahalli**	**3.40**	**31**	*i* P	**Pn**	**20 02 43.3**	**+0.3**
KHAL				*i* S	**Sn**	**20 03 22.8**	**-0.2**
AKS	**Akhisar**	**3.42**	**7**	*e*PN	**Pn**	**20 02 43.5**	**+0.1**
AKS	**Akhisar**	**3.42**	**7**	*e*Pn	**Pn**	**20 02 43.5**	**+0.1**
ISP	**Isparta**	**3.51**	**47**	*e*PN	**Pn**	**20 02 45.9**	**+1.3**
ISP	**Isparta**	**3.51**	**47**	*e*Pn	**Pn**	**20 02 42.9**	**-1.7**
ISP	**Isparta**	**3.51**	**47**	*e*Pn	**Pn**	**20 02 42.9**	**-1.7**
KYTH	**Kithira**	**3.53**	**284**	*e*Pn	**Pn**	**20 02 45.2**	**+0.4**
KYTH	**Kithira**	**3.53**	**284**	*e*PN	**Pn**	**20 02 45.2**	**+0.4**
KYTH	**Kithira**	**3.53**	**284**	*e*Pn	**Pn**	**20 02 45.2**	**+0.4**
SUTC	**Sutluce-Ispart**	**3.61**	**55**	*e*PN	**Pn**	**20 02 47.0**	**+1.1**
SUTC	**Sutluce-Ispart**	**3.61**	**55**	*e*Pn	**Pn**	**20 02 47.0**	**+1.0**
VLY	**Voula,Athens**	**3.66**	**311**	*e*Pn	**Pn**	**20 02 47.1**	**+0.5**
VLY				*e*Sn	**Sn**	**20 03 29.1**	**-0.4**
VLY	**Voula,Athens**	**3.66**	**311**	*e*PN	**Pn**	**20 02 47.1**	**+0.5**
VLY				*e*SN	**Sn**	**20 03 29.1**	**-0.4**
VLY	**Voula,Athens**	**3.66**	**311**	*e*Pn	**Pn**	**20 02 47.1**	**+0.5**
VLY				*e*Sn	**Sn**	**20 03 29.1**	**-0.4**
VLI	**Veliai**	**3.72**	**291**	*e*Pn	**Pn**	**20 02 48.0**	**+0.6**
VLI				*e*Sn	**Sn**	**20 03 30.9**	**0.0**
VLI	**Veliai**	**3.72**	**291**	*e*PN	**Pn**	**20 02 48.0**	**+0.6**
VLI				*e*SN	**Sn**	**20 03 30.9**	**0.0**
VLI	**Veliai**	**3.72**	**291**	*e*Pn	**Pn**	**20 02 48.0**	**+0.6**
VLI				*e*Sn	**Sn**	**20 03 30.9**	**0.0**
DEMI	**Demirci**	**3.74**	**18**	*i* P	**Pn**	**20 02 48.2**	**+0.4**
DEMI				*i* S	**Sn**	**20 03 26.1**	**-5.4**
DEMI	**Demirci**	**3.74**	**18**	*i* P	**Pn**	**20 02 48.2**	**+0.4**
SHUT	**Suhut-Afyon**	**4.04**	**40**	*e*PN	**Pn**	**20 02 52.8**	**+0.9**
SHUT	**Suhut-Afyon**	**4.04**	**40**	*e*Pn	**Pn**	**20 02 52.8**	**+0.9**
BALB	**Balikesir**	**4.19**	**7**	*e*PN	**Pn**	**20 02 54.1**	**+0.2**
BALB	**Balikesir**	**4.19**	**7**	*e*Pn	**Pn**	**20 02 54.1**	**+0.3**
DURS	**Dursunbey**	**4.23**	**13**	*i* P	**Pn**	**20 02 54.3**	**-0.1**
DURS				*i* S	**Sn**	**20 03 39.0**	**-4.5**
DURS	**Dursunbey**	**4.23**	**13**	*i* P	**Pn**	**20 02 54.3**	**-0.1**
DURS				*i* S	**Sn**	**20 03 39.0**	**-4.5**
ALT	**Altintas**	**4.23**	**32**	*e*PN	**Pn**	**20 02 55.3**	**+0.9**
ALT	**Altintas**	**4.23**	**32**	*e*Pn	**Pn**	**20 02 55.3**	**+0.8**
BALY	**Balya**	**4.27**	**4**	*i* P	**Pn**	**20 02 55.3**	**+0.4**
BALY				*i* S	**Sn**	**20 03 43.4**	**-1.1**
BALY	**Balya**	**4.27**	**4**	*i* P	**Pn**	**20 02 55.3**	**+0.4**
BALY				*i* S	**Sn**	**20 03 43.3**	**-1.1**
EZN	**Ezine**	**4.41**	**351**	*e*PN	**Pn**	**20 02 56.9**	**0.0**
EZN	**Ezine**	**4.41**	**351**	*e*Pn	**Pn**	**20 02 56.9**	**0.0**
HDMB	**Hadim**	**4.47**	**69**	*e*PN	**Pn**	**20 02 58.5**	**+0.7**
HDMB	**Hadim**	**4.47**	**69**	*e*Pn	**Pn**	**20 02 58.5**	**+0.7**
LEF	**Lefka**	**4.62**	**93**	*e*PN	**Pn**	**20 02 59.0**	**-0.7**
LEF	**Lefka**	**4.62**	**93**	*e*Pn	**Pn**	**20 02 59.0**	**-0.7**
LIA	**Limnos Island**	**4.71**	**340**	P	**Pn**	**20 03 01.5**	**+0.4**
LIA	**Limnos Island**	**4.71**	**340**	P	**Pn**	**20 03 01.5**	**+0.4**
KONT	**Konya--Tatoy**	**4.78**	**57**	*e*PN	**Pn**	**20 03 03.7**	**+1.7**
GADA	**Gvkgeada**	**4.83**	**347**	*e*PN	**Pn**	**20 03 02.5**	**-0.2**
GADA	**Gvkgeada**	**4.83**	**347**	*e*Pn	**Pn**	**20 03 02.5**	**-0.2**
KCT	**Karacabey**	**4.86**	**10**	*e*PN	**Pn**	**20 03 03.2**	**+0.1**
KCT	**Karacabey**	**4.86**	**10**	*e*Pn	**Pn**	**20 03 03.2**	**+0.1**
BNT	**Bandirma**	**4.90**	**6**	*e*PN	**Pn**	**20 03 03.5**	**-0.2**
BNT	**Bandirma**	**4.90**	**6**	*e*Pn	**Pn**	**20 03 03.5**	**-0.1**
CSS	**Prodhromos**	**4.99**	**94**	*e*Pn	**Pn**	**20 03 02.5**	**-2.4**
	10nm,0.6s						
CSS				*e*Sn	**Sn**	**20 03 59.3**	**-3.1**
CSS	**Prodhromos**	**4.99**	**94**	*e*Pn	**Pn**	**20 03 02.5**	**-2.4**
	10nm,0.6s						
CSS				*e*Sn	**Sn**	**20 03 59.3**	**-3.1**
KIZT	**Kizilcal**	**5.01**	**46**	*e*PN	**Pn**	**20 03 06.0**	**+0.9**
KIZT	**Kizilcal**	**5.01**	**46**	*e*Pn	**Pn**	**20 03 06.1**	**+0.9**
LFK	**Lefkose**	**5.12**	**90**	*e*PN	**Pn**	**20 03 06.6**	**-0.2**
RKY	**Sarkoy-Tekirda**	**5.20**	**359**	*e*PN	**Pn**	**20 03 08.2**	**+0.3**
RKY	**Sarkoy-Tekirda**	**5.20**	**359**	*e*Pn	**Pn**	**20 03 08.2**	**+0.4**
ARMT	**Armutlu**	**5.24**	**13**	*e*PN	**Pn**	**20 03 08.7**	**+0.4**
ARMT	**Armutlu**	**5.24**	**13**	*e*Pn	**Pn**	**20 03 08.7**	**+0.4**
IKL	**Isikli**	**5.27**	**80**	*e*PN	**Pn**	**20 03 08.7**	**-0.1**
MFT	**Murefte**	**5.30**	**0**	*e*PN	**Pn**	**20 03 09.0**	**-0.2**
MFT	**Murefte**	**5.30**	**0**	*e*Pn	**Pn**	**20 03 09.0**	**-0.2**
GULT	**Gulveren**	**5.58**	**26**	*e*PN	**Pn**	**20 03 13.4**	**+0.5**
GULT	**Gulveren**	**5.58**	**26**	*e*Pn	**Pn**	**20 03 13.4**	**+0.5**
CTKS	**Kestanelik-??a**	**5.83**	**9**	*e*PN	**Pn**	**20 03 16.4**	**0.0**
CTKS	**Kestanelik-??a**	**5.83**	**9**	*e*Pn	**Pn**	**20 03 16.4**	**-0.1**
KARA	**Karaisali**	**6.53**	**72**	*e*PN	**Pn**	**20 03 26.0**	**0.0**
BR131	**Keskin Array S**	**6.60**	**48**	*e*Pn	**Pn**	**20 03 26.8**	**-0.3**
BR131				*e*Sn	**Sn**	**20 04 44.5**	**+2.5**
BR131	**Keskin Array S**	**6.60**	**48**	*e*Pn	**Pn**	**20 03 26.8**	**-0.2**
BR131				*e*Sn	**Sn**	**20 04 44.5**	**+2.5**
BRTR	**Keskin Array B**	**6.60**	**48**	Pn	**Pn**	**20 03 25.7**	**-1.3**
	2.2nm,0.3s,baz=216,slow=15,SNR=5.8						
BRTR				Sn	**Sn**	**20 04 41.7**	**-0.3**
	0.1nm,0.3s,baz=224,slow=19,SNR=2.6						
BRTR	**Keskin Array B**	**6.60**	**48**	Pn	**Pn**	**20 03 25.7**	**-1.3**
BRTR				Sn	**Sn**	**20 04 41.7**	**-0.3**
MMAI	**Mount Meron Ar**	**7.17**	**108**	Pn	**Pn**	**20 03 33.1**	**-1.8**
	2.3nm,0.3s,baz=312,slow=11,SNR=11						
MMAI				Sn	**Sn**	**20 04 55.0**	**-1.1**
	4.1nm,0.3s,baz=325,slow=25,SNR=6.8						
KOZT	**Kozan**	**7.18**	**71**	*e*PN	**Pn**	**20 03 34.8**	**-0.2**
ASF	**Jabal al Asfar**	**8.66**	**110**	Sn	**Sn**	**20 05 35.6**	**+2.9**
	0.2nm,0.3s,baz=351,slow=19,SNR=2.6						
ASF				LR	LR	20 08 43.9	
	comp=Z,86nm,18.0s,baz=266,slow=48						
EIL	**Elat**	**8.69**	**130**	Pn	**Pn**	**20 03 53.4**	**-2.4**
	0.6nm,0.3s,baz=14,slow=17,SNR=8.1						
EIL				Sn	**Sn**	**20 05 28.2**	**-5.2**
	2.5nm,0.3s,baz=148,slow=22,SNR=6.5						
TIP	**Timpagrande**	**9.15**	**297**	*e*Pn	**Pn**	**20 04 02.1**	**+0.1**
TIP	**Timpagrande**	**9.15**	**297**	*e*Pn	**Pn**	**20 04 02.1**	**+0.2**
MLR	**Muntele Rosu**	**10.05**	**355**	Pn	**Pn**	**20 04 12.0**	**-2.3**
	0.1nm,0.3s,baz=169,slow=16,SNR=1.9						
AKASG	**Malin Array Be**	**15.29**	**5**	Pn	**Pn**	**20 05 26.4**	**+0.8**
	0.2nm,0.3s,baz=185,slow=9.0,SNR=4.1						
AKASG	**Malin Array Be**	**15.29**	**5**	Pn	**Pn**	**20 05 26.4**	**+0.8**
AKASG	**Malin Array Be**	**15.29**	**5**	Pn	**Pn**	**20 05 26.4**	**+0.8**
ESDC	**Sonseca Array**	**25.03**	**289**	P	**P**	**20 07 13.7**	**-0.3**
	0.7nm,0.4s,mb3.5,baz=85,slow=9.7,SNR=8.3						
ESDC	**Sonseca Array**	**25.03**	**289**	P	**P**	**20 07 13.7**	**-0.3**
TORD	**Torodi Ar. Bea**	**32.03**	**232**	P	**P**	**20 08 16.4**	**-0.2**
	0.7nm,0.5s,mb3.7,baz=34,slow=8.5,SNR=4.8						
TORD	**Torodi Ar. Bea**	**32.03**	**232**	P	**P**	**20 08 16.4**	**-0.2**
ARCES	**ARCESS Array B**	**34.13**	**359**	P	**P**	**20 08 33.3**	**-1.1**
	1.8nm,1.0s,mb4.0,baz=178,slow=9.0,SNR=3.3						
ARCES	**ARCESS Array B**	**34.13**	**359**	P	**P**	**20 08 33.3**	**-1.1**
KURK	**Kurchatov**	**39.65**	**51**	P	**P**	**20 09 20.8**	**-0.7**
	0.3nm,0.3s,mb3.5,baz=273,slow=8.8,SNR=2.7						
KURK	**Kurchatov**	**39.65**	**51**	P	**P**	**20 09 20.8**	**-0.7**
MK31	**Makanchi Array**	**42.16**	**57**	P	**P**	**20 09 43.5**	**+1.2**
MK31	**Makanchi Array**	**42.16**	**57**	P	**P**	**20 09 43.5**	**+1.2**
MKAR	**Makanchi Array**	**42.16**	**57**	P	**P**	**20 09 42.6**	**+0.3**
	0.3nm,0.3s,mb3.5,baz=278,slow=5.7,SNR=2.8						
ZALV	**Zalesovo Beam**	**43.54**	**46**	P	**P**	**20 09 53.2**	**-0.2**
	0.3nm,0.3s,mb3.5,baz=260,slow=8.2,SNR=3.7						

TRN 17 20:13:14.3, 15°.80N×61°.59W, h16km, MD3.8, M3.2(FDF), 5C-1D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBG	**Guadaloupe-3**	**0.07**	**315**	*i* P	Pg	20 13 17.9	+0.4
HMG	**Houelmont**	**0.20**	**330**	*e*P	Pg	20 13 20.3	+1.1
PHG	**Guadaloupe-2**	**0.22**	**347**	*i* P	Pg	20 13 20.9	+1.5
SCG	**Saint Claude**	**0.24**	**340**	*i* P	Pg	20 13 21.1	+1.4
BCG	**Bois Riant Cap**	**0.28**	**355**	*i* P	Pg	20 13 21.8	+1.4
MGG	**Marie-Galante**	**0.29**	**67**	*i* P	Pg	20 13 23.0	+2.4
DWS	**Wesley**	**0.36**	**131**	*e*P	Pg	20 13 25.7	+3.9
DWS				*e*S	Sg	20 13 30.1	+3.3
LZG	**Guadaloupe-1**	**0.38**	**333**	*i* P	Pg	20 13 23.4	+1.2
MDN	**Morne-Daniel**	**0.52**	**158**	*e*P	Pg	20 13 26.6	+1.9
MDN				*e*S	Sg	20 13 35.8	+4.1
DLPL	**La Plaine**	**0.57**	**144**	*e*P	Pg	20 13 28.8	+3.1
DLPL				*e*S	Sg	20 13 37.2	+3.8
DPMT	**Pointe Michel**	**0.58**	**159**	*e*P	Pg	20 13 28.6	+2.9
DBCT	**Belle View Cho**	**0.58**	**156**	*e*P	Pg	20 13 29.1	+3.2
DBCT				*e*S	Sg	20 13 37.6	+4.0
SFG	**Saint Francois**	**0.59**	**40**	*e*P	Pg	20 13 27.7	+1.7
SEG	**Port Louis**	**0.60**	**8**	*e*P	Pg	20 13 28.0	+1.8
DFBT	**Forest Bistro**	**0.60**	**158**	*e*P	Pg	20 13 28.7	+2.4
DFBT				*e*S	Sg	20 13 38.1	+3.7
DSTT	**Stowe**	**0.62**	**153**	*e*P	Pg	20 13 29.5	+3.0
DSTT				*e*S	Sg	20 13 38.1	+3.3
DSHT	**Scott's Head**	**0.62**	**160**	*e*P	Pg	20 13 29.5	+2.8
DSHT				*e*S	Sg	20 13 39.0	+4.1
DEG	**La Desirade**	**0.72**	**45**	*e*P	Pg	20 13 29.4	+0.9
FDF	**Fort de France**	**1.15**	**158**	*e*P	Pn	20 13 37.5	+1.8
FDF				*e*S	Sb	20 13 53.5	+3.1
BPA	**Boggy Peak**	**1.26**	**348**	*e*P	Pn	20 13 38.5	+1.2
BPA				*e*S	Sb	20 13 57.2	+3.5
BIM	**Bigot**	**1.38**	**158**	*e*P	Pn	20 13 41.3	+2.5
MVM	**Montagne Vaucl**	**1.41**	**151**	*e*P	Pn	20 13 41.7	+2.3
MVM				*e*S	Sn	20 14 01.5	+3.9
SKI	**Saint Kitts**	**1.88**	**324**	*e*P	Pn	20 13 47.9	+2.1
SKI				*e*S	Sn	20 14 12.8	+3.7
MCLT	**Moule a Chique**	**2.17**	**163**	*e*P	Pn	20 13 51.8	+2.0
MCLT				*e*S	Sn	20 14 19.3	+2.9
SVV	**Soufriere Volc**	**2.50**	**172**	*e*P	Pn	20 13 56.1	+1.9
SVV				*e*S	Sn	20 14 26.2	+1.8
SVV				*e*T		20 15 58.2	
SVV				T		20 16 23.8	

*IDC **17** 20:47:16.6±0.8, 31°.35N×104°.11E, h0km, mb3.8/8, mb1 3.9/10, mb1mx3.7/25, mbtmp3.8/10, ML3.4/2, Error ellipse: s-maj=46.5km s-min=16.2km az=62.0*
*NEIC **17** 20:47:18.5±0.5, 31°.37N×103°.96E, h10km, Error ellipse: s-maj=13.5km s-min=8.5km az=67.0*
*ISCJB **17** 20:47:18.3±1.0, 31°.32N±0°.04×103°.97E±0°.06, h24km±8km, mb3.8/8, Error ellipse: s-maj=9.3km s-min=6.6km az=6.8*
*BJI **17** 20:47:20.1, 31°.23N×104°.14E, h20km, mB4.5/2, mb4.2/4, ML3.7/17, Ms3.6/4, Ms7 3.5/5*

ISC 17 20:47:18.1±0.7, 31°.35N±0°.03×103°.98E±0°.05, h7km±5km, n24, σ0°.78/32, mb3.8/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.48**	**203**	Pg	**Pg**	**20 47 27.1**	**-0.3**
CD2				Sg	**Sg**	**20 47 33.8**	**+0.1**
CD2				smax			
	comp=N,4μm,0.8s						
LZH	**Lanzhou**	**4.72**	**359**	Pg	**Pg**	**20 48 48.6**	**0.0**
LZH				Sg	**Sg**	**20 49 50.0**	**+0.3**
LZH				smax			
	comp=N,85nm,1.0s						
LZH				smax			
	comp=E,180nm,1.0s						
LZH				LR	LR		
	comp=N,410nm,4.8s						
LZH				LR	LR		
	comp=Z,450nm,8.6s						
ENH	**Enshi**	**4.86**	**101**	*e*Pn	**Pn**	**20 48 33.1**	**+1.6**
XAN	**Xi'an**	**4.95**	**56**	Pn	**Pn**	**20 48 33.5**	**+0.6**
XAN				Sn	**Sn**	**20 49 30.6**	**+0.2**
XAN				Sg	**Sg**	**20 49 55.6**	**-1.5**
XAN				smax			
	comp=N,130nm,1.0s						
XAN				smax			
	comp=E,52nm,1.0s						
GYA	**Guiyang**	**5.42**	**154**	Pn	**Pn**	**20 48 45.4**	**+6.2**
GYA				Pg	**Pg**	**20 49 02.1**	**+0.2**
GYA				Sn	**Sn**	**20 49 41.8**	**0.0**
GYA				Sg	**Sg**	**20 50 03.8**	**-8.2**
GYA				smax			
	comp=N,120nm,0.7s						
GYA				smax			
	comp=E,130nm,0.9s						
KMI	**Kunming**	**6.30**	**190**	Pn	**Pn**	**20 48 57.1**	**+5.7**
KMI				Sn	**Sn**	**20 50 02.8**	**-0.9**
KMI				smax			
	comp=N,18nm,0.8s				

AKS	**Akhisar**	**1.74**	**86**	*e*PN	**Pn**	**20 54 24.0**	**+0.8**
LPK	**Lapseki**	**1.83**	**29**	*e*PN	**Pn**	**20 54 24.4**	**0.0**
LPK	**Lapseki**	**1.83**	**29**	*e*Pn	**Pn**	**20 54 24.5**	**0.0**
BALY	**Balya**	**1.85**	**58**	*e*P	**Pn**	**20 54 24.2**	**-0.4**
BALY				*e*S	**Sn**	**20 54 44.4**	**-4.2**
BALY	**Balya**	**1.85**	**58**	*e*P	**Pn**	**20 54 24.2**	**-0.5**
BALY				*e*S	**Sn**	**20 54 44.4**	**-4.2**
BALB	**Balikesir**	**1.98**	**64**	*e*PN	**Pn**	**20 54 27.1**	**+0.7**
BALB	**Balikesir**	**1.98**	**64**	*e*Pn	**Pn**	**20 54 27.1**	**+0.6**
ENEZ	**Enez**	**2.00**	**12**	*e*PN	**Pn**	**20 54 27.1**	**+0.3**
ENEZ	**Enez**	**2.00**	**12**	*e*Pn	**Pn**	**20 54 27.1**	**+0.3**
AYDN	**Tasoluk**	**2.12**	**121**	*e*P	**Pn**	**20 54 29.8**	**+1.4**
AYDN				*e*S	**Sn**	**20 54 59.1**	**+3.7**
AYDN	**Tasoluk**	**2.12**	**121**	*e*P	**Pn**	**20 54 29.8**	**+1.3**
AYDN				*e*S	**Sn**	**20 54 59.1**	**+3.7**
RKY	**Sarkoy-Tekirda**	**2.27**	**32**	*e*PN	**Pn**	**20 54 30.9**	**+0.5**
RKY	**Sarkoy-Tekirda**	**2.27**	**32**	*e*Pn	**Pn**	**20 54 30.9**	**+0.5**
SART	**Tekirdag**	**2.27**	**32**	*e*P	**Pn**	**20 54 31.3**	**+0.8**
SART				*i* S	**Sn**	**20 55 00.3**	**+1.3**
SART	**Tekirdag**	**2.27**	**32**	*e*P	**Pn**	**20 54 31.3**	**+0.8**
SART				*i* S	**Sn**	**20 55 00.3**	**+1.3**
MLSB	**Milas**	**2.28**	**130**	*e*PN	**Pn**	**20 54 32.5**	**+2.0**
MLSB	**Milas**	**2.28**	**130**	*e*Pn	**Pn**	**20 54 32.5**	**+1.9**
RDO	**Rodhopi**	**2.36**	**359**	*e*PN	**Pn**	**20 54 31.4**	**-0.4**
RDO	**Rodhopi**	**2.36**	**359**	*e*PN	**Pn**	**20 54 31.4**	**-0.4**
RDO	**Rodhopi**	**2.36**	**359**	*e*Pn	**Pn**	**20 54 31.4**	**-0.4**
BNT	**Bandirma**	**2.39**	**48**	*e*PN	**Pn**	**20 54 32.0**	**-0.2**
KULA	**Kula-Manisa**	**2.42**	**95**	*e*PN	**Pn**	**20 54 33.6**	**+1.1**
KULA	**Kula-Manisa**	**2.42**	**95**	*e*Pn	**Pn**	**20 54 33.6**	**+1.0**
VLI	**Veliai**	**2.94**	**226**	*e*Pn	**Pn**	**20 54 39.8**	**+0.1**
VLI	**Veliai**	**2.94**	**226**	*e*PN	**Pn**	**20 54 39.8**	**+0.1**
VLI	**Veliai**	**2.94**	**226**	*e*Pn	**Pn**	**20 54 39.8**	**+0.1**
ARMT	**Armutlu**	**3.09**	**54**	*e*PN	**Pn**	**20 54 42.2**	**+0.4**
ARMT	**Armutlu**	**3.09**	**54**	*e*Pn	**Pn**	**20 54 42.2**	**+0.4**
EDRB	**Edirne**	**3.19**	**16**	*e*PN	**Pn**	**20 54 43.9**	**+0.7**
EDRB	**Edirne**	**3.19**	**16**	*e*Pn	**Pn**	**20 54 43.9**	**+0.8**
KYTH	**Kithira**	**3.21**	**220**	*e*Pn	**Pn**	**20 54 43.5**	**0.0**
KYTH	**Kithira**	**3.21**	**220**	*e*PN	**Pn**	**20 54 43.5**	**0.0**
KYTH	**Kithira**	**3.21**	**220**	*e*Pn	**Pn**	**20 54 43.5**	**0.0**
CTKS	**Kestanelik-??a**	**3.32**	**41**	*e*PN	**Pn**	**20 54 46.0**	**+1.0**
CTKS	**Kestanelik-??a**	**3.32**	**41**	*e*Pn	**Pn**	**20 54 46.0**	**+1.0**

*IDC **17** 20:57:02.6±0.9, 9.°38S×67.°17E, h0km, mb4.0/11, mb1 4.1/11, mb1mx3.9/27, mbtmp4.0/11, MS3.9/14, Ms1 3.9/14, ms1mx3.7/26, Error ellipse: s-maj=26.0km s-min=21.4km az=30.0*

*ISCJB **17** 20:57:02.3±0.8, 9.°3S±0.°1×67.°1E±0.°1, h10km, mb4.2/20, MS3.9/14, Error ellipse: s-maj=18.6km s-min=14.3km az=26.2*

*NEIC **17** 20:57:04.3±0.6, 9.°32S×67.°17E, h10km, mb4.5/9, Error ellipse: s-maj=16.0km s-min=12.9km az=200.0*

*GCMT **17** 20:57:07.9±0.4, 9.°20S×67.°15E, h20km±1km, MW5.0, Moment Tensor Solution. s25,c26; s77,c106; Moment tensor: Scale 10^16^Nm; Mrr-0.65±.18; Mθθ-3.01±.12; Mφφ3.65±.16; Mrθ-1.20±.30; Mrφ0.54±.14; Mθφ0.50±.27; Best double couple: M0 3.70000×10^16^ NP1:φs47.00000°, δ70.00000°, λ-13.00000°. NP2:φs142.00000°, δ78.00000°, λ-159.00000°. Principal axes: T 3.7300, Plg5.0000°, Azm274.0000°; N -0.1600, Plg66.0000°, Azm171.0000°; P -3.5800, Plg23.0000°, Azm6.0000°; Data Used: II G IU IC CN.*

ISC 17 20:57:04.3±0.8, 9.°3S±0.°1×67.°2E±0.°1, h10km, n39, σ0 93/26, mb4.2/20, MS3.9/14, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo**	**30.85**	**284**	LR	LR	21 12 54.1	
	comp=Z,200nm,21.1s,MS3.8,baz=275,slow=31						
ATD	**Arta Tunnel**	**31.84**	**310**	LR	LR	21 13 57.4	
	comp=Z,261nm,19.2s,MS3.9,baz=125,slow=32						
PSI	**Prapat**	**33.87**	**71**	LR	LR	21 15 06.1	
	comp=Z,477nm,19.9s,MS4.2,baz=250,slow=32						
KULM	**Kulim**	**36.40**	**68**	*e*P	**P**	**21 04 08.6**	**-0.7**
	35nm,1.5s,mb5.1						
LSZ	**Lusaka**	**38.49**	**257**	P	**P**	**21 04 27.4**	**+0.4**
	7.1nm,1.0s,mb4.3,baz=92,slow=10,SNR=8.3						
LSZ	**Lusaka**	**38.49**	**257**	*e*P	**P**	**21 04 27.3**	**+0.3**
	27nm,1.5s,mb4.8						
CM31	**Chiang Mai Arr**	**41.79**	**49**	P	**P**	**21 04 54.2**	**-0.1**
	4.2nm,1.0s,mb4.0						
CMAR	**Chiang Mai Arr**	**41.79**	**49**	P	**P**	**21 04 54.5**	**+0.2**
	2.1nm,0.9s,mb3.8,baz=238,slow=9.6,SNR=13						
CHTO	**Chiang Mai**	**42.01**	**48**	*e*P	**P**	**21 04 55.8**	**-0.4**
	12nm,1.4s,mb4.3						
BOSA	**Boshof**	**43.73**	**238**	LR	LR	21 21 04.1	
	comp=Z,105nm,18.1s,MS3.8,baz=98,slow=33						
KSM	**Kuching**	**44.30**	**78**	*e*P	**P**	**21 05 14.9**	**+0.1**
	6.8nm,1.0s,mb4.3						
LSA	**Lhasa**	**45.16**	**30**	*e*P	**P**	**21 05 22.8**	**+1.4**
MMAI	**Mount Meron Ar**	**51.85**	**326**	LR	LR	21 24 51.1	
	comp=Z,115nm,19.6s,MS3.9,baz=170,slow=32						
EKS2	**Erkin-Say**	**52.09**	**6**	P	**P**	**21 06 14.8**	**+0.3**
	7.6nm,1.4s,mb4.4						
TKM2	**Tokmak 2**	**52.57**	**8**	*e*P	**P**	**21 06 17.8**	**-0.2**
	7.0nm,1.4s,mb4.4						
ENH	**Enshi**	**56.60**	**44**	P	**P**	**21 06 46.7**	**-0.9**
GTA	**Gaotai**	**57.19**	**30**	*e*P	**P**	**21 06 51.8**	**+0.2**
GTA				pP	pP	21 06 56.3	+1.5
GTA				sP	sP	21 06 59.3	+3.3
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.3						
MK31	**Makanchi Array**	**57.48**	**12**	P	**P**	**21 06 56.6**	**+3.1**
MKAR	**Makanchi Array**	**57.48**	**12**	P	**P**	**21 06 54.8**	**+1.3**
	comp=Z,1.5nm,1.0s,mb4.0,baz=200,slow=7.7,SNR=5.2						
MKAR				LR	LR	21 31 37.3	
	comp=Z,72nm,20.0s,MS3.8,baz=59,slow=36						
BRTR	**Keskin Array B**	**57.86**	**330**	P	**P**	**21 06 56.6**	**+0.3**
	comp=Z,0.9nm,1.1s,mb3.7,baz=176,slow=4.3,SNR=2.8						
MAW	**Mawson**	**58.27**	**182**	LR	LR	21 25 30.4	
	comp=Z,163nm,21.9s,MS4.1,baz=182,slow=29						
ABKAR	**Akbulak array**	**58.68**	**354**	*e*P	**P**	**21 07 00.4**	**-1.4**
	comp=Z,2.4nm,1.0s,mb4.2						
AKTK	**Aktyubinsk**	**60.05**	**353**	P	**P**	**21 07 10.0**	**-1.3**
AKTO	**Aktyubinsk**	**60.05**	**353**	P	**P**	**21 07 10.0**	**-1.3**
	comp=Z,1.2nm,0.7s,mb4.0,baz=164,slow=7.8,SNR=4.3						
KURK	**Kurchatov**	**60.62**	**8**	P	**P**	**21 07 13.9**	**-1.3**
	comp=Z,1.9nm,1.1s,mb4.1,baz=201,slow=6.6,SNR=4.1						
ZALV	**Zalesovo Beam**	**64.79**	**11**	P	**P**	**21 07 45.0**	**+2.1**
	comp=Z,0.4nm,0.6s,mb3.6,baz=225,slow=5.5,SNR=3.4						
ZALV				LR	LR	21 35 40.6	
	comp=Z,39nm,19.7s,MS3.6,baz=240,slow=36						
ZALV	**Zalesovo Beam**	**64.79**	**11**	P	**P**	**21 07 45.0**	**+2.1**
ZALV				LR	LR	21 35 40.6	
ASAR	**Alice Springs**	**65.06**	**112**	P	**P**	**21 07 45.5**	**0.0**
	comp=Z,1.7nm,1.0s,mb4.0,baz=282,slow=5.5,SNR=9.3						
WRA	**Warramunga Arr**	**65.50**	**108**	P	**P**	**21 07 48.0**	**-0.3**
	comp=Z,2.9nm,1.0s,mb4.3,baz=277,slow=6.0,SNR=13						
WRAB	**Tennant Creek**	**65.51**	**108**	*e*P	**P**	**21 07 48.5**	**+0.1**
	comp=Z,7.9nm,1.1s,mb4.7						
SONM	**Songino Array**	**66.67**	**28**	P	**P**	**21 07 55.5**	**+0.3**
	comp=Z,0.5nm,0.5s,mb3.8,baz=234,slow=5.1,SNR=6.6						
SONM				LR	LR	21 36 13.7	
	comp=Z,152nm,20.6s,MS4.2,baz=253,slow=35						
AKASG	**Malin Array Be**	**68.24**	**335**	LR	LR	21 35 17.8	
	comp=Z,51nm,21.4s,MS3.7,baz=20,slow=34						
STKA	**Stephens Creek**	**71.94**	**120**	LR	LR	21 37 22.6	
	comp=Z,119nm,19.1s,MS4.2,baz=29,slow=34						
KSRS	**Korea Array**	**73.38**	**46**	LR	LR	21 41 35.3	
	comp=Z,81nm,18.1s,MS4.0,baz=259,slow=36						
DBIC	**Dimbokro**	**73.50**	**280**	LR	LR	21 37 06.9	
	comp=Z,54nm,19.4s,MS3.8,baz=83,slow=33						
FINES	**FINESS Array B**	**77.52**	**341**	LR	LR	21 43 30.5	
	comp=Z,34nm,19.4s,MS3.7,baz=138,slow=36						
MJAR	**Matsushiro Arr**	**80.64**	**51**	P	**P**	**21 09 17.8**	**+0.2**
	comp=Z,1.1nm,0.7s,mb3.9,baz=241,slow=4.0,SNR=5.9						
LKWY	**Lake**	**144.84**	**357**	*e*PKPdf	PKPdf	21 16 43.8	+2.0
NVAR	**Mina Array Bea**	**150.62**	**9**	PKPbc	PKPbc	21 16 56.0	-1.0
	comp=Z,0.3nm,0.6s,baz=217,slow=0.9,SNR=4.3						

MAN 17 20:58:51, 6.°45N×124.°20E, h60km, mb4.5, ML3.3, MS3.2, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.82**	**116**	*e*P	Pn	20 59 10.9	+4.1
PAGZ	**Pagadian**	**1.61**	**330**	*e*P	Pn	20 59 18.5	+1.3
PAGZ				*e*S	Sn	20 59 37.8	+0.8
BUKP	**Musuan**	**1.66**	**31**	*e*P	Pn	20 59 20.1	+2.3
BUKP				*e*S	Sn	20 59 39.4	+1.4
IPIL	**Ipil**	**2.10**	**309**	*e*P	Pn	20 59 25.2	+1.5

BJI 17 21:33:21.6, 35.°49N×81.°64E, h18km, ML3.5/3, Southern Xinjiang

CASC 17 21:41:50.2±1.6, 9.°52N×83.°70W, h13km±5km, MD3.5, 2C-4D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUS	**Buena Vista**	**0.07**	**300**	⇓*e*P	Pg	21 41 53.6	+0.8
URSC	**Urasca**	**0.32**	**346**	⇓*e*P	Pg	21 41 57.4	+0.6
URSC				*e*S	Sg	21 42 01.9	+0.7
QCR	**Quepos**	**0.47**	**258**	*e*P	Pg	21 41 59.5	+0.1
QCR				*e*S	Sg	21 42 06.4	+0.7
BAR1		**0.47**	**126**	*e*P	Pg	21 41 59.4	-0.2
BAR1				*e*S	Sg	21 42 06.6	+0.6
LAJ	**Bijagual**	**0.54**	**309**	⇓*e*P	Pg	21 42 06.6	+5.9
PRS1	**Puriscal**	**0.76**	**307**	⇓*e*P	Pg	21 42 04.4	-0.5
PRS1				*e*S	Sg	21 42 14.7	-0.1
CGA2	**Cerro Gallo 2**	**0.90**	**303**	⇑*e*P	Pg	21 42 06.9	-0.7
CGA2				*e*S	Sg	21 42 19.4	0.0
ACR	**Cerro Adams**	**1.01**	**149**	⇑*e*P	Pb	21 42 07.8	-1.8
ACR				*e*S	Sb	21 42 20.9	-1.9
CTCR	**Cotoan**	**1.12**	**124**	*e*P	Pb	21 42 11.2	-0.3
CTCR				*e*S	Sb	21 42 25.6	-0.3
BRU2	**Volcan**	**1.23**	**126**	*e*P	Pn	21 42 12.2	-0.9
BRU2				*e*S	Sb	21 42 29.1	-0.1

*IDC **17** 21:50:34.9±29.0, 38.°14N×71.°22E, h0km, mb3.9/2, mb1 3.8/4, mb1mx3.4/25, mbtmp3.7/4, ML3.1/1, MS3.1/1, Ms1 3.1/1, ms1mx2.2/39, Error ellipse: s-maj=516.1km s-min=34.0km az=165.0*

*NNC **17** 21:50:39.5±3.5, 38.°53N×70.°99E, h0km, mb3.5, mpv3.3, Error ellipse: s-maj=34.0km s-min=26.2km az=67.0*

*ISCJB **17** 21:50:42.4±0.8, 38.°45N±0.°05×71.°28E±0.°07, h44km±10km, mb3.9/4, Error ellipse: s-maj=10.5km s-min=6.3km az=36.4*

*NEIC **17** 21:50:43.7±0.8, 38.°29N×71.°47E, h63km±15km, mb3.8/2, Error ellipse: s-maj=23.3km s-min=7.9km az=127.0*

ISC 17 21:50:43.8±0.9, 38.°33N±0.°06×71.°38E±0.°08, h54km±13km, n26, σ1 9°17/34, mb3.9/4, 4C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**3.77**	**70**	*e*Pn	**Pn**	**21 51 36.3**	**-3.1**
KSH				Sn	**Sn**	**21 52 21.8**	**-0.7**
KSH				smax			
	comp=N,89nm,0.7s						
KSH				smax			
	comp=E,68nm,0.8s						
AML	**Almayashu**	**4.19**	**24**	*e*Pn	**Pn**	**21 51 45.3**	**+0.2**
AML				*e*S	**Sn**	**21 52 32.5**	**-0.1**
KBL	**Kabul**	**4.23**	**207**	*e*Pn	**Pn**	**21 51 45.5**	**-0.1**
KBL				*e*Sn	**Sn**	**21 52 37.9**	**+4.2**
UCH	**Uchtor**	**4.57**	**31**	*e*Pn	**Pn**	**21 51 50.7**	**+0.4**
UCH				S	**Sn**	**21 52 49.9**	**+7.8**
EKS2	**Erkin-Say**	**4.70**	**22**	*e*Pn	**Pn**	**21 51 52.5**	**+0.4**
EKS2				*e*S	**Sn**	**21 52 52.2**	**+7.0**
KK31	**Karatay Array**	**4.81**	**352**	Pn	**Pn**	**21 51 52.1**	**-1.5**
	comp=E,1.8nm,0.3s,baz=180,slow=13,SNR=59						
KK31				⇓Sn	**Sn**	**21 52 50.6**	**+2.6**
	comp=E,1.3nm,0.3s,baz=176,slow=16,SNR=5.8						
KK31				⇑Lg		21 53 06.9	
	comp=E,8.0nm,0.5s,baz=174,slow=31,SNR=4.1						
AAK	**Ala-Archa**	**4.91**	**28**	*e*Pn	**Pn**	**21 51 56.4**	**+1.5**
TKM2	**Tokmak 2**	**5.59**	**34**	⇑Pn	**Pn**	**21 52 05.4**	**+1.1**
	comp=E,1.7nm,0.5s						
TKM2				⇑Lg		21 53 37.7	
	comp=E,3.8nm,0.8s						
TKM2	**Tokmak 2**	**5.59**	**34**	*e*Pn	**Pn**	**21 52 04.9**	**+0.5**
	comp=E,3.2nm,0.5s						
TKM2				*e*Sn	**Sn**	**21 53 07.7**	**+0.4**
MK31	**Makanchi Array**	**11.66**	**40**	*e*Pn	**Pn**	**21 53 26.8**	**-0.5**
MKAR	**Makanchi Array**	**11.66**	**40**	Pn	**Pn**	**21 53 26.8**	**-0.5**
	comp=E,0.1nm,0.3s,baz=226,slow=12,SNR=6.2						
MKAR	**Makanchi Array**	**11.66**	**40**	Pn	**Pn**	**21 53 26.8**	**-0.6**
AB31	**Akbulak array**	**13.67**	**327**	⇓Pn	**Pn**	**21 53 49.5**	**-5.2**
	comp=E,0.4nm,0.5s,baz=150,slow=12,SNR=16						
AB31				⇑Sn	Sx	21 56 18.6	
	comp=E,0.5nm,0.5s,baz=141,slow=23,SNR=3.8						
ABKAR	**Akbulak array**	**13.67**	**327**	*e*Pn	**Pn**	**21 53 49.0**	**-5.8**
	comp=E,0.5nm,0.4s						
ABKAR				*e*Sn	Sx	21 56 16.7	
BRVK	**Borovoye**	**14.75**	**357**	Pn	**Pn**	**21 54 08.8**	**-0.2**
AKTO	**Aktyubinsk**	**15.38**	**326**	⇓Pn	**Pn**	**21 54 19.3**	**+2.0**
	comp=E,0.4nm,0.8s						
AKTO				⇓Sn	**Sn**	**21 57 03.8**	**-2.6**
	comp=E,0.1nm,0.8s						
ZALV	**Zalesovo Beam**	**18.13**	**26**	P	**Pn**	**21 54 50.5**	**-1.0**
	comp=E,0.2nm,0.3s,baz=218,slow=12,SNR=2.9						
GNI	**Garni**	**20.69**	**283**	*e*P	**P**	**21 55 18.7**	**-0.5**
	comp=E,5.4nm,0.9s						
KIV	**Kislovodsk**	**22.26**	**294**	P	**P**	**21 55 36.2**	**+0.1**
HHC	**Hu-ho-hao-te**	**30.88**	**72**	*e*P	**P**	**21 56 58.5**	**+3.5**
HHC				S	**S**	**22 02 00.1**	**+5.0**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.7						
HHC				pmax	pmax		
	comp=Z,110nm,5.8s						
TIRR	**Tirgusor**	**32.52**	**295**	P	**P**	**21 57 10.3**	**+1.0**
MLR	**Muntele Rosu**	**34.19**	**297**	LR	LR	22 11 52.2	
	comp=Z,29nm,19.3s,baz=211,slow=37						
FINES	**FINESS Array B**	**36.15**	**325**	P	**P**	**21 57 39.5**	**-1.0**
	comp=Z,0.8nm,0.7s,mb3.8,baz=122,slow=15,SNR=4.5						
PSZ	**Piszkesteto**	**38.14**	**302**	P	**P**	**21 57 57.0**	**-0.5**
MORC	**Moravsky Berou**	**39.55**	**305**	*e*P	**P**	**21 58 11.1**	**+1.8**
	comp=Z,0.6nm,0.6s,mb3.5						
ARCES	**ARCESS Array B**	**39.58**	**337**	P	**P**	**21 58 08.1**	**-1.1**
	comp=Z,0.9nm,0.8s,mb3.5,baz=102,slow=8.4,SNR=4.8						

*IDC **17** 22:03:51.8±2.5, 3.°95N×97.°16E, h94km±22km, mb3.7/14, mb1 3.8/15, mb1mx3.6/27, mbtmp3.7/15, MS3.8/1, Ms1 3.7/1, ms1mx2.4/26, Error ellipse: s-maj=54.5km s-min=16.2km az=51.0*

*ISCJB **17** 22:03:51.3±1.2, 3.°83N±0.°06×97.°02E±0.°10, h110km±11km, mb4.0/18, Error ellipse: s-maj=16.7km s-min=9.3km az=162.4*

*NEIC **17** 22:03:52.2±1.0, 3.°81N×97.°01E, h104km±9km, mb4.4/4, Error ellipse: s-maj=11.6km s-min=6.3km az=73.0*

ISC 17 22:03:52.5±1.2, 3.°81N±0.°06×97.°03E±0.°10, h106km±11km, n37, σ0 °75/39, mb4.0/18, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.14**	**118**	P	**Pn**	**22 04 27.5**	**+0.4**
	26nm,0.3s,baz=310,slow=10,SNR=151						
PSI				S	**Sn**	**22 04 53.2**	**-0.4**
	39nm,0.3s,baz=39,slow=13,SNR=15						
PSI	**Prapat**	**2.14**	**118**	P	**Pn**	**22 04 27.5**	**+0.4**
PSI				S	**Sn**	**22 04 53.2**	**-0.4**
KULM	**Kulim**	**3.90**	**68**	*e*Pn	**Pn**	**22 04 50.1**	**-0.4**
KULM				*e*Sn	**Sn**	**22 05 30.2**	**-5.2**
CMAR	**Chiang Mai Arr**	**14.68**	**7**	P	**Pn**	**22 07 16.7**	**+1.7**
	0.2nm,0.3s,baz=200,slow=12,SNR=18						
COCO	**West Island**	**15.89**	**181**	Pn	**Pn**	**22 07 30.5**	**+0.2**
LSA	**Lhasa**	**26.35**	**348**	*e*P	**P**	**22 09 18.7**	**0.0**
	1.5nm,0.5s,mb3.7						
DGAR	**Diego Garcia**	**26.94**	**246**	P	**P**	**22 09 23.3**	**-0.9**
NWAO	**Narrogin (SRO)**	**41.25**	**154**	P	**P**	**22 11 27.0**	**-0.2**
AAK	**Ala-Archa**	**43.56**	**336**	P	**P**	**22 11 43.3**	**-2.5**
WRA	**Warramunga Arr**	**43.60**	**124**	P	**P**	**22 11 46.8**	**+0.3**
	6.6nm,0.6s,mb4.6,baz=302,slow=9.2,SNR=77						
WRAB	**Tennant Creek**	**43.60**	**124**	*e*P	**P**	**22 11 47.1**	**+0.5**
	6.0nm,0.4s,mb4.7						
MK31	**Makanchi Array**	**44.69**	**346**	*e*P	**P**	**22 11 54.4**	**-0.3**
MKAR	**Makanchi Array**	**44.69**	**346**	P	**P**	**22 11 54.5**	**-0.3**
	0.8nm,0.4s,mb3.8,baz=155,slow=8.4,SNR=9.1						
MKAR	**Makanchi Array**	**44.69**	**346**	P	**P**	**22 11 54.5**	**-0.3**
ASAR	**Alice Springs**	**45.13**	**129**	P	**P**	**22 11 59.0**	**+0.3**
	0.6nm,0.6s,mb3.5,baz=302,slow=7.9,SNR=8.3						
TLY	**Talaya**	**48.03**	**6**	P	**P**	**22 12 20.2**	**-0.6**
	3.3nm,0.6s,mb4.3						
KURK	**Kurchatov**	**49.24**	**345**	P	**P**	**22 12 29.3**	**-0.9**
	0.6nm,0.5s,mb3.8,baz=170,slow=6.3,SNR=6.5						
KURK	**Kurchatov**	**49.24**	**345**	*e*P	**P**	**22 12 29.5**	**-0.6**
MDJ	**Mudanjiang**	**49.70**	**30**	P	**P**	**22 12 33.6**	**-0.1**
ZALV	**Zalesovo Beam**	**50.97**	**351**	P	**P**	**22 12 42.8**	**-0.3**
	1.6nm,0.4s,mb4.5,baz=167,slow=6.5,SNR=8.6						

BVAR	**Borovoye Array**	**53.75**	**340**	P	**P**	**22 13 03.2**	**-0.5**
	0.7nm,0.6s,mb3.9,baz=156,slow=11,SNR=3.2						
STKA	**Stephens Creek**	**55.24**	**133**	LR	LR	22 37 05.9	
	comp=Z,89nm,19.2s,baz=352,slow=36						
STKA	**Stephens Creek**	**55.24**	**133**	*e*P	**P**	**22 13 14.9**	**0.0**
ARU	**Arti**	**60.73**	**337**	*e*P	**P**	**22 13 52.7**	**0.0**
KIV	**Kislovodsk**	**62.24**	**318**	*e*P	**P**	**22 14 03.5**	**+0.4**
	1.9nm,0.5s,mb4.4						
BRTR	**Keskin Array B**	**67.25**	**312**	P	**P**	**22 14 36.1**	**+0.4**
	0.9nm,0.7s,mb3.7,baz=130,slow=7.1,SNR=7.6						
AKASG	**Malin Array Be**	**73.10**	**322**	P	**P**	**22 15 10.8**	**-0.5**
	0.4nm,0.4s,mb3.6,baz=95,slow=4.9,SNR=3.9						
MLR	**Muntele Rosu**	**74.07**	**316**	P	**P**	**22 15 18.6**	**+1.6**
	1.0nm,0.5s,mb3.8,baz=130,slow=7.9						
LBTB	**Lobatse**	**74.90**	**243**	P	**P**	**22 15 21.9**	**-0.3**
MCQ	**Macquarie Isla**	**77.27**	**148**	*e*P	**P**	**22 15 35.1**	**0.0**
FINES	**FINESS Array B**	**77.62**	**332**	P	**P**	**22 15 37.1**	**+0.2**
	1.5nm,0.7s,mb3.8,baz=102,slow=6.7,SNR=5.5						
BILL	**Bilibino**	**78.81**	**21**	*e*P	**P**	**22 15 42.0**	**-1.4**
ARCES	**ARCESS Array B**	**80.04**	**340**	P	**P**	**22 15 50.9**	**+0.9**
	1.1nm,0.6s,mb3.9,baz=95,slow=4.8,SNR=17						
HFS	**Hagfors**	**83.39**	**330**	P	**P**	**22 16 09.4**	**+1.6**
	2.1nm,0.9s,mb4.0,baz=120,slow=5.7,SNR=4.0						
SPITS	**Spitsbergen Ar**	**84.38**	**348**	P	**P**	**22 16 12.6**	**+0.1**
	3.8nm,0.8s,mb4.2,baz=129,slow=7.6,SNR=7.1						
DAVOX	**Davos/Dischmat**	**85.29**	**316**	P	**P**	**22 16 18.4**	**+0.8**
	1.5nm,0.6s,mb4.1,baz=32,slow=13,SNR=3.5						
SBA	**Scott Base**	**89.50**	**169**	P	**P**	**22 16 37.0**	**-0.3**

*NEIC **17** 22:05:14.3, 60.°59N×137.°29W, h1km, ML2.9(PGC), ML2.7(AEIC), After PGC.*

PGC 17 22:05:14.3±0.9, 60.°59N×137.°29W, h1km, ML2.9/4, 10D, 21km Ese of Haines Jct., Yt Southern Yukon Territory, Canada, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HYT	**Haines Junctio**	**0.25**	**336**	⇑P	Pg	22 05 18.8	-0.3
HYT				⇓S	Sg	22 05 22.2	-0.2
WHY	**Whitehorse**	**1.19**	**86**	P	Pg	22 05 35.5	-1.6
WHY				S	Sg	22 05 51.0	-1.4
WHY	**Whitehorse**	**1.19**	**86**	⇓P	Pg	22 05 35.5	-1.6
WHY				⇑S	Sg	22 05 51.2	-1.3
PLBC	**Pleasant Camp**	**1.23**	**157**	⇓P	Pg	22 05 36.0	-1.9
PLBC				⇓S	Sg	22 05 52.8	-1.0
PNL	**Peninsula**	**1.40**	**230**	P	Pn	22 05 40.3	-0.6
PNL				S	Sg	22 06 00.2	+0.9
SKAG	**Skagway**	**1.50**	**138**	P	Pn	22 05 40.2	-2.1
SKAG				S	Sb	22 06 00.8	-1.7
BESE	**Bessie Mountai**	**2.37**	**147**	P	Pn	22 05 52.2	-2.0
BCA3	**Beaver Creek A**	**3.27**	**321**	P	Pn	22 06 07.3	+0.8
BMRM	**Bremner River**	**3.60**	**279**	*e*Pn	Pn	22 06 11.7	+0.6
BMRM				*e*Sn	Sn	22 06 55.5	+1.2
DLBC	**Dease Lake**	**4.29**	**117**	*e*Pn	Pn	22 06 19.7	-0.8
DLBC				*e*Pg	Pg	22 06 31.2	-5.1
DLBC				*e*S	Sn	22 07 27.9	+17
DLBC	**Dease Lake**	**4.29**	**117**	⇓Pn	Pn	22 06 20.2	-0.3
DLBC				⇑Sg	Sg	22 07 27.0	-4.8
EGAK	**Eagle**	**4.56**	**339**	*e*Pn	Pn	22 06 24.1	-0.2
EGAK				*e*Pg	Pg	22 06 42.2	+0.

comp=E,7.4nm,1.0s
KIV Kislovodsk 22.22 294 *e*P **P 22 10 16.0 -0.8**
comp=E,3.6nm,0.6s,mb4.0
GTA Gaotai 22.36 78 *e*P **P 22 10 19.9 +1.5**
GTA pmax pmax
comp=Z,4.0nm,0.8s,mb3.9
LZH Lanzhou 26.08 84 *e*P **P 22 10 49.5 -4.5**
LZH P 22 10 58.9
LZH LR LR
comp=N,480nm,6.6s
LZH LR LR
comp=Z,560nm,7.5s
ULN Ulaanbaatar 27.81 58 P **P 22 11 11.2 +1.7**
HHC Hu-ho-hao-te 31.13 72 *e*P **P 22 11 40.1 +1.1**
HHC pP pP 22 11 57.8 +16
HHC sP sP 22 12 07.0 +24
HHC PP PP 22 12 44.8 -4.4
HHC PcP PcP 22 14 34.3 +0.3
HHC S **S 22 16 38.8 -5.8**
HHC sS sS 22 17 09.3 +20
HHC ScP ScP 22 18 09.8 -7.1
HHC PcS PcS 22 18 17.5 -0.6
HHC SS SS 22 18 26.9 -30
HHC ScS ScS 22 22 05.3 -8.7
HHC pmax pmax
comp=Z,13nm,0.8s,mb4.8
HHC pmax pmax
comp=Z,110nm,5.6s
HHC LR LR
comp=N,110nm,14.3s,MS3.8
HHC LR LR
comp=E,89nm,15.5s,MS3.8
HHC LR LR
comp=Z,78nm,15.5s,MS3.5
FINES FINESS Array B 36.27 325 P **P 22 12 23.2 -0.3**
comp=Z,1.3nm,0.7s,mb4.0,baz=116,slow=8.7,SNR=4.4
ARCES ARCESS Array B 39.76 337 P **P 22 12 53.7 +1.0**
comp=Z,1.2nm,0.7s,mb3.8,baz=112,slow=8.0,SNR=8.2
ARCES LR LR 22 30 34.1
comp=Z,34nm,18.4s,MS3.2,baz=137,slow=38
HFS Hagfors 41.93 321 P **P 22 13 12.3 +1.5**
comp=Z,1.6nm,0.4s,mb4.0,baz=105,slow=11,SNR=19
NOA NORSAR Array B 43.22 322 P **P 22 13 22.1 +0.8**
comp=Z,1.1nm,0.8s,mb3.6,baz=94,slow=8.0,SNR=4.5
WRA Warramunga Arr 82.71 122 P **P 22 17 43.5 -0.8**
comp=Z,0.4nm,0.6s,mb3.6,baz=325,slow=4.7,SNR=4.9
ULM Lac du Bonnet 91.33 352 LR LR 23 00 37.9
comp=Z,34nm,19.3s,MS3.8,baz=186,slow=36

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*IDC **17** 22:19:29.8±1.1, 8°.90S×127°.72E, h0km, mb4.4/8, mb1 4.5/12, mb1mx4.3/20, mbtmp4.4/12, ML4.3/4, MS3.4/2, Ms1 3.4/2, ms1mx2.6/24, Error ellipse: s-maj=47.3km s-min=18.6km az=77.0*
*BJI **17** 22:19:35.9, 9°.47S×127°.53E, h87km, mB5.0/3, mb4.8/5*
*ISCJB **17** 22:19:36.2±1.3, 9°.24S±0°.06×127°.27E±0°.07, h65km±13km, mb4.4/18, Error ellipse: s-maj=13.2km s-min=6.5km az=145.4*
*NEIC **17** 22:19:39.0±0.6, 9°.28S×127°.27E, h78km±7km, mb4.6/9, Error ellipse: s-maj=8.8km s-min=4.5km az=222.0*
*DJA **17** 22:19:40, 9°.22S×127°.15E, h57km, mb4.8/8*
ISC 17 22:19:37.5±1.1, 9°.21S±0°.06×127°.32E±0°.07, h60km±12km, n49, σ0.87/58, mb4.5/18, Timor Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**6.11**	**125**	*e*P	**Pn**	**22 21 09.0**	**+3.8**
	44nm,0.6s						
KAKA	**Kakadu**	**6.11**	**125**	*e*Pn	**Pn**	**22 21 07.3**	**+2.1**
	174nm,0.6s						
KAKA				*e*Sn	**Sn**	**22 22 24.6**	**+11**
KAPI	**Kappang**	**8.59**	**298**	Pn	**Pn**	**22 21 38.8**	**-0.4**
	1.3nm,0.3s,baz=137,slow=12,SNR=9.6						
KAPI	**Kappang**	**8.59**	**298**	*e*P	**Pn**	**22 21 40.3**	**+1.1**
FITZ	**Fitzroy Crossi**	**8.99**	**190**	*e*P	**Pn**	**22 21 45.8**	**+1.1**
	37nm,0.8s						
FITZ				*e*S	**Sn**	**22 23 25.4**	**+0.9**
FITZ	**Fitzroy Crossi**	**8.99**	**190**	Pn	**Pn**	**22 21 45.6**	**+0.9**
	2.7nm,0.3s,baz=31,slow=9.6,SNR=49						
FITZ				Sn	**Sn**	**22 23 24.7**	**+0.2**
	13nm,0.3s,baz=132,slow=20,SNR=16						
FITZ				LR	LR	22 26 05.5	
	comp=Z,121nm,18.9s,baz=17,slow=42						
FITZ	**Fitzroy Crossi**	**8.99**	**190**	*e*Pn	**Pn**	**22 21 45.6**	**+0.9**
FITZ				*e*Sn	**Sn**	**22 23 25.7**	**+1.3**
FITZ				LR	LR	22 26 05.5	
WRAB	**Tennant Creek**	**12.64**	**148**	*e*Pn	**Pn**	**22 22 34.8**	**+0.2**
	17nm,0.6s						
WRAB				*e*Sn	**Sn**	**22 24 54.2**	**+0.5**
WRA	**Warramunga Arr**	**12.64**	**148**	Pn	**Pn**	**22 22 32.4**	**-2.2**
	2.3nm,0.3s,baz=318,slow=13,SNR=140						
WRA				Sn	**Sn**	**22 24 51.0**	**-2.8**
	1.2nm,0.3s,baz=323,slow=23,SNR=10						
MBWA	**Marble Bar**	**13.95**	**211**	*e*Pn	**Pn**	**22 22 52.0**	**-0.3**
MBWA				*e*Sn	**Sn**	**22 25 19.4**	**-6.3**
ASAR	**Alice Springs**	**15.70**	**157**	Pn	**Pn**	**22 23 14.6**	**-0.4**
	0.9nm,0.3s,baz=331,slow=9.2,SNR=49						
ASAR				Sn	**Sn**	**22 26 07.3**	**-0.7**
	0.9nm,0.3s,baz=314,slow=18,SNR=6.6						
COEN	**Coen**	**16.23**	**108**	*e*Pn	**Pn**	**22 23 22.7**	**+1.0**
	119nm,0.8s						
COEN				*e*Sn	**Sn**	**22 26 12.4**	**-8.6**
KKM	**Kota Kinabalu**	**18.76**	**323**	*e*P	**Pn**	**22 23 52.6**	**-0.3**
	18nm,1.0s						
KSM	**Kuching**	**20.00**	**301**	*e*P	**Pn**	**22 24 05.7**	**-1.8**
	9.5nm,0.8s						
CTAO	**Charters Tower**	**21.25**	**123**	P	**P**	**22 24 19.1**	**+0.3**
FORT	**Forrest**	**21.47**	**178**	*e*P	**P**	**22 24 27.0**	**+5.9**
	24nm,0.7s,mb4.6						
KLBR	**Kellerberrin**	**23.98**	**200**	*e*P	**P**	**22 24 51.2**	**+4.7**
	6.2nm,0.5s,mb4.3						
KLBR				*e*S	**S**	**22 29 13.2**	**+14**
NWAO	**Narrogin (SRO)**	**25.38**	**200**	P	**P**	**22 25 02.8**	**+3.6**
	5.3nm,0.6s,mb4.2,baz=10.0,slow=23,SNR=4.9						
STKA	**Stephens Creek**	**26.16**	**152**	*e*P	**P**	**22 25 12.3**	**+6.1**
	3.8nm,0.6s,mb4.1						
STKA	**Stephens Creek**	**26.16**	**152**	P	**P**	**22 25 11.8**	**+5.6**
	4.8nm,0.9s,mb4.0,baz=326,slow=10,SNR=8.1						
STKA	**Stephens Creek**	**26.16**	**152**	*e*P	**P**	**22 25 05.7**	**-0.6**
KULM	**Kulim**	**30.24**	**297**	*e*P	**P**	**22 25 42.7**	**-0.1**
CM31	**Chiang Mai Arr**	**39.24**	**315**	*e*P	**P**	**22 27 00.2**	**-0.2**
	7.4nm,0.7s,mb4.5						
CMAR	**Chiang Mai Arr**	**39.24**	**315**	P	**P**	**22 27 00.8**	**+0.5**
	9.2nm,0.7s,mb4.6,baz=143,slow=6.8,SNR=68						
CHTO	**Chiang Mai**	**39.48**	**315**	*e*P	**P**	**22 27 01.7**	**-0.6**
	10nm,0.8s,mb4.6						
ENH	**Enshi**	**42.83**	**337**	*e*P	**P**	**22 27 29.3**	**-0.4**
MJAR	**Matsushiro Arr**	**46.64**	**12**	PcP	PcP	22 29 31.4	-1.5
	0.7nm,0.4s,baz=190,slow=3.6,SNR=4.7						
LZH	**Lanzhou**	**50.19**	**335**	*e*P	**P**	**22 28 28.0**	**+0.8**
LZH				pmax	pmax		
	comp=Z,23nm,1.4s,mb5.0						
LZH				pmax	pmax		
	comp=Z,85nm,4.3s						
LSA	**Lhasa**	**52.04**	**319**	*e*P	**P**	**22 28 41.4**	**+0.1**
GTA	**Gaotai**	**54.70**	**334**	*e*P	**P**	**22 29 01.1**	**+0.5**
GTA				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.6						
SONM	**Songino Array**	**59.74**	**344**	P	**P**	**22 29 35.3**	**-0.6**
	comp=Z,0.5nm,0.4s,mb3.9,baz=163,slow=11,SNR=3.5						
SONM				LR	LR	22 55 20.4	
	comp=Z,51nm,18.9s,baz=253,slow=36						
MK31	**Makanchi Array**	**68.66**	**329**	*e*P	**P**	**22 30 34.3**	**-0.1**
MKAR	**Makanchi Array**	**68.66**	**329**	P	**P**	**22 30 34.6**	**+0.2**
	comp=Z,3.6nm,0.8s,mb4.4,baz=125,slow=8.0,SNR=31						
TKM2	**Tokmak 2**	**70.04**	**322**	*e*P	**P**	**22 30 43.4**	**+0.3**
KBL	**Kabul**	**70.20**	**312**	*e*P	**P**	**22 30 43.2**	**-1.0**
	comp=Z,2.8nm,0.7s,mb4.3						
UCH	**Uchtor**	**70.32**	**321**	P	**P**	**22 30 45.5**	**+0.8**
EKS2	**Erkin-Say**	**71.01**	**321**	P	**P**	**22 30 49.7**	**+0.8**
ZAA0	**Zalesovo Array**	**72.42**	**335**	*e*P	**P**	**22 30 56.5**	**-0.6**
ZALV	**Zalesovo Beam**	**72.42**	**335**	P	**P**	**22 30 57.0**	**-0.2**
	comp=Z,7.8nm,0.7s,mb4.8,baz=134,slow=3.9,SNR=33						
KURK	**Kurchatov**	**73.05**	**330**	P	**P**	**22 31 01.4**	**+0.4**
	comp=Z,6.6nm,0.9s,mb4.6,baz=136,slow=5.3,SNR=33						
KURK	**Kurchatov**	**73.05**	**330**	*e*P	**P**	**22 31 01.2**	**+0.2**
	comp=Z,7.3nm,0.8s,mb4.7						
BVAR	**Borovoye Array**	**78.54**	**329**	P	**P**	**22 31 32.7**	**+0.5**
	comp=Z,2.6nm,0.8s,mb4.2,baz=134,slow=6.4,SNR=18						
BRVK	**Borovoye**	**78.61**	**329**	*e*P	**P**	**22 31 32.8**	**+0.2**
	comp=Z,6.5nm,1.1s,mb4.5						
TIXI	**Tiksi**	**80.69**	**0**	*e*P	**P**	**22 31 40.4**	**-3.2**
	comp=Z,3.3nm,0.3s,mb4.7						
QSPA	**South Pole Qui**	**80.78**	**180**	P	**P**	**22 31 43.8**	**-0.3**
BILL	**Bilibino**	**81.86**	**14**	P	**P**	**22 31 49.8**	**0.0**
AKTK	**Aktyubinsk**	**84.21**	**323**	P	**P**	**22 32 03.0**	**+0.7**
AKTO	**Aktyubinsk**	**84.21**	**323**	P	**P**	**22 32 03.0**	**+0.7**
	comp=Z,1.4nm,0.8s,mb4.2,baz=94,slow=6.8,SNR=4.8						
ARU	**Arti**	**86.19**	**329**	P	**P**	**22 32 11.5**	**-0.5**

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*IDC **17** 22:36:11.7±0.8, 32°.22N×105°.01E, h0km, mb3.8/10, mb1 3.9/13, mb1mx3.7/28, mbtmp3.7/13, ML3.7/3, Error ellipse: s-maj=33.8km s-min=15.3km az=55.0*
*ISCJB **17** 22:36:11.0±0.9, 32°.24N±0°.03×105°.08E±0°.04, h8km±6km, mb3.8/14, Error ellipse: s-maj=6.4km s-min=4.9km az=26.8*
*BJI **17** 22:36:12.2, 32°.23N×105°.22E, h7km, ML3.6/16, Ms3.5/3, Ms7 3.3/3*
*NEIC **17** 22:36:13.4±0.4, 32°.23N×104°.98E, h10km, mb3.9/4, Error ellipse: s-maj=11.2km s-min=7.2km az=61.0*
ISC 17 22:36:12.5±0.8, 32°.28N±0°.03×105°.01E±0°.04, h3km±5km, n33, σ1.03/46, mb3.8/14, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**1.74**	**218**	Pn	**Pn**	**22 36 44.3**	**+0.8**
CD2				Pg	**Pg**	**22 36 45.8**	**0.0**
CD2				Sg	**Sg**	**22 37 08.8**	**+0.5**
CD2				smax			
	comp=N,2μm,0.7s						
CD2				smax			
	comp=E,2μm,0.5s						
XAN	**Xi'an**	**3.72**	**61**	Pn	**Pn**	**22 37 11.3**	**+0.5**
XAN				Sn	**Sn**	**22 38 00.3**	**+5.2**
XAN				Sg	**Sg**	**22 38 12.8**	**+0.8**
XAN				smax			
	comp=N,170nm,0.8s						
XAN				smax			
	comp=E,71nm,0.9s						
LZH	**Lanzhou**	**3.92**	**346**	*e*Pn	**Pn**	**22 37 15.6**	**+2.1**
LZH				Pg	**Pg**	**22 37 26.5**	**-1.1**
LZH				Sn	**Sn**	**22 37 54.8**	**-5.2**
LZH				Sg	**Sg**	**22 38 15.8**	**-2.6**
LZH				smax			
	comp=N,190nm,0.5s						
LZH				smax			
	comp=E,540nm,0.6s						
LZH				LR	LR		
	comp=N,800nm,6.5s						
LZH				LR	LR		
	comp=Z,980nm,8.0s						
ENH	**Enshi**	**4.32**	**116**	*e*Pn	**Pn**	**22 37 19.4**	**+0.2**
ENH				*e*Pg	**Pg**	**22 37 34.9**	**-0.5**
ENH				*e*S	**Sb**	**22 38 29.2**	**+7.6**
GYA	**Guiyang**	**5.98**	**166**	Pn	**Pn**	**22 37 42.6**	**+0.7**
GYA				Sn	**Sn**	**22 38 49.1**	**-1.8**
GYA				Sg	**Sg**	**22 39 17.3**	**-7.3**
GYA				smax			
	comp=N,90nm,0.8s						
GYA				smax			
	comp=E,90nm,0.8s						
KMI	**Kunming**	**7.41**	**196**	Pn	**Pn**	**22 38 03.1**	**+1.6**
KMI				Sn	**Sn**	**22 39 25.0**	**-1.0**
KMI				smax			
	comp=N,10.0nm,0.7s						
KMI				smax			
	comp=E,11nm,0.6s						
WHN	**Wuhan**	**8.17**	**100**	P	**Pn**	**22 38 12.4**	**+0.5**
WHN				S	**Sn**	**22 39 38.3**	**-6.4**
GTA	**Gaotai**	**8.27**	**331**	*e*P	Px	22 38 25.0	
GTA				pP		22 38 29.3	
GTA				sP		22 38 32.8	
GTA				S	**Sb**	**22 40 05.5**	**-10**
GTA				sS		22 40 10.8	
GTA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,63nm,5.4s						
GTA				LR	LR		
	comp=N,150nm,10.5s						
GTA				LR	LR		
	comp=E,130nm,8.1s						
GTA				LR	LR		
	comp=Z,150nm,10.8s						
CMAR	**Chiang Mai Arr**	**14.81**	**203**	Pn	**Pn**	**22 39 42.9**	**0.0**
	comp=Z,0.2nm,0.3s,baz=10.0,slow=9.6,SNR=3.0						
SONM	**Songino Array**	**15.57**	**3**	Pn	**Pn**	**22 39 55.3**	**+2.5**
	comp=Z,0.3nm,0.3s,baz=134,slow=10,SNR=2.1						
ULN	**Ulaanbaatar**	**15.64**	**5**	Pn	**Pn**	**22 39 53.5**	**-0.3**
KSRS	**Korea Array**	**19.48**	**68**	P	**Pn**	**22 40 39.2**	**-2.5**
	comp=Z,0.1nm,0.3s,baz=254,slow=26,SNR=3.2						
MK31	**Makanchi Array**	**22.63**	**316**	*e*P	**P**	**22 41 14.4**	**0.0**
MKAR	**Makanchi Array**	**22.63**	**316**	P	**P**	**22 41 14.7**	**+0.3**
	comp=Z,0.9nm,0.7s,mb3.3,baz=108,slow=11,SNR=7.6						
TKM2	**Tokmak 2**	**25.49**	**303**	*e*P	**P**	**22 41 41.5**	**-0.4**
	comp=Z,1.0nm,0.6s,mb3.5						
ZALV	**Zalesovo Beam**	**26.02**	**332**	P	**P**	**22 41 47.2**	**+0.6**
	comp=Z,0.6nm,0.3s,mb3.6,baz=132,slow=8.9,SNR=3.6						
UCH	**Uchtor**	**26.11**	**301**	*e*P	**P**	**22 41 49.0**	**+1.5**
	comp=Z,3.1nm,1.2s,mb3.7						
KURK	**Kurchatov**	**26.79**	**321**	P	**P**	**22 41 54.0**	**+0.4**
	comp=Z,0.3nm,0.5s,mb3.1,baz=25,slow=32,SNR=6.2						
KURK	**Kurchatov**	**26.79**	**321**	P	**P**	**22 41 53.5**	**-0.1**
KBL	**Kabul**	**30.01**	**284**	*e*P	**P**	**22 42 22.3**	**-0.2**
BVAR	**Borovoye Array**	**32.37**	**320**	P	**P**	**22 42 41.8**	**-1.2**
	comp=Z,0.3nm,0.5s,mb3.4,baz=93,slow=2.9,SNR=3.1						
BRVK	**Borovoye**	**32.44**	**320**	*e*P	**P**	**22 42 44.7**	**+1.1**
	comp=Z,2.2nm,0.6s,mb4.2						
ARU	**Arti**	**39.99**	**321**	*e*P	**P**	**22 43 47.1**	**-1.1**
	comp=Z,3.0nm,0.8s,mb4.1						
KIV	**Kislovodsk**	**49.33**	**303**	*e*P	**P**	**22 45 02.9**	**0.0**
ARCES	**ARCESS Array B**	**56.51**	**336**	P	**P**	**22 45 54.8**	**-0.7**
	comp=Z,0.8nm,0.5s,mb4.0,baz=33,slow=4.6,SNR=11						
BRTR	**Keskin Array B**	**56.84**	**299**	P	**P**	**22 45 57.3**	**-1.1**
	comp=Z,0.2nm,0.5s,mb3.4,baz=64,slow=5.0,SNR=2.7						
FINES	**FINESS Array B**	**57.03**	**326**	P	**P**	**22 46 00.1**	**+0.8**
	comp=Z,1.3nm,0.7s,mb4.1,baz=89,slow=8.5,SNR=9.9						
CSS	**Prodhromos**	**58.54**	**294**	P	**P**	**22 46 09.8**	**-0.6**
WRA	**Warramunga Arr**	**59.03**	**147**	P	**P**	**22 46 13.4**	**-0.4**
	comp=Z,1.7nm,0.6s,mb4.3,baz=341,slow=7.5,SNR=26						
KWP	**Kalwaria Pacla**	**61.47**	**313**	P	**P**	**22 46 30.1**	**-0.2**
ASAR	**Alice Springs**	**62.11**	**150**	P	**P**	**22 46 34.0**	**-0.8**
	comp=Z,1.1nm,0.5s,mb4.2,baz=330,slow=6.6,SNR=9.2						
NB2	**NORSAR Subarra**	**64.09**	**327**	P	**P**	**22 46 48.8**	**+1.3**
	comp=Z,0.8nm,0.5s,mb4.0,baz=73,slow=6.5						
NOA	**NORSAR Array B**	**64.09**	**327**	P	**P**	**22 46 48.9**	**+1.3**
	comp=Z,1.5nm,0.7s,mb4.1,baz=73,slow=6.8,SNR=6.4						

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*IDC **17** 22:43:13.5±0.8, 31°.12N×103°.45E, h0km, mb4.0/15, mb1 4.1/17, mb1mx4.0/28, mbtmp4.0/17, ML3.8/2, MS3.4/4, Ms1 3.4/4, ms1mx2.9/33, Error ellipse: s-maj=28.4km s-min=14.5km az=51.0*
*NEIC **17** 22:43:14.7±0.3, 31°.12N×103°.40E, h10km, mb4.5/17, Error ellipse: s-maj=6.3km s-min=5.5km az=126.0*
*BJI **17** 22:43:14.7, 31°.27N×103°.48E, h11km, mB4.7/4, mb4.5/5, ML3.9/19, Ms4.1/7, Ms7 3.8/6*
*MOS **17** 22:43:15.8±0.9, 31°.11N×103°.49E, h33km, mb4.4/26, Error ellipse: s-maj=10.1km s-min=6.3km az=114.0*
ISC 17 22:43:13.9±1.0, 31°.20N±0°.03×103°.44E±0°.04, h2km±6km, n102, σ1.07/113, mb4.2/32, MS3.3/5, 2C-4D, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**0.40**	**137**	Pg	**Pg**	**22 43 23.8**	**+2.2**
CD2				Sg	**Sg**	**22 43 31.8**	**+5.0**
LZH	**Lanzhou**	**4.88**	**4**	*e*Pn	**Pn**	**22 44 31.4**	**+3.0**
LZH				Sn	**Sn**	**22 45 24.9**	**-0.6**
LZH				Sg	**Sg**	**22 45 50.8**	**0.0**
LZH				smax			
	comp=N,190nm,0.6s						
LZH				smax			
	comp=E,220nm,0.8s						
LZH				LR	LR		
	comp=E,3μm,6.7s						
LZH				LR	LR		
	comp=Z,3μm,7.5s						
ENH	**Enshi**	**5.29**	**99**	*e*Pn	**Pn**	**22 44 33.8**	**-0.1**
	comp=Z,59nm,0.6s						
ENH				*e*Pg	**Pg**	**22 44 53.0**	**-2.3**
ENH				*e*Sn	**Sn**	**22 45 33.6**	**-1.9**
XAN	**Xi'an**	**5.42**	**57**	Pn	**Pn**	**22 44 35.6**	**-0.2**
XAN				Sn	**Sn**	**22 45 31.3**	**-7.4**
XAN				Sg	**Sg**	**22 46 02.9**	**-5.2**
XAN				smax			
	comp=N,140nm,0.7s						
XAN				smax			
	comp=E,77nm,1.0s						
GYA	**Guiyang**	**5.51**	**148**	Pn	**Pn**	**22 44 38.6**	**+1.6**
GYA				Sn	**Sn**	**22 45 43.3**	**+2.4**
GYA				Sg	**Sg**	**22 46 05.6**	**-5.3**
GYA				smax			
	comp=N,270nm,0.7s						
GYA				smax			
	comp=E,200nm,0.8s						
KMI	**Kunming**	**6.09**	**186**	Pn	**Pn**	**22 44 46.8**	**+1.9**
KMI				Sn	**Sn**	**22 46 05.3**	**+10**
KMI				smax			
	comp=N,56nm,1.7s						
KMI				smax			
	comp=E,55nm,1.0s						
KMI				LR	LR		
	comp=N,520nm,7.1s						
KMI				LR	LR		
	comp=E,2μm,10.5s						
KMI				LR	LR		
	comp=Z,620nm,11.5s						
GTA	**Gaotai**	**8.71**	**341**	*e*P	Px	22 45 55.4	
GTA				pP		22 45 59.6	
GTA				sP		22 46 02.8	
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
LSA	**Lhasa**	**10.71**	**265**	P	**Pn**	**22 45 51.8**	**+3.4**
LSA	**Lhasa**	**10.71**	**265**	*e*P	**Pn**	**22 45 51.8**	**+3.4**
LSA				pmax	pmax		
	comp=Z,4.0nm,0.4s						
LSA	**Lhasa**	**10.71**	**265**	*e*Pn	**Pn**	**22 45 51.8**	**+3.4**
	comp=Z,4.2nm,0.4s						
SHL	**Shillong**	**11.62**	**244**	*e*PKP	**Pn**	**22 46 06.5**	**+5.7**
CHTO	**Chiang Mai**	**12.99**	**199**	*e*P	**Pn**	**22 46 19.5**	**0.0**
NJ2	**Nanjing**	**13.17**	**82**	*e*P	**Pn**	**22 46 18.4**	**-3.5**
NJ2				pP		22 46 24.8	
NJ2				PP		22 46 29.3	
NJ2				sP		22 46 31.9	
NJ2				S	**Sn**	**22 48 40.9**	**-8.1**
NJ2				sS		22 48 46.3	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,220nm,3.7s						
NJ2				LR	LR		
	comp=N,340nm,9.8s						
NJ2				LR	LR		
	comp=E,320nm,10.7s						
NJ2				LR	LR		
	comp=Z,2μm,11.7s						
CMAR	**Chiang Mai Arr**	**13.33**	**199**	Pn	**Pn**	**22 46 23.0**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=6.7,slow=8.9,SNR=2.9						
TAPN	**Taplejung**	**14.25**	**258**	*e*P	**Pn**	**22 46 35.8**	**-1.0**
	comp=Z,31nm,0.9s						
ODAN	**Odare**	**14.69**	**257**	*e*P	**Pn**	**22 46 40.8**	**-1.9**
	comp=Z,32nm,0.9s						
RAMN	**Ramite**	**15.32**	**258**	*e*P	**Pn**	**22 46 49.4**	**-1.8**
	comp=Z,31nm,0.8s						
GUN	**Gumba**	**15.63**	**262**	*e*P	**Pn**	**22 46 53.9**	**-1.4**
	comp=Z,104nm,0.9s						
PKI	**Pulchoki**	**16.13**	**262**	*e*P	**Pn**	**22 47 00.1**	**-1.6**
	comp=Z,56nm,0.5s						
PKI	**Pulchoki**	**16.13**	**262**	*e*P	**Pn**	**22 47 00.4**	**-1.3**
PKI				pmax	pmax		
	comp=Z,70nm,0.6s						
PKI	**Pulchoki**	**16.13**	**262**	*e*P	**Pn**	**22 47 00.4**	**-1.3**
	comp=Z,70nm,0.6s						
PKIN	**Phulchoki**	**16.13**	**262**	*e*P	**Pn**	**22 47 00.4**	**-1.5**
	comp=Z,70nm,0.6s						
KKN	**Kakani**	**16.17**	**262**	*e*P	**Pn**	**22 47 00.9**	**-1.4**
	comp=Z,133nm,0.7s						
KKN	**Kakani**	**16.17**	**262**	*e*P	**Pn**	**22 47 00.9**	**-1.4**
KKN				pmax	pmax		
	comp=Z,133nm,0.7s						
DMN	**Daman**	**16.37**	**262**	*e*P	**Pn**	**22 47 03.1**	**-1.8**
	comp=Z,81nm,0.7s						
SONM	**Songino Array**	**16.77**	**7**	Pn	**Pn**	**22 47 09.2**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=188,slow=12,SNR=7.5						
ULN	**Ulaanbaatar**	**16.87**	**8**	*e*P	**Pn**	**22 47 10.6**	**-0.5**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ULN	**Ulaanbaatar**	**16.87**	**8**	*e*Pn	**Pn**	**22 47 10.6**	**-0.5**
	comp=Z,6.2nm,1.1s						
TLY	**Talaya**	**20.46**	**0**	P	**P**	**22 47 52.6**	**0.0**
KSRS	**Korea Array**	**21.13**	**66**	P	**P**	**22 47 59.8**	**-0.3**
	comp=Z,4.7nm,0.9s,mb3.8,baz=263,slow=11,SNR=13						
KSRS	**Korea Array**	**21.13**	**66**	P	**P**	**22 47 59.8**	**-0.2**
KSRS				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb3.8						
DDI	**Dehra Dun**	**21.82**	**274**	*ex*	**P**	**22 48 07.0**	**-0.5**
HIA	**Hailar**	**21.84**	**30**	P	**P**	**22 48 07.3**	**-0.2**
MK31	**Makanchi Array**	**22.53**	**320**	*e*P	**P**	**22 48 16.0**	**+1.0**
MKAR	**Makanchi Array**	**22.53**	**320**	P	**P**	**22 48 15.8**	**+0.9**
	comp=Z,12nm,1.1s,mb4.2,baz=120,slow=11,SNR=19						
MKAR				LR	LR	22 57 47.0	
	comp=Z,137nm,18.5s,MS3.4,baz=135,slow=39						
MKAR	**Makanchi Array**	**22.53**	**320**	P	**P**	**22 48 15.8**	**+0.8**
MKAR				pmax	pmax		
	comp=Z,12nm,1.1s						
MKAR				MLR	MLR		
	comp=Z,137nm,18.5s						
MKAR	**Makanchi Array**	**22.53**	**320**	P	**P**	**22 48 15.8**	**+0.8**
MKAR				LR	LR	22 57 47.0	
TKM2	**Tokmak 2**	**24.99**	**306**	*e*P	**P**	**22 48 39.8**	**+0.8**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.8						
TKM2	**Tokmak 2**	**24.99**	**306**	*e*P	**P**	**22 48 39.8**	**+0.8**
	comp=Z,3.2nm,0.9s,mb3.9						
UCH	**Uchtor**	**25.55**	**304**	*e*P	**P**	**22 48 45.6**	**+1.6**
	comp=Z,6.1nm,0.9s,mb4.1						
AAK	**Ala-Archa**	**25.68**	**304**	P	**P**	**22 48 46.1**	**+0.9**
	comp=Z,4.9nm,0.7s,mb4.2,baz=159,slow=10,SNR=11						
AAK				LR	LR	23 00 50.9	
	comp=Z,96nm,20.6s,MS3.3,baz=286,slow=41						
AAK	**Ala-Archa**	**25.68**	**304**	*d i*P	**P**	**22 48 49.2**	**+4.0**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.9						
AAK	**Ala-Archa**	**25.68**	**304**	*e*P	**P**	**22 48 46.8**	**+1.6**
AAK				LR	LR	23 00 50.9	
AML	**Almayashu**	**26.11**	**303**	*e*P	**P**	**22 48 50.6**	**+1.5**
	comp=

comp=Z,4.7nm,0.9s,mb4.5
VSR Storozhevoye 50.60 313 *e*P **P 22 52 14.3 +0.3**
VSR pmax pmax
comp=E,2.0nm,0.4s
VSR pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
VSR pmax pmax
comp=N,3.0nm,0.8s
BILL Bilibino 51.33 25↓↓ *e*P **P 22 52 19.6 +0.3**
BILL pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
MOS Moscow 51.41 319 *e*P **P 22 52 20.5 +0.4**
OBN Obninsk 52.02 318↑↑ *e*P **P 22 52 25.3 +0.7**
OBN pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
JOF Joensuu 54.64 328 *e*P **P 22 52 44.3 +0.5**
JOF pmax pmax
comp=Z,4.0nm,1.2s,mb4.3
JOF Joensuu 54.64 328 *e*p **P 22 52 44.3 +0.5**
comp=Z,4.1nm,1.2s,mb4.3
JOF Joensuu 54.64 328 *e*p **P 22 52 44.3 +0.5**
comp=Z,4.1nm,1.2s,mb4.3
BRTR Keskin Array B 56.20 299 P **P 22 52 55.0 -0.4**
comp=Z,0.8nm,0.8s,mb3.8,baz=105,slow=7.8,SNR=5.1
BRTR Keskin Array B 56.20 299 P **P 22 52 55.0 -0.4**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
KEV Kevo 56.41 336 *e*P **P 22 52 55.5 -0.9**
KEV pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
KEV Kevo 56.41 336 *e*p **P 22 52 55.5 -0.9**
comp=Z,4.6nm,0.7s,mb4.6
KEV Kevo 56.41 336 *e*p **P 22 52 55.5 -0.9**
comp=Z,4.6nm,0.7s,mb4.6
AKASG Malin Array Be 56.90 313 P **P 22 52 59.9 -0.3**
comp=Z,1.0nm,0.4s,mb4.2,baz=67,slow=7.0,SNR=5.7
AKASG Malin Array Be 56.90 313 P **P 22 52 59.9 -0.3**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
ARCES ARCESS Array B 56.94 336 P **P 22 53 01.2 +1.1**
comp=Z,2.1nm,0.7s,mb4.3,baz=74,slow=7.6,SNR=7.4
ARCES LR LR 23 21 18.1
comp=Z,37nm,19.0s,MS3.5,baz=134,slow=40
ARCES ARCESS Array B 56.94 336 P **P 22 53 01.2 +1.1**
ARCES pmax pmax
comp=Z,2.0nm,0.7s
ARCES MLR MLR
comp=Z,37nm,19.0s
KAF Kangasniemi 57.00 327 *e*P **P 22 52 59.7 -1.0**
KAF pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
KAF Kangasniemi 57.00 327 *e*p **P 22 52 59.7 -1.0**
comp=Z,2.7nm,0.8s,mb4.3
KAF Kangasniemi 57.00 327 *e*p **P 22 52 59.7 -1.0**
comp=Z,2.7nm,0.8s,mb4.3
FINES FINESS Array B 57.17 326 P **P 22 53 02.1 +0.2**
comp=Z,2.4nm,0.8s,mb4.3,baz=69,slow=10,SNR=7.6
FINES FINESS Array B 57.17 326 P **P 22 53 02.1 +0.2**
FINES pmax pmax
comp=Z,2.0nm,0.8s
WRAB Tennant Creek 58.87 146 *e*P **P 22 53 13.3 -1.0**
WRAB pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
WRAB Tennant Creek 58.87 146 *e*P **P 22 53 13.2 -1.0**
comp=Z,4.1nm,0.8s,mb4.5
WRA Warramunga Arr 58.87 146 P **P 22 53 13.9 -0.4**
comp=Z,2.7nm,0.5s,mb4.5,baz=338,slow=7.7,SNR=59
WRA Warramunga Arr 58.87 146 P **P 22 53 13.9 -0.4**
WRA pmax pmax
comp=Z,3.0nm,0.5s
KWP Kalwaria Pacla 61.22 313 *e*P **P 22 53 30.5 +0.3**
KWP Kalwaria Pacla 61.22 313 *e*P **P 22 53 30.5 +0.3**
comp=Z,9.6nm,1.1s,mb4.8
KWP PP PP 22 55 43.6 -1.0
ASAR Alice Springs 61.87 148 P **P 22 53 34.2 -0.5**
comp=Z,1.0nm,0.6s,mb4.1,baz=327,slow=6.9,SNR=8.5
ASAR Alice Springs 61.87 148 P **P 22 53 34.3 -0.5**
ASAR pmax pmax
comp=Z,1.0nm,0.6s
NOA NORSAR Array B 64.27 327 P **P 22 53 51.3 +1.0**
comp=Z,1.7nm,0.9s,mb4.1,baz=74,slow=6.6,SNR=3.0
NOA NORSAR Array B 64.27 327 P **P 22 53 51.3 +1.0**
NOA pmax pmax
comp=Z,2.0nm,0.9s
MORC Moravsky Berou 64.39 314 *e*P **P 22 53 51.9 +0.6**
MORC pmax pmax
comp=Z,1.0nm,0.7s,mb4.0
MORC Moravsky Berou 64.39 314 *e*P **P 22 53 51.9 +0.6**
comp=Z,1.5nm,0.7s,mb4.1
CDF Champ du Feu 71.15 316 *e*P **P 22 54 33.5 -0.4**
LPG La Plagne 72.77 313 *e*P **P 22 54 43.3 -0.4**
comp=Z,11nm,1.0s,mb4.4
LPG La Plagne 72.77 313 *e*P **P 22 54 43.3 -0.4**
LPG pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
LPG La Plagne 72.77 313 *e*P **P 22 54 43.3 -0.4**
comp=Z,5.4nm,1.0s,mb4.4
LPL La Plagne 72.77 313 *e*P **P 22 54 43.3 -0.4**
SMF Signal de Mont 74.03 315 *e*P **P 22 54 50.6 -0.5**
YKA Yellowknife Ar 81.77 17 P **P 22 55 33.7 -0.2**
comp=Z,0.7nm,0.8s,mb3.6,baz=321,slow=5.5,SNR=3.2
YKA Yellowknife Ar 81.77 17 P **P 22 55 33.7 -0.2**
YKA pmax pmax
comp=Z,1.0nm,0.8s

*DJA **17** 22:49:53,0°.10N×97°.37E,h22km,MLv4.3/5*
*IDC **17** 22:49:54.5±2.0,0°.45N×98°.02E,h0km,mb3.5/5,mb1 3.6/6, mb1mx3.4/22,mbtmp3.5/6,Error ellipse: s-maj=67.4km s-min=23.5km az=63.0*
*NEIC **17** 22:49:59.8±0.6,0°.54N×98°.19E,h35km,mb3.9/1,Error ellipse: s-maj=12.3km s-min=10.1km az=49.0*
*ISCJB **17** 22:50:00.8±0.8,0°.72N±0°.08×98°.25E±0°.07,h60km±7km, mb3.6/6,Error ellipse: s-maj=15.8km s-min=7.6km az=36.9*
ISC 17 22:50:02.0±0.8,**0°.71N**±0°.08×**98°.25E**±0°.07,**h52**km±8km, **n21**,σ**1°.04/24**,**mb3.6/6**,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.90**	**311**	P	**Pn**	**22 50 15.3**	**-3.2**
GSI				S	**Sn**	**22 50 30.8**	**+0.2**
MNSI	**Mandailing Nat**	**1.33**	**86**	P	**Pn**	**22 50 23.5**	**-0.7**
PSI	**Prapat**	**2.19**	**18**	Pn	**Pn**	**22 50 35.1**	**-0.8**
	1.1nm,0.3s,baz=210,slow=10,SNR=6.6						
PPI	**Padang Panjang**	**2.44**	**118**	P	**Pn**	**22 50 40.0**	**+0.7**
PPI				S	**Sn**	**22 51 15.1**	**+7.1**
PDSI	**Padang**	**2.73**	**126**	P	**Pn**	**22 50 44.2**	**+0.8**
BKNI	**Bangkinang**	**2.81**	**98**	P	**Pn**	**22 50 49.9**	**+5.4**
BKNI				S	**Sn**	**22 51 34.5**	**+17**
SDSI	**Sungai Dareh**	**3.57**	**117**	P	**Pn**	**22 50 56.6**	**+1.7**
KULM	**Kulim**	**5.14**	**28**	*e*Pn	**Pn**	**22 51 17.2**	**+0.7**
	8.1nm,0.6s						
KSM	**Kuching**	**12.08**	**86**	Pn	**Pn**	**22 52 50.0**	**-1.5**
KKM	**Kota Kinabalu**	**18.69**	**73**	*e*P	**Pn**	**22 54 17.3**	**+0.3**
LSA	**Lhasa**	**29.62**	**347**	P	**P**	**22 56 02.5**	**+0.2**
WRA	**Warramunga Arr**	**40.88**	**122**	P	**P**	**22 57 38.6**	**-0.7**
	0.6nm,0.9s,mb3.2,baz=302,slow=8.8,SNR=4.1						
WRAB	**Tennant Creek**	**40.89**	**122**	*e*P	**P**	**22 57 38.7**	**-0.6**
	2.0nm,0.8s,mb3.8						
ASAR	**Alice Springs**	**42.26**	**127**	P	**P**	**22 57 50.5**	**0.0**
	0.1nm,0.3s,mb2.9,baz=295,slow=7.4,SNR=2.7						
TKM2	**Tokmak 2**	**46.67**	**337**	P	**P**	**22 58 25.9**	**+0.5**
SONM	**Songino Array**	**47.47**	**7**	P	**P**	**22 58 34.3**	**+2.7**
	0.8nm,0.5s,mb3.9,baz=199,slow=13,SNR=3.9						
SONM				PcP	PcP	23 00 03.0	+1.8
	0.8nm,0.5s,baz=195,slow=4.3,SNR=3.7						
MKAR	**Makanchi Array**	**47.98**	**345**	P	**P**	**22 58 36.3**	**+0.8**
	0.2nm,0.5s,mb3.4,baz=154,slow=9.4,SNR=4.5						
ZALV	**Zalesovo Beam**	**54.21**	**350**	P	**P**	**22 59 22.3**	**+0.1**
	0.8nm,0.4s,mb4.0,baz=128,slow=4.0,SNR=3.5						
KMBO	**Kilima Mbogo**	**61.02**	**268**	P	**P**	**23 00 09.8**	**-1.0**
HNR	**Honiara**	**62.24**	**101**	*e*P	**P**	**23 00 17.1**	**-1.9**
	63nm,0.7s						
BOSA	**Boshof**	**75.45**	**240**	*e*P	**P**	**23 01 41.5**	**+0.6**

*ISCJB **17** 22:50:45.1±1.1,30°.74N±0°.04×142°.0E±0°.2,h70km±11km, mb4.2/2,Error ellipse: s-maj=28.2km s-min=6.2km az=171.5*
*NEIC **17** 22:50:46.7±2.9,30°.71N×142°.05E,h67km±23km,mb3.9/1, Error ellipse: s-maj=29.8km s-min=14.2km az=117.0*
*JMA **17** 22:50:46.0±0.2,30°.72N×142°.05E,h57km,M3.7*

ISC 17 22:50:47.2±1.0,**30°.70N**±0°.04×**141°.9E**±0°.2,**h67**km±11km, **n14**,σ**0°.85/15**,**mb4.2/2**,**Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.60**	**176**	P	**Pn**	**22 51 41.0**	**+0.5**
CBIJ				*e*S	**Sn**	**22 52 21.5**	**-0.3**
BSO2	**Boso 2**	**4.16**	**347**	*e*S	**Sn**	**22 52 37.9**	**+2.5**
BSO3	**Boso 3**	**4.26**	**344**	*e*S	**Sn**	**22 52 37.8**	**-0.1**
BSO4	**Boso 4**	**4.48**	**343**	*e*S	**Sn**	**22 52 43.8**	**+0.5**
JHU	**Hanno**	**5.59**	**338**	*e*S	**Sn**	**22 53 09.6**	**-1.0**
JHO	**Hitachi**	**6.00**	**350**	S	**Sn**	**22 53 19.5**	**-1.2**
MAJO	**Matsushiro**	**6.60**	**333**	*e*Pn	**Pn**	**22 52 21.6**	**+0.1**
YULB	**Yu-li**	**19.73**	**253**	P	**Pn**	**22 55 12.4**	**-1.2**
KKM	**Kota Kinabalu**	**34.41**	**230**	*e*P	**P**	**22 57 28.1**	**-0.1**
	3.2nm,0.4s,mb4.5						
KSM	**Kuching**	**41.72**	**232**	P	**P**	**22 58 30.4**	**+0.6**
TKM2	**Tokmak 2**	**53.21**	**303**	P	**P**	**22 59 59.3**	**+0.6**
AML	**Almayashu**	**54.74**	**302**	*e*P	**P**	**23 00 10.4**	**+0.6**
	0.9nm,0.6s,mb4.0						
INK	**Inuvik**	**59.88**	**25**	P	**P**	**23 00 44.5**	**-1.0**
NWAO	**Narrogin (SRO)**	**67.45**	**202**	P	**P**	**23 01 36.0**	**+0.2**

*NEIC **17** 23:23:24.7±0.7,30°.92N×103°.39E,h10km,mb3.8/2,Error ellipse: s-maj=15.7km s-min=11.6km az=52.0*
*IDC **17** 23:23:27.6±1.2,32°.01N×104°.53E,h0km,mb3.7/6, mb1 3.8/6,mb1mx3.5/24,mbtmp3.7/6,Error ellipse: s-maj=153.8km s-min=21.3km az=56.0*
ISC 17 23:23:28.8±0.8,**32°.20N**±0°.03×**104°.64E**±0°.04,**h5**km±6km, **n17**,σ**1°.05/27**,**mb3.7/7**,**Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.49**	**211**	Pn	**Pn**	**23 23 54.8**	**-1.3**
CD2				Pg	**Pg**	**23 23 56.8**	**-0.5**
CD2				Sn	**Sn**	**23 24 16.8**	**+0.9**
CD2				Sg	**Sg**	**23 24 17.8**	**+1.1**
CD2				smax			
	comp=N,2μm,0.7s						
CD2				smax			
	comp=E,2μm,0.6s						
LZH	**Lanzhou**	**3.93**	**351**	*e*Pn	**Pn**	**23 24 33.8**	**+4.1**
LZH				Pg	**Pg**	**23 24 44.5**	**+0.4**
LZH				Sn	**Sn**	**23 25 20.8**	**+4.6**
LZH				Sg	**Sg**	**23 25 35.4**	**+0.4**
LZH				smax			
	comp=N,87nm,0.6s						
LZH				smax			
	comp=E,120nm,0.5s						
LZH				LR	LR		
	comp=N,230nm,5.7s						
LZH				LR	LR		
	comp=Z,420nm,7.0s						
XAN	**Xi'an**	**4.03**	**62**	Pn	**Pn**	**23 24 31.6**	**+0.5**
XAN				Pg	**Pg**	**23 24 46.8**	**+0.7**
XAN				Sn	**Sn**	**23 25 20.4**	**+1.7**
XAN				Sg	**Sg**	**23 25 36.9**	**-1.5**
XAN				smax			
	comp=N,86nm,0.6s						
XAN				smax			
	comp=E,37nm,0.7s						
ENH	**Enshi**	**4.58**	**114**	Pn	**Pn**	**23 24 43.8**	**+5.2**
	comp=E,15nm,0.6s						
ENH				*e*Sn	**Sg**	**23 25 55.7**	**0.0**
MK31	**Makanchi Array**	**22.47**	**317**	*e*P	**P**	**23 28 26.6**	**-2.1**
MKAR	**Makanchi Array**	**22.47**	**317**	P	**P**	**23 28 29.7**	**+1.0**
	comp=E,0.5nm,0.6s,mb3.1,baz=119,slow=11,SNR=5.1						
MKAR	**Makanchi Array**	**22.47**	**317**	P	**P**	**23 28 29.7**	**+1.0**
ZALV	**Zalesovo Beam**	**25.95**	**333**	P	**P**	**23 29 02.5**	**+0.7**
	comp=E,2.4nm,0.5s,mb4.0,baz=130,slow=10,SNR=11						
ZALV	**Zalesovo Beam**	**25.95**	**333**	P	**P**	**23 29 02.5**	**+0.7**
AML	**Almayashu**	**26.45**	**301**	P	**P**	**23 29 00.1**	**-6.4**
KURK	**Kurchatov**	**26.66**	**322**	P	**P**	**23 29 09.2**	**+1.0**
	comp=E,0.3nm,0.3s,mb3.4,baz=116,slow=11,SNR=3.8						
KURK	**Kurchatov**	**26.66**	**322**	P	**P**	**23 29 06.6**	**-1.7**
	comp=E,1.6nm,1.0s,mb3.5						
ARU	**Arti**	**39.85**	**321**	P	**P**	**23 31 01.4**	**-1.6**
	comp=E,3.7nm,1.4s,mb3.9						
ARCES	**ARCESS Array B**	**56.45**	**336**	P	**P**	**23 33 10.8**	**-0.1**
	comp=E,0.3nm,0.5s,mb3.6,baz=81,slow=7.9,SNR=5.0						
FINES	**FINESS Array B**	**56.91**	**326**	P	**P**	**23 33 14.8**	**+0.4**
	comp=E,1.8nm,0.9s,mb4.1,baz=98,slow=7.9,SNR=5.6						
WRA	**Warramunga Arr**	**59.14**	**147**	P	**P**	**23 33 29.5**	**-0.9**
	comp=E,0.2nm,0.3s,mb3.6,baz=327,slow=9.1,SNR=14						
WRA	**Warramunga Arr**	**59.14**	**147**	P	**P**	**23 33 29.5**	**-0.9**

*BJI **17** 23:28:06.7,54°.50N×161°.60W,h48km,mB4.9/9,mb5.0/15, Ms4.7/10,Ms7 4.3/9*
*IDC **17** 23:28:06.1±3.2,54°.60N×161°.70W,h32km±22km,mb4.6/25, mb1 4.6/27,mb1mx4.6/32,mbtmp4.6/27,ML4.0/2,MS3.9/22, Ms1 3.9/22,ms1mx3.8/29,Error ellipse: s-maj=17.4km s-min=9.9km az=179.0*
*ISCJB **17** 23:28:06.0±0.5,54°.53N±0°.03×161°.62W±0°.04,h44km±3km, mb4.9/178,MS4.1/40,Error ellipse: s-maj=5.8km s-min=3.0km az=153.9*
*MOS **17** 23:28:07.7±0.8,55°.07N×162°.08W,h33km,mb5.1/82, MS4.1/13,Error ellipse: s-maj=13.2km s-min=4.2km az=91.9*
*NEIC **17** 23:28:07.8±0.4,54°.53N×161°.65W,h48km±2km,mb4.9/108, ML4.9(PMR),ML4.5(AEIC),Error ellipse: s-maj=5.6km s-min=2.8km az=166.0*
*SZGRF **17** 23:28:09.8,55°.32N×161°.69W,h33km,mb5.1,MS3.9, Alaska Peninsula, United States*
ISC 17 23:28:07.7±0.5,**54°.46N**±0°.03×**161°.63W**±0°.04,**h48**km±3km, **h49**km±1.6km:**pP-P**,**n494**,σ**0°.92/503**,**mb4.9/178**,**MS4.1/40**, **46C-9D**,**Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	**False Pass**	**1.11**	**292**	P	**Pn**	**23 28 26.7**	**-0.2**
FALS				S	**Sn**	**23 28 42.7**	**+1.7**
SDPT	**Sand Point**	**1.12**	**36**	*e*P	**Pn**	**23 28 25.4**	**-1.5**
SDPT				S	**Sn**	**23 28 40.2**	**-1.0**
AKUT	**Akutan**	**2.45**	**264**	*e*P	**Pn**	**23 28 45.6**	**+0.5**
AKUT				S	**Sn**	**23 29 16.9**	**+3.2**
AKLV	**Akutan Long Va**	**2.55**	**265**	P	**Pn**	**23 28 47.2**	**+0.7**
AKGG	**Akutan Green G**	**2.56**	**266**	P	**Pn**	**23 28 47.6**	**+0.9**
CHGN	**Chignik**	**2.61**	**44**	*e*Pn	**Pn**	**23 28 46.7**	**-0.6**
CHGN				*e*S	**Sn**	**23 29 22.4**	**+4.8**
UNV	**Unalaska Valle**	**2.93**	**260**	P	**Pn**	**23 28 51.9**	**+0.2**
NIKO	**Nikolski**	**4.54**	**254**	P	**Pn**	**23 29 15.0**	**+1.2**
OHAK	**Old Harbor**	**5.46**	**56**	*e*P	**Pn**	**23 29 24.2**	**-2.2**
SPIA	**Saint Paul Isl**	**5.57**	**303**	P	**Pn**	**23 29 29.2**	**+1.3**
KDAK	**Kodiak Island**	**6.06**	**53**	Pn	**Pn**	**23 29 32.1**	**-2.5**
	4.0nm,0.3s,baz=238,slow=6.4,SNR=14						
KDAK				Sn	**Sn**	**23 30 36.5**	**-6.0**
	baz=60,slow=23,SNR=2.4						
KDAK				Lg		23 31 01.7	
	5.8nm,0.3s,baz=29,slow=20,SNR=20						
KDAK	**Kodiak Island**	**6.06**	**53**	*i* P	**Pn**	**23 29 32.0**	**-2.6**
KDAK	**Kodiak Island**	**6.06**	**53**	P	**Pn**	**23 29 31.8**	**-2.9**
SVW2	**Sparrevohn**	**7.40**	**23**	*e*P	**Pn**	**23 29 53.7**	**+0.8**
RSO	**Redoubt South**	**7.69**	**35**	*e*Pn	**Pn**	**23 29 59.1**	**+2.2**
RSO				*e*Sn	**Sn**	**23 31 26.2**	**+3.8**
SEW	**Seward**	**8.69**	**44**	*e*Pn	**Pn**	**23 30 09.4**	**-1.2**
	33nm,0.8s						
SEW				*e*Sn	**Sn**	**23 31 47.2**	**+0.2**
TTA	**Tatalina**	**8.98**	**17**	*e*P	**Pn**	**23 30 14.0**	**-0.6**
FIB	**Fire Island**	**9.08**	**38**	*e*P	**Pn**	**23 30 14.7**	**-1.2**
MID	**Middleton Isla**	**9.72**	**53**	*e*P	**Pn**	**23 30 22.4**	**-2.3**
MID				pmax	pmax		
	comp=Z,91nm,0.7s						
MID	**Middleton Isla**	**9.72**	**53**	*e*P	**Pn**	**23 30 22.4**	**-2.3**
	comp=Z,90nm,0.7s						
PMR	**Palmer**	**9.74**	**38**	*e*P	**Pn**	**23 30 24.2**	**-0.7**
PMR				*e*		23 32 13.2	
PMR				pmax	pmax		
	comp=Z,23nm,0.8s						
PMR	**Palmer**	**9.74**	**38**	*e*Pn	**Pn**	**23 30 24.2**	**-0.7**
	comp=Z,23nm,0.8s						
PMR				*e*Sn	**Sn**	**23 32 13.2**	**+0.4**
PPLA	**Purkeypile**	**9.78**	**26**	*e*Pn	**Pn**	**23 30 27.4**	**+1.9**
	comp=Z,2.3nm,1.2s						
PPLA				*e*Sn	**Sn**	**23 32 16.6**	**+2.9**
CHUM	**Lake Minchumin**	**10.58**	**23**	*e*Pn	**Pn**	**23 30 37.3**	**+0.9**
	comp=Z,36nm,0.9s						
CHUM				*e*Sn	**Sn**	**23 32 34.7**	**+1.5**
KTH	**Kantishna Hill**	**10.64**	**27**	*e*Pn	**Pn**	**23 30 37.0**	**-0.3**
	comp=Z,99nm,1.2s						
KTH				*e*Sn	**Sn**	**23 32 35.4**	**+0.5**

GAMB	**Gambell**	**10.66**	**335**	*e*Pn	**Pn**	**23 30 38.5**	**+0.9**
	comp=Z,30nm,0.8s						
GAMB				*e*Sn	**Sn**	**23 32 38.1**	**+2.7**
TRF	**Thorofare Moun**	**10.73**	**28**	*e*Pn	**Pn**	**23 30 37.7**	**-0.9**
	comp=Z,114nm,1.2s						
TRF				*e*Sn	**Sn**	**23 32 39.2**	**+2.2**
DIV	**Divide**	**10.77**	**45**	*e*Pn	**Pn**	**23 30 37.1**	**-1.8**
	comp=Z,29nm,0.8s						
DIV				*e*Sn	**Sn**	**23 32 36.7**	**-1.2**
BPAW	**Bear Paw Mtn.**	**11.08**	**25**	*e*Pn	**Pn**	**23 30 43.0**	**-0.2**
	comp=Z,33nm,0.9s						
BPAW				*e*Sn	**Sn**	**23 32 47.2**	**+1.7**
BMRM	**Bremner River**	**11.18**	**47**	*e*Pn	**Pn**	**23 30 41.3**	**-3.3**
	comp=Z,56nm,1.0s						
BMRM				*e*Sn	**Sn**	**23 32 47.0**	**-1.0**
MCK	**McKinley**	**11.34**	**30**	*e*P	**Pn**	**23 30 46.9**	**+0.1**
MCK				*e*		23 32 53.9	
MCK				pmax	pmax		
	comp=Z,58nm,1.1s						
MCK	**McKinley**	**11.34**	**30**	*e*Pn	**Pn**	**23 30 46.9**	**+0.2**
	comp=Z,58nm,1.1s						
MCK				*e*Sn	**Sn**	**23 32 53.9**	**+2.1**
AMKA	**Amchitka**	**11.91**	**263**	*e*P	**Pn**	**23 30 54.2**	**-0.4**
	comp=Z,15nm,0.4s						
COLA	**College**	**12.52**	**28**	*e*P	**Pn**	**23 31 03.1**	**+0.3**
COLA				*e*		23 33 21.5	
COLA				pmax	pmax		
	comp=Z,26nm,1.0s						
COLA	**College**	**12.52**	**28**	*e*Pn	**Pn**	**23 31 03.1**	**+0.3**
	comp=Z,26nm,1.0s						
COLA				*e*Sn	**Sn**	**23 33 21.4**	**+0.9**
PNL	**Peninsula**	**13.14**	**58**	*e*Pn	**Pn**	**23 31 09.8**	**-1.6**
	comp=Z,68nm,0.8s						
PNL				*e*Sn	**Sn**	**23 33 35.6**	**-0.3**
COLD	**Coldfoot**	**13.93**	**19**	*e*Pn	**Pn**	**23 31 20.8**	**-1.3**
	comp=Z,15nm,0.8s						
COLD				*e*Sn	**Sn**	**23 33 50.2**	**-4.8**
EGAK	**Eagle**	**14.55**	**37**	*e*Pn	**Pn**	**23 31 26.7**	**-3.8**
	comp=Z,16nm,0.7s						
EGAK				Sn	**Sn**	**23 34 10.8**	**+0.7**
FX1	**Attu Island--F**	**15.00**	**274**	Pn	**Pn**	**23 31 35.1**	**-1.2**
	comp=Z,2.4nm,0.3s,baz=294,slow=17,SNR=5.8						
FX1				LR	LR	23 36 54.6	
	comp=Z,254nm,18.8s,baz=333,slow=35						
SKAG	**Skagway**	**15.14**	**60**	*e*Pn	**Pn**	**23 31 38.3**	**+0.1**
	comp=Z,49nm,1.1s						
DLBC	**Dease Lake**	**17.82**	**64**	LR	LR	23 39 13.4	
	comp=Z,258nm,18.1s,baz=283,slow=38						
DLBC	**Dease Lake**	**17.82**	**64**	*e*Pn	**Pn**	**23 32 11.2**	**-0.7**
INK	**Inuvik**	**19.07**	**32**	*e*P	**Pn**	**23 32 22.8**	**-4.1**
INK				pmax	pmax		
	comp=Z,20nm,0.8s						
INK	**Inuvik**	**19.07**	**32**	*e*P	**Pn**	**23 32 22.8**	**-4.1**
	comp=Z,20nm,0.8s						
BILL	**Bilibino**	**20.24**	**325**	*e*P	**P**	**23 32 37.5**	**-0.9**
BILL				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,1μm,18.0s,MS4.4						
BILL	**Bilibino**	**20.24**	**325**	*e*P	**P**	**23 32 37.1**	**-1.3**
	comp=Z,24nm,1.0s						
PET	**Petropavlovsk**	**23.32**	**283**	*e*S	**S**	**23 37 15.3**	**-4.6**
PET				pmax	pmax		
	comp=Z,200nm,1.8s,mb5.2						
PET				pmax	pmax		
	comp=Z,100nm,6.4s						
PET				pmax	pmax		
	comp=Z,91nm,0.9s,mb5.2						
PET				MLR	MLR		
	comp=Z,300nm,19.0s,MS3.8						
PET				MLR	MLR		
	comp=Z,300nm,18.0s						
PET	**Petropavlovsk**	**23.32**	**283**	*e*P	**P**	**23 33 09.8**	**-1.6**
	comp=Z,90nm,1.0s,mb5.2						
PET	**Petropavlovsk**	**23.32**	**283**	*e*P	**P**	**23 33 01.0**	**-10**
PEA0B	**Petropavlovsk-**	**23.84**	**284**	*e*P	**P**	**23 33 15.3**	**-0.7**
PETK	**Petropavlovsk-**	**23.84**	**284**	P	**P**	**23 33 15.2**	**-0.8**
	comp=Z,85nm,0.5s,mb5.4,baz=81,slow=12,SNR=340						
PETK				LR	LR	23 42 32.7	
	comp=Z,182nm,19.4s,MS3.6,baz=82,slow=36						
PETK	**Petropavlovsk-**	**23.84**	**284**	P	**P**	**23 33 15.2**	**-0.8**
PETK				LR	LR	23 42 32.7	
SEY	**Seymchan**	**24.84**	**308**	*e*P	**P**	**23 33 23.6**	**-1.5**
SEY	**Seymchan**	**24.84**	**308**↑↑	*e*P	**P**	**23 33 23.7**	**-1.4**
YKA	**Yellowknife Ar**	**25.34**	**53**	P	**P**	**23 33 28.4**	**-1.2**
	comp=Z,5.5nm,0.8s,mb4.1,baz=269,slow=7.8,SNR=24						
YKA				PcP	PcP	23 37 00.2	-0.7
	comp=Z,2.0nm,0.7s,baz=270,slow=2.3,SNR=6.6						
YKA				ScP	ScP	23 40 36.4	+0.6
	comp=Z,0.3nm,0.3s,baz=276,slow=2.5,SNR=3.6						
YKA	**Yellowknife Ar**	**25.34**	**53**	P	**P**	**23 33 28.4**	**-1.2**
YKA						23 37 00.2	
YKA	**Yellowknife Ar**	**25.34**	**53**	P	**P**	**23 33 28.4**	**-1.2**
YKA				PcP	PcP	23 37 00.2	-0.7
YKA				ScP	ScP	23 40 36.4	+0.6
YBH	**Yreka Blue Hor**	**28.55**	**100**	P	**P**	**23 34 00.6**	**+1.9**
	comp=Z,1.6nm,0.9s,mb3.8,baz=291,slow=8.6,SNR=2.7						
YBH				LR	LR	23 42 34.2	
	comp=Z,527nm,21.7s,MS4.1,baz=332,slow=30						
HLID	**Hailey**	**32.25**	**90**	*e*P	**P**	**23 34 32.2**	**+1.0**
	comp=Z,1.8nm,0.8s,mb4.0						
MCMT	**McKenzie Canyo**	**32.42**	**87**	*e*P	**P**	**23 34 34.7**	**+1.9**
	comp=Z,1.0nm,0.6s,mb3.8						
RES	**Resolute Bay**	**32.44**	**27**	*e*P	**P**	**23 34 31.4**	**-1.3**
RES				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.2						
RES	**Resolute Bay**	**32.44**	**27**	*e*P	**P**	**23 34 31.4**	**-1.3**
	comp=Z,3.1nm,0.8s,mb4.2						
NVAR	**Mina Array Bea**	**33.27**	**101**	P	**P**	**23 34 42.1**	**+1.9**
	comp=Z,1.1nm,0.8s,mb3.9,baz=288,slow=10.0,SNR=4.4						
NVAR				PcP	PcP	23 37 21.7	+0.2
	comp=Z,0.6nm,0.6s,baz=280,slow=2.5,SNR=3.5						
TIXI	**Tiksi**	**33.41**	**327**	*e*P	**P**	**23 34 39.5**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.8						
TIXI	**Tiksi**	**33.41**	**327**	*e*P	**P**	**23 34 39.5**	**-1.6**
	comp=Z,4.6nm,0.4s,mb4.8						
N12A	**Clover Valley,**	**33.56**	**94**	*e*P	**P**	**23 34 43.7**	**+0.9**
	comp=Z,20nm,1.3s,mb4.9

ECSD EROS Data Cent 42.44 77 *e*P **P 23 35 55.9 -1.6**
comp=Z,2.0nm,0.6s,mb3.9
ANMO Albuquerque 42.53 94 PcP PcP 23 37 50.3 +0.2
comp=Z,2.2nm,0.8s,baz=288,slow=3.3,SNR=7.1
EYMN Ely 42.75 69 *e*P **P 23 35 59.5 -0.4**
comp=Z,6.0nm,0.5s,mb4.6
BNM Barren Site 43.00 95 *e*P **P 23 36 03.6 +1.4**
comp=Z,5.1nm,1.2s,mb4.1
MAJO Matsushiro 44.34 272 *e*P **P 23 36 12.9 +0.1**
MAJO pmax pmax
comp=Z,39nm,0.8s,mb5.2
MAJO Matsushiro 44.34 272 *e*P **P 23 36 12.9 +0.1**
comp=Z,39nm,0.8s,mb5.2
MAT Matsushiro 44.34 272 P **P 23 36 12.8 0.0**
MJAR Matsushiro Arr 44.34 272 P **P 23 36 13.0 +0.2**
comp=Z,8.5nm,0.7s,mb4.6,baz=38,slow=6.5,SNR=22
MJAR LR LR 23 52 57.6
comp=Z,70nm,22.0s,MS3.5,baz=90,slow=34
MNTX Cornudas Mount 45.49 96 *e*P **P 23 36 23.7 +1.6**
comp=Z,3.1nm,1.1s,mb4.0
CN2 Changchun 46.83 288 *e*P **P 23 36 32.1 -0.4**
CN2 *e*pP pP 23 36 36.6 -8.9
CN2 *e*S **S 23 43 21.1 +1.9**
CN2 pmax pmax
comp=Z,20nm,1.0s,mb5.0
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,19.0s,MS4.2
CN2 LR LR
comp=E,200nm,19.0s,MS4.2
CN2 LR LR
comp=Z,200nm,21.0s,MS4.0
WMOK Wichita Mounta 47.16 88 *e*P **P 23 36 36.2 +1.0**
WMOK pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
WMOK Wichita Mounta 47.16 88 *e*P **P 23 36 36.2 +1.1**
comp=Z,2.8nm,0.8s,mb4.2
SUMG Summit 47.33 20 *e*P **P 23 36 35.6 -0.3**
SUMG pmax pmax
comp=Z,9.0nm,0.8s
SUMG Summit 47.33 20 *e*P **P 23 36 35.6 -0.4**
comp=Z,8.8nm,0.8s,mb4.7
SUMG Summit 47.33 20 *i*P **P 23 36 35.7 -0.2**
comp=Z,8.3nm,1.0s,mb4.6
SPITS Spitsbergen Ar 47.62 1 P **P 23 36 36.6 -1.6**
comp=Z,5.0nm,0.8s,mb4.6,baz=45,slow=4.8,SNR=7.6
SPITS PcP PcP 23 38 05.5 -1.5
comp=Z,1.4nm,0.4s,baz=46,slow=3.6,SNR=10
TXAR Lajitas Array 48.23 97 P **P 23 36 43.8 +0.2**
comp=Z,0.8nm,0.6s,mb3.9,baz=309,slow=5.9,SNR=14
TXAR PcP PcP 23 38 10.2 +0.2
comp=Z,0.8nm,0.7s,baz=262,slow=1.8,SNR=4.8
TXAR LR LR 23 54 41.7
comp=Z,128nm,18.4s,MS3.9,baz=295,slow=33
TXAR Lajitas Array 48.23 97 P **P 23 36 43.8 +0.3**
TXAR 23 38 10.2
SFJD Kangerlussuaq 48.38 29 *i*P **P 23 36 43.2 -0.9**
SFJD pmax pmax
comp=Z,14nm,0.9s,mb5.0
SFJD Kangerlussuaq 48.38 29 *e*P **P 23 36 42.9 -1.2**
comp=Z,20nm,1.0s,mb5.1
SFJD Kangerlussuaq 48.38 29 *i*P **P 23 36 43.2 -0.9**
comp=Z,14nm,0.9s,mb5.0
HDIL Hopedale 48.64 75 *e*P **P 23 36 44.7 -1.8**
CBIJ Chichi jima 48.89 259 P **P 23 36 47.6 -1.0**
comp=Z,65nm,0.7s,mb5.8,baz=286,slow=20,SNR=3.7
KSRS Korea Array 49.67 280 P **P 23 36 55.0 +0.6**
comp=Z,28nm,0.8s,mb5.4,baz=48,slow=7.1,SNR=71
KSRS LR LR 23 56 02.9
comp=Z,82nm,20.4s,MS3.7,baz=245,slow=34
INCN Inchon 50.39 281 *e*P **P 23 37 00.2 +0.3**
SCHQ Schefferville 50.66 48 P **P 23 37 00.9 -0.8**
comp=Z,4.4nm,0.7s,mb4.5,baz=299,slow=8.4,SNR=6.9
SCHQ LR LR 23 59 15.5
comp=Z,195nm,18.7s,MS4.2,baz=95,slow=37
WVT Waverly 52.53 78 *e*P **P 23 37 15.1 -0.7**
WVT pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
WVT Waverly 52.53 78 *e*P **P 23 37 15.1 -0.8**
comp=Z,9.6nm,0.6s,mb4.9
TLY Talaya 52.75 309 *e*P **P 23 37 17.1 -0.1**
TLY pmax pmax
comp=Z,15nm,1.0s,mb4.9
TLY MLR MLR
comp=Z,134nm,19.0s,MS4.0
TLY Talaya 52.75 309 *e*P **P 23 37 17.4 +0.2**
comp=Z,12nm,0.8s,mb4.9
ULN Ulaanbaatar 53.76 303⇑ *e*P **P 23 37 24.5 -0.2**
ULN Ulaanbaatar 53.76 303 *e*P **P 23 37 23.9 -0.8**
comp=Z,19nm,0.8s,mb5.1
ZAK Zakamensk 53.81 308⇑ *i*P **P 23 37 25.0 -0.1**
ZAK *e* 23 38 31.2
ZAK pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
SONM Songino Array 54.10 304 P **P 23 37 27.6 +0.3**
comp=Z,16nm,0.8s,mb5.0,baz=47,slow=7.7,SNR=57
SONM PcP PcP 23 38 32.3 +0.8
comp=Z,7.7nm,0.9s,baz=68,slow=2.4,SNR=7.8
SONM LR LR 00 03 02.3
comp=Z,316nm,18.8s,MS4.4,baz=73,slow=39
SONM Songino Array 54.10 304 P **P 23 37 27.6 +0.4**
SONM 23 38 32.3
BJI Beijing 54.47 291 P **P 23 37 29.8 -0.2**
BJI S **S 23 45 04.6 -0.6**
BJI SS SS 23 48 48.5 +1.0
BJI pmax pmax
comp=Z,12nm,0.8s,mb4.9
BJI pmax pmax
comp=Z,69nm,3.9s
BJI LR LR
comp=N,150nm,16.5s,MS4.3
BJI LR LR
comp=E,140nm,16.9s,MS4.3
BJI LR LR
comp=Z,120nm,24.5s
KEV Kevo 55.94 356 *e*P **P 23 37 38.4 -1.8**
KEV pmax pmax
comp=Z,11nm,0.6s,mb5.1
KEV Kevo 55.94 356 *e*p **P 23 37 38.4 -1.8**
comp=Z,11nm,0.6s,mb5.0
KEV Kevo 55.94 356 *e*p **P 23 37 38.4 -1.8**
comp=Z,11nm,0.6s,mb5.0
ARCES ARCESS Array B 56.21 357 P **P 23 37 40.9 -1.3**
comp=Z,8.0nm,0.9s,mb4.7,baz=30,slow=6.5,SNR=19
ARCES PcP PcP 23 38 39.2 0.0
comp=Z,4.6nm,0.8s,baz=2.9,slow=5.4,SNR=6.2
ARCES LR LR 00 00 28.5
comp=Z,84nm,21.9s,MS3.8,baz=354,slow=35
ARCES ARCESS Array B 56.21 357 P **P 23 37 40.9 -1.2**
ARCES 23 38 39.2
ARE0 ARCESS Array S 56.21 357 *e*P **P 23 37 40.9 -1.2**
HHC Hu-ho-hao-te 56.38 295 *e*P **P 23 37 43.4 -0.4**
HHC pP pP 23 37 56.1 -1.0
HHC sP sP 23 38 01.5 -1.1
HHC PcP PcP 23 38 41.3 +0.9
HHC PP PP 23 39 50.5 +1.2
HHC ScP ScP 23 42 35.6 +0.2
HHC PcS PcS 23 42 40.5 -0.4
HHC S **S 23 45 27.0 -3.6**
HHC sS sS 23 45 48.5 -4.4
HHC ScS ScS 23 47 25.8 -2.7
HHC SS SS 23 49 13.8 -3.7
HHC pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
HHC pmax pmax
comp=Z,110nm,5.3s
HHC LR LR
comp=N,140nm,17.8s,MS4.3
HHC LR LR
comp=E,220nm,20.2s,MS4.3
HHC LR LR
comp=Z,150nm,16.6s,MS4.2
LVZ Lovozero 57.36 353⇑ *e*P **P 23 37 49.5 -0.8**
APA Apatity 57.77 353⇑ *e*P **P 23 37 53.0 -0.2**
APA pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
APA MLR MLR
comp=Z,200nm,16.0s,MS4.3
NVS Novosibirsk 58.75 322 *i*P **P 23 37 59.0 -1.2**
ZALV Zalesovo Beam 58.87 321 P **P 23 38 00.4 -0.6**
comp=Z,3.0nm,0.7s,mb4.4,baz=23,slow=6.6,SNR=8.2
ZALV PcP PcP 23 38 50.2 +0.2
comp=Z,2.9nm,0.9s,baz=49,slow=2.7,SNR=4.5
ZALV LR LR 00 05 52.8
comp=Z,268nm,18.1s,MS4.4,baz=57,slow=39

ZALV Zalesovo Beam 58.87 321 P **P 23 38 00.4 -0.7**
ZALV 23 38 50.2
SOKR Solikamsk 62.23 339 *c i*P **P 23 38 22.8 -1.0**
SOKR pmax pmax
comp=Z,20nm,1.0s,mb5.2
SOKR MLR MLR
comp=Z,380nm,20.0s,MS4.6
JOF Joensuu 62.53 353 *ep* **P 23 38 23.8 -2.0**
comp=Z,17nm,0.6s,mb5.3
JOF Joensuu 62.53 353 *ep* **P 23 38 23.8 -2.0**
comp=Z,17nm,0.6s,mb5.3
GTA Gaotai 63.51 301 *e*P **P 23 38 32.4 -0.3**
GTA pP pP 23 38 36.6 -10
GTA sP sP 23 38 40.1 -12
GTA PP PP 23 40 53.9 +1.6
GTA S **S 23 47 01.8 -0.4**
GTA sS sS 23 47 11.0 -14
GTA SS SS 23 51 08.6 -0.5
GTA pmax pmax
comp=Z,19nm,1.1s,mb5.0
GTA pmax pmax
comp=Z,100nm,6.3s
GTA LR LR
comp=N,170nm,21.3s,MS4.3
GTA LR LR
comp=E,130nm,18.6s,MS4.3
GTA LR LR
comp=Z,270nm,18.9s,MS4.5
KAF Kangasniemi 63.60 356 *e*P **P 23 38 31.1 -1.8**
KAF pmax pmax
comp=Z,23nm,0.6s,mb5.4
KAF Kangasniemi 63.60 356 *ep* **P 23 38 31.1 -1.8**
comp=Z,23nm,0.6s,mb5.4,baz=4.6,slow=6.2
KAF Kangasniemi 63.60 356 *ep* **P 23 38 31.1 -1.8**
comp=Z,23nm,0.6s,mb5.4,baz=4.6,slow=6.2
KURK Kurchatov 63.74 322 P **P 23 38 33.2 -0.7**
comp=Z,7.3nm,1.0s,mb4.7,baz=21,slow=6.9,SNR=25
KURK Kurchatov 63.74 322 *e*P **P 23 38 33.4 -0.6**
KURK *e* 23 40 49.3
KURK pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
KURK Kurchatov 63.74 322 *e*P **P 23 38 33.4 -0.6**
comp=Z,8.0nm,0.9s,mb4.8
KURK *e*PP PP 23 40 49.3 -4.7
SSLB Suanglung 63.76 275 *e*P **P 23 38 33.8 -0.7**
comp=Z,17nm,0.7s,mb5.2
SVE Sverdlovsk 63.86 336 *e*P **P 23 38 34.3 -0.4**
SVE pmax pmax
comp=Z,36nm,0.8s,mb5.5
LZH Lanzhou 63.97 296 ⇑P **P 23 38 36.3 +0.5**
LZH pmax pmax
comp=Z,33nm,1.0s,mb5.3
LZH pmax pmax
comp=Z,140nm,4.3s
FINES FINESS Array B 64.28 356 P **P 23 38 36.4 -1.0**
comp=Z,19nm,0.6s,mb5.3,baz=19,slow=7.9,SNR=103
FINES LR LR 00 05 23.1
comp=Z,101nm,21.3s,MS4.0,baz=1.0,slow=35
BVAR Borovoye Array 64.54 328 P **P 23 38 39.4 +0.2**
comp=Z,21nm,0.6s,mb5.3,baz=45,slow=6.5,SNR=137
BRVK Borovoye 64.54 328 *c i*P **P 23 38 38.8 -0.4**
BRVK pmax pmax
comp=Z,24nm,0.8s,mb5.3
BRVK Borovoye 64.54 328 *e*P **P 23 38 38.4 -0.8**
comp=Z,26nm,0.9s,mb5.2
ARU Arti 64.71 337 *e*P **P 23 38 39.6 -0.6**
comp=Z,26nm,0.6s,mb5.4
NB2 NORSAR Subarra 64.71 4 P **P 23 38 39.6 -0.6**
comp=Z,14nm,0.9s,mb5.0,baz=357,slow=6.5
NOA NORSAR Array B 64.71 4 P **P 23 38 39.7 -0.5**
comp=Z,9.8nm,0.8s,mb4.9,baz=356,slow=6.5,SNR=34
NOA LR LR 00 06 53.7
comp=Z,46nm,20.3s,MS3.7,baz=355,slow=36
MK31 Makanchi Array 65.57 317 *e*P **P 23 38 44.6 -1.4**
MKAR Makanchi Array 65.57 317 P **P 23 38 45.1 -0.9**
comp=Z,1.5nm,0.5s,mb4.3,baz=41,slow=6.4,SNR=32
MKAR LR LR 00 08 52.3
comp=Z,219nm,22.0s,MS4.3,baz=25,slow=37
TAOE Nuku Hiva Isla 65.62 157 *e*LR LR 23 58 31.7
comp=Z,250nm,23.6s
WMQ Urumqi 65.74 312 *e*P **P 23 38 49.0 +1.9**
WMQ sP sP 23 39 07.0 +0.9
WMQ PP PP 23 41 15.0 +3.4
WMQ S S 23 47 30.0 +0.5
WMQ SS SS 23 51 45.0 +1.5
WMQ pmax pmax
comp=Z,27nm,1.0s,mb5.2
WMQ LR LR
comp=N,140nm,18.0s,MS4.4
WMQ LR LR
comp=E,170nm,18.0s,MS4.4
WMQ LR LR
comp=Z,190nm,18.0s,MS4.3
KONO Kongsberg 66.03 5⇑ *e*P **P 23 38 48.8 +0.1**
VSU Vasula 67.23 355⇑ *i*P **P 23 38 55.7 -0.7**
ESK Eskdalemuir 69.16 13 *i*P **P 23 39 09.8 +1.3**
ESK Eskdalemuir 69.16 13 *i*P **P 23 39 09.9 +1.4**
MUD Monsted U'grnd 69.19 5 *i*P **P 23 39 08.3 -0.4**
MUD pmax pmax
comp=Z,14nm,1.0s,mb4.8
MUD Monsted U'grnd 69.19 5 *i*P **P 23 39 08.3 -0.4**
comp=Z,14nm,1.0s,mb4.9
OBN Obninsk 69.77 349⇑ *i*P **P 23 39 10.9 -1.4**
OBN pmax pmax
comp=Z,13nm,1.0s,mb4.8
OBN MLR MLR
comp=Z,100nm,16.0s,MS4.2
OBN Obninsk 69.77 349 *e*P **P 23 39 11.0 -1.3**
comp=Z,7.8nm,0.6s,mb4.8
GYA Guiyang 69.87 287 P **P 23 39 15.0 +1.7**
GYA pP pP 23 39 29.4 +2.4
GYA sP sP 23 39 35.3 +2.8
GYA PcP PcP 23 39 40.8 +5.2
GYA PP PP 23 41 51.0 +3.1
GYA S S 23 48 18.5 -0.8
GYA SKS 23 49 05.8
GYA SS SS 23 52 47.3 -0.9
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.0
GYA pmax pmax
comp=Z,90nm,5.8s
GYA LR LR
comp=N,530nm,19.0s,MS5.0
GYA LR LR
comp=E,620nm,18.2s,MS5.0
GYA LR LR
comp=Z,570nm,19.3s,MS4.8
COP Copenhagen 70.11 4 *e*P **P 23 39 13.2 -1.2**
COP pmax pmax
comp=Z,15nm,0.9s,mb4.9
COP Copenhagen 70.11 4 *i*P **P 23 39 13.2 -1.2**
comp=Z,15nm,0.9s,mb4.9
PMOR Pomariorio Ree 70.17 166 *e*T 00 55 37.7
comp=Z,65nm,0.2s
AKTK Aktyubinsk 70.33 334 P **P 23 39 15.7 -0.1**
AKTO Aktyubinsk 70.33 334 P **P 23 39 15.7 -0.1**
comp=Z,24nm,0.8s,mb5.2,baz=36,slow=6.5,SNR=94
BSD Bornholm Skovb 70.76 2 *i*P **P 23 39 16.8 -1.5**
BSD pmax pmax
comp=Z,11nm,0.9s,mb4.8
BSD Bornholm Skovb 70.76 2 *i*P **P 23 39 16.8 -1.5**
comp=Z,11nm,0.9s,mb4.8
ABKAR Akbulak array 70.91 333 *e*P **P 23 39 19.4 +0.1**
comp=Z,16nm,0.5s,mb5.2
TGY Tagaytay City 71.35 268 P **P 23 39 22.9 +0.4**
comp=Z,152nm,0.3s,baz=137,slow=10,SNR=6.3
TKM2 Tokmak 2 71.42 319 P **P 23 39 23.1 +0.6**
SNR=10
TKM2 Tokmak 2 71.42 319 *e*P **P 23 39 22.9 +0.4**
TKM2 pmax pmax
comp=Z,11nm,1.1s,mb4.7
TKM2 Tokmak 2 71.42 319 *e*P **P 23 39 22.9 +0.3**
comp=Z,11nm,1.1s,mb4.7
USP Ospenovka 71.53 320 P **P 23 39 23.7 +0.5**
SNR=5.3
CHMS Chumysh 71.67 320 P **P 23 39 24.5 +0.5**
SNR=8.8
BSEG Bad Segeberg 71.77 5 *e*P **P 23 39 24.4 -0.1**
comp=Z,21nm,1.0s,mb5.0
SUW Suwalki 71.82 357 *e*P **P 23 39 23.9 -0.9**
SUW Suwalki 71.82 357 *e*P **P 23 39 23.5 -1.3**
comp=Z,67nm,1.0s,mb5.5
KBK Karagaybulak 71.89 320 P **P 23 39 26.0 +0.6**
SNR=10
AAK Ala-Archa 72.08 320 P **P 23 39 23.0 -3.5**
SNR=6.5

AAK Ala-Archa 72.08 320 P **P 23 39 26.5 0.0**
comp=Z,5.6nm,0.6s,mb4.7,baz=85,slow=0.6,SNR=15
AAK Ala-Archa 72.08 320 *c i*P **P 23 39 26.7 +0.2**
AAK pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
AAK Ala-Archa 72.08 320 *e*P **P 23 39 26.4 -0.2**
comp=Z,13nm,0.9s,mb4.9
KZA Kyzart 72.27 319 P **P 23 39 28.8 +1.1**
SNR=6.7
EKS2 Erkin-Say 72.32 320 P **P 23 39 28.4 +0.4**
SNR=8.2
EKS2 Erkin-Say 72.32 320 *e*P **P 23 39 27.6 -0.4**
EKS2 pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
EKS2 Erkin-Say 72.32 320 *e*P **P 23 39 27.6 -0.4**
comp=Z,9.8nm,0.9s,mb4.7
UCH Uchtor 72.42 320 P **P 23 39 29.2 +0.7**
SNR=7.1
UCH Uchtor 72.42 320 *e*P **P 23 39 29.2 +0.6**
UCH pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
UCH Uchtor 72.42 320 *e*P **P 23 39 29.2 +0.7**
comp=Z,3.4nm,0.9s,mb4.3
PPT Papeete 72.47 168 *e*S S 23 48 55.7 +6.4
comp=Z,67nm,27.8s
PPT *e*LR LR 00 01 38.6
comp=Z,311nm,24.5s,baz=352
PPT Papeete 72.47 168 LR LR 00 06 00.7
comp=Z,171nm,20.4s,MS4.3,baz=350,slow=31
TIAR Tiarei 72.49 168 *e*T 00 58 31.0
comp=Z,81nm,0.3s
GKP Gorka Klasztor 72.64 1 *e*P **P 23 39 29.1 -0.5**
AML Almayashu 72.81 320 P **P 23 39 32.2 +1.3**
SNR=12
AML Almayashu 72.81 320 *e*P **P 23 39 32.1 +1.2**
AML pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
AML Almayashu 72.81 320 *e*P **P 23 39 32.1 +1.2**
comp=Z,10nm,0.9s,mb4.8
VRHR Novokhopersk 73.03 345 *e*P **P 23 39 30.4 -1.6**
VRHR pmax pmax
comp=N,10.0nm,0.9s
VRHR pmax pmax
comp=Z,20nm,0.9s,mb5.0
VRHR pmax pmax
comp=E,10.0nm,0.4s
KMI Kunming 73.09 289 P **P 23 39 33.4 +0.6**
KMI pP pP 23 39 47.6 +1.0
KMI sP sP 23 39 53.4 +1.4
KMI PP PP 23 42 17.9 +2.3
KMI S S 23 48 54.5 -2.1
KMI sS sS 23 49 18.8 -0.8
KMI SS SS 23 53 37.4 -0.2
KMI pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
KMI pmax pmax
comp=Z,80nm,5.5s
KMI LR LR
comp=N,180nm,19.2s,MS4.5
KMI LR LR
comp=E,130nm,19.2s,MS4.5
KMI LR LR
comp=Z,160nm,23.3s,MS4.2
IBBN Ibbenburen 73.24 7 *e*P **P 23 39 33.2 0.0**
comp=Z,41nm,1.3s,mb5.2
VSR Storozhevoye 73.27 347 *e*P **P 23 39 32.4 -1.0**
VSR pmax pmax
comp=N,20nm,0.9s
VSR pmax pmax
comp=E,5.0nm,0.9s
VSR pmax pmax
comp=Z,30nm,0.9s,mb5.2
RUE Ruedersdorf 73.36 3 *e*P **P 23 39 34.1 +0.1**
comp=Z,43nm,1.2s,mb5.2
VORD Divnogorie 73.50 346 *e*P **P 23 39 32.7 -2.1**
VORD pmax pmax
comp=N,100nm,0.7s
VORD pmax pmax
comp=E,230nm,0.7s
VORD pmax pmax
comp=Z,70nm,0.7s,mb5.7
WTSB Winterswijk 73.51 7⇑ *e*P **P 23 39 34.7 -0.1**
comp=Z,22nm,0.9s,mb5.1
CLZ Clausthal 73.86 5 *e*P **P 23 39 37.1 +0.2**
comp=Z,18nm,0.9s,mb5.0
CLZ Clausthal 73.86 5 *e*P **P 23 39 37.1 +0.2**
CLZ pmax pmax
comp=Z,18nm,0.9s,mb5.0
BUG Bochum--Univer 74.07 7 *e*P **P 23 39 37.8 -0.3**
comp=Z,21nm,0.9s,mb5.1
KSH Kashi 74.19 317⇑ *i*P **P 23 39 42.5 +3.5**
KSH pP pP 23 39 55.6 +2.8
KSH sP sP 23 40 00.9 +2.7
KSH PP PP 23 42 31.1 +6.7
KSH S S 23 49 10.6 +2.1
KSH SKS 23 49 41.8
KSH ScS ScS 23 49 46.3 +1.0
KSH SS SS 23 54 01.4 +8.0
KSH pmax pmax
comp=Z,32nm,0.9s,mb5.2
KSH pmax pmax
comp=Z,120nm,4.2s
KSH LR LR
comp=N,71nm,5.8s
KSH LR LR
comp=E,69nm,4.2s
KSH LR LR
comp=Z,85nm,5.8s
UCC Uccle 74.46 9 P **P 23 39 40.1 -0.3**
CLL Collm 74.51 3 *e*P **P 23 39 40.1 -0.6**
comp=Z,12nm,0.7s,mb4.9
CLL Collm 74.51 3⇑ *i*P **P 23 39 40.3 -0.4**
CLL pmax pmax
comp=Z,12nm,0.7s,mb4.9
CLL MLR MLR
comp=Z,100nm,20.8s,MS4.1
CLL Collm 74.51 3⇑ *i*P **P 23 39 40.3 -0.4**
comp=Z,12nm,0.7s,mb4.9
CLL *e*S S 23 49 27.0 +15
CLL LR LR
comp=Z,100nm,20.8s,MS4.1
CLL Collm 74.51 3⇑ *i*P **P 23 39 40.3 -0.4**
comp=Z,12nm,0.7s,mb4.9
CLL *e*SS SS 23 54 17.0 +19
CLL *e*SSS 23 57 12.0
CLL *e*(SSSS) 23 59 48.0
BEBN Eben Emael 74.58 8 P **P 23 39 40.5 -0.6**
HGN Heimansgroeve 74.64 8 *e*P **P 23 39 41.3 -0.1**
comp=Z,15nm,1.0s,mb4.9
SNF Seneffe 74.74 9 P **P 23 39 43.2 +1.2**
MEM Membach 74.79 8 P **P 23 39 42.4 +0.1**
comp=Z,12nm,1.1s,mb4.7
AKASG Malin Array Be 74.82 353 P **P 23 39 41.5 -0.9**
comp=Z,27nm,0.7s,mb5.3,baz=7.8,slow=5.7,SNR=94
AKASG LR LR 00 13 04.0
comp=Z,108nm,21.4s,MS4.1,baz=0.0,slow=36
AKBB Malin Array Si 74.82 353 *e*P **P 23 39 40.8 -1.7**
KIEV Kiev 74.83 353 *e*P **P 23 39 41.0 -1.5**
KIEV pmax pmax
comp=Z,31nm,0.8s,mb5.3
KIEV Kiev 74.83 353 *e*Pn **P 23 39 41.0 -1.5**
comp=Z,31nm,0.8s,mb5.3
BCLA Clavier 74.92 9 P **P 23 39 42.9 -0.2**
BRG Berggiesshubel 74.98 3 *e*P **P 23 39 43.0 -0.4**
comp=Z,13nm,1.0s,mb4.8
BRG Berggiesshubel 74.98 3⇑ *i*P **P 23 39 43.2 -0.1**
comp=Z,13nm,1.0s,mb4.8
BRG Berggiesshubel 74.98 3⇑ *i*P **P 23 39 43.2 -0.2**
BRG pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
KSP Ksiaz 75.06 1 *e*P **P 23 39 43.9 +0.1**
KSP Ksiaz 75.06 1 *e*P **P 23 39 43.7 -0.1**
MOX Moxa 75.12 4 *e*P **P 23 39 43.9 -0.3**
comp=Z,22nm,1.0s,mb5.0
MOX Moxa 75.12 4 *e*P **P 23 39 44.0 -0.2**
comp=Z,25nm,1.2s,mb5.0
MOX Moxa 75.12 4 *e*P **P 23 39 43.9 -0.3**
MOX pmax pmax
comp=Z,22nm,1.0s,mb5.0
BAIF Baives 75.18 9 *e*P **P 23 39 44.6 0.0**
comp=Z,20nm,0.8s,mb4.8
BAIF Baives 75.18 9 *e*P **P 23 39 44.6 0.0**
BAIF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
BAIF Baives 75.18 9 *e*P **P 23 39 44.6 0.0**
comp=Z,9.9nm,0.8s,mb4.8

DOU	Dourbes	75.18	9	P		P	23 39 44.3	-0.2
GIVF	Givet	75.19	9	eP		P	23 39 44.6	0.0
comp=Z,22nm,0.8s,mb4.9								
GIVF	Givet	75.19	9	eP		P	23 39 44.6	0.0
GIVF				pmax		pmax		
comp=Z,11nm,0.8s,mb4.8								
GIVF	Givet	75.19	9	eP		P	23 39 44.6	0.0
comp=Z,11nm,0.8s,mb4.8								
PVCC	Panska Ves	75.34	3	eP		P	23 39 45.7	+0.2
PVCC	Panska Ves	75.34	3	eP		P	23 39 45.7	+0.2
TNS	Taunus Mts	75.36	7	eP		P	23 39 45.4	-0.2
comp=Z,33nm,1.1s,mb5.2								
TNS	Taunus Mts	75.36	7	eP		P	23 39 45.4	-0.2
TNS				pmax		pmax		
comp=Z,33nm,1.1s,mb5.2								
TANN	Tannenbergstha	75.38	4	eP		P	23 39 45.6	-0.1
comp=Z,4.0nm,0.6s,mb4.5								
UPC	Upice	75.39	2	eP		P	23 39 46.0	+0.2
UPC	Upice	75.39	2	eP		P	23 39 46.0	+0.2
LSA	Lhasa	75.53	301	P		P	23 39 48.3	+1.4
LSA	Lhasa	75.53	301	eP		P	23 39 47.8	+0.9
LSA				pmax		pmax		
comp=Z,14nm,0.9s,mb4.9								
LSA	Lhasa	75.53	301	eP		P	23 39 47.8	+0.9
comp=Z,14nm,0.9s,mb4.9								
DPC	Dobruska-Polom	75.55	1	eP		P	23 39 47.2	+0.5
DPC	Dobruska-Polom	75.55	1	eP		P	23 39 47.2	+0.5
OJC	Ojcow	75.69	359	eP		P	23 39 46.2	-1.3
WLF	Walferdange	75.74	8	P		P	23 39 48.3	+0.5
comp=Z,12nm,1.1s,mb4.7								
WLF	Walferdange	75.74	8	eP		P	23 39 48.0	+0.2
comp=Z,23nm,1.1s,mb5.0								
WLF	Walferdange	75.74	8	eP		P	23 39 48.0	+0.2
WLF				pmax		pmax		
comp=Z,13nm,0.9s,mb4.9								
WLF	Walferdange	75.74	8	eP		P	23 39 48.0	+0.2
comp=Z,13nm,0.9s,mb4.9								
PRU	Pruhonice	75.88	3	eP		P	23 39 49.3	+0.7
PRU	Pruhonice	75.88	3	eP		P	23 39 49.3	+0.7
FLN	La Foliniere	75.93	13	eP		P	23 39 48.7	-0.2
comp=Z,8.2nm,0.7s,mb4.5								
FLN	La Foliniere	75.93	13	eP		P	23 39 48.7	-0.2
FLN				pmax		pmax		
comp=Z,4.0nm,0.6s,mb4.5								
FLN	La Foliniere	75.93	13	eP		P	23 39 48.7	-0.2
comp=Z,4.1nm,0.6s,mb4.5								
LVV	L'vov	75.99	356	eP		P	23 39 48.3	-0.9
GRA1	Grafenberg Arr	76.05	5	eP		P	23 39 49.8	+0.3
comp=Z,27nm,1.2s,mb5.0								
GRF	Grafenberg Arr	76.05	5	eL			00 15 37.3	
comp=Z,59nm,20.3s								
GRF	Grafenberg Arr	76.05	5	eP		P	23 39 49.8	+0.3
GRF				pmax		pmax		
comp=Z,27nm,1.2s,mb5.0								
GRF				MLR		MLR		
comp=Z,100nm,20.3s,MS4.1								
GRF	Grafenberg Arr	76.05	5	eP		P	23 39 49.8	+0.3
GRF				LR		LR		
comp=Z,100nm,20.3s,MS4.1								
OKC	Ostrava-Krasne	76.08	0	eP		P	23 39 49.8	+0.1
OKC	Ostrava-Krasne	76.08	0	eP		P	23 39 49.8	+0.1
MORC	Moravsky Berou	76.14	1	P		P	23 39 50.3	+0.3
MORC	Moravsky Berou	76.14	1	eP		P	23 39 50.1	+0.1
comp=Z,10nm,0.9s,mb4.8								
MORC	Moravsky Berou	76.14	1⇑	iP		P	23 39 50.1	+0.1
LDF	La Druitiere	76.15	13	eP		P	23 39 49.7	-0.4
comp=Z,13nm,0.8s,mb4.6								
LDF	La Druitiere	76.15	13	eP		P	23 39 49.7	-0.4
LDF				pmax		pmax		
comp=Z,7.0nm,0.8s,mb4.6								
LDF	La Druitiere	76.15	13	eP		P	23 39 49.7	-0.4
comp=Z,6.7nm,0.8s,mb4.6								
KWP	Kalwaria Pacla	76.22	357	eP		P	23 39 50.8	+0.3
KWP	Kalwaria Pacla	76.22	357	eP		P	23 39 51.0	+0.5
KWP				pmax		pmax		
comp=Z,31nm,0.9s,mb5.2								
KWP	Kalwaria Pacla	76.22	357	eP		P	23 39 51.0	+0.4
comp=Z,31nm,0.9s,mb5.2								
KWP	Kalwaria Pacla	76.22	357⇑	iP		P	23 39 50.8	+0.3
GRR	Gorron	76.25	13	eP		P	23 39 50.5	-0.2
comp=Z,12nm,0.7s,mb4.6								
GRR	Gorron	76.25	13	eP		P	23 39 50.5	-0.2
GRR				pmax		pmax		
comp=Z,6.0nm,0.7s,mb4.6								
GRR	Gorron	76.25	13	eP		P	23 39 50.5	-0.2
comp=Z,6.0nm,0.7s,mb4.6								
STHS	Stebnicka Huta	76.47	358	eP		P	23 39 52.8	+0.9
STHS				pmax		pmax		
comp=Z,18nm,0.6s,mb5.2								
STHS	Stebnicka Huta	76.47	358	eP		P	23 39 52.8	+0.9
comp=Z,18nm,0.6s,mb5.2								
STHS	Stebnicka Huta	76.47	358	eP		P	23 39 52.8	+0.9
NIE	Niedzica	76.48	359	eP		P	23 39 52.7	+0.7
TREC	Trest	76.59	2	eP		P	23 39 52.6	0.0
TREC	Trest	76.59	2	eP		P	23 39 52.6	0.0
VRAC	Vranov	76.60	1	P		P	23 39 53.1	+0.4
VRAC	Vranov	76.60	1⇑	iP		P	23 39 53.1	+0.4
WET	Wettzell	76.67	4	eP		P	23 39 53.3	+0.2
comp=Z,13nm,1.3s,mb4.7								
WET	Wettzell	76.67	4	eP		P	23 39 53.3	+0.2
WET				pmax		pmax		
comp=Z,13nm,1.3s,mb4.7								
KHC	Kasperske Hory	76.71	3	eP		P	23 39 53.8	+0.5
KHC				pmax		pmax		
comp=Z,19nm,0.9s,mb5.0								
KHC	Kasperske Hory	76.71	3	eP		P	23 39 53.8	+0.5
comp=Z,19nm,0.9s,mb5.0								
KHC	Kasperske Hory	76.71	3	eP		P	23 39 53.8	+0.5
MEZF	Maizieres J'vi	76.80	9	eP		P	23 39 54.0	+0.2
comp=Z,9.0nm,0.7s,mb4.5								
MEZF	Maizieres J'vi	76.80	9	eP		P	23 39 54.0	+0.2
comp=Z,9.0nm,0.7s,mb4.8								
STU	Stuttgart	76.86	6	eP		P	23 39 54.2	+0.1
comp=Z,12nm,0.8s,mb4.9								
KOLS	Kolonicke sedl	76.93	357	eP		P	23 39 54.9	+0.4
KOLS				e			23 49 35.0	
KOLS				pmax		pmax		
comp=Z,8.0nm,1.0s,mb4.6								
KOLS	Kolonicke sedl	76.93	357	eP		P	23 39 54.9	+0.4
comp=Z,8.0nm,1.0s,mb4.6								
KOLS				e			23 49 35.0	
KOLS	Kolonicke sedl	76.93	357	eP		P	23 39 54.9	+0.4
KOLS				e			23 49 35.0	
CRVS	Cervenica-Dubn	76.98	358	eP		P	23 39 55.1	+0.3
CRVS				pmax		pmax		
comp=Z,8.0nm,1.1s,mb4.6								
CRVS	Cervenica-Dubn	76.98	358	eP		P	23 39 55.1	+0.3
comp=Z,8.3nm,1.1s,mb4.6								
CRVS	Cervenica-Dubn	76.98	358	eP		P	23 39 55.1	+0.3
GEC2	GERESS Array S	77.00	3	eP		P	23 39 54.8	-0.1
comp=Z,8.0nm,0.8s,mb4.7								
GEC2	GERESS Array S	77.00	3	eP		P	23 39 54.8	-0.1
GEC2				pmax		pmax		
comp=Z,8.0nm,0.8s,mb4.7								
CDF	Champ du Feu	77.08	8	eP		P	23 39 55.4	0.0
comp=Z,19nm,0.9s,mb4.7								
CDF	Champ du Feu	77.08	8	eP		P	23 39 55.4	0.0
CDF				pmax		pmax		
comp=Z,10.0nm,0.9s,mb4.8								
CDF	Champ du Feu	77.08	8	eP		P	23 39 55.4	0.0
comp=Z,9.6nm,0.9s,mb4.7								
BFO	Black Forest	77.24	7	eP		P	23 39 56.0	-0.3
comp=Z,6.0nm,0.7s,mb4.6								
BFO	Black Forest	77.24	7	eP		P	23 39 56.0	-0.3
BFO				pmax		pmax		
comp=Z,6.0nm,0.7s,mb4.6								
ECH	Echery	77.26	8	eP		P	23 39 55.5	-0.9
ECH				pmax		pmax		
comp=Z,13nm,0.9s,mb4.9								
ECH	Echery	77.26	8	eP		P	23 39 55.5	-0.9
comp=Z,13nm,0.9s,mb4.9								
KOLL	Kolacno	77.34	360	eP		P	23 39 57.4	+0.6
KOLL	Kolacno	77.34	360	eP		P	23 39 57.4	+0.6
SMOL	Smolenice	77.40	1	eP		P	23 39 58.1	+0.9
SMOL				e			23 49 01.3	
SMOL	Smolenice	77.40	1	eP		P	23 39 58.1	+0.9
SMOL				e			23 49 01.3	
HAU	Haudompre	77.41	8	eP		P	23 39 57.2	0.0
comp=Z,20nm,0.9s,mb4.8								
HAU				eMLR		MLR		
comp=Z,82nm,18.8s,MS3.8								
HAU	Haudompre	77.41	8	eP		P	23 39 57.2	0.0
HAU				pmax		pmax		
comp=Z,10.0nm,0.9s,mb4.8								
HAU				MLR		MLR		
comp=Z,80nm,18.8s,MS4.1								
HAU	Haudompre	77.41	8	eP		P	23 39 57.2	0.0
comp=Z,10nm,0.9s,mb4.8								
HAU				LR		LR		
comp=Z,80nm,18.8s,MS4.1								
KECS	Kecovo	77.42	359	eP		P	23 39 57.8	+0.5
KECS				pmax		pmax		
comp=Z,7.0nm,0.7s,mb4.7								
KECS	Kecovo	77.42	359	eP		P	23 39 57.8	+0.5
comp=Z,7.2nm,0.7s,mb4.7								
KECS				e			23 49 12.5	
KECS	Kecovo	77.42	359	eP		P	23 39 57.8	+0.5
KECS				e			23 49 12.5	
VYHS	Vyhne	77.42	360	eP		P	23 39 57.7	+0.4
VYHS				pmax		pmax		
comp=Z,9.0nm,1.1s,mb4.6								
VYHS	Vyhne	77.42	360	eP		P	23 39 57.7	+0.4
comp=Z,9.0nm,1.1s,mb4.6								
VYHS	Vyhne	77.42	360	eP		P	23 39 57.7	+0.4
FUR	Furstenfeldbru	77.58	5	eP		P	23 39 58.6	+0.4
comp=Z,15nm,0.8s,mb5.0								
FUR	Furstenfeldbru	77.58	5	eP		P	23 39 58.6	+0.4
FUR				pmax		pmax		
comp=Z,15nm,0.8s,mb5.0								
HINF	Hinteralfeld	77.64	8	eP		P	23 39 58.3	-0.2
comp=Z,15nm,0.9s,mb4.6								
HINF	Hinteralfeld	77.64	8	eP		P	23 39 58.3	-0.2
HINF				pmax		pmax		
comp=Z,8.0nm,0.9s,mb4.7								
HINF	Hinteralfeld	77.64	8	eP		P	23 39 58.3	-0.2
comp=Z,7.6nm,0.9s,mb4.6								
ZST	Bratislava	77.72	1	eP		P	23 39 59.8	+0.9
ZST				pmax		pmax		
comp=Z,18nm,0.6s,mb5.2								
ZST	Bratislava	77.72	1	eP		P	23 39 59.8	+0.9
comp=Z,18nm,0.6s,mb5.2								
ZST	Bratislava	77.72	1	eP		P	23 39 59.8	+0.9
LOR	Lormes	77.91	10	eP		P	23 39 59.9	-0.1
comp=Z,34nm,1.1s,mb4.9								
LOR				eMLR		MLR		
comp=Z,93nm,20.0s,MS3.8								
LOR	Lormes	77.91	10	eP		P	23 39 59.9	-0.1
LOR				pmax		pmax		
comp=Z,17nm,1.1s,mb4.9								
LOR				MLR		MLR		
comp=Z,90nm,20.0s,MS4.1								
LOR	Lormes	77.91	10	eP		P	23 39 59.9	-0.1
comp=Z,17nm,1.1s,mb4.9								
LOR				LR		LR		
comp=Z,90nm,20.0s,MS4.1								
CONA	Conrad Observa	77.97	2	iP		P	23 40 01.0	+0.6
comp=Z,16nm,0.7s,mb5.1,SNR=22								
PSZ	Piszkesteto	77.99	359	P		P	23 40 01.5	+1.0
PSZ	Piszkesteto	77.99	359	eP		P	23 40 01.0	+0.5
comp=Z,14nm,0.9s,mb4.9								
PSZ	Piszkesteto	77.99	359⇑	iP		P	23 40 01.2	+0.7
RJOB	Jochberg	78.07	4	eP		P	23 40 01.3	+0.4
comp=Z,21nm,0.8s,mb5.1								
SSF	Saint Saulge	78.08	10	eP		P	23 40 00.9	-0.1
comp=Z,24nm,0.9s,mb4.8								
SSF	Saint Saulge	78.08	10	eP		P	23 40 00.9	-0.1
SSF				pmax		pmax		
comp=Z,12nm,0.9s,mb4.8								
SSF	Saint Saulge	78.08	10	eP		P	23 40 00.9	-0.1
comp=Z,12nm,0.9s,mb4.8								
MFF	Saint Martin d	78.10	13	eP		P	23 40 01.2	+0.1
comp=Z,21nm,0.8s,mb4.8								
MFF	Saint Martin d	78.10	13	eP		P	23 40 01.2	+0.1
MFF				pmax		pmax		
comp=Z,11nm,0.8s,mb4.8								
MFF	Saint Martin d	78.10	13	eP		P	23 40 01.2	+0.1
comp=Z,11nm,0.8s,mb4.8								
BUR08	Bucovina Ar. S	78.11	355	eP		P	23 40 01.1	0.0
BUR01	Bucovina Ar. S	78.14	355	⇑P		P	23 40 01.5	+0.2
BURAR	Bucovina Array	78.14	355	⇑iP		P	23 40 01.5	+0.2
BMR	Baia Mare	78.15	356	P		P	23 40 02.2	+0.8
BMR	Baia Mare	78.15	356	⇓P		P	23 40 01.7	+0.4
BMR	Baia Mare	78.15	356	⇓iP		P	23 40 01.7	+0.3
AVF	Avril sur Loir	78.33	10	eP		P	23 40 02.1	-0.3
comp=Z,16nm,0.9s,mb4.6								
AVF	Avril sur Loir	78.33	10	eP		P	23 40 02.1	-0.3
AVF				pmax		pmax		
comp=Z,8.0nm,0.9s,mb4.7								
AVF	Avril sur Loir	78.33	10	eP		P	23 40 02.1	-0.3
comp=Z,8.1nm,0.9s,mb4.7								
MOTA	Moosalm	78.39	5⇑	iP		P	23 40 03.0	+0.3
comp=Z,18nm,0.9s,mb5.0								
WATA	Walderalm	78.42	5⇓	iP		P	23 40 03.3	+0.5
comp=Z,7.8nm,0.6s,mb4.8								
WTTA	Wattenberg	78.49	5⇑	iP		P	23 40 04.0	+0.7
comp=Z,13nm,0.6s,mb5.0,SNR=11								
BGF	Bois d'Agland	78.50	11	eP		P	23 40 03.1	-0.2
comp=Z,13nm,0.9s,mb4.6								
BGF	Bois d'Agland	78.50	11	eP		P	23 40 03.1	-0.2
BGF				pmax		pmax		
comp=Z,7.0nm,0.9s,mb4.6								
BGF	Bois d'Agland	78.50	11	eP		P	23 40 03.1	-0.2
comp=Z,6.6nm,0.9s,mb4.6								
SMF	Signal de Mont	78.52	10	eP		P	23 40 03.2	-0.2
comp=Z,22nm,1.0s,mb4.8								
SMF	Signal de Mont	78.52	10	eP		P	23 40 03.2	-0.2
SMF				pmax		pmax		
comp=Z,11nm,1.0s,mb4.7								
SMF	Signal de Mont	78.52	10	eP		P	23 40 03.2	-0.2
comp=Z,11nm,1.0s,mb4.7								
ARSA	Arzberg	78.64	2	iP		P	23 40 04.8	+0.7
comp=Z,10nm,0.7s,mb4.9,SNR=10								
FETA	Feichten	78.69	5⇓	iP		P	23 40 04.8	+0.5
comp=Z,18nm,1.0s,mb5.0								
TCF	Toulx Ste Croi	78.70	11	eP		P	23 40 05.1	+0.7
comp=Z,9.6nm,0.9s,mb4.4								
TCF	Toulx Ste Croi	78.70	11	eP		P	23 40 05.1	+0.7
TCF				pmax		pmax		
comp=Z,5.0nm,0.9s,mb4.4								
TCF	Toulx Ste Croi	78.70	11	eP		P	23 40 05.1	+0.7
comp=Z,4.8nm,0.9s,mb4.4								
KBA	Koelnbreinsper	78.75	3⇑	iP		P	23 40 05.6	+1.0
comp=Z,33nm,1.2s,mb5.1,SNR=15								
CABF	La Chapelle	78.77	9	eP		P	23 40 05.2	+0.4
comp=Z,20nm,0.9s,mb4.7								
CABF	La Chapelle	78.77	9	eP		P	23 40 05.2	+0.4
CABF				pmax		pmax		
comp=Z,10.0nm,0.9s,mb4.8								
CABF	La Chapelle	78.77	9	eP		P	23 40 05.2	+0.4
comp=Z,10nm,0.9s,mb4.8								
DRGR		79.06	357	P		P	23 40 06.5	+0.1
DRGR		79.06	357	⇓P		P	23 40 06.4	0.0
DRGR		79.06	357	⇓iP		P	23 40 06.4	0.0
TAPN	Taplejung	79.18	302	eP		P	23 40 07.2	-0.2
comp=Z,33nm,0.7s,mb5.4								
SOKA	Soboth	79.20	2⇑	iP		P	23 40 07.5	+0.3
comp=Z,30nm,1.3s,mb5.1								
GROS	Grobnik	79.43	2	iP		P	23 40 08.7	+0.3
KOGS	Kog	79.45	1	iP		P	23 40 08.7	+0.2
RJF	Les Rejaudoux	79.58	12	eP		P	23 40 09.8	+0.5
RJF				eMLR		MLR		
comp=Z,124nm,20.0s,MS4.0								
RJF	Les Rejaudoux	79.58	12	eP		P	23 40 09.8	+0.5
RJF				LR		LR		
comp=Z,120nm,20.0s,MS4.2								
GUN	Gumba	79.61	304	eP		P	23 40 09.5	-0.2
comp=Z,76nm,1.0s,mb5.6								
CADS	Cadrg	79.61	3	iP		P	23 40 09.0	-0.4
JIRN	Jiri	79.67	303	eP		P	23 40 09.8	-0.2
comp=Z,11nm,0.3s,mb5.3								
ODAN	Odare	79.74	302	eP		P	23 40 09.9	-0.5
comp=Z,20nm,0.8s,mb5.1								
KIV	Kislovodsk	79.79	342	eP		P	23 40 10.9	+0.5
KIV				pmax		pmax		
comp=Z,28nm,0.8s,mb5.2								
KIV	Kislovodsk	79.79	342	eP		P	23 40 10.9	+0.5
comp=Z,28nm,0.8s,mb5.2								
VRI	Vrincioaia	79.80	354	⇑P		P	23 40 10.4	0.0
VRI	Vrincioaia	79.80	354	⇑iP		P	23 40 10.4	0.0
MAK	Makhachkala	79.81	339	eP		P	23 40 11.1	+0.5
MAK				e			23 40 17.0	
MAK				eS		S	23 50 12.4	+2.8
MAK				e			23 50 50.9	
MAK				pmax		pmax		
comp=Z,60nm,0.9s,mb5.5								
LFF	La Frestale	79.85	13	eP		P	23 40 10.7	0.0
comp=Z,8.2nm,0.7s,mb4.5								
LFF	La Frestale	79.85	13	eP		P	23 40 10.7	0.0
LFF				pmax		pmax		
comp=Z,4.0nm,0.7s,mb4.5								
LFF	La Frestale	79.85	13	eP		P	23 40 10.7	0.0
comp=Z,4.1nm,0.7s,mb4.5								
LPL	La Plagne	79.91	8	eP		P	23 40 12.1	+1.1
comp=Z,5.9nm,0.7s,mb4.3								
LPL	La Plagne	79.91	8	eP		P	23 40 12.1	+1.1
LPL				pmax		pmax		
comp=Z,3.0nm,0.7s,mb4.3								
LPL	La Plagne	79.91	8	eP		P	23 40 12.1	+1.1
comp=Z,3.0nm,0.7s,mb4.3								
LPG	La Plagne	79.93	8	eP		P	23 40 12.4	+1.3
comp=Z,9.6nm,0.9s,mb4.4								
LPG	La Plagne	79.93	8	eP		P	23 40 12.4	+1.3
LPG				pmax		pmax		
comp=Z,5.0nm,0.9s,mb4.4								
LPG	La Plagne	79.93	8	eP		P	23 40 12.4	+1.3
comp=Z,4.8nm,0.9s,mb4.4								
KKN	Kakani	80.00	304	eP		P	23 40 11.0	-0.8
comp=Z,17nm,0.6s,mb5.2								
KKN	Kakani	80.00	304	eP		P	23 40 11.0	-0.8
KKN				pmax		pmax		
comp=Z,17nm,0.6s,mb5.2								
CAF	Calviac	80.02	12	eP		P	23 40 11.5	-0.2
comp=Z,14nm,1.1s,mb4.5								
CAF	Calviac	80.02	12	eP		P	23 40 11.5	-0.2
CAF				pmax		pmax		
comp=Z,7.0nm,1.1s,mb4.5								
CAF	Calviac	80.02	12	eP		P	23 40 11.5	-0.2
comp=Z,6.9nm,1.1s,mb4.5								
RAMN	Ramite	80.06	303	eP		P	23 40 11.7	-0.4
comp=Z,40nm,0.6s,mb5.5								
PKI	Pulchoki	80.12	304	eP		P	23 40 11.8	-0.7
comp=Z,20nm,0.6s,mb5.2								
PKI	Pulchoki	80.12	304	eP		P	23 40 12.0	-0.5
PKI				pmax		pmax		
comp=Z,36nm,0.6s,mb5.5								
PKI	Pulchoki	80.12	304	eP		P	23 40 12.0	-0.5
comp=Z,36nm,0.6s,mb5.5								
PKIN	Phulchoki	80.12	304	eP		P	23 40 12.0	-0.5
comp=Z,36nm,0.6s,mb5.5								
MLR	Muntele Rosu	80.22	355	P		P	23 40 13.5	+0.8
MLR	Muntele Rosu	80.22	355	⇑P		P	23 40 12.8	+0.1
MLR	Muntele Rosu	80.22	355	⇑iP		P	23 40 12.8	+0.1
CHTO	Chiang Mai	80.23	289	eP		P	23 40 12.9	-0.3
CHTO				pmax		pmax		
comp=Z,5.0nm,0.9s,mb4.4								
CHTO	Chiang Mai	80.23	289	eP		P	23 40 12.9	-0.3
comp=Z,4.9nm,0.9s,mb4.4								
DMN	Daman	80.23	304	eP		P	23 40 12.4	-0.7
comp=Z,42nm,0.8s,mb5.4								
BZS	Buzias	80.26	358	⇑P		P	23 40 13.0	+0.1
BZS	Buzias	80.26	358	⇑iP		P	23 40 12.9	0.0
VOIR		80.32	355	P		P	23 40 13.7	+0.5
VOIR		80.32	355	⇑P		P	23 40 13.6	+0.4
VOIR		80.32	355	⇑iP		P	23 40 13.6	+0.4
TLCR		80.33	353	⇑P		P	23 40 13.3	0.0
TLCR		80.33	353	⇑iP		P	23 40 13.3	0.0
BNI	Bardonecchia	80.37	8	eP		P	23 40 14.0	+0.5
BNI				pmax		pmax		
comp=Z,9.0nm,1.0s,mb4.7								
BNI	Bardonecchia	80.37	8	eP		P	23 40 14.0	+0.5
comp=Z,9.3nm,1.0s,mb4.7								
VIVF	Saint-Julien-l	80.38	10	eP		P	23 40 13.7	+0.1
comp=Z,16nm,1.1s,mb4.6								
VIVF	Saint-Julien-l	80.38	10	eP		P	23 40 13.7	+0.1
VIVF				pmax		pmax		
comp=Z,8.0nm,1.1s,mb4.6								
VIVF	Saint-Julien-l	80.38	10	eP		P	23 40 13.7	+0.1
comp=Z,8.1nm,1.1s,mb4.6								
CFR	Carcaliu	80.39	353	⇓P		P	23 40 13.6	0.0
CFR	Carcaliu	80.39	353	⇓iP		P	23 40 13.6	0.0
ORIF	Oris-en-Rattie	80.43	9	eP		P	23 40 14.3	+0.5
ORIF				eMLR		MLR		
comp=Z,91nm,21.5s,MS3.8								
GZR	Gura Zlata	80.45	357	⇑P		P	23 40 14.5	+0.5
GZR	Gura Zlata	80.45	357	P		P	23 40 14.3	+0.3
GZR	Gura Zlata	80.45	357	⇑iP		P	23 40 14.5	+0.5
CM31	Chiang Mai Arr	80.52	288	eP		P	23 40 14.4	-0.3
comp=Z,19nm,1.0s,mb5.0								
CMAR	Chiang Mai Arr	80.52	288	P		P	23 40 14.8	0.0
comp=Z,17nm,0.9s,mb5.0,baz=18,slow=5.4,SNR=69								
CMAR				LR		LR	00 20 15.1	
comp=Z,88nm,19.5s,MS4.1,baz=164,slow=39								
SOC	Sochi	80.65	344	c iP		P	23 40 15.0	0.0
SOC				e			23 43 16.0	
SOC				ePPP			23 45 07.3	
SOC				eS		S	23 50 18.4	0.0
SOC				eSS		SS	23 55 24.6	-5.7
SOC				pmax		pmax		
comp=Z,26nm,0.7s,mb5.3								
SOC				MLR		MLR		
comp=Z,107nm,16.0s,MS4.3								
MBDF	Montbardon	80.70	8	eP		P	23 40 16.3	+1.0
comp=Z,25nm,1.0s,mb4.8								
MBDF	Montbardon	80.70	8	eP		P	23 40 16.3	+1.0
MBDF				pmax		pmax		
comp=Z,13nm,1.0s,mb4.8								
MBDF	Montbardon	80.70	8	eP		P	23 40 16.3	+1.0
comp=Z,13nm,1.0s,m

GNI	**Garni**	**83.08**	**340**	*eP*	**P**	**23 40 29.4**	**+1.5**
GNI				pmax	pmax		
comp=Z,15nm,0.9s							
GNI	**Garni**	**83.08**	**340**	*eP*	**P**	**23 40 29.4**	**+1.5**
comp=Z,15nm,0.9s,mb5.0							
PCBR	**Castelo Branco**	**83.49**	**20**	*eP*	**P**	**23 40 30.5**	**+0.5**
comp=Z,30nm,1.7s,mb5.0							
PTOM	**Tomar**	**83.52**	**21**	*eP*	**P**	**23 40 31.1**	**+1.0**
PMAFR	**Mafra**	**83.97**	**21**	*eP*	**P**	**23 40 33.5**	**+1.0**
ESDC	**Sonseca Array**	**84.30**	**17**	P	**P**	**23 40 34.6**	**+0.5**
comp=Z,3.0nm,0.6s,mb4.6,baz=344,slow=5.0,SNR=23							
ESDC				LR	LR	00 19 42.4	
comp=Z,52nm,19.5s,MS3.9,baz=275,slow=37							
ROSC	**El Rosal**	**84.51**	**89**	LR	LR	00 16 27.7	
comp=Z,43nm,21.4s,MS3.8,baz=192,slow=34							
BR131	**Keskin Array S**	**85.28**	**348**	*eP*	**P**	**23 40 39.4**	**+0.3**
comp=Z,12nm,0.9s,mb5.0							
BRTR	**Keskin Array B**	**85.28**	**348**	P	**P**	**23 40 39.5**	**+0.4**
comp=Z,12nm,0.8s,mb5.1,baz=36,slow=2.7,SNR=86							
BRTR				LR	LR	00 22 05.6	
comp=Z,69nm,19.7s,MS4.0,baz=73,slow=38							
TIP	**Timpagrande**	**86.73**	**1**	*eP*	**P**	**23 40 45.7**	**-0.5**
comp=Z,17nm,1.1s,mb5.2							
KEST	**Kesra**	**89.84**	**7**	P	**P**	**23 41 02.2**	**+1.2**
comp=Z,1.6nm,0.9s,mb4.3,baz=202,slow=10,SNR=4.3							
MMAI	**Mount Meron Ar**	**91.65**	**346**	P	**P**	**23 41 10.2**	**+0.7**
comp=Z,1.6nm,0.7s,mb4.5,baz=29,slow=3.3,SNR=3.2							
HYB	**Hyderabad**	**92.04**	**304**	*i P*	**P**	**23 41 10.0**	**-1.5**
KMBO	**Kilima Mbogo**	**124.63**	**337**	PKP	PKPdf	23 47 02.3	+0.4
comp=Z,2.7nm,0.8s,baz=22,slow=1.5,SNR=7.4							
QSPA	**South Pole Qui**	**144.23**	**180**	*e*PKPdf	PKPdf	23 47 34.4	-1.9
TSUM	**Tsumeb**	**144.80**	**1**	PKP	PKPdf	23 47 37.3	-1.7
comp=Z,12nm,0.8s,baz=354,slow=6.0,SNR=31							
TSUM	**Tsumeb**	**144.80**	**1**	PKPdf	PKPdf	23 47 37.6	-1.5
BOSA	**Boshof**	**153.69**	**346**	PKP	PKPdf	23 47 52.2	-0.8
comp=Z,7.8nm,1.2s,baz=118,slow=6.6,SNR=2.4							
BOSA				PKPbc	PKPbc	23 48 00.5	-0.3
comp=Z,8.4nm,1.1s,baz=102,slow=17,SNR=4.9							
BOSA				PKPab	PKPab	23 48 12.7	-0.9
comp=Z,4.2nm,1.0s,baz=117,slow=6.8,SNR=3.5							
BOSA	**Boshof**	**153.69**	**346**	PKP	PKPdf	23 47 52.2	-0.8
BOSA				PKPbc	PKPbc	23 48 00.5	-0.4
BOSA				PKPab	PKPab	23 48 12.7	-0.9
MAW	**Mawson**	**155.43**	**220**	PKP	PKPdf	23 47 52.0	-2.1
comp=Z,2.5nm,1.0s,baz=90,slow=0.6,SNR=3.4							
MAW				PKPab	PKPab	23 48 20.4	+0.4
comp=Z,2.0nm,0.6s,baz=78,slow=8.1,SNR=4.8							

BEO ***17*** *23:29:55.6±2.2, 42°.92N×18°.01E, h6km±2km, ML2.5/3*
ISCJB ***17*** *23:29:55.6±0.8, 42°.98N±0°.05×18°.09E±0°.06, h1km±19km, Error ellipse: s-maj=9.1km s-min=5.8km az=144.7*
CSEM ***17*** *23:29:56.0±0.5, 42°.94N×18°.10E, h10km, ML2.5, Error ellipse: s-maj=10.9km s-min=7.8km az=115.0*

ISC 17 23:29:56.2±0.9, 42°.94N±0°.06×18°.08E±0°.06, h9km±14km, n7,σ0°69/14, 5D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STON	**Ston**	**0.28**	**256**	⇓*i* Pg	**Pg**	**23 30 01.2**	**-0.6**
STON				Sg	**Sg**	**23 30 06.4**	**+0.8**
TREB	**Trebinje**	**0.30**	**138**	⇓*i* Pg	**Pg**	**23 30 01.5**	**-0.7**
TREB				*i* Sg	**Sg**	**23 30 06.7**	**+0.5**
TREB	**Trebinje**	**0.30**	**138**	⇓*i* Pg	**Pg**	**23 30 01.5**	**-0.7**
TREB				*i* Sg	**Sg**	**23 30 06.7**	**+0.5**
BBLS	**Lazići**	**1.34**	**46**	⇓*i* Pg	**Pg**	**23 30 20.7**	**-1.2**
BBLS				*e*Sg	**Sg**	**23 30 39.3**	**0.0**
BBLS	**Lazići**	**1.34**	**46**	⇓*i* Pg	**Pg**	**23 30 20.7**	**-1.2**
BBLS				*e*Sg	**Sg**	**23 30 39.3**	**0.0**
DIVS	**Divibare**	**1.81**	**50**	*e*Pn	**Pn**	**23 30 27.7**	**+0.2**
DIVS				*i* Sg	**Sg**	**23 30 55.3**	**+0.9**
DIVS	**Divibare**	**1.81**	**50**	*e*Pn	**Pn**	**23 30 27.7**	**+0.2**
DIVS				*i* Sg	**Sg**	**23 30 55.3**	**+0.9**

TRN 17 23:30:02.5, 15°.82N×61°.63W, h20km, MD3.4, M3.5(FDF), 6C-2D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBG	**Guadaloupe-3**	**0.04**	**335**	⇓*i* P	Pb	23 30 05.5	-0.7
HMG	**Houelmont**	**0.18**	**337**	⇑*i* P	Pb	23 30 08.3	+0.9
PHG	**Guadaloupe-2**	**0.20**	**356**	⇑*i* P	Pb	23 30 08.9	+1.2
SCG	**Saint Claude**	**0.22**	**347**	⇑*i* P	Pb	23 30 09.1	+1.1
BCG	**Bois Riant Cap**	**0.27**	**2**	⇑*i* P	Pb	23 30 09.8	+1.1
MGG	**Marie-Galante**	**0.32**	**72**	⇑*i* P	Pb	23 30 11.4	+1.8
LZG	**Guadaloupe-1**	**0.35**	**336**	⇑*i* P	Pb	23 30 11.3	+1.2
DWS	**Wesley**	**0.39**	**129**	*e*P	Pb	23 30 13.8	+3.0
DWS				*e*S	Sb	23 30 19.9	+3.5
MDN	**Morne-Daniel**	**0.55**	**155**	*e*P	Pb	23 30 16.5	+3.0
MDN				*e*S	Sb	23 30 24.5	+3.7
SFG	**Saint Francois**	**0.60**	**44**	*e*P	Pb	23 30 15.9	+1.6
DLPL	**La Plaine**	**0.61**	**143**	*e*P	Pb	23 30 17.3	+2.8
DLPL				*e*S	Sb	23 30 26.0	+3.4
DFBT	**Forest Bistro**	**0.63**	**155**	*e*P	Pb	23 30 18.0	+3.1
DFBT				*e*S	Sb	23 30 27.1	+3.8
DSHT	**Scott's Head**	**0.65**	**158**	*e*P	Pb	23 30 18.5	+3.3
DSHT				*e*S	Sb	23 30 28.9	+5.1
DSTT	**Stowe**	**0.65**	**151**	*e*P	Pb	23 30 18.4	+3.2
DSTT				*e*S	Sb	23 30 27.4	+3.6
FDF	**Fort de France**	**1.17**	**157**	*e*P	Pn	23 30 26.0	+2.2
FDF				*e*S	Sb	23 30 41.9	+3.0
BPA	**Boggy Peak**	**1.24**	**350**	⇓*e*P	Pn	23 30 26.5	+1.7
BPA				*e*S	Sb	23 30 43.4	+2.6
BIM	**Bigot**	**1.40**	**157**	*e*P	Pn	23 30 29.4	+2.4
SKI	**Saint Kitts**	**1.84**	**325**	*e*P	Pn	23 30 35.8	+2.8
SKI				*e*S	Sn	23 30 59.1	+3.3
SLB	**Belfond**	**2.06**	**164**	*e*P	Pn	23 30 38.2	+2.2
SLB				*e*S	Sn	23 31 02.4	+1.4
MCLT	**Moule a Chique**	**2.20**	**162**	*e*S	Sn	23 31 06.3	+1.8
SVB	**Belmont**	**2.56**	**172**	*e*P	Pn	23 30 44.9	+2.0
SVB				*e*S	Sn	23 31 15.5	+2.1

IDC 17 23:30:55.9±1.9, 0°.23S×125°.32E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/20, mbtmp3.4/3, Error ellipse: s-maj=186.4km s-min=27.4km az=64.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.49**	**156**	P	P	23 35 45.2	-1.1
0.4nm,0.5s,baz=334,slow=11,SNR=8.4							
ASAR	**Alice Springs**	**24.74**	**161**	P	P	23 36 20.2	+1.1
0.4nm,0.5s,baz=343,slow=9.5,SNR=5.1							
MKAR	**Makanchi Array**	**60.04**	**327**	P	P	23 41 04.6	0.0
0.6nm,0.6s,baz=128,slow=7.2,SNR=4.3							

DJA 17 23:35:12, 2°.85S×129°.11E, h15km, MLv4.4/7, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**1.24**	**228**	P	Pn	23 35 31.4	-3.3
NLAI	**Namlea**	**2.04**	**259**	P	Pn	23 35 44.1	-1.8
LBMI	**Labuha**	**2.72**	**324**	P	Pn	23 35 55.9	+0.7
LBMI				S	Sn	23 36 26.6	-1.3
KDI	**Kendari**	**6.57**	**260**	P	Pn	23 36 48.4	+0.2
0.5nm1μm12nm,1.2s							
LUWI	**Luwuk**	**6.58**	**286**	P	Pn	23 36 49.0	+0.7
3.5nm2μm74nm,0.7s							

BJI ***17*** *23:35:28.1±2°.83N×128°.30E, h98km, mB4.8/18, mb4.8/25*
NEIC ***17*** *23:35:33.0±1.0, 3°.18N×127°.86E, h98km±9km, mb4.6/21, Error ellipse: s-maj=7.8km s-min=4.7km az=76.0*
ISCJB ***17*** *23:35:32.9±0.8, 3°.18N±0°.04×127°.85E±0°.06, h111km±6km, mb4.5/46, Error ellipse: s-maj=10.3km s-min=5.8km az=166.4*
IDC ***17*** *23:35:33.7±0.8, 3°.20N×127°.94E, h105km±7km, mb4.0/18, mb1 4.1/20, mb1mx4.0/27, mbtmp4.0/20, Error ellipse: s-maj=21.0km s-min=10.0km az=76.0*

ISC 17 23:35:33.4±0.7, 3°.16N±0°.04×127°.91E±0°.06, h100km±5km, h103km±2.6km: pP-P, n88, σ1°.04/96, mb4.5/46, 1C-2D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**2.44**	**282**	P	**Pn**	**23 36 11.0**	**-0.6**
TNTI	**Ternate**	**2.44**	**193**	P	**Pn**	**23 36 13.7**	**+2.0**
GSPH	**General Santos**	**4.14**	**315**	*e*P	**Pn**	**23 36 33.8**	**-0.7**
GSPH				*e*S	**Sn**	**23 37 19.8**	**-2.1**
DAV	**Davao City (W)**	**4.52**	**329**	P	**Pn**	**23 36 41.4**	**+1.7**
22nm,0.3s,baz=90,slow=5.3,SNR=2.5							
DAV				S	**Sn**	**23 37 36.1**	**+4.9**
48nm,0.3s,baz=334,slow=22,SNR=3.7							
DAV	**Davao City (W)**	**4.52**	**329**	*e*Pn	**Pn**	**23 36 38.6**	**-1.1**
DAV				*e*S	**Sn**	**23 37 23.1**	**-8.1**
DMPH	**Davao City--Mi**	**4.57**	**329**	⇑*e*P	**Pn**	**23 36 41.4**	**+1.1**
DMPH				*e*S	**Sn**	**23 37 35.9**	**+3.6**
KMSI	**Cibinong**	**4.69**	**237**	P	**Pn**	**23 36 43.5**	**+1.5**
718nm,0.8s							
BUKP	**Musuan**	**5.48**	**329**	*e*P	**Pn**	**23 36 53.4**	**+0.8**
PAGZ	**Pagadian**	**6.48**	**316**	*e*P	**Pn**	**23 37 05.2**	**-1.0**
MRSI	**Marisa**	**6.54**	**246**	P	**Pn**	**23 37 08.2**	**+1.2**
KAPI	**Kappang**	**11.51**	**225**	P	**Pn**	**23 38 14.2**	**-0.4**
2.8nm,0.3s,baz=17,slow=8.3,SNR=6.7							
KAPI				S	**Sn**	**23 40 14.8**	**-6.4**
5.1nm,0.3s,baz=359,slow=21,SNR=6.7							
KAPI	**Kappang**	**11.51**	**225**	*e*Pn	**Pn**	**23 38 14.2**	**-0.3**
KAPI				*e*S	**Sn**	**23 40 14.1**	**-7.1**
KKM	**Kota Kinabalu**	**12.00**	**284**	*e*Pn	**Pn**	**23 38 20.2**	**-1.0**
KSM	**Kuching**	**17.67**	**265**	*e*P	**Pn**	**23 39 32.5**	**-0.7**
23nm,1.0s							
FITZ	**Fitzroy Crossi**	**21.25**	**186**	P	**P**	**23 40 11.2**	**-0.3**
1.7nm,0.4s,mb3.7,baz=35,slow=5.8,SNR=6.3							
FITZ	**Fitzroy Crossi**	**21.25**	**186**	*e*P	**P**	**23 40 11.6**	**+0.1**
17nm,1.6s,mb4.1							
NACB	**Ninganchiao**	**21.76**	**344**	P	**P**	**23 40 16.1**	**-0.9**
COEN	**Coen**	**22.77**	**139**	*e*P	**P**	**23 40 26.7**	**-1.0**
QIZ	**Qiongzhong**	**23.68**	**313**	P	**P**	**23 40 35.3**	**-0.8**
QIZ				S	**S**	**23 44 44.8**	**+1.0**
QIZ				pmax	pmax		
comp=Z,27nm,2.1s,mb4.2							
QIZ	**Qiongzhong**	**23.68**	**313**	P	**P**	**23 40 35.0**	**-1.0**
WRAB	**Tennant Creek**	**23.81**	**165**	*e*P	**P**	**23 40 37.4**	**+0.2**
comp=Z,25nm,1.1s,mb4.5							
WRAB				*e*		23 41 01.2	
WRA	**Warramunga Arr**	**23.81**	**165**	P	**P**	**23 40 37.2**	**0.0**
comp=Z,8.3nm,0.7s,mb4.2,baz=344,slow=10,SNR=29							
WRA				pP		23 40 59.7	
comp=Z,2.4nm,0.4s,baz=346,slow=11,SNR=3.1							
WRA				ScP	ScP	23 47 48.3	+0.7
comp=Z,0.8nm,0.8s,baz=339,slow=3.0,SNR=5.9							
WRA	**Warramunga Arr**	**23.81**	**165**	P	**P**	**23 40 37.2**	**0.0**
WRA				pP		23 40 59.7	
WRA				ScP	ScP	23 47 48.3	+0.7
MBWA	**Marble Bar**	**25.46**	**198**	*e*P	**P**	**23 40 51.2**	**-1.0**
KULM	**Kulim**	**27.27**	**275**	*e*P	**P**	**23 41 08.1**	**-0.5**
ASAR	**Alice Springs**	**27.30**	**168**	P	**P**	**23 41 09.0**	**+0.4**
comp=Z,0.6nm,0.3s,mb3.5,baz=351,slow=7.7,SNR=4.9							
ASAR				PcP	PcP	23 44 26.6	+0.5
comp=Z,1.5nm,0.6s,baz=341,slow=2.0,SNR=7.3							
CBIJ	**Chichi jima**	**27.44**	**28**	P	**P**	**23 41 08.2**	**-1.7**
comp=Z,63nm,0.9s,mb5.2,baz=278,slow=19,SNR=5.1							
GYA	**Guiyang**	**30.85**	**321**	P	**P**	**23 41 41.8**	**+1.6**
GYA				pP	pP	23 42 05.4	+2.8
GYA				sP	sP	23 42 17.0	+2.7
GYA				PP	PP	23 42 48.5	-3.2
GYA				S	**S**	**23 46 38.3**	**+1.5**
GYA				PcS	PcS	23 48 20.1	+0.9
GYA				pmax	pmax		
comp=Z,10.0nm,0.8s,mb4.6							
GYA				pmax	pmax		
comp=Z,80nm,4.7s							
GYA				LR	LR		
comp=N,430nm,17.0s							
GYA				LR	LR		
comp=E,420nm,18.2s							
GYA				LR	LR		
comp=Z,470nm,16.3s							
CM31	**Chiang Mai Arr**	**32.17**	**300**	*e*P	**P**	**23 41 51.4**	**-0.5**
CMAR	**Chiang Mai Arr**	**32.17**	**300**	P	**P**	**23 41 52.0**	**+0.1**
comp=Z,2.9nm,0.7s,mb4.1,baz=116,slow=7.1,SNR=8.4							
CHTO	**Chiang Mai**	**32.32**	**301**	*e*P	**P**	**23 41 52.8**	**-0.4**
KMI	**Kunming**	**32.61**	**314**	P	**P**	**23 41 57.0**	**+1.3**
KMI				pP	pP	23 42 19.8	+1.5
KMI				PP	PP	23 43 09.9	-1.4
KMI				S	**S**	**23 47 05.8**	**+1.4**
KMI				pmax	pmax		
comp=Z,15nm,0.8s,mb4.9							
KMI				pmax	pmax		
comp=Z,48nm,4.2s							
KMI				LR	LR		
comp=N,54nm,10.2s							
KMI				LR	LR		
comp=E,140nm,10.2s							
KMI				LR	LR		
comp=Z,96nm,12.0s							
KSRS	**Korea Array**	**34.13**	**0**	P	**P**	**23 42 08.4**	**-0.2**
comp=Z,5.1nm,0.5s,mb4.6,baz=175,slow=9.7,SNR=17							
MJAR	**Matsushiro Arr**	**34.55**	**15**	P	**P**	**23 42 10.5**	**-1.8**
comp=Z,1.6nm,0.4s,mb4.2,baz=188,slow=9.9,SNR=5.8							
MAJO	**Matsushiro**	**34.55**	**15**	*e*P	**P**	**23 42 11.6**	**-0.7**
comp=Z,6.2nm,0.5s,mb4.7							
STKA	**Stephens Creek**	**37.20**	**161**	P	**P**	**23 42 34.9**	**-0.1**
comp=Z,4.2nm,0.3s,mb4.8,baz=345,slow=8.7,SNR=18							
STKA	**Stephens Creek**	**37.20**	**161**	*e*P	**P**	**23 42 34.7**	**-0.2**
STKA				*e*	pP	23 43 02.1	+4.2
NWAO	**Narrogin (SRO)**	**37.29**	**195**	P	**P**	**23 42 35.3**	**-0.4**
BJT	**Baijiatuan**	**38.20**	**345**	P	**P**	**23 42 43.5**	**+0.1**
BJI	**Beijing**	**38.22**	**345**	P	**P**	**23 42 43.5**	**0.0**
BJI				S	**S**	**23 48 33.6**	**+3.8**
BJI				pmax	pmax		
comp=Z,24nm,0.6s,mb5.2							
BJI				pmax	pmax		
comp=Z,54nm,3.6s							
BJI				LR	LR		
comp=N,110nm,12.9s							
BJI				LR	LR		
comp=E,170nm,13.8s							
BJI				LR	LR		
comp=Z,150nm,22.6s							
LZH	**Lanzhou**	**39.59**	**329**	*e*P	**P**	**23 42 56.8**	**+1.8**
LZH				pP	pP	23 43 19.3	+1.2
LZH				sP	sP	23 43 32.3	+2.7
LZH				PP	PP	23 44 33.5	+5.6
LZH				pmax	pmax		
comp=Z,36nm,1.2s,mb5.1							
LZH				pmax	pmax		
comp=Z,190nm,5.4s							
HHC	**Hu-ho-hao-te**	**40.31**	**341**	*e*P	**P**	**23 43 02.1**	**+1.2**
HHC				pP	pP	23 43 24.8	+0.7
HHC				sP	sP	23 43 36.5	+1.0
HHC				PP	PP	23 44 40.9	+5.3
HHC				PcP	PcP	23 45 04.3	+1.7
HHC				ScP	ScP	23 48 43.1	+0.2
HHC				PcS	PcS	23 48 53.4	+0.3
HHC				S	**S**	**23 49 03.3**	**+2.2**
HHC				SS	SS	23 52 00.3	-3.4
HHC				ScS	ScS	23 52 56.3	-0.6
HHC				pmax	pmax		
comp=Z,8.0nm,0.9s,mb4.5							
HHC				pmax	pmax		
comp=Z,140nm,5.2s							
HHC				LR	LR		
comp=N,100nm,15.5s							
HHC				LR	LR		
comp=E,84nm,15.5s							
HHC				LR	LR		
comp=Z,100nm,16.7s							
CN2	**Changchun**	**40.53**	**357**	*e*P	**P**	**23 43 04.6**	**+2.0**
SHL	**Shillong**	**41.16**	**306**	*e*PKP	**P**	**23 43 12.0**	**+3.9**
LSA	**Lhasa**	**43.70**	**311**	*e*P	**P**	**23 43 28.7**	**+0.1**
comp=Z,6.8nm,0.6s,mb4.5							
GTA	**Gaotai**	**44.19**	**328**	*e*P	**P**	**23 43 33.6**	**+1.2**
GTA				pmax	pmax		
comp=Z,8.0nm,0.9s,mb4.5							
ULN	**Ulaanbaatar**	**48.02**	**341**	*e*P	**P**	**23 44 02.7**	**+0.3**
comp=Z,6.2nm,0.9s,mb4.4							
SONM	**Songino Array**	**48.21**	**341**	P	**P**	**23 44 03.5**	**-0.3**
comp=Z,2.3nm,0.6s,mb4.2,baz=158,slow=8.5,SNR=8.8							
TLY	**Talaya**	**52.44**	**341**	P	**P**	**23 44 35.7**	**+0.2**
WMQ	**Urumqi**	**53.86**	**325**	*e*P	**P**	**23 44 47.0**	**+0.8**
PETK	**Petropavlovsk-**	**55.52**	**21**	P	**P**	**23 44 58.1**	**+0.2**
comp=Z,6.5nm,0.8s,mb4.7,baz=196,slow=3.9,SNR=12							
MK31	**Makanchi Array**	**58.69**	**325**	*e*P	**P**	**23 45 21.2**	**+0.8**
MKAR	**Makanchi Array**	**58.69**	**325**	P	**P**	**23 45 20.9**	**+0.5**
comp=Z,4.9nm,0.6s,mb4.7,baz=117,slow=8.3,SNR=58							
MKAR				pP	pP	23 45 46.6	+1.5
comp=Z,3.3nm,0.8s,baz=121,slow=7.0,SNR=3.2							
MKAR	**Makanchi Array**	**58.69**	**325**	P	**P**	**23 45 20.9**	**+0.5**
MKAR				pP	pP	23 45 46.5	+1.5
KSH	**Kashi**	**59.28**	**315**	*e*P	**P**	**23 45 26.6**	**+2.0**
KSH				pP	pP	23 45 50.6	+1.3
KSH				PcP	PcP	23 46 13.8	+2.0
KSH				PP	PP	23 47 40.3	+3.6
KSH				ScP	ScP	23 50 04.0	+0.4
KSH				PcS	PcS	23 50 14.4	+0.5
KSH				S	**S**	**23 53 23.8**	**-1.4**
KSH				ScS	ScS	23 55 03.5	-1.9
KSH				SS	SS	23 57 22.4	+0.9
KSH				pmax	pmax		
comp=Z,9.0nm,1.3s,mb4.6							
KSH				pmax	pmax		
comp=Z,100nm,4.9s							
KSH				LR	LR		
comp=N,64nm,7.3s							
KSH				LR	LR		
comp=E,100nm,5.5s							
KSH				LR	LR		
comp=Z,93nm,5.7s							
TKM2	**Tokmak 2**	**60.95**	**318**	*e*P	**P**	**23 45 35.0**	**-0.9**
comp=Z,3.8nm,0.9s,mb4.4							
UCH	**Uchtor**	**61.39**	**317**	*e*P	**P**	**23 45 39.8**	**+0.9**
comp=Z,2.9nm,0.8s,mb4.4							
ZALV	**Zalesovo Beam**	**61.63**	**333**	P	**P**	**23 45 39.4**	**-1.0**
comp=Z,1.2nm,0.5s,mb4.2,baz=133,slow=6.3,SNR=6.8							
AML	**Almayashu**	**61.91**	**317**	*e*P	**P**	**23 45 40.7**	**-1.7**
comp=Z,6.5nm,0.9s,mb4.7							
KURK	**Kurchatov**	**62.85**	**327**	P	**P**	**23 45 48.7**	**+0.1**
comp=Z,8.6nm,0.8s,mb4.7,baz=129,slow=6.2,SNR=25							
KURK				pP	pP	23 46 13.9	+0.4
comp=Z,3.1nm,0.7s,baz=128,slow=6.2,SNR=4.6							
TIXI	**Tiksi**	**68.39**	**0**	*e*P	**P**	**23 46 22.9**	**-0.9**
comp=Z,4.9nm,0.8s,mb4.4							
BVAR	**Borovoye Array**	**68.44**	**327**	P	**P**	**23 46 24.5**	**0.0**
comp=Z,5.2nm,0.9s,mb4.4,baz=124,slow=7.9,SNR=17							
BRVK	**Borovoye**	**68.51**	**327**	*e*P	**P**	**23 46 24.5**	**-0.3**
comp=Z,5.3nm,0.8s,mb4.4							
CASY	**Casey**	**70.40**	**187**	*e*P	**P**	**23 46 36.5**	**+0.3**
comp=Z,12nm,0.8s,mb4.8							
ABKAR	**Akbulak array**	**73.33**	**321**	*e*P	**P**	**23 46 53.2**	**-1.0**
comp=Z,0.8nm,0.5s,mb3.8							
AKTK	**Aktyubinsk**	**74.83**	**322**	P	**P**	**23 47 02.4**	**-0.5**
AKTO	**Aktyubinsk**	**74.83**	**322**	P	**P**	**23 47 02.4**	**-0.5**
comp=Z,2.8nm,0.9s,mb4.0,baz=115,slow=9.3,SNR=8.7							
ARU	**Arti**	**76.04**	**328**	*e*P	**P**	**23 47 08.4**	**-1.3**
SDPT	**Sand Point**	**77.00**	**34**	*e*P	**P**	**23 47 15.2**	**+0.1**
comp=Z,48nm,0.6s,mb5.4							
SVW2	**Sparrevohn**	**80.73**	**29**	*e*P	**P**	**23 47 36.4**	**+1.0**
TTA	**Tatalina**	**80.87**	**27**	*e*P	**P**	**23 47 36.8**	**+0.7**
OHAK	**Old Harbor**	**81.29**	**33**	*e*P	**P**	**23 47 38.9**	**+0.5**
comp=Z,10.0nm,0.9s,mb4.7							
KDAK	**Kodiak Island**	**81.74**	**32**	*e*P	**P**	**23 47 41.4**	**+0.6**
comp=Z,10nm,0.8s,mb4.7							
CHUM	**Lake Minchumin**	**82.67**	**26**	*e*P	**P**	**23 47 46.0**	**+0.5**
comp=Z,9.8nm,0.9s,mb4.6							
PMR	**Palmer**	**83.88**	**29**	*e*P	**P**	**23 47 50.5**	**-1.2**
comp=Z,14nm,0.8s,mb4.9							
COLD	**Coldfoot**	**83.95**	**23**	*e*P	**P**	**23 47 52.8**	**+0.8**
comp=Z,16nm,0.9s,mb4.8							
MCK	**McKinley**	**84.14**	**26**	*e*P	**P**	**23 47 53.2**	**+0.2**
comp=Z,14nm,1.0s,mb4.8							
DIV	**Divide**	**85.47**	**29**	*e*P	**P**	**23 48 01.1**	**+1.3**
comp=Z,26nm,0.8s,mb5.2							
BRTR	**Keskin Array B**	**91.29**	**310**	P	**P**	**23 48 26.1**	**-1.8**
comp=Z,0.2nm,0.6s,mb3.4,baz=141,slow=4.8,SNR=2.4							
ARCES	**ARCESS Array B**	**91.38**	**340**	P	**P**	**23 48 25.9**	**-1.8**
comp=Z,0.8nm,0.4s,mb4.2,baz=78,slow=6.6,SNR=11							
FINES	**FINESS Array B**	**92.89**	**332**	P	**P**	**23 48 32.9**	**-2.0**
comp=Z,0.7nm,0.6s,mb4.2,baz=57,slow=7.0,SNR=3.9							
DLBC	**Dease Lake**	**93.62**	**31**	P	**P**	**23 48 38.1**	**-0.1**
comp=Z,1.2nm,0.6s,mb4.4,baz=276,slow=5.0,SNR=3.2							
DRGR		**98.05**	**318**	⇓P	**P**	**23 49 02.8**	**+4.1**
DRGR		**98.05**	**318**	⇓*i* P	**P**	**23 49 02.8**	**+4.1**
TXAR	**Lajitas Array**	**121.00**	**53**	PKP	PKPdf	23 54 15.6	+0.7
comp=Z,0.4nm,0.6s,baz=233,slow=1.0,SNR=6.8							
TXAR	**Lajitas Array**	**121.00**	**53**	PKP	PKPdf	23 54 15.6	+0.6
JCT	**Junction City**	**123.53**	**50**	*e*PKPdf	PKPdf	23 54 20.1	+0.3
LPAZ	**La Paz**	**159.53**	**131**	PKPab	PKPab	23 56 03.5	+3.7
comp=Z,1.2nm,0.7s,baz=308,slow=3.1,SNR=2.6							

ISCJB ***17*** *23:41:30.2±1.7, 15°.4S±0°.5×177°.7W±0°.3, h379km±28km, mb3.4/5, Error ellipse: s-maj=79.2km s-min=23.0km az=155.0*
NEIC ***17*** *23:41:31.6±1.5, 15°.43S×177°.61W, h389km±22km, mb3.5/1, Error ellipse: s-maj=85.5km s-min=18.5km az=159.0*
IDC ***17*** *23:41:31.6±2.5, 15°

GRUS				*e*Sg		**Sg**	**23 48 47.3 +0.5**
GRUS	**Gruza**		**1.75 114**	*i* Pg		**Pn**	**23 48 22.7 +1.8**
GRUS				*e*Sg		**Sg**	**23 48 47.3 +0.5**
STON	**Ston**		**1.85 199**	*e*Pn		**Pn**	**23 48 24.9 +2.5**
STON				Sn		**Sn**	**23 48 50.1 +4.4**
STON	**Ston**		**1.85 199**	*e*Pn		**Pn**	**23 48 24.8 +2.4**
TREB	**Trebinje**		**1.91 184**	*e*Pn		**Pn**	**23 48 23.4 +0.2**
TREB				*e*Sg		**Sg**	**23 48 51.6 -0.5**
TREB	**Trebinje**		**1.91 184**	*e*Pn		**Pn**	**23 48 23.4 +0.2**
TREB				*e*Sg		**Sg**	**23 48 51.6 -0.5**
PKS2	**Kecel**		**1.93 15**	*e*Pn		**Pn**	**23 48 23.6 +0.1**
PKS9	**Tamasi**		**1.97 355**	*e*Pn		**Pn**	**23 48 24.6 +0.6**
PKS9	**Tamasi**		**1.97 355**	*e*Pg		**Pg**	**23 48 28.7 +0.3**
BZS	**Buzias**		**2.41 65**	*e*Pn		**Pn**	**23 48 29.3 -0.8**
BZS				*e*Sg		**Sg**	**23 49 07.6 -0.5**
BZS	**Buzias**		**2.41 65**	⇑*i*P		**Pn**	**23 48 29.6 -0.5**
BZS	**Buzias**		**2.41 65**	*e*Pn		**Pn**	**23 48 29.3 -0.8**
BZS	**Buzias**		**2.41 65**	⇑*i*P		**Pn**	**23 48 29.6 -0.5**
BZS				*e*Sg		**Sg**	**23 49 07.6 -0.5**
PKSG			**2.77 358**	*e*Pn		**Pn**	**23 48 35.0 0.0**
BARS	**Barje**		**3.00 126**	⇑*i*Pn		**Pn**	**23 48 37.8 -0.4**
BARS				*i* Sg		**Sg**	**23 49 27.3 +0.2**
BARS	**Barje**		**3.00 126**	⇑*i*Pn		**Pn**	**23 48 37.8 -0.4**
BARS				*i* Sg		**Sg**	**23 49 27.3 +0.2**
GZR	**Gura Zlata**		**3.12 74**	⇑*i*P		**Pn**	**23 48 39.1 -0.7**
GZR	**Gura Zlata**		**3.12 74**	⇑*i*P		**Pn**	**23 48 39.1 -0.7**
SOKA	**Soboth**		**3.19 311**	⇑*i*Pn		**Pn**	**23 48 40.2 -0.6**
SOKA	**Soboth**		**3.19 311**	Pn		**Pn**	**23 48 40.2 -0.5**
ZAPS	**Zavoj**		**3.27 113**	⇑*i*Pn		**Pn**	**23 48 42.3 +0.4**
ARSA	**Arzberg**		**3.35 323**	⇑*i*Pn		**Pn**	**23 48 43.2 +0.2**
ARSA				⇑*i*Sn		**Sn**	**23 49 22.2 -0.6**
ARSA	**Arzberg**		**3.35 323**	Pn		**Pn**	**23 48 43.2 +0.2**
ARSA				Sn		**Sn**	**23 49 22.2 -0.6**
ZST	**Bratislava**		**3.70 345**	*e*PN		**Pn**	**23 48 48.2 +0.4**
ZST				*e*SN		**Sn**	**23 49 29.7 -1.7**
ZST	**Bratislava**		**3.70 345**	*e*Pn		**Pn**	**23 48 48.2 +0.4**
ZST				*e*Sn		**Sn**	**23 49 29.7 -1.7**
CONA	**Conrad Observa**		**3.78 332**	⇓*i*Pn		**Pn**	**23 48 49.2 +0.4**
CONA				⇑*i*Sn		**Sn**	**23 49 32.8 -0.5**
CONA	**Conrad Observa**		**3.78 332**	Pn		**Pn**	**23 48 49.2 +0.3**
CONA				Sn		**Sn**	**23 49 32.8 -0.5**
VYHS	**Vyhne**		**3.88 3**	*e*PN		**Pn**	**23 48 50.8 +0.6**
VYHS				*e*SN		**Sn**	**23 49 35.2 -0.5**
VYHS				*e*SG		**Sg**	**23 49 56.7 +1.6**
VYHS	**Vyhne**		**3.88 3**	*e*Pn		**Pn**	**23 48 50.8 +0.6**
VYHS				*e*Sn		**Sn**	**23 49 35.2 -0.5**
VYHS				*e*Sg		**Sg**	**23 49 56.7 +1.6**
MOA	**Molln**		**4.37 319**	⇑*i*Pn		**Pn**	**23 48 57.0 +0.1**
MOA				⇑*i*Sn		**Sn**	**23 49 47.9 +0.1**
MOA	**Molln**		**4.37 319**	Pn		**Pn**	**23 48 57.0 +0.1**
MOA				Sn		**Sn**	**23 49 47.9 +0.1**
KOLS	**Kolonicke sedl**		**5.02 30**	*e*SG		**Sg**	**23 50 38.2 +6.3**

NEIC 17 23:55:25.0, 19°.86N×155°.98W, *h*41km, MD3.8(HVO), After HVO., Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POHA	**Pohakuloa**	**0.44**	**103**	*e*P	Pn	23 55 34.4	-0.5
POHA				*e*S	Sn	23 55 42.2	+0.3
KHU	**Kahuku**	**0.70**	**150**	*e*P	Pn	23 55 37.2	-1.2
KHU				*e*S	Sn	23 55 46.2	-1.9
PUH	**Pauahi**	**0.87**	**124**	*e*P	Pn	23 55 38.9	-1.9
PUH				*e*S	Sn	23 55 51.6	-0.6
STCH	**Steam Cracks**	**0.93**	**120**	*e*P	Pn	23 55 40.0	-1.6
STCH				*e*S	Sn	23 55 50.7	-3.1
HON	**Honolulu**	**2.39**	**308**	*e*Pn	Pn	23 55 58.5	-3.1
HON				*e*Sn	Sn	23 56 25.3	-4.4
KIP	**Kipapa**	**2.46**	**310**	*e*Pn	Pn	23 55 58.9	-3.7
KIP				*e*Sn	Sn	23 56 26.1	-5.3

KRSC 18 00:17:48.8±3.7, 49°.54N×156°.83E, *h*5km±5km, ML4.1, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**1.56**	**329**	*e*P	Pn	00 18 18.8	+1.6
MIPR	**Malaya Ipel'ka**	**2.74**	**359**	*e*P	Pn	00 18 35.2	+1.8
AVH	**Avacha**	**3.92**	**17**	*e*P	Pn	00 18 51.2	+1.7
GNL	**Ganaly**	**4.22**	**9**	P	Pn	00 18 54.0	+0.3
MKZ	**Mys Kozlova**	**5.86**	**29**	*e*P	Pn	00 19 19.9	+3.7
MKZ				*i* S	Sn	00 20 26.3	+2.6

*IDC **18** 00:20:08.2±2.9, 34°.24S×179°.44W, h0km, mb3.8/2, mb1 4.1/3, mb1mx3.8/16, mbtmp3.9/3, ML4.1/1, Error ellipse: s-maj=68.1km s-min=44.7km az=123.0*
*NEIC **18** 00:20:12.9±1.8, 34°.48S×179°.43W, h35km, Error ellipse: s-maj=42.0km s-min=13.6km az=98.0*
ISC 18 00:20:17.0±2.8, 34°.6S±0°.3×179°.8W±0°.6, *h*50km±54km, n9, σ0§63/11, mb3.6/2, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**3.78**	**204**	P	**Pn**	**00 21 13.0**	**+0.3**
PUZ				S	**Sn**	**00 21 55.8**	**0.0**
MWZ	**Matawai**	**4.28**	**210**	P	**Pn**	**00 21 18.9**	**-0.7**
URZ	**Urewera**	**4.40**	**214**	Pn	**Pn**	**00 21 22.2**	**+1.0**
URZ	8.5nm,0.3s,baz=254,slow=2.2,SNR=23			Sn	**Sn**	**00 22 11.2**	**+0.1**
URZ	**Urewera**	**4.40**	**214**	P	**Pn**	**00 21 22.0**	**+0.8**
URZ	5.0nm,0.3s,baz=330,slow=23,SNR=6.3			*e*Pn	**Pn**	**00 21 23.0**	**+1.8**
KNZ	**Kokohu**	**4.83**	**204**	*e*P	**Pn**	**00 21 27.4**	**+0.3**
BKZ	**Black Stump Fm**	**5.42**	**212**	P	**Pn**	**00 21 34.0**	**-1.2**
ASAR	**Alice Springs**	**41.57**	**273**	P	**P**	**00 27 59.9**	**0.0**
	0.4nm,0.4s,mb3.4,baz=113,slow=7.6,SNR=9.3						
WRA	**Warramunga Arr**	**42.95**	**278**	P	**P**	**00 28 11.2**	**+0.1**
	0.7nm,0.3s,mb3.8,baz=116,slow=7.7,SNR=29						
FINES	**FINESS Array B**	**148.50**	**336**	PKPbc	PKPbc	00 39 54.9	-2.4
	0.8nm,0.5s,baz=29,slow=4.4,SNR=7.4						

*ISCJB **18** 00:27:17.3±0.7, 10°.91N±0°.05×62°.27W±0°.03, h98km±6km, Error ellipse: s-maj=9.1km s-min=5.5km az=178.9*
*TRN **18** 00:27:20.4, 10°.95N×62°.17W, h86km, MD3.1*
*FUNV **18** 00:27:20.2, 10°.85N×62°.32W, h89km, MW3.0*
ISC 18 00:27:18.3±0.7, 10°.92N±0°.05×62°.27W±0°.03, *h*93km±7km, n20, σ0§80/30, 3C-2D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.27**	**171**	⇑*i*P	**Pn**	**00 27 32.5**	**+0.5**
GUIV				*e*S	**Sn**	**00 27 42.1**	**0.0**
TCE	**Chacachacare**	**0.55**	**114**	⇑*i*P	**Pn**	**00 27 34.8**	**+1.0**
TCE				*e*S	**Sn**	**00 27 45.6**	**+0.3**
TRN	**Trinidad (W)**	**0.89**	**108**	⇑*i*P	**Pn**	**00 27 37.9**	**+0.9**
TRN				*e*S	**Sn**	**00 27 49.9**	**-1.2**
ITEV	**Isla Los Testi**	**0.95**	**297**	⇓*i*P	**Pn**	**00 27 38.3**	**+0.6**
ITEV				*e*S	**Sn**	**00 27 52.6**	**+0.4**
CRUV	**Carupano**	**0.98**	**256**	⇓*i*P	**Pn**	**00 27 39.0**	**+1.0**
CRUV				*e*S	**Sn**	**00 27 51.9**	**-0.9**
GUNV	**Guanoco**	**1.00**	**222**	*e*P	**Pn**	**00 27 39.6**	**+1.3**
GUNV				*e*S	**Sn**	**00 27 52.3**	**-1.0**
TBH	**Brigand Hill**	**1.26**	**110**	*e*P	**Pn**	**00 27 42.0**	**+0.8**
TBH				*e*S	**Sn**	**00 27 57.9**	**-0.5**
GRW	**Mount Saint Ca**	**1.37**	**26**	*e*S	**Sn**	**00 28 00.0**	**-0.9**
TPR	**Prospect**	**1.49**	**80**	*e*P	**Pn**	**00 27 44.4**	**+0.3**
TPR				*e*S	**Sn**	**00 28 02.9**	**-0.7**
PCRV	**Puerto La Cruz**	**2.44**	**253**	*e*P	**Pn**	**00 27 56.8**	**+0.3**
RIOV	**Rio Grande**	**2.87**	**171**	*e*P	**Pn**	**00 28 02.8**	**+0.7**
PRGV	**PARIAGUAN**	**3.18**	**228**	*e*P	**Pn**	**00 28 06.8**	**+0.5**
GURV	**El Guri**	**3.24**	**194**	*e*P	**Pn**	**00 28 07.3**	**+0.1**
CUPV	**Cepira**	**3.57**	**256**	*e*P	**Pn**	**00 28 12.5**	**+0.9**
CUPV				*e*S	**Sn**	**00 28 48.9**	**-3.8**
BIRV	**Birongo**	**3.96**	**264**	*e*P	**Pn**	**00 28 17.0**	**+0.2**
MERV	**Las Mercedes**	**4.30**	**248**	*e*P	**Pn**	**00 28 21.4**	**-0.1**
LUEV	**Luepa**	**5.11**	**171**	*e*P	**Pn**	**00 28 31.3**	**-1.2**
CAOV	**Caicara del Or**	**5.36**	**229**	*e*P	**Pn**	**00 28 35.2**	**-0.7**
CAOV				*e*S	**Sn**	**00 29 30.1**	**-6.3**
TURV	**Turiamo**	**5.50**	**266**	*e*P	**Pn**	**00 28 36.7**	**-1.1**
BAUV	**El Baul**	**6.02**	**251**	*e*P	**Pn**	**00 28 43.6**	**-1.2**

IDC 18 00:36:14.8±8.6, 47°.81N×154°.45E, *h*0km, mb3.6/2, mb1 4.0/3, mb1mx3.4/25, mbtmp3.6/3, ML3.4/1, Error ellipse: s-maj=244.7km s-min=48.4km az=94.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**5.69**	**20**	Pn	Pn	00 37 40.0	-0.5
	1.0nm,0.3s,baz=184,slow=12,SNR=14						
PETK				Sn	Sn	00 38 49.0	+2.4
	baz=228,slow=25,SNR=2.3						
PDAR	**Pinedale Array**	**63.39**	**55**	P	P	00 46 45.9	+0.1
	0.6nm,0.7s,baz=304,slow=3.4,SNR=3.7						
TXAR	**Lajitas Array**	**76.18**	**62**	P	P	00 48 05.3	+0.5
	0.3nm,0.6s,baz=292,slow=3.2,SNR=4.9						

*NEIC **18** 00:40:31.9, 35°.29S×178°.45E, h260km, mb3.8/3, After WEL.*
*IDC **18** 00:40:35.7±3.0, 35°.44S×177°.53E, h277km±16km, mb3.8/4, mb1 3.9/6, mb1mx3.6/17, mbtmp3.8/6, Error ellipse: s-maj=46.1km s-min=19.8km az=50.0*
ISC 18 00:40:34.0±1.0, 35°.45S±0°.10×177°.7E±0°.1, *h*268km±9km, n46, σ1§03/52, mb3.9/6, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.16**	**167**	P	**Pn**	**00 41 18.0**	**-1.3**
MXZ				S	**S**	**00 41 53.3**	**-1.9**
PUZ	**Puketiti**	**2.65**	**171**	P	**Pn**	**00 41 22.9**	**-1.0**
PUZ				S	**S**	**00 42 03.1**	**-0.5**
URZ	**Urewera**	**2.84**	**190**	P	**Pn**	**00 41 27.0**	**+1.1**
URZ	20nm,0.3s,baz=18,slow=6.4,SNR=121			S	**S**	**00 42 10.7**	**+3.6**
	34nm,0.3s,baz=66,slow=23,SNR=40						
URZ	**Urewera**	**2.84**	**190**	P	**Pn**	**00 41 26.8**	**+0.9**
MWZ	**Matawai**	**2.88**	**183**	P	**Pn**	**00 41 26.4**	**+0.2**
KNZ	**Kokohu**	**3.56**	**180**	P	**Pn**	**00 41 33.4**	**-0.1**
KNZ				S	**S**	**00 42 21.8**	**+0.8**
BKZ	**Black Stump Fm**	**3.83**	**194**	P	**Pn**	**00 41 37.5**	**+0.9**
TWVZ	**Taurewa**	**4.04**	**206**	P	**Pn**	**00 41 41.8**	**+2.8**
TUVZ	**Tukino**	**4.15**	**203**	P	**Pn**	**00 41 42.3**	**+2.1**
FWVZ	**Far West T-bar**	**4.17**	**204**	P	**Pn**	**00 41 42.8**	**+2.4**
WNVZ	**Wahianoa**	**4.22**	**203**	P	**Pn**	**00 41 43.1**	**+2.1**
MOVZ	**Moawhango**	**4.25**	**201**	P	**Pn**	**00 41 42.5**	**+1.2**
WAZ	**Wanganui**	**4.81**	**206**	P	**Pn**	**00 41 50.3**	**+2.4**
DVHZ	**Dannevirke**	**4.99**	**194**	P	**Pn**	**00 41 49.9**	**-0.2**
BFZ	**Birch Farm**	**5.35**	**192**	P	**Pn**	**00 41 54.2**	**-0.2**
MRZ	**Mangatainoka R**	**5.47**	**197**	P	**Pn**	**00 41 55.5**	**-0.3**
KIW	**Kapiti Island**	**5.83**	**201**	P	**Pn**	**00 42 00.2**	**-0.1**
MTW	**Mount Morrison**	**5.96**	**196**	P	**Pn**	**00 42 00.9**	**-0.9**
CAW	**Cannon Point**	**6.02**	**199**	P	**Pn**	**00 42 01.9**	**-0.7**
MSWZ	**Moikau Station**	**6.26**	**197**	P	**Pn**	**00 42 04.6**	**-0.9**
SNZO	**South Karori**	**6.31**	**201**	P	**Pn**	**00 42 05.3**	**-0.8**
BHW	**Baring Head**	**6.35**	**200**	P	**Pn**	**00 42 05.6**	**-1.1**
TCW	**Tory Channel**	**6.35**	**204**	P	**Pn**	**00 42 06.1**	**-0.6**
NNZ	**Nelson**	**6.69**	**209**	P	**Pn**	**00 42 10.7**	**-0.1**
QRZ	**Quartz Range**	**6.74**	**216**	P	**Pn**	**00 42 11.8**	**+0.3**
BSWZ	**Blackbirch Sta**	**6.94**	**204**	P	**Pn**	**00 42 13.9**	**0.0**
THZ	**Tophouse**	**7.34**	**209**	P	**Pn**	**00 42 19.1**	**+0.2**
KHZ	**Kahutara**	**7.68**	**204**	P	**Pn**	**00 42 22.7**	**-0.4**
DSZ	**Dennistoun Nort**	**7.80**	**215**	P	**Pn**	**00 42 24.1**	**-0.6**
LTZ	**Lake Taylor**	**8.45**	**208**	P	**Pn**	**00 42 32.6**	**-0.2**
MQZ	**McQueen's Vall**	**9.12**	**204**	P	**Pn**	**00 42 40.1**	**-1.1**
RPZ	**Rata Peaks**	**9.72**	**210**	P	**Pn**	**00 42 48.0**	**-0.6**
	2.4nm,0.3s,baz=12,slow=9.3,SNR=14						
RPZ				S	**S**	**00 44 36.6**	**-1.5**
	1.8nm,0.3s,baz=126,slow=7.0,SNR=11						
RPZ	**Rata Peaks**	**9.72**	**210**	*e*Pn	**Pn**	**00 42 48.1**	**-0.5**
RPZ				*e*Sn	**S**	**00 44 38.0**	**-0.2**
LBZ	**Lake Benmore**	**10.63**	**211**	P	**Pn**	**00 42 59.8**	**-0.2**
ODZ	**Otahua Downs**	**10.99**	**207**	P	**Pn**	**00 43 05.2**	**+0.7**
JCZ	**Jackson Bay**	**11.02**	**216**	P	**Pn**	**00 43 04.4**	**-0.5**
WKZ	**Wanaka**	**11.48**	**213**	P	**Pn**	**00 43 09.6**	**-0.9**
STKA	**Stephens Creek**	**30.17**	**266**	P	**P**	**00 46 19.2**	**-0.2**
	1.7nm,0.5s,mb3.8,baz=112,slow=11,SNR=3.1						
ASAR	**Alice Springs**	**39.58**	**275**	P	**P**	**00 47 40.0**	**+0.3**
	4.7nm,0.5s,mb4.1,baz=114,slow=7.9,SNR=86						
WRAB	**Tennant Creek**	**41.05**	**280**	*e*P	**P**	**00 47 51.0**	**-0.7**
	4.6nm,0.5s,mb4.0						
WRA	**Warramunga Arr**	**41.05**	**280**	P	**P**	**00 47 51.2**	**-0.5**
	4.1nm,0.3s,mb4.1,baz=118,slow=8.4,SNR=130						
SBA	**Scott Base**	**42.77**	**183**	*e*P	**P**	**00 48 07.7**	**+2.9**
FITZ	**Fitzroy Crossi**	**49.03**	**276**	*e*P	**P**	**00 48 53.6**	**-0.6**
	2.2nm,0.7s,mb3.6						
QSPA	**South Pole Qui**	**54.67**	**180**	P	**P**	**00 49 36.1**	**+1.3**
	2.1nm,0.5s,mb3.8,baz=94,slow=5.4,SNR=12						
QSPA	**South Pole Qui**	**54.67**	**180**	*e*P	**P**	**00 49 35.9**	**+1.1**
	2.0nm,0.6s,mb3.7						
MAW	**Mawson**	**66.30**	**202**	P	**P**	**00 50 53.7**	**+0.4**

*GII **18** 00:56:56.0±0.5, 33°.30N×35°.46E, h1km±2km, Md2.2/6, Mm1.9/5*
*CSEM **18** 00:56:56.8±0.2, 33°.33N×35°.44E, h5km, ML3.0, Error ellipse: s-maj=8.8km s-min=3.0km az=98.0*
*ISCJB **18** 00:56:56.5±0.5, 33°.33N±0°.02×35°.45E±0°.05, h8km±5km, Error ellipse: s-maj=6.8km s-min=3.4km az=21.4*
*GRAL **18** 00:56:57.2±0.4, 33°.31N×35°.46E, h8km±2km, MD3.0*
ISC 18 00:56:56.9±0.5, 33°.34N±0°.02×35°.45E±0°.05, *h*6km±7km, n17, σ0§67/29, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.18**	**326**	*e*P	**Pg**	**00 57 01.2**	**+0.6**
MATL	**Matarih**	**0.18**	**326**	*e*P	**Pg**	**00 57 01.2**	**+0.6**
KSDI	**Kefar Szold**	**0.23**	**130**	Pg	**Pg**	**00 57 01.0**	**-0.4**
KSDI				Sg	**Sg**	**00 57 04.5**	**+0.1**
HRI	**Mount Hermon**	**0.25**	**107**	Pg	**Pg**	**00 57 01.4**	**-0.4**
MMA0	**Mount Meron ar**	**0.33**	**187**	Pg	**Pg**	**00 57 02.7**	**-0.5**
MMA0				Sg	**Sg**	**00 57 08.2**	**+0.7**
RCY	**Rachaya**	**0.34**	**65**	*e*P	**Pg**	**00 57 04.2**	**+0.7**
RCY				*e*S	**Sg**	**00 57 09.0**	**+0.9**
RCY	**Rachaya**	**0.34**	**65**	*e*P	**Pg**	**00 57 04.2**	**+0.7**
RCY				*e*S	**Sg**	**00 57 09.0**	**+1.0**
HNTI	**Hanita**	**0.34**	**222**	Pg	**Pg**	**00 57 03.5**	**-0.1**
HNTI				Sg	**Sg**	**00 57 09.3**	**+1.2**
BHL	**Bhannes**	**0.59**	**17**	*e*P	**Pg**	**00 57 08.1**	**-0.2**
BHL				*e*S	**Sg**	**00 57 16.5**	**+0.6**
BHL	**Bhannes**	**0.59**	**17**	*e*P	**Pg**	**00 57 08.1**	**-0.2**
BHL				*e*S	**Sg**	**00 57 16.5**	**+0.6**
BLGI	**Bet Lehem HaGe**	**0.64**	**200**	Pg	**Pg**	**00 57 08.9**	**-0.4**
OFRI	**'Ofer**	**0.82**	**209**	Pg	**Pg**	**00 57 12.1**	**-0.5**
MMLI	**Mount Malkishu**	**0.90**	**182**	Pg	**Pg**	**00 57 13.2**	**-1.0**
MMLI				Sg	**Sg**	**00 57 26.1**	**+0.3**
HWQ	**Hawqa**	**1.02**	**24**	*e*P	**Pg**	**00 57 16.1**	**-0.5**
HWQ				*e*S	**Sg**	**00 57 29.4**	**-0.5**
HMDT	**Nahal Hemdat**	**1.08**	**177**	Pg	**Pg**	**00 57 16.5**	**-1.2**
HMDT				Sg	**Sg**	**00 57 32.5**	**+0.7**
SLTI	**Sal'it**	**1.15**	**198**	Pg	**Pg**	**00 57 17.9**	**-1.0**
SLTI				Sg	**Sg**	**00 57 34.2**	**+0.4**
DSI	**Dead Sea**	**1.77**	**182**	Pn	**Pn**	**00 57 27.5**	**-0.5**
DSI				Sn	**Sn**	**00 57 51.7**	**+1.0**

*IDC **18** 01:04:45.5±2.4, 6°.91S×150°.34E, h0km, mb4.0/7, mb1 4.2/7, mb1mx4.0/16, mbtmp4.0/7, MS3.1/1, Ms1 3.1/1, ms1mx2.5/21, Error ellipse: s-maj=68.6km s-min=16.8km az=111.0*
*ISCJB **18** 01:04:48.7±1.2, 7°.0S±0°.1×150°.4E±0°.3, h33km, mb4.1/13, Error ellipse: s-maj=39.5km s-min=11.6km az=22.2*
*NEIC **18** 01:04:50.3±1.0, 6°.97S×150°.53E, h35km, mb4.3/8, Error ellipse: s-maj=31.8km s-min=9.2km az=113.0*
ISC 18 01:04:47.4±4.2, 7°.0S±0°.1×150°.6E±0°.3, *h*15km±25km, n17, σ0§73/17, mb4.1/13, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**10.06**	**226**	*e*Pn	**Pn**	**01 07 11.4**	**-0.1**
CTA	**Charters Tower**	**13.71**	**197**	LR	LR	01 12 32.7	
	comp=Z,77nm,18.1s,baz=229,slow=34						
WRAB	**Tennant Creek**	**20.35**	**229**	*e*P	**P**	**01 09 23.2**	**-0.2**
	6.8nm,0.7s						
WRA	**Warramunga Arr**	**20.36**	**229**	P	**P**	**01 09 23.6**	**+0.1**
	6.5nm,0.7s,baz=56,slow=12,SNR=29						
ASAR	**Alice Springs**	**23.07**	**222**	P	**P**	**01 09 52.4**	**-0.2**
	2.9nm,0.7s,mb3.8,baz=54,slow=9.8,SNR=26						
ASAR				S	**S**	**01 14 03.0**	**-0.2**
	1.7nm,0.9s,baz=38,slow=20,SNR=12						
STKA	**Stephens Creek**	**26.17**	**198**	P	**P**	**01 10 21.4**	**+0.1**
	0.9nm,0.4s,mb3.6,baz=32,slow=7.1,SNR=3.4						
FITZ	**Fitzroy Crossi**	**26.70**	**243**	P	**P**	**01 10 26.5**	**+0.2**
	6.8nm,0.7s,mb4.3,baz=76,slow=5.2,SNR=27						
ULN	**Ulaanbaatar**	**66.68**	**330**	*e*P	**P**	**01 15 37.5**	**-0.1**
	1.2nm,0.6s,mb4.1						
SONM	**Songino Array**	**66.99**	**329**	P	**P**	**01 15 39.7**	**+0.1**
	0.9nm,0.6s,mb4.0,baz=163,slow=6.0,SNR=4.0						
MKAR	**Makanchi Array**	**80.50**	**320**	P	**P**	**01 16 58.1**	**-0.8**
	0.3nm,0.4s,mb3.6,baz=110,slow=5.4,SNR=3.6						
ZALV	**Zalesovo Beam**	**81.72**	**327**	P	**P**	**01 17 03.8**	**-1.4**
	0.5nm,0.4s,mb3.8,baz=130,slow=6.4,SNR=4.0						
MCK	**McKinley**	**83.69**	**23**	*e*P	**P**	**01 17 15.2**	**-0.1**
	4.8nm,0.8s,mb4.7						
TKM2	**Tokmak 2**	**83.83**	**314**	*e*P	**P**	**01 17 16.9**	**+0.4**
	1.0nm,0.7s,mb4.0						
KURK	**Kurchatov**	**84.10**	**323**	*e*P	**P**	**01 17 16.2**	**-1.4**
	1.7nm,0.7s,mb4.3						
AAK	**Ala-Archa**	**84.54**	**314**	*e*P	**P**	**01 17 20.7**	**+0.6**
	3.1nm,0.7s,mb4.5						
EKS2	**Erkin-Say**	**85.06**	**314**	*e*P	**P**	**01 17 23.8**	**+1.1**
	3.2nm,1.0s,mb4.4						
BRVK	**Borovoye**	**89.70**	**323**	*e*P	**P**	**01 17 46.5**	**+1.6**
	1.7nm,0.8s,mb4.4						

*IDC **18** 01:23:23.7±0.9, 31°.65N×104°.28E, h0km, mb3.7/11, mb1 3.9/11, mb1mx3.7/25, mbtmp3.8/11, MS3.1/1, Ms1 3.1/1, ms1mx2.3/48, Error ellipse: s-maj=40.2km s-min=15.9km az=52.0*
*ISCJB **18** 01:23:23.6±0.4, 31°.64N±0°.03×104°.35E±0°.06, h10km, mb3.8/14, Error ellipse: s-maj=7.1km s-min=4.7km az=165.6*
*NEIC **18** 01:23:25.6±0.6, 31°.75N×104°.43E, h10km, mb3.9/5, Error ellipse: s-maj=24.2km s-min=8.9km az=39.0*
*BJI **18** 01:23:26.1, 31°.45N×104°.17E, h15km, ML3.7/11*
ISC 18 01:23:25.6±0.4, 31°.60N±0°.04×104°.27E±0°.06, *h*10km, n26, σ1§10/34, mb3.8/14, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.82**	**212**	Pg	**Pg**	**01 23 35.8**	**-5.5**
CD2				Sg	**Sg**	**01 23 44.8**	**-7.2**
CD2				smax			
	comp=N,5μm,0.7s						
CD2				smax			
	comp=E,9μm,0.5s						
LZH	**Lanzhou**	**4.49**	**356**	*e*Pn	**Pb**	**01 24 43.8**	**-0.7**
LZH				Pg	**Pg**	**01 24 53.1**	**+1.5**
LZH				Sn	**Sb**	**01 25 36.4**	**-2.2**
LZH				Sg	**Sg**	**01 25 51.1**	**+1.4**
LZH				smax			
	comp=N,65nm,0.5s						
LZH				smax			
	comp=E,60nm,0.9s						
LZH				LR	LR		
	comp=N,310nm,5.8s						
LZH				LR	LR		
	comp=Z,340nm,6.9s						
XAN	**Xi'an**	**4.61**	**57**	Pn	**Pn**	**01 24 39.8**	**+4.5**
XAN				Sn	**Sn**	**01 25 34.4**	**+5.5**
XAN				Sg	**Sg**	**01 25 54.4**	**+0.7**
XAN				smax			
	comp=N,140nm,0.9s						
XAN				smax			
	comp=E,53nm,0.7s						
ENH	**Enshi**	**4.68**	**105**	*e*Pn	**Pn**	**01 24 36.0**	**-0.3**
ENH				*e*Sg	**Sg**	**01 25 51.9**	**-3.9**
GYA	**Guiyang**	**5.54**	**157**	Pn	**Pn**	**01 24 49.4**	**+1.3**
GYA				Sn	**Sn**	**01 25 52.1**	**+0.3**
GYA				Sg	**Sg**	**01 26 18.5**	**-5.0**
GYA				smax			
	comp=N,90nm,0.8s						
GYA				smax			
	comp=E,70nm,0.8s						
KSRS	**Korea Array**	**20.32**	**67**	P	**P**	**01 28 01.7**	**-0.2**
	comp=E,0.9nm,0.8s,baz=254,slow=9.2,SNR=3.0						
MK31	**Makanchi Array**	**22.70**	**318**	*e*P	**P**	**01 28 28.9**	**+1.6**
MKAR	**Makanchi Array**	**22.70**	**318**	P	**P**	**01 28 27.1**	**-0.2**
	comp=E,1.4nm,0.7s,mb3.5,baz=127,slow=12,SNR=9.1						
UCH	**Uchtor**	**25.92**	**303**	*e*P	**P**	**01 29 00.2**	**+2.3**
	comp=E,1.4nm,0.8s,mb3.5						
AAK	**Ala

comp=Z,1.0nm,0.6s,mb3.5,baz=127,slow=9.9,SNR=5.6
KURK Kurchatov 26.82 324 *eP* **P 01 30 40.4 +1.7**
comp=Z,1.4nm,0.8s,mb3.5
FINES FINESS Array B 57.17 326 P **P 01 34 44.5 -0.5**
comp=Z,1.4nm,0.8s,mb4.0,baz=86,slow=6.7,SNR=2.5
WRA Warramunga Arr 58.87 145 P **P 01 34 58.1 +0.6**
comp=Z,1.2nm,0.9s,mb3.9,baz=334,slow=7.6,SNR=5.0

JMA 18 01:47:16.3±0.2, 25°.25N×123°.51E, h153km±4km, M3.8, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.91**	**210**	P	Pn	01 47 40.9	+0.3
YOJ				S	Sn	01 47 59.9	+0.8
IRIF	**Iriomote-Funau**	**0.93**	**168**	P	Pn	01 47 40.6	-0.2
IRIF				*e*S	Sn	01 48 00.4	+0.9
JIJ	**Ishigaki jima**	**1.05**	**147**	P	Pn	01 47 41.7	-0.1
JIJ				S	Sn	01 48 00.8	-0.5
JKRS	**Kuro-shima**	**1.11**	**156**	P	Pn	01 47 42.5	+0.2
JKRS				S	Sn	01 48 02.3	+0.2
HATJ	**Hateruma jima**	**1.22**	**167**	P	Pn	01 47 43.5	+0.2
HATJ				S	Sn	01 48 04.2	+0.3
JTJ	**Tarama**	**1.24**	**119**	P	Pn	01 47 43.8	+0.3
JTJ				S	Sn	01 48 04.8	+0.6
JMJ	**Miyako jima 2**	**1.68**	**105**	P	Pn	01 47 48.5	+0.6
JMJ				S	Sn	01 48 12.3	+0.1
JOGS	**Gusukube**	**1.79**	**105**	P	Pn	01 47 49.8	+0.6
JOGS				S	Sn	01 48 14.8	+0.4
JKE	**Kume jima 2**	**3.14**	**69**	P	Pn	01 48 04.4	-1.1
JKE				S	Sn	01 48 43.2	-0.5
JAGN	**Aguni-jima**	**3.62**	**68**	P	Pn	01 48 10.0	-1.6
JAGN				*e*S	Sn	01 48 51.6	-2.9
JJT2	**Tamagusuku 2**	**3.92**	**76**	P	Pn	01 48 14.5	-1.1
JIH	**Iheya**	**4.38**	**65**	P	Pn	01 48 19.5	-2.1
JOW	**Kunigami**	**4.57**	**69**	P	Pn	01 48 21.2	-2.8
JOW				*e*S	Sn	01 49 11.4	-5.4
JTK	**Tokunoshima**	**5.49**	**61**	P	Pn	01 48 32.7	-3.5
JAM	**Amami Oshima**	**6.29**	**59**	P	Pn	01 48 43.2	-3.6
JMZ	**Minamidaito 2**	**6.99**	**84**	P	Pn	01 48 52.5	-3.7
JMZ				*e*S	Sn	01 50 03.6	-11

NEIC 18 01:51:52.3, 37°.50S×177°.08E, h5km, ML3.9(WEL), 1C-1D, After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	**White Island**	**0.09**	**108**	⇓P	Pg	01 51 55.5	+1.2
WIZ				S	Sg	01 51 57.5	+1.9
MARZ	**Manawahe**	**0.58**	**213**	P	Pg	01 52 03.2	-0.3
TGRZ	**Tauranga**	**0.69**	**250**	P	Pg	01 52 06.3	+0.7
URZ	**Urewera**	**0.76**	**178**	P	Pg	01 52 05.5	-1.4
KARZ	**Kaharoa**	**0.84**	**232**	P	Pg	01 52 08.6	+0.1
MWZ	**Matawai**	**0.91**	**157**	⇑P	Pg	01 52 08.1	-1.6
MXZ	**Matakaoa Point**	**0.98**	**94**	P	Pg	01 52 10.4	-0.6
PUZ	**Puketiti**	**1.09**	**122**	P	Pg	01 52 12.5	-0.8
KUZ	**Kuaotunu**	**1.32**	**304**	P	Pn	01 52 15.8	-1.6
MKAZ	**Moumakai**	**1.57**	**284**	P	Pn	01 52 19.5	-1.4
BKZ	**Black Stump Fm**	**1.73**	**195**	P	Pn	01 52 20.3	-2.7

SZGRF ***18*** *01:58:28.8, 37°.54N×23°.46E, h33km, Southern Greece*
BGS ***18*** *01:58:34.8±1.4, 37°.37N×23°.07E, h33km, mb5.4*
HLW ***18*** *01:58:36.6, 38°.00N×23°.01E, h29km±27km, Md4.7, Ml5.0*
PRU ***18*** *01:58:37.9, 37°.69N×22°.17E, h0km, M5.2*
NIC ***18*** *01:58:40.2±0.3, 37°.52N×22°.80E, h65km, mb5.1, ML4.6, Southern Greece 15 km. NW Argos*
BJI ***18*** *01:58:40.4, 37°.72N×22°.46E, h94km, mB5.1/25, mb5.3/46*
DJA ***18*** *01:58:40, 37°.81N×22°.76E, h45km, mb5.3/13*
NEIC ***18*** *01:58:42.9, 37°.67N×22°.78E, h83km, mb5.2/266, After ATH.*
NEIC Felt [III] at Athens and Patrai. Felt in much of central Greece.
SFS ***18*** *01:58:42.0, 37°.71N×22°.80E, h66km, ML5.4*
ATH ***18*** *01:58:42.9, 37°.67N×22°.78E, h83km±1km, ML5.1*
IDC ***18*** *01:58:43.8±0.7, 37°.77N×22°.86E, h82km±5km, mb4.9/44, mb1 5.0/51, mb1mx5.0/51, mbtmp4.9/51, MS3.9/29, Ms1 3.9/29, ms1mx3.8/42, Error ellipse: s-maj=8.1km s-min=6.0km az=70.0*
MOS ***18*** *01:58:43.7±1.0, 37°.77N×22°.71E, h95km, mb5.4/93, Error ellipse: s-maj=3.3km s-min=1.9km az=105.4*
PDG ***18*** *01:58:43.7±0.6, 37°.81N×22°.66E, h78km±3km, MD5.6/10, ML5.7/10, Error ellipse: s-maj=1.3km s-min=1.1km az=90.0*
ISCJB ***18*** *01:58:43.1±0.1, 37°.74N±0°.01×22°.75E±0°.01, h83km±1km, mb5.2/321, Error ellipse: s-maj=1.8km s-min=1.3km az=19.6*
THE ***18*** *01:58:44.4, 37°.72N×22°.78E, h77km±1km, ML6.0/21, Error ellipse: s-maj=1.7km s-min=0.7km az=264.0*
CSEM ***18*** *01:58:44.1±0.1, 37°.73N×22°.72E, h88km, mb5.2/99, Ms4.0, Mw5.1, Error ellipse: s-maj=2.1km s-min=1.4km az=19.0*
TEH ***18*** *01:58:45.0, 37°.79N×22°.63E, h94km*
GCMT ***18*** *01:58:45.5±0.2, 37°.63N×22°.78E, h92km±2km, MW5.1, Moment Tensor Solution. s64,c82; s75,c134; Moment tensor: Scale 10^16 Nm; Mrr3.84±.12; Mθθ-4.49±.11; Mφφ0.65±.12; Mrθ1.27±.10; Mθφ-0.75±.13; Mφr-2.10±.08; Best double couple: M0=4.90000×10^16 NP1:φs=238.00000°, δ45.00000°, λ50.00000°. NP2:φs=107.00000°, δ58.00000°, λ122.00000°. Principal axes: T 5.1100, Plg62.0000°, Azm71.0000°; N -0.3900, Plg27.0000°, Azm268.0000°; P -4.7200, Plg7.0000°, Azm175.0000°; Data Used: II IC G IU CN.*
SGS ***18*** *01:58:48.1, 37°.89N×22°.88E, h80km*
GII ***18*** *01:58:50.1±0.0, 36°.87N×23°.67E, h1km, Mb4.9/4, Md4.9/4*
ISC 18 01:58:44.0±0.1, 37°.72N±0°.01×22°.74E±0°.01, h81km, h79km±5.9km; pP-P, n2516, σ1°.08/2729, mb5.2/321, 471C-276D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTK	**Loutraki**	**0.35**	**30**	P	Pn	01 58 56.7	0.0
LTK				S	Sn	01 59 06.1	+0.1
LTK	**Loutraki**	**0.35**	**30**	⇑*i*P	Pn	01 58 56.6	-0.1
LTK				*e*S	Sn	01 59 05.9	-0.1
LTK	**Loutraki**	**0.35**	**30**	P	Pn	01 58 56.7	0.0
LTK				S	Sn	01 59 06.1	+0.1
GUR	**Goura**	**0.38**	**304**	P	Pn	01 58 57.1	+0.2
GUR				S	Sn	01 59 06.0	-0.4
GUR	**Goura**	**0.38**	**304**	*e*P	Pn	01 58 57.1	+0.2
GUR	**Goura**	**0.38**	**304**	P	Pn	01 58 57.1	+0.2
VLX	**Vlachokerasia**	**0.45**	**220**	P	Pn	01 58 57.3	-0.1
VLX				S	Sn	01 59 07.0	-0.3
VLX	**Vlachokerasia**	**0.45**	**220**	⇑*i*P	Pn	01 58 57.4	0.0
VLX				*e*S	Sn	01 59 06.9	-0.4
VLX	**Vlachokerasia**	**0.45**	**220**	⇑*i*P	Pn	01 58 57.4	0.0
VLX				*e*S	Sn	01 59 06.9	-0.4
NAIG	**Nisos Aigina**	**0.59**	**86**	*e*P	Pn	01 58 58.0	-0.6
NAIG	**Nisos Aigina**	**0.59**	**86**	*e*P	Pn	01 58 58.0	-0.6
NAIG	**Nisos Aigina**	**0.59**	**86**	*e*P	Pn	01 58 58.0	-0.6
DSF	**Desfina**	**0.71**	**346**	P	Pn	01 59 00.1	+0.3
DSF				S	Sn	01 59 11.4	-0.2
DSF	**Desfina**	**0.71**	**346**	P	Pn	01 59 00.1	+0.3
DSF				S	Sn	01 59 11.4	-0.2
LAKA	**Lakka**	**0.80**	**311**	P	Pn	01 59 01.5	+0.8
LAKA				S	Sn	01 59 13.3	+0.1
LAKA	**Lakka**	**0.80**	**311**	P	Pn	01 59 01.5	+0.8
LAKA				S	Sn	01 59 13.3	+0.1
ATH	**Athens Observa**	**0.81**	**72**	P	Pn	01 59 01.4	+0.5
ATH				S	Sn	01 59 13.5	0.0
ATH	**Athens Observa**	**0.81**	**72**	⇓*i*P	Pn	01 59 01.2	+0.3
ATH				*e*S	Sn	01 59 12.9	-0.6
ATH	**Athens Observa**	**0.81**	**72**	⇓*i*P	Pn	01 59 01.2	+0.3
ATH				*e*S	Sn	01 59 12.9	-0.6
KALE	**Kalithea**	**0.82**	**325**	P	Pn	01 59 01.5	+0.5
KALE				S	Sn	01 59 13.9	+0.2
KALE	**Kalithea**	**0.82**	**325**	P	Pn	01 59 01.5	+0.5
KALE				S	Sn	01 59 13.9	+0.2
TRIZ	**Trizonia**	**0.83**	**321**	P	Pn	01 59 01.7	+0.5
TRIZ				S	Sn	01 59 14.1	+0.2
TRIZ	**Trizonia**	**0.83**	**321**	P	Pn	01 59 01.7	+0.5
TRIZ				S	Sn	01 59 14.1	+0.2
VLY	**Voula,Athens**	**0.84**	**81**	*e*P	Pn	01 59 01.2	-0.1
VLY				*e*S	Sn	01 59 13.7	-0.4
VLY	**Voula,Athens**	**0.84**	**81**	*e*P	Pn	01 59 01.2	-0.1
VLY				*e*S	Sn	01 59 13.7	-0.4
VLY	**Voula,Athens**	**0.84**	**81**	*e*P	Pn	01 59 01.2	-0.1
VLY				*e*S	Sn	01 59 13.7	-0.4
ITM	**Ithomi**	**0.84**	**230**	P	Pn	01 59 02.4	+1.1
ITM				S	Sn	01 59 15.9	+1.8
ITM	**Ithomi**	**0.84**	**230**	P	Pn	01 59 02.4	+1.1
ITM				S	Sn	01 59 15.9	+1.8
ITM	**Ithomi**	**0.84**	**230**	⇑*i*P	Pn	01 59 02.3	+1.0
ITM				*e*S	Sn	01 59 14.2	+0.1
ITM	**Ithomi**	**0.84**	**230**	P	Pn	01 59 02.4	+1.1
ITM				S	Sn	01 59 15.9	+1.8
ATHU	**Athens Univers**	**0.86**	**73**	P	Pn	01 59 01.4	-0.1
ATHU				S	Sn	01 59 13.5	-1.0
ATHU	**Athens Univers**	**0.86**	**73**	P	Pn	01 59 01.4	-0.1
ATHU				S	Sn	01 59 13.5	-1.0
UPR	**University Cam**	**0.94**	**307**	P	Pn	01 59 02.9	+0.5
UPR	**University Cam**	**0.94**	**307**	*e*P	Pn	01 59 03.2	+0.8
UPR				*e*S	Sn	01 59 17.3	+1.2
UPR	**University Cam**	**0.94**	**307**	*e*P	Pn	01 59 03.2	+0.8
UPR				*e*S	Sn	01 59 17.3	+1.2
PTL	**Penteli**	**0.95**	**69**	*e*P	Pn	01 59 02.8	+0.4
PTL				*e*S	Sn	01 59 15.8	-0.4
PTL	**Penteli**	**0.95**	**69**	*e*P	Pn	01 59 02.8	+0.4
PTL				*e*S	Sn	01 59 15.8	-0.4
PTL	**Penteli**	**0.95**	**69**	*e*P	Pn	01 59 02.8	+0.4
PTL				*e*S	Sn	01 59 15.8	-0.4
LKR	**Lokris**	**0.95**	**12**	P	Pn	01 59 03.1	+0.6
LKR				S	Sn	01 59 16.1	-0.2
LKR	**Lokris**	**0.95**	**12**	P	Pn	01 59 03.1	+0.6
LKR				S	Sn	01 59 16.1	-0.2
LKR	**Lokris**	**0.95**	**12**	⇓*i*P	Pn	01 59 03.1	+0.6
LKR				*e*S	Sn	01 59 17.0	+0.7
LKR	**Lokris**	**0.95**	**12**	P	Pn	01 59 03.1	+0.6
LKR				*e*S	Sn	01 59 17.0	+0.7
EFP	**Efpalio**	**0.97**	**317**	P	Pn	01 59 03.5	+0.8
EFP				S	Sn	01 59 17.8	+1.2
EFP	**Efpalio**	**0.97**	**317**	*e*P	Pn	01 59 03.5	+0.8
EFP				*e*S	Sn	01 59 17.1	+0.5
EFP	**Efpalio**	**0.97**	**317**	P	Pn	01 59 03.5	+0.8
EFP				S	Sn	01 59 17.8	+1.2
ATAL	**Atalanti**	**0.99**	**13**	P	Pn	01 59 03.5	+0.5
ATAL				S	Sn	01 59 17.2	0.0
ATAL	**Atalanti**	**0.99**	**13**	P	Pn	01 59 03.5	+0.5
ATAL				S	Sn	01 59 17.2	0.0
VLI	**Veliai**	**1.01**	**171**	*e*P	Pn	01 59 02.4	-0.9
VLI	**Veliai**	**1.01**	**171**	*e*P	Pn	01 59 02.4	-0.9
VLI	**Veliai**	**1.01**	**171**	*e*P	Pn	01 59 02.4	-0.9
RLS	**Riolos of Patr**	**1.06**	**289**	*e*P	Pn	01 59 04.9	+1.1
RLS				*e*S	Sn	01 59 20.7	+2.0
RLS	**Riolos of Patr**	**1.06**	**289**	*e*P	Pn	01 59 04.9	+1.1
RLS				*e*S	Sn	01 59 20.7	+2.0
RLS	**Riolos of Patr**	**1.06**	**289**	*e*P	Pn	01 59 04.9	+1.1
RLS				*e*S	Sn	01 59 20.7	+2.0
PYL	**PYLOS**	**1.15**	**224**	P	Pn	01 59 04.7	-0.2
PYL	**PYLOS**	**1.15**	**224**	⇓*i*P	Pn	01 59 04.6	-0.3
PYL				*e*S	Sn	01 59 20.5	0.0
PYL	**PYLOS**	**1.15**	**224**	P	Pn	01 59 04.7	-0.2
PYL				*e*S	Sn	01 59 20.5	0.0
AGG	**Agios Georgios**	**1.34**	**346**	P	Pn	01 59 08.2	+0.9
AGG				S	Sn	01 59 26.1	+1.3
AGG	**Agios Georgios**	**1.34**	**346**	P	Pn	01 59 08.2	+0.9
AGG				S	Sn	01 59 26.1	+1.3
AGG	**Agios Georgios**	**1.34**	**346**	*e*P	Pn	01 59 08.2	+0.9
AGG				*e*S	Sn	01 59 25.8	+1.0
AGG	**Agios Georgios**	**1.34**	**346**	P	Pn	01 59 08.2	+0.9
AGG				*e*S	Sn	01 59 25.8	+1.0
EVR	**Evrytania**	**1.40**	**329**	*e*P	Pn	01 59 09.3	+1.2
EVR				*e*S	Sn	01 59 28.2	+2.0
EVR	**Evrytania**	**1.40**	**329**	*e*P	Pn	01 59 09.3	+1.2
EVR				*e*S	Sn	01 59 28.2	+2.0
EVR	**Evrytania**	**1.40**	**329**	*e*P	Pn	01 59 09.3	+1.2
EVR				*e*S	Sn	01 59 28.2	+2.0
KYTH	**Kithira**	**1.46**	**171**	⇑*i*P	Pn	01 59 08.0	-0.8
KYTH	**Kithira**	**1.46**	**171**	⇑*i*P	Pn	01 59 08.0	-0.8
KYTH	**Kithira**	**1.46**	**171**	⇑*i*P	Pn	01 59 08.0	-0.8
KFL	**Anninata**	**1.59**	**285**	P	Pn	01 59 11.1	+0.6
NEO	**Neokhori**	**1.63**	**13**	⇓*i*P	Pn	01 59 11.7	+0.7
NEO	**Neokhori**	**1.63**	**13**	⇓*i*P	Pn	01 59 11.7	+0.7
NEO	**Neokhori**	**1.63**	**13**	⇓*i*P	Pn	01 59 11.7	+0.7
XOR	**Xorichti**	**1.68**	**12**	P	Pn	01 59 12.3	+0.6
XOR				S	Sn	01 59 32.5	-0.1
XOR	**Xorichti**	**1.68**	**12**	P	Pn	01 59 12.3	+0.6
XOR				S	Sn	01 59 32.5	-0.1
XOR	**Xorichti**	**1.68**	**12**	P	Pn	01 59 12.3	+0.6
XOR				S	Sn	01 59 32.5	-0.1
AOS	**Alonnisos**	**1.70**	**31**	P	Pn	01 59 12.4	+0.5
AOS				S	Sn	01 59 33.0	-0.1
AOS	**Alonnisos**	**1.70**	**31**	P	Pn	01 59 12.4	+0.5
AOS				S	Sn	01 59 33.0	-0.1
AOS	**Alonnisos**	**1.70**	**31**	P	Pn	01 59 12.4	+0.5
AOS				S	Sn	01 59 33.0	-0.1
VLS	**Valsamata**	**1.76**	**286**	P	Pn	01 59 12.7	0.0
VLS	**Valsamata**	**1.76**	**286**	P	Pn	01 59 12.7	0.0
VLS	**Valsamata**	**1.76**	**286**	*e*P	Pn	01 59 12.8	+0.1
VLS	**Valsamata**	**1.76**	**286**	*e*P	Pn	01 59 12.8	+0.1
THL	**Klokotos Trika**	**1.93**	**343**	P	Pn	01 59 15.6	+0.7
THL				S	Sn	01 59 40.3	+1.8
THL	**Klokotos Trika**	**1.93**	**343**	*e*P	Pn	01 59 15.7	+0.8
THL	**Klokotos Trika**	**1.93**	**343**	P	Pn	01 59 15.6	+0.7
THL				S	Sn	01 59 40.3	+1.8
LKD2	**Lefkada island**	**1.96**	**304**	P	Pn	01 59 15.8	+0.5
LKD2				S	Sn	01 59 42.0	+2.8
LKD2	**Lefkada island**	**1.96**	**304**	P	Pn	01 59 15.8	+0.5
LKD2				S	Sn	01 59 42.0	+2.8
APE	**Apeiranthos**	**2.31**	**106**	P	Pn	01 59 20.0	-0.1
APE	**Apeiranthos**	**2.31**	**106**	P	Pn	01 59 20.0	-0.1
APE	**Apeiranthos**	**2.31**	**106**	⇑*i*P	Pn	01 59 20.1	0.0
APE	**Apeiranthos**	**2.31**	**106**	⇓*i*P	Pn	01 59 20.1	0.0
APE	**Apeiranthos**	**2.31**	**106**	⇓*i*P	Pn	01 59 20.1	0.0
PAIG	**Paliouri**	**2.32**	**18**	P	Pn	01 59 20.7	+0.5
PAIG	**Paliouri**	**2.32**	**18**	P	Pn	01 59 20.7	+0.5
PAIG	**Paliouri**	**2.32**	**18**	P	Pn	01 59 20.7	+0.5
MEV	**Metsovon**	**2.38**	**331**	P	Pn	01 59 22.1	+1.2
MEV	**Metsovon**	**2.38**	**331**	P	Pn	01 59 22.1	+1.2
MEV	**Metsovon**	**2.38**	**331**	P	Pn	01 59 22.1	+1.2
JAN	**Janina**	**2.43**	**323**	*e*P	Pn	01 59 23.7	+2.0
JAN	**Janina**	**2.43**	**323**	*e*P	Pn	01 59 23.7	+2.0
JAN	**Janina**	**2.43**	**323**	*e*P	Pn	01 59 23.7	+2.0
THR5	**Thira Island,**	**2.46**	**121**	P	Pn	01 59 22.4	+0.4
THR5	**Thira Island,**	**2.46**	**121**	P	Pn	01 59 22.4	+0.4
THR5	**Thira Island,**	**2.46**	**121**	P	Pn	01 59 22.4	+0.4
THR3	**Thira Island,**	**2.50**	**121**	P	Pn	01 59 22.8	+0.2
THR3	**Thira Island,**	**2.50**	**121**	P	Pn	01 59 22.8	+0.2
THR3	**Thira Island,**	**2.50**	**121**	P	Pn	01 59 22.8	+0.2
KARN	**Karanos**	**2.50**	**157**	P	Pn	01 59 21.8	-0.8
KARN	**Karanos**	**2.50**	**157**	*e*P	Pn	01 59 21.8	-0.8
KARN	**Karanos**	**2.50**	**157**	P	Pn	01 59 21.8	-0.8
THR1	**Thera Island**	**2.56**	**121**	P	Pn	01 59 23.8	+0.4
THR1	**Thera Island**	**2.56**	**121**	P	Pn	01 59 23.8	+0.4
VAM	**Vamos**	**2.59**	**153**	⇓*i*P	Pn	01 59 22.7	-1.1
VAM	**Vamos**	**2.59**	**153**	⇓*i*P	Pn	01 59 22.7	-1.1
VAM	**Vamos**	**2.59**	**153**	⇓*i*P	Pn	01 59 22.7	-1.1
IGT	**Igoumenitsa**	**2.61**	**315**	P	Pn	01 59 24.4	+0.3
IGT	**Igoumenitsa**	**2.61**	**315**	P	Pn	01 59 24.4	+0.3
IGT	**Igoumenitsa**	**2.61**	**315**	P	Pn	01 59 24.4	+0.3
KZN	**Kozani**	**2.69**	**344**	P	Pn	01 59 26.1	+1.0
KZN				S	Sn	01 59 59.1	+2.4
KZN	**Kozani**	**2.69**	**344**	P	Pn	01 59 26.1	+1.0
KZN				S	Sn	01 59 59.1	+2.4
KZN	**Kozani**	**2.69**	**344**	*e*P	Pn	01 59 26.2	+1.1
KZN	**Kozani**	**2.69**	**344**	P	Pn	01 59 26.1	+1.0
KZN				S	Sn	01 59 59.1	+2.4
CHOS	**Chios island**	**2.70**	**75**	P	Pn	01 59 26.2	+1.0
CHOS	**Chios island**	**2.70**	**75**	*e*P	Pn	01 59 26.0	+0.8
CHOS	**Chios island**	**2.70**	**75**	*e*P	Pn	01 59 26.0	+0.8
PLG	**Polygyros**	**2.71**	**11**	P	Pn	01 59 26.0	+0.7
PLG				S	Sn	01 59 57.1	0.0
PLG	**Polygyros**	**2.71**	**11**	P	Pn	01 59 26.0	+0.7
PLG				S	Sn	01 59 57.1	0.0
PLG	**Polygyros**	**2.71**	**11**	⇓*i*P	Pn	01 59 25.9	+0.6
PLG	**Polygyros**	**2.71**	**11**	⇓*i*P	Pn	01 59 25.9	+0.6
PLG				S	Sn	01 59 57.1	0.0
OUR	**Ouranopolis**	**2.78**	**20**	P	Pn	01 59 26.9	+0.5
OUR				S	Sn	01 59 59.5	+0.5
OUR	**Ouranopolis**	**2.78**	**20**	P	Pn	01 59 26.9	+0.5
OUR				S	Sn	01 59 59.5	+0.5
OUR	**Ouranopolis**	**2.78**	**20**	P	Pn	01 59 26.9	+0.5
OUR				S	Sn	01 59 59.5	+0.5
SIGR	**SIGRI**	**2.86**	**58**	P	Pn	01 59 28.2	+0.8
SIGR	**SIGRI**	**2.86**	**58**	P	Pn	01 59 28.2	+0.8
SIGR	**SIGRI**	**2.86**	**58**	P	Pn	01 59 28.2	+0.8
HORT	**Hortiatis**	**2.89**	**5**	P	Pn	01 59 28.7	+0.9
HORT				S	Sn	02 00 02.3	+0.8
HORT	**Hortiatis**	**2.89**	**5**	P	Pn	01 59 28.7	+0.9
HORT				S	Sn	02 00 02.3	+0.8
HORT	**Hortiatis**	**2.89**	**5**	P	Pn	01 59 28.7	+0.9
HORT				S	Sn	02 00 02.3	+0.8
LIA	**Limnos Island**	**2.89**	**41**	P	Pn	01 59 28.3	+0.5
LIA	**Limnos Island**	**2.89**	**41**	P	Pn	01 59 28.3	+0.5
LIA	**Limnos Island**	**2.89**	**41**	⇓*i*P	Pn	01 59 28.2	+0.3
LIA	**Limnos Island**	**2.89**	**41**	⇓*i*P	Pn	01 59 28.2	+0.3
THE	**Thessaloniki**	**2.91**	**3**	P	Pn	01 59 28.8	+0.7
THE				S	Sn	02 00 02.0	-0.1
THE	**Thessaloniki**	**2.91**	**3**	P	Pn	01 59 28.8	+0.7
THE				S	Sn	02 00 02.0	-0.1
THE	**Thessaloniki**	**2.91**	**3**	P	Pn	01 59 28.8	+0.7
THE				S	Sn	02 00 02.0	-0.1
IDI	**Anoyia**	**2.98**	**144**	P	Pn	01 59 27.5	-1.6
	146nm,0.3s,baz=325,slow=14,SNR=494						
IDI				S	Sn	02 00 02.8	-1.1
	517nm,0.3s,baz=261,slow=17,SNR=7.8						
IDI				LR	LR	02 00 21.9	
	comp=Z,3μm,21.9s,baz=191,slow=33						
IDI	**Anoyia**	**2.98**	**144**	*e*P	Pn	01 59 27.7	-1.4
IDI	**Anoyia**	**2.98**	**144**	*e*P	Pn	01 59 27.7	-1.4
IDI	**Anoyia**	**2.98**	**144**	*e*P	Pn	01 59 27.7	-1.4
SRN	**Sarande**	**3.04**	**316**	*e*PN	Pn	01 59 29.9	+0.1
SRN				*i* SN	Sn	02 00 04.0	-1.2
SRN	**Sarande**	**3.04**	**316**	*e*PN	Pn	01 59 29.9	+0.1
SRN				*i* SN	Sn	02 00 04.0	-1.2
SRN	**Sarande**	**3.04**	**316**	*e*Pn	Pn	01 59 29.9	+0.1
SRN				*i* Sn	Sn	02 00 04.0	-1.2
KEK	**Kerkira**	**3.04**	**312**	P	Pn	01 59 30.4	+0.5
KEK	**Kerkira**	**3.04**	**312**	P	Pn	01 59 30.4	+0.5
KEK	**Kerkira**	**3.04**	**312**	⇓*i*P	Pn	01 59 30.2	+0.3
KEK	**Kerkira**	**3.04**	**312**	P	Pn	01 59 30.4	+0.5
GVD	**Gavdhos**	**3.08**	**159**	P	Pn	01 59 30.4	0.0
GVD	**Gavdhos**	**3.08**	**159**	P	Pn	01 59 30.4	0.0
GVD	**Gavdhos**	**3.08**	**159**	*e*P	Pn	01 59 30.0	-0.4
GVD	**Gavdhos**	**3.08**	**159**	P	Pn	01 59 30.4	0.0
URLA	**Izmir**	**3.11**	**77**	⇓*i*P	Pn	01 59 31.9	+1.1
URLA	**Izmir**	**3.11**	**77**	*i* P	Pn	01 59 31.9	+1.1
SOH	**Sokhos**	**3.13**	**9**	P	Pn	01 59 32.6	+1.5
SOH				S	Sn	02 00 08.9	+1.5
SOH	**Sokhos**	**3.13**	**9**	P	Pn	01 59 32.6	+1.5
SOH				S	Sn	02 00 08.9	+1.5
SOH	**Sokhos**	**3.13**	**9**	*e*P	Pn	01 59 32.5	+1.4
SOH	**Sokhos**	**3.13**	**9**	*e*P	Pn	01 59 32.5	+1.4
SOH				S	Sn	02 00 08.9	+1.5
PRK	**Paraskevi**	**3.16**	**60**	P	Pn	01 59 31.7	+0.2
PRK	**Paraskevi**	**3.16**	**60**	P	Pn	01 59 31.7	+0.2
PRK	**Paraskevi**	**3.16**	**60**	⇓*i*P	Pn	01 59 31.9	+0.4
PRK	**Paraskevi**	**3.16**	**60**	P	Pn	01 59 31.7	+0.2
SIVA	**Sivas**	**3.17**	**148**	P	Pn	01 59 31.1	-0.6
SIVA	**Sivas**	**3.17**	**148**	P	Pn	01 59 31.1	-0.6
SIVA	**Sivas**	**3.17**	**148**	*e*P	Pn	01 59 32.5	+0.8
SIVA	**Sivas**	**3.17**	**148**	*e*P	Pn	01 59 32.5	+0.8
FNA	**Florina**	**3.24**	**341**	P	Pn	01 59 34.0	+1.5
FNA				S	Sn	02 00 11.2	+1.2
FNA	**Florina**	**3.24**	**341**	P	Pn	01 59 34.0	+1.5
FNA				S	Sn	02 00 11.2	+1.2
FNA	**Florina**	**3.24**	**341**	P	Pn	01 59 34.0	+1.5
FNA				S	Sn	02 00 11.2	+1.2
SMG	**Samos**	**3.25**	**89**	*e*P	Pn	01 59 33.4	+0.7
SMG	**Samos**	**3.25**	**89**	*e*P	Pn	01 59 33.4	+0.7
SMG	**Samos**	**3.25**	**89**	*e*P	Pn	01 59 33.4	+0.7
KBN	**

SKO	Skopje	4.36	347	P	Pn	01 59 48.9	+1.1
SKO	Skopje	4.36	347	*i* Pn	Pn	01 59 49.4	+1.5
SKO				*e*Sg	Sn	02 00 37.4	0.0
SKO	Skopje	4.36	347	P	Pn	01 59 48.9	+1.1
SKO	Skopje	4.36	347	P	Pn	01 59 48.9	+1.1
YER	Yerkesik	4.45	96	*e*P	Pn	01 59 51.4	+2.4
YER	Yerkesik	4.45	96	P	Pn	01 59 51.4	+2.4
BALB	Balikesir	4.45	63	*e*P	Pn	01 59 50.2	+1.1
BALB	Balikesir	4.45	63	P	Pn	01 59 50.1	+1.0
BALB	Balikesir	4.45	63	P	Pn	01 59 50.1	+1.0
RKY	Sarkoy-Tekirda	4.54	48	*e*P	Pn	01 59 50.5	+0.2
RKY	Sarkoy-Tekirda	4.54	48	P	Pn	01 59 50.4	+0.1
RKY	Sarkoy-Tekirda	4.54	48	P	Pn	01 59 50.4	+0.1
SART	Tekirdag	4.54	48	⇓*i*P	Pn	01 59 51.1	+0.8
SART	Tekirdag	4.54	48	*i* P	Pn	01 59 51.1	+0.8
ARG	Arkhangelos	4.56	108	P	Pn	01 59 52.4	+1.8
ARG				S	Sn	02 00 44.5	+2.1
ARG	Arkhangelos	4.56	108	P	Pn	01 59 52.4	+1.8
ARG				S	Sn	02 00 44.5	+2.1
ARG	Arkhangelos	4.56	108	*e*P	Pn	01 59 52.6	+2.0
ARG	Arkhangelos	4.56	108	P	Pn	01 59 52.4	+1.8
ARG				S	Sn	02 00 44.5	+2.1
PLD	Plovdiv	4.63	18	P	Pn	01 59 53.5	+2.0
PLD	Plovdiv	4.63	18	P	Pn	01 59 53.5	+2.0
PLD	Plovdiv	4.63	18	P	Pn	01 59 53.5	+2.0
MFT	Murefte	4.67	48	*e*P	Pn	01 59 52.4	+0.5
MFT	Murefte	4.67	48	P	Pn	01 59 52.4	+0.4
MFT	Murefte	4.67	48	P	Pn	01 59 52.4	+0.4
KULA	Kula-Manisa	4.73	79	*e*P	Pn	01 59 54.8	+1.9
TURN	Turunc	4.75	98	⇓*i*P	Pn	01 59 51.2	-1.9
TURN	Turunc	4.75	98	*i* P	Pn	01 59 51.2	-1.9
EDC	Edincik	4.77	55	*e*P	Pn	01 59 54.5	+1.1
EDC	Edincik	4.77	55	P	Pn	01 59 54.4	+1.0
BNT	Bandirma	4.81	55	*e*P	Pn	01 59 54.8	+0.8
PUK	Puka	4.84	334	*e*PN	Pn	01 59 55.2	+0.9
PUK				*i* SN	Sn	02 00 49.5	+0.5
PUK	Puka	4.84	334	*e*PN	Pn	01 59 55.2	+0.9
PUK				*i* SN	Sn	02 00 49.5	+0.5
PUK	Puka	4.84	334	*e*Pn	Pn	01 59 55.2	+0.9
PUK				*i* Sn	Sn	02 00 49.5	+0.5
DURS	Dursunbey	4.86	66	⇓*i*P	Pn	01 59 56.2	+1.6
DURS	Dursunbey	4.86	66	*i* P	Pn	01 59 56.2	+1.6
VTS	Vitosha	4.88	4	P	Pn	01 59 57.1	+2.3
VTS	Vitosha	4.88	4	P	Pn	01 59 57.1	+2.3
VTS	Vitosha	4.88	4	P	Pn	01 59 57.1	+2.3
TIP	Timpagrande	4.92	289	*e*Pn	Pn	01 59 55.1	-0.3
TIP				*e*Sn	Sn	02 00 46.0	-5.0
TIP	Timpagrande	4.92	289	*e*Pn	Pn	01 59 55.1	-0.3
TKR	Tekirdag	4.95	47	*e*P	Pn	01 59 56.3	+0.5
TKR	Tekirdag	4.95	47	P	Pn	01 59 56.2	+0.4
TKR	Tekirdag	4.95	47	P	Pn	01 59 56.2	+0.4
DST	Dursunbey	4.97	66	*e*P	Pn	01 59 60.0	+3.9
DST	Dursunbey	4.97	66	P	Pn	01 59 57.6	+1.5
DENT	Denizli	4.99	88	*e*P	Pn	01 59 59.0	+2.7
DENT	Denizli	4.99	88	P	Pn	01 59 59.0	+2.7
DENT	Denizli	4.99	88	P	Pn	01 59 59.0	+2.7
ULC	Ulcinj	5.02	329	⇑*i*Pn	Pn	01 59 55.9	-0.8
ULC				*e*Sn	Sn	02 00 50.2	-3.2
ULC	Ulcinj	5.02	329	⇑*i*Pn	Pn	01 59 55.9	-0.8
ULC				*e*Sn	Sn	02 00 50.2	-3.2
KCT	Karacabey	5.06	58	*e*P	Pn	01 59 58.9	+1.6
KCT	Karacabey	5.06	58	P	Pn	01 59 58.8	+1.5
KCT	Karacabey	5.06	58	P	Pn	01 59 58.8	+1.5
BCI	Bajram Curri	5.07	337	*e*PN	Pn	01 59 58.4	+0.9
BCI				*i* SN	Sn	02 00 54.4	-0.3
BCI	Bajram Curri	5.07	337	*e*PN	Pn	01 59 58.4	+0.9
BCI				*i* SN	Sn	02 00 54.4	-0.3
BCI	Bajram Curri	5.07	337	*e*Pn	Pn	01 59 58.4	+0.9
BCI				*i* Sn	Sn	02 00 54.4	-0.3
BARS	Barje	5.14	352	P	Pn	01 59 59.3	+0.9
BARS	Barje	5.14	352	⇑*i*Pn	Pn	01 59 59.2	+0.8
CRLT	Corlu	5.15	47	*e*P	Pn	01 59 58.9	+0.3
CRLT	Corlu	5.15	47	P	Pn	01 59 58.8	+0.3
CRLT	Corlu	5.15	47	P	Pn	01 59 58.8	+0.3
PVY	Plav	5.31	337	⇑*i*Pn	Pn	02 00 00.9	+0.2
PVY				*e*Sn	Sn	02 00 57.7	-2.8
PVY	Plav	5.31	337	⇑*i*Pn	Pn	02 00 00.9	+0.2
PVY				*e*Sn	Sn	02 00 57.7	-2.8
KHL	Karahalli	5.39	82	*e*P	Pn	02 00 05.7	+3.9
KHL	Karahalli	5.39	82	P	Pn	02 00 05.2	+3.4
KHL	Karahalli	5.39	82	P	Pn	02 00 05.2	+3.4
GLHS	Glhisar (BURDU	5.41	94	*e*P	Pn	02 00 05.5	+3.4
GLHS	Glhisar (BURDU	5.41	94	P	Pn	02 00 05.5	+3.4
PDG	Podgorica	5.41	332	⇑*i*Pn	Pn	02 00 01.4	-0.7
PDG				*e*Sn	Sn	02 00 59.9	-3.0
TTG	Podgorica	5.41	332	⇑*i*Pn	Pn	02 00 01.4	-0.7
TTG				*e*Sn	Sn	02 00 59.9	-3.0
TTG	Podgorica	5.41	332	*i* P	Pn	02 00 01.4	-0.7
TTG				*e*S	Sn	02 00 59.9	-3.0
CEL	Celeste	5.44	278	*e*Pn	Pn	02 00 01.9	-0.6
	400nm,0.5s						
CEL				*e*Sn	Sn	02 00 57.5	-6.1
CEL	Celeste	5.44	278	*e*Pn	Pn	02 00 01.9	-0.6
	400nm,0.5s						
BUM	Brajici-Budva	5.44	328	⇑*i*Pn	Pn	02 00 01.8	-0.7
BUM				*e*Sn	Sn	02 01 00.5	-3.2
BUM	Brajici-Budva	5.44	328	⇑*i*Pn	Pn	02 00 01.8	-0.7
GOLH	Golhisar	5.45	93	*i* P	Pn	02 00 06.2	+3.6
GDZ	Gediz	5.47	73	*i* P	Pn	02 00 05.1	+2.3
GDZ	Gediz	5.47	73	*i* P	Pn	02 00 05.1	+2.2
ARMT	Armutlu	5.54	57	*e*P	Pn	02 00 04.5	+0.6
ARMT	Armutlu	5.54	57	P	Pn	02 00 04.4	+0.5
ARMT	Armutlu	5.54	57	P	Pn	02 00 04.4	+0.5
JMB	Yambol	5.58	31	P	Pn	02 00 05.1	+0.7
JMB	Yambol	5.58	31	P	Pn	02 00 05.1	+0.7
JMB	Yambol	5.58	31	P	Pn	02 00 05.1	+0.7
BEY	Berane	5.58	338	⇓*i*Pn	Pn	02 00 04.5	0.0
BEY				*e*Sn	Sn	02 01 04.9	-2.3
IVA	Berane	5.58	338	⇓*i*Pn	Pn	02 00 04.5	0.0
IVA				*e*Sn	Sn	02 01 04.9	-2.3
IVA	Berane	5.58	338	⇓*i*Pn	Pn	02 00 04.5	0.0
IVA				*e*Sn	Sn	02 01 04.9	-2.3
SG1	Sgolgore (BA)	5.64	305	*i* Pn	Pn	02 00 04.2	-1.0
BAI	Bari	5.66	308	*i* Pn	Pn	02 00 04.4	-1.1
AKAS	Kas	5.69	103	*i* P	Pn	02 00 08.5	+2.5
GEMT	Gemlik	5.70	60	*e*P	Pn	02 00 07.9	+1.8
GEMT	Gemlik	5.70	60	P	Pn	02 00 07.3	+1.2
GEMT	Gemlik	5.70	60	P	Pn	02 00 07.3	+1.2
NISS		5.71	354	⇑*i*Pn	Pn	02 00 07.3	+1.2
HCY	Herceg Novi	5.73	327	⇓*i*Pn	Pn	02 00 04.6	-1.9
HCY				*e*Sn	Sn	02 01 06.8	-4.0
HCY	Herceg Novi	5.73	327	⇓*i*Pn	Pn	02 00 04.6	-1.9
LTBQ	Tobruq	5.74	170	*i* P	Pn	02 00 05.0	-1.6
	SNR=76						
ELL	Elmali	5.80	97	*e*P	Pn	02 00 10.9	+3.4
NKY	Niksic	5.84	332	⇑*i*Pn	Pn	02 00 07.2	-0.7
NKY				*e*Sn	Sn	02 01 10.3	-3.0
NKY	Niksic	5.84	332	⇑*i*Pn	Pn	02 00 07.2	-0.7
YLV	Yalova	5.88	59	*e*P	Pn	02 00 09.3	+0.7
YLV	Yalova	5.88	59	P	Pn	02 00 09.2	+0.6
ISK	Istanbul-Kandi	5.92	54	*e*P	Pn	02 00 08.7	-0.4
ALT	Altintas	5.94	75	*e*P	Pn	02 00 11.8	+2.5
ALT	Altintas	5.94	75	P	Pn	02 00 11.8	+2.5
ALT	Altintas	5.94	75	P	Pn	02 00 11.8	+2.5
ADVT	Abdulvahap	6.08	61	*e*P	Pn	02 00 12.4	+1.2
ADVT	Abdulvahap	6.08	61	P	Pn	02 00 12.4	+1.2
ADVT	Abdulvahap	6.08	61	P	Pn	02 00 12.4	+1.2
BRY	Bratogost	6.09	330	⇑*i*Pn	Pn	02 00 10.0	-1.3
BRY				*e*Sn	Sn	02 01 15.8	-3.7
BRY	Bratogost	6.09	330	⇑*i*Pn	Pn	02 00 10.0	-1.3
KORT	Korkueli	6.10	94	*i* P	Pn	02 00 16.3	+4.8
PLE	Pljevlja	6.16	337	⇑*i*Pn	Pn	02 00 12.2	0.0
PLE				*e*Sn	Sn	02 01 18.2	-2.9
PLE	Pljevlja	6.16	337	⇑*i*Pn	Pn	02 00 12.2	0.0
ISP	Isparta	6.16	87	*e*P	Pn	02 00 15.3	+2.9
ISP	Isparta	6.16	87	P	Pn	02 00 15.0	+2.6
ISP	Isparta	6.16	87	P	Pn	02 00 15.0	+2.6
ISP	Isparta	6.16	87	⇓*i*P	Pn	02 00 14.8	+2.4
ISP	Isparta	6.16	87	P	Pn	02 00 15.0	+2.6
ISP	Isparta	6.16	87	Pn	Pn	02 00 14.5	+2.1
UPM	Unac-Piva	6.21	333	⇓*i*Pn	Pn	02 00 12.7	-0.2
UPM				*e*Sn	Sn	02 01 19.3	-3.1
UPM	Unac-Piva	6.21	333	⇓*i*Pn	Pn	02 00 12.7	-0.2
SHUT	Suhut-Afyon	6.21	80	*e*P	Pn	02 00 15.2	+2.2
BCK	Bucak	6.24	90	*e*P	Pn	02 00 17.0	+3.6
GRUS	Gruza	6.35	347	P	Pn	02 00 14.1	-0.8
GRUS	Gruza	6.35	347	P	Pn	02 00 14.1	-0.8
ANTB	Antalya	6.36	95	*e*P	Pn	02 00 19.8	+4.8
GPA	Golpazari	6.43	64	*e*P	Pn	02 00 18.1	+2.1
GPA	Golpazari	6.43	64	P	Pn	02 00 18.1	+2.1
STON	Ston	6.43	325	*e*Pn	Pn	02 00 15.2	-0.8
STON				Sn	Sn	02 01 20.3	-7.5
STON	Ston	6.43	325	*e*Pn	Pn	02 00 15.2	-0.8
BOLV	Bolvadin	6.54	79	*i* P	Pn	02 00 21.0	+3.5
SLUM		6.54	161	P	Pn	02 00 14.5	-3.1
	baz=163						
SLUM				AMP		02 01 00.0	
	comp=N,1670µm,0.7s,logA/T=6.4,baz=163						
SUTC	Sutluce-Ispart	6.56	90	*e*P	Pn	02 00 21.1	+3.3
MS1	Monte Sant'Ang	6.58	309	*i* Pn	Pn	02 00 16.8	-1.3
ESKT	Eskisehir	6.60	72	*e*P	Pn	02 00 20.8	+2.5
ESKT	Eskisehir	6.60	72	P	Pn	02 00 20.4	+2.1
ESKT	Eskisehir	6.60	72	P	Pn	02 00 20.4	+2.1
VAE	Valguarnera	6.62	270	P	Pn	02 00 18.8	+0.2
	comp=N,7.6nm,0.3s,baz=283,slow=5.2,SNR=24						
VAE				S	Sn	02 01 30.2	-2.4
	comp=N,73nm,0.3s,baz=122,slow=19,SNR=7.5						
VAE	Valguarnera	6.62	270	P	Pn	02 00 18.8	+0.2
VAE				S	Sn	02 01 30.2	-2.4
VAE	Valguarnera	6.62	270	P	Pn	02 00 18.8	+0.2
GULT	Gulveren	6.62	63	*e*P	Pn	02 00 20.9	+2.2
GULT	Gulveren	6.62	63	P	Pn	02 00 20.8	+2.1
GULT	Gulveren	6.62	63	P	Pn	02 00 20.8	+2.1
BBLS	Lazići	6.64	339	P	Pn	02 00 17.9	-0.9
BBLS	Lazići	6.64	339	⇓*i*Pn	Pn	02 00 18.0	-0.8
SVIS	Svilajnac	6.64	350	P	Pn	02 00 18.8	0.0
DIVS	Divibare	6.70	343	P	Pn	02 00 18.5	-1.2
DIVS	Divibare	6.70	343	⇓*i*Pn	Pn	02 00 18.6	-1.1
TRUS	Trudelj	6.73	346	*e*Pn	Pn	02 00 18.4	-1.7
WDD	Wield Dalam	6.85	257	*e*Pn	Pn	02 00 19.8	-1.9
	comp=N,850nm,0.5s						
WDD				*e*Sn	Sn	02 01 31.9	-6.3
WDD	Wield Dalam	6.85	257	*e*Pn	Pn	02 00 19.8	-2.0
	comp=N,850nm,0.5s						
DJES	Djerdap	6.94	359	P	Pn	02 00 22.7	-0.2
HENT	Hendek	7.04	61	*i* P	Pn	02 00 26.3	+1.9
HENT	Hendek	7.04	61	*i* P	Pn	02 00 26.3	+1.9
SVRH	Sivrihisar-ESK	7.09	73	*e*P	Pn	02 00 27.6	+2.6
SVRH	Sivrihisar-ESK	7.09	73	P	Pn	02 00 27.5	+2.5
SVRH	Sivrihisar-ESK	7.09	73	P	Pn	02 00 27.5	+2.5
KIZT	Kizilcal	7.28	78	*e*P	Pn	02 00 30.7	+3.1
KIZT	Kizilcal	7.28	78	P	Pn	02 00 30.7	+3.1
KDHN	Kadinhani	7.43	81	*i* P	Pn	02 00 34.2	+4.5
KONT	Konya--Tatoy	7.62	85	*e*P	Pn	02 00 35.3	+3.1
KONT	Konya--Tatoy	7.62	85	P	Pn	02 00 35.3	+3.1
GZR	Gura Zlata	7.67	0	⇓P	Pn	02 00 34.0	+1.2
GZR	Gura Zlata	7.67	0	⇓*i*P	Pn	02 00 34.0	+1.2
GZR	Gura Zlata	7.67	0	P	Pn	02 00 34.0	+1.2
AMRR	Amara	7.70	25	⇓P	Pn	02 00 34.6	+1.2
AMRR	Amara	7.70	25	⇓*i*P	Pn	02 00 34.6	+1.2
AMRR	Amara	7.70	25	⇓P	Pn	02 00 34.6	+1.2
CVD	Cernavoda	7.70	30	⇓P	Pn	02 00 35.5	+2.1
CVD	Cernavoda	7.70	30	⇓*i*P	Pn	02 00 35.5	+2.1
CVD	Cernavoda	7.70	30	P	Pn	02 00 35.5	+2.1
HDMB	Hadim	7.80	93	*e*P	Pn	02 00 37.3	+2.6
HDMB	Hadim	7.80	93	P	Pn	02 00 37.3	+2.6
HDMB	Hadim	7.80	93	P	Pn	02 00 37.3	+2.6
GAZI	Gazipasa	7.80	98	*i* P	Pn	02 00 35.0	+0.2
GAZI	Gazipasa	7.80	98	*i* P	Pn	02 00 35.0	+0.2
VOIR		7.90	12	⇑P	Pn	02 00 37.4	+1.4
VOIR		7.90	12	⇑*i*P	Pn	02 00 37.4	+1.4
VOIR		7.90	12	P	Pn	02 00 37.4	+1.4
ISR	Istrita	7.92	20	⇓P	Pn	02 00 39.0	+2.7
ISR	Istrita	7.92	20	⇓*i*P	Pn	02 00 39.0	+2.7
ISR	Istrita	7.92	20	P	Pn	02 00 39.0	+2.7
BZS	Buzias	7.93	354	⇓P	Pn	02 00 37.2	+0.7
BZS	Buzias	7.93	354	⇓*i*P	Pn	02 00 37.2	+0.7
BZS	Buzias	7.93	354	P	Pn	02 00 37.2	+0.7
TIRR	Tirgusor	7.97	31	⇓P	Pn	02 00 38.2	+1.1
TIRR	Tirgusor	7.97	31	*e*Pn	Pn	02 00 37.7	+0.6
	comp=N,394nm,0.8s						
TIRR	Tirgusor	7.97	31	⇓*i*P	Pn	02 00 38.2	+1.1
TIRR	Tirgusor	7.97	31	*e*Pn	Pn	02 00 37.7	+0.6
	comp=N,394nm,0.8s						
TIRR	Tirgusor	7.97	31	P	Pn	02 00 38.2	+1.1
HARR	Harsova	7.98	28	⇑P	Pn	02 00 38.5	+1.3
HARR	Harsova	7.98	28	⇑*i*P	Pn	02 00 38.5	+1.3
HARR	Harsova	7.98	28	P	Pn	02 00 38.5	+1.3
MLR	Muntele Rosu	8.12	16	P	Pn	02 00 39.9	+0.8
	comp=N,12nm,0.3s,baz=216,slow=5.5,SNR=176						
MLR				S	Sn	02 02 14.0	+4.8
	baz=130,slow=16,SNR=1.7						
MLR				LR	LR	02 04 10.4	
	comp=N,2µm,20.4s,baz=201,slow=41						
MLR				ScP	ScP	02 10 30.1	-1.6
	comp=N,0.1nm,0.3s,baz=173,slow=4.1,SNR=3.2						
MLR	Muntele Rosu	8.12	16	⇑P	Pn	02 00 41.5	+2.4
MLR	Muntele Rosu	8.12	16	⇑P	Pn	02 00 41.5	+2.4
MLR	Muntele Rosu	8.12	16	⇑*i*P	Pn	02 00 41.5	+2.4
MLR	Muntele Rosu	8.12	16	P	Pn	02 00 39.9	+0.8
	comp=N,12nm,0.3s						
DEV	Deva	8.16	1	⇑P	Pn	02 00 41.7	+2.2
DEV	Deva	8.16	1	⇑*i*P	Pn	02 00 41.7	+2.2
DEV	Deva	8.16	1	P	Pn	02 00 41.7	+2.2
BLY	Banja Luka	8.17	331	P	Pn	02 00 38.0	-1.8
BLY	Banja Luka	8.17	331	P	Pn	02 00 38.0	-1.8
ERMK	Ermenek	8.19	94	*i* P	Pn	02 00 45.3	+5.3
PPCY	Paphos	8.25	107	P	Pn	02 00 38.2	-2.7
BBAL	Bala	8.33	74	*i* P	Pn	02 00 46.0	+4.2
ALFC	Alevga	8.35	105	P	Pn	02 00 39.7	-2.5
	comp=N,6.4nm,0.3s						
ALFC				S	Sn	02 02 12.4	-2.4
CFR	Carcaliu	8.48	27	⇑P	Pn	02 00 45.2	+1.3
CFR	Carcaliu	8.48	27	⇑*i*P	Pn	02 00 45.2	+1.3
CFR	Carcaliu	8.48	27	P	Pn	02 00 45.2	+1.3
MDB	Medias	8.50	8	⇑*i*P	Pn	02 00 47.5	+3.3
PLOR	Plostina	8.63	19	⇑P	Pn	02 00 47.6	+1.6
PLOR	Plostina	8.63	19	⇑*i*P	Pn	02 00 47.6	+1.6
PLOR	Plostina	8.63	19	P	Pn	02 00 47.6	+1.6
VRI	Vrincioaia	8.66	19	⇑P	Pn	02 00 48.9	+2.5
VRI	Vrincioaia	8.66	19	⇑*i*P	Pn	02 00 48.9	+2.5
VRI	Vrincioaia	8.66	19	P	Pn	02 00 48.9	+2.5
TLCR		8.74	30	⇓P	Pn	02 00 49.1	+1.6
TLCR		8.74	30	⇓*i*P	Pn	02 00 49.1	+1.6
TLCR		8.74	30	P	Pn	02 00 49.1	+1.6
BR131	Keskin Array S	8.75	73	*e*Pn	Pn	02 00 51.3	+3.6
BRTR	Keskin Array B	8.75	73	P	Pn	02 00 51.4	+3.7
	comp=N,10.0nm,0.3s,baz=258,slow=13,SNR=679						
BRTR				PcP	PcP	02 07 08.0	+0.1
	comp=N,0.5nm,0.3s,baz=189,slow=2.5,SNR=4.3						
BRTR				ScP	ScP	02 10 30.8	-1.7
	comp=N,0.1nm,0.3s,baz=176,slow=3.2,SNR=10						
BRTR				PKIKP	tx	02 15 07.1	
	comp=N,0.1nm,0.3s,baz=161,slow=2.3,SNR=9.6						
BRTR	Keskin Array B	8.75	73	P	Pn	02 00 51.4	+3.7
BRTR				PcP	PcP	02 07 08.0	+0.1
BRTR				ScP	ScP	02 10 30.8	-1.7
BRTR	Keskin Array B	8.75	73	PcP	PcP	02 07 07.9	+0.1
SWA2		8.75	164	P	Pn	02 00 43.8	-4.0
	baz=166						
MAMC	Mammari	8.82	104	P	Pn	02 00 45.5	-3.1
CSS	Prodhromos	8.97	105	P	Pn	02 00 47.8	-3.0
CSS				S	Sn	02 02 28.5	-1.7
PKSM	Moragy	9.02	342	⇑*i*P	Pn	02 00 49.2	-2.0
PKSM	Moragy	9.02	342	⇓*e*P	Pn	02 00 49.1	-2.1
BALT	Daday	9.05	62	*i* P	Pn	02 00 54.4	+2.7
BALT	Daday	9.05	62	*i* P	Pn	02 00 54.4	+2.7
DRGR		9.06	360	⇓P	Pn	02 00 53.5	+1.6
DRGR		9.06	360	⇓*i*P	Pn	02 00 53.5	+1.6
DRGR		9.06	360	P	Pn	02 00 53.5	+1.6
SISC	Sisak	9.09	330	*e*Pn	Pn	02 00 52.7	+0.4
SISC				Sn	Sn	02 02 26.2	-6.6
SISC	Sisak	9.09	330	*e*Pn	Pn	02 00 52.6	+0.3
ILGA	Ilgaz	9.12	65	*i* P	Pn	02 00 56.1	+3.3
PKS2	Kecel	9.15	344	⇑*e*P	Pn	02 00 53.4	+0.4
CDAG	Cicekdag	9.29	75	*i* P	Pn	02 00 58.6	+3.5
PKSN	Nyarlorinc	9.41	348	*e*P	Pn	02 00 58.9	+2.3
PKSN				*e*S	Sn	02 02 39.8	-0.9
PKS9	Tamasi	9.46	341	⇑*e*P	Pn	02 00 55.3	-1.9
PHNC	Paralimni	9.50	103	P	Pn	02 00 56.0	-1.9
PHNC				S	Sn	02 02 41.8	-1.2
PHNC	Paralimni	9.50	103	P	Pn	02 00 56.0	-1.9
PHNC				S	Sn	02 02 41.8	-1.2
GULE	Gulek	9.57	89	*i* P	Pn	02 01 03.7	+4.8
AVNT	Avonos	9.59	80	*i* P	Pn	02 01 03.3	+4.2
PKS7	Kunszentmiklos	9.69	345	⇑*e*P	Pn	02 00 59.5	-0.9
MANS	Anshas	9.90	130	P	Pn	02 01 04.6	+1.1
KOGS	Kog	9.96	333	*i* Pn	Pn	02 01 01.7	-2.4
KOGS				*e*Sn	Sn	02 02 46.5	-7.6
BUR08	Bucovina Ar. S	10.08	10	*e*Pn	Pn	02 01 07.0	+1.2
BUR08	Bucovina Ar. S	10.08	10	*e*Pn	Pn	02 01 07.0	+1.3
BUD	Budapest	10.13	346	⇓*e*P	Pn	02 01 05.9	-0.5
BUD				*e*S	Sn	02 02 56.4	-1.8
PDKS	Podkum	10.13	328	*i* Pn	Pn	02 01 04.7	-1.8
PKSG		10.18	343	⇑*e*P	Pn	02 01 07.4	+0.3
KIS	Kishinev	10.30	24	⇑*i*P	Pn	02 01 07.0	-1.7
	comp=N,500nm,3.0s						
KIS				*e*S	Sn	02 03 02.0	-0.3
KIS				*i* Li		02 03 40.0	
KIS				*i* LQ		02 03 54.0	
KIS				LRM		02 06 04.0	
	comp=N,600nm,10.0s						
KIS	Kishinev	10.30	24	⇑*i*P	Pn	02 01 07.0	-1.7
KIS				*e*S	Sn	02 03 02.0	-0.3
KIS				pmax	pmax		
	comp=Z,500nm,3.0s						
KIS				pmax	pmax		
	comp=Z,500nm,3.0s						
KIS				MLR	MLR		
	comp=Z,500nm,10.0s						
KIS				MLR	MLR		
	comp=Z,600nm,10.0s						
KIS	Kishinev	10.30	24	⇑P	Pn	02 01 10.4	+1.7
KIS	Kishinev	10.30	24	⇑*i*P	Pn	02 01 10.4	+1.7
KIS	Kishinev	10.30	24	⇑P	Pn	02 01 10.4	+1.7
KIS				*e*S	Sn	02 03 02.0	-0.3
	comp=Z,600nm,10.0s						
AANS		10.32	133	P	Pn	02 01 04.6	-4.5
	baz=135						
LJU	Ljubljana	10.32	326	*e*Pn	Pn	02 01 08.9	-0.1
LJU				*e*Sn	Sn	02 02 55.0	-7.9
LJU	Ljubljana	10.32	326	P	Pn	02 01 07.6	-1.4
LJU	Ljubljana	10.32	326	P	Pn	02 01 07.6	-1.4
HMYD	Mayadein	10.36	137	P	Pn	02 01 05.5	-4.2
	baz=139						
PENC	Penc	10.38	347	⇓*e*P	Pn	02 01 11.0	+1.2
PSZ	Piszkesteto	10.40	349	⇑P	Pn	02 01 09.9	-0.2
PSZ	Piszkesteto	10.40	349	*e*Pn	Pn	02 01 09.0	-1.1
PSZ				*e*Sn	Sn	02 03 01.6	-3.2
PSZ	Piszkesteto	10.40	349	⇑*e*P	Pn	02 01 09.8	-0.3
PSZ				*e*S	Sn	02 03 00.0	-4.8
PSZ	Piszkesteto	10.40	349	⇑*i*P	Pn	02 01 09.9	-0.2
PSZ	Piszkesteto	10.40	349	*e*Pn	Pn	02 01 09.0	-1.1
PSZ	Piszkesteto	10.40	349	P	Pn	02 01 09.9	-0.2
TRI	Trieste	10.42	323	*e*P	Pn	02 01 07.2	-3.2
TRI				*e*		02 02 55.7	
TRI

comp=Z,600nm,15.6s
ZST Bratislava 11.25 340 *e*Pn **Pn 02 01 20.1 -1.6**
ZST *e* 02 01 30.3
ZST *e*Sn **Sn 02 03 16.8 -8.7**
ZST Bratislava 11.25 340 *e*PN **Pn 02 01 20.1 -1.6**
ZST *e* 02 01 30.3
ZST Bratislava 11.25 340 *e*SN **Sn 02 03 16.8 -8.7**
ZST *e* 02 04 33.5
ZST Bratislava 11.25 340 *e*P **Pn 02 01 20.1 -1.6**
ERBA Erbaa 11.27 70 *i* P **Pn 02 01 24.8 +2.8**
CAE Caneva 11.29 320 ⇑*i*P **Pn 02 01 19.0 -3.2**
MLNI Malnisio 11.30 321 ⇑*e*P **Pn 02 01 20.0 -2.4**
KOLL Kolacno 11.30 345 *e*P **Pn 02 01 20.7 -1.7**
KOLL *e* 02 03 22.0
KOLL Kolacno 11.30 345 *e*PN **Pn 02 01 20.7 -1.7**
KOLL Kolacno 11.30 345 *e*SN **Sn 02 03 22.0 -4.7**
KOLL Kolacno 11.30 345 *e*P **Pn 02 01 20.7 -1.7**
MMAI Mount Meron Ar 11.35 111 P **Pn 02 01 19.4 -3.8**
comp=Z,16nm,0.3s,baz=310,slow=12,SNR=34
MMAI S **Sn 02 03 18.1 -10**
comp=Z,16nm,0.3s,baz=306,slow=23,SNR=6.5
MMAI LR LR 02 06 37.6
comp=Z,196nm,19.4s,baz=290,slow=42
MMAI PcP PcP 02 07 11.0 +0.5
comp=Z,1.4nm,0.3s,baz=29,slow=3.3,SNR=5.0
MMAI ScP ScP 02 10 34.9 -1.0
comp=Z,0.2nm,0.3s,baz=320,slow=4.9,SNR=5.0
CONA Conrad Observa 11.38 336 ⇓*i*Pn **Pn 02 01 20.9 -2.5**
SNR=16
CONA ⇑*i*Sn **Sn 02 03 21.1 -7.4**
ZOU Zoufplan 11.42 324 ⇑*e*P **Pn 02 01 24.0 +0.1**
ZOU Zoufplan 11.42 324 ⇑*e*P **Pn 02 01 24.0 +0.1**
RCY Rachaya 11.45 108 *e*Pn **Pn 02 01 21.5 -3.0**
KSDI Kefar Szold 11.46 109 Pn **Pn 02 01 21.2 -3.4**
KSDI Kefar Szold 11.46 109 Pn **Pn 02 01 21.2 -3.4**
SMOL Smolenice 11.46 342 *e*Pn **Pn 02 01 25.6 +1.1**
SMOL *e* 02 01 31.1
SMOL *e*Sn **Sn 02 03 18.1 -12**
SMOL *e* 02 03 24.6
SMOL Smolenice 11.46 342 *e*PN **Pn 02 01 25.6 +1.1**
SMOL *e* 02 01 31.1
SMOL *e* 02 03 18.1
SMOL Smolenice 11.46 342 *e*SN **Sn 02 03 24.6 -6.0**
SMOL Smolenice 11.46 342 *e*P **Pn 02 01 25.6 +1.1**
SLTI Sal'it 11.47 115 Pn **Pn 02 01 21.5 -3.3**
SLTI S **Sn 02 03 19.8 -11**
SLTI Sal'it 11.47 115 Pn **Pn 02 01 21.5 -3.3**
SLTI Sn **Sn 02 03 19.8 -11**
CSMI Casera Mimoias 11.54 323 ⇑*i*P **Pn 02 01 24.0 -1.6**
CSMI Casera Mimoias 11.54 323 ⇑*i*P **Pn 02 01 24.0 -1.6**
PGF Pioggiola 11.57 299 *e*P **Pn 02 01 26.1 0.0**
comp=Z,87nm,0.7s
PGF Pioggiola 11.57 299 *e*P **Pn 02 01 26.1 0.0**
PGF pmax pmax
comp=Z,44nm,0.7s
PGF Pioggiola 11.57 299 *e*P **Pn 02 01 26.1 0.0**
comp=Z,44nm,0.7s
PGF Pioggiola 11.57 299 *e*P **Pn 02 01 26.1 0.0**
comp=Z,44nm,0.7s
FKH Fakeheh 11.60 103 *e*Pn **Pn 02 01 24.4 -2.1**
FKH Fakeheh 11.60 103 *e*Pn **Pn 02 01 24.4 -2.1**
KBA Koelnbreinsper 11.64 326 ⇑*i*Pn **Pn 02 01 24.8 -2.2**
SNR=22
KBA ⇑*i*Sn **Sn 02 03 26.8 -8.1**
KBA Koelnbreinsper 11.64 326 Pn **Pn 02 01 24.8 -2.2**
SNR=22
MMLI Mount Malkishu 11.64 113 Pn **Pn 02 01 23.7 -3.5**
MMLI S **Sn 02 03 23.4 -12**
MMLI Mount Malkishu 11.64 113 Pn **Pn 02 01 23.7 -3.5**
MMLI Sn **Sn 02 03 23.9 -11**
KSHT Keshet 11.67 110 Pn **Pn 02 01 23.9 -3.6**
KSHT Keshet 11.67 110 Pn **Pn 02 01 24.2 -3.3**
JAVC Velka Javorina 11.73 343 P **Pn 02 01 27.6 -0.5**
ZAF 11.73 133 P **Pn 02 01 24.5 -3.8**
baz=134
STHS Stebnicka Huta 11.74 355 *e*Pn **Pn 02 01 29.0 +0.7**
STHS *e* 02 01 41.9
STHS Stebnicka Huta 11.74 355 *e*PN **Pn 02 01 29.0 +0.7**
STHS *e* 02 01 41.9
STHS Stebnicka Huta 11.74 355 *e*P **Pn 02 01 29.0 +0.7**
ABTA Abfaltersbach 11.77 323 ⇓*i*Pn **Pn 02 01 26.6 -2.2**
SNR=22
ABTA ⇓*i*Sn **Sn 02 03 30.0 -8.2**
ABTA Abfaltersbach 11.77 323 Pn **Pn 02 01 26.6 -2.2**
SNR=22
GZT Gaziantep 11.78 87 *i* P **Pn 02 01 31.6 +2.6**
KZIT Kziot 11.79 122 Pn **Pn 02 01 24.7 -4.4**
KZIT Kziot 11.79 122 Pn **Pn 02 01 24.7 -4.4**
KZIT Sn **Sn 02 03 26.4 -12**
HMDT Nahal Hemdat 11.81 114 Pn **Pn 02 01 25.9 -3.6**
HMDT S **Sn 02 03 28.9 -11**
HMDT Nahal Hemdat 11.81 114 Pn **Pn 02 01 25.9 -3.6**
HMDT Sn **Sn 02 03 28.9 -11**
NIE Niedzica 11.82 352 *e*P **Pn 02 01 30.0 +0.5**
NIE *e*PP 02 01 37.0
NIE *e*S **Sn 02 03 38.1 -1.3**
NIE Niedzica 11.82 352 P **Pn 02 01 31.8 +2.3**
NIE Niedzica 11.82 352 P **Pn 02 01 31.8 +2.3**
NIE *e*S **Sn 02 03 38.1 -1.3**
ZNM 11.86 132 P **Pn 02 01 26.3 -3.7**
baz=133
MOA Molln 11.88 331 P **Pn 02 01 28.3 -1.9**
MOA Molln 11.88 331 ⇑*i*Pn **Pn 02 01 28.2 -2.0**
SNR=45
MOA ⇓*i*Sn **Sn 02 03 32.6 -8.1**
MOA Molln 11.88 331 P **Pn 02 01 28.3 -1.9**
RTMI Retamim 11.89 120 Pn **Pn 02 01 26.3 -4.3**
RTMI S **Sn 02 03 30.1 -11**
RTMI Retamim 11.89 120 Pn **Pn 02 01 26.1 -4.5**
RTMI Sn **Sn 02 03 30.1 -11**
KWP Kalwaria Pacla 11.91 360 *e*P **Pn 02 01 32.4 +1.8**
KWP *e*S **Sn 02 03 49.6 +8.2**
KWP Kalwaria Pacla 11.91 360 *e*Pn **Pn 02 01 32.1 +1.5**
comp=Z,217nm,1.1s
KWP Kalwaria Pacla 11.91 360 ⇑*i*P **Pn 02 01 32.1 +1.5**
KWP Kalwaria Pacla 11.91 360 *e*Pn **Pn 02 01 32.1 +1.5**
comp=Z,217nm,1.1s
KWP Kalwaria Pacla 11.91 360 ⇑*e*P **Pn 02 01 32.4 +1.8**
YTIR Yattir 12.01 118 Pn **Pn 02 01 28.5 -3.6**
YTIR Yattir 12.01 118 Pn **Pn 02 01 28.2 -3.9**
DSI Dead Sea 12.08 117 Pn **Pn 02 01 29.8 -3.2**
DSI S **Sn 02 03 35.0 -11**
DSI Dead Sea 12.08 117 Pn **Pn 02 01 29.8 -3.2**
DSI Sn **Sn 02 03 35.0 -11**
LVV L'vov 12.13 4 *e*P **Pn 02 01 32.9 -0.7**
LVV *e*S **Sn 02 03 43.7 -3.1**
LVV MLR MLR
comp=Z,900nm,11.0s
LVV MLR MLR
comp=N,300nm,10.0s
LVV MLR MLR
comp=E,500nm,10.0s
LVV L'vov 12.13 4 *e*P **Pn 02 01 32.9 -0.7**
comp=E,900nm,11.0s
HNKL Nakhl 12.15 126 P **Pn 02 01 30.2 -3.8**
baz=128
KRUC Moravsky 12.23 340 P **Pn 02 01 33.0 -2.0**
CMAH Djebel Manchou 12.28 270 P **Pn 02 01 38.0 +2.3**
CMAH Djebel Manchou 12.28 270 P **Pn 02 01 38.0 +2.3**
ABSA Djebel Ababsia 12.29 268 P **Pn 02 01 38.6 +2.6**
ABSA Djebel Ababsia 12.29 268 P **Pn 02 01 38.6 +2.6**
RJOB Jochberg 12.38 327 *e*P **Pn 02 01 33.5 -3.6**
comp=Z,194nm,0.6s
VRAC Vranov 12.41 341 P **Pn 02 01 34.5 -2.9**
comp=Z,1.2nm,0.3s,baz=124,slow=6.3,SNR=6.8
VRAC S **Sn 02 03 49.0 -4.6**
comp=Z,3.2nm,0.3s,baz=187,slow=21,SNR=5.5
VRAC PcP PcP 02 07 11.4 +0.1
comp=Z,0.3nm,0.3s,baz=148,slow=15,SNR=3.1
VRAC Vranov 12.41 341 ⇑P **Pn 02 01 36.5 -0.9**
VRAC Vranov 12.41 341 ⇑*i*P **Pn 02 01 36.5 -0.9**
VRAC Vranov 12.41 341 *e*Pn **Pn 02 01 35.2 -2.2**
VRAC Vranov 12.41 341 P **Pn 02 01 36.5 -0.9**
KEMA Kemaliye 12.44 78 *i* P **Pn 02 01 40.1 +2.2**
KEMA Kemaliye 12.44 78 *i* P **Pn 02 01 40.1 +2.2**
GRSN GIRESUNGRSN 12.44 70 *i* P **Pn 02 01 40.3 +2.3**
GRSN GIRESUNGRSN 12.44 70 *i* P **Pn 02 01 40.3 +2.4**
KRMI Paran Flat 12.50 124 Pn **Pn 02 01 34.3 -4.6**
KRMI S **Sn 02 03 44.1 -12**
KRMI Paran Flat 12.50 124 Pn **Pn 02 01 34.2 -4.7**
KRMI Sn **Sn 02 03 44.1 -12**
ZFRI Zfri 12.53 121 Pn **Pn 02 01 34.8 -4.4**
ZFRI Zfri 12.53 121 Pn **Pn 02 01 34.9 -4.3**
PRNI Paran 12.54 122 P **Pn 02 01 34.5 -4.9**
PRNI Paran 12.54 122 Pn **Pn 02 01 34.2 -5.2**
OKC Ostrava-Krasne 12.55 346 P **Pn 02 01 40.1 +0.7**
OKC Ostrava-Krasne 12.55 346 *e*P **Pn 02 01 37.3 -2.1**
OKC *e*S **Sn 02 03 55.4 -1.8**
OKC Ostrava-Krasne 12.55 346 P **Pn 02 01 40.1 +0.7**
WTTA Wattenberg 12.56 323 ⇓*i*Pn **Pn 02 01 37.7 -1.8**
SNR=47
WTTA ⇑*i*Sn **Sn 02 03 48.3 -9.1**
WTTA Wattenberg 12.56 323 Pn **Pn 02 01 37.7 -1.8**
SNR=47
WTTA Wattenberg 12.56 323 P **Pn 02 01 38.7 -0.8**
MORC Moravsky Berou 12.62 344 ⇑P **Pn 02 01 39.9 -0.3**
MORC Moravsky Berou 12.62 344 *e*Pn **Pn 02 01 38.5 -1.8**
MORC *e*Sn **Sn 02 03 57.1 -1.6**
MORC Moravsky Berou 12.62 344 ⇑*i*P **Pn 02 01 39.9 -0.3**
MORC Moravsky Berou 12.62 344 *e*Pn **Pn 02 01 38.5 -1.7**
MORC Moravsky Berou 12.62 344 P **Pn 02 01 39.9 -0.3**
MORC *e*Sn **Sn 02 03 57.1 -1.6**
WATA Walderalm 12.64 323 ⇓*i*Pn **Pn 02 01 39.0 -1.6**
SNR=55
WATA ⇓*i*Sn **Sn 02 03 51.1 -8.2**
WATA Walderalm 12.64 323 Pn **Pn 02 01 39.0 -1.6**
SNR=55
WATA Walderalm 12.64 323 P **Pn 02 01 39.4 -1.2**
OJC Ojcow 12.67 351 *e*P **Pn 02 01 39.3 -1.6**
OJC *e*PP 02 01 49.1
OJC *e*S **Sn 02 03 58.0 -2.0**
OJC Ojcow 12.67 351 *e*P **Pn 02 01 39.2 -1.7**
OJC *e*S **Sn 02 03 58.0 -2.0**
OJC Ojcow 12.67 351 *e*P **Pn 02 01 39.2 -1.7**
OJC *e*S **Sn 02 03 58.0 -2.0**
TREC Trest 12.70 338 *e*P **Pn 02 01 39.1 -2.3**
TREC *e*S **Sn 02 03 53.2 -7.5**
TREC MLR MLR
comp=Z,600nm,14.3s
TREC Trest 12.70 338 *e*P **Pn 02 01 39.1 -2.3**
TREC *e*S **Sn 02 03 53.2 -7.5**
TREC AMS AMS 02 07 30.0
comp=Z,600nm,14.3s
TREC Trest 12.70 338 *e*P **Pn 02 01 39.1 -2.3**
comp=Z,600nm,14.3s
HRFI Mount Harif 12.76 123 Pn **Pn 02 01 37.9 -4.4**
HRFI Mount Harif 12.76 123 Pn **Pn 02 01 37.9 -4.4**
MBRI Mt Berech 12.84 124 Pn **Pn 02 01 39.1 -4.2**
FETA Feichten 12.84 320 ⇑*i*Pn **Pn 02 01 42.2 -1.1**
SNR=37
FETA ⇓*i*Sn **Sn 02 03 56.9 -7.3**
FETA Feichten 12.84 320 Pn **Pn 02 01 42.2 -1.0**
SNR=37
ASF Jabal al Asfar 12.86 111 P **Pn 02 01 41.6 -2.0**
comp=Z,1.4nm,0.3s,baz=138,slow=2.6,SNR=18
ASF S **Sn 02 04 01.7 -3.2**
comp=Z,1.9nm,0.3s,baz=180,slow=18,SNR=4.0
ASF LR LR 02 07 09.3
comp=Z,172nm,21.0s,baz=317,slow=40
ASF Jabal al Asfar 12.86 111 P **Pn 02 01 41.6 -2.0**
ASF S **Sn 02 04 01.7 -3.1**
ASF pmax pmax
comp=Z,1.0nm,0.3s
ASF smax
comp=N,2.0nm,0.3s
ASF MLR MLR
comp=Z,172nm,21.0s
MOTA Moosalm 12.88 322 ⇓*i*Pn **Pn 02 01 41.9 -1.7**
SNR=63
MOTA ⇓*i*Sn **Sn 02 03 57.0 -8.0**
MOTA Moosalm 12.88 322 Pn **Pn 02 01 41.9 -1.8**
SNR=63
MOTA Moosalm 12.88 322 P **Pn 02 01 42.2 -1.5**
GEC2 GERESS Array S 12.91 332 *e*P **Pn 02 01 41.8 -2.3**
comp=Z,74nm,0.7s
GEC2 GERESS Array S 12.91 332 *e*P **Pn 02 01 41.8 -2.3**
GEC2 pmax pmax
comp=Z,74nm,0.7s
EIL Elat 12.95 125 P **Pn 02 01 40.8 -3.9**
comp=Z,4.4nm,0.3s,baz=332,slow=8.8,SNR=49
EIL S **Sn 02 03 55.6 -11**
comp=Z,18nm,0.3s,baz=292,slow=24,SNR=8.0
EIL Elat 12.95 125 Pn **Pn 02 01 40.1 -4.6**
EIL Elat 12.95 125 Pn **Pn 02 01 40.1 -4.6**
AQBJ Aqaba 12.97 124 Pn **Pn 02 01 41.0 -4.1**
CASM Ain Smara 13.08 269 P **Pn 02 01 48.0 +1.5**
CASM Ain Smara 13.08 269 P **Pn 02 01 48.0 +1.5**
SAOF Saorge 13.08 303 *e*P **Pn 02 01 48.0 +1.6**
SAOF Saorge 13.08 303 *e*P **Pn 02 01 48.0 +1.6**
ANN Anapa 13.11 53 *e*P **Pn 02 01 47.4 +0.6**
ANN *e*S **Sn 02 04 15.2 +4.5**
ANN pmax pmax
comp=Z,89nm,1.3s
ANN Anapa 13.11 53 *i* P **Pn 02 01 47.4 +0.6**
ANN Anapa 13.11 53 *e*P **Pn 02 01 47.4 +0.6**
comp=Z,89nm,1.3s
ANN *e*S **Sn 02 04 15.2 +4.5**
HBST Basata 13.11 127 P **Pn 02 01 43.1 -3.8**
baz=128
HBST AMP 02 04 08.6
comp=E,580µm,0.7s,logA/T=5.9,baz=128
SBF Sospel 13.11 303 *e*P **Pn 02 01 46.4 -0.5**
comp=E,196nm,1.0s
SBF Sospel 13.11 303 *e*P **Pn 02 01 46.4 -0.5**
SBF pmax pmax
comp=Z,98nm,1.0s
SBF Sospel 13.11 303 *e*P **Pn 02 01 46.4 -0.5**
comp=Z,98nm,1.0s
DAVOX Davos/Dischmat 13.13 318 P **Pn 02 01 47.1 +0.1**
comp=Z,3.6nm,0.3s,baz=127,slow=16,SNR=21
DAVOX S **Sn 02 03 59.2 -12**
comp=Z,7.2nm,0.3s,baz=263,slow=19,SNR=3.6
DAVOX ScP ScP 02 10 37.2 -1.1
comp=Z,0.2nm,0.3s,baz=252,slow=16,SNR=2.9
DAVOX PKiKP PKiKP 02 15 07.9 -1.0
comp=Z,0.3nm,0.3s,baz=287,slow=7.7,SNR=5.5
DAVOX Davos/Dischmat 13.13 318 P **Pn 02 01 47.1 +0.1**
DAVOX S **Sn 02 03 59.2 -12**
DAVOX ScP ScP 02 10 37.2 -1.1
DAVOX Davos/Dischmat 13.13 318 P **Pn 02 01 47.2 +0.2**
RETA Reutte 13.14 322 *i* Pn **Pn 02 01 45.3 -1.9**
SNR=18
RETA ⇑*i*Sn **Sn 02 04 02.8 -8.6**
RETA Reutte 13.14 322 Pn **Pn 02 01 45.3 -1.9**
SNR=18
HKAT Jabal Katrina 13.14 131 P **Pn 02 01 43.8 -3.6**
baz=132
AUTN L'Aution 13.17 303 *e*P **Pn 02 01 49.7 +2.1**
AUTN L'Aution 13.17 303 *e*P **Pn 02 01 49.7 +2.1**
LUCF Luceram 13.18 303 *e*P **Pn 02 01 49.8 +2.0**
LUCF Luceram 13.18 303 *e*P **Pn 02 01 49.8 +2.0**
KHC Kasperske Hory 13.19 333 *e*P **Pn 02 01 45.1 -2.8**
KHC *e*S **Sn 02 04 06.4 -6.3**
KHC MLR MLR
comp=Z,1µm,10.6s
KHC Kasperske Hory 13.19 333 *e*Pn **Pn 02 01 45.4 -2.5**
comp=Z,53nm,0.7s
KHC *e*Sn **Sn 02 04 06.1 -6.5**
KHC Kasperske Hory 13.19 333 *e*P **Pn 02 01 45.1 -2.8**
KHC *ex* x 02 01 50.0
KHC *ex* x 02 01 56.0
KHC *ex* x 02 02 15.5
KHC *e*S **Sn 02 04 06.4 -6.3**
KHC AMS AMS 02 07 20.0
comp=Z,1µm,10.6s
KHC Kasperske Hory 13.19 333 *e*Pn **Pn 02 01 45.4 -2.5**
comp=Z,53nm,0.7s
TOUF Mont Tournerai 13.30 303 *e*P **Pn 02 01 51.6 +2.3**
TOUF Mont Tournerai 13.30 303 *e*P **Pn 02 01 51.6 +2.3**
MVIF Mont Vial 13.31 302 *e*P **Pn 02 01 52.3 +2.8**
MVIF Mont Vial 13.31 302 *e*P **Pn 02 01 52.3 +2.8**
FUR Furstenfeldbru 13.38 325 *e*P **Pn 02 01 48.8 -1.5**
comp=Z,154nm,0.7s
FUR Furstenfeldbru 13.38 325 *e*P **Pn 02 01 48.8 -1.5**
FUR pmax pmax
comp=Z,154nm,0.7s
HDHB Dhahab 13.38 129 P **Pn 02 01 47.0 -3.5**
baz=130
DPC Dobruska-Polom 13.44 342 P **Pn 02 01 49.1 -1.9**
DPC Dobruska-Polom 13.44 342 *e*P **Pn 02 01 48.9 -2.1**
DPC *e*S **Sn 02 04 13.5 -5.0**
CALN Calern 13.44 302 *e*P **Pn 02 01 53.3 +2.2**
DAVA Damuels 13.45 319 P **Pn 02 01 51.5 +0.2**
DAVA Damuels 13.45 319 ⇑*i*Pn **Pn 02 01 50.1 -1.1**
SNR=28
DAVA Damuels 13.45 319 Pn **Pn 02 01 50.1 -1.2**
SNR=28
WET Wettzell 13.47 331 *e*P **Pn 02 01 48.3 -3.2**
comp=Z,165nm,1.0s
WET Wettzell 13.47 331 *e*P **Pn 02 01 48.3 -3.2**
WET pmax pmax
comp=Z,165nm,1.0s
DFRA Djebel Bou Aff 13.51 270 P **Pn 02 01 53.0 +0.8**
FRF La Foret Royal 13.54 301 *e*P **Pn 02 01 50.4 -2.0**
comp=Z,45nm,0.7s
FRF La Foret Royal 13.54 301 *e*P **Pn 02 01 50.4 -2.0**
FRF pmax pmax
comp=Z,22nm,0.7s
FRF La Foret Royal 13.54 301 *e*P **Pn 02 01 50.4 -2.0**
comp=Z,22nm,0.7s
LMR La Mourre 13.55 300 *e*P **Pn 02 01 53.1 +0.4**
comp=Z,25nm,0.6s
LMR La Mourre 13.55 300 *e*P **Pn 02 01 53.1 +0.4**
LMR pmax pmax
comp=Z,13nm,0.6s
LMR La Mourre 13.55 300 *e*P **Pn 02 01 53.1 +0.4**
comp=Z,13nm,0.6s
UBR Ueberruh 13.60 321 P **Pn 02 01 51.9 -1.3**
PRU Pruhonice 13.60 337 P **Pn 02 01 52.3 -1.0**
PRU Pruhonice 13.60 337 *e*P **Pn 02 01 51.3 -2.0**
PRU *e*S **Sn 02 04 19.2 -3.4**
PRU AMS AMS 02 08 00.0
comp=Z,600nm,10.6s
UPC Upice 13.66 342 P **Pn 02 01 53.2 -0.8**
UPC Upice 13.66 342 *e*P **Pn 02 01 53.0 -1.0**
PRA Prague 13.71 337 P **Pn 02 01 51.0 -3.6**
KIEV Kiev 13.77 18 *e*P **Pn 02 01 53.9 -1.5**
KIEV pmax pmax
comp=Z,35nm,0.6s
KIEV Kiev 13.77 18 *e*Pn **Pn 02 01 53.9 -1.5**
comp=Z,35nm,0.6s
KIEV *e*S **Sn 02 04 40.3 +14**
KIEV *e*PcP PcP 02 07 12.4 -0.6
KIEV Kiev 13.77 18 *e*Pn **Pn 02 01 53.9 -1.5**
comp=Z,35nm,0.6s
SURF Saint Ours 13.77 304 *e*P **Pn 02 01 54.8 -0.7**
SURF Saint Ours 13.77 304 *e*P **Pn 02 01 58.4 +2.9**
AKASG Malin Array Be 13.78 18 P **Pn 02 01 52.9 -2.6**
comp=Z,4.2nm,0.3s,baz=206,slow=12,SNR=36
AKASG PcP PcP 02 07 12.6 -0.4
comp=Z,2.9nm,0.3s,baz=225,slow=0.9,SNR=14
AKASG LR LR 02 07 57.9
comp=Z,934nm,18.4s,baz=195,slow=40
AKASG ScP ScP 02 10 36.6 -2.6
comp=Z,0.5nm,0.3s,baz=237,slow=1.2,SNR=12
AKASG PKiKP PKiKP 02 15 06.5 -2.5
comp=Z,0.3nm,0.3s,baz=283,slow=0.1,SNR=4.6
AKASG Malin Array Be 13.78 18 PcP PcP 02 07 12.6 -0.4
AKBB Malin Array Si 13.78 18 *e*Pn **Pn 02 01 53.8 -1.7**
AKBB *e*S **Sn 02 04 38.9 +12**
AKBB *e*PcP PcP 02 07 12.3 -0.7
AKBB Malin Array Si 13.78 18 *e*Pn **Pn 02 01 53.8 -1.7**
HHRG Al Ghardaqah 13.89 136 AMP 02 04 08.6
comp=N,150µm,0.5s,logA/T=5.5,baz=137
BDAS Al Bad' **13.89 128** P **Pn 02 01 53.8 -3.4**
MBDF Montbardon 13.90 305 *e*P **Pn 02 01 58.8 +1.6**
comp=N,107nm,0.7s
MBDF Montbardon 13.90 305 *e*P **Pn 02 01 58.8 +1.6**
MBDF pmax pmax
comp=Z,53nm,0.7s
MBDF Montbardon 13.90 305 *e*P **Pn 02 01 58.8 +1.6**
comp=Z,53nm,0.7s
KSP Ksiaz 13.90 343 *e*P **Pn 02 01 59.6 +2.5**
KSP *e*S **Sn 02 04 44.0 +14**
KSP Ksiaz 13.90 343 *e*P **Pn 02 01 59.0 +1.9**
SET Setif 13.95 269 P **Pn 02 02 01.0 +3.0**
SET Setif 13.95 269 P **Pn 02 02 01.0 +3.0**
PVCC Panska Ves 14.07 338 P **Pn 02 01 59.3 -0.1**
PVCC Panska Ves 14.07 338 *e*P **Pn 02 01 57.6 -1.8**
PVCC AMS AMS 02 07 40.0
comp=Z,600nm,9.9s
BNI Bardonecchia 14.10 306 *e*Pn **Pn 02 01 59.8 +0.1**
BNI *e*Sn **Sn 02 04 32.9 -1.7**
BNI Bardonecchia 14.10 306 *e*Pn **Pn 02 01 59.8 +0.1**
BNI *e*Sn **Sn 02 04 32.9 -1.7**
SOC Sochi 14.14 60 *d i*P **Pn 02 02 01.5 +1.1**
SOC *e* 02 04 42.1
SOC pmax pmax
comp=Z,34nm,1.1s
SOC MLR MLR
comp=Z,108nm,9.0s
SOC Sochi 14.14 60 *i* P **Pn 02 02 01.6 +1.2**
HDH Heidenheim-Cha 14.18 324 P **Pn 02 01 57.8 -3.0**
SISB Singen-Schiene 14.18 319 P **Pn 02 02 01.3 +0.4**
ROTZ Rotzenmuhle 14.23 331 *e*P **Pn 02 01 58.1 -3.3**
comp=Z,61nm,0.9s
LPG La Plagne 14.25 308 *e*P **Pn 02 02 02.4 +0.7**
comp=Z,109nm,0.7s
LPG La Plagne 14.25 308 *e*P **Pn 02 02 02.4 +0.7**
LPG pmax pmax
comp=Z,54nm,0.7s
LPG La Plagne 14.25 308 *e*P **Pn 02 02 02.4 +0.7**
comp=Z,54nm,0.7s
LPL La Plagne 14.27 308 *e*P **Pn 02 02 02.8 +0.8**
comp=Z,67nm,0.7s
LPL La Plagne 14.27 308 *e*P **Pn 02 02 02.8 +0.8**
LPL pmax pmax
comp=Z,34nm,0.7s
LPL La Plagne 14.27 308 *e*P **Pn 02 02 02.8 +0.8**
comp=Z,34nm,0.7s
MARD Mardin 14.32 86 *i* P **Pn 02 02 02.6 -0.2**
GUT Gutenstein 14.36 320 P **Pn 02 02 01.3 -1.8**
SMRF Simiane la Rot 14.41 301 *e*P **Pn 02 02 04.4 +0.6**
comp=Z,76nm,0.9s
SMRF Simiane la Rot 14.41 301 *e*P **Pn 02 02 04.4 +0.6**
comp=Z,76nm,0.9s
BUCH Bad Urach 14.49 322 P **Pn 02 02 02.3 -2.5**
NKC Novy Kostel 14.52 333 P **Pn 02 02 04.0 -1.2**
NKC Novy Kostel 14.52 333 *e*P **Pn 02 02 02.6 -2.6**
NKC AMS AMS 02 08 10.0
comp=Z,800nm,17.0s
GDM Grand'Maison 14.52 306 *e*P **Pn 02 02 09.9 +4.6**
GDM Grand'Maison 14.52 306 *e*P **Pn 02 02 09.9 +4.6**
SPAK Spaichingen-Ko 14.54 320 *e*P **Pn 02 02 05.1 -0.4**
ORIF Oris-en-Rattie 14.55 305 *e*P **Pn 02 02 06.4 +0.7**
comp=Z,52nm,0.7s
ORIF *e*MLR MLR
comp=Z,221nm,18.2s
ORIF Oris-en-Rattie 14.55 305 *e*P **Pn 02 02 06.4 +0.7**
ORIF pmax pmax
comp=Z,26nm,0.7s
ORIF Oris-en-Rattie 14.55 305 *e*P **Pn 02 02 06.4 +0.7**
comp=Z,26nm,0.7s
GRA1 Grafenberg Arr 14.56 329 *e*P **Pn 02 02 03.9 -1.8**
comp=Z,387nm,1.2s
GRF Grafenberg Arr 14.56 329 *e*P **Pn 02 02 03.9 -1.8**
comp=Z,387nm,1.2s
GRF Grafenberg Arr 14.56 329 *e*P **Pn 02 02 03.9 -1.8**
GRF pmax pmax
comp=Z,387nm,1.2s
GRF Grafenberg Arr 14.56 329 *e*P **Pn 02 02 03.9 -1.8**
GRF pmax pmax
comp=Z,387nm,1.2s
BRG Berggiesshubel 14.56 337 *e*P **Pn 02 02 03.3 -2.5**
comp=Z,95nm,0.7s
BRG Berggiesshubel 14.56 337 *e*P **Pn 02 02 02.8 -3.0**
comp=Z,12nm,0.9s
BRG *i* 02 02 11.2
comp=Z,95nm,0.7s
BRG *e* **Sn 02 05 02.0 +16**
comp=Z,23nm,1.1s
BRG Berggiesshubel 14.56 337 *e*P **Pn 02 02 02.8 -3.0**
BRG pmax pmax
comp=Z,7.0nm,1.0s
BRG MLR MLR
comp=Z,391nm,13.1s
BRG MLR MLR
comp=N,306nm,10.0s
BRG MLR MLR
comp=E,255nm,10.0s
WAR Warsaw 14.57 356 *e*P **Pn 02 02 08.4 +2.6**
WAR *e*S **Sn 02 04 58.3 +12**
WAR Warsaw 14.57 356 *e*P **Pn 02 02 08.4 +2.6**
WAR *e*S **Sn 02 04 58.3 +12**
TANN Tannenbergstha 14.66 333 *e*P **Pn 02 02 05.2 -1.9**
comp=Z,92nm,0.9s
TANN Tannenbergstha 14.66 333 P **Pn 02 02 06.1 -1.0**
GUNZ Gunzen 14.67 333 *e*P **Pn 02 02 06.0 -1.1**
comp=Z,58nm,0.6s
WERD Werda 14.75 333 *e*P **Pn 02 02 07.0 -1.1**
comp=Z,62nm,0.8s

STU	Stuttgart	14.79	323	eP	Pn	02 02 07.8 -0.9
	comp=Z,170nm,0.9s					
STU	Stuttgart	14.79	323	ePn	Pn	02 02 07.9 -0.8
STU	Stuttgart	14.79	323	ePn	Pn	02 02 07.9 -0.8
FELD	Feldberg im Sc	14.81	318	eP	Pn	02 02 08.1 -0.8
BBS	Basel-Blauen	14.83	316	eP	Pn	02 02 09.6 +0.4
KIZ	Kirchzarten	14.90	318	P	Pn	02 02 09.3 -0.9
LBG	Lerchenberg	14.91	322	P	Pn	02 02 10.0 -0.2
BFO	Black Forest	14.92	320	Pn	Pn	02 02 10.6 +0.2
	comp=Z,564nm,0.8s,SNR=6.3					
BFO	Black Forest	14.92	320	eP	Pn	02 02 08.1 -2.3
	comp=Z,71nm,0.9s					
BFO	Black Forest	14.92	320	eP	Pn	02 02 08.1 -2.3
BFO				pmax	pmax	
	comp=Z,71nm,0.9s					
TBKS	Tabuk	14.95	125	P	Pn	02 02 08.9 -2.0
LOMF	Lomont	15.15	314	eP	Pn	02 02 13.9 +0.6
LOMF	Lomont	15.15	314	eP	Pn	02 02 13.9 +0.6
MOX	Moxa	15.16	332	eP	Pn	02 02 13.0 -0.4
MOX				e		02 02 18.0
MOX				e		02 04 52.2
MOX						
	comp=Z,600nm,18.0s					
MOX	Moxa	15.16	332	eP	Pn	02 02 12.1 -1.3
	comp=Z,64nm,0.8s					
MOX	Moxa	15.16	332	eP	Pn	02 02 13.0 -0.4
MOX				e		02 02 18.0
MOX				e		02 04 52.2
CABF	La Chapelle	15.19	311	eP	Pn	02 02 13.0 -0.8
	comp=Z,160nm,0.7s					
CABF	La Chapelle	15.19	311	eP	Pn	02 02 13.0 -0.8
CABF				pmax	pmax	
	comp=Z,80nm,0.7s					
CABF	La Chapelle	15.19	311	eP	Pn	02 02 13.0 -0.8
	comp=Z,80nm,0.7s					
CLL	Collm	15.24	336	eP	Pn	02 02 14.3 -0.1
	comp=Z,250nm,1.2s					
CLL	Collm	15.24	336	eP	Pn	02 02 15.0 +0.6
CLL				e		02 02 18.0
CLL				i		02 02 19.0
CLL				eS	S	02 05 08.0 -6.0
CLL	Collm	15.24	336	eP	Pn	02 02 15.0 +0.6
CLL				e		02 02 18.0
CLL				i		02 02 19.0
	comp=Z,188nm,0.9s					
CLL				i		02 02 22.6
CLL				eS	S	02 05 08.0 -6.0
CLL				⇑iScP	ScP	02 10 40.4 -1.3
	comp=Z,12nm,0.9s					
CLL				e(PcS)		02 10 47.0
CLL	Collm	15.24	336	eP	Pn	02 02 15.0 +0.6
MOF	Molkenrain	15.26	316	eP	Pn	02 02 15.1 +0.3
MOF	Molkenrain	15.26	316	eP	Pn	02 02 15.1 +0.3
VIVF	Saint-Julien-I	15.32	303	eP	Pn	02 02 15.6 +0.1
	comp=Z,27nm,0.6s					
VIVF	Saint-Julien-I	15.32	303	eP	Pn	02 02 15.6 +0.1
VIVF				pmax	pmax	
	comp=Z,14nm,0.6s					
VIVF	Saint-Julien-I	15.32	303	eP	Pn	02 02 15.6 +0.1
	comp=Z,14nm,0.6s					
HINF	Hinteralfeld	15.40	316	eP	Pn	02 02 15.1 -1.3
	comp=Z,143nm,0.8s					
HINF	Hinteralfeld	15.40	316	eP	Pn	02 02 15.1 -1.3
HINF				pmax	pmax	
	comp=Z,72nm,0.8s					
HINF	Hinteralfeld	15.40	316	eP	Pn	02 02 15.1 -1.3
	comp=Z,72nm,0.8s					
ECH	Echery	15.47	318	eP	Pn	02 02 17.4 +0.1
ECH	Echery	15.47	318	eP	Pn	02 02 15.6 -1.7
ECH				e		02 04 56.0
ECH				pmax	pmax	
	comp=Z,32nm,0.8s					
ECH	Echery	15.47	318	ePn	Pn	02 02 15.6 -1.7
	comp=Z,32nm,0.8s					
ECH				eSn	Sn	02 04 56.0 -12
ECH	Echery	15.47	318	ePn	Pn	02 02 15.6 -1.7
	comp=Z,32nm,0.8s					
ECH	Echery	15.47	318	eP	Pn	02 02 17.4 +0.1
SWS	Schriesheim-Wi	15.52	324	P	Pn	02 02 19.4 +1.5
SWS	Schriesheim-Wi	15.52	324	P	Pn	02 02 19.4 +1.5
CDF	Champ du Feu	15.52	318	eP	Pn	02 02 16.5 -1.5
	comp=Z,131nm,0.9s					
CDF	Champ du Feu	15.52	318	eP	Pn	02 02 16.5 -1.5
CDF				pmax	pmax	
	comp=Z,65nm,0.9s					
CDF	Champ du Feu	15.52	318	eP	Pn	02 02 16.5 -1.5
	comp=Z,65nm,0.9s					
CDF				Pn	Pn	02 02 20.5 +2.5
CDF	Champ du Feu	15.52	318	Pn	Pn	02 02 20.5 +2.5
TOD	Tromm	15.55	324	eP	Pn	02 02 19.3 +0.9
TOD	Tromm	15.55	324	eP	Pn	02 02 19.3 +0.9
SSB	Saint Sauveur	15.57	305	eP	Pn	02 02 17.4 -1.2
SSB				pmax	pmax	
	comp=Z,12nm,0.6s					
SSB	Saint Sauveur	15.57	305	ePn	Pn	02 02 17.4 -1.2
	comp=Z,12nm,0.6s					
SSB	Saint Sauveur	15.57	305	ePn	Pn	02 02 17.4 -1.2
	comp=Z,12nm,0.6s					
LANF	Langenberg	15.61	321	P	Pn	02 02 20.2 +1.1
LANF	Langenberg	15.61	321	P	Pn	02 02 20.2 +1.1
LASF	Ste Croix	15.61	300	eP	Pn	02 02 18.6 -0.6
	comp=Z,61nm,0.9s					
ETOS	Mallorca	15.68	284	P	Pn	02 02 20.8 +0.6
	comp=Z,15nm,0.8s					
ETOS	Mallorca	15.68	284	P	Pn	02 02 20.8 +0.6
	comp=Z,15nm,0.8s					
KTD	Kalmit	15.70	322	eP	Pn	02 02 23.9 +3.7
KTD	Kalmit	15.70	322	eP	Pn	02 02 23.9 +3.7
HAU	Haudompre	15.78	316	eP	Pn	02 02 21.6 +0.3
	comp=Z,128nm,0.6s					
HAU				eMLR	MLR	
	comp=Z,516nm,22.2s					
HAU	Haudompre	15.78	316	eP	Pn	02 02 21.6 +0.3
HAU				pmax	pmax	
	comp=Z,64nm,0.6s					
HAU	Haudompre	15.78	316	eP	Pn	02 02 21.6 +0.3
	comp=Z,64nm,0.6s					
HAU	Haudompre	15.78	316	eP	Pn	02 02 21.6 +0.3
	comp=Z,64nm,0.6s					
EMHD	Djebel Mahouad	15.89	271	P	Pn	02 02 25.0 +2.2
EMHD	Djebel Mahouad	15.89	271	P	Pn	02 02 25.0 +2.2
WJHS		15.90	130	P	Pn	02 02 20.2 -2.8
EJON	La Jonquera	15.90	293	P	Pn	02 02 22.6 -0.3
	comp=Z,4.7nm,0.6s					
EJON	La Jonquera	15.90	293	P	Pn	02 02 22.6 -0.3
	comp=Z,4.7nm,0.6s					
UBBA	Unterbreizbach	15.93	329	eP	Pn	02 02 23.1 0.0
	comp=Z,43nm,1.3s					
GKP	Gorka Klasztor	16.01	348	eP	Pn	02 02 25.3 +1.2
GKP				eS	S	02 05 27.8 -2.0
GKP	Gorka Klasztor	16.01	348	eP	Pn	02 02 25.3 +1.1
GKP				eS	S	02 05 27.8 -2.0
RUE	Ruedersdorf	16.04	340	eP	Pn	02 02 24.6 +0.1
	comp=Z,220nm,0.9s					
RUE	Ruedersdorf	16.04	340	ePn	Pn	02 02 23.4 -1.1
	comp=Z,333nm,1.1s					
RUE	Ruedersdorf	16.04	340	ePn	Pn	02 02 23.4 -1.1
	comp=Z,333nm,1.1s					
CFON	Fontmartina	16.13	291	P	Pn	02 02 25.3 -0.4
	comp=Z,8.4nm,0.7s					
CFON	Fontmartina	16.13	291	P	Pn	02 02 25.3 -0.4
	comp=Z,8.4nm,0.7s					
TNS	Taunus Mts	16.15	325	eP	Pn	02 02 26.9 +1.0
	comp=Z,119nm,0.6s					
TNS	Taunus Mts	16.15	325	eP	Pn	02 02 26.9 +1.0
TNS				pmax	pmax	
	comp=Z,119nm,0.6s					
TNS	Taunus Mts	16.15	325	eP	Pn	02 02 26.9 +1.0
	comp=Z,119nm,0.6s					
BIDS	Bi'r al Bayda'	16.15	128	P	Pn	02 02 25.4 -0.8
BIDS	Bi'r al Bayda'	16.15	128	P	Pn	02 02 25.4 -0.7
LRDF	Laroque-de-Fa	16.25	295	eP	Pn	02 02 26.6 -0.7
LRDF	Laroque-de-Fa	16.25	295	eP	Pn	02 02 26.6 -0.7
TVAN	Van	16.28	81	iP	Pn	02 02 27.2 -0.5
TVAN	Van	16.28	81	iP	Pn	02 02 27.2 -0.5
SUW	Suwalki	16.30	1	eP	Pn	02 02 26.4 -1.3
SUW				e		02 02 28.8
SUW				eS	S	02 05 31.1 -4.4
SUW	Suwalki	16.30	1	eP	Pn	02 02 27.5 -0.2
SUW				e		02 05 25.6
SUW				pmax	pmax	
	comp=Z,665nm,0.8s					
SUW	Suwalki	16.30	1	ePn	Pn	02 02 27.5 -0.2
	comp=Z,666nm,0.8s					
SUW				eSn	Sn	02 05 25.6 -2.1
SUW	Suwalki	16.30	1	eP	Pn	02 02 27.5 -0.2
	comp=Z,665nm,0.8s					
SUW				eSn	Sn	02 05 25.6 -2.1
KIV	Kislovodsk	16.31	61	P	Pn	02 02 30.6 +2.6
	comp=Z,919nm,1.3s,SNR=21					
KIV	Kislovodsk	16.31	61	c iP	Pn	02 02 29.3 +1.3
KIV				eS	S	02 05 31.1 -4.9
KIV				pmax	pmax	
	comp=Z,209nm,1.2s					
KIV				MLR	MLR	
	comp=Z,56nm,11.0s					
KIV	Kislovodsk	16.31	61	ePn	Pn	02 02 28.6 +0.7
	comp=Z,289nm,1.3s					
KIV				ePcP	PcP	02 07 17.0 +0.3
KIV	Kislovodsk	16.31	61	P	Pn	02 02 29.7 +1.8
KIV				P		02 02 29.7
	SNR=66					
KIV	Kislovodsk	16.31	61	ePn	Pn	02 02 28.6 +0.7
	comp=Z,289nm,1.3s					
KIV	Kislovodsk	16.31	61	i P	Pn	02 02 29.3 +1.3
	comp=Z,209nm,1.2s					
KIV	Kislovodsk	16.31	61	ePcP	PcP	02 07 17.0 +0.3
ABH	Alteburg	16.33	323	eP	Pn	02 02 29.3 +1.1
ABH	Alteburg	16.33	323	eP	Pn	02 02 29.3 +1.1
LBL	Lubilhac	16.40	303	eP	Pn	02 02 29.6 +0.5
LBL	Lubilhac	16.40	303	eP	Pn	02 02 29.6 +0.5
PLDF	La Plantade	16.43	306	eP	Pn	02 02 31.7 +2.3
PLDF	La Plantade	16.43	306	eP	Pn	02 02 31.7 +2.3
VALF	Valcebollere	16.53	293	eP	Pn	02 02 32.1 +1.4
VALF	Valcebollere	16.53	293	eP	Pn	02 02 32.1 +1.4
ONI	Oni	16.55	66	P	Pn	02 02 33.3 +2.3
MTLF	Montolieu	16.57	296	eP	Pn	02 02 30.7 -0.5
	comp=Z,58nm,1.0s					
MTLF	Montolieu	16.57	296	eP	Pn	02 02 30.7 -0.5
MTLF				pmax	pmax	
	comp=Z,29nm,1.0s					
MTLF	Montolieu	16.57	296	eP	Pn	02 02 30.7 -0.5
	comp=Z,29nm,1.0s					
MTLF	Montolieu	16.57	296	eP	Pn	02 02 30.7 -0.5
	comp=Z,29nm,1.0s					
SMF	Signal de Mont	16.57	309	eP	Pn	02 02 31.8 +0.6
	comp=Z,68nm,0.6s					
SMF	Signal de Mont	16.57	309	eP	Pn	02 02 31.8 +0.6
SMF				pmax	pmax	
	comp=Z,34nm,0.6s					
SMF	Signal de Mont	16.57	309	eP	Pn	02 02 31.8 +0.6
	comp=Z,34nm,0.6s					
SMF	Signal de Mont	16.57	309	eP	Pn	02 02 31.8 +0.6
	comp=Z,34nm,0.6s					
CLLI	Llivia	16.58	293	P	Pn	02 02 32.0 +0.7
CLLI	Llivia	16.58	293	P	Pn	02 02 32.0 +0.7
CLZ	Clausthal	16.59	332	eP	Pn	02 02 32.2 +0.8
	comp=Z,147nm,1.0s					
CLZ	Clausthal	16.59	332	eP	Pn	02 02 32.2 +0.8
CLZ				pmax	pmax	
	comp=Z,147nm,1.0s					
CLZ	Clausthal	16.59	332	eP	Pn	02 02 32.2 +0.8
	comp=Z,147nm,1.0s					
HAKT	HAKKARI	16.61	84	i P	Pn	02 02 32.4 +0.7
HAKT	HAKKARI	16.61	84	i P	Pn	02 02 32.4 +0.7
AGO	Saint Agoulin	16.78	306	eP	Pn	02 02 35.5 +1.8
AGO	Saint Agoulin	16.78	306	eP	Pn	02 02 35.5 +1.8
MEZF	Maizieres J'vi	16.78	316	eP	Pn	02 02 35.2 +1.5
	comp=Z,215nm,0.9s,baz=115					
MEZF	Maizieres J'vi	16.78	316	eP	Pn	02 02 35.2 +1.5
	comp=Z,215nm,0.9s					
MEZF	Maizieres J'vi	16.78	316	eP	Pn	02 02 35.2 +1.5
	comp=Z,108nm,0.9s,baz=115					
EIBI	Ibiza	16.83	281	P	Pn	02 02 35.2 +0.7
	comp=Z,9.2nm,0.8s					
EIBI	Ibiza	16.83	281	P	Pn	02 02 35.2 +0.7
	comp=Z,9.2nm,0.8s					
LOR	Lormes	16.84	310	eP	Pn	02 02 33.6 -0.9
	comp=Z,62nm,0.6s,baz=129					
LOR				eMLR	MLR	
	comp=Z,350nm,20.2s					
LOR	Lormes	16.84	310	eP	Pn	02 02 33.6 -0.9
LOR				pmax	pmax	
	comp=Z,31nm,0.6s					
LOR	Lormes	16.84	310	eP	Pn	02 02 33.6 -0.9
	comp=Z,31nm,0.6s					
LOR				Pn	Pn	02 02 37.0 +2.5
LOR	Lormes	16.84	310	eP	Pn	02 02 33.6 -0.9
	comp=Z,31nm,0.6s,baz=129					
WLF	Walferdange	16.88	320	P	Pn	02 02 36.9 +2.0
	comp=Z,50nm,1.5s					
WLF	Walferdange	16.88	320	eP	Pn	02 02 35.4 +0.5
	comp=Z,73nm,1.0s					
WLF	Walferdange	16.88	320	eP	Pn	02 02 35.8 +0.9
WLF				pmax	pmax	
	comp=Z,86nm,1.1s					
WLF	Walferdange	16.88	320	eP	Pn	02 02 35.8 +0.9
	comp=Z,86nm,1.1s					
WLF	Walferdange	16.88	320	eP	Pn	02 02 35.8 +0.9
	comp=Z,86nm,1.1s					
ZEI	Tsey	16.91	66	⇑iP	Pn	02 02 38.6 +3.2
ZEI				pmax	pmax	
	comp=Z,153nm,0.9s					
AVF	Avril sur Loir	16.94	308	eP	Pn	02 02 35.7 0.0
	comp=Z,102nm,0.8s					
AVF	Avril sur Loir	16.94	308	eP	Pn	02 02 35.7 0.0
AVF				pmax	pmax	
	comp=Z,51nm,0.8s					
AVF	Avril sur Loir	16.94	308	eP	Pn	02 02 35.7 0.0
	comp=Z,51nm,0.8s					
AVF				Pn	Pn	02 02 39.0 +3.3
AVF	Avril sur Loir	16.94	308	eP	Pn	02 02 35.7 0.0
	comp=Z,51nm,0.8s					
GOR	Gori	16.94	69	P	Pn	02 02 37.6 +1.8
SSF	Saint Saulge	16.96	309	eP	Pn	02 02 35.2 -0.8
	comp=Z,163nm,0.7s					
SSF	Saint Saulge	16.96	309	eP	Pn	02 02 35.2 -0.8
SSF				pmax	pmax	
	comp=Z,82nm,0.7s					
SSF	Saint Saulge	16.96	309	eP	Pn	02 02 35.2 -0.8
	comp=Z,82nm,0.7s					
SSF	Saint Saulge	16.96	309	eP	Pn	02 02 35.2 -0.8
	comp=Z,82nm,0.7s					
EBNR	Beni Rached	17.00	272	P	Pn	02 02 38.0 +1.4
EBNR	Beni Rached	17.00	272	P	Pn	02 02 38.0 +1.4
CAF	Calviac	17.09	301	eP	Pn	02 02 37.6 0.0
	comp=Z,90nm,0.9s					
CAF	Calviac	17.09	301	eP	Pn	02 02 37.6 0.0
CAF				pmax	pmax	
	comp=Z,45nm,0.9s					
CAF	Calviac	17.09	301	eP	Pn	02 02 37.6 0.0
	comp=Z,45nm,0.9s					
CAF	Calviac	17.09	301	eP	Pn	02 02 37.6 0.0
	comp=Z,45nm,0.9s					
EPOB	Poblet	17.09	289	P	Pn	02 02 37.5 -0.1
	comp=Z,9.5nm,0.8s					
EPOB	Poblet	17.09	289	P	Pn	02 02 37.5 -0.2
	comp=Z,9.5nm,0.8s					
MNK	Minsk	17.14	10	⇑iP	Pn	02 02 32.0 -6.1
MNK				eS	S	02 05 35.0 -18
MNK				pmax	pmax	
	comp=Z,250nm,1.5s					
MNK				pmax	pmax	
	comp=N,380nm,1.5s					
MICGM	Minsk	17.15	10	⇑iP	Pn	02 02 32.0 -6.2
BGF	Bois d'Agland	17.16	307	eP	Pn	02 02 37.5 -0.9
	comp=N,115nm,0.8s					
BGF	Bois d'Agland	17.16	307	eP	Pn	02 02 37.5 -0.9
BGF				pmax	pmax	
	comp=Z,57nm,0.8s					
BGF	Bois d'Agland	17.16	307	eP	Pn	02 02 37.5 -0.9
	comp=Z,57nm,0.8s					
BGF	Bois d'Agland	17.16	307	eP	Pn	02 02 37.5 -0.9
	comp=Z,57nm,0.8s					
ECHA	Ech Chlef	17.16	271	P	Pn	02 02 43.0 +4.5
CSOR	Sort	17.17	292	P	Pn	02 02 39.1 +0.5
	comp=Z,15nm,1.0s					
CSOR	Sort	17.17	292	P	Pn	02 02 39.1 +0.5
	comp=Z,15nm,1.0s					
NRDL	Niedersach Rie	17.21	333	eP	Pn	02 02 39.1 +0.1
	comp=Z,62nm,1.0s					
GNI	Garni	17.28	75	P	Pn	02 02 41.7 +1.7
	comp=Z,3.9nm,0.3s,baz=305,slow=3.7,SNR=54					
GNI				LR	LR	02 10 26.1
	comp=Z,316nm,19.1s,baz=69,slow=41					
GNI				ScP	ScP	02 10 45.2 -0.7
	comp=Z,0.4nm,0.3s,baz=7.6,slow=2.7,SNR=3.3					
GNI	Garni	17.28	75	c iP	Pn	02 02 41.6 +1.6
GNI				pmax	pmax	
	comp=Z,362nm,1.7s					
GNI	Garni	17.28	75	eP	Pn	02 02 41.6 +1.6
	comp=Z,274nm,1.3s					
GNI	Garni	17.28	75	P	Pn	02 02 42.8 +2.8
	SNR=80					
GNI				P		02 02 42.8
	SNR=80					
GNI	Garni	17.28	75	P	Pn	02 02 41.2 +1.2
	SNR=48					
TBLG	Delisi	17.38	70	P	Pn	02 02 43.4 +2.3
TBLG	Delisi	17.38	70	P	Pn	02 02 43.4 +2.3
NACGM	Naroch	17.40	8	eP	Pn	02 02 37.0 -4.3
MTA	Mtatsminda	17.41	70	P	Pn	02 02 43.0 +1.4
EANR	'Ain N'Sour	17.41	271	P	Pn	02 02 43.5 +1.9
EANR	'Ain N'Sour	17.41	271	P	Pn	02 02 43.5 +1.9
TCF	Toulx Ste Croi	17.46	306	eP	Pn	02 02 42.2 +0.1
	comp=Z,26nm,0.8s					
TCF	Toulx Ste Croi	17.46	306	eP	Pn	02 02 42.2 +0.1
TCF				pmax	pmax	
	comp=Z,13nm,0.8s					
TCF	Toulx Ste Croi	17.46	306	eP	Pn	02 02 42.2 +0.1
	comp=Z,13nm,0.8s					
TCF	Toulx Ste Croi	17.46	306	eP	Pn	02 02 42.2 +0.1
	comp=Z,13nm,0.8s					
MELF	Melles	17.52	294	eP	Pn	02 02 45.0 +2.1
MELF	Melles	17.52	294	eP	Pn	02 02 45.0 +2.1
BUG	Bochum--Univer	17.54	326	eP	Pn	02 02 44.1 +1.0
	comp=Z,80nm,0.9s					
MEM	Membach	17.56	323	P	Pn	02 02 44.8 +1.6
	comp=Z,36nm,1.0s					
MEM	Membach	17.56	323	P	Pn	02 02 44.7 +1.5
	comp=Z,36nm,1.0s					
UMJS	Umm Lajj	17.56	131	P	Pn	02 02 41.6 -1.9
UMJS	Umm Lajj	17.56	131	P	Pn	02 02 41.6 -1.9
RJF	Les Rejaudoux	17.58	302	eP	Pn	02 02 43.4 -0.1
	comp=Z,113nm,1.1s					
RJF				eMLR	MLR	
	comp=Z,240nm,17.0s					
RJF	Les Rejaudoux	17.58	302	eP	Pn	02 02 43.4 -0.1
RJF				pmax	pmax	
	comp=Z,57nm,1.1s					
RJF	Les Rejaudoux	17.58	302	eP	Pn	02 02 43.4 -0.1
	comp=Z,56nm,1.1s					
RJF	Les Rejaudoux	17.58	302	eP	Pn	02 02 43.4 -0.1
	comp=Z,56nm,1.1s					
HYF	Humbligny	17.59	309	eP	Pn	02 02 43.9 +0.3
HYF	Humbligny	17.59	309	eP	Pn	02 02 43.9 +0.3
ERTA	Horta de San J	17.62	288	P	Pn	02 02 44.8 +0.7
	comp=Z,6.6nm,0.6s					
ERTA	Horta de San J	17.62	288	P	Pn	02 02 44.8 +0.6
	comp=Z,6.6nm,0.6s					
HGN	Heimansgroeve	17.69	323	⇑iP	Pn	02 02 45.2 +0.3
	comp=Z,63nm,1.1s					
VORD	Divnogorie	17.70	36	eP	Pn	02 02 45.0 0.0
VORD				eS	S	02 05 58.3 -4.4
VORD				pmax	pmax	
	comp=Z,90nm,1.0s					
VORD				pmax	pmax	
	comp=N,50nm,0.6s					
VORD				pmax	pmax	
	comp=E,60nm,0.9s					
VORD				smax		
	comp=N,230nm,7.8s					
VORD				smax		
	comp=Z,390nm,8.7s					
VORD				smax		
	comp=E,210nm,8.4s					
VORD	Divnogorie	17.70	36	eP	Pn	02 02 45.0 0.0
	comp=E,50nm,0.6s					
BCLA	Clavier	17.78	321	P	Pn	02 02 46.7 +0.8
	comp=Z,34nm,1.7s					
BCLA	Clavier	17.78	321	P	Pn	02 02 46.7 +0.8
	comp=Z,34nm,1.7s					
VSR	Storozhevoye	17.82	36	eP	Pn	02 02 45.8 -0.6
VSR				eS	S	02 06 00.4 -4.8
VSR				pmax	pmax	
	comp=Z,30nm,0.5s					
VSR				pmax	pmax	
	comp=N,50nm,1.0s					
VSR				pmax	pmax	
	comp=E,50nm,1.0s					
VSR				smax		
	comp=N,260nm,8.3s					
VSR				smax		
	comp=Z,440nm,9.1s					
VSR				smax		
	comp=E,230nm,9.7s					
VSR	Storozhevoye	17.82	36	eP	Pn	02 02 45.8 -0.6
	comp=E,30nm,0.5s					
RESF	Ens	17.82	294	eP	Pn	02 02 47.2 +0.7
RESF	Ens	17.82	294	eP	Pn	02 02 47.2 +0.7
GIVF	Givet	17.83	320	eP	Pn	02 02 46.7 +0.2
	comp=E,197nm,1.0s					
GIVF	Givet	17.83	320	eP	Pn	02 02 46.7 +0.2
GIVF				pmax	pmax	
	comp=Z,98nm,1.0s					
GIVF	Givet	17.83	320	eP	Pn	02 02 46.7 +0.2
	comp=Z,98nm,1.0s					
GIVF	Givet	17.83	320	eP	Pn	02 02 46.7 +0.2
	comp=Z,98nm,1.0s					
BEBN	Eben Emael	17.84	323	P	Pn	02 02 48.4 +1.7
	comp=Z,22nm,1.5s					
BEBN	Eben Emael	17.84	323	P	Pn	02 02 48.3 +1.7
	comp=Z,22nm,1.5s					
EPF	Esparros	17.86	294	eP	Pn	02 02 45.1 -1.8
	comp=Z,21nm,0.7s					
EPF	Esparros	17.86	294	eP	Pn	02 02 45.1 -1.8
EPF				pmax	pmax	
	comp=Z,11nm,0.7s					
EPF	Esparros	17.86	294	eP	Pn	02 02 45.1 -1.8
	comp=Z,11nm,0.7s					
EPF	Esparros	17.86	294	eP	Pn	02 02 45.1 -1.8
	comp=Z,11nm,0.7s					
DOU	Dourbes	17.94	319	P	Pn	02 02 47.7 -0.2
	comp=Z,48nm,1.2s					
DOU	Dourbes	17.94	319	P	Pn	02 02 47.6 -0.3
	comp=Z,48nm,1.2s					
EBIE	Bielsa	17.94	293	P	Pn	02 02 46.7 -1.3
	comp=Z,11nm,0.6s					
EBIE	Bielsa	17.94	293	P	Pn	02 02 46.7 -1.3
	comp=Z,11nm,0.6s					
IBBN	Ibbenburen	17.97	329	eP	Pn	02 02 48.5 +0.3
	comp=Z,54nm,1.0s					
LFF	La Frestale	18.00	301	eP	Pn	02 02 48.3 -0.3
	comp=Z,55nm,0.8s					
LFF	La Frestale	18.00	301	eP	Pn	02 02 48.3 -0.3
LFF				pmax	pmax	
	comp=Z,27nm,0.8s					
LFF	La Frestale	18.00	301	eP	Pn	02 02 48.3 -0.3
	comp=Z,28nm,0.8s					
LFF	La Frestale	18.00	301	eP	Pn	02 02 48.3 -0.3
	comp=Z,28nm,0.8s					
RGN	Rugen	18.02	342	eP	Pn	02 02 48.2 -0.6
	comp=Z,209nm,0.8s					
RGN	Rugen	18.02	342	eP	Pn	02 02 47.9 -0.9
	comp=Z,160nm,0.7s					
RGN	Rugen	18.02	342	eP	Pn	02 02 47.9 -0.9
	comp=Z,160nm,0.7s					
ISHB	Shabestar	18.03	81	eP	Pn	02 02 49.0 -0.1
ISHB	Shabestar	18.03	81	eP	Pn	02 02 49.0 -0.1
LABF	Labassere	18.05	294	eP	Pn	02 02 49.8 +0.5
LABF	Labassere	18.05	294	eP	Pn	02 02 49.8 +0.5
VIEF	Viey	18.06	294	eP	Pn	02 02 49.6 +0.2
VIEF	Viey	18.06	294	eP	Pn	02 02 49.6 +0.2
IMRD	Marand	18.07	80	eP	Pn	02 02 49.3 -0.2
IMRD	Marand	18.07	80	eP	Pn	02 02 49.3 -0.2
EBEN	Beniarda	18.07	280	P	Pn	02 02 49.5 -0.1
	comp=Z,3.1nm,

BSD *i* 02 06 11.7
BSD pmax pmax
comp=Z,110nm,0.8s
BSD MLR MLR
comp=Z,260nm,19.0s
BSD Bornholm Skovb 18.19 345⇑*i*P Pn 02 02 48.4 -2.5
comp=Z,114nm,0.8s
BSD *i* 02 06 11.7
BSD
comp=Z,250nm,19.0s
BSD Bornholm Skovb 18.19 345⇑*i*P Pn 02 02 48.5 -2.4
comp=Z,115nm,0.8s,SNR=46
BSD *i*S **S 02 06 11.7 -2.2**
comp=Z,260nm,19.0s
EMOS Mosqueruela 18.22 286 P **Pn 02 02 53.0 +1.6**
comp=Z,6.9nm,0.6s
BSEG Bad Segeberg 18.34 336 *e*P **Pn 02 02 51.6 -1.0**
comp=Z,107nm,1.1s
BSEG Bad Segeberg 18.34 336 *e*P **Pn 02 02 51.6 -1.0**
SNF Seneffe 18.35 320 P **Pn 02 02 53.0 +0.2**
SNF Seneffe 18.35 320 P **Pn 02 02 53.0 +0.2**
IAZR Azarshahr 18.39 83 *e*P **Pn 02 02 53.4 0.0**
IAZR Azarshahr 18.39 83 *e*P **Pn 02 02 53.4 0.0**
REYF Montagne du Re 18.39 294 *e*P **Pn 02 02 53.4 0.0**
REYF Montagne du Re 18.39 294 *e*P **Pn 02 02 53.4 0.0**
ETSF Etsaut 18.49 294 *e*P **Pn 02 02 53.7 -0.8**
comp=Z,31nm,0.5s
ETSF Etsaut 18.49 294 *e*P **Pn 02 02 53.7 -0.8**
ETSF pmax pmax
comp=Z,16nm,0.5s
ETSF Etsaut 18.49 294 *e*P **Pn 02 02 53.7 -0.8**
comp=Z,16nm,0.5s
ETSF Etsaut 18.49 294 *e*P **Pn 02 02 53.7 -0.8**
comp=Z,16nm,0.5s
UCC Uccle 18.49 321 P **Pn 02 02 54.5 0.0**
comp=Z,66nm,1.5s
UCC Uccle 18.49 321 P **Pn 02 02 54.4 -0.1**
comp=Z,66nm,1.5s
ATE Arette 18.62 294 *e*P **Pn 02 02 55.1 -1.0**
ATE Arette 18.62 294 *e*P **Pn 02 02 55.1 -1.0**
CART Cartagena 18.80 277 *e*P **Pn 02 02 56.1 -2.1**
comp=Z,43nm,0.9s
CART Cartagena 18.80 277 *e*P **Pn 02 02 56.1 -2.2**
comp=Z,43nm,0.9s
LARF Larrau 18.82 294 *e*P **Pn 02 02 57.1 -1.4**
LARF Larrau 18.82 294 *e*P **Pn 02 02 57.1 -1.4**
VRHR Novokhopersk 18.92 39 *e*P **Pn 02 02 58.8 -0.8**
VRHR *e*S **S 02 06 26.9 -1.7**
VRHR pmax pmax
comp=Z,550nm,0.5s
VRHR pmax pmax
comp=N,320nm,1.0s
VRHR pmax pmax
comp=E,540nm,1.2s
VRHR smax
comp=N,240nm,2.0s
VRHR smax
comp=Z,30nm,0.6s
VRHR smax
comp=E,180nm,1.0s
VRHR Novokhopersk 18.92 39 *e*P **Pn 02 02 58.8 -0.8**
comp=E,320nm,1.0s
VRHR *e*S **S 02 06 26.9 -1.7**
comp=E,30nm,0.6s
SJPF Ste Jean 19.00 294 *e*P **Pn 02 02 59.9 -0.8**
comp=E,76nm,0.8s
SJPF Ste Jean 19.00 294 *e*P **Pn 02 02 59.9 -0.8**
SJPF pmax pmax
comp=Z,38nm,0.8s
SJPF Ste Jean 19.00 294 *e*P **Pn 02 02 59.9 -0.8**
comp=Z,38nm,0.8s
SJPF Ste Jean 19.00 294 *e*P **Pn 02 02 59.9 -0.8**
comp=Z,38nm,0.8s
MFF Saint Martin d 19.09 305⇑*i*P Pn 02 03 00.8 -0.9
comp=Z,95nm,0.6s
MFF Saint Martin d 19.09 305⇑*i*P Pn 02 03 00.8 -0.9
MFF pmax pmax
comp=Z,48nm,0.6s
MFF Saint Martin d 19.09 305⇑*i*P Pn 02 03 00.8 -0.9
comp=Z,48nm,0.6s
MFF Saint Martin d 19.09 305⇑*i*P Pn 02 03 00.8 -0.9
comp=Z,48nm,0.6s
ETOB Tobarra 19.11 280 P **Pn 02 02 59.4 -2.6**
comp=Z,5.0nm,0.6s
ETOB Tobarra 19.11 280 P **Pn 02 02 59.4 -2.6**
comp=Z,5.0nm,0.6s
IHRS Heris 19.15 81 *e*P **Pn 02 03 00.5 -1.9**
EALK Alkurruntz 19.22 294 P **Pn 02 03 01.7 -1.5**
comp=Z,8.6nm,0.5s
EALK Alkurruntz 19.22 294 P **Pn 02 03 01.7 -1.6**
comp=Z,8.6nm,0.5s
ELIZ Elizondo 19.23 294 P **Pn 02 03 02.3 -1.0**
ELIZ pmax pmax
comp=Z,16nm,0.5s
ELIZ Elizondo 19.23 294 P **Pn 02 03 02.3 -1.0**
comp=Z,16nm,0.5s
ELIZ Elizondo 19.23 294 P **Pn 02 03 02.3 -1.0**
comp=Z,16nm,0.5s
COP Copenhagen 19.27 342⇑*i*P Pn 02 03 02.2 -1.5
COP *i*S **S 02 06 37.7 +2.1**
COP pmax pmax
comp=Z,59nm,0.9s
COP MLR MLR
comp=Z,100nm,19.0s
COP Copenhagen 19.27 342⇑*i*P Pn 02 03 02.2 -1.5
comp=Z,59nm,0.9s
COP *i*S **S 02 06 37.7 +2.1**
COP
comp=Z,100nm,19.0s
COP Copenhagen 19.27 342⇑*i*P Pn 02 03 02.2 -1.5
comp=Z,59nm,0.9s,SNR=40
IDHR Dehrash 19.31 92 *e*P **Pn 02 03 02.4 -1.9**
IDHR Dehrash 19.31 92 *e*P **Pn 02 03 02.4 -1.9**
HLG Helgoland 19.37 333 *e*P **Pn 02 03 02.8 -2.1**
comp=Z,415nm,0.7s
ETOR Torete 19.43 287 P **Pn 02 03 04.1 -1.6**
ETOR pmax pmax
comp=Z,73nm,0.6s
ETOR Torete 19.43 287 P **Pn 02 03 04.1 -1.7**
comp=Z,73nm,0.6s
ETOR Torete 19.43 287 P **Pn 02 03 04.1 -1.6**
comp=Z,73nm,0.6s
MAK Makhachkala 19.56 67⇓*i*P Pn 02 03 07.3 +0.1
MAK *e* 02 06 45.2
MAK pmax pmax
comp=E,790nm,0.8s
MAK pmax pmax
comp=Z,3μm,1.6s
MAK pmax pmax
comp=N,824nm,0.8s
MAK MLR MLR
comp=Z,405nm,16.0s
ISRB Sarab 19.69 82 *e*P **Pn 02 03 05.5 -3.4**
ISRB Sarab 19.69 82 *e*P **Pn 02 03 05.5 -3.4**
ILIN Lien 19.70 91 *e*P **Pn 02 03 06.4 -2.6**
ILIN Lien 19.70 91 *e*P **Pn 02 03 06.4 -2.6**
IVIS Veis 19.72 92 *e*P **Pn 02 03 06.1 -3.1**
IVIS Veis 19.72 92 *e*P **Pn 02 03 06.1 -3.1**
OBN Obninsk 19.77 24 P **Pn 02 03 06.6 -3.0**
comp=Z,2μm,1.2s,SNR=19
OBN Obninsk 19.77 24*c i*P **Pn 02 03 06.5 -3.1**
OBN *i*S **S 02 06 42.2 -3.4**
OBN pmax pmax
comp=Z,424nm,1.6s
OBN MLR MLR
comp=Z,400nm,18.0s
OBN Obninsk 19.77 24 *e*P **Pn 02 03 06.7 -2.9**
comp=Z,231nm,0.9s
OBN *e*S **S 02 06 41.4 -4.1**
OBN Obninsk 19.77 24 *e*P **Pn 02 03 06.7 -2.9**
comp=Z,231nm,0.9s
LDF La Druitiere 19.83 310⇑*i*P Pn 02 03 08.2 -2.2
comp=Z,271nm,0.6s
LDF La Druitiere 19.83 310⇑*i*P Pn 02 03 08.2 -2.2
LDF pmax pmax
comp=Z,136nm,0.6s
LDF La Druitiere 19.83 310⇑*i*P Pn 02 03 08.2 -2.2
comp=Z,136nm,0.6s
LDF La Druitiere 19.83 310⇑*i*P Pn 02 03 08.2 -2.2
comp=Z,136nm,0.6s
ENIJ Nijar 19.84 275 P **Pn 02 03 07.5 -3.1**
ENIJ pmax pmax
comp=Z,25nm,0.6s
ENIJ Nijar 19.84 275 P **Pn 02 03 07.5 -3.0**
comp=Z,25nm,0.6s
ENIJ Nijar 19.84 275 P **Pn 02 03 07.5 -3.1**
comp=Z,25nm,0.6s
EVIA Vianos 19.85 280 P **Pn 02 03 08.8 -1.9**
EVIA pmax pmax
comp=Z,38nm,0.6s
EVIA Vianos 19.85 280 P **Pn 02 03 08.8 -2.0**
comp=Z,38nm,0.6s
EVIA Vianos 19.85 280 P **Pn 02 03 08.8 -1.9**
comp=Z,38nm,0.6s
ECRI Cripan 19.88 292 P **Pn 02 03 08.8 -2.2**
ECRI Cripan 19.88 292 P **Pn 02 03 08.8 -2.2**
EHUE Huescar 20.02 278 P **P 02 03 10.4 +0.2**
EHUE pmax pmax
comp=Z,6.0nm,0.6s
EHUE Huescar 20.02 278 P **P 02 03 10.4 +0.2**
comp=Z,5.5nm,0.6s
EHUE Huescar 20.02 278 P **P 02 03 10.4 +0.2**
comp=Z,5.5nm,0.6s
FLN La Foliniere 20.12 311⇑*i*P P 02 03 11.1 -0.1
comp=Z,320nm,0.9s,baz=123
FLN *e*MLR MLR
comp=Z,403nm,23.0s
FLN La Foliniere 20.12 311⇑*i*P P 02 03 11.1 -0.1
FLN pmax pmax
comp=Z,160nm,0.9s
FLN MLR MLR
comp=Z,400nm,23.0s
FLN La Foliniere 20.12 311⇑*i*P P 02 03 11.1 -0.1
comp=Z,160nm,0.9s
FLN LR LR
comp=Z,400nm,23.0s
FLN La Foliniere 20.12 311⇑*i*P P 02 03 11.1 -0.1
comp=Z,160nm,0.9s,baz=123
GRR Gorron 20.20 309⇑*i*P P 02 03 11.9 -0.1
comp=Z,205nm,0.7s
GRR Gorron 20.20 309⇑*i*P P 02 03 11.9 -0.1
GRR pmax pmax
comp=Z,103nm,0.7s
GRR Gorron 20.20 309⇑*i*P P 02 03 11.9 -0.1
comp=Z,102nm,0.7s
GRR Gorron 20.20 309⇑*i*P P 02 03 11.9 -0.1
comp=Z,102nm,0.7s
TFO1 Folkestone 20.33 318 *e*P **P 02 03 13.5 +0.1**
TFO1 Folkestone 20.33 318 P **P 02 03 13.5 +0.1**
TFO1 Folkestone 20.33 318 *e*P **P 02 03 13.5 0.0**
IKOM Komasi 20.34 93 *e*P **P 02 03 13.3 -0.5**
IKOM Komasi 20.34 93 *e*P **P 02 03 13.3 -0.5**
EBER Berja 20.39 276 P **P 02 03 14.1 -0.2**
comp=Z,4.4nm,0.5s
EBER Berja 20.39 276 P **P 02 03 14.1 -0.2**
comp=Z,4.4nm,0.5s
EQES Quesada 20.39 278 P **P 02 03 13.6 -0.7**
comp=Z,8.5nm,0.6s
EQES Quesada 20.39 278 P **P 02 03 13.6 -0.7**
comp=Z,8.5nm,0.6s
ELAN Lanestosa 20.62 294 P **P 02 03 16.1 -0.5**
comp=Z,16nm,0.6s
ELAN Lanestosa 20.62 294 P **P 02 03 16.1 -0.6**
comp=Z,16nm,0.6s
MOS Moscow 20.63 24 *e*P **P 02 03 13.5 -3.1**
MOS *e* 02 03 49.3
MOS *i*S **S 02 06 58.5 -4.0**
MOS pmax pmax
comp=Z,300nm,0.8s
MOS pmax pmax
comp=Z,255nm,0.7s
MOS smax
comp=N,600nm,1.7s
EALB Alboran 20.69 273 P **P 02 03 17.7 +0.1**
comp=N,71nm,0.6s
EALB Alboran 20.69 273 P **P 02 03 17.7 +0.2**
comp=N,71nm,0.6s
MUD Monsted U'grnd 20.82 339⇑*i*P P 02 03 18.7 0.0
MUD pmax pmax
comp=Z,92nm,0.9s
MUD MLR MLR
comp=Z,180nm,21.0s
MUD Monsted U'grnd 20.82 339⇑*i*P P 02 03 18.7 0.0
comp=Z,92nm,0.9s
MUD
comp=Z,170nm,21.0s
MUD Monsted U'grnd 20.82 339 *i*P **P 02 03 18.7 0.0**
comp=Z,180nm,21.0s
ECOG Cogollos-Vega 20.86 277 P **P 02 03 20.2 +0.9**
ECOG pmax pmax
comp=Z,11nm,0.7s
ECOG Cogollos-Vega 20.86 277 P **P 02 03 20.2 +0.9**
comp=Z,10nm,0.7s
ECOG Cogollos-Vega 20.86 277 P **P 02 03 20.2 +0.9**
comp=Z,10nm,0.7s
EBAN Banos Encina 20.91 279 P **P 02 03 19.2 -0.6**
EBAN pmax pmax
comp=Z,7.0nm,0.6s
EBAN Banos Encina 20.91 279 P **P 02 03 19.2 -0.6**
comp=Z,7.2nm,0.6s
EBAN Banos Encina 20.91 279 P **P 02 03 19.2 -0.6**
comp=Z,7.2nm,0.6s
ESDC Sonseca Array 20.91 284 P **P 02 03 19.0 -0.8**
comp=Z,63nm,0.6s,baz=77,slow=11,SNR=215
ESDC ScP ScP 02 10 53.7 -0.5
comp=Z,1.6nm,0.8s,baz=77,slow=3.0,SNR=5.9
ESDC LR LR 02 12 03.2
comp=Z,151nm,18.5s,baz=80,slow=38
ESDC Sonseca Array 20.91 284 P **P 02 03 19.3 -0.6**
comp=Z,36nm,0.6s
ESDC Sonseca Array 20.91 284 P **P 02 03 19.3 -0.5**
comp=Z,36nm,0.6s
ESLA Sonseca Array 20.91 284 *e*P **P 02 03 19.3 -0.5**
comp=Z,8.8nm,0.6s
ESLA Sonseca Array 20.91 284 *e*P **P 02 03 19.3 -0.5**
comp=Z,8.8nm,0.6s
VSU Vasula 20.92 6*c i*P **P 02 03 18.4 -1.3**
VSU pmax pmax
comp=Z,446nm,0.7s
VSU Vasula 20.92 6 *i*P **P 02 03 18.4 -1.3**
comp=Z,446nm,0.7s
EGUA Guajares 20.94 276 P **P 02 03 19.7 -0.4**
EGUA pmax pmax
comp=Z,199nm,0.8s
EGUA Guajares 20.94 276 P **P 02 03 19.7 -0.4**
comp=Z,199nm,0.8s
EGUA Guajares 20.94 276 P **P 02 03 19.7 -0.4**
comp=Z,199nm,0.8s
TAM Tamanrasset 20.99 230 *e*P **P 02 03 21.9 +1.1**
TAM pmax pmax
comp=Z,17nm,0.8s
TAM Tamanrasset 20.99 230 *e*P **P 02 03 21.9 +1.2**
comp=Z,18nm,0.8s
TAM Tamanrasset 20.99 230 *e*P **P 02 03 21.9 +1.1**
comp=Z,18nm,0.8s
GUD Guadarrama 21.02 286 P **P 02 03 21.1 +0.1**
GUD pmax pmax
comp=Z,13nm,0.5s,mb4.5
GUD Guadarrama 21.02 286 P **P 02 03 21.1 +0.1**
comp=Z,13nm,0.5s,mb4.5
GUD Guadarrama 21.02 286 P **P 02 03 21.1 +0.1**
comp=Z,13nm,0.5s,mb4.5
ERON Agron 21.09 276 P **P 02 03 24.4 +2.6**
comp=Z,19nm,0.7s,mb4.5
AEU East Anglia Un 21.14 322⇑*e*P P 02 03 22.3 +0.1
AEU East Anglia Un 21.14 322 P **P 02 03 22.3 +0.1**
AEU East Anglia Un 21.14 322⇑*e*P P 02 03 22.3 +0.2
SGMF Saint Gilles 21.20 308⇑*i*P P 02 03 22.4 -0.4
comp=Z,263nm0.7s,mb5.4
SGMF Saint Gilles 21.20 308⇑*i*P P 02 03 22.4 -0.4
SGMF pmax pmax
comp=Z,131nm,0.7s,mb5.4
SGMF Saint Gilles 21.20 308⇑*i*P P 02 03 22.4 -0.4
comp=Z,131nm,0.7s,mb5.4
SGMF Saint Gilles 21.20 308⇑*i*P P 02 03 22.4 -0.4
comp=Z,131nm,0.7s,mb5.4
PAB San Pablo 21.22 283 *e*P **P 02 03 22.2 -0.9**
PAB pmax pmax
comp=Z,38nm,0.7s,mb4.8
PAB San Pablo 21.22 283 *e*P **P 02 03 22.2 -0.9**
comp=Z,38nm,0.7s,mb4.8
PAB San Pablo 21.22 283 *e*P **P 02 03 22.2 -0.9**
comp=Z,38nm,0.7s,mb4.8
ELOJ Sierra Loja 21.34 277 P **P 02 03 26.1 +1.6**
ELOJ pmax pmax
comp=Z,27nm,0.6s,mb4.8
ELOJ Sierra Loja 21.34 277 P **P 02 03 26.1 +1.6**
comp=Z,27nm,0.6s,mb4.8
ELOJ Sierra Loja 21.34 277 P **P 02 03 26.1 +1.6**
comp=Z,27nm,0.6s,mb4.8
ELUQ Luque 21.37 278 P **P 02 03 23.6 -1.1**
ELUQ pmax pmax
comp=Z,49nm,0.6s,mb5.0
ELUQ Luque 21.37 278 P **P 02 03 23.6 -1.1**
comp=Z,49nm,0.6s,mb5.0
ELUQ Luque 21.37 278 P **P 02 03 23.6 -1.1**
comp=Z,49nm,0.6s,mb5.0
QUIF Quistinic 21.47 307⇑*i*P P 02 03 25.5 -0.2
comp=Z,458nm,0.7s,mb5.6
QUIF Quistinic 21.47 307⇑*i*P P 02 03 25.5 -0.2
QUIF pmax pmax
comp=Z,229nm,0.7s,mb5.6
QUIF Quistinic 21.47 307⇑*i*P P 02 03 25.5 -0.2
comp=Z,229nm,0.7s,mb5.6
QUIF Quistinic 21.47 307⇑*i*P P 02 03 25.5 -0.2
comp=Z,229nm,0.7s,mb5.6
EADA Adamuz 21.53 280 P **P 02 03 25.1 -1.3**
comp=Z,28nm,0.5s,mb4.8
EADA Adamuz 21.53 280 P **P 02 03 25.1 -1.3**
comp=Z,28nm,0.5s,mb4.8
ROSF Rostrenen 21.68 308⇑*i*P P 02 03 27.2 -0.7
comp=Z,124nm,0.6s,mb5.1
ROSF Rostrenen 21.68 308⇑*i*P P 02 03 27.2 -0.7
ROSF pmax pmax
comp=Z,62nm,0.6s,mb5.1
ROSF Rostrenen 21.68 308⇑*i*P P 02 03 27.2 -0.7
comp=Z,62nm,0.6s,mb5.1
ROSF Rostrenen 21.68 308⇑*i*P P 02 03 27.2 -0.7
comp=Z,62nm,0.6s,mb5.1
WOL Wolverton 21.70 316 *e*P **P 02 03 27.3 -0.9**
WOL AMb AMB 02 03 29.8
comp=Z,158nm,1.5s,mb5.1
WOL Wolverton 21.70 316 P **P 02 03 27.3 -0.9**
WOL AMb AMB 02 03 29.8
comp=Z,158nm,1.5s,mb5.1
WOL Wolverton 21.70 316 *e*P **P 02 03 27.3 -0.9**
MIB Mutribah 21.88 104 *e*P **P 02 03 28.5 -1.7**
MIB AMb AMB 02 03 32.2
comp=Z,1μm,0.6s
MIB Mutribah 21.88 104 *e*P **P 02 03 28.5 -1.8**
comp=Z,1μm,0.6s
EARI Arriondas 21.92 294 P **P 02 03 29.7 -0.8**
comp=Z,22nm,0.6s,mb4.7
EARI Arriondas 21.92 294 P **P 02 03 29.7 -0.8**
comp=Z,22nm,0.6s,mb4.7
IRAZ Razeghan 21.93 88 *e*P **P 02 03 29.8 -1.0**
IRAZ Razeghan 21.93 88 *e*P **P 02 03 29.8 -1.0**
EMIJ Mijas 21.94 275 P **P 02 03 29.6 -1.3**
comp=Z,27nm,0.6s,mb4.8
EMIJ Mijas 21.94 275 P **P 02 03 29.6 -1.2**
comp=Z,27nm,0.6s,mb4.8
NAY Al-Naaiem 22.07 105 *e*P **P 02 03 30.5 -1.7**
NAY AMb AMB 02 03 32.3
comp=Z,309nm,0.7s,mb5.8
NAY Al-Naaiem 22.07 105 *e*P **P 02 03 30.5 -1.7**
comp=Z,309nm,0.7s,mb5.7
TZK Tazeka 22.08 269 *i*P **P 02 03 33.0 +0.6**
SWN1 Swindon 22.12 316 *e*P **P 02 03 32.0 -0.6**
SWN1 AMb AMB 02 03 34.9
comp=Z,461nm,1.2s,mb5.7
SWN1 Swindon 22.12 316 P **P 02 03 32.0 -0.6**
SWN1 AMb AMB 02 03 34.9
comp=Z,461nm,1.2s,mb5.7
SWN1 Swindon 22.12 316 *e*P **P 02 03 32.0 -0.6**
ECAB El Cabril 22.20 280 P **P 02 03 32.1 -1.4**
comp=Z,43nm,0.6s,mb5.0
ECAB El Cabril 22.20 280 P **P 02 03 32.1 -1.5**
comp=Z,43nm,0.6s,mb5.0
UMR Umm Al-Rimmam 22.29 104 *e*P **P 02 03 32.5 -2.0**
UMR AMb AMB 02 03 35.6
comp=Z,565nm,0.7s,mb6.0
UMR Umm Al-Rimmam 22.29 104 *e*P **P 02 03 32.5 -2.1**
comp=Z,565nm,0.7s,mb6.0
LIJA Lijar 22.37 277 *i*P **P 02 03 34.0 -1.4**
RDF Al-Radifah 22.46 106 *e*P **P 02 03 34.3 -2.1**
RDF AMb AMB 02 03 37.2
comp=Z,148nm,0.7s,mb5.4
RDF Al-Radifah 22.46 106 *e*P **P 02 03 34.3 -2.1**
comp=Z,148nm,0.7s,mb5.4
CWF Charnwood Fore 22.48 320 *e*P **P 02 03 35.9 -0.5**
CWF AMb AMB 02 03 37.2
comp=Z,94nm,0.8s,mb5.2
CWF Charnwood Fore 22.48 320 P **P 02 03 35.9 -0.5**
CWF AMb AMB 02 03 37.2
comp=Z,94nm,0.8s,mb5.2
CWF Charnwood Fore 22.48 320 *e*P **P 02 03 35.9 -0.5**
EJIF Jimena Fronter 22.51 275 P **P 02 03 35.9 -1.0**
EJIF pmax pmax
comp=Z,20nm,0.5s,mb4.7
EJIF Jimena Fronter 22.51 275 P **P 02 03 35.9 -1.0**
comp=Z,20nm,0.5s,mb4.7
EJIF Jimena Fronter 22.51 275 P **P 02 03 35.9 -1.0**
comp=Z,20nm,0.5s,mb4.7
PUL Pulkovo 22.59 10⇑*i*P P 02 03 36.5 -1.0
PUL pmax pmax
comp=Z,371nm,0.9s,mb5.7
PUL Pulkovo 22.59 10⇑*i*P P 02 03 36.6 -0.9
PUL Pulkovo 22.59 10⇑*i*P P 02 03 36.6 -0.9
DKH Dar Kharkhour 22.64 273 *i*P **P 02 03 40.0 +1.7**
HGH Gray Hill 22.73 316⇑*i*P P 02 03 37.9 -1.1
HGH Gray Hill 22.73 316 P **P 02 03 37.9 -1.1**
HGH Gray Hill 22.73 316⇑*i*P P 02 03 37.9 -1.1
ESPR Espera 22.73 277 P **P 02 03 36.1 -3.1**
comp=Z,12nm,0.7s,mb4.3
IR3 Iran Long-Peri 22.78 87 *e*P **P 02 03 38.5 -1.3**
IR3 Iran Long-Peri 22.78 87 *e*P **P 02 03 38.5 -1.3**
MDT Midelt 22.83 266 P **P 02 03 40.0 -0.3**
comp=Z,27nm,0.8s,mb4.6,baz=87,slow=11,SNR=43
MDT LR LR 02 13 29.0
comp=Z,205nm,20.9s,baz=48,slow=39
MDT Midelt 22.83 266 P **P 02 03 40.0 -0.3**
GIBL Gibalbin 22.83 277 *e*P **P 02 03 39.0 -1.2**
DYA Yadsworthy 22.85 312⇑*e*P P 02 03 38.6 -1.7
DYA AMb AMB 02 03 40.8
comp=Z,178nm,0.9s,mb5.4
DYA Yadsworthy 22.85 312 P **P 02 03 38.6 -1.7**
DYA AMb AMB 02 03 40.8
comp=Z,178nm,0.9s,mb5.4
DYA Yadsworthy 22.85 312⇑*e*P P 02 03 38.6 -1.7
KBI1 Birley Grange 22.88 321⇑*i*P P 02 03 39.2 -1.3
KBI1 Birley Grange 22.88 321 P **P 02 03 39.2 -1.3**
KBI1 Birley Grange 22.88 321⇑*i*P P 02 03 39.2 -1.3
ZFT Errachidia 22.90 264 *i*P **P 02 03 41.0 0.0**
KWE Weaver Farm 22.91 320 *e*P **P 02 03 40.0 -0.9**
KWE Weaver Farm 22.91 320 P **P 02 03 40.0 -0.9**
KWE Weaver Farm 22.91 320 *e*P **P 02 03 40.0 -0.9**
ECAL Calabor 22.97 290 P **P 02 03 40.2 -1.4**
comp=Z,26nm,0.6s,mb4.7
ECAL Calabor 22.97 290 P **P 02 03 40.2 -1.5**
comp=Z,26nm,0.6s,mb4.7
PBRG Braganca 22.97 289 *e*P **P 02 03 41.1 -0.6**
comp=Z,63nm,0.7s,mb5.1
PBRG Braganca 22.97 289 *e*P **P 02 03 41.1 -0.6**
comp=Z,63nm,0.7s,mb5.1
SNART Snartemo 22.99 339 *e*P **P 02 03 34.8 -6.8**
CNIL Conil 22.99 275 *e*P **P 02 03 40.0 -1.9**
HEX Exmoor 23.04 314⇑*e*P P 02 03 41.5 -0.7
HEX Exmoor 23.04 314 P **P 02 03 41.5 -0.7**
HEX Exmoor 23.04 314⇑*e*P P 02 03 41.5 -0.6
CZD Col de Zad 23.09 267 *i*P **P 02 03 44.0 +1.1**
MIF Mishlifen 23.12 268 *i*P **P 02 03 43.0 -0.1**
STNC Stoke 23.13 320⇑*e*P P 02 03 42.4 -0.6
STNC AMb AMB 02 03 45.9
comp=Z,321nm,1.4s,mb5.5
STNC Stoke 23.13 320 P **P 02 03 42.4 -0.6**
STNC AMb AMB 02 03 45.9
comp=Z,321nm,1.4s,mb5.5
STNC Stoke 23.13 320⇑*e*P P 02 03 42.4 -0.6
HFS Hagfors 23.16 348 P **P 02 03 41.4 -1.8**
comp=Z,81nm,0.5s,mb5.3,baz=155,slow=12,SNR=328
HFS PcP PcP 02 07 27.6 -1.1
comp=Z,3.4nm,0.4s,baz=207,slow=2.9,SNR=5.0
HFS S **S 02 07 47.2 -1.0**
comp=Z,18nm,0.9s,baz=149,slow=17,SNR=3.9
HFS LR LR 02 14 23.6
comp=Z,378nm,19.2s,baz=142,slow=41
HFS Hagfors 23.16 348 P **P 02 03 41.4 -1.8**
HFS 02 07 27.6
HFS S **S 02 07 47.2 -1.0**
HFS pmax pmax
comp=Z,81nm,0.5s
HFS smax
comp=N,18nm,0.9s
HFS MLR MLR
comp=Z,378nm,19.2s
HFS Hagfors 23.16 348 P **P 02 03 41.4 -1.8**
comp=Z,81nm,0.5s,mb5.3
HFS Hagfors 23.16 348 PcP PcP 02 07 27.6 -1.2

HFS S **S** **02 07 47.2 -1.0**
comp=Z,378nm,19.2s
RSA Sarsar 23.16 272 *i* P **P** **02 03 43.0 -0.5**
HTR Trewern Hill 23.19 317 *eP* **P** **02 03 43.1 -0.5**
HTR Trewern Hill 23.19 317 P **P** **02 03 43.1 -0.5**
HTR Trewern Hill 23.19 317 *eP* **P** **02 03 43.1 -0.5**
HLM1 Long Mynd 23.19 318⇑ *eP* **P** **02 03 42.8 -0.8**
HLM1 Long Mynd 23.19 318 P **P** **02 03 42.8 -0.8**
HLM1 Long Mynd 23.19 318⇑ *eP* **P** **02 03 42.8 -0.8**
MVO Moncorvo 23.19 288 P **P** **02 03 42.5 -1.2**
MVO Moncorvo 23.19 288 *eP* **P** **02 03 42.5 -1.2**
comp=Z,112nm,0.7s,mb5.3
MVO Moncorvo 23.19 288 *eP* **P** **02 03 42.5 -1.2**
comp=Z,112nm,0.7s,mb5.3
LHO Holmfirth 23.20 321⇑ *eP* **P** **02 03 42.0 -1.6**
LHO Holmfirth 23.20 321 P **P** **02 03 42.0 -1.6**
LHO Holmfirth 23.20 321⇑ *eP* **P** **02 03 42.0 -1.6**
EMIN Mina Concepcio 23.22 279 P **P** **02 03 42.1 -1.9**
comp=Z,48nm,0.5s,mb5.1
EMIN Mina Concepcio 23.22 279 P **P** **02 03 42.1 -1.9**
comp=Z,48nm,0.5s,mb5.1
ERUA La Rua 23.28 291 P **P** **02 03 44.0 -0.5**
ERUA pmax pmax
comp=Z,10.0nm,0.6s,mb4.3
ERUA La Rua 23.28 291 P **P** **02 03 44.0 -0.5**
comp=Z,9.6nm,0.6s,mb4.3
ERUA La Rua 23.28 291 P **P** **02 03 44.0 -0.5**
comp=Z,9.6nm,0.6s,mb4.3
HPK Haverah Park 23.31 322⇑ *eP* **P** **02 03 43.7 -1.0**
HPK AMb AMB 02 03 45.5
comp=Z,143nm,1.2s,mb5.2
HPK Haverah Park 23.31 322 P **P** **02 03 43.7 -1.0**
HPK AMb AMB 02 03 45.5
comp=Z,143nm,1.2s,mb5.2
HPK Haverah Park 23.31 322⇑ *eP* **P** **02 03 43.7 -0.9**
EPON Pontenova 23.33 293 P **P** **02 03 43.7 -1.2**
comp=Z,30nm,0.5s,mb4.9
EPON Pontenova 23.33 293 P **P** **02 03 43.7 -1.2**
comp=Z,30nm,0.5s,mb4.9
EBAD Badajoz 23.35 282 P **P** **02 03 43.6 -1.6**
comp=Z,15nm,0.6s,mb4.5
EBAD Badajoz 23.35 282 P **P** **02 03 43.6 -1.6**
comp=Z,15nm,0.6s,mb4.5
HTL Hartland 23.40 313⇑ *eP* **P** **02 03 44.8 -0.6**
HTL AMb AMB 02 03 46.5
comp=Z,190nm,0.7s,mb5.5
HTL Hartland 23.40 313 P **P** **02 03 44.8 -0.6**
HTL AMb AMB 02 03 46.5
comp=Z,190nm,0.7s,mb5.5
HTL Hartland 23.40 313⇑ *eP* **P** **02 03 44.8 -0.7**
PBAR Barrancos 23.45 280 *eP* **P** **02 03 45.2 -0.9**
comp=Z,42nm,0.1s,mb5.7
PBAR Barrancos 23.45 280 *eP* **P** **02 03 45.2 -0.9**
comp=Z,42nm,0.1s,mb5.7
IPIR Pirpir 23.50 94 *eP* **P** **02 03 46.2 -0.4**
IPIR Pirpir 23.50 94 *eP* **P** **02 03 46.2 -0.4**
KONO Kongsberg 23.51 343 *eP* **P** **02 03 42.7 -3.7**
KONO *eS* **S** **02 07 53.6 -0.3**
KONO Kongsberg 23.51 343 *eP* **P** **02 03 44.8 -1.6**
KONO *e* 02 07 29.2
KONO pmax pmax
comp=Z,131nm,1.1s,mb5.2
KONO Kongsberg 23.51 343 *eP* **P** **02 03 44.8 -1.6**
comp=Z,131nm,1.1s,mb5.2
KONO *e*PcP PcP 02 07 29.2 -0.3
KONO Kongsberg 23.51 343 *eP* **P** **02 03 44.8 -1.6**
comp=Z,131nm,1.1s,mb5.2
KONO Kongsberg 23.51 343 *e*PcP PcP 02 07 29.2 -0.3
KONO *eS* **S** **02 07 53.6 -0.3**
SNR=41
CCA1 Carnmenellis 23.52 311⇑ *eP* **P** **02 03 45.9 -0.8**
CCA1 Carnmenellis 23.52 311 P **P** **02 03 45.9 -0.8**
CCA1 Carnmenellis 23.52 311⇑ *eP* **P** **02 03 45.8 -0.8**
OSL Oslo 23.52 345 *eP* **P** **02 03 44.7 -1.8**
OSL AMb AMB 02 03 46.0
comp=Z,112nm,1.3s,mb5.0
OSL Oslo 23.52 345 *eP* **P** **02 03 44.7 -1.8**
comp=Z,112nm,1.3s,mb5.0
OSL Oslo 23.52 345 *eP* **P** **02 03 44.7 -1.8**
comp=Z,112nm,1.3s,mb5.0,SNR=41
IDMV Damavand 23.56 86 *eP* **P** **02 03 46.6 -0.5**
IDMV Damavand 23.56 86 *eP* **P** **02 03 46.6 -0.5**
PMRV Marv??o 23.57 284 *eP* **P** **02 03 46.3 -0.9**
comp=Z,61nm,0.8s,mb5.0
PMRV Marv??o 23.57 284 *eP* **P** **02 03 46.3 -0.9**
comp=Z,61nm,0.8s,mb5.0
PCBR Castelo Branco 23.60 285 *eP* **P** **02 03 47.0 -0.5**
comp=Z,36nm,1.3s,mb4.5
PCBR Castelo Branco 23.60 285 *eP* **P** **02 03 47.0 -0.5**
comp=Z,36nm,1.3s,mb4.5
MTE Manteigas 23.62 286 *eP* **P** **02 03 46.6 -1.0**
comp=Z,79nm,0.8s,mb5.1
MTE Manteigas 23.62 286 *eP* **P** **02 03 47.3 -0.3**
comp=Z,93nm,0.7s,mb5.2
MTE Manteigas 23.62 286 *eP* **P** **02 03 47.3 -0.3**
comp=Z,93nm,0.7s,mb5.2
PVRL Vila Real 23.71 288 *eP* **P** **02 03 48.0 -0.4**
comp=Z,20nm,1.8s,mb4.1
PVRL Vila Real 23.71 288 *eP* **P** **02 03 48.0 -0.4**
comp=Z,20nm,1.8s,mb4.1
PESTR Estremoz 23.79 282 *eP* **P** **02 03 47.9 -1.2**
comp=Z,83nm,0.9s,mb5.1
PESTR Estremoz 23.79 282 *eP* **P** **02 03 47.9 -1.2**
comp=Z,83nm,0.9s,mb5.1
IKLH Kolahrood 23.83 92 *eP* **P** **02 03 49.7 +0.1**
IKLH Kolahrood 23.83 92 *eP* **P** **02 03 49.7 +0.1**
FINES FINESS Array B 23.84 4 P **P** **02 03 47.1 -2.3**
comp=Z,48nm,0.7s,mb4.9,baz=161,slow=8.1,SNR=94
FINES PcP PcP 02 07 29.9 -0.3
comp=Z,23nm,0.6s,baz=117,slow=2.1,SNR=9.2
FINES S **S** **02 07 56.3 -2.8**
comp=Z,6.3nm,0.8s,baz=174,slow=16,SNR=1.9
FINES ScP ScP 02 10 58.9 -2.3
comp=Z,8.3nm,0.7s,baz=116,slow=4.4,SNR=7.5
FINES LR LR 02 14 15.7
comp=Z,576nm,19.2s,baz=162,slow=39
FINES FINESS Array B 23.84 4 P **P** **02 03 47.1 -2.3**
FINES 02 07 29.9
FINES S **S** **02 07 56.3 -2.8**
FINES pmax pmax
comp=Z,48nm,0.7s
FINES smax
comp=N,6.0nm,0.8s
FINES MLR MLR
comp=Z,576nm,19.2s
FINES FINESS Array B 23.84 4 P **P** **02 03 47.1 -2.3**
FINES PcP PcP 02 07 29.9 -0.3
FINES S **S** **02 07 56.3 -2.8**
FINES ScP ScP 02 10 58.9 -2.3
FINES LR LR 02 14 15.7
FINES FINESS Array B 23.84 4 P **P** **02 03 47.1 -2.3**
comp=Z,48nm,0.7s,mb4.9
FINES FINESS Array B 23.84 4 PcP PcP 02 07 29.9 -0.3
FINES S **S** **02 07 56.3 -2.8**
comp=Z,576nm,19.2s
PVIS Viseu 23.86 287 *eP* **P** **02 03 49.5 -0.3**
comp=Z,104nm,0.8s,mb5.2
PVIS Viseu 23.86 287 *eP* **P** **02 03 49.5 -0.3**
comp=Z,104nm,0.8s,mb5.2
EGRO El Granado 23.89 279 P **P** **02 03 49.7 -0.5**
comp=Z,38nm,0.5s,mb5.0
EGRO El Granado 23.89 279 P **P** **02 03 49.7 -0.4**
comp=Z,38nm,0.5s,mb5.0
STAV Stavanger 23.92 338 *eP* **P** **02 03 49.9 -0.2**
STAV AMb AMB 02 03 51.2
comp=Z,76nm,1.0s,mb5.0
STAV Stavanger 23.92 338 *eP* **P** **02 03 49.9 -0.2**
comp=Z,76nm,1.0s,mb5.0
STAV Stavanger 23.92 338 *eP* **P** **02 03 49.9 -0.3**
comp=Z,76nm,1.0s,mb5.0,SNR=41
PCAB Cabril 23.93 289 *eP* **P** **02 03 50.4 -0.1**
comp=Z,42nm,1.3s,mb4.6
PCAB Cabril 23.93 289 *eP* **P** **02 03 50.4 -0.1**
comp=Z,42nm,1.3s,mb4.6
ELOB Lobios 23.96 290 P **P** **02 03 50.1 -0.6**
comp=Z,10nm,0.5s,mb4.4
ELOB Lobios 23.96 290 P **P** **02 03 50.1 -0.6**
comp=Z,10nm,0.5s,mb4.4
KIB El Ksiba 24.04 266 *i* P **P** **02 03 52.0 +0.5**
ISFB Sefidab 24.04 89 *eP* **P** **02 03 50.3 -1.2**
ISFB Sefidab 24.04 89 *eP* **P** **02 03 50.3 -1.2**
PVAQ Vaqueiros 24.10 279 *eP* **P** **02 03 51.4 -0.6**
comp=Z,130nm,0.8s,mb5.3
PVAQ Vaqueiros 24.10 279 *eP* **P** **02 03 51.4 -0.6**
comp=Z,130nm,0.8s,mb5.3
IFIR Firoozkooh 24.11 86 *eP* **P** **02 03 51.9 -0.2**

IFIR Firoozkooh 24.11 86 *eP* **P** **02 03 51.9 -0.2**
XAL Allendale 24.11 323⇑ *iP* **P** **02 03 51.2 -0.7**
XAL Allendale 24.11 323 P **P** **02 03 51.2 -0.7**
XAL Allendale 24.11 323⇑ *iP* **P** **02 03 51.2 -0.7**
BLS5 Blasjo 24.11 339 *eP* **P** **02 03 51.5 -0.4**
BLS5 AMb AMB 02 03 53.1
comp=Z,53nm,0.6s,mb5.1
BLS5 Blasjo 24.11 339 *eP* **P** **02 03 51.5 -0.4**
comp=Z,53nm,0.6s,mb5.0
BLS5 Blasjo 24.11 339 *eP* **P** **02 03 51.5 -0.4**
comp=Z,53nm,0.6s,mb5.1,SNR=41
PBEJ Beja 24.11 280 *eP* **P** **02 03 51.6 -0.6**
comp=Z,45nm,1.5s,mb4.6
PBEJ Beja 24.11 280 *eP* **P** **02 03 51.6 -0.6**
comp=Z,45nm,1.5s,mb4.6
EVO Evora 24.16 281⇑ *iP* **P** **02 03 51.7 -0.8**
comp=Z,34nm,0.7s,mb4.5
EVO *e*MLR MLR
comp=Z,210nm,19.0s
EVO Evora 24.16 281 *eP* **P** **02 03 51.7 -0.8**
comp=Z,38nm,1.3s,mb4.6
EVO Evora 24.16 281 *eP* **P** **02 03 51.7 -0.8**
comp=Z,38nm,1.3s,mb4.6
EVOP Sao Brissos 24.24 281 *eP* **P** **02 03 52.4 -0.9**
EVOP AMb AMB 02 03 57.9
comp=Z,43nm,0.8s,mb4.8
EVOP *e*S **S** **02 08 06.5 +0.4**
EVOP Sao Brissos 24.24 281⇑ *iP* **P** **02 03 51.7 -1.6**
comp=Z,17nm,0.7s,mb4.5
KMY Karmoy 24.29 338 *eP* **P** **02 03 53.0 -0.5**
KMY AMb AMB 02 03 54.6
comp=Z,78nm,1.2s,mb4.9
KMY *e*sP sP 02 04 20.6 -0.8
KMY Karmoy 24.29 338 *eP* **P** **02 03 53.0 -0.5**
comp=Z,78nm,1.3s,mb4.9
KMY Karmoy 24.29 338 *eP* **P** **02 03 53.0 -0.5**
comp=Z,78nm,1.2s,mb4.9,SNR=41
PBDV Barranco-do-Ve 24.30 278 *eP* **P** **02 03 53.5 -0.3**
comp=Z,204nm,1.2s,mb5.3
PBDV Barranco-do-Ve 24.30 278 *eP* **P** **02 03 53.5 -0.3**
comp=Z,204nm,1.2s,mb5.3
PCVE Castro Verde 24.31 279 *eP* **P** **02 03 46.0 -8.0**
comp=Z,76nm,0.5s,mb5.3
NAO01 NORSAR Array S 24.32 346 *eP* **P** **02 03 52.3 -1.5**
NAO01 *e*PcP PcP 02 07 31.2 0.0
NAO01 NORSAR Array S 24.32 346 *eP* **P** **02 03 52.3 -1.5**
STS Santiago 24.33 292 P **P** **02 03 53.9 -0.2**
STS pmax pmax
comp=Z,5.0nm,0.5s,mb4.1
STS Santiago 24.33 292 P **P** **02 03 53.9 -0.2**
comp=Z,5.0nm,0.5s,mb4.1
STS Santiago 24.33 292 P **P** **02 03 53.9 -0.2**
comp=Z,5.0nm,0.5s,mb4.1
ILAS Lasjerd 24.34 86 *eP* **P** **02 03 53.9 -0.3**
ILAS Lasjerd 24.34 86 *eP* **P** **02 03 53.9 -0.3**
PTOM Tomar 24.34 284 *eP* **P** **02 03 54.1 -0.1**
comp=Z,84nm,0.6s,mb5.2
PTOM Tomar 24.34 284 *eP* **P** **02 03 54.1 -0.1**
comp=Z,84nm,0.6s,mb5.2
PTO Porto 24.38 288 *eP* **P** **02 03 54.8 +0.2**
comp=Z,83nm,1.1s,mb5.0
PTO Porto 24.38 288 *eP* **P** **02 03 54.8 +0.2**
comp=Z,83nm,1.1s,mb5.0
EZAM Zamans 24.43 290 P **P** **02 03 54.8 -0.2**
EZAM pmax pmax
comp=Z,28nm,0.6s,mb4.8
EZAM Zamans 24.43 290 P **P** **02 03 54.8 -0.1**
comp=Z,28nm,0.6s,mb4.8
EZAM Zamans 24.43 290 P **P** **02 03 54.8 -0.2**
comp=Z,28nm,0.6s,mb4.8
NB2 NORSAR Subarra 24.44 346 P **P** **02 03 53.9 -1.0**
comp=Z,22nm,0.5s,mb4.8,baz=158,slow=9.3
NB2 NORSAR Subarra 24.44 346 P **P** **02 03 53.9 -1.0**
comp=Z,22nm,0.5s,mb4.8,baz=158,slow=9.1,SNR=85
NOA NORSAR Array B 24.44 346 P **P** **02 03 53.6 -1.3**
comp=Z,41nm,0.6s,mb4.9,baz=148,slow=9.8,SNR=172
NOA PcP PcP 02 07 30.5 -1.0
comp=Z,15nm,0.7s,baz=136,slow=2.5,SNR=6.2
NOA S **S** **02 08 09.3 +0.5**
comp=Z,1.2nm,0.9s,baz=143,slow=14,SNR=2.3
NOA ScP ScP 02 11 00.7 -2.2
comp=Z,5.9nm,0.8s,baz=140,slow=3.5,SNR=5.3
NOA LR LR 02 14 44.2
comp=Z,184nm,18.9s,baz=155,slow=39
NOA NORSAR Array B 24.44 346 P **P** **02 03 53.6 -1.3**
NOA 02 07 30.5
NOA S **S** **02 08 09.4 +0.5**
NOA pmax pmax
comp=Z,41nm,0.6s
NOA smax
comp=N,1.0nm,0.9s
NOA MLR MLR
comp=Z,184nm,18.9s
NOA NORSAR Array B 24.44 346 P **P** **02 03 53.6 -1.3**
NOA PcP PcP 02 07 30.5 -1.0
NOA S **S** **02 08 09.3 +0.5**
NOA ScP ScP 02 11 00.7 -2.2
NOA LR LR 02 14 44.2
NOA NORSAR Array B 24.44 346 P **P** **02 03 53.6 -1.3**
comp=Z,41nm,0.6s,mb4.9
NOA NORSAR Array B 24.44 346 PcP PcP 02 07 30.5 -1.0
NOA S **S** **02 08 09.4 +0.5**
comp=Z,184nm,18.9s
ODD1 Odda 24.48 340 *eP* **P** **02 03 54.9 -0.3**
ODD1 Odda 24.48 340 *eP* **P** **02 03 54.9 -0.3**
SNR=41
ISHM Shahmirzad 24.50 85 *eP* **P** **02 03 55.3 -0.4**
ISHM Shahmirzad 24.50 85 *eP* **P** **02 03 55.3 -0.4**
IGAR Gharneh 24.51 94 *eP* **P** **02 03 56.1 +0.3**
ALMR Almeirim 24.52 283 *eP* **P** **02 03 55.2 -0.6**
KAF Kangasniemi 24.52 4 *eP* **P** **02 03 54.3 -1.2**
KAF pmax pmax
comp=Z,44nm,0.7s,mb5.0
KAF Kangasniemi 24.52 4 *ep* **P** **02 03 54.3 -1.2**
comp=Z,44nm,0.7s,mb5.0
KAF Kangasniemi 24.52 4 *ep* **P** **02 03 54.3 -1.2**
comp=Z,44nm,0.7s,mb5.0
KAF Kangasniemi 24.52 4 *eP* **P** **02 03 54.3 -1.2**
comp=Z,44nm,0.7s,mb5.0
XDE Dent Fell 24.53 322⇑ *eP* **P** **02 03 55.2 -0.6**
XDE Dent Fell 24.53 322 P **P** **02 03 55.2 -0.6**
XDE Dent Fell 24.53 322⇑ *eP* **P** **02 03 55.2 -0.5**
TZC Tazercounte 24.55 266 *i* P **P** **02 03 56.0 -0.1**
IZEF Zefreh 24.57 92 *eP* **P** **02 03 56.3 0.0**
IZEF Zefreh 24.57 92 *eP* **P** **02 03 56.3 0.0**
EMAZ Mazaricos 24.65 292 P **P** **02 03 56.5 -0.5**
comp=Z,18nm,0.6s,mb4.7
EMAZ Mazaricos 24.65 292 P **P** **02 03 56.5 -0.5**
comp=Z,18nm,0.6s,mb4.7
IKIA Kiasar 24.72 84 *eP* **P** **02 03 56.8 -0.8**
IKIA Kiasar 24.72 84 *eP* **P** **02 03 56.8 -0.8**
ECK Cauldkaine Hil 24.73 323⇑ *eP* **P** **02 03 57.1 -0.4**
ECK Cauldkaine Hil 24.73 323 P **P** **02 03 57.1 -0.4**
ECK Cauldkaine Hil 24.73 323⇑ *eP* **P** **02 03 57.1 -0.4**
IGLO Ghaloghah 24.77 83 *eP* **P** **02 03 57.6 -0.5**
IGLO Ghaloghah 24.77 83 *eP* **P** **02 03 57.6 -0.5**
EKA Eskdalemuir Ar 24.83 324 P **P** **02 03 58.2 -0.2**
comp=Z,115nm,0.8s,mb5.4,baz=125,slow=9.0,SNR=159
EKA PcP PcP 02 07 32.5 0.0
comp=Z,7.5nm,0.7s,baz=97,slow=2.7,SNR=7.4
EKA Eskdalemuir Ar 24.83 324 P **P** **02 03 58.3 -0.1**
EKA 02 07 32.5
EKA pmax pmax
comp=Z,115nm,0.8s
EKA Eskdalemuir Ar 24.83 324 P **P** **02 03 58.2 -0.2**
EKA Eskdalemuir Ar 24.83 324 PcP PcP 02 07 32.5 0.0
ESK Eskdalemuir 24.84 323 P **P** **02 03 58.3 -0.2**
comp=Z,1μm,0.6s,SNR=58
ESK Eskdalemuir 24.84 323⇑ *eP* **P** **02 03 58.2 -0.3**
ESK AMb AMB 02 04 00.2
comp=Z,231nm,1.0s,mb5.6
ESK Eskdalemuir 24.84 323 P **P** **02 03 58.2 -0.3**
ESK AMb AMB 02 04 00.2
comp=Z,231nm,1.0s,mb5.6
ESK Eskdalemuir 24.84 323 *eP* **P** **02 03 57.6 -0.9**
ESK pmax pmax
comp=Z,178nm,0.9s,mb5.5
ESK Eskdalemuir 24.84 323 *eP* **P** **02 03 57.5 -1.0**
comp=Z,178nm,0.9s,mb5.5
ESK Eskdalemuir 24.84 323 *eP* **P** **02 03 57.6 -0.9**
comp=Z,178nm,0.9s,mb5.5
PTEO Sao Teotonio 24.86 279 *eP* **P** **02 03 58.7 -0.3**
comp=Z,75nm,1.2s,mb5.0
PTEO Sao Teotonio 24.86 279 *eP* **P** **02 03 58.7 -0.3**
comp=Z,75nm,1.2s,mb5.0

GIM North Isle of 24.91 320⇑ *iP* **P** **02 03 59.0 -0.1**
GIM North Isle of 24.91 320 P **P** **02 03 59.0 -0.1**
GIM North Isle of 24.91 320⇑ *iP* **P** **02 03 59.0 -0.1**
ESY Stoneypath 24.91 325⇑ *eP* **P** **02 03 58.8 -0.4**
ESY Stoneypath 24.91 325 P **P** **02 03 58.8 -0.4**
ESY Stoneypath 24.91 325⇑ *eP* **P** **02 03 58.8 -0.4**
GCD Castle Douglas 24.94 322 *eP* **P** **02 03 59.4 -0.1**
GCD Castle Douglas 24.94 322 P **P** **02 03 59.4 -0.1**
GCD Castle Douglas 24.94 322 *eP* **P** **02 03 59.4 -0.1**
PFVI Vila Bisbo 25.02 278 P **P** **02 03 59.3 -1.1**
PFVI Vila Bisbo 25.02 278 P **P** **02 03 59.3 -1.1**
EBL Broad Law 25.02 324⇑ *iP* **P** **02 03 59.5 -0.7**
EBL Broad Law 25.02 324 P **P** **02 03 59.5 -0.7**
EBL Broad Law 25.02 324⇑ *iP* **P** **02 03 59.5 -0.7**
PMAFR Mafra 25.09 283 *eP* **P** **02 04 00.9 -0.1**
comp=Z,105nm,1.6s,mb5.0
PMAFR Mafra 25.09 283 *eP* **P** **02 04 00.9 -0.1**
comp=Z,105nm,1.6s,mb5.0
EGD Espegrend 25.16 339 *eP* **P** **02 04 00.1 -1.3**
EGD Espegrend 25.16 339 *eP* **P** **02 04 00.1 -1.3**
EDI Edinburgh 25.18 325⇑ *eP* **P** **02 04 01.5 -0.1**
EDI AMb AMB 02 04 04.0
comp=Z,181nm,1.2s,mb5.4
EDI Edinburgh 25.18 325 P **P** **02 04 01.5 -0.1**
EDI AMb AMB 02 04 04.0
comp=Z,181nm,1.2s,mb5.4
EDI Edinburgh 25.18 325⇑ *eP* **P** **02 04 01.5 -0.1**
BER Bergen 25.23 340 *eP* **P** **02 04 00.5 -1.5**
BER *eP* 02 04 00.6
BER AMb AMB 02 04 09.2
comp=Z,4.9nm,1.6s
BER *e*S **S** **02 08 22.9 +1.5**
BER Bergen 25.23 340 *eP* **P** **02 04 00.6 -1.4**
comp=Z,4.9nm,1.6s,SNR=41
EAU Auchinoon 25.25 324⇑ *iP* **P** **02 04 01.9 -0.3**
EAU Auchinoon 25.25 324 P **P** **02 04 01.9 -0.3**
EAU Auchinoon 25.25 324⇑ *iP* **P** **02 04 02.0 -0.3**
GAL1 Galloway 25.32 321⇑ *eP* **P** **02 04 01.9 -1.1**
GAL1 AMb AMB 02 04 06.6
comp=Z,114nm,1.9s,mb5.0
GAL1 Galloway 25.32 321 P **P** **02 04 01.9 -1.1**
GAL1 AMb AMB 02 04 06.6
comp=Z,114nm,1.9s,mb5.0
GAL1 Galloway 25.32 321⇑ *eP* **P** **02 04 01.9 -1.0**
ASK Askoy 25.35 340 *eP* **P** **02 04 01.1 -2.0**
DSB Dublin 25.41 317 *eP* **P** **02 04 03.7 0.0**
comp=Z,78nm,0.7s,mb5.2
DSB Dublin 25.41 317 *eP* **P** **02 04 03.7 0.0**
comp=Z,78nm,0.7s,mb5.2
EBH Black Hill 25.51 325⇑ *iP* **P** **02 04 04.7 0.0**
EBH Black Hill 25.51 325 P **P** **02 04 04.7 0.0**
EBH Black Hill 25.51 325⇑ *iP* **P** **02 04 04.7 +0.1**
GMM Mts of Mourne 25.64 319 *eP* **P** **02 04 05.8 0.0**
GMM Mts of Mourne 25.64 319 P **P** **02 04 05.8 0.0**
GMM Mts of Mourne 25.64 319 *eP* **P** **02 04 05.8 0.0**
HYA Hoyanger 25.66 341⇑ *iP* **P** **02 04 06.3 +0.4**
HYA AMb AMB 02 04 09.3
comp=Z,81nm,1.0s,mb5.1
HYA Hoyanger 25.66 341⇑ *iP* **P** **02 04 06.3 +0.4**
comp=Z,81nm,1.0s,mb5.1
HYA Hoyanger 25.66 341⇑ *iP* **P** **02 04 06.3 +0.4**
comp=Z,81nm,1.0s,mb5.1,SNR=41
PGBU Glenifferbraes 25.72 323 *eP* **P** **02 04 05.6 -0.9**
PGBU AMb AMB 02 04 10.5
comp=Z,125nm,1.3s,mb5.2
PGBU Glenifferbraes 25.72 323 P **P** **02 04 05.6 -0.9**
PGBU AMb AMB 02 04 10.5
comp=Z,125nm,1.3s,mb5.2
JOF Joensuu 25.77 9 *eP* **P** **02 04 05.8 -1.0**
JOF pmax pmax
comp=Z,79nm,0.6s,mb5.3
JOF Joensuu 25.77 9 *ep* **P** **02 04 05.8 -1.0**
comp=Z,79nm,0.6s,mb5.3
JOF Joensuu 25.77 9 *ep* **P** **02 04 05.8 -1.0**
comp=Z,79nm,0.6s,mb5.3
JOF Joensuu 25.77 9 *eP* **P** **02 04 05.8 -1.0**
comp=Z,79nm,0.6s,mb5.3
EAB Aberfoyle 25.86 324⇑ *iP* **P** **02 04 07.7 -0.1**
EAB Aberfoyle 25.86 324 P **P** **02 04 07.7 -0.1**
EAB Aberfoyle 25.86 324⇑ *iP* **P** **02 04 07.7 -0.1**
MME1 Meikle Cairn 25.91 327⇑ *iP* **P** **02 04 07.2 -1.0**
MME1 Meikle Cairn 25.91 327 P **P** **02 04 07.2 -1.0**
MME1 Meikle Cairn 25.91 327⇑ *iP* **P** **02 04 07.2 -1.1**
DCN Croghan 25.94 317⇑ *iP* **P** **02 04 08.7 +0.2**
DCN Croghan 25.94 317⇑ *iP* **P** **02 04 08.7 +0.2**
DMUB Kingscourt 25.98 318⇑ *iP* **P** **02 04 04.6 -4.3**
ISAD Sadrabad 25.98 94 *eP* **P** **02 04 07.8 -1.4**
ISAD Sadrabad 25.98 94 *eP* **P** **02 04 07.8 -1.4**
OUK Oukaimeden 25.99 265 *i* P **P** **02 04 09.0 -0.2**
MCD Coleburn Disti 26.20 328⇑ *iP* **P** **02 04 10.1 -0.8**
MCD Coleburn Disti 26.20 328 P **P** **02 04 10.1 -0.8**
MCD Coleburn Disti 26.20 328⇑ *iP* **P** **02 04 10.1 -0.8**
IPAR Pars 26.30 98 *eP* **P** **02 04 12.8 +0.7**
IPAR Pars 26.30 98 *eP* **P** **02 04 12.8 +0.7**
FOO Floro 26.32 341 *eS* **S** **02 08 39.5 +0.9**
FOO Floro 26.32 341 *eS* **S** **02 08 39.5 +0.8**
SNR=40
IMOK Mouk 26.39 100 *eP* **P** **02 04 13.0 +0.1**
IMOK Mouk 26.39 100 *eP* **P** **02 04 13.0 +0.1**
ICHK Chekchek 26.44 92 *eP* **P** **02 04 12.1 -1.2**
ICHK Chekchek 26.44 92 *eP* **P** **02 04 12.1 -1.2**
ISRV Sarvestan 26.55 99 *eP* **P** **02 04 23.2 +8.9**
MOL Molde 26.57 344 *eP* **P** **02 04 13.6 -0.6**
MOL Molde 26.57 344 *eP* **P** **02 04 13.6 -0.5**
SNR=41
MDO Dochfour 26.59 327⇑ *iP* **P** **02 04 13.2 -1.2**
MDO Dochfour 26.59 327 P **P** **02 04 13.2 -1.2**
MDO Dochfour 26.59 327⇑ *iP* **P** **02 04 13.2 -1.2**
MVH1 Achvaich 26.81 328⇑ *iP* **P** **02 04 15.2 -1.1**
MVH1 Achvaich 26.81 328 P **P** **02 04 15.2 -1.1**
MVH1 Achvaich 26.81 328⇑ *iP* **P** **02 04 15.2 -1.1**
IMEH Mehriz 26.91 94 *eP* **P** **02 04 16.7 -0.8**
IMEH Mehriz 26.91 94 *eP* **P** **02 04 16.7 -0.8**
KSB Sheil Bridge 26.93 325⇑ *iP* **P** **02 04 16.5 -0.9**
KSB Sheil Bridge 26.93 325 P **P** **02 04 16.5 -0.9**
KSB Sheil Bridge 26.93 325⇑ *iP* **P** **02 04 16.5 -0.9**
KAR1 Arisaig 26.95 325⇑ *iP* **P** **02 04 16.9 -0.7**
KAR1 Arisaig 26.95 325 P **P** **02 04 16.9 -0.7**
KAR1 Arisaig 26.95 325⇑ *iP* **P** **02 04 16.9 -0.7**
ORE Reay 27.02 329⇑ *eP* **P** **02 04 17.4 -0.8**
ORE Reay 27.02 329 P **P** **02 04 17.4 -0.8**
ORE Reay 27.02 329⇑ *eP* **P** **02 04 17.4 -0.8**
KAC Achnashellach 27.04 326⇑ *eP* **P** **02 04 17.2 -1.2**
KAC Achnashellach 27.04 326 P **P** **02 04 17.2 -1.2**
KAC Achnashellach 27.04 326⇑ *eP* **P** **02 04 17.2 -1.2**
JHA Jbel Lahdid 27.04 267 *i* P **P** **02 04 20.0 +1.3**
LRW Lerwick 27.10 334⇑ *eP* **P** **02 04 17.8 -1.1**
LRW AMb AMB 02 04 21.8
comp=Z,92nm,1.6s,mb5.1
LRW Lerwick 27.10 334 P **P** **02 04 17.8 -1.1**
LRW AMb AMB 02 04 21.8
comp=Z,92nm,1.6s,mb5.1
LRW Lerwick 27.10 334⇑ *eP* **P** **02 04 17.8 -1.1**
KPL Plockton 27.11 326⇑ *iP* **P** **02 04 18.2 -0.7**
KPL AMb AMB 02 04 20.9
comp=Z,88nm,1.5s,mb5.1
KPL Plockton 27.11 326 P **P** **02 04 18.2 -0.7**
KPL AMb AMB 02 04 20.9
comp=Z,88nm,1.5s,mb5.1
KPL Plockton 27.11 326⇑ *iP* **P** **02 04 18.2 -0.8**
WAL1 Walls 27.34 333 *eP* **P** **02 04 20.3 -0.7**
WAL1 Walls 27.34 333 P **P** **02 04 20.3 -0.7**
WAL1 Walls 27.34 333 *eP* **P** **02 04 20.3 -0.7**
RRR Rubha Reidh 27.47 326⇑ *iP* **P** **02 04 21.2 -1.0**
RRR Rubha Reidh 27.47 326 P **P** **02 04 21.2 -1.0**
RRR Rubha Reidh 27.47 326⇑ *iP* **P** **02 04 21.2 -1.0**
RSC Scourie 27.48 328⇑ *iP* **P** **02 04 21.6 -0.7**
RSC Scourie 27.48 328 P **P** **02 04 21.6 -0.7**
RSC Scourie 27.48 328⇑ *iP* **P** **02 04 21.6 -0.7**
IBAF Bafgh 27.59 93 *eP* **P** **02 04 23.2 -0.4**
IBAF Bafgh 27.59 93 *eP* **P** **02 04 23.2 -0.4**
NSS Namsos 27.60 350⇑ *iP* **P** **02 04 21.4 -1.9**
NSS Namsos 27.60 350⇑ *iP* **P** **02 04 21.4 -1.9**
SNR=40
ABKT Ailbek 27.84 79 P **P** **02 04 25.6 -0.2**
comp=Z,128nm,0.5s,mb5.7,SNR=7.8
RRH Rhenigidale 27.89 326⇑ *iP* **P** **02 04 25.2 -0.8**
RRH Rhenigidale 27.89 326 P **P** **02 04 25.2 -0.8**
RRH Rhenigidale 27.89 326⇑ *iP* **P** **02 04 25.2 -0.8**
AKTK Aktyubinsk 28.07 52 P **P** **02 04 26.9 -0.8**
AKTK LR LR 02 15 43.3
AKTK Aktyubinsk 28.07 52 P **P** **02 04 26.9 -0.7**

comp=Z,198nm,22.0s
AKTO Aktyubinsk 28.07 52 P P 02 04 26.9 -0.8
comp=Z,24nm,0.6s,mb4.9,baz=262,slow=9.1,SNR=93
AKTO LR LR 02 15 43.3
comp=Z,198nm,22.0s,baz=263,slow=36
AKTO Aktyubinsk 28.07 52 P P 02 04 26.9 -0.7
AKTO pmax pmax
comp=Z,24nm,0.6s,mb4.9
AKTO MLR MLR
comp=Z,198nm,22.0s
IKRD Kardeh 28.39 81 *e*P **P 02 04 37.1 +6.5**
IAKL Akhelmad 28.62 81 *e*P **P 02 04 32.3 -0.4**
MOR8 Moi Rana 28.90 353⇑*i*P **P 02 04 34.6 -0.2**
MOR8 AMb AMB 02 04 35.7
comp=Z,36nm,0.6s,mb5.2
MOR8 Moi Rana 28.90 353⇑ *i*P **P 02 04 34.6 -0.2**
comp=Z,36nm,0.6s,mb5.2
MOR8 Moi Rana 28.90 353⇑ *i*P **P 02 04 34.6 -0.2**
comp=Z,36nm,0.6s,mb5.2,SNR=40
ABKAR Akbulak array 29.06 55 *e*P **P 02 04 35.6 -0.9**
comp=Z,20nm,0.6s,mb4.9
ABKAR *e*PcP PcP 02 07 42.1 -0.5
ABKAR Akbulak array 29.06 55 *e*P **P 02 04 35.6 -0.9**
comp=Z,20nm,0.6s,mb4.9
FLOS Flostrand 29.17 352 *e*P **P 02 04 37.0 -0.2**
STOK Stokkvaagen 29.20 352 *e*P **P 02 04 37.1 -0.4**
STOK Stokkvaagen 29.20 352 *e*P **P 02 04 37.1 -0.4**
KONS Konsvik 29.35 352 *e*P **P 02 04 38.2 -0.6**
IMYA Miami 29.73 81 *e*P **P 02 04 42.2 -0.4**
IMYA Miami 29.73 81 *e*P **P 02 04 42.2 -0.4**
DHBB Dhamar BB 30.01 134⇑*e*P **P 02 04 47.1 +1.9**
DHBB Dhamar BB 30.01 134⇑*e*P **P 02 04 47.1 +2.0**
IBND Bandar-abas 30.12 100 *e*P **P 02 04 45.8 -0.3**
ARU Arti 30.25 40 P **P 02 04 46.8 -0.1**
comp=Z,771nm,0.6s,SNR=39
ARU Arti 30.25 40*c i*P **P 02 04 45.9 -1.0**
ARU *e* 02 05 46.9
ARU *e* 02 07 43.9
ARU S **S 02 09 42.1 +1.5**
ARU SS ScP 02 11 18.9 -1.7
ARU pmax pmax
comp=Z,150nm,1.2s,mb5.5
ARU Arti 30.25 40 *e*P **P 02 04 45.9 -1.0**
comp=Z,82nm,0.7s,mb5.5
ARU *e*PcP PcP 02 07 44.7 -0.9
ARU Arti 30.25 40 *e*P **P 02 04 45.9 -1.0**
comp=Z,82nm,0.7s,mb5.5
ARU Arti 30.25 40 *e*PcP PcP 02 07 44.7 -0.9
APA Apatity 30.50 8⇓*i*P **P 02 04 48.6 -0.3**
APA *i* 02 05 54.0
APA *e*S **S 02 09 42.0 -2.1**
APA *e*SS PcS 02 11 30.0 +0.7
APA pmax pmax
comp=Z,48nm,0.8s,mb5.2
APA MLR MLR
comp=Z,400nm,14.0s
APA Apatity 30.50 8 *i* P **P 02 04 48.6 -0.3**
comp=Z,48nm,0.8s,mb5.2
APA *e*S **S 02 09 42.0 -2.1**
STEI Steigen 30.55 354⇑*i*P **P 02 04 49.0 -0.4**
ASUD Al Ashush, Dub 30.62 106 P **P 02 04 50.9 +0.4**
SNR=7.1
ASUD Al Ashush, Dub 30.62 106 P **P 02 04 50.4 -0.1**
SNR=5.6
NAZ Nazwa, Dubai 30.68 105 P **P 02 04 51.1 +0.1**
SNR=6.4
NAZ Nazwa, Dubai 30.68 105 P **P 02 04 50.7 -0.4**
BANOM Banah 30.68 103 P **P 02 04 50.6 -0.5**
SNR=30
BANOM P 02 04 50.8
SNR=9.0
BANOM Banah 30.68 103 P **P 02 04 50.4 -0.7**
SNR=30
FAQ Al Faqa, Dubai 30.76 105 P **P 02 04 51.0 -0.7**
SNR=13
SOKR Solikamsk 30.81 34*c i*P **P 02 04 51.3 -0.5**
SOKR pmax pmax
comp=Z,200nm,1.0s,mb5.8
SOKR Solikamsk 30.81 34 *i* P **P 02 04 51.3 -0.5**
comp=Z,200nm,1.0s,mb5.8
TORD Torodi Ar. Bea 30.84 223 P **P 02 04 52.0 -0.5**
comp=Z,35nm,0.6s,mb5.3,baz=33,slow=8.9,SNR=644
TORD PcP PcP 02 07 47.5 -0.3
comp=Z,8.5nm,0.9s,baz=50,slow=2.6,SNR=6.1
TORD S **S 02 09 47.5 -2.9**
comp=Z,4.3nm,0.9s,baz=29,slow=16,SNR=5.7
TORD ScP ScP 02 11 22.4 -0.8
comp=Z,2.2nm,0.9s,baz=31,slow=2.9,SNR=3.6
TORD PKiKP PKiKP 02 15 16.6 -1.8
comp=Z,0.9nm,0.4s,baz=356,slow=2.0,SNR=17
TORD LR LR 02 17 45.2
comp=Z,167nm,20.8s,baz=35,slow=37
TORD Torodi Ar. Bea 30.84 223 P **P 02 04 52.0 -0.5**
TORD PcP PcP 02 07 47.5 -0.3
TORD S **S 02 09 47.5 -2.9**
TORD ScP ScP 02 11 22.4 -0.8
LOF Lofoten 30.89 353 *e*P **P 02 05 01.4 +9.0**
HATD Hatta, Dubai 31.13 105 P **P 02 04 54.0 -1.0**
SNR=12
HATD Hatta, Dubai 31.13 105 P **P 02 04 54.3 -0.7**
SNR=28
ASHO Ashiyiah 31.15 105 P **P 02 04 54.5 -0.6**
SNR=14
ASHO P 02 04 55.0
SNR=34
ASHO Ashiyiah 31.15 105 P **P 02 04 54.5 -0.7**
SNR=14
EFAM Famara 31.31 265 P **P 02 04 58.1 +1.5**
comp=Z,27nm,0.7s,mb5.1
EFAM Famara 31.31 265 P **P 02 04 58.1 +1.6**
comp=Z,27nm,0.7s,mb5.1
KTK1 Kautokeino 31.35 0 *e* **P 02 04 54.3 -2.1**
KTK1 *e*P 02 04 55.6
KTK1 Kautokeino 31.35 0 *e*P **P 02 04 55.6 -0.8**
SVE Sverdlovsk 31.47 40⇓*e*P **P 02 04 57.2 -0.4**
SVE pmax pmax
comp=Z,288nm,0.8s,mb6.1
SVE MLR MLR
comp=Z,217nm,17.0s
SVE Sverdlovsk 31.47 40 *e*P **P 02 04 57.2 -0.4**
comp=Z,217nm,17.0s
ATD Arta Tunnel 31.70 140 P **P 02 05 01.1 +1.1**
comp=Z,23nm,0.9s,mb4.9,baz=185,slow=21,SNR=5.0
ATD Arta Tunnel 31.70 140 P **P 02 05 01.1 +1.1**
ARE0 ARCESS Array S 31.91 2 *e*P **P 02 05 00.3 -1.0**
ARE0 ARCESS Array S 31.91 2 *e*P **P 02 05 00.3 -1.0**
ARCES ARCESS Array B 31.91 2 P **P 02 05 00.1 -1.3**
comp=Z,40nm,0.6s,mb5.3,baz=186,slow=8.5,SNR=234
ARCES PcP PcP 02 07 48.8 -1.0
comp=Z,5.5nm,0.4s,baz=192,slow=2.7,SNR=9.3
ARCES ScP ScP 02 11 23.3 -2.6
comp=Z,2.5nm,0.6s,baz=169,slow=2.5,SNR=5.0
ARCES PKiKP PKiKP 02 15 16.5 -1.2
comp=Z,2.2nm,1.1s,baz=229,slow=1.1,SNR=3.9
ARCES LR LR 02 19 06.0
comp=Z,409nm,20.3s,baz=178,slow=38
ARCES ARCESS Array B 31.91 2 P **P 02 05 00.1 -1.2**
ARCES 02 07 48.8
ARCES *i* 02 15 16.5
ARCES pmax pmax
comp=Z,40nm,0.6s
ARCES MLR MLR
comp=Z,409nm,20.3s
ARCES ARCESS Array B 31.91 2 P **P 02 05 00.1 -1.3**
ARCES PcP PcP 02 07 48.8 -1.0
ARCES ScP ScP 02 11 23.3 -2.6
ARCES ARCESS Array B 31.91 2 P **P 02 05 00.1 -1.2**
comp=Z,40nm,0.6s,mb5.3
ARCES ARCESS Array B 31.91 2 PcP PcP 02 07 48.8 -1.0
TRO Tromso 32.04 357 *e*P **P 02 05 01.8 -0.7**
TRO *e*S **S 02 10 07.8 -0.4**
TRO AMS AMS 02 19 02.4
comp=Z,307nm,18.7s
TRO Tromso 32.04 357 *e*P **P 02 05 01.8 -0.7**
SNR=39
TRO *e*S **S 02 10 07.8 -0.3**
SNR=39
CFTV Fuerteventura 32.06 264 P **P 02 05 04.2 +1.1**
comp=Z,17nm,0.6s,mb5.0
CFTV Fuerteventura 32.06 264 P **P 02 05 04.2 +1.1**
comp=Z,17nm,0.6s,mb5.0
KEV Kevo 32.18 3 *e*P **P 02 05 01.4 -2.3**
KEV pmax pmax
comp=Z,31nm,0.6s,mb5.2
KEV Kevo 32.18 3 *ep* **P 02 05 01.4 -2.3**
comp=Z,31nm,0.6s,mb5.2
KEV Kevo 32.18 3 *ep* **P 02 05 01.4 -2.3**
comp=Z,31nm,0.6s,mb5.2
KEV Kevo 32.18 3 *e*P **P 02 05 01.4 -2.3**
comp=Z,31nm,0.6s,mb5.2
ARQ Araqi 32.24 107 P **P 02 05 04.7 -0.1**
SNR=18
ARQ Araqi 32.24 107 P **P 02 05 04.7 -0.1**
SNR=18
HOQ Hoqain 32.71 106 P **P 02 05 08.0 -0.8**
SNR=17
HOQ Hoqain 32.71 106 P **P 02 05 08.0 -0.8**
SNR=17
BSY Bisya 33.09 107 P **P 02 05 11.6 -0.6**
SNR=7.4
BSYO Bisya 33.13 107 P **P 02 05 11.6 -0.9**
SNR=7.4
EOSO Osorio 33.37 265 P **P 02 05 15.3 +0.7**
comp=Z,9.2nm,0.5s,mb4.9
EOSO Osorio 33.37 265 P **P 02 05 15.3 +0.7**
comp=Z,9.2nm,0.5s,mb4.9
SMDO Samad 33.56 106 P **P 02 05 15.8 -0.5**
SNR=17
SMDO Samad 33.56 106 P **P 02 05 15.8 -0.5**
SNR=17
EBAJ Bajamar 33.79 266 P **P 02 05 19.2 +1.0**
comp=Z,34nm,0.6s,mb5.3
EBAJ Bajamar 33.79 266 P **P 02 05 19.2 +1.0**
comp=Z,34nm,0.6s,mb5.3
JMDO Jabal Madar 33.99 107 P **P 02 05 19.4 -0.6**
SNR=6.2
JMDO Jabal Madar 33.99 107 P **P 02 05 19.4 -0.6**
SNR=6.2
CCAN Las Canadas 34.13 266 P **P 02 05 22.6 +1.4**
comp=Z,18nm,0.6s,mb5.1
CCAN Las Canadas 34.13 266 P **P 02 05 22.6 +1.4**
comp=Z,18nm,0.6s,mb5.1
WBK Wadi Bani Khal 34.51 105 P **P 02 05 24.7 +0.2**
SNR=6.8
BRVK Borovoye 36.02 49 P **P 02 05 37.8 +0.7**
comp=Z,913nm,0.5s
BRVK Borovoye 36.02 49*ce*P **P 02 05 36.8 -0.3**
BRVK pmax pmax
comp=Z,158nm,1.0s,mb5.9
BRVK Borovoye 36.02 49 *e*P **P 02 05 37.0 -0.1**
comp=Z,98nm,0.6s,mb5.9
BRVK Borovoye 36.02 49 P **P 02 05 37.3 +0.2**
SNR=51
BRVK P 02 05 37.3
SNR=51
BRVK Borovoye 36.02 49 *e*P **P 02 05 36.8 -0.3**
comp=Z,158nm,1.0s,mb5.9
BVAR Borovoye Array 36.08 49 P **P 02 05 37.3 -0.3**
comp=Z,68nm,0.6s,mb5.8,baz=261,slow=6.3,SNR=474
BVAR ScP ScP 02 11 39.2 -1.7
comp=Z,1.8nm,0.8s,baz=216,slow=7.1,SNR=3.9
BVAR PKiKP PKiKP 02 15 20.2 -1.0
comp=Z,1.7nm,0.7s,baz=270,slow=0.4,SNR=6.1
BVAR Borovoye Array 36.08 49 P **P 02 05 37.3 -0.2**
BVAR ScP ScP 02 11 39.2 -1.7
BVAR Borovoye Array 36.08 49 P **P 02 05 37.3 -0.3**
comp=Z,69nm,0.6s,mb5.8
KBL Kabul 37.24 80 *e*P **P 02 05 46.8 -0.9**
KBL *e* 02 08 05.1
KBL Kabul 37.24 80 *e*P **P 02 05 46.8 -0.9**
KBL Kabul 37.24 80 *e*PcP PcP 02 08 05.1 -0.7
BORG Borgarnes 37.37 331 P **P 02 05 49.1 +0.7**
comp=Z,15nm,0.6s,mb5.1,baz=61,slow=4.1,SNR=7.4
BORG Borgarnes 37.37 331 *e*P **P 02 05 49.9 +1.5**
BORG Borgarnes 37.37 331 *e*P **P 02 05 49.9 +1.5**
EKS2 Erkin-Say 38.81 66 P **P 02 06 00.9 0.0**
SNR=72
EKS2 Erkin-Say 38.81 66 *e*P **P 02 06 00.7 -0.2**
comp=Z,57nm,0.8s,mb5.5
EKS2 *e*PcP PcP 02 08 11.0 +0.5
EKS2 Erkin-Say 38.81 66 *e*P **P 02 06 00.6 -0.3**
comp=Z,57nm,0.8s,mb5.5
EKS2 Erkin-Say 38.81 66 *e*PcP PcP 02 08 11.0 +0.4
AML Almayashu 38.85 67 P **P 02 06 00.9 -0.3**
SNR=30
AML Almayashu 38.85 67 *e*P **P 02 06 00.6 -0.6**
comp=Z,15nm,0.6s,mb5.0
AML *e*PcP PcP 02 08 11.3 +0.7
AML Almayashu 38.85 67 P **P 02 06 00.8 -0.4**
SNR=31
AML Almayashu 38.85 67 *e*PcP PcP 02 08 11.4 +0.7
HOPEN Hopen 38.90 1 *e*P **P 02 05 60.0 -1.2**
HOPEN Hopen 38.90 1 *e*P **P 02 06 00.0 -1.2**
SNR=37
USP Ospenovka 39.23 65 P **P 02 06 03.3 -1.0**
SNR=15
AAK Ala-Archa 39.34 66 P **P 02 06 05.2 0.0**
comp=Z,268nm,0.7s,mb6.2,SNR=19
AAK Ala-Archa 39.34 66 P **P 02 06 05.0 -0.2**
SNR=25
AAK Ala-Archa 39.34 66 P **P 02 06 05.0 -0.2**
comp=Z,20nm,0.7s,mb5.1,baz=225,slow=2.8,SNR=41
AAK ScP ScP 02 11 52.7 -0.8
comp=Z,3.7nm,0.6s,baz=224,slow=4.3,SNR=7.3
AAK Ala-Archa 39.34 66*ce*P **P 02 06 05.0 -0.2**
AAK pmax pmax
comp=Z,29nm,1.0s,mb5.1
AAK Ala-Archa 39.34 66⇑*e*P **P 02 06 05.0 -0.2**
comp=Z,60nm,1.0s,mb5.4
AAK *e*PcP PcP 02 08 12.5 +0.3
AAK *e*ScP ScP 02 11 53.3 -0.2
AAK Ala-Archa 39.34 66 P **P 02 06 05.4 +0.2**
SNR=26
AAK P 02 06 05.4
SNR=26
AAK Ala-Archa 39.34 66⇑*e*P **P 02 06 05.0 -0.2**
comp=Z,60nm,1.0s,mb5.4
AAK Ala-Archa 39.34 66 *e*PcP PcP 02 08 12.5 +0.3
UCH Uchtor 39.43 67 P **P 02 06 06.2 +0.2**
SNR=27
UCH Uchtor 39.43 67 *e*P **P 02 06 05.6 -0.4**
comp=Z,19nm,0.8s,mb5.0
UCH *e*PcP PcP 02 08 13.3 +0.8
UCH *e*ScP ScP 02 11 53.7 -0.2
UCH Uchtor 39.43 67 *e*P **P 02 06 05.6 -0.4**
comp=Z,19nm,0.8s,mb5.0
UCH Uchtor 39.43 67 *e*PcP PcP 02 08 13.3 +0.8
CHMS Chumysh 39.46 65 P **P 02 06 05.7 -0.6**
SNR=23
KBK Karagaybulak 39.66 66 P **P 02 06 08.0 +0.1**
SNR=31
DBIC Dimbokro 39.79 226 P **P 02 06 08.9 -0.3**
comp=Z,67nm,0.6s,mb5.7,baz=15,slow=10,SNR=139
DBIC S **S 02 12 04.5 -3.2**
comp=Z,9.4nm,1.0s,baz=289,slow=23,SNR=12
DBIC LR LR 02 24 13.3
comp=Z,198nm,18.1s,baz=18,slow=38
DBIC Dimbokro 39.79 226 *e*P **P 02 06 08.6 -0.7**
DBIC *e* 02 08 13.8
DBIC pmax pmax
comp=Z,73nm,0.6s
DBIC Dimbokro 39.79 226 *e*P **P 02 06 08.6 -0.7**
comp=Z,73nm,0.6s,mb5.7
DBIC *e*PcP PcP 02 08 13.8 -0.3
DBIC Dimbokro 39.79 226 *e*P **P 02 06 08.6 -0.7**
comp=Z,73nm,0.6s,mb5.7
DBIC Dimbokro 39.79 226 *e*PcP PcP 02 08 13.8 -0.3
TIC Toumodi 39.91 226 *e*P **P 02 06 09.7 -0.5**
comp=Z,98nm,0.6s,mb5.8
TIC Toumodi 39.91 226 *e*P **P 02 06 09.7 -0.5**
TIC pmax pmax
comp=Z,98nm,0.6s,mb5.8
TIC Toumodi 39.91 226 *e*P **P 02 06 09.7 -0.5**
comp=Z,98nm,0.6s,mb5.8
KIC Kosan Boka 39.98 226 *e*P **P 02 06 10.5 -0.3**
comp=Z,147nm,0.6s,mb6.0
KIC Kosan Boka 39.98 226 *e*P **P 02 06 10.5 -0.3**
comp=Z,147nm,0.6s,mb6.0
KZA Kyzart 40.00 67 P **P 02 06 11.3 +0.6**
SNR=32
TKM2 Tokmak 2 40.08 65 P **P 02 06 10.9 -0.5**
SNR=30
TKM2 Tokmak 2 40.08 65 *e*P **P 02 06 10.6 -0.8**
TKM2 *e* 02 07 46.2
TKM2 *e* 02 08 14.3
TKM2 pmax pmax
comp=Z,16nm,0.6s,mb5.0
TKM2 Tokmak 2 40.08 65 *e*P **P 02 06 10.6 -0.8**
comp=Z,16nm,0.6s,mb5.0
TKM2 *e*PP PP 02 07 46.2 +1.4
TKM2 *e*PcP PcP 02 08 14.3 -0.3
TKM2 *e*ScP ScP 02 11 54.7 -1.7
TKM2 Tokmak 2 40.08 65 *e*P **P 02 06 10.6 -0.8**
comp=Z,16nm,0.6s,mb5.0
TKM2 Tokmak 2 40.08 65 *e*PP PP 02 07 46.2 +1.3
TKM2 Tokmak 2 40.08 65 *e*PcP PcP 02 08 14.3 -0.3
SCO Scoresbysund 40.25 339⇑*i*P **P 02 06 13.4 +1.0**
SCO pmax pmax
comp=Z,33nm,0.8s,mb5.2
SCO MLR MLR
comp=Z,75nm,20.0s
SCO Scoresbysund 40.25 339⇑*i*P **P 02 06 13.4 +1.0**
comp=Z,33nm,0.8s,mb5.2,SNR=29
LIC Lamto 40.25 226 *e*P **P 02 06 12.8 -0.3**
comp=Z,442nm,0.6s
LIC Lamto 40.25 226⇑*i*P **P 02 06 12.8 -0.3**
comp=Z,258nm,0.6s,mb5.9,baz=37
LIC *e*MLR MLR
comp=Z,229nm,18.5s
LIC Lamto 40.25 226⇑*i*P **P 02 06 12.8 -0.3**
comp=Z,129nm,0.6s,mb5.9
LIC LR LR
comp=Z,110nm,18.5s
LIC Lamto 40.25 226⇑*i*P **P 02 06 12.8 -0.3**
comp=Z,129nm,0.6s,mb5.9,baz=37
SPITS Spitsbergen Ar 40.65 358 P **P 02 06 15.7 0.0**
comp=Z,19nm,0.5s,mb5.2,baz=160,slow=11,SNR=80
SPITS PcP PcP 02 08 15.9 +0.1
comp=Z,12nm,0.5s,baz=147,slow=5.0,SNR=12
SPITS Spitsbergen Ar 40.65 358 P **P 02 06 15.7 0.0**
SPITS 02 08 15.9
SPITS pmax pmax
comp=Z,19nm,0.5s
SPITS Spitsbergen Ar 40.65 358 P **P 02 06 15.7 0.0**
comp=Z,19nm,0.5s,mb5.2
SPITS Spitsbergen Ar 40.65 358 PcP PcP 02 08 15.9 +0.1
KMBO Kilima Mbogo 40.92 158 P **P 02 06 19.7 +1.2**
comp=Z,5.5nm,0.6s,mb4.6,baz=353,slow=9.6,SNR=17
KMBO PcP PcP 02 08 18.2 +0.5
comp=Z,10nm,1.0s,baz=354,slow=5.1,SNR=7.0
KMBO ScP ScP 02 11 59.6 -0.4
comp=Z,2.4nm,0.9s,baz=322,slow=11,SNR=3.8
KMBO LR LR 02 23 58.1
comp=Z,103nm,18.7s,baz=276,slow=37
KMBO Kilima Mbogo 40.92 158 *e*P **P 02 06 19.3 +0.8**
KMBO *e* 02 08 18.9
KMBO pmax pmax
comp=Z,4.0nm,0.6s
KMBO Kilima Mbogo 40.92 158 *e*P **P 02 06 19.3 +0.8**
comp=Z,3.9nm,0.6s,mb4.4
KMBO *e*PcP PcP 02 08 18.9 +1.2
KMBO Kilima Mbogo 40.92 158 *e*P **P 02 06 19.3 +0.8**
comp=Z,3.9nm,0.6s,mb4.4
KMBO Kilima Mbogo 40.92 158 *e*PcP PcP 02 08 18.9 +1.2
KSH Kashi 41.12 70⇑*i*P **P 02 06 18.0 -2.0**
KSH PP PP 02 07 56.0 -0.2
KSH PcP PcP 02 08 19.8 +1.8
KSH PcS PcS 02 12 09.3 +0.2
KSH S **S 02 12 22.0 -5.1**
KSH SS SS 02 15 20.1 -12
KSH pmax pmax
comp=Z,31nm,1.1s,mb5.0
KSH pmax pmax
comp=Z,220nm,5.6s
KSH LR LR
comp=N,120nm,5.0s
KSH LR LR
comp=E,98nm,5.5s
KSH LR LR
comp=Z,140nm,6.4s
KURK Kurchatov 41.14 53 P **P 02 06 18.9 -1.1**
comp=Z,216nm,0.6s,mb6.2,baz=280,slow=8.6,SNR=665
KURK PP PP 02 07 53.9 -2.3
comp=Z,17nm,0.8s,baz=272,slow=12,SNR=4.3
KURK PcP PcP 02 08 16.9 -0.9
comp=Z,18nm,0.8s,baz=269,slow=3.9,SNR=4.4
KURK ScP ScP 02 11 58.0 -2.4
comp=Z,2.9nm,0.9s,baz=246,slow=4.0,SNR=3.8
KURK PKiKP PKiKP 02 15 24.4 -1.1
comp=Z,1.2nm,0.7s,baz=274,slow=1.2,SNR=4.7
KURK Kurchatov 41.14 53 P **P 02 06 19.0 -1.0**
KURK 02 07 53.9
KURK 02 08 16.9
KURK *i* 02 15 24.4
KURK pmax pmax
comp=Z,217nm,0.6s,mb6.2
KURK pmax pmax
comp=Z,17nm,0.8s,mb4.9
KURK Kurchatov 41.14 53 P **P 02 06 18.9 -1.1**
KURK PP PP 02 07 53.9 -2.3
KURK PcP PcP 02 08 16.9 -0.9
KURK ScP ScP 02 11 58.0 -2.4
KURK Kurchatov 41.14 53 P **P 02 06 19.0 -1.0**
comp=Z,217nm,0.6s,mb6.2
KURK Kurchatov 41.14 53 PP PP 02 07 53.9 -2.3
KURK Kurchatov 41.14 53 PcP PcP 02 08 16.9 -1.0
KBS Kingsbay 41.55 357 *e*P **P 02 06 22.9 -0.1**
KBS *e*SS SS 02 15 37.9 -1.9
KBS Kingsbay 41.55 357*c i*P **P 02 06 22.9 -0.1**
KBS pmax pmax
comp=Z,100nm,1.2s,mb5.4
KBS Kingsbay 41.55 357 *e*P **P 02 06 23.2 +0.2**
comp=Z,21nm,0.7s,mb5.0
KBS Kingsbay 41.55 357 *e*P **P 02 06 22.9 -0.1**
SNR=36
BHJ Bhuj 42.49 96 *e*PKP **P 02 06 27.9 -3.4**
DAG Danmarks Havn 43.12 347⇓*e*P **P 02 06 36.2 +0.4**
DAG pmax pmax
comp=Z,17nm,0.5s,mb5.0
NVS Novosibirsk 43.71 47⇑*i*P **P 02 06 40.4 -0.3**
NVS *i* 02 08 26.7
NVS *e*S **S 02 13 05.5 +0.9**
NVS pmax pmax
comp=Z,481nm,1.5s,mb6.0
NVS pmax pmax
comp=N,89nm,1.1s
NVS pmax pmax
comp=E,58nm,0.7s
NVS smax
comp=N,16nm,0.6s
NVS Novosibirsk 43.71 47 *i* P **P 02 06 40.4 -0.3**
comp=N,89nm,1.1s,mb5.4
NVS Novosibirsk 43.71 47 *i* PcP PcP 02 08 26.7 +0.4
comp=N,16nm,0.6s
MK31 Makanchi Array 44.04 58⇑*e*P **P 02 06 42.7 -0.9**
MK31 *e* 02 08 26.7
MK31 Makanchi Array 44.04 58⇑*e*P **P 02 06 42.7 -0.9**
MK31 *e*PcP PcP 02 08 26.7 -0.9
MK31 *e*ScP ScP 02 12 10.3 -1.9
MK31 Makanchi Array 44.04 58 *e*P **P 02 06 42.7 -0.9**
MKAR Makanchi Array 44.04 58 P **P 02 06 42.7 -0.9**
comp=N,49nm,0.6s,mb5.4,baz=284,slow=6.7,SNR=378
MKAR PcP PcP 02 08 27.1 -0.6
comp=N,16nm,0.7s,baz=288,slow=4.3,SNR=3.7
MKAR ScP ScP 02 12 10.1 -2.1
comp=N,3.6nm,0.8s,baz=281,slow=3.0,SNR=5.2
MKAR LR LR 02 28 15.8
comp=N,125nm,21.6s,baz=270,slow=40
MKAR Makanchi Array 44.04 58 P **P 02 06 42.7 -0.9**
MKAR 02 08 27.1
MKAR pmax pmax
comp=Z,49nm,0.6s
MKAR pmax pmax
comp=Z,16nm,0.7s
MKAR MLR MLR
comp=Z,125nm,21.6s
MKAR Makanchi Array 44.04 58 P **P 02 06 42.7 -0.9**
MKAR PcP PcP 02 08 27.1 -0.6
MKAR ScP ScP 02 12 10.1 -2.1
MKAR LR LR 02 28 15.8
MKAR Makanchi Array 44.04 58 P **P 02 06 42.7 -0.9**
comp=Z,49nm,0.6s,mb5.4
MKAR Makanchi Array 44.04 58 PcP PcP 02 08 27.0 -0.6
ZAA0 Zalesovo Array 44.69 48⇑*i*P **P 02 06 47.5 -1.1**
ZAA0 Zalesovo Array 44.69 48⇑*i*P **P 02 06 47.5 -1.1**
ZALV Zalesovo Beam 44.69 48 P **P 02 06 47.7 -0.9**
comp=Z,106nm,0.5s,mb5.8,baz=274,slow=8.5,SNR=465
ZALV ScP ScP 02 12 13.4 -1.3
comp=Z,0.8nm,0.3s,baz=312,slow=5.2,SNR=3.3
ZALV LR LR 02 26 29.6
comp=Z,79nm,20.8s,baz=75,slow=37
ZALV Zalesovo Beam 44.69 48 P **P 02 06 47.7 -0.9**
ZALV ScP ScP 02 12 13.4 -1.3
ZALV LR LR 02 26 29.6
ZALV Zalesovo Beam 44.69 48 P **P 02 06 47.7 -0.9**
comp=Z,79nm,20.8s
AJM Ajmer 44.87 89 *e*PKP **P 02 06 49.4 -1.0**
KHET Khetri 45.07 86 *e*PKP **P 02 06 50.6 -1.3**

KHET					AMb	AMB	02 06 51.6	
	comp=Z,38nm,0.6s,mb5.3							
KLP	**Kalpa**	**45.53**	**80**	*e*PKP	**P**		**02 06 53.9**	**-1.7**
KLP					AMb	AMB	02 06 55.4	
	comp=Z,44nm,0.3s,mb5.6							
DDI	**Dehra Dun**	**45.87**	**82**	*e*PKP	**P**		**02 06 56.4**	**-1.9**
SUMG	**Summit**	**45.89**	**338⇑**	*i*P	**P**		**02 06 58.8**	**+0.9**
	comp=Z,67nm,1.0s,mb5.3							
SUMG				*e*PcP	PcP		02 08 34.0	+0.4
SUMG				*e*ScP	ScP		02 12 17.7	-1.6
SUMG	**Summit**	**45.89**	**338⇑**	*i*P	**P**		**02 06 58.8**	**+0.9**
	comp=Z,67nm,1.0s,mb5.3							
SUMG	**Summit**	**45.89**	**338**	*e*PcP	PcP		02 08 34.0	+0.4
NDI	**New Delhi**	**45.91**	**85**	*ex*	x		02 06 25.0	
AYAN	**Aya Nagar**	**45.93**	**85**	*e*PKP	**P**		**02 06 57.8**	**-1.0**
SONA	**Sohna**	**46.00**	**85**	*e*PKP	**P**		**02 06 58.1**	**-1.2**
SONA					AMb	AMB	02 06 59.5	
	comp=Z,37nm,0.7s,mb5.2							
BISR	**Bishrakh**	**46.14**	**85**	*e*PKP	**P**		**02 06 59.2**	**-1.2**
JOSI	**Joshimath**	**46.95**	**81**	*e*PKP	**P**		**02 07 05.4**	**-1.4**
AGRA	**Agra**	**47.14**	**86**	*e*PKP	**P**		**02 07 06.8**	**-1.5**
POO	**Poona**	**48.33**	**99**	*e*PKP	**P**		**02 07 16.6**	**-0.9**
WMQ	**Urumqi**	**48.44**	**61**	P	**P**		**02 07 18.0**	**-0.1**
WMQ				PP	PP		02 09 11.0	-0.2
WMQ				S	**S**		**02 14 13.0**	**+0.2**
WMQ				SS	SS		02 17 38.0	-5.1
WMQ				pmax	pmax			
	comp=Z,56nm,1.0s,mb5.3							
WMQ				pmax	pmax			
	comp=Z,140nm,5.0s							
WMQ				LR	LR			
	comp=N,180nm,18.0s							
WMQ				LR	LR			
	comp=E,200nm,18.0s							
WMQ				LR	LR			
	comp=Z,140nm,18.0s							
BHPL	**Bhopal**	**48.65**	**91**	*e*PKP	**P**		**02 07 18.8**	**-1.1**
BHPL				*e*PKP			02 07 19.0	
BHPL				AMb	AMB		02 07 19.9	
	comp=E,43nm,0.4s							
KAD	**Karad**	**49.28**	**100**	*e*PKP	**P**		**02 07 23.8**	**-1.1**
SFJD	**Kangerlussuaq**	**49.50**	**330**	P	**P**		**02 07 24.3**	**-1.5**
	comp=E,17nm,0.8s,mb5.0,baz=70,slow=9.7,SNR=11							
SFJD	**Kangerlussuaq**	**49.50**	**330**	*i* P	**P**		**02 07 25.6**	**-0.2**
SFJD				pmax	pmax			
	comp=Z,17nm,0.9s,mb5.0							
SFJD				MLR	MLR			
	comp=Z,85nm,23.0s							
SFJD	**Kangerlussuaq**	**49.50**	**330**	*i* P	**P**		**02 07 25.6**	**-0.2**
	comp=Z,17nm,0.9s,mb5.0,SNR=26							
LATR	**Latur**	**50.52**	**97**	*e*PKP	**P**		**02 07 31.1**	**-3.2**
ALE	**Alert**	**52.20**	**350**	P	**P**		**02 07 46.0**	**0.0**
	comp=Z,286nm,0.7s,SNR=34							
DMN	**Daman**	**52.61**	**82**	*e*P	**P**		**02 07 47.7**	**-2.0**
	comp=Z,346nm,0.7s							
DMN	**Daman**	**52.61**	**82**	*e*P	**P**		**02 07 47.7**	**-2.0**
	comp=Z,346nm,0.7s							
HYB	**Hyderabad**	**52.65**	**97**	*i* P	**P**		**02 07 48.0**	**-2.1**
KKN	**Kakani**	**52.66**	**81**	*e*P	**P**		**02 07 47.7**	**-2.4**
	comp=Z,178nm,0.6s,mb6.3							
KKN	**Kakani**	**52.66**	**81**	*e*P	**P**		**02 07 47.7**	**-2.4**
KKN				pmax	pmax			
	comp=Z,178nm,0.6s,mb6.3							
KKN	**Kakani**	**52.66**	**81**	*e*P	**P**		**02 07 47.7**	**-2.4**
	comp=Z,178nm,0.6s,mb6.3							
PKIN	**Phulchoki**	**52.85**	**82**	*e*P	**P**		**02 07 49.6**	**-1.9**
	comp=Z,142nm,1.1s,mb5.9							
PKI	**Pulchoki**	**52.86**	**82**	*e*P	**P**		**02 07 49.3**	**-2.3**
	comp=Z,160nm,0.9s,mb6.0							
PKI	**Pulchoki**	**52.86**	**82**	*e*P	**P**		**02 07 49.6**	**-2.0**
PKI				pmax	pmax			
	comp=Z,142nm,1.1s,mb5.9							
PKI	**Pulchoki**	**52.86**	**82**	*e*P	**P**		**02 07 49.6**	**-2.0**
	comp=Z,142nm,1.1s,mb5.9							
PKI	**Pulchoki**	**52.86**	**82**	*e*P	**P**		**02 07 49.6**	**-2.0**
	comp=Z,142nm,1.1s,mb5.9							
LSZ	**Lusaka**	**52.96**	**173**	P	**P**		**02 07 52.1**	**-0.2**
	comp=Z,9.6nm,0.8s,mb4.9,baz=16,slow=6.9,SNR=16							
LSZ	**Lusaka**	**52.96**	**173**	P	**P**		**02 07 52.1**	**-0.1**
LSZ				pmax	pmax			
	comp=Z,10.0nm,0.8s,mb4.9							
LSZ	**Lusaka**	**52.96**	**173**	*e*P	**P**		**02 07 51.8**	**-0.4**
	comp=Z,7.5nm,0.8s,mb4.8							
LSZ	**Lusaka**	**52.96**	**173**	*e*P	**P**		**02 07 51.8**	**-0.4**
	comp=Z,7.5nm,0.8s,mb4.8							
GUN	**Gumba**	**53.07**	**81**	*e*P	**P**		**02 07 51.1**	**-2.0**
	comp=Z,194nm,0.6s							
GUN	**Gumba**	**53.07**	**81**	*e*P	**P**		**02 07 51.1**	**-2.0**
	comp=Z,194nm,0.6s							
JIRN	**Jiri**	**53.43**	**81**	*e*P	**P**		**02 07 53.9**	**-1.9**
	comp=Z,11nm,0.3s,mb5.4							
RAMN	**Ramite**	**54.09**	**82**	*e*P	**P**		**02 07 58.0**	**-2.6**
	comp=Z,408nm,0.8s							
RAMN	**Ramite**	**54.09**	**82**	*e*P	**P**		**02 07 58.0**	**-2.6**
	comp=Z,408nm,0.8s							
MOY	**Mondy**	**54.74**	**48**	*e*P	**P**		**02 08 04.8**	**-0.1**
MOY				pmax	pmax			
	comp=Z,41nm,1.7s,mb5.2							
MOY	**Mondy**	**54.74**	**48**	*e*P	**P**		**02 08 04.8**	**-0.1**
	comp=Z,41nm,1.7s,mb5.2							
ODAN	**Odare**	**54.75**	**81**	*e*P	**P**		**02 08 02.9**	**-2.5**
	comp=Z,72nm,0.7s,mb5.8							
ODAN	**Odare**	**54.75**	**81**	*e*P	**P**		**02 08 02.9**	**-2.5**
	comp=Z,72nm,0.7s,mb5.8							
TAPN	**Taplejung**	**54.77**	**81**	*e*P	**P**		**02 08 03.4**	**-2.1**
	comp=Z,83nm,0.6s,mb5.9							
TAPN	**Taplejung**	**54.77**	**81**	*e*P	**P**		**02 08 03.4**	**-2.1**
	comp=Z,83nm,0.6s,mb5.9							
VIS	**Vishakhapatnam**	**56.25**	**93**	*e*PKP	**P**		**02 08 14.1**	**-2.1**
VIS				AMb	AMB		02 08 15.7	
	comp=Z,80nm,1.4s,mb5.5							
TLY	**Talaya**	**56.30**	**48**	P	**P**		**02 08 16.1**	**0.0**
	comp=Z,154nm,1.0s,mb6.0,SNR=11							
TLY	**Talaya**	**56.30**	**48**	*e*P	**P**		**02 08 15.0**	**-1.1**
TLY				*e*			02 09 13.1	
TLY				pmax	pmax			
	comp=Z,31nm,1.0s,mb5.3							
TLY				MLR	MLR			
	comp=Z,107nm,21.0s							
TLY	**Talaya**	**56.30**	**48**	*e*P	**P**		**02 08 15.6**	**-0.4**
	comp=Z,17nm,0.9s,mb5.1							
TLY	**Talaya**	**56.30**	**48**	P	**P**		**02 08 16.0**	**0.0**
	SNR=22							
TLY				P			02 08 16.0	
	SNR=22							
TLY	**Talaya**	**56.30**	**48**	*e*P	**P**		**02 08 15.6**	**-0.5**
	comp=Z,17nm,0.9s,mb5.1							
TLY	**Talaya**	**56.30**	**48**	*e*PcP	PcP		02 09 13.1	+0.5
	comp=Z,107nm,21.0s							
LSA	**Lhasa**	**56.34**	**76**	P	**P**		**02 08 16.3**	**-0.4**
LSA				pmax	pmax			
	comp=Z,110nm,0.8s,mb5.9							
LSA	**Lhasa**	**56.34**	**76**	*e*P	**P**		**02 08 16.2**	**-0.5**
LSA				pmax	pmax			
	comp=Z,74nm,0.6s,mb5.9							
LSA	**Lhasa**	**56.34**	**76**	*e*P	**P**		**02 08 16.2**	**-0.6**
	comp=Z,74nm,0.6s,mb5.9							
LSA	**Lhasa**	**56.34**	**76**	P	**P**		**02 08 16.4**	**-0.3**
	SNR=20							
IRK	**Irkutsk**	**56.48**	**47**	*e*P	**P**		**02 08 14.3**	**-3.0**
IRK				pmax	pmax			
	comp=Z,73nm,1.5s,mb5.5							
ZAK	**Zakamensk**	**56.53**	**49⇓**	*i*P	**P**		**02 08 16.8**	**-0.9**
ZAK				pmax	pmax			
	comp=Z,19nm,0.9s,mb5.1							
ZAK	**Zakamensk**	**56.53**	**49**	*i* P	**P**		**02 08 16.8**	**-0.9**
	comp=Z,19nm,0.9s,mb5.1							
TSUM	**Tsumeb**	**56.83**	**186**	P	**P**		**02 08 19.5**	**-0.6**
	comp=Z,7.2nm,0.7s,mb4.8,baz=348,slow=8.2,SNR=41							
TSUM	**Tsumeb**	**56.83**	**186**	P	**P**		**02 08 19.5**	**-0.6**
GTA	**Gaotai**	**58.49**	**62**	⇑P	**P**		**02 08 30.6**	**-1.1**
GTA				pP	pP		02 08 53.8	+1.7
GTA				sP	sP		02 09 05.8	+4.7
GTA				PP	PP		02 10 43.8	+2.2
GTA				S	**S**		**02 16 26.4**	**-2.5**
GTA				sS	sS		02 17 08.8	+5.2
GTA				SS	SS		02 20 24.8	+2.8
GTA				pmax	pmax			
	comp=Z,42nm,1.1s,mb5.4							
GTA				pmax	pmax			
	comp=Z,160nm,8.7s							
GTA				LR	LR			
	comp=N,130nm,19.8s							
GTA				LR	LR			
	comp=E,140nm,21.6s							
GTA				LR	LR			
	comp=Z,96nm,15.6s							
SONM	**Songino Array**	**59.38**	**51**	P	**P**		**02 08 36.6**	**-1.1**
	comp=Z,25nm,0.8s,mb5.3,baz=284,slow=9.0,SNR=134							
SONM				ScP	ScP		02 13 17.1	-1.2
	comp=Z,2.9nm,1.0s,baz=266,slow=4.5,SNR=4.9							
SONM				LR	LR		02 41 13.9	
	comp=Z,114nm,19.1s,baz=94,slow=43							
SONM	**Songino Array**	**59.38**	**51**	P	**P**		**02 08 36.6**	**-1.1**
	comp=Z,25nm,0.8s,mb5.3							
TIXI	**Tiksi**	**59.46**	**21**	*e*P	**P**		**02 08 36.9**	**-1.0**
TIXI				*e*			02 09 23.9	
TIXI				pmax	pmax			
	comp=Z,15nm,0.6s,mb5.2							
TIXI	**Tiksi**	**59.46**	**21**	*e*P	**P**		**02 08 36.9**	**-1.0**
	comp=Z,15nm,0.6s,mb5.2							
TIXI				*e*PcP	PcP		02 09 23.9	-0.7
TIXI	**Tiksi**	**59.46**	**21**	*e*P	**P**		**02 08 36.9**	**-1.0**
	comp=Z,15nm,0.6s,mb5.2							
ULN	**Ulaanbaatar**	**59.78**	**51**	*e*P	**P**		**02 08 39.5**	**-0.9**
ULN				*e*			02 10 52.9	
ULN				pmax	pmax			
	comp=Z,33nm,0.8s,mb5.4							
ULN	**Ulaanbaatar**	**59.78**	**51**	*e*P	**P**		**02 08 39.5**	**-1.0**
	comp=Z,33nm,0.8s,mb5.4							
ULN				*e*PP	PP		02 10 52.9	+0.1
ULN	**Ulaanbaatar**	**59.78**	**51**	P	**P**		**02 08 39.9**	**-0.5**
	SNR=18							
ULN				P			02 08 39.9	
	SNR=18							
ULN	**Ulaanbaatar**	**59.78**	**51**	P	**P**		**02 08 39.9**	**-0.5**
	SNR=18							
SCHQ	**Schefferville**	**59.98**	**318**	P	**P**		**02 08 41.9**	**+0.2**
	comp=Z,43nm,0.6s,mb5.7,baz=66,slow=6.5,SNR=89							
SCHQ				LR	LR		02 34 00.4	
	comp=Z,55nm,18.1s,baz=229,slow=35							
SCHQ	**Schefferville**	**59.98**	**318**	P	**P**		**02 08 41.9**	**+0.2**
OPO	**Ambohidratompo**	**60.53**	**153**	P	**P**		**02 08 46.8**	**+1.0**
	comp=Z,20nm,0.7s,mb5.2,baz=339,slow=5.1,SNR=29							
OPO	**Ambohidratompo**	**60.53**	**153**	P	**P**		**02 08 46.8**	**+1.0**
RES	**Resolute Bay**	**60.69**	**344⇑**	*i*P	**P**		**02 08 46.9**	**+0.7**
RES				pmax	pmax			
	comp=Z,40nm,0.8s,mb5.5							
RES	**Resolute Bay**	**60.69**	**344⇑**	*i*P	**P**		**02 08 46.9**	**+0.6**
	comp=Z,40nm,0.8s,mb5.5							
RES	**Resolute Bay**	**60.69**	**344⇑**	*i*P	**P**		**02 08 46.8**	**+0.6**
	comp=Z,40nm,0.8s,mb5.5							
LBTB	**Lobatse**	**62.46**	**177**	P	**P**		**02 08 59.0**	**+0.4**
	comp=Z,20nm,0.7s,mb5.3,baz=360,slow=7.0,SNR=36							
LBTB	**Lobatse**	**62.46**	**177**	P	**P**		**02 08 59.1**	**+0.4**
LBTB				pmax	pmax			
	comp=Z,20nm,0.7s,mb5.3							
LBTB	**Lobatse**	**62.46**	**177**	*e*P	**P**		**02 08 58.9**	**+0.3**
	comp=Z,18nm,0.8s,mb5.2							
LBTB	**Lobatse**	**62.46**	**177**	*e*P	**P**		**02 08 58.9**	**+0.2**
	comp=Z,18nm,0.8s,mb5.2							
LZH	**Lanzhou**	**62.83**	**64**	*e*P	**P**		**02 09 00.5**	**-0.7**
LZH				PcP	PcP		02 09 39.5	+0.6
LZH				PP	PP		02 11 24.3	+4.3
LZH				*e*S	**S**		**02 17 22.0**	**-2.3**
LZH				SS	SS		02 21 28.3	-1.9
LZH				pmax	pmax			
	comp=Z,80nm,1.4s,mb5.5							
LZH				pmax	pmax			
	comp=Z,360nm,5.3s							
LZH				LR	LR			
	comp=E,1μm,14.5s							
LZH				LR	LR			
	comp=Z,1μm,16.2s							
YAK	**Yakutsk**	**64.64**	**30**	*e*P	**P**		**02 09 09.9**	**-2.7**
YAK				pmax	pmax			
	comp=Z,32nm,0.8s,mb5.2							
YAK	**Yakutsk**	**64.64**	**30**	*e*P	**P**		**02 09 10.6**	**-2.0**
	comp=Z,60nm,0.6s,mb5.6							
YAK	**Yakutsk**	**64.64**	**30**	*e*P	**P**		**02 09 10.6**	**-2.0**
	comp=Z,60nm,0.6s,mb5.6							
CD2	**Chengdu**	**65.30**	**69⇑**	*i*P	**P**		**02 09 16.3**	**-1.2**
CD2				PP	PP		02 11 41.8	0.0
CD2				PcS			02 13 51.3	
CD2				ScS	ScS		02 19 01.3	-4.3
CD2				SS	SS		02 22 06.6	-2.3
CD2				pmax	pmax			
	comp=Z,90nm,0.9s,mb5.6							
CD2				pmax	pmax			
	comp=Z,180nm,4.2s							
CD2				LR	LR			
	comp=N,260nm,16.6s							
CD2				LR	LR			
	comp=Z,160nm,10.8s							
CLNS	**Chul'man**	**65.34**	**36**	*e*P	**P**		**02 09 16.5**	**-0.8**
CLNS				pmax	pmax			
	comp=Z,26nm,1.1s,mb5.0							
CLNS				pmax	pmax			
	comp=E,9.0nm,1.2s							
CLNS				pmax	pmax			
	comp=N,9.0nm,1.1s							
CLNS				MLR	MLR			
	comp=E,2μm,12.0s							
CLNS				MLR	MLR			
	comp=N,2μm,14.0s							
CLNS				MLR	MLR			
	comp=Z,4μm,13.0s							
CLNS	**Chul'man**	**65.34**	**36**	*e*P	**P**		**02 09 16.5**	**-0.8**
	comp=Z,4μm,13.0s							
HHC	**Hu-ho-hao-te**	**65.84**	**56**	*e*P	**P**		**02 09 19.3**	**-1.5**
HHC				PcP	PcP		02 09 50.5	-0.7
HHC				PP	PP		02 11 45.5	-0.7
HHC				ScP			02 13 47.0	
HHC				PcS			02 13 53.6	
HHC				S	S		02 17 58.0	-3.3
HHC				ScS	ScS		02 19 05.8	-3.6
HHC				SS	SS		02 22 16.8	+0.1
HHC				pmax	pmax			
	comp=Z,17nm,0.8s,mb4.9							
HHC				pmax	pmax			
	comp=Z,130nm,4.7s							
HHC				LR	LR			
	comp=N,110nm,16.6s							
HHC				LR	LR			
	comp=E,93nm,15.5s							
HHC				LR	LR			
	comp=Z,170nm,19.0s							
BOSA	**Boshof**	**66.03**	**178**	P	**P**		**02 09 22.3**	**+0.3**
	comp=Z,16nm,0.8s,mb4.9,baz=4.0,slow=6.9,SNR=36							
BOSA				LR	LR		02 40 33.8	
	comp=Z,186nm,18.4s,baz=349,slow=38							
BOSA	**Boshof**	**66.03**	**178**	P	**P**		**02 09 22.3**	**+0.4**
BOSA				pmax	pmax			
	comp=Z,16nm,0.8s,mb4.9							
BOSA				MLR	MLR			
	comp=Z,186nm,18.4s							
BOSA	**Boshof**	**66.03**	**178**	*e*P	**P**		**02 09 21.9**	**0.0**
	comp=Z,24nm,1.1s,mb4.9							
BOSA	**Boshof**	**66.03**	**178**	*e*P	**P**		**02 09 21.9**	**0.0**
	comp=Z,24nm,1.1s,mb4.9							
HIA	**Hailar**	**66.61**	**45⇑**	*i*P	**P**		**02 09 24.6**	**-1.0**
HIA	**Hailar**	**66.61**	**45**	*e*P	**P**		**02 09 25.0**	**-0.5**
	comp=Z,26nm,0.8s,mb5.1							
HIA	**Hailar**	**66.61**	**45**	*e*P	**P**		**02 09 25.0**	**-0.6**
	comp=Z,26nm,0.8s,mb5.1							
XAN	**Xi'an**	**67.46**	**64**	P	**P**		**02 09 29.8**	**-1.4**
XAN				PP	PP		02 11 59.8	-0.7
XAN				S	S		02 18 20.9	-0.2
XAN				SS	SS		02 22 43.4	+1.2
XAN				pmax	pmax			
	comp=Z,10.0nm,1.3s,mb4.5							
XAN				pmax	pmax			
	comp=Z,18nm,4.3s							
KMI	**Kunming**	**67.54**	**75**	P	**P**		**02 09 30.3**	**-1.5**
KMI				pP	pP		02 09 50.8	-1.9
KMI				PP	PP		02 12 04.3	+2.9
KMI				S	S		02 18 17.8	-4.4
KMI				SKS			02 19 17.6	
KMI				SS	SS		02 22 44.8	+1.0
KMI				pmax	pmax			
	comp=Z,27nm,1.2s,mb5.0							
KMI				pmax	pmax			
	comp=Z,150nm,3.1s							
KMI				LR	LR			
	comp=N,110nm,11.3s							
KMI				LR	LR			
	comp=E,160nm,10.8s							
KMI				LR	LR			
	comp=Z,170nm,13.7s							
LBNH	**Lisbon**	**67.84**	**309⇑**	*i*P	**P**		**02 09 34.9**	**+1.5**
LBNH				pmax	pmax			
	comp=Z,11nm,0.5s,mb4.9							
LBNH	**Lisbon**	**67.84**	**309⇑**	*i*P	**P**		**02 09 34.9**	**+1.4**
	comp=Z,11nm,0.5s,mb4.9							
LBNH	**Lisbon**	**67.84**	**309⇑**	*i*P	**P**		**02 09 34.9**	**+1.5**
	comp=Z,11nm,0.5s,mb4.9							
CHTO	**Chiang Mai**	**68.01**	**83**	*e*P	**P**		**02 09 32.9**	**-2.0**
CHTO				pmax	pmax			
	comp=Z,79nm,1.1s,mb5.5							
CHTO	**Chiang Mai**	**68.01**	**83**	*e*P	**P**		**02 09 32.9**	**-2.0**
	comp=Z,79nm,1.1s,mb5.5							
CHTO	**Chiang Mai**	**68.01**	**83**	P	**P**		**02 09 33.6**	**-1.3**
	SNR=14							
CHTO				P			02 09 33.6	
	SNR=14							
CHTO	**Chiang Mai**	**68.01**	**83**	P	**P**		**02 09 33.6**	**-1.3**
	SNR=14							
CM31	**Chiang Mai Arr**	**68.21**	**83**	*e*P	**P**		**02 09 34.5**	**-1.6**
	comp=Z,23nm,0.8s,mb5.0							
CM31	**Chiang Mai Arr**	**68.21**	**83**	*e*P	**P**		**02 09 34.5**	**-1.6**
	comp=Z,23nm,0.8s,mb5.0							
CMAR	**Chiang Mai Arr**	**68.21**	**83**	P	**P**		**02 09 34.4**	**-1.8**
	comp=Z,32nm,0.7s,mb5.3,baz=303,slow=7.8,SNR=148							
CMAR	**Chiang Mai Arr**	**68.21**	**83**	P	**P**		**02 09 34.4**	**-1.7**
CMAR				pmax	pmax			
	comp=Z,32nm,0.7s							
CMAR	**Chiang Mai Arr**	**68.21**	**83**	P	**P**		**02 09 34.4**	**-1.7**
	comp=Z,32nm,0.7s,mb5.3							
BBSR	**BB Station**	**69.23**	**295**	*e*P	**P**		**02 09 43.5**	**+1.2**
	comp=Z,45nm,0.9s,mb5.3							
BBSR	**BB Station**	**69.23**	**295**	*e*P	**P**		**02 09 43.5**	**+1.2**
	comp=Z,45nm,0.9s,mb5.3							
LONY	**Lake Ozonia**	**69.25**	**311**	*e*P	**P**		**02 09 43.3**	**+1.0**
	comp=Z,42nm,0.9s,mb5.3							
LONY	**Lake Ozonia**	**69.25**	**311**	*e*P	**P**		**02 09 43.3**	**+1.1**
	comp=Z,42nm,0.9s,mb5.3							
BJI	**Beijing**	**69.27**	**55**	P	**P**		**02 09 40.5**	**-1.9**
BJI				S	S		02 18 42.8	+0.4
BJI				SS	SS		02 23 10.5	+0.7
BJI				pmax	pmax			
	comp=Z,36nm,0.8s,mb5.2							
BJI				pmax	pmax			
	comp=Z,150nm,3.9s							
BJI				LR	LR			
	comp=N,88nm,15.2s							
BJI				LR	LR			
	comp=E,130nm,11.1s							
BJI				LR	LR			
	comp=Z,180nm,23.4s							
BJT	**Baijiatuau**	**69.28**	**55**	*e*P	**P**		**02 09 41.2**	**-1.3**
BJT				pmax	pmax			
	comp=Z,19nm,0.4s							
BJT	**Baijiatuau**	**69.28**	**55**	*e*P	**P**		**02 09 41.2**	**-1.3**
	comp=Z,19nm,0.4s,mb5.3							
BJT	**Baijiatuau**	**69.28**	**55**	*e*P	**P**		**02 09 41.2**	**-1.3**
	comp=Z,19nm,0.4s,mb5.3							
NCB	**Newcomb**	**69.39**	**310**	*e*P	**P**		**02 09 44.3**	**+1.2**
	comp=Z,38nm,1.4s,mb5.0							
NCB	**Newcomb**	**69.39**	**310**	*e*P	**P**		**02 09 44.3**	**+1.2**
	comp=Z,38nm,1.4s,mb5.0							
RCBR	**Riachuelo**	**69.57**	**245**	*e*P	**P**		**02 09 45.6**	**+1.0**
	comp=Z,16nm,0.6s,mb5.0							
RCBR	**Riachuelo**	**69.57**	**245**	*e*P	**P**		**02 09 45.6**	**+1.0**
	comp=Z,15nm,0.6s,mb5.0							
SUR	**Sutherland**	**69.76**	**182**	P	**P**		**02 09 46.1**	**+0.8**
	comp=Z,12nm,0.6s,mb4.9,baz=46,slow=6.9,SNR=21							
SUR	**Sutherland**	**69.76**	**182**	*e*P	**P**		**02 09 45.9**	**+0.6**
	comp=Z,15nm,0.6s,mb5.0							
SUR	**Sutherland**	**69.76**	**182**	*e*P	**P**		**02 09 45.9**	**+0.6**
	comp=Z,15nm,0.6s,mb5.0							
GYA	**Guiyang**	**69.80**	**72⇑**	*i*P	**P**		**02 09 47.0**	**+1.1**
GYA				pP	pP		02 10 05.8	-1.1
GYA				PP	PP		02 12 24.3	+3.3
GYA				S	S		02 18 49.0	-0.1
GYA				SS	SS		02 23 20.8	+2.1
GYA				pmax	pmax			
	comp=Z,50nm,1.0s,mb5.3							
GYA				pmax	pmax			
	comp=Z,160nm,5.4s							
GYA				LR	LR			
	comp=N,830nm,17.0s							
GYA				LR	LR			
	comp=E,620nm,18.2s							
GYA				LR	LR			
	comp=Z,870nm,17.3s							
ENH	**Enshi**	**69.85**	**67**	*e*P	**P**		**02 09 43.9**	**-2.2**
	comp=Z,53nm,1.0s,mb5.3							
ENH	**Enshi**	**69.85**	**67**	*e*P	**P**		**02 09 43.9**	**-2.2**
	comp=Z,53nm,1.0s,mb5.3							
FCC	**Fort Churchill**	**70.52**	**330⇑**	*i*P	**P**		**02 09 49.9**	**+0.2**
	comp=Z,1.1nm,0.8s							
FCC	**Fort Churchill**	**70.52**	**330⇑**	*i*P	**P**		**02 09 49.9**	**+0.2**
	comp=Z,1.1nm,0.8s							
BILL	**Bilibino**	**71.06**	**14**	*e*P	**P**		**02 09 51.8**	**-1.0**
BILL				*i*			02 10 21.4	
BILL				pmax	pmax			
	comp=Z,36nm,1.2s,mb5.1							
BILL				MLR	MLR			
	comp=Z,100nm,18.0s							
BILL	**Bilibino**	**71.06**	**14⇑**	*i*P	**P**		**02 09 51.8**	**-1.1**
	comp=Z,29nm,0.8s,mb5.2							
BILL	**Bilibino**	**71.06**	**14⇑**	*i*P	**P**		**02 09 51.8**	**-1.0**
	comp=Z,29nm,0.8s,mb5.2							
SADO	**Sadowa**	**71.86**	**313**	P	**P**		**02 09 59.4**	**+1.3**
	comp=Z,53nm,0.8s,mb5.4,baz=56,slow=5.0,SNR=39							
SADO	**Sadowa**	**71.86**	**313**	P	**P**		**02 09 59.4**	**+1.3**
SEY	**Seymchan**	**71.92**	**22⇑**	*i*P	**P**		**02 09 57.8**	**-0.3**
SEY	**Seymchan**	**71.92**	**22**	*i* P	**P**		**02 09 57.8**	**-0.3**
INK	**Inuvik**	**72.80**	**351⇑**	*i*P	**P**		**02 10 02.8**	**-0.5**
INK				pmax	pmax			
	comp=Z,57nm,1.0s							
**

HABR pmax pmax
comp=E,26nm,1.5s
HABR MLR MLR
comp=Z,53nm,15.0s
HABR Khabarovsk 75.26 40 *eP* **P 02 10 16.3 -1.6**
comp=Z,48nm,2.7s,mb4.8
MCWV Mont Chateau 75.30 309 *eP* **P 02 10 19.4 +1.1**
comp=Z,101nm,0.7s,mb5.7
MCWV Mont Chateau 75.30 309 *eP* **P 02 10 19.4 +1.1**
comp=Z,101nm,0.7s,mb5.7
AAM Ann Arbor 75.97 313 *eP* **P 02 10 22.8 +0.7**
AAM pmax pmax
comp=Z,39nm,1.0s,mb5.1
AAM Ann Arbor 75.97 313 *eP* **P 02 10 22.8 +0.7**
comp=Z,39nm,1.0s,mb5.1
FFC Flin Flon 76.45 331 P **P 02 10 25.2 +0.6**
comp=Z,361nm,0.9s,mb6.1,SNR=32
FFC Flin Flon 76.45 331 *ceP* **P 02 10 24.8 +0.2**
FFC Flin Flon 76.45 331⇑ *iP* **P 02 10 24.9 +0.3**
comp=Z,41nm,0.8s,mb5.2
EYMN Ely 76.58 321⇑ *iP* **P 02 10 25.9 +0.5**
comp=Z,26nm,0.7s,mb5.1
COWI Conover 76.59 318⇑ *iP* **P 02 10 26.2 +0.7**
comp=Z,103nm,0.7s,mb5.7
ACSO Alum Creek Sta 76.86 311 *eP* **P 02 10 27.5 +0.4**
comp=Z,78nm,1.1s,mb5.3
EGAK Eagle 77.06 353⇑ *iP* **P 02 10 27.9 +0.1**
comp=Z,24nm,0.9s,mb4.9
ULM Lac du Bonnet 77.10 325 P **P 02 10 28.2 -0.1**
comp=Z,86nm,0.8s,mb5.5,baz=42,slow=5.2,SNR=60
ULM LR LR 02 45 05.1
comp=Z,130nm,18.1s,baz=46,slow=36
BLA Blacksburg 77.13 307 *eP* **P 02 10 29.4 +0.6**
BLA pmax pmax
comp=Z,12nm,0.7s,mb4.7
BLA Blacksburg 77.13 307 *eP* **P 02 10 29.4 +0.6**
comp=Z,12nm,0.7s,mb4.8
KULM Kulim 77.22 93 *eP* **P 02 10 27.6 -2.0**
comp=Z,51nm,1.2s,mb5.1
ELN Prospectdale 77.33 307 *eP* **P 02 10 30.1 +0.2**
PSI Prapat 77.36 96 P **P 02 10 28.8 -1.6**
comp=Z,20nm,0.6s,mb5.0,baz=300,slow=5.5,SNR=14
PSI Prapat 77.36 96 P **P 02 10 28.8 -1.6**
PSI pmax pmax
comp=Z,20nm,0.6s,mb5.0
COLA College 77.47 356 *eP* **P 02 10 30.1 -0.1**
COLA pmax pmax
comp=Z,29nm,0.9s,mb5.0
COLA College 77.47 356 *eP* **P 02 10 30.1 -0.1**
comp=Z,29nm,0.9s,mb5.0
CBYP Canovanas 77.98 284 *eP* **P 02 10 34.2 +0.5**
comp=Z,28nm,0.9s,mb5.0
GAMB Gambell 78.19 6 *eP* **P 02 10 32.9 -1.3**
comp=Z,6.5nm,0.6s,mb4.5
KSRS Korea Array 78.25 52 P **P 02 10 33.0 -2.0**
comp=Z,17nm,0.8s,mb4.8,baz=310,slow=4.7,SNR=34
KSRS LR LR 02 47 17.1
comp=Z,68nm,19.1s,baz=316,slow=37
KSRS Korea Array 78.25 52 P **P 02 10 33.0 -2.0**
KSRS pmax pmax
comp=Z,17nm,0.8s,mb4.8
KSRS MLR MLR
comp=Z,68nm,19.1s
BPAW Bear Paw Mtn. 78.40 357⇑ *iP* **P 02 10 34.9 -0.4**
comp=Z,58nm,0.8s,mb5.4
AGMN Agassiz Nation 78.46 323⇑ *iP* **P 02 10 35.9 -0.1**
comp=Z,36nm,0.8s,mb5.2
CHUM Lake Minchumin 78.66 358 *eP* **P 02 10 37.1 +0.4**
comp=Z,130nm,1.1s,mb5.7
MCK McKinley 78.67 356 *eP* **P 02 10 36.6 -0.2**
MCK pmax pmax
comp=Z,114nm,1.1s,mb5.6
MCK McKinley 78.67 356 *eP* **P 02 10 36.6 -0.2**
comp=Z,114nm,1.1s,mb5.6
KTH Kantishna Hill 78.94 357 *eP* **P 02 10 37.3 -1.0**
comp=Z,37nm,0.9s,mb5.2
TRF Thorofare Moun 79.02 357 *eP* **P 02 10 38.6 -0.1**
comp=Z,43nm,0.9s,mb5.3
MENT Mentasta 79.10 354 *eP* **P 02 10 40.1 +1.0**
JFWS Jewell Farm 79.29 317⇑ *iP* **P 02 10 40.6 0.0**
JFWS pmax pmax
comp=Z,68nm,0.7s,mb5.6
JFWS Jewell Farm 79.29 317⇑ *iP* **P 02 10 40.6 0.0**
comp=Z,68nm,0.7s,mb5.6
JSC Jenkinsville 79.47 305 *eP* **P 02 10 42.4 +0.7**
NHSC New Hope 79.49 304 *eP* **P 02 10 43.2 +1.4**
comp=Z,389nm,1.8s,mb5.9
TZTN Tazewell 79.51 308 *eP* **P 02 10 42.7 +0.8**
comp=Z,36nm,1.2s,mb5.1
BLO Bloomington 79.64 312 *eP* **P 02 10 43.0 +0.5**
BLO pmax pmax
comp=Z,89nm,0.8s,mb5.7
BLO Bloomington 79.64 312 *eP* **P 02 10 43.0 +0.4**
comp=Z,89nm,0.8s,mb5.7
PPLA Purkeypile 79.64 358 *eP* **P 02 10 41.5 -0.6**
comp=Z,75nm,0.6s,mb5.7
COW Cow Castle Cre 79.67 304 *eP* **P 02 10 44.1 +1.3**
TTA Tatalina 79.69 359 *eP* **P 02 10 43.2 +0.9**
YSS Yuzh-Sakhalins 80.09 37⇑ *eP* **P 02 10 44.0 -0.8**
YSS *e* 02 11 16.0
YSS pmax pmax
comp=Z,60nm,1.0s,mb5.4
YSS Yuzh-Sakhalins 80.09 37 *eP* **P 02 10 43.9 -0.9**
comp=Z,56nm,1.0s,mb5.3
WCI Wyandotte Cave 80.11 311 *eP* **P 02 10 45.5 +0.4**
WCI pmax pmax
comp=Z,60nm,0.8s,mb5.5
WCI Wyandotte Cave 80.11 311 *eP* **P 02 10 45.5 +0.3**
comp=Z,60nm,0.8s,mb5.5
TKL Tuckaleechee C 80.21 308 P **P 02 10 46.4 +0.7**
comp=Z,30nm,0.8s,mb5.2,baz=94,slow=5.7,SNR=38
TKL Tuckaleechee C 80.21 308 P **P 02 10 46.4 +0.7**
TKL pmax pmax
comp=Z,30nm,0.8s,mb5.2
TKL Tuckaleechee C 80.21 308 *eP* **P 02 10 46.4 +0.7**
HDIL Hopedale 80.33 314⇑ *iP* **P 02 10 46.9 +0.6**
comp=Z,122nm,1.1s,mb5.6
PMR Palmer 80.81 356 *eP* **P 02 10 48.7 +0.3**
PMR pmax pmax
comp=Z,91nm,1.4s,mb5.4
PMR Palmer 80.81 356 *eP* **P 02 10 48.7 +0.3**
comp=Z,91nm,1.4s,mb5.4
CPCT Cooper Cave 80.81 308⇑ *iP* **P 02 10 49.8 +0.8**
OLIL Olney 80.85 312 *eP* **P 02 10 49.4 +0.3**
comp=Z,76nm,1.0s,mb5.5
DIV Divide 81.05 354 *eP* **P 02 10 50.1 +0.4**
comp=Z,15nm,0.7s,mb4.9
USIN University of 81.10 311 *eP* **P 02 10 50.9 +0.4**
comp=Z,105nm,1.3s,mb5.5
BMRM Bremner River 81.12 354 *eP* **P 02 10 50.2 +0.2**
comp=Z,85nm,1.2s,mb5.5
RC01 Rabbit Creek A 81.35 356⇑ *iP* **P 02 10 51.5 +0.2**
comp=Z,94nm,0.8s,mb5.7
GOGA Godfrey 81.45 306⇑ *iP* **P 02 10 53.1 +0.8**
GOGA pmax pmax
comp=Z,48nm,1.1s,mb5.2
GOGA Godfrey 81.45 306⇑ *iP* **P 02 10 53.0 +0.7**
comp=Z,48nm,1.1s,mb5.2
PETK Petropavlovsk- 81.47 26 P **P 02 10 50.0 -2.1**
comp=Z,5.0nm,0.7s,mb4.5,baz=345,slow=2.4,SNR=9.2
PETK LR LR 02 51 24.5
comp=Z,66nm,18.6s,baz=306,slow=39
PETK Petropavlovsk- 81.47 26 P **P 02 10 50.0 -2.1**
PETK pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
PETK MLR MLR
comp=Z,66nm,18.6s
SKAG Skagway 81.48 349 *eP* **P 02 10 52.9 +0.9**
comp=Z,24nm,0.9s,mb5.0
SVW2 Sparrevohn 81.52 359 *eP* **P 02 10 52.6 +0.4**
DLBC Dease Lake 81.53 346⇑ *iP* **P 02 10 53.7 +1.4**
SCIA State Center 81.59 317 *eP* **P 02 10 52.8 -0.1**
comp=Z,46nm,0.8s,mb5.4
SDDR Presa de Saban 81.71 287 *eP* **P 02 10 55.6 +1.7**
comp=Z,45nm,0.7s,mb5.4
EDM Edmonton 81.76 335⇑ *iP* **P 02 10 53.8 +0.2**
PNL Peninsula 81.84 351 *eP* **P 02 10 54.3 +0.4**
comp=Z,70nm,1.1s,mb5.4
SWET Sewanee 81.85 308 *eP* **P 02 10 54.4 0.0**
PET Petropavlovsk 81.87 25 *eP* **P 02 10 51.6 -2.6**
PET pmax pmax
comp=Z,17nm,1.8s,mb4.6
PET MLR MLR
comp=Z,100nm,21.0s
ECSD EROS Data Cent 82.08 320⇑ *iP* **P 02 10 55.9 +0.4**
comp=Z,54nm,0.8s,mb5.4
DGMT Dagmar 82.09 328 ⇓*P* **P 02 10 56.2 +0.8**
baz=82
DGMT Dagmar 82.09 328 *eP* **P 02 10 56.1 +0.7**
comp=Z,20nm,0.9s,mb5.0
RSO Redoubt South 82.10 358 *eP* **P 02 10 54.9 -0.3**
SLM Saint Louis 82.16 313 *eP* **P 02 10 55.7 -0.3**
SLM pmax pmax
comp=Z,37nm,0.7s,mb5.3
SLM Saint Louis 82.16 313 *eP* **P 02 10 55.7 -0.3**
comp=Z,37nm,0.7s,mb5.3
SIUC Sothern Illin 82.19 312 *eP* **P 02 10 56.3 +0.2**
comp=Z,138nm,1.1s,mb5.7
SEW Seward 82.32 356 *eP* **P 02 10 56.3 -0.1**
comp=Z,19nm,0.6s,mb5.1
WVT Waverly 82.41 310⇑ *iP* **P 02 10 57.2 -0.1**
WVT pmax pmax
comp=Z,32nm,0.8s,mb5.2
WVT Waverly 82.41 310⇑ *iP* **P 02 10 57.2 -0.2**
comp=Z,32nm,0.8s,mb5.2
FVM French Village 82.71 313⇑ *iP* **P 02 10 59.6 +0.7**
FVM pmax pmax
comp=Z,70nm,0.8s,mb5.5
FVM French Village 82.71 313⇑ *iP* **P 02 10 59.6 +0.7**
comp=Z,70nm,0.8s,mb5.5
PARMO Parma 83.21 312 *eP* **P 02 11 01.6 +0.1**
SIT Sitka 83.78 348 *eP* **P 02 11 05.4 +1.4**
SIT pmax pmax
comp=Z,59nm,1.2s,mb5.3
SIT Sitka 83.78 348 *eP* **P 02 11 05.4 +1.4**
comp=Z,59nm,1.2s,mb5.3
GNAR Gosnell 83.84 311 *eP* **P 02 11 05.1 +0.4**
comp=Z,1μm,1.1s
LRAL Lakeview Retre 83.94 307⇑ *iP* **P 02 11 05.8 +0.6**
comp=Z,78nm,1.1s,mb5.5
A18A Metzger Ranch, 84.03 331 ⇑*P* **P 02 11 06.1 +0.7**
baz=84
LAO LASA Array 84.34 327⇑ *iP* **P 02 11 08.3 +1.3**
comp=Z,101nm,0.8s,mb5.7
B18A Beardsley Farm 84.43 330 ⇓*P* **P 02 11 08.3 +0.8**
baz=84
OXF Oxford 84.45 310 *eP* **P 02 11 07.0 -0.8**
OXF pmax pmax
comp=Z,125nm,1.4s,mb5.5
OXF Oxford 84.45 310 *eP* **P 02 11 07.0 -0.9**
comp=Z,125nm,1.4s,mb5.5
A16A West Butte Ran 84.68 332 ⇑*P* **P 02 11 08.7 0.0**
baz=84
EGMT Eagleton 84.72 330 ⇓*P* **P 02 11 09.8 +0.9**
baz=84
EGMT Eagleton 84.72 330⇑ *eP* **P 02 11 09.7 +0.7**
comp=Z,141nm,0.9s,mb5.9
KDAK Kodiak Island 84.78 357 P **P 02 11 09.0 0.0**
comp=Z,275nm,1.0s,mb6.1,SNR=9.2
KDAK Kodiak Island 84.78 357 *ceP* **P 02 11 09.3 +0.3**
KDAK Kodiak Island 84.78 357⇑ *iP* **P 02 11 09.4 +0.4**
comp=Z,63nm,1.1s,mb5.5
B17A L&G Farms, Che 84.91 331 ⇑*P* **P 02 11 09.8 -0.1**
baz=85,SNR=13
MAJO Matsushiro 85.03 47 *eP* **P 02 11 09.3 -1.4**
MAJO pmax pmax
comp=Z,11nm,0.9s,mb4.8
MAJO Matsushiro 85.03 47 *eP* **P 02 11 09.2 -1.5**
comp=Z,11nm,0.9s,mb4.8
MJAR Matsushiro Arr 85.03 47 P **P 02 11 09.2 -1.6**
comp=Z,18nm,1.1s,mb4.9,baz=311,slow=5.1,SNR=24
MJAR LR LR 02 53 17.1
comp=Z,99nm,18.1s,baz=205,slow=38
MJAR Matsushiro Arr 85.03 47 P **P 02 11 09.2 -1.5**
MJAR pmax pmax
comp=Z,18nm,1.1s
MJAR MLR MLR
comp=Z,99nm,18.1s
A15A Johnson Ranch, 85.08 332 ⇑*P* **P 02 11 10.8 +0.1**
baz=85,SNR=65
B16A M & M Farms, S 85.16 331 ⇑*P* **P 02 11 11.1 0.0**
baz=85,SNR=8.1
BRAL Brewton 85.31 306 *eP* **P 02 11 13.0 +0.8**
comp=Z,30nm,0.8s,mb5.3
A14A Double T Ranch 85.33 333 ⇓*P* **P 02 11 12.4 +0.4**
baz=85,SNR=54
OHAK Old Harbor 85.36 358 *eP* **P 02 11 11.8 -0.1**
comp=Z,45nm,0.9s,mb5.4
RSSD Black Hills 85.37 325 *eP* **P 02 11 12.7 +0.5**
RSSD pmax pmax
comp=Z,15nm,0.9s,mb4.9
RSSD Black Hills 85.37 325 *eP* **P 02 11 12.7 +0.5**
comp=Z,14nm,0.9s,mb4.9
KSU1 Kansas State U 85.40 317 *eP* **P 02 11 13.5 +1.0**
comp=Z,95nm,0.9s,mb5.7
D18A Linhart Farms, 85.42 330 ⇓*P* **P 02 11 13.3 +0.9**
baz=85,SNR=24
C17A Wharram Farm, 85.44 331 ⇓*P* **P 02 11 12.3 -0.2**
baz=85
WALA Waterton Lakes 85.44 333⇑ *eP* **P 02 11 12.4 -0.1**
comp=Z,2.0nm,1.2s
B15A Bradely Ranch, 85.57 332 ⇓*P* **P 02 11 13.0 -0.1**
baz=85,SNR=68
C16A Fuhringer Ranc 85.68 331 ⇓*P* **P 02 11 13.5 -0.3**
baz=85,SNR=33
A13A Flathead Natio 85.72 333 ⇑*P* **P 02 11 14.1 +0.2**
baz=86
B14A Marquette Ranc 85.79 332 ⇓*P* **P 02 11 14.1 -0.1**
baz=86,SNR=19
D17A Six Diamond Ra 85.80 330 ⇓*P* **P 02 11 14.7 +0.4**
baz=86,SNR=33
E18A Harlowton 85.97 329 ⇑*P* **P 02 11 16.2 +1.0**
baz=86,SNR=30
C15A Salmond Ranch, 86.03 332 ⇓*P* **P 02 11 15.2 -0.3**
baz=86,SNR=27
UALR University of 86.03 312 *eP* **P 02 11 16.1 +0.4**
comp=Z,34nm,0.9s,mb5.3
A12A Yaak River Ran 86.16 334 ⇓*P* **P 02 11 16.2 +0.1**
baz=86,SNR=6.2
B13A Whitefish 86.21 333 ⇓*P* **P 02 11 16.8 +0.5**
baz=86,SNR=21
D16A Dana Ranch, Ca 86.24 331 ⇑*P* **P 02 11 16.8 +0.4**
baz=86,SNR=86
CHGN Chignik 86.34 1 *eP* **P 02 11 15.9 -0.9**
F18A Big Timber 86.43 329 ⇑*P* **P 02 11 18.3 +0.9**
baz=86,SNR=26
C14A Swan Lake 86.46 332 ⇓*P* **P 02 11 18.1 +0.5**
baz=86
YBMT Yellow Bay 86.48 332 *eP* **P 02 11 18.3 +0.6**
comp=Z,75nm,1.3s,mb5.5
GCMT Greycliff 86.50 329⇑ *iP* **P 02 11 18.7 +0.9**
comp=Z,27nm,0.9s,mb5.2
B12A Libby 86.53 334 ⇑*P* **P 02 11 18.2 +0.3**
baz=86
D15A Lincoln 86.61 331 ⇑*P* **P 02 11 18.5 +0.2**
baz=86,SNR=15
HRY Holter Researc 86.61 331 *eP* **P 02 11 19.3 +1.0**
comp=Z,25nm,0.8s,mb5.2
JTMT Jette 86.67 333 *eP* **P 02 11 19.5 +0.9**
comp=Z,80nm,1.3s,mb5.5
VBMS Vicksburg 86.69 309 *eP* **P 02 11 19.6 +0.6**
comp=Z,175nm,1.1s,mb5.9
E16A East Helena 86.70 330 ⇑*P* **P 02 11 19.4 +0.6**
baz=86,SNR=11
BSMT Bassoo Peak 86.77 333⇑ *eP* **P 02 11 19.7 +0.6**
comp=Z,20nm,0.8s,mb5.1
SWMT Swartz Lake 86.77 332 *eP* **P 02 11 19.7 +0.6**
comp=Z,71nm,1.2s,mb5.5
SLMT Seeley Lake 86.81 332 *eP* **P 02 11 19.2 -0.1**
comp=Z,11nm,0.6s,mb5.0
F17A Fitzpatrick Pl 86.81 329 ⇑*P* **P 02 11 20.3 +1.0**
baz=86,SNR=30
C13A Hot Springs 86.84 333 ⇑*P* **P 02 11 19.9 +0.5**
baz=87
G18A Lazy EL Ranch, 86.84 328 ⇑*P* **P 02 11 19.6 +0.1**
baz=87,SNR=6.8
OGNE Ogallala 86.84 321 *eP* **P 02 11 20.0 +0.5**
comp=Z,8.3nm,0.6s,mb4.8
RLMT Red Lodge 86.87 328 ⇓*P* **P 02 11 20.8 +1.2**
baz=87,SNR=16
RLMT Red Lodge 86.87 328⇑ *iP* **P 02 11 20.6 +1.0**
comp=Z,60nm,1.3s,mb5.4
MIAR Mount Ida 86.92 312⇑ *iP* **P 02 11 20.9 +0.8**
MIAR pmax pmax
comp=Z,67nm,0.9s,mb5.6
MIAR Mount Ida 86.92 312⇑ *iP* **P 02 11 20.9 +0.8**
comp=Z,67nm,0.9s,mb5.6
D14A Greenough 86.94 332 ⇑*P* **P 02 11 19.9 0.0**
baz=87,SNR=18
CHMT Chamberlain Mo 86.99 332 *eP* **P 02 11 20.3 +0.1**
comp=Z,9.3nm,0.8s,mb4.8
C12B Naegeli Ranch, 87.14 333 ⇓*P* **P 02 11 21.2 +0.4**
baz=87,SNR=24
E15A Deer Lodge 87.16 331 ⇑*P* **P 02 11 21.5 +0.5**
baz=87,SNR=17
KSM Kuching 87.18 90 *eP* **P 02 11 21.7 +0.1**
comp=Z,5.3nm,0.6s,mb4.7
NEW Newport 87.24 334⇑ *iP* **P 02 11 21.9 +0.6**
NEW pmax pmax
comp=Z,61nm,0.7s
NEW Newport 87.24 334⇑ *iP* **P 02 11 21.9 +0.5**
comp=Z,61nm,0.7s,mb5.6
SDPT Sand Point 87.26 2 *eP* **P 02 11 20.5 -0.8**
comp=Z,138nm,1.0s,mb5.8
CBKS Cedar Bluff 87.27 319 *eP* **P 02 11 21.7 0.0**
CBKS pmax pmax
comp=Z,78nm,1.4s,mb5.5
CBKS Cedar Bluff 87.27 319 *eP* **P 02 11 21.7 0.0**
comp=Z,78nm,1.4s,mb5.5
SDV Santo Domingo 87.29 279 *eP* **P 02 11 22.7 +0.6**
comp=Z,7.3nm,0.4s,mb5.0
D13A Huson 87.29 332 ⇓*P* **P 02 11 22.0 +0.4**
baz=87,SNR=54
F16A Kennard Place, 87.30 330 ⇓*P* **P 02 11 22.1 +0.5**
baz=87,SNR=7.9
C11A Tepee Creek (N 87.30 334 ⇓*P* **P 02 11 21.8 +0.2**
baz=87,SNR=22
G17A Pierce Place, 87.32 329 ⇓*P* **P 02 11 23.3 +1.5**
baz=87,SNR=16
MSO Missoula 87.32 332 *eP* **P 02 11 21.8 0.0**
comp=Z,21nm,1.1s,mb5.0
BOZ Bozeman (W) 87.41 330 ⇑*P* **P 02 11 23.2 +1.0**
baz=87,SNR=30
BOZ Bozeman (W) 87.41 330⇑ *iP* **P 02 11 23.1 +0.9**
BOZ pmax pmax
comp=Z,21nm,1.1s,mb5.0
BOZ Bozeman (W) 87.41 330⇑ *iP* **P 02 11 23.1 +0.9**
comp=Z,21nm,1.1s,mb5.0
E14A Clinton 87.50 331 ⇑*P* **P 02 11 23.2 +0.6**
baz=87,SNR=19
LRM Limekiln Ridge 87.59 330 *eP* **P 02 11 23.5 +0.4**
comp=Z,50nm,0.7s,mb5.7
F15A Butte 87.59 330 ⇑*P* **P 02 11 23.6 +0.6**
baz=87,SNR=18
D12A Red Ives Fores 87.65 333 ⇑*P* **P 02 11 23.3 -0.1**
baz=87
E13A Victor 87.74 332 ⇓*P* **P 02 11 24.1 +0.3**
baz=88,SNR=11
G16A Moss Hill, Enn 87.83 330 ⇓*P* **P 02 11 25.3 +1.1**
baz=88,SNR=29
B08A Colville Reser 87.89 336 ⇓*P* **P 02 11 24.4 -0.1**
baz=88
F14A Wisdom 87.95 331 ⇓*P* **P 02 11 25.0 +0.2**
baz=88,SNR=5.6
QLMT Earthquake Lak 88.00 329 *eP* **P 02 11 26.1 +1.0**
comp=Z,4.8nm,0.6s,mb4.7
DLMT Dillon 88.03 330⇑ *iP* **P 02 11 25.8 +0.7**
comp=Z,27nm,1.2s,mb5.2
C09A Chrisman Ranch 88.03 335 ⇓*P* **P 02 11 25.7 +0.6**
baz=88,SNR=20
H16A Russell Place, 88.03 329 ⇑*P* **P 02 11 26.4 +1.2**
baz=88,SNR=11
YFT Old Faithful 88.07 329 *eP* **P 02 11 27.8 +2.4**
comp=Z,75nm,1.3s,mb5.6
L22A Ellis Ranch, M 88.10 325 ⇓*P* **P 02 11 26.4 +0.8**
baz=88
G15A Dillon 88.15 330 ⇓*P* **P 02 11 26.4 +0.6**
baz=88,SNR=10
PHWY Pilot Hill 88.22 324 *eP* **P 02 11 26.8 +0.6**
comp=Z,110nm,1.3s,mb5.7
I18A Diamond G Ranc 88.26 328 ⇓*P* **P 02 11 27.0 +0.7**
baz=88
E12A Beaver Dam Sad 88.27 333 ⇑*P* **P 02 11 26.1 -0.2**
baz=88,SNR=44
D10A Wagner Farm, O 88.33 334 ⇓*P* **P 02 11 25.9 -0.6**
baz=88,SNR=8.3
F13A Darby 88.34 332 ⇓*P* **P 02 11 27.0 +0.3**
baz=88,SNR=31
I17A Pilgrim Ck. 88.40 328 ⇑*P* **P 02 11 28.5 +1.6**
baz=88
K20A Yellowstone Ra 88.46 326 ⇓*P* **P 02 11 27.0 -0.2**
baz=88,SNR=12
G14A Jackson 88.47 331 ⇓*P* **P 02 11 27.5 +0.3**
baz=88
RPW Rockport 88.51 337 *eP* **P 02 11 26.6 -0.7**
comp=Z,7.0nm,0.5s,mb5.0
OD2 Odessa Site #2 88.53 335 P **P 02 11 27.9 +0.4**
K19A Absolon Red Bu 88.55 327 ⇑*P* **P 02 11 27.2 -0.5**
baz=88,SNR=21
IMW Indian Meadow 88.57 328 *eP* **P 02 11 29.1 +1.4**
comp=Z,29nm,1.1s,mb5.2
MCMT McKenzie Canyo 88.57 330 *eP* **P 02 11 28.9 +1.2**
comp=Z,3.2nm,0.8s,mb4.4
L21A Rawlins 88.58 325 ⇑*P* **P 02 11 27.8 0.0**
baz=88,SNR=24
LOHW Long Hollow 88.66 328 *eP* **P 02 11 28.9 +0.7**
comp=Z,14nm,1.1s,mb4.9
F12A Elk City 88.71 332 ⇑*P* **P 02 11 28.2 -0.2**
baz=88,SNR=46
RWWY Rawlins 88.72 325 *eP* **P 02 11 28.6 +0.1**
comp=Z,78nm,1.3s,mb5.6
J18A Kendall Valley 88.74 328 ⇓*P* **P 02 11 29.3 +0.7**
baz=88,SNR=64
I16A Newdale 88.81 329 ⇓*P* **P 02 11 30.4 +1.5**
baz=89,SNR=9.9
SNOW Snow King Moun 88.84 328 *eP* **P 02 11 30.1 +1.0**
comp=Z,6.9nm,0.6s,mb4.9
M21A Separation Pea 88.86 325 ⇑*P* **P 02 11 29.2 0.0**
baz=89,SNR=51
JCW Jim Creek 88.86 337 P **P 02 11 28.4 -0.6**
ETW Entiat 88.88 336 *eP* **P 02 11 29.4 +0.2**
comp=Z,13nm,0.8s,mb5.0
G13A Cobalt 88.89 331 ⇑*P* **P 02 11 29.4 +0.2**
baz=89,SNR=18
D08A Wollman Farm, 88.89 335 ⇓*P* **P 02 11 29.5 +0.3**
baz=89
BW06 Boulder Array 88.90 327 ⇓*P* **P 02 11 29.1 -0.2**
baz=89,SNR=8.2
BW06 Boulder Array 88.90 327 *eP* **P 02 11 28.6 -0.7**
comp=Z,16nm,1.0s,mb5.0
PDAR Pinedale Array 88.90 327 P **P 02 11 29.1 -0.3**
comp=Z,12nm,0.7s,mb5.0,baz=48,slow=4.4,SNR=65
PDAR PP PP 02 14 58.0 -0.8
comp=Z,1.7nm,0.8s,baz=51,slow=7.8,SNR=3.7
PDAR LR LR 02 50 34.2
comp=Z,116nm,21.3s,baz=55,slow=35
TPAW Teton Pass 88.91 328⇑ *iP* **P 02 11 30.4 +1.0**
comp=Z,28nm,0.9s,mb5.3
J17A Brown Place, J 88.91 328 ⇓*P* **P 02 11 30.1 +0.7**
baz=89,SNR=7.2
F11A Grangeville 88.93 333 ⇓*P* **P 02 11 28.6 -0.8**
baz=89,SNR=18
H14A Leadore 88.95 330 ⇓*P* **P 02 11 30.4 +0.9**
baz=89,SNR=11
REDW Red Top Meadow 88.97 328 *eP* **P 02 11 30.3 +0.7**
comp=Z,28nm,1.4s,mb5.1
L20A Wamsutter 88.98 326 ⇓*P* **P 02 11 30.0 +0.3**
baz=89,SNR=30
N22A Wattenberg Ran 89.08 324 ⇑*P* **P 02 11 30.9 +0.7**
baz=89,SNR=15
E09A Wood Farm, Sta 89.10 334 ⇑*P* **P 02 11 30.2 0.0**
baz=89
I15A Monteview 89.11 329 ⇑*P* **P 02 11 31.8 +1.5**
baz=89
RRI2 Red Ridge 89.18 328 *eP* **P 02 11 31.4 +0.8**
comp=Z,67nm,1.6s,mb5.4
K18A Toltan Ranch, 89.22 327 ⇓*P* **P 02 11 31.3 +0.5**
baz=89,SNR=11
F10A Beach Ranch, E 89.25 333 ⇓*P* **P 02 11 30.7 -0.2**
baz=89,SNR=14
G12A Big Creek, Yel 89.27 332 ⇑*P* **P 02 11 30.7 -0.3**
baz=89
M20A Sweetwater, Wa 89.32 325 ⇓*P* **P 02 11 32.0 +0.7**
baz=89,SNR=56
H13A Challis 89.34 331 ⇓*P* **P 02 11 32.2 +0.8**
baz=89
L19A Farson 89.35 326 ⇓*P* **P 02 11 31.5 +0.1**
baz=89,SNR=18
G11A Walters Elk Ra 89.39 332 ⇓*P* **P 02 11 30.6 -1.0**
baz=89
E08A Dider Farm, El 89.43 335 ⇑*P* **P 02 11 32.2 +0.5**
baz=89
ISCO Idaho Springs 89.47 323⇑ *iP* **P 02 11 32.6 +0.6**
ISCO *e*PP pP 02 11 55.3 +1.5
ISCO pmax pmax
comp=Z,25nm,1.0s,mb5.2
ISCO Idaho Springs 89.47 323⇑ *iP* **P 02 11 32.6 +0.5**
comp=Z,25nm,1.0s,mb5.2
ISCO *e*pP pP 02 11 55.3 +1.5
K17A Gardner Place, 89.50 328 ⇑*P* **P 02 11 32.6 +0.5**
baz=89
NATX Nacogdoches 89.53 311 *eP* **P 02 11 33.5 +1.0**
comp=Z,21nm,0.6s,mb5.4

I14A **Mackay** 89.56 330 ⇑P P 02 11 33.2 +0.8
baz=89,SNR=20
AHID **Auburn Hatcher** 89.56 328 eP P 02 11 33.0 +0.6
comp=Z,19nm,0.8s,mb5.3
H12A **Diamond D Ranc** 89.58 331 ⇓P P 02 11 32.2 -0.3
baz=89,SNR=13
J15A **Blackfoot** 89.59 329 ⇑P P 02 11 33.7 +1.2
baz=89,SNR=18
N21A **Black Mountain** 89.60 325 ⇑P P 02 11 33.3 +0.6
baz=89,SNR=40
E07A **Sunnyside** 89.64 335 ⇓P P 02 11 33.4 +0.7
baz=89
HAWA **Hanford** 89.68 335 eP P 02 11 33.5 +0.6
comp=Z,38nm,1.0s,mb5.5
GNW **Green Mountain** 89.70 337 eP P 02 11 33.5 +0.5
comp=Z,20nm,1.2s,mb5.1
RSW **Rattlesnake Hi** 89.70 335 eP P 02 11 33.2 +0.2
comp=Z,22nm,0.9s,mb5.3
K16A **Soda Springs** 89.71 328 ⇓P P 02 11 33.5 +0.3
baz=90,SNR=6.0
F09A **S2 Ranch, Elgi** 89.72 334 ⇓P P 02 11 32.7 -0.4
baz=89,SNR=5.2
OSD **Olympics--Snow** 89.73 338 P P 02 11 34.1 +1.0
M19A **Rock Springs** 89.75 326 ⇓P P 02 11 33.6 +0.2
baz=90,SNR=22
WMOK **Wichita Mounta** 89.76 315⇑iP P 02 11 34.3 +0.8
WMOK pmax pmax
comp=Z,58nm,1.0s,mb5.7
WMOK **Wichita Mounta** 89.76 315⇑iP P 02 11 34.3 +0.8
comp=Z,58nm,1.0s,mb5.7
D05A **Enumclaw** 89.77 337 ⇓P P 02 11 33.5 +0.2
baz=90
L18A **Fontenelle, Gr** 89.79 327 ⇑P P 02 11 33.4 -0.1
baz=90,SNR=9.0
G10A **Bishop Farm, J** 89.79 333 ⇑P P 02 11 33.0 -0.4
baz=90
I13A **Wildhorse Cree** 89.83 330 ⇓P P 02 11 34.4 +0.7
baz=90,SNR=27
N20A **Spence Gulch,** 89.88 325 ⇓P P 02 11 34.4 +0.4
baz=90,SNR=28
L17A **Cokeville** 90.01 327 ⇓P P 02 11 34.2 -0.3
baz=90,SNR=14
O21A **Pagoda** 90.01 324 ⇑P P 02 11 34.9 +0.3
baz=90,SNR=8.7
G09A **Cove** 90.04 333 ⇑P P 02 11 33.5 -1.1
baz=90,SNR=6.2
J14A **Carey** 90.09 330 ⇑P P 02 11 35.7 +0.8
baz=90,SNR=6.8
LON **Longmire** 90.11 336 eP P 02 11 34.5 -0.4
LON pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
LON **Longmire** 90.11 336 eP P 02 11 34.5 -0.4
comp=Z,5.4nm,0.8s,mb4.7
NLWA **Neilton Lookou** 90.16 338 ⇓P P 02 11 35.9 +0.7
baz=90
NLWA **Neilton Lookou** 90.16 338 eP P 02 11 35.5 +0.4
comp=Z,14nm,0.8s,mb5.2
M18A **Lyman** 90.21 327 ⇓P P 02 11 35.3 -0.2
baz=90,SNR=9.1
K15A **Arbon** 90.22 329 ⇓P P 02 11 36.2 +0.7
baz=90,SNR=12
HLID **Hailey** 90.25 330 ⇓P P 02 11 36.0 +0.4
baz=90,SNR=8.3
HLID **Hailey** 90.25 330 eP P 02 11 35.8 +0.2
comp=Z,4.0nm,0.9s,mb4.5
F07A **Phinny Hill Vi** 90.25 335 ⇑P P 02 11 36.6 +1.1
baz=90
N19A **John Jarvie Ra** 90.25 326 ⇑P P 02 11 35.5 -0.2
baz=90,SNR=28
H10A **Noah's Angus R** 90.26 332 ⇑P P 02 11 35.3 -0.4
baz=90
J13A **Cove Ranch, Pi** 90.29 330 ⇓P P 02 11 36.2 +0.4
baz=90,SNR=15
L16A **Fish Haven** 90.32 328 ⇑P P 02 11 36.0 0.0
baz=90,SNR=22
I12A **Atlanta** 90.33 331 ⇑P P 02 11 36.0 0.0
baz=90,SNR=12
N18A **Larsen Ranch,** 90.40 326 ⇑P P 02 11 36.2 -0.2
baz=90,SNR=9.5
M17A **Scullys Gap (B** 90.43 327 ⇑P P 02 11 36.4 -0.1
baz=90,SNR=9.2
O20A **White River Ci** 90.43 325 ⇓P P 02 11 36.6 +0.1
baz=90,SNR=43
G08A **Pilot Rock** 90.45 334 ⇑P P 02 11 36.6 +0.1
baz=90
I11A **Placerville** 90.55 332 ⇑P P 02 11 36.6 -0.4
baz=90,SNR=9.6
K14A **Jones Ranch, D** 90.60 329 ⇓P P 02 11 38.2 +0.9
baz=90,SNR=8.9
SMCO **Snowmass** 90.60 323 eP P 02 11 37.5 +0.2
comp=Z,9.5nm,0.8s,mb5.0
O19A **Miners Draw (B** 90.70 325 ⇑P P 02 11 37.9 +0.1
baz=90,SNR=24
HWUT **Hardware Ranch** 90.71 328⇑iP P 02 11 37.9 +0.1
comp=Z,50nm,0.8s,mb5.7
I10A **Payette** 90.71 332 ⇓P P 02 11 38.0 +0.3
baz=90
L15A **Malad City** 90.73 328 ⇓P P 02 11 37.9 0.0
baz=90,SNR=6.1
J12A **Stokes Ranch,** 90.78 331 ⇓P P 02 11 38.4 +0.3
baz=90,SNR=8.6
Q22A **Crested Butte,** 90.82 323 ⇓P P 02 11 38.8 +0.4
baz=91,SNR=31
K13A **Stover Farm, H** 90.88 330 ⇑P P 02 11 39.5 +0.9
baz=91
MFID **Camas Ranch** 90.92 331 ⇑P P 02 11 39.2 +0.5
baz=91,SNR=12
N17A **Moffit Pass** 90.94 327 ⇓P P 02 11 38.8 -0.1
baz=91
T25A **Trinidad** 90.94 320 ⇓P P 02 11 39.4 +0.4
baz=91,SNR=14
M16A **Huntsville** 90.98 327 ⇑P P 02 11 39.1 0.0
baz=91
P20A **De Beque** 91.01 324 ⇓P P 02 11 39.0 -0.3
baz=91,SNR=23
H08A **Prairie City** 91.02 333 ⇓P P 02 11 39.7 +0.5
baz=91,SNR=5.3
SDCO **Great Sand Dun** 91.02 321 eP P 02 11 39.3 0.0
comp=Z,20nm,1.1s,mb5.2
F04A **Amboy** 91.03 336 ⇓P P 02 11 39.0 -0.2
baz=91
L14A **Malta** 91.06 329 ⇑P P 02 11 39.8 +0.4
baz=91,SNR=15
G06A **Carlson Farm,** 91.06 335 ⇓P P 02 11 40.2 +0.8
baz=91
HVU **Hansel Valley** 91.08 328 eP P 02 11 39.8 +0.3
HVU pmax pmax
comp=Z,39nm,1.2s,mb5.4
HVU **Hansel Valley** 91.08 328 eP P 02 11 39.8 +0.3
comp=Z,39nm,1.2s,mb5.4
O18A **Roosevelt** 91.13 326 ⇓P P 02 11 39.8 0.0
baz=91
I09A **Lost Marbles R** 91.15 333 ⇑P P 02 11 39.2 -0.6
baz=91,SNR=6.1
Q21A **Lamborn Mesa,** 91.16 323 ⇓P P 02 11 40.0 0.0
baz=91,SNR=16
P19A **Cripple Cowboy** 91.17 325 ⇑P P 02 11 40.1 +0.1
baz=91
U26A **Atchley Ranch,** 91.18 320 ⇑P P 02 11 40.5 +0.4
baz=91
M15A **Larsen Ranch,** 91.20 328 ⇑P P 02 11 40.2 +0.1
baz=91,SNR=25
K12A **Draper Farm, C** 91.22 330 ⇓P P 02 11 40.7 +0.5
baz=91
N16A **Rees Ranch, Co** 91.25 327 ⇑P P 02 11 40.6 +0.3
baz=91
R22A **Saguache, Gunn** 91.25 323 ⇓P P 02 11 41.3 +0.9
baz=91,SNR=28
J10A **Berg Farm, Mel** 91.26 332 ⇓P P 02 11 40.6 +0.2
baz=91
L13A **Double Diamond** 91.30 329 ⇓P P 02 11 41.3 +0.8
baz=91,SNR=13
SPUT **South Promonto** 91.33 328 eP P 02 11 40.8 +0.1
comp=Z,13nm,1.2s,mb4.9
F03A **Seaside** 91.38 337 ⇑P P 02 11 41.4 +0.6
baz=91
Q20A **Ridgley Place,** 91.40 324 ⇓P P 02 11 40.7 -0.4
baz=91,SNR=15
JLU **Jordanelle** 91.49 327 eP P 02 11 41.7 +0.3
comp=Z,44nm,1.1s,mb5.5
JLU epP pP 02 11 58.1 -5.2
O17A **Robinson Place** 91.51 326 ⇑P P 02 11 41.3 -0.2
baz=91,SNR=15
U25A **Circle Dot Ran** 91.51 320 ⇓P P 02 11 42.2 +0.6
baz=91,SNR=7.6
R21A **Cimarron** 91.52 323 ⇓P P 02 11 41.9 +0.2
baz=91,SNR=8.2
HKT **Hockley** 91.52 310 eP P 02 11 42.8 +1.0
HKT pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
HKT **Hockley** 91.52 310 eP P 02 11 42.8 +1.0
comp=Z,9.0nm,1.0s,mb5.0
CTU **Camp Tracy** 91.54 327 eP P 02 11 41.9 +0.2
comp=Z,28nm,1.0s,mb5.4
M14A **Sheep Mountain** 91.54 329 ⇓P P 02 11 42.2 +0.5
baz=91,SNR=44
K11A **Parker Ranch,** 91.55 331 ⇑P P 02 11 42.6 +1.0
baz=91,SNR=35
DAU **Daniels Canyon** 91.56 327 eP P 02 11 42.1 +0.3
DAU pmax pmax
comp=Z,55nm,1.6s,mb5.5
DAU **Daniels Canyon** 91.56 327 eP P 02 11 42.0 +0.3
comp=Z,55nm,1.6s,mb5.5
V26A **Tequesquite Ra** 91.66 319 ⇓P P 02 11 42.0 -0.3
baz=91
L12A **House Creek Ra** 91.68 330 ⇑P P 02 11 43.1 +0.8
baz=91,SNR=10
I07A **Izee** 91.69 334 ⇓P P 02 11 43.1 +0.8
baz=91,SNR=13
G04A **Mulino** 91.69 336 ⇓P P 02 11 42.5 +0.2
baz=91
J09A **Fry Pan Ranch,** 91.70 332 ⇑P P 02 11 42.8 +0.4
baz=91,SNR=17
N15A **Stansbury Isla** 91.71 328 ⇓P P 02 11 42.5 +0.1
baz=91,SNR=14
P18A **Preston Nutter** 91.75 326 ⇓P P 02 11 42.8 +0.1
baz=92,SNR=23
O16A **Springville** 91.83 327 ⇓P P 02 11 43.5 +0.5
baz=92
W27A **Bowe Ranch, En** 91.84 318 ⇓P P 02 11 43.4 +0.2
baz=92
Q19A **Hogan Spring (** 91.85 325 ⇓P P 02 11 43.0 -0.2
baz=92,SNR=7.6
K10A **MacKenzie Ranc** 91.86 331 ⇓P P 02 11 43.6 +0.6
baz=92,SNR=6.0
BGU **Big Grassy Mou** 91.89 328 eP P 02 11 43.6 +0.3
comp=Z,34nm,1.1s,mb5.5
L11A **Cat Creek Ranc** 91.95 330 ⇓P P 02 11 44.3 +0.8
baz=92,SNR=16
J08A **Circle Bar Ran** 91.95 333 ⇓P P 02 11 43.7 +0.1
baz=92,SNR=8.7
M13A **Montello** 92.00 329 ⇓P P 02 11 44.3 +0.5
baz=92,SNR=19
M13A **Montello** 92.00 329 eP P 02 11 44.4 +0.6
comp=Z,21nm,1.1s,mb5.3
N14A **Grayback Hills** 92.02 328 ⇓P P 02 11 44.2 +0.3
baz=92,SNR=10
MPU **Maple Canyon** 92.05 327 eP P 02 11 44.3 +0.3
comp=Z,16nm,1.2s,mb5.1
R20A **Redvale** 92.06 324 ⇑P P 02 11 44.4 +0.3
baz=92,SNR=15
V25A **Rancho No Teng** 92.06 320 ⇓P P 02 11 44.1 -0.1
baz=92
H04A **Detroit Lake** 92.06 336 ⇑P P 02 11 44.0 0.0
baz=92
P17A **Butcher Ranch,** 92.10 326 ⇓P P 02 11 43.8 -0.5
baz=92
Q18A **Rafter H Ranch** 92.13 325 ⇑P P 02 11 44.2 -0.2
baz=92,SNR=21
PV04 **Paradox Valley** 92.14 324 eP P 02 11 44.9 +0.4
X27A **F and S Farms,** 92.18 318 ⇓P P 02 11 44.8 +0.1
baz=92
PV01 **Paradox Valley** 92.19 324 eP P 02 11 45.0 +0.3
comp=Z,4μm,1.1s
O15A **The Old Anders** 92.19 327 ⇓P P 02 11 45.3 +0.6
baz=92
W26A **Owens Ranch, T** 92.19 319 ⇑P P 02 11 45.2 +0.4
baz=92,SNR=5.1
S21A **Coal Bank Pass** 92.20 323 ⇑P P 02 11 45.4 +0.7
baz=92,SNR=15
M12A **Wells** 92.25 330 ⇑P P 02 11 45.9 +0.9
baz=92,SNR=18
T22A **Edith** 92.28 322 ⇓P P 02 11 45.7 +0.5
baz=92,SNR=20
NLU **North Lily Min** 92.29 327 eP P 02 11 45.2 +0.1
comp=Z,13nm,1.1s,mb5.1
SRU **San Rafael** 92.30 325 ⇓P P 02 11 45.0 -0.2
baz=92,SNR=9.2
SRU **San Rafael** 92.30 325 eP P 02 11 44.9 -0.3
SRU pmax pmax
comp=Z,34nm,1.2s,mb5.5
SRU **San Rafael** 92.30 325 eP P 02 11 44.9 -0.3
comp=Z,34nm,1.2s,mb5.5
L10A **Juniper Basin** 92.31 331 ⇑P P 02 11 45.8 +0.7
baz=92,SNR=13
R19A **Curley Farm, L** 92.39 324 ⇑P P 02 11 45.9 +0.3
baz=92,SNR=8.5
P16A **Fountain Green** 92.39 326 ⇑P P 02 11 46.4 +0.8
baz=92
DUG **Dugway** 92.41 328 ⇑P P 02 11 46.0 +0.3
baz=92,SNR=18
DUG **Dugway** 92.41 328⇑iP P 02 11 45.9 +0.2
DUG pmax pmax
comp=Z,19nm,0.8s,mb5.4
DUG **Dugway** 92.41 328⇑iP P 02 11 45.9 +0.2
comp=Z,19nm,0.8s,mb5.4
W25A **X Bar L Ranch,** 92.45 319 ⇓P P 02 11 46.3 +0.3
baz=92,SNR=11
U23A **El Rito** 92.47 321 ⇓P P 02 11 46.6 +0.6
baz=92,SNR=6.4
M11A **Holland Ranch,** 92.59 330 ⇑P P 02 11 47.9 +1.4
baz=92
R18A **Canyonlands Na** 92.60 325 ⇓P P 02 11 46.5 -0.1
baz=92,SNR=18
T21A **Navajo Lake** 92.61 322 ⇑P P 02 11 47.1 +0.4
baz=92
X26A **CR and CF Fran** 92.63 318 ⇓P P 02 11 46.9 +0.1
baz=92,SNR=7.7
ROSC **El Rosal** 92.64 278 P P 02 11 47.6 +0.4
comp=Z,6.3nm,0.6s,mb5.1,baz=100,slow=20,SNR=5.0
ROSC **El Rosal** 92.64 278 eP P 02 11 48.1 +0.9
P15A **Leamington** 92.69 327 ⇓P P 02 11 47.0 0.0
baz=92,SNR=9.0
Q16A **Castle Valley** 92.75 326 ⇓P P 02 11 47.2 0.0
baz=92,SNR=5.3
U22A **Llaves** 92.76 321 ⇑P P 02 11 48.4 +1.0
baz=92,SNR=12
S19A **Harvey Farm, M** 92.77 324 ⇑P P 02 11 47.6 +0.2
baz=92,SNR=47
N12A **Clover Valley,** 92.78 329 ⇓P P 02 11 48.4 +1.0
baz=92,SNR=7.5
N12A **Clover Valley,** 92.78 329 eP P 02 11 48.5 +1.1
comp=Z,22nm,1.2s,mb5.4
Y27A **Causey** 92.80 318 ⇑P P 02 11 47.7 +0.1
baz=93
M10A **I.L. Ranch, Tu** 92.81 331 ⇑P P 02 11 48.8 +1.3
baz=92
WVOR **Wild Horse Val** 92.81 332 eP P 02 11 48.0 +0.5
WVOR pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
WVOR **Wild Horse Val** 92.81 332 eP P 02 11 48.0 +0.5
comp=Z,9.9nm,1.0s,mb5.1
MVCO **Mesa Verde** 92.89 323 ⇑P P 02 11 48.6 +0.7
baz=93
MVCO **Mesa Verde** 92.89 323 eP P 02 11 48.6 +0.6
comp=Z,14nm,1.0s,mb5.2
V23A **Ortiz Mt. (NFS** 92.92 321 ⇑P P 02 11 49.3 +1.1
baz=93
R17A **Hanksville Air** 92.95 325 ⇓P P 02 11 47.8 -0.4
baz=93,SNR=11
W24A **Lazy 6 Ranch,** 92.95 320 ⇑P P 02 11 48.9 +0.6
baz=93,SNR=13
ELK **Elko** 92.95 329 P P 02 11 49.0 +0.9
comp=Z,7.2nm,1.1s,mb4.9,baz=5.7,slow=3.3,SNR=19
ELK **Elko** 92.95 329 eP P 02 11 49.4 +1.2
O13A **Hicks Ranch, I** 92.95 328 ⇑P P 02 11 49.4 +1.2
baz=93
P14A **Drum Mountains** 93.02 327 ⇑P P 02 11 49.1 +0.6
baz=93,SNR=13
N11A **Elko Archery C** 93.09 330 ⇓P P 02 11 49.9 +1.0
baz=93
X25A **Clemmons Ranch** 93.09 319 ⇑P P 02 11 49.2 +0.2
baz=93,SNR=6.7
U21A **Nageezi** 93.11 322 ⇑P P 02 11 49.2 +0.2
baz=93,SNR=15
Y26A **Elida** 93.12 318 ⇑P P 02 11 49.2 +0.1
baz=93
V22A **San Miguel Ran** 93.15 321 ⇑P P 02 11 49.8 +0.6
baz=93,SNR=5.6
O12A **Currie** 93.16 329 ⇓P P 02 11 49.6 +0.4
baz=93,SNR=6.1
Q15A **Fillmore** 93.21 327 ⇓P P 02 11 49.6 +0.2
baz=93
S18A **Hurst Farm, Bl** 93.21 324 ⇓P P 02 11 49.4 0.0
baz=93,SNR=15
Z27A **Tatum** 93.26 317 ⇓P P 02 11 49.7 -0.1
baz=93,SNR=6.4
K05A **Summer Lake** 93.36 334 ⇓P P 02 11 51.3 +1.2
baz=93
W23A **Werner Place,** 93.36 320 ⇓P P 02 11 50.7 +0.5
baz=93
R16A **Teasdale** 93.40 326 ⇓P P 02 11 50.7 +0.3
baz=93
T19A **Beclabito** 93.45 323 ⇓P P 02 11 50.4 -0.2
baz=93,SNR=11
X24A **Lazy VL Ranch,** 93.47 319 ⇓P P 02 11 51.1 +0.4
baz=93
N10A **Dunphy** 93.48 330 ⇓P P 02 11 51.4 +0.7
baz=93
JCT **Junction City** 93.49 313 eP P 02 11 51.1 +0.3
JCT pmax pmax
comp=Z,7.0nm,0.7s,mb5.1
JCT **Junction City** 93.49 313 eP P 02 11 51.1 +0.2
comp=Z,7.2nm,0.7s,mb5.1
MSU **Marysvale** 93.53 326 eP P 02 11 51.4 +0.5
MSU pmax pmax
comp=Z,6.0nm,0.7s,mb5.0
MSU **Marysvale** 93.53 326 eP P 02 11 51.4 +0.5
comp=Z,6.2nm,0.7s,mb5.0
P13A **Bates Ranch, G** 93.53 328 ⇑P P 02 11 51.6 +0.8
baz=93,SNR=22
U20A **Newcomb** 93.57 323 ⇓P P 02 11 51.3 +0.2
baz=93
Y25A **Mesa, Roswell** 93.58 319 ⇓P P 02 11 51.2 0.0
baz=93
V21A **Milan** 93.60 322 ⇓P P 02 11 51.6 +0.4
baz=93
T18A **Mexican Hat** 93.60 324 ⇑P P 02 11 51.4 +0.1
baz=93,SNR=31
Q14A **Sevier Lake (B** 93.61 327 ⇑P P 02 11 52.0 +0.7
baz=93,SNR=18
S17A **Black Ridge (B** 93.63 325 ⇓P P 02 11 51.3 -0.1
baz=93
O11A **Cowboy Ranch,** 93.64 329 ⇓P P 02 11 51.9 +0.6
baz=93
ANMO **Albuquerque** 93.69 320 eP P 02 11 52.1 +0.4
comp=Z,0.6nm,0.8s
Z26A **Caprock** 93.70 318 ⇑P P 02 11 52.1 +0.3
baz=94,SNR=14
W22A **Albuquerque** 93.80 321 ⇑P P 02 11 52.8 +0.7
baz=94
R15A **Junction** 93.82 326 ⇑P P 02 11 53.2 +1.0
baz=94
127A **Arkansas Junct** 93.82 317 ⇑P P 02 11 52.5 +0.1
baz=94
X23A **Hourglass Bar** 93.84 320 ⇑P P 02 11 52.7 +0.3
baz=94
O10A **Cortez Mining,** 93.84 330 ⇑P P 02 11 53.0 +0.7
baz=94
MOD **Modoc** 93.88 333 eP P 02 11 52.2 -0.2
comp=Z,17nm,1.0s,mb5.3
P12A **McGill** 93.89 328 ⇓P P 02 11 53.2 +0.6
baz=94,SNR=9.9
Q13A **Wheeler Ranch,** 93.95 328 ⇓P P 02 11 53.6 +0.8
baz=94,SNR=19
Y24A **Capitan** 93.96 319 ⇑P P 02 11 53.4 +0.4
baz=94
U19A **Dine' College,** 93.97 323 ⇓P P 02 11 53.0 0.0
baz=94
BMN **Battle Mountai** 94.01 331 eP P 02 11 53.7 +0.7
BMN pmax pmax
comp=Z,12nm,1.1s,mb5.1
BMN **Battle Mountai** 94.01 331 eP P 02 11 53.7 +0.7
comp=Z,12nm,1.1s,mb5.2
V20A **Brimhall** 94.01 322 ⇓P P 02 11 53.6 +0.4
baz=94
R14A **James Farms, M** 94.07 327 ⇑P P 02 11 54.3 +0.9
baz=94
Z25A **Roswell** 94.09 318 ⇑P P 02 11 53.9 +0.3
baz=94,SNR=12
T17A **Navajo Res., N** 94.15 324 ⇓P P 02 11 54.1 +0.3
baz=94,SNR=8.1
W21A **San Fidel** 94.15 321 ⇑P P 02 11 54.5 +0.7
baz=94
HUMO **Hull Mountain** 94.17 335 eP P 02 11 53.7 0.0
comp=Z,45nm,1.7s,mb5.5
P11A **Circle Ranch,** 94.17 329 ⇑P P 02 11 54.5 +0.7
baz=94
U18A **Rough Rock, Ch** 94.18 323 ⇑P P 02 11 54.2 +0.2
baz=94,SNR=6.8
126A **Clayton Basin,** 94.20 317 ⇑P P 02 11 54.2 +0.1
baz=94,SNR=6.4
Q12A **Willow Creek R** 94.22 328 ⇓P P 02 11 54.7 +0.6
baz=94,SNR=8.9
Y23A **Lovelace Mesa,** 94.28 319 ⇑P P 02 11 54.7 +0.3
baz=94,SNR=6.0
227A **Bennet, Jal** 94.30 316 ⇓P P 02 11 55.3 +0.8
baz=94
S15A **Panguitch** 94.30 326 ⇑P P 02 11 55.3 +0.9
baz=94
X22A **Bernardo** 94.31 320 ⇓P P 02 11 55.6 +1.0
baz=94
Z24A **Sheeppen Canyo** 94.39 319 ⇑P P 02 11 55.7 +0.7
baz=94
BNM **Barren Site** 94.40 320 eP P 02 11 55.2 +0.3
comp=Z,5.1nm,1.1s,mb4.8
P10A **Eureka** 94.40 330 ⇓P P 02 11 55.9 +1.0
baz=94
LAZ **Ladron** 94.46 320 eP P 02 11 55.5 +0.2
comp=Z,5.1nm,1.4s,mb4.7
T16A **Glen Canyon Da** 94.48 325 ⇓P P 02 11 55.0 -0.2
baz=94
328A **Wristen Ranch,** 94.51 316 ⇑P P 02 11 55.5 0.0
baz=94,SNR=8.4
125A **Gardner Draw,** 94.54 318 ⇓P P 02 11 55.6 -0.1
baz=94
W20A **Ramah** 94.56 322 ⇑P P 02 11 55.9 +0.2
baz=94
R13A **O'Grain Ranch,** 94.58 327 ⇓P P 02 11 56.6 +0.9
baz=94,SNR=7.2
S14A **Cedar City** 94.58 326 ⇓P P 02 11 56.6 +0.9
baz=94,SNR=8.6
226A **Malaga, Loving** 94.70 317 ⇓P P 02 11 56.6 +0.2
baz=94
R12A **Pony Springs,** 94.73 328 ⇓P P 02 11 56.9 +0.5
baz=94
Q11A **Duckwater** 94.73 329 ⇓P P 02 11 56.6 +0.2
baz=94,SNR=9.1
Y22A **Socorro** 94.74 320 ⇑P P 02 11 57.0 +0.5
baz=94
X21A **Alamocita Cree** 94.75 321 ⇓P P 02 11 57.4 +0.8
baz=94,SNR=15
CCUT **Cedar City** 94.84 326 eP P 02 11 57.5 +0.5
comp=Z,6.8nm,0.9s,mb5.1
T15A **Red Dirt Ranch** 94.85 325 ⇑P P 02 11 56.3 -0.7
baz=95,SNR=9.0
YBH **Yreka Blue Hor** 94.87 335 P P 02 11 56.6 -0.3
comp=Z,5.3nm,0.9s,mb5.0,baz=325,slow=1.6,SNR=11
YBH **Yreka Blue Hor** 94.87 335 P P 02 11 56.6 -0.4
YBH pmax pmax
comp=Z,5.0nm,0.9s
YBH **Yreka Blue Hor** 94.87 335 eP P 02 11 56.4 -0.5
comp=Z,5.1nm,0.9s,mb5.0
Z23A **Sita Site, Whi** 94.89 319 ⇓P P 02 11 57.8 +0.6
baz=95
327A **Balmorhea Ranc** 94.90 316 ⇑P P 02 11 57.8 +0.5
baz=95
124A **Stringfield Ra** 94.93 318 ⇓P P 02 11 57.6 +0.2
baz=95,SNR=6.1
428A **Kincaid Ranch,** 94.94 315 ⇓P P 02 11 58.3 +0.8
baz=95
X20A **Quemado** 95.03 321 ⇓P P 02 11 58.6 +0.8
baz=95
Y21A **Point of Rocks** 95.04 321 ⇑P P 02 11 58.7 +0.7
baz=95,SNR=9.9
Q10A **Clear Creek Ra** 95.05 329 ⇓P P 02 11 58.5 +0.6
baz=95
R11A **Troy Canyon, C** 95.12 328 ⇑P P 02 11 58.6 +0.4
baz=95,SNR=6.0
T14A **Hurricane** 95.13 326 ⇓P P 02 11 58.6 +0.4
baz=95
W18A **Petrified Fore** 95.17 323 ⇑P P 02 11 58.7 +0.2
baz=95
326A **Caldwell Ranch** 95.20 316 ⇑P P 02 11 59.0 +0.3
baz=95,SNR=5.2
427A **Hayter Ranch,** 95.24 316 ⇑P P 02 11 59.1 +0.2
baz=95,SNR=6.1
V17A **Tonalea, Kykot** 95.27 324 ⇑P P 02 11 59.4 +0.5
baz=95
Z22A **Elephant Butte** 95.28 320 ⇓P P 02 11 59.3 +0.3
baz=95
U15A **North Rim** 95.30 325 ⇓P P 02 11 59.2 +0.2
baz=95,SNR=13
528A **Cox Ranch, San** 95.43 315 ⇑P P 02 12 00.0 +0.3

baz=95,SNR=8.9
S12A Delamar Landin 95.44 327 ⇑P **P 02 12 00.7 +1.1**
baz=95,SNR=8.8
224A Cornudas Mount 95.45 318 ⇑P **P 02 11 59.6 -0.2**
baz=95,SNR=6.1
R10A Warm Springs 95.47 329 ⇑P **P 02 12 00.5 +0.7**
baz=95
Y20A Horse Springs, 95.47 321 ⇓P **P 02 12 00.3 +0.4**
baz=95,SNR=6.8
X19A St. Johns 95.51 322 ⇑P **P 02 12 00.6 +0.6**
baz=95
T13A Saint George 95.53 326 ⇓P **P 02 12 00.9 +0.8**
baz=95,SNR=13
Z21A St. Cloud Mine 95.60 320 ⇓P **P 02 12 01.0 +0.6**
baz=95
WUAZ Wupatki 95.62 324 ⇓P **P 02 12 01.0 +0.5**
baz=95,SNR=6.2
WUAZ Wupatki 95.62 324 *e*P **P 02 12 01.2 +0.7**
comp=Z,6.7nm,0.8s,mb5.1
MNTX Cornudas Mount 95.67 318 *e*P **P 02 12 00.3 -0.5**
comp=Z,15nm,1.2s,mb5.3
W17A Winslow 95.67 323 ⇑P **P 02 12 01.7 +0.9**
baz=95
BEKR Beckworth 95.69 332 ⇑P **P 02 12 01.1 +0.4**
baz=95
U14A Mt Trumbull 95.70 326 ⇓P **P 02 12 01.7 +0.8**
baz=96,SNR=14
426A McDonald Obser 95.73 316 ⇓P **P 02 12 01.7 +0.5**
baz=96,SNR=20
V15A Kaibab Nationa 95.74 325 ⇑P **P 02 12 01.7 +0.7**
baz=96,SNR=11
S11A Rachel 95.79 328 ⇓P **P 02 12 01.8 +0.5**
baz=96
Y19A Nutrioso 95.87 322 ⇓P **P 02 12 02.2 +0.5**
baz=96,SNR=7.8
527A Woodward Ranch 95.90 315 ⇑P **P 02 12 02.2 +0.3**
baz=96,SNR=6.1
S10A Tonopah Range, 95.90 329 ⇑P **P 02 12 01.9 +0.1**
baz=96,SNR=7.0
T11A Corn Creek, Al 95.91 328 ⇓P **P 02 12 02.6 +0.8**
baz=96,SNR=9.3
324A Moseley Ranch, 95.92 318 ⇑P **P 02 12 01.7 -0.3**
baz=96,SNR=18
WCN Washoe City 95.96 332 ⇓P **P 02 12 02.6 +0.7**
baz=96
628A Black Gap, Mar 96.00 315 ⇑P **P 02 12 03.0 +0.7**
baz=96
W16A Flagstaff 96.04 324 ⇓P **P 02 12 03.1 +0.7**
baz=96,SNR=5.9
U13A Pakoon Wash 96.06 326 ⇑P **P 02 12 03.2 +0.7**
baz=96,SNR=8.0
NVAR Mina Array Bea 96.16 330 P **P 02 12 03.4 +0.5**
comp=Z,2.4nm,0.7s,mb4.7,baz=56,slow=4.8,SNR=15
NVAR PKKPbc PKKPbc 02 28 49.1 +0.6
comp=Z,2.0nm,0.6s,baz=196,slow=4.4,SNR=12
Z20A Nine Sixteen R 96.22 321 ⇓P **P 02 12 03.9 +0.6**
baz=96,SNR=12
526A Mary Lane Ranc 96.23 316 ⇑P **P 02 12 04.1 +0.7**
baz=96
222A Williams Famil 96.26 319 ⇑P **P 02 12 04.0 +0.5**
baz=96
121A Cookes Peak, D 96.27 320 ⇑P **P 02 12 04.1 +0.6**
baz=96
627A Terlingua Ranc 96.30 315 ⇑P **P 02 12 04.3 +0.5**
baz=96,SNR=12
W15A Williams 96.31 324 ⇓P **P 02 12 04.8 +1.1**
baz=96
X17A Forest Lakes 96.32 323 ⇑P **P 02 12 04.5 +0.8**
baz=96
V14A Boquillas Ranc 96.32 325 ⇑P **P 02 12 04.6 +0.9**
baz=96,SNR=13
Y18A Canyon Day Jun 96.40 322 ⇑P **P 02 12 04.8 +0.7**
baz=96
Z19A T-Link Ranch, 96.41 321 ⇓P **P 02 12 04.4 +0.2**
baz=96
V13A Grand Canyon W 96.53 326 ⇓P **P 02 12 05.5 +0.8**
baz=96,SNR=9.3
TXAR Lajitas Array 96.55 315 P **P 02 12 05.5 +0.6**
comp=Z,4.6nm,0.8s,mb5.0,baz=66,slow=3.4,SNR=40
TXAR PKKPbc PKKPbc 02 28 48.0 +0.8
comp=Z,0.5nm,0.7s,baz=194,slow=6.0,SNR=6.9
TXAR LR LR 02 53 46.3
comp=Z,45nm,20.1s,baz=20,slow=34
TXAR Lajitas Array 96.55 315 P **P 02 12 05.5 +0.6**
TXAR PKKPbc PKKPbc 02 28 48.0 +0.8
TXAR LR LR 02 53 46.3
X16A Lo Mia Camp, P 96.55 323 ⇓P **P 02 12 05.5 +0.8**
baz=96,SNR=7.2
626A Big Bend Ranch 96.64 315 ⇑P **P 02 12 05.6 +0.3**
baz=96,SNR=5.5
W14A Seligman 96.66 325 ⇑P **P 02 12 06.2 +1.0**
baz=96,SNR=8.1
U11A Corn Creek 96.67 327 ⇑P **P 02 12 06.2 +0.9**
baz=96
120A U Bar Ranch, L 96.69 320 ⇑P **P 02 12 05.9 +0.5**
baz=96
119A Ashpeak Ranch, 96.85 321 ⇓P **P 02 12 06.8 +0.6**
baz=97
Y17A Roosevelt 96.86 323 ⇑P **P 02 12 06.7 +0.5**
baz=97,SNR=5.3
X15A Humboldt 96.87 324 ⇑P **P 02 12 06.8 +0.6**
baz=97,SNR=11
Z18A Geronimo 96.96 322 ⇓P **P 02 12 07.2 +0.6**
baz=97
Z17A San Carlos Hig 97.00 322 ⇑P **P 02 12 07.3 +0.4**
baz=97
GRAC Grapevine Rang 97.01 329 ⇓P **P 02 12 07.4 +0.6**
baz=97
Y16A Circle Bar Ran 97.01 323 ⇑P **P 02 12 07.7 +0.9**
baz=97,SNR=5.5
V12A Nelson 97.02 326 ⇓P **P 02 12 07.5 +0.7**
baz=97,SNR=11
U10A Ash Meadows, A 97.07 328 ⇑P **P 02 12 07.9 +0.8**
baz=97
W13A Hualapai Mount 97.12 325 ⇓P **P 02 12 08.0 +0.7**
baz=97
220A Playas Peak, P 97.15 320 ⇑P **P 02 12 07.7 +0.2**
baz=97
V11A Goodsprings 97.18 327 ⇓P **P 02 12 08.3 +0.8**
baz=97,SNR=7.8
X14A Yava 97.19 324 ⇓P **P 02 12 08.4 +0.8**
baz=97,SNR=6.7
FURC Furnace Creek, 97.25 328 ⇓P **P 02 12 08.6 +0.7**
baz=97
118A Homack Ranch, 97.28 321 ⇑P **P 02 12 08.5 +0.4**
baz=97
Y15A Casa Rosa Ranc 97.36 324 ⇑P **P 02 12 08.9 +0.5**
baz=97,SNR=6.1
Z16A Peralta Trail, 97.43 323 ⇓P **P 02 12 09.3 +0.6**
baz=97
219A White Tail Can 97.44 320 ⇓P **P 02 12 09.3 +0.4**
baz=97,SNR=11
SHOC Shoshone 97.49 328 ⇓P **P 02 12 09.3 +0.3**
baz=97
X13A Yucca 97.52 325 ⇓P **P 02 12 09.9 +0.8**
baz=97,SNR=8.2
320A Kipp Ranch, An 97.60 320 ⇓P **P 02 12 10.0 +0.4**
baz=97,SNR=5.3
Y14A Wickenburg 97.68 324 ⇓P **P 02 12 09.8 -0.1**
baz=97
117A Oracle 97.72 322 ⇓P **P 02 12 10.4 +0.3**
baz=98,SNR=7.1
218A Dragoon 97.86 321 ⇑P **P 02 12 11.1 +0.4**
baz=98
MPMC Manual Prospec 97.87 328 ⇑P **P 02 12 11.1 +0.4**
baz=98
PDMCI Parker Dam,Lak 97.90 325 ⇑P **P 02 12 11.3 +0.5**
baz=98
TUC Tucson 97.95 322 *e*P **P 02 12 11.6 +0.5**
TUC pmax pmax
comp=Z,8.0nm,1.3s,mb5.1
TUC Tucson 97.95 322 *e*P **P 02 12 11.6 +0.4**
comp=Z,7.6nm,1.3s,mb5.1
Z14A Wintersburg 98.13 324 ⇑P **P 02 12 12.5 +0.6**
baz=98
GMRC Granite Mounta 98.17 326 ⇑P **P 02 12 12.7 +0.6**
baz=98
GSC Goldstone 98.23 328 ⇑P **P 02 12 12.6 +0.3**
baz=98
318A Bisbee 98.26 321 ⇓P **P 02 12 12.8 +0.2**
baz=98
115A Sonoran Desert 98.33 323 ⇓P **P 02 12 13.4 +0.5**
baz=98,SNR=6.0
CPUP Villa Florida 98.40 243 P **P 02 12 13.3 +0.3**
comp=Z,0.5nm,0.5s,mb4.3,baz=80,slow=20,SNR=4.1
CPUP LR LR 02 57 36.1
comp=Z,155nm,18.9s,baz=14,slow=36
CPUP Villa Florida 98.40 243 P **P 02 12 13.4 +0.4**
CPUP pmax pmax
comp=Z,1.0nm,0.5s
CPUP MLR MLR
comp=Z,155nm,18.9s
HEC Hector,Ludlow 98.42 327 ⇑P **P 02 12 13.9 +0.7**
baz=98
LRMC Laurel Mountai 98.45 328 ⇓P **P 02 12 13.8 +0.6**
baz=98
IRM Iron Mountain 98.47 326 ⇑P **P 02 12 14.2 +0.8**
baz=98
Y12C Blythe 98.53 325 ⇑P **P 02 12 14.4 +0.7**
baz=98
216A Three Points, 98.53 322 ⇑P **P 02 12 14.3 +0.6**
baz=98
Z13A Yuma Proving G 98.60 324 ⇑P **P 02 12 14.3 +0.3**
baz=98
114A Black Gap (USA 98.61 323 ⇓P **P 02 12 14.3 +0.3**
baz=98
ISA Isabella 98.61 329 ⇑P **P 02 12 14.6 +0.6**
baz=98
ISA Isabella 98.61 329 *e*P **P 02 12 14.5 +0.5**
ISA pmax pmax
comp=Z,10.0nm,1.1s,mb5.3
ISA Isabella 98.61 329 *e*P **P 02 12 14.5 +0.5**
comp=Z,10.0nm,1.1s,mb5.3
OTAV Otavalo 98.71 277 *e*P **P 02 12 16.0 +1.2**
comp=Z,5.0nm,1.1s,mb5.0
113A Mohawk Valley, 99.00 324 ⇓P **P 02 12 16.3 +0.5**
baz=99
EDW2 Edwards Air Fo 99.09 328 ⇑P **P 02 12 16.8 +0.6**
baz=99
214A Organ Pipe Nat 99.23 323 ⇑P **P 02 12 16.8 0.0**
baz=99
GLA Glamis 99.26 325 ⇑P **P 02 12 17.4 +0.5**
baz=99
BFSC Mount Baldy Ra 99.50 328 ⇑P Pdif 02 12 18.4 +0.6
baz=99
PFO Pinyon Flat Ob 99.52 326 ⇑P Pdif 02 12 18.6 +0.6
baz=99
LPAZ La Paz 100.45 258 PKKPbc PKKPbc 02 28 37.2 +0.7
comp=Z,1.2nm,0.7s,baz=241,slow=2.1,SNR=6.1
LPAZ La Paz 100.45 258 *e*P Pdif 02 12 24.3 +2.2
MAW Mawson 109.29 165 PKiKP PKiKP 02 17 04.0 +0.4
comp=Z,1.1nm,0.5s,baz=42,slow=15,SNR=5.9
LCO Las Campanas 109.61 248 *e*PKP PKiKP 02 17 06.0 +0.6
NWAO Narrogin (SRO) 112.45 115 PKiKP PKiKP 02 17 09.9 -0.8
comp=Z,23nm,1.2s,baz=177,slow=4.3,SNR=5.8
NWAO Narrogin (SRO) 112.45 115 *i* PKIKP PKiKP 02 17 09.9 -0.7
NWAO pmax pmax
comp=Z,23nm,1.2s
KAKA Kakadu 113.20 88 *e*PKP PKiKP 02 17 12.7 +0.1
PLCA Paso Flores 115.51 237 PKP PKPdf 02 17 16.6 +0.4
comp=Z,3.7nm,0.9s,baz=11,slow=3.1,SNR=7.3
PLCA Paso Flores 115.51 237 PKIKP PKPdf 02 17 16.6 +0.4
PLCA pmax pmax
comp=Z,4.0nm,0.9s
PLCA Paso Flores 115.51 237 *e*PKPdf PKPdf 02 17 16.6 +0.3
PLCA Paso Flores 115.51 237 *e*PKIKP PKPdf 02 17 16.5 +0.3
WRA Warramunga Arr 118.76 94 PKP PKPdf 02 17 22.0 -1.1
comp=Z,8.9nm,0.5s,baz=317,slow=1.3,SNR=19
WRA SKP 02 20 49.7
comp=Z,0.5nm,0.3s,baz=292,slow=2.6,SNR=4.9
WRA PKKPbc PKKPbc 02 27 39.2 +1.6
comp=Z,0.6nm,0.7s,baz=120,slow=3.5,SNR=6.1
WRA Warramunga Arr 118.76 94 PKP PKPdf 02 17 22.0 -1.1
WRA SKP 02 20 49.7
WRA PKKPbc PKKPbc 02 27 39.2 +1.6
WRAB Tennant Creek 118.76 94 *e*PKIKP PKPdf 02 17 21.5 -1.6
FORT Forrest 119.37 108 *e*PKP PKPdf 02 17 23.0 -1.0
comp=Z,20nm,0.6s
FORT Forrest 119.37 108 *e*PKPdf PKPdf 02 17 23.5 -0.5
ASAR Alice Springs 120.37 98 PKP PKPdf 02 17 25.1 -1.0
comp=Z,15nm,0.6s,baz=312,slow=1.5,SNR=152
ASAR pPKP pPKPdf 02 17 46.4 -2.4
comp=Z,5.0nm,0.8s,baz=331,slow=1.8,SNR=7.6
ASAR SKP 02 20 52.6
comp=Z,2.1nm,0.8s,baz=322,slow=1.4,SNR=6.1
ASAR PKKPbc PKKPbc 02 27 33.1 +1.4
comp=Z,0.7nm,0.5s,baz=115,slow=3.4,SNR=6.2
ASAR Alice Springs 120.37 98 PKIKP PKPdf 02 17 25.2 -0.9
ASAR 02 17 46.4
ASAR pmax pmax
comp=Z,15nm,0.6s
COEN Coen 122.41 83 *e*PKIKP PKPdf 02 17 29.8 -0.5
COEN Coen 122.41 83 *e*PKPdf PKPdf 02 17 30.0 -0.3
CASY Casey 123.01 151 *e*PKPdf PKPdf 02 17 29.8 -0.1
QSPA South Pole Qui 127.57 180 *e*PKPdf PKPdf 02 17 37.5 -0.8
CTAO Charters Tower 128.28 87 *e*PKIKP PKPdf 02 17 41.2 -0.2
STKA Stephens Creek 130.22 103 PKP PKPdf 02 17 44.0 -0.8
comp=Z,17nm,0.8s,baz=332,slow=2.0,SNR=7.2
STKA SKPbc SKPbc 02 20 58.7 -1.8
comp=Z,13nm,0.7s,baz=303,slow=5.3,SNR=16
STKA Stephens Creek 130.22 103 *e*PKPdf PKPdf 02 17 44.3 -0.4
STKA *e*SKPbc SKPbc 02 20 58.7 -1.8
SBA Scott Base 137.00 169 *e*PKPdf PKPdf 02 17 55.7 -0.5
SBA *e*SKPbc SKPbc 02 21 21.0 -0.8
MSVF Nonsavu 150.59 54 *e*PKPbc PKPbc 02 18 27.6 +0.7
AFI Afiamalu 153.00 32 PKPbc PKPbc 02 18 33.2 +0.7
comp=Z,47nm,0.7s,baz=36,slow=22,SNR=4.4
AFI Afiamalu 153.00 32 PKIKP PKPbc 02 18 33.2 +0.7
AFI pmax pmax
comp=Z,47nm,0.7s
RPZ Rata Peaks 155.34 114 PKPbc PKPdf 02 18 36.6 +9.0
comp=Z,7.1nm,0.8s,baz=237,slow=6.8,SNR=2.5
RPZ PKPab PKPab 02 18 53.0 -0.3
comp=Z,22nm,0.8s,baz=258,slow=3.3,SNR=5.6
URZ Urewera 159.80 99 PKPab PKPab 02 19 10.0 -2.9
comp=Z,34nm,0.8s,baz=358,slow=0.9,SNR=11

*IDC **18** 02:19:52.6±1.0, 8°.28N×127°.59E, h0km, mb4.0/8, mb1 4.0/9, mb1mx3.8/22, mbtmp4.0/9, ML4.0/1, Error ellipse: s-maj=33.1km s-min=17.7km az=78.0*
*ISCJB **18** 02:19:54.8±3.4, 8°.32N±0°.07×127°.58E±0°.07, h28km±24km, mb4.0/12, Error ellipse: s-maj=12.9km s-min=11.5km az=136.7*
*MAN **18** 02:19:56, 8°.32N×127°.27E, h3km, mb4.7, ML3.6, MS3.5*
*NEIC **18** 02:19:59.5±6.0, 8°.20N×127°.41E, h49km±51km, mb4.1/4, Error ellipse: s-maj=66.4km s-min=7.9km az=63.0*
ISC 18 02:19:55.3±3.5, 8°.31N±0°.07×127°.54E±0°.06, h17km±22km, n20, σ0.56/24, mb4.0/12, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**2.01**	**289**	*e*P	**Pn**	**02 20 27.9**	**-0.6**
BUTP				*e*S	**Sn**	**02 20 37.3**	**-16**
DAV	**Davao City (W)**	**2.30**	**238**	Pn	**Pn**	**02 20 32.8**	**+0.3**
42nm,0.3s,baz=12,slow=10.0,SNR=4.7							
DAV				Sn	**Sn**	**02 21 01.5**	**+1.2**
77nm,0.3s,baz=90,slow=18,SNR=4.1							
DAV	**Davao City (W)**	**2.30**	**238**	Pn	**Pn**	**02 20 32.8**	**+0.3**
DAV				Sn	**Sn**	**02 21 01.5**	**+1.2**
BUKP	**Musuan**	**2.49**	**260**	*e*P	**Pn**	**02 20 35.1**	**+0.1**
BUKP				*e*S	**Sn**	**02 20 46.0**	**-19**
CGP	**Cagayan de Oro**	**2.82**	**273**	⇓*e*P	**Pn**	**02 20 39.8**	**+0.1**
CGP				*e*S	**Sn**	**02 21 11.8**	**-1.5**
PAGZ	**Pagadian**	**4.14**	**264**	*e*P	**Pn**	**02 20 58.1**	**+0.3**
FITZ	**Fitzroy Crossi**	**26.30**	**184**	P	**P**	**02 25 30.1**	**-0.1**
3.3nm,1.0s,mb3.8,baz=42,slow=15,SNR=5.7							
WRAB	**Tennant Creek**	**28.85**	**167**	*e*P	**P**	**02 25 52.7**	**-0.3**
2.6nm,0.7s,mb4.1							
WRA	**Warramunga Arr**	**28.86**	**167**	P	**P**	**02 25 52.1**	**-1.0**
0.6nm,0.6s,mb3.5,baz=349,slow=9.7,SNR=6.5							
ASAR	**Alice Springs**	**32.38**	**169**	PcP	PcP	02 29 12.0	+0.2
0.4nm,0.4s,baz=350,slow=2.5,SNR=4.2							
STKA	**Stephens Creek**	**42.15**	**162**	P	**P**	**02 27 47.0**	**-0.1**
2.9nm,0.7s,mb4.0,baz=337,slow=7.6,SNR=6.2							
MK31	**Makanchi Array**	**54.34**	**323**	*e*P	**P**	**02 29 21.2**	**+0.2**
MKAR	**Makanchi Array**	**54.34**	**323**	P	**P**	**02 29 21.5**	**+0.5**
1.1nm,0.6s,mb3.9,baz=113,slow=7.8,SNR=7.7							
ZALV	**Zalesovo Beam**	**56.94**	**331**	P	**P**	**02 29 40.0**	**+0.5**
0.6nm,0.3s,mb4.1,baz=120,slow=7.1,SNR=4.0							
TKM2	**Tokmak 2**	**56.94**	**316**	*e*P	**P**	**02 29 39.4**	**-0.3**
1.2nm,0.7s,mb4.0							
EKS2	**Erkin-Say**	**58.10**	**316**	*e*P	**P**	**02 29 47.9**	**-0.1**
1.3nm,0.6s,mb4.1							
KURK	**Kurchatov**	**58.38**	**326**	*e*P	**P**	**02 29 49.9**	**+0.1**
2.3nm,0.8s,mb4.3							
BVAR	**Borovoye Array**	**63.98**	**326**	P	**P**	**02 30 27.9**	**+0.2**
0.8nm,0.6s,mb3.9,baz=114,slow=7.3,SNR=5.3							
ARCES	**ARCESS Array B**	**86.46**	**340**	P	**P**	**02 32 37.4**	**+0.6**
0.7nm,0.7s,mb4.0,baz=108,slow=4.0,SNR=4.0							
FINES	**FINESS Array B**	**88.20**	**332**	P	**P**	**02 32 45.4**	**+0.1**
0.7nm,0.7s,mb4.0,baz=74,slow=4.8,SNR=3.6							

*IDC **18** 02:40:34.2±0.7, 10°.02N×75°.73W, h0km, mb3.8/6, mb1 4.1/10, mb1mx3.9/23, mbtmp3.9/10, ML3.3/1, MS3.2/3, Ms1 3.2/3, ms1mx2.8/26, Error ellipse: s-maj=22.6km s-min=17.3km az=46.0*
*ISCJB **18** 02:40:36.2±2.5, 9°.91N±0°.07×75°.82W±0°.04, h23km±20km, mb3.9/20, Error ellipse: s-maj=11.3km s-min=6.3km az=7.3*
*NEIC **18** 02:40:39.9±0.5, 9°.85N×75°.80W, h42km±6km, mb3.9/15, Error ellipse: s-maj=6.8km s-min=5.5km az=206.0*
ISC 18 02:40:39.6±2.5, 9°.90N±0°.07×75°.85W±0°.03, h33km±20km, n40, σ0.95/44, mb3.9/20, Near north coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCIP	**Isla Barro Col**	**4.00**	**260**	*e*Pn	**Pn**	**02 41 39.1**	**+0.5**
BCIP				*e*Sn	**Sn**	**02 42 25.3**	**+0.8**
ROSC	**El Rosal**	**5.24**	**163**	Pn	**Pn**	**02 41 55.5**	**-0.1**
0.2nm,0.3s,baz=270,slow=20,SNR=2.7							
ROSC				Sn	**Sn**	**02 43 00.9**	**+6.1**
6.3nm,0.3s,baz=254,slow=22,SNR=7.2							
SDV	**Santo Domingo**	**5.24**	**101**	Pn	**Pn**	**02 41 56.1**	**+0.4**
8.3nm,0.3s,baz=309,slow=7.7,SNR=65							
SDV				Sn	**Sn**	**02 42 56.9**	**+1.8**
41nm,0.3s,baz=355,slow=17,SNR=8.4							
SDV	**Santo Domingo**	**5.24**	**101**	Pn	**Pn**	**02 41 56.1**	**+0.4**
SDV				Sn	**Sn**	**02 42 56.9**	**+1.8**
JTS	**JuntasAbangare**	**8.97**	**273**	Pn	**Pn**	**02 42 46.4**	**-0.6**
2.3nm,0.3s,baz=306,slow=15,SNR=8.6							
JTS				Sn	**Sn**	**02 44 25.5**	**-1.4**
1.5nm,0.3s,baz=316,slow=16,SNR=4.3							
JTS				LR	LR	02 46 38.6	
comp=Z,68nm,19.8s,baz=310,slow=40							
JTS	**JuntasAbangare**	**8.97**	**273**	*e*Pn	**Pn**	**02 42 46.4**	**-0.6**
JTS				*e*Sn	**Sn**	**02 44 24.8**	**-2.2**
OTAV	**Otavalo**	**9.95**	**195**	*e*Pn	**Pn**	**02 43 00.7**	**+0.3**
SDDR	**Presa de Saban**	**10.05**	**26**	*e*Pn	**Pn**	**02 43 02.9**	**+1.2**
SDDR				*e*Sn	**Sn**	**02 44 45.2**	**-8.0**
PCRV	**Puerto La Cruz**	**11.04**	**88**	Pn	**Pn**	**02 43 13.7**	**-1.7**
3.1nm,0.3s,baz=283,slow=5.9,SNR=14							
PCRV				Sn	**Sn**	**02 45 16.4**	**-1.4**
1.9nm,0.3s,baz=323,slow=22,SNR=7.1							
APG	**El Apazote**	**15.14**	**291**	Pn	**Pn**	**02 44 15.5**	**+4.3**
0.1nm,0.3s,baz=154,slow=6.3,SNR=7.4							
APG				LR	LR	02 50 22.8	
comp=Z,200nm,19.2s,baz=74,slow=39							
ATAH	**Atahualpa**	**16.98**	**189**	P	**Pn**	**02 44 42.8**	**+8.0**
0.2nm,0.3s,baz=294,slow=4.4,SNR=5.6							
CMIG	**Matias Romero**	**19.83**	**293**	P	**Pn**	**02 45 08.0**	**-1.5**
0.1nm,0.3s,baz=88,slow=15,SNR=2.6							
CMIG				LR	LR	02 52 17.6	
comp=Z,69nm,21.7s,baz=235,slow=35							
CMIG	**Matias Romero**	**19.83**	**293**	P	**Pn**	**02 45 08.0**	**-1.5**
CMIG				LR	LR	02 52 17.6	
LPAZ	**La Paz**	**27.12**	**164**	P	**P**	**02 46 21.1**	**+1.4**
0.9nm,0.7s,mb3.4,baz=315,slow=3.7,SNR=3.6							
LPAZ	**La Paz**	**27.12**	**164**	*e*P	**P**	**02 46 19.1**	**-0.6**
1.5nm,0.9s,mb3.5							
WVT	**Waverly**	**28.29**	**339**	*e*P	**P**	**02 46 30.1**	**+0.1**
2.6nm,0.9s,mb3.9							
WMOK	**Wichita Mounta**	**32.41**	**323**	*e*P	**P**	**02 47 05.7**	**-0.8**
2.4nm,0.9s,mb4.0							
TXAR	**Lajitas Array**	**32.41**	**311**	P	**P**	**02 47 06.1**	**-0.5**
0.8nm,0.8s,mb3.6,baz=121,slow=8.5,SNR=7.8							
AMTX	**Amarillo**	**34.27**	**320**	*e*P	**P**	**02 47 23.1**	**+0.3**
4.6nm,0.7s,mb4.5							
MNTX	**Cornudas Mount**	**34.91**	**313**	*e*P	**P**	**02 47 27.9**	**-0.4**
0.7nm,0.7s,mb3.7							
ANMO	**Albuquerque**	**37.44**	**317**	*e*P	**P**	**02 47 50.7**	**+0.8**
0.5nm,1.1s,mb3.3							
SDCO	**Great Sand Dun**	**38.47**	**321**	*e*P	**P**	**02 47 59.7**	**+1.2**
1.9nm,0.8s,mb3.9							
TUC	**Tucson**	**39.21**	**310**	*e*P	**P**	**02 48 05.3**	**+0.4**
1.5nm,0.7s,mb3.8							
ISCO	**Idaho Springs**	**39.84**	**323**	*e*P	**P**	**02 48 10.9**	**+0.9**
3.5nm,1.0s,mb4.0							
PDAR	**Pinedale Array**	**44.01**	**324**	P	**P**	**02 48 43.9**	**-0.1**
1.3nm,0.7s,mb3.8,baz=115,slow=10.0,SNR=8.8							
BW06	**Boulder Array**	**44.02**	**324**	*e*P	**P**	**02 48 43.4**	**-0.6**
5.4nm,1.1s,mb4.2							
HWUT	**Hardware Ranch**	**44.52**	**321**	*e*P	**P**	**02 48 48.1**	**0.0**
1.0nm,0.6s,mb3.8							
DUG	**Dugway**	**44.53**	**319**	*e*P	**P**	**02 48 48.9**	**+0.7**
0.8nm,0.5s,mb3.8							
BOZ	**Bozeman (W)**	**46.96**	**326**	*e*P	**P**	**02 49 07.7**	**+0.4**
0.5nm,0.7s,mb3.5							
MCMT	**McKenzie Canyo**	**47.16**	**324**	*e*P	**P**	**02 49 10.4**	**+1.5**
1.5nm,0.9s,mb3.9							
WVOR	**Wild Horse Val**	**49.45**	**319**	*e*P	**P**	**02 49 27.8**	**+1.2**
15nm,1.6s,mb4.8							
YKA	**Yellowknife Ar**	**59.47**	**340**	P	**P**	**02 50 38.3**	**-0.7**
2.2nm,0.7s,mb4.3,baz=132,slow=7.3,SNR=12							
YKA	**Yellowknife Ar**	**59.47**	**340**	P	**P**	**02 50 38.3**	**-0.7**
YKW3	**Yellowknife Ar**	**59.52**	**340**	*e*P	**P**	**02 50 38.5**	**-0.9**
TORD	**Torodi Ar. Bea**	**75.78**	**79**	P	**P**	**02 52 21.1**	**-1.7**
0.3nm,0.8s,mb3.3,baz=288,slow=7.3,SNR=3.1							
ARCES	**ARCESS Array B**	**84.74**	**20**	P	**P**	**02 53 09.8**	**-0.2**
0.5nm,0.5s,mb3.9,baz=274,slow=3.5,SNR=11							
ASAR	**Alice Springs**	**148.49**	**241**	PKPbc	PKPbc	03 00 23.2	-0.5
1.8nm,0.6s,baz=107,slow=2.7,SNR=11							
ASAR				PKPab	PKPab	03 00 27.3	+0.1
1.9nm,0.6s,baz=112,slow=3.7,SNR=14							
WRAB	**Tennant Creek**	**149.22**	**248**	*e*PKPbc	PKPbc	03 00 25.1	-0.6
WRA	**Warramunga Arr**	**149.22**	**248**	PKPbc	PKPbc	03 00 25.2	-0.5
0.8nm,0.5s,baz=101,slow=3.1,SNR=28							
WRA				PKPab	PKPab	03 00 30.8	+0.6
2.1nm,0.7s,baz=99,slow=3.8,SNR=25							
CMAR	**Chiang Mai Arr**	**151.35**	**10**	PKPbc	PKPbc	03 00 29.6	-1.3
1.9nm,0.7s,baz=294,slow=3.1,SNR=8.7							
CMAR				PKPab	PKPab	03 00 38.5	-0.3
0.6nm,0.3s,baz=332,slow=3.9,SNR=4.4							

*GUC **18** 02:53:10.9±0.8, 31°.81S×69°.77W, h154km±12km, MD3.5, ML3.7*
*NEIC **18** 02:53:10.9, 31°.82S×69°.77W, h154km, mb3.7/2, MD3.5(GUC), After GUC.*
*ISCJB **18** 02:53:10.4±0.5, 31°.82S±0°.03×69°.24W±0°.06, h118km±5km, mb3.6/3, Error ellipse: s-maj=8.4km s-min=5.0km az=17.1*
*IDC **18** 02:53:11.3±2.0, 31°.95S×69°.10W, h113km±13km, mb3.1/2, mb1 3.4/4, mb1mx3.4/15, mbtmp3.2/4, Error ellipse: s-maj=43.1km s-min=31.8km az=66.0*
ISC 18 02:53:11.4±0.5, 31°.82S±0°.03×69°.24W±0°.06, h111km±6km, n36, σ0.79/61, mb3.6/3, 13C-5D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**0.88**	**76**	P	**Pn**	**02 53 32.0**	**+0.4**
4.8nm,0.3s,baz=243,slow=10,SNR=336							
CFAA				S	**Sn**	**02 53 46.4**	**-0.3**
24nm,0.3s,baz=144,slow=20,SNR=78							
CFAA	**Coronel Fontan**	**0.88**	**76**	P	**Pn**	**02 53 32.0**	**+0.4**
CFAA				S	**Sn**	**02 53 46.4**	**-0.3**
JACH	**Jahuel**	**1.43**	**233**	*i* P	**Pn**	**02 53 37.6**	**+0.2**
JACH				*i* S	**Sn**	**02 53 58.0**	**+0.7**
JACH	**Jahuel**	**1.43**	**233**	*i* P	**Pn**	**02 53 37.6**	**+0.2**
JACH				*i* S	**Sn**	**02 53 58.0**	**+0.7**
FCH	**Farellones**	**1.74**	**210**	⇓*i* P	**Pn**	**02 53 44.7**	**+3.4**
FCH				*i* S	**Sn**	**02 54 08.2**	**+4.2**
FCH				AML	AML	02 54 14.2	
comp=E,519nm,0.2s							
PEL	**Peldehue**	**1.79**	**222**	⇑*i* P	**Pn**	**02 53 41.4**	**-0.5**
PEL				*i* S	**Sn**	**02 54 04.8**	**-0.3**
PEL				AML	AML	02 54 06.7	
comp=E,1μm,0.4s							
ROCH	**El Roble**	**1.88**	**232**	⇓*i* P	**Pn**	**02 53 42.7**	**-0.3**
ROCH				*i* S	**Sn**	**02 54 06.2**	**-0.9**
ROCH	**El Roble**	**1.88**	**232**	⇓*i* P	**Pn**	**02 53 42.7**	**-0.3**
ROCH				*i* S	**Sn**	**02 54 06.2**	**-0.9**
CLCH	**Cerro Calan**	**1.91**	**215**	*e*P	**Pn**	**02 53 44.1**	**+0.8**
CLCH				*i* S	**Sn**	**02 54 09.0**	**+1.3**
CLCH	**Cer

ANTU	**Antumapu**	**2.10**	**214**	*e*P	**Pn**	**02 53 45.0**	**-0.7**
ANTU				*i* S	**Sn**	**02 54 12.1**	**+0.1**
ANTU	**Antumapu**	**2.10**	**214**	*e*P	**Pn**	**02 53 45.0**	**-0.7**
ANTU				*i* S	**Sn**	**02 54 12.1**	**+0.1**
ANTU				AML	AML	02 54 13.8	
	comp=E,442nm,0.2s						
TLL	**Tololo Astrono**	**2.13**	**320**	⇑*i*P	**Pn**	**02 53 46.4**	**+0.3**
TLL				*i* S	**Sn**	**02 54 12.3**	**-0.3**
TLL	**Tololo Astrono**	**2.13**	**320**	⇑*i*P	**Pn**	**02 53 46.4**	**+0.3**
TLL				*i* S	**Sn**	**02 54 12.3**	**-0.3**
TLL				AML	AML	02 54 13.9	
	comp=N,231nm,0.2s						
TACH	**Talagante**	**2.32**	**218**	⇑*i*P	**Pn**	**02 53 47.9**	**-0.6**
TACH				*i* S	**Sn**	**02 54 15.7**	**-1.2**
TACH	**Talagante**	**2.32**	**218**	⇑*i*P	**Pn**	**02 53 47.9**	**-0.6**
TACH				*i* S	**Sn**	**02 54 15.7**	**-1.2**
CHCH	**Chadas Angostu**	**2.42**	**209**	⇑*i*P	**Pn**	**02 53 49.8**	**0.0**
CHCH				*i* S	**Sn**	**02 54 18.9**	**-0.3**
CHCH	**Chadas Angostu**	**2.42**	**209**	⇑*i*P	**Pn**	**02 53 49.8**	**0.0**
CHCH				*i* S	**Sn**	**02 54 18.9**	**-0.3**
CACH	**El Canelo**	**2.56**	**206**	⇑*i*P	**Pn**	**02 53 52.2**	**+0.6**
CACH				*i* S	**Sn**	**02 54 23.5**	**+1.0**
CACH	**El Canelo**	**2.56**	**206**	⇑*i*P	**Pn**	**02 53 52.2**	**+0.6**
CACH				*i* S	**Sn**	**02 54 23.5**	**+1.0**
LNV	**Longovilo**	**2.80**	**220**	⇑*i*P	**Pn**	**02 53 52.9**	**-2.0**
LNV	**Longovilo**	**2.80**	**220**	⇑*i*P	**Pn**	**02 53 52.9**	**-2.0**
LCO	**Las Campanas**	**3.07**	**335**	⇑*i*P	**Pn**	**02 53 58.4**	**-0.1**
LCO				*i* S	**Sn**	**02 54 34.5**	**-0.2**
LCO	**Las Campanas**	**3.07**	**335**	⇑*i*P	**Pn**	**02 53 58.4**	**-0.1**
LCO				*i* S	**Sn**	**02 54 34.5**	**-0.2**
LCO				AML	AML	02 54 35.5	
	comp=E,382nm,0.3s						
TRQA	**Tornquist**	**8.61**	**138**	*e*Pn	**Pn**	**02 55 12.4**	**-0.8**
	comp=E,11nm,0.6s						
LPAZ	**La Paz**	**15.50**	**4**	P	**Pn**	**02 56 46.4**	**+2.4**
	comp=E,0.2nm,0.3s,baz=177,slow=6.5,SNR=7.0						
LPAZ	**La Paz**	**15.50**	**4**	*e*P	**Pn**	**02 56 45.9**	**+1.9**
	comp=E,1.1nm,0.7s						
SIV	**San Ignacio**	**17.43**	**27**	P	**Pn**	**02 57 07.2**	**-0.5**
	comp=E,0.5nm,0.3s,baz=206,slow=12,SNR=10						
TXAR	**Lajitas Array**	**69.06**	**328**	P	**P**	**03 04 05.8**	**+0.7**
	comp=E,0.3nm,0.6s,mb3.3,baz=158,slow=8.0,SNR=3.8						
WVT	**Waverly**	**69.81**	**344**	*e*P	**P**	**03 04 09.2**	**-0.5**
	comp=E,2.1nm,0.6s,mb4.1						
TORD	**Torodi Ar. Bea**	**81.24**	**69**	P	**P**	**03 05 15.2**	**-0.3**
	comp=E,0.3nm,0.5s,mb3.4,baz=240,slow=4.9,SNR=7.4						
WRA	**Warramunga Arr**	**123.78**	**207**	PKP	PKPdf	03 11 55.5	-1.2
	comp=E,0.2nm,0.4s,baz=164,slow=1.6,SNR=7.0						

*NEIC **18** 02:55:13.0, 38°.17N×24°.07E, h4km, ML2.9(ATH), After ATH.*
*CSEM **18** 02:55:13.4±0.2, 38°.16N×24°.04E, h5km, ML2.9, Error ellipse: s-maj=3.5km s-min=2.4km az=89.0*
*ATH **18** 02:55:13.0, 38°.17N×24°.07E, h4km, MD2.6/6, ML2.9*
*ISCJB **18** 02:55:13.3±0.7, 38°.16N±0°.03×24°.04E±0°.04, h5km±5km, Error ellipse: s-maj=5.1km s-min=4.4km az=153.8*
*THE **18** 02:55:14.1, 38°.17N×24°.00E, h8km±1km, ML2.6/9, Error ellipse: s-maj=1.7km s-min=1.1km az=287.0*
ISC 18 02:55:13.7±0.7, 38°.16N±0°.02×24°.03E±0°.04, h8km±3km, n44, σ0s56/84, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTL	**Penteli**	**0.17**	**230**	*e*Pg	**Pg**	**02 55 17.2**	**-0.1**
PTL				*e*Sg	**Sg**	**02 55 19.4**	**-0.3**
PTL	**Penteli**	**0.17**	**230**	*e*PG	**Pg**	**02 55 17.2**	**-0.1**
PTL				*e*SG	**Sg**	**02 55 19.4**	**-0.3**
PTL	**Penteli**	**0.17**	**230**	*e*Pg	**Pg**	**02 55 17.2**	**-0.1**
PTL				*e*Sg	**Sg**	**02 55 19.4**	**-0.3**
ATHU	**Athens Univers**	**0.27**	**225**	P	**Pg**	**02 55 18.9**	**-0.2**
ATHU				S	**Sg**	**02 55 22.5**	**-0.3**
ATHU	**Athens Univers**	**0.27**	**225**	P	**Pg**	**02 55 18.9**	**-0.2**
ATHU				S	**Sg**	**02 55 22.5**	**-0.3**
ATH	**Athens Observa**	**0.31**	**233**	*e*Pg	**Pg**	**02 55 19.8**	**0.0**
ATH				*e*Sg	**Sg**	**02 55 24.1**	**+0.2**
ATH	**Athens Observa**	**0.31**	**233**	*e*PG	**Pg**	**02 55 19.8**	**0.0**
ATH				*e*SG	**Sg**	**02 55 24.1**	**+0.2**
ATH	**Athens Observa**	**0.31**	**233**	*e*Pg	**Pg**	**02 55 19.8**	**0.0**
ATH				*e*Sg	**Sg**	**02 55 24.1**	**+0.2**
VLY	**Voula,Athens**	**0.36**	**212**	*e*Pg	**Pg**	**02 55 20.6**	**-0.1**
VLY				*e*Sg	**Sg**	**02 55 25.7**	**+0.2**
VLY	**Voula,Athens**	**0.36**	**212**	*e*PG	**Pg**	**02 55 20.6**	**-0.1**
VLY				*e*SG	**Sg**	**02 55 25.7**	**+0.2**
VLY	**Voula,Athens**	**0.36**	**212**	*e*Pg	**Pg**	**02 55 20.6**	**-0.1**
VLY				*e*Sg	**Sg**	**02 55 25.7**	**+0.2**
NAIG	**Nisos Aigina**	**0.59**	**227**	*e*Pg	**Pg**	**02 55 24.8**	**-0.2**
NAIG	**Nisos Aigina**	**0.59**	**227**	*e*PG	**Pg**	**02 55 24.8**	**-0.2**
NAIG	**Nisos Aigina**	**0.59**	**227**	*e*Pg	**Pg**	**02 55 24.8**	**-0.2**
LTK	**Loutraki**	**0.85**	**261**	P	**Pg**	**02 55 30.2**	**+0.2**
LTK				S	**Sg**	**02 55 41.8**	**+0.7**
LTK	**Loutraki**	**0.85**	**261**	*e*PG	**Pg**	**02 55 30.2**	**+0.2**
LTK				*e*SG	**Sg**	**02 55 42.0**	**+0.9**
LTK	**Loutraki**	**0.85**	**261**	P	**Pg**	**02 55 30.2**	**+0.2**
LTK				S	**Sg**	**02 55 41.8**	**+0.7**
LKR	**Lokris**	**0.95**	**301**	*e*Pb	**Pg**	**02 55 31.1**	**-0.8**
LKR				*e*Sg	**Sg**	**02 55 45.1**	**+0.9**
LKR	**Lokris**	**0.95**	**301**	P	**Pg**	**02 55 31.1**	**-0.8**
LKR				S	**Sg**	**02 55 44.7**	**+0.5**
LKR	**Lokris**	**0.95**	**301**	*e*PB	**Pg**	**02 55 31.1**	**-0.8**
LKR				*e*SG	**Sg**	**02 55 45.1**	**+0.9**
LKR	**Lokris**	**0.95**	**301**	P	**Pg**	**02 55 31.1**	**-0.8**
LKR				S	**Sg**	**02 55 44.7**	**+0.5**
LKR				*e*Sg	**Sg**	**02 55 45.1**	**+0.9**
ATAL	**Atalanti**	**0.95**	**304**	P	**Pg**	**02 55 32.7**	**+0.7**
ATAL				S	**Sg**	**02 55 44.8**	**+0.3**
ATAL	**Atalanti**	**0.95**	**304**	P	**Pg**	**02 55 32.7**	**+0.7**
ATAL				S	**Sg**	**02 55 44.8**	**+0.3**
AOS	**Alonnisos**	**1.02**	**353**	P	**Pg**	**02 55 33.0**	**-0.2**
AOS				S	**Sg**	**02 55 46.7**	**+0.3**
AOS	**Alonnisos**	**1.02**	**353**	P	**Pg**	**02 55 33.0**	**-0.2**
AOS				S	**Sg**	**02 55 46.7**	**+0.3**
DSF	**Desfina**	**1.21**	**282**	P	**Pb**	**02 55 35.8**	**-1.0**
DSF				S	**Sb**	**02 55 53.3**	**+0.7**
DSF	**Desfina**	**1.21**	**282**	P	**Pb**	**02 55 35.8**	**-1.0**
DSF				S	**Sb**	**02 55 53.3**	**+0.7**
NEO	**Neokhori**	**1.31**	**331**	*e*Pb	**Pb**	**02 55 38.0**	**-0.5**
NEO				*e*Sb	**Sb**	**02 55 55.1**	**-0.3**
NEO	**Neokhori**	**1.31**	**331**	*e*PB	**Pb**	**02 55 38.0**	**-0.5**
NEO				*e*SB	**Sb**	**02 55 55.1**	**-0.3**
NEO	**Neokhori**	**1.31**	**331**	*e*Pb	**Pb**	**02 55 38.0**	**-0.5**
NEO				*e*Sb	**Sb**	**02 55 55.1**	**-0.3**
GUR	**Goura**	**1.35**	**261**	P	**Pn**	**02 55 38.5**	**-0.3**
GUR				S	**Sb**	**02 55 55.8**	**-0.8**
GUR	**Goura**	**1.35**	**261**	*e*PG	**Pg**	**02 55 38.8**	**-0.8**
GUR	**Goura**	**1.35**	**261**	P	**Pn**	**02 55 38.5**	**-0.3**
GUR	**Goura**	**1.35**	**261**	*e*Pg	**Pg**	**02 55 38.8**	**-0.8**
GUR				S	**Sb**	**02 55 55.8**	**-0.8**
XOR	**Xorichti**	**1.37**	**332**	P	**Pn**	**02 55 39.4**	**+0.3**
XOR				S	**Sb**	**02 55 56.4**	**-0.8**
XOR	**Xorichti**	**1.37**	**332**	P	**Pn**	**02 55 39.4**	**+0.3**
XOR				S	**Sb**	**02 55 56.4**	**-0.8**
VLX	**Vlachokerasia**	**1.53**	**239**	P	**Pn**	**02 55 41.5**	**+0.3**
VLX				S	**Sn**	**02 56 01.4**	**+0.2**
VLX	**Vlachokerasia**	**1.53**	**239**	P	**Pn**	**02 55 41.5**	**+0.3**
VLX				S	**Sn**	**02 56 01.4**	**+0.2**
TRIZ	**Trizonia**	**1.56**	**278**	P	**Pn**	**02 55 41.9**	**+0.3**
TRIZ				S	**Sn**	**02 56 01.9**	**0.0**
TRIZ	**Trizonia**	**1.56**	**278**	P	**Pn**	**02 55 41.9**	**+0.3**
TRIZ				S	**Sn**	**02 56 01.9**	**0.0**
AGG	**Agios Georgios**	**1.59**	**303**	P	**Pn**	**02 55 43.9**	**+1.9**
AGG				S	**Sn**	**02 56 02.1**	**-0.6**
AGG	**Agios Georgios**	**1.59**	**303**	P	**Pn**	**02 55 43.9**	**+1.9**
AGG				S	**Sn**	**02 56 02.1**	**-0.6**
APE	**Apeiranthos**	**1.61**	**132**	P	**Pn**	**02 55 42.3**	**-0.1**
APE				S	**Sn**	**02 56 03.7**	**+0.4**
APE	**Apeiranthos**	**1.61**	**132**	P	**Pn**	**02 55 42.3**	**-0.1**
APE				S	**Sn**	**02 56 03.7**	**+0.4**

*IDC **18** 03:05:18.8±0.8, 31°.25N×103°.54E, h0km, mb3.9/12, mb1 4.0/13, mb1mx3.8/25, mbtmp3.9/13, MS3.2/5, Ms1 3.2/5, ms1mx2.7/38, Error ellipse: s-maj=35.9km s-min=15.7km az=50.0*
*NEIC **18** 03:05:20.9±0.5, 31°.36N×103°.70E, h10km, mb4.2/8, Error ellipse: s-maj=10.3km s-min=8.1km az=167.0*
*BJI **18** 03:05:21.8, 31°.26N×103°.63E, h18km, mB4.5/1, mb4.3/3, ML3.7/19, Ms3.8/3, Ms7 3.7/2*
ISC 18 03:05:20.0±1.0, 31°.33N±0°.03×103°.69E±0°.04, h2km±6km, n42, σ1s11/53, mb4.0/19, MS3.1/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.42**	**172**	Pg	**Pg**	**03 05 29.5**	**+1.4**
CD2				Sg	**Sg**	**03 05 37.5**	**+3.9**
CD2				smax			
	comp=N,18μm,0.7s						
CD2				smax			
	comp=E,8μm,0.6s						
LZH	**Lanzhou**	**4.75**	**2**	*e*Pn	**Pn**	**03 06 34.4**	**+1.9**
LZH				Pg	**Pg**	**03 06 46.5**	**-4.4**
LZH				Sn	**Sn**	**03 07 29.3**	**+1.2**
LZH				Sg	**Sg**	**03 07 46.4**	**-6.0**
LZH				smax			
	comp=N,34nm,0.7s						
LZH				smax			
	comp=E,80nm,1.0s						
LZH				LR	LR		
	comp=N,650nm,5.2s						
LZH				LR	LR		
	comp=Z,700nm,5.8s						
ENH	**Enshi**	**5.10**	**100**	*e*Pn	**Pn**	**03 06 38.9**	**+1.5**
	comp=Z,32nm,0.4s						
ENH				*e*Sn	**Sn**	**03 07 38.9**	**+2.0**
XAN	**Xi'an**	**5.17**	**57**	Pn	**Pn**	**03 06 42.8**	**+4.4**
XAN				Pg	**Pg**	**03 06 58.4**	**-0.7**
XAN				Sn	**Sn**	**03 07 44.9**	**+6.2**
XAN				Sg	**Sg**	**03 08 05.3**	**-0.9**
GYA	**Guiyang**	**5.51**	**151**	Pn	**Pn**	**03 06 43.4**	**+0.3**
GYA				Pg	**Pg**	**03 07 04.0**	**-1.6**
GYA				Sn	**Sn**	**03 07 46.6**	**-0.4**
GYA				Sg	**Sg**	**03 08 08.9**	**-8.2**
GYA				smax			
	comp=N,100nm,0.8s						
GYA				smax			
	comp=E,140nm,0.7s						
KMI	**Kunming**	**6.24**	**188**	Pn	**Pn**	**03 06 54.3**	**+1.2**
KMI				Sn	**Sn**	**03 08 03.5**	**-1.5**
KMI				smax			
	comp=N,24nm,1.5s						
KMI				smax			
	comp=E,23nm,1.2s						
KMI				LR	LR		
	comp=N,160nm,7.0s						
KMI				LR	LR		
	comp=E,440nm,9.8s						
GTA	**Gaotai**	**8.66**	**340**	*e*P	Px	03 08 02.1	
GTA				pP		03 08 06.5	
GTA				sP		03 08 09.5	
GTA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ODAN	**Odare**	**14.93**	**257**	*e*P	**Pn**	**03 08 52.4**	**+0.4**
	comp=Z,6.5nm,0.3s						
RAMN	**Ramite**	**15.55**	**258**	*e*P	**Pn**	**03 08 59.8**	**-0.6**
JIRN	**Jiri**	**15.67**	**261**	*e*P	**Pn**	**03 09 03.4**	**+1.5**
GUN	**Gumba**	**15.86**	**262**	*e*P	**Pn**	**03 09 06.1**	**+1.8**
	comp=Z,37nm,0.8s						
PKI	**Pulchoki**	**16.36**	**261**	*e*P	**Pn**	**03 09 10.5**	**-0.3**
	comp=Z,40nm,0.6s						
PKIN	**Phulchoki**	**16.36**	**261**	*e*P	**Pn**	**03 09 10.1**	**-0.8**
	comp=Z,30nm,0.6s						
KKN	**Kakani**	**16.40**	**262**	*e*P	**Pn**	**03 09 11.6**	**+0.3**
	comp=Z,52nm,0.7s						
DMN	**Daman**	**16.60**	**262**	*e*P	**Pn**	**03 09 13.6**	**-0.3**
	comp=Z,34nm,0.6s						
SONM	**Songino Array**	**16.61**	**6**	Pn	**Pn**	**03 09 12.4**	**-1.5**
	baz=193,slow=12,SNR=2.6						
SONM	**Songino Array**	**16.61**	**6**	Pn	**Pn**	**03 09 12.4**	**-1.5**
KSRS	**Korea Array**	**20.88**	**66**	P	**P**	**03 10 04.1**	**+0.7**
	comp=Z,2.7nm,0.6s,baz=248,slow=10,SNR=11						
MK31	**Makanchi Array**	**22.57**	**319**	*e*P	**P**	**03 10 21.6**	**+0.1**
MKAR	**Makanchi Array**	**22.57**	**319**	P	**P**	**03 10 21.9**	**+0.4**
	comp=Z,5.3nm,0.9s,mb4.0,baz=118,slow=10,SNR=18						
MKAR				LR	LR	03 19 52.3	
	comp=Z,52nm,20.4s,MS3.0,baz=181,slow=39						
TKM2	**Tokmak 2**	**25.09**	**305**	*e*P	**P**	**03 10 46.2**	**+0.3**
	comp=Z,4.7nm,1.2s,mb3.9						
UCH	**Uchtor**	**25.66**	**303**	*e*P	**P**	**03 10 52.4**	**+1.3**
	comp=Z,5.4nm,1.0s,mb4.0						
AAK	**Ala-Archa**	**25.78**	**304**	P	**P**	**03 10 53.7**	**+1.5**
	comp=Z,2.2nm,0.5s,mb3.9,baz=216,slow=5.2,SNR=6.8						
AAK				LR	LR	03 22 54.9	
	comp=Z,65nm,19.4s,MS3.2,baz=44,slow=41						
AAK	**Ala-Archa**	**25.78**	**304**	*e*P	**P**	**03 10 54.8**	**+2.6**
	comp=Z,4.4nm,0.8s,mb4.0						
AAK				LR	LR	03 22 54.9	
AML	**Almayashu**	**26.22**	**303**	*e*P	**P**	**03 10 57.3**	**+1.1**
	comp=Z,2.7nm,0.9s,mb3.8						
ZAA0	**Zalesovo Array**	**26.36**	**334**	*e*P	**P**	**03 10 57.1**	**-0.2**
ZALV	**Zalesovo Beam**	**26.36**	**334**	P	**P**	**03 10 56.6**	**-0.7**
	comp=Z,1.4nm,0.6s,mb3.7,baz=131,slow=8.2,SNR=8.3						
ZALV				LR	LR	03 21 51.0	
	comp=Z,30nm,19.2s,MS2.9,baz=58,slow=38						
KURK	**Kurchatov**	**26.85**	**323**	P	**P**	**03 11 01.2**	**-0.5**
	comp=Z,6.4nm,0.8s,mb4.2,baz=129,slow=9.4,SNR=23						
KURK				LR	LR	03 22 25.8	
	comp=Z,49nm,21.9s,MS3.0,baz=140,slow=38						
KURK	**Kurchatov**	**26.85**	**323**	*e*P	**P**	**03 11 01.7**	**-0.1**
KURK				LR	LR	03 22 25.8	
BVAR	**Borovoye Array**	**32.39**	**322**	P	**P**	**03 11 50.8**	**-0.1**
	comp=Z,1.3nm,0.6s,mb4.0,baz=116,slow=10,SNR=8.4						
BRVK	**Borovoye**	**32.47**	**322**	*e*P	**P**	**03 11 51.2**	**-0.3**
	comp=Z,1.6nm,0.5s,mb4.1						
ABKAR	**Akbulak array**	**37.26**	**312**	*e*P	**P**	**03 12 32.5**	**-0.4**
	comp=Z,0.7nm,0.6s,mb3.7						
ARU	**Arti**	**40.03**	**322**	*e*P	**P**	**03 12 55.8**	**-0.4**
	comp=Z,3.6nm,0.4s,mb4.5						
BRTR	**Keskin Array B**	**56.32**	**299**	P	**P**	**03 14 59.6**	**-2.7**
	comp=Z,0.5nm,0.7s,mb3.6,baz=29,slow=2.8,SNR=4.3						
ARCES	**ARCESS Array B**	**56.91**	**336**	P	**P**	**03 15 03.5**	**-2.5**
	comp=Z,1.6nm,0.9s,mb4.0,baz=81,slow=7.6,SNR=4.2						
ARCES				LR	LR	03 44 44.2	
	comp=Z,24nm,19.0s,MS3.3,baz=110,slow=42						
AKASG	**Malin Array Be**	**56.97**	**313**	P	**P**	**03 15 04.9**	**-1.8**
	comp=Z,1.1nm,0.5s,mb4.1,baz=70,slow=6.4,SNR=3.6						
FINES	**FINESS Array B**	**57.18**	**326**	P	**P**	**03 15 07.3**	**-0.7**
	comp=Z,1.0nm,0.6s,mb4.0,baz=86,slow=5.9,SNR=4.1						
WRA	**Warramunga Arr**	**58.86**	**146**	P	**P**	**03 15 19.4**	**-0.9**
	comp=Z,1.8nm,0.5s,mb4.4,baz=338,slow=7.7,SNR=61						
WRA	**Warramunga Arr**	**58.86**	**146**	P	**P**	**03 15 19.4**	**-0.9**
ASAR	**Alice Springs**	**61.87**	**148**	P	**P**	**03 15 40.3**	**-0.5**
	comp=Z,0.6nm,0.5s,mb4.0,baz=348,slow=8.2,SNR=5.3						
NOA	**NORSAR Array B**	**64.28**	**327**	P	**P**	**03 15 56.0**	**-0.4**
	comp=Z,0.5nm,0.7s,mb3.6,baz=57,slow=6.2,SNR=2.8						
INK	**Inuvik**	**72.06**	**19**	*e*P	**P**	**03 16 45.2**	**+0.1**
	comp=Z,2.2nm,0.8s,mb4.1						

*DDA **18** 03:06:31.0, 36°.55N×28°.82E, h7km±3km, Md3.0*
*ISCJB **18** 03:06:31.4±0.8, 36°.50N±0°.05×28°.79E±0.05, h7km±20km, Error ellipse: s-maj=9.2km s-min=5.7km az=23.0*
*ISK **18** 03:06:32.7, 36°.57N×28°.76E, h9km, MD2.8*
*CSEM **18** 03:06:32.6±0.4, 36°.51N×28°.76E, h2km, MD3.0, Error ellipse: s-maj=8.3km s-min=4.1km az=3.0*
ISC 18 03:06:31.8±0.9, 36°.49N±0°.05×28°.79E±0°.05, h15km±14km, n17, σ1s00/23, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TURN	**Turunc**	**0.41**	**339**	*i* P	**Pg**	**03 06 40.9**	**+0.9**
TURN	**Turunc**	**0.41**	**339**	*i* P	**Pg**	**03 06 40.9**	**+0.8**
AKAS	**Kas**	**0.71**	**111**	*i* P	**Pg**	**03 06 44.1**	**-1.5**
AKAS				*i* S	**Sg**	**03 06 55.5**	**+0.5**
YER	**Yerkesik**	**0.76**	**328**	*e*PG	**Pg**	**03 06 45.5**	**-1.1**
YER				*e*SG	**Sg**	**03 06 56.9**	**+0.3**
YER	**Yerkesik**	**0.76**	**328**	*e*Pg	**Pg**	**03 06 45.5**	**-1.1**
YER				*e*Sg	**Sg**	**03 06 56.9**	**+0.3**
GLHS	**Glhisar (BURDU**	**0.88**	**41**	*e*PG	**Pg**	**03 06 50.0**	**+1.1**
GLHS				*e*SG	**Sg**	**03 07 00.4**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.88**	**41**	*e*Pg	**Pg**	**03 06 50.0**	**+1.2**
GLHS				*e*Sg	**Sg**	**03 07 00.4**	**+0.1**
ELL	**Elmali**	**0.94**	**74**	*e*PG	**Pg**	**03 06 51.5**	**+1.5**
ELL	**Elmali**	**0.94**	**74**	*e*Pg	**Pg**	**03 06 51.5**	**+1.5**
GOLH	**Golhisar**	**0.97**	**40**	*i* P	**Pg**	**03 06 48.1**	**-2.5**
GOLH				*i* S	**Sg**	**03 07 03.0**	**-0.3**
GOLH	**Golhisar**	**0.97**	**40**	*i* S	**Sg**	**03 07 03.0**	**-0.3**
DAT	**Datca**	**1.00**	**284**	*e*PG	**Pg**	**03 06 51.6**	**+0.4**
DAT	**Datca**	**1.00**	**284**	*e*Pg	**Pg**	**03 06 51.6**	**+0.4**
MLSB	**Milas**	**1.14**	**315**	*e*PG	**Pg**	**03 06 53.4**	**-0.4**
MLSB	**Milas**	**1.14**	**315**	*e*Pg	**Pg**	**03 06 53.4**	**-0.4**
BDRM	**Kayabasi**	**1.22**	**298**	*i* P	**Pn**	**03 06 54.6**	**+0.2**
BDRM	**Kayabasi**	**1.22**	**298**	*i* P	**Pn**	**03 06 54.6**	**+0.2**

*NEIC **18** 03:06:46.0, 38°.16N×24°.05E, h8km, ML2.7(ATH), After ATH.*
*ATH **18** 03:06:46.0, 38°.16N×24°.05E, h8km±5km, MD2.7/7, ML2.7*
*CSEM **18** 03:06:46.6±0.2, 38°.16N×24°.00E, h5km, ML2.7, Error ellipse: s-maj=4.3km s-min=2.7km az=95.0*
*ISCJB **18** 03:06:46.5±0.8, 38°.14N±0°.03×24°.00E±0°.04, h6km±4km, Error ellipse: s-maj=5.3km s-min=4.5km az=171.5*
*THE **18** 03:06:47.4, 38°.17N×23°.97E, h5km±2km, ML2.2/9, Error ellipse: s-maj=2.1km s-min=1.4km az=284.0*
ISC 18 03:06:46.9±0.7, 38°.16N±0°.02×24°.00E±0°.04, h6km±4km, n39, σ0s57/72, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTL	**Penteli**	**0.15**	**222**	*e*Pg	**Pg**	**03 06 49.9**	**-0.1**
PTL				*e*Sg	**Sg**	**03 06 52.1**	**0.0**
PTL	**Penteli**	**0.15**	**222**	*e*PG	**Pg**	**03 06 49.9**	**-0.1**
PTL				*e*SG	**Sg**	**03 06 52.1**	**0.0**
PTL	**Penteli**	**0.15**	**222**	*e*Pg	**Pg**	**03 06 49.9**	**-0.1**
PTL				*e*Sg	**Sg**	**03 06 52.1**	**0.0**
ATHU	**Athens Univers**	**0.26**	**220**	P	**Pg**	**03 06 51.5**	**-0.5**
ATHU				S	**Sg**	**03 06 55.2**	**-0.2**
ATHU	**Athens Univers**	**0.26**	**220**	P	**Pg**	**03 06 51.5**	**-0.5**
ATHU				S	**Sg**	**03 06 55.2**	**-0.2**
ATH	**Athens Observa**	**0.29**	**229**	*e*Pb	**Pg**	**03 06 52.5**	**-0.1**
ATH				*e*Sb	**Sg**	**03 06 56.7**	**+0.3**
ATH	**Athens Observa**	**0.29**	**229**	*e*PB	**Pg**	**03 06 52.5**	**-0.1**
ATH				*e*SB	**Sg**	**03 06 56.7**	**+0.3**
ATH	**Athens Observa**	**0.29**	**229**	*e*Pb	**Pg**	**03 06 52.5**	**-0.1**
ATH				*e*Sb	**Sg**	**03 06 56.7**	**+0.3**
VLY	**Voula,Athens**	**0.35**	**207**	*e*Pb	**Pg**	**03 06 53.2**	**-0.5**
VLY				*e*Sb	**Sg**	**03 06 58.3**	**+0.1**
VLY	**Voula,Athens**	**0.35**	**207**	*e*PB	**Pg**	**03 06 53.2**	**-0.5**
VLY				*e*SB	**Sg**	**03 06 58.3**	**+0.1**
VLY	**Voula,Athens**	**0.35**	**207**	*e*Pb	**Pg**	**03 06 53.2**	**-0.5**
VLY				*e*Sb	**Sg**	**03 06 58.3**	**+0.1**
NAIG	**Nisos Aigina**	**0.57**	**225**	*e*Pb	**Pg**	**03 06 57.7**	**-0.2**
NAIG	**Nisos Aigina**	**0.57**	**225**	*e*PB	**Pg**	**03 06 57.7**	**-0.2**
NAIG	**Nisos Aigina**	**0.57**	**225**	*e*Pb	**Pg**	**03 06 57.7**	**-0.2**
LTK	**Loutraki**	**0.82**	**261**	P	**Pg**	**03 07 03.1**	**+0.4**
LTK				S	**Sg**	**03 07 14.6**	**+1.2**
LTK	**Loutraki**	**0.82**	**261**	*e*PB	**Pg**	**03 07 03.0**	**+0.3**
LTK				*e*SB	**Sg**	**03 07 14.7**	**+1.3**
LTK	**Loutraki**	**0.82**	**261**	*e*Pb	**Pg**	**03 07 03.0**	**+0.3**
LTK				S	**Sg**	**03 07 14.6**	**+1.2**
LKR	**Lokris**	**0.92**	**302**	*e*Pg	**Pg**	**03 07 04.0**	**-0.6**
LKR				*e*Sb	**Sb**	**03 07 17.5**	**-0.3**
LKR	**Lokris**	**0.92**	**302**	P	**Pg**	**03 07 03.9**	**-0.7**
LKR				S	**Sg**	**03 07 17.3**	**+0.7**
LKR	**Lokris**	**0.92**	**302**	*e*PG	**Pg**	**03 07 04.0**	**-0.6**
LKR				*e*SB	**Sb**	**03 07 17.5**	**-0.3**
LKR	**Lokris**	**0.92**	**302**	*e*Pg	**Pg**	**03 07 04.0**	**-0.6**
LKR				*e*Sb	**Sb**	**03 07 17.5**	**-0.3**
AOS	**Alonnisos**	**1.01**	**355**	P	**Pg**	**03 07 06.1**	**-0.2**
AOS				S	**Sg**	**03 07 20.1**	**+0.7**
AOS	**Alonnisos**	**1.01**	**355**	P	**Pg**	**03 07 06.1**	**-0.2**
AOS				S	**Sg**	**03 07 20.1**	**+0.7**
DSF	**Desfina**	**1.18**	**283**	P	**Pg**	**03 07 08.7**	**-0.9**
DSF				S	**Sg**	**03 07 25.4**	**+0.5**
DSF	**Desfina**	**1.18**	**283**	P	**Pg**	**03 07 08.7**	**-0.9**
DSF				S	**Sg**	**03 07 25.4**	**+0.5**
GUR	**Goura**	**1.32**	**261**	P	**Pn**	**03 07 12.4**	**+0.4**
GUR				S	**Sb**	**03 07 29.7**	**+0.3**
GUR	**Goura**	**1.32**	**261**	*e*PG	**Pg**	**03 07 11.6**	**-0.7**
GUR	**Goura**

LZH				Sg	Sg	03 36 33.3	-6.6
LZH				smax			
	comp=N,250nm,0.8s						
LZH				smax			
	comp=E,330nm,0.7s						
LZH				LR	LR		
	comp=N,570nm,5.5s						
LZH				LR	LR		
	comp=Z,810nm,7.0s						
ENH	**Enshi**	**4.47**	**111**	*e*Pn	**Pn**	**03 35 34.9**	**0.0**
ENH				*e*Pg	**Pg**	**03 35 52.2**	**-0.5**
ENH				*e*Sg	**Sg**	**03 36 51.1**	**+0.5**
GYA	**Guiyang**	**5.79**	**162**	Pn	**Pn**	**03 35 53.9**	**+0.8**
GYA				Sn	**Sn**	**03 37 00.9**	**+1.4**
GYA				Sg	**Sg**	**03 37 28.5**	**-4.5**
GYA				smax			
	comp=N,100nm,0.9s						
GYA				smax			
	comp=E,70nm,0.7s						
GTA	**Gaotai**	**8.38**	**333**	*e*P	**Pn**	**03 36 27.9**	**-0.8**
GTA				pP		03 36 31.9	
GTA				sP		03 36 35.8	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
WHN	**Wuhan**	**8.40**	**97**	*e*P	**Pn**	**03 36 34.8**	**+5.8**
WHN				S	**Sn**	**03 38 02.4**	**-1.5**
WHN				LR	LR		
	comp=N,640nm,4.4s						
WHN				LR	LR		
	comp=E,600nm,4.6s						
WHN				LR	LR		
	comp=Z,440nm,4.9s						
BTO	**Baotou**	**9.60**	**25**	*e*P	Px	03 37 31.5	
CMAR	**Chiang Mai Arr**	**14.45**	**202**	Pn	**Pn**	**03 37 52.4**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=3.5,slow=9.0,SNR=6.4						
SONM	**Songino Array**	**15.87**	**4**	Pn	**Pn**	**03 38 10.6**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=186,slow=12,SNR=3.3						
KSRS	**Korea Array**	**19.84**	**68**	P	**P**	**03 39 00.6**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=257,slow=10,SNR=6.6						
MKAR	**Makanchi Array**	**22.64**	**317**	P	**P**	**03 39 28.7**	**+0.5**
	comp=Z,0.6nm,0.5s,mb3.3,baz=118,slow=10,SNR=4.6						
TKM2	**Tokmak 2**	**25.41**	**304**	*e*P	**P**	**03 39 54.6**	**-0.2**
	comp=Z,1.6nm,0.8s,mb3.6						
UCH	**Uchtor**	**26.01**	**302**	*e*P	**P**	**03 40 00.2**	**0.0**
	comp=Z,2.1nm,0.9s,mb3.7						
ZAA0	**Zalesovo Array**	**26.14**	**333**	*e*P	**P**	**03 40 01.2**	**0.0**
ZALV	**Zalesovo Beam**	**26.14**	**333**	P	**P**	**03 40 01.7**	**+0.4**
	comp=Z,2.5nm,0.6s,mb4.0,baz=133,slow=10.0,SNR=12						
ZALV	**Zalesovo Beam**	**26.14**	**333**	P	**P**	**03 40 01.7**	**+0.4**
KURK	**Kurchatov**	**26.84**	**322**	P	**P**	**03 40 07.6**	**+0.1**
	comp=Z,0.3nm,0.4s,mb3.2,baz=132,slow=8.5,SNR=4.1						
KURK				LR	LR	03 52 31.4	
	comp=Z,54nm,18.5s,MS3.1,baz=210,slow=41						
PSI	**Prapat**	**29.55**	**192**	LR	LR	03 54 59.7	
	comp=Z,167nm,19.6s,MS3.7,baz=25,slow=42						
ARCES	**ARCESS Array B**	**56.65**	**336**	P	**P**	**03 44 10.1**	**+0.1**
	comp=Z,0.9nm,0.4s,mb4.1,baz=82,slow=7.4,SNR=20						
ARCES	**ARCESS Array B**	**56.65**	**336**	P	**P**	**03 44 10.1**	**0.0**
FINES	**FINESS Array B**	**57.10**	**326**	P	**P**	**03 44 11.7**	**-1.7**
	comp=Z,2.2nm,0.9s,mb4.2,baz=122,slow=7.2,SNR=3.7						
WRA	**Warramunga Arr**	**58.95**	**147**	P	**P**	**03 44 27.7**	**+1.0**
	comp=Z,0.5nm,0.5s,mb3.8,baz=340,slow=7.9,SNR=9.8						
NOA	**NORSAR Array B**	**64.17**	**327**	P	**P**	**03 44 59.5**	**-2.1**
	comp=Z,0.6nm,0.8s,mb3.6,baz=80,slow=5.0,SNR=3.6						
YKA	**Yellowknife Ar**	**80.69**	**17**	P	**P**	**03 46 40.0**	**-0.1**
	comp=Z,0.5nm,0.5s,mb3.7,baz=331,slow=5.6,SNR=3.8						

*DDA **18** 03:40:23.3, 38°.63N×27°.02E, h7km±2km, Md2.8*
*ISCJB **18** 03:40:24.0±1.0, 38°.65N±0°.04×26°.95E±0°.08, h10km, Error ellipse: s-maj=9.6km s-min=5.5km az=10.6*
ISC 18 03:40:24.0±1.0, 38°.66N±0°.04×26°.95E±0°.08, h10km, n5, σ0°91/9, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLCB	**Balcova**	**0.29**	**165**	*e*PG	**Pg**	**03 40 29.6**	**-0.1**
BLCB				*e*SG	**Sg**	**03 40 33.3**	**-0.3**
IZM	**Izmir**	**0.36**	**137**	*e*PG	**Pg**	**03 40 32.6**	**+1.5**
IZM				*e*SG	**Sg**	**03 40 36.7**	**+0.7**
URLA	**Izmir**	**0.41**	**222**	*i* P	**Pg**	**03 40 31.5**	**-0.5**
AKHS	**Akhisar**	**0.71**	**72**	*i* P	**Pg**	**03 40 36.6**	**-1.2**
AKHS				*i* S	**Sg**	**03 40 46.1**	**-1.0**
BALY	**Balya**	**1.20**	**26**	*i* P	**Pb**	**03 40 46.4**	**-0.4**
BALY				*i* S	**Sb**	**03 41 03.8**	**+1.5**

*DDA **18** 03:13:08.7, 40°.14N×42°.19E, h6km±4km, Md3.2*
*ISK **18** 03:13:09.2, 40°.23N×42°.03E, h2km, MD3.1*
*CSEM **18** 04:13:10.5±0.1, 40°.20N×42°.01E, h2km, MD3.2, Error ellipse: s-maj=2.4km s-min=2.2km az=94.0*
*ISCJB **18** 04:13:11.0±0.4, 40°.20N±0°.03×42°.06E±0°.03, h10km, Error ellipse: s-maj=3.8km s-min=3.6km az=145.4*
ISC 18 04:13:11.3±0.5, 40°.19N±0°.02×42°.04E±0°.03, h6km±5km, n41, σ1°11/52, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERZM	**Erzurum**	**0.59**	**241**	*i* P	**Pg**	**04 13 21.5**	**-1.1**
ERZM				*i* S	**Sg**	**04 13 32.4**	**+2.1**
ERZM	**Erzurum**	**0.59**	**241**	*i* P	**Pg**	**04 13 21.5**	**-1.1**
EZM	**Erzurum**	**0.59**	**241**	*e*PG	**Pg**	**04 13 21.6**	**-1.1**
DDEM	**Demirkent**	**0.73**	**343**	*i* P	**Pg**	**04 13 24.8**	**-0.6**
DDEM				*i* S	**Sg**	**04 13 36.6**	**+1.7**
DDEM	**Demirkent**	**0.73**	**343**	*i* P	**Pg**	**04 13 24.8**	**-0.6**
DBAD	**Bademkaya**	**0.87**	**343**	*i* P	**Pg**	**04 13 27.2**	**-0.8**
DBAD				*i* S	**Sg**	**04 13 40.1**	**+1.0**
DBAD	**Bademkaya**	**0.87**	**343**	*i* P	**Pg**	**04 13 27.2**	**-0.7**
DBAD				*i* S	**Sg**	**04 13 40.1**	**+0.9**
KARS	**Kars**	**0.91**	**61**	*e*PG	**Pg**	**04 13 27.6**	**-1.1**
KARS				*e*SG	**Sg**	**04 13 40.5**	**+0.1**
KARS	**Kars**	**0.91**	**61**	*e*Pg	**Pg**	**04 13 27.6**	**-1.1**
KARS				*e*Sg	**Sg**	**04 13 40.5**	**0.0**
AGRB	**Hanur-Agry**	**0.96**	**130**	*e*PG	**Pg**	**04 13 28.8**	**-0.8**
AGRB				*e*SG	**Sg**	**04 13 43.3**	**+1.2**
AGRB	**Hanur-Agry**	**0.96**	**130**	*e*Pg	**Pg**	**04 13 28.8**	**-0.8**
AGRB				*e*Sg	**Sg**	**04 13 43.3**	**+1.2**
ARTV	**Artvin**	**1.00**	**355**	*i* P	**Pg**	**04 13 29.4**	**-1.0**
ARTV				*i* S	**Sg**	**04 13 45.5**	**+2.2**
ARTV	**Artvin**	**1.00**	**355**	*i* P	**Pg**	**04 13 29.4**	**-1.0**
KOPT	**Kop Dagi**	**1.19**	**262**	*i* P	**Pg**	**04 13 32.9**	**-1.3**
KOPT				*i* S	**Sg**	**04 13 52.1**	**+2.5**
KOPT	**Kop Dagi**	**1.19**	**262**	*i* P	**Pg**	**04 13 32.8**	**-1.4**
BCA	**Borcka**	**1.29**	**346**	*e*PN	**Pn**	**04 13 34.1**	**-1.7**
BCA	**Borcka**	**1.29**	**346**	*e*Pn	**Pn**	**04 13 34.1**	**-1.7**
PZAR	**Pazar-Rize**	**1.31**	**319**	*e*PN	**Pn**	**04 13 34.6**	**-1.5**
PZAR	**Pazar-Rize**	**1.31**	**319**	*e*Pn	**Pn**	**04 13 34.6**	**-1.5**
BINT	**Bingol**	**1.78**	**223**	*e*PN	**Pn**	**04 13 42.7**	**+0.2**
BINT	**Bingol**	**1.78**	**223**	*e*Pn	**Pn**	**04 13 42.7**	**+0.2**
CLDR	**Caldiran**	**1.79**	**125**	*e*PN	**Pn**	**04 13 42.5**	**-0.2**
CLDR	**Caldiran**	**1.79**	**125**	*e*Pn	**Pn**	**04 13 42.5**	**-0.1**
KTUT	**Trabzon**	**1.90**	**295**	*e*PN	**Pn**	**04 13 43.9**	**-0.3**
KTUT	**Trabzon**	**1.90**	**295**	*e*Pn	**Pn**	**04 13 43.9**	**-0.3**
VANB	**Van**	**1.91**	**146**	*e*PN	**Pn**	**04 13 44.4**	**+0.1**
VANB	**Van**	**1.91**	**146**	*e*Pn	**Pn**	**04 13 44.4**	**+0.2**
GUMT	**Gumushane**	**1.97**	**279**	*e*PN	**Pn**	**04 13 44.6**	**-0.6**
GUMT	**Gumushane**	**1.97**	**279**	*e*Pn	**Pn**	**04 13 44.6**	**-0.6**
BTMT	**Batman**	**2.04**	**192**	*e*PN	**Pn**	**04 13 47.8**	**+1.7**
GNI	**Garni**	**2.07**	**90**	*e*PN	**Pn**	**04 13 46.9**	**+0.4**
GNI	**Garni**	**2.07**	**90**	*e*Pn	**Pn**	**04 13 46.9**	**+0.4**
EZC	**Erzincan**	**2.11**	**259**	*e*PN	**Pn**	**04 13 46.9**	**-0.1**
BEST	**Besiri**	**2.37**	**195**	*i* P	**Pn**	**04 13 52.3**	**+1.6**
BEST				*i* S	**Sg**	**04 14 26.6**	**-0.9**
PTK	**Pertek**	**2.42**	**238**	*e*PN	**Pn**	**04 13 51.5**	**+0.2**
PTK	**Pertek**	**2.42**	**238**	*e*Pn	**Pn**	**04 13 51.5**	**+0.2**
TBLG	**Delisi**	**2.56**	**52**	P	**Pn**	**04 13 54.1**	**+0.9**
MTA	**Mtatsminda**	**2.57**	**53**	P	**Pn**	**04 13 53.9**	**+0.6**
ONI	**Oni**	**2.62**	**23**	P	**Pg**	**04 14 00.9**	**-0.6**
ESPY	**Espiye-Giresun**	**2.62**	**287**	*e*PN	**Pn**	**04 13 53.3**	**-0.8**
ESPY	**Espiye-Giresun**	**2.62**	**287**	*e*Pn	**Pn**	**04 13 53.3**	**-0.8**

*DJA **18** 04:27:15, 3°.10S×100°.07E, h13km, MLv4.0/6*
*IDC **18** 04:27:18.2±1.6, 1°.92S×101°.40E, h0km, mb3.7/6, mb1 3.7/6, mb1mx3.6/22, mbtmp3.7/6, MS3.4/3, Ms1 3.4/3, ms1mx2.9/26, Error ellipse: s-maj=76.4km s-min=20.5km az=52.0*
*ISCJB **18** 04:27:21.1±1.5, 2°.6S±0°.2×100°.6E±0°.2, h63km±11km, mb3.7/8, Error ellipse: s-maj=38.5km s-min=11.8km az=138.4*
*NEIC **18** 04:27:23.3±0.9, 1°.93S×101°.43E, h35km, mb3.9/2, Error ellipse: s-maj=47.5km s-min=11.8km az=52.0*
ISC 18 04:27:21.8±1.5, 2°.7S±0°.2×100°.6E±0°.2, h49km±12km, n21, σ0°83/14, mb3.7/8, MS3.6/2, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.55**	**259**	P	Px	04 27 23.0	
PPSI				S	Sx	04 27 28.0	
KRJI	**Kerinci**	**1.07**	**59**	P	Px	04 27 45.1	
KRJI				S	Sx	04 28 08.5	
PDSI	**Padang**	**1.73**	**357**	P	**Pn**	**04 27 49.5**	**0.0**
PDSI				S	Sx	04 28 18.1	
SDSI	**Sungai Dareh**	**1.92**	**27**	P	Px	04 27 54.9	
SISI	**Saibi**	**1.96**	**312**	P	**Pn**	**04 27 52.4**	**-0.2**
PPI	**Padang Panjang**	**2.19**	**356**	P	**Pn**	**04 27 56.3**	**+0.6**
MNAI	**Manna**	**2.94**	**125**	P	**Pn**	**04 28 02.4**	**-3.6**
MDSI	**Maura Dua**	**4.05**	**117**	P	**Pn**	**04 28 21.5**	**+0.2**
PSI	**Prapat**	**5.66**	**343**	LR	LR	04 30 27.3	
	comp=Z,172nm,18.1s,baz=93,slow=36						
WRA	**Warramunga Arr**	**37.19**	**120**	P	**P**	**04 34 28.9**	**+0.4**
	0.2nm,0.3s,mb3.4,baz=304,slow=9.1,SNR=7.8						
ASAR	**Alice Springs**	**38.43**	**126**	P	**P**	**04 34 39.4**	**+0.5**
	0.5nm,0.8s,mb3.3,baz=301,slow=8.3,SNR=3.7						
KSRS	**Korea Array**	**47.30**	**30**	LR	LR	04 58 54.8	
	comp=Z,34nm,18.9s,MS3.3,baz=4.5,slow=41						
STKA	**Stephens Creek**	**48.31**	**132**	LR	LR	04 57 30.8	
	comp=Z,127nm,21.9s,MS3.9,baz=203,slow=38						
SONM	**Songino Array**	**50.54**	**5**	P	**P**	**04 36 12.2**	**-2.9**
	0.9nm,0.7s,mb3.8,baz=152,slow=7.9,SNR=3.1						
TKM2	**Tokmak 2**	**50.65**	**336**	*e*P	**P**	**04 36 16.9**	**+0.9**
	1.2nm,0.6s,mb4.0						
MK31	**Makanchi Array**	**51.80**	**344**	*e*P	**P**	**04 36 25.1**	**+0.5**
MKAR	**Makanchi Array**	**51.80**	**344**	P	**P**	**04 36 24.2**	**-0.4**
	1.4nm,0.8s,mb4.0,baz=147,slow=8.6,SNR=9.1						
KURK	**Kurchatov**	**56.38**	**343**	*e*P	**P**	**04 36 57.5**	**-0.4**
	0.4nm,0.4s,mb3.8						
ZALV	**Zalesovo Beam**	**57.91**	**349**	P	**P**	**04 37 08.4**	**-0.2**
	1.1nm,0.7s,mb4.0,baz=150,slow=6.3,SNR=4.8						
BRTR	**Keskin Array B**	**74.16**	**312**	P	**P**	**04 38 58.1**	**+4.8**
	0.2nm,0.4s,mb3.4,baz=73,slow=4.3,SNR=3.6						
TXAR	**Lajitas Array**	**144.88**	**38**	PKP	PKPdf	04 46 54.6	+0.5
	0.7nm,0.8s,baz=256,slow=2.1,SNR=6.6						

*NIED **18** 04:30:00.36°.80N×141°.30E, h77km, Mw3.7 Best double couple: M₀3.70000×10¹⁴ NP1:φs211.00000°, δ59.00000°, λ-116.00000°. NP2:φs74.00000°, δ40.00000°, λ-54.00000°.*
*NEIC **18** 04:30:29.9±2.6, 37°.51N×141°.50E, h10km, mb4.0/4, Error ellipse: s-maj=59.0km s-min=20.1km az=147.0*
NEIC Recorded [1 JMA] in Fukushima.
*ISCJB **18** 04:30:33.2±1.2, 36°.83N±0°.07×141°.5E±0°.1, h78km±6km, mb3.9/4, Error ellipse: s-maj=16.4km s-min=7.8km az=35.8*
*JMA **18** 04:30:34.9±0.1, 36°.82N×141°.35E, h75km±1km, M3.8*
JMA Felt I J1.
ISC 18 04:30:34.1±1.2, 36°.83N±0°.07×141°.5E±0°.1, h71km±7km, n16, σ0°68/25, mb3.9/4, 3C-4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.62**	**297**	⇓P	**Pn**	**04 30 48.4**	**+0.3**
ONAJ				*e*S	**Sn**	**04 30 58.1**	**-0.4**
JFK	**Kawauchi**	**0.73**	**318**	⇓P	**Pn**	**04 30 49.7**	**+0.3**
JFK				*e*S	**Sn**	**04 31 00.3**	**-0.3**
JHO	**Hitachi**	**0.77**	**254**	⇓P	**Pn**	**04 30 49.6**	**-0.2**
JHO				*e*S	**Sn**	**04 31 00.9**	**-0.6**
JFT	**Otama**	**1.15**	**307**	⇑P	**Pn**	**04 30 55.2**	**+0.7**
JFT				*e*S	**Sn**	**04 31 09.8**	**0.0**
JMM	**Marumori**	**1.18**	**332**	⇑P	**Pn**	**04 30 55.3**	**+0.5**
JMM				*e*S	**Sn**	**04 31 10.3**	**-0.1**
JFY	**Yanaizu**	**1.54**	**293**	P	**Pn**	**04 30 59.7**	**+0.1**
JFY				*e*S	**Sn**	**04 31 18.0**	**-0.8**
JIO	**Ouri**	**1.63**	**356**	⇑P	**Pn**	**04 31 01.2**	**+0.4**
JIO				*e*S	**Sn**	**04 31 20.5**	**-0.4**
JOU	**Okura**	**1.67**	**337**	P	**Pn**	**04 31 01.8**	**+0.5**
JAG	**Ashikaga**	**1.69**	**257**	⇓P	**Pn**	**04 31 01.4**	**-0.1**
JAG				*e*S	**Sn**	**04 31 21.0**	**-1.3**
MAJO	**Matsushiro**	**2.65**	**265**	*e*Pn	**Pn**	**04 31 15.0**	**+0.4**
MAT	**Matsushiro**	**2.65**	**265**	P	**Pn**	**04 31 15.3**	**+0.8**
MAT				S	**Sn**	**04 31 47.1**	**+1.5**
ULN	**Ulaanbaatar**	**27.52**	**305**	*e*P	**P**	**04 36 13.8**	**0.0**
	1.7nm,0.5s,mb3.8						
MK31	**Makanchi Array**	**44.28**	**302**	*e*P	**P**	**04 38 36.0**	**-0.5**
KURK	**Kurchatov**	**46.11**	**308**	*e*P	**P**	**04 38 52.3**	**+1.3**
	1.0nm,0.5s,mb3.8						
COLA	**College**	**49.22**	**32**	*e*P	**P**	**04 39 13.8**	**-1.0**
	2.0nm,0.6s,mb4.2						
ABKAR	**Akbulak array**	**58.12**	**310**	*e*P	**P**	**04 40 19.0**	**-1.1**
	0.8nm,0.7s,mb3.9						

MEX 18 04:31:49.3±0.9, 14°.11N×93°.16W, h23km±30km, MD3.7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.18**	**47**	*i* P	Pn	04 32 07.4	-2.9
THIG				*i* S	Sn	04 32 21.6	-4.0
PCIG		**1.59**	**358**	*i* P	Pn	04 32 12.7	-3.3
PCIG				*i* S	Sn	04 32 32.9	-3.0
TGIG		**2.65**	**1**	*i* P	Pn	04 32 29.6	-1.1
TGIG				*i* S	Sn	04 32 58.2	-3.9
SCX	**San Cristobal**	**2.66**	**11**	*i* P	Pn	04 32 28.6	-2.2
SCX				*i* S	Sn	04 32 59.0	-3.3
UTMO	**Huajuapan**	**5.80**	**310**	*i* P	Pn	04 33 12.5	-1.4
UTMO				*i* S	Sn	04 34 17.2	-2.5

*CASC **18** 04:38:37.8±2.0, 13°.01N×89°.35W, h44km±26km, MD4.3, ML4.6, mb4.3(NEIC)*
*ISCJB **18** 04:38:37.5±0.4, 13°.07N±0°.05×89°.22W±0°.05, h75km±2km, mb4.3/48, Error ellipse: s-maj=10.5km s-min=2.7km az=43.4*
*BJI **18** 04:38:38.4, 13°.10N×89°.10W, h81km, mB4.7/1, Ms4.7/1, Ms7 4.4/1*
*IDC **18** 04:38:38.4±1.7, 13°.26N×89°.01W, h66km±15km, mb4.0/10, mb1 4.2/14, mb1mx3.9/25, mbtmp4.0/14, MS3.2/3, Ms1 3.2/3, ms1mx2.4/26, Error ellipse: s-maj=30.9km s-min=11.7km az=41.0*
*NEIC **18** 04:38:39.4±0.9, 13°.08N×89°.15W, h81km±8km, mb4.3/41, MD4.6(SNET), Error ellipse: s-maj=11.6km s-min=6.6km az=49.0*
NEIC Felt [II] at San Salvador.
ISC 18 04:38:39.1±0.4, 13°.14N±0°.05×89°.17W±0°.05, h69km±2km, n240, σ0°89/242, mb4.3/47, 76C-58D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIES	**Las Flores**	**0.34**	**21**	*e*P	**Pn**	**04 38 49.1**	**-1.4**
AIES				*e*S	**Sn**	**04 38 58.1**	**-0.6**
AIES				AML	AML	04 39 00.5	
	comp=Z,17μm,0.5s						
LFRS	**El Faro**	**0.49**	**13**	⇓*i*P	**Pn**	**04 38 51.0**	**-0.8**
SNET	**Serv Nac Est T**	**0.55**	**354**	⇓*e*P	**Pn**	**04 38 51.0**	**-1.3**
SNET				*e*S	**Sn**	**04 39 02.0**	**0.0**
SNET				AML	AML	04 39 05.8	
	comp=Z,24μm,0.3s						
BOQS	**Boqueron**	**0.60**	**350**	⇓*i*P	**Pn**	**04 38 51.9**	**-1.0**
LBRS	**Las Brisas**	**0.61**	**12**	⇑*i*P	**Pn**	**04 38 52.9**	**-0.1**
SBLS	**San Blas**	**0.82**	**328**	*e*P	**Pn**	**04 38 53.4**	**-1.9**
SNJE	**San Jose**	**0.84**	**330**	⇑*i*P	**Pn**	**04 38 53.7**	**-1.9**
RTR	**El Retiro**	**0.88**	**329**	⇑*i*P	**Pn**	**04 38 54.3**	**-1.7**
VSM	**San Miguel**	**0.92**	**72**	*e*P	**Pn**	**04 38 57.4**	**+0.8**
BLLM	**Bellamira**	**0.96**	**72**	⇓*e*P	**Pn**	**04 38 57.8**	**+0.8**
RBDL	**Robledal**	**1.09**	**333**	⇑*i*P	**Pn**	**04 38 57.6**	**-1.1**
CAHU	**Cacacuatique**	**1.13**	**56**	*e*P	**Pn**	**04 39 00.5**	**+1.4**
CNCH	**Conchagua**	**1.31**	**84**	⇓*e*P	**Pn**	**04 39 02.4**	**+0.8**
NBG	**Las Nubes**	**1.83**	**322**	⇑*e*P	**Pn**	**04 39 08.5**	**0.0**
NBG				*e*S	**Sn**	**04 39 32.7**	**+1.9**
MRL	**Marmol**	**1.98**	**345**	*e*P	**Pn**	**04 39 11.9**	**+1.4**
TGUH	**Tegucigalpa,Un**	**2.06**	**64**	*e*Pn	**Pn**	**04 39 13.2**	**+1.7**
TGUH	**Tegucigalpa,Un**	**2.06**	**64**	*e*P	**Pn**	**04 39 13.3**	**+1.8**
TGUH				AML	AML	04 39 51.3	
	comp=N,6μm,0.7s						
CRIN	**San Cristobal**	**2.12**	**102**	*e*P	**Pn**	**04 39 12.5**	**+0.2**
FG6		**2.18**	**311**	*e*P	**Pn**	**04 39 12.0**	**-1.2**
FG6				*e*S	**Sn**	**04 39 35.5**	**-3.7**
APG	**El Apazote**	**2.24**	**326**	P	**Pn**	**04 39 13.2**	**-0.8**
	comp=N,18nm,0.3s,baz=149,slow=6.3,SNR=124						
APG				S	**Sn**	**04 39 42.6**	**+2.1**
	comp=N,28nm,0.3s,baz=61,slow=18,SNR=6.5						
TP2	**Tecpan 2**	**2.43**	**313**	⇓*e*P	**Pn**	**04 39 16.3**	**-0.2**
CNGN	**Cerro Negro**	**2.50**	**104**	*e*P	**Pn**	**04 39 16.8**	**-0.7**
MOMN	**Momotombo**	**2.67**	**106**	*e*P	**Pn**	**04 39 19.8**	**0.0**
COPN	**Copaltepe**	**2.69**	**110**	*e*P	**Pn**	**04 39 19.1**	**-1.0**
CSAN		**2.85**	**109**	*e*P	**Pn**	**04 39 21.9**	**-0.3**
XAVN	**Gruta Xavier**	**2.95**	**109**	*e*P	**Pn**	**04 39 23.1**	**-0.5**
MGAN	**Managua**	**3.02**	**109**	*e*P	**Pn**	**04 39 24.0**	**-0.6**
CRUN	**El Crucero**	**3.03**	**112**	*e*P	**Pn**	**04 39 26.5**	**+1.7**
HUEN		**3.04**	**105**	*e*P	**Pn**	**04 39 24.6**	**-0.2**
WILN	**Americas 2**	**3.07**	**108**	*e*P	**Pn**	**04 39 25.0**	**-0.3**
APON	**Apoyo**	**3.27**	**111**	*e*P	**Pn**	**04 39 28.7**	**+0.8**
BOAB	**BOACO BROADBAN**	**3.49**	**101**	*e*P	**Pn**	**04 39 30.4**	**-0.6**
SSN	**San Juan del S**	**3.73**	**119**	*e*P	**Pn**	**04 39 34.2**	**+0.1**
CONN	**Concepcion**	**3.80**	**114**	*e*P	**Pn**	**04 39 35.7**	**+0.4**
GBS2	**Las Lilas**	**4.30**	**122**	*i* P	**Pn**	**04 39 41.4**	**-0.7**
NY14	**Universidad de**	**4.34**	**124**	*i* P	**Pn**	**04 39 43.5**	**+0.9**
GB1A	**Borinquen Arri**	**4.36**	**122**	*i* P	**Pn**	**04 39 42.6**	**-0.2**
GB1A				*i* S	**Sn**	**04 40 30.7**	**-1.6**
COLC	**Colonia**	**4.60**	**122**	*i* P	**Pn**	**04 39 47.0**	**+0.8**
CUI	**Cuipilapa**	**4.63**	**122**	*i* P	**Pn**	**04 39 46.8**	**+0.1**
CUI				*i* S	**Sn**	**04 40 37.2**	**-2.0**
JTS	**JuntasAbangare**	**5.01**	**124**	P	**Pn**	**04 39 51.2**	**-0.5**
	comp=N,20nm,0.3s,baz=312,slow=21,SNR=87						
JTS				S	**Sn**	**04 40 46.1**	**-2.3**
	comp=N,10nm,0.3s,baz=25,slow=22,SNR=5.2						
JTS	**JuntasAbangare**	**5.01**	**124**	*e*Pn	**Pn**	**04 39 51.0**	**-0.8**
JTS				*e*Sn	**Sn**	**04 40 46.4**	**-2.0**
JTS	**JuntasAbangare**	**5.01**	**124**	*e*P	**Pn**	**04 39 51.8**	**0.0**
JCR	**Jicaral**	**5.15**	**129**	⇑*e*P	**Pn**	**04 39 54.5**	**+0.8**
CGA2	**Cerro Gallo 2**	**5.56**	**123**	⇑*e*P	**Pn**	**04 40 01.8**	**+2.5**
PRS1	**Puriscal**	**5.70**	**123**	*e*P	**Pn**	**04 40 02.8**	**+1.5**
LAJ	**Bijagual**	**5.93**	**123**	*e*P	**Pn**	**04 40 01.8**	**-2.5**
QCR	**Quepos**	**6.14**	**126**	⇑*e*P	**Pn**	**04 40 08.7**	**+1.4**
URSC	**Urasca**	**6.22**	**121**	*e*P	**Pn**	**04 40 09.9**	**+1.5**
BUS	**Buena Vista**	**6.39**	**123**	*e*P	**Pn**	**04 40 13.2**	**+2.5**
CMIG	**Matias Romero**	**6.77**	**306**	P	**Pn**	**04 40 14.4**	**-1.5**
	comp=N,1.6nm,0.3s,baz=102,slow=11,SNR=16						
CMIG				S	**Sn**	**04 41 23.9**	**-7.6**
	comp=N,1.1nm,0.3s,baz=128,slow=10,SNR=3.8						
BAR1		**6.93**	**123**	⇑*e*P	**Pn**	**04 40 20.0**	**+1.9**
TEIG	**Tepich**	**7.10**	**7**	*e*Pn	**Pn**	**04 40 22.2**	**+1.9**
TEIG	**Tepich**	**7.10**	**7**	*e*P	**Pn**	**04 40 22.2**	**+1.9**
ACR	**Cerro Adams**	**7.39**	**126**	*e*P	**Pn**	**04 40 26.0**	**+1.6**
CNI	**Changuinola**	**7.50**	**119**	*e*P	**Pn**	**04 40 27.0**	**+1.1**
CTCR	**Cotoan**	**7.58**	**123**	*e*P	**Pn**	**04 40 28.6**	**+1.7**
CTCR				*e*S	**Sn**	**04 41 49.7**	**-1.6**
BRU2	**Volcan**	**7.69**	**124**	⇑*i*P	**Pn**	**04 40 30.2**	**+1.7**
HKT	**Hockley**	**17.83**	**341**	*e*P	**Pn**	**04 42 43.6**	**+1.1**
	comp=N,4.6nm,0.9s						
SDV	**Santo Domingo**	**18.68**	**101**	P	**Pn**	**04 42 52.0**	**-1.0**
	comp=N,0.3nm,0.3s,baz=257,slow=6.2,SNR=7.9						
JCT	**Junction City**	**19.85**	**332**	*e*Pn	**Pn**	**04 43 04.5**	**-2.2**
	comp=N,8.0nm,0.6s						
LRAL	**Lakeview Retre**	**19.90**	**5**	*e*Pn	**Pn**	**04 43 07.3**	**+0.1**
	comp=N,6.5nm,0.9s						
628A	**Black Gap, Mar**	**20.65**	**324**	⇑P	**P**	**04 43 14.0**	**+0.9**
	baz=21						
627A	**Terlingua Ranc**	**20.91**	**323**	⇑P	**P**	**04 43 17.0**	**+1.0**
	baz=21						
TXAR	**Lajitas Array**	**20.99**	**322**	P	**P**	**04 43 17.8**	**+0.9**
	comp=N,3.0nm,0.4s,baz=140,slow=

SMCO Snowmass 30.34 332 eP P 04 44 45.1 +1.0
comp=N,4.1nm,0.9s,mb4.1
R19A Curley Farm, L 30.76 328 ⇑P P 04 44 48.6 +0.7
baz=31
ECSD EROS Data Cent 31.15 350 eP P 04 44 50.1 -1.2
comp=N,4.2nm,1.0s,mb4.1
Q19A Hogan Spring (31.27 329 ⇓P P 04 44 52.5 +0.2
baz=32
BC3 Big Chuckawall 31.44 315 ⇑P P 04 44 54.5 +0.5
baz=32
N22A Wattenberg Ran 31.44 334 ⇓P P 04 44 54.7 +0.9
baz=32,SNR=7.3
PHWY Pilot Hill 31.45 336 eP P 04 44 54.3 +0.3
comp=N,3.5nm,0.9s,mb4.1
O20A White River Ci 31.69 332 ⇑P P 04 44 56.7 +0.7
baz=32,SNR=5.8
N21A Black Mountain 31.87 333 ⇑P P 04 44 58.4 +0.8
baz=32
GMRC Granite Mounta 32.22 316 ⇑P P 04 45 01.3 +0.5
baz=32
O19A Miners Draw (B 32.23 331 ⇑P P 04 45 01.4 +0.6
baz=32
N20A Spence Gulch, 32.26 332 ⇑P P 04 45 02.0 +0.9
baz=32,SNR=6.7
P18A Preston Nutter 32.27 329 ⇑P P 04 45 02.0 +0.8
baz=32
P17A Butcher Ranch, 32.41 328 ⇓P P 04 45 02.6 +0.2
baz=33
M21A Separation Pea 32.49 334 ⇑P P 04 45 03.6 +0.5
baz=33
RWWY Rawlins 32.49 334 eP P 04 45 03.8 +0.7
comp=N,9.1nm,0.8s,mb4.6
O18A Roosevelt 32.64 330 ⇓P P 04 45 04.7 +0.4
baz=33,SNR=6.0
N19A John Jarvie Ra 32.73 331 ⇓P P 04 45 05.3 +0.1
baz=33,SNR=5.3
L21A Rawlins 32.79 335 ⇓P P 04 45 05.9 +0.2
baz=33,SNR=14
COWI Conover 32.85 0 eP P 04 45 04.4 -1.8
comp=N,8.4nm,0.9s,mb4.6
O17A Robinson Place 32.95 329 ⇓P P 04 45 07.5 +0.4
baz=33
N18A Larsen Ranch, 33.02 331 ⇑P P 04 45 08.0 +0.3
baz=33,SNR=5.9
O16A Springville 33.35 328 ⇑P P 04 45 10.8 +0.2
baz=34
RSSD Black Hills 33.40 340 eP P 04 45 11.4 +0.4
comp=N,2.7nm,0.6s,mb4.2
L19A Farson 33.77 332 ⇓P P 04 45 14.1 -0.1
baz=34
K20A Yellowstone Ra 33.77 334 ⇓P P 04 45 14.2 0.0
baz=34
M17A Scullys Gap (B 33.88 330 ⇑P P 04 45 15.4 +0.2
baz=34
L18A Fontenelle, Gr 33.94 332 ⇓P P 04 45 16.0 +0.3
baz=34,SNR=7.1
LRMC Laurel Mountai 33.99 316 ⇓P P 04 45 16.4 +0.2
baz=34
DUG Dugway 34.03 327 eP P 04 45 17.6 +1.1
comp=N,1.3nm,0.9s,mb3.8
K19A Absolon Red Bu 34.12 334 ⇓P P 04 45 17.2 -0.1
baz=34
BW06 Boulder Array 34.38 333 ⇑P P 04 45 19.8 +0.3
baz=35
BW06 Boulder Array 34.38 333 eP P 04 45 19.3 -0.2
comp=N,1.4nm,0.7s,mb3.9
PDAR Pinedale Array 34.38 333 P P 04 45 19.5 0.0
comp=N,0.9nm,0.5s,mb3.9,baz=128,slow=11,SNR=9.3
PDAR PcP PcP 04 47 53.5 -0.4
comp=N,0.7nm,0.6s,baz=105,slow=4.1,SNR=5.1
HWUT Hardware Ranch 34.42 330 eP P 04 45 20.3 +0.4
comp=N,1.4nm,0.6s,mb4.0
L17A Cokeville 34.46 331 ⇑P P 04 45 20.1 -0.1
baz=35,SNR=7.7
K18A Toltan Ranch, 34.50 332 ⇑P P 04 45 21.0 +0.5
baz=35,SNR=7.7
L16A Fish Haven 34.67 330 ⇓P P 04 45 22.1 +0.1
baz=35,SNR=10
N14A Grayback Hills 34.69 327 ⇓P P 04 45 22.4 +0.2
baz=35
EYMN Ely 34.75 357 eP P 04 45 20.9 -1.7
comp=N,9.0nm,0.6s,mb4.8
M15A Larsen Ranch, 34.76 329 ⇑P P 04 45 23.0 +0.3
baz=35
J18A Kendall Valley 34.94 333 ⇑P P 04 45 24.2 -0.1
baz=35,SNR=6.5
L15A Malad City 35.13 329 ⇑P P 04 45 25.9 -0.1
baz=35,SNR=7.2
I18A Diamond G Ranc 35.25 334 ⇑P P 04 45 27.2 +0.3
baz=36
K16A Soda Springs 35.37 331 ⇓P P 04 45 28.2 +0.3
baz=36
J17A Brown Place, J 35.37 332 ⇑P P 04 45 28.0 +0.1
baz=36,SNR=7.7
REDW Red Top Meadow 35.44 332 eP P 04 45 28.7 +0.1
comp=N,16nm,0.7s,mb5.0
SNOW Snow King Moun 35.47 333 eP P 04 45 29.2 +0.3
comp=N,17nm,0.6s,mb5.0
AGMN Agassiz Nation 35.49 352 eP P 04 45 27.5 -1.5
comp=N,17nm,0.8s,mb4.9
LOHW Long Hollow 35.52 333 eP P 04 45 30.0 +0.7
comp=N,4.9nm,0.7s,mb4.5
M13A Montello 35.58 327 ⇓P P 04 45 30.1 +0.3
baz=36
L14A Malta 35.58 329 ⇑P P 04 45 30.3 +0.5
baz=36
TPAW Teton Pass 35.58 332 eP P 04 45 30.4 +0.6
comp=N,4.1nm,0.6s,mb4.5
N12A Clover Valley, 35.70 325 ⇑P P 04 45 30.9 0.0
baz=36
K15A Arbon 35.71 330 ⇓P P 04 45 31.0 +0.1
baz=36
IMW Indian Meadow 35.89 333 eP P 04 45 33.9 +1.4
comp=N,4.1nm,0.5s,mb4.6
K14A Jones Ranch, D 35.92 329 ⇓P P 04 45 32.5 -0.2
baz=36,SNR=12
NVAR Mina Array Bea 36.08 320 P P 04 45 34.3 +0.1
comp=N,1.7nm,0.8s,mb4.0,baz=136,slow=7.9,SNR=6.2
NVAR PcP PcP 04 47 59.4 +0.4
comp=N,0.8nm,0.7s,baz=161,slow=4.7,SNR=4.1
RLMT Red Lodge 36.17 336 ⇓P P 04 45 35.0 +0.1
baz=36
RLMT Red Lodge 36.17 336 eP P 04 45 35.3 +0.4
comp=N,3.1nm,0.8s,mb4.3
J15A Blackfoot 36.20 331 ⇓P P 04 45 35.3 +0.2
baz=36,SNR=6.7
LAO LASA Array 36.39 340 eP P 04 45 36.9 +0.2
comp=N,21nm,0.6s,mb5.2
G18A Lazy EL Ranch, 36.45 336 ⇑P P 04 45 36.8 -0.4
baz=37,SNR=6.0
J14A Carey 36.66 330 ⇑P P 04 45 39.2 +0.1
baz=37,SNR=6.2
H16A Russell Place, 36.67 333 ⇑P P 04 45 39.5 +0.4
baz=37
K12A Draper Farm, C 36.87 328 ⇓P P 04 45 40.6 -0.2
baz=37
F18A Big Timber 37.00 336 ⇑P P 04 45 41.8 -0.1
baz=37,SNR=6.4
I14A Mackay 37.08 330 ⇓P P 04 45 42.9 +0.3
baz=37,SNR=6.4
HLID Hailey 37.28 329 ⇑P P 04 45 44.2 -0.2
baz=38
HLID Hailey 37.28 329 eP P 04 45 44.6 +0.3
comp=N,0.9nm,0.5s,mb4.0
G16A Moss Hill, Enn 37.32 333 ⇓P P 04 45 44.8 +0.2
baz=38
DGMT Dagmar 37.37 343 ⇑P P 04 45 44.9 0.0
baz=38,SNR=7.6
F17A Fitzpatrick Pl 37.38 335 ⇑P P 04 45 45.1 0.0
baz=38,SNR=6.7
I13A Wildhorse Cree 37.39 330 ⇑P P 04 45 45.5 +0.3
baz=38
ULM Lac du Bonnet 37.41 353 P P 04 45 43.5 -1.8
comp=N,7.0nm,0.5s,mb4.8,baz=172,slow=8.4,SNR=7.4
ULM LR LR 05 04 27.9
comp=N,43nm,18.7s,baz=26,slow=42
MCMT McKenzie Canyo 37.48 332 eP P 04 45 46.9 +0.9
comp=N,3.1nm,0.6s,mb4.4
H14A Leadore 37.56 331 ⇓P P 04 45 46.7 +0.1
baz=38,SNR=6.5
BOZ Bozeman (W) 37.58 334 ⇑P P 04 45 46.6 -0.2
baz=38,SNR=6.8
BOZ Bozeman (W) 37.58 334 eP P 04 45 46.5 -0.3
comp=N,2.1nm,0.6s,mb4.1
G15A Dillon 37.58 333 ⇑P P 04 45 47.2 +0.5
baz=38
E18A Harlowton 37.62 336 ⇑P P 04 45 46.8 -0.3
baz=38
F16A Kennard Place, 37.69 334 ⇓P P 04 45 48.0 +0.3
baz=38
I12A Atlanta 37.81 329 ⇓P P 04 45 49.0 +0.2
baz=38
H13A Challis 37.94 330 ⇑P P 04 45 49.9 +0.1
baz=38,SNR=13
LRM Limekiln Ridge 38.07 333 eP P 04 45 51.2 +0.3
comp=N,24nm,0.7s,mb5.1
D18A Linhart Farms, 38.10 337 ⇑P P 04 45 50.8 -0.3
baz=38
F15A Butte 38.10 333 ⇓P P 04 45 51.1 -0.1
baz=38
E16A East Helena 38.30 335 ⇓P P 04 45 53.3 +0.4
baz=38
I11A Placerville 38.31 328 ⇑P P 04 45 53.0 0.0
baz=38,SNR=6.1
G13A Cobalt 38.32 331 ⇓P P 04 45 53.2 +0.2
baz=38
D17A Six Diamond Ra 38.41 336 ⇑P P 04 45 53.8 +0.1
baz=39
D16A Dana Ranch, Ca 38.65 335 ⇑P P 04 45 55.6 -0.2
baz=39
EGMT Eagleton 38.77 338 ⇑P P 04 45 56.5 -0.3
baz=39,SNR=5.3
F13A Darby 38.89 332 ⇓P P 04 45 57.6 -0.2
baz=39
H11A Donnelly 38.90 329 ⇓P P 04 45 57.7 -0.2
baz=39
E14A Clinton 38.99 333 ⇑P P 04 45 58.2 -0.4
baz=39
B18A Beardsley Farm 39.09 338 ⇓P P 04 45 59.4 0.0
baz=39
F12A Elk City 39.30 331 ⇓P P 04 46 00.6 -0.6
baz=40,SNR=9.1
E13A Victor 39.32 333 ⇓P P 04 46 01.1 -0.3
baz=40
G11A Walters Elk Ra 39.53 330 ⇑P P 04 46 02.7 -0.4
baz=40
A18A Metzger Ranch, 39.56 339 ⇑P P 04 46 03.4 +0.1
baz=40
E12A Beaver Dam Sad 39.93 331 ⇓P P 04 46 05.8 -0.7
baz=40
D13A Huson 39.94 333 ⇓P P 04 46 06.1 -0.4
baz=40
B15A Bradely Ranch, 40.09 336 ⇓P P 04 46 07.4 -0.3
baz=40
A15A Johnson Ranch, 40.69 336 ⇓P P 04 46 12.4 -0.2
baz=41
A14A Double T Ranch 40.96 336 ⇑P P 04 46 14.8 -0.1
baz=41
FFC Flin Flon 42.69 349 eP P 04 46 28.1 -0.9
comp=N,3.3nm,0.6s,mb4.2
EDM Edmonton 44.37 339 eP P 04 46 41.6 -0.8
SCHQ Schefferville 45.13 18 P P 04 46 46.9 -1.5
comp=N,6.5nm,0.5s,mb4.6,baz=221,slow=7.2,SNR=25
SCHQ PcP PcP 04 48 26.4 -1.5
comp=N,1.6nm,0.4s,baz=180,slow=1.0,SNR=3.8
YKA Yellowknife Ar 52.52 345 P P 04 47 43.6 -1.3
comp=N,7.3nm,0.8s,mb4.8,baz=144,slow=7.7,SNR=35
FRB Frobisher Bay 52.57 11 P P 04 47 43.2 -2.1
comp=N,10nm,0.6s,mb5.1,baz=214,slow=8.9,SNR=15
RES Resolute Bay 61.62 358 eP P 04 48 47.1 -1.9
comp=N,3.1nm,0.6s,mb4.5
INK Inuvik 62.05 343 eP P 04 48 50.5 -1.6
comp=N,3.2nm,0.8s,mb4.4
BPAW Bear Paw Mtn. 66.11 335 eP P 04 49 16.9 -1.8
comp=N,2.1nm,0.9s,mb4.0
ARCES ARCESS Array B 86.08 19 P P 04 51 10.4 -1.5
comp=N,0.6nm,0.6s,mb3.7,baz=288,slow=4.7,SNR=10
TORD Torodi Ar. Bea 87.90 77 P P 04 51 19.7 -2.1
comp=N,0.3nm,0.3s,baz=327,slow=6.9,SNR=3.6
ZALV Zalesovo Beam 112.98 4 PP PP 04 57 55.0 -1.7
comp=N,0.3nm,0.3s,baz=327,slow=6.9,SNR=3.6
BJI Beijing 122.08 337 PKP PKPdf 04 57 24.6 -1.6
HHC Hu-ho-hao-te 122.95 341 ePKP PKPdf 04 57 24.3 -3.5
HHC sPKP 04 58 01.6
HHC PP PP 04 59 07.4 +1.3
HHC PKS 05 00 59.3
HHC SKS SKSdf 05 04 24.8 -9.1
HHC SKKS SKKSac 05 05 49.6 -10
HHC SS SS 05 15 39.5 -4.3
HHC AMB AMB
comp=Z,42nm,6.1s
WMQ Urumqi 123.25 3 ePKP PKPdf 04 57 26.0 -2.3
CD2 Chengdu 134.47 344 ePKP PKPdf 04 57 46.6 -3.4
WRA Warramunga Arr 137.84 255 PKP PKPdf 04 57 57.1 +0.7
comp=Z,0.9nm,0.6s,baz=86,slow=1.9,SNR=20
ASAR Alice Springs 137.95 249 PKP PKPdf 04 57 57.7 +1.1
comp=Z,0.5nm,0.6s,baz=117,slow=1.4,SNR=5.0
CMAR Chiang Mai Arr 147.60 346 PKP PKPdf 04 58 13.0 -0.8
comp=Z,1.6nm,0.3s,baz=336,slow=2.8,SNR=8.5
CMAR PKPbc PKPbc 04 58 15.2 -1.2
comp=Z,1.7nm,0.3s,baz=344,slow=3.5,SNR=8.2

IDC 18 04:39:42.6±3.0, 27°.71S×176°.94W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.8/14, mbtmp3.8/3, Error ellipse: s-maj=67.3km s-min=29.9km az=109.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.77	209	Pn	Pn	04 40 14.4	-0.1
112nm,0.3s,baz=90,slow=20,SNR=4.3							
RAO				Sn	Sn	04 40 38.0	+0.4
299nm,0.3s,baz=108,slow=22,SNR=8.7							
STKA	Stephens Creek	36.07	253	P	P	04 46 45.6	-0.4
3.1nm,1.0s,baz=73,slow=11,SNR=2.5							
ASAR	Alice Springs	44.26	264	P	P	04 47 54.5	+0.5
0.6nm,0.7s,baz=94,slow=7.1,SNR=6.9							
WRA	Warramunga Arr	45.00	269	P	P	04 47 59.9	-0.2
0.6nm,0.5s,baz=107,slow=7.8,SNR=12							
NOA	NORSAR Array B	146.22	353	PKPbc	PKPbc	04 59 23.6	-0.8
0.8nm,0.7s,baz=14,slow=4.4,SNR=3.3							

*NEIC **18** 04:53:59.0±1.6, 0°.44N×126°.10E, h36km±14km, mb4.6/14, Error ellipse: s-maj=12.1km s-min=5.8km az=61.0*
*IDC **18** 04:54:00.5±3.2, 0°.39N×126°.05E, h51km±29km, mb4.1/13, mb1 4.3/15, mb1mx4.2/22, mbtmp4.2/15, ML4.6/1, MS3.2/2, Ms1 3.3/2, ms1mx2.6/28, Error ellipse: s-maj=23.7km s-min=9.8km az=74.0*
*ISCJB **18** 04:54:01.0±0.6, 0°.34N±0°.04×126°.06E±0°.04, h74km±6km, mb4.4/26, Error ellipse: s-maj=6.7km s-min=5.9km az=14.9*
*DJA **18** 04:54:01, 0°.23N×126°.11E, h15km, MLv4.7/9*
ISC 18 04:54:02.7±0.5, 0°.32N±0°.04×126°.12E±0°.03, h72km±5km, n59, σ1§08/61, mb4.4/26, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.33	70	P	Pn	04 54 21.2	-4.3
TNTI				S	Sn	04 54 43.9	+1.2
LBMI	Labuha	1.68	124	P	Pn	04 54 28.8	-1.4
LBMI				S	Sn	04 54 51.3	+0.3
KMSI	Cibinong	2.15	277	P	Pn	04 54 33.7	-2.8
KMSI				S	Sn	04 55 04.2	+2.0
SGSI	Sangihe	3.40	350	P	Pn	04 54 56.5	+3.1
LUWI	Luwuk	3.61	248	P	Pn	04 54 57.5	+1.2
NLAI	Namlea	3.67	164	P	Pn	04 54 56.2	-0.9
NLAI				S	Sn	04 55 38.5	-0.7
MRSI	Marisa	4.18	272	P	Pn	04 55 02.7	-1.3
APSI	Ampana	4.63	255	P	Pn	04 55 08.9	-1.3
KDI	Kendari	5.50	219	P	Pn	04 55 22.0	-0.1
TTSI	Tana Toraja	7.13	242	P	Pn	04 55 44.3	-0.1
0.3nm83nm,1.0s							
BNSI	Bone	7.62	232	P	Pn	04 55 51.2	+0.1
0.4nm1μm99nm,0.8s							
SPSI	Sidrap Palu	7.64	236	P	Pn	04 55 51.6	+0.2
0.4nm1μm78nm,0.9s							
BKSI	Bulukumba	8.20	227	P	Pn	04 55 59.2	+0.2
KAPI	Kappang	8.28	230	P	Pn	04 55 57.7	-2.3
7.0nm,0.3s,baz=66,slow=5.5,SNR=17							
KAPI				S	Sn	04 57 31.4	-0.6
1.6nm,0.3s,baz=219,slow=22,SNR=3.8							
KAPI	Kappang	8.28	230	P	Pn	04 56 00.3	+0.2
MYLDM	Lahad Datu	9.01	303	P	Pn	04 56 12.1	+2.0
SBUM	Sibu	14.05	279	P	Pn	04 57 24.0	+5.5
KAKA	Kakadu	14.39	154	eP	Pn	04 57 23.6	+0.8
16nm,0.6s							
KAKA	Kakadu	14.39	154	P	Pn	04 57 21.6	-1.2
KSM	Kuching	15.85	274	eP	Pn	04 57 44.4	+2.8
51nm,0.8s							
NGJI	Ngawi	16.49	242	P	Pn	04 57 54.1	+4.5
PWJI	Pagerwojo	16.50	240	P	Pn	04 57 53.3	+3.5
FITZ	Fitzroy Crossi	18.31	181	eP	Pn	04 58 11.7	-0.2
14nm,0.7s							
FITZ	Fitzroy Crossi	18.31	181	P	Pn	04 58 11.8	-0.1
0.7nm,0.3s,baz=20,slow=8.1,SNR=26							
FITZ	Fitzroy Crossi	18.31	181	ePKPbc	Pn	04 58 11.6	-0.3
WRAB	Tennant Creek	21.68	159	eP	P	04 58 48.4	+0.7
58nm,0.8s,mb5.0							
WRA	Warramunga Arr	21.69	159	P	P	04 58 47.7	-0.1
46nm,0.8s,mb4.8,baz=338,slow=11,SNR=252							
WRA				S	S	05 02 45.5	+1.6
0.8nm,0.6s,baz=329,slow=17,SNR=5.6							
COEN	Coen	22.06	131	eP	P	04 58 51.4	-0.3
98nm,0.8s,mb5.2							
MBWA	Marble Bar	22.24	196	eP	P	04 58 53.4	-0.2
7.5nm,0.6s,mb4.2							
ASAR	Alice Springs	25.01	163	P	P	04 59 21.0	+1.0
12nm,0.4s,mb4.7,baz=351,slow=14,SNR=113							
ASAR				PcP	PcP	05 02 54.8	+1.3
1.3nm,0.6s,baz=340,slow=2.1,SNR=5.8							
FORT	Forrest	30.98	177	eP	P	05 00 14.0	+0.7
44nm,0.7s,mb5.3							
CMAR	Chiang Mai Arr	32.20	306	P	P	05 00 22.4	-1.8
1.2nm,0.3s,mb4.0,baz=125,slow=8.9,SNR=6.2							
CMAR				LR	LR	05 11 41.3	
comp=Z,39nm,21.8s,baz=110,slow=33							
STKA	Stephens Creek	35.22	157	eP	P	05 00 51.2	+1.1
8.4nm,0.8s,mb4.6							
STKA	Stephens Creek	35.22	157	P	P	05 00 51.2	+1.0
8.7nm,0.5s,mb4.8,baz=325,slow=9.3,SNR=26							
STKA				LR	LR	05 15 02.1	
comp=Z,49nm,21.7s,baz=204,slow=36							
STKA	Stephens Creek	35.22	157	P	P	05 00 51.2	+1.0
STKA				LR	LR	05 15 02.1	
KSRS	Korea Array	36.99	2	P	P	05 01 05.2	0.0
1.4nm,0.7s,mb4.0,baz=177,slow=10,SNR=5.2							
MJAR	Matsushiro Arr	37.74	16	P	P	05 01 10.3	-1.3
2.5nm,0.5s,mb4.3,baz=189,slow=9.2,SNR=8.2							
ULN	Ulaanbaatar	50.17	343	eP	P	05 02 51.1	+0.2
1.6nm,0.5s,mb4.2							
SONM	Songino Array	50.33	343	P	P	05 02 51.6	-0.5
1.0nm,0.5s,mb4.0,baz=168,slow=9.9,SNR=6.4							
SONM				PcP	PcP	05 04 11.1	+1.2
1.2nm,0.8s,baz=170,slow=4.5,SNR=4.0							
PETK	Petropavlovsk-	58.80	22	P	P	05 03 53.4	+0.1
4.2nm,0.8s,mb4.5,baz=195,slow=4.5,SNR=7.7							
PETK	Petropavlovsk-	58.80	22	P	P	05 03 53.4	+0.1
MK31	Makanchi Array	60.02	327	eP	P	05 04 01.4	-0.5
MKAR	Makanchi Array	60.02	327	P	P	05 04 01.4	-0.5
1.5nm,0.3s,mb4.4,baz=117,slow=8.3,SNR=14							
MKAR				PcP	PcP	05 04 47.6	+0.3
2.0nm,0.7s,baz=108,slow=4.0,SNR=5.2							
TKM2	Tokmak 2	61.91	320	eP	P	05 04 14.6	-0.2
1.8nm,0.6s,mb4.3							
UCH	Uchtor	62.29	319	eP	P	05 04 18.9	+1.6
2.1nm,0.8s,mb4.2							
AML	Almayashu	62.78	318	eP	P	05 04 21.6	+0.9
4.0nm,0.7s,mb4.5							
EKS2	Erkin-Say	62.97	319	eP	P	05 04 21.9	0.0
1.6nm,0.6s,mb4.1							
ZALV	Zalesovo Beam	63.35	334	P	P	05 04 23.1	-1.0
1.2nm,0.4s,mb4.2,baz=112,slow=4.0,SNR=6.0							
KURK	Kurchatov	64.29	329	eP	P	05 04 29.8	-0.7
14nm,0.8s,mb4.8							
CASY	Casey	67.38	187	eP	P	05 04 51.8	+1.9
3.5nm,0.6s,mb4.4							
BVAR	Borovoye Array	69.84	328	P	P	05 05 04.0	-1.5
1.8nm,0.6s,mb4.1,baz=138,slow=6.9,SNR=10							
BRVK	Borovoye	69.92	328	eP	P	05 05 06.7	+0.7
3.7nm,0.8s,mb4.3							
ABKAR	Akbulak array	74.40	322	eP	P	05 05 32.6	-0.2
1.6nm,0.6s,mb3.9							
BRTR	Keskin Array B	91.71	310	P	P	05 07 02.2	-0.2
1.0nm,0.7s,mb4.2,baz=96,slow=11,SNR=4.8							
ARCES	ARCESS Array B	93.42	340	P	P	05 07 09.1	-0.6
0.8nm,0.6s,mb4.2,baz=77,slow=6.4,SNR=5.8							
TORD	Torodi Ar. Bea	123.32	286	PKP	PKPdf	05 12 53.2	+0.7
1.1nm,0.7s,baz=70,slow=1.9,SNR=6.2							
TORD	Torodi Ar. Bea	123.32	286	PKP	PKPdf	05 12 53.2	+0.7
CPUP	Villa Florida	153.93	173	PKPbc	PKPbc	05 13 56.0	+1.3
1.2nm,0.6s,baz=122,slow=4.0,SNR=5.5							
CPUP				PKPab	PKPab	05 14 09.9	+2.0
0.7nm,0.5s,baz=156,slow=3.4,SNR=4.0							
CPUP	Villa Florida	153.93	173	PKPbc	PKPbc	05 13 56.0	+1.3
CPUP				PKPab	PKPab	05 14 09.9	+2.0

*IDC **18** 05:04:29.4±1.3, 2°.77S×129°.15E, h0km, mb3.9/3, mb1 4.2/6, mb1mx3.9/21, mbtmp4.0/6, ML4.0/3, Error ellipse: s-maj=50.9km s-min=22.2km az=74.0*
*DJA **18** 05:04:35, 2°.93S×128°.78E, h16km, MLv4.1/4*
*ISCJB **18** 05:04:35.3±0.5, 3°.04S±0°.04×128°.84E±0°.05, h58km±6km, mb3.9/3, Error ellipse: s-maj=8.7km s-min=7.3km az=177.8*
*NEIC **18** 05:04:36.5±2.9, 2°.89S×129°.00E, h53km±29km, mb3.7/1, Error ellipse: s-maj=33.0km s-min=13.8km az=219.0*
ISC 18 05:04:36.6±0.5, 3°.04S±0°.04×128°.83E±0°.05, h49km±7km, n19, σ1§15/22, mb3.9/3, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	Masohi	0.32	163	P	Pn	05 04 44.6	-1.3
MSAI				S	Sn	05 04 51.7	-0.8
AAI	Ambon	0.91	224	P	Pn	05 04 52.2	-0.9
AAI				S	Sn	05 05 06.9	+1.8
NLAI	Namlea	1.74	263	P	Pn	05 05 03.8	-0.6
LBMI	Labuha	2.73	331	P	Pn	05 05 17.8	-0.1
LBMI				S	Sn	05 05 49.1	-0.6
SWI	Sorong	3.25	48	P	Pn	05 05 25.6	+0.5
SWI				S	Sn	05 06 04.4	+1.9
KAPI	Kappang	9.27	257	Pn	Pn	05 06 49.3	+1.6
1.1nm,0.3s,baz=36,slow=7.2,SNR=6.8							
KAPI	Kappang	9.27	257	Pn	Pn	05 06 49.3	+1.6
KAKA	Kakadu	10.26	160	eP	Pn	05 07 04.1	+2.9
9.7nm,0.6s							
KAKA	Kakadu	10.26	160	ePn	Pn	05 07 03.8	+2.6
31nm,0.6s							
FITZ	Fitzroy Crossi	15.30	192	eP	Pn	05 08 13.7	+4.3
5.9nm,1.0s							
FITZ	Fitzroy Crossi	15.30	192	Pn	Pn	05 08 13.0	+3.6
0.3nm,0.3s,baz=20,slow=16,SNR=9.0							
WRAB	Tennant Creek	17.64	163	ePn	Pn	05 08 38.9	0.0
4.1nm,0.7s							
WRA	Warramunga Arr	17.64	163	P	Pn	05 08 37.9	-1.0
0.7nm,0.3s,baz=346,slow=12,SNR=53							
COEN	Coen	17.84	128	ePn	Pn	05 08 40.2	-1.3
ASAR	Alice Springs	21.09	167	P	P	05 09 17.4	+0.5
6.5nm,0.7s,mb4.1,baz=346,slow=11,SNR=51							
MKAR	Makanchi Array	64.30	326	P	P	05 15 06.2	-0.7
0.9nm,0.6s,mb4.0,baz=124,slow=8.1,SNR=6.7							
MKAR	Makanchi Array	64.30	326	P	P	05 15 06.2	-0.7
ZALV	Zalesovo Beam	67.54	334	P	P	05 15 27.0	-0.6
0.4nm,0.4s,mb3.8,baz=132,slow=6.0,SNR=2.5							
TORD	Torodi Ar. Bea	126.81	284	PKP	PKPdf	05 23 36.8	+1.0
0.2nm,0.6s,baz=98,slow=2.3,SNR=2.8							

IDC 18 05:15:44.4±6.1, 39°.43N×110°.70E, h0km, mb3.4/2, mb1 3.7/3, mb1mx3.3/25, mbtmp3.5/3, Error ellipse: s-maj=127.2km s-min=31.8km az=84.0, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	Songino Array	8.96	341	Pn	Pn	05 17 55.4	+0.3
baz=159,slow=12,SNR=7.4							
MKAR	Makanchi Array	21.92	299	P	P	05 20 39.2	0.0
1.2nm,0.8s,baz=93,slow=12,SNR=9.1							
CMAR	Chiang Mai Arr	23.25	209	P	P	05 20 53.5	0.0
1.3nm,0.6s,baz=16,slow=9.6,SNR=6.3							

*IDC **18** 05:23:28.8±0.5, 35°.22N×91°.35E, h0km, mb4.6/24, mb1 4.7/30, mb1mx4.7/33, mbtmp4.6/30, ML3.8/6, MS4.9/32, Ms1 4.9/32, ms1mx4.8/36, Error ellipse: s-maj=16.4km s-min=11.0km az=37.0*
*BJI **18** 05:23:29.4, 35°.28N×91°.21E, h15km, mB4.9/29, mb4.8/47, Ms5.6/65, MS7 5.4/53*
*ISCJB **18** 05:23:29.6±0.1, 35°.23N±0°.02×91°.22E±0°.02, h11km, mb4.9/125, MS5.1/240, Error ellipse: s-maj=2.9km s-min=2.3km az=6.3*
*NEIC **18** 05:23:31.4±0.2, 35°.29N×91°.27E, h10km, mb5.1/78, MS5.1/181, Error ellipse: s-maj=5.0km s-min=4.2km az=224.0*

LDG ***18*** *05:23:31.3±0.3, 35°.49N×90°.81E, h10km, Mb5.3/27, Ms4.9/10, Error ellipse: s-maj=13.0km s-min=6.9km az=116.0*

TEH ***18*** *05:23:32.0, 35°.28N×91°.17E, h10km*

MOS ***18*** *05:23:33.1±1.0, 35°.29N×91°.22E, h33km, mb5.1/80, MS5.0/58, Error ellipse: s-maj=6.6km s-min=3.8km az=125.0*

GCMT ***18*** *05:23:34.5±0.1, 35°.31N×91°.33E, h22km, MW5.4, Moment Tensor Solution. s59,c86; s18,c18; Moment tensor: Scale 10^17 Nm; Mrr 0.17±.03; Mθθ -1.13±.03; Mφφ 0.96±.03; Mrθ 0.03±.04; Mφθ 1.45±.03; Mφr -0.07±.04; Best double couple: M0 1.80000×10^17 NP1: φs 252.00000°, δ88.00000°, λ0.00000°. NP2: φs 162.00000°, δ90.00000°, λ178.00000°. Principal axes: T 1.7000, Plg2.0000°, Azm117.0000°; N 0.1700, Plg88.0000°, Azm341.0000°; P -1.8800, Plg2.0000°, Azm207.0000°; Data Used: II IU IC G CN. Surface waves: sta=107, comp=217, per= 50.*

DJA ***18*** *05:23:34, 35°.24N×91°.25E, h13km, mb5.1/12*

SZGRF ***18*** *05:23:45.4, 36°.47N×90°.10E, h33km, mb5.1, MS5.4, Southern Xinjiang, China*

ISC 18 05:23:30.4±0.7, 35°.28N±0°.02×91°.24E±0°.02, h2km±4km, h11km±.8km; pP-P, n575, σ1§11/468, mb4.9/125, MS5.1/240, 18C-22D, Qinghai

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
LSA	**Lhasa**	**5.57**	**181**	P	**Pn**	**05 24 59.1**	**+4.8**
LSA				S	**Sg**	**05 26 28.4**	**-0.9**
LSA				LR	LR		
	comp=E,98μm,13.6s						
LSA	**Lhasa**	**5.57**	**181**	*e*P	**Pn**	**05 24 58.8**	**+4.5**
LSA				pmax	pmax		
	comp=Z,749nm,1.1s						
LSA	**Lhasa**	**5.57**	**181**	*e*Pn	**Pn**	**05 24 58.8**	**+4.5**
	comp=Z,749nm,1.1s						
LSA				*e*Sg	**Sg**	**05 26 32.5**	**+3.2**
GTA	**Gaotai**	**7.97**	**56**	P	**Pn**	**05 25 27.6**	**+0.3**
GTA				pP		05 25 31.8	
GTA				sP		05 25 35.0	
GTA				S	**Sn**	**05 26 54.9**	**-3.1**
GTA				pmax	pmax		
	comp=Z,12nm,1.3s						
GTA				pmax	pmax		
	comp=Z,190nm,5.6s						
GTA				LR	LR		
	comp=N,48μm,20.4s						
GTA				LR	LR		
	comp=E,24μm,14.0s						
GTA				LR	LR		
	comp=Z,13μm,14.0s						
TAPN	**Taplejung**	**8.46**	**202**	*e*P	**Pn**	**05 25 35.8**	**+1.8**
GUN	**Gumba**	**8.65**	**213**	*e*P	**Pn**	**05 25 38.4**	**+1.8**
	comp=Z,248nm,1.2s						
WMQ	**Urumqi**	**8.95**	**343**	*e*P	**Pn**	**05 25 41.4**	**+0.7**
WMQ				S	**Sn**	**05 27 21.3**	**-0.8**
ODAN	**Odare**	**9.02**	**202**	*e*P	**Pn**	**05 25 42.7**	**+1.0**
	comp=Z,177nm,1.0s						
KKN	**Kakani**	**9.03**	**216**	*e*P	**Pn**	**05 25 43.5**	**+1.6**
	comp=Z,183nm,1.1s						
PKI	**Pulchoki**	**9.16**	**215**	*e*P	**Pn**	**05 25 45.0**	**+1.4**
	comp=Z,323nm,1.2s						
PKI	**Pulchoki**	**9.16**	**215**	*e*P	**Pn**	**05 25 45.2**	**+1.6**
PKIN	**Phulchoki**	**9.16**	**215**	*e*P	**Pn**	**05 25 45.2**	**+1.6**
RAMN	**Ramite**	**9.21**	**207**	*e*P	**Pn**	**05 25 45.3**	**+1.1**
	comp=Z,1μm,1.1s						
DMN	**Daman**	**9.27**	**216**	*e*P	**Pn**	**05 25 47.0**	**+1.9**
	comp=Z,616nm,1.5s						
SHL	**Shillong**	**9.70**	**177**	*e*PKP	**Pn**	**05 25 51.0**	**0.0**
SHL				*ex*	x	05 26 35.0	
SHL				*ex*	x	05 27 38.0	
LZH	**Lanzhou**	**10.29**	**82**	*e*P	**Pn**	**05 25 59.0**	**0.0**
LZH				pP		05 26 03.0	
LZH				sP		05 26 06.3	
LZH				*e*S	**Sn**	**05 27 56.3**	**+1.5**
LZH				sS		05 28 00.6	
LZH				SS		05 28 09.5	
LZH				pmax	pmax		
	comp=Z,60nm,1.1s						
LZH				pmax	pmax		
	comp=Z,290nm,4.3s						
LZH				LR	LR		
	comp=E,18μm,8.2s						
LZH				LR	LR		
	comp=Z,19μm,9.0s						
JOSI	**Joshimath**	**10.89**	**248**	*e*PKP	**Pn**	**05 26 06.3**	**-1.0**
PTH	**Pithoragarh**	**10.93**	**242**	*ex*	**Pn**	**05 26 10.0**	**+2.2**
AGT	**Agartala**	**11.36**	**180**	*i* P	**Pn**	**05 26 13.0**	**-0.7**
AGT				*i* x	x	05 26 38.0	
CD2	**Chengdu**	**11.37**	**109**	⇓*i*P	**Pn**	**05 26 15.8**	**+2.0**
CD2				pP		05 26 18.9	
CD2				sP		05 26 21.9	
CD2				PP		05 26 24.8	
CD2				S	**Sn**	**05 28 24.1**	**+2.7**
CD2				sS		05 28 29.1	
CD2				SS		05 28 37.9	
CD2				pmax	pmax		
	comp=Z,80nm,2.0s						
CD2				pmax	pmax		
	comp=Z,120nm,4.2s						
CD2				LR	LR		
	comp=N,31μm,7.2s						
CD2				LR	LR		
	comp=E,20μm,6.0s						
CD2				LR	LR		
	comp=Z,21μm,12.0s						
KLP	**Kalpa**	**11.48**	**255**	*e*PKP	**Pn**	**05 26 14.7**	**-0.7**
KLP				AMb	AMB	05 26 24.5	
	comp=Z,51nm,1.5s						
KSH	**Kashi**	**12.85**	**294**	⇑*i*P	**Pn**	**05 26 36.8**	**+2.7**
KSH				pP		05 26 40.1	
KSH				sP		05 26 43.3	
KSH				PP		05 26 47.1	
KSH				S	**Sn**	**05 29 00.3**	**+2.6**
KSH				SS		05 29 15.1	
KSH				PcP	PcP	05 32 12.1	+2.6
KSH				ScP	ScP	05 35 43.3	-0.3
KSH				PcS	PcS	05 35 45.0	+1.2
KSH				pmax	pmax		
	comp=Z,41nm,1.4s						
KSH				LR	LR		
	comp=N,5μm,7.0s						
KSH				LR	LR		
	comp=E,4μm,10.5s						
KSH				LR	LR		
	comp=Z,4μm,9.3s						
BHK	**Bhakra**	**12.98**	**257**	*ex*	**Pn**	**05 26 31.8**	**-4.0**
MK31	**Makanchi Array**	**13.32**	**332**	*e*P	**Pn**	**05 26 39.4**	**-1.1**
MKAR	**Makanchi Array**	**13.32**	**332**	Pn	**Pn**	**05 26 38.4**	**-2.1**
	comp=Z,1.4nm,0.3s,baz=142,slow=14,SNR=38						
MKAR				LR	LR	05 31 49.2	
	comp=Z,3μm,19.6s,baz=319,slow=37						
MKAR	**Makanchi Array**	**13.32**	**332**	P	**Pn**	**05 26 38.4**	**-2.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR				MLR	MLR		
	comp=Z,3μm,19.6s						
NDI	**New Delhi**	**13.59**	**245**	*e*PKP	**Pn**	**05 26 43.0**	**-1.3**
NDI				*ex*	x	05 30 55.0	
ULHL	**Ulahol**	**13.60**	**305**	P	**Pn**	**05 26 44.8**	**+0.5**
	SNR=109						
AAA	**Alma-Ata**	**13.63**	**310**	*i* P	**Pn**	**05 26 45.9**	**+1.2**
AAA				*i* S	**Sn**	**05 29 16.0**	**-0.7**
AAA				pmax	pmax		
	comp=Z,3μm,2.8s						
AAA				smax			
	comp=N,1μm,5.6s						
AAA				MLR	MLR		
	comp=Z,16μm,14.0s						
AYAN	**Aya Nagar**	**13.77**	**244**	*e*PKP	**Pn**	**05 26 45.0**	**-1.6**
AYAN				AMb	AMB	05 26 51.6	
	comp=Z,34nm,1.2s						
AYAN				*i* x	x	05 32 24.8	
AGRA	**Agra**	**13.91**	**238**	*e*PKP	**Pn**	**05 26 46.3**	**-2.3**
SONA	**Sohna**	**13.93**	**244**	*e*PKP	**Pn**	**05 26 47.5**	**-1.3**
SONA				AMb	AMB	05 26 52.6	
	comp=Z,58nm,1.3s						
SONA				*i* x	x	05 32 40.0	
KMI	**Kunming**	**14.18**	**132**	P	**Pn**	**05 26 55.9**	**+3.6**
KMI				pP	pP	05 26 57.8	-2.8
KMI				sP	sP	05 26 59.4	-1.4
KMI				PP		05 27 06.8	
KMI				S	**Sn**	**05 29 34.3**	**+4.1**
KMI				sS		05 29 37.6	
KMI				SS		05 29 51.3	
KMI				pmax	pmax		
	comp=Z,250nm,6.1s						
KMI				LR	LR		
	comp=N,19μm,12.2s						
KMI				LR	LR		
	comp=E,18μm,13.2s						
KMI				LR	LR		
	comp=Z,12μm,10.9s						
KZA	**Kyzart**	**14.20**	**303**	P	**Pn**	**05 26 53.0**	**+0.5**
	SNR=23						
TKM2	**Tokmak 2**	**14.33**	**307**	P	**Pn**	**05 26 54.4**	**+0.1**
	SNR=43						
TKM2	**Tokmak 2**	**14.33**	**307**	*e*P	**Pn**	**05 26 54.3**	**+0.1**
TKM2				pmax	pmax		
	comp=Z,67nm,0.8s						
TKM2	**Tokmak 2**	**14.33**	**307**	*e*Pn	**Pn**	**05 26 54.3**	**+0.1**
	comp=Z,67nm,0.8s						
XAN	**Xi'an**	**14.61**	**90**	P	**Pn**	**05 26 53.1**	**-5.0**
XAN				pP	pP	05 27 02.9	-2.4
XAN				S	**Sn**	**05 29 40.4**	**-0.2**
XAN				sS	sS	05 29 54.3	-6.8
XAN				pmax	pmax		
	comp=Z,3.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,30nm,7.1s						
XAN				LR	LR		
	comp=N,24μm,16.0s						
XAN				LR	LR		
	comp=E,4μm,15.1s						
XAN				LR	LR		
	comp=Z,2μm,13.3s						
KBK	**Karagaybulak**	**14.64**	**305**	P	**Pn**	**05 26 58.9**	**+0.4**
	SNR=10.0						
UCH	**Uchtor**	**14.77**	**303**	P	**Pn**	**05 26 59.5**	**-0.7**
	SNR=12						
CHMS	**Chumysh**	**14.92**	**306**	P	**Pn**	**05 27 10.6**	**+8.3**
	SNR=10						
AAK	**Ala-Archa**	**14.94**	**304**	Pn	**Pn**	**05 27 02.0**	**-0.5**
	comp=Z,931nm,1.5s,SNR=24						
AAK	**Ala-Archa**	**14.94**	**304**	P	**Pn**	**05 27 03.0**	**+0.5**
	SNR=8.3						
AAK	**Ala-Archa**	**14.94**	**304**	Pn	**Pn**	**05 27 02.4**	**-0.1**
	comp=Z,0.0nm,0.3s,baz=124,slow=16,SNR=23						
AAK				LR	LR	05 33 53.4	
	comp=Z,15μm,20.2s,baz=100,slow=42						
AAK	**Ala-Archa**	**14.94**	**304**	*c i*P	**Pn**	**05 27 02.4**	**-0.1**
AAK	**Ala-Archa**	**14.94**	**304**	*e*Pn	**Pn**	**05 27 02.7**	**+0.1**
FRU	**Bishkek**	**14.94**	**305**	*i* P	**Pn**	**05 27 08.0**	**+5.5**
FRU				pmax	pmax		
	comp=Z,750nm,2.0s						
KHET	**Khetri**	**14.97**	**246**	*ex*	**Pn**	**05 26 59.6**	**-3.4**
KHET				AMb	AMB	05 27 17.3	
	comp=Z,88nm,1.6s						
USP	**Ospenovka**	**15.20**	**307**	P	**Pn**	**05 27 13.7**	**+7.6**
	SNR=13						
AML	**Almayashu**	**15.30**	**302**	P	**Pn**	**05 27 12.2**	**+4.9**
	SNR=13						
AML	**Almayashu**	**15.30**	**302**	*e*Pn	**Pn**	**05 27 07.4**	**+0.1**
	comp=Z,892nm,2.2s						
EKS2	**Erkin-Say**	**15.44**	**304**	P	**Pn**	**05 27 09.7**	**+0.5**
	SNR=13						
EKS2	**Erkin-Say**	**15.44**	**304**	*e*Pn	**Pn**	**05 27 09.8**	**+0.6**
	comp=Z,430nm,1.5s						
JBP	**Jabalpur**	**15.55**	**222**	⇓*i*P	**Pn**	**05 27 08.4**	**-2.4**
JBP				*ex*	x	05 27 15.6	
	comp=Z,175nm,1.9s						
JBP				*i* x	x	05 30 22.9	
BTO	**Baotou**	**15.73**	**65**	*e*P	**Pn**	**05 27 08.4**	**-4.6**
BTO				LR	LR		
	comp=N,11μm,17.1s						
BTO				LR	LR		
	comp=E,3μm,16.1s						
GYA	**Guiyang**	**15.88**	**119**	P	**Pn**	**05 27 11.5**	**-3.6**
GYA				PP		05 27 30.6	
GYA				S	**Sn**	**05 30 17.5**	**+5.8**
GYA				pmax	pmax		
	comp=Z,30nm,0.8s						
GYA				pmax	pmax		
	comp=Z,140nm,4.3s						
GYA				LR	LR		
	comp=N,3μm,12.0s						
GYA				LR	LR		
	comp=E,2μm,13.2s						
GYA				LR	LR		
	comp=Z,3μm,12.3s						
ENH	**Enshi**	**16.14**	**103**	*e*Pn	**Pn**	**05 27 15.3**	**-3.0**
	comp=Z,99nm,1.1s						
AJM	**Ajmer**	**16.72**	**243**	*e*PKP	**Pn**	**05 27 26.1**	**+0.4**
AJM				AMb	AMB	05 27 30.4	
	comp=Z,110nm,1.5s						
SONM	**Songino Array**	**16.87**	**37**	Pn	**Pn**	**05 27 24.6**	**-2.9**
	comp=Z,0.4nm,0.3s,baz=224,slow=12,SNR=41						
SONM				Lg		05 32 29.0	
	comp=Z,0.3nm,0.3s,baz=234,slow=28,SNR=2.8						
SONM				LR	LR	05 34 51.7	
	comp=Z,5μm,20.6s,baz=230,slow=40						
HHC	**Hu-ho-hao-te**	**16.93**	**65**	*e*P	**Pn**	**05 27 31.3**	**+2.9**
HHC				pP	pP	05 27 34.8	+3.8
HHC				sP	sP	05 27 38.3	+7.0
HHC				PP		05 27 45.8	
HHC				S	**Sn**	**05 30 38.8**	**+1.8**
HHC				sS	sS	05 30 44.5	-4.0
HHC				PcP	PcP	05 32 18.8	+3.6
HHC				ScS	ScS	05 39 30.0	-0.4
HHC				pmax	pmax		
	comp=Z,30nm,0.9s						
HHC				pmax	pmax		
	comp=Z,180nm,5.6s						
HHC				LR	LR		
	comp=N,11μm,14.9s						
HHC				LR	LR		
	comp=E,14μm,14.7s						
HHC				LR	LR		
	comp=Z,10μm,15.0s						
BHPL	**Bhopal**	**16.99**	**229**	*ex*	**Pn**	**05 27 24.7**	**-4.5**
BHPL				AMb	AMB	05 27 30.3	
	comp=Z,87nm,2.1s						
BHPL				*ex*	x	05 30 32.7	
TIY	**Taiyuan**	**17.21**	**76**	*e*P	**Pn**	**05 27 30.3**	**-1.6**
TIY				S	**Sn**	**05 30 39.8**	**-4.0**
TIY				sS	sS	05 30 55.3	+1.0
TIY				LR	LR		
	comp=N,2μm,6.7s						
TIY				LR	LR		
	comp=E,9μm,8.3s						
TIY				LR	LR		
	comp=Z,10μm,8.6s						
ULN	**Ulaanbaatar**	**17.22**	**38**	*e*P	**Pn**	**05 27 32.8**	**+0.8**
ULN				pmax	pmax		
	comp=Z,42nm,0.9s						
ULN	**Ulaanbaatar**	**17.22**	**38**	*e*Pn	**Pn**	**05 27 32.8**	**+0.8**
	comp=Z,42nm,0.9s						
ZAK	**Zakamensk**	**17.45**	**26**	⇓*i*P	**Pn**	**05 27 33.7**	**-1.1**
ZAK				pmax	pmax		
	comp=Z,24nm,2.2s						
NGP	**Nagpur**	**17.69**	**220**	*ex*	**Pn**	**05 27 34.2**	**-3.7**
NGP				*ex*	x	05 27 38.3	
	comp=Z,503nm,1.6s						
NGP				*e*S	**Sn**	**05 30 57.0**	**+1.6**
CHTO	**Chiang Mai**	**17.77**	**155**	*e*P	**Pn**	**05 27 37.4**	**-1.6**
CHTO				pmax	pmax		
	comp=Z,21nm,1.1s						
CHTO	**Chiang Mai**	**17.77**	**155**	*e*Pn	**Pn**	**05 27 37.4**	**-1.5**
	comp=Z,21nm,1.1s						
KURK	**Kurchatov**	**17.93**	**333**	Pn	**Pn**	**05 27 37.8**	**-3.0**
	comp=Z,0.1nm,0.3s,baz=134,slow=12,SNR=47						
KURK				LR	LR	05 34 28.4	
	comp=Z,3μm,19.7s,baz=155,slow=37						
KURK	**Kurchatov**	**17.93**	**333**	*e*P	**Pn**	**05 27 38.0**	**-2.8**
KURK				pmax	pmax		
	comp=Z,153nm,1.2s						
KURK	**Kurchatov**	**17.93**	**333**	*e*Pn	**Pn**	**05 27 38.0**	**-2.8**
	comp=Z,153nm,1.2s						
CM31	**Chiang Mai Arr**	**18.10**	**156**	*e*Pn	**Pn**	**05 27 41.7**	**-1.3**
	comp=Z,10nm,0.8s						
CMAR	**Chiang Mai Arr**	**18.10**	**156**	P	**Pn**	**05 27 40.1**	**-2.9**
	comp=Z,0.2nm,0.3s,baz=332,slow=12,SNR=21						
CMAR				LR	LR	05 34 27.5	
	comp=Z,2μm,21.1s,baz=152,slow=37						
CMAR	**Chiang Mai Arr**	**18.10**	**156**	P	**Pn**	**05 27 40.1**	**-2.9**
CMAR				LR	LR	05 34 27.5	
KBL	**Kabul**	**18.22**	**274**	*e*P	**Pn**	**05 27 42.7**	**-1.7**
KBL				pmax	pmax		
	comp=Z,638nm,2.2s						
KBL	**Kabul**	**18.22**	**274**	*e*Pn	**Pn**	**05 27 42.7**	**-1.7**
	comp=Z,638nm,2.2s						
TLY	**Talaya**	**18.65**	**25**	*e*P	**Pn**	**05 27 50.2**	**+0.6**
TLY				*e*S	**Sn**	**05 31 19.7**	**+1.2**
TLY				pmax	pmax		
	comp=Z,21nm,1.3s						
TLY				MLR	MLR		
	comp=Z,8μm,21.0s						
VIS	**Vishakhapatnam**	**18.86**	**204**	*e*PKP	**Pn**	**05 27 52.6**	**+0.4**
VIS				AMb	AMB	05 28 01.7	
	comp=Z,42nm,0.8s						
AKL	**Akola**	**19.17**	**224**	⇓*i*P	**Pn**	**05 27 54.1**	**-2.0**
AKL				*ex*	x	05 27 59.9	
	comp=Z,234nm,1.7s						
AKL				*i* x	x	05 33 56.8	
ZAA0	**Zalesovo Array**	**19.20**	**348**	*e*P	**Pn**	**05 27 55.1**	**-1.1**
ZALV	**Zalesovo Beam**	**19.20**	**348**	P	**Pn**	**05 27 54.3**	**-1.9**
	comp=Z,0.5nm,0.3s,baz=168,slow=11,SNR=30						
ZALV				LR	LR	05 35 46.4	
	comp=Z,2μm,18.6s,baz=166,slow=38						
ZALV	**Zalesovo Beam**	**19.20**	**348**	P	**Pn**	**05 27 54.3**	**-1.9**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV				MLR	MLR		
	comp=Z,2μm,18.6s						
JASL	**Jaisalmer**	**19.28**	**250**	*e*PKP	**Pn**	**05 27 56.4**	**-1.0**
IRK	**Irkutsk**	**19.34**	**25**	⇓*i*P	**Pn**	**05 27 58.0**	**+0.1**
IRK				pmax	pmax		
	comp=Z,117nm,2.2s						
WHN	**Wuhan**	**19.95**	**97**	⇑P	**Pn**	**05 28 04.3**	**-1.1**
WHN				S	**Sn**	**05 31 49.3**	**-1.0**
WHN				LR	LR		
	comp=N,24μm,8.2s						
WHN				LR	LR		
	comp=E,13μm,8.2s						
WHN				LR	LR		
	comp=Z,23μm,9.6s						
BJT	**Baijiatuau**	**20.27**	**69**	*e*P	**P**	**05 28 08.2**	**+1.0**
BJT				pmax	pmax		
	comp=Z,88nm,1.3s						
BJT	**Baijiatuau**	**20.27**	**69**	*e*P	**P**	**05 28 08.2**	**+1.1**
	comp=Z,88nm,1.3s						
BJI	**Beijing**	**20.28**	**69**	P	**P**	**05 28 07.8**	**+0.6**
BJI				S	**S**	**05 31 56.1**	**+0.9**
BJI				pmax	pmax		
	comp=Z,20nm,1.1s						
BJI				pmax	pmax		
	comp=Z,130nm,3.5s						
BJI				LR	LR		
	comp=N,22μm,16.4s,MS5.8						
BJI				LR	LR		
	comp=E,28μm,14.4s,MS5.8						
BJI				LR	LR		
	comp=Z,25μm,16.4s,MS5.7						
NVS	**Novosibirsk**	**20.33**	**347**	*e*P	**P**	**05 28 08.1**	**+0.4**
NVS				*e*S	**S**	**05 31 54.7**	**-1.3**
NVS				pmax	pmax		
	comp=Z,63nm,1.4s						
NVS				pmax	pmax		
	comp=N,105nm,1.9s						
NVS				pmax	pmax		
	comp=E,42nm,1.4s						
NVS				smax			
	comp=N,75nm,2.0s						
NVS				smax			
	comp=E,147nm,2.0s						
TIA	**Tai'an**	**21.01**	**80**	*e*P	**P**	**05 28 14.9**	**-0.3**
TIA				LR	LR		
	comp=N,5μm,10.0s,MS5.2						
TIA				LR	LR		
	comp=E,3μm,10.0s,MS5.2						
HYB	**Hyderabad**	**21.08**	**216**	*e*P	**P**	**05 28 18.0**	**+2.0**
HYB				*e*S	**S**	**05 32 12.0**	**+0.6**
HYB	**Hyderabad**	**21.08**	**216**	*i* P	**P**	**05 28 18.0**	**+2.0**
HYB				*e*S	**S**	**05 32 18.0**	**+6.6**
GZH	**Guangzhou**	**22.75**	**116**	P	**P**	**05 28 30.8**	**-3.1**
GZH				S	**S**	**05 32 35.0**	**-8.9**
GZH				LR	LR		
	comp=N,10μm,9.2s						
GZH				LR	LR		
	comp=E,5μm,9.2s						
GZH				LR	LR		
	comp=Z,11μm,15.4s,MS5.4						
BVAR	**Borovoye Array**	**23.06**	**327**	P	**P**	**05 28 36.9**	**0.0**
	comp=Z,36nm,1.2s,mb4.7,baz=134,slow=8.4,SNR=46						
BVAR	**Borovoye Array**	**23.06**	**327**	P	**P**	**05 28 36.9**	**0.0**
BVAR				pmax	pmax		
	comp=Z,36nm,1.2s						
QIZ	**Qiongzhong**	**23.09**	**130**	P	**P**	**05 28 38.3**	**+0.8**
QIZ				S	**S**	**05 32 50.0**	**+0.6**
QIZ				LR	LR		
	comp=N,16μm,15.9s						
QIZ				LR	LR		
	comp=Z,27μm,16.5s,MS5.8						
QIZ	**Qiongzhong**	**23.09**	**130**	PFAKE		05 28 50.0	+12
QIZ				LR	LR		
	comp=Z,3μm,19.0s,MS4.7						
CIT	**Chita**	**23.10**	**37**	*e*P	**P**	**05 28 38.1**	**+0.7**
CIT				*e*		05 28 55.4	
CIT				*e*		05 29 18.2	
BRVK	**Borovoye**	**23.13**	**327**	P	**P**	**05 28 38.0**	**+0.3**
	comp=Z,343nm,1.4s,mb5.6,SNR=28						
BRVK	**Borovoye**	**23.13**	**327**	*c e*P	**P**	**05 28 38.2**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,211nm,2.5s,mb5.1						
BRVK	**Borovoye**	**23.13**	**327**	*e*P	**P**	**05 28 38.0**	**+0.4**
	comp=Z,217nm,1.6s,mb5.3						
BRVK				LR	LR		
	comp=Z,5μm,19.0s,MS5.0						
NJ2	**Nanjing**	**23.18**	**90**	*e*P	**P**	**05 28 38.4**	**0.0**
NJ2				pP		05 28 46.6	
NJ2				sP	sP	05 28 50.3	+11
NJ2				PP		05 29 08.9	
NJ2				S	**S**	**05 32 45.5**	**-5.3**
NJ2				sS	sS	05 33 00.0	+8.2
NJ2				pmax	pmax		
	comp=Z,30nm,1.0s,mb4.7						
NJ2				pmax	pmax		
	comp=Z,250nm,6.5s						
NJ2				LR	LR		
	comp=N,15μm,15.4s,MS5.6						
NJ2				LR	LR		
	comp=E,4μm,15.2s,MS5.6						
NJ2				LR	LR		
	comp=Z,5μm,11.0s,MS5.2						
KAD	**Karad**	**23.48**	**225**	*e*PKP	**P**	**05 28 40.6**	**-1.0**
KAD				AMb	AMB	05 28 46.7	
	comp=Z,49nm,0.9s,mb4.9						
DL2	**Dalian**	**24.45**	**72**	P	**P**	**05 28 51.5**	**+1.0**
DL2				S	**S**	**05 33 10.0**	**-1.3**
DL2				sS	sS	05 33 20.3	+7.9
DL2				SS		05 33 57.9	
DL2				pmax	pmax		
	comp=Z,30nm,1.0s,mb4.7						
DL2				pmax	pmax		
	comp=Z,190nm,8.8s						
DL2				LR	LR		
	comp=N,5μm,17.5s,MS5.1						
DL2				LR	LR		
	comp=E,800nm,16.2s,MS5.1						
DL2				LR	LR		
	comp=Z,3μm,12.8s,MS5.0						
HIA	**Hailar**	**25.12**	**47**	PFAKE		05 29 10.0	+14
HIA				LR	LR		
	comp=Z,10μm,20.0s,MS5.3						
IMYA	**Miami**	**25.22**	**282**	*e*P	**P**	**05 28 58.7**	**+1.1**
SSE	**Sheshan**	**25.36**	**91**	P	**P**	**05 28 57.5**	**-1.4**
SSE				S	**S**	**05 33 24.3**	**-1.7**
SSE				sS	sS	05 33 29.3	+2.2
SSE				pmax	pmax		
	comp=Z,58nm,1.0s,mb5.1						
SSE				pmax	pmax		
	comp=Z,99nm,4.1s						
SSE				LR	LR		
	comp=N,9μm,16.5s,MS5.4						
SSE				LR	LR		
	comp=E,5μm,16.5s,MS5.4						
SSE				LR	LR		
	comp=Z,3μm,11.0s						
QZH	**Quanzhou**	**25.73**	**106**	*e*P	**P**	**05 29 03.5**	**+1.2**
QZH				S	**S**	**05 33 31.6**	**-0.4**
QZH				LR	LR		
	comp=N,23μm,15.0s,MS5.9						
QZH				LR	LR		
	comp=E,17μm,15.0s,MS5.9						
QZH				LR	LR		

comp=Z,15μm,13.5s,MS5.7
ISRO Mashad 25.73 282 *e*P **P 05 29 03.4 +1.2**
IMOG Moghan 25.86 281 *e*P **P 05 29 03.8 +0.4**
SNY Shenyang 26.02 66 ⇓P **P 05 29 04.6 -0.1**
SNY S **S 05 33 35.1 -1.1**
SNY pmax pmax
comp=Z,28nm,0.9s,mb4.8
SNY LR LR
comp=E,5μm,11.1s
SNY LR LR
comp=Z,5μm,15.8s,MS5.1
IKRD Kardeh 26.44 283 *e*P **P 05 29 00.9 -7.7**
ABKAR Akbulak array 26.82 311 *e*P **P 05 29 11.9 0.0**
comp=Z,18nm,0.9s,mb4.6
ISFR Sfrayin 26.82 284 *e*P **P 05 29 10.3 -1.7**
ISHV Shirvan 27.01 285 *e*P **P 05 29 14.6 +0.9**
CN2 Changchun 27.56 62 *e*P **P 05 29 19.0 +0.4**
CN2 *ep*P pP 05 29 23.3 +4.0
CN2 *es*P sP 05 29 26.1 +6.6
CN2 *e*S **S 05 33 58.4 -2.2**
CN2 pmax pmax
comp=Z,20nm,1.2s,mb4.6
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,3μm,11.0s,MS5.5
CN2 LR LR
comp=E,7μm,11.0s,MS5.5
CN2 LR LR
comp=Z,9μm,20.0s
TATO Taipei 28.01 103 PFAKE 05 29 30.0 +7.2
TATO LR LR
comp=Z,2μm,19.0s,MS4.7
YHNB Yeheng 28.07 104 PFAKE 05 29 30.0 +6.7
YHNB LR LR
comp=Z,3μm,22.0s,MS4.9
AKTK Aktyubinsk 28.39 313 P **P 05 29 26.1 +0.1**
AKTK LR LR 05 42 18.6
AKTO Aktyubinsk 28.39 313 P **P 05 29 26.1 +0.1**
comp=Z,3.8nm,0.7s,mb4.1,baz=100,slow=8.0,SNR=15
AKTO LR LR 05 42 18.6
comp=Z,6μm,18.5s,MS5.2,baz=297,slow=40
AKTO Aktyubinsk 28.39 313 P **P 05 29 26.1 +0.2**
AKTO pmax pmax
comp=Z,4.0nm,0.7s,mb4.2
AKTO MLR MLR
comp=Z,6μm,18.5s,MS5.2
INCN Inchon 28.48 75 PFAKE 05 29 40.0 +13
INCN LR LR
comp=Z,3μm,21.0s,MS4.8
KSRS Korea Array 29.50 75 P **P 05 29 34.0 -2.0**
comp=Z,12nm,0.9s,mb4.7,baz=268,slow=8.5,SNR=16
KSRS LR LR 05 41 40.6
comp=Z,2μm,19.5s,MS4.7,baz=97,slow=37
KSRS Korea Array 29.50 75 P **P 05 29 34.0 -2.0**
KSRS pmax pmax
comp=Z,12nm,0.9s,mb4.6
KSRS MLR MLR
comp=Z,2μm,19.5s,MS4.7
SVE Sverdlovsk 29.84 326⇑*e*P **P 05 29 39.9 +1.2**
SVE *e*S **S 05 34 36.0 -0.1**
SVE pmax pmax
comp=Z,83nm,2.0s,mb5.1
SVE MLR MLR
comp=Z,3μm,12.0s,MS5.1
IBAF Bafgh 29.90 273 *e*P **P 05 29 38.7 -0.8**
MDJ Mudanjiang 30.60 61 P **P 05 29 45.8 +0.1**
MDJ pP pP 05 29 48.5 +2.2
MDJ sP sP 05 29 50.0 +3.4
MDJ PcP PcP 05 32 40.5 -3.6
MDJ S **S 05 34 49.3 +0.9**
MDJ ScP ScP 05 36 22.8 -4.8
MDJ PcS PcS 05 36 25.0 -2.7
MDJ ScS ScS 05 40 22.4 -1.4
MDJ pmax pmax
comp=Z,13nm,1.4s,mb4.6
MDJ pmax pmax
comp=Z,32nm,3.8s
MDJ LR LR
comp=N,9μm,12.8s,MS5.7
MDJ LR LR
comp=E,1μm,11.3s,MS5.7
MDJ LR LR
comp=Z,5μm,16.1s,MS5.2
MDJ Mudanjiang 30.60 61 PFAKE 05 30 00.0 +14
MDJ LR LR
comp=Z,5μm,19.0s,MS5.2
ARU Arti 30.61 324 P **P 05 29 46.9 +1.4**
comp=Z,148nm,1.0s,mb5.8,SNR=5.7
ARU Arti 30.61 324 *c i*P **P 05 29 45.8 +0.3**
ARU *e* 05 30 41.0
ARU 05 32 43.3
ARU S **S 05 34 49.5 +1.4**
ARU SS SS 05 36 30.7 -28
ARU pmax pmax
comp=Z,87nm,2.5s,mb5.1
ARU MLR MLR
comp=Z,2μm,19.0s,MS4.9
ARU Arti 30.61 324 *e*P **P 05 29 46.0 +0.5**
comp=Z,36nm,1.1s,mb5.1
ARU LR LR
comp=Z,3μm,19.0s,MS5.0
ICHK Chekchek 30.66 275 *e*P **P 05 29 42.4 -3.9**
IMEH Mehriz 30.73 273 *e*P **P 05 29 46.2 -0.8**
KULM Kulim 31.09 162 PFAKE 05 30 00.0 +10
KULM LR LR
comp=Z,1μm,19.0s,MS4.6
IZEF Zefreh 32.18 277 *e*P **P 05 29 59.7 +0.1**
VLA Vladivostok 32.21 64 P **P 05 30 00.0 +0.2**
VLA pmax pmax
comp=Z,37nm,1.3s,mb5.0
VLA MLR MLR
comp=Z,4μm,14.6s,MS5.2
KLR Kul'dur 32.65 52 *e*P **P 05 29 56.8 -6.8**
KLR *e*S **S 05 35 21.0 +0.8**
KLR MLR MLR
comp=E,5μm,13.0s
KLR MLR MLR
comp=Z,10μm,13.0s,MS5.7
SOKR Solikamsk 33.03 328⇑*i*P **P 05 30 08.5 +1.7**
SOKR S **S 05 35 15.6 -10**
SOKR 05 40 31.5
SOKR pmax pmax
comp=Z,40nm,1.1s,mb5.3
SOKR MLR MLR
comp=Z,2μm,17.0s,MS4.9
PSI Prapat 33.10 166 P **P 05 30 06.7 -1.1**
comp=Z,9.1nm,0.9s,mb4.7,baz=286,slow=8.4,SNR=8.5
PSI LR LR 05 46 11.1
comp=Z,1μm,20.3s,MS4.7,baz=138,slow=41
PSI Prapat 33.10 166 P **P 05 30 06.7 -1.1**
PSI pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
PSI MLR MLR
comp=Z,1μm,20.3s,MS4.7
IPIR Pirpir 33.40 277 *e*P **P 05 30 12.1 +1.8**
IRAZ Razeghan 33.52 282 *e*P **P 05 30 11.8 +0.4**
TGY Tagaytay City 34.03 121 LR LR 05 44 30.5
comp=Z,5.9nm,18.0s,baz=128,slow=37
HABR Khabarovsk 34.70 54 *e*P **P 05 30 23.3 +1.8**
HABR *e* 05 31 34.3
HABR 05 32 53.2
HABR *e*S **S 05 35 50.4 -1.7**
HABR *e*SS SS 05 38 03.3 -19
HABR *e* 05 40 41.5
HABR MLR MLR
comp=Z,3μm,17.0s,MS5.0
YAK Yakutsk 35.98 30 PFAKE 05 30 40.0 +7.7
YAK LR LR
comp=Z,5μm,21.0s,MS5.3
TBLG Delisi 36.60 294 *e*P **P 05 30 42.0 +4.2**
TBLG Delisi 36.60 294 P **P 05 30 42.0 +4.2**
GNI Garni 36.78 292⇑*i*P **P 05 30 39.3 -0.1**
GNI pmax pmax
comp=Z,27nm,2.5s
GNI Garni 36.78 292 PFAKE 05 30 50.0 +11
GNI LR LR
comp=Z,1μm,19.0s,MS4.8
KKM Kota Kinabalu 37.09 136 *e*P **P 05 30 41.1 -1.1**
comp=Z,54nm,1.3s,mb5.2
KKM LR LR
comp=Z,3μm,22.0s,MS5.0
ZEI Tsey 37.13 296 *e*P **P 05 30 45.8 +3.5**
ZEI pmax pmax
comp=Z,6.0nm,0.4s,mb4.8

MAJO Matsushiro 37.77 74 PFAKE 05 31 00.0 +12
MAJO LR LR
comp=Z,1μm,21.0s,MS4.7
MJAR Matsushiro Arr 37.77 74 P **P 05 30 47.7 -0.1**
comp=Z,10nm,1.1s,mb4.5,baz=284,slow=9.7,SNR=15
MJAR LR LR 05 46 36.2
comp=Z,1μm,20.2s,MS4.6,baz=300,slow=37
MJAR Matsushiro Arr 37.77 74 P **P 05 30 47.7 -0.1**
MJAR pmax pmax
comp=Z,10.0nm,1.1s
MJAR MLR MLR
comp=Z,1μm,20.3s
KIV Kislovodsk 37.92 298 *e*P **P 05 30 49.7 +0.6**
KIV *e* 05 32 15.8
KIV *e*S **S 05 36 42.0 +0.6**
KIV pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
KIV MLR MLR
comp=Z,3μm,16.0s,MS5.2
KIV Kislovodsk 37.92 298 PFAKE 05 31 00.0 +11
KIV LR LR
comp=Z,4μm,19.0s,MS5.2
KSM Kuching 38.03 148 PFAKE 05 31 00.0 +10
KSM LR LR
comp=Z,3μm,19.0s,MS5.1
VRHR Novokhopersk 38.69 310 *e*P **P 05 30 54.9 -0.5**
VRHR pmax pmax
comp=E,8.0nm,0.4s
VRHR pmax pmax
comp=Z,10.0nm,0.4s,mb4.9
VRHR pmax pmax
comp=N,4.0nm,0.3s
VRHR MLR MLR
comp=Z,2μm,15.0s,MS5.2
VRHR MLR MLR
comp=N,720nm,9.0s
VRHR MLR MLR
comp=E,2μm,16.0s
YSS Yuzh-Sakhalins 39.85 57 *e*P **P 05 31 09.0 +3.8**
YSS *e*S **S 05 37 12.0 +1.6**
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.0
YSS Yuzh-Sakhalins 39.85 57 PFAKE 05 31 20.0 +15
YSS LR LR
comp=Z,655nm,19.0s,MS4.5
JHJ Hachijo jima 2 39.89 79 LR LR 05 48 44.3
comp=Z,1μm,18.2s,MS4.8,baz=253,slow=38
ASAJ Asahikawa 39.93 61 LR LR 05 48 36.3
comp=Z,3μm,20.4s,MS5.2,baz=218,slow=38
SOC Sochi 40.10 298 *e*P **P 05 31 06.7 -0.6**
SOC *e* 05 32 40.8
SOC *e*S **S 05 37 11.1 -3.1**
SOC *e*SSS 05 40 36.9
SOC pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
SOC MLR MLR
comp=Z,4μm,17.0s,MS5.3
VSR Storozhevoye 40.24 310 *e*P **P 05 31 07.8 -0.6**
VSR *e*S **S 05 37 15.4 -0.7**
VSR *e*SS SS 05 40 01.9 -12
VSR pmax pmax
comp=E,10.0nm,0.5s
VSR pmax pmax
comp=Z,9.0nm,0.5s,mb4.8
VSR pmax pmax
comp=N,10.0nm,1.2s
VSR pmax pmax
comp=N,80nm,3.1s
VSR pmax pmax
comp=Z,210nm,3.1s
VSR pmax pmax
comp=E,120nm,2.2s
VSR smax
comp=E,170nm,12.5s
VSR smax
comp=Z,20nm,4.2s
VSR smax
comp=N,130nm,11.1s
VSR MLR MLR
comp=Z,2μm,14.0s,MS5.2
VSR MLR MLR
comp=N,730nm,13.0s,MS5.1
VSR MLR MLR
comp=E,2μm,15.0s,MS5.1
ERM Erimo 40.58 64 *e*P **P 05 31 13.1 +1.8**
ERM pmax pmax
comp=Z,39nm,1.1s,mb5.0
ERM MLR MLR
comp=Z,1μm,20.0s,MS4.8
ERM Erimo 40.58 64 *e*P **P 05 31 13.1 +1.8**
comp=Z,39nm,1.1s,mb5.0
ERM LR LR
comp=Z,1μm,20.0s,MS4.8
TIXI Tiksi 41.35 17 *e*P **P 05 31 16.2 -1.1**
TIXI *e* 05 32 52.6
TIXI MLR MLR
comp=Z,4μm,19.0s,MS5.3
MOS Moscow 41.52 317 *e*P **P 05 31 17.5 -1.4**
MOS *e* 05 32 54.4
MOS pmax pmax
comp=Z,54nm,1.0s,mb5.1
MOS pmax pmax
comp=Z,500nm,2.2s,mb5.8
MOS MLR MLR
comp=Z,4μm,16.0s,MS5.3
MOS MLR MLR
comp=E,3μm,15.0s
ANN Anapa 41.60 300 *e*P **P 05 31 23.2 +3.5**
ANN *e* 05 32 56.5
ANN *e*SS SS 05 40 38.5 -2.6
ANN pmax pmax
comp=Z,55nm,1.2s,mb5.1
ANN MLR MLR
comp=N,1μm,16.0s,MS5.0
ANN MLR MLR
comp=E,1μm,16.0s,MS5.0
ANN MLR MLR
comp=Z,2μm,16.0s,MS5.1
OBN Obninsk 42.06 316⇓*i*P **P 05 31 23.3 0.0**
OBN *i* 05 33 16.9
OBN *i* S **S 05 37 42.8 -0.2**
OBN *i* SS SS 05 40 35.1 -15
OBN pmax pmax
comp=Z,67nm,1.6s,mb5.0
OBN MLR MLR
comp=Z,3μm,19.0s,MS5.1
OBN Obninsk 42.06 316 PFAKE 05 31 30.0 +6.7
OBN LR LR
comp=Z,3μm,20.0s,MS5.2
DAV Davao City (W) 42.20 124 PFAKE 05 31 40.0 +15
DAV LR LR
comp=Z,2μm,20.0s,MS4.9
SIM Simferopol' 43.93 301 *e*P **P 05 31 40.0 +1.5**
SIM *e*S **S 05 38 11.9 +1.2**
SIM *e*SS SS 05 41 19.0 -7.8
SIM pmax pmax
comp=Z,16nm,0.7s,mb4.9
SIM MLR MLR
comp=Z,2μm,19.2s,MS5.0
CBIJ Chichi jima 43.94 86 LR LR 05 50 42.8
comp=Z,590nm,18.3s,MS4.5,baz=329,slow=37
ASF Jabal al Asfar 44.83 282 P **P 05 31 45.2 -0.8**
comp=Z,8.7nm,0.8s,mb4.6,baz=297,slow=3.9,SNR=13
ASF Jabal al Asfar 44.83 282 P **P 05 31 45.2 -0.8**
ASF pmax pmax
comp=Z,9.0nm,0.8s
BR131 Keskin Array S 45.24 294 *e*P **P 05 31 49.2 0.0**
comp=Z,9.7nm,0.9s,mb4.6
BR131 LR LR
comp=Z,573nm,20.0s,MS4.5
BRTR Keskin Array B 45.24 294 P **P 05 31 49.2 +0.1**
comp=Z,4.9nm,0.7s,mb4.4,baz=98,slow=7.6,SNR=28
BRTR Keskin Array B 45.24 294 P **P 05 31 49.3 +0.2**
BRTR pmax pmax
comp=Z,5.0nm,0.7s
LVZ Lovozero 45.35 334⇓*e*P **P 05 31 50.6 +1.0**
LVZ pmax pmax
comp=Z,40nm,1.0s,mb5.2
LVZ Lovozero 45.35 334 PFAKE 05 32 00.0 +10
LVZ LR LR
comp=Z,2μm,20.0s,MS5.1
JOF Joensuu 45.66 326 *e*P **P 05 31 50.5 -1.6**
JOF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
JOF Joensuu 45.66 326 *ep* **P 05 31 50.5 -1.6**
comp=Z,8.1nm,0.8s,mb4.7

APA Apatity 45.72 333⇓*e*P **P 05 31 56.9 +4.4**
APA *i* 05 33 44.0
APA *i* S **S 05 38 42.0 +5.8**
APA pmax pmax
comp=Z,18nm,1.2s,mb4.9
APA MLR MLR
comp=Z,3μm,12.0s,MS5.4
MMAI Mount Meron Ar 45.75 284 P **P 05 31 53.0 -0.2**
comp=Z,2.6nm,0.5s,mb4.4,baz=67,slow=13,SNR=7.3
MMAI LR LR 05 56 47.8
comp=Z,936nm,18.9s,MS4.8,baz=90,slow=44
SEY Seymchan 46.21 34⇑*i*P **P 05 31 56.9 +0.4**
AKASG Malin Array Be 46.54 309 P **P 05 31 58.3 -0.9**
comp=Z,8.4nm,1.0s,mb4.6,baz=76,slow=6.7,SNR=11
AKASG LR LR 05 54 23.5
comp=Z,2μm,18.8s,MS5.2,baz=80,slow=40
AKASG Malin Array Be 46.54 309 P **P 05 31 58.3 -0.9**
AKASG pmax pmax
comp=Z,8.0nm,1.0s
AKASG MLR MLR
comp=Z,2μm,18.8s
AKBB Malin Array Si 46.54 309 *e*P **P 05 31 58.3 -0.9**
KIEV Kiev 46.55 309 *e*P **P 05 31 58.5 -0.8**
KIEV pmax pmax
comp=Z,22nm,1.3s,mb4.9
KIEV MLR MLR
comp=Z,3μm,19.0s,MS5.2
KIEV Kiev 46.55 309 *e*P **P 05 31 58.5 -0.8**
comp=Z,22nm,1.3s,mb4.9
KIEV LR LR
comp=Z,3μm,19.0s,MS5.2
CSS Prodhromos 46.76 287 PFAKE 05 32 10.0 +8.8
CSS LR LR
comp=Z,1μm,19.0s,MS4.9
MNK Minsk 47.10 315 *e*P **P 05 32 00.0 -3.6**
KIS Kishinev 47.28 304 *e*P **P 05 31 56.0 -9.0**
KIS *e*LQ 05 45 20.0
KIS *e*LR LR 05 54 30.0
comp=Z,2μm,16.0s
KIS Kishinev 47.28 304 *e*P **P 05 31 56.0 -9.0**
KIS *e* 05 33 40.0
EIL Elat 47.28 280 P **P 05 32 05.8 +0.5**
comp=Z,17nm,0.8s,mb5.0,baz=35,slow=5.8,SNR=8.7
VSU Vasula 47.60 320⇑*i*P **P 05 32 07.3 -0.1**
VSU pmax pmax
comp=Z,41nm,0.9s,mb5.5
KAF Kangasniemi 47.90 325 *e*P **P 05 32 08.3 -1.3**
KAF pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
KAF Kangasniemi 47.90 325 *ep* **P 05 32 08.3 -1.3**
comp=Z,6.6nm,0.8s,mb4.7
FINES FINESS Array B 47.98 324 P **P 05 32 10.1 -0.1**
comp=Z,7.0nm,0.6s,mb4.8,baz=90,slow=7.6,SNR=12
FINES LR LR 05 52 59.1
comp=Z,2μm,18.3s,MS5.1,baz=89,slow=37
FINES FINESS Array B 47.98 324 P **P 05 32 10.1 -0.2**
FINES pmax pmax
comp=Z,7.0nm,0.6s
FINES MLR MLR
comp=Z,2μm,18.3s
TIRR Tirgusor 48.02 301 ⇓P **P 05 32 11.1 +0.3**
TIRR Tirgusor 48.02 301 *e*P **P 05 32 13.0 +2.2**
comp=Z,32nm,1.6s,mb5.1
CFR Carcaliu 48.07 302 ⇓P **P 05 32 11.4 +0.2**
ISP Isparta 48.09 292 P **P 05 32 11.2 -0.3**
ISP MLR MLR
comp=Z,934nm,19.0s,MS4.8
KAPI Kappang 48.22 140 PFAKE 05 32 20.0 +7.3
KAPI LR LR
comp=Z,1μm,20.0s,MS4.9
HARR Harsova 48.31 301 ⇓P **P 05 32 13.6 +0.5**
KEV Kevo 48.48 335 *e*P **P 05 32 11.8 -2.2**
comp=Z,5.9nm,0.9s,mb4.6
KEV LR LR
comp=Z,2μm,21.0s,MS5.0
KEV Kevo 48.48 335 *ep* **P 05 32 11.8 -2.2**
comp=Z,5.9nm,0.9s,mb4.6
VRI Vrincioaia 48.90 303 ⇑P **P 05 32 18.2 +0.6**
PLOR Plostina 48.96 303 ⇓P **P 05 32 19.1 +1.0**
ARCES ARCESS Array B 48.96 335 P **P 05 32 17.5 -0.3**
comp=Z,16nm,1.1s,mb5.0,baz=81,slow=7.6,SNR=19
ARCES LR LR 05 54 05.5
comp=Z,1μm,18.1s,MS4.9,baz=110,slow=37
ARCES ARCESS Array B 48.96 335 P **P 05 32 17.5 -0.2**
ARCES pmax pmax
comp=Z,16nm,1.1s
ARCES MLR MLR
comp=Z,1μm,18.1s
PETK Petropavlovsk- 49.02 47 P **P 05 32 17.8 -0.6**
comp=Z,2.0nm,0.7s,mb4.3,baz=280,slow=2.5,SNR=2.5
PETK LR LR 05 53 29.2
comp=Z,2μm,18.1s,MS5.0,baz=96,slow=37
PETK Petropavlovsk- 49.02 47 P **P 05 32 17.8 -0.6**
PETK pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
PETK MLR MLR
comp=Z,2μm,18.1s,MS5.0
MLR Muntele Rosu 49.52 303 ⇓P **P 05 32 23.4 +1.1**
BURAR Bucovina Array 49.58 306 ⇓P **P 05 32 23.1 +0.3**
BUR08 Bucovina Ar. S 49.59 306 *e*P **P 05 32 22.6 -0.2**
PET Petropavlovsk 49.60 47 PFAKE 05 32 30.0 +7.1
PET LR LR
comp=Z,2μm,20.0s,MS5.1
JMB Yambol 49.77 299 P **P 05 32 25.3 +1.0**
LVV L'vov 49.96 309 *e*P **P 05 32 31.9 +6.3**
LVV *e*S **S 05 39 39.5 +2.8**
LVV MLR MLR
comp=E,1μm,17.0s,MS5.0
LVV MLR MLR
comp=Z,1μm,17.0s,MS5.0
LVV MLR MLR
comp=N,800nm,13.0s,MS5.0
VOIR 50.14 303 ⇓P **P 05 32 27.4 +0.3**
ALN Alexandroupoli 50.56 297 P **P 05 32 28.0 -2.4**
KWP Kalwaria Pacla 50.84 309 *e*P **P 05 32 32.6 +0.3**
KWP Kalwaria Pacla 50.84 309 *e*P **P 05 32 32.2 -0.1**
KWP pmax pmax
comp=Z,31nm,0.9s,mb5.2
KWP MLR MLR
comp=Z,3μm,20.0s,MS5.3
KWP Kalwaria Pacla 50.84 309 *e*P **P 05 32 32.1 -0.1**
comp=Z,31nm,0.9s,mb5.2
KWP LR LR
comp=Z,3μm,20.0s,MS5.3
RDO Rodhopi 50.87 297 P **P 05 32 31.9 -0.7**
KOLS Kolonicke sedl 51.25 308 *e*P **P 05 32 35.2 -0.2**
comp=Z,45nm,2.4s,mb5.0
KOLS *e*S S 05 40 18.3 +24
KOLS *e*SS SS 05 43 46.3 +17
KOLS LR LR
comp=Z,2μm,22.7s,MS5.0
TRO Tromso 51.27 335 *e*S **S 05 39 57.2 +2.8**
TRO *e*SS SS 05 43 36.8 +7.5
TRO AMS AMS 05 57 02.3
comp=Z,2μm,14.9s,MS5.2
UZH Uzhgorod 51.30 308 *e*P **P 05 32 42.0 +6.2**
UZH *e* 05 32 51.7
UZH *e*S **S 05 40 03.0 +7.6**
UZH MLR MLR
comp=N,1μm,14.0s,MS5.3
UZH MLR MLR
comp=E,2μm,14.0s,MS5.3
UZH MLR MLR
comp=Z,900nm,14.0s,MS5.0
DRGR 51.42 305 ⇓P **P 05 32 37.2 +0.5**
LIA Limnos Island 51.48 296 P **P 05 32 36.6 -0.7**
GZR Gura Zlata 51.71 303 ⇓P **P 05 32 39.4 +0.5**
CRVS Cervenica-Dubn 51.78 308 *e*P **P 05 32 40.1 +0.7**
CRVS *e* 05 32 50.8
CRVS *e*S **S 05 40 04.9 +2.8**
CRVS pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
CRVS MLR MLR
comp=Z,1μm,20.2s,MS4.9
CRVS Cervenica-Dubn 51.78 308 *e*P **P 05 32 40.1 +0.7**
comp=Z,10nm,1.4s,mb4.6
CRVS *e* 05 32 50.8
CRVS *e*S **S 05 40 04.9 +2.8**
CRVS *e*SS SS 05 43 49.3 +11
CRVS LR LR
comp=Z,1μm,20.2s,MS4.9
STHS Stebnicka Huta 51.81 309 *e*P **P 05 32 40.0 +0.4**
STHS pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
STHS Stebnicka Huta 51.81 309 *e*P **P 05 32 40.0 +0.4**

comp=Z,5.7nm,1.2s,mb4.4
MSEY Mahe Island 52.04 228 PFAKE 05 32 50.0 +8.3
MSEY LR LR
comp=Z,931nm,21.0s,MS4.8
VTS Vitosha 52.14 300 P **P** **05 32 42.5 +0.4**
BILL Bilibino 52.24 27 *d iP* **P** **05 32 42.6 +0.1**
BILL pmax pmax
comp=Z,20nm,1.2s,mb4.9
BILL MLR MLR
comp=Z,5µm,18.0s,MS5.6
BILL Bilibino 52.24 27 *e*P **P** **05 32 43.3 +0.7**
comp=Z,13nm,0.9s,mb4.8
BILL LR LR
comp=Z,5µm,19.0s,MS5.5
NIE Niedzica 52.41 309 *e*P **P** **05 32 45.3 +1.3**
BZS Buzias 52.44 304 ⇑P **P** **05 32 45.0 +0.6**
KECS Kecovo 52.51 308 *e*P **P** **05 32 45.0 +0.2**
KECS pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
KECS Kecovo 52.51 308 *e*P **P** **05 32 45.0 +0.2**
comp=Z,3.8nm,0.9s,mb4.3
OJC Ojcow 52.56 310 *e*P **P** **05 32 44.3 -0.8**
OJC *e*S **S** **05 40 09.5 -3.2**
OJC L 05 56 05.3
comp=Z,1.6nm,21.5s
AOS Alonnisos 52.66 296 P **P** **05 32 45.3 -0.8**
GUMO Guam 52.70 100 PFAKE 05 33 00.0 +13
GUMO LR LR
comp=Z,984nm,21.0s,MS4.8
PSZ Piszkesteto 53.02 307 ⇓P **P** **05 32 48.8 +0.2**
PSZ LR LR
comp=Z,2µm,20.0s,MS5.1
XOR Xorichti 53.11 296 P **P** **05 32 48.1 -1.3**
VYHS Vyhne 53.57 308 *e*P **P** **05 32 53.1 +0.5**
comp=Z,18nm,1.5s,mb4.8
VYHS *e*PP pP 05 32 57.1 +3.8
VYHS *e*S **S** **05 40 25.6 -0.9**
VYHS *e*SS SS 05 44 27.3 +21
VYHS LR LR
comp=Z,1µm,20.1s,MS5.0
KBS Kingsbay 53.59 346 AMS AMS 06 01 22.3
comp=Z,2µm,12.2s,MS5.3
KBS Kingsbay 53.59 346 PFAKE 05 33 00.0 +7.6
KBS LR LR
comp=Z,2µm,19.0s,MS5.1
OKC Ostrava-Krasne 53.68 310 *e*P **P** **05 32 53.9 +0.5**
OKC *e*S **S** **05 40 30.0 +2.0**
OKC MLR MLR
comp=Z,1µm,15.9s,MS5.1
OKC Ostrava-Krasne 53.68 310 *e*P **P** **05 32 53.9 +0.5**
OKC *e*pP pP 05 32 57.1 +3.0
OKC *e*S **S** **05 40 30.0 +2.0**
OKC AMS AMS 05 57 30.0
comp=Z,1µm,15.9s
KOLL Kolacno 53.83 308 *e*P **P** **05 32 54.8 +0.3**
AGG Agios Georgios 53.85 296 P **P** **05 32 53.1 -1.7**
MORC Moravsky Berou 54.08 310 *e*P **P** **05 32 57.0 +0.7**
MORC pmax pmax
comp=Z,30nm,1.5s,mb5.0
MORC Moravsky Berou 54.08 310 *e*P **P** **05 32 57.0 +0.7**
comp=Z,30nm,1.5s,mb5.0
PKSM Moragy 54.29 305 ⇑P **P** **05 32 57.6 -0.3**
DPC Dobruska-Polom 54.70 311 *e*P **P** **05 33 01.3 +0.5**
DPC *e*S **S** **05 40 38.6 -3.1**
DPC MLR MLR
comp=Z,2µm,13.9s,MS5.3
DPC Dobruska-Polom 54.70 311 *e*P **P** **05 33 01.3 +0.5**
DPC *e*pP pP 05 33 04.1 +2.6
DPC *e*S **S** **05 40 38.6 -3.1**
DPC AMS AMS 05 58 50.0
comp=Z,2µm,13.9s
ZST Bratislava 54.76 308 *e*P **P** **05 33 02.6 +1.3**
comp=Z,7.4nm,0.7s,mb4.8
ZST *e*S **S** **05 40 50.7 +8.1**
ZST *e*SS SS 05 44 39.1 +14
ZST LR LR
comp=Z,2µm,16.2s,MS5.3
VRAC Vranov 54.79 309 ⇓P **P** **05 33 02.7 +1.2**
UPC Upice 54.85 311 *e*P **P** **05 33 02.3 +0.4**
UPC Upice 54.85 311 *e*P **P** **05 33 02.3 +0.4**
UPC *e*pP pP 05 33 05.6 +3.0
TIR Tirane 54.89 299 PFAKE 05 33 10.0 +7.6
TIR LR LR
comp=Z,2µm,21.0s,MS5.1
NB2 NORSAR Subarra 55.16 324 P **P** **05 33 03.2 -0.8**
comp=Z,14nm,0.8s,mb5.0,baz=79,slow=7.4
NOA NORSAR Array B 55.16 324 P **P** **05 33 03.6 -0.4**
comp=Z,16nm,0.9s,mb5.0,baz=79,slow=7.2,SNR=22
NOA LR LR 05 56 22.3
comp=Z,991nm,18.1s,MS4.9,baz=95,slow=36
NOA NORSAR Array B 55.16 324 P **P** **05 33 03.6 -0.4**
NOA pmax pmax
comp=Z,16nm,0.9s
NOA MLR MLR
comp=Z,991nm,18.1s
NAO01 NORSAR Array S 55.35 324 *e*P **P** **05 33 04.9 -0.5**
comp=Z,10nm,0.8s,mb4.9
TREC Trest 55.49 310 AMS AMS 06 01 00.0
comp=Z,2µm,18.3s
CONA Conrad Observa 55.64 308 ⇑ *i*P **P** **05 33 08.0 +0.4**
comp=Z,16nm,0.8s,mb5.1
PVCC Panska Ves 55.73 311 AMS AMS 05 58 40.0
comp=Z,2µm,14.5s
PRU Pruhonice 55.90 311 *e*P **P** **05 33 09.8 +0.3**
PRU *e*S **S** **05 40 56.1 -1.6**
PRU MLR MLR
comp=Z,2µm,14.8s,MS5.3
PRU Pruhonice 55.90 311 *e*P **P** **05 33 09.8 +0.3**
PRU *e*pP pP 05 33 12.9 +2.8
PRU *e*S **S** **05 40 56.1 -1.6**
PRU AMS AMS 05 59 30.0
comp=Z,2µm,14.8s
PRA Prague 55.94 311 P **P** **05 33 13.0 +3.2**
BRG Berggiesshubel 56.02 312 *e*P **P** **05 33 10.4 +0.1**
comp=Z,45nm,1.9s,mb5.2
BRG S **S** **05 40 59.0 -0.4**
BRG SS SS 05 44 47.0 +2.1
BRG
comp=Z,3µm,17.5s
BRG
comp=N,2µm,18.5s
BRG
comp=E,2µm,18.5s
BRG Berggiesshubel 56.02 312 *e*P **P** **05 33 10.4 0.0**
BRG S **S** **05 40 59.0 -0.4**
BRG SS SS 05 44 47.0 +2.1
BRG pmax pmax
comp=Z,27nm,1.9s,mb5.0
BRG MLR MLR
comp=Z,2µm,17.5s,MS5.2
BRG MLR MLR
comp=N,1µm,18.5s,MS5.1
BRG MLR MLR
comp=E,1µm,18.5s,MS5.1
KONO Kongsberg 56.24 323 *e*S **S** **05 41 01.6 -0.3**
KONO *e*SS SS 05 44 48.8 +0.9
KONO Kongsberg 56.24 323 PFAKE 05 33 20.0 +8.2
KONO LR LR
comp=Z,807nm,20.0s,MS4.8
CLL Collm 56.47 313 *e*P **P** **05 33 14.3 +0.7**
comp=Z,22nm,1.5s,mb5.0
CLL Collm 56.47 313 *e*P **P** **05 33 14.0 +0.4**
CLL *e* 05 33 20.0
CLL *e*S **S** **05 41 02.0 -3.4**
CLL pmax pmax
comp=Z,44nm,1.9s,mb5.2
CLL MLR MLR
comp=Z,2µm,18.0s,MS5.3
CLL Collm 56.47 313 *e*P **P** **05 33 14.0 +0.4**
comp=Z,44nm,1.9s,mb5.2
CLL *e* 05 33 20.0
CLL *e*S **S** **05 41 02.0 -3.4**
CLL LR LR
comp=Z,2µm,18.0s,MS5.3
SOKA Soboth 56.54 307 ⇑ *i*P **P** **05 33 14.3 +0.2**
comp=Z,17nm,0.9s,mb5.1
KHC Kasperske Hory 56.74 310 *e*P **P** **05 33 16.0 +0.5**
KHC *e*S **S** **05 41 07.6 -1.4**
KHC MLR MLR
comp=Z,2µm,18.8s,MS5.1
KHC Kasperske Hory 56.74 310 *e*P **P** **05 33 15.9 +0.4**
comp=Z,7.5nm,1.1s,mb4.6
KHC Kasperske Hory 56.74 310 *e*P **P** **05 33 16.0 +0.5**
KHC *e*pP pP 05 33 18.4 +2.2
KHC *e*S **S** **05 41 07.6 -1.4**
KHC AMS AMS 06 01 50.0
comp=Z,2µm,18.8s
GEC2 GERESS Array S 56.75 310 *e*P **P** **05 33 16.0 +0.4**
comp=Z,38nm,1.6s,mb5.2
GEC2 GERESS Array S 56.75 310 *e*P **P** **05 33 16.0 +0.4**
GEC2 pmax pmax
comp=Z,38nm,1.6s,mb5.2
NKC Novy Kostel 57.12 311 *e*P **P** **05 33 17.8 -0.4**
NKC *e*S **S** **05 41 15.0 +1.1**
NKC MLR MLR
comp=Z,2µm,14.9s,MS5.4
NKC Novy Kostel 57.12 311 *e*P **P** **05 33 17.8 -0.4**
NKC *e*pP pP 05 33 21.6 +2.8
NKC *e*S **S** **05 41 15.0 +1.1**
NKC AMS AMS 05 59 30.0
comp=Z,2µm,14.9s
BSEG Bad Segeberg 57.31 316 *e*P **P** **05 33 19.9 +0.4**
comp=Z,27nm,1.1s,mb5.2
MOX Moxa 57.51 312 *e*P **P** **05 33 23.4 +2.5**
comp=Z,39nm,2.0s,mb5.1
MOX *e*S **S** **05 41 23.0 +4.0**
MOX
comp=Z,1µm,21.0s
MOX Moxa 57.51 312 *e*P **P** **05 33 20.8 -0.1**
comp=Z,22nm,1.6s,mb4.9
MOX Moxa 57.51 312 *e*P **P** **05 33 23.4 +2.5**
MOX *e*S **S** **05 41 23.0 +4.0**
MOX pmax pmax
comp=Z,39nm,2.0s,mb5.1
MOX MLR MLR
comp=Z,1µm,21.0s,MS5.0
RJOB Jochberg 57.66 308 *e*P **P** **05 33 22.6 +0.5**
comp=Z,9.0nm,1.0s,mb4.8
TRI Trieste 57.69 306 PFAKE 05 33 30.0 +7.7
TRI LR LR
comp=Z,1µm,21.0s,MS5.0
NRDL Niedersach Rie 57.85 314 *e*P **P** **05 33 23.7 +0.4**
comp=Z,36nm,1.3s,mb5.2
TIP Timpagrande 57.86 298 PFAKE 05 33 40.0 +16
TIP LR LR
comp=Z,841nm,21.0s,MS4.8
CLZ Clausthal 57.89 314 *e*P **P** **05 33 23.8 +0.2**
comp=Z,23nm,1.2s,mb5.1
CLZ Clausthal 57.89 314 *e*P **P** **05 33 23.8 +0.2**
CLZ pmax pmax
comp=Z,23nm,1.2s,mb5.1
GRA1 Grafenberg Arr 58.04 311 *e*P **P** **05 33 25.5 +0.8**
comp=Z,53nm,1.5s,mb5.3
GRA1 *e*PP PP 05 35 32.0 -0.9
GRA1 LR LR
comp=Z,3µm,18.7s,MS5.4
GRF Grafenberg Arr 58.04 311 *e*P **P** **05 33 25.5 +0.8**
comp=Z,53nm,1.5s,mb5.3
GRF *e*PP PP 05 35 32.0 -0.9
GRF *e*L 06 00 19.8
comp=Z,3µm,18.7s
GRF Grafenberg Arr 58.04 311 *e*P **P** **05 33 25.5 +0.8**
GRF *e* 05 35 32.0
GRF pmax pmax
comp=Z,53nm,1.5s,mb5.3
GRF MLR MLR
comp=Z,3µm,18.7s,MS5.4
GRF Grafenberg Arr 58.04 311 *e*P **P** **05 33 25.5 +0.8**
GRF *e* 05 35 32.0
GRF pmax pmax
comp=Z,53nm,1.5s,mb5.3
GRF MLR MLR
comp=Z,3µm,18.7s,MS5.4
BER Bergen 58.12 324 AMS AMS 06 00 12.7
comp=Z,2µm,11.3s,MS5.6
FX1 Attu Island--F 58.19 45 LR LR 06 01 22.5
comp=Z,956nm,18.1s,MS5.0,baz=98,slow=39
CEL Celeste 58.83 297 PFAKE 05 33 40.0 +10
CEL LR LR
comp=Z,1µm,21.0s,MS5.0
FETA Feichten 59.23 308 ⇑ *i*P **P** **05 33 32.6 -0.4**
comp=Z,11nm,0.9s,mb4.9
TNS Taunus Mts 59.56 312 *e*P **P** **05 33 37.0 +1.8**
comp=Z,40nm,1.5s,mb5.2
TNS Taunus Mts 59.56 312 *e*P **P** **05 33 37.0 +1.8**
TNS pmax pmax
comp=Z,40nm,1.5s,mb5.2
JMIC Jan Mayen 60.14 338 AMS AMS 06 01 44.5
comp=Z,692nm,14.6s,MS4.9
BFO Black Forest 60.29 310 *e*P **P** **05 33 41.4 +1.1**
BFO pmax pmax
comp=Z,21nm,1.3s,mb5.0
BFO MLR MLR
comp=Z,2µm,19.0s,MS5.2
BFO Black Forest 60.29 310 *e*P **P** **05 33 41.4 +1.1**
comp=Z,21nm,1.3s,mb5.0
BFO LR LR
comp=Z,2µm,19.0s,MS5.2
VLC Villacollemand 60.48 305 PFAKE 05 33 50.0 +8.4
VLC LR LR
comp=Z,2µm,22.0s,MS5.1
WDD Wield Dalam 60.78 295 PFAKE 05 34 00.0 +16
WDD LR LR
comp=Z,579nm,19.0s,MS4.8
CDF Champ du Feu 60.91 311 *e*P **P** **05 33 44.2 -0.3**
comp=Z,32nm,1.1s,mb5.0
CDF Champ du Feu 60.91 311 *e*P **P** **05 33 44.2 -0.3**
CDF pmax pmax
comp=Z,16nm,1.1s,mb5.1
CDF Champ du Feu 60.91 311 *e*P **P** **05 33 44.2 -0.3**
comp=Z,16nm,1.1s,mb5.1
ECH Echery 61.06 311 PFAKE 05 34 00.0 +14
ECH LR LR
comp=Z,2µm,20.0s,MS5.2
WLF Walferdange 61.14 312 *e*P **P** **05 33 48.9 +2.8**
comp=Z,42nm,1.4s,mb5.4
WLF Walferdange 61.14 312 PFAKE 05 34 00.0 +14
WLF LR LR
comp=Z,2µm,20.0s,MS5.2
HINF Hinteralfeld 61.40 310 *e*P **P** **05 33 47.3 -0.5**
comp=Z,20nm,1.0s,mb4.9
HINF Hinteralfeld 61.40 310 *e*P **P** **05 33 47.3 -0.5**
HINF pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
HINF Hinteralfeld 61.40 310 *e*P **P** **05 33 47.3 -0.5**
comp=Z,10nm,1.0s,mb4.9
HAU Haudompre 61.64 311 *e*P **P** **05 33 48.9 -0.6**
HAU *e*MLR MLR
comp=Z,2µm,21.2s,MS5.0
HAU Haudompre 61.64 311 *e*P **P** **05 33 48.9 -0.6**
HAU LR LR
comp=Z,2µm,21.3s,MS5.3
GIVF Givet 61.78 313 *e*P **P** **05 33 49.8 -0.6**
KMBO Kilima Mbogo 61.98 246 P **P** **05 33 52.0 -0.2**
comp=Z,1.5nm,0.5s,mb4.4,baz=78,slow=15,SNR=4.4
KMBO LR LR 06 00 42.2
comp=Z,784nm,21.9s,MS4.8,baz=225,slow=36
KMBO Kilima Mbogo 61.98 246 P **P** **05 33 52.0 -0.2**
KMBO pmax pmax
comp=Z,2.0nm,0.5s
KMBO MLR MLR
comp=Z,784nm,21.9s
PGF Pioggiola 62.03 304 *e*P **P** **05 33 51.8 -0.4**
comp=Z,43nm,1.1s,mb5.2
PGF Pioggiola 62.03 304 *e*P **P** **05 33 51.8 -0.4**
PGF pmax pmax
comp=Z,21nm,1.1s,mb5.2
PGF Pioggiola 62.03 304 *e*P **P** **05 33 51.8 -0.4**
comp=Z,21nm,1.1s,mb5.2
BAIF Baives 62.16 313 *e*P **P** **05 33 53.0 0.0**
MBWA Marble Bar 62.30 150 *e*P **P** **05 33 55.1 +1.0**
comp=Z,50nm,1.2s,mb5.5
MBWA LR LR
comp=Z,857nm,21.0s,MS4.9
FITZ Fitzroy Crossi 62.32 143 P **P** **05 33 51.9 -2.4**
comp=Z,8.9nm,0.9s,mb4.9,baz=231,slow=1.6,SNR=5.4
FITZ LR LR 06 06 36.8
comp=Z,505nm,19.5s,MS4.7,baz=324,slow=42
FITZ Fitzroy Crossi 62.32 143 *e*P **P** **05 33 52.8 -1.5**
comp=Z,9.1nm,0.9s,mb4.9
CABF La Chapelle 62.34 309 *e*P **P** **05 33 53.5 -0.7**
comp=Z,23nm,1.1s,mb4.9
CABF La Chapelle 62.34 309 *e*P **P** **05 33 53.5 -0.7**
CABF pmax pmax
comp=Z,11nm,1.1s,mb4.9
CABF La Chapelle 62.34 309 *e*P **P** **05 33 53.5 -0.7**
comp=Z,11nm,1.1s,mb4.9
LPG La Plagne 62.35 308 *e*P **P** **05 33 54.7 +0.4**
comp=Z,61nm,1.0s,mb5.4
LPG La Plagne 62.35 308 *e*P **P** **05 33 54.7 +0.4**
LPG pmax pmax
comp=Z,31nm,1.0s,mb5.4
LPG La Plagne 62.35 308 *e*P **P** **05 33 54.7 +0.4**
comp=Z,31nm,1.0s,mb5.4
LPL La Plagne 62.36 308 *e*P **P** **05 33 54.6 +0.3**
comp=Z,58nm,1.0s,mb5.4
LPL La Plagne 62.36 308 *e*P **P** **05 33 54.6 +0.3**
LPL pmax pmax
comp=Z,29nm,1.0s,mb5.4
LPL La Plagne 62.36 308 *e*P **P** **05 33 54.6 +0.3**
comp=Z,29nm,1.0s,mb5.4
SBF Sospel 62.55 306 *e*P **P** **05 33 55.4 -0.3**
comp=Z,47nm,0.9s,mb5.3
SBF Sospel 62.55 306 *e*P **P** **05 33 55.4 -0.3**
SBF pmax pmax
comp=Z,24nm,0.9s,mb5.3
SBF Sospel 62.55 306 *e*P **P** **05 33 55.4 -0.3**
comp=Z,24nm,0.9s,mb5.3
BNI Bardonecchia 62.58 307 PFAKE 05 34 10.0 +14
BNI LR LR
comp=Z,2µm,22.0s,MS5.2
VSL Villasalto 63.01 301 PFAKE 05 34 10.0 +11
VSL LR LR
comp=Z,816nm,21.0s,MS4.9
ORIF Oris-en-Rattie 63.15 307 *e*P **P** **05 33 59.0 -0.6**
comp=Z,24nm,0.8s,mb5.1
ORIF *e*MLR MLR
comp=Z,2µm,21.5s,MS5.0
ORIF Oris-en-Rattie 63.15 307 *e*P **P** **05 33 59.0 -0.6**
ORIF pmax pmax
comp=Z,12nm,0.8s,mb5.1
ORIF Oris-en-Rattie 63.15 307 *e*P **P** **05 33 59.0 -0.6**
comp=Z,12nm,0.8s,mb5.1
FRF La Foret Royal 63.20 306 *e*P **P** **05 33 59.4 -0.6**
comp=Z,19nm,0.9s,mb5.0
FRF La Foret Royal 63.20 306 *e*P **P** **05 33 59.4 -0.6**
FRF pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
FRF La Foret Royal 63.20 306 *e*P **P** **05 33 59.4 -0.6**
comp=Z,9.6nm,0.9s,mb4.9
LMR La Mourre 63.38 306 *e*P **P** **05 34 00.7 -0.5**
LOR Lormes 63.48 311 *e*P **P** **05 34 00.7 -1.1**
LOR *e*MLR MLR
comp=Z,2µm,22.0s,MS4.8
LOR Lormes 63.48 311 *e*P **P** **05 34 00.7 -1.1**
LOR LR LR
comp=Z,2µm,22.0s,MS5.2
SMF Signal de Mont 63.75 310 *e*P **P** **05 34 02.9 -0.6**
comp=Z,38nm,1.1s,mb5.0
SMF Signal de Mont 63.75 310 *e*P **P** **05 34 02.9 -0.6**
SMF pmax pmax
comp=Z,19nm,1.1s,mb5.0
SMF Signal de Mont 63.75 310 *e*P **P** **05 34 02.9 -0.6**
comp=Z,19nm,1.1s,mb5.0
SSF Saint Saulge 63.78 310 *e*P **P** **05 34 03.0 -0.8**
comp=Z,32nm,1.2s,mb4.9
SSF Saint Saulge 63.78 310 *e*P **P** **05 34 03.0 -0.8**
SSF pmax pmax
comp=Z,16nm,1.2s,mb4.9
SSF Saint Saulge 63.78 310 *e*P **P** **05 34 03.0 -0.8**
comp=Z,16nm,1.2s,mb4.9
SSB Saint Sauveur 63.87 308 PFAKE 05 34 20.0 +16
SSB LR LR
comp=Z,1µm,20.0s,MS5.1
VIVF Saint-Julien-l 63.96 308 *e*P **P** **05 34 04.5 -0.5**
comp=Z,31nm,1.1s,mb5.0
VIVF Saint-Julien-l 63.96 308 *e*P **P** **05 34 04.5 -0.5**
VIVF pmax pmax
comp=Z,16nm,1.1s,mb5.0
VIVF Saint-Julien-l 63.96 308 *e*P **P** **05 34 04.5 -0.5**
comp=Z,16nm,1.1s,mb5.0
AVF Avril sur Loir 63.99 310 *e*P **P** **05 34 04.4 -0.8**
comp=Z,21nm,0.9s,mb4.9
AVF Avril sur Loir 63.99 310 *e*P **P** **05 34 04.4 -0.8**
AVF pmax pmax
comp=Z,11nm,0.9s,mb4.9
AVF Avril sur Loir 63.99 310 *e*P **P** **05 34 04.4 -0.8**
comp=Z,11nm,0.9s,mb4.9
ESK Eskdalemuir 64.18 321 PFAKE 05 34 20.0 +14
ESK LR LR
comp=Z,1µm,20.0s,MS5.2
SCO Scoresbysund 64.32 340 *i* P **P** **05 34 09.7 +2.8**
SCO pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
ADK Adak 64.35 43 PFAKE 05 34 20.0 +13
ADK LR LR
comp=Z,990nm,20.0s,MS5.0
BGF Bois d'Agland 64.41 310 *e*P **P** **05 34 07.2 -0.7**
KEST Kesra 64.65 297 P **P** **05 34 09.3 -0.3**
comp=Z,3.9nm,0.9s,mb4.4,baz=142,slow=5.5,SNR=5.2
KEST LR LR 06 07 25.4
comp=Z,312nm,19.8s,MS4.5,baz=263,slow=41
KEST Kesra 64.65 297 *e*P **P** **05 34 09.8 +0.2**
LASF Ste Croix 64.82 307 *e*P **P** **05 34 10.5 -0.1**
comp=Z,41nm,1.1s,mb5.1
TCF Toulx Ste Croi 64.92 310 *e*P **P** **05 34 10.9 -0.3**
comp=Z,35nm,0.9s,mb5.1
TCF Toulx Ste Croi 64.92 310 *e*P **P** **05 34 10.9 -0.3**
TCF pmax pmax
comp=Z,18nm,0.9s,mb5.1
TCF Toulx Ste Croi 64.92 310 *e*P **P** **05 34 10.9 -0.3**
comp=Z,18nm,0.9s,mb5.1
LDF La Druitiere 65.35 313 *e*P **P** **05 34 13.2 -0.8**
FLN La Foliniere 65.49 313 *e*P **P** **05 34 14.2 -0.7**
FLN *e*MLR MLR
comp=Z,2µm,22.2s,MS5.0
FLN La Foliniere 65.49 313 *e*P **P** **05 34 14.2 -0.7**
FLN LR LR
comp=Z,2µm,22.3s,MS5.3
CAF Calviac 65.60 309 *e*P **P** **05 34 15.0 -0.7**
RJF Les Rejaudoux 65.78 309 *e*P **P** **05 34 17.0 +0.1**
comp=Z,21nm,0.8s,mb4.9
RJF *e*MLR MLR
comp=Z,1µm,21.2s,MS4.8
RJF Les Rejaudoux 65.78 309 *e*P **P** **05 34 17.0 +0.1**
RJF pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
RJF MLR MLR
comp=Z,1µm,21.3s,MS5.1
RJF Les Rejaudoux 65.78 309 *e*P **P** **05 34 17.0 +0.1**
comp=Z,10nm,0.8s,mb4.9
RJF LR LR
comp=Z,1µm,21.3s,MS5.1
GRR Gorron 65.88 313 *e*P **P** **05 34 16.6 -0.8**
comp=Z,31nm,1.0s,mb5.0
GRR Gorron 65.88 313 *e*P **P** **05 34 16.6 -0.8**
GRR pmax pmax
comp=Z,16nm,1.0s,mb5.0
GRR Gorron 65.88 313 *e*P **P** **05 34 16.6 -0.8**
comp=Z,16nm,1.0s,mb5.0
MTLF Montolieu 66.21 307 *e*P **P** **05 34 19.3 -0.3**
comp=Z,20nm,1.1s,mb4.8
MTLF Montolieu 66.21 307 *e*P **P** **05 34 19.3 -0.3**
MTLF pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
MTLF Montolieu 66.21 307 *e*P **P** **05 34 19.3 -0.3**
comp=Z,10nm,1.1s,mb4.8
MFF Saint Martin d 66.25 311 *e*P **P** **05 34 19.1 -0.7**
comp=Z,39nm,1.2s,mb5.0
MFF Saint Martin d 66.25 311 *e*P **P** **05 34 19.1 -0.7**
MFF pmax pmax
comp=Z,19nm,1.2s,mb5.0
MFF Saint Martin d 66.25 311 *e*P **P** **05 34 19.1 -0.7**
comp=Z,19nm,1.2s,mb5.0
LFF La Frestale 66.44 309 *e*P **P** **05 34 20.4 -0.7**
comp=Z,18nm,0.7s,mb4.9
LFF La Frestale 66.44 309 *e*P **P** **05 34 20.4 -0.7**
LFF pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
LFF La Frestale 66.44 309 *e*P **P** **05 34 20.4 -0.7**
comp=Z,9.1nm,0.7s,mb4.9
SGMF Saint Gilles 66.95 314 *e*P **P** **05 34 23.9 -0.4**
SUMG Summit 66.99 345 *e*P **P** **05 34 25.3 +1.2**
comp=Z,22nm,1.0s,mb5.2
ROSF Rostrenen 67.34 314 *e*P **P** **05 34 26.4 -0.3**
EPF Esparros 67.57 308 *e*P **P** **05 34 27.3 -1.0**
COLD Coldfoot 67.83 22 *e*P **P** **05 34 29.9 +0.4**
comp=Z,16nm,0.9s,mb5.1
ABPO Ambohimpanom 68.26 225 PFAKE 05 34 40.0 +7.2
ABPO LR LR
comp=Z,919nm,20.0s,MS5.0
WRAB Tennant Creek 68.47 136 PFAKE 05 34 50.0 +16
WRAB LR LR
comp=Z,731nm,20.0s,MS4.9
WRA Warramunga Arr 68.47 136 P **P** **05 34 32.4 -1.7**
comp=Z,17nm,1.1s,mb5.0,baz=331,slow=6.7,SNR=11
WRA LR LR 06 07 00.6
comp=Z,434nm,19.6s,MS4.7,baz=290,slow=38

WRA Warramunga Arr 68.47 136 P **P** **05 34 32.4 -1.7**
WRA pmax pmax
comp=Z,17nm,1.1s
WRA MLR MLR
TTA Tatalina 68.50 27 *e*P **P** **05 34 35.2 +1.4**
CHUM Lake Minchumin 69.25 25 *e*P **P** **05 34 39.1 +0.7**
comp=Z,11nm,0.9s,mb4.8
BPAW Bear Paw Mtn. 69.56 24 *e*P **P** **05 34 40.2 -0.2**
comp=Z,16nm,1.1s,mb4.9
SVW2 Sparrevohn 69.75 28 *e*P **P** **05 34 42.5 +0.9**
PPLA Purkeypile 69.91 26 *e*P **P** **05 34 43.1 +0.5**
comp=Z,49nm,1.1s,mb5.3
KTH Kantishna Hill 69.94 25 *e*P **P** **05 34 43.0 +0.3**
comp=Z,22nm,1.1s,mb5.0
COLA College 70.09 23 *e*P **P** **05 34 42.9 -0.7**
COLA pmax pmax
comp=Z,18nm,0.8s,mb5.0
COLA MLR MLR
comp=Z,728nm,19.0s,MS5.0
COLA College 70.09 23 *e*P **P** **05 34 42.9 -0.7**
comp=Z,18nm,0.8s,mb5.1
COLA LR LR
comp=Z,728nm,19.0s,MS5.0
TRF Thorofare Moun 70.22 25 *e*P **P** **05 34 45.4 +1.0**
comp=Z,6.1nm,1.0s,mb4.5
RES Resolute Bay 70.23 2 *e*P **P** **05 34 46.1 +1.7**
PMR Palmer 71.85 26 *e*P **P** **05 34 54.0 -0.3**
PMR pmax pmax
comp=Z,24nm,1.1s,mb5.0
PMR Palmer 71.85 26 *e*P **P** **05 34 54.0 -0.3**
comp=Z,24nm,1.1s,mb5.0
RC01 Rabbit Creek A 71.96 27 *e*P **P** **05 34 56.1 +1.1**
comp=Z,25nm,1.0s,mb5.1
ESDC Sonseca Array 72.04 306 P **P** **05 34 55.4 -0.6**
comp=Z,1.7nm,0.7s,mb4.1,baz=54,slow=6.6,SNR=2.6
ESDC LR LR 06 11 23.2
comp=Z,801nm,18.1s,MS5.0,baz=30,slow=40
ESLA Sonseca Array 72.04 306 PFAKE 05 35 10.0 +14
ESLA LR LR
comp=Z,4μm,19.0s,MS5.7
NWAO Narrogin (SRO) 72.10 157 PFAKE 05 35 10.0 +14
NWAO LR LR
comp=Z,461nm,21.0s,MS4.7
PAX Paxson 72.16 24 *e*P **P** **05 34 57.0 +0.8**
PAX pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
PAX Paxson 72.16 24 *e*P **P** **05 34 57.0 +0.8**
comp=Z,9.7nm,1.1s,mb4.7
EGAK Eagle 72.20 21 *e*P **P** **05 34 56.0 -0.4**
comp=Z,7.9nm,1.0s,mb4.6
EGAK LR LR
comp=Z,1μm,20.0s,MS5.2
PAB San Pablo 72.36 306 PFAKE 05 35 10.0 +12
PAB LR LR
comp=Z,1μm,19.0s,MS5.1
KDAK Kodiak Island 73.01 30 *c*e*P **P** **05 35 01.2 -0.1**
KDAK Kodiak Island 73.01 30 *e*P **P** **05 35 01.2 -0.1**
comp=Z,28nm,1.1s,mb5.1
KDAK LR LR
comp=Z,2μm,22.0s,MS5.2
OHAK Old Harbor 73.08 31 *e*P **P** **05 35 01.6 -0.1**
comp=Z,25nm,0.9s,mb5.2
BMRM Bremner River 73.86 25 *e*P **P** **05 35 07.2 +0.9**
comp=Z,19nm,1.0s,mb5.0
TAM Tamanrasset 73.87 287 *e*P **P** **05 35 08.2 +1.2**
TAM pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
TAM MLR MLR
comp=Z,508nm,22.0s,MS4.8
TAM Tamanrasset 73.87 287 *e*P **P** **05 35 08.2 +1.2**
comp=Z,7.4nm,1.2s,mb4.5
TAM LR LR
comp=Z,508nm,22.0s,MS4.8
SFJD Kangerlussuaq 73.99 345 *i*P **P** **05 35 07.4 +0.4**
SFJD pmax pmax
comp=Z,16nm,0.9s,mb5.0
SFJD Kangerlussuaq 73.99 345 *e*P **P** **05 35 07.6 +0.7**
comp=Z,16nm,0.9s,mb5.0
SFJD LR LR
comp=Z,947nm,21.0s,MS5.1
MTE Manteigas 73.99 308 PFAKE 05 35 20.0 +13
MTE LR LR
comp=Z,753nm,21.0s,MS5.0
SFS San Fernando 75.24 304 PFAKE 05 35 30.0 +15
SFS LR LR
comp=Z,2μm,19.0s,MS5.4
CTA Charters Tower 75.84 127 LR LR 06 09 03.0
comp=Z,438nm,18.8s,MS4.8,baz=303,slow=36
CTAO Charters Tower 75.84 127 PFAKE 05 35 30.0 +12
CTAO LR LR
comp=Z,565nm,19.0s,MS4.9
LSZ Lusaka 78.04 242 *e*P **P** **05 35 31.1 +0.3**
LSZ pmax pmax
comp=Z,12nm,1.0s,mb4.8
LSZ MLR MLR
comp=Z,847nm,20.0s,MS5.1
LSZ Lusaka 78.04 242 *e*P **P** **05 35 31.1 +0.3**
comp=Z,12nm,1.0s,mb4.8
LSZ LR LR
comp=Z,847nm,20.0s,MS5.1
SKAG Skagway 78.05 22 *e*P **P** **05 35 29.5 -0.7**
comp=Z,27nm,1.4s,mb5.0
HNR Honiara 78.49 110 PFAKE 05 35 40.0 +6.6
HNR LR LR
comp=Z,549nm,21.0s,MS4.9
YKA Yellowknife Ar 80.36 12 P **P** **05 35 41.4 -1.4**
comp=Z,2.2nm,0.8s,mb4.1,baz=332,slow=5.5,SNR=11
YKA Yellowknife Ar 80.36 12 P **P** **05 35 41.4 -1.4**
YKA pmax pmax
comp=Z,2.0nm,0.8s
DLBC Dease Lake 80.47 21 *e*P **P** **05 35 44.3 +0.9**
STKA Stephens Creek 81.84 139 P **P** **05 35 49.2 -1.8**
comp=Z,6.1nm,0.8s,mb4.6,baz=342,slow=7.4,SNR=7.3
STKA LR LR 06 16 49.0
comp=Z,549nm,19.9s,MS4.9,baz=309,slow=39
TORD Torodi Ar. Bea 82.17 280 P **P** **05 35 52.0 -1.2**
comp=Z,11nm,0.9s,mb4.8,baz=45,slow=4.5,SNR=22
TORD LR LR 06 17 01.1
comp=Z,914nm,18.5s,MS5.2,baz=65,slow=39
CMLA Cha da Macela 86.64 315 PFAKE 05 36 30.0 +14
CMLA LR LR
comp=Z,1μm,21.0s,MS5.3
SCHQ Schefferville 88.29 348 P **P** **05 36 20.9 -2.3**
comp=Z,5.6nm,0.9s,mb4.8,baz=322,slow=4.1,SNR=6.9
SCHQ LR LR 06 18 08.0
comp=Z,704nm,21.4s,MS5.0,baz=19,slow=37
TSUM Tsumeb 88.31 245 PFAKE 05 36 30.0 +6.3
TSUM LR LR
comp=Z,509nm,19.0s,MS5.0
CAN Canberra 88.51 136 PFAKE 05 36 40.0 +16
CAN LR LR
comp=Z,620nm,19.0s,MS5.0
BOSA Boshof 88.92 233 LR LR 06 14 53.8
comp=Z,578nm,18.0s,MS5.0,baz=52,slow=35
BOSA Boshof 88.92 233 PFAKE 05 36 40.0 +14
BOSA LR LR
comp=Z,822nm,19.0s,MS5.2
EDM Edmonton 89.31 14 *e*P **P** **05 36 29.0 +1.0**
FFC Flin Flon 89.64 8 *c*e*P **P** **05 36 29.2 -0.3**
FFC Flin Flon 89.64 8 *e*P **P** **05 36 30.1 +0.6**
comp=Z,4.6nm,0.8s,mb4.9
FFC LR LR
comp=Z,779nm,19.0s,MS5.2
DBIC Dimbokro 91.14 279 LR LR 06 22 24.9
comp=Z,723nm,20.1s,MS5.1,baz=42,slow=39
DBIC Dimbokro 91.14 279 PFAKE 05 36 50.0 +13
DBIC LR LR
comp=Z,723nm,20.0s,MS5.1
DZM Mont Dzumac 91.20 116 *e*LR LR 06 05 44.0
comp=Z,420nm,25.6s
NLWA Neilton Lookou 91.88 23 PFAKE 05 36 50.0 +10
NLWA LR LR
comp=Z,596nm,19.0s,MS5.1
NEW Newport 93.05 19 PFAKE 05 37 00.0 +14
NEW LR LR
comp=Z,690nm,22.0s,MS5.1
FUNA Funafuti 93.20 98 PFAKE 05 37 00.0 +13
FUNA LR LR
comp=Z,9μm,20.0s,MS6.2
KIP Kipapa 93.51 61 ‖ *e*P **P** **05 36 47.6 -0.5**
HAWA Hanford 94.10 21 PFAKE 05 37 00.0 +10
HAWA LR LR
comp=Z,750nm,19.0s,MS5.2
SUR Sutherland 94.28 233 PFAKE 05 37 00.0 +8.8
SUR LR LR
comp=Z,823nm,21.0s,MS5.2

COR Corvallis 94.55 24 PFAKE 05 37 00.0 +7.5
COR LR LR
comp=Z,457nm,20.0s,MS4.9
ULM Lac du Bonnet 94.61 5 P **P** **05 36 49.8 -2.9**
comp=Z,3.1nm,0.6s,mb4.9,baz=67,slow=0.8,SNR=3.7
ULM LR LR 06 22 54.8
comp=Z,615nm,19.4s,MS5.1,baz=220,slow=38
ULM Lac du Bonnet 94.61 5 P **P** **05 36 49.8 -2.9**
ULM LR LR 06 22 54.8
EGMT Eagleton 94.97 14 PFAKE 05 37 10.0 +16
EGMT LR LR
comp=Z,491nm,20.0s,MS5.0
MSO Missoula 95.18 17 PFAKE 05 37 10.0 +15
MSO LR LR
comp=Z,518nm,20.0s,MS5.0
DGMT Dagmar 95.49 10 PFAKE 05 37 10.0 +13
DGMT LR LR
comp=Z,740nm,22.0s,MS5.1
HUMO Hull Mountain 96.42 25 PFAKE 05 37 10.0 +9.0
HUMO LR LR
comp=Z,577nm,20.0s,MS5.0
AGMN Agassiz Nation 96.55 5 PFAKE 05 37 10.0 +8.5
AGMN LR LR
comp=Z,465nm,20.0s,MS5.0
BOZ Bozeman (W) 96.83 16 PFAKE 05 37 10.0 +7.1
BOZ LR LR
comp=Z,596nm,20.0s,MS5.1
LAO LASA Array 96.90 12 PFAKE 05 37 10.0 +6.9
LAO LR LR
comp=Z,685nm,19.0s,MS5.2
EYMN Ely 97.11 2 PFAKE 05 37 10.0 +6.0
EYMN LR LR
comp=Z,637nm,20.0s,MS5.1
YBH Yreka Blue Hor 97.28 25 PFAKE 05 37 20.0 +15
YBH LR LR
comp=Z,571nm,20.0s,MS5.1
RLMT Red Lodge 97.84 14 PFAKE 05 37 20.0 +13
RLMT LR LR
comp=Z,760nm,20.0s,MS5.2
PKME Peaks-Kenny Pk 97.91 346 PFAKE 05 37 20.0 +12
PKME LR LR
comp=Z,620nm,19.0s,MS5.1
MOD Modoc 97.93 23 PFAKE 05 37 20.0 +12
MOD LR LR
comp=Z,646nm,21.0s,MS5.1
WVOR Wild Horse Val 97.97 22 PFAKE 05 37 20.0 +12
WVOR LR LR
comp=Z,491nm,20.0s,MS5.0
HLID Hailey 98.12 19 PFAKE 05 37 20.0 +11
HLID LR LR
comp=Z,685nm,21.0s,MS5.1
LKWY Lake 98.13 15 PFAKE 05 37 20.0 +11
LKWY LR LR
comp=Z,1μm,20.0s,MS5.3
WDC Whiskeytown Da 98.36 25 PFAKE 05 37 20.0 +10
WDC LR LR
comp=Z,479nm,21.0s,MS5.0
COWI Conover 98.99 0 PFAKE 05 37 20.0 +7.5
COWI LR LR
comp=Z,799nm,20.0s,MS5.2
LBNH Lisbon 99.39 348 PFAKE 05 37 30.0 +16
LBNH LR LR
comp=Z,469nm,19.0s,MS5.0
LONY Lake Ozonia 99.44 350 PFAKE 05 37 30.0 +15
LONY LR LR
comp=Z,693nm,20.0s,MS5.2
HOPS Hopland 99.57 26 PFAKE 05 37 30.0 +15
HOPS LR LR
comp=Z,395nm,21.0s,MS4.9
AHID Auburn Hatcher 99.69 16 PFAKE 05 37 30.0 +14
AHID LR LR
comp=Z,451nm,21.0s,MS5.0
RSSD Black Hills 99.76 11 PFAKE 05 37 30.0 +14
RSSD LR LR
comp=Z,640nm,19.0s,MS5.2
NCB Newcomb 100.02 349 PFAKE 05 37 30.0 +13
NCB LR LR
comp=Z,741nm,21.0s,MS5.2
BW06 Boulder Array 100.03 15 PFAKE 05 37 30.0 +13
BW06 LR LR
comp=Z,674nm,19.0s,MS5.2
BMN Battle Mountai 100.23 22 PFAKE 05 37 30.0 +12
BMN LR LR
comp=Z,582nm,20.0s,MS5.1
MCCM Marconi Confer 100.39 27 PFAKE 05 37 30.0 +11
MCCM LR LR
comp=Z,518nm,20.0s,MS5.0
ELK Elko 100.52 20 PFAKE 05 37 30.0 +11
ELK LR LR
comp=Z,588nm,20.0s,MS5.1
SACV Santiago Islan 100.64 297 PFAKE 05 37 30.0 +10
SACV LR LR
comp=Z,405nm,20.0s,MS4.9
HWUT Hardware Ranch 100.67 17 PFAKE 05 37 30.0 +10
HWUT LR LR
comp=Z,517nm,19.0s,MS5.1
ECSD EROS Data Cent 101.03 6 PFAKE 05 37 30.0 +8.3
ECSD LR LR
comp=Z,566nm,20.0s,MS5.1
CMB Columbia Colle 101.38 25 PFAKE 05 37 30.0 +6.8
CMB LR LR
comp=Z,519nm,20.0s,MS5.0
DUG Dugway 101.69 19 PFAKE 05 37 40.0 +15
DUG LR LR
comp=Z,404nm,19.0s,MS5.0
BINY Binghamton 102.01 350 PFAKE 05 37 40.0 +14
BINY LR LR
comp=Z,700nm,22.0s,MS5.1
JFWS Jewell Farm 102.17 1 PFAKE 05 37 40.0 +13
JFWS LR LR
comp=Z,841nm,22.0s,MS5.2
CASY Casey 102.33 172 PFAKE 05 37 40.0 +13
CASY LR LR
comp=Z,484nm,19.0s,MS5.0
TPH Tonopah 102.39 23 PFAKE 05 37 40.0 +12
TPH LR LR
comp=Z,608nm,19.0s,MS5.1
ERPA Erie 102.56 353 PFAKE 05 37 40.0 +12
ERPA LR LR
comp=Z,771nm,22.0s,MS5.2
AAM Ann Arbor 102.65 356 PFAKE 05 37 40.0 +11
AAM LR LR
comp=Z,476nm,19.0s,MS5.0
SCIA State Center 103.08 3 PFAKE 05 37 40.0 +9.2
SCIA LR LR
comp=Z,774nm,19.0s,MS5.2
OGNE Ogallala 103.17 10 PFAKE 05 37 40.0 +8.8
OGNE LR LR
comp=Z,846nm,22.0s,MS5.2
MVU Marysvale 103.44 19 PFAKE 05 37 40.0 +7.6
MVU LR LR
comp=Z,392nm,20.0s,MS4.9
ISCO Idaho Springs 103.69 13 PFAKE 05 37 40.0 +6.5
ISCO LR LR
comp=Z,595nm,21.0s,MS5.1
SSPA Standing Stone 103.79 352 PFAKE 05 37 40.0 +6.0
SSPA LR LR
comp=Z,749nm,20.0s,MS5.2
DAC Darwin (Calif) 103.91 24 PFAKE 05 37 50.0 +15
DAC LR LR
comp=Z,461nm,20.0s,MS5.0
HDIL Hopedale 104.53 0 PFAKE 05 37 50.0 +13
HDIL LR LR
comp=Z,606nm,19.0s,MS5.2
ACSO Alum Creek Sta 104.67 355 PFAKE 05 37 50.0 +12
ACSO LR LR
comp=Z,450nm,20.0s,MS5.0
MCWV Mont Chateau 104.98 353 PFAKE 05 37 50.0 +11
MCWV LR LR
comp=Z,424nm,19.0s,MS5.0
CBKS Cedar Bluff 105.58 9 PFAKE 05 42 10.0 +15
CBKS LR LR
comp=Z,646nm,22.0s,MS5.1
MVCO Mesa Verde 105.58 16 PFAKE 05 42 10.0 +15
MVCO LR LR
comp=Z,620nm,19.0s,MS5.2
KSU1 Kansas State U 105.63 6 PFAKE 05 42 10.0 +15
KSU1 LR LR
comp=Z,789nm,21.0s,MS5.2
SDCO Great Sand Dun 105.70 14 PFAKE 05 42 10.0 +14
SDCO LR LR
comp=Z,507nm,22.0s,MS5.0
CBN Corbin 106.12 351 PFAKE 05 42 10.0 +14
CBN LR LR
comp=Z,744nm,20.0s,MS5.2

WUAZ Wupatki 106.47 19 PFAKE 05 42 10.0 +13
WUAZ LR LR
comp=Z,536nm,20.0s,MS5.1
PFO Pinyon Flat Ob 106.72 24 PFAKE 05 42 10.0 +12
PFO LR LR
comp=Z,785nm,20.0s,MS5.3
WCI Wyandotte Cave 106.82 358 PFAKE 05 42 10.0 +12
WCI LR LR
comp=Z,498nm,20.0s,MS5.1
BLA Blacksburg 107.46 353 PFAKE 05 42 10.0 +11
BLA LR LR
comp=Z,851nm,19.0s,MS5.3
ANMO Albuquerque 108.20 15 PFAKE 05 42 10.0 +10
ANMO LR LR
comp=Z,509nm,19.0s,MS5.1
WVT Waverly 108.95 359 PFAKE 05 42 10.0 +8.4
WVT LR LR
comp=Z,540nm,19.0s,MS5.1
BBSR BB Station 109.01 339 PFAKE 05 42 10.0 +8.2
BBSR LR LR
comp=Z,489nm,22.0s,MS5.0
CNNC Cliffs of the 109.11 351 PFAKE 05 42 10.0 +8.1
CNNC LR LR
comp=Z,643nm,20.0s,MS5.2
AMTX Amarillo 109.16 11 PFAKE 05 42 10.0 +8.0
AMTX LR LR
comp=Z,561nm,20.0s,MS5.1
TUC Tucson 109.66 20 PFAKE 05 42 10.0 +6.9
TUC LR LR
comp=Z,405nm,19.0s,MS5.0
WMOK Wichita Mounta 109.72 9 PFAKE 05 42 10.0 +6.9
WMOK LR LR
comp=Z,590nm,21.0s,MS5.1
MIAR Mount Ida 110.39 4 PFAKE 05 42 20.0 +16
MIAR LR LR
comp=Z,634nm,19.0s,MS5.2
OXF Oxford 110.56 1 PFAKE 05 42 20.0 +15
OXF LR LR
comp=Z,513nm,19.0s,MS5.1
GOGA Godfrey 111.48 355 PFAKE 05 42 20.0 +14
GOGA LR LR
comp=Z,597nm,21.0s,MS5.2
NHSC New Hope 111.50 352 PFAKE 05 42 20.0 +13
NHSC LR LR
comp=Z,517nm,19.0s,MS5.1
MNTX Cornudas Mount 111.57 15 PFAKE 05 42 20.0 +13
MNTX LR LR
comp=Z,447nm,21.0s,MS5.0
LRAL Lakeview Retre 112.02 358 PFAKE 05 42 20.0 +12
LRAL LR LR
comp=Z,539nm,20.0s,MS5.1
VBMS Vicksburg 112.83 2 PFAKE 05 42 20.0 +11
VBMS LR LR
comp=Z,808nm,22.0s,MS5.3
NATX Nacogdoches 113.08 5 PFAKE 05 42 20.0 +10
NATX LR LR
comp=Z,566nm,22.0s,MS5.1
JCT Junction City 113.77 10 PFAKE 05 42 20.0 +9.1
JCT LR LR
comp=Z,846nm,19.0s,MS5.4
BRAL Brewton 114.04 358 PFAKE 05 42 20.0 +8.6
BRAL LR LR
comp=Z,659nm,21.0s,MS5.2
HKT Hockley 114.77 7 PFAKE 05 42 20.0 +7.1
HKT LR LR
comp=Z,763nm,19.0s,MS5.3
DWPF Disney 116.57 353 PFAKE 05 42 30.0 +14
DWPF LR LR
comp=Z,481nm,19.0s,MS5.1
KVTX Kingsville 116.92 9 PFAKE 05 42 30.0 +13
KVTX LR LR
comp=Z,500nm,19.0s,MS5.2
GRTK Grand Turk 121.09 341 PFAKE 05 42 40.0 +15
GRTK LR LR
comp=Z,476nm,20.0s,MS5.1
ANWB Willy Bob 121.45 330 PFAKE 05 42 40.0 +14
ANWB LR LR
comp=Z,344nm,22.0s,MS5.0
SJG San Juan 122.73 334 PFAKE 05 42 40.0 +12
SJG LR LR
comp=Z,352nm,21.0s,MS5.0
RCBR Riachuelo 123.33 288 PFAKE 05 42 40.0 +10
RCBR LR LR
comp=Z,401nm,20.0s,MS5.1
SDDR Presa de Saban 123.54 340 PFAKE 05 42 40.0 +10
SDDR LR LR
comp=Z,434nm,20.0s,MS5.1
PPT Papeete 123.58 88 *e*SS SS 06 00 59.8 -1.0
comp=Z,198nm,24.5s
PPT *e*LQ 06 15 36.7
comp=Z,836nm,36.5s
PPT *e*LR LR 06 20 54.5
comp=Z,736nm,23.5s
GTBY Guantanamo Bay 123.59 345 PFAKE 05 42 40.0 +10
GTBY LR LR
comp=Z,466nm,21.0s,MS5.1
FDF Fort de France 123.79 327 PFAKE 05 42 40.0 +10
FDF LR LR
comp=Z,404nm,19.0s,MS5.1
TEIG Tepich 124.80 359 PFAKE 05 42 40.0 +7.7
TEIG LR LR
comp=Z,617nm,21.0s,MS5.2
QSPA South Pole Qui 125.06 180 PFAKE 05 42 40.0 +9.0
QSPA LR LR
comp=Z,564nm,22.0s,MS5.2
MTDJ Mount Denham 125.73 347 PFAKE 05 42 50.0 +16
MTDJ LR LR
comp=Z,389nm,19.0s,MS5.1
GRGR Grenville 126.31 326 PFAKE 05 42 50.0 +15
GRGR LR LR
comp=Z,258nm,19.0s,MS4.9
TAOE Nuku Hiva Isla 126.33 73 *e*LR LR 06 22 08.9
comp=Z,318nm,28.2s
TGUH Tegucigalpa,Un 130.91 358 PFAKE 05 43 00.0 +16
TGUH LR LR
comp=Z,356nm,21.0s,MS5.0
SDV Santo Domingo 132.85 335 PFAKE 05 43 00.0 +12
SDV LR LR
comp=Z,149nm,20.0s,MS4.7
JTS JuntasAbangare 134.53 355 PFAKE 05 43 00.0 +9.0
JTS LR LR
comp=Z,454nm,20.0s,MS5.2
BCIP Isla Barro Col 135.00 347 PFAKE 05 43 00.0 +8.2
BCIP LR LR
comp=Z,357nm,21.0s,MS5.1
SPB Sao Paulo 142.42 277 PFAKE 05 43 20.0 +15
SPB LR LR
comp=Z,487nm,22.0s,MS5.2
OTAV Otavalo 143.38 343 PFAKE 05 43 20.0 +13
OTAV LR LR
comp=Z,349nm,22.0s,MS5.1
CPUP Villa Florida 151.66 280 PKPbc PKPbc 05 43 24.9 -1.8
comp=Z,3.9nm,0.7s,baz=56,slow=3.0,SNR=16
LPAZ La Paz 153.59 310 PKPbc PKPbc 05 43 30.6 -0.6
comp=Z,1.5nm,1.0s,baz=13,slow=15,SNR=4.1
LPAZ La Paz 153.59 310 PFAKE 05 43 40.0 +17
LPAZ LR LR
comp=Z,499nm,20.0s,MS5.3
NNA Nana 154.41 332 PFAKE 05 43 40.0 +15
NNA LR LR
comp=Z,422nm,20.0s,MS5.3
TRQA Tornquist 158.37 255 PFAKE 05 43 40.0 +11
TRQA LR LR
comp=Z,428nm,19.0s,MS5.3
PLCA Paso Flores 164.66 244 PFAKE 05 43 50.0 +14
PLCA LR LR
comp=Z,427nm,19.0s

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*NEIC **18** 05:23:57.8, 34°.39S×72°.40W, h26km, ML3.0(GUC), After GUC.*

GUC 18 05:23:57.8±0.4, 34°.39S×72°.40W, h26km±3km, MD3.6, ML3.0, 7C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNV	**Longovilo**	**0.93**	**62**	⇑ *i*P	Pn	05 24 14.4	-0.8
LNV				*i*S	Sb	05 24 26.9	-0.3
LNV	**Longovilo**	**0.93**	**62**	⇑ *i*P	Pn	05 24 14.4	-0.8
LNV				*i*S	Sb	05 24 26.9	-0.3
CNCO	**Chanco**	**1.34**	**184**	*e*P	Pn	05 24 20.9	0.0
CNCO				*e*S	Sn	05 24 38.6	+0.6
CNCO	**Chanco**	**1.34**	**184**	*e*P	Pn	05 24 20.9	0.0
CNCO				*e*S	Sn	05 24 38.6	+0.6
CACH	**El Canelo**	**1.52**	**80**	⇑ *i*P	Pn	05 24 24.1	+0.9

CACH			*i* S		Sn	05 24 44.8	+2.6
CACH	**El Canelo**	**1.52**	**80**	⇑*i*P	Pn	05 24 24.1	+0.9
CACH			*i* S		Sn	05 24 44.8	+2.6
CHCH	**Chadas Angostu**	**1.52**	**73**	⇑*i*P	Pn	05 24 23.9	+0.6
CHCH			*i* S		Sn	05 24 43.6	+1.3
CHCH	**Chadas Angostu**	**1.52**	**73**	⇑*i*P	Pn	05 24 23.9	+0.6
CHCH			*i* S		Sn	05 24 43.6	+1.3
PEL	**Peldehue**	**1.90**	**49**	⇑*i*P	Pn	05 24 29.8	+1.3
PEL			*i* S		Sn	05 24 54.5	+2.9
PEL			AML		AML	05 25 03.5	
	comp=N,192nm,0.6s						
FCH	**Farellones**	**2.05**	**59**	*e*P	Pn	05 24 32.5	+1.8
FCH			*i* S		Sn	05 24 59.3	+3.9
FCH	**Farellones**	**2.05**	**59**	*e*P	Pn	05 24 32.5	+1.8
FCH			*i* S		Sn	05 24 59.3	+3.9

*IDC **18** 05:28:13.0±1.4, 4°70S×129°98E, h0km, mb4.0/6, mb1 4.0/10, mb1mx3.9/20, mbtmp3.9/10, ML3.7/4, Error ellipse: s-maj=50.2km s-min=23.2km az=76.0*
*ISCJB **18** 05:28:22.9±3.7, 5°1S±0°2×129°5E±0°2, h100km±37km, mb3.9/7, Error ellipse: s-maj=43.2km s-min=14.6km az=44.4*
*NEIC **18** 05:28:25.1±2.5, 5°15S×129°47E, h104km±24km, mb4.3/2, Error ellipse: s-maj=32.1km s-min=10.8km az=48.0*

ISC 18 05:28:24.9±2.7, 5°1S±0°2×129°5E±0°2, h101km±27km, n14, σ0°88/14, mb3.9/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**8.08**	**159**	*e*Pn	**Pn**	**05 30 20.7**	**+1.2**
KAPI	**Kappang**	**9.69**	**270**	Pn	**Pn**	**05 30 41.1**	**-0.3**
	0.8nm,0.3s,baz=108,slow=8.2,SNR=3.6						
FITZ	**Fitzroy Crossi**	**13.42**	**196**	Pn	**Pn**	**05 31 31.8**	**+0.4**
	0.3nm,0.3s,baz=42,slow=12,SNR=9.5						
WRAB	**Tennant Creek**	**15.46**	**163**	*e*Pn	**Pn**	**05 31 55.4**	**-2.0**
	25nm,1.3s						
WRA	**Warramunga Arr**	**15.46**	**163**	Pn	**Pn**	**05 31 56.2**	**-1.2**
	0.4nm,0.3s,baz=352,slow=13,SNR=24						
ASAR	**Alice Springs**	**18.91**	**167**	P	**P**	**05 32 39.2**	**+1.5**
	0.1nm,0.3s,baz=346,slow=9.4,SNR=4.3						
KULM	**Kulim**	**30.59**	**289**	*e*P	**P**	**05 34 28.9**	**-0.7**
	11nm,1.4s,mb4.4						
CMAR	**Chiang Mai Arr**	**38.15**	**309**	P	**P**	**05 35 35.4**	**+0.7**
	1.0nm,0.3s,mb4.1,baz=134,slow=7.3,SNR=4.8						
SONM	**Songino Array**	**56.52**	**342**	P	**P**	**05 37 55.9**	**-0.7**
	0.8nm,0.6s,mb4.0,baz=176,slow=5.8,SNR=4.3						
MKAR	**Makanchi Array**	**66.39**	**327**	P	**P**	**05 39 03.6**	**+0.5**
	0.6nm,0.5s,mb3.7,baz=128,slow=7.9,SNR=4.9						
ZALV	**Zalesovo Beam**	**69.69**	**334**	P	**P**	**05 39 23.1**	**-0.4**
	0.7nm,0.5s,mb3.8,baz=121,slow=5.7,SNR=4.7						
KURK	**Kurchatov**	**70.66**	**328**	P	**P**	**05 39 29.9**	**+0.4**
	1.6nm,0.7s,mb4.0,baz=128,slow=6.0,SNR=6.4						
BVAR	**Borovoye Array**	**76.22**	**328**	P	**P**	**05 40 02.2**	**+0.1**
	0.8nm,0.5s,mb3.7,baz=116,slow=6.9,SNR=4.1						
ABKAR	**Akbulak array**	**80.73**	**322**	*e*P	**P**	**05 40 27.1**	**+0.1**

IDC 18 05:28:37.0±1.0, 4°48S×130°24E, h0km, mb4.1/8, mb1 4.3/10, mb1mx4.1/20, mbtmp4.2/10, ML4.3/2, Error ellipse: s-maj=70.0km s-min=19.1km az=61.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.88**	**166**	Pn	Pn	05 32 22.1	0.0
	1.0nm,0.3s,baz=348,slow=13,SNR=9.5						
ASAR	**Alice Springs**	**19.40**	**170**	P	Pn	05 33 04.0	-1.9
	1.5nm,0.3s,baz=348,slow=10,SNR=13						
CTA	**Charters Tower**	**22.00**	**136**	P	P	05 33 33.9	+0.9
	1.8nm,0.3s,baz=331,slow=8.6,SNR=2.8						
CMAR	**Chiang Mai Arr**	**38.35**	**307**	P	P	05 36 00.8	+0.8
	0.7nm,0.5s,baz=139,slow=7.0,SNR=5.2						
SONM	**Songino Array**	**56.14**	**341**	P	P	05 38 18.2	-0.1
	2.6nm,1.0s,baz=152,slow=6.4,SNR=3.2						
MKAR	**Makanchi Array**	**66.26**	**326**	P	P	05 39 27.2	+0.2
	1.4nm,0.6s,baz=115,slow=8.2,SNR=5.3						
ZALV	**Zalesovo Beam**	**69.44**	**333**	P	P	05 39 46.9	0.0
	2.4nm,0.9s,baz=101,slow=3.8,SNR=5.8						
KURK	**Kurchatov**	**70.51**	**328**	P	P	05 39 53.0	-0.5
	2.3nm,0.6s,baz=127,slow=5.5,SNR=5.7						
BVAR	**Borovoye Array**	**76.07**	**327**	P	P	05 40 26.3	-0.1
	2.0nm,0.8s,baz=123,slow=5.5,SNR=6.0						
AKTO	**Aktyubinsk**	**82.24**	**322**	P	P	05 41 00.7	+0.5
	0.9nm,0.5s,baz=108,slow=6.4,SNR=3.9						

IDC 18 05:30:12.3±1.5, 4°79S×129°78E, h0km, mb4.0/6, mb1 4.2/8, mb1mx4.0/18, mbtmp4.1/8, MS3.5/2, Ms1 3.5/2, ms1mx2.7/26, Error ellipse: s-maj=97.3km s-min=25.2km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.71**	**164**	Pn	Pn	05 33 54.6	-0.4
	baz=349,slow=13,SNR=4.4						
WRA				Sn	Sn	05 36 33.6	-16
	baz=346,slow=24,SNR=2.3						
WRA				LR	LR	05 38 59.0	
	comp=Z,142nm,21.3s,baz=335,slow=34						
ASAR	**Alice Springs**	**19.18**	**168**	P	Pn	05 34 38.2	-0.3
	baz=348,slow=9.4,SNR=2.4						
STKA	**Stephens Creek**	**29.14**	**159**	LR	LR	05 48 27.6	
	comp=Z,120nm,20.4s,baz=33,slow=38						
CMAR	**Chiang Mai Arr**	**38.18**	**308**	P	P	05 37 33.8	-0.1
	1.3nm,0.7s,baz=134,slow=7.5,SNR=5.8						
SONM	**Songino Array**	**56.29**	**341**	P	P	05 39 55.5	+0.8
	1.0nm,0.7s,baz=165,slow=12,SNR=4.0						
MKAR	**Makanchi Array**	**66.27**	**326**	P	P	05 41 03.8	+1.5
	0.9nm,0.5s,baz=124,slow=7.5,SNR=5.1						
ZALV	**Zalesovo Beam**	**69.52**	**334**	P	P	05 41 21.7	-1.0
	1.0nm,0.7s,baz=120,slow=5.7,SNR=3.8						
KURK	**Kurchatov**	**70.53**	**328**	P	P	05 41 28.4	-0.6
	2.9nm,0.9s,baz=126,slow=5.4,SNR=5.9						
BVAR	**Borovoye Array**	**76.09**	**328**	P	P	05 42 01.8	0.0
	2.7nm,0.9s,baz=93,slow=5.0,SNR=6.1						

IDC 18 05:36:01.9±1.6, 4°82S×129°48E, h0km, mb3.9/4, mb1 4.1/6, mb1mx3.9/17, mbtmp3.9/6, ML3.9/1, Error ellipse: s-maj=101.8km s-min=25.2km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.75**	**163**	Pn	Pn	05 39 43.7	-1.6
	0.1nm,0.3s,baz=348,slow=13,SNR=5.8						
ASAR	**Alice Springs**	**19.21**	**168**	P	Pn	05 40 28.4	-0.1
	0.3nm,0.3s,baz=353,slow=11,SNR=20						
CMAR	**Chiang Mai Arr**	**37.97**	**308**	P	P	05 43 21.6	-0.2
	0.8nm,0.3s,baz=132,slow=8.2,SNR=6.3						
SONM	**Songino Array**	**56.23**	**341**	P	P	05 45 43.6	-0.2
	0.4nm,0.5s,baz=141,slow=7.4,SNR=2.7						
MKAR	**Makanchi Array**	**66.14**	**327**	P	P	05 46 51.0	-0.1
	0.5nm,0.6s,baz=115,slow=7.9,SNR=2.6						
ZALV	**Zalesovo Beam**	**69.42**	**334**	P	P	05 47 12.1	+0.4
	0.5nm,0.3s,baz=140,slow=5.6,SNR=3.3						

*IDC **18** 05:37:19.1±0.9, 16°07S×179°25E, h0km, mb4.1/8, mb1 4.4/8, mb1mx4.2/16, mbtmp4.1/8, MS3.7/3, Ms1 3.7/3, ms1mx3.2/21, Error ellipse: s-maj=50.8km s-min=22.3km az=149.0*
*ISCJB **18** 05:37:24.3±2.7, 16°1S±0°2×179°2E±0°1, h47km±23km, mb4.3/13, MS3.8/2, Error ellipse: s-maj=28.0km s-min=21.6km az=143.3*
*NEIC **18** 05:37:25.0±1.9, 16°14S×179°24E, h41km±16km, mb4.6/5, Error ellipse: s-maj=17.8km s-min=14.1km az=139.0*

ISC 18 05:37:25.3±2.7, 16°1S±0°2×179°2E±0°2, h42km±24km, n34, σ0°58/17, mb4.3/13, MS3.8/2, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**1.94**	**215**	*e*Pn	**Pn**	**05 37 55.8**	**-0.1**
RAO	**Raoul Island**	**13.31**	**169**	LR	LR	05 43 57.5	
	comp=Z,139nm,21.5s,baz=91,slow=30						
DZM	**Mont Dzumac**	**13.44**	**242**	*e*LR	LR	05 44 16.5	
	238nm,25.6s						
URZ	**Urewera**	**22.11**	**184**	LR	LR	05 49 09.5	
	comp=Z,102nm,19.9s,MS3.2,baz=206,slow=32						
PPT	**Papeete**	**29.87**	**97**	*e*LQ		05 49 45.9	
	246nm,24.5s						
PPT				*e*LR	LR	05 51 03.2	
	384nm,27.5s,baz=260						

STKA	**Stephens Creek**	**37.56**	**238**	P	**P**	**05 44 36.7**	**+1.1**
	2.8nm,0.7s,mb4.1,baz=69,slow=11,SNR=5.8						
STKA	**Stephens Creek**	**37.56**	**238**	P	**P**	**05 44 36.7**	**+1.1**
TAOE	**Nuku Hiva Isla**	**40.26**	**85**	*e*LR	LR	05 55 43.2	
	292nm,27.6s						
WRA	**Warramunga Arr**	**42.76**	**258**	P	**P**	**05 45 17.8**	**-1.1**
	0.9nm,0.9s,mb3.5,baz=90,slow=8.4,SNR=5.4						
ASAR	**Alice Springs**	**43.13**	**253**	P	**P**	**05 45 22.1**	**+0.3**
	3.3nm,0.7s,mb4.2,baz=83,slow=8.8,SNR=32						
RKT	**Rikitea**	**43.55**	**107**	*e*LR	LR	05 57 17.0	
	330nm,28.1s						
PEA0B	**Petropavlovsk-**	**71.42**	**347**	P	**P**	**05 48 40.8**	**-0.1**
KSRS	**Korea Array**	**71.89**	**319**	LR	LR	06 14 23.2	
	comp=Z,177nm,20.9s,MS4.3,baz=19,slow=31						
QSPA	**South Pole Qui**	**73.90**	**180**	*e*P	**P**	**05 48 55.0**	**-0.4**
	2.9nm,0.7s,mb4.3						
NVAR	**Mina Array Bea**	**79.75**	**45**	P	**P**	**05 49 29.2**	**+0.3**
	0.4nm,0.7s,mb3.5,baz=217,slow=8.9,SNR=3.3						
TTA	**Tatalina**	**81.16**	**11**	*e*P	**P**	**05 49 30.2**	**-5.8**
	9.8nm,1.1s,mb4.7						
M13A	**Montello**	**83.95**	**44**	*e*P	**P**	**05 49 51.0**	**+0.1**
	4.7nm,0.6s,mb4.8						
COLA	**College**	**84.57**	**13**	*e*P	**P**	**05 49 48.7**	**-4.9**
	3.0nm,0.6s,mb4.6						
MAW	**Mawson**	**84.74**	**200**	P	**P**	**05 49 54.4**	**-0.2**
	2.8nm,0.8s,mb4.4,baz=106,slow=6.5,SNR=5.6						
EGAK	**Eagle**	**86.12**	**16**	*e*P	**P**	**05 49 56.9**	**-4.5**
	3.8nm,1.0s,mb4.6						
CMAR	**Chiang Mai Arr**	**86.16**	**290**	P	**P**	**05 50 03.4**	**+0.9**
	1.5nm,0.3s,mb4.7,baz=108,slow=2.9,SNR=3.2						
PMSA	**Palmer Station**	**86.31**	**157**	*e*P	**P**	**05 50 02.3**	**-0.1**
TXAR	**Lajitas Array**	**86.98**	**58**	P	**P**	**05 50 06.6**	**+0.2**
	1.2nm,1.0s,mb4.1,baz=245,slow=3.7,SNR=4.7						
SONM	**Songino Array**	**90.75**	**320**	P	**P**	**05 50 22.8**	**-0.9**
	0.6nm,0.6s,mb4.1,baz=107,slow=5.1,SNR=4.2						
ARCES	**ARCESS Array B**	**124.17**	**349**	PKP	PKPdf	05 56 19.4	+0.7
	0.9nm,0.6s,baz=316,slow=5.1,SNR=4.3						
BOSA	**Boshof**	**128.88**	**210**	PKP	PKPdf	05 56 29.2	+0.3
	4.8nm,1.0s,baz=126,slow=8.7,SNR=3.2						
CDF	**Champ du Feu**	**147.15**	**350**	*e*PKP1	PKPbc	05 57 04.9	+1.2
	20nm,1.1s						
HAU	**Haudompre**	**147.69**	**351**	*e*PKP1	PKPbc	05 57 06.4	+1.2
LOR	**Lormes**	**148.73**	**354**	*e*PKP1	PKPbc	05 57 08.0	0.0
	24nm,1.2s						
BGF	**Bois d'Agland**	**149.52**	**355**	*e*PKP1	PKPbc	05 57 11.2	+1.2
LPL	**La Plagne**	**150.04**	**349**	*e*PKP1	PKPbc	05 57 10.3	-1.0
LPG	**La Plagne**	**150.06**	**349**	*e*PKP1	PKPbc	05 57 09.9	-1.5
ORIF	**Oris-en-Rattie**	**150.77**	**350**	*e*PKP1	PKPbc	05 57 13.6	+0.5
MBDF	**Montbardon**	**150.80**	**349**	*e*PKP1	PKPbc	05 57 13.4	+0.2
	12nm,0.8s						

*MOS **18** 05:37:34.6±1.2, 46°60N×153°60E, h45km, mb4.0/1, Error ellipse: s-maj=46.2km s-min=18.3km az=65.2*
*IDC **18** 05:37:34.6±2.0, 46°56N×153°63E, h0km, mb3.7/2, mb1 4.0/4, mb1mx3.5/26, mbtmp3.7/4, ML3.5/2, Error ellipse: s-maj=58.8km s-min=33.5km az=156.0*
*ISCJB **18** 05:37:34.5±7.3, 46°7N±0°2×153°6E±0°3, h7km±50km, mb3.6/2, Error ellipse: s-maj=53.5km s-min=16.8km az=43.8*

ISC 18 05:37:38.3±5.5, 46°7N±0°2×153°6E±0°4, h22km±43km, n8, σ1°38/8, mb3.6/2, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**4.24**	**252**	*e*PN	**Pn**	**05 38 36.6**	**-4.9**
KUR				pmax	pmax		
	comp=Z,340nm,0.5s						
SKR	**Severo-Kuril's**	**4.33**	**22**	*e*PN	**Pn**	**05 38 51.0**	**+8.2**
PETK	**Petropavlovsk-**	**6.95**	**21**	Pn	**Pn**	**05 39 20.2**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=180,slow=13,SNR=8.2						
PET	**Petropavlovsk**	**7.14**	**25**	*e*PN	**Pn**	**05 39 19.6**	**-1.7**
MJAR	**Matsushiro Arr**	**15.30**	**234**	Pn	**Pn**	**05 41 12.8**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=43,slow=7.5,SNR=6.9						
MKAR	**Makanchi Array**	**47.25**	**298**	P	**P**	**05 46 09.3**	**-0.2**
	comp=Z,0.4nm,0.5s,mb3.6,baz=57,slow=5.3,SNR=3.3						
TXAR	**Lajitas Array**	**77.24**	**61**	P	**P**	**05 49 30.9**	**+0.1**
	comp=Z,0.6nm,0.7s,mb3.6,baz=308,slow=4.4,SNR=6.9						
TXAR	**Lajitas Array**	**77.24**	**61**	P	**P**	**05 49 30.9**	**+0.2**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						

*ISK **18** 05:55:30.5, 39°63N×33°13E, h7km, MD2.9*
*CSEM **18** 05:55:31.0±0.4, 39°38N×33°14E, h5km, MD2.8, Error ellipse: s-maj=13.3km s-min=7.9km az=159.0*
*ISCJB **18** 05:55:31.2±1.1, 39°40N±0°05×33°23E±0°08, h0km±11km, Error ellipse: s-maj=10.5km s-min=7.2km az=27.4*
*DDA **18** 05:55:32.2, 39°48N×33°17E, h7km±1km, Md2.8*

ISC 18 05:55:32.0±0.8, 39°43N±0°06×33°12E±0°06, h11km±7km, n17, σ0°89/25, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBAL	**Bala**	**0.12**	**1**	*i* P	**Pg**	**05 55 34.3**	**-0.7**
BBAL				*i* S	**Sg**	**05 55 36.0**	**-1.1**
BBAL	**Bala**	**0.12**	**1**	*i* P	**Pg**	**05 55 34.3**	**-0.7**
BBAL				*i* S	**Sg**	**05 55 36.0**	**-1.1**
LOD	**Lodumlu**	**0.54**	**329**	*e*PG	**Pg**	**05 55 37.6**	**-4.9**
LOD	**Lodumlu**	**0.54**	**329**	*e*Pg	**Pg**	**05 55 37.6**	**-4.9**
CDAG	**Cicekdag**	**0.99**	**78**	*i* P	**Pg**	**05 55 50.2**	**-0.7**
CDAG				*i* S	**Sg**	**05 56 05.6**	**+1.7**
CDAG	**Cicekdag**	**0.99**	**78**	*i* P	**Pg**	**05 55 50.2**	**-0.8**
CDAG				*i* S	**Sg**	**05 56 05.6**	**+1.7**
ELDT	**Eldivan**	**1.09**	**12**	*e*P	**Pg**	**05 55 53.6**	**+0.7**
ELDT				*i* S	**Sg**	**05 56 08.2**	**+1.1**
ELDT	**Eldivan**	**1.09**	**12**	*e*P	**Pg**	**05 55 53.6**	**+0.7**
ELDT				*i* S	**Sg**	**05 56 08.2**	**+1.1**
KIZT	**Kizilcal**	**1.11**	**241**	*e*PN	**Pg**	**05 55 53.8**	**+0.6**
KIZT				*e*SN	**Sg**	**05 56 12.0**	**+4.3**
KIZT	**Kizilcal**	**1.11**	**241**	*e*PN	**Pg**	**05 55 53.8**	**+0.5**
KIZT				*e*SN	**Sg**	**05 56 12.0**	**+4.3**
SVRH	**Sivrihisar-ESK**	**1.24**	**271**	*e*PN	**Pn**	**05 55 55.4**	**+0.2**
SVRH	**Sivrihisar-ESK**	**1.24**	**271**	*e*PN	**Pn**	**05 55 55.4**	**+0.3**
CORM	**Corum**	**1.39**	**57**	*e*PN	**Pn**	**05 55 56.1**	**-1.0**
CORM	**Corum**	**1.39**	**57**	*e*PN	**Pn**	**05 55 56.1**	**-1.1**
YOZ	**Yozgat**	**1.71**	**82**	*e*PN	**Pn**	**05 56 01.2**	**-0.5**
YOZ	**Yozgat**	**1.71**	**82**	*e*PN	**Pn**	**05 56 01.2**	**-0.5**
SARI	**SarÐ1z-Kayseri**	**2.88**	**104**	*e*PN	**Pn**	**05 56 17.4**	**-0.3**

IDC 18 05:57:58.2±4.4, 6°12S×146°88E, h0km, mb3.1/2, mb1 3.5/3, mb1mx3.3/16, mbtmp3.2/3, ML3.2/1, Error ellipse: s-maj=150.2km s-min=47.3km az=116.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.37**	**220**	P	Pn	06 02 15.2	+0.7
	0.1nm,0.3s,baz=41,slow=12,SNR=4.8						
ASAR	**Alice Springs**	**21.45**	**214**	P	P	06 02 46.9	-1.4
	0.1nm,0.3s,baz=36,slow=12,SNR=2.7						
FITZ	**Fitzroy Crossi**	**23.90**	**238**	P	P	06 03 14.4	+0.4
	1.5nm,0.7s,baz=72,slow=14,SNR=4.4						
TORD	**Torodi Ar. Bea**	**145.00**	**284**	PKPbc	PKPbc	06 17 37.2	-0.7
	1.2nm,0.7s,baz=80,slow=3.1,SNR=8.2						

*NIED **18** 06:20:00, 20°50N×122°20E, h68km, Mw4.9 Best double couple: M0=2.37000×10^16 NP1:φ=185.00000°, δ=88.00000°, λ=-81.00000°. NP2:φ=287.00000°, δ=9.00000°, λ=-167.00000°.*
*NEIC **18** 06:20:09.2±0.4, 20°08N×122°39E, h10km, mb4.5/9, Error ellipse: s-maj=12.0km s-min=6.2km az=87.0*
*MAN **18** 06:20:10, 20°05N×122°05E, h2km, mb5.5, ML4.5, MS4.9*
*ISCJB **18** 06:20:11.7±0.6, 20°12N±0°03×122°38E±0°08, h43km±6km, mb4.2/29, MS4.0/10, Error ellipse: s-maj=12.2km s-min=4.5km az=3.2*
*IDC **18** 06:20:15.7±3.2, 20°11N×122°41E, h68km±31km, mb3.8/20, mb1 3.9/21, mb1mx3.9/26, mbtmp3.8/21, ML4.3/2, MS4.0/11, Ms1 4.0/11, ms1mx3.6/36, Error ellipse: s-maj=19.2km s-min=11.7km az=77.0*

ISC 18 06:20:13.4±0.6, 20°11N±0°03×122°38E±0°08, h43km±6km, n52, σ1°09/56, mb4.2/29, MS4.0/10, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBP	**Basco**	**0.51**	**310**	*e*P	**Pn**	**06 20 18.7**	**-5.7**
BBP				*e*S	**Sn**	**06 20 36.8**	**+4.5**
APYP	**Conner**	**2.48**	**206**	*e*P	**Pn**	**06 20 50.4**	**-1.0**
APYP				*e*S	**Sn**	**06 21 17.3**	**-3.2**
ABRA	**Dolores**	**2.92**	**213**	*e*P	**Pn**	**06 20 57.9**	**+0.5**
ABRA				*e*S	**Sn**	**06 21 29.6**	**-1.6**
TWG	**Pinlang**	**2.96**	**336**	*e*Pn	**Pn**	**06 20 56.2**	**-1.7**
PALP	**Palanan**	**3.03**	**179**	*e*P	**Pn**	**06 20 59.7**	**+0.8**
YULB	**Yu-li**	**3.42**	**343**	*e*Pn	**Pn**	**06 21 02.1**	**-2.2**
YULB				*e*Sn	**Sn**	**06 21 48.1**	**+4.6**
SSLB	**Suanglung**	**3.89**	**340**	*e*Pn	**Pn**	**06 21 10.8**	**+0.1**
SSLB				*e*Sn	**Sn**	**06 21 59.3**	**+4.1**
BCPH	**Baguio City Da**	**4.08**	**205**	⇓*e*P	**Pn**	**06 21 14.7**	**+1.3**
NACB	**Ninganchiao**	**4.11**	**350**	*e*Pn	**Pn**	**06 21 12.7**	**-1.1**
NACB				*e*Sn	**Sn**	**06 21 59.5**	**-1.0**
BALP	**Baler**	**4.41**	**190**	*e*P	**Pn**	**06 21 19.0**	**+1.1**
YHNB	**Yeheng**	**4.63**	**349**	*e*Pn	**Pn**	**06 21 20.1**	**-0.9**
YHNB				*e*Sn	**Sn**	**06 22 14.6**	**+1.2**
TATO	**Taipei**	**4.91**	**350**	*e*Pn	**Pn**	**06 21 26.6**	**+1.9**
TGY	**Tagaytay City**	**6.13**	**193**	P	**Pn**	**06 21 42.7**	**+1.2**
	32nm,0.3s,baz=81,slow=13,SNR=1.9						
GQP	**Guinayangan**	**6.17**	**179**	*e*P	**Pn**	**06 21 46.0**	**+3.9**
DAV	**Davao City (W)**	**13.33**	**166**	LR	LR	06 28 35.9	
	comp=Z,797nm,19.9s,baz=354,slow=38						
KSRS	**Korea Array**	**17.94**	**14**	P	**Pn**	**06 24 19.6**	**-0.1**
	0.2nm,0.3s,baz=192,slow=11,SNR=8.8						
MAJO	**Matsushiro**	**21.45**	**37**	*e*P	**P**	**06 24 57.9**	**-0.1**
MJAR	**Matsushiro Arr**	**21.45**	**37**	P	**P**	**06 24 59.4**	**+1.4**
	0.6nm,0.3s,mb3.4,baz=212,slow=17,SNR=2.8						
KSM	**Kuching**	**21.96**	**214**	*e*P	**P**	**06 25 03.7**	**0.0**
	40nm,1.0s,mb4.8						
CMAR	**Chiang Mai Arr**	**22.18**	**270**	P	**P**	**06 25 06.6**	**+0.5**
	2.4nm,0.5s,mb3.9,baz=67,slow=8.5,SNR=15						
CMAR				LR	LR	06 33 53.6	
	comp=Z,93nm,18.9s,MS3.2,baz=70,slow=37						
KAPI	**Kappang**	**25.10**	**186**	P	**P**	**06 25 34.5**	**+0.2**
	6.9nm,0.3s,mb4.6,baz=182,slow=14,SNR=4.0						
KULM	**Kulim**	**25.76**	**238**	*e*P	**P**	**06 25 37.8**	**-2.6**
	9.2nm,0.7s,mb4.4						
PSI	**Prapat**	**28.64**	**236**	P	**P**	**06 26 07.2**	**+1.1**
	1.2nm,0.4s,mb4.0,baz=17,slow=19,SNR=2.6						
ULN	**Ulaanbaatar**	**30.35**	**339**	*e*P	**P**	**06 26 21.6**	**+0.7**
	4.7nm,0.8s,mb4.3						
SONM	**Songino Array**	**30.54**	**339**	P	**P**	**06 26 22.4**	**-0.3**
	0.4nm,0.4s,mb3.6,baz=150,slow=6.0,SNR=3.3						
SONM				LR	LR	06 39 12.7	
	comp=Z,354nm,21.5s,MS4.0,baz=139,slow=37						
WRAB	**Tennant Creek**	**41.49**	**163**	*e*P	**P**	**06 27 55.1**	**-1.3**
	25nm,1.1s,mb4.8						
WRA	**Warramunga Arr**	**41.49**	**163**	P	**P**	**06 27 56.0**	**-0.5**
	7.2nm,0.8s,mb4.3,baz=343,slow=9.1,SNR=66						
MK31	**Makanchi Array**	**42.07**	**319**	*e*P	**P**	**06 28 02.2**	**+1.2**
MKAR	**Makanchi Array**	**42.07**	**319**	P	**P**	**06 28 01.5**	**+0.5**
	2.9nm,0.7s,mb4.0,baz=109,slow=9.3,SNR=25						
MKAR				LR	LR	06 47 03.9	
	comp=Z,184nm,19.0s,MS4.0,baz=266,slow=38						
MKAR	**Makanchi Array**	**42.07**	**319**	P	**P**	**06 28 01.5**	**+0.5**
MKAR				LR	LR	06 47 03.9	
PETK	**Petropavlovsk-**	**42.69**	**31**	P	**P**	**06 28 05.6**	**-0.3**
	1.0nm,0.5s,mb3.9,baz=308,slow=5.1,SNR=4.0						
ZAA0	**Zalesovo Array**	**44.27**	**329**	*e*P	**P**	**06 28 18.6**	**-0.1**
ZALV	**Zalesovo Beam**	**44.27**	**329**	P	**P**	**06 28 18.8**	**+0.1**
	2.6nm,0.6s,mb4.2,baz=111,slow=7.8,SNR=13						
ZALV				LR	LR	06 48 04.0	
	comp=Z,161nm,20.9s,MS3.9,baz=226,slow=38						
ASAR	**Alice Springs**	**44.94**	**165**	P	**P**	**06 28 24.1**	**-0.1**
	2.6nm,0.7s,mb4.2,baz=341,slow=7.0,SNR=36						
TKM2	**Tokmak 2**	**45.20**	**311**	*e*P	**P**	**06 28 27.6**	**+1.3**
	3.4nm,0.9s,mb4.2						
UCH	**Uchtor**	**45.81**	**310**	*e*P	**P**	**06 28 32.6**	**+1.5**
	21nm,1.6s,mb4.8						
AAK	**Ala-Archa**	**45.92**	**310**	LR	LR	06 49 54.6	
	comp=Z,155nm,18.7s,MS4.0,baz=280,slow=39						
KURK	**Kurchatov**	**45.95**	**322**	P	**P**	**06 28 32.0**	**0.0**
	2.5nm,0.6s,mb4.3,baz=116,slow=7.7,SNR=17						
KURK				LR	LR	06 49 08.0	
	comp=Z,124nm,19.0s,MS3.9,baz=95,slow=38						
AML	**Almayashu**	**46.38**	**309**	*e*P	**P**	**06 28 32.6**	**-2.9**
	5.9nm,0.9s,mb4.5						
EKS2	**Erkin-Say**	**46.44**	**310**	*e*P	**P**

JMA 18 06:32:09.2±0.5, 25°.01N×122°.28E, h33km, M2.6
ISC 18 06:32:08.2±0.4, 24°.36N±0°.02×122°.14E±0°.02, h8km±3km, n43, σ1§06/74, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao** baz=329	**0.36**	**313**	P	**Pg**	**06 32 15.4**	**0.0**
TWC				*e*S	**Sg**	**06 32 19.8**	**-0.3**
ENA	**Nanau** baz=278	**0.37**	**281**	⇑*i*P	**Pg**	**06 32 14.9**	**-0.6**
ENA				S	**Sg**	**06 32 19.4**	**-0.9**
ILA	**Ilan** baz=329	**0.54**	**319**	*e*S	**Sg**	**06 32 25.8**	**+0.1**
TWE	**Neicheng** baz=318	**0.56**	**310**	P	**Pg**	**06 32 19.1**	**0.0**
TWE				*e*S	**Sg**	**06 32 26.1**	**-0.3**
TWD	**Chiawan** baz=229	**0.57**	**241**	*e*P	**Pg**	**06 32 19.4**	**+0.2**
TWD				*e*S	**Sg**	**06 32 28.8**	**+2.2**
ENTT	**Nioudou** baz=302	**0.59**	**298**	P	**Pg**	**06 32 19.3**	**-0.3**
ENTT				*e*S	**Sg**	**06 32 25.9**	**-1.5**
HWA	**Hwalien** baz=220	**0.62**	**232**	*e*P	**Pg**	**06 32 21.2**	**+1.0**
HWA				*e*S	**Sg**	**06 32 31.7**	**+3.5**
TWB1	**Santiao Chiao** baz=359	**0.66**	**348**	*e*P	**Pg**	**06 32 21.7**	**+0.7**
TWB1				*e*S	**Sg**	**06 32 30.1**	**+0.5**
NNS	**Nan Shan** baz=274	**0.70**	**277**	P	**Pg**	**06 32 20.9**	**-0.8**
NNS				S	**Sg**	**06 32 29.4**	**-1.5**
NSK	**Sanguang** baz=296	**0.78**	**294**	P	**Pg**	**06 32 22.6**	**-0.6**
NSK				*e*S	**Sg**	**06 32 31.8**	**-1.5**
NWF	**Wu-fen Shan** baz=343	**0.78**	**335**	P	**Pg**	**06 32 23.9**	**+0.6**
NWF				S	**Sg**	**06 32 33.7**	**+0.3**
TWA	**Mucha** baz=327	**0.80**	**321**	*e*P	**Pg**	**06 32 24.1**	**+0.5**
TWA				*e*S	**Sg**	**06 32 34.1**	**+0.1**
YOJ	**Yonaguni jima**	**0.80**	**83**	P	**Pg**	**06 32 25.0**	**+1.3**
YOJ				*e*S	**Sg**	**06 32 36.2**	**+2.1**
WHF	**Hehuan Shan** baz=249	**0.82**	**255**	*e*P	**Pg**	**06 32 23.2**	**-0.9**
WHF				*e*S	**Sg**	**06 32 34.4**	**-0.5**
ESL	**Shilin** baz=221	**0.84**	**230**	P	**Pg**	**06 32 23.7**	**-0.7**
ESL				*e*S	**Sg**	**06 32 36.2**	**+0.8**
TAP1	**Taipei** baz=325	**0.88**	**321**	*e*P	**Pg**	**06 32 24.9**	**-0.2**
TAP1				*e*S	**Sg**	**06 32 36.6**	**+0.1**
TWT	**Tachien** baz=259	**0.88**	**263**	*e*P	**Pg**	**06 32 25.2**	**0.0**
TWT				*e*S	**Sg**	**06 32 38.6**	**+1.9**
TWS1	**Kuangyinshan** baz=323	**0.99**	**319**	*e*P	**Pg**	**06 32 27.9**	**+0.7**
TWS1				*e*S	**Sg**	**06 32 40.8**	**+0.7**
TWY	**Chenhua** baz=337	**1.03**	**332**	*e*P	**Pg**	**06 32 28.5**	**+0.4**
TWY				*e*S	**Sg**	**06 32 41.8**	**+0.2**
NCU	**National Centr** baz=308	**1.06**	**305**	*e*S	**Sg**	**06 32 44.0**	**+1.7**
NSTT	**Nanjuang** baz=284	**1.07**	**285**	P	**Pg**	**06 32 28.8**	**0.0**
NSTT				*e*S	**Sg**	**06 32 42.5**	**-0.2**
EHY	**Hungye** baz=214	**1.13**	**221**	*e*P	**Pg**	**06 32 28.2**	**-1.7**
EHY				*e*S	**Sg**	**06 32 44.5**	**-0.1**
SMLT	**Sun Moon Lake** baz=243	**1.23**	**248**	P	**Pb**	**06 32 30.5**	**-1.1**
SMLT				*e*S	**Sb**	**06 32 46.6**	**-1.0**
TWQ1	**Liyutan** baz=267	**1.25**	**270**	*e*P	**Pn**	**06 32 32.3**	**+0.3**
TYC	**Yuchr** baz=244	**1.25**	**249**	*e*P	**Pn**	**06 32 30.9**	**-1.2**
TYC				*e*S	**Sb**	**06 32 47.8**	**-0.7**
NSY	**Sanyi** baz=271	**1.26**	**273**	*e*P	**Pn**	**06 32 31.7**	**-0.4**
TWF1	**Yuli** baz=211	**1.26**	**218**	*e*P	**Pn**	**06 32 29.3**	**-2.8**
TCU	**Taichung** baz=258	**1.35**	**261**	*e*P	**Pn**	**06 32 33.7**	**+0.3**
TCU				*e*S	**Sb**	**06 32 52.5**	**+1.3**
YUS	**Yu-Shan** baz=226	**1.39**	**232**	*e*P	**Pn**	**06 32 32.5**	**-1.4**
YUS				*e*S	**Sb**	**06 32 52.7**	**+0.4**
IRIF	**Iriomote-Funau**	**1.45**	**91**	P	**Pn**	**06 32 34.2**	**-0.6**
IRIF				*e*S	**Sn**	**06 32 53.5**	**-0.5**
ALS	**Alishan** baz=231	**1.48**	**236**	*e*P	**Pn**	**06 32 34.5**	**-0.7**
ALS				*e*S	**Sn**	**06 32 54.5**	**-0.3**
CHN5	**Tsauling** baz=236	**1.54**	**241**	*e*P	**Pn**	**06 32 36.0**	**0.0**
CHN5				*e*S	**Sn**	**06 32 57.2**	**+1.2**
HATJ	**Hateruma jima**	**1.55**	**101**	*e*S	**Sn**	**06 32 58.7**	**+2.2**
ELDTW	**Lidau** baz=216	**1.55**	**222**	*e*P	**Pn**	**06 32 34.5**	**-1.7**
JKRS	**Kuro-shima**	**1.71**	**94**	P	**Pn**	**06 32 38.4**	**+0.1**
JKRS				*e*S	**Sn**	**06 32 59.3**	**-1.1**
WTP	**Ta-pu** baz=227	**1.78**	**232**	*e*P	**Pn**	**06 32 40.0**	**+0.7**
WTP				*e*S	**Sn**	**06 33 04.0**	**+1.9**
CHY	**Chiayi** baz=238	**1.79**	**242**	*e*S	**Sn**	**06 33 04.5**	**+2.3**
TWG	**Pinlang** baz=208	**1.82**	**213**	*e*P	**Pn**	**06 32 36.9**	**-2.9**
JIJ	**Ishigaki jima**	**1.83**	**89**	P	**Pn**	**06 32 38.1**	**-1.9**
JIJ				*e*S	**Sn**	**06 33 00.2**	**-3.1**
TWK	**Hsinying** baz=230	**1.86**	**235**	*e*S	**Sn**	**06 33 05.3**	**+1.2**
CHN1	**Nanshi** baz=228	**1.88**	**232**	*e*P	**Pn**	**06 32 41.2**	**+0.5**
CHN1				*e*S	**Sn**	**06 33 05.9**	**+1.3**
SSD	**Sandimen** baz=217	**2.12**	**221**	*e*P	**Pn**	**06 32 44.5**	**+0.6**
EAST	**Anshuo** baz=207	**2.30**	**211**	*e*P	**Pn**	**06 32 45.9**	**-0.5**

IDC 18 06:45:21.0±2.4, 21°.96N×143°.01E, h267km±19km, mb3.1/9, mb1 3.3/10, mb1mx3.1/24, mbtmp3.2/10, Error ellipse: s-maj=36.8km s-min=20.3km az=82.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima** 2.6nm,0.3s,baz=285,slow=20,SNR=5.1	**5.17**	**352**	P	Pn	06 46 40.2	+0.9
CBIJ	4.3nm,0.3s,baz=307,slow=20,SNR=3.5			S	S	06 47 41.5	-0.5
KSRS	**Korea Array** 1.7nm,0.6s,baz=148,slow=8.9,SNR=4.6	**20.21**	**323**	P	P	06 49 37.0	+0.9
SONM	**Songino Array** 0.7nm,0.6s,baz=116,slow=3.4,SNR=2.4	**39.03**	**320**	P	P	06 52 22.7	+0.6
WRA	**Warramunga Arr** 0.4nm,1.0s,baz=9.9,slow=8.9,SNR=4.8	**42.50**	**192**	P	P	06 52 50.2	-0.3
ZALV	**Zalesovo Beam** 0.9nm,0.5s,baz=110,slow=7.8,SNR=3.4	**53.91**	**322**	P	P	06 54 16.0	-1.0
MKAR	**Makanchi Array** 0.4nm,0.5s,baz=96,slow=7.7,SNR=3.6	**54.40**	**313**	P	P	06 54 21.0	+0.4
BVAR	**Borovoye Array** 0.9nm,0.5s,baz=94,slow=8.0,SNR=4.7	**62.37**	**319**	P	P	06 55 15.7	+0.3
YKA	**Yellowknife Ar** 0.4nm,0.5s,baz=297,slow=6.3,SNR=3.6	**76.30**	**28**	P	P	06 56 41.3	+1.1
ARCES	**ARCESS Array B** 1.3nm,0.5s,baz=72,slow=9.1,SNR=10	**78.63**	**341**	P	P	06 56 52.5	-0.5
FINES	**FINESS Array B** 1.2nm,0.5s,baz=69,slow=6.9,SNR=5.9	**82.88**	**334**	P	P	06 57 15.0	-0.5

ISCJB 18 06:50:25.0±0.3, 31°.78N±0°.02×116°.27W±0°.02, h10km, Error ellipse: s-maj=3.1km s-min=1.8km az=27.2
NEIC 18 06:50:26.3, 31°.83N×116°.30W, h0km, mb4.1/3, ML4.5(PAS), ML4.4(ECX), After ECX.
NEIC Felt at Ensenada. Also felt at Boulevard, Chula Vista, El Cajon, El Centro, Escondido, Jamul, Oceanside, Santee, San Diego and San Ysidro, California.
ECX 18 06:50:26.3±0.8, 31°.83N×116°.30W, h8km, MD4.3, ML4.5
IDC 18 06:50:29.7±2.0, 32°.01N×115°.91W, h0km, mb1 4.0/6, mb1mx3.8/27, mbtmp3.7/6, ML3.7/6, Error ellipse: s-maj=28.7km s-min=11.1km az=41.0
ISC 18 06:50:26.7±0.3, 31°.80N±0°.02×116°.31W±0°.02, h10km, n215, σ1§54/255, 86C-88D, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECNX	**Esteban Cantu**	**0.28**	**239**	⇑*e*P	**Pg**	**06 50 31.8**	**-0.6**
ECNX				⇑*e*P		06 50 32.1	
CCX	**Cicese**	**0.31**	**282**	⇑*e*P	**Pg**	**06 50 32.1**	**-0.7**
RDX	**Rancho Dawling**	**0.34**	**68**	⇑*e*P	**Pg**	**06 50 32.0**	**-1.4**
RDX				*e*S	**Sg**	**06 50 37.0**	**-1.0**
PBX	**Punta Banda**	**0.36**	**260**	⇑*e*P	**Pg**	**06 50 33.2**	**-0.6**
PBX				*e*S	**Sg**	**06 50 38.4**	**-0.1**
CBX	**Cerro Bola**	**0.59**	**330**	⇑*e*P	**Pg**	**06 50 36.4**	**-1.8**
CBX				*e*S	**Sg**	**06 50 44.5**	**-1.4**
CBX	comp=E,45μm,1.0s			⇑*e*		06 50 46.5	
CBX	comp=N,26μm,0.6s			*e*		06 50 52.9	
RMX	**La Rumorosa**	**0.82**	**14**	⇓*e*P	**Pg**	**06 50 40.7**	**-1.9**
RMX				*e*S	**Sg**	**06 50 51.1**	**-2.2**
DVTC	**Desert V Tower** baz=0.9,SNR=677	**0.87**	**12**	P	**Pg**	**06 50 41.5**	**-2.1**
DVTC				⇓S	**Sg**	**06 50 52.4**	**-2.6**
BAR	**Barrett**	**0.93**	**341**	*e*Pg	**Pg**	**06 50 42.0**	**-2.5**
BAR				*e*Sn	**Sn**	**06 50 53.7**	**-5.4**
EMX	**El Mayor**	**0.93**	**78**	⇑*e*P	**Pg**	**06 50 42.6**	**-2.0**
EMX				*e*S	**Sg**	**06 50 55.1**	**-1.6**
EMX	comp=E,10μm,0.3s			⇑*e*		06 50 57.0	
EMX	comp=N,13μm,0.6s			⇓*e*		06 50 59.0	
EMX	**El Mayor**	**0.93**	**78**	⇑*e*P	**Pg**	**06 50 42.6**	**-2.0**
EMX				*e*S	**Sg**	**06 50 55.1**	**-1.6**
SPX	**San Pedro Mart**	**1.05**	**136**	⇓*e*P	**Pg**	**06 50 44.3**	**-2.6**
SPX				*e*S	**Sg**	**06 50 59.5**	**-0.9**
SPX	comp=N,6μm,0.3s			*e*		06 51 00.5	
SPX	comp=E,10μm,0.6s			⇑*e*		06 51 05.4	
CPBX	**Cerro Prieto**	**1.05**	**54**	⇑*e*P	**Pg**	**06 50 41.4**	**-5.6**
MONP	**Monument Peak** baz=1.1,SNR=820	**1.09**	**355**	P	**Pb**	**06 50 45.0**	**-2.6**
MONP				⇓S	**Sg**	**06 50 59.1**	**-2.7**
ECBX	**El Chinero**	**1.12**	**107**	*e*P	**Pb**	**06 50 46.1**	**-2.2**
ECBX				*e*S	**Sb**	**06 51 00.8**	**-2.1**
SWSC	**Sam W. Stewart** baz=1.2,SNR=1000	**1.22**	**21**	⇑P	**Pn**	**06 50 47.9**	**-1.9**
SWSC				⇑S	**Sb**	**06 51 03.3**	**-2.2**
109C	**Camp Elliot, M** baz=1.2	**1.27**	**328**	⇑P	**Pn**	**06 50 47.7**	**-2.9**
109C				⇓S	**Sb**	**06 51 04.0**	**-3.3**
112A	**Yuma** baz=1.7,SNR=13	**1.64**	**63**	⇑P	**Pn**	**06 50 53.1**	**-2.5**
112A				⇓S	**Sn**	**06 51 14.0**	**-2.8**
GLA	**Glamis** baz=1.8,SNR=168	**1.77**	**45**	⇓P	**Pn**	**06 50 55.4**	**-1.9**
GLA				⇑S	**Sn**	**06 51 17.0**	**-2.9**
GLA	**Glamis**	**1.77**	**45**	*e*Pn	**Pn**	**06 50 55.5**	**-1.9**
GLA				*e*Sn	**Sn**	**06 51 16.5**	**-3.5**
PFO	**Pinyon Flat Ob** baz=1.8,SNR=243	**1.81**	**356**	⇓P	**Pn**	**06 50 56.7**	**-1.2**
PFO				⇓Sb	**Sb**	**06 51 20.2**	**-2.3**
PFO	**Pinyon Flat Ob**	**1.81**	**356**	*e*Pn	**Pn**	**06 50 57.6**	**-0.3**
PFO				*e*Sn	**Sn**	**06 51 19.7**	**-1.1**
MURC	**Murrieta** baz=1.9,SNR=70	**1.94**	**338**	⇑P	**Pn**	**06 50 58.6**	**-1.1**
MURC				⇑Sb	**Sb**	**06 51 24.2**	**-2.3**
BC3	**Big Chuckawall** baz=2.0,SNR=66	**1.98**	**21**	⇓P	**Pn**	**06 50 59.1**	**-1.3**
BC3				⇑Sb	**Sb**	**06 51 25.7**	**-2.0**
BELC	**Belle Mtn. Jos** baz=2.2,SNR=44	**2.21**	**7**	⇑P	**Pn**	**06 51 02.2**	**-1.2**
BELC				⇓Sb	**Sb**	**06 51 32.7**	**-1.4**
SCI	**San Clemente I** baz=2.2	**2.23**	**302**	⇑P	**Pn**	**06 51 01.5**	**-2.1**
SCI				⇓S	**Sn**	**06 51 29.1**	**-2.1**
113A	**Mohawk Valley,** baz=2.4,SNR=200	**2.36**	**65**	P	**Pn**	**06 51 04.0**	**-1.6**
113A				⇓S	**Sn**	**06 51 31.7**	**-2.8**
CIS	**Catalina Islan** baz=2.3	**2.38**	**313**	⇑P	**Pn**	**06 51 03.1**	**-2.7**
CIS				⇑S	**Sn**	**06 51 31.7**	**-3.3**
Y12C	**Blythe** baz=2.5,SNR=14	**2.46**	**37**	⇑P	**Pn**	**06 51 05.4**	**-1.4**
BBRC	**Big Bear Solar** baz=2.5	**2.51**	**348**	⇑P	**Pn**	**06 51 07.4**	**-0.1**
BBRC				⇑Sb	**Sb**	**06 51 42.1**	**-0.6**
FMP	**Fort Macarthur** baz=2.5	**2.53**	**319**	⇑Sb	**Sb**	**06 51 43.0**	**-0.5**
IRM	**Iron Mountain** baz=2.5	**2.55**	**22**	⇑P	**Pn**	**06 51 07.1**	**-1.0**
Z13A	**Yuma Proving G** baz=2.7,SNR=92	**2.64**	**57**	P	**Pn**	**06 51 08.2**	**-1.2**
Z13A				⇓S	**Sn**	**06 51 39.3**	**-2.1**
BFSC	**Mount Baldy Ra** baz=2.6	**2.68**	**335**	⇓P	**Pn**	**06 51 10.0**	**+0.1**
BFSC				⇑Sb	**Sb**	**06 51 45.5**	**-2.2**
MWC	**Mount Wilson**	**2.83**	**329**	*e*Pn	**Pn**	**06 51 11.1**	**-0.8**
MWC				*e*Sn	**Sn**	**06 51 51.6**	**+5.7**
PASC	**Pasadena Art C**	**2.84**	**327**	*e*Pn	**Pn**	**06 51 10.7**	**-1.4**
PASC				*e*Sn	**Sn**	**06 51 50.3**	**+4.0**
214A	**Organ Pipe Nat** baz=3.0,SNR=96	**2.98**	**86**	P	**Pn**	**06 51 11.9**	**-2.1**
214A				⇑S	**Sn**	**06 51 46.9**	**-3.0**
GMRC	**Granite Mounta** baz=3.0,SNR=18	**3.02**	**10**	⇓P	**Pn**	**06 51 13.7**	**-0.9**
HEC	**Hector,Ludlow** baz=3.0	**3.02**	**360**	⇑P	**Pn**	**06 51 14.9**	**+0.3**
114A	**Black Gap (USA** baz=3.1,SNR=53	**3.06**	**71**	P	**Pn**	**06 51 13.6**	**-1.5**
114A				⇓S	**Sn**	**06 51 49.6**	**-2.1**
SNCC	**San Nicolas Is** baz=3.0	**3.07**	**299**	⇑P	**Pn**	**06 51 13.7**	**-1.6**
SNCC				⇓S	**Sn**	**06 51 49.1**	**-3.0**
SNCC	**San Nicolas Is**	**3.07**	**299**	*e*Pn	**Pn**	**06 51 13.1**	**-2.2**
SNCC				*e*Sn	**Sn**	**06 51 50.6**	**-1.5**
PDMCI	**Parker Dam,Lak** baz=3.1	**3.09**	**36**	⇑P	**Pn**	**06 51 14.7**	**-0.8**
Z14A	**Wintersburg** baz=3.3,SNR=63	**3.24**	**60**	P	**Pn**	**06 51 16.6**	**-1.0**
BLG	**Laguna Peak** baz=3.2	**3.26**	**316**	⇑S	**Sn**	**06 51 54.3**	**-2.5**
EDW2	**Edwards Air Fo** baz=3.3	**3.38**	**336**	⇑P	**Pn**	**06 51 19.7**	**+0.3**
EDW2				⇓Sb	**Sb**	**06 52 06.4**	**-1.3**
LDFC	**Landfair** baz=3.3	**3.42**	**17**	*e*Pn	**Pn**	**06 51 21.5**	**+1.5**
OSI	**Osito Adit** baz=3.4	**3.46**	**325**	⇑P	**Pn**	**06 51 20.5**	**-0.1**
OSI				⇑S	**Sn**	**06 51 58.8**	**-2.8**
OSI	**Osito Adit** baz=3.4	**3.46**	**325**	*e*Pn	**Pn**	**06 51 19.9**	**-0.6**
OSI				*e*Sn	**Sn**	**06 52 00.1**	**-1.4**
X13A	**Yucca** baz=3.5,SNR=19	**3.48**	**36**	⇓P	**Pn**	**06 51 20.5**	**-0.3**
Y14A	**Wickenburg** baz=3.5,SNR=24	**3.50**	**52**	⇑P	**Pn**	**06 51 20.2**	**-1.0**
GSC	**Goldstone** baz=3.5	**3.51**	**353**	⇑P	**Pn**	**06 51 21.5**	**+0.2**
GSC	**Goldstone**	**3.51**	**353**	*e*Pn	**Pn**	**06 51 22.0**	**+0.6**
115A	**Sonoran Desert** baz=3.6,SNR=38	**3.57**	**74**	⇓P	**Pn**	**06 51 20.4**	**-1.8**
TUQ	**Turquoise Moun** baz=3.6	**3.64**	**5**	⇓P	**Pn**	**06 51 23.9**	**+0.8**
W12A	**Cal Nev Ari** baz=3.7	**3.69**	**19**	⇑P	**Pn**	**06 51 24.5**	**+0.7**
Z15A	**Gila River Ind** baz=3.8,SNR=44	**3.81**	**66**	P	**Pn**	**06 51 24.5**	**-0.9**
Z15A				⇑S	**Sn**	**06 52 07.9**	**-2.4**
LRMC	**Laurel Mountai** baz=3.8	**3.84**	**343**	⇓P	**Pn**	**06 51 26.8**	**+1.0**
W13A	**Hualapai Mount** baz=3.9	**3.86**	**31**	⇑P	**Pn**	**06 51 25.4**	**-0.7**
X14A	**Yava** baz=3.9,SNR=17	**3.91**	**46**	⇑P	**Pn**	**06 51 26.2**	**-0.6**
ARVC	**Arvin** baz=3.9	**3.93**	**328**	⇑P	**Pn**	**06 51 26.6**	**-0.4**
Y15A	**Casa Rosa Ranc** baz=4.0,SNR=30	**3.98**	**56**	⇑P	**Pn**	**06 51 26.5**	**-1.2**
116A	**Eloy** baz=4.0,SNR=12	**3.98**	**78**	P	**Pn**	**06 51 25.9**	**-1.8**
SHOC	**Shoshone** baz=4.1	**4.09**	**0**	⇓P	**Pn**	**06 51 27.8**	**-1.5**
V11A	**Goodsprings** baz=4.1	**4.09**	**10**	⇓P	**Pn**	**06 51 28.1**	**-1.2**
V12A	**Nelson** baz=4.1	**4.10**	**17**	⇓P	**Pn**	**06 51 29.4**	**0.0**
216A	**Three Points,** baz=4.2,SNR=7.7	**4.13**	**86**	⇓P	**Pn**	**06 51 27.7**	**-2.2**
ISA	**Isabella** baz=4.2	**4.25**	**336**	⇓P	**Pn**	**06 51 31.0**	**-0.5**
ISA	**Isabella**	**4.25**	**336**	*e*Pn	**Pn**	**06 51 31.8**	**+0.3**
W14A	**Seligman** baz=4.4	**4.34**	**38**	⇑P	**Pn**	**06 51 33.0**	**+0.3**
X15A	**Humboldt** baz=4.4,SNR=82	**4.34**	**51**	⇓P	**Pn**	**06 51 32.4**	**-0.4**
MPMC	**Manual Prospec** baz=4.3	**4.36**	**347**	⇑P	**Pn**	**06 51 33.2**	**+0.2**
Z16A	**Peralta Trail,** baz=4.4,SNR=41	**4.40**	**68**	P	**Pn**	**06 51 32.3**	**-1.2**
Z16A				⇓S	**Sn**	**06 52 22.2**	**-2.6**
V13A	**Grand Canyon W** baz=4.5	**4.48**	**25**	⇑P	**Pn**	**06 51 34.9**	**+0.2**
Y16A	**Circle Bar Ran** baz=4.6,SNR=83	**4.56**	**62**	⇑P	**Pn**	**06 51 34.7**	**-1.1**
Y16A				⇑S	**Sn**	**06 52 26.6**	**-2.3**
U10A	**Ash Meadows, A** baz=4.6	**4.61**	**360**	⇓P	**Pn**	**06 51 36.8**	**+0.5**
VES	**Vestal, Richgr** baz=4.6	**4.64**	**331**	⇑P	**Pn**	**06 51 37.9**	**+1.1**
SMMC	**Simmler** baz=4.6	**4.66**	**320**	⇓P	**Pn**	**06 51 37.8**	**+0.7**
V14A	**Boquillas Ranc** baz=4.7	**4.66**	**34**	⇑P	**Pn**	**06 51 37.7**	**+0.6**
U11A	**Corn Creek** baz=4.7	**4.67**	**9**	⇓P	**Pn**	**06 51 40.4**	**+3.1**
FURC	**Furnace Creek,** baz=4.7	**4.68**	**355**	⇓P	**Pn**	**06 51 39.5**	**+2.1**
TUC	**Tucson**	**4.72**	**82**	*e*Pn	**Pn**	**06 51 36.1**	**-1.9**
TUC				*e*Sn	**Sn**	**06 52 35.8**	**+3.1**
W15A	**Williams** baz=4.8	**4.77**	**44**	⇑P	**Pn**	**06 51 39.6**	**+0.9**
117A	**Oracle** baz=4.8,SNR=19	**4.79**	**79**	⇓P	**Pn**	**06 51 36.8**	**-2.1**
U12A	**Valley of Fire** baz=4.8	**4.85**	**17**	⇓P	**Pn**	**06 51 40.2**	**+0.6**
X16A	**Lo Mia Camp, P** baz=4.9,SNR=154	**4.85**	**56**	⇓P	**Pn**	**06 51 39.6**	**-0.1**
Y17A	**Roosevelt** baz=5.0,SNR=57	**4.98**	**66**	P	**Pn**	**06 51 40.4**	**-1.1**
U13A	**Pakoon Wash** baz=5.0	**5.00**	**22**	⇓P	**Pn**	**06 51 42.7**	**+1.0**
T12A	**Moapa** baz=5.1	**5.08**	**15**	⇑P	**Pn**	**06 51 44.6**	**+1.6**
RCTC	**Rector, Farmer** baz=5.1	**5.11**	**332**	⇓P	**Pn**	**06 51 44.2**	**+0.9**
Z17A	**San Carlos Hig** baz=5.2,SNR=15	**5.15**	**72**	P	**Pn**	**06 51 43.3**	**-0.6**
W16A	**Flagstaff** baz=5.2,SNR=13	**5.17**	**49**	⇑P	**Pn**	**06 51 45.1**	**+1.0**
GRAC	**Grapevine Rang** baz=5.2	**5.26**	**351**	⇓P	**Pn**	**06 51 47.4**	**+2.1**
X17A	**Forest Lakes** baz=5.3,SNR=64	**5.27**	**60**	⇓P	**Pn**	**06 51 45.5**	**0.0**
V15A	**Kaibab Nationa** baz=5.3	**5.28**	**40**	⇓P	**Pn**	**06 51 47.1**	**+1.4**
U14A	**Mt Trumbull** baz=5.3	**5.29**	**29**	⇓P	**Pn**	**06 51 46.6**	**+0.9**
218A	**Dragoon** baz=5.4	**5.33**	**87**	⇑P	**Pn**	**06 51 45.8**	**-0.5**
118A	**Homack Ranch,** baz=5.5,SNR=16	**5.44**	**79**	⇓P	**Pn**	**06 51 46.4**	**-1.4**
T11A	**Corn Creek, Al** baz=5.5	**5.50**	**9**	⇓P	**Pn**	**06 51 50.1**	**+1.4**
WUAZ	**Wupatki** baz=5.6,SNR=24	**5.54**	**47**	⇓P	**Pn**	**06 51 50.3**	**+1.1**
WUAZ	**Wupatki**	**5.54**	**47**	*e*Pn	**Pn**	**06 51 49.9**	**+0.7**
T13A	**Saint George** baz=5.6	**5.57**	**20**	⇑P	**Pn**	**06 51 50.8**	**+1.2**
Y18A	**Canyon Day Jun** baz=5.7,SNR=26	**5.64**	**68**	⇑P	**Pn**	**06 51 49.6**	**-1.0**
U15A	**North Rim** baz=5.7	**5.69**	**35**	⇓P	**Pn**	**06 51 52.7**	**+1.4**
W17A	**Winslow** baz=5.7,SNR=12	**5.71**	**54**	⇓P	**Pn**	**06 51 52.0**	**+0.5**
MTUM	**Tungsten Hills**	**5.84**	**342**	*e*Pn	**Pn**	**06 51 56.4**	**+3.1**
T14A	**Hurricane** baz=5.9	**5.88**	**26**	⇓P	**Pn**	**06 51 55.1**	**+1.2**
S12A	**Delamar Landin** baz=5.9	**5.92**	**11**	⇓P	**Pn**	**06 51 56.5**	**+2.1**
V17A	**Tonalea, Kykot** baz=6.0	**5.97**	**49**	⇓P	**Pn**	**06 51 56.3**	**+1.1**
X18A	**Snowflake** baz=6.0,SNR=84	**5.99**	**61**	⇑P	**Pn**	**06 51 55.5**	**+0.1**
219A	**White Tail Can** baz=6.0,SNR=20	**6.00**	**86**	P	**Pn**	**06 51 54.8**	**-0.8**
119A	**Ashpeak Ranch,** baz=6.0,SNR=6.8	**6.01**	**79**	⇓P	**Pn**	**06 51 54.3**	**-1.4**
319A	**Douglas** baz=6.1	**6.01**	**92**	⇓P	**Pn**	**06 51 55.0**	**-0.7**
S10A	**Tonopah Range,** baz=6.1	**6.11**	**358**	⇓P	**Pn**	**06 51 59.3**	**+2.3**
T15A	**Red Dirt Ranch** baz=6.1	**6.13**	**31**	⇑P	**Pn**	**06 51 59.0**	**+1.7**
Z19A	**T-Link Ranch,** baz=6.2	**6.13**	**74**	⇑P	**Pn**	**06 51 57.5**	**+0.1**
CCUT	**Cedar City**	**6.23**	**22**	*e*Pn	**Pn**	**06 52 00.2**	**+1.5**
Y19A	**Nutrioso** baz=6.3,SNR=138	**6.31**	**68**	⇓P	**Pn**	**06 52 00.1**	**+0.2**
W18A	**Petrified Fore** baz=6.4,SNR=26	**6.41**	**57**	⇑P	**Pn**	**06 52 02.1**	**+0.9**
ARUT	**Antelope Range**	**6.42**	**21**	*e*Pn	**Pn**	**06 52 03.0**	**+1.7**
X19A	**St. Johns** baz=6.5,SNR=31	**6.45**	**64**	⇓P	**Pn**	**06 52 02.1**	**+0.5**
R10A	**Warm Springs** baz=6.5	**6.47**	**0**	⇑P	**Pn**	**06 52 05.3**	**+3.3**
S14A	**Cedar City** baz=6.5	**6.48**	**23**	⇓P	**Pn**	**06 52 04.3**	**+2.2**
T16A	**Glen Canyon Da** baz=6.5	**6.52**	**36**	⇓P	**Pn**	**06 52 04.3**	**+1.7**
120A	**U Bar Ranch, L** baz=6.6	**6.55**	**81**	⇑P	**Pn**	**06 52 01.9**	**-1.3**
R11A	**Troy Canyon, C** baz=6.5	**6.56**	**5**	⇑P	**Pn**	**06 52 03.1**	**-0.1**
220A	**Playas Peak, P** baz=6.7,SNR=26	**6.62**	**87**	P	**Pn**	**06 52 04.1**	**0.0**
R13A	**O'Grain Ranch,** baz=6.6	**6.65**	**16**	⇓P	**Pn**	**06 52 06.7**	**+2.3**
Z20A	**Nine Sixteen R** baz=6.7	**6.65**	**77**	⇓P	**Pn**	**06 52 03.6**	**-0.9**

R12A	Pony Springs,	6.66	12	⇓P	Pn	06 52 06.8 +2.3
	baz=6.7					
320A	Kipp Ranch, An	6.66	92	⇓P	Pn	06 52 04.9 +0.3
	baz=6.7,SNR=9.7					
W19A	Sanders	6.66	58	⇓P	Pn	06 52 05.4 +0.8
	baz=6.7					
S15A	Panguitch	6.70	28	⇑P	Pn	06 52 08.0 +2.9
	baz=6.7					
NVAR	Mina Array Bea	6.81	347	Pn	Pn	06 52 09.9 +3.3
	comp=E,0.6nm,0.3s,baz=167,slow=14,SNR=14					
NVAR				Lg		06 53 60.0
	comp=E,0.3nm,0.3s,baz=160,slow=32,SNR=2.4					
NVAR	Mina Array Bea	6.81	347	Pn	Pn	06 52 09.9 +3.3
NVAR				Lg		06 53 60.0
T17A	Navajo Res., N	6.90	40	⇑P	Pn	06 52 10.1 +2.2
	baz=6.9					
Y20A	Horse Springs,	7.00	70	⇓P	Pn	06 52 09.6 +0.3
	baz=7.0,SNR=24					
Q10A	Clear Creek Ra	7.01	359	⇑P	Pn	06 52 12.4 +3.0
	baz=7.0					
CMB	Columbia Colle	7.06	333	*e*Pn	Pn	06 52 10.9 +0.8
X20A	Quemado	7.10	65	⇓P	Pn	06 52 11.6 +1.0
	baz=7.1					
221A	Mesquite Ranch	7.26	86	⇓P	Pn	06 52 12.6 -0.3
	baz=7.3,SNR=12					
121A	Cookes Peak, D	7.27	82	⇓P	Pn	06 52 12.1 -0.8
	baz=7.3,SNR=17					
W20A	Ramah	7.32	61	⇓P	Pn	06 52 14.2 +0.6
	baz=7.3					
Q13A	Wheeler Ranch,	7.38	14	⇑P	Pn	06 52 16.5 +2.1
	baz=7.4					
S17A	Black Ridge (B	7.38	36	⇓P	Pn	06 52 16.8 +2.4
	baz=7.4					
U19A	Dine' College,	7.40	51	⇓P	Pn	06 52 16.1 +1.3
	baz=7.4					
MSU	Marysvale	7.50	26	*e*Pn	Pn	06 52 20.1 +4.0
T18A	Mexican Hat	7.52	43	⇑P	Pn	06 52 18.5 +2.1
	baz=7.5					
R16A	Teasdale	7.58	30	⇑P	Pn	06 52 20.1 +2.9
	baz=7.6					
Q14A	Sevier Lake (B	7.58	18	⇑P	Pn	06 52 19.3 +2.0
	baz=7.6					
Y21A	Point of Rocks	7.59	71	⇓P	Pn	06 52 18.3 +0.9
	baz=7.6					
X21A	Alamocita Cree	7.62	67	⇓P	Pn	06 52 18.6 +0.8
	baz=7.7					
V20A	Brimhall	7.65	56	⇓P	Pn	06 52 19.7 +1.5
	baz=7.7					
P12A	McGill	7.74	8	⇑P	Pn	06 52 22.0 +2.6
	baz=7.7					
P11A	Circle Ranch,	7.75	3	⇓P	Pn	06 52 22.5 +3.0
	baz=7.7					
P10A	Eureka	7.80	359	⇑P	Pn	06 52 23.6 +3.3
	baz=7.8					
222A	Williams Famil	7.83	85	⇑P	Pn	06 52 20.3 -0.4
	baz=7.9,SNR=20					
T19A	Beclabito	7.84	48	⇑P	Pn	06 52 22.9 +2.1
	baz=7.9					
S18A	Hurst Farm, Bl	7.84	40	⇓P	Pn	06 52 23.8 +3.0
	baz=7.9					
P13A	Bates Ranch, G	7.86	13	⇑P	Pn	06 52 23.8 +2.7
	baz=7.9					
U20A	Newcomb	7.91	53	⇓P	Pn	06 52 23.4 +1.7
	baz=7.9					
W21A	San Fidel	7.96	63	⇑P	Pn	06 52 23.8 +1.4
	baz=8.0					
Z22A	Elephant Butte	8.03	77	⇓P	Pn	06 52 22.4 -0.9
	baz=8.1,SNR=10					
R17A	Hanksville Air	8.04	33	⇓P	Pn	06 52 25.3 +1.8
	baz=8.0					
LAZ	Ladron	8.12	69	*e*Pn	Pn	06 52 24.7 0.0
Y22A	Socorro	8.14	72	⇑P	Pn	06 52 24.9 -0.1
	baz=8.2					
P14A	Drum Mountains	8.21	18	⇓P	Pn	06 52 27.5 +1.7
	baz=8.2					
V21A	Milan	8.25	59	⇑P	Pn	06 52 28.0 +1.6
	baz=8.3					
X22A	Bernardo	8.25	68	⇓P	Pn	06 52 27.4 +0.9
	baz=8.3					
S19A	Harvey Farm, M	8.36	43	⇑P	Pn	06 52 30.5 +2.5
	baz=8.4					
MVCO	Mesa Verde	8.40	48	⇓P	Pn	06 52 30.7 +2.2
	baz=8.4,SNR=19					
MVCO	Mesa Verde	8.40	48	*e*Pn	Pn	06 52 30.7 +2.1
R18A	Canyonlands Na	8.41	37	⇓P	Pn	06 52 31.1 +2.5
	baz=8.4					
BNM	Barren Site	8.47	71	*e*Pn	Pn	06 52 29.5 +0.1
BNM				*e*Sg	Sn	06 54 56.8 +52
LPM	Los Pinos Moun	8.50	70	*e*Pn	Pn	06 52 30.5 +0.6
U21A	Nageezi	8.53	55	⇑P	Pn	06 52 32.1 +1.9
	baz=8.6					
W22A	Albuquerque	8.54	65	⇓P	Pn	06 52 32.1 +1.7
	baz=8.6					
O12A	Currie	8.54	8	⇓P	Pn	06 52 32.9 +2.5
	baz=8.5					
TMUT	Trail Mountain	8.55	28	*e*Pn	Pn	06 52 36.0 +5.4
SRU	San Rafael	8.68	31	*e*Pn	Pn	06 52 35.6 +3.2
ANMO	Albuquerque	8.82	67	Pn	Pn	06 52 34.8 +0.6
	comp=E,0.3nm,0.3s,baz=252,slow=6.4,SNR=11					
ANMO				Lg		06 54 54.6
	comp=E,0.1nm,0.3s,baz=298,slow=17,SNR=2.1					
ANMO	Albuquerque	8.82	67	*e*Pn	Pn	06 52 34.9 +0.7
DUG	Dugway	8.84	18	*e*Pn	Pn	06 52 36.2 +1.7
Y23A	Lovelace Mesa,	8.88	73	⇑P	Pn	06 52 34.8 -0.3
	baz=8.9					
PV04	Paradox Valley	8.95	41	*e*Pn	Pn	06 52 38.9 +2.9
PV01	Paradox Valley	8.96	43	*e*Pn	Pn	06 52 38.2 +2.1
ELK	Elko	8.97	5	Pn	Pn	06 52 39.1 +2.9
	comp=E,0.7nm,0.3s,baz=180,slow=8.2,SNR=13					
ELK				Lg		06 55 03.6
	comp=E,0.2nm,0.3s,baz=186,slow=19,SNR=5.3					
U22A	Llaves	9.07	57	⇑P	Pn	06 52 39.7 +2.0
	baz=9.1					
N12A	Clover Valley,	9.09	6	*e*Pn	Pn	06 52 35.6 -2.3
W23A	Werner Place,	9.12	66	⇓P	Pn	06 52 39.3 +0.9
	baz=9.1					
S21A	Coal Bank Pass	9.13	48	⇑P	Pn	06 52 40.6 +2.2
	baz=9.1					
224A	Cornudas Mount	9.17	85	⇓P	Pn	06 52 38.8 -0.3
	baz=9.2					
324A	Moseley Ranch,	9.24	89	⇓P	Pn	06 52 39.9 -0.1
	baz=9.3,SNR=12					
MNTX	Cornudas Mount	9.31	88	*e*Pn	Pn	06 52 40.7 -0.2
NOQ	North Oquirrh	9.46	20	*e*Pn	Pn	06 52 50.0 +7.1
DAU	Daniels Canyon	9.51	24	*e*Pn	Pn	06 52 49.0 +5.3
JLU	Jordanelle	9.62	23	Pn	Pn	06 52 46.8 +1.7
HWUT	Hardware Ranch	10.50	20	Pn	Pn	06 52 57.4 +0.2
SMCO	Snowmass	10.58	43	*e*Pn	Pn	06 53 00.9 +2.5
SDCO	Great Sand Dun	10.68	53	*e*Pn	Pn	06 53 01.0 +1.3
YBH	Yreka Blue Hor	11.15	334	Pn	Pn	06 53 12.1 +5.9
	comp=E,0.1nm,0.3s,baz=169,slow=10,SNR=2.3					
TXAR	Lajitas Array	11.17	99	Pn	Pn	06 53 07.6 +1.1
	comp=E,0.6nm,0.3s,baz=277,slow=12,SNR=75					
TXAR				Lg		06 56 14.9
	comp=E,0.0nm,0.3s,baz=289,slow=25,SNR=3.7					
ISCO	Idaho Springs	11.79	44	*e*Pn	Pn	06 53 19.0 +4.1
PDAR	Pinedale Array	12.19	24	Pn	Pn	06 53 24.4 +4.1
	comp=E,0.1nm,0.3s,baz=189,slow=11,SNR=14					
REDW	Red Top Meadow	12.32	19	*e*Pn	Pn	06 53 26.3 +4.2
TPAW	Teton Pass	12.41	18	*e*Pn	Pn	06 53 27.1 +3.7
SNOW	Snow King Moun	12.44	19	*e*Pn	Pn	06 53 33.7 +10
LOHW	Long Hollow	12.62	19	*e*Pn	Pn	06 53 26.7 +0.5
MCMT	McKenzie Canyo	13.28	11	*e*Pn	Pn	06 53 43.1 +7.8
	comp=E,18nm,2.0s					
DLMT	Dillon	13.85	11	*e*Pn	Pn	06 53 50.3 +7.3
LRM	Limekiln Ridge	14.32	11	*e*Pn	Pn	06 53 47.2 -2.1
RLMT	Red Lodge	14.39	20	*e*P	Pn	06 53 58.1 +7.8
RSSD	Black Hills	15.63	35	*e*Pn	Pn	06 54 07.6 +0.6
	comp=E,13nm,1.3s					
LAO	LASA Array	16.77	25	*e*P	Pn	06 54 24.2 +2.7
	comp=E,36nm,1.4s					
MIAR	Mount Ida	19.23	76	*e*P	Pn	06 54 52.7 +0.8
	comp=E,5.4nm,0.9s					
EDM	Edmonton	21.51	5	*e*P	P	06 55 18.3 +2.7

ISCJB ***18*** *07:00:00.2±2.5,5.5S±0.1×149.0E±0.2,h148km±27km, mb3.9/5,Error ellipse: s-maj=43.4km s-min=15.2km az=21.7*

IDC ***18*** *07:00:05.1±1.5,5.78S×149.13E,h191km±11km,mb3.5/6, mb1 3.6/7,mb1mx3.4/17,mbtmp3.5/7,Error ellipse: s-maj=40.3km s-min=11.1km az=115.0*

NEIC ***18*** *07:00:08.0±4.1,5.84S×149.19E,h226km±41km,mb4.1/1, Error ellipse: s-maj=29.9km s-min=23.7km az=118.0*

ISC 18 07:00:05.0±2.2,5.7S±0.1×149.1E±0.2,h186km±23km,n11, σ0.88/12,mb3.9/5,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	14.54	191	P	Pn	07 03 22.8	+0.6
	0.2nm,0.3s,baz=27,slow=9.0,SNR=2.8						
KAKA	Kakadu	17.80	246	*e*P	Pn	07 04 00.8	-0.7
WRAB	Tennant Creek	20.10	224	*e*P	P	07 04 24.6	+0.1
	4.7nm,0.8s						
WRA	Warramunga Arr	20.11	224	P	P	07 04 25.1	+0.4
	1.8nm,0.3s,baz=50,slow=11,SNR=45						
WRA				pP		07 04 57.6	
	0.8nm,0.5s,baz=50,slow=11,SNR=2.3						
WRA				S	S	07 07 59.9	-0.5
	0.7nm,0.8s,baz=53,slow=20,SNR=4.7						
ASAR	Alice Springs	23.04	218	P	P	07 04 55.2	+1.2
	1.2nm,0.5s,mb3.6,baz=56,slow=8.7,SNR=16						
ASAR				pP		07 05 29.2	
	1.1nm,0.7s,baz=43,slow=11,SNR=3.4						
ASAR				S	S	07 08 51.5	+0.7
	0.3nm,0.8s,baz=40,slow=18,SNR=3.2						
FITZ	Fitzroy Crossi	25.96	240	P	P	07 05 20.3	-0.3
	0.7nm,0.3s,mb3.7,baz=65,slow=11,SNR=7.0						
FITZ				pP		07 05 57.7	-0.7
	2.7nm,0.7s,baz=69,slow=9.1,SNR=3.7						
STKA	Stephens Creek	26.94	194	P	P	07 05 26.7	-2.5
	1.7nm,0.8s,mb3.7,baz=0.0,slow=12,SNR=2.9						
STKA	Stephens Creek	26.94	194	P	P	07 05 26.7	-2.5
KSRS	Korea Array	47.26	337	P	P	07 08 20.1	+0.5
	1.9nm,0.6s,mb3.9,baz=152,slow=8.2,SNR=6.4						
PETK	Petropavlovsk-	59.06	6	P	P	07 09 45.0	-0.3
	2.7nm,0.5s,mb4.3,baz=156,slow=7.1,SNR=13						
TORD	Torodi Ar. Bea	146.99	285	PKPbc	PKPbc	07 19 26.1	-0.7
	0.2nm,0.3s,baz=76,slow=2.7,SNR=7.5						

IDC ***18*** *07:10:31.0±0.5,33.08N×91.96E,h0km,mb4.5/25, mb1 4.6/28,mb1mx4.5/35,mbtmp4.6/28,ML4.1/3,MS3.9/19, Ms1 3.9/19,ms1mx3.7/34,Error ellipse: s-maj=18.2km s-min=10.7km az=45.0*

BJI ***18*** *07:10:31.5,33.16N×92.02E,h10km,mB4.7/25,mb4.6/40, ML4.7/1,Ms4.7/45,Ms7 4.4/43*

ISCJB ***18*** *07:10:31.3±1.0,33.17N±0.02×92.00E±0.03,h10km±6km, mb4.7/73,MS4.0/28,Error ellipse: s-maj=4.4km s-min=3.6km az=136.3*

NEIC ***18*** *07:10:33.5±0.3,33.29N×92.15E,h10km,mb4.9/49,Error ellipse: s-maj=6.3km s-min=5.9km az=99.0*

MOS ***18*** *07:10:34.2±1.0,33.13N×92.00E,h33km,mb4.9/47,Error ellipse: s-maj=8.9km s-min=5.2km az=112.2*

ISC 18 07:10:33.1±1.1,33.15N±0.02×91.97E±0.03,h9km±6km, n247,σ1.04/257,mb4.7/73,MS4.0/28,6C-5D,Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	Lhasa	3.51	192	Pg	Pb	07 11 34.6	-0.8
LSA				Sn	Sb	07 12 19.3	+1.1
LSA				LR	LR		
	comp=N,5μm,8.6s						
LSA				LR	LR		
	comp=E,4μm,6.9s						
LSA				LR	LR		
	comp=Z,12μm,7.4s						
LSA	Lhasa	3.51	192	*e*Pn	Pb	07 11 33.1	-2.3
LSA				*e*Sg	Sg	07 12 25.9	0.0
TAPN	Taplejung	6.86	214	*e*P	Pn	07 12 19.9	+6.1
	comp=Z,26nm,0.5s						
GUN	Gumba	7.41	227	*e*P	Pn	07 12 27.8	+6.5
	comp=Z,40nm,0.6s						
SHL	Shillong	7.56	181	*e*PKP	Pn	07 12 24.0	+0.5
SHL				*e*S	Sn	07 13 50.0	+0.7
SHL				*ex*	x	07 14 40.0	
SHL				*ex*	x	07 15 10.0	
SHL	Shillong	7.56	181	*e*PKP	Pb	07 12 44.0	-0.4
SHL				*e*S	Sn	07 13 50.0	+0.7
RAMN	Ramite	7.74	218	*e*P	Pn	07 12 28.8	+2.9
	comp=Z,86nm,0.7s						
KKN	Kakani	7.87	229	*e*P	Pn	07 12 34.4	+6.8
	comp=Z,39nm,0.6s						
KKN	Kakani	7.87	229	*e*P	Pn	07 12 34.4	+6.8
KKN				pmax	pmax		
	comp=Z,39nm,0.6s						
PKI	Pulchoki	7.94	227	*e*P	Pn	07 12 33.6	+4.9
	comp=Z,61nm,0.4s						
PKI	Pulchoki	7.94	227	*e*P	Pn	07 12 34.9	+6.2
PKI				pmax	pmax		
	comp=Z,61nm,0.7s						
PKI	Pulchoki	7.94	227	*e*P	Pn	07 12 34.9	+6.2
	comp=Z,61nm,0.7s						
PKIN	Phulchoki	7.94	227	*e*P	Pn	07 12 34.9	+6.2
	comp=Z,61nm,0.7s						
DMN	Daman	8.10	229	*e*P	Pn	07 12 36.8	+5.9
	comp=Z,37nm,0.5s						
GTA	Gaotai	8.89	43	P	Pn	07 12 42.3	+0.6
GTA				pP		07 12 46.6	
GTA				sP		07 12 50.1	
GTA				S	Sn	07 14 22.1	+0.2
GTA				pmax	pmax		
	comp=Z,19nm,1.3s						
GTA				pmax	pmax		
	comp=Z,95nm,6.0s						
GTA				LR	LR		
	comp=N,2μm,10.1s						
GTA				LR	LR		
	comp=E,2μm,11.3s						
GTA				LR	LR		
	comp=Z,2μm,10.4s						
LZH	Lanzhou	10.21	70	*e*P	Pn	07 13 03.8	+4.0
LZH				pP		07 13 07.9	
LZH				sP		07 13 11.4	
LZH				*e*S	Sn	07 14 56.6	+2.2
LZH				sS		07 15 03.8	
LZH				SS		07 15 11.3	
LZH				pmax	pmax		
	comp=Z,29nm,1.0s						
LZH				pmax	pmax		
	comp=Z,120nm,4.6s						
LZH				LR	LR		
	comp=N,2μm,6.3s						
LZH				LR	LR		
	comp=Z,2μm,7.4s						
CD2	Chengdu	10.25	99	*e*P	Pn	07 13 02.1	+1.7
CD2				pP		07 13 05.4	
CD2				sP		07 13 07.9	
CD2				PP		07 13 10.8	
CD2				S	Sn	07 14 57.5	+2.1
CD2				sS		07 15 00.4	
CD2				SS		07 15 08.5	
CD2				pmax	pmax		
	comp=Z,20nm,1.1s						
CD2				pmax	pmax		
	comp=Z,100nm,4.8s						
CD2				LR	LR		
	comp=N,2μm,6.5s						
CD2				LR	LR		
	comp=E,3μm,8.3s						
CD2				LR	LR		
	comp=Z,4μm,6.5s						
WMQ	Urumqi	11.16	344	P	Pn	07 13 13.0	+0.2
WMQ				sP		07 13 19.0	
WMQ				PP		07 13 22.0	
WMQ				S	Sn	07 15 18.0	+0.4
WMQ				SS		07 15 31.0	
WMQ				pmax	pmax		
	comp=Z,25nm,0.7s						
WMQ				LR	LR		
	comp=N,700nm,4.0s						
WMQ				LR	LR		
	comp=E,1μm,4.0s						
WMQ				LR	LR		
	comp=Z,690nm,4.0s						
KMI	Kunming	12.35	128	P	Pn	07 13 31.1	+2.0
KMI				pP		07 13 33.3	
KMI				sP		07 13 34.3	
KMI				S	Sn	07 15 49.1	+2.3
KMI				sS		07 15 54.3	
KMI				SS		07 16 03.8	
KMI				pmax	pmax		
	comp=Z,12nm,0.9s						
KMI				pmax	pmax		
	comp=Z,100nm,3.7s						
KMI				LR	LR		
	comp=N,1μm,6.5s						
KMI				LR	LR		
	comp=E,1μm,12.9s						
KMI				LR	LR		
	comp=Z,1μm,10.2s						
XAN	Xi'an	14.16	82	P	Pn	07 13 53.4	-0.4
XAN				pP	pP	07 14 01.4	-2.7
XAN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,7.0nm,3.0s						
XAN				LR	LR		
	comp=N,810nm,10.1s						
XAN				LR	LR		
	comp=E,390nm,8.5s						
XAN				LR	LR		
	comp=Z,290nm,8.2s						
KSH	Kashi	14.36	301	P	Pn	07 14 00.8	+4.3
KSH				pP	pP	07 14 04.3	-2.0
KSH				sP	sP	07 14 07.8	+0.3
KSH				PP		07 14 12.6	
KSH				S	Sn	07 16 42.9	+7.0
KSH				sS		07 16 48.8	
KSH				SS		07 17 00.3	
KSH				PcP	PcP	07 19 14.8	+1.9
KSH				ScP	ScP	07 22 46.8	0.0
KSH				PcS	PcS	07 22 48.4	+0.6
KSH				ScS	ScS	07 26 23.1	-1.0
KSH				pmax	pmax		
	comp=Z,25nm,1.9s						
KSH				LR	LR		
	comp=N,560nm,7.3s						
KSH				LR	LR		
	comp=E,470nm,6.0s						
KSH				LR	LR		
	comp=Z,280nm,6.0s						
GYA	Guiyang	14.39	114	P	Pn	07 13 55.6	-1.3
GYA				PP		07 14 11.6	
GYA				S	Sn	07 16 40.3	+3.6
GYA				SS		07 16 56.9	
GYA				pmax	pmax		
	comp=Z,30nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,4.3s						
GYA				LR	LR		
	comp=N,2μm,12.0s						
GYA				LR	LR		
	comp=E,2μm,13.2s						
GYA				LR	LR		
	comp=Z,2μm,12.3s						
ENH	Enshi	15.19	96	*e*Pn	Pn	07 14 05.9	-1.8
	comp=Z,56nm,0.4s						
ULHL	Ulahol	15.39	311	P	Pn	07 14 14.6	+4.3
	SNR=14						
MK31	Makanchi Array	15.49	334	*e*P	Pn	07 14 11.3	-0.4
MKAR	Makanchi Array	15.49	334	Pn	Pn	07 14 10.8	-0.8
	comp=Z,0.2nm,0.3s,baz=141,slow=14,SNR=29						
MKAR				LR	LR	07 20 14.4	
	comp=Z,209nm,20.9s,baz=149,slow=38						
CHTO	Chiang Mai	15.59	155	*e*P	Pn	07 14 13.1	+0.1
CHTO				pmax	pmax		
	comp=Z,36nm,1.8s						
CHTO	Chiang Mai	15.59	155	*e*Pn	Pn	07 14 13.1	+0.1
	comp=Z,36nm,1.8s						
CMAR	Chiang Mai Arr	15.92	155	Pn	Pn	07 14 15.5	-1.8
	comp=Z,0.5nm,0.3s,baz=332,slow=12,SNR=26						
CMAR				PcP	PcP	07 19 15.3	-0.1
	baz=317,slow=2.5,SNR=6.0						
CMAR				LR	LR	07 21 00.2	
	comp=Z,288nm,18.8s,baz=335,slow=40						
CMAR	Chiang Mai Arr	15.92	155	P	Pn	07 14 15.5	-1.8
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR				MLR	MLR		
	comp=Z,288nm,18.8s						
KZA	Kyzart	15.94	309	P	Pn	07 14 24.7	+7.2
	SNR=36						
TKM2	Tokmak 2	16.14	312	P	Pn	07 14 26.4	+6.3
	SNR=10						
TKM2	Tokmak 2	16.14	312	*e*P	Pn	07 14 22.1	+2.0
TKM2				pmax	pmax		
	comp=Z,56nm,1.4s						
TKM2	Tokmak 2	16.14	312	*e*Pn	Pn	07 14 22.1	+2.0
	comp=Z,56nm,1.4s						
KBK	Karagaybulak	16.42	310	P	Pn	07 14 30.6	+7.0
	SNR=30						
UCH	Uchtor	16.50	308	P	Pn	07 14 31.5	+6.9
	SNR=46						
UCH	Uchtor	16.50	308	*e*P	Pn	07 14 28.2	+3.6
	comp=Z,44nm,0.8s						
AAK	Ala-Archa	16.70	310	P	Pn	07 14 35.6	+8.4
	SNR=9.1						
AAK	Ala-Archa	16.70	310	Pn	Pn	07 14 30.4	+3.2
	comp=Z,0.0nm,0.3s,baz=110,slow=6.1,SNR=20						
AAK				LR	LR	07 22 25.5	
	comp=Z,368nm,19.8s,baz=106,slow=43						
AAK	Ala-Archa	16.70	310	*e*P	Pn	07 14 31.7	+4.5
	comp=Z,157nm,1.8s						
AAK	Ala-Archa	16.70	310	Pn	Pn	07 14 33.2	+6.0
	SNR=25						
AAK				Pn	Pn	07 14 33.2	+6.0
	SNR=25						
AML	Almayashu	17.00	307	P	Pn	07 14 34.6	+3.7
	SNR=13						
AML	Almayashu	17.00	307	*e*P	Pn	07 14 32.5	+1.6
	comp=Z,16nm,0.8s						
USP	Ospenovka	17.01	311	P	Pn	07 14 34.4	+3.3
	SNR=9.2						
EKS2	Erkin-Say	17.18	309	P	Pn	07 14 41.0	+7.7
	SNR=6.7						
EKS2	Erkin-Say	17.18	309	*e*P	Pn	07 14 37.0	+3.8
	comp=Z,30nm,0.8s						
HHC	Hu-ho-hao-te	17.41	58	*e*P	Pn	07 14 37.9	+1.7
HHC				pP	pP	07 14 41.4	+1.3
HHC				sP	sP	07 14 45.0	+3.7
HHC				PP		07 14 52.6	
HHC				S	Sn	07 17 51.8	+1.8
HHC				sS	sS	07 17 56.0	-6.7
HHC				SS		07 18 12.4	
HHC				PcP	PcP	07 19 20.3	+2.9
HHC				ScS	ScS	07 26 32.4	0.0
HHC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,5.0s						
HHC				LR	LR		
	comp=N,570nm,11.3s						
HHC				LR	LR		
	comp=E,740nm,12.7s						
HHC				LR	LR		
	comp=Z,810nm,12.9s						
SONM	Songino Array	18.27	32	P	Pn	07 14 46.8	+0.1
	comp=Z,1.1nm,0.3s,baz=211,slow=12,SNR=30						
SONM				LR	LR	07 23 03.6	
	comp=Z,67nm,18.9s,baz=261,slow=41						
ULN	Ulaanbaatar	18.59	33	*e*P	Pn	07 14 50.0	-0.6
ULN				pmax	pmax		
	comp=Z,22nm,0.8s						
ULN	Ulaanbaatar	18.59	33	*e*P	Pn	07 14 50.0	-0.6
	comp=Z,22nm,0.8s						
ULN	Ulaanbaatar	18.59	33	P	Pn	07 14 50.9	+0.3
	SNR=19						
ULN				P		07 14 50.9	
	SNR=19						
KBL	Kabul	19.09	281	*e*P	Pn	07 14 57.1	+0.3
KBL				pmax	pmax		
	comp=Z,45nm,0.8s						
KBL	Kabul	19.09	281	*e*P	Pn	07 14 57.1	+0.4
	comp=Z,45nm,0.8s						
ZAK	Zakamensk	19.13	23	⇓*i*P	Pn	07 14 57.4	+0.3
ZAK				pmax	pmax		
	comp=Z,17nm,1.4s						
WHN	Wuhan	19.19	92	⇑P	Pn	07 14 57.0	-1.0
WHN				LR	LR		
	comp=N,1μm,5.7s						
WHN				LR	LR		
	comp=E,1μm,7.8s						
WHN				LR	LR		
	comp=Z,2μm,8.0s						
MOY	Mondy	19.64	17	*e*P	Pn	07 15 02.9	-0.3
MOY				pmax	pmax		
	comp=Z,30nm,2.3s						
KURK	Kurchatov	20.11	335	P	P	07 15 06.2	-0.8
	comp=Z,14nm,0.9s,baz=146,slow=11,SNR=36						
KURK				LR	LR	07 22 52.4	
	comp=Z,244nm,19.1s,MS3.6,baz=165,slow=37						
KURK	Kurchatov	20.11	335	*c i*P	P	07 15 07.2	+0.3
KURK				pmax	pmax		
	comp=Z,39nm,1.2s		

comp=Z,22nm,0.8s
KURK Kurchatov 20.11 335 P P 07 15 07.4 +0.4
SNR=16
KURK P 07 15 07.4
SNR=16
TLY Talaya 20.38 21 *e*P **P 07 15 11.0 +1.2**
TLY *e*S **S 07 18 54.0 -4.0**
TLY pmax pmax
comp=Z,32nm,1.3s
TLY MLR MLR
comp=Z,321nm,22.0s,MS3.6
TLY Talaya 20.38 21 *e*Pn **P 07 15 11.8 +2.0**
comp=Z,30nm,1.2s
TLY Talaya 20.38 21 P P 07 15 12.0 +2.2
SNR=14
TLY P 07 15 12.0
SNR=14
BJT Baijiatuau 20.57 64 *e*P **P 07 15 10.3 -1.8**
BJT pmax pmax
comp=Z,16nm,0.7s
BJT Baijiatuau 20.57 64 *e*P **P 07 15 10.3 -1.7**
comp=Z,16nm,0.7s
BJI Beijing 20.58 64 P P 07 15 11.6 -0.6
BJI S **S 07 19 01.6 -0.7**
BJI pmax pmax
comp=Z,20nm,0.8s
BJI pmax pmax
comp=Z,130nm,4.7s
BJI LR LR
comp=N,3μm,12.2s,MS4.8
BJI LR LR
comp=E,610nm,13.3s,MS4.8
BJI LR LR
comp=Z,340nm,19.9s
QIZ Qiongzhong 21.30 127 P P 07 15 20.0 -0.1
QIZ S **S 07 19 17.8 +1.1**
QIZ LR LR
comp=N,890nm,11.9s
QIZ LR LR
comp=Z,690nm,9.5s
ZAA0 Zalesovo Array 21.40 348 *e*P **P 07 15 20.6 -0.3**
ZALV Zalesovo Beam 21.40 348 P P 07 15 20.4 -0.5
comp=Z,21nm,0.8s,mb4.5,baz=155,slow=11,SNR=32
ZALV LR LR 07 25 34.3
comp=Z,27nm,21.9s,baz=202,slow=42
NVS Novosibirsk 22.54 347 *e*P **P 07 15 32.1 -0.9**
NJ2 Nanjing 22.66 85 *e*P **P 07 15 32.3 -2.3**
NJ2 pP 07 15 41.4
NJ2 sP sP 07 15 44.8 +6.3
NJ2 PP 07 15 58.8
NJ2 S **S 07 19 36.5 -6.6**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.5
NJ2 pmax pmax
comp=Z,210nm,4.5s
NJ2 LR LR
comp=N,560nm,9.8s
NJ2 LR LR
comp=E,440nm,11.7s
NJ2 LR LR
comp=Z,600nm,10.4s,MS4.3
BVAR Borovoye Array 25.18 329 P P 07 15 59.0 +0.4
comp=Z,6.2nm,0.7s,mb4.2,baz=132,slow=11,SNR=24
BVAR Borovoye Array 25.18 329 P P 07 15 59.0 +0.4
BVAR pmax pmax
comp=Z,6.0nm,0.7s
BRVK Borovoye 25.25 328 *d i*P **P 07 15 59.7 +0.5**
BRVK pmax pmax
comp=Z,18nm,0.8s,mb4.7
BRVK Borovoye 25.25 328 *e*P **P 07 15 59.5 +0.3**
comp=Z,16nm,0.7s,mb4.7
BRVK Borovoye 25.25 328 P P 07 16 00.0 +0.8
SNR=17
BRVK P 07 16 00.0
SNR=17
HIA Hailar 26.17 44 *e*P **P 07 16 06.7 -0.9**
CN2 Changchun 28.11 58 *e*P **P 07 16 26.3 +1.2**
CN2 *es*P sP 07 16 33.3 +4.1
CN2 *e*S **S 07 21 09.3 -0.8**
CN2 pmax pmax
comp=Z,20nm,0.8s,mb4.8
CN2 LR LR
comp=N,2μm,15.0s,MS4.8
CN2 LR LR
comp=E,400nm,15.0s,MS4.8
CN2 LR LR
comp=Z,500nm,14.0s,MS4.3
ABKAR Akbulak array 28.70 314 *e*P **P 07 16 31.2 +0.9**
comp=Z,8.5nm,0.8s,mb4.5
KSRS Korea Array 29.54 71 P P 07 16 37.8 -0.2
comp=Z,2.9nm,0.8s,mb4.1,baz=282,slow=9.3,SNR=6.1
KSRS LR LR 07 29 19.3
comp=Z,190nm,18.2s,MS3.8,baz=92,slow=38
KSRS Korea Array 29.54 71 P P 07 16 37.8 -0.1
KSRS pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
KSRS MLR MLR
comp=Z,191nm,18.2s,MS3.8
AKTK Aktyubinsk 30.29 315 P P 07 16 45.1 +0.7
AKTK LR LR 07 30 35.4
AKTO Aktyubinsk 30.29 315 P P 07 16 45.1 +0.7
comp=Z,7.2nm,0.8s,mb4.5,baz=118,slow=9.8
AKTO LR LR 07 30 35.4
comp=Z,273nm,18.7s,MS3.9,baz=285,slow=40
AKTO Aktyubinsk 30.29 315 P P 07 16 45.1 +0.7
AKTO pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
AKTO MLR MLR
comp=Z,273nm,18.7s,MS3.9
MDJ Mudanjiang 31.18 57 P P 07 16 51.8 -0.5
MDJ pP pP 07 16 54.8 -0.4
MDJ sP sP 07 16 56.5 +0.1
MDJ PcP PcP 07 19 47.3 +0.2
MDJ S **S 07 21 58.1 -0.2**
MDJ ScP ScP 07 23 29.3 -0.9
MDJ ScS ScS 07 27 27.5 +0.3
MDJ pmax pmax
comp=Z,13nm,0.8s,mb4.8
MDJ pmax pmax
comp=Z,65nm,4.8s
MDJ LR LR
comp=N,1μm,16.3s,MS4.6
MDJ LR LR
comp=E,260nm,17.0s,MS4.6
MDJ LR LR
comp=Z,380nm,13.8s,MS4.2
SVE Sverdlovsk 31.94 327 ǁ *e*P **P 07 17 00.1 +1.2**
SVE pmax pmax
comp=Z,31nm,0.9s,mb5.1
SVE MLR MLR
comp=Z,306nm,14.0s,MS4.1
ARU Arti 32.69 326 *c i*P **P 07 17 06.1 +0.7**
ARU *e* 07 18 13.8
ARU S **S 07 22 21.4 -0.1**
ARU SS SS 07 24 17.7 -24
ARU pmax pmax
comp=Z,26nm,1.7s,mb4.9
ARU MLR MLR
comp=Z,230nm,17.0s,MS4.0
ARU Arti 32.69 326 *e*P **P 07 17 06.0 +0.6**
comp=Z,15nm,1.0s,mb4.9
KLR Kul'dur 33.52 49 *e*P **P 07 17 07.7 -5.1**
KLR MLR MLR
comp=N,600nm,15.0s,MS4.6
KLR MLR MLR
comp=E,500nm,10.5s,MS4.6
KLR MLR MLR
comp=Z,1μm,10.5s,MS4.8
KKM Kota Kinabalu 35.15 135 *e*P **P 07 17 28.1 +0.9**
comp=Z,72nm,1.3s,mb5.5
SOKR Solikamsk 35.16 329 *c i*P **P 07 17 27.9 +1.0**
SOKR pmax pmax
comp=Z,30nm,1.1s,mb5.1
SOKR MLR MLR
comp=Z,290nm,20.0s,MS4.0
MJAR Matsushiro Arr 37.82 72 P P 07 17 49.6 -0.2
comp=Z,0.6nm,0.3s,mb3.8,baz=279,slow=8.5,SNR=4.5
MJAR LR LR 07 33 55.8
comp=Z,105nm,20.5s,MS3.6,baz=295,slow=37
MJAR Matsushiro Arr 37.82 72 P P 07 17 49.7 -0.2
MJAR pmax pmax
comp=Z,1.0nm,0.3s
MJAR MLR MLR
comp=Z,105nm,20.5s
GNI Garni 38.16 294 P P 07 17 54.6 +1.9
comp=Z,3.2nm,0.3s,mb4.5,baz=16,slow=10,SNR=5.3
GNI Garni 38.16 294 *d i*P **P 07 17 55.0 +2.3**
GNI pmax pmax
comp=Z,45nm,1.2s
GNI Garni 38.16 294 *e*P **P 07 17 54.3 +1.6**
comp=Z,53nm,1.3s,mb5.1
GNI Garni 38.16 294 P P 07 17 55.7 +3.0
SNR=8.3
GNI P 07 17 55.7
SNR=8.3
ZEI Tsey 38.64 299 *e*P **P 07 18 00.3 +3.6**
ZEI pmax pmax
comp=Z,5.0nm,0.4s,mb4.6
KIV Kislovodsk 39.49 301 *e*P **P 07 18 05.5 +1.7**
KIV *e* 07 20 13.1
KIV *e*S **S 07 24 06.2 +0.2**
KIV pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
KIV MLR MLR
comp=Z,55nm,17.0s,MS3.5
VRHR Novokhopersk 40.53 312 *e*P **P 07 18 12.0 -0.3**
VRHR pmax pmax
comp=N,40nm,0.6s
VRHR pmax pmax
comp=E,30nm,0.6s
VRHR pmax pmax
comp=Z,30nm,0.6s,mb5.1
DAV Davao City (W) 40.54 122 LR LR 07 35 52.1
comp=Z,260nm,21.2s,MS4.1,baz=203,slow=38
ERM Erimo 40.99 62 *e*P **P 07 18 22.1 +5.8**
ERM pmax pmax
comp=Z,25nm,1.0s,mb4.8
ERM Erimo 40.99 62 *e*P **P 07 18 22.1 +5.9**
comp=Z,25nm,1.0s,mb4.8
VORD Divnogorie 41.99 311 *e*P **P 07 18 23.9 -0.4**
VORD pmax pmax
comp=N,10.0nm,0.9s
VORD pmax pmax
comp=E,9.0nm,0.9s
VORD pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
VSR Storozhevoye 42.09 312 *e*P **P 07 18 24.7 -0.4**
VSR *e*S **S 07 24 48.5 +4.1**
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,10.0nm,0.9s
VSR pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
VSR smax
comp=E,60nm,3.8s
VSR smax
comp=Z,80nm,3.8s
VSR smax
comp=N,7.0nm,0.4s
TIXI Tiksi 43.22 16 *e*P **P 07 18 32.9 -1.1**
TIXI pmax pmax
comp=Z,7.0nm,0.3s,mb4.9
TIXI Tiksi 43.22 16 *e*P **P 07 18 32.9 -1.2**
comp=Z,7.1nm,0.3s,mb4.9
MOS Moscow 43.49 318 *e*P **P 07 18 39.1 +2.6**
OBN Obninsk 44.01 317 *e*P **P 07 18 40.8 +0.2**
OBN pmax pmax
comp=Z,32nm,1.5s,mb4.8
OBN MLR MLR
comp=Z,100nm,17.0s,MS3.8
BRTR Keskin Array B 46.67 296 P P 07 19 02.5 +0.6
comp=Z,7.1nm,0.8s,mb4.7,baz=104,slow=5.2,SNR=8.9
BRTR Keskin Array B 46.67 296 P P 07 19 02.6 +0.6
BRTR pmax pmax
comp=Z,7.0nm,0.8s
SEY Seymchan 47.66 33 ⇑ *i*P **P 07 19 09.6 +0.2**
EIL Elat 48.28 282 P P 07 19 14.9 +0.3
comp=Z,24nm,0.8s,mb5.3,baz=90,slow=20,SNR=5.0
AKASG Malin Array Be 48.37 311 P P 07 19 14.8 -0.2
comp=Z,6.2nm,0.8s,mb4.7,baz=82,slow=6.2,SNR=9.5
AKASG LR LR 07 43 45.4
comp=Z,182nm,18.2s,MS4.1,baz=55,slow=41
AKASG Malin Array Be 48.37 311 P P 07 19 14.8 -0.2
AKASG pmax pmax
comp=Z,6.0nm,0.8s
AKASG MLR MLR
comp=Z,182nm,18.2s
PETK Petropavlovsk- 50.05 46 P P 07 19 27.2 -0.6
comp=Z,7.9nm,1.0s,mb4.7,baz=228,slow=5.8,SNR=9.9
PETK LR LR 07 42 42.0
comp=Z,65nm,18.0s,MS3.7,baz=326,slow=38
PETK Petropavlovsk- 50.05 46 P P 07 19 27.2 -0.6
PETK pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
PETK MLR MLR
comp=Z,65nm,18.0s,MS3.7
FINES FINESS Array B 50.06 325 P P 07 19 27.8 +0.1
comp=Z,2.0nm,0.8s,mb4.2,baz=98,slow=7.2,SNR=4.6
FINES LR LR 07 42 34.6
comp=Z,222nm,19.0s,MS4.2,baz=117,slow=38
FINES FINESS Array B 50.06 325 P P 07 19 27.8 0.0
FINES pmax pmax
comp=Z,2.0nm,0.8s
FINES MLR MLR
comp=Z,222nm,19.0s
ARCES ARCESS Array B 51.15 336 P P 07 19 36.2 +0.3
comp=Z,3.1nm,0.7s,mb4.3,baz=95,slow=6.8,SNR=9.2
ARCES PcP PcP 07 20 51.0 -0.3
comp=Z,1.4nm,0.7s,baz=79,slow=4.8,SNR=4.2
ARCES LR LR 07 41 47.0
comp=Z,79nm,20.2s,MS3.7,baz=249,slow=37
ARCES ARCESS Array B 51.15 336 P P 07 19 36.2 +0.3
ARCES 07 20 51.0
ARCES pmax pmax
comp=Z,3.0nm,0.7s
ARCES MLR MLR
comp=Z,79nm,20.2s
ARCES ARCESS Array B 51.15 336 P P 07 19 36.2 +0.3
ARCES PcP PcP 07 20 51.0 -0.3
ARCES LR LR 07 41 47.0
BUR08 Bucovina Ar. S 51.34 307 *e*P **P 07 19 36.5 -1.1**
KOLS Kolonicke sedl 53.05 309 *e*P **P 07 19 53.2 +2.9**
KOLS pmax pmax
comp=Z,25nm,2.3s,mb4.7
KOLS Kolonicke sedl 53.05 309 *e*P **P 07 19 53.2 +2.9**
comp=Z,24nm,2.3s,mb4.7
KOLS *e* 07 19 59.3
UZH Uzhgorod 53.09 309 *e*P **P 07 19 56.0 +5.4**
UZH *e* 07 20 04.5
UZH Uzhgorod 53.09 309 *e*P **P 07 19 56.0 +5.4**
UZH MLR MLR
comp=N,240nm,10.0s,MS4.7
UZH MLR MLR
comp=E,200nm,10.0s,MS4.7
UZH MLR MLR
comp=Z,170nm,10.0s,MS4.4
CRVS Cervenica-Dubn 53.58 309 *e*P **P 07 19 55.9 +1.7**
CRVS pmax pmax
comp=Z,10.0nm,1.5s,mb4.5
CRVS Cervenica-Dubn 53.58 309 *e*P **P 07 19 55.9 +1.7**
comp=Z,9.7nm,1.5s,mb4.5
CRVS *e* 07 20 04.1
CRVS Cervenica-Dubn 53.58 309 *e*P **P 07 19 55.9 +1.7**
comp=Z,9.7nm,1.5s,mb4.5
STHS Stebnicka Huta 53.63 310 *e*P **P 07 19 55.3 +0.7**
STHS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
STHS Stebnicka Huta 53.63 310 *e*P **P 07 19 55.3 +0.7**
comp=Z,2.9nm,0.9s,mb4.2
STHS *e* 07 20 10.3
BILL Bilibino 53.87 27 *d i*P **P 07 19 56.4 +0.4**
BILL pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
BILL MLR MLR
comp=Z,100nm,17.0s,MS3.9
BILL Bilibino 53.87 27 *e*P **P 07 19 56.3 +0.3**
comp=Z,6.4nm,0.8s,mb4.6
KECS Kecovo 54.30 309 *e*P **P 07 20 00.6 +1.1**
KECS pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
KECS Kecovo 54.30 309 *e*P **P 07 20 00.6 +1.1**
comp=Z,3.8nm,1.2s,mb4.2
KECS *e* 07 20 18.7
PSZ Piszkesteto 54.80 308 *e*P **P 07 20 02.6 -0.6**
PSZ pmax pmax
comp=Z,11nm,1.1s,mb4.8
PSZ Piszkesteto 54.80 308 *e*P **P 07 20 02.6 -0.6**
comp=Z,11nm,1.1s,mb4.8
VYHS Vyhne 55.37 309 *e*P **P 07 20 05.2 -2.0**
VYHS pmax pmax
comp=Z,8.0nm,1.8s,mb4.5
VYHS Vyhne 55.37 309 *e*P **P 07 20 05.2 -2.0**
VYHS pmax pmax
comp=Z,8.0nm,1.8s,mb4.5
VYHS Vyhne 55.37 309 *e*P **P 07 20 05.2 -2.0**
comp=Z,7.8nm,1.8s,mb4.4
KOLL Kolacno 55.63 309 *e*P **P 07 20 07.0 -2.1**
KOLL Kolacno 55.63 309 *e*P **P 07 20 07.0 -2.1**
KOLL Kolacno 55.63 309 *e*P **P 07 20 07.0 -2.1**
HFS Hagfors 56.18 324 P P 07 20 12.7 -0.2
comp=Z,3.5nm,0.7s,mb4.5,baz=95,slow=9.5,SNR=6.0
HFS LR LR 07 44 45.0
comp=Z,128nm,21.5s,MS4.0,baz=261,slow=36
HFS Hagfors 56.18 324 P P 07 20 12.7 -0.2
HFS pmax pmax
comp=Z,4.0nm,0.7s
HFS MLR MLR
comp=Z,128nm,21.5s
NB2 NORSAR Subarra 57.24 325 P P 07 20 19.5 -0.9
comp=Z,1.3nm,0.6s,mb4.1,baz=80,slow=7.4
NOA NORSAR Array B 57.24 325 P P 07 20 19.9 -0.5
comp=Z,2.2nm,0.7s,mb4.3,baz=80,slow=7.3,SNR=8.9
NOA LR LR 07 46 45.0
comp=Z,209nm,18.1s,MS4.3,baz=90,slow=38
NOA NORSAR Array B 57.24 325 P P 07 20 19.9 -0.5
NOA pmax pmax
comp=Z,2.0nm,0.7s
NOA MLR MLR
comp=Z,209nm,18.1s
CONA Conrad Observa 57.43 309 ⇑ *i*P **P 07 20 22.5 +0.6**
comp=Z,8.7nm,0.9s,mb4.8
BRG Berggiesshubel 57.90 313 *e*P **P 07 20 25.3 0.0**
comp=Z,6.2nm,0.9s,mb4.6
BRG *e* pP 07 20 28.9 +0.6
comp=Z,4.8nm,0.8s
BRG Berggiesshubel 57.90 313 *e*P **P 07 20 25.3 +0.1**
BRG pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
CLL Collm 58.37 314 *e*P **P 07 20 28.0 -0.5**
CLL MLR MLR
comp=Z,100nm,19.6s,MS3.9
KHC Kasperske Hory 58.58 311 *e*P **P 07 20 29.2 -0.8**
KHC pmax pmax
comp=Z,11nm,1.0s,mb4.8
KHC Kasperske Hory 58.58 311 *e*P **P 07 20 29.2 -0.8**
KHC pmax pmax
comp=Z,11nm,1.0s,mb4.8
KHC Kasperske Hory 58.58 311 *e*P **P 07 20 29.2 -0.8**
comp=Z,11nm,1.0s,mb4.9
KHC Kasperske Hory 58.58 311 *e*P **P 07 20 29.0 -1.0**
KHC *ex* x 07 20 38.5
KHC Kasperske Hory 58.58 311 *e*P **P 07 20 29.2 -0.8**
comp=Z,11nm,1.0s,mb4.8
FITZ Fitzroy Crossi 60.27 143 P P 07 20 41.8 -0.2
comp=Z,2.9nm,0.7s,mb4.4,baz=344,slow=8.5,SNR=10
DAVOX Davos/Dischmat 61.66 309 P P 07 20 52.3 +1.2
comp=Z,5.9nm,0.9s,mb4.7,baz=39,slow=6.5,SNR=4.1
CDF Champ du Feu 62.77 312 *e*P **P 07 20 57.5 -1.1**
CDF Champ du Feu 62.77 312 *e*P **P 07 20 57.5 -1.1**
HINF Hinteralfeld 63.24 311 *e*P **P 07 21 00.6 -1.1**
HINF Hinteralfeld 63.24 311 *e*P **P 07 21 00.6 -1.1**
HINF Hinteralfeld 63.24 311 *e*P **P 07 21 00.6 -1.1**
HINF Hinteralfeld 63.24 311 *e*P **P 07 21 00.6 -1.1**
HAU Haudompre 63.49 312 *e*P **P 07 21 02.5 -0.9**
HAU Haudompre 63.49 312 *e*P **P 07 21 02.5 -0.9**
HAU Haudompre 63.49 312 *e*P **P 07 21 02.5 -0.9**
LOR Lormes 65.33 311 *e*P **P 07 21 14.0 -1.4**
comp=Z,29nm,1.1s,mb4.9
LOR Lormes 65.33 311 *e*P **P 07 21 14.0 -1.4**
LOR pmax pmax
comp=Z,14nm,1.1s,mb4.9
LOR Lormes 65.33 311 *e*P **P 07 21 14.0 -1.4**
comp=Z,14nm,1.1s,mb4.9
LOR Lormes 65.33 311 *e*P **P 07 21 14.0 -1.4**
comp=Z,14nm,1.1s,mb4.9
SMF Signal de Mont 65.58 311 *e*P **P 07 21 15.2 -1.9**
SMF Signal de Mont 65.58 311 *e*P **P 07 21 15.2 -1.9**
SMF Signal de Mont 65.58 311 *e*P **P 07 21 15.2 -1.9**
SMF Signal de Mont 65.58 311 *e*P **P 07 21 15.2 -1.9**
SSF Saint Saulge 65.63 311 *e*P **P 07 21 15.6 -1.8**
comp=Z,40nm,1.0s,mb5.1
SSF Saint Saulge 65.63 311 *e*P **P 07 21 15.6 -1.8**
SSF pmax pmax
comp=Z,20nm,1.0s,mb5.1
SSF Saint Saulge 65.63 311 *e*P **P 07 21 15.6 -1.8**
comp=Z,20nm,1.0s,mb5.1
SSF Saint Saulge 65.63 311 *e*P **P 07 21 15.6 -1.8**
comp=Z,20nm,1.0s,mb5.1
EKA Eskdalemuir Ar 66.18 322 P P 07 21 19.2 -1.6
comp=Z,4.2nm,1.0s,mb4.4,baz=64,slow=6.6,SNR=5.1
EKA Eskdalemuir Ar 66.18 322 P P 07 21 19.2 -1.6
EKA pmax pmax
comp=Z,4.0nm,1.0s
WRAB Tennant Creek 66.51 136 *e*P **P 07 21 22.2 -1.1**
WRAB pmax pmax
comp=Z,58nm,1.3s,mb5.5
WRAB Tennant Creek 66.51 136 *e*P **P 07 21 22.2 -1.1**
comp=Z,58nm,1.3s,mb5.5
WRA Warramunga Arr 66.51 136 P P 07 21 22.9 -0.3
comp=Z,21nm,1.0s,mb5.1,baz=332,slow=6.8,SNR=45
WRA Warramunga Arr 66.51 136 P P 07 21 23.0 -0.3
WRA pmax pmax
comp=Z,21nm,1.0s
TCF Toulx Ste Croi 66.76 311 *e*P **P 07 21 23.9 -0.7**
comp=Z,31nm,1.2s,mb4.9
TCF Toulx Ste Croi 66.76 311 *e*P **P 07 21 23.9 -0.7**
TCF pmax pmax
comp=Z,16nm,1.2s,mb4.9
TCF Toulx Ste Croi 66.76 311 *e*P **P 07 21 23.9 -0.7**
comp=Z,16nm,1.2s,mb4.9
ASAR Alice Springs 69.21 139 P P 07 21 39.7 -0.5
comp=Z,16nm,0.8s,mb5.0,baz=325,slow=5.7,SNR=59
ASAR Alice Springs 69.21 139 P P 07 21 39.7 -0.5
ASAR pmax pmax
comp=Z,16nm,0.8s
COLD Coldfoot 69.58 22 *e*P **P 07 21 42.2 +0.3**
comp=Z,15nm,0.9s,mb4.9
ETSF Etsaut 70.00 309 *e*P **P 07 21 43.9 -1.1**
comp=Z,12nm,0.9s,mb4.5
ETSF Etsaut 70.00 309 *e*P **P 07 21 43.9 -1.1**
ETSF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
ETSF Etsaut 70.00 309 *e*P **P 07 21 43.9 -1.1**
comp=Z,6.2nm,0.9s,mb4.5
TTA Tatalina 70.12 27 *e*P **P 07 21 44.8 -0.5**
CHUM Lake Minchumin 70.92 25 *e*P **P 07 21 49.7 -0.5**
comp=Z,8.8nm,0.8s,mb4.7
BPAW Bear Paw Mtn. 71.25 24 *e*P **P 07 21 51.8 -0.4**
comp=Z,9.1nm,1.0s,mb4.7
SVW2 Sparrevohn 71.33 28 *e*P **P 07 21 53.7 +0.9**
PPLA Purkeypile 71.56 26 *e*P **P 07 21 54.6 +0.5**
comp=Z,14nm,0.7s,mb5.0
KTH Kantishna Hill 71.61 25 *e*P **P 07 21 54.4 0.0**
comp=Z,11nm,1.0s,mb4.8
COLA College 71.81 23 *e*P **P 07 21 55.4 -0.2**
COLA pmax pmax
comp=Z,18nm,0.9s,mb5.0
COLA College 71.81 23 *e*P **P 07 21 55.4 -0.2**
comp=Z,18nm,0.9s,mb5.0
TRF Thorofare Moun 71.90 25 *e*P **P 07 21 55.8 -0.3**
comp=Z,3.7nm,0.9s,mb4.3
RES Resolute Bay 72.34 2 *e*P **P 07 21 58.7 +0.1**
RES pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
RES Resolute Bay 72.34 2 *e*P **P 07 21 58.7 +0.1**
comp=Z,9.7nm,1.4s,mb4.5
INK Inuvik 73.34 16 *e*P **P 07 22 04.7 0.0**
INK pmax pmax
comp=Z,9.0nm,0.9s
INK Inuvik 73.34 16 *e*P **P 07 22 04.7 0.0**
comp=Z,9.1nm,0.9s,mb4.7
PMR Palmer 73.49 26 *e*P **P 07 22 05.7 +0.1**
PMR pmax pmax
comp=Z,15nm,1.0s,mb4.9
PMR Palmer 73.49 26 *e*P **P 07 22 05.7 +0.1**
comp=Z,15nm,1.0s,mb4.9
RC01 Rabbit Creek A 73.59 26 *e*P **P 07 22 05.8 -0.4**
comp=Z,4μm,1.0s
EGAK Eagle 73.97 21 *e*P **P 07 22 08.2 -0.2**
comp=Z,12nm,0.9s,mb4.8
CTA Charters Tower 74.07 127 P P 07 22 08.9 -0.7
comp=Z,8.0nm,1.0s,mb4.6,baz=321,slow=5.2,SNR=4.1
CTA Charters Tower 74.07 127 P P 07 22 08.9 -0.7
CTA pmax pmax
comp=Z,8.0nm,1.0s
KDAK Kodiak Island 74.54 30 *i*P **P 07 22 11.5 -0.4**
KDAK Kodiak Island 74.54 30 *e*P **P 07 22 11.0 -0.9**

comp=Z,17nm,0.8s,mb5.0
OHAK Old Harbor 74.59 31 *e*P **P 07 22 11.5 -0.6**
comp=Z,17nm,0.8s,mb5.0
BMRM Bremner River 75.54 25 *e*P **P 07 22 17.6 0.0**
comp=Z,23nm,0.9s,mb5.1
LSZ Lusaka 77.57 242 P **P 07 22 28.5 -1.2**
comp=Z,2.7nm,0.6s,mb4.4,baz=52,slow=7.9,SNR=5.9
LSZ Lusaka 77.57 242 P **P 07 22 28.5 -1.2**
LSZ pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
LSZ Lusaka 77.57 242 P **P 07 22 28.5 -1.2**
HYT Haines Junctio 78.03 22 *e*P **P 07 22 32.2 +0.6**
PNL Peninsula 78.28 24 *e*P **P 07 22 33.4 +0.4**
comp=Z,20nm,0.9s,mb5.0
SKAG Skagway 79.78 22 *e*P **P 07 22 42.0 +0.8**
comp=Z,20nm,0.9s,mb5.0
STKA Stephens Creek 79.85 139 P **P 07 22 40.6 -1.2**
comp=Z,3.8nm,0.7s,mb4.4,baz=314,slow=6.7,SNR=8.9
DLBC Dease Lake 82.24 21 *e*P **P 07 22 55.0 +0.6**
YKA Yellowknife Ar 82.32 12 P **P 07 22 54.1 -0.6**
comp=Z,5.7nm,0.9s,mb4.5,baz=331,slow=5.2,SNR=16
YKA Yellowknife Ar 82.32 12 P **P 07 22 54.1 -0.6**
YKA pmax pmax
comp=Z,6.0nm,0.9s
LBTB Lobatse 85.63 236 *e*P **P 07 23 11.9 -0.2**
FCC Fort Churchill 88.29 3 *e*P **P 07 23 23.6 -1.0**
FCC *e*PcP PcP 07 23 26.4 +0.1
SCHQ Schefferville 90.49 348 P **P 07 23 34.2 -0.8**
comp=Z,5.2nm,0.9s,mb4.9,baz=28,slow=8.5,SNR=6.9
SCHQ Schefferville 90.49 348 P **P 07 23 34.2 -0.8**
EDM Edmonton 91.21 15 *e*P **P 07 23 38.5 +0.1**
FFC Flin Flon 91.66 8 *i*P **P 07 23 39.9 -0.5**
FFC Flin Flon 91.66 8 *e*P **P 07 23 39.7 -0.8**
comp=Z,13nm,1.0s,mb5.2
DBIC Dimbokro 92.08 279 LR LR 08 08 56.6
comp=Z,53nm,18.5s,MS4.0,baz=41,slow=38
ULM Lac du Bonnet 96.67 5 LR LR 08 13 58.7
comp=Z,50nm,18.8s,MS4.0,baz=312,slow=39
YBH Yreka Blue Hor 98.94 26 LR LR 08 12 11.9
comp=Z,51nm,19.5s,MS4.0,baz=319,slow=37
OTAV Otavalo 145.58 343 *e*PKPdf PKPdf 07 30 12.5 +0.1
SIV San Ignacio 150.25 299 PKPbc PKPbc 07 30 24.6 -0.5
comp=Z,3.6nm,1.0s,baz=62,slow=2.5,SNR=14
CPUP Villa Florida 152.55 276 PKPbc PKPbc 07 30 28.0 -2.1
comp=Z,0.4nm,0.5s,baz=27,slow=9.0,SNR=3.3
CPUP Villa Florida 152.55 276 P PKPbc 07 30 28.0 -2.2
LPAZ La Paz 155.40 308 PKPab PKPab 07 30 52.4 -0.4
comp=Z,1.4nm,0.9s,baz=55,slow=2.9,SNR=4.4
LPAZ La Paz 155.40 308 PKP2 PKPab 07 30 52.4 -0.4
LPAZ pmax pmax
comp=Z,1.0nm,0.9s
PLCA Paso Flores 164.12 237 PKP PKPdf 07 30 35.1 -1.5
comp=Z,1.0nm,0.6s,baz=169,slow=9.2,SNR=3.2
PLCA Paso Flores 164.12 237 PKIKP PKPdf 07 30 35.2 -1.5
PLCA pmax pmax
comp=Z,1.0nm,0.6s

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*DDA **18** 07:16:22.1, 35.°05N×27.°07E, h12km±5km, Md3.9*
*IDC **18** 07:16:28.7±0.9, 35.°36N×27.°34E, h0km, mb4.0/14, mb1 4.0/22, mb1mx3.9/35, mbtmp4.0/22, ML4.2/5, MS3.5/2, Ms1 3.5/2, ms1mx2.6/42, Error ellipse: s-maj=19.5km s-min=10.1km az=2.0*
*ISK **18** 07:16:29.2, 35.°33N×26.°99E, h43km, ML4.1*
*ISCJB **18** 07:16:30.0±0.4, 35.°44N±0.°02×27.°33E±0.°02, h11km±3km, mb4.0/21, Error ellipse: s-maj=3.1km s-min=2.2km az=166.0*
*HLW **18** 07:16:30.5, 36.°03N×28.°28E, h28km±30km, Md3.6, Ml3.5*
*ATH **18** 07:16:30.8, 35.°53N×27.°28E, h22km, MD4.3/31, ML4.4*
*CSEM **18** 07:16:31.7±0.1, 35.°45N×27.°32E, h13km, mb4.1/16, Error ellipse: s-maj=3.6km s-min=2.4km az=174.0*
*MOS **18** 07:16:32.9±1.2, 35.°52N×27.°34E, h33km, mb4.2/17, Error ellipse: s-maj=7.8km s-min=4.9km az=97.9*
*THE **18** 07:16:32.2, 35.°35N×27.°36E, h27km±10km, ML4.4/5, Error ellipse: s-maj=10.6km s-min=1.1km az=148.0*
*NEIC **18** 07:16:33.0, 35.°56N×27.°25E, h10km, ML4.2(ATH), After ATH.*

ISC 18 07:16:31.3±0.5, 35.°45N±0.°02×27.°32E±0.°02, h10km±3km, n394, σ1§18/453, mb4.0/21, 23C-7D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.17**	**308**	P	**Pg**	**07 16 34.5**	**-0.4**
KARP	**Karpathos**	**0.17**	**308**	⇑*i*PB	**Pg**	**07 16 34.9**	**0.0**
KARP				*e*SB	**Sg**	**07 16 37.6**	**+0.3**
KARP	**Karpathos**	**0.17**	**308**	P	**Pg**	**07 16 34.5**	**-0.4**
KARP	**Karpathos**	**0.17**	**308**	⇑*i*Pb	**Pg**	**07 16 34.9**	**0.0**
KARP				*e*Sb	**Sg**	**07 16 37.6**	**+0.3**
ZKR	**Zakros**	**0.96**	**250**	*e*Pb	**Pg**	**07 16 48.4**	**-1.4**
ZKR				*e*Sn	**Sn**	**07 17 03.5**	**-1.1**
ZKR	**Zakros**	**0.96**	**250**	P	**Pg**	**07 16 48.3**	**-1.5**
ZKR				S	**Sg**	**07 17 01.4**	**-0.9**
ZKR	**Zakros**	**0.96**	**250**	*e*PB	**Pg**	**07 16 48.4**	**-1.4**
ZKR				*e*SN	**Sn**	**07 17 03.5**	**-1.1**
ZKR	**Zakros**	**0.96**	**250**	P	**Pg**	**07 16 48.3**	**-1.5**
ZKR				S	**Sg**	**07 17 01.4**	**-0.9**
ZKR				*e*Sn	**Sn**	**07 17 03.5**	**-1.1**
ARG	**Arkhangelos**	**1.01**	**40**	P	**Pg**	**07 16 50.6**	**-0.1**
ARG	**Arkhangelos**	**1.01**	**40**	P	**Pg**	**07 16 50.0**	**-0.7**
ARG				S	**Sg**	**07 17 04.0**	**+0.1**
ARG	**Arkhangelos**	**1.01**	**40**	⇑*i*PN	**Pg**	**07 16 50.1**	**-0.6**
ARG				*e*SN	**Sg**	**07 17 03.2**	**-0.7**
ARG	**Arkhangelos**	**1.01**	**40**	⇑*i*Pn	**Pg**	**07 16 50.1**	**-0.6**
ARG	**Arkhangelos**	**1.01**	**40**	P	**Pg**	**07 16 50.6**	**-0.1**
ARG				*e*Sn	**Sg**	**07 17 03.2**	**-0.7**
ARG				S	**Sg**	**07 17 04.0**	**+0.1**
NIS1	**Nisyros Isl.**	**1.16**	**354**	P	**Pb**	**07 16 52.3**	**-1.2**
NIS1				S	**Sb**	**07 17 09.1**	**+0.5**
NIS1	**Nisyros Isl.**	**1.16**	**354**	P	**Pb**	**07 16 52.3**	**-1.2**
NIS1				S	**Sb**	**07 17 09.1**	**+0.5**
DAT	**Datca**	**1.30**	**9**	*e*PN	**Pn**	**07 16 54.7**	**-0.8**
DAT				*e*SN	**Sn**	**07 17 12.4**	**-0.6**
DAT	**Datca**	**1.30**	**9**	*e*Pn	**Pn**	**07 16 54.7**	**-0.8**
DAT				*e*Sn	**Sn**	**07 17 12.4**	**-0.6**
NPS	**Neapolis**	**1.41**	**263**	P	**Pn**	**07 16 57.3**	**+0.3**
NPS	**Neapolis**	**1.41**	**263**	⇑*i*PN	**Pn**	**07 16 56.9**	**-0.1**
NPS				*e*SN	**Sn**	**07 17 15.8**	**+0.1**
NPS	**Neapolis**	**1.41**	**263**	⇑*i*Pn	**Pn**	**07 16 56.9**	**-0.1**
NPS	**Neapolis**	**1.41**	**263**	P	**Pn**	**07 16 57.3**	**+0.3**
NPS				*e*Sn	**Sn**	**07 17 15.8**	**+0.1**
XRY	**Khrisi**	**1.45**	**247**	*e*Pn	**Pn**	**07 16 57.5**	**-0.1**
XRY	**Khrisi**	**1.45**	**247**	*e*PN	**Pn**	**07 16 57.5**	**-0.1**
XRY	**Khrisi**	**1.45**	**247**	*e*Pn	**Pn**	**07 16 57.5**	**-0.1**
LAST	**Lasithi**	**1.53**	**260**	*e*Pn	**Pn**	**07 16 59.2**	**+0.4**
LAST				*e*Sn	**Sn**	**07 17 20.0**	**+1.2**
LAST	**Lasithi**	**1.53**	**260**	P	**Pn**	**07 16 58.8**	**0.0**
LAST	**Lasithi**	**1.53**	**260**	*e*PN	**Pn**	**07 16 59.2**	**+0.4**
LAST				*e*SN	**Sn**	**07 17 20.0**	**+1.2**
LAST	**Lasithi**	**1.53**	**260**	P	**Pn**	**07 16 58.8**	**0.0**
LAST	**Lasithi**	**1.53**	**260**	*e*Pn	**Pn**	**07 16 59.2**	**+0.4**
LAST				*e*Sn	**Sn**	**07 17 20.0**	**+1.2**
BDRM	**Kayabasi**	**1.62**	**3**	*i*P	**Pn**	**07 16 59.0**	**-1.0**
BDRM				*i*S	**Sn**	**07 17 19.7**	**-1.2**
BDRM	**Kayabasi**	**1.62**	**3**	*i*P	**Pn**	**07 16 59.0**	**-1.0**
BDRM				*i*S	**Sn**	**07 17 19.7**	**-1.2**
TURN	**Turunc**	**1.76**	**36**	*i*P	**Pn**	**07 16 57.5**	**-4.4**
TURN				*i*S	**Sn**	**07 17 17.6**	**-6.9**
TURN	**Turunc**	**1.76**	**36**	*i*P	**Pn**	**07 16 57.5**	**-4.4**
THR1	**Thera Island**	**1.77**	**302**	P	**Pn**	**07 17 01.3**	**-0.7**
THR1	**Thera Island**	**1.77**	**302**	P	**Pn**	**07 17 01.3**	**-0.7**
THR3	**Thira Island,**	**1.83**	**302**	P	**Pn**	**07 17 01.9**	**-1.0**
THR3	**Thira Island,**	**1.83**	**302**	P	**Pn**	**07 17 01.9**	**-1.0**
YER	**Yerkesik**	**1.86**	**24**	*e*PN	**Pn**	**07 17 03.3**	**+0.1**
YER	**Yerkesik**	**1.86**	**24**	*e*Pn	**Pn**	**07 17 03.3**	**+0.1**
FETY	**Fethiye**	**1.86**	**50**	*e*PN	**Pn**	**07 17 04.4**	**+1.2**
FETY	**Fethiye**	**1.86**	**50**	*e*Pn	**Pn**	**07 17 04.4**	**+1.2**
THR5	**Thira Island,**	**1.87**	**302**	P	**Pn**	**07 17 02.7**	**-0.7**
THR5	**Thira Island,**	**1.87**	**302**	P	**Pn**	**07 17 02.7**	**-0.7**
MLSB	**Milas**	**1.88**	**11**	*e*PN	**Pn**	**07 17 01.8**	**-1.8**
MLSB				*e*SN	**Sn**	**07 17 26.6**	**-0.8**
MLSB	**Milas**	**1.88**	**11**	*e*Pn	**Pn**	**07 17 01.8**	**-1.8**
MLSB				*e*Sn	**Sn**	**07 17 26.6**	**-0.8**
KSL	**Kastellorizon**	**1.97**	**68**	*e*Pn	**Pn**	**07 17 05.1**	**+0.3**
KSL	**Kastellorizon**	**1.97**	**68**	*e*PN	**Pn**	**07 17 05.1**	**+0.3**
IDI	**Anoyia**	**1.99**	**266**	Pn	**Pn**	**07 17 04.5**	**-0.6**
IDI				Lg		07 17 32.1	
24nm,0.3s,baz=65,slow=13,SNR=52
64nm,0.3s,baz=90,slow=10,SNR=6.0
IDI Anoyia 1.99 266 *e*PB **Pn 07 17 04.3 -0.8**
IDI *e*SN **Sn 07 17 30.8 +0.7**
IDI Anoyia 1.99 266 Pn **Pn 07 17 04.4 -0.7**
IDI *e*Sn **Sn 07 17 30.8 +0.7**
AKAS Kas 2.02 66 *i*P **Pn 07 17 06.0 +0.6**
AKAS *i*S **Sg 07 17 34.4 -1.7**
AKAS Kas 2.02 66 *i*P **Pn 07 17 06.0 +0.6**
AKAS *i*S **Sg 07 17 34.4 -1.7**
SIVA Sivas 2.10 259 *e*Pn **Pn 07 17 07.8 +1.3**
SIVA Sivas 2.10 259 P **Pn 07 17 08.2 +1.7**
SIVA Sivas 2.10 259 *e*PN **Pn 07 17 07.8 +1.3**
SIVA Sivas 2.10 259 *e*Pn **Pn 07 17 07.8 +1.3**
SIVA Sivas 2.10 259 P **Pn 07 17 08.2 +1.7**
APE Apeiranthos 2.17 319 *e*Pb **Pn 07 17 06.7 -0.9**
APE *e*Sn **Sn 07 17 33.5 -1.1**
APE Apeiranthos 2.17 319 P **Pn 07 17 06.5 -1.1**
APE S **Sn 07 17 33.4 -1.2**
APE Apeiranthos 2.17 319 ⇑*i*P Px 07 17 21.3
APE Apeiranthos 2.17 319 *e*PB **Pn 07 17 06.7 -0.9**
APE *e*SN **Sn 07 17 33.5 -1.1**
APE Apeiranthos 2.17 319 P **Pn 07 17 06.5 -1.1**
APE *e*Sn **Sn 07 17 33.5 -1.1**
GCAM G?zelcaml? 2.25 358 *i*P **Pn 07 17 07.9 -0.8**
GCAM *i*S **Sg 07 17 41.9 -1.8**
GCAM G?zelcaml? 2.25 358 *i*P **Pn 07 17 07.9 -0.8**
AYDN Tasoluk 2.26 11 *i*P **Pn 07 17 08.1 -0.6**
AYDN *i*S **Sg 07 17 41.3 -2.5**
AYDN Tasoluk 2.26 11 *i*P **Pn 07 17 08.1 -0.6**
SMG Samos 2.29 350 P **Pn 07 17 08.6 -0.6**
SMG Samos 2.29 350 *e*PN **Pn 07 17 08.1 -1.1**
SMG Samos 2.29 350 *e*Pn **Pn 07 17 08.1 -1.1**
SMG Samos 2.29 350 P **Pn 07 17 08.6 -0.6**
GLHS Glhisar (BURDU 2.45 45 *e*PN **Pn 07 17 12.4 +1.0**
GLHS Glhisar (BURDU 2.45 45 *e*Pn **Pn 07 17 12.4 +1.0**
ELL Elmali 2.47 57 *e*PN **Pn 07 17 13.2 +1.6**
ELL Elmali 2.47 57 *e*Pn **Pn 07 17 13.2 +1.6**
GOLH Golhisar 2.54 45 *i*P **Pn 07 17 14.8 +2.1**
GOLH *i*S **Sg 07 17 53.5 +0.5**
GOLH Golhisar 2.54 45 *i*P **Pn 07 17 14.8 +2.1**
VAM Vamos 2.55 270 *e*P **Pn 07 17 13.2 +0.5**
VAM Vamos 2.55 270 *e*PN **Pn 07 17 13.2 +0.5**
VAM Vamos 2.55 270 *e*Pn **Pn 07 17 13.2 +0.5**
DNZL Cakiroluk 2.64 31 *i*P **Pn 07 17 14.7 +0.7**
DNZL *i*S **Sg 07 17 54.9 -1.1**
DNZL Cakiroluk 2.64 31 *i*P **Pn 07 17 14.7 +0.8**
DENT Denizli 2.69 30 *e*PN **Pn 07 17 14.7 +0.1**
DENT Denizli 2.69 30 *e*Pn **Pn 07 17 14.7 +0.1**
GVD Gavdhos 2.72 258 *e*Pn **Pb 07 17 18.2 -1.8**
GVD Gavdhos 2.72 258 *e*PB **Pn 07 17 16.5 +1.4**
GVD Gavdhos 2.72 258 *e*Pb **Pn 07 17 16.5 +1.4**
KARN Karanos 2.78 270 P **Pn 07 17 15.6 -0.3**
KARN Karanos 2.78 270 *e*PN **Pn 07 17 15.2 -0.7**
KARN Karanos 2.78 270 *e*Pn **Pn 07 17 15.2 -0.7**
KARN Karanos 2.78 270 P **Pn 07 17 15.6 -0.3**
KORT Korkueli 2.90 57 *i*P **Pn 07 17 19.5 +2.0**
KORT *i*S **Sg 07 17 59.7 -4.7**
KORT Korkueli 2.90 57 *i*P **Pn 07 17 19.5 +1.9**
BLCB Balcova 2.94 356 *e*PN **Pn 07 17 16.6 -1.6**
BLCB Balcova 2.94 356 P **Pn 07 17 17.4 -0.8**
BLCB Balcova 2.94 356 *e*Pn **Pn 07 17 16.6 -1.6**
BLCB Balcova 2.94 356 P **Pn 07 17 17.4 -0.8**
IZM Izmir 2.95 359 *e*PN **Pn 07 17 16.9 -1.3**
IZM Izmir 2.95 359 *e*Pn **Pn 07 17 16.9 -1.3**
KDAG Bornova 2.95 359 *i*P **Pn 07 17 17.3 -1.0**
KDAG Bornova 2.95 359 *i*P **Pn 07 17 17.3 -1.0**
URLA Izmir 2.97 349 *i*P **Pn 07 17 17.5 -1.0**
URLA *i*S **Sg 07 18 09.5 +2.9**
URLA Izmir 2.97 349 *i*P **Pn 07 17 17.5 -1.0**
ANTB Antalya 3.06 61 *e*PN **Pn 07 17 20.6 +0.8**
ANTB Antalya 3.06 61 *e*Pn **Pn 07 17 20.6 +0.8**
CHOS Chios island 3.11 341 P **Pn 07 17 19.5 -0.9**
CHOS S **Sn 07 17 56.8 -0.8**
CHOS Chios island 3.11 341 *e*PN **Pn 07 17 19.5 -0.9**
CHOS Chios island 3.11 341 P **Pn 07 17 19.5 -0.9**
CHOS S **Sn 07 17 56.8 -0.8**
MANT Manisa 3.20 18 *i*P **Pn 07 17 21.6 0.0**
MANT Manisa 3.20 18 *i*P **Pn 07 17 21.6 -0.1**
KULA Kula-Manisa 3.25 19 *e*PN **Pn 07 17 22.3 0.0**
KULA Kula-Manisa 3.25 19 *e*Pn **Pn 07 17 22.3 0.0**
BCK Bucak 3.31 52 *e*PN **Pn 07 17 24.4 +1.1**
BCK Bucak 3.31 52 *e*Pn **Pn 07 17 24.4 +1.1**
KHL Karahalli 3.37 31 *e*PN **Pn 07 17 25.0 +0.9**
KHL Karahalli 3.37 31 *e*Pn **Pn 07 17 25.0 +1.0**
KHAL Karahalli 3.40 30 *i*P **Pn 07 17 25.5 +1.1**
KHAL Karahalli 3.40 30 *i*P **Pn 07 17 25.5 +1.1**
AKHS Akhisar 3.45 6 *i*P **Pn 07 17 24.6 -0.5**
AKHS *i*S **Sn 07 18 07.8 +1.8**
AKHS Akhisar 3.45 6 *i*P **Pn 07 17 24.6 -0.5**
AKHS *i*S **Sn 07 18 07.8 +1.7**
AKS Akhisar 3.45 6 *e*PN **Pn 07 17 24.2 -0.9**
AKS Akhisar 3.45 6 *e*Pn **Pn 07 17 24.2 -0.9**
ISP Isparta 3.50 46 *e*PN **Pn 07 17 27.4 +1.6**
ISP Isparta 3.50 46 *e*Pn **Pn 07 17 27.6 +1.8**
ISP *e*Sn **Sn 07 18 07.0 -0.3**
ISP Isparta 3.50 46 P **Pn 07 17 26.6 +0.8**
ISP Isparta 3.50 46 P **Pn 07 17 26.6 +0.8**
ISP Isparta 3.50 46 *e*Pn **Pn 07 17 27.4 +1.6**
ISP *e*S **Sn 07 18 07.0 -0.3**
KYTH Kithira 3.58 285 *e*Pn **Pn 07 17 26.4 -0.5**
KYTH Kithira 3.58 285 *e*PN **Pn 07 17 26.4 -0.5**
KYTH Kithira 3.58 285 *e*Pn **Pn 07 17 26.4 -0.5**
SUTC Sutluce-Ispart 3.59 55 *e*PN **Pn 07 17 28.2 +1.1**
SUTC Sutluce-Ispart 3.59 55 *e*Pn **Pn 07 17 28.2 +1.1**
VLY Voula,Athens 3.72 311 *e*PN **Pn 07 17 29.0 +0.2**
VLY Voula,Athens 3.72 311 *e*PN **Pn 07 17 29.0 +0.2**
VLY Voula,Athens 3.72 311 *e*Pn **Pn 07 17 29.0 +0.2**
DEMI Demirci 3.76 17 *i*P **Pn 07 17 29.1 -0.2**
DEMI *i*S **Sn 07 18 12.6 -1.1**
DEMI Demirci 3.76 17 *i*P **Pn 07 17 29.1 -0.3**
DEMI *i*S **Sn 07 18 12.6 -1.1**
VLI Veliai 3.77 291 P **Pn 07 17 29.9 +0.4**
VLI Veliai 3.77 291 ⇑*i*PN **Pn 07 17 29.4 -0.1**
VLI Veliai 3.77 291 ⇑*i*Pn **Pn 07 17 29.4 -0.1**
VLI Veliai 3.77 291 P **Pn 07 17 29.9 +0.4**
ATHU Athens Univers 3.80 313 P **Pn 07 17 29.9 0.0**
ATHU Athens Univers 3.80 313 P **Pn 07 17 29.9 0.0**
PTL Penteli 3.80 314 *e*Pn **Pn 07 17 29.9 -0.1**
PTL Penteli 3.80 314 *e*PN **Pn 07 17 29.9 -0.1**
PTL Penteli 3.80 314 *e*Pn **Pn 07 17 29.9 -0.1**
ATH Athens Observa 3.84 312 *e*P **Pn 07 17 30.4 -0.1**
ATH Athens Observa 3.84 312 *e*PN **Pn 07 17 30.4 -0.1**
ATH Athens Observa 3.84 312 *e*Pn **Pn 07 17 30.4 -0.1**
NAIG Nisos Aigina 3.85 308 *e*Pn **Pn 07 17 30.1 -0.5**
NAIG Nisos Aigina 3.85 308 *e*PN **Pn 07 17 30.1 -0.5**
NAIG Nisos Aigina 3.85 308 *e*Pn **Pn 07 17 30.1 -0.5**
PRK Paraskevi 3.88 348 *e*P **Pn 07 17 30.5 -0.6**
PRK Paraskevi 3.88 348 P **Pn 07 17 30.1 -1.0**
PRK S **Sn 07 18 17.1 +0.3**
PRK Paraskevi 3.88 348 *e*PN **Pn 07 17 30.5 -0.6**
PRK Paraskevi 3.88 348 P **Pn 07 17 30.1 -1.0**
PRK Paraskevi 3.88 348 *e*Pn **Pn 07 17 30.5 -0.6**
PRK S **Sn 07 18 17.1 +0.3**
SIGR SIGRI 3.94 343 P **Pn 07 17 30.7 -1.1**
SIGR S **Sn 07 18 16.3 -1.8**
SIGR SIGRI 3.94 343 P **Pn 07 17 30.7 -1.1**
SIGR S **Sn 07 18 16.3 -1.8**
GDZ Gediz 4.03 25 *i*P **Pn 07 17 33.6 +0.6**
GDZ Gediz 4.03 25 *i*P **Pn 07 17 33.6 +0.6**
SHUT Suhut-Afyon 4.04 39 *e*PN **Pn 07 17 34.9 +1.7**
SHUT Suhut-Afyon 4.04 39 *e*Pn **Pn 07 17 34.9 +1.7**
ALT Altintas 4.24 31 *e*PN **Pn 07 17 36.8 +0.9**
ALT Altintas 4.24 31 *e*Pn **Pn 07 17 36.8 +0.9**
DURS Dursunbey 4.25 12 *i*P **Pn 07 17 35.7 -0.4**
DURS Dursunbey 4.25 12 *i*P **Pn 07 17 35.7 -0.4**
BALY Balya 4.29 3 *i*P **Pn 07 17 36.2 -0.5**
BALY Balya 4.29 3 *i*P **Pn 07 17 36.2 -0.5**
LTK Loutraki 4.34 308 P **Pn 07 17 37.9 +0.5**
LTK Loutraki 4.34 308 *e*PN **Pn 07 17 37.4 0.0**
LTK Loutraki 4.34 308 *e*Pn **Pn 07 17 37.4 0.0**
LTK Loutraki 4.34 308 P **Pn 07 17 37.9 +0.5**
BOLV Bolvadin 4.37 41 *e*P **Pn 07 17 34.7 -3.1**
BOLV Bolvadin 4.37 41 *e*P **Pn 07 17 34.7 -3.1**
VLX Vlachokerasia 4.42 297 P **Pn 07 17 39.1 +0.6**
VLX S **Sn 07 18 28.4 -1.7**
VLX Vlachokerasia 4.42 297 *e*PN **Pn 07 17 39.8 +1.3**
VLX Vlachokerasia 4.42 297 P **Pn 07 17 39.1 +0.6**
VLX Vlachokerasia 4.42 297 *e*Pn **Pn 07 17 39.8 +1.3**
VLX S **Sn 07 18 28.4 -1.7**
HDMB Hadim 4.44 69 *e*PN **Pn 07 17 41.1 +2.3**
HDMB Hadim 4.44 69 *e*Pn **Pn 07 17 41.1 +2.3**
LEF Lefka 4.57 92 *e*PN **Pn 07 17 41.1 +0.6**
LEF Lefka 4.57 92 *e*Pn **Pn 07 17 41.1 +0.6**
AOS Alonnisos 4.62 325 P **Pn 07 17 40.5 -0.7**
AOS S **Sn 07 18 34.3 -0.6**
AOS Alonnisos 4.62 325 P **Pn 07 17 40.5 -0.7**
AOS S **Sn 07 18 34.3 -0.6**
ITM Ithomi 4.69 293 P **Pn 07 17 45.3 +3.2**
ITM Ithomi 4.69 293 P **Pn 07 17 43.7 +1.6**
ITM Ithomi 4.69 293 *e*PN **Pn 07 17 43.8 +1.7**
ITM Ithomi 4.69 293 P **Pn 07 17 43.7 +1.6**
GUR Goura 4.71 303 P **Pn 07 17 45.5 +3.1**
GUR Goura 4.71 303 *e*PN **Pn 07 17 43.7 +1.3**
GUR Goura 4.71 303 *e*Pn **Pn 07 17 43.7 +1.3**
GUR Goura 4.71 303 P **Pn 07 17 45.5 +3.1**
LKR Lokris 4.71 314 *e*Pn **Pn 07 17 42.7 +0.3**
LKR Lokris 4.71 314 *e*PN **Pn 07 17 42.7 +0.3**
LKR Lokris 4.71 314 *e*Pn **Pn 07 17 42.7 +0.3**
PYL PYLOS 4.74 289 *e*PN **Pn 07 17 43.3 +0.4**
PYL PYLOS 4.74 289 *e*Pn **Pn 07 17 43.3 +0.4**
KONT Konya--Tatoy 4.76 57 *e*PN **Pn 07 17 45.6 +2.5**
KONT Konya--Tatoy 4.76 57 *e*Pn **Pn 07 17 45.6 +2.5**
LIA Limnos Island 4.76 340 ⇑*i*Pn **Pn 07 17 42.5 -0.6**
LIA Limnos Island 4.76 340 ⇑*i*PN **Pn 07 17 42.5 -0.6**
LIA Limnos Island 4.76 340 ⇑*i*Pn **Pn 07 17 42.5 -0.6**
DSF Desfina 4.85 309 P **Pn 07 17 44.9 +0.6**
DSF Desfina 4.85 309 P **Pn 07 17 44.9 +0.6**
LADK Ladik-KONYA 4.89 54 *e*PN **Pn 07 17 46.4 +1.4**
LADK Ladik-KONYA 4.89 54 *e*Pn **Pn 07 17 46.4 +1.5**
KDHN Kadinhani 4.92 50 *i*P **Pn 07 17 44.7 -0.6**
KDHN Kadinhani 4.92 50 *i*P **Pn 07 17 44.7 -0.6**
ESKT Eskisehir 4.94 34 *e*PN **Pn 07 17 47.1 +1.5**
ESKT Eskisehir 4.94 34 *e*Pn **Pn 07 17 47.1 +1.5**
CSS Prodhromos 4.94 94 *e*Pn **Pn 07 17 43.7 -2.0**
53nm,0.8s
CSS *e*Sn **Sn 07 18 45.9 +2.9**
CSS Prodhromos 4.94 94 *e*Pn **Pn 07 17 43.7 -2.0**
53nm,0.8s
KIZT Kizilcal 5.00 45 *e*PN **Pn 07 17 47.5 +1.1**
KIZT Kizilcal 5.00 45 *e*Pn **Pn 07 17 47.5 +1.1**
NEO Neokhori 5.05 321 *e*Pn **Pn 07 17 47.2 +0.1**
NEO Neokhori 5.05 321 *e*PN **Pn 07 17 47.2 +0.1**
NEO Neokhori 5.05 321 *e*Pn **Pn 07 17 47.2 +0.1**
LFK Lefkose 5.08 90 *e*PN **Pn 07 17 49.2 +1.7**
LFK Lefkose 5.08 90 *e*Pn **Pn 07 17 49.3 +1.8**
KALE Kalithea 5.09 307 P **Pn 07 17 48.6 +1.0**
KALE Kalithea 5.09 307 P **Pn 07 17 48.6 +1.0**
XOR Xorichti 5.11 321 P **Pn 07 17 47.9 0.0**
XOR Xorichti 5.11 321 P **Pn 07 17 47.9 0.0**
LAKA Lakka 5.11 305 P **Pn 07 17 49.5 +1.5**
LAKA Lakka 5.11 305 P **Pn 07 17 49.5 +1.5**
TRIZ Trizonia 5.12 306 P **Pn 07 17 48.8 +0.8**
TRIZ Trizonia 5.12 306 P **Pn 07 17 48.8 +0.8**
SVRH Sivrihisar-ESK 5.21 39 *e*PN **Pn 07 17 51.3 +2.0**
SVRH Sivrihisar-ESK 5.21 39 *e*Pn **Pn 07 17 51.3 +2.0**
IKL Isikli 5.23 79 *e*PN **Pn 07 17 51.3 +1.7**
IKL Isikli 5.23 79 *e*Pn **Pn 07 17 51.3 +1.7**
EFP Efpalio 5.26 306 P **Pn 07 17 58.5 +8.5**
EFP Efpalio 5.26 306 *e*PN **Pn 07 17 50.0 0.0**
EFP Efpalio 5.26 306 *e*Pn **Pn 07 17 50.0 0.0**
AGG Agios Georgios 5.35 313 *e*P **Pn 07 17 52.4 +1.2**
AGG Agios Georgios 5.35 313 P **Pn 07 17 53.0 +1.8**
AGG Agios Georgios 5.35 313 *e*PN **Pn 07 17 52.4 +1.2**
AGG Agios Georgios 5.35 313 *e*Pn **Pn 07 17 52.4 +1.2**
AGG Agios Georgios 5.35 313 P **Pn 07 17 53.0 +1.8**
RLS Riolos of Patr 5.38 301 *e*Pn **Pn 07 17 52.9 +1.3**
RLS Riolos of Patr 5.38 301 *e*PN **Pn 07 17 52.9 +1.3**
RLS Riolos of Patr 5.38 301 *e*Pn **Pn 07 17 52.9 +1.3**
ALN Alexandroupoli 5.54 350 *e*P **Pn 07 17 54.6 +0.8**
ALN Alexandroupoli 5.54 350 P **Pn 07 17 55.2 +1.4**
ALN Alexandroupoli 5.54 350 *e*PN **Pn 07 17 54.6 +0.8**
ALN Alexandroupoli 5.54 350 *e*Pn **Pn 07 17 54.6 +0.8**
ALN Alexandroupoli 5.54 350 P **Pn 07 17 55.2 +1.4**
EREN Erenkoy 5.59 87 *e*PN **Pn 07 17 56.2 +1.7**
EREN Erenkoy 5.59 87 *e*Pn **Pn 07 17 56.2 +1.7**
EVR Evrytania 5.60 310 *e*Pn **Pn 07 17 55.6 +0.9**
EVR Evrytania 5.60 310 *e*PN **Pn 07 17 55.6 +0.9**
EVR Evrytania 5.60 310 *e*Pn **Pn 07 17 55.6 +0.9**
RDO Rodhopi 5.86 347 ⇑*i*Pn **Pn 07 17 58.4 +0.1**
RDO Rodhopi 5.86 347 ⇑*i*PN **Pn 07 17 58.4 +0.1**
RDO Rodhopi 5.86 347 ⇑*i*Pn **Pn 07 17 58.4 +0.1**
THL Klokotos Trika 5.89 316 P **Pn 07 18 00.5 +1.8**
THL Klokotos Trika 5.89 316 *e*PN **Pn 07 17 58.9 +0.2**
THL Klokotos Trika 5.89 316 *e*Pn **Pn 07 17 58.9 +0.2**
THL Klokotos Trika 5.89 316 P **Pn 07 18 00.5 +1.8**
MERS Mersin 6.00 74 *e*PN **Pn 07 18 02.0 +1.8**
MERS Mersin 6.00 74 *e*Pn **Pn 07 18 02.0 +1.9**
VLS Valsamata 6.05 299 ⇑*i*P **Pn 07 18 02.0 +1.2**
VLS Valsamata 6.05 299 ⇑*i*PN **Pn 07 18 02.0 +1.2**
VLS Valsamata 6.05 299 ⇑*i*Pn **Pn 07 18 02.0 +1.2**
KARA Karaisali 6.50 72 *e*PN **Pn 07 18 08.5 +1.5**
KARA Karaisali 6.50 72 *e*Pn **Pn 07 18 08.5 +1.5**
BRTR Keskin Array B 6.59 48 Pn **Pn 07 18 08.4 +0.2**
0.2nm,0.3s,baz=233,slow=14,SNR=13
BRTR Sn **Sn 07 19 27.2 +3.8**
0.4nm,0.3s,baz=220,slow=20

VOIR		10.13	351	⇓iP		Pn	07 18 59.7	+2.9
VRI	Vrincioaia	10.42	358	⇑P		Pn	07 19 01.7	+0.9
VRI	Vrincioaia	10.42	358	⇑iP		Pn	07 19 01.7	+0.9
VRI	Vrincioaia	10.42	358	⇑P		Pn	07 19 01.7	+0.9
GZR	Gura Zlata	10.52	342	⇑P		Pn	07 19 05.3	+3.2
GZR	Gura Zlata	10.52	342	⇑iP		Pn	07 19 05.3	+3.2
GNI	Garni	14.55	66	LR	LR		07 26 55.3	
comp=N,224nm,19.3s,baz=267,slow=43								
KIV	Kislovodsk	14.55	50	eP		Pn	07 20 01.7	+4.5
KIV				pmax	pmax			
comp=Z,23nm,1.1s								
KIV	Kislovodsk	14.55	50	eP		Pn	07 20 01.7	+4.5
comp=Z,23nm,1.1s								
KEST	Kesra	14.63	276	Pn		Pn	07 19 58.5	+0.1
comp=Z,0.0nm,0.3s,baz=130,slow=7.9,SNR=3.8								
ZEI	Tsey	14.79	55	eP		Pn	07 20 06.3	+5.8
ZEI				pmax	pmax			
comp=Z,14nm,0.9s								
ZEI	Tsey	14.79	55	eP		Pn	07 20 06.3	+5.8
comp=Z,14nm,0.9s								
AKASG	Malin Array Be	15.31	5	Pn		Pn	07 20 08.0	+0.6
comp=Z,1.4nm,0.3s,baz=194,slow=10,SNR=10.0								
AKASG	Malin Array Be	15.31	5	P		Pn	07 20 08.0	+0.6
AKASG				pmax	pmax			
comp=Z,1.0nm,0.3s								
AKASG	Malin Array Be	15.31	5	Pn		Pn	07 20 08.0	+0.6
VRAC	Vranov	15.94	334	Pn		Pn	07 20 16.6	+1.0
comp=Z,0.7nm,0.3s,baz=110,slow=13,SNR=5.9								
VRAC	Vranov	15.94	334	P		Pn	07 20 16.6	+1.1
VRAC				pmax	pmax			
comp=Z,1.0nm,0.3s								
VRAC	Vranov	15.94	334	P		Pn	07 20 16.6	+1.1
comp=Z,1.0nm,0.3s								
DAVOX	Davos/Dischmat	17.31	316	LR		LR	07 27 26.5	
comp=Z,138nm,20.1s,baz=116,slow=38								
VORD	Divnogorie	17.76	25	eP		Pn	07 20 38.5	-0.1
VORD				pmax	pmax			
comp=N,30nm,0.9s								
VORD				pmax	pmax			
comp=Z,10.0nm,0.9s								
VORD				pmax	pmax			
comp=E,6.0nm,0.4s								
VORD	Divnogorie	17.76	25	eP		Pn	07 20 38.5	-0.1
VSR	Storozhevoye	17.93	25	eP		Pn	07 20 37.7	-2.9
VSR				pmax	pmax			
comp=N,5.0nm,0.4s								
VSR				pmax	pmax			
comp=E,6.0nm,0.4s								
VSR				pmax	pmax			
comp=Z,10.0nm,0.4s								
VRHR	Novokhopersk	18.74	29	eP		Pn	07 20 49.5	-1.0
VRHR				pmax	pmax			
comp=N,10.0nm,0.6s								
VRHR				pmax	pmax			
comp=E,40nm,0.6s								
VRHR				pmax	pmax			
comp=Z,20nm,0.6s								
VRHR	Novokhopersk	18.74	29	eP		Pn	07 20 49.5	-1.0
CLL	Collm	18.91	331	eP		Pn	07 20 53.0	+0.4
CLL				pmax	pmax			
comp=Z,6.0nm,0.8s								
CLL	Collm	18.91	331	eP		Pn	07 20 53.0	+0.4
comp=Z,6.0nm,0.8s								
CLL	Collm	18.91	331	eP		Pn	07 20 53.0	+0.4
comp=Z,6.0nm,0.8s								
CLL				e			07 21 01.0	
comp=Z,12nm,1.3s								
CLL	Collm	18.91	331	eP		Pn	07 20 53.0	+0.4
comp=Z,6.0nm,0.8s								
MOX	Moxa	18.98	328	eP		Pn	07 20 55.9	+2.5
OBN	Obninsk	20.68	15	eP		P	07 21 07.9	-3.4
OBN				i			07 21 20.5	
OBN				pmax	pmax			
comp=Z,51nm,1.2s								
AVF	Avril sur Loir	21.23	310	eP		P	07 21 16.6	-0.7
AVF	Avril sur Loir	21.23	310	eP		P	07 21 16.6	-0.7
AVF	Avril sur Loir	21.23	310	eP		P	07 21 16.6	-0.7
AVF	Avril sur Loir	21.23	310	eP		P	07 21 16.6	-0.7
TAM	Tamanrasset	22.78	242	eP		P	07 21 35.7	+1.7
TAM				pmax	pmax			
comp=Z,11nm,1.3s,mb4.1								
TAM	Tamanrasset	22.78	242	eP		P	07 21 35.7	+1.7
comp=Z,11nm,1.3s,mb4.1								
TAM	Tamanrasset	22.78	242	eP		P	07 21 35.7	+1.7
comp=Z,11nm,1.3s,mb4.1								
ESDC	Sonseca Array	25.09	289	P		P	07 21 55.1	-0.9
comp=Z,0.5nm,0.3s,mb3.5,baz=76,slow=9.6,SNR=7.4								
ESDC	Sonseca Array	25.09	289	P		P	07 21 55.2	-0.9
FINES	FINESS Array B	26.03	359	P		P	07 22 02.8	-1.5
comp=Z,2.8nm,0.8s,mb3.8,baz=183,slow=9.6,SNR=4.0								
FINES	FINESS Array B	26.03	359	P		P	07 22 02.8	-1.6
FINES				pmax	pmax			
comp=Z,3.0nm,0.8s								
FINES	FINESS Array B	26.03	359	P		P	07 22 02.8	-1.6
comp=Z,3.0nm,0.8s,mb3.9								
HFS	Hagfors	26.24	345	P		P	07 22 04.8	-1.5
comp=Z,1.8nm,0.8s,mb3.7,baz=141,slow=14,SNR=4.1								
HFS	Hagfors	26.24	345	P		P	07 22 04.8	-1.4
HFS				pmax	pmax			
comp=Z,2.0nm,0.8s								
HFS	Hagfors	26.24	345	P		P	07 22 04.8	-1.4
comp=Z,2.0nm,0.8s,mb3.7								
MDT	Midelt	26.50	274	P		P	07 22 09.1	+0.1
comp=Z,1.2nm,0.6s,mb3.6,baz=32,slow=9.5,SNR=3.2								
MDT	Midelt	26.50	274	P		P	07 22 09.1	+0.1
AKTK	Aktyubinsk	26.77	46	P		P	07 22 10.2	-1.0
AKTK	Aktyubinsk	26.77	46	P		P	07 22 10.2	-1.0
comp=Z,3.0nm,0.7s,mb3.9								
AKTO	Aktyubinsk	26.77	46	P		P	07 22 10.2	-1.0
comp=Z,3.0nm,0.7s,mb4.0,baz=246,slow=8.7,SNR=7.7								
AKTO	Aktyubinsk	26.77	46	P		P	07 22 10.2	-1.0
AKTO				pmax	pmax			
comp=Z,3.0nm,0.7s,mb3.9								
EVO	Evora	28.29	287	eP		P	07 22 26.7	+1.8
comp=Z,14nm,0.8s,mb4.3								
EVOP	Sao Brissos	28.37	287	eP		P	07 22 26.7	+1.0
comp=Z,14nm,0.8s,mb4.6								
TORD	Torodi Ar. Bea	32.05	233	P		P	07 22 57.9	-0.4
comp=Z,4.7nm,0.7s,mb4.4,baz=47,slow=4.4,SNR=22								
TORD				LR	LR		08 04 46.9	
comp=Z,102nm,18.6s,baz=135,slow=39								
TORD	Torodi Ar. Bea	32.05	233	P		P	07 22 57.9	-0.4
TORD				LR	LR		08 04 46.9	
ARCES	ARCESS Array B	34.16	359	P		P	07 23 14.6	-1.6
comp=Z,1.7nm,0.9s,mb4.0,baz=180,slow=9.1,SNR=5.3								
ARCES	ARCESS Array B	34.16	359	P		P	07 23 14.6	-1.6
ARCES				pmax	pmax			
comp=Z,2.0nm,0.9s								
ARCES	ARCESS Array B	34.16	359	P		P	07 23 14.6	-1.6
comp=Z,2.0nm,0.9s,mb4.0								
BVAR	Borovoye Array	34.87	46	P		P	07 23 22.6	0.0
comp=Z,0.6nm,0.7s,mb3.6,baz=248,slow=7.8,SNR=4.0								
BVAR	Borovoye Array	34.87	46	P		P	07 23 22.6	0.0
BVAR				pmax	pmax			
comp=Z,1.0nm,0.7s								
BVAR	Borovoye Array	34.87	46	P		P	07 23 22.6	0.0
comp=Z,1.0nm,0.7s,mb3.9								
KURK	Kurchatov	39.63	51	P		P	07 24 02.3	-0.7
comp=Z,2.4nm,0.8s,mb4.0,baz=277,slow=8.8,SNR=9.1								
KURK	Kurchatov	39.63	51	P		P	07 24 02.3	-0.7
KURK				pmax	pmax			
comp=Z,2.0nm,0.8s,mb3.9								
KURK	Kurchatov	39.63	51	P		P	07 24 02.3	-0.7
comp=Z,2.0nm,0.8s,mb3.9								
MK31	Makanchi Array	42.14	57	eP		P	07 24 23.9	+0.1
MK31	Makanchi Array	42.14	57	eP		P	07 24 23.9	+0.1
MKAR	Makanchi Array	42.14	57	P		P	07 24 23.1	-0.6
comp=Z,0.5nm,0.5s,mb3.4,baz=283,slow=7.0,SNR=7.0								
MKAR	Makanchi Array	42.14	57	P		P	07 24 23.2	-0.6
MKAR				pmax	pmax			
comp=Z,1.0nm,0.5s								
MKAR	Makanchi Array	42.14	57	P		P	07 24 23.2	-0.6
comp=Z,1.0nm,0.5s,mb3.7								
SPITS	Spitsbergen Ar	43.09	357	P		P	07 24 30.6	-0.5
comp=Z,1.9nm,0.7s,mb3.9,baz=161,slow=12,SNR=2.2								
SPITS	Spitsbergen Ar	43.09	357	P		P	07 24 30.6	-0.5
SPITS				pmax	pmax			
comp=Z,2.0nm,0.7s								
SPITS	Spitsbergen Ar	43.09	357	P		P	07 24 30.6	-0.5
comp=Z,2.0nm,0.7s,mb4.0								
ZALV	Zalesovo Beam	43.53	46	P		P	07 24 34.4	-0.5
comp=Z,2.4nm,0.7s,mb4.0,baz=270,slow=8.5,SNR=6.3								
ZALV	Zalesovo Beam	43.53	46	P		P	07 24 34.4	-0.5
ZALV				pmax	pmax			
comp=Z,2.0nm,0.7s,mb4.0								
ZALV	Zalesovo Beam	43.53	46	P		P	07 24 34.4	-0.5
comp=Z,2.0nm,0.7s,mb4.0								
ZALV	Zalesovo Beam	43.53	46	P		P	07 24 34.4	-0.5
ZAK	Zakamensk	55.23	49	eP		P	07 26 05.2	+0.9
ZAK				pmax	pmax			
comp=Z,1.0nm,0.9s,mb3.9								
ZAK	Zakamensk	55.23	49	eP		P	07 26 05.2	+0.9
comp=Z,1.0nm,0.9s,mb3.9								
SCHQ	Schefferville	64.11	320	P		P	07 27 04.2	-1.3
comp=Z,4.0nm,0.8s,mb4.5,baz=53,slow=2.0,SNR=3.8								
CMAR	Chiang Mai Arr	64.78	85	P		P	07 27 09.0	-1.5
comp=Z,0.9nm,0.6s,mb4.0,baz=302,slow=11,SNR=3.5								
CMAR	Chiang Mai Arr	64.78	85	P		P	07 27 09.0	-1.4
CMAR				pmax	pmax			
comp=Z,1.0nm,0.6s								
CMAR	Chiang Mai Arr	64.78	85	P		P	07 27 09.0	-1.4
comp=Z,1.0nm,0.6s,mb4.0								
BILL	Bilibino	72.34	15	eP		P	07 27 53.8	-3.1
BILL				i			07 28 10.6	
BILL				pmax	pmax			
comp=Z,3.0nm,1.4s,mb4.0								
KSRS	Korea Array	76.70	53	P		P	07 28 22.6	-0.1
comp=Z,3.0nm,1.1s,mb4.2,baz=296,slow=5.0,SNR=2.7								
KSRS	Korea Array	76.70	53	P		P	07 28 22.6	-0.1
KSRS				pmax	pmax			
comp=Z,3.0nm,1.1s,mb4.1								
KSRS	Korea Array	76.70	53	P		P	07 28 22.6	-0.1
comp=Z,3.0nm,1.1s,mb4.1								

IDC 18 07:26:51.5±1.7, 33°.08N×92°.17E, h0km, mb3.4/4, mb1 3.7/7, mb1mx3.5/26, mbtmp3.5/7, ML3.7/3, Error ellipse: s-maj=73.1km s-min=21.8km az=67.0, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	15.64	334	Pn	Pn	07 30 32.0	-1.1
0.1nm,0.3s,baz=152,slow=13,SNR=2.5							
CMAR	Chiang Mai Arr	15.78	156	Pn	Pn	07 30 36.9	+1.8
0.3nm,0.3s,baz=324,slow=12,SNR=3.7							
SONM	Songino Array	18.24	32	P	Pn	07 31 05.9	-0.1
0.3nm,0.3s,baz=203,slow=13,SNR=3.6							
KURK	Kurchatov	20.25	335	P	P	07 31 26.3	-1.9
0.8nm,0.7s,baz=145,slow=10,SNR=3.2							
ZALV	Zalesovo Beam	21.51	348	P	P	07 31 42.8	+1.0
0.6nm,0.4s,baz=152,slow=9.4,SNR=2.7							
WRA	Warramunga Arr	66.34	136	P	P	07 37 42.2	+0.1
0.6nm,0.9s,baz=330,slow=6.7,SNR=3.5							
ASAR	Alice Springs	69.04	139	P	P	07 37 58.9	-0.2
0.3nm,0.7s,baz=329,slow=6.4,SNR=4.9							

CASC 18 07:36:40.4±1.1, 11°.99N×88°.05W, h22km±10km, MD3.8, ML3.4, 1C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	San Cristobal	1.21	54	eP	Pn	07 37 02.2	+0.2
CRIN				AML	AML	07 37 31.2	
comp=N,781nm,0.4s							
CNCH	Conchagua	1.30	9	eP	Pn	07 37 03.3	+0.1
CNGN	Cerro Negro	1.42	69	eP	Pn	07 37 04.1	-0.7
COPN	Copaltepe	1.44	82	eP	Pn	07 37 04.8	-0.4
COPN				eP		07 37 05.0	
BLLM	Bellamira	1.46	353	eP	Pn	07 37 05.0	-0.3
MOMN	Momotombo	1.54	74	eP	Pn	07 37 06.5	0.0
CSAN		1.61	83	eP	Pn	07 37 07.4	-0.1
MGAN	Managua	1.77	85	eP	Pn	07 37 09.0	-0.8
CAHU	Cacacuatique	1.78	355	eP	Pn	07 37 10.0	+0.2
CAHU				eS	Sn	07 37 33.0	+1.2
WILN	Americas 2	1.83	84	eP	Pn	07 37 10.1	-0.5
TGUH	Tegucigalpa,Un	2.19	20	eP	Pn	07 37 15.8	+0.3
TGUH				⇑eP		07 37 15.9	
BOAB	BOACO BROADBAN	2.38	79	eP	Pn	07 37 17.6	-0.4
CONN	Concepcion	2.41	100	eP	Pn	07 37 19.6	+1.1

*MDD **18** 07:54:09.7±2.5, 35°.46N×11°.46W, h0km, mb3.9/3, Error ellipse: s-maj=23.6km s-min=21.4km az=160.0, PRIMO*
*INMG **18** 07:54:10.5±0.9, 35°.37N×11°.55W, h10km, ML2.5, Error ellipse: s-maj=5.9km s-min=4.4km az=119.0*
*CSEM **18** 07:54:11.8±0.5, 35°.57N×11°.33W, h10km, ML3.3/10, Error ellipse: s-maj=9.6km s-min=7.8km az=152.0*

ISC 18 07:54:11.9±1.2, 35°.58N±0°.06×11°.32W±0°.08, h10km, n62, σ1§01/107, 2D, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	2.54	52	⇓P	Pn	07 54 53.5	+0.3
7.1nm,0.3s,SNR=18							
PFVI				S	Sn	07 55 25.6	+1.4
14nm,0.7s,SNR=8.3							
PFVI	Vila Bisbo	2.54	52	⇓P	Pn	07 54 53.5	+0.3
7.1nm,0.3s,SNR=18							
PFVI				S	Sn	07 55 25.6	+1.4
14nm,0.7s,SNR=8.3							
PFVI	Vila Bisbo	2.54	52	ePn	Pn	07 54 53.5	+0.3
PFVI				eSn	Sn	07 55 26.2	+2.0
PFVI				A		07 55 26.9	
8.3nm,0.1s							
PFVI	Vila Bisbo	2.54	52	ePn	Pn	07 54 53.5	+0.3
PFVI				S	Sn	07 55 25.6	+1.4
14nm,0.7s,SNR=8.3							
PFVI				eSn	Sn	07 55 26.2	+2.0
8.3nm,0.1s							
MORF	Marmelete	2.76	51	P	Pn	07 54 56.6	+0.4
MORF				S	Sn	07 55 29.6	0.0
MORF	Marmelete	2.76	51	P	Pn	07 54 56.6	+0.4
MORF				S	Sn	07 55 29.6	0.0
MORF	Marmelete	2.76	51	ePn	Pn	07 54 56.6	+0.4
MORF				eSn	Sn	07 55 31.7	+2.1
MORF				A		07 55 32.5	
14nm,0.2s							
MORF	Marmelete	2.76	51	ePn	Pn	07 54 56.6	+0.4
MORF				eSn	Sn	07 55 31.7	+2.1
14nm,0.2s							
PTEO	Sao Teotonio	2.87	46	eSn	Sn	07 55 33.9	+1.6
PTEO				A		07 55 38.9	
6.9nm,0.5s							
PTEO	Sao Teotonio	2.87	46	eSn	Sn	07 55 33.9	+1.6
6.9nm,0.5s							
PBDV	Barranco-do-Ve	3.20	58	ePn	Pn	07 55 03.3	+1.0
PBDV				eSn	Sn	07 55 41.7	+1.2
PBDV				A		07 55 45.5	
4.6nm,0.1s							
PBDV	Barranco-do-Ve	3.20	58	ePn	Pn	07 55 03.3	+1.0
PBDV				eSn	Sn	07 55 41.7	+1.2
4.6nm,0.1s							
PCVE	Castro Verde	3.34	51	ePn	Pn	07 54 57.5	-6.7
PCVE				eSn	Sn	07 55 38.3	-5.7
PCVE				A		07 55 40.2	
3.5nm,0.2s							
PVAQ	Vaqueiros	3.43	57	ePn	Pn	07 55 05.8	+0.4
PVAQ				eSn	Sn	07 55 46.6	+0.5
PVAQ				A		07 55 48.9	
7.0nm,0.1s							
PVAQ	Vaqueiros	3.43	57	ePn	Pn	07 55 05.8	+0.4
PVAQ				eSn	Sn	07 55 46.6	+0.5
7.0nm,0.1s							
EGRO	El Granado	3.66	57	P	Pn	07 55 08.5	0.0
1.4nm,0.1s,SNR=7.9							
EGRO				S	Sn	07 55 51.9	+0.2
14nm,0.2s,SNR=7.9

Azm175.0000°; P Plg20.0000°, Azm303.0000°;
JMA Felt III J1.
MOS ***18*** *07:55:02.6±0.9, 39.°09N×140.°83E, h33km, mb4.4/20 Error ellipse: s-maj=11.8km s-min=7.1km az=81.1*

ISC 18 07:55:01.3±0.4, 39.°03N±0.°02×140.°86E±0.°03, h10km±3km, n88, σ0°80/98, mb4.2/33, 3C-6D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.29**	**106**	⇓P	**Pg**	**07 55 06.8**	**-0.3**
JMK				S	**Sg**	**07 55 11.0**	**0.0**
JRG	**Rokugo**	**0.40**	**334**	⇓P	**Pg**	**07 55 09.1**	**-0.1**
JRG				S	**Sg**	**07 55 15.1**	**+0.5**
JYK	**Kaneyama**	**0.41**	**254**	⇓P	**Pg**	**07 55 09.3**	**0.0**
JYK				S	**Sg**	**07 55 14.9**	**+0.2**
JOM	**Ohasama**	**0.55**	**37**	⇑P	**Pg**	**07 55 11.6**	**-0.4**
JOM				S	**Sg**	**07 55 19.0**	**-0.3**
JOU	**Okura**	**0.68**	**193**	⇑P	**Pg**	**07 55 14.4**	**-0.1**
JOU				S	**Sg**	**07 55 23.7**	**+0.3**
JIO	**Ouri**	**0.69**	**146**	⇓P	**Pg**	**07 55 14.1**	**-0.5**
JIO				S	**Sg**	**07 55 23.4**	**-0.3**
JYA	**Atsumi**	**1.00**	**244**	⇓P	**Pg**	**07 55 19.9**	**-0.6**
JYS	**Shiratake**	**1.02**	**218**	⇑P	**Pg**	**07 55 20.4**	**-0.5**
JYS				S	**Sg**	**07 55 35.2**	**+1.0**
MAJO	**Matsushiro**	**3.25**	**221**	*e*P	**Pn**	**07 55 53.7**	**+1.4**
MAT	**Matsushiro**	**3.25**	**221**	P	**Pn**	**07 55 53.7**	**+1.4**
MAT				S	**Sn**	**07 56 35.7**	**+4.6**
MJAR	**Matsushiro Arr**	**3.25**	**221**	Pn	**Pn**	**07 55 53.3**	**+1.0**
	5.6nm,0.3s,baz=25,slow=14,SNR=31						
MJAR				Pg	**Pg**	**07 55 59.5**	**-4.1**
	12nm,0.3s,baz=21,slow=15,SNR=35						
MJAR				Lg		07 56 41.9	
	4.6nm,0.3s,baz=35,slow=32,SNR=3.8						
ERM	**Erimo**	**3.46**	**30**	*e*P	**Pn**	**07 55 55.3**	**+0.2**
ASAJ	**Asahikawa**	**5.24**	**14**	Pn	**Pn**	**07 56 21.3**	**+1.7**
	8.0nm,0.3s,baz=233,slow=10,SNR=26						
ASAJ				Sn	**Sn**	**07 57 28.4**	**+8.4**
	baz=238,slow=19,SNR=2.2						
ASAJ				LR	LR	07 58 24.8	
	comp=Z,215nm,18.6s,baz=273,slow=39						
ASAJ	**Asahikawa**	**5.24**	**14**	P	**Pn**	**07 56 21.3**	**+1.7**
ASAJ						07 57 28.5	
ASAJ				pmax	pmax		
	comp=Z,8.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,215nm,18.6s						
YSS	**Yuzh-Sakhalins**	**8.04**	**9**	⇓*e*P	**Pn**	**07 56 59.2**	**+1.2**
YSS	**Yuzh-Sakhalins**	**8.04**	**9**	*e*Pn	**Pn**	**07 56 58.9**	**+1.0**
	comp=Z,36nm,0.8s						
KUR	**Kuril'sk**	**8.09**	**38**	*e*P	**Pn**	**07 56 59.0**	**+0.3**
KUR				*e*S	**Sn**	**07 58 31.0**	**+0.9**
KUR				smax			
	comp=N,860nm,0.7s						
KUR				smax			
	comp=E,70nm,0.7s						
KSRS	**Korea Array**	**10.30**	**265**	Pn	**Pn**	**07 57 32.7**	**+3.7**
	comp=E,3.5nm,0.3s,baz=76,slow=14,SNR=51						
KSRS				Sn	**Sn**	**07 59 30.1**	**+5.7**
	comp=E,0.9nm,0.3s,baz=70,slow=24,SNR=5.4						
KSRS				LR	LR	08 00 54.8	
	comp=E,92nm,20.5s,baz=332,slow=35						
KSRS	**Korea Array**	**10.30**	**265**	P	**Pn**	**07 57 32.7**	**+3.7**
KSRS						07 59 30.2	
KSRS				pmax	pmax		
	comp=Z,4.0nm,0.3s						
KSRS				smax			
	comp=N,1.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,92nm,20.5s						
KLR	**Kul'dur**	**12.11**	**330**	*e*P	**Pn**	**07 57 53.2**	**-0.4**
PETK	**Petropavlovsk-**	**18.23**	**34**	P	**Pn**	**07 59 14.5**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=230,slow=8.7,SNR=3.8						
PETK				LR	LR	08 07 08.6	
	comp=Z,63nm,19.7s,baz=236,slow=40						
SSLB	**Suanglung**	**22.72**	**234**	*e*P	**P**	**08 00 02.9**	**-0.3**
	comp=Z,13nm,0.6s,mb4.5						
ULN	**Ulaanbaatar**	**25.91**	**301**	P	**P**	**08 00 33.4**	**+0.1**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.0						
ULN	**Ulaanbaatar**	**25.91**	**301**	P	**P**	**08 00 33.4**	**+0.2**
	comp=Z,2.9nm,0.6s,mb4.0						
SONM	**Songino Array**	**26.35**	**301**	P	**P**	**08 00 37.4**	**+0.1**
	comp=Z,0.6nm,0.5s,mb3.4,baz=90,slow=10,SNR=3.6						
SONM	**Songino Array**	**26.35**	**301**	P	**P**	**08 00 37.4**	**+0.2**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BILL	**Bilibino**	**32.25**	**18**	*i* P	**P**	**08 01 30.3**	**+0.9**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.1						
BILL				MLR	MLR		
	comp=Z,100nm,15.0s						
BILL	**Bilibino**	**32.25**	**18**	*e*P	**P**	**08 01 28.8**	**-0.6**
	comp=Z,3.9nm,0.8s,mb4.3						
ZAA0	**Zalesovo Array**	**40.27**	**311**	*e*P	**P**	**08 02 38.0**	**-0.1**
ZALV	**Zalesovo Beam**	**40.27**	**311**	P	**P**	**08 02 35.7**	**-2.3**
	comp=Z,1.6nm,0.5s,mb4.0,baz=99,slow=8.4,SNR=6.1						
ZALV	**Zalesovo Beam**	**40.27**	**311**	P	**P**	**08 02 35.7**	**-2.3**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.1						
MK31	**Makanchi Array**	**42.71**	**300**	*e*P	**P**	**08 02 57.4**	**-0.8**
MKAR	**Makanchi Array**	**42.71**	**300**	P	**P**	**08 02 57.7**	**-0.5**
	comp=Z,1.6nm,0.7s,mb3.9,baz=85,slow=10,SNR=13						
MKAR	**Makanchi Array**	**42.71**	**300**	P	**P**	**08 02 57.7**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	**Makanchi Array**	**42.71**	**300**	P	**P**	**08 02 57.7**	**-0.5**
KURK	**Kurchatov**	**44.38**	**306**	P	**P**	**08 03 11.3**	**-0.3**
	comp=Z,3.4nm,0.6s,mb4.3,baz=84,slow=9.2,SNR=18						
KURK	**Kurchatov**	**44.38**	**306**	P	**P**	**08 03 11.3**	**-0.3**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
KURK	**Kurchatov**	**44.38**	**306**	P	**P**	**08 03 11.3**	**-0.3**
KDAK	**Kodiak Island**	**45.92**	**43**	P	**P**	**08 03 23.6**	**-0.1**
	comp=Z,3.2nm,0.4s,mb4.6,baz=283,slow=4.6,SNR=7.1						
KDAK	**Kodiak Island**	**45.92**	**43**	LR	**P**	**08 03 23.7**	**-0.1**
KDAK				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.6						
KTH	**Kantishna Hill**	**46.35**	**35**	*e*P	**P**	**08 03 28.1**	**+1.0**
	comp=Z,9.2nm,1.2s,mb4.6						
COLD	**Coldfoot**	**46.63**	**30**	*e*P	**P**	**08 03 29.5**	**+0.3**
	comp=Z,1.6nm,0.6s,mb4.1						
KSM	**Kuching**	**46.64**	**224**	*e*P	**P**	**08 03 28.7**	**-1.2**
	comp=Z,59nm,0.8s						
COLA	**College**	**47.64**	**33**	*e*P	**P**	**08 03 35.6**	**-1.5**
COLA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
COLA	**College**	**47.64**	**33**	*e*P	**P**	**08 03 35.6**	**-1.5**
	comp=Z,2.7nm,0.8s,mb4.3						
TKM2	**Tokmak 2**	**48.32**	**297**	*e*P	**P**	**08 03 41.3**	**-1.4**
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
TKM2	**Tokmak 2**	**48.32**	**297**	*e*P	**P**	**08 03 41.3**	**-1.4**
	comp=Z,5.3nm,0.8s,mb4.6						
BVAR	**Borovoye Array**	**48.92**	**311**	P	**P**	**08 03 46.9**	**-0.3**
	comp=Z,1.2nm,0.5s,mb4.2,baz=62,slow=8.6,SNR=5.2						
BVAR	**Borovoye Array**	**48.92**	**311**	P	**P**	**08 03 46.9**	**-0.3**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
EKS2	**Erkin-Say**	**49.67**	**297**	*e*P	**P**	**08 03 52.9**	**-0.2**
	comp=Z,2.6nm,0.9s,mb4.3						
INK	**Inuvik**	**52.82**	**28**	P	**P**	**08 04 16.9**	**+0.7**
	comp=Z,2.7nm,0.5s,mb4.5,baz=296,slow=6.3,SNR=18						
INK	**Inuvik**	**52.82**	**28**	*e*P	**P**	**08 04 15.7**	**-0.5**
ABKAR	**Akbulak array**	**56.33**	**309**	*e*P	**P**	**08 04 40.6**	**-1.5**
	comp=Z,2.3nm,0.6s,mb4.4						
AKTK	**Aktyubinsk**	**57.03**	**311**	P	**P**	**08 04 47.4**	**+0.4**
AKTO	**Aktyubinsk**	**57.03**	**311**	P	**P**	**08 04 47.4**	**+0.4**
	comp=Z,1.4nm,0.6s,mb4.2,baz=75,slow=9.0,SNR=7.1						
AKTO	**Aktyubinsk**	**57.03**	**311**	P	**P**	**08 04 47.4**	**+0.4**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
WRA	**Warramunga Arr**	**58.98**	**187**	P	**P**	**08 05 00.2**	**-0.6**
	comp=Z,1.5nm,0.4s,mb4.4,baz=5.2,slow=7.5,SNR=22						
WRA	**Warramunga Arr**	**58.98**	**187**	P	**P**	**08 05 00.3**	**-0.6**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
RES	**Resolute Bay**	**60.78**	**15**	*e*P	**P**	**08 05 12.2**	**-0.5**
RES				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
RES	**Resolute Bay**	**60.78**	**15**	*e*P	**P**	**08 05 12.2**	**-0.5**
	comp=Z,4.2nm,0.9s,mb4.6						
ARCES	**ARCESS Array B**	**61.98**	**339**	P	**P**	**08 05 22.0**	**+1.1**
	comp=Z,0.5nm,0.5s,mb3.9,baz=77,slow=7.6,SNR=4.6						
ARCES	**ARCESS Array B**	**61.98**	**339**	P	**P**	**08 05 22.0**	**+1.1**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARCES	**ARCESS Array B**	**61.98**	**339**	P	**P**	**08 05 21.9**	**+1.1**
ASAR	**Alice Springs**	**62.71**	**187**	P	**P**	**08 05 26.3**	**+0.1**
	comp=Z,1.3nm,0.8s,mb4.1,baz=8.6,slow=6.0,SNR=10						
ASAR	**Alice Springs**	**62.71**	**187**	P	**P**	**08 05 26.3**	**+0.1**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
OBN	**Obninsk**	**66.24**	**323**	*i* P	**P**	**08 05 48.1**	**-1.0**
OBN				*i*		08 06 17.3	
OBN				*e*		08 08 12.3	
OBN				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.2						
FINES	**FINESS Array B**	**66.85**	**332**	P	**P**	**08 05 52.0**	**-0.9**
	comp=Z,3.2nm,0.7s,mb4.5,baz=69,slow=6.3,SNR=5.4						
FINES	**FINESS Array B**	**66.85**	**332**	P	**P**	**08 05 52.0**	**-0.9**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
FINES	**FINESS Array B**	**66.85**	**332**	P	**P**	**08 05 52.0**	**-0.9**
KIV	**Kislovodsk**	**69.28**	**310**	*e*P	**P**	**08 06 10.5**	**+2.1**
KIV				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
SLMT	**Seeley Lake**	**71.58**	**44**	*e*P	**P**	**08 06 22.4**	**-0.1**
HFS	**Hagfors**	**72.09**	**335**	P	**P**	**08 06 25.0**	**-0.2**
	comp=Z,1.3nm,0.4s,mb4.2,baz=55,slow=5.6,SNR=7.7						
HFS	**Hagfors**	**72.09**	**335**	P	**P**	**08 06 25.0**	**-0.3**
HFS				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NB2	**NORSAR Subarra**	**72.18**	**337**	P	**P**	**08 06 25.5**	**-0.3**
	comp=Z,2.3nm,0.7s,mb4.2,baz=40,slow=6.5						
NOA	**NORSAR Array B**	**72.18**	**337**	P	**P**	**08 06 25.8**	**0.0**
	comp=Z,1.5nm,0.7s,mb4.1,baz=39,slow=6.0,SNR=5.2						
NOA	**NORSAR Array B**	**72.18**	**337**	P	**P**	**08 06 25.8**	**0.0**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKASG	**Malin Array Be**	**72.46**	**322**	P	**P**	**08 06 27.0**	**-0.6**
	comp=Z,0.8nm,0.4s,mb4.0,baz=47,slow=5.6,SNR=5.0						
AKASG	**Malin Array Be**	**72.46**	**322**	P	**P**	**08 06 27.0**	**-0.6**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
DLMT	**Dillon**	**73.23**	**45**	*e*P	**P**	**08 06 32.2**	**-0.2**
	comp=Z,1.7nm,0.6s,mb4.2						
BOZ	**Bozeman (W)**	**73.58**	**44**	*e*P	**P**	**08 06 34.7**	**+0.3**
BOZ				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
BOZ	**Bozeman (W)**	**73.58**	**44**	*e*P	**P**	**08 06 34.7**	**+0.3**
	comp=Z,1.4nm,0.7s,mb4.0						
NVAR	**Mina Array Bea**	**74.14**	**53**	P	**P**	**08 06 39.3**	**+1.5**
	comp=Z,0.7nm,0.6s,mb3.7,baz=284,slow=5.3,SNR=6.8						
PDAR	**Pinedale Array**	**76.58**	**46**	P	**P**	**08 06 51.5**	**-0.2**
	comp=Z,0.8nm,0.7s,mb3.8,baz=304,slow=2.1,SNR=5.8						
BRTR	**Keskin Array B**	**77.21**	**311**	P	**P**	**08 06 55.0**	**-0.4**
	comp=Z,1.5nm,1.0s,mb3.9,baz=64,slow=5.6,SNR=5.7						
BRTR	**Keskin Array B**	**77.21**	**311**	P	**P**	**08 06 55.0**	**-0.3**
BRTR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TXAR	**Lajitas Array**	**89.24**	**52**	P	**P**	**08 07 58.0**	**+0.4**
	comp=Z,0.3nm,0.7s,mb3.7,baz=276,slow=3.6,SNR=5.5						
TORD	**Torodi Ar. Bea**	**115.61**	**315**	PKP	PKPdf	08 13 44.5	+0.4
	comp=Z,0.2nm,0.6s,baz=25,slow=1.9,SNR=3.4						
LPAZ	**La Paz**	**146.00**	**56**	PKPbc	PKPbc	08 14 42.2	+0.7
	comp=Z,1.6nm,0.5s,baz=349,slow=2.1,SNR=11						

NEIC ***18*** *07:56:11.8±2.5, 20.°14S×169.°68E, h122km±18km, mb4.5/5, Error ellipse: s-maj=26.1km s-min=12.1km az=213.0*
NOU ***18*** *07:56:12.7±0.6, 19.°67S×169.°29E, h10km, MD2.9, ML3.3, MS3.6*
IDC ***18*** *07:56:14.8±12.0, 20.°27S×169.°63E, h144km±107km, mb4.2/5, mb1 4.3/6, mb1mx3.9/17, mbtmp4.2/6, ML4.6/1, MS3.7/1, Ms1 3.7/1, ms1mx2.9/21, Error ellipse: s-maj=72.2km s-min=24.1km az=23.0*

ISC 18 07:56:14.7±2.1, 20.°4S±0.°2×169.°5E±0.°1, h130km±14km, n28, σ0°77/31, mb4.4/10, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.02**	**233**	*e*P	**Pn**	**07 57 01.8**	**+0.2**
BAYA				*e*S	**Sn**	**07 57 38.0**	**+0.1**
PLUM	**Mont Dore**	**3.28**	**234**	*e*P	**Pn**	**07 57 05.1**	**+0.1**
PLUM				*e*S	**Sn**	**07 57 44.1**	**+0.3**
DZM	**Mont Dzumac**	**3.32**	**239**	*e*P	**Pn**	**07 57 04.9**	**-0.6**
DZM				*e*S	**Sn**	**07 57 44.5**	**-0.4**
DZM				AMP		07 57 52.5	
	comp=Z,3μm,11.1s						
DZM	**Mont Dzumac**	**3.32**	**239**	*e*Pn	**Pn**	**07 57 05.6**	**+0.1**
DZM				*e*Sn	**Sn**	**07 57 45.3**	**+0.5**
LASL	**Noumea**	**3.33**	**236**	*e*S	**Sn**	**07 57 44.3**	**-0.8**
ONTRN	**Noumea**	**3.44**	**235**	*e*P	**Pn**	**07 57 07.3**	**+0.2**
ONTRN				*e*S	**Sn**	**07 57 47.1**	**-0.5**
NOUC	**Port Laguerre**	**3.45**	**239**	*e*P	**Pn**	**07 57 07.4**	**+0.2**
NOUC				*e*S	**Sn**	**07 57 47.9**	**+0.1**
NOUC				AMP		07 57 51.5	
	comp=Z,159nm,1.2s						
ARMA	**Armidale**	**18.98**	**235**	*e*P	**P**	**08 00 29.3**	**+3.2**
URZ	**Urewera**	**19.01**	**161**	P	**P**	**08 00 26.1**	**-0.3**
	comp=Z,1.9nm,0.3s,baz=343,slow=2.3,SNR=14						
CTA	**Charters Tower**	**21.82**	**267**	*e*P	**P**	**08 00 58.6**	**+1.9**
	comp=Z,10nm,0.6s,mb4.4						
CTA	**Charters Tower**	**21.82**	**267**	P	**P**	**08 00 57.2**	**+0.6**
	comp=Z,12nm,0.5s,mb4.5,baz=92,slow=10,SNR=13						
CTAO	**Charters Tower**	**21.82**	**267**	*e*P	**P**	**08 00 57.3**	**+0.6**
	comp=Z,9.4nm,0.5s,mb4.5						
CNB	**Canberra Magne**	**23.15**	**226**	*e*P	**P**	**08 01 11.0**	**+1.4**
STKA	**Stephens Creek**	**27.48**	**240**	*e*P	**P**	**08 01 49.4**	**+0.6**
	comp=Z,4.1nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**27.48**	**240**	P	**P**	**08 01 48.5**	**-0.3**
	comp=Z,5.2nm,0.7s,mb4.3,baz=76,slow=10,SNR=11						
STKA	**Stephens Creek**	**27.48**	**240**	P	**P**	**08 01 48.5**	**-0.3**
WRAB	**Tennant Creek**	**32.97**	**265**	*e*P	**P**	**08 02 35.8**	**-1.6**
	comp=Z,6.8nm,1.2s,mb4.2						
WRA	**Warramunga Arr**	**32.98**	**265**	P	**P**	**08 02 36.6**	**-0.8**
	comp=Z,0.8nm,0.3s,mb3.9,baz=94,slow=8.5,SNR=36						
ASAR	**Alice Springs**	**33.12**	**258**	P	**P**	**08 02 38.5**	**-0.1**
	comp=Z,12nm,0.6s,mb4.8,baz=84,slow=9.3,SNR=185						
KAKA	**Kakadu**	**36.27**	**276**	*e*P	**P**	**08 03 06.7**	**+0.9**
	comp=Z,3.3nm,0.6s,mb4.1						
FITZ	**Fitzroy Crossi**	**41.39**	**265**	*e*P	**P**	**08 03 48.7**	**+0.3**
	comp=Z,12nm,0.6s,mb4.7						
FITZ	**Fitzroy Crossi**	**41.39**	**265**	P	**P**	**08 03 48.9**	**+0.4**
	comp=Z,6.4nm,0.6s,mb4.4,baz=110,slow=9.9,SNR=31						
FITZ				LR	LR	08 18 18.1	
	comp=Z,100nm,21.7s,baz=91,slow=32						
MBWA	**Marble Bar**	**46.39**	**260**	*e*P	**P**	**08 04 27.1**	**-1.2**
	comp=Z,3.1nm,0.4s,mb4.3						
SBA	**Scott Base**	**57.55**	**181**	*e*P	**P**	**08 05 50.4**	**+0.3**
	comp=Z,43nm,2.2s,mb4.9						
QSPA	**South Pole Qui**	**69.69**	**180**	*e*P	**P**	**08 07 09.1**	**-0.7**
	comp=Z,6.6nm,0.9s,mb4.4						
ARCES	**ARCESS Array B**	**126.21**	**345**	PKP	PKPdf	08 14 59.3	-1.8
	comp=Z,0.7nm,0.8s,baz=66,slow=4.4,SNR=3.7						
EKA	**Eskdalemuir Ar**	**144.65**	**353**	PKP	PKPdf	08 15 33.0	-2.6
	comp=Z,1.4nm,0.4s,baz=1.2,slow=2.7,SNR=9.0						
DAVOX	**Davos/Dischmat**	**148.84**	**332**	PKPbc	PKPbc	08 15 44.9	-2.1
	comp=Z,1.4nm,0.4s,baz=130,slow=3.6,SNR=3.5						

IDC 18 08:00:11.2±3.4, 52.°76N×35.°74E, h0km, mb1 3.5/3, mb1mx3.2/25, mbtmp3.4/3, ML3.2/3, Error ellipse: s-maj=42.0km s-min=14.0km az=112.0, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKASG	**Malin Array Be**	**4.54**	**246**	Pn	Pn	08 01 19.2	-1.9
	2.8nm,0.3s,baz=58,slow=16,SNR=8.4						
AKASG				Sn	Sn	08 02 12.2	-2.4
	2.0nm,0.3s,baz=60,slow=28,SNR=3.3						
MICGM	**Minsk**	**4.99**	**294**	*e*	Sn	08 02 23.0	-2.6
FINES	**FINESS Array B**	**10.16**	**333**	Pn	Pn	08 02 33.2	-4.8
	0.2nm,0.3s,baz=152,slow=12,SNR=4.2						
FINES				Sn	Sn	08 04 23.4	-9.1
	0.2nm,0.3s,baz=150,slow=22,SNR=3.8						
ARCES	**ARCESS Array B**	**17.50**	**348**	Pn	Pn	08 04 10.7	-5.5
	0.3nm,0.3s,baz=161,slow=11,SNR=14						

IDC ***18*** *08:12:11.5±0.4, 33.°14N×92.°08E, h0km, mb5.0/35, mb1 5.1/38, mb1mx5.1/39, mbtmp5.0/38, ML4.2/3, MS4.4/29, Ms1 4.4/29, ms1mx4.2/36, Error ellipse: s-maj=13.1km s-min=9.2km az=39.0*
LDG ***18*** *08:12:11.7±0.3, 33.°26N×91.°86E, h10km, Mb5.5/38, Ms4.3/8, Error ellipse: s-maj=16.2km s-min=5.0km az=135.0*
ISCJB ***18*** *08:12:13.5±0.8, 33.°19N±0.°02×92.°00E±0.°02, h21km±5km, mb5.2/218, MS4.6/73, Error ellipse: s-maj=3.3km s-min=2.5km az=9.4*
MOS ***18*** *08:12:15.2±0.8, 33.°21N×92.°01E, h33km, mb5.4/105, MS4.5/39, Error ellipse: s-maj=5.7km s-min=3.5km az=119.7*
BJI ***18*** *08:12:15.7, 33.°23N×92.°12E, h37km, mB5.2/33, mb5.1/52, ML5.3/3, Ms5.1/69, Ms7 5.0/55*
SZGRF ***18*** *08:12:17.8, 33.°33N×91.°95E, h33km, mb5.2, MS4.6, Qinghai, China*
NEIC ***18*** *08:12:18.3±0.4, 33.°21N×92.°02E, h44km±4km, mb5.2/129, MS4.6/9, Error ellipse: s-maj=3.3km s-min=2.7km az=207.0*
GCMT ***18*** *08:12:18.2±0.2, 33.°09N×92.°21E, h19km, MW5.2, Moment Tensor Solution. s42,c53; s77,c128; Moment tensor: Scale 10¹⁶Nm; Mrr-3.45±.27; Mθθ-3.89±.19; Mφφ7.34±.21; Mrθ-1.98±.49; Mθφ2.96±.16; Mφr-0.44±.43; Best double couple: M0 7.10000×10¹⁶ NP1:φs154.00000°, δ62.00000°, λ-156.00000°. NP2:φs52.00000°, δ69.00000°, λ-31.00000°. Principal axes: T 8.1500, Plg5.0000°, Azm105.0000°; N -2.1800, Plg53.0000°, Azm201.0000°; P -5.9600, Plg36.0000°, Azm11.0000°; Data Used: II IC G IU CN.*
DJA ***18*** *08:12:22, 33.°02N×91.°81E, h68km, Mw5.6/14*

ISC 18 08:12:15.2±0.8, 33.°19N±0.°02×92.°03E±0.°02, h19km±5km, h15km±2.0km: pP-P, n647, σ1°01/671, mb5.2/218, MS4.6/73, 20C-36D, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.56**	**192**	P	**Pn**	**08 13 14.1**	**+4.7**
LSA				LR	LR		
	comp=N,20μm,8.2s						
LSA				LR	LR		
	comp=E,14μm,6.3s						
LSA				LR	LR		
	comp=Z,48μm,7.0s						
LSA	**Lhasa**	**3.56**	**192**	*e*Pn	**Pn**	**08 13 13.1**	**+3.6**
LSA				*e*Sg	**Sg**	**08 14 07.6**	**-2.0**
TAPN	**Taplejung**	**6.92**	**214**	*e*P	**Pn**	**08 13 58.4**	**+2.9**
	comp=Z,145nm,0.9s						
JIRN	**Jiri**	**7.47**	**224**	*e*P	**Pn**	**08 14 06.9**	**+3.8**
	comp=Z,121nm,0.6s						
GUN	**Gumba**	**7.47**	**227**	*e*P	**Pn**	**08 14 06.6**	**+3.5**
	comp=Z,218nm,0.8s						
ODAN	**Odare**	**7.48**	**214**	*e*P	**Pn**	**08 14 05.6**	**+2.3**
	comp=Z,157nm,0.9s						
SHL	**Shillong**	**7.60**	**181**	*e*PKP	**Pn**	**08 14 07.0**	**+2.1**
SHL				*ex*	**Sn**	**08 15 31.0**	**+0.5**
RAMN	**Ramite**	**7.80**	**218**	*e*P	**Pn**	**08 14 08.4**	**+0.8**
	comp=Z,273nm,0.6s						
KKN	**Kakani**	**7.93**	**229**	*e*P	**Pn**	**08 14 11.1**	**+1.7**
	comp=Z,121nm,0.6s						
KKN	**Kakani**	**7.93**	**229**	*e*P	**Pn**	**08 14 11.1**	**+1.7**
KKN				pmax	pmax		
	comp=Z,121nm,0.6s						
PKI	**Pulchoki**	**8.00**	**227**	*e*P	**Pn**	**08 14 12.8**	**+2.4**
	comp=Z,212nm,0.6s						
PKI	**Pulchoki**	**8.00**	**227**	*e*P	**Pn**	**08 14 13.5**	**+3.1**
PKI				pmax	pmax		
	comp=Z,302nm,0.6s						
PKI	**Pulchoki**	**8.00**	**227**	*e*P	**Pn**	**08 14 13.5**	**+3.1**
	comp=Z,302nm,0.6s						
PKIN	**Phulchoki**	**8.01**	**227**	*e*P	**Pn**	**08 14 13.5**	**+3.0**
	comp=Z,302nm,0.6s						
DMN	**Daman**	**8.16**	**229**	*e*P	**Pn**	**08 14 14.5**	**+1.9**
	comp=Z,210nm,0.7s						
GTA	**Gaotai**	**8.83**	**43**	⇓P	**Pn**	**08 14 22.6**	**+0.9**
GTA				pP		08 14 26.9	
GTA				S	**Sn**	**08 15 59.4**	**-1.3**
GTA				pmax	pmax		
	comp=Z,57nm,1.0s						
GTA				pmax	pmax		
	comp=Z,550nm,5.4s						
GTA				LR	LR		
	comp=N,9μm,11.9s						
GTA				LR	LR		
	comp=E,6μm,12.2s						
GTA				LR	LR		
	comp=Z,7μm,10.7s						
AGT	**Agartala**	**9.30**	**184**	*i* P	**Pn**	**08 14 28.0**	**-0.2**
AGT				*i* x	x	08 15 18.0	
LZH	**Lanzhou**	**10.16**	**70**	*e*P	**Pn**	**08 14 38.8**	**-1.1**
LZH				pP		08 14 45.5	
LZH				sP		08 14 51.8	
LZH				*e*S	**Sn**	**08 16 34.1**	**+0.9**
LZH				sS		08 16 41.1	
LZH				SS		08 16 44.0	
LZH				pmax	pmax		
	comp=Z,39nm,1.1s						
LZH		

comp=E,2μm,8.4s
XAN LR LR
comp=E,1μm,7.6s
GYA Guiyang 14.36 114 P Pn 08 15 34.0 -3.5
GYA PP 08 15 51.0
GYA S **Sn 08 18 21.3 +5.1**
GYA SS 08 18 37.4
GYA pmax pmax
comp=Z,40nm,0.8s
GYA pmax pmax
comp=Z,180nm,4.3s
GYA LR LR
comp=N,3μm,12.0s
GYA LR LR
comp=E,2μm,13.2s
GYA LR LR
comp=Z,3μm,12.3s
KSH Kashi 14.38 301 P Pn 08 15 40.3 +2.6
KSH PP 08 15 51.9
KSH S **Sn 08 18 21.0 +4.3**
KSH SS 08 18 37.5
KSH PcP PcP 08 20 56.5 +3.1
KSH PcS PcS 08 24 30.3 +2.1
KSH pmax pmax
comp=Z,26nm,1.4s
KSH pmax pmax
comp=Z,200nm,3.2s
KSH LR LR
comp=N,3μm,7.8s
KSH LR LR
comp=E,2μm,9.0s
KSH LR LR
comp=Z,2μm,9.0s
JBP Jabalpur 14.57 230 *i* P **Pn 08 15 39.4 -0.9**
JBP *ex* x 08 17 43.4
KHET Khetri 14.86 254 *e*PKP **Pn 08 15 43.5 -0.8**
KHET AMb AMB 08 15 46.7
comp=Z,59nm,1.3s
ENH Enshi 15.14 96 *e*Pn **Pn 08 15 47.6 -0.4**
comp=Z,156nm,1.0s
ULHL Ulahol 15.40 310 P **Pn 08 15 53.5 +2.2**
SNR=23
MK31 Makanchi Array 15.48 334 *e*P **Pn 08 15 51.7 -0.6**
MKAR Makanchi Array 15.48 334 Pn **Pn 08 15 51.1 -1.2**
comp=Z,0.5nm,0.3s,baz=143,slow=13,SNR=36
MKAR Sn **Sn 08 18 53.0 +10**
comp=Z,0.1nm,0.3s,baz=137,slow=28,SNR=1.9
MKAR LR LR 08 21 55.3
comp=Z,882nm,20.5s,baz=149,slow=38
MKAR Makanchi Array 15.48 334 P **Pn 08 15 51.1 -1.2**
MKAR 08 18 53.0
MKAR pmax pmax
comp=Z,1.0nm,0.3s
MKAR MLR MLR
comp=Z,882nm,20.5s
AAA Alma-Ata 15.52 315 *i* P **Pn 08 15 56.5 +3.6**
AAA *e*S **Sn 08 18 48.5 +4.2**
AAA pmax pmax
comp=Z,1μm,2.4s
AAA smax
comp=N,900nm,4.8s
AAA MLR MLR
comp=Z,3μm,15.0s
CHTO Chiang Mai 15.60 155 *e*P **Pn 08 15 53.7 -0.4**
CHTO pmax pmax
comp=Z,30nm,1.0s
CHTO Chiang Mai 15.60 155 *e*Pn **Pn 08 15 53.7 -0.4**
comp=Z,30nm,1.0s
CHTO Chiang Mai 15.60 155 Pn **Pn 08 15 54.2 +0.1**
SNR=9.5
CHTO Pn **Pn 08 15 54.2 +0.1**
SNR=9.5
CHCP Chirah Chowk 15.68 277 P **Pn 08 15 55.5 +0.5**
CM31 Chiang Mai Arr 15.93 155 *e*Pn **Pn 08 15 57.8 -0.5**
CMAR Chiang Mai Arr 15.93 155 Pn **Pn 08 15 56.0 -2.3**
comp=Z,0.3nm,0.3s,baz=331,slow=12,SNR=69
CMAR PcP PcP 08 20 56.0 +0.2
comp=Z,0.4nm,0.3s,baz=302,slow=1.9,SNR=8.8
CMAR LR LR 08 23 12.7
comp=Z,1μm,21.6s,baz=337,slow=42
CMAR ScP ScP 08 24 34.4 +5.2
comp=Z,0.5nm,0.3s,baz=320,slow=2.7,SNR=3.1
KZA Kyzart 15.96 309 P **Pn 08 16 05.4 +6.9**
SNR=35
TKM2 Tokmak 2 16.15 312 P **Pn 08 16 05.0 +4.0**
SNR=37
TKM2 Tokmak 2 16.15 312 *e*P **Pn 08 16 01.6 +0.5**
TKM2 pmax pmax
comp=Z,225nm,1.5s
TKM2 Tokmak 2 16.15 312 *e*Pn **Pn 08 16 01.6 +0.6**
comp=Z,225nm,1.5s
BTO Baotou 16.17 58 *e*P **Pn 08 16 00.0 -1.3**
BHPL Bhopal 16.23 236 *e*PKP **Pn 08 16 01.3 -0.8**
BHPL AMb AMB 08 16 07.4
comp=Z,117nm,1.1s
KBK Karagaybulak 16.43 310 P **Pn 08 16 10.6 +6.0**
SNR=53
AJM Ajmer 16.49 251 *e*PKP **Pn 08 16 03.6 -1.8**
AJM AMb AMB 08 16 07.7
comp=Z,74nm,1.2s
UCH Uchtor 16.51 308 P **Pn 08 16 14.8 +9.2**
SNR=7.3
NGP Nagpur 16.63 227 *e*PKP **Pn 08 16 04.2 -3.0**
NGP *ex* x 08 16 16.6
comp=Z,99nm,1.3s
NGP *e*S **Sn 08 19 07.9 -3.5**
AAK Ala-Archa 16.71 309 P **Pn 08 16 13.4 +5.2**
comp=Z,737nm,1.1s,SNR=36
AAK Ala-Archa 16.71 309 P **Pn 08 16 13.5 +5.3**
SNR=45
AAK Ala-Archa 16.71 309 Pn **Pn 08 16 10.4 +2.2**
comp=Z,0.0nm,0.3s,baz=107,slow=6.4,SNR=23
AAK Ala-Archa 16.71 309 *c i* P **Pn 08 16 10.4 +2.2**
AAK pmax pmax
comp=Z,205nm,2.3s
AAK Ala-Archa 16.71 309 *e*P **Pn 08 16 11.1 +2.9**
comp=Z,254nm,1.3s
AAK Ala-Archa 16.71 309 Pn **Pn 08 16 11.5 +3.3**
SNR=96
AAK Pn **Pn 08 16 11.5 +3.3**
SNR=96
CHMS Chumysh 16.73 311 P **Pn 08 16 11.6 +3.3**
SNR=15
FRU Bishkek 16.73 310 *i* P **Pn 08 16 14.0 +5.6**
FRU pmax pmax
comp=Z,320nm,1.8s
CEP Cherat 16.79 278 P **Pn 08 16 08.9 -0.4**
AML Almayashu 17.01 307 P **Pn 08 16 15.0 +3.0**
SNR=34
AML Almayashu 17.01 307 *e*P **Pn 08 16 14.6 +2.7**
comp=Z,265nm,1.2s
USP Ospenovka 17.02 311 P **Pn 08 16 15.0 +2.9**
SNR=26
EKS2 Erkin-Say 17.19 309 P **Pn 08 16 18.7 +4.4**
SNR=46
TIY Taiyuan 17.22 69 *e*P **Pn 08 16 15.3 +0.7**
TIY S **Sn 08 19 24.3 -1.3**
TIY sS sS 08 19 34.8 -8.4
TIY LR LR
comp=N,4μm,6.8s
TIY LR LR
comp=E,2μm,8.2s
TIY LR LR
comp=Z,4μm,7.5s
HHC Hu-ho-hao-te 17.35 58 *e*P **Pn 08 16 16.3 +0.1**
HHC PP 08 16 30.1
HHC S **Sn 08 19 28.8 +0.1**
HHC SS 08 19 47.3
HHC PcP PcP 08 21 01.6 +3.9
HHC pmax pmax
comp=Z,27nm,0.8s
HHC pmax pmax
comp=Z,280nm,5.7s
HHC LR LR
comp=N,2μm,13.5s
HHC LR LR
comp=E,3μm,13.7s
HHC LR LR
comp=Z,3μm,12.7s
SONM Songino Array 18.21 32 P **Pn 08 16 27.3 +0.6**
comp=Z,3.1nm,0.3s,baz=216,slow=12,SNR=172
SONM LR LR 08 24 44.2
comp=Z,380nm,19.3s,baz=225,slow=41
SONM Songino Array 18.21 32 P **Pn 08 16 27.3 +0.6**
SONM pmax pmax
comp=Z,3.0nm,0.3s
SONM MLR MLR
comp=Z,380nm,19.3s
ULN Ulaanbaatar 18.53 33 *e*P **Pn 08 16 31.0 +0.3**
ULN pmax pmax
comp=Z,83nm,1.0s
ULN Ulaanbaatar 18.53 33 *e*Pn **Pn 08 16 31.0 +0.3**
comp=Z,83nm,1.0s
ULN Ulaanbaatar 18.53 33 P **Pn 08 16 30.7 +0.1**
SNR=61
ULN P 08 16 30.7
SNR=61
ZAK Zakamensk 19.08 22 *e*P **Pn 08 16 37.7 +0.5**
ZAK pmax pmax
comp=Z,5.0nm,1.4s
KBL Kabul 19.13 280 *e*P **Pn 08 16 36.8 -1.2**
KBL pmax pmax
comp=Z,184nm,0.9s
KBL Kabul 19.13 280 *e*Pn **Pn 08 16 36.8 -1.2**
comp=Z,184nm,0.9s
WHN Wuhan 19.14 92 P **Pn 08 16 36.6 -1.6**
WHN S **Sn 08 20 10.0 -2.1**
WHN pmax pmax
comp=Z,150nm,0.9s
WHN pmax pmax
comp=Z,1μm,6.7s
WHN LR LR
comp=N,6μm,7.4s
WHN LR LR
comp=E,6μm,7.8s
WHN LR LR
comp=Z,8μm,7.0s
JASL Jaisalmer 19.31 257 *e*PKP **Pn 08 16 38.9 -1.3**
MOY Mondy 19.59 17 *e*P **Pn 08 16 44.0 +0.7**
MOY pmax pmax
comp=Z,119nm,2.4s
HYB Hyderabad 19.84 221 *e*P **Pn 08 16 45.0 -1.6**
HYB *e*S **Sn 08 20 30.0 +0.8**
HYB Hyderabad 19.84 221 *i* P **Pn 08 16 45.0 -1.6**
HYB *e*S **Sn 08 20 30.0 +0.8**
KURK Kurchatov 20.09 335 P **P 08 16 47.2 -0.3**
comp=Z,440nm,0.9s,SNR=32
KURK Kurchatov 20.09 335 P **P 08 16 46.9 -0.5**
comp=Z,56nm,0.8s,baz=140,slow=12,SNR=63
KURK LR LR 08 24 33.6
comp=Z,941nm,19.8s,MS4.1,baz=145,slow=37
KURK Kurchatov 20.09 335 *d i* P **P 08 16 47.1 -0.4**
KURK pmax pmax
comp=Z,110nm,1.2s
KURK Kurchatov 20.09 335 *e*P **P 08 16 47.1 -0.3**
comp=Z,62nm,0.9s
KURK Kurchatov 20.09 335 P **P 08 16 47.4 -0.1**
SNR=59
KURK P 08 16 47.4
SNR=59
TLY Talaya 20.32 21 Pn **P 08 16 52.1 +2.2**
comp=Z,308nm,1.4s,SNR=21
TLY Talaya 20.32 21 *d i* P **P 08 16 51.7 +1.8**
TLY *e* 08 17 03.1
TLY *e*SS 08 21 06.7
TLY pmax pmax
comp=Z,85nm,1.2s
TLY MLR MLR
comp=Z,2μm,21.0s,MS4.3
TLY Talaya 20.32 21 *e*Pn **P 08 16 52.0 +2.1**
comp=Z,84nm,1.2s
TLY Talaya 20.32 21 P **P 08 16 51.8 +1.8**
SNR=43
TLY P 08 16 51.8
SNR=43
BJT Baijiatuau 20.51 64 *e*P **P 08 16 52.7 +0.6**
BJT pmax pmax
comp=Z,37nm,0.7s
BJT Baijiatuau 20.51 64 *e*P **P 08 16 52.7 +0.6**
comp=Z,37nm,0.7s
BJI Beijing 20.52 64 P **P 08 16 52.1 -0.1**
BJI S **S 08 20 42.4 +1.5**
BJI pmax pmax
comp=Z,25nm,0.8s
BJI pmax pmax
comp=Z,530nm,4.6s
BJI LR LR
comp=N,11μm,11.7s,MS5.4
BJI LR LR
comp=E,3μm,14.4s,MS5.4
BJI LR LR
comp=Z,1μm,17.3s,MS4.3
TIA Tai'an 20.84 75 *e*P **P 08 16 55.3 -0.4**
TIA S **S 08 20 49.0 +1.7**
TIA pmax pmax
comp=Z,100nm,0.7s
TIA LR LR
comp=N,2μm,9.0s
IRK Irkutsk 21.00 21 *e*P **P 08 16 59.1 +1.8**
IRK pmax pmax
comp=Z,362nm,1.1s,mb5.6
QIZ Qiongzhong 21.28 127 P **P 08 17 01.1 +0.5**
QIZ LR LR
comp=N,3μm,13.7s,MS4.9
QIZ LR LR
comp=E,1μm,13.6s,MS4.9
QIZ LR LR
comp=Z,3μm,9.6s
QIZ Qiongzhong 21.28 127 *e*P **P 08 17 01.2 +0.6**
GZH Guangzhou 21.29 113 P **P 08 17 01.6 +1.0**
GZH S **S 08 20 56.3 -0.1**
GZH LR LR
comp=N,4μm,12.6s,MS5.1
GZH LR LR
comp=E,2μm,13.0s,MS5.1
GZH LR LR
comp=Z,4μm,9.5s
ZAA0 Zalesovo Array 21.37 348 *e*P **P 08 17 01.0 -0.2**
ZALV Zalesovo Beam 21.37 348 P **P 08 17 00.9 -0.3**
comp=Z,44nm,0.8s,mb4.8,baz=158,slow=9.6,SNR=74
ZALV LR LR 08 26 33.6
comp=Z,261nm,18.5s,MS3.7,baz=340,slow=40
ZALV Zalesovo Beam 21.37 348 P **P 08 17 01.0 -0.3**
ZALV pmax pmax
comp=Z,44nm,0.8s,mb4.8
ZALV MLR MLR
comp=Z,261nm,18.5s,MS3.7
ZALV Zalesovo Beam 21.37 348 P **P 08 17 00.9 -0.3**
ZALV LR LR 08 26 33.6
POO Poona 21.88 233 *ex* **P 08 17 04.0 -3.0**
NVS Novosibirsk 22.51 347 ‖ *i* P **P 08 17 11.9 -1.5**
NVS *e*S **S 08 21 15.5 -4.2**
NVS pmax pmax
comp=N,185nm,1.4s
NVS pmax pmax
comp=E,71nm,1.4s
NVS pmax pmax
comp=Z,127nm,1.4s,mb5.2
NVS smax
comp=N,73nm,1.8s
NVS smax
comp=E,63nm,1.8s
NJ2 Nanjing 22.61 86 *e*P **P 08 17 17.6 +2.9**
NJ2 pP 08 17 27.9
NJ2 sP sP 08 17 31.3 +8.5
NJ2 PP 08 17 45.9
NJ2 pmax pmax
comp=Z,30nm,1.1s,mb4.6
NJ2 pmax pmax
comp=Z,310nm,5.4s
NJ2 LR LR
comp=N,2μm,10.5s,MS5.0
NJ2 LR LR
comp=E,2μm,11.8s,MS5.0
NJ2 LR LR
comp=Z,2μm,12.0s,MS4.8
CIT Chita 24.44 33 *e*P **P 08 17 32.2 -0.3**
CIT *e* 08 18 02.1
DL2 Dalian 24.54 68 P **P 08 17 35.5 +1.9**
DL2 pmax pmax
comp=Z,30nm,0.9s,mb4.8
DL2 pmax pmax
comp=Z,100nm,3.7s
DL2 LR LR
comp=N,2μm,18.0s,MS4.7
DL2 LR LR
comp=E,550nm,16.7s,MS4.7
DL2 LR LR
comp=Z,920nm,14.7s,MS4.4
QZH Quanzhou 24.58 103 *e*P **P 08 17 32.1 -2.0**
QZH S **S 08 21 51.3 -2.9**
QZH LR LR
comp=N,3μm,10.0s,MS5.2
QZH LR LR
comp=E,2μm,11.3s,MS5.2
QZH LR LR
comp=Z,3μm,10.8s,MS5.1
SSE Sheshan 24.75 87 P **P 08 17 17.9 -18**
SSE S S 08 21 33.1 -24
SSE sS sS 08 21 48.3 -18
SSE pmax pmax
comp=Z,26nm,0.7s,mb4.9
SSE pmax pmax
comp=Z,220nm,5.4s
SSE LR LR
comp=N,1μm,12.0s,MS4.6
SSE LR LR
comp=E,550nm,12.0s,MS4.6
SSE LR LR
comp=Z,2μm,13.3s,MS4.8
BVAR Borovoye Array 25.17 328 P **P 08 17 39.7 +0.6**
comp=Z,18nm,0.7s,mb4.7,baz=132,slow=11,SNR=54
BVAR PcP PcP 08 21 12.1 -0.5
comp=Z,1.9nm,0.6s,baz=168,slow=1.9,SNR=4.3
BVAR Borovoye Array 25.17 328 P **P 08 17 39.7 +0.6**
BVAR 08 21 12.1
BVAR pmax pmax
comp=Z,18nm,0.7s
BRVK Borovoye 25.24 328 P **P 08 17 40.6 +0.9**
comp=Z,355nm,1.0s,mb5.8,SNR=22
BRVK Borovoye 25.24 328 *d i* P **P 08 17 40.4 +0.7**
BRVK pmax pmax
comp=Z,98nm,1.2s,mb5.2
BRVK Borovoye 25.24 328 *e*P **P 08 17 40.5 +0.8**
comp=Z,70nm,1.0s,mb5.1
BRVK Borovoye 25.24 328 P **P 08 17 40.7 +1.0**
SNR=39
BRVK P 08 17 40.7
SNR=39
HIA Hailar 26.11 44 *i* P **P 08 17 48.4 +0.7**
HIA Hailar 26.11 44 *e*P **P 08 17 48.3 +0.6**
comp=Z,37nm,1.1s,mb4.8
SNY Shenyang 26.36 62 ‖ P **P 08 17 49.5 -0.5**
SNY S **S 08 22 23.3 +1.2**
SNY pmax pmax
comp=Z,30nm,1.1s,mb4.7
SNY pmax pmax
comp=Z,290nm,5.8s
SNY LR LR
comp=N,1μm,10.4s,MS5.0
SNY LR LR
comp=E,2μm,11.8s,MS5.0
SNY LR LR
comp=Z,2μm,10.6s,MS4.8
YHNB Yeheng 26.99 101 *e*P **P 08 17 57.2 +1.4**
comp=Z,105nm,1.5s,mb5.2
NACB Ninganchiao 27.38 101 *e*P **P 08 17 59.0 -0.4**
comp=Z,75nm,1.1s,mb5.1
ABKT Ailbek 27.89 289 P **P 08 18 05.9 +2.1**
comp=Z,338nm,1.4s,mb5.8,SNR=16
CN2 Changchun 28.05 58 ‖ P **P 08 18 04.8 -0.4**
CN2 *e*S **S 08 22 47.0 -1.7**
CN2 pmax pmax
comp=Z,80nm,0.9s,mb5.3
CN2 LR LR
comp=N,1μm,16.0s,MS5.3
CN2 LR LR
comp=E,7μm,16.0s,MS5.3
CN2 LR LR
comp=Z,2μm,14.0s,MS4.9
ABKAR Akbulak array 28.70 314 *e*P **P 08 18 10.6 -0.3**
comp=Z,28nm,0.8s,mb5.0
KULM Kulim 28.90 162 P **P 08 18 14.9 +2.0**
KULM Kulim 28.90 162 *e*P **P 08 18 13.5 +0.6**
comp=Z,59nm,1.4s,mb5.1
KSRS Korea Array 29.48 71 P **P 08 18 16.9 -1.0**
comp=Z,6.3nm,0.8s,mb4.4,baz=276,slow=9.1,SNR=11
KSRS LR LR 08 30 49.8
comp=Z,615nm,22.0s,MS4.2,baz=273,slow=38
KSRS Korea Array 29.48 71 P **P 08 18 17.0 -1.0**
KSRS pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
KSRS MLR MLR
comp=Z,615nm,22.0s,MS4.2
KTGM Kuala Trenggan 29.59 157 P **P 08 18 21.5 +2.4**
IPM Ipoh 29.78 162 P **P 08 18 21.8 +1.1**
AKTK Aktyubinsk 30.30 315 P **P 08 18 25.6 +0.6**
AKTO Aktyubinsk 30.30 315 P **P 08 18 25.6 +0.6**
comp=Z,25nm,0.8s,mb5.0,baz=106,slow=8.7,SNR=44
AKTO Aktyubinsk 30.30 315 P **P 08 18 25.7 +0.6**
AKTO pmax pmax
comp=Z,25nm,0.8s,mb5.0
PSI Prapat 30.92 166 P **P 08 18 32.0 +1.2**
comp=Z,16nm,0.9s,mb4.8,baz=325,slow=8.9,SNR=14
PSI PcP PcP 08 21 26.5 -0.8
comp=Z,8.4nm,0.9s,baz=258,slow=3.8,SNR=4.7
PSI LR LR 08 32 58.1
comp=Z,670nm,18.4s,MS4.3,baz=341,slow=40
PSI Prapat 30.92 166 P **P 08 18 32.0 +1.2**
PSI 08 21 26.5
PSI pmax pmax
comp=Z,16nm,0.9s,mb4.8
PSI MLR MLR
comp=Z,670nm,18.4s,MS4.3
MDJ Mudanjiang 31.12 57 P **P 08 18 31.6 -0.8**
MDJ PcP PcP 08 21 25.3 -2.0
MDJ S **S 08 23 37.4 +0.4**
MDJ ScP ScP 08 25 09.4 +0.2
MDJ pmax pmax
comp=Z,22nm,1.3s,mb4.8
MDJ pmax pmax
comp=Z,91nm,4.6s
MDJ LR LR
comp=N,5μm,16.3s,MS5.2
MDJ LR LR
comp=E,980nm,15.2s,MS5.2
MDJ LR LR
comp=Z,1μm,14.9s,MS4.7
FRIM Kepong 31.12 161 P **P 08 18 34.0 +1.3**
SVE Sverdlovsk 31.93 327 ‖ *e*P **P 08 18 40.4 +1.0**
SVE pmax pmax
comp=Z,101nm,1.0s,mb5.6
SVE MLR MLR
comp=Z,1μm,15.0s,MS4.7
VLA Vladivostok 32.61 61 P **P 08 18 46.0 +0.5**
VLA pmax pmax
comp=Z,71nm,1.5s,mb5.4
VLA MLR MLR
comp=Z,600nm,11.0s,MS4.5
VLA Vladivostok 32.61 61 *e*P **P 08 18 43.7 -1.8**
CLNS Chul'man 32.62 34 *e*P **P 08 18 46.5 +1.1**
CLNS *e* 08 19 49.2
CLNS *e*PPP 08 20 04.9
CLNS *e* 08 21 32.6
CLNS *e*S **S 08 24 00.0 0.0**
CLNS *e*SS SS 08 26 14.9 -5.4
CLNS pmax pmax
comp=Z,21nm,1.4s,mb4.9
CLNS pmax pmax
comp=E,15nm,1.2s
CLNS pmax pmax
comp=N,12nm,1.3s
CLNS pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
CLNS pmax pmax
comp=E,9.0nm,1.2s
CLNS pmax pmax
comp=N,8.0nm,1.2s
CLNS smax
comp=N,64nm,12.3s
CLNS smax
comp=E,85nm,14.9s
CLNS MLR MLR
comp=E,1μm,12.0s,MS4.9
CLNS MLR MLR
comp=Z,1μm,11.0s,MS4.9
CLNS MLR MLR
comp=N,486nm,12.0s,MS4.9
CLNS Chul'man 32.62 34 *e*P **P 08 18 46.6 +1.2**
ARU Arti 32.68 325 P **P 08 18 46.8 +0.8**
comp=N,233nm,0.7s,mb6.2,SNR=6.4
ARU Arti 32.68 325 *d i* P **P 08 18 46.5 +0.5**
ARU *e* 08 19 49.7
ARU S **S 08 24 04.8 +3.8**
ARU SS SS 08 26 04.0 -18
ARU pmax pmax
comp=Z,58nm,1.2s,mb5.4
ARU MLR MLR

comp=Z,904nm,17.0s,MS4.5
ARU Arti 32.68 325 *e*P **P 08 18 45.9 0.0**
comp=Z,38nm,0.9s,mb5.3
KGM Kluang 32.77 159 P **P 08 18 48.3 +1.2**
MYKOM Kota Tinggi 33.15 158 P **P 08 18 52.7 +2.3**
KLR Kul'dur 33.46 49 *e*P **P 08 18 48.2 -4.7**
KLR *e*S **S 08 24 10.5 -2.8**
KLR *e* 08 26 40.5
KLR pmax pmax
comp=E,52nm,1.4s
KLR pmax pmax
comp=Z,48nm,1.4s,mb5.2
KLR MLR MLR
comp=E,2μm,11.0s
KLR MLR MLR
comp=Z,4μm,11.0s,MS5.4
KDM Kudat 34.83 133 P **P 08 19 07.9 +2.8**
KKM Kota Kinabalu 35.15 135 P **P 08 19 09.0 +1.3**
KKM Kota Kinabalu 35.15 135 *e*P **P 08 19 08.6 +0.8**
comp=Z,184nm,1.1s,mb5.9
SOKR Solikamsk 35.15 329 *d i*P **P 08 19 08.4 +1.1**
SOKR pmax pmax
comp=Z,60nm,1.2s,mb5.4
SOKR MLR MLR
comp=Z,820nm,16.0s,MS4.6
HABR Khabarovsk 35.45 52 *e*P **P 08 19 07.8 -2.3**
HABR *e* 08 20 26.1
HABR *e*S **S 08 24 42.8 -1.2**
HABR *e* 08 29 28.0
HABR pmax pmax
comp=N,8.0nm,0.3s
HABR pmax pmax
comp=E,11nm,0.3s
HABR pmax pmax
comp=Z,48nm,1.3s,mb5.3
HABR MLR MLR
comp=Z,580nm,15.0s,MS4.5
BTM Bintulu 35.75 142 P **P 08 19 15.6 +2.6**
KSM Kuching 35.92 148 P **P 08 19 15.9 +1.5**
KSM Kuching 35.92 148 *e*P **P 08 19 15.4 +1.0**
comp=Z,40nm,0.9s,mb5.3
SBUM Sibu 35.96 144 P **P 08 19 15.9 +1.1**
SDKM Sandakan 36.05 134 P **P 08 19 18.3 +2.8**
MYLDM Lahad Datu 37.21 133 P **P 08 19 27.6 +2.1**
YAK Yakutsk 37.49 28 *i*P **P 08 19 27.4 +0.1**
YAK *e**PP pP 08 19 33.6 +0.3
YAK *e* 08 20 58.0
YAK *e*PPP 08 21 11.2
YAK *e*S **S 08 25 17.4 +2.6**
YAK pmax pmax
comp=N,7.0nm,1.1s
YAK pmax pmax
comp=E,14nm,1.3s
YAK pmax pmax
comp=Z,20nm,1.3s,mb4.8
YAK pmax pmax
comp=Z,7.0nm,0.4s,mb4.8
YAK pmax pmax
comp=E,10.0nm,0.8s
YAK smax
comp=N,68nm,11.3s
YAK smax
comp=E,49nm,11.2s
YAK MLR MLR
comp=Z,398nm,12.0s,MS4.4
YAK MLR MLR
comp=N,124nm,10.0s,MS4.4
YAK MLR MLR
comp=E,307nm,11.0s,MS4.4
YAK Yakutsk 37.49 28 ⇓*i*P **P 08 19 27.5 +0.2**
MAT Matsushiro 37.76 72 P **P 08 19 27.9 -2.0**
MAT S **S 08 25 17.0 -2.6**
MJAR Matsushiro Arr 37.76 72 P **P 08 19 28.6 -1.3**
comp=E,5.5nm,1.0s,mb4.2,baz=280,slow=9.3,SNR=14
MJAR PcP PcP 08 21 45.9 -0.7
comp=E,2.3nm,0.8s,baz=286,slow=3.0,SNR=4.7
MJAR LR LR 08 35 36.4
comp=E,434nm,18.8s,MS4.3,baz=290,slow=37
MJAR Matsushiro Arr 37.76 72 P **P 08 19 28.7 -1.3**
MJAR 08 21 45.9
MIB Mutribah 38.04 277 *e*P **P 08 19 32.0 -0.4**
MIB AMb AMB 08 19 38.6
comp=Z,96nm,1.3s,mb5.4
MTA Mtatsminda 38.05 297 P **P 08 19 33.1 +0.8**
TBLG Delisi 38.09 297 P **P 08 19 35.6 +3.0**
RDF Al-Radifah 38.12 276 *e*P **P 08 19 32.3 -0.7**
RDF AMb AMB 08 19 35.7
comp=Z,58nm,1.7s,mb5.0
GNI Garni 38.19 294 P **P 08 19 33.8 +0.3**
comp=Z,70nm,1.1s,mb5.3,baz=153,slow=15,SNR=15
GNI Garni 38.19 294 *d i*P **P 08 19 35.5 +2.0**
GNI pmax pmax
comp=Z,119nm,1.5s
GNI Garni 38.19 294 *e*P **P 08 19 34.8 +1.2**
comp=Z,172nm,1.3s,mb5.6
GNI Garni 38.19 294 P **P 08 19 36.1 +2.6**
SNR=30
GNI P 08 19 36.1
SNR=30
NAY Al-Naaiem 38.28 276 *e*P **P 08 19 33.5 -0.9**
NAY AMb AMB 08 19 37.1
comp=Z,41nm,1.1s,mb5.1
GOR Gori 38.55 297 P **P 08 19 35.0 -1.5**
ZEI Tsey 38.67 299 *e*P **P 08 19 37.8 +0.3**
ZEI pmax pmax
comp=Z,34nm,1.4s,mb4.9
ONI Oni 39.00 298 P **P 08 19 42.2 +1.9**
GOF Gofitskoye 39.25 302 *e*P **P 08 19 41.6 -0.8**
GOF pmax pmax
comp=Z,110nm,1.3s,mb5.4
KIV Kislovodsk 39.52 301 *e*P **P 08 19 45.4 +0.8**
KIV *e* 08 21 15.6
KIV *e*S **S 08 25 48.7 +2.8**
KIV pmax pmax
comp=Z,22nm,1.0s,mb4.8
KIV MLR MLR
comp=Z,193nm,15.0s,MS4.1
KIV Kislovodsk 39.52 301 *e*P **P 08 19 45.0 +0.4**
comp=Z,22nm,0.8s,mb4.9
KIV Kislovodsk 39.52 301 P **P 08 19 45.8 +1.2**
SNR=7.2
KIV P 08 19 45.8
SNR=7.2
JHJ Hachijo jima 2 39.70 77 LR LR 08 37 03.3
comp=Z,580nm,18.1s,MS4.5,baz=273,slow=38
DAV Davao City (W) 40.52 122 LR LR 08 39 10.0
comp=Z,866nm,18.4s,MS4.6,baz=335,slow=40
VRHR Novokhopersk 40.54 312 *e*P **P 08 19 52.8 -0.2**
VRHR pmax pmax
comp=N,40nm,0.8s
VRHR pmax pmax
comp=E,30nm,0.8s
VRHR pmax pmax
comp=Z,70nm,0.8s,mb5.3
VRHR MLR MLR
comp=Z,610nm,18.0s,MS4.5
VRHR MLR MLR
comp=N,550nm,9.0s
VRHR MLR MLR
comp=E,270nm,9.0s
ERM Erimo 40.93 62 *e*P **P 08 19 58.2 +1.9**
SOC Sochi 41.68 300 *e*P **P 08 20 02.5 0.0**
SOC *e* 08 21 47.0
SOC *e*PPP 08 22 10.9
SOC *e*S **S 08 26 18.1 -0.1**
SOC *e*SSS 08 29 58.5
SOC pmax pmax
comp=Z,41nm,1.0s,mb5.0
SOC Sochi 41.68 300 *e*P **P 08 20 01.8 -0.7**
VSR Storozhevoye 42.10 312 *e*P **P 08 20 05.3 -0.4**
VSR pmax pmax
comp=N,10.0nm,1.0s
VSR pmax pmax
comp=E,40nm,1.0s
VSR pmax pmax
comp=Z,40nm,1.0s,mb5.0
VSR MLR MLR
comp=E,140nm,13.0s
VSR MLR MLR
comp=Z,430nm,13.0s,MS4.5
VSR MLR MLR
comp=N,70nm,6.0s
TIXI Tiksi 43.17 16 *e*P **P 08 20 13.4 -0.8**
TIXI pmax pmax
comp=Z,28nm,0.8s,mb5.0
TIXI Tiksi 43.17 16 *e*P **P 08 20 13.4 -0.8**
comp=Z,28nm,0.8s,mb5.0
ANN Anapa 43.24 302 *e*P **P 08 20 14.5 -0.6**
ANN *e* 08 21 56.1
ANN *e*S **S 08 26 43.0 +1.9**
ANN *e*SS SS 08 29 53.7 -0.5
ANN pmax pmax
comp=Z,39nm,1.0s,mb5.1
ANN MLR MLR
comp=N,374nm,17.0s,MS4.4
ANN MLR MLR
comp=E,249nm,17.0s,MS4.4
ANN MLR MLR
comp=Z,462nm,17.0s,MS4.5
CBIJ Chichi jima 43.47 84 LR LR 08 39 57.0
comp=Z,311nm,18.6s,MS4.2,baz=329,slow=38
MOS Moscow 43.50 318 *e*P **P 08 20 16.3 -0.7**
MOS *e* 08 21 59.0
MOS pmax pmax
comp=Z,300nm,1.7s,mb5.8
MOS pmax pmax
comp=Z,131nm,1.3s,mb5.5
MOS MLR MLR
comp=Z,1.0nm,15.0s
OBN Obninsk 44.02 317 *e*P **P 08 20 21.0 -0.2**
OBN *i* 08 20 32.3
OBN *i* 08 22 08.7
OBN *e*S **S 08 26 59.3 +7.1**
OBN pmax pmax
comp=Z,72nm,1.5s,mb5.2
OBN MLR MLR
comp=Z,500nm,17.0s,MS4.5
SIM Simferopol' 45.58 303 P **P 08 20 32.7 -1.1**
SIM pmax pmax
comp=Z,30nm,0.6s,mb5.4
SIM MLR MLR
comp=Z,240nm,17.6s,MS4.2
ASF Jabal al Asfar 45.95 285 P **P 08 20 38.3 +1.3**
comp=Z,34nm,1.2s,mb5.2,baz=141,slow=6.5,SNR=28
ASF Jabal al Asfar 45.95 285 P **P 08 20 38.3 +1.4**
ASF pmax pmax
comp=Z,34nm,1.2s
KAPI Kappang 46.20 140 P **P 08 20 36.4 -2.6**
comp=Z,19nm,1.1s,mb4.9,baz=244,slow=6.1,SNR=4.5
BR131 Keskin Array S 46.70 296 *e*P **P 08 20 42.5 -0.2**
comp=Z,18nm,0.8s,mb5.0
BRTR Keskin Array B 46.70 296 P **P 08 20 43.0 +0.2**
comp=Z,20nm,0.8s,mb5.1,baz=96,slow=7.6,SNR=106
BRTR Keskin Array B 46.70 296 *i*P **P 08 20 43.0 +0.3**
BRTR pmax pmax
comp=Z,20nm,0.8s
MMAI Mount Meron Ar 46.92 286 P **P 08 20 45.9 +1.3**
comp=Z,13nm,0.9s,mb4.9,baz=79,slow=8.1,SNR=14
LVZ Lovozero 47.51 334⇑*e*P **P 08 20 48.1 -0.6**
LVZ pmax pmax
comp=Z,28nm,1.2s,mb5.2
LVZ Lovozero 47.51 334⇑*e*P **P 08 20 48.2 -0.5**
SEY Seymchan 47.60 33 *d i*P **P 08 20 49.9 +0.5**
SEY Seymchan 47.60 33 *i*P **P 08 20 49.0 -0.4**
JOF Joensuu 47.76 327 *e*P **P 08 20 49.5 -1.2**
JOF pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
JOF Joensuu 47.76 327 *e*p **P 08 20 49.5 -1.2**
comp=Z,3.6nm,0.5s,mb4.7
JOF Joensuu 47.76 327 *e*p **P 08 20 49.5 -1.2**
comp=Z,3.6nm,0.5s,mb4.7
APA Apatity 47.88 334⇑*e*P **P 08 20 46.0 -5.5**
APA pmax pmax
comp=Z,18nm,1.2s,mb5.0
APA MLR MLR
comp=Z,2μm,13.0s,MS5.2
EIL Elat 48.32 282 P **P 08 20 55.5 +0.1**
comp=Z,86nm,0.9s,mb5.8,baz=54,slow=2.7,SNR=26
AKASG Malin Array Be 48.38 311 P **P 08 20 55.0 -0.6**
comp=Z,12nm,0.7s,mb5.0,baz=80,slow=6.5,SNR=38
AKASG PP PP 08 22 49.9 +1.8
comp=Z,2.2nm,0.7s,baz=74,slow=8.7,SNR=5.5
AKASG LR LR 08 45 26.3
comp=Z,719nm,18.4s,MS4.7,baz=100,slow=41
AKASG Malin Array Be 48.38 311 P **P 08 20 55.0 -0.6**
AKASG 08 22 49.9
AKASG pmax pmax
comp=Z,12nm,0.7s
AKASG MLR MLR
comp=Z,719nm,18.4s
AKBB Malin Array Si 48.38 311 *e*P **P 08 20 54.8 -0.8**
KIEV Kiev 48.39 311 *e*P **P 08 20 54.6 -1.1**
KIEV pmax pmax
comp=Z,33nm,1.2s,mb5.2
KIEV Kiev 48.39 311 *e*P **P 08 20 54.5 -1.1**
comp=Z,33nm,1.2s,mb5.2
KIS Kishinev 49.01 306 *e*P **P 08 21 00.0 -0.5**
KIS Kishinev 49.01 306 *e*PP PP 08 22 57.0 +3.1
KIS *e*LQ 08 43 16.0
KIS LRM 08 46 00.0
comp=Z,500nm,13.0s
KIS Kishinev 49.01 306 *e*P **P 08 21 00.0 -0.5**
KIS *e* 08 22 57.0
KIS MLR MLR
comp=Z,500nm,13.0s,MS4.7
KIS MLR MLR
comp=Z,500nm,14.0s
MNK Minsk 49.04 316 *e*P **P 08 21 00.0 -0.6**
ISP Isparta 49.49 294 P **P 08 21 04.8 +0.4**
VSU Vasula 49.63 321 *i*P **P 08 21 04.8 -0.2**
VSU pmax pmax
comp=Z,56nm,1.4s,mb5.4
VSU Vasula 49.63 321 *i*P **P 08 21 04.9 -0.1**
NACGM Naroch 49.64 316 *e*LR LR 08 39 08.0
CFR Carcaliu 49.74 304 ⇓P **P 08 21 06.5 +0.3**
CFR Carcaliu 49.74 304 ⇓*i*P **P 08 21 06.5 +0.3**
PSN Preselentsi 49.97 302 *e*P **P 08 21 07.1 -0.8**
KAF Kangasniemi 49.98 326 *e*P **P 08 21 04.1 -3.6**
KAF pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
KAF Kangasniemi 49.98 326 *e*p **P 08 21 04.1 -3.6**
comp=Z,2.7nm,0.7s,mb4.4
KAF Kangasniemi 49.98 326 *e*p **P 08 21 04.1 -3.6**
comp=Z,2.7nm,0.7s,mb4.4
PEA0B Petropavlovsk- 49.99 46 *e*P **P 08 21 07.7 -0.2**
PETK Petropavlovsk- 49.99 46 P **P 08 21 07.7 -0.2**
comp=Z,16nm,0.9s,mb5.0,baz=251,slow=4.5,SNR=18
PETK Petropavlovsk- 49.99 46 P **P 08 21 07.7 -0.2**
PETK pmax pmax
comp=Z,16nm,0.9s,mb5.0
FINES FINESS Array B 50.05 325 P **P 08 21 07.9 -0.3**
comp=Z,4.5nm,0.6s,mb4.7,baz=96,slow=8.8,SNR=11
FINES LR LR 08 44 15.2
comp=Z,789nm,18.3s,MS4.8,baz=93,slow=38
FINES FINESS Array B 50.05 325 P **P 08 21 07.9 -0.4**
FINES pmax pmax
comp=Z,5.0nm,0.6s
FINES MLR MLR
comp=Z,789nm,18.3s
PET Petropavlovsk 50.57 46 *e*P **P 08 21 11.4 -0.9**
VRI Vrincioaia 50.61 305 P **P 08 21 13.4 +0.7**
VRI Vrincioaia 50.61 305 ⇑P **P 08 21 13.1 +0.4**
VRI Vrincioaia 50.61 305 ⇑*i*P **P 08 21 13.1 +0.4**
KEV Kevo 50.65 336 *e*P **P 08 21 12.1 -0.6**
KEV pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
KEV Kevo 50.65 336 *e*p **P 08 21 12.1 -0.6**
comp=Z,7.1nm,0.7s,mb4.7
KEV Kevo 50.65 336 *e*p **P 08 21 12.1 -0.6**
comp=Z,7.1nm,0.7s,mb4.7
PLOR Plostina 50.66 305 ⇑P **P 08 21 14.2 +1.1**
PLOR Plostina 50.66 305 ⇑*i*P **P 08 21 14.2 +1.1**
ARCES ARCESS Array B 51.13 336 P **P 08 21 16.1 -0.1**
comp=Z,7.3nm,0.7s,mb4.7,baz=78,slow=7.9,SNR=23
ARCES PcP PcP 08 22 31.5 -0.1
comp=Z,4.9nm,0.8s,baz=103,slow=3.9,SNR=6.0
ARCES LR LR 08 44 21.3
comp=Z,318nm,19.8s,MS4.3,baz=113,slow=38
ARCES ARCESS Array B 51.13 336 P **P 08 21 16.2 -0.1**
ARCES 08 22 31.5
ARCES pmax pmax
comp=Z,7.0nm,0.7s
ARCES MLR MLR
comp=Z,318nm,19.8s
MLR Muntele Rosu 51.21 304 P **P 08 21 18.7 +1.4**
MLR Muntele Rosu 51.21 304 ⇓P **P 08 21 18.2 +1.0**
MLR Muntele Rosu 51.21 304 ⇓*i*P **P 08 21 18.3 +1.0**
BURAR Bucovina Array 51.34 307 ⇓P **P 08 21 18.9 +0.7**
BURAR Bucovina Array 51.34 307 ⇓*i*P **P 08 21 18.9 +0.7**
BUR08 Bucovina Ar. S 51.35 307 *e*P **P 08 21 18.1 -0.1**
LVV L'vov 51.78 310 *e*P **P 08 21 20.7 -0.8**
LVV *e*S **S 08 28 37.7 -4.7**
LVV *e*SS SS 08 32 21.3 +2.6
LVV MLR MLR
comp=E,900nm,21.0s,MS5.0
LVV MLR MLR
comp=Z,600nm,21.0s,MS4.6
LVV MLR MLR
comp=N,1μm,18.0s,MS5.0
SUW Suwalki 51.80 316 *e*P **P 08 21 20.8 -0.7**
SUW Suwalki 51.80 316 *e*P **P 08 21 21.3 -0.2**
VOIR 51.84 305 ⇓P **P 08 21 22.1 +0.1**
VOIR 51.84 305 ⇓*i*P **P 08 21 22.1 +0.1**
KWP Kalwaria Pacla 52.66 310 *e*P **P 08 21 28.4 +0.4**
KWP Kalwaria Pacla 52.66 310 *e*P **P 08 21 27.8 -0.2**
comp=N,44nm,0.9s,mb5.4
KOLS Kolonicke sedl 53.06 309 *e*P **P 08 21 31.1 +0.2**
KOLS *e* 08 21 47.0
KOLS *e*S **S 08 29 13.0 +13**
KOLS pmax pmax
comp=Z,12nm,1.5s,mb4.6
KOLS MLR MLR
comp=Z,600nm,20.3s,MS4.6
KOLS Kolonicke sedl 53.06 309 *e*P **P 08 21 31.1 +0.2**
comp=Z,12nm,1.5s,mb4.6
KOLS *e* 08 21 47.0
KOLS *e*S **S 08 29 13.0 +13**
KOLS *e*SS SS 08 32 58.7 +20
KOLS LR LR
comp=Z,600nm,20.3s,MS4.6
KOLS Kolonicke sedl 53.06 309 *e*P **P 08 21 31.1 +0.2**
KOLS *e*pP pP 08 21 47.0 +10
KOLS *e*S **S 08 29 13.0 +13**
KOLS *e*SS SS 08 32 58.7 +20
UZH Uzhgorod 53.10 309 *e*P **P 08 21 31.3 +0.1**
UZH *e*S **S 08 28 55.0 -5.5**
UZH *e* 08 29 09.0
UZH *e* 08 32 42.7
UZH MLR MLR
comp=N,240nm,17.0s,MS4.7
UZH MLR MLR
comp=E,600nm,17.0s,MS4.7
UZH MLR MLR
comp=Z,280nm,17.0s,MS4.4
DRGR 53.17 307 ⇑P **P 08 21 32.5 +0.7**
DRGR 53.17 307 P **P 08 21 32.3 +0.5**
DRGR 53.17 307 ⇑*i*P **P 08 21 32.5 +0.7**
GZR Gura Zlata 53.42 305 ⇓P **P 08 21 34.1 +0.5**
GZR Gura Zlata 53.42 305 ⇓*i*P **P 08 21 34.1 +0.5**
CRVS Cervenica-Dubn 53.59 309 *e*P **P 08 21 35.0 +0.1**
comp=Z,8.3nm,1.1s,mb4.6
CRVS *e*S **S 08 29 15.3 +8.2**
CRVS *e*SS SS 08 33 18.4 +31
CRVS LR LR
comp=Z,500nm,19.1s,MS4.6
CRVS Cervenica-Dubn 53.59 309 *e*P **P 08 21 35.0 +0.1**
CRVS *e*S **S 08 29 15.3 +8.2**
CRVS *e*SS SS 08 33 18.4 +31
MMB Musomiste 53.64 300 *e*P **P 08 21 33.3 -2.0**
STHS Stebnicka Huta 53.64 310 *e*P **P 08 21 35.3 +0.1**
STHS pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
STHS Stebnicka Huta 53.64 310 *e*P **P 08 21 35.3 +0.1**
comp=Z,8.1nm,0.8s,mb4.7
STHS Stebnicka Huta 53.64 310 *e*P **P 08 21 35.2 0.0**
STHS *e* pP 08 21 39.0 -2.4
VTS Vitosha 53.76 301 *e*P **P 08 21 35.6 -0.6**
BILL Bilibino 53.81 27 *d i*P **P 08 21 36.8 +0.7**
BILL *i* 08 22 39.3
BILL *i* 08 23 40.8
BILL pmax pmax
comp=Z,36nm,1.2s,mb5.2
BILL MLR MLR
comp=Z,500nm,16.0s,MS4.7
BILL Bilibino 53.81 27 *e*P **P 08 21 36.8 +0.6**
comp=Z,22nm,0.9s,mb5.1
KKB Krupnik 54.03 301 *e*P **P 08 21 37.4 -0.8**
NIE Niedzica 54.23 310 *e*P **P 08 21 40.6 +1.1**
KECS Kecovo 54.31 309 *e*P **P 08 21 40.6 +0.5**
KECS pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
KECS Kecovo 54.31 309 *e*P **P 08 21 40.6 +0.5**
comp=Z,7.9nm,1.0s,mb4.6
KECS Kecovo 54.31 309 *e*P **P 08 21 40.6 +0.5**
KECS *e* 08 21 43.8
OJC Ojcow 54.41 311 *e*P **P 08 21 38.1 -2.7**
OJC Ojcow 54.41 311 *e*P **P 08 21 38.2 -2.6**
IDI Anoyia 54.56 292 P **P 08 21 41.3 -0.9**
comp=Z,26nm,0.7s,mb5.4,baz=44,slow=9.8,SNR=15
PSZ Piszkesteto 54.81 308 P **P 08 21 44.7 +0.9**
PSZ Piszkesteto 54.81 308 ⇓*e*P **P 08 21 43.8 0.0**
SPITS Spitsbergen Ar 54.83 346 P **P 08 21 43.6 +0.2**
comp=Z,37nm,1.1s,mb5.3,baz=122,slow=9.9,SNR=9.4
SPITS Spitsbergen Ar 54.83 346 P **P 08 21 43.7 +0.2**
SPITS pmax pmax
comp=Z,37nm,1.1s
VYHS Vyhne 55.38 309 *e*P **P 08 21 48.3 +0.5**
comp=Z,20nm,1.6s,mb4.9
VYHS *e*S **S 08 29 36.6 +5.4**
VYHS *e*SS SS 08 33 32.7 +17
VYHS LR LR
comp=Z,400nm,19.4s,MS4.5
VYHS Vyhne 55.38 309 *e*P **P 08 21 48.3 +0.5**
VYHS *e*S **S 08 29 36.6 +5.4**
VYHS *e*SS SS 08 33 32.7 +17
OKC Ostrava-Krasne 55.53 311 *e*P **P 08 21 49.1 +0.2**
OKC MLR MLR
comp=Z,400nm,11.1s,MS4.8
OKC Ostrava-Krasne 55.53 311 *e*P **P 08 21 49.1 +0.2**
OKC *e*x x 08 21 52.8
OKC AMS AMS 08 47 00.0
comp=Z,400nm,11.1s
KOLL Kolacno 55.64 309 *e*P **P 08 21 50.5 +0.8**
KOLL Kolacno 55.64 309 *e*P **P 08 21 50.5 +0.8**
KOLL *e* pP 08 21 54.3 -1.6
MORC Moravsky Berou 55.92 311 P **P 08 21 52.2 +0.5**
MORC Moravsky Berou 55.92 311 *e*P **P 08 21 51.8 0.0**
comp=Z,8.7nm,0.8s,mb4.8
MORC Moravsky Berou 55.92 311 ⇓*i*P **P 08 21 52.0 +0.3**
PKSM Moragy 56.04 307 P **P 08 21 52.6 0.0**
PKSM Moragy 56.04 307 ⇑P **P 08 21 52.5 -0.1**
PKSM Moragy 56.04 307 ⇑*i*P **P 08 21 52.5 -0.1**
HFS Hagfors 56.18 324 LR LR 08 47 51.7
comp=Z,912nm,18.1s,MS4.9,baz=76,slow=38
KSP Ksiaz 56.47 313 *e*P **P 08 21 55.8 +0.2**
DPC Dobruska-Polom 56.56 312 *e*P **P 08 21 56.8 +0.5**
DPC *e*x x 08 21 59.6
DPC *e*S **S 08 29 52.1 +5.2**
DPC AMS AMS 08 45 50.0
comp=Z,300nm,13.9s
ZST Bratislava 56.57 309 *e*S **S 08 29 59.8 +13**
ZST *e*SS SS 08 34 08.0 +34
VRAC Vranov 56.63 311 LR LR 08 50 41.1
comp=Z,584nm,18.4s,MS4.7,baz=73,slow=41
UPC Upice 56.72 312 *e*P **P 08 21 57.7 +0.3**
UPC Upice 56.72 312 *e*P **P 08 21 57.7 +0.3**
UPC *e*x x 08 22 01.6
NB2 NORSAR Subarra 57.24 325 P **P 08 22 00.0 -0.9**
comp=Z,17nm,0.9s,mb5.1,baz=80,slow=7.4
NOA NORSAR Array B 57.24 325 P **P 08 22 00.4 -0.5**
comp=Z,9.5nm,0.8s,mb4.8,baz=80,slow=7.1,SNR=23
NOA LR LR 08 48 25.9
comp=Z,704nm,18.3s,MS4.8,baz=85,slow=38
NOA NORSAR Array B 57.24 325 P **P 08 22 00.4 -0.5**
NOA pmax pmax
comp=Z,10.0nm,0.9s
NOA MLR MLR
comp=Z,704nm,18.3s
TREC Trest 57.34 311 AMS AMS 08 50 40.0
comp=Z,500nm,14.3s
NAO01 NORSAR Array S 57.43 325 *e*P **P 08 22 01.1 -1.2**
comp=Z,6.4nm,0.8s,mb4.7
CONA Conrad Observa 57.45 309 *i*P **P 08 22 02.9 +0.3**
comp=Z,26nm,1.0s,mb5.2,SNR=15
PVCC Panska Ves 57.61 312 *e*P **P 08 22 03.7 0.0**
PVCC MLR MLR
comp=Z,400nm,14.4s,MS4.7
PVCC Panska Ves 57.61 312 *e*P **P 08 22 03.7 0.0**
PVCC AMS AMS 08 48 20.0
comp=Z,400nm,14.4s
PRU Pruhonice 57.76 312 *e*P **P 08 22 05.5 +0.7**
PRU *e*S **S 08 30 04.9 +2.2**
PRU MLR MLR
comp=Z,400nm,14.6s,MS4.7
PRU Pruhonice 57.76 312 *e*P **P 08 22 05.5 +0.7**

PRU ex x 08 22 09.2
PRU eS **S** **08 30 04.9 +2.2**
PRU AMS AMS 08 51 40.0
comp=Z,400nm,14.6s
ARSA Arzberg 57.85 309⇑ iP P 08 22 05.6 +0.2
comp=Z,14nm,1.6s,mb4.7
BRG Berggiesshubel 57.91 313 eP P 08 22 05.9 +0.1
comp=Z,16nm,1.0s,mb5.0
BRG Berggiesshubel 57.91 313 iP P 08 22 06.1 +0.3
comp=Z,16nm,1.0s,mb5.0
BRG
comp=Z,611nm,14.4s
BRG
comp=N,1µm,20.6s
BRG
comp=E,336nm,20.6s
BRG Berggiesshubel 57.91 313 iP P 08 22 06.1 +0.3
BRG pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
BRG MLR MLR
comp=Z,366nm,14.4s,MS4.6
BRG MLR MLR
comp=N,764nm,20.6s
BRG MLR MLR
comp=E,201nm,20.6s
KONO Kongsberg 58.30 324⇑ iP P 08 22 08.6 +0.2
SOKA Soboth 58.33 308⇓ iP P 08 22 08.8 0.0
comp=E,22nm,1.1s,mb5.1
CLL Collm 58.37 314 eP P 08 22 08.8 -0.2
comp=Z,20nm,1.3s,mb5.0
CLL Collm 58.37 314 eP P 08 22 09.0 0.0
CLL eS **S** **08 30 09.0 -1.6**
CLL pmax pmax
comp=Z,20nm,1.3s,mb5.0
CLL MLR MLR
comp=Z,300nm,21.3s,MS4.4
CLL Collm 58.37 314 eP P 08 22 09.0 0.0
comp=Z,20nm,1.3s,mb5.0
CLL eS **S** **08 30 09.0 -1.6**
CLL LR LR
comp=Z,300nm,21.3s,MS4.4
CLL Collm 58.37 314 eP P 08 22 09.0 0.0
comp=Z,20nm,1.3s,mb5.0
CLL e pP 08 22 13.0 -2.3
CLL eS **S** **08 30 09.0 -1.6**
CLL e 08 30 47.0
CLL eSS SS 08 34 09.0 +6.6
CLL LmV 08 51 00.0
comp=Z,300nm,21.3s
MOA Molln 58.50 309⇓ iP P 08 22 09.9 -0.1
comp=Z,14nm,0.9s,mb5.0,SNR=7.9
KHC Kasperske Hory 58.59 311 eP P 08 22 10.8 +0.2
KHC eS **S** **08 30 15.5 +2.0**
KHC MLR MLR
comp=Z,600nm,15.0s,MS4.8
KHC Kasperske Hory 58.59 311 eP P 08 22 10.5 -0.1
comp=Z,11nm,1.3s,mb4.7
KHC Kasperske Hory 58.59 311 eP P 08 22 10.8 +0.2
KHC eS **S** **08 30 15.5 +2.0**
KHC AMS AMS 08 51 20.0
comp=Z,600nm,15.0s
TANN Tannenbergstha 58.94 313 eP P 08 22 13.2 +0.2
comp=Z,15nm,1.1s,mb4.9
NKC Novy Kostel 59.00 313 eP P 08 22 13.9 +0.5
NKC Novy Kostel 59.00 313 eP P 08 22 13.9 +0.5
NKC ex x 08 22 17.3
WET Wettzell 59.03 311 eP P 08 22 14.0 +0.4
comp=Z,44nm,1.8s,mb5.2
WET Wettzell 59.03 311 eP P 08 22 14.0 +0.4
WET pmax pmax
comp=Z,44nm,1.8s,mb5.2
FX1 Attu Island--F 59.22 44 P P 08 22 14.2 -0.7
comp=Z,33nm,0.7s,mb5.0,baz=302,slow=13,SNR=8.8
FX1 Attu Island--F 59.22 44 P P 08 22 14.2 -0.7
FX1 pmax pmax
comp=Z,33nm,0.7s
BSEG Bad Segeberg 59.28 317 eP P 08 22 15.8 +0.6
comp=Z,26nm,1.0s,mb5.2
KBA Koelnbreinsper 59.32 309⇓ iP P 08 22 15.3 -0.4
comp=Z,9.6nm,0.8s,mb4.9
MOX Moxa 59.40 313 eP P 08 22 16.4 +0.3
comp=Z,24nm,1.6s,mb5.0
MOX
comp=Z,400nm,17.0s
MOX Moxa 59.40 313 eP P 08 22 16.3 +0.2
comp=Z,21nm,1.5s,mb5.0
MOX Moxa 59.40 313 eP P 08 22 16.4 +0.3
MOX pmax pmax
comp=Z,24nm,1.6s,mb5.0
MOX MLR MLR
comp=Z,400nm,17.0s,MS4.6
RJOB Jochberg 59.48 310 eP P 08 22 17.1 +0.3
comp=Z,95nm,2.4s,mb5.4
KAKA Kakadu 59.74 133 eP P 08 22 18.7 -0.2
comp=Z,31nm,1.2s,mb5.2
KAKA Kakadu 59.74 133 eP P 08 22 19.3 +0.3
comp=Z,105nm,1.2s,mb5.7
NRDL Niedersach Rie 59.79 316 eP P 08 22 19.3 +0.5
comp=Z,59nm,1.5s,mb5.4
CLZ Clausthal 59.81 315 eP P 08 22 19.2 +0.2
comp=Z,55nm,1.4s,mb5.4
CLZ Clausthal 59.81 315 eP P 08 22 19.2 +0.2
CLZ pmax pmax
comp=Z,55nm,1.4s,mb5.4
GRA1 Grafenberg Arr 59.91 312 eP P 08 22 20.4 +0.7
comp=Z,110nm,1.9s,mb5.6
GRA1 ePP PP 08 24 30.4 -1.2
GRA1 LR LR
comp=Z,400nm,19.4s,MS4.6
GRF Grafenberg Arr 59.91 312 eP P 08 22 20.4 +0.7
comp=Z,110nm,1.9s,mb5.6
GRF ePP PP 08 24 30.4 -1.2
GRF eL 08 50 18.3
comp=Z,405nm,19.4s
GRF Grafenberg Arr 59.91 312 eP P 08 22 20.4 +0.7
GRF e 08 24 30.4
GRF pmax pmax
comp=Z,110nm,1.9s,mb5.6
GRF MLR MLR
comp=Z,400nm,19.4s,MS4.6
GRF Grafenberg Arr 59.91 312 eP P 08 22 20.4 +0.7
GRF e 08 24 30.4
GRF pmax pmax
comp=Z,110nm,1.9s,mb5.6
GRF MLR MLR
comp=Z,400nm,19.4s,MS4.6
ABTA Abfaltersbach 59.97 309⇑ iP P 08 22 19.6 -0.5
comp=Z,7.1nm,0.8s,mb4.7
MBWA Marble Bar 60.17 150 eP P 08 22 21.0 -0.7
comp=Z,90nm,0.9s,mb5.8
FITZ Fitzroy Crossi 60.27 143 eP P 08 22 21.4 -1.1
comp=Z,27nm,1.2s,mb5.2
FITZ Fitzroy Crossi 60.27 143 P P 08 22 21.3 -1.1
comp=Z,10nm,0.8s,mb4.9,baz=329,slow=5.4,SNR=9.2
FITZ Fitzroy Crossi 60.27 143 eP P 08 22 23.9 +1.4
comp=Z,48nm,1.4s,mb5.3
UBBA Unterbreizbach 60.33 314 eP P 08 22 22.5 -0.1
comp=Z,48nm,1.9s,mb5.2
FUR Furstenfeldbru 60.33 310 eP P 08 22 23.2 +0.6
comp=Z,58nm,1.4s,mb5.4
FUR Furstenfeldbru 60.33 310 eP P 08 22 23.2 +0.6
FUR pmax pmax
comp=Z,58nm,1.4s,mb5.4
WTTA Wattenberg 60.38 309⇓ iP P 08 22 22.5 -0.4
comp=Z,14nm,1.0s,mb5.0,SNR=5.2
CEL Celeste 60.38 298 eP P 08 22 22.5 -0.6
comp=Z,31nm,1.0s,mb5.3
RETA Reutte 60.87 310⇓ iP P 08 22 26.2 -0.1
comp=Z,18nm,1.3s,mb5.0
FETA Feichten 61.04 309 iP P 08 22 27.2 -0.2
comp=Z,17nm,1.1s,mb5.1,SNR=6.8
IBBN Ibbenburen 61.22 316 eP P 08 22 28.7 +0.1
comp=Z,38nm,1.4s,mb5.3
TOD Tromm 61.43 313 eP P 08 22 29.8 -0.3
TNS Taunus Mts 61.46 313 eP P 08 22 30.4 +0.2
comp=Z,28nm,1.3s,mb5.2
TNS Taunus Mts 61.46 313 eP P 08 22 30.4 +0.2
TNS pmax pmax
comp=Z,28nm,1.3s,mb5.2
STU Stuttgart 61.46 312 eP P 08 22 30.4 +0.1
comp=Z,32nm,0.3s,mb5.9
DAVA Damuels 61.50 310⇓ iP P 08 22 29.8 -0.8
comp=Z,16nm,1.1s,mb5.1
DAVOX Davos/Dischmat 61.67 309 LR LR 08 52 20.6
comp=Z,478nm,18.8s,MS4.7,baz=333,slow=39
VAE Valguarnera 61.76 298 LR LR 08 51 36.5
comp=Z,166nm,19.6s,MS4.2,baz=319,slow=38

KMBO Kilima Mbogo 61.77 248 P P 08 22 32.0 -0.9
comp=Z,2.6nm,0.9s,mb4.4,baz=57,slow=11,SNR=4.6
KMBO Kilima Mbogo 61.77 248 eP P 08 22 32.6 -0.3
KMBO pmax pmax
comp=Z,9.0nm,1.3s
KMBO Kilima Mbogo 61.77 248 eP P 08 22 32.6 -0.3
comp=Z,8.7nm,1.3s,mb4.7
BUG Bochum--Univer 61.78 315 eP P 08 22 32.5 +0.1
comp=Z,19nm,1.0s,mb5.2
SPAK Spaichingen-Ko 61.93 311 eP P 08 22 32.6 -0.9
BFO Black Forest 62.15 311 eP P 08 22 34.7 -0.2
comp=Z,29nm,1.4s,mb5.2
BFO Black Forest 62.15 311 eP P 08 22 34.7 -0.2
BFO pmax pmax
comp=Z,29nm,1.4s,mb5.2
LANF Langenberg 62.26 312 eP P 08 22 35.0 -0.6
FELD Feldberg im Sc 62.50 311 eP P 08 22 36.3 -1.0
CDF Champ du Feu 62.78 312 eP P 08 22 38.5 -0.6
comp=Z,21nm,0.8s,mb5.0
CDF Champ du Feu 62.78 312 eP P 08 22 38.5 -0.6
CDF pmax pmax
comp=Z,11nm,0.8s,mb5.0
CDF Champ du Feu 62.78 312 eP P 08 22 38.5 -0.6
comp=Z,11nm,0.8s,mb5.0
ECH Echery 62.92 312 eP P 08 22 39.3 -0.8
WLF Walferdange 63.04 313 P P 08 22 42.2 +1.3
comp=Z,32nm,1.7s,mb5.2
WLF Walferdange 63.04 313 eP P 08 22 41.6 +0.8
comp=Z,75nm,1.5s,mb5.6
WLF Walferdange 63.04 313 eP P 08 22 41.3 +0.5
WLF pmax pmax
comp=Z,76nm,1.4s,mb5.6
WLF Walferdange 63.04 313 eP P 08 22 41.3 +0.5
comp=Z,76nm,1.4s,mb5.6
MOF Molkenrain 63.06 311 eP P 08 22 40.4 -0.6
HINF Hinteralfeld 63.25 311 eP P 08 22 41.5 -0.8
AMKA Amchitka 63.28 44 eP P 08 22 42.5 +0.1
comp=Z,61nm,0.9s,mb5.7
BCLA Clavier 63.29 314 P P 08 22 42.5 0.0
comp=Z,9.0nm,1.4s,mb4.7
GAMB Gambell 63.42 30 eP P 08 22 43.1 0.0
comp=Z,45nm,1.6s,mb5.3
HAU Haudompre 63.50 312 eP P 08 22 43.3 -0.6
HAU eMLR MLR
comp=Z,440nm,20.0s,MS4.3
HAU Haudompre 63.50 312 eP P 08 22 43.3 -0.6
HAU LR LR
comp=Z,440nm,20.0s,MS4.6
GIVF Givet 63.69 314 eP P 08 22 44.7 -0.5
comp=Z,67nm,1.3s,mb5.2
GIVF Givet 63.69 314 eP P 08 22 44.7 -0.5
GIVF pmax pmax
comp=Z,34nm,1.3s,mb5.2
GIVF Givet 63.69 314 eP P 08 22 44.7 -0.5
comp=Z,34nm,1.3s,mb5.2
UCC Uccle 63.72 315 P P 08 22 44.9 -0.4
PGF Pioggiola 63.75 305 eP P 08 22 44.8 -0.9
comp=Z,97nm,1.4s,mb5.3
PGF Pioggiola 63.75 305 eP P 08 22 44.8 -0.9
PGF pmax pmax
comp=Z,49nm,1.4s,mb5.3
PGF Pioggiola 63.75 305 eP P 08 22 44.8 -0.9
comp=Z,49nm,1.4s,mb5.3
ALE Alert 63.84 356 P P 08 22 40.0 -5.7
comp=Z,43nm,1.4s,mb5.3,SNR=6.5
OG01 Vacheresse 63.90 310 eP P 08 22 45.7 -0.9
BAIF Baives 64.08 314 eP P 08 22 47.3 -0.4
comp=Z,37nm,1.1s,mb5.0
BAIF Baives 64.08 314 eP P 08 22 47.3 -0.4
BAIF pmax pmax
comp=Z,18nm,1.1s,mb5.0
BAIF Baives 64.08 314 eP P 08 22 47.3 -0.4
comp=Z,18nm,1.1s,mb5.0
MEZF Maizieres J'vi 64.13 312 eP P 08 22 47.7 -0.4
LPG La Plagne 64.16 309 eP P 08 22 48.4 +0.1
comp=Z,158nm,1.5s,mb5.5
LPG La Plagne 64.16 309 eP P 08 22 48.4 +0.1
LPG pmax pmax
comp=Z,79nm,1.5s,mb5.5
LPG La Plagne 64.16 309 eP P 08 22 48.4 +0.1
comp=Z,79nm,1.5s,mb5.5
LPL La Plagne 64.16 309 eP P 08 22 48.4 +0.1
comp=Z,126nm,1.4s,mb5.5
LPL La Plagne 64.16 309 eP P 08 22 48.4 +0.1
LPL pmax pmax
comp=Z,63nm,1.4s,mb5.5
LPL La Plagne 64.16 309 eP P 08 22 48.4 +0.1
comp=Z,63nm,1.4s,mb5.5
CABF La Chapelle 64.17 310 eP P 08 22 47.7 -0.7
SAOF Saorge 64.19 307 eP P 08 22 48.3 -0.2
AUTN L'Aution 64.27 307 eP P 08 22 49.3 +0.2
SBF Sospel 64.32 307 eP P 08 22 48.6 -0.8
comp=Z,131nm,1.3s,mb5.5
SBF Sospel 64.32 307 eP P 08 22 48.6 -0.8
SBF pmax pmax
comp=Z,65nm,1.3s,mb5.5
SBF Sospel 64.32 307 eP P 08 22 48.6 -0.8
comp=Z,65nm,1.3s,mb5.5
LUCF Luceram 64.36 307 eP P 08 22 48.9 -0.8
TOUF Mont Tournerai 64.38 307 eP P 08 22 49.6 -0.2
MBDF Montbardon 64.43 308 eP P 08 22 50.1 0.0
comp=Z,38nm,1.2s,mb5.0
MBDF Montbardon 64.43 308 eP P 08 22 50.1 0.0
MBDF pmax pmax
comp=Z,19nm,1.2s,mb5.0
MBDF Montbardon 64.43 308 eP P 08 22 50.1 0.0
comp=Z,19nm,1.2s,mb5.0
ORIF Oris-en-Rattie 64.95 309 eP P 08 22 52.6 -0.9
comp=Z,31nm,1.0s,mb5.0
ORIF eMLR MLR
comp=Z,566nm,19.8s,MS4.5
ORIF Oris-en-Rattie 64.95 309 eP P 08 22 52.6 -0.9
ORIF pmax pmax
comp=Z,15nm,1.0s,mb5.0
ORIF Oris-en-Rattie 64.95 309 eP P 08 22 52.6 -0.9
comp=Z,15nm,1.0s,mb5.0
FRF La Foret Royal 64.96 307 eP P 08 22 52.7 -0.9
comp=Z,48nm,1.2s,mb5.1
FRF La Foret Royal 64.96 307 eP P 08 22 52.7 -0.9
FRF pmax pmax
comp=Z,24nm,1.2s,mb5.1
FRF La Foret Royal 64.96 307 eP P 08 22 52.7 -0.9
comp=Z,24nm,1.2s,mb5.1
LMR La Mourre 65.14 307 eP P 08 22 53.9 -0.9
comp=Z,82nm,1.3s,mb5.3
LMR La Mourre 65.14 307 eP P 08 22 53.9 -0.9
LMR pmax pmax
comp=Z,41nm,1.3s,mb5.3
LMR La Mourre 65.14 307 eP P 08 22 53.9 -0.9
comp=Z,41nm,1.3s,mb5.3
LOR Lormes 65.34 311 eP P 08 22 54.8 -1.2
comp=Z,34nm,1.3s,mb4.9
LOR eMLR MLR
comp=Z,318nm,21.2s,MS4.2
LOR Lormes 65.34 311 eP P 08 22 54.8 -1.2
LOR pmax pmax
comp=Z,17nm,1.3s,mb4.9
LOR MLR MLR
comp=Z,320nm,21.3s,MS4.5
LOR Lormes 65.34 311 eP P 08 22 54.8 -1.2
comp=Z,17nm,1.3s,mb4.9
LOR LR LR
comp=Z,320nm,21.3s,MS4.5
OCF Saint Nazaire 65.46 308 eP P 08 22 56.8 0.0
OG26 St.-Nazaire-De 65.46 308 eP P 08 22 56.8 0.0
SMRF Simiane la Rot 65.51 308 eP P 08 22 56.7 -0.5
comp=Z,59nm,1.5s,mb5.1
SMRF Simiane la Rot 65.51 308 eP P 08 22 56.7 -0.5
comp=Z,59nm,1.5s,mb5.4
SMF Signal de Mont 65.59 311 eP P 08 22 56.6 -1.0
comp=Z,122nm,1.5s,mb5.4
SMF Signal de Mont 65.59 311 eP P 08 22 56.6 -1.0
SMF pmax pmax
comp=Z,61nm,1.5s,mb5.4
SMF Signal de Mont 65.59 311 eP P 08 22 56.6 -1.0
comp=Z,61nm,1.5s,mb5.4
SSF Saint Saulge 65.64 311 eP P 08 22 56.9 -1.0
comp=Z,73nm,1.4s,mb5.2
SSF Saint Saulge 65.64 311 eP P 08 22 56.9 -1.0
SSF pmax pmax
comp=Z,37nm,1.4s,mb5.2
SSF Saint Saulge 65.64 311 eP P 08 22 56.9 -1.0
comp=Z,37nm,1.4s,mb5.2
VIVF Saint-Julien-l 65.76 309 eP P 08 22 58.1 -0.6
comp=Z,95nm,1.5s,mb5.3
VIVF Saint-Julien-l 65.76 309 eP P 08 22 58.1 -0.6

VIVF pmax pmax
comp=Z,48nm,1.5s,mb5.3
VIVF Saint-Julien-l 65.76 309 eP P 08 22 58.1 -0.6
comp=Z,48nm,1.5s,mb5.3
AVF Avril sur Loir 65.84 311 eP P 08 22 58.3 -1.0
comp=Z,99nm,1.4s,mb5.3
AVF Avril sur Loir 65.84 311 eP P 08 22 58.3 -1.0
AVF pmax pmax
comp=Z,49nm,1.4s,mb5.3
AVF Avril sur Loir 65.84 311 eP P 08 22 58.3 -1.0
comp=Z,49nm,1.4s,mb5.3
EKA Eskdalemuir Ar 66.18 322 P P 08 23 01.1 -0.2
comp=Z,11nm,0.9s,mb4.9,baz=68,slow=6.7,SNR=13
EKA Eskdalemuir Ar 66.18 322 P P 08 23 01.1 -0.2
EKA pmax pmax
comp=Z,11nm,1.0s
KEST Kesra 66.19 298 P P 08 23 01.8 +0.1
comp=Z,5.4nm,1.0s,mb4.5,baz=275,slow=7.2,SNR=7.3
KEST LR LR 08 59 07.8
comp=Z,54nm,18.2s,MS3.8,baz=318,slow=42
KEST Kesra 66.19 298 eP P 08 23 01.1 -0.5
ESK Eskdalemuir 66.21 322 iP P 08 23 02.8 +1.4
BGF Bois d'Agland 66.26 311 eP P 08 23 01.0 -0.9
AGO Saint Agoulin 66.28 310 eP P 08 23 02.8 +0.7
PYM Petit Puy Mans 66.48 310 eP P 08 23 03.9 +0.6
SCO Scoresbysund 66.51 340⇓ iP P 08 23 03.7 +0.6
SCO pmax pmax
comp=Z,14nm,0.9s,mb5.0
SCO Scoresbysund 66.51 340⇓ iP P 08 23 03.7 +0.6
comp=Z,14nm,0.9s,mb5.0
WRAB Tennant Creek 66.51 136 P P 08 23 03.0 -0.7
comp=Z,572nm,1.1s,mb6.5,SNR=36
WRAB Tennant Creek 66.51 136 eP P 08 23 03.2 -0.5
WRAB pmax pmax
comp=Z,135nm,1.1s,mb5.9
WRAB Tennant Creek 66.51 136 eP P 08 23 03.2 -0.6
comp=Z,135nm,1.1s,mb5.9
WRA Warramunga Arr 66.51 136 P P 08 23 03.1 -0.6
comp=Z,73nm,1.0s,mb5.7,baz=332,slow=6.9,SNR=102
WRA PKP2bc 08 51 32.8
comp=Z,1.7nm,1.0s,baz=136,slow=2.9,SNR=7.9
WRA Warramunga Arr 66.51 136 P P 08 23 03.1 -0.6
WRA ⇑e 08 51 32.8
LASF Ste Croix 66.61 308 eP P 08 23 03.8 -0.4
comp=Z,137nm,1.5s,mb5.5
TCF Toulx Ste Croi 66.77 311 eP P 08 23 04.7 -0.5
comp=Z,152nm,1.5s,mb5.5
TCF Toulx Ste Croi 66.77 311 eP P 08 23 04.7 -0.5
TCF pmax pmax
comp=Z,76nm,1.5s,mb5.5
TCF Toulx Ste Croi 66.77 311 eP P 08 23 04.7 -0.5
comp=Z,76nm,1.5s,mb5.5
LDF La Druitiere 67.26 314 eP P 08 23 07.2 -1.0
comp=Z,56nm,1.2s,mb5.2
LDF La Druitiere 67.26 314 eP P 08 23 07.2 -1.0
LDF pmax pmax
comp=Z,28nm,1.2s,mb5.2
LDF La Druitiere 67.26 314 eP P 08 23 07.2 -1.0
comp=Z,28nm,1.2s,mb5.2
FLN La Foliniere 67.40 314 eP P 08 23 08.0 -1.2
FLN eMLR MLR
comp=Z,507nm,19.5s,MS4.5
FLN La Foliniere 67.40 314 eP P 08 23 08.0 -1.2
FLN LR LR
comp=Z,510nm,19.5s,MS4.8
CAF Calviac 67.43 310 eP P 08 23 09.1 -0.3
comp=Z,63nm,1.4s,mb5.2
CAF Calviac 67.43 310 eP P 08 23 09.1 -0.3
CAF pmax pmax
comp=Z,31nm,1.4s,mb5.2
CAF Calviac 67.43 310 eP P 08 23 09.1 -0.3
comp=Z,31nm,1.4s,mb5.2
RJF Les Rejaudoux 67.62 310 eP P 08 23 10.5 -0.1
comp=Z,122nm,1.5s,mb5.4
RJF eMLR MLR
comp=Z,320nm,23.0s,MS4.2
RJF Les Rejaudoux 67.62 310 eP P 08 23 10.5 -0.1
RJF pmax pmax
comp=Z,61nm,1.5s,mb5.4
RJF MLR MLR
comp=Z,320nm,23.0s,MS4.5
RJF Les Rejaudoux 67.62 310 eP P 08 23 10.5 -0.1
comp=Z,61nm,1.5s,mb5.4
RJF LR LR
comp=Z,320nm,23.0s,MS4.5
GRR Gorron 67.79 314 eP P 08 23 10.5 -1.1
comp=Z,77nm,1.1s,mb5.3
GRR Gorron 67.79 314 eP P 08 23 10.5 -1.1
GRR pmax pmax
comp=Z,38nm,1.1s,mb5.3
GRR Gorron 67.79 314 eP P 08 23 10.5 -1.1
comp=Z,38nm,1.1s,mb5.3
MTLF Montolieu 68.00 308 eP P 08 23 12.4 -0.6
comp=Z,57nm,1.4s,mb5.1
MTLF Montolieu 68.00 308 eP P 08 23 12.4 -0.6
MTLF pmax pmax
comp=Z,29nm,1.4s,mb5.1
MTLF Montolieu 68.00 308 eP P 08 23 12.4 -0.6
comp=Z,29nm,1.4s,mb5.1
MFF Saint Martin d 68.12 312 eP P 08 23 12.9 -0.8
comp=Z,60nm,1.5s,mb5.1
MFF Saint Martin d 68.12 312 eP P 08 23 12.9 -0.8
MFF pmax pmax
comp=Z,30nm,1.5s,mb5.1
MFF Saint Martin d 68.12 312 eP P 08 23 12.9 -0.8
comp=Z,30nm,1.5s,mb5.1
LFF La Frestale 68.27 310 eP P 08 23 14.5 -0.2
comp=Z,107nm,1.4s,mb5.4
LFF La Frestale 68.27 310 eP P 08 23 14.5 -0.2
LFF pmax pmax
comp=Z,54nm,1.4s,mb5.4
LFF La Frestale 68.27 310 eP P 08 23 14.5 -0.2
comp=Z,54nm,1.4s,mb5.4
KLBR Kellerberrin 68.86 157 eP P 08 23 17.1 -1.3
comp=Z,38nm,0.9s,mb5.3
SGMF Saint Gilles 68.87 314 eP P 08 23 17.9 -0.5
comp=Z,180nm,1.5s,mb5.5
SGMF Saint Gilles 68.87 314 eP P 08 23 17.9 -0.5
SGMF pmax pmax
comp=Z,90nm,1.5s,mb5.5
SGMF Saint Gilles 68.87 314 eP P 08 23 17.9 -0.5
comp=Z,90nm,1.5s,mb5.5
SUMG Summit 69.17 346 eP P 08 23 19.2 -0.7
comp=Z,30nm,1.1s,mb5.1
SUMG Summit 69.17 346⇓ iP P 08 23 20.0 +0.1
comp=Z,15nm,1.0s,mb4.9
ASAR Alice Springs 69.21 139 P P 08 23 20.4 -0.3
comp=Z,78nm,1.0s,mb5.6,baz=325,slow=5.9,SNR=170
ASAR PKP2bc 08 51 28.1
comp=Z,1.7nm,0.9s,baz=134,slow=4.2,SNR=10.0
ASAR Alice Springs 69.21 139 P P 08 23 20.4 -0.3
ASAR ⇑e 08 51 28.1
ROSF Rostrenen 69.26 315 eP P 08 23 20.3 -0.5
EPF Esparros 69.37 308 eP P 08 23 20.3 -1.3
QUIF Quistinic 69.38 314 eP P 08 23 20.9 -0.7
comp=Z,187nm,1.7s,mb5.5
QUIF Quistinic 69.38 314 eP P 08 23 20.9 -0.7
QUIF pmax pmax
comp=Z,93nm,1.7s,mb5.4
QUIF Quistinic 69.38 314 eP P 08 23 20.9 -0.7
comp=Z,93nm,1.7s,mb5.4
COLD Coldfoot 69.53 22 eP P 08 23 22.7 +0.6
comp=Z,41nm,1.0s,mb5.3
NWAO Narrogin (SRO) 69.92 158 eP P 08 23 26.1 +1.2
NWAO pmax pmax
comp=Z,198nm,1.8s
NWAO Narrogin (SRO) 69.92 158 eP P 08 23 26.1 +1.2
comp=Z,198nm,1.8s,mb5.7
ETSF Etsaut 70.02 309 eP P 08 23 25.5 -0.1
comp=Z,40nm,1.1s,mb5.0
ETSF Etsaut 70.02 309 eP P 08 23 25.5 -0.1
ETSF pmax pmax
comp=Z,20nm,1.1s,mb5.0
ETSF Etsaut 70.02 309 eP P 08 23 25.5 -0.1
comp=Z,20nm,1.1s,mb5.0
TTA Tatalina 70.06 27 eP P 08 23 26.2 +0.7
SJPF Ste Jean 70.35 309 eP P 08 23 27.4 -0.2
comp=Z,51nm,1.3s,mb5.0
SJPF Ste Jean 70.35 309 eP P 08 23 27.4 -0.2
SJPF pmax pmax
comp=Z,26nm,1.3s,mb5.0
SJPF Ste Jean 70.35 309 eP P 08 23 27.4 -0.2
comp=Z,26nm,1.3s,mb5.0
BPAW Bear Paw Mtn. 71.19 24 eP P 08 23 32.6 +0.2
comp=Z,42nm,1.1s,mb5.3
SVW2 Sparrevohn 71.27 28 eP P 08 23 34.0 +1.1
PPLA Purkeypile 71.50 26 eP P 08 23 35.2 +1.0

comp=Z,80nm,0.9s,mb5.7
KTH Kantishna Hill 71.55 25 *e*P **P 08 23 35.0 +0.4**
comp=Z,5μm,1.1s
COLA College 71.76 23 *e*P **P 08 23 36.0 +0.3**
COLA pmax pmax
comp=Z,69nm,1.0s,mb5.5
COLA College 71.76 23 *e*P **P 08 23 36.0 +0.2**
comp=Z,69nm,1.0s,mb5.5
TRF Thorofare Moun 71.84 25 *e*P **P 08 23 36.2 -0.1**
comp=Z,12nm,0.9s,mb4.8
TRF *e*PP PP 08 26 17.2 +2.0
MCK McKinley 72.13 24 *e*P **P 08 23 38.1 +0.1**
MCK pmax pmax
comp=Z,17nm,0.9s,mb5.0
MCK McKinley 72.13 24 *e*P **P 08 23 38.1 +0.1**
comp=Z,17nm,0.9s,mb5.0
FORT Forrest 72.17 148 *e*P **P 08 23 37.1 -1.5**
comp=Z,51nm,1.1s,mb5.4
RES Resolute Bay 72.30 2 *e*P **P 08 23 38.8 -0.1**
RES pmax pmax
comp=Z,16nm,1.1s,mb4.9
RES Resolute Bay 72.30 2 *e*P **P 08 23 38.8 -0.1**
comp=Z,16nm,1.1s,mb4.9
SDPT Sand Point 72.35 35 *e*P **P 08 23 38.6 -0.8**
comp=Z,52nm,0.8s,mb5.5
RSO Redoubt South 72.77 28 *e*P **P 08 23 42.1 +0.2**
CHGN Chignik 72.79 33 *e*P **P 08 23 40.3 -1.8**
INK Inuvik 73.29 16 *e*P **P 08 23 44.7 -0.1**
INK *e* 08 26 25.1
INK pmax pmax
comp=Z,37nm,1.0s
INK Inuvik 73.29 16 *e*P **P 08 23 44.7 -0.1**
comp=Z,37nm,1.0s,mb5.3
INK *e*PP PP 08 26 25.1 -2.4
PMR Palmer 73.44 26 *e*P **P 08 23 45.6 -0.2**
PMR pmax pmax
comp=Z,60nm,1.0s,mb5.5
PMR Palmer 73.44 26 *e*P **P 08 23 45.6 -0.2**
comp=Z,60nm,1.0s,mb5.5
RC01 Rabbit Creek A 73.54 27 *e*P **P 08 23 46.3 -0.1**
comp=Z,5μm,1.1s
ESDC Sonseca Array 73.80 307 P **P 08 23 48.1 -0.2**
comp=Z,8.0nm,0.9s,mb4.7,baz=55,slow=6.3,SNR=20
ESDC LR LR 09 01 37.4
comp=Z,158nm,19.2s,MS4.3,baz=100,slow=40
ESLA Sonseca Array 73.80 307 *e*P **P 08 23 47.9 -0.5**
comp=Z,30nm,1.8s,mb4.9
PAX Paxson 73.81 24 *e*P **P 08 23 48.2 +0.2**
PAX pmax pmax
comp=Z,21nm,1.0s,mb5.0
PAX Paxson 73.81 24 *e*P **P 08 23 48.2 +0.2**
comp=Z,21nm,1.0s,mb5.0
EGAK Eagle 73.92 21 *e*P **P 08 23 48.8 +0.3**
comp=Z,51nm,1.0s,mb5.4
CTA Charters Tower 74.06 128 *e*P **P 08 23 48.3 -1.7**
comp=Z,10nm,0.8s,mb4.8
CTA Charters Tower 74.06 128 LR LR 09 01 12.2
comp=Z,76nm,18.0s,MS4.0,baz=120,slow=40
CTAO Charters Tower 74.06 128 *e*P **P 08 23 49.3 -0.7**
CTAO pmax pmax
comp=Z,21nm,1.0s,mb5.0
CTAO Charters Tower 74.06 128 *e*P **P 08 23 49.3 -0.7**
comp=Z,21nm,1.0s,mb5.0
PAB San Pablo 74.12 307 *e*P **P 08 23 49.8 -0.5**
PAB pmax pmax
comp=Z,22nm,1.3s,mb4.9
PAB San Pablo 74.12 307 *e*P **P 08 23 49.8 -0.5**
comp=Z,22nm,1.3s,mb4.9
SEW Seward 74.28 27 *e*P **P 08 23 50.4 -0.4**
comp=Z,31nm,1.0s,mb5.2
KDAK Kodiak Island 74.49 30 P **P 08 23 52.0 0.0**
comp=Z,410nm,0.8s,mb6.4,SNR=11
KDAK Kodiak Island 74.49 30 P **P 08 23 52.1 +0.1**
comp=Z,40nm,0.7s,mb5.5,baz=344,slow=3.6,SNR=36
KDAK Kodiak Island 74.49 30 *ce*P **P 08 23 51.7 -0.3**
KDAK Kodiak Island 74.49 30 *e*P **P 08 23 51.6 -0.4**
comp=Z,55nm,0.8s,mb5.5
OHAK Old Harbor 74.53 31 *e*P **P 08 23 52.7 +0.4**
comp=Z,59nm,0.7s,mb5.6
PBRG Braganca 74.56 310 *e*P **P 08 23 52.7 0.0**
comp=Z,35nm,1.6s,mb5.0
DIV Divide 74.96 25 *e*P **P 08 23 55.5 +0.8**
comp=Z,61nm,1.2s,mb5.4
MVO Moncorvo 75.07 309 *e*P **P 08 23 55.9 +0.2**
comp=Z,41nm,0.9s,mb5.4
TAM Tamanrasset 75.10 288 *e*P **P 08 23 55.4 -0.8**
TAM pmax pmax
comp=Z,11nm,1.0s,mb4.7
TAM Tamanrasset 75.10 288 *e*P **P 08 23 55.4 -0.8**
comp=Z,11nm,1.0s,mb4.8
PCAB Cabril 75.43 310 *e*P **P 08 23 58.2 +0.4**
comp=Z,52nm,1.4s,mb5.3
BMRM Bremner River 75.48 25 *e*P **P 08 23 58.3 +0.6**
comp=Z,74nm,1.1s,mb5.5
MTE Manteigas 75.80 309 *e*P **P 08 23 60.0 +0.1**
comp=Z,31nm,1.0s,mb5.2
MTE Manteigas 75.80 309 *e*P **P 08 24 00.6 +0.7**
comp=Z,50nm,1.5s,mb5.2
PVIS Viseu 75.86 309 *e*P **P 08 24 00.9 +0.6**
comp=Z,42nm,1.6s,mb5.1
PCBR Castelo Branco 76.05 309 *e*P **P 08 24 01.9 +0.6**
comp=Z,32nm,1.4s,mb5.0
SFJD Kangerlussuaq 76.17 346 ↓↓*i*P **P 08 24 00.6 -0.9**
SFJD pmax pmax
comp=Z,28nm,1.0s,mb5.2
SFJD Kangerlussuaq 76.17 346 *e*P **P 08 24 00.2 -1.3**
comp=Z,50nm,1.1s,mb5.4
SFJD Kangerlussuaq 76.17 346 ↓↓*i*P **P 08 24 00.6 -0.9**
comp=Z,28nm,1.0s,mb5.2
PMRV Marv??o 76.21 308 *e*P **P 08 24 02.3 0.0**
comp=Z,37nm,1.4s,mb5.1
PBAR Barrancos 76.63 307 *e*P **P 08 24 04.7 0.0**
comp=Z,62nm,1.4s,mb5.3
PESTR Estremoz 76.63 308 *e*P **P 08 24 04.7 0.0**
comp=Z,28nm,1.5s,mb5.0
PTOM Tomar 76.78 309 *e*P **P 08 24 06.0 +0.5**
comp=Z,59nm,1.1s,mb5.4
EVO Evora 77.09 308 *e*P **P 08 24 07.6 +0.3**
comp=Z,45nm,1.0s,mb5.0
EVO *e*MLR MLR
comp=Z,254nm,19.8s,MS4.2
EVO Evora 77.09 308 *e*P **P 08 24 07.4 +0.1**
comp=Z,43nm,1.6s,mb5.1
PBEJ Beja 77.26 307 *e*P **P 08 24 09.0 +0.8**
comp=Z,41nm,1.4s,mb5.2
PVAQ Vaqueiros 77.49 306 *e*P **P 08 24 09.8 +0.3**
comp=Z,44nm,1.4s,mb5.2
PCVE Castro Verde 77.59 307 *e*P **P 08 24 02.9 -7.2**
comp=Z,32nm,1.5s,mb5.0
LSZ Lusaka 77.63 242 *e*P **P 08 24 09.6 -0.9**
LSZ pmax pmax
comp=Z,20nm,0.9s,mb5.0
LSZ Lusaka 77.63 242 *e*P **P 08 24 09.6 -0.9**
comp=Z,20nm,0.9s,mb5.0
PBDV Barranco-do-Ve 77.72 306 *e*P **P 08 24 11.6 +0.8**
comp=Z,70nm,1.3s,mb5.4
MDT Midelt 77.75 301 LR LR 09 06 34.5
comp=Z,78nm,18.2s,MS4.1,baz=272,slow=42
MORF Marmelete 78.17 307 *e*P **P 08 24 14.3 +1.0**
comp=Z,70nm,1.7s,mb5.3
PNL Peninsula 78.22 24 *e*P **P 08 24 14.4 +1.3**
comp=Z,62nm,0.9s,mb5.5
SKAG Skagway 79.73 22 *e*P **P 08 24 22.8 +1.4**
comp=Z,94nm,1.1s,mb5.6
STKA Stephens Creek 79.84 139 *e*P **P 08 24 20.4 -1.9**
comp=Z,12nm,0.7s,mb4.9
STKA Stephens Creek 79.84 139 P **P 08 24 21.7 -0.6**
comp=Z,14nm,0.7s,mb5.0,baz=323,slow=5.7,SNR=16
STKA LR LR 09 05 11.8
comp=Z,213nm,21.8s,MS4.5,baz=189,slow=40
STKA Stephens Creek 79.84 139 *e*P **P 08 24 21.2 -1.1**
comp=Z,4.0nm,0.9s,mb4.3
EIDS Eidsvold 80.92 128 *e*P **P 08 24 27.7 -0.5**
comp=Z,30nm,1.0s,mb5.2
SIT Sitka 81.61 24 *e*P **P 08 24 33.0 +1.5**
SIT pmax pmax
comp=Z,45nm,1.3s,mb5.2
SIT Sitka 81.61 24 *e*P **P 08 24 33.0 +1.5**
comp=Z,45nm,1.3s,mb5.2
DLBC Dease Lake 82.19 21 *e*P **P 08 24 35.8 +1.2**
YKA Yellowknife Ar 82.27 12 P **P 08 24 34.5 -0.4**
comp=Z,22nm,0.9s,mb5.1,baz=335,slow=4.9,SNR=61
YKA Yellowknife Ar 82.27 12 P **P 08 24 34.5 -0.4**
YKA pmax pmax
comp=Z,22nm,0.9s
YKA Yellowknife Ar 82.27 12 P **P 08 24 34.5 -0.4**
TORD Torodi Ar. Bea 83.20 281 P **P 08 24 39.5 -1.1**
comp=Z,8.5nm,0.6s,mb5.0,baz=60,slow=4.9,SNR=46
TORD PP PP 08 27 50.0 -1.9
comp=Z,1.7nm,0.9s,baz=46,slow=7.6,SNR=4.9
TORD LR LR 09 06 28.3
comp=Z,242nm,18.5s,MS4.6,baz=70,slow=39
ARMA Armidale 84.72 132 *e*P **P 08 24 47.7 -0.2**
LBTB Lobatse 85.69 237 *e*P **P 08 24 52.2 -0.7**
LBTB pmax pmax
comp=Z,55nm,0.9s,mb5.8
LBTB Lobatse 85.69 237 *e*P **P 08 24 52.1 -0.7**
comp=Z,56nm,0.9s,mb5.8
TOO Toolangi 86.23 140 *e*P **P 08 24 55.0 -0.2**
CNB Canberra Magne 86.76 136 *e*P **P 08 24 57.3 -0.6**
BOSA Boshof 88.21 234 P **P 08 25 03.9 -1.2**
comp=Z,11nm,0.9s,mb5.1,baz=9.6,slow=5.4,SNR=6.8
BOSA LR LR 09 02 42.9
comp=Z,236nm,18.3s,MS4.6,baz=239,slow=34
FCC Fort Churchill 88.25 3 *e*P **P 08 25 03.9 -1.0**
comp=Z,0.8nm,1.0s
DZM Mont Dzumac 89.69 117 *e*LR LR 08 53 41.9
comp=Z,210nm,35.0s
SCHQ Schefferville 90.46 348 P **P 08 25 14.5 -0.8**
comp=Z,14nm,0.9s,mb5.3,baz=39,slow=7.3,SNR=11
SCHQ LR LR 09 07 28.2
comp=Z,310nm,21.8s,MS4.7,baz=24,slow=37
EDM Edmonton 91.16 15 *e*P **P 08 25 18.6 0.0**
FFC Flin Flon 91.61 8 P **P 08 25 20.4 -0.3**
comp=Z,238nm,0.9s,mb6.5,SNR=29
FFC Flin Flon 91.61 8 *ce*P **P 08 25 20.4 -0.3**
FFC Flin Flon 91.61 8 *e*P **P 08 25 20.2 -0.5**
comp=Z,46nm,1.0s,mb5.8
DBIC Dimbokro 92.12 279 LR LR 09 07 11.4
comp=Z,158nm,21.5s,MS4.4,baz=40,slow=36
RPW Rockport 93.37 22 *e*P **P 08 25 29.2 +0.3**
comp=Z,3.5nm,0.6s,mb5.0
JCW Jim Creek 93.47 22 *e*P **P 08 25 29.7 +0.3**
comp=Z,41nm,1.1s,mb5.8
NEW Newport 94.82 19 *e*P **P 08 25 36.2 +0.6**
NEW pmax pmax
comp=Z,10.0nm,1.0s
NEW Newport 94.82 19 *e*P **P 08 25 36.2 +0.6**
comp=Z,10nm,1.0s,mb5.2
BSMT Bassoo Peak 95.81 18 *e*P **P 08 25 41.1 +1.0**
comp=Z,5.2nm,1.0s,mb4.9
JTMT Jette 96.04 18 *e*P **P 08 25 41.4 +0.2**
comp=Z,8.0nm,1.1s,mb5.1
SWMT Swartz Lake 96.33 17 *e*P **P 08 25 43.0 +0.6**
comp=Z,5.0nm,1.1s,mb4.9
ULM Lac du Bonnet 96.63 5 P **P 08 25 42.9 -0.9**
comp=Z,4.4nm,0.7s,mb5.0,baz=341,slow=5.2,SNR=4.1
ULM LR LR 09 13 43.4
comp=Z,159nm,19.2s,MS4.5,baz=35,slow=38
SLMT Seeley Lake 96.71 17 *e*P **P 08 25 45.0 +0.8**
comp=Z,10nm,1.4s,mb5.1
DGMT Dagmar 97.42 11 *e*P **P 08 25 47.1 -0.2**
BMO Blue Mountains 97.87 21 *e*P **P 08 25 50.2 +0.7**
comp=Z,1.9nm,0.9s,mb4.6
LRM Limekiln Ridge 98.29 17 *e*P **P 08 25 52.1 +0.7**
comp=Z,26nm,1.3s,mb5.6
AGMN Agassiz Nation 98.57 5 *e*P **P 08 25 50.8 -1.7**
comp=Z,4.2nm,1.0s,mb4.9
BOZ Bozeman (W) 98.65 17 *e*P **P 08 25 52.7 -0.3**
BOZ pmax pmax
comp=Z,5.0nm,1.5s,mb4.8
BOZ Bozeman (W) 98.65 17 *e*P **P 08 25 52.7 -0.2**
comp=Z,5.3nm,1.5s,mb4.8
MCMT McKenzie Canyo 99.12 18 *e*P **P 08 25 57.6 +2.5**
comp=Z,1.1nm,0.9s,mb4.4
EYMN Ely 99.17 2 *e*P **P 08 25 53.4 -1.9**
comp=Z,8.7nm,1.1s,mb5.2
PDAR Pinedale Array 101.86 16 P Pdif 08 26 06.6 -0.7
comp=Z,0.2nm,0.3s,baz=355,slow=4.5,SNR=3.0
NVAR Mina Array Bea 103.37 24 Pdiff Pdif 08 26 15.2 +1.2
comp=Z,0.4nm,0.7s,baz=318,slow=2.0,SNR=4.8
TXAR Lajitas Array 116.06 15 PKP PKPdf 08 30 56.0 -1.3
comp=Z,0.7nm,0.9s,baz=172,slow=0.9,SNR=7.7
TXAR PKKPbc PKKPbc 08 41 25.9 -1.3
comp=Z,0.4nm,0.9s,baz=156,slow=3.4,SNR=4.6
TXAR PKKPab PKKPab 08 41 33.8 -1.4
comp=Z,0.4nm,0.8s,baz=167,slow=6.0,SNR=6.1
TXAR Lajitas Array 116.06 15 PKIKP PKPdf 08 30 56.0 -1.2
TXAR 08 41 33.8
TXAR pmax pmax
comp=Z,1.0nm,0.9s
NVL N'lazarevskaya 117.82 202 *e*PKIKP PKPdf 08 30 57.9 -1.3
NVL pmax pmax
comp=Z,12nm,0.8s
PPT Papeete 122.95 90 *e*LR LR 09 09 05.1
comp=Z,411nm,32.0s
QSPA South Pole Qui 122.97 180 *e*PKPdf PKPdf 08 31 07.8 -1.1
TAOE Nuku Hiva Isla 126.26 75 *e*LR LR 09 10 45.6
comp=Z,328nm,28.8s
OTAV Otavalo 145.56 343 *e*PKPdf PKPdf 08 31 53.2 +0.4
CPUP Villa Florida 152.60 276 PKP PKPdf 08 32 02.9 -0.8
comp=Z,4.3nm,0.9s,baz=75,slow=2.8,SNR=4.3
CPUP PKPbc PKPbc 08 32 09.1 -1.6
comp=Z,4.2nm,0.8s,baz=23,slow=2.6,SNR=7.1
CPUP Villa Florida 152.60 276 PKIKP PKPdf 08 32 02.9 -0.8
CPUP 08 32 09.1
CPUP pmax pmax
comp=Z,4.0nm,0.9s
LPAZ La Paz 155.41 308 PKPab PKPab 08 32 33.0 -0.4
comp=Z,3.1nm,0.7s,baz=31,slow=6.4,SNR=10
LPAZ La Paz 155.41 308 PKP2 PKPab 08 32 33.0 -0.3
LPAZ pmax pmax
comp=Z,3.0nm,0.7s
PLCA Paso Flores 164.19 237 PKP PKPdf 08 32 17.2 +0.1
comp=Z,3.2nm,0.9s,baz=160,slow=5.5,SNR=4.0
PLCA PKPab PKPab 08 33 09.8 -1.1
comp=Z,2.7nm,0.9s,baz=71,slow=7.2,SNR=3.9
PLCA Paso Flores 164.19 237 PKIKP PKPdf 08 32 17.2 +0.1
PLCA 08 33 09.8
PLCA pmax pmax
comp=Z,3.0nm,0.9s
PLCA Paso Flores 164.19 237 PKP PKPdf 08 32 17.2 +0.1
PLCA PKPab PKPab 08 33 09.8 -1.1

DDA ***18*** *08:35:08.9, 37.°04N×29.°18E, h7km±4km, Md2.8*
ISK ***18*** *08:35:08.9, 37.°05N×29.°21E, h9km, MD3.1*
CSEM ***18*** *08:35:09.3±0.1, 37.°05N×29.°20E, h8km, MD3.1, Error ellipse: s-maj=2.9km s-min=1.6km az=179.0*
ISCJB ***18*** *08:35:09.1±0.6, 37.°02N±0.°03×29.°20E±0.°03, h5km±6km, Error ellipse: s-maj=5.0km s-min=4.3km az=11.4*
ISC 18 08:35:09.6±0.5, 37.°04N±0.°03×29.°20E±0.°03, h9km±5km, n36,σ0°89/54, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.27**	**63**	*e*PG	**Pg**	**08 35 14.4**	**-0.5**
GLHS				*e*SG	**Sg**	**08 35 18.5**	**-0.1**
GLHS	**Glhisar (BURDU**	**0.27**	**63**	*e*Pg	**Pg**	**08 35 14.4**	**-0.6**
GLHS				*e*Sg	**Sg**	**08 35 18.5**	**-0.1**
GOLH	**Golhisar**	**0.35**	**55**	*i* P	**Pg**	**08 35 15.6**	**-1.0**
GOLH				*i* S	**Sg**	**08 35 22.4**	**+1.1**
GOLH	**Golhisar**	**0.35**	**55**	*i* P	**Pg**	**08 35 15.6**	**-0.9**
GOLH				*i* S	**Sg**	**08 35 22.4**	**+1.2**
ELL	**Elmali**	**0.64**	**117**	*e*PG	**Pg**	**08 35 21.8**	**-0.1**
ELL	**Elmali**	**0.64**	**117**	*e*Pg	**Pg**	**08 35 21.8**	**-0.1**
DNZL	**Cakiroluk**	**0.67**	**349**	*i* P	**Pg**	**08 35 21.2**	**-1.3**
DNZL				*i* S	**Sg**	**08 35 34.8**	**+3.6**
DNZL	**Cakiroluk**	**0.67**	**349**	*i* P	**Pg**	**08 35 21.2**	**-1.3**
DNZL				*i* S	**Sg**	**08 35 34.8**	**+3.6**
DENT	**Denizli**	**0.73**	**350**	*e*PG	**Pg**	**08 35 22.9**	**-0.8**
DENT				*e*SG	**Sg**	**08 35 34.1**	**+0.9**
DENT	**Denizli**	**0.73**	**350**	*e*Pg	**Pg**	**08 35 22.9**	**-0.8**
DENT				*e*Sg	**Sg**	**08 35 34.1**	**+0.9**
YER	**Yerkesik**	**0.74**	**278**	*e*PG	**Pg**	**08 35 23.7**	**-0.2**
YER				*e*SG	**Sg**	**08 35 34.6**	**+1.1**
YER	**Yerkesik**	**0.74**	**278**	*e*Pg	**Pg**	**08 35 23.7**	**-0.2**
YER				*e*Sg	**Sg**	**08 35 34.6**	**+1.1**
AKAS	**Kas**	**0.86**	**158**	*i* P	**Pg**	**08 35 25.4**	**-0.8**
AKAS				*i* S	**Sg**	**08 35 39.2**	**+1.8**
AKAS	**Kas**	**0.86**	**158**	*i* P	**Pg**	**08 35 25.4**	**-0.8**
AKAS				*i* S	**Sg**	**08 35 39.2**	**+1.8**
MLSB	**Milas**	**1.17**	**283**	*e*PN	**Pn**	**08 35 31.6**	**-0.5**
MLSB	**Milas**	**1.17**	**283**	*e*Pn	**Pn**	**08 35 31.6**	**-0.6**
AYDN	**Tasoluk**	**1.22**	**301**	*i* P	**Pn**	**08 35 31.7**	**-1.2**
AYDN				*i* S	**Sb**	**08 35 49.2**	**+0.3**
AYDN	**Tasoluk**	**1.22**	**301**	*i* P	**Pn**	**08 35 31.7**	**-1.3**
AYDN				*i* S	**Sb**	**08 35 49.2**	**+0.3**
KHL	**Karahalli**	**1.31**	**11**	*e*PN	**Pn**	**08 35 34.1**	**-0.1**
KHL	**Karahalli**	**1.31**	**11**	*e*Pn	**Pn**	**08 35 34.1**	**-0.1**
ISP	**Isparta**	**1.31**	**53**	*e*PN	**Pn**	**08 35 34.2**	**0.0**
ISP	**Isparta**	**1.31**	**53**	*e*Pn	**Pn**	**08 35 34.2**	**0.0**
DAT	**Datca**	**1.34**	**257**	*e*PN	**Pn**	**08 35 34.2**	**-0.3**
DAT	**Datca**	**1.34**	**257**	*e*Pn	**Pn**	**08 35 34.2**	**-0.3**
BDRM	**Kayabasi**	**1.41**	**272**	*i* P	**Pn**	**08 35 35.3**	**-0.1**
BDRM				*i* S	**Sb**	**08 35 54.4**	**+0.3**
BDRM	**Kayabasi**	**1.41**	**272**	*i* P	**Pn**	**08 35 35.3**	**-0.1**
BDRM				*i* S	**Sb**	**08 35 54.4**	**+0.3**
SUTC	**Sutluce-Ispart**	**1.50**	**72**	*e*PN	**Pn**	**08 35 36.8**	**0.0**
SUTC	**Sutluce-Ispart**	**1.50**	**72**	*e*Pn	**Pn**	**08 35 36.8**	**0.0**
KULA	**Kula-Manisa**	**1.54**	**344**	*e*PN	**Pn**	**08 35 36.3**	**-1.0**
KULA	**Kula-Manisa**	**1.54**	**344**	*e*Pn	**Pn**	**08 35 36.3**	**-1.0**
MANT	**Manisa**	**1.54**	**341**	*i* P	**Pn**	**08 35 37.0**	**-0.3**
MANT				*i* S	**Sn**	**08 35 59.9**	**+2.5**
MANT	**Manisa**	**1.54**	**341**	*i* P	**Pn**	**08 35 37.0**	**-0.3**
MANT				*i* S	**Sn**	**08 35 59.9**	**+2.4**
AKS	**Akhisar**	**2.14**	**330**	*e*PN	**Pn**	**08 35 45.2**	**-0.4**
AKS	**Akhisar**	**2.14**	**330**	*e*Pn	**Pn**	**08 35 45.2**	**-0.4**
HDMB	**Hadim**	**2.63**	**91**	*e*PN	**Pn**	**08 35 53.3**	**+1.0**
HDMB	**Hadim**	**2.63**	**91**	*e*Pn	**Pn**	**08 35 53.3**	**+1.0**

CSEM ***18*** *08:40:18.8±0.2, 38.°29N×37.°93E, h10km, MD2.9, Error ellipse: s-maj=3.7km s-min=3.0km az=139.0*
ISK ***18*** *08:40:20.7, 38.°36N×38.°11E, h5km, MD2.9*
ISCJB ***18*** *08:40:21.8±0.6, 38.°41N±0.°03×38.°11E±0.°05, h10km, Error ellipse: s-maj=6.2km s-min=4.5km az=150.1*
DDA ***18*** *08:40:22.9, 38.°32N×38.°18E, h7km±7km, Md2.9*
ISC 18 08:40:22.1±0.7, 38.°41N±0.°03×38.°09E±0.°05, h2km±12km, n16,σ1°19/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MYA	**Malataya**	**0.27**	**108**	PG	**Pg**	**08 40 27.0**	**-0.4**
MYA				*e*SG	**Sg**	**08 40 31.5**	**+0.6**
MYA	**Malataya**	**0.27**	**108**	*i* Pg	**Pg**	**08 40 27.0**	**-0.3**
MYA				*e*Sg	**Sg**	**08 40 31.5**	**+0.6**
DARE	**Darende-Malaty**	**0.58**	**337**	*e*PG	**Pg**	**08 40 31.7**	**-1.6**
DARE				*e*SG	**Sg**	**08 40 41.4**	**+0.5**
DARE	**Darende-Malaty**	**0.58**	**337**	*e*Pg	**Pg**	**08 40 31.7**	**-1.6**
DARE				*e*Sg	**Sg**	**08 40 41.4**	**+0.5**
ELZG	**Elazig**	**0.70**	**83**	*i* P	**Pg**	**08 40 35.0**	**-0.6**
ELZG				*i* S	**Sg**	**08 40 46.6**	**+1.9**
ELZG	**Elazig**	**0.70**	**83**	*i* P	**Pg**	**08 40 35.0**	**-0.6**
ELZG				*i* S	**Sg**	**08 40 46.6**	**+1.9**
KEMA	**Kemaliye**	**0.91**	**20**	*i* P	**Pg**	**08 40 40.5**	**+0.9**
KEMA				*i* S	**Sg**	**08 40 56.7**	**+5.4**
KEMA	**Kemaliye**	**0.91**	**20**	*i* P	**Pg**	**08 40 40.5**	**+1.0**
KEMA				*i* S	**Sg**	**08 40 56.7**	**+5.4**
SVRC	**Sivrice-ELAZID**	**0.95**	**92**	*e*PG	**Pg**	**08 40 39.1**	**-1.2**
SVRC	**Sivrice-ELAZID**	**0.95**	**92**	*e*Pg	**Pg**	**08 40 39.1**	**-1.2**
PTK	**Pertek**	**1.12**	**64**	*e*PN	**Pn**	**08 40 43.5**	**-1.4**
PTK	**Pertek**	**1.12**	**64**	*e*Pn	**Pn**	**08 40 43.5**	**-1.4**
URFA	**Urfa**	**1.13**	**149**	*e*PG	**Pg**	**08 40 41.8**	**-1.9**
URFA				*e*SG	**Sg**	**08 40 59.0**	**+0.7**
URFA	**Urfa**	**1.13**	**149**	*e*Pg	**Pg**	**08 40 41.8**	**-1.9**
GZT	**Gaziantep**	**1.14**	**202**	*i* P	**Pg**	**08 40 43.2**	**-0.7**
GZT				*i* S	**Sg**	**08 40 59.9**	**+1.4**
SVSK	**Karacayir**	**1.73**	**331**	*e*PN	**Pn**	**08 40 54.8**	**+1.6**

DDA ***18*** *08:42:16.6, 36.°97N×29.°18E, h7km±5km, Md3.3*
IDC ***18*** *08:42:17.0±1.8, 36.°82N×29.°26E, h0km, mb3.8/1, mb1 3.6/4, mb1mx3.3/25, mbtmp3.6/4, ML3.4/3, Error ellipse: s-maj=37.3km s-min=20.4km az=161.0*
ISCJB ***18*** *08:42:17.1±0.6, 36.°98N±0.°03×29.°17E±0.°02, h1km±4km, Error ellipse: s-maj=4.3km s-min=3.0km az=165.0*
NEIC ***18*** *08:42:18.0, 37.°11N×29.°18E, h4km, MD3.4(ISK), After ISK.*
CSEM ***18*** *08:42:18.3±0.2, 37.°09N×29.°15E, h2km, MD3.3*
ISK ***18*** *08:42:18.2, 37.°09N×29.°18E, h6km, MD3.3*
ISC 18 08:42:17.7±0.5, 36.°99N±0.°02×29.°18E±0.°02, h1km±4km, n81,σ1°14/107, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**57**	*e*PG	**Pg**	**08 42 23.0**	**-0.5**
GLHS				*e*SG	**Sg**	**08 42 27.8**	**+0.3**
GLHS	**Glhisar (BURDU**	**0.30**	**57**	*e*Pg	**Pg**	**08 42 23.0**	**-0.5**
GLHS				*e*Sg	**Sg**	**08 42 27.8**	**+0.3**
GOLH	**Golhisar**	**0.39**	**51**	*i* P	**Pg**	**08 42 24.2**	**-1.0**
GOLH				*i* S	**Sg**	**08 42 31.3**	**+1.0**
GOLH	**Golhisar**	**0.39**	**51**	*i* P	**Pg**	**08 42 24.2**	**-1.0**
GOLH				*i* S	**Sg**	**08 42 31.3**	**+1.0**
TURN	**Turunc**	**0.48**	**256**	*i* P	**Pg**	**08 42 31.1**	**+4.3**
TURN				*i* S	**Sg**	**08 42 42.9**	**+10**
TURN	**Turunc**	**0.48**	**256**	*i* P	**Pg**	**08 42 31.1**	**+4.3**
DNZL	**Cakiroluk**	**0.71**	**351**	*i* P	**Pg**	**08 42 29.8**	**-1.5**
DNZL				*i* S	**Sg**	**08 42 42.1**	**+1.6**
DNZL	**Cakiroluk**	**0.71**	**351**	*i* P	**Pg**	**08 42 29.8**	**-1.5**
YER	**Yerkesik**	**0.73**	**282**	*e*PG	**Pg**	**08 42 32.3**	**+0.6**
YER				*e*SG	**Sg**	**08 42 43.1**	**+1.9**
YER	**Yerkesik**	**0.73**	**282**	*e*Pg	**Pg**	**08 42 32.3**	**+0.6**
DENT	**Denizli**	**0.77**	**351**	*e*PG	**Pg**	**08 42 31.9**	**-0.6**
DENT				*e*SG	**Sg**	**08 42 41.7**	**-0.8**
DENT	**Denizli**	**0.77**	**351**	*e*Pg	**Pg**	**08 42 31.9**	**-0.6**
AKAS	**Kas**	**0.83**	**155**	*i* P	**Pg**	**08 42 32.8**	**-0.7**
AKAS				*i* S	**Sg**	**08 42 48.2**	**+4.0**
AKAS	**Kas**	**0.83**	**155**	*i* P	**Pg**	**08 42 32.8**	**-0.7**
AKAS				*i* S	**Sg**	**08 42 48.2**	**+4.0**
KSL	**Kastellorizon**	**0.90**	**159**	*e*P	**Pg**	**08 42 33.5**	**-1.4**
KORT	**Korkueli**	**0.94**	**89**	*i* P	**Pg**	**08 42 35.4**	**-0.2**
KORT				*i* S	**Sg**	**08 42 51.6**	**+3.8**
KORT	**Korkueli**	**0.94**	**89**	*i* P	**Pg**	**08 42 35.4**	**-0.2**
KORT				*i* S	**Sg**	**08 42 51.6**	**+3.8**
ARG	**Arkhangelos**	**1.15**	**228**	*e*P	**Pg**	**08 42 38.5**	**-1.1**
MLSB	**Milas**	**1.16**	**286**	*e*PN	**Pn**	**08 42 40.2**	**-0.9**
MLSB	**Milas**	**1.16**	**286**	*e*Pn	**Pn**	**08 42 40.2**	**-0.9**
ANTB	**Antalya**	**1.18**	**94**	*e*PN	**Pn**	**08 42 42.3**	**+0.9**
ANTB	**Antalya**	**1.18**	**94**	*e*Pn	**Pn**	**08 42 42.3**	**+0.9**
BCK	**Bucak**	**1.22**	**67**	*e*PN	**Pn**	**08 42 41.5**	**-0.4**
BCK	**Bucak**	**1.22**	**67**	*e*Pn	**Pn**	**08 42 41.5**	**-0.4**
AYDN	**Tasoluk**	**1.23**	**303**	*i* P	**Pg**	**08 42 40.0**	**-1.3**
AYDN				*i* S	**Sg**	**08 42 59.4**	**+2.0**
AYDN	**Tasoluk**	**1.23**	**303**	*i* P	**Pg**	**08 42 40.0**	**-1.4**
AYDN				*i* S	**Sg**	**08 42 59.4**	**+2.0**
DAT	**Datca**	**1.31**	**259**	*e*PN	**Pn**	**08 42 43.9**	**+0.8**
DAT	**Datca**	**1.31**	**259**	*e*Pn	**Pn**	**08 42 43.9**	**+0.8**
ISP	**Isparta**	**1.35**	**52**	*e*PN	**Pn**	**08 42 43.6**	**-0.1**
ISP	**Isparta**	**1.35**	**52**	*e*Pn	**Pn**	**08 42 42.5**	**-1.3**
ISP				*e*Sn	**Sn**	**08 43 00.9**	**-1.5**
ISP	**Isparta**	**1.35**	**52**	*e*Pn	**Pn**	**08 42 43.7**	**-0.1**
ISP				*e*Sn	**Sn**	**08 43 00.9**	**-1.5**
KHL	**Karahalli**	**1.36**	**11**	*e*PN	**Pn**	**08 42 42.8**	**-1.0**
KHL	**Karahalli**	**1.36**	**11**	*e*Pn	**Pn**	**08 42 42.8**	**-1.0**
BDRM	**Kayabasi**	**1.39**	**274**	*i* P	**Pn**	**08 42 43.7**	**-0.6**
BDRM				*i* S	**Sg**	**08 43 02.9**	**+0.5**
BDRM	**Kayabas

IKL	**Isikli**	**3.70 100**	*e*PN	**Pn**	**08 43 17.7**	**+1.7**
IKL	**Isikli**	**3.70 100**	Pn	**Pn**	**08 43 19.2**	**+3.2**
IKL	**Isikli**	**3.70 100**	*e*Pn	**Pn**	**08 43 17.7**	**+1.7**
IDI	**Anoyia**	**3.86 245**	Pn	**Pn**	**08 43 19.3**	**+1.0**
	3.0nm,0.3s,baz=63,slow=15,SNR=13					
IDI			Sn	**Sn**	**08 44 04.7**	**+0.4**
	4.7nm,0.3s,baz=30,slow=14,SNR=6.4					
IDI	**Anoyia**	**3.86 245**	*e*P	**Pn**	**08 43 19.1**	**+0.8**
IDI	**Anoyia**	**3.86 245**	Pn	**Pn**	**08 43 19.3**	**+1.0**
IDI			Sn	**Sn**	**08 44 04.7**	**+0.4**
VAM	**Vamos**	**4.33 250**	*e*P	**Pn**	**08 43 21.9**	**-2.7**
BR131	**Keskin Array S**	**4.44 51**	*e*PN	**Pn**	**08 43 26.5**	**+0.3**
BR131			*e*Sn	**Sn**	**08 44 20.2**	**+1.7**
BR131	**Keskin Array S**	**4.44 51**	*e*PN	**Pn**	**08 43 26.5**	**+0.3**
BR131			*e*Sn	**Sn**	**08 44 20.2**	**+1.6**
BRTR	**Keskin Array B**	**4.44 51**	Pn	**Pn**	**08 43 26.5**	**+0.3**
	0.6nm,0.3s,baz=228,slow=17,SNR=8.6					
BRTR			Sn	**Sn**	**08 44 20.7**	**+2.1**
	0.5nm,0.3s,baz=231,slow=28,SNR=7.9					
BRTR	**Keskin Array B**	**4.44 51**	Pn	**Pn**	**08 43 26.5**	**+0.3**
BRTR			Sn	**Sn**	**08 44 20.7**	**+2.1**
KARN	**Karanos**	**4.54 251**	*e*P	**Pn**	**08 43 29.1**	**+1.5**
KYTH	**Kithira**	**4.99 264**	*e*P	**Pn**	**08 43 35.7**	**+2.0**
VLI	**Veliai**	**5.01 269**	*e*P	**Pn**	**08 43 34.0**	**0.0**
MMAI	**Mount Meron Ar**	**6.46 126**	Pn	**Pn**	**08 43 52.4**	**-1.6**
	3.0nm,0.3s,baz=308,slow=13,SNR=5.4					
MMAI			Sn	**Sn**	**08 45 04.9**	**-3.5**
	1.0nm,0.3s,baz=301,slow=25,SNR=2.8					
TORD	**Torodi Ar. Bea**	**34.17 233**	P	**P**	**08 49 03.0**	**-1.7**
	0.7nm,0.5s,baz=33,slow=8.7,SNR=18					
TORD	**Torodi Ar. Bea**	**34.17 233**	P	**P**	**08 49 03.0**	**-1.7**

*NEIC **18** 08:51:14.0, 35°.58N×27°.25E, h22km, MD3.6(ATH), After ATH.*
*CSEM **18** 08:51:14.0, 35°.58N×27°.25E, h22km, MD3.6, After ATH*

ATH 18 08:51:14.0, 35°.58N×27°.25E, h22km±1km, MD3.6/8, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.08**	**246**	*e*Pb	Pb	08 51 18.2	+0.1
KARP				*e*Sb	Sb	08 51 20.9	+0.1
KARP	**Karpathos**	**0.08**	**246**	*e*PB	Pb	08 51 18.2	+0.1
KARP				*e*SB	Sb	08 51 20.9	+0.1
KARP	**Karpathos**	**0.08**	**246**	*e*Pb	Pb	08 51 18.2	+0.1
KARP				*e*Sb	Sb	08 51 20.9	+0.1
ARG	**Arkhangelos**	**0.95**	**48**	*e*Pn	Pn	08 51 32.5	+0.4
ARG	**Arkhangelos**	**0.95**	**48**	*e*PN	Pn	08 51 32.5	+0.4
ARG	**Arkhangelos**	**0.95**	**48**	*e*Pn	Pn	08 51 32.5	+0.4
ZKR	**Zakros**	**0.96**	**241**	*e*Pn	Pn	08 51 32.0	-0.2
ZKR				*e*Sn	Sn	08 51 46.2	+1.0
ZKR	**Zakros**	**0.96**	**241**	*e*PN	Pn	08 51 32.0	-0.2
ZKR				*e*SN	Sn	08 51 46.2	+1.0
ZKR	**Zakros**	**0.96**	**241**	*e*Pn	Pn	08 51 32.0	-0.2
ZKR				*e*Sn	Sn	08 51 46.2	+1.0
NPS	**Neapolis**	**1.37**	**257**	*e*Pn	Pn	08 51 40.4	+2.6
NPS	**Neapolis**	**1.37**	**257**	*e*PN	Pn	08 51 40.4	+2.6
NPS	**Neapolis**	**1.37**	**257**	*e*Pn	Pn	08 51 40.4	+2.6
LAST	**Lasithi**	**1.51**	**254**	*e*Pn	Pn	08 51 42.4	+2.7
LAST				*e*Sn	Sn	08 52 01.9	+3.3
LAST	**Lasithi**	**1.51**	**254**	*e*PN	Pn	08 51 42.4	+2.7
LAST				*e*SN	Sn	08 52 01.9	+3.3
LAST	**Lasithi**	**1.51**	**254**	*e*Pn	Pn	08 51 42.4	+2.7
LAST				*e*Sn	Sn	08 52 01.9	+3.3
IDI	**Anoyia**	**1.95**	**262**	*e*Pb	Pb	08 51 47.5	-1.3
IDI				*e*Sn	Sn	08 52 12.3	+2.8
IDI	**Anoyia**	**1.95**	**262**	*e*PB	Pb	08 51 47.5	-1.3
IDI				*e*SN	Sn	08 52 12.2	+2.7
IDI	**Anoyia**	**1.95**	**262**	*e*Pb	Pb	08 51 47.5	-1.3
IDI				*e*Sn	Sn	08 52 12.3	+2.8
SIVA	**Sivas**	**2.07**	**255**	*e*Pn	Pn	08 51 49.9	+2.5
SIVA	**Sivas**	**2.07**	**255**	*e*PN	Pn	08 51 49.9	+2.5
SIVA	**Sivas**	**2.07**	**255**	*e*Pn	Pn	08 51 49.9	+2.5
KARN	**Karanos**	**2.73**	**267**	*e*PN	Pn	08 51 58.2	+1.8
KARN	**Karanos**	**2.73**	**267**	*e*Pn	Pn	08 51 58.2	+1.8
KYTH	**Kithira**	**3.49**	**283**	*e*Pn	Pn	08 52 10.2	+3.3
KYTH	**Kithira**	**3.49**	**283**	*e*PN	Pn	08 52 10.2	+3.3
KYTH	**Kithira**	**3.49**	**283**	*e*Pn	Pn	08 52 10.2	+3.3

*NSSP **18** 08:54:30.3, 41°.43N×44°.38E, h29km, Ms3.3*
*CSEM **18** 08:54:32.0±0.3, 41°.36N×44°.24E, h20km, ML3.3, Error ellipse: s-maj=11.0km s-min=5.3km az=96.0*
*ISCJB **18** 08:54:33.2±0.3, 41°.39N±0°.01×44°.24E±0°.03, h10km, Error ellipse: s-maj=3.6km s-min=1.9km az=11.2*
*TIF **18** 08:54:33.5, 41°.47N×44°.33E, h17km*
*MOS **18** 08:54:34.6±1.1, 41°.38N×44°.30E, h16km, mb4.2/1, Error ellipse: s-maj=19.2km s-min=6.3km az=85.2*

ISC 18 08:54:33.8±0.3, 41°.41N±0°.01×44°.24E±0°.03, h10km, n63, σ1§33/95, 13C-34D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STE	**Stepanavan**	**0.42**	**166**	⇓*i*P	**Pg**	**08 54 41.5**	**-0.5**
STEZ	**Stepenevan**	**0.42**	**163**	⇑*i*P	**Pg**	**08 54 42.4**	**+0.3**
STEZ				⇑S	**Sg**	**08 54 48.2**	**+0.5**
STEZ	**Stepenevan**	**0.42**	**163**	⇓*i*P	**Pg**	**08 54 41.5**	**-0.6**
BAW	**Bavra**	**0.44**	**229**	*i* P	**Pg**	**08 54 34.0**	**-8.4**
TBLG	**Delisi**	**0.49**	**49**	*i* PG	**Pg**	**08 54 42.4**	**-1.0**
TBLG	**Delisi**	**0.49**	**49**	P	**Pg**	**08 54 42.4**	**-1.1**
TBLG				S	**Sg**	**08 54 48.8**	**-1.2**
TBLG	**Delisi**	**0.49**	**49**	P	**Pg**	**08 54 42.4**	**-1.0**
TBLG				S	**Sg**	**08 54 48.8**	**-1.2**
MTA	**Mtatsminda**	**0.50**	**55**	P	**Pg**	**08 54 42.4**	**-1.2**
MTA				S	**Sg**	**08 54 48.8**	**-1.5**
MTA	**Mtatsminda**	**0.50**	**55**	P	**Pg**	**08 54 42.4**	**-1.2**
MTA				S	**Sg**	**08 54 48.8**	**-1.5**
TSOZ	**Tsokhamarg**	**0.54**	**212**	⇓*i*P	**Pg**	**08 54 43.3**	**-0.9**
TSOZ				⇑*i*S	**Sg**	**08 54 53.0**	**+1.7**
TSOZ	**Tsokhamarg**	**0.54**	**212**	⇓P	**Pg**	**08 54 43.3**	**-0.9**
CKLZ	**Chkalov**	**0.56**	**147**	⇑*i*P	**Pg**	**08 54 43.7**	**-1.1**
GOR	**Gori**	**0.59**	**350**	P	**Pg**	**08 54 44.8**	**-0.3**
GOR				S	**Sg**	**08 54 53.0**	**+0.1**
GOR	**Gori**	**0.59**	**350**	P	**Pg**	**08 54 44.8**	**-0.4**
GOR				S	**Sg**	**08 54 53.0**	**+0.1**
KAMZ	**Kamo**	**0.62**	**201**	⇓*i*P	**Pg**	**08 54 44.9**	**-0.9**
KAMZ				⇑*i*S	**Sg**	**08 54 55.0**	**+1.0**
KAMZ	**Kamo**	**0.62**	**201**	⇓P	**Pg**	**08 54 44.9**	**-0.9**
TCHZ	**Tchakhmakh**	**0.65**	**219**	⇓*i*P	**Pg**	**08 54 45.7**	**-0.7**
TCHZ				⇓*i*S	**Sg**	**08 54 56.0**	**+1.1**
TCHZ	**Tchakhmakh**	**0.65**	**219**	⇓P	**Pg**	**08 54 45.7**	**-0.7**
HNAZ	**Hnaberd**	**0.78**	**185**	⇓*i*P	**Pg**	**08 54 47.3**	**-1.5**
HNAZ				⇑*i*S	**Sg**	**08 54 59.7**	**+0.8**
HNAZ	**Hnaberd**	**0.78**	**185**	⇓P	**Pg**	**08 54 47.3**	**-1.5**
LERZ	**Lernakert**	**0.87**	**195**	⇓*i*P	**Pg**	**08 54 48.9**	**-1.6**
LERZ				⇓*i*S	**Sg**	**08 55 02.5**	**+0.7**
KEH	**Kehvi**	**0.93**	**346**	P	**Pg**	**08 54 49.3**	**-2.4**
KEH				S	**Sg**	**08 55 01.4**	**-2.4**
AMBZ	**Amberd**	**1.02**	**179**	⇓*i*P	**Pg**	**08 54 48.5**	**-4.9**
AMBZ				⇓*i*S	**Sg**	**08 55 03.4**	**-3.2**
AMBZ	**Amberd**	**1.02**	**179**	⇓P	**Pg**	**08 54 48.5**	**-4.9**
ARUZ	**Aruch**	**1.13**	**186**	⇓*i*P	**Pg**	**08 54 50.4**	**-5.1**
ARUZ				⇓*i*S	**Sg**	**08 55 05.5**	**-4.6**
ARUZ	**Aruch**	**1.13**	**186**	⇓P	**Pb**	**08 54 50.4**	**-5.0**
KAPZ	**Kaputan**	**1.14**	**162**	⇓*i*P	**Pg**	**08 54 49.8**	**-5.8**
KAPZ				⇓*i*S	**Sg**	**08 55 05.4**	**-5.1**
KAPZ	**Kaputan**	**1.14**	**162**	⇓P	**Pg**	**08 54 49.8**	**-5.9**
PAAR	**P'arak'ar**	**1.26**	**175**	⇓*i*P	**Pn**	**08 54 52.0**	**-5.5**
PAAR				⇓*i*S	**Sb**	**08 55 09.6**	**-4.3**
PAAR	**P'arak'ar**	**1.26**	**175**	⇓P	**Pn**	**08 54 52.0**	**-5.4**
GNI	**Garni**	**1.31**	**163**	*d i*PG	**Pg**	**08 54 59.1**	**+0.1**
GNI				*i* S	**Sb**	**08 55 17.5**	**+2.1**
GNI				pmax	pmax		
	comp=Z,35nm,0.5s						
GNI				smax			
	comp=Z,101nm,0.6s						
GNI	**Garni**	**1.31**	**163**	⇓*i*P	**Pn**	**08 54 59.1**	**+1.0**
GNI				⇑*i*S	**Sb**	**08 55 17.5**	**+2.1**
ONI	**Oni**	**1.32**	**334**	P	**Pn**	**08 54 57.5**	**-0.8**
ONI				S	**Sb**	**08 55 14.9**	**-0.7**
ONI	**Oni**	**1.32**	**334**	P	**Pn**	**08 54 57.5**	**-0.8**
ONI				S	**Sb**	**08 55 14.9**	**-0.7**
VNNZ	**Vanand**	**1.34**	**194**	⇑*i*P	**Pn**	**08 54 54.1**	**-4.5**
VNNZ				⇓*i*S	**Sb**	**08 55 12.6**	**-3.6**
VNNZ	**Vanand**	**1.34**	**194**	⇑P	**Pn**	**08 54 54.1**	**-4.5**
VRNZ	**Vardanashen**	**1.36**	**182**	⇓*i*P	**Pn**	**08 54 53.8**	**-5.0**
VRNZ				⇓*i*S	**Sb**	**08 55 13.9**	**-2.8**
VRNZ	**Vardanashen**	**1.36**	**182**	⇓P	**Pn**	**08 54 53.8**	**-5.0**
ZEI	**Tsey**	**1.39**	**350**	⇓*i*PG	**Pg**	**08 54 59.5**	**-0.9**
ZEI	**Tsey**	**1.39**	**350**	*i* Pg	**Pg**	**08 54 59.5**	**-0.9**
LACR	**Lac**	**1.42**	**2**	⇑*i*PG	**Pn**	**08 54 59.5**	**-0.1**
LACR				*e*S	**Sn**	**08 55 18.2**	**-0.1**
LACR	**Lac**	**1.42**	**2**	*i* Pg	**Pn**	**08 54 59.5**	**-0.1**
LACR				*e*Sg	**Sn**	**08 55 18.2**	**-0.1**
DIGR	**Digorskoe uzhe**	**1.57**	**342**	⇑*i*PG	**Pn**	**08 55 02.7**	**+1.0**
DIGR	**Digorskoe uzhe**	**1.57**	**342**	*i* Pg	**Pn**	**08 55 02.7**	**+1.0**
VLKR	**Vladikavkaz**	**1.67**	**11**	⇓*i*PN	**Pn**	**08 55 04.8**	**+1.7**
VLKR				*e*S	**Sg**	**08 55 27.3**	**-0.2**
VLKR	**Vladikavkaz**	**1.67**	**11**	*e*Sg	**Sg**	**08 55 27.3**	**-0.2**
VADZ	**Vardenis**	**1.68**	**137**	⇑*i*P	**Pn**	**08 55 04.0**	**+0.8**
VADZ				⇑*i*S	**Sn**	**08 55 27.0**	**+2.2**
KORR	**Kora**	**1.68**	**356**	⇓*i*PN	**Pn**	**08 55 04.7**	**+1.4**
KORR	**Kora**	**1.68**	**356**	*i* Pn	**Pn**	**08 55 04.7**	**+1.4**
SNJR	**Sundja**	**1.71**	**14**	*e*PN	**Pn**	**08 55 05.5**	**+1.8**
SNJR				*e*S	**Sg**	**08 55 28.4**	**-0.5**
SNJR	**Sundja**	**1.71**	**14**	*e*Sg	**Sg**	**08 55 28.4**	**-0.5**
GANJ	**Ganja**	**1.75**	**115**	P	**Pn**	**08 55 03.6**	**-0.6**
	SNR=68						
GANJ				S	**Sn**	**08 55 25.6**	**-0.9**
ARNR	**Ardon**	**1.78**	**1**	*e*PN	**Pn**	**08 55 06.3**	**+1.7**
LSNR	**Lesken**	**1.89**	**351**	*e*PN	**Pn**	**08 55 08.0**	**+1.9**
BTLR	**Botlikh**	**1.94**	**49**	*e*PN	**Pn**	**08 55 08.5**	**+1.7**
BTLR				pmax	pmax		
	comp=Z,49nm,0.3s						
KMSR	**Komsomolskaya**	**1.96**	**1**	*e*PN	**Pn**	**08 55 09.4**	**+2.3**
BTKR	**Batakoyurt**	**1.98**	**6**	*e*PN	**Pn**	**08 55 09.7**	**+2.4**
XNZR	**Khunzakh**	**2.16**	**58**	*i* PN	**Pn**	**08 55 11.5**	**+1.7**
XNZR				*e*S	**Sb**	**08 55 39.5**	**-0.3**
XNZR	**Khunzakh**	**2.16**	**58**	*e*Sb	**Sb**	**08 55 39.5**	**-0.3**
SEKA	**Sheki**	**2.24**	**94**	P	**Pn**	**08 55 10.5**	**-0.4**
	SNR=18						
SEKA				S	**Sn**	**08 55 40.7**	**+2.2**
UNCR	**Uncukul**	**2.31**	**55**	*e*PN	**Pb**	**08 55 14.0**	**-1.5**
UNCR				*e*S	**Sb**	**08 55 45.0**	**+1.0**
UNCR				pmax	pmax		
	comp=Z,45nm,0.3s						
NAX	**Nakhchivan**	**2.43**	**156**	P	**Pg**	**08 55 19.6**	**-0.7**
	SNR=3.6						
IML	**Ismayilli**	**3.04**	**100**	P	**Pn**	**08 55 25.2**	**+3.3**
	SNR=4.5						

*ISCJB **18** 08:58:52.0±0.8, 64°.77N±0°.03×30°.7E±0°.1, h0km, Error ellipse: s-maj=8.4km s-min=4.3km az=1.9*
*CSEM **18** 08:58:52.7±0.4, 64°.81N×30°.90E, h2km, ML2.2, Error ellipse: s-maj=10.7km s-min=4.7km az=81.0, Mining explosion.*
*HEL **18** 08:58:53.5±0.2, 64°.77N×30°.81E, h0km, ML2.2, Explosion*
*IDC **18** 08:59:00.5±2.4, 65°.00N×29°.73E, h0km, mb1 3.0/4, mb1mx2.8/27, mbtmp2.9/4, ML2.5/4, Error ellipse: s-maj=36.9km s-min=10.3km az=97.0*
*UPP **18** 08:59:42.2, 65°.02N×22°.74E, h0km, ML0.7, Suspected Mining explosion.*

ISC 18 08:58:52.9±0.8, 64°.79N±0°.03×30°.7E±0°.1, h0km, n21, σ1§01/35, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KU6	**Riekki**	**1.29**	**345**	*e*P	**Pg**	**08 59 17.0**	**-0.6**
KU6				*e*S	**Sg**	**08 59 33.6**	**-0.8**
KU6	**Riekki**	**1.29**	**345**	P	**Pg**	**08 59 17.0**	**-0.6**
KU6				S	**Sg**	**08 59 33.5**	**-0.9**
MSF	**Maaselka**	**1.33**	**329**	*e*P	**Pg**	**08 59 17.8**	**-0.6**
MSF				*e*S	**Sg**	**08 59 35.9**	**+0.2**
MSF	**Maaselka**	**1.33**	**329**	P	**Pg**	**08 59 17.8**	**-0.6**
MSF				S	**Sg**	**08 59 35.9**	**+0.2**
KJN	**Kajaani**	**1.49**	**243**	*e*P	**Pn**	**08 59 20.1**	**-0.6**
KJN				*e*S	**Sg**	**08 59 39.1**	**-1.4**
KJN	**Kajaani**	**1.49**	**243**	P	**Pn**	**08 59 20.1**	**-0.7**
JOF	**Joensuu**	**1.89**	**172**	*e*P	**Pn**	**08 59 26.5**	**+0.1**
JOF				*e*S	**Sn**	**08 59 50.1**	**-0.7**
JOF	**Joensuu**	**1.89**	**172**	P	**Pn**	**08 59 26.4**	**+0.1**
JOF				S	**Sn**	**08 59 50.1**	**-0.7**
OUL	**Oulu**	**2.08**	**281**	*e*P	**Pn**	**08 59 30.4**	**+1.5**
OUL				*e*S	**Sn**	**08 59 57.2**	**+1.7**
OUL	**Oulu**	**2.08**	**281**	P	**Pn**	**08 59 30.4**	**+1.5**
OUL				S	**Sn**	**08 59 57.2**	**+1.7**
SUF	**Sumiainen**	**2.91**	**227**	*e*P	**Pn**	**08 59 41.6**	**+1.4**
SUF				*e*SB	**Sb**	**09 00 20.2**	**-1.2**
SUF				MSG		09 00 21.1	
	comp=Z,8.0nm,0.4s						
SUF	**Sumiainen**	**2.91**	**227**	P	**Pn**	**08 59 41.6**	**+1.4**
KEF	**Keuruu**	**3.72**	**228**	*e*P	**Pn**	**08 59 52.5**	**+1.1**
KEF				*e*S	**Sn**	**09 00 35.8**	**+0.1**
KEF				*e*SG	**Sg**	**09 00 48.0**	**-4.0**
KEF				MSG		09 00 53.1	
	comp=Z,4.4nm,0.4s						
KEF	**Keuruu**	**3.72**	**228**	P	**Pn**	**08 59 52.4**	**+1.0**
KEF				S	**Sn**	**09 00 35.8**	**0.0**
SJUU	**Sjulsmark**	**3.92**	**285**	P	**Pn**	**08 59 55.2**	**+1.0**
FINES	**FINESS Array B**	**3.96**	**214**	Pn	**Pn**	**09 00 02.6**	**+7.8**
	comp=Z,0.2nm,0.3s,baz=28,slow=13,SNR=3.7						
FINES				Lg		09 00 54.8	
	comp=Z,1.3nm,0.3s,baz=27,slow=30,SNR=13						
BURU	**Burvik**	**4.02**	**271**	P	**Pn**	**08 59 55.9**	**+0.3**
LILU	**Lilltraesk**	**4.64**	**281**	P	**Pn**	**09 00 04.9**	**+0.8**
ARCES	**ARCESS Array B**	**5.19**	**339**	Pn	**Pn**	**09 00 12.6**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=156,slow=14,SNR=42						
ARCES				Sn	**Sn**	**09 01 10.1**	**-1.8**
	comp=Z,0.5nm,0.3s,baz=156,slow=24,SNR=7.1						
ARCES				Lg		09 01 30.2	
	comp=Z,0.6nm,0.3s,baz=156,slow=32,SNR=6.0						
HFS	**Hagfors**	**9.15**	**247**	Pn	**Pn**	**09 01 05.6**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=55,slow=13,SNR=4.3						
HFS				Lg		09 03 33.4	
	comp=Z,0.3nm,0.3s,baz=67,slow=30,SNR=3.5						
NOA	**NORSAR Array B**	**9.64**	**256**	Pn	**Pn**	**09 01 11.7**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=53,slow=12,SNR=2.9						

*NIED **18** 09:04:00, 39°.10N×140°.90E, h5km, Mw4.4 Best double couple: M0=3.92000×10^15 NP1:φ=196.00000°, δ=46.00000°, λ=78.00000°. NP2:φ=33.00000°, δ=45.00000°, λ=102.00000°.*
*BJI **18** 09:04:29.5, 38°.96N×141°.31E, h11km, mB4.8/24, mb4.6/36, Ms4.2/28, Ms7 4.1/29*
*ISCJB **18** 09:04:32.5±0.5, 39°.15N±0°.02×140°.85E±0°.02, h6km±3km, mb4.6/127, MS3.9/30, Error ellipse: s-maj=3.7km s-min=2.7km az=155.1*
*IDC **18** 09:04:32.4±0.5, 39°.15N×140°.84E, h0km, mb4.5/29, mb1 4.5/32, mb1mx4.5/36, mbtmp4.4/32, ML3.9/3, MS3.6/15, Ms1 3.7/15, ms1mx3.4/41, Error ellipse: s-maj=13.9km s-min=10.2km az=112.0*
*NEIC **18** 09:04:33.5, 39°.10N×140°.93E, h12km, mb4.7/76, MW4.3(NIED), After JMA.*
NEIC Recorded [3 JMA] in Iwate; [2 JMA] in Akita and Miyagi; [1 JMA] in Aomori.
*JMA **18** 09:04:33.4, 39°.10N×140°.93E, h12km±1km, M4.5 Broadband fault plane solution: P waves. NP1: φ=154.00000°, δ=88.00000°, λ=2.00000°. NP2:φ=64.00000°, δ=88.00000°, λ=178.00000°. Principal axes: T Plg3.0000°, Azm19.0000°; N Plg87.0000°, Azm199.0000°; P Plg0.0000°, Azm109.0000°;*
JMA Felt III J1.
*MOS **18** 09:04:37.0±0.8, 39°.29N×140°.74E, h33km, mb4.9/65 Error ellipse: s-maj=8.2km s-min=4.8km az=94.3*
*SZGRF **18** 09:04:41.3, 39°.84N×141°.51E, h33km, mb4.8, Eastern Honshu, Japan*

ISC 18 09:04:33.6±0.5, 39°.13N±0°.02×140°.87E±0°.02, h3km±2km, h17km±2km: pP-P, n582, σ0§65/594, mb4.6/127, MS3.9/30, 168C-151D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.33**	**122**	⇓P	**Pg**	**09 04 38.8**	**-1.0**
JMK				S	**Sg**	**09 04 42.6**	**-1.4**
JRG	**Rokugo**	**0.33**	**326**	⇓P	**Pg**	**09 04 40.9**	**+1.1**
JRG				*e*S	**Sg**	**09 04 46.7**	**+2.6**
JYK	**Kaneyama**	**0.45**	**243**	⇓P	**Pg**	**09 04 42.9**	**+0.8**
JYK				S	**Sg**	**09 04 49.4**	**+1.5**
JOM	**Ohasama**	**0.48**	**43**	⇑P	**Pg**	**09 04 42.5**	**-0.3**
JOM				S	**Sg**	**09 04 49.0**	**0.0**
OFUJ	**Ofunato**	**0.63**	**94**	⇓P	**Pg**	**09 04 44.7**	**-0.9**
OFUJ				*e*S	**Sg**	**09 04 52.7**	**-1.0**
JIO	**Ouri**	**0.77**	**150**	⇓P	**Pg**	**09 04 47.1**	**-1.2**
JIO				S	**Sg**	**09 04 56.8**	**-1.4**
JOU	**Okura**	**0.77**	**192**	⇑P	**Pg**	**09 04 48.2**	**-0.2**
JOU				S	**Sg**	**09 04 58.4**	**0.0**
MAJO	**Matsushiro**	**3.33**	**220**	*e*P	**Pn**	**09 05 27.9**	**+1.5**
MAT	**Matsushiro**	**3.33**	**220**	P	**Pn**	**09 05 27.7**	**+1.3**
MAT				S	**Sn**	**09 06 08.2**	**+1.7**
MJAR	**Matsushiro Arr**	**3.33**	**220**	Pn	**Pn**	**09 05 27.7**	**+1.3**
	7.4nm,0.3s,baz=21,slow=27,SNR=46						
MJAR				Pg	**Pb**	**09 05 32.6**	**-0.6**
	9.0nm,0.3s,baz=31,slow=12,SNR=45						
MJAR				Lg		09 06 19.5	
	4.8nm,0.3s,baz=353,slow=17,SNR=5.1						
ERM	**Erimo**	**3.37**	**30**	*e*P	**Pn**	**09 05 27.8**	**+0.7**
ASAJ	**Asahikawa**	**5.15**	**14**	Pn	**Pn**	**09 05 53.0**	**+1.5**
	4.7nm,0.3s,baz=248,slow=13,SNR=18						
ASAJ	**Asahikawa**	**5.15**	**14**	P	**Pn**	**09 05 53.0**	**+1.5**
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
JHJ	**Hachijo jima 2**	**6.06**	**189**	Pn	**Pn**	**09 06 03.8**	**-0.2**
	comp=Z,13nm,0.3s,baz=229,slow=18,SNR=12						
JHJ				Sn	**Sn**	**09 07 14.7**	**+0.9**
	comp=Z,25nm,0.3s,baz=71,slow=23,SNR=8.3						
YUK	**Yuzh-Kuril'sk**	**6.17**	**36**	⇓*i*P	**Pn**	**09 06 07.0**	**+1.5**
YUK				*e*S	**Sn**	**09 07 15.8**	**-0.7**
YUK				pmax	pmax		
	comp=Z,466nm,1.4s						
YUK				pmax	pmax		
	comp=N,80nm,0.2s						
YUK				pmax	pmax		
	comp=E,90nm,0.5s						
YUK				smax			
	comp=N,345nm,0.6s						
YUK				smax			
	comp=E,216nm,0.6s						
YUK				MLR	MLR		
	comp=E,1μm,17.2s						
YUK				MLR	MLR		
	comp=Z,390nm,17.2s						
YUK				MLR	MLR		
	comp=N,56nm,2.2s						
YSS	**Yuzh-Sakhalins**	**7.95**	**9**	⇑*e*P	**Pn**	**09 06 30.3**	**+0.5**
YSS				pmax	pmax		
	comp=Z,50nm,0.9s						
YSS				MLR	MLR		
	comp=Z,500nm,12.0s						
YSS	**Yuzh-Sakhalins**	**7.95**	**9**	*e*Pn	**Pn**	**09 06 30.3**	**+0.4**
KUR	**Kuril'sk**	**8.02**	**38**	P	**Pn**	**09 06 39.0**	**+8.2**
KUR				S	**Sn**	**09 08 01.5**	**-0.4**
MDJ	**Mudanjiang**	**10.04**	**307**	P	**Pn**	**09 07 04.8**	**+6.3**
MDJ				PcP	PcP	09 13 06.5	-2.7
MDJ				ScP	ScP	09 16 40.6	-1.7
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,84nm,4.0s						
MDJ				LR	LR		
	comp=N,320nm,16.3s						
MDJ				LR	LR		
	comp=E,390nm,13.8s						
MDJ				LR	LR		
	comp=Z,600nm,17.6s						
HABR	**Khabarovsk**	**10.24**	**338**	*e*P	**Pn**	**09 07 01.6**	**+0.3**
HABR				*e*		09 08 56.1	
HABR				pmax	pmax		
	comp=E,35nm,2.4s						
HABR				pmax	pmax		
	comp=N,27nm,1.4s						
HABR				pmax	pmax		
	comp=Z,56nm,1.7s						
HABR				MLR	MLR		
	comp=Z,153nm,12.0s						
KSRS	**Korea Array**	**10.31**	**265**	Pn	**Pn**	**09 07 05.7**	**+3.4**
	comp=Z,2.3nm,0.3s,baz=80,slow=14,SNR=42						
KSRS				Sn	**Sn**	**09 09 05.0**	**+6.6**
	comp=Z,1.3nm,0.3s,baz=76,slow=24,SNR=20						
KSRS				LR	LR	09 10 38.3	
	comp=Z,274nm,19.5s,baz=265,slow=35						
KSRS	**Korea Array**	**10.31**	**265**	P	**Pn**	**09 07 05.7**	**+3.4**
KSRS						09 09 05.0	
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KSRS				smax			
	comp=N,1.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,274nm,19.5s						
KLR	**Kul'dur**	**12.03**	**330**	*e*P	**Pn**	**09 07 25.2**	**-0.5**
KLR				pmax	pmax		
	comp=E,62nm,1.6s						
KLR

comp=E,35nm,12.0s,MS3.7
SEY Seymchan 24.84 13*c iP* **P 09 09 57.3 +0.6**
SONM Songino Array 26.30 301 P **P 09 10 09.8 -0.3**
comp=E,0.7nm,0.6s,mb3.4,baz=95,slow=12,SNR=5.5
SONM LR LR 09 20 47.6
comp=E,145nm,20.3s,MS3.5,baz=271,slow=37
ENH Enshi 27.16 261 *eP* **P 09 10 17.5 -0.6**
comp=E,14nm,0.8s,mb4.5
ZAK Zakamensk 28.67 306 *eP* **P 09 10 29.9 -1.5**
LZH Lanzhou 29.36 276 *eP* **P 09 10 40.8 +3.2**
LZH pP pP 09 10 45.5 +6.9
LZH sP sP 09 10 48.8 +10
LZH PP PP 09 11 34.1 -10
LZH PcP PcP 09 13 44.0 +0.1
LZH *e*S **S 09 15 32.3 +0.5**
LZH pmax pmax
comp=Z,16nm,1.0s,mb4.7
LZH pmax pmax
comp=Z,100nm,4.3s
LZH LR LR
comp=E,580nm,11.8s
LZH LR LR
comp=Z,840nm,13.1s,MS4.5
GYA Guiyang 31.22 256 P **P 09 10 55.6 +1.4**
GYA PP PP 09 11 58.9 -5.6
GYA PcP PcP 09 13 51.0 +2.1
GYA S **S 09 16 01.9 +0.8**
GYA SS SS 09 17 47.6 -27
GYA pmax pmax
comp=Z,20nm,0.8s,mb5.0
GYA pmax pmax
comp=Z,110nm,4.7s
GYA LR LR
comp=N,630nm,17.0s,MS4.5
GYA LR LR
comp=E,520nm,18.2s,MS4.5
GYA LR LR
comp=Z,670nm,17.3s,MS4.4
CD2 Chengdu 31.31 266 *eP* **P 09 10 55.8 +0.9**
CD2 pP pP 09 11 00.3 +4.4
CD2 PP PP 09 11 57.8 -7.6
CD2 S **S 09 15 59.3 -3.1**
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
CD2 pmax pmax
comp=Z,40nm,4.2s
CD2 LR LR
comp=N,320nm,13.2s
CD2 LR LR
comp=Z,260nm,14.4s,MS4.0
GTA Gaotai 31.59 284 *eP* **P 09 10 57.8 +0.5**
GTA pP pP 09 11 02.4 +4.1
GTA pmax pmax
comp=Z,2.0nm,0.7s,mb4.1
BILL Bilibino 32.16 18*d iP* **P 09 11 01.4 -0.6**
BILL *e* 09 13 49.8
BILL pmax pmax
comp=Z,8.0nm,1.2s,mb4.4
BILL MLR MLR
comp=Z,100nm,15.0s,MS3.6
BILL Bilibino 32.16 18 *eP* **P 09 11 01.2 -0.8**
comp=Z,10nm,1.1s,mb4.6
TIXI Tiksi 33.17 353 *eP* **P 09 11 09.5 -1.3**
TIXI pmax pmax
comp=Z,18nm,1.8s,mb4.7
TIXI Tiksi 33.17 353 *eP* **P 09 11 09.5 -1.2**
comp=Z,18nm,1.8s,mb4.7
KMI Kunming 34.91 258 P **P 09 11 27.3 +0.9**
KMI PP PP 09 12 45.6 +0.1
KMI S **S 09 16 58.3 -0.2**
KMI SS SS 09 19 11.1 -19
KMI pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
KMI pmax pmax
comp=Z,110nm,4.9s
KMI LR LR
comp=N,190nm,11.8s,MS4.2
KMI LR LR
comp=E,200nm,16.4s,MS4.2
KMI LR LR
comp=Z,180nm,14.4s,MS4.0
WMQ Urumqi 39.55 294 P **P 09 12 06.0 +0.4**
WMQ PP PP 09 13 41.0 +4.9
WMQ S **S 09 18 07.0 -1.7**
WMQ pmax pmax
comp=Z,18nm,1.0s,mb4.8
WMQ LR LR
comp=N,71nm,15.0s,MS4.1
WMQ LR LR
comp=E,210nm,15.0s,MS4.1
WMQ LR LR
comp=Z,160nm,15.0s,MS4.0
ZAA0 Zalesovo Array 40.21 311 *eP* **P 09 12 10.5 -0.5**
ZAA0 *e*PcP PcP 09 14 14.3 -0.6
ZALV Zalesovo Beam 40.21 311 P **P 09 12 10.4 -0.6**
comp=Z,7.5nm,0.8s,mb4.5,baz=79,slow=7.7,SNR=18
ZALV PcP PcP 09 14 14.4 -0.5
comp=Z,1.1nm,0.4s,baz=147,slow=3.5,SNR=3.8
ZALV LR LR 09 29 22.5
comp=Z,88nm,21.0s,MS3.6,baz=79,slow=37
ZALV Zalesovo Beam 40.21 311 P **P 09 12 10.4 -0.6**
ZALV 09 14 14.4
ZALV pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
ZALV MLR MLR
comp=Z,88nm,21.0s,MS3.6
CMAR Chiang Mai Arr 41.66 253 P **P 09 12 23.3 0.0**
comp=Z,0.5nm,0.3s,mb3.6,baz=41,slow=7.0,SNR=5.2
CMAR PcP PcP 09 14 20.2 0.0
comp=Z,1.3nm,0.7s,baz=14,slow=2.0,SNR=5.9
CMAR LR LR 09 30 26.7
comp=Z,54nm,19.8s,MS3.4,baz=195,slow=37
CMAR Chiang Mai Arr 41.66 253 P **P 09 12 23.3 0.0**
CMAR 09 14 20.2
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR MLR MLR
comp=Z,54nm,19.8s
MK31 Makanchi Array 42.67 300 *eP* **P 09 12 30.7 -0.6**
MKAR Makanchi Array 42.67 300 P **P 09 12 30.8 -0.5**
comp=Z,3.0nm,0.6s,mb4.2,baz=83,slow=11,SNR=21
MKAR LR LR 09 30 46.1
comp=Z,86nm,20.4s,MS3.6,baz=168,slow=37
MKAR Makanchi Array 42.67 300 P **P 09 12 30.8 -0.5**
MKAR pmax pmax
comp=Z,3.0nm,0.6s
MKAR MLR MLR
comp=Z,86nm,20.4s
TTA Tatalina 43.97 36 *eP* **P 09 12 42.1 +0.6**
SVW2 Sparrevohn 44.14 39 *eP* **P 09 12 52.5 +10**
KURK Kurchatov 44.33 306 P **P 09 12 43.8 -0.8**
comp=Z,17nm,1.0s,mb4.8,baz=82,slow=8.4,SNR=32
KURK PcP PcP 09 14 27.6 -1.1
comp=Z,2.3nm,0.8s,baz=85,slow=3.8,SNR=4.7
KURK Kurchatov 44.33 306*ce*P **P 09 12 43.7 -0.9**
KURK pmax pmax
comp=Z,21nm,1.1s,mb4.8
KURK Kurchatov 44.33 306 *eP* **P 09 12 43.7 -0.8**
comp=Z,13nm,0.8s,mb4.7
OHAK Old Harbor 45.53 44 *eP* **P 09 12 53.1 -1.0**
comp=Z,7.8nm,0.8s,mb4.7
CHUM Lake Minchumin 45.65 35 *eP* **P 09 12 55.4 +0.5**
comp=Z,11nm,1.2s,mb4.7
CHUM *e*PcP PcP 09 14 32.8 -0.2
KDAK Kodiak Island 45.85 43 P **P 09 12 55.8 -0.9**
comp=Z,7.2nm,0.7s,mb4.7,baz=198,slow=3.1,SNR=8.4
KDAK Kodiak Island 45.85 43*ce*P **P 09 12 56.7 +0.1**
KDAK Kodiak Island 45.85 43 *eP* **P 09 12 55.5 -1.2**
comp=Z,6.4nm,0.7s,mb4.7
KTH Kantishna Hill 46.27 35 *eP* **P 09 12 59.8 0.0**
comp=Z,16nm,1.1s,mb4.9
COLD Coldfoot 46.55 30 *eP* **P 09 13 02.2 +0.3**
comp=Z,5.9nm,1.1s,mb4.4
TRF Thorofare Moun 46.56 35 *eP* **P 09 13 03.0 +0.9**
comp=Z,3.1nm,0.7s,mb4.3
SEW Seward 47.22 40 *eP* **P 09 13 06.0 -1.2**
comp=Z,9.9nm,1.0s,mb4.7
SEW *e*PP PP 09 14 57.7 -0.3
PMR Palmer 47.22 38 *eP* **P 09 13 06.2 -1.1**
PMR pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
PMR Palmer 47.22 38 *eP* **P 09 13 06.2 -1.1**
comp=Z,7.2nm,1.0s,mb4.6
COLA College 47.56 33 *eP* **P 09 13 09.9 +0.1**
COLA pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
COLA College 47.56 33 *eP* **P 09 13 09.9 0.0**
comp=Z,3.5nm,0.7s,mb4.5
TARA Tarawa 47.64 134 *eP* **P 09 12 59.2 -12**
TARA *e*PcP PcP 09 14 36.1 -4.7
TARA *e*ScP ScP 09 18 34.9 -0.8
TKM2 Tokmak 2 48.28 297 *eP* **P 09 13 16.3 +0.5**
TKM2 pmax pmax
comp=Z,20nm,1.1s,mb5.1
TKM2 Tokmak 2 48.28 297 *eP* **P 09 13 16.2 +0.5**
comp=Z,20nm,1.1s,mb5.1
BVAR Borovoye Array 48.86 311 P **P 09 13 19.5 -0.6**
comp=Z,2.6nm,0.6s,mb4.4,baz=77,slow=7.8,SNR=10
BVAR PcP PcP 09 14 44.4 -0.2
comp=Z,3.0nm,0.7s,baz=83,slow=4.9,SNR=6.0
BVAR Borovoye Array 48.86 311 P **P 09 13 19.5 -0.6**
BVAR 09 14 44.4
BVAR pmax pmax
comp=Z,3.0nm,0.6s
BRVK Borovoye 48.92 311⇑ *iP* **P 09 13 20.2 -0.3**
BRVK pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
BRVK Borovoye 48.92 311 *eP* **P 09 13 20.6 +0.1**
AAK Ala-Archa 49.14 297 LR LR 09 33 22.8
comp=Z,80nm,21.8s,MS3.7,baz=98,slow=35
AAK Ala-Archa 49.14 297*d iP* **P 09 13 22.8 +0.4**
AAK pmax pmax
comp=Z,11nm,2.5s,mb4.4
KSH Kashi 49.19 292 *eP* **P 09 13 27.5 +4.7**
KSH pP pP 09 13 32.1 +8.3
KSH PcP PcP 09 14 49.3 +3.3
KSH PP PP 09 15 22.5 +6.2
KSH ScP ScP 09 18 42.8 +0.8
KSH PcS PcS 09 18 44.5 +2.1
KSH S **S 09 20 33.6 +4.6**
KSH ScS ScS 09 23 15.8 0.0
KSH SS SS 09 24 02.5 +2.6
KSH pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
KSH LR LR
comp=N,350nm,10.5s
KSH LR LR
comp=E,160nm,7.0s
KSH LR LR
comp=Z,59nm,4.5s
UCH Uchtor 49.27 296 *eP* **P 09 13 24.3 +0.9**
comp=Z,2.6nm,0.9s,mb4.3
EKS2 Erkin-Say 49.63 297 *eP* **P 09 13 26.0 -0.1**
comp=Z,3.5nm,0.8s,mb4.4
EGAK Eagle 50.41 33 *eP* **P 09 13 30.9 -0.9**
KAKA Kakadu 52.16 190 *eP* **P 09 13 45.4 +0.1**
comp=Z,38nm,0.9s,mb5.3
INK Inuvik 52.73 28 P **P 09 13 49.2 +0.1**
comp=Z,6.8nm,0.9s,mb4.6,baz=278,slow=8.7,SNR=14
INK Inuvik 52.73 28 *eP* **P 09 13 49.3 +0.2**
HYT Haines Junctio 52.89 37 *eP* **P 09 13 52.0 +1.6**
SVE Sverdlovsk 53.31 317⇑ *eP* **P 09 13 53.5 +0.1**
SVE *e*S **S 09 21 15.8 -10**
SVE pmax pmax
comp=Z,25nm,1.2s,mb5.0
SVE MLR MLR
comp=Z,194nm,16.0s,MS4.2
ARU Arti 54.52 317*d iP* **P 09 14 01.9 -0.4**
ARU *e* 09 16 00.7
ARU S **S 09 21 40.5 -1.3**
ARU pmax pmax
comp=Z,17nm,1.0s,mb5.0
ARU MLR MLR
comp=Z,199nm,17.0s,MS4.2
ABKAR Akbulak array 56.28 309 *eP* **P 09 14 14.4 -0.7**
comp=Z,5.9nm,0.7s,mb4.7
KBL Kabul 56.29 289 *eP* **P 09 14 15.0 -0.4**
KBL pmax pmax
comp=Z,18nm,0.9s,mb5.1
KBL Kabul 56.29 289 *eP* **P 09 14 15.0 -0.4**
comp=Z,18nm,0.9s,mb5.1
AKTK Aktyubinsk 56.97 311 P **P 09 14 19.1 -0.9**
AKTK PcP PcP 09 15 14.3 -0.9
AKTO Aktyubinsk 56.97 311 P **P 09 14 19.1 -0.9**
comp=Z,5.1nm,0.8s,mb4.6,baz=56,slow=9.7,SNR=20
AKTO PcP PcP 09 15 14.3 -0.9
comp=Z,3.5nm,0.9s,baz=84,slow=4.0,SNR=4.1
AKTO Aktyubinsk 56.97 311 P **P 09 14 19.1 -0.9**
AKTO 09 15 14.3
AKTO pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
FITZ Fitzroy Crossi 58.68 197 P **P 09 14 31.5 -0.8**
comp=Z,1.7nm,0.5s,mb4.3,baz=38,slow=6.1,SNR=6.4
WRAB Tennant Creek 59.06 187 *eP* **P 09 14 33.4 -1.5**
WRAB pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
WRAB Tennant Creek 59.06 187 *eP* **P 09 14 33.4 -1.5**
comp=Z,8.7nm,0.8s,mb4.8
WRA Warramunga Arr 59.07 187 P **P 09 14 33.5 -1.5**
comp=Z,9.7nm,0.8s,mb4.9,baz=4.4,slow=7.2,SNR=163
WRA Warramunga Arr 59.07 187 P **P 09 14 33.5 -1.5**
WRA pmax pmax
comp=Z,10.0nm,0.8s
APA Apatity 60.61 335⇑ *iP* **P 09 14 43.6 -1.4**
APA *i* 09 17 06.0
APA pmax pmax
comp=Z,23nm,1.2s,mb5.2
APA MLR MLR
comp=Z,100nm,17.0s,MS4.0
RES Resolute Bay 60.69 15 *eP* **P 09 14 44.4 -1.1**
RES pmax pmax
comp=Z,15nm,1.0s,mb5.1
RES Resolute Bay 60.69 15 *eP* **P 09 14 44.4 -1.1**
comp=Z,15nm,1.0s,mb5.1
ARCES ARCESS Array B 61.89 339 P **P 09 14 53.2 -0.5**
comp=Z,3.2nm,1.0s,mb4.4,baz=51,slow=6.4,SNR=6.9
ARCES LR LR 09 43 00.2
comp=Z,75nm,18.8s,MS3.9,baz=69,slow=37
ARCES ARCESS Array B 61.89 339 P **P 09 14 53.3 -0.4**
ARCES pmax pmax
comp=Z,3.0nm,1.0s
ARCES MLR MLR
comp=Z,75nm,18.8s
YKA Yellowknife Ar 62.23 31 P **P 09 14 54.8 -1.2**
comp=Z,2.5nm,1.1s,mb4.3,baz=300,slow=7.3,SNR=6.1
YKA PcP PcP 09 15 35.2 -0.7
comp=Z,1.8nm,0.9s,baz=306,slow=4.8,SNR=5.0
YKA Yellowknife Ar 62.23 31 P **P 09 14 54.8 -1.2**
YKA 09 15 35.2
YKA pmax pmax
comp=Z,3.0nm,1.1s
YKA Yellowknife Ar 62.23 31 P **P 09 14 54.8 -1.3**
YKA PcP PcP 09 15 35.2 -0.7
ASAR Alice Springs 62.80 187 P **P 09 14 59.3 -0.9**
comp=Z,3.3nm,0.7s,mb4.5,baz=11,slow=5.3,SNR=32
ASAR Alice Springs 62.80 187 P **P 09 14 59.3 -0.9**
ASAR pmax pmax
comp=Z,3.0nm,0.7s
DAG Danmarks Havn 63.66 355⇑ *iP* **P 09 15 05.0 -0.4**
DAG pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
DAG Danmarks Havn 63.66 355⇑ *iP* **P 09 15 05.0 -0.4**
comp=Z,10.0nm,0.9s,mb4.8
JOF Joensuu 63.92 331 *eP* **P 09 15 05.4 -1.9**
JOF pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
JOF Joensuu 63.92 331 *ep* **P 09 15 05.4 -1.9**
comp=Z,3.1nm,0.6s,mb4.5
NLWA Neilton Lookou 65.63 48 ⇓P **P 09 15 19.1 +0.4**
baz=65
NLWA Neilton Lookou 65.63 48 *eP* **P 09 15 19.8 +1.1**
comp=Z,21nm,1.1s,mb5.1
OBN Obninsk 66.17 323 *eP* **P 09 15 21.1 -1.0**
OBN pmax pmax
comp=Z,12nm,1.2s,mb4.8
OBN MLR MLR
comp=Z,100nm,17.0s,MS4.1
KAF Kangasniemi 66.26 332 *eP* **P 09 15 18.6 -3.9**
KAF pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
KAF Kangasniemi 66.26 332 *ep* **P 09 15 18.6 -3.9**
comp=Z,3.7nm,0.6s,mb4.6
B06A Marblemount 66.39 46 ⇑P **P 09 15 23.8 +0.2**
baz=66
FINES FINESS Array B 66.77 332 P **P 09 15 24.4 -1.4**
comp=Z,9.5nm,0.8s,mb4.9,baz=57,slow=7.0,SNR=15
FINES LR LR 09 46 28.8
comp=Z,45nm,19.9s,MS3.7,baz=311,slow=38
FINES FINESS Array B 66.77 332 P **P 09 15 24.4 -1.4**
FINES pmax pmax
comp=Z,10.0nm,0.8s
FINES MLR MLR
comp=Z,45nm,20.0s
FINES FINESS Array B 66.77 332 P **P 09 15 24.4 -1.4**
FINES LR LR 09 46 28.8
D05A Enumclaw 66.82 47 ⇓P **P 09 15 26.6 +0.2**
baz=67
VSR Storozhevoye 67.08 318 *eP* **P 09 15 26.5 -1.5**
VSR pmax pmax
comp=E,2.0nm,0.4s
VSR pmax pmax
comp=Z,6.0nm,0.4s,mb5.0
VSR pmax pmax
comp=N,1.0nm,0.2s
F04A Amboy 67.26 49 ⇑P **P 09 15 29.5 +0.4**
baz=67
B08A Colville Reser 67.67 45 ⇑P **P 09 15 31.7 0.0**
baz=67
EDM Edmonton 67.98 39 *eP* **P 09 15 33.4 -0.2**
H04A Detroit Lake 68.08 50 ⇓P **P 09 15 34.5 +0.1**
baz=68
C09A Chrisman Ranch 68.57 45 ⇑P **P 09 15 37.2 -0.2**
baz=68
SUMG Summit 68.60 360 *eP* **P 09 15 37.5 +0.3**
comp=N,22nm,0.9s,mb5.1
NEW Newport 68.94 44 *eP* **P 09 15 39.6 -0.1**
NEW pmax pmax
comp=Z,6.0nm,1.1s
NEW Newport 68.94 44 *eP* **P 09 15 39.6 -0.1**
comp=Z,6.1nm,1.1s,mb4.4
ZEI Tsey 69.16 309 *eP* **P 09 15 39.3 -1.9**
ZEI pmax pmax
comp=Z,6.0nm,0.4s,mb4.9
KIV Kislovodsk 69.22 310 *eP* **P 09 15 41.6 +0.1**
KIV pmax pmax
comp=Z,45nm,1.0s,mb5.3
KIV MLR MLR
comp=Z,28nm,15.0s,MS3.6
KIV Kislovodsk 69.22 310 *eP* **P 09 15 42.1 +0.6**
comp=Z,46nm,0.9s,mb5.4
C11A Tepee Creek (N 69.66 44 ⇓P **P 09 15 43.8 -0.3**
baz=69
K05A Summer Lake 69.96 51 ⇑P **P 09 15 46.4 +0.3**
baz=70
E10A Myers Farm, Un 69.98 46 ⇑P **P 09 15 46.1 0.0**
baz=70
SCO Scoresbysund 69.99 354 *i* P **P 09 15 44.6 -1.2**
SCO pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
I07A Izee 70.01 49 ⇓P **P 09 15 46.5 +0.1**
baz=70
H08A Prairie City 70.24 48 ⇑P **P 09 15 47.7 -0.1**
baz=70
B13A Whitefish 70.30 43 ⇓P **P 09 15 48.3 +0.2**
baz=70,SNR=8.3
G09A Cove 70.31 47 ⇑P **P 09 15 48.3 +0.1**
baz=70
A14A Double T Ranch 70.49 42 ⇓P **P 09 15 48.9 -0.3**
baz=70,SNR=5.3
STKA Stephens Creek 70.64 179 P **P 09 15 50.4 +0.3**
comp=Z,2.0nm,0.9s,mb4.1,baz=346,slow=21,SNR=3.3
STKA Stephens Creek 70.64 179 P **P 09 15 50.4 +0.3**
C13A Hot Springs 70.67 44 ⇑P **P 09 15 50.1 -0.2**
baz=70
G10A Bishop Farm, J 70.68 47 ⇑P **P 09 15 50.3 -0.1**
baz=70
JTMT Jette 70.78 44 *eP* **P 09 15 51.3 +0.3**
comp=Z,4.1nm,1.1s,mb4.3
A15A Johnson Ranch, 70.85 42 ⇓P **P 09 15 50.7 -0.7**
baz=71,SNR=5.1
F11A Grangeville 70.87 46 ⇑P **P 09 15 51.3 -0.3**
baz=71
E12A Beaver Dam Sad 70.88 45 ⇑P **P 09 15 51.5 -0.2**
baz=71
B14A Marquette Ranc 70.94 43 ⇑P **P 09 15 51.7 -0.3**
baz=71
J08A Circle Bar Ran 71.04 49 ⇑P **P 09 15 53.0 +0.4**
baz=71
C14A Swan Lake 71.05 43 ⇓P **P 09 15 52.5 -0.2**
baz=71
SWMT Swartz Lake 71.08 44 *eP* **P 09 15 52.9 0.0**
comp=Z,4.8nm,1.1s,mb4.3
D13A Huson 71.08 44 ⇑P **P 09 15 52.6 -0.3**
baz=71
G11A Walters Elk Ra 71.10 47 ⇑P **P 09 15 52.7 -0.3**
baz=71,SNR=8.5
I09A Lost Marbles R 71.10 48 ⇑P **P 09 15 52.9 -0.1**
baz=71
H10A Noah's Angus R 71.31 47 ⇓P **P 09 15 54.0 -0.3**
baz=71
B15A Bradely Ranch, 71.35 42 ⇑P **P 09 15 54.3 -0.2**
baz=71,SNR=12
F12A Elk City 71.45 46 ⇓P **P 09 15 55.2 +0.1**
baz=71,SNR=6.7
A16A West Butte Ran 71.46 42 ⇑P **P 09 15 54.6 -0.5**
baz=71
J09A Fry Pan Ranch, 71.47 49 ⇓P **P 09 15 55.3 0.0**
baz=71,SNR=5.9
WVOR Wild Horse Val 71.48 50 *eP* **P 09 15 55.8 +0.4**
WVOR pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
WVOR Wild Horse Val 71.48 50 *eP* **P 09 15 55.8 +0.4**
comp=Z,3.2nm,1.0s,mb4.2
SLMT Seeley Lake 71.51 44 *eP* **P 09 15 55.5 0.0**
comp=Z,4.8nm,0.8s,mb4.5
MSO Missoula 71.52 44 *eP* **P 09 15 55.4 -0.1**
comp=Z,2.7nm,1.2s,mb4.0
D14A Greenough 71.60 44 ⇑P **P 09 15 55.6 -0.4**
baz=71,SNR=5.7
E13A Victor 71.62 45 ⇑P **P 09 15 55.5 -0.7**
baz=71
C15A Salmond Ranch, 71.66 43 ⇓P **P 09 15 56.4 0.0**
baz=71,SNR=7.2
H11A Donnelly 71.66 47 ⇑P **P 09 15 56.0 -0.4**
baz=71
B16A M & M Farms, S 71.73 42 ⇓P **P 09 15 56.3 -0.5**
baz=72
F13A Darby 71.94 45 ⇓P **P 09 15 57.6 -0.5**
baz=72
BEKR Beckworth 71.95 53 ⇑P **P 09 15 57.9 -0.3**
baz=72,SNR=5.9
HFS Hagfors 72.01 335 P **P 09 15 57.0 -1.3**
comp=Z,3.5nm,0.6s,mb4.5,baz=51,slow=5.3,SNR=13
HFS Hagfors 72.01 335 P **P 09 15 57.0 -1.2**
HFS pmax pmax
comp=Z,4.0nm,0.6s
E14A Clinton 72.02 44 ⇑P **P 09 15 58.1 -0.4**
baz=72
C16A Fuhringer Ranc 72.10 43 ⇓P **P 09 15 58.6 -0.3**
baz=72
NB2 NORSAR Subarra 72.10 337 P **P 09 15 58.0 -0.7**
comp=Z,25nm,1.4s,mb5.0,baz=40,slow=6.2
NOA NORSAR Array B 72.10 337 P **P 09 15 58.1 -0.7**
comp=Z,8.2nm,1.0s,mb4.6,baz=39,slow=6.0,SNR=12
NOA NORSAR Array B 72.10 337 P **P 09 15 58.1 -0.6**
NOA pmax pmax
comp=Z,8.0nm,1.0s
D15A Lincoln 72.16 44 ⇓P **P 09 15 58.9 -0.4**
baz=72
I11A Placerville 72.17 48 ⇑P **P 09 15 59.3 -0.1**
baz=72
FFC Flin Flon 72.19 33*ce*P **P 09 15 59.3 -0.1**
FFC Flin Flon 72.19 33 *eP* **P 09 15 58.6 -0.7**
comp=Z,5.8nm,1.0s,mb4.5
B17A L&G Farms, Che 72.28 42 ⇑P **P 09 15 60.0 -0.1**
baz=72
K10A MacKenzie Ranc 72.33 49 ⇓P **P 09 16 00.6 +0.2**
baz=72,SNR=5.1
FCC Fort Churchill 72.33 27 *eP* **P 09 15 59.3 -0.9**
comp=Z,0.3nm,1.0s
FCC *e*PP PP 09 18 40.0 -0.2
A18A Metzger Ranch, 72.37 41 ⇑P **P 09 16 00.1 -0.5**
baz=72
AKASG Malin Array Be 72.39 322 P **P 09 15 59.6 -1.0**
comp=Z,2.7nm,0.5s,mb4.4,baz=45,slow=6.8,SNR=17
AKASG Malin Array Be 72.39 322 P **P 09 15 59.6 -1.1**
AKASG pmax pmax
comp=Z,3.0nm,0.5s
KIEV Kiev 72.40 322 *eP* **P 09 15 59.8 -0.9**
KIEV pmax pmax
comp=Z,4.0nm,0.4s,mb4.7
KIEV Kiev 72.40 322 *eP* **P 09 15 59.8 -0.9**
comp=Z,3.8nm,0.4s,mb4.7
H12A Diamond D Ranc 72.41 47 ⇑P **P 09 16 00.3 -0.7**
baz=72
G13A Cobalt 72.43 46 ⇑P **P 09 16 00.5 -0.5**
baz=72
E15A Deer Lodge 72.48 44 ⇓P **P 09 16 00.9 -0.4**
baz=72,SNR=6.4
MFID Camas Ranch 72.55 48 ⇓P **P 09 16 01.5 -0.3**

baz=72
WCN Washoe City 72.66 53 ⇑P P 09 16 02.4 -0.1
baz=72
D16A Dana Ranch, Ca 72.68 43 ⇓P P 09 16 02.3 -0.2
baz=72,SNR=5.9
I12A Atlanta 72.72 47 ⇑P P 09 16 02.8 +0.1
baz=72,SNR=5.5
H13A Challis 72.74 46 ⇓P P 09 16 02.7 -0.2
baz=72
B18A Beardsley Farm 72.74 41 ⇓P P 09 16 02.5 -0.4
baz=72,SNR=6.7
K11A Parker Ranch, 72.82 49 ⇑P P 09 16 02.8 -0.6
baz=73
F15A Butte 72.92 44 ⇑P P 09 16 03.9 0.0
baz=73,SNR=9.6
E16A East Helena 72.93 44 ⇓P P 09 16 03.5 -0.4
baz=73
LRM Limekiln Ridge 72.96 44 eP P 09 16 04.4 +0.2
comp=Z,57nm,1.2s,mb5.4
L10A Juniper Basin 72.98 49 ⇓P P 09 16 04.2 -0.1
baz=73
EGMT Eagleton 72.99 41 ⇑P P 09 16 04.1 -0.2
baz=73
CMB Columbia Colle 73.01 55 eP P 09 16 04.6 0.0
CMB pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
CMB Columbia Colle 73.01 55 eP P 09 16 04.6 0.0
comp=Z,6.9nm,1.1s,mb4.5
D17A Six Diamond Ra 73.06 43 ⇑P P 09 16 04.5 -0.2
baz=73
DLMT Dillon 73.17 45 eP P 09 16 05.0 -0.4
comp=Z,8.4nm,1.1s,mb4.6
H14A Leadore 73.21 46 ⇑P P 09 16 05.3 -0.3
baz=73
I13A Wildhorse Cree 73.22 47 ⇑P P 09 16 05.6 -0.2
baz=73
HLID Hailey 73.27 47 ⇑P P 09 16 06.0 0.0
baz=73,SNR=5.7
HLID Hailey 73.27 47 eP P 09 16 06.2 +0.2
comp=Z,3.3nm,1.2s,mb4.1
M10A I.L. Ranch, Tu 73.28 50 ⇑P P 09 16 05.9 -0.2
baz=73
G15A Dillon 73.35 45 ⇓P P 09 16 06.4 -0.1
baz=73,SNR=13
L11A Cat Creek Ranc 73.35 49 ⇓P P 09 16 07.1 +0.5
baz=73,SNR=7.0
D18A Linhart Farms, 73.50 42 ⇓P P 09 16 07.2 -0.1
baz=73
J13A Cove Ranch, Pi 73.51 47 ⇓P P 09 16 07.7 +0.3
baz=73,SNR=5.1
BOZ Bozeman (W) 73.52 44 ⇑P P 09 16 07.6 +0.1
baz=73,SNR=8.2
BOZ Bozeman (W) 73.52 44 eP P 09 16 07.6 +0.2
BOZ pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
BOZ Bozeman (W) 73.52 44 eP P 09 16 07.6 +0.2
comp=Z,6.5nm,1.2s,mb4.4
K12A Draper Farm, C 73.56 48 ⇓P P 09 16 07.6 -0.1
baz=73
I14A Mackay 73.59 46 ⇑P P 09 16 07.9 +0.1
baz=73,SNR=6.4
G16A Moss Hill, Enn 73.69 45 ⇑P P 09 16 08.1 -0.3
baz=73
M11A Holland Ranch, 73.78 50 ⇑P P 09 16 09.9 +0.8
baz=74,SNR=6.2
L12A House Creek Ra 73.80 49 ⇓P P 09 16 09.3 +0.1
baz=74
SFJD Kangerlussuaq 73.84 5 i P P 09 16 06.9 -2.1
SFJD pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
E18A Harlowton 73.85 43 ⇓P P 09 16 09.6 +0.3
baz=74
F17A Fitzpatrick Pl 73.87 44 ⇓P P 09 16 09.6 +0.1
baz=74,SNR=6.4
J14A Carey 73.93 47 ⇓P P 09 16 10.6 +0.7
baz=74,SNR=7.6
K13A Stover Farm, H 74.03 48 ⇑P P 09 16 10.7 +0.2
baz=74
O10A Cortez Mining, 74.06 51 ⇓P P 09 16 11.5 +0.8
baz=74
NVAR Mina Array Bea 74.09 53 P P 09 16 11.8 +0.9
comp=Z,6.1nm,1.0s,mb4.5,baz=280,slow=6.0,SNR=26
NVAR Mina Array Bea 74.09 53 P P 09 16 11.8 +0.9
G17A Pierce Place, 74.20 44 ⇑P P 09 16 11.9 +0.4
baz=74
MLAC Mammoth Lakes 74.24 54 ⇓P P 09 16 12.3 +0.5
baz=74
M12A Wells 74.31 49 ⇑P P 09 16 12.6 +0.4
baz=74,SNR=7.5
H16A Russell Place, 74.32 45 ⇓P P 09 16 12.3 +0.1
baz=74
F18A Big Timber 74.38 43 ⇑P P 09 16 12.8 +0.3
baz=74,SNR=8.4
L13A Double Diamond 74.46 48 ⇑P P 09 16 13.4 +0.4
baz=74
P10A Eureka 74.49 51 ⇓P P 09 16 13.8 +0.5
baz=74
J15A Blackfoot 74.50 46 ⇓P P 09 16 13.5 +0.3
baz=74
N12A Clover Valley, 74.59 50 ⇓P P 09 16 14.4 +0.6
baz=74
N12A Clover Valley, 74.59 50 eP P 09 16 14.6 +0.8
comp=Z,7.4nm,1.1s,mb4.5
K14A Jones Ranch, D 74.61 47 ⇑P P 09 16 14.3 +0.3
baz=74
O11A Cowboy Ranch, 74.66 51 ⇓P P 09 16 14.5 +0.3
baz=74
I16A Newdale 74.72 46 ⇑P P 09 16 15.3 +0.8
baz=74,SNR=7.1
M13A Montello 74.78 49 ⇑P P 09 16 15.4 +0.5
baz=74
M13A Montello 74.78 49 eP P 09 16 15.4 +0.5
comp=Z,3.0nm,1.1s,mb4.1
G18A Lazy EL Ranch, 74.84 44 ⇑P P 09 16 16.0 +0.8
baz=75
H17A Grant Village 74.89 45 ⇑P P 09 16 17.0 +1.6
baz=75
K15A Arbon 74.89 47 ⇑P P 09 16 16.2 +0.7
baz=75
L14A Malta 74.90 48 ⇓P P 09 16 16.4 +0.9
baz=75
IMW Indian Meadow 75.01 45 eP P 09 16 17.6 +1.5
comp=Z,2.7nm,0.7s,mb4.3
Q10A Clear Creek Ra 75.02 52 ⇑P P 09 16 16.5 +0.1
baz=75,SNR=6.7
O12A Currie 75.12 50 ⇑P P 09 16 17.1 +0.2
baz=75,SNR=9.7
RLMT Red Lodge 75.13 44 ⇓P P 09 16 17.4 +0.5
baz=75
RLMT Red Lodge 75.13 44 eP P 09 16 17.4 +0.6
comp=Z,3.3nm,0.8s,mb4.3
VES Vestal, Richgr 75.16 56 ⇑P P 09 16 16.7 -0.5
baz=75
M14A Sheep Mountain 75.17 48 ⇓P P 09 16 17.6 +0.4
baz=75,SNR=6.0
K16A Soda Springs 75.33 46 ⇑P P 09 16 19.3 +1.2
baz=75
SNOW Snow King Moun 75.39 46 eP P 09 16 18.9 +0.5
comp=Z,6.1nm,1.1s,mb4.4
L15A Malad City 75.41 48 ⇓P P 09 16 18.7 +0.2
baz=75
R10A Warm Springs 75.41 52 ⇑P P 09 16 19.4 +0.8
baz=75
S10A Tonopah Range, 75.46 53 ⇑P P 09 16 19.2 +0.3
baz=75,SNR=11
Q11A Duckwater 75.47 52 ⇑P P 09 16 19.1 +0.2
baz=75
J17A Brown Place, J 75.48 46 ⇓P P 09 16 20.0 +1.1
baz=75
P12A McGill 75.53 51 ⇑P P 09 16 19.7 +0.4
baz=75,SNR=7.3
GRAC Grapevine Rang 75.55 54 ⇑P P 09 16 20.1 +0.7
baz=75
N14A Grayback Hills 75.68 49 ⇓P P 09 16 20.6 +0.5
baz=75
ARVC Arvin 75.76 56 ⇓P P 09 16 20.5 -0.1
baz=76
R11A Troy Canyon, C 75.82 52 ⇑P P 09 16 21.1 +0.1
baz=76,SNR=10
Q12A Willow Creek R 75.84 51 ⇓P P 09 16 21.2 +0.2
baz=76
L16A Fish Haven 75.95 47 ⇓P P 09 16 22.1 +0.5
baz=76
J18A Kendall Valley 75.96 45 ⇓P P 09 16 22.0 +0.3
baz=76
MPMC Manual Prospec 76.05 55 ⇑P P 09 16 22.5 +0.2
baz=76,SNR=5.6
P13A Bates Ranch, G 76.07 50 ⇑P P 09 16 22.6 +0.3
baz=76
HWUT Hardware Ranch 76.14 47 eP P 09 16 23.1 +0.4
comp=Z,5.6nm,1.1s,mb4.4
S11A Rachel 76.16 53 ⇓P P 09 16 23.4 +0.6
baz=76
FURC Furnace Creek, 76.19 54 ⇓P P 09 16 23.1 0.0
baz=76,SNR=8.5
L17A Cokeville 76.21 47 ⇓P P 09 16 23.2 +0.1
baz=76
M16A Huntsville 76.29 48 ⇓P P 09 16 23.8 +0.2
baz=76
DUG Dugway 76.32 49 ⇓P P 09 16 23.9 +0.2
baz=76,SNR=7.0
DUG Dugway 76.32 49 eP P 09 16 24.4 +0.7
DUG pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
DUG Dugway 76.32 49 eP P 09 16 24.4 +0.7
comp=Z,6.3nm,1.0s,mb4.5
K18A Toltan Ranch, 76.33 46 ⇑P P 09 16 24.0 +0.2
baz=76
Q13A Wheeler Ranch, 76.39 51 ⇓P P 09 16 24.6 +0.4
baz=76,SNR=8.8
BUR08 Bucovina Ar. S 76.40 321 eP P 09 16 23.9 -0.1
R12A Pony Springs, 76.43 52 ⇑P P 09 16 24.5 +0.1
baz=76,SNR=8.4
EDW2 Edwards Air Fo 76.46 56 ⇑P P 09 16 25.0 +0.3
baz=76
BW06 Boulder Array 76.51 46 ⇑P P 09 16 24.6 -0.2
baz=76
PDAR Pinedale Array 76.51 46 P P 09 16 23.9 -0.8
comp=Z,2.3nm,0.9s,mb4.1,baz=298,slow=3.2,SNR=14
P14A Drum Mountains 76.55 50 ⇑P P 09 16 25.4 +0.3
baz=76,SNR=5.4
U10A Ash Meadows, A 76.56 54 ⇑P P 09 16 25.5 +0.3
baz=76
N16A Rees Ranch, Co 76.67 48 ⇓P P 09 16 26.0 +0.2
baz=76
M17A Scullys Gap (B 76.73 47 ⇓P P 09 16 26.4 +0.3
baz=76
S12A Delamar Landin 76.73 52 ⇑P P 09 16 26.7 +0.5
baz=76,SNR=6.2
T11A Corn Creek, Al 76.74 53 ⇓P P 09 16 26.3 +0.1
baz=76,SNR=13
L18A Fontenelle, Gr 76.80 46 ⇑P P 09 16 26.9 +0.5
baz=76
Q14A Sevier Lake (B 76.81 50 ⇑P P 09 16 26.9 +0.4
baz=77,SNR=11
KOLS Kolonicke sedl 76.88 324 eP P 09 16 27.2 +0.4
KOLS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
KOLS Kolonicke sedl 76.88 324 eP P 09 16 27.2 +0.4
comp=Z,3.9nm,1.0s,mb4.3
R13A O'Grain Ranch, 76.91 51 ⇓P P 09 16 27.7 +0.5
baz=77
SHOC Shoshone 76.92 54 ⇓P P 09 16 27.2 0.0
baz=77
GSC Goldstone 76.96 55 ⇓P P 09 16 27.7 +0.2
baz=77
N17A Moffit Pass 76.98 48 ⇓P P 09 16 27.7 +0.2
baz=77
STHS Stebnicka Huta 77.01 324 eP P 09 16 28.4 +0.9
STHS pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
STHS Stebnicka Huta 77.01 324 eP P 09 16 28.4 +0.9
comp=Z,7.0nm,1.2s,mb4.5
P15A Lemington 77.03 49 ⇑P P 09 16 28.0 +0.2
baz=77
L19A Farson 77.06 46 ⇓P P 09 16 28.4 +0.5
baz=77
BFSC Mount Baldy Ra 77.07 56 ⇑P P 09 16 28.6 +0.5
baz=77
OJC Ojcow 77.07 326 eP P 09 16 26.4 -1.4
O16A Springville 77.08 48 ⇓P P 09 16 28.6 +0.6
baz=77
M18A Lyman 77.11 47 ⇓P P 09 16 28.1 0.0
baz=77
BR131 Keskin Array S 77.15 311 eP P 09 16 28.5 +0.1
comp=Z,1.1nm,0.6s,mb4.0
BRTR Keskin Array B 77.15 311 P P 09 16 28.5 0.0
comp=Z,4.1nm,1.0s,mb4.3,baz=96,slow=5.0,SNR=16
BRTR Keskin Array B 77.15 311 P P 09 16 28.5 0.0
BRTR pmax pmax
comp=Z,4.0nm,1.0s
K20A Yellowstone Ra 77.26 45 ⇓P P 09 16 28.3 -0.7
baz=77
CRVS Cervenica-Dubn 77.28 324 eP P 09 16 29.6 +0.6
CRVS pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
CRVS Cervenica-Dubn 77.28 324 eP P 09 16 29.6 +0.6
comp=Z,4.9nm,1.2s,mb4.3
Q15A Fillmore 77.34 50 ⇑P P 09 16 29.8 +0.3
baz=77
R14A James Farms, M 77.41 51 ⇓P P 09 16 30.1 +0.1
baz=77
V11A Goodsprings 77.49 54 ⇑P P 09 16 30.8 +0.3
baz=77
O17A Robinson Place 77.53 48 ⇑P P 09 16 30.7 +0.1
baz=77
BBRC Big Bear Solar 77.53 56 ⇑P P 09 16 30.9 +0.2
baz=77
N18A Larsen Ranch, 77.63 47 ⇑P P 09 16 31.3 +0.2
baz=77
S14A Cedar City 77.67 51 ⇓P P 09 16 31.7 +0.3
baz=77
U12A Valley of Fire 77.67 53 ⇑P P 09 16 31.9 +0.4
baz=77
T13A Saint George 77.69 52 ⇑P P 09 16 32.1 +0.5
baz=78,SNR=10
L20A Wamsutter 77.69 45 ⇓P P 09 16 31.3 -0.2
baz=77
MSU Marysvale 77.78 50 eP P 09 16 32.7 +0.7
MSU pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
MSU Marysvale 77.78 50 eP P 09 16 32.7 +0.7
comp=Z,2.0nm,0.9s,mb4.0
O18A Roosevelt 77.90 48 ⇑P P 09 16 33.3 +0.6
baz=78
R15A Junction 77.91 50 ⇓P P 09 16 33.3 +0.5
baz=78
V12A Nelson 77.92 54 ⇓P P 09 16 32.9 +0.1
baz=78
N19A John Jarvie Ra 77.96 47 ⇑P P 09 16 33.4 +0.5
baz=78
P17A Butcher Ranch, 78.00 49 ⇓P P 09 16 33.4 +0.2
baz=78,SNR=5.9
GMRC Granite Mounta 78.01 55 ⇓P P 09 16 33.5 +0.1
baz=78
KECS Kecovo 78.03 324 eP P 09 16 33.7 +0.5
KECS pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
KECS Kecovo 78.03 324 eP P 09 16 33.7 +0.5
comp=Z,1.8nm,0.8s,mb4.0
U13A Pakoon Wash 78.04 53 ⇑P P 09 16 33.9 +0.4
baz=78,SNR=12
M20A Sweetwater, Wa 78.12 46 ⇑P P 09 16 34.2 +0.3
baz=78
T14A Hurricane 78.17 52 ⇑P P 09 16 34.5 +0.3
baz=78,SNR=5.7
W12A Cal Nev Ari 78.18 54 ⇑P P 09 16 34.6 +0.3
baz=78
S15A Panguitch 78.21 51 ⇑P P 09 16 34.8 +0.4
baz=78
PFO Pinyon Flat Ob 78.24 56 ⇓P P 09 16 34.8 +0.1
baz=78
L21A Rawlins 78.26 45 ⇑P P 09 16 34.6 +0.1
baz=78
BELC Belle Mtn. Jos 78.29 56 ⇓P P 09 16 34.3 -0.6
baz=78
R16A Teasdale 78.34 50 ⇓P P 09 16 36.0 +0.8
baz=78,SNR=9.0
SRU San Rafael 78.36 49 ⇑P P 09 16 35.3 0.0
baz=78,SNR=5.7
SRU San Rafael 78.36 49 eP P 09 16 35.2 0.0
SRU pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
SRU San Rafael 78.36 49 eP P 09 16 35.2 0.0
comp=Z,6.2nm,1.0s,mb4.5
MORC Moravsky Berou 78.38 326 eP P 09 16 34.8 -0.3
MORC pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
MORC Moravsky Berou 78.38 326 eP P 09 16 34.8 -0.3
comp=Z,9.9nm,1.0s,mb4.7
V13A Grand Canyon W 78.39 53 ⇑P P 09 16 35.6 +0.2
baz=78,SNR=6.1
O19A Miners Draw (B 78.39 47 ⇓P P 09 16 34.9 -0.4
baz=78
DPC Dobruska-Polom 78.47 327 eP P 09 16 36.1 +0.5
DPC MLR MLR
comp=Z,200nm,5.9s
DPC Dobruska-Polom 78.47 327 eP P 09 16 36.1 +0.5
DPC AMS AMS 09 58 10.0
comp=Z,200nm,5.9s
M21A Separation Pea 78.50 45 ⇑P P 09 16 36.0 +0.1
baz=78
N20A Spence Gulch, 78.52 46 ⇓P P 09 16 36.3 +0.2
baz=78,SNR=8.7
U14A Mt Trumbull 78.52 52 ⇓P P 09 16 36.6 +0.5
baz=78,SNR=6.2
T15A Red Dirt Ranch 78.62 51 ⇑P P 09 16 37.2 +0.5
baz=78,SNR=6.2
R17A Hanksville Air 78.71 49 ⇑P P 09 16 37.2 0.0
baz=78,SNR=8.8
L22A Ellis Ranch, M 78.72 44 ⇑P P 09 16 36.3 -0.8
baz=78
IRM Iron Mountain 78.73 55 ⇑P P 09 16 37.5 +0.1
baz=78
VYHS Vyhne 78.77 325 eP P 09 16 37.0 -0.3
VYHS pmax pmax
comp=Z,5.0nm,1.4s,mb4.2
VYHS Vyhne 78.77 325 eP P 09 16 37.0 -0.3
comp=Z,4.9nm,1.4s,mb4.2
BC3 Big Chuckawall 78.86 56 ⇓P P 09 16 38.3 +0.2
baz=79
P19A Cripple Cowboy 78.91 48 ⇓P P 09 16 38.3 +0.1
baz=79
W13A Hualapai Mount 78.93 54 ⇑P P 09 16 38.3 -0.2
baz=79
N21A Black Mountain 78.98 46 ⇓P P 09 16 38.5 -0.2
baz=79
O20A White River Ci 79.00 47 ⇑P P 09 16 38.3 -0.4
baz=79
BRG Berggiesshubel 79.04 329 eP P 09 16 38.8 +0.1
comp=Z,12nm,1.6s,mb4.6
BRG Berggiesshubel 79.04 329 eP P 09 16 38.8 +0.1
BRG pmax pmax
comp=Z,7.0nm,1.6s,mb4.3
PVCC Panska Ves 79.05 328 AMS AMS 09 53 30.0
comp=Z,100nm,10.7s
U15A North Rim 79.06 52 ⇓P P 09 16 39.7 +0.6
baz=79,SNR=12
V14A Boquillas Ranc 79.07 53 ⇓P P 09 16 39.6 +0.3
baz=79,SNR=9.4
CLL Collm 79.08 330 eP P 09 16 37.0 -1.9
VRAC Vranov 79.14 327 P P 09 16 38.7 -0.6
comp=Z,2.2nm,0.4s,mb4.5,baz=332,slow=13,SNR=6.7
VRAC LR LR 09 55 10.5
comp=Z,42nm,19.5s,MS3.8,baz=244,slow=38
VRAC Vranov 79.14 327 P P 09 16 38.7 -0.6
VRAC pmax pmax
comp=Z,2.0nm,0.4s
VRAC MLR MLR
comp=Z,42nm,19.5s
S17A Black Ridge (B 79.17 50 ⇑P P 09 16 39.4 -0.3
baz=79,SNR=9.6
T16A Glen Canyon Da 79.17 51 ⇓P P 09 16 39.8 0.0
baz=79
Q19A Hogan Spring (79.20 48 ⇑P P 09 16 39.6 -0.3
baz=79,SNR=7.4
R18A Canyonlands Na 79.21 49 ⇓P P 09 16 39.3 -0.6
baz=79
PDMCI Parker Dam,Lak 79.29 54 ⇓P P 09 16 40.3 -0.1
baz=79
X13A Yucca 79.29 54 ⇓P P 09 16 40.4 0.0
baz=79,SNR=9.9
W14A Seligman 79.36 53 ⇓P P 09 16 41.3 +0.5
baz=79,SNR=5.8
Y12C Blythe 79.39 55 ⇓P P 09 16 40.8 -0.2
baz=79
PRU Pruhonice 79.48 328 AMS AMS 09 53 00.0
comp=Z,100nm,4.8s
V15A Kaibab Nationa 79.53 52 ⇓P P 09 16 42.1 +0.4
baz=79,SNR=6.7
N22A Wattenberg Ran 79.55 45 ⇓P P 09 16 41.8 +0.1
baz=79
T17A Navajo Res., N 79.59 51 ⇓P P 09 16 42.1 +0.1
baz=79
S18A Hurst Farm, Bl 79.61 50 ⇑P P 09 16 42.2 +0.1
baz=79
TREC Trest 79.62 327 AMS AMS 09 54 20.0
comp=Z,100nm,14.3s
R19A Curley Farm, L 79.65 49 ⇓P P 09 16 41.9 -0.4
baz=79
ZST Bratislava 79.76 326 eP P 09 16 42.8 +0.1
ZST pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
ZST Bratislava 79.76 326 eP P 09 16 42.8 +0.1
comp=Z,6.3nm,0.9s,mb4.5
Q20A Ridgley Place, 79.76 48 ⇓P P 09 16 42.6 -0.3
baz=80
PV04 Paradox Valley 79.78 49 eP P 09 16 43.3 +0.3
W15A Williams 79.89 53 ⇑P P 09 16 44.2 +0.5
baz=80
X14A Yava 79.96 54 ⇓P P 09 16 44.4 +0.4
baz=80,SNR=5.7
ASF Jabal al Asfar 79.99 303 LR LR 09 53 03.1
comp=Z,35nm,18.3s,MS3.7,baz=285,slow=36
T18A Mexican Hat 80.05 50 ⇓P P 09 16 44.2 -0.3
baz=80,SNR=7.6
S19A Harvey Farm, M 80.08 49 ⇓P P 09 16 44.5 -0.2
baz=80,SNR=10.0
NKC Novy Kostel 80.14 329 AMS AMS 09 55 20.0
comp=Z,100nm,13.1s
MOX Moxa 80.14 330 eP P 09 16 41.6 -3.1
PV01 Paradox Valley 80.15 49 eP P 09 16 45.5 +0.4
comp=Z,378nm,1.1s
WUAZ Wupatki 80.22 52 ⇑P P 09 16 45.7 +0.3
baz=80
WUAZ Wupatki 80.22 52 eP P 09 16 45.9 +0.5
comp=Z,7.1nm,1.1s,mb4.5
R20A Redvale 80.23 48 ⇓P P 09 16 45.5 +0.1
baz=80,SNR=6.7
Y14A Wickenburg 80.24 54 ⇑P P 09 16 45.6 +0.1
baz=80,SNR=7.1
Q21A Lamborn Mesa, 80.26 47 ⇑P P 09 16 45.5 0.0
baz=80
Z13A Yuma Proving G 80.30 55 ⇓P P 09 16 46.0 0.0
baz=80,SNR=9.2
X15A Humboldt 80.36 53 ⇑P P 09 16 46.7 +0.4
baz=80,SNR=6.7
SMCO Snowmass 80.37 47 eP P 09 16 46.8 +0.6
comp=Z,5.0nm,1.0s,mb4.4
W16A Flagstaff 80.40 52 ⇑P P 09 16 46.8 +0.4
baz=80
MMAI Mount Meron Ar 80.41 305 P P 09 16 45.8 -0.7
comp=Z,3.4nm,0.7s,mb4.4,baz=36,slow=8.7,SNR=5.2
CONA Conrad Observa 80.50 326 ⇑ i P P 09 16 47.1 +0.3
comp=Z,7.3nm,1.2s,mb4.5
V17A Tonalea, Kykot 80.50 52 ⇑P P 09 16 47.2 +0.3
baz=80
113A Mohawk Valley, 80.51 55 ⇑P P 09 16 46.6 -0.4
baz=80,SNR=5.1
U18A Rough Rock, Ch 80.53 51 ⇑P P 09 16 47.5 +0.4
baz=80,SNR=9.1
KHC Kasperske Hory 80.54 328 AMS AMS 09 54 20.0
comp=Z,100nm,15.2s
R21A Cimarron 80.59 48 ⇑P P 09 16 47.6 +0.2
baz=80
Q22A Crested Butte, 80.62 47 ⇑P P 09 16 47.7 +0.2
baz=80
Z14A Wintersburg 80.65 55 ⇓P P 09 16 47.9 +0.1
baz=80
Y15A Casa Rosa Ranc 80.65 54 ⇓P P 09 16 48.0 +0.3
baz=80,SNR=10.0
ISCO Idaho Springs 80.70 46 eP P 09 16 47.7 -0.3
ISCO pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
ISCO Idaho Springs 80.70 46 eP P 09 16 47.7 -0.3
comp=Z,3.3nm,1.2s,mb4.1
T19A Beclabito 80.76 50 ⇓P P 09 16 48.6 +0.2
baz=80,SNR=8.5
MVCO Mesa Verde 80.82 49 ⇓P P 09 16 48.4 -0.3
baz=81
X16A Lo Mia Camp, P 80.90 53 ⇓P P 09 16 49.7 +0.6
baz=81,SNR=9.3
S21A Coal Bank Pass 80.93 48 ⇑P P 09 16 49.5 +0.3
baz=81
U19A Dine' College, 81.02 50 ⇓P P 09 16 49.9 +0.2
baz=81
EKA Eskdalemuir Ar 81.02 340 P P 09 16 48.9 -0.5
comp=Z,6.4nm,1.1s,mb4.5,baz=33,slow=5.3,SNR=4.0
EKA Eskdalemuir Ar 81.02 340 P P 09 16 48.9 -0.5
EKA pmax pmax
comp=Z,6.0nm,1.2s
GRA1 Grafenberg Arr 81.05 330 eP P 09 16 49.8 +0.2
comp=Z,12nm,1.1s,mb4.7
GRF Grafenberg Arr 81.05 330 eP P 09 16 49.8 +0.2

comp=Z,12nm,1.1s,mb4.7
GRF Grafenberg Arr 81.05 330 *e*P **P 09 16 49.8 +0.2**
GRF pmax pmax
comp=Z,12nm,1.1s,mb4.7
GRF Grafenberg Arr 81.05 330 *e*P **P 09 16 49.8 +0.2**
GRF pmax pmax
comp=Z,12nm,1.1s,mb4.7
114A Black Gap (USA 81.09 55 ⇑P **P 09 16 50.2 +0.1**
baz=81
R22A Saguache, Gunn 81.14 47 ⇑P **P 09 16 50.6 +0.3**
baz=81
Y16A Circle Bar Ran 81.23 53 ⇑P **P 09 16 51.8 +0.9**
baz=81
X17A Forest Lakes 81.35 53 ⇓P **P 09 16 52.2 +0.7**
baz=81
115A Sonoran Desert 81.54 55 ⇑P **P 09 16 52.9 +0.3**
baz=81
EYMN Ely 81.61 33 *e*P **P 09 16 51.1 -1.6**
comp=Z,6.2nm,1.2s,mb4.4
Z16A Peralta Trail, 81.62 54 ⇑P **P 09 16 53.3 +0.3**
baz=81
214A Organ Pipe Nat 81.65 56 ⇓P **P 09 16 53.6 +0.5**
baz=81
X18A Snowflake 81.75 52 ⇓P **P 09 16 54.1 +0.5**
baz=82
Y17A Roosevelt 81.75 53 ⇓P **P 09 16 53.8 +0.2**
baz=82
V20A Brimhall 81.79 50 ⇑P **P 09 16 54.1 +0.2**
baz=82
U21A Nageezi 81.84 49 ⇑P **P 09 16 54.6 +0.5**
baz=82
T22A Edith 81.89 48 ⇓P **P 09 16 54.5 +0.2**
baz=82
SDCO Great Sand Dun 82.19 47 *e*P **P 09 16 56.4 +0.5**
comp=Z,2.3nm,1.1s,mb4.0
Y18A Canyon Day Jun 82.20 53 ⇓P **P 09 16 56.6 +0.6**
baz=82,SNR=6.3
X19A St. Johns 82.22 52 ⇑P **P 09 16 56.5 +0.4**
baz=82,SNR=9.0
W20A Ramah 82.23 51 ⇑P **P 09 16 56.5 +0.4**
baz=82
KBA Koelnbreinsper 82.24 327 ⇑*i*P **P 09 16 55.2 -0.7**
comp=Z,9.4nm,0.9s,mb4.7
U22A Llaves 82.35 49 ⇓P **P 09 16 57.1 +0.3**
baz=82
ECSD EROS Data Cent 82.54 38 *e*P **P 09 16 56.8 -0.8**
comp=Z,5.0nm,1.0s,mb4.5
Y19A Nutrioso 82.56 52 ⇓P **P 09 16 58.4 +0.5**
baz=82
117A Oracle 82.56 54 ⇓P **P 09 16 58.0 +0.1**
baz=82
X20A Quemado 82.62 51 ⇑P **P 09 16 58.7 +0.5**
baz=82
V22A San Miguel Ran 82.64 49 ⇓P **P 09 16 58.8 +0.6**
baz=82
U23A El Rito 82.77 49 ⇓P **P 09 16 59.5 +0.6**
baz=82,SNR=12
EIL Elat 82.89 302 LR LR 09 57 39.8
comp=Z,56nm,18.5s,MS4.0,baz=279,slow=38
118A Homack Ranch, 83.00 53 ⇓P **P 09 17 00.5 +0.3**
baz=83
GIVF Givet 83.10 333 *e*P **P 09 16 59.3 -1.1**
X21A Alamocita Cree 83.12 51 ⇑P **P 09 17 01.6 +0.8**
baz=83,SNR=5.8
Y20A Horse Springs, 83.13 52 ⇑P **P 09 17 01.6 +0.8**
baz=83,SNR=7.1
V23A Ortiz Mt. (NFS 83.18 49 ⇑P **P 09 17 01.9 +0.8**
baz=83
T25A Trinidad 83.23 47 ⇑P **P 09 17 01.0 -0.3**
baz=83
FETA Feichten 83.38 328 ⇑*i*P **P 09 17 01.7 -0.2**
comp=Z,5.6nm,1.0s,mb4.5
218A Dragoon 83.40 54 ⇓P **P 09 17 02.6 +0.3**
baz=83
SCHQ Schefferville 83.45 16 P **P 09 17 01.3 -0.8**
comp=Z,3.5nm,0.9s,mb4.4,baz=309,slow=2.3,SNR=4.0
DAVA Damuels 83.51 329 ⇑*i*P **P 09 17 02.5 -0.1**
comp=Z,15nm,1.2s,mb5.0
Z20A Nine Sixteen R 83.53 52 ⇓P **P 09 17 03.4 +0.4**
baz=83,SNR=9.3
ANMO Albuquerque 83.56 50 *e*P **P 09 17 03.5 +0.4**
ANMO pmax pmax
comp=Z,1.0nm,0.9s
ANMO Albuquerque 83.56 50 *e*P **P 09 17 03.5 +0.5**
comp=Z,0.7nm,0.9s,mb3.8
W23A Werner Place, 83.60 49 ⇑P **P 09 17 03.5 +0.2**
baz=83
CDF Champ du Feu 83.61 331 *e*P **P 09 17 02.2 -0.8**
U25A Circle Dot Ran 83.75 47 ⇑P **P 09 17 04.3 +0.3**
baz=84
219A White Tail Can 83.87 53 ⇑P **P 09 17 04.9 +0.2**
baz=84,SNR=7.6
120A U Bar Ranch, L 83.89 53 ⇑P **P 09 17 05.1 +0.3**
baz=84
DAVOX Davos/Dischmat 83.92 329 P **P 09 17 03.5 -1.2**
comp=Z,5.8nm,1.0s,mb4.7,baz=157,slow=7.5,SNR=4.5
DAVOX LR LR 09 57 56.6
comp=Z,92nm,18.0s,MS4.2,baz=130,slow=38
Y22A Socorro 83.96 51 ⇑P **P 09 17 05.6 +0.5**
baz=84
Z21A St. Cloud Mine 83.96 52 ⇓P **P 09 17 05.7 +0.5**
baz=84
W24A Lazy 6 Ranch, 84.01 49 ⇓P **P 09 17 05.9 +0.6**
baz=84,SNR=9.5
V25A Rancho No Teng 84.03 48 ⇓P **P 09 17 05.9 +0.4**
baz=84
U26A Atchley Ranch, 84.14 47 ⇓P **P 09 17 06.7 +0.7**
baz=84
HINF Hinteralfeld 84.26 331 *e*P **P 09 17 05.3 -1.1**
319A Douglas 84.28 54 ⇑P **P 09 17 06.6 -0.2**
baz=84
HAU Haudompre 84.30 331 *e*P **P 09 17 05.5 -1.0**
HAU *e*MLR MLR
comp=Z,55nm,20.5s,MS3.6
HAU Haudompre 84.30 331 *e*P **P 09 17 05.5 -1.0**
HAU LR LR
comp=Z,50nm,20.5s,MS3.9
220A Playas Peak, P 84.39 53 ⇑P **P 09 17 07.6 +0.3**
baz=84
121A Cookes Peak, D 84.42 52 ⇓P **P 09 17 08.0 +0.5**
baz=84,SNR=5.8
Z22A Elephant Butte 84.43 51 ⇑P **P 09 17 07.9 +0.3**
baz=84,SNR=6.1
Y23A Lovelace Mesa, 84.51 50 ⇑P **P 09 17 08.2 +0.3**
baz=84,SNR=9.7
V26A Tequesquite Ra 84.54 48 ⇑P **P 09 17 08.1 +0.1**
baz=84
W25A X Bar L Ranch, 84.55 48 ⇓P **P 09 17 08.2 +0.1**
baz=84
320A Kipp Ranch, An 84.78 54 ⇓P **P 09 17 09.5 +0.2**
baz=85
Y24A Capitan 84.88 50 ⇓P **P 09 17 10.0 +0.2**
baz=85
X25A Clemmons Ranch 84.92 49 ⇑P **P 09 17 10.4 +0.5**
baz=85
W26A Owens Ranch, T 85.05 48 ⇑P **P 09 17 10.9 +0.3**
baz=85
222A Williams Famil 85.14 52 ⇓P **P 09 17 11.0 -0.1**
baz=85
IDI Anoyia 85.26 312 P **P 09 17 09.8 -1.9**
comp=Z,7.4nm,0.8s,mb4.9,baz=8.1,slow=19,SNR=4.3
Y25A Mesa, Roswell 85.33 49 ⇓P **P 09 17 11.6 -0.4**
baz=85
Z24A Sheeppen Canyo 85.34 50 ⇓P **P 09 17 11.8 -0.3**
baz=85
X26A CR and CF Fran 85.40 48 ⇑P **P 09 17 12.3 -0.1**
baz=85
W27A Bowe Ranch, En 85.47 48 ⇑P **P 09 17 12.7 -0.1**
baz=85
CABF La Chapelle 85.55 331 *e*P **P 09 17 12.0 -0.9**
comp=Z,6.1nm,0.7s,mb4.6
CABF La Chapelle 85.55 331 *e*P **P 09 17 12.0 -0.9**
CABF pmax pmax
comp=Z,3.0nm,0.7s,mb4.6
CABF La Chapelle 85.55 331 *e*P **P 09 17 12.0 -0.9**
comp=Z,3.0nm,0.7s,mb4.6
124A Stringfield Ra 85.73 51 ⇓P **P 09 17 14.4 +0.4**
baz=86
X27A F and S Farms, 85.75 48 ⇑P **P 09 17 14.4 +0.3**
baz=86
Z25A Roswell 85.76 50 ⇓P **P 09 17 14.2 0.0**
baz=86
LOR Lormes 85.83 332 *e*P **P 09 17 13.3 -1.0**
comp=Z,29nm,1.1s,mb5.1
LOR *e*MLR MLR
comp=Z,39nm,20.5s,MS3.5
LOR Lormes 85.83 332 *e*P **P 09 17 13.3 -1.0**
LOR pmax pmax
comp=Z,15nm,1.1s,mb5.1
LOR MLR MLR
comp=Z,40nm,20.5s,MS3.8
LOR Lormes 85.83 332 *e*P **P 09 17 13.3 -1.0**
comp=Z,15nm,1.1s,mb5.1
LOR LR LR
comp=Z,40nm,20.5s,MS3.8
FLN La Foliniere 86.03 336 *e*P **P 09 17 14.2 -1.0**
FLN *e*MLR MLR
comp=Z,85nm,22.0s,MS3.8
FLN La Foliniere 86.03 336 *e*P **P 09 17 14.2 -1.0**
FLN LR LR
comp=Z,80nm,22.0s,MS4.1
LDF La Druitiere 86.06 335 *e*P **P 09 17 14.7 -0.7**
224A Cornudas Mount 86.12 51 ⇑P **P 09 17 16.0 0.0**
baz=86
SSF Saint Saulge 86.13 332 *e*P **P 09 17 14.9 -0.9**
LPL La Plagne 86.21 330 *e*P **P 09 17 15.6 -0.6**
comp=Z,14nm,1.0s,mb4.9
LPL La Plagne 86.21 330 *e*P **P 09 17 15.6 -0.6**
LPL pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
LPL La Plagne 86.21 330 *e*P **P 09 17 15.6 -0.6**
comp=Z,7.2nm,1.0s,mb4.9
LPG La Plagne 86.22 330 *e*P **P 09 17 15.8 -0.4**
comp=Z,22nm,1.1s,mb5.0
LPG La Plagne 86.22 330 *e*P **P 09 17 15.8 -0.4**
LPG pmax pmax
comp=Z,11nm,1.1s,mb5.0
LPG La Plagne 86.22 330 *e*P **P 09 17 15.8 -0.4**
comp=Z,11nm,1.1s,mb5.0
125A Gardner Draw, 86.24 50 ⇓P **P 09 17 16.4 -0.2**
baz=86
Y27A Causey 86.25 49 ⇑P **P 09 17 16.4 -0.2**
baz=86
SMF Signal de Mont 86.36 332 *e*P **P 09 17 16.0 -0.9**
MSTX Muleshoe 86.42 48 ⇓P **P 09 17 17.2 -0.2**
baz=86
AVF Avril sur Loir 86.42 332 *e*P **P 09 17 16.4 -0.8**
comp=Z,31nm,1.0s,mb5.2
AVF Avril sur Loir 86.42 332 *e*P **P 09 17 16.4 -0.8**
AVF pmax pmax
comp=Z,16nm,1.0s,mb5.2
AVF Avril sur Loir 86.42 332 *e*P **P 09 17 16.4 -0.8**
comp=Z,16nm,1.0s,mb5.2
GRR Gorron 86.48 336 *e*P **P 09 17 16.7 -0.7**
comp=Z,32nm,1.0s,mb5.2
GRR Gorron 86.48 336 *e*P **P 09 17 16.7 -0.7**
GRR pmax pmax
comp=Z,16nm,1.0s,mb5.2
GRR Gorron 86.48 336 *e*P **P 09 17 16.7 -0.7**
comp=Z,16nm,1.0s,mb5.2
324A Moseley Ranch, 86.59 52 ⇓P **P 09 17 17.7 -0.6**
baz=86
126A Clayton Basin, 86.62 50 ⇓P **P 09 17 18.7 +0.2**
baz=86
Z27A Tatum 86.63 49 ⇑P **P 09 17 18.2 -0.3**
baz=86
GDL2 Guadalupe Moun 86.73 50 *e*P **P 09 17 18.8 -0.2**
comp=Z,4.6nm,1.1s,mb4.6
BGF Bois d'Agland 86.80 332 *e*P **P 09 17 18.3 -0.8**
325A Bean Ranch, Si 86.95 51 ⇑P **P 09 17 20.2 +0.1**
baz=87
ORIF Oris-en-Rattie 87.05 330 *e*P **P 09 17 19.4 -0.9**
ORIF *e*MLR MLR
comp=Z,63nm,23.0s,MS3.7
TCF Toulx Ste Croi 87.26 333 *e*P **P 09 17 20.7 -0.6**
comp=Z,9.0nm,0.7s,mb4.8
TCF Toulx Ste Croi 87.26 333 *e*P **P 09 17 20.7 -0.6**
TCF pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
TCF Toulx Ste Croi 87.26 333 *e*P **P 09 17 20.7 -0.6**
comp=Z,4.5nm,0.7s,mb4.8
PGF Pioggiola 87.72 327 *e*P **P 09 17 22.1 -1.5**
MFF Saint Martin d 87.81 334 *e*P **P 09 17 23.4 -0.5**
comp=Z,39nm,1.3s,mb5.2
MFF Saint Martin d 87.81 334 *e*P **P 09 17 23.4 -0.5**
MFF pmax pmax
comp=Z,20nm,1.3s,mb5.2
MFF Saint Martin d 87.81 334 *e*P **P 09 17 23.4 -0.5**
comp=Z,20nm,1.3s,mb5.2
426A McDonald Obser 88.02 51 ⇑P **P 09 17 24.7 -0.5**
baz=88
WMOK Wichita Mounta 88.12 45 *e*P **P 09 17 25.1 -0.6**
WMOK pmax pmax
comp=Z,3.0nm,1.1s,mb4.4
WMOK Wichita Mounta 88.12 45 *e*P **P 09 17 25.1 -0.6**
comp=Z,3.1nm,1.1s,mb4.5
427A Hayter Ranch, 88.27 51 ⇑P **P 09 17 26.0 -0.4**
baz=88
RJF Les Rejaudoux 88.35 333 *e*P **P 09 17 26.4 -0.1**
RJF *e*MLR MLR
comp=Z,48nm,21.8s,MS3.6
RJF Les Rejaudoux 88.35 333 *e*P **P 09 17 26.4 -0.1**
RJF LR LR
comp=Z,50nm,21.8s,MS3.9
526A Mary Lane Ranc 88.41 52 ⇓P **P 09 17 27.1 0.0**
baz=88
CAF Calviac 88.48 332 *e*P **P 09 17 27.1 -0.1**
626A Big Bend Ranch 88.74 52 ⇑P **P 09 17 28.8 +0.1**
baz=88
428A Kincaid Ranch, 88.79 50 ⇓P **P 09 17 29.1 +0.2**
baz=89
LFF La Frestale 88.94 333 *e*P **P 09 17 29.0 -0.3**
TXAR Lajitas Array 89.18 52 P **P 09 17 30.6 -0.2**
comp=Z,1.3nm,0.9s,mb4.3,baz=280,slow=3.3,SNR=14
TXAR Lajitas Array 89.18 52 P **P 09 17 30.6 -0.2**
TXAR pmax pmax
comp=Z,1.0nm,0.9s
627A Terlingua Ranc 89.27 52 ⇓P **P 09 17 31.2 0.0**
baz=89
MIAR Mount Ida 91.07 42 *e*P **P 09 17 39.1 -0.4**
MIAR pmax pmax
comp=Z,5.0nm,1.2s,mb4.7
MIAR Mount Ida 91.07 42 *e*P **P 09 17 39.0 -0.4**
comp=Z,5.4nm,1.2s,mb4.8
ETSF Etsaut 91.18 333 *e*P **P 09 17 39.7 -0.1**
comp=Z,7.5nm,0.9s,mb4.7
ETSF Etsaut 91.18 333 *e*P **P 09 17 39.7 -0.1**
ETSF pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
ETSF Etsaut 91.18 333 *e*P **P 09 17 39.7 -0.1**
comp=Z,3.8nm,0.9s,mb4.7
SJPF Ste Jean 91.23 333 *e*P **P 09 17 40.7 +0.7**
ESDC Sonseca Array 95.23 333 LR LR 10 05 25.1
comp=Z,53nm,20.6s,MS4.0,baz=35,slow=38
TORD Torodi Ar. Bea 115.55 315 PKP PKPdf 09 23 15.7 -1.8
comp=Z,1.1nm,1.0s,baz=171,slow=3.1,SNR=4.3
TORD PP PP 09 24 18.2 -0.3
comp=Z,1.2nm,0.9s,baz=12,slow=8.8,SNR=5.0
LPAZ La Paz 145.95 56 PKPbc PKPbc 09 24 14.7 -0.2
comp=Z,5.7nm,0.9s,baz=343,slow=5.5,SNR=22
LPAZ La Paz 145.95 56 *e*PKPbc PKPbc 09 24 14.9 +0.1

IDC 18 09:11:06.7±1.4, 15°.68S×175°.19W, h258km±16km, mb3.2/6, mb1 3.6/7, mb1mx3.4/17, mbtmp3.3/7, Error ellipse: s-maj=127.8km s-min=14.4km az=152.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.74**	**62**	P	Pn	09 12 09.4	+1.5
AFI	21nm,0.3s,baz=135,slow=1.0,SNR=37			S	S	09 12 56.5	-0.1
	33nm,0.3s,baz=234,slow=24,SNR=13						
STKA	**Stephens Creek**	**42.40**	**240**	P	P	09 18 35.9	-0.4
	2.8nm,0.8s,baz=78,slow=11,SNR=4.7						
WRA	**Warramunga Arr**	**48.10**	**257**	P	P	09 19 21.0	0.0
	0.4nm,0.3s,baz=91,slow=6.9,SNR=22						
ASAR	**Alice Springs**	**48.38**	**252**	P	P	09 19 23.1	-0.1
	1.6nm,0.4s,baz=88,slow=8.1,SNR=44						
NVAR	**Mina Array Bea**	**75.70**	**43**	P	P	09 22 24.7	+0.8
	0.5nm,0.7s,baz=219,slow=8.8,SNR=4.5						
TXAR	**Lajitas Array**	**82.20**	**57**	P	P	09 22 59.8	+0.5
	0.2nm,0.6s,baz=200,slow=7.6,SNR=2.9						
PDAR	**Pinedale Array**	**83.63**	**42**	P	P	09 23 05.5	-0.7
	0.5nm,0.6s,baz=224,slow=4.1,SNR=3.8						

IDC 18 09:25:03.8±37.0, 12°.38N×144°.23E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.5/23, mbtmp3.9/3, Error ellipse: s-maj=652.2km s-min=160.7km az=5.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**33.56**	**197**	P	P	09 31 45.5	-0.2
	2.1nm,0.7s,baz=19,slow=9.7,SNR=23						
ASAR	**Alice Springs**	**37.22**	**196**	P	P	09 32 17.7	+0.6
	1.0nm,0.5s,baz=21,slow=12,SNR=28						
STKA	**Stephens Creek**	**44.08**	**183**	P	P	09 33 12.8	-0.8
	1.2nm,0.6s,baz=23,slow=7.7,SNR=3.4						

LDG ***18*** *09:29:46.5±0.9, 13°.16S×166°.74E, h10km, Mb5.3/4, Error ellipse: s-maj=99.6km s-min=59.6km az=18.0*
NOU ***18*** *09:30:07.7±1.0, 12°.04S×164°.70E, h30km, MD4.1, ML4.2*
BJI ***18*** *09:30:10.9, 11°.79S×166°.89E, h181km, mB4.9/21, mb4.9/38*
IDC ***18*** *09:30:11.2±0.7, 12°.29S×166°.78E, h184km±6km, mb4.3/23, mb1 4.4/23, mb1mx4.4/24, mbtmp4.3/23, MS3.6/1, Ms1 3.5/1, ms1mx2.8/19, Error ellipse: s-maj=12.4km s-min=10.0km az=113.0*
NEIC ***18*** *09:30:11.4±0.1, 12°.21S×166°.71E, mb4.9/42, Error ellipse: s-maj=5.9km s-min=4.9km az=141.0*
GCMT ***18*** *09:30:12.4±0.3, 12°.25S×166°.63E, h175km±3km, MW5.0, Moment Tensor Solution. s23,c24; s63,c89; Moment tensor: Scale 10^16^Nm; M_{rr}3.22±.14; $M_{\theta\theta}$0.20±.19; $M_{\phi\phi}$-3.42±.17; $M_{r\theta}$1.09±.17; $M_{\theta\phi}$0.32±.18; $M_{\phi r}$-0.81±.16; Best double couple: $M_0$3.60000×10^16^ NP1:ϕ_s11.00000°, δ40.00000°, λ116.00000°. NP2:ϕ_s159.00000°, δ55.00000°, λ70.00000°. Principal axes: T 3.6400, Plg72.0000°, Azm18.0000°; N -0.0600, Plg16.0000°, Azm171.0000°; P -3.5700, Plg8.0000°, Azm263.0000°; Data Used: IU II IC G CN.*
ISCJB ***18*** *09:30:12.1±1.1, 12°.26S±0°.05×166°.65E±0°.03, h201km±11km, mb4.7/72 Error ellipse: s-maj=7.7km s-min=5.5km az=10.0*

ISC 18 09:30:12.3±1.1, 12°.27S±0°.05×166°.71E±0°.04, h190km±10km, h187km±1.3km: pP-P, n421, $_{\sigma}$0^{s}59/310, mb4.8/72, 117C-85D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**7.21**	**292**	Pn	Pn	09 31 53.8	-1.6
DZM	**Mont Dzumac**	**9.75**	**181**	*e*P	Pn	09 32 29.2	+0.8
DZM				*e*S	Sn	09 34 14.9	-2.4
DZM				AMP		09 34 15.7	
	comp=Z,118nm,1.5s						
DZM	**Mont Dzumac**	**9.75**	**181**	*e*Pn	Pn	09 32 29.8	+1.4
DZM				*e*Sn	Sn	09 34 15.6	-1.7
BAYA	**Yate Dam**	**9.83**	**179**	*e*P	Pn	09 32 31.6	+2.1
BAYA				*e*S	Sn	09 34 18.7	-0.5
NORM	**Noumea**	**9.91**	**181**	*e*P	Pn	09 32 32.8	+2.4
ONTRN	**Noumea**	**9.98**	**181**	*e*S	Sn	09 34 20.5	-2.4
MSVF	**Nonsavu**	**12.23**	**118**	*e*Pn	Pn	09 33 02.0	+1.6
	comp=Z,57nm,1.2s						
EIDS	**Eidsvold**	**19.68**	**226**	*e*P	P	09 34 28.5	+1.5
	comp=Z,37nm,1.1s						
CTA	**Charters Tower**	**21.11**	**246**	*e*P	P	09 34 42.6	+0.3
	comp=Z,13nm,0.7s,mb4.4						
CTA				*e*pP		09 35 10.8	
CTA	**Charters Tower**	**21.11**	**246**	P	P	09 34 42.7	+0.4
	comp=Z,19nm,0.8s,mb4.5,baz=75,slow=13,SNR=14						
CTA	**Charters Tower**	**21.11**	**246**	P	P	09 34 42.7	+0.4
CTAO	**Charters Tower**	**21.11**	**246**	*e*P	P	09 34 42.7	+0.5
	comp=Z,50nm,1.2s,mb4.7						
CTAO				*e*pP		09 35 10.6	
ARMA	**Armidale**	**22.83**	**215**	*e*P	P	09 35 00.1	+1.1
ARMA	**Armidale**	**22.83**	**215**	*e*P	P	09 34 59.9	+0.9
	comp=Z,36nm,1.0s,mb4.8						
COEN	**Coen**	**22.98**	**263**	P	P	09 35 01.6	+1.1
OUZ	**Omahuta**	**23.69**	**166**	P	P	09 35 07.3	+0.6
	comp=Z,78nm,1.4s,mb5.0						
URZ	**Urewera**	**27.50**	**162**	P	P	09 35 39.8	-1.1
	comp=Z,6.3nm,0.4s,mb4.6,baz=202,slow=0.4,SNR=12						
URZ	**Urewera**	**27.50**	**162**	*e*P	P	09 35 40.3	-0.7
SNZO	**South Karori**	**29.77**	**168**	*e*P	P	09 36 00.0	-1.0
	comp=Z,30nm,1.1s,mb4.9						
STKA	**Stephens Creek**	**30.24**	**226**	P	P	09 36 05.9	+0.6
	comp=Z,7.5nm,0.7s,mb4.5,baz=62,slow=6.8,SNR=16						
STKA				PcP	PcP	09 39 00.5	-0.9
	comp=Z,2.4nm,0.6s,baz=359,slow=3.5,SNR=3.7						
STKA				LR	LR	09 48 34.2	
	comp=Z,108nm,18.1s,baz=28,slow=36						
RPZ	**Rata Peaks**	**31.56**	**174**	P	P	09 36 15.7	-1.0
	comp=Z,33nm,0.7s,mb5.2,baz=36,slow=9.4,SNR=21						
RPZ	**Rata Peaks**	**31.56**	**174**	*e*P	P	09 36 16.1	-0.6
	comp=Z,31nm,0.8s,mb5.1						
WRA	**Warramunga Arr**	**31.98**	**252**	P	P	09 36 19.6	-1.1
	comp=Z,6.8nm,1.0s,mb4.3,baz=83,slow=9.0,SNR=31						
ASAR	**Alice Springs**	**33.12**	**245**	P	P	09 36 29.6	-0.9
	comp=Z,8.7nm,0.8s,mb4.5,baz=71,slow=9.3,SNR=90						
ASAR				pP	pP	09 37 08.2	-1.8
	comp=Z,7.8nm,0.8s,baz=75,slow=9.5,SNR=7.4						
ASAR				PcP	PcP	09 39 07.6	-1.7
	comp=Z,2.1nm,1.0s,baz=77,slow=4.3,SNR=5.5						
KAKA	**Kakadu**	**33.45**	**265**	*e*P	P	09 36 34.5	+1.0
	comp=Z,15nm,0.3s,mb5.2						
KAKA	**Kakadu**	**33.45**	**265**	*e*P	P	09 36 34.3	+0.8
	comp=Z,55nm,0.6s,mb5.5						
FITZ	**Fitzroy Crossi**	**39.99**	**256**	P	P	09 37 28.9	+0.1
	comp=Z,8.8nm,0.5s,mb4.6,baz=85,slow=10,SNR=16						
FITZ	**Fitzroy Crossi**	**39.99**	**256**	*e*P	P	09 37 28.5	-0.3
	comp=Z,18nm,1.0s,mb4.7						
FORT	**Forrest**	**40.13**	**236**	*e*P	P	09 37 29.6	-0.2
	comp=Z,26nm,0.6s,mb5.0						
FORT	**Forrest**	**40.13**	**236**	*e*P	P	09 37 29.3	-0.5
	comp=Z,38nm,0.7s,mb5.1						
CBIJ	**Chichi jima**	**45.80**	**329**	P	P	09 38 14.9	-0.3
	comp=Z,24nm,0.4s,mb5.2,baz=78,slow=18,SNR=7.3						
KAPI	**Kappang**	**46.92**	**275**	*e*P	P	09 38 23.6	-0.6
	comp=Z,18nm,0.9s,mb4.7						
JHJ	**Hachijo jima 2**	**51.93**	**331**	P	P	09 39 01.4	-0.4
	comp=Z,19nm,0.3s,mb5.2,baz=256,slow=20,SNR=5.3						
KKM	**Kota Kinabalu**	**53.39**	**287**	*e*P	P	09 39 12.8	0.0
	comp=Z,52nm,1.1s,mb5.2						
MJAR	**Matsushiro Arr**	**55.48**	**332**	P	P	09 39 26.5	-1.0
	comp=Z,9.4nm,0.9s,mb4.5,baz=164,slow=7.1,SNR=28						
MAJO	**Matsushiro**	**55.49**	**332**	*e*P	P	09 39 26.7	-0.8
	comp=Z,29nm,1.1s,mb4.9						
KSM	**Kuching**	**57.63**	**280**	*e*P	P	09 39 41.8	-1.3
	comp=Z,25nm,1.3s,mb4.9						
KSRS	**Korea Array**	**61.41**	**325**	P	P	09 40 08.8	+0.3
	comp=Z,6.0nm,0.8s,mb4.5,baz=142,slow=7.6,SNR=14						
YSS	**Yuzh-Sakhalins**	**62.73**	**342**	*e*P	P	09 40 18.2	+1.2
	comp=Z,33nm,1.0s,mb5.1						
NJ2	**Nanjing**	**63.55**	**315**	*e*P	P	09 40 24.3	+1.6
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.1						
PEA0B	**Petropavlovsk-**	**65.57**	**354**	*e*P	P	09 40 35.4	+0.1
PETK	**Petropavlovsk-**	**65.57**	**354**	P	P	09 40 35.1	-0.2
	comp=Z,6.7nm,0.9s,mb4.5,baz=126,slow=7.5,SNR=13						
SBA	**Scott Base**	**65.58**	**180**	*e*P	P	09 40 36.0	+0.8
	comp=Z,73nm,2.0s,mb5.2						
MDJ	**Mudanjiang**	**65.86**	**332**	P	P	09 40 37.4	0.0
MDJ				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.0						
MDJ				pmax	pmax		
	comp=Z,76nm,3.9s						
MDJ				LR	LR		
	comp=N,120nm,19.1s						
MDJ				LR	LR		
	comp=E,99nm,21.5s						
MDJ				LR	LR		
	comp=Z,63nm,19.1s						
WHN	**Wuhan**	**65.90**	**312**	*e*P	P	09 40 36.9	-1.1
CN2	**Changchun**	**67.27**	**329**	*e*P	P	09 40 47.3	+1.0
CN2				*e*pP	pP	09 41 32.0	+0.9
CN2				*e*S	S	09 49 26.0	+0.1
CN2				pmax	pmax		
	comp=Z,50nm,0.9s,mb5.3						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
PSI	**Prapat**	**68.97**	**278**	P	P	09 40 57.2	-0.4
	comp=Z,18nm,0.9s,mb4.8,baz=138,slow=3.4,SNR=15						
PSI	**Prapat**	**68.97**	**278**	P	P	09 40 57.2	-0.4
ENH	**Enshi**	**69.39**	**309**	*e*P	P	09 40 59.3	-0.5
	comp=Z,11nm,0.3s,mb5.1						
GYA	**Guiyang**	**69.88**	**304**	⇑*i*P	P	09 41 05.4	+2.5
GYA				pP	pP	09 41 50.3	+2.3
GYA				sP	sP	09 42 10.0	+1.6
GYA				PP	PP	09 43 44.5	+4.2
GYA				S	S	09 49 58.3	+0.9
GYA				SKS		09 50 44.3	
GYA				SS	SS	09 54 34.1	+3.5
GYA				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.1						

GYA pmax pmax
comp=Z,160nm,5.8s
GYA LR LR
comp=N,430nm,18.0s
GYA LR LR
comp=E,320nm,19.2s
GYA LR LR
comp=Z,470nm,18.3s
BJI Beijing 70.02 321 P **P** **09 41 03.9 +0.5**
BJI S S 09 50 01.9 +3.5
BJI pmax pmax
comp=Z,22nm,1.0s,mb4.8
BJI pmax pmax
comp=Z,97nm,3.7s
BJI LR LR
comp=N,430nm,11.2s
BJI LR LR
comp=E,140nm,12.0s
BJI LR LR
comp=Z,70nm,21.0s
XAN Xi'an 71.64 312 P **P** **09 41 13.4 +0.1**
XAN pmax pmax
comp=Z,5.0nm,1.1s,mb4.2
XAN pmax pmax
comp=Z,16nm,4.5s
KMI Kunming 72.56 301 P **P** **09 41 20.4 +1.4**
KMI pP pP 09 42 05.5 +1.1
KMI sP sP 09 42 24.3 -0.4
KMI PP PP 09 44 06.8 +3.6
KMI S S 09 50 29.0 +0.8
KMI sS sS 09 51 47.3 +0.1
KMI SS SS 09 55 14.5 +2.8
KMI pmax pmax
comp=Z,34nm,1.0s,mb5.0
KMI pmax pmax
comp=Z,95nm,3.1s
KMI LR LR
comp=N,150nm,18.1s
KMI LR LR
comp=E,150nm,22.4s
KMI LR LR
comp=Z,110nm,24.9s
HHC Hu-ho-hao-te 73.37 319 *eP* **P** **09 41 24.8 +1.4**
HHC PcP PcP 09 41 40.3 +1.7
HHC pP pP 09 42 10.5 +1.6
HHC sP sP 09 42 31.5 +2.3
HHC PP PP 09 44 13.0 +3.2
HHC S S 09 50 36.8 +0.1
HHC SKS 09 51 08.6
HHC ScS ScS 09 51 12.5 -1.7
HHC sS sS 09 51 56.0 +0.1
HHC SS SS 09 55 26.4 +3.0
HHC pmax pmax
comp=Z,34nm,0.8s,mb5.1
HHC pmax pmax
comp=Z,100nm,5.2s
HHC LR LR
comp=N,120nm,17.8s
HHC LR LR
comp=E,110nm,16.7s
HHC LR LR
comp=Z,88nm,17.8s
CM31 Chiang Mai Arr 73.46 294 *eP* **P** **09 41 25.5 +1.1**
comp=Z,3.2nm,0.6s,mb4.2
CMAR Chiang Mai Arr 73.46 294 P **P** **09 41 24.9 +0.5**
comp=Z,12nm,0.9s,mb4.7,baz=119,slow=4.5,SNR=38
CHTO Chiang Mai 73.58 294 *eP* **P** **09 41 25.1 0.0**
HIA Hailar 73.89 330 *eP* **P** **09 41 26.9 +0.7**
comp=Z,20nm,1.2s,mb4.7
CD2 Chengdu 74.09 307⇑ *iP* **P** **09 41 28.3 +0.5**
CD2 pP pP 09 42 13.9 +0.5
CD2 sP sP 09 42 34.3 +0.6
CD2 S S 09 50 44.4 -0.8
CD2 sS sS 09 52 04.1 -0.4
CD2 SS SS 09 55 36.5 +1.7
CD2 pmax pmax
comp=Z,30nm,1.0s,mb5.0
CD2 pmax pmax
comp=Z,150nm,6.2s
LZH Lanzhou 76.27 312 *eP* **P** **09 41 42.1 +1.9**
LZH pP pP 09 42 26.3 +0.3
LZH sP sP 09 42 49.3 +3.1
LZH PP PP 09 44 38.0 +3.6
LZH *eS* S 09 51 08.3 -0.8
LZH sS sS 09 52 28.3 -0.5
LZH SS SS 09 56 10.6 +3.0
LZH pmax pmax
comp=Z,36nm,1.0s,mb5.0
LZH pmax pmax
comp=Z,150nm,5.3s
QSPA South Pole Qui 77.74 180 *eP* **P** **09 41 47.6 -0.1**
comp=Z,16nm,1.0s,mb4.6
SVW2 Sparrevohn 78.98 18 *eP* **P** **09 41 54.7 +0.1**
ULN Ulaanbaatar 79.84 324 *eP* **P** **09 42 00.2 +0.7**
comp=Z,49nm,1.4s,mb4.9
BILL Bilibino 80.09 360 *eP* **P** **09 42 00.2 -0.2**
comp=Z,46nm,1.0s,mb5.1
SONM Songino Array 80.20 324 P **P** **09 42 01.9 +0.4**
comp=Z,2.5nm,0.3s,mb4.2,baz=136,slow=5.0,SNR=25
TTA Tatalina 80.32 16 *eP* **P** **09 42 01.3 -0.4**
comp=Z,12nm,1.4s,mb4.3
GTA Gaotai 80.58 314 P **P** **09 42 04.9 +1.2**
GTA pP pP 09 42 45.5 -4.5
GTA sP sP 09 43 05.9 -4.2
GTA pmax pmax
comp=Z,21nm,1.1s,mb4.7
RC01 Rabbit Creek A 80.81 20 *eP* **P** **09 42 03.9 -0.4**
comp=Z,9.4nm,1.1s,mb4.3
PMR Palmer 81.38 20 *eP* **P** **09 42 06.8 -0.6**
KTH Kantishna Hill 82.27 18 *eP* **P** **09 42 11.0 -0.9**
comp=Z,9.3nm,0.7s,mb4.5
TRF Thorofare Moun 82.38 18 *eP* **P** **09 42 11.0 -1.5**
comp=Z,1.6nm,0.4s,mb4.0
TRF *ep*P pP 09 42 56.5 -2.6
BMRM Bremner River 82.50 22 *eP* **P** **09 42 12.5 -0.8**
comp=Z,24nm,1.5s,mb4.7
BMRM *ep*P pP 09 42 57.0 -2.8
MCK McKinley 83.00 18 *eP* **P** **09 42 15.2 -0.5**
TLY Talaya 83.66 326 *eP* **P** **09 42 19.4 0.0**
comp=Z,45nm,1.4s,mb5.0
MAW Mawson 83.95 202 P **P** **09 42 20.4 -0.2**
comp=Z,15nm,1.1s,mb4.7,baz=97,slow=7.8,SNR=11
MAW Mawson 83.95 202 *eP* **P** **09 42 20.4 -0.3**
OHCM Honcut 84.07 48 *eP* **P** **09 42 21.6 -0.2**
OHCM *ep*P pP 09 43 08.1 -0.4
YBH Yreka Blue Hor 84.08 45 *eP* **P** **09 42 22.0 +0.3**
COLA College 84.15 18 *eP* **P** **09 42 20.3 -1.3**
comp=Z,59nm,1.7s,mb5.0
COLA *ep*P pP 09 43 04.7 -3.6
HUMO Hull Mountain 84.24 44 *eP* **P** **09 42 22.3 -0.3**
CMB Columbia Colle 84.42 49 *eP* **P** **09 42 22.9 -0.6**
BEKR Beckworth 85.07 48 ⇑P **P** **09 42 26.6 -0.2**
baz=85
ISA Isabella 85.07 52 ⇑P **P** **09 42 27.2 +0.3**
baz=85
F03A Seaside 85.12 41 ⇑P **P** **09 42 26.7 -0.1**
baz=85
EDW2 Edwards Air Fo 85.20 53 ⇑P **P** **09 42 27.5 0.0**
baz=85
COLD Coldfoot 85.22 15 P **P** **09 42 26.5 -0.4**
comp=Z,8.2nm,0.9s,mb4.5
BFSC Mount Baldy Ra 85.26 54 ⇑P **P** **09 42 27.7 -0.1**
baz=85
WAKR Walker 85.28 49 *eP* **P** **09 42 28.2 +0.4**
WAKR *ep*P pP 09 43 14.9 +0.3
WCN Washoe City 85.31 48 ⇓P **P** **09 42 27.9 -0.1**
baz=85
H04A Detroit Lake 85.54 43 ⇓P **P** **09 42 28.9 0.0**
baz=86
MTUM Tungsten Hills 85.55 50 *eP* **P** **09 42 30.0 +0.8**
MTUM *ep*P pP 09 43 16.2 +0.2
K05A Summer Lake 85.69 45 ⇓P **P** **09 42 30.0 +0.2**
baz=86
MONP Monument Peak 85.83 55 ⇓P **P** **09 42 30.4 -0.3**
baz=86
F04A Amboy 85.85 41 ⇓P **P** **09 42 31.0 +0.5**
baz=86
MPMC Manual Prospec 85.96 52 ⇑P **P** **09 42 31.1 -0.1**
baz=86
TAPN Taplejung 86.02 299 *eP* **P** **09 42 31.9 +0.2**
comp=Z,62nm,1.2s,mb5.2
DVTC Desert V Tower 86.02 56 ⇑P **P** **09 42 31.5 -0.1**
baz=86
NVAR Mina Array Bea 86.09 49 P **P** **09 42 31.4 -0.5**
comp=Z,4.2nm,1.1s,mb4.1,baz=227,slow=8.3,SNR=15
NVAR pP pP 09 43 16.8 -2.0
comp=Z,3.8nm,0.9s,baz=227,slow=7.5,SNR=9.5
ODAN Odare 86.16 298 *eP* **P** **09 42 32.3 -0.1**
comp=Z,69nm,1.0s,mb5.3
EGAK Eagle 86.20 20 *eP* **P** **09 42 30.8 -0.9**
GRAC Grapevine Rang 86.34 51 ⇓P **P** **09 42 33.3 +0.2**
baz=86
SWSC Sam W. Stewart 86.35 55 ⇑P **P** **09 42 33.4 +0.2**
baz=86
BELC Belle Mtn. Jos 86.50 54 ⇑P **P** **09 42 33.7 -0.2**
baz=87,SNR=6.0
FURC Furnace Creek, 86.57 52 ⇓P **P** **09 42 34.0 -0.2**
baz=87
D05A Enumclaw 86.60 40 ⇓P **P** **09 42 34.9 +0.8**
baz=87
BC3 Big Chuckawall 86.83 55 ⇑P **P** **09 42 35.8 +0.3**
baz=87
RAMN Ramite 86.86 298 *eP* **P** **09 42 35.4 -0.5**
U10A Ash Meadows, A 86.96 52 ⇓P **P** **09 42 36.4 +0.2**
baz=87
GMRC Granite Mounta 87.00 54 ⇓P **P** **09 42 36.4 +0.1**
baz=87
I07A Izee 87.12 44 ⇑P **P** **09 42 36.6 -0.1**
baz=87,SNR=6.4
WVOR Wild Horse Val 87.16 46 *eP* **P** **09 42 36.8 -0.1**
comp=Z,16nm,1.6s,mb4.6
GLA Glamis 87.16 55 ⇓P **P** **09 42 37.3 +0.1**
baz=87
GLA Glamis 87.16 55 *eP* **P** **09 42 37.8 +0.6**
GLA *ep*P pP 09 43 24.5 +0.3
S10A Tonopah Range, 87.21 50 ⇓P **P** **09 42 37.1 -0.2**
baz=87
IRM Iron Mountain 87.22 54 ⇓P **P** **09 42 37.5 +0.1**
baz=87
TIXI Tiksi 87.47 349 *eP* **P** **09 42 37.4 -0.4**
comp=Z,28nm,1.4s,mb4.9
V11A Goodsprings 87.48 53 ⇓P **P** **09 42 38.7 +0.1**
baz=88
R10A Warm Springs 87.54 50 ⇑P **P** **09 42 39.3 +0.4**
baz=88
J08A Circle Bar Ran 87.58 45 ⇓P **P** **09 42 38.7 -0.2**
baz=88,SNR=7.7
Y12C Blythe 87.60 55 ⇓P **P** **09 42 39.0 -0.2**
baz=88
Q10A Clear Creek Ra 87.63 50 ⇑P **P** **09 42 39.2 0.0**
baz=88
U11A Corn Creek 87.69 52 ⇓P **P** **09 42 39.8 +0.2**
baz=88
GUN Gumba 87.73 299 *eP* **P** **09 42 39.7 -0.3**
H08A Prairie City 87.83 44 ⇓P **P** **09 42 39.5 -0.5**
baz=88
V12A Nelson 87.90 53 ⇑P **P** **09 42 40.4 -0.2**
baz=88
113A Mohawk Valley, 87.94 56 ⇓P **P** **09 42 40.8 0.0**
baz=88
O10A Cortez Mining, 88.00 48 ⇑P **P** **09 42 41.0 0.0**
baz=88
PKI Pulchoki 88.05 299 *eP* **P** **09 42 41.0 -0.5**
comp=Z,79nm,1.1s,mb5.5
PKI Pulchoki 88.05 299 *eP* **P** **09 42 41.1 -0.4**
T11A Corn Creek, Al 88.05 51 ⇑P **P** **09 42 41.2 -0.1**
baz=88
PDMCI Parker Dam,Lak 88.06 54 ⇑P **P** **09 42 41.4 0.0**
baz=88
J09A Fry Pan Ranch, 88.07 45 ⇑P **P** **09 42 41.2 -0.1**
baz=88,SNR=6.1
R11A Troy Canyon, C 88.10 50 ⇑P **P** **09 42 41.5 0.0**
baz=88,SNR=6.6
Z13A Yuma Proving G 88.14 56 ⇑P **P** **09 42 41.8 0.0**
baz=88,SNR=5.9
Q11A Duckwater 88.19 50 ⇓P **P** **09 42 41.7 -0.2**
baz=88,SNR=12
KKN Kakani 88.21 299 *eP* **P** **09 42 41.7 -0.6**
comp=Z,32nm,0.9s,mb5.2
I09A Lost Marbles R 88.28 44 ⇓P **P** **09 42 41.9 -0.3**
baz=88,SNR=5.7
DMN Daman 88.32 299 *eP* **P** **09 42 42.5 -0.3**
comp=Z,81nm,1.0s,mb5.5
P11A Circle Ranch, 88.33 49 ⇑P **P** **09 42 42.6 +0.1**
baz=88
U12A Valley of Fire 88.34 52 ⇑P **P** **09 42 42.5 -0.2**
baz=88
M10A I.L. Ranch, Tu 88.35 47 ⇓P **P** **09 42 42.8 +0.2**
baz=88
S12A Delamar Landin 88.44 51 ⇓P **P** **09 42 43.4 +0.3**
baz=88,SNR=5.8
W13A Hualapai Mount 88.48 54 ⇓P **P** **09 42 43.5 +0.1**
baz=88,SNR=8.0
214A Organ Pipe Nat 88.50 57 ⇓P **P** **09 42 43.3 -0.2**
baz=88
K10A MacKenzie Ranc 88.51 46 ⇓P **P** **09 42 43.3 0.0**
baz=89,SNR=7.7
L10A Juniper Basin 88.57 46 ⇑P **P** **09 42 43.6 0.0**
baz=89,SNR=7.9
O11A Cowboy Ranch, 88.57 49 ⇑P **P** **09 42 43.7 +0.1**
baz=89
V13A Grand Canyon W 88.61 53 ⇑P **P** **09 42 43.9 0.0**
baz=89,SNR=6.5
114A Black Gap (USA 88.65 56 ⇓P **P** **09 42 44.3 +0.1**
baz=89
G09A Cove 88.67 43 ⇑P **P** **09 42 43.8 -0.3**
baz=89
B08A Colville Reser 88.69 40 ⇓P **P** **09 42 44.2 +0.2**
baz=89
N11A Elko Archery C 88.72 48 ⇓P **P** **09 42 44.7 +0.3**
baz=89
U13A Pakoon Wash 88.78 52 ⇑P **P** **09 42 44.8 +0.1**
baz=89,SNR=7.0
R12A Pony Springs, 88.83 50 ⇓P **P** **09 42 45.0 +0.1**
baz=89,SNR=6.7
BMO Blue Mountains 88.86 44 *eP* **P** **09 42 44.3 -0.6**
comp=Z,8.3nm,1.4s,mb4.5
M11A Holland Ranch, 88.86 47 ⇓P **P** **09 42 45.3 +0.4**
baz=89,SNR=11
Q12A Willow Creek R 88.87 50 ⇑P **P** **09 42 45.5 +0.4**
baz=89
Y14A Wickenburg 88.87 55 ⇓P **P** **09 42 44.9 -0.3**
baz=89
P12A McGill 88.93 49 ⇓P **P** **09 42 45.6 +0.2**
baz=89,SNR=5.7
I10A Payette 88.96 44 ⇑P **P** **09 42 45.8 +0.4**
baz=89
T13A Saint George 89.00 52 ⇑P **P** **09 42 45.9 +0.2**
baz=89,SNR=8.3
K11A Parker Ranch, 89.09 46 ⇑P **P** **09 42 46.0 -0.1**
baz=89,SNR=6.3
X14A Yava 89.10 55 ⇓P **P** **09 42 46.5 +0.3**
baz=89,SNR=5.6
L11A Cat Creek Ranc 89.11 47 ⇑P **P** **09 42 46.3 +0.2**
baz=89,SNR=7.8
G10A Bishop Farm, J 89.12 43 ⇓P **P** **09 42 45.8 -0.3**
baz=89,SNR=8.3
W14A Seligman 89.15 54 ⇑P **P** **09 42 46.4 -0.1**
baz=89
H10A Noah's Angus R 89.15 44 ⇑P **P** **09 42 45.7 -0.6**
baz=89,SNR=11
N12A Clover Valley, 89.23 48 ⇓P **P** **09 42 46.9 +0.2**
baz=89,SNR=13
N12A Clover Valley, 89.23 48 *eP* **P** **09 42 46.9 +0.2**
comp=Z,23nm,1.1s,mb5.0
N12A *ep*P pP 09 43 30.6 -3.4
V14A Boquillas Ranc 89.24 53 ⇓P **P** **09 42 47.0 +0.1**
baz=89,SNR=7.3
R13A O'Grain Ranch, 89.27 51 ⇓P **P** **09 42 47.3 +0.4**
baz=89,SNR=5.7
O12A Currie 89.28 49 ⇑P **P** **09 42 47.2 +0.2**
baz=89,SNR=12
U14A Mt Trumbull 89.39 53 ⇑P **P** **09 42 47.8 +0.2**
baz=89,SNR=14
Y15A Casa Rosa Ranc 89.41 55 ⇓P **P** **09 42 47.9 +0.2**
baz=90,SNR=6.6
MFID Camas Ranch 89.43 45 ⇓P **P** **09 42 47.7 +0.2**
baz=90
Q13A Wheeler Ranch, 89.45 50 ⇓P **P** **09 42 47.6 -0.2**
baz=90,SNR=7.9
I11A Placerville 89.49 45 ⇓P **P** **09 42 47.8 -0.1**
baz=90,SNR=13
M12A Wells 89.49 47 ⇑P **P** **09 42 48.2 +0.3**
baz=90,SNR=9.2
CCUT Cedar City 89.56 51 *ep*P pP 09 43 34.8 -0.7
116A Eloy 89.56 57 ⇓P **P** **09 42 48.5 +0.1**
baz=90
D10A Wagner Farm, O 89.58 42 ⇓P **P** **09 42 48.4 +0.3**
baz=90
P13A Bates Ranch, G 89.59 50 ⇑P **P** **09 42 48.6 +0.2**
baz=90,SNR=13
216A Three Points, 89.62 57 ⇑P **P** **09 42 48.8 0.0**
baz=90
L12A House Creek Ra 89.62 47 ⇓P **P** **09 42 48.7 +0.2**
baz=90,SNR=14
X15A Humboldt 89.63 55 ⇑P **P** **09 42 48.9 +0.1**
baz=90,SNR=6.2
T14A Hurricane 89.64 52 ⇑P **P** **09 42 48.7 -0.1**
baz=90
H11A Donnelly 89.69 44 ⇑P **P** **09 42 48.3 -0.5**
baz=90,SNR=6.7
G11A Walters Elk Ra 89.73 43 ⇓P **P** **09 42 48.1 -0.8**
baz=90,SNR=7.6
S14A Cedar City 89.76 51 ⇑P **P** **09 42 49.4 +0.1**
baz=90
W15A Williams 89.78 54 ⇑P **P** **09 42 49.7 +0.3**
baz=90
O13A Hicks Ranch, I 89.80 49 ⇑P **P** **09 42 49.8 +0.4**
baz=90
N13A Wendover, West 89.84 48 ⇓P **P** **09 42 49.9 +0.3**
baz=90
N13A Wendover, West 89.84 48 *eP* **P** **09 42 49.6 0.0**
comp=Z,4.3nm,0.6s,mb4.6
K12A Draper Farm, C 89.85 46 ⇑P **P** **09 42 49.5 -0.1**
baz=90,SNR=8.1
J12A Stokes Ranch, 89.89 46 ⇑P **P** **09 42 49.9 +0.2**
baz=90,SNR=18
F11A Grangeville 89.95 43 ⇑P **P** **09 42 48.7 -1.3**
baz=90
Z16A Peralta Trail, 89.98 56 ⇑P **P** **09 42 50.6 +0.2**
baz=90
M13A Montello 90.01 48 ⇑P **P** **09 42 50.3 0.0**
baz=90,SNR=21
M13A Montello 90.01 48 *eP* **P** **09 42 50.4 +0.1**
comp=Z,19nm,1.0s,mb5.0
Q14A Sevier Lake (B 90.01 50 ⇓P **P** **09 42 50.6 +0.2**
baz=90,SNR=13
I12A Atlanta 90.02 45 ⇓P **P** **09 42 50.5 +0.1**
baz=90,SNR=6.3
V15A Kaibab Nationa 90.02 53 ⇑P **P** **09 42 50.9 +0.4**
baz=90,SNR=7.3
Y16A Circle Bar Ran 90.08 55 ⇑P **P** **09 42 51.2 +0.3**
baz=90,SNR=5.3
U15A North Rim 90.09 53 ⇑P **P** **09 42 51.5 +0.7**
baz=90,SNR=12
X16A Lo Mia Camp, P 90.24 55 ⇑P **P** **09 42 52.0 +0.4**
baz=90,SNR=5.9
P14A Drum Mountains 90.33 50 ⇓P **P** **09 42 52.1 +0.3**
baz=90
W16A Flagstaff 90.34 54 ⇑P **P** **09 42 52.4 +0.4**
baz=90
117A Oracle 90.35 57 ⇓P **P** **09 42 52.5 +0.3**
baz=90
S15A Panguitch 90.36 52 ⇑P **P** **09 42 52.5 +0.4**
baz=90
L13A Double Diamond 90.37 47 ⇓P **P** **09 42 52.2 +0.2**
baz=90,SNR=6.1
K13A Stover Farm, H 90.43 46 ⇓P **P** **09 42 52.4 +0.1**
baz=90
H12A Diamond D Ranc 90.43 44 ⇓P **P** **09 42 52.1 -0.1**
baz=90,SNR=6.4
HLID Hailey 90.45 46 ⇑P **P** **09 42 52.6 +0.2**
baz=90
HLID Hailey 90.45 46 *eP* **P** **09 42 52.5 +0.2**
comp=Z,6.5nm,1.2s,mb4.4
C11A Tepee Creek (N 90.48 41 ⇑P **P** **09 42 52.2 -0.1**
baz=90
E12A Beaver Dam Sad 90.50 43 ⇑P **P** **09 42 51.8 -0.6**
baz=91
F12A Elk City 90.51 43 ⇓P **P** **09 42 51.9 -0.6**
baz=91,SNR=9.2
Y17A Roosevelt 90.54 56 ⇑P **P** **09 42 53.5 +0.4**
baz=91
R15A Junction 90.56 51 ⇓P **P** **09 42 53.3 +0.3**
baz=91
WUAZ Wupatki 90.57 54 ⇓P **P** **09 42 53.4 +0.2**
baz=91
WUAZ Wupatki 90.57 54 *eP* **P** **09 42 53.5 +0.3**
J13A Cove Ranch, Pi 90.58 46 ⇑P **P** **09 42 53.2 +0.2**
baz=91,SNR=9.0
N14A Grayback Hills 90.58 48 ⇑P **P** **09 42 52.8 -0.2**
baz=91
WMQ Urumqi 90.62 315 *eP* **P** **09 42 53.0 -0.1**
M14A Sheep Mountain 90.64 48 ⇑P **P** **09 42 53.4 +0.1**
baz=91,SNR=12
DUG Dugway 90.68 49 ⇑P **P** **09 42 53.3 -0.2**
baz=91
MSU Marysvale 90.72 51 *eP* **P** **09 42 54.5 +0.8**
MSU *ep*P pP 09 43 41.2 +0.3
X17A Forest Lakes 90.73 55 ⇑P **P** **09 42 54.4 +0.5**
baz=91,SNR=6.0
I13A Wildhorse Cree 90.76 45 ⇓P **P** **09 42 54.0 +0.2**
baz=91,SNR=12
D12A Red Ives Fores 90.83 42 ⇓P **P** **09 42 53.6 -0.4**
baz=91
H13A Challis 90.85 45 ⇑P **P** **09 42 54.2 0.0**
baz=91,SNR=13
L14A Malta 90.86 47 ⇓P **P** **09 42 54.4 +0.1**
baz=91,SNR=11
C12B Naegeli Ranch, 90.94 41 ⇑P **P** **09 42 54.6 +0.1**
baz=91
O15A The Old Anders 90.96 49 ⇑P **P** **09 42 54.7 -0.1**
baz=91
118A Homack Ranch, 91.00 57 ⇓P **P** **09 42 54.8 -0.3**
baz=91
G13A Cobalt 91.01 44 ⇑P **P** **09 42 55.1 +0.2**
baz=91
J14A Carey 91.02 46 ⇑P **P** **09 42 55.0 0.0**
baz=91
K14A Jones Ranch, D 91.05 47 ⇓P **P** **09 42 55.1 0.0**
baz=91,SNR=7.7
V17A Tonalea, Kykot 91.06 54 ⇓P **P** **09 42 55.2 -0.1**
baz=91
HVU Hansel Valley 91.13 48 *eP* **P** **09 42 56.2 +0.7**
F13A Darby 91.14 43 ⇑P **P** **09 42 54.9 -0.6**
baz=91
R16A Teasdale 91.19 51 ⇓P **P** **09 42 56.5 +0.6**
baz=91
Y18A Canyon Day Jun 91.22 56 ⇑P **P** **09 42 56.2 +0.1**
baz=91
I14A Mackay 91.23 45 ⇑P **P** **09 42 56.2 +0.3**
baz=91,SNR=8.1
319A Douglas 91.27 58 ⇑P **P** **09 42 56.7 +0.2**
baz=91
T17A Navajo Res., N 91.39 53 ⇓P **P** **09 42 57.6 +0.8**
baz=91
E13A Victor 91.42 43 ⇑P **P** **09 42 56.7 -0.1**
baz=92
D13A Huson 91.42 42 ⇑P **P** **09 42 56.5 -0.3**
baz=92
BSMT Bassoo Peak 91.42 41 *eP* **P** **09 42 56.4 -0.4**
219A White Tail Can 91.43 58 ⇓P **P** **09 42 57.4 +0.2**
baz=92
X18A Snowflake 91.47 55 ⇓P **P** **09 42 57.2 -0.1**
baz=92
L15A Malad City 91.47 47 ⇑P **P** **09 42 56.8 -0.3**
baz=92
H14A Leadore 91.47 45 ⇓P **P** **09 42 56.8 -0.3**
baz=92,SNR=5.8
C13A Hot Springs 91.52 42 ⇑P **P** **09 42 57.0 -0.1**
baz=92
K15A Arbon 91.54 47 ⇑P **P** **09 42 57.9 +0.4**
baz=92
S17A Black Ridge (B 91.55 52 ⇓P **P** **09 42 57.2 -0.3**
baz=92
119A Ashpeak Ranch, 91.58 57 ⇓P **P** **09 42 57.6 -0.2**
baz=92
Q16A Castle Valley 91.58 51 ⇑P **P** **09 42 58.2 +0.5**
baz=92
J15A Blackfoot 91.80 46 ⇓P **P** **09 42 58.9 +0.3**
baz=92,SNR=5.1
R17A Hanksville Air 91.81 51 ⇓P **P** **09 42 58.6 -0.1**
baz=92,SNR=6.2
N16A Rees Ranch, Co 91.87 49 ⇑P **P** **09 42 59.3 +0.3**
baz=92
E14A Clinton 91.87 43 ⇑P **P** **09 42 59.0 +0.2**
baz=92
MCMT McKenzie Canyo 91.88 45 *eP* **P** **09 42 59.4 +0.4**
comp=Z,0.2nm,0.5s
MCMT *es*P sP 09 44 04.5 -1.7
320A Kipp Ranch, An 91.89 58 ⇑P **P** **09 42 59.5 +0.2**
baz=92
Y19A Nutrioso 91.89 56 ⇓P **P** **09 42 59.7 +0.4**
baz=92
U18A Rough Rock, Ch 91.98 53 ⇓P **P** **09 42 59.8 +0.2**
baz=92
T18A Mexican Hat 92.14 53 ⇑P **P** **09 43 00.7 +0.4**
baz=92
L16A Fish Haven 92.16 48 ⇑P **P** **09 43 00.2 -0.1**
baz=92
CHMT Chamberlain Mo 92.17 43 *eP* **P** **09 43 00.1 -0.2**

S18A Hurst Farm, Bl 92.18 52 ⇑P P 09 43 00.5 0.0
baz=92
DLMT Dillon 92.20 44 *eP* **P 09 43 00.5 +0.1**
G15A Dillon 92.22 44 ⇑P P 09 43 00.2 -0.2
baz=92
O17A Robinson Place 92.22 49 ⇑P P 09 43 00.3 -0.3
baz=92
K16A Soda Springs 92.25 47 ⇑P P 09 43 01.0 +0.3
baz=92
F15A Butte 92.39 44 ⇑P P 09 43 01.3 0.0
baz=92
R18A Canyonlands Na 92.42 51 ⇓P P 09 43 01.5 -0.1
baz=92
E15A Deer Lodge 92.44 43 ⇓P P 09 43 01.3 -0.2
baz=92
U19A Dine' College, 92.47 54 ⇑P P 09 43 02.3 +0.5
baz=92
Y20A Horse Springs, 92.59 56 ⇑P P 09 43 03.3 +0.8
baz=93
A14A Double T Ranch 92.61 40 ⇓P P 09 43 02.6 +0.4
baz=93
G16A Moss Hill, Enn 92.70 44 ⇑P P 09 43 02.8 +0.1
baz=93
W20A Ramah 92.76 55 ⇓P P 09 43 03.4 +0.2
baz=93
C15A Salmond Ranch, 92.82 42 ⇑P P 09 43 02.6 -0.6
baz=93
S19A Harvey Farm, M 92.86 52 ⇑P P 09 43 03.4 -0.2
baz=93
BOZ Bozeman (W) 92.93 44 ⇑P P 09 43 03.7 0.0
baz=93
BOZ Bozeman (W) 92.93 44 *eP* **P 09 43 02.7 -1.0**
comp=Z,0.4nm,0.3s,mb4.0
F16A Kennard Place, 92.96 44 ⇓P P 09 43 03.7 -0.3
baz=93
B15A Bradely Ranch, 92.99 41 ⇓P P 09 43 03.3 -0.7
baz=93
A15A Johnson Ranch, 93.05 41 ⇑P P 09 43 03.8 -0.4
baz=93
D16A Dana Ranch, Ca 93.33 43 ⇑P P 09 43 05.3 -0.2
baz=93
B16A M & M Farms, S 93.56 41 ⇓P P 09 43 06.2 -0.4
baz=94
Z22A Elephant Butte 93.60 57 ⇑P P 09 43 06.5 -0.7
baz=94
F17A Fitzpatrick Pl 93.65 44 ⇓P P 09 43 07.2 +0.1
baz=94
L19A Farson 93.68 48 ⇓P P 09 43 06.8 -0.5
baz=94
PDAR Pinedale Array 93.69 47 P P 09 43 07.3 0.0
comp=Z,0.5nm,0.7s,mb3.8,baz=262,slow=8.7,SNR=4.1
PDAR pP pP 09 43 53.6 -1.0
comp=Z,0.8nm,0.9s,baz=302,slow=2.8,SNR=3.5
I18A Diamond G Ranc 93.72 46 ⇑P P 09 43 07.1 -0.3
baz=94
U21A Nageezi 93.72 54 ⇓P P 09 43 07.3 -0.3
baz=94
Y22A Socorro 93.74 56 ⇑P P 09 43 07.5 -0.3
baz=94
E18A Harlowton 94.31 43 ⇓P P 09 43 10.4 +0.3
baz=94
Q22A Crested Butte, 94.81 51 ⇑P P 09 43 12.4 -0.2
baz=95
B18A Beardsley Farm 94.81 42 ⇑P P 09 43 12.4 +0.1
baz=95
MK31 Makanchi Array 95.05 317 *eP* **P 09 43 13.2 -0.2**
MKAR Makanchi Array 95.05 317 P P 09 43 13.3 -0.1
comp=Z,10nm,0.8s,mb5.1,baz=97,slow=6.7,SNR=49
ZAA0 Zalesovo Array 95.09 324 *eP* **P 09 43 12.2 -1.2**
ZALV Zalesovo Beam 95.09 324 P P 09 43 12.5 -1.0
comp=Z,5.4nm,0.9s,mb4.8,baz=108,slow=4.8,SNR=13
TXAR Lajitas Array 95.59 61 P P 09 43 14.7 -1.7
comp=Z,0.3nm,0.6s,mb3.8,baz=235,slow=4.4,SNR=4.7
TXAR pP pP 09 44 03.0 -0.6
comp=Z,0.4nm,0.8s,baz=242,slow=5.3,SNR=3.5
YKA Yellowknife Ar 95.62 27 P P 09 43 13.7 -2.0
comp=Z,0.5nm,0.4s,mb4.2,baz=269,slow=4.9,SNR=8.4
KURK Kurchatov 98.18 320 P P 09 43 26.7 -0.8
comp=Z,0.7nm,0.3s,mb4.5,baz=99,slow=3.6,SNR=3.3
BVAR Borovoye Array 103.49 322 Pdiff Pdif 09 43 50.5 -0.6
comp=Z,0.5nm,0.4s,baz=106,slow=5.4,SNR=4.3
KEV Kevo 117.22 345 *ep* PKPdf 09 48 32.6 -1.7
comp=Z,3.2nm,0.8s
ARCES ARCESS Array B 117.75 346 PKP PKPdf 09 48 34.6 -0.7
comp=Z,2.4nm,0.3s,baz=83,slow=2.4,SNR=108
ARE0 ARCESS Array S 117.75 346 *e*PKPdf PKPdf 09 48 34.5 -0.8
JOF Joensuu 120.41 338 *ep* PKPdf 09 48 38.1 -2.5
comp=Z,3.7nm,0.8s
SCHQ Schefferville 120.55 33 PKP PKPdf 09 48 40.2 -0.9
comp=Z,2.2nm,0.5s,baz=260,slow=1.3,SNR=12
SCHQ Schefferville 120.55 33 PKP PKPdf 09 48 40.2 -0.9
GNI Garni 122.16 310 PKP PKPdf 09 48 45.8 +1.2
comp=Z,5.2nm,0.5s,baz=16,slow=22,SNR=4.4
CPUP Villa Florida 122.51 132 PKP PKPdf 09 48 44.3 -1.5
comp=Z,1.0nm,0.6s,baz=22,slow=3.2,SNR=4.1
KAF Kangasniemi 122.72 339 *ep* PKPdf 09 48 42.7 -2.3
comp=Z,2.0nm,0.4s
FINES FINESS Array B 123.25 339 PKP PKPdf 09 48 45.1 -1.0
comp=Z,4.7nm,0.7s,baz=99,slow=3.3,SNR=11
NB2 NORSAR Subarra128.12 345 PKPdf PKPdf 09 48 55.1 -0.3
comp=Z,6.5nm,1.1s,baz=31,slow=1.9
NB2 NORSAR Subarra128.12 345 PKPdf PKPdf 09 48 55.1 -0.3
baz=31,slow=1.9
NOA NORSAR Array B128.12 345 PKP PKPdf 09 48 54.9 -0.5
comp=Z,2.1nm,0.8s,baz=30,slow=1.9,SNR=4.6
HFS Hagfors 128.22 343 PKP PKPdf 09 48 55.6 0.0
comp=Z,0.9nm,0.3s,baz=92,slow=6.7,SNR=7.0
AKASG Malin Array Be 128.40 327 PKP PKPdf 09 48 56.0 -0.2
comp=Z,0.6nm,0.5s,baz=55,slow=2.2,SNR=12
ASF Jabal al Asfar 129.99 302 PKP PKPdf 09 49 00.7 +0.8
comp=Z,1.1nm,0.3s,baz=34,slow=2.2,SNR=4.6
BRTR Keskin Array B 130.48 312 PKP PKPdf 09 49 00.4 -0.1
comp=Z,0.5nm,0.4s,baz=174,slow=4.6,SNR=6.0
CLL Collm 135.60 337 *e*PKP PKPdf 09 49 10.0 +0.2
FELD Feldberg im Sc 140.28 338 PKP PKPdf 09 49 21.3 +2.8
DAVOX Davos/Dischmat 140.44 335 PKP PKPdf 09 49 20.0 +1.1
comp=Z,1.8nm,0.3s,baz=316,slow=15,SNR=4.7
GRR Gorron 142.53 346 *e*PKP1 PKPdf 09 49 19.0 -3.5
LPL La Plagne 142.74 337 *e*PKP1 PKPdf 09 49 19.8 -3.2
comp=Z,8.0nm,0.6s
LPG La Plagne 142.74 337 *e*PKP1 PKPdf 09 49 20.0 -3.0
SMF Signal de Mont 142.80 340 *e*PKP1 PKPdf 09 49 19.6 -3.5
AVF Avril sur Loir 142.83 341 *e*PKP1 PKPdf 09 49 18.9 -4.2
BNI Bardonecchia 143.14 336 *e*PKPdf PKPdf 09 49 21.6 -2.2
MBDF Montbardon 143.38 336⇑ *i*PKP1 PKPdf 09 49 21.3 -2.8
comp=Z,29nm,1.1s
PLDF La Plantade 143.47 340 PKP PKPdf 09 49 23.5 -0.8
AGO Saint Agoulin 143.56 341 PKP PKPdf 09 49 23.7 -0.7
ORIF Oris-en-Rattie 143.56 337⇑ *i*PKP1 PKPdf 09 49 22.4 -2.1
comp=Z,45nm,0.7s
TCF Toulx Ste Croi 143.64 342 *e*PKP1 PKPdf 09 49 22.3 -2.3
SAOF Saorge 143.66 334 PKP PKPdf 09 49 21.6 -3.1
AUTN L'Aution 143.71 334 PKP PKPdf 09 49 23.8 -0.9
SSB Saint Sauveur 143.75 339 *e*PKPdf PKPdf 09 49 23.1 -1.7
TOUF Mont Tournerai 143.76 335 PKP PKPdf 09 49 23.0 -1.9
SBF Sospel 143.81 334⇑ *i*PKP1 PKPdf 09 49 22.5 -2.4
comp=Z,76nm,0.8s
PYM Petit Puy Mans 143.87 341 PKP PKPdf 09 49 24.7 -0.3
MVIF Mont Vial 143.90 335 PKP PKPdf 09 49 23.5 -1.6
MFF Saint Martin d 144.02 345 *e*PKP1 PKPdf 09 49 23.4 -1.8
comp=Z,110nm,1.1s
VIVF Saint-Julien-l 144.07 338⇑ *i*PKP1 PKPdf 09 49 24.1 -1.3
comp=Z,95nm,1.2s
OCF Saint Nazaire 144.07 337 PKP PKPdf 09 49 23.9 -1.5
CALN Calern 144.13 335 PKP PKPdf 09 49 24.3 -1.2
PGF Pioggiola 144.15 331⇑ *i*PKP1 PKPdf 09 49 24.0 -1.6
comp=Z,111nm,1.0s
LBL Lubilhac 144.24 340 PKP PKPdf 09 49 26.1 +0.4
FRNF Fournols 144.33 341 PKP PKPdf 09 49 24.7 -1.1
FRF La Foret Royal 144.39 335⇑ *i*PKP1 PKPdf 09 49 24.6 -1.4
comp=Z,130nm,1.0s
SMRF Simiane la Rot 144.48 336⇑ *i*PKP1 PKPdf 09 49 25.5 -0.6
comp=Z,58nm,1.0s
LMR La Mourre 144.63 335⇑ *i*PKP1 PKPdf 09 49 25.5 -0.9
comp=Z,155nm,1.1s
RJF Les Rejaudoux 144.74 342⇑ *i*PKP1 PKPdf 09 49 26.2 -0.3
comp=Z,167nm,1.3s
CAF Calviac 144.90 341⇑ *i*PKP1 PKPdf 09 49 26.9 +0.1
comp=Z,63nm,1.1s
LASF Ste Croix 145.04 338⇑ *i*PKP1 PKPbc 09 49 27.3 +0.4
comp=Z,110nm,1.2s
LFF La Frestale 145.30 342 *e*PKP1 PKPbc 09 49 27.9 +0.3
MTLF Montolieu 146.26 339⇑ *i*PKP1 PKPbc 09 49 30.9 +0.3
comp=Z,100nm,1.2s
EJON La Jonquera 146.80 338 PKP PKPab 09 49 35.2 +1.4
CLLI Llivia 147.10 339 PKP PKPbc 09 49 33.9 +0.9
EPF Esparros 147.15 341 *e*PKP1 PKPbc 09 49 34.2 +1.1

CSOR Sort 147.48 340 PKP PKPbc 09 49 35.0 +1.0
EALK Alkurruntz 147.52 344 PKP PKPbc 09 49 36.0 +1.9
EBIE Bielsa 147.53 341 PKP PKPbc 09 49 35.4 +1.2
SJPF Ste Jean 147.54 343 *e*PKP1 PKPbc 09 49 34.4 +0.2
comp=Z,9.2nm,0.4s
ETSF Etsaut 147.54 342 *e*PKP1 PKPbc 09 49 34.7 +0.5
comp=Z,11nm,0.5s
CFON Fontmartina 147.56 338 PKP PKPbc 09 49 34.7 +0.4
ELIZ Elizondo 147.58 344 PKP PKPbc 09 49 36.0 +1.7
ELAN Lanestosa 147.99 346 PKP PKPbc 09 49 37.1 +1.7
EARI Arriondas 148.30 349 PKP PKPbc 09 49 36.6 +0.4
EPOB Poblet 148.41 339 PKP PKPbc 09 49 37.0 +0.4
ESAC San Caprasio 148.59 341 PKP PKPbc 09 49 38.4 +1.4
EPON Pontenova 148.60 351 PKP PKPbc 09 49 38.0 +1.1
KEST Kesra 148.96 323 PKPbc PKPbc 09 49 38.5 +0.4
comp=Z,10.0nm,0.9s,baz=330,slow=3.0,SNR=15
ERTA Horta de San J 149.02 340 PKP PKPbc 09 49 38.5 +0.5
ETOS Mallorca 149.13 335 PKP PKPbc 09 49 39.2 +0.8
EMAZ Mazaricos 149.21 354 PKP PKPbc 09 49 39.0 +0.5
STS Santiago 149.22 353 PKP PKPbc 09 49 39.0 +0.5
CMAH Djebel Manchou 149.42 326 P PKPbc 09 49 39.6 +0.4
ERUA La Rua 149.51 351 PKP PKPbc 09 49 39.8 +0.5
ABSA Djebel Ababsia 149.65 325 P PKPbc 09 49 40.4 +0.6
EMOS Mosqueruela 149.82 340 PKP PKPbc 09 49 40.3 +0.3
ECAL Calabor 149.89 350 PKP PKPbc 09 49 40.7 +0.5
ETOR Torete 149.89 343 PKP PKPbc 09 49 41.0 +0.8
CKFL Kef-Lekhel 149.97 327 P PKPbc 09 49 41.2 +0.7
ELOB Lobios 150.16 352 PKP PKPbc 09 49 41.3 +0.4
CASM Ain Smara 150.19 327 P PKPbc 09 49 41.8 +0.7
DFRA Djebel Bou Aff 150.31 328 P PKPbc 09 49 42.4 +1.0
EIBI Ibiza 150.35 337 PKP PKPbc 09 49 41.6 +0.3
CTEI Djebel Teioual 150.39 326 P PKPbc 09 49 41.8 +0.2
GUD Guadarrama 150.62 346 PKP PKPbc 09 49 41.8 -0.1
PVRL Vila Real 150.69 351 *e*PKPbc PKPbc 09 49 42.8 +0.7
MVO Moncorvo 150.70 350 PKP PKPbc 09 49 42.3 +0.2
MVO Moncorvo 150.70 350 *e*PKPbc PKPbc 09 49 42.4 +0.3
EBEN Beniarda 151.22 338 PKP PKPbc 09 49 43.5 0.0
ESDC Sonseca Array 151.48 345 PKPbc PKPbc 09 49 44.1 +0.1
comp=Z,2.3nm,0.4s,baz=16,slow=2.4,SNR=18
ESDC Sonseca Array 151.48 345 PKP PKPbc 09 49 43.8 -0.2
ESLA Sonseca Array 151.48 345 *e*PKPbc PKPbc 09 49 44.5 +0.6
ESLA *e*PKPab PKPab 09 49 54.0 +1.1
MTE Manteigas 151.53 351 *e*PKPbc PKPbc 09 49 44.5 +0.4
MTE *e*PKPab PKPab 09 49 54.1 +1.0
MTE Manteigas 151.53 351 *e*PKPbc PKPbc 09 49 44.3 +0.2
PAB San Pablo 151.70 345 *e*PKPdf PKPdf 09 49 38.2 +0.2
PAB *e*PKPbc PKPbc 09 49 45.0 +0.5
ETOB Tobarra 151.73 340 PKP PKPbc 09 49 44.0 -0.6
EVIA Vianos 152.04 342 PKP PKPbc 09 49 44.3 -0.9
PTOM Tomar 152.42 352 *e*PKPbc PKPbc 09 49 46.3 +0.2
PMRV Marv??o 152.45 350 *e*PKPbc PKPbc 09 49 46.8 +0.6
EHUE Huescar 152.82 341 PKP PKPbc 09 49 45.5 -1.5
EBAN Banos Encina 152.85 343 PKP PKPbc 09 49 45.5 -1.6
EQES Quesada 152.98 342 PKP PKPbc 09 49 45.8 -1.6
EBAD Badajoz 153.04 349 PKP PKPbc 09 49 45.8 -1.7
EADA Adamuz 153.06 345 PKP PKPbc 09 49 46.1 -1.5
ECAB El Cabril 153.36 346 PKP PKPbc 09 49 46.4 -1.8
EVO Evora 153.43 351 *e*PKP2 PKPab 09 50 01.7 +0.6
PBEJ Beja 153.90 350 *e*PKPab PKPab 09 50 04.3 +1.2
EMIN Mina Concepcio 153.93 348 PKP PKPbc 09 49 46.2 -3.2
EGUA Guajares 154.03 342 PKP PKPbc 09 49 47.4 -2.3
PCVE Castro Verde 154.31 350 *e*PKPab PKPab 09 49 58.8 -6.1
TORD Torodi Ar. Bea 165.35 275 PKPab PKPab 09 50 53.9 0.0
comp=Z,7.9nm,1.0s,baz=97,slow=2.3,SNR=21

*IDC **18** 09:35:05.2±0.8, 33°.07N×92°.06E, h0km, mb3.9/10, mb1 4.0/13, mb1mx3.9/29, mbtmp3.9/13, ML3.6/2, MS3.1/3, Ms1 3.1/3, ms1mx2.7/35, Error ellipse: s-maj=30.7km s-min=16.1km az=56.0*
*NEIC **18** 09:35:07.6±0.6, 33°.32N×92°.46E, h10km, mb3.8/6, Error ellipse: s-maj=11.4km s-min=8.5km az=100.0*
*ISCJB **18** 09:35:07.7±0.4, 33°.39N±0°.04×91°.96E±0°.06, h10km, mb3.9/11, Error ellipse: s-maj=7.8km s-min=4.7km az=30.2*
*BJI **18** 09:35:12.3, 33°.23N×92°.42E, h15km, mB4.5/4, mb4.4/3, ML4.1/3, Ms3.8/6, Ms7 3.9/5*
ISC 18 09:35:08.8±0.5, 33°.34N±0°.04×92°.17E±0°.09, h10km, n38, σ1$30/40, mb3.9/11, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.73**	**194**	Pn	**Pn**	**09 36 08.1**	**+1.6**
LSA				Sn	**Sb**	**09 36 58.9**	**-1.2**
LSA				LR	LR		
	comp=N,610nm,8.4s						
LSA				LR	LR		
	comp=E,2μm,11.5s						
LSA				LR	LR		
	comp=Z,2μm,7.3s						
LSA	**Lhasa**	**3.73**	**194**	*e*Pn	**Pn**	**09 36 08.7**	**+2.2**
LSA				*e*Sn	**Sb**	**09 36 59.1**	**-0.9**
TAPN	**Taplejung**	**7.11**	**214**	*eP*	**Pn**	**09 36 53.4**	**+0.6**
GUN	**Gumba**	**7.66**	**227**	*eP*	**Pn**	**09 37 03.6**	**+3.2**
	comp=Z,10nm,0.5s						
SHL	**Shillong**	**7.75**	**182**	*e*PKP	**Pn**	**09 37 02.5**	**+0.8**
SHL				*e*S	**Sn**	**09 38 24.5**	**-5.0**
SHL				*ex*	x	09 39 06.5	
SHL				*ex*	x	09 39 18.0	
RAMN	**Ramite**	**7.99**	**219**	*eP*	**Pn**	**09 37 01.1**	**-3.8**
	comp=Z,27nm,0.5s						
KKN	**Kakani**	**8.12**	**229**	*eP*	**Pn**	**09 37 07.9**	**+1.2**
	comp=Z,14nm,0.5s						
PKI	**Pulchoki**	**8.19**	**227**	*eP*	**Pn**	**09 37 07.9**	**+0.2**
PKI	**Pulchoki**	**8.19**	**227**	*eP*	**Pn**	**09 37 08.1**	**+0.4**
	comp=Z,28nm,0.7s						
PKIN	**Phulchoki**	**8.20**	**227**	*eP*	**Pn**	**09 37 08.1**	**+0.3**
	comp=Z,28nm,0.7s						
DMN	**Daman**	**8.35**	**229**	*eP*	**Pn**	**09 37 10.4**	**+0.4**
	comp=Z,9.3nm,0.5s						
GTA	**Gaotai**	**8.64**	**43**	*eP*	**Pn**	**09 37 17.3**	**+3.5**
GTA				pP		09 37 21.5	
GTA				sP		09 37 24.9	
GTA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LZH	**Lanzhou**	**9.99**	**71**	*eP*	**Pn**	**09 37 36.8**	**+4.4**
LZH				pP		09 37 40.0	
LZH				sP		09 37 43.0	
LZH				*e*S	**Sn**	**09 39 32.0**	**+7.5**
LZH				sS		09 39 37.1	
LZH				SS		09 39 41.1	
LZH				pmax	pmax		
	comp=Z,11nm,1.0s						
LZH				pmax	pmax		
	comp=Z,81nm,5.0s						
LZH				LR	LR		
	comp=E,440nm,5.9s						
LZH				LR	LR		
	comp=Z,470nm,6.5s						
XAN	**Xi'an**	**13.97**	**83**	P	**Pn**	**09 38 36.5**	**+10**
XAN				S	Sn	09 41 32.8	+31
XAN				pmax	pmax		
	comp=Z,2.0nm,1.2s						
XAN				LR	LR		
	comp=N,160nm,8.6s						
XAN				LR	LR		
	comp=E,53nm,9.6s						
XAN				LR	LR		
	comp=Z,52nm,8.0s						
ENH	**Enshi**	**15.04**	**97**	*e*Pn	**Pn**	**09 38 36.6**	**-4.7**
MKAR	**Makanchi Array**	**15.40**	**334**	Pn	**Pn**	**09 38 45.1**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=150,slow=14,SNR=7.8						
CMAR	**Chiang Mai Arr**	**16.02**	**156**	Pn	**Pn**	**09 38 47.9**	**-6.3**
	baz=333,slow=11,SNR=2.1						
UCH	**Uchtor**	**16.52**	**308**	*eP*	**Pn**	**09 39 04.7**	**+4.2**
	comp=Z,5.6nm,0.8s						
AAK	**Ala-Archa**	**16.72**	**309**	LR	LR	09 46 50.4	
	comp=Z,86nm,21.1s,baz=141,slow=42						
EKS2	**Erkin-Say**	**17.20**	**308**	*eP*	**Pn**	**09 39 12.8**	**+3.7**
	comp=Z,2.4nm,0.6s						
SONM	**Songino Array**	**18.02**	**32**	P	**Pn**	**09 39 22.0**	**+2.8**
	comp=Z,0.4nm,0.3s,baz=214,slow=13,SNR=24						
SONM				LR	LR	09 47 38.5	
	comp=Z,59nm,19.4s,baz=265,slow=41						
ULN	**Ulaanbaatar**	**18.34**	**33**	*e*Pn	**Pn**	**09 39 24.9**	**+1.7**
	comp=Z,5.5nm,0.9s						
KBL	**Kabul**	**19.23**	**280**	*eP*	**Pn**	**09 39 33.5**	**-0.5**
	comp=Z,11nm,0.8s						
KURK	**Kurchatov**	**20.01**	**334**	P	**P**	**09 39 42.1**	**+0.6**
	comp=Z,2.0nm,0.5s,baz=146,slow=11,SNR=4.3						
ZAA0	**Zalesovo Array**	**21.25**	**348**	*eP*	**P**	**09 39 55.2**	**+0.3**
ZALV	**Zalesovo Beam**	**21.25**	**348**	P	**P**	**09 39 55.0**	**+0.1**
	comp=Z,2.5nm,0.8s,mb3.6,baz=155,slow=11,SNR=7.3						
BVAR	**Borovoye Array**	**25.11**	**328**	P	**P**	**09 40 33.9**	**+0.3**
	comp=Z,1.3nm,0.7s,mb3.6,baz=134,slow=11,SNR=6.8						
ABKAR	**Akbulak array**	**28.69**	**313**	P	**P**	**09 41 06.0**	**+0.1**
	comp=Z,0.5nm,0.4s,mb3.6						
BRTR	**Keskin Array B**	**46.75**	**295**	P	**P**	**09 43 37.0**	**-1.2**
	comp=Z,1.6nm,0.8s,mb4.0,baz=87,slow=8.6,SNR=8.1						
PETK	**Petropavlovsk-**	**49.80**	**46**	LR	LR	10 05 59.1	
	comp=Z,19nm,18.2s,baz=341,slow=37						
BUR08	**Bucovina Ar. S**	**51.36**	**307**	P	**P**	**09 44 12.2**	**-1.2**
NOA	**NORSAR Array B**	**57.19**	**325**	P	**P**	**09 44 53.9**	**-1.7**
	comp=Z,0.5nm,0.7s,mb3.7,baz=82,slow=6.3,SNR=2.9						
WRA	**Warramunga Arr**	**66.53**	**136**	P	**P**	**09 45 55.8**	**-3.2**
	comp=Z,1.7nm,0.9s,mb4.1,baz=334,slow=6.4,SNR=12						
ASAR	**Alice Springs**	**69.24**	**139**	P	**P**	**09 46 14.2**	**-1.8**
	comp=Z,1.4nm,0.7s,mb4.0,baz=326,slow=6.3,SNR=15						
INK	**Inuvik**	**73.12**	**16**	P	**P**	**09 46 37.4**	**-1.5**
	comp=Z,2.0nm,1.0s,mb4.0,baz=303,slow=14,SNR=3.3						
EGAK	**Eagle**	**73.74**	**21**	*eP*	**P**	**09 46 42.9**	**+0.3**
	comp=Z,5.5nm,1.2s,mb4.4						
KDAK	**Kodiak Island**	**74.30**	**30**	P	**P**	**09 46 45.6**	**-0.4**
	comp=Z,2.1nm,0.8s,mb4.1,baz=297,slow=2.3,SNR=4.2						
TORD	**Torodi Ar. Bea**	**83.29**	**281**	P	**P**	**09 47 33.8**	**-2.4**
	comp=Z,0.6nm,0.5s,mb3.9,baz=51,slow=4.6,SNR=8.8						

*ISCJB **18** 09:39:08.2±0.6, 41°.76N±0°.03×15°.79E±0°.03, h14km±3km, Error ellipse: s-maj=5.9km s-min=3.2km az=30.9*
*ROM **18** 09:39:09.1±0.1, 41°.69N×15°.75E, h2km, Ml2.9/15, Error ellipse: s-maj=1.7km s-min=1.4km az=42.0*
*CSEM **18** 09:39:09.0±0.3, 41°.74N×15°.79E, h10km, ML3.9/11, Error ellipse: s-maj=5.2km s-min=2.9km az=28.0*
ISC 18 09:39:08.6±0.7, 41°.78N±0°.04×15°.79E±0°.03, h13km±3km, n59, σ0$90/91, 4C, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGRT	**San Giovanni R**	**0.04**	**234⇑**	*i*Pg	**Pg**	**09 39 10.7**	**-0.3**
SGRT				Sg	**Sg**	**09 39 11.8**	**-1.0**
SGRT	**San Giovanni R**	**0.04**	**234⇑**	*i*Pg	**Pg**	**09 39 10.7**	**-0.3**
SGRT				Sg	**Sg**	**09 39 11.8**	**-1.0**
MSAG	**Monte S. Angel**	**0.11**	**126**	Pg	**Pg**	**09 39 12.0**	**+0.2**
MSAG				Sg	**Sg**	**09 39 13.9**	**-0.2**
MSAG	**Monte S. Angel**	**0.11**	**126**	Pg	**Pg**	**09 39 12.0**	**+0.2**
MSAG				Sg	**Sg**	**09 39 13.9**	**-0.2**
MS1	**Monte Sant'Ang**	**0.14**	**122**	*e*Pg	**Pg**	**09 39 12.8**	**+0.7**
MS1				*e*Sg	**Sg**	**09 39 16.4**	**+1.8**
RGNG	**Rignano Grg**	**0.18**	**235⇑**	*i*Pg	**Pg**	**09 39 11.8**	**-1.0**
RGNG				Sg	**Sg**	**09 39 13.9**	**-1.8**
RGNG	**Rignano Grg**	**0.18**	**235⇑**	*i*Pg	**Pg**	**09 39 11.8**	**-1.0**
RGNG				Sg	**Sg**	**09 39 13.9**	**-1.8**
FG2	**Serracapriola**	**0.47**	**273**	Pg	**Pg**	**09 39 17.8**	**-0.1**
	371nm,0.3s						
FG2	**Serracapriola**	**0.47**	**273**	Pg	**Pg**	**09 39 17.8**	**-0.1**
	371nm,0.3s						
MOCO	**Biccari - m.te**	**0.62**	**229**	Pg	**Pg**	**09 39 20.3**	**-0.5**
FG5	**Orsara di Pugl**	**0.63**	**218**	Pg	**Pg**	**09 39 20.7**	**-0.2**
	79nm,0.3s						
FG5	**Orsara di Pugl**	**0.63**	**218**	Pg	**Pg**	**09 39 20.7**	**-0.2**
	79nm,0.3s						
CIGN	**Sant'Elia a Pi**	**0.67**	**260**	Pg	**Pg**	**09 39 23.7**	**+2.0**
CIGN	**Sant'Elia a Pi**	**0.67**	**260**	Pg	**Pg**	**09 39 23.7**	**+2.0**
SGTA	**Sant Agata di**	**0.72**	**206**	Pg	**Pg**	**09 39 21.5**	**-1.0**
SGTA				Sg	**Sg**	**09 39 33.3**	**+1.3**
SGTA	**Sant Agata di**	**0.72**	**206**	Pg	**Pg**	**09 39 21.5**	**-1.0**
SGTA				Sg	**Sg**	**09 39 33.3**	**+1.3**
MRVN	**Minervino Murg**	**0.78**	**157**	Pg	**Pg**	**09 39 22.1**	**-1.6**
MRVN				Sg	**Sg**	**09 39 33.5**	**-0.5**
	336nm,0.4s						
MRVN	**Minervino Murg**	**0.78**	**157**	Pg	**Pg**	**09 39 22.1**	**-1.6**
MRVN				Sg	**Sg**	**09 39 33.5**	**-0.5**
	336nm,0.4s						
VULT	**Monte Vulture**	**0.83**	**189**	Pg	**Pg**	**09 39 24.7**	**0.0**
VULT				Sg	**Sg**	**09 39 36.9**	**+1.3**
	503nm,0.4s						
VULT	**Monte Vulture**	**0.83**	**189**	Pg	**Pg**	**09 39 24.7**	**0.0**
VULT				Sg	**Sg**	**09 39 36.9**	**+1.3**
	503nm,0.4s						
PALZ	**Palazzo San Ge**	**0.84**	**171**	Pg	**Pg**	**09 39 24.1**	**-0.8**
PALZ				Sg	**Sg**	**09 39 36.9**	**+0.9**
	397nm,0.5s						
PALZ	**Palazzo San Ge**	**0.84**	**171**	Pg	**Pg**	**09 39 24.1**	**-0.8**
PALZ				Sg	**Sg**	**09 39 36.9**	**+0.9**
	397nm,0.5s						
CAFE	**Carife**	**0.86**	**209**	Pg	**Pg**	**09 39 25.6**	**+0.4**
	87nm,0.4s						
CAFE	**Carife**	**0.86**	**209**	Pg	**Pg**	**09 39 25.6**	**+0.4**
	87nm,0.4s						
FRES	**Fresagrandinar**	**0.86**	**284**	Pg	**Pg**	**09 39 26.0**	**+0.8**
FRES	**Fresagrandinar**	**0.86**	**284**	Pg	**Pg**	**09 39 26.0**	**+0.8**
SACR	**S. Croce Del S**	**0.90**	**245**	Pg	**Pg**	**09 39 26.6**	**+0.7**
SACR	**S. Croce Del S**	**0.90**	**245**	Pg	**Pg**	**09 39 26.6**	**+0.7**
PSB1	**Pescosannita**	**0.92**	**233**	Pg	**Pg**	**09 39 27.1**	**+0.7**
PSB1	**Pescosannita**	**0.92**	**233**	Pg	**Pg**	**09 39 27.1**	**+0.7**
BSSO	**Busso**	**0.92**	**256**	Pg	**Pg**	**09 39 27.7**	**+1.2**
BSSO	**Busso**	**0.92**	**256**	Pg	**Pg**	**09 39 27.7**	**+1.2**
SNAL	**S. Angelo Dei**	**0.96**	**207**	Pg	**Pg**	**09 39 26.2**	**-0.9**
SNAL	**S. Angelo Dei**	**0.96**	**207**	Pg	**Pg**	**09 39 26.2**	**-0.9**
ACER	**Acerenza**	**1.00**	**173**	Pg	**Pg**	**09 39 27.2**	**-0.7**
ACER				Sg	**Sg**	**09 39 41.5**	**+0.6**
	488nm,0.6s						
ACER	**Acerenza**	**1.00**	**173**	Pg	**Pg**	**09 39 27.2**	**-0.7**
ACER				Sg	**Sg**	**09 39 41.5**	**+0.6**
	488nm,0.6s						
MRLC	**Muro Lucano**	**1.04**	**193**	Pg	**Pg**	**09 39 28.0**	**-0.8**
MRLC				Sg	**Sg**	**09 39 42.7**	**+0.3**
	348nm,0.6s						
MRLC	**Muro Lucano**	**1.04**	**193**	Pg	**Pg**	**09 39 28.0**	**-0.8**
MRLC				Sg	**Sg**	**09 39 42.7**	**+0.3**
	348nm,0.6s						
AMUR	**Altamura**	**1.07**	**144**	Pg	**Pg**	**09 39 28.1**	**-1.1**
AMUR				Sg	**Sg**	**09 39 43.2**	**+0.2**
	184nm,0.4s						
AMUR	**Altamura**	**1.07**	**144**	Pg	**Pg**	**09 39 28.1**	**-1.1**
AMUR				Sg	**Sg**	**09 39 43.2**	**+0.2**
	184nm,0.4s						
CSSN	**Cassano Ir

*IDC **18** 09:47:21.1±0.8, 33°.09N×91°.94E, h0km, mb3.9/10, mb1 4.1/13, mb1mx3.9/27, mbtmp3.9/13, ML3.7/3, MS3.1/2, Ms1 3.2/2, ms1mx2.5/34, Error ellipse: s-maj=33.5km s-min=15.6km az=54.0*
*NEIC **18** 09:47:23.9±0.6, 33°.29N×92°.01E, h10km, mb3.8/8, Error ellipse: s-maj=13.0km s-min=10.4km az=77.0*
*BJI **18** 09:47:25.4, 33°.18N×92°.52E, h9km, mB4.5/2, mb4.0/5, ML4.3/1, Ms3.7/5, Ms7 3.6/2*
ISC 18 09:47:22.1±2.0, 33°.07N±0°.05×91°.97E±0°.06, h7km±14km, n31, σ1°09/34, mb4.0/12, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.43**	**192**	Pn	**Pg**	**09 48 24.3**	**-3.5**
LSA				Sn	**Sg**	**09 49 12.3**	**0.0**
LSA				LR	LR		
	comp=N,560nm,8.6s						
LSA				LR	LR		
	comp=E,1μm,11.5s						
LSA				LR	LR		
	comp=Z,1μm,7.5s						
LSA	**Lhasa**	**3.43**	**192**	*e*Pn	**Pg**	**09 48 23.5**	**-4.3**
LSA				*e*Sn	**Sg**	**09 49 12.9**	**+0.6**
GTA	**Gaotai**	**8.96**	**43**	*e*P	**Pn**	**09 49 32.8**	**+1.0**
GTA				pP		09 49 37.3	
GTA				sP		09 49 40.5	
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
LZH	**Lanzhou**	**10.25**	**70**	*e*P	**Pn**	**09 49 51.8**	**+2.3**
LZH				pP		09 49 56.1	
LZH				sP		09 49 58.8	
LZH				*e*S	**Sn**	**09 51 46.6**	**+2.1**
LZH				sS		09 51 51.4	
LZH				SS		09 51 57.6	
LZH				pmax	pmax		
	comp=Z,30nm,1.4s						
LZH				pmax	pmax		
	comp=Z,94nm,4.2s						
LZH				LR	LR		
	comp=E,370nm,5.3s						
XAN	**Xi'an**	**14.18**	**81**	P	**Pn**	**09 50 42.1**	**-1.1**
XAN				S	**Sn**	**09 53 17.3**	**-3.4**
XAN				pmax	pmax		
	comp=Z,1.0nm,0.9s						
XAN				LR	LR		
	comp=N,140nm,8.2s						
XAN				LR	LR		
	comp=E,62nm,10.0s						
XAN				LR	LR		
	comp=Z,63nm,7.0s						
MK31	**Makanchi Array**	**15.57**	**335**	*e*Pn	**Pn**	**09 51 02.8**	**+1.0**
MKAR	**Makanchi Array**	**15.57**	**335**	Pn	**Pn**	**09 50 59.7**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=148,slow=14,SNR=9.1						
MKAR	**Makanchi Array**	**15.57**	**335**	Pn	**Pn**	**09 50 59.7**	**-2.1**
CMAR	**Chiang Mai Arr**	**15.84**	**155**	Pn	**Pn**	**09 51 04.5**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=335,slow=14,SNR=5.7						
CMAR				LR	LR	09 57 37.4	
	comp=Z,46nm,18.7s,baz=300,slow=39						
TKM2	**Tokmak 2**	**16.20**	**312**	*e*Pn	**Pn**	**09 51 08.5**	**-1.5**
	comp=Z,3.8nm,1.0s						
UCH	**Uchtor**	**16.55**	**309**	*e*P	**Pn**	**09 51 19.1**	**+4.6**
	comp=Z,6.0nm,1.0s						
AAK	**Ala-Archa**	**16.75**	**310**	LR	LR	09 58 40.3	
	comp=Z,107nm,21.9s,baz=222,slow=41						
SONM	**Songino Array**	**18.34**	**32**	P	**Pn**	**09 51 37.5**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=216,slow=12,SNR=23						
ULN	**Ulaanbaatar**	**18.66**	**33**	*e*P	**Pn**	**09 51 40.7**	**0.0**
	comp=Z,5.7nm,0.9s						
KBL	**Kabul**	**19.10**	**281**	*e*P	**Pn**	**09 51 47.3**	**+1.1**
	comp=Z,6.9nm,0.8s						
KURK	**Kurchatov**	**20.18**	**335**	P	**P**	**09 51 57.5**	**+0.5**
	comp=Z,1.1nm,0.3s,baz=146,slow=11,SNR=7.2						
TLY	**Talaya**	**20.46**	**21**	*e*P	**P**	**09 51 59.0**	**-1.0**
	comp=Z,2.1nm,0.8s						
ZAA0	**Zalesovo Array**	**21.48**	**348**	*e*P	**P**	**09 52 10.7**	**-0.3**
ZALV	**Zalesovo Beam**	**21.48**	**348**	P	**P**	**09 52 10.7**	**-0.4**
	comp=Z,2.4nm,0.7s,mb3.6,baz=158,slow=12,SNR=9.1						
BVAR	**Borovoye Array**	**25.25**	**329**	P	**P**	**09 52 49.0**	**+0.5**
	comp=Z,1.3nm,0.5s,mb3.7,baz=157,slow=12,SNR=4.0						
ABKAR	**Akbulak array**	**28.75**	**314**	*e*P	**P**	**09 53 21.0**	**+1.0**
	comp=Z,1.1nm,0.8s,mb3.6						
BRTR	**Keskin Array B**	**46.71**	**296**	P	**P**	**09 55 52.1**	**+0.6**
	comp=Z,1.3nm,0.7s,mb3.9,baz=98,slow=7.6,SNR=6.9						
AKASG	**Malin Array Be**	**48.42**	**311**	P	**P**	**09 56 04.9**	**+0.2**
	comp=Z,0.7nm,0.6s,mb3.9,baz=78,slow=6.5,SNR=2.6						
NOA	**NORSAR Array B**	**57.31**	**325**	P	**P**	**09 57 09.8**	**-0.4**
	comp=Z,1.1nm,1.0s,mb3.8,baz=77,slow=6.0,SNR=3.0						
WRA	**Warramunga Arr**	**66.45**	**136**	P	**P**	**09 58 12.8**	**+0.6**
	comp=Z,2.1nm,0.8s,mb4.2,baz=329,slow=7.1,SNR=14						
WRA	**Warramunga Arr**	**66.45**	**136**	P	**P**	**09 58 12.8**	**+0.6**
ASAR	**Alice Springs**	**69.15**	**139**	P	**P**	**09 58 30.4**	**+1.2**
	comp=Z,2.9nm,0.7s,mb4.3,baz=327,slow=6.6,SNR=21						
COLA	**College**	**71.89**	**23**	*e*P	**P**	**09 58 45.9**	**+0.5**
	comp=Z,5.6nm,1.0s,mb4.5						
EGAK	**Eagle**	**74.05**	**21**	*e*P	**P**	**09 58 57.3**	**-0.9**
	comp=Z,3.5nm,1.0s,mb4.2						
YKA	**Yellowknife Ar**	**82.40**	**12**	P	**P**	**09 59 43.1**	**-1.3**
	comp=Z,1.0nm,0.7s,mb3.8,baz=330,slow=5.6,SNR=4.6						
TORD	**Torodi Ar. Bea**	**83.17**	**281**	P	**P**	**09 59 48.8**	**-0.5**
	comp=Z,0.7nm,0.8s,mb3.7,baz=72,slow=4.7,SNR=3.8						

*DDA **18** 10:03:14.9, 41°.20N×40°.28E, h7km±3km, Md2.9*
*ISK **18** 10:03:15.4, 40°.87N×40°.29E, h6km, MD3.0*
*CSEM **18** 10:03:15.6±0.1, 40°.84N×40°.34E, h10km, MD3.0, Error ellipse: s-maj=4.9km s-min=1.4km az=170.0*
*ISCJB **18** 10:03:15.6±0.5, 40°.82N±0°.06×40°.33E±0°.03, h7km±6km, Error ellipse: s-maj=9.5km s-min=3.4km az=169.7*
ISC 18 10:03:16.2±0.5, 40°.84N±0°.06×40°.32E±0°.03, h12km±5km, n25, σ0°79/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACK	**Trabzon**	**0.43**	**285**	*i* P	**Pg**	**10 03 24.3**	**-0.4**
MACK				*i* S	**Sg**	**10 03 31.1**	**+0.6**
MACK	**Trabzon**	**0.43**	**285**	*i* P	**Pg**	**10 03 24.3**	**-0.4**
MACK				*i* S	**Sg**	**10 03 31.1**	**+0.6**
KTUT	**Trabzon**	**0.45**	**290**	*e*PG	**Pg**	**10 03 24.6**	**-0.4**
KTUT	**Trabzon**	**0.45**	**290**	*e*Pg	**Pg**	**10 03 24.6**	**-0.4**
PZAR	**Pazar-Rize**	**0.56**	**52**	*e*PG	**Pg**	**10 03 26.2**	**-0.9**
PZAR				*e*SG	**Sg**	**10 03 35.5**	**+1.1**
PZAR	**Pazar-Rize**	**0.56**	**52**	*e*Pg	**Pg**	**10 03 26.2**	**-0.8**
PZAR				*e*Sg	**Sg**	**10 03 35.5**	**+1.1**
GUMT	**Gumushane**	**0.74**	**240**	*e*PG	**Pg**	**10 03 30.4**	**-0.2**
GUMT				*e*SG	**Sg**	**10 03 40.4**	**+0.2**
GUMT	**Gumushane**	**0.74**	**240**	*e*Pg	**Pg**	**10 03 30.4**	**-0.2**
GUMT				*e*Sg	**Sg**	**10 03 40.4**	**+0.1**
DBAD	**Bademkaya**	**1.06**	**80**	*i* P	**Pg**	**10 03 35.7**	**-0.8**
DBAD				*i* S	**Sg**	**10 03 50.0**	**-0.3**
DBAD	**Bademkaya**	**1.06**	**80**	*i* P	**Pg**	**10 03 35.7**	**-0.8**
DBAD				*i* S	**Sg**	**10 03 50.0**	**-0.3**
DDEM	**Demirkent**	**1.08**	**87**	*i* P	**Pg**	**10 03 36.4**	**-0.7**
DDEM				*i* S	**Sg**	**10 03 53.2**	**+2.0**
DDEM	**Demirkent**	**1.08**	**87**	*i* P	**Pg**	**10 03 36.4**	**-0.7**
DDEM				*i* S	**Sg**	**10 03 53.2**	**+2.0**
BCA	**Borcka**	**1.16**	**58**	*e*PN	**Pn**	**10 03 37.3**	**-0.8**
BCA	**Borcka**	**1.16**	**58**	*e*Pn	**Pn**	**10 03 37.3**	**-0.9**
ESPY	**Espiye-Giresun**	**1.21**	**274**	*e*PN	**Pn**	**10 03 38.1**	**-0.9**
ESPY	**Espiye-Giresun**	**1.21**	**274**	*e*Pn	**Pn**	**10 03 38.1**	**-0.8**
ERZM	**Erzurum**	**1.23**	**139**	*i* P	**Pn**	**10 03 38.2**	**-0.9**
ERZM	**Erzurum**	**1.23**	**139**	*i* P	**Pn**	**10 03 38.2**	**-0.9**
ARTV	**Artvin**	**1.27**	**73**	*i* P	**Pn**	**10 03 39.3**	**-0.3**
ARTV				*i* S	**Sb**	**10 03 56.7**	**+0.6**
ARTV	**Artvin**	**1.27**	**73**	*i* P	**Pn**	**10 03 39.3**	**-0.4**
ARTV				*i* S	**Sb**	**10 03 56.7**	**+0.5**
EZC	**Erzincan**	**1.31**	**215**	*e*PN	**Pn**	**10 03 41.3**	**+1.0**
GRSN	**GIRESUNGRSN**	**1.56**	**274**	*i* P	**Pn**	**10 03 43.5**	**-0.2**
GRSN				*i* S	**Sn**	**10 04 04.5**	**+0.6**
GRSN	**GIRESUNGRSN**	**1.56**	**274**	*i* P	**Pn**	**10 03 43.5**	**-0.2**
GRSN				*i* S	**Sn**	**10 04 04.5**	**+0.7**
SVSK	**Karacayir**	**2.70**	**251**	*e*PN	**Pn**	**10 04 00.4**	**+1.0**
SVSK	**Karacayir**	**2.70**	**251**	*e*Pn	**Pn**	**10 04 00.4**	**+1.0**

NSSP 18 10:17:09.9, 38°.42N×45°.02E, h10km, Ms3.6, 6C-17D, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGRZ	**Megri**	**1.07**	**63**	⇓*i*P	Pg	10 17 31.2	+0.6
MGRZ				⇑*i*S	Sg	10 17 47.3	+2.8
KDR	**Kadzharan**	**1.12**	**49**	⇓*i*P	Pb	10 17 32.1	+0.7
KDR				⇑*i*S	Sb	10 17 48.8	+2.8
XTNZ	**Xhotanan**	**1.37**	**51**	⇓*i*P	Pn	10 17 35.8	+0.7
XTNZ				⇓*i*S	Sb	10 17 55.2	+2.0
EGVZ	**Egvard**	**1.45**	**55**	⇓*i*P	Pn	10 17 37.1	+0.9
EGVZ				⇑*i*S	Sn	10 17 58.1	+2.9
ARRZ	**Ararat**	**1.46**	**350**	*e*P	Pn	10 17 50.0	+14
GRS	**Goris**	**1.49**	**43**	⇓*i*P	Pn	10 17 47.0	+10
GRS				⇓*i*S	Sn	10 18 08.0	+12
GNI	**Garni**	**1.74**	**353**	⇑*i*P	Pn	10 17 50.3	+10
GNI				⇑*i*S	Sn	10 18 16.6	+14
PAAR	**P'arak'ar**	**1.80**	**344**	⇑*i*P	Pn	10 17 44.9	+3.9
PAAR				⇓*i*S	Sn	10 18 11.6	+7.6
VADZ	**Vardenis**	**1.84**	**18**	*e*P	Pn	10 17 52.0	+10
VADZ				⇓S	Sn	10 18 17.0	+12
KAPZ	**Kaputan**	**1.92**	**353**	⇓*i*P	Pn	10 17 47.0	+4.4
KAPZ				⇓*i*S	Sn	10 18 16.0	+9.2
VNNZ	**Vanand**	**1.92**	**332**	⇓*i*P	Pn	10 17 46.9	+4.2
VNNZ				⇓*i*S	Sn	10 18 15.3	+8.4
ARUZ	**Aruch**	**2.00**	**339**	⇓*i*P	Pn	10 17 47.7	+4.0
ARUZ				⇓*i*S	Sn	10 18 18.6	+10
AMBZ	**Amberd**	**2.05**	**344**	⇓*i*P	Pn	10 17 48.7	+4.2
AMBZ				⇓*i*S	Sn	10 18 20.7	+10

*ISCJB **18** 10:17:25.3±0.7, 43°.77N±0°.03×86°.36E±0°.03, h23km±5km, mb4.5/62, MS3.8/21, Error ellipse: s-maj=4.7km s-min=3.0km az=25.8*
*NNC **18** 10:17:25.0±4.4, 44°.25N×86°.62E, h0km, mb4.6, mpv4.5, Error ellipse: s-maj=34.2km s-min=26.6km az=100.0*
*BJI **18** 10:17:26.9, 43°.71N×86°.44E, h26km, mB4.5/21, mb4.5/27, ML4.8/10, Ms4.3/24, Ms7 4.1/24*
*MOS **18** 10:17:26.6±1.0, 43°.75N×86°.35E, h33km, mb4.7/35, Error ellipse: s-maj=9.1km s-min=5.7km az=118.6*
*NEIC **18** 10:17:27.2±0.2, 43°.75N×86°.41E, mb4.7/29, Error ellipse: s-maj=5.1km s-min=3.7km az=67.0*
*IDC **18** 10:17:27.1±0.8, 43°.75N×86°.46E, h26km±4km, mb4.2/19, mb1 4.4/25, mb1mx4.3/32, mbtmp4.3/25, ML4.6/5, MS3.7/13, Ms1 3.7/13, ms1mx3.3/36, Error ellipse: s-maj=15.5km s-min=8.9km az=38.0*
*SZGRF **18** 10:17:46.1, 44°.53N×85°.23E, h33km, mb4.7, Northern Xinjiang, China*
ISC 18 10:17:27.5±0.7, 43°.77N±0°.03×86°.44E±0°.03, h26km±5km, h28km±1.3km: pP-P, n214, σ1°06/240, mb4.5/62, MS3.8/20, 20C-22D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**0.91**	**86**	⇑*i*Pg	**Pb**	**10 17 44.5**	**-0.1**
WMQ				Sg	**Sb**	**10 17 56.3**	**0.0**
WMQ				smax			
	comp=N,6μm,0.5s						
WMQ				smax			
	comp=E,6μm,0.5s						
MK31	**Makanchi Array**	**4.21**	**317**	⇑Pn	**Pn**	**10 18 31.6**	**+1.7**
	comp=E,50nm,0.3s,baz=135,slow=3.5,SNR=737						
MK31				⇑Pg	**Pn**	**10 18 40.8**	**+11**
	comp=E,278nm,0.7s,baz=129,slow=18,SNR=15						
MK31				⇓Sn	**Sn**	**10 19 20.2**	**+2.0**
	comp=E,175nm,0.4s,baz=130,slow=27,SNR=5.6						
MK31				Lg		10 19 31.4	
	comp=E,2μm,0.8s,baz=137,slow=32,SNR=21						
MK31	**Makanchi Array**	**4.21**	**317**	*e*Pn	**Pn**	**10 18 31.6**	**+1.7**
MKAR	**Makanchi Array**	**4.21**	**317**	Pn	**Pn**	**10 18 31.3**	**+1.4**
	comp=E,42nm,0.3s,baz=133,slow=14,SNR=530						
MKAR				Pg	**Pn**	**10 18 41.3**	**+11**
	comp=E,114nm,0.3s,baz=128,slow=17,SNR=37						
MKAR				Sn	**Sn**	**10 19 19.2**	**+1.1**
	comp=E,118nm,0.3s,baz=131,slow=26,SNR=8.8						
MKAR				Lg		10 19 39.2	
	comp=E,197nm,0.3s,baz=143,slow=29,SNR=20						
MKAR	**Makanchi Array**	**4.21**	**317**	P	**Pn**	**10 18 31.3**	**+1.4**
MKAR						10 19 19.2	
MKAR				pmax	pmax		
	comp=Z,42nm,0.3s						
MKAR				smax			
	comp=N,118nm,0.3s						
MKAR	**Makanchi Array**	**4.21**	**317**	Pn	**Pn**	**10 18 31.3**	**+1.4**
MKAR				Pg	**Pn**	**10 18 41.3**	**+11**
MKAR				Sn	**Sn**	**10 19 19.2**	**+1.1**
MKAR				Lg		10 19 39.2	
KNDC	**Almaty**	**6.91**	**269**	⇓Pn	**Pn**	**10 19 08.0**	**+0.9**
	comp=N,0.5nm,0.1s						
KNDC				⇑Lg		10 21 05.5	
	comp=N,373nm,0.6s						
ULHL	**Ulahol**	**7.63**	**262**	P	**Pn**	**10 19 17.8**	**+0.9**
	SNR=15						
TKM2	**Tokmak 2**	**7.95**	**268**	⇓Pn	**Pn**	**10 19 23.1**	**+1.9**
	comp=N,21nm,0.7s						
TKM2				⇑Lg		10 21 36.9	
	comp=N,112nm,0.6s						
TKM2	**Tokmak 2**	**7.95**	**268**	P	**Pn**	**10 19 22.4**	**+1.1**
	SNR=51						
KZA	**Kyzart**	**8.39**	**262**	P	**Pn**	**10 19 28.4**	**+1.1**
	SNR=60						
KBK	**Karagaybulak**	**8.47**	**266**	P	**Pn**	**10 19 29.1**	**+0.7**
	SNR=5.2						
KURBB	**Kurchatov Arra**	**8.71**	**325**	⇓Pn	**Pn**	**10 19 31.3**	**-0.4**
	comp=N,5.7nm,0.7s						
KURBB				⇓Sn	**Sn**	**10 21 07.8**	**-1.2**
	comp=N,23nm,0.5s						
KURBB				⇓Lg		10 21 51.8	
	comp=N,111nm,0.8s						
KURK	**Kurchatov**	**8.75**	**325**	⇓Pn	**Pn**	**10 19 31.3**	**-0.9**
	comp=N,48nm,1.1s						
KURK				⇑Sn	**Sn**	**10 21 08.0**	**-1.8**
	comp=N,94nm,0.5s						
KURK				⇑Lg		10 21 52.2	
	comp=N,550nm,0.7s						
KURK	**Kurchatov**	**8.75**	**325**	Pn	**Pn**	**10 19 30.7**	**-1.4**
	comp=N,4.9nm,0.3s,baz=135,slow=12,SNR=68						
KURK				Sn	**Sn**	**10 21 08.5**	**-1.3**
	comp=N,5.3nm,0.3s,baz=162,slow=22,SNR=4.5						
KURK				Lg		10 22 02.1	
	comp=N,7.5nm,0.3s,baz=247,slow=29,SNR=6.5						
KURK				LR	LR	10 23 26.1	
	comp=N,692nm,18.4s,baz=140,slow=41						
KURK	**Kurchatov**	**8.75**	**325**	*d*P	**Pn**	**10 19 31.4**	**-0.7**
KURK				pmax	pmax		
	comp=Z,47nm,1.0s						
KURK	**Kurchatov**	**8.75**	**325**	*e*Pn	**Pn**	**10 19 31.1**	**-1.1**
	comp=Z,117nm,0.8s						
KURK				*e*Sn	**Sn**	**10 21 06.9**	**-2.9**
AAK	**Ala-Archa**	**8.80**	**267**	Pn	**Pn**	**10 19 32.5**	**-0.4**
	comp=Z,0.0nm,0.3s,baz=87,slow=8.1,SNR=11						
AAK				LR	LR	10 23 23.6	
	comp=Z,188nm,20.4s,baz=3.1,slow=40						
AAK	**Ala-Archa**	**8.80**	**267**	*c i*P	**Pn**	**10 19 33.2**	**+0.3**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AAK	**Ala-Archa**	**8.80**	**267**	*e*Pn	**Pn**	**10 19 33.1**	**+0.2**
UCH	**Uchtor**	**8.88**	**264**	P	**Pn**	**10 19 35.4**	**+1.4**
	SNR=33						
KSH	**Kashi**	**8.91**	**245**	P	**Pn**	**10 19 42.8**	**+8.3**
KSH				pP		10 19 48.1	
KSH				sP		10 19 52.0	
KSH				S	**Sn**	**10 21 28.0**	**+14**
KSH				sS		10 21 37.3	
KSH				LR	LR		
	comp=Z,500nm,5.1s						
EKS2	**Erkin-Say**	**9.31**	**268**	P	**Pn**	**10 19 39.9**	**-0.1**
	SNR=7.5						
AML	**Almayashu**	**9.49**	**264**	P	**Pn**	**10 19 46.5**	**+4.1**
	SNR=7.2						
AML	**Almayashu**	**9.49**	**264**	Pn	**Pn**	**10 19 43.7**	**+1.3**
	comp=Z,41nm,0.8s						
ZAA0	**Zalesovo Array**	**10.24**	**355**	*e*Pn	**Pn**	**10 19 51.3**	**-1.3**
ZAA0				*e*Sn	**Sn**	**10 21 41.5**	**-4.9**
ZALV	**Zalesovo Beam**	**10.24**	**355**	Pn	**Pn**	**10 19 51.5**	**-1.1**
	comp=Z,11nm,0.3s,baz=176,slow=14,SNR=140						
ZALV				Sn	**Sn**	**10 21 40.8**	**-5.6**
	comp=Z,26nm,0.3s,baz=164,slow=27,SNR=16						
ZALV				LR	LR	10 24 27.0	
	comp=Z,544nm,18.1s,baz=25,slow=41						
ZALV	**Zalesovo Beam**	**10.24**	**355**	P	**Pn**	**10 19 51.5**	**-1.1**
ZALV						10 21 40.8	
ZALV				pmax	pmax		
	comp=Z,11nm,0.3s						
ZALV				smax			
	comp=N,26nm,0.3s						
ZALV				MLR	MLR		
	comp=Z,544nm,18.1s						
GTA	**Gaotai**	**10.92**	**109**	*e*P	**Pn**	**10 20 01.9**	**0.0**
GTA				pP		10 20 06.8	
GTA				S	**Sn**	**10 21 56.9**	**-6.3**
GTA				pmax	pmax		
	comp=Z,13nm,1.1s						
GTA				pmax	pmax		
	comp=Z,39nm,4.8s						
GTA				LR	LR		
	comp=N,380nm,10.1s						
GTA				LR	LR		
	comp=E,390nm,11.6s						
GTA				LR	LR		
	comp=Z,590nm,11.3s						
NVS	**Novosibirsk**	**11.28**	**350**	*e*P	**Pn**	**10 20 13.9**	**+7.2**
NVS				*e*S	**Sn**	**10 22 04.9**	**-6.8**
NVS				pmax	pmax		
	comp=N,11nm,0.8s						
NVS				pmax	pmax		
	comp=E,9.0nm,0.8s						
NVS				pmax	pmax		
	comp=Z,17nm,0.8s						
NVS				smax			
	comp=N,55nm,0.6s						
NVS				smax			
	comp=E,112nm,0.6s						
KK31	**Karatay Array**	**11.61**	**272**	⇓Pn	**Pn**	**10 20 12.2**	**+0.9**
	comp=E,7.3nm,0.8s,baz=80,slow=14,SNR=39						
KK31				⇓Sn	**Sn**	**10 22 35.9**	**+16**
	comp=E,6.5nm,0.6s						
KK31				Lg		10 23 34.3	
	comp=E,20nm,0.6s,baz=76,slow=23,SNR=4.0						
MOY	**Mondy**	**12.57**	**46**	*e*P	**Pn**	**10 20 27.8**	**+3.4**
MOY				pmax	pmax		
	comp=Z,18nm,1.8s						
ZAK	**Zakamensk**	**13.23**	**54**	*e*P	**Pn**	**10 20 32.1**	**-1.4**
TLY	**Talaya**	**14.00**	**50**	*e*P	**Pn**	**10 20 47.1**	**+3.2**
TLY				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BVA0	**Borovoye Array**	**14.09**	**317**	⇑Pn	**Pn**	**10 20 43.4**	**-1.8**
	comp=Z,3.0nm,0.8s,baz=126,slow=12,SNR=10						
BVA0				⇓Sn	**Sn**	**10 23 13.4**	**-7.2**
	comp=Z,3.3nm,0.6s,baz=107,slow=23,SNR=6.4						
BVAR	**Borovoye Array**	**14.09**	**317**	Pn	**Pn**	**10 20 43.4**	**-1.8**
	comp=Z,3.1nm,0.3s,baz=119,slow=13,SNR=18						
BVAR				Sn	**Sn**	**10 23 14.9**	**-5.7**
	comp=Z,4.0nm,0.3s,baz=94,slow=24,SNR=4.8						
BVAR				Lg		10 24 54.5	
	comp=Z,1.2nm,0.3s,baz=112,slow=26,SNR=3.6						
BVAR	**Borovoye Array**	**14.09**	**317**	P	**Pn**	**10 20 43.4**	**-1.8**
BVAR						10 23 14.9	
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
BVAR				smax			
	comp=N,4.0nm,0.3s						
BRVK	**Borovoye**	**14.16**	**317**	⇑*i*P	**Pn**	**10 20 44.9**	**-1.3**
BRVK	**Borovoye**	**14.16**	**317**	*e*Pn	**Pn**	**10 20 44.9**	**-1.3**
SONM	**Songino Array**	**14.49**	**67**	Pn	**Pn**	**10 20 51.5**	**+0.8**
	comp=N,0.3nm,0.3s,baz=276,slow=13,SNR=6.2						
SONM				Lg		10 25 05.9	
	comp=N,0.3nm,0.3s,baz=259,slow=32,SNR=5.5						
SONM				LR	LR	10 26 49.2	
	comp=N,502nm,18.4s,baz=275,slow=39						
SONM	**Songino Array**	**14.49**	**67**	Pn	**Pn**	**10 20 51.5**	**+0.8**
SONM				Lg		10 25 05.9	
SONM				LR	LR	10 26 49.2	
LSA	**Lhasa**	**14.54**	**163**	P	**Pn**	**10 21 00.8**	**+9.4**
LSA				pmax	pmax		
	comp=Z,40nm,1.0s						
LSA	**Lhasa**	**14.54**	**163**	*e*P	**Pn**	**10 21 01.0**	**+10**
LSA				pmax	pmax		
	comp=Z,45nm,1.0s						
LSA	**Lhasa**	**14.54**	**163**	*e*Pn	**Pn**	**10 21 01.0**	**+10**
	comp=Z,45nm,1.0s						
ZRNK	**Zerenda**	**14.76**	**315**	⇑Pn	**Pn**	**10 20 52.0**	**-2.2**
	comp=Z,18nm,0.6s						
ZRNK				⇑Sn	**Sn**	**10 23 30.8**	**-5.9**
	comp=Z,38nm,1.1s						
ULN	**Ulaanbaatar**	**14.94**	**67**	*e*P	**Pn**	**10 21 03.8**	**+7.1**
LZH	**Lanzhou**	**15.38**	**114**	*e*P	**Pn**	**10 21 05.3**	**+2.7**
LZH				pP	pP	10 21 09.8	-4.3
LZH				sP	sP	10 21 14.4	-3.1
LZH				*e*S	**Sn**	**10 23 52.1**	**0.0**
LZH				SS		10 24 11.0	
LZH				pmax	pmax		
	comp=Z,36nm,1.4s						
LZH				pmax	pmax		
	comp=Z,100nm,4.2s						
LZH				LR	LR		
	comp=N,490nm,9.6s						
LZH				LR	LR		
	comp=Z,580nm,10.8s						
GUN	**Gumba**	**15.83**	**182**	*e*P	**Pn**	**10 21 08.2**	**-0.3**
	comp=Z,210nm,0.5s						
KKN	**Kakani**	**15.97**	**184**	*e*P	**Pn**	**10 21 10.3**	**0.0**
	comp=Z,82nm,0.6s						
KKN	**Kakani**	**15.97**	**184**	*e*P	**Pn**	**10 21 10.3**	**0.0**
KKN				pmax	pmax		
	comp=Z,82nm,0.6s						
JIRN	**Jiri**	**16.08**	**181**	*e*P	**Pn**	**10 21 13.1**	**+1.4**
	comp=Z,70nm,0.5s						
DMN	**Daman**	**16.16**	**184**	*e*P	**Pn**	**10 21 12.1**	**-0.7**
	comp=Z,54nm,0.9s						
PKIN	**Phulchoki**	**16.18**	**183**	*e*P	**Pn**	**10 21 12.5**	**-0.5**
	comp=Z,52nm,0.5s						
PKI	**Pulchoki**	**16.18**	**183**	*e*P	**Pn**	**10 21 12.4**	**-0.7**
	comp=Z,161nm,1.0s						
PKI	**Pulchoki**	**16.18**	**183**	*e*P	**Pn**	**10 21 12.5**	**-0.6**
PKI				pmax	pmax		
	comp=Z,52nm,0.5s						
PKI	**Pulchoki**	**16.18**	**183**	*e*P	**Pn**	**10 21 12.5**	**-0.6**
	comp=Z,52nm,0.5s						
KBL	**Kabul**	**16.32**	**241**	*

XAN pmax pmax
comp=Z,21nm,8.6s
XAN LR LR
comp=N,150nm,10.0s
XAN LR LR
comp=E,71nm,13.8s
XAN LR LR
comp=Z,79nm,13.3s
AKTK Aktyubinsk 20.38 299 P **P** **10 22 02.5 +0.5**
AKTK S **S** **10 25 43.4 -5.5**
AKTK Lg 10 28 14.6
AKTK LR LR 10 30 27.7
AKTO Aktyubinsk 20.38 299 ⇓Pn **P** **10 22 03.6 +1.6**
comp=Z,1.4nm,0.6s
AKTO ⇑Sn **S** **10 25 47.5 -1.4**
comp=Z,1.7nm,1.0s
AKTO Aktyubinsk 20.38 299 P **P** **10 22 02.5 +0.5**
comp=Z,6.5nm,0.5s,baz=86,slow=7.4,SNR=15
AKTO S **S** **10 25 43.4 -5.5**
comp=Z,9.5nm,1.1s,baz=229,slow=18,SNR=4.1
AKTO Lg 10 28 14.6
comp=Z,5.7nm,0.8s,baz=160,slow=24,SNR=4.6
AKTO LR LR 10 30 27.7
comp=Z,253nm,19.0s,MS3.6,baz=291,slow=38
AKTO Aktyubinsk 20.38 299 P **P** **10 22 02.5 +0.5**
AKTO S **S** **10 25 43.4 -5.5**
AKTO pmax pmax
comp=Z,7.0nm,0.5s
AKTO smax
comp=N,10.0nm,1.1s
AKTO MLR MLR
comp=Z,253nm,19.0s,MS3.6
SVE Sverdlovsk 20.87 318⇓*e*P **P** **10 22 07.6 +0.4**
SVE *e*S **S** **10 26 01.9 +3.4**
SVE pmax pmax
comp=Z,22nm,0.7s
SVE MLR MLR
comp=Z,490nm,17.0s,MS4.0
ARU Arti 21.73 315*d i*P **P** **10 22 16.0 -0.5**
ARU *e* 10 22 37.3
ARU S **S** **10 26 15.6 +0.2**
ARU SS 10 26 42.5
ARU pmax pmax
comp=Z,14nm,0.6s,mb4.6
ARU MLR MLR
comp=Z,395nm,17.0s,MS3.9
ARU Arti 21.73 315 *e*P **P** **10 22 15.9 -0.6**
comp=Z,21nm,0.9s,mb4.6
ENH Enshi 22.71 119 P **P** **10 22 28.5 +1.3**
comp=Z,32nm,1.0s,mb4.7
KMI Kunming 22.87 139 P **P** **10 22 29.1 +0.2**
KMI pP 10 22 38.3
KMI sP sP 10 22 41.3 +1.9
KMI PP 10 23 00.8
KMI S **S** **10 26 34.6 -2.4**
KMI sS sS 10 26 47.1 -2.4
KMI SS 10 27 18.9
KMI pmax pmax
comp=Z,12nm,1.2s,mb4.2
KMI LR LR
comp=N,170nm,16.2s,MS3.7
KMI LR LR
comp=E,160nm,15.9s,MS3.7
KMI LR LR
comp=Z,230nm,18.0s,MS3.7
GYA Guiyang 23.81 130 P **P** **10 22 37.8 -0.4**
GYA sP sP 10 22 50.8 +1.7
GYA PP 10 23 12.9
GYA S **S** **10 26 51.0 -1.3**
GYA SS 10 27 40.6
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.3
GYA pmax pmax
comp=Z,70nm,4.5s
GYA LR LR
comp=N,380nm,12.8s,MS4.2
GYA LR LR
comp=E,320nm,13.0s,MS4.2
GYA LR LR
comp=Z,430nm,12.5s,MS4.1
SOKR Solikamsk 23.96 322*c i*P **P** **10 22 46.7 +7.4**
SOKR pmax pmax
comp=Z,10.0nm,0.9s,mb4.2
SOKR MLR MLR
comp=Z,190nm,16.0s,MS3.7
WHN Wuhan 25.73 112 P **P** **10 22 57.8 +2.2**
WHN LR LR
comp=N,310nm,6.2s
WHN LR LR
comp=E,500nm,3.6s
WHN LR LR
comp=Z,540nm,12.1s,MS4.3
CHTO Chiang Mai 27.01 153 *e*P **P** **10 23 08.0 +0.7**
CHTO pmax pmax
comp=Z,11nm,1.0s,mb4.3
CHTO Chiang Mai 27.01 153 *e*P **P** **10 23 08.0 +0.7**
comp=Z,11nm,1.0s,mb4.3
CMAR Chiang Mai Arr 27.34 153 P **P** **10 23 11.1 +0.8**
comp=Z,9.7nm,1.0s,mb4.3,baz=332,slow=9.2,SNR=38
CMAR LR LR 10 35 44.9
comp=Z,26nm,21.8s,MS2.8,baz=210,slow=40
CN2 Changchun 27.99 76 *e*P **P** **10 23 18.5 +2.6**
MDJ Mudanjiang 30.69 73 P **P** **10 23 39.1 -0.7**
MDJ pmax pmax
comp=Z,6.0nm,1.6s,mb4.2
MDJ pmax pmax
comp=Z,44nm,3.8s
GNI Garni 30.98 278*c i*P **P** **10 23 44.2 +1.7**
GNI pmax pmax
comp=Z,18nm,1.1s
GNI Garni 30.98 278 *e*P **P** **10 23 42.6 +0.2**
comp=Z,16nm,0.8s,mb4.9
KIV Kislovodsk 31.27 286 *e*P **P** **10 23 43.2 -1.8**
KIV pmax pmax
comp=Z,8.0nm,1.0s,mb4.5
KIV MLR MLR
comp=Z,145nm,16.0s,MS3.7
QIZ Qiongzhong 31.53 134 P **P** **10 23 49.3 +1.9**
KSRS Korea Array 31.86 87 P **P** **10 23 48.9 -1.3**
comp=Z,1.8nm,0.8s,mb4.0,baz=288,slow=9.0,SNR=4.5
KSRS LR LR 10 36 36.3
comp=Z,37nm,21.4s,MS3.0,baz=275,slow=36
KSRS Korea Array 31.86 87 P **P** **10 23 48.9 -1.3**
KSRS pmax pmax
comp=Z,2.0nm,0.8s,mb4.0
KSRS MLR MLR
comp=Z,37nm,21.4s,MS3.0
HABR Khabarovsk 33.56 65 *e*P **P** **10 24 05.4 +0.4**
HABR *e* 10 25 17.6
HABR PPP 10 25 30.0
HABR *e* 10 26 44.2
HABR *e*S **S** **10 29 26.8 +1.4**
HABR *e**SS sS 10 29 43.5 +5.2
HABR *e*SS SS 10 31 32.9 -18
HABR *e*SSS 10 31 49.6
HABR *e* 10 34 27.9
HABR pmax pmax
comp=E,6.0nm,0.6s
HABR pmax pmax
comp=N,13nm,1.8s
HABR pmax pmax
comp=Z,18nm,1.3s,mb4.8
HABR MLR MLR
comp=Z,277nm,14.0s,MS4.1
MIB Mutribah 33.95 259 *e*P **P** **10 24 08.5 0.0**
MIB AMb AMB 10 24 09.2
comp=Z,40nm,0.6s,mb5.5
RDF Al-Radifah 34.31 258 *e*P **P** **10 24 12.4 +0.7**
RDF AMb AMB 10 24 13.3
comp=Z,41nm,1.2s,mb5.2
NAY Al-Naaiem 34.34 258 *e*P **P** **10 24 11.9 0.0**
NAY AMb AMB 10 24 12.8
comp=Z,21nm,1.4s,mb4.9
TIXI Tiksi 34.59 22 *e*P **P** **10 24 13.9 +0.3**
TIXI pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
TIXI Tiksi 34.59 22 *e*P **P** **10 24 13.9 +0.2**
comp=Z,8.8nm,1.1s,mb4.6
APA Apatity 36.51 329⇓*e*P **P** **10 24 30.9 +0.7**
APA MLR MLR
comp=Z,200nm,11.0s,MS4.2
JOF Joensuu 36.63 321 *e*P **P** **10 24 31.0 -0.2**
JOF pmax pmax
comp=Z,6.0nm,0.4s,mb4.8
JOF Joensuu 36.63 321 *e*p **P** **10 24 31.0 -0.2**
comp=Z,5.8nm,0.4s,mb4.8
JOF Joensuu 36.63 321 *e*p **P** **10 24 31.0 -0.2**
comp=Z,5.8nm,0.4s,mb4.8
AKASG Malin Array Be 38.61 301 P **P** **10 24 47.6 -0.5**
comp=Z,1.8nm,0.5s,mb4.1,baz=63,slow=8.8,SNR=7.7
AKASG Malin Array Be 38.61 301 P **P** **10 24 47.6 -0.5**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
KIEV Kiev 38.62 301 *e*P **P** **10 24 47.1 -1.1**
KIEV pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
KIEV Kiev 38.62 301 *e*P **P** **10 24 47.1 -1.1**
comp=Z,2.1nm,0.6s,mb4.0
VSU Vasula 38.88 314*c i*P **P** **10 24 50.1 -0.1**
VSU pmax pmax
comp=Z,40nm,1.2s,mb5.0
KAF Kangasniemi 38.92 320 *e*P **P** **10 24 50.3 -0.3**
KAF pmax pmax
comp=Z,3.0nm,0.4s,mb4.4
KAF Kangasniemi 38.92 320 *e*p **P** **10 24 50.3 -0.3**
comp=Z,2.7nm,0.4s,mb4.3
KAF Kangasniemi 38.92 320 *e*p **P** **10 24 50.3 -0.3**
comp=Z,2.7nm,0.4s,mb4.3
FINES FINESS Array B 39.04 318 P **P** **10 24 51.5 -0.1**
comp=Z,3.6nm,0.5s,mb4.3,baz=93,slow=9.5,SNR=18
FINES LR LR 10 42 05.5
comp=Z,149nm,20.1s,MS3.8,baz=28,slow=38
FINES FINESS Array B 39.04 318 P **P** **10 24 51.6 0.0**
FINES pmax pmax
comp=Z,4.0nm,0.5s
FINES MLR MLR
comp=Z,149nm,20.1s
BR131 Keskin Array S 39.05 283 *e*P **P** **10 24 52.5 +0.5**
BR131 *e*pP pP 10 25 00.6 +0.8
BRTR Keskin Array B 39.05 283 P **P** **10 24 52.6 +0.7**
comp=Z,5.0nm,0.5s,mb4.5,baz=87,slow=7.5,SNR=30
BRTR pP pP 10 25 00.3 +0.5
comp=Z,5.1nm,0.6s,baz=81,slow=7.1,SNR=13
BRTR Keskin Array B 39.05 283 P **P** **10 24 52.7 +0.7**
BRTR *PP pP 10 25 00.4 +0.6
BRTR pmax pmax
comp=Z,5.0nm,0.5s
KEV Kevo 39.24 332 *e*P **P** **10 24 52.8 -0.4**
KEV pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
KEV Kevo 39.24 332 *e*p **P** **10 24 52.8 -0.4**
comp=Z,2.2nm,0.5s,mb4.1
KEV Kevo 39.24 332 *e*p **P** **10 24 52.8 -0.4**
comp=Z,2.2nm,0.5s,mb4.1
ARCES ARCESS Array B 39.73 331 P **P** **10 24 57.6 +0.4**
comp=Z,2.7nm,0.7s,mb4.1,baz=80,slow=6.8,SNR=15
ARCES LR LR 10 43 06.0
comp=Z,158nm,19.1s,MS3.9,baz=180,slow=39
ARCES ARCESS Array B 39.73 331 P **P** **10 24 57.6 +0.4**
ARCES pmax pmax
comp=Z,3.0nm,0.7s
ARCES MLR MLR
comp=Z,159nm,19.1s
ARE0 ARCESS Array S 39.73 331 P **P** **10 24 57.5 +0.2**
ASF Jabal al Asfar 40.19 270 P **P** **10 25 02.1 +0.6**
comp=Z,5.6nm,0.8s,mb4.3,baz=296,slow=6.9,SNR=9.3
ASF Jabal al Asfar 40.19 270 P **P** **10 25 02.1 +0.6**
ASF pmax pmax
comp=Z,6.0nm,0.8s
MMAI Mount Meron Ar 40.84 273 P **P** **10 25 07.2 +0.4**
comp=Z,1.2nm,0.3s,mb4.0,baz=73,slow=11,SNR=4.6
SEY Seymchan 41.58 39⇑*i*P **P** **10 25 14.4 +1.9**
STHS Stebnicka Huta 43.91 301 *e*P **P** **10 25 29.5 -2.1**
STHS pmax pmax
comp=Z,3.0nm,1.2s,mb3.9
STHS Stebnicka Huta 43.91 301 *e*P **P** **10 25 29.5 -2.1**
comp=Z,2.8nm,1.2s,mb3.9
STHS Stebnicka Huta 43.91 301 *e*P **P** **10 25 29.5 -2.1**
CRVS Cervenica-Dubn 43.94 300 *e*P **P** **10 25 31.1 -0.8**
CRVS pmax pmax
comp=Z,4.0nm,1.3s,mb4.0
CRVS Cervenica-Dubn 43.94 300 *e*P **P** **10 25 31.1 -0.8**
comp=Z,3.8nm,1.3s,mb4.0
CRVS Cervenica-Dubn 43.94 300 *e*P **P** **10 25 31.1 -0.8**
KECS Kecovo 44.68 300 *e*P **P** **10 25 37.2 -0.6**
KECS Kecovo 44.68 300 *e*P **P** **10 25 37.2 -0.6**
VYHS Vyhne 45.71 301 *e*P **P** **10 25 44.2 -1.8**
VYHS Vyhne 45.71 301 *e*P **P** **10 25 44.2 -1.8**
NB2 NORSAR Subarra 46.20 319 P **P** **10 25 49.4 -0.3**
comp=Z,4.8nm,0.6s,mb4.6,baz=76,slow=7.9
NOA NORSAR Array B 46.20 319 P **P** **10 25 49.5 -0.2**
comp=Z,4.3nm,0.7s,mb4.5,baz=75,slow=7.8,SNR=13
NOA pP pP 10 25 57.2 -0.4
comp=Z,4.2nm,0.6s,baz=76,slow=7.8,SNR=11
NOA LR LR 10 45 57.7
comp=Z,116nm,18.8s,MS3.9,baz=80,slow=37
NOA NORSAR Array B 46.20 319 P **P** **10 25 49.6 -0.1**
NOA *PP pP 10 25 57.3 -0.4
NOA pmax pmax
comp=Z,4.0nm,0.7s
NOA MLR MLR
comp=Z,116nm,18.8s
PETK Petropavlovsk- 46.35 52 P **P** **10 25 50.8 -0.2**
comp=Z,1.7nm,0.8s,mb4.0,baz=215,slow=4.4,SNR=3.7
PETK LR LR 10 46 57.0
comp=Z,107nm,19.1s,MS3.8,baz=144,slow=38
PETK Petropavlovsk- 46.35 52 P **P** **10 25 50.8 -0.1**
PETK pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
PETK MLR MLR
comp=Z,107nm,19.1s,MS3.8
CONA Conrad Observa 47.77 301⇓*i*P **P** **10 26 03.4 +1.3**
comp=Z,4.8nm,1.0s,mb4.5
BRG Berggiesshubel 47.83 305 *e*P **P** **10 26 03.4 +0.8**
comp=Z,6.0nm,1.1s,mb4.5
BRG
comp=Z,264nm,20.7s
BRG
comp=N,53nm,16.7s
BRG
comp=E,167nm,16.7s
BRG Berggiesshubel 47.83 305 *e*P **P** **10 26 03.4 +0.9**
BRG pmax pmax
comp=Z,4.0nm,1.1s,mb4.4
BRG MLR MLR
comp=Z,158nm,20.7s,MS4.0
BRG MLR MLR
comp=N,32nm,16.7s,MS3.9
BRG MLR MLR
comp=E,100nm,16.7s,MS3.9
CLL Collm 48.22 306⇓*i*P **P** **10 26 06.1 +0.5**
CLL *i* *SP sP 10 26 13.8 -2.9
CLL pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
CLL MLR MLR
comp=Z,200nm,17.9s,MS4.1
CLL Collm 48.22 306⇓*i*P **P** **10 26 06.1 +0.5**
comp=Z,9.0nm,0.7s,mb4.9
CLL *e*pP pP 10 26 11.0 -2.6
CLL *i* sP sP 10 26 13.8 -2.9
CLL LR LR
comp=Z,200nm,17.9s,MS4.1
CLL Collm 48.22 306⇓*i*P **P** **10 26 06.1 +0.5**
comp=Z,9.0nm,0.7s,mb4.9
CLL *i* pP pP 10 26 13.8 +0.2
CLL *i* 10 26 23.9
SOKA Soboth 48.78 300⇓*i*P **P** **10 26 10.5 +0.5**
comp=Z,3.0nm,0.7s,mb4.4
OBKA Obir 49.16 300⇓*i*P **P** **10 26 13.6 +0.8**
comp=Z,13nm,1.1s,mb4.8
GRA1 Grafenberg Arr 49.89 305 *e*P **P** **10 26 26.5 +8.1**
comp=Z,8.0nm,0.9s,mb4.8
GRF Grafenberg Arr 49.89 305 *e*P **P** **10 26 26.5 +8.1**
comp=Z,8.0nm,0.9s,mb4.8
GRF Grafenberg Arr 49.89 305 *e*P **P** **10 26 26.5 +8.1**
GRF pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
GRF Grafenberg Arr 49.89 305 *e*P **P** **10 26 26.5 +8.1**
GRF pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
WTTA Wattenberg 50.65 302⇑*i*P **P** **10 26 24.9 +0.8**
comp=Z,14nm,0.5s,mb5.1
JMIC Jan Mayen 50.90 335 LR LR 10 48 36.8
comp=Z,70nm,20.0s,MS3.7,baz=260,slow=37
FETA Feichten 51.31 302⇓*i*P **P** **10 26 29.7 +0.5**
comp=Z,6.6nm,0.8s,mb4.6
HINF Hinteralfeld 53.31 304 *e*P **P** **10 26 44.3 +0.4**
GIVF Givet 53.46 308 *e*P **P** **10 26 45.8 +0.8**
MEZF Maizieres J'vi 54.06 306 *e*P **P** **10 26 50.1 +0.7**
LPG La Plagne 54.47 302 *e*P **P** **10 26 53.3 +0.9**
comp=Z,28nm,0.6s,mb5.1
LPG La Plagne 54.47 302 *e*P **P** **10 26 53.3 +0.9**
LPG pmax pmax
comp=Z,14nm,0.6s,mb5.1
LPG La Plagne 54.47 302 *e*P **P** **10 26 53.3 +0.9**
comp=Z,14nm,0.6s,mb5.1
LPL La Plagne 54.47 302 *e*P **P** **10 26 53.3 +0.9**
comp=Z,32nm,0.6s,mb5.1
LPL La Plagne 54.47 302 *e*P **P** **10 26 53.3 +0.9**
LPL pmax pmax
comp=Z,16nm,0.6s,mb5.1
LPL La Plagne 54.47 302 *e*P **P** **10 26 53.3 +0.9**
comp=Z,16nm,0.6s,mb5.1
MBDF Montbardon 54.83 301 *e*P **P** **10 26 55.8 +0.7**
comp=Z,10nm,0.7s,mb4.7
MBDF Montbardon 54.83 301 *e*P **P** **10 26 55.8 +0.7**
MBDF pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
MBDF Montbardon 54.83 301 *e*P **P** **10 26 55.8 +0.7**
comp=Z,5.2nm,0.7s,mb4.7
ORIF Oris-en-Rattie 55.28 302 *e*P **P** **10 26 58.7 +0.3**
comp=Z,17nm,0.8s,mb4.8
ORIF Oris-en-Rattie 55.28 302 *e*P **P** **10 26 58.7 +0.3**
ORIF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
ORIF Oris-en-Rattie 55.28 302 *e*P **P** **10 26 58.7 +0.3**
comp=Z,8.6nm,0.8s,mb4.8
LOR Lormes 55.36 305 *e*P **P** **10 26 59.7 +0.9**
VIVF Saint-Julien-l 56.06 302 *e*P **P** **10 27 04.2 +0.3**
TCF Toulx Ste Croi 56.83 304 *e*P **P** **10 27 09.3 -0.1**
comp=Z,10nm,0.8s,mb4.6
TCF Toulx Ste Croi 56.83 304 *e*P **P** **10 27 09.3 -0.1**
TCF pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
TCF Toulx Ste Croi 56.83 304 *e*P **P** **10 27 09.3 -0.1**
comp=Z,5.1nm,0.8s,mb4.6
COLD Coldfoot 61.32 22 *e*P **P** **10 27 41.0 +0.8**
comp=Z,4.4nm,0.8s,mb4.6
RES Resolute Bay 61.83 0 LR LR 10 54 27.0
comp=Z,60nm,18.5s,MS3.8,baz=308,slow=36
BPAW Bear Paw Mtn. 63.38 24 *e*P **P** **10 27 53.9 -0.1**
comp=Z,4.9nm,1.0s,mb4.6
BPAW *e*pP pP 10 28 01.9 -0.3
COLA College 63.72 23 *e*P **P** **10 27 56.8 +0.6**
COLA *e**PP pP 10 28 04.9 +0.5
COLA pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
COLA College 63.72 23 *e*P **P** **10 27 56.8 +0.6**
comp=Z,1.6nm,0.8s,mb4.1
COLA *e*pP pP 10 28 04.9 +0.5
KTH Kantishna Hill 63.81 25 *e*P **P** **10 27 57.5 +0.7**
comp=Z,5.6nm,1.2s,mb4.5
KTH *e*pP pP 10 28 05.7 +0.6
KTH *e*sP sP 10 28 08.8 +0.7
PPLA Purkeypile 63.90 26 *e*P **P** **10 27 58.4 +1.0**
comp=Z,7.3nm,0.8s,mb4.8
PPLA *e*pP pP 10 28 06.4 +0.8
INK Inuvik 64.31 15 *e*P **P** **10 27 58.2 -1.8**
INK *e**PP pP 10 28 08.5 +0.2
INK pmax pmax
comp=Z,8.0nm,1.3s
INK Inuvik 64.31 15 *e*P **P** **10 27 58.2 -1.8**
comp=Z,7.9nm,1.3s,mb4.6
INK *e*pP pP 10 28 08.5 +0.2
EGAK Eagle 65.57 20 *e*P **P** **10 28 08.3 0.0**
comp=Z,10nm,1.6s,mb4.6
KDAK Kodiak Island 67.52 30*c e*P **P** **10 28 21.2 +0.3**
HYT Haines Junctio 69.80 21 *e*P **P** **10 28 35.4 +0.4**
YKA Yellowknife Ar 72.75 10 P **P** **10 28 52.4 -0.3**
comp=Z,1.2nm,0.5s,mb4.0,baz=343,slow=5.9,SNR=5.0
YKA pP pP 10 29 00.9 -0.2
comp=Z,2.2nm,0.7s,baz=338,slow=5.5,SNR=7.2
YKA Yellowknife Ar 72.75 10 P **P** **10 28 52.4 -0.4**
YKA *PP pP 10 29 00.9 -0.2
YKA pmax pmax
comp=Z,1.0nm,0.5s
YKA Yellowknife Ar 72.75 10 P **P** **10 28 52.4 -0.3**
YKA pP pP 10 29 00.9 -0.2
WRAB Tennant Creek 77.10 134 *e*P **P** **10 29 17.9 -0.5**
WRAB pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
WRAB Tennant Creek 77.10 134 *e*P **P** **10 29 17.9 -0.5**
comp=Z,8.0nm,0.6s,mb4.8
WRA Warramunga Arr 77.10 134 P **P** **10 29 17.8 -0.6**
comp=Z,6.7nm,0.6s,mb4.7,baz=339,slow=5.1,SNR=197
WRA Warramunga Arr 77.10 134 P **P** **10 29 17.8 -0.6**
WRA pmax pmax
comp=Z,7.0nm,0.6s
TORD Torodi Ar. Bea 77.27 276 P **P** **10 29 18.3 -1.3**
comp=Z,4.5nm,0.8s,mb4.5,baz=42,slow=5.0,SNR=37
SCHQ Schefferville 79.17 345 P **P** **10 29 29.1 -0.5**
comp=Z,0.9nm,0.5s,mb3.9,baz=359,slow=6.2,SNR=5.0
ASAR Alice Springs 79.98 137 P **P** **10 29 33.8 -0.5**
comp=Z,2.7nm,0.8s,mb4.2,baz=333,slow=5.6,SNR=36
ASAR Alice Springs 79.98 137 P **P** **10 29 33.8 -0.5**
ASAR pmax pmax
comp=Z,3.0nm,0.8s
FFC Flin Flon 81.62 5*c e*P **P** **10 29 42.6 -0.1**
FFC Flin Flon 81.62 5 *e*P **P** **10 29 42.0 -0.7**
comp=Z,3.7nm,0.8s,mb4.4
FFC *e*pP pP 10 29 50.3 -0.8
EDM Edmonton 81.90 12 *e*P **P** **10 29 44.3 +0.1**
DBIC Dimbokro 86.37 276 P **P** **10 30 06.2 -1.4**
comp=Z,6.6nm,0.7s,mb5.0,baz=62,slow=6.2,SNR=7.4
DBIC Dimbokro 86.37 276 *e*P **P** **10 30 07.0 -0.6**
DBIC pmax pmax
comp=Z,8.0nm,0.8s
DBIC Dimbokro 86.37 276 *e*P **P** **10 30 07.0 -0.7**
comp=Z,8.4nm,0.8s,mb5.0
KIC Kosan Boka 86.50 275 *e*P **P** **10 30 07.1 -1.2**
comp=Z,26nm,0.8s,mb5.5
TIC Toumodi 86.51 276 *e*P **P** **10 30 05.5 -2.8**
comp=Z,215nm,2.0s
LIC Lamto 86.80 275 *e*P **P** **10 30 08.5 -1.2**
comp=Z,134nm,1.9s
BSMT Bassoo Peak 86.87 14 *e*P **P** **10 30 10.2 +0.7**
SLMT Seeley Lake 87.68 13 *e*P **P** **10 30 13.5 +0.1**
CHMT Chamberlain Mo 88.04 13 *e*P **P** **10 30 15.0 -0.2**
STKA Stephens Creek 90.58 136 P **P** **10 30 25.8 -1.2**
comp=Z,4.4nm,0.7s,mb4.9,baz=352,slow=5.7,SNR=11
NVAR Mina Array Bea 95.17 19 P **P** **10 30 49.0 +0.6**
comp=Z,0.3nm,0.6s,mb3.9,baz=352,slow=5.6,SNR=5.3
LPAZ La Paz 145.13 314 PKPbc PKPbc 10 37 01.8 -0.5
comp=Z,3.2nm,0.7s,baz=15,slow=1.8,SNR=20
LPAZ La Paz 145.13 314 *e*PKPbc PKPbc 10 37 01.9 -0.4
CPUP Villa Florida 145.95 289 PKPbc PKPbc 10 37 03.9 -0.8
comp=Z,3.8nm,0.6s,baz=44,slow=1.8,SNR=16
CPUP Villa Florida 145.95 289 PKP2 PKPbc 10 37 03.9 -0.7
CPUP pmax pmax
comp=Z,4.0nm,0.6s

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*IDC **18** 10:22:01.9±1.4, 15°.83S×174°.77W, h224km±23km, mb3.9/4, mb1 4.1/5, mb1mx3.6/17, mbtmp4.0/5, Error ellipse: s-maj=66.9km s-min=17.5km az=136.0*
*ISCJB **18** 10:22:02.2±1.4, 16°.0S±0°.4×174°.3W±0°.3, h271km±13km, mb4.1/6, Error ellipse: s-maj=73.8km s-min=16.9km az=146.6*
*NEIC **18** 10:22:03.7±1.3, 16°.04S×174°.47W, h259km±10km, mb4.5/2, Error ellipse: s-maj=54.4km s-min=12.8km az=149.0*
ISC 18 10:22:03.0±1.4, 16°.0S±0°.4×174°.4W±0°.3, h262km±13km, n15, σ0=84/14, mb4.1/6, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.25**	**50**	P	**Pn**	**10 23 00.2**	**+1.3**
	41nm,0.3s,baz=74,slow=1.4,SNR=55						
AFI				S	**S**	**10 23 42.3**	**-1.1**
	47nm,0.3s,baz=74,slow=22,SNR=6.8						
AFI	**Afiamalu**	**3.25**	**50**	P	**Pn**	**10 23 00.2**	**+1.3**
AFI				S	**S**	**10 23 42.3**	**-1.1**
MSVF	**Nonsavu**	**7.47**	**256**	*e*Pn	**Pn**	**10 23 50.3**	**+0.6**
CTAO	**Charters Tower**	**37.62**	**258**	*e*P	**P**	**10 28 53.4**	**+0.2**
COEN	**Coen**	**41.03**	**267**	*e*P	**P**	**10 29 19.9**	**-1.5**
	59nm,0.8s,mb4.9						
STKA	**Stephens Creek**	**42.94**	**240**	P	**P**	**10 29 36.9**	**+0.4**
	1.5nm,0.3s,mb3.6,baz=60,slow=9.1,SNR=9.9						
STKA	**Stephens Creek**	**42.94**	**240**	P	**P**	**10 29 36.9**	**+0.4**
WRAB	**Tennant Creek**	**48.80**	**257**	*e*P	**P**	**10 30 21.7**	**-0.7**
	4.6nm,0.7s,mb3.9						
WRA	**Warramunga Arr**	**48.81**	**257**	P	**P**	**10 30 21.9**	**-0.6**
	3.0nm,0.5s,mb3.9,baz=90,slow=6.7,SNR=41						
WRA				PcP	PcP	10 31 44.3	+1.4
	0.6nm,0.5s,baz=96,slow=3.5,SNR=4.7						
ASAR	**Alice Springs**	**49.05**	**252**	P	**P**	**10 30 24.1**	**-0.1**
	6.1nm,0.3s,mb4.3,baz=90,slow=7.6,SNR=114						
MBWA	**Marble Bar**	**62.31**	**254**	*e*P	**P**	**10 31 58.5**	**+0.4**

PETK	Petropavlovsk-	72.94	343	P	P	10 33 04.8 +1.2
	3.3nm,0.7s,mb4.1,baz=121,slow=8.4,SNR=9.7					
ARCES	ARCESS Array B	125.08	352	PKP	PKPdf	10 40 33.5 +2.0
	2.2nm,0.7s,baz=359,slow=3.7,SNR=5.7					
ARCES	ARCESS Array B	125.08	352	PKP	PKPdf	10 40 33.5 +2.0
BRTR	Keskin Array B	146.04	320	PKPbc	PKPbc	10 41 14.4 +2.1
	3.1nm,0.7s,baz=82,slow=1.8,SNR=20					

*NEIC **18** 10:36:50.0±6.0, 23°.70N×122°.56E, h10km, MG3.3(JMA), Error ellipse: s-maj=73.6km s-min=14.2km az=102.0*
*ISCJB **18** 10:36:50.4±0.8, 23°.71N±0°.02×122°.52E±0°.02, h8km±6km, Error ellipse: s-maj=3.5km s-min=2.7km az=145.3*
*JMA **18** 10:36:51.9±0.4, 23°.88N×122°.41E, h41km, M3.3*
*TAP **18** 10:36:51.8, 23°.78N×122°.56E, h26km±1km, ML3.8, C*

ISC 18 10:36:50.6±0.5, 23°.73N±0°.02×122°.52E±0°.02, h8km±3km, n59, σ0°78/98, 2C-9D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.86	31	P	Pg	10 37 07.0	-0.1
YOJ				S	Sg	10 37 17.3	-1.0
HWA	Hwalien	0.88	287	eP	Pg	10 37 07.5	+0.1
HWA	baz=269			eS	Sg	10 37 19.4	+0.5
TWD	Chiawan	0.92	293	⇓iP	Pg	10 37 08.2	-0.1
TWD	baz=274			S	Sg	10 37 20.0	-0.2
NACB	Ninganchiao	0.96	298	ePn	Pn	10 37 10.1	-0.2
ENA	Nanau	1.00	315	P	Pg	10 37 09.9	+0.1
ENA	baz=308			eS	Sg	10 37 23.1	+0.3
ESL	Shilin	1.00	275	⇓iP	Pg	10 37 09.3	-0.6
ESL	baz=270			S	Sg	10 37 23.0	+0.1
TWC	Suao	1.07	325	P	Pg	10 37 10.9	-0.3
TWC	baz=320			S	Sg	10 37 25.8	+0.7
EHY	Hungye	1.12	259	iP	Pg	10 37 11.8	-0.4
EHY	baz=255			S	Sg	10 37 26.3	-0.4
YULB	Yu-li	1.17	254	ePn	Pn	10 37 12.5	-0.8
YULB				eSn	Sn	10 37 28.5	-1.0
TWF1	Yuli	1.18	252	iP	Pb	10 37 12.8	-0.6
TWF1	baz=248			S	Sg	10 37 28.8	0.0
HATJ	Hateruma jima	1.22	74	P	Pb	10 37 13.8	-0.1
HATJ				eS	Sg	10 37 30.8	+0.9
WHF	Hehuan Shan	1.22	290	⇓iP	Pb	10 37 13.1	-0.9
WHF	baz=272			eS	Sb	10 37 29.2	-0.7
ILA	Ilan	1.25	326	eP	Pn	10 37 13.8	-0.6
ILA	baz=308			eS	Sb	10 37 32.1	+1.3
ENTT	Nioudou	1.26	316	P	Pn	10 37 14.1	-0.4
ENTT	baz=296			eS	Sb	10 37 31.9	+0.9
TWE	Neicheng	1.26	322	iP	Pn	10 37 14.3	-0.2
TWE	baz=317			S	Sb	10 37 31.2	+0.2
IRIF	Iriomote-Funau	1.26	61	P	Pn	10 37 14.1	-0.4
IRIF				eS	Sb	10 37 31.2	+0.2
NNS	Nan Shan	1.27	304	P	Pn	10 37 13.8	-0.8
NNS	baz=287			eS	Sb	10 37 30.3	-0.9
TWT	Tachien	1.34	293	⇓iP	Pn	10 37 15.4	-0.2
TWT	baz=277			eS	Sb	10 37 32.8	-0.4
TWB1	Santiao Chiao	1.36	339	P	Pn	10 37 14.8	-1.1
TWB1	baz=352			eS	Sb	10 37 34.2	+0.2
YHNB	Yeheng	1.41	312	ePn	Pn	10 37 15.9	-0.6
NSK	Sanguang	1.42	312	P	Pn	10 37 16.3	-0.4
NSK	baz=305			S	Sb	10 37 35.2	-0.5
SSLB	Suanglung	1.44	273	ePn	Pn	10 37 16.1	-0.9
SSLB				eSn	Sn	10 37 34.2	-1.8
JKRS	Kuro-shima	1.45	69	P	Pn	10 37 17.4	+0.2
YUS	Yu-Shan	1.46	261	⇓iP	Pn	10 37 17.6	+0.4
YUS	baz=256			eS	Sn	10 37 35.0	-1.5
ELDTW	Lidau	1.48	249	⇑iP	Pn	10 37 17.0	-0.6
SMLT	Sun Moon Lake	1.49	276	⇓iP	Pn	10 37 17.6	-0.1
SMLT	baz=271			eS	Sn	10 37 36.1	-1.3
NWF	Wu-fen Shan	1.50	333	⇓iP	Pn	10 37 17.3	-0.5
NWF	baz=327			eS	Sn	10 37 37.9	+0.3
TWA	Mucha	1.51	326	P	Pn	10 37 18.3	+0.3
TWA	baz=319			eS	Sn	10 37 38.0	+0.1
TYC	Yuchr	1.53	277	P	Pn	10 37 18.2	-0.1
TYC	baz=272			eS	Sn	10 37 37.2	-1.2
TATO	Taipei	1.56	323	ePn	Pn	10 37 18.7	+0.1
ALS	Alishan	1.59	263	⇓iP	Pn	10 37 19.7	+0.6
ALS	baz=258			eS	Sn	10 37 39.4	-0.4
TWG	Pinlang	1.61	236	Pn	Pn	10 37 18.2	-1.1
TWG	Pinlang	1.61	236	eP	Pn	10 37 18.5	-0.8
TWG	baz=224			eS	Sn	10 37 37.9	-2.4
JIJ	Ishigaki jima	1.61	67	P	Pn	10 37 18.4	-1.0
JIJ				eS	Sn	10 37 40.6	+0.3
NSTT	Nanjuang	1.65	303	iP	Pn	10 37 20.7	+0.8
NSTT	baz=286			S	Sn	10 37 41.3	0.0
WNT	Mingjian	1.69	275	eP	Pn	10 37 21.1	+0.7
CHN5	Tsauling	1.69	266	⇑P	Pn	10 37 21.4	+0.9
CHN5	baz=261			S	Sn	10 37 42.3	-0.1
TWS1	Kuangyinshan	1.70	324	P	Pn	10 37 20.6	0.0
TWS1	baz=318			eS	Sn	10 37 42.2	-0.2
TWQ1	Liyutan	1.71	291	⇓P	Pn	10 37 22.0	+1.2
TWQ1	baz=286			eS	Sn	10 37 43.6	+0.7
STYT	Tauyuan	1.71	251	eS	Sn	10 37 42.1	-0.7
TCU	Taichung	1.74	284	eP	Pn	10 37 22.2	+1.1
NSY	Sanyi	1.75	293	eP	Pn	10 37 22.5	+1.2
TWY	Chenhua	1.75	332	P	Pn	10 37 21.8	+0.5
TPUB	Ta-pu	1.79	257	ePn	Pn	10 37 22.6	+0.8
TPUB				eSn	Sn	10 37 45.5	+0.8
CHN4	Tsaushan	1.81	258	eP	Pn	10 37 23.6	+1.5
CHN4	baz=254			eS	Sn	10 37 46.3	+1.1
WTP	Ta-pu	1.81	255	eP	Pn	10 37 22.9	+0.7
ECL	Taimali	1.83	232	eP	Pn	10 37 21.2	-1.2
SGST	Jiashian	1.89	251	eP	Pn	10 37 24.4	+1.1
SGST	baz=247			eS	Sn	10 37 48.7	+1.4
LAY	Lan-yu	1.90	208	iP	Pn	10 37 21.9	-1.5
CHN1	Nanshi	1.91	254	eP	Pn	10 37 24.5	+1.1
CHN1	baz=250			eS	Sn	10 37 48.5	+0.9
TWK	Hsinying	1.92	257	eP	Pn	10 37 24.2	+0.6
TWK	baz=252			eS	Sn	10 37 49.3	+1.3
PCYT	Pengchaiyu	1.94	348	eP	Pn	10 37 23.1	-0.8
SSD	Sandimen	1.99	241	eP	Pn	10 37 25.8	+1.2
EAST	Anshuo	2.04	229	eP	Pn	10 37 24.9	-0.4
CHN8	Yiju	2.15	260	eP	Pn	10 37 26.9	+0.1
CHN8	baz=254			eS	Sn	10 37 54.8	+1.1
JTJ	Tarama	2.19	65	P	Pn	10 37 27.2	-0.1
SCZT	Fangliau	2.21	233	eP	Pn	10 37 28.5	+0.9
TSEB	Hengchuen, Pin	2.35	220	eP	Pn	10 37 30.3	+0.7
TWK1	Hengchun	2.38	222	eP	Pn	10 37 30.5	+0.6
TWK1	baz=222			eS	Sn	10 37 59.1	-0.2

IDC 18 10:40:46.3±2.1, 6°.67S×130°.07E, h0km, mb3.6/1, mb1 3.7/4, mb1mx3.5/18, mbtmp3.5/4, ML3.6/3, Error ellipse: s-maj=87.1km s-min=27.8km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.16	200	Pn	Pn	10 43 40.7	-0.2
	0.2nm,0.3s,baz=41,slow=14,SNR=14						
FITZ				Sn	Sn	10 45 42.8	-14
	0.3nm,0.3s,baz=67,slow=15,SNR=5.2						
WRA	Warramunga Arr	13.83	163	Pn	Pn	10 44 03.9	+0.2
	0.3nm,0.3s,baz=346,slow=13,SNR=18						
WRA				Sn	Sn	10 46 25.6	-12
	0.3nm,0.3s,baz=328,slow=27,SNR=6.8						
ASAR	Alice Springs	17.29	168	P	Pn	10 44 49.4	+0.1
	0.1nm,0.3s,baz=344,slow=9.8,SNR=12						
ASAR				S	Sn	10 47 52.0	-10
	0.1nm,0.3s,baz=344,slow=26,SNR=4.5						
MKAR	Makanchi Array	67.99	327	P	P	10 51 47.4	+0.1
	0.3nm,0.4s,baz=114,slow=6.5,SNR=3.0						

*IDC **18** 10:50:45.4±1.3, 34°.62N×73°.00E, h0km, mb3.5/4, mb1 3.6/7, mb1mx3.4/27, mbtmp3.6/7, ML3.7/3, MS2.8/1, Ms1 2.8/1, ms1mx2.3/24, Error ellipse: s-maj=33.7km s-min=26.5km az=85.0*
*ISCJB **18** 10:50:45.8±0.6, 34°.77N±0°.04×73°.32E±0°.06, h10km, mb3.5/3, Error ellipse: s-maj=7.5km s-min=5.8km az=145.3*
*NEIC **18** 10:50:47.2±1.1, 34°.69N×73°.23E, h10km, Error ellipse: s-maj=21.5km s-min=13.4km az=131.0*

ISC 18 10:50:47.6±0.6, 34°.75N±0°.05×73°.28E±0°.06, h10km, n14, σ1°19/16, mb3.5/3, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	Thein Dam	3.08	138	ePKP	Pb	10 51 41.0	-1.5
THN				eS	Sg	10 52 27.4	+0.8
KBL	Kabul	3.50	268	ePn	Pn	10 51 42.5	+0.4
KBL				eSn	Sn	10 52 24.4	+0.9
KSH	Kashi	5.22	24	ePn	Pn	10 52 07.3	+1.6
KSH				Sn	Sn	10 53 04.6	-1.3
KSH				smax			
	comp=N,37nm,0.4s						
KSH				smax			
	comp=E,28nm,0.3s						
UCH	Uchtor	7.53	7	ePn	Pn	10 52 39.1	+1.7
	comp=E,2.6nm,0.5s						
TKM2	Tokmak 2	8.35	12	ePn	Pn	10 52 51.0	+2.2
KURK	Kurchatov	16.42	12	Pn	Pn	10 54 37.2	-0.8
	comp=E,0.0nm,0.3s,baz=197,slow=10,SNR=2.6						
BVAR	Borovoye Array	18.38	354	P	Pn	10 55 02.9	+0.5
	comp=E,0.5nm,0.3s,baz=170,slow=9.0,SNR=7.4						
AKTK	Aktyubinsk	19.22	329	P	Pn	10 55 11.7	-0.9
AKTO	Aktyubinsk	19.22	329	P	Pn	10 55 11.7	-0.9
	comp=E,0.3nm,0.3s,baz=145,slow=9.8,SNR=4.0						
ZALV	Zalesovo Beam	20.84	19	P	P	10 55 29.1	-0.2
	comp=E,1.1nm,0.3s,baz=214,slow=12,SNR=8.2						
GNI	Garni	23.23	292	LR	LR	11 06 21.1	
	comp=E,28nm,21.8s,baz=186,slow=41						
ARCES	ARCESS Array B	43.46	338	P	P	10 58 49.8	-0.6
	comp=E,0.4nm,0.4s,mb3.5,baz=108,slow=8.0,SNR=7.9						
TORD	Torodi Ar. Bea	67.56	271	P	P	11 01 42.5	-2.1
	comp=E,0.4nm,0.7s,mb3.5,baz=51,slow=4.0,SNR=2.8						
WRA	Warramunga Arr	79.49	123	P	P	11 02 55.1	+0.5
	comp=E,0.5nm,1.1s,mb3.4,baz=322,slow=5.0,SNR=5.4						

*IDC **18** 10:53:21.2±1.3, 44°.03N×129°.19W, h0km, mb3.8/8, mb1 3.8/13, mb1mx3.7/30, mbtmp3.6/13, ML3.5/5, MS3.6/9, Ms1 3.6/9, ms1mx3.3/30, Error ellipse: s-maj=35.1km s-min=14.4km az=38.0*
*ISCJB **18** 10:53:23.9±0.5, 44°.28N±0°.05×129°.20W±0°.05, h10km, mb3.9/15, MS3.7/9, Error ellipse: s-maj=7.7km s-min=4.8km az=23.2*
*NEIC **18** 10:53:25.5±0.9, 44°.23N×129°.23W, h10km, mb4.1/20, Error ellipse: s-maj=12.2km s-min=7.5km az=49.0*
*BJI **18** 10:53:26.7, 45°.01N×129°.80W, h10km, mB4.8/1, mb4.3/1, Ms4.6/3, Ms7 4.2/3*

ISC 18 10:53:25.1±0.5, 44°.22N±0°.05×129°.32W±0°.05, h10km, n91, σ1°37/89, mb3.9/15, MS3.7/9, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEBO	Mount Hebo	4.09	74	ePn	Pn	10 54 24.4	-3.2
COR	Corvallis	4.33	83	ePn	Pn	10 54 28.0	-2.9
COR				eSn	Sn	10 55 20.8	-0.6
HUMO	Hull Mountain	4.91	107	ePn	Pn	10 54 35.4	-3.5
HUMO				eSn	Sn	10 55 29.6	-6.0
NLWA	Neilton Lookou	4.96	48	ePn	Pn	10 54 37.2	-2.3
NLWA				eSn	Sn	10 55 33.1	-3.8
YBH	Yreka Blue Hor	5.45	115	Pn	Pn	10 54 40.7	-5.6
	0.7nm,0.3s,baz=311,slow=14,SNR=13						
HOOD	Mount Hood Mea	5.57	76	Pn	Pn	10 54 47.1	-0.9
	62nm,0.7s						
LON	Longmire	5.85	62	ePn	Pn	10 54 50.6	-1.2
WDC	Whiskeytown Da	6.20	124	ePn	Pn	10 54 56.7	+0.1
JCW	Jim Creek	6.49	50	ePn	Pn	10 54 59.0	-1.5
RPW	Rockport	6.86	49	ePn	Pn	10 55 04.1	-1.5
MOD	Modoc	7.00	106	ePn	Pn	10 55 08.0	+0.4
HAWA	Hanford	7.23	69	Pn	Pn	10 55 09.2	-1.6
WVOR	Wild Horse Val	7.99	99	ePn	Pn	10 55 16.5	-4.7
	5.4nm,1.1s						
BMO	Blue Mountains	8.61	82	ePn	Pn	10 55 29.8	+0.2
	6.1nm,1.3s						
CMB	Columbia Colle	9.14	129	ePn	Pn	10 55 36.0	-1.0
NEW	Newport	9.37	60	ePn	Pn	10 55 42.9	+2.9
NVAR	Mina Array Bea	10.10	121	Pn	Pn	10 55 46.9	-3.2
	0.1nm,0.3s,baz=290,slow=13,SNR=8.3						
BSMT	Bassoo Peak	10.73	65	ePn	Pn	10 55 59.5	+0.7
HLID	Hailey	10.78	88	ePn	Pn	10 56 02.5	+3.0
ELK	Elko	10.96	104	Pn	Pn	10 55 59.8	-2.2
	0.1nm,0.3s,baz=192,slow=20,SNR=2.7						
ELK				LR	LR	11 00 22.9	
	comp=Z,234nm,19.9s,baz=286,slow=39						
JTMT	Jette	11.04	66	ePn	Pn	10 56 03.6	+0.6
N12A	Clover Valley,	11.06	103	ePn	Pn	10 56 07.0	+3.7
MSO	Missoula	11.10	71	ePn	Pn	10 56 06.0	+2.2
SWMT	Swartz Lake	11.18	68	ePn	Pn	10 56 05.5	+0.7
SLMT	Seeley Lake	11.47	69	ePn	Pn	10 56 09.0	+0.2
M13A	Montello	11.50	99	ePn	Pn	10 56 09.8	+0.5
	12nm,1.6s						
CHMT	Chamberlain Mo	11.58	71	ePn	Pn	10 56 10.5	+0.2
MCMT	McKenzie Canyo	11.78	81	ePn	Pn	10 56 14.0	+1.0
	1.5nm,0.9s						
DLMT	Dillon	11.94	79	ePn	Pn	10 56 16.3	+1.0
LRM	Limekiln Ridge	12.05	76	ePn	Pn	10 56 17.8	+1.1
BOZ	Bozeman (W)	12.62	77	ePn	Pn	10 56 24.3	-0.2
QLMT	Earthquake Lak	12.78	81	ePn	Pn	10 56 27.9	+1.1
RRI2	Red Ridge	13.04	88	ePn	Pn	10 56 33.1	+2.8
GSC	Goldstone	13.10	129	ePn	Pn	10 56 30.3	-0.9
IMW	Indian Meadow	13.23	85	ePn	Pn	10 56 34.9	+2.0
HWUT	Hardware Ranch	13.27	95	ePn	Pn	10 56 34.5	+0.9
TPAW	Teton Pass	13.28	87	ePn	Pn	10 56 35.5	+1.9
REDW	Red Top Meadow	13.37	87	ePn	Pn	10 56 36.7	+1.9
LOHW	Long Hollow	13.51	86	ePn	Pn	10 56 38.1	+1.4
CCUT	Cedar City	13.78	113	ePn	Pn	10 56 41.7	+1.3
EDM	Edmonton	13.84	44	eP	Pn	10 56 51.1	+10
GCMT	Greycliff	13.99	77	ePn	Pn	10 56 44.1	+0.8
	11nm,0.9s						
MSU	Marysvale	14.07	108	eP	Pn	10 56 51.3	+6.9
LDFC	Landfair	14.24	125	eP	Pn	10 56 54.8	+8.1
RLMT	Red Lodge	14.30	79	eP	Pn	10 56 56.7	+9.2
	9.6nm,1.0s						
PDAR	Pinedale Array	14.42	89	Pn	Pn	10 56 50.0	+0.9
	0.1nm,0.3s,baz=277,slow=12,SNR=5.4						
PDAR				LR	LR	11 02 25.3	
	comp=Z,316nm,20.7s,baz=320,slow=38						
PDAR	Pinedale Array	14.42	89	Pn	Pn	10 56 50.0	+0.9
PDAR				LR	LR	11 02 25.3	
SRU	San Rafael	14.94	103	ePn	Pn	10 56 59.6	+3.3
	32nm,1.2s						
RWWY	Rawlins	16.38	91	eP	Pn	10 57 17.6	+2.6
	9.1nm,1.1s						
LAO	LASA Array	16.38	73	ePn	Pn	10 57 13.8	-1.2
	19nm,1.2s						
PV04	Paradox Valley	16.39	104	ePn	Pn	10 57 16.2	+1.1
PV01	Paradox Valley	16.74	104	ePn	Pn	10 57 19.3	-0.3
	1μm,1.3s						
MVCO	Mesa Verde	17.24	107	ePn	Pn	10 57 25.9	-0.1
	39nm,1.4s						
SMCO	Snowmass	17.41	99	eP	Pn	10 57 32.5	+4.5
	6.4nm,1.3s						
PHWY	Pilot Hill	17.75	91	ePn	Pn	10 57 32.8	+0.7
	7.4nm,1.4s						
DGMT	Dagmar	17.83	67	ePn	Pn	10 57 30.8	-2.3
	95nm,1.9s						
ISCO	Idaho Springs	18.14	96	ePn	Pn	10 57 36.6	-0.4
	6.9nm,1.2s						
TUC	Tucson	18.74	123	eP	Pn	10 57 43.3	-1.1
	6.0nm,1.3s						
SDCO	Great Sand Dun	19.07	102	ePn	Pn	10 57 49.4	+1.0
LAZ	Ladron	19.71	112	eP	Pn	10 57 54.9	-1.1
	3.0nm,1.2s						
ANMO	Albuquerque	19.85	110	P	Pn	10 57 54.1	-3.6
	0.1nm,0.3s,baz=293,slow=11,SNR=2.8						
BNM	Barren Site	20.20	112	eP	P	10 57 59.9	0.0
	9.5nm,1.4s						
YKA	Yellowknife Ar	20.21	20	P	P	10 57 59.0	-0.8
	1.2nm,0.8s,baz=199,slow=10,SNR=3.7						
YKA	Yellowknife Ar	20.21	20	P	P	10 57 59.0	-0.8
FFC	Flin Flon	20.51	50	eP	P	10 58 01.6	-1.6
	34nm,1.4s						
PMR	Palmer	20.95	333	eP	P	10 58 10.4	+2.5
	16nm,1.6s						
TRF	Thorofare Moun	22.69	335	eP	P	10 58 28.7	+2.2
	5.0nm,1.0s,mb3.9						
PPLA	Purkeypile	22.89	333	eP	P	10 58 30.3	+1.8
	19nm,1.3s,mb4.4						
AMTX	Amarillo	23.17	104	eP	P	10 58 31.2	-0.6
	5.7nm,0.9s,mb4.0						
ULM	Lac du Bonnet	23.36	63	P	P	10 58 32.6	-1.0
	2.4nm,0.5s,mb3.9,baz=300,slow=4.4,SNR=3.0						
ULM				LR	LR	11 07 43.6	
	comp=Z,239nm,19.7s,MS3.7,baz=249,slow=37						
AGMN	Agassiz Nation	23.38	68	eP	P	10 58 32.4	-1.4
	14nm,1.4s,mb4.2						
ECSD	EROS Data Cent	23.46	80	eP	P	10 58 33.1	-1.7
	14nm,1.4s,mb4.2						
TTA	Tatalina	24.23	330	eP	P	10 58 42.5	+0.8
	8.2nm,1.4s,mb4.0						
INK	Inuvik	24.25	356	LR	LR	11 07 48.6	
	comp=Z,90nm,21.9s,MS3.2,baz=215,slow=36						
TXAR	Lajitas Array	25.22	117	P	P	10 58 47.6	-3.4
	1.1nm,1.0s,mb3.4,baz=280,slow=5.4,SNR=2.6						
TXAR				LR	LR	11 09 36.1	
	comp=Z,30nm,22.0s,MS2.8,baz=40,slow=39						
WMOK	Wichita Mounta	25.28	102	eP	P	10 58 50.7	-0.8
	12nm,1.1s,mb4.3						
FCC	Fort Churchill	25.94	43	eP	P	10 59 01.9	+4.7
	1.8nm,2.1s,mb3.2						
RES	Resolute Bay	34.14	16	P	P	11 00 08.3	-1.4
	1.4nm,0.7s,mb4.0,baz=207,slow=7.6,SNR=5.2						
AFI	Afiamalu	69.57	224	LR	LR	11 30 56.1	
	comp=Z,78nm,18.5s,MS4.0,baz=48,slow=32						
CN2	Changchun	69.97	312	eP	P	11 04 37.3	+0.8
SONM	Songino Array	76.07	325	P	P	11 05 11.6	-0.9
	0.5nm,0.6s,mb3.6,baz=62,slow=3.5,SNR=4.4						
SONM				LR	LR	11 37 28.0	
	comp=Z,60nm,18.2s,MS3.9,baz=96,slow=35						
BJI	Beijing	77.50	314	P	P	11 05 20.5	-0.3
BJI				S	S	11 15 10.6	-1.1
BJI				LR	LR		
	comp=N,94nm,13.7s,MS4.4						
BJI				LR	LR		
	comp=E,74nm,13.9s,MS4.4						
BJI				LR	LR		
	comp=Z,29nm,19.6s						
ZALV	Zalesovo Beam	77.95	340	LR	LR	11 40 13.3	
	comp=Z,24nm,19.3s,MS3.5,baz=32,slow=36						
HHC	Hu-ho-hao-te	79.20	318	eP	P	11 05 30.9	+0.8
HHC				pP	pP	11 05 35.6	+2.1
HHC				sP	sP	11 05 37.9	+3.3
HHC				PcP	PcP	11 05 39.8	+1.3
HHC				PP	PP	11 08 30.9	+1.9
HHC				S	S	11 15 29.1	-0.8
HHC				sS	sS	11 15 36.1	+0.8
HHC				SKS		11 15 41.8	
HHC				ScS	ScS	11 15 48.9	-3.9
HHC				LR	LR		
	comp=N,160nm,19.2s,MS4.5						
HHC				LR	LR		
	comp=E,120nm,18.0s,MS4.5						
HHC				LR	LR		
	comp=Z,120nm,19.2s,MS4.2						
BVAR	Borovoye Array	81.66	348	P	P	11 05 43.5	+0.3
	comp=Z,0.4nm,0.3s,mb3.8,baz=147,slow=3.4,SNR=3.0						
KURK	Kurchatov	82.38	343	P	P	11 05 45.5	-1.5
	comp=Z,2.1nm,0.9s,mb4.1,baz=17,slow=5.1,SNR=3.7						
AKASG	Malin Array Be	83.64	14	P	P	11 05 51.2	-2.3
	comp=Z,0.8nm,0.6s,mb4.0,baz=327,slow=4.9,SNR=3.8						
MKAR	Makanchi Array	85.17	339	LR	LR	11 43 30.0	
	comp=Z,43nm,19.4s,MS3.9,baz=357,slow=35						
WMQ	Urumqi	86.33	334	eP	P	11 06 07.0	-0.2
CD2	Chengdu	90.92	317	eP	P	11 06 29.0	-0.2
CD2				pP	pP	11 06 33.0	+0.5
CD2				sP	sP	11 06 36.8	+3.1
CD2				pmax	pmax		
	comp=Z,30nm,5.2s						
MAW	Mawson	155.68	191	PKP	PKPdf	11 13 14.9	-3.0
	comp=Z,1.6nm,0.5s,baz=211,slow=5.4,SNR=6.9						

*IDC **18** 11:00:31.2±1.2, 35°.76N×77°.86E, h0km, mb3.4/5, mb1 3.6/7, mb1mx3.5/25, mbtmp3.5/7, ML3.3/2, Error ellipse: s-maj=29.0km s-min=23.9km az=38.0*
*ISCJB **18** 11:00:40.9±0.7, 36°.05N±0°.03×78°.02E±0°.08, h92km±11km, mb3.3/5, Error ellipse: s-maj=11.3km s-min=5.7km az=177.4*
*NEIC **18** 11:00:42.0±2.1, 35°.99N×78°.01E, h84km±19km, Error ellipse: s-maj=26.1km s-min=15.0km az=146.0*

ISC 18 11:00:42.4±0.6, 36°.04N±0°.03×78°.04E±0°.08, h87km±10km, n18, σ1°47/24, mb3.3/5, Kashmir-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	3.83	335	Pn	Pn	11 01 39.8	+0.7
KSH				Sn	Sn	11 02 21.0	-2.0
KSH				smax			
	comp=N,67nm,0.6s						
KSH				smax			
	comp=E,63nm,0.3s						
THN	Thein Dam	4.08	209	ePKP	Pn	11 01 45.0	+2.5
THN				ex	Sn	11 02 30.5	+1.4
KLP	Kalpa	4.50	178	ePKP	Pn	11 01 49.8	+1.6
KLP				eS	Sn	11 02 36.8	-2.5
SDNR	Sundarnagar	4.62	191	ePKP	Pn	11 01 53.1	+3.3
SDNR				ex	Sn	11 02 43.1	+1.0
JOSI	Joshimath	5.62	167	eS	Sn	11 03 04.7	-1.9
JOSI				AML	AML	11 03 05.9	
	comp=E,44nm,0.4s						
JOSI				AML	AML	11 03 08.2	
	comp=N,118nm,0.4s						
UCH	Uchtor	6.76	337	ePn	Pn	11 02 21.2	+2.4
	comp=N,3.8nm,0.7s						

AAK Ala-Archa 7.13 338 Pn **Pn 11 02 24.4 +0.5**
comp=N,0.0nm,0.3s,baz=158,slow=14,SNR=1.8
KBL Kabul 7.51 261 *e*Pn **Pn 11 02 28.6 -0.5**
KBL *e*Sn **Sn 11 03 51.8 -0.9**
SONA Sohna 7.81 186 *e*S **Sn 11 03 55.5 -4.7**
SONA AML AML 11 03 57.5
comp=N,26nm,0.1s
SONA AML AML 11 03 57.6
comp=E,42nm,0.1s
KHET Khetri 8.17 194 *e*S **Sn 11 04 03.0 -5.8**
KHET AML AML 11 04 08.9
comp=E,30nm,0.3s
KHET AML AML 11 04 09.2
comp=N,23nm,0.3s
MK31 Makanchi Array 11.20 15 *e*Pn **Pn 11 03 18.5 -0.8**
MKAR Makanchi Array 11.20 15 Pn **Pn 11 03 18.6 -0.7**
comp=N,1.5nm,0.3s,baz=201,slow=13,SNR=34
MKAR Sn **Sn 11 05 16.1 -6.4**
comp=N,1.3nm,0.3s,baz=192,slow=21,SNR=11
SONM Songino Array 24.02 52 P **P 11 05 51.4 +2.4**
comp=N,0.3nm,0.4s,mb3.0,baz=261,slow=7.2,SNR=3.1
AKASG Malin Array Be 37.68 308 P **P 11 07 47.3 -1.7**
comp=N,0.4nm,0.4s,mb3.6,baz=92,slow=14,SNR=3.2
AKASG Malin Array Be 37.68 308 P **P 11 07 47.3 -1.7**
ARCES ARCESS Array B 43.80 336 P **P 11 08 39.5 +0.4**
comp=N,0.8nm,1.0s,mb3.4,baz=110,slow=11,SNR=3.5
TORD Torodi Ar. Bea 71.41 273 P **P 11 11 54.0 +0.4**
comp=N,0.2nm,0.5s,mb3.2,baz=51,slow=5.9,SNR=2.8
WRA Warramunga Arr 77.03 127 P **P 11 12 25.2 -0.7**
comp=N,0.2nm,0.4s,mb3.2,baz=324,slow=6.1,SNR=8.1

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*GUC **18** 11:01:33.9±0.7,31°.74S×70°.23W,h154km±10km,ML4.9*
*NEIC **18** 11:01:34.8±0.2,31°.81S×69°.45W,mb4.6/24,MD4.7(SJA),*
Error ellipse: s-maj=7.6km s-min=4.1km az=92.0
NEIC Felt [IV] at San Juan and [III] at Mendoza.
*IDC **18** 11:01:34.8±0.6,31°.84S×69°.45W,h113km±4km,mb4.1/11,*
mb1 4.2/14,mb1mx4.2/19,mbtmp4.1/14,MS3.0/2,
Ms1 3.0/2,ms1mx2.7/20,Error ellipse: s-maj=14.0km
s-min=10.9km az=1.0
*ISCJB **18** 11:01:34.2±0.2,31°.76S±0°.02×69°.45W±0°.05,h114km,*
mb4.5/32,Error ellipse: s-maj=6.5km s-min=3.0km
az=10.9
ISC 18 11:01:35.5±0.2,31°.85S±0°.02×69°.37W±0°.06,h116km,
h116km±7km:pP-P,n373,σ0°59/381,mb4.5/32,155C-134D,
San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**1.00**	**76**	P		**Pn**	**11 01 57.1**	**-0.1**
	250nm,0.3s,baz=262,slow=8.9							
CFAA				S		**Sn**	**11 02 13.8**	**+0.3**
	373nm,0.3s,baz=267,slow=9.1,SNR=117							
CFAA	**Coronel Fontan**	**1.00**	**76**	P		**Pn**	**11 01 57.1**	**0.0**
CFAA				S		**Sn**	**11 02 13.8**	**+0.3**
JACH	**Jahuel**	**1.32**	**231**	⇑*i*P		**Pn**	**11 01 59.4**	**-1.1**
JACH	**Jahuel**	**1.32**	**231**	⇑*i*P		**Pn**	**11 01 59.4**	**-1.1**
FCH	**Farellones**	**1.66**	**208**	⇑*i*P		**Pn**	**11 02 07.7**	**+3.1**
FCH				*i* S		**Sn**	**11 02 31.8**	**+5.1**
FCH				AML		AML	11 02 33.2	
	comp=N,12μm,0.4s							
PEL	**Peldehue**	**1.70**	**220**	⇑*i*P		**Pn**	**11 02 03.6**	**-1.4**
PEL				*i* S		**Sn**	**11 02 26.1**	**-1.4**
PEL				AML		AML	11 02 27.2	
	comp=E,23μm,0.6s							
CLCH	**Cerro Calan**	**1.83**	**212**	⇑*i*P		**Pn**	**11 02 06.6**	**+0.1**
CLCH				*i* S		**Sn**	**11 02 31.0**	**+0.7**
CLCH	**Cerro Calan**	**1.83**	**212**	⇑*i*P		**Pn**	**11 02 06.6**	**+0.1**
CLCH				*i* S		**Sn**	**11 02 31.0**	**+0.7**
CLCH				AML		AML	11 02 33.5	
	comp=E,18μm,0.4s							
FSR	**Penalolen**	**1.89**	**211**	*e*P		**Pn**	**11 02 07.3**	**0.0**
FSR				*i* S		**Sn**	**11 02 32.2**	**+0.5**
FSR	**Penalolen**	**1.89**	**211**	*e*P		**Pn**	**11 02 07.3**	**0.0**
FSR				*i* S		**Sn**	**11 02 32.2**	**+0.5**
FSR				AML		AML	11 02 35.7	
	comp=N,3μm,0.2s							
SAN	**Santiago**	**1.93**	**214**	⇓*i*P		**Pn**	**11 02 07.0**	**-0.8**
SAN				*i* S		**Sn**	**11 02 31.8**	**-0.9**
SAN	**Santiago**	**1.93**	**214**	⇓*i*P		**Pn**	**11 02 07.0**	**-0.8**
SAN				*i* S		**Sn**	**11 02 31.8**	**-0.9**
SAN				AML		AML	11 02 33.9	
	comp=N,6μm,0.3s							
PCH	**Pirque**	**2.01**	**208**	⇓*i*P		**Pn**	**11 02 08.4**	**-0.4**
PCH				*i* S		**Sn**	**11 02 35.0**	**+0.7**
PCH	**Pirque**	**2.01**	**208**	⇓*i*P		**Pn**	**11 02 08.4**	**-0.4**
PCH				*i* S		**Sn**	**11 02 35.0**	**+0.7**
ANTU	**Antumapu**	**2.02**	**211**	⇑*i*P		**Pn**	**11 02 08.1**	**-0.8**
ANTU				*i* S		**Sn**	**11 02 34.1**	**-0.4**
ANTU	**Antumapu**	**2.02**	**211**	⇑*i*P		**Pn**	**11 02 08.1**	**-0.8**
ANTU				*i* S		**Sn**	**11 02 34.1**	**-0.4**
ANTU				AML		AML	11 02 35.7	
	comp=N,12μm,0.3s							
TLL	**Tololo Astrono**	**2.08**	**323**	⇑*i*P		**Pn**	**11 02 06.7**	**-3.1**
TLL				*i* S		**Sn**	**11 02 30.7**	**-5.2**
TLL	**Tololo Astrono**	**2.08**	**323**	⇑*i*P		**Pn**	**11 02 06.7**	**-3.1**
TLL				*i* S		**Sn**	**11 02 30.7**	**-5.2**
TLL				AML		AML	11 02 34.9	
	comp=N,9μm,0.5s							
CACH	**El Canelo**	**2.48**	**204**	⇑*i*P		**Pn**	**11 02 14.8**	**-0.1**
CACH				*i* S		**Sn**	**11 02 46.1**	**+1.0**
CACH	**El Canelo**	**2.48**	**204**	⇑*i*P		**Pn**	**11 02 14.8**	**-0.1**
CACH				*i* S		**Sn**	**11 02 46.1**	**+1.0**
LCO	**Las Campanas**	**3.06**	**338**	*e*Pn		**Pn**	**11 02 19.1**	**-3.2**
LCO	**Las Campanas**	**3.06**	**338**	⇑*i*P		**Pn**	**11 02 19.2**	**-3.2**
LCO				*i* S		**Sn**	**11 02 53.7**	**-4.9**
LCO				AML		AML	11 02 54.1	
	comp=E,8μm,0.4s							
TALC	**Talca**	**4.01**	**207**	*e*P		**Pn**	**11 02 32.0**	**-3.0**
TALC				*i* S		**Sn**	**11 03 16.7**	**-4.4**
TALC	**Talca**	**4.01**	**207**	*e*P		**Pn**	**11 02 32.0**	**-3.0**
TALC				*i* S		**Sn**	**11 03 16.7**	**-4.4**
TRQA	**Tornquist**	**8.67**	**138**	*e*Pn		**Pn**	**11 03 37.7**	**-0.3**
PLCA	**Paso Flores**	**8.91**	**186**	P		**Pn**	**11 03 39.5**	**-1.7**
	comp=E,1.6nm,0.3s,baz=353,slow=11,SNR=32							
PLCA	**Paso Flores**	**8.91**	**186**	*e*Pn		**Pn**	**11 03 39.5**	**-1.8**
CPUP	**Villa Florida**	**11.88**	**65**	P		**Pn**	**11 04 16.6**	**-4.6**
	comp=E,3.4nm,0.3s,baz=224,slow=11,SNR=15							
CPUP	**Villa Florida**	**11.88**	**65**	*e*Pn		**Pn**	**11 04 17.0**	**-4.1**
	comp=E,68nm,1.6s							
ARE	**Arequipa**	**15.44**	**352**	*e*P		**Pn**	**11 05 05.0**	**-2.0**
LPAZ	**La Paz**	**15.54**	**4**	P		**Pn**	**11 05 07.4**	**-0.8**
	comp=E,2.6nm,0.3s,baz=177,slow=8.1,SNR=80							
LPAZ				LR		LR	11 11 03.1	
	comp=E,68nm,20.0s,baz=151,slow=37							
SIV	**San Ignacio**	**17.50**	**27**	P		**Pn**	**11 05 30.1**	**-2.3**
	comp=E,1.0nm,0.3s,baz=211,slow=11,SNR=34							
NNA	**Nana**	**20.93**	**339**	P		**P**	**11 06 08.8**	**-0.2**
	comp=E,11nm,0.7s,baz=143,slow=4.6,SNR=5.3							
NNA	**Nana**	**20.93**	**339**	P		**P**	**11 06 08.8**	**-0.2**
USHA	**Ushuaia**	**22.98**	**179**	P		**P**	**11 06 30.1**	**+0.3**
	comp=E,35nm,0.7s,mb4.8,baz=312,slow=4.1,SNR=18							
ATAH	**Atahualpa**	**25.99**	**339**	LR		LR	11 16 56.9	
	comp=E,25nm,21.2s,baz=195,slow=36							
TEIG	**Tepich**	**54.86**	**338**	*e*P		**P**	**11 10 52.5**	**-1.3**
	comp=E,22nm,1.2s,mb5.1							
TEIG					*e*pP	pP	11 11 20.2	-1.3
QSPA	**South Pole Qui**	**58.38**	**180**	*e*P		**P**	**11 11 19.4**	**+1.4**
	comp=E,18nm,0.7s,mb5.2							
SYO	**Syowa Base**	**67.03**	**158**	⇓*e*P		**P**	**11 12 14.8**	**-0.7**
SYO	**Syowa Base**	**67.03**	**158**	⇓*e*P		**P**	**11 12 23.8**	**+8.3**
JCT	**Junction City**	**68.38**	**332**	*e*P		**P**	**11 12 23.9**	**-0.5**
	comp=E,14nm,0.8s,mb4.8							
SWET	**Sewanee**	**68.50**	**345**	*e*P		**P**	**11 12 24.4**	**-0.7**
SWET					*e*pP	pP	11 12 52.2	-1.7
628A	**Black Gap, Mar**	**68.81**	**329**	⇓P		**P**	**11 12 27.0**	**-0.2**
	baz=69,SNR=8.1							
627A	**Terlingua Ranc**	**69.00**	**328**	⇑P		**P**	**11 12 28.3**	**0.0**
	baz=69							
TXAR	**Lajitas Array**	**69.03**	**328**	P		**P**	**11 12 28.1**	**-0.4**
	comp=E,2.2nm,0.7s,mb4.1,baz=153,slow=8.4,SNR=23							
TXAR				pP		pP	11 12 57.0	-0.2
	comp=E,1.0nm,0.8s,baz=154,slow=7.8,SNR=2.9							
528A	**Cox Ranch, San**	**69.35**	**329**	⇑P		**P**	**11 12 29.8**	**-0.6**
	baz=70,SNR=12							
626A	**Big Bend Ranch**	**69.42**	**328**	⇓P		**P**	**11 12 30.9**	**-0.1**
	baz=70,SNR=7.2							
527A	**Woodward Ranch**	**69.70**	**329**	⇑P		**P**	**11 12 32.2**	**-0.4**
	baz=70,SNR=7.4							
428A	**Kincaid Ranch,**	**69.79**	**330**	⇑P		**P**	**11 12 32.8**	**-0.4**
	baz=70,SNR=5.6							
WVT	**Waverly**	**69.81**	**344**	*e*P		**P**	**11 12 31.8**	**-1.4**
	comp=E,25nm,0.8s,mb5.1							
WVT					*e*pP	pP	11 13 00.1	-1.8
526A	**Mary Lane Ranc**	**69.84**	**328**	⇑P		**P**	**11 12 33.2**	**-0.3**
	baz=70,SNR=10							
MIAR	**Mount Ida**	**69.86**	**339**	*e*P		**P**	**11 12 32.9**	**-0.6**
	comp=E,48nm,2.3s,mb4.9							
427A	**Hayter Ranch,**	**70.21**	**329**	⇑P		**P**	**11 12 35.3**	**-0.4**
	baz=70							
426A	**McDonald Obser**	**70.33**	**329**	⇑P		**P**	**11 12 36.2**	**-0.3**
	baz=70,SNR=7.5							
328A	**Wristen Ranch,**	**70.41**	**330**	⇑P		**P**	**11 12 36.5**	**-0.5**
	baz=71,SNR=6.1							
425A	**Indio Mountain**	**70.86**	**328**	⇑P		**P**	**11 12 39.1**	**-0.5**
	baz=71							
326A	**Caldwell Ranch**	**70.86**	**329**	⇓P		**P**	**11 12 39.4**	**-0.3**
	baz=71							
227A	**Bennet, Jal**	**71.16**	**330**	⇑P		**P**	**11 12 41.4**	**-0.1**
	baz=71,SNR=7.3							
325A	**Bean Ranch, Si**	**71.35**	**328**	⇑P		**P**	**11 12 41.8**	**-0.8**
	baz=72,SNR=7.3							
226A	**Malaga, Loving**	**71.55**	**329**	⇑P		**P**	**11 12 43.6**	**-0.2**
	baz=72							
324A	**Moseley Ranch,**	**71.64**	**328**	⇑P		**P**	**11 12 42.9**	**-1.4**
	baz=72,SNR=5.6							
WMOK	**Wichita Mounta**	**71.78**	**335**	*e*P		**P**	**11 12 43.4**	**-1.7**
	comp=E,13nm,1.8s,mb4.5							
GDL2	**Guadalupe Moun**	**71.79**	**329**	*e*P		**P**	**11 12 45.0**	**-0.2**
MNTX	**Cornudas Mount**	**71.81**	**328**	*e*P		**P**	**11 12 43.5**	**-1.8**
	comp=E,6.0nm,1.1s,mb4.3							
MNTX					*e*pP	pP	11 13 12.7	-1.6
126A	**Clayton Basin,**	**72.02**	**330**	⇓P		**P**	**11 12 46.1**	**-0.5**
	baz=72							
224A	**Cornudas Mount**	**72.19**	**328**	⇑P		**P**	**11 12 46.9**	**-0.8**
	baz=72							
FVM	**French Village**	**72.20**	**343**	*e*P		**P**	**11 12 46.5**	**-1.0**
	comp=E,21nm,0.9s,mb5.0							
FVM					*e*pP	pP	11 13 15.1	-1.4
Z27A	**Tatum**	**72.25**	**331**	⇑P		**P**	**11 12 47.6**	**-0.3**
	baz=72							
125A	**Gardner Draw,**	**72.31**	**329**	⇓P		**P**	**11 12 47.3**	**-1.0**
	baz=72							
DBIC	**Dimbokro**	**72.36**	**70**	P		**P**	**11 12 49.2**	**+0.2**
	comp=E,3.4nm,1.0s,mb4.1,baz=155,slow=14,SNR=3.0							
DBIC				pP		pP	11 13 17.6	-0.4
	comp=E,4.1nm,0.8s,baz=192,slow=12,SNR=1.8							
DBIC	**Dimbokro**	**72.36**	**70**	P		**P**	**11 12 49.2**	**+0.2**
DBIC				pP		pP	11 13 17.6	-0.4
Z26A	**Caprock**	**72.54**	**330**	⇓P		**P**	**11 12 49.2**	**-0.5**
	baz=73,SNR=12							
MSTX	**Muleshoe**	**72.64**	**331**	⇑P		**P**	**11 12 49.3**	**-0.9**
	baz=73,SNR=15							
124A	**Stringfield Ra**	**72.69**	**329**	⇑P		**P**	**11 12 50.5**	**-0.1**
	baz=73,SNR=8.5							
Y27A	**Causey**	**72.73**	**331**	⇓P		**P**	**11 12 50.1**	**-0.7**
	baz=73							
Z25A	**Roswell**	**72.86**	**330**	⇑P		**P**	**11 12 51.4**	**-0.2**
	baz=73							
320A	**Kipp Ranch, An**	**72.97**	**326**	⇓P		**P**	**11 12 52.1**	**-0.2**
	baz=73,SNR=6.0							
AMTX	**Amarillo**	**73.00**	**333**	*e*P		**P**	**11 12 51.8**	**-0.6**
	comp=E,11nm,0.9s,mb4.7							
Y26A	**Elida**	**73.03**	**331**	⇓P		**P**	**11 12 52.5**	**-0.1**
	baz=73							
Z24A	**Sheeppen Canyo**	**73.19**	**329**	⇓P		**P**	**11 12 53.4**	**-0.1**
	baz=73							
319A	**Douglas**	**73.37**	**325**	⇓P		**P**	**11 12 54.6**	**0.0**
	baz=74,SNR=8.6							
220A	**Playas Peak, P**	**73.44**	**326**	⇓P		**P**	**11 12 54.8**	**-0.2**
	baz=74,SNR=8.8							
Z23A	**Rita Site, Whi**	**73.51**	**328**	⇑P		**P**	**11 12 55.5**	**+0.1**
	baz=74							
X26A	**CR and CF Fran**	**73.57**	**331**	⇓P		**P**	**11 12 55.5**	**-0.2**
	baz=74,SNR=12							
121A	**Cookes Peak, D**	**73.61**	**327**	⇑P		**P**	**11 12 56.1**	**+0.1**
	baz=74,SNR=5.9							
W27A	**Bowe Ranch, En**	**73.71**	**332**	⇓P		**P**	**11 12 55.8**	**-0.7**
	baz=74							
Y24A	**Capitan**	**73.72**	**329**	⇓P		**P**	**11 12 57.1**	**+0.5**
	baz=74							
Z22A	**Elephant Butte**	**73.83**	**328**	⇑P		**P**	**11 12 57.8**	**+0.5**
	baz=74							
219A	**White Tail Can**	**73.87**	**325**	⇓P		**P**	**11 12 57.6**	**+0.1**
	baz=74,SNR=13							
Y23A	**Lovelace Mesa,**	**74.00**	**329**	⇑P		**P**	**11 12 58.5**	**+0.3**
	baz=74,SNR=6.5							
W26A	**Owens Ranch, T**	**74.02**	**331**	⇓P		**P**	**11 12 58.2**	**-0.1**
	baz=74,SNR=8.4							
120A	**U Bar Ranch, L**	**74.02**	**326**	⇑P		**P**	**11 12 58.6**	**+0.2**
	baz=74							
218A	**Dragoon**	**74.23**	**325**	⇓P		**P**	**11 12 59.5**	**-0.1**
	baz=74,SNR=5.4							
Y22A	**Socorro**	**74.41**	**328**	⇓P		**P**	**11 13 01.2**	**+0.6**
	baz=75							
W25A	**X Bar L Ranch,**	**74.41**	**331**	⇓P		**P**	**11 13 00.2**	**-0.4**
	baz=75,SNR=6.7							
Z20A	**Nine Sixteen R**	**74.47**	**327**	⇓P		**P**	**11 13 01.6**	**+0.6**
	baz=75							
119A	**Ashpeak Ranch,**	**74.52**	**326**	⇓P		**P**	**11 13 01.6**	**+0.3**
	baz=75							
MAW	**Mawson**	**74.58**	**163**	P		**P**	**11 13 02.4**	**+1.1**
	comp=E,1.7nm,0.5s,mb4.0,baz=207,slow=7.6,SNR=4.1							
X23A	**Hourglass Bar**	**74.61**	**329**	⇓P		**P**	**11 13 02.0**	**+0.3**
	baz=75							
V26A	**Tequesquite Ra**	**74.64**	**332**	⇑P		**P**	**11 13 01.8**	**-0.1**
	baz=75							
118A	**Homack Ranch,**	**74.73**	**325**	⇑P		**P**	**11 13 02.8**	**+0.3**
	baz=75							
Y21A	**Point of Rocks**	**74.79**	**328**	⇓P		**P**	**11 13 03.0**	**+0.2**
	baz=75,SNR=7.8							
W24A	**Lazy 6 Ranch,**	**74.81**	**330**	⇓P		**P**	**11 13 02.5**	**-0.3**
	baz=75,SNR=6.4							
LAZ	**Ladron**	**74.88**	**328**	*e*P		**P**	**11 13 02.9**	**-0.4**
	comp=E,2.4nm,1.1s,mb3.8							
216A	**Three Points,**	**74.95**	**324**	⇓P		**P**	**11 13 03.7**	**-0.1**
	baz=75							
V25A	**Rancho No Teng**	**75.01**	**331**	⇓P		**P**	**11 13 03.9**	**-0.2**
	baz=75,SNR=9.9							
Y20A	**Horse Springs,**	**75.03**	**327**	⇓P		**P**	**11 13 04.4**	**+0.2**
	baz=75							
ANMO	**Albuquerque**	**75.04**	**329**	P		**P**	**11 13 04.0**	**-0.2**
	comp=E,2.2nm,0.6s,mb4.0,baz=145,slow=7.1,SNR=12							
ANMO	**Albuquerque**	**75.04**	**329**	*e*P		**P**	**11 13 03.9**	**-0.3**
	comp=E,2.7nm,1.4s,mb3.8							
117A	**Oracle**	**75.05**	**325**	⇑P		**P**	**11 13 04.5**	**+0.2**
	baz=75							
W23A	**Werner Place,**	**75.08**	**329**	⇑P		**P**	**11 13 04.7**	**+0.3**
	baz=75,SNR=9.5							
U26A	**Atchley Ranch,**	**75.14**	**332**	⇓P		**P**	**11 13 04.5**	**-0.3**
	baz=75,SNR=5.6							
X21A	**Alamocita Cree**	**75.20**	**328**	⇓P		**P**	**11 13 05.8**	**+0.6**
	baz=75,SNR=8.0							
U25A	**Circle Dot Ran**	**75.41**	**331**	⇑P		**P**	**11 13 06.6**	**+0.3**
	baz=76,SNR=8.6							
Y19A	**Nutrioso**	**75.47**	**327**	⇑P		**P**	**11 13 07.6**	**+0.8**
	baz=76,SNR=11							
Z17A	**San Carlos Hig**	**75.51**	**325**	⇓P		**P**	**11 13 07.4**	**+0.4**
	baz=76							
116A	**Eloy**	**75.52**	**324**	⇓P		**P**	**11 13 07.5**	**+0.4**
	baz=76							
V23A	**Ortiz Mt. (NFS**	**75.59**	**330**	⇑P		**P**	**11 13 08.2**	**+0.8**
	baz=76							
214A	**Organ Pipe Nat**	**75.60**	**323**	⇓P		**P**	**11 13 08.3**	**+0.7**
	baz=76							
X20A	**Quemado**	**75.61**	**327**	⇓P		**P**	**11 13 08.3**	**+0.9**
	baz=76							
Y18A	**Canyon Day Jun**	**75.69**	**326**	⇓P		**P**	**11 13 08.7**	**+0.7**
	baz=76							
Y17A	**Roosevelt**	**76.02**	**325**	⇓P		**P**	**11 13 10.4**	**+0.6**
	baz=76,SNR=7.6							
V22A	**San Miguel Ran**	**76.05**	**329**	⇑P		**P**	**11 13 11.0**	**+1.0**
	baz=76,SNR=27							
T25A	**Trinidad**	**76.05**	**332**	⇑P		**P**	**11 13 10.5**	**+0.6**
	baz=76,SNR=9.2							
U23A	**El Rito**	**76.09**	**330**	⇑P		**P**	**11 13 11.0**	**+0.8**
	baz=76,SNR=9.1							
W20A	**Ramah**	**76.09**	**328**	⇑P		**P**	**11 13 10.6**	**+0.4**
	baz=76,SNR=8.2							
114A	**Black Gap (USA**	**76.27**	**323**	⇓P		**P**	**11 13 11.8**	**+0.5**
	baz=76							
X18A	**Snowflake**	**76.27**	**326**	⇑P		**P**	**11 13 12.1**	**+0.8**
	baz=76							
U22A	**Llaves**	**76.42**	**330**	⇑P		**P**	**11 13 13.1**	**+1.0**
	baz=77,SNR=5.5							
Y16A	**Circle Bar Ran**	**76.47**	**325**	⇑P		**P**	**11 13 13.0**	**+0.6**
	baz=77,SNR=5.9							
X17A	**Forest Lakes**	**76.52**	**326**	⇓P		**P**	**11 13 13.6**	**+0.9**
	baz=77							
V20A	**Brimhall**	**76.64**	**328**	⇓P		**P**	**11 13 13.7**	**+0.4**
	baz=77							
W18A	**Petrified Fore**	**76.65**	**327**	⇑P		**P**	**11 13 14.0**	**+0.6**
	baz=77							
U21A	**Nageezi**	**76.81**	**329**	⇑P		**P**	**11 13 14.7**	**+0.5**
	baz=77,SNR=18							
X16A	**Lo Mia Camp, P**	**76.89**	**325**	⇑P		**P**	**11 13 15.2**	**+0.4**
	baz=77,SNR=15							
Y15A	**Casa Rosa Ranc**	**76.95**	**324**	⇑P		**P**	**11 13 15.4**	**+0.3**
	baz=77							
T22A	**Edith**	**76.97**	**330**	⇑P		**P**	**11 13 15.9**	**+0.8**
	baz=77,SNR=6.9							
SDCO	**Great Sand Dun**	**77.01**	**331**	*e*P		**P**	**11 13 15.7**	**+0.3**
SDCO					*e*pP	pP	11 13 45.2	+0.6
Z13A	**Yuma Proving G**	**77.02**	**323**	⇓P		**P**	**11 13 15.6**	**+0.1**
	baz=77,SNR=6.0							
Y14A	**Wickenburg**	**77.28**	**324**	⇑P		**P**	**11 13 16.6**	**-0.3**
	baz=78							
X15A	**Humboldt**	**77.33**	**325**	⇓P		**P**	**11 13 17.4**	**+0.2**
	baz=78,SNR=8.7							
U19A	**Dine' College,**	**77.38**	**328**	⇓P		**P**	**11 13 17.2**	**-0.2**
	baz=78,SNR=10.0							
W16A	**Flagstaff**	**77.48**	**326**	⇓P		**P**	**11 13 18.4**	**+0.3**
	baz=78							
V17A	**Tonalea, Kykot**	**77.56**	**326**	⇓P		**P**	**11 13 18.8**	**+0.3**
	baz=78,SNR=7.9							
X14A	**Yava**	**77.64**	**324**	⇑P		**P**	**11 13 19.1**	**+0.2**
	baz=78							
T19A	**Beclabito**	**77.74**	**328**	⇑P		**P**	**11 13 20.2**	**+0.8**
	baz=78							
WUAZ	**Wupatki**	**77.75**	**326**	⇑P		**P**	**11 13 20.2**	**+0.7**
	baz=78							
WUAZ	**Wupatki**	**77.75**	**326**	*e*P		**P**	**11 13 19.8**	**+0.3**
U18A	**Rough Rock, Ch**	**77.79**	**328**	⇓P		**P**	**11 13 19.9**	**+0.2**
	baz=78,SNR=7.2							
MVCO	**Mesa Verde**	**77.83**	**329**	⇑P		**P**	**11 13 20.1**	**+0.1**
	baz=78,SNR=7.0							
MVCO	**Mesa Verde**	**77.83**	**329**	*e*P		**P**	**11 13 20.1**	**+0.2**
	comp=E,7.7nm,0.9s,mb4.4							
Y12C	**Blythe**	**77.90**	**323**	⇑P		**P**	**11 13 20.9**	**+0.5**
	baz=78							
S21A	**Coal Bank Pass**	**77.90**	**330**	⇓P		**P**	**11 13 21.0**	**+0.7**
	baz=78							
W15A	**Williams**	**77.91**	**325**	⇓P		**P**	**11 13 20.9**	**+0.6**
	baz=78							
SWSC	**Sam W. Stewart**	**77.93**	**321**	⇓P		**P**	**11 13 20.8**	**+0.2**
	baz=78							
R22A	**Saguache, Gunn**	**77.94**	**331**	⇓P		**P**	**11 13 20.9**	**+0.4**
	baz=78							
BC3	**Big Chuckawall**	**78.31**	**322**	⇓P		**P**	**11 13 22.7**	**+0.1**
	baz=78,SNR=6.4							
W14A	**Seligman**	**78.33**	**325**	⇑P		**P**	**11 13 23.0**	**+0.3**
	baz=78							
V15A	**Kaibab Nationa**	**78.38**	**326**	⇑P		**P**	**11 13 23.2**	**+0.2**
	baz=79,SNR=7.3							
T18A	**Mexican Hat**	**78.38**	**328**	⇑P		**P**	**11 13 23.0**	**0.0**
	baz=79,SNR=7.5							
R21A	**Cimarron**	**78.39**	**330**	⇑P		**P**	**11 13 23.4**	**+0.4**
	baz=79							
Q22A	**Crested Butte,**	**78.54**	**331**	⇓P		**P**	**11 13 24.6**	**+0.8**
	baz=79							
IRM	**Iron Mountain**	**78.54**	**323**	⇑P		**P**	**11 13 24.3**	**+0.3**
	baz=79							
S19A	**Harvey Farm, M**	**78.55**	**329**	⇑P		**P**	**11 13 23.9**	**0.0**
	baz=79,SNR=9.1							
R20A	**Redvale**	**78.59**	**330**	⇑P		**P**	**11 13 24.4**	**+0.3**
	baz=79,SNR=7.8							
W13A	**Hualapai Mount**	**78.64**	**324**	⇑P		**P**	**11 13 24.8**	**+0.4**
	baz=79							
V14A	**Boquillas Ranc**	**78.68**	**325**	⇑P		**P**	**11 13 24.9**	**+0.3**
	baz=79,SNR=5.7							
T17A	**Navajo Res., N**	**78.69**	**327**	⇓P		**P**	**11 13 25.4**	**+0.7**
	baz=79,SNR=7.1							
Q21A	**Lamborn Mesa,**	**78.79**	**331**	⇑P		**P**	**11 13 26.2**	**+1.0**
	baz=79							
PFO	**Pinyon Flat Ob**	**78.80**	**321**	⇓P		**P**	**11 13 25.8**	**+0.5**
	baz=79							
ISCO	**Idaho Springs**	**78.82**	**332**	*e*P		**P**	**11 13 25.7**	**+0.4**

K11A	Parker Ranch,	85.71 328	⇓P		P	11 14 00.8	-0.3
	baz=86						
I13A	Wildhorse Cree	85.76 329	⇓P		P	11 14 01.4	+0.1
	baz=86,SNR=8.0						
DGMT	Dagmar	85.82 338	⇓P		P	11 14 01.4	0.0
	baz=86						
DGMT	Dagmar	85.82 338	*e*P		P	11 14 01.2	-0.3
G16A	Moss Hill, Enn	85.85 331	⇓P		P	11 14 01.7	0.0
	baz=86						
F17A	Fitzpatrick Pl	85.95 332	⇓P		P	11 14 02.5	+0.2
	baz=86						
MCMT	McKenzie Canyo	85.96 331	*e*P		P	11 14 02.5	+0.3
	comp=E,3.4nm,0.7s,mb4.4						
MCMT			*e*pP		pP	11 14 32.6	+0.4
H14A	Leadore	86.01 330	⇑P		P	11 14 02.6	+0.1
	baz=86,SNR=5.0						
G15A	Dillon	86.08 331	⇑P		P	11 14 02.5	-0.4
	baz=86,SNR=6.2						
K10A	MacKenzie Ranc	86.10 327	⇑P		P	11 14 02.9	-0.1
	baz=86						
I12A	Atlanta	86.11 329	⇓P		P	11 14 03.1	0.0
	baz=86						
MFID	Camas Ranch	86.12 328	⇑P		P	11 14 03.0	-0.1
	baz=86						
BOZ	Bozeman (W)	86.13 332	⇓P		P	11 14 02.2	-0.9
	baz=86						
DLMT	Dillon	86.29 331	*e*P		P	11 14 04.0	+0.1
H13A	Challis	86.34 330	⇑P		P	11 14 04.6	+0.4
	baz=87,SNR=17						
H12A	Diamond D Ranc	86.59 329	⇑P		P	11 14 05.7	+0.3
	baz=87						
LRM	Limekiln Ridge	86.60 331	*e*P		P	11 14 05.0	-0.4
F15A	Butte	86.63 331	⇓P		P	11 14 05.6	+0.1
	baz=87,SNR=5.9						
WVOR	Wild Horse Val	86.67 326	*e*P		P	11 14 05.5	-0.4
	comp=E,3.1nm,1.1s,mb4.2						
WVOR			*e*pP		pP	11 14 35.6	-0.1
D18A	Linhart Farms,	86.69 334	⇑P		P	11 14 05.7	-0.1
	baz=87						
G13A	Cobalt	86.76 330	⇑P		P	11 14 06.4	+0.2
	baz=87,SNR=6.0						
E16A	East Helena	86.87 332	⇓P		P	11 14 07.0	+0.3
	baz=87						
J09A	Fry Pan Ranch,	86.95 327	⇑P		P	11 14 07.8	+0.6
	baz=87						
F14A	Wisdom	86.97 331	⇓P		P	11 14 07.0	-0.2
	baz=87						
D17A	Six Diamond Ra	87.00 333	⇓P		P	11 14 07.0	-0.3
	baz=87,SNR=12						
MOD	Modoc	87.08 325	*e*P		P	11 14 08.0	+0.2
I10A	Payette	87.09 328	⇑P		P	11 14 07.6	-0.3
	baz=87						
E15A	Deer Lodge	87.17 332	⇓P		P	11 14 08.0	-0.2
	baz=87						
H11A	Donnelly	87.22 329	⇓P		P	11 14 07.9	-0.5
	baz=87,SNR=6.5						
D16A	Dana Ranch, Ca	87.23 333	⇑P		P	11 14 08.4	0.0
	baz=88,SNR=9.5						
J08A	Circle Bar Ran	87.30 327	⇓P		P	11 14 09.0	+0.2
	baz=88,SNR=23						
F13A	Darby	87.35 330	⇑P		P	11 14 08.7	-0.3
	baz=88						
EGMT	Eagleton	87.37 334	⇑P		P	11 14 08.7	-0.4
	baz=88						
I09A	Lost Marbles R	87.43 327	⇑P		P	11 14 09.2	-0.3
	baz=88,SNR=8.9						
H10A	Noah's Angus R	87.46 328	⇑P		P	11 14 09.2	-0.4
	baz=88,SNR=5.5						
E14A	Clinton	87.51 331	⇓P		P	11 14 09.8	0.0
	baz=88						
D15A	Lincoln	87.62 332	⇓P		P	11 14 10.5	+0.2
	baz=88						
B18A	Beardsley Farm	87.68 334	⇑P		P	11 14 10.0	-0.5
	baz=88,SNR=9.2						
F12A	Elk City	87.72 330	⇑P		P	11 14 10.7	-0.1
	baz=88,SNR=5.2						
E13A	Victor	87.82 331	⇑P		P	11 14 11.3	0.0
	baz=88						
G11A	Walters Elk Ra	87.88 329	⇑P		P	11 14 11.5	0.0
	baz=88						
C16A	Fuhringer Ranc	87.94 333	⇑P		P	11 14 11.8	+0.1
	baz=88,SNR=5.9						
K05A	Summer Lake	87.98 325	⇓P		P	11 14 12.8	+0.6
	baz=88,SNR=9.0						
D14A	Greenough	88.05 332	⇓P		P	11 14 12.4	0.0
	baz=88						
A18A	Metzger Ranch,	88.15 335	⇓P		P	11 14 12.0	-0.8
	baz=88						
C15A	Salmond Ranch,	88.25 332	⇓P		P	11 14 12.9	-0.3
	baz=88,SNR=6.5						
H08A	Prairie City	88.28 327	⇓P		P	11 14 13.0	-0.4
	baz=88						
I07A	Izee	88.33 326	⇑P		P	11 14 13.8	+0.1
	baz=88,SNR=6.6						
B16A	M & M Farms, S	88.42 333	⇓P		P	11 14 13.5	-0.5
	baz=89						
D13A	Huson	88.45 331	⇓P		P	11 14 14.2	0.0
	baz=89						
G09A	Cove	88.45 328	⇑P		P	11 14 14.0	-0.3
	baz=89						
B15A	Bradely Ranch,	88.67 333	⇓P		P	11 14 14.8	-0.4
	baz=89						
D12A	Red Ives Fores	88.79 331	⇓P		P	11 14 15.7	-0.1
	baz=89						
A16A	West Butte Ran	88.82 334	⇑P		P	11 14 15.5	-0.4
	baz=89,SNR=12						
A15A	Johnson Ranch,	89.28 333	⇑P		P	11 14 17.0	-1.1
	baz=90						
A14A	Double T Ranch	89.54 333	⇑P		P	11 14 18.3	-0.9
	baz=90						
C11A	Tepee Creek (N	89.78 331	⇑P		P	11 14 19.3	-1.1
	baz=90						
FCC	Fort Churchill	92.60 347	*e*P		P	11 14 32.6	-0.6
ASAR	Alice Springs	120.47 205	PKP	PKPdf		11 20 12.2	-1.5
	comp=E,0.3nm,0.5s,baz=128,slow=1.7,SNR=7.2						
ASAR			pPKP	pPKPdf		11 20 42.8	-2.4
	comp=E,0.4nm,0.6s,baz=151,slow=1.4,SNR=2.9						
ARE0	ARCESS Array S	121.14 24	*e*PKPdf	PKPdf		11 20 10.7	-2.8
WRA	Warramunga Arr	123.71 207	PKP	PKPdf		11 20 18.9	-1.2
	comp=E,0.8nm,0.5s,baz=159,slow=1.8,SNR=30						
WRA			pPKP	pPKPdf		11 20 49.7	-1.7
	comp=E,1.2nm,0.6s,baz=164,slow=1.5,SNR=5.2						
BVAR	Borovoye Array	144.19 42	PKP	PKPdf		11 20 55.8	-1.3
	comp=E,0.6nm,0.6s,baz=270,slow=3.9,SNR=3.9						
AAK	Ala-Archa	149.50 59	*e*PKPbc	PKPbc		11 21 11.9	+1.0
AAK			*e*PKPab	PKPab		11 21 16.8	+0.6
UCH	Uchtor	149.57 60	*e*PKPbc	PKPbc		11 21 12.2	+1.1
TKM2	Tokmak 2	150.25 58	*e*PKPbc	PKPbc		11 21 13.1	+0.4
TKM2			*e*PKPab	PKPab		11 21 19.4	+0.1
ZALV	Zalesovo Beam	151.22 32	PKPbc	PKPbc		11 21 14.6	0.0
	comp=E,0.4nm,0.3s,baz=304,slow=3.1,SNR=8.1						
ZALV			pPKPbc	pPKPbc		11 21 45.0	-0.8
	comp=E,13nm,0.7s,baz=292,slow=3.3,SNR=8.4						
MKAR	Makanchi Array	153.67 47	PKPbc	PKPbc		11 21 19.4	-0.9
	comp=E,1.4nm,0.7s,baz=318,slow=1.6,SNR=7.7						
MKAR			PKPab	PKPab		11 21 33.3	-0.2
	comp=E,1.9nm,0.7s,baz=308,slow=4.4,SNR=11						
MKAR			pPKPab	pPKPab		11 22 03.0	-0.9
	comp=E,4.6nm,0.8s,baz=307,slow=4.3,SNR=10						
MKAR	Makanchi Array	153.67 47	PKPbc	PKPbc		11 21 19.4	-0.9
MKAR			PKPab	PKPab		11 21 33.3	-0.2
MKAR			pPKPab	pPKPab		11 22 03.0	-0.9
MJAR	Matsushiro Arr	156.75 289	PKPab	PKPab		11 21 46.9	-0.1
	comp=E,2.9nm,0.7s,baz=107,slow=2.5,SNR=6.9						
SONM	Songino Array	163.72 10	PKPab	PKPab		11 22 17.4	+0.5
	comp=E,0.5nm,0.5s,baz=324,slow=2.7,SNR=3.8						

NSSP ***18*** *11:04:29.3,41°.40N×44°.12E,h15km,Ms3.7*
TIF ***18*** *11:04:31.3,41°.37N×44°.11E,h21km±1km*
DDA ***18*** *11:04:33.0,41°.53N×43°.97E,h7km±3km,Md3.4*
ISK ***18*** *11:04:33.7,41°.36N×44°.07E,h6km,ML3.5*
MOS ***18*** *11:04:33.2±0.9,41°.36N×44°.25E,h4km,mb4.5/3,Error ellipse: s-maj=17.3km s-min=5.7km az=87.9*
CSEM ***18*** *11:04:33.0±0.2,41°.40N×44°.11E,h2km,ML3.7,Error ellipse: s-maj=5.0km s-min=3.5km az=97.0*
ISCJB ***18*** *11:04:33.6±0.2,41°.34N±0°.01×44°.16E±0°.02,h10km, mb3.5/4,Error ellipse: s-maj=2.4km s-min=1.7km az=6.3*
NEIC ***18*** *11:04:34.7±0.7,41°.40N×44°.46E,h10km,mb3.7/1,Error ellipse: s-maj=11.9km s-min=8.9km az=137.0*
IDC ***18*** *11:04:34.3±1.8,41°.26N×44°.45E,h0km,mb3.6/3, mb1 3.6/5,mb1mx3.4/25,mbtmp3.6/5,ML3.2/2,Error ellipse: s-maj=34.5km s-min=11.4km az=100.0*
ISC 18 11:04:33.8±0.2,41°.38N±0°.01×44°.17E±0°.02,h10km,n117,

σ1§45/182,mb3.5/4,19C-25D,Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAW	**Bavra**	**0.38**	**228**	*i* P	**Pg**	**11 04 31.0**	**-10**
STE	**Stepanavan**	**0.41**	**158**	⇓P	**Pg**	**11 04 41.6**	**-0.1**
STE				S	**Sg**	**11 04 47.4**	**+0.3**
STEZ	**Stepenevan**	**0.41**	**155**	⇑*i*P	**Pg**	**11 04 40.7**	**-1.2**
STEZ				⇓*i*S	**Sg**	**11 04 47.5**	**+0.1**
STEZ	**Stepenevan**	**0.41**	**155**	⇓*i*P	**Pg**	**11 04 41.6**	**-0.3**
STEZ				⇓S	**Sg**	**11 04 47.4**	**0.0**
TBLG	**Delisi**	**0.56**	**50**	*i* PG	**Pg**	**11 04 43.9**	**-0.7**
TBLG	**Delisi**	**0.56**	**50**	P	**Pg**	**11 04 43.9**	**-0.7**
TBLG				S	**Sg**	**11 04 52.3**	**+0.4**
TBLG	**Delisi**	**0.56**	**50**	P	**Pg**	**11 04 43.9**	**-0.7**
TBLG				S	**Sg**	**11 04 52.3**	**+0.4**
MTA	**Mtatsminda**	**0.57**	**56**	P	**Pg**	**11 04 44.0**	**-0.8**
MTA				S	**Sg**	**11 04 52.5**	**+0.2**
MTA	**Mtatsminda**	**0.57**	**56**	P	**Pg**	**11 04 44.0**	**-0.8**
MTA				S	**Sg**	**11 04 52.5**	**+0.3**
CKLZ	**Chkalov**	**0.57**	**140**	⇑*i*P	**Pg**	**11 04 43.6**	**-1.3**
CKLZ				⇑*i*S	**Sg**	**11 04 52.9**	**+0.5**
KAMZ	**Kamo**	**0.57**	**197**	⇓*i*P	**Pg**	**11 04 42.8**	**-2.2**
KAMZ				⇑*i*S	**Sg**	**11 04 51.5**	**-1.0**
KAMZ	**Kamo**	**0.57**	**197**	⇓P	**Pg**	**11 04 42.8**	**-2.1**
KAMZ				S	**Sg**	**11 04 51.5**	**-1.0**
GOR	**Gori**	**0.61**	**356**	P	**Pg**	**11 04 44.4**	**-1.3**
GOR				S	**Sg**	**11 04 53.0**	**-0.7**
GOR	**Gori**	**0.61**	**356**	P	**Pg**	**11 04 44.4**	**-1.3**
GOR				S	**Sg**	**11 04 53.0**	**-0.7**
GMRZ	**Gyumri**	**0.62**	**204**	*e*P	**Pg**	**11 04 42.0**	**-3.8**
GMRZ				S	**Sg**	**11 04 52.0**	**-1.9**
HNAZ	**Hnaberd**	**0.74**	**181**	⇓*i*P	**Pg**	**11 04 45.6**	**-2.5**
HNAZ				⇓*i*S	**Sg**	**11 04 53.6**	**-4.2**
HNAZ	**Hnaberd**	**0.74**	**181**	⇓P	**Pg**	**11 04 45.7**	**-2.4**
LERZ	**Lernakert**	**0.82**	**192**	⇓*i*P	**Pg**	**11 04 46.9**	**-2.8**
LERZ				⇓*i*S	**Sg**	**11 04 58.5**	**-1.9**
KEH	**Kehvi**	**0.95**	**349**	P	**Pg**	**11 04 48.6**	**-3.5**
KEH				S	**Sg**	**11 05 01.3**	**-3.2**
KEH	**Kehvi**	**0.95**	**349**	P	**Pg**	**11 04 48.6**	**-3.5**
KEH				S	**Sg**	**11 05 01.3**	**-3.1**
NARZ	**Nor Artik**	**0.97**	**201**	*i* P	**Pg**	**11 04 45.8**	**-6.7**
NARZ				⇓*i*S	**Sg**	**11 04 58.5**	**-6.7**
AMBZ	**Amberd**	**0.99**	**176**	⇓*i*P	**Pg**	**11 04 46.9**	**-5.9**
AMBZ				⇑*i*S	**Sg**	**11 05 01.7**	**-4.0**
ARUZ	**Aruch**	**1.09**	**183**	⇓*i*P	**Pb**	**11 04 48.3**	**-6.4**
ARUZ				⇓*i*S	**Sg**	**11 05 04.7**	**-4.3**
KARS	**Kars**	**1.11**	**228**	*e*PG	**Pg**	**11 04 53.6**	**-1.6**
KARS	**Kars**	**1.11**	**228**	*e*Pg	**Pg**	**11 04 53.6**	**-1.6**
KAPZ	**Kaputan**	**1.13**	**159**	⇑*i*P	**Pb**	**11 04 49.5**	**-5.9**
KAPZ				⇓*i*S	**Sb**	**11 05 05.4**	**-4.7**
PAAR	**P'arak'ar**	**1.23**	**172**	⇓*i*P	**Pn**	**11 04 51.1**	**-6.0**
PAAR				⇓*i*S	**Sb**	**11 05 08.4**	**-4.8**
VNNZ	**Vanand**	**1.30**	**192**	⇓*i*P	**Pn**	**11 04 51.7**	**-6.3**
VNNZ				⇓*i*S	**Sb**	**11 05 10.3**	**-4.6**
GNI	**Garni**	**1.30**	**160**	*e*PN	**Pn**	**11 04 58.5**	**+0.5**
GNI				*e*SN	**Sn**	**11 05 17.6**	**+2.2**
GNI	**Garni**	**1.30**	**160**	Pg	**Pg**	**11 04 58.5**	**-0.3**
	107nm,0.3s,baz=318,slow=3.9,SNR=125						
GNI				Lg		11 05 16.5	
	300nm,0.3s,baz=217,slow=20,SNR=22						
GNI	**Garni**	**1.30**	**160**	*c i* PG	**Pg**	**11 04 58.2**	**-0.6**
GNI				*i* S	**Sn**	**11 05 17.6**	**+2.2**
GNI				pmax	pmax		
	comp=Z,470nm,0.6s						
GNI				smax			
	comp=Z,487nm,0.6s						
GNI	**Garni**	**1.30**	**160**	Pg	**Pg**	**11 04 58.5**	**-0.3**
GNI				Lg		11 05 16.5	
GNI				*e*Sn	**Sn**	**11 05 17.7**	**+2.3**
GNI	**Garni**	**1.30**	**160**	⇑*i*P	**Pn**	**11 04 58.5**	**+0.5**
GNI				⇑*i*S	**Sb**	**11 05 17.2**	**+2.1**
GNI	**Garni**	**1.30**	**160**	⇑P	**Pn**	**11 04 58.5**	**+0.5**
GNI				Lg		11 05 16.5	
GNI				S	**Sb**	**11 05 17.2**	**+2.2**
GNI				*e*Sn	**Sn**	**11 05 17.6**	**+2.2**
VRNZ	**Vardanashen**	**1.32**	**179**	⇓*i*P	**Pn**	**11 04 52.9**	**-5.5**
VRNZ				⇑*i*S	**Sb**	**11 05 13.3**	**-2.5**
ONI	**Oni**	**1.33**	**336**	P	**Pn**	**11 04 56.2**	**-2.2**
ONI				S	**Sb**	**11 05 13.8**	**-2.0**
ONI	**Oni**	**1.33**	**336**	P	**Pn**	**11 04 56.2**	**-2.2**
ONI				S	**Sb**	**11 05 13.8**	**-2.0**
ZEI	**Tsey**	**1.41**	**352**	⇓*i*PG	**Pn**	**11 04 59.1**	**-0.4**
ZEI				*i* S	**Sn**	**11 05 17.8**	**-0.3**
ZEI	**Tsey**	**1.41**	**352**	*i* Pg	**Pn**	**11 04 59.1**	**-0.4**
ZEI				*i* Sg	**Sn**	**11 05 17.8**	**-0.3**
LACR	**Lac**	**1.45**	**4**	⇓*i*PG	**Pn**	**11 04 59.8**	**-0.3**
LACR				*i* S	**Sn**	**11 05 19.1**	**-0.1**
LACR	**Lac**	**1.45**	**4**	*i* Pg	**Pn**	**11 04 59.8**	**-0.3**
LACR				*i* Sg	**Sn**	**11 05 19.1**	**-0.1**
DIGR	**Digorskoe uzhe**	**1.58**	**344**	⇑*i*PG	**Pn**	**11 05 02.3**	**+0.4**
DIGR				*i* S	**Sn**	**11 05 22.6**	**+0.1**
DIGR	**Digorskoe uzhe**	**1.58**	**344**	*i* Pg	**Pn**	**11 05 02.3**	**+0.4**
DIGR				*i* Sg	**Sn**	**11 05 22.6**	**+0.1**
VADZ	**Vardenis**	**1.70**	**135**	*i* P	**Pn**	**11 05 05.0**	**+1.6**
VADZ				S	**Sn**	**11 05 30.0**	**+4.8**
ARTV	**Artvin**	**1.70**	**264**	⇑*i*P	**Pn**	**11 05 03.0**	**-0.4**
ARTV				*i* S	**Sn**	**11 05 24.6**	**-0.7**
ARTV	**Artvin**	**1.70**	**264**	*i* P	**Pn**	**11 05 03.0**	**-0.5**
ARTV				*i* S	**Sn**	**11 05 24.6**	**-0.7**
KORR	**Kora**	**1.71**	**358**	*e*PN	**Pn**	**11 05 04.9**	**+1.2**
KORR				*e*S	**Sn**	**11 05 27.0**	**+1.4**
KORR	**Kora**	**1.71**	**358**	*e*Pn	**Pn**	**11 05 04.9**	**+1.2**
KORR				*e*Sg	**Sn**	**11 05 27.0**	**+1.4**
VLKR	**Vladikavkaz**	**1.71**	**13**	⇑*i*PN	**Pn**	**11 05 05.2**	**+1.5**
VLKR				*e*S	**Sg**	**11 05 28.2**	**-0.7**
VLKR	**Vladikavkaz**	**1.71**	**13**	*i* Pn	**Pn**	**11 05 05.2**	**+1.5**
VLKR				*e*Sg	**Sg**	**11 05 28.2**	**-0.7**
SNJR	**Sundja**	**1.76**	**16**	⇓*i*PN	**Pn**	**11 05 05.9**	**+1.6**
SNJR				*e*S	**Sg**	**11 05 29.6**	**-0.7**
SNJR	**Sundja**	**1.76**	**16**	*i* Pn	**Pn**	**11 05 05.9**	**+1.6**
SNJR				*e*Sg	**Sg**	**11 05 29.6**	**-0.7**
ARNR	**Ardon**	**1.81**	**3**	*e*PN	**Pn**	**11 05 06.7**	**+1.6**
ARNR				*e*S	**Sg**	**11 05 30.5**	**-1.6**
ARNR	**Ardon**	**1.81**	**3**	*e*Pn	**Pn**	**11 05 06.7**	**+1.6**
ARNR				*e*Sg	**Sg**	**11 05 30.5**	**-1.6**
DYDN	**Diyadin**	**1.87**	**191**	*e*P	**Pn**	**11 05 09.2**	**+3.4**
DYDN				*i* S	**Sn**	**11 05 38.5**	**+9.2**
DYDN	**Diyadin**	**1.87**	**191**	*e*P	**Pn**	**11 05 09.2**	**+3.4**
DDEM	**Demirkent**	**1.89**	**256**	*e*P	**Pn**	**11 05 07.2**	**+1.1**
DDEM				*i* S	**Sn**	**11 05 32.8**	**+2.8**
DDEM	**Demirkent**	**1.89**	**256**	*e*P	**Pn**	**11 05 07.2**	**+1.1**
DDEM				*i* S	**Sn**	**11 05 32.8**	**+2.8**
DBAD	**Bademkaya**	**1.90**	**260**	*i* P	**Pn**	**11 05 07.1**	**+0.9**
DBAD				*i* S	**Sn**	**11 05 31.4**	**+1.1**
DBAD	**Bademkaya**	**1.90**	**260**	*i* P	**Pn**	**11 05 07.1**	**+0.8**
DBAD				*i* S	**Sn**	**11 05 31.4**	**+1.1**
LSNR	**Lesken**	**1.92**	**352**	⇑*i*PN	**Pn**	**11 05 08.0**	**+1.5**
LSNR	**Lesken**	**1.92**	**352**	*i* Pn	**Pn**	**11 05 08.0**	**+1.5**
BCA	**Borcka**	**1.92**	**273**	*e*PN	**Pn**	**11 05 06.5**	**+0.1**
BCA				*e*SN	**Sn**	**11 05 30.2**	**-0.4**
BCA	**Borcka**	**1.92**	**273**	*e*Pn	**Pn**	**11 05 06.5**	**0.0**
BCA				*e*Sn	**Sn**	**11 05 30.2**	**-0.4**
KMSR	**Komsomolskaya**	**2.00**	**3**	⇑*i*PN	**Pn**	**11 05 10.0**	**+2.4**
KMSR	**Komsomolskaya**	**2.00**	**3**	*i* Pn	**Pn**	**11 05 10.0**	**+2.4**
AGRB	**Hanur-Agry**	**2.01**	**207**	*e*PN	**Pn**	**11 05 08.7**	**+0.9**
AGRB	**Hanur-Agry**	**2.01**	**207**	*e*Pn	**Pn**	**11 05 08.7**	**+0.9**
BTKR	**Batakoyurt**	**2.01**	**8**	⇑*i*PN	**Pn**	**11 05 10.2**	**+2.4**
BTKR				*i* S	**Sg**	**11 05 36.3**	**-2.2**
BTKR	**Batakoyurt**	**2.01**	**8**	*i* Pn	**Pn**	**11 05 10.2**	**+2.4**
BTKR				*i* Sg	**Sg**	**11 05 36.3**	**-2.2**
HOMI	**Horasan**	**2.17**	**233**	*i* P	**Pn**	**11 05 11.4**	**+1.3**
HOMI				*i* S	**Sg**	**11 05 45.0**	**+1.3**
CLDR	**Caldiran**	**2.24**	**185**	*e*PN	**Pn**	**11 05 12.0**	**+1.1**
CLDR	**Caldiran**	**2.24**	**185**	*e*Pn	**Pn**	**11 05 12.0**	**+1.1**
SEKA	**Sheki**	**2.29**	**93**	S	**Sn**	**11 05 43.8**	**+4.0**
TRKR	**Terskaya**	**2.38**	**10**	*e*PN	**Pb**	**11 05 15.3**	**-1.5**
TRKR				*e*S	**Sb**	**11 05 45.3**	**-0.9**
TRKR	**Terskaya**	**2.38**	**10**	*e*Pn	**Pb**	**11 05 15.3**	**-1.5**
TRKR				*e*Sn	**Sb**	**11 05 45.3**	**-0.9**
NAX	**Nakhchivan**	**2.42**	**155**	P	**Pb**	**11 05 17.9**	**+0.5**
	SNR=30						
BRDA	**Brd**	**2.54**	**115**	P	**Pb**	**11 05 18.4**	**-1.1**
	SNR=9.4						
ERZM	**Erzurum**	**2.59**	**236**	*i* P	**Pb**	**11 05 20.6**	**+0.3**
ERZM				*i* S	**Sb**	**11 05 50.8**	**-1.4**
EZM	**Erzurum**	**2.59**	**236**	*e*PN	**Pn**	**11 05 17.2**	**+1.5**
KIV	**Kislovodsk**	**2.80**	**338**	*e*PN	**Pn**	**11 05 20.0**	**+1.4**
KIV				*e*		11 05 59.9	
KIV	**Kislovodsk**	**2.80**	**338**	*e*Pn	**Pn**	**11 05 19.9**	**+1.3**
KIV				*e*Sn	**Sb**	**11 05 59.9**	**+1.6**

KIV	Kislovodsk	2.80	338	ePn	Pn	11 05 20.0	+1.4
MAK	Makhachkala	2.94	56	ePN	Pb	11 05 26.5	+0.2
MAK				e		11 06 02.6	
MAK				pmax	pmax		
comp=Z,164nm,0.3s							
MAK				MLR	MLR		
comp=Z,369nm,9.0s							
MAK	Makhachkala	2.94	56	eSb	Sb	11 06 02.6	+0.3
comp=Z,369nm,9.0s							
IML	Ismayilli	3.09	100	P	Pn	11 05 24.6	+2.0
SNR=9.7							
KTUT	Trabzon	3.34	265	ePN	Pn	11 05 27.8	+1.7
KTUT	Trabzon	3.34	265	ePn	Pn	11 05 27.8	+1.7
PQL	Pirkuli	3.40	98	P	Pn	11 05 30.6	+3.8
SNR=5.3							
SIZA	Siyzn	3.58	93	P	Pn	11 05 31.7	+2.4
SNR=4.5							
GUMT	Gumushane	3.67	257	ePN	Pn	11 05 32.3	+1.7
GUMT	Gumushane	3.67	257	ePn	Pn	11 05 32.3	+1.7
GLBA	Ciliabad	3.87	122	P	Pn	11 05 35.2	+1.9
SNR=6.0							
SOC	Sochi	3.96	305	ePN	Pb	11 05 43.3	-0.4
SOC				e		11 06 24.1	
SOC				pmax	pmax		
comp=Z,48nm,0.6s							
SOC				smax			
comp=E,80nm,1.0s							
SOC				MLR	MLR		
comp=Z,101nm,10.0s							
SOC	Sochi	3.96	305	eSn	Sn	11 06 24.1	+3.0
comp=Z,101nm,10.0s							
ANN	Anapa	6.00	307	eP	Pn	11 05 59.7	-2.9
ANN	Anapa	6.00	307	eP	Pn	11 05 59.7	-2.9
BR131	Keskin Array S	8.19	262	ePn	Pn	11 06 36.5	+3.9
BRTR	Keskin Array B	8.19	262	Pn	Pn	11 06 37.2	+4.6
comp=Z,0.1nm,0.3s,baz=76,slow=12,SNR=4.3							
AKTK	Aktyubinsk	13.21	42	Pn	Pn	11 07 38.6	-2.7
AKTO	Aktyubinsk	13.21	42	⇑Pn	Pn	11 07 34.7	-6.6
comp=Z,0.2nm,0.6s							
AKTO				⇑Sn	Sn	11 10 00.0	-8.2
comp=Z,0.7nm,1.2s							
AKTO	Aktyubinsk	13.21	42	Pn	Pn	11 07 38.6	-2.7
comp=Z,0.4nm,0.3s,baz=236,slow=7.3,SNR=3.6							
AB31	Akbulak array	13.59	49	Pn	Pn	11 07 44.2	-2.3
comp=Z,1.1nm,0.7s,baz=242,slow=14,SNR=18							
AB31				⇓Sn	Sn	11 10 12.1	-5.4
comp=Z,1.3nm,0.7s,baz=245,slow=23,SNR=3.1							
AB31	Akbulak array	13.59	49	Pn	Pn	11 07 44.2	-2.3
comp=Z,1.1nm,0.7s,SNR=18							
ABKAR	Akbulak array	13.59	49	ePn	Pn	11 07 44.5	-2.0
comp=Z,1.1nm,0.4s							
ABKAR	Akbulak array	13.59	49	ePn	Pn	11 07 44.5	-2.0
comp=Z,1.0nm,0.4s							
BRVK	Borovoye	21.11	48	eP	P	11 09 17.5	-0.8
BRVK				pmax	pmax		
comp=Z,2.0nm,0.6s,mb3.6							
BRVK	Borovoye	21.11	48	eP	P	11 09 17.5	-0.9
comp=Z,2.3nm,0.6s,mb3.7							
BRVK	Borovoye	21.11	48	eP	P	11 09 17.5	-0.8
comp=Z,2.3nm,0.6s,mb3.7							
BVAR	Borovoye Array	21.16	48	P	P	11 09 19.4	+0.6
comp=Z,1.2nm,0.7s,mb3.4,baz=231,slow=9.1,SNR=4.3							
BVAR	Borovoye Array	21.16	48	P	P	11 09 19.4	+0.6
BVAR				pmax	pmax		
comp=Z,1.0nm,0.7s							
BVAR	Borovoye Array	21.16	48	P	P	11 09 19.4	+0.6
comp=Z,1.0nm,0.7s,mb3.2							
KURK	Kurchatov	25.47	57	P	P	11 10 02.4	+0.6
comp=Z,0.8nm,0.4s,mb3.6,baz=269,slow=9.4,SNR=7.7							
KURK	Kurchatov	25.47	57	P	P	11 10 02.4	+0.6
KURK				pmax	pmax		
comp=Z,1.0nm,0.4s,mb3.7							
KURK	Kurchatov	25.47	57	P	P	11 10 02.4	+0.6
comp=Z,1.0nm,0.4s,mb3.7							
MKAR	Makanchi Array	27.72	66	P	P	11 10 24.1	+2.0
comp=Z,0.3nm,0.4s,mb3.3,baz=261,slow=9.6,SNR=2.6							
MKAR	Makanchi Array	27.72	66	P	P	11 10 24.1	+2.0

IDC 18 11:15:07.6±7.4, 31°.69S×179°.58E, h446km±93km, mb2.8/3, mb1 3.0/3, mb1mx2.9/14, mbtmp2.8/3, Error ellipse: s-maj=97.9km s-min=41.8km az=4.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	6.86	196	P	P	11 16 51.9	+1.4
24nm,0.3s,baz=314,slow=2.2,SNR=218							
URZ				S	S	11 18 13.3	-1.6
4.4nm,0.3s,baz=132,slow=22,SNR=19							
STKA	Stephens Creek	32.18	259	P	P	11 20 58.4	+1.3
1.0nm,0.8s,baz=103,slow=14,SNR=3.6							
ASAR	Alice Springs	40.99	270	P	P	11 22 09.9	-0.3
0.2nm,0.3s,baz=108,slow=7.6,SNR=6.1							
WRA	Warramunga Arr	42.10	275	P	P	11 22 18.4	-0.8
0.8nm,0.4s,baz=111,slow=8.1,SNR=21							
FINES	FINESS Array B	145.59	338	PKPbc	PKPbc	11 33 53.6	-0.9
0.8nm,0.4s,baz=41,slow=3.8,SNR=4.0							

IDC 18 11:15:15.2±21.0, 21°.12S×179°.83E, h0km, mb4.1/3, mb1 4.3/4, mb1mx3.9/16, mbtmp4.2/4, Error ellipse: s-maj=393.0km s-min=55.7km az=62.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	17.25	187	P	Pn	11 19 17.5	0.0
baz=118,slow=18,SNR=1.7							
STKA	Stephens Creek	35.69	244	P	P	11 22 14.8	-0.5
1.7nm,1.0s,baz=80,slow=12,SNR=3.9							
ASAR	Alice Springs	42.40	258	P	P	11 23 11.5	-0.2
2.1nm,0.7s,baz=94,slow=7.9,SNR=28							
WRA	Warramunga Arr	42.51	263	P	P	11 23 13.0	+0.4
1.5nm,0.5s,baz=96,slow=8.3,SNR=33							

*ISCJB **18** 11:38:28.9±1.1, 23°.74N±0°.02×122°.48E±0°.02, h5km±9km, Error ellipse: s-maj=4.1km s-min=3.2km az=148.7*
*TAP **18** 11:38:31.3, 23°.80N×122°.46E, h26km±2km, ML3.2, C*
*JMA **18** 11:38:31.8±0.3, 24°.26N×122°.44E, h70km, M2.3*
ISC 18 11:38:28.8±0.5, 23°.75N±0°.02×122°.48E±0°.02, h3km±3km, n38, σ0°81/67, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.86	34	P	Pg	11 38 45.2	-0.1
YOJ				eS	Sg	11 38 55.1	-1.3
TWD	Chiawan	0.88	292	i P	Pg	11 38 46.3	+0.6
baz=275							
TWD				S	Sg	11 38 57.9	+0.9
baz=275							
ENA	Nanau	0.96	315	eP	Pg	11 38 48.1	+0.9
baz=312							
ENA				S	Sg	11 39 00.7	+1.1
baz=312							
ESL	Shilin	0.96	274	P	Pg	11 38 47.3	0.0
baz=269							
ESL				eS	Sg	11 38 59.2	-0.7
baz=269							
TWC	Suao	1.03	326	P	Pg	11 38 49.3	+0.6
baz=324							
TWC				S	Sg	11 39 02.9	+0.8
baz=324							
EHY	Hungye	1.09	257	i P	Pg	11 38 50.1	+0.3
baz=252							
EHY				eS	Sg	11 39 03.8	-0.2
baz=252							
TWF1	Yuli	1.16	250	P	Pg	11 38 51.1	0.0
baz=245							
TWF1				eS	Sg	11 39 06.3	+0.3
baz=245							
WHF	Hehuan Shan	1.18	290	P	Pg	11 38 51.4	-0.1
baz=273							
WHF				eS	Sg	11 39 05.3	-1.5
baz=273							
ENTT	Nioudou	1.22	317	P	Pg	11 38 52.3	0.0
baz=300							
ENTT				eS	Sg	11 39 09.2	+1.2
baz=300							
TWE	Neicheng	1.22	323	P	Pg	11 38 52.5	+0.2
baz=320							
TWE				eS	Sg	11 39 07.8	-0.4
baz=320							
NNS	Nan Shan	1.23	304	P	Pg	11 38 52.2	-0.1
baz=300							
NNS				eS	Sg	11 39 07.3	-1.0
baz=300							
HATJ	Hateruma jima	1.25	76	P	Pg	11 38 54.0	+1.2
HATJ				eS	Sg	11 39 09.2	+0.2
IRIF	Iriomote-Funau	1.28	63	P	Pg	11 38 52.7	-0.7
IRIF				eS	Sg	11 39 09.1	-0.9
TWT	Tachien	1.30	293	i P	Pg	11 38 53.7	0.0
baz=288							
TWT				eS	Sg	11 39 09.7	-0.9
baz=288							
TWB1	Santiao Chiao	1.33	340	eP	Pn	11 38 54.4	0.0
baz=337							
TWB1				eS	Sg	11 39 11.5	-0.1
baz=337							
NSK	Sanguang	1.38	312	eP	Pn	11 38 54.6	-0.3
baz=308							
NSK				eS	Sg	11 39 12.8	-0.5
baz=308							
YUS	Yu-Shan	1.43	260	eP	Pn	11 38 55.3	-0.3
baz=254							
YUS				eS	Sb	11 39 12.9	-1.8
baz=254							
SMLT	Sun Moon Lake	1.46	276	P	Pn	11 38 55.8	-0.2
baz=271							
SMLT				eS	Sb	11 39 13.5	-2.0
baz=271							
ELDTW	Lidau	1.46	248	eP	Pn	11 38 55.1	-0.9
baz=244							
NWF	Wu-fen Shan	1.46	334	eP	Pn	11 38 55.6	-0.5
baz=331							
NWF				eS	Sb	11 39 16.2	+0.6
baz=331							
TWA	Mucha	1.47	326	P	Pn	11 38 56.8	+0.6
baz=322							
TWA				eS	Sb	11 39 16.5	+0.5
baz=322							
JKRS	Kuro-shima	1.48	71	P	Pn	11 38 56.0	-0.3
TYC	Yuchr	1.50	276	eP	Pn	11 38 55.8	-0.7
baz=271							
TYC				eS	Sn	11 39 16.0	-0.6
baz=271							
ALS	Alishan	1.56	262	eP	Pn	11 38 57.7	+0.3
baz=256							
ALS				eS	Sn	11 39 16.7	-1.4
baz=256							
TWG	Pinlang	1.59	235	eP	Pn	11 38 57.4	-0.5
baz=220							
TWG				eS	Sn	11 39 16.1	-2.8
baz=220							
NSTT	Nanjuang	1.61	303	eP	Pn	11 38 58.5	+0.4
baz=287							
NSTT				eS	Sn	11 39 18.5	-1.0
baz=287							
JIJ	Ishigaki jima	1.64	68	P	Pn	11 38 58.3	-0.2
CHN5	Tsauling	1.66	265	P	Pn	11 38 59.6	+0.8
baz=260							
CHN5				eS	Sn	11 39 21.1	+0.5
baz=260							
TWQ1	Liyutan	1.67	291	eP	Pn	11 39 00.1	+1.1
baz=287							
STYT	Tauyuan	1.69	250	eP	Pn	11 38 59.3	+0.1
baz=246							
WTP	Ta-pu	1.79	254	P	Pn	11 39 01.2	+0.6
baz=249							
WTP				eS	Sn	11 39 24.3	+0.5
baz=249							
ECL	Taimali	1.82	231	eP	Pn	11 39 00.3	-0.7
baz=239							
SGST	Jiashian	1.87	250	eP	Pn	11 39 01.3	-0.3
baz=244							
SGST				eS	Sn	11 39 27.9	+2.1
baz=244							
CHN1	Nanshi	1.88	253	eP	Pn	11 39 02.9	+1.0
baz=248							
CHN1				eS	Sn	11 39 27.2	+1.1
baz=248							
TWK	Hsinying	1.89	256	eP	Pn	11 39 02.8	+0.7
baz=250							
TWK				eS	Sn	11 39 27.3	+0.9
baz=250							
LAY	Lan-yu	1.91	207	eP	Pn	11 39 02.1	-0.1
baz=204							
SSD	Sandimen	1.97	240	eP	Pn	11 39 03.8	+0.6
baz=228							
EAST	Anshuo	2.03	228	eP	Pn	11 39 04.5	+0.6
baz=235							

KRSC 18 11:47:32.2±1.5, 49°.60N×156°.62E, h31km±31km, ML3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	Alaid	1.44	332	eP	Pn	11 47 57.6	+1.4
ALID				i S	Sn	11 48 16.2	+2.2
MIPR	Malaya Ipel'ka	2.68	2	eP	Pn	11 48 15.9	+2.7
AVH	Avacha	3.90	19	eP	Pn	11 48 32.2	+2.3
GNL	Ganaly	4.18	11	eP	Pn	11 48 37.8	+4.0

*DDA **18** 11:47:58.4, 38°.89N×27°.56E, h7km±4km, Md3.1*
*ISK **18** 11:47:58.5, 38°.87N×27°.57E, h8km, MD2.7*
*CSEM **18** 11:47:58.6±0.1, 38°.87N×27°.58E, h10km, MD2.7, Error ellipse: s-maj=3.4km s-min=2.6km az=155.0*
*ISCJB **18** 11:47:58.7±0.4, 38°.87N±0°.04×27°.56E±0°.03, h9km±5km, Error ellipse: s-maj=6.5km s-min=3.4km az=153.1*
*THE **18** 11:48:00.6, 38°.83N×27°.38E, h0km±5km, ML2.8/3, Error ellipse: s-maj=9.1km s-min=1.0km az=80.0*
ISC 18 11:47:58.9±0.4, 38°.88N±0°.03×27°.56E±0°.03, h13km±6km, n29, σ0°68/53, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKS	Akhisar	0.20	90	ePG	Pg	11 48 02.4	-0.9
AKS				eSG	Sg	11 48 06.4	+0.2
AKS	Akhisar	0.20	90	ePg	Pg	11 48 02.4	-0.8
AKS				eSg	Sg	11 48 06.4	+0.2
AKHS	Akhisar	0.20	90	⇑i P	Pg	11 48 02.4	-0.8
AKHS				i S	Sg	11 48 06.3	+0.1
AKHS	Akhisar	0.20	90	i P	Pg	11 48 02.4	-0.8
AKHS				i S	Sg	11 48 06.3	+0.1
IZM	Izmir	0.53	206	ePG	Pg	11 48 09.4	+0.1
IZM				eSG	Sg	11 48 17.9	+1.5
BLCB	Balcova	0.64	220	ePG	Pg	11 48 11.2	-0.1
BLCB				eSG	Sg	11 48 19.9	+0.2
BLCB	Balcova	0.64	220	P	Pg	11 48 10.9	-0.4
BLCB				S	Sg	11 48 19.4	-0.3
BLCB	Balcova	0.64	220	P	Pg	11 48 10.9	-0.4
BLCB	Balcova	0.64	220	ePg	Pg	11 48 11.2	-0.1
BLCB				S	Sg	11 48 19.4	-0.3
BLCB				eSg	Sg	11 48 19.9	+0.2
BALB	Balikesir	0.80	18	ePG	Pg	11 48 15.1	+0.7
BALB	Balikesir	0.80	18	ePg	Pg	11 48 15.1	+0.7
AYVA	Ayvalik	0.80	303	i P	Pg	11 48 14.7	+0.3
AYVA				i S	Sg	11 48 24.9	-0.1
AYVA	Ayvalik	0.80	303	i P	Pg	11 48 14.7	+0.3
AYVA				i S	Sg	11 48 24.9	-0.1
BALY	Balya	0.86	3	i P	Pg	11 48 14.4	-1.2
BALY				i S	Sg	11 48 26.8	0.0
BALY	Balya	0.86	3	i P	Pg	11 48 14.4	-1.2
BALY				i S	Sg	11 48 26.8	-0.1
DEMI	Demirci	0.91	79	i P	Pg	11 48 15.4	-1.2
DEMI				i S	Sg	11 48 28.7	+0.2
DEMI	Demirci	0.91	79	i P	Pg	11 48 15.4	-1.1
KULA	Kula-Manisa	0.93	113	ePG	Pg	11 48 16.4	-0.5
KULA				eSG	Sg	11 48 29.5	+0.5
KULA	Kula-Manisa	0.93	113	ePg	Pg	11 48 16.4	-0.5
KULA				eSg	Sg	11 48 29.5	+0.4
DURS	Dursunbey	1.01	44	i P	Pg	11 48 18.3	0.0
DURS				i S	Sg	11 48 33.0	+1.4
DURS	Dursunbey	1.01	44	i P	Pg	11 48 18.3	-0.1
DURS				i S	Sg	11 48 33.0	+1.4
PRK	Paraskevi	1.07	290	P	Pb	11 48 18.8	-0.5
PRK				S	Sg	11 48 33.4	-0.1
PRK	Paraskevi	1.07	290	P	Pb	11 48 18.8	-0.5
PRK				S	Sg	11 48 33.4	-0.1
CHOS	Chios island	1.28	248	P	Pn	11 48 21.7	-0.8
CHOS				S	Sb	11 48 38.6	-0.6
CHOS	Chios island	1.28	248	P	Pn	11 48 21.7	-0.8
CHOS				S	Sb	11 48 38.6	-0.6
EZN	Ezine	1.35	315	ePN	Pn	11 48 24.3	+0.9
EZN	Ezine	1.35	315	ePn	Pn	11 48 24.3	+0.9
SIGR	SIGRI	1.37	285	P	Pn	11 48 24.6	+0.9
SIGR				S	Sb	11 48 41.9	+0.1
SIGR	SIGRI	1.37	285	P	Pn	11 48 24.6	+0.9
SIGR				S	Sb	11 48 41.9	+0.1

KRSC 18 11:58:09.9±0.1, 56°.33N×163°.11E, h22km±22km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.20	233	eP	Pb	11 58 15.9	+0.7
SMKR	Semkarok	0.95	286	eP	Pb	11 58 28.9	+1.3
SMKR				eS	Sb	11 58 42.7	+3.1
BDR	Baidarnaya	1.08	284	eP	Pn	11 58 31.1	+1.4
BDR				eS	Sb	11 58 46.0	+2.4
SRKR	Sorokina	1.12	288	eP	Pn	11 58 32.0	+1.7
ZLN	Zelenaya	1.33	257	eP	Pn	11 58 34.1	+1.0
ZLN				eS	Sn	11 58 50.8	+0.8
CIRR	Tsirk	1.34	262	eP	Pn	11 58 34.2	+1.0
CIRR				eS	Sn	11 58 52.1	+1.9
KLY	Klyuchi	1.37	270	eP	Pn	11 58 32.9	-0.7
KLY				eS	Sn	11 58 49.0	-2.1
KRSR	Krestovskiy	1.42	266	eP	Pn	11 58 35.2	+0.8
KRSR				eS	Sn	11 58 53.7	+1.3
BZMR	Bezymyannaya	1.52	256	eP	Pn	11 58 36.9	+1.2
BZMR				eS	Sn	11 58 56.9	+2.2
KIRR	Kirishev	1.59	257	eP	Pn	11 58 38.1	+1.4
KIRR				eS	Sn	11 58 59.4	+2.8
KPT	Kopyto	1.66	258	eP	Pn	11 58 39.3	+1.7
KPT				eS	Sn	11 59 01.0	+2.9
KMNR	Kamenistaya	1.71	252	eP	Pn	11 58 40.1	+1.8
KMNR				eS	Sn	11 59 02.1	+2.6
KOZ	Kozyrevsk	1.83	263	eP	Pn	11 58 42.1	+2.1
KOZ				eS	Sn	11 59 05.2	+2.8
SRDR	Sredinnyy	1.89	271	eP	Pn	11 58 43.1	+2.3
SRDR				eS	Sn	11 59 06.5	+2.6
MKZ	Mys Kozlova	1.94	204	eP	Pn	11 58 42.4	+0.9
MKZ				eS	Sn	11 59 06.4	+1.2
BKI	Bering	1.97	124	eP	Pn	11 58 45.6	+3.7
BKI				eS	Sn	11 59 10.6	+4.7
NLC	Nalytchevo	3.84	216	S	Sn	11 59 52.7	+0.6
GNL	Ganaly	3.98	231	eP	Pn	11 59 12.2	+2.7
AVH	Avacha	3.98	221	eP	Pn	11 59 11.5	+2.0
PET	Petropavlovsk	4.20	220	eP	Pn	11 59 15.6	+3.0
PET				eS	Sn	12 00 03.5	+2.6

*DDA **18** 12:02:04.5, 37°.49N×38°.71E, h7km±5km, Md2.6*
*ISK **18** 12:02:04.0, 37°.43N×38°.72E, h5km, MD2.8*
*CSEM **18** 12:02:04.4±0.1, 37°.43N×38°.72E, h5km, MD2.8, Error ellipse: s-maj=2.6km s-min=1.5km az=161.0*
*ISCJB **18** 12:02:04.6±0.7, 37°.45N±0°.04×38°.71E±0°.04, h4km±6km, Error ellipse: s-maj=7.4km s-min=4.0km az=155.8*
ISC 18 12:02:04.8±0.6, 37°.43N±0°.04×38°.72E±0°.04, h5km±5km, n19, σ0°57/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URFA	Urfa	0.08	85	ePG	Pg	12 02 06.2	-0.5
URFA				eSG	Sg	12 02 08.2	+0.3
URFA	Urfa	0.08	85	ePg	Pg	12 02 06.2	-0.4
URFA				eSg	Sg	12 02 08.2	+0.3
ATAB	Bozova	0.34	276	i P	Pg	12 02 10.9	-0.4
ATAB				i S	Sg	12 02 15.6	-0.3
ATAB	Bozova	0.34	276	i P	Pg	12 02 10.9	-0.5
ATAB				i S	Sg	12 02 15.6	-0.2
GZT	Gaziantep	0.92	265	i P	Pg	12 02 22.5	0.0
GZT				i S	Sg	12 02 35.3	+0.8
SVRC	Sivrice-ELAZID	1.05	26	ePG	Pg	12 02 24.6	-0.3
SVRC				eSG	Sg	12 02 39.6	+1.0
SVRC	Sivrice-ELAZID	1.05	26	ePg	Pg	12 02 24.7	-0.3
SVRC				eSg	Sg	12 02 39.6	+1.0
AKCD	Akcadag	1.07	324	i P	Pg	12 02 25.1	-0.1
AKCD				i S	Sg	12 02 38.9	-0.2
AKCD	Akcadag	1.07	324	i P	Pg	12 02 25.1	-0.2
AKCD				i S	Sg	12 02 38.9	-0.2
ELZG	Elazig	1.08	11	i P	Pg	12 02 25.1	-0.4
ELZG				i S	Sg	12 02 39.7	+0.1
ELZG	Elazig	1.08	11	i P	Pg	12 02 25.1	-0.5
ELZG				i S	Sg	12 02 39.7	+0.1
DIYA	Diyarbakir	1.21	66	i P	Pg	12 02 27.8	-0.3
DIYA				i S	Sg	12 02 43.5	-0.3
DIYA	Diyarbakir	1.21	66	i P	Pg	12 02 27.8	-0.3
DIYA				i S	Sg	12 02 43.5	-0.3
GAZ	Gaziantep	1.23	258	ePN	Pn	12 02 28.6	0.0
GAZ				eSN	Sn	12 02 44.9	-0.7
GAZ	Gaziantep	1.23	258	ePn	Pn	12 02 28.6	0.0
GAZ				eSn	Sn	12 02 44.9	-0.6
KUZU	Kuzuini	1.47	244	eP	Pn	12 02 33.6	+1.7
KUZU				i S	Sn	12 02 51.0	-0.4
KUZU	Kuzuini	1.47	244	eP	Pn	12 02 33.6	+1.7
KUZU				i S	Sn	12 02 51.0	-0.5
PTK	Pertek	1.55	20	ePN	Pn	12 02 33.1	+0.2
PTK	Pertek	1.55	20	ePn	Pn	12 02 33.1	+0.1

*NEIC **18** 12:20:24.7, 18°.47N×68°.69W, h126km, MD3.4(RSPR), After RSPR.*
RSPR 18 12:20:24.7, 18°.47N×68°.69W, h126km±3km, MD3.4/6, MD3.4/6, 1C-4D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSP	Las Mesas	1.55	101	⇓eP	Pn	12 20 53.4	+0.4
LSP				eS	Sn	12 21 15.0	+0.3
CRPR	Cabo Rojo, PR	1.57	107	⇓eP	Pn	12 20 53.0	-0.3
CRPR				eS	Sn	12 21 15.0	-0.1
AOPR	Arecibo Observ	1.84	93	⇑eP	Pn	12 20 56.7	+0.2
AOPR				eS	Sn	12 21 31.5	+0.7
CELP	Cerrillos	2.04	101	⇓eP	Pn	12 20 59.0	+0.1
CELP				eS	Sn	12 21 24.4	-0.7
SDDR	Presa de Saban	2.52	282	ePn	Pn	12 21 05.3	+0.3
CBYP	Canovanas	2.69	94	⇓eP	Pn	12 21 06.8	-0.3
CBYP				eS	Sn	12 21 40.0	+0.2

JMA 18 12:37:46.4±0.2, 31°.42N×142°.91E, h57km, M3.8, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	3.12	304	P	Pn	12 38 34.7	+1.7
JHJ2				S	Sn	12 39 09.3	+0.3
BSO1	Boso 1	3.61	334	P	Pn	12 38 41.3	+1.5
BSO3	Boso 3	3.93	330	P	Pn	12 38 45.8	+1.6
CBIJ	Chichi jima	4.36	189	P	Pn	12 38 51.0	+0.9
JYT	Yasato	5.30	335	P	Pn	12 39 05.6	+2.6
JHO	Hitachi	5.53	340	P	Pn	12 39 07.4	+1.3
JHO				S	Sn	12 40 06.9	-1.4
JRY	Ryogami san	5.67	325	P	Pn	12 39 10.5	+2.5
MAT	Matsushiro	6.43	324	P	Pn	12 39 20.6	+2.2

IDC 18 12:38:11.0±2.0, 20°.99S×67°.02W, h211km±22km, mb3.5/1, mb1 3.4/4, mb1mx3.2/17, mbtmp3.3/4, Error ellipse: s-maj=27.1km s-min=20.3km az=118.0, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	4.79	347	P	Pn	12 39 23.7	+0.6
2.4nm,0.3s,baz=183,slow=7.5,SNR=54							
LPAZ				S	S	12 40 21.7	+1.6
baz=246,slow=19,SNR=1.4							
SIV	San Ignacio	7.52	50	P	Pn	12 39 58.0	-0.1
2.5nm,0.3s,baz=238,slow=11,SNR=38							
SIV				S	S	12 41 24.0	+0.5
0.4nm,0.3s,baz=147,slow=20,SNR=4.3							
PLCA	Paso Flores	19.91	188	P	P	12 42 26.7	+0.2
0.1nm,0.3s,baz=18,slow=13,SNR=2.9							
TORD	Torodi Ar. Bea	75.52	70	P	P

*ISCJB **18** 12:59:33.3±0.3, 29°.30N±0°.04×102°.41E±0°.03, h10km, mb4.3/33, MS3.8/8, Error ellipse: s-maj=5.3km s-min=4.1km az=171.7*
*NEIC **18** 12:59:34.9±0.4, 29°.31N×102°.45E, h10km, mb4.5/19, Error ellipse: s-maj=8.6km s-min=7.4km az=51.0*
*MOS **18** 12:59:35.9±1.0, 29°.26N×102°.46E, h33km, mb4.5/23, Error ellipse: s-maj=11.7km s-min=7.4km az=99.3*
ISC 18 12:59:35.1±0.3, 29°.30N±0°.03×102°.37E±0°.03, h10km, n90, σ1§19/97, mb4.3/33, MS3.8/8, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.00**	**37**	Pg	**Pg**	**13 00 11.8**	**-1.7**
CD2				Sg	**Sg**	**13 00 41.0**	**+1.5**
CD2				smax			
	comp=N,18μm,0.7s						
CD2				smax			
	comp=E,27μm,0.8s						
KMI	**Kunming**	**4.18**	**175**	Pg	**Pn**	**13 00 39.3**	**+0.4**
KMI				smax			
	comp=N,720nm,1.8s						
KMI				smax			
	comp=E,570nm,1.4s						
KMI				LR	LR		
	comp=N,3μm,3.8s						
KMI				LR	LR		
	comp=E,8μm,6.2s						
GYA	**Guiyang**	**4.74**	**126**	Pn	**Pn**	**13 00 46.5**	**-0.1**
GYA				Sn	**Sn**	**13 01 44.5**	**+2.9**
GYA				Sg	**Sg**	**13 02 04.9**	**-2.4**
GYA				smax			
	comp=N,450nm,0.9s						
GYA				smax			
	comp=E,600nm,1.0s						
ENH	**Enshi**	**6.26**	**79**	*e*Pn	**Pn**	**13 01 08.8**	**+1.3**
	comp=E,258nm,0.8s						
ENH				*e*Sn	**Sn**	**13 02 20.6**	**+1.5**
LZH	**Lanzhou**	**6.88**	**10**	*e*Pn	**Pn**	**13 01 21.0**	**+5.0**
LZH				Pg	**Pg**	**13 01 41.5**	**-5.3**
LZH				Sn	**Sn**	**13 02 42.8**	**+8.5**
LZH				Sg	**Sg**	**13 03 13.3**	**-2.6**
LZH				smax			
	comp=N,120nm,0.7s						
LZH				smax			
	comp=E,2μm,1.0s						
LZH				LR	LR		
	comp=N,3μm,8.4s						
LZH				LR	LR		
	comp=Z,4μm,9.3s						
XAN	**Xi'an**	**7.31**	**48**	Pn	**Pn**	**13 01 21.3**	**-0.6**
XAN				Sn	**Sn**	**13 02 54.5**	**+10**
XAN				smax			
	comp=N,540nm,1.2s						
XAN				smax			
	comp=E,310nm,1.1s						
XAN				LR	LR		
	comp=N,550nm,5.5s						
XAN				LR	LR		
	comp=E,260nm,7.5s						
XAN				LR	LR		
	comp=Z,330nm,7.3s						
LSA	**Lhasa**	**9.79**	**275**	*e*P	**Pn**	**13 01 59.1**	**+3.2**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
LSA	**Lhasa**	**9.79**	**275**	*e*Pn	**Pn**	**13 01 59.1**	**+3.2**
	comp=Z,6.9nm,0.6s						
GTA	**Gaotai**	**10.30**	**349**	*e*P	**Pn**	**13 02 08.3**	**+5.4**
GTA				pP		13 02 12.6	
GTA				sP		13 02 15.5	
GTA				S	**Sn**	**13 04 08.3**	**+10**
GTA				sS		13 04 14.5	
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,120nm,6.0s						
GTA				LR	LR		
	comp=N,530nm,12.2s						
GTA				LR	LR		
	comp=E,2μm,13.7s						
GTA				LR	LR		
	comp=Z,700nm,12.2s						
WHN	**Wuhan**	**10.47**	**80**	⇓P	**Pn**	**13 02 06.4**	**+1.2**
WHN				S	**Sn**	**13 04 03.9**	**+1.3**
WHN				LR	LR		
	comp=N,3μm,7.4s						
WHN				LR	LR		
	comp=E,2μm,4.5s						
WHN				LR	LR		
	comp=Z,1μm,9.2s						
CMAR	**Chiang Mai Arr**	**11.24**	**197**	Pn	**Pn**	**13 02 17.7**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=12,slow=12,SNR=8.8						
CMAR				Lg		13 05 35.1	
	comp=Z,0.0nm,0.3s,baz=17,slow=30,SNR=5.3						
HHC	**Hu-ho-hao-te**	**13.75**	**31**	*e*P	**Pn**	**13 02 50.3**	**+0.2**
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,50nm,5.7s						
HHC				LR	LR		
	comp=N,620nm,6.8s						
HHC				LR	LR		
	comp=E,490nm,4.0s						
HHC				LR	LR		
	comp=Z,380nm,9.6s						
NJ2	**Nanjing**	**14.45**	**75**	*e*P	**Pn**	**13 02 58.9**	**-0.7**
NJ2				pP	pP	13 03 03.6	-5.8
NJ2				sP	sP	13 03 05.6	-5.0
NJ2				PP		13 03 10.5	
NJ2				S	**Sn**	**13 05 40.3**	**+0.4**
NJ2				sS	sS	13 05 45.0	-19
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,40nm,3.5s						
NJ2				LR	LR		
	comp=N,670nm,11.2s						
NJ2				LR	LR		
	comp=E,530nm,8.0s						
NJ2				LR	LR		
	comp=Z,2μm,9.7s						
BJT	**Baijiatuau**	**15.57**	**43**	*e*P	**Pn**	**13 03 15.8**	**+1.1**
BJT				pmax	pmax		
	comp=Z,12nm,0.4s						
BJT	**Baijiatuau**	**15.57**	**43**	*e*P	**Pn**	**13 03 15.8**	**+1.1**
	comp=Z,12nm,0.4s						
DL2	**Dalian**	**18.57**	**54**	P	**Pn**	**13 03 53.9**	**+1.5**
DL2				pmax	pmax		
	comp=Z,20nm,1.1s						
DL2				LR	LR		
	comp=N,260nm,16.2s						
DL2				LR	LR		
	comp=E,190nm,16.3s						
DL2				LR	LR		
	comp=Z,210nm,12.7s						
SONM	**Songino Array**	**18.76**	**8**	P	**Pn**	**13 03 54.3**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=190,slow=11,SNR=29						
SONM				LR	LR	13 11 48.9	
	comp=Z,409nm,21.1s,baz=189,slow=39						
ULN	**Ulaanbaatar**	**18.89**	**10**	*e*P	**Pn**	**13 03 57.6**	**+1.5**
ULN				pmax	pmax		
	comp=Z,14nm,1.1s						
ULN	**Ulaanbaatar**	**18.89**	**10**	*e*P	**Pn**	**13 03 57.6**	**+1.5**
	comp=Z,14nm,1.1s						
ZAK	**Zakamensk**	**21.07**	**2**	*e*P	**P**	**13 04 19.7**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb3.9						
TLY	**Talaya**	**22.38**	**2**	*e*P	**P**	**13 04 41.1**	**+7.8**
TLY				*e*		13 04 50.0	
TLY				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.0						
TLY				MLR	MLR		
	comp=Z,22μm,22.0s						
KSRS	**Korea Array**	**22.79**	**62**	P	**P**	**13 04 36.5**	**-1.3**
	comp=Z,14nm,0.9s,mb4.4,baz=251,slow=9.8,SNR=17						
KSRS				LR	LR	13 14 04.2	
	comp=Z,131nm,19.9s,MS3.4,baz=77,slow=39						
KSRS	**Korea Array**	**22.79**	**62**	P	**P**	**13 04 36.5**	**-1.3**
KSRS				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.3						
KSRS				MLR	MLR		
	comp=Z,131nm,19.9s,MS3.4						
MK31	**Makanchi Array**	**23.45**	**324**	*e*P	**P**	**13 04 44.2**	**-0.5**
MKAR	**Makanchi Array**	**23.45**	**324**	P	**P**	**13 04 44.0**	**-0.7**
	comp=Z,3.2nm,0.7s,mb3.9,baz=125,slow=11,SNR=20						
MKAR				LR	LR	13 15 04.3	
	comp=Z,137nm,18.9s,MS3.4,baz=125,slow=40						
MKAR	**Makanchi Array**	**23.45**	**324**	P	**P**	**13 04 44.0**	**-0.7**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MKAR				MLR	MLR		
	comp=Z,137nm,18.9s						
HIA	**Hailar**	**23.94**	**29**	*e*P	**P**	**13 04 49.8**	**+0.5**
HIA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HIA	**Hailar**	**23.94**	**29**	*e*P	**P**	**13 04 49.8**	**+0.5**
	comp=Z,8.4nm,0.6s,mb4.3						
UCH	**Uchtor**	**25.90**	**307**	*e*P	**P**	**13 05 08.6**	**+1.4**
	comp=Z,9.1nm,1.3s,mb4.2						
AAK	**Ala-Archa**	**26.06**	**308**	P	**P**	**13 05 09.6**	**+1.0**
	comp=Z,1.5nm,0.5s,mb3.8,baz=252,slow=9.6,SNR=4.3						
AAK	**Ala-Archa**	**26.06**	**308**	P	**P**	**13 05 09.6**	**+1.0**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.9						
AML	**Almayashu**	**26.43**	**307**	*e*P	**P**	**13 05 13.4**	**+1.4**
	comp=Z,9.1nm,1.1s,mb4.2						
PSI	**Prapat**	**26.56**	**188**	P	**P**	**13 05 15.4**	**+2.1**
	comp=Z,2.6nm,0.3s,mb4.2,baz=342,slow=5.7,SNR=4.3						
PSI	**Prapat**	**26.56**	**188**	P	**P**	**13 05 15.4**	**+2.1**
PSI				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.3						
KKM	**Kota Kinabalu**	**26.57**	**148**	*e*P	**P**	**13 05 11.6**	**-1.9**
	comp=Z,8.0nm,0.8s,mb4.3						
ZAA0	**Zalesovo Array**	**27.75**	**337**	*e*P	**P**	**13 05 23.4**	**-0.3**
ZALV	**Zalesovo Beam**	**27.75**	**337**	P	**P**	**13 05 23.6**	**-0.1**
	comp=Z,4.0nm,0.8s,mb4.1,baz=148,slow=10,SNR=9.6						
ZALV				LR	LR	13 16 13.7	
	comp=Z,46nm,18.4s,MS3.1,baz=212,slow=36						
ZALV	**Zalesovo Beam**	**27.75**	**337**	P	**P**	**13 05 23.6**	**-0.1**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.1						
ZALV				MLR	MLR		
	comp=Z,46nm,18.4s,MS3.1						
KURK	**Kurchatov**	**27.86**	**327**	P	**P**	**13 05 23.8**	**-0.9**
	comp=Z,4.0nm,0.6s,mb4.2,baz=134,slow=9.6,SNR=23						
KURK	**Kurchatov**	**27.86**	**327**	P	**P**	**13 05 23.8**	**-0.9**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.2						
KBL	**Kabul**	**28.69**	**289**	*e*P	**P**	**13 05 32.6**	**+0.3**
KBL				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
KBL	**Kabul**	**28.69**	**289**	*e*P	**P**	**13 05 32.6**	**+0.3**
	comp=Z,6.5nm,0.8s,mb4.4						
KLR	**Kul'dur**	**29.93**	**40**	*e*P	**P**	**13 05 50.6**	**+7.5**
KLR				MLR	MLR		
	comp=Z,600nm,11.0s,MS4.5						
MJAR	**Matsushiro Arr**	**30.81**	**67**	P	**P**	**13 05 49.9**	**-1.1**
	comp=Z,0.6nm,0.5s,mb3.7,baz=282,slow=6.1,SNR=3.6						
MJAR	**Matsushiro Arr**	**30.81**	**67**	P	**P**	**13 05 49.9**	**-1.2**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
DAV	**Davao City (W)**	**31.10**	**131**	LR	LR	13 18 28.8	
	comp=Z,2μm,19.0s,MS4.7,baz=101,slow=37						
BVAR	**Borovoye Array**	**33.33**	**324**	P	**P**	**13 06 12.8**	**-0.1**
	comp=Z,1.2nm,0.5s,mb4.1,baz=118,slow=12,SNR=6.4						
BVAR				PcP	PcP	13 08 54.5	-0.3
	comp=Z,1.7nm,0.6s,baz=142,slow=3.2,SNR=6.2						
BVAR	**Borovoye Array**	**33.33**	**324**	P	**P**	**13 06 12.8**	**-0.2**
BVAR						13 08 54.5	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRVK	**Borovoye**	**33.40**	**324**	*e*P	**P**	**13 06 13.2**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
BRVK	**Borovoye**	**33.40**	**324**	*e*P	**P**	**13 06 13.2**	**-0.3**
	comp=Z,2.7nm,0.6s,mb4.3						
ABKAR	**Akbulak array**	**37.79**	**314**	*e*P	**P**	**13 06 51.3**	**-0.1**
	comp=Z,3.1nm,0.8s,mb4.1						
AKTK	**Aktyubinsk**	**39.31**	**315**	P	**P**	**13 07 03.8**	**-0.3**
AKTO	**Aktyubinsk**	**39.31**	**315**	P	**P**	**13 07 03.8**	**-0.3**
	comp=Z,2.3nm,0.8s,mb3.9,baz=103,slow=14,SNR=7.5						
AKTO	**Aktyubinsk**	**39.31**	**315**	P	**P**	**13 07 03.8**	**-0.3**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.9						
ARU	**Arti**	**40.97**	**324**	*e*P	**P**	**13 07 17.8**	**0.0**
ARU				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.4						
ARU	**Arti**	**40.97**	**324**	*e*P	**P**	**13 07 17.8**	**-0.1**
	comp=Z,12nm,1.1s,mb4.5						
TIXI	**Tiksi**	**44.81**	**12**	*e*P	**P**	**13 07 46.6**	**-2.1**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.2						
TIXI	**Tiksi**	**44.81**	**12**	*e*P	**P**	**13 07 46.6**	**-2.1**
	comp=Z,3.5nm,0.8s,mb4.2						
BILL	**Bilibino**	**53.44**	**25**	*e*P	**P**	**13 08 54.2**	**-0.6**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
BILL	**Bilibino**	**53.44**	**25**	*e*P	**P**	**13 08 54.1**	**-0.7**
	comp=Z,3.1nm,0.9s,mb4.2						
ASF	**Jabal al Asfar**	**55.56**	**291**	LR	LR	13 36 36.7	
	comp=Z,54nm,19.6s,MS3.6,baz=79,slow=40						
MMAI	**Mount Meron Ar**	**56.55**	**292**	LR	LR	13 35 13.4	
	comp=Z,68nm,18.5s,MS3.8,baz=100,slow=38						
WRAB	**Tennant Creek**	**57.86**	**144**	*e*P	**P**	**13 09 24.9**	**-2.2**
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
WRAB	**Tennant Creek**	**57.86**	**144**	*e*P	**P**	**13 09 24.9**	**-2.3**
	comp=Z,10nm,0.7s,mb5.0						
WRA	**Warramunga Arr**	**57.86**	**144**	P	**P**	**13 09 25.3**	**-1.9**
	comp=Z,5.3nm,0.6s,mb4.8,baz=334,slow=7.8,SNR=68						
WRA	**Warramunga Arr**	**57.86**	**144**	P	**P**	**13 09 25.3**	**-1.9**
WRA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ARCES	**ARCESS Array B**	**58.29**	**336**	P	**P**	**13 09 28.5**	**-1.1**
	comp=Z,2.0nm,1.0s,mb4.1,baz=90,slow=7.2,SNR=3.5						
ARCES	**ARCESS Array B**	**58.29**	**336**	P	**P**	**13 09 28.5**	**-1.1**
ARCES				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SPITS	**Spitsbergen Ar**	**60.72**	**346**	LR	LR	13 40 35.1	
	comp=Z,67nm,18.0s,MS3.8,baz=85,slow=41						
ASAR	**Alice Springs**	**60.77**	**147**	P	**P**	**13 09 45.6**	**-1.7**
	comp=Z,1.0nm,0.5s,mb4.2,baz=328,slow=6.9,SNR=28						
ASAR	**Alice Springs**	**60.77**	**147**	P	**P**	**13 09 45.6**	**-1.7**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KMBO	**Kilima Mbogo**	**69.03**	**256**	P	**P**	**13 10 44.2**	**+2.8**
	comp=Z,1.8nm,0.8s,mb4.0,baz=72,slow=20,SNR=2.6						
KMBO	**Kilima Mbogo**	**69.03**	**256**	P	**P**	**13 10 44.2**	**+2.8**
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
STKA	**Stephens Creek**	**71.35**	**145**	P	**P**	**13 10 56.1**	**+1.0**
	comp=Z,1.1nm,0.3s,mb4.3,baz=329,slow=12,SNR=3.2						
COLA	**College**	**71.69**	**25**	*e*P	**P**	**13 10 55.8**	**-1.0**
COLA				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
COLA	**College**	**71.69**	**25**	*e*P	**P**	**13 10 55.8**	**-1.0**
	comp=Z,5.6nm,0.9s,mb4.5						
CDF	**Champ du Feu**	**71.86**	**316**	*e*P	**P**	**13 10 58.5**	**+0.4**
LPG	**La Plagne**	**73.38**	**313**	*e*P	**P**	**13 11 07.4**	**+0.1**
	comp=Z,14nm,0.9s,mb4.6						
LPG	**La Plagne**	**73.38**	**313**	*e*P	**P**	**13 11 07.4**	**+0.1**
LPG				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
LPG	**La Plagne**	**73.38**	**313**	*e*P	**P**	**13 11 07.4**	**+0.1**
	comp=Z,6.8nm,0.9s,mb4.6						
LPL	**La Plagne**	**73.39**	**313**	*e*P	**P**	**13 11 07.4**	**+0.1**
LPL	**La Plagne**	**73.39**	**313**	*e*P	**P**	**13 11 07.4**	**+0.1**
LPL				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
LPL	**La Plagne**	**73.39**	**313**	*e*P	**P**	**13 11 07.4**	**+0.1**
	comp=Z,15nm,0.9s,mb4.9						
INK	**Inuvik**	**74.34**	**19**	*e*P	**P**	**13 11 11.7**	**-0.8**
INK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
INK	**Inuvik**	**74.34**	**19**	*e*P	**P**	**13 11 11.7**	**-0.7**
	comp=Z,4.7nm,0.8s,mb4.5						
SMF	**Signal de Mont**	**74.71**	**315**	*e*P	**P**	**13 11 15.3**	**+0.3**
BMRM	**Bremner River**	**75.03**	**28**	*e*P	**P**	**13 11 15.6**	**-0.9**
	comp=Z,8.0nm,0.9s,mb4.7						
TCF	**Toulx Ste Croi**	**75.88**	**315**	*e*P	**P**	**13 11 22.2**	**+0.5**
	comp=Z,26nm,1.2s,mb4.7						
TCF	**Toulx Ste Croi**	**75.88**	**315**	*e*P	**P**	**13 11 22.2**	**+0.5**
TCF				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7						
TCF	**Toulx Ste Croi**	**75.88**	**315**	*e*P	**P**	**13 11 22.2**	**+0.5**
	comp=Z,13nm,1.2s,mb4.7						

*BJI **18** 13:13:03.7, 1°.55N×128°.95E, h63km, mB5.1/28, mb5.2/55, Ms4.6/38, Ms7 4.3/37*
*MOS **18** 13:13:05.1±1.1, 2°.10N×128°.38E, h33km, mb5.6/54, Error ellipse: s-maj=12.5km s-min=5.7km az=110.3*

*GCMT **18** 13:13:09.2±0.2, 2°.05N×128°.46E, h52km±1km, MW5.1, Moment Tensor Solution. s51,c69; s74,c124; Moment tensor: Scale 10^16Nm; Mrr2.91±.18; Mθθ-3.75±.11; Mφφ0.85±.16; Mrθ2.46±.11; Mθφ2.65±.11; Mφr1.35±.12; Best double couple: M0=5.10000×10^16 NP1:φs327.00000°, δ45.00000°, λ146.00000°. NP2:φs83.00000°, δ66.00000°, λ50.00000°. Principal axes: T 4.9500, Plg51.0000°, Azm307.0000°; N 0.3900, Plg36.0000°, Azm101.0000°; P -5.3300, Plg12.0000°, Azm201.0000°; Data Used: II IU IC G CN.*
*IDC **18** 13:13:09.5±0.7, 1°.98N×128°.47E, h60km±5km, mb5.0/30, mb1 5.1/32, mb1mx5.0/34, mbtmp5.1/32, MS4.0/17, Ms1 4.0/17, ms1mx3.8/27 Error ellipse: s-maj=14.0km s-min=8.0km az=77.0*
*ISCJB **18** 13:13:09.7±0.5, 1°.96N±0°.02×128°.51E±0°.03, h77km±4km, mb5.3/152, Error ellipse: s-maj=4.9km s-min=3.3km az=173.7*
*NEIC **18** 13:13:10.9±0.8, 1°.98N×128°.41E, h74km±7km, mb5.4/76, MW5.4, Error ellipse: s-maj=6.7km s-min=4.3km az=70.0, Moment Tensor Solution. s8 Moment tensor: Scale 10^17 Nm; Mrr0.95; Mθθ-0.21; Mφφ-0.74; Mrθ-0.31; Mθφ1.01; Mφr0.41; Best double couple: M0=1.40000×10^17 NP1: φs323.00000°, δ56.00000°, λ90.00000°. NP2: φs142.00000°, δ34.00000°, λ89.00000°. Principal axes: T 1.0500, Plg78.0000°, Azm234.0000°; N 0.5700, Plg0.0000°, Azm142.0000°; P -1.6200, Plg11.0000°, Azm52.0000°;*
NEIC Felt [III] at Gálela.
*DJA **18** 13:13:12, 1°.90N×128°.52E, h68km, Mw5.5/27*
ISC 18 13:13:11.3±0.4, 1°.95N±0°.02×128°.53E±0°.03, h76km±3km, h62km±1.8km: pP-P, n453, σ1§18/402, mb5.3/152, 22C-5D, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.65**	**225**	P	**Pn**	**13 13 36.4**	**-2.1**
LBMI	**Labuha**	**2.77**	**202**	P	**Pn**	**13 13 52.7**	**-0.8**
SGSI	**Sangihe**	**3.46**	**300**	P	**Pn**	**13 14 01.4**	**-1.4**
MNI	**Manado**	**3.72**	**262**	P	**Pn**	**13 14 06.2**	**-0.3**
KMSI	**Cibinong**	**4.75**	**253**	P	**Pn**	**13 14 20.7**	**+0.2**
NLAI	**Namlea**	**5.35**	**195**	P	**Pn**	**13 14 28.0**	**-0.7**
	1.1nm5μm307nm,0.6s						
GSPH	**General Santos**	**5.44**	**319⇑**	*e*P	**Pn**	**13 14 29.3**	**-0.7**
GSPH				*e*S	**Sn**	**13 15 30.1**	**-1.1**
MATI	**Mati**	**5.45**	**336**	*e*P	**Pn**	**13 14 33.4**	**+3.3**
AAI	**Ambon**	**5.61**	**183**	P	**Pn**	**13 14 32.5**	**+0.3**
	1.0nm3μm275nm,0.8s						
DAV	**Davao City (W)**	**5.87**	**330**	P	**Pn**	**13 14 35.9**	**0.0**
	22nm,0.3s,baz=71,slow=5.3,SNR=5.2						
DAV	**Davao City (W)**	**5.87**	**330**	Pn	**Pn**	**13 14 35.7**	**-0.1**
	499nm,0.6s						
DAV	**Davao City (W)**	**5.87**	**330**	X	**Pn**	**13 14 32.5**	**-3.3**
DAV	**Davao City (W)**	**5.87**	**330**	P	**Pn**	**13 14 41.3**	**+5.5**
	8.0nm914nm,1.1s						
DMPH	**Davao City--Mi**	**5.92**	**330⇑**	*e*P	**Pn**	**13 14 38.2**	**+1.7**
DMPH				*e*S	**Sn**	**13 15 44.9**	**+1.9**
LUWI	**Luwuk**	**6.48**	**243**	P	**Pn**	**13 14 44.9**	**+0.8**
	4.1nm10μm472nm,0.8s						
MRSI	**Marisa**	**6.75**	**258**	P	**Pn**	**13 14 48.1**	**+0.3**
	1.8nm6μm680nm,0.9s						
BUKP	**Musuan**	**6.83**	**330**	*e*P	**Pn**	**13 14 49.7**	**+0.9**
APSI	**Ampana**	**7.44**	**248**	P	**Pn**	**13 14 56.9**	**-0.4**
	3.0nm398nm,0.9s						
CGP	**Cagayan de Oro**	**7.50**	**330⇑**	*i*P	**Pn**	**13 15 00.2**	**+2.1**
CGP	**Cagayan de Oro**	**7.50**	**330**	*e*S	Px	13 15 27.2	
BUTP	**Butuan**	**7.55**	**338**	*e*P	**Pn**	**13 15 00.5**	**+1.8**
PAGZ	**Pagadian**	**7.78**	**319**	*e*P	**Pn**	**13 15 01.7**	**-0.2**
ZMPH	**Zamboanga City**	**8.14**	**308⇑**	*i*P	**Pn**	**13 15 04.1**	**-2.7**
IPIL	**Ipil**	**8.30**	**315**	*e*P	**Pn**	**13 15 07.9**	**-1.0**
KDI	**Kendari**	**8.33**	**225**	P	**Pn**	**13 15 08.3**	**-1.1**
	6μm572nm,1.3s						
TTSI	**Tana Toraja**	**10.02**	**240**	P	**Pn**	**13 15 31.2**	**-1.3**
	3μm383nm,1.0s						
MYLDM	**Lahad Datu**	**10.51**	**288**	P	**Pn**	**13 15 41.0**	**+1.8**
MYLDM	**Lahad Datu**	**10.51**	**288**	P	**Pn**	**13 15 41.0**	**+1.8**
MYLDM	**Lahad Datu**	**10.51**	**288**	P	**Pn**	**13 15 39.9**	**+0.7**
	3μm227nm,1.3s						
BNSI	**Bone**	**10.52**	**233**	P	**Pn**	**13 15 39.1**	**-0.2**
SPSI	**Sidrap Palu**	**10.54**	**236**	P	**Pn**	**13 15 40.7**	**+1.1**
	3μm319nm,0.6s						
SMPI	**Sarmi**	**10.90**	**111**	P	**Pn**	**13 15 47.1**	**+2.5**
	69nm,1.4s						
BKSI	**Bulukumba**	**11.08**	**229**	P	**Pn**	**13 15 47.0**	**+0.1**
	5μm579nm,0.7s						
RCP	**Roxas**	**11.14**	**329⇓**	*e*P	**Pn**	**13 15 38.4**	**-9.3**
KAPI	**Kappang**	**11.17**	**232**	Pn	**Pn**	**13 15 47.6**	**-0.6**
	2μm,0.6s,SNR=32						
KAPI	**Kappang**	**11.17**	**232**	P	**Pn**	**13 15 46.7**	**-1.5**
	35nm,0.3s,baz=93,slow=4.6,SNR=130						
KAPI				S	**Sn**	**13 17 51.4**	**0.0**
	1.0nm,0.3s,baz=231,slow=23,SNR=5.3						
KAPI	**Kappang**	**11.17**	**232**	*e*P	**Pn**	**13 15 46.3**	**-1.9**
	208nm,0.6s						
KAPI	**Kappang**	**11.17**	**232**	P	**Pn**	**13 15 46.8**	**-1.4**
	SNR=14						
KAPI				P		13 15 46.8	
	SNR=14						
KAPI	**Kappang**	**11.17**	**232**	P	**Pn**	**13 15 47.5**	**-0.7**
	2μm168nm,0.8s						
CUYO	**Cuyo Island**	**11.57**	**320**	*e*P	**Pn**	**13 15 52.6**	**-1.0**
SDKM	**Sandakan**	**11.89**	**288**	P	**Pn**	**13 15 58.6**	**+0.6**
MMRI	**Maumere**	**12.24**	**211**	P	**Pn**	**13 16 03.7**	**+0.9**
	2μm116nm,1.8s						
PVCP	**Virac**	**12.35**	**340**	*e*P	**Pn**	**13 16 04.9**	**+0.6**
BATP	**Bataraza**	**12.66**	**303**	*e*P	**Pn**	**13 16 10.8**	**+2.4**
KDM	**Kudat**	**12.66**	**293**	P	**Pn**	**13 16 09.4**	**+0.9**
SJMP	**San Jose**	**12.77**	**325**	*e*P	**Pn**	**13 16 09.5**	**-0.4**
KKM	**Kota Kinabalu**	**12.94**	**289**	P	**Pn**	**13 16 12.6**	**+0.4**
KKM	**Kota Kinabalu**	**12.94**	**289**	*e*P	**Pn**	**13 16 10.4**	**-1.8**
	58nm,0.8s						
KKM	**Kota Kinabalu**	**12.94**	**289**	P	**Pn**	**13 16 11.8**	**-0.4**
	878nm82nm,1.3s						
KBKI	**Kotabaru**	**13.41**	**247**	P	**Pn**	**13 16 19.1**	**+0.6**
	62nm,1.1s						
TGY	**Tagaytay City**	**14.21**	**329**	P	**Pn**	**13 16 28.3**	**-0.7**
	28nm,0.3s,baz=56,slow=17,SNR=8.6						
TGY	**Tagaytay City**	**14.21**	**329**

FITZ Fitzroy Crossi 20.13 188 P **P** **13 17 38.2 -1.0**
comp=Z,44nm,0.8s,baz=27,slow=8.2,SNR=68
FITZ ScP ScP 13 25 22.0 +0.5
comp=Z,2.0nm,0.5s,baz=12,slow=17,SNR=6.3
FITZ LR LR 13 25 57.3
comp=Z,554nm,21.4s,baz=16,slow=38
FITZ Fitzroy Crossi 20.13 188 *e*P **P** **13 17 37.8 -1.5**
comp=Z,54nm,0.8s
FITZ Fitzroy Crossi 20.13 188 P **P** **13 17 38.3 -1.0**
comp=Z,148nm,1.0s
SMRI Semarang 20.14 243 P **P** **13 17 40.2 +0.7**
comp=Z,198nm,1.7s
TPI Tanjungpandan 21.39 257 P **P** **13 17 55.0 +2.1**
comp=Z,55nm,1.0s,mb4.8
COEN Coen 21.46 138 *e*P **P** **13 17 55.2 +1.5**
comp=Z,260nm,0.9s,mb5.6
COEN Coen 21.46 138 P **P** **13 17 55.3 +1.6**
comp=Z,167nm,1.4s,mb5.2
TWG Pinlang 21.97 341 *e*P **P** **13 17 55.6 -3.4**
comp=Z,38nm,0.5s,mb5.0
YULB Yu-li 22.44 342 *e*P **P** **13 18 02.2 -1.8**
comp=Z,55nm,1.0s,mb4.8
WRAB Tennant Creek 22.49 166 P **P** **13 18 04.0 -0.5**
comp=Z,871nm,0.7s,mb6.2,SNR=50
WRAB Tennant Creek 22.49 166 *e*P **P** **13 18 04.1 -0.4**
WRAB pmax pmax
comp=Z,95nm,0.8s,mb5.2
WRAB MLR MLR
comp=Z,684nm,19.0s
WRAB Tennant Creek 22.49 166 *e*P **P** **13 18 04.1 -0.4**
comp=Z,95nm,0.8s,mb5.2
WRAB LR LR
comp=Z,684nm,19.0s
WRAB Tennant Creek 22.49 166 P **P** **13 18 04.0 -0.5**
comp=Z,168nm,0.9s,mb5.4
WRA Warramunga Arr 22.49 166 P **P** **13 18 04.2 -0.4**
comp=Z,56nm,0.7s,mb5.0,baz=346,slow=10.0,SNR=118
WRA pP 13 18 17.8
comp=Z,76nm,0.8s,baz=342,slow=10,SNR=13
WRA S **S** **13 22 08.3 +2.1**
comp=Z,12nm,1.1s,baz=346,slow=21,SNR=6.6
WRA ScP ScP 13 25 27.6 +0.3
comp=Z,2.0nm,0.7s,baz=342,slow=3.0,SNR=5.4
WRA Warramunga Arr 22.49 166 P **P** **13 18 04.2 -0.4**
WRA *PP 13 18 17.8
WRA S **S** **13 22 08.3 +2.1**
WRA pmax pmax
comp=Z,56nm,0.7s
WRA smax
comp=N,13nm,1.1s
WRA Warramunga Arr 22.49 166 P **P** **13 18 04.2 -0.4**
WRA pP 13 18 17.8
WRA S **S** **13 22 08.3 +2.1**
WRA ScP ScP 13 25 27.6 +0.3
TPUB Ta-pu 22.56 341 *e*P **P** **13 18 02.5 -2.8**
comp=N,93nm,0.8s,mb5.2
SSLB Suanglung 22.91 342 *e*P **P** **13 18 07.0 -2.0**
comp=N,62nm,0.8s,mb5.0
NACB Ninganchiao 23.09 344 *e*P **P** **13 18 09.2 -1.4**
CBJI Citeko 23.19 249 P **P** **13 18 13.5 +1.8**
comp=N,214nm,0.9s,mb5.5
YHNB Yeheng 23.62 344 *e*P **P** **13 18 13.1 -2.4**
comp=N,105nm,1.0s,mb5.1
RBSI Rajabasa 24.04 251 P **P** **13 18 19.8 +0.3**
comp=N,2μmcomp=N,200nm,1.0s,mb5.4
MBWA Marble Bar 24.53 200 *e*P **P** **13 18 22.7 -1.2**
MBWA Marble Bar 24.53 200 *e*P **P** **13 18 22.4 -1.5**
comp=N,13nm,0.6s,mb4.5
MBWA Marble Bar 24.53 200 P **P** **13 18 22.9 -1.0**
comp=N,36nm,1.2s,mb4.7
KLI Kotabumi 24.60 254 P **P** **13 18 27.7 +3.0**
comp=N,3μmcomp=N,104nm,0.9s,mb5.3
MYKOM Kota Tinggi 24.67 270 P **P** **13 18 26.3 +1.0**
MYKOM Kota Tinggi 24.67 270 P **P** **13 18 26.3 +1.0**
MYKOM Kota Tinggi 24.67 270 P **P** **13 18 26.0 +0.7**
comp=N,1μmcomp=N,152nm,1.3s,mb5.3
KLSI 24.68 254 P **P** **13 18 26.2 +0.8**
comp=N,131nm,1.0s,mb5.3
QZH Quanzhou 24.79 338⇑ *i*P **P** **13 18 26.3 +0.1**
QZH S **S** **13 22 49.0 +5.7**
QZH pmax pmax
comp=Z,110nm,0.7s,mb5.4
QZH pmax pmax
comp=Z,1μm,5.2s
QIZ Qiongzhong 24.96 314 P **P** **13 18 27.8 0.0**
QIZ pP 13 18 40.5
QIZ S **S** **13 22 48.8 +2.6**
QIZ pmax pmax
comp=Z,32nm,1.4s,mb4.6
QIZ Qiongzhong 24.96 314 *e*P **P** **13 18 28.3 +0.5**
comp=Z,162nm,1.1s,mb5.4
KASI Kota Agung 25.13 253 P **P** **13 18 30.7 +1.3**
comp=Z,110nm,0.8s,mb5.3
MDSI Maura Dua 25.16 255 P **P** **13 18 31.1 +1.4**
comp=Z,60nm,1.3s,mb4.8
KGM Kluang 25.20 271 P **P** **13 18 31.1 +1.1**
KGM Kluang 25.20 271 P **P** **13 18 31.1 +1.1**
LWLI Liwa 25.41 254 P **P** **13 18 33.5 +1.5**
comp=Z,5μmcomp=Z,168nm,0.9s,mb5.5
KTGM Kuala Trenggan 25.56 278 P **P** **13 18 34.0 +0.6**
KTGM Kuala Trenggan 25.56 278 P **P** **13 18 34.0 +0.6**
ASAR Alice Springs 26.00 169 P **P** **13 18 37.3 +0.2**
comp=Z,25nm,0.8s,mb4.7,baz=355,slow=7.7,SNR=122
ASAR PcP PcP 13 22 03.8 0.0
comp=Z,4.5nm,0.8s,baz=358,slow=3.0,SNR=4.5
ASAR ScP ScP 13 25 37.0 +0.1
comp=Z,1.5nm,0.6s,baz=342,slow=2.7,SNR=5.9
KSI Kapahiang 26.51 258 P **P** **13 18 45.6 +3.6**
comp=Z,117nm,1.0s,mb5.4
FRIM Kepong 26.91 273 P **P** **13 18 46.4 +0.9**
SDSI Sungai Dareh 27.25 264 P **P** **13 18 48.7 +0.1**
comp=Z,23nm,1.1s,mb4.6
IPM Ipoh 27.57 276 P **P** **13 18 52.2 +0.7**
IPM Ipoh 27.57 276 P **P** **13 18 53.9 +2.4**
comp=Z,28nm,1.0s,mb4.8
CTA Charters Tower 27.96 142 *e*P **P** **13 18 57.4 +2.5**
comp=Z,5.8nm,0.7s,mb4.2
CTA Charters Tower 27.96 142 P **P** **13 18 55.3 +0.4**
comp=Z,6.7nm,0.7s,mb4.3,baz=337,slow=7.7,SNR=3.4
CTA LR LR 13 31 47.6
comp=Z,281nm,18.5s,baz=330,slow=40
CTA Charters Tower 27.96 142 P **P** **13 18 55.3 +0.4**
CTA pmax pmax
comp=Z,7.0nm,0.7s
CTA MLR MLR
comp=Z,281nm,18.5s
KULM Kulim 28.02 278 P **P** **13 18 55.8 +0.3**
KULM Kulim 28.02 278 *e*P **P** **13 18 53.3 -2.2**
comp=Z,52nm,1.4s,mb4.9
KULM Kulim 28.02 278 P **P** **13 18 57.2 +1.7**
comp=Z,32nm,1.4s,mb4.7
CBIJ Chichi jima 28.22 26 P **P** **13 18 57.1 +0.1**
comp=Z,116nm,0.7s,mb5.5,baz=282,slow=12,SNR=8.0
CBIJ LR LR 13 27 43.1
comp=Z,258nm,20.7s,baz=156,slow=31
MNSI Mandailing Nat 28.96 268 P **P** **13 19 03.1 -0.8**
comp=Z,32nm,0.7s,mb5.0
PSI Prapat 29.59 272 P **P** **13 19 09.2 -0.2**
comp=Z,47nm,1.1s,mb5.0,baz=105,slow=4.1,SNR=31
PSI Prapat 29.59 272 P **P** **13 19 09.2 -0.3**
PSI pmax pmax
comp=Z,47nm,1.1s,mb5.0
NJ2 Nanjing 31.30 344 *e*P **P** **13 19 25.3 +1.1**
NJ2 pP pP 13 19 41.0 -1.2
NJ2 sP sP 13 19 47.8 -3.3
NJ2 PP PP 13 20 28.3 -8.0
NJ2 S **S** **13 24 27.5 +1.8**
NJ2 pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
NJ2 pmax pmax
comp=Z,130nm,8.7s
NJ2 LR LR
comp=N,320nm,22.4s
NJ2 LR LR
comp=E,230nm,20.8s
NJ2 LR LR
comp=Z,210nm,19.9s
WHN Wuhan 31.45 336 P **P** **13 19 26.0 +0.4**
WHN pP pP 13 19 42.8 -0.8
WHN sP sP 13 19 48.6 -3.9
WHN LR LR
comp=N,850nm,26.5s
WHN LR LR
comp=E,1μm,31.0s
WHN LR LR
comp=Z,1μm,25.6s

GYA Guiyang 32.17 321⇑ *i*P **P** **13 19 32.8 +0.8**
GYA pP pP 13 19 48.0 -2.0
GYA PP PP 13 20 41.3 -4.7
GYA PcP PcP 13 22 21.0 +1.6
GYA S **S** **13 24 42.4 +3.0**
GYA pmax pmax
comp=Z,60nm,0.8s,mb5.4
GYA pmax pmax
comp=Z,160nm,4.8s
GYA LR LR
comp=N,4μm,16.8s
GYA LR LR
comp=E,2μm,17.0s
GYA LR LR
comp=Z,4μm,16.5s
FORT Forrest 32.55 181 *e*P **P** **13 19 34.8 -0.4**
comp=Z,67nm,0.6s,mb5.7
FORT Forrest 32.55 181 *e*P **P** **13 19 34.5 -0.7**
comp=Z,82nm,0.7s,mb5.7
MORW Morawa 33.08 200 *e*P **P** **13 19 38.5 -1.4**
CM31 Chiang Mai Arr 33.32 301 *e*P **P** **13 19 43.3 +1.1**
comp=Z,25nm,0.8s,mb5.1
CMAR Chiang Mai Arr 33.32 301 P **P** **13 19 43.4 +1.2**
comp=Z,22nm,0.8s,mb5.0,baz=117,slow=6.9,SNR=105
CMAR ScP ScP 13 26 02.1 +1.5
comp=Z,3.0nm,1.1s,baz=174,slow=1.7,SNR=6.6
CMAR LR LR 13 34 48.0
comp=Z,134nm,19.5s,baz=293,slow=39
BSI Banda Aceh 33.34 277 P **P** **13 19 40.9 -1.5**
comp=Z,36nm,1.6s,mb4.9
ENH Enshi 33.46 329 *e*P **P** **13 19 42.9 -0.4**
comp=Z,120nm,1.5s,mb5.5
ENH LR LR
comp=Z,426nm,21.0s
CHTO Chiang Mai 33.48 302 *e*P **P** **13 19 43.8 +0.3**
CHTO pmax pmax
comp=Z,53nm,0.9s,mb5.4
CHTO Chiang Mai 33.48 302 *e*P **P** **13 19 43.8 +0.3**
comp=Z,53nm,0.9s,mb5.4
CHTO Chiang Mai 33.48 302 P **P** **13 19 44.5 +1.0**
SNR=16
CHTO P 13 19 44.5
SNR=16
CHTO Chiang Mai 33.48 302 P **P** **13 19 44.5 +1.0**
comp=Z,761nmcomp=Z,82nm,1.0s,mb5.5
KMI Kunming 33.90 315 P **P** **13 19 49.0 +1.9**
KMI pP pP 13 20 01.9 -3.3
KMI sP sP 13 20 09.4 -4.7
KMI PP PP 13 21 04.4 -0.8
KMI PcP PcP 13 22 26.5 +2.2
KMI S **S** **13 25 09.0 +2.7**
KMI PcS PcS 13 26 11.6 +1.1
KMI ScS ScS 13 30 05.8 +1.2
KMI pmax pmax
comp=Z,98nm,0.9s,mb5.6
KMI LR LR
comp=N,230nm,14.6s
KMI LR LR
comp=E,220nm,20.3s
KMI LR LR
comp=Z,270nm,21.1s
EIDS Eidsvold 34.85 143 *e*P **P** **13 19 55.8 +0.5**
comp=Z,20nm,0.9s,mb4.9
KLBR Kellerberrin 34.89 196 *e*P **P** **13 19 54.2 -1.4**
comp=Z,36nm,1.0s,mb5.2
KSRS Korea Array 35.33 359 P **P** **13 19 59.0 -0.3**
comp=Z,26nm,0.7s,mb5.2,baz=175,slow=9.6,SNR=95
KSRS PcP PcP 13 22 28.9 +0.7
comp=Z,5.0nm,0.9s,baz=181,slow=3.0,SNR=7.5
KSRS ScP ScP 13 26 09.3 +2.0
comp=Z,2.1nm,0.9s,baz=180,slow=2.3,SNR=4.1
KSRS LR LR 13 33 24.1
comp=Z,285nm,20.9s,baz=179,slow=34
MAJO Matsushiro 35.56 13 *e*P **P** **13 19 59.7 -1.6**
MAJO *e* pP 13 20 15.0 -4.5
MAJO pmax pmax
comp=Z,125nm,0.8s,mb5.9
MAJO MLR MLR
comp=Z,395nm,20.0s
MAJO Matsushiro 35.56 13 *e*P **P** **13 19 59.6 -1.6**
comp=Z,125nm,0.8s,mb5.9
MAJO *e* pP 13 20 15.0 -4.5
MAJO LR LR
comp=Z,395nm,20.0s
MAT Matsushiro 35.56 13 P **P** **13 19 59.8 -1.5**
MAT S **S** **13 25 27.6 -4.0**
MJAR Matsushiro Arr 35.56 13 P **P** **13 19 59.9 -1.4**
comp=Z,69nm,0.7s,mb5.7,baz=185,slow=9.7,SNR=236
MJAR PcP PcP 13 22 29.2 +0.4
comp=Z,6.2nm,0.8s,baz=178,slow=2.6,SNR=5.6
MJAR LR LR 13 33 54.6
comp=Z,291nm,19.7s,baz=205,slow=35
MJAR Matsushiro Arr 35.56 13 P **P** **13 19 59.9 -1.4**
MJAR 13 22 29.2
MJAR pmax pmax
comp=Z,69nm,0.7s
MJAR MLR MLR
comp=Z,291nm,19.7s
STKA Stephens Creek 35.85 161 *e*P **P** **13 20 04.5 +0.7**
comp=Z,52nm,0.6s,mb5.6
STKA Stephens Creek 35.85 161 P **P** **13 20 04.6 +0.8**
comp=Z,58nm,0.6s,mb5.7,baz=336,slow=8.2,SNR=101
STKA LR LR 13 36 05.9
comp=Z,216nm,18.4s,baz=130,slow=38
STKA Stephens Creek 35.85 161 *e*P **P** **13 20 04.5 +0.7**
comp=Z,12nm,0.7s,mb4.9
XAN Xi'an 36.81 332 P **P** **13 20 11.8 -0.1**
XAN pP pP 13 20 25.8 -4.4
XAN PP PP 13 21 37.5 +0.3
XAN S **S** **13 25 54.5 +3.8**
XAN pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
XAN pmax pmax
comp=Z,28nm,8.5s
XAN LR LR
comp=N,240nm,26.1s
XAN LR LR
comp=E,98nm,22.3s
XAN LR LR
comp=Z,120nm,24.2s
CD2 Chengdu 37.13 323⇑ *i*P **P** **13 20 15.1 +0.4**
CD2 pP pP 13 20 30.3 -2.7
CD2 sP sP 13 20 37.5 -4.4
CD2 PP PP 13 21 42.9 +2.1
CD2 S **S** **13 25 57.1 +1.4**
CD2 ScS ScS 13 30 21.4 -0.6
CD2 pmax pmax
comp=Z,90nm,0.7s,mb5.8
CD2 pmax pmax
comp=Z,200nm,5.2s
CD2 LR LR
comp=N,490nm,26.4s
CD2 LR LR
comp=E,460nm,25.2s
CD2 LR LR
comp=Z,220nm,26.2s
DL2 Dalian 37.32 351 P **P** **13 20 16.3 +0.1**
DL2 pmax pmax
comp=Z,30nm,1.0s,mb5.2
ARMA Armidale 39.01 147 *e*P **P** **13 20 32.2 +1.7**
ARMA Armidale 39.01 147 *e*P **P** **13 20 32.1 +1.6**
comp=Z,19nm,0.9s,mb4.9
BJT Baijiatuau 39.52 345 *e*P **P** **13 20 33.3 -1.3**
BJT pmax pmax
comp=Z,36nm,0.5s
BJT MLR MLR
comp=Z,175nm,20.0s
BJT Baijiatuau 39.52 345 *e*P **P** **13 20 33.3 -1.4**
comp=Z,36nm,0.5s,mb5.5
BJT LR LR
comp=Z,175nm,20.0s
BJI Beijing 39.54 345 P **P** **13 20 33.3 -1.5**
BJI S **S** **13 26 35.3 +3.5**
BJI pmax pmax
comp=Z,40nm,0.9s,mb5.2
BJI pmax pmax
comp=Z,97nm,3.8s
BJI LR LR
comp=N,160nm,15.5s
BJI LR LR
comp=E,160nm,17.3s
BJI LR LR
comp=Z,140nm,26.6s
SNY Shenyang 39.95 354⇑ P **P** **13 20 37.8 -0.3**
SNY S **S** **13 26 37.3 -0.5**
SNY pmax pmax
comp=Z,16nm,0.8s,mb4.9
SNY LR LR
comp=Z,320nm,24.5s
ARPS Mount Arapiles 40.47 163 *e*P **P** **13 20 43.8 +1.3**
comp=Z,70nm,0.7s,mb5.6
LZH Lanzhou 40.94 329 *e*P **P** **13 20 47.9 +1.4**
LZH pP pP 13 21 01.6 -3.4
LZH PP PP 13 22 26.3 +4.0
LZH PcP PcP 13 22 46.8 +1.2
LZH *e*S **S** **13 26 56.1 +3.3**
LZH pmax pmax
comp=Z,51nm,1.3s,mb5.2
LZH pmax pmax
comp=Z,120nm,4.5s
LZH LR LR
comp=N,670nm,16.2s
LZH LR LR
comp=Z,780nm,17.7s
HHC Hu-ho-hao-te 41.65 341 *e*P **P** **13 20 52.1 -0.1**
HHC pP pP 13 21 07.9 -2.8
HHC sP sP 13 21 14.6 -4.9
HHC PP PP 13 22 32.6 +2.7
HHC PcP PcP 13 22 48.8 +1.0
HHC ScP ScP 13 26 33.0 +1.6
HHC PcS PcS 13 26 40.9 +1.7
HHC S **S** **13 27 05.3 +2.1**
HHC sS sS 13 27 32.3 -2.6
HHC SS SS 13 30 07.8 -3.5
HHC ScS ScS 13 30 47.5 -0.6
HHC pmax pmax
comp=Z,22nm,0.9s,mb4.9
HHC pmax pmax
comp=Z,110nm,4.8s
HHC LR LR
comp=N,200nm,18.0s
HHC LR LR
comp=E,310nm,14.6s
HHC LR LR
comp=Z,230nm,20.6s
CAN Canberra 41.74 155 *e*P **P** **13 20 54.8 +1.8**
CAN pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
CAN Canberra 41.74 155 *e*P **P** **13 20 54.8 +1.8**
comp=Z,9.4nm,0.8s,mb4.6
CN2 Changchun 41.76 357 *e*P **P** **13 20 53.0 0.0**
CN2 *e*pP pP 13 21 10.5 -1.1
CN2 *e*S **S** **13 27 06.6 +1.9**
CN2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
CN2 LR LR
comp=Z,400nm,20.0s
TOO Toolangi 42.35 160 *e*P **P** **13 21 00.0 +2.1**
SHL Shillong 42.37 307⇑ *i*x pP 13 21 14.0 -2.9
MDJ Mudanjiang 42.49 1 P **P** **13 20 58.9 -0.1**
MDJ pP pP 13 21 12.3 -5.3
MDJ PcP PcP 13 22 51.3 +0.8
MDJ PcS PcS 13 26 42.8 +0.4
MDJ S **S** **13 27 17.8 +2.3**
MDJ pmax pmax
comp=Z,21nm,1.7s,mb4.6
MDJ LR LR
comp=N,270nm,26.9s
MDJ LR LR
comp=E,67nm,44.1s
MDJ LR LR
comp=Z,310nm,31.6s
MDJ Mudanjiang 42.49 1 *e*P **P** **13 20 58.6 -0.4**
comp=Z,19nm,1.0s,mb4.8
DZM Mont Dzumac 44.05 125 *e*P **P** **13 21 12.7 +0.8**
comp=Z,27nm,1.2s,mb4.9
DZM *e*S **S** **13 27 50.4 +12**
comp=Z,91nm,29.1s
DZM *e*LR LR 13 33 38.5
comp=Z,426nm,29.1s
LSA Lhasa 44.96 312 P **P** **13 21 21.3 +2.3**
LSA pmax pmax
comp=Z,160nm,1.0s,mb5.7
LSA Lhasa 44.96 312 *e*P **P** **13 21 21.1 +2.1**
comp=Z,159nm,0.8s,mb5.8
LSA *e* 13 21 34.2
GTA Gaotai 45.54 329 P **P** **13 21 24.0 +0.5**
GTA pP pP 13 21 39.1 -3.1
GTA sP sP 13 21 46.1 -4.9
GTA PcP PcP 13 23 02.0 +1.0
GTA S **S** **13 28 02.1 +2.1**
GTA SS SS 13 31 20.1 -4.9
GTA pmax pmax
comp=Z,19nm,0.7s,mb4.9
GTA pmax pmax
comp=Z,150nm,5.9s
GTA LR LR
comp=N,230nm,26.8s
GTA LR LR
comp=E,220nm,27.4s
GTA LR LR
comp=Z,390nm,27.7s
YSS Yuzh-Sakhalins 46.51 13 *e*P **P** **13 21 30.5 -0.4**
YSS pmax pmax
comp=Z,60nm,1.0s,mb5.3
YSS Yuzh-Sakhalins 46.51 13 *e*P **P** **13 21 30.8 -0.1**
comp=Z,21nm,0.6s,mb5.0
HABR Khabarovsk 46.68 6 *e*P **P** **13 21 30.4 -1.9**
HABR *e**PP pP 13 21 39.0 -12
HABR *e* 13 23 03.3
HABR *e* 13 23 18.7
HABR *e*PPP 13 24 01.6
HABR *e*S **S** **13 28 16.8 +0.7**
HABR *e**SS sS 13 28 32.8 -15
HABR *e* 13 31 21.6
HABR *e*SSS 13 32 41.4
HABR pmax pmax
comp=N,19nm,1.0s
HABR pmax pmax
comp=E,10.0nm,0.6s
HABR pmax pmax
comp=Z,46nm,1.0s,mb5.2
HABR MLR MLR
comp=Z,152nm,16.0s
VIS Vishakhapatnam 47.04 292 *e*PKP **P** **13 21 33.8 -1.8**
KLR Kul'dur 47.18 3 *e*P **P** **13 21 31.8 -4.3**
KLR pmax pmax
comp=Z,40nm,1.6s,mb4.9
HIA Hailar 47.73 352 *i* P **P** **13 21 37.0 -3.4**
ULN Ulaanbaatar 49.36 341 *e*P **P** **13 21 53.1 +0.1**
comp=Z,36nm,0.7s,mb5.4
ULN *e*PcP PcP 13 23 14.8 +0.3
ULN LR LR
comp=Z,241nm,21.0s
ULN Ulaanbaatar 49.36 341 P **P** **13 21 53.5 +0.5**
SNR=13
ULN P 13 21 53.5
SNR=13
ULN Ulaanbaatar 49.36 341 P **P** **13 21 52.7 -0.3**
comp=Z,589nmcomp=Z,54nm,0.8s,mb5.6
SONM Songino Array 49.55 341 P **P** **13 21 54.4 0.0**
comp=Z,18nm,0.6s,mb5.2,baz=153,slow=8.0,SNR=113
SONM PcP PcP 13 23 15.6 +0.5
comp=Z,9.6nm,0.7s,baz=159,slow=3.7,SNR=8.8
SONM ScP ScP 13 27 05.4 +1.4
comp=Z,0.2nm,0.3s,baz=34,slow=34,SNR=3.2
SONM LR LR 13 43 37.0
comp=Z,234nm,21.9s,baz=150,slow=37
HYB Hyderabad 51.41 291 *e*P **P** **13 22 09.0 0.0**
HYB pmax pmax
comp=Z,250nm,1.0s,mb6.2
HYB Hyderabad 51.41 291 *e*P **P** **13 22 09.0 0.0**
comp=Z,250nm,1.0s,mb6.2
HYB Hyderabad 51.41 291⇑ *i*P **P** **13 22 06.0 -3.0**
comp=Z,125nm,1.0s,mb5.9
NGP Nagpur 51.81 295 *e*PKP **P** **13 22 11.0 -0.9**
NGP AMb AMB 13 22 12.5
comp=Z,102nm,1.7s,mb5.6
ZAK Zakamensk 52.79 340 *e*P **P** **13 22 18.0 -0.6**
ZAK *e* 13 23 25.4
ZAK pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
PTH Pithoragarh 53.43 306 *e*PKP **P** **13 22 22.8 -0.9**
LATR Latur 53.47 291 *e*PKP **P** **13 22 23.1 -1.1**
AKL Akola 53.55 294 *e*PKP **P** **13 22 24.8 +0.1**
AKL AMb AMB 13 22 25.6
comp=Z,266nm,0.0s
TLY Talaya 53.78 341 *e*P **P** **13 22 24.5 -1.3**
TLY *e*SS ScS 13 32 15.5 +7.6
TLY pmax pmax
comp=Z,6.0nm,0.8s,mb4.7

TLY MLR MLR
comp=Z,248nm,25.0s
TLY Talaya 53.78 341 *e*P **P 13 22 24.2 -1.6**
comp=Z,3.7nm,0.5s,mb4.7
TLY Talaya 53.78 341 P **P 13 22 26.3 +0.5**
SNR=5.2
TLY P 13 22 26.3
SNR=5.2
BHPL Bhopal 53.81 297 *e*PKP **P 13 22 25.5 -1.1**
BHPL AMb AMB 13 22 27.3
comp=Z,172nm,1.0s,mb6.0
IRK Irkutsk 54.06 342 *e*P **P 13 22 27.7 -0.2**
IRK *e* 13 23 32.3
IRK pmax pmax
comp=Z,31nm,2.1s,mb5.0
MOY Mondy 54.66 339 *e*P **P 13 22 32.7 +0.4**
MOY pmax pmax
comp=Z,44nm,2.1s,mb5.1
WMQ Urumqi 55.20 325 P **P 13 22 37.0 +0.7**
WMQ pP pP 13 22 53.0 -2.7
WMQ sP sP 13 23 00.0 -4.2
WMQ PP PP 13 24 43.0 +2.4
WMQ S **S 13 30 14.0 0.0**
WMQ ScS ScS 13 32 17.0 -1.5
WMQ SS SS 13 33 59.0 -0.3
WMQ pmax pmax
comp=Z,130nm,1.0s,mb5.9
WMQ LR LR
comp=N,510nm,18.0s
WMQ LR LR
comp=E,370nm,18.0s
WMQ LR LR
comp=Z,330nm,18.0s
KAD Karad 55.49 290 *e*PKP **P 13 22 36.6 -2.3**
NDI New Delhi 55.59 304 *e*PKP **P 13 22 37.0 -2.4**
POO Poona 56.02 291 *e*PKP **P 13 22 40.9 -1.7**
POO AMb AMB 13 22 43.2
comp=Z,91nm,0.7s,mb5.9
PEA0B Petropavlovsk- 56.42 21 *e*P **P 13 22 45.5 +0.6**
PETK Petropavlovsk- 56.42 21 P **P 13 22 45.5 +0.7**
comp=Z,53nm,0.8s,mb5.6,baz=199,slow=5.1,SNR=90
PETK pP pP 13 22 59.8 -4.4
comp=Z,13nm,0.7s,baz=188,slow=5.5,SNR=5.2
PETK PcP PcP 13 23 40.9 -0.2
comp=Z,7.1nm,0.6s,baz=222,slow=3.0,SNR=4.7
PETK LR LR 13 48 41.8
comp=Z,58nm,18.5s,baz=220,slow=38
PETK Petropavlovsk- 56.42 21 P **P 13 22 45.5 +0.7**
PETK *PP pP 13 22 59.8 -4.4
PETK 13 23 40.9
PETK pmax pmax
comp=Z,53nm,0.8s,mb5.6
PETK MLR MLR
comp=Z,58nm,18.5s
PET Petropavlovsk 56.69 21 *e*P **P 13 22 47.3 +0.5**
PET *e*S **S 13 30 37.9 +4.5**
PET pmax pmax
comp=Z,86nm,1.1s,mb5.7
PET pmax pmax
comp=Z,200nm,5.5s
PET Petropavlovsk 56.69 21 *e*P **P 13 22 46.9 +0.1**
comp=Z,84nm,1.0s,mb5.7
SDNR Sundarnagar 56.75 307 *e*PKP **P 13 22 46.5 -1.1**
AJM Ajmer 57.12 300 *e*PKP **P 13 22 49.0 -1.3**
BHK Bhakra 57.16 307 *ex* **P 13 22 46.8 -3.7**
RPZ Rata Peaks 59.28 145 LR LR 13 50 38.3
comp=Z,202nm,18.4s,baz=278,slow=38
YAK Yakutsk 59.94 1 *e*P **P 13 23 08.6 -0.6**
YAK *e* 13 23 54.4
YAK *e* 13 25 22.6
YAK *i* S **S 13 31 14.6 -0.8**
YAK *e**SS sS 13 31 37.3 -11
YAK pmax pmax
comp=Z,72nm,1.0s,mb5.7
YAK pmax pmax
comp=N,15nm,0.9s
YAK pmax pmax
comp=E,7.0nm,0.9s
YAK pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
YAK smax
comp=E,38nm,2.0s
YAK smax
comp=N,85nm,1.6s
YAK Yakutsk 59.94 1 *e*P **P 13 23 08.8 -0.4**
comp=N,75nm,0.8s,mb5.8
YAK LR LR
comp=Z,205nm,21.0s
MK31 Makanchi Array 60.03 325 *e*P **P 13 23 10.1 -0.1**
MKAR Makanchi Array 60.03 325 P **P 13 23 10.3 +0.1**
comp=Z,61nm,0.5s,mb5.9,baz=115,slow=8.2,SNR=431
MKAR PcP PcP 13 23 55.2 -0.2
comp=Z,15nm,0.8s,baz=112,slow=5.4,SNR=4.6
MKAR LR LR 13 53 55.7
comp=Z,79nm,18.6s,baz=264,slow=41
MKAR Makanchi Array 60.03 325 P **P 13 23 10.3 +0.1**
MKAR 13 23 55.3
MKAR pmax pmax
comp=Z,61nm,0.5s
MKAR MLR MLR
comp=Z,79nm,18.6s
KSH Kashi 60.56 315⇑ *i*P **P 13 23 15.5 +1.5**
KSH pP pP 13 23 31.6 -2.0
KSH sP sP 13 23 38.6 -3.5
KSH PcP PcP 13 23 59.1 +1.3
KSH PP PP 13 25 31.5 +3.2
KSH ScP ScP 13 27 53.6 +1.1
KSH PcS PcS 13 28 00.3 0.0
KSH S **S 13 31 23.8 -0.4**
KSH ScS ScS 13 32 57.1 -0.9
KSH SS SS 13 35 25.6 +1.9
KSH pmax pmax
comp=Z,170nm,1.5s,mb5.8
KSH LR LR
comp=N,1μm,10.8s
KSH LR LR
comp=E,530nm,10.5s
KSH LR LR
comp=Z,70nm,3.6s
BHJ Bhuj 60.76 296 *e*PKP **P 13 23 15.9 +0.3**
ULHL Ulahol 61.54 318 P **P 13 23 21.9 +1.5**
SNR=9.8
KZA Kyzart 62.13 318 P **P 13 23 25.8 +1.3**
SNR=49
TKM2 Tokmak 2 62.26 319 P **P 13 23 26.0 +0.7**
SNR=73
TKM2 Tokmak 2 62.26 319 *e*P **P 13 23 25.7 +0.4**
TKM2 pmax pmax
comp=Z,92nm,0.9s,mb5.8
TKM2 Tokmak 2 62.26 319 *e*P **P 13 23 25.7 +0.4**
comp=Z,92nm,0.9s,mb5.8
KBK Karagaybulak 62.58 318 P **P 13 23 28.2 +0.7**
SNR=27
UCH Uchtor 62.69 317 P **P 13 23 29.7 +1.4**
SNR=161
UCH Uchtor 62.69 317 *e*P **P 13 23 29.4 +1.1**
comp=Z,112nm,0.8s,mb5.8
CHMS Chumysh 62.85 318 P **P 13 23 29.4 +0.1**
SNR=21
AAK Ala-Archa 62.87 318 P **P 13 23 30.1 +0.7**
comp=Z,217nm,1.0s,mb6.0,SNR=13
AAK Ala-Archa 62.87 318 P **P 13 23 30.2 +0.8**
SNR=18
AAK Ala-Archa 62.87 318 P **P 13 23 29.1 -0.3**
comp=Z,9.7nm,0.4s,mb5.0,baz=116,slow=6.4,SNR=34
AAK Ala-Archa 62.87 318 *ce*P **P 13 23 30.0 +0.6**
AAK pmax pmax
comp=Z,36nm,1.7s,mb5.0
AAK Ala-Archa 62.87 318 *e*P **P 13 23 29.1 -0.3**
comp=Z,42nm,1.0s,mb5.3
AAK Ala-Archa 62.87 318 P **P 13 23 30.2 +0.8**
SNR=23
AAK P 13 23 30.2
SNR=23
AAK Ala-Archa 62.87 318 P **P 13 23 29.9 +0.5**
comp=Z,104nmcomp=Z,9.6nm,0.9s,mb4.7
FRU Bishkek 62.87 318 *e*P **P 13 23 29.0 -0.4**
FRU pmax pmax
comp=Z,60nm,1.8s,mb5.2
ZAA0 Zalesovo Array 62.98 333 *e*P **P 13 23 28.4 -1.4**
ZALV Zalesovo Beam 62.98 333 P **P 13 23 29.1 -0.7**
comp=Z,5.6nm,0.3s,mb5.0,baz=114,slow=6.8,SNR=21
ZALV pP pP 13 23 45.9 -3.7
comp=Z,4.1nm,0.3s,baz=122,slow=5.6,SNR=2.2
ZALV LR LR 13 52 36.8
comp=Z,84nm,22.0s,baz=113,slow=38
ZALV Zalesovo Beam 62.98 333 P **P 13 23 29.2 -0.7**
ZALV *PP pP 13 23 45.9 -3.7
ZALV pmax pmax
comp=Z,6.0nm,0.3s,mb5.0
ZALV MLR MLR
comp=Z,84nm,22.0s
USP Ospenovka 63.13 318 P **P 13 23 31.5 +0.4**
SNR=87
AML Almayashu 63.21 317 P **P 13 23 32.8 +1.1**
SNR=184
AML Almayashu 63.21 317 *e*P **P 13 23 32.8 +1.2**
comp=Z,196nm,1.0s,mb6.0
EKS2 Erkin-Say 63.37 318 P **P 13 23 33.4 +0.7**
SNR=54
EKS2 Erkin-Say 63.37 318 *e*P **P 13 23 33.3 +0.6**
comp=Z,106nm,0.8s,mb5.8
SEY Seymchan 63.37 12 *ce*P **P 13 23 33.5 +1.2**
KBL Kabul 64.02 308 *e*P **P 13 23 36.9 -0.3**
KBL pmax pmax
comp=Z,74nm,0.8s,mb5.6
KBL Kabul 64.02 308 *e*P **P 13 23 36.9 -0.3**
comp=Z,74nm,0.8s,mb5.6
KURK Kurchatov 64.20 327 P **P 13 23 37.3 -0.7**
comp=Z,2μm,0.5s
KURK Kurchatov 64.20 327 P **P 13 23 37.1 -0.9**
comp=Z,206nm,0.8s,mb6.0,baz=128,slow=5.6,SNR=288
KURK Kurchatov 64.20 327 *ce*P **P 13 23 37.5 -0.5**
KURK pmax pmax
comp=Z,262nm,1.0s,mb6.0
KURK Kurchatov 64.20 327 *e*P **P 13 23 37.4 -0.6**
comp=Z,226nm,0.9s,mb6.0
KURK LR LR
comp=Z,112nm,21.0s
KURK Kurchatov 64.20 327 P **P 13 23 37.6 -0.4**
SNR=84
KURK P 13 23 37.6
SNR=84
NVS Novosibirsk 64.26 333 *e*P **P 13 23 35.7 -2.6**
NVS pmax pmax
comp=N,49nm,1.4s
NVS pmax pmax
comp=E,52nm,1.4s
NVS pmax pmax
comp=Z,89nm,1.4s,mb5.4
TIXI Tiksi 69.59 0 *e*P **P 13 24 10.5 -1.4**
TIXI pmax pmax
comp=Z,14nm,0.6s,mb5.0
TIXI Tiksi 69.59 0 *e*P **P 13 24 10.5 -1.4**
comp=Z,14nm,0.6s,mb5.0
BVAR Borovoye Array 69.78 327 P **P 13 24 12.9 -0.4**
comp=Z,90nm,0.9s,mb5.6,baz=122,slow=7.2,SNR=356
BVAR Borovoye Array 69.78 327 P **P 13 24 12.9 -0.4**
BVAR pmax pmax
comp=Z,90nm,0.9s
BRVK Borovoye 69.85 327 P **P 13 24 13.2 -0.6**
comp=Z,979nm,0.6s,SNR=62
BRVK Borovoye 69.85 327 *ce*P **P 13 24 13.3 -0.5**
BRVK pmax pmax
comp=Z,229nm,1.2s,mb5.9
BRVK Borovoye 69.85 327 *e*P **P 13 24 13.4 -0.3**
comp=Z,188nm,1.0s,mb5.9
BRVK LR LR
comp=Z,182nm,20.0s
BRVK Borovoye 69.85 327 P **P 13 24 13.7 0.0**
SNR=73
BRVK P 13 24 13.7
SNR=73
BILL Bilibino 70.81 14 *e*P **P 13 24 19.0 -0.4**
BILL *i* pP 13 24 39.9 +0.4
BILL *i* 13 26 53.5
BILL pmax pmax
comp=Z,26nm,2.5s,mb4.6
BILL MLR MLR
comp=Z,100nm,18.0s
BILL Bilibino 70.81 14 P **P 13 24 18.6 -0.8**
comp=Z,7.9nm,0.8s,mb4.6
HOQ Hoqain 72.02 294 P **P 13 24 27.4 -0.2**
SNR=5.3
BSY Bisya 72.04 293 P **P 13 24 27.7 0.0**
SNR=5.5
ARQ Araqi 72.72 294 P **P 13 24 31.5 -0.2**
SNR=11
ABKT Ailbek 73.40 309 P **P 13 24 35.8 +0.4**
comp=Z,584nm,0.8s,mb6.5,SNR=14
ASUD Al Ashush, Dub 73.92 295 P **P 13 24 39.5 +0.7**
SNR=5.1
ABKAR Akbulak array 74.66 321 *e*P **P 13 24 41.9 -0.6**
comp=Z,36nm,0.8s,mb5.2
GAMB Gambell 75.29 23 *e*P **P 13 24 46.9 +1.0**
comp=Z,91nm,1.3s,mb5.3
AKTK Aktyubinsk 76.16 322 P **P 13 24 50.5 -0.5**
AKTO Aktyubinsk 76.16 322 P **P 13 24 50.5 -0.5**
comp=Z,47nm,0.9s,mb5.2,baz=100,slow=7.0,SNR=124
AKTO Aktyubinsk 76.16 322 P **P 13 24 50.6 -0.5**
AKTO pmax pmax
comp=Z,47nm,0.9s,mb5.2
SVE Sverdlovsk 76.41 328⇓ *e*P **P 13 24 51.8 -0.6**
SVE pmax pmax
comp=Z,130nm,1.1s,mb5.6
ARU Arti 77.39 328 P **P 13 24 56.2 -1.7**
comp=Z,383nm,0.8s,mb6.2,SNR=11
ARU Arti 77.39 328 *c i*P **P 13 24 56.7 -1.2**
ARU *e* 13 25 09.0
ARU *e* 13 27 50.6
ARU *e*PPP 13 29 35.5
ARU S S 13 34 45.5 +3.3
ARU pmax pmax
comp=Z,82nm,1.0s,mb5.4
ARU Arti 77.39 328 *e*P **P 13 24 56.3 -1.6**
comp=Z,92nm,1.0s,mb5.5
SDPT Sand Point 77.66 34 *e*P **P 13 24 59.9 +0.5**
comp=Z,177nm,0.6s,mb6.0
CHGN Chignik 79.02 33 *e*P **P 13 25 07.4 +0.5**
SOKR Solikamsk 79.13 331 *c i*P **P 13 25 06.5 -0.9**
SOKR pmax pmax
comp=Z,40nm,1.2s,mb5.1
QRN Al-Qurain 80.83 299 *e*P **P 13 25 15.8 -1.5**
QRN AMb AMB 13 25 16.7
comp=Z,72nm,0.9s,mb5.5
RDF Al-Radifah 81.16 299 *e*P **P 13 25 17.7 -1.3**
RDF AMb AMB 13 25 20.4
comp=Z,69nm,1.4s,mb5.3
MIB Mutribah 81.39 300 *e*P **P 13 25 18.7 -1.5**
MIB AMb AMB 13 25 20.1
comp=Z,69nm,1.0s,mb5.4
NAY Al-Naaiem 81.45 299 *e*P **P 13 25 18.5 -2.1**
NAY AMb AMB 13 25 20.3
comp=Z,38nm,1.1s,mb5.1
SVW2 Sparrevohn 81.49 28 *e*P **P 13 25 21.6 +1.5**
TTA Tatalina 81.67 27 *e*P **P 13 25 22.4 +1.4**
OHAK Old Harbor 81.97 33 *e*P **P 13 25 24.3 +1.6**
comp=Z,93nm,0.7s,mb5.7
KDAK Kodiak Island 82.43 32 P **P 13 25 26.0 +0.9**
comp=Z,969nm,0.5s,SNR=36
KDAK Kodiak Island 82.43 32 P **P 13 25 26.2 +1.1**
comp=Z,105nm,0.7s,mb5.8,baz=253,slow=3.1,SNR=91
KDAK Kodiak Island 82.43 32 *ce*P **P 13 25 26.1 +1.0**
KDAK Kodiak Island 82.43 32 *e*P **P 13 25 25.9 +0.9**
comp=Z,273nm,1.3s,mb5.9
KDAK LR LR
comp=Z,181nm,22.0s
MAW Mawson 82.73 201 *e*P **P 13 25 26.2 -0.2**
comp=Z,6.2nm,0.6s,mb4.6
MAW Mawson 82.73 201 P **P 13 25 26.5 +0.1**
comp=Z,9.6nm,0.7s,mb4.7,baz=70,slow=6.3,SNR=20
MAW LR LR 13 59 36.1
comp=Z,93nm,21.9s,baz=230,slow=34
MAW Mawson 82.73 201 *e*P **P 13 25 26.0 -0.4**
comp=Z,2.4nm,0.9s
RSO Redoubt South 82.75 29 *e*P **P 13 25 26.8 +0.1**
PPT Papeete 82.86 108 *e*LR LR 13 51 36.2
comp=Z,208nm,27.5s
PPT Papeete 82.86 108 LR LR 13 59 02.5
comp=Z,136nm,20.0s,baz=269,slow=33
PPLA Purkeypile 83.39 27 *e*P **P 13 25 30.8 +0.8**
comp=Z,38nm,0.6s,mb5.4
CHUM Lake Minchumin 83.48 26 *e*P **P 13 25 31.6 +1.3**
comp=Z,94nm,1.1s,mb5.5
GNI Garni 84.00 310 P **P 13 25 33.7 +0.2**
comp=Z,3.9nm,0.4s,mb4.6,baz=167,slow=19,SNR=5.8
GNI Garni 84.00 310 *ce*P **P 13 25 33.9 +0.4**
GNI pmax pmax
comp=Z,37nm,1.7s
GNI Garni 84.00 310 *e*P **P 13 25 33.4 -0.1**
comp=Z,24nm,0.8s,mb5.1
MTA Mtatsminda 84.03 312 P **P 13 25 34.3 +0.6**
KTH Kantishna Hill 84.05 26 *e*P **P 13 25 34.0 +0.7**
comp=Z,79nm,1.2s,mb5.4
TBLG Delisi 84.07 312 P **P 13 25 34.5 +0.6**
BPAW Bear Paw Mtn. 84.09 26 *e*P **P 13 25 34.2 +0.7**
comp=Z,24nm,0.8s,mb5.1
RC01 Rabbit Creek A 84.30 29 *e*P **P 13 25 34.8 +0.2**
comp=Z,80nm,0.7s,mb5.7
TRF Thorofare Moun 84.31 27 *e*P **P 13 25 35.0 +0.4**
comp=Z,75nm,1.2s,mb5.4
SEW Seward 84.33 30 *e*P **P 13 25 34.2 -0.6**
comp=Z,85nm,0.8s,mb5.6
GOR Gori 84.55 312 P **P 13 25 37.2 +0.9**
PMR Palmer 84.64 28 *e*P **P 13 25 36.8 +0.5**
PMR pmax pmax
comp=Z,116nm,0.9s,mb5.8
PMR Palmer 84.64 28 *e*P **P 13 25 36.8 +0.5**
comp=Z,116nm,0.9s,mb5.8
ZEI Tsey 84.74 313 *e*P **P 13 25 34.8 -2.4**
ZEI pmax pmax
comp=Z,55nm,1.3s,mb5.3
COLD Coldfoot 84.82 23 *e*P **P 13 25 38.3 +1.1**
comp=Z,24nm,0.5s,mb5.4
MCK McKinley 84.95 26 *e*P **P 13 25 38.1 +0.3**
MCK pmax pmax
comp=Z,151nm,1.4s,mb5.7
MCK McKinley 84.95 26 *e*P **P 13 25 38.1 +0.3**
comp=Z,151nm,1.4s,mb5.7
ONI Oni 85.06 312 P **P 13 25 39.6 +0.7**
COLA College 85.53 25 *e*P **P 13 25 39.6 -1.1**
COLA pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
COLA College 85.53 25 *e*P **P 13 25 39.5 -1.1**
comp=Z,3.2nm,0.6s,mb4.4
KIV Kislovodsk 85.66 314 *e*P **P 13 25 41.2 -0.6**
KIV pmax pmax
comp=Z,21nm,1.1s,mb5.0
KIV Kislovodsk 85.66 314 *e*P **P 13 25 41.6 -0.1**
comp=Z,22nm,0.8s,mb5.1
KIV Kislovodsk 85.66 314 P **P 13 25 42.2 +0.4**
SNR=7.8
KIV P 13 25 42.2
SNR=7.8
DIV Divide 86.22 29 *e*P **P 13 25 45.5 +1.3**
comp=Z,175nm,1.1s,mb5.9
PAX Paxson 86.45 27 *e*P **P 13 25 46.0 +0.7**
PAX pmax pmax
comp=Z,44nm,1.1s,mb5.3
PAX Paxson 86.45 27 *e*P **P 13 25 46.0 +0.7**
comp=Z,44nm,1.1s,mb5.3
VRHR Novokhopersk 86.54 321 *e*P **P 13 25 45.1 -0.9**
VRHR pmax pmax
comp=Z,60nm,0.6s,mb5.7
VRHR pmax pmax
comp=N,10.0nm,0.3s
VRHR pmax pmax
comp=E,7.0nm,0.3s
BMRM Bremner River 86.78 29 *e*P **P 13 25 47.4 +0.5**
comp=E,27nm,0.9s,mb5.2
MENT Mentasta 87.25 27 *e*P **P 13 25 49.7 +0.5**
VORD Divnogorie 88.02 321 *e*P **P 13 25 51.6 -1.5**
VORD pmax pmax
comp=N,10.0nm,1.0s
VORD pmax pmax
comp=E,40nm,1.0s
VORD pmax pmax
comp=Z,20nm,1.0s,mb5.1
VSR Storozhevoye 88.09 321 *e*P **P 13 25 52.2 -1.2**
VSR pmax pmax
comp=N,10.0nm,0.6s
VSR pmax pmax
comp=E,7.0nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
EGAK Eagle 88.38 25 *e*P **P 13 25 54.2 -0.4**
comp=Z,11nm,0.7s,mb5.0
MOS Moscow 88.91 326 *e*P **P 13 25 54.7 -2.5**
MOS *e* 13 29 23.4
MOS pmax pmax
comp=Z,100nm,1.3s,mb5.7
MOS pmax pmax
comp=Z,98nm,1.1s,mb5.8
MOS Moscow 88.91 326 *e*P **P 13 25 54.8 -2.4**
PNL Peninsula 89.38 30 *e*P **P 13 26 00.1 +0.8**
comp=Z,11nm,0.7s,mb5.0
ANN Anapa 89.42 315 *e*P **P 13 25 57.6 -2.2**
ANN pmax pmax
comp=Z,43nm,0.9s,mb5.5
OBN Obninsk 89.54 325 *e*P **P 13 25 58.9 -1.3**
OBN *i* pP 13 26 17.3 -3.7
OBN pmax pmax
comp=Z,118nm,1.6s,mb5.8
OBN Obninsk 89.54 325 *e*P **P 13 25 58.9 -1.2**
comp=Z,45nm,0.8s,mb5.7
LVZ Lovozero 89.67 338 P **P 13 25 59.4 -1.1**
comp=Z,218nm,0.9s,mb6.3,SNR=5.1
LVZ Lovozero 89.67 338 *ce*P **P 13 25 59.6 -0.9**
LVZ pmax pmax
comp=Z,45nm,1.2s,mb5.5
APA Apatity 90.17 338⇓ *i*P **P 13 26 02.0 -0.9**
APA *e* 13 29 34.0
APA *e*PPP 13 31 42.0
APA pmax pmax
comp=Z,54nm,1.4s,mb5.5
APA MLR MLR
comp=Z,300nm,21.0s
ASF Jabal al Asfar 90.36 302 P **P 13 26 04.8 +0.3**
comp=Z,12nm,1.0s,mb5.0,baz=342,slow=1.7,SNR=13
ASF PP PP 13 29 43.0 +3.3
comp=Z,1.7nm,0.3s,baz=252,slow=6.2,SNR=7.1
ASF Jabal al Asfar 90.36 302 P **P 13 26 04.8 +0.3**
ASF 13 29 43.0
ASF pmax pmax
comp=Z,12nm,1.0s
ASF pmax pmax
comp=Z,2.0nm,0.3s
INK Inuvik 91.15 22 P **P 13 26 06.8 -0.5**
comp=Z,6.2nm,0.6s,mb4.9,baz=286,slow=4.3,SNR=33
INK Inuvik 91.15 22 P **P 13 26 06.8 -0.6**
INK pmax pmax
comp=Z,6.0nm,0.6s
INK Inuvik 91.15 22 *e*P **P 13 26 06.6 -0.8**
comp=Z,12nm,1.1s,mb5.0
SYO Syowa Base 91.42 201⇓ *e*X **P 13 26 06.6 -2.0**
SKAG Skagway 91.46 31 *e*P **P 13 26 10.6 +1.6**
comp=Z,24nm,0.9s,mb5.3
JOF Joensuu 91.57 333 *e*P **P 13 26 06.2 -3.2**
JOF pmax pmax
comp=Z,24nm,0.5s,mb5.7
JOF Joensuu 91.57 333 *ep* **P 13 26 06.2 -3.2**
comp=Z,24nm,0.5s,mb5.7
JOF Joensuu 91.57 333 *ep* **P 13 26 06.2 -3.2**
comp=Z,24nm,0.5s,mb5.7
MMAI Mount Meron Ar 91.57 303 P **P 13 26 10.5 +0.4**
comp=Z,12nm,0.9s,mb5.1,baz=72,slow=8.8,SNR=8.8
TAOE Nuku Hiva Isla 91.60 99 *e*LR LR 13 55 42.5
comp=Z,140nm,28.2s
SIM Simferopol' 91.77 315 *e*P **P 13 26 11.5 +0.7**
SIM pmax pmax
comp=Z,22nm,0.9s,mb5.4
EIL Elat 92.16 300 P **P 13 26 13.1 +0.2**
comp=Z,2.7nm,0.4s,mb4.8,baz=248,slow=2.0,SNR=3.7
KEV Kevo 92.17 340 *e*P **P 13 26 09.6 -2.5**
KEV pmax pmax
comp=Z,7.0nm,0.7s,mb5.0
KEV Kevo 92.17 340 *ep* **P 13 26 09.6 -2.5**
comp=Z,7.3nm,0.7s,mb5.0
KEV Kevo 92.17 340 *ep* **P 13 26 09.6 -2.5**
comp=Z,7.3nm,0.7s,mb5.0
BR131 Keskin Array S 92.53 310 *e*P **P 13 26 13.2 -1.3**
comp=Z,4.8nm,0.9s,mb4.8
BRTR Keskin Array B 92.53 310 P **P 13 26 13.2 -1.2**
comp=Z,5.4nm,0.9s,mb4.8,baz=112,slow=5.5,SNR=24
BRTR PP PP 13 30 00.6 +4.0
comp=Z,7.0nm,1.1s,baz=104,slow=5.2,SNR=9.8
BRTR LR LR 14 10 33.7
comp=Z,38nm,21.3s,baz=197,slow=37
BRTR Keskin Array B 92.53 310 P **P 13 26 13.3 -1.1**
BRTR 13 30 00.6
BRTR pmax pmax
comp=Z,5.0nm,1.0s
BRTR pmax pmax
comp=Z,7.0nm,1.1s
BRTR MLR MLR
comp=Z,38nm,21.3s
ARCES ARCESS Array B 92.73 340 P **P 13 26 13.4 -1.2**
comp=Z,21nm,0.7s,mb5.6,baz=79,slow=6.3,SNR=88
ARCES pP pP 13 26 31.7 -3.8
comp=Z,9.9nm,0.9s,baz=64,slow=5.5,SNR=3.0

ARCES LR LR 14 13 38.6
comp=Z,69nm,18.6s,baz=172,slow=39
ARE0 ARCESS Array S 92.73 340 *eP* **P 13 26 13.3 -1.3**
KAF Kangasniemi 93.99 333 *eP* **P 13 26 17.7 -2.9**
KAF pmax pmax
comp=Z,6.0nm,0.4s,mb5.3
KAF Kangasniemi 93.99 333 *ep* **P 13 26 17.7 -2.9**
comp=Z,5.7nm,0.4s,mb5.2
KAF Kangasniemi 93.99 333 *ep* **P 13 26 17.7 -2.9**
comp=Z,5.7nm,0.4s,mb5.2
FINES FINESS Array B 94.24 332 P **P 13 26 20.3 -1.4**
comp=Z,8.4nm,0.5s,mb5.3,baz=53,slow=5.4,SNR=39
FINES LR LR 14 13 46.9
comp=Z,117nm,20.7s,baz=243,slow=39
DLBC Dease Lake 94.33 31 P **P 13 26 23.2 +0.9**
comp=Z,9.0nm,0.8s,mb5.1,baz=287,slow=5.7,SNR=22
DLBC Dease Lake 94.33 31 *eP* **P 13 26 23.0 +0.7**
AKASG Malin Array Be 94.40 321 P **P 13 26 20.9 -1.9**
comp=Z,2.3nm,0.4s,mb4.8,baz=69,slow=4.4,SNR=17
AKASG Malin Array Be 94.40 321 P **P 13 26 20.9 -1.8**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
VRI Vrincioaia 96.81 316‖ *eP* **P 13 26 33.1 -0.8**
MLR Muntele Rosu 97.42 316⇑ *eP* **P 13 26 36.4 -0.2**
BURAR Bucovina Array 97.52 318⇑ *eP* **P 13 26 36.1 -0.9**
BUR08 Bucovina Ar. S 97.52 318 *eP* **P 13 26 36.3 -0.7**
RES Resolute Bay 99.22 11 *eP* **P 13 26 43.8 -0.3**
comp=Z,16nm,0.8s,mb5.6
CRVS Cervenica-Dubn 99.68 320 *eP* Pdif 13 26 46.1 -0.4
CRVS pmax pmax
comp=Z,11nm,1.0s,mb5.4
CRVS Cervenica-Dubn 99.68 320 *eP* Pdif 13 26 46.1 -0.4
comp=Z,11nm,1.0s
CRVS Cervenica-Dubn 99.68 320 PDIF Pdif 13 26 46.1 -0.4
STHS Stebnicka Huta 99.69 321 *eP* Pdif 13 26 47.0 +0.5
STHS pmax pmax
comp=Z,3.0nm,0.9s,mb4.9
STHS Stebnicka Huta 99.69 321 *eP* Pdif 13 26 47.0 +0.5
comp=Z,3.1nm,0.9s
STHS Stebnicka Huta 99.69 321 PDIF Pdif 13 26 47.0 +0.5
YKA Yellowknife Ar 100.36 25 P Pdif 13 26 49.7 +0.2
comp=Z,3.1nm,0.7s,baz=299,slow=4.4,SNR=8.5
YKA PKiKP PKiKP 13 31 16.0 +0.1
comp=Z,1.0nm,0.5s,baz=296,slow=2.0,SNR=4.0
YKA Yellowknife Ar 100.36 25 P Pdif 13 26 49.7 +0.2
KECS Kecovo 100.41 320 *eP* Pdif 13 26 49.4 -0.3
KECS pmax pmax
comp=Z,4.0nm,1.1s
KECS Kecovo 100.41 320 *eP* Pdif 13 26 49.4 -0.3
comp=Z,4.3nm,1.1s
KECS Kecovo 100.41 320 PDIF Pdif 13 26 49.4 -0.3
HFS Hagfors 100.42 332 P Pdif 13 26 48.0 -1.8
comp=Z,8.2nm,0.6s,baz=101,slow=4.7,SNR=20
HFS Hagfors 100.42 332 P Pdif 13 26 48.0 -1.8
HFS pmax pmax
comp=Z,8.0nm,0.6s
NB2 NORSAR Subarra101.17 334 P Pdif 13 26 50.9 -2.2
comp=Z,6.6nm,0.7s,baz=67,slow=4.4
NB2 NORSAR Subarra101.17 334 P Pdif 13 26 50.9 -2.2
NB2 NORSAR Subarra101.17 334 P Pdif 13 26 50.9 -2.2
NOA NORSAR Array B101.17 334 P Pdif 13 26 51.5 -1.6
comp=Z,5.5nm,0.7s,baz=66,slow=4.5,SNR=14
NOA NORSAR Array B101.17 334 P Pdif 13 26 51.5 -1.6
NOA pmax pmax
comp=Z,6.0nm,0.7s
NOA NORSAR Array B101.17 334 P Pdif 13 26 51.5 -1.6
VYHS Vyhne 101.47 320 *eP* Pdif 13 26 53.2 -1.2
VYHS pmax pmax
comp=Z,68nm,4.2s
VYHS Vyhne 101.47 320 *eP* Pdif 13 26 53.2 -1.2
comp=Z,68nm,4.2s
VYHS Vyhne 101.47 320 PDIF Pdif 13 26 53.2 -1.2
BRG Berggiesshubel 103.73 324 *eP* Pdif 13 27 03.8 -0.7
comp=Z,8.0nm,1.1s
BRG Berggiesshubel 103.73 324 *eP* Pdif 13 27 03.8 -0.7
BRG pmax pmax
comp=Z,5.0nm,1.1s
CLL Collm 104.12 324 *eP* Pdif 13 27 06.0 -0.2
CLL *e* 13 31 26.0
CLL pmax pmax
comp=Z,9.0nm,1.3s
CLL MLR MLR
comp=Z,100nm,20.1s
CLL Collm 104.12 324 *e*Pdif Pdif 13 27 06.0 -0.2
comp=Z,9.0nm,1.3s
CLL *e*PP PP 13 31 26.0 +1.3
CLL LR LR
comp=Z,100nm,20.1s
CLL Collm 104.12 324 *e*Pdif Pdif 13 27 06.0 -0.2
comp=Z,9.0nm,1.3s
CLL LmV 13 25 00.0
comp=Z,100nm,20.1s
CLL *e*PP PP 13 31 26.0 +1.3
CLL *e*SS SS 13 46 06.0 -1.4
CLL Collm 104.12 324 *e*S PP 13 31 26.0 +1.3
NVAR Mina Array Bea 106.73 49 PKiKP PKiKP 13 31 29.8 +1.5
comp=Z,0.8nm,0.7s,baz=252,slow=3.8,SNR=6.9
HLID Hailey 107.89 43 *e*PKiKP PKiKP 13 31 31.9 +1.6
MCMT McKenzie Canyo 108.48 41 *e*PKiKP PKiKP 13 31 32.5 +1.1
WLF Walferdange 108.79 325 P Pdif 13 27 24.9 -2.1
DOU Dourbes 109.48 325 P Pdif 13 27 28.8 -1.3
LPG La Plagne 110.25 320 *e*PP PP 13 32 13.0 +3.3
comp=Z,24nm,0.9s
LPL La Plagne 110.26 320 *e*PP PP 13 32 13.0 +3.3
comp=Z,30nm,0.9s
REDW Red Top Meadow 110.37 42 *e*PKiKP PKiKP 13 31 36.0 +1.0
MSU Marysvale 111.26 47 *e*PKiKP PKiKP 13 31 38.2 +1.4
PDAR Pinedale Array 111.48 42 PKiKP PKiKP 13 31 36.5 -0.6
comp=Z,1.2nm,0.7s,baz=133,slow=3.1,SNR=6.9
WUAZ Wupatki 112.91 50 *e*PKiKP PKiKP 13 31 40.6 +0.6
PV01 Paradox Valley 114.03 46 *e*PKiKP PKiKP 13 31 43.4 +1.2
RSSD Black Hills 114.46 39 *e*PKiKP PKiKP 13 31 42.4 -0.4
ISCO Idaho Springs 115.43 44 *e*PKiKP PKiKP 13 31 45.6 +0.8
ULM Lac du Bonnet 115.62 30 PKP PKPdf 13 31 44.1 -0.7
comp=Z,5.3nm,0.6s,baz=340,slow=3.8,SNR=6.0
SDCO Great Sand Dun 116.41 46 *e*PKPdf PKPdf 13 31 48.0 +1.3
ANMO Albuquerque 116.86 49 PKP PKPdf 13 31 49.2 +1.5
comp=Z,5.1nm,0.8s,baz=206,slow=3.9,SNR=13
ANMO Albuquerque 116.86 49 PKiKP PKPdf 13 31 49.2 +1.5
ANMO pmax pmax
comp=Z,5.0nm,0.8s
ANMO Albuquerque 116.86 49 *e*PKPdf PKPdf 13 31 48.6 +0.9
BNM Barren Site 117.04 50 *e*PKPdf PKPdf 13 31 48.7 +0.7
MNTX Cornudas Mount 118.95 52 *e*PKPdf PKPdf 13 31 52.2 +0.4
ECSD EROS Data Cent 119.19 36 *e*PKPdf PKPdf 13 31 51.3 -0.6
EYMN Ely 119.31 30 *e*PKPdf PKPdf 13 31 51.5 -0.5
AMTX Amarillo 120.44 47 *e*PKPdf PKPdf 13 31 54.6 +0.1
TXAR Lajitas Array 121.23 54 PKP PKPdf 13 31 56.9 +0.7
comp=Z,3.4nm,0.7s,baz=223,slow=0.9,SNR=29
TXAR PKKPbc PKKPbc 13 41 58.3 -0.4
comp=Z,0.1nm,0.6s,baz=335,slow=4.0,SNR=3.4
COWI Conover 121.75 30 *e*PKPdf PKPdf 13 31 55.7 -1.0
SCHQ Schefferville 122.00 10 PKP PKPdf 13 31 57.1 +0.2
comp=Z,3.3nm,0.6s,baz=340,slow=2.4,SNR=9.2
WMOK Wichita Mounta 122.61 46 *eP* Pdif 13 28 30.5 +2.1
WMOK *e* 13 31 58.4
JFWS Jewell Farm 123.33 33 *e*PKiKP PKPdf 13 31 58.9 -1.0
JCT Junction City 123.82 51 *e*PKiKP PKPdf 13 32 01.5 +0.3
TORD Torodi Ar. Bea 125.17 287 PKP PKPdf 13 32 03.0 -1.1
comp=Z,2.3nm,0.7s,baz=86,slow=1.8,SNR=14
MIAR Mount Ida 126.37 43 *e*PKiKP PKPdf 13 32 05.7 -0.2
OLIL Olney 127.32 36 *e*PKPdf PKPdf 13 32 06.9 -0.7
WVT Waverly 129.18 38 *e*PKiKP PKPdf 13 32 11.3 0.0
NCB Newcomb 129.94 21 *e*PKPdf PKPdf 13 32 13.2 +0.7
BINY Binghamton 130.77 24 *e*PKPdf PKPdf 13 32 13.6 -0.5
LRAL Lakeview Retre 131.67 41 *e*PKPdf PKPdf 13 32 16.1 0.0
LCO Las Campanas 147.44 148 *e*PKPbc PKPbc 13 32 47.4 +0.2
GTBY Guantanamo Bay 148.21 46 *e*PKPbc PKPbc 13 32 49.7 +0.2
SDDR Presa de Saban 151.50 42 *e*PKPbc PKPbc 13 32 57.6 0.0
CPUP Villa Florida 155.12 167 PKP PKPdf 13 32 56.9 +0.4
comp=Z,0.2nm,0.3s,baz=70,slow=6.2,SNR=5.0
MTP Monte Pirata 155.73 34 *e*PKPab PKPab 13 33 24.4 +0.4
SDV Santo Domingo 158.07 60 *e*PKPdf PKPdf 13 33 00.9 +0.4
LPAZ La Paz 158.27 132 PKP PKPdf 13 33 02.5 +1.8
comp=Z,2.3nm,0.9s,baz=339,slow=2.7,SNR=6.2
LPAZ La Paz 158.27 132 PKIKP PKPdf 13 33 02.5 +1.8
LPAZ pmax pmax
comp=Z,2.0nm,0.9s

NEIC ***18*** *13:19:02.2±2.3, 44°.25N×128°.84W, h10km, mb3.8/4, Error ellipse: s-maj=28.8km s-min=8.3km az=83.0*
IDC ***18*** *13:19:05.9±6.2, 44°.06N×128°.04W, h0km, mb3.6/2, mb1 3.8/6, mb1mx3.6/27, mbtmp3.5/6, ML3.4/4, MS3.0/2, Ms1 3.0/2, ms1mx2.7/26, Error ellipse: s-maj=77.0km s-min=38.3km az=88.0*
ISC 18 13:19:00.2±1.8, **44°.37N**±0°.06×**129°.3W**±0°.2, **h10**km, **n51**, σ1♀**38**/51, **mb3.7**/3, **Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RNO	**Roman Nose**	**3.99**	**95**	P	**Pn**	**13 19 59.0**	**-2.4**
HEBO	**Mount Hebo**	**4.01**	**76**	*e*Pn	**Pn**	**13 19 59.8**	**-1.7**
MPOR	**Mary's Peak**	**4.09**	**86**	P	**Pn**	**13 20 00.3**	**-2.3**
COR	**Corvallis**	**4.26**	**85**	*e*Pn	**Pn**	**13 20 03.8**	**-1.3**
KMOR	**Kings Mountain**	**4.28**	**71**	P	**Pn**	**13 20 03.7**	**-1.6**
DBO	**Dodson Butte**	**4.53**	**104**	P	**Pn**	**13 20 05.3**	**-3.4**
HSO	**Harness Mounta**	**4.53**	**99**	P	**Pn**	**13 20 06.5**	**-2.2**
NLWA	**Neilton Lookou**	**4.83**	**49**	*e*Pn	**Pn**	**13 20 12.3**	**-0.5**
NLWA				*e*Sn	**Sn**	**13 21 07.2**	**-1.5**
OOW	**Octopus West**	**4.88**	**44**	P	**Pn**	**13 20 13.5**	**0.0**
HUMO	**Hull Mountain**	**4.91**	**109**	*e*Pn	**Pn**	**13 20 09.8**	**-4.2**
OTR	**Olympics--Tyee**	**5.04**	**41**	P	**Pn**	**13 20 16.3**	**+0.5**
HDW	**Hoodsport**	**5.42**	**51**	P	**Pn**	**13 20 21.0**	**-0.1**
YBH	**Yreka Blue Hor**	**5.47**	**116**	Pn	**Pn**	**13 20 15.3**	**-6.3**
	0.6nm,0.3s,baz=320,slow=9.5,SNR=7.0						
YBH	**Yreka Blue Hor**	**5.47**	**116**	*e*Pn	**Pn**	**13 20 18.1**	**-3.5**
HOOD	**Mount Hood Mea**	**5.49**	**77**	*e*Pn	**Pn**	**13 20 20.7**	**-1.3**
	98nm,0.7s						
LON	**Longmire**	**5.75**	**63**	*e*Pn	**Pn**	**13 20 24.8**	**-0.6**
	20nm,0.7s						
PGC	**Sidney**	**5.87**	**41**	*e*Pn	**Pn**	**13 20 25.9**	**-1.2**
JCW	**Jim Creek**	**6.36**	**50**	*e*Pn	**Pn**	**13 20 34.1**	**+0.3**
CMW	**Cultus Mountai**	**6.39**	**48**	P	**Pn**	**13 20 35.2**	**+0.9**
RPW	**Rockport**	**6.73**	**50**	*e*Pn	**Pn**	**13 20 39.1**	**+0.1**
	28nm,0.5s						
MOD	**Modoc**	**6.99**	**107**	*e*Pn	**Pn**	**13 20 44.3**	**+1.7**
ETW	**Entiat**	**7.01**	**59**	*e*Pn	**Pn**	**13 20 44.5**	**+1.7**
WVOR	**Wild Horse Val**	**7.97**	**100**	P	**Pn**	**13 20 58.0**	**+2.0**
	1.3nm,0.7s						
NVAR	**Mina Array Bea**	**10.14**	**122**	Pn	**Pn**	**13 21 21.2**	**-4.5**
	0.1nm,0.3s,baz=299,slow=9.9,SNR=5.8						
BSMT	**Bassoo Peak**	**10.63**	**66**	*e*Pn	**Pn**	**13 21 32.7**	**+0.2**
	5.6nm,1.0s						
HLID	**Hailey**	**10.73**	**89**	*e*Pn	**Pn**	**13 21 35.6**	**+1.8**
	11nm,1.0s						
ELK	**Elko**	**10.95**	**104**	Pn	**Pn**	**13 21 35.6**	**-1.2**
	0.1nm,0.3s,baz=298,slow=15,SNR=4.8						
MSO	**Missoula**	**11.01**	**72**	P	**Pn**	**13 21 35.9**	**-1.7**
	3.4nm,0.8s						
SWMT	**Swartz Lake**	**11.08**	**68**	P	**Pn**	**13 21 38.0**	**-0.6**
	7.2nm,1.1s						
SLMT	**Seeley Lake**	**11.37**	**70**	*e*P	**Pn**	**13 21 44.0**	**+1.4**
	13nm,0.9s						
CHMT	**Chamberlain Mo**	**11.49**	**72**	*e*P	**Pn**	**13 21 45.9**	**+1.7**
	2.2nm,1.0s						
MCMT	**McKenzie Canyo**	**11.71**	**82**	P	**Pn**	**13 21 49.4**	**+2.2**
	1.5nm,1.0s						
DLMT	**Dillon**	**11.87**	**79**	*e*P	**Pn**	**13 21 51.1**	**+1.8**
	5.3nm,1.0s						
LRM	**Limekiln Ridge**	**11.97**	**77**	*e*P	**Pn**	**13 21 51.9**	**+1.2**
	20nm,1.1s						
BOZ	**Bozeman (W)**	**12.54**	**78**	*e*P	**Pn**	**13 21 59.6**	**+1.0**
	5.0nm,1.3s						
GSC	**Goldstone**	**13.15**	**129**	*e*P	**Pn**	**13 22 05.4**	**-1.6**
	2.9nm,0.8s						
IMW	**Indian Meadow**	**13.17**	**86**	P	**Pn**	**13 22 09.9**	**+2.8**
	17nm,1.5s						
TPAW	**Teton Pass**	**13.23**	**87**	*e*Pn	**Pn**	**13 22 09.9**	**+2.0**
	7.9nm,1.1s						
REDW	**Red Top Meadow**	**13.32**	**88**	*e*P	**Pn**	**13 22 11.0**	**+1.8**
	22nm,1.5s						
GCMT	**Greycliff**	**13.91**	**77**	*e*P	**Pn**	**13 22 26.8**	**+10**
DLBC	**Dease Lake**	**14.10**	**358**	LR	LR	13 26 31.4	
	comp=Z,54nm,21.8s,baz=140,slow=31						
RLMT	**Red Lodge**	**14.23**	**80**	*e*P	**Pn**	**13 22 30.6**	**+9.0**
PDAR	**Pinedale Array**	**14.37**	**90**	Pn	**Pn**	**13 22 23.7**	**+0.2**
	0.1nm,0.3s,baz=287,slow=9.3,SNR=2.4						
SRU	**San Rafael**	**14.93**	**104**	P	**Pn**	**13 22 38.0**	**+6.9**
	18nm,0.8s						
PV01	**Paradox Valley**	**16.73**	**105**	*e*Pn	**Pn**	**13 22 54.3**	**-0.3**
	551nm,1.0s						
MVCO	**Mesa Verde**	**17.24**	**107**	*e*P	**Pn**	**13 23 02.2**	**+1.2**
	4.0nm,0.8s						
SDCO	**Great Sand Dun**	**19.06**	**102**	*e*P	**Pn**	**13 23 22.6**	**-0.6**
	2.9nm,0.9s						
FFC	**Flin Flon**	**20.38**	**50**	*e*P	**P**	**13 23 37.0**	**+0.2**
	7.7nm,0.8s						
ULM	**Lac du Bonnet**	**23.25**	**63**	P	**P**	**13 24 06.8**	**-0.8**
	3.5nm,0.6s,mb4.0,baz=265,slow=11,SNR=2.8						
ULM				LR	LR	13 32 31.9	
	comp=Z,60nm,20.9s,baz=215,slow=36						
TXAR	**Lajitas Array**	**25.24**	**118**	P	**P**	**13 24 26.9**	**+0.6**
	0.5nm,0.6s,mb3.2,baz=323,slow=10,SNR=3.7						
WMOK	**Wichita Mounta**	**25.26**	**102**	*e*P	**P**	**13 24 25.2**	**-1.2**
	5.0nm,1.0s,mb4.0						

ROM ***18*** *13:21:05.8±0.1, 44°.52N×7°.27E, h15km±2km, Md2.1/8, Ml2.2/4, Error ellipse: s-maj=3.1km s-min=1.5km az=74.0*
CSEM ***18*** *13:21:05.6±0.1, 44°.52N×7°.28E, h16km, ML2.5/13, Error ellipse: s-maj=1.5km s-min=0.9km az=72.0*
ISCJB ***18*** *13:21:05.5±0.2, 44°.51N±0°.01×7°.25E±0°.03, h15km±2km, Error ellipse: s-maj=3.6km s-min=2.0km az=156.2*
STR ***18*** *13:21:06.6±0.2, 44°.49N×7°.28E, h5km, Ml2.3, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
GEN ***18*** *13:21:06.4, 44°.51N×7°.27E, h14km, ML1.7*
NEIC ***18*** *13:21:06.6, 44°.49N×7°.28E, h5km, ML2.5(LDG), ML2.3(STR), After STR.*
LDG ***18*** *13:21:06.1±0.1, 44°.52N×7°.30E, h3km, Md2.4/2, Ml2.5/7, Error ellipse: s-maj=1.8km s-min=0.8km az=66.0*
ISC 18 13:21:05.7±0.3, **44°.51N**±0°.01×**7°.28E**±0°.03, **h18**km±2km, **n53**, σ0♀**40**/100, **Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOI	**San Damiano**	**0.03**	**251**	Pg	**Pg**	**13 21 09.1**	**+0.2**
DOI				Sg	**Sg**	**13 21 10.6**	**-0.4**
	2μm,0.1s						
DOI	**San Damiano**	**0.03**	**251**	Pg	**Pg**	**13 21 09.1**	**+0.2**
DOI				Sg	**Sg**	**13 21 10.6**	**-0.4**
	2μm,0.1s						
PZZ	**Stroppo**	**0.12**	**267**	Pg	**Pg**	**13 21 09.8**	**+0.2**
PZZ				Sg	**Sg**	**13 21 11.9**	**-0.2**
	527nm,0.2s						
STV	**Sant Anna di V**	**0.27**	**173**	Pg	**Pg**	**13 21 12.1**	**+0.4**
STV				Sg	**Sg**	**13 21 15.6**	**-0.2**
	378nm,0.1s						
STV	**Sant Anna di V**	**0.27**	**173**	Pg	**Pg**	**13 21 12.1**	**+0.4**
STV				Sg	**Sg**	**13 21 15.6**	**-0.2**
	378nm,0.1s						
ENR	**Entracque**	**0.30**	**161**	S	**Sg**	**13 21 16.7**	**0.0**
SURF	**Saint Ours**	**0.34**	**265**	Pg	**Pg**	**13 21 13.3**	**+0.4**
SURF				Sg	**Sg**	**13 21 18.0**	**+0.3**
SURF	**Saint Ours**	**0.34**	**265**	Pg	**Pg**	**13 21 13.3**	**+0.4**
SURF				Sg	**Sg**	**13 21 18.0**	**+0.3**
MBDF	**Montbardon**	**0.42**	**301**	*e*Pg	**Pg**	**13 21 14.8**	**+0.4**
MBDF				*e*Sg	**Sg**	**13 21 20.8**	**+0.6**
	65nm,0.2s						
MBDF	**Montbardon**	**0.42**	**301**	*e*Pg	**Pg**	**13 21 14.8**	**+0.4**
MBDF				*e*Sg	**Sg**	**13 21 20.8**	**+0.6**
	32nm,0.2s						
TOUF	**Mont Tournerai**	**0.50**	**183**	Pg	**Pg**	**13 21 16.0**	**+0.2**
TOUF	**Mont Tournerai**	**0.50**	**183**	Pg	**Pg**	**13 21 16.0**	**+0.2**
AUTN	**L'Aution**	**0.53**	**168**	Pg	**Pg**	**13 21 16.4**	**+0.1**
AUTN				Sg	**Sg**	**13 21 23.3**	**-0.1**
AUTN	**L'Aution**	**0.53**	**168**	Pg	**Pg**	**13 21 16.4**	**+0.1**
AUTN				Sg	**Sg**	**13 21 23.3**	**-0.1**
MONE	**Monesi**	**0.55**	**142**	P	**Pg**	**13 21 16.9**	**+0.2**
MONE				S	**Sg**	**13 21 24.1**	**0.0**
SAOF	**Saorge**	**0.56**	**159**	Pg	**Pg**	**13 21 16.9**	**0.0**
SAOF				Sg	**Sg**	**13 21 23.9**	**-0.6**
SAOF	**Saorge**	**0.56**	**159**	Pg	**Pg**	**13 21 16.9**	**0.0**
SAOF				Sg	**Sg**	**13 21 23.9**	**-0.6**
LUCF	**Luceram**	**0.62**	**176**	Pg	**Pg**	**13 21 18.1**	**+0.1**
LUCF				Sg	**Sg**	**13 21 26.7**	**+0.4**
LUCF	**Luceram**	**0.62**	**176**	Pg	**Pg**	**13 21 18.1**	**+0.1**
LUCF				Sg	**Sg**	**13 21 26.7**	**+0.4**
MVIF	**Mont Vial**	**0.62**	**189**	Pg	**Pg**	**13 21 18.2**	**+0.2**
MVIF				Sg	**Sg**	**13 21 26.5**	**+0.1**
MVIF	**Mont Vial**	**0.62**	**189**	Pg	**Pg**	**13 21 18.2**	**+0.2**
MVIF				Sg	**Sg**	**13 21 26.5**	**+0.1**
RSP	**Reno Superiore**	**0.64**	**359**	Pg	**Pg**	**13 21 17.9**	**-0.4**
RSP				Sg	**Sg**	**13 21 26.4**	**-0.4**
RSP	**Reno Superiore**	**0.64**	**359**	Pg	**Pg**	**13 21 17.9**	**-0.4**
RSP				S	**Sg**	**13 21 26.4**	**-0.4**
SBF	**Sospel**	**0.66**	**170**	*e*Pg	**Pg**	**13 21 18.9**	**+0.2**
SBF				*e*Sg	**Sg**	**13 21 27.9**	**+0.4**
	19nm,0.2s						
SBF	**Sospel**	**0.66**	**170**	*e*Pg	**Pg**	**13 21 18.9**	**+0.2**
SBF				*e*Sg	**Sg**	**13 21 27.9**	**+0.4**
	9.7nm,0.2s						
RONM	**Roccetta Nervi**	**0.68**	**160**	P	**Pb**	**13 21 18.7**	**-0.2**
RONM				S	**Sb**	**13 21 27.4**	**-0.5**
BNI	**Bardonecchia**	**0.69**	**322**	Pg	**Pg**	**13 21 19.8**	**+0.5**
BNI				Sg	**Sg**	**13 21 28.6**	**+0.1**
BNI	**Bardonecchia**	**0.69**	**322**	Pg	**Pg**	**13 21 19.8**	**+0.5**
BNI				Sg	**Sg**	**13 21 28.6**	**+0.1**
RORO	**Rocca Rossa**	**0.69**	**125**	P	**Pb**	**13 21 18.6**	**-0.6**
RORO				S	**Sb**	**13 21 27.8**	**-0.6**
NEGI	**Seborga**	**0.73**	**155**	P	**Pb**	**13 21 20.1**	**+0.2**
NEGI				S	**Sb**	**13 21 29.4**	**-0.1**
IMI	**Imperia**	**0.75**	**144**	Pg	**Pg**	**13 21 20.2**	**-0.1**
IMI				Sg	**Sg**	**13 21 30.3**	**+0.1**
IMI	**Imperia**	**0.75**	**144**	P	**Pb**	**13 21 20.3**	**+0.2**
IMI				S	**Sb**	**13 21 30.0**	**0.0**
IMI				Sg	**Sg**	**13 21 30.3**	**+0.1**
QLNO	**Quiliano**	**0.79**	**103**	Pg	**Pg**	**13 21 21.7**	**+0.6**
QLNO				Sg	**Sg**	**13 21 32.1**	**+0.6**
QLNO	**Quiliano**	**0.79**	**103**	Pg	**Pg**	**13 21 21.7**	**+0.6**
QLNO				Sg	**Sg**	**13 21 32.1**	**+0.6**
PCP	**Piancastagn**	**0.91**	**88**	P	**Pb**	**13 21 23.3**	**+0.4**
PCP				S	**Sb**	**13 21 34.8**	**+0.2**
LSD	**Lago del Serru**	**0.95**	**354**	Pg	**Pg**	**13 21 23.6**	**-0.7**
LSD				Sg	**Sg**	**13 21 36.9**	**+0.1**
LSD	**Lago del Serru**	**0.95**	**354**	Pg	**Pg**	**13 21 23.6**	**-0.7**
LSD	**Lago del Serru**	**0.95**	**354**	P	**Pb**	**13 21 24.0**	**+0.3**
LSD				S	**Sb**	**13 21 36.1**	**+0.2**
LSD				Sg	**Sg**	**13 21 36.9**	**+0.1**
LPG	**La Plagne**	**1.05**	**339**	*e*Pg	**Pg**	**13 21 26.3**	**+0.1**
LPG				*e*Sg	**Sg**	**13 21 40.0**	**0.0**
	6.1nm,0.2s						
LPG	**La Plagne**	**1.05**	**339**	*e*Pg	**Pg**	**13 21 26.3**	**+0.1**
TRAV	**Traversella**	**1.05**	**18**	P	**Pb**	**13 21 25.4**	**0.0**
TRAV				S	**Sb**	**13 21 38.2**	**-0.6**
FRF	**La Foret Royal**	**1.05**	**206**	*e*Pg	**Pg**	**13 21 26.1**	**-0.1**
FRF				*e*Sg	**Sg**	**13 21 39.2**	**-0.8**
	14nm,0.2s						
FRF	**La Foret Royal**	**1.05**	**206**	*e*Pg	**Pg**	**13 21 26.1**	**-0.1**
FRF				*e*Sg	**Sg**	**13 21 39.2**	**-0.8**
	7.2nm,0.2s						
LPL	**La Plagne**	**1.08**	**339**	*e*Pg	**Pg**	**13 21 26.4**	**-0.2**
LPL				*e*Sg	**Sg**	**13 21 39.7**	**-1.0**
	7.1nm,0.3s						
LPL	**La Plagne**	**1.08**	**339**	*e*Pg	**Pg**	**13 21 26.4**	**-0.2**
ORIF	**Oris-en-Rattie**	**1.08**	**293**	*e*Pg	**Pg**	**13 21 26.8**	**+0.2**
ORIF				*e*Sg	**Sg**	**13 21 40.0**	**-0.7**
	16nm,0.2s						
ORIF	**Oris-en-Rattie**	**1.08**	**293**	*e*Pg	**Pg**	**13 21 26.8**	**+0.2**
LMR	**La Mourre**	**1.30**	**206**	*e*Pg	**Pg**	**13 21 30.4**	**-0.5**
LMR				*e*Sg	**Sg**	**13 21 47.2**	**-0.7**
	23nm,0.2s						
LMR	**La Mourre**	**1.30**	**206**	*e*Pg	**Pg**	**13 21 30.4**	**-0.5**
LMR				*e*Sg	**Sg**	**13 21 47.2**	**-0.7**
	12nm,0.2s						
SMRF	**Simiane la Rot**	**1.34**	**247**	*e*Pg	**Pg**	**13 21 32.2**	**+0.7**
SMRF				*e*Sg	**Sg**	**13 21 48.6**	**-0.4**
	8.0nm,0.2s						
SMRF	**Simiane la Rot**	**1.34**	**247**	*e*Pg	**Pg**	**13 21 32.2**	**+0.7**
SMRF				*e*Sg	**Sg**	**13 21 48.6**	**-0.4**
	4.0nm,0.2s						
VIVF	**Saint-Julien-l**	**1.89**	**281**	*e*Pn	**Pn**	**13 21 37.7**	**+0.6**
VIVF				*e*Sn	**Sn**	**13 22 00.9**	**+0.5**
	2.5nm,0.2s						
VIVF	**Saint-Julien-l**	**1.89**	**281**	*e*Pn	**Pn**	**13 21 37.7**	**+0.6**

IDC ***18*** *13:23:58.1±0.6, 36°.31N×1°.08E, h0km, mb4.3/24, mb1 4.4/30, mb1mx4.4/39, mbtmp4.3/30, ML4.3/6, MS3.6/11, Ms1 3.6/11, ms1mx3.3/33, Error ellipse: s-maj=14.7km s-min=12.7km az=168.0*
ISCJB ***18*** *13:23:58.1±0.5, 36°.36N±0°.01×0°.98E±0°.01, h2km±2km, mb4.5/82, MS4.0/15, Error ellipse: s-maj=2.5km s-min=1.9km az=166.9*
CSEM ***18*** *13:23:58.7±0.1, 36°.23N×1°.08E, h5km, mb4.6/67, ML4.7, Error ellipse: s-maj=3.7km s-min=2.8km az=2.0*
INMG ***18*** *13:23:58.3±2.0, 35°.97N×1°.26E, h31km, ML3.8, Error ellipse: s-maj=6.9km s-min=4.1km az=129.0*
BJI ***18*** *13:23:58.5, 36°.91N×1°.16E, h6km, mB5.1/8, mb4.8/15, Ms4.9/10, Ms7 4.7/10*
SFS ***18*** *13:23:58.0, 36°.19N×1°.15E, h0km, ML4.8*
CRAAG ***18*** *13:23:59.2, 36°.19N×1°.15E, Ml4.7*
CNRM ***18*** *13:23:59.3, 36°.32N×1°.29W, h22km, MD4.8*
NEIC ***18*** *13:23:59.1±1.5, 36°.22N×1°.05E, h6km±9km, mb4.6/56, Error ellipse: s-maj=5.5km s-min=3.1km az=162.0*
MDD ***18*** *13:23:59.9±0.4, 36°.20N×1°.13E, h8km±5km, mb4.7/39, Error ellipse: s-maj=4.7km s-min=3.2km az=164.0, PRIMO*
LDG ***18*** *13:24:00.0±0.2, 36°.34N×0°.82E, h10km, Ml4.4/18, Error ellipse: s-maj=4.3km s-min=2.6km az=158.0*
MOS ***18*** *13:24:01.6±1.2, 36°.32N×1°.00E, h33km, mb4.7/33, Error ellipse: s-maj=5.2km s-min=2.9km az=78.1*
SZGRF ***18*** *13:24:03.6, 36°.44N×1°.52E, h33km, Northern Algeria*
STR ***18*** *13:24:04.9±5.2, 36°.57N×1°.24E, h10km, Ml4.4, Error ellipse: s-maj=0.0km s-min=0

EBEN	**Beniarda**	**2.57**	**338**	P	**Pn**	**13 24 42.0**	**-0.3**
	12nm,0.4s,SNR=21						
EBEN				S	**Sn**	**13 25 14.5**	**+0.9**
	55nm,0.2s,SNR=7.1						

RSA Sarsar 5.73 258 P **Pn 13 25 26.5 +0.8**
RSA S **Sn 13 26 31.0 -0.4**
MDT Midelt 5.79 235 Pn **Pn 13 25 25.4 -1.1**
comp=Z,8.1nm,0.3s,baz=51,slow=11,SNR=121
MIF Mishlifen 5.87 242 P **Pn 13 25 27.0 -0.6**
MIF Mishlifen 5.87 242 P **Pn 13 25 27.0 -0.6**
GUD Guadarrama 5.91 319 P **Pn 13 25 29.6 +1.5**
GUD S **Sn 13 26 34.5 -1.3**
GUD Guadarrama 5.91 319 P **Pn 13 25 29.6 +1.5**
comp=Z,18nm,0.4s,SNR=7.9
GUD S **Sn 13 26 34.5 -1.3**
comp=Z,7.9nm,0.3s,SNR=7.9
GUD Guadarrama 5.91 319 P **Pn 13 25 29.6 +1.5**
comp=Z,18nm,0.4s,SNR=7.9
GUD S **Sn 13 26 34.5 -1.3**
comp=Z,7.9nm,0.3s,SNR=7.9
GUD Guadarrama 5.91 319 P **Pn 13 25 29.6 +1.5**
comp=Z,18nm,0.4s,SNR=7.9
GUD S **Sn 13 26 34.5 -1.3**
comp=Z,7.9nm,0.3s,SNR=7.9
CZD Col de Zad 5.94 238 P **Pn 13 25 29.0 +0.4**
CZD S **Sn 13 26 35.0 -1.7**
CZD Col de Zad 5.94 238 P **Pn 13 25 29.0 +0.4**
CZD S **Sn 13 26 35.0 -1.7**
CSOR Sort 6.06 1 ⇑P **Pn 13 25 30.8 +0.7**
CSOR S **Sn 13 26 35.9 -3.6**
CSOR Sort 6.06 1 ⇑P **Pn 13 25 30.8 +0.7**
comp=Z,64nm,0.5s,SNR=18
CSOR S **Sn 13 26 35.9 -3.6**
comp=Z,24nm,0.4s,SNR=5.8
CSOR Sort 6.06 1 ⇑P **Pn 13 25 30.8 +0.7**
comp=Z,64nm,0.5s,SNR=18
CSOR S **Sn 13 26 35.9 -3.6**
comp=Z,24nm,0.4s,SNR=5.8
CSOR Sort 6.06 1 P **Pn 13 25 30.8 +0.7**
comp=Z,64nm,0.5s,SNR=18
CSOR S **Sn 13 26 35.9 -3.5**
comp=Z,24nm,0.4s,SNR=5.8
VALF Valcebollere 6.13 7 P **Pn 13 25 31.4 +0.2**
ZFT Errachidia 6.14 228 P **Pn 13 25 31.0 -0.4**
ZFT S **Sn 13 26 41.0 -0.6**
ZFT Errachidia 6.14 228 P **Pn 13 25 31.0 -0.4**
ZFT S **Sn 13 26 41.0 -0.6**
CLLI Llivia 6.21 7 P **Pn 13 25 32.7 +0.5**
CLLI S **Sn 13 26 39.9 -3.2**
CLLI Llivia 6.21 7 P **Pn 13 25 32.7 +0.5**
comp=Z,2.2nm,0.2s,SNR=17
CLLI S **Sn 13 26 39.9 -3.2**
comp=Z,11nm,0.4s,SNR=7.9
CLLI Llivia 6.21 7 P **Pn 13 25 32.7 +0.5**
comp=Z,2.2nm,0.2s,SNR=17
CLLI S **Sn 13 26 39.9 -3.2**
comp=Z,11nm,0.4s,SNR=7.9
CLLI Llivia 6.21 7 P **Pn 13 25 32.7 +0.5**
comp=Z,2.2nm,0.2s,SNR=17
CLLI S **Sn 13 26 39.9 -3.2**
comp=Z,11nm,0.4s,SNR=7.9
EMIN Mina Concepcio 6.29 286 P **Pn 13 25 32.9 -0.5**
EMIN S **Sn 13 26 41.9 -3.4**
EMIN Mina Concepcio 6.29 286 P **Pn 13 25 32.9 -0.5**
comp=Z,1.3nm,0.1s,SNR=72
EMIN S **Sn 13 26 41.8 -3.4**
comp=Z,3.2nm,0.3s,SNR=6.2
EMIN Mina Concepcio 6.29 286 P **Pn 13 25 32.9 -0.5**
comp=Z,1.3nm,0.1s,SNR=72
EMIN S **Sn 13 26 41.8 -3.4**
comp=Z,3.2nm,0.3s,SNR=6.2
EMIN Mina Concepcio 6.29 286 P **Pn 13 25 32.9 -0.5**
comp=Z,1.3nm,0.1s,SNR=72
EMIN S **Sn 13 26 41.8 -3.5**
comp=Z,3.2nm,0.3s,SNR=6.2
EJON La Jonquera 6.30 13 P **Pn 13 25 32.7 -0.8**
EJON S **Sn 13 26 39.0 -6.5**
EJON La Jonquera 6.30 13 P **Pn 13 25 32.7 -0.8**
comp=Z,1.8nm,0.2s,SNR=9.6
EJON S **Sn 13 26 39.0 -6.5**
comp=Z,3.0nm,0.1s,SNR=11
EJON La Jonquera 6.30 13 P **Pn 13 25 32.7 -0.8**
comp=Z,1.8nm,0.2s,SNR=9.6
EJON S **Sn 13 26 39.0 -6.5**
comp=Z,3.0nm,0.1s,SNR=11
EJON La Jonquera 6.30 13 P **Pn 13 25 32.7 -0.8**
comp=Z,1.8nm,0.2s,SNR=9.6
EJON S **Sn 13 26 39.0 -6.5**
comp=Z,3.0nm,0.1s,SNR=11
SJAF Saint Jean de 6.34 13 P **Pn 13 25 33.4 -0.6**
FILF Fillols 6.36 11 P **Pn 13 25 33.9 -0.4**
EBIE Bielsa 6.40 354 P **Pn 13 25 36.6 +1.7**
EBIE S **Sn 13 26 45.4 -2.4**
EBIE Bielsa 6.40 354 P **Pn 13 25 36.6 +1.7**
comp=Z,2.5nm,0.3s,SNR=15
EBIE S **Sn 13 26 45.4 -2.4**
comp=Z,10nm,0.4s,SNR=4.1
EBIE Bielsa 6.40 354 P **Pn 13 25 36.6 +1.7**
comp=Z,2.5nm,0.3s,SNR=15
EBIE S **Sn 13 26 45.4 -2.4**
comp=Z,10nm,0.4s,SNR=4.1
EBIE Bielsa 6.40 354 P **Pn 13 25 36.6 +1.8**
comp=Z,2.5nm,0.3s,SNR=15
EBIE S **Sn 13 26 45.4 -2.4**
comp=Z,10nm,0.4s,SNR=4.1
CARF Carcanieres 6.46 7 P **Pn 13 25 36.2 +0.6**
RESF Ens 6.51 356 P **Pn 13 25 38.2 +1.9**
MELF Melles 6.55 359 P **Pn 13 25 37.8 +0.8**
VIEF Viey 6.61 354 P **Pn 13 25 38.5 +0.8**
PBAR Barrancos 6.66 289 *e*Pn **Pn 13 25 37.7 -0.8**
PBAR *e*Sn **Sn 13 26 52.0 -2.4**
PBAR A 13 27 23.6
comp=Z,41nm,0.7s
ETSF Etsaut 6.69 350 *e*Pn **Pn 13 25 35.8 -3.0**
ETSF Etsaut 6.69 350 *e*P **Pn 13 25 40.3 +1.5**
SNR=1.0
ETSF *e*Sn **Sn 13 26 46.8 -8.1**
comp=Z,81nm,0.6s
ETSF Etsaut 6.69 350 *e*P **Pn 13 25 40.3 +1.5**
ETSF *e*Sn **Sn 13 26 46.8 -8.1**
ETSF Etsaut 6.69 350 P **Pn 13 25 40.3 +1.5**
ETSF S **Sn 13 26 46.8 -8.1**
comp=Z,41nm,0.6s
ETSF Etsaut 6.69 350 P **Pn 13 25 40.3 +1.5**
ETSF S **Sn 13 26 46.8 -8.1**
comp=Z,41nm,0.6s
IUNC Unciti 6.71 344 P **Pn 13 25 41.3 +2.1**
comp=Z,1.7nm,0.2s,SNR=5.0
IUNC S **Sn 13 26 52.9 -2.7**
comp=Z,2.9nm,0.2s,SNR=5.1
IUNC Unciti 6.71 344 P **Pn 13 25 41.3 +2.1**
comp=Z,1.7nm,0.2s,SNR=5.0
IUNC S **Sn 13 26 52.9 -2.7**
comp=Z,2.9nm,0.2s,SNR=5.1
IUNC Unciti 6.71 344 P **Pn 13 25 41.3 +2.1**
comp=Z,1.7nm,0.2s,SNR=5.0
IUNC S **Sn 13 26 52.9 -2.7**
comp=Z,2.9nm,0.2s,SNR=5.1
LRDF Laroque-de-Fa 6.73 10 P **Pn 13 25 38.7 -0.6**
EPF Esparros 6.73 356 *e*Pn **Pn 13 25 35.9 -3.5**
EPF Esparros 6.73 356 *e*P **Pn 13 25 41.2 +1.8**
EPF *e*Sn **Sn 13 26 48.0 -8.0**
comp=Z,64nm,0.4s,SNR=1.0
EPF Esparros 6.73 356 *e*P **Pn 13 25 41.2 +1.8**
EPF *e*Sn **Sn 13 26 48.0 -8.0**
EPF Esparros 6.73 356 P **Pn 13 25 41.2 +1.8**
EPF S **Sn 13 26 48.0 -8.0**
comp=Z,32nm,0.4s
EPF Esparros 6.73 356 P **Pn 13 25 41.2 +1.8**
EPF S **Sn 13 26 48.0 -8.0**
comp=Z,32nm,0.4s
IPRE Itoiz 6.73 345 P **Pn 13 25 41.7 +2.3**
comp=Z,3.1nm,0.3s,SNR=10
IPRE S **Sn 13 26 55.1 -0.9**
comp=Z,2.6nm,0.2s,SNR=4.7
IPRE Itoiz 6.73 345 P **Pn 13 25 41.7 +2.3**
comp=Z,3.1nm,0.3s,SNR=10
IPRE S **Sn 13 26 55.1 -0.9**
comp=Z,2.6nm,0.2s,SNR=4.7
IPRE Itoiz 6.73 345 P **Pn 13 25 41.7 +2.3**
comp=Z,3.1nm,0.3s,SNR=10
IPRE S **Sn 13 26 55.1 -0.9**
comp=Z,2.6nm,0.2s,SNR=4.7
EARA Aranguren 6.75 344 S **Sn 13 26 53.1 -3.3**
comp=Z,2.7nm,0.1s,SNR=4.0
EARA Aranguren 6.75 344 S **Sn 13 26 53.1 -3.3**
comp=Z,2.7nm,0.1s,SNR=4.0
EARA Aranguren 6.75 344 S **Sn 13 26 53.1 -3.3**
comp=Z,2.7nm,0.1s,SNR=4.0
LABF Labassere 6.76 354 P **Pn 13 25 39.2 -0.6**

KEST Kesra 6.80 92 Pn **Pn 13 25 37.8 -2.6**
comp=Z,3.0nm,0.3s,baz=239,slow=4.7,SNR=67
KEST LR LR 13 28 23.3
comp=Z,103nm,18.4s,baz=172,slow=40
KEST Kesra 6.80 92 *e*Pn **Pn 13 25 37.9 -2.5**
EBAD Badajoz 6.80 293 P **Pn 13 25 40.2 -0.2**
EBAD S **Sn 13 26 55.7 -2.2**
EBAD Badajoz 6.80 293 P **Pn 13 25 40.2 -0.2**
comp=Z,1.7nm,0.1s,SNR=16
EBAD S **Sn 13 26 55.7 -2.2**
comp=Z,5.8nm,0.2s,SNR=6.0
EBAD Badajoz 6.80 293 P **Pn 13 25 40.2 -0.2**
comp=Z,1.7nm,0.1s,SNR=16
EBAD S **Sn 13 26 55.7 -2.2**
comp=Z,5.8nm,0.2s,SNR=6.0
EBAD Badajoz 6.80 293 P **Pn 13 25 40.2 -0.2**
comp=Z,1.7nm,0.1s,SNR=16
EORO Oroz-Betelu 6.81 346 P **Pn 13 25 43.3 +2.9**
SNR=7.9
EORO S **Sn 13 26 57.7 -0.2**
comp=Z,10nm,0.2s,SNR=7.9
EORO Oroz-Betelu 6.81 346 P **Pn 13 25 43.3 +2.9**
SNR=7.9
EORO S **Sn 13 26 57.7 -0.2**
comp=Z,10nm,0.2s,SNR=7.9
IZUN Zunzarren 6.81 345 P **Pn 13 25 42.8 +2.4**
comp=Z,1.4nm,0.2s,SNR=7.9
IZUN S **Sn 13 26 55.2 -2.7**
comp=Z,2.8nm,0.3s,SNR=7.9
IZUN Zunzarren 6.81 345 P **Pn 13 25 42.8 +2.4**
comp=Z,1.4nm,0.2s,SNR=7.9
IZUN S **Sn 13 26 55.2 -2.7**
comp=Z,2.8nm,0.3s,SNR=7.9
REYF Montagne du Re 6.83 352 P **Pn 13 25 42.8 +2.0**
ATE Arette 6.89 350 P **Pn 13 25 42.6 +1.0**
EGRO El Granado 6.89 283 P **Pn 13 25 41.1 -0.5**
EGRO S **Sn 13 26 57.2 -2.8**
EGRO El Granado 6.89 283 P **Pn 13 25 41.1 -0.5**
comp=Z,24nm,0.5s,SNR=15
EGRO S **Sn 13 26 57.2 -2.8**
comp=Z,9.0nm,0.3s,SNR=4.8
EGRO El Granado 6.89 283 P **Pn 13 25 41.1 -0.5**
comp=Z,24nm,0.5s,SNR=15
EGRO S **Sn 13 26 57.2 -2.8**
comp=Z,9.0nm,0.3s,SNR=4.8
KIB El Ksiba 6.89 239 P **Pn 13 25 42.0 +0.3**
KIB S **Sn 13 26 58.0 -2.1**
KIB El Ksiba 6.89 239 P **Pn 13 25 42.0 +0.3**
KIB S **Sn 13 26 58.0 -2.1**
IUSE Utxeti 6.91 344 P **Pn 13 25 43.1 +1.3**
comp=Z,0.5nm,0.1s,SNR=6.6
IUSE S **Sn 13 26 56.4 -4.0**
comp=Z,0.8nm,0.1s,SNR=7.5
IUSE Utxeti 6.91 344 P **Pn 13 25 43.1 +1.3**
comp=Z,0.5nm,0.1s,SNR=6.6
IUSE S **Sn 13 26 56.4 -4.0**
comp=Z,0.8nm,0.1s,SNR=7.5
SJPF Ste Jean 7.00 347 *e*Pn **Pn 13 25 39.5 -3.6**
SJPF Ste Jean 7.00 347 *e*P **Pn 13 25 44.3 +1.2**
SNR=1.0
SJPF *e*Sn **Sn 13 26 55.3 -7.4**
comp=Z,69nm,0.7s
SJPF Ste Jean 7.00 347 *e*P **Pn 13 25 44.3 +1.2**
SJPF *e*Sn **Sn 13 26 55.3 -7.4**
SJPF Ste Jean 7.00 347 P **Pn 13 25 44.3 +1.2**
SJPF S **Sn 13 26 55.3 -7.4**
comp=Z,34nm,0.7s
SJPF Ste Jean 7.00 347 P **Pn 13 25 44.3 +1.2**
SJPF S **Sn 13 26 55.3 -7.4**
comp=Z,34nm,0.7s
ORDF Ordiarp 7.05 348 P **Pn 13 25 45.0 +1.2**
PVAQ Vaqueiros 7.06 281 *e*Pn **Pn 13 25 43.2 -0.7**
PVAQ *e*Sn **Sn 13 27 00.5 -3.6**
PVAQ A 13 27 47.8
comp=Z,23nm,0.7s
MTLF Montolieu 7.08 7 *e*Pn **Pn 13 25 41.1 -3.1**
MTLF Montolieu 7.08 7 *e*P **Pn 13 25 46.5 +2.2**
SNR=1.0
MTLF *e*Sn **Sn 13 26 57.6 -7.1**
comp=Z,36nm,0.4s,SNR=1.0
MTLF Montolieu 7.08 7 *e*P **Pn 13 25 46.5 +2.2**
MTLF *e*Sn **Sn 13 26 57.6 -7.1**
MTLF Montolieu 7.08 7 P **Pn 13 25 46.5 +2.2**
MTLF S **Sn 13 26 57.6 -7.1**
comp=Z,18nm,0.4s
MTLF Montolieu 7.08 7 P **Pn 13 25 46.5 +2.2**
MTLF S **Sn 13 26 57.6 -7.1**
comp=Z,18nm,0.4s
ELIZ Elizondo 7.11 345 P **Pn 13 25 46.2 +1.6**
ELIZ S **Sn 13 27 04.3 -1.1**
ELIZ Elizondo 7.11 345 P **Pn 13 25 46.2 +1.6**
comp=Z,22nm,0.4s,SNR=21
ELIZ S **Sn 13 27 04.2 -1.1**
comp=Z,14nm,0.3s
ELIZ Elizondo 7.11 345 P **Pn 13 25 46.2 +1.6**
comp=Z,22nm,0.4s,SNR=21
ELIZ S **Sn 13 27 04.2 -1.1**
comp=Z,14nm,0.3s
OSSF Osses 7.15 347 P **Pn 13 25 46.1 +1.0**
EALK Alkurruntz 7.16 345 P **Pn 13 25 47.4 +2.1**
EALK S **Sn 13 27 05.7 -0.9**
EALK Alkurruntz 7.16 345 P **Pn 13 25 47.4 +2.1**
comp=Z,18nm,0.5s,SNR=22
EALK S **Sn 13 27 05.7 -0.9**
comp=Z,15nm,0.3s,SNR=6.1
EALK Alkurruntz 7.16 345 P **Pn 13 25 47.4 +2.1**
comp=Z,18nm,0.5s,SNR=22
EALK S **Sn 13 27 05.7 -0.9**
comp=Z,15nm,0.3s,SNR=6.1
PBDV Barranco-do-Ve 7.21 280 *e*Pn **Pn 13 25 45.6 -0.4**
PBDV *e*Sn **Sn 13 27 04.9 -3.0**
PBDV A 13 27 55.7
comp=Z,24nm,0.8s
PESTR Estremoz 7.27 293 *e*Pn **Pn 13 25 46.5 -0.3**
PESTR *e*Sn **Sn 13 27 07.1 -2.2**
PESTR A 13 27 40.1
comp=Z,62nm,0.6s
PMRV Marv??o 7.32 298 *e*Pn **Pn 13 25 47.6 +0.1**
PMRV *e*Sn **Sn 13 27 12.5 +2.0**
PMRV A 13 27 41.9
comp=Z,66nm,0.6s
PCVE Castro Verde 7.34 283 *e*Pn **Pn 13 25 39.7 -8.1**
PCVE *e*Sn **Sn 13 27 03.2 -7.9**
PCVE A 13 27 43.4
comp=Z,23nm,0.7s
VSL Villasalto 7.36 62 *e*Pn **Pn 13 25 44.0 -4.0**
comp=Z,62nm,0.5s
EVO Evora 7.49 290 *e*P **Pn 13 25 50.3 +0.4**
EVO *e*Sn **Sn 13 27 05.9 -8.9**
EVO *e*Sg **Sg 13 27 49.6 -12**
comp=Z,190nm,0.9s
EVO Evora 7.49 290 *e*Pn **Pn 13 25 49.9 0.0**
EVO *e*Sn **Sn 13 27 11.8 -3.0**
PCBR Castelo Branco 7.54 300 *e*Pn **Pn 13 25 51.3 +0.7**
PCBR *e*Sn **Sn 13 27 13.1 -2.9**
PCBR A 13 28 00.0
comp=Z,43nm,0.6s
EVOP Sao Brissos 7.58 290 *e*Sg **Sb 13 27 49.6 +7.2**
comp=Z,95nm,0.9s
ELAN Lanestosa 7.70 335 P **Pn 13 25 54.7 +2.0**
ELAN S **Sn 13 27 18.2 -1.7**
ELAN Lanestosa 7.70 335 P **Pn 13 25 54.7 +2.0**
comp=Z,5.0nm,0.2s,SNR=27
ELAN S **Sn 13 27 18.2 -1.7**
comp=Z,13nm,0.4s,SNR=5.2
ELAN Lanestosa 7.70 335 P **Pn 13 25 54.7 +2.0**
comp=Z,5.0nm,0.2s,SNR=27
ELAN S **Sn 13 27 18.2 -1.7**
comp=Z,13nm,0.4s,SNR=5.2
MOE Montemor 7.75 289 *e*Pn **Pn 13 25 53.4 0.0**
MOE *e*Sn **Sn 13 27 13.9 -7.2**
MORF Marmelete 7.79 280 *e*Pn **Pn 13 25 53.5 -0.5**
MORF *e*Sn **Sn 13 27 18.9 -3.2**
MORF A 13 27 31.6
comp=Z,11nm,0.9s
MTE Manteigas 7.84 304 *e*Pn **Pn 13 25 56.1 +1.5**
comp=Z,58nm,0.8s
MTE Manteigas 7.84 304 *e*Pn **Pn 13 25 56.6 +1.9**
MTE A 13 28 10.5
comp=Z,55nm,0.6s
PTEO Sao Teotonio 7.87 282 *e*Pn **Pn 13 25 54.5 -0.6**
PTEO *e*Sn **Sn 13 27 20.5 -3.6**
PTEO A 13 28 12.2
comp=Z,28nm,0.6s
MVO Moncorvo 7.91 310 P **Pn 13 25 56.9 +1.3**

MVO S **Sn 13 27 22.3 -2.8**
MVO Moncorvo 7.91 310 P **Pn 13 25 56.9 +1.3**
comp=Z,15nm,0.3s,SNR=36
MVO S **Sn 13 27 22.3 -2.8**
comp=Z,4.4nm,0.3s,SNR=6.1
MVO Moncorvo 7.91 310 P **Pn 13 25 56.9 +1.3**
comp=Z,15nm,0.3s,SNR=36
MVO S **Sn 13 27 22.3 -2.8**
comp=Z,4.4nm,0.3s,SNR=6.1
MVO Moncorvo 7.91 310 *e*Pn **Pn 13 25 56.7 +1.1**
MVO A 13 26 00.7
comp=Z,104nm,0.8s
MVO *e*Sn **Sn 13 27 23.2 -1.9**
MVO A 13 28 07.2
comp=Z,37nm,0.6s
MVO Moncorvo 7.91 310 P **Pn 13 25 56.9 +1.3**
comp=Z,15nm,0.3s,SNR=36
MVO S **Sn 13 27 22.3 -2.8**
comp=Z,4.4nm,0.3s,SNR=6.1
PFVI Vila Bisbo 7.92 279 P **Pn 13 25 55.4 -0.3**
PFVI S **Sn 13 27 19.3 -6.0**
PFVI Vila Bisbo 7.92 279 P **Pn 13 25 55.4 -0.4**
comp=Z,6.6nm,0.2s,SNR=12
PFVI S **Sn 13 27 19.3 -6.0**
comp=Z,18nm,0.5s,SNR=7.0
PFVI Vila Bisbo 7.92 279 P **Pn 13 25 55.4 -0.4**
comp=Z,6.6nm,0.2s,SNR=12
PFVI S **Sn 13 27 19.3 -6.0**
comp=Z,18nm,0.5s,SNR=7.0
PFVI Vila Bisbo 7.92 279 *e*Pn **Pn 13 25 55.1 -0.6**
PFVI *e*Sn **Sn 13 27 20.8 -4.5**
PFVI A 13 27 28.3
comp=Z,29nm,0.7s
LASF Ste Croix 8.06 15 *e*Pn **Pn 13 25 55.9 -1.7**
SNR=1.0
LASF *e*Sn **Sn 13 27 20.5 -8.2**
comp=Z,28nm,0.6s
PTOM Tomar 8.12 297 *e*Pn **Pn 13 25 58.5 0.0**
PBRG Braganca 8.13 315 *e*Pn **Pn 13 25 59.4 +0.8**
PBRG *e*Sn **Sn 13 27 28.7 -1.8**
PBRG A 13 28 20.4
comp=Z,24nm,0.7s
LMR La Mourre 8.20 30 *e*Pn **Pn 13 25 58.4 -1.1**
SNR=1.0
LMR *e*Sn **Sn 13 27 23.7 -8.4**
comp=Z,39nm,0.4s,SNR=1.0
ECAL Calabor 8.22 315 P **Pn 13 26 00.4 +0.6**
ECAL S **Sn 13 27 29.2 -3.4**
ECAL Calabor 8.22 315 P **Pn 13 26 00.4 +0.6**
comp=Z,12nm,0.4s,SNR=46
ECAL S **Sn 13 27 29.2 -3.4**
comp=Z,12nm,0.6s,SNR=7.9
ECAL Calabor 8.22 315 P **Pn 13 26 00.4 +0.6**
comp=Z,12nm,0.4s,SNR=46
ECAL S **Sn 13 27 29.2 -3.4**
comp=Z,12nm,0.6s,SNR=7.9
ECAL Calabor 8.22 315 P **Pn 13 26 00.4 +0.6**
comp=Z,12nm,0.4s,SNR=46
ECAL S **Sn 13 27 29.2 -3.4**
comp=Z,12nm,0.6s,SNR=7.9
PVIS Viseu 8.23 305 *e*Pn **Pn 13 26 01.1 +1.1**
PVIS *e*Sn **Sn 13 27 31.1 -1.8**
PVIS A 13 28 19.3
comp=Z,29nm,0.6s
PVRL Vila Real 8.41 309 *e*Pn **Pn 13 26 03.1 +0.7**
PVRL *e*Sn **Sn 13 27 36.0 -1.2**
PVRL A 13 28 24.4
comp=Z,23nm,0.7s
SMRF Simiane la Rot 8.42 23 *e*Pn **Pn 13 26 01.8 -0.8**
SNR=1.0
FRF La Foret Royal 8.44 29 *e*Pn **Pn 13 26 01.8 -1.1**
SNR=1.0
FRF *e*Sn **Sn 13 27 30.2 -8.0**
comp=Z,114nm,0.5s,SNR=1.0
FRF La Foret Royal 8.44 29 P **Pn 13 26 01.8 -1.1**
FRF S **Sn 13 27 30.2 -8.0**
comp=Z,57nm,0.5s
FRF La Foret Royal 8.44 29 P **Pn 13 26 01.8 -1.1**
FRF S **Sn 13 27 30.2 -8.0**
comp=Z,57nm,0.5s
EARI Arriondas 8.45 328 P **Pn 13 26 04.7 +1.7**
EARI S **Sn 13 27 36.2 -2.1**
EARI Arriondas 8.45 328 P **Pn 13 26 04.7 +1.7**
comp=Z,11nm,0.5s,SNR=15
EARI S **Sn 13 27 36.2 -2.1**
comp=Z,1.7nm,0.3s,SNR=7.9
EARI Arriondas 8.45 328 P **Pn 13 26 04.7 +1.7**
comp=Z,11nm,0.5s,SNR=15
EARI S **Sn 13 27 36.2 -2.1**
comp=Z,1.7nm,0.3s,SNR=7.9
EARI Arriondas 8.45 328 P **Pn 13 26 04.7 +1.7**
comp=Z,11nm,0.5s,SNR=15
EARI S **Sn 13 27 36.2 -2.1**
comp=Z,1.7nm,0.3s,SNR=7.9
PMAFR Mafra 8.56 291 P **Pn 13 26 04.5 0.0**
comp=Z,19nm,0.4s,SNR=7.1
PMAFR S **Sn 13 27 39.6 -1.4**
comp=Z,32nm,0.4s,SNR=7.9
PMAFR Mafra 8.56 291 P **Pn 13 26 04.5 0.0**
comp=Z,19nm,0.4s,SNR=7.1
PMAFR S **Sn 13 27 39.6 -1.4**
comp=Z,32nm,0.4s,SNR=7.9
PMAFR Mafra 8.56 291 *e*Pn **Pn 13 26 04.2 -0.3**
PMAFR *e*Sn **Sn 13 27 39.0 -2.0**
PMAFR A 13 28 36.7
comp=Z,57nm,0.7s
PMAFR Mafra 8.56 291 *e*Pn **Pn 13 26 04.2 -0.3**
PMAFR Mafra 8.56 291 P **Pn 13 26 04.5 0.0**
comp=Z,19nm,0.4s,SNR=7.1
PMAFR S **Sn 13 27 39.6 -1.4**
comp=Z,32nm,0.4s,SNR=7.9
LFF La Frestale 8.62 359 *e*P **Pn 13 26 07.1 +1.8**
SNR=1.0
LFF *e*Sn **Sn 13 27 32.7 -10**
comp=Z,46nm,0.4s
LFF La Frestale 8.62 359 *e*P **Pn 13 26 07.1 +1.8**
SNR=1.0
CAF Calviac 8.64 5 *e*P **Pn 13 26 07.7 +2.1**
SNR=1.0
CAF *e*Sn **Sn 13 27 34.8 -8.3**
comp=Z,24nm,0.4s,SNR=1.0
CAF Calviac 8.64 5 *e*Pn **Pn 13 26 04.2 -1.4**
CAF *e*Sn **Sn 13 27 34.8 -8.3**
CAF Calviac 8.64 5 *e*Pn **Pn 13 26 04.2 -1.4**
CAF Calviac 8.64 5 *e*P **Pn 13 26 07.7 +2.1**
SNR=1.0
ERUA La Rua 8.74 316 P **Pn 13 26 06.8 -0.2**
ERUA S **Sn 13 27 44.5 -1.0**
ERUA La Rua 8.74 316 P **Pn 13 26 06.8 -0.2**
comp=Z,5.1nm,0.3s,SNR=7.9
ERUA S **Sn 13 27 44.5 -1.0**
SNR=7.9
ERUA La Rua 8.74 316 P **Pn 13 26 06.8 -0.2**
comp=Z,5.1nm,0.3s,SNR=7.9
ERUA S **Sn 13 27 44.5 -1.0**
SNR=7.9
ERUA La Rua 8.74 316 P **Pn 13 26 06.8 -0.2**
comp=Z,5.1nm,0.3s,SNR=7.9
ERUA S **Sn 13 27 44.5 -1.0**
SNR=7.9
PGF Pioggiola 8.79 42 *e*Pn **Pn 13 26 04.7 -2.9**
SNR=1.0
PGF *e*Sn **Sn 13 27 36.3 -10**
comp=Z,38nm,0.4s,SNR=1.0
PGF Pioggiola 8.79 42 P **Pn 13 26 04.7 -2.9**
PGF S **Sn 13 27 36.3 -10**
comp=Z,19nm,0.4s
PGF Pioggiola 8.79 42 P **Pn 13 26 04.7 -2.9**
PGF S **Sn 13 27 36.3 -10**
comp=Z,19nm,0.4s
PGF Pioggiola 8.79 42 *e*Pn **Pn 13 26 04.7 -2.9**
SNR=1.0
PCAB Cabril 8.84 310 *e*Pn **Pn 13 26 09.4 +1.0**
PCAB *e*Sn **Sn 13 27 45.7 -2.2**
PCAB A 13 28 43.7
comp=Z,29nm,0.7s
PCAB Cabril 8.84 310 *e*Sn **Sn 13 27 45.7 -2.2**
comp=Z,29nm,0.7s
PCAB Cabril 8.84 310 *e*Pn **Pn 13 26 09.4 +1.0**
PTO Porto 8.90 306 *e*Pn **Pn 13 26 10.9 +1.7**
PTO Porto 8.90 306 *e*Pn **Pn 13 26 10.9 +1.7**
ELOB Lobios 8.95 311 P **Pn 13 26 10.9 +1.0**
ELOB S **Sn 13 27 47.8 -2.8**
ELOB Lobios 8.95 311 P **Pn 13 26 10.9 +1.0**
comp=Z,6.9nm,0.3s,SNR=34
ELOB S **Sn 13 27 47.8 -2.8**

comp=Z,6.1nm,0.3s,SNR=7.9
ELOB Lobios 8.95 311 P **Pn 13 26 10.9 +1.0**
comp=Z,6.9nm,0.3s,SNR=34
ELOB S **Sn 13 27 47.8 -2.8**
comp=Z,6.1nm,0.3s,SNR=7.9
ELOB Lobios 8.95 311 P **Pn 13 26 10.9 +1.0**
comp=Z,6.9nm,0.3s,SNR=34
ELOB S **Sn 13 27 47.8 -2.9**
comp=Z,6.1nm,0.3s,SNR=7.9
VIVF Saint-Julien-l 8.98 17 *e*P **Pn 13 26 13.5 +3.2**
VIVF *e*Sn **Sn 13 27 41.8 -10**
comp=Z,17nm,0.6s
VIVF Saint-Julien-l 8.98 17 *e*Pn **Pn 13 26 07.1 -3.2**
VIVF *e*Sn **Sn 13 27 41.8 -10**
RJF Les Rejaudoux 8.99 2 *e*Pn **Pn 13 26 07.9 -2.5**
SNR=1.0
RJF *e*Sn **Sn 13 27 42.5 -9.1**
comp=Z,14nm,0.3s,SNR=1.0
RJF Les Rejaudoux 8.99 2 *e*Pn **Pn 13 26 07.9 -2.5**
SNR=1.0
SBF Sospel 9.02 31 *e*Pn **Pn 13 26 08.7 -2.0**
SNR=1.0
SBF *e*Sn **Sn 13 27 43.7 -8.5**
comp=Z,41nm,0.5s,SNR=1.0
SBF Sospel 9.02 31 *e*Pn **Pn 13 26 08.7 -2.0**
SNR=1.0
TOUF Mont Tournerai 9.06 30 P **Pn 13 26 10.8 -0.6**
TOUF Mont Tournerai 9.06 30 P **Pn 13 26 10.8 -0.6**
LBL Lubilhac 9.07 10 P **Pn 13 26 11.9 +0.4**
LBL Lubilhac 9.07 10 P **Pn 13 26 11.9 +0.4**
AUTN L'Aution 9.12 31 P **Pn 13 26 11.8 -0.4**
AUTN L'Aution 9.12 31 P **Pn 13 26 11.8 -0.4**
ORIF Oris-en-Rattie 9.37 22 *e*Pn **Pn 13 26 13.4 -2.1**
ORIF Oris-en-Rattie 9.37 22 *e*Pn **Pn 13 26 13.4 -2.1**
EPON Pontenova 9.39 321 P **Pn 13 26 15.6 -0.3**
EPON S **Sn 13 27 57.0 -4.4**
EPON Pontenova 9.39 321 P **Pn 13 26 15.6 -0.3**
comp=Z,1.1nm,0.2s,SNR=7.9
EPON S **Sn 13 27 57.0 -4.4**
comp=Z,1.2nm,0.2s,SNR=7.9
EPON Pontenova 9.39 321 P **Pn 13 26 15.6 -0.3**
comp=Z,1.1nm,0.2s,SNR=7.9
EPON S **Sn 13 27 57.0 -4.4**
comp=Z,1.2nm,0.2s,SNR=7.9
EPON Pontenova 9.39 321 P **Pn 13 26 15.6 -0.2**
comp=Z,1.1nm,0.2s,SNR=7.9
EPON S **Sn 13 27 57.0 -4.3**
comp=Z,1.2nm,0.2s,SNR=7.9
LGHD Ghdames 9.47 129 *i* P **Pn 13 26 12.7 -4.3**
comp=Z,121nm,1.4s,SNR=22
MBDF Montbardon 9.49 26 *e*P **Pn 13 26 20.6 +3.4**
EZAM Zamans 9.50 311 P **Pn 13 26 18.2 +0.8**
EZAM S **Sn 13 28 01.1 -3.0**
EZAM Zamans 9.50 311 P **Pn 13 26 18.2 +0.8**
comp=Z,4.6nm,0.2s,SNR=7.9
EZAM S **Sn 13 28 01.1 -3.0**
comp=Z,1.6nm,0.1s,SNR=7.9
EZAM Zamans 9.50 311 P **Pn 13 26 18.2 +0.8**
comp=Z,4.6nm,0.2s,SNR=7.9
EZAM S **Sn 13 28 01.1 -3.0**
comp=Z,1.6nm,0.1s,SNR=7.9
EZAM Zamans 9.50 311 P **Pn 13 26 18.2 +0.8**
comp=Z,4.6nm,0.2s,SNR=7.9
EZAM S **Sn 13 28 01.1 -3.0**
comp=Z,1.6nm,0.1s,SNR=7.9
PYM Petit Puy Mans 9.55 9 P **Pn 13 26 19.2 +1.1**
PYM Petit Puy Mans 9.55 9 P **Pn 13 26 19.2 +1.1**
STS Santiago 9.86 315 P **Pn 13 26 22.5 +0.3**
STS pmax pmax
comp=Z,13nm,0.4s
STS Santiago 9.86 315 P **Pn 13 26 22.5 +0.3**
comp=Z,13nm,0.4s
STS Santiago 9.86 315 P **Pn 13 26 22.5 +0.3**
comp=Z,13nm,0.4s,SNR=5.8
STS Santiago 9.86 315 P **Pn 13 26 22.5 +0.3**
comp=Z,13nm,0.4s,SNR=5.8
STS Santiago 9.86 315 P **Pn 13 26 22.5 +0.3**
comp=Z,13nm,0.4s,SNR=5.8
AGO Saint Agoulin 9.87 9 P **Pn 13 26 22.5 +0.1**
AGO Saint Agoulin 9.87 9 P **Pn 13 26 22.5 +0.1**
TCF Toulx Ste Croi 10.01 5 *e*Pn **Pn 13 26 22.7 -1.6**
SNR=1.0
TCF *e*Sn **Sn 13 28 08.4 -8.2**
comp=Z,22nm,0.5s,SNR=1.0
TCF Toulx Ste Croi 10.01 5 *e*Pn **Pn 13 26 22.7 -1.6**
SNR=1.0
EMAZ Mazaricos 10.14 314 P **Pn 13 26 27.9 +1.8**
comp=Z,3.5nm,0.2s
EMAZ Mazaricos 10.14 314 P **Pn 13 26 27.9 +1.8**
comp=Z,3.5nm,0.2s,SNR=7.1
EMAZ Mazaricos 10.14 314 P **Pn 13 26 27.9 +1.8**
comp=Z,3.5nm,0.2s,SNR=7.1
EMAZ Mazaricos 10.14 314 P **Pn 13 26 27.9 +1.7**
comp=Z,3.5nm,0.2s,SNR=7.1
LPG La Plagne 10.16 24 *e*Pn **Pn 13 26 25.3 -1.1**
SNR=1.0
LPG La Plagne 10.16 24 *e*Pn **Pn 13 26 25.3 -1.1**
SNR=1.0
LPL La Plagne 10.17 24 *e*Pn **Pn 13 26 24.9 -1.6**
LPL La Plagne 10.17 24 *e*Pn **Pn 13 26 24.9 -1.6**
MFF Saint Martin d 10.32 356 *e*Pn **Pn 13 26 26.1 -2.4**
SNR=1.0
MFF *e*Sn **Sn 13 28 14.3 -10**
comp=Z,12nm,0.3s,SNR=1.0
MFF Saint Martin d 10.32 356 *e*Pn **Pn 13 26 26.1 -2.4**
SNR=1.0
BGF Bois d'Agland 10.33 7 *e*Pn **Pn 13 26 26.3 -2.5**
BGF Bois d'Agland 10.33 7 *e*Pn **Pn 13 26 26.3 -2.5**
SMF Signal de Mont 10.54 11 *e*Pn **Pn 13 26 28.5 -3.2**
SMF Signal de Mont 10.54 11 *e*P **Pn 13 26 34.2 +2.5**
SMF Signal de Mont 10.54 11 *e*P **Pn 13 26 34.2 +2.5**
AVF Avril sur Loir 10.62 9 *e*Pn **Pn 13 26 30.0 -2.7**
AVF Avril sur Loir 10.62 9 *e*P **Pn 13 26 35.4 +2.7**
SNR=1.0
AVF Avril sur Loir 10.62 9 *e*Pn **Pn 13 26 30.0 -2.7**
SSF Saint Saulge 10.90 9 *e*Pn **Pn 13 26 33.2 -3.4**
SSF Saint Saulge 10.90 9 *e*P **Pn 13 26 38.3 +1.7**
SSF Saint Saulge 10.90 9 *e*P **Pn 13 26 38.3 +1.7**
SSF Saint Saulge 10.90 9 *e*P **Pn 13 26 38.3 +1.7**
CABF La Chapelle 10.98 19 *e*Pn **Pn 13 26 34.8 -2.8**
SNR=1.0
LOR Lormes 11.15 10 *e*Pn **Pn 13 26 36.7 -3.3**
QUIF Quistinic 12.00 346 *e*Pn **Pn 13 26 47.2 -4.3**
QUIF Quistinic 12.00 346 *e*P **Pn 13 26 52.5 +1.0**
QUIF *e*Sn **Sn 13 28 53.8 -11**
comp=Z,19nm,0.5s
QUIF Quistinic 12.00 346 *e*P **Pn 13 26 52.5 +1.0**
QUIF *e*Sn **Sn 13 28 53.8 -11**
QUIF Quistinic 12.00 346 *e*P **Pn 13 26 52.5 +1.0**
GRR Gorron 12.14 354 *e*Pn **Pn 13 26 49.5 -4.0**
GRR Gorron 12.14 354 *e*P **Pn 13 26 55.5 +2.0**
SNR=1.0
GRR Gorron 12.14 354 *e*P **Pn 13 26 55.5 +2.0**
GRR Gorron 12.14 354 *e*P **Pn 13 26 55.5 +2.0**
SNR=1.0
SGMF Saint Gilles 12.22 349 *e*Pn **Pn 13 26 50.4 -4.1**
SGMF Saint Gilles 12.22 349 *e*P **Pn 13 26 56.1 +1.6**
SNR=1.0
SGMF *e*Sn **Sn 13 28 59.0 -12**
comp=Z,16nm,0.5s
SGMF Saint Gilles 12.22 349 *e*P **Pn 13 26 56.1 +1.6**
SGMF *e*Sn **Sn 13 28 59.0 -12**
SGMF Saint Gilles 12.22 349 *e*P **Pn 13 26 56.1 +1.6**
SNR=1.0
LDF La Druitiere 12.30 357 *e*Pn **Pn 13 26 52.3 -3.4**
LDF La Druitiere 12.30 357 *e*P **Pn 13 26 57.8 +2.1**
SNR=1.0
LDF La Druitiere 12.30 357 *e*P **Pn 13 26 57.8 +2.1**
LDF La Druitiere 12.30 357 *e*P **Pn 13 26 57.8 +2.1**
SNR=1.0
DAVOX Davos/Dischmat 12.39 30 Pn **Pn 13 27 02.0 +5.1**
comp=Z,1.6nm,0.3s,baz=193,slow=9.6,SNR=6.6
DAVOX LR LR 13 31 56.0
comp=Z,130nm,18.9s,baz=250,slow=39
ROSF Rostrenen 12.42 347 *e*Pn **Pn 13 26 52.1 -5.2**
ROSF Rostrenen 12.42 347 *e*P **Pn 13 26 59.2 +1.9**
ROSF Rostrenen 12.42 347 *e*P **Pn 13 26 59.2 +1.9**
ROSF Rostrenen 12.42 347 *e*P **Pn 13 26 59.2 +1.9**
FLN La Foliniere 12.49 356 *e*Pn **Pn 13 26 54.9 -3.4**
FLN La Foliniere 12.49 356 *e*P **Pn 13 27 00.0 +1.7**
baz=170,SNR=1.0
FLN La Foliniere 12.49 356 *e*P **Pn 13 27 00.0 +1.7**
FLN La Foliniere 12.49 356 *e*P **Pn 13 27 00.0 +1.7**
baz=170,SNR=1.0
ECH Echery 12.74 19 P **Pn 13 27 02.8 +1.1**
ECH pmax pmax
comp=Z,12nm,1.0s
ECH Echery 12.74 19 P **Pn 13 27 02.8 +1.2**
comp=Z,12nm,1.0s
ECH Echery 12.74 19 P **Pn 13 27 02.8 +1.1**
comp=Z,12nm,1.0s
DAVA Damuels 12.81 28⇑ *i*P **Pn 13 27 07.6 +5.0**
comp=Z,12nm,0.8s
FETA Feichten 12.93 31⇑ *i*P **Pn 13 27 10.3 +6.0**
comp=Z,12nm,1.5s
BFO Black Forest 13.17 22 *e*P **Pn 13 27 15.8 +8.2**
WTTA Wattenberg 13.51 33⇑ *i*P **Pn 13 27 19.5 +7.3**
comp=Z,33nm,1.8s
JAVS Javornik 13.73 42 *i* P Px 13 27 26.4
MYKA Terra Mystica 13.99 39⇑ *i*P **Pn 13 27 28.6 +10**
comp=Z,54nm,1.7s
TAM Tamanrasset 14.04 162 *e*P **Pn 13 27 18.6 -0.9**
TAM pmax pmax
comp=Z,3.0nm,0.6s
TAM Tamanrasset 14.04 162 *e*P **Pn 13 27 18.6 -0.9**
comp=Z,3.3nm,0.6s
TAM Tamanrasset 14.04 162 *e*P **Pn 13 27 18.6 -0.9**
comp=Z,3.3nm,0.6s
VISS Visnje 14.10 43 *i* P Px 13 27 30.4
BOJS Bojanci 14.15 45 *i* P **Pn 13 27 29.9 +9.0**
SNF Seneffe 14.39 9 P **Pn 13 27 27.9 +3.8**
SOKA Soboth 14.75 41⇑ *i*P **Pn 13 27 30.1 +1.0**
comp=Z,16nm,1.0s
TNS Taunus Mts 14.92 19 *e*P **Pn 13 27 35.5 +4.1**
TNS Taunus Mts 14.92 19 *e*P **Pn 13 27 35.5 +4.1**
TNS Taunus Mts 14.92 19 *e*P **Pn 13 27 35.5 +4.1**
MOA Molln 15.15 36⇑ *i*P **Pn 13 27 37.6 +3.1**
comp=Z,20nm,0.8s
MOA Molln 15.15 36 P **Pn 13 27 37.6 +3.2**
comp=Z,20nm,0.8s
GRA1 Grafenberg Arr 15.31 26 *e*P **Pn 13 27 38.8 +2.3**
comp=Z,48nm,1.2s
GRA1 Grafenberg Arr 15.31 26 *e*P **Pn 13 27 38.8 +2.3**
comp=Z,48nm,1.2s
GRF Grafenberg Arr 15.31 26 *e*P **Pn 13 27 38.8 +2.3**
comp=Z,48nm,1.2s
GRF Grafenberg Arr 15.31 26 *e*P **Pn 13 27 38.8 +2.3**
GRF pmax pmax
comp=Z,48nm,1.2s
GRF Grafenberg Arr 15.31 26 *e*P **Pn 13 27 38.8 +2.3**
GRF pmax pmax
comp=Z,48nm,1.2s
GRF Grafenberg Arr 15.31 26 *e*P **Pn 13 27 38.8 +2.3**
comp=Z,48nm,1.2s
WET Wettzell 15.49 30 *e*P **Pn 13 27 39.7 +0.7**
GEC2 GERESS Array S 15.61 33 *e*P **Pn 13 27 39.6 -0.9**
ROTZ Rotzenmuhle 15.73 28 *e*P **Pn 13 27 41.6 -0.4**
KHC Kasperske Hory 15.78 32 *e*P **Pn 13 27 41.1 -1.6**
KHC pmax pmax
comp=Z,8.0nm,0.9s
KHC Kasperske Hory 15.78 32 *e*P **Pn 13 27 41.1 -1.6**
comp=Z,8.3nm,0.9s
KHC Kasperske Hory 15.78 32 *e*P **Pn 13 27 42.4 -0.3**
KHC *ex* x 13 27 50.5
KHC AMS AMS 13 35 50.0
comp=Z,400nm,9.1s
UBBA Unterbreizbach 15.89 21 *e*P **Pn 13 27 45.7 +1.6**
CONA Conrad Observa 15.99 39⇑ *i*P **Pn 13 27 46.0 +0.7**
comp=Z,24nm,1.3s
CONA Conrad Observa 15.99 39 P **Pn 13 27 46.0 +0.6**
comp=Z,24nm,1.3s
NKC Novy Kostel 16.20 27 *e*P **Pn 13 27 51.0 +2.9**
NKC Novy Kostel 16.20 27 *e*P **Pn 13 27 51.0 +2.9**
NKC Novy Kostel 16.20 27 *e*P **Pn 13 27 51.0 +2.9**
MOX Moxa 16.25 25 *e*P **Pn 13 27 49.5 +0.8**
comp=Z,33nm,1.6s
MOX
comp=Z,100nm,19.0s
MOX Moxa 16.25 25 *e*P **Pn 13 27 49.1 +0.4**
MOX Moxa 16.25 25 *e*P **Pn 13 27 49.5 +0.8**
comp=Z,33nm,1.6s
TANN Tannenbergstha 16.35 27 *e*P **Pn 13 27 48.8 -1.3**
PKSM Moragy 16.52 48⇓ *e*P **Pn 13 27 53.2 +0.9**
TREC Trest 16.74 35 AMS AMS 13 36 30.0
comp=Z,300nm,11.0s
PRU Pruhonice 16.84 32 *e*P **Pn 13 27 58.4 +2.2**
PRU MLR MLR
comp=Z,300nm,9.1s
PRU Pruhonice 16.84 32 *e*P **Pn 13 27 58.4 +2.2**
PRU AMS AMS 13 36 20.0
comp=Z,300nm,9.1s
PRU Pruhonice 16.84 32 *e*P **Pn 13 27 58.4 +2.2**
comp=Z,300nm,9.1s
PRA Prague 16.85 31 P **Pn 13 27 58.0 +1.6**
PVCC Panska Ves 17.26 30 *e*P **Pn 13 28 03.6 +2.1**
PVCC MLR MLR
comp=Z,300nm,13.0s
PVCC Panska Ves 17.26 30 *e*P **Pn 13 28 03.6 +2.1**
PVCC AMS AMS 13 36 00.0
comp=Z,300nm,13.0s
PVCC Panska Ves 17.26 30 *e*P **Pn 13 28 03.6 +2.1**
comp=Z,300nm,13.0s
VRAC Vranov 17.27 36 P **Pn 13 28 00.9 -0.8**
comp=Z,0.3nm,0.3s,baz=209,slow=10,SNR=2.5
VRAC Vranov 17.27 36 P **Pn 13 28 00.9 -0.8**
BRG Berggiesshubel 17.28 29 *e*P **Pn 13 28 00.6 -1.2**
BRG Berggiesshubel 17.28 29 *e*P **Pn 13 28 04.6 +2.8**
comp=Z,20nm,1.2s
BRG
comp=Z,382nm,10.1s
BRG
comp=N,299nm,10.4s
BRG
comp=E,342nm,10.4s
BRG Berggiesshubel 17.28 29 *e*P **Pn 13 28 04.6 +2.8**
BRG pmax pmax
comp=Z,12nm,1.2s
BRG MLR MLR
comp=Z,229nm,10.1s
BRG MLR MLR
comp=N,179nm,10.4s
BRG MLR MLR
comp=E,205nm,10.4s
BRG Berggiesshubel 17.28 29 *e*P **Pn 13 28 04.6 +2.8**
comp=E,229nm,10.1s
CLL Collm 17.28 26 *e*P **Pn 13 27 59.3 -2.5**
CLL Collm 17.28 26 *e*P **Pn 13 28 04.0 +2.2**
CLL pmax pmax
comp=Z,15nm,1.2s
CLL Collm 17.28 26 *e*P **Pn 13 28 04.0 +2.2**
comp=Z,15nm,1.2s
CLL Collm 17.28 26 *e*(P) **Pn 13 28 04.0 +2.2**
comp=Z,15nm,1.2s
CLL *e*PP 13 28 13.0
CLL *e* 13 28 22.0
CLL *e*(S) **Sn 13 31 26.0 +12**
CLL Collm 17.28 26 *e*P **Pn 13 28 04.0 +2.2**
comp=Z,15nm,1.2s
NRDL Niedersach Rie 17.42 19 *e*P **Pn 13 28 03.0 -0.5**
KOLL Kolacno 17.71 41 *e*P **Pn 13 28 08.8 +1.6**
KOLL Kolacno 17.71 41 *e*P **Pn 13 28 08.8 +1.6**
KOLL Kolacno 17.71 41 *e*P **Pn 13 28 08.8 +1.6**
UPC Upice 17.85 33 *e*P **Pn 13 28 09.0 +0.1**
UPC Upice 17.85 33 *e*P **Pn 13 28 09.0 +0.1**
UPC Upice 17.85 33 *e*P **Pn 13 28 09.0 +0.1**
DPC Dobruska-Polom 17.88 34 *e*P **Pn 13 28 10.2 +1.0**
DPC MLR MLR
comp=Z,300nm,8.9s
DPC Dobruska-Polom 17.88 34 *e*P **Pn 13 28 10.2 +1.0**
DPC AMS AMS 13 36 30.0
comp=Z,300nm,8.9s
DPC Dobruska-Polom 17.88 34 *e*P **Pn 13 28 10.2 +1.0**
comp=Z,300nm,8.9s
VYHS Vyhne 17.89 42 *e*P **Pn 13 28 10.1 +0.7**
VYHS pmax pmax
comp=Z,10.0nm,1.4s
VYHS Vyhne 17.89 42 *e*P **Pn 13 28 10.1 +0.7**
comp=Z,10.0nm,1.4s
VYHS Vyhne 17.89 42 *e*P **Pn 13 28 10.1 +0.7**
VYHS Vyhne 17.89 42 *e*P **Pn 13 28 10.1 +0.7**
comp=Z,10.0nm,1.4s
MORC Moravsky Berou 18.04 37 *e*P **Pn 13 28 10.9 -0.3**
MORC pmax pmax
comp=Z,20nm,1.2s
MORC Moravsky Berou 18.04 37 *e*P **Pn 13 28 10.9 -0.4**
comp=Z,20nm,1.2s
MORC Moravsky Berou 18.04 37⇑ *i*P **Pn 13 28 10.2 -1.0**
MORC Moravsky Berou 18.04 37 *e*P **Pn 13 28 10.9 -0.3**
comp=Z,20nm,1.2s
BZS Buzias 18.10 53⇑ P **Pn 13 28 12.0 0.0**
BZS Buzias 18.10 53 P **Pn 13 28 12.0 0.0**
PSZ Piszkesteto 18.15 44 *e*P **Pn 13 28 12.6 +0.1**
PSZ pmax pmax
comp=Z,42nm,1.2s
PSZ Piszkesteto 18.15 44 *e*P **Pn 13 28 12.6 0.0**
comp=Z,42nm,1.2s
PSZ Piszkesteto 18.15 44⇓ *e*P **Pn 13 28 13.6 +1.1**
PSZ Piszkesteto 18.15 44⇑ *i*P **Pn 13 28 13.3 +0.8**
PSZ Piszkesteto 18.15 44 *e*P **Pn 13 28 12.6 +0.1**
comp=Z,42nm,1.2s
KSP Ksiaz 18.22 32 *e*P **Pn 13 28 14.7 +1.3**
KSP Ksiaz 18.22 32 *e*P **Pn 13 28 14.7 +1.3**
VTS Vitosha 18.25 63 *e*P **Pn 13 28 13.3 -0.5**
OKC Ostrava-Krasne 18.38 37 *e*P **Pn 13 28 15.5 +0.2**
OKC MLR MLR
comp=Z,200nm,16.4s
OKC Ostrava-Krasne 18.38 37 *e*P **Pn 13 28 15.5 +0.2**
OKC AMS AMS 13 36 00.0
comp=Z,200nm,16.4s
OKC Ostrava-Krasne 18.38 37 *e*P **Pn 13 28 15.5 +0.2**
comp=Z,200nm,16.4s
MMB Musomiste 18.44 66 *e*P **Pn 13 28 15.3 -0.9**
GZR Gura Zlata 18.77 54⇑ P **Pn 13 28 18.9 -1.3**
GZR Gura Zlata 18.77 54⇑ *i*P **Pn 13 28 18.9 -1.3**
GZR Gura Zlata 18.77 54 P **Pn 13 28 18.9 -1.3**
BSEG Bad Segeberg 18.78 17 *e*P **Pn 13 28 18.2 -2.0**
BSEG Bad Segeberg 18.78 17 *e*P **Pn 13 28 18.2 -2.0**
KECS Kecovo 18.79 44 *e*P **Pn 13 28 20.3 0.0**
KECS pmax pmax
comp=Z,26nm,1.8s
KECS Kecovo 18.79 44 *e*P **Pn 13 28 20.3 0.0**
comp=Z,26nm,1.8s
KECS Kecovo 18.79 44 *e*P **Pn 13 28 20.3 0.0**
PGB Panagyurishte 18.93 64 *e*P **Pn 13 28 21.4 -0.8**
EKA Eskdalemuir Ar 19.23 353 P **Pn 13 28 25.2 -0.5**
baz=162,slow=11,SNR=5.4
EKA Eskdalemuir Ar 19.23 353 P **Pn 13 28 25.2 -0.5**
PLD Plovdiv 19.24 65 *e*P **Pn 13 28 25.8 -0.1**
DRGR 19.28 50⇑ P **Pn 13 28 25.2 -1.1**
DRGR 19.28 50⇑ *i*P **Pn 13 28 25.2 -1.1**
DRGR 19.28 50 P **Pn 13 28 25.2 -1.1**
IDI Anoyia 19.41 86 P **Pn 13 28 26.5 -1.5**
comp=Z,0.9nm,0.3s,baz=284,slow=12,SNR=9.9
IDI Anoyia 19.41 86 P **Pn 13 28 26.5 -1.5**
CRVS Cervenica-Dubn 19.56 44 *e*P **Pn 13 28 28.1 -1.5**
CRVS pmax pmax
comp=Z,34nm,1.2s
CRVS Cervenica-Dubn 19.56 44 *e*P **Pn 13 28 28.1 -1.5**
comp=Z,34nm,1.2s
CRVS Cervenica-Dubn 19.56 44 *e*P **Pn 13 28 28.1 -1.5**
CRVS Cervenica-Dubn 19.56 44 *e*P **Pn 13 28 28.1 -1.5**
comp=Z,34nm,1.2s
APE Apeiranthos 19.69 80⇑ P **Pn 13 28 31.2 -0.1**
STHS Stebnicka Huta 19.72 42 *e*P **Pn 13 28 31.0 -0.5**
STHS pmax pmax
comp=Z,10.0nm,1.1s
STHS Stebnicka Huta 19.72 42 *e*P **Pn 13 28 31.0 -0.5**
comp=Z,10nm,1.1s
STHS Stebnicka Huta 19.72 42 *e*P **Pn 13 28 31.0 -0.5**
STHS Stebnicka Huta 19.72 42 *e*P **Pn 13 28 31.0 -0.5**
comp=Z,10nm,1.1s
UZH Uzhgorod 19.89 45 *e*P **Pn 13 28 31.5 -2.0**
UZH *e*S **Sn 13 32 10.0 -6.9**
UZH MLR MLR
comp=N,300nm,15.0s
UZH MLR MLR
comp=E,300nm,15.0s
UZH MLR MLR
comp=Z,180nm,15.0s
UZH Uzhgorod 19.89 45 *e*P **Pn 13 28 31.5 -2.0**
PVL Pavlikeni 19.91 62 *e*P **Pn 13 28 31.0 -2.8**
VOIR 20.29 56⇑ P **P 13 28 36.6 +0.3**
VOIR 20.29 56⇑ *i*P **P 13 28 36.6 +0.3**
VOIR 20.29 56 P **P 13 28 36.6 +0.3**
SZH Strazhica 20.35 62 *e*P **P 13 28 35.7 -1.3**
KWP Kalwaria Pacla 20.64 43 *e*P **P 13 28 41.0 +1.0**
KWP Kalwaria Pacla 20.64 43 *e*P **P 13 28 41.0 +1.0**
MLR Muntele Rosu 20.91 56⇑ P **P 13 28 45.3 +2.3**
MLR Muntele Rosu 20.91 56⇑ *i*P **P 13 28 45.3 +2.3**
BURAR Bucovina Array 21.18 50⇓ P **P 13 28 47.3 +1.4**
BURAR Bucovina Array 21.18 50⇓ *i*P **P 13 28 47.3 +1.4**
BURAR Bucovina Array 21.18 50⇓ P **P 13 28 47.3 +1.4**
BUR08 Bucovina Ar. S 21.18 50 *e*P **P 13 28 45.7 -0.2**
BUR08 Bucovina Ar. S 21.18 50 *e*P **P 13 28 45.7 -0.2**
LVV L'vov 21.47 44 *e*P **P 13 28 50.7 +1.7**
LVV L'vov 21.47 44 *e*P **P 13 28 50.7 +1.7**
PLOR Plostina 21.49 56⇑ P **P 13 28 51.4 +2.1**
PLOR Plostina 21.49 56⇑ *i*P **P 13 28 51.4 +2.1**
VRI Vrincioaia 21.55 56⇑ P **P 13 28 52.0 +2.1**
VRI Vrincioaia 21.55 56⇑ *i*P **P 13 28 52.0 +2.1**
LKFR Kufra 22.64 116 *i* P **P 13 29 01.8 0.0**
comp=Z,46nm,0.8s,mb4.9,SNR=146
TOA0 Torodi Ar. Sit 23.07 178 *e*P **P 13 29 03.9 -2.5**
TOA0 Torodi Ar. Sit 23.07 178 *e*P **P 13 29 03.9 -2.4**
TORD Torodi Ar. Bea 23.07 178 P **P 13 29 04.6 -1.8**
comp=Z,4.8nm,0.8s,mb4.0,baz=356,slow=10,SNR=18
TORD LR LR 13 38 48.0
comp=Z,395nm,18.8s,MS3.9,baz=345,slow=39
TORD Torodi Ar. Bea 23.07 178 P **P 13 29 04.6 -1.8**
TORD LR LR 13 38 48.0
KIS Kishinev 23.26 54 *e*P **P 13 29 03.0 -5.1**
KIS LRM 13 39 26.0
comp=Z,300nm,20.0s
KIS Kishinev 23.26 54 *e*P **P 13 29 03.0 -5.1**
KIS MLR MLR
comp=Z,300nm,20.0s,MS3.7
KIS MLR MLR
comp=Z,300nm,20.0s
SUW Suwalki 23.46 34 *e*P **P 13 29 08.7 -1.4**
SUW Suwalki 23.46 34 *e*P **P 13 29 08.7 -1.4**
AKASG Malin Array Be 24.84 46 P **P 13 29 19.7 -3.1**
comp=Z,7.7nm,0.7s,mb4.4,baz=244,slow=11,SNR=10
AKASG Malin Array Be 24.84 46 *i* P **P 13 29 19.7 -3.1**
AKASG pmax pmax
comp=Z,8.0nm,0.7s
AKASG Malin Array Be 24.84 46 *i* P **P 13 29 19.7 -3.1**
comp=Z,8.0nm,0.7s,mb4.4
AKBB Malin Array Si 24.84 46 *e*P **P 13 29 19.8 -3.0**
AKBB Malin Array Si 24.84 46 *e*P **P 13 29 19.8 -3.0**
HFS Hagfors 25.21 15 P **P 13 29 24.3 -1.8**
comp=Z,3.8nm,0.9s,mb3.9,baz=184,slow=5.9,SNR=5.3
HFS Hagfors 25.21 15 P **P 13 29 24.3 -1.8**
HFS pmax pmax
comp=Z,4.0nm,0.9s
HFS Hagfors 25.21 15 P **P 13 29 24.3 -1.8**
comp=Z,4.0nm,0.9s,mb4.0
NB2 NORSAR Subarra 25.59 12 P **P 13 29 28.7 -0.8**
comp=Z,5.0nm,1.1s,mb4.0,baz=199,slow=9.3
NB2 NORSAR Subarra 25.59 12 P **P 13 29 28.7 -0.8**
comp=Z,5.0nm,1.1s,mb4.0,baz=199,slow=9.0,SNR=4.6
NOA NORSAR Array B 25.59 12 P **P 13 29 28.4 -1.2**
comp=Z,2.7nm,0.9s,mb3.8,baz=201,slow=8.6,SNR=5.1
NOA NORSAR Array B 25.59 12 P **P 13 29 28.4 -1.1**
NOA pmax pmax
comp=Z,3.0nm,0.9s
NOA NORSAR Array B 25.59 12 P **P 13 29 28.4 -1.1**
comp=Z,3.0nm,0.9s,mb3.8
BRTR Keskin Array B 25.87 72 P **P 13 29 31.4 -1.0**
comp=Z,0.6nm,0.6s,baz=84,slow=12,SNR=4.3
BRTR Keskin Array B 25.87 72 P **P 13 29 31.4 -1.0**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
BRTR Keskin Array B 25.87 72 P **P 13 29 31.4 -1.0**
comp=Z,1.0nm,0.6s,mb3.5
MNK Minsk 25.94 37 *e*P **P 13 29 28.0 -4.8**
MMAI Mount Meron Ar 28.41 86 P **P 13 29 54.9 -0.4**
comp=Z,6.8nm,0.7s,mb4.4,baz=286,slow=9.5,SNR=5.0
FINES FINESS Array B 29.71 24 P **P 13 30 05.2 -1.2**
comp=Z,4.0nm,0.9s,mb4.2,baz=185,slow=9.2,SNR=5.5
FINES LR LR 13 41 10.5
comp=Z,84nm,19.6s,MS3.4,baz=163,slow=35
FINES FINESS Array B 29.71 24 P **P 13 30 05.3 -1.1**
FINES pmax pmax
comp=Z,4.0nm,0.9s
FINES MLR MLR
comp=Z,84nm,19.6s
FINES FINESS Array B 29.71 24 P **P 13 30 05.3 -1.1**
comp=Z,84nm,19.6s
DBIC Dimbokro 29.98 192 LR LR 13 43 06.4
comp=Z,105nm,21.0s,MS3.5,baz=355,slow=38
OBN Obninsk 30.69 41 *e*P **P 13 30 15.2 0.0**
OBN *i* 13 31 18.7
OBN pmax pmax

comp=Z,9.0nm,1.5s,mb4.4
OBN MLR MLR
OBN Obninsk 30.69 41 *e*P **P 13 30 15.2 0.0**
comp=Z,100nm,15.0s,MS3.6
ARCES ARCESS Array B 35.87 14 P **P 13 30 58.0 -2.1**
comp=Z,6.6nm,0.5s,mb4.4,baz=198,slow=7.6,SNR=20
ARCES ARCESS Array B 35.87 14 P **P 13 30 58.0 -2.1**
ARCES pmax pmax
comp=Z,3.0nm,0.5s
ARCES ARCESS Array B 35.87 14 P **P 13 30 58.0 -2.1**
comp=Z,3.0nm,0.5s,mb4.5
SUMG Summit 41.40 343 *e*P **P 13 31 46.8 +0.3**
comp=Z,16nm,1.0s,mb4.6
SUMG Summit 41.40 343 *e*P **P 13 31 46.8 +0.3**
comp=Z,16nm,1.0s,mb4.6
SOKR Solikamsk 42.39 39*d i*P **P 13 31 53.7 -1.1**
SOKR pmax pmax
comp=Z,20nm,0.7s,mb4.9
SOKR Solikamsk 42.39 39 *i*P **P 13 31 53.7 -1.1**
comp=Z,20nm,0.7s,mb4.9
AKTK Aktyubinsk 42.75 52 P **P 13 31 55.9 -1.9**
AKTK Aktyubinsk 42.75 52 P **P 13 31 55.9 -1.9**
comp=Z,5.0nm,0.9s,mb4.2
AKTO Aktyubinsk 42.75 52 P **P 13 31 55.9 -1.9**
comp=Z,4.9nm,0.8s,mb4.3,baz=262,slow=9.1,SNR=6.0
AKTO Aktyubinsk 42.75 52 P **P 13 31 55.9 -1.9**
AKTO pmax pmax
comp=Z,5.0nm,0.9s,mb4.2
ARU Arti 43.05 43*c i*P **P 13 31 58.5 -1.6**
ARU *e* 13 33 39.3
ARU S **S 13 38 26.1 +0.6**
ARU pmax pmax
comp=Z,64nm,1.7s,mb5.1
ARU Arti 43.05 43 *e*P **P 13 31 58.2 -2.0**
comp=Z,8.5nm,1.7s,mb4.2
ARU Arti 43.05 43 *i*P **P 13 31 58.5 -1.6**
comp=Z,64nm,1.7s,mb5.1
ARU S **S 13 38 26.1 +0.6**
SVE Sverdlovsk 44.21 43⇑*e*P **P 13 32 08.8 -0.7**
SVE pmax pmax
comp=Z,35nm,1.4s,mb4.9
SVE Sverdlovsk 44.21 43 *e*P **P 13 32 08.8 -0.7**
comp=Z,35nm,1.4s,mb4.9
SCHQ Schefferville 48.90 315 LR LR 13 50 07.2
comp=Z,52nm,20.1s,MS3.5,baz=86,slow=32
BRVK Borovoye 50.03 47*ce*P **P 13 32 54.3 -0.6**
BRVK pmax pmax
comp=Z,16nm,1.7s,mb4.8
BRVK Borovoye 50.03 47 *e*P **P 13 32 54.3 -0.6**
comp=Z,16nm,1.7s,mb4.8
BVAR Borovoye Array 50.10 47 P **P 13 32 54.2 -1.2**
comp=Z,0.7nm,0.4s,mb4.0,baz=286,slow=5.4,SNR=4.8
BVAR PP PP 13 34 48.4 -2.0
comp=Z,2.1nm,0.9s,baz=284,slow=7.5,SNR=4.7
BVAR Borovoye Array 50.10 47 P **P 13 32 54.2 -1.3**
BVAR 13 34 48.4
BVAR pmax pmax
comp=Z,1.0nm,0.4s
BVAR pmax pmax
comp=Z,2.0nm,0.9s
BVAR Borovoye Array 50.10 47 P **P 13 32 54.2 -1.3**
comp=Z,1.0nm,0.4s,mb4.2
BVAR Borovoye Array 50.10 47 PP PP 13 34 48.4 -1.9
KMBO Kilima Mbogo 50.24 130 P **P 13 32 56.2 -0.8**
comp=Z,2.9nm,0.9s,mb4.3,baz=250,slow=13,SNR=5.2
KMBO LR LR 13 55 05.8
comp=Z,95nm,18.9s,MS3.8,baz=88,slow=37
KMBO Kilima Mbogo 50.24 130 P **P 13 32 56.2 -0.8**
KMBO pmax pmax
comp=Z,3.0nm,0.9s
KMBO MLR MLR
comp=Z,95nm,19.0s
KMBO Kilima Mbogo 50.24 130 P **P 13 32 56.2 -0.8**
KMBO LR LR 13 55 05.8
KMBO Kilima Mbogo 50.24 130 P **P 13 32 56.2 -0.8**
comp=Z,95nm,19.0s
EKS2 Erkin-Say 54.95 59 P **P 13 33 30.6 -1.0**
comp=Z,3.3nm,0.7s,mb4.5
EKS2 Erkin-Say 54.95 59 P **P 13 33 30.6 -1.0**
comp=Z,3.3nm,0.7s,mb4.5
KURK Kurchatov 55.59 49 P **P 13 33 34.5 -1.6**
comp=Z,4.9nm,0.7s,mb4.7,baz=289,slow=8.1,SNR=21
KURK Kurchatov 55.59 49*ce*P **P 13 33 35.1 -1.0**
KURK pmax pmax
comp=Z,11nm,1.7s,mb4.6
KURK Kurchatov 55.59 49 *e*P **P 13 33 34.1 -2.0**
comp=Z,4.4nm,0.7s,mb4.6
KURK Kurchatov 55.59 49 *e*P **P 13 33 35.1 -1.0**
comp=Z,11nm,1.7s,mb4.6
UCH Uchtor 55.61 60 *e*P **P 13 33 35.5 -0.9**
comp=Z,1.6nm,0.6s,mb4.2
UCH Uchtor 55.61 60 *e*P **P 13 33 35.5 -0.9**
comp=Z,1.6nm,0.6s,mb4.2
RES Resolute Bay 56.88 342 *e*P **P 13 33 44.9 -0.1**
RES pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
RES Resolute Bay 56.88 342 *e*P **P 13 33 44.9 -0.1**
comp=Z,5.3nm,1.0s,mb4.5
RES Resolute Bay 56.88 342 *e*P **P 13 33 44.9 -0.1**
comp=Z,5.3nm,1.0s,mb4.5
NVS Novosibirsk 57.05 43 *e*P **P 13 33 44.0 -2.4**
NVS pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
NVS Novosibirsk 57.05 43 *e*P **P 13 33 44.0 -2.4**
comp=Z,7.0nm,1.1s,mb4.6
KSH Kashi 57.63 62 P **P 13 33 48.8 -1.9**
KSH pP pP 13 33 53.4 -1.0
KSH sP sP 13 33 55.8 +0.1
KSH PcP PcP 13 34 43.1 -0.8
KSH PP PP 13 35 57.5 -0.8
KSH ScP ScP 13 38 40.8 -2.9
KSH PcS PcS 13 38 42.5 -2.5
KSH S **S 13 41 41.8 -7.0**
KSH sS sS 13 41 50.0 -4.7
KSH ScS ScS 13 43 34.0 -6.2
KSH SS SS 13 45 32.4 -6.1
KSH pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
KSH LR LR
comp=N,180nm,8.3s
KSH LR LR
comp=E,160nm,7.7s
KSH LR LR
comp=Z,130nm,5.4s
ZALV Zalesovo Beam 58.21 44 P **P 13 33 53.3 -1.3**
comp=Z,3.9nm,0.7s,mb4.5,baz=286,slow=7.6,SNR=4.8
ZALV Zalesovo Beam 58.21 44 P **P 13 33 53.3 -1.3**
ZALV pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
ZALV Zalesovo Beam 58.21 44 P **P 13 33 53.3 -1.3**
comp=Z,4.0nm,0.7s,mb4.6
MK31 Makanchi Array 59.19 52 *e*P **P 13 33 59.6 -1.9**
MK31 Makanchi Array 59.19 52 *e*P **P 13 33 59.6 -1.9**
MKAR Makanchi Array 59.19 52 P **P 13 34 00.0 -1.5**
comp=Z,2.1nm,0.7s,mb4.3,baz=294,slow=5.9,SNR=12
MKAR Makanchi Array 59.19 52 P **P 13 34 00.0 -1.5**
MKAR pmax pmax
comp=Z,2.0nm,0.7s
EYMN Ely 65.61 312 *e*P **P 13 34 43.3 -1.1**
comp=Z,5.5nm,1.0s,mb4.5
EYMN Ely 65.61 312 *e*P **P 13 34 43.3 -1.2**
comp=Z,5.4nm,1.0s,mb4.5
TIXI Tiksi 66.29 16 *e*P **P 13 34 48.6 +0.1**
TIXI pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
TIXI Tiksi 66.29 16 *e*P **P 13 34 48.6 +0.1**
comp=Z,5.8nm,0.8s,mb4.7
TIXI Tiksi 66.29 16 *e*P **P 13 34 48.6 +0.1**
comp=Z,5.8nm,0.8s,mb4.7
FFC Flin Flon 67.97 322 *i*P **P 13 34 59.7 +0.3**
FFC Flin Flon 67.97 322 *i*P **P 13 34 59.7 +0.3**
BOSA Boshof 68.50 157 LR LR 14 04 39.5
comp=Z,127nm,21.5s,MS4.1,baz=239,slow=36
YKA Yellowknife Ar 68.89 333 P **P 13 35 04.2 -0.8**
comp=Z,3.9nm,0.8s,mb4.4,baz=56,slow=6.0,SNR=8.7
YKA Yellowknife Ar 68.89 333 P **P 13 35 04.2 -0.8**
YKA pmax pmax
comp=Z,4.0nm,0.8s
YKA Yellowknife Ar 68.89 333 P **P 13 35 04.2 -0.8**
YKA Yellowknife Ar 68.89 333 P **P 13 35 04.2 -0.8**
comp=Z,4.0nm,0.8s,mb4.4
INK Inuvik 70.32 344 P **P 13 35 12.6 -1.1**
comp=Z,2.4nm,0.8s,mb4.2,baz=44,slow=8.7,SNR=5.7
INK Inuvik 70.32 344 P **P 13 35 12.6 -1.1**
INK pmax pmax
comp=Z,2.0nm,0.9s
INK Inuvik 70.32 344 P **P 13 35 12.6 -1.1**
comp=Z,2.0nm,0.9s,mb4.0
SONM Songino Array 73.08 43 P **P 13 35 30.7 -0.1**
comp=Z,0.7nm,0.7s,mb3.7,baz=289,slow=5.1,SNR=4.7
SONM Songino Array 73.08 43 P **P 13 35 30.7 0.0**
SONM pmax pmax
comp=Z,1.0nm,0.7s
SONM Songino Array 73.08 43 P **P 13 35 30.6 -0.1**
MIAR Mount Ida 73.75 301 *e*P **P 13 35 33.6 -1.3**
MIAR pmax pmax
comp=Z,11nm,1.1s,mb4.7
MIAR Mount Ida 73.75 301 *e*P **P 13 35 33.6 -1.3**
comp=Z,11nm,1.1s,mb4.7
MIAR Mount Ida 73.75 301 *e*P **P 13 35 33.6 -1.3**
comp=Z,11nm,1.1s,mb4.7
EDM Edmonton 74.28 325 *e*P **P 13 35 37.6 -0.1**
EDM Edmonton 74.28 325 *e*P **P 13 35 37.6 -0.1**
EGAK Eagle 74.96 344 *e*P **P 13 35 41.6 +0.2**
comp=Z,5.7nm,1.1s,mb4.4
EGAK Eagle 74.96 344 *e*P **P 13 35 41.6 +0.2**
comp=Z,5.7nm,1.1s,mb4.4
RSSD Black Hills 75.03 314 *e*P **P 13 35 42.0 -0.2**
RSSD pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
RSSD Black Hills 75.03 314 *e*P **P 13 35 42.0 -0.2**
comp=Z,3.1nm,0.9s,mb4.2
RSSD Black Hills 75.03 314 *e*P **P 13 35 42.0 -0.2**
comp=Z,3.1nm,0.9s,mb4.2
A18A Metzger Ranch, 75.30 320 ⇓P **P 13 35 43.5 -0.2**
baz=75
BILL Bilibino 75.38 6 *e*P **P 13 35 44.6 +0.8**
BILL *i* 13 35 53.1
BILL pmax pmax
comp=Z,16nm,1.6s,mb4.7
BILL MLR MLR
comp=Z,100nm,16.0s,MS4.2
BILL Bilibino 75.38 6 P **P 13 35 44.2 +0.4**
comp=Z,13nm,1.2s,mb4.8
BILL Bilibino 75.38 6 P **P 13 35 44.2 +0.4**
comp=Z,13nm,1.2s,mb4.8
B18A Beardsley Farm 75.60 320 ⇑P **P 13 35 45.1 -0.2**
baz=75
EGMT Eagleton 75.82 320 ⇑P **P 13 35 46.5 -0.1**
baz=76
A16A West Butte Ran 76.18 321 ⇑P **P 13 35 48.2 -0.5**
baz=76,SNR=10
B17A L&G Farms, Che 76.19 320 ⇓P **P 13 35 48.9 +0.1**
baz=76
D18A Linhart Farms, 76.36 319 ⇑P **P 13 35 49.7 -0.1**
baz=76
C17A Wharram Farm, 76.59 320 ⇑P **P 13 35 50.8 -0.3**
baz=76
A15A Johnson Ranch, 76.73 322 ⇑P **P 13 35 51.1 -0.7**
baz=77,SNR=8.9
E18A Harlowton 76.82 319 ⇑P **P 13 35 52.3 0.0**
baz=77
D17A Six Diamond Ra 76.86 319 ⇓P **P 13 35 52.6 +0.1**
baz=77
C16A Fuhringer Ranc 76.99 320 ⇓P **P 13 35 52.9 -0.5**
baz=77
B15A Bradely Ranch, 77.08 321 ⇑P **P 13 35 53.3 -0.5**
baz=77
A14A Double T Ranch 77.08 322 ⇑P **P 13 35 53.4 -0.4**
baz=77,SNR=7.4
F18A Big Timber 77.13 318 ⇓P **P 13 35 54.0 -0.1**
baz=77
DLBC Dease Lake 77.14 336 P **P 13 35 54.6 +0.7**
comp=Z,4.6nm,0.7s,mb4.5,baz=26,slow=4.9,SNR=13
DLBC Dease Lake 77.14 336 *e*P **P 13 35 55.0 +1.1**
DLBC Dease Lake 77.14 336 *e*P **P 13 35 55.0 +1.1**
WMOK Wichita Mounta 77.19 304 P **P 13 35 54.0 -0.7**
WMOK pmax pmax
comp=Z,6.0nm,1.3s,mb4.4
WMOK Wichita Mounta 77.19 304 P **P 13 35 54.0 -0.7**
comp=Z,6.0nm,1.3s,mb4.4
WMOK Wichita Mounta 77.19 304 P **P 13 35 54.0 -0.7**
comp=Z,6.0nm,1.3s,mb4.4
D16A Dana Ranch, Ca 77.39 320 ⇓P **P 13 35 55.3 -0.2**
baz=77
E17A Martinsdale 77.39 319 ⇓P **P 13 35 55.1 -0.4**
baz=77
PHWY Pilot Hill 77.56 312 *e*P **P 13 35 56.9 +0.3**
comp=Z,14nm,1.1s,mb4.8
PHWY Pilot Hill 77.56 312 *e*P **P 13 35 56.9 +0.3**
comp=Z,14nm,1.1s,mb4.8
F17A Fitzpatrick Pl 77.64 318 ⇓P **P 13 35 57.3 +0.3**
baz=78
L22A Ellis Ranch, M 77.69 313 ⇑P **P 13 35 57.2 -0.1**
baz=78
E16A East Helena 77.78 319 ⇑P **P 13 35 58.1 +0.4**
baz=78
CHUM Lake Minchumin 77.92 348 *e*P **P 13 35 58.5 +0.3**
comp=Z,7.0nm,1.0s,mb4.5
CHUM Lake Minchumin 77.92 348 *e*P **P 13 35 58.5 +0.3**
comp=Z,7.0nm,1.0s,mb4.5
TRF Thorofare Moun 77.97 347 *e*P **P 13 35 58.0 -0.4**
comp=Z,20nm,1.6s,mb4.8
TRF Thorofare Moun 77.97 347 *e*P **P 13 35 58.0 -0.5**
comp=Z,20nm,1.6s,mb4.8
KTH Kantishna Hill 77.99 348 *e*P **P 13 35 57.9 -0.7**
comp=Z,6.3nm,0.9s,mb4.5
KTH Kantishna Hill 77.99 348 *e*P **P 13 35 57.9 -0.7**
comp=Z,6.3nm,0.9s,mb4.5
B13A Whitefish 78.00 322 ⇑P **P 13 35 58.8 -0.1**
baz=78,SNR=5.8
C14A Swan Lake 78.04 321 ⇓P **P 13 35 58.6 -0.6**
baz=78
L21A Rawlins 78.28 314 ⇓P **P 13 36 00.4 -0.2**
baz=78
BOZ Bozeman (W) 78.33 319 ⇓P **P 13 36 01.3 +0.5**
baz=78
BOZ Bozeman (W) 78.33 319 *e*P **P 13 36 01.3 +0.5**
BOZ pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
BOZ Bozeman (W) 78.33 319 *e*P **P 13 36 01.3 +0.5**
comp=Z,4.2nm,1.0s,mb4.3
BOZ Bozeman (W) 78.33 319 *e*P **P 13 36 01.3 +0.5**
comp=Z,4.2nm,1.0s,mb4.3
SWMT Swartz Lake 78.34 321 *e*P **P 13 36 00.1 -0.7**
comp=Z,6.3nm,1.2s,mb4.4
SWMT Swartz Lake 78.34 321 *e*P **P 13 36 00.1 -0.7**
comp=Z,6.3nm,1.2s,mb4.4
CHMT Chamberlain Mo 78.35 320 *e*P **P 13 36 01.0 +0.1**
comp=Z,6.1nm,1.5s,mb4.3
CHMT Chamberlain Mo 78.35 320 *e*P **P 13 36 01.0 +0.1**
comp=Z,6.1nm,1.5s,mb4.3
E15A Deer Lodge 78.35 320 ⇑P **P 13 36 01.3 +0.4**
baz=78,SNR=5.3
D14A Greenough 78.37 321 ⇑P **P 13 36 00.9 -0.1**
baz=78
K20A Yellowstone Ra 78.41 315 ⇓P **P 13 36 00.8 -0.6**
baz=78
N22A Wattenberg Ran 78.46 312 ⇓P **P 13 36 01.5 -0.1**
baz=78
SEY Seymchan 78.47 13*ce*P **P 13 36 02.5 +1.2**
SEY Seymchan 78.47 13 *e*P **P 13 36 02.5 +1.2**
M21A Separation Pea 78.50 313 ⇓P **P 13 36 02.0 +0.2**
baz=78
BSMT Bassoo Peak 78.50 322 *e*P **P 13 36 02.0 +0.2**
comp=Z,2.0nm,0.6s,mb4.2
BSMT Bassoo Peak 78.50 322 *e*P **P 13 36 02.0 +0.3**
comp=Z,2.0nm,0.6s,mb4.2
C13A Hot Springs 78.51 322 ⇓P **P 13 36 01.8 0.0**
baz=78,SNR=9.9
H17A Grant Village 78.56 317 ⇑P **P 13 36 02.3 +0.2**
baz=78
ISCO Idaho Springs 78.57 311 *e*P **P 13 36 02.7 +0.4**
ISCO pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
ISCO Idaho Springs 78.57 311 *e*P **P 13 36 02.7 +0.5**
comp=Z,9.8nm,1.4s,mb4.5
ISCO Idaho Springs 78.57 311 *e*P **P 13 36 02.7 +0.4**
comp=Z,9.8nm,1.4s,mb4.5
I18A Diamond G Ranc 78.59 316 ⇑P **P 13 36 02.4 +0.2**
baz=78
K19A Absolon Red Bu 78.59 315 ⇓P **P 13 36 01.8 -0.5**
baz=78
F15A Butte 78.66 319 ⇓P **P 13 36 02.9 +0.3**
baz=78,SNR=5.4
G16A Moss Hill, Enn 78.69 318 ⇓P **P 13 36 03.6 +0.8**
baz=78
H16A Russell Place, 78.73 318 ⇑P **P 13 36 04.1 +1.0**
baz=79
L20A Wamsutter 78.82 314 ⇑P **P 13 36 03.6 0.0**
baz=79
D13A Huson 78.85 321 ⇓P **P 13 36 03.4 -0.2**
baz=79,SNR=6.7
J18A Kendall Valley 79.01 316 ⇑P **P 13 36 04.7 +0.1**
baz=79
DLMT Dillon 79.03 319 *e*P **P 13 36 05.6 +1.0**
comp=Z,15nm,1.3s,mb4.8
DLMT Dillon 79.03 319 *e*P **P 13 36 05.6 +0.9**
comp=Z,15nm,1.3s,mb4.8
PDAR Pinedale Array 79.04 315 P **P 13 36 04.6 -0.2**
comp=Z,4.4nm,0.7s,mb4.5,baz=55,slow=6.0,SNR=28
PDAR LR LR 14 11 09.3
comp=Z,92nm,19.3s,MS4.1,baz=304,slow=36
PDAR Pinedale Array 79.04 315 P **P 13 36 04.6 -0.2**
BW06 Boulder Array 79.04 315 ⇑P **P 13 36 04.3 -0.5**
baz=79
M20A Sweetwater, Wa 79.06 314 ⇑P **P 13 36 05.3 +0.4**
baz=79
BMRM Bremner River 79.07 344 *e*P **P 13 36 05.3 +0.7**
comp=Z,34nm,1.3s,mb5.1
BMRM Bremner River 79.07 344 *e*P **P 13 36 05.3 +0.7**
comp=Z,34nm,1.3s,mb5.1
IMW Indian Meadow 79.08 317 *e*P **P 13 36 05.7 +0.7**
comp=Z,4.2nm,0.8s,mb4.4
IMW Indian Meadow 79.08 317 *e*P **P 13 36 05.7 +0.7**
comp=Z,4.2nm,0.8s,mb4.4
G15A Dillon 79.10 319 ⇑P **P 13 36 06.3 +1.2**
baz=79
N21A Black Mountain 79.12 313 ⇓P **P 13 36 05.7 +0.4**
baz=79
F14A Wisdom 79.14 320 ⇓P **P 13 36 05.6 +0.3**
baz=79
E13A Victor 79.14 320 ⇑P **P 13 36 05.2 -0.1**
baz=79,SNR=6.0
C11A Tepee Creek (N 79.24 322 ⇓P **P 13 36 05.8 +0.1**
baz=79
J17A Brown Place, J 79.30 316 ⇑P **P 13 36 06.4 +0.2**
baz=79
D12A Red Ives Fores 79.33 321 ⇓P **P 13 36 05.8 -0.5**
baz=79
L19A Farson 79.35 315 ⇓P **P 13 36 06.9 +0.4**
baz=79
REDW Red Top Meadow 79.38 316 *e*P **P 13 36 06.8 +0.1**
REDW Red Top Meadow 79.38 316 *e*P **P 13 36 06.8 +0.2**
TTA Tatalina 79.39 350 *e*P **P 13 36 06.9 +0.6**
TTA pmax pmax
comp=Z,14nm,1.4s,mb4.7
TTA Tatalina 79.39 350 *e*P **P 13 36 06.9 +0.6**
comp=Z,14nm,1.4s,mb4.7
TTA Tatalina 79.39 350 *e*P **P 13 36 06.9 +0.6**
comp=Z,14nm,1.4s,mb4.7
K18A Toltan Ranch, 79.39 316 ⇓P **P 13 36 06.7 -0.1**
baz=79
O21A Pagoda 79.43 312 ⇓P **P 13 36 07.3 +0.4**
baz=79
N20A Spence Gulch, 79.51 313 ⇑P **P 13 36 07.7 +0.3**
baz=79
MCMT McKenzie Canyo 79.51 319 *e*P **P 13 36 08.5 +1.1**
comp=Z,4.4nm,1.2s,mb4.3
MCMT McKenzie Canyo 79.51 319 *e*P **P 13 36 08.5 +1.2**
comp=Z,4.4nm,1.2s,mb4.3
H15A Lima 79.54 318 ⇓P **P 13 36 07.9 +0.4**
baz=79
M19A Rock Springs 79.61 314 ⇓P **P 13 36 08.1 +0.2**
baz=80
RRI2 Red Ridge 79.65 317 *e*P **P 13 36 09.1 +1.0**
comp=Z,7.1nm,0.8s,mb4.7
F13A Darby 79.66 320 ⇑P **P 13 36 08.6 +0.5**
baz=80
SDCO Great Sand Dun 79.76 309 *e*P **P 13 36 08.8 0.0**
comp=Z,3.8nm,1.0s,mb4.3
SDCO Great Sand Dun 79.76 309 *e*P **P 13 36 08.8 0.0**
comp=Z,3.8nm,1.0s,mb4.3
K17A Gardner Place, 79.81 316 ⇓P **P 13 36 09.2 +0.2**
baz=80
W27A Bowe Ranch, En 79.84 306 ⇑P **P 13 36 09.5 +0.2**
baz=80
L18A Fontenelle, Gr 79.85 315 ⇓P **P 13 36 09.3 +0.1**
baz=80
J16A Bone 79.86 317 ⇑P **P 13 36 09.7 +0.4**
baz=80
V26A Tequesquite Ra 79.87 307 ⇑P **P 13 36 09.4 -0.1**
baz=80
E12A Beaver Dam Sad 79.87 321 ⇓P **P 13 36 09.0 -0.2**
baz=80
U25A Circle Dot Ran 79.90 308 ⇓P **P 13 36 09.8 +0.2**
baz=80
H14A Leadore 79.93 319 ⇓P **P 13 36 10.7 +1.1**
baz=80,SNR=10
Q22A Crested Butte, 79.94 311 ⇓P **P 13 36 10.0 +0.3**
baz=80
O20A White River Ci 79.94 313 ⇑P **P 13 36 09.8 0.0**
baz=80
G13A Cobalt 80.07 319 ⇓P **P 13 36 11.0 +0.6**
baz=80
K16A Soda Springs 80.14 316 ⇑P **P 13 36 11.2 +0.4**
baz=80
F12A Elk City 80.16 320 ⇓P **P 13 36 10.6 -0.2**
baz=80
M18A Lyman 80.19 315 ⇑P **P 13 36 10.9 -0.1**
baz=80
L17A Cokeville 80.21 315 ⇑P **P 13 36 10.9 -0.2**
baz=80
J15A Blackfoot 80.23 317 ⇑P **P 13 36 12.4 +1.1**
baz=80,SNR=11
R22A Saguache, Gunn 80.24 310 ⇑P **P 13 36 12.1 +0.7**
baz=80
W26A Owens Ranch, T 80.28 306 ⇑P **P 13 36 12.2 +0.5**
baz=80
HHC Hu-ho-hao-te 80.29 46 *e*P **P 13 36 10.3 -1.3**
HHC pP pP 13 36 15.0 -0.3
HHC sP sP 13 36 17.4 +0.7
HHC PP PP 13 39 13.8 +0.1
HHC S S 13 46 12.3 -4.6
HHC sS sS 13 46 20.8 -2.3
HHC SKS 13 46 22.8
HHC ScS ScS 13 46 32.4 -4.8
HHC SS SS 13 51 25.4 -1.7
HHC pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
HHC pmax pmax
comp=Z,70nm,5.6s
HHC LR LR
comp=N,83nm,18.0s,MS4.3
HHC LR LR
comp=E,100nm,18.0s,MS4.3
HHC LR LR
comp=Z,66nm,19.2s,MS4.0
MSTX Muleshoe 80.31 305 ⇑P **P 13 36 11.6 -0.3**
baz=80
O19A Miners Draw (B 80.36 313 ⇑P **P 13 36 12.2 +0.2**
baz=80
B08A Colville Reser 80.36 324 ⇑P **P 13 36 12.4 +0.5**
baz=80
V25A Rancho No Teng 80.38 307 ⇓P **P 13 36 11.9 -0.3**
baz=80
I14A Mackay 80.43 318 ⇓P **P 13 36 13.6 +1.3**
baz=80,SNR=8.4
H13A Challis 80.44 319 ⇑P **P 13 36 13.2 +0.9**
baz=80,SNR=22
M17A Scullys Gap (B 80.50 315 ⇑P **P 13 36 12.5 -0.2**
baz=80
F11A Grangeville 80.53 321 ⇑P **P 13 36 12.3 -0.5**
baz=80,SNR=8.3
L16A Fish Haven 80.58 316 ⇑P **P 13 36 13.3 +0.1**
baz=80
G12A Big Creek, Yel 80.62 320 ⇓P **P 13 36 13.2 -0.1**
baz=80
Y27A Causey 80.62 305 ⇑P **P 13 36 13.5 0.0**
baz=80
R21A Cimarron 80.64 311 ⇓P **P 13 36 14.1 +0.6**
baz=80
X26A CR and CF Fran 80.64 306 ⇑P **P 13 36 13.7 +0.1**
baz=80
W25A X Bar L Ranch, 80.66 307 ⇑P **P 13 36 14.0 +0.3**
baz=80
H12A Diamond D Ranc 80.77 319 ⇑P **P 13 36 14.7 +0.6**
baz=81,SNR=12
I13A Wildhorse Cree 80.80 318 ⇓P **P 13 36 15.3 +1.0**
baz=81,SNR=5.4
J14A Carey 80.87 318 ⇓P **P 13 36 15.5 +0.8**
baz=81
G11A Walters Elk Ra 80.92 321 ⇑P **P 13 36 15.7 +0.8**
baz=81
HWUT Hardware Ranch 80.92 315 *e*P **P 13 36 14.9 -0.1**
comp=Z,4.7nm,0.6s,mb4.6
HWUT Hardware Ranch 80.92 315 *e*P **P 13 36 14.9 -0.1**
comp=Z,4.7nm,0.6s,mb4.6
Z27A Tatum 81.00 305 ⇓P **P 13 36 16.0 +0.4**
baz=81
F10A Beach Ranch, E 81.01 322 ⇑P **P 13 36 15.0 -0.4**

baz=81,SNR=8.4
Y26A Elida 81.03 306 ⇓P P 13 36 16.2 +0.5
baz=81
U23A El Rito 81.07 309 ⇓P P 13 36 16.0 0.0
baz=81
T22A Edith 81.09 310 ⇑P P 13 36 16.6 +0.6
baz=81
L15A Malad City 81.12 316 ⇑P P 13 36 16.2 +0.2
baz=81
J13A Cove Ranch, Pi 81.18 318 ⇑P P 13 36 17.2 +0.9
baz=81,SNR=8.0
HLID Hailey 81.20 318 ⇑P P 13 36 17.4 +0.9
baz=81,SNR=14
HLID Hailey 81.20 318 eP P 13 36 17.6 +1.1
comp=Z,8.1nm,1.0s,mb4.6
HLID Hailey 81.20 318 eP P 13 36 17.5 +1.1
comp=Z,8.1nm,1.0s,mb4.6
K14A Jones Ranch, D 81.20 317 ⇓P P 13 36 16.4 0.0
baz=81
S21A Coal Bank Pass 81.23 311 ⇓P P 13 36 16.8 0.0
baz=81
W24A Lazy 6 Ranch, 81.27 307 ⇓P P 13 36 17.3 +0.3
baz=81
Q19A Hogan Spring (81.30 312 ⇓P P 13 36 17.5 +0.4
baz=81
N16A Rees Ranch, Co 81.32 315 ⇓P P 13 36 17.5 +0.4
baz=81
O17A Robinson Place 81.37 314 ⇑P P 13 36 17.4 0.0
baz=81
I12A Atlanta 81.42 319 ⇓P P 13 36 18.0 +0.3
baz=81
G10A Bishop Farm, J 81.43 321 ⇓P P 13 36 16.9 -0.7
baz=81,SNR=7.2
P18A Preston Nutter 81.45 313 ⇑P P 13 36 17.5 -0.3
baz=81
Z26A Caprock 81.53 305 ⇑P P 13 36 18.7 +0.3
baz=81
L14A Malta 81.58 317 ⇓P P 13 36 19.0 +0.5
baz=81
K13A Stover Farm, H 81.63 318 ⇓P P 13 36 19.3 +0.5
baz=82
JCW Jim Creek 81.69 325 eP P 13 36 18.4 -0.5
comp=Z,9.3nm,0.9s,mb4.7
JCW Jim Creek 81.69 325 eP P 13 36 18.4 -0.5
comp=Z,9.3nm,0.9s,mb4.7
H10A Noah's Angus R 81.72 320 ⇑P P 13 36 20.0 +0.8
baz=82
Q18A Rafter H Ranch 81.72 313 ⇓P P 13 36 18.9 -0.4
baz=82
G09A Cove 81.77 321 ⇑P P 13 36 18.9 -0.5
baz=82,SNR=6.0
J12A Stokes Ranch, 81.78 318 ⇓P P 13 36 19.8 +0.4
baz=82
W23A Werner Place, 81.78 308 ⇓P P 13 36 19.9 +0.3
baz=82
I11A Placerville 81.78 319 ⇓P P 13 36 19.5 0.0
baz=82
V22A San Miguel Ran 81.79 309 ⇓P P 13 36 20.2 +0.5
baz=82
O16A Springville 81.81 314 ⇑P P 13 36 19.9 +0.2
baz=82
BMO Blue Mountains 81.83 321 eP P 13 36 19.3 -0.4
BMO pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
BMO Blue Mountains 81.83 321 eP P 13 36 19.3 -0.4
comp=Z,3.9nm,0.6s,mb4.5
BMO Blue Mountains 81.83 321 eP P 13 36 19.3 -0.4
comp=Z,3.9nm,0.6s,mb4.5
P17A Butcher Ranch, 81.84 313 ⇓P P 13 36 19.6 -0.4
baz=82
328A Wristen Ranch, 81.91 303 ⇑P P 13 36 20.0 -0.4
baz=82
U21A Nageezi 81.93 309 ⇓P P 13 36 20.3 -0.1
baz=82
L13A Double Diamond 81.93 317 ⇓P P 13 36 20.6 +0.3
baz=82
SRU San Rafael 81.95 313 ⇓P P 13 36 20.1 -0.4
baz=82,SNR=10.0
SRU San Rafael 81.95 313 eP P 13 36 20.1 -0.4
SRU pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
SRU San Rafael 81.95 313 eP P 13 36 20.1 -0.4
comp=Z,10nm,0.9s,mb4.8
SRU San Rafael 81.95 313 eP P 13 36 20.1 -0.4
comp=Z,10nm,0.9s,mb4.8
MVCO Mesa Verde 81.95 311 ⇑P P 13 36 20.7 +0.1
baz=82
MVCO Mesa Verde 81.95 311 eP P 13 36 20.9 +0.3
comp=Z,4.9nm,0.8s,mb4.5
MVCO Mesa Verde 81.95 311 eP P 13 36 20.9 +0.3
comp=Z,4.9nm,0.8s,mb4.5
M14A Sheep Mountain 82.00 316 ⇑P P 13 36 20.8 +0.2
baz=82,SNR=7.6
S19A Harvey Farm, M 82.00 311 ⇑P P 13 36 20.8 0.0
baz=82
Z25A Roswell 82.02 305 ⇑P P 13 36 20.8 -0.1
baz=82
R18A Canyonlands Na 82.05 312 ⇑P P 13 36 20.9 -0.1
baz=82
MFID Camas Ranch 82.05 319 ⇑P P 13 36 21.4 +0.4
baz=82,SNR=5.6
Y24A Capitan 82.08 306 ⇓P P 13 36 21.9 +0.6
baz=82
K12A Draper Farm, C 82.09 318 ⇑P P 13 36 21.5 +0.4
baz=82
ANMO Albuquerque 82.11 308 P P 13 36 21.5 +0.1
comp=Z,1.0nm,0.6s,mb3.9,baz=27,slow=4.0,SNR=3.9
ANMO Albuquerque 82.11 308 P P 13 36 21.5 +0.1
ANMO pmax pmax
comp=Z,1.0nm,0.6s
ANMO Albuquerque 82.11 308 P P 13 36 21.5 +0.1
comp=Z,1.0nm,0.6s,mb3.9
H09A Durkee 82.14 321 ⇑P P 13 36 21.2 -0.1
baz=82
BGU Big Grassy Mou 82.20 316 eP P 13 36 21.8 0.0
comp=Z,10nm,1.1s,mb4.7
BGU Big Grassy Mou 82.20 316 eP P 13 36 21.8 0.0
comp=Z,10nm,1.1s,mb4.7
428A Kincaid Ranch, 82.22 302 ⇓P P 13 36 22.5 +0.4
baz=82
V21A Milan 82.31 309 ⇓P P 13 36 22.4 -0.1
baz=82
N14A Grayback Hills 82.34 316 ⇓P P 13 36 22.9 +0.4
baz=82
226A Malaga, Loving 82.36 304 ⇓P P 13 36 23.1 +0.3
baz=82,SNR=8.0
125A Gardner Draw, 82.36 305 ⇓P P 13 36 22.6 -0.2
baz=82,SNR=6.6
Z24A Sheeppen Canyo 82.41 306 ⇓P P 13 36 23.5 +0.5
baz=82
Q16A Castle Valley 82.46 313 ⇑P P 13 36 22.8 -0.3
baz=82
U20A Newcomb 82.50 310 ⇓P P 13 36 23.6 +0.2
baz=82
R17A Hanksville Air 82.51 313 ⇑P P 13 36 23.0 -0.5
baz=82,SNR=16
T19A Beclabito 82.52 311 ⇓P P 13 36 23.1 -0.4
baz=82
J10A Berg Farm, Mel 82.54 319 ⇑P P 13 36 23.6 +0.1
baz=82
M13A Montello 82.55 317 ⇑P P 13 36 24.1 +0.5
baz=82,SNR=5.0
M13A Montello 82.55 317 eP P 13 36 24.0 +0.4
comp=Z,5.9nm,0.9s,mb4.6
M13A Montello 82.55 317 eP P 13 36 24.0 +0.4
comp=Z,5.9nm,0.9s,mb4.6
S18A Hurst Farm, Bl 82.56 312 ⇑P P 13 36 23.3 -0.4
baz=82
DUG Dugway 82.57 315 ⇓P P 13 36 24.2 +0.5
baz=82
K11A Parker Ranch, 82.60 319 ⇓P P 13 36 24.6 +0.8
baz=82,SNR=5.1
427A Hayter Ranch, 82.63 303 ⇓P P 13 36 24.7 +0.5
baz=82
528A Cox Ranch, San 82.63 302 ⇓P P 13 36 24.4 +0.2
baz=83,SNR=6.9
I09A Lost Marbles R 82.67 320 ⇓P P 13 36 24.3 +0.2
baz=82
LON Longmire 82.69 324 eP P 13 36 23.9 -0.3
LON pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
LON Longmire 82.69 324 eP P 13 36 23.9 -0.3
comp=Z,7.0nm,0.7s,mb4.8
LON Longmire 82.69 324 eP P 13 36 23.9 -0.3
comp=Z,7.0nm,0.7s,mb4.8
326A Caldwell Ranch 82.73 304 ⇓P P 13 36 25.9 +1.2
baz=83
H08A Prairie City 82.76 321 ⇑P P 13 36 25.3 +0.7
baz=83
V20A Brimhall 82.84 309 ⇓P P 13 36 25.8 +0.6
baz=83
T18A Mexican Hat 82.84 311 ⇑P P 13 36 25.2 0.0
baz=83,SNR=6.1
124A Stringfield Ra 82.86 305 ⇑P P 13 36 25.8 +0.5
baz=83
L11A Cat Creek Ranc 82.87 318 ⇑P P 13 36 26.3 +1.1
baz=83,SNR=5.6
M12A Wells 82.92 317 ⇓P P 13 36 26.5 +0.9
baz=83,SNR=5.8
Z23A Rita Site, Whi 83.02 306 ⇓P P 13 36 26.5 +0.3
baz=83
K10A MacKenzie Ranc 83.04 319 ⇑P P 13 36 26.7 +0.6
baz=83,SNR=5.4
R16A Teasdale 83.06 313 ⇓P P 13 36 26.3 0.0
baz=83,SNR=11
CPUP Villa Florida 83.07 230 P P 13 36 25.5 -0.8
comp=Z,1.3nm,0.6s,mb4.1,baz=50,slow=5.7,SNR=4.0
CPUP Villa Florida 83.07 230 P P 13 36 25.5 -0.8
CPUP pmax pmax
comp=Z,1.0nm,0.6s
CPUP Villa Florida 83.07 230 P P 13 36 25.5 -0.8
comp=Z,1.0nm,0.6s,mb4.0
S17A Black Ridge (B 83.08 312 ⇓P P 13 36 26.7 +0.3
baz=83
628A Black Gap, Mar 83.11 302 ⇓P P 13 36 27.0 +0.3
baz=83,SNR=16
P14A Drum Mountains 83.12 315 ⇑P P 13 36 26.8 +0.2
baz=83
426A McDonald Obser 83.17 303 ⇓P P 13 36 27.5 +0.5
baz=83,SNR=15
NLWA Neilton Lookou 83.17 326 ⇑P P 13 36 28.0 +1.3
baz=83
NLWA Neilton Lookou 83.17 326 eP P 13 36 27.4 +0.7
comp=Z,6.7nm,0.8s,mb4.7
NLWA Neilton Lookou 83.17 326 eP P 13 36 27.4 +0.7
comp=Z,6.7nm,0.8s,mb4.7
527A Woodward Ranch 83.21 302 ⇓P P 13 36 28.0 +0.8
baz=83
G06A Carlson Farm, 83.22 323 ⇑P P 13 36 27.7 +0.7
baz=83
X21A Alamocita Cree 83.27 308 ⇓P P 13 36 28.3 +0.8
baz=83
224A Cornudas Mount 83.29 305 ⇑P P 13 36 27.8 +0.2
baz=83
U18A Rough Rock, Ch 83.30 311 ⇓P P 13 36 28.0 +0.4
baz=83
L10A Juniper Basin 83.32 318 ⇓P P 13 36 28.4 +0.8
baz=83,SNR=8.6
MSU Marysvale 83.32 313 eP P 13 36 27.8 +0.2
MSU pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
MSU Marysvale 83.32 313 eP P 13 36 27.8 +0.2
comp=Z,2.7nm,0.8s,mb4.3
MSU Marysvale 83.32 313 eP P 13 36 27.8 +0.2
comp=Z,2.7nm,0.8s,mb4.3
N12A Clover Valley, 83.38 317 ⇓P P 13 36 29.1 +1.2
baz=83
N12A Clover Valley, 83.38 317 eP P 13 36 28.7 +0.8
comp=Z,6.7nm,0.9s,mb4.7
N12A Clover Valley, 83.38 317 eP P 13 36 28.7 +0.8
comp=Z,6.7nm,0.9s,mb4.7
M11A Holland Ranch, 83.39 317 ⇓P P 13 36 29.3 +1.3
baz=83,SNR=5.3
BJI Beijing 83.46 44 P P 13 36 26.3 -2.0
BJI pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
J08A Circle Bar Ran 83.48 320 ⇑P P 13 36 28.7 +0.4
baz=83
627A Terlingua Ranc 83.48 302 ⇑P P 13 36 28.9 +0.3
baz=83,SNR=5.3
I07A Izee 83.49 321 ⇓P P 13 36 28.4 0.0
baz=83
T17A Navajo Res., N 83.50 312 ⇑P P 13 36 28.6 +0.1
baz=83
Z22A Elephant Butte 83.50 307 ⇑P P 13 36 28.8 +0.1
baz=83
LPAZ La Paz 83.56 245 P P 13 36 29.3 +0.2
comp=Z,3.1nm,0.8s,mb4.5,baz=13,slow=7.8,SNR=9.1
LPAZ La Paz 83.56 245 P P 13 36 29.3 +0.3
LPAZ pmax pmax
comp=Z,3.0nm,0.8s
LPAZ La Paz 83.56 245 P P 13 36 29.3 +0.2
LPAZ La Paz 83.56 245 P P 13 36 29.3 +0.3
comp=Z,3.0nm,0.8s,mb4.5
526A Mary Lane Ranc 83.58 303 ⇑P P 13 36 29.8 +0.6
baz=84,SNR=9.3
O12A Currie 83.61 316 ⇑P P 13 36 29.9 +0.8
baz=84
Q14A Sevier Lake (B 83.64 314 ⇓P P 13 36 29.7 +0.4
baz=84,SNR=6.3
X20A Quemado 83.66 308 ⇑P P 13 36 30.1 +0.6
baz=84,SNR=6.5
324A Moseley Ranch, 83.66 304 ⇑P P 13 36 29.4 -0.1
baz=84,SNR=6.7
U17A Shonto 83.67 311 ⇑P P 13 36 30.0 +0.5
baz=84
425A Indio Mountain 83.74 304 ⇑P P 13 36 29.7 -0.2
baz=84,SNR=6.3
TXAR Lajitas Array 83.74 302 P P 13 36 30.2 +0.3
comp=Z,1.9nm,0.7s,mb4.3,baz=72,slow=5.7,SNR=15
TXAR LR LR 14 15 06.9
comp=Z,89nm,18.9s,MS4.2,baz=280,slow=37
TXAR Lajitas Array 83.74 302 P P 13 36 30.3 +0.3
TXAR pmax pmax
comp=Z,2.0nm,0.7s
TXAR MLR MLR
comp=Z,89nm,19.0s
TXAR Lajitas Array 83.74 302 P P 13 36 30.2 +0.2
P13A Bates Ranch, G 83.75 315 ⇑P P 13 36 30.1 +0.3
baz=84,SNR=7.9
V18A Ganado 83.80 310 ⇓P P 13 36 30.2 0.0
baz=84
W19A Sanders 83.85 309 ⇑P P 13 36 31.1 +0.6
baz=84
Z21A St. Cloud Mine 83.92 307 ⇑P P 13 36 32.1 +1.3
baz=84
626A Big Bend Ranch 83.93 302 ⇑P P 13 36 31.3 +0.4
baz=84,SNR=6.4
T16A Glen Canyon Da 83.93 312 ⇓P P 13 36 30.8 0.0
baz=84
Y20A Horse Springs, 83.99 308 ⇓P P 13 36 32.2 +1.0
baz=84,SNR=7.3
Q13A Wheeler Ranch, 84.09 315 ⇑P P 13 36 32.0 +0.4
baz=84,SNR=5.1
F03A Seaside 84.11 325 ⇑P P 13 36 32.6 +1.0
baz=84
O11A Cowboy Ranch, 84.21 316 ⇓P P 13 36 33.2 +1.0
baz=84,SNR=5.4
WVOR Wild Horse Val 84.21 320 eP P 13 36 31.7 -0.4
WVOR pmax pmax
comp=Z,12nm,1.2s,mb4.9
WVOR Wild Horse Val 84.21 320 eP P 13 36 31.7 -0.4
comp=Z,12nm,1.2s,mb4.9
WVOR Wild Horse Val 84.21 320 eP P 13 36 31.7 -0.4
comp=Z,12nm,1.2s,mb4.9
X19A St. Johns 84.23 309 ⇑P P 13 36 33.3 +0.9
baz=84
P12A McGill 84.24 316 ⇑P P 13 36 33.1 +0.7
baz=84
KMI Kunming 84.28 63 P P 13 36 31.8 -1.0
KMI pP pP 13 36 35.6 -0.9
KMI sP sP 13 36 37.0 -0.9
KMI PP PP 13 39 47.9 +0.9
KMI S S 13 46 55.0 -3.4
KMI sS sS 13 47 00.1 -4.5
KMI SS SS 13 52 26.3 -1.0
KMI pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
KMI LR LR
comp=N,120nm,15.8s,MS4.4
KMI LR LR
comp=E,92nm,20.0s,MS4.4
KMI LR LR
comp=Z,100nm,12.6s
222A Williams Famil 84.32 306 ⇓P P 13 36 34.0 +1.1
baz=84,SNR=6.6
H04A Detroit Lake 84.38 323 ⇓P P 13 36 33.1 +0.1
baz=84
V17A Tonalea, Kykot 84.39 311 ⇑P P 13 36 33.9 +0.7
baz=84,SNR=17
S14A Cedar City 84.40 313 ⇑P P 13 36 33.4 +0.2
baz=84
T15A Red Dirt Ranch 84.43 312 ⇑P P 13 36 32.8 -0.6
baz=84,SNR=8.4
121A Cookes Peak, D 84.49 307 ⇑P P 13 36 34.8 +1.1
baz=84,SNR=13
Q12A Willow Creek R 84.49 315 ⇑P P 13 36 34.7 +1.0
baz=84,SNR=8.1
Y19A Nutrioso 84.52 308 ⇑P P 13 36 35.1 +1.3
baz=84,SNR=7.7
O10A Cortez Mining, 84.57 317 ⇑P P 13 36 34.4 +0.5
baz=84
X18A Snowflake 84.58 309 ⇓P P 13 36 34.6 +0.5
baz=84
R13A O'Grain Ranch, 84.58 314 ⇑P P 13 36 35.2 +1.1
baz=84,SNR=5.7
Z20A Nine Sixteen R 84.64 307 ⇓P P 13 36 35.4 +0.9
baz=84,SNR=6.4
CCUT Cedar City 84.65 313 eP P 13 36 34.9 +0.4
comp=Z,5.1nm,1.0s,mb4.6
CCUT Cedar City 84.65 313 eP P 13 36 34.9 +0.4
comp=Z,5.1nm,1.0s,mb4.6
P11A Circle Ranch, 84.66 316 ⇓P P 13 36 35.5 +1.1
baz=84
U15A North Rim 84.77 312 ⇑P P 13 36 35.2 +0.2
baz=85,SNR=18
WUAZ Wupatki 84.82 311 ⇓P P 13 36 36.2 +0.8
baz=85
221A Mesquite Ranch 84.82 306 ⇓P P 13 36 36.2 +0.8
baz=85
R12A Pony Springs, 84.85 315 ⇓P P 13 36 36.1 +0.6
baz=85,SNR=7.9
Z19A T-Link Ranch, 84.95 308 ⇓P P 13 36 37.1 +1.0
baz=85
P10A Eureka 85.01 317 ⇑P P 13 36 37.3 +1.0
baz=85,SNR=6.2
120A U Bar Ranch, L 85.03 307 ⇓P P 13 36 37.2 +0.8
baz=85,SNR=5.8
Q11A Duckwater 85.09 316 ⇓P P 13 36 37.3 +0.7
baz=85,SNR=8.4
V15A Kaibab Nationa 85.10 311 ⇑P P 13 36 37.3 +0.5
baz=85,SNR=9.6
Y18A Canyon Day Jun 85.12 309 ⇓P P 13 36 37.8 +0.9
baz=85
K05A Summer Lake 85.17 321 ⇑P P 13 36 38.1 +1.2
baz=85
W16A Flagstaff 85.19 311 ⇑P P 13 36 38.4 +1.1
baz=85
X17A Forest Lakes 85.24 310 ⇑P P 13 36 38.4 +0.9
baz=85
U14A Mt Trumbull 85.31 312 ⇑P P 13 36 38.2 +0.4
baz=85,SNR=16
119A Ashpeak Ranch, 85.32 308 ⇓P P 13 36 38.5 +0.6
baz=85,SNR=5.7
T13A Saint George 85.33 313 ⇓P P 13 36 38.6 +0.7
baz=85,SNR=6.6
220A Playas Peak, P 85.37 306 ⇓P P 13 36 38.7 +0.6
baz=85,SNR=5.5
R11A Troy Canyon, C 85.40 315 ⇑P P 13 36 39.0 +0.8
baz=85,SNR=27
MOD Modoc 85.46 320 eP P 13 36 39.1 +0.7
comp=Z,8.4nm,0.9s,mb4.9
MOD Modoc 85.46 320 eP P 13 36 39.1 +0.7
comp=Z,8.4nm,0.9s,mb4.9
S12A Delamar Landin 85.48 314 ⇑P P 13 36 39.7 +1.1
baz=85,SNR=11
Q10A Clear Creek Ra 85.53 316 ⇓P P 13 36 40.0 +1.1
baz=85,SNR=12
X16A Lo Mia Camp, P 85.58 310 ⇑P P 13 36 40.3 +1.1
baz=86,SNR=6.1
W15A Williams 85.59 311 ⇓P P 13 36 40.4 +1.2
baz=86
CN2 Changchun 85.66 37 eP P 13 36 38.1 -1.3
Y17A Roosevelt 85.69 309 ⇑P P 13 36 40.5 +0.8
baz=86,SNR=5.3
U13A Pakoon Wash 85.78 313 ⇑P P 13 36 40.8 +0.7
baz=86,SNR=8.0
219A White Tail Can 85.79 307 ⇑P P 13 36 41.2 +0.9
baz=86
V14A Boquillas Ranc 85.79 312 ⇑P P 13 36 41.1 +0.9
baz=86,SNR=9.6
118A Homack Ranch, 85.83 308 ⇓P P 13 36 41.2 +0.8
baz=86
R10A Warm Springs 85.85 315 ⇓P P 13 36 41.9 +1.5
baz=86,SNR=12
T11A Corn Creek, Al 85.95 314 ⇓P P 13 36 41.5 +0.6
baz=86
Y16A Circle Bar Ran 85.96 310 ⇑P P 13 36 41.8 +0.8
baz=86
X15A Humboldt 86.03 310 ⇓P P 13 36 42.3 +0.9
baz=86,SNR=5.4
W14A Seligman 86.06 311 ⇓P P 13 36 42.6 +1.0
baz=86,SNR=6.9
V13A Grand Canyon W 86.17 312 ⇑P P 13 36 42.9 +0.8
baz=86,SNR=8.7
HABR Khabarovsk 86.20 29 eP P 13 36 38.8 -3.2
HABR e 13 40 03.1
HABR PPP 13 41 59.0
HABR S SKSac 13 47 01.1 -6.9
HABR eSS SS 13 53 00.8 +6.8
HABR pmax pmax
comp=N,7.0nm,1.6s
HABR pmax pmax
comp=E,18nm,2.0s
HABR pmax pmax
comp=Z,16nm,2.0s,mb4.9
HABR MLR MLR
comp=Z,36nm,19.0s,MS3.8
GYA Guiyang 86.24 60 P P 13 36 41.0 -1.6
GYA PP PP 13 40 02.3 -0.6
GYA SKS 13 47 03.3
GYA S S 13 47 13.8 -4.0
GYA SS SS 13 52 54.0 -2.1
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb5.0
GYA pmax pmax
comp=Z,80nm,5.2s
GYA LR LR
comp=N,380nm,19.8s,MS4.9
GYA LR LR
comp=E,320nm,18.0s,MS4.9
GYA LR LR
comp=Z,430nm,19.5s,MS4.9
S10A Tonopah Range, 86.27 315 ⇑P P 13 36 43.3 +0.8
baz=86,SNR=16
117A Oracle 86.36 308 ⇓P P 13 36 44.2 +1.1
baz=86
X14A Yava 86.44 311 ⇑P P 13 36 44.5 +1.1
baz=86
Y15A Casa Rosa Ranc 86.44 310 ⇓P P 13 36 44.9 +1.4
baz=86
W13A Hualapai Mount 86.62 312 ⇑P P 13 36 45.3 +1.0
baz=86
V12A Nelson 86.77 313 ⇓P P 13 36 46.1 +1.1
baz=87
NVAR Mina Array Bea 86.87 317 P P 13 36 46.8 +1.3
comp=Z,0.5nm,0.7s,mb3.9,baz=90,slow=5.9,SNR=4.8
NVAR Mina Array Bea 86.87 317 P P 13 36 46.8 +1.3
X13A Yucca 86.93 311 ⇑P P 13 36 46.2 +0.3
baz=87
FURC Furnace Creek, 87.43 314 ⇓P P 13 36 49.6 +1.4
baz=87
Z13A Yuma Proving G 87.77 310 ⇑P P 13 36 49.9 0.0
baz=88
Y12C Blythe 87.92 311 ⇑P P 13 36 51.0 +0.4
baz=88
214A Organ Pipe Nat 88.08 309 ⇑P P 13 36 52.0 +0.6
baz=88
MPMC Manual Prospec 88.08 315 ⇓P P 13 36 52.1 +0.7
baz=88
113A Mohawk Valley, 88.13 310 ⇓P P 13 36 52.4 +0.8
baz=88
BC3 Big Chuckawall 88.55 312 ⇓P P 13 36 54.4 +0.8
baz=88
LRMC Laurel Mountai 88.60 314 ⇓P P 13 36 55.1 +1.3
baz=88
BELC Belle Mtn. Jos 88.64 312 ⇓P P 13 36 54.8 +0.8
baz=88
ISA Isabella 88.92 315 ⇓P P 13 36 56.1 +0.8
baz=89
ISA Isabella 88.92 315 eP P 13 36 55.7 +0.4
ISA pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
ISA Isabella 88.92 315 eP P 13 36 55.7 +0.4
comp=Z,8.9nm,1.0s,mb5.0
ISA Isabella 88.92 315 eP P 13 36 55.7 +0.4
comp=Z,8.9nm,1.0s,mb5.0
EDW2 Edwards Air Fo 89.20 314 ⇓P P 13 36 57.1 +0.4
baz=89
MONP Monument Peak 89.66 312 ⇑P P 13 36 59.3 +0.4
baz=90
NJ2 Nanjing 90.53 49 eP P 13 37 02.3 -0.6
NJ2 pmax pmax
comp=Z,20nm,0.6s,mb5.6

WRA	**Warramunga Arr**	**136.19**	**81**	PKhKP	PKPpre	13 43 14.0		
	comp=Z,0.2nm,0.7s,baz=319,slow=2.3,SNR=1.1							
WRA				PKP	PKPdf	13 43 19.5	-3.0	
	comp=Z,0.8nm,0.8s,baz=291,slow=2.1,SNR=6.2							
ASAR	**Alice Springs**	**137.70**	**86**	PKhKP	PKPpre	13 43 16.2		
	comp=Z,0.4nm,0.7s,baz=253,slow=2.0,SNR=5.6							
ASAR				PKP	PKPdf	13 43 23.7	-1.5	
	comp=Z,1.4nm,0.9s,baz=313,slow=2.0,SNR=9.6							
ASAR				PP	PP	13 46 11.2	-1.0	
	comp=Z,0.6nm,1.0s,baz=306,slow=4.2,SNR=4.2							
ASAR	**Alice Springs**	**137.70**	**86**	PKHKP	PKPpre	13 43 16.3		
ASAR						13 43 23.7		
ASAR						13 46 11.3		
ASAR				pmax	pmax			
	comp=Z,1.0nm,0.9s							
ASAR				pmax	pmax			
	comp=Z,1.0nm,1.0s							
STKA	**Stephens Creek**	**147.24**	**94**	PKPbc	PKPbc	13 43 42.6	-1.6	
	comp=Z,22nm,0.8s,baz=317,slow=5.0,SNR=35							
STKA	**Stephens Creek**	**147.24**	**94**	*e*PKPbc	PKPbc	13 43 42.5	-1.7	
STKA				*e*PKPab	PKPab	13 43 45.5	-0.4	

*CRAAG **18** 13:34:01.1,36.°10N×1.°21E,MI3.9*
CSEM 18 13:34:01.1,36.°10N×1.°21E,h0km,ML3.9,After ALG, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECHA	**Ech Chlef**	**0.14**	**68**	P	Pg	13 34 04.0	+0.3
ECHA	**Ech Chlef**	**0.14**	**68**	P	Pg	13 34 04.0	+0.3
EANR	**'Ain N'Sour**	**0.17**	**211**	P	Pg	13 34 06.0	+1.6
EANR	**'Ain N'Sour**	**0.17**	**211**	P	Pg	13 34 06.0	+1.6
EBNR	**Beni Rached**	**0.32**	**53**	P	Pg	13 34 09.6	+2.3
EBNR	**Beni Rached**	**0.32**	**53**	P	Pg	13 34 09.6	+2.3
OKGL	**Djebel Kef Gue**	**0.46**	**263**	P	Pg	13 34 16.0	+6.0
OKGL	**Djebel Kef Gue**	**0.46**	**263**	P	Pg	13 34 16.0	+6.0
OJGS	**Djebel Guires**	**0.70**	**212**	P	Pg	13 34 15.0	+0.5
OJGS	**Djebel Guires**	**0.70**	**212**	P	Pg	13 34 15.0	+0.5
ETRT	**Tiaret**	**0.71**	**174**	P	Pg	13 34 17.5	+2.8
ETRT	**Tiaret**	**0.71**	**174**	P	Pg	13 34 17.5	+2.8
OJBR	**Djebel Berber**	**0.87**	**234**	P	Pg	13 34 17.0	-0.8
OJBR	**Djebel Berber**	**0.87**	**234**	P	Pg	13 34 17.0	-0.8
EMHD	**Djebel Mahouad**	**1.41**	**85**	P	Sg	13 34 53.0	+6.4
EMHD	**Djebel Mahouad**	**1.41**	**85**	P	Sg	13 34 53.0	+6.4
ADJB	**Djebel Djouab**	**1.81**	**87**	P	Sg	13 35 00.6	+1.5
ADJB	**Djebel Djouab**	**1.81**	**87**	P	Sg	13 35 00.6	+1.5
ADJB	**Djebel Djouab**	**1.81**	**87**	P	Sg	13 35 00.6	+1.5
ADJB	**Djebel Djouab**	**1.81**	**87**	P	Sg	13 35 00.6	+1.5
ODZI	**Dziouia**	**2.14**	**249**	P	Pg	13 34 45.0	+2.8
OLHC	**Oulhaca**	**2.30**	**249**	P	Pg	13 34 43.0	-2.2

*MDD **18** 13:34:30.2±1.1,36.°27N×1.°19E,h0km,mb3.9/6,Error ellipse: s-maj=13.7km s-min=9.2km az=7.0,PRIMO*
*NEIC **18** 13:34:33.2,36.°40N×0.°98E,h0km,MG3.8(MDD),After MDD.*
*CSEM **18** 13:34:35.1±0.4,36.°49N×0.°84E,h10km,mb3.8/6,Error ellipse: s-maj=10.2km s-min=6.2km az=166.0*
ISC 18 13:34:35.6±2.3,36.°47N±0.°09×0.°88E±0.°08,h17km±21km, n42,σ0.93/80,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABA	**Alger-Bouzarea**	**1.77**	**78**	P	**Pn**	**13 35 06.6**	**+1.1**
ABA	**Alger-Bouzarea**	**1.77**	**78**	P	**Pn**	**13 35 06.6**	**+1.1**
ABA	**Alger-Bouzarea**	**1.77**	**78**	P	**Pn**	**13 35 06.6**	**+1.1**
EBEN	**Beniarda**	**2.40**	**339**	P	**Pn**	**13 35 13.5**	**-0.7**
EBEN				S	**Sn**	**13 35 43.6**	**+0.5**
EBEN	**Beniarda**	**2.40**	**339**	P	**Pn**	**13 35 13.5**	**-0.7**
	0.5nm,0.2s,SNR=7.9						
EBEN				S	**Sn**	**13 35 43.6**	**+0.5**
	1.4nm,0.3s,SNR=7.9						
EBEN	**Beniarda**	**2.40**	**339**	P	**Pn**	**13 35 13.5**	**-0.7**
	0.5nm,0.2s,SNR=7.9						
EBEN				S	**Sn**	**13 35 43.6**	**+0.5**
	1.4nm,0.3s,SNR=7.9						
EBEN	**Beniarda**	**2.40**	**339**	P	**Pn**	**13 35 13.5**	**-0.7**
	0.5nm,0.2s,SNR=7.9						
EBEN				S	**Sn**	**13 35 43.6**	**+0.4**
	1.4nm,0.3s,SNR=7.9						
EIBI	**Ibiza**	**2.58**	**8**	P	**Pn**	**13 35 15.4**	**-1.3**
EIBI				S	**Sn**	**13 35 46.4**	**-1.3**
EIBI	**Ibiza**	**2.58**	**8**	P	**Pn**	**13 35 15.4**	**-1.3**
	2.7nm,0.2s,SNR=7.9						
EIBI				S	**Sn**	**13 35 46.4**	**-1.3**
	5.3nm,0.2s,SNR=7.9					

2.9nm,0.3s,SNR=8.5
EBER S Sn 13 43 17.9 -4.1
8.1nm,0.4s,SNR=5.6
EBER Berja 3.29 281 P Pn 13 42 39.7 -2.5
2.9nm,0.3s,SNR=8.5
EBER S Sn 13 43 17.9 -4.1
8.1nm,0.4s,SNR=5.6
EBER Berja 3.29 281 P Pn 13 42 39.7 -2.5
2.9nm,0.3s,SNR=8.5
EBER S Sn 13 43 17.9 -4.1
8.1nm,0.4s,SNR=5.6
ECHE Chera 3.66 334 P Pn 13 42 47.3 0.0
ECHE Chera 3.66 334 P Pn 13 42 47.3 0.0
1.8nm,0.2s,SNR=7.9
ECHE Chera 3.66 334 P Pn 13 42 47.3 0.0
1.8nm,0.2s,SNR=7.9
ECHE Chera 3.66 334 P Pn 13 42 47.3 0.0
1.8nm,0.2s,SNR=7.9
EQES Quesada 3.67 295 P Pn 13 42 47.1 -0.4
EQES S Sn 13 43 28.4 -3.0
EQES Quesada 3.67 295 P Pn 13 42 47.1 -0.4
6.0nm,0.3s,SNR=7.9
EQES S Sn 13 43 28.4 -3.0
25nm,0.5s,SNR=7.9
EQES Quesada 3.67 295 P Pn 13 42 47.1 -0.4
6.0nm,0.3s,SNR=7.9
EQES S Sn 13 43 28.4 -3.0
25nm,0.5s,SNR=7.9
EQES Quesada 3.67 295 P Pn 13 42 47.1 -0.4
6.0nm,0.3s,SNR=7.9
EQES S Sn 13 43 28.5 -3.0
25nm,0.5s,SNR=7.9
ETOS Mallorca 3.68 21 P Pn 13 42 45.8 -1.8
ETOS S Sn 13 43 27.4 -4.3
ETOS Mallorca 3.68 21 P Pn 13 42 45.8 -1.8
1.3nm,0.2s,SNR=7.9
ETOS S Sn 13 43 27.4 -4.3
1.7nm,0.1s,SNR=7.9
ETOS Mallorca 3.68 21 P Pn 13 42 45.8 -1.8
1.3nm,0.2s,SNR=7.9
ETOS S Sn 13 43 27.4 -4.3
1.7nm,0.1s,SNR=7.9
ETOS Mallorca 3.68 21 P Pn 13 42 45.8 -1.8
1.3nm,0.2s,SNR=7.9
ETOS S Sn 13 43 27.4 -4.3
1.7nm,0.1s,SNR=7.9
EVIA Vianos 3.70 310 P Pn 13 42 48.0 +0.1
EVIA S Sn 13 43 30.6 -1.6
EVIA Vianos 3.70 310 P Pn 13 42 48.0 +0.1
1.4nm,0.1s,SNR=7.9
EVIA S Sn 13 43 30.6 -1.6
5.8nm,0.2s,SNR=7.9
EVIA Vianos 3.70 310 P Pn 13 42 48.0 +0.1
1.4nm,0.1s,SNR=7.9
EVIA S Sn 13 43 30.6 -1.6
5.8nm,0.2s,SNR=7.9
EVIA Vianos 3.70 310 P Pn 13 42 48.0 +0.2
1.4nm,0.1s,SNR=7.9
EVIA S Sn 13 43 30.6 -1.6
5.8nm,0.2s,SNR=7.9
EQUE Quentar 3.78 285 P Pn 13 42 47.7 -1.2
4.6nm,0.4s,SNR=6.6
EQUE S Sn 13 43 30.5 -3.5
4.0nm,0.4s,SNR=7.9
EQUE Quentar 3.78 285 P Pn 13 42 47.7 -1.2
4.6nm,0.4s,SNR=6.6
EQUE S Sn 13 43 30.5 -3.5
4.0nm,0.4s,SNR=7.9
EQUE Quentar 3.78 285 P Pn 13 42 47.7 -1.2
4.6nm,0.4s,SNR=6.6
EQUE S Sn 13 43 30.5 -3.5
4.0nm,0.4s,SNR=7.9
EGUA Guajares 3.82 279 P Pn 13 42 47.5 -1.9
EGUA S Sn 13 43 28.8 -6.2
EGUA Guajares 3.82 279 P Pn 13 42 47.5 -1.9
5.3nm,0.2s,SNR=7.9
EGUA S Sn 13 43 28.8 -6.2
96nm,0.6s,SNR=7.9
EGUA Guajares 3.82 279 P Pn 13 42 47.5 -1.9
5.3nm,0.2s,SNR=7.9
EGUA S Sn 13 43 28.8 -6.2
96nm,0.6s,SNR=7.9
EGUA Guajares 3.82 279 P Pn 13 42 47.5 -1.9
5.3nm,0.2s,SNR=7.9
EGUA S Sn 13 43 28.8 -6.2
96nm,0.6s,SNR=7.9
EMOS Mosqueruela 4.23 343 P Pn 13 42 55.1 0.0
EMOS S Sn 13 43 42.0 -3.1
EMOS Mosqueruela 4.23 343 P Pn 13 42 55.1 0.0
1.1nm,0.1s,SNR=8.3
EMOS S Sn 13 43 42.0 -3.1
5.6nm,0.4s,SNR=7.9
EMOS Mosqueruela 4.23 343 P Pn 13 42 55.1 0.0
1.1nm,0.1s,SNR=8.3
EMOS S Sn 13 43 42.0 -3.1
5.6nm,0.4s,SNR=7.9
EMOS Mosqueruela 4.23 343 P Pn 13 42 55.1 +0.1
1.1nm,0.1s,SNR=8.3
EMOS S Sn 13 43 42.0 -3.1
5.6nm,0.4s,SNR=7.9
ERTA Horta de San J 4.67 353 S Sn 13 43 51.1 -4.9
1.6nm,0.3s,SNR=7.9
ERTA Horta de San J 4.67 353 S Sn 13 43 51.1 -4.9
1.6nm,0.3s,SNR=7.9
ERTA Horta de San J 4.67 353 S Sn 13 43 51.1 -4.9
1.6nm,0.3s,SNR=7.9
EADA Adamuz 4.92 294 P Pn 13 43 05.0 +0.4
EADA S Sn 13 43 56.8 -5.3
EADA Adamuz 4.92 294 P Pn 13 43 04.9 +0.4
0.9nm,0.4s,SNR=7.9
EADA S Sn 13 43 56.8 -5.3
0.5nm,0.2s,SNR=4.0
EADA Adamuz 4.92 294 P Pn 13 43 04.9 +0.4
0.9nm,0.4s,SNR=7.9
EADA S Sn 13 43 56.8 -5.3
0.5nm,0.2s,SNR=4.0
EADA Adamuz 4.92 294 P Pn 13 43 04.9 +0.4
0.9nm,0.4s,SNR=7.9
EADA S Sn 13 43 56.8 -5.3
0.5nm,0.2s,SNR=4.0
EPOB Poblet 5.02 360 P Pn 13 43 04.3 -1.6
EPOB S Sn 13 43 59.8 -4.9
EPOB Poblet 5.02 360 P Pn 13 43 04.3 -1.6
1.2nm,0.2s,SNR=7.9
EPOB S Sn 13 43 59.8 -4.9
2.9nm,0.4s,SNR=7.9
EPOB Poblet 5.02 360 P Pn 13 43 04.3 -1.6
1.2nm,0.2s,SNR=7.9
EPOB S Sn 13 43 59.8 -4.9
2.9nm,0.4s,SNR=7.9
EPOB Poblet 5.02 360 P Pn 13 43 04.3 -1.7
1.2nm,0.2s,SNR=7.9
EPOB S Sn 13 43 59.8 -4.9
2.9nm,0.4s,SNR=7.9
EMIN Mina Concepcio 6.41 285 P Pn 13 43 22.6 -2.4
EMIN Mina Concepcio 6.41 285 P Pn 13 43 22.6 -2.4
0.6nm,0.2s,SNR=7.9
EMIN Mina Concepcio 6.41 285 P Pn 13 43 22.6 -2.4
0.6nm,0.2s,SNR=7.9
ELAN Lanestosa 7.74 334 P Pn 13 43 45.0 +1.7
ELAN Lanestosa 7.74 334 P Pn 13 43 45.0 +1.7
1.0nm,0.4s,SNR=6.3
ELAN Lanestosa 7.74 334 P Pn 13 43 45.0 +1.7
1.0nm,0.4s,SNR=6.3
ECAL Calabor 8.30 315 P Pn 13 43 49.7 -1.3

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*CRAAG **18** 13:45:42.9,36°.24N×1°.16E,Ml3.5*
*ISCJB **18** 13:45:43.0±0.8,36°.28N±0°.05×1°.10E±0°.06,h11km±9km, Error ellipse: s-maj=9.2km s-min=7.0km az=140.0*
*CSEM **18** 13:45:43.4±0.3,36°.25N×1°.09E,h2km,ML3.5,Error ellipse: s-maj=8.4km s-min=7.6km az=53.0*
*NEIC **18** 13:45:44.8,36°.26N×1°.09E,h0km,MG3.6(MDD),After MDD.*
*MDD **18** 13:45:44.1±0.5,36°.21N×1°.13E,h0km,mb3.6/5,Error ellipse: s-maj=5.9km s-min=4.8km az=7.0,PRIMO*
ISC 18 13:45:43.2±1.1,36°.28N±0°.08×1°.09E±0°.06,h2km±14km, n53,σ1§24/73,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECHF	**Ech Chlef**	**0.24**	**122**	P	**Pg**	**13 45 47.0**	**-0.7**
ECHF	**Ech Chlef**	**0.24**	**122**	P	**Pg**	**13 45 47.0**	**-0.7**
ECHA	**Ech Chlef**	**0.26**	**121**	P	**Pg**	**13 45 47.0**	**-1.1**
ECHA	**Ech Chlef**	**0.26**	**121**	P	**Pg**	**13 45 47.0**	**-1.1**
EANR	**'Ain N'Sour**	**0.33**	**179**	P	**Pg**	**13 45 49.5**	**0.0**
EANR	**'Ain N'Sour**	**0.33**	**179**	P	**Pg**	**13 45 49.5**	**0.0**
EANR	**'Ain N'Sour**	**0.33**	**179**	P	**Pg**	**13 45 49.5**	**0.0**
EBNR	**Beni Rached**	**0.35**	**88**	P	**Pg**	**13 45 50.0**	**+0.1**
EBNR	**Beni Rached**	**0.35**	**88**	P	**Pg**	**13 45 50.0**	**+0.1**
OKGL	**Djebel Kef Gue**	**0.44**	**236**	P	**Pg**	**13 45 53.0**	**+1.5**
OKGL	**Djebel Kef Gue**	**0.44**	**236**	P	**Pg**	**13 45 53.0**	**+1.5**
OKGL	**Djebel Kef Gue**	**0.44**	**236**	P	**Pg**	**13 45 53.0**	**+1.5**
OKGL	**Djebel Kef Gue**	**0.44**	**236**	P	**Pg**	**13 45 53.0**	**+1.5**
OJGS	**Djebel Guires**	**0.82**	**200**	P	**Pg**	**13 45 57.0**	**-1.9**
OJGS	**Djebel Guires**	**0.82**	**200**	P	**Pg**	**13 45 57.0**	**-1.9**
OJGS	**Djebel Guires**	**0.82**	**200**	P	**Pg**	**13 45 57.0**	**-1.9**
OJGS	**Djebel Guires**	**0.82**	**200**	P	**Pg**	**13 45 57.0**	**-1.9**
ETRT	**Tiaret**	**0.91**	**169**	P	**Pg**	**13 46 02.0**	**+1.5**
ETRT	**Tiaret**	**0.91**	**169**	P	**Pg**	**13 46 02.0**	**+1.5**
ETRT	**Tiaret**	**0.91**	**169**	P	**Pg**	**13 46 02.0**	**+1.5**
ETRT	**Tiaret**	**0.91**	**169**	P	**Pg**	**13 46 02.0**	**+1.5**
OJBR	**Djebel Berber**	**0.92**	**221**	P	**Pg**	**13 45 59.0**	**-1.9**
OJBR	**Djebel Berber**	**0.92**	**221**	P	**Pg**	**13 45 59.0**	**-1.9**
OJBR	**Djebel Berber**	**0.92**	**221**	P	**Pg**	**13 45 59.0**	**-1.9**
OJBR	**Djebel Berber**	**0.92**	**221**	P	**Pg**	**13 45 59.0**	**-1.9**
EMHD	**Djebel Mahouad**	**1.51**	**93**	P	**Pn**	**13 46 12.0**	**+0.8**
EMHD	**Djebel Mahouad**	**1.51**	**93**	P	**Pn**	**13 46 12.0**	**+0.8**
EMHD	**Djebel Mahouad**	**1.51**	**93**	P	**Pn**	**13 46 12.0**	**+0.8**
EMHD	**Djebel Mahouad**	**1.51**	**93**	P	**Pn**	**13 46 12.0**	**+0.8**
EIBI	**Ibiza**	**2.75**	**4**	P	**Pn**	**13 46 28.7**	**+0.4**
EIBI				S	**Sn**	**13 46 59.0**	**-3.1**
EIBI	**Ibiza**	**2.75**	**4**	P	**Pn**	**13 46 28.7**	**+0.4**
1.3nm,0.1s,SNR=7.4
EIBI S **Sn** **13 46 58.9** **-3.1**
13nm,0.3s,SNR=7.1
EIBI Ibiza 2.75 4 P **Pn** **13 46 28.7** **+0.4**
1.3nm,0.1s,SNR=7.4
EIBI S **Sn** **13 46 58.9** **-3.1**
13nm,0.3s,SNR=7.1
EIBI Ibiza 2.75 4 P **Pn** **13 46 28.7** **+0.4**
1.3nm,0.1s,SNR=7.4
EIBI S **Sn** **13 46 58.9** **-3.1**
13nm,0.3s,SNR=7.1
ETOB Tobarra 3.16 319 P **Pn** **13 46 33.9** **0.0**
ETOB S **Sn** **13 47 11.5** **-0.7**
ETOB Tobarra 3.16 319 P **Pn** **13 46 33.9** **0.0**
1.4nm,0.3s,SNR=7.9
ETOB S **Sn** **13 47 11.5** **-0.7**
2.0nm,0.6s,SNR=7.9
ETOB Tobarra 3.16 319 P **Pn** **13 46 33.9** **0.0**
1.4nm,0.3s,SNR=7.9
ETOB S **Sn** **13 47 11.5** **-0.7**
2.0nm,0.6s,SNR=7.9
ETOB Tobarra 3.16 319 P **Pn** **13 46 33.9** **0.0**
1.4nm,0.3s,SNR=7.9
ETOB S **Sn** **13 47 11.5** **-0.7**
2.0nm,0.6s,SNR=7.9
EBER Berja 3.26 282 P **Pn** **13 46 35.5** **+0.2**
EBER S **Sn** **13 47 13.3** **-1.4**
EBER Berja 3.26 282 P **Pn** **13 46 35.5** **+0.2**
1.7nm,0.2s,SNR=7.9
EBER S **Sn** **13 47 13.3** **-1.4**
4.4nm,0.4s,SNR=7.9
EBER Berja 3.26 282 P **Pn** **13 46 35.5** **+0.2**
1.7nm,0.2s,SNR=7.9
EBER S **Sn** **13 47 13.3** **-1.4**
4.4nm,0.4s,SNR=7.9
EBER Berja 3.26 282 P **Pn** **13 46 35.5** **+0.2**
1.7nm,0.2s,SNR=7.9
EBER S **Sn** **13 47 13.3** **-1.5**
4.4nm,0.4s,SNR=7.9
EQES Quesada 3.66 296 P **Pn** **13 46 42.8** **+2.0**
EQES S **Sn** **13 47 24.5** **0.0**
EQES Quesada 3.66 296 P **Pn** **13 46 42.8** **+2.0**
1.9nm,0.1s,SNR=7.9
EQES S **Sn** **13 47 24.5** **0.0**
3.6nm,0.2s,SNR=7.9
EQES Quesada 3.66 296 P **Pn** **13 46 42.8** **+2.0**
1.9nm,0.1s,SNR=7.9
EQES S **Sn** **13 47 24.5** **0.0**
3.6nm,0.2s,SNR=7.9
EQES Quesada 3.66 296 P **Pn** **13 46 42.8** **+2.0**
1.9nm,0.1s,SNR=7.9
EQES S **Sn** **13 47 24.5** **-0.1**
3.6nm,0.2s,SNR=7.9
EQUE Quentar 3.76 286 P **Pn** **13 46 43.5** **+1.4**
4.3nm,0.4s,SNR=7.9
EQUE Quentar 3.76 286 P **Pn** **13 46 43.5** **+1.4**
4.3nm,0.4s,SNR=7.9
EQUE Quentar 3.76 286 P **Pn** **13 46 43.5** **+1.4**
4.3nm,0.4s,SNR=7.9
EMOS Mosqueruela 4.26 344 P **Pn** **13 46 51.1** **+2.1**
EMOS S **Sn** **13 47 38.4** **-0.9**
EMOS Mosqueruela 4.26 344 P **Pn** **13 46 51.1** **+2.1**
0.4nm,0.3s,SNR=7.9
EMOS S **Sn** **13 47 38.4** **-0.9**
0.9nm,0.2s,SNR=7.9
EMOS Mosqueruela 4.26 344 P **Pn** **13 46 51.1** **+2.1**
0.4nm,0.3s,SNR=7.9
EMOS S **Sn** **13 47 38.4** **-0.9**
0.9nm,0.2s,SNR=7.9
EMOS Mosqueruela 4.26 344 P **Pn** **13 46 51.1** **+2.1**
0.4nm,0.3s,SNR=7.9
EMOS S **Sn** **13 47 38.4** **-0.9**
0.9nm,0.2s,SNR=7.9

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*IDC **18** 14:01:25.7±1.0,33°.05N×92°.06E,h0km,mb3.6/6, mb1 3.8/8,mb1mx3.6/26,mbtmp3.6/8,ML3.6/2,Error ellipse: s-maj=43.4km s-min=18.8km az=60.0*
*BJI **18** 14:01:26.8,33°.32N×92°.08E,h10km,mB4.4/2,mb4.0/2, ML3.1/2,Ms3.5/4,Ms7 3.5/3*
*NEIC **18** 14:01:27.0±0.6,33°.03N×92°.04E,h10km,Error ellipse: s-maj=21.3km s-min=9.7km az=69.0*
*ISCJB **18** 14:01:27.8±0.6,33°.34N±0°.05×91°.98E±0°.09,h10km, mb3.6/5,Error ellipse: s-maj=10.8km s-min=5.8km az=21.4*
ISC 18 14:01:29.4±0.6,33°.32N±0°.05×91°.87E±0°.08,h10km,n13, σ1§04/15,mb3.6/5,Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.66**	**190**	Pn	**Pn**	**14 02 28.1**	**+2.0**
LSA				Sn	**Sb**	**14 03 17.9**	**-0.8**
LSA				LR	LR		
comp=N,260nm,9.0s
LSA LR LR
comp=E,360nm,10.6s
LSA LR LR
comp=Z,590nm,9.6s
LSA Lhasa 3.66 190 *e*P **Pn** **14 02 27.5** **+1.5**
LSA *e*S **Sn** **14 03 10.2** **+0.9**
SHL Shillong 7.73 180 *e*PKP **Pn** **14 03 18.0** **-4.0**
SHL *e*S x 14 05 38.0
LZH Lanzhou 10.23 71 *e*P **Pn** **14 03 55.5** **-0.8**
LZH pP 14 03 58.0
LZH sP 14 04 00.9
LZH *e*S **Sn** **14 05 51.8** **+0.7**
LZH sS 14 05 56.0
LZH SS 14 06 02.0
LZH pmax pmax
comp=Z,15nm,1.0s
LZH pmax pmax
comp=Z,63nm,4.0s
LZH LR LR
comp=N,280nm,8.1s
LZH LR LR
comp=Z,430nm,10.6s
CMAR Chiang Mai Arr 16.10 155 Pn **Pn** **14 05 08.7** **-7.2**
comp=Z,0.1nm,0.3s,baz=339,slow=14,SNR=5.3
SONM Songino Array 18.17 33 P **Pn** **14 05 41.5** **-0.1**
comp=Z,0.2nm,0.3s,baz=216,slow=12,SNR=8.1
KURK Kurchatov 19.92 335 P **Pn** **14 06 02.2** **-0.6**
comp=Z,0.2nm,0.3s,baz=142,slow=19,SNR=2.7
ZALV Zalesovo Beam 21.22 348 P **P** **14 06 16.6** **+1.5**
comp=Z,0.8nm,0.5s,mb3.3,baz=127,slow=39,SNR=1.8
BVAR Borovoye Array 24.99 328 P **P** **14 06 52.8** **-0.3**
comp=Z,0.6nm,0.6s,mb3.3,baz=149,slow=6.7,SNR=3.1
PRU Pruhonice 57.58 312 AMS AMS 14 11 20.0
WRA Warramunga Arr 66.69 136 P **P** **14 12 16.9** **-3.7**
comp=Z,0.8nm,0.9s,mb3.7,baz=322,slow=7.3,SNR=5.9
ASAR Alice Springs 69.39 139 P **P** **14 12 33.5** **-4.0**
comp=Z,1.3nm,0.8s,mb3.9,baz=328,slow=6.7,SNR=18
TORD Torodi Ar. Bea 83.05 281 P **P** **14 13 55.2** **-0.3**
comp=Z,0.3nm,0.6s,mb3.5,baz=50,slow=6.7,SNR=2.4

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*BJI **18** 14:02:46.5,43°.85N×86°.39E,h18km,ML2.9/5*

*NNC **18** 14:02:46.2±3.1,43°.91N×85°.91E,h0km,mb3.3,mpv3.0, Error ellipse: s-maj=90.3km s-min=22.4km az=51.0*
ISC 18 14:02:46.4±2.6,44°.0N±0°.3×86°.5E±0°.2,h10km,n4,σ1§49/8, 2C-6D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**0.91**	**99**	**Pg**	**Pg**	**14 03 03.8**	**0.0**
WMQ				Sg	**Sg**	**14 03 16.0**	**+0.4**
WMQ				smax			
comp=N,120nm,0.4s
WMQ smax
comp=E,120nm,0.5s
MK31 Makanchi Array 4.08 315 ⇑Pn **Pn** **14 03 50.0** **+1.2**
comp=E,0.6nm,0.4s,baz=137,slow=14,SNR=30
MK31 ⇑Sn **Sn** **14 04 38.5** **+1.9**
comp=E,3.3nm,0.4s,baz=150,slow=26,SNR=4.7
MK31 Lg 14 04 49.9
comp=E,18nm,0.7s,baz=135,slow=32,SNR=20
KURBB Kurchatov Arra 8.56 324 ⇓Pn **Pn** **14 04 48.4** **-2.0**
comp=E,0.2nm,0.7s
KURBB ⇓Sn **Sn** **14 06 28.1** **+1.2**
comp=E,0.3nm,0.5s
KURBB ⇓Lg 14 07 12.8
comp=E,1.7nm,0.8s
KURK Kurchatov 8.60 325 ⇓Pn **Pn** **14 04 47.4** **-3.3**
comp=E,1.0nm,0.3s
KURK ⇓Sn **Sn** **14 06 25.9** **-1.8**
comp=E,1.2nm,0.4s
KURK ⇓Lg 14 07 12.5
comp=E,7.9nm,0.7s

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*IDC **18** 14:07:04.3±8.1,31°.79S×179°.83E,h305km±89km,mb3.3/3, mb1 3.5/4,mb1mx3.3/15,mbtmp3.4/4,Error ellipse: s-maj=92.1km s-min=42.2km az=179.0*
*NEIC **18** 14:07:11.7±2.1,32°.54S×179°.90E,h400km±18km,mb3.6/1, Error ellipse: s-maj=41.7km s-min=24.6km az=91.0*
ISC 18 14:07:12.8±2.1,32°.5S±0°.2×179°.6E±0°.4,h392km±31km, n26,σ1§04/29,mb3.5/4,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**5.12**	**192**	P	**Pn**	**14 08 37.0**	**+1.4**
MXZ				S	**S**	**14 09 43.1**	**+0.2**
PUZ	**Puketiti**	**5.63**	**191**	P	**Pn**	**14 08 41.6**	**+0.6**
PUZ				S	**S**	**14 09 52.4**	**-0.3**
MWZ	**Matawai**	**6.03**	**196**	*e*P	**Pn**	**14 08 43.8**	**-1.5**
MWZ				S	**S**	**14 10 01.4**	**+0.8**
URZ	**Urewera**	**6.06**	**199**	P	**Pn**	**14 08 45.4**	**-0.2**
3.0nm,0.3s,baz=345,slow=8.8,SNR=34
URZ S **S** **14 10 01.4** **+0.1**
7.0nm,0.3s,baz=266,slow=23,SNR=14
KNZ Kokohu 6.66 **193** *e*P **Pn** **14 08 53.9** **+1.7**
BKZ Black Stump Fm 7.08 **200** *e*P **Pn** **14 08 55.1** **-1.9**
TUVZ Tukino 7.44 **204** *e*P **Pn** **14 09 02.6** **+1.5**
TSZ Takapari Road 8.06 **200** *e*P **Pn** **14 09 08.5** **+0.4**
MRZ Mangatainoka R 8.73 **201** *e*P **Pn** **14 09 13.5** **-2.3**
KIW Kapiti Island 9.12 **203** P **Pn** **14 09 20.4** **0.0**
CAW Cannon Point 9.29 **202** *e*P **Pn** **14 09 21.6** **-0.8**
NNZ Nelson 9.99 **208** *e*P **Pn** **14 09 29.6** **-0.9**
QRZ Quartz Range 10.03 **212** *e*P **Pn** **14 09 30.7** **-0.2**
THZ Tophouse 10.64 **208** *e*P **Pn** **14 09 37.4** **-0.7**
KHZ Kahutara 10.97 **204** *e*P **Pn** **14 09 41.2** **-0.7**
DSZ Denniston Nort 11.09 **212** *e*P **Pn** **14 09 43.2** **-0.1**
LTZ Lake Taylor 11.75 **207** *e*P **Pn** **14 09 50.7** **-0.3**
RPZ Rata Peaks 13.02 **209** *e*P **P** **14 10 05.5** **+1.7**
ODZ Otahua Downs 14.29 **207** *e*P **P** **14 10 22.8** **+5.1**
STKA Stephens Creek 32.05 **261** P **P** **14 13 06.8** **+1.9**
2.0nm,0.9s,mb3.5,baz=90,slow=11,SNR=2.0
STKA Stephens Creek 32.05 **261** *e*P **P** **14 13 07.5** **+2.6**
ASAR Alice Springs 41.00 **270** P **P** **14 14 19.9** **+0.3**
0.5nm,0.3s,mb3.3,baz=106,slow=7.2,SNR=23
WRAB Tennant Creek 42.19 **276** *e*P **P** **14 14 28.4** **-0.8**
1.2nm,0.4s,mb3.6
WRA Warramunga Arr 42.19 **276** P **P** **14 14 28.9** **-0.3**
1.4nm,0.3s,mb3.7,baz=112,slow=7.9,SNR=27
WRA Warramunga Arr 42.19 **276** P **P** **14 14 28.9** **-0.3**
FINES FINESS Array B 146.38 **337** PKPbc PKPbc 14 26 05.8 -1.8
1.0nm,0.4s,baz=50,slow=4.3,SNR=4.8

MEX 18 14:08:18.6±1.0,18°.65N×103°.27W,h79km±61km,MD3.9, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFJM	**Santa Fe**	**1.84**	**7**	*i* P	Pn	14 08 46.7	-1.7
SFJM				*i* S	Sn	14 09 10.3	-0.7
CJM	**Chamela**	**1.88**	**297**	*e*P	Pn	14 08 48.2	-0.6
CJM				*i* S	Sn	14 09 09.7	-2.2
MOIG	**Morelia**	**2.21**	**62**	*i* P	Pn	14 08 52.5	-0.8
MOIG				*i* S	Sn	14 09 17.9	-2.0
ANIG	**Ahuacatlan**	**2.67**	**334**	*i* P	Pn	14 08 59.3	-0.2
ANIG				*i* S	Sn	14 09 28.8	-2.0

IDC 18 14:28:38.8±14.0,23°.32S×178°.91W,h430km±111km, mb3.3/6,mb1 3.4/7,mb1mx3.2/19,mbtmp3.3/7,Error ellipse: s-maj=194.0km s-min=47.5km az=57.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**15.28**	**192**	P	P	14 31 53.1	-0.1
1.1nm,0.3s,baz=263,slow=0.9,SNR=10.0
URZ S S 14 34 18.8 -15
0.4nm,0.3s,baz=93,slow=22,SNR=8.7
RPZ Rata Peaks 21.96 **200** P P 14 32 59.3 +0.3
9.1nm,1.0s,baz=190,slow=24,SNR=2.5
CTA Charters Tower 32.48 **269** P P 14 34 33.6 +1.5
2.8nm,0.5s,baz=112,slow=4.7,SNR=6.0
STKA Stephens Creek 35.87 **247** P P 14 34 59.3 -1.3
1.1nm,0.4s,baz=93,slow=11,SNR=6.1
ASAR Alice Springs 43.12 **260** P P 14 35 59.2 -0.4
0.3nm,0.4s,baz=93,slow=7.5,SNR=20
WRA Warramunga Arr 43.45 **265** P P 14 36 02.0 -0.2
1.1nm,0.4s,baz=98,slow=8.3,SNR=44
FITZ Fitzroy Crossi 51.87 **265** P P 14 37 06.4 +0.4
1.0nm,0.9s,baz=96,slow=18,SNR=3.6

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*ISCJB **18** 14:30:48.2±0.9,23°.36N±0°.10×94°.38E±0°.08, h131km±13km,mb3.7/6,Error ellipse: s-maj=19.1km s-min=6.4km az=32.8*
*NEIC **18** 14:30:49.0±0.5,23°.42N×94°.52E,h116km±6km,mb4.6/1, Error ellipse: s-maj=11.2km s-min=4.7km az=221.0*
*IDC **18** 14:30:49.0±4.0,23°.41N×94°.51E,h115km±38km,mb3.4/6, mb1 3.5/7,mb1mx3.2/26,mbtmp3.3/7,Error ellipse: s-maj=59.3km s-min=18.0km az=62.0*
ISC 18 14:30:49.1±0.7,23°.4N±0°.1×94°.40E±0°.08,h118km±11km, n18,σ1§14/25,mb3.7/6,Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHTO	**Chiang Mai 6.22**	**136**	Pn	**Pn**	**14 32 18.2**	**-0.4**
CMAR	**Chiang Mai Arr 6.49**	**138**	P	**Pn**	**14 32 21.2**	**-1.0**
0.1nm,0.3s,baz=313,slow=13,SNR=5.9
LSA Lhasa 6.93 **336** *e*Pn **Pn** **14 32 29.1** **+1.0**
8.5nm,0.4s
JIRN Jiri 8.55 **302** *e*Pn **Pn** **14 32 51.3** **+1.3**
JIRN *e*Sn **Sn** **14 34 22.0** **-2.7**
67nm,0.4s
GUN Gumba 8.91 **302** *e*Pn **Pn** **14 32 55.6** **+0.7**
GUN *e*Sn **Sn** **14 34 31.4** **-2.0**
100nm,0.6s
PKI Pulchoki 9.13 **299** *e*Pn **Pn** **14 32 59.2** **+1.3**
PKI *e*Sn **Sn** **14 34 37.4** **-1.4**
25nm,0.4s
PKI Pulchoki 9.13 **299** *e*Pn **Pn** **14 32 59.8** **+1.9**
PKI *e*Sn **Sn** **14 34 38.8** **0.0**
PKIN Phulchoki 9.14 **299** *e*Pn **Pn** **14 32 59.8** **+1.7**
PKIN *e*Sn **Sn** **14 34 38.8** **-0.3**
31nm,0.4s
KKN Kakani 9.32 **300** *e*Pn **Pn** **14 33 01.7** **+1.1**
KKN *e*Sn **Sn** **14 34 41.1** **-2.5**
16nm,0.2s
DMN Daman 9.39 **299** *e*Pn **Pn** **14 33 02.5** **+1.1**
DMN *e*Sn **Sn** **14 34 44.6** **-0.5**
29nm,0.4s
ENH Enshi 15.11 **60** *e*Pn **Pn** **14 34 14.5** **-1.8**
MK31 Makanchi Array 25.31 **340** *e*P **P** **14 36 05.1** **+0.5**
MKAR Makanchi Array 25.31 **340** P **P** **14 36 05.0** **+0.5**
0.5nm,0.4s,mb3.3,baz=147,slow=10,SNR=6.6

MKAR pP pP 14 36 32.9 +2.9
0.5nm,0.6s,baz=148,slow=9.9,SNR=3.6
SONM Songino Array 26.21 18 P **P 14 36 12.5 -0.2**
0.2nm,0.4s,mb2.9,baz=180,slow=8.9,SNR=2.7
KURK Kurchatov 29.91 340 P **P 14 36 45.8 +0.2**
0.2nm,0.3s,mb3.2,baz=144,slow=9.5,SNR=2.6
WRA Warramunga Arr 58.07 135 P **P 14 40 30.1 -0.1**
1.5nm,0.4s,mb4.4,baz=322,slow=7.5,SNR=3.3
FINES FINESS Array B 59.39 329 P **P 14 40 38.9 +0.1**
2.3nm,1.0s,mb4.2,baz=94,slow=5.6,SNR=4.7
ASAR Alice Springs 60.50 138 P **P 14 40 46.7 -0.1**
1.3nm,0.5s,mb4.2,baz=318,slow=6.7,SNR=3.1

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*BJI **18** 14:32:26.3,2.˚35N×127.˚12E,h34km,mB4.8/9,mb4.8/24,Ms4.0/1,Ms7 4.0/1*
*MOS **18** 14:32:31.5±0.9,3.˚02N×126.˚80E,h33km,mb5.2/25,Error ellipse: s-maj=18.6km s-min=6.9km az=114.4*
*NEIC **18** 14:32:33.7±0.3,3.˚01N×126.˚77E,mb5.0/24,Error ellipse: s-maj=11.1km s-min=5.1km az=74.0*
*IDC **18** 14:32:33.5±0.7,2.˚97N×126.˚84E,h35km±5km,mb4.3/21,mb1 4.4/22,mb1mx4.3/26,mbtmp4.3/22,ML3.7/1,MS3.4/7,Ms1 3.5/7,ms1mx3.0/32,Error ellipse: s-maj=23.4km s-min=8.0km az=76.0*
*ISCJB **18** 14:32:37.6±0.4,3.˚10N±0.˚02×127.˚01E±0.˚04,h88km±4km,mb4.8/61,Error ellipse: s-maj=7.2km s-min=3.6km az=165.0*
*DJA **18** 14:32:39,3.˚08N×127.˚04E,h54km,Mw5.2/13*

ISC 18 14:32:39.0±0.4,3.˚08N±0.˚02×127.˚03E±0.˚04,h85km±3km,h34km±1.2km:pP-P,n163,σ1§24/170,mb4.8/60,6C-2D,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.61**	**292**	P	**Pn**	**14 33 03.6**	**-2.4**
SGSI				S	**Sn**	**14 33 24.1**	**-2.4**
TNTI	**Ternate**	**2.32**	**172**	P	**Pn**	**14 33 14.0**	**-1.4**
TNTI				S	**Sn**	**14 33 42.1**	**-1.1**
MNI	**Manado**	**2.73**	**233**	P	**Pn**	**14 33 19.4**	**-1.4**
GSPH	**General Santos**	**3.63**	**325**	*e*P	**Pn**	**14 33 31.1**	**-2.0**
GSPH				*i* S	**Sn**	**14 34 10.4**	**-4.5**
LBMI	**Labuha**	**3.73**	**173**	P	**Pn**	**14 33 34.1**	**-0.2**
LBMI				S	**Sn**	**14 34 18.8**	**+1.7**
MATI	**Mati**	**3.91**	**349**	*e*P	**Pn**	**14 33 37.6**	**+0.7**
MATI				*e*S	**Sn**	**14 34 05.1**	**-17**
KMSI	**Cibinong**	**3.94**	**231**	P	**Pn**	**14 33 37.0**	**-0.2**
DAV	**Davao City (W)**	**4.22**	**340**	Pn	**Pn**	**14 33 39.7**	**-1.3**
	25nm,0.3s,baz=52,slow=16,SNR=3.8						
DAV	**Davao City (W)**	**4.22**	**340**	P	**Pn**	**14 33 42.7**	**+1.7**
DMPH	**Davao City--Mi**	**4.25**	**339⇓**	*e*P	**Pn**	**14 33 40.6**	**-0.9**
DMPH				*e*S	**Sn**	**14 34 22.8**	**-7.1**
CTBH	**Cotabato--PC H**	**4.96**	**326⇓**	*e*P	**Pn**	**14 33 49.3**	**-1.7**
BUKP	**Musuan**	**5.15**	**338**	*e*P	**Pn**	**14 33 53.7**	**0.0**
MRSI	**Marisa**	**5.71**	**243**	P	**Pn**	**14 34 01.7**	**+0.4**
	2.3nm5μm754nm,0.7s						
CGP	**Cagayan de Oro**	**5.82**	**337⇓**	*e*P	**Pn**	**14 34 10.2**	**+7.3**
CGP				*e*S	**Sn**	**14 35 09.8**	**+1.6**
LUWI	**Luwuk**	**5.91**	**226**	P	**Pn**	**14 34 06.3**	**+2.3**
	1.6nm4μm222nm,0.9s						
PAGZ	**Pagadian**	**5.96**	**323**	*e*P	**Pn**	**14 34 03.4**	**-1.4**
BUTP	**Butuan**	**6.01**	**347**	*e*P	**Pn**	**14 34 06.0**	**+0.6**
NLAI	**Namlea**	**6.28**	**179**	P	**Pn**	**14 34 07.9**	**-1.2**
	0.5nm2μm79nm,0.6s						
IPIL	**Ipil**	**6.44**	**317**	*e*P	**Pn**	**14 34 09.5**	**-1.8**
APSI	**Ampana**	**6.68**	**234**	P	**Pn**	**14 34 13.9**	**-0.7**
	1.0nm3μm289nm,0.9s						
AAI	**Ambon**	**6.83**	**170**	P	**Pn**	**14 34 17.1**	**+0.6**
	0.2nm1μm68nm,1.0s						
MSLP	**Maasin**	**7.33**	**343**	*e*P	**Pn**	**14 34 24.1**	**+0.7**
KDI	**Kendari**	**8.27**	**212**	P	**Pn**	**14 34 36.9**	**+0.7**
	624nm46nm,1.0s						
MYLDM	**Lahad Datu**	**8.76**	**284**	P	**Pn**	**14 34 44.5**	**+1.6**
MYLDM	**Lahad Datu**	**8.76**	**284**	P	**Pn**	**14 34 44.3**	**+1.4**
	1μm146nm,0.9s						
TTSI	**Tana Toraja**	**9.43**	**230**	P	**Pn**	**14 34 53.0**	**+0.9**
	72nm,0.9s						
SPSI	**Sidrap Palu**	**10.08**	**226**	P	**Pn**	**14 35 02.3**	**+1.3**
	28nm,0.8s						
SDKM	**Sandakan**	**10.13**	**285**	P	**Pn**	**14 35 02.6**	**+1.0**
BNSI	**Bone**	**10.15**	**223**	P	**Pn**	**14 35 02.6**	**+0.6**
	3μm26nm,0.8s						
PVCP	**Virac**	**10.82**	**345**	*e*P	**Pn**	**14 35 11.8**	**+0.7**
BKSI	**Bulukumba**	**10.83**	**220**	P	**Pn**	**14 35 14.3**	**+3.1**
	24nm,0.6s						
KAPI	**Kappang**	**10.84**	**222**	Pn	**Pn**	**14 35 05.5**	**-5.9**
	0.6nm,0.3s,baz=226,slow=17,SNR=2.1						
KAPI	**Kappang**	**10.84**	**222**	*e*Pn	**Pn**	**14 35 03.2**	**-8.1**
KDM	**Kudat**	**10.85**	**291**	P	**Pn**	**14 35 11.7**	**+0.4**
KKM	**Kota Kinabalu**	**11.17**	**286**	P	**Pn**	**14 35 17.4**	**+1.5**
KKM	**Kota Kinabalu**	**11.17**	**286**	P	**Pn**	**14 35 17.2**	**+1.4**
	24nm,0.8s						
KBKI	**Kotabaru**	**12.57**	**240**	P	**Pn**	**14 35 33.1**	**-1.7**
	682nm21nm,1.1s						
SMPI	**Sarmi**	**12.72**	**113**	P	**Pn**	**14 35 38.4**	**+1.7**
	71nm,0.8s						
BALP	**Baler**	**13.68**	**337**	*e*P	**Pn**	**14 35 48.4**	**-0.9**
BTM	**Bintulu**	**13.93**	**271**	P	**Pn**	**14 35 55.1**	**+2.5**
SBUM	**Sibu**	**14.80**	**268**	P	**Pn**	**14 36 06.8**	**+2.7**
SBUM	**Sibu**	**14.80**	**268**	P	**Pn**	**14 36 06.0**	**+2.0**
	400nm23nm,0.8s						
STKI	**Sintang**	**15.83**	**259**	P	**Pn**	**14 36 19.9**	**+2.9**
	8μm20nm,1.1s						
KAKA	**Kakadu**	**16.59**	**161**	*e*P	**Pn**	**14 36 25.1**	**-1.3**
	25nm,0.6s						
KAKA				*e*S	**S**	**14 39 33.6**	**-3.0**
KAKA	**Kakadu**	**16.59**	**161**	*e*P	**Pn**	**14 36 24.9**	**-1.5**
	66nm,0.6s						
KAKA	**Kakadu**	**16.59**	**161**	P	**Pn**	**14 36 27.8**	**+1.4**
	515nm58nm,0.6s						
KSM	**Kuching**	**16.78**	**265**	P	**Pn**	**14 36 31.8**	**+2.9**
KNA	**Kununurra**	**18.79**	**175**	P	**Pn**	**14 36 54.1**	**+1.0**
	1μm134nm,0.9s						
FITZ	**Fitzroy Crossi**	**21.09**	**184**	*e*P	**P**	**14 37 18.5**	**+1.8**
	19nm,0.6s,mb4.6						
FITZ				*e*S	**S**	**14 40 59.6**	**-7.2**
FITZ	**Fitzroy Crossi**	**21.09**	**184**	P	**P**	**14 37 15.7**	**-1.0**
	4.3nm,0.6s,mb4.0,baz=11,slow=8.8,SNR=15						
FITZ				S	**S**	**14 41 05.2**	**-1.6**
	3.1nm,0.8s,baz=112,slow=13,SNR=3.3						
FITZ	**Fitzroy Crossi**	**21.09**	**184**	*e*P	**P**	**14 37 16.1**	**-0.6**
FITZ				S	**S**	**14 41 05.2**	**-1.6**
FITZ	**Fitzroy Crossi**	**21.09**	**184**	P	**P**	**14 37 21.7**	**+5.0**
	33nm,1.0s,mb4.6						
MYKOM	**Kota Tinggi**	**23.19**	**267**	P	**P**	**14 37 41.1**	**+2.4**
WRAB	**Tennant Creek**	**23.98**	**163**	*e*P	**P**	**14 37 44.5**	**-1.2**
WRAB				*e**PP		14 37 54.1	
WRAB				pmax	pmax		
	comp=Z,43nm,0.6s,mb5.0						
WRAB	**Tennant Creek**	**23.98**	**163**	*e*P	**P**	**14 37 44.5**	**-1.2**
	comp=Z,43nm,0.6s,mb5.0						
WRAB				*e*pP		14 37 54.1	
WRAB	**Tennant Creek**	**23.98**	**163**	P	**P**	**14 37 44.8**	**-0.9**
	comp=Z,74nm,0.8s,mb5.1						
WRA	**Warramunga Arr**	**23.98**	**163**	P	**P**	**14 37 44.4**	**-1.4**
	comp=Z,22nm,0.7s,mb4.6,baz=342,slow=9.7,SNR=123						
WRA				pP		14 37 54.5	
	comp=Z,39nm,0.7s,baz=342,slow=11,SNR=26						
WRA				S	**S**	**14 41 58.9**	**+2.3**
	comp=Z,4.8nm,0.8s,baz=331,slow=22,SNR=8.8						
MBWA	**Marble Bar**	**25.13**	**196**	*e*P	**P**	**14 37 56.0**	**-0.1**
FRIM	**Kepong**	**25.36**	**271**	P	**P**	**14 38 00.6**	**+2.1**
IPM	**Ipoh**	**25.98**	**274**	P	**P**	**14 38 06.3**	**+2.2**
ASAR	**Alice Springs**	**27.42**	**166**	P	**P**	**14 38 15.9**	**-0.9**
	comp=Z,3.3nm,0.5s,mb4.1,baz=351,slow=7.4,SNR=103						
WHN	**Wuhan**	**29.83**	**338**	P	**P**	**14 38 38.0**	**-0.1**
MEEK	**Meekatharra**	**30.64**	**195**	*e*P	**P**	**14 38 51.8**	**+6.4**
CMAR	**Chiang Mai Arr**	**31.46**	**301**	P	**P**	**14 38 52.0**	**-0.7**
	comp=Z,3.2nm,0.7s,mb4.1,baz=121,slow=7.8,SNR=18						
CMAR				LR	LR	14 51 19.5	
	comp=Z,43nm,18.5s,baz=125,slow=36						
CHTO	**Chiang Mai**	**31.61**	**302**	*e*P	**P**	**14 38 52.7**	**-1.3**
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.5						
CHTO	**Chiang Mai**	**31.61**	**302**	*e*P	**P**	**14 38 52.7**	**-1.3**
	comp=Z,6.1nm,0.6s,mb4.5						
CHTO	**Chiang Mai**	**31.61**	**302**	P	**P**	**14 38 53.3**	**-0.7**
ENH	**Enshi**	**31.73**	**330**	*e*P	**P**	**14 38 54.3**	**-0.6**
	comp=Z,8.7nm,0.7s,mb4.6						
FORT	**Forrest**	**33.69**	**178**	*e*P	**P**	**14 39 10.6**	**-1.4**
	comp=Z,26nm,0.6s,mb5.2						
FORT	**Forrest**	**33.69**	**178**	*e*P	**P**	**14 39 10.6**	**-1.4**
	comp=Z,33nm,0.8s,mb5.2						
FORT				*e*pP	pP	14 39 20.7	-11
KSRS	**Korea Array**	**34.22**	**1**	P	**P**	**14 39 17.4**	**+0.9**
	comp=Z,5.9nm,0.6s,mb4.6,baz=177,slow=9.9,SNR=26						
KSRS				LR	LR	14 55 43.1	
	comp=Z,26nm,18.3s,baz=165,slow=40						
MJAR	**Matsushiro Arr**	**34.86**	**16**	P	**P**	**14 39 22.7**	**+0.7**
	comp=Z,1.2nm,0.6s,mb3.9,baz=192,slow=8.7,SNR=5.4						
XAN	**Xi'an**	**35.12**	**333**	P	**P**	**14 39 23.0**	**-1.4**
XAN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.2						
XAN				pmax	pmax		
	comp=Z,19nm,8.5s						
DL2	**Dalian**	**35.99**	**353**	P	**P**	**14 39 33.0**	**+1.3**
DL2				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.3						
EIDS	**Eidsvold**	**36.66**	**142**	*e*P	**P**	**14 39 36.6**	**-1.0**
EIDS				*e*pP	pP	14 39 47.1	-11
STKA	**Stephens Creek**	**37.42**	**159**	*e*P	**P**	**14 39 43.5**	**-0.5**
	comp=Z,27nm,0.8s,mb5.2						
STKA				*e*pP	pP	14 39 53.4	-11
STKA	**Stephens Creek**	**37.42**	**159**	P	**P**	**14 39 43.8**	**-0.1**
	comp=Z,32nm,0.7s,mb5.3,baz=332,slow=8.5,SNR=71						
STKA				pP	pP	14 39 53.5	-11
	comp=Z,37nm,0.7s,baz=339,slow=8.6,SNR=20						
STKA	**Stephens Creek**	**37.42**	**159**	*e*P	**P**	**14 39 43.6**	**-0.4**
STKA				pP	pP	14 39 53.5	-11
BJT	**Baijiatuau**	**38.06**	**346**	*e*P	**P**	**14 39 49.8**	**+0.6**
BJT				pmax	pmax		
	comp=Z,93nm,1.1s						
BJT	**Baijiatuau**	**38.06**	**346**	*e*P	**P**	**14 39 49.8**	**+0.5**
	comp=Z,92nm,1.1s,mb5.5						
LZH	**Lanzhou**	**39.21**	**330**	*e*P	**P**	**14 40 03.5**	**+4.6**
LZH				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.7						
ARMA	**Armidale**	**40.77**	**147**	*e*P	**P**	**14 40 12.2**	**+0.3**
ARMA				*e*pP	pP	14 40 20.8	-11
ARMA	**Armidale**	**40.77**	**147**	*e*P	**P**	**14 40 12.2**	**+0.4**
	comp=Z,8.1nm,0.9s,mb4.5						
ARPS	**Mount Arapiles**	**41.98**	**162**	*e*P	**P**	**14 40 21.4**	**-0.3**
	comp=Z,29nm,0.7s,mb5.1						
ARPS				*e*pP	pP	14 40 31.6	-11
LSA	**Lhasa**	**43.09**	**312**	P	**P**	**14 40 29.8**	**-1.1**
LSA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.5						
GTA	**Gaotai**	**43.80**	**329**	*e*P	**P**	**14 40 36.6**	**+0.2**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
TAPN	**Taplejung**	**44.64**	**307**	*e*P	**P**	**14 40 41.9**	**-1.4**
ODAN	**Odare**	**44.69**	**306**	*e*P	**P**	**14 40 42.3**	**-1.4**
	comp=Z,47nm,0.7s,mb5.3						
HABR	**Khabarovsk**	**45.74**	**7**	*e*P	**P**	**14 40 51.1**	**-0.6**
HABR						14 42 26.4	
HABR						14 42 40.7	
HABR				*e*PPP		14 43 23.8	
HABR				*e*S	**S**	**14 47 28.4**	**-0.2**
HABR				*e*		14 50 36.9	
HABR				*e*SS	SS	14 50 56.0	+1.8
HABR				*e*SSS		14 51 55.4	
HABR				pmax	pmax		
	comp=E,27nm,1.7s						
HABR				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.7						
HABR				pmax	pmax		
	comp=N,8.0nm,1.0s						
HABR				MLR	MLR		
	comp=Z,44nm,15.0s						
KLR	**Kul'dur**	**46.15**	**4**	*e*P	**P**	**14 40 50.8**	**-4.1**
GUN	**Gumba**	**46.34**	**306**	*e*P	**P**	**14 40 55.2**	**-1.6**
HIA	**Hailar**	**46.43**	**353**	*e*P	**P**	**14 40 59.1**	**+2.0**
HIA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HIA	**Hailar**	**46.43**	**353**	*e*P	**P**	**14 40 59.0**	**+2.0**
	comp=Z,10.0nm,0.8s,mb4.6						
PKI	**Pulchoki**	**46.59**	**306**	*e*P	**P**	**14 40 56.8**	**-1.9**
	comp=Z,30nm,0.8s,mb5.1						
PKI	**Pulchoki**	**46.59**	**306**	*e*P	**P**	**14 40 56.8**	**-1.9**
PKI				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.1						
KKN	**Kakani**	**46.78**	**306**	*e*P	**P**	**14 40 58.2**	**-2.0**
	comp=Z,37nm,0.8s,mb5.2						
KKN	**Kakani**	**46.78**	**306**	*e*P	**P**	**14 40 58.2**	**-2.0**
KKN				pmax	pmax		
	comp=Z,37nm,0.8s,mb5.2						
DMN	**Daman**	**46.85**	**306**	*e*P	**P**	**14 40 59.0**	**-1.7**
	comp=Z,46nm,0.9s,mb5.2						
ULN	**Ulaanbaatar**	**47.82**	**342**	*e*P	**P**	**14 41 08.8**	**+0.9**
ULN				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.0						
ULN	**Ulaanbaatar**	**47.82**	**342**	*e*P	**P**	**14 41 08.8**	**+0.9**
	comp=Z,26nm,1.0s,mb5.0						
SONM	**Songino Array**	**48.00**	**341**	P	**P**	**14 41 10.5**	**+1.2**
	comp=Z,7.4nm,0.7s,mb4.6,baz=156,slow=9.0,SNR=50						
SONM				PcP	PcP	14 42 37.4	+1.3
	comp=Z,2.1nm,0.8s,baz=159,slow=4.1,SNR=4.8						
SONM				LR	LR	15 00 12.3	
	comp=Z,76nm,21.7s,baz=115,slow=34						
SONM	**Songino Array**	**48.00**	**341**	P	**P**	**14 41 10.5**	**+1.2**
SONM						14 42 37.4	
ZAK	**Zakamensk**	**51.23**	**341**	*e*P	**P**	**14 41 34.4**	**+0.6**
ZAK				*e*		14 42 48.0	
TLY	**Talaya**	**52.23**	**342**	*e*P	**P**	**14 41 42.0**	**+0.8**
TLY				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
TLY	**Talaya**	**52.23**	**342**	*e*P	**P**	**14 41 42.4**	**+1.2**
	comp=Z,19nm,1.0s,mb5.1						
IRK	**Irkutsk**	**52.53**	**343**	*e*P	**P**	**14 41 42.8**	**-0.6**
IRK				pmax	pmax		
	comp=Z,25nm,2.1s,mb4.9						
MOY	**Mondy**	**53.09**	**340**	*e*P	**P**	**14 41 49.3**	**+1.8**
MOY				pmax	pmax		
	comp=Z,29nm,1.8s,mb5.0						
PETK	**Petropavlovsk-**	**55.91**	**22**	P	**P**	**14 42 09.4**	**+1.4**
	comp=Z,2.3nm,0.6s,mb4.4,baz=200,slow=6.0,SNR=9.4						
PETK				pP	pP	14 42 19.5	-10
	comp=Z,2.9nm,0.8s,baz=194,slow=5.8,SNR=2.9						
MK31	**Makanchi Array**	**58.25**	**325**	*e*P	**P**	**14 42 24.3**	**-0.3**
MKAR	**Makanchi Array**	**58.25**	**325**	P	**P**	**14 42 24.4**	**-0.2**
	comp=Z,4.3nm,0.5s,mb4.8,baz=117,slow=8.6,SNR=64						
MKAR				LR	LR	15 08 39.4	
	comp=Z,32nm,18.6s,baz=278,slow=37						
MKAR	**Makanchi Array**	**58.25**	**325**	P	**P**	**14 42 24.4**	**-0.2**
MKAR				LR	LR	15 08 39.4	
YAK	**Yakutsk**	**58.84**	**1**	*e*P	**P**	**14 42 27.7**	**-0.7**
YAK				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0						
YAK	**Yakutsk**	**58.84**	**1**	*e*P	**P**	**14 42 28.9**	**+0.6**
	comp=Z,15nm,0.7s,mb5.1						
AAK	**Ala-Archa**	**61.03**	**318**	P	**P**	**14 42 44.3**	**+0.5**
	comp=Z,2.3nm,0.4s,mb4.6,baz=164,slow=17,SNR=3.0						
AAK				LR	LR	15 10 33.8	
	comp=Z,70nm,20.3s,baz=279,slow=37						
AAK	**Ala-Archa**	**61.03**	**318**	P	**P**	**14 42 44.3**	**+0.5**
AAK				LR	LR	15 10 33.8	
ZAA0	**Zalesovo Array**	**61.30**	**333**	*e*P	**P**	**14 42 44.9**	**-0.4**
ZALV	**Zalesovo Beam**	**61.30**	**333**	P	**P**	**14 42 45.2**	**-0.1**
	comp=Z,3.4nm,0.4s,mb4.7,baz=124,slow=6.2,SNR=13						
ZALV	**Zalesovo Beam**	**61.30**	**333**	P	**P**	**14 42 45.2**	**-0.1**
KBL	**Kabul**	**62.15**	**308**	*e*P	**P**	**14 42 50.5**	**-1.0**
KBL				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
KBL	**Kabul**	**62.15**	**308**	*e*P	**P**	**14 42 50.5**	**-1.0**
	comp=Z,7.7nm,0.8s,mb4.8						
KURK	**Kurchatov**	**62.44**	**328**	P	**P**	**14 42 52.9**	**-0.2**
	comp=Z,5.9nm,0.6s,mb4.8,baz=131,slow=6.1,SNR=46						
KURK	**Kurchatov**	**62.44**	**328**	*c*e*P	**P**	**14 42 53.1**	**0.0**
KURK				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.9						
KURK	**Kurchatov**	**62.44**	**328**	*e*P	**P**	**14 42 52.8**	**-0.3**
	comp=Z,7.4nm,0.5s,mb5.0						
NVS	**Novosibirsk**	**62.58**	**333**	*e*P	**P**	**14 42 52.6**	**-1.3**
NVS				pmax	pmax		
	comp=N,8.0nm,0.9s						
NVS				pmax	pmax		
	comp=E,11nm,0.9s						
NVS				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
SEY	**Seymchan**	**62.59**	**13**	*c*e*P	**P**	**14 42 56.2**	**+2.4**
BVAR	**Borovoye Array**	**68.02**	**327**	P	**P**	**14 43 29.5**	**+0.4**
	comp=Z,6.3nm,0.7s,mb4.6,baz=132,slow=8.2,SNR=33						
BRVK	**Borovoye**	**68.09**	**327**	*c*e*P	**P**	**14 43 30.0**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,24nm,1.2s,mb4.9						
BRVK	**Borovoye**	**68.09**	**327**	*e*P	**P**	**14 43 28.9**	**-0.7**
	comp=Z,26nm,1.1s,mb5.0						
TIXI	**Tiksi**	**68.48**	**1**	*e*P	**P**	**14 43 31.7**	**0.0**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
TIXI	**Tiksi**	**68.48**	**1**	*e*P	**P**	**14 43 31.7**	**0.0**
	comp=Z,8.7nm,1.0s,mb4.5						
AKTK	**Aktyubinsk**	**74.35**	**322**	P	**P**	**14 44 07.6**	**+0.3**
AKTO	**Aktyubinsk**	**74.35**	**322**	P	**P**	**14 44 07.6**	**+0.3**
	comp=Z,9.0nm,0.7s,mb4.6,baz=105,slow=7.4,SNR=36						
SVE	**Sverdlovsk**	**74.66**	**329⇓**	*e*P	**P**	**14 44 09.4**	**+0.3**
SVE				pmax	pmax		
	comp=Z,22nm,0.8s,mb4.9						
ARU	**Arti**	**75.64**	**328**	P	**P**	**14 44 14.7**	**0.0**
	comp=Z,141nm,0.6s,mb5.9,SNR=7.3						
ARU	**Arti**	**75.64**	**328**	*c i*P	**P**	**14 44 14.4**	**-0.3**
ARU				*e*		14 44 26.8	
ARU				*e*		14 46 59.1	
ARU				S	S	14 53 48.2	-0.8
ARU				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.8						
ARU	**Arti**	**75.64**	**328**	*e*P	**P**	**14 44 14.0**	**-0.6**
	comp=Z,13nm,0.6s,mb4.8						
QRN	**Al-Qurain**	**78.98**	**299**	*e*P	**P**	**14 44 32.4**	**-1.5**
QRN				AMb	AMB	14 44 34.4	
	comp=Z,34nm,0.7s,mb5.3						
MIB	**Mutribah**	**79.53**	**300**	*e*P	**P**	**14 44 35.3**	**-1.6**
MIB				AMb	AMB	14 44 37.1	
	comp=Z,27nm,0.7s,mb5.2						
NAY	**Al-Naaiem**	**79.59**	**299**	*e*P	**P**	**14 44 35.5**	**-1.7**
NAY				AMb	AMB	14 44 37.3	
	comp=Z,9.8nm,0.7s,mb4.8						
TTA	**Tatalina**	**81.34**	**27**	*e*P	**P**	**14 44 47.7**	**+1.8**
TTA				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.1						
TTA	**Tatalina**	**81.34**	**27**	*e*P	**P**	**14 44 47.7**	**+1.8**
	comp=Z,3.7nm,1.2s,mb4.1						
ZEI	**Tsey**	**82.87**	**313**	*e*P	**P**	**14 44 54.1**	**-0.3**
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb4.8						
KIV	**Kislovodsk**	**83.80**	**314**	*e*P	**P**	**14 44 58.4**	**-0.7**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.4						
KIV				MLR	MLR		
	comp=Z,18nm,19.0s						
VRHR	**Novokhopersk**	**84.73**	**321**	*e*P	**P**	**14 45 03.6**	**0.0**
VRHR				pmax	pmax		
	comp=N,20nm,0.6s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.6s						
VRHR				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.2						
VSR	**Storozhevoye**	**86.28**	**321**	*e*P	**P**	**14 45 11.3**	**0.0**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
VSR				pmax	pmax		
	comp=N,2.0nm,0.3s						
OBN	**Obninsk**	**87.76**	**325**	*e*P	**P**	**14 45 19.0**	**+0.6**
OBN				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
BR131	**Keskin Array S**	**90.66**	**310**	*e*P	**P**	**14 45 32.9**	**+0.5**
	comp=Z,1.7nm,0.7s,mb4.3						
BRTR	**Keskin Array B**	**90.66**	**310**	P	**P**	**14 45 32.0**	**-0.3**
	comp=Z,1.9nm,0.8s,mb4.3,baz=112,slow=5.8,SNR=10						
BRTR				pP	pP	14 45 42.4	-13
	comp=Z,1.7nm,0.9s,baz=107,slow=4.1,SNR=5.1						
ARCES	**ARCESS Array B**	**91.16**	**340**	P	**P**	**14 45 33.5**	**-0.5**
	comp=Z,2.9nm,0.6s,mb4.6,baz=81,slow=7.5,SNR=18						
ARCES				LR	LR	15 34 13.2	
	comp=Z,25nm,19.1s,baz=107,slow=41						
ARCES	**ARCESS Array B**	**91.16**	**340**	P	**P**	**14 45 33.5**	**-0.6**
ARCES				LR	LR	15 34 13.2	
FINES	**FINESS Array B**	**92.54**	**332**	P	**P**	**14 45 41.5**	**+0.9**
	comp=Z,1.1nm,0.6s,mb4.4,baz=51,slow=3.9,SNR=2.4						
AKASG	**Malin Array Be**	**92.58**	**321**	P	**P**	**14 45 40.1**	**-0.9**
	comp=Z,1.9nm,0.7s,mb4.5,baz=70,slow=5.1,SNR=7.7						
QSPA	**South Pole Qui**	**92.99**	**180**	P	**P**	**14 45 43.4**	**+1.1**
	comp=Z,0.7nm,0.9s,mb4.0,baz=255,slow=12,SNR=2.7						
BUR08	**Bucovina Ar. S**	**95.69**	**318**	*e*P	**P**	**14 45 55.7**	**+0.4**
CRVS	**Cervenica-Dubn**	**97.86**	**320**	*e*P	**P**	**14 46 08.1**	**+3.0**
CRVS				pmax	pmax		
	comp=Z,5.0nm,1.5s,mb4.8						
CRVS	**Cervenica-Dubn**	**97.86**	**320**	*e*P	**P**	**14 46 08.1**	**+3.0**
	comp=Z,5.3nm,1.5s,mb4.8						
CRVS	**Cervenica-Dubn**	**97.86**	**320**	*e*P	**P**	**14 46 08.1**	**+3.0**
NOA	**NORSAR Array B**	**99.50**	**

comp=N,67nm,0.4s
KSH smax
comp=E,48nm,0.5s
AML Almayashu 5.91 20 *e*Pn **Pn 14 53 37.4 +0.3**
comp=E,11nm,0.4s
UCH Uchtor 6.25 24 *e*Pn **Pn 14 53 41.8 +0.2**
comp=E,3.3nm,0.4s
EKS2 Erkin-Say 6.43 18 *e*Pn **Pn 14 53 44.2 +0.1**
comp=E,4.8nm,0.5s
KK31 Karatay Array 6.52 357 Pn **Pn 14 53 45.6 +0.2**
comp=E,2.2nm,0.3s,baz=176,slow=12,SNR=144
KK31 Sn **Sn 14 54 56.0 -2.3**
comp=E,5.3nm,0.3s,baz=190,slow=22,SNR=11
AAK Ala-Archa 6.61 23 P **Pn 14 53 45.5 -1.0**
comp=E,0.0nm,0.3s,baz=185,slow=9.5,SNR=5.7
AAK S **Sn 14 55 00.9 +0.6**
comp=E,0.0nm,0.3s,baz=334,slow=20,SNR=10
AAK Ala-Archa 6.61 23 *e*Pn **Pn 14 53 45.3 -1.2**
AAK S **Sn 14 55 00.9 +0.6**
TKM2 Tokmak 2 7.24 28 ⇑Pn **Pn 14 53 52.0 -3.1**
comp=E,3.2nm,0.9s
TKM2 ⇓Sn **Sn 14 55 15.4 -0.2**
comp=E,3.8nm,0.8s
TKM2 Tokmak 2 7.24 28 *e*Pn **Pn 14 53 55.3 +0.2**
MKAR Makanchi Array 13.21 36 P **Pn 14 55 15.8 +0.9**
comp=E,0.2nm,0.3s,baz=213,slow=10,SNR=2.1
AB31 Akbulak array 15.02 331 Pn **Pn 14 55 38.1 0.0**
comp=E,0.5nm,0.4s,baz=152,slow=11,SNR=24
AB31 Sn **Sn 14 58 15.0 -9.1**
comp=E,1.7nm,0.6s,baz=151,slow=25,SNR=7.8
ABKAR Akbulak array 15.02 331 *e*Pn **Pn 14 55 38.2 +0.1**
comp=E,1.0nm,0.3s
KURK Kurchatov 15.14 19 P **Pn 14 55 40.6 +1.0**
comp=E,0.0nm,0.3s,baz=204,slow=10,SNR=3.7
AKTO Aktyubinsk 16.72 330 ⇓Pn **Pn 14 56 01.5 +2.4**
comp=E,0.2nm,0.7s
AKTO ⇑Sn **Sn 14 58 56.0 -8.8**
comp=E,0.2nm,0.5s
ZALV Zalesovo Beam 19.83 25 P **P 14 56 33.5 +0.1**
comp=E,0.9nm,0.3s,baz=206,slow=10,SNR=4.0
ARCES ARCESS Array B 41.08 338 P **P 14 59 47.6 +3.8**
comp=E,0.9nm,0.7s,mb3.7,baz=106,slow=9.1,SNR=4.4
TORD Torodi Ar. Bea 65.75 269 P **P 15 02 43.9 -0.9**
comp=E,0.5nm,0.5s,mb3.6,baz=46,slow=5.5,SNR=6.7
WRA Warramunga Arr 82.01 122 P **P 15 04 18.4 -1.0**
comp=E,0.3nm,0.7s,mb3.2,baz=324,slow=4.8,SNR=3.7

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*NEIC **18** 14:53:12.7±0.9, 24°.21S×179°.90E, h550km, mb4.2/2, Error ellipse: s-maj=20.0km s-min=16.0km az=223.0*
IDC 18 14:53:09.3±3.2, 23°.86S×179°.95E, h503km±31km, mb3.5/5, mb1 3.7/6, mb1mx3.3/17, mbtmp3.4/6, Error ellipse: s-maj=53.5km s-min=28.0km az=176.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.56**	**189**	P		P	14 56 14.0	-0.7
	1.2nm,0.3s,baz=24,slow=24,SNR=9.2							
RPZ	**Rata Peaks**	**21.12**	**198**	*e*P		P	14 57 15.3	-2.3
EIDS	**Eidsvold**	**26.27**	**261**	*e*P		P	14 58 04.3	+0.4
	2.0nm,0.4s							
CTA	**Charters Tower**	**31.43**	**270**	P		P	14 58 49.6	+0.8
	7.8nm,0.5s,baz=95,slow=12,SNR=17							
ASAR	**Alice Springs**	**41.99**	**261**	P		P	15 00 15.8	-0.2
	3.1nm,0.7s,baz=97,slow=7.4,SNR=65							
ASAR				ScP		ScP	15 05 01.4	-0.7
	0.8nm,0.7s,baz=105,slow=4.1,SNR=10							
WRAB	**Tennant Creek**	**42.35**	**266**	*e*P		P	15 00 17.7	-1.1
	4.0nm,0.3s							
WRA	**Warramunga Arr**	**42.36**	**266**	P		P	15 00 18.0	-0.9
	3.9nm,0.3s,baz=96,slow=8.4,SNR=278							
KAKA	**Kakadu**	**46.26**	**275**	*e*P		P	15 00 49.2	+0.1
FITZ	**Fitzroy Crossi**	**50.78**	**266**	P		P	15 01 23.2	+0.3
	1.4nm,0.4s,baz=125,slow=7.2,SNR=13							
TXAR	**Lajitas Array**	**90.45**	**58**	P		P	15 05 17.3	+0.3
	0.4nm,0.7s,baz=208,slow=2.4,SNR=4.1							

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*NIED **18** 14:55:00, 39°.00N×140°.90E, h5km, Mw4.0 Best double couple: M0=9.85000×10^14 NP1:φs=24.00000°, δ56.00000°, λ96.00000°. NP2:φs=192.00000°, δ34.00000°, λ81.00000°.*
*IDC **18** 14:55:04.4±0.7, 39°.06N×140°.82E, h0km, mb3.9/14, mb1 4.1/15, mb1mx3.9/27, mbtmp3.9/15, ML3.1/2, MS3.1/1, Ms1 3.1/1, ms1mx2.3/28, Error ellipse: s-maj=21.6km s-min=14.4km az=96.0*
*JMA **18** 14:55:05.6, 39°.05N×140°.89E, h12km±1km, M4.0 Broadband fault plane solution: P waves. NP1: φs=201.00000°, δ41.00000°, λ96.00000°. NP2:φs12.00000°, δ49.00000°, λ84.00000°. Principal axes: T Plg84.0000°, Azm241.0000°; N Plg4.0000°, Azm16.0000°; P Plg4.0000°, Azm106.0000°;*
JMA Felt II J1.
*ISCJB **18** 14:55:05.2±0.8, 39°.07N±0°.03×140°.91E±0°.05, h15km±5km, mb4.0/17 Error ellipse: s-maj=6.3km s-min=4.2km az=9.2*
*NEIC **18** 14:55:08.8±2.5, 39°.05N×140°.76E, h30km±18km, mb4.3/4, Error ellipse: s-maj=12.0km s-min=7.5km az=119.0*
ISC 18 14:55:05.7±0.5, 39°.06N±0°.02×140°.89E±0°.04, h7km±3km, n39, σ1=1°01/47, mb4.0/17, 7D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.28**	**113**	⇓P		**Pg**	**14 55 11.0**	**-0.2**
JMK				S		**Sg**	**14 55 14.8**	**0.0**
JRG	**Rokugo**	**0.39**	**329**	⇓P		**Pg**	**14 55 13.6**	**+0.3**
JRG				*e*S		**Sg**	**14 55 19.1**	**+0.6**
JYK	**Kaneyama**	**0.44**	**251**	⇓P		**Pg**	**14 55 14.2**	**0.0**
JOM	**Ohasama**	**0.52**	**37**	⇓P		**Pg**	**14 55 15.8**	**+0.1**
JOM				S		**Sg**	**14 55 23.1**	**+0.7**
JIO	**Ouri**	**0.70**	**149**	⇓P		**Pg**	**14 55 18.6**	**-0.6**
JIO				S		**Sg**	**14 55 27.9**	**-0.4**
JOU	**Okura**	**0.72**	**195**	⇓P		**Pg**	**14 55 19.1**	**-0.4**
JOU				S		**Sg**	**14 55 28.7**	**-0.1**
JYA	**Atsumi**	**1.03**	**244**	⇓P		**Pg**	**14 55 24.9**	**-0.6**
MAJO	**Matsushiro**	**3.29**	**221**	*e*P		**Pn**	**14 55 56.4**	**-1.3**
MAT	**Matsushiro**	**3.29**	**221**	P		**Pn**	**14 55 58.8**	**+1.1**
MAT				S		**Sn**	**14 56 38.9**	**+1.8**
MJAR	**Matsushiro Arr**	**3.29**	**221**	Pn		**Pn**	**14 55 58.0**	**+0.2**
	0.8nm,0.3s,baz=311,slow=15,SNR=11							
MJAR				Pg		**Pg**	**14 56 04.8**	**-4.0**
	2.5nm,0.3s,baz=26,slow=15,SNR=26							
MJAR				Lg			14 56 41.9	
	1.6nm,0.3s,baz=25,slow=15,SNR=4.8							
MJAR	**Matsushiro Arr**	**3.29**	**221**	Pn		**Pn**	**14 55 58.0**	**+0.2**
MJAR				Pg		**Pg**	**14 56 04.8**	**-4.0**
MJAR				Lg			14 56 41.9	
ERM	**Erimo**	**3.42**	**30**	*e*P		**Pn**	**14 56 01.6**	**+2.1**
ASAJ	**Asahikawa**	**5.21**	**14**	Pn		**Pn**	**14 56 26.2**	**+2.2**
	0.9nm,0.3s,baz=231,slow=8.5,SNR=8.5							
JHJ	**Hachijo jima 2**	**6.00**	**189**	Pn		**Pn**	**14 56 36.1**	**+1.2**
	3.9nm,0.3s,baz=264,slow=21,SNR=7.4							
JHJ				Sn		**Sn**	**14 57 45.7**	**+1.9**
	3.0nm,0.3s,baz=77,slow=23,SNR=6.1							
KSRS	**Korea Array**	**10.33**	**265**	Pn		**Pn**	**14 57 36.1**	**+1.9**
	0.6nm,0.3s,baz=74,slow=14,SNR=6.0							
KSRS				Sn		**Sn**	**14 59 35.8**	**+5.6**
	0.5nm,0.3s,baz=72,slow=24,SNR=7.9							
YAK	**Yakutsk**	**24.01**	**347**	P		**P**	**15 00 19.1**	**-1.7**
	6.4nm,0.5s,mb4.3							
SONM	**Songino Array**	**26.36**	**301**	LR		LR	15 11 06.6	
	comp=Z,39nm,18.2s,baz=271,slow=37							
TIXI	**Tiksi**	**33.23**	**353**	*e*P		**P**	**15 01 40.9**	**-2.1**
	3.3nm,0.8s,mb4.3							
MK31	**Makanchi Array**	**42.72**	**300**	*e*P		**P**	**15 03 02.3**	**-1.0**
MKAR	**Makanchi Array**	**42.72**	**300**	P		**P**	**15 03 02.6**	**-0.7**
	0.4nm,0.3s,mb3.7,baz=87,slow=9.8,SNR=6.5							
KURK	**Kurchatov**	**44.38**	**306**	P		**P**	**15 03 16.3**	**-0.3**
	2.7nm,0.7s,mb4.1,baz=82,slow=8.1,SNR=13							
KURK	**Kurchatov**	**44.38**	**306**	*e*P		**P**	**15 03 15.9**	**-0.7**
BVAR	**Borovoye Array**	**48.92**	**311**	P		**P**	**15 03 51.7**	**-0.5**
	0.6nm,0.5s,mb3.9,baz=77,slow=6.4,SNR=3.8							
AAK	**Ala-Archa**	**49.19**	**297**	P		**P**	**15 03 54.3**	**-0.1**
	1.5nm,0.4s,mb4.4,baz=298,slow=5.0,SNR=3.8							
AAK	**Ala-Archa**	**49.19**	**297**	P		**P**	**15 03 54.3**	**-0.1**
INK	**Inuvik**	**52.78**	**28**	P		**P**	**15 04 21.6**	**+0.5**
	1.2nm,0.5s,mb4.1,baz=272,slow=4.4,SNR=5.4							
INK	**Inuvik**	**52.78**	**28**	*e*P		**P**	**15 04 21.4**	**+0.4**
	1.0nm,0.4s,mb4.1							
WRA	**Warramunga Arr**	**59.01**	**187**	P		**P**	**15 05 05.0**	**-1.2**
	1.8nm,0.7s,mb4.2,baz=4.8,slow=7.0,SNR=23							
RES	**Resolute Bay**	**60.75**	**15**	*e*P		**P**	**15 05 16.7**	**-0.8**
	3.4nm,0.9s,mb4.5							
ARCES	**ARCESS Array B**	**61.96**	**339**	P		**P**	**15 05 26.0**	**+0.3**
	1.0nm,0.7s,mb4.1,baz=38,slow=6.1,SNR=2.3							
ASAR	**Alice Springs**	**62.74**	**187**	P		**P**	**15 05 30.8**	**-0.6**
	0.7nm,0.8s,mb3.9,baz=3.7,slow=5.2,SNR=9.0							
FINES	**FINESS Array B**	**66.84**	**332**	P		**P**	**15 05 56.6**	**-1.2**
	2.4nm,0.9s,mb4.2,baz=32,slow=7.5,SNR=5.8							
NB2	**NORSAR Subarra**	**72.16**	**337**	P		**P**	**15 06 29.9**	**-0.8**
	comp=Z,2.1nm,0.9s,mb4.1,baz=36,slow=6.2							
NOA	**NORSAR Array B**	**72.16**	**337**	P		**P**	**15 06 30.1**	**-0.7**
	comp=Z,1.2nm,0.8s,mb3.9,baz=40,slow=5.9,SNR=4.9							
AKASG	**Malin Array Be**	**72.45**	**322**	P		**P**	**15 06 32.0**	**-0.6**
	comp=Z,0.6nm,0.4s,mb3.9,baz=47,slow=6.2,SNR=5.5							
NVAR	**Mina Array Bea**	**74.11**	**53**	P		**P**	**15 06 43.6**	**+1.0**
	comp=Z,0.2nm,0.4s,mb3.4,baz=136,slow=10,SNR=2.4							
PDAR	**Pinedale Array**	**76.54**	**46**	P		**P**	**15 06 57.4**	**+0.8**
	comp=Z,0.8nm,1.0s,mb3.6,baz=236,slow=1.6,SNR=4.1							
BRTR	**Keskin Array B**	**77.21**	**311**	P		**P**	**15 07 00.3**	**0.0**
	comp=Z,0.6nm,0.7s,mb3.6,baz=127,slow=3.3,SNR=4.7							
LPAZ	**La Paz**	**145.97**	**56**	PKPbc		PKPbc	15 14 46.6	+0.1
	comp=Z,1.3nm,0.9s,baz=11,slow=5.8,SNR=4.5							

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*TAP **18** 14:57:10.8, 24°.48N×121°.86E, h14km, ML3.5, B*
*NEIC **18** 14:57:10.6±4.7, 24°.46N×121°.90E, h6km±20km, ML4.1(TAP), Error ellipse: s-maj=51.4km s-min=14.4km az=89.0*
NEIC Recorded [4 TAP] in I-lan and [2 TAP] in Hua-lien.
*ISCJB **18** 14:57:10.0±0.4, 24°.46N±0°.02×121°.95E±0°.02, h2km±3km, Error ellipse: s-maj=3.3km s-min=2.5km az=36.6*
*JMA **18** 14:57:11.4±0.2, 24°.89N×121°.97E, h42km, M2.7*
ISC 18 14:57:10.5±0.4, 24°.45N±0°.02×121°.95E±0°.02, h5km±3km, n60, σ1=9°96/96, 7C-7D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.18**	**331**	⇑*i*P		**Pg**	**14 57 14.7**	**+0.6**
	baz=356							
TWC				*i*S		**Sg**	**14 57 16.9**	**+0.5**
	baz=356							
ENA	**Nanau**	**0.19**	**263**	⇓*i*P		**Pg**	**14 57 14.5**	**+0.3**
	baz=247							
ENA				*e*S		**Sg**	**14 57 16.8**	**+0.1**
	baz=247							
EHP	**Heping Village**	**0.23**	**233**	P		**Pg**	**14 57 15.5**	**+0.5**
	baz=207							
EHP				S		**Sg**	**14 57 19.0**	**+0.9**
	baz=207							
ILA	**Ilan**	**0.36**	**330**	⇓*i*P		**Pg**	**14 57 18.0**	**+0.6**
	baz=341							
ILA				*i*S		**Sg**	**14 57 22.9**	**+0.7**
	baz=341							
TWE	**Neicheng**	**0.37**	**317**	⇓*i*P		**Pg**	**14 57 17.6**	**0.0**
	baz=324							
TWE				*i*S		**Sg**	**14 57 22.1**	**-0.4**
	baz=324							
ENTT	**Nioudou**	**0.39**	**298**	⇓*i*P		**Pg**	**14 57 17.9**	**-0.2**
	baz=301							
ENTT				*i*S		**Sg**	**14 57 22.4**	**-0.8**
	baz=301							
NACB	**Ninganchiao**	**0.42**	**229**	*e*Pg		**Pg**	**14 57 18.3**	**-0.4**
NACB				*e*Sg		**Sg**	**14 57 24.1**	**-0.1**
TWD	**Chiawan**	**0.49**	**221**	⇑*i*P		**Pg**	**14 57 20.0**	**+0.1**
	baz=211							
TWD				S		**Sg**	**14 57 26.4**	**+0.1**
	baz=211							
NNS	**Nan Shan**	**0.52**	**269**	⇑*i*P		**Pg**	**14 57 20.2**	**-0.4**
	baz=265							
NNS				*e*S		**Sg**	**14 57 25.9**	**-1.5**
	baz=265							
TWB1	**Santiao Chiao**	**0.56**	**4**	*e*P		**Pg**	**14 57 21.8**	**+0.6**
	baz=13							
TWB1				*e*S		**Sg**	**14 57 28.4**	**0.0**
	baz=13							
YHNB	**Yeheng**	**0.56**	**293**	*e*Pg		**Pg**	**14 57 20.6**	**-0.7**
YHNB				*e*Sn		**Sg**	**14 57 27.0**	**-1.6**
HWA	**Hwalien**	**0.57**	**213**	*e*P		**Pg**	**14 57 22.4**	**+1.0**
	baz=212							
NSK	**Sanguang**	**0.58**	**293**	⇓*i*P		**Pg**	**14 57 21.3**	**-0.3**
	baz=293							
NSK				*i*S		**Sg**	**14 57 27.4**	**-1.8**
	baz=293							
TWA	**Mucha**	**0.62**	**328**	⇓*i*P		**Pg**	**14 57 22.7**	**+0.2**
	baz=323							
TWA				*i*S		**Sg**	**14 57 29.9**	**-0.6**
	baz=323							
NWF	**Wu-fen Shan**	**0.63**	**346**	⇓*i*P		**Pg**	**14 57 23.4**	**+0.7**
	baz=344							
NWF				*i*S		**Sg**	**14 57 31.0**	**+0.1**
	baz=344							
TATO	**Taipei**	**0.67**	**322**	*e*Pg		**Pg**	**14 57 22.9**	**-0.4**
WHF	**Hehuan Shan**	**0.69**	**244**	⇑*i*P		**Pg**	**14 57 23.5**	**-0.3**
	baz=238							
WHF				S		**Sg**	**14 57 32.0**	**-0.8**
	baz=238							
TAP1	**Taipei**	**0.70**	**327**	P		**Pg**	**14 57 24.4**	**+0.5**
	baz=322							
TAP1				*e*S		**Sg**	**14 57 33.2**	**+0.2**
	baz=322							
TWT	**Tachien**	**0.73**	**254**	P		**Pg**	**14 57 24.3**	**-0.2**
	baz=244							
TWT				S		**Sg**	**14 57 33.4**	**-0.6**
	baz=244							
ESL	**Shilin**	**0.79**	**216**	⇑*i*P		**Pg**	**14 57 25.3**	**-0.3**
	baz=218							
TWS1	**Kuangyinshan**	**0.80**	**324**	P		**Pg**	**14 57 26.5**	**+0.5**
	baz=327							
TWS1				*e*S		**Sg**	**14 57 38.3**	**+1.9**
	baz=327							
NCU	**National Centr**	**0.86**	**307**	P		**Pg**	**14 57 27.1**	**+0.1**
	baz=309							
NCU				*e*S		**Sg**	**14 57 39.8**	**+1.6**
	baz=309							
NSTT	**Nanjuang**	**0.88**	**282**	⇑*i*P		**Pg**	**14 57 27.0**	**-0.4**
	baz=281							
NSTT				S		**Sg**	**14 57 36.8**	**-2.0**
	baz=281							
TWY	**Chenhua**	**0.88**	**339**	P		**Pg**	**14 57 27.5**	**+0.1**
	baz=344							
TWY				*e*S		**Sg**	**14 57 39.6**	**+0.9**
	baz=344							
HSN	**Hsinchu**	**0.95**	**292**	*e*P		**Pg**	**14 57 29.1**	**+0.3**
	baz=294							
HSN				*e*S		**Sg**	**14 57 41.1**	**-0.1**
	baz=294							
YOJ	**Yonaguni jima**	**0.97**	**89**	P		**Pg**	**14 57 29.8**	**+0.6**
YOJ				*e*S		**Sg**	**14 57 43.1**	**+1.3**
YOJ	**Yonaguni jima**	**0.97**	**89**	*e*P		**Pg**	**14 57 30.1**	**+0.9**
	baz=80							
TWQ1	**Liyutan**	**1.07**	**265**	⇑P		**Pg**	**14 57 31.0**	**-0.1**
	baz=251							
TWQ1				*e*S		**Sg**	**14 57 44.5**	**-0.6**
	baz=251							
NSY	**Sanyi**	**1.08**	**268**	*e*P		**Pg**	**14 57 31.0**	**-0.2**
	baz=272							
NSY				*e*S		**Sg**	**14 57 45.5**	**+0.3**
	baz=272							
EHY	**Hungye**	**1.10**	**211**	P		**Pg**	**14 57 31.6**	**-0.1**
	baz=216							
EHY				*e*S		**Sg**	**14 57 47.1**	**+1.2**
	baz=216							
SMLT	**Sun Moon Lake**	**1.11**	**239**	*e*P		**Pg**	**14 57 31.0**	**-0.8**
	baz=235							
SSLB	**Suanglung**	**1.12**	**234**	*e*Pn		**Pn**	**14 57 31.1**	**-1.8**
TYC	**Yuchr**	**1.13**	**241**	P		**Pg**	**14 57 31.1**	**-1.2**
	baz=230							
TYC				S		**Sg**	**14 57 45.4**	**-1.5**
	baz=230							
TCU	**Taichung**	**1.20**	**256**	*e*P		**Pg**	**14 57 33.6**	**+0.2**
	baz=252							
YULB	**Yu-li**	**1.21**	**209**	*e*Pn		**Pn**	**14 57 32.6**	**-1.5**
TWF1	**Yuli**	**1.25**	**209**	*e*P		**Pg**	**14 57 33.0**	**-1.4**
	baz=213							
TWF1				*e*S		**Sg**	**14 57 51.1**	**+0.6**
	baz=213							
WNT	**Mingjian**	**1.29**	**244**	*e*P		**Pn**	**14 57 34.7**	**-0.5**
	baz=240							
YUS	**Yu-Shan**	**1.32**	**224**	*e*P		**Pn**	**14 57 35.3**	**-0.4**
	baz=210							
YUS				*e*S		**Sg**	**14 57 54.6**	**+1.6**
	baz=210							
ALS	**Alishan**	**1.40**	**228**	*e*P		**Pn**	**14 57 37.1**	**+0.3**
	baz=210							
CHN5	**Tsauling**	**1.44**	**234**	*e*P		**Pn**	**14 57 37.8**	**+0.6**
	baz=242							
CHN5				*e*S		**Sb**	**14 57 57.6**	**+1.1**
	baz=242							
WGK	**Gukeng**	**1.48**	**239**	*e*P		**Pn**	**14 57 38.7**	**+0.9**
	baz=248							
WGK				*e*S		**Sn**	**14 57 58.3**	**+0.8**
	baz=248							
ELDTW	**Lidau**	**1.52**	**214**	*e*P		**Pn**	**14 57 37.5**	**-0.9**
	baz=196							
IRIF	**Iriomote-Funau**	**1.63**	**94**	P		**Pn**	**14 57 39.2**	**-0.8**
IRIF				*e*S		**Sn**	**14 58 00.5**	**-0.9**
CHN4	**Tsaushan**	**1.65**	**229**	*e*P		**Pn**	**14 57 42.0**	**+1.8**
	baz=211							
CHN4				*e*S		**Sn**	**14 58 04.8**	**+3.0**
	baz=211							
TPUB	**Ta-pu**	**1.66**	**227**	*e*Pn		**Pn**	**14 57 41.9**	**+1.6**
STYT	**Tauyuan**	**1.68**	**221**	*e*P		**Pn**	**14 57 40.5**	**-0.1**
	baz=217							
WTP	**Ta-pu**	**1.71**	**226**	*e*P		**Pn**	**14 57 41.2**	**+0.2**
	baz=208							
WSF	**Szhu**	**1.77**	**243**	*e*P		**Pn**	**14 57 41.4**	**-0.5**
	baz=239							
TWK	**Hsinying**	**1.78**	**229**	*e*P		**Pn**	**14 57 44.0**	**+2.0**
	baz=211							
TWK				*e*S		**Sn**	**14 58 07.4**	**+2.4**
	baz=211							
CHN1	**Nanshi**	**1.81**	**226**	*e*P		**Pn**	**14 57 43.0**	**+0.7**
	baz=223							
TWG	**Pinlang**	**1.81**	**206**	*e*Pn		**Pn**	**14 57 42.7**	**+0.2**
TWG	**Pinlang**	**1.81**	**206**	*e*P		**Pn**	**14 57 42.5**	**+0.1**
	baz=188							
SGST	**Jiashian**	**1.85**	**223**	*e*P		**Pn**	**14 57 44.1**	**+1.2**
	baz=206							
JKRS	**Kuro-shima**	**1.90**	**96**	P		**Pn**	**14 57 43.4**	**-0.2**
JKRS				*e*S		**Sn**	**14 58 06.6**	**-1.3**
CHN8	**Yiju**	**1.93**	**236**	*e*P		**Pn**	**14 57 42.6**	**-1.5**
	baz=232							
JIJ	**Ishigaki jima**	**2.01**	**92**	P		**Pn**	**14 57 44.3**	**-0.8**
JIJ				S		**Sn**	**14 58 08.1**	**-2.5**
ECL	**Taimali**	**2.06**	**206**	*e*P		**Pn**	**14 57 45.4**	**-0.5**
	baz=190							
SSD	**Sandimen**	**2.08**	**216**	*e*P		**Pn**	**14 57 48.1**	**+2.0**
	baz=212							
EAST	**Anshuo**	**2.29**	**206**	*e*P		**Pn**	**14 57 49.3**	**+0.2**
	baz=193							
LAY	**Lan-yu**	**2.43**	**189**	*e*P		**Pn**	**14 57 48.9**	**-2.0**
	baz=186							

DJA 18 15:01:43.1±45N×125°.73E, h57km, MLv3.7/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MNI	**Manado**	**0.89**	**270**	P		Pn	15 01 59.9	+0.4
MNI				S		Sn	15 02 13.4	+1.8
TNTI	**Ternate**	**1.77**	**112**	P		Pn	15 02 11.7	+0.4
KMSI	**Cibinong**	**1.95**	**244**	P		Pn	15 02 14.7	+0.9
KMSI				S		Sn	15 02 37.5	+0.3
SGSI	**Sangihe**	**2.23**	**355**	P		Pn	15 02 20.3	+2.7
SGSI				S		Sn	15 02 43.5	-0.5
LBMI	**Labuha**	**2.73**	**139**	P		Pn	15 02 23.5	-0.9

SKHL 18 15:03:32.1±0.9, 53°.82N×141°.37E, h10km, mb4.1/7, 1C-2D, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NKL	**Nikolayevsk**	**0.79**	**212**	⇓*i*Pg		**Pg**	**15 03 48.0**	**+0.7**
NKL					AMB	AMB	15 03 49.2	
	340nm,0.3s							
NKL				*i*Sg		Sg	15 04 00.7	+3.2
NKL					A		15 04 03.0	
	1μm,0.4s							
OKH	**Okha**	**0.97**	**106**	⇓*i*Pg		Pg	15 03 50.5	-0.2
OKH					AMB	AMB	15 03 51.2	
	200nm,0.6s							
OKH				⇑*i*Sg		Sg	15 04 04.0	+0.7
OKH					A		15 04 06.0	
	1μm,0.6s							
OKH					A		15 04 06.0	
	2μm,0.6s							
TYV	**Tymovskoe**	**3.06**	**165**	*e*P		Pn	15 04 22.0	+1.5
TYV				*e*Pg		Pg	15 04 33.0	+2.2
TYV					AMB	AMB	15 04 36.0	
	18nm,0.5s							
TYV				*e*Sg		Sg	15 05 15.0	+4.5
TYV					A		15 05 16.0	
	32nm,0.7s							
TYV					A		15 05 16.0	
	42nm,0.7s							
GRNR	**Gornyy**	**4.31**	**227**	*e*P		Pn	15 04 40.0	+2.4
GRNR				*e*Pg		Pg	15 04 54.0	-0.6
GRNR					AMB	AMB	15 04 56.0	
	16nm,0.4s							
GRNR				*e*Sg		Sg	15 05 54.0	+3.7
GRNR					A		15 05 57.0	
	71nm,0.5s							
GRNR					A		15 05 57.0	
	67nm,0.5s							
UGL	**Uglegorsk**	**4.77**	**174**	*e*Pg		Pg	15 05 09.0	+5.6
UGL					AMB	AMB	15 05 15.0	
	60nm,0.8s							
UGL				*e*Sg		Sg	15 06 17.0	+12
UGL					A		15 06 18.0	
	77nm,0.5s							
EKMR	**Ekimchan**	**5.09**	**265**	*e*P		Pn	15 04 50.3	+2.0
EKMR				*e*Pg		Pg	15 05 12.5	+3.0
EKMR					AMB	AMB	15 05 15.4	
	9.0nm,0.5s							
EKMR				*e*S		Sn	15 05 47.9	+0.8
EKMR				*e*Sg		Sg	15 06 23.4	+8.0
EKMR					A		15 06 28.5	
	62nm,0.5s							
EKMR					A		15 06 28.5	
	20nm,0.5s							
EKMR					A		15 06 28.5	
	18nm,0.5s							
BMKR	**Bomnak**	**7.39**	**282**	*e*Pg		Pg	15 05 54.0	+0.5
BMKR					AMB	AMB	15 05 55.0	
	2.0nm,0.5s							
BMKR				*e*Sg		Sg	15 07 32.5	+3.3
BMKR					A		15 07 34.8	
	16nm,0.6s							
ZEA	**Zeya**	**8.37**	**275**	*e*Sg		Sn	15 08 07.0	+59
KROS	**Kirovskiy**	**8

TYV			*e*Pg		**Pg**	**15 06 07.7 +0.9**
TYV			AMB		AMB	15 06 10.0
	34nm,0.6s					
TYV			*e*S		**Sn**	**15 06 33.8 0.0**
TYV			*e*Sg		**Sg**	**15 06 49.5 +1.9**
TYV			A			15 06 50.0
	127nm,0.9s					
TYV			A			15 06 50.0
	144nm,0.9s					
GRNR	**Gornyy**	**4.38 226**	*e*Pg		**Pg**	**15 06 26.0 -4.3**
GRNR			AMB		AMB	15 06 29.0
	58nm,0.6s					
GRNR			*e*Sg		**Sg**	**15 07 25.0 -2.0**
GRNR			A			15 07 30.5
	124nm,0.5s					
GRNR			A			15 07 30.5
	105nm,0.5s					
UGL	**Uglegorsk**	**4.86 175**	*e*P		**Pn**	**15 06 20.0 +0.4**
UGL			*e*Pg		**Pg**	**15 06 42.0 +2.5**
UGL			AMB		AMB	15 06 45.0
	123nm,1.0s					
UGL			*e*Sg		**Sg**	**15 07 51.0 +8.6**
UGL			A			15 07 52.0
	92nm,0.5s					
EKMR	**Ekimchan**	**5.11 264**	*e*Pg		**Pg**	**15 06 44.0 -0.2**
EKMR			*e*S		**Sn**	**15 07 19.5 -2.5**
EKMR			*e*Sg		**Sg**	**15 07 55.0 +4.7**
EKMR			A			15 08 01.5
	104nm,0.7s					
YSS	**Yuzh-Sakhalins**	**7.02 172**	*e*Pn		**Pn**	**15 06 49.3 0.0**
BMKR	**Bomnak**	**7.38 281**	*e*Sg		**Sg**	**15 09 07.3 +4.1**
BMKR			A			15 09 08.5
	5.0nm,0.6s					
KLR	**Kul'dur**	**7.62 236**	*e*Pg		**Pg**	**15 07 27.2 -4.9**
KLR			AMS		AMS	15 10 06.0
	600nm,7.0s					
ZEA	**Zeya**	**8.37 274**	*e*Sg		Sx	15 09 45.0
ZEA			A			15 09 51.8
	65nm,1.0s					
ZEA			A			15 09 51.8
	59nm,1.0s					
KROS	**Kirovskiy**	**8.48 279**	*e*Sg		Sx	15 09 36.0
KROS			A			15 09 37.0
	22nm,0.9s					
KROS			A			15 09 37.0
	16nm,0.9s					
TEY	**Ternei**	**9.41 201**	*e*Sg		Sx	15 10 10.0
TEY			A			15 10 10.8
	39nm,0.8s					
TEY			A			15 10 10.8
	52nm,0.8s					
PETK	**Petropavlovsk-**	**9.76 88**	Pn		**Pn**	**15 07 25.9 -0.8**
	0.2nm,0.3s,baz=358,slow=7.2,SNR=8.2					
PETK			Sn		**Sn**	**15 09 14.0 -2.2**
	0.2nm,0.3s,baz=335,slow=5.3,SNR=6.7					
PETK	**Petropavlovsk-**	**9.76 88**	Pn		**Pn**	**15 07 25.9 -0.8**
PETK			Sn		**Sn**	**15 09 14.0 -2.2**
TIXI	**Tiksi**	**18.62 348**	*e*P		**Pn**	**15 09 25.0 +1.0**
	3.2nm,0.7s					
MKAR	**Makanchi Array**	**37.39 284**	P		**P**	**15 12 18.7 -0.5**
	0.4nm,0.2s,mb3.8,baz=46,slow=8.8,SNR=5.9					
MKAR	**Makanchi Array**	**37.39 284**	P		**P**	**15 12 18.7 -0.5**
KURK	**Kurchatov**	**37.40 291**	P		**P**	**15 12 20.4 +1.3**
	0.3nm,0.2s,mb3.7,baz=63,slow=8.7,SNR=4.3					
INK	**Inuvik**	**39.89 35**	*e*P		**P**	**15 12 40.3 +0.4**
NVAR	**Mina Array Bea**	**65.42 58**	P		**P**	**15 15 49.8 +0.6**
	0.4nm,0.6s,mb3.6,baz=302,slow=5.2,SNR=4.3					
PDAR	**Pinedale Array**	**66.22 50**	P		**P**	**15 15 56.8 +2.6**
	0.5nm,0.6s,mb3.7,baz=7.1,slow=3.6,SNR=3.6					
ASAR	**Alice Springs**	**77.53 187**	P		**P**	**15 17 02.5 +0.5**
	0.5nm,0.5s,mb3.7,baz=360,slow=5.3,SNR=12					

*IDC **18** 15:41:04.5±0.8,20".44N×120".17E,h0km,mb3.8/9,*
mb1 3.9/10,mb1mx3.7/23,mbtmp3.8/10,ML3.2/1,MS3.1/3,
Ms1 3.2/3,ms1mx2.3/40,Error ellipse: s-maj=29.5km
s-min=16.8km az=69.0
*NEIC **18** 15:41:06.0±0.4,20".45N×120".20E,h10km,mb4.2/1,Error*
ellipse: s-maj=10.1km s-min=6.5km az=99.0
*ISCJB **18** 15:41:08.5±0.7,20".50N±0".03×120".31E±0".06,h43km±9km,*
mb3.9/9,MS3.0/3,Error ellipse: s-maj=9.5km s-min=4.7km
az=11.7
*MAN **18** 15:41:12,20".33N×120".46E,h33km,mb5.4,ML4.4,MS4.7*
*JMA **18** 15:41:12.0±0.2,20".66N×120".46E,h181km*
ISC 18 15:41:09.7±0.7,20°48N±0".03×120°27E±0".06,h35km±10km,
n32,σ0°83/36,mb3.9/9,MS3.0/3,1D,Philippine Islands
region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBP	**Basco**	**1.59**	**91**	*e*P	**Pn**	**15 41 35.9**	**+0.6**
BBP				*e*S	**Sn**	**15 41 53.1**	**-1.5**
TWG	**Pinlang**	**2.45**	**18**	*e*Pn	**Pn**	**15 41 47.0**	**-0.1**
APYP	**Conner**	**2.76**	**160**	*e*P	**Pn**	**15 41 51.3**	**-0.1**
APYP				*e*S	**Sn**	**15 42 22.5**	**-0.9**
SGCP	**Mt. Cagua**	**2.78**	**143**	*e*P	**Pn**	**15 41 52.1**	**+0.3**
TPUB	**Ta-pu**	**2.83**	**7**	*e*Pn	**Pn**	**15 41 50.8**	**-1.6**
ABRA	**Dolores**	**2.84**	**171**	*e*P	**Pn**	**15 41 53.6**	**+1.0**
ABRA				*e*S	Px	15 42 05.2	
YULB	**Yu-li**	**3.06**	**18**	*e*Pn	**Pn**	**15 41 55.7**	**+0.3**
SSLB	**Suanglung**	**3.36**	**11**	*e*P	**Pn**	**15 41 58.2**	**-1.4**
CAUP	**Cauayan**	**3.81**	**157**	*e*P	**Pn**	**15 42 08.9**	**+3.1**
PALP	**Palanan**	**3.96**	**149**	*e*P	**Pn**	**15 42 13.0**	**+5.1**
BCPH	**Baguio City Da**	**4.08**	**176**	⇓*e*P	**Pn**	**15 42 08.9**	**-0.7**
YHNB	**Yeheng**	**4.30**	**14**	*e*P	**Pn**	**15 42 12.3**	**-0.3**
YOJ	**Yonaguni jima**	**4.71**	**32**	P	**Pn**	**15 42 19.6**	**+1.4**
YOJ				*e*S	**Sn**	**15 43 12.6**	**+1.0**
HATJ	**Hateruma jima**	**4.84**	**42**	*e*S	**Sn**	**15 43 15.0**	**+0.2**
IRIF	**Iriomote-Funau**	**5.00**	**39**	*e*S	**Sn**	**15 43 18.8**	**0.0**
JKRS	**Kuro-shima**	**5.10**	**42**	P	**Pn**	**15 42 24.8**	**+1.2**
JKRS				*e*S	**Sn**	**15 43 21.2**	**0.0**
JIJ	**Ishigaki jima**	**5.27**	**42**	P	**Pn**	**15 42 26.9**	**+0.9**
JIJ				*e*S	**Sn**	**15 43 24.3**	**-1.2**
JTJ	**Tarama**	**5.83**	**44**	*e*S	**Sn**	**15 43 38.6**	**-0.6**
KSRS	**Korea Array**	**18.18**	**20**	P	**Pn**	**15 45 19.2**	**-0.1**
	0.1nm,0.3s,baz=201,slow=12,SNR=3.2						
CMAR	**Chiang Mai Arr**	**20.21**	**268**	P	**P**	**15 45 40.6**	**-1.0**
	0.5nm,0.8s,baz=80,slow=12,SNR=3.5						
CMAR				LR	LR	15 53 51.9	
	comp=Z,44nm,18.1s,MS2.9,baz=205,slow=38						
MJAR	**Matsushiro Arr**	**22.41**	**41**	P	**P**	**15 46 06.2**	**+1.1**
	3.2nm,1.0s,mb3.7,baz=246,slow=10.0,SNR=9.1						
MJAR				LR	LR	15 54 24.5	
	comp=Z,50nm,20.5s,MS2.9,baz=245,slow=36						
SONM	**Songino Array**	**29.51**	**341**	P	**P**	**15 47 10.5**	**0.0**
	0.5nm,0.7s,mb3.4,baz=155,slow=11,SNR=3.7						
MK31	**Makanchi Array**	**40.50**	**319**	P	**P**	**15 48 45.6**	**+0.5**
MKAR	**Makanchi Array**	**40.50**	**319**	P	**P**	**15 48 45.5**	**+0.4**
	1.0nm,0.7s,mb3.7,baz=133,slow=10.0,SNR=7.7						
WRAB	**Tennant Creek**	**42.46**	**160**	*e*P	**P**	**15 49 01.2**	**-0.1**
WRA	**Warramunga Array**	**42.46**	**160**	P	**P**	**15 49 00.9**	**-0.5**
	4.1nm,0.9s,mb4.0,baz=342,slow=9.1,SNR=18						
WRA				PcP	PcP	15 50 54.6	+0.7
	0.5nm,1.0s,baz=345,slow=3.3,SNR=4.7						
ZALV	**Zalesovo Beam**	**42.95**	**330**	P	**P**	**15 49 04.9**	**-0.1**
	1.4nm,0.3s,mb4.2,baz=126,slow=7.5,SNR=5.1						
PETK	**Petropavlovsk-**	**43.42**	**32**	LR	LR	16 05 25.3	
	comp=Z,28nm,20.6s,MS3.2,baz=180,slow=34						
KURK	**Kurchatov**	**44.45**	**323**	*e*P	**P**	**15 49 17.5**	**+0.3**
	4.0nm,1.1s,mb4.1						
ASAR	**Alice Springs**	**45.84**	**162**	P	**P**	**15 49 28.8**	**+0.4**
	0.9nm,0.7s,mb3.8,baz=345,slow=7.1,SNR=12						
BVAR	**Borovoye Array**	**50.05**	**323**	P	**P**	**15 50 00.1**	**-0.6**
	0.4nm,0.6s,mb3.6,baz=102,slow=13,SNR=3.2						
FINES	**FINESS Array B**	**74.22**	**330**	P	**P**	**15 52 42.3**	**-0.3**
	1.7nm,0.7s,mb4.1,baz=98,slow=5.8,SNR=4.4						

*IDC **18** 16:01:36.4±2.7,12".91N×143".88E,h0km,mb3.8/5,*
mb1 4.0/5,mb1mx3.7/23,mbtmp3.8/5,Error ellipse:
s-maj=87.5km s-min=22.7km az=78.0
*NEIC **18** 16:01:47.7±1.9,12".82N×143".76E,h89km±30km,mb3.6/1,*
Error ellipse: s-maj=42.2km s-min=13.3km az=77.0
*ISCJB **18** 16:01:47.4±1.8,12".8N±0".2×143".9E±0".4,h109km±33km,*
mb3.7/6,Error ellipse: s-maj=65.0km s-min=20.9km
az=164.6
ISC 18 16:01:47.7±2.7,12°8N±0".1×143°8E±0".4,h88km±43km,n9,
σ0°34/9,mb3.7/6,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.33**	**54**	*e*Pn	**Pn**	**16 02 11.2**	**0.0**
YULB	**Yu-li**	**23.76**	**299**	P	**P**	**16 06 51.9**	**-0.3**
WRAB	**Tennant Creek**	**33.83**	**196**	*e*P	**P**	**16 08 21.9**	**+0.2**
	0.5nm,0.5s,mb3.6						
WRA	**Warramunga Arr**	**33.84**	**196**	P	**P**	**16 08 21.2**	**-0.6**
	0.6nm,0.6s,mb3.6,baz=17,slow=9.7,SNR=11						
WRA	**Warramunga Arr**	**33.84**	**196**	P	**P**	**16 08 21.2**	**-0.7**
ASAR	**Alice Springs**	**37.52**	**195**	P	**P**	**16 08 53.6**	**+0.4**
	1.2nm,0.5s,mb4.0,baz=21,slow=12,SNR=38						
CMAR	**Chiang Mai Arr**	**43.44**	**283**	P	**P**	**16 09 42.6**	**+0.4**
	0.9nm,0.6s,mb3.7,baz=77,slow=7.0,SNR=7.3						
MKAR	**Makanchi Array**	**61.30**	**317**	P	**P**	**16 11 53.6**	**-0.3**
	0.2nm,0.3s,mb3.6,baz=103,slow=7.1,SNR=2.5						
BVAR	**Borovoye Array**	**69.86**	**322**	P	**P**	**16 12 49.1**	**+0.2**
	0.8nm,0.4s,mb3.9,baz=106,slow=6.8,SNR=9.0						

*CSEM **18** 16:17:47.8±0.3,36".26N×1".07E,h2km,mb3.6/6,Error*
ellipse: s-maj=10.5km s-min=5.8km az=25.0
*ISCJB **18** 16:17:47.1±0.5,36".27N±0".04×1".07E±0".05,h10km,Error*
ellipse: s-maj=7.1km s-min=4.0km az=36.5
*MDD **18** 16:17:48.2±0.8,36".12N×1".32E,h23km±5km,mb3.7/6,*
Error ellipse: s-maj=13.1km s-min=7.3km az=104.0,
PRIMO
*NEIC **18** 16:17:48.4,36".30N×1".18E,h0km,MG3.6(MDD),After*
MDD.
*CRAAG **18** 16:17:49.0,36".18N×1".24E,Ml3.9*
ISC 18 16:17:47.7±1.4,36°30N±0".08×1°09E±0".08,h3km±18km,
n53,σ1°27/84,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECHF	**Ech Chlef**	**0.25**	**126**	P	**Pg**	**16 17 52.0**	**-0.5**
ECHF	**Ech Chlef**	**0.25**	**126**	P	**Pg**	**16 17 52.0**	**-0.5**
ECHA	**Ech Chlef**	**0.27**	**124**	P	**Pg**	**16 17 52.0**	**-0.9**
ECHA	**Ech Chlef**	**0.27**	**124**	P	**Pg**	**16 17 52.0**	**-0.9**
EANR	**'Ain N'Sour**	**0.35**	**178**	P	**Pg**	**16 17 53.8**	**-0.7**
EANR	**'Ain N'Sour**	**0.35**	**178**	P	**Pg**	**16 17 53.8**	**-0.7**
EANR	**'Ain N'Sour**	**0.35**	**178**	P	**Pg**	**16 17 53.8**	**-0.7**
EANR	**'Ain N'Sour**	**0.35**	**178**	P	**Pg**	**16 17 53.8**	**-0.7**
EBNR	**Beni Rached**	**0.36**	**92**	P	**Pg**	**16 17 55.0**	**+0.4**
EBNR	**Beni Rached**	**0.36**	**92**	P	**Pg**	**16 17 55.0**	**+0.4**
ETRT	**Tiaret**	**0.93**	**169**	P	**Pg**	**16 18 02.0**	**-3.5**
ETRT	**Tiaret**	**0.93**	**169**	P	**Pg**	**16 18 02.0**	**-3.5**
ETRT	**Tiaret**	**0.93**	**169**	P	**Pg**	**16 18 02.0**	**-3.5**
ETRT	**Tiaret**	**0.93**	**169**	P	**Pg**	**16 18 02.0**	**-3.5**
EMHD	**Djebel Mahouad**	**1.51**	**93**	P	**Pn**	**16 18 17.2**	**+1.5**
EMHD	**Djebel Mahouad**	**1.51**	**93**	P	**Pn**	**16 18 17.2**	**+1.5**
EMHD	**Djebel Mahouad**	**1.51**	**93**	P	**Pn**	**16 18 17.2**	**+1.5**
EMHD	**Djebel Mahouad**	**1.51**	**93**	P	**Pn**	**16 18 17.2**	**+1.5**
EBEN	**Beniarda**	**2.61**	**337**	P	**Pn**	**16 18 32.8**	**+2.0**
EBEN				S	**Sn**	**16 19 03.3**	**+0.3**
EBEN	**Beniarda**	**2.61**	**337**	P	**Pn**	**16 18 32.8**	**+2.0**
	1.5nm,0.6s,SNR=7.9						
EBEN				S	**Sn**	**16 19 03.3**	**+0.2**
	1.2nm,0.3s,SNR=7.9						
EBEN	**Beniarda**	**2.61**	**337**	P	**Pn**	**16 18 32.8**	**+2.0**
	1.5nm,0.6s,SNR=7.9						
EBEN				S	**Sn**	**16 19 03.3**	**+0.2**
	1.2nm,0.3s,SNR=7.9						
EBEN	**Beniarda**	**2.61**	**337**	P	**Pn**	**16 18 32.8**	**+2.0**
	1.5nm,0.6s,SNR=7.9						
EBEN				S	**Sn**	**16 19 03.3**	**+0.3**
	1.2nm,0.3s,SNR=7.9						
EIBI	**Ibiza**	**2.73**	**4**	P	**Pn**	**16 18 31.6**	**-0.7**
EIBI				S	**Sn**	**16 19 02.9**	**-2.9**
EIBI	**Ibiza**	**2.73**	**4**	P	**Pn**	**16 18 31.6**	**-0.7**
	10nm,0.6s,SNR=7.9						
EIBI				S	**Sn**	**16 19 02.9**	**-2.9**
	6.8nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**2.73**	**4**	P	**Pn**	**16 18 31.6**	**-0.7**
	10nm,0.6s,SNR=7.9						
EIBI				S	**Sn**	**16 19 02.9**	**-2.9**
	6.8nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**2.73**	**4**	P	**Pn**	**16 18 31.6**	**-0.7**
	10nm,0.6s,SNR=7.9						
ETOB	**Tobarra**	**3.14**	**319**	P	**Pn**	**16 18 38.8**	**+0.8**
ETOB				S	**Sn**	**16 19 14.2**	**-1.8**
ETOB	**Tobarra**	**3.14**	**319**	P	**Pn**	**16 18 38.8**	**+0.8**
	1.2nm,0.1s,SNR=5.8						
ETOB				S	**Sn**	**16 19 14.2**	**-1.8**
	2.6nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**3.14**	**319**	P	**Pn**	**16 18 38.8**	**+0.8**
	1.2nm,0.1s,SNR=5.8						
ETOB				S	**Sn**	**16 19 14.2**	**-1.8**
	2.6nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**3.14**	**319**	P	**Pn**	**16 18 38.8**	**+0.8**
	1.2nm,0.1s,SNR=5.8						
EBER	**Berja**	**3.25**	**282**	P	**Pn**	**16 18 39.5**	**-0.2**
EBER				S	**Sn**	**16 19 15.5**	**-3.4**
EBER	**Berja**	**3.25**	**282**	P	**Pn**	**16 18 39.4**	**-0.2**
	2.0nm,0.2s,SNR=7.6						
EBER				S	**Sn**	**16 19 15.5**	**-3.4**
	4.3nm,0.3s,SNR=7.9						
EBER	**Berja**	**3.25**	**282**	P	**Pn**	**16 18 39.4**	**-0.2**
	2.0nm,0.2s,SNR=7.6						
EBER				S	**Sn**	**16 19 15.5**	**-3.4**
	4.3nm,0.3s,SNR=7.9						
EBER	**Berja**	**3.25**	**282**	P	**Pn**	**16 18 39.5**	**-0.1**
EQES	**Quesada**	**3.65**	**295**	P	**Pn**	**16 18 45.3**	**+0.3**
EQES				S	**Sn**	**16 19 29.5**	**+1.0**
EQES	**Quesada**	**3.65**	**295**	P	**Pn**	**16 18 45.3**	**+0.3**
	1.8nm,0.2s,SNR=7.9						
EQES				S	**Sn**	**16 19 29.5**	**+1.0**
	6.9nm,0.4s,SNR=7.9					

ARCES	ARCESS Array B	60.04	10	LR	LR	17 09 30.5	
	comp=Z,26nm,18.7s,MS3.4,baz=354,slow=38						
SDV	Santo Domingo	62.73	109	LR	LR	17 09 30.4	
	comp=Z,50nm,18.4s,MS3.7,baz=332,slow=37						
MJAR	Matsushiro Arr	65.19	298	LR	LR	17 04 51.7	
	comp=Z,41nm,21.8s,MS3.6,baz=90,slow=32						
NOA	NORSAR Array B	65.44	20	LR	LR	17 08 41.8	
	comp=Z,26nm,19.5s,MS3.5,baz=110,slow=34						
PCRV	Puerto La Cruz	65.52	103	LR	LR	17 13 16.4	
	comp=Z,39nm,18.0s,MS3.6,baz=255,slow=39						
CN2	Changchun	66.95	311	*e*P	P	16 41 44.6	+0.6
FINES	FINESS Array B	67.83	13	LR	LR	17 12 24.0	
	comp=Z,59nm,19.1s,MS3.8,baz=145,slow=37						
KSRS	Korea Array	70.31	305	LR	LR	17 11 10.1	
	comp=Z,29nm,18.8s,MS3.6,baz=60,slow=35						
SONM	Songino Array	72.20	325	LR	LR	17 13 31.3	
	comp=Z,50nm,19.4s,MS3.8,baz=222,slow=36						
AFI	Afiamalu	73.46	224	LR	LR	17 05 56.6	
	comp=Z,35nm,19.4s,MS3.6,baz=258,slow=29						
HHC	Hu-ho-hao-te	75.78	317	*e*P	P	16 42 37.3	-0.1
HHC				pP	pP	16 42 41.9	+2.5
HHC				sP	sP	16 42 44.3	+4.1
HHC				PcP	PcP	16 42 50.5	+0.5
HHC				PP	PP	16 45 29.9	+3.3
HHC				S	S	16 52 17.1	-2.4
HHC				sS	sS	16 52 24.9	+2.0
HHC				SKS		16 52 41.4	
HHC				ScS	ScS	16 52 47.4	-4.4
HHC				SS	SS	16 57 10.4	+0.3
HHC				pmax	pmax		
	comp=Z,34nm,5.6s						
HHC				LR	LR		
	comp=N,70nm,18.0s,MS4.2						
HHC				LR	LR		
	comp=E,95nm,16.8s,MS4.2						
HHC				LR	LR		
	comp=Z,94nm,18.0s,MS4.1						
KURK	Kurchatov	77.71	343	P	P	16 42 44.9	-3.2
	comp=Z,0.4nm,0.7s,mb3.4,baz=16,slow=5.9,SNR=2.8						
AKTK	Aktyubinsk	80.54	356	P	P	16 43 00.7	-3.0
AKTO	Aktyubinsk	80.54	356	P	P	16 43 00.7	-3.0
	comp=Z,0.4nm,0.4s,mb3.7,baz=9.3,slow=5.5,SNR=3.9						
WMQ	Urumqi	81.99	334	*e*P	P	16 43 12.0	+0.6
LPAZ	La Paz	84.35	123	P	P	16 43 21.4	-2.4
	comp=Z,0.6nm,0.6s,mb3.9,baz=0.0,slow=8.1,SNR=2.5						
LPAZ	La Paz	84.35	123	P	P	16 43 21.4	-2.4
CD2	Chengdu	87.53	317	*e*P	P	16 43 38.9	-0.7
CD2				pP	pP	16 43 43.5	+1.8
CD2				sP	sP	16 43 46.8	+4.3
CD2				pmax	pmax		
	comp=Z,30nm,5.2s						
GYA	Guiyang	89.94	312	P	P	16 43 51.0	-0.1

DDA ***18*** *16:39:33.0, 35°.17N×26°.83E, h28km, Md3.7*
IDC ***18*** *16:39:36.8±1.0, 35°.15N×27°.55E, h0km, mb3.7/8, mb1 3.6/14, mb1mx3.6/30, mbtmp3.6/14, ML3.3/6, MS2.8/5, Ms1 2.9/5, ms1mx2.5/45, Error ellipse: s-maj=23.3km s-min=14.6km az=169.0*
CSEM ***18*** *16:39:38.8±0.2, 35°.46N×27°.35E, h10km, MD4.1, Error ellipse: s-maj=5.3km s-min=2.8km az=157.0*
MOS ***18*** *16:39:39.1±1.3, 35°.32N×27°.41E, h33km, mb4.0/5, Error ellipse: s-maj=9.0km s-min=6.9km az=119.5*
ISCJB ***18*** *16:39:39.2±0.5, 35°.49N±0°.03×27°.31E±0°.02, h20km±4km, mb3.7/11, Error ellipse: s-maj=5.3km s-min=2.7km az=160.7*
ATH ***18*** *16:39:39.0, 35°.56N×27°.26E, h22km±1km, MD4.1/26*
NEIC ***18*** *16:39:39.0, 35°.56N×27°.26E, h22km, mb4.5/2, MD4.1(ATH), After ATH.*
ISK ***18*** *16:39:40.3, 35°.56N×27°.13E, h57km, ML3.7*
THE ***18*** *16:39:41.9, 35°.45N×27°.35E, h33km±13km, ML4.7/2, Error ellipse: s-maj=13.2km s-min=2.3km az=123.0*

ISC 18 16:39:40.1±0.6, 35°.49N±0°.03×27°.31E±0°.02, h16km±3km, n258, σ1°15/300, mb3.7/11, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.13	295	*e*Pb	Pg	16 39 42.7	-1.2
KARP				*e*Sb	Sg	16 39 45.4	-1.0
KARP	Karpathos	0.13	295	*e*PB	Pg	16 39 42.7	-1.2
KARP				*e*SB	Sg	16 39 45.4	-1.0
KARP	Karpathos	0.13	295	*e*Pb	Pg	16 39 42.7	-1.2
KARP				*e*Sb	Sg	16 39 45.4	-1.0
ZKR	Zakros	0.97	247	*e*Pb	Pb	16 39 56.6	-1.9
ZKR				*e*Sn	Sb	16 40 11.4	+0.4
ZKR	Zakros	0.97	247	P	Pb	16 39 56.3	-2.2
ZKR				S	Sb	16 40 11.4	+0.4
ZKR	Zakros	0.97	247	*e*PB	Pb	16 39 56.6	-1.9
ZKR				*e*SN	Sb	16 40 11.4	+0.4
ZKR	Zakros	0.97	247	P	Pb	16 39 56.3	-2.2
ZKR	Zakros	0.97	247	*e*Pb	Pb	16 39 56.6	-1.9
ZKR				S	Sb	16 40 11.4	+0.4
ARG	Arkhangelos	0.98	42	*e*Pn	Pn	16 39 57.9	-1.3
ARG				*e*Sn	Sn	16 40 11.8	-1.0
ARG	Arkhangelos	0.98	42	P	Pb	16 39 57.3	-1.5
ARG				S	Sb	16 40 10.5	-1.0
ARG	Arkhangelos	0.98	42	*e*PN	Pn	16 39 57.9	-1.3
ARG				*e*SN	Sn	16 40 11.8	-1.0
ARG	Arkhangelos	0.98	42	P	Pb	16 39 57.3	-1.5
ARG	Arkhangelos	0.98	42	*e*Pn	Pn	16 39 57.9	-1.3
ARG				S	Sb	16 40 10.5	-1.0
ARG				*e*Sn	Sn	16 40 11.8	-1.0
NIS1	Nisyros Isl.	1.11	355	P	Pb	16 39 59.9	-1.1
NIS1				S	Sb	16 40 17.1	+1.8
NIS1	Nisyros Isl.	1.11	355	P	Pb	16 39 59.9	-1.1
NIS1				S	Sb	16 40 17.1	+1.8
DAT	Datca	1.25	10	*e*PN	Pn	16 40 02.2	-0.8
DAT				*e*SN	Sn	16 40 18.1	-1.4
DAT	Datca	1.25	10	*e*Pn	Pn	16 40 02.2	-0.8
DAT				*e*Sn	Sn	16 40 18.1	-1.4
NPS	Neapolis	1.40	261	*e*Pn	Pn	16 40 04.9	-0.1
NPS				*e*Sn	Sn	16 40 23.8	+0.6
NPS	Neapolis	1.40	261	*e*PN	Pn	16 40 04.9	-0.1
NPS				*e*SN	Sn	16 40 23.8	+0.6
NPS	Neapolis	1.40	261	*e*Pn	Pn	16 40 04.9	-0.1
NPS				*e*Sn	Sn	16 40 23.8	+0.6
LAST	Lasithi	1.53	258	*e*Pn	Pn	16 40 07.1	+0.3
LAST				*e*Sn	Sn	16 40 27.9	+1.6
LAST	Lasithi	1.53	258	*e*PN	Pn	16 40 07.1	+0.3
LAST				*e*SN	Sn	16 40 27.9	+1.6
LAST	Lasithi	1.53	258	*e*Pn	Pn	16 40 07.1	+0.3
LAST				*e*Sn	Sn	16 40 27.9	+1.6
BDRM	Kayabasi	1.57	4	*i* P	Pn	16 40 06.5	-0.8
BDRM				*i* S	Sn	16 40 34.9	+7.5
BDRM	Kayabasi	1.57	4	*i* P	Pn	16 40 06.6	-0.8
TURN	Turunc	1.73	37	*i* P	Pn	16 40 05.9	-3.6
TURN				*i* S	Sn	16 40 26.3	-5.0
TURN	Turunc	1.73	37	*i* P	Pn	16 40 05.9	-3.6
TURN				*i* S	Sn	16 40 26.3	-5.0
THR1	Thera Island	1.74	301	P	Pn	16 40 09.1	-0.5
THR1				S	Sn	16 40 32.2	+0.8
THR1	Thera Island	1.74	301	P	Pn	16 40 09.1	-0.5
THR1				S	Sn	16 40 32.2	+0.8
THR6	Thira Island,	1.77	300	P	Pn	16 40 09.6	-0.5
THR6	Thira Island,	1.77	300	P	Pn	16 40 09.6	-0.5
THR2	Thira island,	1.79	303	P	Pn	16 40 09.8	-0.6
THR2	Thira island,	1.79	303	P	Pn	16 40 09.8	-0.6
THR3	Thira Island,	1.80	301	P	Pn	16 40 10.5	+0.1
THR3	Thira Island,	1.80	301	P	Pn	16 40 10.5	+0.1
YER	Yerkesik	1.82	25	*e*PN	Pn	16 40 10.3	-0.4
YER	Yerkesik	1.82	25	*e*Pn	Pn	16 40 10.3	-0.4
THR5	Thira Island,	1.84	301	P	Pn	16 40 10.7	-0.3
THR5	Thira Island,	1.84	301	P	Pn	16 40 10.7	-0.3
MLSB	Milas	1.84	12	*e*PN	Pn	16 40 10.1	-0.9
MLSB				*e*SN	Sn	16 40 32.3	-1.6
MLSB	Milas	1.84	12	*e*Pn	Pn	16 40 10.1	-0.9
MLSB				*e*Sn	Sn	16 40 32.3	-1.7
KSL	Kastellorizon	1.96	70	*e*Pn	Pn	16 40 13.4	+0.7
KSL	Kastellorizon	1.96	70	*e*PN	Pn	16 40 13.4	+0.7
IDI	Anoyia	1.99	265	Pn	Pn	16 40 12.5	-0.6
	19nm,0.3s,baz=53,slow=9.8,SNR=64						
IDI				Sn	Sn	16 40 41.4	+3.9
	87nm,0.3s,baz=330,slow=20,SNR=8.7						
IDI				LR	LR	16 41 22.1	
	comp=Z,311nm,21.1s,baz=86,slow=48						
IDI	Anoyia	1.99	265	*e*Pb	Pb	16 40 12.8	-3.1
IDI				*e*Sn	Sn	16 40 38.1	+0.6
IDI	Anoyia	1.99	265	*e*PB	Pb	16 40 12.8	-3.1
IDI				*e*SN	Sn	16 40 38.1	+0.6
AKAS	Kas	2.01	68	*i* P	Pn	16 40 12.6	-0.7
AKAS				*i* S	Sg	16 40 56.3	+12
AKAS	Kas	2.01	68	*i* P	Pn	16 40 12.6	-0.7
SIVA	Sivas	2.10	258	*e*Pn	Pn	16 40 15.1	+0.5
SIVA	Sivas	2.10	258	*e*PN	Pn	16 40 15.1	+0.5
SIVA	Sivas	2.10	258	*e*Pn	Pn	16 40 15.1	+0.5
APE	Apeiranthos	2.13	318	*e*P	Pn	16 40 14.5	-0.5
APE	Apeiranthos	2.13	318	P	Pn	16 40 14.2	-0.8
APE				S	Sn	16 40 39.2	-1.9
APE	Apeiranthos	2.13	318	*e*PN	Pn	16 40 14.5	-0.5
APE	Apeiranthos	2.13	318	P	Pn	16 40 14.2	-0.8
APE	Apeiranthos	2.13	318	*e*Pn	Pn	16 40 14.5	-0.5
APE				S	Sn	16 40 39.2	-1.9
GCAM	G?zelcaml?	2.21	358	*i* P	Pn	16 40 14.9	-1.2
GCAM				*i* S	Sg	16 40 55.1	+4.0
GCAM	G?zelcaml?	2.21	358	*i* P	Pn	16 40 14.9	-1.2
AYDN	Tasoluk	2.21	12	*i* P	Pn	16 40 16.0	-0.1
AYDN				*i* S	Sg	16 40 52.3	+1.0
AYDN	Tasoluk	2.21	12	*i* P	Pn	16 40 16.0	-0.2
SMG	Samos	2.25	350	*e*Pb	Pb	16 40 15.7	-4.6
SMG	Samos	2.25	350	*e*PB	Pb	16 40 15.7	-4.6
GLHS	Glhisar (BURDU	2.43	46	*e*PN	Pn	16 40 19.7	+0.7
GLHS	Glhisar (BURDU	2.43	46	*e*Pn	Pn	16 40 19.7	+0.6
ELL	Elmali	2.45	58	*e*PN	Pn	16 40 21.1	+1.7
ELL	Elmali	2.45	58	*e*Pn	Pn	16 40 21.2	+1.8
GOLH	Golhisar	2.52	46	*i* P	Pn	16 40 22.8	+2.4
GOLH				*i* P		16 40 59.7	
GOLH	Golhisar	2.52	46	*i* P	Pn	16 40 22.8	+2.5
VAM	Vamos	2.54	269	*e*P	Pn	16 40 21.1	+0.5
VAM	Vamos	2.54	269	*e*PN	Pn	16 40 21.1	+0.5
VAM	Vamos	2.54	269	*e*Pn	Pn	16 40 21.1	+0.5
DNZL	Cakiroluk	2.60	32	*i* P	Pn	16 40 22.8	+1.3
DNZL				*i* S	Sg	16 41 04.3	+0.5
DNZL	Cakiroluk	2.60	32	*i* P	Pn	16 40 22.8	+1.3
DENT	Denizli	2.65	31	*e*PN	Pn	16 40 21.7	-0.4
DENT	Denizli	2.65	31	*e*Pn	Pn	16 40 21.7	-0.5
GVD	Gavdhos	2.72	257	Pn	Pn	16 40 22.2	-0.8
GVD	Gavdhos	2.72	257	P	Pn	16 40 24.3	+1.2
GVD	Gavdhos	2.72	257	Pn	Pn	16 40 22.2	-0.9
GVD	Gavdhos	2.72	257	P	Pn	16 40 24.3	+1.2
KARN	Karanos	2.77	269	P	Pn	16 40 23.6	-0.2
KARN	Karanos	2.77	269	*e*PN	Pn	16 40 24.0	+0.2
KARN	Karanos	2.77	269	P	Pn	16 40 23.6	-0.2
KARN	Karanos	2.77	269	*e*Pn	Pn	16 40 24.0	+0.2
BLCB	Balcova	2.90	356	*e*PN	Pn	16 40 25.1	-0.4
BLCB	Balcova	2.90	356	P	Pn	16 40 25.6	+0.1
BLCB	Balcova	2.90	356	*e*Pn	Pn	16 40 25.1	-0.4
BLCB	Balcova	2.90	356	P	Pn	16 40 25.6	+0.1
IZM	Izmir	2.90	359	*e*PN	Pn	16 40 24.8	-0.8
IZM	Izmir	2.90	359	*e*Pn	Pn	16 40 24.8	-0.8
URLA	Izmir	2.92	349	*i* P	Pn	16 40 22.5	-3.4
URLA				*i* S	Sg	16 41 15.3	+1.4
URLA	Izmir	2.92	349	*i* P	Pn	16 40 22.5	-3.4
ANTB	Antalya	3.05	62	*e*PN	Pn	16 40 29.9	+2.2
ANTB	Antalya	3.05	62	*e*Pn	Pn	16 40 29.9	+2.3
CHOS	Chios island	3.06	341	P	Pn	16 40 27.2	-0.6
CHOS	Chios island	3.06	341	*e*PN	Pn	16 40 27.1	-0.7
CHOS	Chios island	3.06	341	P	Pn	16 40 27.2	-0.6
KULA	Kula-Manisa	3.21	19	*e*PN	Pn	16 40 29.1	-0.8
KULA	Kula-Manisa	3.21	19	*e*Pn	Pn	16 40 29.1	-0.7
BCK	Bucak	3.29	52	*e*PN	Pn	16 40 32.5	+1.5
BCK	Bucak	3.29	52	*e*Pn	Pn	16 40 32.6	+1.6
KHL	Karahalli	3.34	31	*e*PN	Pn	16 40 31.6	0.0
KHL	Karahalli	3.34	31	*e*Pn	Pn	16 40 31.6	0.0
AKHS	Akhisar	3.41	7	*i* P	Pn	16 40 32.7	+0.2
AKHS	Akhisar	3.41	7	*i* P	Pn	16 40 32.7	+0.2
AKS	Akhisar	3.41	7	*e*PN	Pn	16 40 31.8	-0.8
AKS	Akhisar	3.41	7	*e*Pn	Pn	16 40 31.8	-0.7
ISP	Isparta	3.48	47	*e*PN	Pn	16 40 34.5	+1.0
ISP	Isparta	3.48	47	*e*Pn	Pn	16 40 34.4	+0.8
ISP	Isparta	3.48	47	P	Pn	16 40 34.9	+1.4
KYTH	Kithira	3.56	284	*e*Pn	Pn	16 40 35.1	+0.5
KYTH	Kithira	3.56	284	*e*PN	Pn	16 40 35.1	+0.5
KYTH	Kithira	3.56	284	*e*Pn	Pn	16 40 35.1	+0.5
SUTC	Sutluce-Ispart	3.57	55	*e*PN	Pn	16 40 36.7	+1.8
SUTC	Sutluce-Ispart	3.57	55	*e*Pn	Pn	16 40 36.7	+1.8
VLY	Voula,Athens	3.68	311	*e*Pn	Pn	16 40 35.3	-1.0
VLY	Voula,Athens	3.68	311	*e*PN	Pn	16 40 35.3	-1.0
VLY	Voula,Athens	3.68	311	*e*Pn	Pn	16 40 35.3	-1.0
VLI	Veliai	3.75	290	*e*Pn	Pn	16 40 37.3	+0.1
VLI	Veliai	3.75	290	*e*PN	Pn	16 40 37.3	+0.1
VLI	Veliai	3.75	290	*e*Pn	Pn	16 40 37.3	+0.1
SHUT	Suhut-Afyon	4.01	39	*e*PN	Pn	16 40 41.5	+0.6
SHUT	Suhut-Afyon	4.01	39	*e*Pn	Pn	16 40 41.5	+0.7
GAZI	Gazipasa	4.13	78	*i* P	Pn	16 40 41.9	-0.7
GAZI				*i* S	Sn	16 41 30.6	+0.1
GAZI	Gazipasa	4.13	78	*i* P	Pn	16 40 41.9	-0.7
GAZI				*i* S	Sn	16 41 30.6	0.0
BALB	Balikesir	4.17	6	*e*PN	Pn	16 40 42.7	-0.3
BALB	Balikesir	4.17	6	*e*Pn	Pn	16 40 42.7	-0.3
ALT	Altintas	4.20	31	*e*PN	Pn	16 40 43.5	+0.1
ALT	Altintas	4.20	31	*e*Pn	Pn	16 40 43.5	0.0
BALY	Balya	4.25	3	*i* P	Pn	16 40 43.1	-1.1
BALY				*i* S	Sg	16 42 05.0	+8.4
BALY	Balya	4.25	3	*i* P	Pn	16 40 43.1	-1.0
LTK	Loutraki	4.30	307	P	Pn	16 40 46.3	+1.4
LTK	Loutraki	4.30	307	*e*PN	Pn	16 40 44.3	-0.6
LTK	Loutraki	4.30	307	*e*Pn	Pn	16 40 44.3	-0.6
LTK	Loutraki	4.30	307	P	Pn	16 40 46.3	+1.4
VLX	Vlachokerasia	4.39	297	P	Pn	16 40 47.4	+1.3
VLX				S	Sn	16 41 35.1	-1.9
VLX	Vlachokerasia	4.39	297	*e*PN	Pn	16 40 46.7	+0.6
VLX	Vlachokerasia	4.39	297	*e*Pn	Pn	16 40 46.7	+0.6
VLX	Vlachokerasia	4.39	297	P	Pn	16 40 47.4	+1.3
VLX				S	Sn	16 41 35.1	-1.9
EZN	Ezine	4.40	350	*e*PN	Pn	16 40 46.4	+0.2
EZN	Ezine	4.40	350	*e*Pn	Pn	16 40 46.4	+0.2
HDMB	Hadim	4.44	69	*e*PN	Pn	16 40 49.5	+2.8
HDMB	Hadim	4.44	69	*e*Pn	Pn	16 40 49.5	+2.8
ITM	Ithomi	4.66	293	*e*Pn	Pn	16 40 49.9	+0.1
ITM	Ithomi	4.66	293	P	Pn	16 40 52.2	+2.4
ITM	Ithomi	4.66	293	*e*PN	Pn	16 40 49.9	+0.1
ITM	Ithomi	4.66	293	*e*Pn	Pn	16 40 49.9	+0.1
ITM	Ithomi	4.66	293	P	Pn	16 40 52.2	+2.4
LKR	Lokris	4.67	314	*e*Pn	Pn	16 40 49.3	-0.6
LKR	Lokris	4.67	314	P	Pn	16 40 51.3	+1.4
LKR	Lokris	4.67	314	*e*PN	Pn	16 40 49.2	-0.7
LKR	Lokris	4.67	314	*e*Pn	Pn	16 40 49.3	-0.6
LKR	Lokris	4.67	314	P	Pn	16 40 51.3	+1.4
LIA	Limnos Island	4.71	340	*e*Pn	Pn	16 40 51.3	+0.8
LIA	Limnos Island	4.71	340	*e*PN	Pn	16 40 51.3	+0.8
LIA	Limnos Island	4.71	340	*e*Pn	Pn	16 40 51.3	+0.8
PYL	PYLOS	4.71	289	*e*PN	Pn	16 40 51.5	+1.0
PYL	PYLOS	4.71	289	*e*Pn	Pn	16 40 51.5	+1.0
KONT	Konya--Tatoy	4.74	57	*e*PN	Pn	16 40 53.4	+2.5
KONT	Konya--Tatoy	4.74	57	*e*Pn	Pn	16 40 53.4	+2.5
GADA	Gvkgeada	4.82	347	*e*PN	Pn	16 40 52.0	0.0
GADA	Gvkgeada	4.82	347	*e*Pn	Pn	16 40 52.0	0.0
EDC	Edincik	4.87	5	*e*PN	Pn	16 40 52.7	+0.1
EDC	Edincik	4.87	5	*e*Pn	Pn	16 40 52.7	+0.1
BNT	Bandirma	4.88	6	*e*PN	Pn	16 40 52.8	0.0
BNT	Bandirma	4.88	6	*e*Pn	Pn	16 40 52.8	0.0
LPK	Lapseki	4.89	355	*e*PN	Pn	16 40 53.2	+0.3
LPK	Lapseki	4.89	355	*e*Pn	Pn	16 40 53.3	+0.3
CSS	Prodhromos	4.96	94	*e*Pn	Pn	16 40 50.1	-3.8
	22nm,0.7s						
CSS	Prodhromos	4.96	94	*e*Pn	Pn	16 40 50.1	-3.8
	22nm,0.7s						
KIZT	Kizilcal	4.98	46	*e*PN	Pn	16 40 55.3	+1.2
KIZT	Kizilcal	4.98	46	*e*Pn	Pn	16 40 55.3	+1.2
NEO	Neokhori	5.01	321	*e*Pn	Pn	16 40 55.1	+0.5
NEO	Neokhori	5.01	321	*e*PN	Pn	16 40 55.1	+0.5
NEO	Neokhori	5.01	321	*e*Pn	Pn	16 40 55.1	+0.5
RKY	Sarkoy-Tekirda	5.19	359	*e*PN	Pn	16 40 57.2	+0.2
RKY	Sarkoy-Tekirda	5.19	359	*e*Pn	Pn	16 40 57.2	+0.2
ARMT	Armutlu	5.21	13	*e*PN	Pn	16 40 57.5	+0.2
ARMT	Armutlu	5.21	13	*e*Pn	Pn	16 40 57.5	+0.1
AGG	Agios Georgios	5.31	313	*e*P	Pn	16 40 58.0	-0.7
AGG	Agios Georgios	5.31	313	P	Pn	16 40 58.9	+0.2
AGG	Agios Georgios	5.31	313	*e*PN	Pn	16 40 58.0	-0.7
AGG	Agios Georgios	5.31	313	*e*Pn	Pn	16 40 58.0	-0.7
AGG	Agios Georgios	5.31	313	P	Pn	16 40 58.9	+0.2
ALN	Alexandroupoli	5.49	350	*e*P	Pn	16 41 01.5	+0.3
ALN	Alexandroupoli	5.49	350	P	Pn	16 40 59.8	-1.4
ALN	Alexandroupoli	5.49	350	*e*PN	Pn	16 41 01.5	+0.3
ALN	Alexandroupoli	5.49	350	P	Pn	16 40 59.8	-1.4
ALN	Alexandroupoli	5.49	350	*e*Pn	Pn	16 41 01.5	+0.3
THL	Klokotos Trika	5.85	316	*e*PN	Pn	16 41 06.6	+0.5
THL	Klokotos Trika	5.85	316	*e*Pn	Pn	16 41 06.6	+0.5
VLS	Valsamata	6.02	298	*e*P	Pn	16 41 09.5	+1.1
VLS	Valsamata	6.02	298	*e*PN	Pn	16 41 09.5	+1.1
VLS	Valsamata	6.02	298	*e*Pn	Pn	16 41 09.5	+1.1
BR131	Keskin Array S	6.57	48	*e*Pn	Pn	16 41 16.9	+0.9
	1.8nm,0.5s						
BR131	Keskin Array S	6.57	48	*e*Pn	Pn	16 41 16.9	+0.9
	1.8nm,0.5s						
BRTR	Keskin Array B	6.57	48	Pn	Pn	16 41 16.3	+0.4
	0.2nm,0.3s,baz=228,slow=15,SNR=10						
BRTR				Sn	Sn	16 42 34.7	+4.2
	0.1nm,0.3s,baz=204,slow=24,SNR=3.8						
BRTR	Keskin Array B	6.57	48	P	Pn	16 41 16.3	+0.3
MMAI	Mount Meron Ar	7.14	108	Pn	Pn	16 41 18.5	-5.4
	1.1nm,0.3s,baz=19,slow=32,SNR=5.1						
MMAI				Sn	Sn	16 42 44.6	-0.1
	4.2nm,0.3s,baz=312,slow=25,SNR=4.1						
ASF	Jabal al Asfar	8.64	110	Pn	Pn	16 41 40.5	-3.9
	0.3nm,0.3s,baz=304,slow=3.6,SNR=3.0						
ASF				LR	LR	16 46 23.9	
	comp=Z,45nm,18.9s,baz=150,slow=49						
EIL	Elat	8.67	130	Pn	Pn	16 41 37.8	-7.1
	0.2nm,0.3s,baz=6.7,slow=17,SNR=2.2						
EIL				Sn	Sn	16 43 17.2	-5.2
	1.4nm,0.3s,baz=342,slow=18,SNR=5.0						
CEL	Celeste	9.55	290	*e*Pn	Pn	16 42 00.2	+3.2
VYHS	Vyhne	14.43	337	*e*P	Pn	16 43 06.9	+3.4
VYHS	Vyhne	14.43	337	*e*P	Pn	16 43 06.9	+3.4
GNI	Garni	14.54	66	LR	LR	16 48 51.7	
	comp=Z,48nm,21.2s,baz=248,slow=38						
STHS	Stebnicka Huta	14.61	344	*e*P	pP	16 43 18.2	+1.3
STHS	Stebnicka Huta	14.61	344	*e*pP	pP	16 43 18.2	+1.3
KEST	Kesra	14.62	276	Pn	Pn	16 43 10.8	+4.7
	0.1nm,0.3s,baz=178,slow=11,SNR=4.1						
ZEI	Tsey	14.77	56	*e*P	Pn	16 43 14.7	+6.5
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.4s						
ZEI	Tsey	14.77	56	*e*P	Pn	16 43 14.7	+6.5
	comp=Z,7.0nm,0.4s						
AKASG	Malin Array Be	15.27	5	Pn	Pn	16 43 17.5	+2.7
	comp=Z,0.3nm,0.3s,baz=195,slow=11,SNR=7.8						
AKASG	Malin Array Be	15.27	5	P	Pn	16 43 17.5	+2.7
DAVOX	Davos/Dischmat	17.27	316	LR	LR	16 51 08.1	
	comp=Z,47nm,19.1s,baz=151,slow=39						
LPG	La Plagne	18.51	309	*e*P	Pn	16 43 58.5	+2.8
LPG	La Plagne	18.51	309	*e*P	Pn	16 43 58.5	+2.8
LPL	La Plagne	18.53	309	*e*P	Pn	16 43 58.3	+2.3
LPL	La Plagne	18.53	309	*e*P	Pn	16 43 58.3	+2.3
CABF	La Chapelle	19.42	311	*e*P	Pn	16 44 06.7	0.0
	comp=Z,9.8nm,0.7s						
CABF	La Chapelle	19.42	311	*e*P	Pn	16 44 06.7	0.0
	comp=Z,9.0nm,0.7s						
OBN	Obninsk	20.64	15	*e*P	P	16 44 17.3	-1.4
OBN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
OBN	Obninsk	20.64	15	*e*P	P	16 44 17.3	-1.4
	comp=Z,9.0nm,1.0s						
SMF	Signal de Mont	20.83	310	*e*P	P	16 44 21.7	+0.9
SMF	Signal de Mont

UPC				eSG	Sg	16 47 34.1	0.0
DPC	**Dobruska-Polom**	**1.22**	**173**	ePg	Pg	16 47 23.8	+0.2
DPC				eSg	Sg	16 47 39.6	+0.1
DPC	**Dobruska-Polom**	**1.22**	**173**	ePG	Pg	16 47 24.0	+0.4
DPC				eSG	Sg	16 47 39.4	0.0
	comp=Z,187nm,0.6s						
DPC	**Dobruska-Polom**	**1.22**	**173**	Pg	Pg	16 47 23.8	+0.2
DPC				eSg	Sg	16 47 39.7	+0.3
	baz=355						
PVCC	**Panska Ves**	**1.41**	**223**	ePG	Pg	16 47 27.1	-0.1
PVCC				eSG	Sg	16 47 45.7	+0.3
	comp=Z,786nm,0.3s						
PVCC	**Panska Ves**	**1.41**	**223**	ePn	Pn	16 47 27.0	-0.1
	baz=41						
PVCC				eSg	Sg	16 47 46.0	+0.6
	baz=41						
BRG	**Berggiesshubel**	**1.51**	**244**	ePn	Pn	16 47 27.8	-0.7
BRG				eSg	Sg	16 47 49.3	+0.6
BRG	**Berggiesshubel**	**1.51**	**244**	PG	Pg	16 47 29.2	0.0
BRG				SG	Sg	16 47 49.4	+0.6
	comp=Z,356nm,0.4s						
BRG	**Berggiesshubel**	**1.51**	**244**	Pn	Pn	16 47 27.8	-0.7
BRG				Sg	Sg	16 47 49.3	+0.5
RUE	**Ruedersdorf**	**1.69**	**304**	ePn	Pn	16 47 30.7	-0.4
RUE				eSn	Sn	16 47 55.7	+2.3
RUE	**Ruedersdorf**	**1.69**	**304**	ePn	Pn	16 47 30.7	-0.4
RUE				eSn	Sn	16 47 55.7	+2.3
GKP	**Gorka Klasztor**	**1.85**	**22**	ePn	Pn	16 47 40.7	+7.5
GKP				eSn	Sn	16 48 03.6	+6.3
PRU	**Pruhonice**	**1.85**	**212**	ePN	Pn	16 47 33.5	+0.3
PRU				ePG	Pg	16 47 35.4	-0.3
PRU				eSN	Sn	16 47 52.3	-5.0
PRU				eSG	Sg	16 47 59.4	-0.3
	comp=Z,193nm,0.7s						
CLL	**Collm**	**1.94**	**264**	ePn	Pn	16 47 33.7	-0.8
CLL				ePg	Pg	16 47 37.0	-0.5
CLL				eSg	Sg	16 48 02.9	+0.2
CLL	**Collm**	**1.94**	**264**	ePn	Pn	16 47 34.0	-0.5
CLL				ePg	Pg	16 47 37.0	-0.5
CLL				*i* Sg	Sg	16 48 03.1	+0.4
CLL	**Collm**	**1.94**	**264**	ePn	Pn	16 47 34.0	-0.5
CLL				ePg	Pg	16 47 37.0	-0.5
CLL				*i*		16 47 41.1	
CLL				*i* Sg	Sg	16 48 03.1	+0.4
	comp=Z,159nm,0.6s						
CLL	**Collm**	**1.94**	**264**	ePn	Pn	16 47 34.0	-0.5
RAC	**Raciborz**	**2.00**	**137**	ePg	Pg	16 47 38.0	-0.5
RAC				eSg	Sg	16 48 04.9	+0.6
RAC	**Raciborz**	**2.00**	**137**	ePg	Pg	16 47 38.0	-0.5
RAC				eSg	Sg	16 48 04.9	+0.6
MORC	**Moravsky Berou**	**2.01**	**152**	ePn	Pn	16 47 35.5	+0.1
MORC	**Moravsky Berou**	**2.01**	**152**	⇓*i* P	Pn	16 47 35.5	+0.1
MORC	**Moravsky Berou**	**2.01**	**152**	⇓*i* P	Pn	16 47 35.5	+0.1
MORC				eSg	Sg	16 48 03.9	-1.0
	comp=Z,131nm,0.4s,baz=335						
OKC	**Ostrava-Krasne**	**2.17**	**142**	ePn	Pn	16 47 36.8	-0.7
OKC				eSg	Sg	16 48 09.2	-0.7
OKC	**Ostrava-Krasne**	**2.17**	**142**	ePN	Pn	16 47 37.0	-0.6
OKC				ePG	Pg	16 47 40.9	-0.9
OKC				eSG	Sg	16 48 09.3	-0.5
	comp=Z,201nm,0.7s						
OKC	**Ostrava-Krasne**	**2.17**	**142**	Pn	Pn	16 47 36.8	-0.8
OKC				Sg	Sg	16 48 09.2	-0.6
VRAC	**Vranov**	**2.28**	**172**	Pn	Pn	16 47 39.7	+0.6
	comp=Z,6.8nm,0.3s,baz=332,slow=14,SNR=24						
VRAC				Lg		16 48 10.6	
	comp=Z,21nm,0.3s,baz=79,slow=20,SNR=9.4						
VRAC	**Vranov**	**2.28**	**172**	⇑P	Pn	16 47 39.3	+0.2
VRAC	**Vranov**	**2.28**	**172**	⇑*i*P	Pn	16 47 39.3	+0.2
VRAC	**Vranov**	**2.28**	**172**	⇑P	Pn	16 47 39.3	+0.2
VRAC				eSg	Sg	16 48 13.5	+0.1
	comp=Z,116nm,0.5s,baz=353						
TREC	**Trest**	**2.30**	**190**	ePN	Pn	16 47 39.8	+0.4
TREC				ePG	Pg	16 47 43.6	-0.7
TREC				eSG	Sg	16 48 12.8	-1.3
	comp=Z,87nm,0.3s						
KRUC	**Moravsky**	**2.51**	**175**	ePn	Pn	16 47 42.6	+0.4
	baz=356						
KRUC				eSg	Sg	16 48 20.4	-0.4
	comp=Z,123nm,0.8s,baz=356						
TANN	**Tannenbergstha**	**2.56**	**245**	ePn	Pn	16 47 43.1	+0.2
TANN				eSg	Sg	16 48 22.0	-0.4
TANN	**Tannenbergstha**	**2.56**	**245**	Pn	Pn	16 47 43.1	+0.2
TANN				Sg	Sg	16 48 22.0	-0.4
WERD	**Werda**	**2.63**	**246**	ePn	Pn	16 47 44.0	0.0
WERD				eSg	Sg	16 48 25.9	+1.1
WERD	**Werda**	**2.63**	**246**	Pn	Pn	16 47 44.0	0.0
WERD				Sg	Sg	16 48 25.9	+1.1
NKC	**Novy Kostel**	**2.66**	**241**	ePN	Pn	16 47 44.5	+0.2
NKC				ePG	Pg	16 47 50.4	-0.8
NKC				eSG	Sg	16 48 25.9	+0.3
	comp=Z,258nm,0.4s						
OJC	**Ojcow**	**2.71**	**118**	Pn	Pn	16 47 42.4	-2.6
OJC				ePg	Pg	16 47 50.9	-1.2
OJC				eSg	Sg	16 48 26.4	-0.8
OJC	**Ojcow**	**2.71**	**118**	ePn	Pn	16 47 42.2	-2.8
OJC	**Ojcow**	**2.71**	**118**	ePn	Pn	16 47 42.4	-2.6
JAVC	**Velka Javorina**	**2.89**	**159**	ePn	Pn	16 47 49.0	+1.5
JAVC				eSg	Sg	16 48 34.7	+1.7
	comp=Z,112nm,1.1s						
KHC	**Kasperske Hory**	**2.91**	**214**	ePn	Pn	16 47 47.3	-0.5
KHC				ePg	Pg	16 47 54.2	-1.9
KHC	**Kasperske Hory**	**2.91**	**214**	ePN	Pn	16 47 47.7	-0.1
KHC				ePG	Pg	16 47 54.1	-2.0
KHC				eSN	Sn	16 48 23.6	+0.1
KHC				eSG	Sg	16 48 32.7	-1.1
	comp=Z,70nm,0.6s						
KHC	**Kasperske Hory**	**2.91**	**214**	ePn	Pn	16 47 47.3	-0.5
MGBB	**Grossbuechelbe**	**2.92**	**239**	⇓*i*Pn	Pn	16 47 48.5	+0.5
MGBB	**Grossbuechelbe**	**2.92**	**239**	Pn	Pn	16 47 48.5	+0.5
MOX	**Moxa**	**2.96**	**254**	ePN	Pn	16 47 48.3	-0.2
MOX				*i* PG	Pg	16 47 56.8	-0.2
MOX				*i* SG	Sg	16 48 36.1	+0.8
MOX	**Moxa**	**2.96**	**254**	ePn	Pn	16 47 48.2	-0.3
MOX				*i* Pg	Pg	16 47 56.8	-0.2
MOX				eSg	Sg	16 48 35.8	+0.5
MOX	**Moxa**	**2.96**	**254**	ePn	Pn	16 47 48.3	-0.2
MOX	**Moxa**	**2.96**	**254**	Pg	Pg	16 47 56.8	-0.2
MOX				Sg	Sg	16 48 35.8	+0.5
ROTZ	**Rotzenmuhle**	**3.05**	**235**	ePn	Pn	16 47 49.6	-0.1
ROTZ	**Rotzenmuhle**	**3.05**	**235**	Pn	Pn	16 47 49.6	-0.1
GEC2	**GERESS Array S**	**3.12**	**210**	ePn	Pn	16 47 50.6	0.0
GEC2				eSg	Sg	16 48 39.5	-0.9
GEC2	**GERESS Array S**	**3.12**	**210**	ePn	Pn	16 47 50.6	0.0
GEC2				eSg	Sg	16 48 39.5	-0.9
GEC2	**GERESS Array S**	**3.12**	**210**	Pn	Pn	16 47 50.6	0.0
GEC2				Sg	Sg	16 48 39.5	-0.9
SMOL	**Smolenice**	**3.17**	**164**	ePn	Pn	16 47 53.5	+2.2
SMOL				*e*		16 48 01.3	
SMOL				eSg	Sg	16 48 42.5	+0.4
SMOL	**Smolenice**	**3.17**	**164**	ePN	Pn	16 47 53.5	+2.2
SMOL				*e*		16 48 01.3	
SMOL	**Smolenice**	**3.17**	**164**	eSG	Sg	16 48 42.5	+0.4
SMOL	**Smolenice**	**3.17**	**164**	ePn	Pn	16 47 53.5	+2.2
WET	**Wettzell**	**3.17**	**222**	ePn	Pn	16 47 51.5	+0.1
WET	**Wettzell**	**3.17**	**222**	ePn	Pn	16 47 51.5	+0.1
WET	**Wettzell**	**3.17**	**222**	Pn	Pn	16 47 51.5	+0.1
LIKS	**Likavka**	**3.17**	**141**	eSG	Sg	16 48 42.7	+0.6
KOLL	**Kolacno**	**3.34**	**153**	ePn	Pn	16 47 55.1	+1.5
KOLL				*e*		16 48 04.3	
KOLL				eSg	Sg	16 48 47.8	+0.4
KOLL	**Kolacno**	**3.34**	**153**	ePN	Pn	16 47 55.1	+1.5
KOLL				*e*		16 48 04.3	
KOLL	**Kolacno**	**3.34**	**153**	eSG	Sg	16 48 47.8	+0.4
KOLL	**Kolacno**	**3.34**	**153**	ePn	Pn	16 47 55.1	+1.5
KOLL				eSg	Sg	16 48 47.8	+0.4
ZST	**Bratislava**	**3.43**	**169**	ePn	Pn	16 47 56.0	+1.1
ZST				*e*		16 48 06.0	
ZST				eSg	Sg	16 48 49.1	-1.3
ZST	**Bratislava**	**3.43**	**169**	ePN	Pn	16 47 56.0	+1.1
ZST				*e*		16 48 06.0	
ZST	**Bratislava**	**3.43**	**169**	eSG	Sg	16 48 49.1	-1.3
ZST	**Bratislava**	**3.43**	**169**	ePn	Pn	16 47 56.0	+1.1
ZST				eSg	Sg	16 48 49.1	-1.3
NIE	**Niedzica**	**3.45**	**127**	eP	Pg	16 48 06.5	+0.2
NIE				eS	Sg	16 48 52.0	+1.0
VYHS	**Vyhne**	**3.54**	**149**	ePn	Pn	16 47 56.6	+0.1
VYHS				*e*		16 48 09.1	
VYHS				eSg	Sg	16 48 52.4	-1.7
VYHS	**Vyhne**	**3.54**	**149**	ePN	Pn	16 47 56.6	+0.1
VYHS				*e*		16 48 09.1	
VYHS	**Vyhne**	**3.54**	**149**	eSG	Sg	16 48 52.4	-1.7
VYHS	**Vyhne**	**3.54**	**149**	ePn	Pn	16 47 56.6	+0.1
VYHS				eSg	Sg	16 48 52.4	-1.7
CLZ	**Clausthal**	**3.56**	**277**	ePn	Pn	16 47 57.5	+0.8
CLZ				eSg	Sg	16 48 54.2	-0.5
CLZ	**Clausthal**	**3.56**	**277**	ePn	Pn	16 47 57.5	+0.8
CLZ				eSg	Sg	16 48 54.2	-0.5
CLZ	**Clausthal**	**3.56**	**277**	Pn	Pn	16 47 57.5	+0.8
CLZ				Sg	Sg	16 48 54.2	-0.5
GRA1	**Grafenberg Arr**	**3.62**	**241**	ePn	Pn	16 47 58.0	+0.5
GRA1				eSg	Sg	16 48 56.5	+0.1
GRA1	**Grafenberg Arr**	**3.62**	**241**	Pn	Pn	16 47 58.0	+0.5
GRA1				Sg	Sg	16 48 56.5	+0.1
GRF	**Grafenberg Arr**	**3.62**	**241**	ePn	Pn	16 47 58.0	+0.5
GRF				eSg	Sg	16 48 56.5	+0.1
GRF	**Grafenberg Arr**	**3.62**	**241**	ePn	Pn	16 47 58.0	+0.5
GRF				eSg	Sg	16 48 56.5	+0.1
GRF	**Grafenberg Arr**	**3.62**	**241**	ePn	Pn	16 47 58.0	+0.5
GRF				eSg	Sg	16 48 56.5	+0.1
BSD	**Bornholm Skovb**	**3.63**	**349**	*i* P	Pn	16 47 57.2	-0.4
BSD				*i* S	Sn	16 48 37.2	-3.9
BSD				*i* LG		16 48 39.6	
BSD	**Bornholm Skovb**	**3.63**	**349**	*i* P	Pn	16 47 57.2	-0.4
CONA	**Conrad Observa**	**3.64**	**182**	⇓*i*Pn	Pn	16 47 58.5	+0.7
	SNR=21						
CONA				⇑*i*Sg	Sg	16 48 56.6	-0.5
	comp=Z,140nm,0.7s						
CONA	**Conrad Observa**	**3.64**	**182**	Pn	Pn	16 47 58.5	+0.7
	SNR=21						
CONA				Sg	Sg	16 48 56.6	-0.5
	comp=Z,140nm,0.7s						
HROE	**Hohe Rhon--Fla**	**3.88**	**257**	⇓*i*Pn	Pn	16 48 01.1	+0.1
HROE	**Hohe Rhon--Fla**	**3.88**	**257**	Pn	Pn	16 48 01.1	+0.1
MOA	**Molln**	**3.90**	**198**	⇓*i*Pn	Pn	16 48 01.9	+0.6
	SNR=38						
MOA				⇓*i*Sg	Sg	16 49 04.0	-1.4
	comp=Z,74nm,0.6s						
MOA	**Molln**	**3.90**	**198**	Pn	Pn	16 48 01.9	+0.6
	SNR=38						
STHS	**Stebnicka Huta**	**3.93**	**121**	ePn	Pn	16 48 04.6	+2.8
STHS				*e*		16 48 16.6	
STHS				eSg	Sg	16 49 06.5	0.0
STHS	**Stebnicka Huta**	**3.93**	**121**	ePN	Pn	16 48 04.6	+2.8
STHS				*e*		16 48 16.6	
STHS	**Stebnicka Huta**	**3.93**	**121**	eSG	Sg	16 49 06.5	0.0
STHS	**Stebnicka Huta**	**3.93**	**121**	ePn	Pn	16 48 04.6	+2.8
STHS				eSg	Sg	16 49 06.5	0.0
KECS	**Kecovo**	**4.19**	**136**	ePn	Pn	16 48 05.4	+0.1
KECS				*e*		16 48 20.8	
KECS				eSg	Sg	16 49 15.0	+0.3
KECS	**Kecovo**	**4.19**	**136**	ePN	Pn	16 48 05.4	+0.1
KECS				*e*		16 48 20.8	
KECS	**Kecovo**	**4.19**	**136**	eSG	Sg	16 49 15.0	+0.3
ARSA	**Arzberg**	**4.33**	**185**	⇑*i*Pn	Pn	16 48 07.6	+0.4
ARSA				⇑*i*Sg	Sg	16 49 18.9	-0.3
	comp=Z,66nm,0.6s						
ARSA	**Arzberg**	**4.33**	**185**	Pn	Pn	16 48 07.6	+0.3
ARSA				Sg	Sg	16 49 18.9	-0.4
	comp=Z,66nm,0.6s						
CRVS	**Cervenica-Dubn**	**4.36**	**126**	ePn	Pn	16 48 08.6	+0.9
CRVS				*e*		16 48 25.7	
CRVS				eSg	Sg	16 49 19.5	-0.7
CRVS	**Cervenica-Dubn**	**4.36**	**126**	ePN	Pn	16 48 08.6	+0.9
CRVS				*e*		16 48 25.7	
CRVS	**Cervenica-Dubn**	**4.36**	**126**	eSG	Sg	16 49 19.5	-0.7
CRVS	**Cervenica-Dubn**	**4.36**	**126**	ePn	Pn	16 48 08.6	+0.9
CRVS				eSg	Sg	16 49 19.5	-0.7
PSZ	**Piszkesteto**	**4.40**	**144**	ePn	Pn	16 48 09.4	+1.1
PSZ	**Piszkesteto**	**4.40**	**144**	⇑ePn	Pn	16 48 09.5	+1.2
PSZ	**Piszkesteto**	**4.40**	**144**	⇓*i*P	Pn	16 48 09.7	+1.4
PSZ	**Piszkesteto**	**4.40**	**144**	ePn	Pn	16 48 09.4	+1.1
KWP	**Kalwaria Pacla**	**4.64**	**112**	ePn	Pg	16 48 26.9	-2.2
KWP				eSn	Sg	16 49 26.7	-2.5
KWP	**Kalwaria Pacla**	**4.64**	**112**	⇓*i*P	Pg	16 48 25.5	-3.6
KBA	**Koelnbreinsper**	**4.83**	**203**	⇑*i*Pn	Pn	16 48 15.3	+1.1
	SNR=25						
KBA				⇓*i*Sg	Sg	16 49 35.1	-0.3
	comp=Z,44nm,0.7s						
KBA	**Koelnbreinsper**	**4.83**	**203**	Pn	Pn	16 48 15.3	+1.2
	SNR=25						
KBA				Sg	Sg	16 49 35.1	-0.2
	comp=Z,44nm,0.7s						
WATA	**Walderalm**	**5.15**	**217**	⇑*i*Pn	Pn	16 48 19.7	+1.2
WATA				⇑*i*Sg	Sg	16 49 45.1	-0.4
	comp=Z,26nm,0.7s						
WATA	**Walderalm**	**5.15**	**217**	Pn	Pn	16 48 19.7	+1.2
WATA				Sg	Sg	16 49 45.1	-0.5
	comp=Z,26nm,0.7s						
OBKA	**Obir**	**5.16**	**192**	⇓*i*Pn	Pn	16 48 18.8	+0.2
OBKA				⇑*i*Sg	Sg	16 49 46.6	+0.8
	comp=Z,21nm,0.5s						
OBKA	**Obir**	**5.16**	**192**	Pn	Pn	16 48 18.8	+0.2
OBKA				Sg	Sg	16 49 46.6	+0.8
	comp=Z,21nm,0.5s						
WTTA	**Wattenberg**	**5.19**	**216**	⇑*i*Pn	Pn	16 48 20.4	+1.4
WTTA				⇓*i*Sg	Sg	16 49 47.1	+0.3
	comp=Z,23nm,0.5s						
WTTA	**Wattenberg**	**5.19**	**216**	Pn	Pn	16 48 20.4	+1.4
WTTA				Sg	Sg	16 49 47.1	+0.3
	comp=Z,23nm,0.5s						
MOTA	**Moosalm**	**5.32**	**220**	⇓*i*Pn	Pn	16 48 21.6	+0.7
MOTA	**Moosalm**	**5.32**	**220**	Pn	Pn	16 48 21.6	+0.7
PKSM	**Moragy**	**5.61**	**162**	⇓*i*P	Pn	16 48 25.4	+0.5
PKSM	**Moragy**	**5.61**	**162**	⇓eP	Pn	16 48 26.2	+1.3
VOY	**Vojsko**	**5.72**	**195**	ePn	Pn	16 48 34.9	+8.6
VOY				*e*		16 48 51.0	
VOY				eSn	Sg	16 50 02.8	-1.0
VOY				*e*		16 50 11.7	
FETA	**Feichten**	**5.74**	**220**	⇑*i*Pn	Pn	16 48 27.7	+1.1
FETA	**Feichten**	**5.74**	**220**	Pn	Pn	16 48 27.7	+1.1
BFO	**Black Forest**	**5.96**	**240**	ePn	Pn	16 48 28.4	-1.2
	comp=Z,2.7nm,0.4s						
BFO	**Black Forest**	**5.96**	**240**	ePn	Pn	16 48 28.4	-1.2
	comp=Z,2.7nm,0.4s						
DAVOX	**Davos/Dischmat**	**6.28**	**223**	Pn	Pn	16 48 34.5	+0.5
	comp=Z,0.8nm,0.3s,baz=93,slow=21,SNR=5.9						
DAVOX				Lg		16 50 22.0	
	comp=Z,1.6nm,0.3s,baz=155,slow=24,SNR=6.2						
DAVOX	**Davos/Dischmat**	**6.28**	**223**	Pn	Pn	16 48 34.5	+0.5
DRGR		**6.45**	**135**	⇓*i*P	Pn	16 48 37.5	+1.1
DRGR		**6.45**	**135**	⇓*i*P	Pn	16 48 37.5	+1.1
CDF	**Champ du Feu**	**6.49**	**244**	ePn	Pn	16 48 35.1	-1.9
CDF				eSg	Sg	16 50 19.6	-9.1
	comp=Z,44nm,0.9s						
CDF	**Champ du Feu**	**6.49**	**244**	ePn	Pn	16 48 35.1	-1.9
HINF	**Hinteralfeld**	**7.06**	**242**	ePn	Pn	16 48 42.2	-2.6
HINF				eSg	Sg	16 50 37.0	-10
	comp=Z,16nm,0.6s						
BUR08	**Bucovina Ar. S**	**7.10**	**120**	ePn	Pn	16 48 46.8	+1.4
BUR08	**Bucovina Ar. S**	**7.10**	**120**	ePn	Pn	16 48 46.8	+1.5
BURAR	**Bucovina Array**	**7.13**	**120**	⇑*i*P	Pn	16 48 45.2	-0.5
BURAR	**Bucovina Array**	**7.13**	**120**	⇑*i*P	Pn	16 48 45.2	-0.5
HAU	**Haudompre**	**7.24**	**244**	eSg	Sg	16 50 42.9	-10
	comp=Z,25nm,0.8s						
AKASG	**Malin Array Be**	**8.31**	**91**	Pn	Pn	16 49 00.7	-1.3
	comp=Z,2.6nm,0.3s,baz=279,slow=12,SNR=14						
AKASG				Sn	Sn	16 50 29.2	-7.2
	comp=Z,1.2nm,0.3s,baz=268,slow=23,SNR=4.2						
AKASG				Lg		16 51 29.2	
	baz=277,slow=12,SNR=2.8						
AKASG	**Malin Array Be**	**8.31**	**91**	Pn	Pn	16 49 00.7	-1.2
LPG	**La Plagne**	**8.66**	**229**	eSg	Sg	16 51 26.8	-11
	comp=Z,33nm,1.3s						
HFS	**Hagfors**	**8.70**	**352**	Pn	Pn	16 49 06.2	-0.9
	comp=Z,0.2nm,0.3s,baz=169,slow=14,SNR=8.0						
HFS				Sn	Sn	16 50 41.0	-4.9
	comp=Z,0.3nm,0.3s,baz=185,slow=34,SNR=3.4						
HFS	**Hagfors**	**8.70**	**352**	Pn	Pn	16 49 06.2	-1.0
LOR	**Lormes**	**9.05**	**246**	ePn	Pn	16 49 08.9	-3.1
	baz=65						
MBDF	**Montbardon**	**9.24**	**226**	ePn	Pn	16 49 11.3	-3.4
MBDF	**Montbardon**	**9.24**	**226**	eP	Pn	16 49 16.8	+2.1
MBDF	**Montbardon**	**9.24**	**226**	eP	Pn	16 49 16.8	+2.1
SSF	**Saint Saulge**	**9.37**	**246**	ePn	Pn	16 49 13.3	-3.0
SBF	**Sospel**	**9.65**	**220**	ePn	Pn	16 49 15.9	-4.4
SBF	**Sospel**	**9.65**	**220**	eP	Pn	16 49 21.4	+1.1
SBF	**Sospel**	**9.65**	**220**	eP	Pn	16 49 21.4	+1.1
SBF	**Sospel**	**9.65**	**220**	eP	Pn	16 49 21.4	+1.1
NOA	**NORSAR Array B**	**9.88**	**346**	Pn	Pn	16 49 19.9	-3.5
	comp=Z,0.2nm,0.3s,baz=167,slow=13,SNR=3.1						
FINES	**FINESS Array B**	**11.32**	**25**	Pn	Pn	16 49 40.8	-2.4
	comp=Z,0.7nm,0.3s,baz=211,slow=11,SNR=16						
EKA	**Eskdalemuir Ar**	**12.07**	**296**	Pn	Pn	16 49 49.6	-3.7
	baz=102,slow=14,SNR=3.7						
ARCES	**ARCESS Array B**	**18.58**	**10**	Pn	Pn	16 51 14.9	-3.7
	comp=Z,0.2nm,0.3s,baz=191,slow=12,SNR=7.7						
AKTK	**Aktyubinsk**	**26.16**	**76**	P	P	16 52 36.9	+1.0
AKTK	**Aktyubinsk**	**26.16**	**76**	P	P	16 52 36.9	+1.0
AKTO	**Aktyubinsk**	**26.16**	**76**	P	P	16 52 36.9	+1.0
	comp=Z,0.4nm,0.3s,mb3.5,baz=306,slow=13,SNR=3.6						
BVAR	**Borovoye Array**	**32.58**	**66**	P	P	16 53 34.7	+1.7
	comp=Z,0.5nm,0.6s,mb3.6,baz=224,slow=6.0,SNR=4.5						
BVAR	**Borovoye Array**	**32.58**	**66**	P	P	16 53 34.7	+1.7
TORD	**Torodi Ar. Bea**	**40.04**	**202**	P	P	16 54 36.0	-1.0
	comp=Z,0.4nm,0.7s,mb3.1,baz=96,slow=4.3,SNR=3.3						

DJA ***18*** *16:58:32.0˚14N×95˚72E,h107km,MLv4.2/7*
IDC ***18*** *16:58:43.9±1.6,0˚01N×97˚63E,h0km,mb3.8/7,mb1 3.8/9, mb1mx3.7/24,mbtmp3.7/9,ML3.4/2,Error ellipse: s-maj=50.8km s-min=18.8km az=60.0*
NEIC ***18*** *16:58:49.5±0.8,0˚06N×97˚73E,h35km,Error ellipse: s-maj=18.7km s-min=10.6km az=62.0*
ISCJB ***18*** *16:58:51.7±1.5,0˚29N±0˚09×97˚9E±0˚1,h64km±10km, mb3.8/7,Error ellipse: s-maj=24.1km s-min=10.3km az=148.7*

ISC 18 16:58:51.5±2.0,0˚2N±0˚1×97˚8E±0˚2,h48km±14km,n27, σ1º04/24,mb3.8/7,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.13**	**349**	P	**Pn**	**16 59 10.0**	**-0.9**
GSI				S	Sx	16 59 35.9	
MNSI	**Mandailing Nat**	**1.89**	**71**	P	**Pn**	**16 59 21.3**	**0.0**
SISI	**Saibi**	**1.99**	**139**	P	**Pn**	**16 59 26.7**	**+4.0**
SISI				S	Sx	17 00 12.9	
PPI	**Padang Panjang**	**2.69**	**104**	P	Px	16 59 41.0	
PSI	**Prapat**	**2.83**	**24**	Pn	**Pn**	**16 59 32.5**	**-1.8**
	2.0nm,0.3s,baz=231,slow=6.2,SNR=5.8						
PSI	**Prapat**	**2.83**	**24**	Pn	**Pn**	**16 59 32.5**	**-1.8**
PDSI	**Padang**	**2.89**	**112**	P	**Pn**	**16 59 36.6**	**+1.6**
BKNI	**Bangkinang**	**3.25**	**88**	P	Px	16 59 48.5	
	123nm,0.8s,2μm0.8nm						
SDSI	**Sungai Dareh**	**3.81**	**107**	P	Px	16 59 54.9	
	23nm,0.7s						
IPM	**Ipoh**	**5.35**	**37**	P	**Pn**	**17 00 10.1**	**+1.3**
	0.1nm12nm,1.4s						
KULM	**Kulim**	**5.82**	**29**	eP	**Pn**	**17 00 15.4**	**+0.2**
KULM	**Kulim**	**5.82**	**29**	P	**Pn**	**17 00 15.5**	**+0.2**
CMAR	**Chiang Mai Arr**	**18.19**	**4**	P	**Pn**	**17 03 00.0**	**-0.6**
	0.1nm,0.3s,baz=191,slow=10,SNR=6.8						
CMAR	**Chiang Mai Arr**	**18.19**	**4**	P	**Pn**	**17 03 00.0**	**-0.6**
KKM	**Kota Kinabalu**	**19.29**	**72**	eP	**Pn**	**17 03 13.5**	**-0.4**
WRA	**Warramunga Arr**	**41.01**	**121**	P	**P**	**17 06 29.3**	**-0.9**
	1.0nm,0.7s,mb3.6,baz=302,slow=9.0,SNR=11						
WRA	**Warramunga Arr**	**41.01**	**121**	P	**P**	**17 06 29.3**	**-0.9**
WRAB	**Tennant Creek**	**41.01**	**121**	P	**P**	**17 06 29.1**	**-1.1**
ASAR	**Alice Springs**	**42.32**	**127**	P	**P**	**17 06 40.0**	**-0.9**
	0.7nm,0.6s,mb3.5,baz=299,slow=7.9,SNR=15						
KSRS	**Korea Array**	**46.35**	**34**	P	**P**	**17 07 13.3**	**+0.4**
	0.8nm,0.6s,mb3.8,baz=218,slow=8.1,SNR=3.4						
SONM	**Songino Array**	**48.04**	**8**	P	**P**	**17 07 26.2**	**+0.3**
	0.4nm,0.3s,mb3.9,baz=199,slow=10.0,SNR=3.6						
MK31	**Makanchi Array**	**48.36**	**346**	eP	**P**	**17 07 29.9**	**+1.5**
MKAR	**Makanchi Array**	**48.36**	**346**	P	**P**	**17 07 30.0**	**+1

SIV pP pP 17 11 14.7 +0.7
1.7nm,0.8s,baz=330,slow=11,SNR=7.2
WVT Waverly 32.30 337 eP P 17 11 40.7 -0.1
MIAR Mount Ida 33.61 328 eP P 17 11 50.8 -1.4
2.6nm,0.7s,mb4.1
SIUC Southern Illin 34.22 337 eP P 17 11 57.1 -0.3
18nm,0.6s,mb5.0
628A Black Gap, Mar 36.18 312 ⇓P P 17 12 13.4 -0.9
baz=36
528A Cox Ranch, San 36.48 313 ⇑P P 17 12 16.0 -0.9
baz=36
627A Terlingua Ranc 36.53 312 ⇑P P 17 12 16.9 -0.4
baz=37,SNR=12
WMOK Wichita Mounta 36.67 323 eP P 17 12 16.4 -2.0
2.9nm,0.6s,mb4.1
TXAR Lajitas Array 36.67 312 P P 17 12 18.1 -0.4
2.9nm,0.6s,mb4.1,baz=127,slow=9.2,SNR=38
TXAR PcP PcP 17 14 38.7 +0.8
0.8nm,0.6s,baz=127,slow=6.1,SNR=6.6
428A Kincaid Ranch, 36.72 314 ⇓P P 17 12 18.7 -0.2
baz=37,SNR=9.5
527A Woodward Ranch 37.07 313 ⇑P P 17 12 21.6 -0.3
baz=37,SNR=9.4
626A Big Bend Ranch 37.14 312 ⇓P P 17 12 21.8 -0.6
baz=37
328A Wristen Ranch, 37.18 315 ⇑P P 17 12 21.7 -1.1
baz=37
427A Hayter Ranch, 37.30 314 ⇓P P 17 12 22.8 -0.9
baz=37,SNR=10
526A Mary Lane Ranc 37.37 312 ⇑P P 17 12 23.8 -0.6
baz=37,SNR=6.0
426A McDonald Obser 37.65 313 ⇓P P 17 12 26.2 -0.6
baz=38,SNR=11
LONY Lake Ozonia 37.77 358 eP P 17 12 28.1 +0.6
7.8nm,0.3s,mb4.8
326A Caldwell Ranch 37.97 314 ⇑P P 17 12 29.0 -0.4
baz=38
425A Indio Mountain 38.41 313 ⇑P P 17 12 32.4 -0.7
baz=38,SNR=5.9
226A Malaga, Loving 38.47 315 ⇓P P 17 12 33.0 -0.6
baz=38
Z27A Tatum 38.58 317 ⇓P P 17 12 33.7 -0.9
baz=39,SNR=23
MSTX Muleshoe 38.68 319 ⇓P P 17 12 34.4 -0.9
baz=39
325A Bean Ranch, Si 38.71 313 ⇓P P 17 12 34.8 -0.8
baz=39
Y27A Causey 38.89 318 ⇓P P 17 12 36.1 -0.9
baz=39
225A Deer Hill, Car 39.01 315 ⇑P P 17 12 37.9 -0.1
baz=39
Z26A Caprock 39.08 317 ⇑P P 17 12 38.0 -0.6
baz=39,SNR=8.8
324A Moseley Ranch, 39.12 313 ⇑P P 17 12 38.4 -0.6
baz=39,SNR=9.1
MNTX Cornudas Mount 39.18 314 eP P 17 12 38.8 -0.7
5.3nm,0.7s,mb4.3
125A Gardner Draw, 39.19 315 ⇑P P 17 12 39.1 -0.5
baz=39,SNR=7.4
Y26A Elida 39.35 318 ⇑P P 17 12 40.4 -0.5
baz=39
224A Cornudas Mount 39.48 314 ⇓P P 17 12 41.8 -0.2
baz=40,SNR=25
W27A Bowe Ranch, En 39.55 320 ⇑P P 17 12 41.9 -0.6
baz=40,SNR=5.2
Z25A Roswell 39.59 316 ⇓P P 17 12 42.3 -0.5
baz=40,SNR=6.7
X26A CR and CF Fran 39.72 318 ⇓P P 17 12 43.4 -0.6
baz=40,SNR=5.1
124A Stringfield Ra 39.78 315 ⇑P P 17 12 44.7 +0.3
baz=40
Y25A Mesa, Roswell 39.94 317 ⇑P P 17 12 45.6 -0.1
baz=40
W26A Owens Ranch, T 40.02 319 ⇓P P 17 12 46.2 -0.2
baz=40
Z24A Sheeppen Canyo 40.06 316 ⇓P P 17 12 46.6 -0.2
baz=40
X25A Clemmons Ranch 40.27 318 ⇑P P 17 12 48.3 -0.1
baz=40,SNR=5.5
Y24A Capitan 40.45 316 ⇑P P 17 12 50.1 +0.1
baz=40,SNR=9.1
W25A X Bar L Ranch, 40.55 319 ⇑P P 17 12 50.3 -0.4
baz=41,SNR=7.9
Z23A Rita Site, Whi 40.63 315 ⇑P P 17 12 51.2 -0.2
baz=41
222A Williams Famil 40.64 313 ⇑P P 17 12 51.7 +0.1
baz=41
X24A Lazy VL Ranch, 40.81 317 ⇓P P 17 12 53.1 +0.2
baz=41
Y23A Lovelace Mesa, 40.88 316 ⇑P P 17 12 53.8 +0.4
baz=41
V25A Rancho No Teng 41.02 319 ⇓P P 17 12 54.9 +0.3
baz=41
221A Mesquite Ranch 41.08 312 ⇓P P 17 12 55.5 +0.4
baz=41
Z22A Elephant Butte 41.14 315 ⇑P P 17 12 55.2 -0.4
baz=41
W24A Lazy 6 Ranch, 41.17 318 ⇓P P 17 12 55.8 0.0
baz=41
U25A Circle Dot Ran 41.23 320 ⇑P P 17 12 56.5 +0.2
baz=41
320A Kipp Ranch, An 41.31 311 ⇓P P 17 12 57.2 +0.2
baz=41
X23A Hourglass Bar 41.33 317 ⇑P P 17 12 57.1 -0.1
baz=41
121A Cookes Peak, D 41.35 313 ⇑P P 17 12 57.8 +0.4
baz=41
220A Playas Peak, P 41.58 312 ⇑P P 17 12 59.6 +0.4
baz=42,SNR=7.2
T25A Trinidad 41.69 321 ⇑P P 17 13 00.4 +0.4
baz=42
ANMO Albuquerque 41.72 317 P P 17 13 00.5 +0.2
0.4nm,0.8s,mb3.1
319A Douglas 41.90 311 ⇑P P 17 13 01.5 -0.2
baz=42
120A U Bar Ranch, L 41.98 313 ⇓P P 17 13 03.0 +0.6
baz=42,SNR=7.1
V23A Ortiz Mt. (NFS 41.99 318 ⇑P P 17 13 03.2 +0.8
baz=42
219A White Tail Can 42.17 311 ⇑P P 17 13 04.1 0.0
baz=42
Z20A Nine Sixteen R 42.23 313 ⇓P P 17 13 04.8 +0.3
baz=42
ECSD EROS Data Cent 42.32 334 eP P 17 13 02.5 -2.5
3.0nm,0.4s,mb4.3
U23A El Rito 42.34 319 ⇑P P 17 13 06.1 +0.8
baz=42
X21A Alamocita Cree 42.36 315 ⇑P P 17 13 05.9 +0.4
baz=42,SNR=7.7
318A Bisbee 42.46 310 ⇓P P 17 13 06.2 -0.1
baz=42
Y20A Horse Springs, 42.49 314 ⇑P P 17 13 07.3 +0.7
baz=42,SNR=5.3
V22A San Miguel Ran 42.57 318 ⇑P P 17 13 07.8 +0.6
baz=43
119A Ashpeak Ranch, 42.58 312 ⇓P P 17 13 07.6 +0.3
baz=43
W21A San Fidel 42.62 316 ⇑P P 17 13 07.9 +0.3
baz=43
SDCO Great Sand Dun 42.75 321 eP P 17 13 08.9 +0.4
3.3nm,0.8s,mb4.0
218A Dragoon 42.75 311 ⇓P P 17 13 09.1 +0.4
baz=43,SNR=7.3
U22A Llaves 42.80 318 ⇓P P 17 13 10.0 +0.9
baz=43
X20A Quemado 42.91 315 ⇑P P 17 13 10.5 +0.6
baz=43
118A Homack Ranch, 43.01 312 ⇑P P 17 13 11.0 +0.3
baz=43,SNR=7.6
Y19A Nutrioso 43.14 314 ⇑P P 17 13 12.7 +0.9
baz=43
T22A Edith 43.20 319 ⇓P P 17 13 12.9 +0.6
baz=43
W20A Ramah 43.22 316 ⇓P P 17 13 12.7 +0.3
baz=43
U21A Nageezi 43.36 318 ⇑P P 17 13 14.2 +0.7
baz=43
X19A St. Johns 43.40 314 ⇑P P 17 13 14.8 +0.9
baz=44
117A Oracle 43.55 311 ⇓P P 17 13 15.2 +0.1
baz=44
W19A Sanders 43.83 315 ⇓P P 17 13 18.2 +1.0
baz=44
X18A Snowflake 43.92 314 ⇓P P 17 13 18.8 +0.7
baz=44
EYMN Ely 44.02 342 eP P 17 13 17.8 -0.7
11nm,0.7s,mb4.6
S21A Coal Bank Pass 44.15 319 ⇑P P 17 13 20.7 +0.9
baz=44
Y17A Roosevelt 44.16 313 ⇑P P 17 13 20.0 +0.1
baz=44
116A Eloy 44.27 311 ⇓P P 17 13 20.9 +0.1
baz=44
Q22A Crested Butte, 44.31 321 ⇓P P 17 13 21.9 +0.9
baz=44
X17A Forest Lakes 44.44 313 ⇓P P 17 13 22.9 +0.7
baz=44
Y16A Circle Bar Ran 44.71 313 ⇑P P 17 13 24.2 -0.1
baz=45
R20A Redvale 44.84 320 ⇓P P 17 13 25.8 +0.6
baz=45
214A Organ Pipe Nat 44.84 309 ⇓P P 17 13 25.4 0.0
baz=45
PV01 Paradox Valley 44.93 319 eP P 17 13 26.6 +0.6
205nm,0.7s
X16A Lo Mia Camp, P 44.94 313 ⇑P P 17 13 26.2 +0.1
baz=45
S19A Harvey Farm, M 45.08 319 ⇑P P 17 13 27.4 +0.2
baz=45
Q20A Ridgley Place, 45.23 321 ⇑P P 17 13 29.1 +0.8
baz=45
N22A Wattenberg Ran 45.23 324 ⇑P P 17 13 29.4 +1.1
baz=45
114A Black Gap (USA 45.24 310 ⇓P P 17 13 28.6 +0.1
baz=45,SNR=6.8
W16A Flagstaff 45.33 314 ⇓P P 17 13 29.6 +0.4
baz=45
PV10 Paradox Valley 45.37 319 eP P 17 13 26.1 -3.4
Y15A Casa Rosa Ranc 45.37 312 ⇓P P 17 13 29.5 0.0
baz=45,SNR=6.1
WUAZ Wupatki 45.43 315 ⇓P P 17 13 30.3 +0.4
baz=46,SNR=7.3
WUAZ Wupatki 45.43 315 eP P 17 13 30.5 +0.5
12nm,0.9s,mb4.5
X15A Humboldt 45.55 313 ⇑P P 17 13 30.9 -0.1
baz=46
Z14A Wintersburg 45.56 311 ⇑P P 17 13 31.1 +0.1
baz=46
S18A Hurst Farm, Bl 45.62 318 ⇑P P 17 13 31.8 +0.4
baz=46
AGMN Agassiz Nation 45.78 339 eP P 17 13 31.4 -1.1
6.3nm,0.6s,mb4.4
N21A Black Mountain 45.84 323 ⇓P P 17 13 33.7 +0.7
baz=46
Q19A Hogan Spring (45.84 320 ⇓P P 17 13 33.0 -0.1
baz=46,SNR=6.9
Y14A Wickenburg 45.86 312 ⇓P P 17 13 33.3 -0.1
baz=46
113A Mohawk Valley, 45.92 310 ⇓P P 17 13 33.8 -0.1
baz=46
R18A Canyonlands Na 45.93 319 ⇓P P 17 13 33.5 -0.3
baz=46
L22A Ellis Ranch, M 46.01 325 ⇓P P 17 13 35.0 +0.7
baz=46
X14A Yava 46.02 312 ⇓P P 17 13 34.6 0.0
baz=46
Z13A Yuma Proving G 46.02 310 ⇑P P 17 13 34.5 -0.2
baz=46,SNR=5.7
RSSD Black Hills 46.12 329 eP P 17 13 35.1 -0.2
3.5nm,0.8s,mb4.0
V15A Kaibab Nationa 46.14 314 ⇑P P 17 13 36.3 +0.8
baz=46,SNR=7.4
T16A Glen Canyon Da 46.26 316 ⇓P P 17 13 37.1 +0.6
baz=46
M21A Separation Pea 46.27 324 ⇑P P 17 13 37.0 +0.6
baz=46
N20A Spence Gulch, 46.33 323 ⇓P P 17 13 37.9 +1.0
baz=46
R17A Hanksville Air 46.49 318 ⇓P P 17 13 38.0 -0.2
baz=47,SNR=6.0
W14A Seligman 46.51 313 ⇑P P 17 13 38.5 +0.1
baz=47
U15A North Rim 46.53 315 ⇓P P 17 13 39.1 +0.6
baz=47,SNR=8.6
O19A Miners Draw (B 46.53 322 ⇑P P 17 13 38.6 +0.1
baz=47
M20A Sweetwater, Wa 46.68 323 ⇑P P 17 13 39.8 +0.2
baz=47
V14A Boquillas Ranc 46.72 314 ⇓P P 17 13 40.5 +0.5
baz=47,SNR=6.4
SRU San Rafael 46.74 319 ⇑P P 17 13 40.6 +0.5
baz=47
GLA Glamis 46.85 310 ⇓P P 17 13 41.4 +0.3
baz=47
R16A Teasdale 46.92 318 ⇓P P 17 13 41.5 -0.1
baz=47
P17A Butcher Ranch, 47.08 320 ⇑P P 17 13 43.2 +0.4
baz=47
U14A Mt Trumbull 47.15 315 ⇓P P 17 13 43.8 +0.5
baz=47,SNR=6.0
N18A Larsen Ranch, 47.27 322 ⇑P P 17 13 45.2 +1.0
baz=47
T14A Hurricane 47.39 315 ⇓P P 17 13 45.8 +0.5
baz=47
ULM Lac du Bonnet 47.44 340 P P 17 13 44.0 -1.4
7.0nm,0.5s,mb4.5,baz=148,slow=7.1,SNR=6.5
V13A Grand Canyon W 47.45 314 ⇑P P 17 13 46.3 +0.6
baz=48
O17A Robinson Place 47.48 320 ⇑P P 17 13 46.2 +0.4
baz=48,SNR=5.1
K20A Yellowstone Ra 47.50 325 ⇓P P 17 13 46.0 +0.1
baz=48,SNR=7.8
MSU Marysvale 47.51 318 eP P 17 13 46.4 +0.3
5.8nm,0.8s,mb4.3
IRM Iron Mountain 47.56 311 ⇓P P 17 13 47.0 +0.4
baz=48
BC3 Big Chuckawall 47.58 310 ⇓P P 17 13 46.4 -0.3
baz=48
U13A Pakoon Wash 47.70 314 ⇓P P 17 13 48.0 +0.4
baz=48,SNR=5.5
L19A Farson 47.75 323 ⇓P P 17 13 48.4 +0.5
baz=48
M18A Lyman 47.78 322 ⇑P P 17 13 48.1 0.0
baz=48
K19A Absolon Red Bu 47.89 324 ⇓P P 17 13 49.3 +0.3
baz=48
N17A Moffit Pass 47.97 321 ⇓P P 17 13 50.0 +0.4
baz=48
MONP Monument Peak 48.01 309 ⇑P P 17 13 50.2 +0.1
baz=48
V12A Nelson 48.02 313 ⇓P P 17 13 50.1 0.0
baz=48
L18A Fontenelle, Gr 48.05 323 ⇓P P 17 13 50.3 +0.1
baz=48
M17A Scullys Gap (B 48.17 322 ⇑P P 17 13 50.7 -0.4
baz=48
SCHQ Schefferville 48.21 5 P P 17 13 51.0 -0.1
6.3nm,0.7s,mb4.4,baz=192,slow=6.5,SNR=9.2
SCHQ Schefferville 48.21 5 eP P 17 13 51.2 0.0
7.0nm,0.7s,mb4.4
PDAR Pinedale Array 48.27 324 P P 17 13 51.6 -0.2
2.4nm,0.6s,mb4.0,baz=120,slow=8.8,SNR=14
N16A Rees Ranch, Co 48.31 321 ⇓P P 17 13 52.5 +0.3
baz=48
K18A Toltan Ranch, 48.48 323 ⇓P P 17 13 53.9 +0.4
baz=49
Q14A Sevier Lake (B 48.49 318 ⇓P P 17 13 54.1 +0.5
baz=49,SNR=9.8
R13A O'Grain Ranch, 48.55 316 ⇓P P 17 13 54.6 +0.5
baz=49,SNR=5.2
L17A Cokeville 48.66 322 ⇓P P 17 13 54.4 -0.4
baz=49,SNR=9.9
P14A Drum Mountains 48.66 318 ⇑P P 17 13 55.0 +0.1
baz=49
M16A Huntsville 48.67 321 ⇑P P 17 13 54.8 -0.2
baz=49
HWUT Hardware Ranch 48.80 321 eP P 17 13 54.9 -1.0
3.4nm,0.8s,mb4.0
J18A Kendall Valley 48.81 324 ⇑P P 17 13 55.6 -0.4
baz=49,SNR=6.6
L16A Fish Haven 48.95 322 ⇑P P 17 13 56.7 -0.4
baz=49,SNR=5.5
Q13A Wheeler Ranch, 48.97 317 ⇑P P 17 13 58.0 +0.7
baz=49
T11A Corn Creek, Al 48.98 315 ⇑P P 17 13 57.4 0.0
baz=49
I18A Diamond G Ranc 48.99 325 ⇑P P 17 13 57.6 +0.2
baz=49
R12A Pony Springs, 49.06 316 ⇑P P 17 13 58.1 +0.1
baz=49
P13A Bates Ranch, G 49.22 318 ⇑P P 17 13 59.7 +0.5
baz=49,SNR=7.0
GSC Goldstone 49.27 312 ⇓P P 17 13 59.6 0.0
baz=49
GSC Goldstone 49.27 312 eP P 17 13 59.7 0.0
1.7nm,0.6s,mb3.9
DGMT Dagmar 49.32 333 ⇑P P 17 13 59.9 +0.2
baz=50,SNR=8.0
N14A Grayback Hills 49.41 320 ⇓P P 17 14 00.7 +0.1
baz=50
Q12A Willow Creek R 49.56 317 ⇑P P 17 14 02.0 +0.2
baz=50
R11A Troy Canyon, C 49.75 316 ⇓P P 17 14 03.4 +0.2
baz=50
IMW Indian Meadow 49.76 324 eP P 17 14 02.5 -0.6
3.4nm,0.7s,mb4.1
P12A McGill 49.83 317 ⇓P P 17 14 04.4 +0.6
baz=50
G18A Lazy EL Ranch, 49.85 327 ⇓P P 17 14 03.8 -0.1
baz=50
M14A Sheep Mountain 49.86 320 ⇓P P 17 14 03.5 -0.4
baz=50,SNR=6.9
K15A Arbon 50.00 322 ⇑P P 17 14 04.6 -0.4
baz=50
Q11A Duckwater 50.03 316 ⇑P P 17 14 05.3 -0.1
baz=50
L14A Malta 50.08 321 ⇑P P 17 14 05.8 +0.2
baz=50
O12A Currie 50.12 318 ⇑P P 17 14 06.2 +0.3
baz=50
R10A Warm Springs 50.22 315 ⇑P P 17 14 06.8 0.0
baz=50
S10A Tonopah Range, 50.26 315 ⇓P P 17 14 06.9 -0.1
baz=50
M13A Montello 50.30 320 ⇓P P 17 14 06.9 -0.4
baz=50,SNR=8.8
F18A Big Timber 50.31 327 ⇑P P 17 14 07.4 +0.1
baz=50,SNR=7.5
J15A Blackfoot 50.35 323 ⇑P P 17 14 07.7 +0.1
baz=50
H16A Russell Place, 50.42 325 ⇑P P 17 14 08.7 +0.6
baz=50
Q10A Clear Creek Ra 50.54 316 ⇓P P 17 14 09.3 +0.2
baz=51
O11A Cowboy Ranch, 50.66 318 ⇑P P 17 14 10.1 +0.1
baz=51
M12A Wells 50.81 320 ⇓P P 17 14 10.7 -0.4
baz=51
F17A Fitzpatrick Pl 50.82 327 ⇓P P 17 14 11.5 +0.4
baz=51
P10A Eureka 50.95 317 ⇑P P 17 14 12.3 +0.1
baz=51
J14A Carey 50.96 322 ⇓P P 17 14 12.3 +0.1
baz=51,SNR=9.4
BOZ Bozeman (W) 51.20 326 ⇓P P 17 14 13.8 -0.1
baz=51
I14A Mackay 51.25 323 ⇑P P 17 14 15.0 +0.6
baz=51
L12A House Creek Ra 51.26 320 ⇑P P 17 14 14.1 -0.3
baz=51
E17A Martinsdale 51.28 327 ⇓P P 17 14 14.4 -0.1
baz=51,SNR=5.7
M11A Holland Ranch, 51.39 319 ⇑P P 17 14 15.2 -0.2
baz=52
J13A Cove Ranch, Pi 51.40 322 ⇓P P 17 14 15.9 +0.4
baz=52
H14A Leadore 51.59 324 ⇓P P 17 14 17.3 +0.4
baz=52
D17A Six Diamond Ra 51.62 328 ⇑P P 17 14 17.6 +0.6
baz=52
HLID Hailey 51.63 322 ⇑P P 17 14 17.5 +0.3
baz=52
I13A Wildhorse Cree 51.65 323 ⇑P P 17 14 17.4 +0.1
baz=52,SNR=7.3
NVAR Mina Array Bea 51.69 315 P P 17 14 17.2 -0.5
1.3nm,0.6s,mb3.7,baz=125,slow=7.3,SNR=13
NVAR PcP PcP 17 15 29.7 +0.8
0.2nm,0.6s,baz=174,slow=5.5,SNR=3.7
L11A Cat Creek Ranc 51.74 320 ⇑P P 17 14 18.1 +0.1
baz=52,SNR=8.9
E16A East Helena 51.77 327 ⇑P P 17 14 18.3 +0.1
baz=52
F15A Butte 51.80 325 ⇓P P 17 14 18.4 0.0
baz=52
J12A Stokes Ranch, 51.89 321 ⇓P P 17 14 19.1 0.0
baz=52
B18A Beardsley Farm 51.95 329 ⇑P P 17 14 19.4 0.0
baz=52,SNR=8.0
D16A Dana Ranch, Ca 52.00 327 ⇓P P 17 14 20.3 +0.4
baz=52
H13A Challis 52.09 323 ⇑P P 17 14 20.5 0.0
baz=52
L10A Juniper Basin 52.15 319 ⇑P P 17 14 21.0 -0.1
baz=52,SNR=9.4
I12A Atlanta 52.20 322 ⇓P P 17 14 21.3 -0.1
baz=52,SNR=7.3
K11A Parker Ranch, 52.22 320 ⇓P P 17 14 21.4 -0.2
baz=52
E15A Deer Lodge 52.23 326 ⇓P P 17 14 21.4 -0.1
baz=52
A18A Metzger Ranch, 52.32 330 ⇑P P 17 14 22.2 0.0
baz=52
G13A Cobalt 52.37 324 ⇑P P 17 14 22.4 -0.2
baz=52
MFID Camas Ranch 52.43 321 ⇑P P 17 14 22.9 -0.2
baz=52,SNR=6.3
H12A Diamond D Ranc 52.44 323 ⇑P P 17 14 23.2 +0.1
baz=52
D15A Lincoln 52.53 327 ⇓P P 17 14 24.0 +0.2
baz=53
C16A Fuhringer Ranc 52.58 328 ⇑P P 17 14 24.6 +0.4
baz=53
K10A MacKenzie Ranc 52.76 320 ⇑P P 17 14 25.3 -0.2
baz=53,SNR=5.2
F13A Darby 52.82 324 ⇓P P 17 14 25.3 -0.6
baz=53
B16A M & M Farms, S 52.95 328 ⇑P P 17 14 26.7 -0.1
baz=53
C15A Salmond Ranch, 53.03 327 ⇓P P 17 14 27.5 +0.1
baz=53
D14A Greenough 53.10 326 ⇑P P 17 14 27.7 -0.3
baz=53
B15A Bradely Ranch, 53.33 328 ⇑P P 17 14 29.5 -0.1
baz=53
F12A Elk City 53.34 324 ⇑P P 17 14 29.8 +0.1
baz=53
J09A Fry Pan Ranch, 53.60 320 ⇓P P 17 14 31.3 -0.4
baz=54,SNR=5.7
G11A Walters Elk Ra 53.74 323 ⇓P P 17 14 32.1 -0.6
baz=54
BEKR Beckworth 53.75 315 ⇓P P 17 14 32.3 -0.5
baz=54
A15A Johnson Ranch, 53.83 328 ⇓P P 17 14 32.8 -0.4
baz=54
E12A Beaver Dam Sad 53.88 325 ⇓P P 17 14 33.7 0.0
baz=54
F11A Grangeville 53.94 324 ⇑P P 17 14 33.5 -0.5
baz=54
C13A Hot Springs 54.04 326 ⇓P P 17 14 34.8 +0.1
baz=54
A14A Double T Ranch 54.19 328 ⇓P P 17 14 35.8 0.0
baz=54
FCC Fort Churchill 54.41 347 eP P 17 14 35.6 -1.6
0.1nm,0.9s
C12B Naegeli Ranch, 54.55 326 ⇑P P 17 14 38.7 +0.2
baz=55
G09A Cove 54.59 322 ⇑P P 17 14 38.7 -0.1
baz=55
F10A Beach Ranch, E 54.62 323 ⇑P P 17 14 38.5 -0.4
baz=55
H08A Prairie City 54.76 321 ⇓P P 17 14 39.7 -0.3
baz=55
E10A Myers Farm, Un 54.82 324 ⇑P P 17 14 39.9 -0.5
baz=55
C11A Tepee Creek (N 55.06 326 ⇓P P 17 14 41.9 -0.2
baz=55
I07A Izee 55.07 320 ⇓P P 17 14 42.2 0.0
baz=55,SNR=7.3
D10A Wagner Farm, O 55.22 324 ⇑P P 17 14 42.4 -0.9
baz=55
E09A Wood Farm, Sta 55.44 323 ⇑P P 17 14 44.3 -0.6
baz=56
H04A Detroit Lake 57.05 320 ⇑P P 17 14 55.9 -0.4
baz=57
B08A Colville Reser 57.08 325 ⇓P P 17 14 55.8 -0.7
baz=57
YKA Yellowknife Ar 63.42 340 P P 17 15 38.6 -0.6
5.6nm,0.6s,mb4.6,baz=132,slow=6.5,SNR=18
DLBC Dease Lake 67.50 331 eP P 17 16 05.7 +0.2
SUMG Summit 69.04 11 eP P 17 16 15.7 +0.8
3.8nm,0.6s,mb4.3
INK Inuvik 73.18 340 eP P 17 16 39.2 -0.7
2.8nm,0.7s,mb4.1
EGAK Eagle 74.76 336 eP P 17 16 48.5 -0.5

2.8nm,1.0s,mb3.9
ARCES **ARCESS Array B 86.69 20** P **P 17 17 51.9 -0.3**
0.8nm,0.7s,mb3.6,baz=270,slow=1.2,SNR=4.7
ARCES **ARCESS Array B 86.69 20** P **P 17 17 51.9 -0.3**
KURK Kurchatov 117.72 20 PKP PKPdf 17 23 53.0 -1.1
0.4nm,0.2s,baz=258,slow=0.9,SNR=2.2
MKAR Makanchi Array 122.34 20 PKP PKPdf 17 24 01.9 -1.3
0.4nm,0.4s,baz=314,slow=1.7,SNR=3.4
CN2 Changchun 127.03 343 *e*PKP PKPdf 17 24 11.8 -0.5
HHC Hu-ho-hao-te 132.48 355 *e*PKP PKPdf 17 24 20.1 -2.6
HHC PKS 17 27 55.3
HHC SKS SKSdf 17 31 13.4 -5.4
HHC SKKS SKKSac 17 33 21.4 -6.3
HHC AMB AMB
comp=Z,78nm,5.2s
HHC LR LR
comp=N,49nm,18.0s
HHC LR LR
comp=E,66nm,18.0s
HHC LR LR
comp=Z,120nm,18.0s
BJI Beijing 132.71 350 PKP PKPdf 17 24 20.9 -2.3
CD2 Chengdu 142.44 5 *e*PKP PKPdf 17 24 40.0 -1.3
ASAR Alice Springs 149.22 234 PKP PKPdf 17 24 53.0 0.0
comp=Z,2.1nm,0.6s,baz=118,slow=3.6,SNR=29
ASAR PKPbc PKPbc 17 24 56.6 -0.8
comp=Z,2.0nm,0.5s,baz=124,slow=3.1,SNR=63
ASAR PKPab PKPab 17 25 01.4 -0.9
comp=Z,0.8nm,0.6s,baz=127,slow=3.8,SNR=8.2
WRA Warramunga Arr 150.47 241 PKP PKPdf 17 24 54.5 -0.6
comp=Z,0.6nm,1.0s,baz=107,slow=2.6,SNR=6.9
WRA PKPbc PKPbc 17 24 59.6 -1.0
comp=Z,2.2nm,0.4s,baz=108,slow=2.5,SNR=91
WRA Warramunga Arr 150.47 241 PKP PKPdf 17 24 54.5 -0.6
WRA PKPbc PKPbc 17 24 59.6 -1.0
CMAR Chiang Mai Arr 153.72 18 PKPbc PKPbc 17 25 08.2 +0.3
comp=Z,1.0nm,0.6s,baz=321,slow=3.3,SNR=14

JMA 18 17:12:22.3, 35°.81N×137°.47E, h9km±1km, M2.6, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JGF	**Kuroka**	**0.23**	**204**	P			Pg	17 12 27.0	+0.1
JGF				S			Sg	17 12 30.1	+0.1
JGN	**Niukaw**	**0.43**	**343**	P			Pg	17 12 30.9	+0.2
JGN				S			Sg	17 12 36.7	+0.3
MAT	**Matsushiro**	**0.94**	**39**	P			Pg	17 12 40.1	-0.4
MAT				S			Sg	17 12 52.1	-0.6

*IDC **18** 17:12:20.7±1.1, 31°.01N×103°.82E, h0km, mb3.5/5, mb1 3.6/7, mb1mx3.4/26, mbtmp3.5/7, ML3.7/2, Error ellipse: s-maj=35.4km s-min=19.7km az=60.0*
*NEIC **18** 17:12:22.0±0.7, 30°.99N×103°.71E, h10km, Error ellipse: s-maj=16.4km s-min=11.8km az=70.0*
*BJI **18** 17:12:22.6, 30°.98N×103°.76E, h12km, ML3.4/11*
*ISCJB **18** 17:12:23.1±0.6, 31°.00N±0°.05×103°.8E±0°.1, h33km, mb3.5/4, Error ellipse: s-maj=13.7km s-min=6.9km az=0.2*
ISC 18 17:12:23.6±0.9, 31°.07N±0°.06×103°.7E±0°.1, h19km±6km, n11, σ0§96/14, mb3.5/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.16**	**173**	Pg			**Pg**	**17 12 27.1**	**-0.9**
CD2				Sg			**Sg**	**17 12 31.3**	**+0.3**
CD2				smax					
	comp=N,20μm,0.4s								
CD2				smax					
	comp=E,8μm,0.7s								
LZH	**Lanzhou**	**5.01**	**1**	*e*Pg			**Pb**	**17 13 51.3**	**+0.6**
LZH				Sg			**Sg**	**17 14 55.8**	**-8.6**
LZH				smax					
	comp=N,28nm,0.6s								
LZH				smax					
	comp=E,30nm,0.8s								
ENH	**Enshi**	**5.02**	**98**	*e*Pn			**Pn**	**17 13 38.0**	**+0.1**
	comp=E,14nm,0.6s								
GYA	**Guiyang**	**5.26**	**150**	Pn			**Pn**	**17 13 42.5**	**+1.3**
GYA				Sg			**Sg**	**17 15 13.1**	**+0.6**
GYA				smax					
	comp=N,70nm,0.8s								
GYA				smax					
	comp=E,60nm,0.8s								
CMAR	**Chiang Mai Arr**	**13.28**	**200**	Pn			**Pn**	**17 15 28.8**	**-2.4**
	comp=E,0.1nm,0.3s,baz=357,slow=15,SNR=2.4								
SONM	**Songino Array**	**16.87**	**6**	Pn			**Pn**	**17 16 17.6**	**-1.0**
	comp=E,0.3nm,0.3s,baz=188,slow=8.7,SNR=4.5								
KSRS	**Korea Array**	**20.95**	**66**	P			**P**	**17 17 04.3**	**-1.1**
	comp=E,1.6nm,0.7s,baz=259,slow=9.8,SNR=6.9								
MKAR	**Makanchi Array**	**22.80**	**320**	P			**P**	**17 17 26.1**	**+1.0**
	comp=E,0.2nm,0.2s,mb3.1,baz=123,slow=9.5,SNR=3.0								
KURK	**Kurchatov**	**27.09**	**324**	P			**P**	**17 18 05.8**	**+0.8**
	comp=E,0.9nm,0.2s,mb3.9,baz=98,slow=12,SNR=2.8								
WRA	**Warramunga Arr**	**58.62**	**146**	P			**P**	**17 22 19.3**	**-0.2**
	comp=E,0.5nm,0.5s,mb3.8,baz=338,slow=7.7,SNR=18								
ASAR	**Alice Springs**	**61.62**	**148**	P			**P**	**17 22 39.8**	**-0.3**
	comp=E,0.1nm,0.4s,mb3.3,baz=328,slow=6.9,SNR=5.8								

CASC 18 17:14:21.0±2.1, 8°.60N×83°.12W, h5km±4km, MD3.8, 3C-2D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.07**	**318**	⇑*i*P			Pg	17 14 23.7	+1.0
ACR				⇑*i*P				17 14 23.7	
ACR				*e*S			Sg	17 14 24.8	+0.9
BRU2	**Volcan**	**0.47**	**65**	*e*P			Pg	17 14 29.6	-0.3
BRU2				*e*S			Sg	17 14 38.8	+2.7
BAR1		**0.67**	**343**	⇓*e*P			Pg	17 14 33.6	-0.2
BAR1				⇓*i*P				17 14 33.7	
BAR1				*e*S			Sg	17 14 44.0	+1.5
BAR1				*e*S			Sg	17 14 44.1	+1.5
BUS	**Buena Vista**	**1.14**	**326**	*e*P			Pg	17 14 41.6	-1.3
BUS				*e*P				17 14 41.7	
BUS				*e*S			Sg	17 14 54.5	-3.3
QCR	**Quepos**	**1.32**	**309**	*e*S			Sg	17 15 03.8	+0.3
URSC	**Urasca**	**1.39**	**332**	⇑*e*P			Pn	17 14 46.1	-1.0
URSC				*e*S			Sb	17 15 05.4	-0.1
LAJ	**Bijagual**	**1.60**	**322**	*e*P			Pn	17 14 53.4	+3.5
PRS1	**Puriscal**	**1.81**	**320**	*e*P			Pn	17 14 52.1	-0.8
PRS1				*e*S			Sn	17 15 16.8	+0.5
CGA2	**Cerro Gallo 2**	**1.94**	**317**	*e*P			Pn	17 14 55.1	+0.5

*IDC **18** 17:45:01.4±0.9, 20°.42N×120°.08E, h0km, mb3.5/8, mb1 3.8/9, mb1mx3.7/23, mbtmp3.6/9, ML3.2/1, MS3.1/3, Ms1 3.2/3, ms1mx2.6/23, Error ellipse: s-maj=28.8km s-min=17.4km az=70.0*
*ISCJB **18** 17:45:04.0±0.6, 20°.55N±0°.05×120°.00E±0°.09, h33km, mb3.7/9, MS3.0/1, Error ellipse: s-maj=13.4km s-min=6.1km az=21.1*
*NEIC **18** 17:45:05.9±0.6, 20°.52N×120°.07E, h35km, mb4.1/2, Error ellipse: s-maj=13.9km s-min=8.9km az=117.0*
ISC 18 17:45:06.1±0.6, 20°.54N±0°.05×120°.06E±0°.09, h35km, n21, σ1§14/24, mb3.7/9, MS3.0/2, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**2.45**	**22**	*e*Pn			**Pn**	**17 45 43.6**	**0.0**
TPUB	**Ta-pu**	**2.79**	**11**	*e*Pn			**Pn**	**17 45 47.2**	**-1.1**
TPUB				*e*Sn			**Sn**	**17 46 20.0**	**-0.8**
YULB	**Yu-li**	**3.06**	**22**	*e*Pn			**Pn**	**17 45 52.5**	**+0.5**
SSLB	**Suanglung**	**3.33**	**14**	*e*Pn			**Pn**	**17 45 54.4**	**-1.3**
NACB	**Ninganchiao**	**3.88**	**21**	*e*Pn			**Pn**	**17 46 03.5**	**+0.2**
NACB				*e*Sn			**Sn**	**17 46 46.9**	**-0.7**
YHNB	**Yeheng**	**4.28**	**16**	*e*Pn			**Pn**	**17 46 08.9**	**+0.1**
YHNB				*e*Sn			**Sn**	**17 46 57.2**	**-0.3**
TATO	**Taipei**	**4.60**	**16**	*e*Pn			**Pn**	**17 46 11.7**	**-1.5**
QIZ	**Qiongzhong**	**9.74**	**263**	*e*Pn			**Pn**	**17 47 21.8**	**-2.0**
KSRS	**Korea Array**	**18.18**	**20**	P			**Pn**	**17 49 17.9**	**+2.1**
	0.1nm,0.3s,baz=199,slow=11,SNR=4.5								
KSRS					LR		LR	17 56 48.9	
	comp=Z,37nm,19.9s,baz=339,slow=39								
CMAR	**Chiang Mai Arr**	**20.02**	**268**	P			**P**	**17 49 36.5**	**+0.5**
	0.2nm,0.5s,baz=68,slow=9.8,SNR=3.2								
CMAR					LR		LR	17 58 36.0	
	comp=Z,66nm,18.1s,MS3.0,baz=90,slow=41								
MAJO	**Matsushiro**	**22.48**	**41**	P			**P**	**17 50 04.1**	**+1.7**
	4.7nm,0.9s,mb3.9								
MJAR	**Matsushiro Arr**	**22.48**	**41**	P			**P**	**17 50 03.4**	**+1.0**
	1.7nm,1.0s,mb3.4,baz=180,slow=37,SNR=4.2								
MJAR					LR		LR	18 00 17.6	
	comp=Z,47nm,18.4s,MS3.0,baz=250,slow=41								
SONM	**Songino Array**	**29.39**	**341**	P			**P**	**17 51 06.7**	**+0.8**
	0.2nm,0.5s,mb3.1,baz=193,slow=5.9,SNR=2.4								
SONM	**Songino Array**	**29.39**	**341**	P			**P**	**17 51 06.7**	**+0.8**
MKAR	**Makanchi Array**	**40.32**	**319**	P			**P**	**17 52 42.8**	**+2.7**
	1.2nm,0.9s,mb3.6,baz=106,slow=9.1,SNR=5.6								
WRAB	**Tennant Creek**	**42.59**	**160**	*e*P			**P**	**17 52 58.1**	**-0.8**
	6.3nm,0.9s,mb4.3								
WRA	**Warramunga Arr**	**42.60**	**160**	P			**P**	**17 52 57.9**	**-1.0**
	3.0nm,0.9s,mb4.0,baz=342,slow=9.1,SNR=22								
WRA	**Warramunga Arr**	**42.60**	**160**	P			**P**	**17 52 57.9**	**-1.0**
ZALV	**Zalesovo Beam**	**42.79**	**330**	P			**P**	**17 53 01.9**	**+1.7**
	1.3nm,0.8s,mb3.7,baz=116,slow=6.8,SNR=5.4								
ASAR	**Alice Springs**	**45.97**	**162**	P			**P**	**17 53 25.8**	**-0.1**
	2.6nm,1.0s,mb4.1,baz=332,slow=7.3,SNR=9.4								
BVAR	**Borovoye Array**	**49.88**	**323**	P			**P**	**17 53 55.6**	**-0.3**
	0.2nm,0.5s,mb3.4,baz=116,slow=8.2,SNR=3.3								

*SZGRF **18** 17:45:40.6, 22°.38S×178°.83W, h33km, South of Fiji Islands*
*BJI **18** 17:46:44.6, 20°.69S×178°.05W, h600km, mB4.7/5, mb4.7/6*
*ISCJB **18** 17:46:46.2±0.7, 20°.91S±0°.05×178°.79W±0°.06, h593km±9km, mb4.3/54, Error ellipse: s-maj=9.6km s-min=6.8km az=29.6*
*NEIC **18** 17:46:47.2±0.7, 20°.84S×178°.82W, h593km±8km, mb4.5/37, Error ellipse: s-maj=9.5km s-min=6.2km az=108.0*
*IDC **18** 17:46:47.0±1.2, 20°.73S×178°.80W, h584km±14km, mb3.8/18, mb1 4.0/19, mb1mx3.9/22, mbtmp3.8/19, Error ellipse: s-maj=14.7km s-min=9.3km az=151.0*
ISC 18 17:46:47.0±0.7, 20°.84S±0°.05×178°.78W±0°.06, h586km±9km, n191, σ1§03/97, mb4.3/54, 21C-9D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.30**	**315**	*e*P			**P**	**17 48 14.1**	**+0.3**
RAO	**Raoul Island**	**8.41**	**175**	P			**P**	**17 48 50.9**	**+1.2**
	56nm,0.3s,baz=72,slow=19,SNR=3.0								
AFI	**Afiamalu**	**9.60**	**45**	P			**P**	**17 48 56.8**	**-4.8**
	7.9nm,0.3s,baz=18,slow=3.6,SNR=14								
AFI				S			**S**	**17 50 41.4**	**-11**
	2.9nm,0.3s,baz=2.5,slow=23,SNR=5.8								
AFI	**Afiamalu**	**9.60**	**45**	*e*P			**P**	**17 48 56.8**	**-4.8**
	144nm,1.0s								
DZM	**Mont Dzumac**	**13.82**	**262**	*e*P			**P**	**17 49 43.5**	**-0.6**
	26nm,1.4s								
OUZ	**Omahuta**	**15.82**	**203**	*e*P			**P**	**17 50 05.8**	**+2.7**
	108nm,1.0s								
OTAZ	**Otara**	**16.97**	**198**	P			**P**	**17 50 16.1**	**+2.5**
URZ	**Urewera**	**17.72**	**191**	P			**P**	**17 50 18.7**	**-1.8**
	10nm,0.3s,baz=359,slow=3.5,SNR=18								
URZ				S			**S**	**17 53 09.8**	**-4.2**
	1.0nm,0.3s,baz=89,slow=19,SNR=7.8								
URZ	**Urewera**	**17.72**	**191**	*e*P			**P**	**17 50 18.4**	**-2.1**
MWZ	**Matawai**	**17.73**	**190**	*e*P			**P**	**17 50 18.9**	**-1.7**
BKZ	**Black Stump Fm**	**18.71**	**192**	*e*P			**P**	**17 50 27.1**	**-2.4**
MRZ	**Mangatainoka R**	**20.34**	**192**	P			**P**	**17 50 42.9**	**-1.3**
KIW	**Kapiti Island**	**20.67**	**194**	P			**P**	**17 50 45.9**	**-1.3**
CAW	**Cannon Point**	**20.87**	**193**	P			**P**	**17 50 47.8**	**-1.2**
QRZ	**Quartz Range**	**21.25**	**198**	P			**P**	**17 50 53.0**	**+0.5**
NNZ	**Nelson**	**21.38**	**196**	P			**P**	**17 50 52.7**	**-0.9**
THZ	**Tophouse**	**22.02**	**197**	P			**P**	**17 50 58.3**	**-0.9**
KHZ	**Kahutara**	**22.47**	**195**	P			**P**	**17 51 02.1**	**-1.2**
LTZ	**Lake Taylor**	**23.14**	**197**	P			**P**	**17 51 07.8**	**-1.4**
WVZ	**Waitaha Valley**	**23.85**	**199**	P			**P**	**17 51 14.9**	**-0.6**
RPZ	**Rata Peaks**	**24.34**	**198**	P			**P**	**17 51 19.5**	**-0.3**
	7.7nm,0.5s,mb4.6,baz=5.0,slow=3.3,SNR=14								
JCZ	**Jackson Bay**	**25.39**	**201**	P			**P**	**17 51 29.1**	**0.0**
ARMA	**Armidale**	**28.27**	**244**	*e*P			**P**	**17 51 56.6**	**+2.1**
CNB	**Canberra Magne**	**31.44**	**236**	*e*P			**P**	**17 52 23.2**	**+1.5**
CTA	**Charters Tower**	**32.73**	**265**	*e*P			**P**	**17 52 33.8**	**+0.9**
	4.9nm,0.5s,mb4.4								
CTA	**Charters Tower**	**32.73**	**265**	P			**P**	**17 52 34.0**	**+1.0**
	7.2nm,0.6s,mb4.5,baz=95,slow=11,SNR=15								
CTAO	**Charters Tower**	**32.73**	**265**	*e*P			**P**	**17 52 33.8**	**+0.9**
TOO	**Toolangi**	**35.11**	**234**	*e*P			**P**	**17 52 53.3**	**+0.8**
STKA	**Stephens Creek**	**36.99**	**244**	*e*P			**P**	**17 53 09.2**	**+1.1**
	8.6nm,0.7s,mb4.4								
STKA	**Stephens Creek**	**36.99**	**244**	P			**P**	**17 53 09.2**	**+1.2**
	11nm,0.7s,mb4.5,baz=89,slow=8.9,SNR=20								
STKA	**Stephens Creek**	**36.99**	**244**	*e*P			**P**	**17 53 09.2**	**+1.1**
	5.3nm,1.2s,mb4.0								
ASAR	**Alice Springs**	**43.73**	**257**	P			**P**	**17 54 02.4**	**+0.6**
	13nm,0.7s,mb4.5,baz=88,slow=8.4,SNR=81								
ASAR				S			**S**	**17 59 50.1**	**-0.5**
	3.1nm,0.7s,baz=92,slow=16,SNR=18								
WRAB	**Tennant Creek**	**43.83**	**263**	*e*P			**P**	**17 54 02.9**	**+0.3**
WRA	**Warramunga Arr**	**43.84**	**263**	P			**P**	**17 54 02.8**	**+0.1**
	2.6nm,0.6s,mb4.0,baz=96,slow=8.7,SNR=32								
WRA				S			**S**	**17 59 50.6**	**-1.5**
	2.1nm,1.0s,baz=97,slow=14,SNR=4.9								
KAKA	**Kakadu**	**47.26**	**272**	*e*P			**P**	**17 54 30.1**	**+1.4**
	12nm,0.8s,mb4.5								
FORT	**Forrest**	**48.49**	**247**	*e*P			**P**	**17 54 37.5**	**-0.2**
	15nm,0.6s,mb4.7								
FITZ	**Fitzroy Crossi**	**52.26**	**263**	*e*P			**P**	**17 55 04.8**	**-0.5**
	4.8nm,1.1s,mb3.7								
KLBR	**Kellerberrin**	**57.26**	**245**	*e*P			**P**	**17 55 40.0**	**+0.1**
	22nm,0.9s,mb4.4								
SBA	**Scott Base**	**57.49**	**184**	*e*P			**P**	**17 55 42.9**	**+2.3**
	30nm,1.0s,mb4.5								
CASY	**Casey**	**63.35**	**205**	*e*P			**P**	**17 56 20.1**	**+0.8**
JHJ	**Hachijo jima 2**	**66.66**	**323**	P			**P**	**17 56 39.6**	**-1.0**
	29nm,0.6s,mb4.8,baz=233,slow=21,SNR=3.5								
QSPA	**South Pole Qui**	**69.23**	**180**	*e*P			**P**	**17 56 56.8**	**+1.3**
	30nm,0.8s,mb4.8								
MJAR	**Matsushiro Arr**	**70.05**	**324**	P			**P**	**17 57 00.1**	**-0.9**
	3.0nm,0.7s,mb3.8,baz=156,slow=6.2,SNR=9.7								
MAT	**Matsushiro**	**70.06**	**324**	P			**P**	**17 57 00.2**	**-0.8**
UNV	**Unalaska Valle**	**75.12**	**7**	*e*P			**P**	**17 57 27.7**	**-1.9**
PETK	**Petropavlovsk-**	**76.41**	**346**	P			**P**	**17 57 36.1**	**-0.6**
	9.9nm,0.7s,mb4.3,baz=128,slow=7.7,SNR=17								
KSRS	**Korea Array**	**76.66**	**319**	P			**P**	**17 57 38.9**	**+0.3**
	2.1nm,0.7s,mb3.7,baz=124,slow=5.7,SNR=7.4								
WDC	**Whiskeytown Da**	**80.40**	**40**	*e*P			**P**	**17 57 58.8**	**+0.4**
	13nm,1.2s,mb4.1								
MAW	**Mawson**	**81.00**	**200**	*e*P			**P**	**17 58 01.9**	**+0.8**
	3.2nm,0.6s,mb3.9								
MAW	**Mawson**	**81.00**	**200**	P			**P**	**17 58 02.4**	**+1.3**
	4.2nm,0.7s,mb4.0,baz=114,slow=4.7,SNR=9.2								
MAW	**Mawson**	**81.00**	**200**	*e*P			**P**	**17 58 02.0**	**+0.9**
	1.0nm,1.2s,mb3.1								
YBH	**Yreka Blue Hor**	**81.01**	**39**	P			**P**	**17 58 01.9**	**+0.4**
	12nm,0.8s,mb4.4,baz=164,slow=0.8,SNR=32								
YBH	**Yreka Blue Hor**	**81.01**	**39**	*e*P			**P**	**17 58 01.7**	**+0.3**
	12nm,0.9s,mb4.3								
GSC	**Goldstone**	**81.02**	**47**	*e*P			**P**	**17 58 02.0**	**+0.4**
	3.9nm,1.0s,mb3.8								
HUMO	**Hull Mountain**	**81.41**	**38**	*e*P			**P**	**17 58 04.5**	**+1.0**
	16nm,1.1s,mb4.4								
NVAR	**Mina Array Bea**	**81.77**	**44**	P			**P**	**17 58 06.0**	**+0.5**
	4.7nm,0.8s,mb4.1,baz=221,slow=8.9,SNR=31								
MOD	**Modoc**	**82.54**	**40**	*e*P			**P**	**17 58 09.3**	**+0.1**
	19nm,1.1s,mb4.5								
HEBO	**Mount Hebo**	**82.59**	**36**	*e*P			**P**	**17 58 10.0**	**+0.5**
	94nm,1.8s,mb5.0								
TUC	**Tucson**	**83.76**	**52**	*e*P			**P**	**17 58 16.7**	**+1.1**
	11nm,1.3s,mb4.2								
NLWA	**Neilton Lookou**	**83.92**	**34**	*e*P			**P**	**17 58 16.6**	**+0.6**
	13nm,1.1s,mb4.4								
OSD	**Olympics--Snow**	**84.28**	**34**	P			**P**	**17 58 18.6**	**+0.9**
TTA	**Tatalina**	**85.40**	**10**	*e*P			**P**	**17 58 21.7**	**-1.1**
	10.0nm,1.2s,mb4.3								
ENH	**Enshi**	**85.63**	**305**	*e*P			**P**	**17 58 25.2**	**+0.5**
	45nm,1.9s,mb4.8								
MSU	**Marysvale**	**85.86**	**46**	*e*P			**P**	**17 58 26.2**	**+0.6**
	2.8nm,0.9s,mb3.9								
ETW	**Entiat**	**85.94**	**35**	P			**P**	**17 58 25.9**	**+0.2**
BMO	**Blue Mountains**	**86.03**	**39**	*e*P			**P**	**17 58 25.9**	**-0.4**
	3.4nm,0.7s,mb4.1								
M13A	**Montello**	**86.04**	**43**	*e*P			**P**	**17 58 26.6**	**+0.2**
	5.2nm,1.0s,mb4.1								
BMRM	**Bremner River**	**86.06**	**16**	*e*P			**P**	**17 58 25.2**	**-0.8**
	15nm,1.1s,mb4.5								
WTV	**Waterville**	**86.19**	**35**	P			**P**	**17 58 26.9**	**-0.1**
OD2	**Odessa Site #2**	**86.69**	**36**	*e*P			**P**	**17 58 29.5**	**+0.2**
	9.0nm,0.9s,mb4.5								
CHUM	**Lake Minchumin**	**86.93**	**11**	*e*P			**P**	**17 58 28.1**	**-2.0**
	2.1nm,0.5s,mb4.1								
TRF	**Thorofare Moun**	**86.93**	**12**	*e*P			**P**	**17 58 28.6**	**-1.4**
	19nm,0.8s,mb4.9								
BPAW	**Bear Paw Mtn.**	**87.38**	**12**	*e*P			**P**	**17 58 29.7**	**-2.4**
	2.5nm,0.9s,mb3.9								
MCK	**McKinley**	**87.46**	**13**	*e*P			**P**	**17 58 31.2**	**-1.3**
	14nm,0.9s,mb4.7								
MNTX	**Cornudas Mount**	**87.54**	**55**	*e*P			**P**	**17 58 34.0**	**+0.4**
	5.6nm,1.3s,mb4.1								
TXAR	**Lajitas Array**	**87.85**	**58**	P			**P**	**17 58 36.1**	**+0.9**
	4.3nm,0.8s,mb4.2,baz=222,slow=6.0,SNR=39								
MENT	**Mentasta**	**87.95**	**15**	*e*P			**P**	**17 58 34.1**	**-0.7**
DLBC	**Dease Lake**	**88.64**	**23**	P			**P**	**17 58 38.0**	**-0.1**
	3.7nm,0.8s,mb4.2,baz=206,slow=8.3,SNR=8.0								
MCMT	**McKenzie Canyo**	**88.68**	**41**	*e*P			**P**	**17 58 39.1**	**+0.5**
	6.7nm,1.2s,mb4.3								
RRI2	**Red Ridge**	**88.87**	**42**	*e*P			**P**	**17 58 40.2**	**+0.7**
	7.1nm,0.8s,mb4.5								
DLMT	**Dillon**	**89.11**	**40**	*e*P			**P**	**17 58 40.8**	**+0.1**
	9.8nm,1.3s,mb4.5								
REDW	**Red Top Meadow**	**89.17**	**43**	*e*P			**P**	**17 58 41.6**	**+0.6**
	14nm,1.2s,mb4.7								
TPAW	**Teton Pass**	**89.17**	**42**	*e*P			**P**	**17 58 41.5**	**+0.6**
	5.7nm,1.2s,mb4.3								
CPRX	**Cap Rock**	**89.27**	**54**	*e*P			**P**	**17 58 42.2**	**+0.5**
	1.2nm,0.7s,mb3.8								
IMW	**Indian Meadow**	**89.38**	**42**	*e*P			**P**	**17 58 42.5**	**+0.6**
	9.6nm,1.0s,mb4.6								
LOHW	**Long Hollow**	**89.45**	**42**	*e*P			**P**	**17 58 42.5**	**+0.3**
	1.4nm,0.4s,mb4.1								
CMAR	**Chiang Mai Arr**	**89.54**	**290**	P			**P**	**17 58 44.9**	**+1.6**
	2.9nm,0.9s,mb4.1,baz=119,slow=2.8,SNR=18								
PLCA	**Paso Flores**	**89.57**	**134**	P			**P**	**17 58 43.4**	**+0.4**
	1.9nm,0.8s,mb4.0,baz=203,slow=7.5,SNR=5.8								
PDAR	**Pinedale Array**	**89.70**	**44**	P			**P**	**17 58 43.4**	**-0.1**
	4.4nm,0.7s,mb4.4,baz=222,slow=2.0,SNR=30								
BOZ	**Bozeman (W)**	**89.84**	**40**	*e*P			**P**	**17 58 44.1**	**+0.1**
	5.0nm,0.4s,mb4.7								
EGAK	**Eagle**	**90.12**	**15**	*e*P			**P**	**17 58 44.0**	**-0.8**
	14nm,1.1s,mb4.7								
COLD	**Coldfoot**	**90.34**	**11**	*e*P			**P**	**17 58 45.3**	**-0.5**
	9.2nm,1.1s,mb4.5								
INK	**Inuvik**	**94.79**	**15**	P			**P**	**17 59 04.3**	**-1.9**
	2.1nm,0.9s,mb4.2,baz=240,slow=6.1,SNR=4.8								
ZALV	**Zalesovo Beam**	**110.30**	**321**	PKiKP			PKiKP	18 04 10.8	-2.0
	0.9nm,0.6s,baz=4.6,slow=0.7,SNR=5.1								
MKAR	**Makanchi Array**	**110.90**	**313**	PKiKP			PKiKP	18 04 12.2	-2.0
	0.8nm,0.7s,baz=60,slow=3.5,SNR=6.1								
BVAR	**Borovoye Array**	**116.87**	**320**	PKP			PKPdf	18 04 28.1	-1.2
	1.2nm,0.3s,baz=117,slow=1.3,SNR=16								
ARU	**Arti**	**125.06**	**325**	*e*PKPdf			PKPdf	18 04 39.9	-1.2
ARCES	**ARCESS Array B**	**129.12**	**349**	PKP			PKPdf	18 04 47.2	-1.3
	1.9nm,0.6s,baz=57,slow=4.5,SNR=8.4								
ARCES	**ARCESS Array B**	**129.12**	**349**	PKP			PKPdf	18 04 47.2	-1.3
FINES	**FINESS Array B**	**135.89**	**343**	PKP			PKPdf	18 05 01.3	0.0
	1.2nm,0.6s,baz=9.1,slow=3.5,SNR=4.5								
FINES						SKPbc	SKPbc	18 07 39.3	+0.6
	9.7nm,0.8s,baz=46,slow=5.5,SNR=19								
NOA	**NORSAR Array B**	**139.23**	**353**	PKhKP				18 04 56.7	
	1.3nm,0.9s,baz=15,slow=3.8,SNR=3.5								
NOA						PKP	PKPdf	18 05 08.0	+0.5
	1.0nm,0.8s,baz=78,slow=7.8,SNR=3.8								
NOA						SKPbc	SKPbc	18 07 49.1	+0.9
	2.6nm,0.8s,baz=15,slow=4.3,SNR=5.5								
AKASG	**Malin Array Be**	**142.95**	**330**	PKhKP				18 05 10.7	
	11nm,0.5s,baz=43,slow=4.3,SNR=56		

TNS				*e*PKPab	PKPab	18 05 40.0	-0.8
TNS	**Taunus Mts**	**150.12**	**351**	*e*PKPbc	PKPbc	18 05 31.9	-0.3
TNS				*e*PKPab	PKPab	18 05 40.0	-0.8
GRA1	**Grafenberg Arr**	**150.13**	**347**	*e*PKPab	PKPab	18 05 40.0	-0.8
GRF	**Grafenberg Arr**	**150.13**	**347**	*e*PKPab	PKPab	18 05 40.0	-0.8
BZS	**Buzias**	**150.14**	**331**	⇓*i*P	PKPbc	18 05 31.5	-0.9
WET	**Wettzell**	**150.26**	**344**	*e*PKPbc	PKPbc	18 05 32.0	-0.5
WET				*e*PKPab	PKPab	18 05 41.2	-0.2
WET	**Wettzell**	**150.26**	**344**	*e*PKPbc	PKPbc	18 05 32.0	-0.5
WET				*e*PKPab	PKPab	18 05 41.2	-0.2
GEC2	**GERESS Array S**	**150.32**	**343**	*e*PKPbc	PKPbc	18 05 31.9	-0.8
GEC2				*e*PKPab	PKPab	18 05 41.3	-0.4
GEC2	**GERESS Array S**	**150.32**	**343**	*e*PKPbc	PKPbc	18 05 31.9	-0.8
GEC2				*e*PKPab	PKPab	18 05 41.3	-0.4
CSNA	**Conrad Observa**	**150.50**	**340**	⇓*i*PKPbc	PKPbc	18 05 32.5	-0.6
	comp=Z,12nm,1.3s						
GIVF	**Givet**	**150.66**	**355**	*e*PKIKP	PKPbc	18 05 32.6	-0.8
	comp=Z,24nm,0.9s						
BAIF	**Baives**	**150.75**	**356**	*e*PKIKP	PKPbc	18 05 33.4	-0.2
	comp=Z,36nm,1.1s						
PKSM	**Moragy**	**150.96**	**335**	⇓*i*P	PKPbc	18 05 33.8	-0.4
WLF	**Walferdange**	**150.97**	**353**	*e*PKPbc	PKPbc	18 05 34.3	+0.2
FUR	**Furstenfeldbru**	**151.56**	**346**	*e*PKPab	PKPab	18 05 46.4	-0.5
FUR	**Furstenfeldbru**	**151.56**	**346**	*e*PKPab	PKPab	18 05 46.4	-0.5
RJOB	**Jochberg**	**151.58**	**343**	*e*PKPbc	PKPbc	18 05 34.5	-1.1
RJOB				*e*PKPab	PKPab	18 05 46.5	-0.5
BFO	**Black Forest**	**151.98**	**350**	*e*PKPbc	PKPbc	18 05 35.6	-0.8
BFO				*e*PKPab	PKPab	18 05 47.6	-1.1
BFO	**Black Forest**	**151.98**	**350**	*e*PKPbc	PKPbc	18 05 35.6	-0.8
BFO				*e*PKPab	PKPab	18 05 47.6	-1.1
CDF	**Champ du Feu**	**152.06**	**351**	*e*PKIKP	PKPbc	18 05 36.2	-0.4
	comp=Z,8.3nm,0.9s						
FLN	**La Foliniere**	**152.11**	**2**	*e*PKIKP	PKPbc	18 05 35.9	-0.8
MEZF	**Maizieres J'vi**	**152.23**	**355**	*e*PKIKP	PKPbc	18 05 36.1	-0.9
WTTA	**Wattenberg**	**152.32**	**345**	⇑*i*PKPbc	PKPbc	18 05 36.8	-0.5
	comp=Z,6.9nm,0.9s						
HAU	**Haudompre**	**152.58**	**353**	*e*PKIKP	PKPbc	18 05 36.7	-1.1
HINF	**Hinteralfeld**	**152.70**	**352**	*e*PKIKP	PKPbc	18 05 37.2	-0.8
DAVOX	**Davos/Dischmat**	**153.18**	**347**	PKPbc	PKPbc	18 05 37.6	-1.5
	comp=Z,4.5nm,0.6s,baz=70,slow=4.5,SNR=6.6						
DAVOX				PKPab	PKPab	18 05 52.7	-1.1
	comp=Z,6.1nm,0.8s,baz=348,slow=1.9,SNR=6.7						
ESDC	**Sonseca Array**	**160.71**	**12**	PKPab	PKPab	18 06 26.0	-0.6
	comp=Z,1.5nm,0.7s,baz=348,slow=4.6,SNR=10						
MDT	**Midelt**	**166.99**	**22**	PKPab	PKPab	18 06 53.8	-0.7
	comp=Z,1.5nm,0.8s,baz=311,slow=1.9,SNR=3.7						
TORD	**Torodi Ar. Bea**	**172.34**	**183**	PKPab	PKPab	18 07 18.7	+0.2
	comp=Z,1.6nm,0.8s,baz=176,slow=3.9,SNR=7.2						

CASC 18 17:56:15.5±1.4, 11°.92N×86°.51W, h104km±6km, MD3.5, ML3.5, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUN	**El Crucero**	**0.21**	**72**	*e*P	Pn	17 56 30.8	+0.7
COPN	**Copaltepe**	**0.27**	**342**	*e*P	Pn	17 56 30.1	-0.3
COPN				*e*P		17 56 30.2	
COPN				*e*S	Sn	17 56 41.2	-0.3
CSAN		**0.28**	**17**	*e*P	Pn	17 56 30.1	-0.3
CSAN				*e*S	Sn	17 56 41.7	+0.1
XAVN	**Gruta Xavier**	**0.29**	**37**	*e*P	Pn	17 56 30.2	-0.3
MGAN	**Managua**	**0.34**	**48**	*e*P	Pn	17 56 30.5	-0.2
MGAN				*e*S	Sn	17 56 42.9	+0.9
APYN	**Apoyeque**	**0.35**	**26**	*e*P	Pn	17 56 30.9	+0.1
APON	**Apoyo**	**0.43**	**90**	*e*P	Pn	17 56 31.6	+0.5
MOMN	**Momotombo**	**0.49**	**356**	*e*P	Pn	17 56 31.8	+0.1
HUEN		**0.53**	**38**	*e*P	Pn	17 56 32.1	+0.2
HUEN				*e*P		17 56 32.3	
CNGN	**Cerro Negro**	**0.61**	**342**	*e*P	Pn	17 56 32.7	+0.2
CNGN				*e*S	Sn	17 56 46.1	+0.9
CNGN				AML	AML	17 56 49.0	
	comp=N,903nm,0.3s						
CRIN	**San Cristobal**	**0.94**	**326**	*e*P	Pn	17 56 36.2	+0.7
CRIN				*e*S	Sn	17 56 51.9	+1.2
CRIN				AML	AML	17 56 52.8	
	comp=E,1μm,0.2s						
CNCH	**Conchagua**	**1.87**	**316**	*e*P	Pn	17 56 47.2	+0.6
CNCH				*e*P		17 56 48.9	
CNCH				*e*S	Sn	17 57 11.6	+1.4
JCR	**Jicaral**	**2.47**	**146**	*e*P	Pn	17 57 19.8	+25
CGA2	**Cerro Gallo 2**	**2.75**	**133**	*e*P	Pn	17 57 23.8	+26
CGA2				*e*S	Sn	17 57 32.9	+2.1
LAJ	**Bijagual**	**3.11**	**131**	*e*P	Pn	17 57 25.8	+23
LAJ				*e*S	Sn	17 57 35.4	-3.8
URSC	**Urasca**	**3.39**	**127**	*e*P	Pn	17 57 32.8	+26
URSC				*e*S	Sn	17 57 49.2	+3.3
BUS	**Buena Vista**	**3.58**	**131**	*e*P	Pn	17 57 37.1	+28
BUS				*e*S	Sn	17 57 52.4	+1.9
BAR1		**4.12**	**130**	*e*P	Pn	17 57 43.1	+27
BAR1				*e*S	Sn	17 58 05.1	+1.6

*IDC **18** 17:57:17.7±1.7, 37°.80N×20°.17E, h0km, mb4.1/3, mb1 4.0/4, mb1mx3.6/25, mbtmp4.0/4, ML3.2/1, Error ellipse: s-maj=53.1km s-min=28.8km az=138.0*
*THE **18** 17:57:26.3, 38°.08N×21°.60E, h0km±4km, ML4.2/6, Error ellipse: s-maj=4.1km s-min=1.1km az=224.0*
*NEIC **18** 17:57:26.3, 38°.09N×21°.55E, h25km, ML3.3(ATH), After ATH.*
*ATH **18** 17:57:26.3, 38°.09N×21°.55E, h25km, MD3.4/20, ML3.3*
*ISCJB **18** 17:57:26.1±0.4, 38°.10N±0°.02×21°.56E±0°.03, h8km±3km, mb4.0/3, Error ellipse: s-maj=3.8km s-min=3.6km az=25.1*
*CSEM **18** 17:57:27.8±0.3, 38°.09N×21°.65E, h20km, ML3.3, Error ellipse: s-maj=6.7km s-min=5.6km az=78.0*

ISC 18 17:57:26.8±0.4, 38°.09N±0°.02×21°.58E±0°.03, h7km±3km, n119, σ1°.12/150, mb4.0/3, 2C, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.10**	**248**	*e*Pb	Pg	17 57 30.4	+1.4
RLS				*e*Sb	Sg	17 57 35.2	+4.7
RLS	**Riolos of Patr**	**0.10**	**248**	*e*PB	Pg	17 57 30.4	+1.4
RLS				*e*SB	Sg	17 57 35.2	+4.7
RLS	**Riolos of Patr**	**0.10**	**248**	*e*Pb	Pg	17 57 30.4	+1.4
RLS				*e*Sb	Sg	17 57 35.2	+4.7
UPR	**University Cam**	**0.25**	**41**	P	Pg	17 57 31.7	-0.1
UPR	**University Cam**	**0.25**	**41**	*e*PB	Pg	17 57 33.1	+1.3
UPR				*e*SB	Sg	17 57 37.9	+2.7
UPR	**University Cam**	**0.25**	**41**	P	Pg	17 57 31.7	-0.1
UPR	**University Cam**	**0.25**	**41**	*e*Pb	Pg	17 57 33.1	+1.3
UPR				*e*Sb	Sg	17 57 37.9	+2.7
LAKA	**Lakka**	**0.35**	**65**	P	Pg	17 57 32.9	-0.7
LAKA				S	Sg	17 57 38.6	+0.4
LAKA	**Lakka**	**0.35**	**65**	P	Pg	17 57 32.9	-0.7
LAKA				S	Sg	17 57 38.6	+0.4
EFP	**Efpalio**	**0.42**	**38**	P	Pg	17 57 34.0	-1.0
EFP				S	Sg	17 57 41.8	+1.2
EFP	**Efpalio**	**0.42**	**38**	*e*PB	Pg	17 57 35.4	+0.4
EFP				*e*SB	Sg	17 57 42.0	+1.4
EFP	**Efpalio**	**0.42**	**38**	P	Pg	17 57 34.0	-1.0
EFP	**Efpalio**	**0.42**	**38**	*e*Pb	Pg	17 57 35.4	+0.4
EFP				*e*Sb	Sg	17 57 42.0	+1.4
TRIZ	**Trizonia**	**0.47**	**55**	P	Pg	17 57 34.9	-1.1
TRIZ				S	Sg	17 57 42.5	+0.3
TRIZ	**Trizonia**	**0.47**	**55**	P	Pg	17 57 34.9	-1.1
TRIZ				S	Sg	17 57 42.5	+0.3
KALE	**Kalithea**	**0.53**	**56**	P	Pg	17 57 35.8	-1.3
KALE				S	Sg	17 57 45.0	+0.9
KALE	**Kalithea**	**0.53**	**56**	P	Pg	17 57 35.8	-1.3
KALE				S	Sg	17 57 45.0	+0.9
GUR	**Goura**	**0.62**	**104**	P	Pg	17 57 37.7	-1.1
GUR				S	Sg	17 57 46.9	0.0
GUR	**Goura**	**0.62**	**104**	*e*PN	Pg	17 57 38.9	+0.1
GUR				*e*SN	Sg	17 57 48.6	+1.7
GUR	**Goura**	**0.62**	**104**	P	Pg	17 57 37.7	-1.1
GUR	**Goura**	**0.62**	**104**	*e*Pn	Pg	17 57 38.9	+0.1
GUR				S	Sg	17 57 46.9	0.0
GUR				*e*Sn	Sg	17 57 48.6	+1.7
KFL	**Anninata**	**0.62**	**272**	P	Pg	17 57 38.7	-0.1
VLS	**Valsamata**	**0.78**	**276**	*e*Pn	Pg	17 57 41.0	-0.9
VLS	**Valsamata**	**0.78**	**276**	P	Pg	17 57 40.8	-1.1
VLS	**Valsamata**	**0.78**	**276**	*e*PN	Pg	17 57 41.0	-0.9
VLS	**Valsamata**	**0.78**	**276**	*e*Pn	Pg	17 57 41.0	-0.9
DSF	**Desfina**	**0.81**	**67**	P	Pg	17 57 40.3	-2.1
DSF				S	Sg	17 57 53.1	+0.1
DSF	**Desfina**	**0.81**	**67**	P	Pg	17 57 40.3	-2.1
DSF				S	Sg	17 57 53.1	+0.1
EVR	**Evrytania**	**0.84**	**12**	*e*Pn	Pg	17 57 42.9	-0.1
EVR	**Evrytania**	**0.84**	**12**	*e*PN	Pg	17 57 42.9	-0.1
EVR	**Evrytania**	**0.84**	**12**	*e*Pn	Pg	17 57 42.9	-0.1
ITM	**Ithomi**	**0.95**	**163**	*e*Pn	Pg	17 57 44.4	-0.7
ITM	**Ithomi**	**0.95**	**163**	P	Pg	17 57 44.3	-0.8
ITM	**Ithomi**	**0.95**	**163**	*e*PN	Pg	17 57 44.4	-0.7
ITM	**Ithomi**	**0.95**	**163**	P	Pg	17 57 44.3	-0.8
VLX	**Vlachokerasia**	**0.96**	**138**	P	Pg	17 57 44.6	-0.7
VLX	**Vlachokerasia**	**0.96**	**138**	*e*PN	Pg	17 57 45.3	0.0
VLX				*e*SN	Sg	17 57 59.0	+1.3
VLX	**Vlachokerasia**	**0.96**	**138**	P	Pg	17 57 44.6	-0.7
VLX	**Vlachokerasia**	**0.96**	**138**	*e*Pn	Pg	17 57 45.3	0.0
VLX				*e*Sn	Sg	17 57 59.0	+1.3
LKD2	**Lefkada island**	**1.00**	**314**	P	Pg	17 57 44.2	-1.9
LKD2	**Lefkada island**	**1.00**	**314**	P	Pg	17 57 44.2	-1.9
LTK	**Loutraki**	**1.10**	**93**	P	Pg	17 57 46.5	-1.4
LTK	**Loutraki**	**1.10**	**93**	*e*PN	Pg	17 57 47.1	-0.8
LTK	**Loutraki**	**1.10**	**93**	P	Pg	17 57 46.5	-1.4
LTK	**Loutraki**	**1.10**	**93**	*e*Pn	Pg	17 57 47.1	-0.8
AGG	**Agios Georgios**	**1.10**	**32**	*e*Pn	Pg	17 57 46.9	-1.0
AGG				*e*Sn	Sg	17 58 02.2	0.0
AGG	**Agios Georgios**	**1.10**	**32**	P	Pg	17 57 46.9	-1.0
AGG	**Agios Georgios**	**1.10**	**32**	*e*PN	Pg	17 57 46.9	-1.0
AGG				*e*SN	Sg	17 58 02.2	0.0
AGG	**Agios Georgios**	**1.10**	**32**	*e*Pn	Pg	17 57 46.9	-1.0
AGG				*e*Sn	Sg	17 58 02.2	0.0
PYL	**PYLOS**	**1.20**	**174**	P	Pg	17 57 49.1	-0.8
PYL	**PYLOS**	**1.20**	**174**	*e*PN	Pn	17 57 49.4	-0.7
PYL	**PYLOS**	**1.20**	**174**	P	Pg	17 57 49.1	-0.8
PYL	**PYLOS**	**1.20**	**174**	*e*Pn	Pn	17 57 49.4	-0.7
LKR	**Lokris**	**1.25**	**63**	*e*Pb	Pb	17 57 49.4	-1.3
LKR				*e*Sn	Sn	17 58 08.4	+0.6
LKR	**Lokris**	**1.25**	**63**	P	Pn	17 57 48.5	-2.2
LKR	**Lokris**	**1.25**	**63**	*e*PB	Pb	17 57 49.4	-1.3
LKR				*e*SN	Sn	17 58 08.4	+0.6
LKR	**Lokris**	**1.25**	**63**	P	Pn	17 57 48.5	-2.2
LKR	**Lokris**	**1.25**	**63**	*e*Pb	Pb	17 57 49.4	-1.3
LKR				*e*Sn	Sn	17 58 08.4	+0.6
ATAL	**Atalanti**	**1.28**	**62**	P	Pn	17 57 50.1	-1.1
ATAL	**Atalanti**	**1.28**	**62**	P	Pn	17 57 50.1	-1.1
THL	**Klokotos Trika**	**1.51**	**13**	P	Pn	17 57 54.1	-0.2
THL	**Klokotos Trika**	**1.51**	**13**	*e*PN	Pn	17 57 54.5	+0.2
THL	**Klokotos Trika**	**1.51**	**13**	P	Pn	17 57 54.1	-0.2
THL	**Klokotos Trika**	**1.51**	**13**	*e*Pn	Pn	17 57 54.5	+0.2
NAIG	**Nisos Aigina**	**1.55**	**102**	*e*Pn	Pn	17 57 54.8	0.0
NAIG	**Nisos Aigina**	**1.55**	**102**	*e*PN	Pn	17 57 54.8	0.0
NAIG	**Nisos Aigina**	**1.55**	**102**	*e*Pn	Pn	17 57 54.8	0.0
JAN	**Janina**	**1.66**	**340**	P	Pg	17 58 00.8	+2.1
JAN	**Janina**	**1.66**	**340**	P	Pg	17 58 00.8	+2.1
ATH	**Athens Observa**	**1.69**	**93**	*e*Pb	Pn	17 57 56.0	-0.8
ATH	**Athens Observa**	**1.69**	**93**	*e*PB	Pn	17 57 56.0	-0.8
ATH	**Athens Observa**	**1.69**	**93**	*e*Pb	Pn	17 57 56.0	-0.8
MEV	**Metsovon**	**1.71**	**351**	P	Pn	17 57 59.0	+1.9
MEV	**Metsovon**	**1.71**	**351**	P	Pn	17 57 59.0	+1.9
ATHU	**Athens Univers**	**1.75**	**93**	P	Pn	17 57 57.3	-0.3
ATHU	**Athens Univers**	**1.75**	**93**	P	Pn	17 57 57.3	-0.3
VLI	**Veliai**	**1.75**	**141**	P	Pg	17 58 02.8	+2.5
VLI	**Veliai**	**1.75**	**141**	*e*PN	Pn	17 57 57.8	+0.2
VLI	**Veliai**	**1.75**	**141**	*e*Pn	Pn	17 57 57.8	+0.2
VLY	**Voula,Athens**	**1.77**	**97**	*e*Pn	Pn	17 57 57.4	-0.4
VLY	**Voula,Athens**	**1.77**	**97**	*e*PN	Pn	17 57 57.4	-0.4
VLY	**Voula,Athens**	**1.77**	**97**	*e*Pn	Pn	17 57 57.4	-0.4
NEO	**Neokhori**	**1.77**	**46**	*e*Pn	Pn	17 57 57.4	-0.5
NEO	**Neokhori**	**1.77**	**46**	*e*PN	Pn	17 57 57.4	-0.5
NEO	**Neokhori**	**1.77**	**46**	*e*Pn	Pn	17 57 57.4	-0.5
XOR	**Xorichti**	**1.79**	**44**	P	Pn	17 57 57.6	-0.6
XOR				S	Sn	17 58 21.2	0.0
XOR	**Xorichti**	**1.79**	**44**	P	Pn	17 57 57.6	-0.6
XOR				S	Sn	17 58 21.2	0.0
AOS	**Alonnisos**	**2.10**	**58**	P	Pn	17 58 01.8	-0.6
AOS	**Alonnisos**	**2.10**	**58**	P	Pn	17 58 01.8	-0.6
KEK	**Kerkira**	**2.13**	**320**	*e*Pb	Pb	17 58 02.6	-3.2
KEK	**Kerkira**	**2.13**	**320**	*e*PB	Pb	17 58 02.6	-3.2
KEK	**Kerkira**	**2.13**	**320**	*e*Pb	Pb	17 58 02.6	-3.2
FNA	**Florina**	**2.69**	**357**	P	Pn	17 58 11.9	+1.3
FNA	**Florina**	**2.69**	**357**	P	Pn	17 58 11.9	+1.3
KRUS	**Krusevo**	**3.28**	**356**	*e*Pn	Pn	17 58 19.9	+1.2
CHOS	**Chios island**	**3.54**	**84**	*e*PN	Pn	17 58 22.1	-0.1
CHOS	**Chios island**	**3.54**	**84**	*e*Pn	Pn	17 58 22.1	-0.1
GVD	**Gavdhos**	**3.83**	**147**	*e*P	Pn	17 58 27.9	+1.8
GVD	**Gavdhos**	**3.83**	**147**	*e*P	Pn	17 58 27.9	+1.8
IDI	**Anoyia**	**3.86**	**135**	Pn	Pn	17 58 27.9	+1.3
	1.2nm,0.3s,baz=343,slow=15,SNR=7.0						
IDI				Sn	Sn	17 59 15.6	+3.4
	1.4nm,0.3s,baz=99,slow=20,SNR=3.9						
IDI	**Anoyia**	**3.86**	**135**	*e*Pn	Pn	17 58 26.4	-0.2
IDI	**Anoyia**	**3.86**	**135**	*e*PN	Pn	17 58 26.4	-0.2
IDI	**Anoyia**	**3.86**	**135**	*e*Pn	Pn	17 58 26.4	-0.2
TIP	**Timpagrande**	**3.93**	**288**	*e*P	Pn	17 58 29.4	+1.9
TIP	**Timpagrande**	**3.93**	**288**	*e*P	Pn	17 58 29.4	+1.9
SMG	**Samos**	**4.18**	**94**	P	Pn	17 58 32.0	+1.0
SMG	**Samos**	**4.18**	**94**	P	Pn	17 58 32.0	+1.0
BARS	**Barje**	**4.72**	**2**	⇑*i*Pn	Pn	17 58 39.4	+1.0
DIVS	**Divibare**	**6.12**	**349**	⇑*i*Pn	Pn	17 58 56.8	-0.8
BRVK	**Borovoye**	**36.47**	**50**	*e*P	P	18 04 27.9	-4.3
	3.0nm,0.8s,mb4.3						
KURK	**Kurchatov**	**41.66**	**53**	P	P	18 05 14.2	-1.5
KURK	**Kurchatov**	**41.66**	**53**	P	P	18 05 14.2	-1.5
MK31	**Makanchi Array**	**44.64**	**59**	*e*P	P	18 05 40.5	+0.7
MK31	**Makanchi Array**	**44.64**	**59**	*e*P	P	18 05 40.5	+0.7
MKAR	**Makanchi Array**	**44.64**	**59**	P	P	18 05 40.5	+0.6
	0.6nm,0.6s,mb3.6,baz=301,slow=6.5,SNR=6.4						
ZAA0	**Zalesovo Array**	**45.13**	**48**	*e*P	P	18 05 43.2	-0.4
ZAA0	**Zalesovo Array**	**45.13**	**48**	*e*P	P	18 05 43.2	-0.4
ZALV	**Zalesovo Beam**	**45.13**	**48**	P	P	18 05 43.6	0.0
	1.5nm,0.4s,mb4.2,baz=280,slow=8.8,SNR=8.1						
ZALV	**Zalesovo Beam**	**45.13**	**48**	P	P	18 05 43.6	0.0

*CSEM **18** 18:13:43.5±0.7, 29°.24N×58°.28E, h2km, ML3.6, Error ellipse: s-maj=18.2km s-min=9.9km az=110.0*
*SGS **18** 18:13:45.4, 29°.24N×58°.39E, h18km*

TEH 18 18:13:44.3, 29°.21N×58°.36E, h2km, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRBR	**Kerman**	**1.59**	**299**	*e*Pg	Pg	18 14 11.4	-3.4
KRBR				*e*Sg	Sg	18 14 32.7	-2.7
IBND	**Bandar-abas**	**2.38**	**223**	*e*Pn	Pn	18 14 24.0	-0.3
IBND				*e*Sg	Sg	18 14 58.1	-2.7
IBND				*e*		18 15 23.7	
	comp=Z,3μm,0.3s						
IBND	**Bandar-abas**	**2.38**	**223**	*e*Pn	Pn	18 14 24.0	-0.3
IBND				*e*Sg	Sg	18 14 58.1	-2.7
BNDS	**Bandar-Abbas**	**2.64**	**227**	*e*Pn	Pn	18 14 26.8	-1.1
BNDS				*e*Sg	Sg	18 15 04.8	-4.4
IKOO	**Kooshah**	**3.25**	**10**	*e*Pn	Pn	18 14 34.8	-1.4
IKOO				*e*Sg	Sg	18 15 25.6	-3.1
IKOO				*e*		18 15 32.9	
	comp=Z,2μm,0.1s						
IKOO	**Kooshah**	**3.25**	**10**	*e*Pn	Pn	18 14 34.8	-1.4
IKOO				*e*Sg	Sg	18 15 25.6	-3.1
IBAF	**Bafgh**	**3.38**	**315**	*e*Pn	Pn	18 14 38.7	+0.7
IBAF				*e*		18 15 35.7	
	comp=Z,780nm,0.1s						
IBAF	**Bafgh**	**3.38**	**315**	*e*Pn	Pn	18 14 38.7	+0.7
ITEG	**Tejag**	**3.69**	**5**	*e*Pn	Pn	18 14 41.1	-1.2
ITEG				*e*		18 14 41.5	
	comp=Z,1μm,0.1s						
ITEG				*e*Sg	Sg	18 15 39.9	-2.9
ITEG	**Tejag**	**3.69**	**5**	*e*Pn	Pn	18 14 41.1	-1.2
ITEG				*e*Sg	Sg	18 15 39.9	-2.9
IMEH	**Mehriz**	**3.90**	**305**	*e*Pn	Pn	18 14 45.9	+0.7
IMEH				*e*		18 14 58.2	
	comp=Z,354nm,0.2s						
IMEH				*e*Sg	Sg	18 15 45.3	-4.2
IMEH	**Mehriz**	**3.90**	**305**	*e*Pn	Pn	18 14 45.9	+0.7
IMEH				*e*Sg	Sg	18 15 45.3	-4.2
GHIR	**Ghir-Karzin**	**4.81**	**260**	*e*Pn	Pn	18 14 56.6	-1.1
BTHS		**8.46**	**234**	P	Pn	18 15 44.5	-3.4

IDC 18 18:20:16.9±3.6, 6°.13S×147°.87E, h0km, mb3.5/2, mb1 3.6/3, mb1mx3.3/16, mbtmp3.4/3, ML3.4/1, Error ellipse: s-maj=102.7km s-min=45.7km az=115.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.00**	**223**	P	Pn	18 24 40.2	-0.8
	0.1nm,0.3s,baz=49,slow=11,SNR=10						
ASAR	**Alice Springs**	**22.01**	**216**	P	P	18 25 13.4	+0.5
	0.6nm,0.4s,baz=49,slow=8.9,SNR=33						
FITZ	**Fitzroy Crossi**	**24.74**	**239**	P	P	18 25 40.5	+0.2
	1.7nm,0.7s,baz=75,slow=8.4,SNR=3.9						
TORD	**Torodi Ar. Bea**	**145.96**	**284**	PKPbc	PKPbc	18 39 58.3	-1.3
	0.5nm,0.9s,baz=75,slow=3.6,SNR=4.5						

*NEIC **18** 18:27:24.5±0.7, 7°.03S×129°.12E, h200km, mb3.8/3, Error ellipse: s-maj=25.6km s-min=9.5km az=70.0*
*IDC **18** 18:27:28.2±6.9, 7°.20S×128°.94E, h233km±69km, mb3.2/5, mb1 3.4/7, mb1mx3.2/17, mbtmp3.3/7, Error ellipse: s-maj=71.3km s-min=18.2km az=59.0*

ISC 18 18:27:20.7±2.2, 7°.00S±0°.09×129°.4E±0°.2, h170km±21km, n15, σ1°.00/19, mb3.5/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.63**	**198**	P	Pn	18 30 02.8	+1.1
	0.7nm,0.3s,baz=30,slow=9.9,SNR=32						
FITZ				S	Sn	18 32 10.6	-0.1
	0.6nm,0.3s,baz=129,slow=17,SNR=6.8						
WRAB	**Tennant Creek**	**13.73**	**160**	*e*Pn	Pn	18 30 27.2	-1.3
WRAB				*e*S	Sn	18 32 50.3	-11
WRA	**Warramunga Arr**	**13.73**	**160**	P	Pn	18 30 27.6	-0.9
	0.7nm,0.3s,baz=338,slow=12,SNR=16						
WRA				S	Sn	18 32 54.0	-7.3
	0.7nm,0.3s,baz=337,slow=23,SNR=7.8						
ASAR	**Alice Springs**	**17.13**	**166**	P	Pn	18 31 12.2	+2.0
	0.8nm,0.3s,baz=346,slow=10,SNR=102						
ASAR				S	S	18 34 17.8	-1.1
	0.3nm,0.3s,baz=322,slow=14,SNR=6.4						
KKM	**Kota Kinabalu**	**18.46**	**314**	*e*P	P	18 31 22.3	-1.5
	3.0nm,0.8s						
KSM	**Kuching**	**20.82**	**293**	*e*P	P	18 31 49.2	0.0
	6.3nm,1.0s						
STKA	**Stephens Creek**	**27.25**	**157**	P	P	18 32 50.8	+1.7
	0.7nm,0.3s,mb3.8,baz=352,slow=7.1,SNR=3.6						
STKA	**Stephens Creek**	**27.25**	**157**	P	P	18 32 50.4	+1.4
CMAR	**Chiang Mai Arr**	**39.27**	**311**	P	P	18 34 33.0	-0.1
	0.4nm,0.6s,mb3.2,baz=140,slow=7.3,SNR=4.8						
ULN	**Ulaanbaatar**	**58.08**	**342**	*e*P	P	18 36 56.4	+0.4
	1.0nm,0.7s,mb3.8						
MK31	**Makanchi Array**	**67.89**	**327**	*e*P	P	18 38 01.6	+0.8
MKAR	**Makanchi Array**	**67.89**	**327**	P	P	18 38 01.6	+0.8
	0.8nm,0.3s,mb3.9,baz=112,slow=8.6,SNR=23						
ZALV	**Zalesovo Beam**	**71.31**	**334**	P	P	18 38 21.3	-0.3
	0.4nm,0.3s,mb3.7,baz=101,slow=4.7,SNR=2.9						
KURK	**Kurchatov**	**72.20**	**329**	P	P	18 38 25.7	-1.2
BVAR	**Borovoye Array**	**77.74**	**328**	P	P	18 38 58.9	+0.2
	0.1nm,0.4s,mb2.8,baz=98,slow=5.1,SNR=3.5						

*ISCJB **18** 18:34:30.2±1.4, 18°.36S±0°.04×174°.69W±0°.04, h57km±12km, mb5.0/88, MS3.8/14, Error ellipse: s-maj=8.4km s-min=5.2km az=140.2*
*BJI **18** 18:34:31.6, 17°.68S×174°.62W, h49km, mB5.1/4, mb5.2/15*
*N

WRAB **Tennant Creek** 48.05 259 *eP* P 18 43 04.8 -1.1
135nm,1.1s,mb5.7
WRA **Warramunga Arr** 48.06 259 P P 18 43 04.7 -1.2
40nm,0.7s,mb5.4,baz=97,slow=8.3,SNR=409
WRA pP pP 18 43 34.4 +11
17nm,1.0s,baz=94,slow=7.6,SNR=2.1
WRA S S 18 49 51.4 -8.2
1.2nm,1.0s,baz=90,slow=16,SNR=4.3
WRA **Warramunga Arr** 48.06 259 P P 18 43 04.7 -1.3
WRA pP pP 18 43 34.4 +11
WRA S S 18 49 51.4 -8.2
ASAR **Alice Springs** 48.11 254 P P 18 43 05.7 -0.6
235nm,0.7s,baz=88,slow=8.6,SNR=1735
ASAR pP pP 18 43 35.1 +12
52nm,0.8s,baz=85,slow=8.5,SNR=4.2
ASAR S S 18 49 52.5 -7.7
3.4nm,0.8s,baz=90,slow=16,SNR=14
KAKA **Kakadu** 51.15 268 *eP* P 18 43 30.1 +0.6
31nm,0.6s,mb5.5
KAKA **Kakadu** 51.15 268 *eP* P 18 43 29.9 +0.4
78nm,0.6s,mb5.9
FORT **Forrest** 53.05 245 *eP* P 18 43 42.1 -1.3
64nm,0.7s,mb5.8
FORT **Forrest** 53.05 245 *eP* P 18 43 42.1 -1.3
134nm,1.0s,mb5.9
FITZ **Fitzroy Crossi** 56.48 260 *eP* P 18 44 07.7 -0.7
36nm,0.6s,mb5.6
FITZ **Fitzroy Crossi** 56.48 260 P P 18 44 07.8 -0.6
21nm,0.5s,mb5.4,baz=114,slow=3.3,SNR=114
FITZ LR LR 19 04 29.5
comp=Z,176nm,18.2s,baz=149,slow=32
FITZ **Fitzroy Crossi** 56.48 260 *eP* P 18 44 07.7 -0.7
21nm,0.6s,mb5.3
SBA **Scott Base** 60.22 184 *eP* P 18 44 35.5 +2.1
17nm,0.6s,mb5.2
MBWA **Marble Bar** 61.43 255 *eP* P 18 44 41.6 -1.0
MBWA **Marble Bar** 61.43 255 *eP* P 18 44 41.6 -1.0
54nm,1.0s,mb5.5
KLBR **Kellerberrin** 61.83 244 *eP* P 18 44 43.7 -1.5
45nm,0.9s,mb5.5
NWAO **Narrogin (SRO)** 62.15 242 P P 18 44 45.9 -1.5
13nm,0.8s,mb5.0,baz=93,slow=6.3,SNR=6.9
MORW **Morawa** 63.57 246 *eP* P 18 44 55.8 -1.0
KAPI **Kappang** 65.29 273 P P 18 45 06.1 -2.2
14nm,0.7s,mb4.9,baz=77,slow=3.7,SNR=5.3
KAPI **Kappang** 65.29 273 P P 18 45 06.0 -2.2
CASY **Casey** 67.23 205 *eP* P 18 45 20.0 +0.2
MYLDM **Lahad Datu** 69.89 283 P P 18 45 37.4 +0.1
MJAR **Matsushiro Arr** 70.45 321 P P 18 45 39.2 -1.0
9.9nm,0.9s,mb4.6,baz=160,slow=5.9,SNR=22
MJAR LR LR 19 14 19.3
comp=Z,70nm,19.4s,baz=205,slow=34
MAJO **Matsushiro** 70.46 321 *eP* P 18 45 39.7 -0.5
12nm,0.9s,mb4.7
MAT **Matsushiro** 70.46 321 P P 18 45 39.8 -0.4
SDKM **Sandakan** 71.27 283 P P 18 45 46.3 +0.7
QSPA **South Pole Qui** 71.69 180 *eP* P 18 45 47.9 +0.8
30nm,0.8s,mb5.2
KDM **Kudat** 72.07 284 P P 18 45 51.7 +1.2
KKM **Kota Kinabalu** 72.33 283 P P 18 45 52.3 +0.3
KKM **Kota Kinabalu** 72.33 283 *eP* P 18 45 52.1 +0.1
14nm,0.6s,mb5.0
BTM **Bintulu** 74.25 279 P P 18 46 03.9 +0.5
SBUM **Sibu** 74.81 278 P P 18 46 07.3 +0.7
TWG **Pinlang** 74.96 301 *eP* P 18 46 05.8 -1.5
17nm,0.6s,mb5.0
YULB **Yu-li** 75.04 301 *eP* P 18 46 07.4 -0.3
15nm,0.8s,mb4.8
PETK **Petropavlovsk-** 75.09 343 P P 18 46 06.9 -0.3
14nm,0.6s,mb4.8,baz=124,slow=7.5,SNR=32
PETK LR LR 19 13 03.9
comp=Z,35nm,21.1s,baz=326,slow=31
YSS **Yuzh-Sakhalins** 75.48 331 *eP* P 18 46 10.3 +0.7
10nm,0.8s,mb4.6
SSLB **Suanglung** 75.50 301 *eP* P 18 46 09.7 -0.6
24nm,0.9s,mb4.9
TPUB **Ta-pu** 75.54 301 *eP* P 18 46 09.7 -0.9
76nm,0.8s,mb5.5
YHNB **Yeheng** 75.58 302 *eP* P 18 46 11.2 +0.4
62nm,1.4s,mb5.1
ISA **Isabella** 75.60 44 *eP* P 18 46 11.1 +0.5
11nm,1.0s,mb4.5
CMB **Columbia Colle** 75.77 41 *eP* P 18 46 11.6 0.0
15nm,1.1s,mb4.6
WDC **Whiskeytown Da** 76.03 38 *eP* P 18 46 12.9 0.0
9.7nm,0.9s,mb4.5
KSM **Kuching** 76.29 276 P P 18 46 16.0 +0.9
KSM **Kuching** 76.29 276 *eP* P 18 46 15.5 +0.4
75nm,0.6s,mb5.5
GSC **Goldstone** 76.51 45 *eP* P 18 46 15.8 0.0
7.6nm,1.1s,mb4.3
HUMO **Hull Mountain** 77.09 36 *eP* P 18 46 19.3 +0.4
9.4nm,1.0s,mb4.5
NVAR **Mina Array Bea** 77.32 42 P P 18 46 20.6 +0.3
8.8nm,0.9s,mb4.5,baz=224,slow=9.8,SNR=38
NVAR pP pP 18 46 49.8 +11
1.8nm,0.8s,baz=234,slow=9.0,SNR=2.1
KSRS **Korea Array** 77.45 317 P P 18 46 22.5 +1.4
20nm,1.0s,mb4.8,baz=136,slow=6.6,SNR=35
KSRS LR LR 19 13 37.7
comp=Z,16nm,20.1s,baz=150,slow=30
LDFC **Landfair** 77.54 46 *eP* P 18 46 22.0 +0.4
9.3nm,0.9s,mb4.5
MOD **Modoc** 78.18 38 *eP* P 18 46 24.4 -0.5
12nm,1.1s,mb4.5
TUC **Tucson** 79.18 51 *eP* P 18 46 31.4 +0.6
8.7nm,0.9s,mb4.6
WVOR **Wild Horse Val** 79.48 39 P P 18 46 32.2 0.0
ARUT **Antelope Range** 80.14 45 *eP* P 18 46 36.8 +1.0
6.9nm,1.2s,mb4.4
N12A **Clover Valley,** 80.77 42 *eP* P 18 46 38.8 -0.3
7.7nm,0.9s,mb4.5
HAWA **Hanford** 81.38 35 *eP* P 18 46 42.4 +0.2
BMO **Blue Mountains** 81.70 37 *eP* P 18 46 43.2 -0.7
7.0nm,1.2s,mb4.4
TTA **Tatalina** 82.34 8 *eP* P 18 46 46.5 -0.4
3.5nm,0.9s,mb4.2
MYKOM **Kota Tinggi** 82.50 274 P P 18 46 49.5 +0.7
CN2 **Changchun** 82.60 321 *eP* P 18 46 50.1 +1.4
CN2 pmax pmax
comp=Z,20nm,0.7s,mb5.1
HLID **Hailey** 82.67 40 P P 18 46 49.2 +0.2
BMRM **Bremner River** 82.67 14 *eP* P 18 46 49.0 +0.4
comp=Z,23nm,1.2s,mb4.9
SRU **San Rafael** 82.78 45 *eP* P 18 46 49.5 -0.2
comp=Z,7.2nm,0.9s,mb4.5
MNTX **Cornudas Mount** 82.94 53 *eP* P 18 46 51.1 +0.3
comp=Z,5.1nm,1.0s,mb4.3
KGM **Kluang** 83.07 274 P P 18 46 52.8 +1.0
BNM **Barren Site** 83.12 51 *eP* P 18 46 52.3 +0.7
comp=Z,3.6nm,0.9s,mb4.2
TXAR **Lajitas Array** 83.25 56 P P 18 46 53.2 +0.9
comp=Z,7.7nm,0.9s,mb4.5,baz=218,slow=7.9,SNR=65
TXAR pP pP 18 47 23.2 +12
comp=Z,1.9nm,1.0s,baz=227,slow=11,SNR=1.8
TXAR LR LR 19 17 48.2
comp=Z,34nm,21.1s,baz=5.0,slow=31
TXAR **Lajitas Array** 83.25 56 P P 18 46 53.2 +0.9
TXAR pP pP 18 47 23.2 +12
TXAR LR LR 19 17 48.2
HWUT **Hardware Ranch** 83.38 42 *eP* P 18 46 52.5 -0.2
comp=Z,4.0nm,0.9s,mb4.2
PV04 **Paradox Valley** 83.52 46 *eP* P 18 46 53.7 +0.2
ANMO **Albuquerque** 83.61 50 *eP* P 18 46 54.5 +0.4
comp=Z,3.5nm,1.1s,mb4.1
PV01 **Paradox Valley** 83.62 46 *eP* P 18 46 54.5 +0.5
comp=Z,485nm,0.8s
WHN **Wuhan** 83.78 305 P P 18 46 55.0 -0.1
CHUM **Lake Minchumin** 83.80 10 *eP* P 18 46 54.3 -0.1
comp=Z,17nm,1.4s,mb4.7
GDL2 **Guadalupe Moun** 83.94 53 *eP* P 18 46 56.8 +0.9
comp=Z,19nm,1.2s,mb4.8
MCK **McKinley** 84.25 11 *eP* P 18 46 57.4 +0.7
comp=Z,18nm,1.1s,mb4.8
MCMT **McKenzie Canyo** 84.30 39 P P 18 46 57.9 +0.5
KTGM **Kuala Trenggan** 84.31 277 P P 18 46 59.5 +1.3
RRI2 **Red Ridge** 84.45 41 *eP* P 18 46 58.0 -0.1
comp=Z,15nm,1.1s,mb4.7
MENT **Mentasta** 84.60 14 *eP* P 18 46 58.2 -0.2
MAW **Mawson** 84.62 199 *eP* P 18 46 58.7 0.0
comp=Z,6.8nm,0.6s,mb4.8
MAW **Mawson** 84.62 199 P P 18 46 58.5 -0.2
comp=Z,15nm,0.9s,mb4.9,baz=126,slow=5.9,SNR=20
MAW **Mawson** 84.62 199 *eP* P 18 46 58.3 -0.4
comp=Z,2.8nm,1.0s,mb4.2
CPRX **Cap Rock** 84.68 53 *eP* P 18 46 59.9 +0.3
comp=Z,4.2nm,0.7s,mb4.5

DLMT **Dillon** 84.74 39 *eP* P 18 46 59.3 -0.3
comp=Z,6.3nm,0.9s,mb4.5
TPAW **Teton Pass** 84.75 41 *eP* P 18 46 59.6 -0.1
comp=Z,4.6nm,0.9s,mb4.4
DLBC **Dease Lake** 84.88 22 *eP* P 18 46 59.6 -0.4
IMW **Indian Meadow** 84.97 41 *eP* P 18 47 00.9 +0.1
comp=Z,8.1nm,1.0s,mb4.6
FRIM **Kepong** 85.06 275 P P 18 47 02.8 +0.9
LRM **Limekiln Ridge** 85.07 38 *eP* P 18 47 01.2 0.0
comp=Z,18nm,1.0s,mb5.0
QLMT **Earthquake Lak** 85.16 40 *eP* P 18 47 03.0 +1.3
comp=Z,7.7nm,0.9s,mb4.6
CHMT **Chamberlain Mo** 85.20 37 *eP* P 18 47 01.3 -0.6
comp=Z,5.2nm,1.1s,mb4.4
PDAR **Pinedale Array** 85.26 42 P P 18 47 01.6 -0.7
comp=Z,3.6nm,0.8s,mb4.3,baz=222,slow=2.0,SNR=16
PDAR pP pP 18 47 32.2 +11
comp=Z,1.7nm,0.8s,baz=199,slow=3.1,SNR=2.8
PDAR LR LR 19 21 56.7
comp=Z,32nm,19.6s,baz=77,slow=33
COLA **College** 85.48 11 *eP* P 18 47 03.5 +0.7
comp=Z,16nm,0.8s,mb5.0
IPM **Ipoh** 86.03 276 P P 18 47 07.7 +1.0
KULM **Kulim** 86.64 277 P P 18 47 10.7 +1.0
KULM **Kulim** 86.64 277 *eP* P 18 47 09.8 +0.1
comp=Z,32nm,1.1s,mb5.2
EGAK **Eagle** 86.77 14 *eP* P 18 47 08.4 -0.8
comp=Z,8.2nm,0.9s,mb4.7
JCT **Junction City** 86.78 57 *eP* P 18 47 09.8 -0.3
comp=Z,16nm,0.9s,mb5.0
BILL **Bilibino** 87.28 353 *eP* P 18 47 10.4 -1.2
comp=Z,6.3nm,1.0s,mb4.5
ENH **Enshi** 87.50 303 *eP* P 18 47 14.6 +1.0
comp=Z,35nm,1.0s,mb5.3
PLCA **Paso Flores** 88.41 132 P P 18 47 17.3 -0.5
comp=Z,2.2nm,0.6s,mb4.3,baz=258,slow=2.8,SNR=6.4
PLCA LR LR 19 17 45.0
comp=Z,55nm,19.2s,baz=267,slow=29
EDM **Edmonton** 88.62 32 *eP* P 18 47 17.0 -1.2
XAN **Xi'an** 89.40 306 P P 18 47 23.4 +1.0
XAN pmax pmax
comp=Z,6.0nm,1.2s,mb4.5
RSSD **Black Hills** 89.44 43 *eP* P 18 47 20.9 -1.5
comp=Z,3.3nm,0.8s,mb4.4
SYO **Syowa Base** 89.47 192⇑*eP* P 18 47 20.0 -2.2
VNA1 **Neumayer--Stat** 90.71 176 *eP* P 18 47 27.3 -0.6
INK **Inuvik** 91.42 14 *eP* P 18 47 29.9 -1.1
comp=Z,7.5nm,1.0s,mb4.8
CMAR **Chiang Mai Arr** 92.41 289 P P 18 47 37.3 +0.5
comp=Z,7.4nm,1.1s,mb4.8,baz=99,slow=2.7,SNR=27
CMAR pP pP 18 48 08.2 +13
comp=Z,4.3nm,1.0s,baz=102,slow=2.8,SNR=4.9
CHTO **Chiang Mai** 92.52 289 *eP* P 18 47 37.4 +0.2
comp=Z,4.6nm,0.7s,mb4.9
LCO **Las Campanas** 92.83 122 *eP* P 18 47 39.4 +0.8
comp=Z,22nm,0.9s,mb5.5
MIAR **Mount Ida** 93.16 55 *eP* P 18 47 40.0 +0.1
comp=Z,6.9nm,1.0s,mb4.9
YKA **Yellowknife Ar** 93.28 24 P P 18 47 38.8 -0.9
comp=Z,3.6nm,0.8s,mb4.7,baz=240,slow=4.2,SNR=6.6
LZH **Lanzhou** 94.02 307 *eP* P 18 47 45.0 +1.2
LZH pmax pmax
comp=Z,17nm,1.2s,mb5.2
ULN **Ulaanbaatar** 95.84 318 *eP* P 18 47 51.6 -0.3
comp=Z,1.5nm,0.6s,mb4.6
SONM **Songino Array** 96.25 318 P P 18 47 53.9 +0.3
comp=Z,1.0nm,0.7s,mb4.4,baz=135,slow=5.3,SNR=5.3
ULM **Lac du Bonnet** 96.97 39 LR LR 19 23 03.0
comp=Z,44nm,21.8s,baz=302,slow=30
TIXI **Tiksi** 97.53 345 *eP* P 18 47 57.2 -1.7
comp=Z,2.8nm,0.8s,mb4.8
ZALV **Zalesovo Beam** 110.81 322 PKiKP PKiKP 18 52 56.0 -1.8
comp=Z,0.9nm,0.6s,baz=159,slow=3.2,SNR=4.4
MK31 **Makanchi Array** 112.03 314 *eP* PKiKP 18 52 59.0 -1.4
MKAR **Makanchi Array** 112.03 314 PKiKP PKiKP 18 52 59.1 -1.3
comp=Z,1.4nm,0.8s,baz=61,slow=2.3,SNR=12
BVAR **Borovoye Array** 119.45 321 PKP PKPdf 18 53 13.6 -0.9
comp=Z,3.3nm,0.7s,baz=90,slow=1.5,SNR=17
KBL **Kabul** 121.62 300 *eP* PKPdf 18 53 19.6 +0.3
ARU **Arti** 125.20 327 *eP*KPdf PKPdf 18 53 24.6 -0.8
ABKAR **Akbulak array** 126.66 318 *eP*KPdf PKPdf 18 53 28.7 +0.2
ARCES **ARCESS Array B** 127.35 351 PKP PKPdf 18 53 28.1 -1.1
comp=Z,6.2nm,0.8s,baz=5.7,slow=1.2,SNR=16
FINES **FINESS Array B** 134.54 346 PKP PKPdf 18 53 42.0 -1.0
comp=Z,4.6nm,0.9s,baz=118,slow=3.2,SNR=8.4
NOA **NORSAR Array B** 137.17 356 PKP PKPdf 18 53 49.0 +1.0
comp=Z,2.0nm,0.8s,baz=13,slow=4.1,SNR=3.9
AKASG **Malin Array Be** 142.56 335 PKhKP 18 53 52.3
comp=Z,1.7nm,0.5s,baz=42,slow=4.0,SNR=9.8
KMBO **Kilima Mbogo** 143.13 242 PKP PKPdf 18 53 57.0 -3.2
comp=Z,2.4nm,0.9s,baz=218,slow=24,SNR=4.4
BSEG **Bad Segeberg** 144.29 355 *e*PKPbc PKPdf 18 54 00.1 -0.9
NRDL **Niedersach Rie** 145.74 355 *e*PKPbc PKPbc 18 54 03.5 -0.5
NRDL *ep*PKPbc pPKPbc 18 54 36.9 +13
IBBN **Ibbenburen** 146.08 357 *e*PKPbc PKPbc 18 54 05.7 +0.6
IBBN *ep*PKPbc pPKPbc 18 54 38.4 +14
OJC **Ojcow** 146.18 343 *e*PKP PKPdf 18 54 03.0 -1.3
CLZ **Clausthal** 146.36 354 *e*PKPbc PKPbc 18 54 06.0 +0.1
CLZ *ep*PKPbc pPKPbc 18 54 39.0 +14
WTSB **Winterswijk** 146.45 358 *e*P PKPdf 18 54 06.6 +1.8
comp=Z,28nm,0.8s
STHS **Stebnicka Huta** 146.48 341 *e*PKP PKPdf 18 54 06.5 +1.6
STHS **Stebnicka Huta** 146.48 341 *e*PKP PKPdf 18 54 06.5 +1.6
CLL **Collm** 146.58 351 *e*PKPbc PKPbc 18 54 06.2 -0.4
CLL *ep*PKPbc pPKPbc 18 54 39.3 +13
CLL **Collm** 146.58 351 *e*PKP PKPdf 18 54 05.0 0.0
CLL ⇑*i*PKP PKPdf 18 54 06.3 +1.3
CLL *i* pPKP pPKPdf 18 54 39.2 +15
CLL **Collm** 146.58 351 *e*PKPdf PKPdf 18 54 05.0 0.0
CLL ⇑*i*PKPbc PKPbc 18 54 06.3 -0.3
comp=Z,28nm,0.9s
CLL *i* sPKiKP 18 54 39.2
comp=Z,27nm,1.1s
CLL *es*PKSbc 18 58 21.0
CLL *e*PPPPrev 19 11 34.0
CLL *e*SS SS 19 16 20.0 -1.6
CLL *e*SSS 19 21 58.0
CLL *e*(SSSS) 19 26 30.0
BUR08 **Bucovina Ar. S** 146.59 335 *e*PKPbc PKPbc 18 54 07.9 +1.2
BURAR **Bucovina Array** 146.61 335 ⇓P PKPdf 18 54 06.3 +1.1
BURAR **Bucovina Array** 146.61 335 ⇓*i*P PKPdf 18 54 06.3 +1.1
NIE **Niedzica** 146.76 342 *e*PKP PKPbc 18 54 07.1 0.0
UPC **Upice** 146.82 348 *e*PKP PKPbc 18 54 07.3 0.0
UPC *es*PKP 18 54 40.0
BRG **Berggiesshubel** 146.85 350 *e*PKPbc PKPbc 18 54 07.3 -0.1
BRG *ep*PKPbc pPKPbc 18 54 39.9 +13
BRG **Berggiesshubel** 146.85 350 *e*PKP PKPdf 18 54 05.9 +0.5
comp=Z,3.7nm,1.0s
BRG *i* 18 54 07.4
comp=Z,13nm,0.8s
BRG *i* 18 54 40.6
comp=Z,11nm,1.1s
CRVS **Cervenica-Dubn** 146.86 340 *e*PKP PKPdf 18 54 06.1 +0.6
CRVS *e* 18 54 42.5
CRVS **Cervenica-Dubn** 146.86 340 *e*PKP PKPdf 18 54 06.1 +0.6
CRVS *e* 18 54 42.5
TLCR 146.88 329 ⇑P PKPbc 18 54 08.0 +0.3
TLCR 146.88 329 ⇑*i*P PKPbc 18 54 08.0 +0.4
DPC **Dobruska-Polom** 146.91 347 *e*PKP PKPdf 18 54 06.9 +1.3
DPC *es*PKP 18 54 40.5
OKC **Ostrava-Krasne** 146.96 345 *e*PKP PKPab 18 54 10.4 +1.2
OKC *es*PKP 18 54 41.4
BUG **Bochum--Univer** 146.96 358 *e*PKPbc PKPbc 18 54 07.4 -0.3
PVCC **Panska Ves** 147.08 349 *e*PKP PKPdf 18 54 06.7 +0.9
PVCC *es*PKP 18 54 41.4
MORC **Moravsky Berou** 147.17 345 *e*PKPdf PKPdf 18 54 07.1 +1.1
MORC **Moravsky Berou** 147.17 345 ⇑*i*P PKPab 18 54 12.0 +2.0
VRI **Vrincioaia** 147.35 332 ⇑P PKPbc 18 54 09.0 0.0
VRI **Vrincioaia** 147.35 332 ⇑*i*P PKPbc 18 54 09.0 +0.1
PLOR **Plostina** 147.40 332 ⇑*i*P PKPab 18 54 16.9 +5.8
MOX **Moxa** 147.41 353 *e*PKP PKPdf 18 54 06.9 +0.5
comp=Z,11nm,1.2s
MOX *e* 18 54 42.1
MOX **Moxa** 147.41 353 *e*PKPbc PKPbc 18 54 08.4 -0.5
TANN **Tannenbergstha** 147.52 352 *e*PKPbc PKPbc 18 54 08.8 -0.4
KECS **Kecovo** 147.54 341 *e*PKP PKPbc 18 54 09.5 +0.1
KECS *e* 18 54 12.3
KECS *e* 18 54 43.5
KECS **Kecovo** 147.54 341 *e*PKP PKPbc 18 54 09.5 +0.1
KECS *e* 18 54 12.3
KECS *e* 18 54 43.5
PRA **Prague** 147.54 349 PKP PKPbc 18 54 10.0 +0.7
BR131 **Keskin Array S** 147.60 317 *e*PKPdf PKPdf 18 54 07.3 +0.2
BRTR **Keskin Array B** 147.60 317 PKPbc PKPbc 18 54 07.5 -2.3
comp=Z,13nm,0.8s,baz=136,slow=3.9,SNR=33
BRTR pPKPbc pPKPbc 18 54 41.4 +12
comp=Z,6.4nm,1.0s,baz=134,slow=4.2,SNR=2.2
TIRR **Tirgusor** 147.60 328 ⇑P PKPbc 18 54 10.2 +0.6
TIRR **Tirgusor** 147.60 328 ⇑*i*P PKPbc 18 54 10.2 +0.5
PRU **Pruhonice** 147.60 349 *e*PKP PKPbc 18 54 09.9 +0.4
PRU *es*PKP 18 54 39.8
HARR **Harsova** 147.67 329 ⇑P PKPbc 18 54 10.4 +0.5
HARR **Harsova** 147.67 329 ⇑*i*P PKPbc 18 54 10.4 +0.6
HGN **Heimansgroeve** 147.67 359 *e*P PKPbc 18 54 11.0 +1.3
comp=Z,12nm,1.4s
NKC **Novy Kostel** 147.70 351 *e*PKP PKPab 18 54 11.9 -0.2
VRAC **Vranov** 147.83 346 ⇓P PKPbc 18 54 10.6 +0.5
VRAC **Vranov** 147.83 346 ⇓*i*P PKPbc 18 54 10.6 +0.5
MLR **Muntele Rosu** 147.99 332 ⇑P PKPbc 18 54 11.2 +0.6
MLR **Muntele Rosu** 147.99 332 ⇑*i*P PKPbc 18 54 11.2 +0.5
VYHS **Vyhne** 148.01 343 *e*PKP PKPdf 18 54 07.6 +0.1
VYHS *e* 18 54 10.8
VYHS *e* 18 54 14.7
VYHS *e* 18 54 42.5
VYHS **Vyhne** 148.01 343 *e*PKP PKPdf 18 54 07.6 +0.1
VYHS *e* 18 54 10.8
VYHS *e* 18 54 14.7
VYHS *e* 18 54 42.5
KOLL **Kolacno** 148.05 344 *e*PKP PKPbc 18 54 11.5 +0.8
KOLL **Kolacno** 148.05 344 *e*PKP PKPbc 18 54 11.5 +0.8
TREC **Trest** 148.08 347 *e*PKP PKPbc 18 54 11.2 +0.4
TNS **Taunus Mts** 148.12 356 *e*PKPbc PKPbc 18 54 10.5 -0.4
PSZ **Piszkesteto** 148.22 341 ⇓P PKPdf 18 54 05.8 -2.0
PSZ **Piszkesteto** 148.22 341 ⇓*i*P PKPdf 18 54 05.8 -2.0
DRGR 148.25 337 ⇓P PKPbc 18 54 11.7 +0.4
DRGR 148.25 337 ⇓*i*P PKPbc 18 54 11.7 +0.4
GIVF **Givet** 148.34 1 *e*PKP1 PKPbc 18 54 11.3 -0.1
comp=Z,30nm,0.9s
BAIF **Baives** 148.37 1 *e*PKP1 PKPbc 18 54 11.4 -0.1
comp=Z,37nm,1.0s
GRA1 **Grafenberg Arr** 148.40 353 *e*PKPbc PKPbc 18 54 11.2 -0.4
GRF **Grafenberg Arr** 148.40 353 *e*PKPbc PKPbc 18 54 11.2 -0.4
VOIR 148.42 333 ⇑P PKPbc 18 54 12.8 +1.0
VOIR 148.42 333 ⇑*i*P PKPbc 18 54 12.8 +1.0
KHC **Kasperske Hory** 148.60 350 *e*PKPdf PKPdf 18 54 08.4 0.0
KHC *e*PKPbc PKPbc 18 54 12.3 +0.2
KHC **Kasperske Hory** 148.60 350 *e*PKP PKPbc 18 54 12.0 -0.1
KHC *es*PKP 18 54 45.5
WLF **Walferdange** 148.77 359 *e*PKPbc PKPbc 18 54 12.9 +0.3
WLF *ep*PKPbc pPKPbc 18 54 46.0 +14
GEC2 **GERESS Array S** 148.85 349 *e*PKPbc PKPbc 18 54 11.9 -0.9
GEC2 *ep*PKPbc pPKPbc 18 54 46.3 +14
CONA **Conrad Observa** 149.29 346 ⇑*i*PKPdf PKPdf 18 54 09.7 +0.2
comp=Z,3.0nm,1.1s,SNR=8.3
CONA ⇑*i*PKiKP PKiKP 18 54 14.3 -0.7
comp=Z,14nm,1.1s
ROSF **Rostrenen** 149.29 11 *e*PKP1 PKPbc 18 54 13.1 -0.8
FLN **La Foliniere** 149.31 8 *e*PKP1 PKPbc 18 54 13.3 -0.6
comp=Z,120nm,1.2s
FLN *e*MLR MLR
comp=Z,40nm,21.5s
FLN **La Foliniere** 149.31 8 *e*PKP PKPbc 18 54 13.3 -0.6
FLN LR LR
comp=Z,40nm,21.5s
MMAI **Mount Meron Ar** 149.37 304 PKPbc PKPbc 18 54 13.2 -1.4
comp=Z,2.9nm,0.4s,baz=82,slow=6.1,SNR=12
SGMF **Saint Gilles** 149.50 10 *e*PKP1 PKPbc 18 54 13.6 -0.8
comp=Z,26nm,1.0s
LDF **La Drutiere** 149.52 7 *e*PKP1 PKPbc 18 54 13.8 -0.7
comp=Z,87nm,1.3s
GRR **Gorron** 149.63 8 *e*PKP1 PKPbc 18 54 14.2 -0.5
comp=Z,89nm,1.2s
BZS **Buzias** 149.65 337 ⇑P PKPbc 18 54 14.7 -0.1
BZS **Buzias** 149.65 337 ⇑*i*P PKPbc 18 54 14.7 -0.2
QUIF **Quistinic** 149.72 11 *e*PKP1 PKPbc 18 54 14.2 -0.8
comp=Z,29nm,1.0s
FUR **Furstenfeldbru** 149.89 352 *e*PKPbc PKPbc 18 54 15.2 -0.2
FUR *ep*PKPbc pPKPbc 18 54 48.4 +13
MEZF **Maizieres J'vi** 149.94 0 *e*PKP1 PKPbc 18 54 15.7 +0.2
comp=Z,54nm,1.0s
CDF **Champ du Feu** 149.99 357 *e*PKP1 PKPbc 18 54 15.5 -0.1
comp=Z,53nm,1.0s
BFO **Black Forest** 150.01 356 *e*PKPbc PKPbc 18 54 15.7 0.0
BFO *ep*PKPbc pPKPbc 18 54 48.6 +13
RJOB **Jochberg** 150.08 350 *e*PKPbc PKPbc 18 54 15.3 -0.6
PKSM **Moragy** 150.13 341 ⇑*i*P PKPbc 18 54 16.1 +0.1
CSS **Prodhromos** 150.17 309 *e*PKPdf PKPdf 18 54 11.6 +0.2
ECH **Echery** 150.19 358 *e*PKPbc PKPbc 18 54 16.1 0.0
HAU **Haudompre** 150.43 359 *e*PKP1 PKPbc 18 54 16.4 -0.3
comp=Z,44nm,1.0s
HAU *e*MLR MLR
comp=Z,32nm,18.0s
HINF **Hinteralfeld** 150.60 358 *e*PKP1 PKPbc 18 54 16.5 -0.6
comp=Z,19nm,0.9s
KBA **Koelnbreinsper** 150.62 349 ⇑*i*PKPdf PKPdf 18 54 12.1 +0.5
comp=Z,2.6nm,0.9s,SNR=9.3
KBA ⇑*i*PKPbc PKPbc 18 54 16.3 -0.9
comp=Z,12nm,1.1s
SOKA **Soboth** 150.66 346 ⇑*i*PKPdf PKPdf 18 54 11.2 -0.5
comp=Z,2.5nm,0.9s
SOKA ⇑*i*PKPbc PKPbc 18 54 16.6 -0.7
comp=Z,9.6nm,0.9s
PERS **Pernice** 150.68 346 *i* PKPbc PKPbc 18 54 17.1 -0.2
MOTA **Moosalm** 150.72 352 ⇑*i*PKPdf PKPdf 18 54 12.3 +0.5
comp=Z,3.9nm,0.8s
MOTA ⇓*i*PKiKP PKiKP 18 54 17.2 -0.8
comp=Z,20nm,0.9s
WTTA **Wattenberg** 150.72 351 ⇑*i*PKPdf PKPdf 18 54 11.9 +0.1
comp=Z,4.0nm,0.9s,SNR=12
WTTA ⇑*i*PKiKP PKiKP 18 54 17.4 -0.7
comp=Z,22nm,0.7s
DAVA **Damuels** 150.92 354 ⇑*i*PKiKP PKiKP 18 54 18.6 +0.1
comp=Z,28nm,1.0s
FETA **Feichten** 151.08 352 ⇓*i*PKPdf PKPdf 18 54 12.7 +0.3
comp=Z,8.8nm,0.9s
FETA ⇓*i*PKiKP PKiKP 18 54 18.6 -0.2
comp=Z,24nm,1.1s
ABTA **Abfaltersbach** 151.09 350 ⇑*i*PKPdf PKPdf 18 54 11.8 -0.6
comp=Z,9.1nm,1.1s
ABTA ⇑*i*PKPbc PKPbc 18 54 17.6 -0.7
comp=Z,21nm,0.8s
HYF **Humbligny** 151.09 4 *e*PKP1 PKPbc 18 54 18.4 +0.1
LOR **Lormes** 151.15 2 ⇑*i*PKP1 PKPbc 18 54 18.2 -0.2
comp=Z,28nm,0.8s
LOR *e*MLR MLR
comp=Z,39nm,22.5s
SSF **Saint Saulge** 151.34 3 ⇑*i*PKP1 PKPbc 18 54 18.7 -0.2
comp=Z,53nm,0.9s
LJU **Ljubljana** 151.37 347 *i* PKPbc PKPbc 18 54 18.7 -0.2
MFF **Saint Martin d** 151.48 8 *e*PKP1 PKPbc 18 54 18.5 -0.7
comp=Z,45nm,1.1s
VISS **Visnje** 151.53 346 *i* PKPdf PKPdf 18 54 12.7 -0.4
VISS *i* PKPbc PKPbc 18 54 19.2 -0.1
AVF **Avril sur Loir** 151.61 3 ⇑*i*PKP1 PKPbc 18 54 18.8 -0.7
comp=Z,14nm,0.8s
JAVS **Javornik** 151.61 347 *i* PKPdf PKPdf 18 54 12.8 -0.5
JAVS *i* PKPbc PKPbc 18 54 18.9 -0.7
BOJS **Bojanci** 151.71 345 *i* PKPdf PKPdf 18 54 13.2 -0.2
BOJS *i* PKPbc PKPbc 18 54 19.6 -0.1
SMF **Signal de Mont** 151.77 2 *e*PKP1 PKPbc 18 54 19.3 -0.6
comp=Z,28nm,1.0s
BGF **Bois d'Agland** 151.81 4 *e*PKP1 PKPbc 18 54 19.5 -0.4
comp=Z,30nm,0.7s
CABF **La Chapelle** 151.83 359 *e*PKP1 PKPbc 18 54 20.3 +0.3
comp=Z,52nm,0.9s
TCF **Toulx Ste Croi** 152.03 5 ⇑*i*PKP1 PKPbc 18 54 19.8 -0.7
comp=Z,18nm,0.8s
LPL **La Plagne** 152.90 358 *e*PKP1 PKPbc 18 54 23.0 +0.6
comp=Z,21nm,1.1s
LPG **La Plagne** 152.92 358 *e*PKP1 PKPbc 18 54 23.1 +0.6
comp=Z,13nm,0.9s
SSB **Saint Sauveur** 153.16 1 *e*PKPdf PKPdf 18 54 14.1 -1.4
CAF **Calviac** 153.38 5 *e*PKP1 PKPbc 18 54 23.1 -0.4
comp=Z,10nm,1.0s
ORIF **Oris-en-Rattie** 153.52 359 *e*PKP1 PKPbc 18 54 23.6 -0.2
comp=Z,13nm,0.9s
ORIF *e*MLR MLR
comp=Z,32nm,22.0s
VIVF **Saint-Julien-l** 153.58 1 *e*PKP1 PKPbc 18 54 23.8 -0.1
comp=Z,12nm,0.9s
MBDF **Montbardon** 153.69 358 *e*PKP1 PKPbc 18 54 24.0 -0.2
comp=Z,19nm,0.8s
LASF **Ste Croix** 154.34 2 *e*PKP1 PKPbc 18 54 25.5 -0.1
SMRF **Simiane la Rot** 154.47 360 *e*PKP1 PKPbc 18 54 26.2 +0.3
comp=Z,42nm,1.4s
SJPF **Ste Jean** 154.71 11 *e*PKP1 PKPbc 18 54 26.4 0.0
ETSF **Etsaut** 155.04 10 *e*PKP1 PKPdf 18 54 26.9 +8.6
comp=Z,8.0nm,0.8s
ESDC **Sonseca Array** 157.29 19 PKPab PKPab 18 54 52.2 -0.3

comp=Z,3.0nm,1.0s,baz=338,slow=4.0,SNR=6.7
TORD Torodi Ar. Bea 173.73 145 PKP PKPdf 18 54 33.3 -2.2
comp=Z,3.1nm,0.8s,baz=12,slow=0.7,SNR=14
TORD PKPab PKPab 18 56 04.8 -0.7
comp=Z,3.6nm,0.9s,baz=228,slow=3.5,SNR=10

IDC 18 18:37:34.5±5.2, 39°.04N×110°.24E, h0km, mb3.1/2, mb1 3.4/3, mb1mx3.1/25, mbtmp3.2/3, ML2.7/1, Error ellipse: s-maj=109.6km s-min=23.6km az=86.0, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**9.22**	**344**	Pn	Pn	18 39 49.7	+1.0
	0.1nm,0.3s,baz=155,slow=12,SNR=7.2						
SONM				Sn	Sn	18 41 35.7	+2.6
	0.1nm,0.3s,baz=156,slow=23,SNR=5.9						
SONM				Lg		18 42 26.1	
	0.1nm,0.3s,baz=161,slow=28,SNR=5.9						
MKAR	**Makanchi Array**	**21.80**	**300**	P	P	18 42 27.8	-0.2
	0.6nm,0.8s,baz=83,slow=12,SNR=5.2						
CMAR	**Chiang Mai Arr**	**22.74**	**209**	P	P	18 42 38.1	0.0
	1.0nm,0.8s,baz=13,slow=10.0,SNR=6.4						

*NEIC **18** 18:59:49.5, 38°.41N×22°.02E, h17km, MD3.4(ATH), After ATH.*
*ATH **18** 18:59:49.5, 38°.41N×22°.02E, h17km±1km, MD3.4/8*
*THE **18** 18:59:50.8, 38°.36N×22°.01E, h8km, ML3.5/12, Error ellipse: s-maj=0.9km s-min=0.5km az=176.0*
*CSEM **18** 18:59:50.2±0.1, 38°.36N×22°.01E, h8km, ML3.5/12, Error ellipse: s-maj=3.5km s-min=3.1km az=137.0*
*ISCJB **18** 18:59:50.3±0.3, 38°.34N±0°.02×21°.99E±0°.02, h11km±2km, Error ellipse: s-maj=3.4km s-min=3.0km az=167.3*
ISC 18 18:59:50.8±0.3, 38°.36N±0°.02×22°.01E±0°.02, h9km±2km, n59, σ0°.78/99, 2C, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRIZ	**Trizonia**	**0.05**	**78**	P	**Pg**	**18 59 52.5**	**-0.2**
TRIZ				S	**Sg**	**18 59 53.9**	**-0.1**
TRIZ	**Trizonia**	**0.05**	**78**	P	**Pg**	**18 59 52.5**	**-0.2**
TRIZ				S	**Sg**	**18 59 53.9**	**-0.1**
KALE	**Kalithea**	**0.10**	**70**	P	**Pg**	**18 59 53.4**	**0.0**
KALE				S	**Sg**	**18 59 55.6**	**+0.4**
KALE	**Kalithea**	**0.10**	**70**	P	**Pg**	**18 59 53.4**	**0.0**
KALE				S	**Sg**	**18 59 55.6**	**+0.4**
EFP	**Efpalio**	**0.11**	**310**	P	**Pg**	**18 59 53.1**	**-0.4**
EFP				S	**Sg**	**18 59 55.2**	**-0.2**
EFP	**Efpalio**	**0.11**	**310**	P↑	i/PB	**Pg**	**18 59 53.1**	**-0.4**
EFP				eSB	**Sg**	**18 59 55.5**	**+0.1**
EFP	**Efpalio**	**0.11**	**310**	P	**Pg**	**18 59 53.1**	**-0.4**
EFP				S	**Sg**	**18 59 55.2**	**-0.2**
EFP				eSb	**Sg**	**18 59 55.5**	**+0.1**
LAKA	**Lakka**	**0.12**	**194**	P	**Pg**	**18 59 53.6**	**0.0**
LAKA				S	**Sg**	**18 59 56.1**	**+0.6**
LAKA	**Lakka**	**0.12**	**194**	P	**Pg**	**18 59 53.6**	**0.0**
LAKA				S	**Sg**	**18 59 56.1**	**+0.6**
UPR	**University Cam**	**0.19**	**248**	P	**Pg**	**18 59 54.9**	**+0.1**
UPR				S	**Sg**	**18 59 58.0**	**+0.5**
UPR	**University Cam**	**0.19**	**248**	P↑	i/PB	**Pg**	**18 59 54.9**	**+0.1**
UPR				eSB	**Sg**	**18 59 58.2**	**+0.7**
UPR	**University Cam**	**0.19**	**248**	P	**Pg**	**18 59 54.9**	**+0.1**
UPR				S	**Sg**	**18 59 58.0**	**+0.5**
DSF	**Desfina**	**0.41**	**82**	P	**Pg**	**18 59 58.2**	**-0.6**
DSF				S	**Sg**	**19 00 04.7**	**+0.5**
DSF	**Desfina**	**0.41**	**82**	P	**Pg**	**18 59 58.2**	**-0.6**
DSF				S	**Sg**	**19 00 04.7**	**+0.5**
GUR	**Goura**	**0.49**	**148**	P	**Pg**	**18 59 59.7**	**-0.7**
GUR				S	**Sg**	**19 00 07.3**	**+0.5**
GUR	**Goura**	**0.49**	**148**	ePN	**Pg**	**18 59 59.9**	**-0.5**
GUR				eSN	**Sg**	**19 00 07.6**	**+0.8**
GUR	**Goura**	**0.49**	**148**	P	**Pg**	**18 59 59.7**	**-0.7**
GUR				S	**Sg**	**19 00 07.3**	**+0.5**
RLS	**Riolos of Patr**	**0.52**	**236**	ePn	**Pg**	**19 00 00.0**	**-1.0**
RLS				eSn	**Sg**	**19 00 08.7**	**+0.9**
RLS	**Riolos of Patr**	**0.52**	**236**	ePN	**Pg**	**19 00 00.0**	**-1.0**
RLS				eSN	**Sg**	**19 00 08.7**	**+0.9**
RLS	**Riolos of Patr**	**0.52**	**236**	ePn	**Pg**	**19 00 00.0**	**-1.0**
AGG	**Agios Georgios**	**0.71**	**20**	P	**Pg**	**19 00 03.3**	**-1.2**
AGG				S	**Sg**	**19 00 14.8**	**+1.0**
AGG	**Agios Georgios**	**0.71**	**20**	P	**Pg**	**19 00 03.3**	**-1.2**
AGG				S	**Sg**	**19 00 14.8**	**+1.0**
LTK	**Loutraki**	**0.82**	**114**	P	**Pg**	**19 00 06.5**	**-0.1**
LTK	**Loutraki**	**0.82**	**114**	ePN	**Pg**	**19 00 05.9**	**-0.7**
LTK	**Loutraki**	**0.82**	**114**	ePn	**Pg**	**19 00 05.9**	**-0.7**
LTK	**Loutraki**	**0.82**	**114**	P	**Pg**	**19 00 06.5**	**-0.1**
LKR	**Lokris**	**0.83**	**69**	P	**Pg**	**19 00 05.6**	**-1.2**
LKR				S	**Sg**	**19 00 18.4**	**+0.9**
LKR	**Lokris**	**0.83**	**69**	P	**Pg**	**19 00 05.6**	**-1.2**
LKR				S	**Sg**	**19 00 18.4**	**+0.9**
ATAL	**Atalanti**	**0.86**	**67**	P	**Pg**	**19 00 06.4**	**-1.0**
ATAL				S	**Sg**	**19 00 18.8**	**+0.3**
ATAL	**Atalanti**	**0.86**	**67**	P	**Pg**	**19 00 06.4**	**-1.0**
ATAL				S	**Sg**	**19 00 18.8**	**+0.3**
KFL	**Anninata**	**1.00**	**256**	P	**Pg**	**19 00 09.3**	**-0.7**
VLX	**Vlachokerasia**	**1.02**	**164**	P	**Pg**	**19 00 09.5**	**-1.0**
VLX				S	**Sg**	**19 00 25.1**	**+1.3**
VLX	**Vlachokerasia**	**1.02**	**164**	ePN	**Pg**	**19 00 09.5**	**-1.0**
VLX				eSN	**Sn**	**19 00 25.4**	**-0.4**
VLX	**Vlachokerasia**	**1.02**	**164**	P	**Pg**	**19 00 09.5**	**-1.0**
VLX				S	**Sg**	**19 00 25.1**	**+1.3**
VLX				eSn	**Sn**	**19 00 25.4**	**-0.4**
VLS	**Valsamata**	**1.14**	**261**	ePn	**Pg**	**19 00 11.2**	**-1.4**
VLS				eSn	**Sg**	**19 00 28.2**	**+0.8**
VLS	**Valsamata**	**1.14**	**261**	P	**Pg**	**19 00 11.2**	**-1.4**
VLS				S	**Sg**	**19 00 28.1**	**+0.7**
VLS	**Valsamata**	**1.14**	**261**	ePN	**Pg**	**19 00 11.2**	**-1.4**
VLS				eSN	**Sg**	**19 00 28.2**	**+0.8**
VLS	**Valsamata**	**1.14**	**261**	P	**Pg**	**19 00 11.2**	**-1.4**
VLS				eSn	**Sg**	**19 00 28.2**	**+0.8**
LKD2	**Lefkada island**	**1.15**	**293**	P	**Pg**	**19 00 11.8**	**-1.1**
LKD2				S	**Sg**	**19 00 29.2**	**+1.4**
LKD2	**Lefkada island**	**1.15**	**293**	P	**Pg**	**19 00 11.8**	**-1.1**
LKD2				S	**Sg**	**19 00 29.2**	**+1.4**
ITM	**Ithomi**	**1.18**	**183**	ePn	**Pn**	**19 00 12.2**	**-1.2**
ITM	**Ithomi**	**1.18**	**183**	ePN	**Pn**	**19 00 12.2**	**-1.2**
ITM	**Ithomi**	**1.18**	**183**	ePn	**Pn**	**19 00 12.2**	**-1.2**
THL	**Klokotos Trika**	**1.21**	**0**	P	**Pb**	**19 00 13.2**	**-0.6**
THL				S	**Sb**	**19 00 29.8**	**+0.3**
THL	**Klokotos Trika**	**1.21**	**0**	P	**Pb**	**19 00 13.2**	**-0.6**
THL				S	**Sb**	**19 00 29.8**	**+0.3**
XOR	**Xorichti**	**1.36**	**42**	P	**Pn**	**19 00 15.4**	**-0.6**
XOR				S	**Sb**	**19 00 35.3**	**+1.3**
XOR	**Xorichti**	**1.36**	**42**	P	**Pn**	**19 00 15.4**	**-0.6**
XOR				S	**Sb**	**19 00 35.3**	**+1.3**
PYL	**PYLOS**	**1.47**	**189**	P	**Pn**	**19 00 17.8**	**+0.3**
PYL	**PYLOS**	**1.47**	**189**	ePN	**Pn**	**19 00 17.9**	**+0.4**
PYL	**PYLOS**	**1.47**	**189**	P	**Pn**	**19 00 17.8**	**+0.3**
AOS	**Alonnisos**	**1.67**	**60**	P	**Pn**	**19 00 19.9**	**-0.3**
AOS	**Alonnisos**	**1.67**	**60**	P	**Pn**	**19 00 19.9**	**-0.3**
VLI	**Veliai**	**1.79**	**156**	ePn	**Pn**	**19 00 22.5**	**+0.7**
VLI	**Veliai**	**1.79**	**156**	ePN	**Pn**	**19 00 22.5**	**+0.7**
VLI	**Veliai**	**1.79**	**156**	ePn	**Pn**	**19 00 22.5**	**+0.7**
KYTH	**Kithira**	**2.23**	**158**	ePn	**Pn**	**19 00 28.8**	**+1.0**
KYTH	**Kithira**	**2.23**	**158**	ePN	**Pn**	**19 00 28.8**	**+1.0**
KYTH	**Kithira**	**2.23**	**158**	ePn	**Pn**	**19 00 28.8**	**+1.0**
KRUS	**Krusevo**	**3.07**	**349**	ePn	**Pn**	**19 00 40.5**	**+1.1**

IDC 18 19:03:57.9±2.7, 10°.65S×112°.93E, h0km, mb3.3/3, mb1 3.6/4, mb1mx3.3/21, mbtmp3.4/4, ML2.9/1, MS2.9/2, Ms1 3.1/2, ms1mx2.6/9, Error ellipse: s-maj=115.9km s-min=25.3km az=47.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**8.78**	**51**	LR	LR	19 09 13.8	
	comp=Z,77nm,20.7s,baz=147,slow=36						
FITZ	**Fitzroy Crossi**	**14.36**	**122**	Pn	Pn	19 07 20.8	-1.8
	0.1nm,0.3s,baz=288,slow=20,SNR=3.0						
FITZ				Sn	Sn	19 09 45.9	-17
	0.1nm,0.3s,baz=294,slow=22,SNR=4.3						
WRA	**Warramunga Arr**	**22.60**	**117**	P	P	19 09 00.6	+0.4
	0.4nm,0.5s,baz=290,slow=12,SNR=7.4						
ASAR	**Alice Springs**	**23.81**	**126**	P	P	19 09 12.9	+0.1
	0.6nm,0.5s,baz=299,slow=9.1,SNR=18						
CMAR	**Chiang Mai Arr**	**32.05**	**334**	P	P	19 10 26.6	+0.1
	0.4nm,0.7s,baz=172,slow=8.5,SNR=4.3						
CMAR				LR	LR	19 24 04.1	
	comp=Z,27nm,21.4s,baz=250,slow=38						

TRN 18 19:13:54.1, 15°.11N×60°.98W, h173km, MD3.5, M3.3(FDF), 1C-2D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DLPL	**La Plaine**	**0.34**	**310**	eP	Pn	19 14 18.6	+1.1
DLPL				eS	Sn	19 14 35.3	-0.1
DSTT	**Stowe**	**0.34**	**293**	eP	Pn	19 14 19.4	+2.0
DSTT				eS	Sn	19 14 36.1	+0.8
DFBT	**Forest Bistro**	**0.39**	**290**	eP	Pn	19 14 19.2	+1.6
DFBT				eS	Sn	19 14 36.2	+0.6
DSHT	**Scott's Head**	**0.40**	**285**	eP	Pn	19 14 19.4	+1.8
DSHT				eS	Sn	19 14 36.6	+0.9
FDF	**Fort de France**	**0.41**	**204**	eP	Pn	19 14 18.4	+0.7
FDF				eS	Sn	19 14 35.1	-0.7
DPMT	**Pointe Michel**	**0.42**	**291**	eP	Pn	19 14 18.6	+1.0
DPMT				eS	Sn	19 14 37.1	+1.4
MDN	**Morne-Daniel**	**0.45**	**297**	eP	Pn	19 14 19.7	+1.9
MDN				eS	Sn	19 14 37.8	+1.7
MVM	**Montagne Vaucl**	**0.56**	**172**	↓eP	Pn	19 14 19.3	+1.0
MVM				↓eS	Sn	19 14 36.4	-0.6
DWS	**Wesley**	**0.56**	**325**	eP	Pn	19 14 20.0	+1.7
DWS				eS	Sn	19 14 37.0	+0.1
BIM	**Bigot**	**0.60**	**189**	eP	Pn	19 14 19.2	+0.6
MGG	**Marie-Galante**	**0.87**	**338**	eP	Pn	19 14 21.6	+1.4
TBG	**Guadaloupe-3**	**0.98**	**319**	eP	Pn	19 14 21.6	+0.7
PHG	**Guadaloupe-2**	**1.11**	**325**	eP	Pn	19 14 23.5	+1.6
SCG	**Saint Claude**	**1.14**	**323**	eP	Pn	19 14 23.7	+1.5
SCG				eS	Sn	19 14 43.8	-0.1
BCG	**Bois Riant Cap**	**1.15**	**327**	eP	Pn	19 14 23.5	+1.3
LZG	**Guadaloupe-1**	**1.28**	**323**	↑iP	Pn	19 14 24.7	+1.3
MCLT	**Moule a Chique**	**1.39**	**179**	eP	Pn	19 14 24.9	+0.4
SSV	**Crater Summit**	**1.78**	**187**	eP	Pn	19 14 29.4	+1.1
SSV				eS	Sn	19 14 55.3	+0.5
SVV	**Soufriere Volc**	**1.80**	**187**	eP	Pn	19 14 29.8	+1.3
SVV				eS	Sn	19 14 55.0	0.0
SVB	**Belmont**	**1.85**	**188**	eP	Pn	19 14 29.3	+0.3
BPA	**Boggy Peak**	**2.10**	**336**	eS	Sn	19 15 00.8	-0.3
GRCU	**Cariacou**	**2.66**	**190**	eP	Pn	19 14 38.9	+0.5
GRCU				eS	Sn	19 15 13.1	+0.4
SKI	**Saint Kitts**	**2.79**	**323**	eP	Pn	19 14 39.6	-0.2
SKI				eS	Sn	19 15 15.2	-0.1
GRIC	**Isle de Caille**	**2.87**	**192**	eS	Sn	19 15 17.3	+0.2
GRHS	**Sauteurs**	**2.94**	**193**	eS	Sn	19 15 17.7	-1.0
GRW	**Mount Saint Ca**	**3.01**	**193**	eP	Pn	19 14 43.7	+1.2
GRW				eS	Sn	19 15 20.2	+0.1
TOSP	**Speyside**	**3.81**	**173**	eP	Pn	19 14 53.6	+1.0
TOSP				eS	Sn	19 15 36.3	-1.9

*IDC **18** 19:38:27.9±74.0, 14°.83S×178°.74E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/16, mbtmp3.9/3, Error ellipse: s-maj=1330.0km s-min=169.8km az=73.0*
*NOU **18** 19:40:06.7±1.8, 18°.16S×167°.35E, h30km, MD2.7, ML3.4*
ISC 18 19:40:08.8±4.3, 18°.5S±0°.3×167°.2E±0°.8, h18km±64km, n7, σ0°.73/10, mb3.8/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.66**	**191**	eP	**Pn**	**19 41 03.6**	**-1.0**
DZM				eS	**Sn**	**19 41 47.6**	**+0.3**
DZM				AMP		19 41 52.1	
	comp=Z,768nm,3.9s						
BAYA	**Yate Dam**	**3.68**	**185**	eS	**Sn**	**19 41 48.1**	**+0.2**
NOUC	**Port Laguerre**	**3.72**	**193**	eP	**Pn**	**19 41 05.1**	**-0.2**
NOUC				eS	**Sn**	**19 41 49.3**	**+0.6**
NOUC				AMP		19 41 53.3	
	comp=Z,54nm,1.7s						
ONTRN	**Noumea**	**3.89**	**190**	eP	**Pn**	**19 41 09.0**	**+1.3**
ONTRN				eS	**Sn**	**19 41 51.9**	**-1.0**
ONTRN				AMP		19 41 57.8	
	comp=Z,152nm,5.6s						
STKA	**Stephens Creek**	**26.68**	**235**	P	**P**	**19 45 46.2**	**-0.7**
	comp=Z,2.7nm,0.8s,mb3.8,baz=87,slow=10,SNR=3.6						
WRA	**Warramunga Arr**	**31.06**	**262**	P	**P**	**19 46 25.9**	**-0.1**
	comp=Z,0.3nm,0.4s,mb3.5,baz=89,slow=8.3,SNR=4.0						
ASAR	**Alice Springs**	**31.47**	**255**	P	**P**	**19 46 30.4**	**+0.7**
	comp=Z,1.0nm,0.4s,mb4.0,baz=82,slow=8.5,SNR=32						

IDC 18 19:40:54.4±58.0, 17°.05S×179°.66E, h0km, mb4.4/3, mb1 4.6/3, mb1mx3.9/16, mbtmp4.4/3, Error ellipse: s-maj=1054.0km s-min=137.5km az=77.0, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.45**	**240**	P	P	19 48 10.2	+0.5
	2.0nm,0.4s,baz=82,slow=11,SNR=14						
WRA	**Warramunga Arr**	**42.98**	**259**	P	P	19 48 55.5	-0.2
	1.2nm,0.5s,baz=95,slow=7.8,SNR=17						
ASAR	**Alice Springs**	**43.26**	**253**	P	P	19 48 57.4	-0.5
	7.7nm,0.4s,baz=89,slow=7.7,SNR=104						

*NEIC **18** 19:59:54.0±1.1, 24°.46S×179°.62W, h431km±13km, mb4.5/20, Error ellipse: s-maj=11.2km s-min=8.7km az=124.0*
*ISCJB **18** 19:59:55.6±1.8, 24°.52S±0°.08×179°.72W±0°.09, h456km±20km, mb4.4/28, Error ellipse: s-maj=12.4km s-min=11.8km az=176.0*
*IDC **18** 19:59:57.5±1.8, 24°.57S×179°.81W, h461km±18km, mb3.8/11, mb1 4.0/12, mb1mx3.9/17, mbtmp3.8/12, Error ellipse: s-maj=14.2km s-min=13.2km az=154.0*
*DJA **18** 20:00:30, 25°.01S×177°.21E, h650km, mb5.0/4*
ISC 18 19:59:57.3±1.3, 24°.64S±0°.07×179°.57W±0°.08, h468km±14km, n64, σ1s04/63, mb4.4/28, 1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**12.96**	**36**	P	**P**	**20 02 43.4**	**-3.0**
	2.6nm,0.3s,baz=210,slow=20,SNR=3.4						
AFI				S	**S**	**20 04 55.1**	**-11**
	1.6nm,0.3s,baz=258,slow=24,SNR=2.5						
AFI	**Afiamalu**	**12.96**	**36**	eP	**P**	**20 02 41.7**	**-4.7**
AFI				eS	**S**	**20 04 55.5**	**-11**
DZM	**Mont Dzumac**	**13.10**	**278**	eP	**P**	**20 02 50.0**	**+2.1**
	11nm,0.8s						
DZM				eS	**S**	**20 05 10.1**	**+1.5**
URZ	**Urewera**	**13.87**	**191**	P	**P**	**20 02 55.1**	**-0.8**
	1.1nm,0.3s,baz=309,slow=6.1,SNR=4.4						
URZ				S	**S**	**20 05 23.1**	**-0.2**
	1.2nm,0.3s,baz=288,slow=10,SNR=5.2						
BKZ	**Black Stump Fm**	**14.86**	**192**	P	**P**	**20 03 09.1**	**+2.7**
SNZO	**South Karori**	**17.30**	**195**	eP	**P**	**20 03 32.4**	**+0.4**
	104nm,1.0s						
QRZ	**Quartz Range**	**17.44**	**200**	P	**P**	**20 03 33.3**	**-0.2**
NNZ	**Nelson**	**17.55**	**198**	eP	**P**	**20 03 33.5**	**-1.1**
THZ	**Tophouse**	**18.19**	**198**	P	**P**	**20 03 40.0**	**-0.9**
DSZ	**Denniston Nort**	**18.51**	**201**	P	**P**	**20 03 44.1**	**+0.3**
KHZ	**Kahutara**	**18.63**	**196**	P	**P**	**20 03 44.4**	**-0.5**
LTZ	**Lake Taylor**	**19.31**	**198**	P	**P**	**20 03 50.3**	**-0.8**
RPZ	**Rata Peaks**	**20.52**	**200**	P	**P**	**20 04 00.9**	**-1.3**
	19nm,0.5s,baz=342,slow=1.7,SNR=30						
RPZ	**Rata Peaks**	**20.52**	**200**	eP	**P**	**20 04 01.9**	**-0.3**
ARMA	**Armidale**	**26.14**	**251**	eP	**P**	**20 04 54.2**	**+1.4**
EIDS	**Eidsvold**	**26.59**	**262**	eP	**P**	**20 04 56.9**	**+0.2**
	9.0nm,0.5s,mb4.5						
CNB	**Canberra Magne**	**28.83**	**241**	eP	**P**	**20 05 17.9**	**+1.6**
CTA	**Charters Tower**	**31.88**	**271**	eP	**P**	**20 05 43.2**	**+0.3**
	32nm,0.6s,mb4.9						
CTAO	**Charters Tower**	**31.88**	**271**	eP	**P**	**20 05 43.0**	**0.0**
	37nm,0.6s,mb5.0						
TOO	**Toolangi**	**32.39**	**238**	eP	**P**	**20 05 47.8**	**+0.8**
TAU	**Tasmania Unive**	**32.73**	**228**	eP	**P**	**20 05 50.6**	**+0.7**
	17nm,0.6s,mb4.7						
STKA	**Stephens Creek**	**34.82**	**249**	eP	**P**	**20 06 08.1**	**+0.3**
	9.1nm,0.4s,mb4.6						
STKA	**Stephens Creek**	**34.82**	**249**	P	**P**	**20 06 08.0**	**+0.2**
	11nm,0.4s,mb4.7,baz=89,slow=11,SNR=50						
ARPS	**Mount Arapiles**	**35.09**	**241**	eP	**P**	**20 06 10.2**	**+0.2**
	22nm,0.6s,mb4.8						
ASAR	**Alice Springs**	**42.31**	**261**	P	**P**	**20 07 08.5**	**-0.4**
	6.5nm,0.4s,mb4.4,baz=92,slow=8.3,SNR=108						
ASAR				PcP	PcP	20 08 52.0	-0.2
	1.1nm,0.7s,baz=101,slow=4.8,SNR=3.6						
ASAR				ScP	ScP	20 11 58.7	+0.8
	0.5nm,0.7s,baz=103,slow=4.0,SNR=4.1						
ASAR				S	**S**	**20 12 54.9**	**-0.3**
	0.6nm,0.9s,baz=153,slow=32,SNR=4.2						
WRAB	**Tennant Creek**	**42.75**	**267**	eP	**P**	**20 07 11.2**	**-1.2**
	35nm,0.8s,mb4.8						
WRAB				eScP	ScP	20 11 59.8	+0.1
WRA	**Warramunga Arr**	**42.75**	**267**	P	**P**	**20 07 11.2**	**-1.4**
	22nm,0.4s,mb4.9,baz=101,slow=8.3,SNR=304						
WRA				PcP	PcP	20 08 53.6	-0.2
	1.7nm,0.7s,baz=98,slow=3.4,SNR=5.1						
WRA				ScP	ScP	20 12 00.8	+1.0
	3.7nm,0.8s,baz=103,slow=4.0,SNR=18						
WRA				S	**S**	**20 12 56.5**	**-5.2**
	2.0nm,1.2s,baz=100,slow=14,SNR=4.6						
WRA	**Warramunga Arr**	**42.75**	**267**	P	**P**	**20 07 11.2**	**-1.4**
WRA				PcP	PcP	20 08 53.6	-0.2
WRA				ScP	ScP	20 12 00.8	+1.0
WRA				S	**S**	**20 12 56.5**	**-5.2**
FORT	**Forrest**	**46.43**	**250**	eP	**P**	**20 07 39.7**	**-1.1**
	56nm,0.6s,mb5.2						
FORT	**Forrest**	**46.43**	**250**	eP	**P**	**20 07 39.5**	**-1.3**
	57nm,0.6s,mb5.2						
KAKA	**Kakadu**	**46.77**	**276**	eP	**P**	**20 07 43.6**	**0.0**
	22nm,0.8s,mb4.6						
KAKA	**Kakadu**	**46.77**	**276**	eP	**P**	**20 07 43.4**	**-0.2**
	47nm,0.7s,mb5.0						
FITZ	**Fitzroy Crossi**	**51.17**	**266**	↓i/P	**P**	**20 08 15.9**	**-0.5**
	34nm,0.6s,mb4.9						
FITZ	**Fitzroy Crossi**	**51.17**	**266**	eP	**P**	**20 08 15.9**	**-0.4**
	25nm,0.8s,mb4.6						
SBA	**Scott Base**	**53.67**	**184**	eP	**P**	**20 08 36.7**	**+3.3**
	15nm,1.1s,mb4.2						
KLBR	**Kellerberrin**	**55.07**	**248**	eP	**P**	**20 08 43.2**	**-0.9**
	14nm,0.5s,mb4.5						
MEEK	**Meekatharra**	**55.28**	**254**	eP	**P**	**20 08 44.1**	**-1.6**
MBWA	**Marble Bar**	**55.64**	**260**	eP	**P**	**20 08 47.2**	**-1.0**
MBWA	**Marble Bar**	**55.64**	**260**	eP	**P**	**20 08 47.0**	**-1.2**
	9.8nm,0.6s,mb4.3						
CASY	**Casey**	**59.62**	**206**	eP	**P**	**20 09 14.2**	**-0.5**
	6.9nm,0.6s,mb4.3						
QSPA	**South Pole Qui**	**65.45**	**180**	P	**P**	**20 09 54.7**	**+2.4**
	11nm,0.7s,mb4.6,baz=18,slow=1.6,SNR=72						
QSPA	**South Pole Qui**	**65.45**	**180**	eP	**P**	**20 09 54.4**	**+2.1**
	11nm,0.7s,mb4.6						
KKM	**Kota Kinabalu**	**69.50**	**287**	eP	**P**	**20 10 17.7**	**-0.6**
	14nm,0.5s,mb4.7						
KSM	**Kuching**	**72.62**	**280**	eP	**P**	**20 10 36.0**	**-0.8**
	23nm,0.7s,mb4.8						
MJAR	**Matsushiro Arr**	**72.73**	**325**	P	**P**	**20 10 35.9**	**-1.0**
	1.5nm,0.8s,mb3.6,baz=164,slow=6.1,SNR=5.7						
MAW	**Mawson**	**77.20**	**200**	P	**P**	**20 11 03.0**	**+1.4**
	8.8nm,0.6s,mb4.5,baz=129,slow=6.7,SNR=34						
MAW	**Mawson**	**77.20**	**200**	eP	**P**	**20 11 02.2**	**+0.6**
	2.2nm,0.6s,mb3.9						
KSRS	**Korea Array**	**79.06**	**320**	P	**P**	**20 11 12.2**	**+0.1**
	1.3nm,0.6s,mb3.6,baz=129,slow=5.6,SNR=13						
KULM	**Kulim**	**82.95**	**279**	eP	**P**	**20 11 32.3**	**-0.6**
	6.4nm,0.7s,mb4.3						
ISA	**Isabella**	**83.25**	**46**	eP	**P**	**20 11 33.7**	**-0.1**
	3.1nm,0.7s,mb4.0						
CMB	**Columbia Colle**	**83.47**	**43**	P	**P**	**20 11 35.8**	**+0.9**
NVAR	**Mina Array Bea**	**85.01**	**44**	P	**P**	**20 11 43.1**	**+0.6**
	0.7nm,0.6s,mb3.4,baz=225,slow=9.6,SNR=5.3						
ENH	**Enshi**	**87.19**	**305**	eP	**P**	**20 11 52.6**	**-0.5**
	5.2nm,0.8s,mb4.3						
CMAR	**Chiang Mai Arr**	**90.15**	**290**	P	**P**	**20 12 08.6**	**+1.5**
	2.0nm,0.8s,mb4.0,baz=141,slow=3.6,SNR=11						
CHTO	**Chiang Mai**	**90.30**	**290**	eP	**P**	**20 12 08.4**	**+0.6**
	5.7nm,1.3s,mb4.2						
TXAR	**Lajitas Array**	**90.49**	**58**	P	**P**	**20 12 10.2**	**+1.7**
	1.7nm,0.8s,mb3.9,baz=215,slow=6.4,SNR=17						
BVAR	**Borovoye Array**	**121.25**	**318**	PKP	PKPdf	20 17 55.1	-0.9
	0.5nm,0.5s,baz=152,slow=5.7,SNR=3.5						
ARCES	**ARCESS Array B**	**132.69**	**348**	SKPbc	SKPbc	20 20 59.5	-0.8
	2.4nm,0.8s,baz=34,slow=5.0,SNR=6.4						
FINES	**FINESS Array B**	**139.27**	**341**	SKPbc	SKPbc	20 21 19.2	-1.2
	2.7nm,0.7s,baz=53,slow=3.3,SNR=11						
AKASG	**Malin Array Be**	**145.80**	**327**	PKPbc	PKPbc	20 18 41.4	-1.7
	1.7nm,0.5s,baz=43,slow=4.9,SNR=8.7						
BR131	**Keskin Array S**	**148.33**	**306**	ePKPbc	PKPbc	20 18 49.6	-0.6
BR131				ePKPab	PKPab	20 18 54.8	-0

CLL	Collm	144.93	353	⇓iPKPdf	PKPdf	21 51 07.6	+0.4
	comp=Z,5.0nm,0.8s						
STHS	Stebnicka Huta	145.14	343	eP	PKPdf	21 51 09.9	+2.3
STHS	Stebnicka Huta	145.14	343	ePKP	PKPdf	21 51 09.9	+2.3
UPC	Upice	145.28	350	ePKP	PKPdf	21 51 09.8	+1.9
DPC	Dobruska-Polom	145.38	349	ePKP	PKPdf	21 51 10.5	+2.5
NIE	Niedzica	145.39	344	eP	PKPbc	21 51 10.4	+2.4
PVCC	Panska Ves	145.49	351	ePKP	PKPdf	21 51 10.0	+1.8
CRVS	Cervenica-Dubn	145.55	343	eP	PKPab	21 51 11.1	+2.4
CRVS	Cervenica-Dubn	145.55	343	ePKP	PKPab	21 51 11.1	+2.4
MOX	Moxa	145.73	355	ePKP	PKPdf	21 51 10.5	+1.9
	comp=Z,9.0nm,1.1s						
PRU	Pruhonice	146.02	351	ePKP	PKPab	21 51 12.6	+2.1
NKC	Novy Kostel	146.05	354	ePKP	PKPab	21 51 12.2	+1.6
KECS	Kecovo	146.20	344	eP	PKPdf	21 51 08.5	-1.0
KECS	Kecovo	146.20	344	ePKP	PKPdf	21 51 08.5	-1.0
VRAC	Vranov	146.33	348	PKPbc	PKPbc	21 51 12.0	+1.1
	comp=Z,2.1nm,0.8s,baz=260,slow=2.8,SNR=4.7						
VYHS	Vyhne	146.61	345	eP	PKPab	21 51 14.1	+1.3
VYHS				ePP	PKiKP	21 51 22.8	+8.2
VYHS	Vyhne	146.61	345	ePKP	PKPab	21 51 14.0	+1.2
VYHS				e		21 51 22.8	
GRF	Grafenberg Arr	146.71	355	ePKP	PKPab	21 51 15.1	+2.0
KHC	Kasperske Hory	147.00	352	ePKP	PKPab	21 51 14.7	+0.4
BRTR	Keskin Array B	147.13	320	PKPbc	PKPbc	21 51 14.6	+1.1
	comp=Z,2.1nm,0.8s,baz=112,slow=1.8,SNR=14						
FLN	La Foiliniere	147.28	9	ePKP1	PKPbc	21 51 16.1	+2.5
GRR	Gorron	147.59	10	ePKP1	PKPbc	21 51 17.4	+2.9
CDF	Champ du Feu	148.18	359	ePKP1	PKPbc	21 51 18.1	+2.0
	comp=Z,9.9nm,1.0s						
HAU	Haudompre	148.59	1	ePKP1	PKPbc	21 51 19.1	+2.0
HINF	Hinteralfeld	148.78	360	ePKP1	PKPbc	21 51 18.4	+0.8
LOR	Lormes	149.23	4	ePKP1	PKPbc	21 51 21.4	+2.6
	comp=Z,15nm,1.0s						
SSF	Saint Saulge	149.41	4	ePKP1	PKPbc	21 51 21.2	+1.9
DAVOX	Davos/Dischmat	149.71	356	PKPbc	PKPbc	21 51 20.7	+0.7
	comp=Z,4.4nm,0.8s,baz=18,slow=14,SNR=5.9						
CABF	La Chapelle	149.98	1	ePKP1	PKPbc	21 51 22.4	+1.7
	comp=Z,22nm,1.0s						

MAN 18 21:37:52, 12°.70N×123°.49E, h30km, mb4.1, ML2.9, MS2.7, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUQP	San Andres	1.00	308	eP	Pn	21 38 10.0	0.0
AUQP				eS	Sn	21 38 23.1	-0.1
PVCP	Virac	1.10	36	eP	Pn	21 38 12.3	+0.9
PVCP				eS	Sn	21 38 23.7	-1.8
CNP	Cataman	1.16	99	eP	Pn	21 38 12.7	+0.4
CNP				eS	Sn	21 38 27.1	0.0
RCP	Roxas	1.35	213⇑	eP	Pn	21 38 15.6	+0.8
RCP				eS	Sn	21 38 29.2	-2.5
GQP	Guinayangan	1.57	320	eP	Pn	21 38 19.0	+1.2
BOAC	Boac	1.77	295	eP	Sn	21 38 49.6	+7.6

*IDC **18** 21:42:19.5±1.0, 10°.02N×126°.52E, h0km, mb3.7/9, mb1 3.8/9, mb1mx3.7/22, mbtmp3.7/9, Error ellipse: s-maj=61.1km s-min=17.8km az=67.0*
*ISCJB **18** 21:42:21.7±1.9, 10°.05N±0°.05×126°.8E±0°.2, h34km±17km, mb3.7/10, Error ellipse: s-maj=25.3km s-min=8.1km az=172.6*
*NEIC **18** 21:42:24.5±0.6, 10°.01N×126°.40E, h35km, mb3.7/1, Error ellipse: s-maj=26.7km s-min=6.7km az=77.0*
*MAN **18** 21:42:29, 10°.17N×126°.26E, h14km, mb4.8, ML3.7, MS3.7*

ISC 18 21:42:22.5±3.5, 10°.08N±0°.05×126°.8E±0°.1, h24km±25km, n25, σ1§05/27, mb3.7/10, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	Butuan	1.60	227	eP	Pn	21 42 50.7	+1.4
BUTP				eS	Sn	21 43 02.9	-6.3
MSLP	Maasin	1.91	272	eP	Pn	21 42 53.7	+0.2
BUKP	Musuan	2.78	218	eP	Pn	21 43 11.5	+6.0
TBP	Tagbilaran	2.92	263	eP	Pn	21 43 08.9	+1.5
DAV	Davao City (W)	3.22	202	Pn	Pn	21 43 08.6	-3.0
DAV				eSn	Sn	21 43 46.4	-2.8
GUIM	Jordan	4.17	278	eP	Pn	21 43 25.7	+1.0
RCP	Roxas	4.24	291⇓	eP	Pn	21 43 26.4	+0.7
PVCP	Virac	4.35	324	eP	Pn	21 43 31.2	+4.1
YULB	Yu-li	14.24	339	Pn	Pn	21 45 42.0	-0.8
TPUB	Ta-pu	14.41	337	Pn	Pn	21 45 43.7	-1.3
YHNB	Yeheng	15.40	341	ePn	Pn	21 45 57.7	-0.6
TATO	Taipei	15.65	342	Pn	Pn	21 46 01.0	-0.6
CMAR	Chiang Mai Arr	28.22	290	P	P	21 48 12.3	-1.4
	0.8nm,0.9s,mb3.3,baz=221,slow=28,SNR=2.8						
WRAB	Tennant Creek	30.73	166	eP	P	21 48 37.1	+1.1
	1.0nm,0.7s,mb3.8						
WRA	Warramunga Arr	30.74	166	P	P	21 48 36.5	+0.5
	0.4nm,0.8s,mb3.3,baz=346,slow=9.3,SNR=3.5						
ASAR	Alice Springs	34.25	168	P	P	21 49 07.5	+0.8
	0.1nm,0.4s,mb3.1,baz=342,slow=7.0,SNR=3.2						
ASAR				PcP	PcP	21 51 43.9	+0.7
	0.5nm,0.7s,baz=358,slow=2.7,SNR=4.4						
SONM	Songino Array	41.38	339	P	P	21 50 07.5	+0.8
	0.6nm,0.5s,mb3.5,baz=153,slow=10.0,SNR=4.3						
MKAR	Makanchi Array	52.49	323	P	P	21 51 33.4	-0.2
	0.7nm,0.6s,mb3.8,baz=115,slow=8.4,SNR=8.3						
MKAR				PcP	PcP	21 52 44.3	+0.4
	0.7nm,0.7s,baz=130,slow=4.5,SNR=2.8						
MKAR	Makanchi Array	52.49	323	P	P	21 51 33.4	-0.2
MKAR				PcP	PcP	21 52 44.3	+0.4
ZALV	Zalesovo Beam	55.04	331	P	P	21 51 52.0	-0.1
	0.7nm,0.5s,mb4.0,baz=114,slow=6.7,SNR=3.8						
KURK	Kurchatov	56.52	325	P	P	21 52 02.4	-0.4
	0.5nm,0.5s,mb3.9,baz=126,slow=6.8,SNR=6.7						
BRVK	Borovoye	62.19	325	P	P	21 52 41.7	-0.2
ARCES	ARCESS Array B	84.55	340	P	P	21 54 54.2	+0.8
	2.1nm,1.0s,mb4.2,baz=77,slow=5.2,SNR=6.6						
ARCES	ARCESS Array B	84.55	340	P	P	21 54 54.2	+0.8
FINES	FINESS Array B	86.31	332	P	P	21 55 02.6	+0.4
	1.3nm,0.5s,mb4.4,baz=73,slow=4.6,SNR=13						

*IDC **18** 21:43:01.6±1.3, 20°.37S×71°.69W, h0km, mb3.6/2, mb1 3.5/4, mb1mx3.4/17, mbtmp3.3/4, ML2.9/2, MS2.8/1, Ms1 2.9/1, ms1mx2.5/15, Error ellipse: s-maj=78.5km s-min=25.7km az=101.0*
*ISCJB **18** 21:43:04.9±0.8, 20°.29S±0°.08×71°.7W±0°.2, h33km, Error ellipse: s-maj=23.8km s-min=11.2km az=175.1*
*NEIC **18** 21:43:08.9±1.1, 20°.17S×71°.67W, h52km±11km, mb3.6/1, Error ellipse: s-maj=21.7km s-min=9.9km az=88.0*
NEIC Felt at Iquique.

ISC 18 21:43:07.0±0.8, 20°.33S±0°.08×71°.7W±0°.2, h35km, n15, σ0§96/10, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	5.25	41	Pn	Pn	21 44 22.5	-0.6
	0.5nm,0.3s,baz=203,slow=3.2,SNR=21						
LPAZ				LR	LR	21 46 35.1	
	comp=Z,99nm,20.9s,baz=27,slow=40						
LPAZ	La Paz	5.25	41	ePn	Pn	21 44 23.4	+0.4
LPAZ				LR	LR	21 46 35.0	
LCO	Las Campanas	8.69	174	Pn	Pn	21 45 14.9	+4.7
	10nm,1.1s						
NNA	Nana	9.66	328	Pn	Pn	21 45 23.1	-0.4
SIV	San Ignacio	10.98	69	Pn	Pn	21 45 30.5	-11
	0.3nm,0.3s,baz=274,slow=10,SNR=6.7						
CFAA	Coronel Fontan	11.65	165	Pn	Pn	21 45 50.1	-0.6
	0.0nm,0.3s,baz=354,slow=11,SNR=1.9						
PLCA	Paso Flores	20.36	178	P	P	21 47 38.2	-2.2
	2.5nm,1.0s,baz=22,slow=5.0,SNR=5.3						
PLCA	Paso Flores	20.36	178	eP	P	21 47 42.8	+2.4
	3.2nm,1.0s						
ROSC	El Rosal	25.16	354	eP	P	21 48 29.5	+0.4
QSPA	South Pole Qui	69.85	180	P	P	21 54 14.2	+0.6
	1.0nm,0.7s,baz=261,slow=3.6,SNR=8.6						
WRA	Warramunga Arr	132.55	214	PKP	PKPdf	22 02 19.1	+0.4
	0.2nm,0.6s,baz=151,slow=1.6,SNR=3.0						
ZALV	Zalesovo Beam	141.94	22	PKP	PKPdf	22 02 33.3	-1.5
	0.5nm,0.5s,baz=300,slow=3.2,SNR=3.0						
MKAR	Makanchi Array	146.14	33	PKPbc	PKPbc	22 02 42.7	-0.7
	0.9nm,0.5s,baz=321,slow=4.3,SNR=9.0						
MKAR	Makanchi Array	146.14	33	PKPbc	PKPbc	22 02 42.7	-0.7
SONM	Songino Array	152.52	3	PKPbc	PKPbc	22 03 00.5	+1.0
	0.1nm,0.3s,baz=32,slow=8.5,SNR=2.4						

*IDC **18** 21:46:56.5±0.5, 7°.64S×107°.96E, h0km, mb4.4/22, mb1 4.5/22, mb1mx4.4/28, mbtmp4.4/22, MS3.5/2, Ms1 3.5/2, ms1mx2.5/30, Error ellipse: s-maj=22.3km s-min=12.7km az=55.0*
*DJA **18** 21:47:05, 8°.17S×107°.86E, h55km, MLv5.0/23*
*ISCJB **18** 21:47:06.4±0.5, 7°.97S±0°.05×107°.93E±0°.03, h97km±4km, mb4.4/35, Error ellipse: s-maj=9.0km s-min=3.3km az=23.8*
*NEIC **18** 21:47:10.3±1.1, 7°.65S×108°.09E, h110km±10km, mb4.3/18, Error ellipse: s-maj=9.5km s-min=6.3km az=53.0*
NEIC Felt [III] at Ciamis, Cilacap, Pangandaran and Tasikmalaya.

ISC 18 21:47:07.5±0.5, 7°.99S±0°.05×107°.92E±0°.03, h95km±4km, n117, σ1§43/124, mb4.4/35, 2C, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	Lembang	1.20	345	P	Pn	21 47 27.5	-2.4
LEM				S	Sn	21 47 47.2	+0.5
TNG	Tangerang	2.21	325	P	Pn	21 47 44.5	+1.8
TNG				S	Sn	21 48 11.0	+1.5
SBJI	Serang	2.57	316	P	Pn	21 47 46.7	-0.8
SBJI				S	Sn	21 48 18.7	+0.5
UGM	Wanagama	2.58	88	P	Pn	21 47 45.0	-2.5
UGM				S	Sn	21 48 14.6	-3.6
CGJI	Cibinong	2.60	302	P	Pn	21 47 45.4	-2.5
CGJI				S	Sn	21 48 14.7	-4.2
SMRI	Semarang	2.67	70	P	Pn	21 47 47.6	-1.1
SMRI				S	Sn	21 48 20.9	+0.5
RBSI	Rajabasa	3.04	314	P	Pn	21 47 52.8	-0.9
RBSI				S	Sn	21 48 31.7	+2.4
PCJI	Pacitan	3.23	94	P	Pn	21 47 54.1	-2.1
PCJI				S	Sn	21 48 29.5	-4.4
NGJI	Ngawi	3.56	80	P	Pn	21 48 00.8	+0.1
NGJI				S	Sn	21 48 44.4	+2.5
SJI	Sawahan	3.82	86	P	Pn	21 48 03.5	-0.7
PWJI	Pagerwojo	3.84	91	P	Pn	21 48 02.7	-1.9
PWJI				S	Sn	21 48 48.7	0.0
KLI	Kotabumi	4.35	315	P	Pn	21 48 12.5	+1.0
KRKI	Karangkates	4.49	92	P	Pn	21 48 13.2	-0.1
KLSI		4.56	316	P	Pn	21 48 15.4	+1.1
KLSI				S	Sn	21 49 10.2	+4.0
LWLI	Liwa	4.84	307	P	Pn	21 48 17.8	-0.3
LWLI				S	Sn	21 49 17.8	+4.7
MDSI	Maura Dua	5.10	313	P	Pn	21 48 22.0	+0.4
	0.3nm1μm104nm,0.8s						
TPI	Tanjungpandan	5.21	357	P	Pn	21 48 24.1	+1.0
	0.3nm979nm70nm,0.7s						
GMJI	Gumukmas	5.47	93	P	Pn	21 48 25.8	-0.9
	0.7nm90nm,0.7s						
KMMI	Kalianget	6.07	82	P	Pn	21 48 32.6	-2.1
	0.4nm60nm,1.7s						
MNAI	Manna	6.12	306	P	Pn	21 48 34.8	-0.6
	2.2nm454nm,1.2s						
MNAI				S	Sn	21 49 42.4	-1.6
	2.2nm454nm,1.2s						
ABJI	Asem Bagus	6.25	89	P	Pn	21 48 41.3	+4.0
BYJI	Banyuwangi	6.37	92	P	Pn	21 48 41.5	+2.6
	1.1nm195nm,0.9s						
BYJI				S	Sn	21 49 55.3	+5.0
	1.1nm195nm,0.9s						
KSI	Kapahiang	6.83	309	P	Pn	21 48 45.0	-0.2
	0.6nm120nm,1.8s						
KSI				S	Sn	21 50 03.1	+1.5
	0.6nm120nm,1.8s						
SRBI	Singaraja	7.22	91	P	Pn	21 48 51.5	+1.0
	0.4nm3μm79nm,0.8s						
SRBI				S	Sn	21 50 13.2	+2.3
	0.4nm3μm79nm,0.8s						
STKI	Sintang	8.75	24	P	Pn	21 49 12.3	+0.9
	21nm,0.8s						
KBKI	Kotabaru	9.43	61	P	Pn	21 49 20.2	-0.4
	26nm,1.6s						
KSM	Kuching	9.70	14	ePn	Pn	21 49 23.4	-0.9
	8.8nm,0.6s						
KSM				Sn	Sn	21 51 21.7	+10
PDSI	Padang	10.23	313	P	Pn	21 49 28.9	-2.6
	2μm40nm,0.8s						
MYKOM	Kota Tinggi	10.53	337	P	Pn	21 49 36.9	+1.3
	631nm23nm,0.5s						
SBUM	Sibu	11.22	23	P	Pn	21 49 47.2	+2.2
	7.7nm,1.2s						
COCO	West Island	11.69	248	Pn	Pn	21 49 57.2	+5.9
MNSI	Mandailing Nat	12.06	316	P	Pn	21 49 50.9	-5.3
	18nm,0.5s						
TTSI	Tana Toraja	12.82	68	P	Pn	21 50 08.0	+1.7
	20nm,1.0s						
GSI	Gunungsitoli	13.85	311	P	Pn	21 50 12.7	-7.1
	42nm,1.6s						
KULM	Kulim	15.06	331	ePn	Pn	21 50 33.9	-1.4
KKM	Kota Kinabalu	16.21	31	ePn	Pn	21 50 51.5	+1.7
	10nm,0.8s						
MYLDM	Lahad Datu	16.81	39	P	Pn	21 51 02.3	+5.1
	37nm,1.2s						
MBWA	Marble Bar	17.36	140	eP	Pn	21 51 02.5	-1.4
MBWA				eS	S	21 53 57.8	-20
MBWA	Marble Bar	17.36	140	ePn	Pn	21 51 01.7	-2.2
MBWA				eSn	Sn	21 53 59.4	-18
NLAI	Namlea	19.66	77	P	Pn	21 51 29.8	-1.6
	774nm70nm,0.6s						
FITZ	Fitzroy Crossi	19.95	122	eP	Pn	21 51 33.4	-1.3
	14nm,0.7s						
FITZ				eS	S	21 54 49.6	-22
FITZ	Fitzroy Crossi	19.95	122	P	Pn	21 51 33.3	-1.5
	6.1nm,0.5s,baz=288,slow=5.6,SNR=23						
FITZ	Fitzroy Crossi	19.95	122	eP	Pn	21 51 33.3	-1.4
	6.1nm,0.7s						
FITZ				eS	S	21 54 46.0	-26
FITZ	Fitzroy Crossi	19.95	122	P	Pn	21 51 33.5	-1.2
	23nm,0.7s						
LBMI	Labuha	20.83	70	P	P	21 51 42.2	+0.4
MEEK	Meekatharra	21.14	153	eP	P	21 51 53.1	+8.1
MEEK				eS	S	21 55 31.6	-3.3
KNA	Kununurra	21.79	113	P	P	21 51 52.7	+0.7
	42nm,0.9s,mb4.8						
KAKA	Kakadu	24.56	103	eP	P	21 52 19.4	+0.6
	58nm,0.5s,mb5.3						
CM31	Chiang Mai Arr	27.73	341	P	P	21 52 53.1	+5.8
CMAR	Chiang Mai Arr	27.73	341	P	P	21 52 45.4	-1.9
	0.4nm,0.4s,mb3.3,baz=181,slow=9.4,SNR=5.4						
CMAR				LR	LR	22 03 24.0	
	comp=Z,56nm,21.2s,baz=170,slow=36						
CHTO	Chiang Mai	28.07	342	P	P	21 52 55.5	+5.3
WRA	Warramunga Arr	28.20	118	P	P	21 52 52.3	+0.8
	2.9nm,0.4s,mb4.1,baz=291,slow=11,SNR=4.9						
WRAB	Tennant Creek	28.21	118	eP	P	21 52 52.0	+0.4
	3.2nm,0.5s,mb4.1						
WRAB	Tennant Creek	28.21	118	P	P	21 52 52.4	+0.8
ASAR	Alice Springs	29.37	125	P	P	21 53 03.4	+1.5
	1.0nm,0.7s,mb3.6,baz=303,slow=9.0,SNR=12						
ASAR				PcP	PcP	21 56 07.5	+1.5
	1.5nm,0.6s,baz=299,slow=2.7,SNR=6.4						
YHNB	Yeheng	35.01	22	P	P	21 53 56.7	+5.6
STKA	Stephens Creek	39.30	132⇑	P	P	21 54 29.1	+1.7
	7.2nm,0.5s,mb4.8						
STKA	Stephens Creek	39.30	132	P	P	21 54 29.2	+1.8
	7.2nm,0.4s,mb4.8,baz=311,slow=7.6,SNR=54						
STKA				PcP	PcP	21 56 36.6	+2.2
	2.0nm,0.5s,baz=285,slow=2.5,SNR=3.1						
STKA				LR	LR	22 11 49.9	
	comp=Z,108nm,21.9s,baz=206,slow=38						
STKA	Stephens Creek	39.30	132	eP	P	21 54 29.0	+1.7
	1.4nm,0.4s,mb4.1						
LSA	Lhasa	40.80	337	eP	P	21 54 39.7	-0.1
	5.1nm,0.9s,mb4.3						
HHC	Hu-ho-hao-te	48.71	4	eP	P	21 55 45.3	+2.9
HHC				pP	pP	21 56 08.5	+3.3
HHC				sP	sP	21 56 19.8	+4.0
HHC				PcP	PcP	21 57 10.8	+4.6
HHC				PP	PP	21 57 39.8	+3.3
HHC				ScP	ScP	22 00 54.3	+1.6
HHC				PcS	PcS	22 01 04.5	+2.2
HHC				S	S	22 02 38.4	+0.6
HHC				sS	sS	22 03 19.5	+2.6
HHC				ScS	ScS	22 05 25.8	+0.2
HHC				SS	SS	22 06 05.4	-4.2
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
HHC				pmax	pmax		
	comp=Z,72nm,6.7s						
HHC				LR	LR		
	comp=N,290nm,14.3s						
HHC				LR	LR		
	comp=E,170nm,16.6s						
HHC				LR	LR		
	comp=Z,250nm,13.9s						
TAU	Tasmania Unive	49.00	142	P	P	21 55 49.3	+4.6
CEP	Cherat	53.81	323	P	P	21 56 18.6	-2.1
SONM	Songino Array	55.60	359	P	P	21 56 32.5	-0.7
	comp=Z,1.5nm,0.4s,mb4.3,baz=183,slow=8.7,SNR=12						
SONM				PcP	PcP	21 57 32.2	+0.3
	comp=Z,3.1nm,0.5s,baz=174,slow=3.5,SNR=12						
ULN	Ulaanbaatar	55.62	359	eP	P	21 56 32.5	-0.9
	comp=Z,2.6nm,0.5s,mb4.5						
TKM2	Tokmak 2	58.60	333	eP	P	21 56 53.1	-1.4
	comp=Z,8.1nm,0.5s,mb5.0						
MK31	Makanchi Array	59.12	340	eP	P	21 56 56.3	-1.8
MKAR	Makanchi Array	59.12	340	P	P	21 56 56.1	-2.0
	comp=Z,4.1nm,0.4s,mb4.8,baz=146,slow=7.5,SNR=44						
MKAR				PcP	PcP	21 57 46.3	+0.5
	comp=Z,1.3nm,0.6s,baz=123,slow=7.1,SNR=3.6						
KURK	Kurchatov	63.74	340	P	P	21 57 27.5	-1.6
	comp=Z,3.4nm,0.6s,mb4.4,baz=156,slow=5.5,SNR=16						
KURK				PcP	PcP	21 58 04.5	+0.2
	comp=Z,2.9nm,0.7s,baz=157,slow=3.7,SNR=6.6						
KURK	Kurchatov	63.74	340	eP	P	21 57 28.6	-0.5
	comp=Z,3.7nm,0.8s,mb4.3						
ZALV	Zalesovo Beam	64.72	345	P	P	21 57 34.1	-1.3
	comp=Z,1.6nm,0.3s,mb4.3,baz=156,slow=6.5,SNR=8.0						
ZALV				PcP	PcP	21 58 07.4	-0.9
	comp=Z,1.0nm,0.4s,baz=160,slow=4.7,SNR=4.3						
MAW	Mawson	66.69	197	P	P	21 57 50.6	+2.7
	comp=Z,1.6nm,0.6s,mb4.0,baz=270,slow=9.2,SNR=4.3						
MAW	Mawson	66.69	197	eP	P	21 57 52.0	+4.0
QRN	Al-Qurain	68.36	305	eP	P	21 57 58.8	-0.4
BVAR	Borovoye Array	68.63	337	P	P	21 57 58.9	-1.5
	comp=Z,2.9nm,0.4s,mb4.5,baz=132,slow=8.0,SNR=31						
NAY	Al-Naaiem	69.10	305	eP	P	21 58 03.5	-0.3
NAY				AMb	AMB	21 58 08.2	
	comp=Z,13nm,0.8s,mb4.8						
MIB	Mutribah	69.24	306	eP	P	21 58 04.5	-0.2
MIB				AMb	AMB	21 58 06.4	
	comp=Z,14nm,0.6s,mb4.9						
ABKAR	Akbulak array	70.73	329	eP	P	21 58 12.1	-1.2
	comp=Z,10nm,0.4s,mb5.0						
AKTK	Aktyubinsk	72.44	329	P	P	21 58 23.1	-0.5
AKTO	Aktyubinsk	72.44	329	P	P	21 58 23.1	-0.5
	comp=Z,1.8nm,0.3s,mb4.4,baz=145,slow=7.0,SNR=13						
SYO	Syowa Base	74.89	200⇑	ePcP	PcP	21 58 52.2	+1.1
GNI	Garni	75.30	315	P	P	21 58 47.3	+6.8
SBA	Scott Base	75.90	169	eP	P	21 58 45.7	+2.4
ARU	Arti	75.91	334	eP	P	21 58 43.0	-0.6
LSZ	Lusaka	78.08	256	eP	P	21 58 59.7	+3.0
	comp=Z,2.5nm,0.5s,mb4.2						
KIV	Kislovodsk	78.22	318	P	P	21 58 57.9	+1.0
ASF	Jabal al Asfar	78.47	305	P	P	21 59 00.0	+1.5
	comp=Z,2.6nm,0.6s,mb4.1,baz=338,slow=3.7,SNR=4.5						
LBTB	Lobatse	79.74	246	P	P	21 59 08.3	+2.6
	comp=Z,2.6nm,0.5s,mb4.3,baz=212,slow=12,SNR=6.6						
LBTB	Lobatse	79.74	246	eP	P	21 59 08.5	+2.9
	comp=Z,2.6nm,0.6s,mb4.2						
BOSA	Boshof	79.81	242	P	P	21 59 08.6	+2.6
	comp=Z,3.2nm,0.4s,mb4.5,baz=129,slow=4.8,SNR=20						
MMAI	Mount Meron Ar	79.92	306	P	P	21 59 07.5	+1.1
	comp=Z,1.6nm,0.4s,mb4.2,baz=95,slow=8.5,SNR=7.0						
TIXI	Tiksi	80.68	7	eP	P	21 59 06.9	-2.7
	comp=Z,2.8nm,0.8s,mb4.1						
QSPA	South Pole Qui	82.00	180	eP	P	21 59 18.8	+2.2
	comp=Z,1.2nm,0.4s,mb4.1						
CSS	Prodhromos	82.11	307	eP	P	21 59 17.5	-0.5
	comp=Z,6.1nm,0.7s,mb4.5						
BR131	Keskin Array S	83.17	312	eP	P	21 59 21.7	-1.7
	comp=Z,1.8nm,0.7s,mb4.0						
BRTR	Keskin Array B	83.17	312	P	P	21 59 23.5	+0.2
	comp=Z,2.0nm,0.7s,mb4.1,baz=140,slow=6.8,SNR=17						
TSUM	Tsumeb	87.73	251	P	P	21 59 49.4	+2.9
	comp=Z,2.5nm,0.6s,mb4.5,baz=88,slow=6.2,SNR=11						
TSUM	Tsumeb	87.73	251	eP	P	21 59 49.6	+3.1
	comp=Z,2.0nm,0.5s,mb4.4						
IDI	Anoyia	88.92	306	P	P	21 59 53.1	+1.4
	comp=Z,1.8nm,0.5s,mb4.4,baz=169,slow=12,SNR=8.1						
AKASG	Malin Array Be	89.04	321	P	P	21 59 51.3	-0.6
	comp=Z,0.8nm,0.4s,mb4.1,baz=90,slow=4.9,SNR=5.6						
GVD	Gavdhos	89.49	305	eP	P	21 59 55.4	+1.0
BUR08	Bucovina Ar. S	90.97	318	eP	P	22 00 01.7	+0.7
FINES	FINESS Array B	93.07	332	P	P	22 00 10.3	-0.1
	comp=Z,1.9nm,0.6s,mb4.6,baz=122,slow=6.9,SNR=8.6						
ARCES	ARCESS Array B	94.78	340	P	P	22 00 17.4	-0.6
	comp=Z,0.3nm,0.3s,mb4.2,baz=112,slow=5.0,SNR=8.2						
PDAR	Pinedale Array	132.24	37	PKP	PKPdf	22 06 12.7	+2.0
	comp=Z,0.6nm,0.6s,baz=306,slow=5.2,SNR=3.6						
SCHQ	Schefferville	133.10	356	PKP	PKPdf	22 06 12.7	+0.7
	comp=Z,1.8nm,0.7s,baz=270,slow=7.1,SNR=3.4						
CPUP	Villa Florida	143.00	202

SHL			*ex*	x	21 59 32.0	
GUN	**Gumba**	**7.73 228**	*eP*	**Pn**	**21 57 17.3**	**+1.4**
GUN	**Gumba**	**7.73 228**	*eP*	**Pn**	**21 57 17.3**	**+1.4**
KKN	**Kakani**	**8.20 230**	*eP*	**Pn**	**21 57 23.8**	**+1.5**
	comp=E,14nm,0.6s					
KKN	**Kakani**	**8.20 230**	*eP*	**Pn**	**21 57 23.8**	**+1.5**
KKN			pmax	pmax		
	comp=Z,14nm,0.6s					
KKN	**Kakani**	**8.20 230**	*eP*	**Pn**	**21 57 23.8**	**+1.5**
	comp=Z,14nm,0.6s					
PKI	**Pulchoki**	**8.27 229**	*eP*	**Pn**	**21 57 22.0**	**-1.2**
	comp=Z,6.0nm,0.3s					
PKI	**Pulchoki**	**8.27 229**	*eP*	**Pn**	**21 57 22.9**	**-0.3**
PKI			pmax	pmax		
	comp=Z,22nm,0.8s					
PKI	**Pulchoki**	**8.27 229**	*eP*	**Pn**	**21 57 22.9**	**-0.3**
	comp=Z,22nm,0.8s					
PKIN	**Phulchoki**	**8.27 229**	*eP*	**Pn**	**21 57 22.9**	**-0.4**
	comp=Z,22nm,0.8s					
DMN	**Daman**	**8.43 230**	*eP*	**Pn**	**21 57 25.5**	**0.0**
	comp=Z,20nm,0.9s					
DMN	**Daman**	**8.43 230**	*eP*	**Pn**	**21 57 25.5**	**0.0**
	comp=Z,20nm,0.9s					
LZH	**Lanzhou**	**9.85 70**	*eP*	**Pn**	**21 57 50.6**	**+5.7**
LZH			pP		21 57 55.9	
LZH			sP		21 57 57.8	
LZH			*eS*	**Sn**	**21 59 44.6**	**+9.1**
LZH			sS		21 59 50.1	
LZH			SS		21 59 56.8	
LZH			pmax	pmax		
	comp=Z,16nm,1.2s					
LZH			pmax	pmax		
	comp=Z,99nm,4.9s					
LZH			LR	LR		
	comp=E,430nm,8.1s					
LZH			LR	LR		
	comp=Z,560nm,10.2s					
ENH	**Enshi**	**14.84 97**	Pn	**Pn**	**21 58 52.3**	**-0.9**
	comp=Z,7.2nm,0.8s					
CHTO	**Chiang Mai**	**15.52 156**	*eP*	**Pn**	**21 59 02.0**	**-0.3**
CHTO			pmax	pmax		
	comp=Z,1.0nm,0.6s					
CHTO	**Chiang Mai**	**15.52 156**	*eP*	**Pn**	**21 59 02.0**	**-0.2**
	comp=Z,1.4nm,0.6s					
MK31	**Makanchi Array**	**15.57 333**	*eP*	**Pn**	**21 59 03.1**	**+0.4**
MK31	**Makanchi Array**	**15.57 333**	*ePn*	**Pn**	**21 59 03.1**	**+0.3**
MKAR	**Makanchi Array**	**15.57 333**	Pn	**Pn**	**21 59 01.8**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=136,slow=14,SNR=3.5					
MKAR			LR	LR	22 05 15.8	
	comp=Z,32nm,20.4s,baz=153,slow=38					
MKAR	**Makanchi Array**	**15.57 333**	*ceP*	**Pn**	**21 59 07.5**	**+4.8**
MKAR			pmax	pmax		
	comp=Z,1.0nm,0.4s					
MKAR	**Makanchi Array**	**15.57 333**	Pn	**Pn**	**21 59 01.8**	**-1.0**
MKAR			LR	LR	22 05 15.8	
CM31	**Chiang Mai Arr**	**15.85 157**	Pn	**Pn**	**21 59 07.4**	**+0.8**
CMAR	**Chiang Mai Arr**	**15.85 157**	Pn	**Pn**	**21 59 05.3**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=331,slow=12,SNR=12					
CMAR	**Chiang Mai Arr**	**15.85 157**	Pn	**Pn**	**21 59 05.3**	**-1.3**
TKM2	**Tokmak 2**	**16.35 311**	*eP*	**Pn**	**21 59 16.6**	**+3.7**
TKM2			pmax	pmax		
	comp=Z,4.0nm,1.1s					
TKM2	**Tokmak 2**	**16.35 311**	*eP*	**Pn**	**21 59 16.6**	**+3.8**
	comp=Z,4.1nm,1.1s					
UCH	**Uchtor**	**16.72 308**	*eP*	**Pn**	**21 59 21.2**	**+3.6**
	comp=Z,6.3nm,0.7s					
AAK	**Ala-Archa**	**16.92 309**	Pn	**Pn**	**21 59 21.7**	**+1.6**
	comp=Z,0.0nm,0.3s,baz=127,slow=5.1,SNR=4.4					
AAK			LR	LR	22 06 52.2	
	comp=Z,99nm,21.2s,baz=283,slow=41					
AAK	**Ala-Archa**	**16.92 309**	*ceP*	**Pn**	**21 59 21.2**	**+1.1**
AAK			pmax	pmax		
	comp=Z,7.0nm,2.5s					
AAK	**Ala-Archa**	**16.92 309**	*eP*	**Pn**	**21 59 22.9**	**+2.8**
	comp=Z,3.9nm,0.8s					
AML	**Almayashu**	**17.23 306**	*eP*	**Pn**	**21 59 24.1**	**+0.1**
	comp=Z,3.2nm,0.8s					
EKS2	**Erkin-Say**	**17.40 308**	*ePn*	**Pn**	**21 59 27.2**	**+1.0**
	comp=Z,4.4nm,0.7s					
SONM	**Songino Array**	**18.00 32**	P	**Pn**	**21 59 36.8**	**+3.3**
	comp=Z,0.1nm,0.3s,baz=215,slow=10,SNR=14					
SONM	**Songino Array**	**18.00 32**	P	**Pn**	**21 59 36.8**	**+3.3**
ULN	**Ulaanbaatar**	**18.32 33**	*eP*	**Pn**	**21 59 37.8**	**+0.4**
ULN			pmax	pmax		
	comp=Z,4.0nm,0.9s					
ULN	**Ulaanbaatar**	**18.32 33**	*eP*	**Pn**	**21 59 37.8**	**+0.4**
	comp=Z,3.5nm,0.9s					
KBL	**Kabul**	**19.42 280**	*eP*	**Pn**	**21 59 47.2**	**-3.7**
KBL			pmax	pmax		
	comp=Z,6.0nm,0.9s					
KBL	**Kabul**	**19.42 280**	*eP*	**Pn**	**21 59 47.2**	**-3.7**
	comp=Z,6.3nm,0.9s					
TLY	**Talaya**	**20.16 21**	P	**P**	**21 59 57.1**	**-0.5**
TLY			pmax	pmax		
	comp=Z,11nm,0.8s					
TLY	**Talaya**	**20.16 21**	P	**P**	**21 59 57.1**	**-0.5**
	comp=Z,11nm,0.8s					
KURK	**Kurchatov**	**20.18 334**	P	**P**	**21 59 57.2**	**-0.6**
	comp=Z,4.8nm,0.7s,baz=146,slow=10,SNR=19					
KURK			LR	LR	22 07 56.6	
	comp=Z,28nm,19.9s,MS2.6,baz=170,slow=37					
KURK	**Kurchatov**	**20.18 334**	*ceP*	**P**	**21 59 59.6**	**+1.8**
KURK			pmax	pmax		
	comp=Z,7.0nm,0.8s					
KURK	**Kurchatov**	**20.18 334**	*eP*	**P**	**21 59 57.5**	**-0.3**
	comp=Z,7.1nm,0.8s					
BJT	**Baijiatuau**	**20.21 64**	*eP*	**P**	**21 59 57.2**	**-1.0**
BJT	**Baijiatuau**	**20.21 64**	*eP*	**P**	**21 59 57.2**	**-1.0**
QIZ	**Qiongzhong**	**21.07 128**	P	**P**	**22 00 10.5**	**+2.8**
QIZ			S	**S**	**22 04 05.8**	**+3.6**
ZAA0	**Zalesovo Array**	**21.39 348**	*eP*	**P**	**22 00 09.4**	**-1.4**
ZALV	**Zalesovo Beam**	**21.39 348**	P	**P**	**22 00 11.3**	**+0.5**
	comp=Z,6.0nm,0.8s,mb4.0,baz=161,slow=9.2,SNR=13					
ZALV			LR	LR	22 08 25.0	
	comp=Z,19nm,19.6s,MS2.5,baz=42,slow=36					
ZALV	**Zalesovo Beam**	**21.39 348**	P	**P**	**22 00 11.3**	**+0.5**
ZALV			LR	LR	22 08 25.0	
NVS	**Novosibirsk**	**22.53 346**	*eP*	**P**	**22 00 21.2**	**-1.9**
NVS			*e*		22 05 23.8	
NVS			pmax	pmax		
	comp=N,13nm,1.4s					
NVS			pmax	pmax		
	comp=E,6.0nm,1.4s					
NVS			pmax	pmax		
	comp=Z,11nm,1.4s,mb4.1					
BVAR	**Borovoye Array**	**25.29 328**	P	**P**	**22 00 50.0**	**+0.4**
	comp=Z,2.3nm,0.6s,mb3.9,baz=136,slow=11,SNR=9.8					
BVAR	**Borovoye Array**	**25.29 328**	P	**P**	**22 00 50.0**	**+0.3**
BVAR			pmax	pmax		
	comp=Z,2.0nm,0.6s					
BVAR	**Borovoye Array**	**25.29 328**	P	**P**	**22 00 50.0**	**+0.4**
BRVK	**Borovoye**	**25.36 328**	*ceP*	**P**	**22 00 51.1**	**+0.8**
BRVK			pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.1					
BRVK	**Borovoye**	**25.36 328**	*eP*	**P**	**22 00 50.0**	**-0.3**
	comp=Z,3.7nm,0.6s,mb4.1					
ABKAR	**Akbulak array**	**28.89 313**	*eP*	**P**	**22 01 21.6**	**-0.5**
AKTK	**Aktyubinsk**	**30.48 315**	P	**P**	**22 01 36.1**	**0.0**
AKTO	**Aktyubinsk**	**30.48 315**	P	**P**	**22 01 36.1**	**0.0**
	comp=Z,3.5nm,0.8s,mb4.2,baz=114,slow=8.7,SNR=13					
AKTO	**Aktyubinsk**	**30.48 315**	P	**P**	**22 01 36.2**	**0.0**
AKTO			pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2					
SVE	**Sverdlovsk**	**32.06 327**	⇓*eP*	**P**	**22 01 50.9**	**+0.9**
SVE			pmax	pmax		
	comp=Z,11nm,0.8s,mb4.7					
SVE			MLR	MLR		
	comp=Z,89nm,14.0s,MS3.6					
ARU	**Arti**	**32.82 325**	*d iP*	**P**	**22 01 57.8**	**+1.2**
ARU			*e*		22 03 04.0	
ARU			S	**S**	**22 07 14.0**	**+0.5**
ARU			SS	SS	22 09 10.8	-24
ARU			pmax	pmax		
	comp=Z,8.0nm,1.7s,mb4.4					
ARU	**Arti**	**32.82 325**	*eP*	**P**	**22 01 55.3**	**-1.3**
YAK	**Yakutsk**	**37.30 28**	*eP*	**P**	**22 02 33.2**	**-1.9**
YAK	**Yakutsk**	**37.30 28**	*eP*	**P**	**22 02 33.2**	**-1.9**
GNI	**Garni**	**38.45 294**	P	**P**	**22 02 44.8**	**-0.4**
	comp=Z,1.9nm,0.6s,mb4.0,baz=310,slow=3.2,SNR=4.0					
GNI	**Garni**	**38.45 294**	*ceP*	**P**	**22 02 46.5**	**+1.3**
GNI			pmax	pmax		
	comp=Z,15nm,2.5s					
GNI	**Garni**	**38.45 294**	*eP*	**P**	**22 02 45.2**	**-0.1**
	comp=Z,5.8nm,0.9s,mb4.3					
GOF	**Gofitskoye**	**39.49 302**	*eP*	**P**	**22 02 55.5**	**+1.7**
KIV	**Kislovodsk**	**39.76 301**	*eP*	**P**	**22 02 55.6**	**-0.5**
KIV	**Kislovodsk**	**39.76 301**	*eP*	**P**	**22 02 55.6**	**-0.5**
BR131	**Keskin Array S**	**46.96 296**	*eP*	**P**	**22 03 53.9**	**-0.4**
	comp=Z,2.9nm,0.8s,mb4.3					
BRTR	**Keskin Array B**	**46.96 296**	P	**P**	**22 03 52.9**	**-1.4**
	comp=Z,3.0nm,0.8s,mb4.3,baz=93,slow=7.4,SNR=18					
BRTR	**Keskin Array B**	**46.96 296**	P	**P**	**22 03 52.9**	**-1.4**
BRTR			pmax	pmax		
	comp=Z,3.0nm,0.8s					
BRTR	**Keskin Array B**	**46.96 296**	P	**P**	**22 03 52.9**	**-1.4**
SEY	**Seymchan**	**47.40 33**	*ceP*	**P**	**22 04 00.5**	**+3.2**
AKASG	**Malin Array Be**	**48.58 311**	P	**P**	**22 04 04.5**	**-2.2**
	comp=Z,2.5nm,1.0s,mb4.2,baz=76,slow=7.0,SNR=5.6					
AKASG	**Malin Array Be**	**48.58 311**	P	**P**	**22 04 04.5**	**-2.2**
AKASG			pmax	pmax		
	comp=Z,3.0nm,1.0s					
AKASG	**Malin Array Be**	**48.58 311**	P	**P**	**22 04 04.5**	**-2.2**
FINES	**FINESS Array B**	**50.19 325**	P	**P**	**22 04 17.7**	**-1.1**
	comp=Z,1.3nm,0.7s,mb4.1,baz=100,slow=7.2,SNR=3.3					
FINES			LR	LR	22 27 24.8	
	comp=Z,45nm,18.2s,MS3.5,baz=81,slow=38					
FINES	**FINESS Array B**	**50.19 325**	P	**P**	**22 04 17.7**	**-1.1**
FINES			pmax	pmax		
	comp=Z,1.0nm,0.7s					
FINES			MLR	MLR		
	comp=Z,45nm,18.2s					
FINES	**FINESS Array B**	**50.19 325**	P	**P**	**22 04 17.7**	**-1.1**
FINES			LR	LR	22 27 24.8	
ARCES	**ARCESS Array B**	**51.21 335**	P	**P**	**22 04 26.6**	**+0.2**
	comp=Z,1.5nm,0.5s,mb4.1,baz=92,slow=7.4,SNR=12					
ARCES	**ARCESS Array B**	**51.21 335**	P	**P**	**22 04 26.6**	**+0.2**
ARCES			pmax	pmax		
	comp=Z,2.0nm,0.5s					
ARCES	**ARCESS Array B**	**51.21 335**	P	**P**	**22 04 26.6**	**+0.2**
KWP	**Kalwaria Pacla**	**52.87 310**	*eP*	**P**	**22 04 37.8**	**-1.2**
KWP			pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3					
KWP	**Kalwaria Pacla**	**52.87 310**	*eP*	**P**	**22 04 37.8**	**-1.2**
	comp=Z,4.5nm,0.9s,mb4.4					
BILL	**Bilibino**	**53.62 27**	*eP*	**P**	**22 04 47.7**	**+3.4**
BILL			*e*		22 05 53.3	
BILL			pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2					
NB2	**NORSAR Subarra**	**57.37 325**	P	**P**	**22 05 10.4**	**-1.0**
	comp=Z,1.0nm,0.6s,mb4.0,baz=80,slow=7.4					
NOA	**NORSAR Array B**	**57.37 325**	P	**P**	**22 05 10.5**	**-0.9**
	comp=Z,1.4nm,0.7s,mb4.1,baz=80,slow=7.0,SNR=6.8					
NOA			LR	LR	22 29 25.0	
	comp=Z,18nm,20.0s,MS3.2,baz=80,slow=36					
NOA	**NORSAR Array B**	**57.37 325**	P	**P**	**22 05 10.5**	**-0.9**
NOA			pmax	pmax		
	comp=Z,1.0nm,0.7s					
NOA			MLR	MLR		
	comp=Z,19nm,20.0s					
NOA	**NORSAR Array B**	**57.37 325**	P	**P**	**22 05 10.5**	**-0.9**
NOA			LR	LR	22 29 25.0	
TIP	**Timpagrande**	**59.68 299**	P	**P**	**22 05 27.4**	**-0.4**
STU	**Stuttgart**	**61.65 312**	P	**P**	**22 05 40.8**	**-0.3**
STU	**Stuttgart**	**61.65 312**	P	**P**	**22 05 40.8**	**-0.3**
WRA	**Warramunga Arr**	**66.33 137**	P	**P**	**22 06 12.2**	**-0.1**
	comp=Z,3.1nm,0.9s,mb4.3,baz=331,slow=7.1,SNR=18					
WRA	**Warramunga Arr**	**66.33 137**	P	**P**	**22 06 12.2**	**0.0**
WRA			pmax	pmax		
	comp=Z,3.0nm,0.9s					
WRA	**Warramunga Arr**	**66.33 137**	P	**P**	**22 06 12.2**	**-0.1**
ASAR	**Alice Springs**	**69.05 139**	P	**P**	**22 06 30.1**	**+0.8**
	comp=Z,3.9nm,0.9s,mb4.3,baz=327,slow=6.4,SNR=23					
ASAR	**Alice Springs**	**69.05 139**	P	**P**	**22 06 30.1**	**+0.8**
ASAR			pmax	pmax		
	comp=Z,4.0nm,0.9s					
ASAR	**Alice Springs**	**69.05 139**	P	**P**	**22 06 30.1**	**+0.8**
COLD	**Coldfoot**	**69.36 22**	*eP*	**P**	**22 06 31.8**	**+1.1**
	comp=Z,2.6nm,0.9s,mb4.2					
EGAK	**Eagle**	**73.76 21**	*eP*	**P**	**22 06 56.1**	**-1.1**
	comp=Z,2.7nm,0.9s,mb4.2					

NIED ***18*** *22:00:00,23.°80N×122.°50E,h20km,Mw4.2 Best double couple: M₀2.07000×10¹⁵ NP1:φ=66.00000°,δ84.00000°, λ54.00000°. NP2:φ=327.00000°,δ36.00000°,λ170.00000°.*
NEIC ***18*** *22:00:09.3±0.8,23.°75N×122.°63E,h10km,mb4.3/10,Error ellipse: s-maj=14.7km s-min=7.9km az=144.0*
TAP ***18*** *22:00:11.9,23.°79N×122.°55E,h22km,ML4.4,D*
ISCJB ***18*** *22:00:11.7±0.4,23.°72N±0.°02×122.°58E±0.°02,h25km±3km, mb4.0/25,Error ellipse: s-maj=3.2km s-min=2.2km az=155.8*
JMA ***18*** *22:00:12.6±0.4,23.°81N×122.°50E,h28km,M3.9*
BJI ***18*** *22:00:13.0,24.°01N×122.°28E,h10km,mB4.6/2,mb4.0/3, ML3.5/3,Ms3.6/2,Ms7 3.6/2*
IDC ***18*** *22:00:14.5±1.0,23.°94N×122.°68E,h38km±7km,mb3.7/15, mb1 3.8/15,mb1mx3.8/25,mbtmp3.7/15,MS3.5/2, Ms1 3.6/2,ms1mx2.8/36,Error ellipse: s-maj=31.6km s-min=14.7km az=65.0*

ISC 18 22:00:10.9±0.5,23.°73N±0.°02×122.°56E±0.°01,h10km±2km, h39km±1.3km;pP-P,n118,σ1§19/184,mb4.0/25,1C-10D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.84**	**29**	P	**Pg**	**22 00 27.6**	**+0.5**
YOJ				*eS*	**Sg**	**22 00 37.7**	**-0.3**
HWA	**Hwalien**	**0.91**	**286**	P	**Pg**	**22 00 27.9**	**-0.5**
HWA	baz=269			S	**Sg**	**22 00 40.6**	**+0.4**
TEGC	**Jichi Village**	**0.94**	**269**	*eP*	**Pg**	**22 00 29.1**	**+0.3**
TEGC	baz=265			*eS*	**Sg**	**22 00 41.1**	**0.0**
TWD	**Chiawan**	**0.95**	**292**	⇓*iP*	**Pg**	**22 00 28.6**	**-0.5**
TWD	baz=273			S	**Sg**	**22 00 40.6**	**-0.9**
NACB	**Ninganchiao**	**0.99**	**297**	*ePn*	**Pn**	**22 00 29.0**	**-1.8**
NACB				*eSn*	**Sn**	**22 00 42.2**	**-2.7**
ENA	**Nanau**	**1.02**	**313**	*i P*	**Pg**	**22 00 30.5**	**-0.1**
ENA	baz=309			S	**Sg**	**22 00 45.4**	**+1.5**
ESL	**Shilin**	**1.04**	**275**	⇓*iP*	**Pg**	**22 00 29.7**	**-1.1**
ESL	baz=270			*eS*	**Sg**	**22 00 41.8**	**-2.6**
TWC	**Suao**	**1.09**	**324**	P	**Pb**	**22 00 31.4**	**-0.4**
TWC	baz=320			*eS*	**Sg**	**22 00 46.1**	**0.0**
EHY	**Hungye**	**1.16**	**259**	*i P*	**Pb**	**22 00 32.2**	**-0.8**
EHY	baz=255			*eS*	**Sb**	**22 00 46.6**	**-1.5**
HATJ	**Hateruma jima**	**1.19**	**74**	P	**Pb**	**22 00 33.9**	**+0.4**
HATJ				*eS*	**Sb**	**22 00 49.0**	**+0.1**
YULB	**Yu-li**	**1.21**	**254**	*ePn*	**Pn**	**22 00 32.8**	**-1.0**
YULB				*eSn*	**Sn**	**22 00 47.1**	**-3.1**
TWF1	**Yuli**	**1.22**	**252**	P	**Pn**	**22 00 33.2**	**-0.8**
TWF1	baz=248			*eS*	**Sb**	**22 00 48.5**	**-1.3**
IRIF	**Iriomote-Funau**	**1.23**	**60**	P	**Pn**	**22 00 34.6**	**+0.5**
IRIF				*eS*	**Sb**	**22 00 51.2**	**+1.1**
WHF	**Hehuan Shan**	**1.25**	**290**	⇓*iP*	**Pn**	**22 00 33.5**	**-0.9**
ILA	**Ilan**	**1.27**	**324**	P	**Pn**	**22 00 34.7**	**0.0**
ILA	baz=308			S	**Sb**	**22 00 52.6**	**+1.3**
TWE	**Neicheng**	**1.28**	**321**	P	**Pn**	**22 00 34.4**	**-0.4**
TWE	baz=318			S	**Sb**	**22 00 52.6**	**+0.5**
ENTT	**Nioudou**	**1.28**	**315**	⇓*iP*	**Pn**	**22 00 34.4**	**-0.5**
ENTT	baz=296			*eS*	**Sb**	**22 00 53.2**	**+1.5**
NNS	**Nan Shan**	**1.30**	**303**	P	**Pn**	**22 00 34.2**	**-0.8**
NNS	baz=287			S	**Sb**	**22 00 52.6**	**+0.5**
TWT	**Tachien**	**1.37**	**293**	*i P*	**Pn**	**22 00 35.9**	**-0.2**
TWB1	**Santiao Chiao**	**1.38**	**338**	P	**Pn**	**22 00 35.6**	**-0.5**
JKRS	**Kuro-shima**	**1.42**	**69**	P	**Pn**	**22 00 37.4**	**+0.7**
JKRS				*eS*	**Sn**	**22 00 56.5**	**+1.0**
YHNB	**Yeheng**	**1.43**	**311**	*ePn*	**Pn**	**22 00 36.4**	**-0.5**
YHNB				*eSn*	**Sn**	**22 00 53.3**	**-2.5**
NSK	**Sanguang**	**1.45**	**311**	⇓*iP*	**Pn**	**22 00 36.8**	**-0.3**
NSK	baz=290			*eS*	**Sn**	**22 00 56.6**	**+0.4**
SSLB	**Suanglung**	**1.47**	**273**	*ePn*	**Pn**	**22 00 36.6**	**-0.9**
SSLB				*eSn*	**Sn**	**22 00 53.2**	**-3.5**
YUS	**Yu-Shan**	**1.49**	**261**	⇓*iP*	**Pn**	**22 00 38.0**	**+0.3**
YUS	baz=256			*eS*	**Sn**	**22 00 56.0**	**-1.3**
NWF	**Wu-fen Shan**	**1.51**	**332**	⇓*iP*	**Pn**	**22 00 37.8**	**-0.3**
NWF	baz=327			*eS*	**Sn**	**22 00 59.1**	**+1.2**
ELDTW	**Lidau**	**1.52**	**250**	⇓*iP*	**Pn**	**22 00 37.3**	**-0.8**
ELDTW	baz=234			*eS*	**Sn**	**22 00 55.0**	**-2.9**
SMLT	**Sun Moon Lake**	**1.53**	**276**	⇓*iP*	**Pn**	**22 00 38.1**	**-0.1**
SMLT	baz=271			S	**Sn**	**22 00 56.5**	**-1.7**
TWA	**Mucha**	**1.53**	**325**	P	**Pn**	**22 00 38.5**	**+0.2**
TWA	baz=319			*eS*	**Sn**	**22 00 59.4**	**+1.1**
TYC	**Yuchr**	**1.57**	**277**	P	**Pn**	**22 00 38.5**	**-0.3**
TYC	baz=272			S	**Sn**	**22 00 57.3**	**-1.8**
JIJ	**Ishigaki jima**	**1.58**	**66**	P	**Pn**	**22 00 38.9**	**0.0**
JIJ				*eS*	**Sn**	**22 01 01.1**	**+1.7**
TATO	**Taipei**	**1.58**	**322**	*ePn*	**Pn**	**22 00 38.8**	**-0.2**
TATO				*eSn*	**Sn**	**22 00 57.2**	**-2.3**
TAP1	**Taipei**	**1.61**	**324**	*eP*	**Pn**	**22 00 39.8**	**+0.4**
TAP1	baz=318			*eS*	**Sn**	**22 01 01.5**	**+1.3**
TTN	**Taitung**	**1.62**	**234**	*eP*	**Pn**	**22 00 38.7**	**-0.9**
TTN	baz=232			*eS*	**Sn**	**22 00 59.6**	**-0.9**
ALS	**Alishan**	**1.62**	**263**	P	**Pn**	**22 00 40.0**	**+0.4**
ALS	baz=258			*eS*	**Sn**	**22 01 00.3**	**-0.3**
TWG	**Pinlang**	**1.64**	**237**	*ePn*	**Pn**	**22 00 38.7**	**-1.1**
TWG				*eSn*	**Sn**	**22 00 57.8**	**-3.1**
TWG	**Pinlang**	**1.64**	**237**	*i P*	**Pn**	**22 00 39.2**	**-0.6**
TWG	baz=225			*eS*	**Sn**	**22 00 58.2**	**-2.7**
NSTT	**Nanjuang**	**1.68**	**303**	P	**Pn**	**22 00 41.2**	**+0.8**
NSTT	baz=285			*eS*	**Sn**	**22 01 01.9**	**-0.1**
TWS1	**Kuangyinshan**	**1.72**	**323**	*i P*	**Pn**	**22 00 41.2**	**+0.3**
WNT	**Mingjian**	**1.73**	**275**	P	**Pn**	**22 00 42.0**	**+1.1**
WNT	baz=270			*eS*	**Sn**	**22 01 03.6**	**+0.6**
CHN5	**Tsauling**	**1.73**	**266**	*i P*	**Pn**	**22 00 41.9**	**+0.9**
CHN5	baz=261			*eS*	**Sn**	**22 01 03.4**	**+0.2**
TWQ1	**Liyutan**	**1.75**	**291**	⇓*iP*	**Pn**	**22 00 42.5**	**+1.3**
TWQ1	baz=285			*eS*	**Sn**	**22 01 05.2**	**+1.6**
STYT	**Tauyuan**	**1.75**	**252**	P	**Pn**	**22 00 41.4**	**+0.1**
STYT	baz=239			S	**Sn**	**22 01 02.6**	**-1.0**
NCU	**National Centr**	**1.76**	**315**	*eP*	**Pn**	**22 00 42.2**	**+0.8**
NCU	baz=308			*eS*	**Sn**	**22 01 04.9**	**+1.0**
TWY	**Chenhua**	**1.77**	**331**	P	**Pn**	**22 00 42.3**	**+0.7**
TCU	**Taichung**	**1.77**	**284**	P	**Pn**	**22 00 42.9**	**+1.3**
TCU	baz=278			*eS*	**Sn**	**22 01 04.7**	**+0.5**
NSY	**Sanyi**	**1.78**	**293**	P	**Pn**	**22 00 43.1**	**+1.4**
NSY	baz=286			*eS*	**Sn**	**22 01 05.1**	**+0.7**
HSN	**Hsinchu**	**1.80**	**307**	*eP*	**Pn**	**22 00 43.2**	**+1.2**
HSN	baz=301			*eS*	**Sn**	**22 01 05.7**	**+0.8**
TPUB	**Ta-pu**	**1.82**	**257**	*ePn*	**Pn**	**22 00 42.6**	**+0.3**
TPUB				*eSn*	**Sn**	**22 01 02.2**	**-3.3**
WGK	**Gukeng**	**1.83**	**269**	*eP*	**Pn**	**22 00 43.9**	**+1.4**
WGK	baz=264			*eS*	**Sn**	**22 01 06.3**	**+0.7**
CHN4	**Tsaushan**	**1.84**	**259**	P	**Pn**	**22 00 43.9**	**+1.3**
CHN4	baz=254			*eS*	**Sn**	**22 01 07.3**	**+1.3**
WTP	**Ta-pu**	**1.85**	**255**	P	**Pn**	**22 00 43.4**	**+0.7**
WTP	baz=251			*eS*	**Sn**	**22 01 06.0**	**-0.1**
ECL	**Taimali**	**1.86**	**233**	P	**Pn**	**22 00 41.8**	**-0.9**
ECL	baz=231			*eS*	**Sn**	**22 01 03.2**	**-3.1**
LAY	**Lan-yu**	**1.92**	**209**	*i P*	**Pn**	**22 00 42.4**	**-1.3**
SGST	**Jiashian**	**1.93**	**251**	P	**Pn**	**22 00 45.0**	**+1.3**
SGST	baz=239			*eS*	**Sn**	**22 01 09.6**	**+1.6**
CHN1	**Nanshi**	**1.94**	**254**	P	**Pn**	**22 00 45.3**	**+1.4**
CHN1	baz=250			*eS*	**Sn**	**22 01 09.6**	**+1.2**
TWK	**Hsinying**	**1.96**	**257**	*eP*	**Pn**	**22 00 45.5**	**+1.4**
TWK	baz=253			*eS*	**Sn**	**22 01 10.1**	**+1.4**
CHY	**Chiayi**	**1.97**	**264**	*eP*	**Pn**	**22 00 45.9**	**+1.5**
CHY	baz=258			*eS*	**Sn**	**22 01 09.7**	**+0.6**
SSD	**Sandimen**	**2.02**	**242**	*eP*	**Pn**	**22 00 45.4**	**+0.3**
SSD	baz=234			*eS*	**Sn**	**22 01 10.6**	**+0.1**
TAW	**Tawu**	**2.05**	**229**	P	**Pn**	**22 00 45.5**	**+0.1**
TAW	baz=238			*eS*	**Sn**	**22 01 07.6**	**-3.5**
EAST	**Anshuo**	**2.07**	**230**	*eP*	**Pn**	**22 00 45.0**	**-0.7**
WTCT	**Ta-ch'eng**	**2.09**	**274**	*eP*	**Pn**	**22 00 47.2**	**+1.3**
WTCT	baz=268			*eS*	**Sn**	**22 01 13.7**	**+1.6**
WSF	**Szhu**	**2.15**	**268**	*eP*	**Pn**	**22 00 48.2**	**+1.5**
WSF	baz=262			*eS*	**Sn**	**22 01 14.7**	**+1.3**
SGLT	**Jiouru**	**2.15**	**243**	*eP*	**Pn**	**22 00 50.8**	**+4.0**
SGLT	baz=240			*eS*	**Sn**	**22 01 18.6**	**+5.0**
JTJ	**Tarama**	**2.16**	**65**	P	**Pn**	**22 00 47.5**	**+0.6**
CHN8	**Yiju**	**2.19**	**260**	P	**Pn**	**22 00 48.5**	**+1.2**
CHN8	baz=255			S	**Sn**	**22 01 15.4**	**+0.9**
SCZT	**Fangliau**	**2.24**	**233**	*eP*	**Pn**	**22 00 48.6**	**+0.5**
SCLT	**Jiali**	**2.24**	**256**	S	**Sn**	**22 01 17.8**	**+2.0**
TAI1	**Yung-k'ang**	**2.25**	**253**	*eP*	**Pn**	**22 00 48.0**	**-0.2**
TAI1	baz=248			*eS*	**Sn**	**22 01 18.4**	**+2.5**
KAU	**Kaohsiung**	**2.37**	**241**	*eP

	baz=252						
TSEB	Hengchuen, Pin	2.38	220	eP		Pn	22 00 51.3 +1.3
	baz=221						
TSEB				eS		Sn	22 01 20.7 +1.5
	baz=221						
HEN	Hengchun	2.40	225	eP		Pn	22 00 52.5 +2.2
	baz=224						
HEN				eS		Sn	22 01 20.1 +0.4
	baz=224						
TWK1	Hengchun	2.40	223	eP		Pn	22 00 51.2 +0.9
	baz=223						
TWK1				eS		Sn	22 01 19.5 -0.2
	baz=223						
TWP	Hsiaoliuchiu	2.45	236	eP		Pn	22 00 54.8 +3.9
	baz=247						
TWP				eS		Sn	22 01 26.0 +5.1
	baz=247						
PNG	Penghu	2.76	267	P		Pn	22 00 55.6 +0.5
	baz=251						
PNG				eS		Sn	22 01 27.8 -0.8
	baz=251						
JOGS	Gusukube	2.79	68	P		Pn	22 00 57.6 +2.0
QZH	Quanzhou	3.82	289	⇑iPn		Pn	22 01 09.0 -0.7
QZH				Sn		Sn	22 01 50.4 -4.3
QZH				smax			
	comp=N,160nm,0.6s						
QZH				smax			
	comp=E,170nm,0.6s						
QZH				LR		LR	
	comp=N,1μm,9.9s						
QZH				LR		LR	
	comp=E,690nm,9.6s						
QZH				LR		LR	
	comp=Z,890nm,12.8s						
KNM	Kinmen	3.83	281	eP		Pn	22 01 11.3 +1.4
	baz=270						
KNM				eS		Sn	22 01 54.3 -0.8
	baz=270						
JKE	Kume jima 2	4.62	55	P		Pn	22 01 20.5 -0.3
JAGN	Aguni-jima	5.11	55	P		Pn	22 01 27.3 -0.2
JOW	Kunigami	6.03	58	P		Pn	22 01 38.7 -1.4
JTK	Tokunoshima	7.04	54	P		Pn	22 01 51.6 -2.4
KSRS	Korea Array	14.43	17	Pn		Pn	22 03 37.5 +2.3
	comp=Z,0.4nm,0.3s,baz=196,slow=11,SNR=13						
KSRS				LR		LR	22 10 15.0
	comp=Z,151nm,18.1s,baz=195,slow=42						
MAJO	Matsushiro	18.57	43	eP		Pn	22 04 26.0 -2.2
	comp=Z,2.5nm,0.4s						
CMAR	Chiang Mai Arr	22.64	261	P		P	22 05 14.0 +1.8
	comp=Z,0.4nm,0.6s,mb3.0,baz=67,slow=7.1,SNR=3.4						
GUMO	Guam	23.39	112	eP		P	22 05 15.1 -5.0
	comp=Z,64nm,1.2s,mb4.9						
GTA	Gaotai	24.80	314	eP		P	22 05 33.3 +0.3
GTA				pP			22 05 37.5
GTA				sP		sP	22 05 40.9 +3.6
GTA				pmax		pmax	
	comp=Z,5.0nm,1.0s,mb4.0						
ULN	Ulaanbaatar	27.07	337	eP		P	22 05 51.8 -1.7
	comp=Z,1.0nm,0.4s,mb3.7						
SONM	Songino Array	27.29	336	P		P	22 05 53.9 -1.5
	comp=Z,1.3nm,0.5s,mb3.7,baz=154,slow=9.9,SNR=9.0						
SONM				pP		pP	22 06 05.0 +6.5
	comp=Z,3.0nm,0.9s,baz=146,slow=8.5,SNR=4.4						
LSA	Lhasa	28.63	289	eP		P	22 06 03.8 -3.8
	comp=Z,9.2nm,0.6s,mb4.7						
TLY	Talaya	31.47	337	eP		P	22 06 30.5 -2.0
	comp=Z,1.1nm,0.5s,mb3.9						
MK31	Makanchi Array	39.54	316	eP		P	22 07 41.5 -0.4
MKAR	Makanchi Array	39.54	316	P		P	22 07 41.1 -0.8
	comp=Z,2.1nm,0.5s,mb4.2,baz=103,slow=10,SNR=26						
MKAR				pP		pP	22 07 52.2 +7.2
	comp=Z,2.3nm,0.5s,baz=101,slow=11,SNR=7.3						
MKAR				PcP		PcP	22 09 48.8 -0.6
	comp=Z,0.2nm,0.2s,baz=85,slow=3.2,SNR=2.3						
MKAR	Makanchi Array	39.54	316	P		P	22 07 41.1 -0.8
MKAR				pP		pP	22 07 52.2 +7.2
MKAR				PcP		PcP	22 09 48.8 -0.6
ZALV	Zalesovo Beam	41.31	327	P		P	22 07 54.3 -2.1
	comp=Z,1.1nm,0.5s,mb3.8,baz=125,slow=7.4,SNR=5.6						
FITZ	Fitzroy Crossi	41.68	176	P		P	22 07 55.7 -4.2
TKM2	Tokmak 2	43.03	308	eP		P	22 08 10.3 -0.4
	comp=Z,7.7nm,0.8s,mb4.5						
KURK	Kurchatov	43.25	320	P		P	22 08 10.8 -1.5
	comp=Z,0.6nm,0.3s,mb3.7,baz=108,slow=9.4,SNR=5.2						
UCH	Uchtor	43.70	307	eP		P	22 08 13.8 -2.3
	comp=Z,7.3nm,1.1s,mb4.3						
AAK	Ala-Archa	43.78	307	P		P	22 08 17.0 +0.2
	comp=Z,1.1nm,0.3s,mb4.0,baz=158,slow=9.1,SNR=4.3						
AAK	Ala-Archa	43.78	307	eP		P	22 08 16.5 -0.2
AML	Almayashu	44.28	307	eP		P	22 08 18.6 -2.2
	comp=Z,1.8nm,0.4s,mb4.2						
EKS2	Erkin-Say	44.31	307	eP		P	22 08 19.8 -1.1
WRA	Warramunga Arr	44.90	164	P		P	22 08 26.1 +0.3
	comp=Z,0.7nm,0.7s,mb3.6,baz=346,slow=8.5,SNR=4.0						
KBL	Kabul	47.49	296	eP		P	22 08 46.8 +0.6
	comp=Z,3.0nm,0.6s,mb4.4						
ASAR	Alice Springs	48.38	166	P		P	22 08 54.1 +1.0
	comp=Z,0.4nm,0.5s,mb3.7,baz=347,slow=8.1,SNR=4.7						
BVAR	Borovoye Array	48.82	321	P		P	22 08 55.0 -1.2
	comp=Z,1.1nm,0.6s,mb4.1,baz=100,slow=8.0,SNR=10						
BRVK	Borovoye	48.89	321	eP		P	22 08 54.0 -2.7
ABKAR	Abkulak array	54.66	315	eP		P	22 09 39.4 -0.5
	comp=Z,2.0nm,0.6s,mb4.3						
ARU	Arti	56.23	323	P		P	22 09 48.3 -2.8
STKA	Stephens Creek	58.21	161	P		P	22 10 06.2 +0.9
	comp=Z,1.6nm,0.7s,mb4.1,baz=331,slow=10,SNR=4.4						
DZM	Mont Dzumac	62.41	133	P		P	22 10 29.3 -4.9
ARCES	ARCESS Array B	70.43	338	P		P	22 11 23.4 -1.5
	comp=Z,1.6nm,0.9s,mb4.0,baz=49,slow=9.7,SNR=3.1						
ARCES				LR		LR	22 49 24.5
	comp=Z,40nm,18.4s,baz=122,slow=42						
FINES	FINESS Array B	72.47	330	P		P	22 11 35.7 -1.7
	comp=Z,1.4nm,0.7s,mb4.0,baz=49,slow=5.3,SNR=7.8						
FINES	FINESS Array B	72.47	330	P		P	22 11 35.7 -1.7
BRTR	Keskin Array B	74.45	307	P		P	22 11 49.4 -0.1
	comp=Z,1.5nm,0.8s,mb4.0,baz=101,slow=6.4,SNR=10.0						
BRTR				pP		pP	22 12 00.4 +7.6
	comp=Z,0.8nm,0.5s,baz=103,slow=5.3,SNR=5.0						
NOA	NORSAR Array B	79.21	333	P		P	22 12 14.4 -1.5
	comp=Z,1.1nm,0.8s,mb3.9,baz=60,slow=5.1,SNR=2.6						
YKA	Yellowknife Ar	82.90	23	P		P	22 12 34.4 -1.1
	comp=Z,2.2nm,0.8s,mb4.2,baz=306,slow=5.7,SNR=3.9						

IDC 18 22:13:06.4±2.6, 6°.07S×129°.76E, h0km, mb3.7/1, mb1 3.5/3, mb1mx3.3/17, mbtmp3.3/3, ML2.7/1, Error ellipse: s-maj=169.3km s-min=33.0km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.49	163	Pn	Pn	22 16 32.6	-0.3
	0.0nm,0.3s,baz=345,slow=12,SNR=2.4						
WRA				Sn	Sn	22 19 01.1	-13
	0.2nm,0.3s,baz=347,slow=22,SNR=4.5						
ASAR	Alice Springs	17.95	168	P	Pn	22 17 17.7	+0.2
	0.1nm,0.3s,baz=345,slow=10,SNR=3.7						
MKAR	Makanchi Array	67.32	327	P	P	22 24 03.2	+0.2
	0.2nm,0.3s,baz=119,slow=8.0,SNR=3.7						

IDC 18 22:23:32.6±0.9, 16°.43S×173°.36W, h0km, mb3.9/9, mb1 4.2/10, mb1mx4.0/21, mbtmp3.9/10, ML1.8/1, MS3.7/6, Ms1 3.7/6, ms1mx3.4/19, Error ellipse: s-maj=48.9km s-min=16.7km az=139.0

ISCJB 18 22:23:36.0±0.5, 16°.5S±0°.1×173°.5W±0°.1, h33km, mb4.1/14, MS3.8/5, Error ellipse: s-maj=24.1km s-min=8.9km az=36.0

NEIC 18 22:23:37.9±0.4, 16°.49S×173°.37W, h35km, mb4.5/5, Error ellipse: s-maj=18.5km s-min=8.0km az=125.0

ISC 18 22:23:37.9±0.5, 16°.5S±0°.1×173°.5W±0°.1, h35km, n54, σ0s57/21, mb4.1/14, MS3.8/5, 1C-1D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	3.02	32	Pn	Pn	22 24 18.6	-4.7
	8.0nm,0.3s,baz=60,slow=13,SNR=8.8						
AFI				Sn	Sn	22 24 51.3	-7.0
	28nm,0.3s,baz=69,slow=20,SNR=7.8						
AFI				LR	LR	22 25 27.8	
	comp=Z,678nm,19.9s,baz=265,slow=39						
AFI	Afiamalu	3.02	32	Pn	Pn	22 24 21.7	-1.6
AFI				eSn	Sn	22 24 59.6	+1.4
AFI				LR	LR	22 25 27.8	
DZM	Mont Dzumac	19.77	251	eLR	LR	22 33 46.7	
	308nm,24.3s						
PPT	Papeete	22.85	96	eLR	LR	22 33 27.0	
	75nm,22.2s						
URZ	Urewera	23.23	199	P	P	22 28 41.8	-0.3
	3.2nm,0.4s,mb4.1,baz=39,slow=14,SNR=5.9						
URZ	Urewera	23.23	199	eP	P	22 28 41.4	-0.7
	5.3nm,0.5s,mb4.2						
STKA	Stephens Creek	43.47	241	P	P	22 31 38.1	+0.2
	0.8nm,0.7s,mb3.6,baz=90,slow=15,SNR=2.6						
STKA				LR	LR	22 48 35.2	
	comp=Z,86nm,20.2s,MS3.6,baz=25,slow=34						
WRA	Warramunga Arr	49.56	258	P	P	22 32 25.8	-0.1
	0.4nm,0.5s,mb3.7,baz=94,slow=7.0,SNR=5.8						
ASAR	Alice Springs	49.74	253	P	P	22 32 27.6	+0.4
	3.5nm,0.6s,mb4.6,baz=87,slow=8.3,SNR=8.0						
FITZ	Fitzroy Crossi	57.95	259	eP	P	22 33 27.4	+0.1
SBA	Scott Base	62.18	185	P	P	22 33 56.0	+0.7
CASY	Casey	69.42	205	eP	P	22 34 41.9	-0.1
	7.4nm,1.2s,mb4.5						
MJAR	Matsushiro Arr	69.73	320	LR	LR	22 58 53.3	
	comp=Z,80nm,21.9s,MS3.9,baz=80,slow=30						
QSPA	South Pole Qui	73.57	180	eP	P	22 35 07.1	+0.2
	2.0nm,0.7s,mb4.2						
YBH	Yreka Blue Hor	74.48	37	P	P	22 35 12.9	+0.2
	1.6nm,1.0s,mb3.9,baz=284,slow=4.2,SNR=3.8						
NVAR	Mina Array Bea	75.16	42	P	P	22 35 17.1	+0.4
	0.6nm,0.7s,mb3.6,baz=217,slow=8.9,SNR=4.6						
KSRS	Korea Array	76.89	316	LR	LR	23 07 56.2	
	comp=Z,28nm,19.3s,MS3.6,baz=210,slow=35						
TXAR	Lajitas Array	81.25	56	P	P	22 35 50.7	0.0
	0.3nm,0.9s,mb3.2,baz=271,slow=7.8,SNR=2.9						
TRF	Thorofare Moun	81.69	10	eP	P	22 35 52.3	+0.1
	3.9nm,0.7s,mb4.5						
MCK	McKinley	82.18	11	eP	P	22 35 54.5	-0.3
	9.5nm,0.9s,mb4.7						
PDAR	Pinedale Array	83.09	42	P	P	22 35 59.5	-0.5
	0.6nm,0.6s,mb3.8,baz=300,slow=4.1,SNR=3.4						
PDAR				LR	LR	23 09 24.3	
	comp=Z,40nm,18.2s,MS3.8,baz=58,slow=33						
COLA	College	83.42	11	eP	P	22 36 01.9	+0.6
	4.8nm,0.3s,mb5.0						
PLCA	Paso Flores	88.82	132	LR	LR	23 06 20.8	
	comp=Z,77nm,18.9s,MS4.2,baz=131,slow=29						
INK	Inuvik	89.32	14	P	P	22 36 28.9	-1.2
	1.3nm,0.8s,mb4.3,baz=178,slow=4.3,SNR=3.4						
OJC	Ojcow	144.69	345	eP	PKPdf	22 43 10.0	-0.9
CLL	Collm	144.87	353	iPKPdf	PKPdf	22 43 11.7	+0.5
STHS	Stebnicka Huta	145.04	343	eP	PKPbc	22 43 12.4	+1.5
STHS	Stebnicka Huta	145.04	343	ePKP	PKPdf	22 43 12.4	+0.9
UPC	Upice	145.21	349	ePKP	PKPdf	22 43 13.5	+1.7
NIE	Niedzica	145.29	344	eP	PKPdf	22 43 14.3	+2.4
DPC	Dobruska-Polom	145.31	349	ePKP	PKPdf	22 43 14.1	+2.2
BUR08	Bucovina Ar. S	145.33	338	PKP	PKPdf	22 43 12.6	+0.5
OKC	Ostrava-Krasne	145.43	347	ePKP	PKPdf	22 43 14.7	+2.5
PVCC	Panska Ves	145.43	351	ePKP	PKPdf	22 43 14.2	+2.1
CRVS	Cervenica-Dubn	145.45	343	eP	PKPdf	22 43 14.7	+2.5
CRVS	Cervenica-Dubn	145.45	343	ePKP	PKPdf	22 43 14.7	+2.5
MOX	Moxa	145.68	354	ePKP	PKPdf	22 43 14.5	+1.9
	14nm,1.6s						
PRU	Pruhonice	145.96	351	ePKP	PKPab	22 43 16.2	+1.9
NKC	Novy Kostel	146.00	353	ePKP	PKPab	22 43 15.9	+1.5
KECS	Kecovo	146.10	343	eP	PKPab	22 43 18.0	+3.1
KECS	Kecovo	146.10	343	ePKP	PKPab	22 43 18.0	+3.1
VYHS	Vyhne	146.52	345	eP	PKPab	22 43 17.8	+1.3
VYHS	Vyhne	146.52	345	ePKP	PKPab	22 43 17.8	+1.3
GRF	Grafenberg Arr	146.66	354	ePKP	PKPab	22 43 17.2	+0.2
KHC	Kasperske Hory	146.93	352	ePKP	PKPab	22 43 18.6	+0.5
BRTR	Keskin Array B	146.96	320	PKPbc	PKPbc	22 43 19.1	+2.0
	2.5nm,1.0s,baz=108,slow=2.7,SNR=11						
CONA	Conrad Observa	147.72	348	⇑iPKiKP	PKPab	22 43 20.5	-0.7
	3.6nm,0.8s						
CDF	Champ du Feu	148.15	359	ePKP1	PKPbc	22 43 21.0	+1.0
SSF	Saint Saulge	149.40	4	ePKP1	PKPbc	22 43 23.2	-0.1
	10nm,1.0s						
ABTA	Abfaltersbach	149.42	352	⇓iPKiKP	PKiKP	22 43 24.6	+0.1
	6.7nm,1.1s						
AVF	Avril sur Loir	149.66	4	ePKP1	PKPbc	22 43 24.4	+0.5
	33nm,1.4s						
CABF	La Chapelle	149.95	1	ePKP1	PKPbc	22 43 25.1	+0.5
	30nm,1.1s						
LPL	La Plagne	151.05	360	ePKP1	PKPbc	22 43 29.0	+1.7
LPG	La Plagne	151.07	360	ePKP1	PKPbc	22 43 29.2	+1.9
	7.5nm,0.8s						

CASC 18 22:35:18.5±2.1, 8°.35N×82°.80W, h13km±11km, MD3.7, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	Volcan	0.46	14	eP	Pg	22 35 28.2	+0.6
BRU2				eS	Sg	22 35 35.4	+1.6
ACR	Cerro Adams	0.47	310	eP	Pg	22 35 27.4	-0.5
ACR				eS	Sg	22 35 35.0	+0.8
BAR1		1.02	331	eP	Pb	22 35 37.0	-1.1
BUS	Buena Vista	1.53	322	eP	Pn	22 35 45.3	-0.2
BUS				eS	Sn	22 36 07.5	+2.3
URSC	Urasca	1.77	327	eP	Pn	22 35 48.9	+0.1
URSC				eS	Sn	22 36 11.3	+0.1
LAJ	Bijagual	1.99	319	eP	Pn	22 35 56.9	+5.0
PRS1	Puriscal	2.21	318	eP	Pn	22 35 54.8	0.0
PRS1				eS	Sn	22 36 21.2	-0.8

ISCJB 18 22:46:24.8±1.4, 35°.52N±0°.06×27°.31E±0°.09, h13km±12km, Error ellipse: s-maj=14.2km s-min=6.2km az=37.8

ATH 18 22:46:25.0, 35°.62N×27°.20E, h18km, MD3.6/10

NEIC 18 22:46:25.0, 35°.62N×27°.20E, h18km, MD3.6(ATH), ML3.7(THE), After ATH.

CSEM 18 22:46:25.3±0.6, 35°.51N×27°.36E, h15km, MD3.6, Error ellipse: s-maj=14.0km s-min=5.9km az=132.0

THE 18 22:46:27.2, 35°.59N×27°.13E, h0km±3km, ML3.7/1, Error ellipse: s-maj=11.1km s-min=2.3km az=120.0

ISC 18 22:46:24.7±1.2, 35°.48N±0°.05×27°.34E±0°.07, h12km±4km, n60, σ1s12/86, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.16	296	ePb	Pg	22 46 28.3	0.0
KARP				eSb	Sg	22 46 30.9	0.0
KARP	Karpathos	0.16	296	ePB	Pg	22 46 28.3	0.0
KARP				eSB	Sg	22 46 30.9	0.0
KARP	Karpathos	0.16	296	ePb	Pg	22 46 28.3	0.0
KARP				eSb	Sg	22 46 30.9	0.0
ARG	Arkhangelos	0.98	41	ePn	Pn	22 46 43.5	-0.7
ARG	Arkhangelos	0.98	41	ePN	Pn	22 46 43.5	-0.7
ARG	Arkhangelos	0.98	41	ePn	Pn	22 46 43.5	-0.7
ZKR	Zakros	0.98	249	ePb	Pb	22 46 42.2	-1.5
ZKR				eSn	Sn	22 46 56.3	-1.9
ZKR	Zakros	0.98	249	P	Pg	22 46 42.4	-1.2
ZKR				S	Sg	22 46 57.4	+0.9
ZKR	Zakros	0.98	249	ePB	Pb	22 46 42.2	-1.5
ZKR				eSN	Sn	22 46 56.3	-1.9
ZKR	Zakros	0.98	249	P	Pg	22 46 42.4	-1.2
ZKR				S	Sg	22 46 57.4	+0.9
NIS1	Nisyros Isl.	1.13	353	P	Pb	22 46 46.1	-0.1
NIS1				S	Sb	22 47 02.0	+1.1
NIS1	Nisyros Isl.	1.13	353	P	Pb	22 46 46.1	-0.1
NIS1				S	Sb	22 47 02.0	+1.1
NPS	Neapolis	1.43	262	ePn	Pn	22 46 50.4	0.0
NPS				eSn	Sn	22 47 08.0	-1.1
NPS	Neapolis	1.43	262	ePN	Pn	22 46 50.4	0.0
NPS				eSN	Sn	22 47 08.0	-1.1
NPS	Neapolis	1.43	262	ePn	Pn	22 46 50.4	0.0
NPS				eSn	Sn	22 47 08.0	-1.1
LAST	Lasithi	1.55	259	ePn	Pn	22 46 52.8	+0.7
LAST				eSn	Sn	22 47 13.5	+1.3
LAST	Lasithi	1.55	259	P	Pn	22 46 52.7	+0.6
LAST				S	Sn	22 47 13.6	+1.4
LAST	Lasithi	1.55	259	ePN	Pn	22 46 52.8	+0.7
LAST				eSN	Sn	22 47 13.5	+1.3
LAST	Lasithi	1.55	259	P	Pn	22 46 52.7	+0.6
LAST				eSn	Sn	22 47 13.5	+1.3
THR3	Thira Island,	1.83	301	P	Pn	22 46 56.6	+0.7
THR3	Thira Island,	1.83	301	P	Pn	22 46 56.6	+0.7
THR3	Thira Island,	1.83	301	P	Pn	22 46 56.6	+0.7
THR5	Thira Island,	1.87	301	P	Pn	22 46 56.4	-0.1
THR5	Thira Island,	1.87	301	P	Pn	22 46 56.4	-0.1
THR5	Thira Island,	1.87	301	P	Pn	22 46 56.4	-0.1
IDI	Anoyia	2.01	265	ePb	Pb	22 46 58.1	-3.0
IDI				eSn	Sn	22 47 23.4	-0.1
IDI	Anoyia	2.01	265	ePB	Pb	22 46 58.1	-3.0
IDI				eSN	Sn	22 47 23.4	-0.1
SIVA	Sivas	2.12	258	ePn	Pn	22 47 01.0	+1.1
SIVA				S	Sn	22 47 28.0	+1.8
SIVA	Sivas	2.12	258	P	Pn	22 47 01.8	+1.9
SIVA				S	Sn	22 47 28.0	+1.8
SIVA	Sivas	2.12	258	ePN	Pn	22 47 01.0	+1.1
SIVA	Sivas	2.12	258	ePn	Pn	22 47 01.0	+1.1
SIVA	Sivas	2.12	258	P	Pn	22 47 01.8	+1.9
SIVA				S	Sn	22 47 28.0	+1.8
APE	Apeiranthos	2.16	318	ePn	Pn	22 47 00.1	-0.4
APE				S	Sn	22 47 25.6	-1.6
APE	Apeiranthos	2.16	318	P	Pn	22 47 00.2	-0.3
APE				S	Sn	22 47 25.6	-1.6
APE	Apeiranthos	2.16	318	ePN	Pn	22 47 00.1	-0.4
APE	Apeiranthos	2.16	318	P	Pn	22 47 00.2	-0.3
APE				S	Sn	22 47 25.6	-1.6
SMG	Samos	2.26	350	ePn	Pn	22 47 01.4	-0.5
SMG	Samos	2.26	350	ePN	Pn	22 47 01.4	-0.5
SMG	Samos	2.26	350	ePn	Pn	22 47 01.4	-0.5
VAM	Vamos	2.56	269	ePn	Pn	22 47 07.0	+1.0
VAM	Vamos	2.56	269	ePN	Pn	22 47 07.0	+1.0
VAM	Vamos	2.56	269	ePn	Pn	22 47 07.0	+1.0
GVD	Gavdhos	2.74	257	ePb	Pb	22 47 10.5	-3.1
GVD	Gavdhos	2.74	257	P	Pn	22 47 11.2	+2.8
GVD	Gavdhos	2.74	257	ePB	Pb	22 47 10.5	-3.1
GVD	Gavdhos	2.74	257	P	Pn	22 47 11.2	+2.8
KARN	Karanos	2.79	269	P	Pn	22 47 09.1	-0.1
KARN				S	Sn	22 47 41.7	-1.1
KARN	Karanos	2.79	269	ePN	Pn	22 47 09.0	-0.2
KARN	Karanos	2.79	269	P	Pn	22 47 09.1	-0.1
KARN				S	Sn	22 47 41.7	-1.1
CHOS	Chios island	3.08	341	ePN	Pn	22 47 12.9	-0.3
CHOS	Chios island	3.08	341	ePn	Pn	22 47 12.9	-0.3
KYTH	Kithira	3.58	284	ePn	Pn	22 47 20.2	+0.1
KYTH	Kithira	3.58	284	ePN	Pn	22 47 20.2	+0.1
KYTH	Kithira	3.58	284	ePn	Pn	22 47 20.2	+0.1
VLI	Veliai	3.77	290	ePn	Pn	22 47 23.1	+0.4
VLI	Veliai	3.77	290	ePN	Pn	22 47 23.1	+0.4
VLI	Veliai	3.77	290	ePn	Pn	22 47 23.1	+0.4
ITM	Ithomi	4.69	293	ePn	Pn	22 47 36.4	+1.2
ITM	Ithomi	4.69	293	ePN	Pn	22 47 36.4	+1.2
ITM	Ithomi	4.69	293	ePn	Pn	22 47 36.4	+1.2

ISCJB 18 22:52:39.9±0.6, 35°.89N±0°.02×29°.64E±0°.02, h8km±4km, mb3.7/10, MS2.8/3, Error ellipse: s-maj=3.3km s-min=2.2km az=40.1

ISK 18 22:52:40.3, 35°.98N×29°.50E, h5km, ML3.7

DDA 18 22:52:40.7, 36°.00N×29°.68E, h8km±2km, Md3.6

IDC 18 22:52:40.5±1.1, 36°.18N×29°.56E, h0km, mb3.7/8, mb1 3.9/13, mb1mx3.8/27, mbtmp3.8/13, ML3.8/5, MS2.8/6, Ms1 2.8/6, ms1mx2.5/29, Error ellipse: s-maj=25.0km s-min=16.5km az=18.0

CSEM 18 22:52:41.3±0.1, 35°.96N×29°.61E, h2km, MD3.6, Error ellipse: s-maj=3.9km s-min=3.9km az=179.0

NEIC 18 22:52:41.5, 36°.10N×29°.51E, h5km, mb3.9/2, ML3.7(ISK), After ISK.

THE 18 22:52:42.6, 35°.93N×29°.58E, h0km±2km, ML4.6/2, Error ellipse: s-maj=4.7km s-min=2.2km az=151.0

GII 18 22:52:45.0±1.1, 35°.78N×29°.43E, h31km, Md2.8/2

HLW 18 22:52:46.1, 35°.78N×29°.54E, h11km±16km, Md3.8, Ml3.5

ISC 18 22:52:41.0±0.6, 35°.93N±0°.02×29°.63E±0°.02, h2km±4km, n229, σ1s13/284, mb3.7/10, MS2.8/3, 12C-3D, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSL	Kastellorizon	0.23	351	eP	Pg	22 52 43.6	-1.7
AKAS	Kas	0.31	356	P	Pg	22 52 45.3	-1.6
AKAS				S	Sg	22 52 48.5	-2.3
AKAS	Kas	0.31	356	⇓iP	Pg	22 52 45.3	-1.6
AKAS				iS	Sg	22 52 48.5	-2.3
AKAS	Kas	0.31	356	iP	Pg	22 52 45.3	-1.6
AKAS				iS	Sg	22 52 48.5	-2.3
ELL	Elmali	0.85	15	ePG	Pg	22 52 55.1	-2.1
ELL				eSG	Sg	22 53 10.2	+1.9
ELL	Elmali	0.85	15	Pg	Pg	22 52 56.1	-1.2
ELL				Sg	Sg	22 53 07.1	-1.2
ELL	Elmali	0.85	15	Pg	Pg	22 52 56.1	-1.2
ELL				Sg	Sg	22 53 07.1	-1.2
GLHS	Glhisar (BURDU	1.23	355	ePN	Pn	22 53 03.1	-2.1
GLHS				eSN	Sn	22 53 21.7	-0.7
GLHS	Glhisar (BURDU	1.23	355	ePn	Pn	22 53 03.1	-2.1
GLHS				eSn	Sn	22 53 21.7	-0.7
ARG	Arkhangelos	1.25	284	P	Pg	22 53 05.1	+0.2
ARG	Arkhangelos	1.25	284	eP	Pg	22 53 04.4	-0.5
ARG	Arkhangelos	1.25	284	P	Pg	22 53 05.1	+0.2
ANTB	Antalya	1.27	40	ePN	Pn	22 53 06.0	+0.2
ANTB				eSN	Sn	22 53 26.1	+2.7
ANTB	Antalya	1.27	40	ePn	Pn	22 53 06.1	+0.3
ANTB				eSn	Sn	22 53 26.2	+2.7
GOLH	Golhisar	1.31	358	P	Pg	22 53 05.2	-0.9
GOLH				S	Sg	22 53 27.4	+4.4
GOLH

CSS	Prodhromos	3.17 107	P	Pn	22 53 32.3	+0.4
CSS	Prodhromos	3.17 107	P	Pn	22 53 32.3	+0.4
DEMI	Demirci	3.19 347	*i* P	Pn	22 53 31.4	-0.8
DEMI			*i* S	Sb	22 54 16.7	-1.1
DEMI	Demirci	3.19 347	*i* P	Pn	22 53 31.4	-0.8
BLCB	Balcova	3.21 321	*e*PN	Pn	22 53 32.4	0.0
BLCB	Balcova	3.21 321	P	Pn	22 53 32.5	+0.1
BLCB	Balcova	3.21 321	P	Pn	22 53 32.5	+0.1
BLCB	Balcova	3.21 321	P	Pn	22 53 32.5	+0.1
AKHS	Akhisar	3.28 334	P	Pn	22 53 33.5	+0.1
AKHS			S	Sg	22 54 25.6	-0.8
AKHS	Akhisar	3.28 334	*i* P	Pn	22 53 33.5	+0.1
AKHS			*i* S	Sg	22 54 25.6	-0.8
AKHS	Akhisar	3.28 334	*i* P	Pn	22 53 33.5	+0.1
AKS	Akhisar	3.28 334	*e*PN	Pn	22 53 33.2	-0.2
AKS	Akhisar	3.28 334	*e*Pn	Pn	22 53 33.2	-0.2
NPS	Neapolis	3.34 260	P	Pn	22 53 35.6	+1.4
NPS	Neapolis	3.34 260	*e*P	Pn	22 53 33.7	-0.5
NPS	Neapolis	3.34 260	P	Pn	22 53 35.6	+1.4
KIZT	Kizilcal	3.45 31	*e*PN	Pn	22 53 37.3	+1.6
KIZT	Kizilcal	3.45 31	*e*Pn	Pn	22 53 37.3	+1.6
LAST	Lasithi	3.47 258	P	Pn	22 53 37.0	+1.0
LAST	Lasithi	3.47 258	*e*P	Pn	22 53 36.2	+0.2
LAST	Lasithi	3.47 258	P	Pn	22 53 37.0	+1.0
APE	Apeiranthos	3.49 290	*e*P	Pn	22 53 35.0	-1.3
ESKT	Eskisehir	3.71 15	*e*PN	Pn	22 53 39.7	+0.4
ESKT	Eskisehir	3.71 15	Pn	Pn	22 53 40.4	+1.0
ESKT	Eskisehir	3.71 15	*e*Pn	Pn	22 53 39.7	+0.4
CHOS	Chios island	3.77 312	P	Pn	22 53 39.4	-0.6
CHOS			S	Sn	22 54 23.7	-1.2
CHOS	Chios island	3.77 312	*e*P	Pn	22 53 39.5	-0.5
CHOS	Chios island	3.77 312	P	Pn	22 53 39.4	-0.6
CHOS			S	Sn	22 54 23.7	-1.2
IDI	Anoyia	3.91 262	Pn	Pn	22 53 41.8	-0.3
	4.3nm,0.3s,baz=85,slow=15,SNR=46					
IDI			Sn	Sn	22 54 25.9	-2.7
	4.3nm,0.3s,baz=280,slow=16,SNR=2.4					
IDI	Anoyia	3.91 262	*e*P	Pn	22 53 41.5	-0.6
IDI	Anoyia	3.91 262	Pn	Pn	22 53 41.8	-0.3
IDI			Sn	Sn	22 54 25.9	-2.7
BALB	Balikesir	3.96 340	*e*PN	Pn	22 53 42.9	+0.2
BALB	Balikesir	3.96 340	*e*Pn	Pn	22 53 42.9	+0.2
SIVA	Sivas	4.04 258	P	Pn	22 53 44.8	+1.0
SIVA			S	Sn	22 54 33.3	+1.7
SIVA	Sivas	4.04 258	P	Pn	22 53 44.8	+1.0
SIVA			S	Sn	22 54 33.3	+1.7
SIVA	Sivas	4.04 258	*e*P	Pn	22 53 44.4	+0.6
SIVA	Sivas	4.04 258	P	Pn	22 53 44.8	+1.0
SIVA			S	Sn	22 54 33.3	+1.7
BALY	Balya	4.12 338	*i* P	Pg	22 53 57.2	-2.8
BALY			*i* S	Sg	22 54 59.9	+6.4
PRK	Paraskevi	4.25 322	P	Pn	22 53 46.8	+0.1
PRK	Paraskevi	4.25 322	P	Pn	22 53 46.8	+0.1
PRK	Paraskevi	4.25 322	*e*P	Pn	22 53 45.2	-1.5
PRK	Paraskevi	4.25 322	P	Pn	22 53 46.8	+0.1
VAM	Vamos	4.45 265	*e*P	Pn	22 53 51.0	+1.5
BNT	Bandirma	4.62 344	*e*PN	Pn	22 53 52.6	+0.8
BNT	Bandirma	4.62 344	*e*Pn	Pn	22 53 52.6	+0.8
EDC	Edincik	4.63 343	*e*PN	Pn	22 53 52.5	+0.7
EDC	Edincik	4.63 343	*e*Pn	Pn	22 53 52.5	+0.6
GVD	Gavdhos	4.66 258	P	Pn	22 53 51.6	-0.7
GVD			S	Sn	22 54 45.0	-1.9
GVD	Gavdhos	4.66 258	P	Pn	22 53 51.6	-0.7
GVD			S	Sn	22 54 45.0	-1.9
GVD	Gavdhos	4.66 258	*e*P	Pn	22 53 52.3	0.0
GVD	Gavdhos	4.66 258	P	Pn	22 53 51.6	-0.7
GVD			S	Sn	22 54 45.0	-1.9
ARMT	Armutlu	4.67 353	*e*PN	Pn	22 53 53.2	+0.8
ARMT	Armutlu	4.67 353	*e*Pn	Pn	22 53 53.2	+0.7
KARN	Karanos	4.68 265	P	Pn	22 53 53.0	+0.4
KARN			S	Sn	22 54 48.3	+0.8
KARN	Karanos	4.68 265	*e*P	Pn	22 53 52.8	+0.2
KARN	Karanos	4.68 265	P	Pn	22 53 53.0	+0.4
KARN			S	Sn	22 54 48.3	+0.8
EZN	Ezine	4.69 327	*e*PN	Pn	22 53 53.4	+0.6
EZN	Ezine	4.69 327	*e*Pn	Pn	22 53 53.4	+0.7
BR131	Keskin Array S	4.94 39	*e*Pn	Pn	22 53 56.2	-0.1
BR131			*e*Sn	Sn	22 54 56.9	+2.8
BR131	Keskin Array S	4.94 39	*e*Pn	Pn	22 53 56.2	0.0
BR131			*e*Sn	Sn	22 54 56.8	+2.8
BRTR	Keskin Array B	4.94 39	Pn	Pn	22 53 57.6	+1.4
	2.5nm,0.3s,baz=204,slow=14,SNR=99					
BRTR			Sn	Sn	22 54 57.4	+3.4
	2.5nm,0.3s,baz=213,slow=25,SNR=12					
BRTR	Keskin Array B	4.94 39	Pn	Pn	22 53 57.7	+1.5
BRTR			Sn	Sn	22 54 57.4	+3.4
LPK	Lapseki	4.98 334	*e*PN	Pn	22 53 56.9	+0.2
LPK	Lapseki	4.98 334	Pn	Pn	22 53 57.6	+0.9
LPK	Lapseki	4.98 334	*e*Pn	Pn	22 53 56.9	+0.2
RKY	Sarkoy-Tekirda	5.13 339	*e*PN	Pn	22 53 59.7	+0.9
RKY	Sarkoy-Tekirda	5.13 339	*e*Pn	Pn	22 53 59.7	+0.9
GADA	Gvkgeada	5.17 326	*e*PN	Pn	22 53 59.4	0.0
GADA	Gvkgeada	5.17 326	Pn	Pn	22 53 59.6	+0.2
GADA	Gvkgeada	5.17 326	*e*Pn	Pn	22 53 59.4	0.0
LIA	Limnos Island	5.30 320	P	Pn	22 54 00.0	-1.1
LIA	Limnos Island	5.30 320	P	Pn	22 54 00.0	-1.1
LIA	Limnos Island	5.30 320	*e*P	Pn	22 54 00.2	-0.9
LIA	Limnos Island	5.30 320	P	Pn	22 54 00.0	-1.1
KYTH	Kithira	5.35 276	*e*P	Pn	22 54 02.0	+0.2
HNTI	Hanita	5.39 120	Pn	Pn	22 54 04.1	+1.8
HNTI			Sn	Sn	22 55 04.5	-0.4
VLI	Veliai	5.46 280	P	Pn	22 54 04.0	+0.7
VLI	Veliai	5.46 280	P	Pn	22 54 04.0	+0.7
OFRI	'Ofer	5.53 125	Pn	Pn	22 54 04.2	-0.1
MMA0B	Mount Meron ar	5.58 120	Pn	Pn	22 54 05.5	+0.5
MMA0B			Sn	Sn	22 55 10.1	+0.3
MMAI	Mount Meron Ar	5.58 120	Pn	Pn	22 54 05.6	+0.5
	7.7nm,0.3s,baz=308,slow=12,SNR=23					
MMAI			Sn	Sn	22 55 10.4	+0.6
	6.4nm,0.3s,baz=307,slow=27,SNR=5.9					
KSDI	Kefar Szold	5.67 117	Pn	Pn	22 54 07.0	+0.7
KSDI			Sn	Sn	22 55 10.1	-1.9
ALN	Alexandroupoli	5.70 332	*e*P	Pn	22 54 06.1	-0.6
LTK	Loutraki	5.73 293	*e*P	Pn	22 54 08.0	+1.0
SLUM		5.75 221	AMP		22 55 00.0	
	comp=E,50μm,0.7s,logA/T=4.9,baz=222					
SLTI	Sal'it	5.80 128	Pn	Pn	22 54 07.9	-0.2
SLTI			Sn	Sn	22 55 14.8	-0.4
KSHT	Keshet	5.89 118	Pn	Pn	22 54 10.5	+1.2
MMLI	Mount Malkishu	5.93 124	Pn	Pn	22 54 10.8	+1.0
MMLI	Mount Malkishu	5.93 124	Pn	Pn	22 54 11.0	+1.2
MMLI			Sn	Sn	22 55 17.8	-0.5
VLX	Vlachokerasia	6.00 286	*e*P	Pn	22 54 11.2	+0.4
AMAG	Maghara	6.06 149	P	Pn	22 54 12.0	+0.4
	baz=148					
AMAG	Maghara	6.06 149	P	Pn	22 54 12.0	+0.4
HMDT	Nahal Hemdat	6.11 125	Pn	Pn	22 54 13.1	+0.8
HMDT			Sn	Sn	22 55 22.3	-0.5
GUR	Goura	6.17 291	*e*P	Pn	22 54 12.1	-1.0
ITM	Ithomi	6.33 284	P	Pn	22 54 18.0	+2.8
ITM	Ithomi	6.33 284	P	Pn	22 54 18.0	+2.8
KZIT	Kziot	6.40 140	Pn	Pn	22 54 16.4	+0.1
KZIT			Sn	Sn	22 55 27.9	-2.0
PYL	PYLOS	6.43 281	*e*P	Pn	22 54 15.6	-1.1
DSI	Dead Sea	6.47 131	Pn	Pn	22 54 17.8	+0.6
DSI			Sn	Sn	22 55 30.2	-1.4
GLL	Jalalah	6.57 164	P	Pn	22 54 19.2	+0.6
	baz=162					
GLL	Jalalah	6.57 164	P	Pn	22 54 19.2	+0.6
AGG	Agios Georgios	6.57 300	*e*P	Pn	22 54 22.9	+4.3
SUZ		6.64 155	P	Pn	22 54 20.4	+0.8
	baz=154					
SUZ			S	Sn	22 55 31.7	-4.2
	baz=154					
SUZ		6.64 155	P	Pn	22 54 20.4	+0.8
EFP	Efpalio	6.65 294	*e*P	Pn	22 54 21.0	+1.3
RMNI	Mount Ramon	6.84 140	Pn	Pn	22 54 22.0	-0.3
HNKL	Nakhl	7.01 147	P	Pn	22 54 25.6	+1.0
	baz=146					
HNKL	Nakhl	7.01 147	P	Pn	22 54 25.6	+0.9
ASF	Jabal al Asfar	7.10 120	Pn	Pn	22 54 28.2	+2.3
	comp=E,1.2nm,0.3s,baz=147,slow=2.2,SNR=9.6					
ASF			Sn	Sn	22 55 54.5	+7.4
	comp=E,0.3nm,0.3s,baz=107,slow=15,SNR=2.5					
PRNI	Paran	7.16 139	Pn	Pn	22 54 27.0	+0.3
PRNI			Sn	Sn	22 55 46.3	-2.3
KRMI	Paran Flat	7.20 142	Pn	Pn	22 54 27.3	0.0
HRFI	Mount Harif	7.42 141	Pn	Pn	22 54 30.1	-0.2
HRFI			Sn	Sn	22 55 52.9	-2.3
MBRI	Mt Berech	7.56 143	Pn	Pn	22 54 32.3	+0.1
MBRI			Sn	Sn	22 55 56.4	-2.1
AWBH		7.61 185	P	Pn	22 54 32.7	-0.2
	baz=185					
AWBH		7.61 185	P	Pn	22 54 32.7	-0.2
EIL	Elat	7.68 143	Pn	Pn	22 54 34.8	+1.0
	comp=E,0.8nm,0.3s,baz=341,slow=14,SNR=7.6					
EIL			Sn	Sn	22 55 59.3	-2.1
	comp=E,1.3nm,0.3s,baz=316,slow=20,SNR=6.1					
EIL			LR	LR	22 59 16.6	
	comp=E,34nm,18.7s,baz=89,slow=50					
EIL	Elat	7.68 143	Pn	Pn	22 54 34.8	+1.0
EIL	Elat	7.68 143	Pn	Pn	22 54 34.3	+0.5
EIL			Sn	Sn	22 55 58.9	-2.5
HKAT	Jabal Katrina	8.26 152	P	Pn	22 54 42.7	+1.0
	baz=151					
HKAT			S	Sn	22 56 11.1	-4.5
	baz=151					
HKAT	Jabal Katrina	8.26 152	P	Pn	22 54 42.7	+1.0
TIRR	Tirgusor	8.57 354 ⇑	P	Pn	22 54 47.4	+1.4
TIRR	Tirgusor	8.57 354 ⇑	*i*P	Pn	22 54 47.4	+1.4
TIRR	Tirgusor	8.57 354 ⇑	P	Pn	22 54 47.4	+1.4
TLCR		9.27 356 ⇑	P	Pn	22 54 55.7	+0.2
TLCR		9.27 356 ⇑	*i*P	Pn	22 54 55.7	+0.1
TLCR		9.27 356 ⇑	P	Pn	22 54 55.7	+0.1
MLR	Muntele Rosu	9.95 345 ⇑	P	Pn	22 55 07.5	+2.6
MLR	Muntele Rosu	9.95 345 ⇑	*i*P	Pn	22 55 07.5	+2.6
MLR	Muntele Rosu	9.95 345 ⇑	P	Pn	22 55 07.5	+2.6
VOIR		10.11 341 ⇓	P	Pn	22 55 12.5	+5.3
VOIR		10.11 341 ⇓	*i*P	Pn	22 55 12.5	+5.4
VRI	Vrincioaia	10.17 348 ⇑	P	Pn	22 55 09.5	+1.6
VRI	Vrincioaia	10.17 348 ⇑	*i*P	Pn	22 55 09.5	+1.6
VRI	Vrincioaia	10.17 348 ⇑	P	Pn	22 55 09.5	+1.6
VAE	Valguarnera	12.31 282	Pn	Pn	22 55 37.4	+0.1
	comp=E,0.6nm,0.3s,baz=71,slow=18,SNR=2.4					
VAE	Valguarnera	12.31 282	Pn	Pn	22 55 37.4	+0.1
GNI	Garni	12.64 66	LR	LR	23 00 26.5	
	comp=E,22nm,20.8s,baz=73,slow=37					
KEST	Kesra	16.45 275	Pn	Pn	22 56 35.3	+2.4
	comp=E,0.1nm,0.3s,baz=125,slow=2.4,SNR=5.6					
DAVOX	Davos/Dischmat	18.32 312	LR	LR	23 04 41.8	
	comp=E,58nm,21.5s,baz=268,slow=40					
AKTK	Aktyubinsk	25.08 46	P	P	22 58 06.1	-0.6
AKTK	Aktyubinsk	25.08 46	P	P	22 58 06.1	-0.6
AKTO	Aktyubinsk	25.08 46	P	P	22 58 06.1	-0.6
	comp=E,1.6nm,0.5s,mb3.8,baz=280,slow=3.0,SNR=4.4					
FINES	FINESS Array B	25.64 356	P	P	22 58 07.3	-4.3
	comp=E,1.2nm,0.7s,mb3.6,baz=184,slow=12,SNR=2.2					
ABKAR	Akbulak array	25.79 49	*e*Pn	P	22 58 11.8	-1.4
	comp=E,1.3nm,0.5s,mb3.7					
ABKAR	Akbulak array	25.79 49	*e*Pn	P	22 58 11.8	-1.4
	comp=E,1.3nm,0.5s,mb3.7					
HFS	Hagfors	26.32 342	P	P	22 58 16.1	-1.7
	comp=E,1.3nm,0.7s,mb3.6,baz=163,slow=10,SNR=2.1					
HFS			LR	LR	23 09 57.4	
	comp=E,27nm,18.9s,MS2.8,baz=48,slow=40					
HFS	Hagfors	26.32 342	P	P	22 58 16.1	-1.7
ESDC	Sonseca Array	26.71 288	P	P	22 58 20.1	-1.6
	comp=E,0.7nm,0.6s,mb3.4,baz=83,slow=10.0,SNR=5.0					
ESDC	Sonseca Array	26.71 288	P	P	22 58 20.1	-1.5
NOA	NORSAR Array B	27.73 341	LR	LR	23 11 12.8	
	comp=E,16nm,18.1s,MS2.6,baz=180,slow=40					
MDT	Midelt	28.35 274	LR	LR	23 12 28.7	
	comp=E,30nm,18.9s,MS2.9,baz=316,slow=42					
KURK	Kurchatov	37.86 51	*e*P	P	22 59 57.3	-1.7
	comp=E,2.4nm,0.9s,mb3.9					
KURK	Kurchatov	37.86 51	*e*P	P	22 59 57.3	-1.7
	comp=E,2.3nm,0.9s,mb3.9					
MKAR	Makanchi Array	40.30 58	P	P	23 00 17.9	-1.6
	comp=E,0.5nm,0.5s,mb3.5,baz=285,slow=6.3,SNR=8.5					
MKAR	Makanchi Array	40.30 58	P	P	23 00 17.9	-1.6
ZALV	Zalesovo Beam	41.84 47	P	P	23 00 29.5	-2.5
	comp=E,0.6nm,0.4s,mb3.6,baz=282,slow=7.1,SNR=2.6					
SONM	Songino Array	56.16 52	P	P	23 02 22.2	+0.2
	comp=E,0.2nm,0.3s,mb3.6,baz=306,slow=4.8,SNR=2.8					
SONM	Songino Array	56.16 52	P	P	23 02 22.1	+0.1
CMAR	Chiang Mai Arr	62.87 86	P	P	23 03 10.3	+1.6
	comp=E,0.4nm,0.3s,mb4.0,baz=291,slow=8.4,SNR=3.7					
CMAR	Chiang Mai Arr	62.87 86	P	P	23 03 10.3	+1.6

*ISCJB **18** 22:57:16.7±0.9, 23°.73N±0°.02×122°.48E±0°.02, h9km±7km, Error ellipse: s-maj=3.8km s-min=2.9km az=149.8*
*TAP **18** 22:57:17.4, 23°.77N×122°.34E, h3km, ML3.1, D*
*JMA **18** 22:57:18.8±0.3, 24°.06N×122°.37E, h47km, M2.4*
ISC 18 22:57:16.4±0.5, 23°.74N±0°.02×122°.48E±0°.02, h5km±3km, n45, σ0°81/80, 1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.86	34	P	Pg	22 57 32.6	-0.4
YOJ				*e*S	Sg	22 57 42.8	-1.4
TWD	Chiawan	0.88	293	*i*P	Pg	22 57 33.6	+0.3
	baz=294						
TWD				S	Sg	22 57 44.8	+0.1
	baz=294						
ENA	Nanau	0.96	315	*e*P	Pg	22 57 35.4	+0.5
	baz=320						
ENA				*e*S	Sg	22 57 48.1	+0.7
	baz=320						
ESL	Shilin	0.96	274	*e*P	Pg	22 57 34.6	-0.4
	baz=273						
ESL				*e*S	Sg	22 57 46.9	-0.6
	baz=273						
TWC	Suao	1.04	326	P	Pg	22 57 36.6	+0.2
	baz=332						
TWC				S	Sg	22 57 50.9	+1.0
	baz=332						
EHY	Hungye	1.09	258	P	Pg	22 57 37.3	-0.1
	baz=254						
EHY				*e*S	Sg	22 57 51.3	-0.2
	baz=254						
TWF1	Yuli	1.16	251	*i* P	Pg	22 57 38.1	-0.4
	baz=246						
TWF1				*e*S	Sg	22 57 53.9	+0.3
	baz=246						
WHF	Hehuan Shan	1.19	290	P	Pg	22 57 38.7	-0.5
	baz=290						
WHF				*e*S	Sg	22 57 53.9	-0.6
	baz=290						
ILA	Ilan	1.22	327	*e*P	Pg	22 57 40.4	+0.5
	baz=331						
ILA				*e*S	Sg	22 57 56.6	+0.9
	baz=331						
ENTT	Nioudou	1.23	317	*e*P	Pg	22 57 39.7	-0.2
	baz=320						
ENTT				S	Sg	22 57 56.0	+0.2
	baz=320						
TWE	Neicheng	1.23	323	P	Pg	22 57 39.6	-0.3
	baz=327						
TWE				*e*S	Sg	22 57 56.3	+0.4
	baz=327						
NNS	Nan Shan	1.23	305	*e*P	Pg	22 57 39.0	-1.1
	baz=307						
NNS				*e*S	Sg	22 57 55.8	-0.2
	baz=307						
HATJ	Hateruma jima	1.25	75	P	Pg	22 57 41.1	+0.7
HATJ				*e*S	Sg	22 57 58.1	+1.5
IRIF	Iriomote-Funau	1.28	62	P	Pg	22 57 40.3	-0.7
IRIF				*e*S	Sg	22 57 55.7	-2.0
TWT	Tachien	1.30	293	*e*P	Pn	22 57 41.0	-0.3
	baz=293						
TWT				*e*S	Sg	22 57 58.2	0.0
	baz=293						
TWB1	Santiao Chiao	1.34	340	*e*P	Pn	22 57 42.0	+0.3
	baz=345						
TWB1				*e*S	Sg	22 58 00.3	+0.8
	baz=345						
NSK	Sanguang	1.39	312	*e*P	Pn	22 57 41.5	-0.9
	baz=315						
NSK				*e*S	Sb	22 58 00.5	-0.3
	baz=315						
YUS	Yu-Shan	1.43	260	*e*P	Pn	22 57 42.9	-0.1
	baz=257						
YUS				*e*S	Sb	22 58 01.0	-1.0
	baz=257						
ELDTW	Lidau	1.46	248	*e*P	Pn	22 57 42.4	-0.9
	baz=244						
ELDTW				*e*S	Sb	22 57 59.7	-3.0
	baz=244						
SMLT	Sun Moon Lake	1.46	276	*e*P	Pn	22 57 42.9	-0.5
	baz=274						
SMLT				*e*S	Sb	22 58 01.5	-1.3
	baz=274						
NWF	Wu-fen Shan	1.47	334	*e*P	Pn	22 57 42.8	-0.8
	baz=338						
NWF				*e*S	Sn	22 58 03.9	+0.7
	baz=338						
JKRS	Kuro-shima	1.48	70	P	Pn	22 57 44.8	+1.1
TWA	Mucha	1.48	327	*e*P	Pn	22 57 43.6	-0.1
	baz=330						
TWA				*e*S	Sn	22 58 03.6	+0.1
	baz=330						
TYC	Yuchr	1.50	277	*e*P	Pn	22 57 43.4	-0.6
	baz=275						
TYC				*e*S	Sn	22 58 01.9	-1.9
	baz=275						
ALS	Alishan	1.56	262	*e*P	Pn	22 57 45.0	+0.2
	baz=259						
ALS				*e*S	Sn	22 58 04.4	-0.9
	baz=259						
TWG	Pinlang	1.59	235	*e*P	Pn	22 57 44.2	-1.0
	baz=230						
NSTT	Nanjuang	1.62	303	*e*P	Pn	22 57 46.6	+1.0
	baz=305						
NSTT				*e*S	Sn	22 58 06.5	-0.3
	baz=305						
JIJ	Ishigaki jima	1.64	67	P	Pn	22 57 46.2	+0.3
JIJ				*e*S	Sn	22 58 05.9	-1.5
CHN5	Tsauling	1.66	265	*e*P	Pn	22 57 46.2	0.0
	baz=263						
CHN5				*e*S	Sn	22 58 08.1	+0.2
	baz=263						
TWQ1	Liyutan	1.68	291	*e*P	Pn	22 57 47.3	+0.9
	baz=291						
TWQ1				*e*S	Sn	22 58 08.5	+0.2
	baz=291						
STYT	Tauyuan	1.69	250	*e*P	Pn	22 57 46.4	-0.2
	baz=247						
STYT				*e*S	Sn	22 58 07.7	-0.8
	baz=247						
NCU	National Centr	1.70	316	*e*P	Pn	22 57 46.9	+0.1
	baz=318						
TWY	Chenhua	1.73	332	*e*P	Pn	22 57 46.8	-0.3
	baz=335						
CHN4	Tsaushan	1.78	258	*e*P	Pn	22 57 50.1	+2.3
	baz=255						
CHN4				*e*S	Sn	22 58 12.1	+1.3
	baz=255						
WTP	Ta-pu	1.79	254	*e*P	Pn	22 57 47.8	-0.1
	baz=251						
WTP				*e*S	Sn	22 58 11.0	0.0
	baz=251						
ECL	Taimali	1.81	231	*e*P	Pn	22 57 49.0	+0.7
	baz=227						
SGST	Jiashian	1.86	250	*e*P	Pn	22 57 50.0	+0.9
	baz=246						
SGST				*e*S	Sn	22 58 13.4	+0.4
	baz=246						
CHN1	Nanshi	1.88	253	*e*P	Pn	22 57 50.9	+1.7
	baz=250						
CHN1				*e*S	Sn	22 58 14.2	+0.9
	baz=250						
TWK	Hsinying	1.89	256	*e*P	Pn	22 57 49.5	+0.2
	baz=253						
TWK				*e*S	Sn	22 58 14.4	+0.8
	baz=253						
LAY	Lan-yu	1.90	207	*e*P	Pn	22 57 48.8	-0.7
	baz=202						
SSD	Sandimen	1.97	240	*e*P	Pn	22 57 51.6	+1.1
	baz=236						
EAST	Anshuo	2.02	228	*e*P	Pn	22 57 51.6	+0.4
	baz=224						
SCLT	Jiali	2.18	255	*e*P	Pn	22 57 53.3	0.0
	baz=253						
SCZT	Fangliau	2.19	232	*e*P	Pn	22 57 54.9	+1.4
	baz=228						
PNG	Penghu	2.69	267	*e*P	Pn	22 58 00.6	+0.2
	baz=265						
PNG				*e*S	Sn	22 58 32.7	-0.6
	baz=265						

*IDC **18** 23:29:03.6±0.5, 20°.45N×120°.16E, h0km, mb4.3/18, mb1 4.4/19, mb1mx4.4/25, mbtmp4.3/19, ML3.9/1, MS3.6/17, Ms1 3.6/17, ms1mx3.4/32, Error ellipse: s-maj=20.5km s-min=12.2km az=75.0*
*ISCJB **18** 23:29:05.9±1.3, 20°.45N±0°.03×120°.09E±0°.03, h24km±9km, mb4.5/66, MS3.6/23, Error ellipse: s-maj=5.8km s-min=4.3km az=147.5*
*MAN **18** 23:29:06, 20°.42N×120°.34E, h1km, mb5.0, ML4.0, MS4.1*
*BJI **18** 23:29:06.7, 20°.54N×119°.98E, h21km, mB4.6/25, mb4.4/35, ML3.6/2, Ms4.2/35, Ms7 4.1/32*
*MOS **18** 23:29:07.3±1.0, 20°.46N×120°.09E, h33km, mb5.0/27, Error ellipse: s-maj=10.6km s-min=5.5km az=111.2*
*NEIC **18** 23:29:09.0±0.8, 20°.41N×120°.04E, h36km±7km, mb4.7/33, Error ellipse: s-maj=6.1km s-min=4.8km az=76.0*
ISC 18 23:29:09.4±0.5, 20°.44N±0°.03×120°.10E±0°.04, h37km±5km, h25km±5.9km: pP-P, n198, σ1°08/206, mb4.5/66, MS3.6/23, 13C-3D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBP	Basco	1.75	90	*e*P	Pn	23 29 34.7	-2.5
BBP				*e*S	Sn	23 29 50.1	-8.1
APYP	Conner	2.78	157	*e*P	Pn	23 29 50.4	-1.0
APYP				*e*S	Sn	23 30 05.3	-18
ABRA	Dolores	2.83	168	*e*P	Pn	23 29 53.1	+0.9
SGCP	Mt. Cagua	2.85	140	*e*P	Pn	23 29 50.7	-1.8
CVP	Callao Caves	3.17	149	*e*P	Pn	23 29 56.5	-0.2
CVP				*e*S	Sn	23 30 34.9	+1.5
CAUP	Cauayan	3.84	155	*e*P	Pn	23 30 07.4	+1.4
PALP	Palanan	4.01	146	*e*P	Pn	23 30 09.0	+0.6
PALP				*e*S	Pn	23 30 20.6	+12
TATO	Taipei	4.69	16	Pn	Pn	23 30 18.1	+0.4
TATO				Sn	Sn	23 31 11.7	+0.7
QZH	Quanzhou	4.70	343	Pn	Pn	23 30 13.0	-4.7
QZH				Sn	Sn	23 31 03.8	-7.2
QZH				smax			
	comp=N,150nm,0.8s						
QZH				smax			
	comp=E,140nm,0.9s						
QZH				LR	LR		
	comp=N,2μm,9.3s						
QZH				LR	LR		

GYA LR LR
comp=N,2μm,12.8s
GYA LR LR
comp=E,1μm,13.0s
GYA LR LR
comp=Z,2μm,12.5s
KMI Kunming 16.67 289 P **Pn** **23 32 59.8 -0.5**
KMI pP pP 23 33 07.1 -4.7
KMI sP sP 23 33 10.8 -5.7
KMI PP 23 33 14.3
KMI S **S** **23 36 02.8 -12**
KMI sS sS 23 36 12.9 -17
KMI SS 23 36 23.1
KMI pmax pmax
comp=Z,5.0nm,1.2s
KMI pmax pmax
comp=Z,74nm,3.8s
KMI LR LR
comp=N,310nm,11.5s
KMI LR LR
comp=E,430nm,11.0s
KMI LR LR
comp=Z,300nm,12.1s
XAN Xi'an 16.79 326 P **Pn** **23 33 06.3 +4.7**
XAN pP pP 23 33 11.6 -1.3
XAN pmax pmax
comp=Z,3μm,1.7s
CD2 Chengdu 18.03 309 *e*P **Pn** **23 33 17.4 +0.4**
CD2 pP pP 23 33 23.8 -2.9
CD2 sP sP 23 33 28.5 -3.0
CD2 PP 23 33 32.5
CD2 S **S** **23 36 34.8 -7.2**
CD2 sS sS 23 36 43.3 -14
CD2 SS 23 36 57.8
CD2 pmax pmax
comp=Z,10.0nm,0.6s
CD2 pmax pmax
comp=Z,60nm,5.2s
CD2 LR LR
comp=N,800nm,10.8s
CD2 LR LR
comp=E,880nm,11.8s
CD2 LR LR
comp=Z,700nm,11.9s
KSRS Korea Array 18.27 20 P **Pn** **23 33 18.0 -2.0**
comp=Z,0.4nm,0.3s,baz=210,slow=11,SNR=16
KSRS LR LR 23 40 28.9
comp=Z,100nm,19.9s,baz=25,slow=38
BJT Baijiatuau 19.80 351 *e*P **Pn** **23 33 36.8 -1.5**
BJT pmax pmax
comp=Z,25nm,0.6s
BJT Baijiatuau 19.80 351 *e*P **Pn** **23 33 36.8 -1.5**
comp=Z,25nm,0.6s
BJI Beijing 19.82 351 P **Pn** **23 33 36.9 -1.7**
BJI S **S** **23 37 19.3 +1.2**
BJI pmax pmax
comp=Z,21nm,1.1s
BJI pmax pmax
comp=Z,92nm,3.8s
BJI LR LR
comp=N,210nm,12.3s
BJI LR LR
comp=E,410nm,14.3s
BJI LR LR
comp=Z,120nm,15.8s
CHTO Chiang Mai 20.00 269 *e*P **Pn** **23 33 36.6 -4.2**
CHTO pmax pmax
comp=Z,11nm,1.2s
CHTO Chiang Mai 20.00 269 *e*P **Pn** **23 33 36.6 -4.2**
comp=Z,11nm,1.2s
CMAR Chiang Mai Arr 20.05 268 P **P** **23 33 39.6 +0.2**
comp=Z,0.7nm,0.3s,baz=73,slow=9.2,SNR=5.4
CMAR LR LR 23 41 10.1
comp=Z,302nm,20.6s,MS3.6,baz=120,slow=36
LZH Lanzhou 21.12 321 *e*P **P** **23 33 53.8 +2.9**
LZH pP 23 34 01.1
LZH sP sP 23 34 05.4 +0.1
LZH *e*S **S** **23 37 41.4 -2.4**
LZH sS sS 23 37 52.3 -7.0
LZH SS 23 38 14.4
LZH pmax pmax
comp=Z,12nm,1.1s,mb4.1
LZH pmax pmax
comp=Z,98nm,5.6s
LZH LR LR
comp=N,330nm,11.6s
LZH LR LR
comp=Z,440nm,12.9s,MS4.0
CBIJ Chichi jima 21.25 68 P **P** **23 33 53.0 +0.5**
comp=Z,58nm,0.8s,mb5.0,baz=252,slow=9.6,SNR=3.1
CBIJ LR LR 23 40 30.2
comp=Z,129nm,21.4s,MS3.3,baz=80,slow=32
JHJ Hachijo jima 2 21.59 50 P **P** **23 33 58.4 +2.3**
comp=Z,24nm,0.5s,mb4.9,baz=231,slow=19,SNR=4.6
JHJ LR LR 23 40 39.2
comp=Z,35nm,20.3s,MS2.8,baz=219,slow=32
HHC Hu-ho-hao-te 21.61 342 *e*P **P** **23 33 57.4 +1.3**
HHC pP 23 34 04.5
HHC sP sP 23 34 07.9 -2.6
HHC PP 23 34 22.8
HHC S **S** **23 37 52.9 -0.4**
HHC PcP PcP 23 37 57.9 +1.0
HHC sS sS 23 38 02.8 -6.0
HHC ScP ScP 23 41 31.9 +0.7
HHC PcS PcS 23 41 35.1 0.0
HHC pmax pmax
comp=Z,13nm,0.8s,mb4.4
HHC pmax pmax
comp=Z,120nm,6.7s
HHC LR LR
comp=N,410nm,11.2s,MS4.1
HHC LR LR
comp=E,250nm,12.8s,MS4.1
HHC LR LR
comp=Z,340nm,11.3s,MS4.0
MAJO Matsushiro 22.54 41 *e*P **P** **23 34 08.9 +2.9**
MAJO pmax pmax
comp=Z,41nm,1.4s,mb4.7
MAJO Matsushiro 22.54 41 *e*P **P** **23 34 08.9 +2.9**
comp=Z,40nm,1.4s,mb4.7
MAT Matsushiro 22.54 41 P **P** **23 34 04.9 -1.1**
MAT S **S** **23 38 09.0 -2.2**
MJAR Matsushiro Arr 22.54 41 P **P** **23 34 05.0 -1.0**
comp=Z,3.8nm,0.7s,mb3.9,baz=230,slow=8.7,SNR=9.9
MJAR LR LR 23 42 45.9
comp=Z,98nm,20.3s,MS3.2,baz=230,slow=36
GUMO Guam 24.62 102 P **P** **23 34 26.0 -0.5**
GUMO pmax pmax
comp=Z,80nm,1.1s,mb5.2
GUMO Guam 24.62 102 P **P** **23 34 26.0 -0.4**
comp=Z,80nm,1.1s,mb5.2
KAPI Kappang 25.30 181 P **P** **23 34 31.6 -0.9**
comp=Z,6.3nm,0.8s,mb4.2,baz=22,slow=19,SNR=2.5
MDJ Mudanjiang 25.37 16 P **P** **23 34 33.0 +0.1**
MDJ pP pP 23 34 38.8 -4.6
MDJ sP sP 23 34 41.9 -6.0
MDJ S **S** **23 39 01.6 +4.8**
MDJ ScS ScS 23 45 26.3 -3.6
MDJ pmax pmax
comp=Z,32nm,1.3s,mb4.7
MDJ pmax pmax
comp=Z,79nm,4.2s
MDJ LR LR
comp=N,26nm,27.0s
MDJ LR LR
comp=E,120nm,36.0s
MDJ LR LR
comp=Z,86nm,16.5s
MDJ Mudanjiang 25.37 16 *e*P **P** **23 34 32.1 -0.8**
comp=Z,54nm,1.3s,mb4.9
GTA Gaotai 25.71 322 *e*P **P** **23 34 32.3 -3.8**
GTA pP pP 23 34 39.4 -7.2
GTA sP sP 23 34 43.1 -8.0
GTA PP 23 35 12.0
GTA S **S** **23 38 55.3 -7.1**
GTA sS sS 23 39 08.4 -11
GTA SS 23 39 59.8
GTA pmax pmax
comp=Z,2.0nm,0.8s,mb3.7
GTA pmax pmax
comp=Z,73nm,5.9s
GTA LR LR
comp=N,260nm,12.8s,MS4.0
GTA LR LR
comp=E,150nm,16.0s,MS4.0

GTA LR LR
comp=Z,250nm,9.8s
PSI Prapat 27.09 232 P **P** **23 34 50.5 +1.7**
comp=Z,3.7nm,0.4s,mb4.2,baz=33,slow=3.3,SNR=5.3
PSI LR LR 23 43 27.0
comp=Z,189nm,21.7s,MS3.6,baz=245,slow=32
LSA Lhasa 27.74 295 *e*P **P** **23 34 53.9 -0.6**
LSA pmax pmax
comp=Z,7.0nm,0.8s,mb4.3
LSA Lhasa 27.74 295 *e*P **P** **23 34 53.9 -0.6**
comp=Z,6.5nm,0.8s,mb4.3
HIA Hailar 28.77 360 *e*P **P** **23 35 02.9 -0.5**
ULN Ulaanbaatar 29.33 342 *e*P **P** **23 35 08.9 +0.5**
ULN pmax pmax
comp=Z,19nm,1.8s,mb4.5
ULN Ulaanbaatar 29.33 342 *e*P **P** **23 35 08.9 +0.5**
comp=Z,19nm,1.8s,mb4.5
SONM Songino Array 29.50 341 P **P** **23 35 09.9 0.0**
comp=Z,1.0nm,0.6s,mb3.7,baz=156,slow=9.5,SNR=7.4
SONM LR LR 23 48 24.8
comp=Z,105nm,18.1s,MS3.5,baz=98,slow=39
KLR Kul'dur 30.20 15 *e*P **P** **23 35 12.0 -4.1**
YSS Yuzh-Sakhalins 32.24 30 *e*P **P** **23 35 35.1 +0.9**
ZAK Zakamensk 32.71 340 *e*P **P** **23 35 36.5 -1.7**
ZAK pmax pmax
comp=Z,2.0nm,1.4s,mb3.9
TLY Talaya 33.73 341 *e*P **P** **23 35 46.8 -0.3**
TLY pmax pmax
comp=Z,6.0nm,1.5s,mb4.3
TLY MLR MLR
comp=Z,76nm,12.0s,MS3.6
WMQ Urumqi 35.65 318 *e*P **P** **23 36 05.0 +1.3**
WMQ pP pP 23 36 12.0 -2.4
WMQ sP sP 23 36 16.0 -2.9
WMQ PP PP 23 37 26.0 +0.9
WMQ S **S** **23 41 39.0 +1.4**
WMQ SS SS 23 43 59.0 -15
WMQ pmax pmax
comp=Z,28nm,1.0s,mb5.2
WMQ LR LR
comp=N,130nm,15.0s,MS3.9
WMQ LR LR
comp=E,100nm,15.0s,MS3.9
WMQ LR LR
comp=Z,110nm,15.0s,MS3.7
FITZ Fitzroy Crossi 38.68 172 *e*P **P** **23 36 27.8 -1.9**
comp=Z,13nm,0.9s,mb4.7
FITZ Fitzroy Crossi 38.68 172 *e*P **P** **23 36 27.9 -1.8**
comp=Z,12nm,1.0s,mb4.6
MK31 Makanchi Array 40.42 319 *e*P **P** **23 36 45.3 +1.4**
MKAR Makanchi Array 40.42 319 P **P** **23 36 44.1 +0.2**
comp=Z,3.5nm,0.9s,mb4.1,baz=111,slow=9.1,SNR=16
MKAR LR LR 23 53 44.0
comp=Z,53nm,19.6s,MS3.4,baz=121,slow=37
COEN Coen 41.02 145 *e*P **P** **23 36 48.4 -0.8**
MBWA Marble Bar 41.34 181 *e*P **P** **23 36 50.6 -1.1**
YAK Yakutsk 42.09 7 *e*P **P** **23 36 56.7 -0.7**
KSH Kashi 42.21 307 P **P** **23 37 01.8 +3.1**
KSH pP pP 23 37 09.3 -0.2
KSH sP sP 23 37 12.8 -1.2
KSH PP PP 23 38 43.3 +6.4
KSH PcP PcP 23 38 55.4 +3.0
KSH ScP ScP 23 42 43.3 +3.1
KSH PcS PcS 23 42 46.0 +1.8
KSH S **S** **23 43 20.8 +4.3**
KSH sS sS 23 43 33.9 -0.4
KSH SS SS 23 46 25.1 -0.3
KSH ScS ScS 23 46 59.8 +1.8
KSH pmax pmax
comp=Z,2.0nm,0.7s,mb3.9
KSH pmax pmax
comp=Z,43nm,4.6s
KSH LR LR
comp=N,94nm,5.0s
KSH LR LR
comp=E,120nm,6.2s
KSH LR LR
comp=Z,110nm,5.5s
WRAB Tennant Creek 42.48 160 *e*P **P** **23 36 59.9 -1.1**
WRAB pmax pmax
comp=Z,35nm,1.1s,mb4.9
WRAB Tennant Creek 42.48 160 *e*P **P** **23 36 59.9 -1.2**
comp=Z,35nm,1.1s,mb4.9
WRA Warramunga Arr 42.48 160 P **P** **23 37 00.1 -1.0**
comp=Z,12nm,0.7s,mb4.6,baz=332,slow=6.3,SNR=18
WRA PcP PcP 23 38 53.2 -0.3
comp=Z,2.7nm,0.9s,baz=339,slow=3.3,SNR=4.5
WRA Warramunga Arr 42.48 160 P **P** **23 37 00.1 -1.0**
WRA PcP PcP 23 38 53.2 -0.3
ZAA0 Zalesovo Array 42.90 330 *e*P **P** **23 37 03.1 -1.0**
ZALV Zalesovo Beam 42.90 330 P **P** **23 37 03.6 -0.5**
comp=Z,4.9nm,0.7s,mb4.4,baz=118,slow=7.7,SNR=26
ZALV LR LR 23 55 48.0
comp=Z,50nm,18.8s,MS3.4,baz=63,slow=37
PETK Petropavlovsk- 43.54 32 P **P** **23 37 09.2 -0.1**
comp=Z,1.2nm,0.6s,mb3.8,baz=203,slow=4.7,SNR=4.0
PETK LR LR 23 55 31.3
comp=Z,50nm,18.3s,MS3.5,baz=239,slow=36
AAK Ala-Archa 44.08 311 P **P** **23 37 12.8 -1.0**
NVS Novosibirsk 44.18 330 *e*P **P** **23 37 11.3 -3.1**
NVS pmax pmax
comp=N,10.0nm,1.6s
NVS pmax pmax
comp=E,8.0nm,1.6s
NVS pmax pmax
comp=Z,14nm,1.6s,mb4.4
KURK Kurchatov 44.39 323 *c*e**P** **P** **23 37 17.0 +0.9**
KURK pmax pmax
comp=Z,11nm,1.2s,mb4.5
KURK Kurchatov 44.39 323 *e*P **P** **23 37 15.8 -0.4**
comp=Z,9.4nm,1.0s,mb4.5
ASAR Alice Springs 45.85 162 P **P** **23 37 27.6 -0.4**
comp=Z,7.2nm,0.9s,mb4.6,baz=331,slow=6.8,SNR=52
KBL Kabul 46.96 299 *e*P **P** **23 37 36.2 -0.5**
CTA Charters Tower 47.73 146 *e*P **P** **23 37 43.8 +1.1**
comp=Z,16nm,0.9s,mb5.0
CTAO Charters Tower 47.73 146 *e*P **P** **23 37 44.0 +1.3**
CTAO pmax pmax
comp=Z,23nm,0.9s,mb5.2
CTAO Charters Tower 47.73 146 *e*P **P** **23 37 44.0 +1.3**
comp=Z,23nm,0.9s,mb5.2
SEY Seymchan 47.83 19 *c*e**P** **P** **23 37 43.9 +0.9**
BVAR Borovoye Array 49.99 323 P **P** **23 38 00.0 +0.3**
comp=Z,1.3nm,0.6s,mb4.2,baz=107,slow=7.6,SNR=9.0
BVAR PcP PcP 23 39 19.6 +0.3
comp=Z,1.3nm,0.8s,baz=132,slow=2.2,SNR=4.3
BRVK Borovoye 50.06 323 *c*e**P** **P** **23 38 01.0 +0.7**
BRVK pmax pmax
comp=Z,9.0nm,1.2s,mb4.7
BRVK Borovoye 50.06 323 *e*P **P** **23 38 00.5 +0.2**
TIXI Tiksi 51.48 4 *e*P **P** **23 38 09.4 -1.3**
TIXI pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
TIXI Tiksi 51.48 4 *e*P **P** **23 38 09.4 -1.3**
comp=Z,5.4nm,0.9s,mb4.5
FORT Forrest 51.49 171 *e*P **P** **23 38 23.4 +12**
comp=Z,12nm,0.7s,mb4.9
NWAO Narrogin (SRO) 53.13 183 *e*P **P** **23 38 22.1 -1.3**
NWAO pmax pmax
comp=Z,16nm,1.1s
NWAO Narrogin (SRO) 53.13 183 *e*P **P** **23 38 22.1 -1.3**
comp=Z,16nm,1.1s,mb4.9
RMQ Roma 54.30 148 *e*P **P** **23 38 32.8 +0.7**
comp=Z,7.6nm,0.6s,mb4.8
BILL Bilibino 55.53 19 *e*P **P** **23 38 41.7 +1.3**
BILL pmax pmax
comp=Z,19nm,2.5s,mb4.7
BILL MLR MLR
comp=Z,100nm,17.0s,MS4.0
BILL Bilibino 55.53 19 *e*P **P** **23 38 41.1 +0.7**
comp=Z,3.0nm,0.6s,mb4.5
STKA Stephens Creek 55.95 158 *e*P **P** **23 38 43.6 -0.3**
comp=Z,7.2nm,1.0s,mb4.7
STKA Stephens Creek 55.95 158 P **P** **23 38 43.8 -0.1**
comp=Z,5.7nm,0.8s,mb4.6,baz=8.5,slow=7.1,SNR=8.2
STKA LR LR 00 05 31.5
comp=Z,63nm,20.9s,MS3.7,baz=23,slow=39
STKA Stephens Creek 55.95 158 *e*P **P** **23 38 44.2 +0.3**
SVE Sverdlovsk 56.50 325⇓ *e*P **P** **23 38 48.2 +0.6**
SVE *e* 23 40 55.8
SVE *e*S **S** **23 46 29.5 -6.7**
SVE pmax pmax
comp=Z,13nm,0.9s,mb5.0
AKTO Aktyubinsk 56.79 318 LR LR 00 04 41.8
comp=Z,77nm,19.7s,MS3.8,baz=309,slow=38
CMSA Cobar Meteorol 57.21 154⇑ *i*P **P** **23 38 53.8 +0.9**

ARU Arti 57.52 325 *c i*P **P** **23 38 55.2 +0.4**
ARU *e* 23 39 44.2
ARU *e* 23 41 01.8
ARU S **S** **23 46 52.5 +2.8**
ARU SS SS 23 50 46.4 +6.8
ARU pmax pmax
comp=Z,12nm,1.7s,mb4.7
ARU Arti 57.52 325 *e*P **P** **23 38 54.1 -0.7**
comp=Z,5.6nm,0.8s,mb4.7
ARU *e*PcP PcP 23 39 44.9 -3.1
DZM Mont Dzumac 61.91 130 *e*LR LR 23 57 52.0
comp=Z,103nm,23.3s
UNV Unalaska Valle 64.00 39 *e*P **P** **23 39 38.3 -0.6**
GNI Garni 66.13 306 LR LR 00 13 52.0
comp=Z,34nm,20.9s,MS3.5,baz=87,slow=41
ZEI Tsey 66.45 309 *e*P **P** **23 39 47.4 -7.6**
ZEI pmax pmax
comp=Z,6.0nm,0.4s,mb5.0
KIV Kislovodsk 67.19 310 *e*P **P** **23 39 54.7 -5.0**
KIV pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
KIV MLR MLR
comp=Z,35nm,17.0s,MS3.6
KIV Kislovodsk 67.19 310 *e*P **P** **23 39 59.1 -0.6**
comp=Z,2.4nm,0.5s,mb4.5
VSR Storozhevoye 68.73 318 *e*P **P** **23 40 09.6 +0.4**
VSR pmax pmax
comp=N,6.0nm,0.9s
VSR pmax pmax
comp=E,5.0nm,0.9s
VSR pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
TTA Tatalina 69.25 29 *e*P **P** **23 40 12.6 +0.4**
SVW2 Sparrevohn 69.60 31 *e*P **P** **23 40 15.5 +1.0**
OBN Obninsk 69.83 323 *e*P **P** **23 40 16.6 +0.6**
OBN *i* 23 40 21.7
OBN pmax pmax
comp=Z,24nm,1.6s,mb4.9
PPLA Purkeypile 70.99 29 *e*P **P** **23 40 23.6 +0.6**
comp=Z,2.1nm,0.8s,mb4.1
OHAK Old Harbor 71.25 35 *e*P **P** **23 40 24.3 -0.3**
comp=Z,15nm,0.9s,mb4.9
JOF Joensuu 71.47 331 *e*p **P** **23 40 25.1 -0.7**
comp=Z,4.8nm,0.6s,mb4.6
JOF Joensuu 71.47 331 *e*p **P** **23 40 25.1 -0.7**
comp=Z,4.8nm,0.6s,mb4.6
KDAK Kodiak Island 71.54 34 *i* P **P** **23 40 26.4 +0.1**
KDAK Kodiak Island 71.54 34 *e*P **P** **23 40 26.5 +0.2**
KDAK pmax pmax
comp=Z,56nm,1.5s,mb5.3
KDAK Kodiak Island 71.54 34 *e*P **P** **23 40 26.5 +0.2**
comp=Z,56nm,1.5s,mb5.3
MCK McKinley 72.31 28 *e*P **P** **23 40 30.9 +0.1**
MCK pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
MCK McKinley 72.31 28 *e*P **P** **23 40 30.9 +0.1**
comp=Z,8.5nm,1.0s,mb4.6
COLA College 72.57 27 *e*P **P** **23 40 33.4 +1.1**
PMR Palmer 72.61 30 *e*P **P** **23 40 31.7 -1.0**
ARCES ARCESS Array B 72.63 338 P **P** **23 40 32.5 -0.2**
comp=Z,1.7nm,0.8s,mb4.0,baz=68,slow=7.9,SNR=4.7
KAF Kangasniemi 73.91 331 *e*P **P** **23 40 38.9 -1.4**
KAF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
KAF Kangasniemi 73.91 331 *e*p **P** **23 40 38.9 -1.4**
comp=Z,2.8nm,0.6s,mb4.4
KAF Kangasniemi 73.91 331 *e*p **P** **23 40 38.9 -1.4**
comp=Z,2.8nm,0.6s,mb4.4
FINES FINESS Array B 74.17 330 P **P** **23 40 42.0 +0.1**
comp=Z,5.2nm,0.8s,mb4.5,baz=60,slow=7.1,SNR=15
BRTR Keskin Array B 74.60 307 P **P** **23 40 45.1 +0.3**
comp=Z,0.5nm,0.6s,mb3.6,baz=116,slow=5.6,SNR=4.0
BRTR LR LR 00 16 44.0
comp=Z,24nm,19.6s,MS3.5,baz=272,slow=38
BRTR Keskin Array B 74.60 307 *c*e**P** **P** **23 40 45.0 +0.2**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
AKASG Malin Array Be 75.00 319 P **P** **23 40 46.0 -0.9**
comp=Z,2.1nm,0.7s,mb4.2,baz=60,slow=6.2,SNR=9.0
AKASG Malin Array Be 75.00 319 P **P** **23 40 46.0 -0.9**
EGAK Eagle 75.37 26 *e*P **P** **23 40 49.1 +0.4**
comp=Z,3.2nm,0.8s,mb4.3
EIL Elat 76.12 297 LR LR 00 19 54.5
comp=Z,52nm,18.0s,MS3.9,baz=66,slow=40
SUW Suwalki 77.67 323 *e*P **P** **23 41 01.5 -0.5**
SUW Suwalki 77.67 323 *e*P **P** **23 41 01.5 -0.5**
SUW pmax pmax
comp=Z,22nm,0.9s,mb5.1
SUW Suwalki 77.67 323 *e*P **P** **23 41 01.5 -0.4**
comp=Z,22nm,0.9s,mb5.1
VRI Vrincioaia 77.89 314⇓ *i*P **P** **23 41 04.9 +1.5**
VRI Vrincioaia 77.89 314⇓ *i*P **P** **23 41 04.9 +1.5**
BURAR Bucovina Array 78.37 317⇑ *i*P **P** **23 41 06.5 +0.5**
BURAR Bucovina Array 78.37 317⇑ *i*P **P** **23 41 06.5 +0.5**
BUR08 Bucovina Ar. S 78.37 317 *e*P **P** **23 41 05.8 -0.2**
MLR Muntele Rosu 78.53 314⇑ *i*P **P** **23 41 05.4 -1.5**
MLR Muntele Rosu 78.53 314⇑ *i*P **P** **23 41 05.4 -1.5**
KWP Kalwaria Pacla 79.32 319 *e*P **P** **23 41 11.8 +0.6**
KWP Kalwaria Pacla 79.32 319 *e*P **P** **23 41 11.5 +0.3**
comp=Z,9.2nm,0.6s,mb4.9
KWP *e*PcP PcP 23 41 19.0 -0.2
KWP Kalwaria Pacla 79.32 319⇑ *i*P **P** **23 41 10.5 -0.7**
DRGR 80.25 316⇑ P **P** **23 41 17.2 +0.9**
DRGR 80.25 316⇑ *i*P **P** **23 41 17.1 +0.8**
STHS Stebnicka Huta 80.30 319 *e*P **P** **23 41 19.2 +2.8**
STHS pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
STHS Stebnicka Huta 80.30 319 *e*P **P** **23 41 19.2 +2.8**
comp=Z,1.5nm,0.8s,mb4.0
STHS Stebnicka Huta 80.30 319 *e*P **P** **23 41 19.2 +2.8**
CRVS Cervenica-Dubn 80.34 319 *e*P **P** **23 41 17.8 +1.1**
CRVS *e* pP 23 41 30.1 +1.9
CRVS pmax pmax
comp=Z,8.0nm,1.6s,mb4.4
CRVS Cervenica-Dubn 80.34 319 *e*P **P** **23 41 17.8 +1.1**
comp=Z,7.9nm,1.6s,mb4.4
CRVS *e* pP 23 41 30.1 +1.9
CRVS Cervenica-Dubn 80.34 319 *e*P **P** **23 41 17.8 +1.1**
CRVS *e*pP pP 23 41 30.1 +1.9
NIE Niedzica 80.86 319 *e*P **P** **23 41 20.3 +0.8**
OJC Ojcow 80.89 320 *e*P **P** **23 41 17.8 -1.8**
NB2 NORSAR Subarra 81.05 332 P **P** **23 41 19.8 -0.5**
comp=Z,0.7nm,0.7s,mb3.7,baz=64,slow=5.3
NOA NORSAR Array B 81.05 332 P **P** **23 41 20.0 -0.3**
comp=Z,2.4nm,1.0s,mb4.1,baz=65,slow=5.3,SNR=4.3
NOA LR LR 00 21 30.8
comp=Z,42nm,19.0s,MS3.8,baz=90,slow=39
PSZ Piszkesteto 81.66 318 *e*P **P** **23 41 23.0 -0.7**
VYHS Vyhne 82.11 319 *e*P **P** **23 41 27.0 +0.9**
VYHS pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
VYHS Vyhne 82.11 319 *e*P **P** **23 41 27.0 +0.9**
comp=Z,1.8nm,1.1s,mb3.9
VYHS *e* 23 41 48.7
VYHS Vyhne 82.11 319 *e*P **P** **23 41 27.0 +0.9**
VYHS *e* 23 41 48.6
MORC Moravsky Berou 82.41 320 P **P** **23 41 27.8 +0.2**
DPC Dobruska-Polom 82.91 321 *e*P **P** **23 41 31.4 +1.2**
DPC Dobruska-Polom 82.91 321 *e*P **P** **23 41 31.4 +1.2**
BRG Berggiesshubel 84.08 322 *e*P **P** **23 41 37.1 +0.9**
comp=Z,12nm,1.6s,mb4.8
BRG Berggiesshubel 84.08 322 *e*P **P** **23 41 37.1 +0.9**
BRG pmax pmax
comp=Z,7.0nm,1.6s,mb4.5
CLL Collm 84.42 323 *i* P **P** **23 41 37.5 -0.5**
CLL *i* 23 41 45.4
CLL pmax pmax
comp=Z,10.0nm,1.3s,mb4.8
CLL Collm 84.42 323 *i* P **P** **23 41 37.5 -0.5**
comp=Z,10.0nm,1.3s,mb4.8
CLL *i* PcP PcP 23 41 40.6 -1.0
CLL *i* 23 41 45.4
CLL Collm 84.42 323 *i* P **P** **23 41 37.5 -0.5**
comp=Z,10.0nm,1.3s,mb4.8
CLL *i* PcP PcP 23 41 40.6 -1.0
CLL *i* pP pP 23 41 45.4 -4.2
KHC Kasperske Hory 85.03 321 *e*P **P** **23 41 41.3 +0.2**
KHC Kasperske Hory 85.03 321 *e*P **P** **23 41 41.3 +0.2**
SUMG Summit 86.10 354 P **P** **23 41 46.2 +0.3**
GRA1 Grafenberg Arr 86.17 322 *e*P **P** **23 41 47.4 +0.7**
comp=Z,9.0nm,1.5s,mb4.8
GRF Grafenberg Arr 86.17 322 *e*P **P** **23 41 47.4 +0.7**
comp=Z,9.0nm,1.5s,mb4.8
GRF Grafenberg Arr 86.17 322 *e*P **P** **23 41 47.4 +0.7**
GRF pmax pmax

comp=Z,9.0nm,1.5s,mb4.8
GRF Grafenberg Arr 86.17 322 *e*P **P 23 41 47.4 +0.7**
GRF pmax pmax
comp=Z,9.0nm,1.5s,mb4.8
YKA Yellowknife Ar 86.80 22 P **P 23 41 49.8 +0.3**
comp=Z,6.1nm,0.9s,mb4.8,baz=311,slow=4.7,SNR=8.8
CDF Champ du Feu 89.06 322 *e*P **P 23 42 00.4 -0.2**
GIVF Givet 89.56 324 *e*P **P 23 42 02.0 -0.9**
LPG La Plagne 90.84 320 *e*P **P 23 42 09.8 +0.8**
comp=Z,35nm,1.6s,mb5.2
LPG La Plagne 90.84 320 *e*P **P 23 42 09.8 +0.8**
LPG pmax pmax
comp=Z,17nm,1.5s,mb5.2
LPG La Plagne 90.84 320 *e*P **P 23 42 09.8 +0.8**
comp=Z,17nm,1.5s,mb5.2
LPL La Plagne 90.84 320 *e*P **P 23 42 09.6 +0.6**
PGF Pioggiola 90.90 316 *e*P **P 23 42 08.3 -1.0**
comp=Z,82nm,1.5s,mb5.5
PGF Pioggiola 90.90 316 *e*P **P 23 42 08.3 -1.0**
PGF pmax pmax
comp=Z,41nm,1.5s,mb5.5
PGF Pioggiola 90.90 316 *e*P **P 23 42 08.3 -1.0**
comp=Z,41nm,1.5s,mb5.5
MBDF Montbardon 91.22 319 *e*P **P 23 42 10.3 -0.5**
LOR Lormes 91.62 322 *e*P **P 23 42 11.1 -1.5**
ORIF Oris-en-Rattie 91.67 320 *e*P **P 23 42 13.1 +0.2**
comp=Z,8.2nm,0.7s,mb4.8
ORIF Oris-en-Rattie 91.67 320 *e*P **P 23 42 13.1 +0.2**
ORIF pmax pmax
comp=Z,4.0nm,0.7s,mb4.9
ORIF Oris-en-Rattie 91.67 320 *e*P **P 23 42 13.1 +0.2**
comp=Z,4.1nm,0.7s,mb4.9
PPT Papeete 96.27 106 *e*LR LR 00 13 46.0
comp=Z,65nm,24.8s
LSZ Lusaka 96.96 256 LR LR 00 21 30.4
comp=Z,57nm,18.5s,MS4.1,baz=318,slow=32
TAOE Nuku Hiva Isla 102.12 95 *e*LR LR 00 16 29.0
comp=Z,98nm,26.6s
ANMO Albuquerque 109.37 39 *e*PKiKP PKiKP 23 47 36.7 +0.6
WMOK Wichita Mounta 113.85 34 PKiKP PKiKP 23 47 44.4 -0.2
TXAR Lajitas Array 114.97 42 PKP PKiKP 23 47 47.0 +0.1
comp=Z,0.2nm,0.5s,baz=297,slow=2.7,SNR=3.7
SDV Santo Domingo 149.01 21 *e*PKPdf PKPdf 23 48 50.4 0.0
ROSC El Rosal 151.14 31 PKPbc PKPbc 23 48 60.0 +0.4
comp=Z,3.2nm,0.4s,baz=269,slow=17,SNR=4.2
PLCA Paso Flores 157.82 158 PKPab PKPab 23 49 35.7 +0.8
comp=Z,2.6nm,1.0s,baz=180,slow=3.0,SNR=3.3
LPAZ La Paz 171.16 64 PKP PKPdf 23 49 15.8 +1.3
comp=Z,1.0nm,0.8s,baz=332,slow=2.3,SNR=3.9
LPAZ La Paz 171.16 64 *e*PKPdf PKPdf 23 49 15.5 +0.9

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*ISK **18** 23:30:57.9, 39°.71N×38°.66E, h13km, MD2.8*
*CSEM **18** 23:30:57.9±0.2, 39°.71N×38°.65E, h2km, MD2.8, Error ellipse: s-maj=5.3km s-min=3.9km az=90.0*
*DDA **18** 23:30:57.7, 39°.71N×38°.60E, h7km±2km, Md2.8*
*ISCJB **18** 23:30:58.7±0.4, 39°.70N±0°.02×38°.69E±0°.04, h10km, Error ellipse: s-maj=4.6km s-min=3.5km az=176.9*
ISC 18 23:30:58.3±0.7, 39°.72N±0°.02×38°.68E±0°.06, h2km±6km, n28, σ0§93/43, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEMA	**Kemaliye**	**0.47**	**198**	*i* P	**Pg**	**23 31 07.0**	**-0.2**
KEMA				*i* S	**Sg**	**23 31 13.7**	**+0.4**
KEMA	**Kemaliye**	**0.47**	**198**	*i* P	**Pg**	**23 31 07.1**	**-0.1**
KEMA				*i* S	**Sg**	**23 31 13.7**	**+0.4**
EZC	**Erzincan**	**0.88**	**88**	*e*PG	**Pg**	**23 31 09.7**	**-5.4**
EZC				*e*SG	**Sg**	**23 31 16.7**	**-10**
GUMT	**Gumushane**	**0.96**	**39**	*e*PG	**Pg**	**23 31 16.8**	**0.0**
GUMT	**Gumushane**	**0.96**	**39**	*e*Pg	**Pg**	**23 31 16.8**	**0.0**
PTK	**Pertek**	**0.99**	**146**	*e*PG	**Pg**	**23 31 18.0**	**+0.7**
PTK				*e*SG	**Sg**	**23 31 31.4**	**+1.3**
PTK	**Pertek**	**0.99**	**146**	*e*Pg	**Pg**	**23 31 18.0**	**+0.7**
PTK				*e*Sg	**Sg**	**23 31 31.4**	**+1.3**
DARE	**Darende-Malaty**	**1.02**	**222**	*e*PN	**Pn**	**23 31 24.1**	**+4.6**
ESPY	**Espiye-Giresun**	**1.20**	**2**	*e*PN	**Pn**	**23 31 21.5**	**-0.5**
ESPY	**Espiye-Giresun**	**1.20**	**2**	*e*Pn	**Pn**	**23 31 21.5**	**-0.6**
ELZG	**Elazig**	**1.24**	**169**	*i* P	**Pg**	**23 31 21.0**	**-1.0**
ELZG				*i* S	**Sg**	**23 31 38.1**	**0.0**
ELZG	**Elazig**	**1.24**	**169**	*i* P	**Pg**	**23 31 21.0**	**-1.0**
ELZG				*i* S	**Sg**	**23 31 38.1**	**0.0**
GRSN	**GIRESUNGRSN**	**1.25**	**346**	*i* P	**Pg**	**23 31 21.7**	**-0.5**
GRSN				*i* S	**Sg**	**23 31 39.0**	**+0.7**
GRSN	**GIRESUNGRSN**	**1.25**	**346**	*i* P	**Pg**	**23 31 21.7**	**-0.5**
GRSN				*i* S	**Sg**	**23 31 39.0**	**+0.7**
SVSK	**Karacayir**	**1.31**	**279**	*e*PN	**Pn**	**23 31 22.3**	**-1.2**
SVSK	**Karacayir**	**1.31**	**279**	*e*Pn	**Pn**	**23 31 22.3**	**-1.3**
SVRC	**Sivrice-ELAZID**	**1.42**	**160**	*e*PN	**Pn**	**23 31 23.9**	**-1.2**
SVRC	**Sivrice-ELAZID**	**1.42**	**160**	*e*Pn	**Pn**	**23 31 23.9**	**-1.2**
MACK	**Trabzon**	**1.48**	**34**	*i* P	**Pn**	**23 31 26.2**	**+0.3**
MACK				*i* S	**Sb**	**23 31 47.9**	**+2.1**
MACK	**Trabzon**	**1.48**	**34**	*i* P	**Pn**	**23 31 26.2**	**+0.2**
MACK				*i* S	**Sb**	**23 31 47.9**	**+2.1**
KTUT	**Trabzon**	**1.52**	**33**	*e*PN	**Pn**	**23 31 25.2**	**-1.2**
KTUT	**Trabzon**	**1.52**	**33**	*e*Pn	**Pn**	**23 31 25.2**	**-1.3**
AKCD	**Akcadag**	**1.54**	**203**	*i* P	**Pn**	**23 31 26.2**	**-0.4**
AKCD				*i* S	**Sn**	**23 31 48.6**	**+1.4**
AKCD	**Akcadag**	**1.54**	**203**	*i* P	**Pn**	**23 31 26.2**	**-0.5**
AKCD				*i* S	**Sn**	**23 31 48.6**	**+1.4**
BINT	**Bingol**	**1.64**	**120**	*e*PN	**Pn**	**23 31 27.1**	**-1.0**
BINT	**Bingol**	**1.64**	**120**	*e*Pn	**Pn**	**23 31 27.1**	**-1.0**
TOKA	**Tokat**	**1.79**	**290**	*i* P	**Pn**	**23 31 30.1**	**-0.1**
TOKA				*i* S	**Sn**	**23 31 54.8**	**+1.2**
TOKA	**Tokat**	**1.79**	**290**	*i* P	**Pn**	**23 31 30.1**	**-0.1**
TOKA				*i* S	**Sn**	**23 31 54.8**	**+1.2**

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*ISCJB **18** 23:48:52.3±1.3, 38°.88N±0°.05×26°.7E±0°.2, h9km±25km, Error ellipse: s-maj=20.9km s-min=8.5km az=1.7*
*DDA **18** 23:48:53.2, 38°.85N×26°.84E, h7km±2km, Md2.9*
ISC 18 23:48:52.8±1.3, 38°.87N±0°.05×26°.7E±0°.2, h13km±22km, n4, σ0§88/6, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLCB	**Balcova**	**0.55**	**152**	*e*PG	**Pg**	**23 49 03.9**	**+0.3**
BLCB				*e*SG	**Sg**	**23 49 10.8**	**-0.1**
EZN	**Ezine**	**1.00**	**343**	*e*PG	**Pg**	**23 49 12.3**	**+0.1**
BALY	**Balya**	**1.12**	**39**	*i* P	**Pg**	**23 49 13.3**	**-1.0**
BALY				*i* S	**Sg**	**23 49 29.5**	**+0.6**
GADA	**Gvkgeada**	**1.46**	**335**	*e*PN	**Pn**	**23 49 19.0**	**+0.1**

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*NEIC **19** 00:02:04.8, 35°.81N×22°.88E, h5km, MD3.5(ATH), ML3.3(THE), After ATH.*
*ATH **19** 00:02:04.8, 35°.81N×22°.88E, h5km, MD3.5/7*
*CSEM **19** 00:02:05.6±0.4, 35°.85N×22°.86E, h2km, MD3.5, Error ellipse: s-maj=13.4km s-min=5.5km az=47.0*
*THE **19** 00:02:06.1, 35°.89N×22°.91E, h0km±3km, ML3.3/1, Error ellipse: s-maj=4.8km s-min=1.1km az=221.0*
*ISCJB **19** 00:02:06.1±0.8, 35°.87N±0°.05×22°.92E±0°.07, h10km, Error ellipse: s-maj=10.4km s-min=4.1km az=141.6*
ISC 19 00:02:06.1±0.8, 35°.85N±0°.05×22°.87E±0°.07, h10km, n30, σ1§00/42, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.46**	**17**	*e*Pb	**Pg**	**00 02 14.8**	**-0.2**
KYTH	**Kithira**	**0.46**	**17**	*e*PB	**Pg**	**00 02 14.8**	**-0.2**
KYTH	**Kithira**	**0.46**	**17**	*e*Pb	**Pg**	**00 02 14.8**	**-0.2**
VLI	**Veliai**	**0.87**	**4**	*e*Pb	**Pg**	**00 02 22.7**	**-0.3**
VLI				*e*Sb	**Sg**	**00 02 34.6**	**+0.3**
VLI	**Veliai**	**0.87**	**4**	*e*PB	**Pg**	**00 02 22.7**	**-0.3**
VLI				*e*SB	**Sg**	**00 02 34.6**	**+0.3**
VLI	**Veliai**	**0.87**	**4**	*e*Pb	**Pg**	**00 02 22.7**	**-0.3**
VLI				*e*Sb	**Sg**	**00 02 34.6**	**+0.3**
KARN	**Karanos**	**0.96**	**117**	P	**Pg**	**00 02 23.5**	**-1.2**
KARN				S	**Sg**	**00 02 38.7**	**+1.5**
KARN	**Karanos**	**0.96**	**117**	P	**Pg**	**00 02 23.5**	**-1.2**
KARN				S	**Sg**	**00 02 38.7**	**+1.5**
PYL	**PYLOS**	**1.39**	**319**	P	**Pn**	**00 02 30.7**	**-0.8**
PYL				S	**Sn**	**00 02 51.7**	**+1.8**
PYL	**PYLOS**	**1.39**	**319**	*e*PB	**Pb**	**00 02 31.7**	**-0.4**
PYL				*e*SB	**Sn**	**00 02 51.7**	**+1.8**
PYL	**PYLOS**	**1.39**	**319**	P	**Pn**	**00 02 30.7**	**-0.8**
PYL	**PYLOS**	**1.39**	**319**	*e*Pb	**Pb**	**00 02 31.7**	**-0.4**
PYL				S	**Sn**	**00 02 51.7**	**+1.8**
GVD	**Gavdhos**	**1.42**	**135**	P	**Pn**	**00 02 32.8**	**+0.9**
GVD	**Gavdhos**	**1.42**	**135**	P	**Pn**	**00 02 32.8**	**+0.9**
GVD	**Gavdhos**	**1.42**	**135**	P	**Pn**	**00 02 32.8**	**+0.9**
ITM	**Ithomi**	**1.53**	**331**	*e*Pb	**Pb**	**00 02 34.3**	**-0.3**
ITM	**Ithomi**	**1.53**	**331**	P	**Pn**	**00 02 33.8**	**+0.3**
ITM	**Ithomi**	**1.53**	**331**	*e*PB	**Pb**	**00 02 34.3**	**-0.3**
ITM	**Ithomi**	**1.53**	**331**	P	**Pn**	**00 02 33.8**	**+0.3**
ITM	**Ithomi**	**1.53**	**331**	*e*Pb	**Pb**	**00 02 34.3**	**-0.3**
VLX	**Vlachokerasia**	**1.57**	**346**	P	**Pn**	**00 02 34.7**	**+0.6**
VLX				S	**Sn**	**00 02 55.7**	**+1.2**
VLX	**Vlachokerasia**	**1.57**	**346**	*e*PG	**Pg**	**00 02 34.8**	**-1.5**
VLX				*e*SB	**Sg**	**00 02 58.1**	**+1.4**
VLX	**Vlachokerasia**	**1.57**	**346**	P	**Pn**	**00 02 34.7**	**+0.6**
VLX				S	**Sn**	**00 02 55.7**	**+1.2**
VLX				*e*Sb	**Sg**	**00 02 58.1**	**+1.4**
GUR	**Goura**	**2.13**	**349**	*e*PG	**Pg**	**00 02 45.5**	**-1.4**
GUR	**Goura**	**2.13**	**349**	*e*Pg	**Pg**	**00 02 45.5**	**-1.4**
LTK	**Loutraki**	**2.17**	**2**	*e*PN	**Pb**	**00 02 44.5**	**-1.1**
LTK	**Loutraki**	**2.17**	**2**	*e*Pn	**Pb**	**00 02 44.5**	**-1.1**
APE	**Apeiranthos**	**2.47**	**60**	P	**Pn**	**00 02 45.9**	**-0.5**
APE	**Apeiranthos**	**2.47**	**60**	P	**Pn**	**00 02 45.9**	**-0.5**
APE	**Apeiranthos**	**2.47**	**60**	P	**Pn**	**00 02 45.9**	**-0.5**

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*IDC **19** 00:08:32.2±1.4, 2°.18N×127°.53E, h0km, mb3.6/4, mb1 3.9/5, mb1mx3.6/21, mbtmp3.8/5, ML4.2/1, Error ellipse: s-maj=59.3km s-min=21.6km az=71.0*
*DJA **19** 00:08:43, 2°.14N×127°.33E, h138km, mb4.3/6*
*ISCJB **19** 00:08:45.3±1.1, 1°.96N±0°.09×127°.09E±0°.10, h129km±10km, mb3.5/4, Error ellipse: s-maj=17.4km s-min=12.9km az=142.9*
ISC 19 00:08:46.4±1.1, 1°.92N±0°.09×127°.10E±0°.10, h122km±10km, n15, σ1§08/15, mb3.5/4, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.18**	**167**	P	**Pn**	**00 09 10.7**	**+0.3**
SGSI	**Sangihe**	**2.35**	**318**	P	**Pn**	**00 09 22.5**	**-1.8**
LBMI	**Labuha**	**2.58**	**171**	P	**Pn**	**00 09 28.0**	**+0.7**
KMSI	**Cibinong**	**3.39**	**247**	P	**Pn**	**00 09 38.1**	**+0.2**
LUWI	**Luwuk**	**5.23**	**236**	P	**Pn**	**00 10 03.2**	**+0.7**
0.6nm2μm31nm,1.1s							
MRSI	**Marisa**	**5.35**	**254**	P	**Pn**	**00 10 05.7**	**+1.6**
0.1nm24nm,0.6s							
APSI	**Ampana**	**6.13**	**243**	P	**Pn**	**00 10 16.0**	**+1.3**
2μm36nm,0.6s							
TTSI	**Tana Toraja**	**8.79**	**236**	P	**Pn**	**00 10 50.3**	**-0.4**
30nm,0.7s							
SPSI	**Sidrap Palu**	**9.37**	**231**	P	**Pn**	**00 10 58.8**	**+0.3**
22nm,0.7s							
BNSI	**Bone**	**9.39**	**228**	P	**Pn**	**00 10 57.0**	**-1.8**
KAPI	**Kappang**	**10.06**	**227**	Pn	**Pn**	**00 11 05.5**	**-2.4**
2.0nm,0.3s,baz=60,slow=19,SNR=5.5							
WRA	**Warramunga Arr**	**22.86**	**162**	P	**P**	**00 13 38.9**	**-0.7**
1.6nm,0.5s,mb3.6,baz=341,slow=11,SNR=6.3							
ASAR	**Alice Springs**	**26.28**	**166**	P	**P**	**00 14 10.5**	**-0.1**
0.2nm,0.5s,mb2.8,baz=354,slow=7.8,SNR=3.6							
MKAR	**Makanchi Array**	**59.24**	**326**	P	**P**	**00 18 35.6**	**+0.6**
0.3nm,0.3s,mb3.6,baz=112,slow=8.0,SNR=3.8							
KURK	**Kurchatov**	**63.45**	**328**	P	**P**	**00 19 04.0**	**+0.8**
0.7nm,0.6s,mb3.8,baz=132,slow=5.9,SNR=3.3							

CASC 19 00:19:19.8±2.2, 8°.74N×83°.22W, h7km, MD3.8, 3C-3D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.10**	**150**	⇑*i*P	Pg	00 19 23.3	+1.3
CTCR	**Cotoan**	**0.48**	**71**	⇓*i*P	Pg	00 19 30.3	+1.2
BAR1		**0.51**	**349**	⇑*i*P	Pg	00 19 30.7	+1.0
BAR1				⇑*i*P		00 19 30.7	
BAR1				*e*S	Sg	00 19 38.1	+1.7
BRU2	**Volcan**	**0.52**	**84**	⇓*i*P	Pg	00 19 30.8	+0.8
BRU2				*e*S	Sg	00 19 39.4	+2.7
CNI	**Changuinola**	**0.97**	**46**	⇓*i*P	Pg	00 19 39.0	+0.6
CNI				*e*S	Sg	00 19 49.5	-1.4
BUS	**Buena Vista**	**0.97**	**327**	*e*P	Pg	00 19 38.1	-0.4
QCR	**Quepos**	**1.16**	**306**	*e*P	Pg	00 19 40.4	-1.7
QCR				*e*P		00 19 40.4	
QCR				*e*S	Sg	00 19 55.0	-2.1
QCR				*e*S	Sg	00 19 56.3	-0.9
URSC	**Urasca**	**1.22**	**333**	*e*P	Pb	00 19 41.8	-1.5
LAJ	**Bijagual**	**1.43**	**322**	*e*P	Pn	00 19 49.3	+3.1
PRS1	**Puriscal**	**1.64**	**319**	*e*P	Pn	00 19 47.8	-1.3
PRS1				*e*S	Sn	00 20 11.2	+0.7
CGA2	**Cerro Gallo 2**	**1.77**	**316**	*e*P	Pn	00 19 51.1	+0.2

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*NEIC **19** 00:24:31.9, 36°.69N×35°.93E, h5km, MD3.6(ISK), After ISK.*
*DDA **19** 00:24:33.0, 36°.63N×36°.05E, h7km±2km, Md3.7*
*ISK **19** 00:24:33.1, 36°.69N×35°.95E, h8km, MD3.6*
*CSEM **19** 00:24:33.2±0.1, 36°.65N×35°.99E, h2km, MD3.7, Error ellipse: s-maj=3.8km s-min=3.6km az=170.0*
*ISCJB **19** 00:24:33.4±0.3, 36°.64N±0°.02×35°.99E±0°.02, h10km, Error ellipse: s-maj=2.8km s-min=2.6km az=4.3*
*IDC **19** 00:24:34.7±1.6, 36°.59N×35°.82E, h0km, mb3.9/1, mb1 3.5/3, mb1mx3.2/22, mbtmp3.4/3, ML2.8/3, Error ellipse: s-maj=39.2km s-min=11.2km az=78.0*
ISC 19 00:24:34.0±0.3, 36°.64N±0°.02×36°.00E±0°.02, h10km, n79, σ1§27/106, 2C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COBT	**Iskenderun**	**0.24**	**119**	⇑*i*P	**Pg**	**00 24 37.6**	**-1.3**
COBT				*i* S	**Sg**	**00 24 40.5**	**-1.8**
COBT	**Iskenderun**	**0.24**	**119**	*i* P	**Pg**	**00 24 37.6**	**-1.3**
COBT				*i* S	**Sg**	**00 24 40.5**	**-1.7**
CEYT	**Ceyhan**	**0.42**	**332**	*e*PG	**Pg**	**00 24 40.5**	**-1.9**
CEYT	**Ceyhan**	**0.42**	**332**	Pg	**Pg**	**00 24 40.5**	**-1.9**
CEYT				Sg	**Sg**	**00 24 46.5**	**-1.5**
CEYT	**Ceyhan**	**0.42**	**332**	*e*Pg	**Pg**	**00 24 40.5**	**-1.8**
CEYT				Sg	**Sg**	**00 24 46.5**	**-1.5**
KRTS	**Karatas**	**0.51**	**263**	*e*PG	**Pg**	**00 24 42.9**	**-1.0**
KRTS				*e*SG	**Sg**	**00 24 50.7**	**+0.1**
KRTS	**Karatas**	**0.51**	**263**	*e*Pg	**Pg**	**00 24 42.9**	**-1.0**
KRTS				*e*Sg	**Sg**	**00 24 50.7**	**+0.2**
HTY	**Hatay**	**0.53**	**168**	*e*PG	**Pg**	**00 24 44.4**	**+0.1**
HTY				*e*SG	**Sg**	**00 24 54.2**	**+3.0**
HTY	**Hatay**	**0.53**	**168**	*e*Pg	**Pg**	**00 24 44.4**	**+0.1**
HTY				*e*Sg	**Sg**	**00 24 54.2**	**+3.0**
YAYL	**Yayladag**	**0.61**	**172**	*i* P	**Pg**	**00 24 44.3**	**-1.5**
YAYL				*i* S	**Sg**	**00 24 53.6**	**-0.1**
YAYL	**Yayladag**	**0.61**	**172**	*i* P	**Pg**	**00 24 44.3**	**-1.5**
YAYL				*i* S	**Sg**	**00 24 53.6**	**-0.2**
KOZT	**Kozan**	**0.85**	**351**	*e*PG	**Pg**	**00 24 48.7**	**-1.8**
KOZT				*e*SG	**Sg**	**00 25 00.8**	**-0.8**
KUZU	**Kuzuini**	**0.88**	**81**	⇑*i*P	**Pg**	**00 24 49.3**	**-1.6**
KUZU				*i* S	**Sg**	**00 25 03.3**	**+0.9**
KUZU	**Kuzuini**	**0.88**	**81**	*i* P	**Pg**	**00 24 49.3**	**-1.6**
KUZU				*i* S	**Sg**	**00 25 03.3**	**+0.9**
KARA	**Karaisali**	**0.98**	**310**	*e*PG	**Pg**	**00 24 50.7**	**-2.2**
KARA	**Karaisali**	**0.98**	**310**	*e*Pg	**Pg**	**00 24 50.7**	**-2.2**
GAZ	**Gaziantep**	**1.11**	**61**	*e*PN	**Pg**	**00 24 54.6**	**-0.8**
GAZ	**Gaziantep**	**1.11**	**61**	Pn	**Pg**	**00 24 54.1**	**-1.3**
GAZ	**Gaziantep**	**1.11**	**61**	*e*Pn	**Pg**	**00 24 54.6**	**-0.8**
KMRS	**Kahramanmaras**	**1.13**	**40**	*e*PN	**Pg**	**00 24 55.0**	**-0.7**
KMRS	**Kahramanmaras**	**1.13**	**40**	*e*Pn	**Pg**	**00 24 55.0**	**-0.7**
GULE	**Gulek**	**1.17**	**304**	*i* P	**Pb**	**00 24 54.8**	**-1.6**
GULE				*i* S	**Sn**	**00 25 14.4**	**+1.9**
GULE	**Gulek**	**1.17**	**304**	*i* P	**Pb**	**00 24 54.8**	**-1.6**
MERS	**Mersin**	**1.21**	**281**	*e*PN	**Pg**	**00 24 55.5**	**-1.7**
MERS	**Mersin**	**1.21**	**281**	*e*Pn	**Pg**	**00 24 55.6**	**-1.6**
GZT	**Gaziantep**	**1.45**	**60**	*i* P	**Pn**	**00 24 59.3**	**-1.0**
GZT				*i* S	**Sn**	**00 25 19.9**	**+0.7**
EREN	**Erenkoy**	**1.85**	**234**	*e*PN	**Pn**	**00 25 05.9**	**+0.1**
EREN	**Erenkoy**	**1.85**	**234**	*e*Pn	**Pn**	**00 25 05.9**	**+0.1**
IKL	**Isikli**	**1.91**	**259**	*e*PN	**Pn**	**00 25 06.5**	**-0.1**
IKL	**Isikli**	**1.91**	**259**	Pn	**Pn**	**00 25 06.4**	**-0.2**
ATAB	**Bozova**	**2.02**	**65**	*i* P	**Pn**	**00 25 09.1**	**+1.0**
ATAB				*i* S	**Sn**	**00 25 35.6**	**+2.3**
ATAB	**Bozova**	**2.02**	**65**	*i* P	**Pn**	**00 25 09.1**	**+1.0**
ATAB				*i* S	**Sn**	**00 25 35.7**	**+2.3**
SARI	**SarD1z-Kayseri**	**2.11**	**15**	*e*PN	**Pn**	**00 25 04.7**	**-4.7**
HWQ	**Hawqa**	**2.35**	**181**	*e*Pn	**Pn**	**00 25 12.6**	**-0.2**
HWQ	**Hawqa**	**2.35**	**181**	*e*Pn	**Pn**	**00 25 12.6**	**-0.1**
URFA	**Urfa**	**2.40**	**70**	*e*PN	**Pn**	**00 25 14.3**	**+1.0**
URFA	**Urfa**	**2.40**	**70**	*e*Pn	**Pn**	**00 25 14.3**	**+1.0**
LFK	**Lefkose**	**2.42**	**237**	*e*PN	**Pn**	**00 25 13.7**	**+0.1**
LFK	**Lefkose**	**2.42**	**237**	*e*Pn	**Pn**	**00 25 13.7**	**+0.1**
ERMK	**Ermenek**	**2.48**	**271**	*i* P	**Pn**	**00 25 16.4**	**+1.9**
ERMK				*i* S	**Sb**	**00 25 47.8**	**-1.4**
ERMK	**Ermenek**	**2.48**	**271**	*i* P	**Pn**	**00 25 16.4**	**+1.9**
SULT	**Sultanhani-AKS**	**2.52**	**309**	*e*PN	**Pn**	**00 25 14.7**	**-0.2**
SULT	**Sultanhani-AKS**	**2.52**	**309**	*e*Pn	**Pn**	**00 25 14.7**	**-0.3**
MYA	**Malataya**	**2.56**	**48**	*e*PN	**Pn**	**00 25 16.4**	**+0.8**
MYA	**Malataya**	**2.56**	**48**	*e*Pn	**Pn**	**00 25 16.4**	**+0.8**
DARE	**Darende-Malaty**	**2.72**	**31**	*e*PN	**Pn**	**00 25 12.0**	**-5.7**
CSS	**Prodhromos**	**2.74**	**233**	*e*Pn	**Pn**	**00 25 16.8**	**-1.2**
CSS				S	**Sn**	**00 25 53.5**	**+2.4**
CSS	**Prodhromos**	**2.74**	**233**	*e*Pn	**Pn**	**00 25 16.8**	**-1.2**
CSS				S	**Sn**	**00 25 53.5**	**+2.4**
BHL	**Bhannes**	**2.74**	**186**	*e*Pn	**Pn**	**00 25 17.7**	**-0.3**
BHL	**Bhannes**	**2.74**	**186**	*e*Pn	**Pn**	**00 25 17.7**	**-0.4**
HDMB	**Hadim**	**2.84**	**278**	*e*PN	**Pn**	**00 25 19.3**	**-0.1**
HDMB	**Hadim**	**2.84**	**278**	*e*Pn	**Pn**	**00 25 19.3**	**-0.1**
LEF	**Lefka**	**2.94**	**240**	*e*PN	**Pn**	**00 25 21.7**	**+0.9**
LEF	**Lefka**	**2.94**	**240**	Pn	**Pn**	**00 25 21.7**	**+0.8**
LEF	**Lefka**	**2.94**	**240**	*e*Pn	**Pn**	**00 25 21.7**	**+0.9**
GAZI	**Gazipasa**	**3.00**	**263**	*i* P	**Pn**	**00 25 23.1**	**+1.5**
GAZI				*i* S	**Sn**	**00 25 58.8**	**+1.3**
GAZI	**Gazipasa**	**3.00**	**263**	*i* P	**Pn**	**00 25 23.0**	**+1.4**
GAZI				*i* S	**Sn**	**00 25 58.8**	**+1.3**
SVRC	**Sivrice-ELAZID**	**3.15**	**56**	*e*PN	**Pn**	**00 25 24.7**	**+1.0**
SVRC	**Sivrice-ELAZID**	**3.15**	**56**	*e*Pn	**Pn**	**00 25 24.7**	**+1.0**
KONT	**Konya--Tatoy**	**3.18**	**295**	*e*PN	**Pn**	**00 25 25.1**	**+1.0**
KONT	**Konya--Tatoy**	**3.18**	**295**	Pn	**Pn**	**00 25 24.2**	**+0.1**
KONT	**Konya--Tatoy**	**3.18**	**295**	*e*Pn	**Pn**	**00 25 25.1**	**+1.0**
KEMA	**Kemaliye**	**3.29**	**36**	*i* P	**Pn**	**00 25 25.0**	**-0.6**
KEMA	**Kemaliye**	**3.29**	**36**	*i* P	**Pn**	**00 25 25.0**	**-0.5**
LADK	**Ladik-KONYA**	**3.29**	**299**	*e*PN	**Pn**	**00 25 25.7**	**+0.2**
SVSK	**Karacayir**	**3.37**	**13**	*e*PN	**Pn**	**00 25 27.1**	**+0.4**
SVSK	**Karacayir**	**3.37**	**13**	*e*Pn	**Pn**	**00 25 27.1**	**+0.4**
PTK	**Pertek**	**3.51**	**49**	*e*PN	**Pn**	**00 25 29.8**	**+1.2**
PTK	**Pertek**	**3.51**	**49**	*e*Pn	**Pn**	**00 25 29.8**	**+1.2**
BRTR	**Keskin Array B**	**3.60**	**330**	Pn	**Pn**	**00 25 30.3**	**+0.4**
0.2nm,0.3s,baz=149,slow=13,SNR=7.4							
BRTR				Pg	**Pb**	**00 25 38.8**	**+1.0**
0.2nm,0.3s,baz=151,slow=13,SNR=5.8							
BRTR				Lg		00 26 28.9	
0.2nm,0.3s,baz=152,slow=28,SNR=3.5							
BRTR	**Keskin Array B**	**3.60**	**330**	Pg	**Pb**	**00 25 38.8**	**+1.0**
BR131	**Keskin Array S**	**3.60**	**330**	*e*Pn	**Pn**	**00 25 31.3**	**+1.5**
BR131				Sn	**Sn**	**00 26 14.3**	**+1.9**
MMAI	**Mount Meron Ar**	**3.65**	**188**	Pn	**Pn**	**00 25 29.9**	**-0.6**
4.8nm,0.3s,baz=357,slow=14,SNR=18							
MMAI				Pg	**Pg**	**00 25 41.7**	**-2.2**
5.3nm,0.3s,baz=7.0,slow=15,SNR=8.7							
MMAI				Sn	**Sn**	**00 26 14.6**	**+1.1**
12nm,0.3s,baz=0.7,slow=23,SNR=10							
MMAI				Lg		00 26 30.3	
12nm,0.3s,baz=7.5,slow=26,SNR=7.0							
CORM	**Corum**	**3.69**	**344**	*e*PN	**Pn**	**00 25 31.4**	**+0.2**
CORM	**Corum**	**3.69**	**344**	*e*Pn	**Pn**	**00 25 31.4**	**+0.2**
KIZT	**Kizilcal**	**3.96**	**306**	*e*PN	**Pn**	**00 25 35.1**	**+0.3**
KIZT	**Kizilcal**	**3.96**	**306**	*e*Pn	**Pn**	**00 25 35.1**	**+0.3**
ASF	**Jabal al Asfar**	**4.51**	**170**	Pn	**Pn**	**00 25 44.6**	**+2.1**
0.4nm,0.3s,baz=0.0,slow=5.1,SNR=5.3							
ASF				Pg	**Pg**	**00 25 58.0**	**-2.6**

QIZ				LR	LR		
	comp=N,3μm,13.5s,MS4.9						
QIZ				LR	LR		
	comp=E,480nm,15.1s,MS4.9						
QIZ				LR	LR		
	comp=Z,3μm,11.9s,MS4.9						
QIZ	**Qiongzhong**	**20.66**	**52**	*e*P	**P**	**00 40 10.6**	**+0.2**
	comp=Z,244nm,1.4s						
KAD	**Karad**	**20.88**	**302**	*ex*	**P**	**00 40 11.1**	**-1.7**
KAD				AMb	AMB	00 40 24.5	
	comp=Z,102nm,1.3s						
KAD				*ex*	x	00 44 01.2	
BHPL	**Bhopal**	**21.99**	**320**	*e*PKP	**P**	**00 40 24.7**	**+0.1**
BHPL				AMb	AMB	00 40 28.8	
	comp=Z,50nm,0.9s,mb4.9						
BHPL				*ex*	x	00 44 25.2	
LSA	**Lhasa**	**22.85**	**357**	P	**P**	**00 40 31.9**	**-1.8**
LSA				LR	LR		
	comp=E,840nm,20.6s						
LSA				LR	LR		
	comp=Z,1μm,16.8s,MS4.3						
LSA	**Lhasa**	**22.85**	**357**	*e*P	**P**	**00 40 33.7**	**0.0**
LSA				pmax	pmax		
	comp=Z,227nm,1.6s,mb5.3						
LSA	**Lhasa**	**22.85**	**357**	*e*P	**P**	**00 40 33.7**	**+0.1**
	comp=Z,227nm,1.6s,mb5.3						
KKM	**Kota Kinabalu**	**23.39**	**90**	P	**P**	**00 40 40.4**	**+0.9**
KKM	**Kota Kinabalu**	**23.39**	**90**	*e*P	**P**	**00 40 40.0**	**+0.4**
	comp=Z,384nm,1.7s,mb5.5						
GYA	**Guiyang**	**23.68**	**33⇑**	*i*P	**P**	**00 40 40.9**	**-1.1**
GYA				pP		00 40 52.8	
GYA				sP	sP	00 40 57.3	+2.0
GYA				PP		00 41 16.3	
GYA				S	**S**	**00 44 52.3**	**-2.4**
GYA				sS	sS	00 45 10.0	-0.1
GYA				pmax	pmax		
	comp=Z,30nm,1.0s,mb4.7						
GYA				pmax	pmax		
	comp=Z,130nm,4.8s						
GYA				LR	LR		
	comp=N,5μm,14.8s,MS5.3						
GYA				LR	LR		
	comp=E,4μm,13.0s,MS5.3						
GYA				LR	LR		
	comp=Z,6μm,15.5s,MS5.2						
KDM	**Kudat**	**23.98**	**88**	P	**P**	**00 40 45.8**	**+0.9**
SDKM	**Sandakan**	**24.39**	**91**	P	**P**	**00 40 49.6**	**+0.9**
AGRA	**Agra**	**24.70**	**327**	*e*PKP	**P**	**00 40 51.7**	**+0.3**
AGRA				AMb	AMB	00 40 56.1	
	comp=Z,51nm,0.4s,mb5.4						
PTH	**Pithoragarh**	**25.52**	**334**	*ex*	**P**	**00 41 01.0**	**+2.2**
GZH	**Guangzhou**	**25.66**	**49**	P	**P**	**00 41 02.1**	**+2.0**
GZH				LR	LR		
	comp=N,1μm,14.2s,MS5.1						
GZH				LR	LR		
	comp=E,4μm,12.3s,MS5.1						
GZH				LR	LR		
	comp=Z,7μm,12.8s,MS5.3						
MYLDM	**Lahad Datu**	**25.72**	**92**	P	**P**	**00 41 01.9**	**+1.1**
PPR	**Puerto Princes**	**25.94**	**82**	*e*P	**P**	**00 41 03.4**	**+0.6**
SONA	**Sohna**	**25.97**	**327**	*e*PKP	**P**	**00 41 03.4**	**+0.5**
SONA				AMb	AMB	00 41 08.0	
	comp=Z,44nm,1.6s,mb4.7						
AYAN	**Aya Nagar**	**26.13**	**328**	*e*PKP	**P**	**00 41 04.6**	**+0.3**
AYAN				AMb	AMB	00 41 08.2	
	comp=Z,21nm,0.6s,mb4.8						
CD2	**Chengdu**	**26.16**	**22⇓**	*i*P	**P**	**00 41 03.8**	**-0.8**
CD2				pP	pP	00 41 14.3	+0.3
CD2				sP	sP	00 41 18.9	+1.0
CD2				PP		00 41 47.0	
CD2				PcP	PcP	00 44 29.3	-2.0
CD2				S	**S**	**00 45 32.8**	**-1.6**
CD2				sS	sS	00 45 50.3	+0.4
CD2				SS		00 46 43.0	
CD2				PcS	PcS	00 48 09.1	-3.2
CD2				pmax	pmax		
	comp=Z,70nm,1.2s,mb5.1						
CD2				pmax	pmax		
	comp=Z,160nm,5.2s						
CD2				LR	LR		
	comp=N,2μm,10.8s,MS5.2						
CD2				LR	LR		
	comp=E,3μm,11.9s,MS5.2						
CD2				LR	LR		
	comp=Z,3μm,11.8s,MS5.0						
KHET	**Khetri**	**26.54**	**325**	*e*PKP	**P**	**00 41 08.3**	**+0.2**
KHET				AMb	AMB	00 41 13.3	
	comp=Z,29nm,1.2s,mb4.7						
JOSI	**Joshimath**	**26.68**	**334**	*e*PKP	**P**	**00 41 09.9**	**+0.7**
KKR	**Kurukshetra**	**27.48**	**329**	*e*PKP	**P**	**00 41 16.5**	**0.0**
KLP	**Kalpa**	**28.09**	**333**	*ex*	**P**	**00 41 18.8**	**-3.1**
KLP				AMb	AMB	00 41 48.2	
	comp=Z,30nm,1.2s,mb4.8						
ENH	**Enshi**	**28.21**	**32**	*e*P	**P**	**00 41 21.7**	**-1.2**
	comp=Z,91nm,1.4s,mb5.2						
KAPI	**Kappang**	**29.44**	**113**	P	**P**	**00 41 33.3**	**-0.8**
	comp=Z,10nm,0.6s,mb4.8,baz=277,slow=11,SNR=5.9						
KAPI	**Kappang**	**29.44**	**113**	*e*P	**P**	**00 41 33.4**	**-0.7**
	comp=Z,77nm,1.3s,mb5.3						
LZH	**Lanzhou**	**30.92**	**18**	*e*P	**P**	**00 41 46.9**	**0.0**
LZH				pP	pP	00 41 57.1	+0.7
LZH				sP	sP	00 42 01.4	+1.1
LZH				PP	PP	00 42 49.0	-8.1
LZH				PcP	PcP	00 44 41.8	-1.2
LZH				*e*S	**S**	**00 46 47.0**	**-2.1**
LZH				sS	sS	00 47 03.4	-1.3
LZH				SS	SS	00 48 34.0	-28
LZH				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.9						
LZH				pmax	pmax		
	comp=Z,120nm,4.2s						
LZH				LR	LR		
	comp=E,2μm,13.4s						
LZH				LR	LR		
	comp=Z,2μm,15.2s,MS4.9						
XAN	**Xi'an**	**31.01**	**27**	P	**P**	**00 41 45.4**	**-2.4**
XAN				pP	pP	00 41 54.3	-2.9
XAN				sP	sP	00 41 58.0	-3.2
XAN				S	**S**	**00 46 53.8**	**+3.2**
XAN				sS	sS	00 47 08.8	+2.5
XAN				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.3						
XAN				pmax	pmax		
	comp=Z,16nm,5.9s						
XAN				LR	LR		
	comp=N,2μm,13.6s,MS4.9						
XAN				LR	LR		
	comp=E,760nm,14.0s,MS4.9						
XAN				LR	LR		
	comp=Z,1μm,12.9s,MS4.7						
WHN	**Wuhan**	**31.18**	**38**	⇓P	**P**	**00 41 49.4**	**0.0**
WHN				LR	LR		
	comp=N,3μm,10.5s,MS5.3						
WHN				LR	LR		
	comp=E,1μm,10.5s,MS5.3						
WHN				LR	LR		
	comp=Z,4μm,13.6s,MS5.3						
TWG	**Pinlang**	**31.65**	**57**	*e*P	**P**	**00 41 55.2**	**+1.7**
SSLB	**Suanglung**	**31.98**	**55**	*e*P	**P**	**00 41 56.6**	**+0.2**
	comp=Z,70nm,1.4s,mb5.3						
YULB	**Yu-li**	**32.09**	**56**	*e*P	**P**	**00 41 57.6**	**+0.2**
	comp=Z,59nm,1.4s,mb5.2						
DAV	**Davao City (W)**	**32.65**	**87**	LR	LR	00 58 09.9	
	comp=Z,838nm,18.8s,MS4.5,baz=185,slow=42						
DAV	**Davao City (W)**	**32.65**	**87**	P	**P**	**00 42 03.1**	**+0.6**
YHNB	**Yeheng**	**32.73**	**54**	*e*P	**P**	**00 42 02.7**	**-0.4**
	comp=Z,22nm,1.1s,mb5.0						
GTA	**Gaotai**	**33.12**	**10**	*e*P	**P**	**00 42 05.9**	**-0.3**
GTA				pP	pP	00 42 15.1	-0.6
GTA				sP	sP	00 42 19.1	-0.6
GTA				PP	PP	00 43 20.4	-1.2
GTA				S	**S**	**00 47 23.8**	**+0.4**
GTA				sS	sS	00 47 38.1	-1.0
GTA				SS	SS	00 49 25.4	-22
GTA				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.5						
GTA				pmax	pmax		
	comp=Z,100nm,5.9s						
GTA				LR	LR		
	comp=N,820nm,14.0s,MS4.7						
GTA				LR	LR		
	comp=E,670nm,14.9s,MS4.7						
GTA				LR	LR		
	comp=Z,810nm,14.6s,MS4.6						
NJ2	**Nanjing**	**35.04**	**41**	*e*P	**P**	**00 42 23.8**	**+0.8**
NJ2				pP	pP	00 42 33.3	+0.8
NJ2				sP	sP	00 42 37.3	+0.8
NJ2				PP	PP	00 43 42.1	-0.8
NJ2				S	**S**	**00 47 53.0**	**-0.3**
NJ2				SS	SS	00 50 02.5	-24
NJ2				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.4						
NJ2				pmax	pmax		
	comp=Z,150nm,8.5s						
NJ2				LR	LR		
	comp=N,1μm,24.7s,MS4.7						
NJ2				LR	LR		
	comp=E,1μm,22.8s,MS4.7						
NJ2				LR	LR		
	comp=Z,1μm,22.1s,MS4.5						
KBL	**Kabul**	**35.20**	**325**	*e*P	**P**	**00 42 24.8**	**+0.4**
KSH	**Kashi**	**35.91**	**338**	P	**P**	**00 42 28.8**	**-1.5**
KSH				pP	pP	00 42 38.5	-1.3
KSH				sP	sP	00 42 40.1	-3.7
KSH				PP	PP	00 43 49.6	-2.7
KSH				PcP	PcP	00 44 57.4	+0.4
KSH				S	**S**	**00 48 01.1**	**-5.2**
KSH				sS	sS	00 48 17.9	-4.2
KSH				ScP	ScP	00 48 39.8	-1.2
KSH				PcS	PcS	00 48 43.5	-0.8
KSH				SS	SS	00 50 22.3	-21
KSH				ScS	ScS	00 52 42.9	-3.3
KSH				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.9						
KSH				pmax	pmax		
	comp=Z,130nm,3.8s						
KSH				LR	LR		
	comp=N,570nm,14.4s,MS4.7						
KSH				LR	LR		
	comp=E,630nm,12.0s,MS4.7						
KSH				LR	LR		
	comp=Z,690nm,13.3s,MS4.6						
SSE	**Sheshan**	**36.01**	**44**	P	**P**	**00 42 29.5**	**-1.9**
SSE				sP	sP	00 42 41.9	-3.0
SSE				S	**S**	**00 48 07.3**	**-1.0**
SSE				sS	sS	00 48 22.3	-1.7
SSE				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.2						
SSE				pmax	pmax		
	comp=Z,120nm,4.8s						
SSE				LR	LR		
	comp=N,710nm,12.2s,MS5.0						
SSE				LR	LR		
	comp=E,1μm,12.2s,MS5.0						
SSE				LR	LR		
	comp=Z,2μm,12.5s,MS5.1						
WMQ	**Urumqi**	**37.16**	**354**	*e*P	**P**	**00 42 42.0**	**+1.0**
WMQ				pP	pP	00 42 52.0	+1.5
WMQ				sP	sP	00 42 56.0	+1.6
WMQ				PP	PP	00 44 10.0	+3.9
WMQ				S	**S**	**00 48 26.0**	**+0.6**
WMQ				SS	SS	00 50 58.0	-11
WMQ				pmax	pmax		
	comp=Z,31nm,1.0s,mb5.1						
WMQ				pmax	pmax		
	comp=Z,94nm,4.0s						
WMQ				LR	LR		
	comp=N,350nm,14.0s,MS4.7						
WMQ				LR	LR		
	comp=E,850nm,14.0s,MS4.7						
WMQ				LR	LR		
	comp=Z,430nm,14.0s,MS4.4						
HHC	**Hu-ho-hao-te**	**37.89**	**24**	*e*P	**P**	**00 42 47.3**	**+0.1**
HHC				pP	pP	00 42 59.4	+2.6
HHC				sP	sP	00 43 04.8	+4.1
HHC				PP	PP	00 44 19.3	+5.1
HHC				PcP	PcP	00 45 01.4	-1.6
HHC				S	**S**	**00 48 38.8**	**+2.2**
HHC				ScP	ScP	00 48 44.3	-4.0
HHC				PcS	PcS	00 48 49.6	-2.1
HHC				ScS	ScS	00 52 52.4	-4.9
HHC				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.8						
HHC				pmax	pmax		
	comp=Z,80nm,6.5s						
HHC				LR	LR		
	comp=N,1μm,14.8s,MS5.0						
HHC				LR	LR		
	comp=E,1μm,12.0s,MS5.0						
HHC				LR	LR		
	comp=Z,850nm,15.2s,MS4.7						
KZA	**Kyzart**	**38.41**	**339**	P	**P**	**00 42 52.9**	**+1.3**
	SNR=16						
MBWA	**Marble Bar**	**38.41**	**137**	P	**P**	**00 42 48.5**	**-3.3**
UCH	**Uchtor**	**38.81**	**338**	P	**P**	**00 42 55.9**	**+1.0**
	SNR=20						
UCH	**Uchtor**	**38.81**	**338**	*e*P	**P**	**00 42 55.4**	**+0.6**
	comp=Z,20nm,0.9s,mb4.8						
KBK	**Karagaybulak**	**39.02**	**339**	P	**P**	**00 42 57.7**	**+1.0**
	SNR=19						
AML	**Almayashu**	**39.03**	**337**	P	**P**	**00 42 57.9**	**+1.1**
	SNR=42						
AML	**Almayashu**	**39.03**	**337**	*e*P	**P**	**00 42 57.7**	**+0.9**
	comp=Z,41nm,0.8s,mb5.2						
TKM2	**Tokmak 2**	**39.03**	**340**	P	**P**	**00 42 57.2**	**+0.4**
	SNR=12						
TKM2	**Tokmak 2**	**39.03**	**340**	*e*P	**P**	**00 42 56.8**	**+0.1**
TKM2				pmax	pmax		
	comp=Z,41nm,1.5s,mb4.9						
TKM2	**Tokmak 2**	**39.03**	**340**	*e*P	**P**	**00 42 56.8**	**0.0**
	comp=Z,41nm,1.5s,mb4.9						
AAK	**Ala-Archa**	**39.17**	**339**	P	**P**	**00 42 59.3**	**+1.4**
	comp=Z,144nm,1.0s,mb5.7,SNR=8.2						
AAK	**Ala-Archa**	**39.17**	**339**	P	**P**	**00 42 59.4**	**+1.5**
	SNR=9.6						
AAK	**Ala-Archa**	**39.17**	**339**	P	**P**	**00 42 57.8**	**-0.1**
	comp=Z,8.5nm,0.8s,mb4.5,baz=171,slow=10.0,SNR=1.7						
AAK				LR	LR	01 01 42.3	
	comp=Z,895nm,18.3s,MS4.6,baz=149,slow=40						
AAK	**Ala-Archa**	**39.17**	**339**	*ce*P	**P**	**00 42 58.6**	**+0.7**
AAK				pmax	pmax		
	comp=Z,22nm,1.7s,mb4.6						
AAK	**Ala-Archa**	**39.17**	**339**	*e*P	**P**	**00 42 58.1**	**+0.3**
	comp=Z,47nm,1.3s,mb5.1						
BJI	**Beijing**	**39.26**	**29**	P	**P**	**00 42 59.1**	**+0.4**
BJI				PP	PP	00 44 34.5	+5.4
BJI				S	**S**	**00 49 01.4**	**+4.2**
BJI				pmax	pmax		
	comp=Z,16nm,2.1s,mb4.4						
BJI				pmax	pmax		
	comp=Z,130nm,4.0s						
BJI				LR	LR		
	comp=N,760nm,18.6s,MS4.8						
BJI				LR	LR		
	comp=E,1μm,17.8s,MS4.8						
BJI				LR	LR		
	comp=Z,480nm,24.2s						
FRU	**Bishkek**	**39.30**	**339**	*e*P	**P**	**00 43 00.0**	**+1.0**
FRU				*e*		00 44 40.0	
FRU				pmax	pmax		
	comp=Z,80nm,1.0s,mb5.4						
EKS2	**Erkin-Say**	**39.46**	**338**	P	**P**	**00 43 01.2**	**+0.9**
	SNR=14						
EKS2	**Erkin-Say**	**39.46**	**338**	*e*P	**P**	**00 43 00.5**	**+0.2**
	comp=Z,20nm,1.0s,mb4.8						
USP	**Ospenovka**	**39.72**	**339**	P	**P**	**00 43 02.2**	**-0.2**
	SNR=15						
MK31	**Makanchi Array**	**40.87**	**349**	*e*P	**P**	**00 43 11.3**	**-0.6**
MKAR	**Makanchi Array**	**40.87**	**349**	P	**P**	**00 43 10.5**	**-1.4**
	comp=Z,4.2nm,0.6s,mb4.2,baz=164,slow=7.8,SNR=25						
MKAR				LR	LR	01 04 18.8	
	comp=Z,515nm,18.7s,MS4.4,baz=72,slow=42						
MKAR	**Makanchi Array**	**40.87**	**349**	P	**P**	**00 43 10.5**	**-1.4**
MKAR				LR	LR	01 04 18.8	
DL2	**Dalian**	**41.29**	**35**	P	**P**	**00 43 17.6**	**+2.0**
DL2				*e*S	**S**	**00 49 31.4**	**+3.7**
DL2				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.7						
DL2				LR	LR		
	comp=N,570nm,12.4s,MS4.7						
DL2				LR	LR		
	comp=E,290nm,11.8s,MS4.7						
DL2				LR	LR		
	comp=Z,620nm,12.4s,MS4.7						
SONM	**Songino Array**	**42.56**	**14**	P	**P**	**00 43 25.0**	**-0.8**
	comp=Z,4.3nm,0.7s,mb4.3,baz=196,slow=6.9,SNR=16						
SONM				PcP	PcP	00 45 18.9	+1.1
	comp=Z,2.1nm,0.7s,baz=208,slow=2.6,SNR=3.6						
SONM				LR	LR	01 03 17.8	
	comp=Z,923nm,18.7s,MS4.7,baz=194,slow=39						
SONM	**Songino Array**	**42.56**	**14**	P	**P**	**00 43 25.0**	**-0.7**
SONM						00 45 18.9	
ULN	**Ulaanbaatar**	**42.74**	**14**	*e*P	**P**	**00 43 28.9**	**+1.7**
ULN				*e*		00 45 19.0	
ULN				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.5						
ULN	**Ulaanbaatar**	**42.74**	**14**	*e*P	**P**	**00 43 28.9**	**+1.6**
	comp=Z,12nm,1.3s,mb4.5						
ULN				*e*PcP	PcP	00 45 19.0	+0.6
ABKT	**Ailbek**	**44.08**	**320**	P	**P**	**00 43 39.1**	**+0.9**
	comp=Z,135nm,0.9s,mb5.7,SNR=10						
KSRS	**Korea Array**	**44.24**	**41**	P	**P**	**00 43 39.0**	**-0.5**
	comp=Z,1.4nm,0.5s,mb3.9,baz=230,slow=7.5,SNR=6.1						
ZAK	**Zakamensk**	**44.36**	**10**	*e*P	**P**	**00 43 39.2**	**-1.0**
SNY	**Shenyang**	**44.38**	**33**	⇑P	**P**	**00 43 39.9**	**-0.6**
SNY				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.6						
SNY				LR	LR		
	comp=N,230nm,17.4s						
SNY				LR	LR		
	comp=E,560nm,24.6s						
SNY				LR	LR		
	comp=Z,380nm,26.5s						
MOY	**Mondy**	**45.28**	**7**	*e*P	**P**	**00 43 48.3**	**+0.8**
MOY				pmax	pmax		
	comp=Z,30nm,2.1s,mb4.8						
KURK	**Kurchatov**	**45.34**	**347**	P	**P**	**00 43 47.4**	**-0.7**
	comp=Z,89nm,1.4s,mb5.4,SNR=11						
KURK	**Kurchatov**	**45.34**	**347**	P	**P**	**00 43 46.9**	**-1.2**
	comp=Z,8.5nm,0.7s,mb4.7,baz=171,slow=6.5,SNR=4.4						
KURK	**Kurchatov**	**45.34**	**347**	*e*P	**P**	**00 43 47.7**	**-0.4**
KURK				pmax	pmax		
	comp=Z,49nm,1.4s,mb5.1						
KURK	**Kurchatov**	**45.34**	**347**	*e*P	**P**	**00 43 47.7**	**-0.4**
	comp=Z,48nm,1.4s,mb5.1						
TLY	**Talaya**	**45.68**	**10**	*e*P	**P**	**00 43 50.7**	**0.0**
TLY				*e*S	**S**	**00 50 20.8**	**-11**
TLY				pmax	pmax		
	comp=Z,23nm,1.8s,mb4.8						
TLY				MLR	MLR		
	comp=Z,391nm,17.0s,MS4.4						
TLY	**Talaya**	**45.68**	**10**	*e*P	**P**	**00 43 50.9**	**+0.2**
NWAO	**Narrogin (SRO)**	**45.86**	**151**	P	**P**	**00 43 53.5**	**+1.1**
	comp=Z,5.0nm,0.8s,mb4.5,baz=329,slow=12,SNR=3.9						
NWAO	**Narrogin (SRO)**	**45.86**	**151**	P	**P**	**00 43 51.6**	**-0.8**
IRK	**Irkutsk**	**46.32**	**10**	*e*P	**P**	**00 43 56.0**	**+0.2**
IRK				pmax	pmax		
	comp=Z,31nm,2.2s,mb4.8						
CN2	**Changchun**	**46.73**	**33**	*e*P	**P**	**00 44 01.1**	**+2.0**
CN2				*ep*P	pP	00 44 11.0	+2.2
CN2				*es*P	sP	00 44 14.9	+2.2
CN2				*e*S	**S**	**00 50 48.3**	**+1.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
CN2				LR	LR		
	comp=N,800nm,16.0s,MS4.9						
CN2				LR	LR		
	comp=E,600nm,16.0s,MS4.9						
CN2				LR	LR		
	comp=Z,500nm,14.0s,MS4.6						
ZAA0	**Zalesovo Array**	**47.47**	**354**	*e*P	**P**	**00 44 04.0**	**-0.7**
ZALV	**Zalesovo Beam**	**47.47**	**354**	P	**P**	**00 44 04.1**	**-0.6**
	comp=Z,4.3nm,0.6s,mb4.6,baz=162,slow=8.4,SNR=22						
HIA	**Hailar**	**48.10**	**24**	*e*P	**P**	**00 44 09.0**	**-0.7**
HIA				pmax	pmax		
	comp=Z,17nm,1.0s						
HIA	**Hailar**	**48.10**	**24**	*e*P	**P**	**00 44 09.0**	**-0.7**
	comp=Z,17nm,1.0s,mb5.0						
NVS	**Novosibirsk**	**48.53**	**353**	*e*P	**P**	**00 44 10.9**	**-2.0**
NVS				pmax	pmax		
	comp=N,22nm,1.7s						
NVS				pmax	pmax		
	comp=Z,20nm,1.7s,mb4.9						
NVS				pmax	pmax		
	comp=E,4.0nm,0.9s						
WRA	**Warramunga Arr**	**48.82**	**124**	P	**P**	**00 44 14.8**	**-0.9**
	comp=E,15nm,0.8s,mb5.1,baz=302,slow=8.4,SNR=6.7						
WRA				S	**S**	**00 51 23.1**	**+5.9**
	comp=E,2.5nm,1.1s,baz=283,slow=12,SNR=4.2						
WRA				LR	LR	01 06 55.6	
	comp=E,482nm,20.5s,MS4.5,baz=320,slow=39						
WRA	**Warramunga Arr**	**48.82**	**124**	P	**P**	**00 44 14.8**	**-0.9**
WRA				S	**S**	**00 51 23.1**	**+6.0**
MDJ	**Mudanjiang**	**49.52**	**34**	P	**P**	**00 44 21.5**	**+0.8**
MDJ				pP	pP	00 44 28.8	-1.7
MDJ				PP	PP	00 46 16.8	+1.6
MDJ				pmax	pmax		
	comp=Z,22nm,2.1s,mb4.8						
MDJ				pmax	pmax		
	comp=Z,140nm,4.1s						
MDJ				LR	LR		
	comp=Z,350nm,32.7s,MS4.1						
MDJ	**Mudanjiang**	**49.52**	**34**	*e*P	**P**	**00 44 21.1**	**+0.4**
	comp=Z,82nm,1.7s,mb5.5						
BVAR	**Borovoye Array**	**49.58**	**342**	P	**P**	**00 44 20.0**	**-0.9**
	comp=Z,4.5nm,0.7s,mb4.6,baz=148,slow=9.0,SNR=21						
BRVK	**Borovoye**	**49.64**	**342**	*e*P	**P**	**00 44 21.0**	**-0.4**
BRVK				*e*		00 45 42.1	
BRVK				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.9						
BRVK	**Borovoye**	**49.64**	**342**	*e*P	**P**	**00 44 21.0**	**-0.4**
	comp=Z,14nm,1.2s,mb4.9						
BRVK				PcP	PcP	00 45 42.1	-0.4
ASAR	**Alice Springs**	**50.34**	**128**	P	**P**	**00 44 27.3**	**+0.1**
	comp=Z,15nm,0.7s,mb5.1,baz=304,slow=6.9,SNR=6.5						
ABKAR	**Akbulak array**	**50.52**	**333**	*e*P	**P**	**00 44 27.6**	**-0.6**
	comp=Z,40nm,1.4s,mb5.2						
ABKAR				*e*PP	PP	00 46 24.7	+0.6
MJAR	**Matsushiro Arr**	**50.97**	**48**	LR	LR	01 08 07.5	
	comp=Z,500nm,18.2s,MS4.6,baz=230,slow=38						
AKTK	**Aktyubinsk**	**52.24**	**333**	P	**P**	**00 44 40.4**	**-0.7**
AKTO	**Aktyubinsk**	**52.24**	**333**	P	**P**	**00 44 40.4**	**-0.7**
	comp=Z,4.4nm,0.8s,mb4.5,baz=132,slow=7.3,SNR=16						
KLR	**Kul'dur**	**53.56**	**31**	*e*P	**P**	**00 44 44.8**	**-6.0**
KLR				*e*		00 54 36.0	
KLR				MLR	MLR		
	comp=N,900nm,13.5s,MS5.2						
KLR				MLR	MLR		
	comp=E,1μm,13.5s,MS5.2						
KLR				MLR	MLR		
	comp=Z,2μm,13.5s,MS5.4						
MAK	**Makhachkala**	**53.60**	**320**	*e*P	**P**	**00 44 54.0**	**+2.8**
MAK				*e*		00 46 49.1	
MAK				*e*PPP		00 47 58.5	
MAK				*e*S	**S**	**00 52 23.8**	**+1.3**
MAK				pmax	pmax		
	comp=Z,67nm,0.9s,mb5.6						
GNI	**Garni**	**54.19**	**315**	*ce*P	**P**	**00 44 57.1**	**+1.5**
GNI				pmax	pmax		
	comp=Z,20nm,1.7s						
GNI	**Garni**	**54.19**	**315**	*e*P	**P**	**00 44 54.9**	**-0.6**
	comp=Z,29nm,1.3s,mb5.0						
KMBO	**Kilima Mbogo**	**55.87**	**264**	*ce*P	**P**	**00 45 05.5**	**-2.7**
KMBO	**Kilima Mbogo**	**55.87**	**264**	P	**P**	**00 45 07.8**	**-0.3**
ZEI	**Tsey**	**55.87**	**318**	*e*P	**P**	**00 45 09.2**	**+1.5**
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.9						
SVE	**Sverdlovsk**	**55.90**	**339⇓**	*e*P	**P**	**00 45 07.5**	**-0.1**
SVE				*e*		00 46 10.6	
SVE				*e*S	**S**	**00 52 50.1**	**-2.9**
SVE				*e*SS	SS	00 56 37.7	-1.4
SVE				pmax	pmax		
	comp=Z,49nm,1.1s,mb5.5						
SVE				MLR	MLR		
	comp=Z,497nm,19.0s,MS4.6						
ARU	**Arti**	**56.35**	**338**	P	**P**	**00 45 10.4**	**-0.4**
	comp=Z,102nm,0.9s,mb5.8,SNR=7.4						
ARU	**Arti**	**56.35**	**338**	*c i*P	**P**	**00 45 09.9**	**-0.9**
ARU				*e*		00 46 04

KIV Kislovodsk 57.18 319 *eP* **P 00 45 15.7 -1.3**
comp=Z,15nm,0.9s,mb5.0
ASAJ Asahikawa 57.19 41 P **P 00 45 18.4 +1.4**
comp=Z,15nm,0.8s,mb5.0,baz=281,slow=16,SNR=5.3
YSS Yuzh-Sakhalins 58.53 38 *eP* **P 00 45 26.0 -0.4**
YSS *e* pP 00 45 34.2 -2.2
YSS *eS* **S 00 53 44.0 +16**
YSS Yuzh-Sakhalins 58.53 38 *eP* **P 00 45 34.2 +7.8**
YSS Yuzh-Sakhalins 58.53 38 *eP* **P 00 45 26.5 +0.1**
SOC Sochi 59.00 317 *eP* **P 00 45 25.0 -4.7**
SOC *eS* **S 00 53 27.7 -6.4**
SOC *eSS* SS 00 57 34.8 +6.5
MMAI Mount Meron Ar 59.03 304 P **P 00 45 32.2 +2.0**
comp=Z,2.8nm,0.7s,mb4.4,baz=119,slow=6.1,SNR=5.9
MMAI LR LR 01 12 49.2
comp=Z,219nm,18.2s,MS4.3,baz=140,slow=38
CTA Charters Tower 59.05 118 *eP* **P 00 45 31.0 +0.6**
comp=Z,16nm,1.1s,mb5.0
CTA Charters Tower 59.05 118 P **P 00 45 31.1 +0.6**
comp=Z,19nm,1.0s,mb5.1,baz=291,slow=8.8,SNR=6.0
CTAO Charters Tower 59.05 118 *eP* **P 00 45 30.8 +0.4**
CTAO pmax pmax
comp=Z,23nm,0.9s,mb5.2
CTAO Charters Tower 59.05 118 *eP* **P 00 45 30.8 +0.4**
comp=Z,23nm,0.9s,mb5.2
SOKR Solikamsk 59.31 340*c iP* **P 00 45 33.5 +1.9**
SOKR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
SOKR MLR MLR
comp=Z,630nm,24.0s,MS4.7
STKA Stephens Creek 60.41 132 *eP* **P 00 45 40.2 +0.6**
comp=Z,10nm,0.9s,mb4.8
STKA *e* pP 00 45 48.7 -0.9
STKA Stephens Creek 60.41 132 P **P 00 45 40.2 +0.6**
comp=Z,14nm,0.9s,mb5.0,baz=330,slow=6.3,SNR=5.0
STKA Stephens Creek 60.41 132 *eP* **P 00 45 40.0 +0.4**
ANN Anapa 60.97 318 *eP* **P 00 45 39.8 -3.4**
ANN *eS* **S 00 54 00.4 +0.9**
ANN pmax pmax
comp=Z,27nm,0.9s,mb5.4
YAK Yakutsk 61.49 19 *eP* **P 00 45 44.7 -1.7**
YAK pmax pmax
comp=Z,29nm,0.9s,mb5.4
YAK pmax pmax
comp=E,11nm,1.1s
YAK pmax pmax
comp=N,14nm,1.1s
YAK MLR MLR
comp=Z,872nm,14.0s,MS5.1
YAK MLR MLR
comp=E,337nm,12.0s,MS5.0
YAK MLR MLR
comp=N,556nm,14.0s,MS5.0
YAK Yakutsk 61.49 19 *eP* **P 00 45 45.9 -0.5**
BR131 Keskin Array S 62.06 312 *eP* **P 00 45 49.6 -1.1**
comp=N,2.9nm,0.8s,mb4.5
BRTR Keskin Array B 62.06 312 P **P 00 45 49.2 -1.5**
comp=N,3.4nm,0.8s,mb4.5,baz=129,slow=6.4,SNR=20
BRTR LR LR 01 14 41.2
comp=N,174nm,21.4s,MS4.2,baz=3.4,slow=38
BRTR Keskin Array B 62.06 312*ceP* **P 00 45 49.7 -1.0**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
VSR Storozhevoye 62.46 325 *eP* **P 00 45 52.0 -1.1**
VSR pmax pmax
comp=N,4.0nm,0.9s
VSR pmax pmax
comp=E,6.0nm,0.9s
VSR pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
VSR MLR MLR
comp=N,220nm,19.0s,MS4.5
VSR MLR MLR
comp=E,210nm,19.0s,MS4.5
VSR MLR MLR
comp=Z,320nm,19.0s,MS4.5
EIDS Eidsvold 65.11 122 *eP* **P 00 46 10.3 -0.7**
MOS Moscow 65.28 329 *eP* **P 00 46 07.5 -4.1**
MOS pmax pmax
comp=Z,47nm,1.0s,mb5.5
OBN Obninsk 65.55 328⇑*eP* **P 00 46 13.2 -0.1**
OBN *e**PP pP 00 46 20.8 -2.6
OBN *SP sP 00 46 28.0 +0.8
OBN 00 46 45.0
OBN S S 00 55 02.0 +5.8
OBN pmax pmax
comp=Z,22nm,1.2s,mb5.1
OBN MLR MLR
comp=Z,300nm,19.0s,MS4.5
OBN Obninsk 65.55 328 *eP* **P 00 46 12.9 -0.4**
ARMA Armidale 67.45 127 *eP* **P 00 46 28.5 +2.6**
ARMA Armidale 67.45 127 *eP* **P 00 46 27.8 +1.9**
LSZ Lusaka 67.54 250 P **P 00 46 24.6 -0.4**
AKASG Malin Array Be 68.13 322 P **P 00 46 28.2 -1.7**
comp=Z,2.4nm,0.7s,mb4.3,baz=96,slow=4.6,SNR=13
AKASG LR LR 01 20 53.9
comp=Z,250nm,19.5s,MS4.5,baz=95,slow=40
AKASG Malin Array Be 68.13 322 P **P 00 46 28.2 -1.7**
AKASG LR LR 01 20 53.9
VRI Vrincioaia 68.50 317⇓*P* **P 00 46 32.9 +0.6**
VRI Vrincioaia 68.50 317⇓*iP* **P 00 46 32.9 +0.6**
PLOR Plostina 68.55 317⇓*P* **P 00 46 33.2 +0.6**
PLOR Plostina 68.55 317⇓*iP* **P 00 46 33.2 +0.6**
TIXI Tiksi 68.59 12 *eP* **P 00 46 31.1 -1.3**
TIXI pmax pmax
comp=Z,25nm,0.8s,mb5.2
TIXI Tiksi 68.59 12 *eP* **P 00 46 31.1 -1.3**
comp=Z,25nm,0.8s,mb5.2
MLR Muntele Rosu 68.95 316⇑*P* **P 00 46 35.4 +0.2**
MLR Muntele Rosu 68.95 316⇑*iP* **P 00 46 35.4 +0.2**
ZIMR 68.99 314⇓*P* **P 00 46 38.1 +2.7**
ZIMR 68.99 314⇓*iP* **P 00 46 38.0 +2.6**
PETK Petropavlovsk- 69.73 36 LR LR 01 17 19.5
comp=Z,226nm,20.4s,MS4.4,baz=139,slow=36
BURAR Bucovina Array 69.90 318⇓*P* **P 00 46 41.3 +0.4**
BURAR Bucovina Array 69.90 318⇓*iP* **P 00 46 41.3 +0.4**
BUR08 Bucovina Ar. S 69.91 318 *eP* **P 00 46 40.6 -0.4**
PET Petropavlovsk 70.27 36 *eP* **P 00 46 46.4 +3.3**
PET *eS* S 00 55 55.0 +2.3
PET *eSS* SS 01 00 25.8 +2.4
PET pmax pmax
comp=Z,500nm,4.2s
PET pmax pmax
comp=Z,100nm,11.2s
PET MLR MLR
comp=Z,300nm,18.0s,MS4.6
PET MLR MLR
comp=Z,400nm,14.0s
SEY Seymchan 70.53 25*ceP* **P 00 46 44.2 -0.3**
VAY Valandovo 70.64 311 *eP* **P 00 46 43.5 -2.1**
JOF Joensuu 71.22 335 *eP* **P 00 46 46.4 -2.3**
JOF pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
JOF Joensuu 71.22 335 *ep* **P 00 46 46.4 -2.3**
comp=Z,7.1nm,0.8s,mb4.7
JOF Joensuu 71.22 335 *ep* **P 00 46 46.4 -2.3**
comp=Z,7.1nm,0.8s,mb4.7
DRGR 71.41 317⇓*P* **P 00 46 50.5 +0.3**
DRGR 71.41 317⇓*iP* **P 00 46 50.5 +0.3**
KRUS Krusevo 71.63 311 *eP* **P 00 46 51.3 -0.4**
KWP Kalwaria Pacla 71.94 320 *eP* **P 00 46 52.5 -0.8**
KWP *e* 00 46 54.9
KWP Kalwaria Pacla 71.94 320⇓*P* **P 00 46 53.1 -0.2**
KWP Kalwaria Pacla 71.94 320 *eP* **P 00 46 52.6 -0.7**
comp=Z,28nm,1.2s,mb5.1
KWP Kalwaria Pacla 71.94 320⇓*iP* **P 00 46 53.1 -0.2**
OHR Ohrid 71.94 311 *eP* **P 00 46 51.9 -1.6**
BZS Buzias 71.97 316⇑*P* **P 00 46 54.1 +0.6**
BZS Buzias 71.97 316⇑*iP* **P 00 46 54.1 +0.6**
SUW Suwalki 72.56 325 *eP* **P 00 46 55.6 -1.3**
SUW *e* 00 46 57.7
SUW Suwalki 72.56 325 *eP* **P 00 46 57.5 +0.6**
SUW pmax pmax
comp=Z,55nm,1.1s,mb5.4
SUW Suwalki 72.56 325 *eP* **P 00 46 57.5 +0.6**
comp=Z,56nm,1.1s,mb5.4
CRVS Cervenica-Dubn 72.61 319 *eP* **P 00 46 57.8 +0.5**
CRVS pmax pmax
comp=Z,27nm,1.8s,mb4.9
CRVS Cervenica-Dubn 72.61 319 *eP* **P 00 46 57.8 +0.5**
comp=Z,26nm,1.8s,mb4.9
CRVS Cervenica-Dubn 72.61 319 *eP* **P 00 46 57.8 +0.5**
STHS Stebnicka Huta 72.83 320 *eP* **P 00 46 59.5 +0.9**
STHS pmax pmax
comp=Z,5.0nm,1.1s,mb4.4

STHS Stebnicka Huta 72.83 320 *eP* **P 00 46 59.5 +0.9**
comp=Z,5.1nm,1.1s,mb4.4
STHS Stebnicka Huta 72.83 320 *eP* **P 00 46 59.5 +0.9**
FINES FINESS Array B 73.01 333 P **P 00 46 58.0 -1.4**
comp=Z,6.2nm,0.7s,mb4.6,baz=90,slow=6.1,SNR=16
KAF Kangasniemi 73.11 333 *eP* **P 00 46 59.6 -0.4**
KAF pmax pmax
comp=Z,11nm,1.1s,mb4.7
KAF Kangasniemi 73.11 333 *ep* **P 00 46 59.6 -0.4**
comp=Z,11nm,1.1s,mb4.7,baz=105,slow=6.1
KAF Kangasniemi 73.11 333 *ep* **P 00 46 59.6 -0.4**
comp=Z,11nm,1.1s,mb4.7,baz=105,slow=6.1
KECS Kecovo 73.18 319 *eP* **P 00 47 02.4 +1.7**
KECS *e* 00 47 15.3
KECS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
KECS Kecovo 73.18 319 *eP* **P 00 47 02.4 +1.7**
comp=Z,3.9nm,1.0s,mb4.3
KECS *e* 00 47 15.3
KECS Kecovo 73.18 319 *eP* **P 00 47 02.4 +1.7**
KECS *e*sP sP 00 47 15.3 +0.6
NIE Niedzica 73.44 320 *eP* **P 00 47 02.3 +0.1**
PSZ Piszkesteto 73.48 318 *eP* **P 00 47 02.7 +0.2**
comp=Z,7.6nm,1.0s,mb4.6
PSZ Piszkesteto 73.48 318⇓*eP* **P 00 47 02.8 +0.3**
PSZ Piszkesteto 73.48 318⇓*iP* **P 00 47 02.7 +0.2**
BOSA Boshof 73.78 238 P **P 00 47 05.9 +1.3**
comp=Z,5.1nm,1.0s,mb4.4,baz=74,slow=16,SNR=4.8
BOSA LR LR 01 14 20.3
comp=Z,409nm,20.0s,MS4.7,baz=75,slow=32
OJC Ojcow 73.89 320 *eP* **P 00 47 02.8 -2.0**
CASY Casey 74.02 173 *eP* **P 00 47 05.2 +0.1**
PKSM Moragy 74.11 316⇑*P* **P 00 47 07.5 +1.3**
PKSM Moragy 74.11 316⇑*iP* **P 00 47 07.5 +1.3**
VYHS Vyhne 74.26 318 *eP* **P 00 47 06.5 -0.6**
VYHS *e* 00 47 21.8
VYHS pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
VYHS Vyhne 74.26 318 *eP* **P 00 47 06.5 -0.6**
comp=Z,4.5nm,1.2s,mb4.3
VYHS *e* 00 47 21.8
VYHS Vyhne 74.26 318 *eP* **P 00 47 06.5 -0.6**
VYHS *e*sP sP 00 47 21.8 +0.7
KOLL Kolacno 74.56 318 *eP* **P 00 47 09.3 +0.5**
KOLL *e* 00 47 24.8
KOLL Kolacno 74.56 318 *eP* **P 00 47 09.3 +0.5**
KOLL *e*sP sP 00 47 24.8 +2.0
OKC Ostrava-Krasne 74.89 320 *eP* **P 00 47 10.9 +0.2**
OKC Ostrava-Krasne 74.89 320 *eP* **P 00 47 10.9 +0.2**
OKC *ex* x 00 47 13.2
SMOL Smolenice 75.19 318 *eP* **P 00 47 12.9 +0.4**
SMOL Smolenice 75.19 318 *eP* **P 00 47 12.9 +0.4**
MORC Moravsky Berou 75.27 320 *eP* **P 00 47 12.6 -0.3**
MORC pmax pmax
comp=Z,11nm,1.2s,mb4.7
MORC Moravsky Berou 75.27 320 *eP* **P 00 47 12.6 -0.2**
comp=Z,11nm,1.2s,mb4.7
ZST Bratislava 75.38 318 *eP* **P 00 47 16.0 +2.5**
ZST *e* 00 47 28.9
ZST pmax pmax
comp=Z,12nm,0.9s,mb4.8
ZST Bratislava 75.38 318 *eP* **P 00 47 16.0 +2.5**
comp=Z,12nm,0.9s,mb4.8
ZST *e* 00 47 28.9
ZST Bratislava 75.38 318 *eP* **P 00 47 16.0 +2.5**
ZST *e*sP sP 00 47 28.9 +1.4
ARCES ARCESS Array B 75.81 340 P **P 00 47 17.2 +1.6**
comp=Z,5.6nm,1.0s,mb4.4,baz=93,slow=4.9,SNR=8.8
ARCES LR LR 01 24 49.6
comp=Z,466nm,19.4s,MS4.8,baz=134,slow=39
ARCES ARCESS Array B 75.81 340 P **P 00 47 17.2 +1.6**
ARCES LR LR 01 24 49.6
VRAC Vranov 75.83 319⇑*P* **P 00 47 18.9 +2.8**
VRAC Vranov 75.83 319⇑*iP* **P 00 47 18.9 +2.8**
DPC Dobruska-Polom 76.12 320 *eP* **P 00 47 18.1 +0.4**
DPC MLR MLR
comp=Z,200nm,15.9s,MS4.5
DPC Dobruska-Polom 76.12 320 *eP* **P 00 47 18.1 +0.4**
DPC *ex* x 00 47 20.8
DPC AMS AMS 01 31 30.0
comp=Z,200nm,15.9s
KSP Ksiaz 76.19 321 *eP* **P 00 47 18.0 -0.1**
GROS Grobnik 76.30 316 *eP* **P 00 47 18.0 -0.8**
UPC Upice 76.33 320 *eP* **P 00 47 21.6 +2.7**
UPC *e* 00 47 25.0
UPC Upice 76.33 320 *eP* **P 00 47 21.6 +2.7**
UPC *ex* x 00 47 25.0
ARSA Arzberg 76.34 317⇑*iP* **P 00 47 19.0 -0.1**
comp=Z,15nm,1.5s,mb4.7
TREC Trest 76.55 319 AMS AMS 01 26 10.0
comp=Z,200nm,18.0s
PERS Pernice 76.57 316 *eP* **P 00 47 20.1 -0.3**
PDKS Podkum 76.61 316 *eP* **P 00 47 20.6 0.0**
SOKA Soboth 76.64 316⇓*iP* **P 00 47 20.7 0.0**
comp=Z,17nm,1.3s,mb4.8
VISS Visnje 76.70 315 *eP* **P 00 47 23.2 +2.0**
MAW Mawson 77.17 191 LR LR 01 16 00.8
comp=Z,214nm,18.6s,MS4.5,baz=47,slow=32
PRU Pruhonice 77.22 320 *eP* **P 00 47 24.3 +0.3**
PRU MLR MLR
comp=Z,200nm,14.7s,MS4.6
PRU Pruhonice 77.22 320 *eP* **P 00 47 24.3 +0.3**
PRU *ex* x 00 47 27.0
PRU AMS AMS 01 27 20.0
comp=Z,200nm,14.7s
PVCC Panska Ves 77.25 320 *eP* **P 00 47 24.6 +0.5**
PVCC MLR MLR
comp=Z,200nm,16.3s,MS4.5
PVCC Panska Ves 77.25 320 *eP* **P 00 47 24.6 +0.5**
PVCC AMS AMS 01 27 20.0
comp=Z,200nm,16.3s
AQU L'Aquila 77.56 312 *eP* **P 00 47 26.2 +0.2**
BILL Bilibino 77.64 22⇓*eP* **P 00 47 25.9 0.0**
BILL *e**PP pP 00 47 34.2 -2.0
BILL *SP sP 00 47 40.0 0.0
BILL *e* 00 57 23.7
BILL PS 00 58 22.0
BILL pmax pmax
comp=Z,17nm,1.7s,mb4.7
BILL MLR MLR
comp=Z,400nm,14.0s,MS4.9
BILL Bilibino 77.64 22 P **P 00 47 25.1 -0.8**
comp=Z,12nm,1.1s,mb4.7
BRG Berggiesshubel 77.67 321 *eP* **P 00 47 26.3 -0.2**
comp=Z,16nm,1.5s,mb4.7
BRG Berggiesshubel 77.67 321 *eP* **P 00 47 26.5 0.0**
comp=Z,23nm,1.7s,mb4.8
BRG *i* 00 47 33.9
comp=Z,50nm,2.1s
BRG Berggiesshubel 77.67 321 *eP* **P 00 47 26.5 0.0**
BRG *i* 00 47 33.9
BRG pmax pmax
comp=Z,14nm,1.7s,mb4.6
BRG pmax pmax
comp=Z,30nm,2.1s,mb4.8
GEC2 GERESS Array S 77.69 318 *eP* **P 00 47 26.6 0.0**
comp=Z,26nm,1.4s,mb5.0
GEC2 GERESS Array S 77.69 318 *eP* **P 00 47 26.6 0.0**
GEC2 pmax pmax
comp=Z,26nm,1.4s,mb5.0
KHC Kasperske Hory 77.78 319 *eP* **P 00 47 26.9 -0.2**
KHC MLR MLR
comp=Z,200nm,17.2s,MS4.5
KHC Kasperske Hory 77.78 319 *eP* **P 00 47 26.7 -0.4**
comp=Z,3.9nm,0.8s,mb4.4
KHC Kasperske Hory 77.78 319 *eP* **P 00 47 26.9 -0.2**
KHC *ex* x 00 47 29.4
KHC AMS AMS 01 31 20.0
comp=Z,200nm,17.2s
KBA Koelnbreinsper 77.82 317⇑*iP* **P 00 47 27.9 +0.6**
comp=Z,7.6nm,0.9s,mb4.6
RJOB Jochberg 78.22 317 *eP* **P 00 47 30.7 +1.1**
comp=Z,13nm,1.2s,mb4.7
WET Wettzell 78.24 319 *eP* **P 00 47 29.5 -0.2**
comp=Z,16nm,1.3s,mb4.8
WET Wettzell 78.24 319 *eP* **P 00 47 29.5 -0.2**
WET pmax pmax
comp=Z,16nm,1.3s,mb4.8
TSUM Tsumeb 78.29 249 P **P 00 47 30.2 -0.3**
CLL Collm 78.30 321 *eP* **P 00 47 29.3 -0.6**
comp=Z,7.0nm,1.1s,mb4.5
CLL Collm 78.30 321 *eP* **P 00 47 29.0 -0.9**
CLL *e* 00 47 36.0
CLL pmax pmax

comp=Z,7.0nm,1.1s,mb4.5
CLL MLR MLR
comp=Z,200nm,20.1s,MS4.4
CLL Collm 78.30 321 *eP* **P 00 47 29.0 -0.9**
comp=Z,7.0nm,1.1s,mb4.5
CLL *e* 00 47 36.0
CLL LR LR
comp=Z,200nm,20.1s,MS4.4
CLL Collm 78.30 321 *eP* **P 00 47 29.0 -0.9**
comp=Z,7.0nm,1.1s,mb4.5
CLL *e* 00 47 36.0
CLL *e*PPS 00 58 14.0
CLL *e*SS SS 01 02 30.0 +4.4
CLL *e*SSS 01 06 00.0
CLL LmV 01 28 00.0
comp=Z,200nm,20.1s
ABTA Abfaltersbach 78.37 316⇑*iP* **P 00 47 31.2 +0.7**
comp=Z,9.9nm,1.4s,mb4.6
NKC Novy Kostel 78.58 320 *eP* **P 00 47 31.8 +0.3**
NKC Novy Kostel 78.58 320 *eP* **P 00 47 31.8 +0.3**
TANN Tannenbergstha 78.59 320 *eP* **P 00 47 31.4 -0.1**
comp=Z,9.0nm,1.4s,mb4.5
HFS Hagfors 78.68 330 P **P 00 47 30.7 -1.2**
comp=Z,3.4nm,0.7s,mb4.4,baz=108,slow=9.3,SNR=5.6
ROTZ Rotzenmuhle 78.72 319 *eP* **P 00 47 32.5 +0.2**
comp=Z,15nm,1.2s,mb4.8
MOX Moxa 79.14 320 *eP* **P 00 47 31.0 -3.5**
comp=Z,17nm,1.5s,mb4.8
MOX
comp=Z,200nm,21.0s
MOX Moxa 79.14 320 *eP* **P 00 47 34.3 -0.2**
comp=Z,7.0nm,1.0s,mb4.5
MOX Moxa 79.14 320 *eP* **P 00 47 31.0 -3.5**
MOX pmax pmax
comp=Z,17nm,1.5s,mb4.8
MOX MLR MLR
comp=Z,200nm,21.0s,MS4.4
GRA1 Grafenberg Arr 79.35 319 *eP* **P 00 47 36.1 +0.4**
comp=Z,20nm,1.0s,mb5.0
GRA1 *eS* S 00 57 27.8 -6.4
GRA1 LR LR
comp=Z,300nm,19.6s,MS4.6
GRF Grafenberg Arr 79.35 319 *eP* **P 00 47 36.1 +0.4**
comp=Z,20nm,1.0s,mb5.0
GRF *eS* S 00 57 27.8 -6.4
GRF *eL* 01 29 16.1
comp=Z,266nm,19.6s
GRF Grafenberg Arr 79.35 319 *eP* **P 00 47 36.1 +0.4**
GRF *eS* S 00 57 27.8 -6.4
GRF pmax pmax
comp=Z,20nm,1.0s,mb5.0
GRF MLR MLR
comp=Z,300nm,19.6s,MS4.6
GRF Grafenberg Arr 79.35 319 *eP* **P 00 47 36.1 +0.4**
GRF *eS* S 00 57 27.8 -6.4
GRF pmax pmax
comp=Z,20nm,1.0s,mb5.0
GRF MLR MLR
comp=Z,300nm,19.6s,MS4.6
MOTA Moosalm 79.35 317⇑*iP* **P 00 47 35.0 -0.8**
comp=Z,20nm,1.1s,mb5.0
RETA Reutte 79.59 317⇓*iP* **P 00 47 36.6 -0.5**
comp=Z,20nm,1.2s,mb4.9
FETA Feichten 79.60 316⇑*iP* **P 00 47 36.4 -0.7**
comp=Z,14nm,1.1s,mb4.8
CLZ Clausthal 79.96 321 *eP* **P 00 47 38.9 -0.1**
comp=Z,9.0nm,0.9s,mb4.7
CLZ Clausthal 79.96 321 *eP* **P 00 47 38.9 -0.1**
CLZ pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
NOA NORSAR Array B 79.98 331 P **P 00 47 37.9 -1.0**
comp=Z,2.1nm,0.7s,mb4.2,baz=95,slow=5.4,SNR=8.4
NOA LR LR 01 27 05.7
comp=Z,340nm,19.9s,MS4.7,baz=95,slow=39
BSEG Bad Segeberg 80.07 323 *eP* **P 00 47 37.9 -1.6**
comp=Z,20nm,1.1s,mb5.0
NRDL Niedersach Rie 80.15 322 *eP* **P 00 47 40.2 +0.2**
comp=Z,13nm,1.3s,mb4.7
DAVOX Davos/Dischmat 80.18 316 P **P 00 47 39.6 -0.7**
comp=Z,11nm,0.7s,mb4.0,baz=120,slow=7.5,SNR=14
DAVA Damuels 80.19 317⇑*iP* **P 00 47 39.4 -0.9**
comp=Z,15nm,1.1s,mb4.8
PGF Pioggiola 80.81 312 *eP* **P 00 47 44.0 +0.2**
SBF Sospel 81.93 313 *eP* **P 00 47 49.3 -0.4**
CDF Champ du Feu 81.94 318 *eP* **P 00 47 49.6 0.0**
LPG La Plagne 82.37 315 *eP* **P 00 47 52.1 +0.1**
comp=Z,15nm,0.8s,mb4.7
LPG La Plagne 82.37 315 *eP* **P 00 47 52.1 +0.1**
LPG pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
LPG La Plagne 82.37 315 *eP* **P 00 47 52.1 +0.1**
comp=Z,7.6nm,0.8s,mb4.7
MBDF Montbardon 82.38 314 *eP* **P 00 47 51.4 -0.6**
LPL La Plagne 82.38 315 *eP* **P 00 47 52.1 +0.1**
comp=Z,33nm,0.8s,mb5.0
LPL La Plagne 82.38 315 *eP* **P 00 47 52.1 +0.1**
LPL pmax pmax
comp=Z,16nm,0.8s,mb5.0
LPL La Plagne 82.38 315 *eP* **P 00 47 52.1 +0.1**
comp=Z,16nm,0.8s,mb5.0
BNI Bardonecchia 82.44 314 *eP* **P 00 47 52.2 -0.1**
BNI pmax pmax
comp=Z,12nm,1.0s,mb4.8
BNI Bardonecchia 82.44 314 *eP* **P 00 47 52.2 -0.1**
comp=Z,12nm,1.0s,mb4.8
FRF La Foret Royal 82.51 313 *eP* **P 00 47 52.7 0.0**
HAU Haudompre 82.57 317 *eP* **P 00 47 52.3 -0.6**
comp=Z,19nm,0.9s,mb4.8
HAU Haudompre 82.57 317 *eP* **P 00 47 52.3 -0.6**
HAU pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
HAU Haudompre 82.57 317 *eP* **P 00 47 52.3 -0.6**
comp=Z,9.4nm,0.9s,mb4.8
LMR La Mourre 82.62 313 *eP* **P 00 47 52.9 -0.4**
WLF Walferdange 82.64 319 *eP* **P 00 47 53.2 -0.1**
comp=Z,22nm,1.5s,mb5.0
WLF Walferdange 82.64 319 *eP* **P 00 47 53.7 +0.4**
CABF La Chapelle 82.79 316 *eP* **P 00 47 53.8 -0.3**
comp=Z,59nm,1.4s,mb5.1
CABF La Chapelle 82.79 316 *eP* **P 00 47 53.8 -0.3**
CABF pmax pmax
comp=Z,30nm,1.4s,mb5.1
CABF La Chapelle 82.79 316 *eP* **P 00 47 53.8 -0.3**
comp=Z,30nm,1.4s,mb5.1
SMRF Simiane la Rot 83.27 313 *eP* **P 00 47 55.9 -0.8**
MEZF Maizieres J'vi 83.41 318 *eP* **P 00 47 57.2 -0.1**
GIVF Givet 83.48 320 *eP* **P 00 47 57.7 +0.1**
VIVF Saint-Julien-l 83.87 314 *eP* **P 00 47 59.6 -0.1**
BAIF Baives 83.88 320 *eP* **P 00 47 59.2 -0.5**
LOR Lormes 84.28 317 *eP* **P 00 48 01.2 -0.6**
comp=Z,22nm,1.1s,mb4.9
LOR Lormes 84.28 317 *eP* **P 00 48 01.2 -0.6**
LOR pmax pmax
comp=Z,11nm,1.1s,mb4.9
LOR Lormes 84.28 317 *eP* **P 00 48 01.2 -0.6**
comp=Z,11nm,1.1s,mb4.9
SMF Signal de Mont 84.34 316 *eP* **P 00 48 01.4 -0.7**
LASF Ste Croix 84.50 314 *eP* **P 00 48 02.4 -0.6**
SSF Saint Saulge 84.54 317 *eP* **P 00 48 02.8 -0.3**
AVF Avril sur Loir 84.66 316 *eP* **P 00 48 03.6 -0.1**
TAM Tamanrasset 84.81 292 *eP* **P 00 48 05.3 +0.4**
TAM pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
TAM Tamanrasset 84.81 292 *eP* **P 00 48 05.3 +0.3**
comp=Z,7.4nm,1.0s,mb4.8
BGF Bois d'Agland 85.03 316 *eP* **P 00 48 04.5 -1.0**
comp=Z,21nm,0.9s,mb5.0
BGF Bois d'Agland 85.03 316 *eP* **P 00 48 04.5 -1.0**
BGF pmax pmax
comp=Z,11nm,0.9s,mb5.0
BGF Bois d'Agland 85.03 316 *eP* **P 00 48 04.5 -1.0**
comp=Z,10nm,0.9s,mb5.0
TCF Toulx Ste Croi 85.49 316 *eP* **P 00 48 07.0 -0.9**
CAF Calviac 85.71 315 *eP* **P 00 48 09.0 0.0**
MTLF Montolieu 85.75 313 *eP* **P 00 48 09.3 +0.1**
comp=Z,17nm,0.9s,mb5.0
MTLF Montolieu 85.75 313 *eP* **P 00 48 09.3 +0.1**
MTLF pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
MTLF Montolieu 85.75 313 *eP* **P 00 48 09.3 +0.1**
comp=Z,8.3nm,0.9s,mb5.0
RJF Les Rejaudoux 86.06 315 *eP* **P 00 48 10.9 +0.2**
comp=Z,63nm,1.5s,mb5.3
RJF Les Rejaudoux 86.06 315 *eP* **P 00 48 10.9 +0.2**
RJF pmax pmax
comp=Z,31nm,1.5s,mb5.3

RJF	Les Rejaudoux	86.06	315	eP	P	00 48 10.9	+0.2
	comp=Z,32nm,1.5s,mb5.3						
RPZ	Rata Peaks	86.30	135	P	P	00 48 13.0	+1.2
	comp=Z,11nm,1.1s,mb5.0,baz=298,slow=2.2,SNR=3.0						
RPZ				LR	LR	01 27 48.7	
	comp=Z,393nm,18.4s,MS4.8,baz=188,slow=36						
EPF	Esparros	87.14	313	eP	P	00 48 15.5	-0.6
ETSF	Etsaut	87.81	313	eP	P	00 48 18.9	-0.4
	comp=Z,20nm,1.2s,mb4.9						
ETSF	Etsaut	87.81	313	eP	P	00 48 18.9	-0.4
ETSF				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.9						
ETSF	Etsaut	87.81	313	eP	P	00 48 18.9	-0.4
	comp=Z,9.8nm,1.2s,mb4.9						
ESK	Eskdalemuir	87.83	325	eP	P	00 48 18.8	-0.3
ESDC	Sonseca Array	90.82	310	P	P	00 48 33.9	+0.4
	comp=Z,3.3nm,0.7s,mb4.8,baz=62,slow=4.1,SNR=13						
ESDC	Sonseca Array	90.82	310	P	P	00 48 33.9	+0.4
ESLA	Sonseca Array	90.82	310	eP	P	00 48 33.6	+0.1
	comp=Z,2.4nm,1.2s,mb4.4						
COLD	Coldfoot	93.92	20	eP	P	00 48 46.4	-0.8
	comp=Z,6.9nm,1.0s,mb5.0						
DBIC	Dimbokro	96.66	278	LR	LR	01 31 57.7	
	comp=Z,380nm,19.1s,MS4.9,baz=77,slow=35						
QSPA	South Pole Qui	96.68	180	eP	P	00 49 04.7	+5.1
	comp=Z,34nm,1.2s,mb5.7						
HLID	Hailey	124.21	24	ePKPdf	PKPdf	00 54 29.5	+0.7
REDW	Red Top Meadow	125.73	21	ePKPdf	PKPdf	00 54 31.7	0.0
NVAR	Mina Array Bea	126.60	30	PKP	PKPdf	00 54 35.7	+2.2
	comp=Z,1.5nm,0.6s,baz=292,slow=1.4,SNR=5.3						
PDAR	Pinedale Array	126.70	20	PKP	PKPdf	00 54 34.0	+0.4
	comp=Z,1.4nm,0.7s,baz=93,slow=3.0,SNR=8.8						
HWUT	Hardware Ranch	126.98	23	ePKPdf	PKPdf	00 54 34.8	+0.7
ECSD	EROS Data Cent	129.03	9	ePKPdf	PKPdf	00 54 37.8	-0.2
MSU	Marysvale	129.37	25	ePKIKP	PKPdf	00 54 39.5	+0.7
TXAR	Lajitas Array	140.81	23	PKhKP		00 54 52.9	
	comp=Z,0.1nm,0.4s,baz=222,slow=1.7,SNR=5.9						
TXAR				PKP	PKPdf	00 54 59.6	-0.8
	comp=Z,0.8nm,0.7s,baz=262,slow=2.5,SNR=6.7						
TXAR	Lajitas Array	140.81	23	PKP	PKPdf	00 54 59.6	-0.8
CPUP	Villa Florida	145.45	232	PKPbc	PKPbc	00 55 08.4	-0.2
	comp=Z,6.0nm,0.8s,baz=79,slow=3.0,SNR=13						
LPAZ	La Paz	158.98	242	PKP	PKPdf	00 55 30.6	+1.7
	comp=Z,3.3nm,1.2s,baz=108,slow=3.2,SNR=4.1						

*ISCJB **19** 00:36:41.3±0.1,4°.90S±0°.03×151°.72E±0°.03,h113km, mb5.2/108,Error ellipse: s-maj=4.4km s-min=3.8km az=0.2*

*IDC **19** 00:36:42.5±0.5,4°.86S×151°.78E,h116km±3km,mb4.8/24, mb1 4.9/25,mb1mx4.9/26,mbtmp4.8/25,MS4.2/4, Ms1 4.2/4,ms1mx3.7/19,Error ellipse: s-maj=12.0km s-min=8.1km az=107.0*

*BJI **19** 00:36:43.8,4°.69S×152°.15E,h146km,mB5.1/30,mb5.2/46*

*MOS **19** 00:36:45.7±0.9,4°.81S×151°.64E,h145km,mb5.1/23,Error ellipse: s-maj=9.9km s-min=7.0km az=99.5*

*NEIC **19** 00:36:45.7±0.9,4°.93S×151°.75E,h143km±7km,mb5.2/69, MW5.5,Error ellipse: s-maj=4.3km s-min=4.2km az=70.0, Moment Tensor Solution. s15 Moment tensor: Scale 10^{17}Nm; M_{rr}0.94; $M_{\theta\theta}$0.10; $M_{\phi\phi}$-1.04; $M_{r\theta}$0.21; $M_{\theta\phi}$-0.54; $M_{\phi r}$1.52; Best double couple: $M_0$1.90000×10^{17} NP1: ϕ_s9.00000°,δ73.00000°,λ80.00000°. NP2:ϕ_s220.00000°, δ20.00000°,λ119.00000°. Principal axes: T 1.7600, Plg60.0000°, Azm264.0000°; N 0.2600, Plg9.0000°, Azm12.0000°; P -2.0200, Plg27.0000°, Azm107.0000°;*

*GCMT **19** 00:36:45.5±0.1,4°.99S×151°.87E,h124km±1km,MW5.4, Moment Tensor Solution. s85,c144; s22,c23; Moment tensor: Scale 10^{17}Nm; M_{rr}0.79±.03; $M_{\theta\theta}$-0.06±.02; $M_{\phi\phi}$-0.73±.03; $M_{r\theta}$0.19±.02; $M_{\theta\phi}$0.41±.03; $M_{\phi r}$1.45±.02; Best double couple: $M_0$1.70000×10^{17} NP1:ϕ_s132.00000°, δ20.00000°,λ42.00000°. NP2:ϕ_s2.00000°,δ76.00000°, λ105.00000°. Principal axes: T 1.7500, Plg56.0000°, Azm291.0000°; N -0.1000, Plg15.0000°, Azm178.0000°; P -1.6500, Plg30.0000°, Azm79.0000°; Data Used: II IU IC G CN. Surface waves: sta=108, comp=222, per= 50.*

*DJA **19** 00:36:49,4°.98S×151°.75E,h173km,Mw5.5/23*

ISC 19 00:36:43.0±0.1,4°.91S±0°.03×151°.78E±0°.03,h116km, h116km±2.1km:pP-P,n640,σ0=7.8/407,mb5.2/107, 131C-124D,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	9.27	119	eP	Pn	00 38 51.1	-2.6
HNR				pmax	pmax		
	comp=Z,248nm,0.9s						
HNR	Honiara	9.27	119	ePn	Pn	00 38 51.1	-2.6
	comp=Z,248nm,0.9s						
COEN	Coen	12.36	223	ePn	Pn	00 39 36.3	+1.2
	comp=Z,964nm,1.0s						
COEN				eSn	Sn	00 41 46.0	-5.2
CTA	Charters Tower	16.02	199	eP	Pn	00 40 23.3	+1.5
	comp=Z,19nm,0.9s						
CTA	Charters Tower	16.02	199	P	Pn	00 40 23.1	+1.4
	comp=Z,3.5nm,0.3s,baz=24,slow=13,SNR=36						
CTA				LR	LR	00 45 47.9	
	comp=Z,848nm,19.7s,baz=25,slow=34						
CTAO	Charters Tower	16.02	199	eP	Pn	00 40 22.8	+1.0
CTAO				pmax	pmax		
	comp=Z,31nm,0.7s						
CTAO	Charters Tower	16.02	199	ePn	Pn	00 40 22.8	+1.0
	comp=Z,31nm,0.7s						
GUMO	Guam	19.61	340	eP	P	00 41 04.6	+2.2
GUMO				pmax	pmax		
	comp=Z,1μm,1.1s						
GUMO	Guam	19.61	340	eP	P	00 41 04.5	+2.1
	comp=Z,1μm,1.1s						
EIDS	Eidsvold	20.36	182	eP	P	00 41 11.1	+0.7
	comp=Z,42nm,1.4s						
KAKA	Kakadu	20.61	247	eP	P	00 41 14.6	+1.4
	comp=Z,290nm,0.4s						
KAKA	Kakadu	20.61	247	eP	P	00 41 14.4	+1.2
	comp=Z,1μm,0.6s						
KAKA				eS	S	00 44 55.4	-2.0
NOUC	Port Laguerre	22.14	142	eP	P	00 41 28.0	-1.4
DZM	Mont Dzumac	22.20	142	eP	P	00 41 29.6	-0.5
	comp=Z,298nm,0.9s,mb5.6						
DZM				eLR	LR	00 46 48.6	
	comp=Z,3μm,33.0s						
WRAB	Tennant Creek	22.61	227	P	P	00 41 33.0	-1.3
	comp=Z,3μm,0.6s						
WRAB	Tennant Creek	22.61	227	eP	P	00 41 33.6	-0.7
WRAB				pmax	pmax		
	comp=Z,304nm,0.7s,mb5.7						
WRAB	Tennant Creek	22.61	227	eP	P	00 41 33.5	-0.8
	comp=Z,304nm,0.7s,mb5.7						
WRA	Warramunga Arr	22.62	227	P	P	00 41 33.9	-0.6
	comp=Z,278nm,0.7s,mb5.7,baz=51,slow=10,SNR=658						
WRA				sP	sP	00 42 11.0	+0.1
	comp=Z,47nm,0.6s,baz=49,slow=10,SNR=2.2						
WRA				PcP	PcP	00 45 23.5	+0.1
	comp=Z,17nm,0.8s,baz=37,slow=2.1,SNR=4.7						
WRA				S	S	00 45 33.5	-0.1
	comp=Z,25nm,0.9s,baz=54,slow=20,SNR=16						
WRA				ScP	ScP	00 48 50.1	-0.6
	comp=Z,4.3nm,0.7s,baz=46,slow=2.9,SNR=5.8						
WRA				LR	LR	00 51 03.2	
	comp=Z,718nm,18.1s,baz=45,slow=38						
WRA	Warramunga Arr	22.62	227	P	P	00 41 33.9	-0.6
WRA				*SP	sP	00 42 11.0	+0.1
WRA						00 45 23.5	
WRA				S	S	00 45 33.5	0.0
ARMA	Armidale	25.38	180	eP	P	00 42 00.2	+0.7
ARMA	Armidale	25.38	180	eP	P	00 41 60.0	+0.5
	comp=Z,102nm,1.8s,mb5.0						
ASAR	Alice Springs	25.39	221	P	P	00 41 59.5	-0.2
	comp=Z,121nm,0.8s,mb5.4,baz=54,slow=8.6,SNR=201						
ASAR				pP	pP	00 42 25.9	+1.1
	comp=Z,36nm,0.7s,baz=53,slow=8.9,SNR=3.5						
ASAR				sP	sP	00 42 38.8	+0.6
	comp=Z,50nm,0.8s,baz=57,slow=7.8,SNR=8.3						
ASAR				PcP	PcP	00 45 29.6	+0.3
	comp=Z,13nm,0.8s,baz=45,slow=3.9,SNR=4.7						
ASAR				S	S	00 46 20.7	+2.7
	comp=Z,5.4nm,0.8s,baz=32,slow=18,SNR=3.4						
ASAR				ScP	ScP	00 48 57.7	-0.5
	comp=Z,6.6nm,0.9s,baz=50,slow=3.5,SNR=6.9						
ASAR	Alice Springs	25.39	221	P	P	00 41 59.6	-0.1
ASAR				*PP	pP	00 42 25.9	+1.2
ASAR						00 45 29.6	
ASAR				S	S	00 46 20.7	+2.7
STKA	Stephens Creek	28.48	198	eP	P	00 42 26.3	-1.0
	comp=Z,9.8nm,0.8s,mb4.4						
STKA	Stephens Creek	28.48	198	P	P	00 42 26.7	-0.6
	comp=Z,6.1nm,0.5s,mb4.4,baz=359,slow=8.3,SNR=20						
STKA				ScP	ScP	00 49 07.5	+0.3
	comp=Z,7.1nm,0.9s,baz=28,slow=7.8,SNR=4.4						
STKA				LR	LR	00 53 31.4	
	comp=Z,645nm,18.1s,baz=15,slow=35						
STKA	Stephens Creek	28.48	198	eP	P	00 42 26.4	-0.9
	comp=Z,2.9nm,0.8s,mb3.9						
MSVF	Nonsavu	28.69	118	eP	P	00 42 29.3	0.0
	comp=Z,23nm,0.8s,mb4.9						
FITZ	Fitzroy Crossi	28.72	241	eP	P	00 42 29.0	-0.6
	comp=Z,224nm,0.8s,mb5.8						
FITZ	Fitzroy Crossi	28.72	241	P	P	00 42 29.1	-0.5
	comp=Z,127nm,0.9s,mb5.6,baz=88,slow=6.9,SNR=194						
FITZ	Fitzroy Crossi	28.72	241	eP	P	00 42 29.3	-0.3
	comp=Z,109nm,0.8s,mb5.5						
FITZ				ePcP	PcP	00 45 36.9	-0.5
DAV	Davao City (W)	28.73	294⇑	eP	P	00 42 26.5	-3.2
CNB	Canberra Magne	30.34	184	eP	P	00 42 36.7	-7.0
KAPI	Kappang	31.91	268	P	P	00 42 57.0	-0.8
	comp=Z,26nm,0.8s,mb5.0,baz=109,slow=6.0,SNR=7.9						
KAPI	Kappang	31.91	268	eP	P	00 42 56.9	-0.9
	comp=Z,56nm,1.2s,mb5.2						
TOO	Toolangi	33.02	189	eP	P	00 43 07.7	+0.6
FORT	Forrest	34.07	218	eP	P	00 43 15.6	-0.8
	comp=Z,121nm,0.5s,mb6.0						
FORT	Forrest	34.07	218	eP	P	00 43 15.7	-0.7
	comp=Z,195nm,1.0s,mb5.9						
MBWA	Marble Bar	35.04	240	eP	P	00 43 24.0	-0.9
	comp=Z,122nm,0.9s,mb5.7						
PPR	Puerto Princes	36.01	294	eP	P	00 43 34.5	+1.2
AFI	Afiamalu	37.00	107	P	P	00 43 42.8	+1.1
	comp=Z,9.6nm,0.3s,mb5.2,baz=55,slow=5.8,SNR=3.9						
AFI	Afiamalu	37.00	107	P	P	00 43 42.8	+1.1
KKM	Kota Kinabalu	37.14	287	eP	P	00 43 43.5	+0.6
	comp=Z,331nm,2.0s,mb5.9						
MOO	Moorlands	37.60	186	eP	P	00 43 47.7	+1.4
URZ	Urewera	40.42	149	P	P	00 44 08.7	-1.2
	comp=Z,7.4nm,0.5s,mb4.8,baz=0.5,slow=7.8,SNR=7.4						
YULB	Yu-li	40.94	315	eP	P	00 44 14.9	+0.5
	comp=Z,34nm,0.8s,mb5.2						
NACB	Ninganchiao	41.23	316	eP	P	00 44 17.1	+0.4
	comp=Z,103nm,1.3s,mb5.5						
TPUB	Ta-pu	41.36	314	eP	P	00 44 18.0	+0.2
	comp=Z,29nm,0.8s,mb5.2						
SSLB	Suanglung	41.43	315	eP	P	00 44 18.1	-0.3
	comp=Z,26nm,0.8s,mb5.1						
SSLB				ePcP	PcP	00 46 13.3	-1.1
KLBR	Kellerberrin	41.50	226	eP	P	00 44 17.3	-1.6
	comp=Z,46nm,0.9s,mb5.3						
YHNB	Yeheng	41.70	316	eP	P	00 44 21.7	+1.1
	comp=Z,191nm,1.5s,mb5.6						
YHNB				ePcP	PcP	00 46 15.6	+0.4
KSM	Kuching	41.91	278	eP	P	00 44 22.6	0.0
	comp=Z,89nm,0.8s,mb5.5						
RPZ	Rata Peaks	42.23	159	P	P	00 44 24.8	+0.2
	comp=Z,31nm,0.8s,mb5.1,baz=261,slow=1.1,SNR=16						
NWAO	Narrogin (SRO)	42.59	225	P	P	00 44 26.5	-1.3
	comp=Z,14nm,0.8s,mb4.7,baz=58,slow=14,SNR=5.1						
NWAO				pP	pP	00 44 53.6	-0.6
	comp=Z,11nm,0.7s,baz=27,slow=5.4,SNR=2.3						
NWAO	Narrogin (SRO)	42.59	225	eP	P	00 44 26.1	-1.6
NWAO				pmax	pmax		
	comp=Z,13nm,0.8s						
NWAO	Narrogin (SRO)	42.59	225	eP	P	00 44 26.1	-1.6
	comp=Z,13nm,0.8s,mb4.7						
MJAR	Matsushiro Arr	43.14	344	P	P	00 44 29.7	-2.3
	comp=Z,7.7nm,0.9s,mb4.4,baz=171,slow=8.6,SNR=20						
MJAR				ScP	ScP	00 49 59.0	-1.5
	comp=Z,2.4nm,0.8s,baz=169,slow=5.1,SNR=4.5						
MJAR	Matsushiro Arr	43.14	344	P	P	00 44 29.7	-2.3
MJAR	Matsushiro Arr	43.14	344	P	P	00 44 29.7	-2.3
MJAR				ScP	ScP	00 49 59.0	-1.5
MAJO	Matsushiro	43.14	344	eP	P	00 44 29.8	-2.3
MAJO				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.8						
MAJO	Matsushiro	43.14	344	eP	P	00 44 29.8	-2.3
MAJO				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.8						
MAJO	Matsushiro	43.14	344	eP	P	00 44 29.8	-2.3
	comp=Z,16nm,0.8s,mb4.8						
MAT	Matsushiro	43.14	344	P	P	00 44 29.8	-2.3
MAT				S	S	00 50 37.0	-13
QZH	Quanzhou	43.83	314⇓	iP	P	00 44 36.8	-1.0
QZH				pmax	pmax		
	comp=Z,110nm,1.0s,mb5.5						
QZH				LR	LR		
	comp=N,4μm,13.1s						
QZH				LR	LR		
	comp=E,7μm,13.6s						
QZH				LR	LR		
	comp=Z,10μm,13.3s						
ERM	Erimo	47.35	351	eP	P	00 45 05.2	0.0
ERM				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.5						
ERM	Erimo	47.35	351	eP	P	00 45 05.2	0.0
ERM				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.5						
KSRS	Korea Array	47.64	334	P	P	00 45 07.5	-0.1
	comp=Z,8.9nm,0.9s,mb4.6,baz=152,slow=9.0,SNR=21						
KSRS				pP	pP	00 45 35.2	+0.7
	comp=Z,1.2nm,0.9s,baz=158,slow=10,SNR=1.8						
KSRS				sP	sP	00 45 48.0	+0.5
	comp=Z,7.8nm,0.9s,baz=149,slow=9.3,SNR=4.3						
KSRS				ScP	ScP	00 50 18.1	-1.0
	comp=Z,0.8nm,0.6s,baz=139,slow=5.3,SNR=4.1						
QIZ	Qiongzhong	47.65	301	P	P	00 45 09.6	+1.7
QIZ	Qiongzhong	47.65	301	eP	P	00 45 09.4	+1.5
	comp=Z,38nm,0.7s,mb5.3						
INCN	Inchon	48.24	333	eP	P	00 45 12.3	+0.1
	comp=Z,106nm,1.1s,mb5.6						
NJ2	Nanjing	48.29	322	eP	P	00 45 14.1	+1.5
NJ2				pP	pP	00 45 43.1	+3.4
NJ2				PP	PP	00 47 08.3	+2.0
NJ2				S	S	00 52 06.0	+2.1
NJ2				sS	sS	00 52 55.0	+4.5
NJ2				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.9						
NJ2				pmax	pmax		
	comp=Z,270nm,6.9s						
NJ2				LR	LR		
	comp=N,1μm,24.7s						
NJ2				LR	LR		
	comp=E,1μm,22.8s						
NJ2				LR	LR		
	comp=Z,1μm,21.1s						
WHN	Wuhan	50.23	317	⇑P	P	00 45 28.8	+1.3
WHN				S	S	00 52 33.3	+2.2
WHN				pmax	pmax		
	comp=Z,480nm,4.0s						
WHN				LR	LR		
	comp=Z,2μm,13.8s						
VLA	Vladivostok	51.08	341	P	P	00 45 34.0	+0.4
VLA				MLR	MLR		
	comp=Z,600nm,13.0s						
DL2	Dalian	51.75	330	P	P	00 45 38.9	+0.3
DL2				pP	pP	00 46 12.8	+6.8
DL2				eS	S	00 52 49.8	-1.9
DL2				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.4						
DL2				pmax	pmax		
	comp=Z,180nm,7.2s						
KULM	Kulim	52.06	281	eP	P	00 45 40.4	-1.0
MDJ	Mudanjiang	53.17	340	P	P	00 45 48.5	-0.5
MDJ				PP	PP	00 47 49.4	-0.9
MDJ				S	S	00 53 09.5	-1.3
MDJ				pmax	pmax		
	comp=Z,20nm,1.9s,mb4.8						
MDJ				pmax	pmax		
	comp=Z,160nm,7.6s						
MDJ				LR	LR		
	comp=E,490nm,34.1s						
MDJ				LR	LR		
	comp=Z,350nm,30.6s						
PSI	Prapat	53.36	277	P	P	00 45 50.0	-1.1
	comp=Z,43nm,0.8s,mb5.5,baz=134,slow=2.4,SNR=24						
ENH	Enshi	53.48	314	eP	P	00 45 51.6	0.0
	comp=Z,288nm,1.7s,mb6.0						
GYA	Guiyang	53.65	308⇑	iP	P	00 45 53.8	+0.9
GYA				pP	pP	00 46 24.3	+3.9
GYA				PcP	PcP	00 46 58.4	+0.5
GYA				PP	PP	00 47 58.0	+3.0
GYA				ScP	ScP	00 50 42.3	-3.0
GYA				PcS	PcS	00 50 56.8	-0.5
GYA				S	S	00 53 17.5	-0.5
GYA				SS	SS	00 57 01.3	+0.9
GYA				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.4						
GYA				pmax	pmax		
	comp=Z,140nm,5.4s						
GYA				LR	LR		
	comp=N,580nm,18.8s						
GYA				LR	LR		
	comp=E,420nm,19.0s						
GYA				LR	LR		
	comp=Z,530nm,18.5s						
CN2	Changchun	53.98	337	eP	P	00 45 57.8	+2.8
CN2				epP	pP	00 46 27.3	+4.8
CN2				eS	S	00 53 23.3	+1.4
CN2				pmax	pmax		
	comp=Z,20nm,2.0s,mb4.8						
CN2				pmax	pmax		
	comp=Z,200nm,7.0s						
CN2				LR	LR		
	comp=N,1μm,19.0s						
CN2				LR	LR		
	comp=E,700nm,19.0s						
CN2				LR	LR		
	comp=Z,500nm,16.0s						
HABR	Khabarovsk	55.14	346	eP	P	00 46 00.9	-2.3
HABR				e*PP	pP	00 46 31.6	+0.7
HABR				e		00 47 01.6	
HABR				S	S	00 53 32.5	-4.7
HABR				e		00 55 37.1	
HABR				SS	SS	00 57 19.0	-4.1
HABR				pmax	pmax		
	comp=Z,127nm,2.5s,mb5.5						
HABR				pmax	pmax		
	comp=N,70nm,2.5s						
HABR				pmax	pmax		
	comp=E,60nm,2.0s						
HABR				MLR	MLR		
	comp=Z,394nm,20.0s						
BJI	Beijing	55.42	327	P	P	00 46 05.3	-0.1
BJI				S	S	00 53 41.4	+0.1
BJI				pmax	pmax		
	comp=Z,24nm,1.7s,mb5.0						
BJI				pmax	pmax		
	comp=Z,290nm,3.8s						
BJI				LR	LR		
	comp=N,890nm,14.9s						
BJI				LR	LR		
	comp=E,840nm,13.1s						
BJI				LR	LR		
	comp=Z,420nm,30.7s						
KMI	Kunming	56.20	305	P	P	00 46 13.5	+2.2
KMI				pP	pP	00 46 47.6	+8.6
KMI				sP	sP	00 47 05.1	+13
KMI				PcP	PcP	00 47 09.0	+1.2
KMI				PP	PP	00 48 22.3	+4.5
KMI				S	S	00 53 49.9	-2.3
KMI				sS	sS	00 54 48.1	+8.2
KMI				SS	SS	00 57 39.8	-0.9
KMI				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.4						
KMI				pmax	pmax		
	comp=Z,200nm,3.1s						
KMI				LR	LR		
	comp=N,970nm,13.9s						
KMI				LR	LR		
	comp=E,670nm,14.5s						
KMI				LR	LR		
	comp=Z,760nm,11.7s						
KLR	Kul'dur	56.66	344	eP	P	00 46 08.3	-5.8
CM31	Chiang Mai Arr	57.00	296	eP	P	00 46 18.6	+1.5
	comp=Z,32nm,0.8s,mb5.4						
CMAR	Chiang Mai Arr	57.00	296	P	P	00 46 17.8	+0.7
	comp=Z,34nm,0.8s,mb5.4,baz=114,slow=5.2,SNR=110						
CMAR				ScP	ScP	00 50 59.3	-0.8
	comp=Z,0.6nm,0.3s,baz=101,slow=3.8,SNR=2.7						
CHTO	Chiang Mai	57.12	296	eP	P	00 46 18.0	+0.1
PET	Petropavlovsk	58.00	5	eP	P	00 46 24.7	+1.3
PET				eS	S	00 54 14.0	-0.8
PETK	Petropavlovsk-	58.01	4	P	P	00 46 23.1	-0.4
	comp=Z,9.2nm,1.0s,mb4.8,baz=174,slow=6.0,SNR=9.8						
PETK				PcP	PcP	00 47 13.3	-0.8
	comp=Z,2.9nm,0.5s,baz=167,slow=5.8,SNR=5.0						
PETK	Petropavlovsk-	58.01	4	P	P	00 46 23.1	-0.4
PETK				PcP	PcP	00 47 13.3	-0.9
CD2	Chengdu	58.04	311⇑	iP	P	00 46 24.8	+0.7
CD2				pP	pP	00 46 54.8	+2.8
CD2				PP	PP	00 48 36.4	+2.4
CD2				PcS	PcS	00 51 15.1	-1.3
CD2				S	S	00 54 13.4	-2.7
CD2				ScS	ScS	00 55 58.0	-4.8
CD2				SS	SS	00 58 08.0	-1.4
CD2				pmax	pmax		
	comp=Z,70nm,0.7s,mb5.8						
CD2				pmax	pmax		
	comp=Z,120nm,4.8s						
HHC	Hu-ho-hao-te	58.54	325	eP	P	00 46 27.8	+0.4
HHC				pP	pP	00 47 01.0	+5.6
HHC				sP	sP	00 47 16.6	+8.5
HHC				PP	PP	00 48 41.1	+2.8
HHC				ScP	ScP	00 51 01.1	-5.3
HHC				PcS	PcS	00 51 17.0	-1.3
HHC				S	S	00 54 19.3	-3.0
HHC				sS	sS	00 55 17.8	+7.5
HHC				ScS	ScS	00 55 59.8	-6.3
HHC				SS	SS	00 58 16.3	-0.7
HHC				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.3						
HHC				pmax	pmax		
	comp=Z,400nm,6.0s						
HHC				LR	LR		
	comp=N,680nm,12.3s						
HHC				LR	LR		
	comp=E,830nm,12.2s						
HHC				LR	LR		
	comp=Z,580nm,12.9s						
PPT	Papeete	58.66	107	eS	S	00 54 18.7	-5.9
	comp=Z,343nm,25.5s						
PPT				eLR	LR	01 03 50.8	
	comp=Z,5μm,29.8s						
PPT	Papeete	58.66	107	LR	LR	01 06 26.0	
	comp=Z,104nm,19.3s,baz=195,slow=30						
BTO	Baotou	59.28	324	eP	P	00 46 32.3	-0.2
LZH	Lanzhou	60.60	316	eP	P	00 46 43.3	+1.7
LZH				pP	pP	00 47 14.5	+4.8
LZH				PcP	PcP	00 47 26.8	+1.9
LZH				eS	S	00 54 48.3	-0.6
LZH				sS	sS	00 55 42.4	+5.2
LZH				SS	SS	00 58 49.0	-0.4
LZH				pmax	pmax		
	comp=Z,41nm,1.0s,mb5.4						
LZH				pmax	pmax		
	comp=Z,230nm,5.7s						
LZH				LR	LR		
	comp=E,930nm,12.2s						
LZH				LR	LR		
	comp=Z,2μm,14.8s						
HIA	Hailar	60.72	337	P	P	00 46 42.0	-0.2
HIA				pmax	pmax		
	comp=Z,25nm,0.2s						
HIA	Hailar	60.72	337	P	P	00 46 42.0	-0.1
	comp=Z,25nm,0.2s,mb5.9						
GTA	Gaotai	65.

comp=Z,15nm,0.6s,mb5.0,baz=146,slow=4.6,SNR=37
LSA Lhasa 67.46 305 *eP* **P 00 47 27.9 +1.2**
CASY Casey 67.62 197 *eP* **P 00 47 26.5 -0.5**
ZAK Zakamensk 69.06 329 ⇓*iP* **P 00 47 35.7 -0.5**
ZAK *e* pP 00 48 05.2 +0.3
ZAK pmax pmax
comp=Z,37nm,1.1s,mb5.1
TLY Talaya 69.66 330 *eP* **P 00 47 39.9 0.0**
TLY pmax pmax
comp=Z,24nm,1.1s,mb4.9
TLY Talaya 69.66 330 *eP* **P 00 47 40.5 +0.6**
comp=Z,61nm,1.6s,mb5.2
MOY Mondy 70.98 329 *eP* **P 00 47 48.3 +0.4**
MOY pmax pmax
comp=Z,87nm,1.8s,mb5.3
RKT Rikitea 72.69 113 *eS* S 00 57 12.5 -2.7
comp=Z,196nm,30.5s
RKT *e*LR LR 01 10 16.3
comp=Z,655nm,36.5s
SBA Scott Base 73.33 177 *eP* **P 00 48 01.5 0.0**
SBA pmax pmax
comp=Z,13nm,1.6s,mb4.5
SBA Scott Base 73.33 177 *eP* **P 00 48 01.4 -0.1**
comp=Z,13nm,1.6s,mb4.5
BILL Bilibino 73.49 6 P **P 00 48 02.0 -0.5**
BILL *PP pP 00 48 33.5 +1.9
BILL pmax pmax
comp=Z,15nm,1.6s,mb4.6
BILL Bilibino 73.49 6 P **P 00 48 01.6 -0.9**
WMQ Urumqi 75.13 318 P **P 00 48 13.0 +0.4**
WMQ pP pP 00 48 45.0 +3.3
WMQ PP PP 00 51 05.0 +2.6
WMQ S S 00 57 40.0 -1.8
WMQ ScS ScS 00 58 11.0 -3.7
WMQ SS SS 01 02 34.0 +0.4
WMQ pmax pmax
comp=Z,42nm,1.1s,mb5.1
WMQ pmax pmax
comp=Z,100nm,7.0s
WMQ LR LR
comp=N,190nm,18.0s
WMQ LR LR
comp=E,170nm,18.0s
WMQ LR LR
comp=Z,130nm,18.0s
HYB Hyderabad 75.57 289 *eP* **P 00 48 14.5 -1.1**
HYB Hyderabad 75.57 289 *i P* **P 00 48 14.0 -1.6**
OHAK Old Harbor 76.11 27 *eP* **P 00 48 17.3 -0.5**
comp=Z,75nm,2.0s,mb5.1
SVW2 Sparrevohn 77.32 23 *eP* **P 00 48 25.6 +1.1**
TTA Tatalina 78.24 22 *eP* **P 00 48 30.3 +0.7**
SEW Seward 79.32 26 *eP* **P 00 48 34.5 -1.0**
comp=Z,21nm,1.0s,mb4.9
PPLA Purkeypile 79.66 23 *eP* **P 00 48 36.5 -0.8**
comp=Z,54nm,1.8s,mb5.1
RC01 Rabbit Creek A 79.70 25 *eP* **P 00 48 36.5 -1.1**
comp=Z,32nm,1.2s,mb5.0
MK31 Makanchi Array 79.74 319 *eP* **P 00 48 37.9 -0.2**
MKAR Makanchi Array 79.74 319 P **P 00 48 37.9 -0.3**
comp=Z,22nm,0.9s,mb5.0,baz=101,slow=6.5,SNR=59
MKAR Makanchi Array 79.74 319*ceP* **P 00 48 38.0 -0.1**
MKAR pmax pmax
comp=Z,22nm,0.9s
PMR Palmer 80.20 25 *eP* **P 00 48 39.0 -1.3**
PMR pmax pmax
comp=Z,21nm,1.1s,mb4.9
PMR Palmer 80.20 25 *eP* **P 00 48 39.0 -1.3**
comp=Z,22nm,1.1s,mb4.9
ZAA0 Zalesovo Array 80.68 327 *eP* **P 00 48 41.5 -1.5**
ZALV Zalesovo Beam 80.68 327 P **P 00 48 41.5 -1.5**
comp=Z,12nm,0.7s,mb4.9,baz=112,slow=6.1,SNR=24
ZALV pP pP 00 49 11.1 -1.4
comp=Z,4.2nm,0.5s,baz=107,slow=6.4,SNR=3.0
ZALV sP sP 00 49 23.7 -1.2
comp=Z,1.6nm,0.4s,baz=93,slow=5.8,SNR=1.9
TRF Thorofare Moun 80.69 23 *eP* **P 00 48 41.7 -1.1**
comp=Z,4.6nm,0.7s,mb4.4
BPAW Bear Paw Mtn. 80.76 22 *eP* **P 00 48 41.8 -1.5**
comp=Z,29nm,1.5s,mb4.9
MCK McKinley 81.35 23 *eP* **P 00 48 45.1 -1.3**
MCK pmax pmax
comp=Z,92nm,1.6s,mb5.4
MCK McKinley 81.35 23 *eP* **P 00 48 45.1 -1.3**
comp=Z,92nm,1.6s,mb5.4
DIV Divide 81.41 26 *eP* **P 00 48 46.2 -0.5**
comp=Z,37nm,1.4s,mb5.0
BMRM Bremner River 81.85 26 *eP* **P 00 48 48.8 -0.3**
comp=Z,51nm,1.4s,mb5.2
KSH Kashi 82.23 311 P **P 00 48 53.3 +1.7**
KSH pP pP 00 49 25.3 +4.1
KSH PP PP 00 52 06.3 +4.7
KSH S S 00 58 55.0 -2.6
KSH SKS 00 58 58.6
KSH SS SS 01 04 25.9 +5.6
KSH pmax pmax
comp=Z,24nm,1.0s,mb5.0
KSH pmax pmax
comp=Z,270nm,4.5s
KSH LR LR
comp=N,760nm,14.7s
KSH LR LR
comp=E,340nm,13.2s
KSH LR LR
comp=Z,230nm,11.2s
COLA College 82.33 22 P **P 00 48 49.0 -2.5**
COLA pmax pmax
comp=Z,17nm,1.0s,mb4.8
COLA College 82.33 22 P **P 00 48 49.0 -2.5**
COLA pmax pmax
comp=Z,17nm,1.0s,mb4.8
COLA College 82.33 22 P **P 00 48 49.0 -2.5**
comp=Z,17nm,1.0s,mb4.8
PAX Paxson 82.36 24 *eP* **P 00 48 51.0 -0.7**
PAX pmax pmax
comp=Z,10.0nm,1.2s,mb4.5
PAX Paxson 82.36 24 *eP* **P 00 48 51.0 -0.7**
comp=Z,10nm,1.2s,mb4.5
PAX *e*PcP PcP 00 48 57.4 +0.8
KURK Kurchatov 83.23 322 P **P 00 48 55.7 -0.7**
comp=Z,220nm,1.0s,mb5.9,SNR=13
KURK Kurchatov 83.23 322 P **P 00 48 55.8 -0.6**
comp=Z,14nm,0.9s,mb4.8,baz=112,slow=3.8,SNR=25
KURK Kurchatov 83.23 322 *eP* **P 00 48 55.9 -0.6**
TKM2 Tokmak 2 83.27 314 P **P 00 48 57.1 +0.2**
SNR=21
TKM2 Tokmak 2 83.27 314 *eP* **P 00 48 57.0 +0.1**
KZA Kyzart 83.33 313 P **P 00 48 58.8 +1.6**
SNR=59
KBK Karagaybulak 83.68 314 P **P 00 48 59.5 +0.5**
SNR=11
CHMS Chumysh 83.89 314 P **P 00 49 00.2 +0.2**
SNR=18
UCH Uchtor 83.90 313 P **P 00 49 01.6 +1.5**
SNR=33
UCH Uchtor 83.90 313 *eP* **P 00 49 00.9 +0.8**
FRU Bishkek 83.95 314 *i P* **P 00 48 59.0 -1.3**
FRU *e* 00 49 54.0
FRU pmax pmax
comp=Z,150nm,2.0s,mb5.5
AAK Ala-Archa 84.00 314 P **P 00 49 01.0 +0.4**
comp=Z,273nm,0.9s,mb6.1,SNR=9.0
AAK Ala-Archa 84.00 314 P **P 00 49 01.2 +0.6**
SNR=14
AAK Ala-Archa 84.00 314 P **P 00 49 01.1 +0.5**
comp=Z,22nm,0.7s,mb5.1,baz=133,slow=4.5,SNR=38
AAK Ala-Archa 84.00 314*ceP* **P 00 49 01.1 +0.5**
AAK pmax pmax
comp=Z,14nm,0.9s,mb4.8
AAK Ala-Archa 84.00 314 *eP* **P 00 49 00.6 0.0**
comp=Z,22nm,0.7s,mb5.1
USP Ospenovka 84.13 314 P **P 00 49 01.6 +0.4**
SNR=37
AML Almayashu 84.48 313 P **P 00 49 04.4 +1.4**
SNR=51
AML Almayashu 84.48 313 *eP* **P 00 49 03.7 +0.7**
comp=Z,107nm,1.9s,mb5.3
EKS2 Erkin-Say 84.52 314 P **P 00 49 03.9 +0.7**
SNR=45
EKS2 Erkin-Say 84.52 314 *eP* **P 00 49 03.6 +0.4**
SIT Sitka 84.89 32 *eP* **P 00 49 04.0 -0.7**
SIT pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
SIT Sitka 84.89 32 *eP* **P 00 49 04.0 -0.8**
comp=Z,9.5nm,1.0s,mb4.7
MAW Mawson 85.08 203 *eP* **P 00 49 04.9 -0.6**
comp=Z,7.5nm,0.9s,mb4.6
MAW Mawson 85.08 203 P **P 00 49 05.0 -0.5**
comp=Z,10nm,1.0s,mb4.7,baz=81,slow=6.2,SNR=14
MAW Mawson 85.08 203 *eP* **P 00 49 05.2 -0.3**
comp=Z,5.0nm,1.3s,mb4.3
KBL Kabul 86.79 305 *eP* **P 00 49 12.8 -1.8**
KBL pmax pmax
comp=Z,14nm,1.1s,mb4.8
KBL Kabul 86.79 305 *eP* **P 00 49 12.8 -1.9**
comp=Z,14nm,1.1s,mb4.8
BVAR Borovoye Array 88.72 323 P **P 00 49 21.1 -2.2**
comp=Z,15nm,0.6s,mb5.2,baz=107,slow=5.6,SNR=64
BRVK Borovoye 88.78 323 P **P 00 49 22.9 -0.8**
comp=Z,110nm,0.9s,mb5.9,SNR=11
BRVK Borovoye 88.78 323*ceP* **P 00 49 22.4 -1.3**
BRVK pmax pmax
comp=Z,37nm,1.5s,mb5.2
BRVK Borovoye 88.78 323 *eP* **P 00 49 21.6 -2.1**
comp=Z,16nm,0.8s,mb5.1
RNO Roman Nose 89.39 46 P **P 00 49 27.4 +0.6**
OOW Octopus West 89.58 42 P **P 00 49 28.4 +0.9**
MPOR Mary's Peak 89.61 45 P **P 00 49 28.5 +0.8**
OBC Olympics--Boni 89.70 42 P **P 00 49 28.8 +0.7**
NLWA Neilton Lookou 89.75 43 ⇑P **P 00 49 28.4 0.0**
baz=90
NLWA Neilton Lookou 89.75 43 *eP* **P 00 49 28.8 +0.5**
comp=Z,22nm,1.2s,mb5.2
F03A Seaside 89.78 44 ⇓P **P 00 49 28.3 -0.2**
baz=90
HUMO Hull Mountain 89.80 47 *eP* **P 00 49 29.2 +0.5**
comp=Z,37nm,1.1s,mb5.4
YBH Yreka Blue Hor 89.88 48 *eP* **P 00 49 29.5 +0.4**
YBH pmax pmax
comp=Z,29nm,1.2s
YBH Yreka Blue Hor 89.88 48 *eP* **P 00 49 29.5 +0.4**
comp=Z,29nm,1.2s,mb5.3
YBH *e* pP 00 49 56.9 -2.2
GNW Green Mountain 90.48 42 *eP* **P 00 49 31.7 0.0**
comp=Z,11nm,1.3s,mb4.8
GNW *e* pP 00 49 59.7 -2.0
F04A Amboy 90.57 44 ⇑P **P 00 49 32.1 -0.1**
baz=91
H04A Detroit Lake 90.59 45 ⇓P **P 00 49 31.9 -0.4**
baz=91
FL2 Flat Top 2 90.64 44 P **P 00 49 33.0 +0.4**
D05A Enumclaw 91.00 43 ⇓P **P 00 49 34.5 +0.3**
baz=91
JCW Jim Creek 91.14 42 P **P 00 49 34.9 +0.1**
CMB Columbia Colle 91.28 52 *eP* **P 00 49 35.6 -0.1**
CMB pmax pmax
comp=Z,19nm,1.4s,mb5.0
CMB Columbia Colle 91.28 52 *eP* **P 00 49 35.6 -0.1**
comp=Z,19nm,1.4s,mb5.0
CMB *e* pP 00 50 04.1 -1.6
K05A Summer Lake 91.33 47 ⇑P **P 00 49 36.2 +0.4**
baz=91
PKM Peak Mountain 91.46 55 ⇓P **P 00 49 37.2 +0.6**
baz=92
BEKR Beckworth 91.47 50 ⇑P **P 00 49 36.6 +0.1**
baz=92
MOD Modoc 91.69 48 *eP* **P 00 49 37.1 -0.4**
comp=Z,42nm,1.3s,mb5.5
MOD *e* pP 00 50 05.7 -1.9
G06A Carlson Farm, 91.74 45 ⇓P **P 00 49 37.5 -0.1**
baz=92
WCN Washoe City 91.88 51 ⇓P **P 00 49 38.7 +0.3**
baz=92
VES Vestal, Richgr 92.14 54 ⇑P **P 00 49 39.6 -0.1**
baz=92
ETW Entiat 92.16 43 *eP* **P 00 49 39.2 -0.3**
comp=Z,16nm,1.1s,mb5.2
ETW *e* pP 00 50 06.3 -3.3
I07A Izee 92.45 46 ⇑P **P 00 49 41.1 +0.2**
baz=92
HAWA Hanford 92.61 44 *eP* **P 00 49 41.1 -0.5**
comp=Z,12nm,1.2s,mb5.1
ISA Isabella 92.62 55 ⇑P **P 00 49 41.7 -0.2**
baz=93
MWC Mount Wilson 92.86 56 *eP* **P 00 49 43.5 +0.4**
MWC pmax pmax
comp=Z,47nm,1.4s,mb5.6
MWC Mount Wilson 92.86 56 *eP* **P 00 49 43.5 +0.4**
comp=Z,47nm,1.4s,mb5.6
MWC *e* pP 00 50 11.4 -1.7
B08A Colville Reser 92.89 42 ⇓P **P 00 49 42.1 -0.8**
baz=93,SNR=6.0
G08A Pilot Rock 92.93 45 ⇓P **P 00 49 42.8 -0.4**
baz=93
E08A Dider Farm, El 92.94 44 ⇓P **P 00 49 43.2 0.0**
baz=93
NVAR Mina Array Bea 92.95 52 P **P 00 49 44.0 +0.6**
comp=Z,14nm,1.0s,mb5.2,baz=251,slow=6.4,SNR=43
NVAR pP pP 00 50 11.2 -2.2
comp=Z,4.8nm,0.9s,baz=246,slow=6.3,SNR=5.0
EDW2 Edwards Air Fo 92.96 55 ⇑P **P 00 49 43.8 +0.3**
baz=93
WVOR Wild Horse Val 92.97 48 *eP* **P 00 49 42.9 -0.5**
WVOR pmax pmax
comp=Z,31nm,1.4s,mb5.5
WVOR Wild Horse Val 92.97 48 *eP* **P 00 49 42.9 -0.5**
comp=Z,31nm,1.4s,mb5.5
CWC Cottonwood Cre 92.99 54 ⇑P **P 00 49 43.6 -0.1**
baz=93
D08A Wollman Farm, 93.08 43 ⇓P **P 00 49 43.5 -0.3**
baz=93
H08A Prairie City 93.08 46 ⇓P **P 00 49 43.7 -0.2**
baz=93
J08A Circle Bar Ran 93.15 47 ⇓P **P 00 49 44.2 0.0**
baz=93
BFSC Mount Baldy Ra 93.19 56 ⇓P **P 00 49 44.6 0.0**
baz=93
OD2 Odessa Site #2 93.24 43 *eP* **P 00 49 44.2 -0.3**
comp=Z,25nm,1.1s,mb5.5
OD2 *e* pP 00 50 12.4 -2.2
MPMC Manual Prospec 93.44 54 ⇑P **P 00 49 46.1 +0.4**
baz=94,SNR=12
MURC Murrieta 93.53 57 ⇑P **P 00 49 46.5 +0.3**
baz=94
C09A Chrisman Ranch 93.56 42 ⇓P **P 00 49 45.4 -0.5**
baz=94
E09A Wood Farm, Sta 93.57 44 ⇓P **P 00 49 45.9 -0.2**
baz=94
GRAC Grapevine Rang 93.60 53 P **P 00 49 46.4 0.0**
baz=94
J09A Fry Pan Ranch, 93.67 47 ⇑P **P 00 49 46.4 -0.2**
baz=94,SNR=12
F09A S2 Ranch, Elgi 93.69 45 ⇑P **P 00 49 46.4 -0.3**
baz=94
I09A Lost Marbles R 93.72 46 ⇑P **P 00 49 46.3 -0.5**
baz=94,SNR=7.6
G09A Cove 93.76 45 ⇑P **P 00 49 46.7 -0.2**
baz=94,SNR=13
H09A Durkee 93.81 46 ⇓P **P 00 49 46.8 -0.4**
baz=94
GSC Goldstone 93.96 55 ⇑P **P 00 49 48.3 +0.2**
baz=94,SNR=5.5
FURC Furnace Creek, 93.98 54 ⇑P **P 00 49 48.4 +0.2**
baz=94,SNR=20
BMO Blue Mountains 94.07 45 *eP* **P 00 49 48.1 -0.3**
BMO pmax pmax
comp=Z,21nm,1.4s,mb5.3
BMO Blue Mountains 94.07 45 *eP* **P 00 49 48.1 -0.3**
comp=Z,21nm,1.4s,mb5.3
BMO *e* pP 00 50 15.9 -2.6
MONP Monument Peak 94.14 57 ⇓P **P 00 49 49.9 +0.9**
baz=94,SNR=5.8
PFO Pinyon Flat Ob 94.15 57 ⇓P **P 00 49 49.1 +0.1**
baz=94
F10A Beach Ranch, E 94.18 44 ⇑P **P 00 49 48.2 -0.7**
baz=94,SNR=6.7
D10A Wagner Farm, O 94.20 43 ⇓P **P 00 49 48.2 -0.7**
baz=94,SNR=6.4
G10A Bishop Farm, J 94.22 45 ⇑P **P 00 49 48.5 -0.6**
baz=94,SNR=14
S10A Tonopah Range, 94.26 52 ⇓P **P 00 49 49.9 +0.4**
baz=94,SNR=21
K10A MacKenzie Ranc 94.29 48 ⇑P **P 00 49 49.4 -0.1**
baz=94,SNR=14
HEC Hector,Ludlow 94.32 56 ⇑P **P 00 49 49.9 +0.1**
baz=94
NEW Newport 94.36 42 *eP* **P 00 49 48.4 -1.2**
NEW pmax pmax
comp=Z,16nm,1.2s
NEW Newport 94.36 42 *eP* **P 00 49 48.4 -1.2**
comp=Z,16nm,1.2s,mb5.2
NEW *e* pP 00 50 16.8 -2.9
J10A Berg Farm, Mel 94.39 47 ⇑P **P 00 49 49.9 0.0**
baz=94
U10A Ash Meadows, A 94.40 54 ⇑P **P 00 49 50.8 +0.6**
baz=94,SNR=5.3
SHOC Shoshone 94.42 54 ⇓P **P 00 49 50.3 +0.1**
baz=94,SNR=8.4
P10A Eureka 94.45 51 ⇓P **P 00 49 50.4 +0.1**
baz=94
O10A Cortez Mining, 94.45 50 ⇑P **P 00 49 50.3 0.0**
baz=94
H10A Noah's Angus R 94.46 46 ⇑P **P 00 49 49.4 -0.8**
baz=94,SNR=13
Q10A Clear Creek Ra 94.46 52 ⇓P **P 00 49 50.4 +0.1**
baz=94
R10A Warm Springs 94.51 52 ⇓P **P 00 49 51.2 +0.6**
baz=95
L10A Juniper Basin 94.55 48 ⇑P **P 00 49 50.5 -0.2**
baz=95,SNR=7.8
BELC Belle Mtn. Jos 94.55 56 ⇑P **P 00 49 51.2 +0.4**
baz=95
SWSC Sam W. Stewart 94.67 57 ⇑P **P 00 49 51.5 +0.1**
baz=95
TUQ Turquoise Moun 94.68 55 ⇓P **P 00 49 51.4 0.0**
baz=95
G11A Walters Elk Ra 94.83 45 ⇑P **P 00 49 50.9 -1.0**
baz=95,SNR=5.8
GMRC Granite Mounta 94.87 56 ⇑P **P 00 49 52.8 +0.5**
baz=95,SNR=10
K11A Parker Ranch, 94.90 48 ⇓P **P 00 49 52.1 -0.2**
baz=95,SNR=8.5
C11A Tepee Creek (N 94.92 43 ⇓P **P 00 49 52.1 -0.1**
baz=95
F11A Grangeville 94.93 44 ⇑P **P 00 49 51.0 -1.3**
baz=95
H11A Donnelly 94.99 46 ⇓P **P 00 49 51.9 -0.7**
baz=95,SNR=6.6
BC3 Big Chuckawall 94.99 57 ⇓P **P 00 49 53.4 +0.5**
baz=95,SNR=9.0
P11A Circle Ranch, 94.99 51 ⇓P **P 00 49 52.9 +0.1**
baz=95
I11A Placerville 95.00 46 ⇓P **P 00 49 52.6 0.0**
baz=95
M11A Holland Ranch, 95.03 49 ⇓P **P 00 49 53.1 +0.2**
baz=95
Q11A Duckwater 95.04 52 ⇓P **P 00 49 53.1 +0.1**
baz=95,SNR=12
MFID Camas Ranch 95.08 47 ⇓P **P 00 49 52.8 -0.2**
baz=95,SNR=8.0
R11A Troy Canyon, C 95.08 52 ⇑P **P 00 49 53.2 0.0**
baz=95,SNR=14
L11A Cat Creek Ranc 95.09 48 ⇑P **P 00 49 53.0 -0.1**
baz=95,SNR=7.9
O11A Cowboy Ranch, 95.09 50 ⇑P **P 00 49 53.3 +0.1**
baz=95,SNR=7.0
V11A Goodsprings 95.10 55 ⇓P **P 00 49 53.8 +0.4**
baz=95,SNR=5.8
IRM Iron Mountain 95.26 56 ⇓P **P 00 49 54.7 +0.6**
baz=95,SNR=5.9
T11A Corn Creek, Al 95.33 53 ⇓P **P 00 49 54.4 +0.1**
baz=95,SNR=14
LDFC Landfair 95.33 55 *eP* **P 00 49 54.6 +0.2**
comp=Z,73nm,1.5s,mb5.9
LDFC *e* pP 00 50 23.2 -1.3
E12A Beaver Dam Sad 95.35 44 ⇑P **P 00 49 53.5 -0.7**
baz=95
G12A Big Creek, Yel 95.49 45 ⇑P **P 00 49 54.7 -0.2**
baz=96
GLA Glamis 95.49 57 ⇓P **P 00 49 56.1 +1.0**
baz=96
GLA Glamis 95.49 57 *eP* **P 00 49 54.0 -1.2**
GLA pmax pmax
comp=Z,35nm,1.6s,mb5.5
GLA Glamis 95.49 57 *eP* **P 00 49 54.0 -1.2**
comp=Z,35nm,1.6s,mb5.5
D12A Red Ives Fores 95.51 43 ⇓P **P 00 49 54.6 -0.3**
baz=96,SNR=9.3
F12A Elk City 95.55 45 ⇓P **P 00 49 54.0 -1.1**
baz=96,SNR=5.4
V12A Nelson 95.57 55 ⇓P **P 00 49 55.9 +0.4**
baz=96,SNR=9.7
N12A Clover Valley, 95.58 50 ⇑P **P 00 49 55.8 +0.4**
baz=96
N12A Clover Valley, 95.58 50 *eP* **P 00 49 55.4 0.0**
comp=Z,35nm,1.2s,mb5.7
I12A Atlanta 95.59 47 ⇓P **P 00 49 55.6 +0.2**
baz=96
J12A Stokes Ranch, 95.60 47 ⇓P **P 00 49 55.5 0.0**
baz=96,SNR=18
S12A Delamar Landin 95.63 53 ⇑P **P 00 49 56.2 +0.5**
baz=96,SNR=10
L12A House Creek Ra 95.64 48 ⇓P **P 00 49 56.0 +0.4**
baz=96
P12A McGill 95.64 51 ⇓P **P 00 49 56.6 +0.9**
baz=96
M12A Wells 95.69 49 ⇑P **P 00 49 56.0 +0.1**
baz=96
Q12A Willow Creek R 95.69 51 ⇓P **P 00 49 56.2 +0.3**
baz=96,SNR=5.7
K12A Draper Farm, C 95.73 48 ⇓P **P 00 49 56.3 +0.3**
baz=96
Y12C Blythe 95.77 57 ⇑P **P 00 49 56.7 +0.3**
baz=96
O12A Currie 95.79 50 ⇓P **P 00 49 56.4 +0.1**
baz=96,SNR=9.5
H12A Diamond D Ranc 95.81 46 ⇑P **P 00 49 56.2 -0.2**
baz=96
ARU Arti 95.84 326*c iP* **P 00 49 53.6 -2.6**
ARU S S 01 00 16.9 -47
ARU pmax pmax
comp=Z,12nm,1.2s,mb5.2
ARU Arti 95.84 326 *eP* **P 00 49 53.3 -2.9**
U12A Valley of Fire 95.84 54 ⇓P **P 00 49 57.4 +0.6**
baz=96
R12A Pony Springs, 95.84 52 ⇓P **P 00 49 57.2 +0.6**
baz=96
BSMT Bassoo Peak 95.91 43 *eP* **P 00 49 56.8 +0.1**
comp=Z,19nm,1.7s,mb5.2
BSMT *e* pP 00 50 24.1 -2.7
YKA Yellowknife Ar 95.99 28 P **P 00 49 55.9 -0.8**
comp=Z,2.4nm,0.9s,mb4.6,baz=280,slow=4.7,SNR=4.3
YKA Yellowknife Ar 95.99 28 P **P 00 49 55.9 -0.9**
YKA Yellowknife Ar 95.99 28 P **P 00 49 55.9 -0.8**
PDMCI Parker Dam,Lak 96.10 56 ⇓P **P 00 49 58.8 +0.8**
baz=96
HLID Hailey 96.11 47 ⇑P **P 00 49 57.6 -0.1**
baz=96,SNR=6.2
HLID Hailey 96.11 47 *eP* **P 00 49 57.7 -0.1**
comp=Z,8.7nm,1.4s,mb5.0
HLID *e* pP 00 50 25.4 -2.4
D13A Huson 96.12 43 ⇑P **P 00 49 57.2 -0.5**
baz=96
B13A Whitefish 96.13 42 ⇑P **P 00 49 57.7 0.0**
baz=96,SNR=10
F13A Darby 96.20 45 ⇑P **P 00 49 57.3 -0.8**
baz=96,SNR=10
H13A Challis 96.24 46 ⇓P **P 00 49 57.9 -0.4**
baz=96,SNR=9.0
M13A Montello 96.25 49 ⇓P **P 00 49 58.3 -0.2**
baz=96,SNR=6.0
M13A Montello 96.25 49 *eP* **P 00 49 58.0 -0.5**
comp=Z,5.7nm,1.0s,mb5.0
G13A Cobalt 96.26 45 ⇑P **P 00 49 57.9 -0.5**
baz=96,SNR=5.3
V13A Grand Canyon W 96.28 55 ⇑P **P 00 49 59.3 +0.6**
baz=96,SNR=14
J13A Cove Ranch, Pi 96.28 47 ⇑P **P 00 49 58.3 -0.3**
baz=96
U13A Pakoon Wash 96.31 54 ⇑P **P 00 49 59.5 +0.7**
baz=96,SNR=7.3
Q13A Wheeler Ranch, 96.32 51 ⇑P **P 00 49 59.0 +0.1**
baz=96,SNR=5.1
I13A Wildhorse Cree 96.33 46 ⇑P **P 00 49 58.5 -0.3**
baz=96,SNR=5.9
P13A Bates Ranch, G 96.33 51 ⇓P **P 00 49 59.2 +0.3**
baz=96,SNR=6.0
W13A Hualapai Mount 96.34 55 ⇑P **P 00 49 59.4 +0.4**
baz=96,SNR=5.5
R13A O'Grain Ranch, 96.34 52 ⇑P **P 00 49 59.7 +0.7**
baz=96,SNR=6.0
T13A Saint George 96.37 53 ⇑P **P 00 49 59.5 +0.5**
baz=96,SNR=11
X13A Yucca 96.37 56 ⇑P **P 00 49 59.7 +0.5**
baz=96
Z13A Yuma Proving G 96.47 57 ⇑P **P 00 50 00.4 +0.7**
baz=96
ARUT Antelope Range 96.75 53 *eP* **P 00 50 01.7 +0.9**
ARUT pmax pmax
comp=Z,8.0nm,1.1s,mb5.1
ARUT Antelope Range 96.75 53 *eP* **P 00 50 01.7 +0.8**
comp=Z,7.9nm,1.1s,mb5.1

I14A	Mackay	96.81	46	⇑P	P		00 50 00.6	-0.3
	baz=97							
CCUT	Cedar City	96.81	53	eP	P		00 50 01.2	+0.2
	comp=Z,111nm,1.2s,mb5.2							
CCUT				e	pP		00 50 29.4	-1.8
A14A	Double T Ranch	96.82	41	⇑P	P		00 50 01.0	+0.1
	baz=97							
H14A	Leadore	96.87	46	⇑P	P		00 50 01.1	-0.1
	baz=97							
M14A	Sheep Mountain	96.87	49	⇓P	P		00 50 01.2	0.0
	baz=97,SNR=8.7							
Q14A	Sevier Lake (B	96.90	51	⇓P	P		00 50 01.5	+0.1
	baz=97,SNR=8.1							
B14A	Marquette Ranc	96.93	42	⇓P	P		00 50 01.0	-0.3
	baz=97							
U14A	Mt Trumbull	96.94	54	⇑P	P		00 50 02.5	+0.8
	baz=97,SNR=12							
L14A	Malta	96.96	48	⇑P	P		00 50 01.5	-0.1
	baz=97,SNR=6.6							
V14A	Boquillas Ranc	96.99	55	⇑P	P		00 50 02.1	+0.2
	baz=97,SNR=7.7							
N14A	Grayback Hills	96.99	50	⇓P	P		00 50 01.7	-0.1
	baz=97,SNR=6.9							
W14A	Seligman	97.00	55	⇑P	P		00 50 01.6	-0.3
	baz=97							
K14A	Jones Ranch, D	97.01	48	⇑P	P		00 50 02.1	+0.2
	baz=97							
T14A	Hurricane	97.03	53	⇑P	P		00 50 03.1	+1.0
	baz=97							
Y14A	Wickenburg	97.04	57	⇑P	P		00 50 03.2	+1.1
	baz=97							
P14A	Drum Mountains	97.07	51	⇓P	P		00 50 02.0	-0.2
	baz=97,SNR=5.7							
114A	Black Gap (USA	97.11	58	⇓P	P		00 50 03.3	+0.7
	baz=97							
X14A	Yava	97.14	56	⇑P	P		00 50 03.0	+0.4
	baz=97,SNR=5.3							
214A	Organ Pipe Nat	97.16	59	⇓P	P		00 50 03.8	+1.0
	baz=97							
MCMT	McKenzie Canyo	97.24	46	eP	P		00 50 03.1	+0.3
	comp=Z,2.0nm,1.1s,mb4.5							
MCMT				e	pP		00 50 31.0	-1.9
DUG	Dugway	97.27	50	⇓P	P		00 50 03.3	+0.2
	baz=97							
A15A	Johnson Ranch,	97.28	41	⇑P	P		00 50 02.4	-0.5
	baz=97							
E15A	Deer Lodge	97.37	44	⇓P	P		00 50 03.0	-0.4
	baz=97							
C15A	Salmond Ranch,	97.38	43	⇓P	P		00 50 03.0	-0.4
	baz=97							
D15A	Lincoln	97.45	43	⇑P	P		00 50 03.5	-0.2
	baz=98							
K15A	Arbon	97.48	48	⇓P	P		00 50 03.8	-0.2
	baz=98							
F15A	Butte	97.48	45	⇑P	P		00 50 03.8	-0.1
	baz=98							
G15A	Dillon	97.49	45	⇓P	P		00 50 03.4	-0.5
	baz=98							
LRM	Limekiln Ridge	97.51	45	eP	P		00 50 03.4	-0.6
	comp=Z,23nm,1.2s,mb5.6							
O15A	The Old Anders	97.53	50	⇑P	P		00 50 04.0	-0.3
	baz=98							
M15A	Larsen Ranch,	97.55	49	⇓P	P		00 50 03.8	-0.5
	baz=98,SNR=8.5							
T15A	Red Dirt Ranch	97.59	53	⇑P	P		00 50 04.9	+0.3
	baz=98							
Y15A	Casa Rosa Ranc	97.59	57	⇓P	P		00 50 05.2	+0.5
	baz=98							
U15A	North Rim	97.66	54	⇓P	P		00 50 05.6	+0.7
	baz=98,SNR=6.8							
X15A	Humboldt	97.68	56	⇑P	P		00 50 06.4	+1.3
	baz=98							
V15A	Kaibab Nationa	97.75	55	⇓P	P		00 50 06.3	+1.0
	baz=98							
C16A	Fuhringer Ranc	97.96	43	⇑P	P		00 50 05.4	-0.6
	baz=98							
G16A	Moss Hill, Enn	97.98	45	⇓P	P		00 50 06.0	-0.2
	baz=98							
BOZ	Bozeman (W)	98.09	45	⇑P	P		00 50 06.5	-0.2
	baz=98							
BOZ	Bozeman (W)	98.09	45	eP	P		00 50 06.1	-0.5
BOZ				pmax	pmax			
	comp=Z,2.0nm,1.0s,mb4.6							
BOZ	Bozeman (W)	98.09	45	eP	P		00 50 06.1	-0.5
	comp=Z,2.3nm,1.0s,mb4.7							
D16A	Dana Ranch, Ca	98.11	43	⇑P	P		00 50 06.6	-0.1
	baz=98							
J16A	Bone	98.15	47	⇓P	P		00 50 06.9	-0.1
	baz=98							
I16A	Newdale	98.23	47	⇓P	P		00 50 07.0	-0.4
	baz=98							
QLMT	Earthquake Lak	98.25	46	P	P		00 50 08.5	+1.1
R16A	Teasdale	98.30	52	⇓P	P		00 50 08.4	+0.6
	baz=98,SNR=7.5							
H16A	Russell Place,	98.38	46	⇑P	P		00 50 08.4	+0.5
	baz=98							
WUAZ	Wupatki	98.40	55	⇑P	P		00 50 09.0	+0.8
	baz=98							
B17A	L&G Farms, Che	98.58	42	⇓P	P		00 50 08.6	-0.1
	baz=99							
E17A	Martinsdale	98.61	44	⇓P	P		00 50 09.0	+0.1
	baz=99							
D17A	Six Diamond Ra	98.70	43	⇓P	P		00 50 09.6	+0.3
	baz=99							
F17A	Fitzpatrick Pl	98.76	44	⇑P	P		00 50 09.9	+0.2
	baz=99							
J17A	Brown Place, J	98.81	47	⇑P	P		00 50 10.4	+0.6
	baz=99							
S17A	Black Ridge (B	98.85	53	⇓P	P		00 50 10.9	+0.7
	baz=99							
T17A	Navajo Res., N	98.85	53	⇓P	P		00 50 10.6	+0.4
	baz=99							
O17A	Robinson Place	98.86	50	⇑P	P		00 50 10.5	+0.3
	baz=99							
P17A	Butcher Ranch,	98.87	51	⇑P	P		00 50 10.2	-0.1
	baz=99							
V17A	Tonalea, Kykot	98.87	55	⇓P	P		00 50 11.3	+0.9
	baz=99							
M17A	Scullys Gap (B	98.89	49	⇑P	P		00 50 10.3	0.0
	baz=99							
R17A	Hanksville Air	98.91	52	⇑P	P		00 50 10.6	+0.1
	baz=99							
SRU	San Rafael	99.04	51	⇓P	P		00 50 10.8	-0.2
	baz=99							
A18A	Metzger Ranch,	99.18	41	⇑P	P		00 50 11.3	-0.1
	baz=99							
P18A	Preston Nutter	99.25	51	⇓P	P		00 50 12.1	+0.2
	baz=99							
E18A	Harlowton	99.25	44	⇑P	P		00 50 11.9	+0.1
	baz=99							
EGMT	Eagleton	99.29	42	⇓P	P		00 50 12.1	+0.1
	baz=99							
J18A	Kendall Valley	99.31	47	⇓P	Pdif		00 50 11.9	0.0
	baz=99							
K18A	Toltan Ranch,	99.32	48	⇑P	Pdif		00 50 12.2	+0.3
	baz=99							
Q18A	Rafter H Ranch	99.35	51	⇑P	Pdif		00 50 12.3	+0.2
	baz=99							
F18A	Big Timber	99.42	44	⇓P	Pdif		00 50 12.8	+0.4
	baz=100							
I18A	Diamond G Ranc	99.44	47	⇓P	Pdif		00 50 12.9	+0.4
	baz=100							
S18A	Hurst Farm, Bl	99.49	53	⇓P	Pdif		00 50 13.3	+0.6
	baz=100							
R18A	Canyonlands Na	99.55	52	⇑P	Pdif		00 50 13.4	+0.4
	baz=100							
V18A	Ganado	99.57	55	⇑P	Pdif		00 50 13.9	+0.9
	baz=100							
X18A	Snowflake	99.57	56	⇑P	Pdif		00 50 14.1	+1.0
	baz=100							
T18A	Mexican Hat	99.59	53	⇑P	Pdif		00 50 13.8	+0.6
	baz=100							
U18A	Rough Rock, Ch	99.61	54	⇓P	Pdif		00 50 14.5	+1.3
	baz=100							
BW06	Boulder Array	99.67	48	⇓P	Pdif		00 50 13.6	+0.1
	baz=100							
PDAR	Pinedale Array	99.67	48	P	Pdif		00 50 13.1	-0.4
	comp=Z,4.4nm,1.0s,baz=267,slow=2.8,SNR=23							
PDAR				pP	pP		00 50 40.7	-3.2
	comp=Z,3.0nm,1.0s,baz=241,slow=1.5,SNR=4.0							
L19A	Farson	99.84	48	⇑P	Pdif		00 50 14.5	+0.2
	baz=100							
R19A	Curley Farm, L	100.05	52	⇑P	Pdif		00 50 15.5	+0.3
	baz=100							
O19A	Miners Draw (B	100.09	50	⇑P	Pdif		00 50 15.6	+0.2
	baz=100							
U19A	Dine' College,	100.15	54	⇑P	Pdif		00 50 16.8	+1.2
	baz=100							
Y19A	Nutrioso	100.15	57	⇓P	Pdif		00 50 18.4	+2.8
	baz=100							
S19A	Harvey Farm, M	100.17	53	⇓P	Pdif		00 50 16.5	+0.8
	baz=100							
K19A	Absolon Red Bu	100.19	48	⇑P	Pdif		00 50 15.5	-0.3
	baz=100							
T19A	Beclabito	100.28	54	⇓P	Pdif		00 50 17.5	+1.3
	baz=100							
K20A	Yellowstone Ra	100.57	48	⇓P	Pdif		00 50 17.4	-0.1
	baz=101							
PV01	Paradox Valley	100.60	52	ePdif	Pdif		00 50 18.4	+0.8
	comp=Z,277nm,1.0s							
L20A	Wamsutter	100.61	48	⇓P	Pdif		00 50 18.1	+0.5
	baz=101							
P20A	De Beque	100.69	51	⇓P	Pdif		00 50 19.0	+1.0
	baz=101							
MVCO	Mesa Verde	100.69	53	⇓P	Pdif		00 50 19.3	+1.3
	baz=101							
N20A	Spence Gulch,	100.72	50	⇑P	Pdif		00 50 18.5	+0.3
	baz=101							
M20A	Sweetwater, Wa	100.75	49	⇓P	Pdif		00 50 17.8	-0.5
	baz=101							
R20A	Redvale	100.75	52	⇓P	Pdif		00 50 18.8	+0.5
	baz=101							
W20A	Ramah	100.75	55	⇓P	Pdif		00 50 19.7	+1.4
	baz=101							
V20A	Grimhall	100.76	55	⇑P	Pdif		00 50 20.3	+2.0
	baz=101							
X20A	Quemado	100.77	56	⇓P	Pdif		00 50 20.7	+2.4
	baz=101							
O20A	White River Ci	100.77	50	⇑P	Pdif		00 50 18.7	+0.3
	baz=101							
Q20A	Ridgley Place,	100.78	51	⇑P	Pdif		00 50 19.0	+0.5
	baz=101							
N21A	Black Mountain	101.29	50	⇓P	Pdif		00 50 20.6	-0.1
	baz=101							
L21A	Rawlins	101.33	48	⇑P	Pdif		00 50 20.8	-0.1
	baz=101							
Q21A	Lamborn Mesa,	101.35	52	⇓P	Pdif		00 50 22.2	+1.2
	baz=101							
M21A	Separation Pea	101.36	49	⇑P	Pdif		00 50 20.5	-0.5
	baz=101							
R21A	Cimarron	101.39	52	⇑P	Pdif		00 50 22.3	+1.1
	baz=101							
U21A	Nageezi	101.39	54	⇑P	Pdif		00 50 22.3	+1.1
	baz=101							
T21A	Navajo Lake	101.47	53	⇓P	Pdif		00 50 22.9	+1.4
	baz=102							
Q22A	Crested Butte,	101.87	51	⇓P	Pdif		00 50 24.3	+1.0
	baz=102							
T22A	Edith	101.97	53	⇑P	Pdif		00 50 24.6	+0.9
	baz=102							
R22A	Saguache, Gunn	102.02	52	⇑P	Pdif		00 50 25.2	+1.3
	baz=102							
U22A	Llaves	102.04	54	⇑P	Pdif		00 50 25.7	+1.7
	baz=102							
W25A	X Bar L Ranch,	104.05	55	⇑P	Pdif		00 50 34.5	+1.5
	baz=104							
U26A	Atchley Ranch,	104.55	54	⇓P	Pdif		00 50 36.9	+1.8
	baz=105							
TXAR	Lajitas Array	105.07	61	Pdiff	Pdif		00 50 37.2	-0.3
	comp=Z,0.1nm,0.3s,baz=57,slow=25,SNR=6.1							
TXAR	Lajitas Array	105.07	61	Pdif	Pdif		00 50 37.2	-0.3
627A	Terlingua Ranc	105.31	61	⇓P	PKiKP		00 54 52.8	0.0
	baz=105							
ARCES	ARCESS Array B	106.67	343	PKiKP	PKiKP		00 54 53.3	-0.8
	comp=Z,1.4nm,0.6s,baz=113,slow=1.8,SNR=10							
JCT	Junction City	108.34	60	ePKIKP	PKiKP		00 54 58.9	+0.6
JCT	Junction City	108.34	60	ePKiKP	PKiKP		00 54 58.9	+0.6
FINES	FINESS Array B	110.73	335	Pdiff	Pdif		00 51 00.1	-2.5
	comp=Z,1.1nm,0.7s,baz=75,slow=5.9,SNR=3.7							
FINES				PKiKP	PKiKP		00 55 01.2	-0.7
	comp=Z,2.2nm,0.6s,baz=143,slow=6.7,SNR=5.8							
HKT	Hockley	111.81	60	ePKIKP	PKiKP		00 55 04.1	-0.8
HKT	Hockley	111.81	60	ePKIKP	PKiKP		00 55 04.1	-0.8
HKT	Hockley	111.81	60	ePKiKP	PKiKP		00 55 04.1	-0.8
AKASG	Malin Array Be	113.99	324	PKiKP	PKiKP		00 55 07.2	-1.2
	comp=Z,1.5nm,0.5s,baz=64,slow=2.4,SNR=8.8							
AKASG	Malin Array Be	113.99	324	PKPdf	PKiKP		00 55 07.2	-1.2
KMBO	Kilima Mbogo	114.32	267	ePKIKP	PKiKP		00 55 09.1	-1.1
BR131	Keskin Array S	114.61	312	ePKIKP	PKiKP		00 55 08.2	-1.8
BRTR	Keskin Array B	114.61	312	PKP	PKiKP		00 55 08.6	-1.4
	comp=Z,1.5nm,0.6s,baz=135,slow=3.7,SNR=12							
BRTR	Keskin Array B	114.61	312	c iPKIKP	PKiKP		00 55 09.0	-1.0
BRTR				pmax	pmax			
	comp=Z,2.0nm,0.6s							
TLCR		116.33	319	⇓PKIKP	PKPdf		00 55 11.9	-1.2
TLCR		116.33	319	⇓iP	PKPdf		00 55 11.9	-1.2
NOA	NORSAR Array B	116.66	340	PKP	PKPdf		00 55 11.8	-1.4
	comp=Z,3.0nm,0.7s,baz=48,slow=2.0,SNR=17							
BURAR	Bucovina Array	117.65	322	⇑PKIKP	PKPdf		00 55 15.9	+0.3
BURAR	Bucovina Array	117.65	322	⇑iP	PKPdf		00 55 15.9	+0.3
MLR	Muntele Rosu	118.08	320	⇓PKIKP	PKPdf		00 55 15.2	-1.3
MLR	Muntele Rosu	118.08	320	⇓iP	PKPdf		00 55 15.1	-1.4
KWP	Kalwaria Pacla	118.22	325	ePKP	PKPdf		00 55 15.8	-0.8
KWP	Kalwaria Pacla	118.22	325	ePKPdf	PKPdf		00 55 16.1	-0.5
KWP	Kalwaria Pacla	118.22	325	⇑iP	PKPdf		00 55 15.4	-1.2
BOSA	Boshof	118.75	234	PKP	PKPdf		00 55 17.8	-0.5
	comp=Z,5.1nm,0.8s,baz=266,slow=7.3,SNR=5.5							
BOSA	Boshof	118.75	234	PKP	PKPdf		00 55 17.8	-0.5
STHS	Stebnicka Huta	119.16	325	ePKIKP	PKPdf		00 55 18.4	0.0
STHS	Stebnicka Huta	119.16	325	ePKP	PKPdf		00 55 18.4	0.0
CRVS	Cervenica-Dubn	119.29	325	ePKIKP	PKPdf		00 55 18.1	-0.6
CRVS	Cervenica-Dubn	119.29	325	ePKP	PKPdf		00 55 18.1	-0.6
DRGR		119.55	322	⇓PKIKP	PKPdf		00 55 16.4	-2.8
DRGR		119.55	322	⇓iP	PKPdf		00 55 16.4	-2.8
OJC	Ojcow	119.55	327	ePKP	PKPdf		00 55 16.8	-2.3
NIE	Niedzica	119.68	326	ePKP	PKPdf		00 55 19.3	-0.1
TEIG	Tepich	119.75	70	PKPdf	PKPdf		00 55 19.4	-1.0
KECS	Kecovo	120.06	325	ePKIKP	PKPdf		00 55 15.7	-4.5
KECS	Kecovo	120.06	325	ePKP	PKPdf		00 55 15.7	-4.5
PLCA	Paso Flores	120.30	144	PKP	PKPdf		00 55 20.0	-1.0
	comp=Z,1.9nm,0.7s,baz=170,slow=2.6,SNR=4.9							
PLCA	Paso Flores	120.30	144	PKIKP	PKPdf		00 55 20.0	-0.9
LSZ	Lusaka	120.65	249	ePKIKP	PKPdf		00 55 21.7	-0.5
OKC	Ostrava-Krasne	120.66	327	ePKIKP	PKPdf		00 55 20.8	-0.5
OKC	Ostrava-Krasne	120.66	327	ePKPdf	PKPdf		00 55 20.8	-0.5
PSZ	Piszkesteto	120.69	324	ePKIKP	PKPdf		00 55 20.6	-0.8
BZS	Buzias	120.77	321	⇓PKIKP	PKPdf		00 55 21.0	-0.6
BZS	Buzias	120.77	321	⇓iP	PKPdf		00 55 21.0	-0.6
VYHS	Vyhne	121.00	325	ePKIKP	PKPdf		00 55 21.1	-0.9
VYHS	Vyhne	121.00	325	ePKP	PKPdf		00 55 21.1	-0.9
KOLL	Kolacno	121.19	326	ePKIKP	PKPdf		00 55 22.3	-0.1
KOLL	Kolacno	121.19	326	ePKP	PKPdf		00 55 22.2	-0.2
SCHQ	Schefferville	121.31	25	PKP	PKPdf		00 55 20.6	-1.8
	comp=Z,4.9nm,1.0s,baz=329,slow=5.4,SNR=4.7							
DPC	Dobruska-Polom	121.34	328	ePKIKP	PKPdf		00 55 22.6	0.0
DPC	Dobruska-Polom	121.34	328	ePKPdf	PKPdf		00 55 22.6	0.0
UPC	Upice	121.42	329	ePKIKP	PKPdf		00 55 22.5	-0.2
UPC	Upice	121.42	329	ePKPdf	PKPdf		00 55 22.5	-0.2
VRAC	Vranov	121.79	327	⇓PKIKP	PKPdf		00 55 23.4	-0.1
VRAC	Vranov	121.79	327	⇓iP	PKPdf		00 55 23.4	-0.1
BSEG	Bad Segeberg	121.96	334	ePKPdf	PKPdf		00 55 23.3	-0.4
ZST	Bratislava	122.13	326	ePKIKP	PKPdf		00 55 24.2	0.0
ZST	Bratislava	122.13	326	ePKP	PKPdf		00 55 24.2	0.0
PVCC	Panska Ves	122.15	329	ePKIKP	PKPdf		00 55 24.0	-0.1
PVCC	Panska Ves	122.15	329	ePKPdf	PKPdf		00 55 24.0	-0.1
BRG	Berggiesshubel	122.25	330	ePKPdf	PKPdf		00 55 23.7	-0.6
BRG	Berggiesshubel	122.25	330	⇑iPKP	PKPdf		00 55 24.0	-0.3
	comp=Z,9.5nm,0.9s							
BRG	Berggiesshubel	122.25	330	⇑iPKIKP	PKPdf		00 55 24.0	-0.3
BRG				pmax	pmax			
	comp=Z,6.0nm,0.9s							
PKSM	Moragy	122.29	323	⇓PKIKP	PKPdf		00 55 23.5	-1.0
PKSM	Moragy	122.29	323	⇓iP	PKPdf		00 55 23.5	-1.0
TREC	Trest	122.39	328	ePKIKP	PKPdf		00 55 24.0	-0.6
TREC	Trest	122.39	328	ePKPdf	PKPdf		00 55 24.0	-0.6
CLL	Collm	122.45	331	ePKPdf	PKPdf		00 55 24.1	-0.6
CLL	Collm	122.45	331	i PKIKP	PKPdf		00 55 24.0	-0.7
CLL				pmax	pmax			
	comp=Z,9.0nm,0.8s							
CLL	Collm	122.45	331	i PKP	PKPdf		00 55 24.0	-0.7
CLL				e			00 55 54.0	
CLL	Collm	122.45	331	i PKPdf	PKPdf		00 55 24.0	-0.7
	comp=Z,9.0nm,0.8s							
CLL				i PKiKP	PKiKP		00 55 26.2	+1.3
CLL				e			00 55 54.0	
CLL				ePP	PP		00 57 00.0	-2.0
CLL				ePS	PS		01 07 00.0	+1.3
CLL				eSPP			01 08 12.0	
CLL	Collm	122.45	331	eS	PP		00 57 00.0	-2.0
PRU	Pruhonice	122.48	329	ePKIKP	PKPdf		00 55 24.6	-0.2
PRU	Pruhonice	122.48	329	ePKPdf	PKPdf		00 55 24.6	-0.2
KRUS	Krusevo	122.91	317	ePKP	PKPdf		00 55 24.5	-1.4
CONA	Conrad Observa	122.97	326	⇑i PKPdf	PKPdf		00 55 25.0	-0.8
	comp=Z,5.1nm,0.6s							
NRDL	Niedersach Rie	123.03	333	ePKPdf	PKPdf		00 55 25.4	-0.4
TANN	Tannenbergstha	123.28	330	ePKPdf	PKPdf		00 55 25.8	-0.5
OHR	Ohrid	123.33	317	ePKP	PKPdf		00 55 25.2	-1.4
CLZ	Clausthal	123.35	332	ePKPdf	PKPdf		00 55 26.2	-0.2
NKC	Novy Kostel	123.40	330	ePKIKP	PKPdf		00 55 26.2	-0.3
NKC	Novy Kostel	123.40	330	ePKPdf	PKPdf		00 55 26.2	-0.3
KHC	Kasperske Hory	123.50	328	ePKPdf	PKPdf		00 55 25.9	-0.9
KHC	Kasperske Hory	123.50	328	ePKPdf	PKPdf		00 55 26.1	-0.7
MOX	Moxa	123.55	331	ePKP	PKPdf		00 55 26.0	-0.8
	comp=Z,5.0nm,1.0s							
MOX	Moxa	123.55	331	ePKPdf	PKPdf		00 55 26.1	-0.7
GEC2	GERESS Array S	123.61	328	ePKPdf	PKPdf		00 55 26.3	-0.7
ROTZ	Rotzenmuhle	123.81	330	ePKPdf	PKPdf		00 55 26.4	-0.9
WET	Wettzell	123.86	329	ePKPdf	PKPdf		00 55 26.7	-0.8
SOKA	Soboth	124.14	325	⇓i PKPdf	PKPdf		00 55 27.0	-1.1
	comp=Z,9.6nm,1.3s							
UBBA	Unterbreizbach	124.21	332	ePKPdf	PKPdf		00 55 28.4	+0.3
ZAVS	Zavodnje	124.29	325	ePKPdf	PKPdf		00 55 27.2	-1.1
GRA1	Grafenberg Arr	124.36	330	ePKPdf	PKPdf		00 55 27.7	-0.7
GRF	Grafenberg Arr	124.36	330	ePKPdf	PKPdf		00 55 27.7	-0.7
BOJS	Bojanci	124.67	324	ePKPdf	PKPdf		00 55 28.3	-0.8
RJOB	Jochberg	124.76	327	ePKPdf	PKPdf		00 55 28.3	-0.9
LJU	Ljubljana	124.79	325	ePKPdf	PKPdf		00 55 28.6	-0.7
GORS	Gorjuse	124.94	325	i PKPdf	PKPdf		00 55 28.8	-0.8
BUG	Bochum--Univer	125.03	334	ePKPdf	PKPdf		00 55 29.3	-0.3
LBNH	Lisbon	125.22	37	ePKIKP	PKPdf		00 55 29.9	-0.3
FUR	Furstenfeldbru	125.30	329	ePKPdf	PKPdf		00 55 29.1	-1.1
TNS	Taunus Mts	125.34	332	ePKPdf	PKPdf		00 55 29.9	-0.4
ABTA	Abfaltersbach	125.51	327	⇑i PKPdf	PKPdf		00 55 29.1	-1.6
	comp=Z,16nm,1.5s,SNR=7.8							
WATA	Walderalm	125.66	328	⇑i PKPdf	PKPdf		00 55 30.0	-1.0
	comp=Z,5.8nm,0.6s							
WTTA	Wattenberg	125.67	328	⇑i PKPdf	PKPdf		00 55 29.9	-1.1
	comp=Z,33nm,1.4s,SNR=7.7							
ESK	Eskdalemuir	125.86	343	ePKIKP	PKPdf		00 55 30.8	-0.3
MOTA	Moosalm	125.91	326	⇓i PKPdf	PKPdf		00 55 30.5	-1.0
	comp=Z,11nm,0.8s,SNR=11							
STU	Stuttgart	125.96	330	ePKPdf	PKPdf		00 55 31.2	-0.3
STU	Stuttgart	125.96	330	ePKPdf	PKPdf		00 55 29.7	-1.8
RETA	Reutte	126.00	328	⇑i PKPdf	PKPdf		00 55 30.6	-1.0
	comp=Z,7.4nm,1.1s							
MEM	Membach	126.18	334	PKP	PKPdf		00 55 32.1	+0.2
FETA	Feichten	126.31	328	⇑i PKPdf	PKPdf		00 55 31.7	-0.5
	comp=Z,19nm,1.3s,SNR=8.8							
DAVA	Damuels	126.58	328	⇑i PKPdf	PKPdf		00 55 31.8	-0.9
	comp=Z,7.9nm,0.8s							
BCLA	Clavier	126.63	334	PKP	PKPdf		00 55 30.9	-1.9
BFO	Black Forest	126.69	330	ePKPdf	PKPdf		00 55 31.3	-1.6
BFO	Black Forest	126.69	330	c iPKIKP	PKPdf		00 55 32.6	-0.3
UCC	Uccle	126.76	335	PKP	PKPdf		00 55 32.8	-0.2
WLF	Walferdange	126.80	333	PKP	PKPdf		00 55 33.3	+0.2
WLF	Walferdange	126.80	333	ePKPdf	PKPdf		00 55 32.6	-0.5
WLF	Walferdange	126.80	333	ePKPdf	PKPdf		00 55 33.3	+0.2
TIP	Timpagrande	126.96	317	ePKPdf	PKPdf		00 55 34.1	+0.4
SNF	Seneffe	127.01	335	PKP	PKPdf		00 55 33.5	+0.1
GIVF	Givet	127.07	334	ePKIKP	PKPdf		00 55 33.3	-0.3
	comp=Z,85nm,1.4s							
CDF	Champ du Feu	127.14	331	ePKIKP	PKPdf		00 55 32.9	-0.9
BAIF	Baives	127.37	334	ePKIKP	PKPdf		00 55 34.0	-0.2
	comp=Z,33nm,1.2s							
AQU	L'Aquila	127.53	322	⇓PKIKP	PKPdf		00 55 35.7	+1.0
AQU	L'Aquila	127.53	322	ePKPdf	PKPdf		00 55 34

FUL	Funchal	150.45	340	*e*PKPbc	PKPbc	00 56 21.6	0.0
KIC	Kosan Boka	156.59	275	*e*PKP2	PKPdf	00 56 24.2	-1.3
	comp=Z,56nm,0.9s						
DBIC	Dimbokro	156.69	275	PKP	PKPdf	00 56 24.7	-0.9
	comp=Z,4.7nm,0.9s,baz=118,slow=5.6,SNR=3.7						
DBIC				PKPbc	PKPdf	00 56 34.8	+9.1
	comp=Z,5.5nm,0.7s,baz=2.3,slow=1.9,SNR=7.8						
DBIC				PKPab	PKPab	00 56 54.8	-0.7
	comp=Z,13nm,0.7s,baz=76,slow=5.3,SNR=8.7						
TIC	Toumodi	156.85	275	*e*PKP2	PKPdf	00 56 24.0	-1.8
	comp=Z,43nm,1.0s						
LIC	Lamto	156.88	274	*e*PKP2	PKPdf	00 56 25.3	-0.6
	comp=Z,70nm,1.0s						

IDC 19 00:41:27.6±30.0, 6°.56N×92°.96E, h0km, mb3.9/2, mb1 4.2/3, mb1mx3.6/23, mbtmp3.9/3, ML3.8/1, Error ellipse: s-maj=719.3km s-min=48.5km az=89.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	13.19	26	Pn	Pn	00 44 36.1	-0.1
	0.2nm,0.3s,baz=229,slow=14,SNR=6.6						
WRA	Warramunga Arr	48.48	124	P	P	00 50 12.4	0.0
	1.4nm,0.7s,baz=300,slow=9.1,SNR=3.6						
ASAR	Alice Springs	50.00	128	P	P	00 50 23.9	0.0
	0.9nm,0.6s,baz=299,slow=7.8,SNR=4.6						

MEX 19 00:42:16.5±0.7, 14°.93N×94°.55W, h16km±9km, MD4.2, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		1.50	59	*e*P	Pn	00 42 38.5	-4.2
PCIG				*i* S	Sn	00 42 56.8	-5.1
HUIG	Huatulco	1.72	299	*e*P	Pn	00 42 42.2	-3.5
HUIG				*i* S	Sn	00 43 02.5	-5.0
CMIG	Matias Romero	2.17	351	*e*P	Pn	00 42 49.3	-2.7
CMIG				*i* S	Sn	00 43 13.4	-5.2
THIG		2.21	90	*i* P	Pn	00 42 49.6	-2.8
THIG				*i* S	Sn	00 43 14.4	-5.0
TGIG		2.29	37	*e*P	Pn	00 42 51.5	-2.2
TGIG				*i* S	Sn	00 43 17.8	-3.8
SCX	San Cristobal	2.57	45	*i* P	Pn	00 42 53.9	-3.5
SCX				*i* S	Sn	00 43 24.2	-4.2
VHO	Vista Hermosa	2.99	316	*i* P	Pn	00 43 00.3	-2.9
VHO				*i* S	Sn	00 43 36.1	-2.7
PNIG	Pinotepa	3.74	293	*i* P	Pn	00 43 11.8	-1.8
PNIG				*i* S	Sn	00 43 53.1	-4.3
UTMO	Huajuapan	4.25	313	*i* P	Pn	00 43 19.0	-1.7
UTMO				*i* S	Sn	00 44 06.8	-3.2

UCR 19 00:45:01.2, 11°.50N×85°.72W, h148km, MD4.1
INET 19 00:45:02.1, 11°.56N×85°.63W, h172km, ML4.1
CASC 19 00:45:01.7±1.9, 11°.36N×85°.63W, h165km±8km, MD3.5, ML4.0, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CONN	Concepcion	0.21	360	*e*P	Pn	00 45 24.7	+0.8
GBS2	Las Lilas	0.54	162	*i* P	Pn	00 45 25.1	+0.1
GBS2				*i* S	Sn	00 45 44.1	+1.2
GB1A	Borinquen Arri	0.58	157	*i* P	Pn	00 45 25.9	+0.7
GBS3	Finca Las Im¯¡	0.59	164	*i* P	Pn	00 45 25.2	-0.1
GBS3				*i* S	Sn	00 45 44.0	+0.7
LAPC	Finca la Perla	0.61	162	*i* P	Pn	00 45 25.3	-0.1
GPS3	Bodega del ICE	0.65	157	*i* P	Pn	00 45 25.7	+0.1
GPS3				*i* S	Sn	00 45 44.9	+1.1
GPS2	Hotel Rinc¯‡n	0.66	156	*i* P	Pn	00 45 25.7	0.0
NY14	Universidad de	0.71	173	*i* P	Pn	00 45 26.3	+0.4
NY14				*i* S	Sn	00 45 45.5	+1.0
MESS	Mesas	0.74	145	*i* P	Pn	00 45 26.6	+0.4
LIM1	Limonal	0.75	151	*i* P	Pn	00 45 26.5	+0.3
CUI	Cuipilapa	0.83	147	*i* P	Pn	00 45 27.3	+0.6
CSAN		1.14	317	*e*P	Pn	00 45 29.3	+0.2
CSAN				AML	AML	00 45 54.6	
	comp=Z,2µm,0.2s						
VCR	Vista de Mar	1.22	180	*e*P	Pn	00 45 29.9	+0.1
COPN	Copaltepe	1.25	311	*e*P	Pn	00 45 29.9	-0.2
CNGN	Cerro Negro	1.55	317	*e*P	Pn	00 45 32.4	-0.6
JCR	Jicaral	1.58	161	*e*P	Pn	00 45 33.8	+0.5
JCR				*e*S	Sn	00 45 57.7	+0.1
CGA2	Cerro Gallo 2	1.75	139	*e*P	Pn	00 45 35.7	+0.6
CGA2				*e*S	Sn	00 46 00.6	-0.2
PRS1	Puriscal	1.88	136	*e*P	Pn	00 45 56.6	+20
PRS1				*e*S	Sn	00 46 05.2	+2.0
LAJ	Bijagual	2.09	135	*e*P	Pn	00 45 38.0	-0.9
URSC	Urasca	2.36	130	*e*S	Sn	00 46 14.5	+1.4
BUS	Buena Vista	2.56	134	*e*P	Pn	00 45 48.0	+3.6
BUS				*e*S	Sn	00 46 22.1	+4.7
BAR1		3.10	132	*e*P	Pn	00 45 51.5	+0.6
BAR1				*e*S	Sn	00 46 30.1	+1.0

DDA 19 00:46:16.3, 40°.05N×38°.29E, h7km±4km, Md3.2
ISK 19 00:46:16.0, 40°.08N×38°.36E, h4km, MD3.1
CSEM 19 00:46:16.9±0.2, 40°.06N×38°.32E, h2km, MD3.2, Error ellipse: s-maj=4.7km s-min=4.2km az=173.0
ISCJB 19 00:46:17.1±0.4, 40°.08N±0°.03×38°.34E±0°.03, h10km, Error ellipse: s-maj=3.7km s-min=3.0km az=163.9
ISC 19 00:46:16.7±0.5, 40°.08N±0°.03×38°.34E±0°.03, h1km±5km, n48, σ0s76/72, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEMA	Kemaliye	0.82	171	*i* P	Pg	00 46 31.8	-0.5
KEMA				*i* S	Sg	00 46 43.0	+0.1
KEMA	Kemaliye	0.82	171	*i* P	Pg	00 46 31.8	-0.5
KEMA				*i* S	Sg	00 46 43.0	+0.1
EZC	Erzincan	0.85	112	*e*PG	Pg	00 46 32.1	-0.9
GRSN	GIRESUNGRSN	0.85	357	*i* P	Pg	00 46 33.4	+0.4
GRSN				*i* S	Sg	00 46 43.3	-0.7
GRSN	GIRESUNGRSN	0.85	357	*i* P	Pg	00 46 33.4	+0.4
GRSN				*i* S	Sg	00 46 43.3	-0.7
ESPY	Espiye-Giresun	0.89	19	*e*PG	Pg	00 46 34.1	+0.3
ESPY				*e*SG	Sg	00 46 46.7	+1.4
ESPY	Espiye-Giresun	0.89	19	*e*Pg	Pg	00 46 34.1	+0.3
ESPY				*e*Sg	Sg	00 46 46.7	+1.3
GUMT	Gumushane	0.96	66	*e*PG	Pg	00 46 34.8	-0.3
GUMT				*e*SG	Sg	00 46 47.6	+0.2
GUMT	Gumushane	0.96	66	*e*Pg	Pg	00 46 34.8	-0.2
GUMT				*e*Sg	Sg	00 46 47.6	+0.2
SVSK	Karacayir	1.04	262	*e*PG	Pg	00 46 36.3	-0.3
SVSK	Karacayir	1.04	262	*e*Pg	Pg	00 46 36.3	-0.3
DARE	Darende-Malaty	1.20	200	*e*PN	Pn	00 46 46.8	+6.3
DARE	Darende-Malaty	1.20	200	*e*Pn	Pn	00 46 46.8	+6.2
ERBA	Erbaa	1.35	297	*i* P	Pg	00 46 42.0	-0.7
ERBA				*i* S	Sg	00 46 59.4	-0.7
ERBA	Erbaa	1.35	297	*i* P	Pg	00 46 42.0	-0.6
ERBA				*i* S	Sg	00 46 59.4	-0.7
TOKT	Tokat	1.39	281	*e*PN	Pn	00 46 43.4	+0.1
TOKT	Tokat	1.39	281	*e*Pn	Pn	00 46 43.4	+0.1
MACK	Trabzon	1.39	51	*i* P	Pn	00 46 43.1	-0.3
MACK				*i* S	Sg	00 47 00.5	-1.0
MACK	Trabzon	1.39	51	*i* P	Pn	00 46 43.1	-0.2
MACK				*i* S	Sg	00 47 00.5	-1.0
KTUT	Trabzon	1.42	50	*e*PN	Pn	00 46 43.4	-0.3
KTUT	Trabzon	1.42	50	*e*Pn	Pn	00 46 43.4	-0.3
PTK	Pertek	1.44	145	*e*PN	Pn	00 46 43.6	-0.3
PTK	Pertek	1.44	145	*e*Pn	Pn	00 46 43.6	-0.3
TOKA	Tokat	1.44	280	*i* P	Pn	00 46 44.0	0.0
TOKA				*i* S	Sg	00 47 04.8	+1.6
TOKA	Tokat	1.44	280	*i* P	Pn	00 46 44.0	0.0
TOKA				*i* S	Sg	00 47 04.8	+1.7
KOPT	Kop Dagi	1.66	91	*e*P	Pb	00 46 48.6	+0.5
KOPT				*i* S	Sg	00 47 12.9	+2.8
KOPT	Kop Dagi	1.66	91	*e*P	Pb	00 46 48.6	+0.5
KOPT				*i* S	Sg	00 47 12.9	+2.8
MYA	Malataya	1.75	178	*e*PN	Pn	00 46 48.5	+0.3
MYA	Malataya	1.75	178	*e*Pn	Pn	00 46 48.5	+0.3
SVRC	Sivrice-ELAZID	1.86	156	*e*PN	Pn	00 46 49.8	+0.2
SVRC	Sivrice-ELAZID	1.86	156	*e*Pn	Pn	00 46 49.8	+0.1
BINT	Bingol	2.05	125	*e*PN	Pn	00 46 52.6	+0.3
BINT	Bingol	2.05	125	*e*Pn	Pn	00 46 52.7	+0.3
PZAR	Pazar-Rize	2.24	60	*e*PN	Pn	00 46 55.5	+0.6
PZAR	Pazar-Rize	2.24	60	*e*Pn	Pn	00 46 55.5	+0.6
EZM	Erzurum	2.33	93	*e*PN	Pn	00 46 56.4	+0.1
YOZ	Yozgat	2.36	260	*e*PN	Pn	00 46 57.0	+0.4
YOZ	Yozgat	2.36	260	*e*Pn	Pn	00 46 57.0	+0.4
DBAD	Bademkaya	2.73	69	*i* P	Pb	00 47 05.1	-1.2
DBAD				*i* S	Sb	00 47 38.6	-1.6
DBAD	Bademkaya	2.73	69	*i* P	Pb	00 47 05.1	-1.2
DBAD				*i* S	Sb	00 47 38.7	-1.5
DDEM	Demirkent	2.73	72	*i* P	Pb	00 47 06.8	+0.5
DDEM				*i* S	Sb	00 47 41.5	+1.2
DDEM	Demirkent	2.73	72	*i* P	Pb	00 47 06.8	+0.5
DDEM				*i* S	Sb	00 47 41.5	+1.2
BCA	Borcka	2.85	60	*e*PN	Pn	00 47 03.6	+0.3
BCA	Borcka	2.85	60	*e*Pn	Pn	00 47 03.6	+0.3
ARTV	Artvin	2.95	67	*e*P	Pb	00 47 10.5	+0.5
ARTV				*i* S	Sb	00 47 45.5	-1.1
ARTV	Artvin	2.95	67	*e*P	Pb	00 47 10.5	+0.4
ARTV				*i* S	Sb	00 47 45.5	-1.5
AVNT	Avonos	2.99	245	*e*P	Pb	00 47 10.5	-0.3
AVNT				*i* S	Sg	00 47 52.4	-0.4
AVNT	Avonos	2.99	245	*e*P	Pb	00 47 10.5	-0.3
AVNT				*i* S	Sg	00 47 52.4	-0.4

DDA 19 01:39:41.7, 34°.72N×32°.07E, h5km, Md3.2
NEIC 19 01:39:44.3, 35°.00N×31°.99E, h20km, MD3.4(ISK), ML3.3(NIC), After NIC.
NIC 19 01:39:44.3±0.2, 35°.00N×31°.99E, h20km, ML3.3, MW3.2
IDC 19 01:39:44.5±1.5, 35°.08N×32°.30E, h0km, mb3.9/2, mb1 3.6/6, mb1mx3.4/23, mbtmp3.5/6, ML2.6/5, Error ellipse: s-maj=36.4km s-min=18.6km az=56.0
ISCJB 19 01:39:45.1±0.8, 34°.81N±0°.03×32°.11E±0°.05, h16km±6km, mb3.8/2, Error ellipse: s-maj=7.2km s-min=5.1km az=146.3
CSEM 19 01:39:46.7±0.4, 34°.95N×32°.21E, h10km, Mw3.2, Error ellipse: s-maj=8.7km s-min=6.8km az=28.0
ISK 19 01:39:51.8, 35°.29N×32°.55E, h11km, MD3.4
ISC 19 01:39:47.0±0.8, 34°.88N±0°.03×32°.22E±0°.04, h15km±4km, n58, σ1s39/80, mb3.8/2, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPCY	Paphos	0.10	88	P	Pg	01 39 51.1	+0.8
PPCY	Paphos	0.10	88	P	Pg	01 39 51.1	+0.8
ALFC	Alevga	0.41	49	P	Pg	01 39 54.7	-0.7
ALFC				S	Sg	01 40 02.9	+1.9
ALFC	Alevga	0.41	49	P	Pg	01 39 54.7	-0.7
LEF	Lefka	0.60	67	*e*PG	Pg	01 39 57.3	-1.5
LEF				*e*SG	Sg	01 40 03.3	-3.5
LEF	Lefka	0.60	67	*e*Pg	Pg	01 39 57.3	-1.5
LEF				*e*Sg	Sg	01 40 03.3	-3.5
MAMC	Mammari	0.87	70	P	Pb	01 40 02.6	-1.1
MAMC	Mammari	0.87	70	P	Pb	01 40 02.6	-1.1
CSS	Prodhromos	0.92	85	P	Pb	01 40 03.4	-1.2
	8.3nm,0.5s						
CSS				S	Sb	01 40 18.2	+1.7
CSS	Prodhromos	0.92	85	P	Pb	01 40 03.4	-1.2
	8.3nm,0.5s						
CSS				S	Sb	01 40 18.2	+1.7
LFK	Lefkose	1.15	69	*e*PG	Pg	01 40 07.8	-1.3
LFK	Lefkose	1.15	69	*e*Pg	Pg	01 40 07.8	-1.3
GAZI	Gazipasa	1.35	3	*i* P	Pn	01 40 09.7	-1.6
GAZI				*i* S	Sn	01 40 26.8	-2.2
GAZI	Gazipasa	1.35	3	*i* P	Pn	01 40 09.7	-1.6
GAZI				*i* S	Sn	01 40 26.8	-2.2
PHNC	Paralimni	1.49	85	P	Pn	01 40 12.5	-0.7
	2.7nm,0.6s						
PHNC				S	Sn	01 40 34.2	+1.7
PHNC	Paralimni	1.49	85	P	Pn	01 40 12.5	-0.7
	2.7nm,0.6s						
PHNC				S	Sn	01 40 34.2	+1.7
EREN	Erenkoy	1.72	67	*e*PN	Pn	01 40 17.2	+0.8
EREN	Erenkoy	1.72	67	*e*Pn	Pn	01 40 17.2	+0.8
IKL	Isikli	1.81	41	*e*PN	Pn	01 40 16.6	-0.9
IKL				*e*SN	Sn	01 40 35.0	-5.2
IKL	Isikli	1.81	41	*e*Pn	Pn	01 40 16.6	-0.9
IKL				*e*Sn	Sn	01 40 35.0	-5.2
ERMK	Ermenek	1.84	18	*i* P	Pn	01 40 17.9	-0.2
ERMK				*i* S	Sn	01 40 42.4	+1.3
ERMK	Ermenek	1.84	18	*i* P	Pn	01 40 17.9	-0.2
ERMK				*i* S	Sn	01 40 42.3	+1.2
HDMB	Hadim	2.09	6	*e*PN	Pn	01 40 21.8	+0.4
HDMB	Hadim	2.09	6	*e*Pn	Pn	01 40 21.8	+0.4
ANTB	Antalya	2.38	328	*e*PN	Pn	01 40 29.9	+4.4
ANTB	Antalya	2.38	328	*e*Pn	Pn	01 40 29.9	+4.5
KORT	Korkueli	2.60	325	*e*P	Pb	01 40 31.6	-1.7
KORT				*i* S	Sg	01 41 14.1	+3.5
KORT	Korkueli	2.60	325	*e*P	Pn	01 40 31.6	+3.1
ELL	Elmali	2.64	315	*e*PN	Pn	01 40 34.8	+5.8
MERS	Mersin	2.73	43	*e*PN	Pn	01 40 30.0	-0.2
MERS	Mersin	2.73	43	*e*Pn	Pn	01 40 30.0	-0.2
SUTC	Sutluce-Ispart	2.77	339	*e*PN	Pn	01 40 34.0	+3.2
SUTC	Sutluce-Ispart	2.77	339	*e*Pn	Pn	01 40 34.0	+3.2
KONT	Konya--Tatoy	3.06	2	*e*PN	Pn	01 40 36.0	+1.2
KONT	Konya--Tatoy	3.06	2	*e*Pn	Pn	01 40 36.0	+1.2
GULE	Gulek	3.17	40	*i* P	Pn	01 40 38.0	+1.8
GULE				*i* S	Sn	01 41 17.9	+4.2
GULE	Gulek	3.17	40	*i* P	Pn	01 40 38.0	+1.8
GULE				*i* S	Sn	01 41 17.9	+4.2
MMAI	Mount Meron Ar	3.24	124	Pn	Pn	01 40 36.9	-0.3
	3.1nm,0.3s,baz=309,slow=12,SNR=13						
MMAI				Sn	Sn	01 41 14.6	-0.8
	10.0nm,0.3s,baz=320,slow=24,SNR=15						
KARA	Karaisali	3.30	43	*e*PN	Pn	01 40 38.3	+0.2
KARA	Karaisali	3.30	43	*e*Pn	Pn	01 40 38.3	+0.2
YAYL	Yayladag	3.38	69	*i* P	Pn	01 40 39.4	+0.3
YAYL				*i* S	Sn	01 41 17.1	-1.7
YAYL	Yayladag	3.38	69	*i* P	Pn	01 40 39.4	+0.3
YAYL				*i* S	Sn	01 41 17.1	-1.8
HTY	Hatay	3.43	68	*e*PN	Pn	01 40 41.3	+1.5
HTY	Hatay	3.43	68	*e*Pn	Pn	01 40 41.3	+1.5
KOZT	Kozan	3.90	47	*e*PN	Pn	01 40 46.9	+0.6
ASF	Jabal al Asfar	4.75	123	Pn	Pn	01 40 59.9	+1.9
	0.2nm,0.3s,baz=292,slow=5.4,SNR=2.1						
ASF				Sn	Sn	01 41 54.8	+2.0
	0.2nm,0.3s,baz=246,slow=20,SNR=1.9						
BRTR	Keskin Array B	4.96	13	Pn	Pn	01 40 57.1	-3.8
	0.0nm,0.3s,baz=194,slow=17,SNR=2.3						
BRTR	Keskin Array B	4.96	13	Pn	Pn	01 40 57.1	-3.8
EIL	Elat	5.69	155	Pn	Pn	01 41 11.7	+0.7
	0.3nm,0.3s,baz=357,slow=18,SNR=1.9						
EIL				Sn	Sn	01 42 14.1	-1.9
	0.5nm,0.3s,baz=35,slow=18,SNR=2.4						
EIL	Elat	5.69	155	Pn	Pn	01 41 11.6	+0.7
IDI	Anoyia	6.02	276	Pn	Pn	01 41 15.8	+0.3
	0.3nm,0.3s,baz=94,slow=19,SNR=6.3						
IDI				Sn	Sn	01 42 13.0	-11
	0.5nm,0.3s,baz=90,slow=20,SNR=2.6						
IDI	Anoyia	6.02	276	Pn	Pn	01 41 15.8	+0.3
IDI	Anoyia	6.02	276	Sn	Sn	01 42 13.0	-11
IDI	Anoyia	6.02	276	*e*Pn	Pn	01 41 16.0	+0.5
FINES	FINESS Array B	26.87	353	P	P	01 45 24.9	-1.8
	3.0nm,1.0s,mb3.8,baz=159,slow=8.1,SNR=5.5						
FINES	FINESS Array B	26.87	353	P	P	01 45 25.0	-1.8
ARCES	ARCESS Array B	34.91	356	P	P	01 46 35.8	-1.7
	0.9nm,0.7s,mb3.8,baz=168,slow=6.2,SNR=5.7						
ARCES	ARCESS Array B	34.91	356	P	P	01 46 35.8	-1.7

NEIC 19 01:40:29.7, 37°.93N×21°.48E, h24km, MD3.4(ATH), After ATH.
ATH 19 01:40:29.7, 37°.93N×21°.48E, h24km±1km, MD3.4/20
ISCJB 19 01:40:30.0±0.4, 37°.89N±0°.02×21°.48E±0°.03, h18km±4km, Error ellipse: s-maj=4.2km s-min=3.5km az=16.6
THE 19 01:40:30.0, 37°.92N×21°.49E, h13km±1km, ML3.5/7, Error ellipse: s-maj=1.1km s-min=0.5km az=17.0
CSEM 19 01:40:30.2±0.2, 37°.89N×21°.47E, h19km, MD3.4, Error ellipse: s-maj=4.5km s-min=3.5km az=47.0
ISC 19 01:40:29.6±0.5, 37°.88N±0°.02×21°.47E±0°.03, h13km±3km, n75, σ0s95/108, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.18	358	*e*Pb	Pg	01 40 34.4	+0.7
RLS	Riolos of Patr	0.18	358	*e*PB	Pg	01 40 34.4	+0.7
RLS	Riolos of Patr	0.18	358	*e*Pb	Pg	01 40 34.4	+0.7
UPR	University Cam	0.47	31	P	Pg	01 40 38.6	-0.4
UPR				S	Sg	01 40 44.9	-0.4
UPR	University Cam	0.47	31	*e*PB	Pb	01 40 38.7	-1.1
UPR				*e*SB	Sg	01 40 45.7	+0.4
UPR	University Cam	0.47	31	*e*Pb	Pb	01 40 38.7	-1.1
UPR				S	Sg	01 40 44.9	-0.4
UPR				*e*Sb	Sg	01 40 45.7	+0.4
LAKA	Lakka	0.54	48	P	Pg	01 40 39.8	-0.3
LAKA				S	Sg	01 40 47.3	0.0
KFL	Anninata	0.59	293	P	Pg	01 40 41.2	+0.1
EFP	Efpalio	0.65	32	P	Pg	01 40 41.2	-1.0
EFP				S	Sg	01 40 50.8	+0.1
EFP	Efpalio	0.65	32	*e*PN	Pg	01 40 41.2	-1.0
EFP				*e*SN	Sg	01 40 51.0	+0.3
GUR	Goura	0.69	85	P	Pg	01 40 42.5	-0.5
GUR				S	Sg	01 40 53.1	+1.0
GUR	Goura	0.69	85	*e*PN	Pn	01 40 42.7	-2.3
GUR				*e*SN	Sg	01 40 53.4	+1.3
GUR	Goura	0.69	85	P	Pg	01 40 42.5	-0.5
GUR				S	Sg	01 40 53.1	+1.0
GUR				*e*Sn	Sg	01 40 53.4	+1.3
KALE	Kalithea	0.73	45	P	Pg	01 40 42.8	-1.0
KALE				S	Sg	01 40 53.9	+0.4
VLS	Valsamata	0.76	293	*e*Pn	Pn	01 40 43.7	-2.3
VLS				*e*Sn	Sn	01 40 56.2	-1.1
VLS	Valsamata	0.76	293	P	Pg	01 40 43.6	-0.7
VLS				S	Sg	01 40 56.0	+1.7
VLS	Valsamata	0.76	293	*e*PN	Pn	01 40 43.7	-2.3
VLS				*e*SN	Sn	01 40 56.2	-1.1
VLS	Valsamata	0.76	293	P	Pg	01 40 43.6	-0.7
VLS				S	Sg	01 40 56.0	+1.7
ITM	Ithomi	0.78	153	*e*Pn	Pn	01 40 46.2	-0.1
ITM				*e*Sn	Sn	01 40 58.1	+0.3
ITM	Ithomi	0.78	153	P	Pg	01 40 45.5	+0.7
ITM	Ithomi	0.78	153	*e*PN	Pn	01 40 46.2	-0.1
ITM				*e*SN	Sn	01 40 58.1	+0.3
ITM	Ithomi	0.78	153	P	Pg	01 40 45.5	+0.7
ITM	Ithomi	0.78	153	*e*Pn	Pn	01 40 46.2	-0.1
ITM				*e*Sn	Sn	01 40 58.1	+0.3
VLX	Vlachokerasia	0.88	125	P	Pg	01 40 46.5	-0.1
VLX				S	Sn	01 41 00.0	-0.2
VLX	Vlachokerasia	0.88	125	*e*PB	Pb	01 40 46.6	0.0
VLX				*e*SN	Sn	01 41 00.0	-0.2
VLX	Vlachokerasia	0.88	125	P	Pg	01 40 46.5	-0.1
VLX				S	Sn	01 41 00.0	-0.2
DSF	Desfina	0.99	57	P	Pb	01 40 47.2	-1.3
DSF				S	Sb	01 41 01.4	0.0
PYL	PYLOS	1.00	168	P	Pb	01 40 49.4	+0.6
PYL	PYLOS	1.00	168	*e*PN	Pn	01 40 49.3	0.0
PYL	PYLOS	1.00	168	*e*Pn	Pn	01 40 49.3	0.0
EVR	Evrytania	1.07	14	*e*Pn	Pn	01 40 49.0	-1.2
EVR	Evrytania	1.07	14	*e*PN	Pn	01 40 49.0	-1.2
EVR	Evrytania	1.07	14	*e*Pn	Pn	01 40 49.0	-1.2
LKD2	Lefkada island	1.11	325	P	Pb	01 40 49.7	-1.0
LKD2				S	Sb	01 41 06.2	+1.1
LKD2	Lefkada island	1.11	325	P	Pb	01 40 49.7	-1.0
LKD2				S	Sb	01 41 06.2	+1.1
LTK	Loutraki	1.19	83	P	Pn	01 40 51.5	-0.3
LTK	Loutraki	1.19	83	*e*PN	Pn	01 40 51.5	-0.3
LTK				*e*SN	Sn	01 41 08.5	+0.7
LTK	Loutraki	1.19	83	*e*Pn	Pn	01 40 51.5	-0.3
LTK				*e*Sn	Sn	01 41 08.5	+0.7
AGG	Agios Georgios	1.33	30	*e*Pn	Pn	01 40 53.7	0.0
AGG				*e*Sn	Sn	01 41 11.6	+0.4
AGG	Agios Georgios	1.33	30	P	Pn	01 40 52.7	-1.0
AGG	Agios Georgios	1.33	30	*e*PN	Pn	01 40 53.7	0.0
AGG				*e*SN	Sn	01 41 11.6	+0.4
AGG	Agios Georgios	1.33	30	P	Pn	01 40 52.7	-1.0
AGG	Agios Georgios	1.33	30	*e*Pn	Pn	01 40 53.7	0.0
AGG				*e*Sn	Sn	01 41 11.6	+0.4
LKR	Lokris	1.43	57	*e*Pn	Pn	01 40 55.3	+0.2
LKR				*e*Sn	Sn	01 41 15.4	+1.7
LKR	Lokris	1.43	57	*e*PN	Pn	01 40 55.3	+0.2
LKR				*e*SN	Sn	01 41 15.4	+1.7
LKR	Lokris	1.43	57	*e*Pn	Pn	01 40 55.3	+0.2
LKR				*e*Sn	Sn	01 41 15.4	+1.7
NAIG	Nisos Aigina	1.60	94	*e*Pn	Pn	01 40 59.0	+1.5
NAIG	Nisos Aigina	1.60	94	*e*PN	Pn	01 40 59.0	+1.5
NAIG	Nisos Aigina	1.60	94	*e*Pn	Pn	01 40 59.0	+1.5
VLI	Veliai	1.64	134	*e*Pn	Pn	01 41 01.0	+2.9
VLI	Veliai	1.64	134	*e*PN	Pn	01 41 01.0	+2.9
THL	Klokotos Trika	1.74	14	*e*PN	Pn	01 41 00.7	+1.3
THL	Klokotos Trika	1.74	14	*e*Pn	Pn	01 41 00.7	+1.3
VLY	Voula,Athens	1.84	90	*e*Pb	Pb	01 41 01.3	-1.7
VLY	Voula,Athens	1.84	90	*e*PB	Pb	01 41 01.3	-1.7
JAN	Janina	1.84	345	*e*Pn	Pn	01

KSP e 02 02 56.6
KSP eSg Sg 02 02 57.5 +1.2
KSP Ksiaz 0.60 169 ePg Pg 02 02 49.2 +0.6
baz=355
KSP eSg Sg 02 02 57.2 +0.9
baz=355
UPC Upice 0.93 184 ePG Pg 02 02 55.4 +0.5
UPC Upice 0.93 184 ePg Pg 02 02 55.3 +0.4
baz=7.6
DPC Dobruska-Polom 1.09 173 ePG Pg 02 02 58.2 +0.2
DPC eSG Sg 02 03 11.7 -0.4
comp=Z,23nm0.4s
DPC Dobruska-Polom 1.09 173 Pg Pg 02 02 58.2 +0.2
DPC eSg Sg 02 03 12.6 +0.5
baz=356
PVCC Panska Ves 1.33 228 ePG Pg 02 03 02.7 +0.1
PVCC eSG Sg 02 03 21.3 +1.5
comp=Z,86nm0.5s
PVCC Panska Ves 1.33 228 Pg Pg 02 03 02.7 +0.1
PVCC Panska Ves 1.33 228 ePn Pn 02 03 03.0 +0.1
baz=48
PVCC Sg Sg 02 03 21.3 +1.5
comp=Z,86nm0.5s
BRG Berggiesshubel 1.48 249 PG Pg 02 03 05.5 +0.1
BRG SG Sg 02 03 25.6 +1.1
comp=Z,22nm0.5s
BRG Berggiesshubel 1.48 249 ePn Pn 02 03 05.0 +0.1
baz=67
BRG eSg Sg 02 03 25.1 +0.6
baz=67
PRU Pruhonice 1.76 215 ePN Pn 02 03 08.9 +0.2
PRU ePG Pg 02 03 10.6 -0.1
PRU eSG Sg 02 03 33.5 0.0
comp=Z,15nm0.3s
PRU Pruhonice 1.76 215 ePn Pn 02 03 08.8 +0.1
baz=35
MORC Moravsky Berou 1.89 151 ePn Pn 02 03 10.3 -0.3
MORC eS Sn 02 03 37.1 +2.0
MORC Moravsky Berou 1.89 151 ePn Pn 02 03 10.3 -0.3
MORC eSg Sg 02 03 35.1 -2.7
MORC eS Sn 02 03 37.1 +2.0
CLL Collm 1.95 268 ePn Pn 02 03 11.0 -0.4
CLL i Pg Pg 02 03 13.5 -1.0
CLL i Sg Sg 02 03 40.5 +0.7
CLL Collm 1.95 268 ePn Pn 02 03 11.0 -0.4
CLL i Pg Pg 02 03 13.5 -1.0
CLL e 02 03 18.0
CLL i Sg Sg 02 03 40.5 +0.7
comp=Z,16nm0.9s
CLL Collm 1.95 268 ePn Pn 02 03 11.0 -0.4
CLL Collm 1.95 268 i Pg Pg 02 03 13.5 -1.0
CLL eSg Sg 02 03 39.5 -0.3
baz=85
VRAC Vranov 2.15 172 ePn Pn 02 03 12.9 -1.2
baz=354
TREC Trest 2.18 191 ePN Pn 02 03 15.7 +1.2
TREC ePG Pg 02 03 18.0 -0.8
TREC Trest 2.18 191 Pn Pn 02 03 15.7 +1.2
TREC Trest 2.18 191 Pg Pg 02 03 18.0 -0.8
TREC eSg Sg 02 03 46.3 -0.7
baz=12
KRUC Moravsky 2.38 176 ePn Pn 02 03 18.6 +1.3
baz=357
KRUC Moravsky 2.38 176 ePg Pg 02 03 21.2 -1.5
baz=357
KRUC eSg Sg 02 03 52.2 -1.3
comp=Z,6.9nm0.3s,baz=357
NKC Novy Kostel 2.62 244 ePN Pn 02 03 20.8 +0.3
NKC ePG Pg 02 03 27.0 -0.2
NKC eSG Sg 02 04 02.0 +0.9
comp=Z,18nm0.3s
NKC Novy Kostel 2.62 244 ePn Pn 02 03 20.5 0.0
baz=62
NKC Novy Kostel 2.62 244 ePg Pg 02 03 27.1 -0.1
baz=62
NKC Sg Sg 02 04 02.0 +0.9
comp=Z,18nm0.3s
OJC Ojcow 2.63 116 ePg Pg 02 03 25.9 -1.6
OJC eSg Sg 02 04 00.6 -1.0
OJC Ojcow 2.63 116 ePg Pg 02 03 25.9 -1.6
OJC eSg Sg 02 04 00.6 -1.0
KHC Kasperske Hory 2.82 216 ePn Pn 02 03 23.5 +0.2
KHC eS Sn 02 03 57.0 -1.0
KHC Kasperske Hory 2.82 216 ePN Pn 02 03 23.7 +0.4
KHC ePG Pg 02 03 29.2 -1.9
KHC eSG Sg 02 04 06.6 -1.0
comp=Z,8.9nm0.5s
KHC Kasperske Hory 2.82 216 ePn Pn 02 03 23.5 +0.2
KHC Kasperske Hory 2.82 216 ePg Pg 02 03 29.3 -1.8
baz=35
KHC eS Sn 02 03 57.0 -1.0
KHC Sg Sg 02 04 06.6 -1.0
comp=Z,8.9nm0.5s
MOX Moxa 2.95 256 ePG Pg 02 03 33.0 -0.5
MOX eSG Sg 02 04 13.1 +1.4
MOX Moxa 2.95 256 ePg Pg 02 03 33.0 -0.5
MOX eSg Sg 02 04 11.4 -0.3
baz=73
GEC2 GERESS Array S 3.02 212 ePn Pn 02 03 27.0 +0.9
GEC2 eSg Sg 02 04 14.2 +0.2
GEC2 GERESS Array S 3.02 212 ePn Pn 02 03 27.0 +0.9
GEC2 eSg Sg 02 04 14.2 +0.2
SMOL Smolenice 3.04 163 e Pg 02 03 36.6 +1.2
SMOL Smolenice 3.04 163 eSG Sg 02 04 15.6 +0.8
SMOL Smolenice 3.04 163 eSg Sg 02 04 15.6 +0.8
WET Wettzell 3.09 223 ePn Pn 02 03 27.3 +0.2
WET eSg Sg 02 04 15.5 -0.8
WET Wettzell 3.09 223 ePn Pn 02 03 27.3 +0.2
WET eSg Sg 02 04 15.5 -0.8
KOLL Kolacno 3.22 152 eSG Sg 02 04 19.2 -1.1
KOLL Kolacno 3.22 152 eSg Sg 02 04 19.2 -1.1
NIE Niedzica 3.36 125 eP Pg 02 03 41.8 +0.4
NIE eS Sg 02 04 25.1 +0.2
VYHS Vyhne 3.43 148 e Pg 02 03 43.6 +0.9
VYHS Vyhne 3.43 148 eSG Sg 02 04 25.9 -1.2
VYHS Vyhne 3.43 148 eSg Sg 02 04 25.9 -1.2
CONA Conrad Observa 3.51 183 ⇓i Pn Pn 02 03 32.8 0.0
CONA ⇑i Sg Sg 02 04 28.7 -1.1
comp=Z,8.1nm0.3s
CONA Conrad Observa 3.51 183 Pn Pn 02 03 32.8 0.0
CONA Sg Sg 02 04 28.7 -1.1
comp=Z,8.1nm0.3s
BSD Bornholm Skovb 3.76 349 i P Pn 02 03 34.2 -2.0
BSD i S Sn 02 04 16.2 -4.9
BSD Bornholm Skovb 3.76 349 i P Pn 02 03 34.3 -1.9
SNR=49
MOA Molln 3.78 199 ⇑i Pn Pn 02 03 37.2 +0.7
MOA ⇑i Sg Sg 02 04 39.2 +0.6
comp=Z,4.3nm0.4s
MOA Molln 3.78 199 Pn Pn 02 03 37.2 +0.6
MOA Sg Sg 02 04 39.2 +0.7
comp=Z,4.3nm0.4s
STHS Stebnicka Huta 3.85 120 e Pg 02 03 52.8 +2.0
STHS Stebnicka Huta 3.85 120 eSG Sg 02 04 41.9 +1.2
STHS Stebnicka Huta 3.85 120 eSg Sg 02 04 41.9 +1.2
CRVS Cervenica-Dubn 4.27 124 eSG Sg 02 04 55.0 +0.8
CRVS Cervenica-Dubn 4.27 124 eSg Sg 02 04 55.0 +0.8

*NEIC **19** 02:25:36.4±1.0, 21°.83S×179°.44W, h593km±10km, mb4.4/7, Error ellipse: s-maj=16.0km s-min=11.3km az=134.0*
*IDC **19** 02:25:36.1±2.3, 21°.76S×179°.48W, h588km±26km, mb3.4/9, mb1 3.7/10, mb1mx3.6/16, mbtmp3.4/10, Error ellipse: s-maj=30.8km s-min=14.3km az=153.0*
*ISCJB **19** 02:25:36.0±0.9, 21°.99S±0°.08×179°.5W±0°.1, h602km±10km, mb4.1/17, Error ellipse: s-maj=15.9km s-min=11.8km az=23.1*

ISC 19 02:25:36.8±1.0, 21°.9S±0°.1×179°.4W±0°.1, h596km±10km, n28, σ0=83/29, mb4.1/17, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.76**	**330**	ePn	**P**	**02 27 07.0**	**-0.8**
MSVF				eS	S	02 28 22.2	+0.5
URZ	**Urewera**	**16.59**	**190**	P	**P**	**02 28 58.4**	**-1.1**
0.9nm,0.3s,baz=23,slow=7.7,SNR=4.6							
URZ				S	**S**	**02 31 39.1**	**-5.4**
0.9nm,0.3s,baz=25,slow=23,SNR=6.3							
EIDS	**Eidsvold**	**27.21**	**257**	eP	**P**	**02 30 34.7**	**0.0**
4.8nm,0.5s,mb4.4							
ARMA	**Armidale**	**27.27**	**246**	eP	**P**	02 30 37.1	+2.0
CTA	**Charters Tower**	**32.05**	**267**	eP	**P**	02 31 16.6	+0.2
8.6nm,0.4s,mb4.7							

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CTAO	**Charters Tower**	**32.05**	**267**	eP	**P**	**02 31 16.4**	**+0.1**
7.5nm,0.5s,mb4.6							
STKA	**Stephens Creek**	**35.99**	**246**	eP	**P**	**02 31 50.1**	**+1.0**
2.6nm,0.4s,mb4.1							
STKA	**Stephens Creek**	**35.99**	**246**	P	**P**	**02 31 49.3**	**+0.2**
3.6nm,0.5s,mb4.2,baz=102,slow=11,SNR=12							
STKA	**Stephens Creek**	**35.99**	**246**	eP	**P**	**02 31 49.6**	**+0.5**
0.6nm,0.6s,mb3.3							
ASAR	**Alice Springs**	**42.91**	**258**	P	**P**	**02 32 44.6**	**0.0**
11nm,0.8s,mb4.5,baz=99,slow=7.9,SNR=103							
ASAR				ScP	ScP	02 37 18.6	+2.2
0.8nm,1.0s,baz=112,slow=4.2,SNR=4.0							
ASAR				S	**S**	**02 38 26.8**	**-0.8**
1.2nm,0.8s,baz=96,slow=16,SNR=8.9							
WRAB	**Tennant Creek**	**43.09**	**264**	eP	**P**	**02 32 44.9**	**-1.1**
14nm,0.9s,mb4.5							
WRA	**Warramunga Arr**	**43.10**	**264**	P	**P**	**02 32 45.4**	**-0.7**
8.6nm,0.8s,mb4.3,baz=97,slow=6.0,SNR=44							
KAKA	**Kakadu**	**46.69**	**273**	eP	**P**	**02 33 14.1**	**+0.6**
11nm,0.4s,mb4.7							
KAKA	**Kakadu**	**46.69**	**273**	eP	**P**	**02 33 14.1**	**+0.5**
21nm,0.6s,mb4.8							
FORT	**Forrest**	**47.53**	**248**	eP	**P**	**02 33 19.2**	**-0.4**
11nm,0.8s,mb4.4							
FITZ	**Fitzroy Crossi**	**51.53**	**264**	eP	**P**	**02 33 49.0**	**-0.1**
2.9nm,0.3s,mb4.1							
QSPA	**South Pole Qui**	**68.19**	**180**	eP	**P**	**02 35 39.6**	**+1.5**
12nm,1.2s,mb4.2							
PETK	**Petropavlovsk-**	**77.28**	**346**	P	**P**	**02 36 29.2**	**-1.2**
2.8nm,0.7s,mb3.8,baz=131,slow=5.0,SNR=7.5							
PETK	**Petropavlovsk-**	**77.28**	**346**	P	**P**	**02 36 29.2**	**-1.2**
MAW	**Mawson**	**79.81**	**200**	P	**P**	**02 36 44.3**	**+0.5**
1.1nm,0.6s,mb3.3,baz=117,slow=14,SNR=2.1							
NVAR	**Mina Array Bea**	**82.95**	**44**	P	**P**	**02 37 00.4**	**+0.2**
0.4nm,0.3s,mb3.4,baz=226,slow=8.7,SNR=2.1							
SYO	**Syowa Base**	**85.08**	**193**	⇓eP	**P**	**02 37 08.8**	**-1.5**
CHUM	**Lake Minchumin**	**88.08**	**12**	eP	**P**	**02 37 24.7**	**+0.4**
3.2nm,0.8s,mb4.1							
TXAR	**Lajitas Array**	**88.92**	**58**	P	**P**	**02 37 29.5**	**+0.5**
1.1nm,0.8s,mb3.7,baz=225,slow=5.8,SNR=5.3							
CMAR	**Chiang Mai Arr**	**89.33**	**290**	P	**P**	**02 37 32.0**	**+0.9**
1.3nm,0.3s,mb4.2,baz=131,slow=3.1,SNR=8.9							
PDAR	**Pinedale Array**	**90.88**	**44**	P	**P**	**02 37 37.5**	**-0.2**
0.4nm,0.6s,mb3.5,baz=179,slow=4.4,SNR=3.0							
AKASG	**Malin Array Be**	**143.54**	**329**	PKP	PKPdf	02 44 01.4	-2.9
2.4nm,0.5s,baz=42,slow=4.4,SNR=17							
BRTR	**Keskin Array B**	**146.74**	**310**	PKPbc	PKPbc	02 44 12.2	-0.7
0.8nm,0.6s,baz=155,slow=4.9,SNR=6.8							

*ISCJB **19** 02:26:36.9±0.3, 12°.45N±0°.03×87°.73W±0°.03, h79km±2km, mb4.9/122, Error ellipse: s-maj=5.8km s-min=3.0km az=34.4*
*IDC **19** 02:26:37.6±0.6, 12°.71N×87°.40W, h68km±4km, mb4.4/18, mb1 4.6/21, mb1mx4.5/26, mbtmp4.4/21, MS3.8/17, Ms1 3.8/17, ms1mx3.8/23, Error ellipse: s-maj=17.3km s-min=9.5km az=56.0*
*CASC **19** 02:26:37.2±1.6, 12°.43N×87°.77W, h66km±17km, MD4.7, ML5.1, mb5.0(NEIC)*
*NEIC **19** 02:26:38.3±0.2, 12°.52N×87°.72W, mb5.0/116, Error ellipse: s-maj=5.6km s-min=3.7km az=215.0*
NEIC Felt at Managua. Felt [II] at Usulutan, El Salvador.
*GCMT **19** 02:26:39.6±0.3, 12°.34N×87°.94W, h69km±1km, MW5.0, Moment Tensor Solution. s51,c68; s74,c106; Moment tensor: Scale 10^{16}Nm; M_{rr}-4.40±.15; $M_{\theta\theta}$1.39±.18; $M_{r\theta}$0.12±.10; $M_{\phi\phi}$-2.38±.12; $M_{r\phi}$-0.50±.13; Best double couple: $M_0$4.60000×10^{16} NP1:ϕ_s121.00000°, δ43.00000°, λ-97.00000°. NP2:ϕ_s310.00000°, δ48.00000°, λ-84.00000°. Principal axes: T 4.7300, Plg2.0000°, Azm36.0000°; N -0.2900, Plg5.0000°, Azm126.0000°; P -4.4400, Plg85.0000°, Azm278.0000°; Data Used: II IU IC G CN.*

ISC 19 02:26:38.2±0.3, 12°.49N±0°.03×87°.69W±0°.03, h72km±2km, h78km±2.4km: pP-P, n662, σ0=75/615, mb4.9/122, 206C-182D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.66**	**71**	eP	**Pn**	**02 26 52.7**	**0.0**
CRIN				eS	**Sn**	**02 27 05.1**	**+1.6**
LEON	**Leon**	**0.78**	**95**	eP	**Pn**	**02 26 53.0**	**-1.1**
CNCH	**Conchagua**	**0.80**	**350**	eP	**Pn**	**02 26 53.3**	**-1.0**
CNCH				eP		02 26 53.4	
TELN	**Telica**	**0.84**	**82**	eP	**Pn**	**02 26 54.7**	**-0.1**
CNGN	**Cerro Negro**	**0.96**	**89**	eP	**Pn**	**02 26 55.7**	**-0.6**
BLLM	**Bellamira**	**1.09**	**330**	eP	**Pn**	**02 26 56.6**	**-1.3**
VSM	**San Miguel**	**1.09**	**328**	eP	**Pn**	**02 26 57.1**	**-0.9**
VSM				eP		02 26 57.1	
COPN	**Copaltepe**	**1.11**	**106**	eP	**Pn**	**02 26 57.3**	**-0.8**
MOMN	**Momotombo**	**1.12**	**94**	eP	**Pn**	**02 26 58.2**	**-0.1**
CSAN		**1.27**	**104**	eP	**Pn**	**02 26 59.9**	**-0.3**
XAVN	**Gruta Xavier**	**1.37**	**104**	eP	**Pn**	**02 27 01.2**	**-0.2**
CAHU	**Cacacuatique**	**1.37**	**338**	eP	**Pn**	**02 27 01.1**	**-0.5**
CAHU				eP		02 27 01.4	
CAHU				eS	**Sn**	**02 27 21.1**	**+2.8**
CRUN	**El Crucero**	**1.45**	**110**	eP	**Pn**	**02 27 02.3**	**-0.1**
MGAN	**Managua**	**1.45**	**103**	eP	**Pn**	**02 27 02.1**	**-0.4**
MGAN				eP		02 27 02.7	
MGAN				AML	AML	02 27 22.8	
comp=N,90μm,0.6s							
HUEN		**1.49**	**96**	eP	**Pn**	**02 27 02.7**	**-0.3**
WILN	**Americas 2**	**1.50**	**102**	eP	**Pn**	**02 27 02.7**	**-0.5**
MASN	**Masaya**	**1.58**	**108**	eP	**Pn**	**02 27 03.5**	**-0.7**
TGUH	**Tegucigalpa,Un**	**1.61**	**14**	⇑i Pn	**Pn**	**02 27 05.1**	**+0.5**
TGUH				eSn	**Sn**	**02 27 24.0**	**-0.1**
TGUH	**Tegucigalpa,Un**	**1.61**	**14**	eP	**Pn**	**02 27 05.2**	**+0.5**
TGUH				AML	AML	02 27 28.0	
comp=N,72μm,0.4s							
APON	**Apoyo**	**1.68**	**110**	i P	**Pn**	**02 27 05.3**	**-0.3**
LFRS	**El Faro**	**1.75**	**310**	eP	**Pn**	**02 27 05.0**	**-1.6**
SNET	**Serv Nac Est T**	**1.92**	**308**	eP	**Pn**	**02 27 07.4**	**-1.4**
BOAB	**BOACO BROADBAN**	**.97**	**91**	⇑i P	**Pn**	**02 27 09.1**	**-0.4**
BOQS	**Boqueron**	**1.99**	**309**	eP	**Pn**	**02 27 08.7**	**-1.0**
BOQS				eP		02 27 08.7	
SSN	**San Juan del S**	**2.15**	**123**	eP	**Pn**	**02 27 10.7**	**-1.2**
CONN	**Concepcion**	**2.21**	**114**	eP	**Pn**	**02 27 12.4**	**-0.3**
SBLS	**San Blas**	**2.31**	**306**	eP	**Pn**	**02 27 13.4**	**-0.7**
SNJE	**San Jose**	**2.32**	**306**	eP	**Pn**	**02 27 13.8**	**-0.4**
GB1A	**Borinquen Arri**	**2.79**	**126**	i P	**Pn**	**02 27 20.1**	**-0.5**
NY14	**Universidad de**	**2.79**	**131**	i P	**Pn**	**02 27 20.9**	**+0.3**
NY14				i S	**Sn**	**02 27 52.9**	**-0.2**
GPS2	**Hotel Rinc^‡n**	**2.87**	**127**	i P	**Pn**	**02 27 21.5**	**-0.1**
LIM1	**Limonal**	**2.98**	**126**	i P	**Pn**	**02 27 23.0**	**0.0**
CUI	**Cuipilapa**	**3.07**	**126**	i P	**Pn**	**02 27 24.4**	**+0.1**
A490	**San Lazaro**	**3.10**	**135**	i P	**Pn**	**02 27 24.6**	**-0.2**
A494	**Palo Verde**	**3.13**	**133**	i P	**Pn**	**02 27 25.5**	**+0.3**
APG	**El Apazote**	**3.68**	**313**	P	**Pn**	**02 27 33.0**	**+0.3**
comp=N,7.4nm,0.3s,baz=128,slow=8.1,SNR=35							
BRU2	**Volcan**	**6.13**	**126**	⇑i P	**Pn**	**02 28 08.4**	**+2.2**
TEIG	**Tepich**	**7.71**	**356**	ePn	**Pn**	**02 28 29.6**	**+1.8**
CMIG	**Matias Romero**	**8.33**	**304**	P	**Pn**	**02 28 36.3**	**+0.1**
comp=N,2.3nm,0.3s,baz=126,slow=8.8,SNR=23							
CMIG				ScP	ScP	02 38 29.9	+0.8
comp=N,0.1nm,0.3s,baz=73,slow=3.7,SNR=4.0							
BCIP	**Isla Barro Col**	**8.39**	**112**	ePn	**Pn**	**02 28 36.3**	**-0.7**
BCIP	**Isla Barro Col**	**8.39**	**112**	eP	**Pn**	**02 28 37.8**	**+0.8**
BCIP				eS		02 28 42.1	
HUIG	**Huatulco**	**8.80**	**293**	i P	**Pn**	**02 28 44.0**	**+1.4**
VHO	**Vista Hermosa**	**9.86**	**299**	i P	**Pn**	**02 29 01.5**	**+4.4**
PNIG	**Pinotepa**	**10.83**	**292**	i P	**Pn**	**02 29 09.1**	**-1.3**
MCJ	**Malvern**	**11.06**	**60**	⇑i P	**Pn**	**02 29 17.6**	**+4.1**
MTDJ	**Mount Denham**	**11.33**	**59**	ePn	**Pn**	**02 29 20.2**	**+3.0**
MTDJ	**Mount Denham**	**11.33**	**59**	eP	**Pn**	**02 29 20.6**	**+3.5**
STH	**Stony Hill**	**11.87**	**61**	⇓eP	**Pn**	**02 29 27.8**	**+3.3**
STH	**Stony Hill**	**11.87**	**61**	⇓i P	**Pn**	**02 29 29.1**	**+4.6**
HOJ	**Hope**	**11.89**	**61**	⇓eP	**Pn**	**02 29 27.7**	**+2.9**
HOJ	**Hope**	**11.89**	**61**	i P	**Pn**	**02 29 29.1**	**+4.3**
GWJ	**Greenwich**	**11.94**	**61**	⇓eP	**Pn**	**02 29 29.0**	**+3.5**
GWJ	**Greenwich**	**11.94**	**61**	⇓i P	**Pn**	**02 29 30.1**	**+4.6**
CMJ	**Castle Mountai**	**12.27**	**61**	⇑eP	**Pn**	**02 29 34.0**	**+4.0**
CMJ	**Castle Mountai**	**12.27**	**61**	i P	**Pn**	**02 29 34.7**	**+4.7**
PPM	**Popocatepetl**	**12.39**	**303**	i P	**Pn**	**02 29 34.1**	**+2.4**
YAIG	**Yautepec**	**12.65**	**301**	eP	**Pn**	**02 29 36.0**	**+0.7**
CAIG	**El Cayaco**	**12.98**	**292**	i P	**Pn**	**02 29 40.2**	**+0.5**
PAYG	**Puerto Ayora**	**13.33**	**191**	ePn	**Pn**	**02 29 49.7**	**+5.3**
comp=N,282nm,1.0s							
GTBY	**Guantanamo Bay**	**14.15**	**57**	ePn	**Pn**	**02 29 59.8**	**+4.6**
ZIIG	**Zihuatanejo**	**14.24**	**293**	i P	**Pn**	**02 30 02.9**	**+6.5**
ROSC	**El Rosal**	**15.22**	**119**	P	**Pn**	**02 30 12.0**	**+2.9**
comp=N,1.1nm,0.3s,baz=96,slow=11,SNR=15							
ROSC				LR	LR	02 36 29.4	
comp=N,375nm,20.4s,baz=200,slow=39							
ROSC				ScP	ScP	02 38 40.6	+1.5
comp=N,0.6nm,0.3s,baz=98,slow=21,SNR=4.8							
ROSC	**El Rosal**	**15.22**	**119**	ePn	**Pn**	**02 30 12.2**	**+3.1**
OTAV	**Otavalo**	**15.23**	**142**	ePn	**Pn**	**02 30 12.3**	**+3.1**
comp=N,26nm,1.1s							
OTAV				ePcP	PcP	02 35 12.8	+1.6
SDDR	**Presa de Saban**	**17.05**	**66**	eP	**Pn**	**02 30 34.4**	**+2.4**
comp=N,40nm,0.8s							
SDV	**Santo Domingo**	**17.13**	**100**	P	**Pn**	**02 30 31.5**	**-1.5**
comp=N,0.6nm,0.3s,baz=292,slow=6.1,SNR=16							
SDV				PcP	PcP	02 35 14.2	+0.1
comp=N,0.2nm,0.3s,baz=316,slow=1.8,SNR=5.6							
SDV				ScP	ScP	02 38 44.0	+1.3
comp=N,0.3nm,0.3s,baz=301,slow=3.4,SNR=9.7							
SDV	**Santo Domingo**	**17.13**	**100**	eP	**Pn**	**02 30 33.0**	**0.0**
comp=N,47nm,0.9s							
SDV				eS	**S**	**02 33 50.0**	**+1.5**
BRAL	**Brewton**	**18.44**	**2**	eP	**Pn**	**02 30 51.5**	**+2.7**
comp=N,106nm,1.1s							
HKT	**Hockley**	**18.95**	**338**	eP	**Pn**	**02 30 54.6**	**-0.3**
comp=N,29nm,1.2s							
NATX	**Nacogdoches**	**20.23**	**343**	eP	**P**	**02 31 09.1**	**+1.7**
comp=N,188nm,1.4s							
LRAL	**Lakeview Retre**	**20.46**	**2**	ePn	**P**	**02 31 11.6**	**+1.7**
CELP	**Cerrillos**	**21.10**	**72**	eP	**P**	**02 31 18.4**	**+1.5**
JCT	**Junction City**	**21.12**	**330**	eP	**P**	**02 31 16.8**	**-0.3**
comp=N,107nm,1.2s,mb5.0							
JCT				ePcP	PcP	02 35 20.8	+0.1
GOGA	**Godfrey**	**21.18**	**10**	eP	**P**	**02 31 19.4**	**+1.7**
comp=N,113nm,0.8s,mb5.2							
GOGA				ePP		02 31 37.4	
GOGA				eSP	sP	02 31 53.5	+12
SJG	**San Juan**	**21.50**	**72**	P	**P**	**02 31 19.0**	**-2.2**
comp=N,26nm,0.7s,mb4.7,baz=278,slow=7.6,SNR=10.0							
SJG	**San Juan**	**21.50**	**72**	eP	**P**	**02 31 22.2**	**+0.9**
comp=N,28nm,0.8s,mb4.6							
ATAH	**Atahualpa**	**21.57**	**154**	P	**P**	**02 31 24.4**	**+2.4**
comp=N,15nm,0.9s,mb4.3,baz=338,slow=7.0,SNR=11							
ATAH				LR	LR	02 39 27.3	
comp=N,206nm,18.7s,baz=160,slow=36							
COW	**Cow Castle Cre**	**21.75**	**16**	eP	**P**	**02 31 26.4**	**+2.6**
CBYP	**Canovanas**	**21.81**	**72**	eP	**P**	**02 31 25.1**	**+0.6**
comp=N,18nm,0.8s,mb4.5							
OXF	**Oxford**	**21.98**	**356**	eP	**P**	**02 31 26.2**	**0.0**
comp=N,157nm,1.1s,mb5.2							
628A	**Black Gap, Mar**	**22.04**	**322**	⇑P	**P**	**02 31 26.4**	**-0.4**
baz=22,SNR=103							
MTP	**Monte Pirata**	**22.06**	**73**	eP	**P**	**02 31 27.6**	**+0.5**
comp=N,52nm,0.8s,mb4.9							
627A	**Terlingua Ranc**	**22.31**	**322**	⇓P	**P**	**02 31 29.0**	**-0.8**
baz=22,SNR=152							
TXAR	**Lajitas Array**	**22.40**	**321**	P	**P**	**02 31 30.1**	**-0.6**
comp=N,40nm,0.9s,mb4.8,baz=143,slow=7.9,SNR=271							
TXAR				PcP	PcP	02 35 24.2	+0.9
comp=N,5.6nm,0.8s,baz=154,slow=5.2,SNR=12							
TXAR				ScP	ScP	02 38 56.0	+1.3
comp=N,2.6nm,0.8s,baz=149,slow=5.5,SNR=18							
TXAR	**Lajitas Array**	**22.40**	**321**	P	**P**	**02 31 30.1**	**-0.6**
TXAR				PcP	PcP	02 35 24.2	+0.9
TXAR				ScP	ScP	02 38 56.0	+1.3
JSC	**Jenkinsville**	**22.47**	**14**	eP	**P**	**02 31 32.4**	**+1.0**
528A	**Cox Ranch, San**	**22.47**	**324**	⇑P	**P**	**02 31 30.1**	**-1.3**
baz=22,SNR=83							
UALR	**University of**	**22.59**	**350**	eP	**P**	**02 31 32.5**	**-0.1**
comp=N,40nm,0.9s,mb4.8							
MIAR	**Mount Ida**	**22.60**	**347**	eP	**P**	**02 31 32.6**	**-0.1**
STVI	**Saint Thomas**	**22.66**	**72**	eP	**P**	**02 31 33.2**	**-0.4**
SWET	**Sewanee**	**22.68**	**4**	eP	**P**	**02 31 33.9**	**+0.3**
PCRV	**Puerto La Cruz**	**22.71**	**93**	P	**P**	**02 31 32.7**	**-1.4**
comp=N,27nm,0.7s,mb4.7,baz=178,slow=3.4,SNR=9.5							
PCRV				LR	LR	02 41 08.4	
comp=N,145nm,19.0s,baz=284,slow=39							
428A	**Kincaid Ranch,**	**22.84**	**325**	⇑P	**P**	**02 31 34.2**	**-1.1**
baz=23,SNR=64							
626A	**Big Bend Ranch**	**22.84**	**321**	⇓P	**P**	**02 31 34.8**	**-0.5**
baz=23,SNR=69							
527A	**Woodward Ranch**	**22.95**	**322**	⇑P	**P**	**02 31 35.2**	**-1.2**
baz=23,SNR=50							
CPCT	**Cooper Cave**	**23.04**	**7**	eP	**P**	**02 31 37.9**	**+0.6**
HBAR	**Harrisburg**	**23.12**	**354**	eP	**P**	**02 31 37.7**	**-0.4**
526A	**Mary Lane Ranc**	**23.17**	**322**	⇓P	**P**	**02 31 38.1**	**-0.6**
baz=23,SNR=39							
TKL	**Tuckaleechee C**	**23.34**	**8**	P	**P**	**02 31 39.0**	**-1.0**
comp=N,58nm,1.0s,mb4.9,baz=181,slow=10.0,SNR=35							
TKL				LR	LR	02 41 27.6	
comp=N,155nm,18.9s,baz=251,slow=39							
TKL	**Tuckaleechee C**	**23.34**	**8**	eP	**P**	**02 31 40.9**	**+0.9**
427A	**Hayter Ranch,**	**23.34**	**324**	⇓P	**P**	**02 31 38.8**	**-1.3**
baz=23,SNR=14							
328A	**Wristen Ranch,**	**23.41**	**326**	⇑P	**P**	**02 31 39.5**	**-1.3**
baz=23,SNR=114							
WVT	**Waverly**	**23.54**	**360**	eP	**P**	**02 31 42.2**	**+0.3**
comp=N,22nm,1.0s,mb4.5							
426A	**McDonald Obser**	**23.57**	**323**	⇓P	**P**	**02 31 41.2**	**-1.1**
baz=24,SNR=79							
327A	**Balmorhea Ranc**	**23.78**	**325**	⇑P	**P**	**02 31 43.2**	**-1.0**
baz=24							
326A	**Caldwell Ranch**	**24.02**	**324**	⇑P	**P**	**02 31 45.3**	**-1.0**
baz=24,SNR=31							
PARMO	**Parma**	**24.14**	**356**	eP	**P**	**02 31 46.8**	**-0.7**
227A	**Bennet, Jal**	**24.15**	**326**	⇓P	**P**	**02 31 46.7**	**-0.9**
baz=24,SNR=26							
425A	**Indio Mountain**	**24.23**	**321**	⇑P	**P**	**02 31 47.5**	**-0.8**
baz=24,SNR=40							
TZTN	**Tazewell**	**24.24**	**8**	eP	**P**	**02 31 48.8**	**+0.5**
comp=N,83nm,1.1s,mb5.0							
CNNC	**Cliffs of the**	**24.32**	**20**	eP	**P**	**02 31 48.5**

baz=26
Y25A Mesa, Roswell 26.37 327 ⇑P P 02 32 07.3 -0.4
baz=26,SNR=93
X26A CR and CF Fran 26.40 329 ⇓P P 02 32 07.0 -1.0
baz=26,SNR=19
W27A Bowe Ranch, En 26.44 331 ⇓P P 02 32 07.7 -0.6
baz=26,SNR=22
JSRW J. Sargeant Re 26.59 18 eP P 02 32 10.1 +0.5
JSRW epP pP 02 32 29.2 +2.6
Z23A Rita Site, Whi 26.74 324 ⇑P P 02 32 10.5 -0.5
baz=27
Y24A Capitan 26.77 326 ⇑P P 02 32 11.1 -0.2
baz=27,SNR=34
122A Conniff Cattle 26.79 322 ⇓P P 02 32 10.6 -0.9
baz=27
221A Mesquite Ranch 26.80 320 ⇑P P 02 32 12.1 +0.5
baz=27,SNR=6.9
W26A Owens Ranch, T 26.80 330 ⇓P P 02 32 11.2 -0.4
baz=27,SNR=8.1
X25A Clemmons Ranch 26.82 328 ⇑P P 02 32 11.4 -0.3
baz=27,SNR=12
Y23A Lovelace Mesa, 27.12 325 ⇑P P 02 32 14.8 +0.4
baz=27,SNR=19
121A Cookes Peak, D 27.16 321 ⇑P P 02 32 15.4 +0.6
baz=27,SNR=38
Z22A Elephant Butte 27.16 323 ⇑P P 02 32 15.0 +0.2
baz=27,SNR=14
220A Playas Peak, P 27.21 319 ⇑P P 02 32 15.5 +0.2
baz=27,SNR=43
W25A X Bar L Ranch, 27.25 329 ⇓P P 02 32 15.7 +0.1
baz=27,SNR=42
X24A Lazy VL Ranch, 27.25 327 ⇓P P 02 32 15.5 -0.1
baz=27
319A Douglas 27.37 317 ⇓P P 02 32 17.2 +0.4
baz=27,SNR=12
V26A Tequesquite Ra 27.38 331 ⇓P P 02 32 16.1 -0.6
baz=27,SNR=28
BNM Barren Site 27.61 324 eP P 02 32 19.6 +0.8
comp=N,48nm,1.3s,mb4.9
BNM ePcP PcP 02 35 36.5 +1.7
Z21A St. Cloud Mine 27.62 322 ⇑P P 02 32 19.2 +0.3
baz=28,SNR=15
Y22A Socorro 27.64 324 ⇑P P 02 32 19.6 +0.4
baz=28,SNR=34
X23A Hourglass Bar 27.68 326 ⇑P P 02 32 19.4 0.0
baz=28
120A U Bar Ranch, L 27.70 319 ⇑P P 02 32 19.9 +0.2
baz=28,SNR=16
LPM Los Pinos Moun 27.73 325 eP P 02 32 20.0 +0.2
W24A Lazy 6 Ranch, 27.73 328 ⇑P P 02 32 20.0 +0.2
baz=28,SNR=30
219A White Tail Can 27.75 318 ⇑P P 02 32 19.8 -0.2
baz=28,SNR=28
LENM Lemitar 27.82 324 eP P 02 32 21.2 +0.5
comp=N,28nm,1.1s,mb4.7
LENM ePcP PcP 02 35 36.6 +1.3
V25A Rancho No Teng 27.82 330 ⇓P P 02 32 20.8 +0.2
baz=28,SNR=58
U26A Atchley Ranch, 27.85 331 ⇓P P 02 32 20.5 -0.4
baz=28,SNR=12
318A Bisbee 27.89 316 ⇑P P 02 32 21.6 +0.3
baz=28,SNR=21
MCWV Mont Chateau 27.93 13 eP P 02 32 22.0 +0.4
comp=N,12nm,0.7s,mb4.5
ACSO Alum Creek Sta 27.94 8 eP P 02 32 21.1 -0.6
comp=N,17nm,0.8s,mb4.6
ACSO epP pP 02 32 38.4 -0.4
HDIL Hopedale 27.99 357 eP P 02 32 21.1 -1.0
Z20A Nine Sixteen R 28.05 320 ⇑P P 02 32 23.0 +0.3
baz=28,SNR=27
LAZ Ladron 28.08 324 eP P 02 32 23.8 +0.8
comp=N,18nm,1.6s,mb4.4
LAZ ePcP PcP 02 35 36.9 +0.9
X22A Bernardo 28.08 325 ⇓P P 02 32 23.4 +0.5
baz=28
W23A Werner Place, 28.09 327 ⇓P P 02 32 23.4 +0.4
baz=28,SNR=13
ANMO Albuquerque 28.10 326 P P 02 32 23.3 +0.2
comp=N,5.8nm,0.9s,mb4.1,baz=147,slow=11,SNR=23
ANMO PcP PcP 02 35 36.5 +0.5
comp=N,2.8nm,0.8s,baz=157,slow=12,SNR=4.0
ANMO ScP ScP 02 39 11.6 +0.8
comp=N,0.8nm,0.6s,baz=163,slow=11,SNR=4.5
ANMO LR LR 02 46 43.4
comp=N,82nm,20.6s,baz=285,slow=43
ANMO Albuquerque 28.10 326 eP P 02 32 23.6 +0.4
comp=N,10nm,1.6s,mb4.1
ANMO ePcP PcP 02 35 36.3 +0.3
Y21A Point of Rocks 28.11 323 ⇓P P 02 32 24.3 +1.0
baz=28,SNR=31
U25A Circle Dot Ran 28.17 331 ⇑P P 02 32 23.8 +0.1
baz=28,SNR=14
218A Dragoon 28.25 317 ⇑P P 02 32 24.8 +0.2
baz=28,SNR=12
119A Ashpeak Ranch, 28.27 319 ⇑P P 02 32 24.9 +0.2
baz=28,SNR=20
W22A Albuquerque 28.41 326 ⇓P P 02 32 26.5 +0.6
baz=28
Y20A Horse Springs, 28.46 322 ⇑P P 02 32 26.8 +0.4
baz=28,SNR=30
SDMD Soldier's Deli 28.48 18 eP P 02 32 27.2 +0.7
SDMD epP pP 02 32 46.5 +2.9
X21A Alamocita Cree 28.48 323 ⇑P P 02 32 27.0 +0.4
baz=28,SNR=28
V23A Ortiz Mt. (NFS 28.55 327 ⇓P P 02 32 27.9 +0.7
baz=29,SNR=8.6
Z19A T-Link Ranch, 28.59 320 ⇑P P 02 32 27.8 +0.2
baz=29,SNR=5.4
U24A Moreno Valley 28.60 329 ⇑P P 02 32 28.1 +0.5
baz=29
118A Homack Ranch, 28.62 318 ⇑P P 02 32 28.0 +0.2
baz=29,SNR=11
T25A Trinidad 28.76 331 ⇓P P 02 32 29.3 +0.3
baz=29,SNR=14
W21A San Fidel 28.89 325 ⇑P P 02 32 30.5 +0.3
baz=29
Z18A Geronimo 28.95 319 ⇓P P 02 32 31.4 +0.7
baz=29
X20A Quemado 28.97 323 ⇓P P 02 32 31.1 +0.2
baz=29
U23A El Rito 29.00 328 ⇓P P 02 32 31.6 +0.5
baz=29,SNR=75
Y19A Nutrioso 29.02 321 ⇑P P 02 32 31.8 +0.4
baz=29,SNR=9.3
V22A San Miguel Ran 29.06 327 ⇑P P 02 32 31.9 +0.2
baz=29,SNR=12
117A Oracle 29.08 317 ⇑P P 02 32 32.0 +0.1
baz=29,SNR=12
MVL Millersville 29.17 18 eP P 02 32 33.5 +0.9
MVL epP pP 02 32 51.0 +1.3
216A Three Points, 29.23 315 ⇑P P 02 32 32.8 -0.4
baz=29
Z17A San Carlos Hig 29.36 319 ⇑P P 02 32 34.4 0.0
baz=29
X19A St. Johns 29.36 322 ⇓P P 02 32 34.5 +0.1
baz=29,SNR=8.4
W20A Ramah 29.38 324 ⇑P P 02 32 34.7 +0.2
baz=29
V21A Milan 29.38 326 ⇓P P 02 32 34.4 -0.1
baz=29
U22A Llaves 29.38 327 ⇓P P 02 32 35.0 +0.5
baz=29,SNR=14
Y18A Canyon Day Jun 29.39 320 ⇑P P 02 32 34.8 +0.1
baz=29,SNR=6.3
116A Eloy 29.73 316 ⇑P P 02 32 37.7 0.0
baz=30
SDCO Great Sand Dun 29.77 331 eP P 02 32 38.4 +0.5
comp=N,92nm,1.4s,mb5.2
SDCO ePcP PcP 02 35 41.2 +1.1
SDCO eScP ScP 02 39 16.5 +0.6
X18A Snowflake 29.84 321 ⇑P P 02 32 38.8 +0.2
baz=30
V20A Brimhall 29.84 325 ⇑P P 02 32 38.5 0.0
baz=30
U21A Nageezi 29.85 326 ⇓P P 02 32 39.0 +0.3
baz=30,SNR=12
Y17A Roosevelt 29.86 319 ⇑P P 02 32 39.0 +0.2
baz=30
T22A Edith 29.89 328 ⇑P P 02 32 39.5 +0.5
baz=30,SNR=11
W19A Sanders 29.89 323 ⇑P P 02 32 39.4 +0.4
baz=30
AAM Ann Arbor 29.91 6 eP P 02 32 38.1 -0.9
comp=N,13nm,0.3s,mb5.0
W18A Petrified Fore 30.10 322 ⇑P P 02 32 41.2 +0.3
baz=30
V19A Window Rock 30.11 324 ⇓P P 02 32 41.5 +0.5
baz=30
214A Organ Pipe Nat 30.14 314 ⇓P P 02 32 41.2 -0.1
baz=30
115A Sonoran Desert 30.16 316 ⇑P P 02 32 41.6 +0.1
baz=30
X17A Forest Lakes 30.24 320 ⇓P P 02 32 42.1 0.0
baz=30
U20A Newcomb 30.28 325 ⇑P P 02 32 42.6 +0.1
baz=30
Y16A Circle Bar Ran 30.38 318 ⇑P P 02 32 43.7 +0.3
baz=30
U19A Dine' College, 30.61 324 ⇓P P 02 32 45.2 -0.2
baz=31
V18A Ganado 30.62 323 ⇓P P 02 32 45.7 +0.1
baz=31
114A Black Gap (USA 30.64 315 ⇓P P 02 32 45.9 +0.2
baz=31,SNR=10.0
X16A Lo Mia Camp, P 30.70 319 ⇑P P 02 32 46.8 +0.7
baz=31,SNR=21
R22A Saguache, Gunn 30.75 330 ⇑P P 02 32 47.4 +0.7
baz=31,SNR=12
S21A Coal Bank Pass 30.84 328 ⇑P P 02 32 47.8 +0.3
baz=31,SNR=8.8
MVCO Mesa Verde 30.88 326 ⇓P P 02 32 48.0 +0.2
baz=31,SNR=23
MVCO Mesa Verde 30.88 326 eP P 02 32 48.5 +0.7
comp=N,22nm,0.9s,mb4.9
MVCO ePP PP 02 34 01.1 +2.4
MVCO ePcP PcP 02 35 43.5 +0.5
MVCO eScP ScP 02 39 22.1 +2.5
T19A Beclabito 30.89 325 ⇓P P 02 32 48.2 +0.3
baz=31,SNR=8.9
Y15A Casa Rosa Ranc 30.98 318 ⇓P P 02 32 48.9 +0.1
baz=31,SNR=5.0
Z14A Wintersburg 31.04 316 ⇑P P 02 32 49.3 +0.1
baz=31
U18A Rough Rock, Ch 31.08 324 ⇑P P 02 32 49.9 +0.4
baz=31
V17A Tonalea, Kykot 31.08 322 ⇓P P 02 32 50.0 +0.5
baz=31,SNR=20
W16A Flagstaff 31.19 320 ⇓P P 02 32 51.2 +0.7
baz=31
X15A Humboldt 31.25 319 ⇑P P 02 32 51.3 +0.3
baz=31,SNR=7.9
113A Mohawk Valley, 31.26 314 ⇓P P 02 32 51.4 +0.2
baz=31
BINY Binghamton 31.30 17 eP P 02 32 51.9 +0.5
comp=N,15nm,0.9s,mb4.7
Q22A Crested Butte, 31.32 330 ⇓P P 02 32 52.1 +0.5
baz=31,SNR=14
WUAZ Wupatki 31.36 321 ⇑P P 02 32 52.5 +0.4
baz=31,SNR=8.8
WUAZ Wupatki 31.36 321 eP P 02 32 52.8 +0.8
comp=N,40nm,1.5s,mb4.9
WUAZ ePcP PcP 02 35 45.7 +1.3
Y14A Wickenburg 31.42 317 ⇓P P 02 32 52.2 -0.3
baz=31,SNR=5.6
Z13A Yuma Proving G 31.43 315 ⇓P P 02 32 52.4 -0.3
baz=32,SNR=6.0
ISCO Idaho Springs 31.48 333 eP P 02 32 53.7 +0.8
comp=N,25nm,1.5s,mb4.7
ISCO eScP ScP 02 39 22.4 +0.8
T18A Mexican Hat 31.59 325 ⇑P P 02 32 53.9 -0.1
baz=32,SNR=17
PV01 Paradox Valley 31.60 328 eP P 02 32 55.0 +0.9
comp=N,895nm,0.9s
SMCO Snowmass 31.60 331 eP P 02 32 54.8 +0.7
comp=N,36nm,1.1s,mb5.0
SMCO ePcP PcP 02 35 46.0 +1.1
S19A Harvey Farm, M 31.62 326 ⇑P P 02 32 54.4 +0.2
baz=32,SNR=41
Q21A Lamborn Mesa, 31.63 330 ⇑P P 02 32 54.9 +0.6
baz=32,SNR=8.5
U17A Shonto 31.66 323 ⇑P P 02 32 54.9 +0.2
baz=32
X14A Yava 31.66 318 ⇓P P 02 32 55.1 +0.4
baz=32
W15A Williams 31.70 320 ⇓P P 02 32 55.7 +0.6
baz=32
PV04 Paradox Valley 31.97 328 eP P 02 32 58.2 +0.9
T17A Navajo Res., N 32.02 324 ⇑P P 02 32 58.5 +0.7
baz=32,SNR=12
S18A Hurst Farm, Bl 32.05 325 ⇑P P 02 32 58.3 +0.3
baz=32,SNR=39
V15A Kaibab Nationa 32.05 321 ⇓P P 02 32 59.1 +1.0
baz=32,SNR=16
ECSD EROS Data Cent 32.07 348 eP P 02 32 56.4 -1.8
comp=N,73nm,1.4s,mb5.2
ECSD eS S 02 38 01.5 -3.5
Q20A Ridgley Place, 32.08 329 ⇑P P 02 32 58.3 0.0
baz=32
R19A Curley Farm, L 32.09 327 ⇓P P 02 32 58.4 +0.1
baz=32,SNR=9.7
GLA Glamis 32.16 314 ⇑P P 02 32 59.2 +0.1
baz=32
W14A Seligman 32.25 319 ⇓P P 02 33 00.4 +0.6
baz=32,SNR=8.9
Y12C Blythe 32.34 315 ⇓P P 02 33 00.8 +0.2
baz=32
X13A Yucca 32.36 317 ⇑P P 02 33 00.8 0.0
baz=32,SNR=5.7
PDMCI Parker Dam,Lak 32.39 316 ⇓P P 02 33 01.2 +0.1
baz=32
T16A Glen Canyon Da 32.42 323 ⇓P P 02 33 01.5 +0.2
baz=32
S17A Black Ridge (B 32.46 324 ⇑P P 02 33 01.6 0.0
baz=32
R18A Canyonlands Na 32.49 326 ⇑P P 02 33 01.8 -0.1
baz=32,SNR=20
V14A Boquillas Ranc 32.52 319 ⇑P P 02 33 03.0 +0.8
baz=33,SNR=12
U15A North Rim 32.52 321 ⇑P P 02 33 02.8 +0.6
baz=33,SNR=10
P20A De Beque 32.55 329 ⇓P P 02 33 02.5 +0.2
baz=33,SNR=12
Q19A Hogan Spring (32.58 328 ⇑P P 02 33 02.6 -0.1
baz=33,SNR=13
PHWY Pilot Hill 32.65 335 eP P 02 33 03.5 +0.3
comp=N,3.6nm,0.6s,mb4.4
O21A Pagoda 32.66 331 ⇑P P 02 33 03.7 +0.4
baz=33
N22A Wattenberg Ran 32.66 333 ⇑P P 02 33 03.4 0.0
baz=33,SNR=11
W13A Hualapai Mount 32.70 318 ⇑P P 02 33 04.2 +0.4
baz=33
SWSC Sam W. Stewart 32.79 313 ⇓P P 02 33 04.6 0.0
baz=33
ARE Arequipa 32.92 151 eP P 02 33 08.0 +2.2
BC3 Big Chuckawall 32.93 314 ⇑P P 02 33 06.3 +0.5
baz=33,SNR=13
O20A White River Ci 32.96 330 ⇑P P 02 33 06.6 +0.6
baz=33,SNR=54
R17A Hanksville Air 32.96 326 ⇓P P 02 33 06.1 +0.1
baz=33,SNR=9.4
T15A Red Dirt Ranch 32.97 322 ⇓P P 02 33 06.9 +0.9
baz=33
IRM Iron Mountain 33.00 315 ⇓P P 02 33 06.3 -0.1
baz=33,SNR=5.2
U14A Mt Trumbull 33.06 320 ⇓P P 02 33 07.7 +0.8
baz=33,SNR=10
N21A Black Mountain 33.11 332 ⇑P P 02 33 08.4 +1.2
baz=33,SNR=35
Q18A Rafter H Ranch 33.14 327 ⇑P P 02 33 07.7 +0.1
baz=33,SNR=16
MONP Monument Peak 33.21 312 ⇓P P 02 33 08.6 +0.4
baz=33
M22A Cedar Creek Ra 33.22 334 ⇓P P 02 33 08.8 +0.6
baz=33
V13A Grand Canyon W 33.22 319 ⇓P P 02 33 08.7 +0.4
baz=33,SNR=10
R16A Teasdale 33.30 325 ⇑P P 02 33 09.4 +0.4
baz=33,SNR=21
SRU San Rafael 33.36 327 ⇑P P 02 33 09.6 +0.2
baz=33,SNR=26
SRU San Rafael 33.36 327 eP P 02 33 09.8 +0.4
comp=N,83nm,1.4s,mb5.4
S15A Panguitch 33.39 323 ⇓P P 02 33 10.9 +1.2
baz=33,SNR=11
T14A Hurricane 33.42 321 ⇓P P 02 33 10.9 +0.9
baz=34,SNR=7.1
BELC Belle Mtn. Jos 33.50 314 ⇑P P 02 33 11.0 +0.3
baz=34,SNR=5.3
N20A Spence Gulch, 33.52 331 ⇓P P 02 33 11.3 +0.5
baz=34,SNR=56
O19A Miners Draw (B 33.52 330 ⇑P P 02 33 10.7 -0.1
baz=34,SNR=20
COWI Conover 33.52 358 eP P 02 33 08.6 -2.2
comp=N,12nm,0.9s,mb4.7
U13A Pakoon Wash 33.55 320 ⇑P P 02 33 12.0 +0.8
baz=34,SNR=15
Q16A Castle Valley 33.57 326 ⇓P P 02 33 11.6 +0.3
baz=34,SNR=16
P18A Preston Nutter 33.59 328 ⇓P P 02 33 12.1 +0.6
baz=34
PFO Pinyon Flat Ob 33.61 313 ⇑P P 02 33 12.2 +0.5
baz=34
L22A Ellis Ranch, M 33.66 334 ⇓P P 02 33 12.8 +0.8
baz=34,SNR=14
GMRC Granite Mounta 33.70 316 ⇓P P 02 33 13.0 +0.6
baz=34,SNR=5.6
R15A Junction 33.70 324 ⇑P P 02 33 13.0 +0.6
baz=34
V12A Nelson 33.70 318 ⇓P P 02 33 12.9 +0.4
baz=34,SNR=16
109C Camp Elliot, M 33.71 312 ⇓P P 02 33 12.6 +0.1
baz=34
RWWY Rawlins 33.72 333 eP P 02 33 13.3 +0.8
comp=N,89nm,1.3s,mb5.4
M21A Separation Pea 33.72 333 ⇓P P 02 33 12.9 +0.4
baz=34,SNR=14
P17A Butcher Ranch, 33.73 327 ⇑P P 02 33 13.1 +0.4
baz=34,SNR=27
MSU Marysvale 33.85 324 eP P 02 33 14.6 +0.8
comp=N,37nm,1.6s,mb5.0
MSU ePcP PcP 02 35 52.4 +1.2
TMUT Trail Mountain 33.86 326 eP P 02 33 14.1 +0.3
comp=N,21nm,0.9s,mb5.0
TMUT ePcP PcP 02 35 51.9 +0.7
T13A Saint George 33.90 321 ⇑P P 02 33 14.9 +0.7
baz=34,SNR=9.7
S14A Cedar City 33.92 322 ⇑P P 02 33 15.2 +0.8
baz=34,SNR=5.3
U12A Valley of Fire 33.93 319 ⇑P P 02 33 14.8 +0.4
baz=34
LONY Lake Ozonia 33.93 17 ePn P 02 33 13.6 -0.8
comp=N,46nm,1.2s,mb5.2
O18A Roosevelt 33.94 329 ⇑P P 02 33 14.8 +0.4
baz=34,SNR=10
M20A Sweetwater, Wa 34.00 332 ⇑P P 02 33 15.2 +0.3
baz=34,SNR=12
N19A John Jarvie Ra 34.00 330 ⇑P P 02 33 14.7 -0.3
baz=34,SNR=16
L21A Rawlins 34.01 333 ⇓P P 02 33 15.1 0.0
baz=34,SNR=24
MURC Murrieta 34.13 313 ⇓P P 02 33 16.7 +0.5
baz=34
V11A Goodsprings 34.15 318 ⇑P P 02 33 16.7 +0.3
baz=34
HEC Hector,Ludlow 34.18 315 ⇑P P 02 33 17.1 +0.5
baz=34
R14A James Farms, M 34.19 323 ⇓P P 02 33 17.2 +0.5
baz=34
TUQ Turquoise Moun 34.24 317 ⇓P P 02 33 17.4 +0.2
baz=34
O17A Robinson Place 34.26 328 ⇑P P 02 33 17.8 +0.5
baz=34,SNR=27
Q15A Fillmore 34.30 325 ⇓P P 02 33 17.8 +0.2
baz=34,SNR=6.0
N18A Larsen Ranch, 34.30 330 ⇓P P 02 33 17.8 +0.1
baz=34,SNR=18
P16A Fountain Green 34.33 326 ⇓P P 02 33 18.6 +0.8
baz=34
LBNH Lisbon 34.41 20 eP P 02 33 19.1 +0.6
comp=N,10.0nm,1.1s,mb4.6
M19A Rock Springs 34.46 331 ⇓P P 02 33 18.8 -0.2
baz=34
L20A Wamsutter 34.48 332 ⇑P P 02 33 18.8 -0.3
baz=34,SNR=12
RSSD Black Hills 34.51 339 eP P 02 33 19.9 +0.6
comp=N,30nm,1.3s,mb5.0
RSSD epP pP 02 33 36.0 -0.6
LPAZ La Paz 34.52 145 P P 02 33 20.2 +0.5
comp=N,1.7nm,0.4s,mb4.2,baz=321,slow=7.9,SNR=17
LPAZ PcP PcP 02 35 53.7 +0.3
comp=N,1.8nm,0.5s,baz=342,slow=7.3,SNR=4.6
LPAZ La Paz 34.52 145 eP P 02 33 20.6 +0.9
comp=N,3.0nm,0.7s,mb4.2
LPAZ esP sP 02 33 46.4 +0.9
LPAZ ePcP PcP 02 35 54.3 +0.8
MPU Maple Canyon 34.60 327 eP P 02 33 20.9 +0.7
comp=N,44nm,0.9s,mb5.3
P15A Leamington 34.64 326 ⇓P P 02 33 20.8 +0.3
baz=35,SNR=11
O16A Springville 34.67 327 ⇓P P 02 33 21.4 +0.6
baz=35,SNR=18
R13A O'Grain Ranch, 34.68 322 ⇓P P 02 33 22.1 +1.2
baz=35,SNR=11
DAU Daniels Canyon 34.69 328 eP P 02 33 21.5 +0.6
comp=N,72nm,1.3s,mb5.3
GSC Goldstone 34.77 316 ⇓P P 02 33 22.7 +0.9
baz=35
BFSC Mount Baldy Ra 34.79 314 ⇑P P 02 33 22.4 +0.5
baz=35
NLU North Lily Min 34.80 326 eP P 02 33 22.7 +0.8
comp=N,30nm,1.4s,mb4.9
Q14A Sevier Lake (B 34.80 324 ⇓P P 02 33 22.8 +0.8
baz=35,SNR=34
M18A Lyman 34.84 330 ⇓P P 02 33 21.8 -0.5
baz=35,SNR=7.7
S12A Delamar Landin 34.85 321 ⇑P P 02 33 23.4 +1.1
baz=35,SNR=9.8
T11A Corn Creek, Al 34.85 320 ⇓P P 02 33 23.1 +0.7
baz=35
N17A Moffit Pass 34.86 329 ⇓P P 02 33 23.0 +0.6
baz=35
JLU Jordanelle 34.93 328 eP P 02 33 23.8 +0.8
comp=N,20nm,0.9s,mb5.0
K20A Yellowstone Ra 34.99 333 ⇓P P 02 33 23.0 -0.5
baz=35,SNR=18
L19A Farson 35.02 331 ⇓P P 02 33 23.6 -0.2
baz=35,SNR=15
U10A Ash Meadows, A 35.08 318 ⇓P P 02 33 24.9 +0.5
baz=35,SNR=5.5
P14A Drum Mountains 35.09 325 ⇓P P 02 33 25.2 +0.8
baz=35,SNR=39
N16A Rees Ranch, Co 35.13 328 ⇓P P 02 33 25.2 +0.5
baz=35,SNR=11
CTU Camp Tracy 35.15 327 eP P 02 33 25.6 +0.7
comp=N,33nm,0.9s,mb5.2
R12A Pony Springs, 35.16 322 ⇓P P 02 33 25.8 +0.8
baz=35,SNR=5.8
M17A Scullys Gap (B 35.17 329 ⇓P P 02 33 24.9 -0.2
baz=35,SNR=25
L18A Fontenelle, Gr 35.20 331 ⇑P P 02 33 25.3 -0.1
baz=35,SNR=29
Q13A Wheeler Ranch, 35.21 323 ⇑P P 02 33 26.3 +0.8
baz=35,SNR=23
O15A The Old Anders 35.24 326 ⇑P P 02 33 26.4 +0.6
baz=35,SNR=5.9
NOQ North Oquirrh 35.32 327 eP P 02 33 27.1 +0.8
comp=N,62nm,0.8s,mb5.5
K19A Absolon Red Bu 35.35 333 ⇑P P 02 33 26.1 -0.5
baz=35,SNR=17
DUG Dugway 35.37 326 ⇑P P 02 33 27.2 +0.4
baz=35,SNR=20
DUG Dugway 35.37 326 eP P 02 33 27.4 +0.6
comp=N,24nm,1.1s,mb4.9
S11A Rachel 35.43 320 ⇓P P 02 33 28.7 +1.3
baz=36,SNR=7.1
FURC Furnace Creek, 35.46 317 ⇓P P 02 33 28.0 +0.4
baz=36,SNR=6.3
EYMN Ely 35.49 356 eP P 02 33 25.7 -2.0
comp=N,12nm,1.1s,mb4.6
M16A Huntsville 35.54 328 ⇓P P 02 33 28.4 +0.1
baz=36
P13A Bates Ranch, G 35.54 324 ⇓P P 02 33 29.4 +1.1
baz=36,SNR=46
BW06 Boulder Array 35.63 332 ⇓P P 02 33 28.7 -0.3
baz=36,SNR=22
PDAR Pinedale Array 35.63 332 P P 02 33 28.4 -0.6
comp=N,15nm,0.8s,mb5.0,baz=128,slow=9.6,SNR=96
PDAR PcP PcP 02 35 55.4 -0.9
comp=N,1.7nm,0.7s,baz=125,slow=5.2,SNR=4.2
PDAR ScP ScP 02 39 36.4 +0.3
comp=N,0.3nm,0.4s,baz=50,slow=44,SNR=3.6
PDAR LR LR 02 51 42.2
comp=N,98nm,21.6s,baz=271,slow=42
MPMC Manual Prospec 35.65 316 ⇓P P 02 33 29.3 0.0
baz=36,SNR=6.4
N15A Stansbury Isla 35.70 327 ⇓P P 02 33 29.7 0.0
baz=36,SNR=14
HWUT Hardware Ranch 35.72 329 eP P 02 33 29.9 +0.1
comp=N,82nm,0.9s,mb5.7
HWUT ePcP PcP 02 35 56.4 -0.2
L17A Cokeville 35.74 330 ⇑P P 02 33 29.6 -0.3
baz=36,SNR=24
Q12A Willow Creek R 35.75 323 ⇑P P 02 33 30.6 +0.5

baz=36,SNR=7.9
K18A **Toltan Ranch,** 35.75 331 ⇑P P 02 33 30.7 +0.6
baz=36,SNR=57
R11A **Troy Canyon, C** 35.77 321 ⇓P P 02 33 31.0 +0.8
baz=36,SNR=6.9
L16A **Fish Haven** 35.96 329 ⇓P P 02 33 31.6 -0.2
baz=36,SNR=83
SPUT **South Promonto** 35.96 327 eP P 02 33 32.3 +0.4
comp=N,28nm,0.8s,mb5.2
O13A **Hicks Ranch, I** 35.98 325 ⇓P P 02 33 33.1 +1.1
baz=36
BGU **Big Grassy Mou** 36.00 327 eP P 02 33 32.5 +0.3
comp=N,43nm,1.3s,mb5.2
N14A **Grayback Hills** 36.03 326 ⇓P P 02 33 33.0 +0.5
baz=36,SNR=49
M15A **Larsen Ranch,** 36.07 328 ⇓P P 02 33 32.8 0.0
baz=36,SNR=59
P12A **McGill** 36.07 323 ⇑P P 02 33 33.7 +0.8
baz=36
ARVC **Arvin** 36.08 314 ⇓P P 02 33 33.2 +0.3
baz=36
ISA **Isabella** 36.11 315 ⇓P P 02 33 33.8 +0.6
baz=36
Q11A **Duckwater** 36.12 322 ⇓P P 02 33 34.0 +0.8
baz=36,SNR=13
S10A **Tonopah Range,** 36.13 320 ⇑P P 02 33 34.2 +0.8
baz=36,SNR=9.6
R10A **Warm Springs** 36.17 320 ⇑P P 02 33 34.4 +0.6
baz=36
J18A **Kendall Valley** 36.19 332 ⇑P P 02 33 33.9 +0.1
baz=36,SNR=67
K17A **Gardner Place,** 36.26 331 ⇑P P 02 33 34.4 0.0
baz=36,SNR=17
AGMN **Agassiz Nation** 36.34 351 eP P 02 33 33.5 -1.5
comp=N,60nm,1.4s,mb5.3
AHID **Auburn Hatcher** 36.35 330 eP P 02 33 35.2 0.0
comp=N,60nm,0.8s,mb5.6
L15A **Malad City** 36.43 328 ⇑P P 02 33 35.5 -0.4
baz=36,SNR=60
HVU **Hansel Valley** 36.47 328 eP P 02 33 36.5 +0.3
comp=N,35nm,0.9s,mb5.3
I18A **Diamond G Ranc** 36.48 333 ⇑P P 02 33 36.4 +0.1
baz=36,SNR=24
O12A **Currie** 36.50 324 ⇑P P 02 33 37.0 +0.5
baz=36,SNR=18
Q10A **Clear Creek Ra** 36.56 321 ⇓P P 02 33 38.1 +1.1
baz=37,SNR=14
M14A **Sheep Mountain** 36.57 327 ⇑P P 02 33 37.1 0.0
baz=37,SNR=74
N13A **Wendover, West** 36.59 325 ⇑P P 02 33 38.2 +0.9
baz=37
N13A **Wendover, West** 36.59 325 eP P 02 33 38.4 +1.1
comp=N,101nm,1.0s,mb5.7
VES **Vestal, Richgr** 36.62 315 ⇑P P 02 33 37.9 +0.3
baz=37
P11A **Circle Ranch,** 36.62 322 ⇑P P 02 33 38.4 +0.8
baz=37
K16A **Soda Springs** 36.64 330 ⇓P P 02 33 37.4 -0.2
baz=37,SNR=9.5
REDW **Red Top Meadow** 36.69 331 eP P 02 33 38.5 +0.4
comp=N,142nm,0.9s,mb5.9
SNOW **Snow King Moun** 36.72 331 eP P 02 33 38.9 +0.6
comp=N,132nm,0.8s,mb5.9
LOHW **Long Hollow** 36.77 332 eP P 02 33 39.0 +0.2
comp=N,90nm,1.4s,mb5.5
TPAW **Teton Pass** 36.84 331 eP P 02 33 39.6 +0.3
comp=N,58nm,0.8s,mb5.6
L14A **Malta** 36.89 328 ⇓P P 02 33 39.7 -0.1
baz=37,SNR=35
RRI2 **Red Ridge** 36.90 331 eP P 02 33 40.1 +0.3
comp=N,88nm,1.2s,mb5.6
M13A **Montello** 36.92 326 ⇑P P 02 33 40.2 +0.2
baz=37,SNR=26
M13A **Montello** 36.92 326 eP P 02 33 40.0 0.0
comp=N,30nm,1.0s,mb5.2
O11A **Cowboy Ranch,** 36.94 323 ⇓P P 02 33 40.9 +0.7
baz=37
RCTC **Rector, Farmer** 36.98 315 ⇓P P 02 33 41.2 +0.6
baz=37
J16A **Bone** 36.98 331 ⇑P P 02 33 40.6 +0.1
baz=37,SNR=30
I17A **Pilgrim Ck.** 36.99 332 ⇓P P 02 33 41.1 +0.5
baz=37,SNR=5.1
K15A **Arbon** 37.00 329 ⇑P P 02 33 40.5 -0.2
baz=37,SNR=25
DCID1 **Drake Creek** 37.02 331 eP P 02 33 41.4 +0.6
comp=N,39nm,0.9s,mb5.3
N12A **Clover Valley,** 37.06 325 ⇓P P 02 33 41.7 +0.5
baz=37,SNR=18
N12A **Clover Valley,** 37.06 325 eP P 02 33 42.0 +0.8
comp=N,61nm,1.2s,mb5.4
P10A **Eureka** 37.09 322 ⇓P P 02 33 42.2 +0.6
baz=37
ELK **Elko** 37.10 324 eP P 02 33 42.6 +1.0
IMW **Indian Meadow** 37.14 332 eP P 02 33 42.0 +0.1
comp=N,15nm,0.6s,mb5.1
IMW ePcP PcP 02 36 01.3 +0.5
K14A **Jones Ranch, D** 37.23 328 ⇑P P 02 33 42.3 -0.3
baz=37,SNR=89
L13A **Double Diamond** 37.30 327 ⇑P P 02 33 43.4 +0.1
baz=37
H17A **Grant Village** 37.36 333 ⇑P P 02 33 45.0 +1.3
baz=37
M12A **Wells** 37.37 325 ⇑P P 02 33 43.8 0.0
baz=37,SNR=15
RLMT **Red Lodge** 37.37 335 ⇓P P 02 33 43.5 -0.3
baz=37,SNR=18
RLMT **Red Lodge** 37.37 335 eP P 02 33 43.5 -0.3
comp=N,29nm,1.0s,mb5.2
I16A **Newdale** 37.38 331 ⇑P P 02 33 44.0 +0.1
baz=37,SNR=12
MLAC **Mammoth Lakes** 37.42 317 ⇑P P 02 33 45.3 +1.0
baz=37
N11A **Elko Archery C** 37.43 324 ⇓P P 02 33 44.7 +0.3
baz=38,SNR=12
J15A **Blackfoot** 37.48 330 ⇓P P 02 33 44.9 +0.2
baz=38,SNR=31
LAO **LASA Array** 37.51 339 eP P 02 33 44.4 -0.5
comp=N,57nm,1.4s,mb5.2
NVAR **Mina Array Bea** 37.52 319 P P 02 33 46.1 +0.9
comp=N,8.1nm,0.9s,mb4.6,baz=137,slow=8.4,SNR=31
NVAR PcP PcP 02 36 03.3 +1.3
comp=N,8.7nm,0.7s,baz=139,slow=4.7,SNR=23
NVAR ScP ScP 02 39 44.2 +1.0
comp=N,5.2nm,0.7s,baz=137,slow=5.0,SNR=18
YFT **Old Faithful** 37.52 332 eP P 02 33 46.8 +1.7
comp=N,48nm,1.0s,mb5.3
O10A **Cortez Mining,** 37.54 323 ⇓P P 02 33 45.6 +0.3
baz=38,SNR=11
G18A **Lazy EL Ranch,** 37.65 335 ⇓P P 02 33 45.7 -0.5
baz=38,SNR=22
K13A **Stover Farm, H** 37.77 328 ⇓P P 02 33 46.8 -0.4
baz=38,SNR=7.7
N10A **Dunphy** 37.81 323 ⇓P P 02 33 48.1 +0.5
baz=38
M11A **Holland Ranch,** 37.87 325 ⇓P P 02 33 48.2 +0.2
baz=38,SNR=6.5
H16A **Russell Place,** 37.91 332 ⇑P P 02 33 48.5 +0.2
baz=38,SNR=23
L12A **House Creek Ra** 37.92 326 ⇑P P 02 33 48.3 -0.2
baz=38,SNR=11
I15A **Monteview** 37.95 331 ⇑P P 02 33 49.2 +0.5
baz=38
J14A **Carey** 37.96 329 ⇑P P 02 33 49.3 +0.5
baz=38
BMN **Battle Mountai** 38.05 322 eP P 02 33 50.2 +0.6
comp=N,64nm,1.5s,mb5.2
GCMT **Greycliff** 38.08 335 eP P 02 33 49.6 -0.2
comp=N,14nm,0.7s,mb4.9
QLMT **Earthquake Lak** 38.09 332 eP P 02 33 51.2 +1.3
comp=N,22nm,0.9s,mb5.0
G17A **Pierce Place,** 38.16 333 ⇓P P 02 33 51.1 +0.7
baz=38,SNR=35
F18A **Big Timber** 38.19 335 ⇓P P 02 33 50.2 -0.4
baz=38,SNR=42
K12A **Draper Farm, C** 38.19 327 ⇓P P 02 33 50.4 -0.4
baz=38,SNR=20
ULM **Lac du Bonnet** 38.25 352 P P 02 33 48.6 -2.5
comp=N,12nm,0.7s,mb4.9,baz=173,slow=9.8,SNR=12
ULM pP pP 02 34 06.7 -1.9
comp=N,8.8nm,0.7s,baz=174,slow=8.3,SNR=3.4
ULM ScP ScP 02 39 43.9 -1.8
comp=N,6.4nm,0.6s,baz=149,slow=4.2,SNR=6.3
ULM LR LR 02 51 06.5
comp=N,91nm,21.9s,baz=330,slow=39
L11A **Cat Creek Ranc** 38.34 326 ⇑P P 02 33 51.6 -0.4
baz=38,SNR=20
J13A **Cove Ranch, Pi** 38.35 328 ⇑P P 02 33 51.8 -0.3
baz=38,SNR=24
M10A **I.L. Ranch, Tu** 38.35 324 ⇓P P 02 33 52.4 +0.3
baz=38
I14A **Mackay** 38.37 330 ⇓P P 02 33 52.8 +0.6
baz=38,SNR=38
DGMT **Dagmar** 38.41 342 ⇑P P 02 33 52.0 -0.5
baz=38,SNR=20
DGMT **Dagmar** 38.41 342 eP P 02 33 52.1 -0.4
comp=N,84nm,0.9s,mb5.6
H15A **Lima** 38.49 331 ⇑P P 02 33 54.3 +1.1
baz=38,SNR=32
G16A **Moss Hill, Enn** 38.56 332 ⇑P P 02 33 54.3 +0.5
baz=39,SNR=38
F17A **Fitzpatrick Pl** 38.59 334 ⇑P P 02 33 54.2 +0.2
baz=39,SNR=30
HLID **Hailey** 38.59 328 ⇑P P 02 33 54.2 +0.1
baz=39,SNR=37
HLID **Hailey** 38.59 328 eP P 02 33 54.1 +0.1
comp=N,22nm,1.1s,mb4.9
L10A **Juniper Basin** 38.67 325 ⇓P P 02 33 54.5 -0.3
baz=39,SNR=7.6
I13A **Wildhorse Cree** 38.69 329 ⇓P P 02 33 55.2 +0.3
baz=39,SNR=54
J12A **Stokes Ranch,** 38.72 327 ⇑P P 02 33 55.0 -0.2
baz=39,SNR=41
MCMT **McKenzie Canyo** 38.74 331 eP P 02 33 56.1 +0.8
comp=N,40nm,0.8s,mb5.3
E18A **Harlowton** 38.80 335 ⇓P P 02 33 55.6 -0.3
baz=39,SNR=18
BOZ **Bozeman (W)** 38.80 333 ⇓P P 02 33 55.8 -0.1
baz=39,SNR=56
BOZ **Bozeman (W)** 38.80 333 eP P 02 33 55.8 -0.1
comp=N,24nm,0.8s,mb5.1
G15A **Dillon** 38.83 332 ⇓P P 02 33 56.7 +0.7
baz=39,SNR=56
H14A **Leadore** 38.83 330 ⇓P P 02 33 56.9 +0.8
baz=39,SNR=90
K11A **Parker Ranch,** 38.90 326 ⇑P P 02 33 56.4 -0.3
baz=39,SNR=20
F16A **Kennard Place,** 38.91 333 ⇑P P 02 33 57.0 +0.3
baz=39,SNR=24
DLMT **Dillon** 39.02 332 eP P 02 33 57.9 +0.2
comp=N,82nm,1.3s,mb5.4
E17A **Martinsdale** 39.11 334 ⇑P P 02 33 58.4 0.0
baz=39,SNR=21
I12A **Atlanta** 39.12 328 ⇓P P 02 33 58.7 +0.2
baz=39,SNR=26
MFID **Camas Ranch** 39.22 327 ⇑P P 02 33 59.2 -0.2
baz=39,SNR=13
H13A **Challis** 39.23 330 ⇓P P 02 33 59.7 +0.3
baz=39,SNR=72
D18A **Linhart Farms,** 39.27 336 ⇑P P 02 33 59.7 0.0
baz=39,SNR=11
LRM **Limekiln Ridge** 39.31 332 eP P 02 34 00.4 +0.3
comp=N,291nm,1.1s,mb6.0
G14A **Jackson** 39.34 331 ⇑P P 02 34 00.1 -0.2
baz=39,SNR=5.4
F15A **Butte** 39.34 332 ⇑P P 02 34 00.2 -0.2
baz=39,SNR=48
K10A **MacKenzie Ranc** 39.36 326 ⇑P P 02 34 00.1 -0.4
baz=39,SNR=16
H12A **Diamond D Ranc** 39.51 329 ⇑P P 02 34 01.9 +0.1
baz=40,SNR=30
E16A **East Helena** 39.52 334 ⇓P P 02 34 01.4 -0.3
baz=40,SNR=45
D17A **Six Diamond Ra** 39.59 335 ⇑P P 02 34 02.2 -0.2
baz=40,SNR=38
G13A **Cobalt** 39.60 330 ⇑P P 02 34 02.1 -0.4
baz=40,SNR=22
I11A **Placerville** 39.63 328 ⇑P P 02 34 02.8 0.0
baz=40,SNR=42
BEKR **Beckworth** 39.65 319 ⇑P P 02 34 03.4 +0.4
baz=40,SNR=10
F14A **Wisdom** 39.72 332 ⇓P P 02 34 03.2 -0.3
baz=40,SNR=6.2
HRY **Holter Researc** 39.72 334 eP P 02 34 03.9 +0.4
comp=N,17nm,0.7s,mb5.0
J10A **Berg Farm, Mel** 39.73 326 ⇓P P 02 34 03.5 -0.1
baz=40
D16A **Dana Ranch, Ca** 39.85 334 ⇑P P 02 34 04.2 -0.3
baz=40,SNR=26
E15A **Deer Lodge** 39.85 333 ⇑P P 02 34 04.3 -0.3
baz=40,SNR=46
EGMT **Eagleton** 39.93 337 ⇓P P 02 34 05.0 -0.2
baz=40
EGMT **Eagleton** 39.93 337 eP P 02 34 05.0 -0.2
comp=N,11nm,0.7s,mb4.8
C17A **Wharram Farm,** 40.01 336 ⇓P P 02 34 05.3 -0.5
baz=40,SNR=9.3
WVOR **Wild Horse Val** 40.14 324 eP P 02 34 06.6 -0.4
comp=N,20nm,0.9s,mb5.0
WVOR ePcP PcP 02 36 11.3 +1.1
F13A **Darby** 40.16 331 ⇓P P 02 34 06.6 -0.5
baz=40,SNR=39
G12A **Big Creek, Yel** 40.16 329 ⇑P P 02 34 06.8 -0.3
baz=40,SNR=26
I10A **Payette** 40.20 327 ⇑P P 02 34 07.1 -0.3
baz=40,SNR=12
H11A **Donnelly** 40.21 328 ⇑P P 02 34 06.8 -0.7
baz=40,SNR=46
J09A **Fry Pan Ranch,** 40.22 326 ⇓P P 02 34 07.3 -0.3
baz=40,SNR=36
E14A **Clinton** 40.23 332 ⇑P P 02 34 07.2 -0.5
baz=40,SNR=9.0
B18A **Beardsley Farm** 40.24 337 ⇓P P 02 34 07.4 -0.4
baz=40,SNR=9.1
D15A **Lincoln** 40.28 334 ⇓P P 02 34 08.0 -0.1
baz=40,SNR=26
CHMT **Chamberlain Mo** 40.50 333 eP P 02 34 09.8 -0.1
comp=N,22nm,1.4s,mb4.8
H10A **Noah's Angus R** 40.51 328 ⇑P P 02 34 08.8 -1.3
baz=40,SNR=20
C16A **Fuhringer Ranc** 40.54 335 ⇑P P 02 34 09.9 -0.3
baz=41,SNR=9.2
B17A **L&G Farms, Che** 40.55 336 ⇓P P 02 34 09.4 -0.9
baz=41,SNR=6.8
E13A **Victor** 40.57 332 ⇑P P 02 34 10.2 -0.3
baz=41,SNR=21
F12A **Elk City** 40.58 330 ⇑P P 02 34 10.2 -0.3
baz=41,SNR=124
I09A **Lost Marbles R** 40.62 326 ⇓P P 02 34 10.4 -0.6
baz=41,SNR=20
J08A **Circle Bar Ran** 40.63 325 ⇓P P 02 34 10.5 -0.5
baz=41,SNR=12
A18A **Metzger Ranch,** 40.70 338 ⇓P P 02 34 11.0 -0.6
baz=41,SNR=15
D14A **Greenough** 40.74 333 ⇑P P 02 34 11.2 -0.7
baz=41,SNR=10.0
MSO **Missoula** 40.74 332 eP P 02 34 11.4 -0.5
comp=N,42nm,1.3s,mb5.1
MOD **Modoc** 40.79 322 eP P 02 34 11.8 -0.6
comp=N,6.7nm,1.1s,mb4.4
G11A **Walters Elk Ra** 40.82 329 ⇑P P 02 34 11.4 -1.2
baz=41,SNR=33
SLMT **Seeley Lake** 40.86 333 eP P 02 34 12.5 -0.4
comp=N,11nm,1.0s,mb4.6
C15A **Salmond Ranch,** 40.88 334 ⇓P P 02 34 12.8 -0.3
baz=41,SNR=26
BMO **Blue Mountains** 40.98 328 eP P 02 34 12.9 -1.0
comp=N,6.3nm,0.9s,mb4.5
B16A **M & M Farms, S** 41.01 336 ⇑P P 02 34 13.1 -1.0
baz=41
H09A **Durkee** 41.04 327 ⇓P P 02 34 13.3 -1.1
baz=41,SNR=6.1
F11A **Grangeville** 41.11 330 ⇓P P 02 34 13.5 -1.4
baz=41,SNR=20
D13A **Huson** 41.18 332 ⇑P P 02 34 14.9 -0.6
baz=41,SNR=31
G10A **Bishop Farm, J** 41.18 328 ⇑P P 02 34 14.4 -1.2
baz=41,SNR=22
E12A **Beaver Dam Sad** 41.20 331 ⇑P P 02 34 14.8 -0.9
baz=41,SNR=29
B15A **Bradely Ranch,** 41.28 335 ⇓P P 02 34 15.7 -0.6
baz=41,SNR=22
SWMT **Swartz Lake** 41.28 333 eP P 02 34 16.0 -0.4
comp=N,5.1nm,0.8s,mb4.4
C14A **Swan Lake** 41.37 333 ⇓P P 02 34 16.6 -0.5
baz=41
H08A **Prairie City** 41.49 326 ⇓P P 02 34 17.1 -1.0
baz=42,SNR=19
G09A **Cove** 41.52 328 ⇓P P 02 34 16.6 -1.6
baz=42,SNR=23
D12A **Red Ives Fores** 41.56 331 ⇑P P 02 34 17.8 -0.8
baz=42
JTMT **Jette** 41.59 333 eP P 02 34 18.7 -0.1
comp=N,14nm,1.3s,mb4.5
B14A **Marquette Ranc** 41.62 334 ⇑P P 02 34 18.3 -0.8
baz=42,SNR=9.7
K05A **Summer Lake** 41.63 323 ⇑P P 02 34 18.2 -1.1
baz=42,SNR=6.3
I07A **Izee** 41.66 325 ⇑P P 02 34 18.3 -1.3
baz=42,SNR=22
C13A **Hot Springs** 41.67 333 ⇓P P 02 34 18.6 -0.9
baz=42,SNR=12
F10A **Beach Ranch, E** 41.71 329 ⇓P P 02 34 18.6 -1.3
baz=42,SNR=22
F09A **S2 Ranch, Elgi** 41.87 328 ⇓P P 02 34 20.2 -1.0
baz=42,SNR=5.8
A15A **Johnson Ranch,** 41.88 335 ⇑P P 02 34 20.6 -0.6
baz=42,SNR=38
BSMT **Bassoo Peak** 41.89 333 eP P 02 34 21.4 +0.1
comp=N,7.3nm,1.0s,mb4.4
E10A **Myers Farm, Un** 42.00 330 ⇓P P 02 34 21.1 -1.2
baz=42
C12B **Naegeli Ranch,** 42.10 332 ⇓P P 02 34 22.6 -0.4
baz=42
B13A **Whitefish** 42.14 333 ⇑P P 02 34 23.2 -0.2
baz=42,SNR=17
A14A **Double T Ranch** 42.16 335 ⇓P P 02 34 23.0 -0.5
baz=42,SNR=48
YBH **Yreka Blue Hor** 42.17 320 LR LR 02 55 34.9
comp=N,173nm,20.7s,baz=145,slow=41
LNOR **Lincton Mounta** 42.18 328 eP P 02 34 23.4 -0.3
comp=N,9.7nm,0.7s,mb4.6
D10A **Wagner Farm, O** 42.48 330 ⇓P P 02 34 24.9 -1.2
baz=42,SNR=23
E09A **Wood Farm, Sta** 42.54 329 ⇑P P 02 34 25.9 -0.7
baz=43
A13A **Flathead Natio** 42.54 334 ⇑P P 02 34 26.8 +0.2
baz=43
C11A **Tepee Creek (N** 42.55 332 ⇓P P 02 34 26.2 -0.5
baz=43,SNR=21
B12A **Libby** 42.71 333 ⇓P P 02 34 27.7 -0.3
baz=43,SNR=5.4
E08A **Dider Farm, El** 42.99 328 ⇑P P 02 34 29.3 -1.0
baz=43
G06A **Carlson Farm,** 43.02 326 ⇑P P 02 34 30.1 -0.4
baz=43
F07A **Phinny Hill Vi** 43.06 327 ⇑P P 02 34 30.0 -0.8
baz=43
A12A **Yaak River Ran** 43.08 333 ⇑P P 02 34 30.9 0.0
baz=43
HAWA **Hanford** 43.17 328 eP P 02 34 31.1 -0.6
comp=N,15nm,0.8s,mb4.8
NEW **Newport** 43.26 331 eP P 02 34 31.3 -1.1
comp=N,12nm,0.9s,mb4.6
D08A **Wollman Farm,** 43.30 329 ⇑P P 02 34 31.8 -1.0
baz=43,SNR=19
OD2 **Odessa Site #2** 43.42 329 P P 02 34 33.2 -0.5
E07A **Sunnyside** 43.45 328 ⇑P P 02 34 33.3 -0.7
baz=44,SNR=6.5
H04A **Detroit Lake** 43.55 324 ⇑P P 02 34 33.6 -1.2
baz=44,SNR=15
FFC **Flin Flon** 43.61 348 eP P 02 34 34.3 -0.8
comp=N,48nm,1.4s,mb5.0
HOOD **Mount Hood Mea** 43.63 325 eP P 02 34 35.6 +0.1
comp=N,218nm,0.9s,mb5.9
MXC **Moxie City** 43.69 327 P P 02 34 36.1 +0.2
G04A **Mulino** 44.03 325 ⇑P P 02 34 37.6 -1.0
baz=44
ASR **Mount Adams--S** 44.12 326 P P 02 34 39.8 +0.5
B08A **Colville Reser** 44.39 330 ⇓P P 02 34 40.3 -1.2
baz=44,SNR=16
F04A **Amboy** 44.44 325 ⇑P P 02 34 40.8 -1.0
baz=44,SNR=6.7
LON **Longmire** 44.61 327 eP P 02 34 42.4 -0.8
comp=N,16nm,0.9s,mb4.8
D05A **Enumclaw** 44.98 327 ⇑P P 02 34 45.1 -1.1
baz=45,SNR=7.0
F03A **Seaside** 45.07 325 ⇑P P 02 34 46.7 -0.2
baz=45,SNR=6.6
PNT **Pentiction** 45.18 331 P P 02 34 47.4 -0.3
SCHQ **Schefferville** 45.31 17 P P 02 34 46.1 -2.5
comp=N,43nm,0.6s,mb5.3,baz=216,slow=6.7,SNR=125
SCHQ LR LR 02 54 32.1
comp=N,348nm,19.5s,baz=219,slow=37
SCHQ **Schefferville** 45.31 17 eP P 02 34 47.2 -1.4
comp=N,56nm,0.9s,mb5.3
RPW **Rockport** 45.53 329 eP P 02 34 49.6 -1.0
comp=N,18nm,1.0s,mb4.8
JCW **Jim Creek** 45.58 328 eP P 02 34 49.7 -1.2
comp=N,53nm,1.0s,mb5.2
GNW **Green Mountain** 45.66 327 eP P 02 34 50.4 -1.2
comp=N,14nm,0.9s,mb4.7
NLWA **Neilton Lookou** 46.11 326 ⇓P P 02 34 54.6 -0.5
baz=46,SNR=15
NLWA **Neilton Lookou** 46.11 326 eP P 02 34 54.7 -0.4
comp=N,31nm,1.0s,mb5.0
A05A **Maple Falls** 46.18 329 ⇑P P 02 34 54.5 -1.1
baz=46
CPUP **Villa Florida** 48.59 143 P P 02 35 13.1 -1.5
comp=N,10.0nm,0.8s,mb4.8,baz=317,slow=7.7,SNR=33
CPUP PcP PcP 02 36 39.5 +0.2
comp=N,3.4nm,0.6s,baz=299,slow=3.6,SNR=5.4
CPUP LR LR 02 56 09.5
comp=N,126nm,21.7s,baz=314,slow=36
CPUP **Villa Florida** 48.59 143 eP P 02 35 13.5 -1.1
comp=N,43nm,0.8s,mb5.4
CPUP ePcP PcP 02 36 39.5 +0.1
YKA **Yellowknife Ar** 53.51 345 P P 02 35 49.1 -1.9
comp=N,8.7nm,0.8s,mb4.9,baz=136,slow=7.8,SNR=18
YKA pP pP 02 36 07.3 -2.1
comp=N,4.4nm,0.9s,baz=140,slow=7.1,SNR=3.1
YKA PcP PcP 02 36 55.0 -1.9
comp=N,3.0nm,0.6s,baz=144,slow=3.9,SNR=7.5
YKA ScP ScP 02 40 47.9 -0.6
comp=N,1.4nm,0.5s,baz=146,slow=4.5,SNR=7.5
YKA **Yellowknife Ar** 53.51 345 P P 02 35 49.1 -1.9
YKA pP pP 02 36 07.3 -2.1
YKA PcP PcP 02 36 55.0 -1.9
YKA ScP ScP 02 40 47.9 -0.6
PLCA **Paso Flores** 55.28 164 P P 02 36 04.2 +0.1
comp=N,20nm,0.9s,mb5.1,baz=340,slow=7.8,SNR=34
PLCA PcP PcP 02 37 03.7 -0.3
comp=N,6.1nm,0.9s,baz=346,slow=8.3,SNR=3.9
PLCA LR LR 02 55 31.5
comp=N,92nm,19.4s,baz=272,slow=31
PLCA **Paso Flores** 55.28 164 eP P 02 36 04.6 +0.5
comp=N,24nm,1.0s,mb5.2
PLCA ePcP PcP 02 37 04.0 -0.1
TRQA **Tornquist** 55.75 156 eP P 02 36 06.9 -0.6
comp=N,76nm,1.6s,mb5.5
RKT **Rikitea** 58.26 233 eLR LR 02 53 24.5
comp=N,371nm,30.5s
EGAK **Eagle** 63.69 337 eP P 02 36 59.9 -1.8
comp=N,1.6nm,0.7s,mb4.0
KDAK **Kodiak Island** 66.21 328 LR LR 03 09 23.8
comp=N,129nm,18.1s,baz=353,slow=39
MCK **McKinley** 66.33 335 eP P 02 37 17.5 -1.3
comp=N,10nm,0.9s,mb4.7
TRF **Thorofare Moun** 66.80 334 eP P 02 37 20.5 -1.3
comp=N,20nm,1.2s,mb4.8
KTH **Kantishna Hill** 67.10 334 eP P 02 37 22.1 -1.7
comp=N,4.7nm,0.8s,mb4.4
BPAW **Bear Paw Mtn.** 67.31 335 eP P 02 37 23.5 -1.6
comp=N,6.6nm,0.8s,mb4.5
PPLA **Purkeypile** 67.44 333 eP P 02 37 24.3 -1.6
comp=N,25nm,1.5s,mb4.8
PPT **Papeete** 68.01 245 eLR LR 02 57 50.9
comp=N,524nm,26.8s,baz=66
PPT **Papeete** 68.01 245 LR LR 02 58 17.9
comp=N,164nm,20.1s,baz=314,slow=28
COLD **Coldfoot** 68.08 338 eP P 02 37 29.4 -0.4
comp=N,9.0nm,0.9s,mb4.6
ESDC **Sonseca Array** 77.35 52 P P 02 38 22.3 -3.0
comp=N,0.6nm,0.5s,baz=288,slow=5.6,SNR=6.5
LDF **La Druitiere** 79.15 42 eP Px 02 38 48.5
TCF **Toulx Ste Croi** 81.02 45 eP Px 02 38 57.4
comp=N,24nm,1.2s
DBIC **Dimbokro** 81.61 85 LR LR 03 11 02.8
comp=N,101nm,20.5s,baz=280,slow=33
SSF **Saint Saulge** 81.78 44 eP Px 02 39 01.3
comp=N,15nm,1.0s
WLF **Walferdange** 83.06 41 eP pP 02 39 14.5 -1.0
comp=Z,16nm,1.3s
NB2 **NORSAR Subarra** 83.44 29 P P 02 38 54.7 -2.9
comp=Z,0.7nm,0.6s,mb3.7,baz=284,slow=5.1
NOA **NORSAR Array B** 83.44 29 P P 02 38 55.0 -2.6
comp=Z,0.9nm,0.6s,mb3.8,baz=287,slow=4.8,SNR=5.0
NOA pP pP 02 39 16.1 -1.1
comp=Z,5.3nm,1.0s,baz=284,slow=5.2,SNR=12
NOA LR LR 03 12 02.8
comp=Z,42nm,21.1s,baz=285,slow=33
BILL **Bilibino** 84.40 339 eP P 02 39 00.8 -1.5
comp=Z,11nm,0.7s,mb4.8
BFO **Black Forest** 84.74 42 eP pP 02 39 24.3 +0.2

comp=Z,21nm,1.8s
NRDL Niedersach Rie 84.89 37 *e*P pP 02 39 26.9 +2.1
comp=Z,6.0nm,1.0s
CLZ Clausthal 85.20 38 *e*P pP 02 39 26.9 +0.5
comp=Z,10.0nm,1.0s
FX1 Attu Island--F 85.60 323 P **P 02 39 07.6 -1.0**
comp=Z,5.4nm,0.7s,mb4.6,baz=211,slow=5.9,SNR=4.5
FX1 LR LR 03 16 03.8
comp=Z,26nm,21.9s,baz=86,slow=35
ARCES ARCESS Array B 86.22 19 P **P 02 39 08.7 -2.6**
comp=Z,3.0nm,1.0s,mb4.2,baz=305,slow=4.3,SNR=11
GRA1 Grafenberg Arr 86.26 40 *e*P pP 02 39 32.8 +1.1
GRA1 *e*pP sP 02 39 37.3 -2.2
GRF Grafenberg Arr 86.26 40 *e*P pP 02 39 32.8 +1.1
comp=Z,15nm,1.2s
GRF *e*pP sP 02 39 37.3 -2.2
MOX Moxa 86.26 39 *e*P **P 02 39 12.3 +0.4**
comp=Z,9.0nm,1.4s,mb4.5
MOX *e* pP 02 39 33.0 +1.3
MOX Moxa 86.26 39 *e*P pP 02 39 32.7 +1.0
comp=Z,7.0nm,1.3s
FETA Feichten 86.62 43 ⇑*i*pP pP 02 39 34.9 +1.4
comp=Z,5.1nm,1.0s
PLN Plauen 86.64 39 *e*P pP 02 39 34.7 +1.2
comp=Z,64nm,1.3s
WERD Werda 86.74 39 *e*P pP 02 39 34.9 +0.9
comp=Z,6.0nm,1.0s
GUNZ Gunzen 86.78 39 *e*P pP 02 39 35.4 +1.2
comp=Z,12nm,1.3s
WERN Wernitzgruen 86.83 39 *e*P pP 02 39 35.6 +1.1
comp=Z,13nm,1.1s
TANN Tannenbergstha 86.84 39 *e*P pP 02 39 35.4 +0.9
comp=Z,11nm,1.1s
ROTZ Rotzenmuhle 86.86 40 *e*P pP 02 39 36.0 +1.4
comp=Z,7.0nm,1.1s
NKC Novy Kostel 86.88 39 *e*P pP 02 39 35.5 +0.8
comp=Z,10.0nm,0.8s
CLL Collm 86.93 38 *e*P pP 02 39 35.8 +0.9
comp=Z,8.0nm,1.2s
CLL Collm 86.93 38 *e*P **P 02 39 11.0 -4.2**
CLL *i*pP pP 02 39 35.7 +0.8
CLL Collm 86.93 38 *i*pP pP 02 39 35.7 +0.8
comp=Z,8.0nm,1.2s
RUE Ruedersdorf 87.06 37 *e*P pP 02 39 37.1 +1.5
comp=Z,15nm,0.6s
WET Wettzell 87.45 40 *e*P pP 02 39 38.8 +1.3
comp=Z,12nm,1.2s
RJOB Jochberg 87.79 42 *e*P pP 02 39 39.5 +0.3
comp=Z,8.0nm,1.2s
PETK Petropavlovsk- 94.23 327 LR LR 03 24 16.4
comp=Z,83nm,19.4s,baz=148,slow=37
BOSA Boshof 115.92 116 PKP PKPdf 02 45 12.4 -0.8
comp=Z,6.6nm,0.8s,baz=298,slow=3.5,SNR=8.3
CN2 Changchun 116.36 334 *e*PKP PKPdf 02 45 13.3 -0.4
CN2 PP PP 02 46 24.5 +4.8
CN2 LR LR
comp=N,1μm,22.0s
CN2 LR LR
comp=E,700nm,22.0s
CN2 LR LR
comp=Z,100nm,21.0s
KSRS Korea Array 120.12 328 PKP PKPdf 02 45 20.8 -0.4
comp=Z,5.0nm,0.6s,baz=5.0,slow=1.6,SNR=21
MKAR Makanchi Array 120.31 8 PKP PKPdf 02 45 18.8 -2.4
comp=Z,0.6nm,0.8s,baz=321,slow=3.8,SNR=3.6
MAW Mawson 121.63 167 PKP PKPdf 02 45 22.7 -0.3
comp=Z,1.1nm,0.5s,baz=252,slow=5.9,SNR=4.4
BJI Beijing 123.23 338 PKP PKPdf 02 45 25.9 -1.2
BJI LR LR
comp=N,110nm,27.2s
BJI LR LR
comp=E,140nm,22.6s
BJI LR LR
comp=Z,120nm,32.6s
WMQ Urumqi 123.81 4 *e*PKP PKPdf 02 45 29.0 +0.9
HHC Hu-ho-hao-te 124.02 342 *e*PKP PKPdf 02 45 26.3 -2.3
HHC sPKP 02 46 03.6
HHC PKS 02 49 01.5
HHC SKS SKSdf 02 52 26.4 -7.9
HHC SKKS SKKSac 02 53 56.6 -8.7
HHC LR LR
comp=N,84nm,19.0s
HHC LR LR
comp=E,100nm,19.0s
HHC LR LR
comp=Z,92nm,20.2s
GTA Gaotai 127.90 353 *e*PKP PKPdf 02 45 36.0 0.0
GTA PKS 02 49 10.9
GTA SKS SKSdf 02 52 36.4 -5.2
GTA SKKS SKKSac 02 54 20.0 -10
GTA AMB AMB
comp=Z,170nm,10.6s
GTA LR LR
comp=N,100nm,10.1s
GTA LR LR
comp=E,70nm,9.5s
GTA LR LR
comp=Z,96nm,11.3s
LZH Lanzhou 130.48 348 *e*PKP PKPdf 02 45 41.5 +0.5
LZH sPKP 02 46 21.4
LZH PP PP 02 48 01.5 +7.1
LZH PKS 02 49 19.0
LZH SKS SKSdf 02 52 42.6 -3.9
LZH SKKS SKKSac 02 54 45.0 -1.1
LZH SS SS 03 05 19.4 +3.5
LZH AMB AMB
comp=Z,110nm,4.0s
STKA Stephens Creek 130.92 239 PKP PKPdf 02 45 42.5 +0.6
comp=Z,4.6nm,0.6s,baz=88,slow=3.4,SNR=9.4
STKA Stephens Creek 130.92 239 PKP PKPdf 02 45 42.5 +0.6
WHN Wuhan 132.25 334 *e*PKP PKPdf 02 45 42.5 -2.0
CD2 Chengdu 135.47 346 *e*PKP PKPdf 02 45 51.1 +0.5
CD2 sPKP 02 46 29.5
CD2 PP PP 02 48 31.9 +5.5
CD2 SKKS SKKSac 02 55 11.9 -4.8
CD2 SS SS 03 06 16.1 -0.4
CD2 AMB AMB
comp=Z,120nm,10.2s
CD2 LR LR
comp=N,130nm,15.8s
GYA Guiyang 138.85 340 *e*Pdif Pdif 02 43 04.3 -3.7
GYA PKP PKPdf 02 45 53.8 -3.1
GYA sPKP 02 46 39.0
GYA PP PP 02 48 50.0 +2.4
GYA AMB AMB
comp=Z,110nm,7.8s
WRAB Tennant Creek 139.05 254 *e*PKPdf PKPdf 02 45 58.0 +0.6
WRA Warramunga Arr 139.06 254 PKhKP 02 45 49.4
comp=Z,2.8nm,1.0s,baz=97,slow=3.6,SNR=7.3
WRA PKP PKPdf 02 45 57.4 0.0
comp=Z,12nm,0.8s,baz=94,slow=2.3,SNR=30
WRA SKPbc SKPbc 02 49 28.5 +2.2
comp=Z,1.2nm,0.7s,baz=93,slow=2.3,SNR=7.6
ASAR Alice Springs 139.07 248 PKhKP 02 45 47.8
comp=Z,1.7nm,0.7s,baz=102,slow=2.6,SNR=13
ASAR PKP PKPdf 02 45 57.6 +0.3
comp=Z,5.9nm,0.7s,baz=98,slow=1.8,SNR=21
ASAR pPKP pPKPdf 02 46 19.0 +1.0
comp=Z,2.3nm,0.8s,baz=163,slow=1.4,SNR=2.7
ASAR SKPbc SKPbc 02 49 28.2 +1.9
comp=Z,3.9nm,0.7s,baz=104,slow=2.9,SNR=23
KMI Kunming 141.26 345 PKP PKPdf 02 45 59.3 -2.0
FITZ Fitzroy Crossi 147.41 256 *e*P PKPdf 02 46 12.4 +0.3
comp=Z,42nm,0.9s
FITZ Fitzroy Crossi 147.41 256 *e*PKPbc PKPbc 02 46 12.6 -2.1
FITZ *e*PKPab PKPab 02 46 15.3 -1.5
CMAR Chiang Mai Arr 148.56 348 PKP PKPdf 02 46 13.2 -0.9
comp=Z,6.7nm,0.7s,baz=318,slow=2.9,SNR=9.8
CMAR PKPbc PKPbc 02 46 16.5 -1.2
comp=Z,6.9nm,0.7s,baz=345,slow=3.7,SNR=21
CMAR pPKPbc pPKPbc 02 46 35.5 -2.8
comp=Z,3.6nm,0.8s,baz=345,slow=3.5,SNR=3.3
KKM Kota Kinabalu 149.94 306 *e*PKPbc PKPbc 02 46 21.9 +0.5

*NIED **19** 02:34:00, 39.°20N×141.°00E, h5km, Mw3.8 Best double couple: M0:5.74000×10^14 NP1:φs=17.00000°, δ82.00000°, λ117.00000°. NP2:φs=122.00000°, δ28.00000°, λ17.00000°.*
*NEIC **19** 02:34:13.3, 39.°20N×140.°99E, h5km, mb4.4/1, After JMA.*
*JMA **19** 02:34:13.3, 39.°20N×140.°99E, h5km±1km, M4.3*
Broadband fault plane solution: P waves. NP1: φs=100.00000°, δ7.00000°, λ-4.00000°. NP2:φs=194.00000°, δ89.00000°, λ-97.00000°. Principal axes: T Plg44.0000°, Azm291.0000°; N Plg7.0000°, Azm194.0000°; P

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Plg45.0000°, Azm97.0000°;
JMA Felt II J1.
*ISCJB **19** 02:34:14.0±0.4, 39.°17N±0.°03×141.°00E±0.°04, h10km, mb3.9/6, MS4.0/4 Error ellipse: s-maj=4.6km s-min=3.7km az=33.1*
*IDC **19** 02:34:16.2±1.2, 38.°89N×141.°13E, h0km, mb3.7/5, mb1 3.9/9, mb1mx3.7/27, mbtmp3.8/9, ML3.6/4, MS3.9/4, Ms1 3.9/4, ms1mx3.0/41, Error ellipse: s-maj=29.6km s-min=18.5km az=95.0*
ISC 19 02:34:14.9±0.5, 39.°15N±0.°03×141.°02E±0.°04, h10km, n26, σ1§60/29, mb3.9/6, MS4.0/4, 2C-3D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.25**	**141**	⇓P	**Pg**	**02 34 19.2**	**-0.8**
JMK				S	**Sg**	**02 34 23.7**	**+0.3**
JRG	**Rokugo**	**0.39**	**310**	⇑P	**Pg**	**02 34 20.1**	**-2.5**
JRG				*e*S	**Sg**	**02 34 24.9**	**-2.8**
JOM	**Ohasama**	**0.39**	**33**	⇓P	**Pg**	**02 34 20.4**	**-2.2**
JOM				S	**Sg**	**02 34 26.0**	**-1.8**
OFUJ	**Ofunato**	**0.51**	**97**	⇓P	**Pg**	**02 34 23.7**	**-1.2**
JYK	**Kaneyama**	**0.56**	**246**	⇑P	**Pg**	**02 34 24.7**	**-1.1**
JYK				S	**Sg**	**02 34 32.1**	**-1.1**
JIO	**Ouri**	**0.74**	**159**	P	**Pg**	**02 34 28.2**	**-1.0**
JOU	**Okura**	**0.83**	**200**	P	**Pg**	**02 34 29.9**	**-0.9**
JOU				S	**Sg**	**02 34 41.9**	**+0.3**
ERM	**Erimo**	**3.30**	**29**	*e*Pn	**Pn**	**02 35 08.5**	**+2.0**
ERM				*e*S	**Sb**	**02 35 54.6**	**+1.0**
MJAR	**Matsushiro Arr**	**3.42**	**221**	Pn	**Pn**	**02 35 10.3**	**+2.1**
	1.0nm,0.3s,baz=31,slow=12,SNR=1.8						
MJAR				Pg	**Pg**	**02 35 16.3**	**-4.2**
	2.3nm,0.3s,baz=37,slow=12,SNR=13						
MAJO	**Matsushiro**	**3.42**	**221**	*e*Pn	**Pn**	**02 35 10.4**	**+2.1**
MAT	**Matsushiro**	**3.42**	**221**	P	**Pn**	**02 35 10.7**	**+2.4**
MAT				*e*S	**Sb**	**02 35 55.4**	**-1.8**
ASAJ	**Asahikawa**	**5.11**	**13**	Pn	**Pn**	**02 35 37.5**	**+6.1**
	1.2nm,0.3s,baz=274,slow=19,SNR=5.4						
JHJ	**Hachijo jima 2**	**6.10**	**190**	Pn	**Pn**	**02 35 43.3**	**-1.8**
	35nm,0.3s,baz=254,slow=23,SNR=8.3						
KSRS	**Korea Array**	**10.43**	**265**	Pn	**Pn**	**02 36 48.4**	**+3.9**
	0.6nm,0.3s,baz=79,slow=14,SNR=16						
KSRS				LR	LR	02 40 20.2	
	comp=Z,34nm,20.6s,baz=164,slow=35						
ZALV	**Zalesovo Beam**	**40.28**	**311**	P	**P**	**02 41 57.6**	**+5.7**
	1.0nm,0.4s,mb3.9,baz=79,slow=9.0,SNR=3.9						
MKAR	**Makanchi Array**	**42.76**	**300**	P	**P**	**02 42 15.0**	**+2.6**
	0.5nm,0.8s,mb3.3,baz=83,slow=13,SNR=2.8						
TKM2	**Tokmak 2**	**48.38**	**297**	*e*P	**P**	**02 42 57.1**	**+0.3**
	3.3nm,0.8s,mb4.4						
WRA	**Warramunga Arr**	**59.11**	**187**	P	**P**	**02 44 16.1**	**+0.7**
	0.6nm,0.6s,mb3.8,baz=4.9,slow=7.0,SNR=3.1						
ASAR	**Alice Springs**	**62.84**	**187**	P	**P**	**02 44 42.7**	**+2.0**
	0.3nm,0.6s,mb3.6,baz=10,slow=5.2,SNR=5.6						
FINES	**FINESS Array B**	**66.81**	**332**	P	**P**	**02 45 11.6**	**+5.3**
	2.1nm,0.9s,mb4.2,baz=30,slow=12,SNR=2.6						
FINES	**FINESS Array B**	**66.81**	**332**	P	**P**	**02 45 11.6**	**+5.3**
BRTR	**Keskin Array B**	**77.23**	**311**	LR	LR	03 22 45.3	
	comp=Z,35nm,21.2s,MS3.6,baz=125,slow=38						
VRAC	**Vranov**	**79.19**	**327**	LR	LR	03 21 26.7	
	comp=Z,55nm,18.5s,MS3.9,baz=171,slow=36						
URZ	**Urewera**	**83.86**	**152**	LR	LR	03 21 06.3	
	comp=Z,90nm,18.8s,MS4.2,baz=43,slow=34						
RPZ	**Rata Peaks**	**86.84**	**159**	LR	LR	03 18 26.8	
	comp=Z,155nm,21.2s,MS4.4,baz=224,slow=31						
LPAZ	**La Paz**	**145.84**	**56**	PKPbc	PKPbc	02 53 57.5	+2.7
	0.4nm,0.5s,baz=103,slow=3.2,SNR=3.6						

*CSEM **19** 02:39:45.2±0.3, 36.°23N×22.°04E, h10km, MD3.8, Error ellipse: s-maj=10.3km s-min=4.7km az=45.0*
*ATH **19** 02:39:47.1, 36.°24N×22.°13E, h37km±4km, MD3.8/23*
*NEIC **19** 02:39:47.1, 36.°24N×22.°13E, h37km, MD3.8(ATH), After ATH.*
ISC 19 02:39:48.2±0.7, 36.°20N±0.°06×22.°05E±0.°07, h43km±31km, n82, σ1§08/91, 2D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.73**	**340**	⇓*i*PN	**Pn**	**02 40 01.2**	**-1.0**
PYL				*e*SN	**Sn**	**02 40 13.3**	**+1.0**
PYL	**PYLOS**	**0.73**	**340**	⇓*i*Pn	**Pn**	**02 40 01.2**	**-1.0**
KYTH	**Kithira**	**0.80**	**84**	*e*Pn	**Pn**	**02 40 02.6**	**-0.5**
KYTH	**Kithira**	**0.80**	**84**	*e*PN	**Pn**	**02 40 02.6**	**-0.5**
KYTH	**Kithira**	**0.80**	**84**	*e*Pn	**Pn**	**02 40 02.6**	**-0.5**
VLI	**Veliai**	**0.88**	**54**	*e*Pn	**Pn**	**02 40 02.6**	**-1.5**
VLI				*e*Sn	**Sn**	**02 40 14.7**	**-1.1**
VLI	**Veliai**	**0.88**	**54**	*e*PN	**Pn**	**02 40 02.6**	**-1.5**
VLI				*e*SN	**Sn**	**02 40 14.7**	**-1.1**
VLI	**Veliai**	**0.88**	**54**	*e*Pn	**Pn**	**02 40 02.6**	**-1.5**
ITM	**Ithomi**	**0.98**	**354**	*e*Pn	**Pn**	**02 40 04.9**	**-0.6**
ITM				*e*Sn	**Sn**	**02 40 18.3**	**+0.1**
ITM	**Ithomi**	**0.98**	**354**	*e*PN	**Pn**	**02 40 04.9**	**-0.6**
ITM				*e*SN	**Sn**	**02 40 18.2**	**0.0**
ITM	**Ithomi**	**0.98**	**354**	*e*Pn	**Pn**	**02 40 04.9**	**-0.6**
ITM				*e*Sn	**Sn**	**02 40 18.3**	**+0.1**
VLX	**Vlachokerasia**	**1.19**	**13**	*e*PN	**Pn**	**02 40 08.2**	**-0.2**
VLX	**Vlachokerasia**	**1.19**	**13**	*e*Pn	**Pn**	**02 40 08.3**	**-0.1**
KARN	**Karanos**	**1.71**	**117**	*e*PB	**Pn**	**02 40 16.7**	**+1.1**
KARN	**Karanos**	**1.71**	**117**	*e*Pb	**Pn**	**02 40 16.7**	**+1.1**
GUR	**Goura**	**1.75**	**8**	*e*PB	**Pn**	**02 40 17.1**	**+1.1**
GUR	**Goura**	**1.75**	**8**	*e*Pb	**Pn**	**02 40 17.1**	**+1.1**
RLS	**Riolos of Patr**	**1.91**	**346**	*e*Pb	**Pn**	**02 40 19.6**	**+1.3**
RLS	**Riolos of Patr**	**1.91**	**346**	*e*PB	**Pn**	**02 40 19.6**	**+1.3**
RLS	**Riolos of Patr**	**1.91**	**346**	*e*Pb	**Pn**	**02 40 19.6**	**+1.3**
VAM	**Vamos**	**1.92**	**114**	*e*Pn	**Pn**	**02 40 17.2**	**-1.2**
VAM	**Vamos**	**1.92**	**114**	*e*PN	**Pn**	**02 40 17.2**	**-1.2**
VAM	**Vamos**	**1.92**	**114**	*e*Pn	**Pn**	**02 40 17.2**	**-1.2**
NAIG	**Nisos Aigina**	**1.93**	**36**	*e*Pb	**Pn**	**02 40 19.3**	**+0.7**
NAIG	**Nisos Aigina**	**1.93**	**36**	*e*PB	**Pn**	**02 40 19.3**	**+0.7**
NAIG	**Nisos Aigina**	**1.93**	**36**	*e*Pb	**Pn**	**02 40 19.3**	**+0.7**
LTK	**Loutraki**	**1.96**	**22**	*e*PN	**Pn**	**02 40 19.0**	**+0.1**
LTK	**Loutraki**	**1.96**	**22**	*e*Pn	**Pn**	**02 40 19.0**	**+0.1**
GVD	**Gavdhos**	**2.15**	**129**	*e*Pn	**Pn**	**02 40 27.1**	**+5.5**
GVD	**Gavdhos**	**2.15**	**129**	*e*PN	**Pn**	**02 40 22.7**	**+1.2**
GVD	**Gavdhos**	**2.15**	**129**	*e*Pn	**Pn**	**02 40 22.7**	**+1.2**
VLY	**Voula,Athens**	**2.16**	**40**	*e*Pb	**Pn**	**02 40 22.4**	**+0.7**
VLY	**Voula,Athens**	**2.16**	**40**	*e*PB	**Pn**	**02 40 22.4**	**+0.7**
EFP	**Efpalio**	**2.22**	**357**	*e*PB	**Pn**	**02 40 25.2**	**+2.6**
EFP	**Efpalio**	**2.22**	**357**	*e*Pb	**Pn**	**02 40 25.2**	**+2.6**
VLS	**Valsamata**	**2.29**	**330**	*e*Pn	**Pn**	**02 40 22.4**	**-1.1**
VLS	**Valsamata**	**2.29**	**330**	*e*PN	**Pn**	**02 40 22.4**	**-1.1**
VLS	**Valsamata**	**2.29**	**330**	*e*Pn	**Pn**	**02 40 22.4**	**-1.1**
IDI	**Anoyia**	**2.48**	**111**	Pn	**Pn**	**02 40 27.4**	**+1.3**
IDI	**Anoyia**	**2.48**	**111**	*e*PN	**Pn**	**02 40 27.1**	**+1.0**
IDI	**Anoyia**	**2.48**	**111**	*e*Pn	**Pn**	**02 40 27.1**	**+1.0**
SIVA	**Sivas**	**2.54**	**117**	*e*Pn	**Pn**	**02 40 27.5**	**+0.6**
SIVA	**Sivas**	**2.54**	**117**	*e*PN	**Pn**	**02 40 27.5**	**+0.6**
SIVA	**Sivas**	**2.54**	**117**	*e*Pn	**Pn**	**02 40 27.5**	**+0.6**
LKR	**Lokris**	**2.56**	**17**	*e*PN	**Pn**	**02 40 26.8**	**-0.3**
LKR	**Lokris**	**2.56**	**17**	*e*PN	**Pn**	**02 40 26.8**	**-0.3**
LKR	**Lokris**	**2.56**	**17**	*e*Pn	**Pn**	**02 40 26.8**	**-0.3**
EVR	**Evrytania**	**2.71**	**356**	*e*Pb	**Pn**	**02 40 32.2**	**+2.9**
EVR	**Evrytania**	**2.71**	**356**	*e*PB	**Pn**	**02 40 32.2**	**+2.9**
AGG	**Agios Georgios**	**2.82**	**4**	*e*Pb	**Pn**	**02 40 31.6**	**+0.8**
AGG	**Agios Georgios**	**2.82**	**4**	*e*PN	**Pn**	**02 40 31.6**	**+0.8**
AGG	**Agios Georgios**	**2.82**	**4**	*e*Pn	**Pn**	**02 40 31.6**	**+0.8**
APE	**Apeiranthos**	**2.93**	**72**	*e*Pn	**Pn**	**02 40 32.5**	**+0.3**
APE	**Apeiranthos**	**2.93**	**72**	*e*PN	**Pn**	**02 40 32.5**	**+0.3**
APE	**Apeiranthos**	**2.93**	**72**	*e*Pn	**Pn**	**02 40 32.5**	**+0.3**
LAST	**Lasithi**	**2.98**	**109**	*e*Pn	**Pn**	**02 40 33.3**	**+0.4**
LAST	**Lasithi**	**2.98**	**109**	*e*PN	**Pn**	**02 40 33.3**	**+0.4**
LAST	**Lasithi**	**2.98**	**109**	*e*Pn	**Pn**	**02 40 33.3**	**+0.4**
NPS	**Neapolis**	**3.05**	**107**	*e*Pn	**Pn**	**02 40 32.5**	**-1.4**
NPS	**Neapolis**	**3.05**	**107**	*e*PN	**Pn**	**02 40 32.5**	**-1.4**
NPS	**Neapolis**	**3.05**	**107**	*e*Pn	**Pn**	**02 40 32.5**	**-1.4**
NEO	**Neokhori**	**3.23**	**16**	*e*Pn	**Pn**	**02 40 35.3**	**-1.1**
NEO	**Neokhori**	**3.23**	**16**	*e*PN	**Pn**	**02 40 35.3**	**-1.1**
NEO	**Neokhori**	**3.23**	**16**	*e*Pn	**Pn**	**02 40 35.3**	**-1.1**
THL	**Klokotos Trika**	**3.35**	**360**	*e*PN	**Pn**	**02 40 38.7**	**+0.6**
THL	**Klokotos Trika**	**3.35**	**360**	*e*Pn	**Pn**	**02 40 38.7**	**+0.6**
JAN	**Janina**	**3.58**	**345**	*e*Pn	**Pn**	**02 40 41.7**	**+0.6**
JAN	**Janina**	**3.58**	**345**	*e*PN	**Pn**	**02 40 41.7**	**+0.6**
JAN	**Janina**	**3.58**	**345**	*e*Pn	**Pn**	**02 40 41.7**	**+0.6**
CHOS	**Chios island**	**3.87**	**54**	*e*PN	**Pn**	**02 40 44.5**	**-0.6**
CHOS	**Chios island**	**3.87**	**54**	*e*Pn	**Pn**	**02 40 44.5**	**-0.6**
KEK	**Kerkira**	**3.93**	**334**	*e*Pn	**Pn**	**02 40 45.5**	**-0.5**
KEK	**Kerkira**	**3.93**	**334**	*e*PN	**Pn**	**02 40 45.5**	**-0.5**
KEK	**Kerkira**	**3.93**	**334**	*e*Pn	**Pn**	**02 40 45.5**	**-0.5**
TIP	**Timpagrande**	**5.14**	**307**	*e*Pn	**Pn**	**02 41 02.7**	**0.0**
TIP	**Timpagrande**	**5.14**	**307**	*e*Pn	**Pn**	**02 41 02.7**	**+0.1**
CEL	**Celeste**	**5.32**	**294**	*e*Pn	**Pn**	**02 41 04.7**	**-0.5**

CEL				*e*S	**Sn**	**02 41 55.9**	**-9.2**
CEL	**Celeste**	**5.32**	**294**	*e*Pn	**Pn**	**02 41 04.7**	**-0.4**
STON	**Ston**	**7.46**	**335**	*e*Pn	**Pn**	**02 41 31.4**	**-3.0**
STON				Sn	**Sn**	**02 42 49.8**	**-7.8**
STON	**Ston**	**7.46**	**335**	*e*Pn	**Pn**	**02 41 31.4**	**-3.0**
NVLJ	**Novalja**	**9.98**	**329**	*e*Pn	**Pn**	**02 42 06.0**	**-2.9**
NVLJ				Sn	**Sn**	**02 43 50.8**	**-8.8**
NVLJ	**Novalja**	**9.98**	**329**	*e*Pn	**Pn**	**02 42 06.0**	**-2.9**

*IDC **19** 02:46:17.0±1.7, 5.°12S×153.°48E, h0km, mb4.2/7, mb1 4.3/7, mb1mx4.0/18, mbtmp4.2/7, MS3.9/4, Ms1 3.9/4, ms1mx3.2/25, Error ellipse: s-maj=41.6km s-min=26.9km az=36.0*
*ISCJB **19** 02:46:19.7±1.6, 5.°0S±0.°2×153.°6E±0.°1, h33km, mb4.3/10, MS4.0/4, Error ellipse: s-maj=35.4km s-min=16.0km az=20.5*
*NEIC **19** 02:46:22.2±1.2, 5.°12S×153.°49E, h35km, mb4.4/2, Error ellipse: s-maj=26.2km s-min=11.1km az=202.0*
ISC 19 02:46:22.3±1.7, 5.°1S±0.°2×153.°5E±0.°1, h35km, n14, σ0§41/11, mb4.2/9, MS4.0/4, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**21.00**	**145**	*e*P	**P**	**02 51 02.7**	**-0.1**
DZM	**Mont Dzumac**	**21.00**	**145**	*e*P	**P**	**02 51 03.0**	**+0.2**
	22nm,0.5s						
KAKA	**Kakadu**	**22.12**	**249**	*e*P	**P**	**02 51 15.8**	**+0.9**
	38nm,0.4s,mb5.2						
WRAB	**Tennant Creek**	**23.75**	**230**	*e*P	**P**	**02 51 31.5**	**-0.1**
	5.5nm,1.0s,mb3.9						
WRA	**Warramunga Arr**	**23.77**	**230**	P	**P**	**02 51 31.7**	**0.0**
	2.0nm,0.5s,mb3.8,baz=54,slow=9.9,SNR=8.8						
ASAR	**Alice Springs**	**26.40**	**224**	P	**P**	**02 51 55.5**	**-0.2**
	0.6nm,0.5s,mb3.4,baz=60,slow=8.9,SNR=7.2						
ASAR				PcP	PcP	02 55 21.0	+0.2
	0.6nm,0.5s,baz=52,slow=2.5,SNR=4.7						
FITZ	**Fitzroy Crossi**	**30.13**	**242**	P	**P**	**02 52 28.5**	**-0.5**
	2.8nm,0.7s,mb4.1,baz=58,slow=7.0,SNR=9.3						
URZ	**Urewera**	**39.36**	**150**	P	**P**	**02 53 48.7**	**+0.3**
	2.3nm,0.3s,mb4.3,baz=315,slow=2.9,SNR=3.3						
RPZ	**Rata Peaks**	**41.44**	**161**	P	**P**	**02 54 05.6**	**+0.1**
	5.4nm,0.5s,mb4.4,baz=322,slow=3.7,SNR=3.1						
CMAR	**Chiang Mai Arr**	**58.64**	**295**	P	**P**	**02 56 16.6**	**+0.1**
	1.9nm,0.6s,mb4.3,baz=120,slow=5.2,SNR=9.9						
ZALV	**Zalesovo Beam**	**81.80**	**326**	LR	LR	03 37 09.9	
	comp=Z,112nm,20.4s,MS4.2,baz=250,slow=37						
KURK	**Kurchatov**	**84.45**	**322**	LR	LR	03 40 20.6	
	comp=Z,72nm,19.0s,MS4.1,baz=355,slow=38						
AAK	**Ala-Archa**	**85.39**	**313**	LR	LR	03 35 29.4	
	comp=Z,47nm,20.7s,MS3.9,baz=350,slow=35						
MAW	**Mawson**	**85.55**	**203**	P	**P**	**02 58 55.8**	**-0.6**
	1.4nm,0.5s,mb4.5,baz=96,slow=8.4,SNR=11						
MAW				LR	LR	03 37 31.1	
	comp=Z,47nm,19.0s,MS3.9,baz=196,slow=36						

*IDC **19** 02:50:20.3±0.9, 31.°79N×104.°18E, h0km, mb3.8/11, mb1 3.9/13, mb1mx3.8/27, mbtmp3.8/13, ML3.7/2, Error ellipse: s-maj=33.3km s-min=16.3km az=55.0*
*BJI **19** 02:50:21.3, 31.°92N×104.°55E, h14km, mb4.1/3, ML3.6/14, Ms3.5/6, Ms7 3.4/6*
*NEIC **19** 02:50:21.8±0.6, 31.°83N×104.°28E, h10km, mb3.9/1, Error ellipse: s-maj=17.6km s-min=8.2km az=77.0*
ISC 19 02:50:22.3±1.1, 31.°77N±0.°03×104.°29E±0.°05, h14km±8km, n21, σ1§04/28, mb3.9/10, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.97**	**208**	Pg	**Pg**	**02 50 41.6**	**+0.6**
CD2				Sg	**Sg**	**02 50 51.8**	**-1.9**
CD2				smax			
	comp=N,3μm,0.5s						
CD2				smax			
	comp=E,7μm,0.5s						
LZH	**Lanzhou**	**4.33**	**355**	*e*Pn	**Pn**	**02 51 30.0**	**+2.4**
LZH				Pg	**Pb**	**02 51 37.9**	**-0.2**
LZH				Sn	**Sn**	**02 52 17.1**	**-0.7**
LZH				Sg	**Sb**	**02 52 31.8**	**+1.7**
LZH				smax			
	comp=N,140nm,1.1s						
LZH				smax			
	comp=E,170nm,1.1s						
LZH				LR	LR		
	comp=E,380nm,5.5s						
LZH				LR	LR		
	comp=Z,440nm,5.8s						
XAN	**Xi'an**	**4.51**	**59**	Pn	**Pn**	**02 51 28.3**	**-1.8**
XAN				Sn	**Sn**	**02 52 20.3**	**-2.0**
XAN				Sg	**Sb**	**02 52 35.6**	**+0.3**
XAN				smax			
	comp=N,110nm,0.7s						
XAN				smax			
	comp=E,49nm,0.8s						
XAN				LR	LR		
	comp=N,160nm,9.7s						
XAN				LR	LR		
	comp=E,84nm,8.1s						
XAN				LR	LR		
	comp=Z,83nm,9.7s						
GYA	**Guiyang**	**5.68**	**158**	Pn	**Pn**	**02 51 50.6**	**+4.3**
GYA				Sn	**Sn**	**02 52 51.8**	**+0.5**
GYA				Sg	**Sg**	**02 53 25.0**	**+0.3**
GYA				smax			
	comp=N,150nm,0.8s						
GYA				smax			
	comp=E,90nm,0.7s						
GTA	**Gaotai**	**8.45**	**336**	*e*P	Px	02 52 34.0	
GTA				pP		02 52 38.3	
GTA				sP		02 52 41.8	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**14.11**	**201**	Pn	**Pn**	**02 53 43.0**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=9.5,slow=8.0,SNR=2.6						
SONM	**Songino Array**	**16.13**	**5**	Pn	**Pn**	**02 54 08.6**	**+0.1

CD2 Chengdu 0.34 137 Pg **Pg 02 55 37.3 -0.5**
CD2 Sg **Sg 02 55 43.3 +0.9**
CD2 smax
comp=N,72μm,0.5s
CD2 smax
comp=E,93μm,0.6s
LZH Lanzhou 4.93 3 *e*Pn **Pn 02 56 45.8 +1.1**
LZH Pg **Pb 02 56 56.6 -0.5**
LZH Sn **Sn 02 57 41.3 -0.2**
LZH Sg **Sb 02 57 59.5 +3.2**
LZH smax
comp=N,380nm,1.2s
LZH smax
comp=E,320nm,1.0s
LZH LR LR
comp=E,2μm,5.3s
LZH LR LR
comp=E,3μm,6.3s
ENH Enshi 5.24 98 *e*Pn **Pn 02 56 48.9 0.0**
comp=Z,0.1nm,0.2s
ENH *e*S **Sn 02 57 48.0 -1.2**
XAN Xi'an 5.41 56 Pn **Pn 02 56 49.6 -1.7**
XAN Pg **Pb 02 57 06.6 +1.3**
XAN Sn **Sn 02 57 55.1 +1.7**
XAN Sg **Sg 02 58 17.5 -7.2**
XAN smax
comp=N,530nm,0.9s
XAN smax
comp=E,530nm,0.9s
XAN LR LR
comp=N,600nm,7.7s
XAN LR LR
comp=E,520nm,9.1s
XAN LR LR
comp=Z,600nm,9.6s
GYA Guiyang 5.44 148 Pn **Pn 02 56 54.3 +2.5**
GYA Sn **Sn 02 57 53.0 -1.3**
GYA Sg **Sb 02 58 11.4 +0.3**
GYA smax
comp=N,1μm,0.9s
GYA smax
comp=E,980nm,1.0s
KMI Kunming 6.04 186 Pn **Pn 02 57 00.4 +0.4**
KMI Sn **Sn 02 58 11.6 +2.5**
KMI Sg **Sg 02 58 43.3 -1.8**
KMI smax
comp=N,120nm,1.9s
KMI smax
comp=E,150nm,1.1s
KMI LR LR
comp=N,2μm,8.8s
KMI LR LR
comp=E,1μm,6.7s
GTA Gaotai 8.77 341 *e*P **Pn 02 57 43.9 +6.5**
GTA pP 02 57 48.3
GTA sP 02 57 51.3
GTA S **Sn 02 59 23.6 +7.6**
GTA sS 02 59 27.5
GTA pmax pmax
comp=Z,3.0nm,1.2s
GTA pmax pmax
comp=Z,2μm,10.2s
GTA LR LR
comp=N,600nm,12.5s
GTA LR LR
comp=E,1μm,12.5s
GTA LR LR
comp=Z,510nm,11.0s
WHN Wuhan 9.36 91 P **Pn 02 57 42.9 -2.6**
WHN sP 02 57 56.8
WHN S **Sn 02 59 22.4 -8.2**
WHN LR LR
comp=N,1μm,5.9s
WHN LR LR
comp=E,4μm,6.9s
WHN LR LR
comp=Z,5μm,6.8s
LSA Lhasa 10.75 265 P **Pn 02 58 11.3 +6.7**
LSA S **Sn 03 00 03.6 -1.2**
LSA LR LR
comp=E,1μm,10.7s
LSA LR LR
comp=Z,1μm,10.3s
LSA Lhasa 10.75 265 *e*P **Pn 02 58 06.3 +1.7**
LSA pmax pmax
comp=Z,14nm,0.6s
LSA Lhasa 10.75 265 *e*Pn **Pn 02 58 06.3 +1.7**
comp=Z,14nm,0.6s
GZH Guangzhou 11.89 130 P **Pn 02 58 17.6 -2.7**
GZH S **Sn 03 00 35.6 +2.8**
GZH LR LR
comp=N,590nm,7.0s
GZH LR LR
comp=E,790nm,6.1s
GZH LR LR
comp=Z,1μm,9.7s
CM31 Chiang Mai Arr 13.29 199 *e*Pn **Pn 02 58 49.4 +10**
comp=Z,19nm,0.6s
CMAR Chiang Mai Arr 13.29 199 Pn **Pn 02 58 39.8 +0.3**
comp=Z,0.3nm,0.3s,baz=9.7,slow=12,SNR=19
CMAR LR LR 03 04 04.7
comp=Z,280nm,18.8s,baz=231,slow=39
QIZ Qiongzhong 13.37 153 P **Pn 02 58 40.8 +0.4**
QIZ S **Sn 03 01 10.8 +1.9**
QIZ pmax pmax
comp=Z,21nm,1.7s
QIZ LR LR
comp=N,740nm,8.0s
QIZ LR LR
comp=Z,530nm,9.4s
BJI Beijing 13.59 46 P **Pn 02 58 39.5 -3.9**
BJI pmax pmax
comp=Z,7.0nm,1.1s
BJI pmax pmax
comp=Z,130nm,5.1s
BJI LR LR
comp=N,410nm,6.9s
BJI LR LR
comp=E,680nm,10.9s
BJI LR LR
comp=Z,150nm,19.5s
SONM Songino Array 16.81 7 Pn **Pn 02 59 24.1 -1.8**
comp=Z,0.4nm,0.3s,baz=186,slow=13,SNR=9.6
SONM LR LR 03 06 40.1
comp=Z,385nm,18.3s,baz=313,slow=40
SSLB Suanglung 17.14 111 *e*Pn **Pn 02 59 31.9 +1.8**
comp=Z,31nm,0.9s
ZAK Zakamensk 19.21 360 *e*P **Pn 02 59 56.3 +0.9**
ZAK pmax pmax
comp=Z,4.0nm,1.0s
TLY Talaya 20.51 0 *e*P **P 03 00 13.1 +4.5**
TLY pmax pmax
comp=Z,4.0nm,0.7s
TLY MLR MLR
comp=Z,343nm,17.0s,MS3.8
MOY Mondy 20.58 356 *e*P **P 03 00 14.3 +5.0**
MOY pmax pmax
comp=Z,26nm,2.4s
IRK Irkutsk 21.08 1 *e*P **P 03 00 16.9 +2.1**
IRK pmax pmax
comp=Z,51nm,1.3s,mb4.7
KSRS Korea Array 21.11 66 P **P 03 00 12.3 -3.0**
comp=Z,5.9nm,0.7s,mb4.0,baz=257,slow=8.6,SNR=14
KSRS LR LR 03 08 16.5
comp=Z,119nm,21.3s,MS3.2,baz=260,slow=37
KSRS Korea Array 21.11 66 P **P 03 00 12.3 -3.0**
KSRS pmax pmax
comp=Z,6.0nm,0.7s,mb4.0
KSRS MLR MLR
comp=Z,119nm,21.3s,MS3.2
MK31 Makanchi Array 22.60 320 *e*P **P 03 00 31.3 +0.2**
MKAR Makanchi Array 22.60 320 P **P 03 00 30.2 -0.9**
comp=Z,6.7nm,0.8s,mb4.1,baz=125,slow=11,SNR=16
MKAR Makanchi Array 22.60 320 *c e*P **P 03 00 34.0 +2.9**
MKAR pmax pmax
comp=Z,7.0nm,0.8s
MKAR Makanchi Array 22.60 320 P **P 03 00 30.2 -0.9**
TKM2 Tokmak 2 25.06 306 *e*P **P 03 00 56.5 +1.6**
TKM2 pmax pmax
comp=Z,16nm,1.4s,mb4.4
TKM2 Tokmak 2 25.06 306 *e*P **P 03 00 56.5 +1.6**
comp=Z,16nm,1.4s,mb4.4
UCH Uchtor 25.61 304 *e*P **P 03 01 02.0 +2.1**
comp=Z,17nm,1.2s,mb4.5
AAK Ala-Archa 25.74 305 P **P 03 01 03.9 +2.8**
comp=Z,9.7nm,1.0s,mb4.3,baz=93,slow=4.9,SNR=16
AAK LR LR 03 12 00.1
comp=Z,166nm,18.7s,MS3.6,baz=84,slow=38
AAK Ala-Archa 25.74 305 P **P 03 01 03.9 +2.8**
AAK pmax pmax
comp=Z,10.0nm,1.0s,mb4.3
AAK MLR MLR
comp=Z,166nm,18.7s,MS3.6
EKS2 Erkin-Say 26.26 304 *e*P **P 03 01 06.8 +1.1**
comp=Z,9.4nm,1.1s,mb4.2
ZAA0 Zalesovo Array 26.45 335 *e*P **P 03 01 07.3 -0.1**
ZALV Zalesovo Beam 26.45 335 P **P 03 01 07.4 0.0**
comp=Z,1.8nm,0.4s,mb3.9,baz=130,slow=8.1,SNR=8.2
ZALV Zalesovo Beam 26.45 335 P **P 03 01 07.4 0.0**
ZALV pmax pmax
comp=Z,2.0nm,0.4s,mb4.0
KURK Kurchatov 26.89 324 P **P 03 01 11.5 +0.1**
comp=Z,5.5nm,0.8s,mb4.1,baz=126,slow=10,SNR=29
KURK PcP PcP 03 04 32.1 -1.3
comp=Z,0.9nm,0.6s,baz=117,slow=1.8,SNR=5.4
KURK Kurchatov 26.89 324 *e*P **P 03 01 11.8 +0.4**
KURK 03 04 32.1
KURK pmax pmax
comp=Z,8.0nm,1.1s,mb4.2
KURK Kurchatov 26.89 324 *e*P **P 03 01 11.8 +0.4**
comp=Z,7.9nm,1.1s,mb4.2
KURK PcP PcP 03 04 32.1 -1.3
PSI Prapat 28.53 190 P **P 03 01 26.3 -0.1**
comp=Z,3.2nm,0.5s,mb4.3,baz=177,slow=8.8,SNR=5.1
PSI Prapat 28.53 190 P **P 03 01 26.3 0.0**
PSI pmax pmax
comp=Z,3.0nm,0.5s,mb4.3
PSI Prapat 28.53 190 P **P 03 01 26.3 -0.1**
JHJ Hachijo jima 2 30.70 77 LR LR 03 15 27.8
comp=Z,188nm,19.4s,MS3.8,baz=7.9,slow=39
BVAR Borovoye Array 32.43 322 P **P 03 02 00.5 +0.1**
comp=Z,1.0nm,0.6s,mb3.8,baz=116,slow=10,SNR=5.4
BVAR PcP PcP 03 04 45.9 -1.6
comp=Z,2.8nm,0.7s,baz=116,slow=3.4,SNR=12
BVAR Borovoye Array 32.43 322 P **P 03 02 00.5 +0.1**
BVAR 03 04 45.9
BVAR pmax pmax
comp=Z,1.0nm,0.6s
BRVK Borovoye 32.50 322 *c e*P **P 03 02 01.8 +0.7**
BRVK pmax pmax
comp=Z,5.0nm,1.2s,mb4.2
ABKAR Akbulak array 37.25 312 *e*P **P 03 02 42.4 +0.3**
comp=Z,1.6nm,0.8s,mb3.9
AKTK Aktyubinsk 38.72 313 P **P 03 02 54.4 -0.1**
AKTO Aktyubinsk 38.72 313 P **P 03 02 54.4 -0.1**
comp=Z,0.8nm,0.5s,mb3.7,baz=52,slow=9.2,SNR=4.4
AKTO Aktyubinsk 38.72 313 P **P 03 02 54.4 -0.1**
AKTO pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
ARU Arti 40.07 322 *c i*P **P 03 03 05.8 +0.1**
ARU 03 04 37.4
ARU S **S 03 09 11.2 0.0**
ARU SS SS 03 12 09.1 +0.7
ARU pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
SEY Seymchan 44.31 30 *c e*P **P 03 03 44.2 +4.1**
GNI Garni 47.81 298 LR LR 03 28 13.4
comp=Z,57nm,19.1s,MS3.6,baz=155,slow=41
ZEI Tsey 48.10 301 *e*P **P 03 04 09.0 -1.3**
ZEI pmax pmax
comp=Z,5.0nm,0.5s,mb4.8
KIV Kislovodsk 48.84 303 *e*P **P 03 04 17.2 +1.2**
KIV pmax pmax
comp=Z,11nm,1.1s,mb4.8
KIV MLR MLR
comp=Z,32nm,15.0s,MS3.4
VRHR Novokhopersk 49.12 313 *e*P **P 03 04 24.7 +6.7**
VRHR pmax pmax
comp=E,30nm,0.7s
VRHR pmax pmax
comp=Z,20nm,0.7s,mb5.3
VRHR pmax pmax
comp=N,3.0nm,0.3s
VORD Divnogorie 50.60 313 *e*P **P 03 04 21.3 -8.0**
VORD pmax pmax
comp=N,3.0nm,0.4s
VORD pmax pmax
comp=E,20nm,0.4s
VORD pmax pmax
comp=Z,8.0nm,0.4s,mb5.0
VSR Storozhevoye 50.66 313 *e*P **P 03 04 29.5 -0.3**
VSR pmax pmax
comp=N,5.0nm,0.6s
VSR pmax pmax
comp=E,4.0nm,0.6s
VSR pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
BILL Bilibino 51.36 25 P **P 03 04 37.0 +2.3**
BILL pmax pmax
comp=Z,7.0nm,1.7s,mb4.3
BILL MLR MLR
comp=Z,100nm,16.0s,MS3.9
OBN Obninsk 52.09 318 P **P 03 04 39.0 -1.4**
OBN 03 06 37.0
OBN pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
BRTR Keskin Array B 56.26 299 P **P 03 05 10.4 -0.6**
comp=Z,0.5nm,0.6s,mb3.8,baz=128,slow=8.0,SNR=4.0
BRTR Keskin Array B 56.26 299 *c e*P **P 03 05 10.3 -0.7**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
BRTR Keskin Array B 56.26 299 P **P 03 05 10.4 -0.6**
AKASG Malin Array Be 56.97 313 P **P 03 05 14.6 -1.3**
comp=Z,1.6nm,0.5s,mb4.3,baz=68,slow=6.7,SNR=6.1
AKASG Malin Array Be 56.97 313 P **P 03 05 14.6 -1.3**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKASG Malin Array Be 56.97 313 P **P 03 05 14.6 -1.3**
ARCES ARCESS Array B 57.00 336 P **P 03 05 15.0 -0.8**
comp=Z,1.6nm,0.9s,mb4.1,baz=86,slow=8.2,SNR=5.1
ARCES PcP PcP 03 06 09.7 -1.1
comp=Z,1.5nm,0.6s,baz=96,slow=5.5,SNR=5.9
ARCES ARCESS Array B 57.00 336 P **P 03 05 15.0 -0.8**
ARCES 03 06 09.7
ARCES pmax pmax
comp=Z,2.0nm,0.9s
ARCES ARCESS Array B 57.00 336 P **P 03 05 15.0 -0.8**
ARCES PcP PcP 03 06 09.7 -1.1
FINES FINESS Array B 57.23 326 P **P 03 05 16.8 -0.8**
comp=Z,2.1nm,0.7s,mb4.3,baz=64,slow=9.3,SNR=4.7
FINES FINESS Array B 57.23 326 P **P 03 05 16.8 -0.8**
FINES pmax pmax
comp=Z,2.0nm,0.7s
FINES FINESS Array B 57.23 326 P **P 03 05 16.8 -0.8**
WRA Warramunga Arr 58.81 146 P **P 03 05 28.1 -1.0**
comp=Z,4.1nm,0.8s,mb4.5,baz=335,slow=7.6,SNR=5.8
WRA Warramunga Arr 58.81 146 P **P 03 05 28.1 -1.0**
WRA pmax pmax
comp=Z,4.0nm,0.8s
SPITS Spitsbergen Ar 59.16 346 LR LR 03 34 04.1
comp=Z,84nm,20.8s,MS3.9,baz=50,slow=39
KWP Kalwaria Pacla 61.29 313 *e*P **P 03 05 46.0 +0.2**
KWP Kalwaria Pacla 61.29 313 *e*P **P 03 05 45.8 -0.1**
KWP pmax pmax
comp=Z,11nm,1.0s,mb4.9
KWP Kalwaria Pacla 61.29 313 *e*P **P 03 05 45.8 0.0**
comp=Z,11nm,1.0s,mb4.9
ASAR Alice Springs 61.81 148 P **P 03 05 48.8 -0.8**
comp=Z,1.4nm,0.8s,mb4.2,baz=340,slow=6.9,SNR=5.4
ASAR Alice Springs 61.81 148 P **P 03 05 48.8 -0.8**
ASAR pmax pmax
comp=Z,1.0nm,0.8s
NB2 NORSAR Subarra 64.33 327 P **P 03 06 04.4 -1.5**
comp=Z,1.0nm,0.7s,mb4.0,baz=74,slow=6.9
NOA NORSAR Array B 64.33 327 P **P 03 06 04.4 -1.5**
comp=Z,0.4nm,0.5s,mb3.7,baz=87,slow=7.1,SNR=3.2
BRG Berggiesshubel 66.26 316 *e*P **P 03 06 18.5 -0.1**
comp=Z,3.7nm,1.2s,mb4.3
BRG Berggiesshubel 66.26 316 *e*P **P 03 06 18.5 -0.1**
BRG pmax pmax
comp=Z,2.0nm,1.2s,mb4.0
CLL Collm 66.66 317 *e*P **P 03 06 29.0 +7.8**
CLL *e* 03 06 38.0
COLD Coldfoot 67.64 24 *e*P **P 03 06 26.7 -0.4**
comp=Z,4.5nm,0.9s,mb4.5
STKA Stephens Creek 72.34 147 P **P 03 06 55.5 -0.9**
comp=Z,2.5nm,0.8s,mb4.2,baz=335,slow=8.2,SNR=4.4
LPG La Plagne 72.83 313 *e*P **P 03 06 59.3 0.0**
comp=Z,9.7nm,0.7s,mb4.5
LPG La Plagne 72.83 313 *e*P **P 03 06 59.3 0.0**
LPG pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
LPG La Plagne 72.83 313 *e*P **P 03 06 59.3 0.0**
comp=Z,4.8nm,0.7s,mb4.5
LPL La Plagne 72.83 313 *e*P **P 03 06 59.2 -0.1**
comp=Z,7.7nm,0.6s,mb4.5
LPL La Plagne 72.83 313 *e*P **P 03 06 59.2 -0.1**
LPL pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
LPL La Plagne 72.83 313 *e*P **P 03 06 59.2 -0.1**
SMF Signal de Mont 74.09 315 *e*P **P 03 07 05.7 -1.0**
comp=Z,19nm,1.2s,mb4.6
SMF Signal de Mont 74.09 315 *e*P **P 03 07 05.7 -1.0**
SMF pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
SMF Signal de Mont 74.09 315 *e*P **P 03 07 05.7 -1.0**
comp=Z,9.3nm,1.2s,mb4.6
AVF Avril sur Loir 74.32 315 *e*P **P 03 07 07.0 -1.0**
comp=Z,24nm,1.3s,mb4.7
AVF Avril sur Loir 74.32 315 *e*P **P 03 07 07.0 -1.0**
AVF pmax pmax
comp=Z,12nm,1.3s,mb4.7
AVF Avril sur Loir 74.32 315 *e*P **P 03 07 07.0 -1.0**
comp=Z,12nm,1.3s,mb4.7
TXAR Lajitas Array 114.53 26 PKP PKiKP 03 14 09.8 -1.4
comp=Z,0.3nm,0.8s,baz=178,slow=0.8,SNR=3.9
AGPR Aguadilla, PR 129.84 348 *e*PKPdf PKPdf 03 14 36.4 -4.3

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*IDC **19** 03:09:12.0±0.8, 19°.95N×122°.06E, h0km, mb4.0/14, mb1 4.1/15, mb1mx4.0/24, mbtmp4.0/15, ML3.7/1, MS3.8/3, Ms1 3.8/3, ms1mx3.0/27, Error ellipse: s-maj=25.3km s-min=16.0km az=70.0*
*MAN **19** 03:09:12, 20°.14N×122°.37E, h0km, mb5.3, ML4.2, MS4.5*
*MOS **19** 03:09:15.2±0.8, 19°.95N×122°.05E, h33km, mb4.7/6, Error ellipse: s-maj=21.4km s-min=10.6km az=119.2*
*ISCJB **19** 03:09:16.2±0.7, 20°.11N±0°.03×122°.38E±0°.06, h43km±6km, mb4.1/22, MS3.8/3, Error ellipse: s-maj=10.2km s-min=4.5km az=177.0*
*NEIC **19** 03:09:17.5±0.6, 20°.09N×122°.15E, h35km, mb4.2/4, Error ellipse: s-maj=16.5km s-min=9.3km az=85.0*
*BJI **19** 03:09:20.2, 20°.29N×122°.01E, h35km, mB4.6/4, mb4.4/6, Ms4.0/5, Ms7 3.9/5*
ISC 19 03:09:17.2±0.7, 20°.12N±0°.03×122°.50E±0°.07, h40km±6km, n50, σ1s 18/58, mb4.1/22, MS3.8/3, 4C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
BBP	**Basco**	**0.59**	**303**	*e*P	**Pn**	**03 09 22.2**	**-6.9**
BBP				*e*S	**Sn**	**03 09 42.4**	**+4.7**
APYP	**Conner**	**2.54**	**208**	*e*P	**Pn**	**03 09 54.5**	**-1.4**
TWG	**Pinlang**	**3.00**	**334**	*e*Pn	**Pn**	**03 09 59.2**	**-3.0**
TWG				*e*S	**Sn**	**03 10 36.8**	**-0.1**
PALP	**Palanan**	**3.04**	**181**	*e*P	**Pn**	**03 10 01.8**	**-1.0**
YULB	**Yu-li**	**3.44**	**341**	*e*Pn	**Pn**	**03 10 06.5**	**-1.9**
YULB				*e*S	**Sn**	**03 10 45.0**	**-2.9**
TPUB	**Ta-pu**	**3.61**	**332**	*e*Pn	**Pn**	**03 10 10.7**	**0.0**
TPUB				*e*S	**Sn**	**03 10 52.5**	**+0.5**
SSLB	**Suanglung**	**3.92**	**339**	*e*Pn	**Pn**	**03 10 14.9**	**0.0**
SSLB				*e*S	**Sn**	**03 11 03.2**	**+3.5**
NACB	**Ninganchiao**	**4.12**	**348**	*e*Pn	**Pn**	**03 10 16.4**	**-1.3**
NACB				*e*S	**Sn**	**03 10 59.6**	**-5.0**
BCPH	**Baguio City Da**	**4.14**	**206**	*e*P	**Pn**	**03 10 18.5**	**+0.6**
BCPH				*e*S	**Sn**	**03 11 06.3**	**+1.2**
BALP	**Baler**	**4.44**	**192**	*e*P	**Pn**	**03 10 24.2**	**+2.2**
BOLP	**Bolinao**	**4.45**	**214**	*e*P	**Pn**	**03 10 22.2**	**0.0**
YHNB	**Yeheng**	**4.65**	**347**	*e*Pn	**Pn**	**03 10 25.9**	**+1.0**
YHNB				*e*S	**Sn**	**03 11 20.1**	**+2.5**
QIZ	**Qiongzhong**	**11.98**	**267**	P	**Pn**	**03 12 03.9**	**-1.5**
QIZ				S	**Sn**	**03 14 18.3**	**+0.5**
QIZ				pmax	pmax		
	comp=Z,16nm,1.5s						
QIZ				LR	LR		
	comp=N,220nm,10.2s						
QIZ				LR	LR		
	comp=Z,240nm,12.7s						
NJ2	**Nanjing**	**12.32**	**345**	*e*P	**Pn**	**03 12 08.3**	**-1.8**
NJ2				pP		03 12 15.5	
NJ2				sP		03 12 20.3	
NJ2				S	**Sn**	**03 14 34.0**	**+7.8**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,80nm,4.1s						
NJ2				LR	LR		
	comp=N,190nm,10.0s						
NJ2				LR	LR		
	comp=E,210nm,10.5s						
NJ2				LR	LR		
	comp=Z,220nm,11.4s						
WHN	**Wuhan**	**12.72**	**326**	P	**Pn**	**03 12 19.9**	**+4.3**
WHN				S	**Sn**	**03 14 37.3**	**+1.4**
WHN				LR	LR		
	comp=N,420nm,10.6s						
WHN				LR	LR		
	comp=E,680nm,12.9s						
WHN				LR	LR		
	comp=Z,850nm,19.4s						
DAV	**Davao City (W)**	**13.31**	**167**	LR	LR	03 17 50.1	
	comp=Z,291nm,18.5s,baz=232,slow=39						
KKM	**Kota Kinabalu**	**15.26**	**204**	*e*Pn	**Pn**	**03 12 50.6**	**+0.6**
KSRS	**Korea Array**	**17.91**	**14**	P	**Pn**	**03 13 25.2**	**+2.0**
	comp=Z,0.2nm,0.3s,baz=189,slow=8.7,SNR=9.5						
MJAR	**Matsushiro Arr**	**21.38**	**37**	P	**P**	**03 14 05.7**	**+4.4**
	comp=Z,2.1nm,1.1s,mb3.4,baz=226,slow=10,SNR=6.5						
CHTO	**Chiang Mai**	**22.24**	**271**	*e*P	**P**	**03 14 10.5**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.3						
CHTO	**Chiang Mai**	**22.24**	**271**	*e*P	**P**	**03 14 10.5**	**-0.2**
	comp=Z,18nm,1.4s,mb4.3						
CMAR	**Chiang Mai Arr**	**22.29**	**270**	P	**P**	**03 14 07.2**	**-4.0**
	comp=Z,0.8nm,0.3s,mb3.6,baz=72,slow=8.6,SNR=10						
SONM	**Songino Array**	**30.57**	**338**	P	**P**	**03 15 27.4**	**+0.4**
	comp=Z,0.5nm,0.5s,mb3.6,baz=161,slow=6.1,SNR=2.9						
SONM				LR	LR	03 28 50.3	
	comp=Z,131nm,18.7s,MS3.6,baz=353,slow=38						
YSS	**Yuzh-Sakhalins**	**31.46**	**27**	*e*P	pP	03 15 46.1	+0.3
WRAB	**Tennant Creek**	**41.46**	**163**	*e*P	**P**	**03 17 00.2**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.6						
WRAB	**Tennant Creek**	**41.46**	**163**	*e*P	**P**	**03 17 00.2**	**-0.2**
	comp=Z,16nm,1.1s,mb4.6						
WRA	**Warramunga Arr**	**41.47**	**163**	P	**P**	**03 17 00.1**	**-0.3**
	comp=Z,6.6nm,0.7s,mb4.3,baz=343,slow=9.1,SNR=25						
MK31	**Makanchi Array**	**42.14**	**319**	*e*P	**P**	**03 17 02.9**	**-2.7**
MKAR	**Makanchi Array**	**42.14**	**319**	P	**P**	**03 17 05.8**	**+0.2**
	comp=Z,2.8nm,0.7s,mb4.0,baz=104,slow=10,SNR=17						
MKAR	**Makanchi Array**	**42.14**	**319**	*c e*P	**P**	**03 17 06.5**	**+0.9**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MKAR	**Makanchi Array**	**42.14**	**319**	P	**P**	**03 17 05.8**	**+0.2**
PETK	**Petropavlovsk-**	**42.63**	**31**	P	**P**	**03 17 13.9**	**+4.4**
	comp=Z,1.5nm,0.6s,mb3.9,baz=202,slow=7.5,SNR=3.9						
ZALV	**Zalesovo Beam**	**44.32**	**329**	P	**P**	**03 17 22.5**	**-0.7**
	comp=Z,1.7nm,0.5s,mb4.1,baz=116,slow=7.6,SNR=7.9						
ASAR	**Alice Springs**	**44.92**	**165**	P	**P**	**03 17 28.9**	**+0.6**
	comp=Z,2.6nm,0.7s,mb4.2,baz=340,slow=6.7,SNR=30						
AAK	**Ala-Archa**	**45.99**	**310**	*c e*P	**P**	**03 17 36.7**	**+0.1**
AAK				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.7						
KURK	**Kurchatov**	**46.01**	**322**	P	**P**	**03 17 37.1**	**+0.5**
	comp=Z,1.7nm,0.5s,mb4.2,baz=113,slow=9.5,SNR=17						
KURK	**Kurchatov**	**46.01**	**322**	*e*P	**P**	**03 17 36.7**	**+0.1**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
KURK	**Kurchatov**	**46.01**	**322**	*e*P	**P**	**03 17 36.7**	**+0.1**
	comp=Z,3.0nm,0.9s,mb4.2						
BVAR	**Borovoye Array**	**51.60**	**323**	P	**P**	**03 18 19.8**	**+0.3**
	comp=Z,1.6nm,0.5s,mb4.2,baz=104,slow=7.3,SNR=7.9						
BVAR				PcP	PcP	03 19 32.8	-0.1
	comp=Z,0.7nm,0.5s,baz=108,slow=3.2,SNR=3.5						
BRVK	**Borovoye**	**51.67**	**323**	*c e*P	**P**	**03 18 20.7**	**+0.7**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.3						
ZEI	**Tsey**	**68.40**	**309**	*e*P	**P**	**03 20 13.8**	**-1.1**
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.9						
KIV	**Kislovodsk**	**69.11**	**310**	*e*P	**P**	**03 20 20.3**	**+1.0**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
KIV				MLR	MLR		
	comp=Z,32nm,18.0s,MS3.6						
BPAW	**Bear Paw Mtn.**	**70.59**	**28**	*e*P	**P**	**03 20 31.5**	**+3.5**

comp=Z,0.9nm,0.7s,mb3.8
OBN Obninsk 71.45 323 ⇓*e*P P 03 20 33.0 -0.4
OBN *e* pP 03 20 45.0 -0.3
OBN pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
ARCES ARCESS Array B 73.75 339 P P 03 20 47.2 +0.4
comp=Z,1.2nm,0.6s,mb4.0,baz=69,slow=7.9,SNR=7.9
FINES FINESS Array B 75.56 330 P P 03 20 56.8 -0.7
comp=Z,1.7nm,0.7s,mb4.1,baz=56,slow=4.8,SNR=5.1
AKASG Malin Array Be 76.72 319 P P 03 21 03.5 -0.8
comp=Z,0.7nm,0.5s,mb3.8,baz=62,slow=5.4,SNR=3.8
NB2 NORSAR Subarra 82.38 333 P P 03 21 34.2 -0.6
comp=Z,0.4nm,0.6s,mb3.5,baz=60,slow=5.6
NOA NORSAR Array B 82.38 333 P P 03 21 34.5 -0.3
comp=Z,0.9nm,0.8s,mb3.8,baz=100,slow=4.4,SNR=3.7
NOA LR LR 04 01 46.6
comp=Z,76nm,18.7s,MS4.1,baz=60,slow=38
CLL Collm 86.03 324 *e*P pP 03 22 06.0 +0.3

*ISCJB **19** 03:12:21.2±0.3, 50°.52N±0°.02×5°.54E±0°.03, h10km, Error ellipse: s-maj=2.8km s-min=1.9km az=140.6*
*CSEM **19** 03:12:21.8±0.1, 50°.58N×5°.55E, h18km±1km, ML2.7/15, Error ellipse: s-maj=2.4km s-min=1.7km az=150.0*
*NEIC **19** 03:12:22.5, 50°.61N×5°.54E, h10km, ML2.5(LDG), After LDG.*
*UCC **19** 03:12:22.6±0.3, 50°.59N×5°.54E, h16km, ML1.7*
*LDG **19** 03:12:22.5±0.1, 50°.61N×5°.54E, h10km, Md2.5/2, Ml2.5/10, Error ellipse: s-maj=1.8km s-min=1.2km az=158.0*
*BGR **19** 03:12:24.5±1.3, 50°.58N×5°.73E, h10km, ML1.8/2, Error ellipse: s-maj=16.7km s-min=6.7km az=108.0*
*BNS **19** 03:12:24.1±0.4, 50°.57N×5°.63E, h14km±7km, ML1.8*
ISC 19 03:12:21.8±0.3, 50°.58N±0°.02×5°.53E±0°.03, h20km±2km, n79, σ0°.75/146, 7C-3D, Belgium

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCLA	**Clavier**	**0.21**	**222**	⇑P	**Pg**	**03 12 27.9**	**+0.9**
BCLA				S	**Sg**	**03 12 31.3**	**+0.7**
comp=E,48nm,0.1s							
BCLA	**Clavier**	**0.21**	**222**	P	**Pg**	**03 12 27.9**	**+0.9**
BCLA				S	**Sg**	**03 12 31.2**	**+0.6**
comp=E,48nm,0.1s							
BEBN	**Eben Emael**	**0.24**	**23**	⇑P	**Pg**	**03 12 27.8**	**+0.3**
BEBN				S	**Sg**	**03 12 31.2**	**-0.2**
comp=N,80nm,0.1s							
BEBN	**Eben Emael**	**0.24**	**23**	P	**Pg**	**03 12 27.7**	**+0.2**
BEBN				S	**Sg**	**03 12 31.2**	**-0.2**
comp=N,80nm,0.1s							
MEM	**Membach**	**0.31**	**84**	⇓P	**Pg**	**03 12 29.0**	**+0.4**
MEM				S	**Sg**	**03 12 33.1**	**-0.1**
comp=N,50nm,0.2s							
MEM	**Membach**	**0.31**	**84**	P	**Pg**	**03 12 28.9**	**+0.4**
MEM				S	**Sg**	**03 12 33.1**	**-0.1**
comp=N,50nm,0.2s							
HGN	**Heimansgroeve**	**0.32**	**54**	*e*Pn	**Pg**	**03 12 28.7**	**0.0**
comp=N,18nm,0.2s,baz=260							
HGN	**Heimansgroeve**	**0.32**	**54**	*i* Pg	**Pg**	**03 12 29.2**	**+0.4**
comp=N,59nm,0.1s							
HGN	**Heimansgroeve**	**0.32**	**54**	*ex*	**Sg**	**03 12 31.6**	**-1.9**
HGN				*e*Sg	**Sg**	**03 12 32.9**	**-0.6**
HGN	**Heimansgroeve**	**0.32**	**54**	*i* Pg	**Pg**	**03 12 29.2**	**+0.5**
comp=N,59nm,0.1s							
HGN				*e*Sg	**Sg**	**03 12 32.9**	**-0.6**
DREG	**Dreilaegerbach**	**0.46**	**79**	⇑*e*Pg	**Pg**	**03 12 31.5**	**+0.3**
DREG				*e*Sg	**Sg**	**03 12 37.4**	**-0.1**
comp=N,76nm,0.2s							
DREG	**Dreilaegerbach**	**0.46**	**79**	Pg	**Pg**	**03 12 31.5**	**+0.3**
DREG				Sg	**Sg**	**03 12 37.3**	**-0.2**
comp=N,76nm,0.2s							
KLL	**Kalltalsperre**	**0.51**	**82**	⇑*e*Pg	**Pg**	**03 12 32.3**	**+0.3**
KLL				*e*Sg	**Sg**	**03 12 38.7**	**-0.2**
comp=N,172nm,0.3s							
KLL	**Kalltalsperre**	**0.51**	**82**	Pg	**Pg**	**03 12 32.3**	**+0.3**
KLL				Sg	**Sg**	**03 12 38.7**	**-0.2**
comp=N,172nm,0.3s							
GIVF	**Givet**	**0.65**	**224**	*e*Pg	**Pg**	**03 12 35.5**	**+0.8**
GIVF				*e*Sg	**Sg**	**03 12 44.0**	**+0.6**
comp=N,155nm,0.2s							
GIVF	**Givet**	**0.65**	**224**	*e*Pg	**Pg**	**03 12 35.5**	**+0.8**
GIVF				*e*Sg	**Sg**	**03 12 44.0**	**+0.6**
comp=N,78nm,0.2s							
DOU	**Dourbes**	**0.77**	**232**	⇑P	**Pg**	**03 12 37.3**	**+0.5**
DOU				S	**Sg**	**03 12 47.1**	**+0.2**
comp=E,15nm,0.2s							
DOU	**Dourbes**	**0.77**	**232**	P	**Pg**	**03 12 37.2**	**+0.4**
DOU				S	**Sg**	**03 12 47.1**	**+0.1**
comp=E,15nm,0.2s							
UCC	**Uccle**	**0.78**	**287**	P	**Pg**	**03 12 37.4**	**+0.4**
UCC				S	**Sg**	**03 12 46.1**	**-1.1**
UCC	**Uccle**	**0.78**	**287**	P	**Pg**	**03 12 37.3**	**+0.3**
UCC				S	**Sg**	**03 12 46.1**	**-1.2**
HILG	**Hillesheim**	**0.79**	**111**	⇓*e*Pg	**Pg**	**03 12 37.7**	**+0.5**
HILG				*e*Sg	**Sg**	**03 12 47.2**	**-0.5**
comp=E,31nm,0.3s							
HILG	**Hillesheim**	**0.79**	**111**	Pg	**Pg**	**03 12 37.7**	**+0.5**
HILG				Sg	**Sg**	**03 12 47.2**	**-0.5**
comp=E,31nm,0.3s							
SNF	**Seneffe**	**0.80**	**266**	P	**Pg**	**03 12 37.5**	**+0.1**
SNF	**Seneffe**	**0.80**	**266**	P	**Pg**	**03 12 37.4**	**+0.1**
STB	**Steinbach**	**0.84**	**88**	⇑*e*Pg	**Pg**	**03 12 38.2**	**+0.1**
STB				*e*Sg	**Sg**	**03 12 48.5**	**-0.8**
comp=E,48nm,0.2s							
STB	**Steinbach**	**0.84**	**88**	Pg	**Pg**	**03 12 38.2**	**0.0**
STB				Sg	**Sg**	**03 12 48.5**	**-0.8**
comp=E,48nm,0.2s							
BAIF	**Baives**	**0.99**	**239**	*e*Pg	**Pg**	**03 12 41.7**	**+0.7**
comp=E,26nm,0.3s							
BAIF				*e*Sg	**Sg**	**03 12 54.0**	**-0.1**
BAIF	**Baives**	**0.99**	**239**	*e*Pg	**Pg**	**03 12 41.7**	**+0.7**
comp=E,13nm,0.3s							
BAIF				*e*Sg	**Sg**	**03 12 54.0**	**-0.1**
WLF	**Walferdange**	**1.00**	**156**	⇓P	**Pg**	**03 12 41.4**	**+0.3**
WLF				S	**Sg**	**03 12 54.1**	**-0.1**
comp=N,50nm,0.2s							
WLF	**Walferdange**	**1.00**	**156**	*e*Pg	**Pg**	**03 12 42.1**	**+0.9**
SNR=1.3							
WLF				*e*Sg	**Sg**	**03 12 54.4**	**+0.1**
WLF	**Walferdange**	**1.00**	**156**	*e*Pg	**Pg**	**03 12 42.1**	**+1.0**
WLF				*e*S	**Sg**	**03 12 55.4**	**+1.1**
WLF	**Walferdange**	**1.00**	**156**	P	**Pg**	**03 12 41.4**	**+0.3**
WLF	**Walferdange**	**1.00**	**156**	Pg	**Pg**	**03 12 42.1**	**+1.0**
SNR=1.3							
WLF				S	**Sg**	**03 12 54.1**	**-0.2**
comp=N,50nm,0.2s							
WLF				Sg	**Sg**	**03 12 54.4**	**+0.1**
BNS	**Bensberg**	**1.12**	**69**	*e*Pg	**Pg**	**03 12 42.7**	**-0.8**
BNS	**Bensberg**	**1.12**	**69**	Pg	**Pg**	**03 12 42.7**	**-0.7**
LAUG	**Laupendahl**	**1.19**	**49**	*e*Pg	**Pg**	**03 12 44.1**	**-0.6**
LAUG	**Laupendahl**	**1.19**	**49**	Pg	**Pg**	**03 12 44.1**	**-0.6**
BGG	**Burgeitz**	**1.22**	**107**	*e*Pg	**Pg**	**03 12 44.8**	**-0.5**
BGG				*e*Sg	**Sg**	**03 12 59.8**	**-1.5**
comp=N,14nm,0.1s							
BGG	**Burgeitz**	**1.22**	**107**	Pg	**Pg**	**03 12 44.8**	**-0.5**
BGG				Sg	**Sg**	**03 12 59.8**	**-1.4**
comp=N,14nm,0.1s							
HOBG	**Hohbusch**	**1.22**	**70**	*e*Pg	**Pn**	**03 12 44.0**	**+0.3**
HOBG	**Hohbusch**	**1.22**	**70**	Pg	**Pn**	**03 12 44.0**	**+0.3**
BUG	**Bochum--Univer**	**1.40**	**51**	*e*Sg	**Sg**	**03 13 06.4**	**-0.7**
KOE	**Koeppel**	**1.42**	**95**	⇑*e*Pg	**Pn**	**03 12 47.6**	**+1.3**
KOE				*e*Sg	**Sn**	**03 13 05.3**	**+0.9**
comp=N,17nm,0.5s							
KOE	**Koeppel**	**1.42**	**95**	Pg	**Pn**	**03 12 47.7**	**+1.3**
KOE				Sg	**Sn**	**03 13 05.3**	**+0.9**
comp=N,17nm,0.5s							
TNS	**Taunus Mts**	**1.90**	**100**	*e*Pg	**Pg**	**03 12 58.1**	**-0.2**
SNR=1.1							
TNS				*e*Sg	**Sn**	**03 13 19.8**	**+3.3**
TNS	**Taunus Mts**	**1.90**	**100**	Pg	**Pg**	**03 12 58.1**	**-0.2**
SNR=1.1							
TNS				Sg	**Sn**	**03 13 19.8**	**+3.4**
RFYF	**Reffroy**	**1.95**	**181**	*e*Sn	**Sn**	**03 13 16.9**	**-0.7**
RFYF				*e*Sg	**Sg**	**03 13 25.0**	**+0.5**
comp=N,10nm,0.2s,baz=351							
RFYF	**Reffroy**	**1.95**	**181**	*e*Sn	**Sn**	**03 13 16.9**	**-0.7**
RFYF				*e*Sg	**Sg**	**03 13 25.0**	**+0.5**
comp=N,5.1nm,0.2s,baz=351							
MEZF	**Maizieres J'vi**	**2.10**	**189**	*e*Pg	**Pg**	**03 13 02.2**	**+0.1**
baz=5.9							
MEZF				*e*Sn	**Sn**	**03 13 20.6**	**-0.7**
baz=12							
MEZF				*e*Sg	**Sg**	**03 13 29.2**	**-0.1**
comp=N,7.3nm,0.3s,baz=3.6							
MEZF	**Maizieres J'vi**	**2.10**	**189**	*e*Pg	**Pg**	**03 13 02.2**	**+0.1**
baz=5.9							
MEZF				*e*Sn	**Sn**	**03 13 20.6**	**-0.7**
baz=12							
MEZF				*e*Sg	**Sg**	**03 13 29.2**	**-0.1**
comp=N,3.7nm,0.3s,baz=3.6							
SFTF	**Sexfontaines**	**2.39**	**188**	*e*Pg	**Pg**	**03 13 07.8**	**+0.1**
baz=5.5							
SFTF				*e*Sg	**Sg**	**03 13 39.0**	**+0.3**
comp=N,4.1nm,0.2s							
SFTF	**Sexfontaines**	**2.39**	**188**	*e*Pg	**Pg**	**03 13 07.8**	**+0.1**
baz=5.5							
SFTF				*e*Sg	**Sg**	**03 13 39.0**	**+0.3**
comp=N,2.0nm,0.2s							
CDF	**Champ du Feu**	**2.45**	**152**	*e*Pg	**Pg**	**03 13 09.2**	**+0.5**
CDF				*e*Sg	**Sg**	**03 13 41.1**	**+0.7**
comp=N,1.1nm,0.2s							
CDF	**Champ du Feu**	**2.45**	**152**	*e*Pn	**Pn**	**03 13 01.6**	**+1.0**
CDF				*e*Pg	**Pg**	**03 13 09.2**	**+0.5**
CDF				*e*Sg	**Sg**	**03 13 41.1**	**+0.7**
CDF	**Champ du Feu**	**2.45**	**152**	*e*Pn	**Pn**	**03 13 01.6**	**+1.0**
CDF	**Champ du Feu**	**2.45**	**152**	*e*Pg	**Pg**	**03 13 09.2**	**+0.5**
CDF				*e*Sg	**Sg**	**03 13 41.1**	**+0.7**
comp=N,0.6nm,0.2s							
HAU	**Haudompre**	**2.63**	**168**	*e*Pg	**Pg**	**03 13 12.4**	**+0.3**
HAU				*e*Sg	**Sg**	**03 13 46.0**	**-0.2**
comp=N,6.1nm,0.3s							
HAU	**Haudompre**	**2.63**	**168**	*e*Pg	**Pg**	**03 13 12.4**	**+0.3**
HAU				*e*Sg	**Sg**	**03 13 46.0**	**-0.2**
comp=N,3.0nm,0.3s							
HINF	**Hinteralfeld**	**2.90**	**162**	*e*Pg	**Pg**	**03 13 17.5**	**+0.3**
HINF				*e*Sg	**Sg**	**03 13 54.6**	**-0.2**
comp=N,1.9nm,0.3s							
HINF	**Hinteralfeld**	**2.90**	**162**	*e*Pn	**Pn**	**03 13 07.5**	**+0.8**
HINF				*e*Pg	**Pg**	**03 13 17.5**	**+0.3**
HINF				*e*Sg	**Sg**	**03 13 54.6**	**-0.2**
HINF	**Hinteralfeld**	**2.90**	**162**	*e*Pn	**Pn**	**03 13 07.5**	**+0.8**
HINF	**Hinteralfeld**	**2.90**	**162**	*e*Pg	**Pg**	**03 13 17.5**	**+0.3**
HINF				*e*Sg	**Sg**	**03 13 54.6**	**-0.2**
comp=N,0.9nm,0.3s							
BFO	**Black Forest**	**2.90**	**140**	*e*Sg	**Sg**	**03 13 55.6**	**+0.8**
BFO	**Black Forest**	**2.90**	**140**	Sg	**Sg**	**03 13 55.6**	**+0.8**
LOR	**Lormes**	**3.49**	**199**	*e*Pn	**Pn**	**03 13 15.4**	**+0.5**
baz=25							
LOR	**Lormes**	**3.49**	**199**	*e*Pg	**Pg**	**03 13 28.1**	**-0.5**
baz=17							
LOR				*e*Sn	**Sn**	**03 13 53.9**	**-1.6**
baz=23							
LOR				*e*Sg	**Sg**	**03 14 11.9**	**-1.8**
comp=N,2.6nm,0.2s,baz=7.5							
LOR	**Lormes**	**3.49**	**199**	*e*Pn	**Pn**	**03 13 15.4**	**+0.5**
LOR				*e*Pg	**Pg**	**03 13 28.1**	**-0.5**
LOR				*e*Sn	**Sn**	**03 13 53.9**	**-1.6**
LOR				*e*Sg	**Sg**	**03 14 11.9**	**-1.8**
LOR	**Lormes**	**3.49**	**199**	*e*Pn	**Pn**	**03 13 15.4**	**+0.5**
baz=25							
LOR	**Lormes**	**3.49**	**199**	*e*Pg	**Pg**	**03 13 28.1**	**-0.5**
baz=17							
LOR				*e*Sn	**Sn**	**03 13 53.9**	**-1.6**
baz=23							
LOR				*e*Sg	**Sg**	**03 14 11.9**	**-1.8**
comp=N,1.3nm,0.2s,baz=7.5							
SSF	**Saint Saulge**	**3.76**	**202**	*e*Pg	**Pg**	**03 13 32.8**	**-1.0**
SSF				*e*Sn	**Sn**	**03 13 59.8**	**-2.5**
SSF				*e*Sg	**Sg**	**03 14 21.0**	**-1.5**
comp=N,1.7nm,0.2s							
SSF	**Saint Saulge**	**3.76**	**202**	*e*Pn	**Pn**	**03 13 18.9**	**+0.3**
SSF				*e*Pg	**Pg**	**03 13 32.8**	**-1.0**
SSF				*e*Sn	**Sn**	**03 13 59.8**	**-2.5**
SSF				*e*Sg	**Sg**	**03 14 21.0**	**-1.5**
SSF	**Saint Saulge**	**3.76**	**202**	*e*Pn	**Pn**	**03 13 18.9**	**+0.3**
SSF	**Saint Saulge**	**3.76**	**202**	*e*Pg	**Pg**	**03 13 32.8**	**-1.0**
SSF				*e*Sn	**Sn**	**03 13 59.8**	**-2.5**
SSF				*e*Sg	**Sg**	**03 14 21.0**	**-1.5**
comp=N,0.9nm,0.2s							
AVF	**Avril sur Loir**	**4.05**	**202**	*e*Pn	**Pn**	**03 13 23.0**	**+0.4**
AVF	**Avril sur Loir**	**4.05**	**202**	*e*Pn	**Pn**	**03 13 23.0**	**+0.4**
SMF	**Signal de Mont**	**4.09**	**197**	*e*Pn	**Pn**	**03 13 23.4**	**+0.3**
SMF	**Signal de Mont**	**4.09**	**197**	*e*Pn	**Pn**	**03 13 23.4**	**+0.3**
BGF	**Bois d'Agland**	**4.40**	**205**	*e*Pn	**Pn**	**03 13 27.4**	**+0.1**
BGF	**Bois d'Agland**	**4.40**	**205**	*e*Pn	**Pn**	**03 13 27.4**	**+0.1**

*ISCJB **19** 03:47:39.8±0.6, 37°.83N±0°.03×21°.37E±0°.04, h2km±4km, Error ellipse: s-maj=5.6km s-min=4.6km az=168.7*
*NEIC **19** 03:47:40.2, 37°.83N×21°.35E, h15km, MD3.4(ATH), After ATH.*
*THE **19** 03:47:40.6, 37°.85N×21°.40E, h20km±2km, ML3.4/5, Error ellipse: s-maj=2.4km s-min=0.6km az=24.0*
*CSEM **19** 03:47:40.1±0.2, 37°.82N×21°.36E, h20km, MD3.4, Error ellipse: s-maj=5.6km s-min=4.7km az=47.0*
*ATH **19** 03:47:40.2, 37°.83N×21°.35E, h15km±1km, MD3.4/16*
ISC 19 03:47:40.5±0.6, 37°.84N±0°.03×21°.36E±0°.04, h2km±4km, n58, σ1°.10/84, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.23**	**21**	*e*Pb	**Pg**	**03 47 45.9**	**+0.9**
RLS				*e*Sb	**Sg**	**03 47 50.3**	**+2.3**
RLS	**Riolos of Patr**	**0.23**	**21**	*e*PB	**Pg**	**03 47 45.9**	**+0.9**
RLS				*e*SB	**Sg**	**03 47 50.3**	**+2.3**
RLS	**Riolos of Patr**	**0.23**	**21**	*e*Pb	**Pg**	**03 47 45.9**	**+0.9**
RLS				*e*Sb	**Sg**	**03 47 50.3**	**+2.3**
KFL	**Anninata**	**0.53**	**301**	P	**Pg**	**03 47 51.4**	**+0.9**
UPR	**University Cam**	**0.56**	**37**	*e*PN	**Pg**	**03 47 51.7**	**+0.6**
UPR	**University Cam**	**0.56**	**37**	*e*Pn	**Pg**	**03 47 51.7**	**+0.6**
LAKA	**Lakka**	**0.63**	**51**	P	**Pg**	**03 47 52.3**	**-0.3**
LAKA				S	**Sg**	**03 48 01.5**	**+0.7**
LAKA	**Lakka**	**0.63**	**51**	P	**Pg**	**03 47 52.3**	**-0.3**
LAKA				S	**Sg**	**03 48 01.5**	**+0.7**
VLS	**Valsamata**	**0.69**	**299**	*e*Pn	**Pg**	**03 47 53.9**	**+0.1**
VLS	**Valsamata**	**0.69**	**299**	P	**Pg**	**03 47 53.6**	**-0.2**
VLS	**Valsamata**	**0.69**	**299**	*e*PN	**Pg**	**03 47 53.9**	**+0.1**
VLS	**Valsamata**	**0.69**	**299**	P	**Pg**	**03 47 53.6**	**-0.2**
VLS	**Valsamata**	**0.69**	**299**	*e*Pn	**Pg**	**03 47 53.9**	**+0.1**
EFP	**Efpalio**	**0.73**	**36**	P	**Pg**	**03 47 53.8**	**-0.6**
EFP				S	**Sg**	**03 48 04.2**	**+0.3**
EFP	**Efpalio**	**0.73**	**36**	*e*PB	**Pg**	**03 47 53.8**	**-0.6**
EFP				*e*SN	**Sg**	**03 48 05.5**	**+1.6**
EFP	**Efpalio**	**0.73**	**36**	P	**Pg**	**03 47 53.8**	**-0.6**
EFP				S	**Sg**	**03 48 04.2**	**+0.3**
EFP				*e*Sn	**Sg**	**03 48 05.5**	**+1.6**
GUR	**Goura**	**0.78**	**83**	P	**Pg**	**03 47 54.3**	**-1.2**
GUR				S	**Sg**	**03 48 05.5**	**-0.1**
GUR	**Goura**	**0.78**	**83**	*e*PN	**Pg**	**03 47 54.2**	**-1.3**
GUR				*e*SN	**Sg**	**03 48 06.3**	**+0.7**
GUR	**Goura**	**0.78**	**83**	P	**Pg**	**03 47 54.3**	**-1.2**
GUR				S	**Sg**	**03 48 05.5**	**-0.1**
GUR				*e*Sn	**Sg**	**03 48 06.3**	**+0.7**
ITM	**Ithomi**	**0.80**	**145**	*e*Pn	**Pg**	**03 47 55.8**	**0.0**
ITM	**Ithomi**	**0.80**	**145**	P	**Pg**	**03 47 55.3**	**-0.5**
ITM	**Ithomi**	**0.80**	**145**	*e*PN	**Pg**	**03 47 55.8**	**0.0**
ITM	**Ithomi**	**0.80**	**145**	P	**Pg**	**03 47 55.3**	**-0.5**
ITM	**Ithomi**	**0.80**	**145**	*e*Pn	**Pg**	**03 47 55.8**	**0.0**
KALE	**Kalithea**	**0.83**	**48**	P	**Pg**	**03 47 55.3**	**-1.0**
KALE				S	**Sg**	**03 48 06.6**	**-0.4**
KALE	**Kalithea**	**0.83**	**48**	P	**Pg**	**03 47 55.3**	**-1.0**
KALE				S	**Sg**	**03 48 06.6**	**-0.4**
VLX	**Vlachokerasia**	**0.94**	**120**	P	**Pg**	**03 47 57.8**	**-0.6**
VLX				S	**Sg**	**03 48 10.4**	**-0.1**
VLX	**Vlachokerasia**	**0.94**	**120**	*e*PN	**Pg**	**03 47 57.9**	**-0.5**
VLX				*e*SN	**Sg**	**03 48 11.1**	**+0.6**
VLX	**Vlachokerasia**	**0.94**	**120**	*e*Pn	**Pg**	**03 47 57.9**	**-0.5**
VLX				S	**Sg**	**03 48 10.4**	**-0.1**
VLX				*e*Sn	**Sg**	**03 48 11.1**	**+0.6**
PYL	**PYLOS**	**0.99**	**162**	P	**Pg**	**03 47 58.4**	**-1.0**
PYL	**PYLOS**	**0.99**	**162**	*e*PN	**Pg**	**03 47 58.5**	**-0.9**
PYL	**PYLOS**	**0.99**	**162**	*e*Pn	**Pg**	**03 47 58.5**	**-0.9**
DSF	**Desfina**	**1.08**	**58**	P	**Pg**	**03 47 59.5**	**-1.7**
DSF	**Desfina**	**1.08**	**58**	P	**Pg**	**03 47 59.5**	**-1.7**
EVR	**Evrytania**	**1.13**	**18**	*e*Pn	**Pg**	**03 48 01.6**	**-0.5**
EVR	**Evrytania**	**1.13**	**18**	*e*PN	**Pg**	**03 48 01.6**	**-0.5**
EVR	**Evrytania**	**1.13**	**18**	*e*Pn	**Pg**	**03 48 01.6**	**-0.5**
LTK	**Loutraki**	**1.28**	**81**	*e*PN	**Pn**	**03 48 04.8**	**-0.6**
LTK				*e*SN	**Sn**	**03 48 22.1**	**-1.0**
LTK	**Loutraki**	**1.28**	**81**	*e*Pn	**Pn**	**03 48 04.8**	**-0.6**
AGG	**Agios Georgios**	**1.41**	**33**	*e*Pn	**Pn**	**03 48 07.1**	**+0.1**
AGG				*e*Sn	**Sn**	**03 48 26.0**	**-0.1**
AGG	**Agios Georgios**	**1.41**	**33**	*e*PN	**Pn**	**03 48 07.1**	**+0.1**
AGG				*e*SN	**Sn**	**03 48 26.0**	**-0.1**
AGG	**Agios Georgios**	**1.41**	**33**	*e*Pn	**Pn**	**03 48 07.1**	**+0.1**
VLI	**Veliai**	**1.69**	**131**	*e*Pn	**Pn**	**03 48 12.2**	**+1.3**
VLI	**Veliai**	**1.69**	**131**	*e*PN	**Pn**	**03 48 12.2**	**+1.3**
NAIG	**Nisos Aigina**	**1.69**	**92**	*e*Pn	**Pn**	**03 48 11.5**	**+0.6**
NAIG	**Nisos Aigina**	**1.69**	**92**	*e*PN	**Pn**	**03 48 11.5**	**+0.6**
THL	**Klokotos Trika**	**1.80**	**16**	*e*PN	**Pn**	**03 48 13.2**	**+0.8**
VLY	**Voula,Athens**	**1.93**	**89**	*e*Pn	**Pn**	**03 48 15.4**	**+1.2**
VLY	**Voula,Athens**	**1.93**	**89**	*e*PN	**Pn**	**03 48 15.4**	**+1.2**
KYTH	**Kithira**	**2.06**	**139**	*e*Pn	**Pn**	**03 48 18.3**	**+2.4**
KYTH	**Kithira**	**2.06**	**139**	*e*PN	**Pn**	**03 48 18.3**	**+2.4**
NEO	**Neokhori**	**2.07**	**44**	*e*Pb	**Pb**	**03 48 16.2**	**-2.5**
NEO	**Neokhori**	**2.07**	**44**	*e*PB	**Pb**	**03 48 16.2**	**-2.5**
IDI	**Anoyia**	**3.82**	**131**	*e*Pn	**Pn**	**03 48 42.5**	**+2.3**
IDI				*e*S	**Sn**	**03 49 25.2**	**-0.4**
STON	**Ston**	**5.75**	**332**	*e*Pn	**Pn**	**03 49 04.5**	**-2.2**
STON				Sn	**Sn**	**03 50 06.8**	**-6.4**
STON	**Ston**	**5.75**	**332**	*e*Pn	**Pn**	**03 49 04.5**	**-2.2**
NVLJ	**Novalja**	**8.31**	**326**	*e*Pn	**Pn**	**03 49 41.0**	**-0.8**
NVLJ				Sn	**Sn**	**03 51 10.8**	**-5.3**
NVLJ	**Novalja**	**8.31**	**326**	*e*Pn	**Pn**	**03 49 41.0**	**-0.8**
NVLJ				Sn	**Sn**	**03 51 10.8**	**-5.3**

*IDC **19** 04:05:02.9±0.9, 42°.32N×30°.61W, h0km, mb3.8/11, mb1 4.0/11, mb1mx3.8/29, mbtmp3.8/11, MS3.4/12, Ms1 3.4/12, ms1mx3.2/30, Error ellipse: s-maj=21.7km s-min=17.3km az=154.0*
*ISCJB **19** 04:05:03.0±0.6, 42°.39N±0°.09×30°.61W±0°.08, h10km, mb4.0/22, MS3.3/12, Error ellipse: s-maj=13.1km s-min=8.5km az=14.9*
*NEIC **19** 04:05:05.6±0.7, 42°.60N×30°.57W, h10km, mb4.1/23, Error ellipse: s-maj=19.7km s-min=8.6km az=194.0*
*CSEM **19** 04:05:05.6, 42°.60N×30°.57W, h10km, mb4.1/23, After NEIC*
ISC 19 04:05:05.1±0.6, 42°.43N±0°.10×30°.56W±0°.08, h10km, n88, σ0°.92/79, mb4.0/22, MS3.3/12, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CALA	**Caldeira**	**4.10**	**159**	*e*S	**Pn**	**04 06 06.1**	**-1.7**
EHIG	**Higuera**	**17.28**	**139**	P	Px	04 09 20.1	
EHIG	**Higuera**	**17.28**	**139**	P	Px	04 09 20.1	
EBAD	**Badajoz**	**18.24**	**94**	P	**Pn**	**04 09 19.1**	**+0.8**
6.5nm,1.1s							
EBAD	**Badajoz**	**18.24**	**94**	P	**Pn**	**04 09 19.1**	**+0.8**
6.5nm,1.1s							
EARI	**Arriondas**	**18.59**	**79**	P	**Pn**	**04 09 19.9**	**-2.6**
11nm,1.2s							
EARI	**Arriondas**	**18.59**	**79**	P	**Pn**	**04 09 19.9**	**-2.6**
11nm,1.2s							
EMIN	**Mina Concepcio**	**18.84**	**96**	P	**Pn**	**04 09 24.6**	**-0.9**
8.8nm,1.6s							
EMIN	**Mina Concepcio**	**18.84**	**96**	P	**Pn**	**04 09 24.6**	**-0.9**
8.8nm,1.6s							
ESPR	**Espera**	**19.79**	**98**	P	**Pn**	**04 09 36.6**	**-0.3**
7.1nm,0.8s							
ESPR	**Espera**	**19.79**	**98**	P	**Pn**	**04 09 36.6**	**-0.3**
7.1nm,0.8s							
GUD	**Guadarrama**	**19.83**	**86**	P	**Pn**	**04 09 37.0**	**-0.4**
3.3nm,0.8s							
GUD	**Guadarrama**	**19.83**	**86**	P	**Pn**	**04 09 37.0**	**-0.4**
3.3nm,0.8s							
ELAN	**Lanestosa**	**19.89**	**78**	P	**Pn**	**04 09 39.5**	**+1.5**
12nm,1.6s							
ELAN	**Lanestosa**	**19.89**	**78**	P	**Pn**	**04 09 39.5**	**+1.5**
12nm,1.6s							
ESDC	**Sonseca Array**	**20.22**	**89**	P	**P**	**04 09 40.6**	**+0.5**
1.4nm,0.7s,baz=293,slow=10.0,SNR=11							
ESDC	**Sonseca Array**	**20.22**	**89**	P	**P**	**04 09 40.4**	**+0.3**
1.4nm,0.7s							
ESDC	**Sonseca Array**	**20.22**	**89**	P	**P**	**04 09 40.4**	**+0.3**
1.4nm,0.7s							
EADA	**Adamuz**	**20.24**	**93**	P	**P**	**04 09 40.8**	**+0.4**
3.9nm,0.8s							
EADA	**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARCES	**ARCESS Array B**	**39.23**	**27**	P	**P**	**04 12 33.4**	**+0.3**
	1.3nm,0.7s,mb3.8,baz=281,slow=8.2,SNR=4.0						
ARCES				LR	LR	04 26 23.4	
	comp=Z,41nm,21.2s,MS3.2,baz=341,slow=32						
ARCES	**ARCESS Array B**	**39.23**	**27**	P	**P**	**04 12 33.4**	**+0.3**
AKASG	**Malin Array Be**	**40.91**	**57**	P	**P**	**04 12 46.7**	**-0.5**
	0.9nm,0.5s,mb3.6,baz=276,slow=8.5,SNR=5.2						
AKASG	**Malin Array Be**	**40.91**	**57**	P	**P**	**04 12 46.7**	**-0.6**
ULM	**Lac du Bonnet**	**44.44**	**304**	LR	LR	04 28 55.2	
	comp=Z,33nm,20.3s,MS3.2,baz=76,slow=32						
BRTR	**Keskin Array B**	**47.44**	**71**	P	**P**	**04 13 40.1**	**+0.4**
	1.6nm,0.9s,mb3.9,baz=297,slow=6.2,SNR=7.1						
BRTR	**Keskin Array B**	**47.44**	**71**	P	**P**	**04 13 40.1**	**+0.4**
INK	**Inuvik**	**55.78**	**334**	LR	LR	04 37 27.1	
	comp=Z,27nm,19.4s,MS3.3,baz=313,slow=35						
PDAR	**Pinedale Array**	**56.02**	**299**	P	**P**	**04 14 43.9**	**+0.1**
	0.9nm,0.9s,mb3.8,baz=69,slow=8.1,SNR=6.1						
PDAR				LR	LR	04 40 58.2	
	comp=Z,47nm,19.0s,MS3.6,baz=257,slow=38						
PDAR	**Pinedale Array**	**56.02**	**299**	P	**P**	**04 14 43.9**	**+0.1**
HWUT	**Hardware Ranch**	**57.89**	**299**	*e*P	**P**	**04 14 57.8**	**+0.7**
	3.4nm,1.0s,mb4.3						
HWUT	**Hardware Ranch**	**57.89**	**299**	*e*P	**P**	**04 14 57.8**	**+0.8**
	3.4nm,1.0s,mb4.3						
TXAR	**Lajitas Array**	**58.97**	**283**	P	**P**	**04 15 04.5**	**-0.3**
	0.5nm,0.7s,mb3.6,baz=63,slow=6.4,SNR=7.4						
TXAR				LR	LR	04 41 36.6	
	comp=Z,50nm,21.3s,MS3.6,baz=245,slow=37						
TXAR	**Lajitas Array**	**58.97**	**283**	P	**P**	**04 15 04.4**	**-0.3**
DUG	**Dugway**	**59.43**	**298**	*e*P	**P**	**04 15 08.1**	**+0.4**
	3.1nm,1.1s,mb4.2						
DUG	**Dugway**	**59.43**	**298**	*e*P	**P**	**04 15 08.1**	**+0.3**
	3.1nm,1.1s,mb4.2						
ZALV	**Zalesovo Beam**	**69.23**	**35**	LR	LR	04 46 20.1	
	comp=Z,22nm,18.8s,MS3.4,baz=160,slow=36						
CPUP	**Villa Florida**	**72.74**	**205**	LR	LR	04 46 48.0	
	comp=Z,60nm,20.9s,MS3.9,baz=186,slow=34						
MK31	**Makanchi Array**	**73.09**	**41**	P	**P**	**04 16 35.3**	**0.0**
MK31	**Makanchi Array**	**73.09**	**41**	P	**P**	**04 16 35.3**	**0.0**
MKAR	**Makanchi Array**	**73.09**	**41**	P	**P**	**04 16 35.1**	**-0.2**
	1.0nm,0.7s,mb3.9,baz=336,slow=5.3,SNR=11						

NEIC ***19*** *04:23:23.6±0.8, 7°.82S×122°.85E, h280km±10km, mb3.9/2, Error ellipse: s-maj=25.2km s-min=6.8km az=62.0*
ISCJB ***19*** *04:23:23.5±0.4, 7°.87S±0°.04×122°.89E±0°.05, h291km±6km, mb3.5/5, Error ellipse: s-maj=8.1km s-min=6.3km az=136.1*
DJA ***19*** *04:23:24, 7°.96S×122°.90E, h263km, mb4.2/17*
IDC ***19*** *04:23:24.2±1.9, 7°.91S×122°.78E, h288km±21km, mb3.3/5, mb1 3.5/9, mb1mx3.3/22, mbtmp3.4/9, Error ellipse: s-maj=66.9km s-min=9.2km az=60.0*

ISC 19 04:23:24.5±0.4, 7°.88S±0°.04×122°.88E±0°.05, h285km±6km, n48, σ1°14/54, mb3.5/5, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**0.99**	**220**	P	**Pn**	**04 24 02.3**	**-0.9**
WSI	**Waingapu**	**3.12**	**235**	P	**Pn**	**04 24 19.2**	**-1.2**
WSI				S	**S**	**04 25 00.9**	**-4.0**
BKSI	**Bulukumba**	**3.74**	**313**	P	**Pn**	**04 24 25.9**	**-1.2**
KDI	**Kendari**	**3.90**	**356**	P	**Pn**	**04 24 29.2**	**+0.3**
KAPI	**Kappang**	**4.22**	**312**	P	**Pn**	**04 24 30.4**	**-2.0**
	1.2nm,0.3s,baz=151,slow=7.3,SNR=6.9						
KAPI	**Kappang**	**4.22**	**312**	P	**Pn**	**04 24 31.5**	**-0.9**
BNSI	**Bone**	**4.42**	**321**	P	**Pn**	**04 24 35.6**	**+0.8**
SPSI	**Sidrap Palu**	**4.97**	**321**	P	**Pn**	**04 24 43.6**	**+2.4**
	0.1nm12nm,1.4s						
NLAI	**Namlea**	**6.23**	**43**	P	**Pn**	**04 24 56.9**	**+0.6**
	0.2nm2μm63nm,0.7s						
LUWI	**Luwuk**	**6.79**	**359**	P	**Pn**	**04 25 03.3**	**+0.2**
	0.3nm1μm57nm,0.5s						
SRBI	**Singaraja**	**7.60**	**268**	P	**Pn**	**04 25 13.9**	**+0.9**
	0.3nm65nm,1.4s						
DNP	**Denpasar**	**7.64**	**263**	P	**Pn**	**04 25 14.1**	**+0.6**
	3.8nm258nm,0.3s						
GMJI	**Gumukmas**	**9.36**	**267**	P	**Pn**	**04 25 35.1**	**+0.3**
	26nm,1.7s						
KNA	**Kununurra**	**9.71**	**144**	*e*P	**Pn**	**04 25 38.1**	**-1.1**
	9.1nm,0.5s						
KNA	**Kununurra**	**9.71**	**144**	P	**Pn**	**04 25 37.9**	**-1.3**
	593nm35nm,0.7s						
TLE	**Tual**	**10.04**	**78**	P	**Pn**	**04 25 44.5**	**+1.3**
	93nm,1.2s						
FITZ	**Fitzroy Crossi**	**10.51**	**165**	*e*P	**Pn**	**04 25 48.6**	**-0.4**
	7.4nm,0.3s						
FITZ				*e*S	**S**	**04 27 48.4**	**+1.3**
FITZ	**Fitzroy Crossi**	**10.51**	**165**	P	**Pn**	**04 25 48.7**	**-0.3**
	0.4nm,0.3s,baz=356,slow=7.4,SNR=19						
FITZ				S	**S**	**04 27 47.6**	**+0.6**
	1.3nm,0.3s,baz=137,slow=6.3,SNR=5.0						
FITZ	**Fitzroy Crossi**	**10.51**	**165**	P	**Pn**	**04 25 48.3**	**-0.7**
	20nm,1.4s						
KAKA	**Kakadu**	**10.56**	**118**	*e*P	**Pn**	**04 25 50.2**	**+0.6**
	7.1nm,0.4s						
KAKA				*e*S	**S**	**04 27 39.0**	**-9.2**
KAKA	**Kakadu**	**10.56**	**118**	P	**Pn**	**04 25 49.3**	**-0.3**
	223nm22nm,0.8s						
SWI	**Sorong**	**10.87**	**51**	P	**Pn**	**04 25 50.4**	**-3.2**
PWJI	**Pagerwojo**	**10.98**	**268**	P	**Pn**	**04 25 54.3**	**-0.5**
	24nm,2.2s						
SJI	**Sawahan**	**11.02**	**270**	P	**Pn**	**04 25 59.8**	**+4.5**
PCJI	**Pacitan**	**11.60**	**268**	P	**Pn**	**04 26 01.4**	**-1.1**
UGM	**Wanagama**	**12.24**	**269**	P	**Pn**	**04 26 11.3**	**+0.9**
	154nm,1.8s						
MBWA	**Marble Bar**	**13.55**	**193**	*e*Pn	**Pn**	**04 26 26.3**	**+0.2**
MBWA	**Marble Bar**	**13.55**	**193**	P	**Pn**	**04 26 26.1**	**0.0**
	35nm,3.0s						
MYLDM	**Lahad Datu**	**13.69**	**341**	P	**Pn**	**04 26 30.2**	**+2.3**
	14nm,2.1s						
KKM	**Kota Kinabalu**	**15.35**	**334**	*e*Pn	**Pn**	**04 26 46.7**	**-0.9**
KSM	**Kuching**	**15.61**	**306**	P	**Pn**	**04 26 50.7**	**0.0**
	11nm,1.1s						
WRA	**Warramunga Arr**	**16.34**	**138**	P	**P**	**04 26 56.9**	**-0.2**
	1.3nm,0.3s,baz=315,slow=12,SNR=24						
WRA				S	**S**	**04 29 53.4**	**-0.3**
	0.1nm,0.3s,baz=319,slow=22,SNR=4.5						
WRAB	**Tennant Creek**	**16.34**	**138**	*e*P	**P**	**04 26 56.8**	**-0.2**
	9.5nm,0.8s						
WRAB				*e*S	**S**	**04 29 46.5**	**-7.2**
WRAB	**Tennant Creek**	**16.34**	**138**	P	**P**	**04 26 56.8**	**-0.2**
	12nm,0.6s						
SMPI	**Sarmi**	**16.81**	**70**	P	**P**	**04 27 02.0**	**-0.3**
ASAR	**Alice Springs**	**18.92**	**147**	P	**P**	**04 27 25.9**	**+0.9**
	2.3nm,0.3s,baz=335,slow=14,SNR=188						
ASAR				S	**S**	**04 30 43.1**	**-1.4**
	0.0nm,0.3s,baz=321,slow=18,SNR=6.9						
MEEK	**Meekatharra**	**19.09**	**192**	*e*P	**P**	**04 27 28.9**	**+2.2**
COEN	**Coen**	**20.81**	**109**	P	**P**	**04 27 42.3**	**-2.6**
STKA	**Stephens Creek**	**29.56**	**146**	*e*P	**P**	**04 29 03.8**	**+0.6**
	2.0nm,0.2s,mb4.3						
STKA	**Stephens Creek**	**29.56**	**146**	P	**P**	**04 29 03.9**	**+0.7**
	3.1nm,0.3s,mb4.3,baz=317,slow=8.9,SNR=12						
STKA	**Stephens Creek**	**29.56**	**146**	*e*P	**P**	**04 29 03.8**	**+0.6**
	0.7nm,0.5s,mb3.5						
CMSA	**Cobar Meteorol**	**31.72**	**141**	*e*P	**P**	**04 29 23.1**	**+0.9**
ARMA	**Armidale**	**35.02**	**134**	*e*P	**P**	**04 29 52.6**	**+2.0**
SONM	**Songino Array**	**57.36**	**347**	P	**P**	**04 32 43.9**	**+0.7**
	0.4nm,0.4s,mb3.2,baz=188,slow=4.4,SNR=2.4						
MKAR	**Makanchi Array**	**65.30**	**331**	P	**P**	**04 33 35.4**	**-0.8**
	0.5nm,0.5s,mb3.5,baz=127,slow=7.7,SNR=7.5						
ZALV	**Zalesovo Beam**	**69.44**	**337**	P	**P**	**04 34 00.6**	**-1.2**
	0.4nm,0.3s,mb3.7,baz=97,slow=7.4,SNR=2.3						
KURK	**Kurchatov**	**69.76**	**332**	P	**P**	**04 34 02.1**	**-1.8**
	0.3nm,0.4s,mb3.4,baz=149,slow=4.6,SNR=3.1						
CPUP	**Villa Florida**	**146.00**	**180**	PKPbc	PKPbc	04 42 31.6	0.0
	0.6nm,0.4s,baz=151,slow=0.8,SNR=4.5						

ISCJB ***19*** *04:48:14.2±1.1, 31°.69N±0°.03×104°.36E±0°.04, h1km±7km, mb4.4/26, MS3.2/4, Error ellipse: s-maj=5.2km s-min=4.5km az=163.6*
IDC ***19*** *04:48:16.1±0.6, 31°.73N×104°.31E, h0km, mb4.3/16, mb1 4.4/18, mb1mx4.3/28, mbtmp4.3/18, ML4.2/2, MS3.3/4, Ms1 3.3/4, ms1mx2.8/32, Error ellipse: s-maj=23.9km s-min=13.0km az=51.0*
NEIC ***19*** *04:48:17.8±0.3, 31°.71N×104°.28E, h10km, mb4.6/17, Error ellipse: s-maj=6.2km s-min=5.7km az=169.0*
BJI ***19*** *04:48:17.5, 31°.74N×104°.50E, h12km, mB4.7/7, mb4.4/15, ML4.3/22, Ms4.2/14, Ms7 4.0/11*
MOS ***19*** *04:48:18.8±1.0, 31°.72N×104°.32E, h33km, mb4.6/21, Error ellipse: s-maj=11.3km s-min=7.9km az=114.4*

ISC 19 04:48:17.0±0.9, 31°.75N±0°.03×104°.34E±0°.03, h5km±6km, n91, σ1°02/101, mb4.3/26, MS3.2/4, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.97**	**211**	⇓*i*Pg	**Pg**	**04 48 37.0**	**+1.4**
CD2				Sg	**Sg**	**04 48 52.3**	**+4.2**
CD2				smax			
	comp=N,17μm,0.7s						
CD2				smax			
	comp=E,27μm,0.7s						
LZH	**Lanzhou**	**4.35**	**355**	*e*Pn	**Pn**	**04 49 26.5**	**+2.8**
LZH				Pg	**Pb**	**04 49 33.8**	**-0.1**
LZH				Sn	**Sn**	**04 50 16.8**	**+2.0**
LZH				Sg	**Sb**	**04 50 29.4**	**+2.7**
LZH				smax			
	comp=N,490nm,0.7s						
LZH				smax			
	comp=E,580nm,0.5s						
LZH				LR	LR		
	comp=E,2μm,6.4s						
LZH				LR	LR		
	comp=Z,3μm,7.9s						
XAN	**Xi'an**	**4.48**	**58**	Pn	**Pn**	**04 49 24.5**	**-1.1**
XAN				Sn	**Sn**	**04 50 17.8**	**-0.4**
XAN				Sg	**Sg**	**04 50 38.5**	**-2.5**
XAN				smax			
	comp=N,620nm,0.8s						
XAN				smax			
	comp=E,320nm,0.8s						
XAN				LR	LR		
	comp=N,600nm,6.8s						
XAN				LR	LR		
	comp=E,480nm,9.7s						
XAN				LR	LR		
	comp=Z,500nm,9.1s						
ENH	**Enshi**	**4.66**	**107**	*e*Pn	**Pn**	**04 49 29.2**	**+1.2**
ENH				*e*Sg	**Sg**	**04 50 46.5**	**-0.2**
GYA	**Guiyang**	**5.65**	**158**	Pn	**Pn**	**04 49 42.4**	**+0.8**
GYA				Sn	**Sn**	**04 50 46.6**	**-0.3**
GYA				Sg	**Sg**	**04 51 18.6**	**+0.2**
GYA				smax			
	comp=N,370nm,0.9s						
GYA				smax			
	comp=E,320nm,0.7s						
KMI	**Kunming**	**6.75**	**192**	Pn	**Pn**	**04 50 03.3**	**+6.6**
KMI				Sn	**Sn**	**04 51 14.6**	**+0.6**
KMI				Sg	**Sg**	**04 51 48.3**	**-5.4**
KMI				smax			
	comp=N,61nm,1.5s						
KMI				smax			
	comp=E,70nm,1.6s						
KMI				LR	LR		
	comp=N,670nm,5.8s						
KMI				LR	LR		
	comp=E,820nm,5.8s						
GTA	**Gaotai**	**8.48**	**336**	*e*P	**Pn**	**04 50 18.0**	**-2.5**
GTA				pP		04 50 22.3	
GTA				sP		04 50 25.3	
GTA				S	**Sn**	**04 51 56.6**	**-0.1**
GTA				sS		04 52 02.0	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.7s						
GTA				pmax	pmax		
	comp=Z,33nm,5.6s						
GTA				LR	LR		
	comp=N,540nm,9.2s						
GTA				LR	LR		
	comp=E,440nm,8.6s						
GTA				LR	LR		
	comp=Z,580nm,10.1s						
WHN	**Wuhan**	**8.67**	**95**	*e*P	**Pn**	**04 50 24.4**	**+1.3**
WHN				S	**Sn**	**04 51 57.0**	**-4.2**
WHN				LR	LR		
	comp=N,2μm,5.6s						
WHN				LR	LR		
	comp=E,1μm,6.8s						
WHN				LR	LR		
	comp=Z,2μm,9.9s						
BTO	**Baotou**	**9.96**	**26**	*e*P	Px	04 51 14.8	
BTO				S	Sx	04 52 57.9	
BTO				LR	LR		
	comp=N,210nm,12.2s						
BTO				LR	LR		
	comp=E,110nm,11.0s						
LSA	**Lhasa**	**11.53**	**263**	P	**Pn**	**04 51 02.8**	**+0.5**
LSA	**Lhasa**	**11.53**	**263**	*e*P	**Pn**	**04 51 04.4**	**+2.1**
LSA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
LSA	**Lhasa**	**11.53**	**263**	*e*Pn	**Pn**	**04 51 04.4**	**+2.1**
	comp=Z,7.6nm,0.6s						
CMAR	**Chiang Mai Arr**	**14.10**	**201**	Pn	**Pn**	**04 51 38.0**	**+0.5**
	comp=Z,0.9nm,0.3s,baz=12,slow=12,SNR=8.0						
CMAR	**Chiang Mai Arr**	**14.10**	**201**	P	**Pn**	**04 51 38.0**	**+0.5**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TAPN	**Taplejung**	**15.12**	**257**	*e*P	**Pn**	**04 51 51.0**	**-0.3**
	comp=Z,38nm,1.0s						
ODAN	**Odare**	**15.56**	**256**	*e*P	**Pn**	**04 51 56.5**	**-0.6**
	comp=Z,36nm,0.8s						
SONM	**Songino Array**	**16.14**	**5**	Pn	**Pn**	**04 52 06.3**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=178,slow=12,SNR=13						
SONM				Lg		04 56 56.6	
	comp=Z,0.6nm,0.3s,baz=200,slow=30,SNR=4.6						
ULN	**Ulaanbaatar**	**16.23**	**7**	*e*P	**Pn**	**04 52 05.6**	**-0.1**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ULN	**Ulaanbaatar**	**16.23**	**7**	*e*Pn	**Pn**	**04 52 05.6**	**-0.1**
	comp=Z,5.6nm,0.8s						
GUN	**Gumba**	**16.46**	**261**	*e*P	**Pn**	**04 52 07.7**	**-1.1**
	comp=Z,54nm,0.8s						
PKI	**Pulchoki**	**16.97**	**261**	*e*P	**Pn**	**04 52 14.0**	**-1.1**
	comp=Z,32nm,0.6s						
PKI	**Pulchoki**	**16.97**	**261**	*e*P	**Pn**	**04 52 14.0**	**-1.1**
PKI				pmax	pmax		
	comp=Z,52nm,0.7s						
PKIN	**Phulchoki**	**16.98**	**261**	*e*P	**Pn**	**04 52 14.0**	**-1.3**
	comp=Z,52nm,0.7s						
KKN	**Kakani**	**17.01**	**261**	*e*P	**Pn**	**04 52 14.2**	**-1.4**
DMN	**Daman**	**17.21**	**261**	*e*P	**Pn**	**04 52 16.3**	**-1.9**
	comp=Z,40nm,0.7s						
ZAK	**Zakamensk**	**18.63**	**358**	*e*P	**Pn**	**04 52 34.3**	**-1.3**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KSRS	**Korea Array**	**20.21**	**67**	P	**P**	**04 52 52.9**	**+0.1**
	comp=Z,25nm,1.0s,baz=256,slow=10,SNR=31						
KSRS	**Korea Array**	**20.21**	**67**	P	**P**	**04 52 52.9**	**+0.2**
KSRS				pmax	pmax		
	comp=Z,25nm,1.0s						
CN2	**Changchun**	**20.51**	**48**	*e*P	**P**	**04 52 59.5**	**+3.6**
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
MK31	**Makanchi Array**	**22.63**	**318**	*e*P	**P**	**04 53 18.6**	**-0.1**
MKAR	**Makanchi Array**	**22.63**	**318**	P	**P**	**04 53 18.7**	**0.0**
	comp=Z,3.4nm,0.8s,mb3.8,baz=112,slow=12,SNR=28						
MKAR				LR	LR	05 02 59.8	
	comp=Z,154nm,19.1s,MS3.5,baz=275,slow=39						
MKAR	**Makanchi Array**	**22.63**	**318**	P	**P**	**04 53 18.7**	**0.0**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MKAR				MLR	MLR		
	comp=Z,154nm,19.1s						
TKM2	**Tokmak 2**	**25.31**	**304**	*e*P	**P**	**04 53 45.9**	**+1.4**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.0						
TKM2	**Tokmak 2**	**25.31**	**304**	*e*P	**P**	**04 53 45.9**	**+1.5**
	comp=Z,3.7nm,0.8s,mb4.0						
UCH	**Uchtor**	**25.90**	**302**	*e*P	**P**	**04 53 52.5**	**+2.6**
	comp=Z,9.8nm,1.1s,mb4.2						
AAK	**Ala-Archa**	**26.01**	**303**	LR	LR	05 05 48.2	
	comp=Z,112nm,18.1s,MS3.4,baz=22,slow=40						
ZAA0	**Zalesovo Array**	**26.23**	**333**	*e*P	**P**	**04 53 52.9**	**+0.1**
ZALV	**Zalesovo Beam**	**26.23**	**333**	P	**P**	**04 53 52.9**	**+0.2**
	comp=Z,5.1nm,0.7s,mb4.2,baz=133,slow=9.7,SNR=17						
ZALV	**Zalesovo Beam**	**26.23**	**333**	P	**P**	**04 53 52.9**	**+0.2**
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
ZALV	**Zalesovo Beam**	**26.23**	**333**	P	**P**	**04 53 52.9**	**+0.2**
KURK	**Kurchatov**	**26.86**	**322**	P	**P**	**04 53 58.7**	**+0.4**
	comp=Z,4.5nm,0.7s,mb4.1,baz=128,slow=8.5,SNR=39						
KURK				LR	LR	05 05 45.2	
	comp=Z,23nm,20.1s,MS2.7,baz=165,slow=39						
KURK	**Kurchatov**	**26.86**	**322**	P	**P**	**04 53 58.7**	**+0.3**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
KURK				MLR	MLR		
	comp=Z,23nm,20.1s,MS2.7						
KURK	**Kurchatov**	**26.86**	**322**	*e*P	**P**	**04 53 58.7**	**+0.3**
	comp=Z,12nm,1.2s,mb4.3						
KURK				LR	LR	05 05 45.2	
MJAR	**Matsushiro Arr**	**28.35**	**71**	LR	LR	05 06 34.1	
	comp=Z,58nm,18.2s,MS3.2,baz=265,slow=39						
KBL	**Kabul**	**29.59**	**285**	*e*P	**P**	**04 54 23.7**	**+0.7**
KBL				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.4						
KBL	**Kabul**	**29.59**	**285**	*e*P	**P**	**04 54 23.6**	**+0.7**
	comp=Z,3.1nm,0.4s,mb4.4						
BVAR	**Borovoye Array**	**32.41**	**321**	P	**P**	**04 54 48.2**	**+0.6**
	comp=Z,1.9nm,0.6s,mb4.1,baz=119,slow=10,SNR=6.7						
BVAR	**Borovoye Array**	**32.41**	**321**	P	**P**	**04 54 48.2**	**+0.5**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ABKAR	**Akbulak array**	**37.40**	**311**	*e*P	**P**	**04 55 31.2**	**+0.4**
	comp=Z,3.6nm,0.8s,mb4.2						
AKTK	**Aktyubinsk**	**38.85**	**312**	P	**P**	**04 55 42.6**	**-0.3**
AKTO	**Aktyubinsk**	**38.85**	**312**	P	**P**	**04 55 42.6**	**-0.3**
	comp=Z,2.5nm,0.5s,mb4.2,baz=89,slow=11,SNR=13						
AKTO	**Aktyubinsk**	**38.85**	**312**	P	**P**	**04 55 42.6**	**-0.3**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.3						
ARU	**Arti**	**40.05**	**322**	*e*P	**P**	**04 55 53.5**	**+0.6**
ARU				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.0						
ARU	**Arti**	**40.05**	**322**	*e*P	**P**	**04 55 53.5**	**+0.6**
	comp=Z,24nm,0.8s,mb5.0						
PETK	**Petropavlovsk-**	**43.59**	**45**	P	**P**	**04 56 22.0**	**+0.1**
	comp=Z,5.4nm,0.7s,mb4.4,baz=222,slow=4.0,SNR=14						
PETK	**Petropavlovsk-**	**43.59**	**45**	P	**P**	**04 56 22.0**	**+0.1**
PETK				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
JOF	**Joensuu**	**54.59**	**328**	*e*P	**P**	**04 57 45.3**	**-0.7**
JOF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
JOF	**Joensuu**	**54.59**	**328**	*e*p	**P**	**04 57 45.3**	**-0.7**
	comp=Z,3.7nm,0.6s,mb4.6						
KEV	**Kevo**	**56.23**	**336**	*e*p	**P**	**04 57 56.7**	**-1.0**
BR131	**Keskin Array S**	**56.60**	**299**	*e*P	**P**	**04 58 01.2**	**+0.4**
	comp=Z,0.6nm,0.6s,mb3.8						
BRTR	**Keskin Array B**	**56.60**	**299**	P	**P**	**04 58 01.1**	**+0.3**
	comp=Z,2.1nm,0.8s,mb4.2,baz=98,slow=6.3,SNR=14						
BRTR	**Keskin Array B**	**56.60**	**299**	P	**P**	**04 58 01.1**	**+0.3**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	**ARCESS Array B**	**56.76**	**336**	P	**P**	**04 58 01.1**	**-0.3**
	comp=Z,2.6nm,0.8s,mb4.3,baz=82,slow=8.7,SNR=7.7						
ARCES	**ARCESS Array B**	**56.76**	**336**	P	**P**	**04 58 01.2**	**-0.3**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KAF	**Kangasniemi**	**56.96**	**327**	*e*P	**P**	**04 58 01.9**	**-1.1**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
KAF	**Kangasniemi**	**56.96**	**327**	*e*p	**P**	**04 58 01.9**	**-1.1**
	comp=Z,4.3nm,0.6s,mb4.7,baz=83,slow=6.9						
AKASG	**Malin Array Be**	**57.09**	**313**	P	**P**	**04 58 03.4**	**-0.8**
	comp=Z,2.3nm,0.6s,mb4.4,baz=75,slow=5.8,SNR=6.9						
AKASG	**Malin Array Be**	**57.09**	**313**	P	**P**	**04 58 03.4**	**-0.8**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES	**FINESS Array B**	**57.15**	**326**	P	**P**	**04 58 04.3**	**-0.1**
	comp=Z,7.3nm,0.7s,mb4.8,baz=76,slow=7.2,SNR=18						
FINES	**FINESS Array B**	**57.15**	**326**	P	**P**	**04 58 04.3**	**-0.1**
FINES				pmax	pmax		
	comp=Z,7.0nm,0.7s						
WRAB	**Tennant Creek**	**58.90**	**147**	*e*P	**P**	**04 58 17.1**	**0.0**
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
WRAB	**Tennant Creek**	**58.90**	**147**	*e*P	**P**	**04 58 17.1**	**0.0**
	comp=Z,5.8nm,0.6s,mb4.8						
WRA	**Warramunga Arr**	**58.90**	**147**	P	**P**	**04 58 17.1**	**0.0**
	comp=Z,4.3nm,0.6s,mb4.7,baz=339,slow=7.5,SNR=19						
WRA	**Warramunga Arr**	**58.90**	**147**	P	**P**	**04 58 17.1**	**0.0**
WRA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ASAR	**Alice Springs**	**61.94**	**149**	P	**P**	**04 58 37.9**	**+0.1**
	comp=Z,1.8nm,0.7s,mb4.3,baz=334,slow=6.5,SNR=22						
ASAR	**Alice Springs**	**61.94**	**149**	P	**P**	**04 58 37.9**	**+0.1**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NB2	**NORSAR Subarra**	**64.23**	**327**	P	**P**	**04 58 51.5**	**-1.1**
	comp=Z,1.3nm,0.6s,mb4.1,baz=73,slow=6.9						
NOA	**NORSAR Array B**	**64.23**	**327**	P	**P**	**04 58 51.8**	**-0.8**
	comp=Z,1.8nm,0.6s,mb4.3,baz=73,slow=6.8,SNR=9.0						
NOA	**NORSAR Array B**	**64.23**	**327**	P	**P**	**04 58 51.8**	**-0.8**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BPAW	**Bear Paw Mtn.**	**67.94**	**27**	*e*P	**P**	**04 59 17.1**	**+0.6**
	comp=Z,1.7nm,0.8s,mb4.1						
STKA	**Stephens Creek**	**72.44**	**147**	P	**P**	**04 59 44.1**	**-0.3**
	comp=Z,3.3nm,0.8s,mb4.3,baz=348,slow=1.9,SNR=4.9						
LPG	**La Plagne**	**72.95**	**313**	*e*P	**P**	**04 59 47.7**	**+0.3**
	comp=Z,12nm,0.7s,mb4.7						
LPG	**La Plagne**	**72.95**	**313**	*e*P	**P**	**04 59 47.7**	**+0.3**
LPG				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
LPG	**La Plagne**	**72.95**	**313**	*e*P	**P**	**04 59 47.7**	**+0.3**
	comp=Z,6.1nm,0.7s,mb4.6						
LPL	**La Plagne**	**72.96**	**313**	*e*P	**P**	**04 59 47.7**	**+0.2**
	comp=Z,8.5nm,0.6s,mb4.5						
LPL	**La Plagne**	**72.96**	**313**	*e*P	**P**

ISC 19 05:19:21.2±1.1, 14°39S±0°.05×167°33E±0°.03, h194km±10km, h214km±4.5km: pP-P, n741, σ0s.55/532, mb4.8/121, 198C-149D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.69**	**186**	*e*Pn	**Pn**	**05 21 10.2**	**-0.1**
	39nm,0.6s						
DZM				*e*S	**Sn**	**05 22 36.0**	**-1.0**
NOUC	**Port Laguerre**	**7.73**	**187**	*e*P	**Pn**	**05 21 12.6**	**+1.7**
NOUC				*e*S	**Sn**	**05 22 37.3**	**-0.9**
BAYA	**Yate Dam**	**7.73**	**183**	*e*S	**Sn**	**05 22 37.7**	**-0.4**
MSVF	**Nonsavu**	**10.82**	**109**	*e*P	**Pn**	**05 21 54.7**	**+3.5**
MSVF				pmax	pmax		
	comp=Z,87nm,0.9s						
MSVF	**Nonsavu**	**10.82**	**109**	*e*Pn	**Pn**	**05 21 54.7**	**+3.5**
	comp=Z,87nm,0.9s						
EIDS	**Eidsvold**	**18.76**	**232**	*e*P	**P**	**05 23 27.1**	**+1.4**
EIDS				*e*S	**S**	**05 26 49.8**	**+0.8**
EIDS	**Eidsvold**	**18.76**	**232**	*e*P	**P**	**05 23 27.3**	**+1.6**
	comp=Z,163nm,1.3s						
AFI	**Afiamalu**	**20.26**	**91**	P	**P**	**05 23 43.2**	**+1.3**
	comp=Z,411nm,0.9s,baz=56,slow=1.6,SNR=48						
AFI	**Afiamalu**	**20.26**	**91**	*e*P	**P**	**05 23 45.1**	**+3.2**
AFI				pmax	pmax		
	comp=Z,487nm,0.9s						
AFI	**Afiamalu**	**20.26**	**91**	*e*P	**P**	**05 23 45.0**	**+3.1**
	comp=Z,487nm,0.9s						
CTA	**Charters Tower**	**20.91**	**251**	⇓*i*P	**P**	**05 23 48.8**	**+0.1**
	comp=Z,25nm,0.9s						
CTA	**Charters Tower**	**20.91**	**251**	P	**P**	**05 23 48.1**	**-0.6**
	comp=Z,27nm,0.8s,baz=79,slow=12,SNR=23						
CTAO	**Charters Tower**	**20.91**	**251**	*e*P	**P**	**05 23 48.9**	**+0.2**
CTAO				pmax	pmax		
	comp=Z,38nm,0.9s						
CTAO	**Charters Tower**	**20.91**	**251**	*e*P	**P**	**05 23 48.9**	**+0.2**
	comp=Z,38nm,0.9s						
ARMA	**Armidale**	**21.53**	**220**	*e*P	**P**	**05 23 55.9**	**+0.8**
ARMA	**Armidale**	**21.53**	**220**	*e*P	**P**	**05 23 56.0**	**+0.9**
	comp=Z,36nm,1.1s,mb4.8						
COEN	**Coen**	**23.43**	**268**	*e*P	**P**	**05 24 13.4**	**+0.3**
	comp=Z,473nm,0.9s						
URZ	**Urewera**	**25.30**	**162**	P	**P**	**05 24 28.9**	**-1.0**
	comp=Z,4.9nm,0.6s,mb4.3,baz=284,slow=4.2,SNR=4.2						
URZ	**Urewera**	**25.30**	**162**	*e*P	**P**	**05 24 28.6**	**-1.3**
	comp=Z,7.7nm,0.6s,mb4.5						
CNB	**Canberra Magne**	**26.37**	**215**	*e*P	**P**	**05 24 40.9**	**+1.4**
STKA	**Stephens Creek**	**29.26**	**229**	*e*P	**P**	**05 25 05.9**	**+0.7**
	comp=Z,21nm,0.4s,mb5.1						
STKA				*e*		05 28 07.0	
STKA	**Stephens Creek**	**29.26**	**229**	P	**P**	**05 25 06.0**	**+0.8**
	comp=Z,20nm,0.4s,mb5.1,baz=50,slow=8.4,SNR=99						
STKA				PcP	PcP	05 28 07.2	+0.1
	comp=Z,14nm,0.7s,baz=27,slow=2.7,SNR=12						
STKA				ScP	ScP	05 31 31.4	+0.8
	comp=Z,4.3nm,0.9s,baz=5.4,slow=9.1,SNR=5.7						
STKA				LR	LR	05 36 44.1	
	comp=Z,230nm,18.9s,baz=31,slow=36						
STKA	**Stephens Creek**	**29.26**	**229**	*e*P	**P**	**05 25 05.9**	**+0.7**
STKA				pmax	pmax		
	comp=Z,5.0nm,0.5s						
RPZ	**Rata Peaks**	**29.40**	**175**	P	**P**	**05 25 06.6**	**+0.3**
	comp=Z,9.5nm,0.5s,mb4.7,baz=48,slow=3.8,SNR=5.8						
WRAB	**Tennant Creek**	**31.96**	**255**	*e*P	**P**	**05 25 27.5**	**-1.5**
WRAB				pmax	pmax		
	comp=Z,183nm,2.3s,mb5.2						
WRAB	**Tennant Creek**	**31.96**	**255**	*e*P	**P**	**05 25 27.5**	**-1.5**
	comp=Z,183nm,2.3s,mb5.2						
WRA	**Warramunga Arr**	**31.97**	**255**	P	**P**	**05 25 27.6**	**-1.5**
	comp=Z,10nm,0.3s,mb4.8,baz=86,slow=9.4,SNR=81						
WRA				PP	PP	05 26 38.4	-7.1
	comp=Z,2.6nm,1.0s,baz=84,slow=10,SNR=5.9						
WRA				PcP	PcP	05 28 13.9	-0.6
	comp=Z,3.6nm,0.8s,baz=86,slow=3.6,SNR=8.9						
WRA				S	**S**	**05 30 21.9**	**-4.4**
	comp=Z,5.6nm,1.0s,baz=83,slow=15,SNR=7.9						
WRA				ScP	ScP	05 31 41.0	+1.3
	comp=Z,2.4nm,0.8s,baz=80,slow=3.8,SNR=6.7						
WRA				LR	LR	05 37 27.4	
	comp=Z,96nm,21.4s,baz=85,slow=34						
WRA	**Warramunga Arr**	**31.97**	**255**	P	**P**	**05 25 27.6**	**-1.5**
WRA						05 26 38.4	
WRA						05 28 13.9	
WRA				S	**S**	**05 30 21.9**	**-4.4**
WRA	**Warramunga Arr**	**31.97**	**255**	P	**P**	**05 25 27.6**	**-1.5**
WRA				PP	PP	05 26 38.4	-7.1
WRA				PcP	PcP	05 28 13.9	-0.6
WRA				S	**S**	**05 30 21.9**	**-4.4**
WRA				ScP	ScP	05 31 41.0	+1.3
WRA				LR	LR	05 37 27.4	
ASAR	**Alice Springs**	**32.85**	**249**	P	**P**	**05 25 35.5**	**-1.2**
	comp=Z,18nm,0.4s,mb5.0,baz=77,slow=9.2,SNR=352						
ASAR				pP	pP	05 26 15.9	-0.9
	comp=Z,3.9nm,0.7s,baz=75,slow=9.8,SNR=2.1						
ASAR				PcP	PcP	05 28 16.4	-0.5
	comp=Z,3.3nm,0.8s,baz=79,slow=3.4,SNR=8.2						
ASAR				S	**S**	**05 30 36.0**	**-3.9**
	comp=Z,3.3nm,1.1s,baz=81,slow=16,SNR=8.1						
ASAR				ScP	ScP	05 31 44.5	+1.8
	comp=Z,2.1nm,0.9s,baz=93,slow=4.6,SNR=5.8						
BBOO	**Buckleboo**	**33.84**	**232**	⇓*i*P	**P**	**05 25 45.4**	**+0.2**
	comp=Z,17nm,0.3s,mb5.1						
KAKA	**Kakadu**	**33.95**	**269**	*e*P	**P**	**05 25 47.3**	**+1.0**
	comp=Z,33nm,0.3s,mb5.3						
KAKA	**Kakadu**	**33.95**	**269**	*e*P	**P**	**05 25 47.3**	**+0.9**
	comp=Z,76nm,0.4s,mb5.6						
KNA	**Kununurra**	**37.23**	**263**	⇓*i*P	**P**	**05 26 13.7**	**-0.6**
	comp=Z,80nm,1.2s,mb5.1						
FORT	**Forrest**	**39.52**	**239**	*e*P	**P**	**05 26 32.7**	**-0.6**
	comp=Z,26nm,0.4s,mb5.0						
FORT	**Forrest**	**39.52**	**239**	*e*P	**P**	**05 26 32.9**	**-0.4**
	comp=Z,41nm,0.5s,mb5.1						
FITZ	**Fitzroy Crossi**	**40.14**	**259**	*e*P	**P**	**05 26 37.9**	**-0.6**
	comp=Z,27nm,0.4s,mb5.0						
FITZ	**Fitzroy Crossi**	**40.14**	**259**	P	**P**	**05 26 38.0**	**-0.5**
	comp=Z,21nm,0.7s,mb4.7,baz=88,slow=9.9,SNR=9.7						
FITZ	**Fitzroy Crossi**	**40.14**	**259**	*e*P	**P**	**05 26 37.8**	**-0.7**
	comp=Z,14nm,0.5s,mb4.6						
FITZ				*e*pP	pP	05 27 21.8	+2.0
MBWA	**Marble Bar**	**45.69**	**254**	*e*P	**P**	**05 27 39.8**	**+17**
MBWA	**Marble Bar**	**45.69**	**254**	*e*P	**P**	**05 27 23.1**	**0.0**
	comp=Z,34nm,1.0s,mb4.6						
KLBR	**Kellerberrin**	**48.32**	**240**	*e*P	**P**	**05 27 42.0**	**-1.2**
	comp=Z,24nm,1.4s,mb4.3						
NWAO	**Narrogin (SRO)**	**48.98**	**239**	P	**P**	**05 27 47.7**	**-0.5**
	comp=Z,11nm,0.7s,mb4.3,baz=74,slow=7.8,SNR=5.7						
NWAO				pP	pP	05 28 29.1	-1.9
	comp=Z,5.5nm,0.6s,baz=78,slow=4.0,SNR=2.2						
NWAO	**Narrogin (SRO)**	**48.98**	**239**	P	**P**	**05 27 47.7**	**-0.5**
NWAO				pP	pP	05 28 29.1	-1.9
KKM	**Kota Kinabalu**	**54.61**	**288**	*e*P	**P**	**05 28 30.9**	**+0.8**
	comp=Z,31nm,1.2s,mb4.7						
MJAR	**Matsushiro Arr**	**57.63**	**332**	P	**P**	**05 28 50.2**	**-0.9**
	comp=Z,9.6nm,0.7s,mb4.6,baz=170,slow=8.1,SNR=20						
MAJO	**Matsushiro**	**57.63**	**332**	*e*P	**P**	**05 28 50.7**	**-0.4**
MAJO				pmax	pmax		
	comp=Z,33nm,1.1s,mb4.9						
MAJO	**Matsushiro**	**57.63**	**332**	*e*P	**P**	**05 28 50.7**	**-0.4**
	comp=Z,33nm,1.1s,mb4.9						
MAT	**Matsushiro**	**57.63**	**332**	P	**P**	**05 28 50.8**	**-0.3**
YHNB	**Yeheng**	**59.31**	**310**	*e*P	**P**	**05 29 02.5**	**-0.3**
	comp=Z,46nm,1.1s,mb5.0						
ERM	**Erimo**	**60.39**	**339**	*e*P	**P**	**05 29 10.7**	**+0.8**
ERM				pmax	pmax		
	comp=Z,19nm,0.7s,mb4.8						
ERM	**Erimo**	**60.39**	**339**	*e*P	**P**	**05 29 10.7**	**+0.9**
	comp=Z,19nm,0.7s,mb4.8						
SBA	**Scott Base**	**63.47**	**180**	*e*P	**P**	**05 29 30.5**	**+0.5**
SBA				pmax	pmax		
	comp=Z,73nm,1.6s,mb5.1						
SBA	**Scott Base**	**63.47**	**180**	*e*P	**P**	**05 29 30.5**	**+0.5**
	comp=Z,73nm,1.6s,mb5.1						
KSRS	**Korea Array**	**63.49**	**326**	P	**P**	**05 29 30.9**	**+0.2**
	comp=Z,5.3nm,0.8s,mb4.2,baz=140,slow=7.4,SNR=22						
KSRS				PcP	PcP	05 30 06.8	+1.2
	comp=Z,7.7nm,1.2s,baz=126,slow=5.2,SNR=5.6						
KSRS				LR	LR	05 53 51.6	
	comp=Z,22nm,20.3s,baz=225,slow=33						
CASY	**Casey**	**63.86**	**202**	*e*P	**P**	**05 29 32.6**	**-0.1**
CASY	**Casey**	**63.86**	**202**	*e*P	**P**	**05 29 32.5**	**-0.2**
	comp=Z,18nm,0.7s,mb4.8						
YSS	**Yuzh-Sakhalins**	**64.93**	**342**	⇑*e*P	**P**	**05 29 40.7**	**+0.9**
YSS	**Yuzh-Sakhalins**	**64.93**	**342**	*e*P	**P**	**05 29 41.0**	**+1.3**
	comp=Z,85nm,1.0s,mb5.3						
PEA0B	**Petropavlovsk-**	**67.73**	**354**	*e*P	**P**	**05 29 57.8**	**+0.4**
PETK	**Petropavlovsk-**	**67.73**	**354**	P	**P**	**05 29 57.9**	**+0.5**
	comp=Z,58nm,0.8s,mb5.3,baz=144,slow=7.6,SNR=103						
PETK	**Petropavlovsk-**	**67.73**	**354**	P	**P**	**05 29 57.9**	**+0.5**
WHN	**Wuhan**	**67.76**	**312**	P	**P**	**05 29 58.4**	**+0.3**
MDJ	**Mudanjiang**	**68.01**	**332**	P	**P**	**05 30 00.0**	**+0.6**
MDJ				PcP	PcP	05 30 22.8	-1.3
MDJ				sP	sP	05 31 15.1	+9.2
MDJ				PP	PP	05 32 32.8	+0.5
MDJ				sS	sS	05 40 11.3	+9.0
MDJ				pmax	pmax		
	comp=Z,37nm,1.1s,mb4.9						
MDJ				pmax	pmax		
	comp=Z,65nm,3.5s						
MDJ	**Mudanjiang**	**68.01**	**332**	*e*P	**P**	**05 30 00.2**	**+0.8**
	comp=Z,35nm,1.0s,mb5.0						
HABR	**Khabarovsk**	**68.85**	**338**	*e*P	**P**	**05 30 03.2**	**-1.3**
HABR				*e*		05 30 26.5	
HABR				*e**SP	sP	05 30 55.7	-15
HABR				*e*S	S	05 38 54.7	+2.3
HABR				*e*		05 39 38.4	
HABR				*e*SS	SS	05 43 23.0	+0.9
HABR				pmax	pmax		
	comp=Z,33nm,1.2s,mb4.8						
HABR				pmax	pmax		
	comp=E,35nm,1.1s						
HABR				pmax	pmax		
	comp=N,15nm,0.6s						
HABR				MLR	MLR		
	comp=Z,158nm,21.0s						
CN2	**Changchun**	**69.39**	**329**	*e*P	**P**	**05 30 06.5**	**-1.4**
CN2				*e*pP	pP	05 30 58.9	+5.2
CN2				*e*S	S	05 38 55.3	-3.7
CN2				pmax	pmax		
	comp=Z,20nm,0.6s,mb4.9						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,700nm,24.0s						
CN2				LR	LR		
	comp=E,400nm,24.0s						
CN2				LR	LR		
	comp=Z,200nm,21.0s						
MIR	**Mirnyy**	**70.66**	**204**	⇓*i*P	**P**	**05 30 15.8**	**+0.5**
MIR				pmax	pmax		
	comp=Z,62nm,1.0s,mb5.2						
KLR	**Kul'dur**	**70.72**	**336**	*e*P	**P**	**05 30 12.9**	**-3.0**
KLR				pmax	pmax		
	comp=E,45nm,1.6s						
KLR				pmax	pmax		
	comp=Z,57nm,1.6s,mb5.0						
ENH	**Enshi**	**71.20**	**309**	*e*P	**P**	**05 30 18.9**	**-0.3**
	comp=Z,11nm,0.8s,mb4.5						
GYA	**Guiyang**	**71.57**	**305**	P	**P**	**05 30 22.8**	**+1.3**
GYA				pP	pP	05 31 17.0	+9.4
GYA				sP	sP	05 31 41.0	+13
GYA				PP	PP	05 33 06.8	+3.5
GYA				S	S	05 39 22.0	-3.0
GYA				SKS		05 40 01.3	
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4						
GYA				pmax	pmax		
	comp=Z,90nm,5.8s						
BJI	**Beijing**	**72.04**	**321**	P	**P**	**05 30 24.8**	**+0.8**
BJI				sP	sP	05 31 38.0	+7.1
BJI				pmax	pmax		
	comp=Z,22nm,0.7s,mb4.9						
BJI				pmax	pmax		
	comp=Z,71nm,3.7s						
XAN	**Xi'an**	**73.51**	**312**	P	**P**	**05 30 33.1**	**+0.3**
XAN				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
XAN				pmax	pmax		
	comp=Z,16nm,5.3s						
KMI	**Kunming**	**74.18**	**302**	P	**P**	**05 30 38.8**	**+1.9**
KMI				pP	pP	05 31 32.4	+9.1
KMI				sP	sP	05 31 56.1	+12
KMI				PP	PP	05 33 29.5	+4.0
KMI				S	S	05 39 53.8	-0.7
KMI				SS	SS	05 44 44.9	+0.4
KMI				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.7						
KMI				pmax	pmax		
	comp=Z,92nm,5.0s						
KMI				LR	LR		
	comp=N,100nm,11.9s						
KMI				LR	LR		
	comp=E,110nm,13.7s						
KMI				LR	LR		
	comp=Z,81nm,14.3s						
CM31	**Chiang Mai Arr**	**74.87**	**294**	*e*P	**P**	**05 30 42.4**	**+1.4**
CMAR	**Chiang Mai Arr**	**74.87**	**294**	P	**P**	**05 30 42.1**	**+1.1**
	comp=Z,7.6nm,0.8s,mb4.3,baz=127,slow=4.5,SNR=34						
CMAR				pP	pP	05 31 26.6	-0.8
	comp=Z,4.9nm,0.9s,baz=107,slow=3.0,SNR=3.9						
CHTO	**Chiang Mai**	**75.00**	**294**	*e*P	**P**	**05 30 42.4**	**+0.7**
CHTO				pmax	pmax		
	comp=Z,24nm,1.3s,mb4.7						
CHTO	**Chiang Mai**	**75.00**	**294**	*e*P	**P**	**05 30 42.4**	**+0.7**
	comp=Z,24nm,1.3s,mb4.7						
HHC	**Hu-ho-hao-te**	**75.37**	**320**	*e*P	**P**	**05 30 44.0**	**+0.7**
HHC				PcP	PcP	05 30 56.3	+0.7
HHC				pP	pP	05 31 37.3	+7.4
HHC				sP	sP	05 32 01.9	+11
HHC				PP	PP	05 33 38.3	+3.1
HHC				S	S	05 40 04.3	-2.7
HHC				SKS		05 40 27.4	
HHC				ScS	ScS	05 40 33.5	-4.8
HHC				pmax	pmax		
	comp=Z,18nm,0.6s,mb4.9						
HHC				pmax	pmax		
	comp=Z,82nm,6.5s						
HHC				LR	LR		
	comp=N,97nm,17.8s						
HHC				LR	LR		
	comp=E,100nm,16.7s						
HHC				LR	LR		
	comp=Z,62nm,16.6s						
QSPA	**South Pole Qui**	**75.64**	**180**	P	**P**	**05 30 44.0**	**-0.3**
	comp=Z,13nm,0.6s,mb4.8,baz=359,slow=1.6,SNR=61						
QSPA				pP	pP	05 31 30.6	-0.2
	comp=Z,1.4nm,0.3s,baz=289,slow=2.2,SNR=1.2						
QSPA	**South Pole Qui**	**75.64**	**180**	*e*P	**P**	**05 30 43.9**	**-0.3**
	comp=Z,40nm,1.1s,mb5.0						
CD2	**Chengdu**	**75.85**	**307**	⇓*i*P	**P**	**05 30 47.1**	**+0.8**
CD2				pP	pP	05 31 40.3	+7.4
CD2				sP	sP	05 32 03.8	+10
CD2				PP	PP	05 33 42.4	+2.9
CD2				S	S	05 40 10.1	-2.6
CD2				sS	sS	05 41 43.0	+9.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.5						
CD2				pmax	pmax		
	comp=Z,40nm,5.8s						
CHGN	**Chignik**	**76.03**	**19**	*e*P	**P**	**05 30 45.2**	**-1.5**
SEY	**Seymchan**	**77.95**	**353**	⇑*e*P	**P**	**05 30 57.4**	**+0.1**
LZH	**Lanzhou**	**78.14**	**312**	*e*P	**P**	**05 31 01.0**	**+2.0**
LZH				pP	pP	05 31 55.8	+10
LZH				sP	sP	05 32 19.3	+13
LZH				*e*S	S	05 40 36.3	-0.9
LZH				sS	sS	05 42 10.3	+11
LZH				pmax	pmax		
	comp=Z,24nm,1.1s,mb4.7						
LZH				pmax	pmax		
	comp=Z,110nm,4.4s						
OHAK	**Old Harbor**	**78.45**	**21**	*e*P	**P**	**05 30 59.3**	**-0.8**
	comp=Z,23nm,0.7s,mb4.9						
CLNS	**Chul'man**	**79.24**	**338**	*e*P	**P**	**05 31 04.9**	**+0.5**
CLNS				*e*		05 31 18.8	
CLNS				*e**SS	sS	05 41 34.0	-36
CLNS				pmax	pmax		
	comp=Z,29nm,0.9s,mb4.9						
CLNS				pmax	pmax		
	comp=E,6.0nm,0.8s						
CLNS				pmax	pmax		
	comp=N,11nm,0.9s						
SVW2	**Sparrevohn**	**80.81**	**17**	*e*P	**P**	**05 31 13.1**	**+0.3**
RSO	**Redoubt South**	**81.15**	**19**	*e*P	**P**	**05 31 13.9**	**-0.7**
YAK	**Yakutsk**	**81.72**	**343**	*c*i*P	**P**	**05 31 17.4**	**-0.2**
YAK				*e**PP	pP	05 32 06.8	+2.0
YAK				*e*S	S	05 41 11.4	-2.2
YAK				*e**SS	sS	05 42 35.4	-0.6
YAK				*e*SS	SS	05 46 32.1	-4.2
YAK				*e*SSS		05 50 00.0	
YAK				pmax	pmax		
	comp=Z,118nm,0.9s,mb5.5						
YAK				pmax	pmax		
	comp=E,19nm,1.3s						
YAK				pmax	pmax		
	comp=N,33nm,1.2s						
YAK				smax			
	comp=N,44nm,2.7s						
YAK				smax			
	comp=E,28nm,3.0s						
YAK	**Yakutsk**	**81.72**	**343**	*e*P	**P**	**05 31 17.7**	**+0.2**
	comp=E,118nm,0.7s,mb5.6						
ULN	**Ulaanbaatar**	**81.90**	**324**	*e*P	**P**	**05 31 19.5**	**+0.7**
ULN				pmax	pmax		
	comp=Z,79nm,1.7s,mb5.1						
ULN	**Ulaanbaatar**	**81.90**	**324**	*e*P	**P**	**05 31 19.5**	**+0.7**
	comp=Z,79nm,1.7s,mb5.1						
SEW	**Seward**	**81.95**	**20**	*e*P	**P**	**05 31 18.0**	**-0.8**
	comp=Z,21nm,0.9s,mb4.8						
TTA	**Tatalina**	**82.18**	**16**	*e*P	**P**	**05 31 20.2**	**+0.3**
BILL	**Bilibino**	**82.20**	**360**	*c*i*P	**P**	**05 31 19.8**	**-0.2**
BILL				pmax	pmax		
	comp=Z,36nm,1.1s,mb4.9						
BILL	**Bilibino**	**82.20**	**360**	*e*P	**P**	**05 31 19.9**	**-0.1**
	comp=Z,64nm,1.3s,mb5.1						
BILL				*e*PP	PP	05 34 28.3	-3.0
MAW	**Mawson**	**82.22**	**202**	*e*P	**P**	**05 31 19.9**	**-0.3**
	comp=Z,17nm,1.0s,mb4.6						
MAW	**Mawson**	**82.22**	**202**	P	**P**	**05 31 20.2**	**0.0**
	comp=Z,30nm,0.9s,mb4.9,baz=111,slow=6.4,SNR=58						
MAW				LR	LR	06 01 35.9	
	comp=Z,68nm,20.8s,baz=283,slow=31						
MAW	**Mawson**	**82.22**	**202**	*e*P	**P**	**05 31 20.3**	**+0.1**
MAW				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MAW	**Mawson**	**82.22**	**202**	*e*P	**P**	**05 31 20.3**	**+0.1**
	comp=Z,5.7nm,0.8s,mb4.2						
SONM	**Songino Array**	**82.26**	**324**	P	**P**	**05 31 21.1**	**+0.4**
	comp=Z,6.4nm,0.6s,mb4.4,baz=149,slow=6.5,SNR=34						
GTA	**Gaotai**	**82.48**	**314**	*e*P	**P**	**05 31 22.9**	**+0.9**
GTA				sP	sP	05 32 40.1	+10
GTA				PP	PP	05 34 38.4	+4.1
GTA				S	S	05 41 16.8	-5.5
GTA				SS	SS	05 46 45.9	-2.6
GTA				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.5						
GTA				pmax	pmax		
	comp=Z,95nm,7.4s						
GTA				LR	LR		
	comp=N,77nm,7.7s						
GTA				LR	LR		
	comp=E,45nm,8.9s						
GTA				LR	LR		
	comp=Z,110nm,9.2s						
RC01	**Rabbit Creek A**	**82.59**	**19**	*e*P	**P**	**05 31 21.5**	**-0.6**
	comp=Z,48nm,1.0s,mb5.2						
PMR	**Palmer**	**83.16**	**19**	*e*P	**P**	**05 31 24.2**	**-0.8**
PMR				pmax	pmax		
	comp=Z,32nm,0.8s,mb5.1						
PMR	**Palmer**	**83.16**	**19**	*e*P	**P**	**05 31 24.2**	**-0.8**
	comp=Z,32nm,0.8s,mb5.1						
PPLA	**Purkeypile**	**83.22**	**17**	*e*P	**P**	**05 31 25.4**	**+0.1**
	comp=Z,11nm,1.0s,mb4.5						
SHL	**Shillong**	**83.46**	**298**	*e*PKP	**P**	**05 31 28.5**	**+1.1**
SHL				*ex*	x	05 32 14.0	
HOPS	**Hopland**	**83.77**	**47**	*e*P	**P**	**05 31 27.9**	**-0.8**
DIV	**Divide**	**83.95**	**21**	*e*P	**P**	**05 31 29.0**	**0.0**
	comp=Z,21nm,0.8s,mb4.9						
CHUM	**Lake Minchumin**	**83.95**	**17**	*e*P	**P**	**05 31 28.1**	**-0.8**
	comp=Z,36nm,1.0s,mb5.1						
KHMM	**Horse Mountain**	**84.08**	**45**	*e*P	**P**	**05 31 30.9**	**+0.7**
	comp=Z,26nm,0.7s,mb5.1						
KTH	**Kantishna Hill**	**84.09**	**17**	*e*P	**P**	**05 31 28.3**	**-1.4**
	comp=Z,44nm,0.9s,mb5.2						
TRF	**Thorofare Moun**	**84.20**	**18**	*e*P	**P**	**05 31 29.2**	**-1.0**
	comp=Z,39nm,0.8s,mb5.2						
BMRM	**Bremner River**	**84.24**	**21**	*e*P	**P**	**05 31 30.2**	**-0.3**
	comp=Z,8.9nm,0.8s,mb4.5						
BSC	**Santa Cruz Isl**	**84.40**	**53**	⇓P	**P**	**05 31 32.8**	**+0.8**
	baz=84						
BPAW	**Bear Paw Mtn.**	**84.49**	**17**	*e*P	**P**	**05 31 30.1**	**-1.6**
	comp=Z,16nm,0.9s,mb4.8						
BPAW				*e*PcP	PcP	05 31 34.4	-0.5
PKM	**Peak Mountain**	**84.59**	**52**	⇓P	**P**	**05 31 32.5**	**-0.4**
	baz=85						
WDC	**Whiskeytown Da**	**84.78**	**46**	*e*P	**P**	**05 31 33.5**	**-0.2**
WDC				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.6						
WDC	**Whiskeytown Da**	**84.78**	**46**	*e*P	**P**	**05 31 33.5**	**-0.2**
	comp=Z,9.0nm,0.7s,mb4.6						
MCK	**McKinley**	**84.81**	**18**	*e*P	**P**	**05 31 32.8**	**-0.5**
MCK				pmax	pmax		
	comp=Z,37nm,1.0s,mb5.1						
MCK	**McKinley**	**84.81**	**18**	*e*P	**P**	**05 31 32.8**	**-0.5**
	comp=Z,38nm,1.0s,mb5.1						
OHCM	**Honcut**	**85.04**	**47**	*e*P	**P**	**05 31 34.8**	**-0.2**
YBH	**Yreka Blue Hor**	**85.13**	**45**	*e*P	**P**	**05 31 35.8**	**+0.4**
YBH				pmax	pmax		
	comp=Z,15nm,0.8s						
YBH	**Yreka Blue Hor**	**85.13**	**45**	*e*P	**P**	**05 31 35.8**	**+0.3**
	comp=Z,15nm,0.8s,mb4.8						
ZAK	**Zakamensk**	**85.31**	**325**	*e*P	**P**	**05 31 35.3**	**-0.8**
ZAK				*e*	pP	05 32 26.4	+2.6
ZAK				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.6						
HUMO	**Hull Mountain**	**85.32**	**44**	*e*P	**P**	**05 31 36.6**	**+0.2**
	comp=Z,19nm,0.8s,mb4.9						
CMB	**Columbia Colle**	**85.33**	**49**	*e*P	**P**	**05 31 36.1**	**-0.4**
CMB				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.8						
CMB	**Columbia Colle**	**85.33**	**49**	*e*P	**P**	**05 31 36.1**	**-0.4**
	comp=Z,16nm,0.8s,mb4.8						
ARVC	**Arvin**	**85.43**	**52**	⇑P	**P**	**05 31 37.1**	**0.0**
	baz=

baz=87
BBRC Big Bear Solar 86.60 54 ⇑P P 05 31 43.2 +0.3
baz=87
H04A Detroit Lake 86.68 42 ⇓P P 05 31 42.4 -0.6
baz=87
PAHR Pah Rah Range 86.68 48 eP P 05 31 43.3 +0.2
comp=Z,9.8nm,0.9s,mb4.5
G04A Mulino 86.70 42 ⇓P P 05 31 43.0 0.0
baz=87
DVTC Desert V Tower 86.72 55 ⇑P P 05 31 43.0 -0.4
baz=87
NLWA Neilton Lookou 86.74 39 ⇓P P 05 31 43.2 +0.1
baz=87
NLWA Neilton Lookou 86.74 39 eP P 05 31 43.2 +0.1
comp=Z,12nm,0.8s,mb4.7
PFO Pinyon Flat Ob 86.75 54 ⇑P P 05 31 43.4 -0.2
baz=87,SNR=7.5
PFO Pinyon Flat Ob 86.75 54 eP P 05 31 42.5 -1.1
PFO pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
PFO Pinyon Flat Ob 86.75 54 eP P 05 31 42.5 -1.1
comp=Z,6.1nm,0.8s,mb4.4
K05A Summer Lake 86.77 45 ⇑P P 05 31 43.7 +0.2
baz=87
MPMC Manual Prospec 86.78 52 ⇓P P 05 31 43.6 0.0
baz=87,SNR=13
HYT Haines Junctio 86.79 24 eP P 05 31 41.5 -1.6
MOD Modoc 86.86 45 eP P 05 31 44.1 +0.2
comp=Z,10.0nm,0.9s,mb4.5
OBC Olympics--Boni 86.88 39 P P 05 31 44.5 +0.7
NVAR Mina Array Bea 87.00 49 P P 05 31 44.5 -0.2
comp=Z,7.3nm,0.8s,mb4.5,baz=226,slow=8.1,SNR=36
F04A Amboy 87.04 41 ⇑P P 05 31 44.3 -0.3
baz=87
GSC Goldstone 87.05 53 ⇑P P 05 31 44.9 -0.1
baz=87
GSC Goldstone 87.05 53 eP P 05 31 44.9 0.0
GSC pmax pmax
comp=Z,7.0nm,1.0s,mb4.3
GSC Goldstone 87.05 53 eP P 05 31 44.9 0.0
comp=Z,7.4nm,1.0s,mb4.4
SWSC Sam W. Stewart 87.05 55 ⇓P P 05 31 45.0 0.0
baz=87,SNR=9.9
COLD Coldfoot 87.09 15 eP P 05 31 44.4 0.0
comp=Z,13nm,0.9s,mb4.7
MOY Mondy 87.19 325 eP P 05 31 45.6 +0.4
GRAC Grapevine Rang 87.19 51 ⇓P P 05 31 45.6 0.0
baz=87
BELC Belle Mtn. Jos 87.24 54 ⇓P P 05 31 45.8 -0.1
baz=87,SNR=19
HEC Hector,Ludlow 87.25 53 ⇑P P 05 31 45.3 -0.6
baz=87,SNR=6.7
FURC Furnace Creek, 87.40 51 ⇑P P 05 31 46.4 -0.2
baz=88,SNR=16
GNW Green Mountain 87.45 40 eP P 05 31 46.5 -0.1
comp=Z,13nm,0.7s,mb4.8
PGC Sidney 87.52 38 eP P 05 31 46.5 -0.4
comp=Z,1.5nm,0.9s,mb3.8
BC3 Big Chuckawall 87.55 55 ⇓P P 05 31 47.4 0.0
baz=88,SNR=14
TAPN Taplejung 87.57 299 eP P 05 31 47.4 -0.2
comp=Z,35nm,0.9s,mb5.2
SHOC Shoshone 87.65 52 ⇓P P 05 31 47.3 -0.5
baz=88,SNR=6.8
ODAN Odare 87.70 298 eP P 05 31 47.9 -0.3
comp=Z,64nm,0.8s,mb5.5
LON Longmire 87.75 41 eP P 05 31 45.0 -3.0
LON pmax pmax
comp=Z,6.0nm,1.0s,mb4.4
LON Longmire 87.75 41 eP P 05 31 45.0 -3.0
comp=Z,6.2nm,1.0s,mb4.4
GMRC Granite Mounta 87.76 53 ⇑P P 05 31 48.4 +0.1
baz=88,SNR=12
TUQ Turquoise Moun 87.77 53 ⇑P P 05 31 48.4 0.0
baz=88,SNR=18
U10A Ash Meadows, A 87.78 52 ⇓P P 05 31 48.4 0.0
baz=88,SNR=6.9
D05A Enumclaw 87.82 40 ⇓P P 05 31 48.4 +0.1
baz=88
GLA Glamis 87.86 55 ⇑P P 05 31 49.1 +0.2
baz=88,SNR=9.7
GLA Glamis 87.86 55 eP P 05 31 49.4 +0.5
GLA pmax pmax
comp=Z,19nm,0.9s,mb4.9
GLA Glamis 87.86 55 eP P 05 31 49.4 +0.6
comp=Z,19nm,0.9s,mb4.9
WPW White Pass 87.90 41 P P 05 31 49.0 +0.3
GSM Grass Mountain 87.94 40 P P 05 31 49.3 +0.4
IRM Iron Mountain 87.96 54 ⇑P P 05 31 49.3 0.0
baz=88,SNR=20
EGAK Eagle 87.98 20 eP P 05 31 47.1 -1.5
comp=Z,8.9nm,0.9s,mb4.6
S10A Tonopah Range, 88.09 50 ⇑P P 05 31 49.9 +0.1
baz=88,SNR=19
WVOR Wild Horse Val 88.20 45 eP P 05 31 50.0 -0.2
WVOR pmax pmax
comp=Z,22nm,1.5s,mb4.8
WVOR Wild Horse Val 88.20 45 eP P 05 31 50.0 -0.2
comp=Z,22nm,1.5s,mb4.8
I07A Izee 88.22 44 ⇓P P 05 31 50.4 +0.1
baz=88
JCW Jim Creek 88.26 39 P P 05 31 50.6 +0.2
V11A Goodsprings 88.28 52 ⇓P P 05 31 50.9 +0.1
baz=88,SNR=25
LDFC Landfair 88.28 53 eP P 05 31 51.3 +0.5
Y12C Blythe 88.32 55 ⇓P P 05 31 51.3 +0.3
baz=88,SNR=9.3
R10A Warm Springs 88.43 50 ⇑P P 05 31 51.6 +0.2
baz=89,SNR=11
U11A Corn Creek 88.51 52 ⇓P P 05 31 51.6 -0.2
baz=89
Q10A Clear Creek Ra 88.54 49 ⇑P P 05 31 51.9 0.0
baz=89,SNR=8.2
W12A Cal Nev Ari 88.54 53 ⇑P P 05 31 52.3 +0.3
baz=89
NEE2 Needles Airpor 88.56 54 ⇓P P 05 31 52.4 +0.2
baz=89
113A Mohawk Valley, 88.61 56 ⇑P P 05 31 52.4 -0.1
baz=89,SNR=12
RPW Rockport 88.61 39 eP P 05 31 52.0 -0.1
S11A Rachel 88.63 51 ⇑P P 05 31 52.2 -0.2
baz=89,SNR=5.9
J08A Circle Bar Ran 88.65 45 ⇑P P 05 31 52.3 0.0
baz=89
V12A Nelson 88.69 53 ⇑P P 05 31 52.9 +0.2
baz=89,SNR=10
P10A Eureka 88.76 49 ⇓P P 05 31 53.0 0.0
baz=89
PDMCI Parker Dam,Lak 88.79 54 ⇑P P 05 31 53.2 0.0
baz=89,SNR=9.2
Z13A Yuma Proving G 88.84 55 ⇓P P 05 31 53.7 +0.3
baz=89,SNR=29
T11A Corn Creek, Al 88.89 51 ⇓P P 05 31 53.7 +0.1
baz=89,SNR=17
E07A Sunnyside 88.92 41 ⇓P P 05 31 53.8 +0.3
baz=89
H08A Prairie City 88.94 43 ⇓P P 05 31 53.3 -0.3
baz=89,SNR=14
O10A Cortez Mining, 88.96 48 ⇑P P 05 31 54.3 +0.4
baz=89
R11A Troy Canyon, C 88.98 50 ⇑P P 05 31 53.7 -0.3
baz=89,SNR=14
ETW Entiat 89.02 40 eP P 05 31 54.2 +0.2
RSW Rattlesnake Hi 89.03 41 eP P 05 31 54.3 +0.3
G08A Pilot Rock 89.03 43 ⇓P P 05 31 54.0 0.0
baz=89,SNR=22
SYO Syowa Base 89.05 197 ⇓eP P 05 31 51.6 -2.2
SYO Syowa Base 89.05 197 ⇓/P P 05 31 52.6 -1.2
HAWA Hanford 89.06 41 eP P 05 31 54.2 0.0
comp=Z,18nm,0.8s,mb5.0
Q11A Duckwater 89.09 50 ⇑P P 05 31 54.5 0.0
baz=89,SNR=28
T12A Moapa 89.11 52 ⇑P P 05 31 54.7 0.0
baz=89,SNR=6.8
X13A Yucca 89.13 54 ⇓P P 05 31 54.7 -0.1
baz=89,SNR=19
J09A Fry Pan Ranch, 89.13 45 ⇑P P 05 31 54.7 +0.1
baz=89,SNR=20
214A Organ Pipe Nat 89.14 57 ⇓P P 05 31 55.0 +0.1
baz=89,SNR=7.0
U12A Valley of Fire 89.15 52 ⇓P P 05 31 55.2 +0.3
baz=89,SNR=17
W13A Hualapai Mount 89.24 54 ⇓P P 05 31 55.5 +0.2
baz=89,SNR=17
P11A Circle Ranch, 89.25 49 ⇓P P 05 31 55.4 +0.2
baz=89
GUN Gumba 89.29 299 eP P 05 31 55.5 -0.2
comp=Z,38nm,0.9s,mb5.2
S12A Delamar Landin 89.29 51 ⇑P P 05 31 55.7 +0.2
baz=89,SNR=36
114A Black Gap (USA 89.32 56 ⇓P P 05 31 55.9 +0.2
baz=89,SNR=6.3
M10A I.L. Ranch, Tu 89.35 47 ⇑P P 05 31 55.9 +0.3
baz=90,SNR=14
I09A Lost Marbles R 89.36 44 ⇓P P 05 31 55.4 -0.3
baz=90
V13A Grand Canyon W 89.40 53 ⇓P P 05 31 56.1 +0.1
baz=90,SNR=14
Z14A Wintersburg 89.45 55 ⇑P P 05 31 56.6 +0.2
baz=90,SNR=5.6
O11A Cowboy Ranch, 89.52 48 ⇑P P 05 31 56.8 +0.3
baz=90,SNR=19
K10A MacKenzie Ranc 89.54 46 ⇓P P 05 31 56.5 0.0
baz=90,SNR=16
Y14A Wickenburg 89.58 55 ⇓P P 05 31 56.8 -0.1
baz=90,SNR=7.6
L10A Juniper Basin 89.58 46 ⇑P P 05 31 56.7 -0.1
baz=90,SNR=15
U13A Pakoon Wash 89.59 52 ⇑P P 05 31 57.1 +0.2
baz=90,SNR=24
PKI Pulchoki 89.59 298 eP P 05 31 56.9 -0.2
comp=Z,47nm,0.9s,mb5.3
PKI Pulchoki 89.59 298 eP P 05 31 56.9 -0.2
PKI pmax pmax
comp=Z,47nm,0.9s,mb5.3
TIXI Tiksi 89.65 349 eP P 05 31 55.5 -0.9
TIXI pmax pmax
comp=Z,19nm,1.0s,mb4.9
TIXI Tiksi 89.65 349 eP P 05 31 55.5 -0.9
comp=Z,19nm,1.0s,mb4.9
H09A Durkee 89.66 44 ⇓P P 05 31 56.8 -0.2
baz=90,SNR=13
LNOR Lincton Mounta 89.68 42 eP P 05 31 57.4 +0.3
N11A Elko Archery C 89.68 48 ⇓P P 05 31 57.5 +0.3
baz=90
D08A Wollman Farm, 89.70 41 ⇑P P 05 31 57.0 -0.2
baz=90,SNR=5.9
R12A Pony Springs, 89.70 50 ⇓P P 05 31 57.5 +0.1
baz=90,SNR=25
KKN Kakani 89.76 299 eP P 05 31 57.4 -0.5
comp=Z,37nm,0.9s,mb5.2
KKN Kakani 89.76 299 eP P 05 31 57.4 -0.5
KKN pmax pmax
comp=Z,37nm,0.9s,mb5.2
Q12A Willow Creek R 89.77 50 ⇑P P 05 31 57.8 +0.1
baz=90,SNR=17
G09A Cove 89.80 43 ⇓P P 05 31 57.3 -0.3
baz=90,SNR=14
T13A Saint George 89.82 52 ⇑P P 05 31 58.4 +0.4
baz=90,SNR=38
X14A Yava 89.83 54 ⇓P P 05 31 58.5 +0.4
baz=90,SNR=20
115A Sonoran Desert 89.83 56 ⇓P P 05 31 58.4 +0.2
baz=90,SNR=8.9
J10A Berg Farm, Mel 89.84 45 ⇑P P 05 31 57.9 0.0
baz=90
M11A Holland Ranch, 89.85 47 ⇓P P 05 31 58.4 +0.4
baz=90,SNR=24
P12A McGill 89.85 49 ⇑P P 05 31 58.2 +0.2
baz=90,SNR=10
DMN Daman 89.86 298 eP P 05 31 58.2 -0.2
comp=Z,70nm,1.0s,mb5.5
F09A S2 Ranch, Elgi 89.87 43 ⇓P P 05 31 57.7 -0.3
baz=90,SNR=5.7
W14A Seligman 89.90 54 ⇑P P 05 31 58.5 +0.2
baz=90,SNR=12
B08A Colville Reser 89.92 40 ⇑P P 05 31 57.5 -0.7
baz=90,SNR=9.5
OD2 Odessa Site #2 89.95 41 eP P 05 31 57.9 -0.4
BMO Blue Mountains 89.96 43 eP P 05 31 58.0 -0.4
BMO pmax pmax
comp=Z,11nm,0.8s,mb4.7
BMO Blue Mountains 89.96 43 eP P 05 31 58.0 -0.4
comp=Z,10nm,0.8s,mb4.7
E09A Wood Farm, Sta 90.00 42 ⇓P P 05 31 58.6 0.0
baz=90
V14A Boquillas Ranc 90.01 53 ⇑P P 05 31 59.3 +0.4
baz=90,SNR=17
ELK Elko 90.02 48 eP P 05 31 59.1 +0.3
ELK pmax pmax
comp=Z,12nm,0.8s
ELK Elko 90.02 48 eP P 05 31 59.1 +0.3
comp=Z,12nm,0.8s,mb4.8
I10A Payette 90.04 44 ⇑P P 05 31 59.0 +0.2
baz=90,SNR=8.7
Z15A Gila River Ind 90.06 56 ⇑P P 05 31 58.7 -0.4
baz=90,SNR=5.3
L11A Cat Creek Ranc 90.12 46 ⇑P P 05 31 59.5 +0.2
baz=90,SNR=32
Y15A Casa Rosa Ranc 90.12 55 ⇓P P 05 31 59.8 +0.4
baz=90,SNR=47
K11A Parker Ranch, 90.12 46 ⇑P P 05 31 59.4 +0.2
baz=90,SNR=14
R13A O'Grain Ranch, 90.13 51 ⇓P P 05 31 60.0 +0.6
baz=90,SNR=14
U14A Mt Trumbull 90.19 52 ⇑P P 05 32 00.2 +0.5
baz=90,SNR=41
N12A Clover Valley, 90.19 48 ⇑P P 05 31 59.8 +0.2
baz=90,SNR=21
N12A Clover Valley, 90.19 48 eP P 05 31 59.9 +0.3
comp=Z,23nm,0.8s,mb5.1
116A Eloy 90.21 57 ⇑P P 05 32 00.3 +0.4
baz=90,SNR=5.6
O12A Currie 90.22 48 ⇓P P 05 31 59.9 +0.1
baz=90,SNR=23
G10A Bishop Farm, J 90.24 43 ⇑P P 05 31 59.4 -0.3
baz=90,SNR=95
H10A Noah's Angus R 90.25 44 ⇓P P 05 31 59.3 -0.5
baz=90,SNR=43
216A Three Points, 90.25 57 ⇑P P 05 32 00.8 +0.7
baz=90,SNR=6.8
Q13A Wheeler Ranch, 90.34 50 ⇓P P 05 32 00.4 +0.1
baz=90,SNR=35
X15A Humboldt 90.35 55 ⇑P P 05 32 00.9 +0.4
baz=90,SNR=22
CCUT Cedar City 90.40 51 eP P 05 32 01.1 +0.4
comp=Z,9.9nm,0.8s,mb4.7
F10A Beach Ranch, E 90.41 42 ⇓P P 05 32 00.1 -0.3
baz=90,SNR=38
ARUT Antelope Range 90.41 51 eP P 05 32 01.3 +0.6
ARUT pmax pmax
comp=Z,6.0nm,0.9s,mb4.4
ARUT Antelope Range 90.41 51 eP P 05 32 01.2 +0.6
comp=Z,6.3nm,0.9s,mb4.5
T14A Hurricane 90.46 52 ⇑P P 05 32 01.3 +0.3
baz=91,SNR=25
M12A Wells 90.47 47 ⇑P P 05 32 01.0 +0.2
baz=91,SNR=23
MFID Camas Ranch 90.48 45 ⇓P P 05 32 00.9 +0.1
baz=91,SNR=19
P13A Bates Ranch, G 90.50 49 ⇑P P 05 32 01.3 +0.3
baz=91,SNR=32
W15A Williams 90.53 54 ⇑P P 05 32 01.9 +0.6
baz=91,SNR=6.2
I11A Placerville 90.55 45 ⇓P P 05 32 01.1 -0.1
baz=91,SNR=22
S14A Cedar City 90.61 51 ⇑P P 05 32 01.8 +0.2
baz=91
L12A House Creek Ra 90.63 47 ⇑P P 05 32 01.9 +0.3
baz=91,SNR=37
E10A Myers Farm, Un 90.66 42 ⇓P P 05 32 01.3 -0.3
baz=91
Z16A Peralta Trail, 90.66 56 ⇓P P 05 32 02.0 +0.1
baz=91,SNR=9.1
O13A Hicks Ranch, I 90.73 49 ⇑P P 05 32 02.6 +0.5
baz=91,SNR=5.4
D10A Wagner Farm, O 90.75 41 ⇓P P 05 32 01.3 -0.7
baz=91,SNR=12
Y16A Circle Bar Ran 90.78 55 ⇓P P 05 32 03.0 +0.5
baz=91,SNR=20
H11A Donnelly 90.78 44 ⇑P P 05 32 02.0 -0.2
baz=91,SNR=30
V15A Kaibab Nationa 90.79 53 ⇓P P 05 32 03.0 +0.5
baz=91,SNR=12
N13A Wendover, West 90.80 48 ⇑P P 05 32 02.2 -0.2
baz=91
N13A Wendover, West 90.80 48 eP P 05 32 02.5 +0.1
comp=Z,20nm,0.8s,mb5.1
G11A Walters Elk Ra 90.84 43 ⇑P P 05 32 01.9 -0.6
baz=91,SNR=22
K12A Draper Farm, C 90.86 46 ⇓P P 05 32 02.7 0.0
baz=91,SNR=12
U15A North Rim 90.88 53 ⇓P P 05 32 03.5 +0.6
baz=91,SNR=27
R14A James Farms, M 90.88 51 ⇑P P 05 32 03.0 +0.2
baz=91
TUC Tucson 90.89 57 eP P 05 32 03.5 +0.5
TUC pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
TUC Tucson 90.89 57 eP P 05 32 03.5 +0.4
comp=Z,9.1nm,0.9s,mb4.7
Q14A Sevier Lake (B 90.90 50 ⇓P P 05 32 03.1 +0.2
baz=91,SNR=36
J12A Stokes Ranch, 90.93 46 ⇓P P 05 32 03.2 +0.3
baz=91,SNR=30
X16A Lo Mia Camp, P 90.96 55 ⇑P P 05 32 03.7 +0.4
baz=91,SNR=16
M13A Montello 90.98 48 ⇓P P 05 32 03.4 +0.1
baz=91,SNR=32
M13A Montello 90.98 48 eP P 05 32 03.5 +0.2
comp=Z,19nm,0.8s,mb5.1
T15A Red Dirt Ranch 90.98 52 ⇓P P 05 32 03.7 +0.3
baz=91,SNR=16
117A Oracle 91.00 57 ⇑P P 05 32 03.9 +0.3
baz=91,SNR=20
I12A Atlanta 91.08 45 ⇓P P 05 32 03.8 +0.1
baz=91,SNR=7.1
F11A Grangeville 91.08 43 ⇑P P 05 32 02.1 -1.5
baz=91,SNR=10
W16A Flagstaff 91.08 54 ⇓P P 05 32 04.1 +0.2
baz=91
S15A Panguitch 91.19 51 ⇓P P 05 32 04.7 +0.4
baz=91
Y17A Roosevelt 91.23 56 ⇓P P 05 32 04.8 +0.2
baz=91,SNR=9.1
P14A Drum Mountains 91.23 49 ⇑P P 05 32 04.3 -0.2
baz=91,SNR=8.6
NEW Newport 91.27 40 eP P 05 32 03.9 -0.5
NEW pmax pmax
comp=Z,13nm,0.8s
NEW Newport 91.27 40 eP P 05 32 03.9 -0.5
comp=Z,13nm,0.8s,mb4.9
318A Bisbee 91.29 58 ⇑P P 05 32 05.3 +0.3
baz=91,SNR=9.7
WUAZ Wupatki 91.33 54 ⇑P P 05 32 05.7 +0.7
baz=91
WUAZ Wupatki 91.33 54 eP P 05 32 05.4 +0.4
comp=Z,9.8nm,0.9s,mb4.7
L13A Double Diamond 91.37 47 ⇓P P 05 32 05.4 +0.4
baz=92
218A Dragoon 91.39 57 ⇑P P 05 32 05.8 +0.4
baz=92,SNR=8.3
R15A Junction 91.41 51 ⇓P P 05 32 06.0 +0.7
baz=92
X17A Forest Lakes 91.44 55 ⇓P P 05 32 06.3 +0.8
baz=92,SNR=20
K13A Stover Farm, H 91.44 46 ⇓P P 05 32 05.5 +0.1
baz=92,SNR=5.6
HLID Hailey 91.50 45 ⇑P P 05 32 05.6 0.0
baz=92,SNR=11
H12A Diamond D Ranc 91.51 44 ⇑P P 05 32 05.2 -0.4
baz=92,SNR=12
N14A Grayback Hills 91.53 48 ⇓P P 05 32 06.0 +0.2
baz=92
Q15A Fillmore 91.57 50 ⇑P P 05 32 05.9 -0.2
baz=92
MSU Marysvale 91.58 51 eP P 05 32 06.9 +0.8
DUG Dugway 91.60 49 ⇑P P 05 32 05.9 -0.3
baz=92,SNR=6.8
DUG Dugway 91.60 49 eP P 05 32 06.1 -0.1
DUG pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
DUG Dugway 91.60 49 eP P 05 32 06.0 -0.1
comp=Z,2.7nm,0.7s,mb4.3
M14A Sheep Mountain 91.61 48 ⇑P P 05 32 05.9 -0.3
baz=92,SNR=11
J13A Cove Ranch, Pi 91.61 46 ⇑P P 05 32 06.3 +0.1
baz=92,SNR=9.6
F12A Elk City 91.63 43 ⇓P P 05 32 05.4 -0.7
baz=92,SNR=29
118A Homack Ranch, 91.64 57 ⇓P P 05 32 06.8 +0.3
baz=92,SNR=9.7
T16A Glen Canyon Da 91.64 52 ⇓P P 05 32 06.8 +0.4
baz=92
C11A Tepee Creek (N 91.67 41 ⇓P P 05 32 06.1 -0.2
baz=92,SNR=24
V17A Tonalea, Kykot 91.81 54 ⇓P P 05 32 07.2 0.0
baz=92,SNR=16
I13A Wildhorse Cree 91.81 45 ⇑P P 05 32 07.1 0.0
baz=92,SNR=9.7
L14A Malta 91.85 47 ⇓P P 05 32 07.1 -0.2
baz=92,SNR=7.0
319A Douglas 91.86 58 ⇓P P 05 32 07.8 +0.3
baz=92
O15A The Old Anders 91.88 49 ⇑P P 05 32 07.5 +0.1
baz=92
Y18A Canyon Day Jun 91.90 56 ⇓P P 05 32 07.9 +0.2
baz=92,SNR=8.0
H13A Challis 91.92 44 ⇓P P 05 32 07.2 -0.4
baz=92,SNR=14
D12A Red Ives Fores 91.99 42 ⇑P P 05 32 07.7 -0.1
baz=92
N15A Stansbury Isla 92.02 48 ⇓P P 05 32 08.2 +0.1
baz=92
R16A Teasdale 92.03 51 ⇑P P 05 32 08.7 +0.5
baz=92,SNR=16
219A White Tail Can 92.05 58 ⇑P P 05 32 08.6 +0.1
baz=92,SNR=17
J14A Carey 92.05 46 ⇑P P 05 32 08.7 +0.6
baz=92
K14A Jones Ranch, D 92.05 47 ⇑P P 05 32 08.1 0.0
baz=92,SNR=5.9
G13A Cobalt 92.10 44 ⇑P P 05 32 07.9 -0.5
baz=92,SNR=9.4
C12B Naegeli Ranch, 92.12 41 ⇓P P 05 32 08.1 -0.3
baz=92
X18A Snowflake 92.17 55 ⇑P P 05 32 09.2 +0.2
baz=92,SNR=5.8
U17A Shonto 92.19 53 ⇑P P 05 32 09.1 +0.2
baz=92
T17A Navajo Res., N 92.19 52 ⇓P P 05 32 09.2 +0.3
baz=92,SNR=10
119A Ashpeak Ranch, 92.22 57 ⇑P P 05 32 09.2 +0.1
baz=92
M15A Larsen Ranch, 92.24 48 ⇑P P 05 32 09.2 +0.1
baz=92
F13A Darby 92.25 43 ⇓P P 05 32 08.1 -0.9
baz=92,SNR=15
I14A Mackay 92.28 45 ⇓P P 05 32 09.2 +0.1
baz=92,SNR=9.1
B12A Libby 92.30 40 ⇑P P 05 32 08.8 -0.4
baz=92
S17A Black Ridge (B 92.37 52 ⇑P P 05 32 09.6 -0.1
baz=92
L15A Malad City 92.45 47 ⇑P P 05 32 09.8 -0.2
baz=93
W18A Petrified Fore 92.50 55 ⇑P P 05 32 11.0 +0.5
baz=93
V18A Ganado 92.51 54 ⇓P P 05 32 10.3 -0.1
baz=93,SNR=8.0
TMUT Trail Mountain 92.53 50 eP P 05 32 06.7 -3.7
comp=Z,26nm,0.4s,mb5.6
WMQ Urumqi 92.53 315 eP P 05 32 11.0 +0.6
H14A Leadore 92.54 45 ⇑P P 05 32 10.4 0.0
baz=93,SNR=7.9
E13A Victor 92.55 43 ⇓P P 05 32 10.3 -0.1
baz=93
O16A Springville 92.57 49 ⇓P P 05 32 10.6 -0.1
baz=93
Y19A Nutrioso 92.57 56 ⇑P P 05 32 11.0 +0.2
baz=93,SNR=8.0
D13A Huson 92.58 42 ⇑P P 05 32 10.3 -0.2
baz=93
BSMT Bassoo Peak 92.61 41 eP P 05 32 10.7 +0.1
220A Playas Peak, P 92.62 58 ⇑P P 05 32 11.0 -0.1
baz=93
R17A Hanksville Air 92.65 51 ⇑P P 05 32 11.0 -0.1
baz=93,SNR=13
G14A Jackson 92.67 44 ⇑P P 05 32 11.6 +0.6
baz=93
X19A St. Johns 92.67 55 ⇓P P 05 32 11.7 +0.5
baz=93
C13A Hot Springs 92.69 41 ⇑P P 05 32 10.9 -0.1
baz=93
120A U Bar Ranch, L 92.70 57 ⇓P P 05 32 11.6 +0.2
baz=93
JLU Jordanelle 92.72 49 eP P 05 32 11.3 0.0
comp=Z,5.2nm,0.8s,mb4.6
W19A Sanders 92.78 55 ⇓P P 05 32 11.6 -0.1
baz=93
M16A Huntsville 92.79 48 ⇑P P 05 32 11.8 +0.2
baz=93
N16A Rees Ranch, Co 92.81 49 ⇑P P 05 32 12.0 +0.3
baz=93

J15A	Blackfoot	92.82	46	⇑P		P	05 32 12.1	+0.4
	baz=93							
MSO	Missoula	92.83	42	eP		P	05 32 10.9	-0.8
	comp=Z,1.5nm,0.8s,mb4.1							
Z20A	Nine Sixteen R	92.88	57	⇑P		P	05 32 12.2	-0.1
	baz=93							
HWUT	Hardware Ranch	92.92	48	eP		P	05 32 11.9	-0.3
	comp=Z,3.4nm,0.7s,mb4.5							
P17A	Butcher Ranch,	92.92	50	⇓P		P	05 32 12.4	+0.1
	baz=93							
T18A	Mexican Hat	92.94	53	⇓P		P	05 32 12.2	-0.2
	baz=93,SNR=11							
MCMT	McKenzie Canyo	92.96	45	eP		P	05 32 12.6	+0.3
	comp=Z,1.2nm,0.6s,mb4.1							
B13A	Whitefish	92.97	41	⇑P		P	05 32 12.6	+0.3
	baz=93,SNR=6.4							
SRU	San Rafael	92.98	51	⇓P		P	05 32 12.0	-0.6
	baz=93,SNR=6.4							
SRU	San Rafael	92.98	51	eP		P	05 32 12.3	-0.3
SRU				pmax		pmax		
	comp=Z,4.0nm,0.8s,mb4.5							
SRU	San Rafael	92.98	51	eP		P	05 32 12.3	-0.3
	comp=Z,4.1nm,0.8s,mb4.5							
S18A	Hurst Farm, Bl	93.00	52	⇓P		P	05 32 12.4	-0.2
	baz=93,SNR=11							
E14A	Clinton	93.00	43	⇓P		P	05 32 11.9	-0.6
	baz=93							
H15A	Lima	93.03	45	⇑P		P	05 32 12.7	+0.1
	baz=93							
O17A	Robinson Place	93.13	49	⇓P		P	05 32 13.2	0.0
	baz=93,SNR=17							
L16A	Fish Haven	93.13	48	⇓P		P	05 32 13.1	0.0
	baz=93							
U19A	Dine' College,	93.23	54	⇑P		P	05 32 14.0	+0.2
	baz=93,SNR=8.7							
R18A	Canyonlands Na	93.26	51	⇓P		P	05 32 13.6	-0.3
	baz=93,SNR=12							
Y20A	Horse Springs,	93.26	56	⇓P		P	05 32 14.1	+0.1
	baz=93							
Q18A	Rafter H Ranch	93.28	51	⇓P		P	05 32 13.7	-0.3
	baz=93							
G15A	Dillon	93.30	44	⇑P		P	05 32 13.6	-0.2
	baz=93,SNR=7.5							
X20A	Quemado	93.33	55	⇑P		P	05 32 14.7	+0.5
	baz=93							
P18A	Preston Nutter	93.33	50	⇓P		P	05 32 14.1	-0.1
	baz=93,SNR=10							
J16A	Bone	93.36	46	⇑P		P	05 32 14.4	+0.3
	baz=94							
W20A	Ramah	93.48	55	⇑P		P	05 32 15.0	+0.1
	baz=94,SNR=5.7							
T19A	Beclabito	93.51	53	⇓P		P	05 32 14.9	-0.2
	baz=94							
LRM	Limekiln Ridge	93.52	44	eP		P	05 32 14.8	-0.1
E15A	Deer Lodge	93.57	43	⇑P		P	05 32 14.7	-0.3
	baz=94							
I16A	Newdale	93.62	46	⇑P		P	05 32 15.5	+0.1
	baz=94							
S19A	Harvey Farm, M	93.67	52	⇓P		P	05 32 15.5	-0.2
	baz=94,SNR=6.7							
Z21A	St. Cloud Mine	93.68	57	⇑P		P	05 32 16.3	+0.4
	baz=94							
O18A	Roosevelt	93.68	50	⇑P		P	05 32 15.5	-0.2
	baz=94,SNR=6.4							
R19A	Curley Farm, L	93.72	52	⇑P		P	05 32 15.6	-0.3
	baz=94,SNR=8.0							
B14A	Marquette Ranc	93.73	41	⇓P		P	05 32 16.0	+0.3
	baz=94,SNR=5.9							
G16A	Moss Hill, Enn	93.78	44	⇓P		P	05 32 16.4	+0.3
	baz=94							
A14A	Double T Ranch	93.82	40	⇑P		P	05 32 16.3	+0.2
	baz=94							
D15A	Lincoln	93.83	42	⇑P		P	05 32 16.1	-0.1
	baz=94							
Y21A	Point of Rocks	93.85	56	⇓P		P	05 32 16.9	+0.2
	baz=94							
X21A	Alamocita Cree	93.88	56	⇑P		P	05 32 16.5	-0.3
	baz=94							
C15A	Salmond Ranch,	93.98	42	⇑P		P	05 32 16.7	-0.2
	baz=94,SNR=13							
IMW	Indian Meadow	94.00	46	eP		P	05 32 17.1	0.0
	comp=Z,2.5nm,0.6s,mb4.4							
H16A	Russell Place,	94.01	45	⇓P		P	05 32 17.8	+0.6
	baz=94							
BOZ	Bozeman (W)	94.02	44	⇓P		P	05 32 17.5	+0.3
	baz=94							
BOZ	Bozeman (W)	94.02	44	eP		P	05 32 17.4	+0.2
BOZ				pmax		pmax		
	comp=Z,2.0nm,0.9s,mb4.2							
BOZ	Bozeman (W)	94.02	44	eP		P	05 32 17.4	+0.2
	comp=Z,1.9nm,0.9s,mb4.1							
F16A	Kennard Place,	94.06	44	⇓P		P	05 32 18.0	+0.7
	baz=94							
B15A	Bradely Ranch,	94.17	41	⇓P		P	05 32 17.7	-0.1
	baz=94,SNR=5.3							
PV01	Paradox Valley	94.20	52	eP		P	05 32 18.2	0.0
	comp=Z,287nm,0.8s							
A15A	Johnson Ranch,	94.25	41	⇑P		P	05 32 18.2	0.0
	baz=94							
K18A	Toltan Ranch,	94.29	47	⇑P		P	05 32 18.9	+0.4
	baz=94							
O19A	Miners Draw (B	94.34	50	⇑P		P	05 32 18.4	-0.4
	baz=94,SNR=5.9							
R20A	Redvale	94.36	52	⇓P		P	05 32 18.5	-0.4
	baz=94,SNR=5.1							
H17A	Grant Village	94.39	45	⇑P		P	05 32 19.6	+0.7
	baz=94							
Y22A	Socorro	94.41	56	⇑P		P	05 32 19.1	-0.1
	baz=94							
D16A	Dana Ranch, Ca	94.46	43	⇑P		P	05 32 19.8	+0.7
	baz=95							
J18A	Kendall Valley	94.46	47	⇓P		P	05 32 19.6	+0.3
	baz=95							
U21A	Nageezi	94.47	54	⇑P		P	05 32 19.3	-0.2
	baz=95,SNR=5.7							
Q20A	Ridgley Place,	94.62	51	⇑P		P	05 32 19.4	-0.7
	baz=95,SNR=6.5							
L19A	Farson	94.64	48	⇑P		P	05 32 20.3	+0.2
	baz=95							
PDAR	Pinedale Array	94.67	47	P		P	05 32 19.8	-0.5
	comp=Z,0.9nm,0.6s,mb4.1,baz=258,slow=4.4,SNR=7.5							
PDAR				PKKPbc		PKKPbc	05 49 16.8	-1.8
	comp=Z,0.9nm,0.7s,baz=76,slow=6.3,SNR=5.7							
S21A	Coal Bank Pass	94.68	52	⇑P		P	05 32 20.6	+0.2
	baz=95							
P20A	De Beque	94.68	51	⇑P		P	05 32 20.1	-0.3
	baz=95,SNR=8.1							
BNM	Barren Site	94.73	56	eP		P	05 32 20.8	+0.1
	comp=Z,2.8nm,0.9s,mb4.4							
F17A	Fitzpatrick Pl	94.74	44	⇑P		P	05 32 20.7	+0.3
	baz=95							
O20A	White River Ci	94.95	50	⇓P		P	05 32 21.2	-0.4
	baz=95,SNR=8.7							
R21A	Cimarron	95.04	52	⇑P		P	05 32 22.4	+0.4
	baz=95							
ANMO	Albuquerque	95.06	55	ceP		P	05 32 22.4	+0.2
ANMO				pmax		pmax		
	comp=Z,3.0nm,1.0s							
ANMO	Albuquerque	95.06	55	eP		P	05 32 21.5	-0.7
	comp=Z,0.6nm,0.9s,mb3.7							
D17A	Six Diamond Ra	95.06	43	⇓P		P	05 32 22.5	+0.7
	baz=95							
U22A	Llaves	95.09	54	⇑P		P	05 32 22.5	+0.2
	baz=95							
N20A	Spence Gulch,	95.11	49	⇑P		P	05 32 22.4	+0.1
	baz=95							
VNA1	Neumayer--Stat	95.12	181	eP		P	05 32 20.3	-1.5
Q21A	Lamborn Mesa,	95.13	51	⇓P		P	05 32 22.1	-0.3
	baz=95,SNR=5.1							
224A	Cornudas Mount	95.14	58	⇓P		P	05 32 22.3	-0.3
	baz=95							
Y23A	Lovelace Mesa,	95.14	56	⇑P		P	05 32 22.4	-0.1
	baz=95							
B17A	L&G Farms, Che	95.29	42	⇑P		P	05 32 23.2	+0.3
	baz=95							
M20A	Sweetwater, Wa	95.33	49	⇑P		P	05 32 23.2	0.0
	baz=95							
124A	Stringfield Ra	95.34	58	⇑P		P	05 32 23.2	-0.3
	baz=95							
L20A	Wamsutter	95.35	48	⇑P		P	05 32 23.2	-0.1
	baz=96							
F18A	Big Timber	95.38	44	⇑P		P	05 32 23.7	+0.4
	baz=96							
E18A	Harlowton	95.42	43	⇓P		P	05 32 23.1	-0.5
	baz=96							
325A	Bean Ranch, Si	95.43	59	⇓P		P	05 32 24.1	+0.1
	baz=96							
V23A	Ortiz Mt. (NFS	95.47	55	⇓P		P	05 32 24.3	+0.3
	baz=96							
R22A	Saguache, Gunn	95.61	52	⇑P		P	05 32 25.1	+0.5
	baz=96							
Y24A	Capitan	95.64	57	⇑P		P	05 32 25.1	+0.2
	baz=96							
Q22A	Crested Butte,	95.64	51	⇓P		P	05 32 24.3	-0.5
	baz=96,SNR=6.0							
SMCO	Snowmass	95.67	51	eP		P	05 32 24.6	-0.2
	comp=Z,3.5nm,0.8s,mb4.6							
626A	Big Bend Ranch	95.71	61	⇓P		P	05 32 25.2	-0.1
	baz=96							
W24A	Lazy 6 Ranch,	95.96	55	⇓P		P	05 32 26.3	0.0
	baz=96							
B18A	Beardsley Farm	95.98	42	⇓P		P	05 32 26.3	+0.3
	baz=96							
426A	McDonald Obser	96.05	60	⇓P		P	05 32 26.4	-0.4
	baz=96							
TXAR	Lajitas Array	96.06	61	P		P	05 32 26.9	0.0
	comp=Z,1.2nm,0.7s,mb4.2,baz=223,slow=5.4,SNR=22							
TXAR				PP		PP	05 36 27.6	+5.2
	comp=Z,0.2nm,0.9s,baz=287,slow=8.5,SNR=3.8							
TXAR				PKKPbc		PKKPbc	05 49 13.3	-1.0
	comp=Z,0.4nm,0.7s,baz=100,slow=3.5,SNR=5.6							
TXAR	Lajitas Array	96.06	61	P		P	05 32 26.9	0.0
TXAR							05 36 27.7	
TXAR	Lajitas Array	96.06	61	P		P	05 32 26.9	0.0
TXAR				PP		PP	05 36 27.6	+5.2
TXAR				PKKPbc		PKKPbc	05 49 13.3	-1.0
A18A	Metzger Ranch,	96.07	41	⇑P		P	05 32 27.2	+0.8
	baz=96							
Y25A	Mesa, Roswell	96.24	57	⇓P		P	05 32 27.4	-0.2
	baz=96							
527A	Woodward Ranch	96.29	61	⇓P		P	05 32 27.9	0.0
	baz=96							
226A	Malaga, Loving	96.31	59	⇓P		P	05 32 27.8	-0.1
	baz=96							
627A	Terlingua Ranc	96.32	61	⇑P		P	05 32 27.8	-0.2
	baz=96							
W25A	X Bar L Ranch,	96.72	55	⇓P		P	05 32 29.4	-0.3
	baz=97							
V25A	Rancho No Teng	96.73	55	⇓P		P	05 32 29.5	-0.3
	baz=97							
628A	Black Gap, Mar	96.76	61	⇑P		P	05 32 29.4	-0.6
	baz=97							
528A	Cox Ranch, San	96.99	61	⇓P		P	05 32 31.1	0.0
	baz=97							
MK31	Makanchi Array	97.00	316	eP		P	05 32 31.0	+0.3
MKAR	Makanchi Array	97.00	316	P		P	05 32 30.6	-0.1
	comp=Z,10nm,0.7s,mb5.2,baz=91,slow=6.8,SNR=75							
MKAR				PKiKP		PKiKP	05 37 05.0	-0.7
	comp=Z,0.6nm,0.5s,baz=197,slow=0.6,SNR=3.9							
MKAR				PKKPbc		PKKPbc	05 49 09.3	-3.2
	comp=Z,0.7nm,0.5s,baz=270,slow=3.4,SNR=7.7							
ZAA0	Zalesovo Array	97.16	324	eP		P	05 32 30.2	-1.0
ZALV	Zalesovo Beam	97.16	324	P		P	05 32 30.0	-1.2
	comp=Z,8.8nm,0.7s,mb5.1,baz=116,slow=4.4,SNR=33							
428A	Kincaid Ranch,	97.20	60	⇓P		P	05 32 32.6	+0.6
	baz=97							
YKA	Yellowknife Ar	97.22	27	P		P	05 32 29.6	-1.6
	comp=Z,6.3nm,0.7s,mb4.9,baz=257,slow=4.6,SNR=28							
YKA				PKKPbc		PKKPbc	05 49 09.2	-3.3
	comp=Z,0.7nm,0.8s,baz=80,slow=2.8,SNR=6.2							
YKA	Yellowknife Ar	97.22	27	P		P	05 32 29.6	-1.6
YKA				PKKPbc		PKKPbc	05 49 09.2	-3.3
V26A	Tequesquite Ra	97.38	55	⇑P		P	05 32 32.5	-0.2
	baz=98							
Y27A	Causey	97.47	57	⇑P		P	05 32 32.9	-0.3
	baz=98							
NVS	Novosibirsk	98.27	324	eP		P	05 32 31.1	-5.1
NVS				eS		SKSac	05 42 53.8	-1.3
NVS				pmax		pmax		
	comp=N,5.0nm,1.3s							
NVS				pmax		pmax		
	comp=E,9.0nm,1.3s							
NVS				pmax		pmax		
	comp=Z,8.0nm,1.3s,mb4.9							
NVS				smax				
	comp=N,6.0nm,1.5s							
NVS				smax				
	comp=E,12nm,1.5s							
BVAR	Borovoye Array	105.52	322	Pdiff		Pdif	05 33 08.0	-0.6
	comp=E,0.4nm,0.5s,baz=130,slow=6.0,SNR=4.0							
BVAR				PKiKP		PKiKP	05 37 20.5	-0.4
	comp=E,1.1nm,0.5s,baz=116,slow=3.4,SNR=7.5							
ARU	Arti	112.25	325	i PKIKP		PKiKP	05 37 32.9	-0.5
ARU							05 38 18.2	
ARU							05 44 00.5	
ARU				SS		SS	05 53 43.9	-1.2
ARU	Arti	112.25	325	ePKPdf		PKiKP	05 37 33.1	-0.3
ARU				eSKPdf		SKPdf	05 40 44.7	-5.8
SOKR	Solikamsk	112.68	329	⇑iPKIKP		PKiKP	05 37 34.2	0.0
SOKR				pmax		pmax		
	comp=Z,10.0nm,0.9s							
LPAZ	La Paz	117.31	117	PKP		PKPdf	05 37 44.0	-0.3
	comp=Z,1.2nm,0.7s,baz=359,slow=4.9,SNR=7.2							
LPAZ				PKKPbc		PKKPbc	05 48 08.4	+0.1
	comp=Z,1.4nm,0.8s,baz=97,slow=1.8,SNR=7.7							
LVZ	Lovozero	118.50	342	⇑ePKIKP		PKPdf	05 37 45.8	+0.7
APA	Apatity	119.08	342	⇑iPKIKP		PKPdf	05 37 46.0	-0.2
APA				e			05 39 16.0	
APA				ePPP			05 41 52.0	
APA				MLR		MLR		
	comp=Z,100nm,23.0s							
KEV	Kevo	119.42	345	ePKIKP		PKPdf	05 37 45.6	-1.2
KEV				pmax		pmax		
	comp=Z,16nm,0.8s							
KEV	Kevo	119.42	345	epkp		PKPdf	05 37 45.6	-1.2
	comp=Z,16nm,0.8s							
KEV	Kevo	119.42	345	epkp		PKPdf	05 37 45.6	-1.2
	comp=Z,16nm,0.8s							
SUMG	Summit	119.89	9	ePKIKP		PKPdf	05 37 47.9	+0.2
SUMG	Summit	119.89	9	i P		PKPdf	05 37 47.8	+0.1
	comp=Z,6.9nm,1.0s							
ARCES	ARCESS Array B	119.94	345	PKP		PKPdf	05 37 47.3	-0.5
	comp=Z,11nm,0.5s,baz=73,slow=1.8,SNR=173							
ARCES				PKKPbc		PKKPbc	05 47 56.2	-3.9
	comp=Z,1.8nm,0.9s,baz=184,slow=3.4,SNR=6.0							
ARE0	ARCESS Array S	119.94	345	ePKPdf		PKPdf	05 37 47.3	-0.5
CPUP	Villa Florida	120.64	133	PKP		PKPdf	05 37 49.3	-1.3
	comp=Z,0.7nm,0.5s,baz=232,slow=3.0,SNR=6.3							
SCHQ	Schefferville	121.98	34	PKP		PKPdf	05 37 52.3	+0.1
	comp=Z,2.0nm,0.7s,baz=84,slow=4.6,SNR=3.9							
SCHQ				PKKPbc		PKKPbc	05 47 50.5	-1.5
	comp=Z,2.6nm,0.6s,baz=133,slow=6.2,SNR=7.8							
QRN	Al-Qurain	122.42	295	eP		PKPdf	05 37 53.6	-0.2
QRN				AMb		AMB	05 37 54.5	
	comp=Z,54nm,0.7s							
JOF	Joensuu	122.60	338	ePKIKP		PKPdf	05 37 51.6	-1.5
JOF				pmax		pmax		
	comp=Z,24nm,0.7s							
JOF	Joensuu	122.60	338	epkp		PKPdf	05 37 51.6	-1.5
	comp=Z,24nm,0.7s							
JOF	Joensuu	122.60	338	epkp		PKPdf	05 37 51.6	-1.5
	comp=Z,24nm,0.7s							
RDF	Al-Radifah	122.74	295	eP		PKPdf	05 37 55.0	+0.5
RDF				AMb		AMB	05 37 55.9	
	comp=Z,40nm,0.7s							
NAY	Al-Naaiem	123.00	296	eP		PKPdf	05 37 54.3	-0.7
NAY				AMb		AMB	05 37 55.3	
	comp=Z,10nm,1.3s							
VRHR	Novokhopersk	123.25	322	ePKIKP		PKPdf	05 37 54.3	-0.4
VRHR				pmax		pmax		
	comp=N,10.0nm,0.4s							
VRHR				pmax		pmax		
	comp=E,20nm,0.4s							
VRHR				pmax		pmax		
	comp=Z,20nm,0.4s							
BOSA	Boshof	123.67	220	PKP		PKPdf	05 37 56.1	-0.2
	comp=Z,2.1nm,0.6s,baz=145,slow=10,SNR=6.9							
GNI	Garni	123.97	309	⇑ePKIKP		PKPdf	05 37 58.2	+1.7
ZEI	Tsey	124.07	312	ePKIKP		PKPdf	05 37 56.1	-0.5
ZEI				pmax		pmax		
	comp=Z,17nm,1.0s							
OBN	Obninsk	124.45	328	⇓iPKIKP		PKPdf	05 37 57.0	+0.1
OBN				pmax		pmax		
	comp=Z,48nm,1.7s							
OBN	Obninsk	124.45	328	⇑ePKP		PKPdf	05 37 57.2	+0.3
VSR	Storozhevoye	124.65	323	ePKIKP		PKPdf	05 37 56.2	-1.2
VSR				pmax		pmax		
	comp=N,9.0nm,0.6s							
VSR				pmax		pmax		
	comp=E,2.0nm,0.6s							
VSR				pmax		pmax		
	comp=Z,20nm,0.6s							
KIV	Kislovodsk	124.66	314	i PKIKP		PKPdf	05 37 58.5	+0.8
KIV				e			05 44 47.1	
KIV				pmax		pmax		
	comp=Z,12nm,1.1s							
KIV	Kislovodsk	124.66	314	⇑ePKIKP		PKPdf	05 37 58.6	+0.9
KIV	Kislovodsk	124.66	314	⇑ePKP		PKPdf	05 37 58.6	+0.9
VORD	Divnogorie	124.67	323	ePKIKP		PKPdf	05 37 54.8	-2.7
VORD				pmax		pmax		
	comp=N,120nm,0.8s							
VORD				pmax		pmax		
	comp=E,100nm,0.8s							
VORD				pmax		pmax		
	comp=Z,10.0nm,0.8s							
KAF	Kangasniemi	124.90	339	ePKIKP		PKPdf	05 37 56.0	-1.6
KAF				pmax		pmax		
	comp=Z,20nm,0.7s							
KAF	Kangasniemi	124.90	339	epkp		PKPdf	05 37 56.0	-1.6
	comp=Z,20nm,0.7s,baz=37,slow=2.0							
KAF	Kangasniemi	124.90	339	epkp		PKPdf	05 37 56.0	-1.6
	comp=Z,20nm,0.7s,baz=37,slow=2.0							
FINES	FINESS Array B	125.43	338	PKP		PKPdf	05 37 58.4	-0.2
	comp=Z,19nm,0.9s,baz=85,slow=2.3,SNR=29							
LBTB	Lobatse	125.91	224	PKP		PKPdf	05 38 00.7	-0.1
	comp=Z,3.6nm,0.6s,baz=358,slow=10,SNR=7.8							
ANN	Anapa	128.02	316	i PKIKP		PKPdf	05 38 11.5	+7.4
ANN				pmax		pmax		
	comp=Z,26nm,0.9s							
HUMP	Col San Antoni	128.95	78	ePKPdf		PKPdf	05 38 05.8	-0.8
NB2	NORSAR Subarra	130.31	345	PKPdf		PKPdf	05 38 07.8	-0.1
	comp=Z,7.4nm,0.9s,baz=31,slow=1.9							
NB2	NORSAR Subarra	130.31	345	PKPdf		PKPdf	05 38 07.8	-0.1
	baz=31,slow=1.9							
NOA	NORSAR Array B	130.31	345	PKP		PKPdf	05 38 07.3	-0.6
	comp=Z,7.5nm,0.8s,baz=34,slow=2.0,SNR=21							
NOA				SKPbc		SKPbc	05 41 14.7	+1.8
	comp=Z,16nm,0.9s,baz=34,slow=2.9,SNR=17							
AKASG	Malin Array Be	130.49	326	PKP		PKPdf	05 38 07.8	-0.7
	comp=Z,2.6nm,0.5s,baz=59,slow=1.5,SNR=21							
AKASG				SKPbc		SKPbc	05 41 14.9	+1.0
	comp=Z,8.1nm,0.8s,baz=48,slow=4.1,SNR=17							
AKBB	Malin Array Si	130.49	326	ePKIKP		PKPdf	05 38 08.4	-0.2
BR131	Keskin Array S	132.34	311	ePKPdf		PKPdf	05 38 12.2	-0.2
BRTR	Keskin Array B	132.34	311	PKP		PKPdf	05 38 12.2	-0.2
	comp=Z,3.9nm,0.6s,baz=137,slow=3.8,SNR=16							
BRTR				SKPbc		SKPbc	05 41 22.2	+1.2
	comp=Z,3.6nm,0.8s,baz=106,slow=4.7,SNR=11							
MMAI	Mount Meron Ar	132.69	302	PKP		PKPdf	05 38 12.3	-1.0
	comp=Z,1.1nm,0.4s,baz=127,slow=4.3,SNR=4.1							
MMAI				SKPbc		SKPbc	05 41 24.2	+1.8
	comp=Z,2.2nm,0.4s,baz=72,slow=9.1,SNR=4.7							
BSD	Bornholm Skovb	134.07	338	i PKIKP		PKPdf	05 38 16.5	+1.3
BSD				pmax		pmax		
	comp=Z,12nm,0.8s							
BSD	Bornholm Skovb	134.07	338	i P		PKPdf	05 38 16.5	+1.3
	comp=Z,12nm,0.8s							
BUR08	Bucovina Ar. S	134.37	325	ePKPdf		PKPdf	05 38 17.4	+1.4
KWP	Kalwaria Pacla	134.54	328	ePKIKP		PKPdf	05 38 17.1	+0.9
MUD	Monsted U'grnd	134.81	343	ePKIKP		PKPdf	05 38 17.9	+1.4
MUD				pmax		pmax		
	comp=Z,13nm,1.1s							
MUD	Monsted U'grnd	134.81	343	i P		PKPdf	05 38 17.9	+1.4
	comp=Z,13nm,1.1s							
TSUM	Tsumeb	135.26	223	PKP		PKPdf	05 38 18.9	+0.3
	comp=Z,3.2nm,0.7s,baz=108,slow=4.2,SNR=5.1							
STHS	Stebnicka Huta	135.42	329	ePKP		PKPdf	05 38 20.1	+2.2
STHS				e			05 41 34.1	
STHS				e			05 41 58.8	
STHS	Stebnicka Huta	135.42	329	ePKP		PKPdf	05 38 20.1	+2.2
STHS				eSKPDF			05 41 34.1	
STHS				e			05 41 58.8	
OJC	Ojcow	135.60	330	ePKP		PKPdf	05 38 16.8	-1.4
CRVS	Cervenica-Dubn	135.63	328	ePKP		PKPdf	05 38 18.9	+0.6
CRVS				e			05 41 34.2	
CRVS	Cervenica-Dubn	135.63	328	ePKP		PKPdf	05 38 18.9	+0.6
CRVS				eSKPDF			05 41 34.1	
KECS	Kecovo	136.40	328	ePKP		PKPdf	05 38 20.3	+0.6
KECS				e			05 41 37.1	
KECS				e			05 51 51.0	
KECS				e			05 53 11.0	
KECS	Kecovo	136.40	328	ePKP		PKPdf	05 38 20.3	+0.6
KECS				eSKPDF			05 41 37.1	
KECS				e			05 51 51.0	
KECS				e			05 53 11.0	
BSEG	Bad Segeberg	136.61	340	ePKPdf		PKPdf	05 38 20.7	+0.8
BSEG				eSKPbc		SKPbc	05 41 37.4	+3.1
KSP	Ksiaz	136.76	333	ePKIKP		PKPdf	05 38 20.8	+0.5
MORC	Moravsky Berou	136.97	331	ePKIKP		PKPdf	05 38 21.4	+0.7
PSZ	Piszkesteto	137.06	328	ePKIKP		PKPdf	05 38 21.3	+0.3
PSZ	Piszkesteto	137.06	328	⇑ePKP		PKPdf	05 38 21.0	0.0
DPC	Dobruska-Polom	137.11	333	ePKIKP		PKPdf	05 38 21.1	+0.1
DPC	Dobruska-Polom	137.11	333	ePKPdf		PKPdf	05 38 21.1	+0.1
DPC				ex		x	05 38 23.3	
UPC	Upice	137.13	333	ePKIKP		PKPdf	05 38 21.8	+0.8
UPC	Upice	137.13	333	ePKPdf		PKPdf	05 38 21.8	+0.8
VYHS	Vyhne	137.22	329	ePKP		PKPdf	05 38 22.1	+0.8
VYHS				e			05 41 38.5	
VYHS				e			05 53 13.5	
VYHS	Vyhne	137.22	329	ePKP		PKPdf	05 38 22.1	+0.8
V

TIP	Timpagrande	144.23	319	*e*PKPdf	PKPdf	05 38 33.4	-0.8
CABF	La Chapelle	144.24	338	*e*PKP1	PKPdf	05 38 33.4	-0.6
	comp=Z,175nm,1.1s						
OG01	Vacheresse	144.25	337	PKP	PKPdf	05 38 33.2	-0.8
FLN	La Foliniere	144.28	346	⇑*i*PKP1	PKPdf	05 38 32.4	-1.6
	comp=Z,92nm,0.9s						
LDF	La Druitiere	144.36	346	*e*PKP1	PKPdf	05 38 32.6	-1.5
	comp=Z,97nm,0.8s						
LOR	Lormes	144.44	341	⇑*i*PKP1	PKPdf	05 38 33.5	-0.8
	comp=Z,161nm,1.1s						
GRR	Gorron	144.72	346	⇑*i*PKP1	PKPdf	05 38 34.1	-0.6
	comp=Z,303nm,0.8s						
SSF	Saint Saulge	144.74	341	⇑*i*PKP1	PKPdf	05 38 34.7	-0.1
	comp=Z,377nm,0.9s						
RSL	Roselend	144.81	336	PKP	PKPdf	05 38 34.9	-0.1
HYF	Humbligny	144.82	342	*e*PKP1	PKPdf	05 38 35.2	+0.3
LPL	La Plagne	144.91	336	⇑*i*PKP1	PKPdf	05 38 35.8	+0.6
	comp=Z,201nm,0.9s						
LPG	La Plagne	144.92	336	⇑*i*PKP1	PKPdf	05 38 35.9	+0.7
	comp=Z,241nm,0.9s						
SMF	Signal de Mont	144.99	340	⇑*i*PKP1	PKPdf	05 38 35.3	0.0
	comp=Z,328nm,1.0s						
AVF	Avril sur Loir	145.03	341	⇑*i*PKP1	PKPbc	05 38 35.3	+0.2
	comp=Z,237nm,1.0s						
SGMF	Saint Gilles	145.21	348	⇑*i*PKP1	PKPbc	05 38 35.7	+0.1
	comp=Z,342nm,1.0s						
ROSF	Rostrenen	145.27	349	*e*PKP1	PKPbc	05 38 35.9	+0.1
	comp=Z,299nm,1.0s						
BNI	Bardonecchia	145.32	336	*e*PKIKP	PKPdf	05 38 35.7	-0.2
CEL	Celeste	145.32	319	*e*PKPbc	PKPbc	05 38 37.0	+0.7
BGF	Bois d'Agland	145.39	341	⇑*i*PKP1	PKPbc	05 38 36.6	+0.3
	comp=Z,198nm,0.8s						
GDM	Grand'Maison	145.41	336	PKP	PKPdf	05 38 37.1	+1.1
BST	Brest	145.44	350	PKP	PKPdf	05 38 36.4	+0.4
MBDF	Montbardon	145.55	335	⇑*i*PKP1	PKPbc	05 38 37.2	+0.4
	comp=Z,201nm,1.1s						
QUIF	Quistinic	145.65	349	⇑*i*PKP1	PKPbc	05 38 36.9	-0.1
	comp=Z,169nm,1.2s						
PLDF	La Plantade	145.66	340	PKP	PKPdf	05 38 38.1	+1.7
SURF	Saint Ours	145.73	335	PKP	PKPdf	05 38 38.0	+1.4
ORIF	Oris-en-Rattie	145.74	336	⇑*i*PKP1	PKPbc	05 38 38.1	+0.7
	comp=Z,231nm,0.8s						
AGO	Saint Agoulin	145.75	340	PKP	PKPdf	05 38 37.7	+1.1
SAOF	Saorge	145.82	334	PKP	PKPdf	05 38 37.8	+1.0
TCF	Toulx Ste Croi	145.83	342	⇑*i*PKP1	PKPbc	05 38 38.0	+0.4
	comp=Z,102nm,0.9s						
AUTN	L'Aution	145.87	334	PKP	PKPdf	05 38 38.3	+1.5
TOUF	Mont Tournerai	145.93	334	PKP	PKPdf	05 38 38.4	+1.5
SSB	Saint Sauveur	145.94	338	*e*PKP2	PKPab	05 38 38.7	0.0
SBF	Sospel	145.97	334	⇑*i*PKP1	PKPbc	05 38 38.1	0.0
	comp=Z,352nm,0.9s						
LUCF	Luceram	145.99	334	PKP	PKPdf	05 38 38.3	+1.3
COLF	Collangettes	146.03	339	PKP	PKPdf	05 38 39.0	+1.9
PYM	Petit Puy Mans	146.06	340	PKP	PKPdf	05 38 39.0	+1.9
MVIF	Mont Vial	146.06	334	PKP	PKPdf	05 38 38.6	+1.4
REVF	Revere	146.10	334	PKP	PKPdf	05 38 38.6	+1.4
MFF	Saint Martin d	146.21	344	⇑*i*PKP1	PKPbc	05 38 39.0	+0.3
	comp=Z,214nm,0.9s						
OCF	Saint Nazaire	146.25	337	PKP	PKPbc	05 38 39.9	+1.0
OG26	St.-Nazaire-De	146.25	337	PKP	PKPbc	05 38 39.9	+1.0
VIVF	Saint-Julien-l	146.25	338	⇑*i*PKP1	PKPbc	05 38 39.5	+0.6
	comp=Z,119nm,1.0s						
PGF	Pioggiola	146.29	331	⇑*i*PKP1	PKPbc	05 38 39.3	+0.2
	comp=Z,410nm,1.1s						
CALN	Calern	146.29	334	PKP	PKPdf	05 38 39.4	+1.8
LBL	Lubilhac	146.43	339	PKP	PKPbc	05 38 40.2	+0.8
FRF	La Foret Royal	146.55	334	⇑*i*PKP1	PKPbc	05 38 39.9	+0.1
	comp=Z,314nm,1.0s						
SMRF	Simiane la Rot	146.65	336	⇑*i*PKP1	PKPbc	05 38 40.7	+0.6
	comp=Z,182nm,0.9s						
LMR	La Mourre	146.79	334	⇑*i*PKP1	PKPbc	05 38 40.6	+0.1
	comp=Z,308nm,1.1s						
OSPF	L'Ospedale	146.87	329	PKP	PKPbc	05 38 41.0	+0.2
RJF	Les Rejaudoux	146.93	342	⇑*i*PKP1	PKPbc	05 38 41.3	+0.5
	comp=Z,127nm,0.9s						
CAF	Calviac	147.09	341	⇑*i*PKP1	PKPbc	05 38 41.9	+0.6
	comp=Z,136nm,1.0s						
LASF	Ste Croix	147.22	338	⇑*i*PKP1	PKPbc	05 38 42.3	+0.6
	comp=Z,247nm,1.0s						
LFF	La Frestale	147.49	342	⇑*i*PKP1	PKPbc	05 38 42.8	+0.4
	comp=Z,220nm,0.9s						
VSL	Villasalto	148.37	326	*e*PKPdf	PKPdf	05 38 41.3	+0.1
MTLF	Montolieu	148.45	339	⇑*i*PKP1	PKPbc	05 38 45.5	+0.6
	comp=Z,183nm,0.9s						
LRDF	Laroque-de-Fa	148.69	338	PKP	PKPbc	05 38 46.1	+0.6
SJAF	Saint Jean de	148.95	337	PKP	PKPbc	05 38 45.8	-0.4
EJON	La Jonquera	148.98	337	P	PKPbc	05 38 44.6	-1.7
FILF	Fillols	149.01	338	PKP	PKPbc	05 38 46.6	+0.2
CARF	Carcanieres	149.03	339	PKP	PKPbc	05 38 46.5	+0.1
SHEL	Horse Pasture	149.08	193	*e*PKP2	PKPbc	05 38 48.1	+0.8
EPF	Esparros	149.34	341	⇑*i*PKP1	PKPbc	05 38 47.5	+0.3
	comp=Z,86nm,0.9s						
LABF	Labassere	149.41	341	PKP	PKPbc	05 38 47.3	0.0
REYF	Montagne du Re	149.53	342	PKP	PKPbc	05 38 47.7	+0.1
RESF	Ens	149.55	341	PKP	PKPbc	05 38 49.1	+1.4
ORDF	Ordiarp	149.56	343	PKP	PKPbc	05 38 47.7	0.0
OSSF	Osses	149.61	343	PKP	PKPbc	05 38 47.7	-0.1
SJPF	Ste Jean	149.73	343	*e*PKP1	PKPbc	05 38 48.7	+0.6
	comp=Z,144nm,1.2s						
ETSF	Etsaut	149.74	342	⇑*i*PKP1	PKPbc	05 38 49.1	+1.0
	comp=Z,150nm,1.0s						
KEST	Kesra	150.99	321	PKPbc	PKPbc	05 38 52.0	+0.7
	comp=Z,33nm,1.0s,baz=203,slow=0.8,SNR=49						
KEST	Kesra	150.99	321	*e*PKPbc	PKPbc	05 38 52.1	+0.8
PBRG	Braganca	152.21	350	*e*PKPbc	PKPbc	05 38 53.8	-0.1
PBRG	Braganca	152.21	350	*e*PKPab	PKPab	05 39 04.7	+0.4
PCAB	Cabril	152.48	352	*e*PKPdf	PKPdf	05 38 46.4	-1.1
PCAB	Cabril	152.48	352	*e*PKPbc	PKPbc	05 38 54.6	+0.1
PCAB	Cabril	152.48	352	*e*PKPab	PKPab	05 39 05.1	-0.3
PVRL	Vila Real	152.87	352	*e*PKPbc	PKPbc	05 38 55.8	+0.4
PVRL	Vila Real	152.87	352	*e*PKPab	PKPab	05 39 07.9	+0.8
MVO	Moncorvo	152.88	351	*e*PKPdf	PKPdf	05 38 48.5	+0.4
MVO	Moncorvo	152.88	351	*e*PKPbc	PKPbc	05 38 55.7	+0.3
PVIS	Viseu	153.44	352	*e*PKPbc	PKPbc	05 38 57.1	+0.4
PVIS	Viseu	153.44	352	*e*PKPab	PKPab	05 39 10.2	+0.7
ESLA	Sonseca Array	153.68	345	*e*PKPbc	PKPbc	05 38 57.2	-0.1
ESLA				*e*PKPab	PKPab	05 39 11.4	+0.8
MTE	Manteigas	153.70	351	*e*PKPdf	PKPdf	05 38 49.6	+0.3
MTE	Manteigas	153.70	351	*e*PKPdf	PKPdf	05 38 49.6	+0.3
MTE	Manteigas	153.70	351	*e*PKPbc	PKPbc	05 38 57.4	+0.2
MTE	Manteigas	153.70	351	*e*PKPab	PKPab	05 39 11.6	+0.9
PAB	San Pablo	153.90	345	*e*PKPdf	PKPdf	05 38 48.9	-0.7
PAB				*e*PKPbc	PKPbc	05 38 58.2	+0.5
PAB				*e*PKPab	PKPab	05 39 12.4	+0.9
PCBR	Castelo Branco	154.24	351	*e*PKPbc	PKPbc	05 38 58.7	+0.3
PCBR	Castelo Branco	154.24	351	*e*PKPab	PKPab	05 39 13.6	+0.6
PTOM	Tomar	154.59	352	*e*PKPbc	PKPbc	05 38 59.3	+0.1
PTOM	Tomar	154.59	352	*e*PKPab	PKPab	05 39 15.0	+0.5
PMRV	Marv??o	154.63	350	*e*PKPbc	PKPbc	05 38 59.7	+0.5
PESTR	Estremoz	155.21	351	*e*PKPab	PKPab	05 39 17.2	+0.1
EVO	Evora	155.60	351	*e*PKP2	PKPab	05 39 19.3	+0.5
	comp=Z,46nm,1.1s						
EVO	Evora	155.60	351	*e*PKPab	PKPab	05 39 19.7	+0.9
PBAR	Barrancos	155.79	349	*e*PKPab	PKPab	05 39 20.2	+0.6
PBEJ	Beja	156.08	351	*e*PKPab	PKPab	05 39 21.8	+0.9
PCVE	Castro Verde	156.49	351	*e*PKPab	PKPab	05 39 15.7	-6.9
PVAQ	Vaqueiros	156.66	350	*e*PKPab	PKPab	05 39 23.9	+0.5
PTEO	Sao Teotonio	156.67	352	*e*PKPab	PKPab	05 39 25.4	+2.0
PBDV	Barranco-do-Ve	156.85	350	*e*PKPab	PKPab	05 39 25.6	+1.4
MORF	Marmelete	156.90	352	*e*PKPab	PKPab	05 39 25.7	+1.3

*SKO **19** 05:50:04.7, 41°.30N×21°.02E, h15km, M3.1, ML3.5*
*LDG **19** 05:50:04.3±0.1, 41°.30N×21°.04E, h2km, Ml3.7/7, Error ellipse: s-maj=4.0km s-min=2.3km az=41.0*
*TIR **19** 05:50:04.4±2.2, 41°.34N×20°.98E, h4km±7km, ML3.7*
*PDG **19** 05:50:05.1±0.6, 41°.29N×21°.07E, h11km±1km, MD3.7/5, ML3.7/9, Error ellipse: s-maj=0.9km s-min=1.1km az=0.0*
*ISCJB **19** 05:50:05.0±0.3, 41°.34N±0°.01×21°.01E±0°.02, h8km±2km, Error ellipse: s-maj=2.6km s-min=2.2km az=42.1*
*CSEM **19** 05:50:05.2±0.1, 41°.34N×21°.05E, h2km, ML4.4/2, Error ellipse: s-maj=3.1km s-min=2.2km az=48.0*
*THE **19** 05:50:05.6, 41°.33N×21°.04E, h2km±1km, ML4.4/2, Error ellipse: s-maj=1.8km s-min=0.8km az=66.0*
*BEO **19** 05:50:06.2±0.6, 41°.29N×20°.99E, h18km±3km, ML3.4/8*
*SOF **19** 05:50:06.5, 41°.37N×21°.14E, h18km, MD2.7*
*NEIC **19** 05:50:07.0, 41°.34N×21°.10E, h10km, ML3.7(PDG), ML3.1(ATH), ML2.9(BUC), After ATH.*
ISC 19 05:50:05.9±0.3, 41°.32N±0°.01×21°.02E±0°.02, h9km±2km, n177, σ1§18/255, 42C-24D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRUS	**Krusevo**	**0.18**	**74**	⇑*i*Pg	**Pg**	**05 50 09.3**	**-0.3**
KRUS				*i* Sg	**Sg**	**05 50 13.1**	**+0.9**
KRUS				*e*Lg		05 50 13.3	
	comp=E,3μm,0.1s						
KRUS				*e*Lg		05 50 13.8	
	comp=N,3μm,0.2s						
OHR	**Ohrid**	**0.27**	**218**	*i* Pg	**Pg**	**05 50 10.0**	**-1.1**
OHR				*i* Sg	**Sg**	**05 50 14.7**	**0.0**
OHR				*e*Lg		05 50 15.0	
	comp=N,7μm,0.3s						
OHR				*e*Lg		05 50 15.1	
	comp=E,11μm,0.4s						
BIA	**Bitola**	**0.38**	**142**	*i* Pg	**Pg**	**05 50 12.5**	**-0.8**
BIA				*i* Sg	**Sg**	**05 50 18.8**	**+0.5**
BIA				*e*Lg		05 50 19.1	
	comp=E,3μm,0.3s						
BIA				*e*Lg		05 50 19.2	
	comp=N,2μm,0.2s						
BIA	**Bitola**	**0.38**	**142**	P	**Pg**	**05 50 12.4**	**-0.9**
BIA				S	**Sg**	**05 50 18.4**	**+0.1**
BIA	**Bitola**	**0.38**	**142**	P	**Pg**	**05 50 12.4**	**-0.9**
BIA				S	**Sg**	**05 50 18.4**	**+0.1**
FNA	**Florina**	**0.60**	**153**	P	**Pg**	**05 50 16.7**	**-0.7**
FNA				S	**Sg**	**05 50 25.4**	**+0.1**
FNA	**Florina**	**0.60**	**153**	P	**Pg**	**05 50 16.7**	**-0.7**
FNA				S	**Sg**	**05 50 25.4**	**+0.1**
KBN	**Korca**	**0.72**	**194**	*e*PG	**Pg**	**05 50 19.3**	**-0.3**
KBN				*i* SG	**Sg**	**05 50 28.8**	**-0.2**
KBN	**Korca**	**0.72**	**194**	*e*Pg	**Pg**	**05 50 19.3**	**-0.3**
	SNR=90						
KBN				*i* Sg	**Sg**	**05 50 28.8**	**-0.2**
	SNR=90						
SKO	**Skopje**	**0.73**	**26**	⇑*i*Pg	**Pg**	**05 50 20.0**	**+0.1**
SKO				*i* Sg	**Sg**	**05 50 31.0**	**+1.7**
SKO	**Skopje**	**0.73**	**26**	*i* Pg	**Pg**	**05 50 20.0**	**+0.1**
SKO				*i* Sg	**Sg**	**05 50 29.9**	**+0.6**
SKO				*e*Lg		05 50 30.4	
	comp=N,3μm,0.3s						
SKO				*e*Lg		05 50 30.5	
	comp=E,2μm,0.5s						
SKO	**Skopje**	**0.73**	**26**	P	**Pg**	**05 50 19.9**	**0.0**
SKO				S	**Sg**	**05 50 29.9**	**+0.6**
SKO	**Skopje**	**0.73**	**26**	P	**Pg**	**05 50 19.9**	**0.0**
SKO				S	**Sg**	**05 50 29.9**	**+0.6**
SKO				*i* Sg	**Sg**	**05 50 31.0**	**+1.7**
TIR	**Tirane**	**0.87**	**272**	⇑*i*Pg	**Pg**	**05 50 21.6**	**-0.9**
TIR				*i* Sg	**Sg**	**05 50 34.5**	**+0.7**
TIR	**Tirane**	**0.87**	**272**	*e*Pg	**Pg**	**05 50 21.4**	**-1.2**
TIR				*e*Sg	**Sg**	**05 50 34.6**	**+0.8**
TIR	**Tirane**	**0.87**	**272**	P	**Pg**	**05 50 21.9**	**-0.6**
TIR				S	**Sg**	**05 50 34.4**	**+0.6**
TIR	**Tirane**	**0.87**	**272**	⇑*i*Pg	**Pg**	**05 50 21.6**	**-0.9**
TIR	**Tirane**	**0.87**	**272**	P	**Pg**	**05 50 21.9**	**-0.6**
TIR				S	**Sg**	**05 50 34.4**	**+0.6**
PUK	**Puka**	**1.11**	**311**	*e*PG	**Pg**	**05 50 25.1**	**-2.1**
PUK				*i* SG	**Sg**	**05 50 40.9**	**-0.7**
PUK	**Puka**	**1.11**	**311**	*e*Pg	**Pg**	**05 50 25.1**	**-2.1**
	SNR=90						
PUK				*i* Sg	**Sg**	**05 50 40.9**	**-0.7**
	SNR=90						
KZN	**Kozani**	**1.16**	**150**	P	**Pb**	**05 50 28.6**	**+0.5**
KZN	**Kozani**	**1.16**	**150**	P	**Pb**	**05 50 27.1**	**-1.0**
KZN				S	**Sg**	**05 50 44.5**	**+1.3**
KZN	**Kozani**	**1.16**	**150**	P	**Pb**	**05 50 27.1**	**-1.0**
KZN				S	**Sg**	**05 50 44.5**	**+1.3**
VAY	**Valandovo**	**1.17**	**89**	*i* Pg	**Pg**	**05 50 26.8**	**-1.5**
VAY				*i* Sg	**Sg**	**05 50 43.3**	**-0.2**
VAY				*e*Lg		05 50 43.7	
	comp=N,535nm,0.7s						
VAY				*e*Lg		05 50 43.8	
	comp=E,636nm,0.9s						
VAY	**Valandovo**	**1.17**	**89**	P	**Pb**	**05 50 26.8**	**-1.4**
VAY				S	**Sb**	**05 50 43.4**	**-0.1**
VAY	**Valandovo**	**1.17**	**89**	P	**Pb**	**05 50 26.8**	**-1.4**
VAY				S	**Sb**	**05 50 43.4**	**-0.1**
BCI	**Bajram Curri**	**1.26**	**326**	*e*PG	**Pn**	**05 50 28.3**	**-1.4**
BCI				*i* SG	**Sg**	**05 50 44.3**	**-2.2**
BCI	**Bajram Curri**	**1.26**	**326**	*e*Pg	**Pn**	**05 50 28.3**	**-1.4**
	SNR=90						
BCI				*i* Sg	**Sg**	**05 50 44.3**	**-2.2**
	SNR=90						
ULC	**Ulcinj**	**1.47**	**297**	⇑*i*Pg	**Pn**	**05 50 32.3**	**-0.3**
ULC				*e*Sg	**Sg**	**05 50 55.7**	**+2.5**
ULC	**Ulcinj**	**1.47**	**297**	⇑*i*Pg	**Pn**	**05 50 32.3**	**-0.3**
ULC				*e*Sg	**Sg**	**05 50 55.7**	**+2.5**
PVY	**Plav**	**1.49**	**329**	⇑*i*Pg	**Pn**	**05 50 32.6**	**-0.2**
PVY				*e*Sg	**Sg**	**05 50 56.1**	**+2.2**
PVY	**Plav**	**1.49**	**329**	⇑*i*Pg	**Pn**	**05 50 32.6**	**-0.2**
PVY				*e*Sg	**Sg**	**05 50 56.1**	**+2.2**
MEV	**Metsovon**	**1.54**	**174**	P	**Pn**	**05 50 34.3**	**+0.8**
MEV	**Metsovon**	**1.54**	**174**	P	**Pn**	**05 50 34.3**	**+0.8**
BARS	**Barje**	**1.61**	**21**	⇓*i*Pn	**Pn**	**05 50 33.8**	**-0.7**
BARS				*e*Sg	**Sg**	**05 50 59.3**	**+1.7**
BARS	**Barje**	**1.61**	**21**	⇓*i*Pn	**Pn**	**05 50 33.8**	**-0.7**
BARS				*e*Sg	**Sg**	**05 50 59.3**	**+1.7**
SRN	**Sarande**	**1.63**	**209**	*e*PN	**Pn**	**05 50 36.2**	**+1.5**
SRN				*i* SN	**Sn**	**05 50 58.6**	**+2.7**
SRN	**Sarande**	**1.63**	**209**	*e*Pn	**Pn**	**05 50 36.2**	**+1.5**
	SNR=57						
SRN				*i* Sn	**Sn**	**05 50 58.6**	**+2.7**
	SNR=57						
KKB	**Krupnik**	**1.64**	**70**	*i* P	**Pn**	**05 50 34.9**	**0.0**
KKB	**Krupnik**	**1.64**	**70**	*i* P	**Pn**	**05 50 34.9**	**0.0**
JAN	**Janina**	**1.67**	**184**	P	**Pn**	**05 50 37.4**	**+2.2**
JAN	**Janina**	**1.67**	**184**	P	**Pn**	**05 50 37.4**	**+2.2**
PDG	**Podgorica**	**1.72**	**311**	⇓*i*Pn	**Pn**	**05 50 36.4**	**+0.5**
PDG				*e*Sn	**Sn**	**05 51 01.5**	**+3.5**
TTG	**Podgorica**	**1.72**	**311**	⇓*i*Pn	**Pn**	**05 50 36.4**	**+0.5**
TTG				*e*Sn	**Sn**	**05 51 01.5**	**+3.5**
TTG	**Podgorica**	**1.72**	**311**	⇓*i*Pn	**Pn**	**05 50 36.4**	**+0.5**
TTG				*e*Sn	**Sn**	**05 51 01.5**	**+3.5**
HORT	**Hortiatis**	**1.73**	**114**	P	**Pn**	**05 50 35.3**	**-0.8**
HORT	**Hortiatis**	**1.73**	**114**	P	**Pn**	**05 50 35.3**	**-0.8**
BEY	**Berane**	**1.76**	**332**	⇓*i*Pn	**Pn**	**05 50 37.3**	**+0.8**
BEY				*e*Sn	**Sn**	**05 51 02.5**	**+3.4**
IVA	**Berane**	**1.76**	**332**	⇓*i*Pn	**Pn**	**05 50 37.3**	**+0.8**
IVA				*e*Sn	**Sn**	**05 51 02.5**	**+3.4**
IVA	**Berane**	**1.76**	**332**	⇓*i*Pn	**Pn**	**05 50 37.3**	**+0.8**
IVA				*e*Sn	**Sn**	**05 51 02.5**	**+3.4**
SOH	**Sokhos**	**1.84**	**105**	P	**Pn**	**05 50 37.2**	**-0.3**
SOH	**Sokhos**	**1.84**	**105**	P	**Pn**	**05 50 37.2**	**-0.3**
KEK	**Kerkira**	**1.85**	**210**	P	**Pn**	**05 50 39.1**	**+1.3**
KEK	**Kerkira**	**1.85**	**210**	P	**Pn**	**05 50 38.3**	**+0.5**
KEK	**Kerkira**	**1.85**	**210**	P	**Pn**	**05 50 38.3**	**+0.5**
BUM	**Brajici-Budva**	**1.86**	**302**	⇑*i*Pn	**Pn**	**05 50 38.9**	**+1.0**
BUM				*e*Sn	**Sn**	**05 51 04.9**	**+3.3**
BUM	**Brajici-Budva**	**1.86**	**302**	⇑*i*Pn	**Pn**	**05 50 38.9**	**+1.0**
BUM				*e*Sn	**Sn**	**05 51 04.9**	**+3.3**
THL	**Klokotos Trika**	**1.91**	**156**	P	**Pn**	**05 50 38.1**	**-0.5**
THL	**Klokotos Trika**	**1.91**	**156**	P	**Pn**	**05 50 38.1**	**-0.5**
MMB	**Musomiste**	**2.06**	**82**	*i* P	**Pn**	**05 50 40.8**	**+0.2**
MMB	**Musomiste**	**2.06**	**82**	*i* P	**Pn**	**05 50 40.8**	**+0.2**
PLG	**Polygyros**	**2.07**	**116**	P	**Pn**	**05 50 41.3**	**+0.5**
PLG	**Polygyros**	**2.07**	**116**	P	**Pn**	**05 50 40.8**	**0.0**
PLG	**Polygyros**	**2.07**	**116**	P	**Pn**	**05 50 40.8**	**0.0**
VTS	**Vitosha**	**2.07**	**51**	⇑*i*Pn	**Pn**	**05 50 41.4**	**+0.6**
VTS				*e*Sg	**Sg**	**05 51 13.4**	**+1.0**
VTS	**Vitosha**	**2.07**	**51**	P	**Pn**	**05 50 42.1**	**+1.3**
VTS	**Vitosha**	**2.07**	**51**	P	**Pn**	**05 50 41.2**	**+0.4**
VTS	**Vitosha**	**2.07**	**51**	*i* P	**Pn**	**05 50 41.2**	**+0.4**
VTS	**Vitosha**	**2.07**	**51**	⇑*i*Pn	**Pn**	**05 50 41.4**	**+0.6**
VTS				*e*Sg	**Sg**	**05 51 13.4**	**+1.0**
SJES	**Sjenica**	**2.09**	**339**	*e*Pn	**Pn**	**05 50 41.5**	**+0.5**
SJES				*i* Sg	**Sg**	**05 51 13.6**	**+0.6**
NKY	**Niksic**	**2.12**	**315**	⇓*i*Pn	**Pn**	**05 50 42.8**	**+1.4**
NKY				*e*Sn	**Sn**	**05 51 11.3**	**+3.4**
NKY	**Niksic**	**2.12**	**315**	⇓*i*Pn	**Pn**	**05 50 42.8**	**+1.4**
NKY				*e*Sn	**Sn**	**05 51 11.3**	**+3.4**
HCY	**Herceg Novi**	**2.19**	**302**	⇑*i*Pn	**Pn**	**05 50 43.5**	**+1.0**
HCY				*e*Sn	**Sn**	**05 51 13.1**	**+3.4**
HCY	**Herceg Novi**	**2.19**	**302**	⇑*i*Pn	**Pn**	**05 50 43.5**	**+1.0**
HCY				*e*Sn	**Sn**	**05 51 13.1**	**+3.4**
NISS		**2.19**	**18**	⇑*i*Pn	**Pn**	**05 50 41.9**	**-0.6**
NISS		**2.19**	**18**	⇑*i*Pn	**Pn**	**05 50 41.9**	**-0.6**
ZAPS	**Zavoj**	**2.29**	**31**	⇑*i*Pn	**Pn**	**05 50 44.1**	**+0.3**
PLE	**Pljevlja**	**2.34**	**330**	⇑*i*Pn	**Pn**	**05 50 45.4**	**+0.9**
PLE				*e*Sn	**Sn**	**05 51 16.6**	**+3.2**
PLE	**Pljevlja**	**2.34**	**330**	⇑*i*Pn	**Pn**	**05 50 45.4**	**+0.9**
PLE				*e*Sn	**Sn**	**05 51 16.6**	**+3.2**

BRY	**Bratogost**	**2.43**	**311**	⇑*i*Pn	**Pn**	**05 50 46.5**	**+0.8**
BRY				*e*Sn	**Sn**	**05 51 18.5**	**+3.1**
BRY	**Bratogost**	**2.43**	**311**	⇑*i*Pn	**Pn**	**05 50 46.5**	**+0.8**
BRY				*e*Sn	**Sn**	**05 51 18.5**	**+3.1**
UPM	**Unac-Piva**	**2.45**	**321**	⇓*i*Pn	**Pn**	**05 50 47.4**	**+1.4**
UPM				*e*Sn	**Sn**	**05 51 19.0**	**+3.0**
UPM	**Unac-Piva**	**2.45**	**321**	⇓*i*Pn	**Pn**	**05 50 47.4**	**+1.4**
UPM				*e*Sn	**Sn**	**05 51 19.0**	**+3.0**
PAIG	**Paliouri**	**2.46**	**124**	P	**Pn**	**05 50 45.6**	**-0.5**
PAIG	**Paliouri**	**2.46**	**124**	P	**Pn**	**05 50 45.6**	**-0.5**
AGG	**Agios Georgios**	**2.50**	**156**	P	**Pn**	**05 50 46.5**	**-0.2**
AGG	**Agios Georgios**	**2.50**	**156**	P	**Pn**	**05 50 46.5**	**-0.2**
LKD2	**Lefkada island**	**2.54**	**186**	P	**Pn**	**05 50 48.0**	**+0.7**
LKD2	**Lefkada island**	**2.54**	**186**	P	**Pn**	**05 50 48.0**	**+0.7**
XOR	**Xorichti**	**2.56**	**139**	P	**Pn**	**05 50 46.9**	**-0.6**
XOR	**Xorichti**	**2.56**	**139**	P	**Pn**	**05 50 46.9**	**-0.6**
GRUS	**Gruza**	**2.58**	**355**	⇑*i*Pn	**Pn**	**05 50 47.1**	**-0.6**
GRUS	**Gruza**	**2.58**	**355**	⇑*i*Pn	**Pn**	**05 50 47.1**	**-0.6**
NEO	**Neokhori**	**2.62**	**139**	P	**Pn**	**05 50 48.6**	**+0.2**
NEO	**Neokhori**	**2.62**	**139**	P	**Pn**	**05 50 48.6**	**+0.2**
KAVA	**Kavala**	**2.66**	**96**	P	**Pn**	**05 50 48.6**	**-0.3**
KAVA	**Kavala**	**2.66**	**96**	P	**Pn**	**05 50 48.6**	**-0.3**
RZN	**Rozhen**	**2.80**	**81**	*i* P	**Pn**	**05 50 51.0**	**+0.2**
RZN	**Rozhen**	**2.80**	**81**	*i* P	**Pn**	**05 50 51.0**	**+0.2**
BBLS	**Lazići**	**2.81**	**335**	⇑*i*Pn	**Pn**	**05 50 50.9**	**0.0**
BBLS	**Lazići**	**2.81**	**335**	⇑*i*Pn	**Pn**	**05 50 50.9**	**0.0**
PLD	**Plovdiv**	**2.87**	**73**	*i* P	**Pn**	**05 50 52.0**	**+0.2**
PLD	**Plovdiv**	**2.87**	**73**	*i* P	**Pn**	**05 50 52.0**	**+0.2**
DIVS	**Divibare**	**2.88**	**345**	⇑*i*Pn	**Pn**	**05 50 51.3**	**-0.6**
DIVS				*e*Sn	**Sn**	**05 51 26.0**	**-0.6**
DIVS	**Divibare**	**2.88**	**345**	⇑*i*Pn	**Pn**	**05 50 51.3**	**-0.6**
DIVS				*e*Sn	**Sn**	**05 51 26.0**	**-0.6**
STON	**Ston**	**2.92**	**303**	*e*

ATAL	Atalanti	0.08	69	P		Pg	06 12 27.4	-0.1
ATAL				S		Sg	06 12 29.2	-0.6
DSF	Desfina	0.40	231	P		Pg	06 12 32.2	-0.2
DSF				S		Sg	06 12 38.4	+0.5
DSF	Desfina	0.40	231	P		Pg	06 12 32.2	-0.2
DSF				S		Sg	06 12 38.4	+0.5
AGG	Agios Georgios	0.59	308	*e*Pn		Pg	06 12 35.4	-0.4
AGG				*e*Sn		Sg	06 12 43.9	+0.2
AGG	Agios Georgios	0.59	308	P		Pg	06 12 36.0	+0.2
AGG				S		Sg	06 12 44.4	+0.7
AGG	Agios Georgios	0.59	308	*e*PN		Pg	06 12 35.4	-0.4
AGG				*e*SN		Sg	06 12 43.9	+0.2
AGG	Agios Georgios	0.59	308	*e*Pn		Pg	06 12 35.4	-0.4
AGG	Agios Georgios	0.59	308	P		Pg	06 12 36.0	+0.2
AGG				S		Sg	06 12 44.4	+0.7
LTK	Loutraki	0.64	177	P		Pg	06 12 36.8	0.0
LTK				S		Sg	06 12 46.8	+1.5
LTK	Loutraki	0.64	177	P		Pg	06 12 36.8	0.0
LTK				S		Sg	06 12 46.8	+1.5
KALE	Kalithea	0.67	246	P		Pg	06 12 37.4	0.0
KALE				S		Sg	06 12 47.7	+1.3
KALE	Kalithea	0.67	246	P		Pg	06 12 37.4	0.0
KALE				S		Sg	06 12 47.7	+1.3
NEO	Neokhori	0.68	20	*e*Pn		Pn	06 12 38.0	-1.1
NEO	Neokhori	0.68	20	*e*PN		Pn	06 12 38.0	-1.1
NEO	Neokhori	0.68	20	*e*Pn		Pn	06 12 38.0	-1.1
XOR	Xorichti	0.73	16	P		Pb	06 12 38.7	+0.2
XOR				S		Sb	06 12 49.7	+1.5
XOR	Xorichti	0.73	16	P		Pb	06 12 38.7	+0.2
XOR				S		Sb	06 12 49.7	+1.5
AOS	Alonnisos	0.90	55	P		Pb	06 12 42.0	+0.6
AOS				S		Sb	06 12 53.9	+0.8
AOS	Alonnisos	0.90	55	P		Pb	06 12 42.0	+0.6
AOS				S		Sb	06 12 53.9	+0.8
EVR	Evrytania	0.91	287	*e*Pb		Pb	06 12 40.0	-1.5
EVR	Evrytania	0.91	287	*e*PB		Pb	06 12 40.0	-1.5
EVR	Evrytania	0.91	287	*e*Pb		Pb	06 12 40.0	-1.5
ATH	Athens Observa	0.93	138	*e*Pn		Pn	06 12 41.2	-1.3
ATH	Athens Observa	0.93	138	*e*PN		Pn	06 12 41.2	-1.3
ATH	Athens Observa	0.93	138	*e*Pn		Pn	06 12 41.2	-1.3
THL	Klokotos Trika	1.15	322	*e*PN		Pn	06 12 45.7	+0.3
THL	Klokotos Trika	1.15	322	*e*Pn		Pn	06 12 45.7	+0.3
RLS	Riolos of Patr	1.30	243	*e*Pn		Pn	06 12 47.2	-0.3
RLS	Riolos of Patr	1.30	243	*e*PN		Pn	06 12 47.2	-0.3
RLS	Riolos of Patr	1.30	243	*e*Pn		Pn	06 12 47.2	-0.3
VLS	Valsamata	1.90	256	*e*Pb		Pb	06 12 55.2	-3.1
VLS	Valsamata	1.90	256	*e*PB		Pb	06 12 55.2	-3.1
VLS	Valsamata	1.90	256	*e*Pb		Pb	06 12 55.2	-3.1

IDC 19 06:14:15.0±3.0, 50°.22S×113°.53W, h0km, mb3.9/5, mb1 4.2/5, mb1mx4.0/13, mbtmp3.8/5, MS4.0/9, Ms1 3.9/9, ms1mx3.9/11, Error ellipse: s-maj=93.9km s-min=40.6km az=29.0, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	Paso Flores	31.21	89	LR	LR	06 30 25.4	
	comp=Z,90nm,19.5s,baz=268,slow=31						
RKT	Rikitea	31.82	320	*e*LR	LR	06 28 30.1	
	870nm,28.0s,baz=152						
RKT				*e*T		06 53 04.1	
	2.8nm,0.3s						
MEH	Mehetia	42.45	307	*e*T		07 06 28.4	
	122nm,0.3s						
PAE	Paea	43.42	305	*e*T		07 07 34.5	
	1.4nm,0.3s						
PPT	Papeete	43.49	305	*e*S	S	06 28 31.8	-18
	79nm,28.2s						
PPT				*e*LQ		06 32 04.3	
	850nm,28.0s						
PPT				*e*LR	LR	06 33 59.3	
	573nm,26.8s,baz=146						
PPT	Papeete	43.49	305	LR	LR	06 35 02.0	
	comp=Z,254nm,18.2s,baz=137,slow=29						
CPUP	Villa Florida	48.79	82	P	P	06 23 02.9	+1.1
	0.8nm,0.6s,baz=228,slow=13,SNR=3.0						
CPUP				LR	LR	06 40 34.9	
	comp=Z,136nm,19.8s,baz=204,slow=32						
LPAZ	La Paz	49.70	64	P	P	06 23 08.9	+0.2
	7.5nm,1.2s,baz=210,slow=8.1,SNR=11						
LPAZ				LR	LR	06 39 02.7	
	comp=Z,141nm,21.6s,baz=262,slow=30						
MAW	Mawson	62.48	178	LR	LR	06 51 42.9	
	comp=Z,177nm,18.1s,baz=280,slow=36						
STKA	Stephens Creek	74.78	238	LR	LR	06 54 20.0	
	comp=Z,135nm,18.1s,baz=205,slow=32						
TXAR	Lajitas Array	79.68	9	P	P	06 26 23.6	-0.4
	0.4nm,0.9s,baz=183,slow=8.3,SNR=4.4						
TXAR				LR	LR	06 54 59.4	
	comp=Z,53nm,21.4s,baz=185,slow=31						
NVAR	Mina Array Bea	88.37	356	P	P	06 27 10.1	+2.0
	0.2nm,0.4s,baz=204,slow=7.9,SNR=3.3						
PDAR	Pinedale Array	92.66	3	P	P	06 27 27.2	-0.9
	0.2nm,0.4s,baz=156,slow=4.7,SNR=2.8						
PDAR				LR	LR	07 03 24.2	
	comp=Z,34nm,18.6s,baz=358,slow=32						
FITZ	Fitzroy Crossi	94.39	235	LR	LR	07 02 09.0	
	comp=Z,129nm,20.5s,baz=330,slow=30						
BRTR	Keskin Array B	154.71	102	PKPab	PKPab	06 34 31.6	-0.8
	1.2nm,0.8s,baz=245,slow=4.2,SNR=6.7						

NIED ***19*** *06:28:00, 26°.40N×126°.20E, h104km, Mw4.2 Best double couple: M0=2.61000×10^15 NP1:φs=220.00000°, δ82.00000°, λ55.00000°. NP2:φs=118.00000°, δ36.00000°, λ165.00000°.*
ISCJB ***19*** *06:28:45.0±0.3, 26°.40N±0°.05×126°.20E±0°.04, h109km±4km, mb4.0/20, Error ellipse: s-maj=9.9km s-min=3.2km az=144.8*
JMA ***19*** *06:28:46.4±0.2, 26°.40N×126°.22E, h107km±2km, M3.9*
JMA Felt I J1.
NEIC ***19*** *06:28:47.0±0.4, 26°.38N×126°.13E, mb4.4/7, Error ellipse: s-maj=9.2km s-min=6.4km az=120.0*
NEIC Recorded [2 JMA] on Okinawa.
IDC ***19*** *06:28:47.1±0.9, 26°.43N×126°.20E, h112km±7km, mb3.8/16, mb1 3.9/19, mb1mx3.8/30, mbtmp3.8/19, Error ellipse: s-maj=23.3km s-min=10.8km az=68.0*

ISC 19 06:28:46.1±0.3, 26°.40N±0°.05×126°.20E±0°.04, h103km±4km, h115km±1.8km: pP-P, n55, σ1§01/73, mb4.0/20, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKE	Kume jima 2	0.53	98	P	Pn	06 29 03.1	+0.8
JKE				*e*S	Sn	06 29 15.5	+0.9
JAGN	Aguni-jima	0.95	79	P	Pn	06 29 06.7	+0.5
JAGN				*e*S	Sn	06 29 21.4	+4.5
NAH1	Naha	1.35	98	P	Pn	06 29 11.3	+0.6
NAH1				*e*S	Sn	06 29 28.9	+2.3
JJT2	Tamagusuku 2	1.42	100	P	Pn	06 29 12.4	+1.0
JJT2				*e*S	Sn	06 29 30.7	+2.6
JIH	Iheya	1.70	68	P	Pn	06 29 15.7	+0.7
JIH				*e*S	Sn	06 29 36.3	+1.2
JMJ	Miyako jima 2	1.78	207	P	Pn	06 29 16.9	+0.9
JMJ				*e*S	Sn	06 29 39.1	+2.1
JOGS	Gusukube	1.79	204	P	Pn	06 29 17.0	+1.0
JOGS				*e*S	Sn	06 29 39.5	+2.4
JOW	Kunigami	1.91	77	P	Pn	06 29 17.6	+0.1
JOW				*e*S	Sn	06 29 40.4	+0.3
JTJ	Tarama	2.21	218	P	Pn	06 29 22.3	+0.8
JTJ				*e*S	Sn	06 29 48.2	+0.7
JIJ	Ishigaki jima	2.75	223	P	Pn	06 29 28.8	+0.2
JIJ				*e*S	Sn	06 29 58.8	-1.8
JTK	Tokunoshima	2.81	60	P	Pn	06 29 29.6	+0.2
JTK				*e*S	Sn	06 30 01.2	-0.9
JKRS	Kuro-shima	2.93	223	P	Pn	06 29 32.6	+1.7
JKRS				*e*S	Sn	06 30 04.5	-0.4
IRIF	Iriomote-Funau	3.04	228	P	Pn	06 29 32.2	-0.2
IRIF				*e*S	Sn	06 30 06.5	-1.1
HATJ	Hateruma jima	3.19	223	P	Pn	06 29 35.5	+1.1
JAM	Amami Oshima	3.63	56	P	Pn	06 29 40.1	-0.2
JAM				*e*S	Sn	06 30 20.5	-1.5
JZK	Kikaishima	3.86	60	P	Pn	06 29 43.2	-0.2
JMZ	Minamidaito 2	4.55	96	P	Pn	06 29 50.1	-2.7
YULB	Yu-li	5.36	237	*e*Pn	Pn	06 30 02.3	-1.5
	23nm,0.6s						
YULB				*e*Sn	Sn	06 30 59.8	-4.4
SSLB	Suanglung	5.42	242	*e*Pn	Pn	06 30 04.8	+0.3
	27nm,0.3s						
SSLB				*e*Sn	Sn	06 31 03.7	-1.9
TWG	Pinlang	5.87	234	*e*Pn	Pn	06 30 10.0	-0.7
TWG				*e*Sn	Sn	06 31 11.6	-5.0
TPUB	Ta-pu	5.92	240	*e*Pn	Pn	06 30 12.2	+0.8
	18nm,0.4s						
TPUB				*e*Sn	Sn	06 31 18.0	+0.1
KSRS	Korea Array	11.12	7	P	Pn	06 31 24.1	+2.3
	0.3nm,0.3s,baz=184,slow=13,SNR=15						
CBIJ	Chichi jima	14.30	84	P	Pn	06 32 04.7	+0.9
	5.5nm,0.3s,baz=280,slow=19,SNR=6.1						
MJAR	Matsushiro Arr	14.38	42	P	Pn	06 32 04.5	-0.3
	0.3nm,0.3s,baz=219,slow=9.4,SNR=2.3						
MJAR	Matsushiro Arr	14.38	42	P	Pn	06 32 04.5	-0.3
BJI	Beijing	15.96	331	P	Pn	06 32 29.9	+5.3
BJI				pmax	pmax		
	comp=Z,18nm,0.9s						
BJI				pmax	pmax		
	comp=Z,96nm,4.1s						
LZH	Lanzhou	21.37	302	*e*P	P	06 33 26.6	+1.4
LZH				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.2						
SONM	Songino Array	26.44	329	P	P	06 34 13.4	+0.2
	comp=Z,0.8nm,0.4s,mb3.5,baz=139,slow=9.0,SNR=4.0						
SONM				pP	pP	06 34 37.4	+1.6
	comp=Z,0.8nm,0.6s,baz=120,slow=10,SNR=2.1						
MK31	Makanchi Array	40.06	312	*e*P	P	06 36 10.7	-0.5
MK31				*e*pP	pP	06 36 37.3	+2.5
MKAR	Makanchi Array	40.06	312	P	P	06 36 11.1	-0.1
	comp=Z,1.9nm,0.6s,mb4.1,baz=94,slow=11,SNR=21						
MKAR				pP	pP	06 36 37.2	+2.4
	comp=Z,0.9nm,0.5s,baz=91,slow=11,SNR=3.3						
MKAR				PcP	PcP	06 38 14.9	+0.9
	comp=Z,0.7nm,0.5s,baz=88,slow=2.9,SNR=5.7						
MKAR				ScP	ScP	06 41 52.8	-1.0
	comp=Z,0.9nm,0.8s,baz=90,slow=5.2,SNR=6.7						
MKAR	Makanchi Array	40.06	312	P	P	06 36 11.1	-0.1
MKAR				pP	pP	06 36 37.2	+2.4
MKAR				PcP	PcP	06 38 14.9	+0.9
MKAR				ScP	ScP	06 41 52.8	-1.0
ZALV	Zalesovo Beam	41.01	323	P	P	06 36 18.4	-0.5
	comp=Z,1.7nm,0.3s,mb4.3,baz=112,slow=8.0,SNR=5.9						
ZALV				pP	pP	06 36 43.1	+0.6
	comp=Z,2.1nm,0.7s,baz=122,slow=7.2,SNR=2.5						
ZALV				ScP	ScP	06 41 56.2	-1.1
	comp=Z,0.7nm,0.6s,baz=132,slow=4.1,SNR=3.4						
KURK	Kurchatov	43.45	317	P	P	06 36 39.7	+1.0
	comp=Z,2.0nm,0.4s,mb4.2,baz=104,slow=8.8,SNR=4.4						
KURK				pP	pP	06 37 05.8	+3.3
	comp=Z,1.7nm,0.5s,baz=107,slow=8.4,SNR=2.9						
KURK	Kurchatov	43.45	317	P	P	06 36 39.7	+1.0
KURK				pP	pP	06 37 05.8	+3.3
FITZ	Fitzroy Crossi	44.24	181	P	P	06 36 45.2	-0.1
	comp=Z,6.6nm,0.7s,mb4.5,baz=14,slow=7.9,SNR=20						
WRA	Warramunga Arr	46.74	169	P	P	06 37 04.7	-0.4
	comp=Z,2.2nm,0.7s,mb4.0,baz=351,slow=8.2,SNR=14						
BVAR	Borovoye Array	48.94	318	P	P	06 37 21.0	-0.6
	comp=Z,0.9nm,0.3s,mb4.2,baz=100,slow=8.7,SNR=6.0						
BVAR				PcP	PcP	06 38 44.8	+0.5
	comp=Z,2.5nm,0.6s,baz=100,slow=4.5,SNR=13						
BVAR				ScP	ScP	06 42 29.0	-1.1
	comp=Z,0.5nm,0.5s,baz=120,slow=5.2,SNR=3.6						
ASAR	Alice Springs	50.33	17	P	P	06 37 33.1	+0.6
	comp=Z,1.2nm,0.6s,mb4.0,baz=357,slow=14,SNR=18						
ABKAR	Akbulak array	55.20	313	*e*P	P	06 38 08.8	+0.7
	comp=Z,2.9nm,0.5s,mb4.6						
ABKAR				*e*pP	pP	06 38 37.4	+4.5
AKTK	Aktyubinsk	56.41	315	P	P	06 38 16.8	0.0
AKTO	Aktyubinsk	56.41	315	P	P	06 38 16.8	0.0
	comp=Z,1.3nm,0.7s,mb4.1,baz=76,slow=11,SNR=7.4						
STKA	Stephens Creek	59.79	165	P	P	06 38 40.7	+0.3
	comp=Z,2.3nm,0.6s,mb4.4,baz=355,slow=9.1,SNR=6.0						
STKA	Stephens Creek	59.79	165	P	P	06 38 40.7	+0.3
BPAW	Bear Paw Mtn.	63.48	29	*e*P	P	06 39 05.0	+0.2
	comp=Z,1.3nm,0.5s,mb4.1						
TRF	Thorofare Moun	63.86	30	*e*P	P	06 39 07.7	+0.4
	comp=Z,1.8nm,0.8s,mb4.0						
MENT	Mentasta	66.88	30	*e*P	P	06 39 27.8	+1.0
ARCES	ARCESS Array B	69.18	338	P	P	06 39 40.4	-0.7
	comp=Z,2.0nm,1.0s,mb3.9,baz=68,slow=8.0,SNR=4.7						
ARCES	ARCESS Array B	69.18	338	P	P	06 39 40.4	-0.7
FINES	FINESS Array B	71.81	330	P	P	06 39 56.7	-0.5
	comp=Z,0.8nm,0.4s,mb3.9,baz=83,slow=5.4,SNR=5.6						
FINES	FINESS Array B	71.81	330	P	P	06 39 56.7	-0.5
AKASG	Malin Array Be	74.21	319	P	P	06 40 10.4	-1.1
	comp=Z,0.3nm,0.3s,mb3.5,baz=58,slow=7.1,SNR=4.5						
BR131	Keskin Array S	75.48	307	*e*P	P	06 40 19.0	-0.2
	comp=Z,1.0nm,0.6s,mb3.7						
BRTR	Keskin Array B	75.48	307	P	P	06 40 19.5	+0.3
	comp=Z,1.8nm,0.7s,mb3.9,baz=95,slow=5.4,SNR=9.7						
NOA	NORSAR Array B	78.35	333	P	P	06 40 34.6	-0.2
	comp=Z,0.5nm,0.6s,mb3.5,baz=52,slow=5.0,SNR=3.4						
YKA	Yellowknife Ar	79.13	24	P	P	06 40 38.8	-0.3
	comp=Z,2.2nm,0.7s,mb4.1,baz=304,slow=5.5,SNR=19						

IDC 19 06:37:35.3±3.2, 9°.83N×125°.97E, h0km, mb3.7/3, mb1 3.7/3, mb1mx3.5/21, mbtmp3.7/3, MS3.3/1, Ms1 3.3/1, ms1mx2.2/21, Error ellipse: s-maj=341.7km s-min=29.6km az=68.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBP	Tagbilaran	2.08	266	*e*P	Sn	06 38 34.5	-3.5
ASAR	Alice Springs	34.19	167	P	P	06 44 22.6	0.0
	0.1nm,0.5s,baz=352,slow=7.0,SNR=3.3						
MKAR	Makanchi Array	52.19	323	P	P	06 46 47.8	-0.1
	0.4nm,0.4s,baz=115,slow=8.4,SNR=3.7						
MKAR				LR	LR	07 10 27.7	
	comp=Z,27nm,19.3s,baz=356,slow=38						
FINES	FINESS Array B	86.13	332	P	P	06 50 18.1	+0.1
	1.0nm,0.5s,baz=79,slow=7.2,SNR=7.2						

NIED ***19*** *06:42:00, 46°.60N×153°.50E, h17km, Mw3.6 Best double couple: M0=2.90000×10^14 NP1:φs=233.00000°, δ65.00000°, λ149.00000°. NP2:φs=337.00000°, δ62.00000°, λ28.00000°.*
JMA ***19*** *06:42:25.4±0.7, 46°.65N×153°.55E, h30km, M4.1*
ISCJB ***19*** *06:42:30.6±1.7, 46°.3N±0°.2×153°.1E±0°.2, h48km±14km, mb3.9/6, Error ellipse: s-maj=40.4km s-min=9.1km az=144.1*
MOS ***19*** *06:42:31.0±1.2, 46°.54N×153°.05E, h45km, mb4.3/5, Error ellipse: s-maj=30.5km s-min=17.7km az=76.8*
IDC ***19*** *06:42:32.1±4.9, 46°.51N×153°.19E, h38km±37km, mb3.6/6, mb1 3.7/8, mb1mx3.4/27, mbtmp3.7/8, ML3.7/2, Error ellipse: s-maj=57.9km s-min=28.1km az=164.0*

ISC 19 06:42:32.1±1.5, 46°.3N±0°.2×153°.2E±0°.2, h45km±11km, n26, σ1§21/29, mb3.9/6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	4.79	23	*e*PN	Pn	06 43 41.5	-0.2
NEM2	Nemuro 2	6.05	244	P	Pn	06 43 57.4	-1.6
NEM2				*e*S	Sn	06 45 05.1	-1.8
JRA	Rausu	6.17	250	P	Pn	06 44 02.0	+1.3
JNK	Nakash	6.59	249	P	Pn	06 44 06.8	+0.4
JNK				*e*S	Sn	06 45 20.9	+0.7
JTKR	Abashiri--Toko	6.96	254	P	Pn	06 44 12.8	+1.3
JAR	Ashorobuto	7.34	249	P	Pn	06 44 17.1	+0.5
JAR				*e*S	Sn	06 45 39.5	+1.0
PETK	Petropavlovsk-	7.41	22	Pn	Pn	06 44 14.8	-2.8
	0.7nm,0.3s,baz=200,slow=12,SNR=5.7						
PETK	Petropavlovsk-	7.41	22	PN	Pn	06 44 14.8	-2.8
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
JOB	Onbets	7.49	246	*e*S	Sn	06 45 40.0	-2.2
JKK2	Kamakawa 2	7.77	255	P	Pn	06 44 24.4	+1.8
ASAJ	Asahikawa	7.79	257	Pn	Pn	06 44 23.9	+1.1
	comp=Z,1.3nm,0.3s,baz=88,slow=20,SNR=5.2						
ASAJ	Asahikawa	7.79	257	PN	Pn	06 44 23.9	+1.1
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
JEM	Erimo	8.38	243	*e*S	Sn	06 46 01.0	-3.2
JNBK	Urakawa-nobuka	8.49	245	*e*S	Sn	06 46 02.9	-4.0
JANG	Nango	10.36	239	*e*S	Sn	06 46 44.5	-8.1
MKAR	Makanchi Array	47.19	298	P	P	06 50 59.9	0.0
	comp=Z,0.6nm,0.4s,mb3.8,baz=62,slow=8.9,SNR=6.3						
MKAR	Makanchi Array	47.19	298	P	P	06 50 59.9	-0.1
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KURK	Kurchatov	47.65	304	P	P	06 51 03.5	0.0
	comp=Z,1.2nm,0.7s,mb4.0,baz=71,slow=8.6,SNR=4.1						
KURK	Kurchatov	47.65	304	P	P	06 51 03.5	0.0
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
FINES	FINESS Array B	64.46	335	P	P	06 53 03.0	-0.3
	comp=Z,1.1nm,0.5s,mb4.1,baz=27,slow=6.4,SNR=4.0						
FINES	FINESS Array B	64.46	335	P	P	06 53 03.1	-0.2
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NOA	NORSAR Array B	68.66	341	P	P	06 53 30.3	+0.1
	comp=Z,1.1nm,0.6s,mb3.9,baz=29,slow=6.3,SNR=3.3						
NOA	NORSAR Array B	68.66	341	P	P	06 53 30.3	+0.1
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	Malin Array Be	71.94	326	P	P	06 53 50.4	+0.1
	comp=Z,1.7nm,0.5s,mb4.2,baz=33,slow=5.9,SNR=5.8						
AKASG	Malin Array Be	71.94	326	P	P	06 53 50.4	0.0
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
TXAR	Lajitas Array	77.67	60	P	P	06 54 24.2	+0.3
	comp=Z,0.2nm,0.5s,mb3.3,baz=313,slow=4.4,SNR=4.5						
TXAR				pP	pP	06 54 35.6	-1.6
	comp=Z,0.4nm,0.6s,baz=298,slow=3.6,SNR=6.4						

TAP ***19*** *06:53:34.8, 23°.17N×120°.50E, h14km, ML3.6, B*
NEIC ***19*** *06:53:36.7±1.7, 23°.23N×120°.64E, h12km±7km, Error ellipse: s-maj=20.8km s-min=9.8km az=67.0*
ISCJB ***19*** *06:53:36.1±0.3, 23°.18N±0°.01×120°.51E±0°.02, h11km±1km, Error ellipse: s-maj=2.8km s-min=2.0km az=179.9*

ISC 19 06:53:36.2±0.2, 23°.18N±0°.01×120°.50E±0°.02, h14km±1km, n54, σ0§97/97, 9C-5D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHN1	Nanshi	0.02	74	⇓*i*P	Pg	06 53 37.8	-0.8
	baz=56						
CHN1				S	Sg	06 53 39.9	-0.5
	baz=56						
TWK	Hsinying	0.09	351	⇓*i*P	Pg	06 53 38.6	-0.6
	baz=353						
TWK				S	Sg	06 53 41.2	-0.1
	baz=353						
SGST	Jiashian	0.12	142	⇓*i*P	Pg	06 53 39.1	-0.5
	baz=140						
SGST				S	Sg	06 53 41.8	-0.1
	baz=140						
WTP	Ta-pu	0.12	57	⇓*i*P	Pg	06 53 39.0	-0.6
	baz=53						
CHN3	Shinhua	0.16	231	*e*S	Sg	06 53 44.7	+1.7
	baz=241						
TPUB	Ta-pu	0.17	44	*e*Pg	Pg	06 53 39.3	-0.9
TPUB				*e*Sg	Sg	06 53 42.7	-0.4
CHN4	Tsaushan	0.19	26	⇓*i*P	Pg	06 53 40.1	-0.5
	baz=25						
CHN4				*i* S	Sg	06 53 44.1	+0.4
	baz=25						
STYT	Tauyuan	0.23	94	⇑*i*P	Pg	06 53 40.8	-0.4
	baz=86						
STYT				S	Sg	06 53 45.1	+0.3
	baz=86						
SCLT	Jiali	0.28	269	*i* P	Pg	06 53 42.1	0.0
	baz=281						
SCLT				S	Sg	06 53 48.1	+1.9
	baz=281						
TAI1	Yung-k'ang	0.29	241	*e*P	Pg	06 53 42.0	-0.2
	baz=243						
CHN8	Yiju	0.32	302	P	Pg	06 53 42.3	-0.4
	baz=304						
CHN8				S	Sg	06 53 48.9	+1.8
	baz=304						
CHY	Chiayi	0.33	347	*i* P	Pg	06 53 42.8	-0.1
	baz=348						
CHY				*e*S	Sg	06 53 48.5	+1.1
	baz=348						
ALS	Alishan	0.43	40	P	Pg	06 53 44.3	-0.5
	baz=48						
ALS				S	Sg	06 53 51.6	+1.0
	baz=48						
CHN5	Tsauling	0.45	21	⇑*i*P	Pg	06 53 44.6	-0.4
	baz=21						
CHN5				*e*S	Sg	06 53 52.3	+1.2
	baz=21						
SSD	Sandimen	0.45	165	⇑*i*P	Pg	06 53 44.8	-0.2
	baz=154						
SSD				*e*S	Sg	06 53 51.8	+0.7
	baz=154						
ELDTW	Lidau	0.47	89	⇑*i*P	Pg	06 53 45.0	-0.5
	baz=86						
WGK	Gukeng	0.51	6	*i* P	Pg	06 53 46.1	-0.1
	baz=7.0						
WGK				S	Sg	06 53 55.0	+2.0
	baz=7.0						
YUS	Yu-Shan	0.52	53	⇑*i*P	Pg	06 53 46.2	-0.2
	baz=52						
YUS				S	Sg	06 53 54.3	+1.0
	baz=52						
TWG	Pinlang	0.63	124	*e*Pg	Pg	06 53 47.8	-0.7
TWG				*e*Sg	Sg	06 53 57.8	+0.8
TWG	Pinlang	0.63	124	⇑*i*P	Pg	06 53 48.1	-0.4
	baz=111						
TWG				*e*S	Sg	06 53 57.4	+0.4
	baz=111						
WTCT	Ta-ch'eng	0.71	343	P	Pg	06 53 49.0	-1.0
	baz=355						
WTCT				S	Sg	06 54 00.1	+0.6
	baz=355						
ECL	Taimali	0.71	144	P	Pg	06 53 49.2	-0.9
	baz=147						
ECL				*e*S	Sg	06 54 00.6	+1.1
	baz=147						
WNT	Mingjian	0.72	13	*e*P	Pg	06 53 49.6	-0.6
	baz=14						
WNT				S	Sg	06 54 00.7	+1.1
	baz=14						
TTN	Taitung	0.73	125	P	Pg	06 53 50.7	+0.4
	baz=114						
TTN				*e*S	Sg

baz=12
TWT Tachien 1.23 30 *e*P Pn **06 53 57.9 -1.1**
baz=29
TWT *e*S Sb **06 54 14.2 -0.8**
baz=29
NSY Sanyi 1.25 11 *e*P Pn **06 53 58.6 -0.6**
baz=12
NSY *e*S Sb **06 54 17.0 +1.4**
baz=12
TWK1 Hengchun 1.26 167 *e*P Pn **06 53 59.4 0.0**
baz=165
TWK1 *e*S Sb **06 54 17.2 +1.4**
baz=165
TSEB Hengchuen, Pin 1.32 164 *e*P Pn **06 54 01.1 +0.9**
baz=162
TWD Chiawan 1.34 48 P Pn **06 54 00.7 +0.2**
baz=56
TWD S Sn **06 54 18.1 -0.1**
baz=56
NACB Ninganchiao 1.41 45 *e*Pn Pn **06 54 00.8 -0.6**
NACB *e*Sn Sn **06 54 21.0 +1.3**
NNS Nan Shan 1.49 32 *e*P Pn **06 54 02.9 +0.4**
baz=32
LAY Lan-yu 1.49 139 *e*P Pn **06 54 01.3 -1.2**
baz=135
NSTT Nanjuang 1.52 17 *e*P Pn **06 54 01.5 -1.4**
baz=17
NSTT *e*S Sn **06 54 22.7 +0.3**
baz=17
NSK Sanguang 1.68 28 *e*P Pn **06 54 05.1 -0.1**
baz=10.0
NSK *e*S Sn **06 54 27.6 +1.0**
baz=10.0
YHNB Yeheng 1.69 28 *e*Pn Pn **06 54 04.3 -0.8**
YHNB *e*Sn Sn **06 54 27.6 +1.0**
ENTT Nioudou 1.75 34 *e*P Pn **06 54 06.8 +0.7**
baz=34
ENTT *e*S Sn **06 54 30.3 +2.1**
baz=34
TWE Neicheng 1.87 35 *e*P Pn **06 54 09.7 +2.0**
baz=17
QZH Quanzhou 2.48 316 *e*Pn Pn **06 54 15.3 -0.8**
QZH Sn Sn **06 54 41.9 -4.2**
QZH smax
comp=N,200nm,1.0s
QZH smax
comp=E,120nm,0.5s

BJI ***19*** *07:25:11.9, 4.48S×28.70E, h10km, mB5.1/7, mb4.9/15, Ms4.7/5, Ms7 4.5/6*
MOS ***19*** *07:25:14.9±0.8, 4.59S×29.38E, h10km, mb4.9/39, Error ellipse: s-maj=15.7km s-min=5.4km az=98.0*
SZGRF ***19*** *07:25:15.1, 5.25S×29.07E, h33km, mb4.7, Lake Tanganyika region*
IDC ***19*** *07:25:15.7±0.6, 4.58S×29.47E, h0km, mb4.4/17, mb1 4.5/19, mb1mx4.4/26, mbtmp4.4/19, MS3.9/15, Ms1 3.9/15, ms1mx3.6/34, Error ellipse: s-maj=19.6km s-min=14.4km az=100.0*
ISCJB ***19*** *07:25:15.2±0.2, 4.63S±0.04×29.41E±0.06, h13km, mb4.7/80, MS4.0/20, Error ellipse: s-maj=9.0km s-min=5.1km az=2.8*
NEIC ***19*** *07:25:17.0±0.3, 4.62S×29.50E, h10km, mb4.7/35, Error ellipse: s-maj=8.2km s-min=5.4km az=91.0*
ISC 19 07:25:16.3±3.9, **4.67S**±0.04×**29.48E**±0.06, **h7**km±24km, **h13**km±1.2km; **pP-P, n180,** e0s**83**/173, **mb4.7**/80, **MS4.0**/20, **7C-2D, Lake Tanganyika region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo**	**8.52**	**66**		Pn		**Pn**	**07 27 19.8**	**-0.4**
108nm,0.3s,baz=90,slow=16,SNR=9.9									
KMBO					Sn		**Sn**	**07 28 49.4**	**-7.3**
40nm,0.3s,baz=162,slow=24,SNR=8.5									
KMBO					Lg			07 29 38.4	
73nm,0.3s,baz=340,slow=22,SNR=16									
KMBO	**Kilima Mbogo**	**8.52**	**66**	*ce*			**Pn**	**07 27 18.5**	**-1.7**
KMBO					pmax		pmax		
comp=Z,379nm,0.3s									
KMBO	**Kilima Mbogo**	**8.52**	**66**	*e*	Pn		**Pn**	**07 27 18.7**	**-1.5**
comp=Z,55nm,0.6s									
KMBO				*e*	Sn		**Sn**	**07 28 47.5**	**-9.1**
LSZ	**Lusaka**	**10.61**	**187**	*e*	P		**Pn**	**07 27 49.6**	**+0.7**
LSZ				*e*				07 29 46.9	
LSZ					pmax		pmax		
comp=Z,27nm,0.5s									
LSZ	**Lusaka**	**10.61**	**187**	*e*	Pn		**Pn**	**07 27 49.6**	**+0.7**
comp=Z,27nm,0.5s									
LSZ				*e*	Sn		**Sn**	**07 29 46.9**	**-1.1**
MSNA	**Messina**	**17.57**	**178**	*e*	P		**Pn**	**07 29 29.0**	**+7.1**
MSNA					AMb		AMB	07 29 39.5	
comp=Z,35nm,1.4s									
TSUM	**Tsumeb**	**18.53**	**218**		P		**Pn**	**07 29 33.4**	**-0.2**
comp=Z,0.5nm,0.3s,baz=10,slow=12,SNR=9.4									
TSUM					S		**Sn**	**07 32 50.2**	**-11**
comp=Z,0.6nm,0.3s,baz=106,slow=19,SNR=3.6									
TSUM					Lg			07 34 59.3	
comp=Z,0.8nm,0.3s,baz=187,slow=19,SNR=3.9									
TSUM					LR		LR	07 37 06.6	
comp=Z,239nm,18.4s,baz=334,slow=38									
TSUM	**Tsumeb**	**18.53**	**218**	*e*	P		**Pn**	**07 29 33.8**	**+0.1**
comp=Z,21nm,0.7s									
TSUM				*e*	Sn		**Sn**	**07 32 55.8**	**-5.3**
MOPA	**Mopani**	**18.82**	**175**	*e*	P		**Pn**	**07 29 46.9**	**+10**
MOPA					AMb		AMB	07 29 52.0	
comp=Z,36nm,1.9s									
LBTB	**Lobatse**	**20.57**	**190**		P		**P**	**07 29 57.4**	**+1.7**
comp=Z,13nm,0.9s,baz=3.1,slow=12,SNR=8.0									
LBTB					LR		LR	07 38 31.1	
comp=Z,209nm,20.4s,MS3.5,baz=33,slow=38									
LBTB	**Lobatse**	**20.57**	**190**	*e*	P		**P**	**07 29 56.9**	**+1.2**
LBTB					pmax		pmax		
comp=Z,27nm,1.1s									
LBTB	**Lobatse**	**20.57**	**190**	*e*	P		**P**	**07 29 56.9**	**+1.2**
comp=Z,27nm,1.1s									
KSR	**Koster**	**21.20**	**186**	*e*	P		**P**	**07 30 10.4**	**+7.8**
KSR					AMb		AMB	07 30 21.9	
comp=Z,59nm,1.7s,mb4.6									
ERPM	**east rand prop**	**21.58**	**183**	*e*	P		**P**	**07 30 07.3**	**+0.7**
ERPM					AMb		AMB	07 30 20.5	
comp=Z,53nm,1.8s,mb4.7									
PRYS	**Parys**	**22.22**	**185**	*e*	P		**P**	**07 30 11.9**	**-1.6**
PRYS					AMb		AMB	07 30 35.0	
comp=Z,52nm,1.8s,mb4.7									
POGA	**Pongola**	**22.66**	**175**	*e*	P		**P**	**07 30 24.3**	**+6.1**
POGA					AMb		AMB	07 30 45.2	
comp=Z,84nm,1.9s,mb4.8									
SWZ	**Schweizer**	**22.73**	**190**	*e*	P		**P**	**07 30 17.3**	**-1.7**
SWZ					AMb		AMB	07 30 34.8	
comp=Z,42nm,1.3s,mb4.7									
SEK	**Senekal**	**23.59**	**184**	*e*	P		**P**	**07 30 26.5**	**-1.4**
SEK					AMb		AMB	07 31 03.4	
comp=Z,55nm,1.5s,mb4.8									
BOSA	**Boshof**	**24.14**	**189**		P		**P**	**07 30 33.4**	**+0.4**
comp=Z,14nm,0.7s,mb4.5,baz=9.6,slow=9.6,SNR=24									
BOSA					LR		LR	07 39 33.9	
comp=Z,196nm,18.5s,MS3.6,baz=198,slow=35									
BOSA	**Boshof**	**24.14**	**189**	*e*	P		**P**	**07 30 33.7**	**+0.7**
BOSA					pmax		pmax		
comp=Z,14nm,0.8s,mb4.4									
BOSA	**Boshof**	**24.14**	**189**	*e*	P		**P**	**07 30 33.7**	**+0.7**
comp=Z,14nm,0.8s,mb4.4									
HVD	**Gariep Dam**	**26.07**	**188**	*e*	P		**P**	**07 30 52.1**	**+1.6**
HVD					AMb		AMB	07 31 20.6	
comp=Z,42nm,1.4s,mb4.8									
SUR	**Sutherland**	**28.73**	**195**		LR		LR	07 43 14.3	
comp=Z,456nm,18.1s,MS4.1,baz=50,slow=37									
TORD	**Torodi Ar. Bea**	**32.79**	**303**		P		**P**	**07 31 50.3**	**-0.2**
comp=Z,8.1nm,0.8s,mb4.7,baz=115,slow=8.6,SNR=42									
TORD					LR		LR	07 45 49.6	
comp=Z,776nm,18.2s,MS4.5,baz=115,slow=38									
TAM	**Tamanrasset**	**35.96**	**320**	*e*	P		**P**	**07 32 18.2**	**+0.3**
TAM					pmax		pmax		
comp=Z,5.0nm,1.3s,mb4.3									
TAM	**Tamanrasset**	**35.96**	**320**	*e*	P		**P**	**07 32 18.2**	**+0.4**
comp=Z,4.8nm,1.3s,mb4.3									
DBIC	**Dimbokro**	**36.08**	**288**		P		**P**	**07 32 18.2**	**-0.8**
comp=Z,2.4nm,0.7s,mb4.2,baz=343,slow=5.9,SNR=4.4									
DBIC					LR		LR	07 47 02.7	
comp=Z,201nm,19.9s,MS3.9,baz=99,slow=36									
DBIC	**Dimbokro**	**36.08**	**288**	*e*	P		**P**	**07 32 19.2**	**+0.2**
DBIC					pmax		pmax		
comp=Z,5.0nm,0.5s									
DBIC	**Dimbokro**	**36.08**	**288**	*e*	P		**P**	**07 32 19.2**	**+0.1**
comp=Z,4.8nm,0.5s,mb4.7									
BRTR	**Keskin Array B**	**44.34**	**5**		P		**P**	**07 33 27.9**	**+0.7**
comp=Z,6.4nm,0.7s,mb4.4,baz=185,slow=8.7,SNR=40									
BRTR	**Keskin Array B**	**44.34**	**5**	*ce*	P		**P**	**07 33 27.8**	**+0.7**
BRTR					pmax		pmax		
comp=Z,6.0nm,0.7s									
BR131	**Keskin Array S**	**44.34**	**5**	*e*	P		**P**	**07 33 27.8**	**+0.7**
comp=Z,4.3nm,0.7s,mb4.3									
KEST	**Kesra**	**44.41**	**336**		LR		LR	07 54 13.2	
comp=Z,65nm,18.0s,MS3.6,baz=224,slow=39									
ZEI	**Tsey**	**49.00**	**14**	*e*	P		**P**	**07 34 04.2**	**+0.6**
ZEI					pmax		pmax		
comp=Z,6.0nm,0.5s,mb4.9									
MDT	**Midelt**	**49.36**	**322**		P		**P**	**07 34 08.2**	**+1.7**
comp=Z,1.4nm,0.6s,mb4.2,baz=128,slow=8.4,SNR=5.6									
PGF	**Pioggiola**	**50.55**	**340**	*e*	P		**P**	**07 34 13.5**	**-1.9**
GCIS	**Gornji Cirnik**	**51.81**	**348**	*i*	P		**P**	**07 34 25.7**	**+0.9**
CEY	**Cerknica**	**51.95**	**347**	*i*	P		**P**	**07 34 26.4**	**+0.5**
JAVS	**Javornik**	**52.18**	**346**	*i*	P		**P**	**07 34 27.9**	**+0.4**
SBF	**Sospel**	**52.24**	**340**	*e*	P		**P**	**07 34 27.3**	**-0.8**
MBDF	**Montbardon**	**53.23**	**340**	*e*	P		**P**	**07 34 35.3**	**0.0**
KECS	**Kecovo**	**53.52**	**353**	*e*	P		**P**	**07 34 37.9**	**+0.5**
KECS					pmax		pmax		
comp=Z,4.0nm,1.2s,mb4.2									
KECS	**Kecovo**	**53.52**	**353**	*e*	P		**P**	**07 34 37.9**	**+0.5**
comp=Z,3.7nm,1.2s,mb4.2									
LASF	**Ste Croix**	**53.73**	**337**	*e*	P		**P**	**07 34 40.2**	**+1.2**
CONA	**Conrad Observa**	**53.73**	**349**	⇑ *i*	P		**P**	**07 34 39.9**	**+0.9**
comp=Z,4.9nm,0.9s,mb4.5									
VYHS	**Vyhne**	**53.76**	**351**	*e*	P		**P**	**07 34 39.5**	**+0.3**
VYHS					pmax		pmax		
comp=Z,3.0nm,0.8s,mb4.3									
VYHS	**Vyhne**	**53.76**	**351**	*e*	P		**P**	**07 34 39.5**	**+0.3**
comp=Z,3.0nm,0.8s,mb4.3									
CRVS	**Cervenica-Dubn**	**53.81**	**353**	*e*	P		**P**	**07 34 40.6**	**+1.1**
CRVS					pmax		pmax		
comp=Z,5.0nm,1.1s,mb4.4									
CRVS	**Cervenica-Dubn**	**53.81**	**353**	*e*	P		**P**	**07 34 40.6**	**+1.1**
comp=Z,4.5nm,1.1s,mb4.3									
ESDC	**Sonseca Array**	**53.81**	**328**		P		**P**	**07 34 40.3**	**+0.6**
comp=Z,1.1nm,0.5s,mb4.0,baz=139,slow=6.2,SNR=7.4									
ESDC					LR		LR	08 00 45.0	
comp=Z,83nm,19.2s,MS3.8,baz=130,slow=40									
KOLL	**Kolacno**	**53.91**	**351**	*e*	P		**P**	**07 34 40.7**	**+0.4**
LPG	**La Plagne**	**53.91**	**340**	*e*	P		**P**	**07 34 39.5**	**-0.8**
MOA	**Molln**	**53.98**	**347**	⇓ *i*	P		**P**	**07 34 41.1**	**+0.2**
comp=Z,7.1nm,0.8s,mb4.7									
EPF	**Esparros**	**54.32**	**334**	*e*	P		**P**	**07 34 43.4**	**0.0**
comp=Z,28nm,1.0s,mb4.8									
EPF	**Esparros**	**54.32**	**334**	*e*	P		**P**	**07 34 43.4**	**0.0**
EPF					pmax		pmax		
comp=Z,14nm,1.0s,mb4.8									
EPF	**Esparros**	**54.32**	**334**	*e*	P		**P**	**07 34 43.4**	**0.0**
comp=Z,14nm,1.0s,mb4.8									
STHS	**Stebnicka Huta**	**54.34**	**353**	*e*	P		**P**	**07 34 45.5**	**+2.1**
STHS					pmax		pmax		
comp=Z,1.0nm,0.7s,mb3.9									
STHS	**Stebnicka Huta**	**54.34**	**353**	*e*	P		**P**	**07 34 45.5**	**+2.1**
comp=Z,1.4nm,0.7s,mb4.0									
DAVA	**Damuels**	**54.55**	**344**	⇑ *i*	P		**P**	**07 34 45.0**	**0.0**
comp=Z,8.4nm,0.8s,mb4.8									
ETSF	**Etsaut**	**54.61**	**333**	*e*	P		**P**	**07 34 45.6**	**+0.1**
comp=Z,25nm,1.1s,mb4.9									
ETSF	**Etsaut**	**54.61**	**333**	*e*	P		**P**	**07 34 45.6**	**+0.1**
ETSF					pmax		pmax		
comp=Z,12nm,1.1s,mb4.8									
ETSF	**Etsaut**	**54.61**	**333**	*e*	P		**P**	**07 34 45.6**	**+0.1**
comp=Z,12nm,1.1s,mb4.8									
GEC2	**GERESS Array S**	**55.05**	**347**	*e*	P		**P**	**07 34 48.6**	**0.0**
comp=Z,5.0nm,0.7s,mb4.7									
GEC2	**GERESS Array S**	**55.05**	**347**	*e*	P		**P**	**07 34 48.6**	**0.0**
GEC2					pmax		pmax		
comp=Z,5.0nm,0.7s,mb4.7									
SJPF	**Ste Jean**	**55.08**	**333**	*e*	P		**P**	**07 34 49.1**	**+0.2**
comp=Z,13nm,0.9s,mb4.7									
SJPF	**Ste Jean**	**55.08**	**333**	*e*	P		**P**	**07 34 49.1**	**+0.2**
SJPF					pmax		pmax		
comp=Z,6.0nm,0.9s,mb4.6									
SJPF	**Ste Jean**	**55.08**	**333**	*e*	P		**P**	**07 34 49.1**	**+0.2**
comp=Z,6.3nm,0.9s,mb4.7									
CAF	**Calviac**	**55.14**	**337**	*e*	P		**P**	**07 34 49.4**	**+0.1**
comp=Z,13nm,0.7s,mb4.8									
CAF	**Calviac**	**55.14**	**337**	*e*	P		**P**	**07 34 49.4**	**+0.1**
CAF					pmax		pmax		
comp=Z,7.0nm,0.7s,mb4.8									
CAF	**Calviac**	**55.14**	**337**	*e*	P		**P**	**07 34 49.4**	**+0.1**
comp=Z,6.7nm,0.7s,mb4.8									
KIEV	**Kiev**	**55.15**	**360**	*e*	P		**P**	**07 34 48.6**	**-0.6**
KIEV					pmax		pmax		
comp=Z,2.0nm,0.5s,mb4.4									
KIEV	**Kiev**	**55.15**	**360**	*e*	P		**P**	**07 34 48.6**	**-0.6**
comp=Z,2.0nm,0.5s,mb4.4									
AKASG	**Malin Array Be**	**55.16**	**360**		P		**P**	**07 34 48.7**	**-0.6**
comp=Z,2.1nm,0.5s,mb4.4,baz=186,slow=7.2,SNR=12									
KHC	**Kasperske Hory**	**55.35**	**347**	*e*	P		**P**	**07 34 50.4**	**-0.3**
comp=Z,4.1nm,0.6s,mb4.6									
KHC	**Kasperske Hory**	**55.35**	**347**	*e*	P		**P**	**07 34 50.5**	**-0.2**
WET	**Wettzell**	**55.52**	**347**	*e*	P		**P**	**07 34 51.7**	**-0.2**
comp=Z,8.0nm,1.4s,mb4.6									
WET	**Wettzell**	**55.52**	**347**	*e*	P		**P**	**07 34 51.7**	**-0.2**
WET					pmax		pmax		
comp=Z,8.0nm,1.4s,mb4.6									
RJF	**Les Rejaudoux**	**55.67**	**336**	*e*	P		**P**	**07 34 53.0**	**-0.1**
RJF				*e*	MLR		MLR		
comp=Z,90nm,20.0s,MS3.5									
RJF	**Les Rejaudoux**	**55.67**	**336**	*e*	P		**P**	**07 34 53.0**	**-0.1**
RJF					LR		LR		
comp=Z,90nm,20.0s,MS3.9									
LFF	**La Frestale**	**55.69**	**336**	*e*	P		**P**	**07 34 53.3**	**+0.1**
comp=Z,27nm,0.6s,mb5.2									
LFF	**La Frestale**	**55.69**	**336**	*e*	P		**P**	**07 34 53.3**	**+0.1**
LFF					pmax		pmax		
comp=Z,14nm,0.6s,mb5.2									
LFF	**La Frestale**	**55.69**	**336**	*e*	P		**P**	**07 34 53.3**	**+0.1**
comp=Z,14nm,0.6s,mb5.2									
SMF	**Signal de Mont**	**55.92**	**339**	*e*	P		**P**	**07 34 54.3**	**-0.5**
comp=Z,43nm,1.2s,mb5.0									
SMF	**Signal de Mont**	**55.92**	**339**	*e*	P		**P**	**07 34 54.3**	**-0.5**
SMF					pmax		pmax		
comp=Z,22nm,1.2s,mb5.1									
SMF	**Signal de Mont**	**55.92**	**339**	*e*	P		**P**	**07 34 54.3**	**-0.5**
comp=Z,22nm,1.2s,mb5.0									
HINF	**Hinteralfeld**	**55.93**	**342**	*e*	P		**P**	**07 34 54.2**	**-0.7**
comp=Z,12nm,0.8s,mb4.7									
HINF	**Hinteralfeld**	**55.93**	**342**	*e*	P		**P**	**07 34 54.2**	**-0.7**
HINF					pmax		pmax		
comp=Z,6.0nm,0.8s,mb4.7									
HINF	**Hinteralfeld**	**55.93**	**342**	*e*	P		**P**	**07 34 54.2**	**-0.7**
comp=Z,6.1nm,0.8s,mb4.7									
BFO	**Black Forest**	**55.94**	**343**	*e*	P		**P**	**07 34 54.6**	**-0.4**
comp=Z,10.0nm,1.2s,mb4.7									
BFO	**Black Forest**	**55.94**	**343**	*ce*	P		**P**	**07 34 55.8**	**+0.8**
VORD	**Divnogorie**	**56.06**	**7**	*e*	P		**P**	**07 34 55.2**	**-0.6**
VORD					pmax		pmax		
comp=N,10.0nm,1.0s									
VORD					pmax		pmax		
comp=E,10.0nm,1.0s									
VORD					pmax		pmax		
comp=Z,9.0nm,1.0s,mb4.8									
AVF	**Avril sur Loir**	**56.22**	**339**	*e*	P		**P**	**07 34 56.5**	**-0.5**
TCF	**Toulx Ste Croi**	**56.22**	**338**	*e*	P		**P**	**07 34 57.3**	**+0.3**
comp=Z,28nm,1.0s,mb4.9									
TCF	**Toulx Ste Croi**	**56.22**	**338**	*e*	P		**P**	**07 34 57.3**	**+0.3**
TCF					pmax		pmax		
comp=Z,14nm,1.0s,mb5.0									
TCF	**Toulx Ste Croi**	**56.22**	**338**	*e*	P		**P**	**07 34 57.3**	**+0.3**
comp=Z,14nm,1.0s,mb5.0									
VSR	**Storozhevoye**	**56.29**	**7**	*e*	P		**P**	**07 34 57.0**	**-0.4**
VSR					pmax		pmax		
comp=E,8.0nm,0.6s									
VSR					pmax		pmax		
comp=Z,10.0nm,0.6s,mb5.0									
VSR					pmax		pmax		
comp=N,5.0nm,0.3s									
CDF	**Champ du Feu**	**56.33**	**342**	*e*	P		**P**	**07 34 56.9**	**-0.8**
comp=N,24nm,1.1s,mb4.9									
CDF	**Champ du Feu**	**56.33**	**342**	*e*	P		**P**	**07 34 56.9**	**-0.8**
CDF					pmax		pmax		
comp=Z,12nm,1.1s,mb4.8									
CDF	**Champ du Feu**	**56.33**	**342**	*e*	P		**P**	**07 34 56.9**	**-0.8**
comp=Z,12nm,1.1s,mb4.8									
SSF	**Saint Saulge**	**56.39**	**339**	*e*	P		**P**	**07 34 57.4**	**-0.8**
GRA1	**Grafenberg Arr**	**56.42**	**346**	*e*	P		**P**	**07 34 58.5**	**+0.1**
comp=Z,32nm,1.5s,mb5.1									
GRF	**Grafenberg Arr**	**56.42**	**346**	*e*	P		**P**	**07 34 58.5**	**+0.1**
comp=Z,32nm,1.5s,mb5.1									
GRF	**Grafenberg Arr**	**56.42**	**346**	*e*	P		**P**	**07 34 58.5**	**+0.1**
GRF					pmax		pmax	

GTA				pP	pP	07 37 20.8	+3.1
GTA				sP	sP	07 37 24.4	+5.8
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
CD2	**Chengdu**	**79.00**	**57**	*eP*	**P**	**07 37 20.4**	**-0.9**
CD2				pP	pP	07 37 25.1	+1.4
CD2				sP	sP	07 37 28.0	+3.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
CD2				pmax	pmax		
	comp=Z,30nm,4.2s						
GYA	**Guiyang**	**80.66**	**62**	P	**P**	**07 37 31.0**	**+0.6**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
ZAK	**Zakamensk**	**83.34**	**38**	*eP*	**P**	**07 37 44.4**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb4.0						
SONM	**Songino Array**	**84.71**	**41**	P	**P**	**07 37 52.6**	**+1.6**
	comp=Z,2.9nm,0.7s,mb4.5,baz=253,slow=4.9,SNR=12						
CPUP	**Villa Florida**	**85.10**	**244**	LR	LR	08 14 56.0	
	comp=Z,63nm,18.2s,MS4.0,baz=269,slow=35						
HHC	**Hu-ho-hao-te**	**87.05**	**49**	*eP*	**P**	**07 38 02.6**	**-0.2**
HHC				sP	sP	07 38 09.8	+3.7
HHC				PP	PP	07 41 28.8	+2.6
HHC				SKS		07 48 27.3	
HHC				S	S	07 48 39.8	-2.6
HHC				sS	sS	07 48 47.8	+1.4
HHC				SS	SS	07 54 24.8	-0.8
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb5.1						
HHC				pmax	pmax		
	comp=Z,95nm,5.5s						
HHC				LR	LR		
	comp=N,81nm,20.2s,MS4.3						
HHC				LR	LR		
	comp=E,97nm,19.0s,MS4.3						
HHC				LR	LR		
	comp=Z,93nm,20.2s,MS4.2						
WHN	**Wuhan**	**87.94**	**59**	*eP*	**P**	**07 38 06.4**	**-0.9**
KAPI	**Kappang**	**89.86**	**95**	LR	LR	08 13 39.3	
	comp=Z,107nm,18.2s,MS4.3,baz=67,slow=32						
SFJD	**Kangerlussuaq**	**90.41**	**337**	LR	LR	08 18 27.3	
	comp=Z,44nm,19.6s,MS3.9,baz=118,slow=35						
BJI	**Beijing**	**90.44**	**50**	P	**P**	**07 38 20.4**	**+1.5**
BJI				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb5.3						
NJ2	**Nanjing**	**91.92**	**58**	*eP*	**P**	**07 38 25.5**	**-0.4**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.3						
PLCA	**Paso Flores**	**94.55**	**229**	LR	LR	08 18 50.0	
	comp=Z,96nm,18.2s,MS4.3,baz=108,slow=34						
CN2	**Changchun**	**97.52**	**47**	*eP*	**P**	**07 38 51.3**	**0.0**
CN2				*esP*	sP	07 38 58.3	+3.7
CN2				*eS*	S	07 50 11.1	-5.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.6						
CN2				LR	LR		
	comp=N,600nm,20.0s,MS5.1						
CN2				LR	LR		
	comp=E,300nm,20.0s,MS5.1						
CN2				LR	LR		
	comp=Z,70nm,4.0s						
MDJ	**Mudanjiang**	**100.46**	**46**	P	Pdif	07 39 01.6	-2.6
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,79nm,4.6s						
PDAR	**Pinedale Array**	**127.52**	**323**	PKP	PKPdf	07 44 21.9	-0.5
	comp=Z,0.5nm,0.7s,baz=64,slow=3.4,SNR=4.6						
PDAR	**Pinedale Array**	**127.52**	**323**	PKP	PKPdf	07 44 21.9	-0.5
TXAR	**Lajitas Array**	**129.40**	**304**	PKP	PKPdf	07 44 27.8	+1.4
	comp=Z,0.3nm,0.7s,baz=128,slow=2.1,SNR=5.4						
NVAR	**Mina Array Bea**	**135.43**	**323**	PKP	PKPdf	07 44 37.0	-0.6
	comp=Z,0.7nm,0.9s,baz=90,slow=1.8,SNR=4.7						
NVAR	**Mina Array Bea**	**135.43**	**323**	PKP	PKPdf	07 44 37.0	-0.6

MAN 19 07:45:07.13°.23N×121°.58E.h29km,mb4.6,ML3.5,MS3.4, 1D,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOAC	**Boac**	**0.35**	**48**	*eP*	Pb	07 45 14.8	-0.2
BOAC				*eS*	Sb	07 45 19.5	-1.0
SJMP	**San Jose**	**0.88**	**211**	*eP*	Pn	07 45 24.5	+1.1
SJMP				*eS*	Sb	07 45 35.7	+0.5
OTRP	**Odiongan**	**0.96**	**153**	*eP*	Pn	07 45 24.5	0.0
OTRP				*eS*	Sn	07 45 32.5	-4.7
AUQP	**San Andres**	**1.07**	**85**	*eP*	Pn	07 45 25.6	-0.5
GQP	**Guinayangan**	**1.08**	**51**	⇓*eP*	Pn	07 45 26.6	+0.4
GQP				*eS*	Sn	07 45 40.9	+0.8
POLP	**Polilio Island**	**1.53**	**13**	*eP*	Pn	07 45 32.8	+0.3
POLP				*eS*	Sn	07 45 46.3	-5.1
BUSP	**Coron**	**1.81**	**228**	*eP*	Pn	07 45 36.9	+0.5
BUSP				*eS*	Sn	07 45 52.2	-6.1
CUYO	**Cuyo Island**	**2.42**	**193**	*eP*	Pn	07 45 45.3	+0.6

*NEIC **19** 07:45:35.9,20°.04N×68°.25W,h13km,MD3.7(RSPR), After RSPR.*

RSPR 19 07:45:35.9,20°.04N×68°.25W,h13km±31km,MD3.7/5, MD3.7/5,6C-10D,North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSP	**Las Mesas**	**2.15**	**149**	⇑*eP*	Pn	07 46 08.0	-3.5
LSP	**Las Mesas**	**2.15**	**149**	⇑*eP*	Pn	07 46 08.2	-3.3
CRPR	**Cabo Rojo, PR**	**2.29**	**152**	⇓*eP*	Pn	07 46 10.2	-3.2
CRPR				*eS*	Sn	07 46 38.1	-3.3
CRPR	**Cabo Rojo, PR**	**2.29**	**152**	⇓*eP*	Pn	07 46 10.2	-3.2
CRPR				*eS*	Sn	07 46 38.1	-3.3
CELP	**Cerrillos**	**2.51**	**141**	⇑*eP*	Pn	07 46 14.5	-1.9
CELP	**Cerrillos**	**2.51**	**141**	⇑*eP*	Pn	07 46 14.5	-1.9
OBIP	**Obispado Ponce**	**2.52**	**142**	⇑*eP*	Pn	07 46 14.3	-2.2
OBIP				*eS*	Sn	07 46 42.7	-4.4
OBIP	**Obispado Ponce**	**2.52**	**142**	⇑*eP*	Pn	07 46 14.3	-2.2
OBIP				*eS*	Sn	07 46 42.7	-4.4
CBYP	**Canovanas**	**2.86**	**127**	⇓*eP*	Pn	07 46 18.8	-2.4
CBYP				*eS*	Sn	07 46 51.5	-4.0
CBYP	**Canovanas**	**2.86**	**127**	⇓*eP*	Pn	07 46 18.8	-2.4
CBYP				*eS*	Sn	07 46 51.5	-4.0
HUMP	**Col San Antoni**	**2.95**	**129**	⇓*eP*	Pn	07 46 19.9	-2.5
HUMP				*eS*	Sn	07 46 54.9	-2.8
HUMP	**Col San Antoni**	**2.95**	**129**	⇓*eP*	Pn	07 46 19.9	-2.5
HUMP				*eS*	Sn	07 46 54.9	-2.8
CPD	**Cerro la Pandu**	**2.97**	**132**	⇓*eP*	Pn	07 46 20.4	-2.3
CPD				*eS*	Sn	07 46 55.4	-2.8
CPD	**Cerro la Pandu**	**2.97**	**132**	⇓*eP*	Pn	07 46 20.4	-2.3
CPD				*eS*	Sn	07 46 55.4	-2.8
MTP	**Monte Pirata**	**3.19**	**127**	⇓*eP*	Pn	07 46 22.9	-2.9
MTP	**Monte Pirata**	**3.19**	**127**	⇓*eP*	Pn	07 46 22.9	-2.9
STVI	**Saint Thomas**	**3.53**	**118**	*eS*	Sn	07 47 08.4	-3.7
STVI	**Saint Thomas**	**3.53**	**118**	*eS*	Sn	07 47 08.4	-3.7

*IDC **19** 07:54:06.0±1.0,62°.03S×46°.83E,h0km,mb4.1/8, mb1 4.4/9,mb1mx4.3/16,mbtmp4.2/9,ML4.5/1,Error ellipse: s-maj=34.4km s-min=23.1km az=174.0*
*NEIC **19** 07:54:07.7±0.7,62°.03S×46°.77E,h10km,mb4.9/1,Error ellipse: s-maj=22.4km s-min=15.7km az=198.0*

ISC 19 07:54:08.0±0.8,62°.4S±0°.1×46°.8E±0°.2,h10km,n14, σ1§15/16,mb4.2/8,1D,South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SYO	**Syowa Base**	**7.27**	**201**	⇓*iP*	**Pn**	**07 55 57.4**	**+3.3**
MAW	**Mawson**	**8.57**	**135**	Pn	**Pn**	**07 56 15.9**	**+4.0**
	5.7nm,0.3s,baz=307,slow=13,SNR=114						
MAW				Sn	**Sn**	**07 57 48.1**	**-0.3**
	10nm,0.3s,baz=86,slow=23,SNR=5.2						
MAIT	**Maitri**	**16.00**	**224**	*eP*	**Pn**	**07 57 50.3**	**-2.5**
MAIT				*eS*	**Sn**	**08 00 36.2**	**-14**
VNA1	**Neumayer--Stat**	**22.60**	**225**	*e*	**P**	**07 59 16.0**	**+7.8**
VNA1				*eS*	**S**	**08 03 14.5**	**-1.2**
QSPA	**South Pole Qui**	**27.78**	**180**	P	**P**	**08 00 00.4**	**+4.0**
	1.8nm,0.9s,mb3.7,baz=300,slow=12,SNR=8.0						
QSPA				S	S	08 05 19.7	+41
	3.0nm,0.8s,baz=107,slow=21,SNR=4.3						
QSPA	**South Pole Qui**	**27.78**	**180**	*eP*	**P**	**08 00 00.2**	**+3.9**
	14nm,0.7s,mb4.7						
QSPA				S	S	08 05 19.7	+41
NWAO	**Narrogin (SRO)**	**52.43**	**90**	P	**P**	**08 03 19.9**	**-0.4**
	4.9nm,0.6s,mb4.6,baz=204,slow=4.8,SNR=4.5						
STKA	**Stephens Creek**	**64.42**	**110**	P	**P**	**08 04 45.2**	**+1.1**
	3.9nm,1.1s,mb4.4,baz=6.3,slow=7.4,SNR=3.5						
PLCA	**Paso Flores**	**65.63**	**228**	P	**P**	**08 04 52.5**	**+0.7**
	2.4nm,1.1s,mb4.1,baz=135,slow=5.7,SNR=2.8						
ASAR	**Alice Springs**	**68.00**	**99**	P	**P**	**08 05 06.5**	**-0.6**
	1.5nm,0.7s,mb4.2,baz=206,slow=6.3,SNR=28						
WRA	**Warramunga Arr**	**71.42**	**97**	P	**P**	**08 05 27.4**	**-0.8**
	4.5nm,0.8s,mb4.5,baz=206,slow=5.5,SNR=20						
TORD	**Torodi Ar. Bea**	**83.08**	**316**	P	**P**	**08 06 33.8**	**+0.3**
	0.3nm,0.8s,mb3.4,baz=180,slow=5.5,SNR=2.6						
LPAZ	**La Paz**	**86.67**	**241**	P	**P**	**08 06 51.9**	**+0.1**
	0.7nm,0.7s,mb4.0,baz=170,slow=6.1,SNR=3.9						
TXAR	**Lajitas Array**	**141.73**	**224**	PKP	PKPdf	08 13 40.0	+1.0
	0.1nm,0.6s,baz=194,slow=3.3,SNR=2.4						

*IDC **19** 07:56:27.1±3.1,30°.29S×70°.46W,h0km,mb3.8/1, mb1 3.9/2,mb1mx3.6/15,mbtmp3.8/2,ML4.0/1,Error ellipse: s-maj=123.6km s-min=72.4km az=85.0*
*GUC **19** 07:56:40.5±0.6,29°.54S×70°.34W,h87km±22km,ML3.6*
*NEIC **19** 07:56:40.5,29°.54S×70°.34W,h87km,MG3.6(GUC),After GUC.*
*ISCJB **19** 07:56:40.5±0.7,29°.58S±0°.04×70°.5W±0°.2,h100km,Error ellipse: s-maj=26.0km s-min=5.9km az=0.2*

ISC 19 07:56:41.4±0.7,29°.56S±0°.04×70°.6W±0°.3,h100km,n15, σ0§69/21,2C-2D,Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.55**	**354**	⇓*iP*	**Pn**	**07 56 57.0**	**-0.5**
LCO				*i* S	**Sn**	**07 57 09.0**	**-0.5**
LCO	**Las Campanas**	**0.55**	**354**	⇓*iP*	**Pn**	**07 56 57.0**	**-0.5**
LCO				*i* S	**Sn**	**07 57 09.0**	**-0.5**
LCO				AML	AML	07 57 10.2	
	comp=E,4μm,0.1s						
TLL	**Tololo Astrono**	**0.63**	**193**	⇑*iP*	**Pn**	**07 56 58.3**	**+0.1**
TLL				*i* S	**Sn**	**07 57 11.0**	**+0.4**
TLL	**Tololo Astrono**	**0.63**	**193**	⇑*iP*	**Pn**	**07 56 58.3**	**+0.1**
TLL				*i* S	**Sn**	**07 57 11.0**	**+0.4**
TLL				AML	AML	07 57 13.1	
	comp=N,2μm,0.5s						
FCH	**Farellones**	**3.77**	**176**	*eP*	**Pn**	**07 57 41.1**	**+3.6**
FCH				*i* S	**Sn**	**07 58 24.6**	**+3.8**
CLCH	**Cerro Calan**	**3.83**	**179**	*eP*	**Pn**	**07 57 37.9**	**-0.3**
CLCH				*i* S	**Sn**	**07 58 21.9**	**-0.4**
ANTU	**Antumapu**	**4.00**	**180**	*i* S	**Sn**	**07 58 26.2**	**-0.2**
CHCH	**Chadas Angostu**	**4.36**	**180**	*i* P	**Pn**	**07 57 45.2**	**-0.2**
CHCH				*i* S	**Sn**	**07 58 35.0**	**-0.2**
CHCH	**Chadas Angostu**	**4.36**	**180**	*i* P	**Pn**	**07 57 45.2**	**-0.2**
CHCH				*i* S	**Sn**	**07 58 35.0**	**-0.2**
CACH	**El Canelo**	**4.55**	**180**	*eP*	**Pn**	**07 57 48.3**	**+0.4**
CACH	**El Canelo**	**4.55**	**180**	*eP*	**Pn**	**07 57 48.3**	**+0.4**
LPAZ	**La Paz**	**13.40**	**10**	Pn	**Pn**	**07 59 48.8**	**+1.2**
	comp=N,0.3nm,0.3s,baz=191,slow=9.3,SNR=9.9						
TORD	**Torodi Ar. Bea**	**81.56**	**70**	P	**P**	**08 08 47.7**	**-0.7**
	comp=N,0.6nm,1.0s,baz=250,slow=4.2,SNR=4.5						
ZALV	**Zalesovo Beam**	**149.81**	**29**	PKPbc	PKPbc	08 16 19.4	+0.2
	comp=N,1.1nm,0.4s,baz=316,slow=4.0,SNR=4.2						
MKAR	**Makanchi Array**	**152.83**	**43**	PKPbc	PKPbc	08 16 27.0	+0.6
	comp=N,0.2nm,0.3s,baz=329,slow=2.5,SNR=3.3						

ISC 19 08:25:17.1±1.3,41°.60N±0°.06×76°.2E±0°.2,h10km,n6, σ1§15/7,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**0.65**	**0**	P	**Pg**	**08 25 29.2**	**-0.4**
	SNR=7.6						
KZA	**Kyzart**	**0.88**	**304**	P	**Pg**	**08 25 33.2**	**-0.8**
	SNR=32						
TKM2	**Tokmak 2**	**1.41**	**341**	P	**Pn**	**08 25 43.5**	**+0.7**
	SNR=6.5						
UCH	**Uchtor**	**1.43**	**297**	P	**Pn**	**08 25 43.3**	**+0.3**
	SNR=5.1						
KSH	**Kashi**	**2.09**	**186**	Pn	**Pn**	**08 25 48.8**	**-3.3**
KSH				Sn	**Sn**	**08 26 18.9**	**+0.8**
KSH				smax			
	comp=N,20nm,0.4s						
KSH				smax			
	comp=E,20nm,0.9s						
USP	**Ospenovka**	**2.11**	**323**	P	**Pn**	**08 25 55.8**	**+3.4**
	SNR=9.0						

MEX 19 08:28:17.6±1.0,13°.80N×93°.47W,h16km±28km,MD4.1, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.61**	**47**	*i* P	Pn	08 28 41.0	-4.3
THIG				*i* S	Sn	08 29 00.9	-4.8
PCIG		**1.91**	**7**	*i* P	Pn	08 28 45.9	-3.6
PCIG				*i* S	Sn	08 29 08.7	-4.6
TGIG		**2.98**	**6**	*i* P	Pn	08 29 02.7	-1.6
TGIG				*i* S	Sn	08 29 35.5	-4.2
SCX	**San Cristobal**	**3.03**	**15**	*i* P	Pn	08 29 03.2	-1.7
SCX				*i* S	Sn	08 29 35.8	-5.1
HUIG	**Huatulco**	**3.22**	**308**	*eP*	Pn	08 29 07.2	-0.3
HUIG				*i* S	Sn	08 29 40.5	-5.0

DJA 19 08:33:53,2°.05N×122°.01E,h10km,MLv4.1/4,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**1.56**	**183**	P	Pn	08 34 22.8	+1.9
MRSI				S	Sn	08 34 38.1	-3.1
KMSI	**Cibinong**	**2.46**	**127**	P	Pn	08 34 33.1	0.0
KMSI				S	Sn	08 35 03.1	-0.1
MNI	**Manado**	**2.89**	**102**	P	Pn	08 34 39.8	+0.7
APSI	**Ampana**	**2.96**	**187**	P	Pn	08 34 46.5	+6.4
APSI				S	Sn	08 35 21.1	+5.3
LUWI	**Luwuk**	**3.16**	**166**	P	Pn	08 34 42.7	-0.2
LUWI				S	Sn	08 35 19.9	-0.8
TTSI	**Tana Toraja**	**5.51**	**203**	P	Pn	08 35 19.8	+4.6
	0.2nm20nm,0.9s						
SPSI	**Sidrap Palu**	**6.38**	**201**	P	Pn	08 35 20.9	-6.2
	11nm,0.9s						
KAPI	**Kappang**	**7.37**	**198**	P	Pn	08 35 33.8	-7.0

*NEIC **19** 08:35:19.7±0.8,16°.08S×69°.97W,h184km±8km,mb3.9/1, Error ellipse: s-maj=14.2km s-min=9.4km az=47.0*
*ISCJB **19** 08:35:19.3±0.8,16°.08S±0°.09×70°.0W±0°.1,h198km±8km, mb3.7/9,Error ellipse: s-maj=18.2km s-min=12.4km az=137.2*
*IDC **19** 08:35:21.2±1.1,16°.10S×69°.84W,h197km±9km,mb3.5/8, mb1 3.7/10,mb1mx3.5/18,mbtmp3.4/10,Error ellipse: s-maj=21.6km s-min=16.3km az=58.0*

ISC 19 08:35:20.4±0.8,16°.10S±0°.09×70°.0W±0°.1,h192km±8km, n22,σ1§05/17,mb3.7/9,Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**1.78**	**96**	P	**Pn**	**08 35 57.6**	**+1.5**
	14nm,0.3s,baz=300,slow=6.2,SNR=931						
LPAZ				S	**Sn**	**08 36 24.5**	**+0.8**
	54nm,0.3s,baz=3.3,slow=22,SNR=31						
NNA	**Nana**	**7.81**	**301**	P	**Pn**	**08 37 09.2**	**-2.1**
	3.5nm,0.3s,baz=128,slow=12,SNR=6.2						
NNA				S	**Sn**	**08 38 31.8**	**-7.5**
	2.9nm,0.3s,baz=21,slow=14,SNR=5.6						
SIV	**San Ignacio**	**8.56**	**91**	P	**Pn**	**08 37 19.3**	**-1.8**
	1.6nm,0.3s,baz=281,slow=11,SNR=65						
CFAA	**Coronel Fontan**	**15.52**	**174**	P	**Pn**	**08 38 49.4**	**+0.1**
	0.1nm,0.3s,baz=355,slow=12,SNR=6.6						
CPUP	**Villa Florida**	**15.57**	**133**	P	**Pn**	**08 38 48.3**	**-1.6**
	0.1nm,0.3s,baz=91,slow=20,SNR=2.1						
PLCA	**Paso Flores**	**24.55**	**181**	P	**P**	**08 40 21.9**	**-0.5**
	3.2nm,0.8s,mb4.0,baz=357,slow=14,SNR=6.0						
TXAR	**Lajitas Array**	**55.66**	**324**	P	**P**	**08 44 36.9**	**+0.2**
	0.5nm,0.7s,mb3.2,baz=150,slow=9.5,SNR=9.3						
TXAR				PcP	PcP	08 45 34.4	+0.6
	0.1nm,0.4s,baz=144,slow=8.7,SNR=4.2						
PV01	**Paradox Valley**	**64.97**	**327**	*eP*	**P**	**08 45 40.6**	**+1.0**
	78nm,0.6s						
DBIC	**Dimbokro**	**68.29**	**76**	P	**P**	**08 46 00.7**	**-0.6**
	4.3nm,0.9s,mb4.1,baz=132,slow=22,SNR=4.3						
PDAR	**Pinedale Array**	**68.95**	**330**	P	**P**	**08 46 05.5**	**+0.8**
	0.3nm,0.4s,mb3.2,baz=124,slow=8.2,SNR=3.9						
NVAR	**Mina Array Bea**	**70.64**	**322**	P	**P**	**08 46 15.6**	**+0.5**
	0.2nm,0.5s,mb3.0,baz=19,slow=19,SNR=3.8						
QSPA	**South Pole Qui**	**74.07**	**180**	*eP*	**P**	**08 46 36.0**	**+1.3**
	1.8nm,0.8s,mb3.8						
TORD	**Torodi Ar. Bea**	**76.57**	**72**	P	**P**	**08 46 49.2**	**-0.9**
	1.5nm,0.4s,mb4.0,baz=260,slow=4.8,SNR=58						
YKA	**Yellowknife Ar**	**85.78**	**341**	P	**P**	**08 47 37.6**	**+0.1**
	1.1nm,0.5s,mb3.8,baz=133,slow=5.0,SNR=24						
MAW	**Mawson**	**89.77**	**164**	P	**P**	**08 47 57.6**	**+0.9**
	1.6nm,0.6s,mb4.0,baz=217,slow=8.2,SNR=4.2						
ASAR	**Alice Springs**	**134.10**	**211**	PKP	PKPdf	08 54 15.4	-0.3
	0.4nm,0.7s,baz=141,slow=2.3,SNR=7.2						
WRA	**Warramunga Arr**	**136.95**	**215**	PKP	PKPdf	08 54 22.7	+1.6
	0.4nm,0.3s,baz=143,slow=1.6,SNR=6.3						
KURK	**Kurchatov**	**137.25**	**29**	PKP	PKPdf	08 54 20.9	+0.2
	0.5nm,0.7s,baz=306,slow=2.3,SNR=3.9						
ZALV	**Zalesovo Beam**	**137.42**	**22**	PKP	PKPdf	08 54 22.1	+1.2
	1.6nm,0.5s,baz=271,slow=2.1,SNR=5.6						
MJAR	**Matsushiro Arr**	**147.75**	**315**	PKPbc	PKPbc	08 54 43.5	+0.7
	2.5nm,0.7s,baz=90,slow=2.1,SNR=7.5						
SONM	**Songino Array**	**148.21**	**5**	PKPbc	PKPbc	08 54 44.8	+1.2
	2.5nm,0.5s,baz=338,slow=2.2,SNR=13						
KSRS	**Korea Array**	**153.49**	**327**	PKPbc	PKPbc	08 54 57.6	+1.3
	0.3nm,0.5s,baz=24,slow=1.5,SNR=5.2						

*IDC **19** 08:48:26.4±0.9,16°.23S×173°.45W,h0km,mb4.0/8, mb1 4.3/8,mb1mx4.1/18,mbtmp4.1/8,MS3.9/4,Ms1 3.9/4, ms1mx3.3/26,Error ellipse: s-maj=42.3km s-min=18.5km az=140.0*
*NEIC **19** 08:48:28.7±0.6,16°.14S×173°.43W,h15km,mb3.9/3,Error ellipse: s-maj=32.0km s-min=11.5km az=138.0*
*ISCJB **19** 08:48:29.9±0.6,16°.1S±0°.2×173°.6W±0°.2,h33km,mb4.0/11, MS4.0/4,Error ellipse: s-maj=32.7km s-min=12.3km az=139.4*

ISC 19 08:48:31.8±0.7,16°.2S±0°.2×173°.5W±0°.2,h35km,n31, σ0§53/16,mb4.0/11,MS4.0/4,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.86**	**36**	Pn	**Pn**	**08 49 09.4**	**-5.6**
	16nm,0.3s,baz=273,slow=2.6,SNR=53						
AFI				Sn	**Sn**	**08 49 38.1**	**-10**
	242nm,0.3s,baz=110,slow=18,SNR=18						
AFI	**Afiamalu**	**2.86**	**36**	Pn	**Pn**	**08 49 09.4**	**-5.6**
AFI				Sn	**Sn**	**08 49 38.1**	**-10**
PAE	**Paea**	**22.93**	**97**	*e*T		09 16 47.2	
	1.5nm,0.3s						
PPT	**Papeete**	**22.93**	**97**	*e*LR	LR	08 58 57.7	
	128nm,24.0s						
PPT				*e*T		09 16 51.1	
	4.2nm,0.4s						
URZ	**Urewera**	**23.44**	**199**	P	**P**	**08 53 38.8**	**+0.7**
	3.9nm,0.5s,mb4.1,baz=28,slow=8.2,SNR=4.0						
PMOR	**Pomariorio Ree**	**24.69**	**91**	*e*T		09 19 18.6	
	1.7nm,0.2s						
RKT	**Rikitea**	**36.84**	**107**	*e*LR	LR	09 05 18.1	
	92nm,24.0s						
RKT				*e*T		09 34 06.0	
	3.5nm,0.3s						
CTA	**Charters Tower**	**38.36**	**258**	LR	LR	09 09 23.9	
	comp=Z,70nm,21.8s,MS3.4,baz=52,slow=33						
STKA	**Stephens Creek**	**43.53**	**241**	P	**P**	**08 56 32.1**	**-0.2**
	2.3nm,0.7s,mb4.0,baz=77,slow=9.5,SNR=5.8						
WRAB	**Tennant Creek**	**49.55**	**257**	*eP*	**P**	**08 57 19.6**	**0.0**
	1.1nm,0.7s,mb4.0						
WRA	**Warramunga Arr**	**49.56**	**257**	P	**P**	**08 57 19.3**	**-0.4**
	0.6nm,0.6s,mb3.8,baz=92,slow=7.0,SNR=8.1						
ASAR	**Alice Springs**	**49.76**	**253**	P	**P**	**08 57 20.7**	**-0.5**
	4.3nm,0.7s,mb4.6,baz=89,slow=8.1,SNR=76						
PETK	**Petropavlovsk-**	**73.40**	**342**	P	**P**	**09 00 01.3**	**+1.3**
	2.8nm,0.7s,mb4.3,baz=108,slow=9.5,SNR=4.7						
PETK	**Petropavlovsk-**	**73.40**	**342**	P	**P**	**09 00 01.3**	**+1.3**
NVAR	**Mina Array Bea**	**75.02**	**42**	P	**P**	**09 00 09.9**	**+0.1**
	1.3nm,0.8s,mb3.9,baz=228,slow=10,SNR=9.6						
HLID	**Hailey**	**80.34**	**39**	*eP*	**P**	**09 00 39.2**	**-0.2**
	1.1nm,0.8s,mb3.8						
TXAR	**Lajitas Array**	**81.16**	**56**	P	**P**	**09 00 43.9**	**-0.3**
	0.2nm,0.7s,mb3.2,baz=226,slow=6.8,SNR=3.3						
MCMT	**McKenzie Canyo**	**81.97**	**39**	*eP*	**P**	**09 00 48.3**	**+0.2**
	0.8nm,0.9s,mb3.6						
PDAR	**Pinedale Array**	**82.96**	**42**	P	**P**	**09 00 52.6**	**-0.6**
	1.7nm,0.7s,mb4.2,baz=232,slow=2.8,SNR=12						
CMIG	**Matias Romero**	**84.26**	**70**	LR	LR	09 31 41.1	
	comp=Z,225nm,18.2s,MS4.6,baz=273,slow=31						
APG	**El Apazote**	**87.65**	**74**	LR	LR	09 34 59.8	
	comp=Z,68nm,18.9s,MS4.1,baz=244,slow=32						
LPAZ	**La Paz**	**99.62**	**110**	LR	LR	09 35 03.2	
	comp=Z,35nm,21.6s,MS3.8,baz=294,slow=28						
EKS2	**Erkin-Say**	**117.47**	**310**	*e*PKPdf	PKPdf	09 07 18.5	+4.5
STHS	**Stebnicka Huta**	**144.80**	**343**	*e*P	PKPdf	09 08 05.4	+0.4
STHS	**Stebnicka Huta**	**144.80**	**343**	*e*PKP	PKPdf	09 08 05.4	+0.4
BUR08	**Bucovina Ar. S**	**145.09**	**338**	*e*PKPbc	PKPbc	09 08 05.6	+0.6
CRVS	**Cervenica-Dubn**	**145.21**	**343**	*e*P	PKPbc	09 08 06.8	+1.5
CRVS	**Cerv

0.3nm,0.3s,baz=330,slow=10,SNR=4.6
MKAR Sn **Sn** **09 11 52.4 0.0**
0.1nm,0.3s,baz=310,slow=28,SNR=4.1
MKAR Lg 09 12 22.6
0.5nm,0.3s,baz=328,slow=27,SNR=10.0

CASC 19 09:27:25.8±0.8, 13°.01N×89°.00W, h33km±3km, MD3.6, ML2.6, mb4.0(NEIC), El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFRS	**El Faro**	**0.61**	**354**	*e*P	Pn	09 27 38.1	-0.1
LFRS				*e*S	Sb	09 27 47.6	+1.0
LBRS	**Las Brisas**	**0.73**	**357**	*e*P	Pn	09 27 40.0	+0.2
LFU	**La Fuente**	**0.74**	**351**	*e*P	Pn	09 27 40.2	+0.2
BOQS	**Boqueron**	**0.77**	**339**	*e*P	Pn	09 27 40.6	+0.2
BOQS				*e*S	Sn	09 27 52.0	+1.1
BOQS				AML	AML	09 27 54.4	
	comp=Z,153nm,0.3s						
BLLM	**Bellamira**	**0.86**	**60**	*e*P	Pn	09 27 41.9	+0.3
SBLS	**San Blas**	**1.02**	**324**	*e*P	Pn	09 27 44.5	+0.6
CAHU	**Cacacuatique**	**1.08**	**45**	*e*P	Pn	09 27 44.9	+0.3
CNCH	**Conchagua**	**1.17**	**77**	*e*P	Pn	09 27 45.5	-0.4
CNCH				*e*S	Sn	09 28 01.3	+0.7

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*IDC **19** 09:27:55.2±1.5, 13°.84N×93°.16W, h0km, mb3.7/6, mb1 4.0/9, mb1mx3.8/25, mbtmp3.7/9, ML3.5/3, MS3.5/4, Ms1 3.5/4, ms1mx2.9/28, Error ellipse: s-maj=38.8km s-min=18.2km az=33.0*
*ISCJB **19** 09:27:57.0±0.7, 14°.08N±0°.05×93°.19W±0°.03, h10km, mb3.9/14, MS3.5/4, Error ellipse: s-maj=7.6km s-min=4.6km az=179.0*
*NEIC **19** 09:27:57.7±1.1, 13°.86N×93°.16W, h10km, mb4.0/12, MD4.1(MEX), Error ellipse: s-maj=23.6km s-min=10.4km az=207.0*
*MEX **19** 09:27:58.7±1.0, 13°.91N×93°.14W, h17km±32km, MD4.5*
ISC 19 09:27:59.5±0.7, 14°.12N±0°.06×93°.22W±0°.03, h10km, n37, σ1§46/42, mb3.9/14, MS3.5/4, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.21**	**50**	*i* P	**Pn**	**09 28 18.4**	**-4.2**
THIG				*i* S	**Sb**	**09 28 33.8**	**-4.5**
PCIG		**1.58**	**0**	*i* P	**Pn**	**09 28 24.8**	**-2.7**
PCIG				*i* S	**Sn**	**09 28 46.4**	**-1.7**
TGIG		**2.65**	**2**	*i* P	**Pn**	**09 28 41.3**	**-1.0**
TGIG				*i* S	**Sn**	**09 29 13.8**	**-0.7**
SCX	**San Cristobal**	**2.66**	**12**	*i* P	**Pn**	**09 28 42.7**	**+0.2**
SCX				*i* S	**Sn**	**09 29 15.2**	**+0.3**
APG	**El Apazote**	**2.81**	**71**	Pn	**Pn**	**09 28 41.9**	**-2.6**
	14nm,0.3s,baz=235,slow=3.9,SNR=78						
APG				Sn	**Sn**	**09 29 19.6**	**+1.1**
	12nm,0.3s,baz=256,slow=19,SNR=6.2						
HUIG	**Huatulco**	**3.24**	**301**	*e*P	**Pn**	**09 28 49.3**	**-1.1**
HUIG				*i* S	**Sn**	**09 29 26.7**	**-2.4**
CMIG	**Matias Romero**	**3.36**	**332**	Pn	**Pn**	**09 28 52.0**	**-0.2**
	3.2nm,0.3s,baz=135,slow=9.4,SNR=40						
VHO	**Vista Hermosa**	**4.48**	**311**	*i* P	**Pn**	**09 29 05.7**	**-1.9**
VHO				*i* S	**Sn**	**09 30 00.6**	**+0.8**
PNIG	**Pinotepa**	**5.25**	**296**	*i* P	**Pn**	**09 29 17.7**	**-0.4**
PNIG				*i* S	**Sn**	**09 30 16.6**	**-2.1**
UTMO	**Huajuapan**	**5.75**	**311**	*i* P	**Pn**	**09 29 24.7**	**-0.2**
UTMO				*i* S	**Sn**	**09 30 31.1**	**+0.1**
TGUH	**Tegucigalpa,Un**	**5.77**	**90**	Pg	**Pg**	**09 29 49.4**	**-0.7**
	24nm,1.0s						
TEIG	**Tepich**	**7.70**	**37**	*e*Pn	**Pn**	**09 29 49.1**	**-2.6**
	26nm,0.3s						
TEIG				*e*Sn	**Sn**	**09 31 20.3**	**+1.3**
TXAR	**Lajitas Array**	**17.97**	**329**	P	**Pn**	**09 32 10.8**	**+1.2**
	0.0nm,0.3s,baz=147,slow=12,SNR=12						
MIAR	**Mount Ida**	**20.34**	**359**	*e*P	**P**	**09 32 35.4**	**-0.6**
	12nm,1.0s						
CLNB	**Carlsbad**	**20.52**	**333**	*e*P	**P**	**09 32 39.3**	**+1.3**
	0.7nm,0.2s						
GDL2	**Guadalupe Moun**	**20.68**	**332**	*e*P	**P**	**09 32 41.9**	**+2.1**
	10nm,1.1s						
MNTX	**Cornudas Mount**	**20.75**	**330**	*e*P	**P**	**09 32 41.8**	**+1.3**
	6.8nm,1.4s						
GOGA	**Godfrey**	**21.16**	**23**	*e*P	**P**	**09 32 47.6**	**+2.7**
	15nm,1.3s,mb4.2						
SDV	**Santo Domingo**	**22.73**	**101**	P	**P**	**09 32 59.1**	**-2.8**
	1.8nm,0.4s,mb3.9,baz=2.7,slow=9.8,SNR=3.9						
SDV	**Santo Domingo**	**22.73**	**101**	P	**P**	**09 32 59.1**	**-2.8**
TKL	**Tuckaleechee C**	**23.07**	**20**	LR	LR	09 43 52.4	
	comp=Z,80nm,18.1s,MS3.2,baz=225,slow=41						
BNM	**Barren Site**	**23.35**	**331**	*e*P	**P**	**09 33 10.5**	**+2.2**
	3.2nm,1.1s,mb3.7						
LAZ	**Ladron**	**23.80**	**330**	*e*P	**P**	**09 33 14.6**	**+2.0**
	4.4nm,1.4s,mb3.7						
ANMO	**Albuquerque**	**23.93**	**332**	P	**P**	**09 33 15.0**	**+1.1**
	1.0nm,0.6s,mb3.4,baz=153,slow=8.0,SNR=4.6						
ARUT	**Antelope Range**	**29.64**	**326**	*e*P	**P**	**09 34 07.5**	**+2.3**
	0.7nm,0.4s,mb3.7						
PDAR	**Pinedale Array**	**31.83**	**337**	P	**P**	**09 34 24.1**	**-0.4**
	0.4nm,0.6s,mb3.4,baz=38,slow=46,SNR=3.2						
REDW	**Red Top Meadow**	**32.84**	**336**	*e*P	**P**	**09 34 34.3**	**+0.9**
	14nm,1.4s,mb4.7						
NVAR	**Mina Array Bea**	**32.84**	**322**	P	**P**	**09 34 33.3**	**-0.1**
	1.2nm,0.8s,mb3.9,baz=144,slow=9.4,SNR=10.0						
SNOW	**Snow King Moun**	**32.89**	**336**	*e*P	**P**	**09 34 34.1**	**+0.3**
	2.9nm,0.6s,mb4.4						
MCMT	**McKenzie Canyo**	**34.86**	**335**	*e*P	**P**	**09 34 52.8**	**+1.9**
	1.5nm,0.8s,mb4.0						
DLMT	**Dillon**	**35.20**	**336**	*e*P	**P**	**09 34 55.1**	**+1.3**
	4.9nm,1.3s,mb4.3						
ULM	**Lac du Bonnet**	**36.10**	**357**	LR	LR	09 53 11.6	
	comp=Z,52nm,19.6s,MS3.3,baz=147,slow=42						
SIV	**San Ignacio**	**43.64**	**132**	P	**P**	**09 35 59.2**	**-5.3**
	0.4nm,0.7s,mb3.3,baz=288,slow=20,SNR=2.3						
SCHQ	**Schefferville**	**45.53**	**21**	LR	LR	09 57 42.3	
	comp=Z,101nm,19.5s,MS3.8,baz=232,slow=39						
YKA	**Yellowknife Ar**	**50.65**	**347**	P	**P**	**09 36 56.8**	**-1.8**
	2.0nm,0.7s,mb4.2,baz=148,slow=7.5,SNR=13						
NOA	**NORSAR Array B**	**84.61**	**28**	LR	LR	10 16 05.2	
	comp=Z,23nm,22.0s,MS3.5,baz=310,slow=34						
CMAR	**Chiang Mai Arr**	**145.48**	**339**	PKPbc	PKPbc	09 47 37.0	-1.8
	0.8nm,0.3s,baz=349,slow=2.8,SNR=5.9						

SKHL 19 09:39:05.3±0.9, 48°.88N×142°.60E, h10km, mb3.7/3, 1C, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UGL	**Uglegorsk**	**0.40**	**300**	⇑*i*Pg	Pg	09 39 13.8	+0.6
UGL				AMB	AMB	09 39 14.3	
	423nm,0.3s						
UGL				*e*Sg	Sg	09 39 19.1	+0.5
UGL				A		09 39 19.2	
	2μm,0.4s						
UGL				A		09 39 19.2	
	5μm,0.4s						
YSS	**Yuzh-Sakhalins**	**1.93**	**177**	*e*Pg	Pg	09 39 43.7	+1.4
YSS				AMB	AMB	09 39 47.7	
	23nm,0.5s						
YSS				*e*Sg	Sg	09 40 11.6	+4.3
YSS				A		09 40 15.0	
	25nm,0.8s						
YSS				A		09 40 15.0	
	32nm,0.8s						
TYV	**Tymovskoe**	**1.99**	**1**	*e*Pg	Pg	09 39 45.0	+1.7
TYV				AMB	AMB	09 39 47.0	
	8.0nm,0.5s						
TYV				*e*Sg	Sg	09 40 13.0	+3.9
TYV				A		09 40 19.0	
	29nm,1.0s						
TYV				A		09 40 19.0	
	24nm,1.0s						
GRNR	**Gornyy**	**4.42**	**298**	*e*Sg	Sg	09 41 34.0	+6.8
GRNR				A		09 41 35.0	
	25nm,0.6s						
GRNR				A		09 41 35.0	
	32nm,0.6s						
EKMR	**Ekimchan**	**7.39**	**308**	*e*Sg	Sg	09 42 57.5	-4.9
EKMR				A		09 43 03.1	
	4.0nm,0.6s						

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*IDC **19** 09:44:59.9±1.8, 33°.19N×91°.77E, h0km, mb3.8/2, mb1 3.7/5, mb1mx3.4/26, mbtmp3.5/5, ML3.2/2, MS3.0/2, Ms1 3.0/2, ms1mx2.4/31, Error ellipse: s-maj=72.0km s-min=26.0km az=67.0*
*ISCJB **19** 09:44:59.0±0.8, 33°.21N±0°.05×91°.71E±0°.2, h10km, mb3.8/2, MS2.9/2, Error ellipse: s-maj=21.5km s-min=7.1km az=0.0*
*NEIC **19** 09:45:00.7±0.7, 33°.15N×91°.61E, h10km, Error ellipse: s-maj=21.7km s-min=8.8km az=81.0*
ISC 19 09:45:01.4±0.7, 33°.28N±0°.05×91°.7E±0°.2, h10km, n10, σ1§12/10, mb3.8/2, MS2.9/2, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.59**	**188**	P	**Pb**	**09 46 05.8**	**+0.8**
LSA				S	**Sg**	**09 46 55.6**	**-1.3**
LSA				LR	LR		
	comp=N,140nm,9.4s						
LSA				LR	LR		
	comp=E,210nm,7.2s						
LSA				LR	LR		
	comp=Z,340nm,6.6s						
LSA	**Lhasa**	**3.59**	**188**	*e*Pg	**Pb**	**09 46 06.7**	**+1.6**
LSA				*e*Sg	**Sg**	**09 46 57.4**	**+0.5**
MK31	**Makanchi Array**	**15.29**	**335**	*e*P	**Pn**	**09 48 38.7**	**+1.5**
MKAR	**Makanchi Array**	**15.29**	**335**	Pn	**Pn**	**09 48 37.0**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=143,slow=13,SNR=2.5						
SONM	**Songino Array**	**18.29**	**33**	P	**Pn**	**09 49 15.8**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=220,slow=11,SNR=4.8						
KURK	**Kurchatov**	**19.90**	**335**	P	**Pn**	**09 49 32.5**	**-2.0**
	comp=Z,0.0nm,0.3s,baz=145,slow=10,SNR=2.5						
ZALV	**Zalesovo Beam**	**21.24**	**349**	LR	LR	09 58 30.3	
	comp=Z,17nm,22.0s,MS2.4,baz=46,slow=38						
ARCES	**ARCESS Array B**	**50.94**	**336**	LR	LR	10 20 03.0	
	comp=Z,32nm,19.0s,MS3.4,baz=187,slow=41						
WRA	**Warramunga Arr**	**66.76**	**136**	P	**P**	**09 55 52.0**	**-1.1**
	comp=Z,1.4nm,1.0s,mb3.9,baz=334,slow=7.1,SNR=4.7						
ASAR	**Alice Springs**	**69.45**	**139**	P	**P**	**09 56 09.9**	**0.0**
	comp=Z,0.6nm,0.6s,mb3.7,baz=324,slow=6.4,SNR=12						

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*ISK **19** 10:03:02.2, 40°.27N×29°.12E, h6km, MD2.9*
*CSEM **19** 10:03:02.9±0.2, 40°.30N×29°.16E, h5km, MD2.9, Error ellipse: s-maj=4.1km s-min=3.4km az=23.0*
*ISCJB **19** 10:03:03.0±0.5, 40°.32N±0°.03×29°.17E±0°.04, h7km±5km, Error ellipse: s-maj=4.9km s-min=4.4km az=34.7*
*DDA **19** 10:03:03.5, 40°.30N×29°.09E, h5km±6km, Md2.7*
ISC 19 10:03:03.3±0.4, 40°.32N±0°.03×29°.16E±0°.04, h8km±4km, n38, σ0§91/53, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEMT	**Gemlik**	**0.12**	**13**	PG	**Pg**	**10 03 06.0**	**0.0**
GEMT	**Gemlik**	**0.12**	**13**	*i* Pg	**Pg**	**10 03 06.0**	**0.0**
ULDT	**Uludag**	**0.18**	**185**	*i* P	**Pg**	**10 03 06.5**	**-0.5**
ULDT				*i* S	**Sg**	**10 03 09.6**	**+0.2**
ULDT	**Uludag**	**0.18**	**185**	*i* P	**Pg**	**10 03 06.5**	**-0.5**
ULDT				*i* S	**Sg**	**10 03 09.6**	**+0.1**
ARMT	**Armutlu**	**0.33**	**318**	PG	**Pg**	**10 03 09.8**	**0.0**
ARMT				*e*SG	**Sg**	**10 03 15.6**	**+1.3**
ARMT	**Armutlu**	**0.33**	**318**	*i* Pg	**Pg**	**10 03 09.8**	**0.0**
ARMT				*e*Sg	**Sg**	**10 03 15.6**	**+1.4**
ADVT	**Abdulvahap**	**0.46**	**76**	PG	**Pg**	**10 03 12.4**	**+0.1**
ADVT				*e*SG	**Sg**	**10 03 20.0**	**+1.8**
ADVT	**Abdulvahap**	**0.46**	**76**	*i* Pg	**Pg**	**10 03 12.4**	**+0.2**
ADVT				*e*Sg	**Sg**	**10 03 20.0**	**+1.7**
ISK	**Istanbul-Kandi**	**0.75**	**354**	*e*PG	**Pg**	**10 03 17.6**	**-0.1**
ISK	**Istanbul-Kandi**	**0.75**	**354**	*e*Pg	**Pg**	**10 03 17.6**	**-0.1**
GPA	**Golpazari**	**0.88**	**92**	*e*PG	**Pg**	**10 03 20.4**	**+0.2**
GPA	**Golpazari**	**0.88**	**92**	*e*Pg	**Pg**	**10 03 20.5**	**+0.2**
DURS	**Dursunbey**	**0.89**	**216**	*i* P	**Pg**	**10 03 21.2**	**+0.8**
DURS				*i* S	**Sg**	**10 03 32.6**	**+0.6**
DURS	**Dursunbey**	**0.89**	**216**	*i* P	**Pg**	**10 03 21.2**	**+0.8**
DURS				*i* S	**Sg**	**10 03 32.6**	**+0.6**
BNT	**Bandirma**	**0.94**	**273**	*e*PG	**Pg**	**10 03 20.6**	**-0.9**
EDC	**Edincik**	**0.99**	**272**	*e*PG	**Pg**	**10 03 21.2**	**-1.1**
EDC	**Edincik**	**0.99**	**272**	*e*Pg	**Pg**	**10 03 21.2**	**-1.1**
ELBA	**Catalca**	**0.99**	**327**	*i* P	**Pg**	**10 03 22.2**	**-0.2**
ELBA				*i* S	**Sg**	**10 03 32.8**	**-2.5**
ELBA	**Catalca**	**0.99**	**327**	*i* P	**Pg**	**10 03 22.2**	**-0.2**
ELBA				*i* S	**Sg**	**10 03 32.8**	**-2.5**
CTKS	**Kestanelik-??a**	**1.04**	**332**	*e*PG	**Pg**	**10 03 22.9**	**-0.3**
CTKS	**Kestanelik-??a**	**1.04**	**332**	*e*Pg	**Pg**	**10 03 23.0**	**-0.3**
GULT	**Gulveren**	**1.04**	**83**	*e*PN	**Pn**	**10 03 23.7**	**-0.6**
GULT	**Gulveren**	**1.04**	**83**	*e*Pn	**Pn**	**10 03 23.7**	**-0.6**
BALY	**Balya**	**1.31**	**244**	*i* P	**Pn**	**10 03 27.6**	**-0.4**
BALY				*i* S	**Sb**	**10 03 45.5**	**+0.2**
BALY	**Balya**	**1.31**	**244**	*i* P	**Pn**	**10 03 27.6**	**-0.4**
BALY				*i* S	**Sb**	**10 03 45.5**	**+0.2**
CTYL	**Yal??k??y-??at**	**1.33**	**331**	*e*PN	**Pn**	**10 03 28.5**	**+0.3**
CTYL	**Yal??k??y-??at**	**1.33**	**331**	*e*Pn	**Pn**	**10 03 28.5**	**+0.3**
ALT	**Altintas**	**1.46**	**149**	*e*PN	**Pn**	**10 03 28.9**	**-1.1**
ALT	**Altintas**	**1.46**	**149**	*e*Pn	**Pn**	**10 03 28.9**	**-1.1**
ESKT	**Eskisehir**	**1.53**	**121**	*e*PN	**Pn**	**10 03 30.1**	**-0.8**
ESKT	**Eskisehir**	**1.53**	**121**	*e*Pn	**Pn**	**10 03 30.1**	**-0.8**
SART	**Tekirdag**	**1.55**	**284**	*i* P	**Pn**	**10 03 31.7**	**+0.5**
SART				*i* S	**Sn**	**10 03 54.5**	**+3.0**
SART	**Tekirdag**	**1.55**	**284**	*i* P	**Pn**	**10 03 31.7**	**+0.5**
SART				*i* S	**Sn**	**10 03 54.5**	**+3.0**
KHL	**Karahalli**	**2.02**	**172**	*e*PN	**Pn**	**10 03 36.9**	**-0.7**
KHL	**Karahalli**	**2.02**	**172**	*e*Pn	**Pn**	**10 03 36.9**	**-0.7**
BOZC	**Bozcaada**	**2.43**	**260**	*i* P	**Pn**	**10 03 47.0**	**+3.7**
BOZC				*i* S	**Sn**	**10 04 20.8**	**+7.6**
KIZT	**Kizilcal**	**2.55**	**123**	*e*PN	**Pn**	**10 03 45.4**	**+0.4**
KIZT	**Kizilcal**	**2.55**	**123**	*e*Pn	**Pn**	**10 03 45.4**	**+0.4**

IDC 19 10:05:14.3±1.1, 21°.73N×144°.15E, h0km, mb3.4/5, mb1 3.8/5, mb1mx3.5/23, mbtmp3.4/5, Error ellipse: s-maj=49.0km s-min=24.2km az=100.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**21.04**	**322**	P	P	10 10 00.2	+0.5
	0.3nm,0.3s,baz=149,slow=8.3,SNR=4.9						
WRA	**Warramunga Arr**	**42.51**	**194**	P	P	10 13 12.7	+1.1
	0.4nm,0.4s,baz=17,slow=9.3,SNR=6.6						
ASAR	**Alice Springs**	**46.21**	**193**	P	P	10 13 39.9	-1.3
	0.3nm,0.8s,baz=8.3,slow=7.3,SNR=3.4						
YKA	**Yellowknife Ar**	**76.01**	**28**	P	P	10 17 01.6	-1.4
	0.3nm,0.4s,baz=292,slow=5.8,SNR=5.3						
NVAR	**Mina Array Bea**	**82.42**	**52**	P	P	10 17 40.9	+2.2
	0.4nm,0.7s,baz=246,slow=6.8,SNR=3.6						

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*IDC **19** 10:05:54.9±5.6, 38°.84N×141°.15E, h0km, mb3.4/2, mb1 3.6/3, mb1mx3.3/24, mbtmp3.4/3, ML3.0/2, Error ellipse: s-maj=110.3km s-min=46.2km az=11.0*
*ISCJB **19** 10:05:55.8±0.4, 38°.92N±0°.03×140°.89E±0°.03, h10km, mb3.5/2, Error ellipse: s-maj=3.9km s-min=3.3km az=41.5*
*NEIC **19** 10:05:56.4, 38°.93N×140°.87E, h10km, MG3.2(JMA), After JMA.*
*JMA **19** 10:05:56.3, 38°.93N×140°.87E, h10km±1km, M3.2 Broadband fault plane solution: P waves. NP1: ϕ_s221.00000°, δ20.00000°, λ82.00000°. NP2:ϕ_s49.00000°, δ70.00000°, λ93.00000°. Principal axes: T Plg65.0000°, Azm324.0000°; N Plg3.0000°, Azm228.0000°; P Plg25.0000°, Azm137.0000°;*
JMA Felt II J1.
ISC 19 10:05:56.4±0.4, 38°.92N±0°.02×140°.89E±0°.03, h10km, n16, σ0§78/27, mb3.5/2, 1C-7D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.26**	**82**	⇓P	**Pg**	**10 06 01.8**	**0.0**
JMK				S	**Sg**	**10 06 05.7**	**+0.3**
JYK	**Kaneyama**	**0.41**	**271**	⇓P	**Pg**	**10 06 04.2**	**-0.3**
JYK				S	**Sg**	**10 06 09.4**	**-0.5**
JRG	**Rokugo**	**0.52**	**338**	⇓P	**Pg**	**10 06 06.2**	**-0.3**
JRG				S	**Sg**	**10 06 13.4**	**0.0**
JOU	**Okura**	**0.57**	**198**	⇓P	**Pg**	**10 06 07.5**	**-0.1**
JOU				S	**Sg**	**10 06 15.4**	**+0.3**
JIO	**Ouri**	**0.59**	**142**	⇓P	**Pg**	**10 06 07.5**	**-0.3**
JIO				*e*S	**Sg**	**10 06 15.7**	**+0.2**
OFUJ	**Ofunato**	**0.63**	**75**	⇓P	**Pg**	**10 06 08.4**	**-0.3**
JOM	**Ohasama**	**0.64**	**29**	P	**Pg**	**10 06 08.4**	**-0.4**
JOM				S	**Sg**	**10 06 17.1**	**-0.1**
JYS	**Shirataka**	**0.94**	**223**	P	**Pg**	**10 06 14.2**	**-0.4**
JYS				S	**Sg**	**10 06 27.0**	**+0.1**
JYA	**Atsumi**	**0.97**	**251**	⇑P	**Pg**	**10 06 14.4**	**-0.7**
JYA				*e*S	**Sg**	**10 06 27.1**	**-0.6**
JMM	**Marumori**	**1.05**	**184**	⇓P	**Pg**	**10 06 15.3**	**-1.3**
JMM				S	**Sg**	**10 06 29.4**	**-0.8**
MAJO	**Matsushiro**	**3.18**	**223**	*e*Pn	**Pn**	**10 06 48.0**	**+1.5**
MAT	**Matsushiro**	**3.18**	**223**	P	**Pn**	**10 06 48.0**	**+1.5**
MAT				*e*S	**Sn**	**10 07 29.4**	**+5.0**
MJAR	**Matsushiro Arr**	**3.18**	**223**	Pn	**Pn**	**10 06 47.6**	**+1.2**
	0.6nm,0.3s,baz=29,slow=12,SNR=5.3						
MJAR				Sn	**Sn**	**10 07 34.9**	**+10**
	0.9nm,0.3s,baz=256,slow=32,SNR=3.0						
KSRS	**Korea Array**	**10.31**	**266**	Pn	**Pn**	**10 08 27.0**	**+2.7**
	0.3nm,0.3s,baz=82,slow=14,SNR=4.8						
WRA	**Warramunga Arr**	**58.87**	**187**	P	**P**	**10 15 54.6**	**-0.7**
	0.4nm,0.9s,mb3.4,baz=5.0,slow=7.3,SNR=4.9						
ASAR	**Alice Springs**	**62.59**	**187**	P	**P**	**10 16 20.9**	**+0.2**
	0.3nm,0.8s,mb3.5,baz=8.5,slow=7.5,SNR=3.7						

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*IDC **19** 10:25:58.9±0.5, 32°.77N×105°.58E, h0km, mb4.5/28, mb1 4.6/31, mb1mx4.5/38, mbtmp4.5/31, ML4.1/3, MS3.6/11, Ms1 3.6/11, ms1mx3.4/28, Error ellipse: s-maj=16.1km s-min=11.5km az=43.0*
*BJI **19** 10:25:59.0, 32°.73N×105°.62E, h10km, mB4.5/19, mb4.6/28, ML4.6/23, Ms4.4/39, Ms7 4.1/34*
*ISCJB **19** 10:25:59.1±0.1, 32°.73N±0°.02×105°.64E±0°.02, h10km, mb4.7/99, MS3.7/13, Error ellipse: s-maj=2.9km s-min=2.6km az=10.2*
*NEIC **19** 10:26:01.1±0.2, 32°.77N×105°.56E, h10km, mb4.8/54, Error ellipse: s-maj=6.0km s-min=5.2km az=193.0*
*MOS **19** 10:26:02.3±1.4, 32°.75N×105°.69E, h33km, mb4.9/55, Error ellipse: s-maj=7.7km s-min=5.1km az=107.5*
*SZGRF **19** 10:26:14.2, 32°.75N×103°.22E, h33km, mb5.0, Sichuan, China*
*DJA **19** 10:26:14, 32°.92N×105°.49E, h132km, mb4.6/12*
ISC 19 10:26:01.2±0.1, 32°.76N±0°.02×105°.60E±0°.02, h10km, n264, σ1§28/289, mb4.7/99, MS3.7/13, 12C-6D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.42**	**221**	Pn	**Pn**	**10 26 41.6**	**+0.8**
CD2				Pg	**Pg**	**10 26 44.4**	**-3.1**
CD2				Sg	**Sg**	**10 27 16.3**	**-2.6**
CD2				smax			
	comp=N,19μm,0.6s						
CD2				smax			
	comp=E,15μm,0.7s						
XAN	**Xi'an**	**3.06**	**64**	Pn	**Pn**	**10 26 50.0**	**+0.4**
XAN				Pg	**Pg**	**10 26 56.6**	**-3.2**
XAN				Sn	**Sn**	**10 27 27.4**	**+1.2**
XAN				Sg	**Sg**	**10 27 38.3**	**-1.2**
XAN				smax			
	comp=N,3μm,0.8s						
XAN				smax			
	comp=E,2μm,0.8s						
XAN				LR	LR		
	comp=N,5μm,7.0s						
XAN				LR	LR		
	comp=E,1μm,7.4s						
XAN				LR	LR		
	comp=Z,1μm,6.6s						
LZH	**Lanzhou**	**3.62**	**337**	*e*Pn	**Pn**	**10 26 58.8**	**+1.5**
LZH				Pg	**Pg**	**10 27 07.8**	**-2.8**
LZH				Sn	**Sn**	**10 27 43.1**	**+3.0**
LZH				Sg	**Sg**	**10 27 53.4**	**-4.2**
LZH				smax			
	comp=N,4μm,1.0s						
LZH				smax			
	comp=E,7μm,0.8s						
LZH				LR	LR		
	comp=E,9μm,5.9s						
LZH				LR	LR		
	comp=Z,10μm,7.7s						
ENH	**Enshi**	**4.14**	**126**	*e*Pn	**Pn**	**10 27 05.0**	**+0.5**
ENH				*e*Sg	**Sg**	**10 28 18.1**	**+3.8**
GYA	**Guiyang**	**6.35**	**171**	Pn	**Pn**	**10 27 34.4**	**-0.4**
GYA				Pg	**Pb**	**10 27 53.3**	**+1.6**
GYA				Sn	**Sn**	**10 28 48.9**	**+1.6**
GYA				Sg	**Sb**	**10 29 14.4**	**+6.7**
GYA				smax			
	comp=N,480nm,0.7s						
GYA				smax			
	comp=E,600nm,0.9s						
GYA				LR	LR		
	comp=N,5μm,4.8s						
GYA				LR	LR		
	comp=E,3μm,4.2s						
GYA				LR	LR		
	comp=Z,5μm,4.0s						
WHN	**Wuhan**	**7.78**	**104**	Pn	**Pn**	**10 27 53.1**	**-1.4**
WHN				Sn	**Sn**	**10 29 20.8**	**-1.8**
WHN				LR	LR		
	comp=N,3μm,7.9s						
WHN				LR	LR		
	comp=E,3μm,5.2s						
WHN				LR	LR		
	comp=Z,2μm,4.8s						
KMI	**Kunming**	**8.01**	**199**	P	**Pn**	**10 27 57.8**	**+0.2**
KMI				S	**Sn**	**10 29 27.8**	**-0.4**
KMI				smax			
	comp=N,110nm,1.5s						
KMI				smax			
	comp=E,76nm,1.2s						
KMI				LR	LR		
	comp=N,1μm,7.0s						
KMI				LR	LR		
	comp=E,2μm,6.1s						
GTA	**Gaotai**	**8.12**	**326**	P	**Pn**	**10 27 58.3**	**-0.8**
GTA				pP		10 28 02.8	
GTA				sP		10 28 05.8	
GTA				S	**Sn**	**10 29 29.8**	**-1.1**
GTA				pmax	pmax		
	comp=Z,48nm,1.0s						
GTA				pmax	pmax		
	comp=Z,84nm,5.9s						
GTA				LR	LR		
	comp=N,2μm,9.2s						
GTA				LR	LR		
	comp=E,2μm,12.2s						
GTA				LR	LR		
	comp=Z,2μm,9.5s						
BTO	**Baotou**	**8.60**	**23**	*e*P	**Pn**	**10 28 04.8**	**-0.8**
BTO				S	**Sn**	**10 29 52.1**	**+9.4**
BTO				LR	LR		
	comp=N,510nm,7.9s	

NJ2 LR LR
comp=Z,540nm,11.6s
GZH Guangzhou 11.81 143 P **Pn 10 28 43.8 -6.0**
GZH S **Sn 10 30 57.4 -4.3**
GZH LR LR
comp=N,2µm,10.9s
GZH LR LR
comp=E,2µm,9.8s
LSA Lhasa 12.73 260 P **Pn 10 29 04.6 +2.3**
LSA Lhasa 12.73 260 *e*Pn **Pn 10 29 05.2 +2.9**
QZH Quanzhou 13.79 121 *e*P **Pn 10 29 15.0 -1.7**
QZH S **Sn 10 31 50.6 +0.7**
QZH LR LR
comp=N,2µm,10.6s
QZH LR LR
comp=E,1µm,10.2s
QZH LR LR
comp=Z,940nm,16.6s
SHL Shillong 13.95 243⇑ *i*P **Pn 10 29 18.5 -0.5**
QIZ Qiongzhong 14.19 163 P **Pn 10 29 19.5 -2.8**
QIZ S **Sn 10 32 05.8 +6.0**
QIZ pmax pmax
comp=Z,26nm,1.7s
QIZ pmax pmax
comp=Z,110nm,4.3s
QIZ LR LR
comp=N,950nm,8.6s
QIZ LR LR
comp=Z,1µm,10.4s
SONM Songino Array 15.07 2 Pn **Pn 10 29 32.2 -1.9**
comp=Z,0.4nm,0.3s,baz=187,slow=15,SNR=23
SONM LR LR 10 35 59.5
comp=Z,301nm,21.1s,baz=86,slow=40
CHTO Chiang Mai 15.12 205 *e*P **Pn 10 29 35.5 +0.7**
CHTO pmax pmax
comp=Z,9.0nm,0.8s
CHTO Chiang Mai 15.12 205 *e*Pn **Pn 10 29 35.5 +0.7**
comp=Z,9.3nm,0.8s
ULN Ulaanbaatar 15.13 4 *e*P **Pn 10 29 34.2 -0.7**
ULN pmax pmax
comp=Z,11nm,0.7s
ULN Ulaanbaatar 15.13 4 *e*Pn **Pn 10 29 34.2 -0.6**
comp=Z,11nm,0.7s
CM31 Chiang Mai Arr 15.45 204 *e*Pn **Pn 10 29 43.7 +4.5**
CMAR Chiang Mai Arr 15.45 204 Pn **Pn 10 29 38.8 -0.4**
comp=Z,0.4nm,0.3s,baz=12,slow=12,SNR=14
CMAR PcP PcP 10 34 42.9 +0.2
comp=Z,0.5nm,0.3s,baz=307,slow=2.7,SNR=5.3
CMAR LR LR 10 35 59.8
comp=Z,165nm,19.6s,baz=10.0,slow=39
TATO Taipei 15.92 115 *e*P **Pn 10 29 50.8 +5.4**
comp=Z,134nm,0.4s
YHNB Yeheng 16.00 116 *e*P **Pn 10 29 51.5 +5.1**
comp=Z,236nm,0.4s
SSLB Suanglung 16.20 120 *e*P **Pn 10 29 53.0 +4.1**
comp=Z,60nm,0.6s
TAPN Taplejung 16.39 255 *e*P **Pn 10 29 51.2 -0.2**
comp=Z,226nm,1.1s
NACB Ninganchiao 16.45 117 *e*Pn **Pn 10 29 50.3 -1.8**
comp=Z,259nm,0.4s
YULB Yu-li 16.69 120 *e*P **Pn 10 29 54.8 -0.3**
comp=Z,30nm,0.6s
ODAN Odare 16.85 254 *e*P **Pn 10 29 55.4 -1.8**
comp=Z,53nm,0.5s
TWG Pinlang 16.88 122 P **Pn 10 29 59.7 +2.1**
comp=Z,11nm,0.4s
SNY Shenyang 16.91 53 ⇓P **Pn 10 29 51.1 -6.7**
SNY S **Sn 10 32 56.4 -9.2**
SNY pmax pmax
comp=Z,11nm,0.4s
SNY LR LR
comp=N,450nm,18.9s
SNY LR LR
comp=E,260nm,18.6s
SNY LR LR
comp=Z,150nm,18.6s
RAMN Ramite 17.46 256 *e*P **Pn 10 30 02.7 -2.1**
comp=Z,166nm,1.0s
JIRN Jiri 17.52 258 *e*P **Pn 10 30 04.5 -1.1**
GUN Gumba 17.69 259 *e*P **Pn 10 30 06.5 -1.2**
comp=Z,172nm,0.9s
ZAK Zakamensk 17.69 355 *e*P **Pn 10 30 06.7 -0.8**
ZAK pmax pmax
comp=Z,4.0nm,1.0s
WMQ Urumqi 17.84 313 P **Pn 10 30 12.0 +2.6**
WMQ sP sP 10 30 19.0 +4.8
WMQ PP 10 30 27.0
WMQ S **Sn 10 33 28.0 -0.1**
WMQ SS 10 33 51.0
WMQ pmax pmax
comp=Z,25nm,0.8s
WMQ LR LR
comp=N,950nm,5.0s
WMQ LR LR
comp=E,650nm,5.0s
WMQ LR LR
comp=Z,360nm,5.0s
PKI Pulchoki 18.20 259 *e*P **Pn 10 30 11.8 -2.2**
comp=Z,47nm,0.5s
PKI Pulchoki 18.20 259 *e*P **Pn 10 30 12.4 -1.6**
PKI pmax pmax
comp=Z,89nm,0.7s
PKI Pulchoki 18.20 259 *e*P **Pn 10 30 12.4 -1.6**
comp=Z,89nm,0.7s
PKIN Phulchoki 18.21 259 *e*P **Pn 10 30 12.4 -1.7**
comp=Z,89nm,0.7s
KKN Kakani 18.23 260 *e*P **Pn 10 30 12.5 -1.8**
comp=Z,121nm,0.8s
KKN Kakani 18.23 260 *e*P **Pn 10 30 12.5 -1.8**
KKN pmax pmax
comp=Z,121nm,0.8s
DMN Daman 18.44 259 *e*P **Pn 10 30 14.6 -2.3**
comp=Z,68nm,0.9s
KSRS Korea Array 18.84 69 P **Pn 10 30 21.4 -0.4**
comp=Z,0.6nm,0.3s,baz=258,slow=10,SNR=24
KSRS LR LR 10 38 07.4
comp=Z,207nm,18.1s,baz=142,slow=39
KSRS Korea Array 18.84 69 P **Pn 10 30 21.4 -0.4**
KSRS pmax pmax
comp=Z,1.0nm,0.3s
KSRS MLR MLR
comp=Z,207nm,18.1s
TLY Talaya 18.96 356 *e*P **Pn 10 30 23.3 +0.2**
TLY *e*S **Sn 10 33 54.3 -1.0**
TLY pmax pmax
comp=Z,7.0nm,0.8s
TLY MLR MLR
comp=Z,230nm,13.0s
TLY Talaya 18.96 356 *e*P **Pn 10 30 20.5 -2.5**
comp=Z,5.2nm,0.8s
CN2 Changchun 19.04 49 *e*P **Pn 10 30 25.1 +1.0**
CN2 *e*pP pP 10 30 28.8 +2.7
CN2 *e*sP sP 10 30 32.1 +4.6
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 LR LR
comp=N,700nm,21.0s
CN2 LR LR
comp=E,400nm,21.0s
CN2 LR LR
comp=Z,300nm,19.0s
IRK Irkutsk 19.50 358 *e*P **Pn 10 30 29.0 -0.5**
IRK pmax pmax
comp=Z,44nm,0.8s
MDJ Mudanjiang 22.07 51 P **P 10 30 54.5 -1.7**
MDJ pP 10 30 56.8
MDJ S **S 10 35 01.6 +2.1**
MDJ pmax pmax
comp=Z,16nm,1.7s,mb4.2
MDJ pmax pmax
comp=Z,64nm,4.6s
MDJ LR LR
comp=N,150nm,20.4s,MS3.4
MDJ LR LR
comp=E,77nm,22.5s,MS3.4
MDJ LR LR
comp=Z,74nm,16.3s
JOSI Joshimath 22.26 271 *e*PKP **P 10 30 58.3 0.0**
MK31 Makanchi Array 22.64 315 *e*P **P 10 31 01.4 -0.7**
MKAR Makanchi Array 22.64 315 P **P 10 31 01.4 -0.8**
comp=Z,9.5nm,0.8s,mb4.3,baz=115,slow=11,SNR=39
MKAR LR LR 10 39 30.0
comp=Z,214nm,19.3s,MS3.6,baz=115,slow=36
MKAR Makanchi Array 22.64 315 *i*P **P 10 31 01.7 -0.4**
MKAR pmax pmax
comp=Z,10.0nm,0.7s

AGRA Agra 24.54 264 *e*PKP **P 10 31 21.2 +0.2**
AGRA *e*PKP 10 31 21.5
AGRA AMb AMB 10 31 25.2
comp=Z,56nm,0.2s,mb5.8
BISR Bishrakh 24.55 268 *ex* x 10 31 31.0
NDI New Delhi 24.70 268 *ex* **P 10 31 20.0 -2.5**
KSH Kashi 24.79 294 P **P 10 31 26.1 +2.9**
KSH pP 10 31 30.3
KSH sP sP 10 31 33.0 +5.6
KSH PP 10 32 03.5
KSH PcP PcP 10 35 02.0 +2.5
KSH S **S 10 35 46.0 +0.5**
KSH sS sS 10 35 53.8 +3.3
KSH SS 10 36 45.6
KSH ScP ScP 10 38 39.1 +0.6
KSH PcS PcS 10 38 40.8 +1.2
KSH ScS ScS 10 42 26.1 -0.4
KSH pmax pmax
comp=Z,32nm,1.2s,mb4.7
KSH LR LR
comp=N,200nm,6.7s
KSH LR LR
comp=E,220nm,8.0s
KSH LR LR
comp=Z,190nm,9.6s
AYAN Aya Nagar 24.84 268 *e*PKP **P 10 31 23.7 0.0**
AYAN AMb AMB 10 31 34.2
comp=Z,14nm,0.5s,mb4.7
SONA Sohna 24.94 267 *e*PKP **P 10 31 24.9 +0.2**
SONA AMb AMB 10 31 27.6
comp=Z,11nm,0.4s,mb4.8
ULHL Ulahol 25.04 301 P **P 10 31 27.2 +1.8**
SNR=7.4
KLR Kul'dur 25.51 42 *e*P **P 10 31 26.7 -2.9**
KLR MLR MLR
comp=N,900nm,14.0s,MS4.5
KLR MLR MLR
comp=E,600nm,14.0s,MS4.5
TKM2 Tokmak 2 25.65 302 P **P 10 31 33.7 +2.7**
SNR=5.7
TKM2 Tokmak 2 25.65 302 *e*P **P 10 31 33.6 +2.6**
TKM2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.5
TKM2 Tokmak 2 25.65 302 *e*P **P 10 31 33.6 +2.6**
comp=Z,9.6nm,0.6s,mb4.5
KZA Kyzart 25.73 300 P **P 10 31 33.9 +2.2**
SNR=6.5
ZAA0 Zalesovo Array 25.84 331 *e*P **P 10 31 32.5 0.0**
ZALV Zalesovo Beam 25.84 331 P **P 10 31 31.6 -0.9**
comp=Z,1.9nm,0.4s,mb4.0,baz=134,slow=9.7,SNR=12
ZALV LR LR 10 41 14.7
comp=Z,65nm,18.5s,MS3.2,baz=72,slow=36
ZALV Zalesovo Beam 25.84 331 P **P 10 31 31.6 -0.9**
ZALV pmax pmax
comp=Z,2.0nm,0.4s,mb4.0
ZALV MLR MLR
comp=Z,65nm,18.5s,MS3.2
KBK Karagaybulak 26.06 301 P **P 10 31 37.8 +3.1**
SNR=19
KHET Khetri 26.07 268 *e*PKP **P 10 31 34.5 -0.3**
KHET AMb AMB 10 31 39.6
comp=Z,38nm,1.4s,mb4.7
NGP Nagpur 26.26 251 *e*PKP **P 10 31 36.3 -0.4**
UCH Uchtor 26.29 300 P **P 10 31 38.5 +1.7**
SNR=31
AAK Ala-Archa 26.38 301 P **P 10 31 39.6 +2.0**
comp=Z,2.3nm,0.3s,mb4.1,baz=145,slow=5.3,SNR=11
AAK LR LR 10 43 14.3
comp=Z,301nm,20.9s,MS3.8,baz=300,slow=39
AAK Ala-Archa 26.38 301 *e*P **P 10 31 38.0 +0.4**
AAK pmax pmax
comp=Z,15nm,1.1s,mb4.4
AAK Ala-Archa 26.38 301 *e*P **P 10 31 38.0 +0.4**
comp=Z,15nm,1.1s,mb4.4
USP Ospenovka 26.52 302 P **P 10 31 41.3 +2.6**
SNR=12
BHPL Bhopal 26.55 256 *e*PKP **P 10 31 39.3 0.0**
KURK Kurchatov 26.74 320 P **P 10 31 40.6 -0.1**
comp=Z,11nm,0.9s,mb4.4,baz=132,slow=8.8,SNR=28
KURK Kurchatov 26.74 320 *e*P **P 10 31 40.9 +0.2**
KURK pmax pmax
comp=Z,26nm,1.2s,mb4.6
KURK Kurchatov 26.74 320 *e*P **P 10 31 40.9 +0.2**
comp=Z,26nm,1.2s,mb4.6
AML Almayashu 26.87 300 P **P 10 31 43.2 +1.2**
SNR=15
AML Almayashu 26.87 300 *e*P **P 10 31 42.9 +0.9**
comp=Z,17nm,1.0s,mb4.5
MJAR Matsushiro Arr 27.02 73 P **P 10 31 43.1 -0.4**
comp=Z,0.6nm,0.5s,baz=302,slow=7.0,SNR=4.6
MJAR LR LR 10 41 55.7
comp=Z,68nm,20.9s,baz=265,slow=35
HABR Khabarovsk 27.10 46 *e*P **P 10 31 41.4 -2.6**
HABR *e**SP sP 10 31 54.7 +6.4
HABR PPP 10 32 33.4
HABR 10 35 01.9
HABR *e*S **S 10 36 17.6 -4.4**
HABR *e**SS sS 10 36 33.6 +6.6
HABR *e* 10 42 30.4
HABR pmax pmax
comp=Z,32nm,1.9s,mb4.5
HABR pmax pmax
comp=N,29nm,2.3s
HABR pmax pmax
comp=E,39nm,2.1s
HABR MLR MLR
comp=Z,246nm,11.0s,MS4.0
NVS Novosibirsk 27.12 331 *i*P **P 10 31 47.6 +3.5**
NVS pmax pmax
comp=N,9.0nm,1.1s
NVS pmax pmax
comp=E,10.0nm,1.1s
NVS pmax pmax
comp=Z,11nm,1.1s,mb4.3
JHJ Hachijo jima 2 28.62 80 LR LR 10 44 15.0
comp=Z,163nm,20.2s,MS3.6,baz=88,slow=38
KBL Kabul 30.38 284 *e*P **P 10 32 14.6 +1.2**
KBL pmax pmax
comp=Z,16nm,0.9s,mb4.8
KBL Kabul 30.38 284 *e*P **P 10 32 14.6 +1.3**
comp=Z,16nm,0.9s,mb4.8
PSI Prapat 30.45 193 P **P 10 32 15.0 +0.9**
comp=Z,2.6nm,0.3s,mb4.4,baz=332,slow=5.5,SNR=3.8
PSI Prapat 30.45 193 P **P 10 32 15.0 +0.9**
PSI pmax pmax
comp=Z,3.0nm,0.3s,mb4.5
PSI Prapat 30.45 193 P **P 10 32 15.0 +0.9**
BVAR Borovoye Array 32.33 319 P **P 10 32 30.4 +0.2**
comp=Z,2.7nm,0.7s,mb4.2,baz=111,slow=8.1,SNR=9.6
BVAR PcP PcP 10 35 16.1 -1.9
comp=Z,1.3nm,0.7s,baz=134,slow=4.2,SNR=3.9
BVAR Borovoye Array 32.33 319 P **P 10 32 30.4 +0.1**
BVAR 10 35 16.1
BVAR pmax pmax
comp=Z,3.0nm,0.7s
BRVK Borovoye 32.40 319⇑ *e*P **P 10 32 30.5 -0.4**
BRVK pmax pmax
comp=Z,10.0nm,1.2s,mb4.5
BRVK Borovoye 32.40 319 *e*P **P 10 32 31.4 +0.5**
comp=Z,5.9nm,0.8s,mb4.5
YAK Yakutsk 33.11 21 *e*P **P 10 32 36.0 -1.0**
YAK *e**PP pP 10 32 45.4 +5.3
YAK *e* 10 33 47.8
YAK *e*PPP 10 34 01.4
YAK *e*S **S 10 37 56.0 +0.1**
YAK *e*SS SS 10 40 11.5 -6.9
YAK *e* 10 42 58.7
YAK pmax pmax
comp=Z,19nm,1.0s,mb5.0
YAK pmax pmax
comp=N,4.0nm,1.3s
YAK pmax pmax
comp=E,3.0nm,1.3s
YAK pmax pmax
comp=Z,20nm,0.7s,mb5.2
YAK smax
comp=N,25nm,2.3s
YAK smax
comp=E,24nm,3.0s
YAK MLR MLR
comp=Z,112nm,11.0s,MS3.8
YAK MLR MLR
comp=E,87nm,12.0s,MS3.8
YAK MLR MLR
comp=N,81nm,13.0s,MS3.8
ABKAR Akbulak array 37.56 310 *e*P **P 10 33 15.4 0.0**

comp=N,6.4nm,0.8s,mb4.4
SVE Sverdlovsk 38.96 322⇓ *e*P **P 10 33 27.8 +0.7**
SVE pmax pmax
comp=Z,19nm,1.0s,mb4.8
AKTK Aktyubinsk 38.97 311 P **P 10 33 27.1 -0.2**
AKTO Aktyubinsk 38.97 311 P **P 10 33 27.1 -0.2**
comp=Z,3.2nm,0.8s,mb4.1,baz=106,slow=13,SNR=9.7
AKTO Aktyubinsk 38.97 311 P **P 10 33 27.1 -0.2**
AKTO pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
KAPI Kappang 39.90 158 *e*P **P 10 33 35.5 +0.1**
comp=Z,21nm,0.9s,mb4.9
ARU Arti 39.93 321 *c i*P **P 10 33 34.9 -0.4**
ARU S **S 10 39 40.4 +0.3**
ARU SS SS 10 42 33.6 -2.9
ARU pmax pmax
comp=Z,28nm,1.2s,mb4.9
ARU Arti 39.93 321 *e*P **P 10 33 35.1 -0.1**
comp=Z,24nm,1.1s,mb4.8
TIXI Tiksi 40.89 11 *e*P **P 10 33 41.9 -1.1**
TIXI pmax pmax
comp=Z,16nm,1.3s,mb4.5
TIXI Tiksi 40.89 11 *e*P **P 10 33 41.9 -1.1**
comp=Z,16nm,1.3s,mb4.5
SOKR Solikamsk 41.75 325 *e*P **P 10 33 52.6 +2.4**
SOKR pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
SEY Seymchan 42.03 30⇑ *e*P **P 10 33 53.0 +0.6**
PETK Petropavlovsk- 42.12 45 P **P 10 33 52.6 -0.8**
comp=Z,2.1nm,0.7s,mb3.9,baz=224,slow=4.1,SNR=5.0
PETK LR LR 10 53 02.4
comp=Z,84nm,19.9s,MS3.6,baz=71,slow=38
PETK Petropavlovsk- 42.12 45 P **P 10 33 52.6 -0.8**
PETK pmax pmax
comp=Z,2.0nm,0.7s,mb3.9
PETK MLR MLR
comp=Z,84nm,19.9s,MS3.6
ZEI Tsey 48.81 301 *e*P **P 10 34 47.3 +0.8**
ZEI pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
BILL Bilibino 49.14 26 *ke*P **P 10 34 48.4 -0.2**
BILL pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
BILL MLR MLR
comp=Z,100nm,15.0s,MS3.9
BILL Bilibino 49.14 26 *e*P **P 10 34 48.4 -0.3**
comp=Z,11nm,0.6s,mb5.1
RDF Al-Radifah 49.46 282 *e*P **P 10 34 51.2 -0.4**
RDF AMb AMB 10 34 54.4
comp=Z,63nm,1.0s,mb5.6
KIV Kislovodsk 49.49 302 *e*P **P 10 34 53.2 +1.5**
KIV pmax pmax
comp=Z,13nm,1.0s,mb4.9
KIV MLR MLR
comp=Z,88nm,16.0s,MS3.9
NAY Al-Naaiem 49.60 282 *e*P **P 10 34 51.3 -1.4**
NAY AMb AMB 10 34 54.6
comp=Z,49nm,1.0s,mb5.5
VSR Storozhevoye 50.91 312 *e*P **P 10 35 01.8 -0.5**
VSR pmax pmax
comp=N,7.0nm,1.3s
VSR pmax pmax
comp=E,20nm,1.3s
VSR pmax pmax
comp=Z,20nm,1.3s,mb4.9
FX1 Attu Island--F 51.45 46 P **P 10 35 06.5 +0.1**
comp=Z,11nm,0.6s,mb5.0,baz=217,slow=6.2,SNR=18
FX1 Attu Island--F 51.45 46 P **P 10 35 06.5 +0.2**
FX1 pmax pmax
comp=Z,11nm,0.6s
MOS Moscow 51.48 318 *e*P **P 10 35 04.8 -1.7**
MOS pmax pmax
comp=Z,57nm,0.9s,mb5.5
KAKA Kakadu 51.98 146 *e*P **P 10 35 13.0 +2.3**
comp=Z,5.9nm,0.6s,mb4.7
OBN Obninsk 52.12 317⇑ *e*P **P 10 35 12.7 +1.4**
OBN pmax pmax
comp=Z,28nm,1.7s,mb4.9
ANN Anapa 53.04 304 *e*P **P 10 35 16.0 -2.3**
ANN pmax pmax
comp=Z,18nm,0.8s,mb5.0
KNA Kununurra 53.08 152 *e*P **P 10 35 19.1 +0.3**
comp=Z,13nm,0.6s,mb5.0
FITZ Fitzroy Crossi 54.08 156 *e*P **P 10 35 26.2 +0.1**
comp=Z,7.5nm,0.9s,mb4.6
JOF Joensuu 54.32 327 *e*P **P 10 35 26.3 -1.1**
JOF pmax pmax
comp=Z,18nm,0.9s,mb5.0
JOF Joensuu 54.32 327 *ep* **P 10 35 26.3 -1.1**
comp=Z,18nm,0.9s,mb5.0
JOF Joensuu 54.32 327 *ep* **P 10 35 26.3 -1.1**
comp=Z,18nm,0.9s,mb5.0
KEV Kevo 55.75 336 *e*P **P 10 35 34.2 -3.4**
KEV pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
KEV Kevo 55.75 336 *ep* **P 10 35 34.2 -3.4**
comp=Z,4.1nm,0.7s,mb4.6
KEV Kevo 55.75 336 *ep* **P 10 35 34.2 -3.4**
comp=Z,4.1nm,0.7s,mb4.6
ARCES ARCESS Array B 56.28 335 P **P 10 35 40.2 -1.2**
comp=Z,2.8nm,0.7s,mb4.4,baz=90,slow=7.3,SNR=6.5
ARCES LR LR 11 00 27.6
comp=Z,38nm,20.2s,MS3.5,baz=8.7,slow=37
ARCES ARCESS Array B 56.28 335 P **P 10 35 40.3 -1.1**
ARCES pmax pmax
comp=Z,3.0nm,0.7s
ARCES MLR MLR
comp=Z,38nm,20.2s
KAF Kangasniemi 56.71 326 *e*P **P 10 35 43.1 -1.5**
KAF pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
KAF Kangasniemi 56.71 326 *ep* **P 10 35 43.1 -1.5**
comp=Z,5.9nm,0.7s,mb4.7,baz=83,slow=7.1
KAF Kangasniemi 56.71 326 *ep* **P 10 35 43.1 -1.5**
comp=Z,5.9nm,0.7s,mb4.7,baz=83,slow=7.1
FINES FINESS Array B 56.91 326 P **P 10 35 45.1 -0.9**
comp=Z,4.2nm,0.4s,mb4.9,baz=90,slow=7.3,SNR=31
FINES FINESS Array B 56.91 326 P **P 10 35 45.1 -0.9**
FINES pmax pmax
comp=Z,4.0nm,0.4s
ASF Jabal al Asfar 56.98 290 P **P 10 35 47.7 +0.7**
comp=Z,3.4nm,0.8s,mb4.4,baz=10,slow=0.4,SNR=5.6
ASF Jabal al Asfar 56.98 290 P **P 10 35 47.7 +0.7**
ASF pmax pmax
comp=Z,3.0nm,0.9s
BRTR Keskin Array B 57.04 299 P **P 10 35 46.8 -0.6**
comp=Z,2.1nm,0.8s,mb4.2,baz=104,slow=6.8,SNR=11
BRTR Keskin Array B 57.04 299 P **P 10 35 46.8 -0.5**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
AKASG Malin Array Be 57.19 313 P **P 10 35 47.0 -1.2**
comp=Z,5.2nm,0.6s,mb4.7,baz=69,slow=6.5,SNR=16
AKASG Malin Array Be 57.19 313 *ce*P **P 10 35 47.0 -1.2**
AKASG pmax pmax
comp=Z,5.0nm,0.6s
COEN Coen 58.72 136 *e*P **P 10 35 59.7 +0.4**
COEN Coen 58.72 136 *e*P **P 10 36 01.0 +1.8**
WRAB Tennant Creek 59.17 148 *e*P **P 10 36 01.8 -0.5**
WRAB pmax pmax
comp=Z,22nm,0.7s,mb5.3
WRAB Tennant Creek 59.17 148 *e*P **P 10 36 01.8 -0.5**
comp=Z,22nm,0.7s,mb5.3
WRA Warramunga Arr 59.17 148 P **P 10 36 01.4 -0.9**
comp=Z,16nm,0.8s,mb5.1,baz=340,slow=7.6,SNR=49
WRA Warramunga Arr 59.17 148 P **P 10 36 01.5 -0.8**
WRA pmax pmax
comp=Z,16nm,0.8s
CFR Carcaliu 59.33 307⇑ *i*P **P 10 36 02.0 -1.3**
EIL Elat 59.45 288 P **P 10 36 03.5 -0.9**
comp=Z,6.9nm,0.8s,mb4.7,baz=53,slow=8.0,SNR=4.8
EIL Elat 59.45 288 P **P 10 36 03.5 -0.9**
VRI Vrincioaia 60.07 308⇓ *i*P **P 10 36 09.2 +0.8**
PLOR Plostina 60.13 308⇑ *i*P **P 10 36 09.1 +0.4**
BURAR Bucovina Array 60.54 310⇑ *i*P **P 10 36 11.1 -0.4**
BUR08 Bucovina Ar. S 60.54 310 *e*P **P 10 36 11.2 -0.3**
LVV L'vov 60.64 313 *e*P **P 10 36 13.0 +0.8**
MLR Muntele Rosu 60.71 307 P **P 10 36 12.2 -0.5**
comp=Z,2.2nm,0.5s,mb4.6,baz=180,slow=8.1,SNR=4.3
MLR Muntele Rosu 60.71 307 P **P 10 36 12.2 -0.5**
MLR pmax pmax
comp=Z,2.0nm,0.5s
MLR Muntele Rosu 60.71 307⇓ *i*P **P 10 36 09.5 -3.2**
ASAR Alice Springs 62.27 151 P **P 10 36 22.6 -0.8**
comp=Z,5.0nm,0.5s,mb4.9,baz=330,slow=6.2,SNR=51
ASAR Alice Springs 62.27 151 P **P 10 36 22.7 -0.7**
ASAR pmax pmax

comp=Z,5.0nm,0.5s
STHS Stebnicka Huta 62.49 313 *e*P **P 10 36 27.1 +2.5**
STHS pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
STHS Stebnicka Huta 62.49 313 *e*P **P 10 36 27.1 +2.5**
comp=Z,4.1nm,0.9s,mb4.6
STHS Stebnicka Huta 62.49 313 *e*P **P 10 36 27.1 +2.5**
CRVS Cervenica-Dubn 62.52 312 *e*P **P 10 36 28.5 +3.6**
CRVS pmax pmax
comp=Z,7.0nm,1.6s,mb4.5
CRVS Cervenica-Dubn 62.52 312 *e*P **P 10 36 28.5 +3.6**
comp=Z,7.2nm,1.6s,mb4.5
CRVS Cervenica-Dubn 62.52 312 *e*P **P 10 36 28.5 +3.6**
NIE Niedzica 63.06 313 *e*P **P 10 36 30.8 +2.3**
OJC Ojcow 63.11 314 *e*P **P 10 36 26.6 -2.1**
HFS Hagfors 63.12 326 P **P 10 36 27.3 -1.3**
comp=Z,7.8nm,0.9s,mb4.8,baz=90,slow=5.9,SNR=8.7
HFS Hagfors 63.12 326 P **P 10 36 27.3 -1.3**
HFS pmax pmax
comp=Z,8.0nm,0.9s
KECS Kecovo 63.27 312 *e*P **P 10 36 31.4 +1.5**
KECS pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
KECS Kecovo 63.27 312 *e*P **P 10 36 31.4 +1.5**
comp=Z,1.8nm,0.8s,mb4.2
KECS Kecovo 63.27 312 *e*P **P 10 36 31.4 +1.5**
NB2 NORSAR Subarra 63.95 327 P **P 10 36 32.5 -1.7**
comp=Z,9.1nm,0.9s,mb4.8,baz=72,slow=6.9
NOA NORSAR Array B 63.95 327 P **P 10 36 32.7 -1.5**
comp=Z,4.4nm,0.7s,mb4.6,baz=71,slow=6.8,SNR=8.1
NOA LR LR 11 04 56.7
comp=Z,34nm,18.0s,MS3.6,baz=345,slow=37
NOA NORSAR Array B 63.95 327 P **P 10 36 32.7 -1.5**
NOA pmax pmax
comp=Z,4.0nm,0.7s
NOA MLR MLR
comp=Z,35nm,18.0s
NOA NORSAR Array B 63.95 327 P **P 10 36 32.7 -1.5**
NOA LR LR 11 04 56.7
VYHS Vyhne 64.30 313 *e*P **P 10 36 38.8 +2.2**
VYHS pmax pmax
comp=Z,6.0nm,1.2s,mb4.5
VYHS Vyhne 64.30 313 *e*P **P 10 36 38.8 +2.2**
comp=Z,5.6nm,1.2s,mb4.5
VYHS Vyhne 64.30 313 *e*P **P 10 36 38.8 +2.2**
TTA Tatalina 65.00 30 *e*P **P 10 36 40.4 -0.6**
IDI Anoyia 65.10 297 P **P 10 36 40.7 -1.4**
comp=Z,3.9nm,0.6s,mb4.6,baz=72,slow=16,SNR=4.5
VRAC Vranov 65.37 314 P **P 10 36 43.0 -0.6**
comp=Z,4.9nm,0.7s,mb4.7,baz=45,slow=5.7,SNR=3.6
VRAC Vranov 65.37 314 P **P 10 36 43.0 -0.6**
VRAC pmax pmax
comp=Z,5.0nm,0.7s
COLD Coldfoot 65.45 25 *e*P **P 10 36 44.0 +0.2**
comp=Z,3.5nm,0.8s,mb4.4
SVW2 Sparrevohn 65.93 32 *e*P **P 10 36 47.0 0.0**
BRG Berggiesshubel 66.35 316 *e*P **P 10 36 52.3 +2.4**
comp=Z,3.8nm,0.9s,mb4.4
BRG Berggiesshubel 66.35 316 *e*P **P 10 36 52.3 +2.4**
BRG pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
CONA Conrad Observa 66.35 313⇑*i*P **P 10 36 50.6 +0.6**
comp=Z,6.4nm,1.2s,mb4.5
BPAW Bear Paw Mtn. 66.55 28 *e*P **P 10 36 50.7 -0.3**
comp=Z,4.2nm,0.7s,mb4.6
PPLA Purkeypile 66.61 29 *e*P **P 10 36 51.5 +0.2**
comp=Z,8.4nm,0.6s,mb5.0
FORT Forrest 66.67 159 *e*P **P 10 36 52.7 +0.6**
comp=Z,10nm,0.7s,mb5.0
CLL Collm 66.72 317 *e*P **P 10 36 53.7 +1.4**
CLL Collm 66.72 317 *e*P **P 10 36 54.0 +1.7**
CLL Collm 66.72 317 *e*P **P 10 36 54.0 +1.7**
KTH Kantishna Hill 66.82 28 *e*P **P 10 36 53.3 +0.6**
comp=Z,5.0nm,0.8s,mb4.6
TRF Thorofare Moun 67.12 28 *e*P **P 10 36 55.7 +1.1**
comp=Z,3.3nm,0.8s,mb4.4
BSEG Bad Segeberg 67.14 320 *e*P **P 10 36 57.3 +2.4**
comp=Z,9.0nm,0.9s,mb4.8
GEC2 GERESS Array S 67.30 314 *e*P **P 10 36 57.8 +1.8**
comp=Z,7.0nm,1.1s,mb4.6
GEC2 GERESS Array S 67.30 314 *e*P **P 10 36 57.8 +1.8**
GEC2 pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
PERS Pernice 67.33 312 *e*P **P 10 36 57.4 +1.2**
COLA College 67.39 26 *e*P **P 10 36 56.0 -0.3**
COLA pmax pmax
comp=Z,11nm,0.9s,mb4.9
COLA College 67.39 26 *e*P **P 10 36 56.0 -0.3**
comp=Z,11nm,0.9s,mb4.9
TANN Tannenbergstha 67.39 316 *e*P **P 10 36 58.1 +1.5**
comp=Z,9.0nm,1.3s,mb4.6
GUNZ Gunzen 67.49 316 *e*P **P 10 36 59.1 +1.9**
comp=Z,8.0nm,0.9s,mb4.8
WERN Wernitzgruen 67.50 316 *e*P **P 10 36 58.9 +1.7**
comp=Z,9.0nm,1.2s,mb4.7
BOJS Bojanci 67.71 311 *e*P **P 10 37 00.0 +1.4**
ROTZ Rotzenmuhle 67.81 316 *e*P **P 10 37 00.9 +1.7**
comp=Z,10.0nm,1.1s,mb4.8
NRDL Niedersach Rie 67.86 319 *e*P **P 10 37 01.6 +2.1**
comp=Z,14nm,1.1s,mb4.9
CLZ Clausthal 67.99 318 *e*P **P 10 37 02.6 +2.3**
comp=Z,12nm,0.8s,mb5.0
CLZ Clausthal 67.99 318 *e*P **P 10 37 02.6 +2.3**
CLZ pmax pmax
comp=Z,12nm,0.8s,mb5.0
GRA1 Grafenberg Arr 68.42 316 *e*P **P 10 37 04.7 +1.6**
comp=Z,13nm,1.0s,mb4.9
GRF Grafenberg Arr 68.42 316 *e*P **P 10 37 04.7 +1.6**
comp=Z,13nm,1.0s,mb4.9
GRF Grafenberg Arr 68.42 316 *e*P **P 10 37 04.7 +1.6**
GRF pmax pmax
comp=Z,13nm,1.0s,mb4.9
GRF Grafenberg Arr 68.42 316 *e*P **P 10 37 04.7 +1.6**
GRF pmax pmax
comp=Z,13nm,1.0s,mb4.9
PMR Palmer 68.48 30 *e*P **P 10 37 02.0 -1.2**
PMR pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
PMR Palmer 68.48 30 *e*P **P 10 37 02.0 -1.2**
comp=Z,9.2nm,0.6s,mb5.0
PAX Paxson 69.26 28 *e*P **P 10 37 09.0 +1.0**
PAX pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
PAX Paxson 69.26 28 *e*P **P 10 37 09.0 +0.9**
comp=Z,2.4nm,0.7s,mb4.2
EGAK Eagle 69.88 25 *e*P **P 10 37 12.3 +0.5**
comp=Z,2.5nm,0.9s,mb4.1
FETA Feichten 69.89 313⇑*i*P **P 10 37 12.1 -0.1**
comp=Z,9.8nm,1.1s,mb4.6
INK Inuvik 70.18 20 *e*P **P 10 37 12.9 -0.7**
INK pmax pmax
comp=Z,5.0nm,0.8s
INK Inuvik 70.18 20 *e*P **P 10 37 12.9 -0.7**
comp=Z,5.0nm,0.8s,mb4.5
DAVOX Davos/Dischmat 70.52 314 P **P 10 37 14.9 -1.1**
comp=Z,4.7nm,0.8s,mb4.5,baz=59,slow=6.8,SNR=6.0
BMRM Bremner River 70.68 29 *e*P **P 10 37 17.0 +0.3**
comp=Z,8.8nm,0.9s,mb4.7
BFO Black Forest 70.74 315 *e*P **P 10 37 18.7 +1.3**
comp=Z,9.0nm,1.1s,mb4.6
BFO Black Forest 70.74 315 *e*P **P 10 37 18.7 +1.3**
BFO pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
WLF Walferdange 71.37 317 *e*P **P 10 37 23.9 +2.7**
comp=Z,20nm,1.1s,mb5.0
RES Resolute Bay 71.98 6 *e*P **P 10 37 23.1 -1.3**
RES pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
RES Resolute Bay 71.98 6 *e*P **P 10 37 23.1 -1.4**
comp=Z,6.8nm,1.1s,mb4.5
KMBO Kilima Mbogo 72.52 257 P **P 10 37 28.3 -0.4**
comp=Z,3.6nm,0.8s,mb4.3,baz=46,slow=10,SNR=7.1
KMBO Kilima Mbogo 72.52 257 *c*e*P **P 10 37 30.2 +1.6**
KMBO pmax pmax
comp=Z,4.0nm,0.8s
KMBO Kilima Mbogo 72.52 257 P **P 10 37 28.3 -0.4**
STKA Stephens Creek 72.72 148 *e*P **P 10 37 29.6 +0.2**
comp=Z,2.6nm,0.9s,mb4.2
STKA Stephens Creek 72.72 148 P **P 10 37 29.0 -0.4**
comp=Z,3.3nm,0.8s,mb4.3,baz=325,slow=9.9,SNR=6.5
LPG La Plagne 73.04 313 *e*P **P 10 37 31.2 -0.1**
comp=Z,16nm,0.6s,mb4.8
LPG La Plagne 73.04 313 *e*P **P 10 37 31.2 -0.1**
LPG pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
LPG La Plagne 73.04 313 *e*P **P 10 37 31.2 -0.1**
comp=Z,7.9nm,0.6s,mb4.8
LPL La Plagne 73.05 313 *e*P **P 10 37 31.1 -0.2**
comp=Z,12nm,0.6s,mb4.7
LPL La Plagne 73.05 313 *e*P **P 10 37 31.1 -0.2**
LPL pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
LPL La Plagne 73.05 313 *e*P **P 10 37 31.1 -0.2**
comp=Z,6.2nm,0.6s,mb4.7
ESK Eskdalemuir 73.34 326 *i*P Px 10 37 43.1
HYT Haines Junctio 73.58 27 *e*P **P 10 37 34.4 +0.2**
CMSA Cobar Meteorol 74.33 145 *e*P **P 10 37 38.6 -0.2**
SKAG Skagway 75.29 27 *e*P **P 10 37 44.2 +0.1**
comp=Z,11nm,0.8s,mb4.8
YKA Yellowknife Ar 79.74 18 P **P 10 38 08.0 -0.9**
comp=Z,2.1nm,0.6s,mb4.2,baz=329,slow=5.2,SNR=14
YKA Yellowknife Ar 79.74 18 P **P 10 38 08.0 -0.9**
YKA pmax pmax
comp=Z,2.0nm,0.6s
YKA Yellowknife Ar 79.74 18 P **P 10 38 08.0 -0.9**
FCC Fort Churchill 87.36 10 *e*P **P 10 38 47.4 -0.7**
comp=Z,0.1nm,0.9s
FFC Flin Flon 89.69 16 *i*P **P 10 38 59.8 +0.5**
FFC Flin Flon 89.69 16 *e*P **P 10 38 58.3 -0.9**
comp=Z,3.4nm,0.8s,mb4.7
SCHQ Schefferville 92.53 356 P **P 10 39 11.7 -0.7**
comp=Z,1.2nm,0.5s,mb4.5,baz=326,slow=3.6,SNR=4.3
HUMO Hull Mountain 92.78 34 *e*P **P 10 39 13.1 -0.7**
comp=Z,2.3nm,1.1s,mb4.5
SLMT Seeley Lake 92.95 25 *e*P **P 10 39 14.6 +0.1**
TORD Torodi Ar. Bea 94.33 289 P **P 10 39 20.6 -0.9**
comp=Z,0.5nm,0.5s,mb4.2,baz=73,slow=4.2,SNR=6.5
OTAV Otavalo 146.96 7 *e*PKPdf PKPdf 10 45 42.0 -0.7
OTAV *e*PKPbc PKPbc 10 45 45.6 +1.0

TAP ***19*** *10:40:50.0,24.°39N×121.°94E,h26km,ML3.5,C*
JMA ***19*** *10:40:50.0±0.3,25.°18N×122.°34E,h0km,M2.6*
ISCJB ***19*** *10:40:50.1±0.5,24.°38N±0.°02×122.°01E±0.°02,h13km±3km,*
Error ellipse: s-maj=3.3km s-min=2.8km az=37.3
ISC 19 10:40:50.4±0.4,24.°39N±0.°02×121.°99E±0.°02,h15km±2km,
n40,σ0s75/69,6C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau** baz=281	**0.23**	**279**	⇑*i*P	**Pg**	**10 40 55.7**	**+0.1**
ENA				*i*S	**Sg**	**10 40 59.6**	**+0.4**
EHP	**Heping Village** baz=244	**0.24**	**251**	P	**Pg**	**10 40 55.3**	**-0.5**
EHP				*e*S	**Sg**	**10 41 00.5**	**+1.1**
TWC	**Suao** baz=341	**0.26**	**329**	*i*P	**Pg**	**10 40 56.3**	**+0.3**
TWC				S	**Sg**	**10 41 00.3**	**+0.5**
ILA	**Ilan** baz=330	**0.44**	**329**	P	**Pg**	**10 40 59.3**	**+0.1**
ILA				S	**Sg**	**10 41 06.4**	**+1.3**
TWE	**Neicheng** baz=325	**0.44**	**318**	⇑*i*P	**Pg**	**10 40 59.2**	**-0.2**
TWE				S	**Sg**	**10 41 05.3**	**-0.1**
ENTT	**Nioudou** baz=307	**0.46**	**303**	⇑*i*P	**Pg**	**10 40 59.3**	**-0.4**
ENTT				S	**Sg**	**10 41 05.9**	**0.0**
TWD	**Chiawan** baz=231	**0.48**	**230**	P	**Pg**	**10 40 59.7**	**-0.2**
TWD				S	**Sg**	**10 41 07.3**	**+1.0**
HWA	**Hwalien** baz=215	**0.54**	**221**	*e*P	**Pg**	**10 41 01.9**	**+0.7**
NNS	**Nan Shan** baz=281	**0.57**	**275**	P	**Pg**	**10 41 01.1**	**-0.6**
NNS				S	**Sg**	**10 41 08.7**	**-0.5**
TWB1	**Santiao Chiao**	**0.62**	**360**	*i*P	**Pg**	**10 41 02.8**	**+0.2**
TWB1				S	**Sg**	**10 41 11.2**	**+0.5**
NSK	**Sanguang** baz=299	**0.65**	**296**	*i*P	**Pg**	**10 41 02.4**	**-0.7**
NSK				S	**Sg**	**10 41 10.7**	**-1.0**
TWA	**Mucha** baz=323	**0.70**	**328**	*e*P	**Pg**	**10 41 03.6**	**-0.4**
TWA				*e*S	**Sg**	**10 41 13.3**	**0.0**
NWF	**Wu-fen Shan** baz=342	**0.70**	**344**	⇑P	**Pg**	**10 41 04.3**	**+0.1**
NWF				S	**Sg**	**10 41 14.2**	**+0.6**
WHF	**Hehuan Shan** baz=257	**0.71**	**250**	⇑P	**Pg**	**10 41 03.6**	**-0.7**
WHF				S	**Sg**	**10 41 13.6**	**0.0**
TWT	**Tachien** baz=259	**0.76**	**260**	P	**Pg**	**10 41 04.8**	**-0.4**
TWT				*e*S	**Sg**	**10 41 15.2**	**0.0**
ESL	**Shilin** baz=232	**0.77**	**222**	*e*P	**Pg**	**10 41 04.4**	**-1.0**
ESL				*e*S	**Sg**	**10 41 16.5**	**+0.9**
TAP1	**Taipei** baz=324	**0.78**	**327**	*e*P	**Pg**	**10 41 05.7**	**+0.1**
TAP1				*e*S	**Sg**	**10 41 16.0**	**+0.2**
TWS1	**Kuangyinshan** baz=337	**0.88**	**324**	*e*P	**Pb**	**10 41 07.2**	**-0.2**
TWS1				*e*S	**Sb**	**10 41 19.5**	**+0.5**
YOJ	**Yonaguni jima** baz=286	**0.93**	**85**	P	**Pb**	**10 41 08.4**	**+0.2**
YOJ				S	**Sb**	**10 41 21.5**	**+1.1**
NSTT	**Nanjuang** baz=286	**0.94**	**285**	*e*P	**Pb**	**10 41 07.8**	**-0.5**
NSTT				S	**Sb**	**10 41 19.7**	**-0.9**
TWY	**Chenhua** baz=341	**0.95**	**338**	*e*P	**Pb**	**10 41 08.5**	**-0.1**
TWY				*e*S	**Sb**	**10 41 21.2**	**+0.2**
EHY	**Hungye** baz=212	**1.07**	**215**	*e*P	**Pb**	**10 41 09.8**	**-0.9**
TWQ1	**Liyutan** baz=268	**1.11**	**268**	*e*P	**Pb**	**10 41 11.5**	**+0.1**
TWQ1				*e*S	**Sb**	**10 41 26.1**	**+0.5**
SMLT	**Sun Moon Lake** baz=232	**1.12**	**243**	*e*P	**Pb**	**10 41 10.4**	**-1.0**
NSY	**Sanyi** baz=271	**1.12**	**272**	*e*P	**Pb**	**10 41 10.3**	**-1.3**
NSY				*e*S	**Sb**	**10 41 26.9**	**+0.9**
TYC	**Yuchr** baz=235	**1.15**	**245**	P	**Pn**	**10 41 10.6**	**-1.3**
TWF1	**Yuli** baz=221	**1.21**	**212**	*e*P	**Pn**	**10 41 10.7**	**-2.1**
PCYT	**Pengchaiyu** baz=7.0	**1.24**	**3**	*e*P	**Pn**	**10 41 12.0**	**-1.2**
YUS	**Yu-Shan** baz=225	**1.31**	**227**	⇑P	**Pn**	**10 41 13.3**	**-0.8**
ALS	**Alishan** baz=219	**1.40**	**231**	*e*P	**Pn**	**10 41 14.9**	**-0.4**
CHN5	**Tsauling** baz=236	**1.44**	**237**	*e*P	**Pn**	**10 41 15.7**	**-0.2**
CHN5				*e*S	**Sn**	**10 41 35.4**	**+0.9**
ELDTW	**Lidau** baz=204	**1.49**	**217**	*e*P	**Pn**	**10 41 15.6**	**-1.1**
IRIF	**Iriomote-Funau**	**1.58**	**92**	*e*S	**Sn**	**10 41 38.1**	**0.0**
CHN4	**Tsaushan** baz=230	**1.65**	**231**	*e*P	**Pn**	**10 41 19.5**	**+0.7**
CHN4				*e*S	**Sn**	**10 41 41.6**	**+1.9**
WTP	**Ta-pu** baz=227	**1.70**	**228**	*e*P	**Pn**	**10 41 19.6**	**0.0**
WTP				*e*S	**Sn**	**10 41 42.0**	**+1.0**
TWK	**Hsinying** baz=230	**1.77**	**231**	*e*P	**Pn**	**10 41 20.8**	**+0.2**
TWK				*e*S	**Sn**	**10 41 43.8**	**+1.0**
TWG	**Pinlang** baz=193	**1.78**	**209**	*e*P	**Pn**	**10 41 19.7**	**-0.9**
CHN1	**Nanshi** baz=227	**1.80**	**229**	*e*P	**Pn**	**10 41 20.6**	**-0.4**
CHN1				*e*S	**Sn**	**10 41 45.0**	**+1.5**
JKRS	**Kuro-shima** baz=227	**1.84**	**94**	P	**Pn**	**10 41 22.8**	**+1.3**
JKRS				*e*S	**Sn**	**10 41 45.2**	**+0.6**
JIJ	**Ishigaki jima**	**1.96**	**90**	P	**Pn**	**10 41 23.2**	**+0.1**
JIJ				S	**Sn**	**10 41 46.5**	**-0.9**

TAP ***19*** *10:44:41.5,24.°40N×121.°93E,h25km,ML3.3,C*
JMA ***19*** *10:44:41.6±0.1,24.°54N×121.°92E,h56km,M2.2*
ISCJB ***19*** *10:44:41.6±0.3,24.°38N±0.°02×122.°00E±0.°02,h18km±4km,*
Error ellipse: s-maj=3.9km s-min=2.6km az=136.6
ISC 19 10:44:41.6±0.4,24.°39N±0.°02×121.°99E±0.°02,h16km±2km,
n44,σ0s80/76,5C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau** baz=280	**0.23**	**280**	⇑*i*P	**Pg**	**10 44 47.0**	**+0.1**
ENA				S	**Sg**	**10 44 50.8**	**+0.4**
EHP	**Heping Village** baz=243	**0.24**	**251**	*e*P	**Pg**	**10 44 46.8**	**-0.2**
EHP				*e*S	**Sg**	**10 44 51.7**	**+1.1**
TWC	**Suao** baz=342	**0.25**	**330**	*i*P	**Pg**	**10 44 47.7**	**+0.4**
TWC				*i*S	**Sg**	**10 44 51.5**	**+0.5**
ILA	**Ilan** baz=330	**0.43**	**330**	*i*P	**Pg**	**10 44 50.8**	**+0.4**
ILA				S	**Sg**	**10 44 57.2**	**+0.9**
TWE	**Neicheng** baz=325	**0.44**	**319**	⇑*i*P	**Pg**	**10 44 50.5**	**-0.1**
TWE				S	**Sg**	**10 44 56.2**	**-0.4**
ENTT	**Nioudou** baz=307	**0.46**	**303**	⇑*i*P	**Pg**	**10 44 50.6**	**-0.2**
ENTT				S	**Sg**	**10 44 57.0**	**0.0**
TWD	**Chiawan** baz=230	**0.47**	**229**	*i*P	**Pg**	**10 44 51.0**	**-0.1**
TWD				*e*S	**Sg**	**10 44 58.4**	**+0.9**
HWA	**Hwalien** baz=214	**0.54**	**220**	*e*P	**Pg**	**10 44 52.5**	**+0.1**
NNS	**Nan Shan** baz=281	**0.56**	**275**	P	**Pg**	**10 44 52.4**	**-0.3**
NNS				S	**Sg**	**10 44 59.8**	**-0.5**
TWB1	**Santiao Chiao** baz=1.0	**0.61**	**0**	*i*P	**Pg**	**10 44 53.9**	**+0.1**
TWB1				S	**Sg**	**10 45 02.3**	**+0.3**
NSK	**Sanguang** baz=306	**0.64**	**297**	⇑*i*P	**Pg**	**10 44 53.7**	**-0.5**
NSK				S	**Sg**	**10 45 01.7**	**-1.0**
TWA	**Mucha** baz=324	**0.69**	**328**	*e*P	**Pg**	**10 44 55.1**	**-0.1**
TWA				*e*S	**Sg**	**10 45 04.3**	**-0.2**
NWF	**Wu-fen Shan** baz=343	**0.70**	**345**	P	**Pg**	**10 44 55.4**	**-0.1**
NWF				S	**Sg**	**10 45 05.5**	**+0.7**
WHF	**Hehuan Shan** baz=256	**0.70**	**250**	⇑*i*P	**Pg**	**10 44 54.9**	**-0.5**
WHF				S	**Sg**	**10 45 04.7**	**-0.1**
TWT	**Tachien** baz=259	**0.75**	**260**	P	**Pb**	**10 44 56.1**	**-0.2**
TWT				*e*S	**Sg**	**10 45 06.1**	**-0.2**
ESL	**Shilin** baz=233	**0.77**	**222**	*e*P	**Pb**	**10 44 55.3**	**-1.3**
ESL				*e*S	**Sg**	**10 45 08.0**	**+1.3**
TAP1	**Taipei** baz=324	**0.77**	**327**	*e*P	**Pb**	**10 44 56.6**	**0.0**
TAP1				*e*S	**Sb**	**10 45 07.3**	**+0.4**
TWS1	**Kuangyinshan** baz=338	**0.88**	**324**	*e*P	**Pb**	**10 44 58.2**	**-0.3**
TWS1				*e*S	**Sb**	**10 45 10.7**	**+0.8**
NSTT	**Nanjuang** baz=286	**0.93**	**285**	*e*P	**Pb**	**10 44 58.7**	**-0.7**
NSTT				*e*S	**Sb**	**10 45 10.4**	**-1.1**
YOJ	**Yonaguni jima** baz=286	**0.94**	**85**	P	**Pb**	**10 44 59.7**	**+0.3**
YOJ				S	**Sb**	**10 45 12.7**	**+1.1**
TWY	**Chenhua** baz=342	**0.95**	**338**	*e*P	**Pb**	**10 44 59.7**	**0.0**
TWY				*e*S	**Sb**	**10 45 12.5**	**+0.5**
EHY	**Hungye** baz=212	**1.07**	**215**	*e*P	**Pb**	**10 44 59.3**	**-2.4**
TWQ1	**Liyutan** baz=268	**1.11**	**268**	*e*P	**Pb**	**10 45 01.4**	**-1.0**
TWQ1				*e*S	**Sb**	**10 45 16.7**	**+0.2**
SMLT	**Sun Moon Lake** baz=234	**1.11**	**243**	*e*P	**Pb**	**10 45 01.7**	**-0.8**
SMLT				*e*S	**Sb**	**10 45 18.4**	**+1.7**
TYC	**Yuchr** baz=233	**1.14**	**245**	*e*P	**Pn**	**10 45 01.6**	**-1.3**
TWF1	**Yuli** baz=221	**1.21**	**212**	*e*P	**Pn**	**10 45 01.3**	**-2.6**
PCYT	**Pengchaiyu** baz=7.0	**1.24**	**3**	*e*P	**Pn**	**10 45 03.3**	**-0.9**
WNT	**Mingjian** baz=245	**1.30**	**247**	*e*P	**Pn**	**10 45 04.7**	**-0.3**
YUS	**Yu-Shan** baz=225	**1.30**	**227**	*e*P	**Pn**	**10 45 04.2**	**-0.9**
YUS				*e*S	**Sn**	**10 45 22.1**	**-0.1**
ALS	**Alishan** baz=218	**1.39**	**231**	*e*P	**Pn**	**10 45 06.0**	**-0.4**
CHN5	**Tsauling** baz=235	**1.44**	**237**	*e*P	**Pn**	**10 45 07.0**	**+0.1**
CHN5				*e*S	**Sn**	**10 45 26.8**	**+1.4**
ELDTW	**Lidau** baz=203	**1.49**	**217**	*e*P	**Pn**	**10 45 05.6**	**-2.1**
IRIF	**Iriomote-Funau**	**1.59**	**92**	P	**Pn**	**10 45 09.1**	**0.0**
IRIF				*e*S	**Sn**	**10 45 29.3**	**+0.1**
CHN4	**Tsaushan** baz=230	**1.64**	**231**	*e*P	**Pn**	**10 45 10.6**	**+0.8**
CHN4				*e*S	**Sn**	**10 45 32.5**	**+1.9**
STYT	**Tauyuan** baz=210	**1.66**	**223**	*e*P	**Pn**	**10 45 10.0**	**-0.1**
STYT				*e*S	**Sn**	**10 45 31.0**	**0.0**
WTP	**Ta-pu** baz=226	**1.70**	**228**	*e*P	**Pn**	**10 45 10.3**	**-0.3**
WTP				*e*S	**Sn**	**10 45 33.9**	**+2.0**
TWK	**Hsinying** baz=229	**1.77**	**231**	*e*P	**Pn**	**10 45 11.6**	**0.0**
CHN1	**Nanshi** baz=227	**1.80**	**228**	*e*P	**Pn**	**10 45 11.6**	**-0.3**
CHN1				*e*S	**Sn**	**10 45 35.9**	**+1.5**
SGST	**Jiashian** baz=211	**1.83**	**225**	*e*P	**Pn**	**10 45 13.1**	**+0.7**
JKRS	**Kuro-shima** baz=198	**1.85**	**94**	P	**Pn**	**10 45 12.5**	**-0.1**
JKRS				S	**Sn**	**10 45 36.1**	**+0.4**
JIJ	**Ishigaki jima**	**1.96**	**90**	P	**Pn**	**10 45 14.2**	**0.0**
JIJ				S	**Sn**	**10 45 38.0**	**-0.5**
SSD	**Sandimen** baz=217	**2.06**	**218**	*e*P	**Pn**	**10 45 15.8**	**+0.4**
EAST	**Anshuo** baz=198	**2.26**	**208**	*e*P	**Pn**	**10 45 17.4**	**-0.9**
JTJ	**Tarama**	**2.48**	**84**	P	**Pn**	**10 45 21.2**	**-0.2**
JTJ				*e*S	**Sn**	**10 45 52.1**	**+0.7**

MEX 19 10:45:55.9±0.7,16.°23N×99.°46W,h7km±15km,MD3.5,
Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.74**	**329**	*i*P	Pg	10 46 09.5	-0.7

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX				*i* S	Sg	10 46 19.0	-0.9
CAIG	**El Cayaco**	**1.12**	**316**	*e*P	Pg	10 46 13.8	-3.7
CAIG				*i* S	Sg	10 46 28.9	-3.2
PNIG	**Pinotepa**	**1.29**	**83**	*e*P	Pn	10 46 16.9	-3.4
PNIG				*i* S	Sb	10 46 32.5	-4.8
UTMO	**Huajuapan**	**2.24**	**45**	*i* P	Pn	10 46 29.7	-3.8
UTMO				*i* S	Sn	10 46 57.4	-4.0
PPM	**Popocatepetl**	**2.93**	**16**	*i* P	Pn	10 46 39.8	-3.1
PPM				*i* S	Sn	10 47 17.3	-1.1

BJI ***19*** *10:48:06.2, 11°.64S×112°.16E, h35km, mB5.0/5, mb4.7/12*
IDC ***19*** *10:48:13.1±4.1, 10°.78S×111°.98E, h21km±25km, mb4.5/17, mb1 4.5/20, mb1mx4.5/24, mbtmp4.4/20, ML4.1/3, MS3.5/11, Ms1 3.5/11, ms1mx3.3/23, Error ellipse: s-maj=17.6km s-min=11.9km az=45.0*
ISCJB ***19*** *10:48:13.4±0.6, 10°.83S±0°.03×111°.73E±0°.02, h37km±5km, mb4.8/43, MS3.5/9, Error ellipse: s-maj=5.6km s-min=3.5km az=15.6*
NEIC ***19*** *10:48:15.2±0.2, 10°.72S×111°.97E, h35km, mb4.8/11, Error ellipse: s-maj=9.3km s-min=4.9km az=47.0*
DJA ***19*** *10:48:15, 10°.64S×111°.80E, h10km, mb4.8/39*
ISC 19 10:48:15.5±0.5, 10°.81S±0°.03×111°.75E±0°.02, h38km±4km, n174, σ1°.24/176, mb4.8/43, MS3.5/9, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**2.66**	**348**	P	**Pn**	**10 48 53.5**	**-2.4**
PCJI				S	**Sn**	**10 49 26.0**	**-1.0**
KRKI	**Karangkates**	**2.73**	**15**	P	**Pn**	**10 48 55.4**	**-1.4**
KRKI				S	**Sn**	**10 49 28.6**	**0.0**
PWJI	**Pagerwojo**	**2.77**	**1**	P	**Pn**	**10 48 55.5**	**-2.0**
PWJI				S	**Sn**	**10 49 28.9**	**-0.8**
GMJI	**Gumukmas**	**3.03**	**34**	P	**Pn**	**10 48 59.4**	**-1.5**
GMJI				S	**Sn**	**10 49 33.2**	**-2.8**
SJI	**Sawahan**	**3.06**	**0**	P	**Pn**	**10 48 59.9**	**-1.5**
SJI				S	**Sn**	**10 49 37.2**	**+0.4**
UGM	**Wanagama**	**3.13**	**337**	P	**Pn**	**10 49 00.9**	**-1.4**
UGM				S	**Sn**	**10 49 38.4**	**-0.1**
YOGI	**Yogyakarta**	**3.31**	**334**	P	**Pn**	**10 49 03.5**	**-1.3**
YOGI				S	**Sn**	**10 49 42.4**	**-0.5**
NGJI	**Ngawi**	**3.44**	**355**	P	**Pn**	**10 49 07.9**	**+1.3**
NGJI				S	**Sn**	**10 49 51.5**	**+5.4**
BYJI	**Banyuwangi**	**3.64**	**45**	P	**Pn**	**10 49 09.8**	**+0.4**
BYJI				S	**Sn**	**10 49 52.4**	**+1.2**
NBBI	**Negara**	**3.73**	**50**	P	**Pn**	**10 49 11.3**	**+0.7**
NBBI				S	**Sn**	**10 49 52.3**	**-1.0**
ABJI	**Asem Bagus**	**3.87**	**39**	P	**Pn**	**10 49 12.7**	**+0.1**
IGBI	**Denpasar**	**3.89**	**60**	P	**Pn**	**10 49 10.7**	**-2.1**
IGBI				S	**Sn**	**10 49 57.3**	**0.0**
GRJI	**Gresik**	**3.94**	**11**	P	**Pn**	**10 49 14.0**	**+0.5**
GRJI				S	**Sn**	**10 49 58.1**	**-0.4**
SMRI	**Semarang**	**3.96**	**341**	P	**Pn**	**10 49 13.6**	**-0.2**
SMRI				S	**Sn**	**10 50 01.6**	**+2.6**
DNP	**Denpasar**	**4.02**	**58**	P	**Pn**	**10 49 15.9**	**+1.3**
DNP				S	**Sn**	**10 50 02.5**	**+2.1**
KMMI	**Kalianget**	**4.33**	**31**	P	**Pn**	**10 49 19.6**	**+0.7**
KMMI				S	**Sn**	**10 50 10.1**	**+1.9**
SRBI	**Singaraja**	**4.36**	**52**	P	**Pn**	**10 49 18.3**	**-1.0**
SRBI				S	**Sn**	**10 50 06.2**	**-2.7**
CMJI	**Cimerak**	**4.44**	**312**	S	**Sn**	**10 50 06.8**	**-4.0**
KHKI	**Kahang-Kahang**	**4.51**	**58**	P	**Pn**	**10 49 20.7**	**-0.7**
KHKI				S	**Sn**	**10 50 14.9**	**+2.2**
LEM	**Lembang**	**5.69**	**314**	P	**Pn**	**10 49 39.0**	**+1.4**
3.1nm170nm,0.9s							
SKJI	**Sukabumi**	**6.38**	**306**	P	**Pn**	**10 49 48.1**	**+1.1**
SKJI				S	**Sn**	**10 50 59.4**	**+0.8**
SBJI	**Serang**	**7.26**	**310**	S	**Sn**	**10 51 23.7**	**+3.4**
CGJI	**Cibinong**	**7.30**	**304**	P	**Pn**	**10 49 59.3**	**-0.4**
CGJI				S	**Sn**	**10 51 18.1**	**-3.2**
RBSI	**Rajabasa**	**7.73**	**309**	P	**Pn**	**10 50 06.2**	**+0.6**
0.6nm2μm195nm,0.6s							
KBKI	**Kotabaru**	**8.65**	**31**	P	**Pn**	**10 50 20.7**	**+2.4**
40nm,1.1s							
KASI	**Kota Agung**	**8.90**	**306**	P	**Pn**	**10 50 20.4**	**-1.2**
KASI				S	**Sn**	**10 51 58.8**	**-1.9**
TPI	**Tanjungpandan**	**8.98**	**333**	P	**Pn**	**10 50 23.3**	**+0.6**
22nm,1.1s							
KLI	**Kotabumi**	**9.03**	**310**	P	**Pn**	**10 50 27.3**	**+3.8**
6μm120nm,0.6s							
KLSI		**9.24**	**311**	P	**Pn**	**10 50 27.0**	**+0.7**
52nm,1.1s							
LWLI	**Liwa**	**9.55**	**306**	P	**Pn**	**10 50 31.5**	**+0.9**
7μm202nm,0.8s							
MDSI	**Maura Dua**	**9.79**	**309**	P	**Pn**	**10 50 33.7**	**-0.1**
34nm,0.9s							
KAPI	**Kappang**	**9.79**	**55**	Pn	**Pn**	**10 50 30.5**	**-3.4**
3.2nm,0.3s,baz=222,slow=7.0,SNR=8.5							
KAPI	**Kappang**	**9.79**	**55**	*e*Pn	**Pn**	**10 50 30.3**	**-3.6**
KAPI	**Kappang**	**9.79**	**55**	P	**Pn**	**10 50 33.2**	**-0.7**
17nm,0.6s							
BKSI	**Bulukumba**	**9.92**	**57**	P	**Pn**	**10 50 34.7**	**-1.0**
470nm63nm,0.7s							
PPBI	**Pangkal Pinang**	**10.24**	**327**	P	**Pn**	**10 50 41.0**	**+0.9**
2μm18nm,1.0s							
BNSI	**Bone**	**10.45**	**53**	P	**Pn**	**10 50 44.6**	**+1.7**
70nm,0.7s							
SPSI	**Sidrap Palu**	**10.46**	**50**	P	**Pn**	**10 50 45.1**	**+2.0**
18nm,1.0s							
MMRI	**Maumere**	**10.56**	**79**	P	**Pn**	**10 50 41.7**	**-2.7**
1μm81nm,1.2s							
STKI	**Sintang**	**10.81**	**359**	P	**Pn**	**10 50 52.1**	**+4.2**
28nm,0.9s							
MNAI	**Manna**	**10.82**	**306**	P	**Pn**	**10 50 45.2**	**-2.8**
TTSI	**Tana Toraja**	**11.12**	**47**	P	**Pn**	**10 50 54.1**	**+2.0**
35nm,1.0s							
KSI	**Kapahiang**	**11.54**	**307**	P	**Pn**	**10 50 56.9**	**-0.9**
346nm,0.8s							
MBWA	**Marble Bar**	**12.83**	**144**	*e*Pn	**Pn**	**10 51 08.3**	**-7.1**
30nm,0.5s							
MBWA				*e*Sn	**Sn**	**10 53 17.3**	**-20**
MBWA	**Marble Bar**	**12.83**	**144**	P	**Pn**	**10 51 09.5**	**-5.9**
59nm,0.8s							
SBUM	**Sibu**	**13.18**	**2**	P	**Pn**	**10 51 23.9**	**+3.6**
11nm,0.7s							
APSI	**Ampana**	**13.91**	**46**	P	**Pn**	**10 51 37.5**	**+7.3**
77nm,0.9s							
SDSI	**Sungai Dareh**	**14.20**	**313**	P	**Pn**	**10 51 41.3**	**+7.1**
LUWI	**Luwuk**	**14.63**	**49**	P	**Pn**	**10 51 47.3**	**+7.2**
COCO	**West Island**	**14.68**	**263**	P	**Pn**	**10 51 49.5**	**+8.7**
PDSI	**Padang**	**14.92**	**311**	P	**Pn**	**10 51 48.6**	**+4.7**
53nm,0.7s							
MRSI	**Marisa**	**15.11**	**43**	P	**Pn**	**10 51 51.1**	**+4.6**
FITZ	**Fitzroy Crossi**	**15.27**	**120**	*e*P	**Pn**	**10 51 43.2**	**-5.3**
22nm,0.9s							
FITZ				*e*S	S	10 54 14.7	-37
FITZ	**Fitzroy Crossi**	**15.27**	**120**	Pn	**Pn**	**10 51 43.6**	**-4.9**
0.5nm,0.3s,baz=300,slow=5.8,SNR=14							
FITZ				Sn	Sn	10 54 15.4	-21
0.7nm,0.3s,baz=127,slow=20,SNR=3.6							
FITZ				LR	LR	10 57 26.8	
comp=Z,144nm,18.6s,baz=300,slow=37							
FITZ	**Fitzroy Crossi**	**15.27**	**120**	*e*Pn	**Pn**	**10 51 44.3**	**-4.1**
FITZ				Sn	Sn	10 54 15.4	-21
FITZ				*e*Sn	**Sn**	**10 54 20.1**	**-17**
FITZ				LR	LR	10 57 26.8	
FITZ	**Fitzroy Crossi**	**15.27**	**120**	P	**Pn**	**10 51 48.0**	**-0.5**
43nm,1.5s							
BKNI	**Bangkinang**	**15.36**	**315**	P	**Pn**	**10 51 55.7**	**+6.0**
SISI	**Saibi**	**15.72**	**306**	P	**Pn**	**10 51 59.4**	**+5.1**
52nm,0.9s							
KMSI	**Cibinong**	**16.61**	**48**	P	**Pn**	**10 52 10.8**	**+5.1**
MNSI	**Mandailing Nat**	**16.72**	**313**	P	**Pn**	**10 52 10.3**	**+3.2**
26nm,0.4s							
NLAI	**Namlea**	**16.98**	**65**	P	**Pn**	**10 52 14.9**	**+4.5**
229nm,0.6s							
MEEK	**Meekatharra**	**17.02**	**159**	*e*P	**Pn**	**10 52 03.2**	**-7.6**
MEEK				*e*S	S	10 54 56.2	-32
MYLDM	**Lahad Datu**	**17.25**	**23**	P	**Pn**	**10 52 13.1**	**-0.6**
27nm,1.2s							
KNA	**Kununurra**	**17.27**	**108**	P	**Pn**	**10 52 15.1**	**+1.2**
KKM	**Kota Kinabalu**	**17.32**	**15**	P	**Pn**	**10 52 16.9**	**+2.3**
10nm,1.2s							
AAI	**Ambon**	**17.77**	**68**	P	**Pn**	**10 52 21.6**	**+1.4**
4μm76nm,0.9s							
MNI	**Manado**	**17.83**	**48**	P	**Pn**	**10 52 22.8**	**+2.0**
92nm,0.7s							
GSI	**Gunungsitoli**	**18.54**	**310**	P	**Pn**	**10 52 28.4**	**-1.1**
33nm,1.2s							
IPM	**Ipoh**	**18.57**	**324**	P	**Pn**	**10 52 30.9**	**+1.0**
14nm,1.5s							
PSI	**Prapat**	**18.60**	**316**	P	**Pn**	**10 52 28.3**	**-2.0**
0.5nm,0.3s,baz=196,slow=10,SNR=3.6							
PSI				LR	LR	11 01 47.7	
comp=Z,180nm,18.5s,baz=301,slow=44							
PSI	**Prapat**	**18.60**	**316**	P	**Pn**	**10 52 28.3**	**-2.0**
PSI				LR	LR	11 01 47.7	
LBMI	**Labuha**	**18.63**	**58**	P	**Pn**	**10 52 29.5**	**-1.2**
116nm,1.0s							
KULM	**Kulim**	**19.44**	**325**	P	**Pn**	**10 52 38.3**	**-2.1**
13nm,1.3s							
TPTI		**20.14**	**313**	P	**P**	**10 52 45.3**	**-1.4**
KAKA	**Kakadu**	**20.34**	**97**	*e*P	**P**	**10 52 49.6**	**+0.8**
8.9nm,0.6s							
KAKA	**Kakadu**	**20.34**	**97**	*e*P	**P**	**10 52 45.6**	**-3.2**
30nm,0.6s							
KAKA	**Kakadu**	**20.34**	**97**	P	**P**	**10 52 50.8**	**+2.0**
227nm24nm,0.9s							
TLE	**Tual**	**21.39**	**78**	P	**P**	**10 53 00.3**	**+0.1**
49nm,2.1s,mb4.5							
KLBR	**Kellerberrin**	**21.41**	**166**	*e*P	**P**	**10 53 00.9**	**+0.7**
18nm,0.8s,mb4.4							
KLBR				*e*S	**S**	**10 56 42.3**	**-13**
NWAO	**Narrogin (SRO)**	**22.58**	**168**	*e*P	**P**	**10 53 14.4**	**+1.7**
79nm,0.8s,mb5.2							
NWAO				*e*S	**S**	**10 57 09.8**	**-8.4**
NWAO	**Narrogin (SRO)**	**22.58**	**168**	P	**P**	**10 53 14.4**	**+1.7**
6.1nm,0.6s,mb4.2,baz=346,slow=17,SNR=5.3							
NWAO				S	**S**	**10 57 09.5**	**-8.7**
8.9nm,0.7s,baz=111,slow=8.6,SNR=3.0							
WRA	**Warramunga Arr**	**23.57**	**115**	P	**P**	**10 53 20.2**	**-2.7**
20nm,0.8s,mb4.6,baz=289,slow=11,SNR=47							
WRA				S	**S**	**10 57 33.1**	**-1.5**
0.8nm,0.6s,baz=284,slow=24,SNR=3.2							
WRAB	**Tennant Creek**	**23.58**	**115**	*e*P	**P**	**10 53 21.3**	**-1.8**
21nm,1.0s,mb4.5							
WRAB	**Tennant Creek**	**23.58**	**115**	P	**P**	**10 53 22.1**	**-0.9**
ASAR	**Alice Springs**	**24.67**	**124**	P	**P**	**10 53 31.0**	**-2.0**
6.7nm,0.7s,mb4.3,baz=300,slow=9.0,SNR=37							
ASAR				PcP	PcP	10 57 09.3	-0.5
1.1nm,0.5s,baz=305,slow=1.7,SNR=4.0							
ASAR				S	**S**	**10 57 57.5**	**+5.1**
0.4nm,0.6s,baz=299,slow=16,SNR=2.7							
FORT	**Forrest**	**24.98**	**145**	*e*P	**P**	**10 53 34.7**	**-1.0**
46nm,0.6s,mb5.2							
FORT				*e*S	**S**	**10 58 02.7**	**+5.6**
FORT	**Forrest**	**24.98**	**145**	*e*P	**P**	**10 53 34.9**	**-0.8**
57nm,0.7s,mb5.2							
QIZ	**Qiongzhong**	**29.71**	**356**	P	**P**	**10 54 16.3**	**-1.9**
QIZ				S	**S**	**10 59 09.8**	**-2.0**
CMAR	**Chiang Mai Arr**	**31.71**	**336**	P	**P**	**10 54 36.8**	**+0.9**
4.1nm,0.7s,mb4.3,baz=170,slow=8.2,SNR=23							
CMAR				PcP	PcP	10 57 29.1	+2.0
1.8nm,0.8s,baz=186,slow=4.0,SNR=5.2							
CMAR				LR	LR	11 08 24.9	
comp=Z,77nm,18.9s,MS3.4,baz=337,slow=38							
CHTO	**Chiang Mai**	**32.03**	**337**	*e*P	**P**	**10 54 39.5**	**+0.8**
4.3nm,0.8s,mb4.3							
CHTO	**Chiang Mai**	**32.03**	**337**	P	**P**	**10 54 39.0**	**+0.3**
CTA	**Charters Tower**	**34.45**	**110**	LR	LR	11 07 39.4	
comp=Z,83nm,21.1s,MS3.5,baz=78,slow=34							
STKA	**Stephens Creek**	**34.62**	**132**	*e*P	**P**	**10 55 00.3**	**-0.9**
12nm,0.8s,mb4.9							
STKA	**Stephens Creek**	**34.62**	**132**	P	**P**	**10 55 00.4**	**-0.8**
14nm,0.7s,mb5.0,baz=306,slow=7.9,SNR=28							
STKA				LR	LR	11 09 21.0	
comp=Z,94nm,20.8s,MS3.5,baz=206,slow=37							
STKA	**Stephens Creek**	**34.62**	**132**	*e*P	**P**	**10 55 00.4**	**-0.8**
3.4nm,0.8s,mb4.3							
STKA				LR	LR	11 09 21.0	
CMSA	**Cobar Meteorol**	**37.53**	**129**	*e*P	**P**	**10 55 27.1**	**+0.9**
SHL	**Shillong**	**41.01**	**332**	*e*PKP	**P**	**10 55 55.5**	**+0.3**
WHN	**Wuhan**	**41.19**	**3**	*e*P	**P**	**10 55 57.6**	**+1.0**
ODAN	**Odare**	**44.29**	**328**	*e*P	**P**	**10 56 21.9**	**+0.1**
36nm,0.6s,mb5.2							
TAPN	**Taplejung**	**44.53**	**329**	*e*P	**P**	**10 56 24.2**	**+0.5**
46nm,0.7s,mb5.4							
RAMN	**Ramite**	**44.78**	**327**	*e*P	**P**	**10 56 26.1**	**+0.4**
LSA	**Lhasa**	**44.91**	**334**	P	**P**	**10 56 28.0**	**+1.4**
LSA				pmax	pmax		
comp=Z,20nm,0.8s,mb5.0							
LSA	**Lhasa**	**44.91**	**334**	*e*P	**P**	**10 56 28.0**	**+1.4**
comp=Z,14nm,0.6s,mb5.0							
JIRN	**Jiri**	**45.56**	**328**	*e*P	**P**	**10 56 32.7**	**+0.8**
comp=Z,104nm,0.6s,mb5.9							
PKI	**Pulchoki**	**45.91**	**327**	*e*P	**P**	**10 56 34.7**	**0.0**
PKI	**Pulchoki**	**45.91**	**327**	*e*P	**P**	**10 56 35.1**	**+0.4**
comp=Z,34nm,0.8s,mb5.3							
PKIN	**Phulchoki**	**45.92**	**327**	*e*P	**P**	**10 56 35.1**	**+0.4**
comp=Z,34nm,0.8s,mb5.3							
GUN	**Gumba**	**45.93**	**327**	*e*P	**P**	**10 56 35.4**	**+0.6**
comp=Z,139nm,0.5s							
DMN	**Daman**	**46.10**	**326**	*e*P	**P**	**10 56 36.5**	**+0.3**
comp=Z,73nm,0.7s,mb5.7							
KKN	**Kakani**	**46.15**	**327**	*e*P	**P**	**10 56 36.5**	**-0.1**
comp=Z,50nm,0.9s,mb5.5							
LZH	**Lanzhou**	**47.24**	**351**	*e*P	**P**	**10 56 45.5**	**+0.6**
LZH				pmax	pmax		
comp=Z,25nm,1.3s,mb5.0							
LZH				pmax	pmax		
comp=Z,150nm,4.7s							
KSRS	**Korea Array**	**50.35**	**17**	P	**P**	**10 57 07.9**	**-0.9**
comp=Z,1.9nm,0.8s,mb4.2,baz=205,slow=8.1,SNR=9.1							
KSRS				LR	LR	11 20 30.5	
comp=Z,31nm,18.7s,MS3.4,baz=206,slow=39							
GTA	**Gaotai**	**51.18**	**348**	*e*P	**P**	**10 57 15.9**	**+0.9**
GTA				pmax	pmax		
comp=Z,6.0nm,0.8s,mb4.6							
MJAR	**Matsushiro Arr**	**53.28**	**27**	P	**P**	**10 57 28.1**	**-2.6**
comp=Z,3.6nm,0.9s,mb4.3,baz=205,slow=7.3,SNR=7.4							
MJAR				LR	LR	11 21 17.4	
comp=Z,46nm,20.1s,MS3.5,baz=255,slow=37							
ULN	**Ulaanbaatar**	**58.56**	**356**	*e*P	**P**	**10 58 08.0**	**-0.3**
comp=Z,5.5nm,1.0s,mb4.5							
SONM	**Songino Array**	**58.58**	**356**	P	**P**	**10 58 08.1**	**-0.3**
comp=Z,3.8nm,0.6s,mb4.6,baz=176,slow=8.7,SNR=19							
SONM				LR	LR	11 22 43.0	
comp=Z,39nm,18.9s,MS3.5,baz=66,slow=35							
KBL	**Kabul**	**60.61**	**320**	*e*P	**P**	**10 58 22.4**	**-0.2**
comp=Z,31nm,1.1s,mb5.3							
KZA	**Kyzart**	**62.39**	**330**	P	**P**	**10 58 35.4**	**+0.9**
SNR=10							
OPO	**Ambohidratompo**	**62.66**	**255**	P	**P**	**10 58 38.2**	**+1.4**
comp=Z,9.9nm,0.9s,mb4.9,baz=103,slow=8.6,SNR=5.7							
TKM2	**Tokmak 2**	**62.85**	**331**	P	**P**	**10 58 38.2**	**+0.6**
SNR=13							
TKM2	**Tokmak 2**	**62.85**	**331**	*e*P	**P**	**10 58 38.0**	**+0.4**
comp=Z,26nm,0.9s,mb5.4							
UCH	**Uchtor**	**62.86**	**330**	P	**P**	**10 58 38.8**	**+1.1**
SNR=8.9							
KBK	**Karagaybulak**	**62.97**	**330**	P	**P**	**10 58 39.3**	**+0.9**
SNR=20							
MK31	**Makanchi Array**	**63.11**	**338**	*e*P	**P**	**10 58 39.0**	**-0.1**
MKAR	**Makanchi Array**	**63.11**	**338**	P	**P**	**10 58 39.1**	**-0.1**
comp=Z,11nm,0.5s,mb5.2,baz=140,slow=7.8,SNR=78							
MKAR				LR	LR	11 29 53.1	
comp=Z,25nm,19.7s,MS3.4,baz=356,slow=40							
AAK	**Ala-Archa**	**63.17**	**330**	P	**P**	**10 58 40.5**	**+0.8**
SNR=7.1							
AML	**Almayashu**	**63.20**	**329**	P	**P**	**10 58 40.2**	**+0.3**
SNR=16							
EKS2	**Erkin-Say**	**63.55**	**330**	P	**P**	**10 58 42.3**	**+0.1**
SNR=16							
MAW	**Mawson**	**65.18**	**199**	P	**P**	**10 58 52.4**	**-0.1**
comp=Z,3.1nm,0.8s,mb4.4,baz=40,slow=6.3,SNR=5.0							
KURK	**Kurchatov**	**67.72**	**338**	*e*P	**P**	**10 59 08.7**	**-0.2**
comp=Z,9.5nm,0.9s,mb4.8							
ZAA0	**Zalesovo Array**	**68.44**	**343**	*e*P	**P**	**10 59 12.8**	**-0.6**
ZALV	**Zalesovo Beam**	**68.44**	**343**	P	**P**	**10 59 12.8**	**-0.6**
comp=Z,15nm,0.6s,mb5.2,baz=157,slow=4.2,SNR=60							
ZALV				LR	LR	11 30 41.4	
comp=Z,24nm,18.5s,MS3.5,baz=115,slow=37							
ZALV	**Zalesovo Beam**	**68.44**	**343**	P	**P**	**10 59 12.8**	**-0.6**
ZALV				LR	LR	11 30 41.4	
BVAR	**Borovoye Array**	**72.73**	**335**	P	**P**	**10 59 39.2**	**-0.3**
comp=Z,3.1nm,0.7s,mb4.3,baz=147,slow=8.5,SNR=19							
RDF	**Al-Radifah**	**73.43**	**305**	*e*P	**P**	**10 59 44.5**	**+0.2**
RDF				AMb	AMB	10 59 45.6	
comp=Z,20nm,0.7s,mb5.1							
UMR	**Umm Al-Rimmam**	**73.54**	**305**	*e*P	**P**	**10 59 44.4**	**-0.5**
UMR				AMb	AMB	10 59 45.4	
comp=Z,26nm,0.7s,mb5.3							
NAY	**Al-Naaiem**	**73.81**	**305**	*e*P	**P**	**10 59 45.8**	**-0.7**
NAY				AMb	AMB	10 59 47.1	
comp=Z,14nm,1.4s,mb4.7							
MIB	**Mutribah**	**73.94**	**305**	*e*P	**P**	**10 59 46.7**	**-0.5**
YAK	**Yakutsk**	**73.96**	**9**	*e*P	**P**	**10 59 46.0**	**-0.6**
comp=Z,26nm,0.8s,mb5.2							
KMBO	**Kilima Mbogo**	**74.56**	**272**	P	**P**	**10 59 53.2**	**+2.0**
comp=Z,7.2nm,1.0s,mb4.5,baz=79,slow=20,SNR=5.1							
KMBO	**Kilima Mbogo**	**74.56**	**272**	P	**P**	**10 59 53.2**	**+2.0**
PEA0B	**Petropavlovsk-**	**74.74**	**27**	*e*P	**P**	**10 59 51.0**	**-0.3**
PETK	**Petropavlovsk-**	**74.74**	**27**	P	**P**	**10 59 50.8**	**-0.6**
comp=Z,6.8nm,0.7s,mb4.7,baz=232,slow=2.0,SNR=19							
ABKAR	**Akbulak array**	**75.09**	**328**	*e*P	**P**	**10 59 53.5**	**0.0**
comp=Z,8.6nm,0.5s,mb4.9							
TIXI	**Tiksi**	**83.07**	**5**	*e*P	**P**	**11 00 35.5**	**-1.2**
comp=Z,4.2nm,0.6s,mb4.7							
MMAI	**Mount Meron Ar**	**84.62**	**305**	P	**P**	**11 00 47.6**	**+2.1**
comp=Z,3.8nm,0.7s,mb4.7,baz=82,slow=12,SNR=4.7							
BRTR	**Keskin Array B**	**87.85**	**311**	P	**P**	**11 01 01.6**	**+0.3**
comp=Z,5.0nm,0.8s,mb4.8,baz=133,slow=6.5,SNR=25							
AKASG	**Malin Array Be**	**93.59**	**321**	P	**P**	**11 01 26.1**	**-1.6**
comp=Z,0.3nm,0.2s,mb4.3,baz=84,slow=5.3,SNR=4.4							
PPT	**Papeete**	**94.90**	**109**	LR	LR	11 41 24.6	
comp=Z,40nm,18.1s,MS3.9,baz=141,slow=34							
CLL	**Collm**	**103.82**	**320**	*e*PP	PP	11 06 33.0	+2.0
YKA	**Yellowknife Ar**	**118.68**	**23**	PKP	PKPdf	11 06 59.0	-0.2
comp=Z,2.0nm,0.6s,baz=315,slow=1.3,SNR=14							
YKA	**Yellowknife Ar**	**118.68**	**23**	PKP	PKPdf	11 06 59.0	-0.2
MSO	**Missoula**	**127.35**	**38**	*e*PKPdf	PKPdf	11 07 16.8	+0.5
NVAR	**Mina Array Bea**	**127.65**	**50**	PKP	PKPdf	11 07 18.8	+1.7
comp=Z,0.6nm,0.7s,baz=229,slow=2.6,SNR=7.6							
HLID	**Hailey**	**128.51**	**42**	*e*PKPdf	PKPdf	11 07 20.4	+1.8
EGMT	**Eagleton**	**129.20**	**35**	*e*PKPdf	PKPdf	11 07 21.4	+1.6
PDAR	**Pinedale Array**	**132.03**	**41**	PKP	PKPdf	11 07 26.2	+0.8
comp=Z,0.4nm,0.7s,baz=312,slow=2.9,SNR=2.9							
ECSD	**EROS Data Cent**	**139.03**	**32**	*e*PKPdf	PKPdf	11 07 38.3	0.0
TXAR	**Lajitas Array**	**142.18**	**56**	PKhKP		11 07 39.9	
comp=Z,1.1nm,0.6s,baz=250,slow=2.8,SNR=18							
JCT	**Junction City**	**144.77**	**52**	*e*PKPdf	PKPdf	11 07 48.7	-0.3
FVM	**French Village**	**146.42**	**33**	*e*PKPbc	PKPbc	11 07 52.9	0.0
NCB	**Newcomb**	**146.56**	**8**	*e*PKPbc	PKPbc	11 07 53.8	+0.7
MIAR	**Mount Ida**	**146.96**	**40**	*e*PKPbc	PKPbc	11 07 55.4	+0.8
OLIL	**Olney**	**147.02**	**29**	*e*PKPbc	PKPbc	11 07 54.9	+0.2
ACSO	**Alum Creek Sta**	**147.92**	**22**	*e*PKPbc	PKPbc	11 07 57.3	+0.3
HKT	**Hockley**	**148.03**	**49**	*e*PKPbc	PKPbc	11 07 57.0	-0.7
SSPA	**Standing Stone**	**149.10**	**14**	*e*PKPbc	PKPbc	11 08 00.5	+0.4
WVT	**Waverly**	**149.18**	**32**	*e*PKPbc	PKPbc	11 08 00.9	+0.5
OXF	**Oxford**	**149.51**	**36**	*e*PKPbc	PKPbc	11 08 01.0	-0.3
TZTN	**Tazewell**	**150.89**	**26**	*e*PKPdf	PKPdf	11 07 59.1	+0.2
TZTN				*e*PKPbc	PKPbc	11 08 05.0	+0.4
TZTN				*e*PKPab	PKPab	11 08 11.8	0.0
ELN	**Prospectdale**	**151.39**	**21**	*e*PKPdf	PKPdf	11 07 59.8	+0.2
ELN				*e*PKPbc	PKPbc	11 08 05.7	0.0
ELN				*e*PKPab	PKPab	11 08 13.7	-0.2
TKL	**Tuckaleechee C**	**151.53**	**27**	*e*PKPbc	PKPbc	11 08 06.6	+0.6
LRAL	**Lakeview Retre**	**151.96**	**35**	*e*PKPdf	PKPdf	11 08 01.4	+0.7
LRAL				*e*PKPbc	PKPbc	11 08 07.5	+0.3
LRAL				*e*PKPab	PKPab	11 08 15.9	-0.5
LPAZ	**La Paz**	**153.07**	**180**	PKPbc	PKPbc	11 08 10.5	+0.4
comp=Z,0.9nm,0.5s,baz=260,slow=4.8,SNR=5.2							
LPAZ				PKPab	PKPab

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RND	Reindeer	0.20	310	P	Pn	12 10 28.0	+0.6
RND				S	Sn	12 10 37.1	+1.8
MCK	McKinley	0.50	337	P	Pn	12 10 30.0	+0.5
MCK				S	Sn	12 10 40.5	+1.5
TRF	Thorofare Moun	0.82	283	P	Pn	12 10 33.7	+0.7
TRF				S	Sn	12 10 46.9	+1.8
KTH	Kantishna Hill	1.12	285	P	Pn	12 10 37.1	+0.5
KTH				S	Sn	12 10 53.0	+1.4
BPAW	Bear Paw Mtn.	1.38	308	P	Pn	12 10 39.9	0.0
BPAW				S	Sn	12 10 57.4	-0.1
PAX	Paxson	1.41	101	P	Pn	12 10 40.0	-0.4
PAX				S	Sn	12 10 59.8	+1.5
SML	Sawmill	1.48	177	P	Pn	12 10 40.3	-1.0
COLA	College	1.63	10	P	Pn	12 10 42.8	-0.5
PMR	Palmer	1.72	190	eP	Pn	12 10 43.8	-0.6
PPLA	Purkeypile	1.72	259	P	Pn	12 10 45.2	+0.8
CHUM	Lake Minchumin	1.81	291	ePn	Pn	12 10 45.7	0.0
CHUM				eSn	Sn	12 11 07.1	-0.6
DOT	Dot Lake	2.03	77	P	Pn	12 10 47.9	-0.7
MENT	Mentasta	2.20	97	eP	Pn	12 10 50.2	-0.7
FIB	Fire Island	2.26	201	P	Pn	12 10 52.6	+0.9
RC01	Rabbit Creek A	2.27	195	P	Pn	12 10 51.9	+0.1
DIV	Divide	2.51	148	P	Pn	12 10 53.2	-1.8
SLKM	Skilak Lake	2.90	197	P	Pn	12 11 00.1	-0.3
BMRM	Bremner River	2.95	140	P	Pn	12 10 59.4	-1.7
EYAK	Cordova Ski Ar	3.03	153	P	Pn	12 11 00.7	-1.5
BCA3	Beaver Creek A	3.05	91	P	Pn	12 11 01.1	-1.4
SEW	Seward	3.22	188	P	Pn	12 11 03.6	-1.1
TTA	Tatalina	3.43	268	eP	Pn	12 11 07.3	-0.3
TT01	Tatalina	3.44	267	P	Pn	12 11 07.3	-0.4
RSO	Redoubt South	3.47	217	ePn	Pn	12 11 09.8	+1.7
IM3	Indian Mountai	3.53	323	P	Pn	12 11 09.3	+0.4
EGAK	Eagle	3.56	62	P	Pn	12 11 08.6	-0.8
SVW2	Sparrevohn	3.97	240	eP	Pn	12 11 14.7	-0.3
MID	Middleton Isla	4.00	164	ePn	Pn	12 11 13.0	-2.3
COLD	Coldfoot	4.03	351	P	Pn	12 11 15.5	-0.3
PNL	Peninsula	5.67	126	ePn	Pn	12 11 36.3	-1.9
	21nm,0.4s						
KDAK	Kodiak Island	5.87	202	P	Pn	12 11 39.7	-1.2
	8.2nm,0.3s,baz=35,slow=9.5,SNR=53						
KDAK				S	Sn	12 12 41.3	-5.4
	14nm,0.3s,baz=286,slow=22,SNR=9.2						
OHAK	Old Harbor	6.52	204	eP	Pn	12 11 48.5	-1.3
SKAG	Skagway	7.39	115	eP	Pn	12 12 01.6	0.0
INK	Inuvik	7.95	44	P	Pn	12 12 09.3	+0.2
	0.8nm,0.3s,baz=235,slow=17,SNR=14						
INK				S	Sn	12 13 33.0	-4.4
	0.5nm,0.3s,baz=336,slow=20,SNR=1.8						
CHGN	Chignik	8.59	220	eP	Pn	12 12 17.7	-0.3
SIT	Sitka	9.04	128	ePn	Pn	12 12 22.1	-2.1
	15nm,0.6s						
YKA	Yellowknife Ar	15.37	78	P	Pn	12 13 47.3	-1.6
	0.8nm,0.3s,baz=286,slow=10,SNR=36						
BILL	Bilibino	18.87	304	eP	Pn	12 14 30.7	-1.2
	2.7nm,0.6s						
EDM	Edmonton	20.78	103	eP	P	12 14 50.2	-1.3
NLWA	Neilton Lookou	20.98	128	⇑P	P	12 14 53.7	0.0
	baz=21						
JCW	Jim Creek	21.02	123	eP	P	12 14 53.4	-0.7
	5.2nm,0.8s,mb3.9						
RES	Resolute Bay	21.38	36	P	P	12 14 56.6	-1.1
	1.5nm,0.6s,mb3.5,baz=258,slow=15,SNR=7.5						
LON	Longmire	22.28	125	eP	P	12 15 08.9	+1.5
	5.3nm,1.0s,mb3.8						
FX1	Attu Island--F	22.42	260	P	P	12 15 07.3	-1.6
	2.7nm,0.5s,mb3.8,baz=315,slow=7.1,SNR=7.2						
F04A	Amboy	22.75	127	⇓P	P	12 15 12.0	-0.4
	baz=23						
NEW	Newport	22.85	116	eP	P	12 15 14.1	+0.6
	5.9nm,0.8s,mb4.0						
G04A	Mulino	23.36	129	⇓P	P	12 15 18.5	+0.1
	baz=23						
C11A	Tepee Creek (N	23.54	116	⇑P	P	12 15 19.7	-0.3
	baz=23						
D10A	Wagner Farm, O	23.76	118	⇓P	P	12 15 21.9	-0.2
	baz=24						
A14A	Double T Ranch	23.83	110	⇑P	P	12 15 22.6	-0.2
	baz=24						
B13A	Whitefish	23.86	113	⇑P	P	12 15 22.7	-0.3
	baz=24,SNR=9.1						
H04A	Detroit Lake	23.91	129	⇑P	P	12 15 22.7	-0.8
	baz=24						
A15A	Johnson Ranch,	24.12	110	⇓P	P	12 15 24.7	-0.7
	baz=24						
BSMT	Bassoo Peak	24.14	114	eP	P	12 15 25.6	+0.1
C13A	Hot Springs	24.36	114	⇑P	P	12 15 27.2	-0.4
	baz=24						
B14A	Marquette Ranc	24.37	111	⇓P	P	12 15 27.2	-0.4
	baz=24,SNR=5.4						
JTMT	Jette	24.43	113	eP	P	12 15 28.6	+0.4
YBMT	Yellow Bay	24.45	113	eP	P	12 15 28.2	-0.1
D12A	Red Ives Fores	24.54	116	⇓P	P	12 15 28.8	-0.4
	baz=24						
B15A	Bradely Ranch,	24.71	110	⇑P	P	12 15 30.0	-0.7
	baz=24						
D13A	Huson	24.87	115	⇑P	P	12 15 31.6	-0.6
	baz=25,SNR=6.0						
FFC	Flin Flon	24.91	88	eP	P	12 15 33.1	+0.6
	3.5nm,0.9s,mb3.8						
C15A	Salmond Ranch,	25.11	111	⇑P	P	12 15 33.7	-0.6
	baz=25,SNR=6.6						
D14A	Greenough	25.27	113	⇓P	P	12 15 35.6	-0.3
	baz=25						
G10A	Bishop Farm, J	25.28	121	⇑P	P	12 15 35.6	-0.3
	baz=25						
MSO	Missoula	25.30	114	eP	P	12 15 36.2	+0.2
	1.8nm,0.7s,mb3.6						
H08A	Prairie City	25.34	124	⇓P	P	12 15 36.4	0.0
	baz=25						
I07A	Izee	25.40	125	⇑P	P	12 15 37.2	+0.2
	baz=25						
A18A	Metzger Ranch,	25.41	106	⇓P	P	12 15 36.7	-0.4
	baz=25						
C16A	Fuhringer Ranc	25.45	110	⇑P	P	12 15 37.1	-0.3
	baz=25						
B17A	L&G Farms, Che	25.47	108	⇓P	P	12 15 37.2	-0.5
	baz=25						
E13A	Victor	25.51	115	⇓P	P	12 15 37.6	-0.4
	baz=25						
G11A	Walters Elk Ra	25.52	119	⇓P	P	12 15 37.7	-0.4
	baz=25,SNR=6.1						
F12A	Elk City	25.63	117	⇑P	P	12 15 39.0	-0.1
	baz=26,SNR=5.4						
F13A	Darby	25.98	116	⇓P	P	12 15 41.8	-0.4
	baz=26,SNR=11						
C17A	Wharram Farm,	26.00	109	⇓P	P	12 15 41.3	-1.0
	baz=26,SNR=5.3						
EGMT	Eagleton	26.13	107	⇑P	P	12 15 43.0	-0.6
	baz=26,SNR=5.3						
EGMT	Eagleton	26.13	107	eP	P	12 15 43.3	-0.3
	9.1nm,0.9s,mb4.2						
D16A	Dana Ranch, Ca	26.14	111	⇑P	P	12 15 42.7	-0.9
	baz=26,SNR=11						
I09A	Lost Marbles R	26.15	123	⇑P	P	12 15 43.8	0.0
	baz=26						
H11A	Donnelly	26.20	120	⇓P	P	12 15 44.1	-0.2
	baz=26						
YBH	Yreka Blue Hor	26.34	133	P	P	12 15 46.2	+0.7
	0.8nm,0.6s,mb3.4,baz=3.8,slow=6.2,SNR=4.2						
F14A	Wisdom	26.35	115	⇓P	P	12 15 45.5	-0.1
	baz=26						
D17A	Six Diamond Ra	26.40	110	⇓P	P	12 15 45.2	-0.9
	baz=26,SNR=6.1						
E16A	East Helena	26.47	112	⇓P	P	12 15 46.0	-0.7
	baz=26						
G13A	Cobalt	26.59	117	⇓P	P	12 15 47.4	-0.3
	baz=26,SNR=7.6						
D18A	Linhart Farms,	26.75	109	⇑P	P	12 15 49.2	0.0
	baz=27						
H12A	Diamond D Ranc	26.79	118	⇑P	P	12 15 49.3	-0.2
	baz=27						
E17A	Martinsdale	26.88	111	⇓P	P	12 15 50.2	-0.1
	baz=27						
H13A	Challis	27.02	118	⇓P	P	12 15 51.1	-0.5
	baz=27,SNR=10						
DLMT	Dillon	27.03	115	eP	P	12 15 51.5	-0.2
	8.5nm,1.3s,mb4.1						
F16A	Kennard Place,	27.09	113	⇑P	P	12 15 52.5	+0.2
	baz=27						
WVOR	Wild Horse Val	27.14	126	eP	P	12 15 52.7	0.0
	2.2nm,0.9s,mb3.7						
E18A	Harlowton	27.19	110	⇑P	P	12 15 53.4	+0.3
	baz=27						
BOZ	Bozeman (W)	27.20	113	⇑P	P	12 15 53.3	+0.1
	baz=27						
BOZ	Bozeman (W)	27.20	113	eP	P	12 15 53.3	+0.1
	1.8nm,0.8s,mb3.6						
G15A	Dillon	27.24	115	⇓P	P	12 15 53.9	+0.4
	baz=27						
I12A	Atlanta	27.31	120	⇓P	P	12 15 54.5	+0.3
	baz=27						
H14A	Leadore	27.33	116	⇓P	P	12 15 54.0	-0.3
	baz=27,SNR=5.4						
MFID	Camas Ranch	27.36	121	⇓P	P	12 15 54.7	+0.1
	baz=27						
MCMT	McKenzie Canyo	27.37	116	eP	P	12 15 54.7	0.0
	1.4nm,0.7s,mb3.6						
F17A	Fitzpatrick Pl	27.40	111	eP	P	12 15 55.0	-0.1
	baz=27						
G16A	Moss Hill, Enn	27.47	114	⇓P	P	12 15 55.4	-0.2
	baz=27,SNR=7.1						
K10A	MacKenzie Ranc	27.50	123	⇑P	P	12 15 56.3	+0.4
	baz=27						
I13A	Wildhorse Cree	27.61	118	⇑P	P	12 15 56.8	-0.1
	baz=28,SNR=15						
J12A	Stokes Ranch,	27.78	120	⇑P	P	12 15 58.4	0.0
	baz=28						
HLID	Hailey	27.79	119	⇑P	P	12 15 58.4	0.0
	baz=28,SNR=9.6						
HLID	Hailey	27.79	119	eP	P	12 15 58.4	0.0
	3.8nm,0.8s,mb4.0						
K11A	Parker Ranch,	27.83	122	⇑P	P	12 15 59.1	+0.2
	baz=28						
I14A	Mackay	27.86	117	⇓P	P	12 15 58.9	-0.2
	baz=28,SNR=7.1						
J13A	Cove Ranch, Pi	28.02	119	⇑P	P	12 16 00.3	-0.2
	baz=28						
H16A	Russell Place,	28.12	114	⇓P	P	12 16 01.9	+0.4
	baz=28,SNR=8.7						
L10A	Juniper Basin	28.25	123	⇓P	P	12 16 02.4	-0.2
	baz=28						
YMR	Madison River	28.27	113	eP	P	12 16 03.3	+0.6
	12nm,0.9s,mb4.4						
G18A	Lazy EL Ranch,	28.33	111	⇓P	P	12 16 03.1	-0.2
	baz=28						
J14A	Carey	28.34	118	⇓P	P	12 16 03.6	+0.2
	baz=28						
L11A	Cat Creek Ranc	28.45	122	⇓P	P	12 16 04.9	+0.5
	baz=28						
RLMT	Red Lodge	28.62	111	⇑P	P	12 16 06.4	+0.5
	baz=28						
RLMT	Red Lodge	28.62	111	eP	P	12 16 06.7	+0.9
	8.2nm,1.1s,mb4.3						
H17A	Grant Village	28.66	113	⇑P	P	12 16 07.4	+1.2
	baz=28						
K13A	Stover Farm, H	28.69	120	⇑P	P	12 16 07.4	+0.9
	baz=28						
LAO	LASA Array	28.69	105	eP	P	12 16 06.3	-0.1
	6.7nm,0.8s,mb4.3						
I16A	Newdale	28.70	115	⇓P	P	12 16 07.5	+0.8
	baz=28,SNR=5.1						
J15A	Blackfoot	28.71	117	⇓P	P	12 16 06.7	0.0
	baz=29						
L12A	House Creek Ra	28.75	121	⇓P	P	12 16 07.4	+0.4
	baz=29						
IMW	Indian Meadow	28.91	114	eP	P	12 16 09.7	+1.2
	8.2nm,0.8s,mb4.4						
DCID1	Drake Creek	29.06	115	eP	P	12 16 10.0	+0.3
	27nm,0.5s,mb5.1						
K14A	Jones Ranch, D	29.13	119	⇑P	P	12 16 10.6	+0.2
	baz=29						
J16A	Bone	29.15	116	⇓P	P	12 16 11.0	+0.4
	baz=29,SNR=5.4						
RRI2	Red Ridge	29.21	115	eP	P	12 16 11.9	+0.9
	10nm,0.8s,mb4.5						
TPAW	Teton Pass	29.24	115	eP	P	12 16 12.0	+0.6
	6.5nm,1.1s,mb4.2						
LOHW	Long Hollow	29.28	114	eP	P	12 16 13.2	+1.4
	5.1nm,0.7s,mb4.3						
REDW	Red Top Meadow	29.39	115	eP	P	12 16 13.0	+0.3
	26nm,2.1s,mb4.5						
M12A	Wells	29.42	122	⇓P	P	12 16 13.4	+0.5
	baz=29						
K16A	Soda Springs	29.53	116	⇓P	P	12 16 14.4	+0.5
	baz=29						
L14A	Malta	29.54	119	⇑P	P	12 16 14.7	+0.7
	baz=29,SNR=5.3						
M13A	Montello	29.75	121	⇓P	P	12 16 16.3	+0.3
	baz=30						
J18A	Kendall Valley	29.86	114	⇓P	P	12 16 16.9	+0.1
	baz=30						
ELK	Elko	29.87	123	P	P	12 16 17.6	+0.6
	0.8nm,0.6s,mb3.5,baz=301,slow=8.7,SNR=3.6						
L15A	Malad City	29.90	118	⇓P	P	12 16 17.0	-0.2
	baz=30						
HVU	Hansel Valley	29.94	119	eP	P	12 16 18.9	+1.3
	4.1nm,0.8s,mb4.1						
M14A	Sheep Mountain	29.95	120	⇓P	P	12 16 18.1	+0.4
	baz=30,SNR=7.8						
N13A	Wendover, West	30.17	122	⇓P	P	12 16 19.6	0.0
	baz=30						
O11A	Cowboy Ranch,	30.25	124	⇓P	P	12 16 20.5	+0.2
	baz=30						
L16A	Fish Haven	30.28	117	⇓P	P	12 16 20.7	+0.2
	baz=30,SNR=6.1						
K18A	Toltan Ranch,	30.32	115	⇑P	P	12 16 21.5	+0.5
	baz=30,SNR=5.2						
BW06	Boulder Array	30.41	114	⇓P	P	12 16 22.0	+0.3
	baz=30,SNR=11						
BW06	Boulder Array	30.41	114	eP	P	12 16 22.6	+0.8
	8.0nm,0.9s,mb4.3						
PDAR	Pinedale Array	30.41	114	P	P	12 16 22.6	+0.8
	6.1nm,0.8s,mb4.3,baz=324,slow=7.3,SNR=40						
L17A	Cokeville	30.43	116	⇑P	P	12 16 21.8	-0.1
	baz=30						
O12A	Currie	30.47	123	⇑P	P	12 16 22.5	+0.3
	baz=30						
N14A	Grayback Hills	30.57	120	⇑P	P	12 16 23.3	+0.2
	baz=30						
K19A	Absolon Red Bu	30.66	113	⇑P	P	12 16 24.0	+0.1
	baz=30						
ULM	Lac du Bonnet	30.68	90	P	P	12 16 23.1	-0.9
	5.0nm,0.9s,mb4.2,baz=310,slow=7.2,SNR=2.9						
M16A	Huntsville	30.79	118	⇑P	P	12 16 25.3	+0.3
	baz=31						
NVAR	Mina Array Bea	30.80	129	P	P	12 16 25.8	+0.7
	1.9nm,0.8s,mb3.9,baz=307,slow=6.7,SNR=19						
NVAR				PcP	PcP	12 19 20.5	-0.1
	0.5nm,0.6s,baz=310,slow=2.2,SNR=5.0						
L18A	Fontenelle, Gr	30.92	115	⇓P	P	12 16 26.1	-0.1
	baz=31						
K20A	Yellowstone Ra	31.01	113	⇑P	P	12 16 26.6	-0.4
	baz=31						
L19A	Farson	31.05	114	⇓P	P	12 16 27.0	-0.3
	baz=31,SNR=6.7						
Q10A	Clear Creek Ra	31.12	127	⇑P	P	12 16 28.2	+0.2
	baz=31						
DUG	Dugway	31.28	121	⇓P	P	12 16 29.3	0.0
	baz=31						
M18A	Lyman	31.32	116	⇑P	P	12 16 29.6	-0.1
	baz=31						
Q11A	Duckwater	31.38	126	⇑P	P	12 16 30.6	+0.3
	baz=31,SNR=6.2						
L20A	Wamsutter	31.55	113	⇓P	P	12 16 31.7	-0.1
	baz=31						
M19A	Rock Springs	31.63	115	⇓P	P	12 16 31.8	-0.7
	baz=32						
R10A	Warm Springs	31.63	127	⇑P	P	12 16 32.2	-0.3
	baz=32						
RSSD	Black Hills	31.66	106	eP	P	12 16 32.7	0.0
	6.9nm,0.6s,mb4.6						
P14A	Drum Mountains	31.70	122	⇑P	P	12 16 33.1	0.0
	baz=32						
O16A	Springville	31.78	119	⇓P	P	12 16 33.7	-0.1
	baz=32						
R11A	Troy Canyon, C	31.84	126	⇑P	P	12 16 34.3	0.0
	baz=32,SNR=5.3						
S10A	Tonopah Range,	31.85	128	⇓P	P	12 16 34.9	+0.5
	baz=32						
M20A	Sweetwater, Wa	32.04	114	⇑P	P	12 16 36.0	-0.1
	baz=32						
O17A	Robinson Place	32.10	118	⇑P	P	12 16 37.6	+1.0
	baz=32,SNR=14						
N19A	John Jarvie Ra	32.13	115	⇑P	P	12 16 36.7	-0.2
	baz=32,SNR=9.2						
Q14A	Sevier Lake (B	32.14	122	⇓P	P	12 16 36.8	-0.1
	baz=32						
M21A	Separation Pea	32.29	113	⇑P	P	12 16 38.0	-0.2
	baz=32						
L22A	Ellis Ranch, M	32.33	111	⇓P	P	12 16 39.1	+0.5
	baz=32,SNR=8.1						
N20A	Spence Gulch,	32.56	114	⇓P	P	12 16 41.3	+0.7
	baz=32,SNR=24						
O19A	Miners Draw (B	32.66	116	⇓P	P	12 16 42.4	+0.9
	baz=32,SNR=6.5						
S12A	Delamar Landin	32.77	126	⇑P	P	12 16 42.5	0.0
	baz=33						
P18A	Preston Nutter	32.78	118	⇓P	P	12 16 43.6	+1.1
	baz=33,SNR=14						
N21A	Black Mountain	32.93	114	⇑P	P	12 16 43.6	-0.2
	baz=33						
T11A	Corn Creek, Al	32.95	126	⇓P	P	12 16 43.9	-0.2
	baz=33						
MSU	Marysvale	32.98	121	eP	P	12 16 45.5	+1.2
Q16A	Castle Valley	33.02	120	⇓P	P	12 16 44.3	-0.3
	baz=33						
SRU	San Rafael	33.11	119	⇑P	P	12 16 45.7	+0.3
	baz=33,SNR=14						
SRU	San Rafael	33.11	119	eP	P	12 16 46.3	+0.9
	7.8nm,0.8s,mb4.6						
O20A	White River Ci	33.16	115	⇓P	P	12 16 46.0	+0.2
	baz=33						
ISA	Isabella	33.23	132	⇑P	P	12 16 47.2	+0.7
	baz=33						
P19A	Cripple Cowboy	33.28	116	⇓P	P	12 16 47.0	+0.1
	baz=33						
N22A	Wattenberg Ran	33.34	112	⇑P	P	12 16 47.3	-0.1
	baz=33						
CCUT	Cedar City	33.37	124	eP	P	12 16 48.4	+0.7
	2.6nm,1.0s,mb4.0						
R16A	Teasdale	33.45	121	⇑P	P	12 16 49.0	+0.6
	baz=33,SNR=7.5						
R17A	Hanksville Air	33.63	120	⇓P	P	12 16 50.0	+0.1
	baz=34,SNR=5.8						
P20A	De Beque	33.63	116	⇑P	P	12 16 49.7	-0.3
	baz=34						
T14A	Hurricane	33.90	124	⇓P	P	12 16 52.5	+0.1
	baz=34						
R18A	Canyonlands Na	33.98	119	⇑P	P	12 16 52.8	-0.2
	baz=34						
GSC	Goldstone	34.13	130	⇓P	P	12 16 54.1	-0.2
	baz=34						
Q20A	Ridgley Place,	34.14	116	⇓P	P	12 16 53.7	-0.7
	baz=34						
U13A	Pakoon Wash	34.15	125	⇓P	P	12 16 54.9	+0.4
	baz=34						
T15A	Red Dirt Ranch	34.21	123	⇑P	P	12 16 54.9	0.0
	baz=34						
S17A	Black Ridge (B	34.27	120	⇑P	P	12 16 55.8	+0.2
	baz=34,SNR=9.5						
R19A	Curley Farm, L	34.31	118	⇑P	P	12 16 55.8	-0.1
	baz=34						
TUQ	Turquoise Moun	34.32	129	⇓P	P	12 16 56.3	+0.3
	baz=34						
EYMN	Ely	34.33	89	eP	P	12 16 55.2	-0.8
	9.4nm,0.6s,mb4.8						
U14A	Mt Trumbull	34.44	124	⇑P	P	12 16 57.1	+0.1
	baz=34,SNR=5.2						
V12A	Nelson	34.44	127	⇑P	P	12 16 56.8	-0.2
	baz=34						
Q21A	Lamborn Mesa,	34.53	115	⇑P	P	12 16 57.7	-0.1
	baz=34						
V13A	Grand Canyon W	34.64	126	⇑P	P	12 16 58.9	+0.2
	baz=34						
PV01	Paradox Valley	34.73	117	eP	P	12 16 59.6	+0.2
	586nm,0.9s						
R20A	Redvale	34.76	117	⇑P	P	12 16 59.5	-0.2
	baz=35						
U15A	North Rim	34.76	123	⇓P	P	12 16 59.7	0.0
	baz=35						
BFSC	Mount Baldy Ra	34.80	132	⇓P	P	12 17 00.3	+0.2
	baz=35						
T17A	Navajo Res., N	34.83	121	⇓P	P	12 16 59.8	-0.6
	baz=35						
S19A	Harvey Farm, M	34.84	118	⇓P	P	12 17 00.1	-0.3
	baz=35						
R21A	Cimarron	34.94	116	⇓P	P	12 17 01.0	-0.3
	baz=35						
GMRC	Granite Mounta	35.00	129	⇑P	P	12 17 01.6	-0.2
	baz=35						
T18A	Mexican Hat	35.07	120	⇑P	P	12 17 01.9	-0.5
	baz=35,SNR=6.6						
V14A	Boquillas Ranc	35.16	125	⇑P	P	12 17 03.6	+0.4
	baz=35						
ECSD	EROS Data Cent	35.24	99	eP	P	12 17 02.1	-1.7
	6.6nm,0.9s,mb4.5						
V15A	Kaibab Nationa	35.34	124	⇑P	P	12 17 05.4	+0.7
	baz=35,SNR=9.3						
W13A	Hualapai Mount	35.35	126	⇑P	P	12 17 04.9	+0.1
	baz=35						
R22A	Saguache, Gunn	35.38	115	⇓P	P	12 17 05.4	+0.3
	baz=35						
S21A	Coal Bank Pass	35.45	117	⇓P	P	12 17 05.7	+0.1
	baz=35						
W14A	Seligman	35.54	125	⇑P	P	12 17 06.6	+0.1
	baz=35						
MVCO	Mesa Verde	35.55	118	⇑P	P	12 17 06.5	0.0
	baz=35						
T19A	Beclabito	35.67	119	⇑P	P	12 17 07.1	-0.5
	baz=36						
U18A	Rough Rock, Ch	35.70	120	⇓P	P	12 17 07.5	-0.3
	baz=36						
X13A	Yucca	35.82	127	⇓P	P	12 17 08.4	-0.4
	baz=36						
WUAZ	Wupatki	35.91	123	⇑P	P	12 17 09.9	+0.2
	baz=36						
WUAZ	Wupatki	35.91	123	eP	P	12 17 10.4	+0.8
	11nm,1.1s,mb4.7						
V17A	Tonalea, Kykot	36.04	122	⇑P	P	12 17 11.5	+0.8
	baz=36,SNR=13						
W16A	Flagstaff	36.23	123	⇑P	P	12 17 12.9	+0.6
	baz=36						
V18A	Ganado	36.29	121	⇑P	P	12 17 12.9	+0.1
	baz=36						
T22A	Edith	36.36	116	⇑P	P	12 17 13.9	+0.4
	baz=36						
MONP	Monument Peak	36.45	131	⇓P	P	12 17 14.5	+0.3
	baz=36						
SUMG	Summit	36.50	28	eP	P	12 17 17.3	+3.0
	5.1nm,0.6s,mb4.6						
U21A	Nageezi	36.57	118	⇑P	P	12 17 15.2	0.0
	baz=36						
Y14A	Wickenburg	36.71	126	⇑P	P	12 17 16.6	+0.2
	baz=37						
V20A	Brimhall	36.79	119	⇓P	P	12 17 17.1	0.0
	baz=37						
U22A	Llaves	36.93	117	⇓P	P	12 17 18.8	+0.5
	baz=37						
Y15A	Casa Rosa Ranc	36.94	125	⇑P	P	12 17 19.1	+0.7
	baz=37						
Z13A	Yuma Proving G	37.14	127

	baz=39					
Y22A	**Socorro**	**39.01 119**	⇑P	**P**	**12 17 36.5**	**+0.7**
	baz=39					
Z20A	**Nine Sixteen R**	**39.10 121**	⇑P	**P**	**12 17 37.2**	**+0.6**
	baz=39					
119A	**Ashpeak Ranch,**	**39.14 122**	⇑P	**P**	**12 17 37.5**	**+0.6**
	baz=39					
Y23A	**Lovelace Mesa,**	**39.38 118**	⇑P	**P**	**12 17 39.4**	**+0.5**
	baz=39					
120A	**U Bar Ranch, L**	**39.59 122**	⇑P	**P**	**12 17 41.1**	**+0.5**
	baz=40					
Z22A	**Elephant Butte**	**39.61 119**	⇑P	**P**	**12 17 41.0**	**+0.2**
	baz=40					
Y24A	**Capitan**	**39.63 117**	⇑P	**P**	**12 17 42.2**	**+1.2**
	baz=40,SNR=5.6					
219A	**White Tail Can**	**39.84 123**	⇓P	**P**	**12 17 43.1**	**+0.4**
	baz=40					
Z23A	**Rita Site, Whi**	**39.90 119**	⇓P	**P**	**12 17 43.5**	**+0.3**
	baz=40					
Y25A	**Mesa, Roswell**	**39.94 116**	⇓P	**P**	**12 17 43.7**	**+0.2**
	baz=40					
318A	**Bisbee**	**40.06 124**	⇓P	**P**	**12 17 44.4**	**-0.2**
	baz=40					
Z24A	**Sheeppen Canyo**	**40.18 117**	⇑P	**P**	**12 17 45.9**	**+0.4**
	baz=40					
220A	**Playas Peak, P**	**40.20 122**	⇑P	**P**	**12 17 46.1**	**+0.4**
	baz=40,SNR=5.1					
MSTX	**Muleshoe**	**40.68 114**	⇑P	**P**	**12 17 49.2**	**-0.4**
	baz=40					
124A	**Stringfield Ra**	**40.70 118**	⇓P	**P**	**12 17 49.7**	**-0.1**
	baz=41					
Z26A	**Caprock**	**40.79 116**	⇑P	**P**	**12 17 50.6**	**0.0**
	baz=41					
125A	**Gardner Draw,**	**41.05 117**	⇑P	**P**	**12 17 52.4**	**-0.4**
	baz=41					
Z27A	**Tatum**	**41.07 115**	⇓P	**P**	**12 17 52.4**	**-0.4**
	baz=41					
224A	**Cornudas Mount**	**41.22 119**	⇑P	**P**	**12 17 54.0**	**-0.1**
	baz=41					
225A	**Deer Hill, Car**	**41.47 118**	⇑P	**P**	**12 17 56.4**	**+0.3**
	baz=41					
WMOK	**Wichita Mounta**	**41.70 109**	*e*P	**P**	**12 17 57.4**	**-0.5**
	4.6nm,1.0s,mb4.2					
325A	**Bean Ranch, Si**	**42.06 118**	⇓P	**P**	**12 18 01.0**	**+0.1**
	baz=42					
425A	**Indio Mountain**	**42.57 119**	⇑P	**P**	**12 18 05.5**	**+0.4**
	baz=42,SNR=8.0					
426A	**McDonald Obser**	**43.06 118**	⇑P	**P**	**12 18 09.2**	**+0.2**
	baz=43					
428A	**Kincaid Ranch,**	**43.55 116**	⇑P	**P**	**12 18 13.0**	**0.0**
	baz=43					
526A	**Mary Lane Ranc**	**43.57 118**	⇓P	**P**	**12 18 13.5**	**+0.3**
	baz=43,SNR=6.2					
527A	**Woodward Ranch**	**43.69 118**	⇑P	**P**	**12 18 14.0**	**-0.2**
	baz=44					
626A	**Big Bend Ranch**	**44.00 119**	⇓P	**P**	**12 18 16.5**	**-0.1**
	baz=44					
528A	**Cox Ranch, San**	**44.00 117**	⇑P	**P**	**12 18 16.7**	**+0.1**
	baz=44					
MIAR	**Mount Ida**	**44.12 104**	*e*P	**P**	**12 18 16.7**	**-0.8**
	4.1nm,0.8s,mb4.2					
TXAR	**Lajitas Array**	**44.38 118**	P	**P**	**12 18 19.8**	**+0.1**
	1.7nm,0.7s,mb3.9,baz=329,slow=6.8,SNR=29					
TXAR			PcP	PcP	12 20 00.6	-1.8
	0.6nm,0.8s,baz=318,slow=1.7,SNR=4.0					
TXAR	**Lajitas Array**	**44.38 118**	P	**P**	**12 18 19.8**	**+0.1**
TXAR			PcP	PcP	12 20 00.6	-1.8
627A	**Terlingua Ranc**	**44.39 118**	⇓P	**P**	**12 18 19.7**	**0.0**
	baz=44,SNR=5.2					
628A	**Black Gap, Mar**	**44.56 117**	⇑P	**P**	**12 18 20.7**	**-0.4**
	baz=44					
ARCES	**ARCESS Array B**	**47.40 3**	P	**P**	**12 18 42.5**	**-0.4**
	1.6nm,0.8s,mb3.8,baz=0.0,slow=9.2,SNR=4.5					
MDJ	**Mudanjiang**	**47.95 288**	P	**P**	**12 18 46.1**	**-1.4**
MDJ			pmax	pmax		
	comp=Z,9.0nm,2.2s,mb4.2					
MDJ			pmax	pmax		
	comp=Z,60nm,4.4s					
JSRW	**J. Sargeant Re**	**48.54 87**	*e*P	**P**	**12 18 51.7**	**-0.4**
CN2	**Changchun**	**50.38 290**	*e*P	**P**	**12 19 06.3**	**+0.3**
KSRS	**Korea Array**	**54.52 284**	P	**P**	**12 19 35.7**	**-1.1**
	comp=Z,1.0nm,0.6s,mb4.0,baz=30,slow=7.1,SNR=4.6					
SONM	**Songino Array**	**54.57 307**	P	**P**	**12 19 36.5**	**-0.4**
	comp=Z,1.8nm,0.7s,mb4.2,baz=17,slow=6.5,SNR=7.4					
FINES	**FINESS Array B**	**55.53 3**	P	**P**	**12 19 42.4**	**-1.2**
	comp=Z,2.0nm,0.6s,mb4.3,baz=6.4,slow=8.6,SNR=8.6					
FINES	**FINESS Array B**	**55.53 3**	P	**P**	**12 19 42.4**	**-1.2**
ZAA0	**Zalesovo Array**	**55.96 325**	*e*P	**P**	**12 19 45.1**	**-1.7**
ZALV	**Zalesovo Beam**	**55.96 325**	P	**P**	**12 19 44.8**	**-2.0**
	comp=Z,1.7nm,0.6s,mb4.2,baz=8.3,slow=8.4,SNR=8.5					
HHC	**Hu-ho-hao-te**	**58.53 299**	*e*P	**P**	**12 20 07.0**	**+1.8**
HHC			pP	pP	12 20 23.0	-0.5
HHC			sP	sP	12 20 30.1	-1.4
HHC			PcP	PcP	12 20 57.0	+2.2
HHC			PP	PP	12 22 19.3	+4.4
HHC			ScP	ScP	12 24 50.1	+1.7
HHC			PcS	PcS	12 24 57.1	+0.7
HHC			S	**S**	**12 28 03.4**	**+0.3**
HHC			ScS	ScS	12 29 48.6	+0.7
HHC			pmax	pmax		
	comp=Z,14nm,0.7s,mb5.1					
HHC			pmax	pmax		
	comp=Z,120nm,5.1s					
HHC			LR	LR		
	comp=N,120nm,17.8s					
HHC			LR	LR		
	comp=E,88nm,14.3s					
HHC			LR	LR		
	comp=Z,65nm,16.7s					
BVAR	**Borovoye Array**	**60.11 334**	P	**P**	**12 20 14.1**	**-1.7**
	comp=Z,3.4nm,0.6s,mb4.5,baz=32,slow=8.7,SNR=3.8					
KURK	**Kurchatov**	**60.47 328**	P	**P**	**12 20 16.9**	**-1.4**
	comp=Z,0.9nm,0.4s,mb4.1,baz=29,slow=7.1,SNR=5.1					
MKAR	**Makanchi Array**	**63.15 323**	P	**P**	**12 20 33.5**	**-2.8**
	comp=Z,1.2nm,0.7s,mb3.9,baz=50,slow=8.0,SNR=6.0					
WMQ	**Urumqi**	**64.32 318**	*e*P	**P**	**12 20 48.0**	**+3.9**
XAN	**Xi'an**	**65.47 297**	P	**P**	**12 20 51.5**	**-0.2**
XAN			LR	LR		
	comp=Z,56nm,10.2s					
LZH	**Lanzhou**	**65.67 302**	*e*P	**P**	**12 20 54.0**	**+1.0**
LZH			pP	pP	12 21 13.5	+1.8
LZH			pmax	pmax		
	comp=Z,15nm,1.3s,mb4.7					
WHN	**Wuhan**	**66.27 291**	*e*P	**P**	**12 21 01.0**	**+4.1**
CD2	**Chengdu**	**70.27 300**	*e*P	**P**	**12 21 23.4**	**+1.5**
CD2			pP	pP	12 21 40.4	-0.4
CD2			sP	sP	12 21 46.8	-1.9
CD2			pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.9					
CD2			pmax	pmax		
	comp=Z,20nm,4.2s					
CMAR	**Chiang Mai Arr**	**83.33 298**	P	**P**	**12 22 33.6**	**-1.9**
	comp=Z,0.3nm,0.3s,mb3.5,baz=15,slow=6.3,SNR=3.1					
CMAR			pP	pP	12 22 53.5	-1.4
	comp=Z,1.2nm,0.6s,baz=14,slow=5.8,SNR=7.8					
BOSA	**Boshof**	**145.09 10**	PKPbc	PKPbc	12 29 43.4	-1.3
	comp=Z,2.9nm,0.5s,baz=342,slow=3.2,SNR=4.5					

DJA 19 12:18:04.1±84S×124°60E, h61km, MLv3.6/6, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**1.99**	**293**	P	Pn	12 18 36.7	+1.3
LUWI				S	Sn	12 19 01.5	+2.2
NLAI	**Namlea**	**2.86**	**119**	P	Pn	12 18 48.1	+0.9
KDI	**Kendari**	**2.89**	**223**	P	Pn	12 18 48.7	+1.1
APSI	**Ampana**	**3.09**	**287**	P	Pn	12 18 50.2	-0.2
APSI				S	Sn	12 19 28.4	+2.2
LBMI	**Labuha**	**3.14**	**68**	P	Pn	12 18 50.8	-0.2
MNI	**Manado**	**3.27**	**4**	P	Pn	12 18 54.5	+1.6

*IDC **19** 12:19:47.0±1.0, 32°.29N×105°.00E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.6/24, mbtmp3.6/6, MS3.3/1, Ms1 3.3/1, ms1mx2.2/26, Error ellipse: s-maj=73.3km s-min=19.7km az=59.0*

ISC 19 12:19:47.6±3.8, 32°.11N±0°.09×104°.7E±0°.3, h4km±23km, n8, σ0°58/10, mb3.6/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.04**	**350**	*e*Pn	**Pn**	**12 20 50.8**	**+0.6**
LZH				Pg	**Pb**	**12 20 59.0**	**-0.3**
LZH				Sn	**Sn**	**12 21 38.3**	**+0.4**
LZH				Sg	**Sb**	**12 21 48.3**	**-0.1**
LZH				smax			
	comp=N,200nm,0.5s						
LZH				smax			
	comp=E,190nm,0.5s						
LZH				LR	LR		
	comp=N,490nm,5.7s						
LZH				LR	LR		
	comp=Z,630nm,7.0s						
MKAR	**Makanchi Array**	**22.60**	**317**	P	**P**	**12 24 49.0**	**0.0**
	comp=Z,0.5nm,0.6s,mb3.1,baz=102,slow=11,SNR=4.6						
ZALV	**Zalesovo Beam**	**26.07**	**333**	P	**P**	**12 25 22.3**	**+0.4**
	comp=Z,1.8nm,0.5s,mb3.9,baz=136,slow=9.6,SNR=8.2						
CBIJ	**Chichi jima**	**32.83**	**89**	LR	LR	12 37 53.0	
	comp=Z,60nm,21.4s,baz=131,slow=33						
FINES	**FINESS Array B**	**57.04**	**326**	P	**P**	**12 29 33.7**	**-0.7**
	comp=Z,1.1nm,0.7s,mb4.0,baz=93,slow=8.0,SNR=4.0						
WRA	**Warramunga Arr**	**59.01**	**147**	P	**P**	**12 29 49.0**	**+0.3**
	comp=Z,0.3nm,0.3s,mb3.8,baz=318,slow=11,SNR=13						
ASAR	**Alice Springs**	**62.08**	**150**	P	**P**	**12 30 10.1**	**+0.6**
	comp=Z,0.2nm,0.5s,mb3.5,baz=338,slow=6.9,SNR=4.7						
YKA	**Yellowknife Ar**	**80.57**	**17**	P	**P**	**12 31 59.6**	**-1.3**
	comp=Z,0.3nm,0.6s,mb3.4,baz=330,slow=5.2,SNR=2.8						

*IDC **19** 12:40:16.7±2.8, 29°.87N×143°.15E, h0km, mb3.7/7, mb1 3.7/10, mb1mx3.6/25, mbtmp3.6/10, ML3.2/3, Error ellipse: s-maj=100.1km s-min=18.3km az=75.0*

*ISCJB **19** 12:40:21.9±0.8, 29°.84N±0°.05×142°.4E±0°.2, h33km, mb3.7/7, Error ellipse: s-maj=27.9km s-min=4.7km az=167.7*

*NEIC **19** 12:40:22.9, 29°.83N×142°.21E, h41km, MG4.0(JMA), After JMA.*

*JMA **19** 12:40:22.9±0.2, 29°.83N×142°.21E, h41km, M4.0*

ISC 19 12:40:23.8±0.9, 29°.81N±0°.06×142°.5E±0°.2, h35km, n23, σ1°11/32, mb3.7/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.71**	**185**	P	**Pn**	**12 41 05.2**	**+0.3**
CBIJ	**Chichi jima**	**2.71**	**185**	Pn	**Pn**	**12 41 03.6**	**-1.3**
	2.2nm,0.3s,baz=107,slow=22,SNR=6.3						
CBIJ				Sn	**Sn**	**12 41 32.0**	**-4.5**
	19nm,0.3s,baz=300,slow=23,SNR=10						
JHJ2	**Mitsune**	**3.99**	**326**	*e*S	**Sn**	**12 42 05.7**	**-2.3**
BSO1	**Boso 1**	**4.99**	**346**	P	**Pn**	**12 41 36.3**	**+0.1**
BSO1				*e*S	**Sn**	**12 42 32.3**	**-0.3**
BSO3	**Boso 3**	**5.24**	**342**	P	**Pn**	**12 41 40.9**	**+1.2**
BSO3				*e*S	**Sn**	**12 42 39.3**	**+0.4**
JHU	**Hanno**	**6.59**	**337**	P	**Pn**	**12 41 58.4**	**+0.2**
JHU				*e*S	**Sn**	**12 43 10.6**	**-1.5**
JYT	**Yasato**	**6.68**	**344**	P	**Pn**	**12 42 00.0**	**+0.7**
JYT				*e*S	**Sn**	**12 43 13.6**	**-0.6**
JRY	**Ryogami san**	**6.87**	**335**	P	**Pn**	**12 42 02.9**	**+0.9**
JRY				*e*S	**Sn**	**12 43 20.3**	**+1.3**
JHO	**Hitachi**	**6.96**	**347**	P	**Pn**	**12 42 02.2**	**-1.1**
JHO				*e*S	**Sn**	**12 43 16.2**	**-5.1**
JAG	**Ashikaga**	**7.06**	**340**	P	**Pn**	**12 42 04.9**	**+0.3**
JAG				S	**Sn**	**12 43 21.5**	**-2.1**
MJAR	**Matsushiro Arr**	**7.60**	**333**	Pn	**Pn**	**12 42 12.3**	**+0.3**
	0.9nm,0.3s,baz=156,slow=11,SNR=12						
MJAR	**Matsushiro Arr**	**7.60**	**333**	Pn	**Pn**	**12 42 12.3**	**+0.3**
MAJO	**Matsushiro**	**7.60**	**333**	*e*Pn	**Pn**	**12 42 09.5**	**-2.5**
MAT	**Matsushiro**	**7.60**	**333**	P	**Pn**	**12 42 12.4**	**+0.4**
MAT				*e*S	**Sn**	**12 43 37.5**	**+0.6**
KSRS	**Korea Array**	**14.30**	**306**	Pn	**Pn**	**12 43 48.0**	**+4.3**
	0.1nm,0.3s,baz=112,slow=12,SNR=4.9						
SONM	**Songino Array**	**32.98**	**313**	P	**P**	**12 46 56.5**	**+1.3**
	0.4nm,0.5s,mb3.6,baz=111,slow=6.8,SNR=3.6						
ZALV	**Zalesovo Beam**	**47.63**	**317**	P	**P**	**12 48 57.6**	**+1.4**
	0.4nm,0.3s,mb3.9,baz=134,slow=6.2,SNR=3.0						
MKAR	**Makanchi Array**	**48.97**	**308**	P	**P**	**12 49 07.8**	**+1.1**
	0.5nm,0.6s,mb3.7,baz=85,slow=8.7,SNR=5.4						
WRAB	**Tennant Creek**	**50.07**	**190**	*e*P	**P**	**12 49 12.4**	**-2.8**
WRA	**Warramunga Arr**	**50.08**	**190**	P	**P**	**12 49 14.8**	**-0.5**
	0.9nm,0.5s,mb4.0,baz=7.9,slow=7.9,SNR=10						
ASAR	**Alice Springs**	**53.80**	**190**	P	**P**	**12 49 42.7**	**-0.3**
	0.2nm,0.6s,mb3.2,baz=4.1,slow=4.2,SNR=6.2						
BVAR	**Borovoye Array**	**56.23**	**316**	P	**P**	**12 50 00.7**	**+0.3**
	0.7nm,0.5s,mb3.9,baz=93,slow=7.0,SNR=4.6						
BRTR	**Keskin Array B**	**84.34**	**313**	P	**P**	**12 52 52.8**	**+0.4**
	0.4nm,0.6s,mb3.8,baz=14,slow=7.4,SNR=3.4						

MEX 19 13:14:09.7±0.7, 15°.41N×93°.55W, h78km±7km, MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.43**	**47**	*e*P	Pn	13 14 21.4	-1.2
PCIG				*i* S	Sn	13 14 30.8	-1.4
THIG		**1.34**	**112**	*e*P	Pn	13 14 31.4	-1.4
THIG				*i* S	Sn	13 14 48.3	-1.9
TGIG		**1.42**	**17**	*i* P	Pn	13 14 32.5	-1.3
TGIG				*i* S	Sn	13 14 49.8	-2.3
SCX	**San Cristobal**	**1.58**	**34**	*i* P	Pn	13 14 35.7	-0.3
SCX				*i* S	Sn	13 14 54.5	-1.4
CMIG	**Matias Romero**	**2.10**	**323**	*i* P	Pn	13 14 42.4	-0.5
CMIG				*i* S	Sn	13 15 06.7	-1.6
HUIG	**Huatulco**	**2.49**	**278**	*i* P	Pn	13 14 46.5	-1.7
HUIG				*i* S	Sn	13 15 14.7	-3.0
VHO	**Vista Hermosa**	**3.48**	**299**	*i* P	Pn	13 15 01.3	-0.2
VHO				*i* S	Sn	13 15 40.4	-1.1
PNIG	**Pinotepa**	**4.51**	**283**	*i* P	Pn	13 15 15.3	-0.3
PNIG				*i* S	Sn	13 16 06.0	-0.9

*ISCJB **19** 13:18:21.7±0.4, 50°.12N±0°.02×18°.38E±0°.03, h0km, Error ellipse: s-maj=3.7km s-min=2.1km az=18.6*

*IPEC **19** 13:18:22.4±0.1, 50°.12N×18°.44E, h3km±1km, ML2.3/2, Error ellipse: s-maj=1.4km s-min=0.8km az=160.0*

*WAR **19** 13:18:23.0, 50°.06N×18°.43E*

*PRU **19** 13:18:24.2, 50°.09N×18°.32E, h0km*

*CSEM **19** 13:18:24.8±0.1, 50°.00N×18°.17E, h1km, ML3.4/7, Error ellipse: s-maj=3.5km s-min=2.4km az=25.0*

*NEIC **19** 13:18:26.1±0.7, 49°.97N×18°.23E, h5km, ML2.5(BRA), Error ellipse: s-maj=11.5km s-min=8.0km az=220.0*

*VIE **19** 13:18:26.3±0.7, 49°.68N×18°.32E, h0km, mb2.1/3, ML2.9/3, Error ellipse: s-maj=5.7km s-min=2.5km az=100.0 18 km SSE of Ostrava Suspected Mining induced.*

ISC 19 13:18:22.7±0.4, 50°.09N±0°.02×18°.37E±0°.02, h0km, n63, σ1°13/115, 2C-5D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.11**	**266**	⇓*i* Pg	**Pg**	**13 18 26.7**	**+1.9**
RAC				*e*Sg	**Sg**	**13 18 29.8**	**+3.5**
RAC	**Raciborz**	**0.11**	**266**	⇓*i* Pg	**Pg**	**13 18 26.7**	**+1.9**
RAC				*e*Sg	**Sg**	**13 18 29.8**	**+3.5**
OKC	**Ostrava-Krasne**	**0.29**	**209**	*e*PG	**Pg**	**13 18 29.1**	**+0.8**
OKC				*e*SG	**Sg**	**13 18 33.3**	**+1.3**
	comp=Z,391nm,0.6s						
OKC	**Ostrava-Krasne**	**0.29**	**209**	Pg	**Pg**	**13 18 29.1**	**+0.8**
OKC				*e*Sg	**Sg**	**13 18 33.2**	**+1.2**
	baz=34						
OJC	**Ojcow**	**0.93**	**82**	*e*Pg	**Pg**	**13 18 38.3**	**-2.3**
OJC				*e*Sg	**Sg**	**13 18 51.1**	**-1.5**
LIKS	**Likavka**	**1.15**	**155**	*e*P	**Pg**	**13 18 45.9**	**+1.2**
LIKS				*e*Sn	**Sn**	**13 19 02.3**	**-0.1**
LIKS	**Likavka**	**1.15**	**155**	*e*	**Pg**	**13 18 45.9**	**+1.2**
LIKS	**Likavka**	**1.15**	**155**	*e*SN	**Sn**	**13 19 02.3**	**-0.1**
LIKS	**Likavka**	**1.15**	**155**	*e*P	**Pg**	**13 18 45.9**	**+1.2**
LIKS				*e*Sn	**Sn**	**13 19 02.3**	**-0.1**
JAVC	**Velka Javorina**	**1.31**	**200**	*e*Pn	**Pn**	**13 18 48.4**	**+0.1**
	baz=21						
JAVC				*e*Sg	**Sg**	**13 19 06.6**	**+1.7**
	baz=21						
DPC	**Dobruska-Polom**	**1.34**	**282**	*e*PG	**Pg**	**13 18 48.6**	**+0.2**
DPC				*e*SG	**Sg**	**13 19 06.5**	**+0.8**
	comp=Z,132nm,0.5s						
DPC	**Dobruska-Polom**	**1.34**	**282**	*e*Pn	**Pn**	**13 18 48.3**	**-0.3**
	baz=99						
DPC	**Dobruska-Polom**	**1.34**	**282**	Pg	**Pg**	**13 18 48.6**	**+0.2**
DPC				*e*Sg	**Sg**	**13 19 06.7**	**+1.0**
	baz=99						
VRAC	**Vranov**	**1.39**	**236**	*e*Pn	**Pn**	**13 18 49.1**	**-0.3**
VRAC				*e*Sg	**Sg**	**13 19 06.8**	**-0.6**
	comp=Z,20nm,0.1s,baz=55						
NIE	**Niedzica**	**1.43**	**117**	*e*Pg	**Pg**	**13 18 49.3**	**-0.9**
NIE				*e*Sg	**Sg**	**13 19 08.6**	**-0.1**
KOLL	**Kolacno**	**1.52**	**179**	*e*Pn	**Pn**	**13 18 51.3**	**+0.2**
KOLL				*e*Sn	**Sn**	**13 19 11.4**	**-0.1**
KOLL	**Kolacno**	**1.52**	**179**	*e*PN	**Pn**	**13 18 51.3**	**+0.2**
KOLL				*e*SN	**Sn**	**13 19 11.4**	**-0.1**
KOLL	**Kolacno**	**1.52**	**179**	*e*Pn	**Pn**	**13 18 51.3**	**+0.2**
KOLL				*e*Sn	**Sn**	**13 19 11.4**	**-0.1**
KSP	**Ksiaz**	**1.52**	**300**	*e*Pn	**Pn**	**13 18 51.0**	**-0.2**
KSP				*e*Pg	**Pg**	**13 18 52.9**	**+1.0**
KSP				*e*Sg	**Sg**	**13 19 13.3**	**+1.7**
KSP	**Ksiaz**	**1.52**	**300**	*e*Pn	**Pn**	**13 18 50.7**	**-0.5**
KSP				*e*Pg	**Pg**	**13 18 52.7**	**+0.8**
KSP				*e*Sg	**Sg**	**13 19 13.1**	**+1.5**
UPC	**Upice**	**1.56**	**286**	*e*PG	**Pg**	**13 18 53.3**	**+0.6**
UPC				*e*SG	**Sg**	**13 19 13.8**	**+0.8**
UPC	**Upice**	**1.56**	**286**	Pg	**Pg**	**13 18 53.3**	**+0.6**
UPC				Sg	**Sg**	**13 19 13.8**	**+0.8**
VYHS	**Vyhne**	**1.63**	**169**	*e*Pn	**Pn**	**13 18 54.1**	**+1.5**
VYHS				*e*Sn	**Sn**	**13 19 13.4**	**-0.9**
VYHS	**Vyhne**	**1.63**	**169**	*e*PN	**Pn**	**13 18 54.1**	**+1.5**
VYHS				*e*SN	**Sn**	**13 19 13.4**	**-0.9**
VYHS	**Vyhne**	**1.63**	**169**	*e*Pn	**Pn**	**13 18 54.1**	**+1.5**
VYHS				*e*Sn	**Sn**	**13 19 13.4**	**-0.9**
KRUC	**Moravsky**	**1.65**	**232**	*e*Pn	**Pn**	**13 18 52.8**	**-0.1**
	baz=51						
KRUC				*e*Sg	**Sg**	**13 19 14.1**	**-1.5**
	comp=Z,31nm,0.3s,baz=51						
SMOL	**Smolenice**	**1.69**	**202**	*e*Pn	**Pn**	**13 18 53.5**	**0.0**
SMOL				*e*Sn	**Sn**	**13 19 15.5**	**-0.4**
SMOL	**Smolenice**	**1.69**	**202**	*e*PN	**Pn**	**13 18 53.5**	**0.0**
SMOL				*e*SN	**Sn**	**13 19 15.5**	**-0.4**
SMOL	**Smolenice**	**1.69**	**202**	*e*Pn	**Pn**	**13 18 53.5**	**0.0**
SMOL				*e*Sn	**Sn**	**13 19 15.5**	**-0.4**
STHS	**Stebnicka Huta**	**1.98**	**109**	*e*Pn	**Pg**	**13 19 00.2**	**-0.6**
STHS				*e*Sn	**Sg**	**13 19 27.4**	**+0.9**
STHS	**Stebnicka Huta**	**1.98**	**109**	*e*PN	**Pg**	**13 19 00.2**	**-0.6**
STHS				*e*SN	**Sg**	**13 19 27.4**	**+0.9**
STHS	**Stebnicka Huta**	**1.98**	**109**	*e*Pn	**Pg**	**13 19 00.2**	**-0.6**
STHS				*e*Sn	**Sg**	**13 19 27.4**	**+0.9**
ZST	**Bratislava**	**2.07**	**204**	*e*Pn	**Pn**	**13 18 59.7**	**+1.0**
ZST				*e*Sn	**Sn**	**13 19 24.7**	**-0.5**
ZST	**Bratislava**	**2.07**	**204**	*e*PN	**Pn**	**13 18 59.7**	**+1.0**
ZST				*e*SN	**Sn**	**13 19 24.7**	**-0.5**
ZST	**Bratislava**	**2.07**	**204**	*e*Pn	**Pn**	**13 18 59.7**	**+1.0**
ZST				*e*Sn	**Sn**	**13 19 24.7**	**-0.5**
KECS	**Kecovo**	**2.13**	**138**	*e*P	**Pg**	**13 19 04.7**	**+1.2**
KECS				*e*		13 19 25.3	
KECS	**Kecovo**	**2.13**	**138**	*e*	**Pg**	**13 19 04.7**	**+1.2**
KECS				*e*		13 19 25.3	
CRVS	**Cervenica-Dubn**	**2.34**	**119**	*e*Pn	**Pb**	**13 19 05.6**	**-0.2**
CRVS				*e*Sn	**Sb**	**13 19 35.9**	**+0.7**
CRVS	**Cervenica-Dubn**	**2.34**	**119**	*e*PN	**Pb**	**13 19 05.6**	**-0.2**
CRVS				*e*SN	**Sb**	**13 19 35.9**	**+0.7**
CRVS	**Cervenica-Dubn**	**2.34**	**119**	*e*Pn	**Pb**	**13 19 05.6**	**-0.2**
CRVS				*e*Sn	**Sb**	**13 19 35.9**	**+0.7**
PSZ	**Piszkesteto**	**2.40**	**155**	*e*Pn	**Pn**	**13 19 05.6**	**+2.4**
PSZ	**Piszkesteto**	**2.40**	**155**	⇓*e*PB	**Pb**	**13 19 08.3**	**+1.6**
PSZ				*e*Sn	**Sn**	**13 19 33.3**	**+0.1**
PSZ	**Piszkesteto**	**2.40**	**155**	*e*Pn	**Pn**	**13 19 05.6**	**+2.4**
PSZ				*e*Sn	**Sn**	**13 19 33.3**	**+0.1**
PRU	**Pruhonice**	**2.47**	**269**	*e*PG	**Pg**	**13 19 08.3**	**-1.7**
PRU				*e*SG	**Sg**	**13 19 40.4**	**-1.6**
	comp=Z,25nm,0.5s						
PRU	**Pruhonice**	**2.47**	**269**	Pg	**Pg**	**13 19 08.3**	**-1.7**
PRU				Sg	**Sg**	**13 19 40.4**	**-1.6**
	comp=Z,25nm,0.5s						
PVCC	**Panska Ves**	**2.47**	**282**	*e*PG	**Pg**	**13 19 09.3**	**-0.8**
PVCC				*e*SG	**Sg**	**13 19 42.0**	**-0.1**
	comp=Z,61nm,0.6s						
PVCC	**Panska Ves**	**2.47**	**282**	Pg	**Pg**	**13 19 09.3**	**-0.8**
PVCC				Sg	**Sg**	**13 19 42.0**	**-0.1**
	comp=Z,61nm,0.6s						
CONA	**Conrad Observa**	**2.72**	**218**	⇑*i* Pn	**Pn**	**13 19 07.3**	**-0.4**
CONA				⇓*i* Sn	**Sn**	**13 19 37.7**	**-3.5**
CONA	**Conrad Observa**	**2.72**	**218**	Pn	**Pn**	**13 19 07.3**	**-0.3**
CONA				Sn	**Sn**	**13 19 37.7**	**-3.5**
KOLS	**Kolonicke sedl**	**2.80**	**113**	*e*P	**Pg**	**13 19 16.6**	**+0.3**
KOLS				*e*Sn	**Sb**	**13 19 46.7**	**-1.6**
KOLS	**Kolonicke sedl**	**2.80**	**113**	*e*	**Pg**	**13 19 16.6**	**+0.3**
KOLS	**Kolonicke sedl**	**2.80**	**113**	*e*SN	**Sb**	**13 19 46.7**	**-1.6**
KWP	**Kalwaria Pacla**	**2.85**	**98**	*e*Pn	**Pb**	**13 19 14.0**	**-0.4**
KWP	**Kalwaria Pacla**	**2.85**	**98**	*e*Pn	**Pb**	**13 19 14.0**	**-0.4**
KHC	**Kasperske Hory**	**3.26**	**255**	*e*Pn	**Pn**	**13 19 15.5**	**+0.5**
KHC

comp=Z,1.0nm,0.6s,mb3.3
COLA College 34.69 39 *e*P **P 13 31 30.1 +0.5**
COLA pmax pmax
comp=Z,1.0nm,0.5s,mb3.9
COLA College 34.69 39 *e*P **P 13 31 30.1 +0.5**
comp=Z,0.8nm,0.5s,mb3.8
ZALV Zalesovo Beam 42.59 305 LR LR 13 50 47.2
comp=Z,18nm,22.0s,baz=68,slow=37
YKA Yellowknife Ar 49.47 38 P **P 13 33 29.5 -0.3**
comp=Z,0.4nm,0.8s,mb3.4,baz=286,slow=6.8,SNR=3.9
YKA Yellowknife Ar 49.47 38 P **P 13 33 29.5 -0.3**
CMAR Chiang Mai Arr 53.46 257 P **P 13 33 59.8 -0.3**
comp=Z,0.7nm,0.4s,mb4.1,baz=29,slow=6.6,SNR=4.6
CMAR Chiang Mai Arr 53.46 257 P **P 13 33 59.8 -0.3**
CMAR pmax pmax
comp=Z,1.0nm,0.4s
PDAR Pinedale Array 63.38 55 P **P 13 35 06.7 -2.2**
comp=Z,0.4nm,0.7s,mb3.5,baz=336,slow=6.3,SNR=2.6
WRA Warramunga Arr 69.92 200 P **P 13 35 50.9 +0.2**
comp=Z,0.3nm,0.6s,mb3.3,baz=19,slow=6.8,SNR=4.8
AKASG Malin Array Be 71.01 327 *i* P **P 13 36 04.5 +7.4**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
ASAR Alice Springs 73.61 199 P **P 13 36 13.8 +1.0**
comp=Z,0.4nm,0.6s,mb3.4,baz=12,slow=5.6,SNR=8.5
ASAR Alice Springs 73.61 199 *e*P **P 13 36 14.0 +1.3**
TXAR Lajitas Array 76.19 62 P **P 13 36 29.1 +1.2**
comp=Z,0.5nm,0.7s,mb3.4,baz=291,slow=3.6,SNR=5.9
TXAR Lajitas Array 76.19 62 *e*P **P 13 36 29.4 +1.6**
TXAR pmax pmax
comp=Z,1.0nm,0.6s

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*ISCJB **19** 13:49:02.7±0.6, 50.°15N±0.°05×18.°39E±0.°04, h0km, Error ellipse: s-maj=6.9km s-min=3.4km az=2.1*
*CSEM **19** 13:49:03.7±0.3, 50.°12N×18.°42E, h1km, ML2.8/6, Error ellipse: s-maj=7.2km s-min=3.4km az=179.0*
*PRU **19** 13:49:04.4, 50.°09N×18.°41E, h0km*
*IPEC **19** 13:49:04.0±0.1, 50.°09N×18.°43E, h4km±1km, ML1.8/2, Error ellipse: s-maj=1.8km s-min=0.8km az=161.0*
*WAR **19** 13:49:04.4, 50.°06N×18.°43E*
ISC 19 13:49:03.8±0.6, 50.°11N±0.°05×18.°39E±0.°03, h0km, n19, σ1°01/30, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.13**	**259**	*e*Pg	**Pg**	**13 49 08.1**	**+1.8**
RAC				*e*Sg	**Sg**	**13 49 11.3**	**+3.3**
OKC	**Ostrava-Krasne**	**0.32**	**211**	*e*PG	**Pg**	**13 49 10.3**	**+0.5**
OKC				*e*SG	**Sg**	**13 49 14.9**	**+1.0**
comp=Z,43nm,0.7s							
OKC	**Ostrava-Krasne**	**0.32**	**211**	Pg	**Pg**	**13 49 10.3**	**+0.5**
OKC				Sg	**Sg**	**13 49 14.9**	**+1.0**
comp=Z,43nm,0.7s							
OJC	**Ojcow**	**0.91**	**82**	*e*Pg	**Pg**	**13 49 19.7**	**-1.5**
OJC				*e*Sg	**Sg**	**13 49 32.2**	**-0.8**
OJC	**Ojcow**	**0.91**	**82**	*e*Pg	**Pg**	**13 49 19.6**	**-1.6**
baz=262							
OJC				*e*Sg	**Sg**	**13 49 32.9**	**-0.1**
baz=262							
JAVC	**Velka Javorina**	**1.34**	**201**	*e*Pn	**Pn**	**13 49 29.8**	**+0.1**
baz=22							
DPC	**Dobruska-Polom**	**1.35**	**281**	*e*PG	**Pg**	**13 49 30.4**	**+0.7**
DPC				*e*SG	**Sg**	**13 49 47.9**	**+0.7**
comp=Z,13nm,0.5s							
DPC	**Dobruska-Polom**	**1.35**	**281**	*e*Pn	**Pn**	**13 49 30.0**	**+0.1**
baz=100							
DPC	**Dobruska-Polom**	**1.35**	**281**	Pg	**Pg**	**13 49 30.4**	**+0.7**
DPC				Sg	**Sg**	**13 49 47.9**	**+0.7**
comp=Z,13nm,0.5s							
VRAC	**Vranov**	**1.42**	**236**	*e*Pn	**Pn**	**13 49 30.5**	**-0.3**
VRAC				*e*Sg	**Sg**	**13 49 48.2**	**-1.1**
comp=Z,6.8nm,0.3s,baz=56							
NIE	**Niedzica**	**1.42**	**118**	*e*Pg	**Pg**	**13 49 31.2**	**+0.1**
NIE				*e*Sg	**Sg**	**13 49 50.5**	**+1.0**
NIE	**Niedzica**	**1.42**	**118**	*e*Pg	**Pg**	**13 49 31.2**	**+0.1**
NIE				*e*Sg	**Sg**	**13 49 50.5**	**+1.0**
KRUC	**Moravsky**	**1.67**	**232**	*e*Pn	**Pn**	**13 49 34.2**	**-0.1**
baz=51							
KRUC				*e*Sg	**Sg**	**13 49 56.0**	**-1.4**
comp=Z,8.1nm,0.2s,baz=51							
PRU	**Pruhonice**	**2.49**	**269**	*e*SG	**Sg**	**13 50 22.6**	**-1.0**
comp=Z,4.3nm,0.5s							
PRU	**Pruhonice**	**2.49**	**269**	Sg	**Sg**	**13 50 22.6**	**-1.0**
comp=Z,4.3nm,0.5s							
PVCC	**Panska Ves**	**2.49**	**281**	*e*SG	**Sg**	**13 50 24.2**	**+0.5**
comp=Z,10nm,0.4s							
PVCC	**Panska Ves**	**2.49**	**281**	Sg	**Sg**	**13 50 24.2**	**+0.5**
comp=Z,10nm,0.4s							
KHC	**Kasperske Hory**	**3.28**	**254**	*e*SG	**Sg**	**13 50 47.7**	**-1.5**
comp=Z,3.4nm,0.4s							
KHC	**Kasperske Hory**	**3.28**	**254**	Sg	**Sg**	**13 50 47.7**	**-1.5**
comp=Z,3.4nm,0.4s							

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*DDA **19** 13:54:34.9, 37.°98N×30.°62E, h15km±9km, Md3.0*
*ISK **19** 13:54:35.8, 37.°80N×31.°05E, h7km, MD2.9*
*CSEM **19** 13:54:36.2±0.3, 37.°71N×31.°03E, h20km, MD2.9, Error ellipse: s-maj=10.5km s-min=7.4km az=148.0*
*ISCJB **19** 13:54:36.6±0.7, 37.°73N±0.°08×31.°02E±0.°07, h22km±14km, Error ellipse: s-maj=14.0km s-min=8.6km az=14.9*
ISC 19 13:54:36.4±0.7, 37.°75N±0.°06×31.°03E±0.°06, h18km±8km, n17, σ0°94/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUTC	**Sutluce-Ispart**	**0.27**	**184**	*e*PG	**Pg**	**13 54 41.7**	**-0.8**
SUTC				*e*SG	**Sg**	**13 54 48.2**	**+1.6**
SUTC	**Sutluce-Ispart**	**0.27**	**184**	*e*Pg	**Pg**	**13 54 41.7**	**-0.8**
SUTC				*e*Sg	**Sg**	**13 54 48.2**	**+1.6**
ISP	**Isparta**	**0.42**	**283**	*e*PG	**Pg**	**13 54 43.8**	**-1.3**
ISP				*e*SG	**Sg**	**13 54 51.3**	**+0.4**
BCK	**Bucak**	**0.45**	**231**	*e*PG	**Pg**	**13 54 45.6**	**0.0**
BCK	**Bucak**	**0.45**	**231**	*e*Pg	**Pg**	**13 54 45.6**	**0.0**
KORT	**Korkueli**	**0.92**	**216**	*i* P	**Pb**	**13 54 52.5**	**-1.2**
KORT				*i* S	**Sb**	**13 55 12.7**	**+7.1**
KORT	**Korkueli**	**0.92**	**216**	*i* P	**Pb**	**13 54 52.5**	**-1.3**
KORT				*i* S	**Sb**	**13 55 12.7**	**+7.1**
KONT	**Konya--Tatoy**	**1.07**	**79**	*e*PG	**Pg**	**13 54 56.9**	**-0.3**
KONT	**Konya--Tatoy**	**1.07**	**79**	*e*Pg	**Pg**	**13 54 56.9**	**-0.4**
KDHN	**Kadinhani**	**1.16**	**48**	*i* P	**Pn**	**13 54 57.4**	**-0.3**
KDHN				*i* S	**Sb**	**13 55 19.3**	**+6.9**
KDHN	**Kadinhani**	**1.16**	**48**	*i* P	**Pn**	**13 54 57.4**	**-0.3**
KDHN				*i* S	**Sb**	**13 55 19.3**	**+6.8**
KIZT	**Kizilcal**	**1.32**	**30**	*e*PN	**Pn**	**13 55 00.6**	**+0.7**
KIZT	**Kizilcal**	**1.32**	**30**	*e*Pn	**Pn**	**13 55 00.6**	**+0.8**
KHL	**Karahalli**	**1.32**	**296**	*e*PN	**Pn**	**13 55 01.2**	**+1.3**
KHL	**Karahalli**	**1.32**	**296**	*e*Pn	**Pn**	**13 55 01.2**	**+1.3**
DURS	**Dursunbey**	**2.72**	**314**	*i* P	**Pn**	**13 55 12.7**	**-6.5**
DURS				*i* S	**Sn**	**13 55 40.0**	**-12**
DURS	**Dursunbey**	**2.72**	**314**	*i* P	**Pn**	**13 55 12.7**	**-6.5**
DURS				*i* S	**Sn**	**13 55 40.0**	**-12**

IDC 19 14:09:58.5±39.0, 21.°02S×168.°87E, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.8/15, mbtmp4.0/4, Error ellipse: s-maj=679.7km s-min=106.6km az=81.0, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**26.63**	**240**	P	P	14 15 39.1	+0.1
2.5nm,0.8s,baz=109,slow=8.5,SNR=5.2							
WRA	**Warramunga Arr**	**32.33**	**266**	P	P	14 16 28.7	-0.9
0.7nm,1.0s,baz=102,slow=8.5,SNR=4.0							
ASAR	**Alice Springs**	**32.40**	**259**	P	P	14 16 30.8	+0.5
1.9nm,0.9s,baz=78,slow=9.2,SNR=16							
FITZ	**Fitzroy Crossi**	**40.75**	**266**	P	P	14 17 41.7	+0.2
3.3nm,0.7s,baz=121,slow=5.9,SNR=13							

IDC 19 14:31:29.2±6.7, 6.°11S×150.°78E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.6/16, mbtmp3.9/4, Error ellipse: s-maj=103.3km s-min=70.7km az=38.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.08**	**228**	P	P	14 36 15.2	-0.1
2.2nm,0.7s,baz=52,slow=9.8,SNR=10							
ASAR	**Alice Springs**	**23.84**	**221**	P	P	14 36 43.8	-0.6
1.3nm,0.5s,baz=55,slow=9.3,SNR=40							
STKA	**Stephens Creek**	**27.03**	**197**	P	P	14 37 13.7	+0.4
3.0nm,0.9s,baz=12,slow=9.3,SNR=3.0							
FITZ	**Fitzroy Crossi**	**27.27**	**242**	P	P	14 37 15.9	+0.4
1.2nm,0.6s,baz=82,slow=8.7,SNR=7.0							

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*ISCJB **19** 14:42:45.5±1.2, 2.°58S±0.°04×152.°99E±0.°04, h6km±7km, mb5.0/103, MS4.3/30, Error ellipse: s-maj=7.3km s-min=6.3km az=1.5*
*IDC **19** 14:42:46.3±0.6, 2.°58S×152.°89E, h0km, mb4.7/20, mb1 4.8/21, mb1mx4.8/22, mbtmp4.7/21, ML4.2/1, MS4.2/13, Ms1 4.2/13, ms1mx4.0/28, Error ellipse: s-maj=20.3km s-min=12.8km az=106.0*
*MOS **19** 14:42:49.3±0.9, 2.°58S×153.°00E, h33km, mb5.3/28, Error ellipse: s-maj=10.5km s-min=6.8km az=105.5*
*BJI **19** 14:42:49.3, 2.°29S×153.°47E, h37km, mB5.1/32, mb5.2/49, Ms4.7/32, Ms7 4.4/32*
*NEIC **19** 14:42:51.5±0.2, 2.°59S×152.°97E, h35km, mb5.1/60, Error ellipse: s-maj=6.2km s-min=4.7km az=99.0*
*GCMT **19** 14:42:53.2±0.2, 2.°55S×153.°12E, h18km±1km, MW5.1, Moment Tensor Solution. s37,c44; s68,c101; Moment tensor: Scale 10^{16}Nm; M_{rr}3.73±.21; $M_{\theta\theta}$-0.33±.13; $M_{\phi\phi}$-3.40±.15; $M_{r\theta}$-0.68±.32; $M_{\theta\phi}$2.33±.09; $M_{\phi r}$4.04±.36; Best double couple: $M_0$5.90000×10^{16} NP1:ϕ_s134.00000°, δ26.00000°, λ60.00000°. NP2:ϕ_s346.00000°, δ68.00000°, λ103.00000°. Principal axes: T 5.5700, Plg65.0000°, Azm278.0000°; N 0.6400, Plg12.0000°, Azm161.0000°; P -6.2100, Plg22.0000°, Azm66.0000°; Data Used: II IU IC G CN.*
*DJA **19** 14:43:00, 2.°70S×152.°72E, h91km, mb5.1/35*
ISC 19 14:42:50.1±1.3, 2.°61S±0.°04×153.°00E±0.°04, h24km±9km, h36km±1.2km: pP-P, n200, σ1°04/205, mb5.0/103, MS4.3/30, 12C-5D, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**9.68**	**135**	*e*P	**Pn**	**14 45 08.4**	**+0.5**
HNR				pmax	pmax		
comp=Z,495nm,0.8s							
HNR	**Honiara**	**9.68**	**135**	*e*Pn	**Pn**	**14 45 08.4**	**+0.4**
comp=Z,495nm,0.8s							
COEN	**Coen**	**14.88**	**220**	*e*Pn	**Pn**	**14 46 21.6**	**+2.5**
comp=Z,463nm,1.4s							
GUMO	**Guam**	**18.00**	**334**	*e*P	**Pn**	**14 46 59.0**	**+0.2**
GUMO				pmax	pmax		
comp=Z,124nm,1.2s							
GUMO	**Guam**	**18.00**	**334**	*e*P	**Pn**	**14 46 59.0**	**+0.2**
comp=Z,124nm,1.2s							
CTA	**Charters Tower**	**18.58**	**200**	⇓*i*P	**Pn**	**14 47 07.6**	**+1.7**
comp=Z,17nm,0.9s							
CTA	**Charters Tower**	**18.58**	**200**	P	**Pn**	**14 47 06.0**	**0.0**
comp=Z,0.5nm,0.3s,baz=38,slow=12,SNR=11							
CTA				LR	LR	14 52 55.5	
comp=Z,364nm,20.5s,baz=22,slow=33							
CTA	**Charters Tower**	**18.58**	**200**	P	**Pn**	**14 47 06.0**	**0.0**
CTA				LR	LR	14 52 55.5	
CTAO	**Charters Tower**	**18.58**	**200**	*e*P	**Pn**	**14 47 07.5**	**+1.6**
CTAO				pmax	pmax		
comp=Z,393nm,2.5s							
CTAO	**Charters Tower**	**18.58**	**200**	*e*Pn	**Pn**	**14 47 07.5**	**+1.6**
comp=Z,393nm,2.5s							
KAKA	**Kakadu**	**22.70**	**243**	⇑*i*P	**P**	**14 47 50.4**	**+0.2**
comp=Z,70nm,0.6s,mb5.3							
KAKA	**Kakadu**	**22.70**	**243**	*e*P	**P**	**14 47 49.8**	**-0.4**
comp=Z,129nm,0.5s,mb5.6							
EIDS	**Eidsvold**	**22.71**	**185**	*e*P	**P**	**14 47 50.5**	**+0.3**
comp=Z,34nm,1.0s,mb4.7							
DZM	**Mont Dzumac**	**23.34**	**147**	*e*P	**P**	**14 47 57.0**	**+0.1**
comp=Z,36nm,1.1s,mb4.7							
WRAB	**Tennant Creek**	**25.07**	**225**	P	**P**	**14 48 12.0**	**-0.9**
comp=Z,202nm,1.2s,mb5.5,SNR=23							
WRAB	**Tennant Creek**	**25.07**	**225**	*e*P	**P**	**14 48 12.1**	**-0.8**
WRAB				pmax	pmax		
comp=Z,46nm,1.1s,mb4.9							
WRAB	**Tennant Creek**	**25.07**	**225**	*e*P	**P**	**14 48 12.1**	**-0.8**
comp=Z,46nm,1.1s,mb4.9							
WRA	**Warramunga Arr**	**25.08**	**225**	P	**P**	**14 48 12.3**	**-0.7**
comp=Z,27nm,0.8s,mb4.8,baz=50,slow=9.2,SNR=117							
WRA				LR	LR	14 58 51.8	
comp=Z,622nm,18.3s,MS4.2,baz=50,slow=39							
ARMA	**Armidale**	**27.69**	**183**	*e*P	**P**	**14 48 37.3**	**+0.8**
ARMA	**Armidale**	**27.69**	**183**	*e*P	**P**	**14 48 37.3**	**+0.9**
comp=Z,39nm,1.0s,mb5.0							
ASAR	**Alice Springs**	**27.93**	**220**	P	**P**	**14 48 37.9**	**-0.8**
comp=Z,14nm,0.9s,mb4.6,baz=53,slow=8.2,SNR=86							
DAV	**Davao City (W)**	**29.01**	**290**	LR	LR	14 57 23.8	
comp=Z,563nm,21.6s,MS4.1,baz=125,slow=30							
FITZ	**Fitzroy Crossi**	**30.93**	**238**	⇓*i*P	**P**	**14 49 03.6**	**-1.8**
comp=Z,12nm,0.7s,mb4.8							
FITZ	**Fitzroy Crossi**	**30.93**	**238**	P	**P**	**14 49 04.0**	**-1.3**
comp=Z,7.5nm,0.9s,mb4.5,baz=63,slow=7.4,SNR=12							
STKA	**Stephens Creek**	**31.04**	**199**	*e*P	**P**	**14 49 04.8**	**-1.3**
comp=Z,9.6nm,0.8s,mb4.7							
STKA	**Stephens Creek**	**31.04**	**199**	P	**P**	**14 49 05.3**	**-0.8**
comp=Z,11nm,0.7s,mb4.8,baz=360,slow=9.4,SNR=21							
STKA				LR	LR	15 00 07.3	
comp=Z,228nm,19.7s,MS3.8,baz=207,slow=34							
STKA	**Stephens Creek**	**31.04**	**199**	*e*P	**P**	**14 49 05.6**	**-0.5**
comp=Z,2.7nm,0.8s,mb4.1							
CNB	**Canberra Magne**	**32.72**	**186**	*e*P	**P**	**14 49 21.8**	**+0.9**
CAN	**Canberra**	**32.76**	**186**	*e*P	**P**	**14 49 21.1**	**-0.1**
CAN				pmax	pmax		
comp=Z,48nm,1.1s,mb5.3							
CAN	**Canberra**	**32.76**	**186**	*e*P	**P**	**14 49 21.1**	**-0.1**
comp=Z,48nm,1.1s,mb5.3							
KAPI	**Kappang**	**33.26**	**265**	P	**P**	**14 49 24.5**	**-1.4**
comp=Z,60nm,1.3s,mb5.4,baz=172,slow=9.7,SNR=5.1							
KAPI	**Kappang**	**33.26**	**265**	*e*P	**P**	**14 49 25.1**	**-0.8**
MYLDM	**Lahad Datu**	**35.33**	**283**	P	**P**	**14 49 44.3**	**+0.5**
TOO	**Toolangi**	**35.48**	**190**	*e*P	**P**	**14 49 45.1**	**+0.3**
TGY	**Tagaytay City**	**35.86**	**298**	P	**P**	**14 49 48.0**	**-0.3**
comp=Z,49nm,0.3s,mb5.9,baz=219,slow=18,SNR=3.6							
FORT	**Forrest**	**36.62**	**217**	*e*P	**P**	**14 49 53.5**	**-1.2**
comp=Z,54nm,0.9s,mb5.4							
FORT	**Forrest**	**36.62**	**217**	*e*P	**P**	**14 49 53.0**	**-1.7**
comp=Z,115nm,1.1s,mb5.6							
SDKM	**Sandakan**	**36.69**	**283**	P	**P**	**14 49 55.6**	**+0.1**
KKM	**Kota Kinabalu**	**37.73**	**283**	P	**P**	**14 50 04.7**	**+0.3**
KKM	**Kota Kinabalu**	**37.73**	**283**	*e*P	**P**	**14 50 03.7**	**-0.6**
comp=Z,66nm,1.1s,mb5.3							
YULB	**Yu-li**	**40.27**	**312**	*e*P	**P**	**14 50 23.0**	**-2.4**
comp=Z,112nm,1.6s,mb5.3							
BTM	**Bintulu**	**40.32**	**278**	P	**P**	**14 50 25.6**	**-0.4**
NACB	**Ninganchiao**	**40.51**	**313**	*e*P	**P**	**14 50 27.4**	**0.0**
comp=Z,54nm,1.3s,mb5.0							
SSLB	**Suanglung**	**40.75**	**312**	*e*P	**P**	**14 50 28.6**	**-0.9**
comp=Z,23nm,1.0s,mb4.8							
YHNB	**Yeheng**	**40.96**	**313**	*e*P	**P**	**14 50 30.8**	**-0.4**
comp=Z,113nm,1.4s,mb5.3							
SBUM	**Sibu**	**41.08**	**277**	P	**P**	**14 50 31.6**	**-0.7**
MJAR	**Matsushiro Arr**	**41.32**	**342**	P	**P**	**14 50 31.1**	**-2.8**
comp=Z,4.2nm,1.1s,mb4.0,baz=169,slow=8.5,SNR=7.7							
MJAR				PcP	PcP	14 52 32.4	+0.2
comp=Z,3.6nm,1.0s,baz=172,slow=3.4,SNR=6.6							
MAT	**Matsushiro**	**41.32**	**342**	P	**P**	**14 50 30.7**	**-3.2**
MAT				S	**S**	**14 56 34.0**	**-13**
URZ	**Urewera**	**41.78**	**151**	LR	LR	15 05 06.3	
comp=Z,270nm,18.7s,MS4.2,baz=336,slow=32							
KSM	**Kuching**	**42.88**	**275**	P	**P**	**14 50 45.9**	**-1.1**
KSM	**Kuching**	**42.88**	**275**	*e*P	**P**	**14 50 47.3**	**+0.3**
comp=Z,73nm,1.1s,mb5.3							
RPZ	**Rata Peaks**	**43.96**	**161**	P	**P**	**14 50 56.1**	**+0.8**
comp=Z,7.1nm,0.8s,mb4.4,baz=95,slow=7.7,SNR=4.4							
KSRS	**Korea Array**	**46.16**	**332**	P	**P**	**14 51 11.7**	**-1.1**
comp=Z,16nm,1.1s,mb4.8,baz=148,slow=9.0,SNR=34							
INCN	**Inchon**	**46.79**	**331**	*e*P	**P**	**14 51 17.8**	**0.0**
comp=Z,105nm,1.4s,mb5.6							
NJ2	**Nanjing**	**47.30**	**320**	*e*P	**P**	**14 51 23.8**	**+1.9**
NJ2				pP	pP	14 51 33.8	+4.5
NJ2				sP	sP	14 51 37.9	+5.7
NJ2				PP	PP	14 53 14.4	+1.2
NJ2				S	**S**	**14 58 15.5**	**+1.4**
NJ2				sS	sS	14 58 33.0	+6.6
NJ2				pmax	pmax		
comp=Z,10.0nm,1.2s,mb4.6							
NJ2				pmax	pmax		
comp=Z,150nm,6.0s							
NJ2				LR	LR		
comp=N,330nm,22.2s							
NJ2				LR	LR		
comp=E,190nm,16.6s							
NJ2				LR	LR		
comp=Z,290nm,19.8s,MS4.2							
QIZ	**Qiongzhong**	**47.57**	**299**	P	**P**	**14 51 24.9**	**+0.7**
QIZ				pP	pP	14 51 34.0	+2.4
QIZ				S	**S**	**14 58 18.8**	**+0.5**
QIZ				pmax	pmax		
comp=Z,140nm,3.5s							
QIZ				LR	LR		
comp=N,200nm,16.3s							
QIZ				LR	LR		
comp=Z,280nm,20.2s,MS4.2							
MYKOM	**Kota Tinggi**	**49.33**	**275**	P	**P**	**14 51 37.2**	**-0.8**
VLA	**Vladivostok**	**49.34**	**340**	*e*P	**P**	**14 51 37.2**	**-0.2**
VLA				pmax	pmax		
comp=Z,45nm,1.2s,mb5.4							
WHN	**Wuhan**	**49.44**	**315**	P	**P**	**14 51 39.0**	**+0.6**
WHN				pP	pP	14 51 52.3	+6.4
WHN				S	**S**	**14 58 46.1**	**+1.6**
WHN				pmax	pmax		
comp=Z,59nm,1.2s,mb5.5							
WHN				LR	LR		
comp=Z,550nm,20.4s,MS4.5							
KGM	**Kluang**	**49.88**	**275**	P	**P**	**14 51 41.4**	**-0.7**
KTGM	**Kuala Trenggan**	**50.43**	**279**	P	**P**	**14 51 46.5**	**+0.2**
MDJ	**Mudanjiang**	**51.45**	**339**	P	**P**	**14 51 49.6**	**-3.8**
MDJ				pP	pP	14 51 58.3	-2.6
MDJ				sP	sP	14 52 02.3	-1.5
MDJ				S	**S**	**14 59 04.5**	**-7.5**
MDJ				pmax	pmax		
comp=Z,19nm,1.3s,mb4.9							
MDJ				pmax	pmax		
comp=Z,71nm,5.1s							
MDJ				LR	LR		
comp=N,140nm,33.4s,MS4.1							
MDJ				LR	LR		
comp=E,240nm,30.6s,MS4.1							
MDJ				LR	LR		
comp=Z,62nm,27.8s,MS3.5							
MDJ	**Mudanjiang**	**51.45**	**339**	*e*P	**P**	**14 51 51.5**	**-1.8**
comp=Z,25nm,1.1s,mb5.0							
FRIM	**Kepong**	**51.68**	**276**	P	**P**	**14 51 55.1**	**-0.6**
CN2	**Changchun**	**52.40**	**335**	*e*P	**P**	**14 52 04.8**	**+4.3**
CN2				*e*pP	pP	14 52 14.8	+6.8
CN2				*e*sP	sP	14 52 18.6	+7.7
CN2				*e*S	**S**	**14 59 28.1**	**+3.1**
CN2				pmax	pmax		
comp=Z,20nm,1.0s,mb5.0							
CN2				LR	LR		
comp=N,400nm,21.0s,MS4.5							
CN2				LR	LR		
comp=E,200nm,21.0s,MS4.5							
CN2				LR	LR		
comp=Z,200nm,16.0s,MS4.2							
IPM	**Ipoh**	**52.41**	**278**	P	**P**	**14 51 60.0**	**-1.1**
ENH	**Enshi**	**52.84**	**312**	*e*P	**P**	**14 52 03.9**	**-0.1**
comp=Z,103nm,1.4s,mb5.6							
KULM	**Kulim**	**52.88**	**279**	P	**P**	**14 52 03.9**	**-0.7**
KULM	**Kulim**	**52.88**	**279**	*e*P	**P**	**14 52 03.4**	**-1.2**
comp=Z,42nm,1.4s,mb5.2							
HABR	**Khabarovsk**	**53.22**	**345**	*ce*P	**P**	**14 52 04.4**	**-2.0**
HABR				*SP	sP	14 52 17.1	+0.2
HABR				*e*		14 53 10.3	
HABR				*e*		14 54 03.2	
HABR				*e*S	**S**	**14 59 33.6**	**-2.4**
HABR				*e**SS	sS	14 59 49.2	+0.8
HABR				*e*		15 01 49.8	
HABR				*e*SS	SS	15 03 13.6	-2.5
HABR				SSS		15 05 06.6	
HABR				pmax	pmax		
comp=Z,45nm,1.1s,mb5.3							
HABR				pmax	pmax		
comp=E,14nm,0.5s							
HABR				pmax	pmax		
comp=N,16nm,1.1s							
HABR				MLR	MLR		
comp=Z,160nm,16.0s,MS4.2							
GYA	**Guiyang**	**53.25**	**306**	⇑*i*P	**P**	**14 52 08.3**	**+1.2**
GYA				pP	pP	14 52 20.8	+6.2
GYA				sP	sP	14 52 26.8	+9.2
GYA				PcP	PcP	14 53 17.0	+2.2
GYA				PP	PP	14 54 11.4	+3.9
GYA				ScP	ScP	14 57 10.9	-0.3
GYA				sS	sS	14 59 53.3	+3.6
GYA				SS	SS	15 03 16.0	-1.4
GYA				pmax	pmax		
comp=Z,20nm,1.0s,mb5.0							
GYA				pmax	pmax		
comp=Z,150nm,4.9s							
GYA				LR	LR		
comp=N,790nm,18.8s,MS4.9							
GYA				LR	LR		
comp=E,680nm,19.2s,MS4.9							
GYA				LR	LR		
comp=Z,830nm,18.0s,MS4.8							
BJI	**Beijing**	**54.20**	**325**	P	**P**	**14 52 16.4**	**+2.6**
BJI				PP	PP	14 54 15.9	+0.1
BJI				S	**S**	**14 59 50.8**	**+1.2**
BJI				SS	SS	15 03 23.8	-8.1
BJI				pmax	pmax		
comp=Z,14nm,1.6s,mb4.6							
BJI				pmax	pmax		
comp=Z,93nm,4.2s							
BJI				LR	LR		
comp=N,200nm,20.3s,MS4.2							
BJI				LR	LR		
comp=E,110nm,19.2s,MS4.2							
BJI				LR	LR		
comp=Z,150nm,16.8s,MS4.1							
PSI	**Prapat**	**54.33**	**275**	P	**P**	**14 52 14.3**	**-0.9**
comp=Z,10nm,1.1s,mb4.7,baz=120,slow=8.7,SNR=6.5							
PSI	**Prapat**	**54.33**	**275**	P	**P**	**14 52 14.3**	**-0.9**
KLR	**Kul'dur**	**54.81**	**343**	*e*P	**P**	**14 52 13.6**	**-4.4**
KLR				pmax	pmax		
comp=E,38nm,1.4s							
KLR				pmax	pmax		
comp=Z,57nm,1.4s,mb5.4							
XAN	**Xi'an**	**55.20**	**315**	P	**P**	**14 52 20.6**	**-0.5**
XAN				pP	pP	14 52 31.1	+2.4
XAN				S	**S**	**15 00 01.5**	**-1.8**
XAN				pmax	pmax		
comp=Z,8.0nm,1.1s,mb4.7							

comp=Z,24nm,0.8s,mb5.3
CHTO Chiang Mai 57.25 294 *e*P **P 14 52 36.7 +0.6**
comp=Z,24nm,0.8s,mb5.3
HHC Hu-ho-hao-te 57.41 323 *e*P **P 14 52 36.5 -0.3**
HHC pP pP 14 52 46.8 +2.5
HHC sP sP 14 52 50.5 +3.3
HHC PcP PcP 14 53 30.0 -0.5
HHC PP PP 14 54 45.8 +1.4
HHC ScP ScP 14 57 26.1 -3.0
HHC PcS PcS 14 57 29.8 -1.7
HHC S **S 15 00 30.3 -2.0**
HHC ScS ScS 15 02 19.9 -4.9
HHC SS SS 15 04 20.9 -1.4
HHC pmax pmax
comp=Z,18nm,0.7s,mb5.2
HHC pmax pmax
comp=Z,230nm,5.0s
HHC LR LR
comp=N,140nm,16.7s,MS4.3
HHC LR LR
comp=E,150nm,17.8s,MS4.3
HHC LR LR
comp=Z,170nm,18.4s,MS4.2
CD2 Chengdu 57.49 309⇑ *i*P **P 14 52 38.1 +0.5**
CD2 pP pP 14 52 48.3 +3.2
CD2 sP sP 14 52 52.1 +4.1
CD2 PcP PcP 14 53 30.9 -0.2
CD2 PP PP 14 54 47.8 +2.4
CD2 PcS PcS 14 57 30.6 -1.7
CD2 S **S 15 00 32.1 -1.7**
CD2 sS sS 15 00 48.8 +2.5
CD2 ScS ScS 15 02 21.3 -4.6
CD2 SS SS 15 04 23.8 -0.2
CD2 pmax pmax
comp=Z,80nm,1.0s,mb5.7
CD2 pmax pmax
comp=Z,160nm,4.2s
CD2 LR LR
comp=N,310nm,16.6s,MS4.6
CD2 LR LR
comp=E,180nm,15.5s,MS4.6
CD2 LR LR
comp=Z,210nm,17.8s,MS4.3
FX1 Attu Island--F 57.83 14 P **P 14 52 40.4 +0.9**
comp=Z,9.2nm,0.9s,mb4.8,baz=310,slow=7.9,SNR=6.2
FX1 Attu Island--F 57.83 14 P **P 14 52 40.4 +0.9**
BTO Baotou 58.19 322 *e*P **P 14 52 41.8 -0.5**
PPT Papeete 58.22 109 *e*S **S 15 00 41.1 -2.7**
comp=Z,98nm,26.0s
PPT *e*LQ 15 07 19.3
comp=Z,385nm,26.0s
PPT *e*LR LR 15 09 54.0
comp=Z,184nm,20.8s
PPT Papeete 58.22 109 LR LR 15 13 04.4
comp=Z,243nm,18.4s,MS4.3,baz=164,slow=31
HIA Hailar 59.13 335 *e*P **P 14 52 48.5 -0.1**
HIA pmax pmax
comp=Z,13nm,0.8s
HIA Hailar 59.13 335 *e*P **P 14 52 48.5 -0.1**
comp=Z,12nm,0.8s,mb5.0
PMOR Pomariorio Ree 59.51 106 *e*T 15 57 11.5
comp=Z,5.2nm,0.3s
LZH Lanzhou 59.82 315 *e*P **P 14 52 55.4 +1.7**
LZH pP pP 14 53 05.4 +4.1
LZH sP sP 14 53 09.3 +5.1
LZH PcP PcP 14 53 36.4 -3.8
LZH PP PP 14 55 08.5 +2.5
LZH ScP ScP 14 57 30.6 -9.3
LZH PcS PcS 14 57 38.1 -4.3
LZH *e*S **S 15 01 05.0 +1.0**
LZH sS sS 15 01 20.5 +4.0
LZH SS SS 15 04 59.5 -1.0
LZH pmax pmax
comp=Z,87nm,1.2s,mb5.7
LZH pmax pmax
comp=Z,280nm,4.8s
LZH LR LR
comp=N,2μm,16.3s
LZH LR LR
comp=Z,2μm,17.3s,MS5.3
CIT Chita 63.82 334 *e*P **P 14 53 21.1 +0.8**
CIT *e* 14 53 35.0
GTA Gaotai 64.20 316 ⇑P **P 14 53 24.3 +1.2**
GTA pP pP 14 53 34.6 +3.8
GTA sP sP 14 53 38.6 +5.0
GTA PP PP 14 55 49.3 +4.8
GTA S **S 15 02 01.3 +2.1**
GTA sS sS 15 02 16.9 +5.1
GTA pmax pmax
comp=Z,46nm,1.1s,mb5.4
GTA pmax pmax
comp=Z,240nm,6.2s
GTA LR LR
comp=N,130nm,17.8s,MS4.3
GTA LR LR
comp=E,120nm,19.0s,MS4.3
GTA LR LR
comp=Z,160nm,17.2s,MS4.3
ULN Ulaanbaatar 64.26 328 *e*P **P 14 53 23.6 +0.3**
ULN pmax pmax
comp=Z,35nm,1.4s,mb5.2
ULN Ulaanbaatar 64.26 328 *e*P **P 14 53 23.6 +0.4**
comp=Z,35nm,1.4s,mb5.2
SONM Songino Array 64.59 327 P **P 14 53 26.3 +0.8**
comp=Z,8.4nm,0.9s,mb4.8,baz=146,slow=5.2,SNR=32
SONM LR LR 15 18 27.4
comp=Z,154nm,20.8s,MS4.2,baz=290,slow=33
SEY Seymchan 65.36 360*c i*P **P 14 53 29.7 -0.5**
SHL Shillong 65.39 300 *e*PKP **P 14 53 32.5 +1.4**
YAK Yakutsk 66.88 348 *e*P **P 14 53 40.0 +0.1**
YAK *e**PP pP 14 53 48.5 +0.9
YAK *e* 14 54 04.1
YAK *e* 14 56 08.5
YAK *e*PPP 14 57 42.4
YAK *e*S S 15 02 31.1 0.0
YAK pmax pmax
comp=Z,23nm,1.0s,mb5.2
YAK pmax pmax
comp=N,10.0nm,1.1s
YAK pmax pmax
comp=E,4.0nm,1.0s
YAK pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
YAK smax
comp=E,110nm,3.0s
YAK smax
comp=N,37nm,2.8s
YAK MLR MLR
comp=Z,108nm,21.0s,MS4.0
YAK MLR MLR
comp=N,63nm,21.0s
YAK Yakutsk 66.88 348 *e*P **P 14 53 40.2 +0.3**
comp=N,7.7nm,0.3s,mb5.2
LSA Lhasa 67.18 304 *e*P **P 14 53 44.1 +1.6**
LSA pmax pmax
comp=Z,44nm,1.3s,mb5.3
LSA Lhasa 67.18 304 *e*P **P 14 53 44.1 +1.6**
comp=Z,44nm,1.3s,mb5.3
ZAK Zakamensk 67.74 328⇓ *i*P **P 14 53 45.4 -0.2**
ZAK pmax pmax
comp=Z,12nm,1.0s,mb4.9
TLY Talaya 68.30 329 *e*P **P 14 53 48.9 -0.2**
TLY *e*S S 15 02 52.1 +3.6
TLY pmax pmax
comp=Z,18nm,1.7s,mb4.8
TLY Talaya 68.30 329 *e*P **P 14 53 49.2 +0.1**
comp=Z,6.3nm,0.9s,mb4.7
IRK Irkutsk 68.31 330 *e*P **P 14 53 48.7 -0.5**
IRK pmax pmax
comp=Z,29nm,1.5s,mb5.1
TAPN Taplejung 69.47 300 *e*P **P 14 53 57.4 +0.5**
comp=Z,164nm,1.4s,mb5.8
ODAN Odare 69.62 300 *e*P **P 14 53 58.4 +0.5**
comp=Z,90nm,1.1s,mb5.6
MOY Mondy 69.66 328 *e*P **P 14 53 57.8 +0.3**
MOY pmax pmax
comp=Z,30nm,1.7s,mb5.0
CASY Casey 70.16 197 *e*P **P 14 53 59.5 -0.9**
RAMN Ramite 70.33 300 *e*P **P 14 54 02.6 +0.4**
JIRN Jiri 70.85 300 *e*P **P 14 54 06.2 +0.8**
comp=Z,156nm,1.4s,mb5.7
BILL Bilibino 71.10 5*αe*P **P 14 54 05.6 -0.4**
BILL *e* 14 54 19.4
BILL 14 54 28.0
BILL *e*S S 15 03 21.5 +0.6
BILL *e* 15 04 11.0
BILL pmax pmax
comp=Z,20nm,1.2s,mb4.9
BILL MLR MLR
comp=Z,100nm,16.0s,MS4.2
BILL Bilibino 71.10 5 *e*P **P 14 54 05.8 -0.2**
comp=Z,11nm,0.9s,mb4.8
GUN Gumba 71.18 301 *e*P **P 14 54 08.1 +0.8**
comp=Z,58nm,0.8s,mb5.6
PKI Pulchoki 71.50 300 *e*P **P 14 54 09.7 +0.4**
comp=Z,170nm,1.4s,mb5.8
PKI Pulchoki 71.50 300 *e*P **P 14 54 10.8 +1.5**
PKI pmax pmax
comp=Z,40nm,0.9s,mb5.3
PKI Pulchoki 71.50 300 *e*P **P 14 54 10.8 +1.5**
comp=Z,40nm,0.9s,mb5.3
PKIN Phulchoki 71.52 300 *e*P **P 14 54 10.8 +1.4**
comp=Z,40nm,0.9s,mb5.4
KKN Kakani 71.67 300 *e*P **P 14 54 10.5 +0.2**
comp=Z,69nm,1.0s,mb5.5
KKN Kakani 71.67 300 *e*P **P 14 54 10.5 +0.2**
KKN pmax pmax
comp=Z,69nm,1.0s,mb5.5
DMN Daman 71.78 300 *e*P **P 14 54 11.6 +0.6**
comp=Z,194nm,1.2s,mb5.9
RKT Rikitea 72.45 113 *e*LR LR 15 16 28.9
comp=Z,429nm,31.0s
OHAK Old Harbor 73.52 27 *e*P **P 14 54 20.1 -0.6**
comp=Z,23nm,1.2s,mb5.0
KDAK Kodiak Island 74.14 27 LR LR 15 20 31.3
comp=Z,228nm,21.0s,MS4.4,baz=239,slow=30
WMQ Urumqi 74.28 317 P **P 14 54 26.0 +0.5**
WMQ pP pP 14 54 36.0 +2.8
WMQ sP sP 14 54 40.0 +3.9
WMQ PP PP 14 57 14.0 +2.4
WMQ S S 15 03 56.0 -2.1
WMQ ScS ScS 15 04 31.0 -3.8
WMQ SS SS 15 08 44.0 -0.3
WMQ pmax pmax
comp=Z,120nm,1.1s,mb5.7
WMQ pmax pmax
comp=Z,87nm,7.0s
WMQ LR LR
comp=N,130nm,18.0s,MS4.3
WMQ LR LR
comp=E,92nm,18.0s,MS4.3
WMQ LR LR
comp=Z,100nm,18.0s,MS4.2
SVW2 Sparrevohn 74.74 23 *e*P **P 14 54 28.7 +1.0**
TTA Tatalina 75.67 22 *e*P **P 14 54 34.1 +1.1**
TIXI Tiksi 75.76 352 *e*P **P 14 54 32.8 -0.6**
TIXI pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
TIXI Tiksi 75.76 352 *e*P **P 14 54 32.8 -0.7**
comp=Z,5.5nm,0.8s,mb4.5
HYB Hyderabad 75.98 289 *e*P **P 14 54 36.0 +0.2**
HYB Hyderabad 75.98 289 *i*P **P 14 54 34.0 -1.8**
MIR Mirnyy 76.03 201⇓ *i*P **P 14 54 35.4 +0.3**
MIR pmax pmax
comp=Z,65nm,1.2s,mb5.4
SEW Seward 76.73 26 *e*P **P 14 54 39.6 +0.4**
comp=Z,25nm,1.1s,mb5.1
PPLA Purkeypile 77.08 23 *e*P **P 14 54 41.0 -0.1**
comp=Z,42nm,1.8s,mb5.1
CHUM Lake Minchumin 77.58 22 *e*P **P 14 54 43.9 +0.1**
comp=Z,22nm,1.0s,mb5.0
KTH Kantishna Hill 77.92 22 *e*P **P 14 54 44.9 -0.9**
comp=Z,16nm,1.2s,mb4.8
TRF Thorofare Moun 78.11 23 *e*P **P 14 54 44.2 -2.6**
comp=Z,7.5nm,1.0s,mb4.6
BPAW Bear Paw Mtn. 78.19 22 *e*P **P 14 54 42.0 -5.2**
comp=Z,8.8nm,1.2s,mb4.6
MCK McKinley 78.77 23 *e*P **P 14 54 49.2 -1.2**
MCK pmax pmax
comp=Z,21nm,1.0s,mb5.0
MCK McKinley 78.77 23 *e*P **P 14 54 49.2 -1.2**
comp=Z,22nm,1.0s,mb5.0
NDI New Delhi 78.82 300 *e*PKP **P 14 54 49.0 -2.5**
MK31 Makanchi Array 78.82 319 *e*P **P 14 54 51.4 +0.3**
MKAR Makanchi Array 78.82 319 P **P 14 54 51.1 0.0**
comp=Z,7.8nm,0.9s,mb4.7,baz=96,slow=7.4,SNR=25
ZAA0 Zalesovo Array 79.45 326 *e*P **P 14 54 52.3 -2.1**
ZALV Zalesovo Beam 79.45 326 P **P 14 54 52.9 -1.5**
comp=Z,6.3nm,0.8s,mb4.6,baz=107,slow=5.9,SNR=23
COLA College 79.75 22 *e*P **P 14 54 54.5 -1.3**
COLA pmax pmax
comp=Z,16nm,0.9s,mb5.0
COLA College 79.75 22 *e*P **P 14 54 54.5 -1.3**
comp=Z,16nm,0.9s,mb5.0
PAX Paxson 79.78 24 *e*P **P 14 54 56.1 +0.1**
PAX pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
PAX Paxson 79.78 24 *e*P **P 14 54 56.1 +0.1**
comp=Z,8.0nm,1.2s,mb4.5
COLD Coldfoot 80.13 19 *e*P **P 14 54 58.2 +0.5**
comp=Z,12nm,1.1s,mb4.8
MENT Mentasta 80.48 24 *e*P **P 14 54 59.9 +0.1**
NVS Novosibirsk 80.62 327⇑ *i*P **P 14 54 59.6 -1.1**
NVS *e* 14 55 10.0
NVS *e*S S 15 04 58.0 -8.3
NVS pmax pmax
comp=N,13nm,1.5s
NVS pmax pmax
comp=E,20nm,1.5s
NVS pmax pmax
comp=Z,32nm,1.5s,mb5.0
NVS smax
comp=N,16nm,2.4s
NVS smax
comp=E,19nm,2.2s
KSH Kashi 81.67 310 P **P 14 55 08.8 +2.2**
KSH pP pP 14 55 19.3 +4.8
KSH sP sP 14 55 23.1 +5.8
KSH PP PP 14 58 18.1 +4.5
KSH S S 15 05 16.8 -1.2
KSH SKS 15 05 21.8
KSH sS sS 15 05 35.8 +4.9
KSH SS SS 15 10 39.8 +4.0
KSH pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
KSH pmax pmax
comp=Z,99nm,4.1s
KSH LR LR
comp=N,510nm,13.9s,MS5.2
KSH LR LR
comp=E,260nm,10.2s,MS5.2
KSH LR LR
comp=Z,65nm,5.9s
KURK Kurchatov 82.18 322 P **P 14 55 08.9 -0.1**
comp=Z,90nm,1.1s,mb5.6,SNR=11
KURK Kurchatov 82.18 322 LR LR 15 32 53.8
comp=Z,112nm,19.4s,MS4.2,baz=105,slow=37
KURK Kurchatov 82.18 322 *e*P **P 14 55 07.9 -1.1**
KURK pmax pmax
comp=Z,21nm,1.1s,mb5.0
KURK Kurchatov 82.18 322 *e*P **P 14 55 07.9 -1.2**
comp=Z,21nm,1.1s,mb5.0
EGAK Eagle 82.28 23 *e*P **P 14 55 09.4 +0.2**
comp=Z,19nm,1.1s,mb5.0
TKM2 Tokmak 2 82.57 314 P **P 14 55 12.2 +1.0**
SNR=6.3
TKM2 Tokmak 2 82.57 314 *e*P **P 14 55 10.6 -0.6**
TKM2 pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
TKM2 Tokmak 2 82.57 314 *e*P **P 14 55 10.6 -0.6**
comp=Z,4.6nm,0.8s,mb4.6
KZA Kyzart 82.67 313 P **P 14 55 13.2 +1.4**
SNR=10.0
CHMS Chumysh 83.19 314 P **P 14 55 15.2 +0.7**
SNR=5.7
UCH Uchtor 83.23 313 P **P 14 55 16.2 +1.5**
SNR=12
UCH Uchtor 83.23 313 *e*P **P 14 55 15.4 +0.7**
comp=Z,19nm,1.3s,mb5.0
FRU Bishkek 83.26 313 *e*P **P 14 55 14.5 -0.3**
AAK Ala-Archa 83.31 313*c i*P **P 14 55 14.3 -0.8**
AAK pmax pmax
comp=Z,7.0nm,1.5s,mb4.5
AAK Ala-Archa 83.31 313 *e*P **P 14 55 15.7 +0.6**
comp=Z,4.6nm,0.8s,mb4.6
AML Almayashu 83.82 313 P **P 14 55 19.7 +1.9**
SNR=10.0
AML Almayashu 83.82 313 *e*P **P 14 55 18.8 +1.1**
comp=Z,34nm,1.1s,mb5.4
EKS2 Erkin-Say 83.84 313 P **P 14 55 18.9 +1.1**
SNR=13
EKS2 Erkin-Say 83.84 313 *e*P **P 14 55 18.3 +0.5**
comp=Z,36nm,1.4s,mb5.3
INK Inuvik 86.35 21 LR LR 15 33 40.1
comp=Z,183nm,20.3s,MS4.5,baz=228,slow=35
KBL Kabul 86.49 305 *e*P **P 14 55 31.0 -0.3**
KBL pmax pmax
comp=Z,39nm,1.3s,mb5.5
KBL Kabul 86.49 305 *e*P **P 14 55 31.0 -0.2**
comp=Z,39nm,1.3s,mb5.5
HUMO Hull Mountain 87.36 47 *e*P **P 14 55 35.7 +0.4**
comp=Z,15nm,1.7s,mb4.9
BVAR Borovoye Array 87.62 323 P **P 14 55 35.3 -1.0**
comp=Z,8.8nm,0.8s,mb5.0,baz=102,slow=6.2,SNR=32
MAW Mawson 87.66 203 *e*P **P 14 55 35.8 -0.5**
comp=Z,5.5nm,0.9s,mb4.8
MAW Mawson 87.66 203 P **P 14 55 36.0 -0.3**
comp=Z,7.3nm,1.0s,mb4.9,baz=84,slow=7.1,SNR=9.6
BRVK Borovoye 87.68 323 P **P 14 55 35.7 -1.0**
comp=Z,70nm,1.0s,mb5.8,SNR=6.9
BRVK Borovoye 87.68 323*c i*P **P 14 55 35.4 -1.3**
BRVK pmax pmax
comp=Z,16nm,1.2s,mb5.1
BRVK Borovoye 87.68 323 *e*P **P 14 55 35.3 -1.4**
comp=Z,12nm,1.0s,mb5.1
MOD Modoc 89.26 48 *e*P **P 14 55 45.3 +0.9**
comp=Z,5.4nm,0.9s,mb4.9
WVOR Wild Horse Val 90.53 48 *e*P **P 14 55 49.1 -1.2**
WVOR pmax pmax
comp=Z,5.0nm,1.0s,mb4.8
WVOR Wild Horse Val 90.53 48 *e*P **P 14 55 49.0 -1.2**
comp=Z,4.7nm,1.0s,mb4.8
NVAR Mina Array Bea 90.58 52 P **P 14 55 51.5 +0.9**
comp=Z,1.1nm,0.7s,mb4.3,baz=250,slow=7.1,SNR=6.8
BMO Blue Mountains 91.60 45 *e*P **P 14 55 55.9 +0.7**
BMO pmax pmax
comp=Z,7.0nm,1.4s,mb4.8
BMO Blue Mountains 91.60 45 *e*P **P 14 55 55.9 +0.7**
comp=Z,6.6nm,1.4s,mb4.8
YKA Yellowknife Ar 93.40 28 P **P 14 56 03.5 +0.4**
comp=Z,3.9nm,1.0s,mb4.8,baz=267,slow=4.8,SNR=19
YKA Yellowknife Ar 93.40 28 P **P 14 56 03.5 +0.4**
ABKAR Akbulak array 93.96 319 *e*P **P 14 56 03.4 -2.6**
comp=Z,1.2nm,0.8s,mb4.4
ARU Arti 94.62 326*d i*P **P 14 56 06.9 -1.9**
ARU 14 59 53.2
ARU S SKSac 15 06 39.4 -3.2
ARU SS SS 15 13 36.7 -6.8
ARU pmax pmax
comp=Z,5.0nm,1.2s,mb4.8
PDAR Pinedale Array 97.23 47 P **P 14 56 21.6 +0.6**
comp=Z,0.7nm,0.8s,mb4.1,baz=344,slow=5.7,SNR=3.3
PDAR LR LR 15 31 52.0
comp=Z,206nm,21.7s,MS4.6,baz=311,slow=30
TXAR Lajitas Array 102.89 61 P Pdif 14 56 46.9 +0.8
comp=Z,0.2nm,0.5s,baz=214,slow=4.4,SNR=4.5
DBIC Dimbokro 157.57 281 PKPab PKPab 15 03 17.0 -0.5
comp=Z,6.5nm,1.0s,baz=63,slow=5.6,SNR=5.0

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*IDC **19** 14:43:51.5±0.7, 13°.50N×125°.60E, h0km, mb4.2/14, mb1 4.3/15, mb1mx4.2/23, mbtmp4.2/15, ML4.3/1, Error ellipse: s-maj=29.9km s-min=12.7km az=77.0*
*ISCJB **19** 14:43:53.2±1.7, 13°.45N±0°.03×125°.75E±0°.05, h26km±12km, mb4.2/26, Error ellipse: s-maj=8.3km s-min=5.5km az=3.5*
*MAN **19** 14:43:54, 13°.39N×125°.67E, h67km, mb5.1, ML4.1, MS4.2*
*NEIC **19** 14:43:56.6±0.5, 13°.47N×125°.72E, h35km, mb4.3/9, Error ellipse: s-maj=17.4km s-min=7.2km az=76.0*
ISC 19 14:43:55.1±1.8, 13°.44N±0°.03×125°.72E±0°.05, h25km±13km, n53, σ1$03/60, mb4.2/26, 2C-3D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
PVCP	**Virac**	**1.53**	**276**	*e*P		**Pn**	**14 44 20.3**	**-0.5**
PVCP				*e*S		**Sn**	**14 44 29.6**	**-10**
MMPH	**Masbate**	**2.31**	**243**⇓	*e*P		**Pn**	**14 44 31.4**	**0.0**
MMPH				*i* S		**Sn**	**14 45 00.9**	**+1.8**
PLP	**Palo**	**2.37**	**198**	*e*P		**Pn**	**14 44 30.8**	**-1.6**
PLP				*e*S		**Sn**	**14 44 55.7**	**-4.9**
OCLP	**Ormoc**	**2.61**	**205**	*e*P		**Pn**	**14 44 35.5**	**-0.1**
AUQP	**San Andres**	**2.97**	**268**	*e*P		**Pn**	**14 44 43.6**	**+3.1**
GQP	**Guinayangan**	**3.22**	**279**⇓	*e*P		**Pn**	**14 44 43.8**	**-0.2**
GQP				*e*S		**Sn**	**14 45 20.6**	**-1.0**
RCP	**Roxas**	**3.45**	**238**⇓	*e*P		**Pn**	**14 44 47.6**	**+0.3**
RCP				*e*S		**Sn**	**14 45 28.4**	**+1.0**
LLP	**Lapu-Lapu**	**3.54**	**209**⇑	*e*P		**Pn**	**14 44 47.2**	**-1.3**
LLP				*e*S		**Sn**	**14 45 29.1**	**-0.5**
BOAC	**Boac**	**3.77**	**271**	*e*P		**Pn**	**14 44 52.2**	**+0.6**
POLP	**Polilio Island**	**3.89**	**290**	*e*P		**Pn**	**14 44 53.9**	**+0.6**
GUIM	**Jordan**	**4.14**	**228**	*e*P		**Pn**	**14 44 56.5**	**-0.3**
BALP	**Baler**	**4.62**	**300**	*e*P		**Pn**	**14 45 01.6**	**-1.7**
PALP	**Palanan**	**4.81**	**319**	*e*P		**Pn**	**14 45 06.5**	**+0.6**
CAUP	**Cauayan**	**5.13**	**313**	*e*P		**Pn**	**14 45 11.0**	**+0.7**
CUYO	**Cuyo Island**	**5.27**	**241**	*e*P		**Pn**	**14 45 12.2**	**0.0**
BCPH	**Baguio City Da**	**5.77**	**301**⇑	*e*P		**Pn**	**14 45 18.5**	**-0.6**
BCPH				*i* S		**Sn**	**14 46 22.5**	**-2.0**
PAGZ	**Pagadian**	**6.01**	**203**	*e*P		**Pn**	**14 45 21.9**	**-0.5**
APYP	**Conner**	**6.16**	**316**	*e*P		**Pn**	**14 45 26.1**	**+1.6**
ABRA	**Dolores**	**6.39**	**312**	*e*P		**Pn**	**14 45 28.3**	**+0.6**
YHNB	**Yeheng**	**11.90**	**340**	*e*Pn		**Pn**	**14 46 42.9**	**-0.3**
KAPI	**Kappang**	**19.26**	**198**	P		**Pn**	**14 48 17.4**	**-1.6**
	0.9nm,0.3s,baz=54,slow=13,SNR=3.4							
ENH	**Enshi**	**22.48**	**321**	*e*P		**P**	**14 48 54.6**	**+2.0**
	3.6nm,0.7s,mb3.9							
KSRS	**Korea Array**	**24.00**	**4**	P		**P**	**14 49 07.2**	**-0.5**
	3.2nm,0.9s,mb3.8,baz=184,slow=11,SNR=18							
XAN	**Xi'an**	**25.56**	**326**	P		**P**	**14 49 22.3**	**+0.3**
XAN				pP		pP	14 49 31.6	+2.1
XAN				pmax		pmax		
	comp=Z,4.0nm,0.9s,mb4.0							
MAJO	**Matsushiro**	**25.59**	**24**	*e*P		**P**	**14 49 26.8**	**+4.5**
	comp=Z,1.9nm,0.4s,mb4.0							
MJAR	**Matsushiro Arr**	**25.59**	**24**	P		**P**	**14 49 22.2**	**-0.1**
	comp=Z,1.5nm,0.9s,mb3.5,baz=193,slow=10.0,SNR=3.5							
CM31	**Chiang Mai Arr**	**26.21**	**284**	*e*P		**P**	**14 49 28.9**	**+0.8**
	comp=Z,4.5nm,0.8s,mb4.0							
CMAR	**Chiang Mai Arr**	**26.21**	**284**	P		**P**	**14 49 26.4**	**-1.7**
	comp=Z,3.7nm,0.9s,mb3.9,baz=95,slow=7.5,SNR=17							
FITZ	**Fitzroy Crossi**	**31.34**	**180**	P		**P**	**14 50 14.9**	**+1.3**
	comp=Z,2.8nm,0.3s,mb4.6,baz=13,slow=12,SNR=32							
WRA	**Warramunga Arr**	**34.23**	**165**	P		**P**	**14 50 40.4**	**+1.5**
	comp=Z,1.2nm,0.8s,mb3.9,baz=344,slow=8.4,SNR=4.1							
WRA	**Warramunga Arr**	**34.23**	**165**	P		**P**	**14 50 40.4**	**+1.5**
ULN	**Ulaanbaatar**	**37.69**	**339**	*e*P		**P**	**14 51 08.7**	**+0.4**
	comp=Z,2.3nm,0.3s,mb4.4							
ASAR	**Alice Springs**	**37.73**	**168**	P		**P**	**14 51 10.2**	**+1.4**
	comp=Z,1.9nm,0.4s,mb4.2,baz=349,slow=7.1,SNR=12							
SONM	**Songino Array**	**37.89**	**339**	P		**P**	**14 51 10.0**	**0.0**
	comp=Z,3.4nm,0.9s,mb4.1,baz=154,slow=9.5,SNR=16							
NWAO	**Narrogin (SRO)**	**46.81**	**190**	*e*P		**P**	**14 52 22.2**	**-0.6**
	comp=Z,202nm,2.3s							
STKA	**Stephens Creek**	**47.55**	**162**	P		**P**	**14 52 29.2**	**+0.7**
	comp=Z,6.9nm,1.1s,mb4.6,baz=325,slow=8.6,SNR=4.3							
MK31	**Makanchi Array**	**49.21**	**321**	*e*P		**P**	**14 52 42.2**	**+1.0**
MKAR	**Makanchi Array**	**49.21**	**321**	P		**P**	**14 52 42.2**	**+1.0**
	comp=Z,4.4nm,0.8s,mb4.5,baz=112,slow=9.3,SNR=21							
ZALV	**Zalesovo Beam**	**51.62**	**330**	P		**P**	**14 52 59.0**	**-0.3**
	comp=Z,1.1nm,0.4s,mb4.1,baz=117,slow=8.6,SNR=7.8							
UCH	**Uchtor**	**52.60**	**313**	*e*P		**P**	**14 53 08.9**	**+2.1**
	comp=Z,5.7nm,0.8s,mb4.5							
KURK	**Kurchatov**	**53.18**	**324**	*e*P		**P**	**14 53 10.8**	**-0.2**
	comp=Z,16nm,1.0s,mb4.9							
TIXI	**Tiksi**	**58.22**	**1**	*e*P		**P**	**14 53 45.5**	**-1.2**
	comp=Z,1.9nm,0.8s,mb4.2							
BVAR	**Borovoye Array**	**58.78**	**324**	P		**P**	**14 53 51.2**	**+0.2**
	comp=Z,2.0nm,0.6s,mb4.3,baz=111,slow=8.1,SNR=13							
BRVK	**Borovoye**	**58.85**	**324**	*e*P		**P**	**14 53 51.8**	**+0.3**
	comp=Z,12nm,1.4s,mb4.8							
ABKAR	**Akbulak array**	**64.15**	**318**	*e*P		**P**	**14 54 27.0**	**-0.4**
	comp=Z,2.8nm,0.8s,mb4.3							
JOF	**Joensuu**	**80.15**	**332**	*e*p		**P**	**14 56 01.0**	**-1.8**
	comp=Z,1.8nm,0.5s,mb4.3							
JOF	**Joensuu**	**80.15**	**332**	*e*p		**P**	**14 56 01.0**	**-1.8**
	comp=Z,1.8nm,0.5s,mb4.3							
ARCES	**ARCESS Array B**	**81.06**	**339**	P		**P**	**14 56 06.9**	**-0.7**
	comp=Z,1.9nm,0.6s,mb4.2,baz=77,slow=6.4,SNR=8.1							
KAF	**Kangasniemi**	**82.59**	**332**	*e*p		**P**	**14 56 11.4**	**-4.4**
	comp=Z,2.4nm,0.5s,mb4.5							
KAF	**Kangasniemi**	**82.59**	**332**	*e*p		**P**	**14 56 11.4**	**-4.4**
	comp=Z,2.4nm,0.5s,mb4.5							
FINES	**FINESS Array B**	**82.87**	**331**	P		**P**	**14 56 16.4**	**-0.8**
	comp=Z,2.2nm,0.6s,mb4.3,baz=70,slow=5.3,SNR=13							
FINES	**FINESS Array B**	**82.87**	**331**	P		**P**	**14 56 16.4**	**-0.8**

AKASG Malin Array Be 83.79 321 P **P 14 56 21.0 -1.2**
comp=Z,0.3nm,0.3s,mb3.9,baz=62,slow=5.6,SNR=5.6

IDC 19 14:49:49.0±28.0, 17°.61S×172°.11W, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.7/19, mbtmp4.0/4, Error ellipse: s-maj=562.5km s-min=161.4km az=88.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**44.05**	**242**	P	P	14 57 59.5	+0.7
	0.5nm,0.3s,baz=90,slow=11,SNR=4.7						
WRA	**Warramunga Arr**	**50.58**	**258**	P	P	14 58 49.3	-0.6
	0.8nm,0.3s,baz=98,slow=7.0,SNR=29						
ASAR	**Alice Springs**	**50.64**	**254**	P	P	14 58 50.0	-0.3
	2.1nm,0.8s,baz=93,slow=7.2,SNR=46						
FITZ	**Fitzroy Crossi**	**58.98**	**259**	P	P	14 59 51.1	+0.2
	1.1nm,0.8s,baz=98,slow=15,SNR=6.3						

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*IDC **19** 14:55:19.1±0.9, 55°.40N×163°.18E, h0km, mb3.6/5, mb1 3.8/7, mb1mx3.5/27, mbtmp3.6/7, ML3.7/2, Error ellipse: s-maj=27.6km s-min=14.3km az=6.0*
*NEIC **19** 14:55:20.3±0.7, 55°.41N×163°.25E, h10km, mb3.9/1, Error ellipse: s-maj=18.3km s-min=10.4km az=158.0*
*MOS **19** 14:55:23.3±1.1, 55°.16N×163°.37E, h50km, mb4.3/4, Error ellipse: s-maj=16.6km s-min=10.7km az=60.9*
*ISCJB **19** 14:55:23.3±0.7, 55°.15N±0°.03×163°.38E±0°.07, h46km±9km, mb3.6/6, Error ellipse: s-maj=6.9km s-min=5.1km az=3.9*
*KRSC **19** 14:55:24.3±0.4, 55°.19N×163°.12E, h43km±42km, ML4.3*
ISC 19 14:55:24.6±0.7, 55°.20N±0°.03×163°.38E±0°.08, h41km±9km, n39, σ1°15/60, mb3.6/6, 1D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**1.06**	**343**	*i* P	**Pn**	**14 55 41.5**	**-1.5**
KBTR				*i* S	**Sn**	**14 55 53.9**	**-2.6**
MKZ	**Mys Kozlova**	**1.15**	**237**	*i* P	**Pn**	**14 55 42.7**	**-1.4**
MKZ				*i* S	**Sn**	**14 55 55.6**	**-3.0**
ZLN	**Zelenaya**	**1.68**	**300**	*e*P	**Pn**	**14 55 51.7**	**+0.3**
ZLN				*i* S	**Sn**	**14 56 11.3**	**-0.3**
BZGR	**Bezymyannyi-Gr**	**1.70**	**297**	*i* P	**Pn**	**14 55 52.0**	**+0.4**
BZGR				*i* S	**Sn**	**14 56 12.4**	**+0.3**
KMNR	**Kamenistaya**	**1.87**	**289**	*i* P	**Pn**	**14 55 54.7**	**+0.6**
KMNR				*i* S	**Sn**	**14 56 16.4**	**-0.1**
KRSR	**Krestovskiy**	**1.89**	**304**	*i* P	**Pn**	**14 55 54.1**	**-0.2**
KRSR				*i* S	**Sn**	**14 56 16.1**	**-0.8**
KLY	**Klyuchi**	**1.90**	**307**	*i* P	**Pn**	**14 55 53.1**	**-1.4**
KLY				*i* S	**Sn**	**14 56 14.0**	**-3.2**
SRKR	**Sorokina**	**1.92**	**321**	*e*P	**Pn**	**14 55 55.0**	**+0.3**
SRKR				*i* S	**Sn**	**14 56 18.0**	**+0.4**
KPT	**Kopyto**	**1.95**	**295**	*i* P	**Pn**	**14 55 55.7**	**+0.6**
KPT				*i* S	**Sn**	**14 56 18.6**	**+0.3**
KOZR	**Kozyr**	**2.16**	**295**	PN	**Pn**	**14 55 59.5**	**+1.5**
KOZR				S	**Sn**	**14 56 25.0**	**+1.6**
KOZ	**Kozyrevsk**	**2.17**	**295**	*i* P	**Pn**	**14 55 59.5**	**+1.4**
KOZ				*i* S	**Sn**	**14 56 25.0**	**+1.3**
SRDR	**Sredinnyy**	**2.35**	**300**	*i* P	**Pn**	**14 56 01.3**	**+0.6**
SRDR				*i* S	**Sn**	**14 56 28.2**	**-0.1**
KII	**Karymskiy**	**2.56**	**245**	*e*P	**Pn**	**14 56 03.9**	**+0.4**
KII				*i* S	**Sn**	**14 56 32.7**	**-0.7**
NLC	**Nalytchevo**	**3.12**	**231**	*e*P	**Pn**	**14 56 10.5**	**-0.7**
NLC				*i* S	**Sn**	**14 56 43.4**	**-3.7**
AVH	**Avacha**	**3.34**	**237**	*i* P	**Pn**	**14 56 15.4**	**+1.2**
AVH				*i* S	**Sn**	**14 56 52.4**	**-0.2**
GNL	**Ganaly**	**3.51**	**247**	*i* P	**Pn**	**14 56 17.7**	**+1.1**
GNL				*e*S	**Sn**	**14 56 56.2**	**-0.6**
PET	**Petropavlovsk**	**3.53**	**234**	||*i* PN	**Pn**	**14 56 17.0**	**+0.2**
PET				*e*S	**Sn**	**14 56 55.0**	**-2.3**
PET				pmax	pmax		
	comp=Z,37nm,0.5s						
PET				smax			
	comp=N,169nm,0.6s						
PET				MLR	MLR		
	comp=Z,100nm,12.0s						
PET	**Petropavlovsk**	**3.53**	**234**	*i* P	**Pn**	**14 56 17.1**	**+0.3**
PET				*i* S	**Sn**	**14 56 54.9**	**-2.4**
PET	**Petropavlovsk**	**3.53**	**234**	*e*Pn	**Pn**	**14 56 16.0**	**-0.8**
PET				*e*Sn	**Sn**	**14 56 55.6**	**-1.6**
PEA0B	**Petropavlovsk-**	**3.94**	**240**	*e*P	**Pn**	**14 56 21.4**	**-1.0**
PETK	**Petropavlovsk-**	**3.94**	**240**	Pn	**Pn**	**14 56 22.4**	**0.0**
	comp=Z,3.9nm,0.3s,baz=77,slow=20,SNR=20						
PETK				Sn	**Sn**	**14 57 09.1**	**+1.8**
	comp=Z,3.1nm,0.3s,baz=54,slow=11,SNR=6.5						
PETK	**Petropavlovsk-**	**3.94**	**240**	PN	**Pn**	**14 56 22.4**	**0.0**
PETK						14 57 09.1	
PETK				pmax	pmax		
	comp=Z,4.0nm,0.3s						
PETK				smax			
	comp=N,3.0nm,0.3s						
MIPR	**Malaya Ipel'ka**	**4.90**	**236**	*e*P	**Pn**	**14 56 37.1**	**+1.5**
FX1	**Attu Island--F**	**6.21**	**108**	Pn	**Pn**	**14 56 53.1**	**-0.5**
	comp=N,5.6nm,0.3s,baz=225,slow=4.1,SNR=36						
FX1				Sn	**Sn**	**14 57 57.7**	**-5.6**
	comp=N,6.2nm,0.3s,baz=164,slow=22,SNR=9.8						
SKR	**Severo-Kuril's**	**6.30**	**227**	*e*PN	**Pn**	**14 56 55.2**	**+0.4**
ALID	**Alaid**	**6.41**	**231**	P	**Pn**	**14 56 57.5**	**+1.2**
YSS	**Yuzh-Sakhalins**	**15.32**	**246**	*e*P	**Pn**	**14 58 56.0**	**-1.6**
MAJO	**Matsushiro**	**25.36**	**233**	*e*P	**P**	**15 00 47.6**	**+0.1**
MAJO				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.8						
MAJO	**Matsushiro**	**25.36**	**233**	*e*P	**P**	**15 00 47.6**	**+0.1**
	comp=Z,0.9nm,0.3s,mb3.8						
MJAR	**Matsushiro Arr**	**25.36**	**233**	P	**P**	**15 00 48.5**	**+1.0**
	comp=Z,0.7nm,0.5s,mb3.4,baz=17,slow=9.0,SNR=4.0						
MJAR	**Matsushiro Arr**	**25.36**	**233**	P	**P**	**15 00 48.5**	**+1.0**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA	**Yellowknife Ar**	**40.31**	**45**	P	**P**	**15 02 58.0**	**+0.8**
	comp=Z,0.5nm,0.6s,mb3.4,baz=298,slow=8.0,SNR=3.6						
YKA	**Yellowknife Ar**	**40.31**	**45**	P	**P**	**15 02 58.0**	**+0.8**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA	**Yellowknife Ar**	**40.31**	**45**	P	**P**	**15 02 58.0**	**+0.8**
MKAR	**Makanchi Array**	**48.98**	**296**	P	**P**	**15 04 04.2**	**-2.3**
	comp=Z,0.4nm,0.2s,mb4.0,baz=46,slow=7.7,SNR=3.2						
MKAR	**Makanchi Array**	**48.98**	**296**	P	**P**	**15 04 04.2**	**-2.3**
BVAR	**Borovoye Array**	**50.59**	**309**	P	**P**	**15 04 16.9**	**-1.8**
	comp=Z,0.6nm,0.4s,mb3.9,baz=60,slow=8.8,SNR=4.8						
BVAR	**Borovoye Array**	**50.59**	**309**	P	**P**	**15 04 16.9**	**-1.8**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TXAR	**Lajitas Array**	**68.07**	**70**	P	**P**	**15 06 21.4**	**+1.7**
	comp=Z,0.2nm,0.5s,mb3.4,baz=295,slow=4.9,SNR=3.6						

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*ISCJB **19** 15:07:49.7±0.6, 84°.13N±0°.08×0°.3E±0°.8, h10km, mb3.8/10, MS3.4/3, Error ellipse: s-maj=14.1km s-min=8.7km az=44.2*
*NEIC **19** 15:07:51.5±0.7, 84°.14N×0°.30E, h10km, mb4.4/3, Error ellipse: s-maj=16.3km s-min=9.5km az=46.0*
*IDC **19** 15:07:51.1±0.8, 84°.29N×1°.15E, h0km, mb3.6/8, mb1 3.8/11, mb1mx3.7/28, mbtmp3.7/11, ML3.5/3, MS3.5/6, Ms1 3.5/6, ms1mx3.1/36, Error ellipse: s-maj=30.8km s-min=15.5km az=39.0*
*CSEM **19** 15:07:51.5, 84°.14N×0°.30E, h10km, mb4.4/3, After NEIC*
ISC 19 15:07:51.6±0.6, 84°.14N±0°.08×0°.3E±0°.8, h10km, n35, σ1°21/37, mb3.8/10, MS3.4/3, 1D, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**5.50**	**156**	*e*Pn	**Pn**	**15 09 12.5**	**-0.9**
	22nm,0.8s						
KBS				*e*Sn	**Sn**	**15 10 08.3**	**-8.2**
KBS	**Kingsbay**	**5.50**	**156**	*e*Pn	**Pn**	**15 09 12.5**	**-0.9**
	22nm,0.8s						
KBS				*e*Sn	**Sn**	**15 10 08.4**	**-8.1**
SPITS	**Spitsbergen Ar**	**6.44**	**149**	Pn	**Pn**	**15 09 25.4**	**-0.8**
	baz=2.0,slow=12,SNR=14						
SPITS				Sn	**Sn**	**15 10 34.5**	**-5.1**
	baz=355,slow=8.5,SNR=7.1						
SPITS				LR	LR	15 11 43.7	
	comp=Z,328nm,19.9s,baz=315,slow=36						
SPITS	**Spitsbergen Ar**	**6.44**	**149**	Pn	**Pn**	**15 09 25.4**	**-0.8**
SPITS				Sn	**Sn**	**15 10 34.5**	**-5.1**
DAG	**Danmarks Havn**	**7.97**	**213**	||*i* P	**Pn**	**15 09 52.0**	**+4.8**
	5.9nm,0.4s						
SUMG	**Summit**	**13.44**	**234**	*e*Pn	**Pn**	**15 11 01.4**	**-0.6**
	34nm,1.3s						
SUMG	**Summit**	**13.44**	**234**	*i* P	**Pn**	**15 11 02.6**	**+0.7**
	8.7nm,0.9s						
SUMG	**Summit**	**13.44**	**234**	*e*Pn	**Pn**	**15 11 01.4**	**-0.5**
	34nm,1.3s						
KEV	**Kevo**	**15.32**	**144**	*e*Pn	**Pn**	**15 11 26.7**	**-0.8**
	9.5nm,0.9s						
KEV	**Kevo**	**15.32**	**144**	*e*Pn	**Pn**	**15 11 26.7**	**-0.7**
	9.5nm,0.9s						
ARCES	**ARCESS Array B**	**15.45**	**146**	Pn	**Pn**	**15 11 27.2**	**-1.9**
	0.2nm,0.3s,baz=0.5,slow=15,SNR=6.5						
ARCES				LR	LR	15 17 30.3	
	comp=Z,110nm,20.5s,baz=11,slow=37						
ARCES	**ARCESS Array B**	**15.45**	**146**	Pn	**Pn**	**15 11 27.2**	**-1.9**
RES	**Resolute Bay**	**16.97**	**295**	Pn	**Pn**	**15 11 47.8**	**-0.8**
	0.2nm,0.3s,baz=42,slow=15,SNR=3.6						
RES				LR	LR	15 18 49.3	
	comp=Z,246nm,18.3s,baz=46,slow=39						
RES	**Resolute Bay**	**16.97**	**295**	Pn	**Pn**	**15 11 47.8**	**-0.8**
NOA	**NORSAR Array B**	**23.36**	**167**	P	**P**	**15 13 00.9**	**+1.2**
	2.3nm,0.7s,mb3.7,baz=355,slow=11,SNR=5.4						
NOA	**NORSAR Array B**	**23.36**	**167**	P	**P**	**15 13 00.9**	**+1.2**
FINES	**FINESS Array B**	**23.54**	**148**	P	**P**	**15 13 03.0**	**+1.4**
	1.7nm,0.8s,mb3.5,baz=38,slow=16,SNR=3.2						
FINES				LR	LR	15 22 19.6	
	comp=Z,92nm,18.6s,MS3.3,baz=4.0,slow=37						
FINES	**FINESS Array B**	**23.54**	**148**	P	**P**	**15 13 03.0**	**+1.4**
NAO01	**NORSAR Array S**	**23.55**	**167**	*e*P	**P**	**15 13 01.7**	**0.0**
	9.6nm,0.9s,mb4.2						
NAO01	**NORSAR Array S**	**23.55**	**167**	*e*P	**P**	**15 13 01.7**	**0.0**
	9.6nm,0.9s,mb4.2						
HFS	**Hagfors**	**24.33**	**164**	LR	LR	15 21 24.6	
	comp=Z,100nm,19.8s,MS3.3,baz=169,slow=33						
BILL	**Bilibino**	**27.85**	**11**	*e*P	**P**	**15 13 38.9**	**-1.7**
	12nm,1.0s,mb4.5						
BILL	**Bilibino**	**27.85**	**11**	*e*P	**P**	**15 13 38.9**	**-1.7**
	12nm,1.0s,mb4.5						
YKA	**Yellowknife Ar**	**30.59**	**304**	P	**P**	**15 14 04.3**	**-0.5**
	0.3nm,0.5s,mb3.3,baz=7.0,slow=11,SNR=3.1						
YKA				PcP	PcP	15 17 04.9	+2.1
	0.5nm,0.6s,baz=3.3,slow=2.5,SNR=7.4						
YKA	**Yellowknife Ar**	**30.59**	**304**	P	**P**	**15 14 04.3**	**-0.5**
YKA				PcP	PcP	15 17 04.9	+2.1
YKA	**Yellowknife Ar**	**30.59**	**304**	P	**P**	**15 14 04.3**	**-0.5**
YKA	**Yellowknife Ar**	**30.59**	**304**	PcP	PcP	15 17 04.9	+2.1
BVAR	**Borovoye Array**	**35.52**	**102**	P	**P**	**15 14 49.2**	**+1.2**
	0.9nm,0.6s,mb3.9,baz=326,slow=13,SNR=5.9						
BVAR	**Borovoye Array**	**35.52**	**102**	P	**P**	**15 14 49.2**	**+1.2**
KURK	**Kurchatov**	**38.64**	**95**	P	**P**	**15 15 14.7**	**+0.2**
	1.2nm,0.7s,mb3.7,baz=356,slow=7.6,SNR=5.8						
KURK	**Kurchatov**	**38.64**	**95**	P	**P**	**15 15 14.7**	**+0.2**
BRTR	**Keskin Array B**	**45.62**	**144**	P	**P**	**15 16 14.6**	**+3.1**
	0.9nm,1.0s,mb3.6,baz=332,slow=5.5,SNR=3.3						
TXAR	**Lajitas Array**	**62.41**	**287**	P	**P**	**15 18 16.6**	**+2.4**
	0.5nm,1.0s,mb3.6,baz=6.3,slow=9.1,SNR=3.0						
TXAR	**Lajitas Array**	**62.41**	**287**	P	**P**	**15 18 16.6**	**+2.4**
CMAR	**Chiang Mai Arr**	**72.64**	**80**	P	**P**	**15 19 19.2**	**+0.4**
	1.0nm,0.7s,mb3.8,baz=350,slow=7.4,SNR=6.6						
CMAR				LR	LR	15 53 27.7	
	comp=Z,32nm,21.2s,MS3.6,baz=240,slow=38						

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*BJI **19** 15:08:42.4, 56°.68N×127°.16E, h19km, mb4.5/2, ML4.7/3, Ms7 4.1/1*
*IDC **19** 15:08:45.6±0.8, 56°.39N×126°.48E, h0km, mb3.8/13, mb1 3.9/15, mb1mx3.8/28, mbtmp3.8/15, ML3.7/2, MS3.6/1, Ms1 3.6/1, ms1mx2.9/35, Error ellipse: s-maj=22.5km s-min=15.7km az=2.0*
*NEIC **19** 15:08:47.0±0.5, 56°.46N×126°.38E, h10km, mb4.2/5, Error ellipse: s-maj=9.9km s-min=7.7km az=140.0*
*MOS **19** 15:08:46.0±1.1, 56°.25N×126°.30E, h10km, mb4.2/12, Error ellipse: s-maj=14.3km s-min=10.2km az=96.2*
*ISCJB **19** 15:08:46.3±1.4, 56°.29N±0°.06×126°.43E±0°.10, h15km±10km, mb3.9/20, MS3.5/3, Error ellipse: s-maj=10.7km s-min=7.6km az=39.4*
ISC 19 15:08:46.9±1.5, 56°.37N±0°.06×126°.40E±0°.09, h6km±9km, n52, σ0°89/56, mb3.9/20, MS3.5/3, 1C, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLNS	**Chul'man**	**0.95**	**300c**	*i* P	**Pg**	**15 09 05.7**	**+0.5**
CLNS				*e*S	**Sg**	**15 09 17.7**	**+0.1**
CLNS				pmax	pmax		
	comp=Z,776nm,0.2s						
CLNS				pmax	pmax		
	comp=N,471nm,0.2s						
CLNS				pmax	pmax		
	comp=E,244nm,0.1s						
CLNS				smax			
	comp=E,8μm,0.5s						
CLNS				smax			
	comp=Z,3μm,0.3s						
YAK	**Yakutsk**	**5.92**	**15**	*e*P	**Pn**	**15 10 14.7**	**-0.2**
YAK				*e*		15 11 19.3	
YAK				pmax	pmax		
	comp=Z,85nm,0.4s						
YAK				pmax	pmax		
	comp=N,24nm,0.3s						
YAK				pmax	pmax		
	comp=E,9.0nm,0.3s						
YAK				smax			
	comp=E,45nm,0.2s						
YAK				smax			
	comp=N,293nm,0.5s						
YAK	**Yakutsk**	**5.92**	**15**	*e*Pn	**Pn**	**15 10 12.4**	**-2.5**
	comp=N,116nm,0.5s						
YAK				*e*Sn	**Sn**	**15 11 16.4**	**-6.5**
KLR	**Kul'dur**	**7.85**	**153**	*e*P	**Pn**	**15 10 39.3**	**-2.2**
KLR				MLR	MLR		
	comp=Z,700nm,10.0s						
HIA	**Hailar**	**8.18**	**212**	*e*P	**Pn**	**15 10 45.5**	**-0.5**
HABR	**Khabarovsk**	**9.51**	**143**	*e*P	**Pn**	**15 11 05.4**	**+1.2**
HABR				*e*		15 12 54.5	
HABR				pmax	pmax		
	comp=Z,11nm,0.7s						
HABR				pmax	pmax		
	comp=N,3.0nm,0.6s						
HABR				pmax	pmax		
	comp=E,37nm,1.3s						
HABR				MLR	MLR		
	comp=Z,281nm,11.0s						
MDJ	**Mudanjiang**	**11.94**	**169**	*e*Pn	**Pn**	**15 11 38.4**	**+0.8**
	comp=Z,12nm,0.6s						
TLY	**Talaya**	**14.15**	**260**	*e*P	**Pn**	**15 12 02.9**	**-4.7**
TLY				pmax	pmax		
	comp=Z,5.0nm,1.4s						
TLY				MLR	MLR		
	comp=Z,110nm,16.0s						
TLY	**Talaya**	**14.15**	**260**	*e*Pn	**Pn**	**15 12 05.9**	**-1.7**
	comp=Z,3.5nm,0.9s						
ULN	**Ulaanbaatar**	**14.58**	**242**	P	**Pn**	**15 12 13.0**	**-0.5**
SEY	**Seymchan**	**14.60**	**53**	*i* P	**Pn**	**15 12 20.8**	**+7.1**
SONM	**Songino Array**	**14.93**	**243**	Pn	**Pn**	**15 12 17.6**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=44,slow=9.1,SNR=9.1						
SONM				Lg		15 16 38.7	
	comp=Z,2.1nm,0.3s,baz=40,slow=26,SNR=12						
ZAK	**Zakamensk**	**15.01**	**256**	*e*P	**Pn**	**15 12 19.0**	**-0.2**
ZAK				*e*		15 15 00.7	
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TIXI	**Tiksi**	**15.37**	**3**	*e*P	**Pn**	**15 12 20.0**	**-4.0**
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.4s						
TIXI	**Tiksi**	**15.37**	**3**	*e*P	**Pn**	**15 12 19.9**	**-4.0**
	comp=Z,8.5nm,0.4s						
TIXI				*e*Sn	**Sn**	**15 15 04.1**	**-10**
MOY	**Mondy**	**15.62**	**263**	*e*P	**Pn**	**15 12 34.3**	**+7.1**
MOY				pmax	pmax		
	comp=Z,16nm,1.5s						
PETK	**Petropavlovsk-**	**18.27**	**87**	P	**Pn**	**15 13 00.6**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=318,slow=4.2,SNR=5.0						
PETK	**Petropavlovsk-**	**18.27**	**87**	*e*P	**Pn**	**15 13 04.1**	**+3.3**
PETK	**Petropavlovsk-**	**18.27**	**87**	P	**Pn**	**15 13 00.6**	**-0.2**
BILL	**Bilibino**	**21.48**	**41**	P	**P**	**15 13 40.0**	**+4.3**
BILL				*e*		15 13 42.1	
BILL				*e*		15 14 16.2	
BILL				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.1						
BILL				MLR	MLR		
	comp=Z,100nm,17.0s,MS3.3						
ZALV	**Zalesovo Beam**	**23.62**	**282**	P	**P**	**15 13 59.2**	**+0.8**
	comp=Z,0.8nm,0.5s,mb3.4,baz=71,slow=9.6,SNR=5.8						
NVS	**Novosibirsk**	**24.14**	**285**	*e*P	**P**	**15 14 03.8**	**+0.6**
NVS				*e*S	**S**	**15 18 12.8**	**-8.3**
NVS				*e*		15 25 10.5	
NVS				pmax	pmax		
	comp=Z,21nm,1.9s,mb4.2						
NVS				pmax	pmax		
	comp=N,12nm,1.8s						
NVS				pmax	pmax		
	comp=E,19nm,1.8s						
NVS				smax			
	comp=N,10.0nm,1.9s						
NVS				smax			
	comp=E,8.0nm,1.9s						
KURK	**Kurchatov**	**28.47**	**279**	P	**P**	**15 14 43.4**	**+1.1**
	comp=E,2.0nm,0.6s,mb4.0,baz=62,slow=9.2,SNR=19						
KURK	**Kurchatov**	**28.47**	**279**	P	**P**	**15 14 43.4**	**+1.1**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
KURK	**Kurchatov**	**28.47**	**279**	*e*P	**P**	**15 14 39.8**	**-2.5**
	comp=Z,3.6nm,1.0s,mb4.0						
MK31	**Makanchi Array**	**28.57**	**269**	*e*P	**P**	**15 14 43.3**	**0.0**
MKAR	**Makanchi Array**	**28.57**	**269**	P	**P**	**15 14 43.8**	**+0.5**
	comp=Z,1.7nm,0.6s,mb4.0,baz=58,slow=8.7,SNR=11						
MKAR				LR	LR	15 26 30.1	
	comp=Z,114nm,18.0s,MS3.5,baz=270,slow=37						
MKAR	**Makanchi Array**	**28.57**	**269**	*e*P	**P**	**15 14 43.8**	**+0.5**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BVAR	**Borovoye Array**	**31.78**	**288**	P	**P**	**15 15 11.8**	**+0.3**
	comp=Z,1.3nm,0.5s,mb4.0,baz=48,slow=8.9,SNR=6.3						
BVAR	**Borovoye Array**	**31.78**	**288**	*e*P	**P**	**15 15 11.8**	**+0.3**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AAK	**Ala-Archa**	**35.51**	**270**	P	**P**	**15 15 44.6**	**+0.5**
	comp=Z,1.1nm,0.3s,mb4.2,baz=272,slow=12,SNR=3.7						
AAK	**Ala-Archa**	**35.51**	**270**	P	**P**	**15 15 44.6**	**+0.5**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.2						
EKS2	**Erkin-Say**	**35.89**	**270**	P	**P**	**15 15 47.4**	**0.0**
	comp=Z,3.3nm,0.9s,mb4.3						
ABKAR	**Akbulak array**	**39.35**	**289**	*e*P	**P**	**15 16 16.7**	**+0.2**
	comp=Z,1.0nm,0.6s,mb3.7						
AKTK	**Aktyubinsk**	**39.66**	**291**	P	**P**	**15 16 19.0**	**-0.1**
AKTO	**Aktyubinsk**	**39.66**	**291**	P	**P**	**15 16 19.0**	**-0.1**
	comp=Z,1.3nm,0.6s,mb3.8,baz=65,slow=8.9,SNR=4.5						
AKTO	**Aktyubinsk**	**39.66**	**291**	P	**P**	**15 16 19.0**	**-0.1**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
FINES	**FINESS Array B**	**47.09**	**320**	P	**P**	**15 17 18.0**	**-1.0**
	comp=Z,0.7nm,0.5s,mb3.9,baz=50,slow=10,SNR=7.4						
FINES	**FINESS Array B**	**47.09**	**320**	P	**P**	**15 17 18.0**	**-0.9**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KIV	**Kislovodsk**	**51.78**	**294**	*e*P	**P**	**15 17 55.7**	**+0.8**
KIV				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
KIV				MLR	MLR		
	comp=Z,76nm,17.0s,MS3.8						
NOA	**NORSAR Array B**	**52.36**	**326**	P	**P**	**15 17 57.4**	**-1.6**
	comp=Z,1.0nm,0.9s,mb3.8,baz=66,slow=9.8,SNR=3.2						
NOA	**NORSAR Array B**	**52.36**	**326**	P	**P**	**15 17 57.4**	**-1.6**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BRTR	**Keskin Array B**	**59.45**	**297**	P	**P**	**15 18 50.6**	**+0.4**
	comp=Z,0.7nm,0.6s,mb3.9,baz=15,slow=3.4,SNR=3.5						
BRTR	**Keskin Array B**	**59.45**	**297**	P	**P**	**15 18 50.6**	**+0.5**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CLL	**Collm**	**59.46**	**318**	*i* P	**P**	**15 18 56.4**	**+6.4**
CLL				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
MCMT	**McKenzie Canyo**	**67.58**	**41**	P	**P**	**15 19 44.8**	**+1.0**
	comp=Z,1.8nm,0.7s,mb4.2						
PDAR	**Pinedale Array**	**70.56**	**40**	P	**P**	**15 20 03.4**	**+1.0**
	comp=Z,0.3nm,0.4s,mb3.6,baz=19,slow=4.2,SNR=1.9						
NVAR	**Mina Array Bea**	**70.88**	**49**	P	**P**	**15 20 03.3**	**-1.0**
	comp=Z,0.1nm,0.4s,mb3.1,baz=302,slow=5.1,SNR=2.6						
WRA	**Warramunga Arr**	**76.31**	**172**	P	**P**	**15 20 36.0**	**-0.3**
	comp=Z,0.6nm,0.5s,mb3.8,baz=352,slow=6.8,SNR=15						
WRA	**Warramunga Arr**	**76.31**	**172**	P	**P**	**15 20 36.0**	**-0.2**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ASAR	**Alice Springs**	**79.97**	**173**	P	**P**	**15 20 56.0**	**-0.5**
	comp=Z,0.4nm,1.1s,mb3.3,baz=346,slow=3.5,SNR=4.6						
ASAR	**Alice Springs**	**79.97**	**173**	*e*P	**P**	**15 20 57.1**	**+0.6**

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*NIED **19** 15:17:00, 36°.00N×141°.30E, h23km, Mw3.8 Best double couple: M0=5.27000×10^14 NP1:φ0=24.00000°, δ73.00000°, λ84.00000°. NP2:φ0=224.00000°, δ18.00000°, λ109.00000°.*
*IDC **19** 15:17:35.0±1.0, 36°.06N×141°.40E, h0km, mb3.7/7, mb1 3.8/11, mb1mx3.6/29, mbtmp3.8/11, ML3.5/4, MS2.9/1, Ms1 2.9/1, ms1mx2.5/32, Error ellipse: s-maj=24.5km s-min=16.2km az=81.0*
*ISCJB **19** 15:17:36.0±1.3, 36°.05N±0°.04×141°.53E±0°.07, h27km±9km, mb3.8/9, Error ellipse: s-maj=9.7km s-min=7.5km az=3.8*
*JMA **19** 15:17:38.9±0.2, 36°.04N×141°.29E, h42km±3km, M3.6*
*NEIC **19** 15:17:41.4±2.5, 36°.02N×141°.20E, h43km±19km, mb4.2/3, Error ellipse: s-maj=27.5km s-min=13.6km az=72.0*
**ISC 19 15:17:37.4±1.5, 36°.04N±0°.04×141°.43E±0°.07, h18km±8km, n23, σ0°77/29, mb3.8/

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFRS	**El Faro**	**1.30**	**359**	*eP*	**Pn**	**15 20 33.7**	**-1.6**
LFRS				*eS*	**Sn**	**15 20 50.6**	**-1.0**
VSM	**San Miguel**	**1.34**	**34**	*eP*	**Pn**	**15 20 35.6**	**-0.3**
BLLM	**Bellamira**	**1.37**	**35**	*eP*	**Pn**	**15 20 35.4**	**-1.0**
BLLM				*eS*	**Sn**	**15 20 53.6**	**+0.3**
BOQS	**Boqueron**	**1.43**	**351**	*eP*	**Pn**	**15 20 35.8**	**-1.3**
BOQS				*eP*		15 20 36.2	
BOQS				*eS*	**Sn**	**15 20 54.8**	**0.0**
BOQS				*eS*	**Sn**	**15 20 55.0**	**+0.2**
BOQS				AML	AML	15 20 57.4	
	comp=Z,252nm,0.2s						
CNCH	**Conchagua**	**1.52**	**51**	*eP*	**Pn**	**15 20 38.2**	**-0.2**
CNCH				*eP*		15 20 38.2	
SBLS	**San Blas**	**1.62**	**340**	*eP*	**Pn**	**15 20 39.1**	**-0.6**
SBLS				*eP*		15 20 39.6	
SBLS				*eS*	**Sn**	**15 21 01.2**	**+1.8**
SNJE	**San Jose**	**1.64**	**341**	*eP*	**Pn**	**15 20 38.9**	**-1.0**
CAHU	**Cacacuatique**	**1.66**	**29**	*eP*	**Pn**	**15 20 40.1**	**-0.2**
CAHU				*eP*		15 20 40.3	
CAHU				*eS*	**Sn**	**15 21 01.9**	**+1.5**
RBDL	**Robledal**	**1.90**	**341**	*eP*	**Pn**	**15 20 42.3**	**-1.1**
MTO2	**Montecristo 2**	**2.10**	**352**	*eP*	**Pn**	**15 20 45.1**	**-1.1**
MTO2				*eS*	**Sn**	**15 21 12.6**	**+1.4**
TELN	**Telica**	**2.18**	**82**	*eP*	**Pn**	**15 20 47.8**	**+0.4**
CNGN	**Cerro Negro**	**2.30**	**85**	*eP*	**Pn**	**15 20 48.7**	**-0.3**
COPN	**Copaltepe**	**2.40**	**93**	*eP*	**Pn**	**15 20 50.6**	**+0.1**
TGUH	**Tegucigalpa,Un**	**2.45**	**45**	*ePn*	**Pn**	**15 20 50.3**	**-0.8**
TGUH	**Tegucigalpa,Un**	**2.45**	**45**	*eP*	**Pn**	**15 20 50.3**	**-0.8**
MOMN	**Momotombo**	**2.45**	**87**	*eP*	**Pn**	**15 20 51.4**	**+0.3**
CSAN		**2.57**	**93**	*eP*	**Pn**	**15 20 54.0**	**+1.3**
APYN	**Apoyeque**	**2.64**	**91**	*eP*	**Pn**	**15 20 53.9**	**+0.2**
APG	**El Apazote**	**3.01**	**333**	Pn	**Pn**	**15 21 01.4**	**+2.7**
	comp=Z,0.9nm,0.3s,baz=206,slow=13,SNR=10						
CONN	**Concepcion**	**3.43**	**102**	*eP*	**Pn**	**15 21 05.0**	**+0.4**
CMIG	**Matias Romero**	**7.38**	**311**	**Pn**	**Pn**	**15 22 00.0**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=2.6,slow=6.3,SNR=4.4						
TXAR	**Lajitas Array**	**21.72**	**323**	P	**P**	**15 25 03.5**	**+2.6**
	comp=Z,2.9nm,0.7s,mb3.9,baz=146,slow=11,SNR=46						
TXAR	**Lajitas Array**	**21.72**	**323**	P	**P**	**15 25 03.5**	**+2.6**
MIAR	**Mount Ida**	**22.51**	**350**	*eP*	**P**	**15 25 09.4**	**+0.2**
	comp=Z,13nm,0.8s,mb4.4						
TKL	**Tuckaleechee C**	**23.73**	**11**	P	**P**	**15 25 21.5**	**0.0**
	comp=Z,3.5nm,0.7s,mb3.9,baz=185,slow=13,SNR=4.2						
EYMN	**Ely**	**35.58**	**357**	*eP*	**P**	**15 27 04.7**	**-1.8**
	comp=Z,5.0nm,1.0s,mb4.4						
YKA	**Yellowknife Ar**	**53.34**	**346**	P	**P**	**15 29 27.6**	**-0.2**
	comp=Z,0.6nm,0.8s,mb3.6,baz=143,slow=7.3,SNR=8.3						
CMAR	**Chiang Mai Arr**	**148.43**	**345**	PKPbc	PKPbc	15 39 57.2	+1.3
	comp=Z,1.8nm,1.1s,baz=341,slow=2.4,SNR=6.8						

IDC 19 15:22:44.6±17.0, 4°.56S×150°.58E, h^{0km}, mb3.5/3, mb1 3.7/3, mb1mx3.4/15, mbtmp3.6/3, Error ellipse: s-maj=280.4km s-min=92.1km az=21.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.00**	**225**	P	P	15 27 40.8	+0.2
	1.7nm,0.7s,baz=51,slow=11,SNR=9.7						
ASAR	**Alice Springs**	**24.89**	**219**	P	P	15 28 09.1	-0.3
	0.6nm,1.1s,baz=54,slow=9.3,SNR=4.4						
STKA	**Stephens Creek**	**28.45**	**196**	P	P	15 28 41.6	+0.3
	0.5nm,0.3s,baz=8.7,slow=13,SNR=2.9						

MEX 19 15:25:04.4±1.0, 16°.72N×94°.52W, $h113^{km}\pm9^{km}$, MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.51**	**317**	*eP*	Pn	15 25 20.3	-1.3
CMIG				*i* S	Sn	15 25 33.1	-1.5
TUIG	**Tuzandepetl**	**1.31**	**4**	*i* P	Pn	15 25 27.6	-1.6
TUIG				*i* S	Sn	15 25 46.4	-1.7
TGIG		**1.34**	**87**	*eP*	Pn	15 25 28.3	-1.2
TGIG				*i* S	Sn	15 25 46.5	-2.1
PCIG		**1.61**	**129**	*eP*	Pn	15 25 32.0	-0.7
PCIG				*i* S	Sn	15 25 53.1	-1.1
HUIG	**Huatulco**	**1.79**	**238**	*i* P	Pn	15 25 32.3	-2.6
HUIG				*i* S	Sn	15 25 56.4	-1.8
SCX	**San Cristobal**	**1.81**	**89**	*i* P	Pn	15 25 35.1	0.0
SCX				*i* S	Sn	15 25 56.2	-2.4
OXX	**Oaxaca**	**2.14**	**280**	*i* P	Pn	15 25 38.2	-1.1
OXX				*i* S	Sn	15 26 04.7	-1.3
VHO	**Vista Hermosa**	**2.15**	**280**	*i* P	Pn	15 25 39.6	+0.3
VHO				*i* S	Sn	15 26 06.4	+0.3
THIG		**2.82**	**129**	*i* P	Pn	15 25 46.7	-1.4
THIG				*i* S	Sn	15 26 20.2	-1.5
UTMO	**Huajuapan**	**3.33**	**290**	*i* P	Pn	15 25 54.8	0.0
UTMO				*i* S	Sn	15 26 32.1	-1.7
PNIG	**Pinotepa**	**3.47**	**265**	*i* P	Pn	15 25 54.9	-1.9
PNIG				*i* S	Sn	15 26 36.9	-0.4

*DDA **19** 15:32:23.7, 38°.74N×39°.40E, $h7^{km}\pm2^{km}$, Md2.9, Ml2.9*
*ISK **19** 15:32:23.9, 38°.73N×39°.19E, $h2^{km}$, MD2.7*
*CSEM **19** 15:32:25.6±0.3, 38°.73N×39°.30E, $h2^{km}$, MD2.7, Error ellipse: s-maj=7.8km s-min=5.5km az=104.0*
*ISCJB **19** 15:32:25.5±0.6, 38°.73N±0°.03×39°.30E±0°.05, $h10^{km}$, Error ellipse: s-maj=6.0km s-min=4.0km az=14.2*
ISC 19 15:32:25.6±1.1, 38°.72N±0°.03×39°.34E±0°.06, $h14^{km}\pm12^{km}$, n13, σ0°.90/23, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTK	**Pertek**	**0.17**	**14**	*e*PG	**Pg**	**15 32 29.2**	**-0.6**
PTK				*e*SG	**Sg**	**15 32 32.9**	**+0.2**
PTK	**Pertek**	**0.17**	**14**	*e*Pg	**Pg**	**15 32 29.2**	**-0.6**
PTK				*e*Sg	**Sg**	**15 32 32.9**	**+0.2**
SVRC	**Sivrice-ELAZID**	**0.34**	**184**	*e*PG	**Pg**	**15 32 32.1**	**-0.5**
SVRC				*e*SG	**Sg**	**15 32 37.7**	**+0.4**
SVRC	**Sivrice-ELAZID**	**0.34**	**184**	*e*Pg	**Pg**	**15 32 32.1**	**-0.5**
SVRC				*e*Sg	**Sg**	**15 32 37.7**	**+0.3**
ELZG	**Elazig**	**0.35**	**231**	*i* P	**Pg**	**15 32 32.0**	**-0.8**
ELZG				*i* S	**Sg**	**15 32 38.1**	**+0.4**
ELZG	**Elazig**	**0.35**	**231**	*i* P	**Pg**	**15 32 32.0**	**-0.9**
ELZG				*i* S	**Sg**	**15 32 38.1**	**+0.4**
KEMA	**Kemaliye**	**0.85**	**310**	*i* P	**Pg**	**15 32 40.4**	**-1.8**
KEMA				*i* S	**Sg**	**15 32 53.9**	**+0.4**
KEMA	**Kemaliye**	**0.85**	**310**	*i* P	**Pg**	**15 32 40.4**	**-1.8**
KEMA				*i* S	**Sg**	**15 32 53.8**	**+0.4**
BINT	**Bingol**	**0.91**	**80**	*e*PG	**Pg**	**15 32 44.1**	**+0.8**
BINT				*e*SG	**Sg**	**15 33 00.3**	**+5.0**
BINT	**Bingol**	**0.91**	**80**	*e*Pg	**Pg**	**15 32 44.1**	**+0.8**
EZC	**Erzincan**	**1.03**	**1**	*e*PG	**Pg**	**15 32 44.6**	**-0.9**
EZC				*e*SG	**Sg**	**15 32 59.7**	**+0.8**
DARE	**Darende-Malaty**	**1.22**	**281**	*e*PN	**Pg**	**15 32 50.8**	**+1.7**
DARE	**Darende-Malaty**	**1.22**	**281**	*e*Pn	**Pg**	**15 32 50.8**	**+1.7**

*IDC **19** 15:37:12.1±3.3, 12°.64N×88°.61W, $h0^{km}$, mb4.0/5, mb1 4.1/6, mb1mx3.8/21, mbtmp3.9/6, ML2.9/2, Error ellipse: s-maj=61.9km s-min=36.4km az=8.0*
*CASC **19** 15:37:13.9±2.2, 12°.35N×89°.08W, $h19^{km}\pm9^{km}$, MD3.9, ML3.8, mb4.1(NEIC)*
*ISCJB **19** 15:37:13.8±1.1, 12°.26N±0°.07×89°.13W±0°.05, $h53^{km}\pm9^{km}$, mb4.0/7, Error ellipse: s-maj=12.6km s-min=6.4km az=30.9*
*NEIC **19** 15:37:21.7±2.7, 12°.88N×88°.89W, $h64^{km}\pm13^{km}$, mb4.1/3, Error ellipse: s-maj=36.1km s-min=14.5km az=182.0*
ISC 19 15:37:14.3±1.1, 12°.25N±0°.06×89°.16W±0°.06, $h42^{km}\pm10^{km}$, n26, σ0°.87/33, mb4.0/7, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFRS	**El Faro**	**1.37**	**4**	*eP*	**Pn**	**15 37 36.3**	**-0.6**
LFRS				*eS*	**Sn**	**15 37 53.0**	**-0.8**
VSM	**San Miguel**	**1.45**	**36**	*eP*	**Pn**	**15 37 37.3**	**-0.8**
VSM				*eS*	**Sn**	**15 37 56.5**	**+0.6**
BOQS	**Boqueron**	**1.48**	**355**	*eP*	**Pn**	**15 37 38.5**	**0.0**
BOQS				*eS*	**Sn**	**15 37 56.0**	**-0.6**
BLLM	**Bellamira**	**1.48**	**37**	*eP*	**Pn**	**15 37 37.8**	**-0.7**
BLLM				*eS*	**Sn**	**15 37 57.0**	**+0.3**
SBLS	**San Blas**	**1.64**	**344**	*eP*	**Pn**	**15 37 41.3**	**+0.6**
CNCH	**Conchagua**	**1.65**	**52**	*eP*	**Pn**	**15 37 40.2**	**-0.5**
CNCH				*eS*	**Sn**	**15 38 01.7**	**+1.1**
CAHU	**Cacacuatique**	**1.77**	**31**	*eP*	**Pn**	**15 37 42.5**	**0.0**
CAHU				*eS*	**Sn**	**15 38 04.5**	**+0.8**
RBDL	**Robledal**	**1.92**	**344**	*eP*	**Pn**	**15 37 45.6**	**+1.0**
TELN	**Telica**	**2.30**	**81**	*eP*	**Pn**	**15 37 50.3**	**+0.6**
CNGN	**Cerro Negro**	**2.42**	**84**	*eP*	**Pn**	**15 37 50.3**	**-1.0**
COPN	**Copaltepe**	**2.51**	**91**	*eP*	**Pn**	**15 37 53.2**	**+0.6**
COPN				*eS*	**Sn**	**15 38 23.7**	**+1.7**
TGUH	**Tegucigalpa,Un**	**2.57**	**45**	*ePn*	**Pn**	**15 37 53.2**	**-0.2**
TGUH	**Tegucigalpa,Un**	**2.57**	**45**	*eP*	**Pn**	**15 37 53.5**	**+0.1**
TGUH				AML	AML	15 38 29.2	
	comp=N,692nm,0.5s						
APYN	**Apoyeque**	**2.74**	**90**	*eP*	**Pn**	**15 37 55.5**	**-0.3**
APYN				*eS*	**Sn**	**15 38 26.2**	**-1.6**
APG	**El Apazote**	**3.02**	**335**	Pn	**Pn**	**15 38 00.2**	**+0.6**
	comp=N,0.8nm,0.3s,baz=160,slow=4.8,SNR=5.0						
CMIG	**Matias Romero**	**7.34**	**312**	Pn	**Pn**	**15 39 03.0**	**+4.1**
	comp=N,0.4nm,0.3s,baz=97,slow=17,SNR=5.4						
TEIG	**Tepich**	**7.97**	**6**	*ePn*	**Pn**	**15 39 05.7**	**-2.0**
JCT	**Junction City**	**20.65**	**333**	P	**P**	**15 41 51.5**	**+1.1**
	comp=N,8.3nm,0.7s						
TXAR	**Lajitas Array**	**21.71**	**324**	P	**P**	**15 42 05.9**	**+4.0**
	comp=N,2.7nm,0.7s,mb3.8,baz=146,slow=11,SNR=38						
MIAR	**Mount Ida**	**22.55**	**350**	*eP*	**P**	**15 42 11.6**	**+0.8**
	comp=N,10nm,0.8s,mb4.3						
TKL	**Tuckaleechee C**	**23.81**	**11**	P	**P**	**15 42 22.6**	**-0.7**
	comp=N,3.9nm,0.7s,mb4.0,baz=166,slow=8.4,SNR=5.5						
WMOK	**Wichita Mounta**	**24.03**	**340**	*eP*	**P**	**15 42 25.0**	**-0.4**
	comp=N,3.5nm,1.0s,mb3.7						
SADO	**Sadowa**	**33.52**	**13**	P	**P**	**15 43 49.5**	**-0.3**
	comp=N,2.8nm,0.5s,mb4.4,baz=202,slow=11,SNR=2.7						
SCHQ	**Schefferville**	**45.96**	**18**	P	**P**	**15 45 31.9**	**-1.1**
	comp=N,2.3nm,0.7s,mb4.2,baz=233,slow=8.8,SNR=3.9						
YKA	**Yellowknife Ar**	**53.38**	**346**	P	**P**	**15 46 30.2**	**+0.9**
	comp=N,0.6nm,0.7s,mb3.6,baz=137,slow=8.1,SNR=11						
CMAR	**Chiang Mai Arr**	**148.46**	**345**	PKPbc	PKPbc	15 57 00.8	+3.5
	comp=N,0.7nm,0.7s,baz=350,slow=3.6,SNR=5.8						

*IDC **19** 16:20:46.3±0.6, 18°.93S×173°.18W, $h0^{km}$, mb4.5/15, mb1 4.7/15, mb1mx4.6/22, mbtmp4.5/15, MS4.6/22, Ms1 4.6/22, ms1mx4.5/31, Error ellipse: s-maj=24.5km s-min=13.7km az=148.0*
*BJI **19** 16:20:47.6, 18°.82S×173°.60W, $h10^{km}$, mB5.4/20, mb5.0/21, Ms5.0/18, Ms7 4.8/20*
*NEIC **19** 16:20:48.2±0.3, 18°.71S×173°.39W, $h10^{km}$, mb4.9/33, Error ellipse: s-maj=14.1km s-min=7.7km az=138.0*
*ISCJB **19** 16:20:50.2±0.3, 18°.83S±0°.07×173°.39W±0°.06, $h33^{km}$, mb4.8/56, MS4.7/32, Error ellipse: s-maj=11.8km s-min=6.3km az=142.4*
*GCMT **19** 16:20:52.7±0.2, 18°.97S×172°.62W, $h12^{km}$, MW5.1, Moment Tensor Solution. s45,c67; s94,c163; Moment tensor: Scale 10^{16}Nm; M_{rr}5.31±.09; $M_{\theta\theta}$-1.15±.09; $M_{\phi\phi}$-4.15±.08; $M_{r\theta}$1.07±.28; $M_{\theta\phi}$-1.80±.08; $M_{\phi r}$2.95±.26; Best double couple: $M_0$6.00000×10^{16} NP1:ϕ_s207.00000°, δ29.00000°, λ94.00000°. NP2:ϕ_s23.00000°, δ61.00000°, λ88.00000°. Principal axes: T 6.2000, Plg74.0000°, Azm286.0000°; N -0.3200, Plg2.0000°, Azm24.0000°; P -5.8700, Plg16.0000°, Azm114.0000°; Data Used: II IU IC G CN.*
*DJA **19** 16:20:59, 19°.55S×173°.83W, $h60^{km}$, mb5.3/6*
ISC 19 16:20:52.1±0.3, 18°.82S±0°.07×173°.37W±0°.06, $h35^{km}$, ($h8^{km}\pm3.7^{km}$:pP-P), n137, σ1°.17/89, mb4.8/56, MS4.7/32, 5C, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.11**	**18**	Pn	**Pn**	**16 21 59.0**	**-7.3**
	9.5nm,0.3s,baz=258,slow=2.0,SNR=16						
AFI				Sn	**Sn**	**16 22 53.6**	**-11**
	27nm,0.3s,baz=18,slow=20,SNR=4.2						
AFI	**Afiamalu**	**5.11**	**18**	*e*Pn	**Pn**	**16 21 57.2**	**-9.1**
	125nm,0.4s						
AFI				*e*Sn	**Sn**	**16 22 52.9**	**-11**
MSVF	**Nonsavu**	**8.22**	**276**	Pn	**Pn**	**16 22 39.9**	**-9.0**
	59nm,0.9s						
RAR	**Rarotonga**	**13.00**	**103**	*e*Pn	**Pn**	**16 23 41.1**	**-13**
DZM	**Mont Dzumac**	**19.19**	**257**	*eP*	**Pn**	**16 25 13.9**	**-0.1**
DZM	**Mont Dzumac**	**19.19**	**257**	*eP*	**Pn**	**16 25 15.2**	**+1.1**
	33nm,0.8s						
NOUC	**Port Laguerre**	**19.32**	**257**	*eP*	**Pn**	**16 25 15.3**	**-0.3**
URZ	**Urewera**	**21.07**	**201**	P	**P**	**16 25 33.0**	**-0.3**
	15nm,0.5s,mb4.6,baz=22,slow=2.9,SNR=24						
URZ	**Urewera**	**21.07**	**201**	*eP*	**P**	**16 25 32.8**	**-0.5**
	50nm,0.9s,mb4.8						
PPT	**Papeete**	**22.64**	**91**	*e*S	**S**	**16 29 45.8**	**-11**
	4μm,25.8s						
PPT				*e*LR	LR	16 30 53.9	
	4μm,28.0s,baz=263						
PPT	**Papeete**	**22.64**	**91**	LR	LR	16 32 38.1	
	comp=Z,1μm,18.2s,MS4.5,baz=254,slow=32						
SNZO	**South Karori**	**24.63**	**202**	*eP*	**P**	**16 26 10.8**	**+1.6**
	89nm,1.2s,mb5.2						
KHZ	**Kahutara**	**26.02**	**202**	*eP*	**P**	**16 26 21.8**	**0.0**
	21nm,0.8s,mb4.7						
RPZ	**Rata Peaks**	**28.07**	**204**	P	**P**	**16 26 41.0**	**+0.7**
	17nm,0.6s,mb4.9,baz=259,slow=2.4,SNR=23						
RPZ	**Rata Peaks**	**28.07**	**204**	*eP*	**P**	**16 26 42.6**	**+2.4**
	27nm,0.8s,mb4.9						
EIDS	**Eidsvold**	**33.51**	**252**	*eP*	**P**	**16 27 27.1**	**-1.4**
	10nm,1.0s,mb4.7						
ARMA	**Armidale**	**33.72**	**243**	*eP*	**P**	**16 27 29.5**	**-0.7**
RKT	**Rikitea**	**36.04**	**104**	*e*LR	LR	16 36 53.8	
	2μm,29.5s,baz=280						
CNB	**Canberra Magne**	**36.77**	**236**	*eP*	**P**	**16 27 55.5**	**-1.0**
CTA	**Charters Tower**	**38.03**	**261**	*eP*	**P**	**16 28 06.6**	**-0.7**
	22nm,0.6s,mb5.0						
CTAO	**Charters Tower**	**38.03**	**261**	*eP*	**P**	**16 28 06.7**	**-0.6**
	30nm,0.7s,mb5.1						
TOO	**Toolangi**	**40.40**	**234**	*eP*	**P**	**16 28 26.1**	**-0.8**
STKA	**Stephens Creek**	**42.44**	**243**	*eP*	**P**	**16 28 42.4**	**-1.3**
	5.5nm,1.0s,mb4.1						
STKA	**Stephens Creek**	**42.44**	**243**	P	**P**	**16 28 42.5**	**-1.3**
	6.0nm,0.8s,mb4.2,baz=98,slow=11,SNR=11						
STKA				LR	LR	16 45 24.6	
	comp=Z,2μm,19.7s,MS5.1,baz=54,slow=35						
STKA	**Stephens Creek**	**42.44**	**243**	*eP*	**P**	**16 28 42.4**	**-1.3**
	1.1nm,0.8s						
ASAR	**Alice Springs**	**49.16**	**255**	P	**P**	**16 29 36.0**	**-0.9**
	21nm,0.8s,mb5.2,baz=91,slow=8.5,SNR=232						
ASAR				S	**S**	**16 36 40.5**	**+0.3**
	1.1nm,0.9s,baz=89,slow=17,SNR=6.0						
WRAB	**Tennant Creek**	**49.16**	**260**	*eP*	**P**	**16 29 35.6**	**-1.3**
	11nm,0.8s,mb4.9						
WRA	**Warramunga Arr**	**49.17**	**260**	P	**P**	**16 29 35.7**	**-1.4**
	6.9nm,0.7s,mb4.8,baz=97,slow=8.0,SNR=87						
WRA				S	**S**	**16 36 46.9**	**+6.4**
	1.7nm,0.9s,baz=97,slow=14,SNR=6.7						
WRA	**Warramunga Arr**	**49.17**	**260**	P	**P**	**16 29 35.7**	**-1.4**
WRA				S	**S**	**16 36 46.9**	**+6.4**
KAKA	**Kakadu**	**52.34**	**268**	*eP*	**P**	**16 30 01.5**	**+0.5**
	19nm,0.6s,mb5.2						
KAKA	**Kakadu**	**52.34**	**268**	*eP*	**P**	**16 30 00.7**	**-0.3**
	57nm,0.6s,mb5.7						
FORT	**Forrest**	**53.96**	**245**	*eP*	**P**	**16 30 11.5**	**-1.2**
	13nm,0.7s,mb5.0						
FITZ	**Fitzroy Crossi**	**57.59**	**260**	*eP*	**P**	**16 30 38.6**	**-0.3**
	9.7nm,0.8s,mb4.9						
FITZ	**Fitzroy Crossi**	**57.59**	**260**	*eP*	**P**	**16 30 38.6**	**-0.3**
	21nm,1.4s,mb5.0						
SBA	**Scott Base**	**59.87**	**185**	*eP*	**P**	**16 30 56.2**	**+2.4**
	120nm,2.3s,mb5.5						
KLBR	**Kellerberrin**	**62.71**	**244**	*eP*	**P**	**16 31 13.9**	**+0.1**
	22nm,1.0s,mb5.2						
CBIJ	**Chichi jima**	**62.77**	**315**	LR	LR	16 55 09.9	
	comp=Z,771nm,19.7s,MS4.9,baz=129,slow=33						
CASY	**Casey**	**67.34**	**205**	P	**P**	**16 31 46.1**	**+2.9**
	8.5nm,1.0s,mb4.7						
MJAR	**Matsushiro Arr**	**71.57**	**321**	P	**P**	**16 32 11.0**	**+1.3**
	6.8nm,0.9s,mb4.6,baz=158,slow=5.6,SNR=17						
MJAR				LR	LR	16 58 17.7	
	comp=Z,149nm,20.0s,MS4.2,baz=135,slow=31						
MJAR	**Matsushiro Arr**	**71.57**	**321**	P	**P**	**16 32 11.0**	**+1.3**
MJAR				LR	LR	16 58 17.7	
MAJO	**Matsushiro**	**71.57**	**321**	*eP*	**P**	**16 32 09.8**	**0.0**
	13nm,0.9s,mb4.8						
MAT	**Matsushiro**	**71.57**	**321**	P	**P**	**16 32 10.8**	**+1.0**
MAT				S	S	16 41 33.0	+6.5
FX1	**Attu Island--F**	**72.35**	**351**	LR	LR	16 59 15.6	
	comp=Z,260nm,18.4s,MS4.5,baz=87,slow=32						
KKM	**Kota Kinabalu**	**73.61**	**282**	P	**P**	**16 32 22.6**	**+0.1**
	15nm,0.9s,mb4.9						
ISA	**Isabella**	**75.08**	**44**	P	**P**	**16 32 29.3**	**-1.2**
	1.4nm,0.8s,mb3.9						
PETK	**Petropavlovsk-**	**75.88**	**342**	P	**P**	**16 32 34.8**	**+0.1**
	4.4nm,0.8s,mb4.4,baz=113,slow=7.1,SNR=7.7						
PETK				LR	LR	17 02 31.0	
	comp=Z,186nm,18.7s,MS4.4,baz=157,slow=33						
YBH	**Yreka Blue Hor**	**76.30**	**37**	LR	LR	17 02 47.5	
	comp=Z,408nm,18.1s,MS4.8,baz=232,slow=33						
YBH	**Yreka Blue Hor**	**76.30**	**37**	*eP*	**P**	**16 32 36.4**	**-0.9**
	4.8nm,1.2s,mb4.3						
YSS	**Yuzh-Sakhalins**	**76.46**	**331**	P	**P**	**16 32 39.1**	**+1.0**
	23nm,1.1s,mb5.0						
TPUB	**Ta-pu**	**76.81**	**300**	*eP*	**P**	**16 32 40.6**	**0.0**
	23nm,0.8s,mb5.2						
NVAR	**Mina Array Bea**	**76.85**	**41**	P	**P**	**16 32 39.7**	**-0.8**
	2.6nm,0.9s,mb4.2,baz=226,slow=7.8,SNR=13						
NVAR	**Mina Array Bea**	**76.85**	**41**	P	**P**	**16 32 39.7**	**-0.8**
KSM	**Kuching**	**77.54**	**276**	*eP*	**P**	**16 32 46.5**	**+1.5**
	29nm,1.0s,mb5.2						
KSM				*e*	pP	16 32 56.8	+0.8
KDAK	**Kodiak Island**	**78.25**	**11**	LR	LR	17 00 30.3	
	comp=Z,229nm,20.0s,MS4.5,baz=194,slow=30						
TUC	**Tucson**	**78.54**	**50**	*eP*	**P**	**16 32 50.3**	**+0.2**
	12nm,1.4s,mb4.7						
KSRS	**Korea Array**	**78.61**	**316**	P	**P**	**16 32 53.1**	**+2.7**
	7.6nm,0.9s,mb4.6,baz=130,slow=6.1,SNR=33						
KSRS				LR	LR	17 06 03.9	
	comp=Z,322nm,18.4s,MS4.7,baz=135,slow=34						
ELK	**Elko**	**80.12**	**41**	LR	LR	17 04 07.2	
	comp=Z,381nm,18.3s,MS4.8,baz=258,slow=32						
MSU	**Marysvale**	**80.84**	**44**	*eP*	**P**	**16 33 03.3**	**+0.8**
	9.5nm,1.2s,mb4.6						
BMO	**Blue Mountains**	**81.33**	**37**	P	**P**	**16 33 06.0**	**+1.2**
	2.9nm,1.3s,mb4.0						
MDJ	**Mudanjiang**	**81.74**	**323**	P	**P**	**16 33 07.1**	**0.0**
MDJ				pP	pP	16 33 09.4	-8.7
MDJ				S	S	16 43 26.4	+9.0
MDJ				pmax	pmax		
	comp=Z,9.0nm,2.1s,mb4.3						
MDJ				pmax	pmax		
	comp=Z,180nm,7.3s						
MDJ				LR	LR		
	comp=N,170nm,33.0s,MS4.5						
MDJ				LR	LR		
	comp=E,260nm,31.8s,MS4.5						
MDJ				LR	LR		
	comp=Z,390nm,28.4s,MS4.6						
MNTX	**Cornudas Mount**	**82.24**	**53**	*eP*	**P**	**16 33 09.7**	**-0.4**
	comp=Z,7.3nm,1.4s,mb4.4						
NJ2	**Nanjing**	**82.25**	**308**	*eP*	**P**	**16 33 08.8**	**-1.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
TXAR	**Lajitas Array**	**82.49**	**56**	P	**P**	**16 33 11.1**	**-0.3**
	comp=Z,1.2nm,0.8s,mb3.9,baz=233,slow=7.7,SNR=11						
TXAR				LR	LR	17 04 40.2	
	comp=Z,250nm,18.2s,MS4.6,baz=335,slow=32						
ANMO	**Albuquerque**	**82.97**	**50**	LR	LR	17 07 17.8	
	comp=Z,266nm,18.6s,MS4.6,baz=234,slow=34						
ANMO	**Albuquerque**	**82.97**	**50**	P	**P**	**16 33 14.4**	**+0.6**
	comp=Z,3.5nm,1.7s,mb4.1						
PV01	**Paradox Valley**	**83.06**	**46**	*eP*	**P**	**16 33 12.2**	**-1.9**
	comp=Z,692nm,1.2s						
GDL2	**Guadalupe Moun**	**83.24**	**53**	P	**P**	**16 33 15.1**	**-0.1**
	comp=Z,3.0nm,0.8s,mb4.4						
CN2	**Changchun**	**83.71**	**320**	*eP*	**P**	**16 33 17.6**	**+0.3**
CN2				*es*P	sP	16 33 24.6	-7.8
CN2				*eS*	S	16 43 38.9	+1.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.3s,mb5.4						
CN2				pmax	pmax		
	comp=Z,300nm,6.0s						
CN2				LR	LR		
	comp=N,200nm,23.0s,MS4.6						
CN2				LR	LR		
	comp=E,200nm,23.0s,MS4.6						
CN2				LR	LR		
	comp=Z,200nm,21.0s,MS4.5						
MCMT	**McKenzie Canyo**	**83

KMI pP pP 16 34 03.8 -7.5
KMI sP sP 16 34 05.0 -10
KMI PP PP 16 37 44.5 +2.5
KMI S S 16 45 01.9 -0.2
KMI SS SS 16 51 17.1 +2.4
KMI pmax pmax
comp=Z,5.0nm,1.1s,mb4.9
KMI pmax pmax
comp=Z,99nm,4.1s
KMI LR LR
comp=N,140nm,18.4s,MS4.7
KMI LR LR
comp=E,210nm,17.2s,MS4.7
KMI LR LR
comp=Z,260nm,22.1s,MS4.6
YKA Yellowknife Ar 93.20 23 P P 16 34 04.0 +1.6
comp=Z,0.4nm,0.8s,mb3.9,baz=231,slow=3.8,SNR=5.6
CD2 Chengdu 93.60 301 *e*P **P 16 34 05.4 +0.4**
CD2 pP pP 16 34 10.3 -5.8
CD2 sP sP 16 34 12.8 -7.3
CD2 PP PP 16 37 53.1 +2.7
CD2 SKS 16 44 37.8
CD2 S S 16 45 10.8 -0.7
CD2 sS sS 16 45 18.9 -11
CD2 SS SS 16 51 31.4 +1.3
CD2 pmax pmax
comp=Z,10.0nm,0.8s,mb5.3
CD2 pmax pmax
comp=Z,30nm,6.2s
CD2 LR LR
comp=N,200nm,17.8s,MS4.8
CD2 LR LR
comp=E,240nm,16.7s,MS4.8
CD2 LR LR
comp=Z,230nm,15.5s,MS4.7
CMAR Chiang Mai Arr 93.70 288 P **P 16 34 08.2 +2.5**
comp=Z,2.2nm,0.8s,mb4.6,baz=121,slow=2.3,SNR=15
CMAR LR LR 17 11 52.0
comp=Z,177nm,18.5s,MS4.5,baz=300,slow=33
CHTO Chiang Mai 93.81 288 *e*P **P 16 34 03.2 -3.0**
comp=Z,3.3nm,0.8s,mb4.8
LZH Lanzhou 95.26 306 *e*P **P 16 34 11.6 -0.9**
LZH pP pP 16 34 15.3 -8.3
LZH sP sP 16 34 19.1 -8.5
LZH PP PP 16 38 04.0 +0.8
LZH SKS 16 44 44.0
LZH *e*S S 16 45 24.4 -1.3
LZH SS SS 16 51 53.4 -0.1
LZH pmax pmax
comp=Z,28nm,1.4s,mb5.5
LZH pmax pmax
comp=Z,93nm,5.0s
LZH LR LR
comp=E,430nm,17.8s
LZH LR LR
comp=Z,690nm,19.2s,MS5.1
ULM Lac du Bonnet 96.56 39 LR LR 17 13 59.2
comp=Z,427nm,18.2s,MS5.0,baz=9.7,slow=33
SONM Songino Array 97.39 318 LR LR 17 10 51.1
comp=Z,182nm,21.7s,MS4.5,baz=114,slow=31
LPAZ La Paz 98.61 110 LR LR 17 09 59.7
comp=Z,359nm,21.1s,MS4.8,baz=252,slow=30
ROSC El Rosal 100.09 88 LR LR 17 15 03.8
comp=Z,224nm,18.1s,MS4.7,baz=254,slow=33
KURK Kurchatov 115.70 318 PKP PKPdf 16 39 29.7 -0.8
comp=Z,0.5nm,0.5s,baz=92,slow=1.8,SNR=2.9
BVAR Borovoye Array 120.56 321 PKP PKPdf 16 39 40.2 +0.3
comp=Z,1.8nm,0.7s,baz=117,slow=2.0,SNR=7.7
AKASG Malin Array Be 143.47 336 PKP PKPdf 16 40 20.6 -2.3
comp=Z,0.6nm,0.5s,baz=37,slow=4.3,SNR=6.1
KMBO Kilima Mbogo 143.97 240 PKP PKPdf 16 40 22.7 -2.2
comp=Z,2.9nm,0.7s,baz=140,slow=2.6,SNR=6.8
KMBO Kilima Mbogo 143.97 240 *e*PKPdf PKPdf 16 40 24.8 -0.1
CLL Collm 147.19 353 ⇑ *i*PKP PKPdf 16 40 31.9 +2.7
CLL *i* 16 40 35.7
CLL *i* 16 40 46.0
CLL LR LR
comp=Z,200nm,20.0s,MS4.9
CLL Collm 147.19 353 ⇑ *i*PKPbc PKPbc 16 40 31.9 +0.5
comp=Z,14nm,1.3s
CLL *i* PKiKP PKiKP 16 40 35.7 +1.9
CLL *e*pPKiKP 16 40 38.0
CLL *i* 16 40 46.0
CLL *i* 16 40 53.5
CLL *e*PP PP 16 43 54.0 -1.9
CLL *e*PSKS 16 54 24.0
CLL *e*PSPS 17 04 00.0
CLL *e*SSS 17 09 00.0
CLL Lm 17 49 00.0
comp=N,100nm,20.9s
CLL Lm 17 49 00.0
comp=E,100nm,21.8s
CLL Lm 17 49 00.0
comp=Z,200nm,20.0s
STHS Stebnicka Huta 147.29 342 *e*PKP PKPab 16 40 33.9 +0.3
STHS *e* 16 40 38.2
STHS Stebnicka Huta 147.29 342 *e*PKP PKPab 16 40 33.8 +0.2
STHS *e* 16 40 38.2
KOLS Kolonicke sedl 147.41 341 *e*PKP PKPab 16 40 35.0 +0.9
KOLS Kolonicke sedl 147.41 341 *e*PKP PKPab 16 40 35.0 +0.9
BRG Berggiesshubel 147.49 351 *e*PKP PKPbc 16 40 33.0 +0.7
comp=Z,47nm,1.9s
BRG *e* 16 40 47.9
comp=Z,7.3nm,1.0s
BUR08 Bucovina Ar. S 147.50 336 *e*PKPbc PKPbc 16 40 32.3 -0.1
UPC Upice 147.51 349 *e*PKP PKPbc 16 40 34.4 +2.0
DPC Dobruska-Polom 147.60 348 *e*PKP PKPbc 16 40 33.8 +1.2
DPC AMS AMS 17 53 40.0
comp=Z,200nm,19.8s
CRVS Cervenica-Dubn 147.68 342 *e*PKP PKPbc 16 40 34.1 +1.2
CRVS Cervenica-Dubn 147.68 342 *e*PKP PKPbc 16 40 34.1 +1.2
OKC Ostrava-Krasne 147.70 346 *e*PKP PKPbc 16 40 34.3 +1.4
OKC AMS AMS 17 52 10.0
comp=Z,200nm,15.4s
PVCC Panska Ves 147.73 350 *e*PKP PKPbc 16 40 34.2 +1.2
PVCC AMS AMS 17 51 00.0
comp=Z,200nm,13.7s
MOX Moxa 148.00 354 *e*PKP PKPab 16 40 35.4 -0.9
comp=Z,47nm,2.1s
MOX
comp=Z,200nm,19.0s
PRU Pruhonice 148.26 350 AMS AMS 17 52 40.0
comp=Z,200nm,20.3s
NKC Novy Kostel 148.31 353 AMS AMS 17 50 00.0
KECS Kecovo 148.34 342 *e*PKP PKPbc 16 40 35.6 +0.9
KECS Kecovo 148.34 342 *e*PKP PKPbc 16 40 35.5 +0.8
BR131 Keskin Array S 148.75 318 *e*PKPbc PKPbc 16 40 37.1 +1.1
BRTR Keskin Array B 148.75 318 PKPbc PKPbc 16 40 36.5 +0.5
comp=Z,3.7nm,0.9s,baz=93,slow=2.9,SNR=8.6
VYHS Vyhne 148.78 344 *e*PKP PKPab 16 40 38.0 -1.6
VYHS Vyhne 148.78 344 *e*PKP PKPab 16 40 38.0 -1.6
GRA1 Grafenberg Arr 148.98 354 *e*PKP PKPbc 16 40 37.1 +0.9
GRF Grafenberg Arr 148.98 354 *e*PKP PKPbc 16 40 37.1 +0.9
PSZ Piszkesteto 149.03 343 ⇑ *e*PKP PKPbc 16 40 37.3 +0.9
KHC Kasperske Hory 149.24 351 *e*PKPbc PKPbc 16 40 36.0 -1.0
KHC Kasperske Hory 149.24 351 *e*PKP PKPbc 16 40 36.7 -0.2
KHC AMS AMS 17 51 30.0
comp=Z,200nm,19.0s
CSNA Conrad Observa 150.00 348 ⇑ *i*pPKPdf pPKPdf 16 40 35.6 -10
comp=Z,5.0nm,1.8s
MMAI Mount Meron Ar 150.63 304 PKP PKPdf 16 40 36.0 +0.6
comp=Z,0.8nm,0.4s,baz=8.6,slow=4.8,SNR=2.5
MMAI PKPbc PKPbc 16 40 42.0 +1.2
comp=Z,8.0nm,0.9s,baz=43,slow=6.3,SNR=4.4
SOKA Soboth 151.37 348 ⇑ *i*PKPbc PKPbc 16 40 40.1 -2.0
comp=Z,7.9nm,1.3s
CSS Prodhromos 151.39 310 *e*PKPdf PKPdf 16 40 38.0 +1.5
EIL Elat 152.08 298 PKPbc PKPbc 16 40 44.2 -0.1
comp=Z,2.9nm,0.9s,baz=105,slow=12,SNR=2.4
EIL Elat 152.08 298 PKPbc PKPbc 16 40 44.2 -0.1

IDC 19 16:34:01.8±1.9, 33°.61N×73°.30E, h0km, mb3.3/4, mb1 3.5/8, mb1mx3.3/28, mbtmp3.4/8, ML3.3/4, Error ellipse: s-maj=60.2km s-min=20.1km az=76.0, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**9.06**	**6**	Pn	Pn	16 36 18.5	+4.8
	0.0nm,0.3s,baz=201,slow=14,SNR=3.2						
AAK				Pg	Pg	16 36 43.1	-12
	0.0nm,0.3s,baz=170,slow=6.1,SNR=11						
MKAR	**Makanchi Array**	**14.84**	**25**	Pn	Pn	16 37 31.9	-0.8
	0.1nm,0.3s,baz=191,slow=14,SNR=2.3						
KURK	**Kurchatov**	**17.53**	**11**	Pn	Pn	16 38 04.8	-2.7
	0.1nm,0.3s,baz=210,slow=7.9,SNR=4.3						
BVAR	**Borovoye Array**	**19.52**	**355**	P	Pn	16 38 30.5	-1.1
	0.2nm,0.3s,baz=167,slow=13,SNR=3.1						
AKTO	**Aktyubinsk**	**20.22**	**331**	P	P	16 38 37.7	-0.5
	0.9nm,0.5s,baz=115,slow=10,SNR=5.9						
ZALV	**Zalesovo Beam**	**21.91**	**18**	P	P	16 38 55.5	-0.9
	0.4nm,0.5s,baz=216,slow=7.1,SNR=3.1						
WRA	**Warramunga Arr**	**78.85**	**123**	P	P	16 46 07.9	+1.0
	0.2nm,0.5s,baz=322,slow=4.8,SNR=6.8						
ASAR	**Alice Springs**	**81.04**	**126**	P	P	16 46 18.1	-0.6
	0.1nm,0.6s,baz=314,slow=5.2,SNR=3.3						

*ISCJB **19** 16:40:49.4±0.8, 54°.16N±0°.08×161°.37W±0°.08, h10km, mb3.7/8, Error ellipse: s-maj=12.0km s-min=4.6km az=156.4*
*NEIC **19** 16:40:55.6, 54°.49N×161°.59W, h14km, ML3.5(AEIC), After AEIC.*
*IDC **19** 16:41:05.5±3.6, 55°.02N×162°.06W, h101km±34km, mb3.4/8, mb1 3.5/11, mb1mx3.3/30, mbtmp3.4/11, Error ellipse: s-maj=73.7km s-min=18.3km az=160.0*
ISC 19 16:40:52.0±0.8, 54°.32N±0°.09×161°.49W±0°.08, h10km, n21, σ1°46/28, mb3.7/8, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDPT	**Sand Point**	**1.18**	**29**	P	**Pb**	**16 41 14.7**	**+0.1**
SDPT				S	**Sb**	**16 41 29.7**	**-0.2**
FALS	**False Pass**	**1.24**	**296**	P	**Pn**	**16 41 15.6**	**+0.1**
FALS				S	**Sb**	**16 41 31.8**	**+0.2**
AKUT	**Akutan**	**2.52**	**267**	P	**Pn**	**16 41 34.8**	**+1.8**
AKUT				S	**Sn**	**16 42 04.9**	**+1.2**
CHGN	**Chignik**	**2.65**	**40**	*e*Pn	**Pn**	**16 41 37.0**	**+2.3**
CHGN				*e*Sn	**Sn**	**16 42 09.8**	**+2.9**
UNV	**Unalaska Valle**	**2.99**	**263**	*e*Pn	**Pn**	**16 41 40.9**	**+1.5**
OHAK	**Old Harbor**	**5.46**	**55**	*e*Pn	**Pn**	**16 42 13.5**	**+0.2**
	12nm,0.8s						
OHAK				*e*S	**Sb**	**16 43 36.0**	**+3.0**
KDAK	**Kodiak Island**	**6.07**	**52**	P	**Pb**	**16 42 32.0**	**-5.8**
	1.8nm,0.3s,baz=301,slow=9.2,SNR=8.1						
KDAK				S	**Sb**	**16 43 50.7**	**+0.3**
	0.8nm,0.3s,baz=64,slow=19,SNR=10						
KDAK	**Kodiak Island**	**6.07**	**52**	P	**Pb**	**16 42 32.0**	**-5.8**
KDAK				S	**Sb**	**16 43 50.7**	**+0.3**
PAX	**Paxson**	**11.99**	**37**	*e*Pn	**Pn**	**16 43 36.9**	**-5.8**
	1.6nm,0.5s						
EGAK	**Eagle**	**14.61**	**36**	*e*Pn	**Pn**	**16 44 17.4**	**-1.1**
FX1	**Attu Island--F**	**15.09**	**275**	P	**Pn**	**16 44 28.4**	**+3.4**
	0.3nm,0.3s,baz=297,slow=2.3,SNR=4.6						
FX1	**Attu Island--F**	**15.09**	**275**	P	**Pn**	**16 44 28.4**	**+3.4**
INK	**Inuvik**	**19.14**	**32**	P	**Pn**	**16 45 14.2**	**-1.5**
	0.1nm,0.3s,baz=239,slow=9.3,SNR=2.2						
PETK	**Petropavlovsk-**	**23.95**	**284**	P	**P**	**16 46 04.5**	**-1.5**
	4.1nm,0.5s,mb4.1,baz=81,slow=13,SNR=49						
YKA	**Yellowknife Ar**	**25.35**	**52**	P	**P**	**16 46 21.0**	**+2.3**
	0.5nm,0.9s,mb3.0,baz=277,slow=9.8,SNR=3.6						
KSRS	**Korea Array**	**49.78**	**281**	P	**P**	**16 49 44.1**	**-0.4**
	1.0nm,0.7s,mb4.0,baz=44,slow=6.8,SNR=6.2						
SONM	**Songino Array**	**54.25**	**304**	P	**P**	**16 50 16.5**	**-1.1**
	0.5nm,0.6s,mb3.6,baz=84,slow=4.6,SNR=4.6						
FINES	**FINESS Array B**	**64.42**	**356**	P	**P**	**16 51 25.5**	**-2.2**
	1.0nm,0.7s,mb3.9,baz=28,slow=8.6,SNR=6.1						
BVAR	**Borovoye Array**	**64.70**	**328**	P	**P**	**16 51 27.9**	**-1.8**
	0.5nm,0.5s,mb3.8,baz=19,slow=5.0,SNR=7.3						
AKASG	**Malin Array Be**	**74.96**	**353**	P	**P**	**16 52 30.7**	**-2.1**
	0.5nm,0.4s,mb3.8,baz=8.7,slow=6.1,SNR=3.6						
CMAR	**Chiang Mai Arr**	**80.64**	**288**	P	**P**	**16 53 04.7**	**-0.3**
	0.9nm,1.0s,mb3.7,baz=25,slow=5.0,SNR=4.7						

*IDC **19** 16:43:26.6±0.7, 19°.11S×173°.12W, h0km, mb4.3/14, mb1 4.5/14, mb1mx4.4/21, mbtmp4.3/14, MS4.4/13, Ms1 4.4/13, ms1mx4.1/30, Error ellipse: s-maj=29.2km s-min=16.5km az=140.0*
*NEIC **19** 16:43:28.6±0.3, 18°.87S×173°.32W, h10km, mb4.8/22, MS4.6/2, Error ellipse: s-maj=15.7km s-min=7.3km az=146.0*
*BJI **19** 16:43:29.6, 18°.56S×173°.64W, h10km, mB5.3/19, mb4.8/25, Ms4.9/13, Ms7 4.7/19*
*SZGRF **19** 16:43:29.5, 18°.96S×172°.85W, h10km, Tonga Islands region*
*ISCJB **19** 16:43:30.3±0.4, 19°.07S±0°.10×173°.25W±0°.07, h33km, mb4.6/43, MS4.5/22, Error ellipse: s-maj=15.2km s-min=7.2km az=150.2*
*GCMT **19** 16:43:33.0±0.3, 18°.86S×172°.60W, h14km±1km, MW5.0, Moment Tensor Solution. s28,c35; s76,c116; Moment tensor: Scale 10^16Nm; Mrr3.09±.18; Mθθ-0.79±.11; Mφφ-2.30±.12; Mrθ-0.21±.29; Mrφ-1.16±.08; Mθφ1.53±.28; Best double couple: M0 3.40000×10^16 NP1:φs221.00000°, δ35.00000°, λ112.00000°. NP2:φs14.00000°, δ58.00000°, λ75.00000°. Principal axes: T 3.5500, Plg73.0000°, Azm247.0000°; N -0.3600, Plg13.0000°, Azm22.0000°; P -3.1900, Plg12.0000°, Azm115.0000°; Data Used: IU II IC G CN.*
ISC 19 16:43:32.2±0.4, 19°.06S±0°.10×173°.23W±0°.07, h35km, (h10km±3.3km: pP-P), n125, σ0s99/74, mb4.6/43, MS4.5/22, 3C-1D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.31**	**15**	Pn	**Pn**	**16 44 41.7**	**-7.3**
	7.5nm,0.3s,baz=226,slow=24,SNR=12						
AFI				Sn	**Sn**	**16 45 38.6**	**-10**
	16nm,0.3s,baz=194,slow=17,SNR=7.3						
AFI	**Afiamalu**	**5.31**	**15**	*e*Pn	**Pn**	**16 44 40.2**	**-8.8**
	137nm,0.8s						
AFI				*e*Sn	**Sn**	**16 45 34.1**	**-15**
MSVF	**Nonsavu**	**8.38**	**278**	*e*Pn	**Pn**	**16 45 37.1**	**+5.9**
	121nm,1.5s						
DZM	**Mont Dzumac**	**19.26**	**258**	*e*P	**Pn**	**16 47 55.3**	**+0.3**
DZM	**Mont Dzumac**	**19.26**	**258**	*e*P	**Pn**	**16 47 53.3**	**-1.7**
	22nm,0.8s						
URZ	**Urewera**	**20.90**	**202**	P	**P**	**16 48 11.7**	**+0.2**
	7.8nm,0.4s,baz=358,slow=6.4,SNR=18						
URZ	**Urewera**	**20.90**	**202**	*e*P	**P**	**16 48 13.8**	**+2.3**
	15nm,0.7s						
PPT	**Papeete**	**22.50**	**90**	*e*S	**S**	**16 52 23.6**	**-11**
	2μm,26.0s						
PPT				*e*LR	LR	16 53 32.5	
	2μm,27.8s,baz=264						
PPT	**Papeete**	**22.50**	**90**	LR	LR	16 54 14.2	
	comp=Z,902nm,20.8s,MS4.2,baz=255,slow=29						
PPT	**Papeete**	**22.50**	**90**	*e*S	**S**	**16 52 23.6**	**-11**
EIDS	**Eidsvold**	**33.56**	**253**	*e*P	**P**	**16 50 07.2**	**-1.7**
ARMA	**Armidale**	**33.73**	**244**	*e*P	**P**	**16 50 10.5**	**+0.1**
RKT	**Rikitea**	**35.85**	**103**	*e*LR	LR	16 59 35.1	
	1μm,29.2s						
CTA	**Charters Tower**	**38.12**	**262**	*e*P	**P**	**16 50 47.2**	**-1.0**
	10nm,0.6s,mb4.7						
CTA	**Charters Tower**	**38.12**	**262**	P	**P**	**16 50 47.8**	**-0.4**
	14nm,0.8s,mb4.8,baz=90,slow=10,SNR=20						
CTAO	**Charters Tower**	**38.12**	**262**	*e*P	**P**	**16 50 46.7**	**-1.5**
	16nm,0.8s,mb4.8						
STKA	**Stephens Creek**	**42.45**	**243**	*e*P	**P**	**16 51 23.2**	**-0.7**
	3.4nm,1.0s,mb3.9						
STKA	**Stephens Creek**	**42.45**	**243**	P	**P**	**16 51 23.0**	**-0.8**
	2.7nm,0.7s,mb4.0,baz=68,slow=12,SNR=5.8						
STKA				LR	LR	17 07 54.7	
	comp=Z,1μm,18.8s,MS4.8,baz=277,slow=34						
STKA	**Stephens Creek**	**42.45**	**243**	*e*P	**P**	**16 51 22.8**	**-1.1**
ASAR	**Alice Springs**	**49.22**	**255**	P	**P**	**16 52 16.7**	**-0.7**
	4.5nm,0.6s,mb4.7,baz=91,slow=8.1,SNR=119						
ASAR				S	**S**	**16 59 19.2**	**-1.9**
	1.2nm,1.2s,baz=95,slow=16,SNR=4.7						
WRAB	**Tennant Creek**	**49.25**	**260**	*e*P	**P**	**16 52 16.2**	**-1.5**
	32nm,1.4s,mb5.2						
KAKA	**Kakadu**	**52.47**	**268**	*e*P	**P**	**16 52 42.4**	**+0.4**
	6.9nm,0.6s,mb4.8						
FITZ	**Fitzroy Crossi**	**57.68**	**260**	*e*P	**P**	**16 53 19.5**	**-0.1**
	7.7nm,0.8s,mb4.8						
SBA	**Scott Base**	**59.64**	**185**	*e*P	**P**	**16 53 35.5**	**+3.2**
	14nm,1.4s,mb4.8						
CBIJ	**Chichi jima**	**63.03**	**315**	LR	LR	17 17 30.3	
	comp=Z,429nm,18.9s,MS4.6,baz=113,slow=32						
MJAR	**Matsushiro Arr**	**71.84**	**321**	P	**P**	**16 54 50.7**	**-0.8**
	3.2nm,0.8s,mb4.3,baz=161,slow=6.4,SNR=10						
MJAR				LR	LR	17 25 18.4	
	comp=Z,122nm,18.7s,MS4.2,baz=295,slow=35						
MAJO	**Matsushiro**	**71.84**	**321**	*e*P	**P**	**16 54 51.1**	**-0.4**
	6.7nm,0.8s,mb4.6						
MAT	**Matsushiro**	**71.84**	**321**	P	**P**	**16 54 51.8**	**+0.3**
KKM	**Kota Kinabalu**	**73.79**	**282**	*e*P	**P**	**16 55 01.7**	**-1.9**
	13nm,0.8s,mb4.9						
ISA	**Isabella**	**75.16**	**43**	*e*P	**P**	**16 55 10.2**	**-0.8**
	13nm,1.6s,mb4.6						
PETK	**Petropavlovsk-**	**76.15**	**342**	P	**P**	**16 55 15.9**	**-0.3**
	1.3nm,0.7s,mb4.0,baz=116,slow=8.6,SNR=4.2						
PETK				LR	LR	17 25 50.9	
	comp=Z,120nm,19.0s,MS4.2,baz=167,slow=33						
YBH	**Yreka Blue Hor**	**76.42**	**36**	P	**P**	**16 55 17.3**	**-0.8**
	1.4nm,0.6s,mb4.1,baz=131,slow=3.7,SNR=5.3						
YBH				LR	LR	17 26 12.9	
	comp=Z,238nm,18.1s,MS4.5,baz=232,slow=34						
YBH	**Yreka Blue Hor**	**76.42**	**36**	*e*P	**P**	**16 55 17.2**	**-0.8**
	17nm,1.9s,mb4.6						
NVAR	**Mina Array Bea**	**76.94**	**41**	P	**P**	**16 55 20.9**	**-0.2**
	1.7nm,0.9s,mb4.0,baz=226,slow=9.0,SNR=11						
KSM	**Kuching**	**77.70**	**276**	*e*P	**P**	**16 55 26.9**	**+0.9**
	31nm,1.2s,mb5.1						
TUC	**Tucson**	**78.59**	**50**	*e*P	**P**	**16 55 29.9**	**-0.6**
	28nm,1.8s,mb4.9						
KSRS	**Korea Array**	**78.88**	**316**	P	**P**	**16 55 33.9**	**+2.0**
	2.9nm,0.8s,mb4.2,baz=131,slow=5.8,SNR=17						
KSRS				LR	LR	17 28 34.6	
	comp=Z,192nm,18.4s,MS4.5,baz=306,slow=34						
MSU	**Marysvale**	**80.92**	**44**	*e*P	**P**	**16 55 43.4**	**+0.4**
	5.0nm,1.2s,mb4.3						
HAWA	**Hanford**	**81.18**	**34**	P	**P**	**16 55 44.4**	**+0.3**
BMO	**Blue Mountains**	**81.44**	**37**	*e*P	**P**	**16 55 45.4**	**-0.1**
	13nm,1.9s,mb4.5						
MDJ	**Mudanjiang**	**82.01**	**323**	P	**P**	**16 55 49.8**	**+1.2**
MDJ				pP	pP	16 55 53.0	-6.6
MDJ				PP	PP	16 58 57.3	+0.4
MDJ				S	S	17 06 01.8	+1.5
MDJ				pmax	pmax		
	comp=Z,15nm,2.5s,mb4.5						
MDJ				pmax	pmax		
	comp=Z,150nm,9.2s						
MDJ				LR	LR		
	comp=N,80nm,33.6s,MS4.0						
MDJ				LR	LR		
	comp=E,90nm,33.6s,MS4.0						
MDJ				LR	LR		
	comp=Z,160nm,32.3s,MS4.2						
NJ2	**Nanjing**	**82.50**	**307**	*e*P	**P**	**16 55 51.3**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
TXAR	**Lajitas Array**	**82.52**	**56**	P	**P**	**16 55 51.4**	**-0.2**
	comp=Z,1.8nm,0.9s,mb4.1,baz=215,slow=5.9,SNR=17						
TXAR				LR	LR	17 25 02.4	
	comp=Z,136nm,18.1s,MS4.4,baz=345,slow=30						
HWUT	**Hardware Ranch**	**83.00**	**42**	P	**P**	**16 55 53.8**	**0.0**
ANMO	**Albuquerque**	**83.03**	**50**	*e*P	**P**	**16 55 55.2**	**+1.1**
	comp=Z,5.4nm,1.8s,mb4.3						
PV01	**Paradox Valley**	**83.13**	**46**	*e*P	**P**	**16 55 53.9**	**-0.7**
	comp=Z,778nm,1.3s						
GDL2	**Guadalupe Moun**	**83.28**	**53**	P	**P**	**16 55 55.5**	**0.0**
	comp=Z,4.4nm,1.0s,mb4.4						
CN2	**Changchun**	**83.98**	**320**	*e*P	**P**	**16 55 59.3**	**+0.5**
CN2				*es*P	sP	16 56 06.3	-7.6
CN2				*e*S	S	17 06 20.5	+0.1
CN2				pmax	pmax		
	comp=Z,10.0nm,2.0s,mb4.6						
CN2				LR	LR		
	comp=N,300nm,21.0s,MS4.7						
CN2				LR	LR		
	comp=E,200nm,21.0s,MS4.7						
CN2				LR	LR		
	comp=Z,80nm,19.0s,MS4.1						
MCMT	**McKenzie Canyo**	**84.00**	**38**	*e*P	**P**	**16 55 58.6**	**-0.2**
	comp=Z,4.1nm,1.4s,mb4.4						
TRF	**Thorofare Moun**	**84.18**	**10**	*e*P	**P**	**16 55 57.5**	**-1.8**
MAW	**Mawson**	**84.39**	**199**	P	**P**	**16 55 59.7**	**-0.9**
	comp=Z,1.5nm,0.7s,mb4.2,baz=99,slow=6.5,SNR=2.6						
QIZ	**Qiongzhong**	**84.42**	**292**	P	**P**	**16 56 01.0**	**-0.6**
QIZ				S	S	17 06 27.0	+1.2
QIZ				LR	LR		
	comp=Z,220nm,9.7s						
PAX	**Paxson**	**84.63**	**12**	*e*P	**P**	**16 56 01.6**	**0.0**
MCK	**McKinley**	**84.67**	**11**	*e*P	**P**	**16 56 00.9**	**-0.9**
SMCO	**Snowmass**	**84.73**	**46**	P	**P**	**16 56 02.5**	**-0.2**
	comp=Z,14nm,1.4s,mb4.9						
PDAR	**Pinedale Array**	**84.88**	**42**	P	**P**	**16 56 02.1**	**-1.2**
	comp=Z,1.1nm,1.0s,mb4.0,baz=190,slow=4.4,SNR=5.6						
PDAR				LR	LR	17 27 06.4	
	comp=Z,156nm,18.1s,MS4.4,baz=254,slow=31						
CMIG	**Matias Romero**	**84.96**	**70**	LR	LR	17 28 25.1	
	comp=Z,280nm,18.0s,MS4.7,baz=197,slow=32						
SDCO	**Great Sand Dun**	**85.05**	**47**	*e*P	**P**	**16 56 04.4**	**+0.1**
	comp=Z,12nm,1.8s,mb4.7						
BOZ	**Bozeman (W)**	**85.17**	**38**	*e*P	**P**	**16 56 03.9**	**-0.8**
	comp=Z,9.5nm,1.5s,mb4.7						
COLA	**College**	**85.91**	**11**	P	**P**	**16 56 07.8**	**-0.1**
	comp=Z,10.0nm,0.9s,mb5.0						
AMTX	**Amarillo**	**86.49**	**51**	P	**P**	**16 56 12.2**	**+0.6**
	comp=Z,6.6nm,0.6s,mb5.0						
PLCA	**Paso Flores**	**86.95**	**132**	LR	LR	17 29 46.9	
	comp=Z,283nm,18.2s,MS4.7,baz=91,slow=32						
EGAK	**Eagle**	**87.13**	**13**	*e*P	**P**	**16 56 13.2**	**-0.8**
KULM	**Kulim**	**88.05**	**276**	*e*P	**P**	**16 56 20.8**	**+1.1**
	comp=Z,6.2nm,0.9s,mb4.8						
BJI	**Beijing**	**88.09**	**314**	P	**P**	**16 56 20.8**	**+1.6**
BJI				pmax	pmax		
	comp=Z,19nm,2.5s,mb4.9						
BJI				pmax	pmax		
	comp=Z,200nm,4.3s						
BJI				LR	LR		
	comp=N,110nm,17.6s,MS4.6						
BJI				LR	LR		
	comp=E,160nm,18.4s,MS4.6						
BJI				LR	LR		
	comp=Z,76nm,18.4s,MS4.1						
BILL	**Bilibino**	**88.14**	**352**	P	**P**	**16 56 18.7**	**0.0**
ENH	**Enshi**	**89.01**	**302**	*e*P	**P**	**16 56 24.8**	**+1.0**
	comp=Z,144nm,2.0s						
RSSD	**Black Hills**	**89.04**	**42**	P	**P**	**16 56 23.4**	**-0.1**
GYA	**Guiyang**	**89.89**	**298**	P	**P**	**16 56 28.8**	**+0.8**
GYA				PP	PP	17 00 02.8	+1.6
GYA				SKS		17 06 56.0	
GYA				S	S	17 07 17.8	-0.4
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.4						
GYA				pmax	pmax		
	comp=Z,120nm,5.2s						
GYA				LR	LR		
	comp=N,560nm,20.8s,MS5.1						
GYA				LR	LR		
	comp=E,450nm,21.2s,MS5.1						
GYA				LR	LR		
	comp=Z,510nm,20.0s,MS5.0						
XAN	**Xi'an**	**90.89**	**306**	P	**P**	**16 56 31.3**	**-1.1**
XAN				pP	pP	16 56 45.0	+1.4
XAN				pmax	pmax		
	comp=Z,3.0nm,2.1s,mb4.2						
HHC	**Hu-ho-hao-te**	**91.62**	**313**	*e*P	**P**	**16 56 37.6**	**+2.0**
HHC				pP	pP	16 56 42.3	-4.5
HHC				sP	sP	16 56 44.6	-6.2
HHC				PP	PP	17 00 17.8	+3.2
HHC				SKS		17 07 08.0	
HHC				S	S	17 07 35.8	+2.4
HHC				sS	sS	17 07 42.8	-9.1
HHC				pmax	pmax		
	comp=Z,13nm,0.7s,mb5.4						
HHC				pmax	pmax		
	comp=Z,98nm,6.1s						
HHC				LR	LR		
	comp=N,86nm,19.0s,MS4.4					

CD2	**Chengdu**	**93.84**	**301**	*e*P	**P**	**16 56 47.5**	**+1.3**
CD2				pP	pP	16 56 52.3	-5.0
CD2				sP	sP	16 56 54.8	-6.5
CD2				PP	PP	17 00 35.8	+3.5
CD2				SKS		17 07 20.1	
CD2				S	S	17 07 53.6	0.0
CD2				sS	sS	17 08 01.8	-10
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb5.3						
CD2				pmax	pmax		
	comp=Z,40nm,5.2s						
CD2				LR	LR		
	comp=N,200nm,16.6s						
CD2				LR	LR		
	comp=Z,220nm,16.6s,MS4.7						
CMAR	**Chiang Mai Arr**	**93.90**	**288**	P	**P**	**16 56 48.9**	**+2.2**
	comp=Z,0.9nm,0.8s,mb4.2,baz=114,slow=2.4,SNR=7.1						
LZH	**Lanzhou**	**95.51**	**306**	*e*P	**P**	**16 56 54.5**	**+0.8**
LZH				pP	pP	16 57 00.3	-4.5
LZH				sP	sP	16 57 03.3	-5.5
LZH				PP	PP	17 00 47.0	+1.8
LZH				*e*S	S	17 08 06.4	-1.5
LZH				sS	sS	17 08 13.8	-13
LZH				SS	SS	17 14 36.3	-0.8
LZH				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.4						
LZH				pmax	pmax		
	comp=Z,94nm,4.0s						
LZH				LR	LR		
	comp=E,340nm,15.8s						
LZH				LR	LR		
	comp=Z,540nm,17.2s,MS5.1						
LPAZ	**La Paz**	**98.41**	**110**	LR	LR	17 32 29.3	
	comp=Z,220nm,20.1s,MS4.7,baz=72,slow=30						
ROSC	**El Rosal**	**99.97**	**88**	LR	LR	17 31 11.5	
	comp=Z,81nm,21.6s,MS4.2,baz=12,slow=29						
BVAR	**Borovoye Array**	**120.83**	**321**	PKP	PKPdf	17 02 21.4	+1.0
	comp=Z,1.1nm,0.6s,baz=148,slow=2.5,SNR=9.0						
AKASG	**Malin Array Be**	**143.75**	**336**	PKP	PKPdf	17 03 02.0	-1.4
	comp=Z,3.0nm,0.9s,baz=36,slow=3.5,SNR=7.7						
KMBO	**Kilima Mbogo**	**143.96**	**240**	PKP	PKPdf	17 03 05.2	+0.2
	comp=Z,4.5nm,1.1s,baz=92,slow=4.9,SNR=7.5						
KMBO	**Kilima Mbogo**	**143.96**	**240**	*e*PKPdf	PKPdf	17 03 04.5	-0.4
BSEG	**Bad Segeberg**	**145.08**	**356**	*e*PKPbc	PKPbc	17 03 04.5	-0.6
NRDL	**Niedersach Rie**	**146.53**	**356**	*e*PKPbc	PKPbc	17 03 09.9	+0.3
IBBN	**Ibbenburen**	**146.81**	**359**	*e*PKPbc	PKPbc	17 03 11.0	+0.6
KWP	**Kalwaria Pacla**	**146.93**	**341**	*e*PKPdf	PKPdf	17 03 10.6	+1.7
CLZ	**Clausthal**	**147.16**	**356**	*e*PKPbc	PKPbc	17 03 13.1	+1.7
CLL	**Collm**	**147.45**	**353**	*e*PKPbc	PKPbc	17 03 12.9	+0.7
CLL	**Collm**	**147.45**	**353**	*e*PKP	PKPbc	17 03 13.0	+0.8
CLL				*e*		17 03 19.0	
CLL				*e*		17 03 26.0	
CLL				LR	LR		
	comp=Z,100nm,19.3s,MS4.6						
CLL	**Collm**	**147.45**	**353**	*e*PKPbc	PKPbc	17 03 13.0	+0.8
	comp=Z,17nm,1.2s						
CLL				*e*		17 03 26.0	
CLL				*e*		17 03 35.0	
CLL				Lm		18 10 00.0	
	comp=Z,100nm,19.3s						
STHS	**Stebnicka Huta**	**147.56**	**342**	*e*PKP	PKPab	17 03 16.4	+1.7
STHS	**Stebnicka Huta**	**147.56**	**342**	*e*PKP	PKPab	17 03 16.3	+1.6
KOLS	**Kolonicke sedl**	**147.68**	**341**	*e*PKP	PKPdf	17 03 11.1	+0.9
KOLS	**Kolonicke sedl**	**147.68**	**341**	*e*PKP	PKPdf	17 03 11.1	+0.9
BRG	**Berggiesshubel**	**147.75**	**351**	*e*PKPbc	PKPbc	17 03 13.7	+0.6
BRG	**Berggiesshubel**	**147.75**	**351**	*e*PKP	PKPbc	17 03 14.0	+0.9
	comp=Z,12nm,1.2s						
BRG				*e*		17 03 27.9	
	comp=Z,6.8nm,1.1s						
UPC	**Upice**	**147.77**	**349**	*e*PKP	PKPbc	17 03 14.5	+1.4
DPC	**Dobruska-Polom**	**147.86**	**348**	*e*PKP	PKPbc	17 03 15.5	+2.1
CRVS	**Cervenica-Dubn**	**147.95**	**342**	*e*PKP	PKPbc	17 03 12.6	-1.1
CRVS	**Cervenica-Dubn**	**147.95**	**342**	*e*PKP	PKPbc	17 03 12.6	-1.1
OKC	**Ostrava-Krasne**	**147.97**	**346**	*e*PKP	PKPbc	17 03 14.9	+1.2
PVCC	**Panska Ves**	**147.99**	**351**	*e*PKP	PKPbc	17 03 15.2	+1.5
UBBA	**Unterbreizbach**	**148.21**	**356**	*e*PKPbc	PKPbc	17 03 14.6	+0.3
MOX	**Moxa**	**148.25**	**354**	*e*PKP	PKPbc	17 03 16.2	+1.8
	comp=Z,35nm,1.9s						
MOX							
	comp=Z,100nm,18.0s						
MOX	**Moxa**	**148.25**	**354**	*e*PKPbc	PKPbc	17 03 14.3	-0.1
PRU	**Pruhonice**	**148.52**	**350**	*e*PKP	PKPab	17 03 18.0	-0.5
NKC	**Novy Kostel**	**148.57**	**353**	*e*PKP	PKPab	17 03 17.9	-0.8
BR131	**Keskin Array S**	**149.02**	**317**	*e*PKPdf	PKPdf	17 03 14.5	+1.8
BR131				*e*PKPbc	PKPbc	17 03 18.8	+2.0
BRTR	**Keskin Array B**	**149.02**	**317**	PKPbc	PKPbc	17 03 18.9	+2.1
	comp=Z,4.5nm,1.1s,baz=333,slow=0.3,SNR=13						
VYHS	**Vyhne**	**149.05**	**344**	*e*PKP	PKPbc	17 03 17.3	+0.8
VYHS	**Vyhne**	**149.05**	**344**	*e*PKP	PKPbc	17 03 17.3	+0.8
ROTZ	**Rotzenmuhle**	**149.06**	**353**	*e*PKPbc	PKPbc	17 03 18.0	+1.5
GRA1	**Grafenberg Arr**	**149.23**	**354**	*e*PKP	PKPbc	17 03 18.1	+1.2
GRF	**Grafenberg Arr**	**149.23**	**354**	*e*PKP	PKPbc	17 03 18.1	+1.2
PSZ	**Piszkesteto**	**149.29**	**343**	‖ *e*pPKP	pPKPdf	17 03 19.1	-5.2
KHC	**Kasperske Hory**	**149.50**	**351**	*e*PKPdf	PKPdf	17 03 14.0	+0.9
KHC				*e*PKPbc	PKPbc	17 03 19.1	+1.4
KHC	**Kasperske Hory**	**149.50**	**351**	*e*PKP	PKPbc	17 03 19.8	+2.2
WET	**Wettzell**	**149.59**	**352**	*e*PKPbc	PKPbc	17 03 18.6	+0.8
GEC2	**GERESS Array S**	**149.76**	**351**	*e*PKPbc	PKPbc	17 03 18.6	+0.3
CSNA	**Conrad Observa**	**150.27**	**348**	⇑ *p*PKiKP		17 03 22.2	
	comp=Z,15nm,1.4s						
BFO	**Black Forest**	**150.78**	**358**	*e*PKPbc	PKPbc	17 03 22.0	+1.3
MMAI	**Mount Meron Ar**	**150.87**	**304**	PKPbc	PKPbc	17 03 22.2	+0.7
	comp=Z,2.5nm,0.7s,baz=29,slow=8.8,SNR=6.0						
RJOB	**Jochberg**	**150.98**	**352**	*e*PKPbc	PKPbc	17 03 23.3	+2.1
ARSA	**Arzberg**	**150.98**	**348**	⇑ *i*PKiKP	PKPbc	17 03 21.9	+0.6
	comp=Z,9.7nm,1.6s						
FETA	**Feichten**	**151.92**	**354**	⇑ *i*pPKPbc	pPKPbc	17 03 25.6	-9.2
	comp=Z,9.2nm,1.6s						

MOS ***19*** *16:47:34.0±3.1, 52°.10N×159°.94E, h9km, mb4.2/13, Error ellipse: s-maj=13.9km s-min=6.8km az=94.7*
KRSC ***19*** *16:47:41.2±0.9, 52°.31N×159°.70E, h6km±5km, ML4.5*
BJI ***19*** *16:47:41.7, 52°.40N×159°.55E, h54km, mB4.4/3, mb4.4/3, Ms4.4/1, Ms7 4.3/1*
IDC ***19*** *16:47:43.0±0.7, 52°.23N×160°.00E, h58km±6km, mb3.5/11, mb1 3.8/13, mb1mx3.6/27, mbtmp3.7/13, Error ellipse: s-maj=15.8km s-min=8.5km az=34.0*
NEIC ***19*** *16:47:42.8±1.2, 52°.37N×159°.81E, h54km±10km, mb4.2/3, Error ellipse: s-maj=16.4km s-min=12.1km az=189.0*
ISCJB ***19*** *16:47:43.8±0.8, 52°.28N±0°.05×159°.5E±0°.1, h73km±6km, mb3.8/16, Error ellipse: s-maj=13.0km s-min=4.8km az=34.6*
ISC 19 16:47:45.2±0.8, 52°.29N±0°.05×159°.5E±0°.1, h69km±6km, h55km±2.6km: pP-P, n64, σ1°.24/77, mb3.8/16, 3D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLC	**Nalytchevo**	**0.89**	**354**	*i* P	**Pn**	**16 47 58.7**	**-3.5**
NLC				*i* S	**Sn**	**16 48 11.7**	**-3.2**
PET	**Petropavlovsk**	**0.90**	**326**	‖ *i*PN	**Pn**	**16 48 00.2**	**-2.1**
PET				*e*S	**Sn**	**16 48 14.4**	**-0.7**
PET				pmax	pmax		
	comp=Z,863nm,0.6s						
PET				smax			
	comp=N,2μm,0.7s						
PET	**Petropavlovsk**	**0.90**	**326**	*i* P	**Pn**	**16 48 00.2**	**-2.1**
PET				*i* S	**Sn**	**16 48 14.3**	**-0.8**
PET	**Petropavlovsk**	**0.90**	**326**	*e*Pn	**Pn**	**16 47 60.0**	**-2.4**
GRL	**Gorelyy**	**0.91**	**288**	*i* P	**Pn**	**16 48 01.7**	**-0.8**
GRL				*i* S	**Sn**	**16 48 16.5**	**+1.2**
AVH	**Avacha**	**1.08**	**335**	*i* P	**Pn**	**16 48 03.1**	**-1.5**
AVH				*i* S	**Sn**	**16 48 19.4**	**+0.3**
PEA0B	**Petropavlovsk-**	**1.37**	**308**	*e*Pn	**Pn**	**16 48 07.4**	**-0.9**
PEA0B				*e*Sn	**Sn**	**16 48 24.1**	**-1.6**
PETK	**Petropavlovsk-**	**1.37**	**308**	P	**Pn**	**16 48 07.9**	**-0.4**
	comp=N,81nm,0.3s,baz=116,slow=18,SNR=1260						
PETK				S	**Sn**	**16 48 30.9**	**+5.2**
	comp=N,96nm,0.3s,baz=121,slow=27,SNR=15						
PETK	**Petropavlovsk-**	**1.37**	**308**	*e*PN	**Pn**	**16 48 07.9**	**-0.4**
PETK				pmax	pmax		
	comp=Z,81nm,0.3s						
MIPR	**Malaya Ipel'ka**	**1.68**	**271**	*i* P	**Pn**	**16 48 13.4**	**+0.9**
MIPR				*e*S	**Sn**	**16 48 36.5**	**+3.4**
GNL	**Ganaly**	**1.69**	**327**	*i* P	**Pn**	**16 48 12.4**	**-0.2**
GNL				*i* S	**Sn**	**16 48 35.5**	**+2.0**
KII	**Karymskiy**	**1.75**	**359**	*e*P	**Pn**	**16 48 12.0**	**-1.4**
KII				*i* S	**Sn**	**16 48 34.6**	**-0.2**
SKR	**Severo-Kuril's**	**2.65**	**234**	‖ *i*PN	**Pn**	**16 48 25.0**	**-0.6**
SKR				*e*S	**Sn**	**16 48 57.0**	**+0.4**
SKR				pmax	pmax		
	comp=E,50nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				smax			
	comp=N,800nm,2.0s						
SKR				smax			
	comp=E,800nm,2.0s						
SKR				smax			
	comp=N,310nm,0.6s						
SKR				smax			
	comp=E,360nm,0.6s						
ALID	**Alaid**	**2.84**	**242**	P	**Pn**	**16 48 28.4**	**+0.2**
KMNR	**Kamenistaya**	**3.50**	**7**	*e*P	**Pn**	**16 48 37.6**	**+0.5**
KPT	**Kopyto**	**3.71**	**6**	P	**Pn**	**16 48 40.9**	**+0.9**
BZGR	**Bezymyannyi-Gr**	**3.73**	**10**	P	**Pn**	**16 48 40.4**	**+0.2**
KOZ	**Kozyrevsk**	**3.79**	**3**	P	**Pn**	**16 48 42.8**	**+1.8**
KOZR	**Kozyr**	**3.79**	**3**	PN	**Pn**	**16 48 42.8**	**+1.7**
ZLN	**Zelenaya**	**3.82**	**11**	*e*P	**Pn**	**16 48 41.9**	**+0.5**
ZLN				*i* S	**Sn**	**16 49 26.2**	**+1.2**
KRSR	**Krestovskiy**	**3.99**	**9**	P	**Pn**	**16 48 42.3**	**-1.4**
SRDR	**Sredinnyy**	**4.04**	**2**	P	**Pn**	**16 48 44.2**	**-0.3**
KLY	**Klyuchi**	**4.09**	**9**	*e*P	**Pn**	**16 48 46.1**	**+0.9**
KLY				*i* S	**Sn**	**16 49 33.7**	**+2.0**
FX1	**Attu Island--F**	**8.35**	**81**	P	**Pn**	**16 49 37.4**	**-6.0**
	comp=E,17nm,0.3s,baz=302,slow=3.5,SNR=54						
FX1	**Attu Island--F**	**8.35**	**81**	PN	**Pn**	**16 49 37.4**	**-5.9**
FX1				pmax	pmax		
	comp=Z,17nm,0.3s						
SEY	**Seymchan**	**11.33**	**343**	*e*PN	**Pn**	**16 50 18.8**	**-5.0**
ASAJ	**Asahikawa**	**13.90**	**241**	P	**Pn**	**16 50 59.5**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=53,slow=5.1,SNR=3.5						
ERM	**Erimo**	**15.10**	**234**	*i* P	**Pn**	**16 51 12.0**	**-2.4**
BILL	**Biiibino**	**16.14**	**9**	P	**Pn**	**16 51 29.0**	**+1.7**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.2s						
MJAR	**Matsushiro Arr**	**21.76**	**232**	P	**P**	**16 52 32.3**	**+1.4**
	comp=Z,2.5nm,0.7s,mb3.6,baz=28,slow=10,SNR=7.1						
MJAR	**Matsushiro Arr**	**21.76**	**232**	P	**P**	**16 52 32.3**	**+1.4**
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
TIXI	**Tiksi**	**23.67**	**336**	*e*P	**P**	**16 52 48.9**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb3.9						
TIXI	**Tiksi**	**23.67**	**336**	*e*Pn	**P**	**16 52 48.9**	**-1.0**
	comp=Z,5.0nm,0.8s,mb3.9						
KSRS	**Korea Array**	**26.58**	**249**	P	**P**	**16 53 16.9**	**+0.3**
	comp=Z,1.0nm,0.8s,mb3.4,baz=47,slow=9.6,SNR=5.0						
KSRS	**Korea Array**	**26.58**	**249**	*e*P	**P**	**16 53 19.8**	**+3.2**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.4						
WHN	**Wuhan**	**39.40**	**255**	P	**P**	**16 55 08.8**	**+0.8**
KURK	**Kurchatov**	**47.85**	**302**	*e*P	**P**	**16 56 13.0**	**-2.6**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.2						
KURK	**Kurchatov**	**47.85**	**302**	*e*P	**P**	**16 56 13.0**	**-2.6**
	comp=Z,2.9nm,0.8s,mb4.2						
MKAR	**Makanchi Array**	**48.18**	**296**	P	**P**	**16 56 17.6**	**-0.6**
	comp=Z,0.4nm,0.3s,mb3.7,baz=54,slow=7.7,SNR=6.3						
BVAR	**Borovoye Array**	**50.61**	**309**	P	**P**	**16 56 35.6**	**-1.0**
	comp=Z,0.9nm,0.6s,mb4.0,baz=51,slow=8.0,SNR=8.6						
BVAR	**Borovoye Array**	**50.61**	**309**	*e*P	**P**	**16 56 35.5**	**-1.1**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRVK	**Borovoye**	**50.64**	**309**	P	**P**	**16 56 35.3**	**-1.5**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
BRVK	**Borovoye**	**50.64**	**309**	P	**P**	**16 56 35.3**	**-1.5**
	comp=Z,1.6nm,0.6s,mb4.2						
CMAR	**Chiang Mai Arr**	**57.66**	**258**	P	**P**	**16 57 30.6**	**+2.3**
	comp=Z,0.8nm,0.7s,mb3.9,baz=32,slow=7.2,SNR=9.6						
CMAR	**Chiang Mai Arr**	**57.66**	**258**	P	**P**	**16 57 30.6**	**+2.3**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
JOF	**Joensuu**	**58.15**	**335**	*e*P	**P**	**16 57 30.1**	**-1.0**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
JOF	**Joensuu**	**58.15**	**335**	*e*p	**P**	**16 57 30.1**	**-1.0**
	comp=Z,1.6nm,0.7s,mb4.2						
KAF	**Kangasniemi**	**60.08**	**337**	*e*P	**P**	**16 57 43.4**	**-1.1**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
KAF	**Kangasniemi**	**60.08**	**337**	*e*p	**P**	**16 57 43.4**	**-1.1**
	comp=Z,1.1nm,0.4s,mb4.2						
FINES	**FINESS Array B**	**60.72**	**336**	P	**P**	**16 57 48.5**	**-0.3**
	comp=Z,1.3nm,0.7s,mb4.1,baz=27,slow=6.4,SNR=6.3						
FINES	**FINESS Array B**	**60.72**	**336**	P	**P**	**16 57 48.5**	**-0.3**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NB2	**NORSAR Subarra**	**64.22**	**343**	P	**P**	**16 58 12.7**	**+0.6**
	comp=Z,1.1nm,0.5s,mb3.9,baz=24,slow=6.9						
NOA	**NORSAR Array B**	**64.22**	**343**	P	**P**	**16 58 12.6**	**+0.5**
	comp=Z,1.5nm,0.5s,mb4.0,baz=24,slow=6.5,SNR=5.7						
NOA	**NORSAR Array B**	**64.22**	**343**	P	**P**	**16 58 12.6**	**+0.5**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	**Malin Array Be**	**69.12**	**329**	P	**P**	**16 58 42.8**	**-0.7**
	comp=Z,1.4nm,0.3s,mb4.2,baz=31,slow=6.3,SNR=5.5						
AKASG	**Malin Array Be**	**69.12**	**329**	*e*P	**P**	**16 58 40.1**	**-3.4**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TXAR	**Lajitas Array**	**71.29**	**66**	P	**P**	**16 58 56.5**	**-0.7**
	comp=Z,0.1nm,0.5s,mb2.9,baz=308,slow=4.4,SNR=3.2						
TXAR				pP	pP	16 59 10.4	-5.1
	comp=Z,0.3nm,0.5s,baz=297,slow=5.1,SNR=5.0						
TXAR	**Lajitas Array**	**71.29**	**66**	*e*P	**P**	**16 59 05.9**	**+8.7**
TXAR	**Lajitas Array**	**71.29**	**66**	P	**P**	**16 58 56.5**	**-0.7**
TXAR				pP	pP	16 59 10.4	-5.1
CLL	**Collm**	**72.98**	**339**	‖ *i*P	**P**	**16 59 07.8**	**+1.0**
WRA	**Warramunga Arr**	**75.19**	**204**	P	**P**	**16 59 20.4**	**+0.4**
	comp=Z,0.8nm,1.1s,mb3.4,baz=13,slow=5.8,SNR=3.3						
WRA				pP	pP	16 59 36.1	-2.5
	comp=Z,1.0nm,0.8s,baz=20,slow=6.3,SNR=4.9						
WRA	**Warramunga Arr**	**75.19**	**204**	P	**P**	**16 59 20.4**	**+0.4**
WRA				*PP	pP	16 59 36.1	-2.5
WRA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ASAR	**Alice Springs**	**78.87**	**204**	P	**P**	**16 59 40.0**	**-0.5**
	comp=Z,0.5nm,0.9s,mb3.3,baz=16,slow=5.2,SNR=4.6						
ASAR				pP	pP	16 59 55.4	-3.8
	comp=Z,0.5nm,0.7s,baz=12,slow=5.1,SNR=3.7						
ASAR	**Alice Springs**	**78.87**	**204**	*e*P	**P**	**16 59 41.3**	**+0.7**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						

IDC 19 17:17:21.6±25.0, 21°.30S×172°.65W, h0km, mb4.2/4, mb1 4.3/4, mb1mx3.9/19, mbtmp4.2/4, Error ellipse: s-maj=476.4km s-min=159.9km az=75.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**38.38**	**264**	P	P	17 24 45.6	+0.7
	3.5nm,0.3s,baz=92,slow=12,SNR=13						
STKA	**Stephens Creek**	**41.98**	**246**	P	P	17 25 13.3	-1.4
	0.6nm,0.4s,baz=95,slow=12,SNR=3.3						
ASAR	**Alice Springs**	**49.20**	**257**	P	P	17 26 11.8	-0.1
	1.0nm,0.6s,baz=95,slow=7.3,SNR=29						
WRA	**Warramunga Arr**	**49.44**	**262**	P	P	17 26 13.9	+0.1
	1.3nm,0.3s,baz=96,slow=8.3,SNR=64						

PLV ***19*** *17:20:17.2±1.2, 23°.22N×105°.76E, h8km±7km, MD3.5*
ISCJB ***19*** *17:21:02.3±0.9, 25°.05N±0°.08×106°.77E±0°.06, h10km, mb3.4/5, Error ellipse: s-maj=11.7km s-min=7.6km az=165.0*
IDC ***19*** *17:21:03.9±1.4, 25°.21N×107°.10E, h0km, mb3.4/4, mb1 3.4/5, mb1mx3.3/23, mbtmp3.4/5, ML3.3/1, Error ellipse: s-maj=32.1km s-min=22.9km az=110.0*
NEIC ***19*** *17:21:04.9±0.9, 25°.24N×107°.15E, h10km, mb3.6/1, Error ellipse: s-maj=23.9km s-min=12.7km az=112.0*
BJI ***19*** *17:21:05.6, 25°.27N×106°.87E, h17km, mb3.5/1, ML3.5/9, Ms3.6/1*
ISC 19 17:21:04.3±1.0, 25°.00N±0°.08×106°.83E±0°.06, h10km, n15, σ0°.85/13, mb3.4/5, Southeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTZV	**Met**	**3.47**	**188**	*e*Pn	x	17 20 47.1	
MTZV				*e*Pg	x	17 20 51.1	
MTZV				*e*Sg	x	17 21 13.8	
KMI	**Kunming**	**3.71**	**273**	Pg	**Pg**	**17 22 15.9**	**+0.4**
KMI				Sg	**Sg**	**17 23 03.0**	**-0.6**
KMI				smax			
	comp=N,120nm,1.0s						
KMI				smax			
	comp=E,92nm,1.0s						
KMI				LR	LR		
	comp=N,510nm,5.6s						
KMI				LR	LR		
	comp=E,250nm,3.8s						
YTV	**Yen Tu**	**3.83**	**182**	*e*Pn	x	17 20 54.8	
YTV				*e*Pg	x	17 21 00.1	
YTV				*e*Sg	x	17 21 29.9	
HNV	**Hanoi**	**4.05**	**194**	*e*Pn	x	17 20 55.0	
HNV				*e*Pg	x	17 21 01.1	
HNV				*e*Sg	x	17 21 30.6	
PLV	**Phu-Lien**	**4.18**	**183**	*e*Pn	x	17 20 58.9	
PLV				*e*Pg	x	17 21 05.9	
PLV				*e*Sg	x	17 21 38.2	
DSV	**Doi Son**	**4.46**	**190**	*e*Pn	x	17 20 58.9	
DSV				*e*Pg	x	17 21 06.8	
DSV				*e*Sg	x	17 21 41.8	
ENH	**Enshi**	**5.75**	**24**	*e*Pn	**Pn**	**17 22 25.2**	**-4.5**
	comp=E,28nm,0.8s						
ENH				*e*Sn	**Sn**	**17 23 27.8**	**-8.1**
XAN	**Xi'an**	**9.19**	**11**	P	**Pn**	**17 23 17.4**	**+0.5**
XAN				pP		17 23 26.3	
XAN				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**9.80**	**230**	Pn	**Pn**	**17 23 31.3**	**+5.9**
	comp=Z,0.1nm,0.3s,baz=38,slow=12,SNR=4.3						
CMAR				Lg		17 26 27.4	
	comp=Z,0.1nm,0.3s,baz=45,slow=31,SNR=3.7						
LZH	**Lanzhou**	**11.34**	**348**	*e*P	**Pn**	**17 23 57.3**	**+11**
LZH				pP		17 24 01.9	
LZH				sP		17 24 03.9	
LZH				*e*S	**Sn**	**17 25 54.0**	**+0.7**
LZH				sS		17 25 59.4	
LZH				SS		17 26 05.3	
LZH				pmax	pmax		
	comp=Z,33nm,1.5s						
LZH				pmax	pmax		
	comp=Z,100nm,5.7s						
LZH				LR	LR		
	comp=N,170nm,6.8s						
LZH				LR	LR		
	comp=Z,440nm,8.8s						
KSRS	**Korea Array**	**21.84**	**50**	P	**P**	**17 25 55.0**	**-1.9**
	comp=Z,0.7nm,0.7s,mb3.2,baz=246,slow=10,SNR=5.3						
SONM	**Songino Array**	**22.79**	**359**	P	**P**	**17 26 06.9**	**-0.1**
	comp=Z,0.6nm,0.8s,mb3.1,baz=183,slow=9.6,SNR=4.6						
ZALV	**Zalesovo Beam**	**33.25**	**336**	P	**P**	**17 27 40.9**	**-0.7**
	comp=Z,0.8nm,0.5s,mb3.9,baz=131,slow=8.0,SNR=4.9						
ABKAR	**Akbulak array**	**43.63**	**316**	*e*P	**P**	**17 29 09.2**	**+0.4**
	comp=Z,0.8nm,0.8s,mb3.5						
ASAR	**Alice Springs**	**55.04**	**149**	P	**P**	**17 30 37.4**	**+1.1**
	comp=Z,0.4nm,0.8s,mb3.5,baz=341,slow=6.2,SNR=4.3						

ATH ***19*** *17:29:20.6, 38°.14N×21°.57E, h27km±1km, MD3.1/5*
NEIC ***19*** *17:29:20.6, 38°.14N×21°.57E, h27km, MD3.1(ATH), After ATH.*
THE ***19*** *17:29:21.9, 38°.11N×21°.62E, h17km±1km, ML2.7/5, Error ellipse: s-maj=1.3km s-min=0.5km az=33.0*
CSEM ***19*** *17:29:21.4±0.2, 38°.14N×21°.59E, h23km±1km, MD3.1, Error ellipse: s-maj=4.7km s-min=3.3km az=148.0*
ISCJB ***19*** *17:29:21.8±0.5, 38°.12N±0°.04×21°.63E±0°.03, h25km±4km, Error ellipse: s-maj=6.1km s-min=4.1km az=161.7*
ISC 19 17:29:21.9±0.5, 38°.12N±0°.04×21°.63E±0°.03, h24km±4km, n36, σ0°.83/58, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.14**	**246**	*e*Pb	**Pb**	**17 29 26.0**	**-0.8**
RLS				*e*Sb	**Sb**	**17 29 29.4**	**-0.7**
RLS	**Riolos of Patr**	**0.14**	**246**	*e*PB	**Pb**	**17 29 26.0**	**-0.8**
RLS				*e*SB	**Sb**	**17 29 29.4**	**-0.7**
RLS	**Riolos of Patr**	**0.14**	**246**	*e*Pb	**Pb**	**17 29 26.0**	**-0.8**
RLS				*e*Sb	**Sb**	**17 29 29.4**	**-0.7**
UPR	**University Cam**	**0.21**	**36**	P	**Pb**	**17 29 27.2**	**-0.3**
UPR				S	**Sb**	**17 29 31.3**	**-0.1**
UPR	**University Cam**	**0.21**	**36**	*e*PB	**Pb**	**17 29 27.0**	**-0.5**
UPR	**University Cam**	**0.21**	**36**	*e*Pb	**Pb**	**17 29 27.0**	**-0.5**
UPR				S	**Sb**	**17 29 31.3**	**-0.1**
LAKA	**Lakka**	**0.30**	**66**	P	**Pb**	**17 29 28.4**	**-0.4**
LAKA				S	**Sb**	**17 29 33.7**	**+0.1**
LAKA	**Lakka**	**0.30**	**66**	P	**Pb**	**17 29 28.4**	**-0.4**
LAKA				S	**Sb**	**17 29 33.7**	**+0.1**
EFP	**Efpalio**	**0.38**	**35**	P	**Pb**	**17 29 29.6**	**-0.4**
EFP				S

JRG				*e*S		Sg	17 32 18.7 +0.6
JOM	**Ohasama**	**0.42**	**40**	P		Pg	17 32 14.4 -0.6
JOM				*e*S		Sg	17 32 19.9 -0.6
JYK	**Kaneyama**	**0.51**	**243**	P		Pg	17 32 16.9 +0.1
JYK				*e*S		Sg	17 32 23.9 +0.4
OFUJ	**Ofunato**	**0.57**	**97**	⇓P		Pg	17 32 17.4 -0.4
JIO	**Ouri**	**0.77**	**156**	P		Pg	17 32 20.9 -0.7
JOU	**Okura**	**0.82**	**196**	⇑P		Pg	17 32 22.4 -0.2
JOU				*e*S		Sg	17 32 33.5 +0.3
ERM	**Erimo**	**3.32**	**30**	*e*Pn		Pn	17 33 00.4 +1.4
MJAR	**Matsushiro Arr**	**3.39**	**221**	Pn		Pn	17 33 01.5 +1.5
	2.2nm,0.3s,baz=26,slow=14,SNR=18						
MJAR				Lg			17 33 53.9
	2.7nm,0.3s,baz=15,slow=25,SNR=5.8						
MJAR	**Matsushiro Arr**	**3.39**	**221**	Pn		Pn	17 33 01.5 +1.5
MJAR				Lg			17 33 53.9
MAJO	**Matsushiro**	**3.39**	**221**	*e*Pn		Pn	17 33 01.1 +1.1
MAT	**Matsushiro**	**3.39**	**221**	P		Pn	17 33 01.1 +1.1
MAT				*e*S		Sn	17 33 45.6 +5.2
ASAJ	**Asahikawa**	**5.11**	**13**	Pn		Pn	17 33 26.1 +2.5
	1.9nm,0.3s,baz=266,slow=12,SNR=9.8						
ASAJ				Sn		Sn	17 34 24.9 +2.1
	0.8nm,0.3s,baz=198,slow=19,SNR=2.3						
JHJ	**Hachijo jima 2**	**6.10**	**189**	Sn		Sn	17 34 49.0 +1.9
	7.8nm,0.3s,baz=48,slow=12,SNR=4.3						
JHJ				LR		LR	17 35 49.5
	comp=Z,131nm,19.6s,baz=92,slow=36						
YSS	**Yuzh-Sakhalins**	**7.91**	**9**	*e*Pn		Pn	17 34 03.0 +1.0
KSRS	**Korea Array**	**10.38**	**265**	Pn		Pn	17 34 40.5 +4.7
	1.5nm,0.3s,baz=72,slow=14,SNR=37						
KSRS				Sn		Sn	17 36 38.5 +6.2
	0.2nm,0.3s,baz=76,slow=24,SNR=7.9						
KSRS				LR		LR	17 38 02.9
	comp=Z,107nm,18.3s,baz=167,slow=34						
SONM	**Songino Array**	**26.34**	**301**	P		P	17 37 42.5 -0.5
	0.5nm,0.7s,mb3.1,baz=108,slow=9.3,SNR=3.4						
ENH	**Enshi**	**27.23**	**261**	P		P	17 37 50.6 -0.6
	4.2nm,0.7s,mb4.1						
ZALV	**Zalesovo Beam**	**40.24**	**311**	P		P	17 39 42.9 -0.8
	0.9nm,0.7s,mb3.6,baz=80,slow=11,SNR=4.2						
MK31	**Makanchi Array**	**42.71**	**300**	*e*P		P	17 40 02.5 -1.6
MKAR	**Makanchi Array**	**42.71**	**300**	P		P	17 40 03.6 -0.4
	0.4nm,0.3s,mb3.7,baz=80,slow=8.8,SNR=7.7						
TKM2	**Tokmak 2**	**48.32**	**297**	*e*P		P	17 40 48.6 0.0
	4.2nm,0.8s,mb4.5						
BVAR	**Borovoye Array**	**48.89**	**311**	P		P	17 40 52.6 -0.2
	0.9nm,0.6s,mb4.0,baz=87,slow=6.6,SNR=5.1						
BVAR				PcP		PcP	17 42 16.9 -0.3
	0.4nm,0.4s,baz=80,slow=1.7,SNR=4.3						
KULM	**Kulim**	**49.60**	**238**	P		P	17 40 56.6 -2.1
	3.7nm,1.0s,mb4.4						
INK	**Inuvik**	**52.68**	**28**	P		P	17 41 21.4 +0.3
	2.0nm,0.7s,mb4.2,baz=195,slow=9.7,SNR=5.7						
INK	**Inuvik**	**52.68**	**28**	P		P	17 41 21.4 +0.3
ARU	**Arti**	**54.54**	**317**	*e*P		P	17 41 34.2 -0.7
	1.6nm,0.5s,mb4.3						
ABKAR	**Akbulak array**	**56.31**	**309**	*e*P		P	17 41 47.1 -0.7
	1.1nm,0.4s,mb4.2						
KBL	**Kabul**	**56.34**	**289**	P		P	17 41 47.7 -0.6
	3.9nm,0.7s,mb4.5						
WRAB	**Tennant Creek**	**59.10**	**187**	P		P	17 42 06.9 -0.8
	2.9nm,0.8s,mb4.4						
WRA	**Warramunga Arr**	**59.11**	**187**	P		P	17 42 07.2 -0.6
	2.3nm,0.6s,mb4.4,baz=357,slow=7.3,SNR=16						
ARCES	**ARCESS Array B**	**61.89**	**339**	P		P	17 42 26.2 +0.1
	2.1nm,0.9s,mb4.3,baz=60,slow=10,SNR=3.9						
ASAR	**Alice Springs**	**62.84**	**187**	P		P	17 42 32.7 -0.3
	1.0nm,0.7s,mb4.1,baz=5.8,slow=4.9,SNR=15						
FINES	**FINESS Array B**	**66.77**	**332**	P		P	17 42 57.7 -0.6
	3.0nm,0.8s,mb4.3,baz=51,slow=7.3,SNR=6.7						
NB2	**NORSAR Subarra**	**72.09**	**337**	P		P	17 43 30.7 -0.5
	comp=Z,2.5nm,0.9s,mb4.1,baz=38,slow=6.5						
NOA	**NORSAR Array B**	**72.09**	**337**	P		P	17 43 29.7 -1.5
	comp=Z,1.3nm,0.8s,mb3.9,baz=41,slow=6.0,SNR=3.7						
AKASG	**Malin Array Be**	**72.40**	**322**	P		P	17 43 32.0 -1.2
	comp=Z,1.1nm,0.4s,mb4.1,baz=43,slow=6.5,SNR=7.0						
NVAR	**Mina Array Bea**	**74.02**	**53**	P		P	17 43 44.1 +1.1
	comp=Z,0.3nm,0.4s,mb3.5,baz=275,slow=5.2,SNR=3.5						
PDAR	**Pinedale Array**	**76.45**	**46**	P		P	17 43 57.5 +0.6
	comp=Z,0.5nm,0.5s,mb3.7,baz=208,slow=5.9,SNR=4.1						
BRTR	**Keskin Array B**	**77.18**	**311**	P		P	17 44 00.3 -0.8
	comp=Z,0.4nm,0.5s,mb3.6,baz=64,slow=3.4,SNR=3.1						
TXAR	**Lajitas Array**	**89.12**	**52**	P		P	17 45 03.8 +0.9
	comp=Z,0.1nm,0.4s,mb3.5,baz=309,slow=5.7,SNR=2.0						
LPAZ	**La Paz**	**145.88**	**56**	PKPbc	PKPbc		17 51 48.5 +1.4
	comp=Z,0.5nm,0.5s,baz=326,slow=1.7,SNR=4.4						
SIV	**San Ignacio**	**149.93**	**46**	PKPbc	PKPbc		17 51 57.5 -0.6
	comp=Z,0.8nm,0.5s,baz=244,slow=8.0,SNR=4.4						

*IDC **19** 17:38:17.6±1.7, 18°.04S×177°.47W, h0km, mb4.2/4, mb1 4.4/4, mb1mx3.9/16, mbtmp4.2/4, Error ellipse: s-maj=154.0km s-min=28.9km az=156.0*
*ISCJB **19** 17:38:21.1±1.4, 17°.9S±0°.6×177°.7W±0°.3, h33km, mb4.3/7, Error ellipse: s-maj=88.1km s-min=24.7km az=154.4*
ISC 19 17:38:22.9±1.4, 18°.0S±0°.6×177°.6W±0°.3, h35km, n9, σ0°75/9, mb4.4/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMSA	**Cobar Meteorol**	**35.79**	**241**	*e*P	**P**	**17 45 19.6**	**+0.7**
STKA	**Stephens Creek**	**39.27**	**241**	*e*P	**P**	**17 45 48.9**	**+0.5**
STKA	**Stephens Creek**	**39.27**	**241**	P	**P**	**17 45 49.1**	**+0.7**
	1.8nm,0.4s,mb4.1,baz=91,slow=11,SNR=9.8						
BBOO	**Buckleboo**	**44.05**	**241**	*e*P	**P**	**17 46 26.1**	**-1.4**
	3.9nm,0.3s,mb4.6						
WRA	**Warramunga Arr**	**45.38**	**260**	P	**P**	**17 46 39.0**	**+0.7**
	2.4nm,0.4s,mb4.4,baz=97,slow=7.8,SNR=45						
ASAR	**Alice Springs**	**45.52**	**254**	P	**P**	**17 46 39.5**	**+0.2**
	2.2nm,0.4s,mb4.5,baz=86,slow=8.1,SNR=91						
KNA	**Kununurra**	**51.24**	**264**	*e*P	**P**	**17 47 23.7**	**+0.1**
	4.8nm,0.5s,mb4.7						
FITZ	**Fitzroy Crossi**	**53.78**	**260**	*e*P	**P**	**17 47 41.3**	**-1.1**
	3.1nm,0.4s,mb4.6						
TXAR	**Lajitas Array**	**85.38**	**57**	P	**P**	**17 50 57.0**	**+0.1**
	0.4nm,0.6s,mb3.7,baz=212,slow=7.1,SNR=7.4						

*HLW **19** 17:48:59.3, 33°.85N×35°.81E, h30km±14km, Md2.9, Ml2.7*
*GII **19** 17:49:03.7±0.5, 33°.31N×35°.45E, h1km, Md2.7/7, Mm2.4/6*
*CSEM **19** 17:49:04.4±0.1, 33°.35N×35°.42E, h5km, ML3.4, Error ellipse: s-maj=4.7km s-min=2.4km az=104.0*
*ISCJB **19** 17:49:04.1±0.4, 33°.34N±0°.02×35°.42E±0°.04, h7km±4km, Error ellipse: s-maj=6.3km s-min=2.9km az=22.8*
*GRAL **19** 17:49:05.1±0.3, 33°.32N×35°.44E, h0km±2km, MD3.4*
ISC 19 17:49:04.6±0.4, 33°.35N±0°.02×35°.43E±0°.04, h5km±4km, n38, σ0°57/53, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.16**	**329**	*e*P	**Pg**	**17 49 08.6**	**+0.7**
MATL	**Matarih**	**0.16**	**329**	*e*P	**Pg**	**17 49 08.6**	**+0.7**
KSDI	**Kefar Szold**	**0.25**	**129**	Pg	**Pg**	**17 49 08.8**	**-0.6**
KSDI				Sg	**Sg**	**17 49 13.1**	**+0.5**
HRI	**Mount Hermon**	**0.27**	**108**	Pg	**Pg**	**17 49 09.3**	**-0.5**
MMA0B	**Mount Meron ar**	**0.33**	**184**	Pg	**Pg**	**17 49 10.2**	**-0.8**
MMA0B				Sg	**Sg**	**17 49 16.3**	**+0.9**
MMB1	**Mount Meron ar**	**0.33**	**183**	Pg	**Pg**	**17 49 10.6**	**-0.4**
HNTI	**Hanita**	**0.34**	**219**	Pg	**Pg**	**17 49 11.1**	**-0.1**
HNTI				Sg	**Sg**	**17 49 16.1**	**+0.4**
RCY	**Rachaya**	**0.35**	**67**	*e*P	**Pg**	**17 49 11.7**	**+0.3**
RCY				*e*S	**Sg**	**17 49 16.9**	**+0.8**
RCY	**Rachaya**	**0.35**	**67**	*e*P	**Pg**	**17 49 11.7**	**+0.3**
RCY				*e*S	**Sg**	**17 49 16.9**	**+0.9**
KSHT	**Keshet**	**0.48**	**139**	Pg	**Pg**	**17 49 13.5**	**-0.4**
BEYL	**Beirut**	**0.53**	**6**	*e*P	**Pg**	**17 49 15.0**	**+0.3**
BEYL	**Beirut**	**0.53**	**6**	*e*P	**Pg**	**17 49 15.0**	**+0.3**
BHL	**Bhannes**	**0.58**	**18**	*e*P	**Pg**	**17 49 15.9**	**0.0**
BHL				*e*S	**Sg**	**17 49 24.0**	**+0.5**
BHL	**Bhannes**	**0.58**	**18**	*e*P	**Pg**	**17 49 15.9**	**0.0**
BHL				*e*S	**Sg**	**17 49 24.0**	**+0.5**
BLGI	**Bet Lehem HaGe**	**0.65**	**198**	Pg	**Pg**	**17 49 16.8**	**-0.2**
OFRI	**'Ofer**	**0.82**	**207**	Pg	**Pg**	**17 49 20.0**	**-0.3**
MMLI	**Mount Malkishu**	**0.91**	**181**	Pg	**Pg**	**17 49 20.7**	**-1.3**
MMLI				Sg	**Sg**	**17 49 34.7**	**+0.9**
HWQ	**Hawqa**	**1.02**	**25**	*e*P	**Pg**	**17 49 23.7**	**-0.5**
HWQ				*e*S	**Sg**	**17 49 37.5**	**0.0**
HWQ	**Hawqa**	**1.02**	**25**	*e*P	**Pg**	**17 49 23.7**	**-0.5**
HWQ				*e*S	**Sg**	**17 49 37.5**	**0.0**
HMDT	**Nahal Hemdat**	**1.09**	**176**	Pg	**Pg**	**17 49 24.5**	**-1.1**
HMDT				Sg	**Sg**	**17 49 40.9**	**+1.1**
SLTI	**Sal'it**	**1.15**	**197**	Pg	**Pg**	**17 49 25.7**	**-1.0**
SLTI				Sg	**Sg**	**17 49 42.3**	**+0.7**
FKH	**Fakeheh**	**1.20**	**42**	*e*P	**Pg**	**17 49 27.1**	**-0.5**
FKH				*e*S	**Sg**	**17 49 43.2**	**0.0**
FKH	**Fakeheh**	**1.20**	**42**	*e*P	**Pg**	**17 49 27.1**	**-0.5**
FKH				*e*S	**Sg**	**17 49 43.2**	**0.0**
DSI	**Dead Sea**	**1.77**	**181**	Pn	**Pn**	**17 49 35.4**	**-0.5**
DSI				Sn	**Sn**	**17 49 59.1**	**+0.3**
YTIR	**Yattir**	**2.00**	**188**	Pn	**Pn**	**17 49 39.0**	**0.0**
RTMI	**Retamim**	**2.37**	**196**	Pn	**Pn**	**17 49 44.5**	**+0.4**
KZIT	**Kziot**	**2.59**	**200**	Pn	**Pn**	**17 49 47.6**	**+0.5**
RSH		**2.79**	**212**	P	**Pn**	**17 49 49.5**	**-0.3**
PRNI	**Paran**	**3.01**	**187**	Pn	**Pn**	**17 49 52.7**	**-0.2**
AMAG	**Maghara**	**3.29**	**216**	P	**Pn**	**17 49 56.8**	**0.0**
	baz=216						
AMAG	**Maghara**	**3.29**	**216**	P	**Pn**	**17 49 56.8**	**0.0**
MBRI	**Mt Berech**	**3.57**	**187**	Pn	**Pn**	**17 50 00.8**	**+0.2**
HNKL	**Nakhl**	**3.63**	**200**	P	**Pn**	**17 50 01.4**	**+0.1**
	baz=203						
HNKL				AMP		17 50 00.0	
	comp=E,20μm,0.4s,logA/T=4.7,baz=203						
HNKL	**Nakhl**	**3.63**	**200**	P	**Pn**	**17 50 01.4**	**0.0**
SUZ		**4.14**	**213**	P	**Pn**	**17 50 08.8**	**+0.3**
	baz=214						
SUZ		**4.14**	**213**	P	**Pn**	**17 50 08.8**	**+0.3**
HKAT	**Jabal Katrina**	**4.97**	**195**	P	**Pn**	**17 50 19.6**	**-0.2**
	baz=197						
HKAT	**Jabal Katrina**	**4.97**	**195**	P	**Pn**	**17 50 19.6**	**-0.2**

*ISCJB **19** 18:06:12.7±0.8, 18°.82N±0°.06×67°.19W±0°.04, h31km±6km, mb3.8/7, Error ellipse: s-maj=10.0km s-min=5.2km az=25.3*
*NEIC **19** 18:06:14.1, 18°.80N×67°.22W, h12km, MD3.7(RSPR), After RSPR.*
NEIC Felt [II] at Mayaguez.
*RSPR **19** 18:06:14.1, 18°.80N×67°.22W, h12km, MD3.7/20, MD3.7/20*
*IDC **19** 18:06:15.6±2.2, 18°.72N×67°.20W, h51km±24km, mb3.5/7, mb1 3.8/7, mb1mx3.5/23, mbtmp3.5/7, Error ellipse: s-maj=31.4km s-min=18.0km az=35.0*
ISC 19 18:06:13.7±0.9, 18°.77N±0°.06×67°.18W±0°.04, h29km±7km, n59, σ0°76/71, mb3.8/7, 31C-13D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.31**	**169**	⇑*i*P	**Pb**	**18 06 21.0**	**-0.1**
AGPR				*e*S	**Sb**	**18 06 26.7**	**+0.6**
AGPR	**Aguadilla, PR**	**0.31**	**169**	⇑*i*P	**Pb**	**18 06 21.0**	**-0.1**
AGPR				*e*S	**Sb**	**18 06 26.7**	**+0.6**
MPR	**Mayaguez**	**0.56**	**177**	⇑*e*P	**Pb**	**18 06 24.5**	**-0.5**
MPR				*e*S	**Sb**	**18 06 33.7**	**+1.1**
MPR	**Mayaguez**	**0.56**	**177**	⇑*e*P	**Pb**	**18 06 24.5**	**-0.5**
MPR				*e*S	**Sb**	**18 06 33.7**	**+1.1**
LRS	**Lares**	**0.57**	**147**	⇑*i*P	**Pb**	**18 06 25.0**	**-0.2**
LRS	**Lares**	**0.57**	**147**	⇑*i*P	**Pb**	**18 06 25.3**	**+0.1**
AOPR	**Arecibo Observ**	**0.58**	**137**	⇑*e*P	**Pb**	**18 06 25.2**	**-0.2**
AOPR	**Arecibo Observ**	**0.58**	**137**	⇑*e*P	**Pb**	**18 06 25.2**	**-0.2**
LSP	**Las Mesas**	**0.60**	**172**	⇓*i*P	**Pb**	**18 06 25.4**	**-0.3**
LSP	**Las Mesas**	**0.60**	**172**	⇓*i*P	**Pb**	**18 06 25.4**	**-0.3**
CRPR	**Cabo Rojo, PR**	**0.76**	**175**	⇑*e*P	**Pb**	**18 06 28.0**	**-0.4**
CRPR				*e*S	**Sb**	**18 06 38.6**	**+0.1**
CRPR	**Cabo Rojo, PR**	**0.76**	**175**	⇑*e*P	**Pb**	**18 06 28.0**	**-0.4**
CRPR				*e*S	**Sb**	**18 06 38.6**	**+0.1**
GBPR	**Guanica, Bosqu**	**0.84**	**160**	⇓*i*P	**Pn**	**18 06 29.3**	**-0.3**
GBPR				*e*S	**Sb**	**18 06 40.4**	**-0.3**
GBPR	**Guanica, Bosqu**	**0.84**	**160**	⇓*i*P	**Pn**	**18 06 29.3**	**-0.3**
GBPR				*e*S	**Sb**	**18 06 40.4**	**-0.3**
CELP	**Cerrillos**	**0.89**	**141**	⇑*i*P	**Pn**	**18 06 30.1**	**-0.2**
CELP	**Cerrillos**	**0.89**	**141**	⇑*i*P	**Pn**	**18 06 30.1**	**-0.2**
OBIP	**Obispado Ponce**	**0.90**	**143**	⇑*e*P	**Pn**	**18 06 30.2**	**-0.3**
OBIP				*e*S	**Sb**	**18 06 42.4**	**0.0**
OBIP	**Obispado Ponce**	**0.90**	**143**	⇑*e*P	**Pn**	**18 06 30.2**	**-0.3**
OBIP				*e*S	**Sb**	**18 06 42.4**	**0.0**
IMO	**Isla Mona**	**0.96**	**227**	⇑*e*P	**Pn**	**18 06 29.1**	**-2.1**
IMO	**Isla Mona**	**0.96**	**227**	⇑*e*P	**Pn**	**18 06 29.9**	**-1.3**
ICM	**Isla Caja Muer**	**1.07**	**144**	⇑*e*P	**Pn**	**18 06 33.1**	**+0.4**
ICM	**Isla Caja Muer**	**1.07**	**144**	⇑*e*P	**Pn**	**18 06 33.1**	**+0.4**
PCDR	**Punta Cana, DR**	**1.17**	**258**	⇓*e*P	**Pn**	**18 06 31.0**	**-3.1**
PCDR	**Punta Cana, DR**	**1.17**	**258**	⇓*e*P	**Pn**	**18 06 31.2**	**-3.0**
SJG	**San Juan**	**1.17**	**124**	⇑*e*P	**Pn**	**18 06 34.0**	**-0.1**
SJG	**San Juan**	**1.17**	**124**	*e*S	**Sn**	**18 06 50.4**	**+1.2**
SJG	**San Juan**	**1.17**	**124**	⇑*e*P	**Pn**	**18 06 34.2**	**0.0**
SJG	**San Juan**	**1.17**	**124**	P	**Pn**	**18 06 34.2**	**0.0**
	165nm,0.3s,baz=308,slow=11,SNR=140						
SJG				S	**Sn**	**18 06 50.8**	**+1.6**
	315nm,0.3s,baz=292,slow=19,SNR=14						
SJG	**San Juan**	**1.17**	**124**	⇑*e*P	**Pn**	**18 06 34.0**	**-0.1**
SJG				*e*S	**Sn**	**18 06 50.4**	**+1.2**
SJG	**San Juan**	**1.17**	**124**	⇑*e*P	**Pn**	**18 06 34.2**	**0.0**
SJG	**San Juan**	**1.17**	**124**	⇑*e*P	**Pn**	**18 06 34.5**	**+0.3**
SJG				*e*S	**Sn**	**18 06 50.4**	**+1.2**
CBYP	**Canovanas**	**1.35**	**111**	⇓*e*P	**Pn**	**18 06 36.5**	**0.0**
CBYP	**Canovanas**	**1.35**	**111**	⇓*e*P	**Pn**	**18 06 36.5**	**0.0**
CPD	**Cerro la Pandu**	**1.40**	**121**	⇑*e*P	**Pn**	**18 06 37.1**	**-0.2**
CPD	**Cerro la Pandu**	**1.40**	**121**	⇑*e*P	**Pn**	**18 06 37.1**	**-0.2**
HUMP	**Col San Antoni**	**1.40**	**116**	⇓*e*P	**Pn**	**18 06 37.5**	**+0.2**
HUMP	**Col San Antoni**	**1.40**	**116**	⇓*e*P	**Pn**	**18 06 37.5**	**+0.2**
MTP	**Monte Pirata**	**1.68**	**113**	⇑*e*P	**Pn**	**18 06 41.0**	**-0.1**
MTP	**Monte Pirata**	**1.68**	**113**	⇑*e*P	**Pn**	**18 06 41.0**	**-0.1**
SMN1	**Samana, DR**	**2.03**	**282**	⇓*e*P	**Pn**	**18 06 45.4**	**-0.6**
SMN1				*e*S	**Sn**	**18 07 11.4**	**+1.1**
STVI	**Saint Thomas**	**2.15**	**101**	⇓*e*P	**Pn**	**18 06 47.5**	**-0.1**
STVI	**Saint Thomas**	**2.15**	**101**	⇓*e*P	**Pn**	**18 06 47.5**	**-0.1**
TBVI	**Tortola**	**2.45**	**98**	⇑*e*P	**Pn**	**18 06 51.8**	**0.0**
TBVI	**Tortola**	**2.45**	**98**	⇑*e*P	**Pn**	**18 06 51.8**	**0.0**
CDVI	**St. Croix**	**2.50**	**114**	⇑*e*P	**Pn**	**18 06 52.5**	**0.0**
CDVI	**St. Croix**	**2.50**	**114**	⇑*e*P	**Pn**	**18 06 52.5**	**0.0**
SDDR	**Presa de Saban**	**3.90**	**274**	⇑*e*P	**Pn**	**18 07 14.0**	**+2.3**
SDDR	**Presa de Saban**	**3.90**	**274**	*e*P	**Pn**	**18 07 13.1**	**+1.4**
SDDR	**Presa de Saban**	**3.90**	**274**	⇑*e*P	**Pn**	**18 07 14.0**	**+2.3**
TKL	**Tuckaleechee C**	**22.32**	**322**	P	**P**	**18 11 10.7**	**+1.7**
	2.3nm,0.4s,mb4.0,baz=52,slow=18,SNR=3.8						
TXAR	**Lajitas Array**	**34.81**	**295**	P	**P**	**18 13 01.9**	**-0.2**
	0.4nm,0.7s,mb3.5,baz=97,slow=7.4,SNR=3.7						
TXAR	**Lajitas Array**	**34.81**	**295**	P	**P**	**18 13 01.9**	**-0.3**
SCHQ	**Schefferville**	**36.00**	**0**	P	**P**	**18 13 12.0**	**0.0**
	0.9nm,0.5s,mb4.0,baz=214,slow=11,SNR=2.2						
NVAR	**Mina Array Bea**	**48.32**	**305**	P	**P**	**18 14 53.1**	**+0.4**
	0.7nm,0.9s,mb3.7,baz=103,slow=6.7,SNR=4.3						
YKA	**Yellowknife Ar**	**54.49**	**335**	P	**P**	**18 15 37.3**	**-1.1**
	0.9nm,0.8s,mb3.8,baz=109,slow=7.3,SNR=10						
TORD	**Torodi Ar. Bea**	**66.11**	**84**	P	**P**	**18 16 59.1**	**+0.3**
	0.4nm,0.6s,mb3.6,baz=274,slow=7.1,SNR=4.2						
ARCES	**ARCESS Array B**	**73.51**	**21**	P	**P**	**18 17 42.5**	**-0.9**
	1.7nm,0.7s,mb4.1,baz=309,slow=7.7,SNR=3.9						
WRA	**Warramunga Arr**	**159.67**	**263**	PKP	PKPdf	18 26 08.2	-2.4
	0.5nm,1.0s,baz=101,slow=4.3,SNR=7.4						
WRA				PKPab	PKPab	18 26 47.9	-1.3
	0.1nm,0.3s,baz=20,slow=7.5,SNR=3.5						
ASAR	**Alice Springs**	**159.76**	**252**	PKPab	PKPab	18 26 48.0	-1.4
	0.5nm,0.9s,baz=93,slow=5.4,SNR=4.4						

IDC 19 18:08:27.4±1.4, 31°.16N×103°.82E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.3/24, mbtmp3.4/5, Error ellipse: s-maj=38.0km s-min=26.9km az=61.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.39**	**200**	Pn	Pn	18 11 40.4	+1.6
	baz=7.1,slow=8.5,SNR=3.0						
KSRS	**Korea Array**	**20.85**	**66**	P	P	18 13 11.2	+0.5
	0.8nm,0.6s,baz=260,slow=11,SNR=5.6						
MKAR	**Makanchi Array**	**22.78**	**319**	P	P	18 13 31.3	-0.1
	0.8nm,0.8s,baz=114,slow=12,SNR=6.5						
WRA	**Warramunga Arr**	**58.65**	**146**	P	P	18 18 26.4	-0.1
	0.6nm,0.4s,baz=338,slow=7.8,SNR=16						
ASAR	**Alice Springs**	**61.66**	**149**	P	P	18 18 46.9	-0.3
	0.2nm,0.7s,baz=337,slow=7.0,SNR=5.7						

*ATH **19** 18:09:33.4, 37°.86N×21°.44E, h27km±2km, MD3.3/4*
*NEIC **19** 18:09:33.2, 37°.86N×21°.44E, h30km, MD3.3(ATH), After ATH.*
*THE **19** 18:09:34.1, 37°.81N×21°.42E, h12km±1km, ML2.7/6, Error ellipse: s-maj=1.5km s-min=0.7km az=57.0*
*CSEM **19** 18:09:34.0±0.3, 37°.84N×21°.43E, h30km, MD3.3, Error ellipse: s-maj=6.3km s-min=5.4km az=68.0*
*ISCJB **19** 18:09:34.2±0.5, 37°.82N±0°.03×21°.43E±0°.03, h27km±4km, Error ellipse: s-maj=4.9km s-min=4.6km az=23.4*
ISC 19 18:09:34.0±0.6, 37°.80N±0°.03×21°.43E±0°.03, h19km±4km, n34, σ1°06/57, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.26**	**6**	*e*Pb	**Pg**	**18 09 39.4**	**-0.6**
RLS				*e*Sb	**Sg**	**18 09 43.9**	**-0.2**
RLS	**Riolos of Patr**	**0.26**	**6**	*e*PB	**Pg**	**18 09 39.4**	**-0.6**
RLS				*e*SB	**Sg**	**18 09 43.9**	**-0.2**
RLS	**Riolos of Patr**	**0.26**	**6**	*e*Pb	**Pg**	**18 09 39.4**	**-0.6**
RLS				*e*Sb	**Sg**	**18 09 43.9**	**-0.2**
UPR	**University Cam**	**0.56**	**30**	P	**Pg**	**18 09 45.0**	**-0.2**
UPR				S	**Sg**	**18 09 52.8**	**0.0**
KFL	**Anninata**	**0.59**	**302**	P	**Pg**	**18 09 45.0**	**-0.8**
KFL				S	**Sg**	**18 09 53.5**	**-0.4**
LAKA	**Lakka**	**0.62**	**44**	P	**Pg**	**18 09 45.3**	**-1.0**
LAKA				S	**Sg**	**18 09 55.3**	**+0.7**
LAKA	**Lakka**	**0.62**	**44**	P	**Pg**	**18 09 45.3**	**-1.0**
LAKA				S	**Sg**	**18 09 55.3**	**+0.7**
EFP	**Efpalio**	**0.73**	**31**	P	**Pb**	**18 09 47.0**	**-1.1**
EFP				S	**Sg**	**18 09 58.8**	**+0.7**
EFP	**Efpalio**	**0.73**	**31**	*e*PN	**Pb**	**18 09 47.0**	**-1.1**
EFP				*e*SN	**Sn**	**18 09 56.8**	**-3.1**
EFP	**Efpalio**	**0.73**	**31**	*e*Pn	**Pb**	**18 09 47.0**	**-1.1**
EFP				*e*Sn	**Sn**	**18 09 56.8**	**-3.1**
EFP				S	**Sg**	**18 09 58.8**	**+0.7**
ITM	**Ithomi**	**0.73**	**147**	*e*Pn	**Pn**	**18 09 49.1**	**-0.2**
ITM	**Ithomi**	**0.73**	**147**	P	**Pb**	**18 09 48.9**	**+0.8**
ITM				S	**Sg**	**18 09 59.8**	**+1.6**
ITM	**Ithomi**	**0.73**	**147**	*e*PN	**Pn**	**18 09 49.1**	**-0.2**
ITM	**Ithomi**	**0.73**	**147**	*e*Pn	**Pn**	**18 09 49.1**	**-0.2**
ITM				S	**Sg**	**18 09 59.8**	**+1.6**
GUR	**Goura**	**0.73**	**79**	P	**Pb**	**18 09 47.4**	**-0.7**
GUR				S	**Sg**	**18 09 58.6**	**+0.4**
GUR	**Goura**	**0.73**	**79**	*e*PN	**Pn**	**18 09 47.3**	**-2.0**
GUR				*e*SN	**Sn**	**18 09 58.0**	**-1.9**
GUR	**Goura**	**0.73**	**79**	P	**Pb**	**18 09 47.4**	**-0.7**
GUR				*e*Sn	**Sn**	**18 09 58.0**	**-1.9**
GUR				S	**Sg**	**18 09 58.6**	**+0.4**
VLS	**Valsamata**	**0.76**	**300**	*e*Pn	**Pb**	**18 09 48.5**	**-0.1**
VLS	**Valsamata**	**0.76**	**300**	P	**Pb**	**18 09 48.5**	**-0.1**
VLS				S	**Sb**	**18 09 59.9**	**+1.3**
VLS	**Valsamata**	**0.76**	**300**	*e*PN	**Pb**	**18 09

comp=Z,158nm,1.0s
MNSR Manas 1.26 103 *e*Pg **Pg 18 21 31.0 +0.3**
comp=Z,158nm,1.0s
MNSR *e*Sg **Sg 18 21 53.2 +6.1**
LACR Lac 1.30 263 ⇓*i*PG **Pn 18 21 28.7 -1.7**
LACR *i* S **Sb 18 21 46.9 -0.6**
LACR Lac 1.30 263 *i* Pg **Pn 18 21 28.7 -1.7**
LACR *i* Sg **Sb 18 21 46.9 -0.6**
ARNR Ardon 1.32 279 ⇑*i*PG **Pn 18 21 29.8 -0.8**
ARNR *e*S **Sg 18 21 49.1 +0.1**
ARNR Ardon 1.32 279 *i* Pg **Pn 18 21 29.8 -0.8**
ARNR *e*Sg **Sg 18 21 49.1 +0.1**
KMSR Komsomolskaya 1.34 287 ⇑*i*PG **Pn 18 21 31.2 +0.2**
KMSR *e*S **Sg 18 21 50.8 +0.9**
KMSR Komsomolskaya 1.34 287 *i* Pg **Pn 18 21 31.2 +0.2**
KMSR *e*Sg **Sg 18 21 50.8 +0.9**
KORR Kora 1.46 274 *e*PG **Pn 18 21 32.2 -0.4**
KORR *i* S **Sg 18 21 53.2 -0.4**
KORR Kora 1.46 274 *e*Pg **Pn 18 21 32.2 -0.4**
KORR *i* Sg **Sg 18 21 53.2 -0.4**
PRTR Priterechnaya 1.50 301 *e*PG **Pn 18 21 33.5 +0.4**
PRTR *e*S **Sg 18 21 55.7 +0.9**
PRTR Priterechnaya 1.50 301 *e*Pg **Pn 18 21 33.5 +0.4**
PRTR *e*Sg **Sg 18 21 55.7 +0.9**
TBLG Delisi 1.59 218 *i* PG **Pn 18 21 33.9 -0.5**
TBLG *i* S **Sn 18 21 55.0 +0.2**
TBLG Delisi 1.59 218 P **Pn 18 21 33.9 -0.5**
TBLG S **Sn 18 21 55.0 +0.2**
TBLG Delisi 1.59 218 *i* Pg **Pn 18 21 33.9 -0.5**
TBLG *i* Sg **Sn 18 21 55.0 +0.2**
MTA Mtatsminda 1.60 216 P **Pn 18 21 33.9 -0.6**
MTA S **Sn 18 21 55.1 +0.2**
ZEI Tsey 1.60 263 ⇓*i*PG **Pn 18 21 33.0 -1.5**
ZEI *i* S **Sn 18 21 55.0 0.0**
ZEI Tsey 1.60 263 *i* Pg **Pn 18 21 33.0 -1.5**
ZEI *i* Sg **Sn 18 21 55.0 0.0**
LSNR Lesken 1.66 281 *e*PN **Pn 18 21 35.3 -0.1**
LSNR *i* S **Sg 18 21 58.8 -1.3**
LSNR Lesken 1.66 281 *e*Pn **Pn 18 21 35.3 -0.1**
LSNR *i* Sg **Sg 18 21 58.8 -1.3**
KEH Kehvi 1.71 247 P **Pn 18 21 34.5 -1.4**
KEH S **Sn 18 21 57.2 -0.4**
GOR Gori 1.76 236 P **Pn 18 21 37.3 +0.7**
GOR S **Sn 18 22 00.4 +1.6**
DIGR Digorskoe uzhe 1.82 268 *e*PN **Pn 18 21 36.9 -0.6**
DIGR *i* S **Sn 18 22 01.5 +1.1**
DIGR Digorskoe uzhe 1.82 268 *e*Pn **Pn 18 21 36.9 -0.6**
DIGR *i* Sg **Sn 18 22 01.5 +1.1**
AKT Akhty 1.96 140 *e*PN **Pn 18 21 41.0 +1.6**
AKT *e*S **Sg 18 22 10.0 +0.6**
AKT pmax pmax
comp=Z,113nm,0.3s
AKT Akhty 1.96 140 *e*Pn **Pn 18 21 41.0 +1.6**
comp=Z,113nm,0.3s
AKT *e*Sg **Sg 18 22 10.0 +0.6**
ONI Oni 1.96 259 P **Pn 18 21 39.6 +0.2**
ONI S **Sn 18 22 05.3 +1.5**
KUBR Kubataba 2.09 294 *i* PN **Pn 18 21 39.8 -1.4**
KUBR Kubataba 2.09 294 *i* Pn **Pn 18 21 39.8 -1.4**
PYA Pyatigorsk 2.42 297 *e*PN **Pn 18 21 44.1 -1.6**
PYA Pyatigorsk 2.42 297 *e*Pn **Pn 18 21 44.1 -1.6**
BEYR Belyy Ugol+ 2.57 295 *e*PN **Pn 18 21 49.0 +1.2**
BEYR Belyy Ugol+ 2.57 295 *e*Pn **Pn 18 21 49.0 +1.2**
GNI Garni 3.00 200 *e*PN **Pn 18 21 55.6 +1.8**
GNI Garni 3.00 200 *e*Pn **Pn 18 21 55.6 +1.8**
DOMR Dombai 3.26 277 *e*PN **Pn 18 21 57.5 +0.2**
DOMR Dombai 3.26 277 *e*Pn **Pn 18 21 57.5 +0.2**
SOC Sochi 4.67 279 *e*PN **Pn 18 22 13.8 -2.8**
SOC *e* 18 23 06.8
SOC pmax pmax
comp=Z,48nm,5.8s
SOC Sochi 4.67 279 *e*Pn **Pn 18 22 13.8 -2.8**
comp=Z,48nm,5.8s
SOC *e*Sn **Sn 18 23 06.8 -3.8**
AKTO Aktyubinsk 11.07 44 ⇑Pn **Pn 18 23 44.0 -0.5**
comp=Z,0.1nm,0.3s
AKTO ⇑Sn **Sn 18 25 40.1 -8.0**
comp=Z,0.3nm,0.5s
AKTO Aktyubinsk 11.07 44 Pn **Pn 18 23 44.0 -0.5**
comp=Z,0.1nm,0.3s
AKTO Sn **Sn 18 25 40.1 -8.0**
comp=Z,0.3nm,0.5s
AB31 Akbulak array 11.49 52 ⇓Pn **Pn 18 23 50.1 -0.1**
comp=Z,0.3nm,0.2s,baz=249,slow=13,SNR=40
AB31 ⇑Sn **Sn 18 25 51.6 -6.5**
comp=Z,0.8nm,0.3s,baz=245,slow=27,SNR=4.9
AB31 Akbulak array 11.49 52 Pn **Pn 18 23 50.1 0.0**
comp=Z,0.3nm,0.2s,SNR=40
AB31 Sn **Sn 18 25 51.6 -6.6**
comp=Z,0.8nm,0.3s,SNR=4.9
ARU Arti 15.66 26 P **Pn 18 24 49.3 +2.6**
ARU Arti 15.66 26 P **Pn 18 24 49.3 +2.6**

*NEIC **19** 18:29:28.9±1.8, 12°.6N×145°.45E, h38km±14km, mb4.4/2, Error ellipse: s-maj=24.3km s-min=11.2km az=88.0*
*ISCJB **19** 18:29:28.5±2.3, 12°.6N±0°.1×145°.4E±0°.2, h49km±16km, mb3.8/13, Error ellipse: s-maj=39.2km s-min=18.3km az=178.5*
*IDC **19** 18:29:29.5±1.0, 12°.64N×145°.42E, h42km±7km, mb3.5/11, mb1 3.6/11, mb1mx3.5/23, mbtmp3.4/11, Error ellipse: s-maj=35.6km s-min=17.2km az=92.0*
ISC 19 18:29:28.1±6.7, 12°.6N±0°.1×145°.5E±0°.2, h31km±44km, h41km±1.0km: pP-P, n18, σ0.9:50/17, mb3.8/13, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.12**	**327**	*e*Pn			**Pn**	**18 29 47.9**	**+0.3**
KSRS	**Korea Array**	**29.28**	**331**	P			**P**	**18 35 27.1**	**-0.5**
	0.1nm,0.3s,mb3.1,baz=150,slow=9.4,SNR=4.3								
WRA	**Warramunga Arr**	**34.19**	**199**	P			**P**	**18 36 10.2**	**-0.6**
	0.4nm,0.7s,mb3.5,baz=24,slow=9.8,SNR=5.2								
WRA				pP			pP	18 36 21.6	+1.6
	0.5nm,0.6s,baz=20,slow=9.9,SNR=3.5								
ASAR	**Alice Springs**	**37.82**	**197**	P			**P**	**18 36 42.3**	**+0.5**
	0.2nm,0.7s,mb3.0,baz=19,slow=8.7,SNR=4.0								
ASAR				pP			pP	18 36 54.2	+3.1
	0.2nm,0.6s,baz=18,slow=9.9,SNR=2.2								
CMAR	**Chiang Mai Arr**	**45.12**	**283**	P			**P**	**18 37 42.0**	**+0.1**
	0.7nm,0.5s,mb3.7,baz=80,slow=6.5,SNR=9.6								
SONM	**Songino Array**	**47.85**	**325**	P			**P**	**18 38 02.3**	**-0.6**
	0.3nm,0.5s,mb3.6,baz=130,slow=6.3,SNR=2.8								
YAK	**Yakutsk**	**50.62**	**350**	*e*P			**P**	**18 38 23.5**	**-0.2**
	3.2nm,0.6s,mb4.4								
LSA	**Lhasa**	**52.97**	**298**	P			**P**	**18 38 42.1**	**+0.1**
	3.5nm,1.0s,mb4.2								
MKAR	**Makanchi Array**	**62.59**	**316**	P			**P**	**18 39 49.1**	**-0.2**
	0.3nm,0.5s,mb3.6,baz=91,slow=9.5,SNR=5.7								
KURK	**Kurchatov**	**65.70**	**320**	P			**P**	**18 40 08.6**	**-1.0**
	0.5nm,0.4s,mb3.9,baz=104,slow=6.4,SNR=5.3								
TKM2	**Tokmak 2**	**66.80**	**311**	P			**P**	**18 40 17.0**	**+0.2**
BVAR	**Borovoye Array**	**71.04**	**322**	P			**P**	**18 40 43.8**	**+0.9**
	0.9nm,0.5s,mb4.0,baz=108,slow=6.4,SNR=9.2								
AKTK	**Aktyubinsk**	**78.78**	**319**	P			**P**	**18 41 28.3**	**+0.6**
AKTK				pP			pP	18 41 40.2	+2.6
AKTO	**Aktyubinsk**	**78.78**	**319**	P			**P**	**18 41 28.3**	**+0.6**
	0.6nm,0.5s,mb3.8,baz=83,slow=14,SNR=4.6								
AKTO				pP			pP	18 41 40.2	+2.6
	0.6nm,0.5s,baz=312,slow=6.8,SNR=2.8								
YKA	**Yellowknife Ar**	**83.42**	**27**	P			**P**	**18 41 52.4**	**+0.3**
	0.4nm,0.6s,mb3.7,baz=283,slow=5.0,SNR=3.0								
YKA				pP			pP	18 42 05.5	+3.4
	0.3nm,0.6s,baz=289,slow=4.8,SNR=3.7								
NVAR	**Mina Array Bea**	**87.03**	**51**	pP			pP	18 42 26.6	+5.8
	0.3nm,0.6s,baz=282,slow=5.2,SNR=2.7								
FINES	**FINESS Array B**	**92.27**	**335**	P			**P**	**18 42 34.5**	**-0.4**
	0.6nm,0.5s,mb4.2,baz=46,slow=5.5,SNR=4.4								
FINES	**FINESS Array B**	**92.27**	**335**	P			**P**	**18 42 34.5**	**-0.4**

IDC 19 19:18:47.2±2.9, 9°.17S×118°.98E, h0km, mb3.6/3, mb1 3.7/4, mb1mx3.5/20, mbtmp3.6/4, ML3.4/1, Error ellipse: s-maj=176.0km s-min=26.2km az=54.0, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.30**	**128**	P			Pn	19 23 02.1	-0.6
	0.1nm,0.3s,baz=302,slow=12,SNR=3.4								
ASAR	**Alice Springs**	**20.29**	**137**	P			P	19 23 25.1	+0.5
	1.7nm,0.5s,baz=312,slow=10.0,SNR=57								
SONM	**Songino Array**	**57.84**	**350**	P			P	19 28 40.6	+0.1
	0.4nm,0.6s,baz=165,slow=6.0,SNR=3.2								
MKAR	**Makanchi Array**	**64.59**	**333**	P			P	19 29 26.4	+0.1
	0.2nm,0.3s,baz=148,slow=7.9,SNR=2.5								

*JMA **19** 19:42:02.3±0.3, 22°.10N×121°.84E, h141km*
TAP 19 19:42:01.7, 21°.98N×121°.62E, h12km, ML3.0, 1D, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.09**	**314**	⇓*i*P			Pg	19 42 04.3	0.0
	baz=316								
LAY				S			Sg	19 42 07.1	+0.8
	baz=316								
TSEB	**Hengchuen, Pin**	**0.67**	**264**	P			Pg	19 42 16.0	+1.2
	baz=263								
TSEB				S			Sg	19 42 26.7	+3.1
	baz=263								
TWK1	**Hengchun**	**0.76**	**268**	P			Pg	19 42 17.0	+0.6
	baz=267								
TWK1				S			Sg	19 42 28.0	+1.8
	baz=267								
TAW	**Tawu**	**0.77**	**300**	*e*P			Pg	19 42 17.6	+1.0
	baz=299								
TAW				S			Sg	19 42 27.2	+0.6
	baz=299								
HEN	**Hengchun**	**0.82**	**272**	*e*P			Pg	19 42 18.1	+0.6
	baz=271								
HEN				S			Sg	19 42 29.4	+1.2
	baz=271								
EAST	**Anshuo**	**0.82**	**300**	*e*P			Pg	19 42 16.8	-0.8
	baz=299								
EAST				*e*S			Sg	19 42 29.0	+0.7
	baz=299								
ECL	**Taimali**	**0.87**	**315**	*e*P			Pg	19 42 17.1	-1.5
	baz=315								
ECL				*e*S			Sg	19 42 29.5	-0.4
	baz=315								
TTN	**Taitung**	**0.89**	**331**	*e*P			Pg	19 42 18.9	+0.1
	baz=330								
TTN				*e*S			Sg	19 42 31.8	+1.4
	baz=330								
TWG	**Pinlang**	**0.98**	**329**	*e*P			Pg	19 42 20.1	-0.5
	baz=329								
TWG				*e*S			Sg	19 42 33.6	+0.3
	baz=329								
SCZT	**Fangliau**	**1.01**	**293**	P			Pb	19 42 21.3	+0.3
	baz=293								
SCZT				*e*S			Sg	19 42 34.8	+0.6
	baz=293								
SSD	**Sandimen**	**1.19**	**310**	*e*P			Pn	19 42 24.2	+0.1
	baz=310								
SSD				*e*S			Sb	19 42 39.9	+0.3
	baz=310								
ELDTW	**Lidau**	**1.33**	**335**	*e*P			Pn	19 42 25.2	-0.8
	baz=335								
ELDTW				*e*S			Sb	19 42 44.2	+0.7
	baz=335								
TWM1	**Shoushan**	**1.39**	**307**	*e*P			Pn	19 42 29.0	+2.1
	baz=307								
TWF1	**Yuli**	**1.40**	**348**	*e*P			Pn	19 42 24.4	-2.6
	baz=348								
TWF1				*e*S			Sn	19 42 44.3	-1.1
	baz=348								
STYT	**Tauyuan**	**1.42**	**326**	*e*P			Pn	19 42 27.1	-0.2
	baz=326								
SGST	**Jiashian**	**1.46**	**319**	*e*P			Pn	19 42 28.7	+0.9
	baz=319								
SGST				*e*S			Sn	19 42 48.3	+1.4
	baz=319								
EHY	**Hungye**	**1.54**	**350**	*e*P			Pn	19 42 28.5	-0.6
	baz=349								
EHY				*e*S			Sn	19 42 49.5	+0.4
	baz=349								
WTP	**Ta-pu**	**1.57**	**324**	*e*P			Pn	19 42 29.9	+0.6
	baz=323								
CHN1	**Nanshi**	**1.57**	**320**	*e*P			Pn	19 42 30.5	+1.1
	baz=320								
CHN1				*e*S			Sn	19 42 51.9	+2.3
	baz=320								
YUS	**Yu-Shan**	**1.62**	**338**	*e*P			Pn	19 42 30.7	+0.6
	baz=337								
TWK	**Hsinying**	**1.65**	**321**	*e*P			Pn	19 42 31.9	+1.3
	baz=321								
TWK				*e*S			Sn	19 42 53.9	+2.2
	baz=321								
CHN4	**Tsaushan**	**1.66**	**325**	*e*P			Pn	19 42 32.0	+1.4
	baz=325								
ALS	**Alishan**	**1.70**	**334**	*e*P			Pn	19 42 32.7	+1.5
	baz=333								
ALS				*e*S			Sn	19 42 54.8	+1.9
	baz=333								
CHN5	**Tsauling**	**1.83**	**332**	*e*P			Pn	19 42 34.2	+1.2
	baz=331								
CHN5				*e*S			Sn	19 42 57.8	+1.7
	baz=331								
ESL	**Shilin**	**1.83**	**355**	*e*P			Pn	19 42 32.8	-0.3
	baz=354								
ESL				*e*S			Sn	19 42 55.1	-1.1
	baz=354								
SMLT	**Sun Moon Lake**	**2.01**	**341**	*e*P			Pn	19 42 36.3	+0.9
	baz=340								
SMLT				*e*S			Sn	19 43 02.0	+1.5
	baz=340								
TYC	**Yuchr**	**2.04**	**340**	P			Pn	19 42 36.8	+0.9
	baz=340								
TYC				*e*S			Sn	19 43 03.1	+1.8
	baz=340								
WHF	**Hehuan Shan**	**2.18**	**351**	*e*P			Pn	19 42 38.9	+1.0
	baz=351								
WHF				*e*S			Sn	19 43 06.0	+1.2
	baz=351								
NNS	**Nan Shan**	**2.46**	**355**	*e*P			Pn	19 42 43.2	+1.6
	baz=354								
TWQ1	**Liyutan**	**2.48**	**342**	*e*P			Pn	19 42 43.2	+1.3
	baz=341								
TWQ1				*e*S			Sn	19 43 14.2	+2.0
	baz=341								
ENTT	**Nioudou**	**2.65**	**359**	*e*P			Pn	19 42 45.8	+1.5
	baz=359								
NSK	**Sanguang**	**2.70**	**355**	*e*P			Pn	19 42 45.7	+0.8
	baz=355								
NSK				*e*S			Sn	19 43 17.7	+0.2
	baz=355								
YOJ	**Yonaguni jima**	**2.78**	**27**	P			Pn	19 42 44.6	-1.5
YOJ				*e*S			Sn	19 43 17.2	-2.4
HATJ	**Hateruma jima**	**2.89**	**44**	*e*S			Sn	19 43 19.1	-3.1
IRIF	**Iriomote-Funau**	**3.05**	**39**	P			Pn	19 42 47.7	-2.0
IRIF				*e*S			Sn	19 43 22.2	-3.9
JKRS	**Kuro-shima**	**3.15**	**44**	P			Pn	19 42 48.9	-2.2
JKRS				*e*S			Sn	19 43 24.4	-4.2
JIJ	**Ishigaki jima**	**3.32**	**44**	P			Pn	19 42 50.7	-2.8
JIJ				*e*S			Sn	19 43 27.8	-5.1
JTJ	**Tarama**	**3.88**	**46**	P			Pn	19 42 58.8	-2.4
JTJ				*e*S			Sn	19 43 41.8	-4.9

*ISCJB **19** 19:45:52.6±0.8, 21°.97N±0°.04×121°.81E±0°.03, h15km±7km, Error ellipse: s-maj=7.1km s-min=5.2km az=171.5*
*JMA **19** 19:45:53.5±0.4, 21°.90N×121°.91E, h20km*
*TAP **19** 19:45:54.9, 22°.00N×121°.62E, h13km, ML3.0, D*
ISC 19 19:45:53.1±0.8, 22°.00N±0°.04×121°.76E±0°.03, h4km±5km, n37, σ1.9:08/60, 1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.20**	**283**	⇓*i*P			**Pg**	**19 45 57.5**	**+0.4**
	baz=302								
LAY				S			**Sg**	**19 46 00.6**	**+0.9**
	baz=302								
TSEB	**Hengchuen, Pin**	**0.81**	**263**	*e*P			**Pg**	**19 46 09.9**	**+1.3**
	baz=261								
TSEB				*e*S			**Sg**	**19 46 19.7**	**+0.6**
	baz=261								
TAW	**Tawu**	**0.88**	**294**	*e*P			**Pg**	**19 46 11.3**	**+1.3**
	baz=298								
TAW				*e*S			**Sg**	**19 46 20.6**	**-0.8**
	baz=298								
TWK1	**Hengchun**	**0.89**	**267**	*e*P			**Pg**	**19 46 09.7**	**-0.5**
	baz=265								
TWK1				*e*S			**Sg**	**19 46 20.4**	**-1.3**
	baz=265								
EAST	**Anshuo**	**0.93**	**295**	*e*P			**Pg**	**19 46 09.7**	**-1.3**
	baz=298								
EAST				*e*S			**Sg**	**19 46 21.7**	**-1.4**
	baz=298								
TTN	**Taitung**	**0.95**	**323**	*e*P			**Pg**	**19 46 11.2**	**-0.1**
	baz=330								
TTN				*e*S			**Sg**	**19 46 25.7**	**+2.1**
	baz=330								
HEN	**Hengchun**	**0.95**	**271**	*e*P			**Pg**	**19 46 10.9**	**-0.5**
	baz=270								
HEN				S			**Sg**	**19 46 22.4**	**-1.3**
	baz=270								
ECL	**Taimali**	**0.96**	**309**	*e*P			**Pg**	**19 46 10.3**	**-1.3**
	baz=314								
ECL				*e*S			**Sg**	**19 46 22.6**	**-1.4**
	baz=314								
TWG	**Pinlang**	**1.04**	**322**	*e*P			**Pg**	**19 46 12.8**	**-0.4**
	baz=328								
TWG				*e*S			**Sg**	**19 46 26.7**	**+0.1**
	baz=328								
SCZT	**Fangliau**	**1.12**	**290**	*e*P			**Pg**	**19 46 14.5**	**-0.2**
	baz=291								
SSD	**Sandimen**	**1.28**	**306**	*e*P			**Pn**	**19 46 17.0**	**-0.9**
	baz=309								
TWP	**Hsiaoliuchiu**	**1.34**	**285**	*e*P			**Pn**	**19 46 17.7**	**-0.9**
	baz=286								
TWP				*e*S			**Sb**	**19 46 33.8**	**-2.6**
	baz=286								
ELDTW	**Lidau**	**1.37**	**330**	*e*P			**Pn**	**19 46 18.1**	**-1.0**
	baz=335								
TWF1	**Yuli**	**1.42**	**342**	*e*P			**Pn**	**19 46 18.2**	**-1.5**
	baz=347								
TWF1				*e*S			**Sb**	**19 46 37.7**	**-0.8**
	baz=347								
STYT	**Tauyuan**	**1.49**	**322**	*e*P			**Pn**	**19 46 20.7**	**0.0**
	baz=325								
TWM1	**Shoushan**	**1.49**	**304**	*e*P			**Pn**	**19 46 21.4**	**+0.7**
	baz=306								
SGST	**Jiashian**	**1.54**	**315**	*e*P			**Pn**	**19 46 22.1**	**+0.8**
	baz=318								
EHY	**Hungye**	**1.56**	**345**	*e*P			**Pn**	**19 46 21.3**	**-0.3**
	baz=349								
EHY				*e*S			**Sn**	**19 46 41.7**	**-0.5**
	baz=349								
WTP	**Ta-pu**	**1.64**	**320**	*e*P			**Pn**	**19 46 23.4**	**+0.8**
	baz=323								
CHN1	**Nanshi**	**1.64**	**316**	*e*P			**Pn**	**19 46 23.0**	**+0.2**
	baz=319								
YUS	**Yu-Shan**	**1.66**	**333**	*e*P			**Pn**	**19 46 24.0**	**+1.0**
	baz=337								
CHN4	**Tsaushan**	**1.73**	**322**	*e*P			**Pn**	**19 46 25.6**	**+1.7**
	baz=324								
TWK	**Hsinying**	**1.73**	**317**	*e*P			**Pn**	**19 46 24.0**	**0.0**
	baz=320								
TWK				*e*S			**Sn**	**19 46 46.4**	**0.0**
	baz=320								
ALS	**Alishan**	**1.75**	**330**	*e*P			**Pn**	**19 46 26.3**	**+2.1**
	baz=333								
CHN5	**Tsauling**	**1.88**	**328**	*e*P			**Pn**	**19 46 27.2**	**+1.2**
	baz=331								
SMLT	**Sun Moon Lake**	**2.04**	**337**	*e*P			**Pn**	**19 46 29.2**	**+0.9**
	baz=340								
SMLT				*e*S			**Sn**	**19 46 53.6**	**-0.5**
	baz=340								
TYC	**Yuchr**	**2.08**	**336**	*e*P			**Pn**	**19 46 30.1**	**+1.4**
	baz=340								
TYC				*e*S			**Sn**	**19 46 55.6**	**+0.6**
	baz=340								
WHF	**Hehuan Shan**	**2.19**	**348**	*e*P			**Pn**	**19 46 32.4**	**+2.1**
	baz=351								
WHF				*e*S			**Sn**	**19 46 58.4**	**+0.6**
	baz=351								
TWQ1	**Liyutan**	**2.51**	**339**	*e*P			**Pn**	**19 46 35.6**	**+0.9**
	baz=341								
ENTT	**Nioudou**	**2.64**	**356**	*e*P			**Pn**	**19 46 39.4**	**+2.9**
	baz=359								
ENTT				*e*S			**Sn**	**19 47 09.7**	**+0.8**
	baz=359								
NSK	**Sanguang**	**2.69**	**352**	*e*P			**Pn**	**19 46 39.5**	**+2.3**
	baz=355								
NSK				*e*S			**Sn**	**19 47 10.4**	**+0.1**
	baz=355								
YOJ	**Yonaguni jima**	**2.71**	**25**	P			**Pn**	**19 46 37.8**	**+0.3**
YOJ				*e*S			**Sn**	**19 47 10.2**	**-0.5**
HATJ	**Hateruma jima**	**2.78**	**42**	*e*S			**Sn**	**19 47 11.3**	**-1.2**
IRIF	**Iriomote-Funau**	**2.95**	**37**	P			**Pn**	**19 46 40.9**	**+0.2**
IRIF				*e*S			**Sn**	**19 47 16.1**	**-0.5**
JKRS	**Kuro-shima**	**3.04**	**42**	P			**Pn**	**19 46 41.6**	**-0.4**
JKRS				*e*S			**Sn**	**19 47 17.9**	**-1.0**
JIJ	**Ishigaki jima**	**3.22**	**42**	P			**Pn**	**19 46 44.1**	**-0.3**
JIJ				*e*S			**Sn**	**19 47 20.8**	**-2.4**
JTJ	**Tarama**	**3.77**	**45**	P			**Pn**	**19 46 52.4**	**+0.3**
JTJ				*e*S			**Sn**	**19 47 35.1**	**-1.8**

*ISCJB **19** 19:54:27.1±1.4, 30°.64S±0°.09×178°.1W±0°.2, h57km±14km, mb4.3/9, MS3.3/2, Error ellipse: s-maj=27.1km s-min=13.8km az=15.1*
*NEIC **19** 19:54:28.7±1.4, 30°.58S×178°.04W, h63km±12km, mb4.4/4, Error ellipse: s-maj=22.4km s-min=13.4km az=111.0*
*IDC **19** 19:54:29.1±1.8, 30°.57S×178°.08W, h63km±16km, mb4.0/5, mb1 4.2/6, mb1mx3.8/17, mbtmp4.0/6, MS3.3/2, Ms1 3.3/2, ms1mx2.9/23, Error ellipse: s-maj=26.2km s-min=15.2km az=113.0*
ISC 19 19:54:28.9±1.2, 30°.58S±0°.09×178°.1W±0°.2, h59km±13km, n20, σ1.9:09/15, mb4.3/9, MS3.3/2, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.34**	**7**	P			**Pn**	**19 54 50.6**	**-0.8**
	120nm,0.3s,baz=221,slow=20,SNR=5.2								
RAO				S			**Sn**	**19 55 08.4**	**+0.2**
	721nm,0.3s,baz=250,slow=18,SNR=12								
URZ	**Urewera**	**8.61**	**206**	P			**Pn**	**19 56 31.4**	**+0.6**
	1.0nm,0.3s,baz=68,slow=5.4,SNR=5.0								
URZ				S			**Sn**	**19 57 57.8**	**-8.7**
	2.4nm,0.3s,baz=324,slow=14,SNR=15								
PPT	**Papeete**	**29.00**	**70**	LR			LR	20 09 48.5	
	comp=Z,47nm,21.7s,MS3.1,baz=183,slow=32								
CTAO	**Charters Tower**	**33.73**	**280**	*e*P			**P**	**20 01 06.5**	**+1.6**
	3.2nm,0.6s,mb4.4								
STKA	**Stephens Creek**	**34.34**	**257**	P			**P**	**20 01 11.1**	**+1.0**
	8.4nm,0.8s,mb4.7,baz=95,slow=8.8,SNR=18								
STKA				LR			LR	20 12 14.3	
	comp=Z,86nm,21.1s,MS3.5,baz=64,slow=31								
ASAR	**Alice Springs**	**43.00**	**267**	P			**P**	**20 02 22.4**	**-0.3**
	2.5nm,0.7s,mb4.1,baz=106,slow=7.2,SNR=37								
WRAB	**Tennant Creek**	**44.00**	**272**	*e*P			**P**	**20 02 30.3**	**-0.4**
	4.3nm,0.8s,mb4.2								
WRA	**Warrumunga Arr**	**44.01**	**272**	P			**P**	**20 02 30.7**	**-0.1**
	1.9nm,0.4s,mb4.2,baz=110,slow=8.1,SNR=29								
WRA	**Warramunga Arr**	**44.01**	**272**	P			**P**	**20 02 30.7**	**-0.1**
CASY	**Casey**	**54.93**	**208**	*e*P			**P**	**20 03 50.9**	**-2.5**
	2.9nm,0.6s,mb4.5								
QSPA	**South Pole Qui**	**59.53**	**180**	P			**P**	**20 04 25.8

MSAG				Sg	Sg	20 09 29.1	+0.4
	1μm,0.2s						
MSAG	Monte S. Angel	0.27	5	Pg	Pg	20 09 24.5	-0.3
MSAG				Sg	Sg	20 09 29.1	+0.4
	1μm,0.2s						
SGRT	San Giovanni R	0.33	342	Pg	Pg	20 09 25.0	-0.8
SGRT				Sg	Sg	20 09 30.6	+0.3
	170nm,0.2s						
SGRT	San Giovanni R	0.33	342	Pg	Pg	20 09 25.0	-0.8
SGRT				Sg	Sg	20 09 30.6	+0.3
	170nm,0.2s						
MRVN	Minervino Murg	0.45	148	Pg	Pg	20 09 26.8	-1.2
MRVN				Sg	Sg	20 09 34.2	+0.1
	132nm,0.1s						
MRVN	Minervino Murg	0.45	148	Pg	Pg	20 09 26.8	-1.2
MRVN				Sg	Sg	20 09 34.2	+0.1
	132nm,0.1s						
SGTA	Sant Agata di	0.50	232	Pg	Pg	20 09 27.8	-1.0
SGTA				Sg	Sg	20 09 36.1	+0.6
	205nm,0.3s						
SGTA	Sant Agata di	0.50	232	Pg	Pg	20 09 27.8	-1.0
SGTA				Sg	Sg	20 09 36.1	+0.6
	205nm,0.3s						
PALZ	Palazzo San Ge	0.50	173	Pg	Pg	20 09 27.9	-1.1
PALZ				Sg	Sg	20 09 35.8	+0.1
	116nm,0.4s						
PALZ	Palazzo San Ge	0.50	173	Pg	Pg	20 09 27.9	-1.1
PALZ				Sg	Sg	20 09 35.8	+0.1
	116nm,0.4s						
VULT	Monte Vulture	0.53	202	Pg	Pg	20 09 29.5	+0.1
VULT				Sg	Sg	20 09 36.9	+0.4
	368nm,0.2s						
VULT	Monte Vulture	0.53	202	Pg	Pg	20 09 29.5	+0.1
VULT				Sg	Sg	20 09 36.9	+0.4
	368nm,0.2s						
MOCO	Biccari - m.te	0.55	262	Pg	Pg	20 09 29.2	-0.6
	89nm,0.8s						
CAFE	Carife	0.64	230	Pg	Pg	20 09 30.7	-0.8
CAFE				Sg	Sg	20 09 41.0	+1.0
	76nm,0.5s						
CAFE	Carife	0.64	230	Pg	Pg	20 09 30.7	-0.8
CAFE				Sg	Sg	20 09 41.0	+1.0
	76nm,0.5s						
ACER	Acerenza	0.66	176	Pg	Pg	20 09 31.5	-0.4
ACER				Sg	Sg	20 09 41.8	+1.2
	199nm,0.4s						
ACER	Acerenza	0.66	176	Pg	Pg	20 09 31.5	-0.4
ACER				Sg	Sg	20 09 41.8	+1.2
	199nm,0.4s						
SNAL	S. Angelo Dei	0.72	225	Pg	Pg	20 09 31.3	-1.8
SNAL				Sg	Sg	20 09 42.8	+0.1
	133nm,0.6s						
SNAL	S. Angelo Dei	0.72	225	Pg	Pg	20 09 31.3	-1.8
SNAL				Sg	Sg	20 09 42.8	+0.1
	133nm,0.6s						
MRLC	Muro Lucano	0.75	203	Pg	Pg	20 09 33.2	-0.3
MRLC				Sg	Sg	20 09 44.5	+1.1
	230nm,0.6s						
MRLC	Muro Lucano	0.75	203	Pg	Pg	20 09 33.2	-0.3
MRLC				Sg	Sg	20 09 44.5	+1.1
	230nm,0.6s						
MRB1	Monte Rocchett	0.75	245	Pg	Pg	20 09 33.5	-0.2
MRB1				Sg	Sg	20 09 46.2	+2.6
	94nm,0.5s						
MRB1	Monte Rocchett	0.75	245	Pg	Pg	20 09 33.5	-0.2
CIGN	Sant'Elia a Pi	0.76	286	Pg	Pg	20 09 33.8	0.0
CIGN	Sant'Elia a Pi	0.76	286	Pg	Pg	20 09 33.8	0.0
AMUR	Altamura	0.77	134	Pg	Pg	20 09 32.6	-1.3
AMUR				Sg	Sg	20 09 44.7	+0.7
	178nm,0.3s						
AMUR	Altamura	0.77	134	Pg	Pg	20 09 32.6	-1.3
AMUR				Sg	Sg	20 09 44.7	+0.7
	178nm,0.3s						
BAI	Bari	0.82	114	*e*Pg	Pg	20 09 35.7	+0.7
BAI				*e*Sg	Sg	20 09 47.1	+1.3
PSB1	Pescosannita	0.83	255	Pg	Pg	20 09 34.4	-0.8
	33nm,0.6s						
PSB1	Pescosannita	0.83	255	Pg	Pg	20 09 34.4	-0.8
	33nm,0.6s						
MCRV	Calabrutti - M	0.85	219	Pg	Pg	20 09 35.2	-0.3
	297nm,0.3s						
MCRV	Calabrutti - M	0.85	219	Pg	Pg	20 09 35.2	-0.3
	297nm,0.3s						
SG1	Sgolgore (BA)	0.85	135	*e*Pg	Pg	20 09 35.8	+0.3
SG1				*e*Sg	Sg	20 09 48.7	+2.0
CSSN	Cassano Irpino	0.87	228	Pg	Pg	20 09 35.0	-0.9
	40nm,0.4s						
CSSN	Cassano Irpino	0.87	228	Pg	Pg	20 09 35.0	-0.9
	40nm,0.4s						
SACR	S. Croce Del S	0.89	267	Pg	Pg	20 09 35.4	-0.7
	37nm,0.6s						
SACR	S. Croce Del S	0.89	267	Pg	Pg	20 09 35.4	-0.7
	37nm,0.6s						
PTRP	Pietrapertosa	0.93	171	Pg	Pg	20 09 37.9	+0.9
	155nm,0.6s						
PTRP	Pietrapertosa	0.93	171	Pg	Pg	20 09 37.9	+0.9
	155nm,0.6s						
MIGL	Miglionico	0.94	153	Pg	Pg	20 09 36.0	-1.2
	178nm,0.4s						
MIGL	Miglionico	0.94	153	Pg	Pg	20 09 36.0	-1.2
	178nm,0.4s						
BSSO	Busso	0.97	276	Pg	Pg	20 09 37.9	+0.1
	66nm,0.5s						
BSSO	Busso	0.97	276	Pg	Pg	20 09 37.9	+0.1
	66nm,0.5s						
MATE	Matera	1.01	142	Pg	Pg	20 09 37.9	-0.6
MATE				Sg	Sg	20 09 52.2	+0.5
	116nm,0.3s						
MATE	Matera	1.01	142	Pg	Pg	20 09 37.9	-0.6
MATE				Sg	Sg	20 09 52.2	+0.5
	116nm,0.3s						
TRIV	Trivento	1.05	288	Pg	Pg	20 09 39.5	+0.3
	67nm,0.5s						
TRIV	Trivento	1.05	288	Pg	Pg	20 09 39.5	+0.3
	67nm,0.5s						
CDRU	Civita di Ruta	1.05	205	Pg	Pg	20 09 38.3	-0.9
CDRU				Sg	Sg	20 09 53.1	+0.2
	54nm,0.6s						
CDRU	Civita di Ruta	1.05	205	Pg	Pg	20 09 38.3	-0.9
CDRU				Sg	Sg	20 09 53.1	+0.2
	54nm,0.6s						
FRES	Fresagrandinar	1.05	301	Pg	Pg	20 09 39.6	+0.3
FRES	Fresagrandinar	1.05	301	Pg	Pg	20 09 39.6	+0.3
LTRZ	Laterza	1.10	139	Pg	Pg	20 09 39.1	-1.1
LTRZ				Sg	Sg	20 09 55.2	+0.6
	82nm,0.3s						
LTRZ	Laterza	1.10	139	Pg	Pg	20 09 39.1	-1.1
LTRZ				Sg	Sg	20 09 55.2	+0.6
	82nm,0.3s						
NOCI	Noci	1.11	126	Pg	Pg	20 09 40.1	-0.3
	94nm,0.3s						
NOCI	Noci	1.11	126	Pg	Pg	20 09 40.1	-0.3
	94nm,0.3s						
MCEL	Monticello	1.12	183	Pg	Pg	20 09 39.6	-1.0
	42nm,0.5s						
MCEL	Monticello	1.12	183	Pg	Pg	20 09 39.6	-1.0
	42nm,0.5s						
SGG	Gregorio Mates	1.13	268	Pg	Pg	20 09 40.2	-0.6
	69nm,0.7s						
SGG	Gregorio Mates	1.13	268	Pg	Pg	20 09 40.2	-0.6
	69nm,0.7s						
CRAC	Craco	1.16	159	Pg	Pn	20 09 40.4	-0.2
	111nm,0.3s						
CRAC	Craco	1.16	159	Pg	Pn	20 09 40.4	-0.2
	111nm,0.3s						
MTSN	Montesano sull	1.18	185	Pg	Pn	20 09 40.3	-0.6
	46nm,0.5s						
MTSN	Montesano sull	1.18	185	Pg	Pn	20 09 40.3	-0.6
	46nm,0.5s						
MIDA	Miranda	1.24	280	Pg	Pn	20 09 42.1	+0.4
MIDA	Miranda	1.24	280	Pg	Pn	20 09 42.1	+0.4
VAGA	Valle Agricola	1.24	269	Pg	Pn	20 09 42.2	+0.5
	67nm,0.4s						
VAGA	Valle Agricola	1.24	269	Pg	Pn	20 09 42.2	+0.5
	67nm,0.4s						
SCHR	S. Chirico Rap	1.25	173	Pg	Pn	20 09 42.0	+0.1
	24nm,0.7s						
SCHR	S. Chirico Rap	1.25	173	Pg	Pn	20 09 42.0	+0.1
	24nm,0.7s						
SIRI	Monte Sirino -	1.26	180	Pg	Pn	20 09 41.4	-0.6
	41nm,0.3s						
SIRI	Monte Sirino -	1.26	180	Pg	Pn	20 09 41.4	-0.6
	41nm,0.3s						
RNI2	Rionero Sannit	1.32	282	Pg	Pn	20 09 43.9	+1.1
RNI2	Rionero Sannit	1.32	282	Pg	Pn	20 09 43.9	+1.1
LPEL	Lama dei Pelig	1.41	296	Pg	Pn	20 09 44.8	+0.8
	54nm,0.2s						
LPEL	Lama dei Pelig	1.41	296	Pg	Pn	20 09 44.8	+0.8
	54nm,0.2s						
SDI	San Donato	1.57	280	Pg	Pn	20 09 47.6	+1.3
	13nm,0.3s						
SDI	San Donato	1.57	280	Pg	Pn	20 09 47.6	+1.3
	13nm,0.3s						
STON	Ston	1.97	43	*e*Pn	Pn	20 09 47.6	-4.1
STON				Sn	Sn	20 10 14.7	-1.3
STON	Ston	1.97	43	*e*Pn	Pn	20 09 47.6	-4.1
STON				Sn	Sn	20 10 14.7	-1.3
NVLJ	Novalja	3.20	347	*e*Pn	Pn	20 10 08.8	+0.1
NVLJ				Sn	Sn	20 10 47.6	+1.0
NVLJ	Novalja	3.20	347	*e*Pn	Pn	20 10 08.7	0.0
NVLJ				Sn	Sn	20 10 47.5	+0.9

MAN 19 20:09:19,12.°51N×120.°90E,h12km,mb4.6,ML3.5,MS3.5, 1C,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJMP	San Jose	0.22	102	*e*P	Pg	20 09 25.0	+1.2
SJMP				*e*S	Sg	20 09 28.4	+1.4
BUSP	Coron	0.84	234	*e*P	Pg	20 09 36.5	+1.1
BUSP				*e*S	Sg	20 09 47.5	+1.1
OTRP	Odiongan	1.11	97	*e*P	Pb	20 09 40.0	-0.1
OTRP				*e*S	Sb	20 09 52.3	-2.2
BOAC	Boac	1.32	44	*e*P	Pn	20 09 42.8	-0.5
BOAC				*e*S	Sb	20 09 53.6	-7.1
LUBP	Lubang	1.38	333	*e*P	Pn	20 09 43.3	-0.8
LUBP				*e*S	Sn	20 09 49.6	-13
CUYO	Cuyo Island	1.65	176	*e*P	Pn	20 09 47.2	-0.6
GQP	Guinayangan	2.05	47⇑	*e*P	Pn	20 09 55.2	+1.9
GQP				*e*S	Sn	20 10 19.7	+0.8
POLP	Polilio Island	2.43	25	*e*P	Pn	20 10 01.4	+2.8
GUIM	Jordan	2.50	138	*e*P	Pn	20 10 01.9	+2.4

IDC 19 20:26:13.7±1.1,13.°31N×145.°27E,h0km,mb3.6/5, mb1 3.9/5,mb1mx3.6/24,mbtmp3.6/5,Error ellipse: s-maj=51.1km s-min=25.9km az=103.0,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	34.75	198	P	P	20 33 05.4	-0.5
	0.7nm,1.0s,baz=20,slow=9.3,SNR=2.8						
ASAR	Alice Springs	38.39	197	P	P	20 33 37.2	+0.3
	0.2nm,0.6s,baz=24,slow=11,SNR=4.8						
KURK	Kurchatov	65.05	320	P	P	20 36 56.3	+0.5
	0.3nm,0.3s,baz=105,slow=6.7,SNR=5.0						
DIB	Dawson Inlet,	74.83	38	T		22 00 08.9	
YKA	Yellowknife Ar	82.93	27	P	P	20 38 39.4	-0.9
	0.4nm,0.4s,baz=284,slow=5.0,SNR=3.8						
NVAR	Mina Array Bea	86.79	51	P	P	20 39 01.7	+1.4
	0.3nm,0.6s,baz=282,slow=5.7,SNR=3.6						

*ISCJB **19** 20:27:44.2±1.0,31.°05N±0.°02×103.°65E±0.°03,h11km±6km, mb4.5/72,MS4.0/20,Error ellipse: s-maj=3.9km s-min=3.5km az=144.6*
*BJI **19** 20:27:45.1,31.°09N×103.°73E,h10km,mB4.8/15,mb4.7/26, ML4.7/23,Ms4.6/34,Ms7 4.4/31*
*NEIC **19** 20:27:46.2±0.2,31.°12N×103.°65E,h10km,mb4.6/38,Error ellipse: s-maj=5.6km s-min=4.5km az=51.0*
*MOS **19** 20:27:47.2±1.1,31.°05N×103.°60E,h33km,mb4.8/34, MS4.2/12,Error ellipse: s-maj=8.5km s-min=5.7km az=101.5*
*IDC **19** 20:27:49.8±2.3,31.°09N×103.°64E,h37km±19km,mb4.0/23, mb1 4.1/25,mb1mx4.0/31,mbtmp4.0/25,ML3.8/2,MS4.1/12, Ms1 4.1/12,ms1mx3.7/37,Error ellipse: s-maj=15.3km s-min=10.5km az=52.0*
*DJA **19** 20:27:49,31.°03N×103.°77E,h19km,mb5.0/14*
ISC 19 20:27:46.5±0.8,31.°06N±0.°02×103.°61E±0.°03,h12km±5km, h22km±6.0km:pP-P,n209,σ1s25/223,mb4.5/72,MS4.0/20, 5C-9D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.19	139⇓	*i*Pg	Pg	20 27 53.4	+2.7
CD2				Sg	Sg	20 27 58.5	+4.9
CD2				smax			
	comp=N,75μm,0.6s						
CD2				smax			
	comp=E,98μm,0.7s						
LZH	Lanzhou	5.02	2	*e*Pn	Pn	20 29 02.4	+0.8
LZH				Pg	Pb	20 29 14.0	-0.3
LZH				Sn	Sn	20 29 59.5	-0.1
LZH				Sg	Sb	20 30 16.6	+2.0
LZH				smax			
	comp=N,420nm,1.0s						
LZH				smax			
	comp=E,2μm,1.1s						
LZH				LR	LR		
	comp=N,12μm,7.7s						
LZH				LR	LR		
	comp=Z,12μm,9.0s						
ENH	Enshi	5.12	97	*e*Pn	Pn	20 29 03.8	+0.8
	comp=Z,281nm,0.6s						
ENH				*e*Pg	Pg	20 29 23.5	-1.1
ENH				*e*Sn	Sn	20 30 00.9	-1.1
GYA	Guiyang	5.30	149	Pn	Pn	20 29 06.6	+1.1
GYA				Sn	Sn	20 30 12.9	+6.3
GYA				smax			
	comp=N,1μm,1.1s						
GYA				smax			
	comp=E,2μm,1.0s						
XAN	Xi'an	5.38	55	Pn	Pn	20 29 05.3	-1.2
XAN				Pg	Pg	20 29 23.5	-6.0
XAN				Sg	Sg	20 30 35.8	-3.4
XAN				smax			
	comp=N,940nm,1.1s						
XAN				smax			
	comp=E,610nm,0.9s						
XAN				LR	LR		
	comp=N,2μm,8.9s						
XAN				LR	LR		
	comp=E,570nm,9.7s						
XAN				LR	LR		
	comp=Z,1μm,10.2s						
KMI	Kunming	5.96	188	⇑Pn	Pn	20 29 16.8	+2.3
KMI				Sn	Sn	20 30 25.3	+2.6
KMI				Sg	Sg	20 30 57.9	0.0
KMI				smax			
	comp=N,420nm,1.2s						
KMI				smax			
	comp=E,250nm,1.4s						
KMI				LR	LR		
	comp=N,5μm,9.3s						
KMI				LR	LR		
	comp=E,6μm,7.8s						
GTA	Gaotai	8.89	341	*e*P	Pn	20 29 55.1	+0.3
GTA				pP		20 29 59.3	
GTA				sP		20 30 02.3	
GTA				S	Sn	20 31 37.3	+2.4
GTA				sS		20 31 42.3	
GTA				pmax	pmax		
	comp=Z,53nm,5.1s						
GTA				LR	LR		
	comp=N,2μm,11.4s						
GTA				LR	LR		
	comp=E,1μm,12.8s						
GTA				LR	LR		
	comp=Z,3μm,18.7s						
LSA	Lhasa	10.85	266	P	Pn	20 30 23.0	+1.4
LSA				LR	LR		
	comp=E,1μm,11.2s						
LSA				LR	LR		
	comp=Z,2μm,11.8s						
LSA	Lhasa	10.85	266	*e*P	Pn	20 30 23.6	+2.0
LSA				pmax	pmax		
	comp=Z,12nm,0.7s						
LSA	Lhasa	10.85	266	*e*Pn	Pn	20 30 23.6	+2.0
	comp=Z,12nm,0.7s						
SHL	Shillong	11.69	245	*e*PKP	Pn	20 30 31.0	-2.1
SHL				*ex*	x	20 34 09.5	
HHC	Hu-ho-hao-te	11.70	31	*e*P	Pn	20 30 35.6	+2.4
HHC				pP		20 30 38.9	
HHC				sP		20 30 41.8	
HHC				PP		20 30 45.0	
HHC				S	Sn	20 32 46.0	+2.4
HHC				sS		20 32 51.8	
HHC				SS		20 33 00.8	
HHC				PcS	PcS	20 39 58.9	+2.4
HHC				ScS	ScS	20 43 30.8	+0.1
HHC				pmax	pmax		
	comp=Z,15nm,0.8s						
HHC				pmax	pmax		
	comp=Z,46nm,6.1s						
HHC				LR	LR		
	comp=N,2μm,9.5s						
HHC				LR	LR		
	comp=E,670nm,7.2s						
HHC				LR	LR		
	comp=Z,620nm,7.9s						
GZH	Guangzhou	11.75	130	P	Pn	20 30 32.8	-1.1
GZH				S	Sn	20 32 46.6	+1.6
GZH				LR	LR		
	comp=N,3μm,9.4s						
GZH				LR	LR		
	comp=E,3μm,11.9s						
GZH				LR	LR		
	comp=Z,6μm,10.1s						
TIA	Tai'an	12.37	62	*e*P	Pn	20 30 41.8	-0.6
CHTO	Chiang Mai	12.90	200	*e*P	Pn	20 30 51.3	+1.6
CHTO				pmax	pmax		
	comp=Z,18nm,0.8s						
CHTO	Chiang Mai	12.90	200	*e*Pn	Pn	20 30 51.3	+1.6
	comp=Z,18nm,0.8s						
NJ2	Nanjing	13.04	82	*e*P	Pn	20 30 50.5	-1.0
NJ2				pP		20 30 54.3	
NJ2				sP		20 30 56.9	
NJ2				PP		20 31 00.4	
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,100nm,4.3s						
NJ2				LR	LR		
	comp=N,820nm,9.6s						
NJ2				LR	LR		
	comp=E,1μm,11.6s						
NJ2				LR	LR		
	comp=Z,2μm,10.7s						
QIZ	Qiongzhong	13.23	153	P	Pn	20 30 53.1	-1.2
QIZ				S	Sn	20 33 20.1	-1.3
QIZ				LR	LR		
	comp=N,3μm,11.3s						
QIZ				LR	LR		
	comp=E,740nm,9.1s						
QIZ				LR	LR		
	comp=Z,4μm,11.9s						
CM31	Chiang Mai Arr	13.24	200	*e*Pn	Pn	20 30 56.6	+2.3
	comp=Z,21nm,0.6s						
CM31				*e*		20 31 05.0	
CMAR	Chiang Mai Arr	13.24	200	Pn	Pn	20 30 56.7	+2.4
	comp=Z,0.1nm,0.3s,baz=12,slow=11,SNR=27						
CMAR				Lg		20 34 45.9	
	comp=Z,0.1nm,0.3s,baz=20,slow=30,SNR=2.5						
CMAR				LR	LR	20 36 59.9	
	comp=Z,231nm,21.7s,baz=358,slow=41						
BJI	Beijing	13.59	45	P	Pn	20 30 56.8	-2.2
BJI				pmax	pmax		
	comp=Z,14nm,0.5s						
TAPN	Taplejung	14.37	259	*e*P	Pn	20 31 08.6	-1.2
	comp=Z,59nm,1.1s						
ODAN	Odare	14.80	258	*e*P	Pn	20 31 12.6	-3.1
	comp=Z,58nm,0.9s						
RAMN	Ramite	15.44	259	*e*P	Pn	20 31 20.4	-3.7
	comp=Z,43nm,1.0s						
JIRN	Jiri	15.56	262	*e*P	Pn	20 31 24.0	-1.8
GUN	Gumba	15.76	263	*e*P	Pn	20 31 26.1	-2.2
PKI	Pulchoki	16.25	262	*e*P	Pn	20 31 32.0	-2.7
KKN	Kakani	16.30	263	*e*P	Pn	20 31 32.4	-2.9
	comp=Z,83nm,0.9s						
KKN	Kakani	16.30	263	*e*P	Pn	20 31 32.4	-2.9
KKN				pmax	pmax		
	comp=Z,83nm,0.9s						
DMN	Daman	16.50	263	*e*P	Pn	20 31 35.3	-2.5
	comp=Z,96nm,1.1s						
SONM	Songino Array	16.89	6	Pn	Pn	20 31 42.3	-0.3
	comp=Z,0.4nm,0.3s,baz=191,slow=14,SNR=11						
SONM				Lg		20 36 40.1	
	comp=Z,0.1nm,0.3s,baz=183,slow=27,SNR=2.2						
SONM				LR	LR	20 38 57.1	
	comp=Z,1μm,19.1s,baz=232,slow=40						
YHNB	Yeheng	16.94	108	*e*Pn	Pn	20 31 44.6	+1.2
	comp=Z,20nm,0.7s						
TPUB	Ta-pu	16.98	113	*e*Pn	Pn	20 31 44.2	+0.2
	comp=Z,20nm,0.7s						
ULN	Ulaanbaatar	16.99	8	*e*P	Pn	20 31 43.1	-0.8
ULN				pmax	pmax		
	comp=Z,17nm,1.1s						
ULN	Ulaanbaatar	16.99	8	*e*Pn	Pn	20 31 43.1	-0.8
	comp=Z,17nm,1.1s						
SSLB	Suanglung	17.00	111	*e*Pn	Pn	20 31 45.4	+1.2
	comp=Z,47nm,0.8s						
WMQ	Urumqi	17.91	320	P	Pn	20 31 54.6	-0.7
WMQ				pmax	pmax		
	comp=Z,21nm,1.0s						
SNY	Shenyang	19.28	51	⇓P	Pn	20 32 15.6	+3.6
SNY				S	Sn	20 35 42.5	-5.6
SNY				pmax	pmax		
	comp=Z,11nm,0.6s						
SNY				LR	LR		
	comp=N,190nm,10.8s						
SNY				LR	LR		
	comp=E,340nm,17.7s						
SNY				LR	LR		
	comp=Z,350nm,17.1s						
ZAK	Zakamensk	19.31	359	*e*P	Pn	20 32 12.1	-0.2
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TLY	Talaya	20.61	0	*e*P	P	20 32 27.0	+1.6
TLY				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TLY	Talaya	20.61	0	*e*P	P	20 32 26.9	+1.6
	comp=Z,5.2nm,0.8s						
JOSI	Joshimath	20.66	275	*e*PKP	P	20 32 27.5	+1.3
MOY	Mondy	20.68	355	*e*P	P	20 32 27.8	+1.6
KSRS	Korea Array	21.05	66	P	P	20 32 30.3	0.0
	comp=Z,16nm,0.8s,mb4.4,baz=264,slow=10,SNR=82						
KSRS				LR	LR	20 41 28.0	
	comp=Z,136nm,18.4s,MS3.4,baz=101,slow=39						
KSRS	Korea Array	21.05	66	P	P	20 32 30.3	0.0
KSRS				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.4						
KSRS				MLR	MLR		
	comp=Z,136nm,18.4s,MS3.4						
IRK	Irkutsk	21.18	1	*e*P	P	20 32 31.9	+0.4
IRK				pmax	pmax		
	comp=Z,92nm,1.4s,mb4.9						
CN2	Changchun	21.43	47	*e*P	P	20 32 34.9	+0.6
CN2				*e*S	S	20 36 31.6	-0.2
CN2				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.5						
CN2				LR	LR		
	comp=N,500nm,14.0s,MS4.2						
CN2				LR	LR		
	comp=E,400nm,14.0s,MS4.2						
CN2				LR	LR		
	comp=Z,300nm,12.0s,MS3.9						
KLP	Kalpa	21.67	278	*e*PKP	P	20 32 38.1	+1.1
KLP				AMb	AMB	20 32 44.9	
	comp=Z,54nm,0.7s,mb5.1						
KLP				*ex*	x	20 36 35.8	
HIA	Hailar	21.89	29	*e*P	P	20 32 39.5	+0.3
HIA				pmax	pmax		
	comp=Z,15nm,0.8s						
HIA	Hailar	21.89	29	*e*P	P	20 32 39.5	+0.3
	comp=Z,15nm,0.8s,mb4.5						
CIT	Chita	22.19	16	*e*P	P	20 32 43.2	+0.8
CIT				*e*		20 32 53.4	
CIT				*e*		20 32 58.2	
CIT				*e*		20 33 06.1	
AGRA	Agra	22.73	267	*ex*	x	20 32 46.2	
MK31	Makanchi Array	22.74	320	*e*P	P	20 32 49.3	+1.0
MKAR	Makanchi Array	22.74	320	P	P	20 32 49.2	+0.9
	comp=Z,6.2nm,0.8s,mb4.1,baz=122,slow=12,SNR=37						
MKAR				ScP	ScP	20 40 14.7	-2.9
	comp=Z,0.3nm,0.2s,baz=96,slow=4.9,SNR=4.3						
MKAR				LR	LR	20 42 21.5	
	comp=Z,1μm,18.8s,MS4.3,baz=156,slow=38						
MKAR	Makanchi Array	22.74	320	P	P	20 32 49.2	+0.9
MKAR				ScP	ScP	20 40 14.7	-2.9
MKAR				LR	LR	20 42 21.5	
BISR	Bishrakh	22.83	270	*e*PKP	P	20 32 49.7	+0.2
NDI	New Delhi	23.00	271	*e*PKP	P	20 32 51.0	-0.2
AYAN	Aya Nagar	23.12	270	*e*PKP	P	20 32 51.6	-0.9
AYAN				AMb	AMB	20 32 58.2	

comp=Z,20nm,1.0s,mb4.5
SONA Sohna 23.21 270 *e*PKP **P 20 32 53.9 +0.5**
NGP Nagpur 24.12 252 *ex* **P 20 32 59.8 -2.4**
KHET Khetri 24.34 270 *e*PKP **P 20 33 03.7 -0.5**
KHET AMb AMB 20 33 05.7
comp=Z,7.3nm,0.8s,mb4.2
MDJ Mudanjiang 24.45 49 P **P 20 33 08.8 +3.7**
MDJ S **S 20 37 30.4 +5.5**
MDJ pmax pmax
comp=Z,25nm,1.9s,mb4.3
MDJ pmax pmax
comp=Z,100nm,3.7s
MDJ LR LR
comp=Z,100nm,16.4s,MS3.4
MDJ Mudanjiang 24.45 49 *e*P **P 20 33 06.3 +1.2**
comp=Z,43nm,1.4s,mb4.7
TKM2 Tokmak 2 25.20 306 *e*P **P 20 33 13.3 +1.4**
TKM2 pmax pmax
comp=Z,16nm,1.2s,mb4.4
TKM2 Tokmak 2 25.20 306 *e*P **P 20 33 13.3 +1.4**
comp=Z,16nm,1.2s,mb4.4
UCH Uchtor 25.75 304 *e*P **P 20 33 19.0 +2.1**
comp=Z,29nm,1.1s,mb4.7
KULM Kulim 25.78 187 *e*P **P 20 33 17.0 -0.4**
comp=Z,6.8nm,0.9s,mb4.2
FRU Bishkek 25.86 305 *e*P **P 20 33 21.0 +3.1**
FRU *e* 20 33 52.0
AAK Ala-Archa 25.88 305 P **P 20 33 19.7 +1.6**
comp=Z,1.3nm,0.3s,mb3.9,baz=101,slow=5.8,SNR=6.5
AAK LR LR 20 45 12.5
comp=Z,944nm,21.3s,MS4.3,baz=91,slow=40
AAK Ala-Archa 25.88 305 P **P 20 33 19.7 +1.6**
AAK pmax pmax
comp=Z,1.0nm,0.4s,mb3.7
AAK MLR MLR
comp=Z,944nm,21.3s,MS4.3
AAK Ala-Archa 25.88 305 *e*P **P 20 33 19.7 +1.6**
comp=Z,17nm,0.9s,mb4.6
AML Almayashu 26.32 303 *e*P **P 20 33 24.6 +2.6**
comp=Z,14nm,1.1s,mb4.4
EKS2 Erkin-Say 26.40 304 *e*P **P 20 33 23.9 +1.1**
comp=Z,9.9nm,1.0s,mb4.3
ZAA0 Zalesovo Array 26.58 335 *e*P **P 20 33 24.0 -0.3**
ZALV Zalesovo Beam 26.58 335 P **P 20 33 23.9 -0.4**
comp=Z,3.1nm,0.6s,mb4.0,baz=134,slow=8.6,SNR=16
ZALV LR LR 20 44 29.9
comp=Z,493nm,20.9s,MS4.0,baz=326,slow=38
ZALV Zalesovo Beam 26.58 335 P **P 20 33 23.9 -0.4**
ZALV pmax pmax
comp=Z,3.0nm,0.6s,mb4.0
ZALV MLR MLR
comp=Z,493nm,20.9s,MS4.0
ZALV Zalesovo Beam 26.58 335 P **P 20 33 23.9 -0.4**
ZALV LR LR 20 44 29.9
KURK Kurchatov 27.04 324 P **P 20 33 28.2 -0.2**
comp=Z,4.8nm,0.6s,mb4.2,baz=129,slow=9.2,SNR=22
KURK LR LR 20 44 50.9
comp=Z,639nm,18.5s,MS4.2,baz=115,slow=38
KURK Kurchatov 27.04 324 *e*P **P 20 33 28.0 -0.4**
KURK pmax pmax
comp=Z,13nm,1.1s,mb4.4
KURK Kurchatov 27.04 324 *e*P **P 20 33 27.9 -0.4**
comp=Z,14nm,1.1s,mb4.4
PSI Prapat 28.45 190 P **P 20 33 41.8 +0.5**
comp=Z,3.3nm,0.4s,mb4.3,baz=345,slow=12,SNR=8.6
PSI LR LR 20 45 52.8
comp=Z,285nm,18.6s,MS3.9,baz=200,slow=38
PSI Prapat 28.45 190 P **P 20 33 41.8 +0.5**
PSI pmax pmax
comp=Z,3.0nm,0.4s,mb4.3
PSI MLR MLR
comp=Z,285nm,18.6s,MS3.9
MJAR Matsushiro Arr 29.16 70 P **P 20 33 46.6 -0.9**
comp=Z,0.5nm,0.4s,mb3.6,baz=272,slow=9.7,SNR=3.1
MJAR LR LR 20 46 22.8
comp=Z,100nm,19.3s,MS3.4,baz=280,slow=38
MJAR Matsushiro Arr 29.16 70 P **P 20 33 46.6 -1.0**
MJAR pmax pmax
comp=Z,1.0nm,0.4s
MJAR MLR MLR
comp=Z,100nm,19.3s
KBL Kabul 29.18 286 *e*P **P 20 33 47.2 -0.6**
KBL pmax pmax
comp=Z,10.0nm,1.1s,mb4.5
KBL Kabul 29.18 286 *e*P **P 20 33 47.2 -0.6**
comp=Z,10nm,1.1s,mb4.5
DAV Davao City (W) 31.49 135 LR LR 20 48 56.6
comp=Z,402nm,18.8s,MS4.1,baz=292,slow=40
BVAR Borovoye Array 32.57 322 P **P 20 34 17.4 0.0**
comp=Z,1.2nm,0.6s,mb4.0,baz=114,slow=9.4,SNR=7.3
BVAR PcP PcP 20 37 01.8 -1.8
comp=Z,1.9nm,0.8s,baz=131,slow=4.1,SNR=6.7
BVAR ScP ScP 20 40 43.9 -3.4
comp=Z,0.8nm,0.8s,baz=125,slow=7.2,SNR=5.2
YAK Yakutsk 35.30 21 *e*P **P 20 34 43.3 +2.3**
YAK *e**PP pP 20 34 51.9 +7.1
YAK *e*PPP 20 36 12.2
YAK *e* 20 37 17.6
YAK *e*S **S 20 40 08.7 -5.8**
YAK *e* 20 45 00.0
YAK pmax pmax
comp=Z,12nm,0.9s,mb4.8
YAK pmax pmax
comp=N,3.0nm,1.3s
YAK smax
comp=N,12nm,2.8s
YAK smax
comp=E,59nm,2.9s
YAK MLR MLR
comp=Z,365nm,19.0s,MS4.2
YAK MLR MLR
comp=N,75nm,15.0s,MS4.0
YAK MLR MLR
comp=E,154nm,12.0s,MS4.0
ABKAR Akbulak array 37.39 312 *e*P **P 20 34 59.4 +0.3**
comp=E,2.3nm,0.7s,mb4.1
AKTK Aktyubinsk 38.86 313 P **P 20 35 12.3 +0.9**
AKTO Aktyubinsk 38.86 313 P **P 20 35 12.3 +0.9**
comp=E,1.0nm,0.5s,mb3.8,baz=111,slow=12,SNR=5.3
AKTO Aktyubinsk 38.86 313 P **P 20 35 12.3 +0.9**
AKTO pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
SVE Sverdlovsk 39.29 324 *e*P **P 20 35 20.1 +5.2**
SVE *e*S **S 20 41 16.5 +1.2**
SVE pmax pmax
comp=Z,12nm,1.0s,mb4.6
SVE MLR MLR
comp=Z,227nm,12.0s,MS4.2
ARU Arti 40.21 322 *c i*P **P 20 35 22.6 0.0**
ARU S **S 20 41 29.8 +0.6**
ARU SS SS 20 44 24.6 -2.4
ARU pmax pmax
comp=Z,10.0nm,2.5s,mb4.1
ARU MLR MLR
comp=Z,395nm,18.0s,MS4.3
ARU Arti 40.21 322 *e*P **P 20 35 22.6 0.0**
comp=Z,7.3nm,0.8s,mb4.5
TIXI Tiksi 42.88 11 *e*P **P 20 35 42.3 -2.0**
TIXI pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
TIXI Tiksi 42.88 11 *e*P **P 20 35 42.2 -2.0**
comp=Z,3.3nm,0.6s,mb4.2
PETK Petropavlovsk- 44.52 44 P **P 20 35 57.0 -0.6**
comp=Z,4.5nm,0.8s,mb4.4,baz=261,slow=8.6,SNR=7.4
PETK Petropavlovsk- 44.52 44 P **P 20 35 57.1 -0.6**
PETK pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
MIB Mutribah 48.09 284 *e*P **P 20 36 25.0 -1.2**
MIB AMb AMB 20 36 39.9
comp=Z,40nm,0.9s,mb5.4
RDF Al-Radifah 48.16 283 *e*P **P 20 36 26.2 -0.5**
RDF AMb AMB 20 36 34.6
comp=Z,18nm,0.9s,mb5.1
ZEI Tsey 48.24 302 *e*P **P 20 36 35.2 +8.1**
ZEI pmax pmax
comp=Z,15nm,1.0s,mb5.0
NAY Al-Naaiem 48.33 283 *e*P **P 20 36 26.6 -1.3**
NAY AMb AMB 20 36 28.0
comp=Z,16nm,0.8s,mb5.1
KIV Kislovodsk 48.99 303 *e*P **P 20 36 33.4 +0.6**
KIV pmax pmax
comp=Z,11nm,1.1s,mb4.8
KIV MLR MLR
comp=Z,112nm,16.0s,MS4.0
BILL Bilibino 51.40 25 P **P 20 36 49.0 -1.8**
BILL *e* 20 37 00.5
BILL pmax pmax
comp=Z,14nm,1.2s,mb4.8
BILL MLR MLR
comp=Z,200nm,15.0s,MS4.3
BILL Bilibino 51.40 25 *e*P **P 20 36 49.5 -1.2**
comp=Z,6.3nm,0.8s,mb4.6
KAKA Kakadu 51.58 143 *e*P **P 20 36 52.4 -0.3**
OBN Obninsk 52.23 318 P **P 20 36 59.0 +1.8**
OBN *e* 20 37 10.4
OBN pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
OBN MLR MLR
comp=Z,500nm,20.0s,MS4.5
KNA Kununurra 52.44 149⇑ *i*P **P 20 36 58.9 -0.2**
comp=Z,18nm,0.7s,mb5.1
ANN Anapa 52.61 305 *e*P **P 20 37 08.0 +7.9**
ANN pmax pmax
comp=Z,15nm,0.9s,mb4.9
FITZ Fitzroy Crossi 53.26 154⇑ *i*P **P 20 37 04.6 -0.5**
comp=Z,12nm,1.1s,mb4.7
FX1 Attu Island--F 53.84 45 P **P 20 37 08.5 -0.6**
comp=Z,5.8nm,0.7s,mb4.6,baz=254,slow=4.5,SNR=6.8
FX1 Attu Island--F 53.84 45 P **P 20 37 08.5 -0.6**
FX1 pmax pmax
comp=Z,6.0nm,0.7s
JOF Joensuu 54.84 328 *e*P **P 20 37 16.7 +0.5**
JOF pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
JOF Joensuu 54.84 328 *ep* **P 20 37 16.7 +0.5**
comp=Z,3.2nm,0.6s,mb4.5
JOF Joensuu 54.84 328 *ep* **P 20 37 16.7 +0.5**
comp=Z,3.2nm,0.6s,mb4.5
BR131 Keskin Array S 56.40 300 P **P 20 37 32.4 +4.6**
comp=Z,5.1nm,1.1s,mb4.5
BRTR Keskin Array B 56.40 300 P **P 20 37 27.3 -0.5**
comp=Z,0.6nm,0.7s,mb3.8,baz=125,slow=6.2,SNR=3.6
BRTR Keskin Array B 56.40 300 *i* P **P 20 37 26.6 -1.2**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
KEV Kevo 56.60 336 *ep* **P 20 37 25.9 -2.8**
KEV Kevo 56.60 336 *ep* **P 20 37 25.9 -2.8**
AKASG Malin Array Be 57.11 313 P **P 20 37 31.7 -0.9**
comp=Z,0.5nm,0.3s,mb4.0,baz=67,slow=7.4,SNR=4.0
AKASG Malin Array Be 57.11 313 P **P 20 37 31.7 -0.9**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
ARCES ARCESS Array B 57.13 336 P **P 20 37 31.3 -1.2**
comp=Z,0.7nm,0.5s,mb4.0,baz=87,slow=7.5,SNR=9.5
ARCES PcP PcP 20 38 25.8 -1.3
comp=Z,1.2nm,0.7s,baz=100,slow=3.7,SNR=4.1
ARCES LR LR 21 04 22.5
comp=Z,279nm,18.1s,MS4.4,baz=279,slow=38
ARCES ARCESS Array B 57.13 336 P **P 20 37 31.3 -1.2**
ARCES 20 38 25.8
ARCES pmax pmax
comp=Z,1.0nm,0.5s
ARCES MLR MLR
comp=Z,279nm,18.1s
KAF Kangasniemi 57.20 327 *e*P **P 20 37 36.2 +3.1**
KAF pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
KAF Kangasniemi 57.20 327 *ep* **P 20 37 36.2 +3.1**
comp=Z,3.3nm,0.8s,mb4.4
KAF Kangasniemi 57.20 327 *ep* **P 20 37 36.2 +3.1**
comp=Z,3.3nm,0.8s,mb4.4
FINES FINESS Array B 57.37 326 P **P 20 37 33.5 -0.8**
comp=Z,1.2nm,0.5s,mb4.2,baz=77,slow=6.9,SNR=9.9
FINES FINESS Array B 57.37 326 P **P 20 37 33.5 -0.8**
FINES pmax pmax
comp=Z,1.0nm,0.5s
VSU Vasula 57.38 323 *e*P **P 20 37 34.7 +0.3**
VSU pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
WRAB Tennant Creek 58.66 146 *e*P **P 20 37 44.0 +0.2**
WRAB pmax pmax
comp=Z,34nm,1.0s,mb5.3
WRAB Tennant Creek 58.66 146 *e*P **P 20 37 44.0 +0.2**
comp=Z,34nm,1.0s,mb5.3
WRA Warramunga Arr 58.67 146 P **P 20 37 44.0 +0.2**
comp=Z,17nm,0.6s,mb5.2,baz=338,slow=7.6,SNR=100
WRA Warramunga Arr 58.67 146 P **P 20 37 44.1 +0.3**
WRA pmax pmax
comp=Z,17nm,0.6s
COEN Coen 58.71 134 *e*P **P 20 37 44.6 +0.3**
VRI Vrincioaia 59.78 308‖ *i*P **P 20 37 53.9 +2.5**
PLOR Plostina 59.84 308‖ *i*P **P 20 38 03.4 +12**
BURAR Bucovina Array 60.34 310‖ *i*P **P 20 38 01.8 +6.6**
BUR08 Bucovina Ar. S 60.35 310 *e*P **P 20 37 55.1 -0.1**
MLR Muntele Rosu 60.41 308‖ *i*P **P 20 37 56.3 +0.6**
LVV L'vov 60.55 313 *e*P **P 20 37 55.6 -1.0**
VOIR 61.03 308‖ *i*P **P 20 38 00.6 +0.7**
KWP Kalwaria Pacla 61.43 313 *e*P **P 20 38 03.1 +0.5**
KWP pmax pmax
comp=Z,12nm,0.8s,mb5.1
KWP Kalwaria Pacla 61.43 313 *e*P **P 20 38 03.1 +0.6**
comp=Z,12nm,0.8s,mb5.1
KWP Kalwaria Pacla 61.43 313‖ *i*P **P 20 38 02.3 -0.3**
ASAR Alice Springs 61.67 148 P **P 20 38 04.7 +0.3**
comp=Z,5.0nm,0.8s,mb4.7,baz=340,slow=6.8,SNR=49
ASAR Alice Springs 61.67 148 P **P 20 38 04.7 +0.3**
ASAR pmax pmax
comp=Z,5.0nm,0.8s
KOLS Kolonicke sedl 61.90 312 *e*P **P 20 38 12.0 +6.3**
KOLS Kolonicke sedl 61.90 312 *ep*P pP 20 38 12.0 +2.4
STHS Stebnicka Huta 62.41 313 *e*P **P 20 38 16.1 +7.0**
STHS *e* pP 20 38 18.2 +5.1
STHS Stebnicka Huta 62.41 313 *ep*P pP 20 38 16.1 +3.0
STHS *es*P sP 20 38 18.2 +3.7
CRVS Cervenica-Dubn 62.42 312 *e*P **P 20 38 08.2 -1.0**
CRVS pmax pmax
comp=Z,3.0nm,1.3s,mb4.3
CRVS Cervenica-Dubn 62.42 312 *e*P **P 20 38 08.2 -1.0**
comp=Z,3.2nm,1.3s,mb4.3
CRVS Cervenica-Dubn 62.42 312 *e*P **P 20 38 08.2 -1.0**
KECS Kecovo 63.16 312 *e*P **P 20 38 21.4 +7.3**
KECS Kecovo 63.16 312 *ep*P pP 20 38 21.4 +3.3
PSZ Piszkesteto 63.71 312‖ *i*P **P 20 38 14.4 -3.4**
VYHS Vyhne 64.20 313 *e*P **P 20 38 21.4 +0.4**
VYHS *e* 20 38 28.4
VYHS pmax pmax
comp=Z,8.0nm,2.1s,mb4.4
VYHS Vyhne 64.20 313 *e*P **P 20 38 21.4 +0.4**
comp=Z,8.0nm,2.1s,mb4.4
VYHS *e* 20 38 28.4
VYHS Vyhne 64.20 313 *e*P **P 20 38 21.4 +0.4**
VYHS *ep*P pP 20 38 28.4 +3.4
KOLL Kolacno 64.45 313 *e*P **P 20 38 30.8 +8.2**
KOLL Kolacno 64.45 313 *ep*P pP 20 38 30.8 +4.2
NB2 NORSAR Subarra 64.47 327 P **P 20 38 21.4 -1.2**
comp=Z,1.9nm,0.7s,mb4.2,baz=75,slow=6.9
NOA NORSAR Array B 64.47 327 P **P 20 38 21.6 -1.0**
comp=Z,0.8nm,0.6s,mb4.0,baz=77,slow=5.3,SNR=4.5
NOA LR LR 21 08 36.0
comp=Z,165nm,18.5s,MS4.2,baz=90,slow=38
NOA NORSAR Array B 64.47 327 P **P 20 38 21.6 -1.0**
NOA pmax pmax
comp=Z,1.0nm,0.6s
NOA MLR MLR
comp=Z,165nm,18.5s
CTA Charters Tower 65.28 136 P **P 20 38 28.3 -0.1**
comp=Z,5.0nm,0.6s,mb4.7,baz=358,slow=7.5,SNR=6.2
CTA Charters Tower 65.28 136 P **P 20 38 28.3 -0.1**
CTA pmax pmax
comp=Z,5.0nm,0.6s
CTA Charters Tower 65.28 136 P **P 20 38 28.3 -0.1**
FORT Forrest 65.73 157 *e*P **P 20 38 31.4 +0.4**
comp=Z,8.9nm,1.0s,mb4.8
BRG Berggiesshubel 66.41 316 *e*P **P 20 38 42.0 +6.8**
comp=Z,4.7nm,1.0s,mb4.5
BRG
comp=Z,384nm,17.1s
BRG
comp=N,147nm,21.1s
BRG
comp=E,294nm,21.1s
BRG Berggiesshubel 66.41 316 *e*P **P 20 38 42.0 +6.7**
BRG pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
BRG MLR MLR
comp=Z,230nm,17.1s,MS4.5
BRG MLR MLR
comp=N,88nm,21.1s,MS4.3
BRG MLR MLR
comp=E,176nm,21.1s,MS4.3
COLD Coldfoot 67.69 24 *e*P **P 20 38 42.3 -0.8**
comp=E,6.4nm,0.9s,mb4.7
BPAW Bear Paw Mtn. 68.83 27 *e*P **P 20 38 49.5 -0.9**
comp=E,5.7nm,0.9s,mb4.5
PPLA Purkeypile 68.91 28 *e*P **P 20 38 50.5 -0.3**
comp=E,7.5nm,0.6s,mb4.8
TRF Thorofare Moun 69.41 27 *e*P **P 20 38 54.2 +0.3**
comp=E,3.3nm,0.8s,mb4.3
COLA College 69.65 26 *e*P **P 20 38 54.6 -0.8**
COLA pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
COLA College 69.65 26 *e*P **P 20 38 54.6 -0.8**
comp=Z,9.6nm,0.8s,mb4.8
KMBO Kilima Mbogo 70.49 256 P **P 20 39 00.5 -0.9**
comp=Z,1.2nm,0.7s,mb3.9,baz=49,slow=20,SNR=5.2
KMBO Kilima Mbogo 70.49 256 P **P 20 39 00.5 -0.9**
KMBO pmax pmax
comp=Z,1.0nm,0.7s
PMR Palmer 70.79 29 P **P 20 39 01.0 -1.4**
PMR pmax pmax
comp=Z,12nm,0.8s,mb4.9
PMR Palmer 70.79 29 P **P 20 39 00.9 -1.5**
comp=Z,12nm,0.8s,mb4.9
KDAK Kodiak Island 71.11 33 P **P 20 39 03.6 -0.8**
comp=Z,5.6nm,0.6s,mb4.7,baz=301,slow=7.4,SNR=6.4
KDAK Kodiak Island 71.11 33 *i* P **P 20 39 03.6 -0.8**
CDF Champ du Feu 71.36 316 *e*P **P 20 39 04.9 -1.2**
EIDS Eidsvold 72.17 136 *e*P **P 20 39 10.8 -0.5**
comp=Z,3.0nm,0.6s,mb4.4
STKA Stephens Creek 72.20 147⇑ *i*P **P 20 39 11.1 -0.1**
comp=Z,4.0nm,0.6s,mb4.5
STKA Stephens Creek 72.20 147 P **P 20 39 11.2 -0.1**
comp=Z,5.0nm,0.6s,mb4.6,baz=326,slow=5.6,SNR=18
LPG La Plagne 72.98 313 *e*P **P 20 39 15.5 -0.4**
comp=Z,16nm,0.8s,mb4.7
LPG La Plagne 72.98 313 *e*P **P 20 39 15.5 -0.4**
LPG pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
LPG La Plagne 72.98 313 *e*P **P 20 39 15.5 -0.4**
comp=Z,7.8nm,0.8s,mb4.7
LPL La Plagne 72.98 313 *e*P **P 20 39 15.4 -0.5**
comp=Z,24nm,0.9s,mb4.8
LPL La Plagne 72.98 313 *e*P **P 20 39 15.4 -0.5**
LPL pmax pmax
comp=Z,12nm,0.9s,mb4.8
LPL La Plagne 72.98 313 *e*P **P 20 39 15.4 -0.5**
comp=Z,12nm,0.9s,mb4.8
CMSA Cobar Meteorol 73.94 143 *e*P **P 20 39 22.3 +0.8**
SMF Signal de Mont 74.23 315 *e*P **P 20 39 21.9 -1.4**
comp=Z,17nm,0.9s,mb4.7
SMF Signal de Mont 74.23 315 *e*P **P 20 39 21.9 -1.4**
SMF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
SMF Signal de Mont 74.23 315 *e*P **P 20 39 21.9 -1.4**
comp=Z,8.6nm,0.9s,mb4.7
AVF Avril sur Loir 74.46 315 *e*P **P 20 39 23.1 -1.5**
comp=Z,15nm,1.0s,mb4.5
AVF Avril sur Loir 74.46 315 *e*P **P 20 39 23.1 -1.5**
AVF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
AVF Avril sur Loir 74.46 315 *e*P **P 20 39 23.1 -1.5**
comp=Z,7.3nm,1.0s,mb4.6
TCF Toulx Ste Croi 75.39 315 *e*P **P 20 39 28.8 -1.2**
YKA Yellowknife Ar 81.86 17 P **P 20 40 04.5 -0.8**
comp=Z,1.5nm,0.7s,mb4.1,baz=330,slow=5.2,SNR=13
YKA Yellowknife Ar 81.86 17 P **P 20 40 04.5 -0.8**
YKA pmax pmax
comp=Z,2.0nm,0.7s
YKA Yellowknife Ar 81.86 17 P **P 20 40 04.5 -0.8**
AFI Afiamalu 92.54 105 LR LR 21 18 45.0
comp=Z,5.9nm,19.3s,MS3.0,baz=335,slow=33
TORD Torodi Ar. Bea 93.25 287 P **P 20 41 00.5 -1.0**
comp=Z,1.0nm,0.9s,mb4.2,baz=57,slow=3.7,SNR=3.5
URZ Urewera 97.16 130 *e*P **P 20 41 21.6 +2.9**
comp=Z,252nm,1.5s

NOU ***19*** *20:36:07.9±0.8, 14°.54S×166°.82E, h30km, MD3.8, ML4.0*
ISCJB ***19*** *20:36:08.0±1.0, 14°.77S±0°.04×167°.29E±0°.06, h111km±9km, mb4.8/48, Error ellipse: s-maj=9.6km s-min=6.5km az=158.6*
BJI ***19*** *20:36:08.8, 14°.80S×167°.30E, h113km, mB5.1/4, mb4.7/12*
NEIC ***19*** *20:36:09.8±0.8, 14°.76S×167°.34E, h113km±7km, mb5.0/30, Error ellipse: s-maj=6.1km s-min=5.8km az=223.0*
LDG ***19*** *20:36:09.6±0.3, 14°.65S×166°.66E, h100km, Mb4.8/4, Error ellipse: s-maj=37.3km s-min=8.9km az=85.0*
IDC ***19*** *20:36:09.9±0.9, 14°.80S×167°.31E, h111km±6km, mb4.4/18, mb1 4.5/18, mb1mx4.5/20, mbtmp4.4/18, MS3.7/7, Ms1 3.7/7, ms1mx3.5/26, Error ellipse: s-maj=17.4km s-min=12.2km az=97.0*
GCMT ***19*** *20:36:13.1±0.3, 14°.79S×167°.08E, h110km±3km, MW5.0, Moment Tensor Solution. s32,c38; s66,c105; Moment tensor: Scale 10¹⁶Nm; Mrr0.17±.13; Mθθ1.71±.13; Mφφ-1.88±.12; Mrθ-2.35±.10; Mθφ2.90±.13; Mφr-0.18±.08; Best double couple: M0 4.10000×10¹⁶ NP1:φs193.00000°, δ58.00000°, λ172.00000°. NP2:φs287.00000°, δ83.00000°, λ32.00000°. Principal axes: T 4.4300, Plg27.0000°, Azm155.0000°; N -0.6400, Plg57.0000°, Azm298.0000°; P -3.7900, Plg17.0000°, Azm56.0000°; Data Used: II IU IC G CN.*
MOS ***19*** *20:36:14.5±1.5, 14°.66S×166°.94E, h149km, mb4.8/10 Error ellipse: s-maj=13.5km s-min=9.9km az=126.7*
ISC 19 20:36:09.5±0.8, 14°.77S±0°.04×167°.32E±0°.06, h110km±7km, h110km±2.9km; pP-P, n189, c0°92/104, mb4.8/48, 13C-1D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.31**	**186**	*e*P	**Pn**	**20 37 53.6**	**0.0**
DZM				AMP		20 39 23.7	
	comp=Z,1μm,3.9s						
DZM	**Mont Dzumac**	**7.31**	**186**	*e*Pn	**Pn**	**20 37 53.9**	**+0.2**
	comp=Z,320nm,0.9s						
DZM				*e*Sn	**Sn**	**20 39 11.2**	**-3.9**
BAYA	**Yate Dam**	**7.36**	**183**	*e*P	**Pn**	**20 37 55.2**	**+0.9**
BAYA				*e*S	**Sn**	**20 39 14.4**	**-1.8**
NOUC	**Port Laguerre**	**7.36**	**187**	*e*P	**Pn**	**20 37 54.7**	**+0.4**
NOUC				*e*S	**Sn**	**20 39 12.6**	**-3.5**
NOUC				AMP		20 39 24.8	
	comp=Z,34nm,3.4s						
ONTRN	**Noumea**	**7.54**	**186**	*e*P	**Pn**	**20 37 57.2**	**+0.4**
HNR	**Honiara**	**8.95**	**306**	*e*P	**Pn**	**20 38 17.2**	**+1.3**
HNR				*e*		20 39 53.0	
HNR				pmax	pmax		
	comp=Z,886nm,1.1s						
HNR	**Honiara**	**8.95**	**306**	*e*Pn	**Pn**	**20 38 17.2**	**+1.2**
	comp=Z,886nm,1.1s						
HNR				*e*Sn	**Sn**	**20 39 53.0**	**-2.0**
MSVF	**Nonsavu**	**10.72**	**107**	*e*Pn	**Pn**	**20 38 39.8**	**0.0**
	comp=Z,131nm,1.4s						
EIDS	**Eidsvold**	**18.53**	**233**	*e*P	**P**	**20 40 19.5**	**+2.1**
	comp=Z,56nm,0.6s						
CTA	**Charters Tower**	**20.78**	**252**	‖ *i*P	**P**	**20 40 43.2**	**+1.3**
	comp=Z,38nm,0.6s						
CTA	**Charters Tower**	**20.78**	**252**	P	**P**	**20 40 43.4**	**+1.5**
	comp=Z,48nm,0.7s,baz=80,slow=12,SNR=48						
CTA	**Charters Tower**	**20.78**	**252**	P	**P**	**20 40 43.4**	**+1.5**
CTAO	**Charters Tower**	**20.78**	**252**	*e*P	**P**	**20 40 42.8**	**+0.9**
CTAO				pmax	pmax		
	comp=Z,45nm,0.7s						
CTAO	**Charters Tower**	**20.78**	**252**	*e*P	**P**	**20 40 42.8**	**+0.8**
	comp=Z,45nm,0.7s						
ARMA	**Armidale**	**21.23**	**220**	*e*P	**P**	**20 40 48.2**	**+1.5**
ARMA	**Armidale**	**21.23**	**220**	*e*P	**P**	**20 40 48.0**	**+1.4**
	comp=Z,115nm,1.4s,mb5.0						
RIV	**Riverview**	**23.96**	**215**	*e*P	**P**	**20 41 14.7**	**+1.0**
URZ	**Urewera**	**24.95**	**162**	P	**P**	**20 41 22.2**	**-0.4**
	comp=Z,63nm,0.9s,mb5.0,baz=39,slow=2.0,SNR=5.8						
URZ				LR	LR	20 48 38.2	
	comp=Z,175nm,19.9s,baz=354,slow=30						
BKZ	**Black Stump Fm**	**25.61**	**163**	P	**P**	**20 41 28.4**	**-0.2**
CNB	**Canberra Magne**	**26.06**	**215**⇑ *i*P		**P**	**20 41 33.5**	**+0.9**
LTZ	**Lake Taylor**	**28.24**	**172**	P	**P**	**20 41 52.1**	**0.0**
STKA	**Stephens Creek**	**29.01**	**230**⇑ *i*P		**P**	**20 42 00.0**	**+1.0**
	comp=Z,86nm,0.5s,mb5.6						
STKA	**Stephens Creek**	**29.01**	**230**	P	**P**	**20 42 00.0**	**+1.0**
	comp=Z,96nm,0.5s,mb5.7,baz=45,slow=8.0,SNR=310						
STKA				ScP	ScP	20 48 36.6	0.0
	comp=Z,4.0nm,0.8s,baz=70,slow=6.5,SNR=6.2						
RPZ	**Rata Peaks**	**29.03**	**174**	P	**P**	**20 41 59.0**	**0.0**
	comp=Z,32nm,0.8s,mb5.0,baz=258,slow=2.0,SNR=20						
RPZ				LR	LR	20 50 42.7	
	comp=Z,36nm,21.9s,baz=347,slow=30						
RPZ	**Rata Peaks**	**29.03**	**174**	*e*P	**P**	**20 41 58.5**	**-0.5**

comp=Z,40nm,0.8s,mb5.1
RPZ LR LR 20 50 42.7
TOO Toolangi 29.85 216 ⇑*iP* **P 20 42 06.9 +0.5**
WRA Warramunga Arr 31.87 256 P **P 20 42 23.0 -1.4**
comp=Z,4.7nm,0.7s,mb4.3,baz=86,slow=9.1,SNR=31
WRA ScP ScP 20 48 45.9 -0.4
comp=Z,2.7nm,0.8s,baz=81,slow=3.6,SNR=15
MOO Moorlands 32.58 208 *eP* **P 20 42 30.9 +0.6**
ASAR Alice Springs 32.71 249 P **P 20 42 30.6 -1.2**
comp=Z,12nm,0.7s,mb4.9,baz=76,slow=9.2,SNR=121
ASAR PcP PcP 20 45 14.8 -0.2
comp=Z,1.1nm,0.7s,baz=73,slow=2.5,SNR=4.8
ASAR ScP ScP 20 48 48.5 -0.6
comp=Z,4.4nm,1.0s,baz=90,slow=2.8,SNR=14
ASAR Alice Springs 32.71 249 P **P 20 42 30.6 -1.1**
ASAR 20 45 14.8
KNA Kununurra 37.18 263 *eP* **P 20 43 09.3 -0.9**
comp=Z,20nm,0.9s,mb5.0
FORT Forrest 39.32 239 ⇑*iP* **P 20 43 27.8 -0.2**
comp=Z,100nm,0.6s,mb5.8
FORT Forrest 39.32 239 *eP* **P 20 43 27.7 -0.4**
comp=Z,99nm,0.6s,mb5.8
FITZ Fitzroy Crossi 40.06 259 *eP* **P 20 43 33.6 -0.7**
comp=Z,16nm,0.6s,mb5.0
FITZ Fitzroy Crossi 40.06 259 *eP* **P 20 43 33.5 -0.8**
comp=Z,7.4nm,0.8s,mb4.6
KLBR Kellerberrin 48.13 241 *eP* **P 20 44 37.3 -1.3**
comp=Z,15nm,0.6s,mb5.0
CBIJ Chichi jima 48.24 329 P **P 20 44 39.2 -0.1**
comp=Z,53nm,0.6s,mb5.5,baz=64,slow=21,SNR=5.6
MJAR Matsushiro Arr 57.96 332 P **P 20 45 50.1 -0.4**
comp=Z,5.0nm,0.6s,mb4.7,baz=173,slow=8.7,SNR=18
MAJO Matsushiro 57.96 332 *eP* **P 20 45 50.1 -0.4**
MAJO pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
MAJO Matsushiro 57.96 332 *eP* **P 20 45 50.1 -0.4**
comp=Z,7.6nm,0.6s,mb4.9
MAT Matsushiro 57.96 332 P **P 20 45 50.1 -0.4**
YULB Yu-li 58.86 309 *eP* **P 20 45 56.1 -0.9**
comp=Z,11nm,1.0s,mb4.8
TPUB Ta-pu 59.31 309 *eP* **P 20 45 59.0 -1.1**
comp=Z,20nm,0.7s,mb5.3
SSLB Suanglung 59.34 310 *eP* **P 20 45 59.3 -1.0**
comp=Z,8.6nm,0.6s,mb5.0
YHNB Yeheng 59.55 311 *eP* **P 20 46 01.6 -0.1**
comp=Z,27nm,0.8s,mb5.3
ERM Erimo 60.74 340 *eP* **P 20 46 11.2 +1.7**
ASAJ Asahikawa 62.79 340 P **P 20 46 24.3 +1.1**
comp=Z,6.0nm,0.8s,mb4.6,baz=176,slow=5.7,SNR=6.0
SBA Scott Base 63.10 180 *e*PKIKP **P 20 46 25.6 +0.8**
SBA Scott Base 63.10 180 *eP* **P 20 46 25.6 +0.8**
CASY Casey 63.51 202 ⇑*iP* **P 20 46 27.6 -0.1**
CASY Casey 63.51 202 *eP* **P 20 46 27.3 -0.4**
comp=Z,45nm,0.9s,mb5.3
KSRS Korea Array 63.80 326 P **P 20 46 30.1 +0.1**
comp=Z,2.8nm,0.8s,mb4.1,baz=141,slow=7.2,SNR=18
KSRS pP pP 20 46 58.0 +0.9
comp=Z,1.2nm,0.8s,baz=139,slow=6.6,SNR=2.8
KSRS LR LR 21 10 28.8
comp=Z,33nm,18.9s,baz=181,slow=32
YSS Yuzh-Sakhalins 65.28 342 *eP* **P 20 46 48.0 +8.6**
PETK Petropavlovsk- 68.10 354 P **P 20 46 57.7 +0.5**
comp=Z,11nm,0.8s,mb4.7,baz=158,slow=7.7,SNR=20
PETK LR LR 21 10 46.1
comp=Z,43nm,21.9s,baz=325,slow=30
MIR Mirnyy 70.32 204 ⇑*iP* **P 20 47 11.0 +0.2**
MIR pmax pmax
comp=Z,43nm,1.2s,mb5.2
ENH Enshi 71.43 309 *eP* **P 20 47 17.7 -0.4**
comp=Z,12nm,0.8s,mb4.8
XAN Xi'an 73.75 313 P **P 20 47 32.0 +0.2**
XAN pP pP 20 48 00.8 +1.3
XAN pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
CMAR Chiang Mai Arr 75.01 294 P **P 20 47 40.9 +1.5**
comp=Z,3.6nm,0.8s,mb4.1,baz=126,slow=4.6,SNR=23
CMAR pP pP 20 48 08.8 +1.6
comp=Z,2.1nm,0.9s,baz=116,slow=4.6,SNR=4.1
CHTO Chiang Mai 75.14 294 *eP* **P 20 47 40.7 +0.5**
CHTO pmax pmax
comp=Z,3.0nm,0.9s,mb4.0
CHTO Chiang Mai 75.14 294 *eP* **P 20 47 40.7 +0.5**
comp=Z,3.2nm,0.9s,mb4.0
SEY Seymchan 78.32 353 ⇑*iP* **P 20 47 56.9 -0.2**
MAW Mawson 81.87 202 ⇑*iP* **P 20 48 16.1 -0.2**
comp=Z,4.9nm,1.0s,mb4.3
MAW Mawson 81.87 202 P **P 20 48 16.2 -0.1**
comp=Z,6.4nm,0.9s,mb4.5,baz=107,slow=6.1,SNR=10
YAK Yakutsk 82.08 343 *eP* **P 20 48 15.9 -1.4**
YAK pmax pmax
comp=Z,28nm,1.0s,mb5.0
YAK pmax pmax
comp=E,4.0nm,1.2s
YAK pmax pmax
comp=N,6.0nm,0.9s
YAK Yakutsk 82.08 343 *eP* **P 20 48 17.8 +0.6**
comp=N,20nm,0.8s,mb5.0
ULN Ulaanbaatar 82.20 324 *eP* **P 20 48 18.4 +0.2**
ULN pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
ULN Ulaanbaatar 82.20 324 *eP* **P 20 48 18.4 +0.2**
comp=Z,5.6nm,0.7s,mb4.5
SONM Songino Array 82.56 324 P **P 20 48 20.8 +0.7**
comp=Z,1.9nm,0.6s,mb4.1,baz=144,slow=7.0,SNR=5.5
BILL Bilibino 82.58 360 *ceP* **P 20 48 19.7 -0.1**
BILL pmax pmax
comp=Z,29nm,1.7s,mb4.8
BILL Bilibino 82.58 360 *eP* **P 20 48 19.8 +0.1**
comp=Z,8.0nm,0.7s,mb4.7
GTA Gaotai 82.73 314 *eP* **P 20 48 22.5 +1.3**
GTA pmax pmax
comp=Z,5.0nm,1.0s,mb4.3
SHL Shillong 83.63 298 *e*PKP **P 20 48 28.0 +1.9**
BPAW Bear Paw Mtn. 84.85 17 *eP* **P 20 48 29.9 -1.5**
comp=Z,2.0nm,0.6s,mb4.2
YBH Yreka Blue Hor 85.41 45 LR LR 21 23 27.3
comp=Z,58nm,18.6s,baz=250,slow=33
HUMO Hull Mountain 85.60 44 *eP* **P 20 48 35.6 0.0**
comp=Z,1.9nm,0.8s,mb4.1
ZAK Zakamensk 85.61 325 *eP* **P 20 48 35.4 -0.1**
LSA Lhasa 85.62 302 *eP* **P 20 48 37.1 +1.0**
LSA pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
LSA Lhasa 85.62 302 *eP* **P 20 48 37.1 +1.0**
comp=Z,4.1nm,0.7s,mb4.5
TLY Talaya 86.05 326 P **P 20 48 37.7 0.0**
comp=Z,42nm,0.7s,mb5.5,SNR=5.5
TLY Talaya 86.05 326 *eP* **P 20 48 37.9 +0.2**
TLY pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
TLY Talaya 86.05 326 *eP* **P 20 48 37.9 +0.2**
comp=Z,4.3nm,0.7s,mb4.5
NVAR Mina Array Bea 87.26 49 P **P 20 48 44.8 +1.0**
comp=Z,1.1nm,0.8s,mb3.8,baz=227,slow=8.8,SNR=5.8
TAPN Taplejung 87.74 299 *eP* **P 20 48 46.6 +0.2**
comp=Z,17nm,0.7s,mb5.2
ODAN Odare 87.86 298 *eP* **P 20 48 46.9 -0.1**
comp=Z,23nm,0.7s,mb5.3
EGAK Eagle 88.33 20 *eP* **P 20 48 46.9 -1.4**
comp=Z,2.5nm,0.8s,mb4.3
RAMN Ramite 88.56 298 *eP* **P 20 48 49.9 -0.4**
SYO Syowa Base 88.69 197 ⇑*eP* **P 20 48 48.3 -1.8**
DLBC Dease Lake 88.95 28 LR LR 21 23 01.2
comp=Z,87nm,20.3s,baz=175,slow=32
JIRN Jiri 89.12 299 *eP* **P 20 48 53.2 +0.2**
GUN Gumba 89.46 299 *eP* **P 20 48 55.4 +0.9**
PKI Pulchoki 89.76 298 *eP* **P 20 48 55.8 -0.1**
comp=Z,16nm,0.8s,mb5.2
TIXI Tiksi 90.02 349 *eP* **P 20 48 55.4 -0.7**
TIXI pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
TIXI Tiksi 90.02 349 *eP* **P 20 48 55.4 -0.7**
comp=Z,6.3nm,1.0s,mb4.7
DMN Daman 90.03 298 *eP* **P 20 48 57.0 -0.2**
comp=Z,26nm,1.0s,mb5.3
ELK Elko 90.28 48 LR LR 21 20 47.5
comp=Z,72nm,19.9s,baz=1.8,slow=30
VNA1 Neumayer--Stat 94.74 181 *eP* **P 20 49 16.2 -1.9**
EGMT Eagleton 96.18 42 *eP* **P 20 49 25.4 +0.3**
comp=Z,17nm,0.8s,mb5.5
TXAR Lajitas Array 96.25 61 P **P 20 49 26.9 +1.1**
comp=Z,0.3nm,0.7s,mb3.9,baz=215,slow=5.2,SNR=4.6
MK31 Makanchi Array 97.27 316 *eP* **P 20 49 29.9 -0.1**
MK31 *ep*P pP 20 49 55.9 -2.8
MKAR Makanchi Array 97.27 316 **P 20 49 30.4 +0.4**
comp=Z,3.4nm,0.7s,mb4.9,baz=88,slow=7.0,SNR=30
MKAR pP pP 20 49 59.5 +0.9
comp=Z,0.9nm,0.6s,baz=81,slow=7.9,SNR=2.6
MKAR Makanchi Array 97.27 316 *ce*P **P 20 49 30.3 +0.3**
MKAR pmax pmax
comp=Z,3.0nm,0.7s
ZALV Zalesovo Beam 97.45 324 P **P 20 49 29.7 -0.9**
comp=Z,3.3nm,0.6s,mb4.9,baz=118,slow=4.8,SNR=20
YKA Yellowknife Ar 97.56 27 P **P 20 49 29.7 -1.2**
comp=Z,0.8nm,0.8s,mb4.3,baz=260,slow=4.5,SNR=7.2
BVAR Borovoye Array 105.81 321 Pdiff Pdif 20 50 07.4 -0.6
comp=Z,0.3nm,0.6s,baz=98,slow=11,SNR=3.5
KEV Kevo 119.78 345 *e*PKIKP PKPdf 20 54 44.6 -1.5
KEV pmax pmax
comp=Z,5.0nm,0.8s
KEV Kevo 119.78 345 *e*pkp PKPdf 20 54 44.6 -1.5
comp=Z,5.1nm,0.8s
KEV Kevo 119.78 345 *e*pkp PKPdf 20 54 44.6 -1.5
comp=Z,5.1nm,0.8s
ARCES ARCESS Array B 120.30 345 PKP PKPdf 20 54 46.6 -0.5
comp=Z,5.2nm,0.6s,baz=81,slow=2.3,SNR=66
JOF Joensuu 122.94 338 *e*PKIKP PKPdf 20 54 50.9 -1.4
JOF pmax pmax
comp=Z,5.0nm,0.6s
JOF Joensuu 122.94 338 *e*pkp PKPdf 20 54 50.9 -1.4
comp=Z,4.9nm,0.6s
JOF Joensuu 122.94 338 *e*pkp PKPdf 20 54 50.9 -1.4
comp=Z,4.9nm,0.6s
KAF Kangasniemi 125.25 339 *e*PKIKP PKPdf 20 54 55.5 -1.3
KAF pmax pmax
comp=Z,5.0nm,0.7s
KAF Kangasniemi 125.25 339 *e*pkp PKPdf 20 54 55.5 -1.3
comp=Z,4.7nm,0.7s,baz=58,slow=2.1
KAF Kangasniemi 125.25 339 *e*pkp PKPdf 20 54 55.5 -1.3
comp=Z,4.7nm,0.7s,baz=58,slow=2.1
FINES FINESS Array B 125.78 338 PKP PKPdf 20 54 57.7 -0.1
comp=Z,1.8nm,0.7s,baz=52,slow=2.3,SNR=13
NB2 NORSAR Subarra130.67 345 PKPdf PKPdf 20 55 07.6 +0.4
comp=Z,0.8nm,0.6s,baz=31,slow=1.9
NOA NORSAR Array B 130.67 345 PKP PKPdf 20 55 07.3 +0.1
comp=Z,1.3nm,0.6s,baz=33,slow=2.0,SNR=6.1
NOA SKPbc SKPbc 20 58 21.1 0.0
comp=Z,5.6nm,0.7s,baz=31,slow=3.1,SNR=13
NOA NORSAR Array B 130.67 345 PKP PKPdf 20 55 07.3 +0.1
NOA SKPbc SKPbc 20 58 21.1 0.0
AKASG Malin Array Be 130.79 326 PKP PKPdf 20 55 07.7 0.0
comp=Z,0.6nm,0.5s,baz=36,slow=2.6,SNR=4.5
AKASG SKPbc SKPbc 20 58 21.5 -0.5
comp=Z,3.0nm,0.7s,baz=46,slow=4.4,SNR=12
BRTR Keskin Array B 132.57 311 PKP PKPdf 20 55 12.2 +0.7
comp=Z,0.7nm,0.6s,baz=119,slow=3.7,SNR=4.1
BRTR SKPbc SKPbc 20 58 29.2 +0.6
comp=Z,1.1nm,0.7s,baz=97,slow=3.3,SNR=6.7
BRTR Keskin Array B 132.57 311 *c i*PKIKP PKPdf 20 55 12.1 +0.7
BRTR pmax pmax
comp=Z,1.0nm,0.6s
MMAI Mount Meron Ar 132.87 301 SKPbc SKPbc 20 58 30.9 +0.9
comp=Z,0.5nm,0.4s,baz=76,slow=3.5,SNR=5.3
CLL Collm 138.11 336 *e*PKP PKPdf 20 55 23.0 +1.6
CLL *e*PKS 20 58 59.0
CLL Collm 138.11 336 *e*PKPdf PKPdf 20 55 23.0 +1.6
CLL *e*PKSdf 20 58 59.0
FETA Feichten 142.38 334 ⇑*iP*PKPdf PKPdf 20 55 25.5 -3.8
comp=Z,3.9nm,0.7s
CDF Champ du Feu 142.63 338 *e*PKP1 PKPdf 20 55 27.2 -2.5
comp=Z,9.3nm,0.7s
HINF Hinteralfeld 143.28 338 *e*PKP1 PKPdf 20 55 27.8 -3.0
HAU Haudompre 143.31 339 *e*PKP1 PKPdf 20 55 29.9 -1.0
comp=Z,15nm,0.7s
AQU L'Aquila 144.50 326 *e*PKIKP PKPdf 20 55 31.9 -1.2
TIP Timpagrande 144.51 319 *e*PKPdf PKPdf 20 55 32.6 -0.6
CABF La Chapelle 144.58 338 *e*PKP1 PKPdf 20 55 32.8 -0.3
comp=Z,23nm,0.7s
OG01 Vacheresse 144.59 337 PKP PKPdf 20 55 33.0 -0.2
FLN La Foliniere 144.64 346 *e*PKP1 PKPdf 20 55 31.9 -1.3
comp=Z,17nm,0.6s
LDF La Druitiere 144.72 346 *e*PKP1 PKPdf 20 55 32.2 -1.1
comp=Z,12nm,0.5s
LOR Lormes 144.79 340 *e*PKP1 PKPdf 20 55 33.0 -0.5
comp=Z,18nm,0.6s
GRR Gorron 145.08 346 *e*PKP1 PKPbc 20 55 33.7 +0.1
comp=Z,37nm,0.5s
SSF Saint Saulge 145.09 341 *e*PKP1 PKPbc 20 55 34.1 +0.4
comp=Z,49nm,0.6s
RSL Roselend 145.15 336 PKP PKPdf 20 55 34.4 +0.2
HYF Humbligny 145.17 342 *e*PKP1 PKPbc 20 55 34.6 +0.7
LPL La Plagne 145.25 336 *e*PKP1 PKPbc 20 55 35.1 +0.9
comp=Z,49nm,0.6s
LPG La Plagne 145.26 336 *e*PKP1 PKPbc 20 55 35.2 +0.9
comp=Z,55nm,0.6s
SMF Signal de Mont 145.34 340 *e*PKP1 PKPbc 20 55 34.6 +0.1
comp=Z,58nm,1.0s
AVF Avril sur Loir 145.38 340 *e*PKP1 PKPbc 20 55 34.7 +0.1
comp=Z,25nm,0.7s
SGMF Saint Gilles 145.58 348 *e*PKP1 PKPbc 20 55 35.1 -0.1
comp=Z,50nm,0.8s
CEL Celeste 145.59 318 *e*PKPdf PKPdf 20 55 35.0 -0.2
ROSF Rostrenen 145.64 349 *e*PKP1 PKPbc 20 55 35.6 +0.3
BNI Bardonecchia 145.65 335 *e*PKP2 PKPab 20 55 36.3 +0.4
BGF Bois d'Agland 145.74 341 *e*PKP1 PKPbc 20 55 36.0 +0.3
comp=Z,51nm,0.6s
MBDF Montbardon 145.88 335 *e*PKP1 PKPbc 20 55 36.5 +0.3
comp=Z,30nm,0.6s
PLDF La Plantade 146.01 340 PKP PKPbc 20 55 38.3 +1.7
QUIF Quistinic 146.02 349 *e*PKP1 PKPbc 20 55 36.3 -0.2
ORIF Oris-en-Rattie 146.08 336 *e*PKP1 PKPbc 20 55 37.3 +0.5
comp=Z,98nm,0.7s
AGO Saint Agoulin 146.10 340 PKP PKPbc 20 55 38.5 +1.7
SAOF Saorge 146.15 333 PKP PKPdf 20 55 36.8 +0.9
TCF Toulx Ste Croi 146.18 341 *e*PKP1 PKPbc 20 55 37.3 +0.2
comp=Z,15nm,0.5s
AUTN L'Aution 146.20 334 PKP PKPbc 20 55 37.6 +0.4
TOUF Mont Tournerai 146.26 334 PKP PKPbc 20 55 37.6 +0.2
SSB Saint Sauveur 146.28 338 *e*PKP2 PKPab 20 55 36.9 -1.4
SBF Sospel 146.30 333 *e*PKP1 PKPbc 20 55 37.9 +0.4
comp=Z,123nm,0.7s
LUCF Luceram 146.32 333 PKP PKPdf 20 55 37.9 +1.7
MVIF Mont Vial 146.40 334 PKP PKPdf 20 55 37.6 +1.3
PYM Petit Puy Mans 146.41 340 PKP PKPab 20 55 39.5 +0.7
MFF Saint Martin d 146.57 344 *e*PKP1 PKPbc 20 55 38.4 +0.2
comp=Z,61nm,0.8s
OCF Saint Nazaire 146.59 336 PKP PKPbc 20 55 39.1 +0.8
OG26 St.-Nazaire-De 146.59 336 PKP PKPdf 20 55 39.1 +2.5
VIVF Saint-Julien-l 146.59 337 *e*PKP1 PKPbc 20 55 38.7 +0.4
comp=Z,20nm,0.7s
PGF Pioggiola 146.61 330 *e*PKP1 PKPbc 20 55 39.1 +0.7
comp=Z,65nm,0.8s
CALN Calern 146.62 334 PKP PKPbc 20 55 38.7 +0.3
LBL Lubilhac 146.78 339 PKP PKPab 20 55 40.9 +0.7
FRF La Foret Royal 146.88 334 *e*PKP1 PKPbc 20 55 39.1 -0.1
comp=Z,46nm,0.8s
SMRF Simiane la Rot 146.99 335 *e*PKP1 PKPbc 20 55 40.0 +0.5
comp=Z,40nm,0.9s
LMR La Mourre 147.13 334 *e*PKP1 PKPbc 20 55 39.7 -0.2
comp=Z,29nm,0.8s
RJF Les Rejaudoux 147.28 341 *e*PKP1 PKPbc 20 55 40.5 +0.3
comp=Z,33nm,0.6s
CAF Calviac 147.44 340 *e*PKP1 PKPbc 20 55 41.1 +0.4
comp=Z,16nm,0.7s
LASF Ste Croix 147.56 338 *e*PKP1 PKPbc 20 55 41.5 +0.5
comp=Z,27nm,0.7s
LFF La Frestale 147.85 342 *e*PKP1 PKPbc 20 55 42.1 +0.3
comp=Z,51nm,0.6s
VSL Villasalto 148.67 326 *e*PKPbc PKPbc 20 55 44.1 0.0
MTLF Montolieu 148.79 339 *e*PKP1 PKPbc 20 55 44.5 +0.2
comp=Z,28nm,0.7s
LRDF Laroque-de-Fa 149.03 338 PKP PKPbc 20 55 45.1 +0.2
FILF Fillols 149.35 338 PKP PKPbc 20 55 46.0 +0.3
EPF Esparros 149.69 341 *e*PKP1 PKPbc 20 55 47.1 +0.6
comp=Z,14nm,0.7s
RESF Ens 149.90 341 PKP PKPbc 20 55 48.2 +1.2
SJPF Ste Jean 150.09 343 *e*PKP1 PKPbc 20 55 48.1 +0.6
comp=Z,12nm,0.7s
ETSF Etsaut 150.09 342 *e*PKP1 PKPbc 20 55 48.7 +1.2
comp=Z,32nm,0.5s
KEST Kesra 151.27 321 PKPbc PKPbc 20 55 51.0 +0.4
comp=Z,3.5nm,0.7s,baz=120,slow=0.9,SNR=14
KEST Kesra 151.27 321 *e*PKPbc PKPbc 20 55 50.7 +0.2
ESDC Sonseca Array 154.04 345 PKPbc PKPbc 20 55 57.4 +0.9
comp=Z,0.5nm,0.6s,baz=9.5,slow=3.9,SNR=4.2
TORD Torodi Ar. Bea 165.96 265 PKP PKPdf 20 56 02.1 -0.3
comp=Z,1.0nm,0.9s,baz=109,slow=1.0,SNR=6.0
TORD PKPab PKPab 20 57 03.2 +0.2
comp=Z,1.9nm,0.8s,baz=97,slow=4.0,SNR=8.8
DBIC Dimbokro 168.88 224 PKP PKPdf 20 56 03.6 -1.0
comp=Z,1.2nm,0.8s,baz=88,slow=19,SNR=3.9

*IDC **19** 20:50:33.5±3.5, 12°.39N×86°.41W, h84km±31km, mb3.6/7, mb1 3.9/9, mb1mx3.7/21, mbtmp3.7/9, Error ellipse: s-maj=34.3km s-min=22.5km az=57.0*
*ISCJB **19** 20:50:33.1±0.3, 12°.10N±0°.05×86°.77W±0°.05, h94km±3km, mb3.9/10, Error ellipse: s-maj=11.0km s-min=3.0km az=135.3*
*CASC **19** 20:50:34.0±1.5, 11°.98N×86°.89W, h71km±8km, MD3.9, ML4.5, mb4.3(NEIC)*
*NEIC **19** 20:50:35.6±1.2, 12°.19N×86°.65W, h111km±10km, mb4.3/5, Error ellipse: s-maj=24.8km s-min=11.0km az=224.0*

ISC 19 20:50:34.0±0.3, 12°.11N±0°.05×86°.77W±0°.05, h88km±3km, n61, σ0°98/71, mb3.9/10, 2C-4D, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.19**	**66**	⇑*iP*	**Pn**	**20 50 45.8**	**-0.9**
COPN				*eP*		20 50 45.9	
LEON	**Leon**	**0.33**	**338**	*eP*	**Pn**	**20 50 46.4**	**-1.1**
CSAN		**0.34**	**77**	*eP*	**Pn**	**20 50 47.0**	**-0.5**
MOMN	**Momotombo**	**0.37**	**36**	*eP*	**Pn**	**20 50 47.7**	**0.0**
CNGN	**Cerro Negro**	**0.40**	**10**	*eP*	**Pn**	**20 50 47.4**	**-0.5**
APYN	**Apoyeque**	**0.43**	**73**	*eP*	**Pn**	**20 50 47.7**	**-0.4**
XAVN	**Gruta Xavier**	**0.43**	**84**	*eP*	**Pn**	**20 50 47.8**	**-0.3**
CRUN	**El Crucero**	**0.47**	**105**	*eP*	**Pn**	**20 50 48.4**	**0.0**
TELN	**Telica**	**0.50**	**353**	*eP*	**Pn**	**20 50 48.8**	**+0.2**
MGAN	**Managua**	**0.51**	**85**	*eP*	**Pn**	**20 50 48.3**	**-0.4**
WILN	**Americas 2**	**0.57**	**84**	*eP*	**Pn**	**20 50 49.0**	**-0.2**
MASN	**Masaya**	**0.61**	**101**	*eP*	**Pn**	**20 50 49.3**	**-0.3**
HUEN		**0.62**	**68**	*eP*	**Pn**	**20 50 49.8**	**+0.1**
HUEN				⇓*iP*		20 50 49.9	
HUEN				*eS*	**Sn**	**20 51 02.2**	**+0.9**
CRIN	**San Cristobal**	**0.65**	**335**	*eP*	**Pn**	**20 50 49.8**	**-0.2**
CRIN				*eS*	**Sn**	**20 51 01.9**	**0.0**
CRIN				AML	AML	20 51 02.8	
	comp=E,17μm,0.2s						
CRIN				AML	AML	20 51 03.1	
	comp=N,15μm,0.8s						
APON	**Apoyo**	**0.71**	**105**	*eP*	**Pn**	**20 50 50.5**	**0.0**
SSN	**San Juan del S**	**1.20**	**132**	⇓*eP*	**Pn**	**20 50 55.5**	**-0.5**
SSN				*eP*		20 50 55.5	
SSN				*eS*	**Sn**	**20 51 12.3**	**-0.2**
CONN	**Concepcion**	**1.24**	**116**	*eP*	**Pn**	**20 50 56.6**	**+0.1**
CNCH	**Conchagua**	**1.56**	**318**	*eP*	**Pn**	**20 51 00.1**	**-0.5**
CNCH				*eP*		20 51 00.1	
CNCH				*eS*	**Sn**	**20 51 21.2**	**+0.6**
GBS3	**Finca Las lm^¡**	**1.84**	**136**	*i P*	**Pn**	**20 51 03.2**	**-0.9**
GB1A	**Boringuen Arri**	**1.85**	**134**	*i P*	**Pn**	**20 51 03.8**	**-0.5**
LAPC	**Finca la Perla**	**1.86**	**135**	*i P*	**Pn**	**20 51 03.3**	**-1.1**
LAPC				*i S*	**Sn**	**20 51 25.4**	**-2.1**
NY14	**Universidad de**	**1.89**	**140**	*i P*	**Pn**	**20 51 05.0**	**+0.3**
GPS1	**Guardaparques**	**1.92**	**133**	*i P*	**Pn**	**20 51 04.8**	**-0.3**
VSM	**San Miguel**	**1.97**	**312**	*eP*	**Pn**	**20 51 05.2**	**-0.6**
VSM				*eP*		20 51 06.5	
VSM				*eS*	**Sn**	**20 51 30.6**	**+0.5**
TGUH	**Tegucigalpa,Un**	**2.00**	**346**	*e*Pn	**Pn**	**20 51 07.3**	**+1.1**
TGUH				*e*Sn	**Sn**	**20 51 34.7**	**+4.0**
TGUH	**Tegucigalpa,Un**	**2.00**	**346**	*eP*	**Pn**	**20 51 07.5**	**+1.2**
TGUH				⇑*iP*		20 51 07.5	
TGUH				*eS*	**Sn**	**20 51 31.9**	**+1.1**
LIM1	**Limonal**	**2.04**	**133**	*i P*	**Pn**	**20 51 06.5**	**-0.3**
GUAB	**Guayabo de Bag**	**2.05**	**133**	*i P*	**Pn**	**20 51 06.8**	**0.0**
MESS	**Mesas**	**2.05**	**131**	*i P*	**Pn**	**20 51 06.8**	**-0.2**
CUI	**Cuipilapa**	**2.13**	**132**	*i P*	**Pn**	**20 51 08.1**	**+0.1**
CAHU	**Cacacuatique**	**2.17**	**320**	*eP*	**Pn**	**20 51 08.9**	**+0.4**
VCR	**Vista de Mar**	**2.26**	**150**	⇓*eP*	**Pn**	**20 51 09.1**	**-0.6**
LFRS	**El Faro**	**2.70**	**304**	*eP*	**Pn**	**20 51 14.8**	**-0.7**
LFRS				*eS*	**Sn**	**20 51 46.5**	**-0.9**
JCR	**Jicaral**	**2.77**	**144**	*eP*	**Pn**	**20 51 16.6**	**+0.1**
JCR				*eS*	**Sn**	**20 51 49.7**	**+0.7**
BOQS	**Boqueron**	**2.94**	**304**	*eP*	**Pn**	**20 51 18.8**	**+0.1**
BOQS				*eP*		20 51 18.9	
BOQS				*eS*	**Sn**	**20 51 53.3**	**+0.2**
CGA2	**Cerro Gallo 2**	**3.07**	**132**	*eP*	**Pn**	**20 51 22.3**	**+1.8**
CGA2				*eS*	**Sn**	**20 51 56.6**	**+0.3**
PRS1	**Puriscal**	**3.20**	**131**	*eP*	**Pn**	**20 51 23.8**	**+1.5**
SBLS	**San Blas**	**3.27**	**302**	*eP*	**Pn**	**20 51 23.7**	**+0.4**
MTO2	**Montecristo 2**	**3.40**	**312**	*eP*	**Pn**	**20 51 25.6**	**+0.6**
LAJ	**Bijagual**	**3.42**	**130**	⇓*eP*	**Pn**	**20 51 23.5**	**-1.7**
BUS	**Buena Vista**	**3.89**	**130**	*eP*	**Pn**	**20 51 33.8**	**+2.2**
BUS				*eS*	**Sn**	**20 52 19.3**	**+3.1**
BAR1		**4.43**	**130**	*eP*	**Pn**	**20 51 40.7**	**+1.8**
APG	**El Apazote**	**4.61**	**309**	P	**Pn**	**20 51 42.7**	**+1.3**
	comp=N,2.8nm,0.3s,baz=135,slow=12,SNR=14						
BCIP	**Isla Barro Col**	**7.41**	**113**	*e*Pn	**Pn**	**20 52 20.4**	**+0.8**
	comp=N,12nm,0.5s						
TEIG	**Tepich**	**8.20**	**350**	Pn	**Pn**	**20 52 32.9**	**+2.6**
CMIG	**Matias Romero**	**9.29**	**303**	P	**Pn**	**20 52 45.6**	**+0.4**
	comp=N,4.9nm,0.3s,baz=139,slow=9.6,SNR=86						
CMIG				S	**Sn**	**20 54 24.2**	**-3.7**
	comp=N,0.9nm,0.3s,baz=317,slow=18,SNR=4.7						
MIAR	**Mount Ida**	**23.18**	**346**	*eP*	**P**	**20 55 32.6**	**-0.5**
	comp=N,2.7nm,0.5s,mb3.8						
TXAR	**Lajitas Array**	**23.27**	**320**	P	**P**	**20 55 34.3**	**+0.4**
	comp=N,5.5nm,0.7s,mb4.0,baz=137,slow=10,SNR=51						
TXAR				pP		20 55 54.3	
	comp=N,0.9nm,0.7s,baz=135,slow=10,SNR=3.6						
TZTN	**Tazewell**	**24.50**	**6**	*eP*	**P**	**20 55 42.8**	**-2.3**
	comp=N,9.8nm,0.7s,mb4.3						
WMOK	**Wichita Mounta**	**25.04**	**336**	*eP*	**P**	**20 55 51.0**	**+1.0**
	comp=N,8.2nm,1.0s,mb4.1						
LPAZ	**La Paz**	**33.70**	**146**	P	**P**	**20 57 08.2**	**+1.3**
	comp=N,0.5nm,0.6s,mb3.5,baz=321,slow=6.5,SNR=3.5						
PDAR	**Pinedale Array**	**36.39**	**331**	P	**P**	**20 57 29.2**	**-0.6**
	comp=N,0.9nm,0.5s,mb3.9,baz=134,slow=11,SNR=3.9						
NVAR	**Mina Array Bea**	**38.40**	**319**	P	**P**	**20 57 47.5**	**+0.6**
	comp=N,0.3nm,0.4s,mb3.5,baz=163,slow=10,SNR=3.6						
SCHQ	**Schefferville**	**45.42**	**16**	P	**P**	**20 58 41.8**	**-2.0**
	comp=N,3.7nm,0.4s,mb4.4,baz=220,slow=7.6,SNR=21						
SCHQ	**Schefferville**	**45.42**	**16**	*eP*	**P**	**20 58 41.3**	**-2.5**
	comp=N,4.3nm,0.5s,mb4.4						
YKA	**Yellowknife Ar**	**54.12**	**344**	P	**P**	**20 59 47.8**	**-1.8**
	comp=N,0.8nm,0.7s,mb3.9,baz=132,slow=8.3,SNR=8.7						
YKA				pP	pP	21 00 09.0	-2.4
	comp=N,0.2nm,0.5s,baz=128,slow=8.0,SNR=2.7						
ESDC	**Sonseca Array**	**76.88**	**52**	P	**P**	**21 02 13.5**	**-3.2**
	comp=N,0.6nm,0.6s,mb3.5,baz=280,slow=4.9,SNR=4.8						
ASAR	**Alice Springs**	**139.76**	**248**	PKhKP		21 09 45.4	
	comp=N,0.9nm,0.7s,baz=104,slow=3.3,SNR=8.6						
ASAR				PKP	PKPdf	21 09 53.0	+0.6
	comp=N,1.0nm,0.7s,baz=93,slow=1.7,SNR=12						
WRA	**Warramunga Arr**	**139.81**	**253**	PKhKP		21 09 45.6	
	comp=N,0.7nm,0.9s,baz=90,slow=3.3,SNR=6.7						
WRA				PKP	PKPdf	21 09 53.2	+0.5

*THE **19** 21:16:40.8, 37°.88N×21°.45E, h4km±2km, ML2.8/6, Error ellipse: s-maj=2.0km s-min=0.7km az=222.0*

ISC 19 21:16:40.0±0.6, 37°.83N±0°.03×21°.45E±0°.04, h11km±7km, n47, σ0§98/69, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.23**	**3**	*e*Pb	**Pg**	**21 16 44.1**	**-0.8**
RLS				*e*Sb	**Sg**	**21 16 49.8**	**+1.7**
RLS	**Riolos of Patr**	**0.23**	**3**	*e*PB	**Pg**	**21 16 44.1**	**-0.8**
RLS				*e*SB	**Sg**	**21 16 49.8**	**+1.7**
RLS	**Riolos of Patr**	**0.23**	**3**	*e*Pb	**Pg**	**21 16 44.1**	**-0.8**
RLS				*e*Sb	**Sg**	**21 16 49.8**	**+1.7**
UPR	**University Cam**	**0.53**	**30**	P	**Pg**	**21 16 50.4**	**+0.1**
UPR				S	**Sg**	**21 16 57.5**	**+0.2**
UPR	**University Cam**	**0.53**	**30**	P	**Pg**	**21 16 50.4**	**+0.1**
UPR				S	**Sg**	**21 16 57.5**	**+0.2**
LAKA	**Lakka**	**0.58**	**45**	P	**Pg**	**21 16 51.5**	**+0.1**
LAKA				S	**Sg**	**21 16 59.1**	**0.0**
LAKA	**Lakka**	**0.58**	**45**	P	**Pg**	**21 16 51.5**	**+0.1**
LAKA				S	**Sg**	**21 16 59.1**	**0.0**
KFL	**Anninata**	**0.60**	**298**	P	**Pg**	**21 16 51.5**	**-0.1**
EFP	**Efpalio**	**0.70**	**31**	P	**Pg**	**21 16 53.1**	**-0.4**
EFP				S	**Sg**	**21 17 02.0**	**-0.7**
EFP	**Efpalio**	**0.70**	**31**	*e*PN	**Pg**	**21 16 51.5**	**-2.0**
EFP				*e*SN	**Sg**	**21 17 01.8**	**-0.9**
EFP	**Efpalio**	**0.70**	**31**	*e*Pn	**Pg**	**21 16 51.5**	**-2.0**
EFP	**Efpalio**	**0.70**	**31**	P	**Pg**	**21 16 53.1**	**-0.4**
EFP				*e*Sn	**Sg**	**21 17 01.8**	**-0.9**
EFP				S	**Sg**	**21 17 02.0**	**-0.7**
GUR	**Goura**	**0.71**	**81**	P	**Pg**	**21 16 53.9**	**+0.1**
GUR	**Goura**	**0.71**	**81**	*e*PN	**Pg**	**21 16 52.4**	**-1.4**
GUR	**Goura**	**0.71**	**81**	*e*Pn	**Pg**	**21 16 52.4**	**-1.4**
GUR	**Goura**	**0.71**	**81**	P	**Pg**	**21 16 53.9**	**+0.1**
ITM	**Ithomi**	**0.75**	**150**	*e*Pn	**Pg**	**21 16 54.4**	**-0.1**
ITM	**Ithomi**	**0.75**	**150**	P	**Pg**	**21 16 56.0**	**+1.5**
ITM	**Ithomi**	**0.75**	**150**	*e*PN	**Pg**	**21 16 54.4**	**-0.1**
ITM	**Ithomi**	**0.75**	**150**	*e*Pn	**Pg**	**21 16 54.4**	**-0.1**
ITM	**Ithomi**	**0.75**	**150**	P	**Pg**	**21 16 56.0**	**+1.5**
VLS	**Valsamata**	**0.77**	**297**	*e*Pn	**Pg**	**21 16 52.7**	**-2.1**
VLS	**Valsamata**	**0.77**	**297**	P	**Pg**	**21 16 54.0**	**-0.8**
VLS				S	**Sg**	**21 17 06.1**	**+1.3**
VLS	**Valsamata**	**0.77**	**297**	*e*PN	**Pg**	**21 16 52.7**	**-2.1**
VLS	**Valsamata**	**0.77**	**297**	*e*Pn	**Pg**	**21 16 52.7**	**-2.1**
VLS	**Valsamata**	**0.77**	**297**	P	**Pg**	**21 16 54.0**	**-0.8**
VLS				S	**Sg**	**21 17 06.1**	**+1.3**
KALE	**Kalithea**	**0.78**	**44**	P	**Pg**	**21 16 55.0**	**-0.1**
KALE				S	**Sg**	**21 17 05.7**	**+0.4**
KALE	**Kalithea**	**0.78**	**44**	P	**Pg**	**21 16 55.0**	**-0.1**
KALE				S	**Sg**	**21 17 05.7**	**+0.4**
VLX	**Vlachokerasia**	**0.87**	**122**	P	**Pg**	**21 16 57.2**	**+0.5**
VLX	**Vlachokerasia**	**0.87**	**122**	*e*PN	**Pg**	**21 16 56.6**	**-0.1**
VLX	**Vlachokerasia**	**0.87**	**122**	*e*Pn	**Pg**	**21 16 56.6**	**-0.1**
VLX	**Vlachokerasia**	**0.87**	**122**	P	**Pg**	**21 16 57.2**	**+0.5**
PYL	**PYLOS**	**0.96**	**166**	P	**Pg**	**21 16 59.2**	**+0.7**
PYL				S	**Sg**	**21 17 14.9**	**+3.9**
PYL	**PYLOS**	**0.96**	**166**	*e*PN	**Pg**	**21 16 57.4**	**-1.1**
PYL	**PYLOS**	**0.96**	**166**	*e*Pn	**Pg**	**21 16 57.4**	**-1.1**
PYL	**PYLOS**	**0.96**	**166**	P	**Pg**	**21 16 59.2**	**+0.7**
PYL				S	**Sg**	**21 17 14.9**	**+3.9**
DSF	**Desfina**	**1.03**	**55**	P	**Pg**	**21 16 59.1**	**-0.7**
DSF				S	**Sg**	**21 17 14.3**	**+1.1**
DSF	**Desfina**	**1.03**	**55**	P	**Pg**	**21 16 59.1**	**-0.7**
DSF				S	**Sg**	**21 17 14.3**	**+1.1**
EVR	**Evrytania**	**1.12**	**14**	*e*Pn	**Pg**	**21 16 59.2**	**-2.4**
EVR	**Evrytania**	**1.12**	**14**	*e*PN	**Pg**	**21 16 59.2**	**-2.4**
EVR	**Evrytania**	**1.12**	**14**	*e*Pn	**Pg**	**21 16 59.2**	**-2.4**
LKD2	**Lefkada island**	**1.15**	**327**	P	**Pb**	**21 17 00.6**	**-1.2**
LKD2				S	**Sg**	**21 17 18.1**	**+1.1**
LKD2	**Lefkada island**	**1.15**	**327**	P	**Pb**	**21 17 00.6**	**-1.2**
AGG	**Agios Georgios**	**1.38**	**30**	P	**Pn**	**21 17 05.8**	**+0.6**
AGG				S	**Sb**	**21 17 23.6**	**+0.2**
AGG	**Agios Georgios**	**1.38**	**30**	P	**Pn**	**21 17 05.8**	**+0.6**
AGG				S	**Sb**	**21 17 23.6**	**+0.2**
LKR	**Lokris**	**1.47**	**56**	P	**Pn**	**21 17 07.3**	**+0.9**
LKR	**Lokris**	**1.47**	**56**	P	**Pn**	**21 17 07.3**	**+0.9**

*IDC **19** 21:17:30.6±1.3, 33°.16N×91°.91E, h0km, mb3.4/5, mb1 3.7/8, mb1mx3.5/26, mbtmp3.5/8, ML3.4/3, Error ellipse: s-maj=61.1km s-min=18.2km az=63.0*

*NEIC **19** 21:17:36.8±1.2, 33°.33N×92°.11E, h46km±14km, mb3.4/6, Error ellipse: s-maj=11.3km s-min=8.4km az=54.0*

*ISCJB **19** 21:17:36.2±1.2, 33°.34N±0°.05×92°.08E±0°.08, h59km±14km, mb3.8/6, Error ellipse: s-maj=11.6km s-min=9.0km az=172.3*

ISC 19 21:17:37.5±1.0, 33°.37N±0°.05×92°.06E±0°.08, h52km±12km, n23, σ0§92/24, mb3.8/6, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.74**	**192**	*e*Pn	**Pn**	**21 18 33.0**	**+0.3**
LSA				Sn	**Sn**	**21 19 14.4**	**-1.0**
ENH	**Enshi**	**15.13**	**97**	Pn	**Pn**	**21 21 08.5**	**+0.5**
	2.3nm,0.5s						
MKAR	**Makanchi Array**	**15.34**	**334**	Pn	**Pn**	**21 21 08.9**	**-1.5**
	0.1nm,0.3s,baz=134,slow=12,SNR=2.2						
CMAR	**Chiang Mai Arr**	**16.08**	**156**	Pn	**Pn**	**21 21 15.8**	**-4.3**
	0.1nm,0.3s,baz=330,slow=13,SNR=4.6						
UCH	**Uchtor**	**16.43**	**308**	*e*Pn	**Pn**	**21 21 26.0**	**+1.6**
AAK	**Ala-Archa**	**16.63**	**309**	Pn	**Pn**	**21 21 27.7**	**+0.8**
EKS2	**Erkin-Say**	**17.11**	**308**	*e*Pn	**Pn**	**21 21 33.5**	**+0.7**
	1.2nm,0.5s						
SONM	**Songino Array**	**18.05**	**33**	P	**Pn**	**21 21 45.8**	**+1.5**
	0.3nm,0.3s,baz=210,slow=12,SNR=6.2						
ULN	**Ulaanbaatar**	**18.37**	**34**	*e*P	**Pn**	**21 21 47.5**	**-0.7**
	0.9nm,0.4s						
KBL	**Kabul**	**19.13**	**280**	*e*P	**Pn**	**21 21 57.8**	**+0.3**
	2.9nm,0.7s						
KURK	**Kurchatov**	**19.95**	**334**	P	**Pn**	**21 22 06.5**	**-0.5**
	1.2nm,0.7s,baz=144,slow=12,SNR=8.0						
KURK	**Kurchatov**	**19.95**	**334**	*e*P	**Pn**	**21 22 05.6**	**-1.4**
	0.7nm,0.6s						
TLY	**Talaya**	**20.15**	**21**	P	**P**	**21 22 06.0**	**-1.2**
ZALV	**Zalesovo Beam**	**21.21**	**348**	P	**P**	**21 22 18.6**	**+0.1**
	0.3nm,0.3s,mb3.1,baz=165,slow=12,SNR=5.5						
BVAR	**Borovoye Array**	**25.04**	**328**	P	**P**	**21 22 56.7**	**+0.2**
	0.2nm,0.3s,mb3.1,baz=135,slow=9.2,SNR=2.8						
CSS	**Prodhromos**	**48.01**	**289**	P	**P**	**21 26 11.2**	**-0.1**
TIRR	**Tirgusor**	**49.60**	**303**	*e*P	**P**	**21 26 21.1**	**-2.3**
	9.8nm,1.1s,mb4.8						
TIP	**Timpagrande**	**59.37**	**299**	*e*P	**P**	**21 27 34.5**	**+0.1**
	3.6nm,0.9s,mb4.4						
AQU	**L'Aquila**	**60.70**	**304**	P	**P**	**21 27 43.3**	**-0.1**
WRA	**Warramunga Arr**	**66.61**	**136**	P	**P**	**21 28 23.4**	**+0.8**
	0.4nm,0.7s,mb3.6,baz=322,slow=6.0,SNR=7.1						
ASAR	**Alice Springs**	**69.32**	**139**	P	**P**	**21 28 39.1**	**-0.3**
	1.2nm,0.9s,mb3.8,baz=330,slow=7.2,SNR=7.2						
ESLA	**Sonseca Array**	**73.72**	**307**	*e*P	**P**	**21 29 05.9**	**0.0**
BOSA	**Boshof**	**88.34**	**234**	*e*P	**P**	**21 30 24.5**	**+0.9**

*DJA **19** 22:04:48, 2°.74N×128°.04E, h137km, mb4.8/8*

*IDC **19** 22:04:48.4±1.2, 2°.07N×127°.70E, h0km, mb4.3/6, mb1 4.6/7, mb1mx4.1/21, mbtmp4.5/7, ML4.9/1, Error ellipse: s-maj=51.1km s-min=17.5km az=70.0*

*ISCJB **19** 22:05:02.3±1.1, 1°.68N±0°.06×127°.22E±0°.08, h130km±9km, mb4.3/14, Error ellipse: s-maj=13.8km s-min=9.3km az=150.8*

*NEIC **19** 22:05:03.4±5.0, 1°.66N×127°.26E, h125km±44km, mb4.3/9, Error ellipse: s-maj=45.7km s-min=8.5km az=61.0*

ISC 19 22:05:03.3±1.0, 1°.66N±0°.06×127°.24E±0°.08, h120km±8km, n36, σ0§91/37, mb4.4/14, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.89**	**172**	P	**Pn**	**22 05 24.1**	**-0.2**
MNI	**Manado**	**2.41**	**265**	P	**Pn**	**22 05 40.5**	**-1.4**
KMSI	**Cibinong**	**3.43**	**252**	P	**Pn**	**22 05 55.2**	**-0.1**
NLAI	**Namlea**	**4.87**	**182**	P	**Pn**	**22 06 14.5**	**0.0**
	3μm34nm,0.4s						
LUWI	**Luwuk**	**5.21**	**239**	P	**Pn**	**22 06 21.4**	**+2.3**
	3μm88nm,0.6s						
MRSI	**Marisa**	**5.42**	**258**	P	**Pn**	**22 06 22.1**	**+0.1**
	86nm,0.6s						
APSI	**Ampana**	**6.14**	**245**	P	**Pn**	**22 06 32.0**	**+0.3**
	2μm86nm,0.7s						
TTSI	**Tana Toraja**	**8.77**	**238**	P	**Pn**	**22 07 06.9**	**-0.3**
	61nm,0.7s						
SPSI	**Sidrap Palu**	**9.32**	**233**	P	**Pn**	**22 07 15.4**	**+0.6**
	85nm,0.6s						
BNSI	**Bone**	**9.33**	**230**	P	**Pn**	**22 07 14.5**	**-0.4**
	2μm33nm,0.7s						
BKSI	**Bulukumba**	**9.93**	**226**	P	**Pn**	**22 07 25.4**	**+2.5**
KAPI	**Kappang**	**9.99**	**228**	Pn	**Pn**	**22 07 23.8**	**0.0**
	8.7nm,0.3s,baz=6.5,slow=6.8,SNR=47						
KAPI				Sn	**Sn**	**22 09 12.2**	**-1.9**
	1.2nm,0.3s,baz=74,slow=20,SNR=6.1						
KAKA	**Kakadu**	**15.18**	**160**	*e*P	**Pn**	**22 08 36.7**	**+5.2**
	8.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.70**	**185**	*e*P	**P**	**22 09 24.2**	**+0.9**
	7.8nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.70**	**185**	P	**P**	**22 09 23.5**	**+0.2**
	3.4nm,0.4s,baz=16,slow=6.4,SNR=17						
FITZ	**Fitzroy Crossi**	**19.70**	**185**	*e*P	**P**	**22 09 23.2**	**-0.1**
	3.3nm,0.5s						
WRAB	**Tennant Creek**	**22.57**	**162**	*e*P	**P**	**22 09 53.7**	**-0.1**
	26nm,0.8s,mb4.6						
WRA	**Warramunga Arr**	**22.57**	**162**	P	**P**	**22 09 53.3**	**-0.5**
	17nm,0.4s,mb4.7,baz=340,slow=10,SNR=125						
ASAR	**Alice Springs**	**26.00**	**166**	P	**P**	**22 10 25.0**	**0.0**
	1.7nm,0.4s,mb3.9,baz=347,slow=7.4,SNR=28						
FORT	**Forrest**	**32.27**	**179**	*e*P	**P**	**22 11 20.4**	**-0.1**
	7.2nm,0.6s,mb4.6						
KLBR	**Kellerberrin**	**34.27**	**194**	*e*P	**P**	**22 11 38.3**	**+0.3**
	51nm,1.9s,mb5.0						
NWAO	**Narrogin (SRO)**	**35.68**	**195**	*e*P	**P**	**22 11 50.5**	**+0.5**
	11nm,1.0s,mb4.7						
STKA	**Stephens Creek**	**36.03**	**159**	*e*P	**P**	**22 11 53.4**	**+0.4**
	14nm,0.7s,mb5.0						
STKA	**Stephens Creek**	**36.03**	**159**	P	**P**	**22 11 53.6**	**+0.7**
	10nm,0.3s,mb5.2,baz=332,slow=7.9,SNR=45						
STKA	**Stephens Creek**	**36.03**	**159**	*e*P	**P**	**22 11 53.4**	**+0.4**
	2.8nm,0.6s,mb4.4						
LSA	**Lhasa**	**44.19**	**313**	P	**P**	**22 13 00.3**	**-0.2**
MK31	**Makanchi Array**	**59.54**	**326**	*e*P	**P**	**22 14 53.5**	**-0.5**
MKAR	**Makanchi Array**	**59.54**	**326**	P	**P**	**22 14 53.5**	**-0.5**
	1.5nm,0.5s,mb4.3,baz=110,slow=8.4,SNR=17						
TKM2	**Tokmak 2**	**61.63**	**319**	*e*P	**P**	**22 15 08.9**	**+0.6**
UCH	**Uchtor**	**62.04**	**318**	*e*P	**P**	**22 15 12.2**	**+1.2**
	1.4nm,0.6s,mb4.2						
AAK	**Ala-Archa**	**62.23**	**318**	P	**P**	**22 15 13.6**	**+1.3**
EKS2	**Erkin-Say**	**62.71**	**318**	*e*P	**P**	**22 15 16.6**	**+1.1**
	1.2nm,0.6s,mb4.0						
KURK	**Kurchatov**	**63.75**	**328**	*e*P	**P**	**22 15 21.3**	**-0.9**
	4.7nm,0.6s,mb4.5						
BVAR	**Borovoye Array**	**69.32**	**327**	P	**P**	**22 15 56.8**	**-0.8**
	0.3nm,0.4s,mb3.5,baz=101,slow=6.2,SNR=6.3						
BRVK	**Borovoye**	**69.39**	**327**	*e*P	**P**	**22 15 56.9**	**-1.1**
	0.8nm,0.4s,mb3.9						
QSPA	**South Pole Qui**	**91.58**	**180**	*e*P	**P**	**22 17 54.4**	**-1.6**
	2.9nm,1.3s,mb4.3						

*CRAAG **19** 22:06:01.5, 35°.76N×5°.23E, Ml3.8*

*ISCJB **19** 22:06:02.1±1.1, 37°.00N±0°.04×5°.20E±0°.04, h18km±13km, Error ellipse: s-maj=6.7km s-min=5.3km az=4.7*

*CSEM **19** 22:06:02.3±0.2, 36°.88N×5°.22E, h10km, ML3.2/6, Error ellipse: s-maj=7.4km s-min=5.6km az=54.0*

*MDD **19** 22:06:03.6±0.4, 36°.81N×5°.24E, h0km, mb3.9/4, Error ellipse: s-maj=6.3km s-min=4.0km az=24.0, PRIMO*

*NEIC **19** 22:06:06.6, 36°.97N×5°.02E, h0km, MG3.8(MDD), After MDD.*

*LDG **19** 22:06:08.8±0.4, 37°.21N×4°.79E, h10km, Ml3.2/6, Error ellipse: s-maj=8.7km s-min=4.7km az=155.0*

ISC 19 22:06:03.2±0.9, 36°.92N±0°.04×5°.22E±0°.04, h16km±8km, n113, σ1§54/154, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKF	**Akfadou**	**0.59**	**242**	P	**Pg**	**22 06 14.1**	**-0.8**
AKF	**Akfadou**	**0.59**	**242**	P	**Pg**	**22 06 14.1**	**-0.8**
AKF	**Akfadou**	**0.59**	**242**	P	**Pg**	**22 06 14.1**	**-0.8**
AKF	**Akfadou**	**0.59**	**242**	P	**Pg**	**22 06 14.1**	**-0.8**
DFRA	**Djebel Bou Aff**	**0.65**	**125**	P	**Pg**	**22 06 14.4**	**-1.4**
DFRA	**Djebel Bou Aff**	**0.65**	**125**	P	**Pg**	**22 06 14.4**	**-1.4**
DFRA	**Djebel Bou Aff**	**0.65**	**125**	P	**Pg**	**22 06 14.4**	**-1.4**
DFRA	**Djebel Bou Aff**	**0.65**	**125**	P	**Pg**	**22 06 14.4**	**-1.4**
SET	**Setif**	**0.73**	**168**	P	**Pg**	**22 06 15.0**	**-2.4**
SET	**Setif**	**0.73**	**168**	P	**Pg**	**22 06 15.0**	**-2.4**
SET	**Setif**	**0.73**	**168**	P	**Pg**	**22 06 15.0**	**-2.4**
SET	**Setif**	**0.73**	**168**	P	**Pg**	**22 06 15.0**	**-2.4**
CKHR	**Kef el Ahmar**	**0.93**	**165**	P	**Pg**	**22 06 17.8**	**-3.4**
CKHR	**Kef el Ahmar**	**0.93**	**165**	P	**Pg**	**22 06 17.8**	**-3.4**
CKHR	**Kef el Ahmar**	**0.93**	**165**	P	**Pg**	**22 06 17.8**	**-3.4**
CKHR	**Kef el Ahmar**	**0.93**	**165**	P	**Pg**	**22 06 17.8**	**-3.4**
CASM	**Ain Smara**	**1.21**	**122**	P	**Pn**	**22 06 25.5**	**+0.1**
CASM	**Ain Smara**	**1.21**	**122**	P	**Pn**	**22 06 25.5**	**+0.1**
CASM	**Ain Smara**	**1.21**	**122**	P	**Pn**	**22 06 25.5**	**+0.1**
CASM	**Ain Smara**	**1.21**	**122**	P	**Pn**	**22 06 25.5**	**+0.1**
CTEI	**Djebel Teioual**	**1.28**	**131**	P	**Pn**	**22 06 25.0**	**-1.3**
CTEI	**Djebel Teioual**	**1.28**	**131**	P	**Pn**	**22 06 25.0**	**-1.3**
CTEI	**Djebel Teioual**	**1.28**	**131**	P	**Pn**	**22 06 25.0**	**-1.3**
CTEI	**Djebel Teioual**	**1.28**	**131**	P	**Pn**	**22 06 25.0**	**-1.3**
ATAF	**Djebel Tarf**	**1.29**	**216**	P	**Pn**	**22 06 25.9**	**-0.6**
ATAF	**Djebel Tarf**	**1.29**	**216**	P	**Pn**	**22 06 25.9**	**-0.6**
ATAF	**Djebel Tarf**	**1.29**	**216**	P	**Pn**	**22 06 25.9**	**-0.6**
ATAF	**Djebel Tarf**	**1.29**	**216**	P	**Pn**	**22 06 25.9**	**-0.6**
CKFL	**Kef-Lekhel**	**1.31**	**113**	P	**Pn**	**22 06 28.0**	**+1.2**
CKFL	**Kef-Lekhel**	**1.31**	**113**	P	**Pn**	**22 06 28.0**	**+1.2**
CKFL	**Kef-Lekhel**	**1.31**	**113**	P	**Pn**	**22 06 28.0**	**+1.2**
CKFL	**Kef-Lekhel**	**1.31**	**113**	P	**Pn**	**22 06 28.0**	**+1.2**
CAEH	**'Ain El Ouahch**	**1.31**	**95**	P	**Pn**	**22 06 27.5**	**+0.7**
CAEH	**'Ain El Ouahch**	**1.31**	**95**	P	**Pn**	**22 06 27.5**	**+0.7**
CAEH	**'Ain El Ouahch**	**1.31**	**95**	P	**Pn**	**22 06 27.5**	**+0.7**
CAEH	**'Ain El Ouahch**	**1.31**	**95**	P	**Pn**	**22 06 27.5**	**+0.7**
AKET	**Djebel Ketaf**	**1.38**	**232**	P	**Pn**	**22 06 28.0**	**+0.2**
AKET	**Djebel Ketaf**	**1.38**	**232**	P	**Pn**	**22 06 28.0**	**+0.2**
AKET	**Djebel Ketaf**	**1.38**	**232**	P	**Pn**	**22 06 28.0**	**+0.2**
AKET	**Djebel Ketaf**	**1.38**	**232**	P	**Pn**	**22 06 28.0**	**+0.2**
ADJB	**Djebel Djouab**	**1.62**	**243**	P	**Pn**	**22 06 33.4**	**+2.4**
ADJB	**Djebel Djouab**	**1.62**	**243**	P	**Pn**	**22 06 33.4**	**+2.4**
ADJB	**Djebel Djouab**	**1.62**	**243**	P	**Pn**	**22 06 33.4**	**+2.4**
ADJB	**Djebel Djouab**	**1.62**	**243**	P	**Pn**	**22 06 33.4**	**+2.4**
ABA	**Alger-Bouzarea**	**1.76**	**267**	P	**Pn**	**22 06 36.4**	**+3.5**
ABA	**Alger-Bouzarea**	**1.76**	**267**	P	**Pn**	**22 06 36.4**	**+3.5**
ABA	**Alger-Bouzarea**	**1.76**	**267**	P	**Pn**	**22 06 36.4**	**+3.5**
ABA	**Alger-Bouzarea**	**1.76**	**267**	P	**Pn**	**22 06 36.4**	**+3.5**
CMAH	**Djebel Manchou**	**1.79**	**99**	P	**Pn**	**22 06 32.4**	**-1.0**
CMAH	**Djebel Manchou**	**1.79**	**99**	P	**Pn**	**22 06 32.4**	**-1.0**
CMAH	**Djebel Manchou**	**1.79**	**99**	P	**Pn**	**22 06 32.4**	**-1.0**
CMAH	**Djebel Manchou**	**1.79**	**99**	P	**Pn**	**22 06 32.4**	**-1.0**
EMHD	**Djebel Mahouad**	**1.96**	**249**	P	**Pn**	**22 06 39.5**	**+3.8**
EMHD	**Djebel Mahouad**	**1.96**	**249**	P	**Pn**	**22 06 39.5**	**+3.8**
EMHD	**Djebel Mahouad**	**1.96**	**249**	P	**Pn**	**22 06 39.5**	**+3.8**
EMHD	**Djebel Mahouad**	**1.96**	**249**	P	**Pn**	**22 06 39.5**	**+3.8**
ETOS	**Mallorca**	**3.42**	**327**	P	**Pn**	**22 06 58.1**	**+2.4**
ETOS				S	**Sn**	**22 07 35.8**	**-0.1**
ETOS	**Mallorca**	**3.42**	**327**	P	**Pn**	**22 06 58.1**	**+2.4**
	2.7nm,0.2s,SNR=17						
ETOS				S	**Sn**	**22 07 37.5**	**+1.6**
	0.5nm,0.1s,SNR=5.5						
ETOS	**Mallorca**	**3.42**	**327**	P	**Pn**	**22 06 58.1**	**+2.4**
	2.7nm,0.2s,SNR=17						
ETOS				S	**Sn**	**22 07 37.5**	**+1.6**
	0.5nm,0.1s,SNR=5.5						
ETOS	**Mallorca**	**3.42**	**327**	P	**Pn**	**22 06 58.1**	**+2.3**
	2.7nm,0.2s,SNR=17						
ETOS				S	**Sn**	**22 07 35.8**	**-0.1**
	0.5nm,0.1s,SNR=5.5						
EIBI	**Ibiza**	**3.72**	**306**	P	**Pn**	**22 07 02.3**	**+2.5**
EIBI				S	**Sn**	**22 07 42.8**	**-0.5**
EIBI	**Ibiza**	**3.72**	**306**	P	**Pn**	**22 07 02.3**	**+2.5**
	2.5nm,0.1s,SNR=14						
EIBI				S	**Sn**	**22 07 44.6**	**+1.3**
	1.6nm,0.1s,SNR=7.9						
EIBI	**Ibiza**	**3.72**	**306**	P	**Pn**	**22 07 02.3**	**+2.5**
	2.5nm,0.1s,SNR=14						
EIBI				S	**Sn**	**22 07 44.6**	**+1.3**
	1.6nm,0.1s,SNR=7.9						
EIBI	**Ibiza**	**3.72**	**306**	P	**Pn**	**22 07 02.3**	**+2.4**
	2.5nm,0.1s,SNR=14						
EIBI				S	**Sn**	**22 07 42.8**	**-0.5**
	1.6nm,0.1s,SNR=7.9						
EBEN	**Beniarda**	**4.67**	**294**	S	**Sn**	**22 08 05.1**	**-1.6**
	0.4nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**4.67**	**294**	S	**Sn**	**22 08 05.1**	**-1.6**
	0.4nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**4.67**	**294**	S	**Sn**	**22 08 05.1**	**-1.6**
	0.4nm,0.2s,SNR=7.9						
CFON	**Fontmartina**	**5.30**	**337**	P	**Pn**	**22 07 23.3**	**+1.7**
CFON				S	**Sn**	**22 08 20.9**	**-1.3**
CFON	**Fontmartina**	**5.30**	**337**	P	**Pn**	**22 07 23.3**	**+1.7**
	0.6nm,0.1s,SNR=7.9						
CFON				S	**Sn**	**22 08 23.2**	**+0.9**
	1.1nm,0.2s,SNR=7.9						
CFON	**Fontmartina**	**5.30**	**337**	P	**Pn**	**22 07 23.3**	**+1.7**
	0.6nm,0.1s,SNR=7.9						
CFON				S	**Sn**	**22 08 23.2**	**+0.9**
	1.1nm,0.2s,SNR=7.9						
CFON	**Fontmartina**	**5.30**	**337**	P	**Pn**	**22 07 23.3**	**+1.7**
	0.6nm,0.1s,SNR=7.9						
CFON				S	**Sn**	**22 08 20.9**	**-1.4**
	1.1nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**5.48**	**325**	P	**Pn**	**22 07 25.9**	**+1.9**
EPOB				S	**Sn**	**22 08 24.6**	**-2.1**
EPOB	**Poblet**	**5.48**	**325**	P	**Pn**	**22 07 25.9**	**+1.9**
	0.9nm,0.3s,SNR=7.9						
EPOB				S	**Sn**	**22 08 24.6**	**-2.1**
	0.3nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**5.48**	**325**	P	**Pn**	**22 07 25.9**	**+1.9**
	0.9nm,0.3s,SNR=7.9						
EPOB				S	**Sn**	**22 08 24.6**	**-2.1**
	0.3nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**5.48**	**325**	P	**Pn**	**22 07 25.9**	**+1.9**
	0.9nm,0.3s,SNR=7.9						
EPOB				S	**Sn**	**22 08 24.6**	**-2.0**
	0.3nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**5.63**	**309**	P	**Pn**	**22 07 27.8**	**+1.7**
EMOS				S	**Sn**	**22 08 28.6**	**-1.9**
EMOS	**Mosqueruela**	**5.63**	**309**	P	**Pn**	**22 07 27.8**	**+1.7**
	0.6nm,0.3s,SNR=7.9						
EMOS				S	**Sn**	**22 08 28.5**	**-1.9**
	0.1nm,0.1s,SNR=7.9					

ARMA Armidale 18.81 228 *e*P **Pn 22 18 52.3 +3.3**
ARMA Armidale 18.81 228 *e*Pn **Pn 22 18 52.8 +3.8**
comp=Z,198nm,2.3s
CTA Charters Tower 20.26 262 *e*P **P 22 19 05.7 +1.4**
comp=Z,33nm,0.8s
CTA Charters Tower 20.26 262 P **P 22 19 05.4 +1.1**
comp=Z,41nm,0.8s,baz=88,slow=12,SNR=36
CTA LR LR 22 25 17.9
comp=Z,564nm,19.1s,MS3.9,baz=73,slow=32
CTA Charters Tower 20.26 262 P **P 22 19 05.4 +1.1**
CTA LR LR 22 25 17.9
CTAO Charters Tower 20.26 262 *e*P **P 22 19 05.8 +1.5**
comp=Z,45nm,0.8s
AFI Afiamalu 20.27 80 LR LR 22 25 34.3
comp=Z,141nm,20.5s,MS3.3,baz=261,slow=33
AFI Afiamalu 20.27 80 *e*P **P 22 19 05.3 +1.0**
URZ Urewera 21.41 159 P **P 22 19 18.3 +1.8**
comp=Z,9.0nm,0.7s,mb4.2,baz=250,slow=10,SNR=4.1
URZ Urewera 21.41 159 *e*P **P 22 19 18.8 +2.3**
comp=Z,134nm,1.5s,mb5.0
CNB Canberra Magne 23.35 220 *e*P **P 22 19 39.5 +2.3**
STKA Stephens Creek 27.02 235 *e*P **P 22 20 11.6 +1.0**
comp=Z,18nm,0.8s,mb4.7
STKA Stephens Creek 27.02 235 P **P 22 20 11.7 +1.1**
comp=Z,18nm,0.8s,mb4.6,baz=62,slow=7.7,SNR=32
STKA LR LR 22 29 03.9
comp=Z,279nm,21.9s,MS3.8,baz=30,slow=32
STKA Stephens Creek 27.02 235 *e*P **P 22 20 11.7 +1.0**
comp=Z,5.6nm,0.9s,mb4.1
TOO Toolangi 27.19 221 *e*P **P 22 20 07.7 -4.4**
WRAB Tennant Creek 31.45 262 *e*P **P 22 20 48.8 -1.3**
comp=Z,7.1nm,0.8s,mb4.5
WRA Warramunga Arr 31.46 262 P **P 22 20 48.5 -1.7**
comp=Z,3.2nm,0.8s,mb4.2,baz=86,slow=8.7,SNR=20
ASAR Alice Springs 31.87 255 P **P 22 20 52.9 -0.9**
comp=Z,12nm,0.8s,mb4.8,baz=82,slow=8.7,SNR=101
MCQ Macquarie Isla 36.61 188 P **P 22 21 35.8 +1.5**
FORT Forrest 37.84 243 *e*P **P 22 21 45.5 +0.3**
comp=Z,22nm,0.7s,mb5.0
FORT Forrest 37.84 243 *e*P **P 22 21 47.6 +2.4**
comp=Z,56nm,1.2s,mb5.2
FITZ Fitzroy Crossi 39.83 264 *e*P **P 22 22 01.5 -0.5**
comp=Z,75nm,0.9s,mb5.4
FITZ Fitzroy Crossi 39.83 264 P **P 22 22 01.8 -0.2**
comp=Z,25nm,0.8s,mb5.0,baz=105,slow=8.0,SNR=27
FITZ LR LR 22 37 25.6
comp=Z,439nm,18.1s,MS4.3,baz=98,slow=35
FITZ Fitzroy Crossi 39.83 264 *e*P **P 22 22 01.9 0.0**
comp=Z,53nm,0.9s,mb5.3
PPT Papeete 40.62 96 *e*LR LR 22 33 47.0
comp=Z,235nm,31.2s
PPT Papeete 40.62 96 LR LR 22 36 33.4
comp=Z,133nm,18.3s,MS3.8,baz=181,slow=33
KLBR Kellerberrin 46.70 244 *e*P pP 22 23 08.4 +0.7
comp=Z,22nm,0.9s
NWAO Narrogin (SRO) 47.24 242 *e*P **P 22 23 01.3 -0.2**
comp=Z,19nm,1.0s,mb5.0
DAV Davao City (W) 48.62 298 P **P 22 23 11.7 -0.7**
SBA Scott Base 59.45 180 *e*P **P 22 24 32.6 +2.1**
comp=Z,70nm,1.9s,mb5.4
CASY Casey 60.26 203 *e*P **P 22 24 37.7 +1.5**
MJAR Matsushiro Arr 61.35 333 P **P 22 24 41.6 -2.4**
comp=Z,1.0nm,0.7s,mb4.0,baz=150,slow=6.9,SNR=3.9
NACB Ninganchiao 61.72 312 P **P 22 24 45.5 -1.3**
SSLB Suanglung 61.94 311 *e*P **P 22 24 47.3 -0.9**
comp=Z,12nm,1.1s,mb4.9
MDJ Mudanjiang 71.71 332 P **P 22 25 50.0 0.0**
MDJ pP pP 22 26 03.5 +2.6
MDJ S S 22 35 04.8 -2.6
MDJ pmax pmax
comp=Z,51nm,4.6s
PETK Petropavlovsk- 71.77 354 P **P 22 25 49.8 -0.4**
comp=Z,3.8nm,0.7s,mb4.5,baz=140,slow=7.4,SNR=6.5
CN2 Changchun 73.00 329 *e*P **P 22 25 59.1 +1.4**
CN2 *e*S S 22 35 20.1 -2.1
CN2 pmax pmax
comp=Z,10.0nm,0.3s,mb5.2
CN2 LR LR
comp=N,3μm,18.0s,MS5.7
CN2 LR LR
comp=E,800nm,18.0s,MS5.7
CN2 LR LR
comp=Z,1μm,15.0s,MS5.2
ENH Enshi 74.00 310 *e*P **P 22 26 03.4 -0.6**
comp=Z,8.2nm,0.9s,mb4.7
GYA Guiyang 74.13 305 *e*P **P 22 26 05.4 +0.6**
GYA PP PP 22 28 52.0 +1.2
GYA S S 22 35 32.3 -3.4
GYA pmax pmax
comp=Z,20nm,0.6s,mb5.2
GYA pmax pmax
comp=Z,110nm,4.9s
GYA LR LR
comp=N,540nm,18.8s,MS5.0
GYA LR LR
comp=E,490nm,19.2s,MS5.0
GYA LR LR
comp=Z,560nm,18.0s,MS4.9
BJI Beijing 75.37 322 P **P 22 26 12.5 +0.8**
BJI S S 22 35 45.8 -3.2
BJI pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
BJI pmax pmax
comp=Z,48nm,3.7s
BJI LR LR
comp=N,2μm,16.2s
BJI LR LR
comp=E,720nm,8.9s
XAN Xi'an 76.46 313 P **P 22 26 18.3 +0.3**
XAN pP pP 22 26 30.3 +1.3
XAN pmax pmax
comp=Z,1.0nm,0.8s,mb3.8
KMI Kunming 76.57 302 P **P 22 26 20.1 +1.2**
KMI PP PP 22 29 14.1 +2.6
KMI S S 22 36 00.3 -2.6
KMI SS SS 22 40 58.8 -0.1
KMI pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
KMI pmax pmax
comp=Z,57nm,5.1s
KMI LR LR
comp=N,120nm,18.8s
KMI LR LR
comp=E,160nm,13.4s
KMI LR LR
comp=Z,120nm,17.0s,MS4.3
CMAR Chiang Mai Arr 76.80 295 P **P 22 26 21.4 +1.1**
comp=Z,1.3nm,0.9s,mb3.9,baz=132,slow=3.5,SNR=8.4
CHTO Chiang Mai 76.95 295 P **P 22 26 20.6 -0.5**
CD2 Chengdu 78.56 308 *e*P **P 22 26 29.9 +0.1**
CD2 PP PP 22 29 29.8 +1.7
CD2 S S 22 36 19.6 -4.5
CD2 SS SS 22 41 26.1 -2.6
CD2 pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
CD2 pmax pmax
comp=Z,30nm,5.8s
CD2 LR LR
comp=N,240nm,16.2s
CD2 LR LR
comp=Z,200nm,14.8s,MS4.6
MAW Mawson 78.60 202 P **P 22 26 29.6 +0.1**
comp=Z,1.5nm,0.5s,mb4.2,baz=104,slow=13,SNR=3.8
MAW Mawson 78.60 202 P **P 22 26 30.9 +1.4**
comp=Z,2.1nm,1.1s,mb4.0
HHC Hu-ho-hao-te 78.64 320 *e*P **P 22 26 31.1 +1.1**
HHC PP PP 22 29 31.3 +2.7
HHC S S 22 36 22.4 -2.2
HHC SKS 22 36 35.3
HHC ScS ScS 22 36 44.3 -4.3
HHC SS SS 22 41 29.3 -0.2
HHC pmax pmax
comp=Z,12nm,0.8s,mb4.9
HHC pmax pmax
comp=Z,67nm,6.2s
HHC LR LR
comp=N,420nm,9.9s
HHC LR LR
comp=E,490nm,9.2s
HHC LR LR
comp=Z,380nm,9.9s
LZH Lanzhou 81.08 313 *e*P **P 22 26 44.8 +1.4**
LZH PP PP 22 29 54.4 +5.5
LZH *e*S S 22 36 50.3 -0.2
LZH SKS 22 36 53.4
LZH SS SS 22 42 05.5 -0.8
LZH pmax pmax
comp=Z,13nm,1.0s,mb4.8
LZH pmax pmax
comp=Z,90nm,4.4s
OHAK Old Harbor 82.12 20 *e*P **P 22 26 47.2 -1.2**
comp=Z,12nm,1.0s,mb4.8
SVW2 Sparrevohn 84.57 17 *e*P **P 22 27 00.3 -0.6**
ULN Ulaanbaatar 85.33 324 *e*P **P 22 27 06.9 +1.9**
GTA Gaotai 85.48 314 *e*P **P 22 27 02.1 -3.9**
GTA pP pP 22 27 06.3 -11
GTA sP sP 22 27 09.5 -12
GTA pmax pmax
comp=Z,2.0nm,0.7s,mb4.4
SONM Songino Array 85.68 324 P **P 22 27 06.4 -0.4**
comp=Z,0.6nm,0.5s,mb4.1,baz=120,slow=8.5,SNR=2.7
TTA Tatalina 85.97 16 *e*P **P 22 27 07.1 -0.7**
BILL Biiibino 86.23 359 *e*P **P 22 27 08.2 -0.8**
comp=Z,18nm,1.4s,mb5.1
CMB Columbia Colle 87.76 49 *e*P **P 22 27 16.3 -0.9**
YBH Yreka Blue Hor 87.78 45 P **P 22 27 17.2 0.0**
comp=Z,2.4nm,0.7s,mb4.5,baz=332,slow=1.6,SNR=9.8
YBH LR LR 23 00 37.6
comp=Z,57nm,18.8s,MS4.0,baz=74,slow=32
YBH Yreka Blue Hor 87.78 45 *e*P **P 22 27 17.4 +0.2**
HUMO Hull Mountain 88.02 44 *e*P **P 22 27 18.1 -0.2**
comp=Z,3.6nm,0.8s,mb4.7
ISA Isabella 88.16 52 *e*P **P 22 27 18.7 -0.4**
MTUM Tungsten Hills 88.78 50 *e*P **P 22 27 22.1 0.0**
NVAR Mina Array Bea 89.41 49 P **P 22 27 24.6 -0.4**
comp=Z,1.4nm,0.7s,mb4.4,baz=228,slow=8.3,SNR=11
MOD Modoc 89.47 45 *e*P **P 22 27 24.4 -0.8**
comp=Z,2.8nm,0.8s,mb4.6
WVOR Wild Horse Val 90.82 45 *e*P **P 22 27 31.1 -0.3**
comp=Z,8.5nm,1.3s,mb4.9
EGAK Eagle 91.67 20 *e*P **P 22 27 34.2 -0.6**
DLBC Dease Lake 92.03 28 *e*P **P 22 27 35.3 -1.3**
WMQ Urumqi 95.57 314 *e*P **P 22 27 53.0 -0.3**
YKA Yellowknife Ar 100.66 27 P Pdif 22 28 14.1 -2.0
comp=Z,0.3nm,0.6s,baz=254,slow=4.5,SNR=3.9
ARCES ARCESS Array B 123.91 345 PKP PKPdf 22 33 25.1 -0.3
comp=Z,1.8nm,0.7s,baz=356,slow=4.0,SNR=4.5
NOA NORSAR Array B 134.28 344 PKP PKPdf 22 33 45.5 +0.2
comp=Z,1.0nm,0.7s,baz=25,slow=6.2,SNR=3.8
MEM Membach 144.72 340 PKP PKPdf 22 34 04.0 -0.6
VOY Vojsko 144.95 328 *e*P PKPdf 22 34 04.3 -0.9
VOY *e* 22 34 17.4
UCC Uccle 145.08 341 PKP PKPdf 22 34 04.9 -0.3
BCLA Clavier 145.12 340 PKP PKPdf 22 34 05.3 0.0
MOTA Moosalm 145.36 332 ∥ *i*PKPbc PKPbc 22 34 05.8 +0.1
comp=Z,5.7nm,0.9s
SNF Seneffe 145.36 341 PKP PKPdf 22 34 05.8 0.0
WLF Walferdange 145.48 339 PKP PKPdf 22 34 07.1 +1.1
WLF Walferdange 145.48 339 *e*PKP PKPdf 22 34 06.2 +0.2
GIVF Givet 145.54 340 *e*PKP1 PKPbc 22 34 06.3 +0.1
DOU Dourbes 145.62 341 PKP PKPdf 22 34 06.9 +0.7
FETA Feichten 145.77 332 ∥ *i*PKPbc PKPbc 22 34 07.1 +0.1
comp=Z,13nm,1.0s
BFO Black Forest 145.77 335 *e*PKPdf PKPdf 22 34 06.1 -0.4
BAIF Baives 145.78 341 *e*PKP1 PKPbc 22 34 07.2 +0.3
comp=Z,64nm,1.5s
CDF Champ du Feu 146.12 336 *e*PKP1 PKPbc 22 34 08.3 +0.3
HINF Hinteralfeld 146.77 336 *e*PKP1 PKPbc 22 34 09.9 -0.1
HAU Haudompre 146.80 337 *e*PKP1 PKPbc 22 34 10.3 +0.2
comp=Z,27nm,1.2s
MEZF Maizieres J'vi 146.85 339 *e*PKP1 PKPbc 22 34 10.9 +0.7
comp=Z,32nm,0.9s
CABF La Chapelle 148.06 336 *e*PKP1 PKPbc 22 34 14.2 +0.6
comp=Z,31nm,1.0s
FLN La Foliniere 148.26 345 *e*PKP1 PKPbc 22 34 13.9 -0.1
comp=Z,36nm,1.0s
LOR Lormes 148.32 339 *e*PKP1 PKPbc 22 34 14.5 +0.3
comp=Z,21nm,1.0s
LDF La Druitiere 148.32 344 *e*PKP1 PKPbc 22 34 14.0 -0.2
SSF Saint Saulge 148.62 339 *e*PKP1 PKPbc 22 34 15.4 +0.4
comp=Z,20nm,0.9s
LPL La Plagne 148.68 334 *e*PKP1 PKPbc 22 34 16.1 +0.9
LPG La Plagne 148.69 334 *e*PKP1 PKPbc 22 34 16.2 +0.9
comp=Z,14nm,0.9s
GRR Gorron 148.70 345 *e*PKP1 PKPbc 22 34 15.3 +0.1
comp=Z,17nm,0.9s
SMF Signal de Mont 148.86 338 *e*PKP1 PKPbc 22 34 15.7 0.0
comp=Z,14nm,0.9s
AVF Avril sur Loir 148.91 339 *e*PKP1 PKPbc 22 34 15.9 +0.1
comp=Z,23nm,1.1s
BNI Bardonecchia 149.08 333 *e*PKPdf PKPdf 22 34 12.8 +0.6
SGMF Saint Gilles 149.21 347 *e*PKP1 PKPbc 22 34 16.4 -0.1
comp=Z,23nm,0.9s
ROSF Rostrenen 149.28 348 *e*PKP1 PKPbc 22 34 16.6 0.0
comp=Z,15nm,0.9s
BGF Bois d'Agland 149.28 339 *e*PKP1 PKPbc 22 34 16.9 +0.2
comp=Z,15nm,0.9s
MBDF Montbardon 149.30 333 *e*PKP1 PKPbc 22 34 17.6 +0.8
ORIF Oris-en-Rattie 149.52 334 *e*PKP1 PKPbc 22 34 17.8 +0.4
comp=Z,14nm,0.9s
QUIF Quistinic 149.66 348 *e*PKP1 PKPbc 22 34 17.8 +0.2
SBF Sospel 149.68 331 *e*PKP1 PKPbc 22 34 17.8 0.0
comp=Z,25nm,0.9s
TCF Toulx Ste Croi 149.73 340 *e*PKP1 PKPbc 22 34 18.0 +0.2
comp=Z,28nm,1.2s
PGF Pioggiola 149.90 328 *e*PKP1 PKPbc 22 34 18.7 +0.3
comp=Z,52nm,1.2s
VIVF Saint-Julien-l 150.06 335 *e*PKP1 PKPbc 22 34 19.2 +0.5
comp=Z,10nm,0.9s
MFF Saint Martin d 150.16 343 *e*PKP1 PKPbc 22 34 19.0 +0.1
comp=Z,28nm,0.9s
FRF La Foret Royal 150.27 331 *e*PKP1 PKPbc 22 34 19.2 0.0
comp=Z,23nm,1.1s
SMRF Simiane la Rot 150.41 333 *e*PKP1 PKPbc 22 34 20.3 +0.7
comp=Z,32nm,1.2s
LMR La Mourre 150.51 331 *e*PKP1 PKPbc 22 34 19.9 +0.1
comp=Z,32nm,1.2s
RJF Les Rejaudoux 150.83 340 *e*PKP1 PKPbc 22 34 20.8 +0.3
comp=Z,29nm,1.4s
CAF Calviac 150.97 339 *e*PKP1 PKPbc 22 34 21.3 +0.4
comp=Z,18nm,1.2s
LASF Ste Croix 151.04 335 *e*PKP1 PKPbc 22 34 21.6 +0.6
comp=Z,18nm,0.9s
LFF La Frestale 151.40 340 *e*PKP1 PKPbc 22 34 22.4 +0.3
comp=Z,22nm,0.9s
MTLF Montolieu 152.29 337 *e*PKP1 PKPbc 22 34 24.1 +0.2
comp=Z,19nm,1.4s
EPF Esparros 153.23 339 *e*PKP1 PKPbc 22 34 26.6 +0.6

BJI ***19*** *22:22:28.5,0.°14N×124.°94E,h208km,mB4.7/26,mb4.8/46*
MOS ***19*** *22:22:32.7±0.9,1.°02N×124.°66E,h189km,mb5.1/37,Error ellipse: s-maj=14.4km s-min=5.8km az=119.0*
IDC ***19*** *22:22:34.7±1.3,0.°96N×124.°60E,h194km±12km,mb4.5/30, mb1 4.5/32,mb1mx4.5/35,mbtmp4.5/32,MS3.1/1, Ms1 3.1/1,ms1mx2.4/31,Error ellipse: s-maj=12.7km s-min=7.1km az=67.0*
ISCJB ***19*** *22:22:34.0±0.4,0.°95N±0.°03×124.°74E±0.°03,h201km±3km, mb4.8/105,Error ellipse: s-maj=5.8km s-min=4.1km az=155.7*
DJA ***19*** *22:22:35,0.°96N×124.°76E,h184km,mb4.8/22*
NEIC ***19*** *22:22:36.1±0.9,0.°95N×124.°67E,h208km±9km,mb4.9/47, Error ellipse: s-maj=7.1km s-min=4.0km az=63.0*
ISC 19 22:22:35.0±0.4,0.°94N±0.°03×124.°72E±0.°03,h196km±3km, h190km±3.3km;pP-P,n270,σ1°17/277,mb4.8/105,11C-9D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	**Manado**	**0.52**	**13**	P	**Pn**	**22 23 01.2**	**-0.6**
KMSI	**Cibinong**	**0.83**	**244**	P	**Pn**	**22 23 02.1**	**-1.2**
TNTI	**Ternate**	**2.65**	**94**	P	**Pn**	**22 23 19.3**	**-1.1**
LUWI	**Luwuk**	**2.77**	**225**	P	**Pn**	**22 23 19.9**	**-1.9**
MRSI	**Marisa**	**2.82**	**261**	P	**Pn**	**22 23 20.7**	**-1.7**
APSI	**Ampana**	**3.58**	**239**	P	**Pn**	**22 23 30.4**	**-1.1**
NLAI	**Namlea**	**4.78**	**150**	P	**Pn**	**22 23 45.1**	**-1.5**
KDI	**Kendari**	**5.30**	**203**	P	**Pn**	**22 23 54.1**	**+0.9**
	1.0nm2μm78nm,0.7s						
AAI	**Ambon**	**5.76**	**143**	P	**Pn**	**22 24 01.3**	**+2.2**
TTSI	**Tana Toraja**	**6.30**	**231**	P	**Pn**	**22 24 05.7**	**-0.5**
	153nm,0.8s						
SPSI	**Sidrap Palu**	**6.95**	**225**	P	**Pn**	**22 24 15.2**	**+0.6**
	0.4nm82nm,0.6s						
BNSI	**Bone**	**7.03**	**221**	P	**Pn**	**22 24 17.2**	**+1.5**
	0.4nm2μm60nm,0.8s						
MYLDM	**Lahad Datu**	**7.51**	**304**	P	**Pn**	**22 24 23.4**	**+1.5**
MYLDM	**Lahad Datu**	**7.51**	**304**	P	**Pn**	**22 24 24.1**	**+2.2**
	0.4nm1μm72nm,1.4s						
KAPI	**Kappang**	**7.72**	**220**	P	**Pn**	**22 24 24.9**	**+0.2**
	3.2nm,0.3s,baz=217,slow=19,SNR=6.5						
KAPI				S	**Sn**	**22 25 47.3**	**-4.4**
	1.3nm,0.3s,baz=221,slow=19,SNR=3.8						
KAPI				LR	LR	22 27 29.1	
	comp=Z,127nm,19.3s,baz=103,slow=38						
KAPI	**Kappang**	**7.72**	**220**	*e*Pn	**Pn**	**22 24 24.7**	**0.0**
SDKM	**Sandakan**	**8.85**	**302**	P	**Pn**	**22 24 39.1**	**-0.3**
TLE	**Tual**	**10.33**	**129**	P	Px	22 25 10.0	
SBUM	**Sibu**	**12.59**	**277**	P	**Pn**	**22 25 31.0**	**+3.4**
SBUM	**Sibu**	**12.59**	**277**	P	**Pn**	**22 25 33.6**	**+6.0**
SRBI	**Singaraja**	**13.05**	**226**	P	**Pn**	**22 25 39.9**	**+6.5**
STKI	**Sintang**	**13.28**	**266**	P	**Pn**	**22 25 37.3**	**+1.1**
TGY	**Tagaytay City**	**13.61**	**344**	P	**Pn**	**22 25 42.7**	**+2.4**
	baz=164,slow=12,SNR=4.8						
SMPI	**Sarmi**	**14.28**	**102**	P	**Pn**	**22 25 51.1**	**+2.4**
	3μm70nm,1.1s						
KSM	**Kuching**	**14.42**	**272**	P	**Pn**	**22 25 51.5**	**+1.0**
KSM	**Kuching**	**14.42**	**272**	*e*P	**Pn**	**22 25 50.9**	**+0.4**
KSM	**Kuching**	**14.42**	**272**	P	**Pn**	**22 25 51.9**	**+1.4**
	822nm100nm,0.9s						
SJI	**Sawahan**	**15.53**	**236**	P	**Pn**	**22 26 07.0**	**+3.0**
	42nm,1.0s						
KAKA	**Kakadu**	**15.57**	**151**	*e*P	**Pn**	**22 26 04.0**	**-0.5**
	55nm,0.6s						
KAKA	**Kakadu**	**15.57**	**151**	*e*P	**Pn**	**22 26 03.9**	**-0.6**
	147nm,0.6s						
KAKA	**Kakadu**	**15.57**	**151**	P	**Pn**	**22 26 04.6**	**+0.1**
	997nm128nm,0.7s						
KNA	**Kununurra**	**17.06**	**167**	P	**Pn**	**22 26 20.5**	**-1.8**
FITZ	**Fitzroy Crossi**	**18.94**	**177**	*e*P	**P**	**22 26 40.7**	**-0.7**
	58nm,0.6s						
FITZ				*e*S	**S**	**22 30 01.7**	**-4.5**
FITZ	**Fitzroy Crossi**	**18.94**	**177**	P	**P**	**22 26 40.7**	**-0.7**
	3.7nm,0.3s,baz=5.2,slow=7.9,SNR=68						
FITZ				S	**S**	**22 30 01.8**	**-4.4**
	baz=184,slow=16,SNR=6.0						
FITZ	**Fitzroy Crossi**	**18.94**	**177**	*e*P	**P**	**22 26 40.5**	**-0.9**
	25nm,0.5s						
FITZ	**Fitzroy Crossi**	**18.94**	**177**	P	**P**	**22 26 40.8**	**-0.6**
	100nm,0.8s						
MYKOM	**Kota Tinggi**	**20.89**	**273**	P	**P**	**22 27 02.5**	**+0.2**
MYKOM	**Kota Tinggi**	**20.89**	**273**	P	**P**	**22 27 04.8**	**+2.5**
	35nm,1.4s						
MDSI	**Maura Dua**	**21.22**	**255**	P	**P**	**22 27 07.3**	**+1.4**
	838nm23nm,1.0s,mb4.7						
KGM	**Kluang**	**21.43**	**273**	P	**P**	**22 27 07.8**	**-0.2**
KTGM	**Kuala Trenggan**	**21.99**	**282**	P	**P**	**22 27 13.6**	**-0.1**
TWG	**Pinlang**	**22.04**	**351**	*e*P	**P**	**22 27 12.7**	**-1.2**
YULB	**Yu-li**	**22.57**	**352**	*e*P	**P**	**22 27 18.0**	**-0.8**
	20nm,0.6s,mb4.8						
TPUB	**Ta-pu**	**22.58**	**350**	*e*P	**P**	**22 27 17.6**	**-1.3**
	111nm,0.6s,mb5.6						
WRAB	**Tennant Creek**	**22.79**	**156**	*e*P	**P**	**22 27 20.6**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,212nm,0.8s,mb5.7						
WRAB	**Tennant Creek**	**22.79**	**156**	*e*P	**P**	**22 27 20.6**	**-0.2**
	comp=Z,212nm,0.8s,mb5.7						
WRAB	**Tennant Creek**	**22.79**	**156**	P	**P**	**22 27 20.9**	**0.0**
WRA	**Warramunga Arr**	**22.79**	**156**	P	**P**	**22 27 21.0**	**+0.1**
	comp=Z,202nm,0.7s,mb5.8,baz=335,slow=11,SNR=356						
WRA				S	**S**	**22 31 11.9**	**-3.2**
	comp=Z,6.9nm,0.8s,baz=331,slow=16,SNR=5.3						
SSLB	**Suanglung**	**23.01**	**351**	*e*P	**P**	**22 27 22.2**	**-0.7**
	comp=Z,37nm,0.8s,mb5.0						
FRIM	**Kepong**	**23.20**	**276**	P	**P**	**22 27 25.3**	**+0.6**
NACB	**Ninganchiao**	**23.30**	**353**	*e*P	**P**	**22 27 26.4**	**+0.9**
SDSI	**Sungai Dareh**	**23.37**	**266**	P	**P**	**22 27 25.2**	**-1.1**
COEN	**Coen**	**23.52**	**130**	*e*P	**P**	**22 27 27.3**	**-0.3**
	comp=Z,132nm,0.5s,mb5.8						
COEN	**Coen**	**23.52**	**130**	P	**P**	**22 27 28.1**	**+0.5**
	comp=Z,177nm,1.0s,mb5.7						
YHNB	**Yeheng**	**23.81**	**352**	*e*P	**P**	**22 27 30.3**	**+0.1**
	comp=Z,40nm,0.7s,mb5.2						
IPM	**Ipoh**	**23.93**	**279**	P	**P**	**22 27 31.0**	**-0.4**
IPM	**Ipoh**	**23.93**	**279**	P	**P**	**22 27 31.7**	**+0.3**
	comp=Z,646nmcomp=Z,71nm,0.9s,mb5.3						
PDSI	**Padang**	**24.33**	**266**	P	**P**	**22 27 37.2**	**+2.1**
	comp=Z,85nm,0.8s,mb5.4						
PPI	**Padang Panjang**	**24.37**	**267**	P	**P**	**22 27 37.7**	**+2.3**
KULM	**Kulim**	**24.42**	**281**	P	**P**	**22 27 35.7**	**-0.2**
KULM	**Kulim**	**24.42**	**281**	*e*P	**P**	**22 27 35.1**	**-0.7**
	comp=Z,20nm,0.9s,mb4.8						
MNSI	**Mandailing Nat**	**25.14**	**270**	P	**P**	**22 27 43.3**	**+0.9**
	comp=Z,28nm,0.8s,mb5.0						
PSI	**Prapat**	**25.85**	**274**	P	**P**	**22 27 48.1**	**-0.7**
	comp=Z,25nm,0.7s,mb5.0,baz=99,slow=4.9,SNR=30						
ASAR	**Alice Springs**	**26.03**	**161**	P	**P**	**22 27 50.4**	**+0.1**
	comp=Z,25nm,1.0s,mb4.8,baz=342,slow=7.7,SNR=157						
ASAR				S	**S**	**22 32 05.5**	**-1.1**
	comp=Z,4.1nm,0.9s,baz=346,slow=19,SNR=7.5						
ASAR				ScP	ScP	22 34 33.2	-1.1
	comp=Z,2.5nm,1.0s,baz=319,slow=1.4,SNR=7.4						
ASAR	**Alice Springs**	**26.03**	**161**	P	**P**	**22 27 50.4**	**+0.1**
ASAR				S	**S**	**22 32 05.5**	**-1.1**
GSI	**Gunungsitoli**	**27.15**	**271**	P	**P**	**22 27 59.8**	**-0.6**
	comp=Z,77nm,0.6s,mb5.5						
CTA	**Charters Tower**	**29.70**	**136**	*e*P	**P**	**22 28 23.9**	**+1.0**
	comp=Z,7.8nm,0.8s,mb4.4						
CTA	**Charters Tower**	**29.70**	**136**	P	**P**	**22 28 23.9**	**+1.1**
	comp=Z,7.9nm,0.6s,mb4.5,baz=324,slow=11,SNR=13						
CTAO	**Charters Tower**	**29.70**	**136**	*e*P	**P**	**22 28 24.2**	**+1.3**
CTAO				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.6						
CTAO	**Charters Tower**	**29.70**	**136**	*e*P	**P**	**22 28 24.2**	**+1.4**
	comp=Z,12nm,0.8s,mb4.6						
CM31	**Chiang Mai Arr**	**30.71**	**306**	*e*P	**P**	**22 28 32.8**	**+1.0**
CMAR	**Chiang Mai Arr**	**30.71**	**306**	P	**P**	**22 28 32.4**	**+0.5**
	comp=Z,7.6nm,0.8s,mb4.4,baz=134,slow=7.7,SNR=25						
CMAR				ScP	ScP	22 34 50.4	+1.3
	comp=Z,0.8nm,0.4s,baz=148,slow=2.2,SNR=8.3						
GYA	**Guiyang**	**30.75**	**327**	P	**P**	**22 28 33.4**	**+1.3**
GYA				pP	pP	22 29 14.8	+2.5
GYA				sP	sP	22 29 37.0	+2.1
GYA				PP	PP	22 29 43.5	-2.2
GYA				PcP	PcP	22 31 25.6	+0.8
GYA				S	**S**	**22 33 21.8**	**+1.1**
GYA				ScS	ScS	22 38 45.0	-1.1
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.8						
GYA				pmax	pmax		
	comp=Z,120nm,4.9s						
CHTO	**Chiang Mai**	**30.90**	**307**	*e*P	**P**	**22 28 33.9**	**+0.4**
CHTO				pmax	pmax		
	comp=Z,29nm,0.9s,mb4.9						
CHTO	**Chiang Mai**	**30.90**	**307**	*e*P	**P**	**22 28 33.9**	**+0.4**
	comp=Z,29nm,0.9s,mb4.9						
CHTO	**Chiang Mai**	**30.90**	**307**	P	**P**	**22 28 34.7**	**+1.2**
	SNR=5.5						
CHTO				P		22 28 34.7	
	SNR=5.5						
CHTO	**Chiang Mai**	**30.90**	**307**	P	**P**	**22 28 33.9**	**+0.4**
	comp=Z,40nm,0.9s,mb5.0						
CBIJ	**Chichi jima**	**30.94**	**31**	P	**P**	**22 28 34.0**	**+0.2**
	comp=Z,36nm,0.4s,mb5.3,baz=306,slow=22,SNR=6.9						
NJ2	**Nanjing**	**31.44**	**350**	*e*P	**P**	**22 28 41.8**	**+3.8**
NJ2				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.7						
FORT	**Forrest**	**31.70**	**175**	*e*P	**P**	**22 28 40.4**	**+0.1**
	comp=Z,124nm,0.7s,mb5.5						
FORT	**Forrest**	**31.70**	**175**	*e*P	**P**	**22 28 40.4**	**+0.1**
	comp=Z,120nm,0.6s,mb5.6						
KMI	**Kunming**	**32.08**	**320**	P	**P**	**22 28 45.1**	**+1.4**
KMI				pP	pP	22 29 26.6	+2.5
KMI				sP	sP	22 29 49.4	+2.7
KMI				PP	PP	22 30 01.3	+0.9
KMI				S	**S**	**22 33 43.3**	**+2.0**
KMI				pmax	pmax		
	comp=Z,7.0nm,1.5s,mb4.0						
KMI				pmax	pmax		
	comp=Z,82nm,5.0s						
KMI				LR	LR		
	comp=N,130nm,7.2s						
KMI				LR	LR		
	comp=E,98nm,8.4s						
KMI				LR	LR		
	comp=Z,73nm,12.4s						
ENH	**Enshi**	**32.57**	**335**	*e*P	**P**	**22 28 47.8**	**-0.1**
	comp=Z,18nm,0.8s,mb4.7						
KLBR	**Kellerberrin**	**33.02**	**191**	*e*P	**P**	**22 28 51.5**	**-0.3**
	comp=Z,9.7nm,0.6s,mb4.5						
NWAO	**Narrogin (SRO)**	**34.42**	**191**	P	**P**	**22 29 04.0**	**+0.1**
	comp=Z,5.0nm,0.8s,mb4.1,baz=14,slow=8.0,SNR=5.5						
NWAO	**Narrogin

CD2 S **S** **22 34 41.3 +2.5**
CD2 SS SS 22 37 17.5 -6.5
CD2 pmax pmax
comp=Z,30nm,0.6s,mb5.0
CD2 pmax pmax
comp=Z,120nm,4.2s
XAN Xi'an 36.10 337 P **P** **22 29 17.3 -0.9**
XAN pmax pmax
comp=Z,5.0nm,0.8s,mb4.1
STKA Stephens Creek 36.34 155 *e*P **P** **22 29 20.8 +0.5**
comp=Z,26nm,0.6s,mb5.0
STKA Stephens Creek 36.34 155 P **P** **22 29 20.8 +0.5**
comp=Z,34nm,0.5s,mb5.1,baz=328,slow=8.9,SNR=116
STKA ScP ScP 22 35 09.6 +1.0
comp=Z,2.7nm,0.7s,baz=328,slow=8.0,SNR=4.1
STKA Stephens Creek 36.34 155 *e*P **P** **22 29 20.9 +0.6**
STKA pmax pmax
comp=Z,7.0nm,0.8s
STKA Stephens Creek 36.34 155 *e*P **P** **22 29 20.9 +0.6**
comp=Z,7.5nm,0.8s,mb4.3
KSRS Korea Array 36.45 4 P **P** **22 29 22.4 +1.2**
comp=Z,4.4nm,0.7s,mb4.1,baz=176,slow=10.0,SNR=20
KSRS ScP ScP 22 35 09.5 +0.6
comp=Z,2.2nm,0.8s,baz=190,slow=3.9,SNR=11
HNR Honiara 36.56 107 *e*P **P** **22 29 22.2 -0.1**
MAJO Matsushiro 37.56 18 *e*P **P** **22 29 29.4 -1.1**
MAJO pmax pmax
comp=Z,24nm,0.8s,mb4.8
MAJO Matsushiro 37.56 18 *e*P **P** **22 29 29.4 -1.1**
comp=Z,24nm,0.8s,mb4.8
MAT Matsushiro 37.56 18 P **P** **22 29 30.1 -0.4**
MJAR Matsushiro Arr 37.56 18 P **P** **22 29 30.0 -0.5**
comp=Z,16nm,0.7s,mb4.7,baz=194,slow=8.8,SNR=66
MJAR ScP ScP 22 35 12.5 -0.5
comp=Z,0.4nm,0.3s,baz=191,slow=2.6,SNR=4.7
BJT Baijiatuau 39.67 350 *e*P **P** **22 29 49.0 +1.1**
BJT pmax pmax
comp=Z,38nm,0.8s
BJT Baijiatuau 39.67 350 *e*P **P** **22 29 49.0 +1.1**
comp=Z,38nm,0.8s,mb4.9
BJI Beijing 39.69 350 P **P** **22 29 49.5 +1.4**
BJI pP pP 22 30 28.4 -1.3
BJI sP sP 22 30 51.3 -0.7
BJI S **S** **22 35 43.1 +6.3**
BJI pmax pmax
comp=Z,57nm,0.8s,mb5.0
BJI pmax pmax
comp=Z,110nm,4.7s
LZH Lanzhou 39.98 333 *e*P **P** **22 29 53.0 +2.4**
LZH pP pP 22 30 37.8 +5.5
LZH sP sP 22 30 55.0 +0.5
LZH *e*S **S** **22 35 46.4 +5.2**
LZH SS SS 22 38 45.0 -1.8
LZH pmax pmax
comp=Z,45nm,1.4s,mb4.7
LZH pmax pmax
comp=Z,92nm,4.6s
ARMA Armidale 40.36 143 *e*P **P** **22 29 55.5 +1.7**
ARMA Armidale 40.36 143 *e*P **P** **22 29 55.7 +1.9**
comp=Z,18nm,0.7s,mb4.6
SNY Shenyang 40.72 359 ⇓P **P** **22 29 59.1 +2.6**
SNY pmax pmax
comp=Z,18nm,0.7s,mb4.6
SNY LR LR
comp=N,3μm,13.8s
SNY LR LR
comp=E,490nm,19.2s
SNY LR LR
comp=Z,680nm,10.5s
HHC Hu-ho-hao-te 41.48 345 *e*P **P** **22 30 04.8 +2.0**
HHC sP sP 22 31 06.9 0.0
HHC PP PP 22 31 47.0 +4.0
HHC PcS PcS 22 35 49.1 +1.0
HHC S **S** **22 36 05.8 +2.6**
HHC SS SS 22 39 13.0 -3.1
HHC ScS ScS 22 39 45.3 +0.3
HHC pmax pmax
comp=Z,23nm,0.8s,mb4.7
HHC pmax pmax
comp=Z,76nm,5.1s
HHC LR LR
comp=N,3μm,18.1s
HHC LR LR
comp=E,1μm,16.2s
HHC LR LR
comp=Z,560nm,15.3s
CN2 Changchun 42.68 1 *e*P **P** **22 30 15.0 +2.6**
CN2 *e*pP pP 22 30 56.3 +1.7
CN2 *e*S **S** **22 36 24.1 +3.4**
CN2 pmax pmax
comp=Z,10.0nm,0.4s,mb4.6
CN2 LR LR
comp=N,300nm,21.0s
CN2 LR LR
comp=E,300nm,21.0s
CN2 LR LR
comp=Z,200nm,19.0s
CNB Canberra Magne 42.78 150 *e*P **P** **22 30 15.0 +1.6**
TOO Toolangi 42.86 156 *e*P **P** **22 30 16.1 +2.1**
LSA Lhasa 42.88 315 *e*P **P** **22 30 14.1 -0.1**
LSA pmax pmax
comp=Z,16nm,0.6s,mb4.6
LSA Lhasa 42.88 315 *e*P **P** **22 30 14.1 -0.1**
comp=Z,16nm,0.6s,mb4.6
MDJ Mudanjiang 43.70 5 P **P** **22 30 21.3 +0.7**
MDJ pP pP 22 31 02.1 -0.8
MDJ S **S** **22 36 39.3 +3.7**
MDJ pmax pmax
comp=Z,31nm,0.9s,mb4.6
MDJ pmax pmax
comp=Z,58nm,5.9s
MDJ Mudanjiang 43.70 5 *e*P **P** **22 30 20.9 +0.3**
comp=Z,24nm,0.7s,mb4.6
GTA Gaotai 44.53 332 *e*P **P** **22 30 27.1 -0.2**
GTA PP PP 22 32 15.0 -0.5
GTA S **S** **22 36 47.8 0.0**
GTA pmax pmax
comp=Z,4.0nm,1.0s,mb3.7
GTA pmax pmax
comp=Z,70nm,4.8s
GTA LR LR
comp=N,2μm,10.1s
GTA LR LR
comp=E,1μm,12.8s
GTA LR LR
comp=Z,1μm,11.0s
JIRN Jiri 45.47 309 *e*P **P** **22 30 34.6 -0.3**
comp=Z,76nm,0.6s,mb5.2
GUN Gumba 45.83 309 *e*P **P** **22 30 37.8 +0.1**
comp=Z,119nm,0.6s,mb5.4
PKI Pulchoki 46.04 309 *e*P **P** **22 30 39.1 -0.2**
comp=Z,31nm,0.5s,mb4.9
PKI Pulchoki 46.04 309 *e*P **P** **22 30 40.0 +0.7**
PKI pmax pmax
comp=Z,30nm,0.5s,mb4.9
PKI Pulchoki 46.04 309 *e*P **P** **22 30 40.0 +0.7**
comp=Z,30nm,0.5s,mb4.9
PKIN Phulchoki 46.05 309 *e*P **P** **22 30 40.0 +0.6**
comp=Z,30nm,0.5s,mb4.8
KKN Kakani 46.24 309 *e*P **P** **22 30 40.8 -0.1**
comp=Z,38nm,0.5s,mb5.0
KKN Kakani 46.24 309 *e*P **P** **22 30 40.8 -0.1**
KKN pmax pmax
comp=Z,38nm,0.5s,mb5.0
DMN Daman 46.29 308 *e*P **P** **22 30 41.2 -0.1**
comp=Z,33nm,0.5s,mb4.9
HYB Hyderabad 48.25 293 *e*P **P** **22 30 55.0 -1.5**
HYB Hyderabad 48.25 293 *i*P **P** **22 30 56.0 -0.5**
HIA Hailar 48.33 356 *e*P **P** **22 30 57.1 +0.5**
HIA pmax pmax
comp=Z,29nm,0.8s
HIA Hailar 48.33 356 *e*P **P** **22 30 57.1 +0.5**
comp=Z,28nm,0.8s,mb4.7
ULN Ulaanbaatar 49.19 344 *e*P **P** **22 31 03.4 +0.2**
ULN pmax pmax
comp=Z,23nm,0.8s,mb4.6
ULN Ulaanbaatar 49.19 344 *e*P **P** **22 31 03.4 +0.2**
comp=Z,23nm,0.8s,mb4.6
ULN Ulaanbaatar 49.19 344 P **P** **22 31 03.2 0.0**
SNR=13
ULN P 22 31 03.2
SNR=13
ULN Ulaanbaatar 49.19 344 P **P** **22 31 03.2 0.0**
comp=Z,280nmcomp=Z,36nm,0.9s,mb4.7
SONM Songino Array 49.34 344 P **P** **22 31 04.0 -0.3**
comp=Z,23nm,0.8s,mb4.6,baz=157,slow=8.1,SNR=51

ZAK Zakamensk 52.53 343 *e*P **P** **22 31 26.7 -1.4**
TLY Talaya 53.59 344 *e*P **P** **22 31 35.5 -0.2**
TLY pmax pmax
comp=Z,21nm,0.7s,mb4.8
TLY Talaya 53.59 344 *e*P **P** **22 31 36.2 +0.5**
comp=Z,22nm,0.7s,mb4.8
TLY Talaya 53.59 344 P **P** **22 31 38.6 +2.9**
SNR=8.4
TLY P 22 31 38.6
SNR=8.4
WMQ Urumqi 53.91 327 *e*P **P** **22 31 38.5 +0.2**
WMQ pP pP 22 32 21.5 -0.8
WMQ PP PP 22 33 43.5 +1.8
WMQ S **S** **22 38 56.5 -1.7**
WMQ ScS ScS 22 41 04.5 -3.0
WMQ pmax pmax
comp=Z,21nm,1.0s,mb4.6
WMQ pmax pmax
comp=Z,98nm,5.0s
WMQ LR LR
comp=N,530nm,16.0s
WMQ LR LR
comp=E,1μm,16.0s
WMQ LR LR
comp=Z,500nm,16.0s
KSH Kashi 58.65 317 *e*P **P** **22 32 13.4 +1.6**
KSH pP pP 22 32 57.1 +0.5
KSH PcP PcP 22 33 01.3 +1.6
KSH sP sP 22 33 18.1 0.0
KSH PP PP 22 34 27.0 +3.0
KSH PcS PcS 22 37 01.8 +0.2
KSH S **S** **22 39 57.3 -3.5**
KSH ScS ScS 22 41 40.3 -1.8
KSH SS SS 22 43 58.3 +1.1
KSH pmax pmax
comp=Z,14nm,0.9s,mb4.6
KSH pmax pmax
comp=Z,100nm,5.6s
KSH LR LR
comp=N,160nm,5.2s
KSH LR LR
comp=E,170nm,4.7s
KSH LR LR
comp=Z,200nm,4.4s
MK31 Makanchi Array 58.74 327 *e*P **P** **22 32 11.9 -0.4**
MKAR Makanchi Array 58.74 327 P **P** **22 32 11.5 -0.8**
comp=Z,21nm,0.6s,mb5.0,baz=120,slow=8.6,SNR=82
PETK Petropavlovsk- 58.76 23 P **P** **22 32 13.7 +1.4**
comp=Z,5.7nm,0.6s,mb4.4,baz=186,slow=3.4,SNR=17
KZA Kyzart 60.36 319 P **P** **22 32 24.2 +0.7**
SNR=22
TKM2 Tokmak 2 60.55 320 P **P** **22 32 24.7 0.0**
SNR=21
TKM2 Tokmak 2 60.55 320 *e*P **P** **22 32 24.5 -0.2**
TKM2 pmax pmax
comp=Z,24nm,0.9s,mb4.8
TKM2 Tokmak 2 60.55 320 *e*P **P** **22 32 24.4 -0.3**
comp=Z,24nm,0.9s,mb4.8
RPZ Rata Peaks 60.70 143 P **P** **22 32 26.3 +0.6**
comp=Z,17nm,0.8s,mb4.7,baz=78,slow=1.2,SNR=14
RPZ Rata Peaks 60.70 143 *e*P **P** **22 32 26.8 +1.0**
comp=Z,12nm,0.6s,mb4.7
KBK Karagaybulak 60.84 320 P **P** **22 32 29.3 +2.6**
SNR=14
UCH Uchtor 60.91 319 P **P** **22 32 27.7 +0.5**
SNR=39
UCH Uchtor 60.91 319 *e*P **P** **22 32 27.7 +0.5**
comp=Z,617nm,0.7s
UCH *e*PcP PcP 22 33 10.3 +1.6
YAK Yakutsk 61.05 3 *c i*P **P** **22 32 28.1 +0.4**
YAK *e* pP 22 33 10.1 -2.8
YAK *e**PP pP 22 33 15.0 +2.1
YAK *e*S **S** **22 40 29.7 -0.9**
YAK *e* 22 41 57.1
YAK *e*SSS 22 47 19.4
YAK pmax pmax
comp=Z,55nm,0.8s,mb5.2
YAK pmax pmax
comp=N,10.0nm,1.1s
YAK smax
comp=N,73nm,2.8s
YAK smax
comp=E,36nm,2.1s
YAK Yakutsk 61.05 3 *e*P **P** **22 32 28.3 +0.6**
comp=E,86nm,0.8s,mb5.4
AAK Ala-Archa 61.12 320 P **P** **22 32 30.6 +2.1**
SNR=10
AAK Ala-Archa 61.12 320 *e*P **P** **22 32 29.0 +0.4**
AAK pmax pmax
comp=Z,18nm,1.0s,mb4.7
AAK Ala-Archa 61.12 320 *e*P **P** **22 32 29.0 +0.5**
comp=Z,18nm,1.0s,mb4.7
AAK Ala-Archa 61.12 320 P **P** **22 32 30.8 +2.3**
SNR=10
AAK P 22 32 30.8
SNR=10
AAK Ala-Archa 61.12 320 P **P** **22 32 30.2 +1.6**
comp=Z,4.7nm,1.0s,mb4.1
CHMS Chumysh 61.13 320 P **P** **22 32 29.8 +1.1**
SNR=5.2
FRU Bishkek 61.13 320 *e*P **P** **22 32 29.0 +0.3**
FRU *e* 22 33 31.0
AML Almayashu 61.40 319 P **P** **22 32 30.9 +0.4**
SNR=32
AML Almayashu 61.40 319 *e*P **P** **22 32 30.6 +0.1**
AML *e* pP 22 33 11.1 -4.6
AML pmax pmax
comp=Z,28nm,0.8s,mb4.9
AML Almayashu 61.40 319 *e*P **P** **22 32 30.6 +0.1**
comp=Z,28nm,0.8s,mb4.9
AML *e*PcP PcP 22 33 11.1 +0.4
USP Ospenovka 61.42 320 P **P** **22 32 32.5 +2.0**
SNR=11
EKS2 Erkin-Say 61.60 319 P **P** **22 32 32.0 +0.2**
SNR=35
EKS2 Erkin-Say 61.60 319 *e*P **P** **22 32 32.1 +0.3**
EKS2 *e* pP 22 33 12.5 -4.5
EKS2 pmax pmax
comp=Z,26nm,0.9s,mb4.9
EKS2 Erkin-Say 61.60 319 *e*P **P** **22 32 32.1 +0.3**
comp=Z,26nm,0.9s,mb4.9
EKS2 *e*PcP PcP 22 33 12.5 +1.0
KBL Kabul 61.67 309 *e*P **P** **22 32 31.4 -1.1**
KBL pmax pmax
comp=Z,29nm,0.9s,mb4.9
KBL Kabul 61.67 309 *e*P **P** **22 32 31.4 -1.0**
comp=Z,29nm,0.9s,mb4.9
URZ Urewera 61.94 135 P **P** **22 32 34.1 0.0**
comp=Z,6.8nm,0.6s,mb4.5,baz=15,slow=6.4,SNR=5.3
ZAA0 Zalesovo Array 62.19 335 *e*P **P** **22 32 33.7 -1.8**
ZALV Zalesovo Beam 62.19 335 P **P** **22 32 33.9 -1.7**
comp=Z,19nm,0.8s,mb4.8,baz=126,slow=5.0,SNR=48
KURK Kurchatov 63.05 329 P **P** **22 32 39.8 -1.4**
comp=Z,24nm,0.7s,mb5.0,baz=133,slow=6.0,SNR=74
KURK PcP PcP 22 33 16.6 -0.6
comp=Z,3.3nm,0.8s,baz=125,slow=3.3,SNR=4.0
KURK Kurchatov 63.05 329 *e*P **P** **22 32 40.5 -0.7**
KURK pmax pmax
comp=Z,52nm,0.6s,mb5.3
KURK Kurchatov 63.05 329 *e*P **P** **22 32 40.5 -0.7**
comp=Z,52nm,0.6s,mb5.3
KURK Kurchatov 63.05 329 P **P** **22 32 40.7 -0.5**
SNR=18
KURK P 22 32 40.7
SNR=18
NVS Novosibirsk 63.48 335 ⇑*i*P **P** **22 32 42.2 -1.8**
NVS *e* 22 33 42.4
NVS pmax pmax
comp=N,14nm,0.8s
NVS pmax pmax
comp=E,13nm,0.8s
NVS pmax pmax
comp=Z,26nm,0.8s,mb4.9
SEY Seymchan 65.19 14 *e*P **P** **22 32 55.9 +1.0**
CASY Casey 67.83 186 *e*P **P** **22 33 12.6 +1.0**
BVAR Borovoye Array 68.59 328 P **P** **22 33 15.3 -1.2**
comp=Z,9.3nm,0.8s,mb4.5,baz=131,slow=7.7,SNR=37
BRVK Borovoye 68.66 328 ⇑*e*P **P** **22 33 16.3 -0.7**
BRVK pmax pmax
comp=Z,15nm,1.0s,mb4.6
BRVK Borovoye 68.66 328 *e*P **P** **22 33 15.6 -1.4**
comp=Z,18nm,1.0s,mb4.7
BRVK Borovoye 68.66 328 P **P** **22 33 16.8 -0.2**
SNR=5.8
BRVK P 22 33 16.8
SNR=5.8

TIXI Tiksi 70.65 1 *e*P **P** **22 33 28.0 -0.8**
TIXI pmax pmax
comp=Z,14nm,0.7s,mb4.7
TIXI Tiksi 70.65 1 *e*P **P** **22 33 28.0 -0.8**
comp=Z,14nm,0.7s,mb4.7
BILL Bilibino 72.75 15 P **P** **22 33 41.0 -0.4**
BILL 22 33 56.0
ABKAR Akbulak array 73.06 322 *e*P **P** **22 33 42.6 -1.0**
comp=Z,12nm,0.6s,mb4.7
AKTK Aktyubinsk 74.61 322 P **P** **22 33 51.5 -1.0**
AKTO Aktyubinsk 74.61 322 P **P** **22 33 51.5 -1.0**
comp=Z,29nm,0.7s,mb5.0,baz=110,slow=8.5,SNR=58
SVE Sverdlovsk 75.30 329 *e*P **P** **22 33 56.0 -0.4**
SVE pmax pmax
comp=Z,30nm,0.7s,mb5.0
ARU Arti 76.23 328 *c i*P **P** **22 34 00.3 -1.4**
ARU *PP pP 22 34 44.8 -4.0
ARU SS SS 22 48 31.7 +4.0
ARU pmax pmax
comp=Z,24nm,1.0s,mb4.8
ARU Arti 76.23 328 *e*P **P** **22 34 00.4 -1.3**
RDF Al-Radifah 78.32 299 *e*P **P** **22 34 11.6 -2.3**
RDF AMb AMB 22 34 16.1
comp=Z,28nm,1.3s,mb4.8
MIB Mutribah 78.59 300 *e*P **P** **22 34 13.6 -1.7**
MIB AMb AMB 22 34 16.9
comp=Z,34nm,0.8s,mb5.0
NAY Al-Naaiem 78.62 300 *e*P **P** **22 34 13.6 -1.9**
NAY AMb AMB 22 34 17.5
comp=Z,15nm,1.0s,mb4.6
MAW Mawson 80.46 200 P **P** **22 34 25.6 +1.0**
GNI Garni 81.73 310 P **P** **22 34 31.9 0.0**
comp=Z,2.3nm,0.6s,mb4.0,baz=269,slow=1.4,SNR=3.8
GNI Garni 81.73 310 *e*P **P** **22 34 31.7 -0.2**
GNI pmax pmax
comp=Z,14nm,0.8s
GNI Garni 81.73 310 *e*P **P** **22 34 31.7 -0.2**
comp=Z,14nm,0.8s,mb4.6
SBA Scott Base 81.87 172 *e*P **P** **22 34 32.3 +0.4**
ZEI Tsey 82.62 313 ⇑*i*P **P** **22 34 35.4 -1.1**
ZEI pmax pmax
comp=Z,30nm,1.0s,mb5.0
KIV Kislovodsk 83.61 314 *e*P **P** **22 34 41.0 -0.5**
KIV pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
KIV Kislovodsk 83.61 314 *e*P **P** **22 34 44.0 +2.4**
TTA Tatalina 84.28 27 *e*P **P** **22 34 45.7 +1.2**
SOC Sochi 85.73 313 *e*P **P** **22 34 50.8 -1.3**
SOC *e* 22 38 08.0
SOC *e*PPP 22 40 18.9
SOC *e*S S 22 44 55.9 -12
SOC *e**SS sS 22 46 24.4 -7.8
SOC *e*SSS 22 54 19.6
SOC pmax pmax
comp=Z,20nm,0.7s,mb5.0
VORD Divnogorie 86.39 321 *e*P **P** **22 34 54.2 -1.0**
VORD pmax pmax
comp=Z,10.0nm,0.3s,mb5.0
VORD pmax pmax
comp=N,10.0nm,0.7s
VORD pmax pmax
comp=E,10.0nm,0.7s
VSR Storozhevoye 86.48 321 *e*P **P** **22 34 54.5 -1.1**
VSR pmax pmax
comp=E,10.0nm,0.8s
VSR pmax pmax
comp=Z,20nm,0.8s,mb4.9
VSR pmax pmax
comp=N,2.0nm,0.4s
COLD Coldfoot 87.22 23 *e*P **P** **22 34 58.8 0.0**
comp=N,2.9nm,0.9s,mb4.0
ANN Anapa 87.42 315 *e*P **P** **22 34 57.8 -2.5**
ANN pmax pmax
comp=Z,65nm,0.9s,mb5.4
KMBO Kilima Mbogo 87.49 269 P **P** **22 35 02.2 +0.9**
comp=Z,12nm,0.8s,mb4.7,baz=60,slow=8.4,SNR=28
KMBO Kilima Mbogo 87.49 269 *e*P **P** **22 35 02.4 +1.1**
ASF Jabal al Asfar 87.66 302 P **P** **22 35 02.4 +0.6**
comp=Z,12nm,0.8s,mb4.8,baz=335,slow=3.0,SNR=31
OBN Obninsk 88.18 325 *c e*P **P** **22 35 02.8 -0.8**
OBN pmax pmax
comp=Z,26nm,0.9s,mb5.1
OBN Obninsk 88.18 325 *e*P **P** **22 35 01.4 -2.2**
MMAI Mount Meron Ar 88.92 303 P **P** **22 35 07.5 -0.2**
comp=Z,10nm,0.9s,mb4.7,baz=96,slow=4.6,SNR=14
EIL Elat 89.34 299 P **P** **22 35 09.0 -0.7**
comp=Z,3.4nm,0.7s,mb4.3,baz=56,slow=0.6,SNR=4.8
EIL Elat 89.34 299 P **P** **22 35 09.0 -0.7**
BR131 Keskin Array S 90.24 310 *e*P **P** **22 35 12.7 -0.9**
BRTR Keskin Array B 90.24 310 P **P** **22 35 12.0 -1.6**
comp=Z,3.9nm,0.8s,mb4.3,baz=135,slow=3.8,SNR=9.6
BRTR Keskin Array B 90.24 310 *c e*P **P** **22 35 12.3 -1.4**
BRTR pmax pmax
comp=Z,4.0nm,0.8s
BRTR Keskin Array B 90.24 310 P **P** **22 35 12.0 -1.6**
JOF Joensuu 90.73 333 *e*P **P** **22 35 12.6 -2.8**
JOF pmax pmax
comp=Z,13nm,0.6s,mb5.0
JOF Joensuu 90.73 333 *e p* **P** **22 35 12.6 -2.8**
comp=Z,13nm,0.6s,mb5.0
JOF Joensuu 90.73 333 *e p* **P** **22 35 12.6 -2.8**
comp=Z,13nm,0.6s,mb5.0
ARCES ARCESS Array B 92.36 340 P **P** **22 35 21.1 -1.6**
comp=Z,2.8nm,0.6s,mb4.4,baz=77,slow=5.2,SNR=8.6
AKASG Malin Array Be 92.77 321 P **P** **22 35 23.3 -1.8**
comp=Z,2.7nm,0.5s,mb4.5,baz=71,slow=4.6,SNR=8.3
AKASG Malin Array Be 92.77 321 *c e*P **P** **22 35 23.7 -1.4**
AKASG pmax pmax
comp=Z,3.0nm,0.5s
SPITS Spitsbergen Ar 92.81 349 P **P** **22 35 24.2 -0.5**
comp=Z,3.3nm,0.6s,mb4.6,baz=96,slow=7.6,SNR=9.4
KAF Kangasniemi 93.12 332 *e*P **P** **22 35 17.7 -8.7**
KAF pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
KAF Kangasniemi 93.12 332 *e p* **P** **22 35 17.7 -8.7**
comp=Z,8.1nm,0.8s,mb4.8
KAF Kangasniemi 93.12 332 *e p* **P** **22 35 17.7 -8.7**
comp=Z,8.1nm,0.8s,mb4.8
FINES FINESS Array B 93.32 332 P **P** **22 35 25.6 -1.8**
comp=Z,3.9nm,0.6s,mb4.6,baz=51,slow=6.1,SNR=13
NACGM Naroch 93.81 325 *e* **P** **22 35 27.0 -2.8**
VRI Vrincioaia 94.91 316 ⇓P **P** **22 35 34.9 -0.1**
VRI Vrincioaia 94.91 316 ⇓*i*P **P** **22 35 34.9 -0.1**
MLR Muntele Rosu 95.50 316 ⇓P **P** **22 35 37.2 -0.5**
MLR Muntele Rosu 95.50 316 ⇓*i*P **P** **22 35 37.2 -0.5**
BURAR Bucovina Array 95.73 318 ⇓P **P** **22 35 38.8 +0.1**
BURAR Bucovina Array 95.73 318 ⇓*i*P **P** **22 35 38.8 +0.1**
BUR08 Bucovina Ar. S 95.73 318 *e*P **P** **22 35 38.3 -0.4**
SUW Suwalki 96.03 324 *e*P **P** **22 35 39.2 -0.7**
comp=Z,36nm,0.9s,mb5.6
LSZ Lusaka 96.55 255 *e*P **P** **22 35 43.0 -0.1**
KWP Kalwaria Pacla 97.06 320 *e*P **P** **22 35 44.7 0.0**
KWP Kalwaria Pacla 97.06 320 ⇓P **P** **22 35 44.9 +0.2**
KWP Kalwaria Pacla 97.06 320 *e*P **P** **22 35 43.8 -0.9**
comp=Z,7.0nm,0.9s,mb4.9
KWP Kalwaria Pacla 97.06 320 ⇓*i*P **P** **22 35 44.9 +0.2**
KOLS Kolonicke sedl 97.47 320 *e*P **P** **22 35 46.1 -0.4**
KOLS pmax pmax
comp=Z,4.0nm,1.1s,mb4.6
KOLS Kolonicke sedl 97.47 320 *e*P **P** **22 35 46.1 -0.4**
comp=Z,4.2nm,1.1s,mb4.6
KOLS Kolonicke sedl 97.47 320 *e*P **P** **22 35 46.0 -0.5**
IDI Anoyia 97.49 306 P **P** **22 35 44.9 -2.1**
comp=Z,2.8nm,0.6s,mb4.7,baz=88,slow=11,SNR=3.6
DRGR 97.54 317 ⇑P **P** **22 35 46.8 -0.1**
DRGR 97.54 317 ⇑*i*P **P** **22 35 46.8 -0.1**
CRVS Cervenica-Dubn 98.00 320 *e*P **P** **22 35 49.1 +0.2**
CRVS pmax pmax
comp=Z,11nm,1.2s,mb5.1
CRVS Cervenica-Dubn 98.00 320 *e*P **P** **22 35 49.1 +0.2**
comp=Z,11nm,1.2s,mb5.0
CRVS Cervenica-Dubn 98.00 320 PDIF **P** **22 35 49.0 +0.1**
STHS Stebnicka Huta 98.04 320 *e*P **P** **22 35 50.0 +0.9**
STHS pmax pmax
comp=Z,3.0nm,0.7s,mb4.7
STHS Stebnicka Huta 98.04 320 *e*P **P** **22 35 50.0 +0.9**
comp=Z,3.3nm,0.7s,mb4.8
STHS Stebnicka Huta 98.04 320 PDIF **P** **22 35 50.0 +0.9**
KECS Kecovo 98.71 319 *e*P **P** **22 35 51.5 -0.6**
KECS pmax pmax
comp=Z,2.0nm,0.8s,mb4.5
KECS Kecovo 98.71 319 *e*P **P** **22 35 51.5 -0.6**
comp=Z,2.1nm,0.8s,mb4.5
KECS Kecovo 98.71 319 PDIF **P** **22 35 51.5 -0.6**
VYHS Vyhne 99.78 320 *e*P Pdif 22 35 56.4 -0.3

VYHS			pmax	pmax		
	comp=Z,6.0nm,2.1s,mb4.7					
VYHS	**Vyhne**	**99.78 320**	*e*P	Pdif	22 35 56.4	-0.3
	comp=Z,6.2nm,2.1s					
VYHS	**Vyhne**	**99.78 320**	PDIF	Pdif	22 35 56.4	-0.3
NOA	**NORSAR Array B**	**100.36 333**	P	Pdif	22 35 57.4	-2.0
	comp=Z,2.0nm,0.8s,baz=70,slow=4.6,SNR=4.5					
BRG	**Berggiesshubel**	**102.25 323**	*e*(P)	Pdif	22 36 07.8	+0.1
	comp=Z,5.0nm,1.2s					
BRG	**Berggiesshubel**	**102.25 323**	*e*P	Pdif	22 36 07.8	+0.1
BRG			pmax	pmax		
	comp=Z,3.0nm,1.2s					
ACSO	**Alum Creek Sta**	**131.85 29**	*e*PKPdf	PKPdf	22 41 21.4	-3.9
MCWV	**Mont Chateau**	**133.76 26**	*e*PKPdf	PKPdf	22 41 21.1	-7.8
TKL	**Tuckaleechee C**	**134.92 33**	*e*PKIKP	PKPdf	22 41 31.5	+0.3
LPAZ	**La Paz**	**160.17 141**	PKPab	PKPab	22 42 55.1	+2.2
	comp=Z,0.9nm,0.7s,baz=152,slow=6.9,SNR=6.9					

IDC ***19*** *22:36:54.9±0.6, 33°.20N×92°.15E, h0km, mb4.3/20, mb1 4.4/23, mb1mx4.3/30, mbtmp4.3/23, ML4.1/2, MS4.1/15, Ms1 4.1/15, ms1mx3.9/25, Error ellipse: s-maj=20.2km s-min=12.2km az=38.0*

ISCJB ***19*** *22:36:57.9±0.6, 33°.22N±0°.03×92°.14E±0°.02, h33km±5km, mb4.6/70, MS4.3/38, Error ellipse: s-maj=4.6km s-min=3.2km az=6.1*

LDG ***19*** *22:36:57.2±0.4, 33°.56N×91°.56E, h10km, Mb5.0/12, Ms4.1/7, Error ellipse: s-maj=16.7km s-min=5.4km az=124.0*

MOS ***19*** *22:36:58.0±0.9, 33°.21N×92°.11E, h33km, mb4.8/40, MS4.2/24, Error ellipse: s-maj=7.7km s-min=4.7km az=118.3*

BJI ***19*** *22:36:58.1, 33°.21N×92°.13E, h35km, mB4.8/26, mb4.7/35, ML4.8/4, Ms4.8/45, Ms7 4.6/42*

SZGRF ***19*** *22:36:59.8, 32°.86N×92°.01E, h33km, mb4.7, MS4.3, Xizang*

GCMT ***19*** *22:36:59.2±0.3, 33°.13N×92°.19E, h18km±1km, MW4.9, Moment Tensor Solution. s22,c26; s66,c122; Moment tensor: Scale 10^16Nm; Mrr-1.23±.15; Mθθ-1.35±.09; Mφφ2.58±.12; Mrθ-0.39±.23; Mθφ1.96±.08; Mφr0.63±.23; Best double couple: Mo3.00000×10^16 NP1:φs161.00000°, δ67.00000°, λ-16.00000°. NP2:φs161.00000°, δ75.00000°, λ-157.00000°. Principal axes: T 3.4300, Plg5.0000°, Azm292.0000°; N -0.9700, Plg63.0000°, Azm191.0000°; P -2.4600, Plg27.0000°, Azm25.0000°; Data Used: II IU G IC CN.*

NEIC ***19*** *22:37:00.6±0.5, 33°.31N×92°.10E, h36km±4km, mb4.7/44, MS4.3/5 Error ellipse: s-maj=4.1km s-min=3.9km az=98.0*

ISC 19 22:37:00.9±0.4,**33°.23N**±0°.03×**92°.14E**±0°.02,**h41**km±4km, **h33**km±1.3km;**pP-P**,**n265**,σ1§**05**/277,**mb4.6**/70,**MS4.3**/38, **10C-10D**,**Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.62**	**194**	P	**Pn**	**22 37 57.0**	**+2.5**
LSA				LR	LR		
	comp=N,10μm,9.3s						
LSA				LR	LR		
	comp=E,12μm,11.6s						
LSA				LR	LR		
	comp=Z,23μm,7.7s						
LSA	**Lhasa**	**3.62**	**194**	*e*Pn	**Pn**	**22 37 56.9**	**+2.3**
LSA				*e*Sg	**Sn**	**22 38 48.9**	**+13**
TAPN	**Taplejung**	**7.00**	**214**	*e*P	**Pn**	**22 38 41.6**	**+0.6**
JIRN	**Jiri**	**7.56**	**224**	*e*P	**Pn**	**22 38 50.2**	**+1.5**
	comp=Z,78nm,0.8s						
GUN	**Gumba**	**7.57**	**227**	*e*P	**Pn**	**22 38 50.6**	**+1.9**
	comp=Z,63nm,0.6s						
ODAN	**Odare**	**7.57**	**214**	*e*P	**Pn**	**22 38 48.1**	**-0.6**
SHL	**Shillong**	**7.64**	**182**	*e*PKP	**Pn**	**22 38 49.0**	**-0.8**
SHL				*ex*	x	22 40 16.0	
RAMN	**Ramite**	**7.89**	**219**	*e*P	**Pn**	**22 38 52.5**	**-0.6**
	comp=Z,91nm,0.6s						
KKN	**Kakani**	**8.03**	**229**	*e*P	**Pn**	**22 38 55.5**	**+0.5**
	comp=Z,53nm,0.5s						
KKN	**Kakani**	**8.03**	**229**	*e*P	**Pn**	**22 38 55.5**	**+0.5**
KKN				pmax	pmax		
	comp=Z,53nm,0.5s						
PKI	**Pulchoki**	**8.10**	**228**	*e*P	**Pn**	**22 38 57.0**	**+1.0**
	comp=Z,76nm,0.5s						
PKI	**Pulchoki**	**8.10**	**228**	*e*P	**Pn**	**22 38 57.0**	**+1.0**
PKI				pmax	pmax		
	comp=Z,76nm,0.5s						
PKIN	**Phulchoki**	**8.10**	**228**	*e*P	**Pn**	**22 38 56.9**	**+0.8**
	comp=Z,98nm,0.6s						
DMN	**Daman**	**8.26**	**229**	*e*P	**Pn**	**22 38 58.1**	**-0.1**
	comp=Z,81nm,0.7s						
GTA	**Gaotai**	**8.73**	**43**	P	**Pn**	**22 39 05.5**	**+0.9**
GTA				pP		22 39 09.8	
GTA				sP		22 39 13.3	
GTA				S	**Sn**	**22 40 49.0**	**+7.3**
GTA				sS		22 40 54.3	
GTA				pmax	pmax		
	comp=Z,28nm,1.2s						
GTA				pmax	pmax		
	comp=Z,180nm,5.9s						
GTA				LR	LR		
	comp=N,4μm,11.9s						
GTA				LR	LR		
	comp=E,2μm,12.3s						
GTA				LR	LR		
	comp=Z,4μm,11.3s						
AGT	**Agartala**	**9.35**	**185**	*i* x	**Pn**	**22 39 09.0**	**-4.1**
AGT				*i* x	x	22 39 25.0	
LZH	**Lanzhou**	**10.05**	**70**	*e*P	**Pn**	**22 39 24.8**	**+2.1**
LZH				pP		22 39 27.9	
LZH				*e*S	**Sn**	**22 41 17.5**	**+3.4**
LZH				sS		22 41 32.1	
LZH				SS		22 41 33.5	
LZH				pmax	pmax		
	comp=Z,37nm,1.1s						
LZH				pmax	pmax		
	comp=Z,150nm,4.2s						
LZH				LR	LR		
	comp=E,3μm,8.2s						
LZH				LR	LR		
	comp=Z,4μm,10.2s						
CD2	**Chengdu**	**10.13**	**100**	*e*P	**Pn**	**22 39 24.3**	**+0.6**
CD2				pP		22 39 31.3	
CD2				sP		22 39 33.1	
CD2				PP		22 39 36.5	
CD2				S	**Sn**	**22 41 16.4**	**+0.4**
CD2				sS		22 41 27.5	
CD2				SS		22 41 30.5	
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CD2				pmax	pmax		
	comp=Z,30nm,4.2s						
CD2				LR	LR		
	comp=N,4μm,7.2s						
CD2				LR	LR		
	comp=E,4μm,8.2s						
CD2				LR	LR		
	comp=Z,4μm,7.4s						
WMQ	**Urumqi**	**11.13**	**343**	P	**Pn**	**22 39 37.0**	**-0.3**
WMQ				pP		22 39 44.0	
WMQ				sP		22 39 49.0	
WMQ				S	**Sn**	**22 41 40.0**	**-0.3**
WMQ				SS		22 41 55.0	
WMQ				pmax	pmax		
	comp=Z,18nm,0.6s						
WMQ				LR	LR		
	comp=N,2μm,6.0s						
WMQ				LR	LR		
	comp=E,4μm,6.0s						
WMQ				LR	LR		
	comp=Z,1μm,6.0s						
KMI	**Kunming**	**12.28**	**128**	P	**Pn**	**22 39 51.8**	**-1.5**
KMI				pP		22 39 59.0	
KMI				PP		22 40 03.1	
KMI				sP		22 40 05.1	
KMI				S	**Sn**	**22 42 09.6**	**+0.7**
KMI				sS		22 42 21.9	
KMI				SS		22 42 25.3	
KMI				pmax	pmax		
	comp=Z,19nm,1.3s						
KMI				LR	LR		
	comp=N,2μm,9.1s						
KMI				LR	LR		
	comp=E,2μm,14.0s						
KMI				LR	LR		
	comp=Z,2μm,8.1s						
XAN	**Xi'an**	**14.01**	**82**	P	**Pn**	**22 40 15.3**	**-1.5**
XAN				pP		22 40 28.5	
XAN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GYA	**Guiyang**	**14.29**	**114**	P	**Pn**	**22 40 16.8**	**-3.9**
GYA				S	**Sn**	**22 42 55.5**	**-2.3**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,100nm,7.5s						
GYA				LR	LR		
	comp=N,2μm,13.4s						
GYA				LR	LR		
	comp=E,950nm,13.4s						
GYA				LR	LR		
	comp=Z,2μm,10.3s						
JBP	**Jabalpur**	**14.67**	**230**	*e*PKP	**Pn**	**22 40 25.5**	**-0.3**
JBP				*ex*	x	22 40 34.0	
	comp=Z,54nm,1.5s						
JBP				*ex*	x	22 45 01.2	
ENH	**Enshi**	**15.05**	**97**	*e*Pn	**Pn**	**22 40 29.6**	**-1.2**
	comp=Z,25nm,0.7s						
ENH				Sn	**Sn**	**22 43 18.3**	**+2.0**
MK31	**Makanchi Array**	**15.48**	**334**	*e*P	**Pn**	**22 40 34.5**	**-1.8**
MKAR	**Makanchi Array**	**15.48**	**334**	Pn	**Pn**	**22 40 33.3**	**-3.0**
	comp=Z,0.2nm,0.3s,baz=138,slow=14,SNR=23						
MKAR				LR	LR	22 46 27.3	
	comp=Z,391nm,20.0s,baz=149,slow=37						
MKAR	**Makanchi Array**	**15.48**	**334**	Pn	**Pn**	**22 40 33.3**	**-3.0**
MKAR				LR	LR	22 46 27.3	
CHTO	**Chiang Mai**	**15.60**	**155**	*e*P	**Pn**	**22 40 34.7**	**-3.2**
CHTO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CHTO	**Chiang Mai**	**15.60**	**155**	*e*Pn	**Pn**	**22 40 34.6**	**-3.3**
	comp=Z,10nm,1.0s						
CM31	**Chiang Mai Arr**	**15.93**	**156**	*e*Pn	**Pn**	**22 40 39.0**	**-3.2**
CMAR	**Chiang Mai Arr**	**15.93**	**156**	Pn	**Pn**	**22 40 38.3**	**-3.9**
	baz=334,slow=12,SNR=32						
CMAR				LR	LR	22 47 36.7	
	comp=Z,571nm,21.9s,baz=335,slow=40						
KZA	**Kyzart**	**16.01**	**308**	P	**Pn**	**22 40 48.4**	**+5.4**
	SNR=52						
BTO	**Baotou**	**16.07**	**58**	*e*P	**Pn**	**22 40 39.8**	**-4.0**
TKM2	**Tokmak 2**	**16.20**	**311**	P	**Pn**	**22 40 49.6**	**+4.2**
	SNR=14						
TKM2	**Tokmak 2**	**16.20**	**311**	*e*P	**Pn**	**22 40 44.5**	**-1.0**
TKM2				pmax	pmax		
	comp=Z,34nm,1.2s						
TKM2	**Tokmak 2**	**16.20**	**311**	*e*Pn	**Pn**	**22 40 44.5**	**-1.0**
	comp=Z,34nm,1.2s						
BHPL	**Bhopal**	**16.33**	**236**	*ex*	**Pn**	**22 40 43.3**	**-3.9**
BHPL				AMb	AMB	22 40 44.5	
	comp=Z,48nm,1.0s						
KBK	**Karagaybulak**	**16.48**	**310**	P	**Pn**	**22 40 55.7**	**+6.7**
	SNR=32						
UCH	**Uchtor**	**16.56**	**308**	P	**Pn**	**22 40 55.2**	**+5.2**
	SNR=28						
UCH	**Uchtor**	**16.56**	**308**	*e*Pn	**Pn**	**22 40 49.0**	**-1.1**
AJM	**Ajmer**	**16.59**	**251**	*e*PKP	**Pn**	**22 40 50.0**	**-0.6**
AJM				AMb	AMB	22 40 53.1	
	comp=Z,32nm,1.2s						
AAK	**Ala-Archa**	**16.76**	**309**	P	**Pn**	**22 40 58.2**	**+5.6**
	SNR=13						
AAK	**Ala-Archa**	**16.76**	**309**	Pn	**Pn**	**22 40 54.3**	**+1.8**
	comp=Z,0.0nm,0.3s,baz=118,slow=5.7,SNR=34						
AAK				LR	LR	22 47 37.9	
	comp=Z,439nm,21.6s,baz=101,slow=38						
AAK	**Ala-Archa**	**16.76**	**309**	*e*Pn	**Pn**	**22 40 50.9**	**-1.7**
	comp=Z,27nm,1.0s						
AAK				LR	LR	22 47 37.9	
CHMS	**Chumysh**	**16.77**	**311**	P	**Pn**	**22 40 56.1**	**+3.4**
	SNR=11						
FRU	**Bishkek**	**16.78**	**310**	*e*P	**Pn**	**22 40 52.0**	**-0.8**
FRU				pmax	pmax		
	comp=Z,70nm,2.0s						
AML	**Almayashu**	**17.06**	**307**	*e*Pn	**Pn**	**22 40 55.8**	**-0.5**
	comp=Z,12nm,0.8s						
EKS2	**Erkin-Say**	**17.24**	**308**	P	**Pn**	**22 41 03.1**	**+4.5**
	SNR=18						
EKS2	**Erkin-Say**	**17.24**	**308**	*e*Pn	**Pn**	**22 40 58.5**	**0.0**
	comp=Z,14nm,0.8s						
HHC	**Hu-ho-hao-te**	**17.25**	**58**	*e*P	**Pn**	**22 40 58.9**	**+0.2**
HHC				pP	pP	22 41 06.8	-3.0
HHC				sP	sP	22 41 11.4	-3.6
HHC				PP		22 41 13.6	
HHC				S	**S**	**22 44 08.3**	**-8.8**
HHC				sS	sS	22 44 20.0	-13
HHC				SS		22 44 29.3	
HHC				PcP	PcP	22 45 43.0	+2.9
HHC				ScS	ScS	22 52 52.5	+1.0
HHC				pmax	pmax		
	comp=Z,17nm,0.9s						
HHC				pmax	pmax		
	comp=Z,76nm,5.0s						
HHC				LR	LR		
	comp=N,1μm,13.7s						
HHC				LR	LR		
	comp=E,2μm,13.9s						
HHC				LR	LR		
	comp=Z,2μm,13.1s						
VIS	**Vishakhapatnam**	**17.36**	**209**	*e*PKP	**Pn**	**22 41 01.5**	**+1.3**
SONM	**Songino Array**	**18.12**	**32**	P	**Pn**	**22 41 10.1**	**+0.8**
	comp=Z,2.8nm,0.3s,baz=215,slow=13,SNR=59						
SONM				LR	LR	22 49 26.4	
	comp=Z,252nm,20.6s,baz=120,slow=41						
ULN	**Ulaanbaatar**	**18.44**	**33**	*e*P	**Pn**	**22 41 13.3**	**+0.1**
ULN				pmax	pmax		
	comp=Z,46nm,1.3s						
ULN	**Ulaanbaatar**	**18.44**	**33**	*e*Pn	**Pn**	**22 41 13.3**	**+0.1**
	comp=Z,46nm,1.3s						
KBL	**Kabul**	**19.22**	**280**	*e*P	**Pn**	**22 41 20.0**	**-2.7**
KBL				pmax	pmax		
	comp=Z,44nm,0.9s						
KBL	**Kabul**	**19.22**	**280**	*e*P	**Pn**	**22 41 20.0**	**-2.7**
	comp=Z,44nm,0.9s						
MOY	**Mondy**	**19.52**	**17**	*e*P	**Pn**	**22 41 27.0**	**+0.9**
MOY				pmax	pmax		
	comp=Z,52nm,3.8s						
HYB	**Hyderabad**	**19.94**	**221**	*e*P	**Pn**	**22 41 30.0**	**-1.4**
HYB	**Hyderabad**	**19.94**	**221**	*i* P	**Pn**	**22 41 30.0**	**-1.4**
KURK	**Kurchatov**	**20.10**	**334**	P	**P**	**22 41 29.4**	**-1.5**
	comp=Z,20nm,1.0s,baz=147,slow=10,SNR=43						
KURK				LR	LR	22 49 16.3	
	comp=Z,470nm,20.4s,MS3.8,baz=155,slow=37						
KURK	**Kurchatov**	**20.10**	**334**	*e*P	**P**	**22 41 30.4**	**-0.5**
KURK				pmax	pmax		
	comp=Z,26nm,1.1s						
KURK	**Kurchatov**	**20.10**	**334**	*e*P	**P**	**22 41 30.4**	**-0.5**
	comp=Z,26nm,1.1s						
TLY	**Talaya**	**20.25**	**21**	*e*P	**P**	**22 41 34.1**	**+1.6**
TLY				pmax	pmax		
	comp=Z,30nm,1.7s						
TLY				MLR	MLR		
	comp=Z,731nm,19.0s,MS4.0						
TLY	**Talaya**	**20.25**	**21**	*e*P	**P**	**22 41 32.4**	**-0.2**
	comp=Z,16nm,1.1s						
BJT	**Baijiatuau**	**20.41**	**64**	*e*P	**P**	**22 41 33.8**	**-0.6**
BJI	**Beijing**	**20.41**	**64**	P	**P**	**22 41 35.1**	**+0.6**
BJI				S	**S**	**22 45 21.0**	**+0.2**
BJI				pmax	pmax		
	comp=Z,14nm,1.4s						
BJI				pmax	pmax		
	comp=Z,61nm,4.0s						
BJI				LR	LR		
	comp=N,6μm,15.2s,MS5.1						
BJI				LR	LR		
	comp=E,1μm,14.6s,MS5.1						
BJI				LR	LR		
	comp=Z,540nm,13.9s,MS4.1						
IRK	**Irkutsk**	**20.93**	**21**	*e*P	**P**	**22 41 41.4**	**+1.5**
IRK				pmax	pmax		
	comp=Z,136nm,1.6s						
GZH	**Guangzhou**	**21.22**	**113**	P	**P**	**22 41 41.8**	**-1.4**
GZH				S	**S**	**22 45 34.5**	**-2.4**
GZH				LR	LR		
	comp=N,2μm,10.8s,MS4.7						
GZH				LR	LR		
	comp=E,790nm,11.9s,MS4.7						
GZH				LR	LR		
	comp=Z,2μm,14.1s,MS4.7						
QIZ	**Qiongzhong**	**21.23**	**127**	P	**P**	**22 41 43.5**	**+0.1**
QIZ				S	**S**	**22 45 38.9**	**+1.7**
QIZ				pmax	pmax		
	comp=Z,110nm,3.8s						
QIZ				LR	LR		
	comp=N,1μm,13.8s						
QIZ				LR	LR		
	comp=Z,1μm,11.1s,MS4.6						
ZAA0	**Zalesovo Array**	**21.35**	**348**	*e*P	**P**	**22 41 43.3**	**-1.1**
ZALV	**Zalesovo Beam**	**21.35**	**348**	P	**P**	**22 41 43.3**	**-1.1**
	comp=Z,14nm,0.9s,mb4.3,baz=155,slow=11,SNR=52						
ZALV	**Zalesovo Beam**	**21.35**	**348**	P	**P**	**22 41 43.3**	**-1.1**
ZALV				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.3						
POO	**Poona**	**21.98**	**233**	*e*PKP	**P**	**22 41 51.5**	**0.0**
POO				AMb	AMB	22 41 56.7	
	comp=Z,50nm,1.3s,mb4.8						
NVS	**Novosibirsk**	**22.49**	**346**	⇓*i* P	**P**	**22 41 55.2**	**-1.4**
NVS				*e*		22 42 23.0	
NVS				*e*S	**S**	**22 46 02.2**	**+1.2**
NVS				pmax	pmax		
	comp=N,112nm,1.6s						
NVS				pmax	pmax		
	comp=E,44nm,1.6s						
NVS				pmax	pmax		
	comp=Z,86nm,1.6s,mb4.9						
NVS				smax			
	comp=N,28nm,2.5s						
NVS				smax			
	comp=E,30nm,2.3s						
NJ2	**Nanjing**	**22.51**	**86**	*e*P	**P**	**22 41 59.1**	**+2.1**
NJ2				pP		22 42 08.4	
NJ2				sP	sP	22 42 12.4	0.0
NJ2				PP		22 42 28.0	
NJ2				S	**S**	**22 46 01.0**	**-0.7**
NJ2				sS	sS	22 46 17.0	-1.5
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.4						
NJ2				pmax	pmax		
	comp=Z,90nm,3.8s						
NJ2				LR	LR		
	comp=N,1μm,10.9s,MS4.7						
NJ2				LR	LR		
	comp=E,1μm,11.4s,MS4.7						
NJ2				LR	LR		
	comp=Z,1μm,11.7s,MS4.6						
QZH	**Quanzhou**	**24.50**	**103**	*e*P	**P**	**22 42 14.9**	**-1.5**
QZH				S	**S**	**22 46 28.3**	**-5.8**
QZH				LR	LR		
	comp=N,2μm,7.8s						
QZH				LR	LR		
	comp=E,670nm,8.4s						
QZH				LR	LR		
	comp=Z,2μm,24.1s,MS4.6						
SSE	**Sheshan**	**24.65**	**87**	P	**P**	**22 42 14.8**	**-2.9**
SSE				S	**S**	**22 46 35.1**	**-1.4**
SSE				pmax	pmax		
	comp=Z,21nm,0.7s,mb4.8						
SSE				pmax	pmax		
	comp=Z,77nm,6.3s						
SSE				LR	LR		
	comp=N,770nm,11.7s,MS4.5						
SSE				LR	LR		
	comp=E,350nm,11.7s,MS4.5						
SSE				LR	LR		
	comp=Z,950nm,13.2s,MS4.5						
BVAR	**Borovoye Array**	**25.18**	**328**	P	**P**	**22 42 22.2**	**-0.1**
	comp=Z,8.6nm,0.9s,mb4.3,baz=134,slow=11,SNR=28						
BVAR	**Borovoye Array**	**25.18**	**328**	P	**P**	**22 42 22.2**	**-0.1**
BVAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BRVK	**Borovoye**	**25.25**	**328**	*d* *i*P	**P**	**22 42 22.9**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,37nm,1.2s,mb4.8						
BRVK	**Borovoye**	**25.25**	**328**	*e*P	**P**	**22 42 23.5**	**+0.5**
	comp=Z,30nm,1.1s,mb4.7						
CN2	**Changchun**	**27.94**	**58**	*e*P	**P**	**22 42 48.1**	**+0.8**
CN2				*e*pP	pP	22 42 57.5	-1.0
CN2				*e*S	**S**	**22 47 27.1**	**-1.2**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.7						
CN2				LR	LR		
	comp=N,1μm,17.0s,MS4.6						
CN2				LR	LR		
	comp=E,600nm,17.0s,MS4.6						
CN2				LR	LR		
	comp=Z,1μm,13.0s,MS4.6						
ABKAR	**Akbulak array**	**28.74**	**313**	*e*P	**P**	**22 42 54.2**	**-0.2**
	comp=Z,14nm,1.2s,mb4.6						
KSRS	**Korea Array**	**29.38**	**72**	P	**P**	**22 43 00.5**	**+0.3**
	comp=Z,1.2nm,0.6s,mb3.8,baz=266,slow=9.6,SNR=9.3						
KSRS				LR	LR	22 55 50.1	
	comp=Z,230nm,18.6s,MS3.8,baz=93,slow=39						
KSRS	**Korea Array**	**29.38**	**72**	P	**P**	**22 43 00.5**	**+0.4**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
KSRS				MLR	MLR		
	comp=Z,230nm,18.6s,MS3.8						
AKTK	**Aktyubinsk**	**30.34**	**315**	P	**P**	**22 43 08.9**	**+0.4**
AKTK				LR	LR	22 56 59.5	
AKTO	**Aktyubinsk**	**30.34**	**315**	P	**P**	**22 43 08.9**	**+0.4**
	comp=Z,7.7nm,1.1s,mb4.3,baz=114,slow=9.3,SNR=9.3						
AKTO				LR	LR	22 56 59.5	
	comp=Z,639nm,19.0s,MS4.3,baz=116,slow=40						
AKTO	**Aktyubinsk**	**30.34**	**315**	P	**P**	**22 43 08.9**	**+0.4**
AKTO				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.4						
AKTO				MLR	MLR		
	comp=Z,639nm,19.0s,MS4.3						
PSI	**Prapat**	**30.93**	**167**	LR	LR	22 57 32.5	
	comp=Z,412nm,20.6s,MS4.1,baz=198,slow=40						
MDJ	**Mudanjiang**	**31.02**	**57**	P	**P**	**22 43 14.4**	**-0.1**
MDJ				pP	pP	22 43 23.0	-2.8
MDJ				sP	sP	22 43 27.1	-3.6
MDJ				S	**S**	**22 48 18.0**	**+1.4**
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.4						
MDJ				pmax	pmax		
	comp=Z,61nm,4.9s						
MDJ				LR	LR		
	comp=N,2μm,23.3s,MS4.6						
MDJ				LR	LR		
	comp=E,250nm,20.7s,MS4.6						
MDJ				LR	LR		
	comp=Z,320nm,19.5s,MS4.0						
SVE	**Sverdlovsk**	**31.95**	**327**	⇓*e*P	**P**	**22 43 23.6**	**+1.0**
SVE				*e*S	**S**	**22 48 30.2**	**-0.7**
SVE				pmax	pmax		
	comp=Z,33nm,1.1s,mb5.1						
SVE				MLR	MLR		
	comp=Z,741nm,16.0s,MS4.5						
ARU	**Arti**	**32.70**	**325**	*d* *i*P	**P**	**22 43 29.2**	**0.0**
ARU				*e*		22 44 36.3	
ARU				*e*PPP		22 44 51.7	
ARU				S	**S**	**22 48 45.9**	**+3.3**
ARU				SS	SS	22 50 41.6	-23
ARU				pmax	pmax		
	comp=Z,25nm,1.7s,mb4.9						
ARU				MLR	MLR		
	comp=Z,465nm,18.0s,MS4.2						
ARU	**Arti**	**32.70**	**325**	*e*P	**P**	**22 43 28.9**	**-0.3**
	comp=Z,35nm,1.6s,mb5.0						
ARU				*e*PcP	PcP	22 46 13.2	-0.8
ARU	**Arti**	**32.70**	**325**	S	**P**	**22 43 29.0**	**-0.2**
KLR	**Kul'dur**	**33.36**	**49**	*e*P	**P**	**22 43 31.8**	**-3.2**
KKM	**Kota Kinabalu**	**35.11**	**135**	*e*P	**P**	**22 43 51.4**	**+0.9**
	comp=Z,42nm,1.0s,mb5.3						
SOKR	**Solikamsk**	**35.16**	**329**	*c* *i*P	**P**	**22 43 51.5**	**+1.0**
SOKR				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb5.0						
SOKR				MLR	MLR		
	comp=Z,470nm,18.0s,MS4.3						
HABR	**Khabarovsk**	**35.35**	**52**	P	**P**	**22 43 50.6**	**-1.6**
HABR				*e*		22 45 09.2	
HABR				S	**S**	**22 49 24.7**	**+1.1**
HABR				*e**SS	sS	22 49 40.3	-2.2
HABR				*e*SS	SS	22 51 46.9	-11
HABR				*e*SSS		22 52 03.9	
HABR				*e*		22 54 06.9	
HABR				MLR	MLR		
	comp=Z,413nm,15.0s,MS4.3						
MAK	**Makhachkala**	**36.08**	**299**	*e*P	**P**	**22 44 00.5**	**+1.9**
MJAR	**Matsushiro Arr**	**37.66**	**72**	LR	LR	22 59 59.0	
	comp=Z,188nm,19.0s,MS3.9,baz=45,slow=37						
GNI	**Garni**	**38.26**	**294**	P	**P**	**22 44 18.7**	**+1.6**
	comp=Z,9.3nm,1.0s,mb4.5,baz=356,slow=9.9,SNR=7.9						
GNI	**Garni**	**38.26**	**294**	*e*P	**P**	**22 44 17.5**	**+0.4**
GNI				pmax	pmax		
	comp=Z,28nm,1.7s						
GNI	**Garni**	**38.26**	**294**	*e*P	**P**	**22 44 17.3**	**+0.1**
	comp=Z,25nm,1.4s,mb4.8						

GNI *e*PcP PcP 22 46 30.8 +0.2
KIV Kislovodsk 39.58 301 *e*P **P 22 44 28.4 +0.3**
KIV pmax pmax
comp=Z,6.0nm,1.1s,mb4.2
KIV MLR MLR
comp=Z,137nm,15.0s,MS3.9
KIV Kislovodsk 39.58 301 *e*P **P 22 44 28.3 +0.2**
comp=Z,3.2nm,0.6s,mb4.2
JHJ Hachijo jima 2 39.60 77 LR LR 23 00 23.2
comp=Z,321nm,21.7s,MS4.1,baz=129,slow=36
DAV Davao City (W) 40.46 123 LR LR 23 03 42.1
comp=Z,568nm,19.6s,MS4.4,baz=354,slow=40
VORD Divnogorie 42.04 311 *e*P **P 22 44 47.7 -0.6**
VORD pmax pmax
comp=E,30nm,1.2s
VORD pmax pmax
comp=Z,20nm,1.2s,mb4.6
VORD pmax pmax
comp=N,8.0nm,0.6s
VORD MLR MLR
comp=N,130nm,19.0s,MS4.2
VORD MLR MLR
comp=E,300nm,19.0s,MS4.2
VORD MLR MLR
comp=Z,470nm,19.0s,MS4.4
VSR Storozhevoye 42.14 312 *e*P **P 22 44 47.5 -1.6**
VSR pmax pmax
comp=E,10.0nm,1.0s
VSR pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
VSR pmax pmax
comp=N,5.0nm,0.5s
VSR MLR MLR
comp=E,400nm,26.0s
VSR MLR MLR
comp=Z,690nm,26.0s,MS4.4
VSR MLR MLR
comp=N,120nm,9.0s
TIXI Tiksi 43.10 16 *e*P **P 22 44 56.1 -0.5**
TIXI pmax pmax
comp=Z,9.0nm,0.9s,mb4.5
TIXI Tiksi 43.10 16 *e*P **P 22 44 56.1 -0.5**
comp=Z,8.6nm,0.9s,mb4.5
MOS Moscow 43.53 318 *e*P **P 22 44 59.8 -0.5**
MOS pmax pmax
comp=Z,68nm,1.3s,mb5.2
OBN Obninsk 44.05 317⇑*e*P **P 22 45 04.2 -0.3**
OBN *e* pP 22 45 13.9 -2.1
OBN *e* 22 55 04.4
OBN pmax pmax
comp=Z,24nm,1.6s,mb4.7
OBN MLR MLR
comp=Z,300nm,17.0s,MS4.3
ASF Jabal al Asfar 46.03 285 P **P 22 45 21.0 +0.5**
comp=Z,2.1nm,0.6s,mb4.2,baz=297,slow=2.2,SNR=10
ASF Jabal al Asfar 46.03 285 P **P 22 45 21.0 +0.5**
ASF pmax pmax
comp=Z,2.0nm,0.6s
BR131 Keskin Array S 46.77 296 *e*P **P 22 45 26.2 -0.1**
BRTR Keskin Array B 46.77 296 P **P 22 45 25.8 -0.4**
comp=Z,3.9nm,0.8s,mb4.4,baz=100,slow=7.4,SNR=22
BRTR PP PP 22 47 18.1 +1.7
comp=Z,2.7nm,1.1s,baz=74,slow=6.9,SNR=4.6
BRTR Keskin Array B 46.77 296*ce*P **P 22 45 25.7 -0.5**
BRTR pmax pmax
comp=Z,4.0nm,0.8s
MMAI Mount Meron Ar 47.00 286 P **P 22 45 28.3 +0.2**
comp=Z,1.3nm,0.6s,mb4.0,baz=48,slow=14,SNR=5.5
SEY Seymchan 47.52 33 *e*P **P 22 45 32.7 +1.0**
JOF Joensuu 47.78 327 *e*P **P 22 45 33.7 0.0**
JOF pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
JOF Joensuu 47.78 327 *e*p **P 22 45 33.7 0.0**
comp=Z,9.6nm,1.1s,mb4.7
JOF Joensuu 47.78 327 *e*p **P 22 45 33.7 0.0**
comp=Z,9.6nm,1.1s,mb4.7
EIL Elat 48.40 282 P **P 22 45 39.0 0.0**
comp=Z,11nm,0.7s,mb5.0,baz=44,slow=4.4,SNR=16
AKASG Malin Array Be 48.42 311 P **P 22 45 37.9 -1.0**
comp=Z,0.6nm,0.3s,mb4.1,baz=80,slow=6.1,SNR=12
AKASG Malin Array Be 48.42 311*ce*P **P 22 45 37.9 -1.0**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
ISP Isparta 49.56 294 P **P 22 45 48.1 +0.3**
VSU Vasula 49.65 321⇓*e*P **P 22 45 49.5 +1.3**
VSU pmax pmax
comp=Z,17nm,1.2s,mb5.0
PETK Petropavlovsk- 49.89 46 P **P 22 45 50.2 +0.1**
comp=Z,2.2nm,0.9s,mb4.2,baz=284,slow=2.4,SNR=4.6
PETK Petropavlovsk- 49.89 46 P **P 22 45 50.2 +0.1**
PETK pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
KAF Kangasniemi 50.00 326 *e*P **P 22 45 51.0 +0.2**
KAF pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
KAF Kangasniemi 50.00 326 *e*p **P 22 45 51.0 +0.2**
comp=Z,5.2nm,1.1s,mb4.5
KAF Kangasniemi 50.00 326 *e*p **P 22 45 51.0 +0.2**
comp=Z,5.2nm,1.1s,mb4.5
FINES FINESS Array B 50.08 325 P **P 22 45 51.1 -0.2**
comp=Z,1.3nm,0.6s,mb4.2,baz=88,slow=7.4,SNR=9.8
FINES LR LR 23 08 59.2
comp=Z,439nm,19.1s,MS4.5,baz=91,slow=38
FINES FINESS Array B 50.08 325 P **P 22 45 51.2 -0.1**
FINES pmax pmax
comp=Z,1.0nm,0.6s
FINES MLR MLR
comp=Z,439nm,19.1s
VRI Vrincioaia 50.66 305⇑*i*P **P 22 45 59.0 +3.0**
PLOR Plostina 50.72 305⇓*i*P **P 22 45 59.2 +2.8**
ARCES ARCESS Array B 51.13 336 P **P 22 45 59.5 +0.3**
comp=Z,1.5nm,0.7s,mb4.0,baz=95,slow=7.9,SNR=14
ARCES LR LR 23 12 40.8
comp=Z,125nm,18.7s,MS4.0,baz=70,slow=42
ARCES ARCESS Array B 51.13 336 P **P 22 45 59.5 +0.3**
ARCES pmax pmax
comp=Z,2.0nm,0.7s
ARCES MLR MLR
comp=Z,125nm,18.7s
ARCES ARCESS Array B 51.13 336 P **P 22 45 59.5 +0.3**
ARCES LR LR 23 12 40.8
MLR Muntele Rosu 51.27 304⇓*i*P **P 22 46 01.4 +0.8**
BURAR Bucovina Array 51.40 307⇑*i*P **P 22 46 03.0 +1.5**
VOIR 51.90 304⇓*i*P **P 22 46 06.2 +0.9**
KWP Kalwaria Pacla 52.71 310 *e*P **P 22 46 11.2 0.0**
KWP Kalwaria Pacla 52.71 310 *e*P **P 22 46 10.9 -0.3**
comp=Z,16nm,1.1s,mb4.8
KWP Kalwaria Pacla 52.71 310⇑*i*P **P 22 46 11.3 +0.1**
KOLS Kolonicke sedl 53.11 309 *e*P **P 22 46 16.7 +2.5**
KOLS pmax pmax
comp=Z,18nm,2.2s,mb4.6
KOLS Kolonicke sedl 53.11 309 *e*P **P 22 46 16.7 +2.5**
comp=Z,18nm,2.2s,mb4.6
KOLS Kolonicke sedl 53.11 309 *e*P **P 22 46 16.7 +2.5**
CRVS Cervenica-Dubn 53.64 309 *e*P **P 22 46 19.2 +1.1**
CRVS pmax pmax
comp=Z,15nm,2.1s,mb4.5
CRVS Cervenica-Dubn 53.64 309 *e*P **P 22 46 19.2 +1.1**
comp=Z,15nm,2.1s,mb4.5
CRVS Cervenica-Dubn 53.64 309 *e*P **P 22 46 19.2 +1.1**
STHS Stebnicka Huta 53.69 310 *e*P **P 22 46 23.6 +5.2**
STHS pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
STHS Stebnicka Huta 53.69 310 *e*P **P 22 46 23.6 +5.2**
comp=Z,1.9nm,1.1s,mb3.9
STHS Stebnicka Huta 53.69 310 *e*P **P 22 46 23.6 +5.2**
BILL Bilibino 53.73 27κ *i*P **P 22 46 19.5 +1.1**
BILL pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
BILL MLR MLR
comp=Z,300nm,17.0s,MS4.4
BILL Bilibino 53.73 27 *e*P **P 22 46 18.9 +0.5**
comp=Z,9.3nm,1.2s,mb4.6
KECS Kecovo 54.36 309 *e*P **P 22 46 26.1 +2.8**
KECS pmax pmax
comp=Z,4.0nm,1.3s,mb4.2
KECS Kecovo 54.36 309 *e*P **P 22 46 26.1 +2.8**
comp=Z,3.7nm,1.3s,mb4.2
KECS Kecovo 54.36 309 *e*P **P 22 46 26.1 +2.8**
PSZ Piszkesteto 54.86 308 *e*P **P 22 46 27.3 +0.3**
GVD Gavdhos 55.40 292 *e*P **P 22 46 30.4 -0.6**
VYHS Vyhne 55.43 309 *e*P **P 22 46 31.1 0.0**
VYHS pmax pmax
comp=Z,8.0nm,1.8s,mb4.5
VYHS Vyhne 55.43 309 *e*P **P 22 46 31.1 0.0**
comp=Z,7.6nm,1.8s,mb4.4
VYHS Vyhne 55.43 309 *e*P **P 22 46 31.1 0.0**
OKC Ostrava-Krasne 55.57 311 *e*P **P 22 46 32.4 +0.3**
OKC MLR MLR
comp=Z,200nm,13.5s,MS4.4
OKC Ostrava-Krasne 55.57 311 *e*P **P 22 46 32.4 +0.3**
OKC AMS AMS 23 12 30.0
comp=Z,200nm,13.5s
KOLL Kolacno 55.69 309 *e*P **P 22 46 34.2 +1.3**
KOLL Kolacno 55.69 309 *e*P **P 22 46 34.2 +1.3**
DPC Dobruska-Polom 56.61 312 *e*P **P 22 46 39.9 +0.4**
DPC MLR MLR
comp=Z,200nm,14.9s,MS4.3
DPC Dobruska-Polom 56.61 312 *e*P **P 22 46 39.9 +0.4**
DPC AMS AMS 23 13 20.0
comp=Z,200nm,14.9s
UPC Upice 56.76 312 *e*P **P 22 46 41.5 +0.9**
UPC Upice 56.76 312 *e*P **P 22 46 41.5 +0.9**
NB2 NORSAR Subarra 57.26 325 P **P 22 46 43.2 -0.7**
comp=Z,2.9nm,0.8s,mb4.4,baz=81,slow=7.4
NOA NORSAR Array B 57.26 325 P **P 22 46 43.4 -0.5**
comp=Z,0.9nm,0.7s,mb3.9,baz=88,slow=8.5,SNR=4.7
NOA LR LR 23 13 09.3
comp=Z,438nm,18.1s,MS4.6,baz=90,slow=38
NOA NORSAR Array B 57.26 325 P **P 22 46 43.4 -0.5**
NOA pmax pmax
comp=Z,1.0nm,0.7s
NOA MLR MLR
comp=Z,438nm,18.1s
TREC Trest 57.38 311 AMS AMS 23 13 30.0
comp=Z,300nm,13.9s
CONA Conrad Observa 57.49 309⇑*i*P **P 22 46 46.2 +0.4**
comp=Z,10nm,1.3s,mb4.7
PVCC Panska Ves 57.65 312 *e*P **P 22 46 46.9 0.0**
PVCC MLR MLR
comp=Z,300nm,18.5s,MS4.4
PVCC Panska Ves 57.65 312 *e*P **P 22 46 46.9 0.0**
PVCC AMS AMS 23 13 10.0
comp=Z,300nm,18.5s
PRU Pruhonice 57.80 312 *e*P **P 22 46 48.0 +0.1**
PRU MLR MLR
comp=Z,300nm,24.4s,MS4.3
PRU Pruhonice 57.80 312 *e*P **P 22 46 48.0 +0.1**
PRU AMS AMS 23 13 30.0
comp=Z,300nm,24.4s
BRG Berggiesshubel 57.95 313 *e*P **P 22 46 48.9 -0.1**
comp=Z,3.8nm,0.9s,mb4.4
BRG Berggiesshubel 57.95 313 *e*P **P 22 46 48.8 -0.2**
BRG pmax pmax
comp=Z,2.0nm,1.0s,mb4.1
SOKA Soboth 58.38 308⇑*i*P **P 22 46 52.1 +0.1**
comp=Z,8.8nm,1.5s,mb4.6
CLL Collm 58.41 314 *e*P **P 22 46 54.0 +1.8**
CLL MLR MLR
comp=Z,200nm,21.1s,MS4.2
CLL Collm 58.41 314 *e*(P) **P 22 46 54.0 +1.8**
CLL *e*SS SS 22 58 57.0 +13
CLL *e* 23 00 00.0
CLL *e*SSS 23 01 12.0
CLL LmV 23 15 00.0
comp=Z,200nm,21.1s
KHC Kasperske Hory 58.64 311 AMS AMS 23 14 50.0
comp=Z,300nm,18.8s
NKC Novy Kostel 59.04 313 AMS AMS 23 14 10.0
comp=Z,300nm,13.0s
GRA1 Grafenberg Arr 59.95 312 *e*P **P 22 47 03.1 +0.2**
comp=Z,12nm,1.6s,mb4.7
GRA1 *e*PP PP 22 49 18.5 +3.4
GRA1 LR LR
comp=Z,300nm,21.1s,MS4.4
GRF Grafenberg Arr 59.95 312 *e*P **P 22 47 03.1 +0.2**
comp=Z,12nm,1.6s,mb4.7
GRF *e*PP PP 22 49 18.5 +3.4
GRF *e*L 23 15 01.6
comp=Z,252nm,21.1s
GRF Grafenberg Arr 59.95 312 *e*P **P 22 47 03.1 +0.2**
GRF *e* 22 49 18.5
GRF pmax pmax
comp=Z,12nm,1.6s,mb4.7
GRF MLR MLR
comp=Z,300nm,21.1s,MS4.4
GRF Grafenberg Arr 59.95 312 *e*P **P 22 47 03.1 +0.2**
GRF *e* 22 49 18.5
GRF pmax pmax
comp=Z,12nm,1.6s,mb4.7
GRF MLR MLR
comp=Z,300nm,21.1s,MS4.4
AQU L'Aquila 60.83 304 *e*P **P 22 47 08.4 -0.5**
RETA Reutte 60.92 310⇑*i*P **P 22 47 09.1 -0.4**
comp=Z,4.1nm,1.1s,mb4.5
CDF Champ du Feu 62.82 312 *e*P **P 22 47 21.6 -0.7**
PGF Pioggiola 63.80 305 *e*P **P 22 47 27.9 -0.9**
comp=Z,44nm,1.4s,mb5.0
PGF Pioggiola 63.80 305 *e*P **P 22 47 27.9 -0.9**
PGF pmax pmax
comp=Z,22nm,1.4s,mb5.0
PGF Pioggiola 63.80 305 *e*P **P 22 47 27.9 -0.9**
comp=Z,22nm,1.4s,mb5.0
LPG La Plagne 64.21 309 *e*P **P 22 47 31.5 +0.1**
comp=Z,12nm,0.9s,mb4.6
LPG La Plagne 64.21 309 *e*P **P 22 47 31.5 +0.1**
LPG pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
LPG La Plagne 64.21 309 *e*P **P 22 47 31.5 +0.1**
comp=Z,5.8nm,0.9s,mb4.6
LPL La Plagne 64.21 309 *e*P **P 22 47 31.4 -0.1**
SBF Sospel 64.37 307 *e*P **P 22 47 31.7 -0.8**
MBDF Montbardon 64.48 308 *e*P **P 22 47 33.3 0.0**
ORIF Oris-en-Rattie 65.00 309 *e*P **P 22 47 35.7 -0.9**
ORIF *e*MLR MLR
comp=Z,429nm,23.0s,MS4.3
LMR La Mourre 65.19 307 *e*P **P 22 47 37.0 -0.9**
comp=Z,30nm,1.3s,mb4.8
LMR La Mourre 65.19 307 *e*P **P 22 47 37.0 -0.9**
LMR pmax pmax
comp=Z,15nm,1.3s,mb4.9
LMR La Mourre 65.19 307 *e*P **P 22 47 37.0 -0.9**
comp=Z,15nm,1.3s,mb4.9
LOR Lormes 65.38 312 *e*P **P 22 47 37.8 -1.3**
comp=Z,8.0nm,0.8s,mb4.5
LOR *e*MLR MLR
comp=Z,185nm,21.2s,MS4.0
LOR Lormes 65.38 312 *e*P **P 22 47 37.8 -1.3**
LOR pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
LOR MLR MLR
comp=Z,180nm,21.3s,MS4.2
LOR Lormes 65.38 312 *e*P **P 22 47 37.8 -1.3**
comp=Z,4.0nm,0.8s,mb4.5
LOR LR LR
comp=Z,180nm,21.3s,MS4.2
SMRF Simiane la Rot 65.56 308 *e*P **P 22 47 39.8 -0.5**
SMF Signal de Mont 65.64 311 *e*P **P 22 47 39.8 -0.9**
comp=Z,21nm,1.1s,mb4.8
SMF Signal de Mont 65.64 311 *e*P **P 22 47 39.8 -0.9**
SMF pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
SMF Signal de Mont 65.64 311 *e*P **P 22 47 39.8 -0.9**
comp=Z,10nm,1.1s,mb4.8
SSF Saint Saulge 65.69 311 *e*P **P 22 47 39.9 -1.1**
VIVF Saint-Julien-l 65.81 309 *e*P **P 22 47 40.9 -1.0**
AVF Avril sur Loir 65.89 311 *e*P **P 22 47 41.6 -0.8**
BGF Bois d'Agland 66.30 311 *e*P **P 22 47 44.0 -1.0**
WRAB Tennant Creek 66.47 136 *e*P **P 22 47 46.5 +0.2**
WRAB pmax pmax
comp=Z,17nm,0.9s,mb5.1
WRAB Tennant Creek 66.47 136 *e*P **P 22 47 46.5 +0.2**
comp=Z,17nm,0.9s,mb5.1
WRA Warramunga Arr 66.47 136 P **P 22 47 46.2 -0.2**
comp=Z,10.0nm,0.9s,mb4.9,baz=332,slow=6.8,SNR=19
WRA Warramunga Arr 66.47 136 P **P 22 47 46.2 -0.1**
WRA pmax pmax
comp=Z,10.0nm,0.9s
WRA Warramunga Arr 66.47 136 P **P 22 47 46.2 -0.2**
LASF Ste Croix 66.66 308 *e*P **P 22 47 46.7 -0.6**
TCF Toulx Ste Croi 66.81 311 *e*P **P 22 47 47.8 -0.5**
comp=Z,22nm,1.2s,mb4.8
TCF Toulx Ste Croi 66.81 311 *e*P **P 22 47 47.8 -0.5**
TCF pmax pmax
comp=Z,11nm,1.2s,mb4.8
TCF Toulx Ste Croi 66.81 311 *e*P **P 22 47 47.8 -0.5**
comp=Z,11nm,1.2s,mb4.8
CAF Calviac 67.47 310 *e*P **P 22 47 52.3 -0.2**
RJF Les Rejaudoux 67.67 310 *e*P **P 22 47 53.6 -0.1**
RJF *e*MLR MLR
comp=Z,171nm,20.0s,MS4.0
RJF Les Rejaudoux 67.67 310 *e*P **P 22 47 53.6 -0.1**
RJF LR LR
comp=Z,170nm,20.0s,MS4.3
MTLF Montolieu 68.05 308 *e*P **P 22 47 55.5 -0.6**
ASAR Alice Springs 69.18 139 P **P 22 48 03.7 +0.4**
comp=Z,9.5nm,0.7s,mb4.8,baz=324,slow=6.3,SNR=56
ASAR Alice Springs 69.18 139 P **P 22 48 03.7 +0.4**
ASAR pmax pmax
comp=Z,10.0nm,0.7s
EPF Esparros 69.42 308 *e*P **P 22 48 03.7 -1.0**
comp=Z,20nm,1.5s,mb4.5
EPF Esparros 69.42 308 *e*P **P 22 48 03.7 -1.0**
EPF pmax pmax
comp=Z,10.0nm,1.5s,mb4.5
EPF Esparros 69.42 308 *e*P **P 22 48 03.7 -1.0**
comp=Z,9.9nm,1.5s,mb4.5
QUIF Quistinic 69.42 314 *e*P **P 22 48 03.8 -0.8**
COLD Coldfoot 69.45 22 *e*P **P 22 48 05.1 +0.7**
comp=Z,9.7nm,1.1s,mb4.7
ETSF Etsaut 70.06 309 *e*P **P 22 48 08.6 -0.1**
SJPF Ste Jean 70.40 309 *e*P **P 22 48 10.4 -0.3**
CHUM Lake Minchumin 70.78 25 *e*P **P 22 48 10.3 -2.4**
comp=Z,18nm,1.4s,mb4.8
BPAW Bear Paw Mtn. 71.11 24 *e*P **P 22 48 16.0 +1.4**
comp=Z,15nm,1.4s,mb4.7
PPLA Purkeypile 71.42 26 *e*P **P 22 48 17.9 +1.4**
comp=Z,52nm,1.5s,mb5.2
KTH Kantishna Hill 71.47 25 *e*P **P 22 48 17.5 +0.7**
comp=Z,44nm,1.8s,mb5.1
COLA College 71.68 23 *e*P **P 22 48 18.8 +0.7**
COLA pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
COLA College 71.68 23 *e*P **P 22 48 18.8 +0.7**
comp=Z,4.3nm,0.6s,mb4.6
PMR Palmer 73.36 26 *e*P **P 22 48 28.4 +0.3**
PMR pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
PMR Palmer 73.36 26 *e*P **P 22 48 28.4 +0.3**
comp=Z,5.6nm,0.6s,mb4.7
RC01 Rabbit Creek A 73.45 27 *e*P **P 22 48 28.8 +0.1**
comp=Z,9.0nm,1.0s,mb4.7
EGAK Eagle 73.84 21 *e*P **P 22 48 31.5 +0.6**
comp=Z,9.1nm,1.0s,mb4.7
ESDC Sonseca Array 73.86 307 P **P 22 48 31.1 -0.3**
comp=Z,0.9nm,0.7s,mb3.8,baz=49,slow=6.7,SNR=4.1
ESLA Sonseca Array 73.86 307 *e*P **P 22 48 31.4 0.0**
KDAK Kodiak Island 74.40 30 *i*P **P 22 48 34.7 +0.4**
STKA Stephens Creek 79.81 139 P **P 22 49 04.1 -0.8**
comp=Z,2.7nm,0.8s,mb4.2,baz=304,slow=3.4,SNR=5.5
STKA Stephens Creek 79.81 139 P **P 22 49 04.1 -0.8**
YKA Yellowknife Ar 82.21 12 P **P 22 49 16.6 -0.7**
comp=Z,2.5nm,0.8s,mb4.2,baz=337,slow=4.9,SNR=22
YKA Yellowknife Ar 82.21 12 P **P 22 49 16.6 -0.7**
YKA pmax pmax
comp=Z,3.0nm,0.8s
YKA Yellowknife Ar 82.21 12 P **P 22 49 16.6 -0.7**
LBTB Lobatse 85.80 237 *e*P **P 22 49 37.5 +1.4**
FFC Flin Flon 91.56 8 *i*P **P 22 50 03.3 +0.2**
FFC Flin Flon 91.56 8 *e*P **P 22 50 02.6 -0.5**
comp=Z,7.9nm,1.1s,mb5.0
ULM Lac du Bonnet 96.58 5 LR LR 23 37 11.3
comp=Z,106nm,18.7s,MS4.3,baz=40,slow=37
OTAV Otavalo 145.55 343 *e*PKPdf PKPdf 22 56 36.1 +0.8

IDC ***19*** *22:39:02.9±0.8, 33°.14N×92°.06E, h0km, mb4.2/10, mb1 4.3/13, mb1mx4.0/28, mbtmp4.2/13, ML3.9/2, MS3.8/3, Ms1 3.8/3, ms1mx3.1/23, Error ellipse: s-maj=30.3km s-min=16.2km az=54.0*
ISCJB ***19*** *22:39:06.2±1.4, 33°.18N±0°.06×92°.10E±0°.07, h39km±15km, mb4.2/12, MS3.9/3, Error ellipse: s-maj=11.8km s-min=8.0km az=40.8*
NEIC ***19*** *22:39:08.2±0.8, 33°.22N×92°.09E, h38km±9km, mb4.0/10, Error ellipse: s-maj=7.8km s-min=5.9km az=219.0*
ISC 19 22:39:07.0±2.6, 33°.15N±0°.06×92°.07E±0°.07, h29km±20km, n39, σ0s72/36, mb4.2/12, MS3.9/3, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.53**	**193**	Pn	**Pn**	**22 40 03.8**	**+4.0**
CD2	**Chengdu**	**10.17**	**100**	Pg	Px	22 41 41.1	
CD2				Sg	Px	22 42 06.3	
CD2				smax			
comp=N,200nm,0.6s							
XAN	**Xi'an**	**14.08**	**82**	Pg	**Pn**	**22 42 17.3**	**-7.0**
XAN				Sg	Px	22 42 57.5	
XAN				smax			
comp=N,17nm,0.7s							
XAN				smax			
comp=E,12nm,0.8s							
ENH	**Enshi**	**15.10**	**96**	Pn	**Pn**	**22 42 37.3**	**-0.9**
MK31	**Makanchi Array**	**15.53**	**334**	*e*Pn	**Pn**	**22 42 44.1**	**+0.4**
MKAR	**Makanchi Array**	**15.53**	**334**	Pn	**Pn**	**22 42 42.4**	**-1.3**
comp=E,0.1nm,0.3s,baz=132,slow=15,SNR=3.2							
CHTO	**Chiang Mai**	**15.55**	**155**	*e*Pn	**Pn**	**22 42 44.0**	**-0.1**
comp=E,1.9nm,0.6s							
CMAR	**Chiang Mai Arr**	**15.88**	**155**	Pn	**Pn**	**22 42 47.5**	**-0.9**
comp=E,0.5nm,0.3s,baz=337,slow=13,SNR=4.8							
TKM2	**Tokmak 2**	**16.21**	**312**	*e*Pn	**Pn**	**22 42 52.3**	**-0.2**
UCH	**Uchtor**	**16.57**	**308**	*e*Pn	**Pn**	**22 42 57.8**	**+0.8**
comp=E,5.4nm,0.7s							
AML	**Almayashu**	**17.07**	**307**	*e*Pn	**Pn**	**22 43 03.2**	**-0.1**
EKS2	**Erkin-Say**	**17.25**	**309**	*e*Pn	**Pn**	**22 43 06.5**	**+0.9**
comp=E,3.8nm,0.7s							
SONM	**Songino Array**	**18.22**	**32**	P	**Pn**	**22 43 19.3**	**+1.7**
comp=E,0.4nm,0.3s,baz=215,slow=13,SNR=5.1							
ULN	**Ulaanbaatar**	**18.54**	**33**	*e*P	**Pn**	**22 43 21.8**	**+0.4**
comp=E,4.9nm,0.9s							
KBL	**Kabul**	**19.18**	**281**	*e*P	**Pn**	**22 43 30.1**	**+0.9**
comp=E,12nm,0.7s							
KURK	**Kurchatov**	**20.15**	**335**	P	**P**	**22 43 38.1**	**-0.5**
comp=E,4.6nm,0.7s,baz=143,slow=11,SNR=4.7							
KURK	**Kurchatov**	**20.15**	**335**	*e*P	**P**	**22 43 38.3**	**-0.2**
comp=E,4.7nm,0.8s							
TLY	**Talaya**	**20.35**	**21**	P	**P**	**22 43 39.8**	**-0.9**
BJT	**Baijiatuau**	**20.49**	**64**	P	**P**	**22 43 42.6**	**+0.2**
ZALV	**Zalesovo Beam**	**21.42**	**348**	P	**P**	**22 43 51.9**	**-0.4**
comp=E,3.8nm,0.7s,mb3.9,baz=167,slow=10,SNR=5.5							
BVAR	**Borovoye Array**	**25.23**	**328**	P	**P**	**22 44 30.6**	**+0.6**
comp=E,1.2nm,0.6s,mb3.6,baz=136,slow=9.9,SNR=4.9							
BRVK	**Borovoye**	**25.29**	**328**	*e*P	**P**	**22 44 30.0**	**-0.6**
comp=E,2.6nm,0.5s,mb4.0							
ARU	**Arti**	**32.74**	**325**	*e*P	**P**	**22 45 36.3**	**-0.5**
comp=E,21nm,2.3s,mb4.7							
KIV	**Kislovodsk**	**39.57**	**301**	P	**P**	**22 46 34.3**	**-1.1**
BR131	**Keskin Array S**	**46.75**	**296**	*e*P	**P**	**22 47 34.1**	**+0.6**
comp=E,2.0nm,0.9s,mb4.0							
BRTR	**Keskin Array B**	**46.75**	**296**	P	**P**	**22 47 33.9**	**+0.4**
comp=E,2.3nm,0.8s,mb4.2,baz=99,slow=7.1,SNR=6.9							
BRTR				LR	LR	23 12 40.8	
comp=E,123nm,18.7s,MS3.9,baz=234,slow=43							
CSS	**Prodhromos**	**48.09**	**289**	P	**P**	**22 47 42.9**	**-1.0**
EIL	**Elat**	**48.36**	**282**	P	**P**	**22 47 46.7**	**+0.6**
comp=E,7.8nm,0.9s,mb4.8,baz=0.7,slow=5.6,SNR=6.4							
EIL	**Elat**	**48.36**	**282**	P	**P**	**22 47 46.7**	**+0.6**
PETK	**Petropavlovsk-**	**49.99**	**46**	LR	LR	23 09 14.2	
comp=E,115nm,18.2s,MS3.9,baz=90,slow=36							
FINES	**FINESS Array B**	**50.11**	**325**	P	**P**	**22 47 59.2**	**+0.2**
comp=E,1.8nm,1.0s,mb4.1,baz=94,slow=8.7,SNR=3.6							
TIP	**Timpagrande**	**59.49**	**299**	P	**P**	**22 49 06.6**	**-0.7**
KEST	**Kesra**	**66.24**	**298**	LR	LR	23 23 23.6	
comp=E,57nm,21.6s,MS3.7,baz=216,slow=40							
WRA	**Warramunga Arr**	**66.45**	**136**	P	**P**	**22 49 54.4**	**+0.7**
comp=E,4.6nm,0.9s,mb4.5,baz=333,slow=6.9,SNR=8.6							
ASAR	**Alice Springs**	**69.15**	**139**	P	**P**	**22 50 11.3**	**+0.7**
comp=E,5.9nm,0.9s,mb4.5,baz=327,slow=6.2,SNR=12							
ESLA	**Sonseca Array**	**73.86**	**307**	P	**P**	**22 50 38.5**	**-0.4**
EGAK	**Eagle**	**73.94**	**21**	*e*P	**P**	**22 50 39.1**	**+0.1**
comp=E,2.9nm,0.9s,mb4.2							
KDAK	**Kodiak Island**	**74.50**	**30**	P	**P**	**22 50 42.9**	**+0.5**
comp=E,4.1nm,0.6s,mb4.5,baz=286,slow=3.7,SNR=3.8							
YKA	**Yellowknife Ar**	**82.30**	**12**	P	**P**	**22 51 25.3**	**0.0**
comp=E,1.4nm,0.9s,mb3.9,baz=336,slow=4.8,SNR=5.5							

IDC ***19*** *22:42:29.4±0.6, 33°.16N×92°.09E, h0km, mb4.3/21, mb1 4.4/25, mb1mx4.3/33, mbtmp4.3/25, ML3.9/4, Error ellipse: s-maj=19.5km s-min=11.9km az=44.0*
LDG ***19*** *22:42:33.6±0.5, 33°.32N×91°.85E, h33km, Mb4.9/7, Ms3.8/1, Error ellipse: s-maj=22.2km s-min=7.1km az=127.0*
MOS ***19*** *22:42:33.7±0.9, 33°.35N×92°.06E, h33km, mb4.8/23, Error ellipse: s-maj=8.4km s-min=5.2km az=109.0*
ISCJB ***19*** *22:42:35.1±0.6, 33°.33N±0°.03×92°.02E±0°.03, h45km±6km, mb4.5/50, MS4.0/5, Error ellipse: s-maj=5.6km*

s-min=4.2km az=173.5
*BJI **19** 22:42:35.8, 33°.34N×92°.19E, h42km, mB4.9/14, mb4.8/27, ML4.6/3, Ms4.6/26, Ms7 4.2/25*
*NEIC **19** 22:42:36.8±0.6, 33°.36N×92°.06E, h44km±5km, mb4.5/30, Error ellipse: s-maj=5.4km s-min=4.7km az=94.0*
ISC 19 22:42:37.5±0.5,**33°.37N**±0°.04×**92°.00E**±0°.03,**h47**km±5km,
n166,σ0**97**/176,**mb4.5**/50,**MS4.0**/5,**8C-7D**,**Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.73**	**191**	P	**Pn**	**22 43 32.1**	**-0.4**
LSA				S	**Sn**	**22 44 22.9**	**+7.8**
LSA				LR	LR		
	comp=N,4μm,9.0s						
LSA				LR	LR		
	comp=E,5μm,10.4s						
LSA				LR	LR		
	comp=Z,10μm,8.1s						
LSA	**Lhasa**	**3.73**	**191**	*e*Pn	**Pn**	**22 43 31.9**	**-0.6**
LSA				*e*Sn	**Sn**	**22 44 24.2**	**+9.0**
TAPN	**Taplejung**	**7.05**	**213**	*e*P	**Pn**	**22 44 18.3**	**+0.2**
GUN	**Gumba**	**7.57**	**226**	*e*P	**Pn**	**22 44 26.5**	**+1.2**
	comp=Z,28nm,0.4s						
JIRN	**Jiri**	**7.58**	**223**	*e*P	**Pn**	**22 44 25.9**	**+0.5**
	comp=Z,51nm,0.8s						
ODAN	**Odare**	**7.61**	**213**	*e*P	**Pn**	**22 44 21.2**	**-4.7**
RAMN	**Ramite**	**7.92**	**218**	*e*P	**Pn**	**22 44 26.6**	**-3.4**
KKN	**Kakani**	**8.02**	**228**	*e*P	**Pn**	**22 44 32.2**	**+0.7**
	comp=Z,43nm,0.7s						
KKN	**Kakani**	**8.02**	**228**	*e*P	**Pn**	**22 44 32.2**	**+0.7**
KKN				pmax	pmax		
	comp=Z,43nm,0.7s						
PKI	**Pulchoki**	**8.10**	**226**	*e*P	**Pn**	**22 44 32.6**	**0.0**
	comp=Z,38nm,0.5s						
PKI	**Pulchoki**	**8.10**	**226**	*e*P	**Pn**	**22 44 32.6**	**0.0**
PKI				pmax	pmax		
	comp=Z,38nm,0.5s						
PKIN	**Phulchoki**	**8.11**	**226**	*e*P	**Pn**	**22 44 31.8**	**-0.8**
	comp=Z,35nm,0.5s						
DMN	**Daman**	**8.26**	**228**	*e*P	**Pn**	**22 44 34.5**	**-0.2**
	comp=Z,45nm,0.8s						
GTA	**Gaotai**	**8.72**	**44**	P	**Pn**	**22 44 40.8**	**-0.2**
GTA				pP		22 44 45.3	
GTA				pmax	pmax		
	comp=Z,31nm,1.1s						
LZH	**Lanzhou**	**10.12**	**71**	*e*P	**Pn**	**22 44 59.4**	**-0.8**
LZH				pP		22 45 02.9	
LZH				*e*S	**Sn**	**22 46 54.3**	**+2.0**
LZH				SS		22 47 06.3	
LZH				pmax	pmax		
	comp=Z,49nm,1.0s						
LZH				pmax	pmax		
	comp=Z,420nm,4.7s						
LZH				LR	LR		
	comp=N,1μm,9.0s						
LZH				LR	LR		
	comp=Z,2μm,10.3s						
CD2	**Chengdu**	**10.27**	**101**	*e*P	**Pn**	**22 45 02.8**	**+0.6**
CD2				pP		22 45 09.9	
CD2				sP		22 45 14.6	
CD2				S	**Sn**	**22 46 55.0**	**-0.9**
CD2				sS		22 47 06.0	
CD2				SS		22 47 08.4	
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,30nm,4.2s						
CD2				LR	LR		
	comp=N,1μm,7.2s						
CD2				LR	LR		
	comp=E,2μm,7.2s						
CD2				LR	LR		
	comp=Z,2μm,7.0s						
WMQ	**Urumqi**	**10.97**	**343**	*e*P	**Pn**	**22 45 15.0**	**+3.3**
WMQ				pP		22 45 22.0	
WMQ				sP		22 45 27.0	
WMQ				S	**Sn**	**22 47 18.0**	**+5.1**
WMQ				SS		22 47 33.0	
WMQ				pmax	pmax		
	comp=Z,15nm,0.6s						
WMQ				LR	LR		
	comp=N,540nm,5.0s						
WMQ				LR	LR		
	comp=E,1μm,5.0s						
WMQ				LR	LR		
	comp=Z,490nm,5.0s						
KMI	**Kunming**	**12.46**	**128**	P	**Pn**	**22 45 34.9**	**+2.7**
KMI				pP		22 45 41.8	
KMI				PP		22 45 44.6	
KMI				sP		22 45 47.3	
KMI				S	**Sn**	**22 47 53.6**	**+4.0**
KMI				sS		22 48 04.4	
KMI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KMI				LR	LR		
	comp=N,860nm,9.9s						
KMI				LR	LR		
	comp=E,730nm,11.6s						
KMI				LR	LR		
	comp=Z,860nm,10.4s						
XAN	**Xi'an**	**14.11**	**83**	Pg	**Pn**	**22 45 43.9**	**-11**
XAN				Sg		22 46 33.6	
XAN				smax			
	comp=N,3.0nm,0.9s						
XAN				smax			
	comp=E,29nm,0.7s						
KSH	**Kashi**	**14.28**	**300⇑**	*i*P	**Pn**	**22 46 06.5**	**+10**
KSH				pP		22 46 14.1	
KSH				sP	sP	22 46 18.8	-1.0
KSH				S	**Sn**	**22 48 50.0**	**+16**
KSH				sS		22 49 01.9	
KSH				PcP	PcP	22 51 17.1	+5.5
KSH				ScP	ScP	22 54 47.3	+5.9
KSH				PcS	PcS	22 54 51.1	+4.7
KSH				ScS	ScS	22 58 23.8	+5.1
KSH				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,440nm,6.6s						
KSH				LR	LR		
	comp=N,340nm,7.5s						
KSH				LR	LR		
	comp=E,670nm,6.8s						
KSH				LR	LR		
	comp=Z,250nm,5.9s						
GYA	**Guiyang**	**14.46**	**115**	P	**Pn**	**22 45 55.3**	**-4.0**
GYA				pP		22 46 00.9	
GYA				S	**Sn**	**22 48 32.3**	**-5.9**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,100nm,7.3s						
GYA				LR	LR		
	comp=N,680nm,8.4s						
GYA				LR	LR		
	comp=E,420nm,8.8s						
GYA				LR	LR		
	comp=Z,730nm,9.0s						
MK31	**Makanchi Array**	**15.31**	**334**	*e*P	**Pn**	**22 46 09.5**	**-0.9**
MKAR	**Makanchi Array**	**15.31**	**334**	Pn	**Pn**	**22 46 09.1**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=139,slow=13,SNR=7.7						
CHTO	**Chiang Mai**	**15.77**	**155**	P	**Pn**	**22 46 17.3**	**+0.8**
TKM2	**Tokmak 2**	**16.02**	**311**	*e*P	**Pn**	**22 46 17.9**	**-1.6**
TKM2				pmax	pmax		
	comp=Z,12nm,1.1s						
TKM2	**Tokmak 2**	**16.02**	**311**	*e*Pn	**Pn**	**22 46 17.9**	**-1.7**
	comp=Z,12nm,1.1s						
CMAR	**Chiang Mai Arr**	**16.10**	**156**	Pn	**Pn**	**22 46 13.4**	**-7.3**
	comp=Z,0.5nm,0.3s,baz=333,slow=12,SNR=17						
UCH	**Uchtor**	**16.39**	**308**	*e*Pn	**Pn**	**22 46 24.6**	**+0.5**
	comp=Z,9.3nm,0.9s						
AAK	**Ala-Archa**	**16.59**	**309**	Pn	**Pn**	**22 46 27.3**	**+0.6**
	comp=Z,0.0nm,0.3s,baz=255,slow=12,SNR=2.3						
AAK	**Ala-Archa**	**16.59**	**309**	*e*P	**Pn**	**22 46 26.0**	**-0.6**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
AAK	**Ala-Archa**	**16.59**	**309**	*e*Pn	**Pn**	**22 46 27.8**	**+1.2**
	comp=Z,34nm,1.4s						
AML	**Almayashu**	**16.89**	**306**	*e*Pn	**Pn**	**22 46 29.7**	**-0.7**
	comp=Z,4.4nm,0.7s						
EKS2	**Erkin-Say**	**17.07**	**308**	*e*Pn	**Pn**	**22 46 33.6**	**+0.9**
	comp=Z,9.3nm,0.8s						
HHC	**Hu-ho-hao-te**	**17.28**	**59**	*e*P	**Pn**	**22 46 35.0**	**-0.4**
HHC				pP	pP	22 46 42.8	-4.4
HHC				sP	sP	22 46 47.4	-5.8
HHC				PP		22 46 49.8	
HHC				S	**S**	**22 49 44.1**	**-10**
HHC				sS	sS	22 49 56.1	-15
HHC				SS		22 50 05.1	
HHC				PcP	PcP	22 51 19.1	+3.1
HHC				ScS	ScS	22 58 28.6	+1.7
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		
	comp=Z,280nm,6.1s						
HHC				LR	LR		
	comp=N,620nm,7.3s						
HHC				LR	LR		
	comp=E,770nm,7.4s						
HHC				LR	LR		
	comp=Z,400nm,9.9s						
SONM	**Songino Array**	**18.08**	**33**	P	**Pn**	**22 46 44.5**	**-0.5**
	comp=Z,1.6nm,0.3s,baz=213,slow=12,SNR=48						
ULN	**Ulaanbaatar**	**18.40**	**34**	*e*P	**Pn**	**22 46 47.9**	**-1.1**
ULN				pmax	pmax		
	comp=Z,23nm,1.1s						
ULN	**Ulaanbaatar**	**18.40**	**34**	*e*P	**Pn**	**22 46 47.9**	**-1.0**
	comp=Z,23nm,1.1s						
ZAK	**Zakamensk**	**18.93**	**23⇓**	*i*P	**Pn**	**22 46 55.6**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,11nm,1.1s						
KBL	**Kabul**	**19.07**	**280**	*e*P	**Pn**	**22 46 57.3**	**+0.1**
KBL				pmax	pmax		
	comp=Z,28nm,1.2s						
KBL	**Kabul**	**19.07**	**280**	*e*P	**Pn**	**22 46 57.3**	**0.0**
	comp=Z,28nm,1.2s						
KURK	**Kurchatov**	**19.93**	**334**	P	**Pn**	**22 47 04.1**	**-3.0**
	comp=Z,8.5nm,0.7s,baz=142,slow=11,SNR=24						
KURK	**Kurchatov**	**19.93**	**334**	*e*P	**Pn**	**22 47 04.1**	**-3.0**
TLY	**Talaya**	**20.17**	**21**	*e*P	**P**	**22 47 09.3**	**+1.5**
TLY				pmax	pmax		
	comp=Z,15nm,1.1s						
TLY				MLR	MLR		
	comp=Z,234nm,15.0s,MS3.7						
TLY	**Talaya**	**20.17**	**21**	*e*Pn	**P**	**22 47 09.4**	**+1.6**
	comp=Z,11nm,1.0s						
BJI	**Beijing**	**20.47**	**64**	P	**P**	**22 47 10.3**	**-0.8**
BJI				S	**S**	**22 51 00.1**	**+2.5**
BJI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BJI				LR	LR		
	comp=N,2μm,13.9s,MS4.7						
BJI				LR	LR		
	comp=E,750nm,11.3s,MS4.7						
BJI				LR	LR		
	comp=Z,200nm,15.9s,MS3.6						
IRK	**Irkutsk**	**20.85**	**22**	*e*P	**P**	**22 47 16.7**	**+1.5**
IRK				pmax	pmax		
	comp=Z,95nm,1.5s						
ZAA0	**Zalesovo Array**	**21.20**	**348**	*e*P	**P**	**22 47 18.2**	**-0.7**
ZALV	**Zalesovo Beam**	**21.20**	**348**	P	**P**	**22 47 18.3**	**-0.6**
	comp=Z,14nm,0.9s,mb4.3,baz=162,slow=11,SNR=30						
QIZ	**Qiongzhong**	**21.41**	**127**	P	**P**	**22 47 22.5**	**+1.1**
NVS	**Novosibirsk**	**22.34**	**347⇓**	*i*P	**P**	**22 47 29.8**	**-1.2**
NVS				*e*S	**S**	**22 51 36.8**	**+2.9**
NVS				pmax	pmax		
	comp=Z,58nm,1.8s,mb4.7						
NVS				pmax	pmax		
	comp=N,74nm,1.7s						
NVS				pmax	pmax		
	comp=E,30nm,1.7s						
NVS				smax			
	comp=N,21nm,2.6s						
NVS				smax			
	comp=E,18nm,2.1s						
NJ2	**Nanjing**	**22.62**	**86**	*e*P	**P**	**22 47 35.4**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.4						
BVAR	**Borovoye Array**	**25.01**	**328**	P	**P**	**22 47 57.3**	**+0.5**
	comp=Z,4.0nm,0.8s,mb4.0,baz=138,slow=11,SNR=17						
BVAR				PcP	PcP	22 51 30.1	-0.5
	comp=Z,0.6nm,0.6s,baz=172,slow=4.2,SNR=3.6						
BRVK	**Borovoye**	**25.08**	**328⇓**	*i*P	**P**	**22 47 56.0**	**-1.4**
BRVK				pmax	pmax		
	comp=Z,28nm,1.7s,mb4.5						
BRVK	**Borovoye**	**25.08**	**328**	*e*P	**P**	**22 47 58.4**	**+1.0**
	comp=Z,15nm,1.0s,mb4.5						
CN2	**Changchun**	**27.98**	**58**	*e*P	**P**	**22 48 25.1**	**+1.5**
CN2				*e*pP	pP	22 48 34.5	-1.5
CN2				*e*S	**S**	**22 53 04.1**	**-0.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4						
CN2				LR	LR		
	comp=N,900nm,16.0s,MS4.5						
CN2				LR	LR		
	comp=E,400nm,16.0s,MS4.5						
CN2				LR	LR		
	comp=Z,500nm,14.0s,MS4.2						
ABKAR	**Akbulak array**	**28.57**	**313**	*e*P	**P**	**22 48 29.2**	**+0.4**
	comp=Z,3.9nm,0.8s,mb4.2						
KSRS	**Korea Array**	**29.45**	**72**	P	**P**	**22 48 34.8**	**-2.0**
	comp=Z,0.4nm,0.3s,mb3.6,baz=257,slow=11,SNR=4.3						
KSRS	**Korea Array**	**29.45**	**72**	P	**P**	**22 48 34.8**	**-2.0**
AKTK	**Aktyubinsk**	**30.16**	**315**	P	**P**	**22 48 42.6**	**-0.3**
AKTO	**Aktyubinsk**	**30.16**	**315**	P	**P**	**22 48 42.6**	**-0.3**
	comp=Z,2.7nm,0.8s,mb4.0,baz=116,slow=6.3,SNR=10						
MDJ	**Mudanjiang**	**31.05**	**58**	P	**P**	**22 48 51.0**	**+0.2**
MDJ				pmax	pmax		
	comp=Z,62nm,3.5s						
SVE	**Sverdlovsk**	**31.77**	**327⇑**	*e*P	**P**	**22 48 57.9**	**+0.8**
SVE				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.8						
ARU	**Arti**	**32.53**	**325**	*d*P	**P**	**22 49 03.9**	**+0.2**
ARU				*e*		22 50 10.0	
ARU				S	**S**	**22 54 18.5**	**+3.1**
ARU				SS	SS	22 56 21.0	-15
ARU				pmax	pmax		
	comp=Z,14nm,1.7s,mb4.6						
ARU	**Arti**	**32.53**	**325**	*e*P	**P**	**22 49 03.0**	**-0.6**
SOKR	**Solikamsk**	**34.99**	**329**	*e*P	**P**	**22 49 25.1**	**+0.1**
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
GNI	**Garni**	**38.10**	**294**	P	**P**	**22 49 52.3**	**+0.6**
	comp=Z,2.2nm,0.5s,mb4.1,baz=7.3,slow=19,SNR=4.3						
GNI	**Garni**	**38.10**	**294**	*d*P	**P**	**22 49 53.2**	**+1.4**
GNI				pmax	pmax		
	comp=Z,13nm,1.2s						
GNI	**Garni**	**38.10**	**294**	*e*P	**P**	**22 49 53.0**	**+1.2**
	comp=Z,15nm,1.1s,mb4.7						
KIV	**Kislovodsk**	**39.41**	**300**	*e*P	**P**	**22 50 03.5**	**+0.8**
KIV	**Kislovodsk**	**39.41**	**300**	*e*P	**P**	**22 50 03.5**	**+0.9**
VORD	**Divnogorie**	**41.87**	**311**	*e*P	**P**	**22 50 22.3**	**-0.5**
VORD				pmax	pmax		
	comp=N,8.0nm,0.7s						
VORD				pmax	pmax		
	comp=E,10.0nm,0.7s						
VORD				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
VSR	**Storozhevoye**	**41.96**	**311**	*e*P	**P**	**22 50 23.1**	**-0.5**
VSR				pmax	pmax		
	comp=N,5.0nm,0.6s						
VSR				pmax	pmax		
	comp=E,8.0nm,0.6s						
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.6						
TIXI	**Tiksi**	**43.01**	**16**	*e*P	**P**	**22 50 30.7**	**-1.1**
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.4						
TIXI	**Tiksi**	**43.01**	**16**	*e*P	**P**	**22 50 30.7**	**-1.1**
	comp=Z,6.4nm,0.7s,mb4.5						
OBN	**Obninsk**	**43.87**	**317**	P	**P**	**22 50 39.0**	**0.0**
OBN				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.1						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s,MS3.8						
ASF	**Jabal al Asfar**	**45.88**	**284**	P	**P**	**22 50 56.0**	**+0.7**
	comp=Z,2.6nm,0.9s,mb4.1,baz=206,slow=1.3,SNR=5.9						
BR131	**Keskin Array S**	**46.60**	**295**	*e*P	**P**	**22 51 01.1**	**+0.2**
BRTR	**Keskin Array B**	**46.60**	**295**	P	**P**	**22 51 00.6**	**-0.3**
	comp=Z,4.4nm,0.8s,mb4.4,baz=96,slow=7.7,SNR=25						
BRTR	**Keskin Array B**	**46.60**	**295**	*c*e*P**	**P**	**22 51 01.0**	**+0.1**
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SEY	**Seymchan**	**47.47**	**33**	*c*i*P**	**P**	**22 51 07.6**	**+0.3**
AKASG	**Malin Array Be**	**48.24**	**311**	P	**P**	**22 51 11.8**	**-1.7**
	comp=Z,1.2nm,0.5s,mb4.2,baz=69,slow=8.4,SNR=9.1						
AKASG	**Malin Array Be**	**48.24**	**311**	*c*e*P**	**P**	**22 51 13.0**	**-0.5**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	**48.24**	**311**	P	**P**	**22 51 11.8**	**-1.7**
EIL	**Elat**	**48.26**	**282**	P	**P**	**22 51 12.5**	**-1.4**
	comp=Z,11nm,0.8s,mb5.0,baz=12,slow=3.2,SNR=13						
ISP	**Isparta**	**49.40**	**294**	*e*P	**P**	**22 51 22.6**	**0.0**
PETK	**Petropavlovsk-**	**49.88**	**46**	P	**P**	**22 51 24.5**	**-1.5**
	comp=Z,2.1nm,0.8s,mb4.2,baz=222,slow=2.0,SNR=4.8						
FINES	**FINESS Array B**	**49.90**	**325**	P	**P**	**22 51 25.8**	**-0.1**
	comp=Z,1.4nm,0.7s,mb4.1,baz=92,slow=9.5,SNR=5.1						
ARCES	**ARCESS Array B**	**50.96**	**335**	P	**P**	**22 51 33.7**	**-0.2**
	comp=Z,3.0nm,0.8s,mb4.3,baz=77,slow=5.4,SNR=5.5						
MLR	**Muntele Rosu**	**51.09**	**304⇑**	*i*P	**P**	**22 51 36.2**	**+0.9**
BURAR	**Bucovina Array**	**51.22**	**307⇑**	*i*P	**P**	**22 51 36.7**	**+0.5**
VOIR		**51.72**	**304⇑**	*i*P	**P**	**22 51 39.8**	**-0.2**
KWP	**Kalwaria Pacla**	**52.53**	**310**	*e*P	**P**	**22 51 45.8**	**0.0**
KWP	**Kalwaria Pacla**	**52.53**	**310**	*e*P	**P**	**22 51 45.9**	**0.0**
KWP				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
KWP	**Kalwaria Pacla**	**52.53**	**310**	*e*P	**P**	**22 51 45.9**	**0.0**
	comp=Z,7.0nm,0.9s,mb4.6						
KWP	**Kalwaria Pacla**	**52.53**	**310⇓**	*i*P	**P**	**22 51 45.7**	**-0.2**
BILL	**Bilibino**	**53.66**	**27⇓**	*e*P	**P**	**22 51 54.6**	**+0.7**
BILL				*e*		22 52 01.3	
BILL				pmax	pmax		
	comp=Z,14nm,1.7s,mb4.6						
BILL				MLR	MLR		
	comp=Z,200nm,17.0s,MS4.2						
BILL	**Bilibino**	**53.66**	**27**	*e*P	**P**	**22 51 54.5**	**+0.6**
	comp=Z,4.7nm,0.8s,mb4.5						
PSZ	**Piszkesteto**	**54.69**	**308**	*e*P	**P**	**22 52 02.4**	**+0.7**
VYHS	**Vyhne**	**55.25**	**309**	*e*P	**P**	**22 52 06.0**	**+0.2**
VYHS				pmax	pmax		
	comp=Z,9.0nm,2.1s,mb4.4						
VYHS	**Vyhne**	**55.25**	**309**	*e*P	**P**	**22 52 06.0**	**+0.2**
	comp=Z,8.9nm,2.1s,mb4.4						
VYHS	**Vyhne**	**55.25**	**309**	*e*P	**P**	**22 52 06.0**	**+0.2**
OKC	**Ostrava-Krasne**	**55.40**	**311**	*e*P	**P**	**22 52 07.3**	**+0.5**
OKC	**Ostrava-Krasne**	**55.40**	**311**	*e*P	**P**	**22 52 07.3**	**+0.5**
DPC	**Dobruska-Polom**	**56.43**	**312**	*e*P	**P**	**22 52 14.8**	**+0.6**
DPC	**Dobruska-Polom**	**56.43**	**312**	*e*P	**P**	**22 52 14.8**	**+0.6**
UPC	**Upice**	**56.59**	**312**	*e*P	**P**	**22 52 15.7**	**+0.4**
UPC	**Upice**	**56.59**	**312**	*e*P	**P**	**22 52 15.7**	**+0.4**
NB2	**NORSAR Subarra**	**57.08**	**325**	P	**P**	**22 52 18.0**	**-0.6**
	comp=Z,1.3nm,0.7s,mb4.1,baz=79,slow=7.4						
NOA	**NORSAR Array B**	**57.08**	**325**	P	**P**	**22 52 18.2**	**-0.4**
	comp=Z,1.8nm,0.7s,mb4.2,baz=80,slow=7.2,SNR=5.4						
PRU	**Pruhonice**	**57.63**	**312**	*e*P	**P**	**22 52 23.9**	**+1.3**
PRU	**Pruhonice**	**57.63**	**312**	*e*P	**P**	**22 52 23.9**	**+1.3**
BRG	**Berggiesshubel**	**57.77**	**313**	*e*P	**P**	**22 52 23.5**	**-0.2**
	comp=Z,3.5nm,0.9s,mb4.4						
BRG	**Berggiesshubel**	**57.77**	**313**	*e*P	**P**	**22 52 23.5**	**-0.2**
BRG				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2						
TIP	**Timpagrande**	**59.33**	**299**	P	**P**	**22 52 36.1**	**+1.4**
WLF	**Walferdange**	**62.90**	**313**	P	**P**	**22 52 57.5**	**-1.2**
HINF	**Hinteralfeld**	**63.12**	**311**	*e*P	**P**	**22 52 59.7**	**-0.5**
HAU	**Haudompre**	**63.37**	**311**	*e*P	**P**	**22 53 01.6**	**-0.2**
LPG	**La Plagne**	**64.03**	**309**	*e*P	**P**	**22 53 06.4**	**+0.2**
	comp=Z,7.2nm,0.8s,mb4.4						
LPG	**La Plagne**	**64.03**	**309**	*e*P	**P**	**22 53 06.4**	**+0.2**
LPG				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
LPG	**La Plagne**	**64.03**	**309**	*e*P	**P**	**22 53 06.4**	**+0.2**
	comp=Z,3.6nm,0.8s,mb4.5						
LPL	**La Plagne**	**64.03**	**309**	*e*P	**P**	**22 53 06.4**	**+0.1**
SMF	**Signal de Mont**	**65.46**	**311**	*e*P	**P**	**22 53 14.7**	**-0.8**
VIVF	**Saint-Julien-l**	**65.63**	**309**	*e*P	**P**	**22 53 15.9**	**-0.8**
LASF	**Ste Croix**	**66.48**	**308**	*e*P	**P**	**22 53 21.7**	**-0.4**
TCF	**Toulx Ste Croi**	**66.64**	**311**	*e*P	**P**	**22 53 23.6**	**+0.5**
WRAB	**Tennant Creek**	**66.65**	**136**	*e*P	**P**	**22 53 23.5**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
WRAB	**Tennant Creek**	**66.65**	**136**	*e*P	**P**	**22 53 23.4**	**+0.1**
	comp=Z,10.0nm,0.9s,mb4.8						
WRA	**Warramunga Arr**	**66.65**	**136**	P	**P**	**22 53 21.1**	**-2.3**
	comp=Z,5.2nm,1.0s,mb4.5,baz=326,slow=6.2,SNR=13						
GRR	**Gorron**	**67.65**	**314**	*e*P	**P**	**22 53 29.4**	**-0.1**
MTLF	**Montolieu**	**67.87**	**308**	*e*P	**P**	**22 53 31.4**	**+0.5**
	comp=Z,8.8nm,1.0s,mb4.4						
MTLF	**Montolieu**	**67.87**	**308**	*e*P	**P**	**22 53 31.4**	**+0.5**
MTLF				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
MTLF	**Montolieu**	**67.87**	**308**	*e*P	**P**	**22 53 31.4**	**+0.5**
	comp=Z,4.4nm,1.0s,mb4.4						
ASAR	**Alice Springs**	**69.36**	**139**	P	**P**	**22 53 38.4**	**-1.9**
	comp=Z,4.9nm,0.6s,mb4.6,baz=323,slow=6.4,SNR=24						
COLD	**Coldfoot**	**69.38**	**22**	*e*P	**P**	**22 53 39.7**	**-0.2**
	comp=Z,11nm,1.0s,mb4.8						
NWAO	**Narrogin (SRO)**	**70.09**	**158**	P	**P**	**22 53 41.5**	**-3.2**
	comp=Z,7.0nm,1.0s,mb4.5,baz=342,slow=15,SNR=3.9						
CHUM	**Lake Minchumin**	**70.71**	**25**	*e*P	**P**	**22 53 47.9**	**-0.2**
	comp=Z,5.0nm,0.9s,mb4.4						
BPAW	**Bear Paw Mtn.**	**71.05**	**24**	*e*P	**P**	**22 53 49.9**	**-0.3**
	comp=Z,8.0nm,1.1s,mb4.6						
SVW2	**Sparrevohn**	**71.13**	**28**	*e*P	**P**	**22 53 51.5**	**+0.8**
PPLA	**Purkeypile**	**71.36**	**26**	*e*P	**P**	**22 53 52.4**	**+0.3**
	comp=Z,9.5nm,0.7s,mb4.8						
KTH	**Kantishna Hill**	**71.41**	**25**	*e*P	**P**	**22 53 52.7**	**+0.3**
	comp=Z,11nm,1.2s,mb4.7						
COLA	**College**	**71.61**	**23**	*e*P	**P**	**22 53 53.6**	**+0.1**
COLA				pmax	pmax		
	comp=Z,41nm,1.1s,mb5.3						
COLA	**College**	**71.61**	**23**	*e*P	**P**	**22 53 53.6**	**0.0**
	comp=Z,41nm,1.1s,mb5.3						
INK	**Inuvik**	**73.13**	**16**	*e*P	**P**	**22 54 03.0**	**+0.4**
INK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
INK	**Inuvik**	**73.13**	**16**	*e*P	**P**	**22 54 03.0**	**+0.4**
	comp=Z,7.0nm,1.0s,mb4.5						
PMR	**Palmer**	**73.29**	**26**	*e*P	**P**	**22 54 03.6**	**0.0**
PMR				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
PMR	**Palmer**	**73.29**	**26**	*e*P	**P**	**22 54 03.6**	**0.0**
	comp=Z,12nm,0.8s,mb4.9						
PAX	**Paxson**	**73.66**	**24**	*e*P	**P**	**22 54 04.4**	**-1.4**
PAX				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.4						
PAX	**Paxson**	**73.66**	**24**	*e*P	**P**	**22 54 04.4**	**-1.4**
	comp=Z,6.4nm,1.2s,mb4.4	

DZM				*e*LR	LR	22 48 05.1	
	805nm,22.4s						
DZM	**Mont Dzumac**	**3.78**	**194**	*e*P	**Pn**	**22 47 11.5**	**-1.7**
DZM				*e*S	**Sn**	**22 47 55.1**	**-1.4**
DZM	**Mont Dzumac**	**3.78**	**194**	*e*Pn	**Pn**	**22 47 12.1**	**-1.1**
DZM				*e*Sn	**Sn**	**22 47 56.1**	**-0.3**
NOUC	**Port Laguerre**	**3.84**	**196**	*e*P	**Pn**	**22 47 13.1**	**-1.0**
NOUC				*e*S	**Sn**	**22 47 57.5**	**-0.5**
MSVF	**Nonsavu**	**10.12**	**88**	*e*Pn	**Pn**	**22 48 40.9**	**+0.6**
	42nm,1.0s						
CTA	**Charters Tower**	**20.07**	**262**	*e*P	**P**	**22 50 51.7**	**+3.7**
	11nm,0.9s						
CTA	**Charters Tower**	**20.07**	**262**	P	**P**	**22 50 48.2**	**+0.2**
	11nm,0.8s,baz=86,slow=13,SNR=8.0						
CTAO	**Charters Tower**	**20.07**	**262**	*e*P	**P**	**22 50 48.3**	**+0.3**
	25nm,1.1s						
URZ	**Urewera**	**21.52**	**159**	P	**P**	**22 51 05.2**	**+1.8**
	7.8nm,0.8s,mb4.2,baz=335,slow=19,SNR=3.4						
STKA	**Stephens Creek**	**26.89**	**235**	*e*P	**P**	**22 51 57.5**	**+2.3**
	8.4nm,0.9s,mb4.3						
STKA	**Stephens Creek**	**26.89**	**235**	P	**P**	**22 51 57.3**	**+2.1**
	9.3nm,0.9s,mb4.3,baz=37,slow=6.5,SNR=8.2						
STKA				LR	LR	23 02 21.3	
	comp=Z,259nm,18.2s,baz=296,slow=36						
STKA	**Stephens Creek**	**26.89**	**235**	*e*P	**P**	**22 51 56.9**	**+1.7**
	2.6nm,1.0s,mb3.7						
STKA				LR	LR	23 02 21.3	
RAR	**Rarotonga**	**30.95**	**101**	P	**P**	**22 52 31.9**	**+0.5**
WRA	**Warramunga Arr**	**31.27**	**262**	P	**P**	**22 52 34.2**	**-0.1**
	0.7nm,0.5s,mb3.8,baz=83,slow=6.1,SNR=4.7						
ASAR	**Alice Springs**	**31.69**	**255**	P	**P**	**22 52 38.5**	**+0.6**
	5.4nm,0.9s,mb4.4,baz=82,slow=8.4,SNR=22						
FITZ	**Fitzroy Crossi**	**39.63**	**264**	*e*P	**P**	**22 53 47.4**	**+1.2**
	33nm,0.9s,mb5.1						
FITZ	**Fitzroy Crossi**	**39.63**	**264**	P	**P**	**22 53 46.9**	**+0.8**
	14nm,1.0s,mb4.6,baz=109,slow=6.3,SNR=7.7						
FITZ	**Fitzroy Crossi**	**39.63**	**264**	*e*P	**P**	**22 53 46.6**	**+0.4**
	16nm,0.8s,mb4.8						
PPT	**Papeete**	**40.83**	**96**	*e*LR	LR	23 05 42.5	
	180nm,27.0s						
KKM	**Kota Kinabalu**	**56.04**	**291**	P	**P**	**22 55 53.2**	**-0.1**
SBA	**Scott Base**	**59.49**	**180**	*e*P	**P**	**22 56 17.8**	**+1.2**
MAJO	**Matsushiro**	**61.22**	**333**	P	**P**	**22 56 27.8**	**-1.2**
KSRS	**Korea Array**	**66.86**	**327**	LR	LR	23 21 52.3	
	comp=Z,38nm,18.4s,baz=200,slow=32						
PSI	**Prapat**	**70.60**	**280**	P	**P**	**22 57 30.0**	**+0.2**
	1.7nm,0.4s,mb4.3,baz=289,slow=11,SNR=4.0						
PSI	**Prapat**	**70.60**	**280**	P	**P**	**22 57 30.0**	**+0.2**
QSPA	**South Pole Qui**	**71.66**	**180**	*e*P	**P**	**22 57 36.0**	**+1.0**
	5.1nm,1.2s,mb4.3						
PETK	**Petropavlovsk-**	**71.70**	**354**	P	**P**	**22 57 35.2**	**-0.3**
	2.8nm,0.8s,mb4.2,baz=116,slow=6.8,SNR=6.0						
PETK	**Petropavlovsk-**	**71.70**	**354**	P	**P**	**22 57 35.2**	**-0.3**
KMI	**Kunming**	**76.38**	**303**	P	**P**	**22 58 07.3**	**+3.7**
KMI				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.4						
CMAR	**Chiang Mai Arr**	**76.60**	**295**	P	**P**	**22 58 04.6**	**-0.3**
	comp=Z,0.7nm,0.4s,mb4.0,baz=99,slow=5.6,SNR=3.9						
GTA	**Gaotai**	**85.31**	**314**	*e*P	**P**	**22 58 57.4**	**+6.4**
GTA				pP	pP	22 59 01.8	+0.1
GTA				sP	sP	22 59 04.8	-0.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.4						
YBH	**Yreka Blue Hor**	**87.89**	**45**	P	**P**	**22 59 01.7**	**-1.8**
	comp=Z,2.0nm,0.8s,mb4.4,baz=190,slow=2.8,SNR=5.4						
NVAR	**Mina Array Bea**	**89.53**	**49**	P	**P**	**22 59 09.0**	**-2.3**
	comp=Z,1.1nm,0.6s,mb4.3,baz=231,slow=9.0,SNR=7.8						
YKA	**Yellowknife Ar**	**100.71**	**28**	P	Pdif	22 59 59.5	-2.7
	comp=Z,0.3nm,0.5s,baz=256,slow=4.5,SNR=4.4						
ARCES	**ARCESS Array B**	**123.81**	**345**	PKP	PKPdf	23 05 10.1	-0.9
	comp=Z,1.4nm,0.7s,baz=75,slow=1.4,SNR=5.2						
ABTA	**Abfaltersbach**	**145.00**	**329**	⇑*i*PKPbc	PKPdf	23 05 49.8	-1.3
	comp=Z,3.9nm,0.7s						
MOTA	**Moosalm**	**145.22**	**331**	⇑*i*PKPbc	PKPbc	23 05 51.3	+0.2
	comp=Z,3.0nm,0.8s						
FETA	**Feichten**	**145.63**	**331**	⇑*i*PKPbc	PKPbc	23 05 52.7	+0.3
	comp=Z,7.1nm,0.9s						
HINF	**Hinteralfeld**	**146.65**	**336**	*e*PKP1	PKPbc	23 05 55.4	0.0
HAU	**Haudompre**	**146.68**	**337**	*e*PKP1	PKPbc	23 05 55.7	+0.2
CABF	**La Chapelle**	**147.93**	**335**	*e*PKP1	PKPbc	23 05 59.6	+0.5
	comp=Z,18nm,1.0s						
LOR	**Lormes**	**148.21**	**339**	*e*PKP1	PKPbc	23 05 59.9	+0.1
	comp=Z,10nm,0.8s						
LDF	**La Druitiere**	**148.23**	**344**	*e*PKP1	PKPbc	23 05 59.4	-0.4
SSF	**Saint Saulge**	**148.51**	**339**	*e*PKP1	PKPbc	23 06 00.8	+0.2
	comp=Z,12nm,0.8s						
LPL	**La Plagne**	**148.56**	**334**	*e*PKP1	PKPbc	23 06 01.4	+0.7
LPG	**La Plagne**	**148.56**	**334**	*e*PKP1	PKPbc	23 06 01.5	+0.7
	comp=Z,8.1nm,0.8s						
GRR	**Gorron**	**148.60**	**345**	*e*PKP1	PKPbc	23 06 00.7	-0.1
BGF	**Bois d'Agland**	**149.17**	**339**	*e*PKP1	PKPbc	23 06 02.3	0.0
ORIF	**Oris-en-Rattie**	**149.40**	**334**	*e*PKP1	PKPbc	23 06 03.2	+0.3
TCF	**Toulx Ste Croi**	**149.62**	**340**	*e*PKP1	PKPbc	23 06 03.6	+0.2
	comp=Z,25nm,1.2s						
VIVF	**Saint-Julien-l**	**149.94**	**335**	*e*PKP1	PKPbc	23 06 04.6	+0.4
MFF	**Saint Martin d**	**150.06**	**343**	*e*PKP1	PKPbc	23 06 04.4	0.0
	comp=Z,23nm,1.0s						
FRF	**La Foret Royal**	**150.14**	**331**	*e*PKP1	PKPbc	23 06 05.6	+0.9
	comp=Z,14nm,1.0s						
SMRF	**Simiane la Rot**	**150.28**	**333**	*e*PKP1	PKPbc	23 06 05.5	+0.4
LMR	**La Mourre**	**150.38**	**331**	*e*PKP1	PKPbc	23 06 05.3	0.0
	comp=Z,39nm,1.4s						
RJF	**Les Rejaudoux**	**150.72**	**339**	*e*PKP1	PKPbc	23 06 06.2	+0.1
CAF	**Calviac**	**150.86**	**338**	*e*PKP1	PKPbc	23 06 06.7	+0.3
LASF	**Ste Croix**	**150.91**	**335**	*e*PKP1	PKPbc	23 06 07.0	+0.4
	comp=Z,11nm,0.8s						
LFF	**La Frestale**	**151.29**	**340**	*e*PKP1	PKPbc	23 06 07.6	+0.2
	comp=Z,11nm,0.8s						
MTLF	**Montolieu**	**152.17**	**337**	*e*PKP1	PKPbc	23 06 09.5	0.0
EPF	**Esparros**	**153.12**	**339**	*e*PKP1	PKPbc	23 06 11.8	+0.2

*IDC **19** 22:52:13.9±1.6, 33°.15N×91°.95E, h0km, mb3.6/4, mb1 3.9/7, mb1mx3.5/26, mbtmp3.7/7, ML3.9/3, Error ellipse: s-maj=71.5km s-min=20.4km az=67.0*
*ISCJB **19** 22:52:19.3±1.6, 33°.35N±0°.06×92°.1E±0°.1, h57km±18km, mb3.6/3, Error ellipse: s-maj=17.2km s-min=9.7km az=173.5*
*NEIC **19** 22:52:20.2±1.4, 33°.35N×92°.07E, h45km±16km, mb3.8/1, Error ellipse: s-maj=13.0km s-min=9.2km az=79.0*

ISC 19 22:52:20.8±1.3, 33°.37N±0°.06×92°.0E±0°.1, h52km±17km, n16, σ0°.71/17, mb3.6/3, Qinghai

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.74**	**192**		*e*Pn	**Pn**	**22 53 15.5**	**-0.5**
LSA					Sn	**Sn**	**22 53 58.9**	**+0.2**
MK31	**Makanchi Array**	**15.32**	**334**		Pn	**Pn**	**22 55 53.3**	**-0.3**
MKAR	**Makanchi Array**	**15.32**	**334**		Pn	**Pn**	**22 55 52.8**	**-0.8**
	0.1nm,0.3s,baz=143,slow=13,SNR=3.8							
CMAR	**Chiang Mai Arr**	**16.09**	**156**		Pn	**Pn**	**22 55 58.7**	**-4.9**
	0.6nm,0.3s,baz=325,slow=12,SNR=5.9							
AAK	**Ala-Archa**	**16.60**	**309**		Pn	**Pn**	**22 56 10.4**	**+0.5**
SONM	**Songino Array**	**18.06**	**33**		P	**Pn**	**22 56 29.5**	**+1.7**
	0.3nm,0.3s,baz=223,slow=12,SNR=4.1							
KBL	**Kabul**	**19.10**	**280**		*e*P	**Pn**	**22 56 41.8**	**+1.3**
	7.4nm,1.2s							
KURK	**Kurchatov**	**19.93**	**334**		P	**Pn**	**22 56 49.0**	**-1.2**
	1.0nm,0.6s,baz=145,slow=12,SNR=6.6							
TLY	**Talaya**	**20.16**	**21**		*e*P	**P**	**22 56 50.8**	**+0.2**
ZALV	**Zalesovo Beam**	**21.20**	**348**		P	**P**	**22 57 01.6**	**-0.2**
	0.6nm,0.4s,mb3.3,baz=155,slow=11,SNR=4.5							
YAK	**Yakutsk**	**37.33**	**28**		P	**P**	**22 59 27.2**	**-0.5**
GNI	**Garni**	**38.12**	**294**		*e*P	**P**	**22 59 34.9**	**+0.2**
GVD	**Gavdhos**	**55.26**	**292**		P	**P**	**23 01 48.8**	**0.0**
WRA	**Warramunga Arr**	**66.64**	**136**		P	**P**	**23 03 05.6**	**-0.4**
	1.1nm,1.0s,mb3.9,baz=325,slow=6.1,SNR=4.1							
WRA	**Warramunga Arr**	**66.64**	**136**		P	**P**	**23 03 05.6**	**-0.4**
ASAR	**Alice Springs**	**69.34**	**139**		P	**P**	**23 03 22.9**	**0.0**
	0.5nm,0.5s,mb3.7,baz=321,slow=6.4,SNR=6.3							

NEIC 19 23:03:53.7, 54°.48N×161°.56W, h14km, ML3.5(AEIC), After AEIC., Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SDPT	**Sand Point**	**1.08**	**35**		P	Pb	23 04 12.8	-1.3
SDPT					S	Sb	23 04 27.7	-0.4
FALS	**False Pass**	**1.14**	**290**		P	Pb	23 04 13.5	-1.7
FALS					S	Sb	23 04 30.1	+0.2
AKUT	**Akutan**	**2.49**	**264**		*e*Pn	Pn	23 04 33.5	-0.3
AKUT					*e*Sn	Sn	23 05 03.2	-0.8
CHGN	**Chignik**	**2.56**	**43**		*e*Pn	Pn	23 04 34.2	-0.6
CHGN					*e*S	Sn	23 05 08.7	+2.9
UNV	**Unalaska Valle**	**2.97**	**260**		*e*Pn	Pn	23 04 40.0	-0.4
UNV					Sn	Sn	23 05 16.2	+0.4
SPIA	**Saint Paul Isl**	**5.59**	**302**		P	Pn	23 05 16.7	+0.3

*BJI **19** 23:40:51.6, 0°.60S×128°.00E, h126km, mB5.0/6, mb4.6/12*
*NEIC **19** 23:40:59.8±0.8, 0°.17N×127°.45E, h126km±8km, mb4.8/27, Error ellipse: s-maj=7.0km s-min=4.3km az=69.0*
*ISCJB **19** 23:41:00.0±0.3, 0°.16N±0°.02×127°.37E±0°.03, h140km±3km, mb4.6/42, Error ellipse: s-maj=5.6km s-min=3.9km az=167.6*
*IDC **19** 23:41:02.2±1.8, 0°.08N×127°.30E, h152km±17km, mb4.1/14, mb1 4.2/17, mb1mx4.0/25, mbtmp4.1/17, Error ellipse: s-maj=17.9km s-min=7.4km az=81.0*
*DJA **19** 23:41:03, 0°.07N×127°.25E, h111km, Mw5.2/8*

ISC 19 23:41:01.2±0.3, 0°.15N±0°.02×127°.38E±0°.03, h135km±3km, n106, σ1°.02/120, mb4.6/42, 1C, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.62**	**359**		P	**Pn**	**23 41 21.8**	**+0.2**
TNTI					S	**Sn**	**23 41 37.1**	**+0.1**
LBMI	**Labuha**	**0.79**	**171**		P	**Pn**	**23 41 23.1**	**+0.3**
LBMI					S	**Sn**	**23 41 39.8**	**+0.6**
MNI	**Manado**	**2.85**	**297**		P	**Pn**	**23 41 46.4**	**+0.4**
MNI					S	**Sn**	**23 42 19.9**	**-0.7**
NLAI	**Namlea**	**3.38**	**185**		P	**Pn**	**23 41 53.6**	**+0.7**
NLAI					S	**Sn**	**23 42 31.9**	**-1.0**
KMSI	**Cibinong**	**3.42**	**277**		P	**Pn**	**23 41 53.9**	**+0.4**
KMSI					S	**Sn**	**23 42 34.3**	**+0.3**
AAI	**Ambon**	**3.90**	**168**		P	**Pn**	**23 42 00.3**	**+0.6**
SWI	**Sorong**	**4.01**	**105**		P	**Pn**	**23 42 02.7**	**+1.5**
LUWI	**Luwuk**	**4.76**	**256**		P	**Pn**	**23 42 10.5**	**-0.6**
LUWI					S	**Sn**	**23 43 01.6**	**-3.9**
MRSI	**Marisa**	**5.45**	**273**		P	**Pn**	**23 42 18.9**	**-1.5**
	1.5nm5μm438nm,0.6s							
APSI	**Ampana**	**5.83**	**260**		P	**Pn**	**23 42 25.3**	**-0.1**
	7.8nm2μm,0.7s							
KDI	**Kendari**	**6.26**	**229**		P	**Pn**	**23 42 32.2**	**+0.8**
	1.7nm4μm54nm,0.6s							
GSPH	**General Santos**	**6.38**	**338**		*e*P	**Pn**	**23 42 31.7**	**-1.1**
GSPH					*e*S	**Sn**	**23 43 40.8**	**-3.8**
MATI	**Mati**	**6.84**	**351**		*e*P	**Pn**	**23 42 39.4**	**+0.2**
DAV	**Davao City (W)**	**7.11**	**345**		P	**Pn**	**23 42 42.4**	**-0.3**
	59nm,0.3s,baz=158,slow=5.4,SNR=3.8							
DAV					S	**Sn**	**23 44 02.9**	**+0.8**
	46nm,0.3s,baz=270,slow=20,SNR=4.5							
DAV	**Davao City (W)**	**7.11**	**345**		*e*Pn	**Pn**	**23 42 40.8**	**-1.9**
DAV					Sn	**Sn**	**23 44 02.7**	**+0.6**
DMPH	**Davao City--Mi**	**7.14**	**345**	⇑	*e*P	**Pn**	**23 42 42.5**	**-0.6**
DMPH	**Davao City--Mi**	**7.14**	**345**		*e*S	Px	23 43 07.9	
PCI	**Palu**	**7.61**	**262**		P	**Pn**	**23 42 50.1**	**+0.6**
	0.0nm119nm6.9nm,0.4s							
BUKP	**Musuan**	**8.02**	**343**		*e*P	**Pn**	**23 42 54.9**	**-0.1**
TTSI	**Tana Toraja**	**8.20**	**247**		P	**Pn**	**23 42 57.2**	**-0.1**
	3μm221nm,0.6s							
TTSI					S	**Sn**	**23 44 26.4**	**-2.0**
	3μm221nm,0.6s							
BNSI	**Bone**	**8.56**	**238**		P	**Pn**	**23 43 03.2**	**+1.0**
	68nm,0.7s							
PAGZ	**Pagadian**	**8.62**	**333**		*e*P	**Pn**	**23 43 00.7**	**-2.4**
SPSI	**Sidrap Palu**	**8.63**	**242**		P	**Pn**	**23 43 03.5**	**+0.3**
	3μm254nm,0.7s							
BUTP	**Butuan**	**8.94**	**349**		*e*P	**Pn**	**23 43 07.0**	**-0.2**
BKSI	**Bulukumba**	**9.06**	**233**		P	**Pn**	**23 43 12.7**	**+3.8**
	801nm74nm,0.5s							
KAPI	**Kappang**	**9.18**	**236**		P	**Pn**	**23 43 10.6**	**+0.1**
	6.9nm,0.3s,baz=70,slow=6.6,SNR=26							
KAPI					S	**Sn**	**23 44 48.6**	**-3.7**
	19nm,0.3s,baz=332,slow=22,SNR=18							
KAPI	**Kappang**	**9.18**	**236**		*e*Pn	**Pn**	**23 43 10.4**	**-0.2**
KAPI					*e*Sn	**Sn**	**23 44 50.5**	**-1.8**
MYLDM	**Lahad Datu**	**10.18**	**300**		P	**Pn**	**23 43 26.0**	**+2.1**
	109nm,0.8s							
SMPI	**Sarmi**	**11.53**	**101**		P	**Pn**	**23 43 45.2**	**+3.4**
	47nm,0.9s							
KKM	**Kota Kinabalu**	**12.59**	**298**		*e*Pn	**Pn**	**23 43 55.5**	**-0.2**
	47nm,1.1s							
KAKA	**Kakadu**	**13.73**	**159**		*e*P	**Pn**	**23 44 09.3**	**-1.0**
	47nm,0.6s							
KAKA	**Kakadu**	**13.73**	**159**		*e*Pn	**Pn**	**23 44 09.3**	**-1.0**
	129nm,0.6s							
KAKA					*e*S	**Sn**	**23 46 52.9**	**+11**
KNA	**Kununurra**	**15.86**	**175**		P	**Pn**	**23 44 37.4**	**+0.4**
	2μm277nm,0.8s							
KSM	**Kuching**	**17.12**	**274**		*e*P	**Pn**	**23 44 51.9**	**-0.5**
	24nm,0.8s							
KSM	**Kuching**	**17.12**	**274**		P	**Pn**	**23 44 52.9**	**+0.5**
	31nm,1.0s							
FITZ	**Fitzroy Crossi**	**18.22**	**185**		*e*P	**P**	**23 45 03.1**	**-0.8**
	15nm,0.8s							
FITZ	**Fitzroy Crossi**	**18.22**	**185**		P	**P**	**23 45 03.3**	**-0.7**
	1.0nm,0.3s,baz=25,slow=11,SNR=24							
FITZ	**Fitzroy Crossi**	**18.22**	**185**		*e*P	**P**	**23 45 03.1**	**-0.8**
	7.9nm,0.6s							
FITZ	**Fitzroy Crossi**	**18.22**	**185**		P	**P**	**23 45 05.5**	**+1.6**
	38nm,1.4s							
WRAB	**Tennant Creek**	**21.09**	**162**		*e*P	**P**	**23 45 35.0**	**-0.1**
	21nm,0.7s,mb4.6							
WRAB					*e*S	**S**	**23 49 19.1**	**-3.2**
WRAB	**Tennant Creek**	**21.09**	**162**		P	**P**	**23 45 36.0**	**+1.0**
	37nm,0.9s,mb4.7							
WRA	**Warramunga Arr**	**21.10**	**162**		P	**P**	**23 45 34.5**	**-0.5**
	15nm,0.4s,mb4.7,baz=340,slow=11,SNR=37							
WRA					S	**S**	**23 49 19.5**	**-2.9**
	7.9nm,0.9s,baz=330,slow=21,SNR=11							
GUMO	**Guam**	**21.87**	**52**		*e*P	**P**	**23 45 42.6**	**-0.8**
TWG	**Pinlang**	**23.36**	**345**		*e*P	**P**	**23 45 55.8**	**-1.8**
	39nm,0.5s,mb5.1							
MDSI	**Maura Dua**	**23.63**	**258**		P	**P**	**23 46 02.3**	**+2.1**
YULB	**Yu-li**	**23.85**	**346**		*e*P	**P**	**23 46 00.4**	**-1.7**
	12nm,0.6s,mb4.6							
TPUB	**Ta-pu**	**23.93**	**345**		*e*P	**P**	**23 46 02.7**	**-0.1**
	49nm,0.6s,mb5.2							
SSLB	**Suanglung**	**24.31**	**346**		*e*P	**P**	**23 46 06.1**	**-0.2**
	38nm,0.8s,mb5.0							
ASAR	**Alice Springs**	**24.51**	**165**		P	**P**	**23 46 08.1**	**0.0**
	11nm,0.6s,mb4.6,baz=338,slow=9.1,SNR=65							
ASAR					S	**S**	**23 50 15.6**	**-3.2**
	2.1nm,0.8s,baz=353,slow=21,SNR=5.7							
NACB	**Ninganchiao**	**24.53**	**347**		*e*P	**P**	**23 46 08.2**	**-0.1**
YHNB	**Yeheng**	**25.06**	**347**		*e*P	**P**	**23 46 13.5**	**+0.4**
	25nm,0.6s,mb4.9							
PSI	**Prapat**	**28.56**	**276**		P	**P**	**23 46 43.0**	**-1.7**
	3.3nm,0.5s,mb4.3,baz=171,slow=23,SNR=3.6							
FORT	**Forrest**	**30.76**	**179**		*e*P	**P**	**23 47 04.5**	**+0.7**
	7.5nm,0.7s,mb4.5							
KLBR	**Kellerberrin**	**32.86**	**195**		*e*P	**P**	**23 47 21.3**	**-0.9**
	38nm,1.4s,mb4.9							
CM31	**Chiang Mai Arr**	**33.33**	**305**		P	**P**	**23 47 25.8**	**-0.7**
CMAR	**Chiang Mai Arr**	**33.33**	**305**		P	**P**	**23 47 26.6**	**+0.1**
	0.8nm,0.3s,mb3.9,baz=122,slow=8.3,SNR=5.0							
CHTO	**Chiang Mai**	**33.51**	**305**		*e*P	**P**	**23 47 27.6**	**-0.4**
	2.0nm,0.4s,mb4.2							
HNR	**Honiara**	**33.79**	**107**		P	**P**	**23 47 28.9**	**-1.6**
NWAO	**Narrogin (SRO)**	**34.26**	**195**		P	**P**	**23 47 33.8**	**-0.5**
	3.1nm,0.5s,mb4.3,baz=38,slow=11,SNR=3.6							
NWAO	**Narrogin (SRO)**	**34.26**	**195**		*e*P	**P**	**23 47 33.7**	**-0.6**
ENH	**Enshi**	**34.45**	**332**		*e*P	**P**	**23 47 35.7**	**-0.3**
	6.7nm,0.6s,mb4.5							
STKA	**Stephens Creek**	**34.58**	**158**		*e*P	**P**	**23 47 37.3**	**+0.2**
	8.2nm,0.7s,mb4.5							
STKA	**Stephens Creek**	**34.58**	**158**		P	**P**	**23 47 37.5**	**+0.5**
	9.6nm,0.6s,mb4.6,baz=330,slow=8.0,SNR=28							
STKA	**Stephens Creek**	**34.58**	**158**		*e*P	**P**	**23 47 36.7**	**-0.4**
	1.6nm,0.5s,mb3.9							
KSRS	**Korea Array**	**37.12**	**1**		P	**P**	**23 47 59.0**	**+0.3**
	8.0nm,0.5s,mb4.6,baz=177,slow=9.6,SNR=36							
MAJO	**Matsushiro**	**37.58**	**14**		*e*P	**P**	**23 48 01.5**	**-1.1**
	11nm,0.8s,mb4.5							
MAT	**Matsushiro**	**37.58**	**14**		P	**P**	**23 48 01.3**	**-1.2**
MJAR	**Matsushiro Arr**	**37.58**	**14**		P	**P**	**23 48 01.2**	**-1.4**
	4.9nm,0.5s,mb4.4,baz=186,slow=8.8,SNR=15							
MJAR	**Matsushiro Arr**	**37.58**	**14**		P	**P**	**23 48 01.2**	**-1.4**
XAN	**Xi'an**	**37.90**	**335**		P	**P**	**23 48 05.6**	**+0.3**
XAN					pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.4							
ARMA	**Armidale**	**38.16**	**145**		*e*P	**P**	**23 48 09.1**	**+1.6**
BJT	**Baijiatuau**	**40.98**	**347**		*e*P	**P**	**23 48 29.9**	**-0.8**
LZH	**Lanzhou**	**41.91**	**331**		*e*P	**P**	**23 48 40.0**	**+1.6**
LZH					pmax	pmax		
	comp=Z,20nm,1.3s,mb4.6							
LZH					pmax	pmax		
	comp=Z,120nm,5.4s							
SHL	**Shillong**	**42.57**	**309**		*e*PKP	**P**	**23 48 46.0**	**+2.1**
LSA	**Lhasa**	**45.32**	**314**		*e*P	**P**	**23 49 07.8**	**+2.0**
	comp=Z,11nm,0.7s,mb4.6							
GTA	**Gaotai**	**46.50**	**330**		*e*P	**P**	**23 49 16.1**	**+1.2**
GTA					pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.2							
TAPN	**Taplejung**	**46.70**	**309**		*e*P	**P**	**23 49 16.7**	**+0.1**
	comp=Z,12nm,0.4s,mb4.8							
ODAN	**Odare**	**46.72**	**308**		*e*P	**P**	**23 49 17.9**	**+1.1**
	comp=Z,32nm,0.7s,mb5.0							
RAMN	**Ramite**	**47.38**	**308**		*e*P	**P**	**23 49 23.4**	**+1.4**
	comp=Z,51nm,0.6s,mb5.3							
JIRN	**Jiri**	**48.03**	**308**		*e*P	**P**	**23 49 28.2**	**+1.2**
	comp=Z,30nm,0.7s,mb5.0							
GUN	**Gumba**	**48.39**	**308**		*e*P	**P**	**23 49 30.8**	**+1.1**
	comp=Z,45nm,0.8s,mb5.2							
PKI	**Pulchoki**	**48.61**	**308**		*e*P	**P**	**23 49 33.2**	**+1.8**
PKIN	**Phulchoki**	**48.62**	**308**		*e*P	**P**	**23 49 32.9**	**+1.4**
	comp=Z,9.8nm,0.6s,mb4.6							
KKN	**Kakani**	**48.81**	**308**		*e*P	**P**	**23 49 33.7**	**+0.8**
	comp=Z,26nm,0.8s,mb4.9							
DMN	**Daman**	**48.87**	**308**		*e*P	**P**	**23 49 34.3**	**+0.9**
ULN	**Ulaanbaatar**	**50.70**	**342**		*e*P	**P**	**23 49 47.2**	**+0.3**
	comp=Z,9.4nm,1.0s,mb4.4							
SONM	**Songino Array**	**50.88**	**342**		P	**P**	**23 49 48.5**	**+0.3**
	comp=Z,4.3nm,0.7s,mb4.2,baz=157,slow=8.0,SNR=18							
PETK	**Petropavlovsk-**	**58.50**	**21**		P	**P**	**23 50 43.9**	**+0.9**
	comp=Z,4.3nm,0.5s,mb4.5,baz=189,slow=6.1,SNR=10							
PETK	**Petropavlovsk-**	**58.50**	**21**		P	**P**	**23 50 43.9**	**+0.9**
MK31	**Makanchi Array**	**60.86**	**326**		*e*P	**P**	**23 50 59.7**	**+0.3**
MKAR	**Makanchi Array**	**60.86**	**326**		P	**P**	**23 50 59.3**	**0.0**
	comp=Z,3.1nm,0.5s,mb4.4,baz=112,slow=9.1,SNR=24							
YAK	**Yakutsk**	**61.75**	**1**		*e*P	**P**	**23 51 04.6**	**-0.4**
	comp=Z,40nm,0.7s,mb5.4							
TKM2	**Tokmak 2**	**62.86**	**320**		*e*P	**P**	**23 51 13.3**	**+0.6**
	comp=Z,2.6nm,0.8s,mb4.1							
UCH	**Uchtor**	**63.25**	**318**		*e*P	**P**	**23 51 15.5**	**+0.1**
EKS2	**Erkin-Say**	**63.93**	**319**		*e*P	**P**	**23 51 20.9**	**+1.0**
	comp=Z,2.4nm,0.8s,mb4.1							
ZAA0	**Zalesovo Array**	**64.06**	**334**		*e*P	**P**	**23 51 18.9**	**-1.6**
ZALV	**Zalesovo Beam**	**64.06**	**334**		P	**P**	**23 51 19.0**	**-1.4**
	comp=Z,2.6nm,0.8s,mb4.1,baz=116,slow=6.8,SNR=13							
KBL	**Kabul**	**64.23**	**309**		*e*P	**P**	**23 51 22.2**	**+0.2**
KURK	**Kurchatov**	**65.10**	**328**		*e*P	**P**	**23 51 26.6**	**-0.7**

KORT	Korkueli	0.95	88	i P		Pg		00 07 22.6	-0.7
KORT				i S		Sg		00 07 38.4	+2.7
KORT	Korkueli	0.95	88	i P		Pg		00 07 22.6	-0.7
MLSB	Milas	1.15	286	ePN		Pn		00 07 27.0	-0.5
MLSB				eSN		Sn		00 07 42.0	-1.4
MLSB	Milas	1.15	286	ePn		Pn		00 07 27.0	-0.5
MLSB				eSn		Sn		00 07 42.0	-1.4
ANTB	Antalya	1.20	93	ePN		Pn		00 07 27.9	-0.2
ANTB	Antalya	1.20	93	ePn		Pn		00 07 27.9	-0.2
AYDN	Tasoluk	1.23	304	i P		Pb		00 07 28.5	0.0
AYDN				i S		Sb		00 07 46.2	+1.7
AYDN	Tasoluk	1.23	304	i P		Pb		00 07 28.5	0.0
AYDN				i S		Sb		00 07 46.2	+1.7
BCK	Bucak	1.24	67	ePN		Pn		00 07 28.2	-0.4
BCK				eSN		Sn		00 07 46.3	+0.7
BCK	Bucak	1.24	67	ePn		Pn		00 07 28.2	-0.4
BCK				eSn		Sn		00 07 46.3	+0.8
DAT	Datca	1.29	259	ePN		Pn		00 07 28.6	-0.8
DAT	Datca	1.29	259	ePn		Pn		00 07 28.6	-0.8
KHL	Karahalli	1.37	12	ePN		Pn		00 07 29.4	-1.1
KHL	Karahalli	1.37	12	ePn		Pn		00 07 29.4	-1.1
ISP	Isparta	1.37	52	ePN		Pn		00 07 30.6	+0.1
ISP	Isparta	1.37	52	ePn		Pn		00 07 30.6	+0.1
BDRM	Kayabasi	1.38	274	i P		Pn		00 07 30.9	+0.4
BDRM				i S		Sb		00 07 49.8	+1.1
BDRM	Kayabasi	1.38	274	i P		Pn		00 07 30.9	+0.3
BDRM				i S		Sb		00 07 49.8	+1.0
KHAL	Karahalli	1.41	11	i P		Pn		00 07 30.7	-0.3
KHAL				i S		Sb		00 07 51.5	+1.7
KHAL	Karahalli	1.41	11	i P		Pn		00 07 30.7	-0.4
KHAL				i S		Sb		00 07 51.5	+1.7
SUTC	Sutluce-Ispart	1.55	71	ePN		Pn		00 07 33.4	+0.5
SUTC	Sutluce-Ispart	1.55	71	ePn		Pn		00 07 33.4	+0.5
KULA	Kula-Manisa	1.58	346	ePN		Pn		00 07 32.7	-0.7
KULA	Kula-Manisa	1.58	346	ePn		Pn		00 07 32.7	-0.7
SHUT	Suhut-Afyon	1.92	35	ePN		Pn		00 07 37.5	-0.5
SHUT	Suhut-Afyon	1.92	35	ePn		Pn		00 07 37.5	-0.5
IZM	Izmir	2.07	314	ePN		Pn		00 07 39.9	-0.2
KDAG	Bornova	2.07	314	i P		Pn		00 07 39.9	-0.2
KDAG				i S		Sn		00 08 06.8	+0.7
KDAG	Bornova	2.07	314	i P		Pn		00 07 39.9	-0.2
KDAG				i S		Sn		00 08 06.8	+0.8
DEMI	Demirci	2.09	350	i P		Pn		00 07 39.9	-0.5
DEMI				i S		Sn		00 08 02.5	-4.1
DEMI	Demirci	2.09	350	i P		Pn		00 07 39.8	-0.6
AKS	Akhisar	2.17	331	ePN		Pn		00 07 40.8	-0.7
AKS	Akhisar	2.17	331	ePn		Pn		00 07 40.8	-0.7
BLCB	Balcova	2.19	310	ePN		Pn		00 07 41.5	-0.2
BLCB	Balcova	2.19	310	ePn		Pn		00 07 41.5	-0.2
ALT	Altintas	2.20	20	ePN		Pn		00 07 41.1	-0.8
ALT	Altintas	2.20	20	ePn		Pn		00 07 41.1	-0.8
HDMB	Hadim	2.66	89	ePN		Pn		00 07 48.9	+0.7
KONT	Konya--Tatoy	2.72	68	ePN		Pn		00 07 49.9	+0.8
LADK	Ladik-KONYA	2.82	63	ePN		Pn		00 07 51.2	+0.8
ESKT	Eskisehir	2.86	27	ePN		Pn		00 07 50.7	-0.3
ESKT	Eskisehir	2.86	27	ePn		Pn		00 07 50.7	-0.3
KIZT	Kizilcal	2.87	48	ePN		Pn		00 07 51.3	+0.3
KIZT	Kizilcal	2.87	48	ePn		Pn		00 07 51.3	+0.2

SZGRF ***20*** *00:18:18.4, 19°.14S×174°.87W, h33km, Tonga Islands*
ISCJB ***20*** *00:18:23.8±1.6, 18°.59S±0°.05×174°.77W±0°.03, h73km±14km, mb5.0/130, Error ellipse: s-maj=8.6km s-min=4.7km az=160.5*
MOS ***20*** *00:18:25.5±0.8, 18°.48S×174°.76W, h83km, mb5.1/31, Error ellipse: s-maj=9.8km s-min=7.6km az=61.9*
IDC ***20*** *00:18:26.7±2.3, 18°.70S×174°.64W, h89km±20km, mb4.7/20, mb1 4.8/21, mb1mx4.7/23, mbtmp4.7/21, MS3.9/7, Ms1 3.9/7, ms1mx3.8/12, Error ellipse: s-maj=18.0km s-min=11.1km az=135.0*
BJI ***20*** *00:18:31.2, 18°.48S×174°.24W, h144km, mB5.0/21, mb5.0/32*
NEIC ***20*** *00:18:32.2±0.9, 18°.70S×174°.66W, h139km±7km, mb5.0/105, Error ellipse: s-maj=7.3km s-min=4.4km az=150.0*
NEIC Felt at Neiafu.
GCMT ***20*** *00:18:35.9±0.2, 18°.77S×174°.18W, h147km±1km, MW5.2, Moment Tensor Solution. s63,c100; s97,c152; Moment tensor: Scale 10^16^Nm; Mrr4.24±.16; Mθθ-2.05±.24; Mφφ-2.19±.24; Mrθ3.79±.14; Mθφ-2.30±.20; Mφr6.03±.13; Best double couple: M0 8.30000×10^16^ NP1:φs235.00000°, δ16.00000°, λ110.00000°. NP2:φs34.00000°, δ75.00000°, λ84.00000°. Principal axes: T 8.3200, Plg60.0000°, Azm296.0000°; N 0.0400, Plg6.0000°, Azm35.0000°; P -8.3500, Plg29.0000°, Azm129.0000°; Data Used: II IU IC G CN.*

ISC 20 00:18:26.5±1.5, 18°.57S±0°.05×174°.75W±0°.03, h82km±13km, h139km±1.4km: pP-P, n896, σ0s57/642, mb5.0/130, 245C-227D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.45**	**32**	P	**Pn**	**00 19 45.5**	**+0.3**
	52nm,0.3s,baz=209,slow=19,SNR=39						
AFI				S	**Sn**	**00 20 39.3**	**-7.3**
	188nm,0.3s,baz=21,slow=22,SNR=14						
AFI	**Afiamalu**	**5.45**	**32**	*e*P	**Pn**	**00 19 45.1**	**-0.1**
AFI				*e*		00 20 38.8	
AFI				pmax	pmax		
	comp=Z,1μm,0.4s						
AFI	**Afiamalu**	**5.45**	**32**	*e*Pn	**Pn**	**00 19 45.1**	**-0.1**
	comp=Z,1μm,0.4s						
AFI				*e*Sn	**Sn**	**00 20 38.8**	**-7.8**
MSVF	**Nonsavu**	**6.89**	**276**	Pn	Px	00 20 18.9	
	comp=Z,460nm,0.8s,SNR=12						
MSVF	**Nonsavu**	**6.89**	**276**	*e*Pn	Px	00 20 18.5	
	comp=Z,158nm,1.3s						
RAO	**Raoul Island**	**11.02**	**195**	S	**Sn**	**00 22 57.3**	**-5.2**
	comp=Z,49nm,0.3s,baz=75,slow=23,SNR=6.0						
FUNA	**Funafuti**	**11.59**	**329**	*e*Pn	**Pn**	**00 21 18.2**	**+9.2**
	comp=Z,281nm,0.6s						
DZM	**Mont Dzumac**	**17.97**	**256**	*e*P	**Pn**	**00 22 35.6**	**+4.6**
	comp=Z,200nm,1.4s						
DZM				*e*LR	LR	00 26 48.2	
	comp=Z,680nm,26.5s						
DZM	**Mont Dzumac**	**17.97**	**256**	*e*P	**Pn**	**00 22 34.9**	**+3.9**
DZM				*e*S	Px	00 23 12.9	
DZM	**Mont Dzumac**	**17.97**	**256**	*e*P	**Pn**	**00 22 35.4**	**+4.4**
	comp=Z,131nm,1.4s						
URZ	**Urewera**	**20.86**	**198**	P	**P**	**00 23 01.0**	**-0.7**
	comp=Z,52nm,0.5s,baz=355,slow=6.0,SNR=50						
URZ				S	**S**	**00 26 40.6**	**-9.2**
	comp=Z,8.3nm,0.8s,baz=90,slow=21,SNR=2.9						
URZ	**Urewera**	**20.86**	**198**	*e*P	**P**	**00 23 00.7**	**-1.0**
	comp=Z,51nm,0.5s						
URZ				*e*S	**S**	**00 26 44.2**	**-5.6**
PAE	**Paea**	**23.94**	**92**	*e*P	**P**	**00 23 32.0**	**-1.2**
PAE				*e*T		00 47 43.5	
	comp=Z,26nm,0.3s						
PPT	**Papeete**	**23.95**	**92**	*e*P	**P**	**00 23 32.4**	**-0.9**
	comp=Z,209nm,1.4s,mb5.3						
PPT				*e*LR	LR	00 29 06.5	
	comp=Z,1μm,36.8s						
PPT				*e*T		00 47 50.3	
	comp=Z,20nm,0.3s						
PPT	**Papeete**	**23.95**	**92**	P	**P**	**00 23 31.9**	**-1.4**
	comp=Z,158nm,1.2s,mb5.2,baz=258,slow=6.4,SNR=5.2						
TIAR	**Tiarei**	**24.17**	**92**	*e*P	**P**	**00 23 34.5**	**-0.8**
	comp=Z,196nm,1.2s,mb5.3						
SNZO	**South Karori**	**24.39**	**199**	P	**P**	**00 23 32.7**	**-4.3**
MEH	**Mehetia**	**25.35**	**93**	*e*T		00 49 42.6	
	comp=Z,130nm,0.2s						
PMOR	**Pomariorio Ree**	**25.95**	**86**	*e*T		00 49 53.9	
	comp=Z,6.8nm,0.3s						
HNR	**Honiara**	**26.15**	**287**	P	**P**	**00 23 54.8**	**+1.6**
RPZ	**Rata Peaks**	**27.77**	**202**	P	**P**	**00 24 07.6**	**+0.2**
	comp=Z,21nm,0.6s,mb4.9,baz=8.3,slow=2.4,SNR=28						
RPZ	**Rata Peaks**	**27.77**	**202**	*e*P	**P**	**00 24 07.1**	**-0.4**
	comp=Z,23nm,0.6s,mb4.9						
EIDS	**Eidsvold**	**32.33**	**252**	*e*P	**P**	**00 24 48.1**	**0.0**
	comp=Z,36nm,1.5s,mb4.9						
ARMA	**Armidale**	**32.66**	**242**	*e*P	**P**	**00 24 51.4**	**+0.5**
ARMA	**Armidale**	**32.66**	**242**	*e*P	**P**	**00 24 51.8**	**+0.9**
	comp=Z,35nm,1.6s,mb4.9						
TAOE	**Nuku Hiva Isla**	**34.92**	**79**	*e*LR	LR	00 34 04.5	
	comp=Z,411nm,35.9s						
CNB	**Canberra Magne**	**35.84**	**235**	*e*P	**P**	**00 25 18.9**	**+0.7**
CTA	**Charters Tower**	**36.77**	**261**	*e*P	**P**	**00 25 27.2**	**+0.8**
	comp=Z,61nm,0.5s,mb5.8						
CTAO	**Charters Tower**	**36.77**	**261**	*e*P	**P**	**00 25 26.7**	**+0.3**
CTAO				pmax	pmax		
	comp=Z,78nm,0.7s,mb5.8						
CTAO	**Charters Tower**	**36.77**	**261**	*e*P	**P**	**00 25 26.7**	**+0.3**
	comp=Z,78nm,0.7s,mb5.8						
RKT	**Rikitea**	**37.37**	**104**	*e*LR	LR	00 35 06.5	
	comp=Z,536nm,36.2s						
RKT				*e*T		01 04 24.0	
	comp=Z,5.5nm,0.3s						
COEN	**Coen**	**40.58**	**270**	*e*P	**P**	**00 25 59.0**	**+0.7**
	comp=Z,97nm,0.4s,mb6.0						
STKA	**Stephens Creek**	**41.38**	**243**	⇑*i*P	**P**	**00 26 04.3**	**-0.5**
	comp=Z,12nm,1.1s,mb4.6						
STKA	**Stephens Creek**	**41.38**	**243**	P	**P**	**00 26 04.3**	**-0.4**
	comp=Z,15nm,1.0s,mb4.8,baz=80,slow=7.5,SNR=13						
STKA				PcP	PcP	00 28 01.8	+0.2
	comp=Z,4.5nm,0.8s,baz=88,slow=5.4,SNR=3.5						
STKA				LR	LR	00 41 08.5	
	comp=Z,207nm,21.3s,baz=206,slow=33						
STKA	**Stephens Creek**	**41.38**	**243**	*e*P	**P**	**00 26 04.5**	**-0.3**
	comp=Z,9.5nm,1.4s,mb4.4						
STKA				*e*PcP	PcP	00 28 01.2	-0.3
WAKE	**Wake Island**	**41.81**	**333**	*e*P	**P**	**00 26 09.1**	**+0.8**
	comp=Z,478nm,1.5s,mb6.0						
WAKE				*e*PcP	PcP	00 28 01.9	-1.1
WRAB	**Tennant Creek**	**47.92**	**260**	P	**P**	**00 26 56.3**	**-0.6**
	comp=Z,305nm,0.7s,mb6.2,SNR=30						
WRAB	**Tennant Creek**	**47.92**	**260**	*e*P	**P**	**00 26 56.1**	**-0.8**
WRAB						00 28 47.5	
WRAB				pmax	pmax		
	comp=Z,187nm,1.7s,mb5.6						
WRAB	**Tennant Creek**	**47.92**	**260**	*e*P	**P**	**00 26 56.1**	**-0.8**
	comp=Z,187nm,1.7s,mb5.6						
WRAB				PP	PP	00 28 47.5	-2.0
WRA	**Warramunga Arr**	**47.93**	**260**	P	**P**	**00 26 56.0**	**-1.0**
	comp=Z,23nm,0.5s,mb5.2,baz=97,slow=8.3,SNR=102						
WRA				PcP	PcP	00 28 24.3	0.0
	comp=Z,1.8nm,0.4s,baz=97,slow=7.6,SNR=4.4						
WRA				S	**S**	**00 33 40.5**	**-8.2**
	comp=Z,1.4nm,0.8s,baz=94,slow=14,SNR=5.0						
ASAR	**Alice Springs**	**47.96**	**255**	P	**P**	**00 26 56.7**	**-0.5**
	comp=Z,30nm,0.6s,mb5.3,baz=90,slow=8.4,SNR=286						
ASAR				PcP	PcP	00 28 23.9	-0.4
	comp=Z,5.2nm,0.6s,baz=108,slow=3.6,SNR=7.8						
ASAR				ScP	ScP	00 32 10.4	-1.1
	comp=Z,1.4nm,1.0s,baz=90,slow=3.0,SNR=5.9						
ASAR				S	**S**	**00 33 41.8**	**-7.2**
	comp=Z,2.5nm,0.9s,baz=91,slow=16,SNR=14						
ASAR	**Alice Springs**	**47.96**	**255**	P	**P**	**00 26 56.7**	**-0.5**
ASAR						00 28 23.9	
ASAR				S	**S**	**00 33 41.8**	**-7.2**
KAKA	**Kakadu**	**51.04**	**268**	⇑*i*P	**P**	**00 27 22.0**	**+1.3**
	comp=Z,76nm,0.4s,mb6.1						
KAKA	**Kakadu**	**51.04**	**268**	*e*P	**P**	**00 27 22.4**	**+1.6**
	comp=Z,238nm,0.5s						
GUMO	**Guam**	**51.04**	**306**	*e*P	**P**	**00 27 21.4**	**+0.7**
GUMO				*e*		00 28 34.5	
GUMO				pmax	pmax		
	comp=Z,127nm,1.1s,mb5.9						
GUMO	**Guam**	**51.04**	**306**	*e*P	**P**	**00 27 21.4**	**+0.8**
	comp=Z,127nm,1.1s,mb5.9						
GUMO				*e*PcP	PcP	00 28 34.5	-1.1
FORT	**Forrest**	**52.87**	**245**	⇑*i*P	**P**	**00 27 32.6**	**-1.5**
	comp=Z,44nm,0.6s,mb5.7						
FORT	**Forrest**	**52.87**	**245**	*e*P	**P**	**00 27 32.8**	**-1.4**
	comp=Z,58nm,0.7s,mb5.7						
FORT				*e*PP	PP	00 29 33.8	-0.6
FITZ	**Fitzroy Crossi**	**56.34**	**260**	⇑*i*P	**P**	**00 27 59.0**	**-0.4**
	comp=Z,16nm,0.6s,mb5.2						
FITZ	**Fitzroy Crossi**	**56.34**	**260**	*e*P	**P**	**00 27 59.2**	**-0.3**
	comp=Z,9.2nm,0.6s,mb5.0						
FITZ				*e*		00 28 40.1	
SBA	**Scott Base**	**60.00**	**184**	*e*P	**P**	**00 28 25.2**	**+1.2**
SBA				pmax	pmax		
	comp=Z,247nm,2.9s,mb5.7						
SBA	**Scott Base**	**60.00**	**184**	*e*P	**P**	**00 28 25.2**	**+1.2**
	comp=Z,247nm,2.9s,mb5.7						
RPN	**Rapa Nui**	**60.31**	**111**	P	**P**	**00 28 28.0**	**+1.0**
KLBR	**Kellerberrin**	**61.65**	**244**	*e*P	**P**	**00 28 34.5**	**-1.4**
	comp=Z,9.6nm,0.7s,mb4.9						
CASY	**Casey**	**67.00**	**205**	*e*P	**P**	**00 29 09.5**	**-0.8**
CASY	**Casey**	**67.00**	**205**	*e*P	**P**	**00 29 09.6**	**-0.7**
	comp=Z,11nm,0.6s,mb4.9						
ADK	**Adak**	**70.17**	**359**	*e*P	**P**	**00 29 29.4**	**-0.6**
ADK				pmax	pmax		
	comp=Z,89nm,1.4s,mb5.4						
ADK	**Adak**	**70.17**	**359**	*e*P	**P**	**00 29 29.4**	**-0.7**
	comp=Z,89nm,1.4s,mb5.4						
ATKA	**Atka Island**	**70.47**	**0**	*e*P	**P**	**00 29 31.4**	**-0.4**
	comp=Z,125nm,1.3s,mb5.6						
MJAR	**Matsushiro Arr**	**70.55**	**321**	P	**P**	**00 29 32.9**	**+0.2**
	comp=Z,12nm,0.7s,mb4.9,baz=159,slow=6.1,SNR=28						
MJAR				LR	LR	00 55 02.2	
	comp=Z,51nm,21.4s,baz=95,slow=31						
MAJO	**Matsushiro**	**70.55**	**321**	*e*P	**P**	**00 29 32.6**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.1						
MAJO	**Matsushiro**	**70.55**	**321**	*e*P	**P**	**00 29 32.6**	**-0.2**
	comp=Z,20nm,0.7s,mb5.1						
MAT	**Matsushiro**	**70.55**	**321**	P	**P**	**00 29 30.9**	**-1.8**
MAT				*e*S	S	00 38 52.0	+12
NIKO	**Nikolski**	**71.43**	**4**	*e*P	**P**	**00 29 36.5**	**-1.1**
	comp=Z,220nm,1.9s,mb5.7						
QSPA	**South Pole Qui**	**71.49**	**180**	*e*P	**P**	**00 29 37.1**	**-0.7**
	comp=Z,26nm,1.3s,mb4.9						
QSPA				*e*		00 30 09.4	
SMY	**Shemya**	**71.66**	**353**	*e*P	**P**	**00 29 38.4**	**-0.6**
SMY				pmax	pmax		
	comp=Z,76nm,0.9s,mb5.5						
SMY	**Shemya**	**71.66**	**353**	*e*P	**P**	**00 29 38.4**	**-0.6**
	comp=Z,76nm,0.9s,mb5.5						
UNV	**Unalaska Valle**	**72.47**	**5**	*e*P	**P**	**00 29 43.4**	**-0.5**
	comp=Z,15nm,0.6s,mb5.0						
ASAJ	**Asahikawa**	**73.57**	**329**	P	**P**	**00 29 52.2**	**+1.7**
	comp=Z,20nm,0.9s,mb4.8,baz=210,slow=4.5,SNR=8.1						
PKM	**Peak Mountain**	**74.47**	**44**	⇓P	**P**	**00 29 56.3**	**+0.2**
	baz=75						
SAO	**San Andreas Ge**	**74.54**	**42**	*e*P	**P**	**00 29 56.3**	**-0.1**
SAO				pmax	pmax		
	comp=Z,31nm,1.4s,mb4.8						
SAO	**San Andreas Ge**	**74.54**	**42**	*e*P	**P**	**00 29 56.3**	**-0.1**
	comp=Z,31nm,1.4s,mb4.8						
CIS	**Catalina Islan**	**74.56**	**46**	⇓P	**P**	**00 29 56.2**	**-0.4**
	baz=75						
SMMC	**Simmler**	**74.60**	**44**	⇑P	**P**	**00 29 57.4**	**+0.6**
	baz=75						
SDPT	**Sand Point**	**74.62**	**8**	*e*P	**P**	**00 29 54.8**	**-1.6**
	comp=Z,152nm,1.5s,mb5.5						
PET	**Petropavlovsk**	**74.92**	**344**	⇑*i*P	**P**	**00 29 57.6**	**-0.6**
TWG	**Pinlang**	**74.98**	**301**	*e*P	**P**	**00 29 58.6**	**-0.7**
	comp=Z,20nm,0.6s,mb5.0						
OSI	**Osito Adit**	**75.04**	**45**	⇓P	**P**	**00 29 59.7**	**+0.3**
	baz=75						
YULB	**Yu-li**	**75.06**	**301**	*e*P	**P**	**00 29 59.8**	**+0.1**
	comp=Z,11nm,0.6s,mb4.8						
DECC	**Green Verdugo**	**75.09**	**46**	⇑P	**P**	**00 29 59.6**	**0.0**
	baz=75						
109C	**Camp Elliot, M**	**75.17**	**47**	⇓P	**P**	**00 30 00.1**	**0.0**
	baz=75						
NACB	**Ninganchiao**	**75.19**	**302**	*e*P	**P**	**00 30 00.6**	**+0.1**
	comp=Z,96nm,1.3s,mb5.4						
PEA0B	**Petropavlovsk-**	**75.26**	**343**	*e*P	**P**	**00 30 00.6**	**+0.4**
PETK	**Petropavlovsk-**	**75.26**	**343**	P	**P**	**00 30 00.7**	**+0.5**
	comp=Z,18nm,0.7s,mb4.9,baz=120,slow=8.8,SNR=27						
PETK				LR	LR	00 56 42.6	
	comp=Z,83nm,20.2s,baz=338,slow=30						
MWC	**Mount Wilson**	**75.27**	**46**	*e*P	**P**	**00 30 00.2**	**-0.4**
MWC				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.6						
MWC	**Mount Wilson**	**75.27**	**46**	*e*P	**P**	**00 30 00.2**	**-0.4**
	comp=Z,14nm,1.1s,mb4.6						
ARVC	**Arvin**	**75.27**	**45**	⇓P	**P**	**00 30 00.7**	**+0.1**
	baz=76						
MURC	**Murrieta**	**75.50**	**47**	⇓P	**P**	**00 30 01.9**	**-0.1**
	baz=76						
VES	**Vestal, Richgr**	**75.52**	**44**	⇓P	**P**	**00 30 02.0**	**0.0**
	baz=76						
SSLB	**Suanglung**	**75.53**	**302**	*e*P	**P**	**00 30 02.3**	**0.0**
	comp=Z,18nm,0.5s,mb5.1						
BFSC	**Mount Baldy Ra**	**75.55**	**46**	⇑P	**P**	**00 30 02.1**	**-0.1**
	baz=76						
TPUB	**Ta-pu**	**75.56**	**301**	*e*P	**P**	**00 30 01.7**	**-0.9**
	comp=Z,75nm,0.9s,mb5.4						
YHNB	**Yeheng**	**75.60**	**303**	*e*P	**P**	**00 30 02.1**	**-0.7**
	comp=Z,58nm,1.3s,mb5.2						
YSS	**Yuzh-Sakhalins**	**75.61**	**331**	⇑*i*P	**P**	**00 30 03.8**	**+1.5**
YSS				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.3						
YSS	**Yuzh-Sakhalins**	**75.61**	**331**	*e*P	**P**	**00 30 02.0**	**-0.3**
	comp=Z,56nm,1.1s,mb5.2						
MONP	**Monument Peak**	**75.65**	**48**	⇑P	**P**	**00 30 03.0**	**+0.1**
	baz=76						
EDW2	**Edwards Air Fo**	**75.69**	**45**	⇑P	**P**	**00 30 02.8**	**-0.2**
	baz=76,SNR=7.0						
RCTC	**Rector, Farmer**	**75.69**	**43**	⇓P	**P**	**00 30 02.5**	**-0.6**
	baz=76						
KHMM	**Horse Mountain**	**75.75**	**37**	*e*P	**P**	**00 30 02.5**	**-0.7**
	comp=Z,26nm,1.2s,mb4.8						
ISA	**Isabella**	**75.81**	**44**	⇑P	**P**	**00 30 03.9**	**+0.2**
	baz=76,SNR=12						
ISA	**Isabella**	**75.81**	**44**	*e*P	**P**	**00 30 04.0**	**+0.2**
ISA				pmax	pmax		
	comp=Z,29nm,1.3s,mb4.8						
ISA	**Isabella**	**75.81**	**44**	*e*P	**P**	**00 30 04.0**	**+0.2**
	comp=Z,29nm,1.3s,mb4.8						
CHGN	**Chignik**	**75.84**	**9**	*e*P	**P**	**00 30 02.5**	**-1.0**
CMB	**Columbia Colle**	**75.99**	**41**	*e*P	**P**	**00 30 04.6**	**-0.1**
CMB				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.6						
CMB	**Columbia Colle**	**75.99**	**41**	*e*P	**P**	**00 30 04.6**	**-0.1**
	comp=Z,13nm,1.1s,mb4.6						
PFO	**Pinyon Flat Ob**	**76.02**	**47**	⇓P	**P**	**00 30 05.0**	**+0.1**
	baz=76						
BBRC	**Big Bear Solar**	**76.06**	**46**	⇑P	**P**	**00 30 05.5**	**+0.3**
	baz=76						
OHCM	**Honcut**	**76.11**	**40**	*e*P	**P**	**00 30 05.5**	**+0.1**
SWSC	**Sam W. Stewart**	**76.11**	**48**	⇓P	**P**	**00 30 05.4**	**-0.1**
	baz=76						
KSM	**Kuching**	**76.21**	**276**	*e*P	**P**	**00 30 07.3**	**+0.8**
	comp=Z,34nm,1.0s,mb5.0						
LRMC	**Laurel Mountai**	**76.23**	**45**	⇑P	**P**	**00 30 05.9**	**-0.2**
	baz=76,SNR=5.3						
WDC	**Whiskeytown Da**	**76.26**	**38**	*e*P	**P**	**00 30 05.8**	**-0.3**
WDC				pmax	pmax		
	comp=Z,34nm,1.4s,mb4.9						
WDC	**Whiskeytown Da**	**76.26**	**38**	*e*P	**P**	**00 30 05.8**	**-0.4**
	comp=Z,34nm,1.4s,mb4.9						
RRX	**Edison Barstow**	**76.36**	**46**	⇓P	**P**	**00 30 06.5**	**-0.4**
	baz=77						
CWC	**Cottonwood Cre**	**76.52**	**44**	⇑P	**P**	**00 30 08.1**	**+0.3**
	baz=77						
BELC	**Belle Mtn. Jos**	**76.55**	**47**	⇓P	**P**	**00 30 07.8**	**-0.1**
	baz=77,SNR=9.5						
MPMC	**Manual Prospec**	**76.70**	**44**	⇑P	**P**	**00 30 08.9**	**+0.1**
	baz=77,SNR=19						
GSC	**Goldstone**	**76.72**	**45**	⇓P	**P**	**00 30 08.7**	**-0.2**
	baz=77,SNR=7.1						
GSC	**Goldstone**	**76.72**	**45**	*e*P	**P**	**00 30 08.9**	**0.0**
GSC				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.7						
GSC	**Goldstone**	**76.72**	**45**	*e*P	**P**	**00 30 08.9**	**0.0**
	comp=Z,19nm,1.3s,mb4.7						
MLAC	**Mammoth Lakes**	**76.73**	**43**	⇑P	**P**	**00 30 09.6**	**+0.7**
	baz=77						
MTUM	**Tungsten Hills**	**76.74**	**43**	*e*P	**P**	**00 30 09.4**	**+0.4**
BC3	**Big Chuckawall**	**76.74**	**47**	⇑P	**P**	**00 30 09.1**	**0.0**
	baz=77,SNR=6.8						
112A	**Yuma**	**76.76**	**49**	⇓P	**P**	**00 30 09.3**	**+0.2**
	baz=77						
HEC	**Hector,Ludlow**	**76.78**	**46**	⇓P	**P**	**00 30 08.8**	**-0.4**
	baz=77,SNR=6.2						
TIN	**Tinemaha**	**76.78**	**43**	⇓P	**P**	**00 30 09.5**	**+0.3**
	baz=77						
GLA	**Glamis**	**76.86**	**48**	⇑P	**P**	**00 30 10.1**	**+0.4**
	baz=77						
WAKR	**Walker**	**76.87**	**41**	*e*P	**P**	**00 30 10.0**	**+0.3**
YBH	**Yreka Blue Hor**	**76.89**	**37**	P	**P**	**00 30 09.9**	**+0.2**
	comp=Z,12nm,0.9s,mb4.6,baz=196,slow=1.7,SNR=23						
YBH	**Yreka Blue Hor**	**76.89**	**37**	*e*P	**P**	**00 30 10.2**	**+0.5**
YBH				pmax	pmax		
	comp=Z,34nm,1.4s						
YBH	**Yreka Blue Hor**	**76.89**	**37**	*e*P	**P**	**00 30 10.2**	**+0.5**
	comp=Z,34nm,1.4s,mb4.9						
BEKR	**Beckworth**	**77.12**	**40**	⇑P	**P**	**00 30 10.8**	**-0.2**
	baz=77,SNR=5.7						
WCN	**Washoe City**	**77.15**	**41**	⇓P	**P**	**00

baz=79,SNR=10
Q10A Clear Creek Ra 78.98 43 ⇓P **P 00 30 21.5 +0.1**
baz=79
H04A Detroit Lake 79.08 35 ⇓P **P 00 30 21.4 -0.4**
baz=79,SNR=5.3
Y15A Casa Rosa Ranc 79.10 49 ⇑P **P 00 30 22.3 +0.2**
baz=79,SNR=17
F03A Seaside 79.15 34 ⇑P **P 00 30 22.4 +0.3**
baz=79
W14A Seligman 79.23 47 ⇑P **P 00 30 23.5 +0.7**
baz=79,SNR=19
R11A Troy Canyon, C 79.24 43 ⇓P **P 00 30 22.5 -0.3**
baz=80,SNR=9.3
G04A Mulino 79.26 35 ⇑P **P 00 30 22.8 +0.1**
baz=80
U13A Pakoon Wash 79.26 46 ⇓P **P 00 30 23.4 +0.5**
baz=80,SNR=29
S12A Delamar Landin 79.32 44 ⇓P **P 00 30 23.7 +0.5**
baz=80,SNR=14
BMN Battle Mountai 79.39 41 *e*P **P 00 30 23.7 +0.2**
BMN pmax pmax
comp=Z,21nm,1.2s,mb4.8
BMN Battle Mountai 79.39 41 *e*P **P 00 30 23.7 +0.2**
comp=Z,21nm,1.2s,mb4.8
TUC Tucson 79.39 51 *e*P **P 00 30 24.1 +0.4**
TUC pmax pmax
comp=Z,27nm,1.3s,mb4.9
TUC Tucson 79.39 51 *e*P **P 00 30 24.1 +0.3**
comp=Z,26nm,1.3s,mb4.9
P10A Eureka 79.39 42 ⇑P **P 00 30 23.7 +0.1**
baz=80
V14A Boquillas Ranc 79.44 47 ⇓P **P 00 30 24.5 +0.6**
baz=80,SNR=26
Z16A Peralta Trail, 79.44 50 ⇑P **P 00 30 24.4 +0.4**
baz=80
X15A Humboldt 79.44 48 ⇓P **P 00 30 24.5 +0.5**
baz=80,SNR=12
Q11A Duckwater 79.47 43 ⇓P **P 00 30 24.1 0.0**
baz=80,SNR=14
318A Bisbee 79.55 52 ⇑P **P 00 30 25.1 +0.5**
baz=80,SNR=12
117A Oracle 79.55 51 ⇑P **P 00 30 25.2 +0.5**
baz=80,SNR=10
Y16A Circle Bar Ran 79.67 49 ⇓P **P 00 30 25.8 +0.6**
baz=80
WVOR Wild Horse Val 79.71 39 *e*P **P 00 30 24.8 -0.4**
WVOR pmax pmax
comp=Z,19nm,1.3s,mb4.8
WVOR Wild Horse Val 79.71 39 *e*P **P 00 30 24.8 -0.4**
comp=Z,19nm,1.3s,mb4.8
O10A Cortez Mining, 79.76 41 ⇑P **P 00 30 25.8 +0.3**
baz=80
F04A Amboy 79.76 34 ⇓P **P 00 30 25.5 +0.1**
baz=80
218A Dragoon 79.77 51 ⇓P **P 00 30 26.2 +0.4**
baz=80
W15A Williams 79.78 48 ⇑P **P 00 30 26.5 +0.7**
baz=80
U14A Mt Trumbull 79.80 46 ⇑P **P 00 30 26.6 +0.7**
baz=80,SNR=30
P11A Circle Ranch, 79.81 42 ⇑P **P 00 30 25.9 0.0**
baz=80,SNR=17
R12A Pony Springs, 79.87 44 ⇑P **P 00 30 26.4 +0.2**
baz=80,SNR=8.2
X16A Lo Mia Camp, P 79.97 49 ⇑P **P 00 30 27.5 +0.6**
baz=80,SNR=19
N10A Dunphy 80.00 41 ⇓P **P 00 30 27.0 +0.2**
baz=80
Y17A Roosevelt 80.04 49 ⇓P **P 00 30 27.6 +0.4**
baz=80,SNR=5.2
Z17A San Carlos Hig 80.11 50 ⇓P **P 00 30 28.4 +0.8**
baz=80
Q12A Willow Creek R 80.12 43 ⇓P **P 00 30 27.4 -0.1**
baz=80,SNR=5.2
118A Homack Ranch, 80.15 51 ⇓P **P 00 30 28.3 +0.5**
baz=80,SNR=12
V15A Kaibab Nationa 80.18 47 ⇓P **P 00 30 28.5 +0.5**
baz=80,SNR=9.3
O11A Cowboy Ranch, 80.20 42 ⇓P **P 00 30 28.1 +0.2**
baz=80,SNR=5.8
I07A Izee 80.20 37 ⇓P **P 00 30 27.8 0.0**
baz=80,SNR=14
T14A Hurricane 80.20 46 ⇑P **P 00 30 28.4 +0.4**
baz=80,SNR=9.3
R13A O'Grain Ranch, 80.21 44 ⇓P **P 00 30 28.3 +0.3**
baz=80,SNR=6.6
W16A Flagstaff 80.25 48 ⇓P **P 00 30 29.0 +0.6**
baz=80,SNR=6.4
CCUT Cedar City 80.28 45 *e*P **P 00 30 29.2 +0.8**
comp=Z,15nm,1.1s,mb4.7
G06A Carlson Farm, 80.28 36 ⇑P **P 00 30 28.4 +0.1**
baz=81
Z18A Geronimo 80.32 50 ⇓P **P 00 30 29.5 +0.7**
baz=80
HABR Khabarovsk 80.34 329 *e*P **P 00 30 27.1 -1.4**
HABR *e**PP pP 00 30 52.5 +2.2
HABR S S 00 40 24.4 -3.1
HABR pmax pmax
comp=E,53nm,1.1s
HABR pmax pmax
comp=N,52nm,1.6s
HABR pmax pmax
comp=Z,155nm,1.8s,mb5.5
HABR MLR MLR
comp=Z,66nm,20.0s
ARUT Antelope Range 80.35 45 *e*P **P 00 30 28.9 +0.1**
ARUT pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
ARUT Antelope Range 80.35 45 *e*P **P 00 30 28.9 +0.1**
comp=Z,10nm,1.0s,mb4.6
J08A Circle Bar Ran 80.36 38 ⇑P **P 00 30 28.5 -0.2**
baz=81,SNR=12
219A White Tail Can 80.37 52 ⇓P **P 00 30 29.3 +0.2**
baz=80,SNR=9.8
X17A Forest Lakes 80.39 49 ⇓P **P 00 30 30.2 +1.1**
baz=81,SNR=8.4
U15A North Rim 80.41 46 ⇑P **P 00 30 29.8 +0.6**
baz=81,SNR=24
M10A I.L. Ranch, Tu 80.44 40 ⇑P **P 00 30 29.5 +0.3**
baz=81
S14A Cedar City 80.52 45 ⇑P **P 00 30 29.9 +0.2**
baz=81
N11A Elko Archery C 80.53 41 ⇓P **P 00 30 30.0 +0.3**
baz=81
WUAZ Wupatki 80.58 48 ⇓P **P 00 30 30.5 +0.4**
baz=81,SNR=5.8
WUAZ Wupatki 80.58 48 *e*P **P 00 30 31.0 +0.9**
comp=Z,26nm,1.3s,mb4.9
320A Kipp Ranch, An 80.60 53 ⇓P **P 00 30 30.8 +0.5**
baz=81
Q13A Wheeler Ranch, 80.60 44 ⇑P **P 00 30 30.1 0.0**
baz=81
LON Longmire 80.61 34 *e*P **P 00 30 29.8 -0.2**
LON pmax pmax
comp=Z,19nm,1.4s,mb4.7
LON Longmire 80.61 34 *e*P **P 00 30 29.8 -0.2**
comp=Z,19nm,1.4s,mb4.7
T15A Red Dirt Ranch 80.66 46 ⇑P **P 00 30 30.8 +0.3**
baz=81,SNR=15
Y18A Canyon Day Jun 80.66 50 ⇓P **P 00 30 31.2 +0.7**
baz=81,SNR=13
119A Ashpeak Ranch, 80.70 51 ⇑P **P 00 30 31.4 +0.6**
baz=81,SNR=6.6
RSO Redoubt South 80.75 11 *e*P **P 00 30 30.2 -0.1**
MDJ Mudanjiang 80.76 323 P **P 00 30 32.3 +1.5**
MDJ pP pP 00 31 04.8 +12
MDJ sP sP 00 31 18.3 +17
MDJ PP PP 00 33 38.3 +2.1
MDJ S S 00 40 26.1 -6.0
MDJ sS sS 00 41 27.9 +18
MDJ pmax pmax
comp=Z,30nm,1.4s,mb4.9
MDJ pmax pmax
comp=Z,110nm,5.8s
MDJ LR LR
comp=N,98nm,30.1s
MDJ LR LR
comp=E,57nm,26.7s
MDJ Mudanjiang 80.76 323 *e*P **P 00 30 30.9 +0.1**
comp=E,33nm,1.3s,mb5.0
J09A Fry Pan Ranch, 80.77 38 ⇓P **P 00 30 30.7 -0.2**
baz=81,SNR=13
D05A Enumclaw 80.80 33 ⇓P **P 00 30 31.1 +0.1**
baz=81,SNR=6.3
L10A Juniper Basin 80.80 40 ⇓P **P 00 30 30.8 -0.3**
baz=81,SNR=10
W17A Winslow 80.83 48 ⇑P **P 00 30 31.9 +0.5**
baz=81

M11A Holland Ranch, 80.85 41 ⇑P **P 00 30 31.5 +0.2**
baz=81
O12A Currie 80.85 42 ⇓P **P 00 30 31.3 -0.1**
baz=81,SNR=7.5
220A Playas Peak, P 80.87 52 ⇑P **P 00 30 32.5 +0.8**
baz=81,SNR=22
P13A Bates Ranch, G 80.87 43 ⇑P **P 00 30 31.7 +0.2**
baz=81,SNR=9.5
SVW2 Sparrevohn 80.88 9 *e*P **P 00 30 30.1 -0.9**
R14A James Farms, M 80.90 45 ⇓P **P 00 30 31.7 -0.1**
baz=81
H08A Prairie City 80.94 37 ⇑P **P 00 30 31.3 -0.5**
baz=81,SNR=8.6
K10A MacKenzie Ranc 80.96 39 ⇑P **P 00 30 31.7 -0.2**
baz=81,SNR=14
Z19A T-Link Ranch, 80.99 50 ⇓P **P 00 30 32.7 +0.4**
baz=81
N12A Clover Valley, 80.99 42 ⇓P **P 00 30 32.2 +0.1**
baz=81
N12A Clover Valley, 80.99 42 *e*P **P 00 30 32.3 +0.2**
comp=E,17nm,1.3s,mb4.7
S15A Panguitch 81.02 45 ⇑P **P 00 30 33.6 +1.2**
baz=81
NJ2 Nanjing 81.06 308 *e*P **P 00 30 34.1 +1.4**
NJ2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
F07A Phinny Hill Vi 81.08 35 ⇑P **P 00 30 32.4 -0.1**
baz=81
120A U Bar Ranch, L 81.09 51 ⇓P **P 00 30 33.4 +0.5**
baz=81,SNR=9.1
X18A Snowflake 81.09 49 ⇑P **P 00 30 33.2 +0.4**
baz=81
Q14A Sevier Lake (B 81.10 44 ⇑P **P 00 30 33.1 +0.3**
baz=81,SNR=17
I09A Lost Marbles R 81.15 38 ⇓P **P 00 30 32.4 -0.5**
baz=81
T16A Glen Canyon Da 81.24 46 ⇑P **P 00 30 34.1 +0.5**
baz=81
G08A Pilot Rock 81.25 36 ⇓P **P 00 30 33.2 -0.2**
baz=82,SNR=15
O13A Hicks Ranch, I 81.26 43 ⇓P **P 00 30 33.7 +0.1**
baz=82
L11A Cat Creek Ranc 81.29 40 ⇓P **P 00 30 33.6 0.0**
baz=82,SNR=13
Y19A Nutrioso 81.32 50 ⇑P **P 00 30 34.9 +0.9**
baz=82,SNR=15
R15A Junction 81.36 45 ⇓P **P 00 30 34.8 +0.6**
baz=82
M12A Wells 81.38 41 ⇑P **P 00 30 34.2 0.0**
baz=82,SNR=7.6
Z20A Nine Sixteen R 81.39 51 ⇓P **P 00 30 34.9 +0.5**
baz=82,SNR=15
J10A Berg Farm, Mel 81.40 39 ⇑P **P 00 30 33.7 -0.5**
baz=82
K11A Parker Ranch, 81.46 40 ⇑P **P 00 30 34.5 -0.1**
baz=82,SNR=8.6
JCW Jim Creek 81.47 33 *e*P **P 00 30 34.9 +0.4**
221A Mesquite Ranch 81.48 52 ⇑P **P 00 30 35.4 +0.5**
baz=82
N13A Wendover, West 81.52 42 ⇑P **P 00 30 35.2 +0.2**
baz=82
X19A St. Johns 81.52 49 ⇑P **P 00 30 35.8 +0.7**
baz=82,SNR=12
E07A Sunnyside 81.53 35 ⇑P **P 00 30 35.2 +0.3**
baz=82
W18A Petrified Fore 81.54 49 ⇓P **P 00 30 35.7 +0.5**
baz=82
P14A Drum Mountains 81.56 43 ⇓P **P 00 30 35.5 +0.3**
baz=82,SNR=11
RSW Rattlesnake Hi 81.57 35 *e*P **P 00 30 35.6 +0.5**
MSU Marysvale 81.58 45 *e*P **P 00 30 36.2 +0.9**
HAWA Hanford 81.60 35 *e*P **P 00 30 35.6 +0.3**
comp=Z,44nm,1.4s,mb5.1
H09A Durkee 81.61 37 ⇓P **P 00 30 35.0 -0.3**
baz=82,SNR=6.6
U17A Shonto 81.63 47 ⇓P **P 00 30 36.3 +0.6**
baz=82,SNR=5.2
V18A Ganado 81.69 48 ⇓P **P 00 30 36.6 +0.6**
baz=82,SNR=11
Q15A Fillmore 81.70 44 ⇑P **P 00 30 36.4 +0.5**
baz=82
121A Cookes Peak, D 81.72 52 ⇑P **P 00 30 36.9 +0.7**
baz=82,SNR=10
L12A House Creek Ra 81.73 40 ⇑P **P 00 30 36.1 +0.1**
baz=82,SNR=5.0
T17A Navajo Res., N 81.73 47 ⇓P **P 00 30 36.8 +0.6**
baz=82,SNR=12
I10A Payette 81.76 38 ⇓P **P 00 30 36.7 +0.5**
baz=82
W19A Sanders 81.78 49 ⇑P **P 00 30 37.2 +0.7**
baz=82
M13A Montello 81.82 41 ⇑P **P 00 30 36.7 +0.1**
baz=82
G09A Cove 81.90 37 ⇑P **P 00 30 36.6 -0.3**
baz=82,SNR=10
B06A Marblemount 81.91 33 ⇓P **P 00 30 36.5 -0.3**
baz=82
A05A Maple Falls 81.92 32 ⇑P **P 00 30 36.5 -0.3**
baz=82
BMO Blue Mountains 81.92 37 *e*P **P 00 30 36.4 -0.6**
BMO pmax pmax
comp=Z,24nm,1.5s,mb4.8
BMO Blue Mountains 81.92 37 *e*P **P 00 30 36.4 -0.6**
comp=Z,24nm,1.5s,mb4.8
R16A Teasdale 81.93 45 ⇑P **P 00 30 37.7 +0.5**
baz=82,SNR=5.5
ETW Entiat 81.93 34 *e*P **P 00 30 37.2 +0.3**
Y20A Horse Springs, 81.93 50 ⇑P **P 00 30 38.2 +0.9**
baz=82,SNR=20
MFID Camas Ranch 81.95 39 ⇓P **P 00 30 36.9 -0.3**
baz=82,SNR=7.3
222A Williams Famil 82.03 52 ⇓P **P 00 30 38.2 +0.4**
baz=82
DUG Dugway 82.05 43 ⇑P **P 00 30 37.3 -0.4**
baz=82,SNR=5.5
DUG Dugway 82.05 43 *e*P **P 00 30 37.8 0.0**
DUG pmax pmax
comp=Z,15nm,1.5s,mb4.6
DUG Dugway 82.05 43 *e*P **P 00 30 37.8 +0.1**
comp=Z,15nm,1.5s,mb4.6
S17A Black Ridge (B 82.06 46 ⇑P **P 00 30 37.9 0.0**
baz=82
P15A Leamington 82.07 44 ⇓P **P 00 30 37.7 -0.1**
baz=82
K12A Draper Farm, C 82.07 40 ⇓P **P 00 30 37.9 +0.1**
baz=82
F09A S2 Ranch, Elgi 82.09 36 ⇓P **P 00 30 37.7 -0.1**
baz=82
U18A Rough Rock, Ch 82.09 48 ⇓P **P 00 30 38.4 +0.3**
baz=82,SNR=11
H10A Noah's Angus R 82.09 38 ⇓P **P 00 30 37.1 -0.7**
baz=82,SNR=18
X20A Quemado 82.15 50 ⇓P **P 00 30 39.3 +0.9**
baz=82
I11A Placerville 82.16 39 ⇓P **P 00 30 38.0 -0.3**
baz=82,SNR=6.8
N14A Grayback Hills 82.16 42 ⇓P **P 00 30 38.0 -0.3**
baz=82,SNR=5.0
Z21A St. Cloud Mine 82.17 51 ⇑P **P 00 30 39.6 +1.1**
baz=82,SNR=23
G10A Bishop Farm, J 82.29 37 ⇓P **P 00 30 38.4 -0.5**
baz=82,SNR=8.6
J12A Stokes Ranch, 82.30 40 ⇓P **P 00 30 38.9 0.0**
baz=82,SNR=12
O15A The Old Anders 82.32 43 ⇑P **P 00 30 39.4 +0.2**
baz=82
V19A Window Rock 82.32 48 ⇑P **P 00 30 39.8 +0.6**
baz=82
D08A Wollman Farm, 82.34 35 ⇓P **P 00 30 38.7 -0.4**
baz=83,SNR=7.4
L13A Double Diamond 82.36 41 ⇑P **P 00 30 39.6 +0.2**
baz=83
122A Conniff Cattle 82.38 52 ⇓P **P 00 30 40.7 +1.0**
baz=83
M14A Sheep Mountain 82.41 42 ⇓P **P 00 30 39.3 -0.3**
baz=83,SNR=14
W20A Ramah 82.43 49 ⇓P **P 00 30 40.8 +0.9**
baz=83,SNR=17
E09A Wood Farm, Sta 82.44 36 ⇑P **P 00 30 39.4 -0.2**
baz=83
T18A Mexican Hat 82.44 47 ⇓P **P 00 30 40.4 +0.5**
baz=83,SNR=64
Q16A Castle Valley 82.46 45 ⇓P **P 00 30 40.6 +0.7**
baz=83
PMR Palmer 82.47 12 *e*P **P 00 30 39.3 -0.1**
PMR pmax pmax
comp=Z,37nm,1.3s,mb5.0
PMR Palmer 82.47 12 *e*P **P 00 30 39.3 -0.2**

comp=Z,37nm,1.3s,mb5.1
KLR Kul'dur 82.48 328 *e*P **P 00 30 36.7 -3.1**
U19A Dine' College, 82.49 48 ⇓P **P 00 30 40.6 +0.4**
baz=83,SNR=11
223A Chaparral, Ant 82.49 53 ⇓P **P 00 30 40.8 +0.6**
baz=83
Y21A Point of Rocks 82.49 51 ⇑P **P 00 30 41.2 +1.0**
baz=83,SNR=16
P16A Fountain Green 82.50 44 ⇓P **P 00 30 40.5 +0.4**
baz=83
R17A Hanksville Air 82.52 45 ⇑P **P 00 30 40.2 0.0**
baz=83,SNR=17
TTA Tatalina 82.56 9 *e*P **P 00 30 40.2 +0.3**
K13A Stover Farm, H 82.58 40 ⇑P **P 00 30 40.4 -0.1**
baz=83,SNR=6.2
H11A Donnelly 82.58 38 ⇑P **P 00 30 40.1 -0.3**
baz=83,SNR=14
I12A Atlanta 82.58 39 ⇑P **P 00 30 40.6 +0.1**
baz=83,SNR=19
N15A Stansbury Isla 82.61 43 ⇓P **P 00 30 40.6 -0.1**
baz=83
X21A Alamocita Cree 82.62 50 ⇑P **P 00 30 41.6 +0.7**
baz=83,SNR=12
F10A Beach Ranch, E 82.63 36 ⇑P **P 00 30 39.9 -0.7**
baz=83,SNR=16
S18A Hurst Farm, Bl 82.64 46 ⇓P **P 00 30 40.9 +0.1**
baz=83,SNR=6.6
OD2 Odessa Site #2 82.66 35 P **P 00 30 40.4 -0.4**
Z22A Elephant Butte 82.67 51 ⇓P **P 00 30 41.6 +0.4**
baz=83,SNR=7.9
CN2 Changchun 82.70 321 *e*P **P 00 30 41.5 +0.5**
CN2 *ep*P pP 00 31 16.9 +14
CN2 *es*P sP 00 31 32.0 +20
CN2 *e*S S 00 40 48.4 -3.6
CN2 pmax pmax
comp=Z,30nm,1.2s,mb5.0
CN2 LR LR
comp=N,600nm,22.0s
CN2 LR LR
comp=E,300nm,22.0s
CN2 LR LR
comp=Z,60nm,7.0s
DIV Divide 82.77 14 *e*P **P 00 30 41.0 +0.1**
comp=Z,36nm,0.8s,mb5.3
L14A Malta 82.77 41 ⇑P **P 00 30 41.2 -0.3**
baz=83,SNR=5.6
V20A Brimhall 82.78 49 ⇑P **P 00 30 41.7 +0.1**
baz=83
G11A Walters Elk Ra 82.84 37 ⇓P **P 00 30 41.1 -0.6**
baz=83,SNR=11
T19A Beclabito 82.88 47 ⇑P **P 00 30 42.2 0.0**
baz=83,SNR=17
HLID Hailey 82.89 40 ⇓P **P 00 30 42.2 +0.2**
baz=83,SNR=23
HLID Hailey 82.89 40 *e*P **P 00 30 42.1 +0.1**
comp=Z,21nm,1.1s,mb4.9
BMRM Bremner River 82.89 14 *e*P **P 00 30 41.1 -0.5**
comp=Z,102nm,1.7s,mb5.4
123A Bell Site, Whi 82.90 52 ⇑P **P 00 30 43.1 +0.7**
baz=83
O16A Springville 82.91 44 ⇑P **P 00 30 42.2 0.0**
baz=83
B08A Colville Reser 82.92 34 ⇑P **P 00 30 41.0 -1.1**
baz=83,SNR=6.8
HVU Hansel Valley 82.92 42 *e*P **P 00 30 42.6 +0.3**
HVU pmax pmax
comp=Z,28nm,1.3s,mb4.9
HVU Hansel Valley 82.92 42 *e*P **P 00 30 42.6 +0.3**
comp=Z,28nm,1.3s,mb4.9
J13A Cove Ranch, Pi 82.94 40 ⇑P **P 00 30 42.5 +0.2**
baz=83,SNR=20
324A Moseley Ranch, 82.95 54 ⇓P **P 00 30 42.9 +0.2**
baz=83,SNR=19
M15A Larsen Ranch, 82.96 42 ⇑P **P 00 30 42.0 -0.5**
baz=83,SNR=9.0
Y22A Socorro 82.98 51 ⇑P **P 00 30 43.2 +0.4**
baz=83,SNR=12
SRU San Rafael 82.99 45 ⇓P **P 00 30 42.6 -0.1**
baz=83,SNR=19
SRU San Rafael 82.99 45 *e*P **P 00 30 42.9 +0.2**
SRU pmax pmax
comp=Z,25nm,1.0s,mb5.0
SRU San Rafael 82.99 45 *e*P **P 00 30 42.9 +0.2**
comp=Z,26nm,1.0s,mb5.0
E10A Myers Farm, Un 83.00 36 ⇑P **P 00 30 42.2 -0.3**
baz=83
U20A Newcomb 83.02 48 ⇑P **P 00 30 43.2 +0.3**
baz=83,SNR=8.4
P17A Butcher Ranch, 83.03 45 ⇓P **P 00 30 43.2 +0.3**
baz=83,SNR=6.6
W21A San Fidel 83.04 50 ⇓P **P 00 30 44.0 +1.0**
baz=83
425A Indio Mountain 83.05 54 ⇓P **P 00 30 43.6 +0.4**
baz=83,SNR=24
R18A Canyonlands Na 83.05 46 ⇑P **P 00 30 43.0 0.0**
baz=83,SNR=30
LAZ Ladron 83.07 50 *e*P **P 00 30 43.9 +0.7**
comp=Z,15nm,1.5s,mb4.6
Y22D IRIS PASSCAL I 83.08 51 ⇑P **P 00 30 42.9 -0.3**
baz=83
LENM Lemitar 83.08 51 *e*P **P 00 30 44.0 +0.8**
K14A Jones Ranch, D 83.09 41 ⇑P **P 00 30 43.5 +0.4**
baz=83
PNL Peninsula 83.12 17 *e*P **P 00 30 42.3 -0.5**
comp=Z,44nm,1.2s,mb5.2
PPLA Purkeypile 83.12 10 *e*P **P 00 30 42.0 -0.7**
comp=Z,8.3nm,1.1s,mb4.5
C09A Chrisman Ranch 83.14 34 ⇓P **P 00 30 43.1 -0.2**
baz=83
MNTX Cornudas Mount 83.15 53 *e*P **P 00 30 43.4 -0.2**
comp=Z,20nm,1.2s,mb4.8
JLU Jordanelle 83.15 43 *e*P **P 00 30 43.9 +0.5**
comp=Z,21nm,1.4s,mb4.8
626A Big Bend Ranch 83.17 56 ⇑P **P 00 30 44.3 +0.4**
baz=83,SNR=13
H12A Diamond D Ranc 83.17 39 ⇑P **P 00 30 43.1 -0.4**
baz=83,SNR=14
DAU Daniels Canyon 83.18 43 *e*P **P 00 30 44.2 +0.6**
F11A Grangeville 83.19 37 ⇑P **P 00 30 42.0 -1.5**
baz=83,SNR=6.6
224A Cornudas Mount 83.21 53 ⇑P **P 00 30 44.5 +0.6**
baz=83,SNR=16
Z23A Rita Site, Whi 83.21 52 ⇑P **P 00 30 44.5 +0.6**
baz=83
Q18A Rafter H Ranch 83.25 45 ⇓P **P 00 30 43.8 -0.3**
baz=84,SNR=21
S19A Harvey Farm, M 83.25 47 ⇑P **P 00 30 44.1 0.0**
baz=84,SNR=9.2
I13A Wildhorse Cree 83.26 39 ⇓P **P 00 30 44.1 +0.1**
baz=84,SNR=12
L15A Malad City 83.29 42 ⇓P **P 00 30 43.7 -0.4**
baz=84,SNR=8.7
J14A Carey 83.30 40 ⇑P **P 00 30 44.7 +0.5**
baz=84,SNR=26
N16A Rees Ranch, Co 83.31 43 ⇓P **P 00 30 44.2 -0.1**
baz=84,SNR=5.5
325A Bean Ranch, Si 83.31 54 ⇑P **P 00 30 44.5 0.0**
baz=84,SNR=30
BNM Barren Site 83.33 51 *e*P **P 00 30 43.6 -0.9**
comp=Z,45nm,1.8s,mb5.0
V21A Milan 83.37 49 ⇑P **P 00 30 45.2 +0.5**
baz=84
LPM Los Pinos Moun 83.40 51 *e*P **P 00 30 45.5 +0.6**
M16A Huntsville 83.41 43 ⇓P **P 00 30 44.6 -0.1**
baz=84
526A Mary Lane Ranc 83.42 55 ⇑P **P 00 30 45.5 +0.4**
baz=84,SNR=12
MVCO Mesa Verde 83.44 47 ⇓P **P 00 30 45.4 +0.4**
baz=84
R19A Curley Farm, L 83.44 46 ⇓P **P 00 30 45.3 +0.3**
baz=84
P18A Preston Nutter 83.44 45 ⇑P **P 00 30 45.2 +0.2**
baz=84,SNR=11
TXAR Lajitas Array 83.44 56 P **P 00 30 45.5 +0.3**
comp=Z,7.7nm,1.1s,mb4.5,baz=223,slow=4.6,SNR=35
TXAR LR LR 01 01 09.6
comp=Z,60nm,18.2s,baz=0.0,slow=31
H13A Challis 83.54 39 ⇑P **P 00 30 45.3 0.0**
baz=84,SNR=17
124A Stringfield Ra 83.54 53 ⇑P **P 00 30 46.1 +0.4**
baz=84,SNR=11
K15A Arbon 83.56 41 ⇑P **P 00 30 45.3 -0.2**
baz=84,SNR=5.6
W22A Albuquerque 83.58 50 ⇑P **P 00 30 46.6 +0.8**
baz=84
HWUT Hardware Ranch 83.60 42 *e*P **P 00 30 45.3 -0.4**
comp=Z,17nm,1.3s,mb4.7
F12A Elk City 83.62 37 ⇓P **P 00 30 45.3 -0.5**

baz=84,SNR=39
PV10 **Paradox Valley** 83.63 46 eP P 00 30 45.9 -0.1
comp=Z,266nm,0.9s,mb6.1
Y23A **Lovelace Mesa,** 83.65 51 ⇑P P 00 30 46.4 +0.2
baz=84,SNR=13
U21A **Nageezi** 83.65 48 ⇑P P 00 30 46.5 +0.4
baz=84,SNR=29
I14A **Mackay** 83.67 40 ⇓P P 00 30 46.2 +0.1
baz=84,SNR=13
627A **Terlingua Ranc** 83.71 56 ⇓P P 00 30 46.9 +0.3
baz=84,SNR=21
N17A **Moffit Pass** 83.73 43 ⇑P P 00 30 46.4 0.0
baz=84
PV04 **Paradox Valley** 83.73 46 eP P 00 30 47.1 +0.6
426A **McDonald Obser** 83.73 55 ⇓P P 00 30 47.0 +0.3
baz=84,SNR=23
225A **Deer Hill, Car** 83.75 53 ⇓P P 00 30 47.2 +0.4
baz=84,SNR=11
Q19A **Hogan Spring (** 83.77 46 ⇑P P 00 30 46.4 -0.3
baz=84,SNR=6.1
WHN **Wuhan** 83.81 305 P P 00 30 48.0 +0.9
ANMO **Albuquerque** 83.82 50 P P 00 30 47.3 +0.3
comp=Z,16nm,1.1s,mb4.8,baz=222,slow=5.5,SNR=38
ANMO **Albuquerque** 83.82 50 eP P 00 30 47.4 +0.4
ANMO pmax pmax
comp=Z,9.0nm,1.3s
ANMO **Albuquerque** 83.82 50 eP P 00 30 47.4 +0.3
comp=Z,8.9nm,1.3s,mb4.4
527A **Woodward Ranch** 83.83 56 ⇓P P 00 30 47.2 0.0
baz=84,SNR=10
PV01 **Paradox Valley** 83.83 47 eP P 00 30 46.7 -0.4
comp=Z,3μm,1.5s
G13A **Cobalt** 83.85 38 ⇓P P 00 30 46.5 -0.4
baz=84,SNR=13
X23A **Hourglass Bar** 83.85 51 ⇑P P 00 30 47.3 +0.1
baz=84,SNR=7.7
Z24A **Sheepen Canyo** 83.89 52 ⇓P P 00 30 47.7 +0.2
baz=84,SNR=13
L16A **Fish Haven** 83.90 42 ⇓P P 00 30 46.7 -0.6
baz=84,SNR=11
O18A **Roosevelt** 83.92 44 ⇓P P 00 30 47.6 +0.1
baz=84
V22A **San Miguel Ran** 83.94 49 ⇑P P 00 30 48.2 +0.6
baz=84
KTH **Kantishna Hill** 83.95 10 eP P 00 30 45.6 -1.4
comp=Z,124nm,1.9s,mb5.4
TRF **Thorofare Moun** 83.96 11 eP P 00 30 46.3 -0.7
comp=Z,24nm,0.9s,mb5.0
R20A **Redvale** 83.99 47 ⇓P P 00 30 47.7 -0.1
baz=84,SNR=7.0
J15A **Blackfoot** 84.00 40 ⇓P P 00 30 48.1 +0.4
baz=84,SNR=15
T21A **Navajo Lake** 84.01 48 ⇑P P 00 30 48.7 +0.8
baz=84
CHUM **Lake Minchumin** 84.02 10 eP P 00 30 46.3 -1.0
comp=Z,54nm,1.4s,mb5.2
NEW **Newport** 84.04 35 eP P 00 30 48.0 +0.2
NEW pmax pmax
comp=Z,15nm,1.4s
NEW **Newport** 84.04 35 eP P 00 30 48.0 +0.2
comp=Z,14nm,1.4s,mb4.6
326A **Caldwell Ranch** 84.05 54 ⇑P P 00 30 48.3 0.0
baz=84
H14A **Leadore** 84.10 39 ⇓P P 00 30 48.1 -0.1
baz=84,SNR=21
Y24A **Capitan** 84.11 51 ⇑P P 00 30 48.9 +0.4
baz=84,SNR=47
M17A **Scullys Gap (B** 84.11 43 ⇓P P 00 30 47.8 -0.5
baz=84,SNR=6.5
628A **Black Gap, Mar** 84.12 56 ⇑P P 00 30 48.9 +0.2
baz=84,SNR=12
125A **Gardner Draw,** 84.12 53 ⇑P P 00 30 49.1 +0.5
baz=84,SNR=14
W23A **Werner Place,** 84.14 50 ⇓P P 00 30 48.7 +0.1
baz=84,SNR=7.5
GDL2 **Guadalupe Moun** 84.14 53 eP P 00 30 47.5 -1.2
SKAG **Skagway** 84.14 19 eP P 00 30 49.4 +1.3
comp=Z,24nm,1.0s,mb5.0
S21A **Coal Bank Pass** 84.15 47 ⇓P P 00 30 48.9 +0.3
baz=84,SNR=10
F13A **Darby** 84.18 38 ⇑P P 00 30 47.9 -0.7
baz=84,SNR=11
U22A **Llaves** 84.20 49 ⇓P P 00 30 49.3 +0.4
baz=84
K16A **Soda Springs** 84.23 41 ⇑P P 00 30 48.8 -0.1
baz=84,SNR=10.0
226A **Malaga, Loving** 84.28 54 ⇑P P 00 30 49.6 +0.2
baz=84,SNR=14
P19A **Cripple Cowboy** 84.29 45 ⇓P P 00 30 49.2 -0.1
baz=84
I15A **Monteview** 84.30 40 ⇓P P 00 30 49.3 +0.1
baz=84,SNR=7.3
427A **Hayter Ranch,** 84.30 55 ⇑P P 00 30 50.1 +0.5
baz=84,SNR=8.1
L17A **Cokeville** 84.30 42 ⇓P P 00 30 48.6 -0.6
baz=84
D12A **Red Ives Fores** 84.31 36 ⇓P P 00 30 48.3 -0.9
baz=85
Z25A **Roswell** 84.35 52 ⇓P P 00 30 50.3 +0.5
baz=84,SNR=21
G14A **Jackson** 84.39 39 ⇑P P 00 30 49.8 +0.2
baz=85
V23A **Ortiz Mt. (NFS** 84.39 50 ⇑P P 00 30 50.6 +0.7
baz=85,SNR=8.5
MAW **Mawson** 84.39 199 eP P 00 30 48.9 -0.5
comp=Z,6.6nm,0.6s,mb4.6
MAW **Mawson** 84.39 199 P P 00 30 48.5 -0.9
comp=Z,8.9nm,0.8s,mb4.6,baz=125,slow=7.6,SNR=20
MAW **Mawson** 84.39 199 eP P 00 30 49.0 -0.4
MAW pmax pmax
comp=Z,12nm,1.7s
MAW **Mawson** 84.39 199 eP P 00 30 49.0 -0.5
comp=Z,12nm,1.7s,mb4.5
X24A **Lazy VL Ranch,** 84.39 51 ⇓P P 00 30 49.9 -0.1
baz=85
Q20A **Ridgley Place,** 84.42 46 ⇑P P 00 30 49.9 -0.1
baz=85,SNR=14
BPAW **Bear Paw Mtn.** 84.44 10 eP P 00 30 47.9 -1.6
comp=Z,38nm,1.7s,mb5.0
J16A **Bone** 84.45 41 ⇑P P 00 30 49.9 -0.1
baz=85,SNR=16
T22A **Edith** 84.46 48 ⇓P P 00 30 49.9 -0.4
baz=85,SNR=6.5
MCK **McKinley** 84.47 11 eP P 00 30 49.1 -0.5
MCK pmax pmax
comp=Z,62nm,1.0s,mb5.4
MCK **McKinley** 84.47 11 eP P 00 30 49.1 -0.5
comp=Z,62nm,1.0s,mb5.4
PAX **Paxson** 84.47 13 eP P 00 30 48.9 -0.7
PAX pmax pmax
comp=Z,37nm,1.6s,mb5.0
PAX **Paxson** 84.47 13 eP P 00 30 48.9 -0.7
comp=Z,37nm,1.6s,mb5.0
M18A **Lyman** 84.47 43 ⇑P P 00 30 49.9 -0.3
baz=85,SNR=10
N18A **Larsen Ranch,** 84.50 44 ⇓P P 00 30 49.6 -0.7
baz=85,SNR=6.8
MCMT **McKenzie Canyo** 84.52 39 eP P 00 30 49.9 -0.4
comp=Z,2.7nm,0.2s,mb4.8
O19A **Miners Draw (B** 84.53 44 ⇓P P 00 30 49.9 -0.6
baz=85,SNR=9.7
H15A **Lima** 84.53 39 ⇑P P 00 30 50.6 +0.2
baz=85,SNR=9.0
CLNB **Carlsbad** 84.54 54 eP P 00 30 51.1 +0.4
comp=Z,1.9nm,0.7s,mb4.1
126A **Clayton Basin,** 84.60 53 ⇑P P 00 30 51.0 -0.1
baz=85,SNR=10
HYT **Haines Junctio** 84.61 17 eP P 00 30 50.7 +0.3
K17A **Gardner Place,** 84.61 42 ⇓P P 00 30 50.6 -0.2
baz=85,SNR=7.1
C12B **Naegeli Ranch,** 84.62 36 ⇑P P 00 30 50.6 -0.1
baz=85
P20A **De Beque** 84.62 45 ⇓P P 00 30 50.9 -0.1
baz=85,SNR=20
E13A **Victor** 84.62 37 ⇑P P 00 30 49.8 -1.1
baz=85,SNR=8.2
U23A **El Rito** 84.65 49 ⇓P P 00 30 51.3 +0.1
baz=85,SNR=14
R21A **Cimarron** 84.65 47 ⇑P P 00 30 51.5 +0.3
baz=85,SNR=9.0
Y25A **Mesa, Roswell** 84.66 52 ⇓P P 00 30 51.3 0.0
baz=85,SNR=28
RRI2 **Red Ridge** 84.67 41 eP P 00 30 51.6 +0.5
comp=Z,36nm,1.3s,mb5.1
W24A **Lazy 6 Ranch,** 84.71 50 ⇑P P 00 30 51.3 -0.2
baz=85,SNR=12
L18A **Fontenelle, Gr** 84.74 43 ⇓P P 00 30 51.5 -0.1
baz=85

F14A **Wisdom** 84.75 38 ⇑P P 00 30 51.2 -0.2
baz=85
N19A **John Jarvie Ra** 84.78 44 ⇓P P 00 30 51.0 -0.7
baz=85,SNR=5.6
428A **Kincaid Ranch,** 84.81 55 ⇑P P 00 30 52.6 +0.5
baz=85,SNR=11
MENT **Mentasta** 84.82 14 eP P 00 30 50.6 -0.8
D13A **Huson** 84.84 37 ⇓P P 00 30 50.5 -1.4
baz=85,SNR=16
I16A **Newdale** 84.84 40 ⇑P P 00 30 52.0 +0.1
baz=85,SNR=11
Q21A **Lamborn Mesa,** 84.86 46 ⇓P P 00 30 52.2 0.0
baz=85,SNR=7.8
227A **Bennet, Jal** 84.88 54 ⇑P P 00 30 52.2 -0.2
baz=85
CPRX **Cap Rock** 84.88 53 eP P 00 30 52.3 -0.2
comp=Z,21nm,1.1s,mb5.0
Z26A **Caprock** 84.90 53 ⇑P P 00 30 52.5 0.0
baz=85,SNR=34
G15A **Dillon** 84.92 39 ⇓P P 00 30 52.2 -0.1
baz=85,SNR=19
X25A **Clemmons Ranch** 84.95 51 ⇓P P 00 30 52.4 -0.3
baz=85
DLMT **Dillon** 84.96 39 eP P 00 30 52.6 +0.1
comp=Z,18nm,1.1s,mb4.9
REDW **Red Top Meadow** 84.97 41 eP P 00 30 52.9 +0.3
comp=Z,25nm,1.2s,mb5.0
TPAW **Teton Pass** 84.97 41 eP P 00 30 53.2 +0.6
comp=Z,31nm,1.4s,mb5.0
MSO **Missoula** 84.98 37 eP P 00 30 52.0 -0.6
comp=Z,18nm,1.6s,mb4.8
328A **Wristen Ranch,** 84.98 55 ⇓P P 00 30 52.8 -0.2
baz=85,SNR=11
B12A **Libby** 84.99 35 ⇑P P 00 30 52.6 0.0
baz=85
E14A **Clinton** 85.01 38 ⇑P P 00 30 52.5 -0.2
baz=85
O20A **White River Ci** 85.03 45 ⇓P P 00 30 52.6 -0.4
baz=85,SNR=5.6
J17A **Brown Place, J** 85.05 41 ⇓P P 00 30 52.9 -0.2
baz=85,SNR=5.2
SNOW **Snow King Moun** 85.08 41 eP P 00 30 53.8 +0.7
comp=Z,28nm,1.1s,mb5.1
BSMT **Bassoo Peak** 85.08 36 eP P 00 30 52.4 -0.6
C13A **Hot Springs** 85.10 36 ⇓P P 00 30 52.6 -0.6
baz=85
M19A **Rock Springs** 85.10 43 ⇓P P 00 30 52.7 -0.7
baz=85,SNR=5.7
K18A **Toltan Ranch,** 85.10 42 ⇓P P 00 30 53.1 -0.2
baz=85,SNR=10
DLBC **Dease Lake** 85.11 22 eP P 00 30 53.2 +0.3
127A **Arkansas Junct** 85.12 53 ⇑P P 00 30 53.5 -0.1
baz=85
R22A **Saguache, Gunn** 85.14 47 ⇑P P 00 30 53.9 +0.3
baz=85,SNR=5.6
IMW **Indian Meadow** 85.19 41 eP P 00 30 53.9 +0.2
comp=Z,16nm,1.0s,mb4.9
A12A **Yaak River Ran** 85.22 35 ⇑P P 00 30 53.8 0.0
baz=86
SEY **Seymchan** 85.24 346 ⇑iP P 00 30 52.6 -0.9
LOHW **Long Hollow** 85.25 41 eP P 00 30 54.3 +0.3
comp=Z,12nm,1.2s,mb4.7
L19A **Farson** 85.27 43 ⇓P P 00 30 53.8 -0.4
baz=86,SNR=11
F15A **Butte** 85.28 38 ⇓P P 00 30 53.6 -0.5
baz=86,SNR=7.8
LRM **Limekiln Ridge** 85.30 38 eP P 00 30 54.1 -0.1
Y26A **Elida** 85.30 52 ⇓P P 00 30 54.3 -0.2
baz=86,SNR=8.3
N20A **Spence Gulch,** 85.36 44 ⇓P P 00 30 54.3 -0.3
baz=86,SNR=14
G16A **Moss Hill, Enn** 85.36 39 ⇑P P 00 30 54.2 -0.3
baz=86,SNR=5.6
D14A **Greenough** 85.37 37 ⇑P P 00 30 53.3 -1.3
baz=86,SNR=7.1
QLMT **Earthquake Lak** 85.38 40 eP P 00 30 55.7 +1.1
W25A **X Bar L Ranch,** 85.40 51 ⇑P P 00 30 54.5 -0.5
baz=86,SNR=9.3
J18A **Kendall Valley** 85.41 42 ⇓P P 00 30 54.4 -0.4
baz=86,SNR=19
H16A **Russell Place,** 85.42 40 ⇓P P 00 30 55.6 +0.7
baz=86
CHMT **Chamberlain Mo** 85.42 37 eP P 00 30 54.1 -0.7
I17A **Pilgrim Ck.** 85.42 41 ⇑P P 00 30 55.6 +0.7
baz=86
SMCO **Snowmass** 85.43 46 eP P 00 30 55.3 +0.2
comp=Z,13nm,1.3s,mb4.7
SLMT **Seeley Lake** 85.47 37 eP P 00 30 54.4 -0.6
BW06 **Boulder Array** 85.48 42 ⇑P P 00 30 54.4 -0.8
baz=86,SNR=8.7
BW06 **Boulder Array** 85.48 42 eP P 00 30 54.5 -0.6
PDAR **Pinedale Array** 85.48 42 P P 00 30 54.3 -0.9
comp=Z,6.1nm,0.9s,mb4.5,baz=219,slow=3.8,SNR=29
PDAR LR LR 01 02 16.3
comp=Z,29nm,18.1s,baz=80,slow=31
Z27A **Tatum** 85.50 53 ⇑P P 00 30 55.2 -0.3
baz=86,SNR=14
E15A **Deer Lodge** 85.51 38 ⇑P P 00 30 54.3 -0.9
baz=86,SNR=5.4
V25A **Rancho No Teng** 85.56 50 ⇓P P 00 30 55.7 -0.1
baz=86,SNR=9.2
O21A **Pagoda** 85.59 45 ⇓P P 00 30 55.6 -0.2
baz=86
X26A **CR and CF Fran** 85.59 51 ⇑P P 00 30 55.7 -0.2
baz=86
H17A **Grant Village** 85.67 40 ⇓P P 00 30 57.1 +1.0
baz=86
BOZ **Bozeman (W)** 85.69 39 ⇓P P 00 30 55.8 -0.4
baz=86,SNR=14
BOZ **Bozeman (W)** 85.69 39 eP P 00 30 55.9 -0.3
COLA **College** 85.70 11 ⇑iP P 00 30 55.0 -0.8
COLA **College** 85.70 11 eP P 00 30 54.5 -1.3
comp=Z,67nm,0.8s,mb5.6
M20A **Sweetwater, Wa** 85.73 44 ⇑P P 00 30 56.4 0.0
baz=86
F16A **Kennard Place,** 85.76 39 ⇓P P 00 30 56.2 -0.3
baz=86
Y27A **Causey** 85.78 52 ⇓P P 00 30 56.6 -0.3
baz=86,SNR=16
I18A **Diamond G Ranc** 85.78 41 ⇓P P 00 30 56.4 -0.3
baz=86
SDCO **Great Sand Dun** 85.79 48 eP P 00 30 56.1 -0.7
comp=Z,8.9nm,1.5s,mb4.5
N21A **Black Mountain** 85.82 45 ⇓P P 00 30 56.7 -0.2
baz=86,SNR=10
W26A **Owens Ranch, T** 85.86 51 ⇑P P 00 30 56.4 -0.8
baz=86
L20A **Wamsutter** 85.88 43 ⇑P P 00 30 57.0 -0.2
baz=86
D15A **Lincoln** 85.91 37 ⇓P P 00 30 56.6 -0.6
baz=86,SNR=5.2
K19A **Absolon Red Bu** 85.96 42 ⇓P P 00 30 56.7 -0.9
baz=86
U25A **Circle Dot Ran** 85.97 50 ⇑P P 00 30 57.5 -0.3
baz=86
G17A **Pierce Place,** 86.05 39 ⇑P P 00 30 58.0 0.0
baz=86
MSTX **Muleshoe** 86.11 52 ⇓P P 00 30 58.1 -0.4
baz=86,SNR=8.0
E16A **East Helena** 86.13 38 ⇓P P 00 30 57.7 -0.6
baz=86,SNR=5.2
V26A **Tequesquite Ra** 86.15 50 ⇓P P 00 30 58.2 -0.5
baz=86
X27A **F and S Farms,** 86.16 52 ⇓P P 00 30 58.2 -0.5
baz=86
K20A **Yellowstone Ra** 86.20 43 ⇓P P 00 30 57.7 -1.0
baz=86
B14A **Marquette Ranc** 86.21 36 ⇓P P 00 30 57.9 -0.7
baz=86,SNR=11
WALA **Waterton Lakes** 86.24 35 P P 00 30 58.1 -0.7
comp=Z,0.8nm,1.5s
C15A **Salmond Ranch,** 86.26 37 ⇑P P 00 30 58.0 -0.9
baz=86,SNR=8.7
T25A **Trinidad** 86.29 49 ⇓P P 00 30 58.9 -0.4
baz=86
M21A **Separation Pea** 86.33 44 ⇓P P 00 30 58.7 -0.7
baz=86,SNR=5.9
W27A **Bowe Ranch, En** 86.36 51 ⇑P P 00 30 59.0 -0.8
baz=86
F17A **Fitzpatrick Pl** 86.40 39 ⇓P P 00 30 59.5 -0.1
baz=87,SNR=7.2
U26A **Atchley Ranch,** 86.44 50 ⇓P P 00 30 59.8 -0.3
baz=87
A14A **Double T Ranch** 86.46 35 ⇓P P 00 30 59.1 -0.7
baz=87,SNR=10
D16A **Dana Ranch, Ca** 86.47 38 ⇓P P 00 30 59.8 -0.1
baz=87,SNR=6.2
L21A **Rawlins** 86.49 44 ⇑P P 00 30 59.8 -0.4

baz=87
N22A **Wattenberg Ran** 86.55 45 ⇑P P 00 31 00.4 -0.1
baz=87
KULM **Kulim** 86.56 277 eP P 00 31 01.0 -0.2
comp=Z,4.8nm,0.6s,mb4.6
E17A **Martinsdale** 86.57 38 ⇓P P 00 31 00.5 0.0
baz=87
BJI **Beijing** 86.72 314 P P 00 31 02.3 +0.9
BJI pP pP 00 31 38.1 +15
BJI sP sP 00 31 49.6 +17
BJI S S 00 41 30.5 -1.6
BJI sS sS 00 42 36.3 +26
BJI pmax pmax
comp=Z,25nm,1.6s,mb4.9
M22A **Cedar Creek Ra** 86.74 44 ⇑P P 00 31 01.1 -0.3
baz=87
G18A **Lazy EL Ranch,** 86.76 40 ⇓P P 00 31 01.3 -0.2
baz=87
C16A **Fuhringer Ranc** 86.76 37 ⇑P P 00 31 00.7 -0.7
baz=87
A15A **Johnson Ranch,** 86.84 36 ⇓P P 00 31 00.7 -1.1
baz=87,SNR=14
RLMT **Red Lodge** 86.84 40 ⇓P P 00 31 01.8 0.0
baz=87
F18A **Big Timber** 86.97 39 ⇓P P 00 31 02.5 +0.1
baz=87
JCT **Junction City** 86.97 57 eP P 00 31 01.6 -1.2
EGAK **Eagle** 86.99 14 eP P 00 31 02.0 -0.1
D17A **Six Diamond Ra** 87.03 38 ⇑P P 00 31 02.3 -0.4
baz=87,SNR=11
B16A **M & M Farms, S** 87.11 36 ⇓P P 00 31 02.2 -0.9
baz=87
E18A **Harlowton** 87.19 39 ⇑P P 00 31 03.5 0.0
baz=87,SNR=6.1
C17A **Wharram Farm,** 87.24 37 ⇓P P 00 31 03.0 -0.7
baz=88,SNR=8.0
COLD **Coldfoot** 87.46 9 eP P 00 31 04.1 -0.2
comp=Z,58nm,2.0s,mb5.2
BILL **Bilibino** 87.47 353 c iP P 00 31 04.4 0.0
BILL e*PP pP 00 31 25.0 -1.5
BILL e*SP sP 00 31 39.6 +4.2
BILL e 00 34 30.7
BILL e 00 41 23.9
BILL pmax pmax
comp=Z,31nm,1.2s,mb5.1
BILL **Bilibino** 87.47 353 eP P 00 31 04.1 -0.3
comp=Z,26nm,1.0s,mb5.1
ENH **Enshi** 87.53 303 eP P 00 31 06.6 +1.0
comp=Z,1.5nm,0.6s,mb4.2
B17A **L&G Farms, Che** 87.56 37 ⇑P P 00 31 04.7 -0.5
baz=88
D18A **Linhart Farms,** 87.57 38 ⇓P P 00 31 05.6 +0.3
baz=88
EGMT **Eagleton** 88.02 38 ⇑P P 00 31 07.2 -0.2
baz=88
B18A **Beardsley Farm** 88.20 37 ⇑P P 00 31 07.9 -0.3
baz=88
GYA **Guiyang** 88.39 298 eP P 00 31 10.9 +1.2
GYA pP pP 00 31 46.0 +14
GYA sP sP 00 32 01.4 +21
GYA PP PP 00 34 41.8 +3.0
GYA SKS 00 41 24.8
GYA S S 00 41 42.6 -6.2
GYA sS sS 00 42 43.8 +17
GYA SS SS 00 47 40.3 -0.6
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,130nm,5.4s
GYA LR LR
comp=N,440nm,20.8s
GYA LR LR
comp=E,390nm,21.2s
GYA LR LR
comp=Z,460nm,20.0s
A18A **Metzger Ranch,** 88.43 37 ⇓P P 00 31 08.9 -0.5
baz=89
EDM **Edmonton** 88.85 32 eP P 00 31 10.9 -0.3
HIA **Hailar** 88.94 323 i P P 00 31 12.3 +0.6
HIA **Hailar** 88.94 323 eP P 00 31 11.5 -0.3
SYO **Syowa Base** 89.25 192 ⇑iP P 00 31 10.0 -3.0
XAN **Xi'an** 89.44 306 P P 00 31 15.4 +1.0
XAN pmax pmax
comp=Z,8.0nm,1.4s,mb4.6
XAN pmax pmax
comp=Z,37nm,9.1s
RSSD **Black Hills** 89.66 43 eP P 00 31 13.8 -1.4
RSSD pmax pmax
comp=Z,8.0nm,1.1s,mb4.8
RSSD **Black Hills** 89.66 43 eP P 00 31 13.8 -1.4
comp=Z,8.0nm,1.1s,mb4.8
HHC **Hu-ho-hao-te** 90.23 313 eP P 00 31 19.1 +1.1
HHC pP pP 00 31 55.3 +15
HHC sP sP 00 32 10.1 +21
HHC PP PP 00 34 58.3 +5.2
HHC SKS 00 41 35.5
HHC S S 00 41 59.3 -6.0
HHC sS sS 00 43 02.3 +19
HHC SS SS 00 48 06.0 -1.0
HHC pmax pmax
comp=Z,22nm,1.0s,mb5.2
HHC pmax pmax
comp=Z,110nm,4.7s
HHC LR LR
comp=N,110nm,19.2s
HHC LR LR
comp=E,65nm,18.0s
HHC LR LR
comp=Z,73nm,18.0s
CLNS **Chul'man** 90.38 331 eP P 00 31 18.5 +0.2
CLNS pmax pmax
comp=Z,38nm,1.1s,mb5.4
CLNS pmax pmax
comp=E,14nm,1.2s
CLNS pmax pmax
comp=N,21nm,1.3s
KMI **Kunming** 91.23 296 P P 00 31 24.3 +1.3
KMI pP pP 00 31 59.8 +15
KMI sP sP 00 32 15.0 +21
KMI PP PP 00 35 05.5 +4.1
KMI S S 00 42 08.0 -7.1
KMI sS sS 00 43 11.4 +18
KMI SS SS 00 48 20.9 -1.2
KMI pmax pmax
comp=Z,13nm,1.2s,mb4.9
KMI LR LR
comp=N,140nm,16.7s
KMI LR LR
comp=E,69nm,17.6s
KMI LR LR
comp=Z,130nm,17.6s
DGMT **Dagmar** 91.50 39 ⇑P P 00 31 23.6 -0.1
baz=92
YAK **Yakutsk** 91.51 337 eP P 00 31 21.8 -1.6
YAK pmax pmax
comp=Z,22nm,1.1s,mb5.3
YAK **Yakutsk** 91.51 337 eP P 00 31 22.6 -0.8
INK **Inuvik** 91.64 14 eP P 00 31 23.8 -0.1
INK pmax pmax
comp=Z,37nm,1.1s
INK **Inuvik** 91.64 14 eP P 00 31 23.8 -0.1
comp=Z,37nm,1.1s,mb5.5
CD2 **Chengdu** 92.36 302 eP P 00 31 28.8 +0.7
CD2 pP pP 00 32 04.3 +14
CD2 sP sP 00 32 17.8 +19
CD2 PP PP 00 35 15.0 +4.8
CD2 SKS 00 41 49.0
CD2 S S 00 42 20.3 -4.7
CD2 sS sS 00 43 19.0 +16
CD2 SS SS 00 48 40.3 +2.3
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.2
CD2 pmax pmax
comp=Z,30nm,4.8s
CMAR **Chiang Mai Arr** 92.38 289 P P 00 31 29.8 +1.3
comp=Z,8.0nm,1.1s,mb4.9,baz=102,slow=3.2,SNR=31
CHTO **Chiang Mai** 92.50 289 eP P 00 31 28.4 -0.6
CHTO pmax pmax
comp=Z,24nm,1.4s,mb5.2
CHTO **Chiang Mai** 92.50 289 eP P 00 31 28.4 -0.5
comp=Z,24nm,1.4s,mb5.2
YKA **Yellowknife Ar** 93.51 24 P P 00 31 31.5 -1.1
comp=Z,2.9nm,0.9s,mb4.6,baz=239,slow=4.1,SNR=18
LZH **Lanzhou** 94.06 307 eP P 00 31 36.4 +0.6
LZH pP pP 00 32 12.8 +15

LZH sP sP 00 32 26.4 +20
LZH eS S 00 42 32.1 -7.7
LZH sS sS 00 43 35.0 +17
LZH SS SS 00 49 01.6 -0.6
LZH pmax pmax
comp=Z,23nm,1.0s,mb5.5
LZH pmax pmax
comp=Z,110nm,4.6s
ECSD EROS Data Cent 94.40 45 eP **P 00 31 37.2 0.0**
ULN Ulaanbaatar 95.93 318 eP **P 00 31 43.5 -0.6**
ULN pmax pmax
comp=Z,3.0nm,1.0s,mb4.7
ULN Ulaanbaatar 95.93 318 eP **P 00 31 43.5 -0.6**
comp=Z,3.4nm,1.0s,mb4.7
SONM Songino Array 96.34 318 P **P 00 31 46.5 +0.6**
comp=Z,0.6nm,0.4s,mb4.3,baz=46,slow=4.3,SNR=4.1
AGMN Agassiz Nation 96.52 41 eP **P 00 31 45.4 -1.4**
FVM French Village 96.89 52 eP **P 00 31 48.3 -0.4**
TIXI Tiksi 97.70 345 eP **P 00 31 51.3 -0.2**
GTA Gaotai 98.14 309 eP **P 00 31 54.8 +0.5**
GTA pP pP 00 32 31.0 +14
GTA sP sP 00 32 45.8 +20
GTA PP PP 00 36 00.3 +5.5
GTA SKS 00 42 17.8
GTA S S 00 43 07.6 -7.2
GTA sS sS 00 44 10.5 +17
GTA SS SS 00 49 58.4 -1.4
GTA pmax pmax
comp=Z,3.0nm,1.4s,mb4.6
GTA pmax pmax
comp=Z,32nm,5.7s
GTA LR LR
comp=N,66nm,17.7s
GTA LR LR
comp=E,110nm,17.4s
GTA LR LR
comp=Z,100nm,16.8s
TLY Talaya 99.29 321 P **P 00 31 58.8 -0.3**
LPAZ La Paz 99.92 111 PP PP 00 36 08.4 -0.1
comp=Z,1.1nm,1.1s,baz=287,slow=11,SNR=3.7
LPAZ LR LR 01 07 44.7
comp=Z,94nm,18.9s,baz=53,slow=30
ZALV Zalesovo Beam 110.91 322 PKiKP PKiKP 00 36 48.1 -1.7
comp=Z,2.3nm,0.5s,baz=142,slow=1.2,SNR=16
ZALV PP PP 00 37 24.7 -4.3
comp=Z,0.5nm,0.3s,baz=48,slow=4.4,SNR=4.8
MK31 Makanchi Array 112.10 314 ePKIKP PKiKP 00 36 50.7 -1.6
MK31 e 00 37 40.1
MKAR Makanchi Array 112.10 314 PKiKP PKiKP 00 36 50.7 -1.6
comp=Z,1.8nm,0.6s,baz=69,slow=0.7,SNR=19
KURK Kurchatov 114.64 318c iPKIKP PKiKP 00 36 55.2 -1.9
KURK pmax pmax
comp=Z,7.0nm,1.2s
KURK Kurchatov 114.64 318 ePKiKP PKiKP 00 36 55.4 -1.7
KSH Kashi 116.28 305 PKP PKPdf 00 37 00.3 -0.3
KSH PKS 00 40 35.9
KSH SKS SKSdf 00 43 55.5 -10
KSH AMB AMB
comp=Z,47nm,5.4s
KSH LR LR
comp=N,83nm,6.6s
KSH LR LR
comp=E,56nm,4.1s
KSH LR LR
comp=Z,160nm,7.3s
TKM2 Tokmak 2 116.69 309 ePKIKP PKPdf 00 37 00.3 -1.0
UCH Uchtor 117.48 308 ePKPdf PKPdf 00 37 01.9 -0.9
AAK Ala-Archa 117.50 309 PKP PKPdf 00 37 01.6 -1.2
comp=Z,1.6nm,0.4s,baz=141,slow=13,SNR=5.2
EKS2 Erkin-Say 118.03 309 ePKPdf PKPdf 00 37 03.0 -0.8
AML Almayashu 118.09 308 ePKPdf PKPdf 00 37 02.8 -1.2
BVAR Borovoye Array 119.55 321 PKP PKPdf 00 37 04.9 -1.5
comp=Z,8.4nm,0.4s,baz=100,slow=2.3,SNR=42
BRVK Borovoye 119.61 321 ePKIKP PKPdf 00 37 05.5 -1.1
KBL Kabul 121.63 300 ePKIKP PKPdf 00 37 10.6 -0.5
SVE Sverdlovsk 124.10 327 ePKIKP PKPdf 00 37 12.0 -3.1
SVE pmax pmax
comp=Z,21nm,1.2s
SOKR Solikamsk 124.94 331c iPKIKP PKPdf 00 37 15.3 -1.3
SOKR pmax pmax
comp=Z,20nm,1.0s
ARU Arti 125.31 327 i PKIKP PKPdf 00 37 16.3 -1.1
ARU 00 39 06.6
ARU 00 44 10.6
ARU Arti 125.31 327 ePKPdf PKPdf 00 37 16.4 -1.0
ABKAR Akbulak array 126.75 318 ePKPdf PKPdf 00 37 19.1 -1.3
KEV Kevo 127.12 351 ep PKPdf 00 37 18.0 -2.5
KEV Kevo 127.12 351 ep PKPdf 00 37 18.0 -2.5
ARCES ARCESS Array B 127.54 351 PKP PKPdf 00 37 20.3 -1.0
comp=Z,2.4nm,0.4s,baz=12,slow=1.7,SNR=26
AKTK Aktyubinsk 127.62 320 PKP PKPdf 00 37 20.9 -1.1
AKTO Aktyubinsk 127.62 320 PKP PKPdf 00 37 20.9 -1.1
comp=Z,3.1nm,0.8s,baz=50,slow=3.3,SNR=9.5
BOSA Boshof 129.26 203 PKP PKPdf 00 37 25.6 -0.4
comp=Z,4.8nm,1.1s,baz=160,slow=6.3,SNR=4.1
JOF Joensuu 132.18 344 ep PKPdf 00 37 28.9 -1.4
comp=Z,8.6nm,0.6s
JOF Joensuu 132.18 344 ep PKPdf 00 37 28.9 -1.4
comp=Z,8.6nm,0.6s
KAF Kangasniemi 134.08 346 ep PKPdf 00 37 30.9 -3.0
comp=Z,4.1nm,0.6s
KAF Kangasniemi 134.08 346 ep PKPdf 00 37 30.9 -3.0
comp=Z,4.1nm,0.6s
FINES FINESS Array B 134.72 346 PKhKP 00 37 25.7
comp=Z,1.2nm,0.7s,baz=96,slow=1.9,SNR=5.4
FINES PKP PKPdf 00 37 33.2 -1.9
comp=Z,0.7nm,0.5s,baz=54,slow=3.0,SNR=4.8
OBN Obninsk 136.44 334⇓iPKIKP PKPdf 00 37 35.7 -2.8
OBN e 00 40 22.2
OBN eSS SKSac 00 44 36.5 -8.4
OBN pmax pmax
comp=Z,10.0nm,0.9s
VSR Storozhevoye 137.83 328 ePKIKP PKPdf 00 37 39.2 -2.0
VSR pmax pmax
comp=N,4.0nm,0.8s
VSR pmax pmax
comp=E,3.0nm,0.8s
VSR pmax pmax
comp=Z,9.0nm,0.8s
ZEI Tsey 139.44 315 ePKIKP PKPdf 00 37 46.1 +1.7
ZEI pmax pmax
comp=Z,4.0nm,0.4s
KIV Kislovodsk 139.72 317 PKIKP PKPdf 00 37 44.0 -0.9
KIV Kislovodsk 139.72 317 PKPdf PKPdf 00 37 44.0 -0.9
GNI Garni 139.85 311⇑ePKIKP PKPdf 00 37 45.5 +0.2
UMR Umm Al-Rimmam 139.91 294 eP 00 37 38.3
RDF Al-Radifah 140.12 293 eP 00 37 38.8
RDF AMb AMB 00 37 47.0
comp=Z,22nm,1.2s
MIB Mutribah 140.21 294 eP 00 37 38.4
MIB AMb AMB 00 37 49.0
comp=Z,32nm,1.1s
NAY Al-Naaiem 140.35 294 eP 00 37 38.5
NAY AMb AMB 00 37 48.6
comp=Z,6.7nm,1.2s
SUW Suwalki 142.02 343 ePKP PKPdf 00 37 43.5 -5.2
AKASG Malin Array Be 142.70 335 PKhKP 00 37 44.9
comp=Z,3.6nm,0.4s,baz=38,slow=4.0,SNR=20
AKBB Malin Array Si 142.70 335 ePKHKP 00 37 45.4
KIEV Kiev 142.71 335 ePKHKP 00 37 44.7
KMBO Kilima Mbogo 142.94 242 PKP PKPdf 00 37 48.7 -2.9
comp=Z,6.3nm,1.0s,baz=79,slow=6.4,SNR=8.2
KMBO Kilima Mbogo 142.94 242 ePKPdf PKPdf 00 37 48.5 -3.2
GKP Gorka Klasztor 144.14 348 ePKP PKPdf 00 37 50.3 -2.2
WAR Warsaw 144.19 343 ePKP PKPdf 00 37 51.5 -1.1
SIM Simferopol' 144.37 324c iPKIKP PKPdf 00 37 52.3 -0.9
SIM pmax pmax
comp=Z,75nm,1.4s
BSEG Bad Segeberg 144.49 355 ePKPbc PKPdf 00 37 51.0 -2.1
RUE Ruedersdorf 145.51 351 ePKPdf PKPdf 00 37 53.4 -1.5
WIT Witteveen 145.81 358⇑ePKP PKPdf 00 37 56.2 +0.9
comp=Z,528nm,1.3s
NRDL Niedersach Rie 145.94 355 ePKPbc PKPbc 00 37 55.7 -0.7
KWP Kalwaria Pacla 145.99 340 ePKP PKPdf 00 37 56.5 +0.8
KWP Kalwaria Pacla 145.99 340 ePKPdf PKPdf 00 37 55.3 -0.5
KWP Kalwaria Pacla 145.99 340⇑iP PKPdf 00 37 55.9 +0.1
IBBN Ibbenburen 146.28 357 ePKPbc PKPbc 00 37 56.9 -0.5
OJC Ojcow 146.35 343 ePKP PKPdf 00 37 54.6 -1.8
CLZ Clausthal 146.56 354 ePKPbc PKPbc 00 37 58.0 -0.3
KSP Ksiaz 146.62 347 ePKP PKPdf 00 37 58.7 +1.9
KSP Ksiaz 146.62 347 ePKP2 PKPdf 00 37 57.1 +0.3
STHS Stebnicka Huta 146.64 341 ePKP PKPdf 00 37 57.1 +0.2
STHS e 00 37 58.9
STHS Stebnicka Huta 146.64 341 ePKP PKPdf 00 37 57.1 +0.2
STHS e 00 38 58.9
WTSB Winterswijk 146.66 358⇑ePKP PKPdf 00 37 57.9 +1.1
comp=Z,57nm,1.3s
KOLS Kolonicke sedl 146.73 339 ePKIKP PKPdf 00 37 56.7 -0.4
KOLS e 00 37 58.6
KOLS Kolonicke sedl 146.73 339 ePKP PKPdf 00 37 56.7 -0.4
KOLS e 00 37 58.6
BUR08 Bucovina Ar. S 146.74 335 ePKPdf PKPdf 00 37 56.0 -1.1
BUR08 ePKPab PKPab 00 38 00.1 -0.1
BUR01 Bucovina Ar. S 146.75 335 P PKPdf 00 37 58.5 +1.4
BURAR Bucovina Array 146.75 335⇓iPKP2 PKPbc 00 37 58.2 -0.8
BURAR Bucovina Array 146.75 335⇓iP PKPdf 00 37 58.2 +1.1
CLL Collm 146.76 351 ePKPbc PKPbc 00 37 57.9 -1.0
CLL Collm 146.76 351⇑iPKP PKPbc 00 37 58.4 -0.5
CLL epPKP pPKPbc 00 38 35.0 +13
CLL Collm 146.76 351⇑iPKPbc PKPbc 00 37 58.4 -0.5
comp=Z,96nm,1.2s
CLL epPKPbc pPKPbc 00 38 35.0 +13
CLL ePKSdf 00 41 31.0
NIE Niedzica 146.92 342 ePKP PKPbc 00 37 59.5 +0.1
UZH Uzhgorod 146.99 339⇓iPKP2 PKPbc 00 37 59.2 -0.4
UPC Upice 147.00 347 ePKIKP PKPdf 00 37 57.3 -0.2
UPC i 00 37 59.6
UPC Upice 147.00 347 ePKPDF PKPdf 00 37 57.3 -0.2
UPC ⇑iPKP PKPbc 00 37 59.6 0.0
CRVS Cervenica-Dubn 147.02 340 ePKIKP PKPdf 00 37 57.1 -0.5
CRVS e 00 37 59.8
CRVS e 00 38 26.4
CRVS Cervenica-Dubn 147.02 340 ePKP PKPdf 00 37 57.1 -0.5
CRVS e 00 37 59.8
CRVS e 00 38 26.4
BRG Berggiesshubel 147.04 350 ePKPdf PKPdf 00 37 56.9 -0.6
BRG ePKPbc PKPbc 00 37 59.5 -0.2
BRG Berggiesshubel 147.04 350 ePKP PKPdf 00 37 56.9 -0.6
comp=Z,9.9nm,1.2s
BRG i 00 37 59.6
comp=Z,53nm,1.2s
BRG Berggiesshubel 147.04 350 ePKIKP PKPdf 00 37 56.9 -0.6
BRG i 00 37 59.6
BRG pmax pmax
comp=Z,6.0nm,1.2s
BRG pmax pmax
comp=Z,32nm,1.2s
DPC Dobruska-Polom 147.08 347 ePKIKP PKPdf 00 37 57.5 -0.1
DPC i 00 37 59.9
DPC Dobruska-Polom 147.08 347 ePKPDF PKPdf 00 37 57.5 -0.1
DPC ⇑iPKP PKPbc 00 37 59.9 +0.1
OKC Ostrava-Krasne 147.13 345 ePKP2 PKPbc 00 37 59.6 -0.4
OKC Ostrava-Krasne 147.13 345⇑ePKP PKPbc 00 37 59.6 -0.4
BUG Bochum--Univer 147.16 358 ePKPbc PKPbc 00 37 59.1 -0.9
PVCC Panska Ves 147.26 349 ePKIKP PKPdf 00 37 57.5 -0.4
PVCC e 00 38 00.1
PVCC Panska Ves 147.26 349 ePKPDF PKPdf 00 37 57.5 -0.4
PVCC ⇑ePKP PKPbc 00 38 00.1 -0.2
CFR Carcaliu 147.34 329⇑PKP2 PKPbc 00 38 01.0 +0.3
CFR Carcaliu 147.34 329⇑iP PKPbc 00 38 01.0 +0.3
BMR Baia Mare 147.37 337 PKP2 PKPbc 00 38 01.2 +0.5
BMR Baia Mare 147.37 337⇓P PKPbc 00 38 00.7 0.0
BMR P 00 38 01.1
BMR Baia Mare 147.37 337⇓iP PKPbc 00 38 00.7 0.0
VRI Vrincioaia 147.48 332 PKP2 PKPbc 00 38 00.9 -0.2
VRI Vrincioaia 147.48 332⇑P PKPbc 00 38 00.7 -0.4
VRI P 00 38 00.9
VRI Vrincioaia 147.48 332⇑iP PKPbc 00 38 00.7 -0.4
PLOR Plostina 147.53 332⇓PKP2 PKPbc 00 38 00.6 -0.6
PLOR Plostina 147.53 332⇓iP PKPbc 00 38 00.6 -0.6
MOX Moxa 147.60 352 ePKP PKPdf 00 37 57.5 -1.0
MOX e 00 38 00.8
comp=Z,55nm,1.6s
MOX Moxa 147.60 352 ePKPdf PKPdf 00 37 57.4 -1.1
MOX ePKPbc PKPbc 00 38 00.6 -0.6
UBBA Unterbreizbach 147.60 354 ePKPdf PKPdf 00 37 57.8 -0.7
UBBA ePKPbc PKPbc 00 38 00.2 -1.0
BR131 Keskin Array S 147.68 317 ePKPdf PKPdf 00 37 57.8 -1.2
BR131 ePKPbc PKPbc 00 38 01.3 -0.5
BRTR Keskin Array B 147.68 317 PKP PKPdf 00 37 57.6 -1.4
comp=Z,11nm,0.7s,baz=73,slow=1.5,SNR=13
BRTR PKPbc PKPbc 00 38 01.5 -0.4
comp=Z,11nm,0.7s,baz=207,slow=0.3,SNR=13
KECS Kecovo 147.70 341 ePKP2 PKPbc 00 38 01.6 0.0
KECS Kecovo 147.70 341 ePKP PKPbc 00 38 01.6 0.0
TANN Tannenbergstha 147.71 351 ePKPdf PKPdf 00 37 57.8 -0.9
TANN ePKPbc PKPbc 00 38 01.0 -0.5
TANN ePKPab PKPab 00 38 03.7 -0.3
PRU Pruhonice 147.78 349 ePKIKP PKPdf 00 37 58.7 -0.1
PRU e 00 38 01.8
PRU Pruhonice 147.78 349 ePKPDF PKPdf 00 37 58.7 -0.1
PRU ⇑ePKP PKPbc 00 38 01.8 +0.1
UCC Uccle 147.84 1 PKPbc PKPbc 00 38 00.3 -1.6
UCC PKPab PKPab 00 38 02.8 -1.7
BEBN Eben Emael 147.85 359 PKPbc PKPbc 00 38 02.0 +0.2
HGN Heimansgroeve 147.88 359⇑ePKP PKPdf 00 38 00.8 +1.9
comp=Z,45nm,1.7s
NKC Novy Kostel 147.89 351 ePKIKP PKPdf 00 37 58.6 -0.4
NKC i 00 38 01.9
NKC Novy Kostel 147.89 351 ePKPDF PKPdf 00 37 58.6 -0.4
NKC ⇑iPKP PKPbc 00 38 01.9 -0.1
VRAC Vranov 148.00 346⇑PKP2 PKPbc 00 38 02.7 +0.4
VRAC Vranov 148.00 346 P PKPbc 00 38 02.6 +0.3
VRAC ⇑P 00 38 02.7
VRAC Vranov 148.00 346⇑iP PKPbc 00 38 02.7 +0.4
CVD Cernavoda 148.02 328⇑PKHKP PKPdf 00 37 54.8 -4.6
CVD Cernavoda 148.02 328⇑iP PKPdf 00 37 54.8 -4.6
MEM Membach 148.03 359 PKPbc PKPbc 00 38 01.5 -0.9
MLR Muntele Rosu 148.12 332⇑PKHKP PKPdf 00 37 57.3 -2.2
MLR 00 38 02.9
MLR Muntele Rosu 148.12 332⇑iP PKPdf 00 37 57.3 -2.2
SNF Seneffe 148.13 1 PKPbc PKPbc 00 38 02.8 +0.2
VYHS Vyhne 148.18 343 ePKIKP PKPdf 00 37 58.3 -1.2
VYHS e 00 38 02.9
VYHS Vyhne 148.18 343 ePKP PKPdf 00 37 58.3 -1.2
VYHS e 00 38 02.9
KOLL Kolacno 148.22 343 ePKIKP PKPdf 00 37 59.8 +0.2
KOLL e 00 38 03.1
KOLL Kolacno 148.22 343 ePKP PKPdf 00 37 59.8 +0.2
KOLL e 00 38 03.1
BCLA Clavier 148.23 360 PKPbc PKPbc 00 38 02.9 0.0
BCLA PKPab PKPab 00 38 05.6 -0.4
TREC Trest 148.26 347 ePKIKP PKPdf 00 37 58.7 -0.9
TREC e 00 38 02.6
TREC Trest 148.26 347 ePKPDF PKPdf 00 37 58.7 -0.9
TREC ⇑ePKP PKPbc 00 38 02.6 -0.4
TNS Taunus Mts 148.32 356 ePKPdf PKPdf 00 37 58.9 -0.8
TNS ePKPbc PKPbc 00 38 02.6 -0.5
TNS ePKPab PKPab 00 38 06.0 -0.4
TNS Taunus Mts 148.32 356 ePKIKP PKPdf 00 37 58.9 -0.8
TNS e 00 38 02.6
PSZ Piszkesteto 148.38 341 ePKPdf PKPdf 00 37 58.8 -1.1
PSZ ePKPbc PKPbc 00 38 02.5 -0.9
PSZ P 00 38 03.6
PSZ Piszkesteto 148.38 341⇑ePKP PKPbc 00 38 03.2 -0.2
DRGR 148.40 337 PKP2 PKPbc 00 38 03.4 -0.1
DRGR 148.40 337⇑P PKPbc 00 38 03.0 -0.5
DRGR P 00 38 03.4
DRGR 148.40 337⇑iP PKPbc 00 38 03.0 -0.5
SMOL Smolenice 148.54 344 ePKP PKPbc 00 38 04.3 +0.5
SMOL e 00 38 08.7
SMOL Smolenice 148.54 344 ePKP PKPbc 00 38 04.3 +0.5
SMOL e 00 38 08.7
DOU Dourbes 148.55 1 PKPbc PKPbc 00 38 03.7 -0.1
DOU PKPab PKPab 00 38 06.9 -0.5
VOIR 148.56 333 PKP2 PKPbc 00 38 04.1 +0.2
VOIR 148.56 333⇑P PKPbc 00 38 03.4 -0.6
VOIR P 00 38 04.1
VOIR 148.56 333⇑iP PKPbc 00 38 03.3 -0.6
GRA1 Grafenberg Arr 148.59 353 ePKPbc PKPbc 00 38 03.8 0.0
GRF Grafenberg Arr 148.59 353 ePKPbc PKPbc 00 38 03.8 0.0
ABH Alteburg 148.71 357 PKP PKPbc 00 38 04.0 -0.2
KHC Kasperske Hory 148.78 349 ePKIKP PKPdf 00 37 59.4 -1.0
KHC e 00 38 04.2
KHC Kasperske Hory 148.78 349 ePKPdf PKPdf 00 37 59.4 -1.0
KHC ePKPbc PKPbc 00 38 04.2 -0.1
KHC ePKPab PKPab 00 38 08.4 +0.1
KHC Kasperske Hory 148.78 349 ePKPDF PKPdf 00 38 00.0 -0.4
KHC ⇑iPKP PKPbc 00 38 04.2 -0.2
KHC ePKPAB PKPab 00 38 08.5 +0.2
WET Wettzell 148.89 350 ePKPdf PKPdf 00 38 00.5 -0.1
WET ePKPbc PKPbc 00 38 03.8 -0.8
TOD Tromm 148.91 356 PKP PKPbc 00 38 04.0 -0.7
ZST Bratislava 148.92 345 ePKP PKPbc 00 38 05.4 +0.7
ZST e 00 38 10.1
ZST Bratislava 148.92 345 ePKP PKPbc 00 38 05.4 +0.7
ZST e 00 38 10.1
WLF Walferdange 148.97 359 PKPbc PKPbc 00 38 05.1 +0.3
WLF Walferdange 148.97 359 ePKPbc PKPbc 00 38 04.7 -0.1
WLF Walferdange 148.97 359 PKIKP PKPdf 00 37 59.7 -1.0
WLF e 00 38 05.1
WLF Walferdange 148.97 359 PKPdf PKPdf 00 37 59.7 -1.0
WLF ePKPbc PKPbc 00 38 05.1 +0.3
WLF ePKPab PKPab 00 38 09.6 +0.6
GEC2 GERESS Array S 149.04 349 ePKPdf PKPdf 00 38 00.0 -0.9
GEC2 ePKPbc PKPbc 00 38 04.2 -0.8
GEC2 ePKPab PKPab 00 38 09.9 +0.6
GEC2 GERESS Array S 149.04 349 ePKP2 PKPab 00 38 09.9 +0.6
MMAI Mount Meron Ar 149.41 304 PKPbc PKPbc 00 38 06.3 -0.1
comp=Z,27nm,0.7s,baz=62,slow=4.1,SNR=56
CONA Conrad Observa 149.47 346⇑iPKPdf PKPdf 00 38 00.6 -0.9
comp=Z,4.2nm,1.1s,SNR=23
CONA ⇑iPKiKP PKiKP 00 38 06.1 -1.1
comp=Z,68nm,1.2s
ROSF Rostrenen 149.51 11 ePKIKP PKPdf 00 38 00.5 -1.1
comp=Z,98nm,1.7s
FLN La Foliniere 149.53 7 ePKIKP PKPdf 00 38 00.3 -1.4
LANF Langenberg 149.60 357 PKP PKPbc 00 38 06.1 -0.3
STU Stuttgart 149.71 355 ePKPdf PKPdf 00 38 01.2 -0.7
STU ePKPbc PKPbc 00 38 06.1 -0.6
STU ePKPab PKPab 00 38 11.8 -0.3
STU Stuttgart 149.71 355 ePKPdf PKPdf 00 38 01.2 -0.7
STU ePKPbc PKPbc 00 38 06.3 -0.4
STU ePKPab PKPab 00 38 11.3 -0.7
LDF La Druitiere 149.74 7 ePKIKP PKPdf 00 38 00.4 -1.6
comp=Z,27nm,1.1s
ZIMR 149.80 330⇑PKP2 PKPbc 00 38 07.8 +0.7
ZIMR 149.80 330⇑iP PKPbc 00 38 07.8 +0.7
BZS Buzias 149.80 337 PKP2 PKPbc 00 38 06.4 -0.6
BZS Buzias 149.80 337⇓iP PKPbc 00 38 06.5 -0.5
SZH Strazhica 149.82 329 i P PKPbc 00 38 06.2 -0.9
SZH i P 00 38 09.7
GRR Gorron 149.85 8 ePKIKP PKPdf 00 38 00.7 -1.5
comp=Z,72nm,1.6s
MOA Molln 149.88 348⇓iPKPdf PKPdf 00 38 01.4 -0.9
comp=Z,3.4nm,1.3s,SNR=14
MOA ⇑iPKPbc PKPbc 00 38 06.3 -0.9
comp=Z,16nm,0.7s
QUIF Quistinic 149.94 11 ePKIKP PKPdf 00 38 00.6 -1.7
FUR Furstenfeldbru 150.08 352 ePKPdf PKPdf 00 38 01.6 -0.9
FUR ePKPbc PKPbc 00 38 06.9 -0.7
FUR ePKPab PKPab 00 38 13.5 -0.1
ARSA Arzberg 150.18 346⇓iPKPdf PKPdf 00 38 01.7 -1.0
comp=Z,1.7nm,0.8s,SNR=7.4
ARSA ⇑iPKiKP PKiKP 00 38 07.3 -1.4
comp=Z,16nm,1.1s
BFO Black Forest 150.21 356 ePKPbc PKPbc 00 38 07.2 -0.7
BFO ePKPab PKPab 00 38 13.4 -0.8
BFO Black Forest 150.21 356 ePKPdf PKPdf 00 38 02.6 -0.1
BFO ePKPbc PKPbc 00 38 07.2 -0.7
BFO ePKPbc PKPbc 00 38 07.4 -0.5
BFO ePKPab PKPab 00 38 13.4 -0.8
BFO ePKPab PKPab 00 38 13.7 -0.5
CSS Prodhromos 150.22 309 ePKPbc PKPbc 00 38 06.6 -1.8
RJOB Jochberg 150.26 350 ePKPdf PKPdf 00 38 01.9 -1.0
RJOB ePKPbc PKPbc 00 38 07.5 -0.6
RJOB ePKPab PKPab 00 38 14.6 +0.2
PKSM Moragy 150.29 341 PKIKP PKPbc 00 38 07.7 -0.5
ECH Echery 150.39 357 PKP PKPbc 00 38 07.6 -0.8
ECH Echery 150.39 357 ePKPdf PKPdf 00 38 02.6 -0.5
ECH ePKPbc PKPbc 00 38 07.2 -1.1
ECH PKP PKPbc 00 38 07.6 -0.8
ECH ePKPab PKPab 00 38 14.2 -0.7
SPAK Spaichingen-Ko 150.41 355 PKP PKPbc 00 38 07.9 -0.5
FELD Feldberg im Sc 150.69 356 PKP PKPbc 00 38 08.3 -0.8
MOF Molkenrain 150.76 357 PKP PKPbc 00 38 08.5 -0.7
ISP Isparta 150.76 316 ePKIKP PKPbc 00 38 08.1 -1.5
ISP Isparta 150.76 316⇓iP PKPbc 00 38 08.3 -1.3
RETA Reutte 150.81 352⇑iPKPdf PKPdf 00 38 02.5 -1.2
comp=Z,4.6nm,1.4s,SNR=15
RETA ⇑iPKiKP PKiKP 00 38 08.8 -1.1
comp=Z,39nm,1.5s
SOKA Soboth 150.83 346⇑iPKPdf PKPdf 00 38 02.3 -1.5
comp=Z,5.5nm,1.3s
SOKA ⇓iPKPbc PKPbc 00 38 08.3 -1.2
comp=Z,34nm,1.1s
WATA Walderalm 150.85 351⇓iPKPdf PKPdf 00 38 02.9 -0.9
comp=Z,3.0nm,0.7s,SNR=12
WATA ⇑iPKiKP PKiKP 00 38 08.9 -1.2
comp=Z,14nm,0.5s
PERS Pernice 150.85 346 i PKPdf PKPdf 00 38 02.6 -1.2
PERS i PKPbc PKPbc 00 38 08.4 -1.1
PERS i PKPab PKPab 00 38 16.8 -0.1
MOTA Moosalm 150.91 352⇑iPKPdf PKPdf 00 38 02.7 -1.2
comp=Z,6.5nm,1.3s,SNR=18
MOTA ⇓iPKiKP PKiKP 00 38 08.9 -1.3
comp=Z,54nm,1.2s
WTTA Wattenberg 150.91 351⇑iPKPdf PKPdf 00 38 03.0 -0.9
comp=Z,8.8nm,1.2s,SNR=31
WTTA ⇑iPKiKP PKiKP 00 38 09.2 -1.0
comp=Z,44nm,0.5s
DAVA Damuels 151.11 353⇑iPKPbc PKPdf 00 38 05.6 +1.4
comp=Z,3.1nm,1.1s,SNR=16
DAVA ⇓iPKiKP PKiKP 00 38 09.7 -0.9
comp=Z,60nm,1.2s
MYKA Terra Mystica 151.18 348⇓iPKPdf PKPdf 00 38 02.7 -1.6
comp=Z,4.5nm,0.9s
MYKA ⇑iPKPbc PKPbc 00 38 08.9 -1.4
comp=Z,24nm,1.1s
PGB Panagyurishte 151.21 330 i P PKPbc 00 38 10.0 -0.5
LOMF Lomont 151.27 358 PKP PKPbc 00 38 10.0 -0.4
ABTA Abfaltersbach 151.27 350⇑iPKPdf PKPdf 00 38 02.8 -1.6
comp=Z,11nm,1.2s,SNR=14
ABTA ⇓iPKPbc PKPbc 00 38 09.3 -1.2
comp=Z,64nm,1.3s
FETA Feichten 151.27 352⇑iPKPdf PKPdf 00 38 03.6 -0.8
comp=Z,8.4nm,1.2s,SNR=12
FETA ⇑iPKiKP PKiKP 00 38 10.1 -0.8
comp=Z,47nm,1.4s
LOR Lormes 151.36 2 ePKIKP PKPdf 00 38 03.4 -1.2
comp=Z,17nm,1.1s
LEGS Legarje 151.45 345 ePKPdf PKPdf 00 38 03.4 -1.4
LEGS i PKPbc PKPbc 00 38 10.0 -0.9
LEGS i PKPab PKPab 00 38 18.8 -0.6
LJU Ljubljana 151.55 346 i PKPdf PKPdf 00 38 04.0 -0.9
LJU i PKPbc PKPbc 00 38 10.3 -0.8
LJU i PKPab PKPab 00 38 19.9 +0.1
SSF Saint Saulge 151.55 2 ePKIKP PKPdf 00 38 03.7 -1.2
comp=Z,11nm,1.0s
VTS Vitosha 151.62 331 i P PKPbc 00 38 11.0 -0.4
MFF Saint Martin d 151.69 8 ePKIKP PKPdf 00 38 03.7 -1.4
comp=Z,19nm,1.3s
JAVS Javornik 151.79 347 i PKPdf PKPdf 00 38 04.2 -1.1
JAVS i PKPbc PKPbc 00 38 10.7 -1.0
JAVS i PKPab PKPab 00 38 20.0 -0.8
AVF Avril sur Loir 151.81 3 ePKIKP PKPdf 00 38 03.8 -1.5
BOJS Bojanci 151.89 345 ePKPdf PKPdf 00 38 04.1 -1.3
BOJS i PKPbc PKPbc 00 38 11.4 -0.5
BOJS i PKPab PKPab 00 38 20.6 -0.7
SMF Signal de Mont 151.98 2 ePKIKP PKPdf 00 38 04.3 -1.2
BGF Bois d'Agland 152.02 4 ePKIKP PKPdf 00 38 04.4 -1.2
CABF La Chapelle 152.03 359 ePKIKP PKPdf 00 38 04.9 -0.7
comp=Z,57nm,1.6s
TRI Trieste 152.03 347 ePKIKP PKPbc 00 38 10.9 -1.3
TRI e 00 38 21.0
MMB Musomiste 152.16 329 i P PKPbc 00 38 11.8 -0.9
KKB Krupnik 152.25 331 i P PKPbc 00 38 11.8 -1.1
TCF Toulx Ste Croi 152.25 5 ePKIKP PKPdf 00 38 04.5 -1.4
comp=Z,23nm,1.3s
AGO Saint Agoulin 152.54 3 PKP PKPbc 00 38 12.4 -1.0
PLDF La Plantade 152.65 2 PKP PKPbc 00 38 12.9 -0.7
PYM Petit Puy Mans 152.84 3 PKP PKPbc 00 38 13.4 -0.6
VAY Valandovo 152.91 330 ePKP PKPbc 00 38 12.6 -1.8
LPL La Plagne 153.10 358 ePKIKP PKPdf 00 38 06.5 -0.7
LPG La Plagne 153.12 358 ePKIKP PKPdf 00 38 07.2 0.0
RJF Les Rejaudoux 153.16 6 ePKIKP PKPdf 00 38 05.9 -1.4
comp=Z,42nm,1.4s
SSB Saint Sauveur 153.36 1 ePKPdf PKPdf 00 38 06.3 -1.3
SSB ePKPbc PKPbc 00 38 14.7 -0.5
SSB ePKPab PKPab 00 38 27.3 -0.1
LBL Lubilhac 153.37 3 PKP PKPbc 00 38 14.7 -0.5
LFF La Frestale 153.44 7 ePKIKP PKPdf 00 38 06.3 -1.4
KRUS Krusevo 153.47 332 ePKP PKPbc 00 38 14.2 -1.4
BNI Bardonecchia 153.57 358 ePKPdf PKPdf 00 38 07.4 -0.5
BNI ePKPbc PKPbc 00 38 16.2 +0.6
BNI ePKPab PKPab 00 38 28.7 +0.4
CAF Calviac 153.59 5 ePKIKP PKPdf 00 38 07.0 -0.9

ORIF	Oris-en-Rattie	153.73	359	*e*PKIKP	PKPdf	00 38 07.3	-0.8
VIVF	Saint-Julien-l	153.79	1	*e*PKIKP	PKPdf	00 38 07.4	-0.8
	comp=Z,32nm,1.4s						
OHR	Ohrid	153.88	333	*e*PKP	PKPbc	00 38 15.4	-1.1
PCAB	Cabril	154.30	23	*e*PKPab	PKPab	00 38 31.4	-0.2
APE	Apeiranthos	154.38	320	⇓PKIKP	PKPbc	00 38 15.7	-2.0
APE	Apeiranthos	154.38	320	⇓*i*P	PKPbc	00 38 15.7	-2.0
LASF	Ste Croix	154.55	2	*e*PKIKP	PKPdf	00 38 08.3	-1.0
	comp=Z,38nm,1.5s						
SAOF	Saorge	154.59	356	PKP	PKPbc	00 38 16.1	-1.8
SMRF	Simiane la Rot	154.67	359	*e*PKIKP	PKPdf	00 38 08.6	-0.9
PVRL	Vila Real	154.80	23	*e*PKPab	PKPab	00 38 33.6	-0.1
FRF	La Foret Royal	155.06	358	*e*PKIKP	PKPdf	00 38 08.9	-1.1
	comp=Z,18nm,1.2s						
MVO	Moncorvo	155.15	22	*e*PKPab	PKPab	00 38 35.2	0.0
MTLF	Montolieu	155.18	5	*e*PKIKP	PKPdf	00 38 09.0	-1.2
	comp=Z,29nm,1.7s						
PVIS	Viseu	155.21	24	*e*PKPab	PKPab	00 38 35.5	+0.1
EPF	Esparros	155.27	9	*e*PKIKP	PKPdf	00 38 09.5	-0.8
	comp=Z,16nm,1.4s						
AQU	L'Aquila	155.30	345	*e*PKP2	PKPab	00 38 36.4	+0.6
MTE	Manteigas	155.62	24	*e*PKPab	PKPab	00 38 36.8	-0.4
PTOM	Tomar	155.93	27	*e*PKPab	PKPab	00 38 38.4	-0.2
PMRV	Marv??o	156.51	25	*e*PKPab	PKPab	00 38 40.5	-0.6
PESTR	Estremoz	156.90	26	*e*PKPab	PKPab	00 38 42.3	-0.5
EVO	Evora	157.00	27	*e*PKIKP	PKPdf	00 38 11.8	-1.0
	comp=Z,19nm,1.2s						
ESDC	Sonseca Array	157.51	19	PKPab	PKPab	00 38 45.5	+0.1
	comp=Z,4.6nm,1.0s,baz=335,slow=3.5,SNR=16						
PBAR	Barrancos	157.72	26	*e*PKPab	PKPab	00 38 45.7	-0.6
DBIC	Dimbokro	164.61	139	PKP	PKPdf	00 38 19.4	-2.4
	comp=Z,1.2nm,0.5s,baz=146,slow=3.6,SNR=4.0						

ISCJB ***20*** *00:18:59.8±0.3, 52°.33N±0°.03×101°.22E±0°.03, h10km, mb3.8/3, Error ellipse: s-maj=4.9km s-min=2.5km az=1.9*
BYKL ***20*** *00:19:01.3±0.4, 52°.26N×101°.03E*
MOS ***20*** *00:19:01.3±1.9, 52°.39N×101°.15E, h11km, mb4.4/3, Error ellipse: s-maj=11.0km s-min=10.2km az=3.6*
NEIC ***20*** *00:19:04.3±0.7, 52°.94N×101°.15E, h10km, mb3.8/4, Error ellipse: s-maj=12.8km s-min=10.1km az=185.0*
IDC ***20*** *00:19:05.1±1.6, 53°.20N×100°.88E, h0km, mb3.9/2, mb1 3.8/6, mb1mx3.5/27, mbtmp3.7/6, ML3.2/3, Error ellipse: s-maj=38.4km s-min=17.1km az=20.0*
ISC 20 00:19:02.4±0.4, 52°29N±0°.03×101°22E±0°.03, h10km, n56, σ1§76/101, mb3.8/3, 10C-7D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOY	**Mondy**	**0.64**	**193**	*e*PG	**Pg**	**00 19 12.8**	**-1.9**
MOY				*e*S	**Sg**	**00 19 20.3**	**-2.7**
MOY				pmax	pmax		
	comp=Z,2μm,0.1s						
MOY				smax			
	comp=E,5μm,0.2s						
MOY	**Mondy**	**0.64**	**193**	⇑*i*Pg	**Pg**	**00 19 12.7**	**-2.0**
MOY				Pmax		00 19 13.0	
	comp=E,2μm,0.3s						
MOY				*i* Sg	**Sg**	**00 19 20.3**	**-2.7**
MOY				Smax		00 19 20.6	
	comp=E,9μm,0.7s						
ARS	**Arshan**	**0.83**	**116**	*e*PG	**Pg**	**00 19 18.9**	**+0.6**
ARS				*e*		00 19 31.6	
ARS				pmax	pmax		
	comp=Z,2μm,0.1s						
ARS				smax			
	comp=E,10μm,0.2s						
ARS	**Arshan**	**0.83**	**116**	⇑*i*Pg	**Pg**	**00 19 18.8**	**+0.5**
	comp=E,370nm,0.5s						
ARS				⇓*i*Pg	**Pg**	**00 19 18.8**	**+0.5**
	comp=E,2μm,0.5s						
ARS				⇓*i*Pg	**Pg**	**00 19 18.8**	**+0.5**
	comp=E,1μm,0.5s						
ARS				Pmax		00 19 21.0	
	comp=E,3μm,0.4s						
ARS				*e*Sg	**Sg**	**00 19 31.6**	**+2.5**
ARS				Smax		00 19 33.0	
	comp=E,14μm,0.4s						
ORL	**Orlik**	**0.90**	**287**	*e*PG	**Pg**	**00 19 16.2**	**-3.5**
ORL				*e*		00 19 26.8	
ORL				pmax	pmax		
	comp=Z,557nm,0.2s						
ORL				smax			
	comp=N,5μm,0.3s						
ORL	**Orlik**	**0.90**	**287**	⇑*i*Pg	**Pg**	**00 19 16.2**	**-3.5**
ORL				Pmax		00 19 17.4	
	comp=N,348nm,0.1s						
ORL				*e*Sg	**Sg**	**00 19 26.8**	**-4.6**
ORL				Smax		00 19 27.4	
	comp=N,5μm,0.3s						
TLY	**Talaya**	**1.62**	**111**	⇓*i*Pg	**Pg**	**00 19 32.4**	**-1.0**
	comp=N,68nm,0.4s						
TLY				⇑*i*Pg	**Pg**	**00 19 32.4**	**-1.0**
	comp=N,350nm,0.4s						
TLY				⇑*i*Pg	**Pg**	**00 19 32.4**	**-1.0**
	comp=N,282nm,0.4s						
TLY				Pmax		00 19 33.9	
	comp=N,332nm,0.3s						
TLY				*e*Sg	**Sg**	**00 19 54.8**	**+0.5**
TLY				Smax		00 19 59.1	
	comp=N,2μm,1.3s						
TLY				*e*		00 20 04.7	
TLY	**Talaya**	**1.62**	**111**	*e*Pn	**Pn**	**00 19 32.2**	**+1.3**
TLY				*e*Sn	**Sn**	**00 19 54.3**	**+2.5**
IRK	**Irkutsk**	**1.88**	**90**	*e*PN	**Pn**	**00 19 36.2**	**+1.7**
IRK				*e*		00 20 02.7	
IRK				pmax	pmax		
	comp=Z,492nm,0.1s						
IRK				smax			
	comp=E,9μm,0.4s						
IRK	**Irkutsk**	**1.88**	**90**	*e*Pg	**Pg**	**00 19 36.6**	**-1.7**
IRK				*e*		00 19 43.7	
IRK				max		00 19 46.1	
	comp=E,1μm,0.5s						
IRK				*e*Sg	**Sg**	**00 20 03.1**	**+0.5**
IRK				Smax		00 20 05.5	
	comp=E,9μm,0.3s						
LSTR	**Listvyanka**	**2.27**	**99**	⇑*i*Pg	**Pg**	**00 19 43.0**	**-2.8**
LSTR				*e*		00 19 50.6	
LSTR				max		00 19 51.0	
	comp=E,535nm,0.5s						
LSTR				*e*Sg	**Sg**	**00 20 13.5**	**-1.7**
LSTR				Smax		00 20 17.6	
	comp=E,1μm,1.1s						
ZAK	**Zakamensk**	**2.30**	**145**	*e*PN	**Pn**	**00 19 39.6**	**-0.8**
ZAK				*e*		00 19 42.7	
ZAK				*e*S	**Sn**	**00 20 14.3**	**+5.6**
ZAK				smax			
	comp=N,796nm,0.5s						
ZAK	**Zakamensk**	**2.30**	**145**	⇓*i*Pg	**Pg**	**00 19 42.9**	**-3.6**
	comp=N,78nm,0.3s						
ZAK				⇑*i*Pg	**Pg**	**00 19 42.9**	**-3.6**
	comp=N,60nm,0.3s						
ZAK				⇑*i*Pg	**Pg**	**00 19 42.9**	**-3.6**
	comp=N,78nm,0.3s						
ZAK				Pmax		00 19 43.8	
	comp=N,401nm,0.6s						
ZAK				*e*		00 19 49.9	
ZAK				*e*Sg	**Sg**	**00 20 14.9**	**-1.4**
ZAK				Smax		00 20 18.0	
	comp=N,791nm,0.4s						
TDJR	**Todzha**	**3.14**	**274**	*e*Pn	**Pn**	**00 19 50.6**	**-1.3**
TDJR				*e*Pg	**Pb**	**00 19 54.3**	**-4.0**
TDJR				*e*Sg	**Sb**	**00 20 33.2**	**-3.4**
STDB	**Stepnoy Dvoret**	**3.17**	**90**	*e*Pn	**Pn**	**00 19 55.0**	**+2.8**
STDB				*e*Pg	**Pg**	**00 20 01.9**	**-1.1**
STDB				Pmax		00 20 13.1	
	comp=N,362nm,0.5s						
STDB				*e*		00 20 35.5	
STDB				*e*Sg	**Sg**	**00 20 45.5**	**+1.5**
STDB				Smax		00 20 56.8	
	comp=N,5μm,1.1s						
TRG	**Tyrgan**	**3.17**	**79**	*e*PN	**Pn**	**00 19 54.0**	**+1.8**
TRG				*e*		00 20 01.0	
TRG				*e*S	**Sn**	**00 20 32.5**	**+2.4**
TRG				*e*		00 20 44.4	
TRG				pmax	pmax		
	comp=Z,187nm,0.3s						
TRG				smax			
	comp=E,1μm,0.3s						
TRG	**Tyrgan**	**3.17**	**79**	⇓*i*Pn	**Pn**	**00 19 53.9**	**+1.7**
TRG				*e*Pg	**Pg**	**00 20 01.3**	**-1.8**
TRG				Pmax		00 20 03.9	
	comp=E,183nm,0.2s						
TRG				*e*Sn	**Sn**	**00 20 32.4**	**+2.3**
TRG				*e*Sg	**Sg**	**00 20 43.9**	**-0.2**
TRG				Smax		00 20 46.4	
	comp=E,1μm,0.3s						
FFNB	**Fofonovo**	**3.42**	**92**	*e*	**Pn**	**00 19 59.1**	**+3.4**
FFNB				*e*Pg	**Pg**	**00 20 03.9**	**-4.0**
FFNB				*e*		00 20 05.9	
FFNB				max		00 20 09.8	
	comp=E,96nm,0.1s						
FFNB				*e*		00 20 40.6	
FFNB				*e*Sg	**Sg**	**00 20 49.1**	**-3.1**
FFNB				Smax		00 20 53.1	
	comp=E,4μm,0.9s						
HRMR	**Khuramsha**	**3.61**	**98**	*i* Pn	**Pn**	**00 20 01.4**	**+3.1**
HRMR				*e*Pg	**Pg**	**00 20 08.5**	**-3.0**
HRMR				Pmax		00 20 09.5	
	comp=E,256nm,0.5s						
HRMR				*e*		00 20 45.8	
HRMR				*e*Sg	**Sg**	**00 20 56.9**	**-1.3**
HRMR				Smax		00 20 59.1	
	comp=E,3μm,0.4s						
ZRHB	**Zarechye**	**3.64**	**83**	*e*Pg	**Pg**	**00 20 09.4**	**-2.7**
ZRHB				*e*		00 20 15.3	
ZRHB				max		00 20 17.2	
	comp=E,287nm,0.8s						
ZRHB				*e*Sg	**Sg**	**00 20 59.0**	**-0.3**
ZRHB				Smax		00 21 07.7	
	comp=E,2μm,1.2s						
UUDB	**Ulan-Yde**	**4.00**	**93**	*e*Pn	**Pn**	**00 20 06.0**	**+2.4**
UUDB				⇑*i*Pg	**Pg**	**00 20 14.4**	**-4.5**
UUDB				Pmax		00 20 16.4	
	comp=E,96nm,0.8s						
UUDB				*e*Sn	**Sn**	**00 20 53.9**	**+3.4**
UUDB				*e*Sg	**Sg**	**00 21 06.6**	**-4.1**
UUDB				Smax		00 21 10.8	
	comp=E,613nm,0.8s						
OGRR	**Ongureny**	**4.09**	**68**	*e*PN	**Pn**	**00 20 05.6**	**+0.7**
OGRR				*e*		00 20 16.8	
OGRR				*e*		00 21 11.8	
OGRR				pmax	pmax		
	comp=Z,65nm,0.6s						
OGRR				smax			
	comp=E,957nm,0.6s						
OGRR	**Ongureny**	**4.09**	**68**	*e*Pn	**Pn**	**00 20 06.4**	**+1.5**
OGRR				*e*Pg	**Pg**	**00 20 16.6**	**-4.0**
OGRR				Pmax		00 20 27.1	
	comp=E,66nm,0.3s						
OGRR				*e*Sn	**Sn**	**00 20 53.7**	**+1.0**
OGRR				*e*Sg	**Sg**	**00 21 11.3**	**-2.2**
OGRR				Smax		00 21 13.4	
	comp=E,965nm,0.4s						
MXMB	**Maximikha**	**4.67**	**75**	*e*Pn	**Pn**	**00 20 14.4**	**+1.5**
MXMB				*e*Pg	**Pg**	**00 20 26.5**	**-5.3**
MXMB				Pmax		00 20 33.4	
	comp=E,43nm,0.6s						
MXMB				*e*		00 21 08.1	
MXMB				*e*Sg	**Sg**	**00 21 27.8**	**-4.5**
MXMB				Smax		00 21 35.8	
	comp=E,806nm,0.9s						
SYVR	**Suvo**	**5.48**	**72**	*e*Pn	**Pn**	**00 20 26.2**	**+2.2**
SYVR				*e*		00 20 34.5	
SYVR				max		00 20 45.3	
	comp=E,15nm,0.4s						
SYVR				*e*Sn	**Sn**	**00 21 28.1**	**+1.1**
SYVR				*e*Sg	**Sg**	**00 21 54.0**	**-4.2**
SYVR				Smax		00 22 00.3	
	comp=E,307nm,2.6s						
SONM	**Songino Array**	**5.56**	**141**	Pn	**Pb**	**00 20 41.5**	**+2.0**
	comp=E,11nm,0.3s,baz=324,slow=18,SNR=51						
SONM				Sn	**Sg**	**00 21 56.8**	**-4.1**
	comp=E,18nm,0.3s,baz=324,slow=34,SNR=11						
ULN	**Ulaanbaatar**	**5.80**	**137**	*e*PN	**Pb**	**00 20 37.6**	**-6.0**
ULN				pmax	pmax		
	comp=Z,19nm,0.4s						
ULN	**Ulaanbaatar**	**5.80**	**137**	*e*Pn	**Pb**	**00 20 37.6**	**-6.0**
	comp=Z,19nm,0.4s						
ULN				Sn	**Sb**	**00 21 53.1**	**0.0**
NIZ	**Nizh Angarsk**	**6.02**	**51**	*e*PN	**Pn**	**00 20 32.9**	**+1.5**
NIZ				*e*		00 20 52.1	
NIZ				*e*		00 22 11.7	
NIZ				pmax	pmax		
	comp=Z,43nm,0.7s						
NIZ				smax			
	comp=N,1μm,1.3s						
NIZ	**Nizh Angarsk**	**6.02**	**51**	⇓*i*Pn	**Pn**	**00 20 32.7**	**+1.3**
NIZ				*e*		00 20 41.0	
NIZ				max		00 20 41.9	
	comp=N,58nm,0.3s						
NIZ				*e*Sn	**Sn**	**00 21 40.0**	**-0.3**
NIZ				*e*Sg	**Sg**	**00 22 12.4**	**-3.1**
NIZ				Smax		00 22 15.1	
	comp=N,1μm,1.1s						
YLYR	**Ulyunkhan**	**6.46**	**62**	*e*PN	**Pn**	**00 20 39.0**	**+1.5**
YLYR				*e*		00 20 59.9	
YLYR				*e*		00 22 25.6	
YLYR				pmax	pmax		
	comp=Z,13nm,0.4s						
YLYR				smax			
	comp=N,165nm,1.1s						
YLYR	**Ulyunkhan**	**6.46**	**62**	⇓*i*Pn	**Pn**	**00 20 39.0**	**+1.5**
YLYR				*e*		00 20 48.4	
YLYR				max		00 20 51.2	
	comp=N,27nm,0.3s						
YLYR				*e*		00 21 52.3	
YLYR				*e*Sg	**Sg**	**00 22 24.1**	**-5.6**
YLYR				Smax		00 22 27.6	
	comp=N,165nm,1.6s						
KMO	**Kumora**	**6.89**	**54**	⇑*i*Pn	**Pn**	**00 20 45.7**	**+2.4**
KMO				*e*		00 20 54.5	
KMO				max		00 20 55.0	
	comp=N,96nm,0.7s						
KMO				*e*Sn	**Sn**	**00 22 00.4**	**-1.3**
KMO				*e*Sg	**Sg**	**00 22 38.9**	**-4.4**
KMO				Smax		00 23 02.3	
	comp=N,200nm,0.8s						
KPC	**Khapcheranga**	**7.50**	**106**	*e*Sg	**Sg**	**00 22 56.0**	**-7.0**
KPC				Smax		00 23 02.6	
	comp=N,73nm,1.6s						
NLYR	**Nelyaty**	**9.44**	**58**	*e*Pn	**Pn**	**00 21 20.6**	**+2.4**
NLYR				*e*		00 21 38.1	
NLYR				max		00 21 44.0	
	comp=N,9.0nm,1.6s						
NLYR				*e*		00 23 20.0	
NLYR				*e*Sg	Sx	00 23 58.0	
NLYR				Smax		00 24 31.9	
	comp=N,124nm,1.1s						
ZALV	**Zalesovo Beam**	**10.00**	**286**	Pn	**Pn**	**00 21 25.8**	**-0.2**
	comp=N,0.1nm,0.3s,baz=90,slow=12,SNR=9.2						
ZALV				Pg	Px	00 21 59.5	
	comp=N,0.4nm,0.3s,baz=100,slow=16,SNR=4.8						
ZALV				Lg		00 24 05.2	
	comp=N,0.4nm,0.3s,baz=94,slow=21,SNR=5.9						
ZALV	**Zalesovo Beam**	**10.00**	**286**	Pn	**Pn**	**00 21 25.8**	**-0.2**
ZALV				Pg	Px	00 21 59.5	
ZALV				Lg		00 24 05.2	
TUP	**Tupik**	**11.40**	**72**	*e*	Sx	00 24 25.4	
TUP				*e*Sg	Sx	00 24 55.0	
TUP				Smax		00 25 21.1	
	comp=N,57nm,1.8s						
MK31	**Makanchi Array**	**13.45**	**253**	*e*P	**Pn**	**00 22 17.9**	**+4.8**
MKAR	**Makanchi Array**	**13.45**	**253**	Pn	**Pn**	**00 22 20.1**	**+7.0**
	comp=N,0.2nm,0.3s,baz=46,slow=8.3,SNR=3.5						
MKAR				Lg		00 25 58.9	
	comp=N,0.1nm,0.3s,baz=71,slow=31,SNR=4.9						
KURK	**Kurchatov**	**14.16**	**273**	Pn	**Pn**	**00 22 22.9**	**+0.2**
	comp=N,0.0nm,0.3s,baz=77,slow=13,SNR=8.3						
KURK				Lg		00 26 26.7	
	comp=N,0.0nm,0.3s,baz=221,slow=32,SNR=6.4						
KURK	**Kurchatov**	**14.16**	**273**	*e*P	**Pn**	**00 22 21.2**	**-1.5**
KURK				pmax	pmax		
	comp=Z,1.0nm,1.1s						
TKM2	**Tokmak 2**	**19.56**	**252**	*e*P	**Pn**	**00 23 33.8**	**+2.4**
TKM2				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TKM2	**Tokmak 2**	**19.56**	**252**	*e*P	**Pn**	**00 23 33.8**	**+2.4**
	comp=Z,4.2nm,1.0s						
UCH	**Uchtor**	**20.62**	**251**	*e*P	**P**	**00 23 45.9**	**+4.3**
	comp=Z,2.9nm,1.0s						
EKS2	**Erkin-Say**	**20.79**	**253**	*e*P	**P**	**00 23 48.5**	**+5.0**
	comp=Z,7.1nm,1.0s						
TIXI	**Tiksi**	**22.96**	**22**	*e*P	**P**	**00 24 02.5**	**-3.9**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.1						
TIXI	**Tiksi**	**22.96**	**22**	*e*P	**P**	**00 24 02.5**	**-3.9**
	comp=Z,4.6nm,0.6s,mb4.1						
KSRS	**Korea Array**	**23.86**	**118**	P	**P**	**00 24 24.9**	**+9.2**
	comp=Z,1.6nm,0.8s,mb3.5,baz=328,slow=7.7,SNR=7.6						
KSRS	**Korea Array**	**23.86**	**118**	P	**P**	**00 24 25.0**	**+9.3**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.6						
ARU	**Arti**	**24.89**	**297**	P	**P**	**00 24 22.8**	**-2.2**
ARU	**Arti**	**24.89**	**297**	P	**P**	**00 24 22.8**	**-2.2**
FINES	**FINESS Array B**	**39.85**	**314**	P	**P**	**00 26 33.8**	**-1.8**
	comp=Z,0.8nm,0.7s,mb3.6,baz=77,slow=13,SNR=3.7						
GNI	**Garni**	**39.93**	**275**	*e*P	**P**	**00 26 38.1**	**+1.6**
CSS	**Prodhromos**	**50.21**	**278**	P	**P**	**00 27 58.4**	**+0.2**
KMBO	**Kilima Mbogo**	**75.28**	**248**	*i* P	**P**	**00 30 47.7**	**+2.1**
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.4s						

NEIC ***20*** *00:43:17.5, 37°.85N×21°.41E, h27km, MD3.3(ATH), After ATH.*
ATH ***20*** *00:43:17.5, 37°.85N×21°.41E, h27km±2km, MD3.3/5*
THE ***20*** *00:43:18.4, 37°.85N×21°.43E, h9km±1km, ML2.7/5, Error ellipse: s-maj=1.5km s-min=0.5km az=97.0*
CSEM ***20*** *00:43:18.3±0.2, 37°.83N×21°.44E, h20km, MD3.3, Error ellipse: s-maj=3.7km s-min=3.0km az=59.0*
ISC 20 00:43:18.5±0.5, 37°.84N±0°.03×21°.43E±0°.04, h25km±4km, n42, σ0§82/64, 3D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.22**	**8**	⇓*i*Pb	**Pb**	**00 43 23.8**	**-0.5**
RLS				*e*Sb	**Sb**	**00 43 28.3**	**0.0**
RLS	**Riolos of Patr**	**0.22**	**8**	⇓*i*PB	**Pb**	**00 43 23.8**	**-0.5**
RLS				*e*SB	**Sb**	**00 43 28.3**	**0.0**
RLS	**Riolos of Patr**	**0.22**	**8**	⇓*i*Pb	**Pb**	**00 43 23.8**	**-0.5**
RLS				*e*Sb	**Sb**	**00 43 28.3**	**0.0**
UPR	**University Cam**	**0.52**	**33**	P	**Pb**	**00 43 28.4**	**-0.6**
UPR				S	**Sb**	**00 43 36.1**	**-0.1**
UPR	**University Cam**	**0.52**	**33**	P	**Pb**	**00 43 28.4**	**-0.6**
UPR				S	**Sb**	**00 43 36.1**	**-0.1**
KFL	**Anninata**	**0.57**	**298**	P	**Pb**	**00 43 29.2**	**-0.7**
LAKA	**Lakka**	**0.59**	**47**	P	**Pb**	**00 43 29.7**	**-0.4**
LAKA				S	**Sb**	**00 43 37.9**	**-0.2**
LAKA	**Lakka**	**0.59**	**47**	P	**Pb**	**00 43 29.7**	**-0.4**
LAKA				S	**Sb**	**00 43 37.9**	**-0.2**
EFP	**Efpalio**	**0.69**	**33**	P	**Pb**	**00 43 31.4**	**-0.5**
EFP				S	**Sb**	**00 43 41.5**	**+0.4**
EFP	**Efpalio**	**0.69**	**33**	*e*PN	**Pb**	**00 43 31.4**	**-0.5**
EFP				*e*SN	**Sn**	**00 43 41.7**	**-0.9**
EFP	**Efpalio**	**0.69**	**33**	P	**Pb**	**00 43 31.4**	**-0.5**
EFP				*e*Sn	**Sn**	**00 43 41.7**	**-0.9**
GUR	**Goura**	**0.73**	**82**	P	**Pb**	**00 43 31.8**	**-0.7**
GUR				S	**Sb**	**00 43 42.6**	**+0.5**
GUR	**Goura**	**0.73**	**82**	*e*PN	**Pn**	**00 43 31.7**	**-1.4**
GUR				*e*SN	**Sn**	**00 43 42.3**	**-1.2**
GUR	**Goura**	**0.73**	**82**	P	**Pb**	**00 43 31.8**	**-0.7**
GUR				*e*Sn	**Sn**	**00 43 42.3**	**-1.2**
GUR				S	**Sb**	**00 43 42.6**	**+0.5**
VLS	**Valsamata**	**0.74**	**297**	*e*Pn	**Pn**	**00 43 32.1**	**-1.2**
VLS	**Valsamata**	**0.74**	**297**	P	**Pb**	**00 43 32.2**	**-0.5**
VLS				S	**Sb**	**00 43 43.1**	**+0.7**
VLS	**Valsamata**	**0.74**	**297**	*e*PN	**Pn**	**00 43 32.1**	**-1.2**
VLS	**Valsamata**	**0.74**	**297**	P	**Pb**	**00 43 32.2**	**-0.5**
VLS				S	**Sb**	**00 43 43.1**	**+0.7**
ITM	**Ithomi**	**0.77**	**149**	*e*Pn	**Pn**	**00 43 33.5**	**-0.2**
ITM	**Ithomi**	**0.77**	**149**	P	**Pb**	**00 43 33.2**	**0.0**
ITM	**Ithomi**	**0.77**	**149**	*e*PN	**Pn**	**00 43 33.5**	**-0.2**
ITM	**Ithomi**	**0.77**	**149**	P	**Pb**	**00 43 33.2**	**0.0**
ITM	**Ithomi**	**0.77**	**149**	*e*Pn	**Pn**	**00 43 33.5**	**-0.2**
KALE	**Kalithea**	**0.78**	**46**	P	**Pb**	**00 43 33.0**	**-0.4**
KALE				S	**Sb**	**00 43 44.6**	**+1.0**
KALE	**Kalithea**	**0.78**	**46**	P	**Pb**	**00 43 33.0**	**-0.4**
KALE				S	**Sb**	**00 43 44.6**	**+1.0**
VLX	**Vlachokerasia**	**0.89**	**122**	P	**Pb**	**00 43 35.8**	**+0.6**
VLX				S	**Sb**	**00 43 48.6**	**+1.9**
VLX	**Vlachokerasia**	**0.89**	**122**	*e*PN	**Pn**	**00 43 35.7**	**+0.3**
VLX	**Vlachokerasia**	**0.89**	**122**	*e*Pn	**Pn**	**00 43 35.7**	**+0.3**
VLX				S	**Sb**	**00 43 48.6**	**+1.9**
PYL	**PYLOS**	**0.98**	**165**	P	**Pn**	**00 43 36.3**	**-0.3**
PYL	**PYLOS**	**0.98**	**165**	*e*PN	**Pn**	**00 43 36.3**	**-0.3**
PYL	**PYLOS**	**0.98**	**165**	P	**Pn**	**00 43 36.3**	**-0.3**
DSF	**Desfina**	**1.03**	**56**	P	**Pn**	**00 43 37.3**	**-0.1**
DSF	**Desfina**	**1.03**	**56**	P	**Pn**	**00 43 37.3**	**-0.1**
EVR	**Evrytania**	**1.11**	**15**	*e*Pn	**Pn**	**00 43 39.1**	**+0.7**
EVR	**Evrytania**	**1.11**	**15**	*e*PN	**Pn**	**00 43 39.1**	**+0.7**
EVR	**Evrytania**	**1.11**	**15**	*e*Pn	**Pn**	**00 43 39.1**	**+0.7**
LKD2	**Lefkada island**	**1.12**	**328**	P	**Pn**	**00 43 39.0**	**+0.4**
LKD2				S	**Sn**	**00 43 55.4**	**+2.2**
LKD2	**Lefkada island**	**1.12**	**328**	P	**Pn**	**00 43 39.0**	**+0.4**
LKD2				S	**Sn**	**00 43 55.4**	**+2.2**
LTK	**Loutraki**	**1.23**	**81**	P	**Pn**	**00 43 40.5**	**+0.5**
LTK	**Loutraki**	**1.23**	**81**	P	**Pn**	**00 43 40.5**	**+0.5**
AGG	**Agios Georgios**	**1.37**	**31**	P	**Pn**	**00 43 43.4**	**+1.4**
AGG	**Agios Georgios**	**1.37**	**31**	P	**Pn**	**00 43 43.4**	**+1.4**

ISCJB ***20*** *01:03:33.9±0.7, 21°.86N±0°.05×121°.83E±0°.03, h10km, Error ellipse: s-maj=6.8km s-min=3.0km az=166.1*
TAP ***20*** *01:03:35.5, 21°.92N×121°.72E, h18km, ML3.8, C*
JMA ***20*** *01:03:37.7±0.3, 21°.99N×121°.82E, h106km, M3.3*
NEIC ***20*** *01:03:42.9±4.5, 22°.53N×121°.64E, h10km, MG3.3(JMA), Error ellipse: s-maj=45.4km s-min=17.6km az=157.0*
ISC 20 01:03:34.7±0.7, 21°.87N±0°.05×121°.79E±0°.02, h10km, n53, σ1§14/74, 1C-2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.28**	**308**	⇓*i*P	**Pg**	**01 03 40.5**	**+0.3**
	baz=308						
TSEB	**Hengchuen, Pin**	**0.82**	**272**	⇑*i*P	**Pg**	**01 03 51.7**	**+1.1**
	baz=283						
TSEB				*e*S	**Sg**	**01 04 02.0**	**+0.7**
	baz=283						
TWK1	**Hengchun**	**0.91**	**275**	*e*P	**Pg**	**01 03 51.8**	**-0.5**
	baz=

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	baz=322						
CHN1	**Nanshi**	**1.75**	**319**	*e*P	**Pn**	**01 04 05.1**	**0.0**
	baz=319						
CHN1				S	**Sn**	**01 04 28.7**	**+1.2**
	baz=319						
TPUB	**Ta-pu**	**1.78**	**323**	*e*Pn	**Pn**	**01 04 05.7**	**+0.2**
TPUB				*e*Sg	**Sg**	**01 04 22.4**	**-10**
YUS	**Yu-Shan**	**1.79**	**335**	*e*P	**Pn**	**01 04 05.6**	**0.0**
	baz=335						
TWK	**Hsinying**	**1.84**	**319**	*e*P	**Pn**	**01 04 06.8**	**+0.5**
	baz=320						
CHN4	**Tsaushan**	**1.84**	**323**	*e*P	**Pn**	**01 04 07.6**	**+1.3**
	baz=311						
CHN4				*e*S	**Sn**	**01 04 30.9**	**+1.2**
	baz=311						
ALS	**Alishan**	**1.87**	**331**	*e*P	**Pn**	**01 04 08.2**	**+1.5**
	baz=332						
ESL	**Shilin**	**1.96**	**351**	P	**Pn**	**01 04 06.8**	**-1.3**
	baz=358						
CHN5	**Tsauling**	**2.00**	**329**	*e*P	**Pn**	**01 04 09.4**	**+0.9**
	baz=313						
CHN5				*e*S	**Sn**	**01 04 35.6**	**+2.0**
	baz=313						
CHY	**Chiayi**	**2.05**	**322**	*e*P	**Pn**	**01 04 10.2**	**+0.9**
	baz=323						
CHY				*e*S	**Sn**	**01 04 36.1**	**+1.2**
	baz=323						
SSLB	**Suanglung**	**2.06**	**338**	*e*Pn	**Pn**	**01 04 09.2**	**-0.2**
SMLT	**Sun Moon Lake**	**2.16**	**338**	*e*P	**Pn**	**01 04 11.3**	**+0.5**
	baz=348						
TYC	**Yuchr**	**2.20**	**337**	*e*P	**Pn**	**01 04 12.4**	**+1.2**
	baz=349						
TYC				*e*S	**Sn**	**01 04 40.8**	**+2.2**
	baz=349						
NACB	**Ninganchiao**	**2.30**	**356**	*e*Pn	**Pn**	**01 04 10.8**	**-1.8**
WHF	**Hehuan Shan**	**2.31**	**348**	*e*P	**Pn**	**01 04 12.7**	**-0.2**
	baz=358						
WHF				*e*S	**Sn**	**01 04 40.0**	**-1.4**
	baz=358						
TWT	**Tachien**	**2.44**	**347**	*e*P	**Pn**	**01 04 15.1**	**+0.5**
	baz=355						
ENA	**Nanau**	**2.55**	**359**	*e*P	**Pn**	**01 04 15.9**	**-0.2**
	baz=9.0						
NNS	**Nan Shan**	**2.59**	**352**	*e*P	**Pn**	**01 04 17.3**	**+0.7**
TWQ1	**Liyutan**	**2.64**	**340**	*e*P	**Pn**	**01 04 19.0**	**+1.7**
	baz=323						
PNG	**Penghu**	**2.66**	**310**	*e*P	**Pn**	**01 04 16.1**	**-1.5**
	baz=310						
NSY	**Sanyi**	**2.70**	**340**	*e*P	**Pn**	**01 04 19.8**	**+1.6**
	baz=324						
ENTT	**Nioudou**	**2.77**	**356**	*e*P	**Pn**	**01 04 20.9**	**+1.8**
	baz=357						
YHNB	**Yeheng**	**2.81**	**352**	*e*Pn	**Pn**	**01 04 19.5**	**-0.2**
YOJ	**Yonaguni jima**	**2.82**	**23**	P	**Pn**	**01 04 20.3**	**+0.5**
YOJ				*e*S	**Sn**	**01 04 52.8**	**-1.0**
NSK	**Sanguang**	**2.82**	**352**	P	**Pn**	**01 04 20.0**	**+0.2**
	baz=1.0						
TWE	**Neicheng**	**2.84**	**358**	*e*P	**Pn**	**01 04 21.3**	**+1.2**
	baz=7.0						
NSTT	**Nanjuang**	**2.84**	**345**	*e*P	**Pn**	**01 04 22.3**	**+2.2**
	baz=358						
HATJ	**Hateruma jima**	**2.87**	**40**	P	**Pn**	**01 04 21.0**	**+0.6**
HATJ				*e*S	**Sn**	**01 04 53.9**	**-1.1**
IRIF	**Iriomote-Funau**	**3.04**	**36**	P	**Pn**	**01 04 23.5**	**+0.7**
IRIF				*e*S	**Sn**	**01 04 58.3**	**-1.0**
JKRS	**Kuro-shima**	**3.12**	**41**	P	**Pn**	**01 04 24.9**	**+0.9**
JKRS				*e*S	**Sn**	**01 05 00.1**	**-1.3**
NWF	**Wu-fen Shan**	**3.19**	**360**	*e*P	**Pn**	**01 04 25.5**	**+0.6**
	baz=11						
JIJ	**Ishigaki jima**	**3.30**	**41**	P	**Pn**	**01 04 26.6**	**+0.2**
JTJ	**Tarama**	**3.85**	**44**	P	**Pn**	**01 04 34.6**	**+0.6**
JTJ				S	**Sn**	**01 05 17.8**	**-1.5**

*IDC **20** 01:22:23.8±1.8, 25°.90S×177°.99W, h235km±17km, mb3.6/11, mb1 3.8/12, mb1mx3.7/18, mbtmp3.6/12, Error ellipse: s-maj=21.8km s-min=19.0km az=176.0*
*ISCJB **20** 01:22:23.6±0.9, 25°.95S±0°.06×178°.1W±0°.1, h245km±8km, mb3.7/14, Error ellipse: s-maj=19.0km s-min=10.5km az=4.0*
*NEIC **20** 01:22:24.2±0.9, 25°.93S×178°.03W, h242km±8km, mb4.2/4, Error ellipse: s-maj=14.8km s-min=10.6km az=91.0*
ISC 20 01:22:24.3±1.0, 25°.94S±0°.08×178°.1W±0°.1, h238km±9km, n34, σ0§70/24, mb3.7/14, 1C-1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.30**	**178**	P	**Pn**	**01 23 19.6**	**+0.2**
	196nm,0.3s,baz=28,slow=20,SNR=9.1						
RAO				S	**S**	**01 24 03.0**	**-0.1**
	257nm,0.3s,baz=245,slow=23,SNR=6.6						
MSVF	**Nonsavu**	**8.93**	**335**	*e*Pn	**Pn**	**01 24 29.3**	**-0.2**
	24nm,0.9s						
URZ	**Urewera**	**12.94**	**197**	P	**Pn**	**01 25 19.8**	**0.0**
	0.5nm,0.3s,baz=174,slow=17,SNR=1.8						
URZ				S	**S**	**01 27 34.7**	**-9.0**
	2.4nm,0.3s,baz=259,slow=21,SNR=14						
AFI	**Afiamalu**	**13.34**	**27**	P	**Pn**	**01 25 17.9**	**-7.1**
	3.4nm,0.3s,baz=22,slow=23,SNR=2.4						
AFI				S	S	01 27 30.2	-23
	5.7nm,0.3s,baz=54,slow=21,SNR=3.0						
RPZ	**Rata Peaks**	**19.82**	**204**	P	**P**	**01 26 41.1**	**+4.0**
	0.6nm,0.3s,baz=28,slow=8.5,SNR=4.5						
RPZ				S	**S**	**01 30 02.1**	**-4.9**
	0.3nm,0.3s,baz=76,slow=18,SNR=2.0						
CTA	**Charters Tower**	**33.28**	**273**	P	**P**	**01 28 40.9**	**+1.2**
	0.7nm,0.3s,mb3.7,baz=107,slow=8.7,SNR=5.4						
CTA	**Charters Tower**	**33.28**	**273**	P	**P**	**01 28 40.9**	**+1.2**
ASAR	**Alice Springs**	**43.47**	**262**	P	**P**	**01 30 04.3**	**0.0**
	0.7nm,0.3s,mb3.5,baz=92,slow=7.5,SNR=9.4						
WRAB	**Tennant Creek**	**44.04**	**268**	*e*P	**P**	**01 30 02.8**	**-6.1**
	6.0nm,0.8s,mb4.0						
WRA	**Warramunga Arr**	**44.05**	**268**	P	**P**	**01 30 08.2**	**-0.8**
	0.6nm,0.3s,mb3.4,baz=103,slow=7.8,SNR=3.4						
WRA	**Warramunga Arr**	**44.05**	**268**	P	**P**	**01 30 08.2**	**-0.8**
FORT	**Forrest**	**47.28**	**251**	*e*P	**P**	**01 30 32.9**	**-1.2**
	9.3nm,0.9s,mb4.1						
CASY	**Casey**	**59.07**	**207**	*e*P	**P**	**01 31 58.6**	**-0.6**
	6.0nm,0.9s,mb4.2						
QSPA	**South Pole Qui**	**64.16**	**180**	P	**P**	**01 32 32.4**	**-0.5**
	1.9nm,0.9s,mb3.7,baz=105,slow=3.1,SNR=4.0						
MAW	**Mawson**	**76.45**	**200**	P	**P**	**01 33 48.4**	**+1.1**
	1.6nm,0.5s,mb4.0,baz=137,slow=6.4,SNR=8.4						
KSRS	**Korea Array**	**80.93**	**319**	P	**P**	**01 34 12.1**	**-0.1**
	1.2nm,0.6s,mb3.7,baz=137,slow=6.1,SNR=6.6						
PETK	**Petropavlovsk-**	**81.49**	**346**	P	**P**	**01 34 14.2**	**-0.4**
	1.4nm,0.5s,mb3.9,baz=110,slow=7.8,SNR=6.7						
NVAR	**Mina Array Bea**	**85.02**	**43**	P	**P**	**01 34 33.6**	**+0.6**
	1.1nm,0.7s,mb3.7,baz=218,slow=9.1,SNR=7.4						
TXAR	**Lajitas Array**	**90.03**	**57**	P	**P**	**01 34 56.6**	**-0.6**
	0.2nm,0.6s,mb3.1,baz=185,slow=4.5,SNR=4.1						
CMAR	**Chiang Mai Arr**	**91.87**	**290**	P	**P**	**01 35 07.1**	**+1.2**
	0.4nm,0.3s,mb3.8,baz=146,slow=2.6,SNR=4.3						
PDAR	**Pinedale Array**	**92.95**	**43**	P	**P**	**01 35 10.3**	**0.0**
	0.4nm,0.7s,mb3.6,baz=191,slow=0.9,SNR=2.8						
KBL	**Kabul**	**122.32**	**296**	*e*PKPdf	PKPdf	01 40 51.0	-0.2
BVAR	**Borovoye Array**	**123.12**	**318**	PKP	PKPdf	01 40 51.3	-0.8
	0.8nm,0.6s,baz=143,slow=0.7,SNR=5.0						
ARCES	**ARCESS Array B**	**134.23**	**349**	PKP	PKPdf	01 41 13.2	+0.5
	1.7nm,0.7s,baz=35,slow=3.3,SNR=7.7						
JOF	**Joensuu**	**138.24**	**340**	*e*p	PKPdf	01 41 18.1	-2.2
JOF	**Joensuu**	**138.24**	**340**	*e*p	PKPdf	01 41 18.1	-2.2
FINES	**FINESS Array B**	**140.93**	**342**	PKhKP		01 41 17.4	
	2.6nm,0.9s,baz=35,slow=4.7,SNR=7.2						
NOA	**NORSAR Array B**	**144.34**	**352**	PKP	PKPdf	01 41 28.6	-2.7
	4.8nm,0.7s,baz=16,slow=2.4,SNR=15						
AKASG	**Malin Array Be**	**147.63**	**327**	PKPbc	PKPbc	01 41 39.2	-1.1
	1.4nm,0.3s,baz=44,slow=4.1,SNR=11						
AKASG	**Malin Array Be**	**147.63**	**327**	PKPbc	PKPbc	01 41 39.2	-1.1
MMAI	**Mount Meron Ar**	**150.11**	**292**	PKPbc	PKPbc	01 41 47.8	+0.7
	1.7nm,0.4s,baz=87,slow=6.1,SNR=7.6						
BR131	**Keskin Array S**	**150.19**	**305**	*e*PKPbc	PKPbc	01 41 46.7	-0.3
BR131				*e*PKPab	PKPab	01 41 53.6	-0.5
BRTR	**Keskin Array B**	**150.19**	**305**	PKPbc	PKPbc	01 41 46.5	-0.6
	0.7nm,0.4s,baz=117,slow=4.3,SNR=6.0						
BRTR				PKPab	PKPab	01 41 53.5	-0.6
	2.3nm,0.7s,baz=109,slow=3.8,SNR=13						
CLL	**Collm**	**153.29**	**344**	⇓*i*PKPbc	PKPbc	01 41 52.9	-0.8
	comp=Z,4.0nm,0.9s						
CLL				⇑*i*PKPab	PKPab	01 42 05.8	-0.8
	comp=Z,5.0nm,0.7s						

CASC 20 01:29:57.6±2.1, 11°.84N×87°.79W, h4km, MD4.0, 1C-1D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEON	**Leon**	**1.05**	**57**	*e*P	Pg	01 30 18.1	+0.3
TELN	**Telica**	**1.21**	**51**	*e*P	Pg	01 30 20.6	-0.2
COPN	**Copaltepe**	**1.22**	**74**	*i* P	Pg	01 30 20.2	-0.9
COPN				*e*P		01 30 20.2	
MOMN	**Momotombo**	**1.35**	**65**	*e*P	Pn	01 30 22.4	-0.8
CSAN		**1.38**	**75**	*e*P	Pn	01 30 22.2	-1.4
CSAN				*e*S	Sb	01 30 41.5	-0.5
CNCH	**Conchagua**	**1.43**	**358**	*e*P	Pn	01 30 24.4	+0.1
CNCH				*e*P		01 30 24.5	
CNCH				*e*S	Sb	01 30 44.2	+0.8
XAVN	**Gruta Xavier**	**1.47**	**78**	*e*P	Pn	01 30 23.5	-1.3
VSM	**San Miguel**	**1.65**	**343**	*e*P	Pn	01 30 28.2	+0.8
BLLM	**Bellamira**	**1.65**	**345**	*e*P	Pn	01 30 27.3	-0.1
HUEN		**1.66**	**72**	*e*P	Pn	01 30 26.2	-1.3
APON	**Apoyo**	**1.69**	**87**	*e*P	Pn	01 30 26.6	-1.4
CAHU	**Cacacuatique**	**1.96**	**348**	*e*P	Pn	01 30 32.6	+0.9
BOAB	**BOACO BROADBAN**	**2.17**	**73**	*e*P	Pn	01 30 32.5	-1.9
LFRS	**El Faro**	**2.17**	**325**	*e*P	Pn	01 30 34.2	-0.2
LFRS				*e*S	Sn	01 31 00.9	-0.8
BOQS	**Boqueron**	**2.38**	**323**	*e*P	Pn	01 30 37.9	+0.5
BOQS				*e*P		01 30 39.0	
BOQS				*e*S	Sn	01 31 07.4	+0.3
PRS1	**Puriscal**	**3.88**	**118**	*e*P	Pn	01 30 59.7	+1.6
LAJ	**Bijagual**	**4.10**	**118**	*e*P	Pn	01 30 56.0	-5.2
QCR	**Quepos**	**4.30**	**124**	*e*P	Pn	01 31 03.2	-0.6
URSC	**Urasca**	**4.42**	**116**	⇓*e*P	Pn	01 31 07.2	+1.8
URSC				*e*S	Sn	01 31 55.7	-1.6
BUS	**Buena Vista**	**4.57**	**119**	⇑*e*P	Pn	01 31 08.3	+0.8
BUS				*e*S	Sn	01 31 57.3	-3.7
BAR1		**5.10**	**120**	*e*P	Pn	01 31 14.7	-0.2
BAR1				*e*S	Sn	01 32 08.5	-5.8
ACR	**Cerro Adams**	**5.54**	**124**	*e*P	Pn	01 31 20.5	-0.4

*ISCJB **20** 01:34:10.0±0.4, 36°.06N±0°.03×0°.63W±0°.03, h10km, Error ellipse: s-maj=3.8km s-min=3.0km az=173.2*
*CRAAG **20** 01:34:11.4, 35°.71N×0°.37W, Ml3.5*
*NEIC **20** 01:34:12.6, 35°.82N×0°.52W, h34km, MG4.0(MDD), After MDD.*
*MDD **20** 01:34:12.1±0.5, 35°.84N×0°.56W, h21km±7km, mb3.8/11, Error ellipse: s-maj=9.7km s-min=5.1km az=179.0, PRIMO*
*INMG **20** 01:34:13.4±1.2, 35°.91N×0°.55W, h31km, ML2.3, Error ellipse: s-maj=6.0km s-min=3.2km az=152.0*
*CSEM **20** 01:34:13.0±0.3, 35°.95N×0°.58W, h30km, mb4.0/11, Error ellipse: s-maj=6.7km s-min=4.5km az=177.0*
ISC 20 01:34:11.4±0.4, 36°.04N±0°.03×0°.65W±0°.03, h10km, n173, σ1§52/297, Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USTO	**Oran**	**0.32**	**166**	P	**Pg**	**01 34 16.0**	**-1.7**
USTO	**Oran**	**0.32**	**166**	P	**Pg**	**01 34 16.0**	**-1.7**
USTO	**Oran**	**0.32**	**166**	P	**Pg**	**01 34 16.0**	**-1.7**
EANR	**'Ain N'Sour**	**1.42**	**93**	P	**Pn**	**01 34 35.0**	**-2.2**
EANR	**'Ain N'Sour**	**1.42**	**93**	P	**Pn**	**01 34 35.0**	**-2.2**
EANR	**'Ain N'Sour**	**1.42**	**93**	P	**Pn**	**01 34 35.0**	**-2.2**
EANR	**'Ain N'Sour**	**1.42**	**93**	P	**Pn**	**01 34 35.0**	**-2.2**
ENIJ	**Nijar**	**1.56**	**307**	P	**Pn**	**01 34 39.6**	**+0.4**
ENIJ				S	**Sn**	**01 34 57.5**	**-2.0**
ENIJ	**Nijar**	**1.56**	**307**	P	**Pn**	**01 34 39.6**	**+0.4**
	5.1nm,0.2s,SNR=9.3						
ENIJ				S	**Sn**	**01 34 57.5**	**-2.0**
	31nm,0.2s,SNR=21						
ENIJ	**Nijar**	**1.56**	**307**	P	**Pn**	**01 34 39.6**	**+0.4**
	5.1nm,0.2s,SNR=9.3						
ENIJ				S	**Sn**	**01 34 57.5**	**-2.0**
	31nm,0.2s,SNR=21						
ENIJ	**Nijar**	**1.56**	**307**	P	**Pn**	**01 34 39.6**	**+0.4**
	5.1nm,0.2s,SNR=9.3						
ENIJ				S	**Sn**	**01 34 57.5**	**-2.1**
	31nm,0.2s,SNR=21						
ECHF	**Ech Chlef**	**1.61**	**85**	P	**Pn**	**01 34 38.5**	**-1.4**
ECHF	**Ech Chlef**	**1.61**	**85**	P	**Pn**	**01 34 38.5**	**-1.4**
ECHA	**Ech Chlef**	**1.63**	**86**	P	**Pn**	**01 34 38.5**	**-1.7**
ECHA	**Ech Chlef**	**1.63**	**86**	P	**Pn**	**01 34 38.5**	**-1.7**
ETRT	**Tiaret**	**1.71**	**112**	P	**Pn**	**01 34 37.5**	**-3.7**
ETRT	**Tiaret**	**1.71**	**112**	P	**Pn**	**01 34 37.5**	**-3.7**
ETRT	**Tiaret**	**1.71**	**112**	P	**Pn**	**01 34 37.5**	**-3.7**
ETRT	**Tiaret**	**1.71**	**112**	P	**Pn**	**01 34 37.5**	**-3.7**
EBNR	**Beni Rached**	**1.78**	**81**	P	**Pn**	**01 34 39.8**	**-2.4**
EBNR	**Beni Rached**	**1.78**	**81**	P	**Pn**	**01 34 39.8**	**-2.4**
EALB	**Alboran**	**1.94**	**268**	P	**Pn**	**01 34 43.0**	**-1.4**
EALB				S	**Sn**	**01 35 06.4**	**-2.4**
EALB	**Alboran**	**1.94**	**268**	P	**Pn**	**01 34 43.0**	**-1.4**
	2.6nm,0.1s,SNR=7.9						
EALB				S	**Sn**	**01 35 06.4**	**-2.4**
	22nm,0.4s,SNR=7.9					

0.6nm,0.3s,baz=140,slow=13,SNR=19
ESDC S **Sn** **01 36 07.8 -3.6**
1.9nm,0.2s,baz=139,slow=23,SNR=22
ESDC Sonseca Array 4.48 325 P **Pn** **01 35 21.4 +2.1**
0.6nm,0.3s,slow=13,SNR=19
ESDC S **Sn** **01 36 07.8 -3.6**
1.9nm,0.2s,slow=23,SNR=22
ETOS Mallorca 4.62 35 P **Pn** **01 35 21.8 +0.6**
ETOS S **Sn** **01 36 12.7 -2.2**
ETOS Mallorca 4.62 35 P **Pn** **01 35 21.8 +0.6**
1.2nm,0.2s,SNR=7.3
ETOS S **Sn** **01 36 12.7 -2.2**
0.4nm,0.1s,SNR=7.9

YHNB Yeheng 39.88 319 *e*P **P 02 24 20.1 +0.7**
comp=Z,15nm,0.6s,mb4.7
URZ Urewera 41.87 146 P **P 02 24 35.1 +0.2**
comp=Z,12nm,0.4s,mb4.7,baz=333,slow=2.9,SNR=16
URZ Urewera 41.87 146 *e*P **P 02 24 35.0 +0.1**
comp=Z,14nm,0.8s,mb4.5
MJAR Matsushiro Arr 42.45 347 P **P 02 24 38.9 -0.6**
comp=Z,11nm,0.7s,mb4.5,baz=174,slow=9.0,SNR=31
MJAR PcP PcP 02 26 17.4 -0.4
comp=Z,1.6nm,0.7s,baz=162,slow=3.1,SNR=4.1
MJAR ScP ScP 02 29 10.0 -1.1
comp=Z,0.9nm,0.6s,baz=177,slow=4.8,SNR=4.3
MJAR Matsushiro Arr 42.45 347 P **P 02 24 38.9 -0.6**
MJAR 02 26 17.4
MAJO Matsushiro 42.45 347 *e*P **P 02 24 39.5 0.0**
MAJO pmax pmax
comp=Z,28nm,1.0s,mb4.8
MAJO Matsushiro 42.45 347 *e*P **P 02 24 39.5 0.0**
comp=Z,28nm,1.0s,mb4.7
MAT Matsushiro 42.45 347 P **P 02 24 37.9 -1.6**
MAT S **S 02 30 15.0 -3.4**
RPZ Rata Peaks 43.25 157 P **P 02 24 46.0 +0.4**
comp=Z,69nm,1.0s,mb5.1,baz=14,slow=3.4,SNR=29
RPZ Rata Peaks 43.25 157 *e*P **P 02 24 45.7 +0.2**
comp=Z,74nm,1.0s,mb5.2
KSRS Korea Array 46.51 337 P **P 02 25 10.6 +0.1**
comp=Z,11nm,0.7s,mb4.5,baz=155,slow=8.0,SNR=50
KSRS PcP PcP 02 26 32.1 +0.1
comp=Z,1.5nm,0.7s,baz=148,slow=3.9,SNR=5.6
KSRS pP pP 02 27 02.8 +3.6
comp=Z,1.3nm,0.9s,baz=151,slow=10,SNR=2.4
NJ2 Nanjing 46.66 324 *e*P **P 02 25 12.6 +0.9**
NJ2 pmax pmax
comp=Z,20nm,0.6s,mb4.8
WHN Wuhan 48.42 319 P **P 02 25 25.0 +0.1**
ASAJ Asahikawa 49.13 354 P **P 02 25 30.4 +0.6**
comp=Z,9.1nm,0.4s,mb4.6,baz=230,slow=17,SNR=9.9
GYA Guiyang 51.55 309 *e*P **P 02 25 47.3 -0.4**
GYA pP pP 02 27 42.6 +2.5
GYA sP sP 02 28 50.0 +3.3
GYA ScP ScP 02 29 50.4 +0.6
GYA PcS PcS 02 30 49.6 -0.5
GYA S **S 02 32 25.4 +1.3**
GYA ScS ScS 02 34 31.3 -2.5
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.1
YSS Yuzh-Sakhalins 51.92 354 *e*P **P 02 25 49.6 -0.3**
YSS pmax pmax
comp=Z,15nm,0.3s,mb4.8
YSS Yuzh-Sakhalins 51.92 354 *e*P **P 02 25 49.6 -0.3**
comp=Z,14nm,0.3s,mb4.8
MDJ Mudanjiang 52.30 342 P **P 02 25 52.9 +0.2**
MDJ pP pP 02 27 46.0 +0.4
MDJ PP PP 02 28 00.6 -0.1
MDJ sP sP 02 28 53.8 +1.8
MDJ ScP ScP 02 29 51.6 -1.0
MDJ S **S 02 32 33.0 -0.4**
MDJ pmax pmax
comp=Z,16nm,1.0s,mb4.3
MDJ pmax pmax
comp=Z,82nm,4.2s
CN2 Changchun 52.95 339 *e*P **P 02 25 57.3 0.0**
CN2 pmax pmax
comp=Z,10.0nm,0.4s,mb4.5
BJI Beijing 53.99 329 P **P 02 26 04.3 -0.4**
BJI S **S 02 32 52.8 -3.0**
BJI pmax pmax
comp=Z,17nm,1.6s,mb4.1
KMI Kunming 54.01 306 P **P 02 26 07.3 +2.1**
KMI pP pP 02 28 03.1 +3.9
KMI PP PP 02 28 20.8 +4.6
KMI S **S 02 32 58.1 +1.6**
KMI sS sS 02 36 23.6 +2.0
KMI SS SS 02 36 54.8 +3.7
KMI pmax pmax
comp=Z,9.0nm,0.8s,mb4.2
KMI pmax pmax
comp=Z,68nm,5.5s
XAN Xi'an 54.19 319 P **P 02 26 05.8 -0.5**
XAN pmax pmax
comp=Z,4.0nm,0.8s,mb3.8
XAN pmax pmax
comp=Z,17nm,10.7s
HABR Khabarovsk 54.54 349 *de*P **P 02 26 06.9 -1.5**
HABR *e* 02 27 00.4
HABR *e**PP pP 02 27 58.9 -3.9
HABR *e* 02 28 18.1
HABR *e*S **S 02 33 02.0 -0.7**
HABR *e* 02 34 53.5
HABR *e**SS sS 02 36 25.0 -3.3
HABR *e*SS SS 02 36 58.7 0.0
HABR pmax pmax
comp=E,61nm,1.9s
HABR pmax pmax
comp=Z,91nm,1.8s,mb4.8
HABR pmax pmax
comp=N,17nm,0.7s
CMAR Chiang Mai Arr 54.59 297 P **P 02 26 09.9 +0.5**
comp=N,1.4nm,0.5s,mb3.6,baz=119,slow=5.8,SNR=7.6
CMAR pP pP 02 28 05.9 +2.1
comp=N,0.6nm,0.4s,baz=109,slow=5.2,SNR=1.2
KLR Kul'dur 55.97 346 *e*P **P 02 26 14.4 -3.9**
KLR *e* 02 27 02.7
CD2 Chengdu 56.03 313 *e*P **P 02 26 21.8 +2.7**
CD2 pP pP 02 28 16.4 +2.0
CD2 PP PP 02 28 38.9 +4.9
CD2 sP sP 02 29 19.9 -0.2
CD2 S **S 02 33 26.6 +4.0**
CD2 sS sS 02 36 48.9 -0.7
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.2
CD2 pmax pmax
comp=Z,30nm,5.2s
HHC Hu-ho-hao-te 57.02 327 *e*P **P 02 26 25.8 +0.1**
HHC S **S 02 33 34.9 0.0**
HHC pmax pmax
comp=Z,17nm,1.0s,mb4.2
HHC pmax pmax
comp=Z,98nm,5.2s
PEA0B Petropavlovsk- 58.23 6 *e*P **P 02 26 33.7 +0.1**
PETK Petropavlovsk- 58.23 6 P **P 02 26 34.1 +0.5**
comp=Z,30nm,0.6s,mb4.6,baz=169,slow=6.7,SNR=68
PETK PcP PcP 02 27 16.0 -0.4
comp=Z,3.8nm,0.7s,baz=143,slow=2.5,SNR=2.0
PET Petropavlovsk 58.26 7 *e*P **P 02 26 33.8 +0.1**
PET pmax pmax
comp=Z,37nm,0.8s,mb4.6
PET Petropavlovsk 58.26 7 *e*P **P 02 26 33.9 +0.1**
comp=Z,25nm,0.8s,mb4.4
LZH Lanzhou 58.76 318 *e*P **P 02 26 38.8 +1.3**
LZH PcP PcP 02 27 18.4 -0.5
LZH pP pP 02 28 37.9 +3.3
LZH PP PP 02 28 59.3 +1.4
LZH sP sP 02 29 37.9 -1.8
LZH *e*S **S 02 33 59.0 +1.9**
LZH sS sS 02 37 22.3 -4.5
LZH pmax pmax
comp=Z,33nm,1.0s,mb4.4
LZH pmax pmax
comp=Z,160nm,6.0s
HIA Hailar 59.67 338 *e*P **P 02 26 43.6 +0.4**
HIA pmax pmax
comp=Z,29nm,0.8s
HIA Hailar 59.67 338 *e*P **P 02 26 43.5 +0.3**
comp=Z,29nm,0.8s,mb4.6
FX1 Attu Island--F 61.05 16 P **P 02 26 52.6 +0.4**
comp=Z,30nm,0.6s,mb4.7,baz=212,slow=2.2,SNR=94
FX1 PcP PcP 02 27 27.4 -0.4
comp=Z,7.1nm,0.8s,baz=291,slow=8.6,SNR=2.1
GTA Gaotai 63.25 319 ⇓P **P 02 27 07.5 +0.8**
GTA pP pP 02 29 09.5 +3.0
GTA PP PP 02 29 39.0 +2.1
GTA sP sP 02 30 12.1 +1.3
GTA S **S 02 34 53.3 +1.1**
GTA sS sS 02 38 22.6 -3.6
GTA SS SS 02 39 17.5 +2.8
GTA pmax pmax
comp=Z,12nm,1.2s,mb4.1
GTA pmax pmax
comp=Z,120nm,8.4s
ADK Adak 63.62 23 *e*P **P 02 27 09.3 +0.5**
ADK pmax pmax
comp=Z,112nm,1.5s,mb5.0
ADK Adak 63.62 23 *e*P **P 02 27 09.3 +0.5**
comp=Z,112nm,1.5s,mb5.0

ULN Ulaanbaatar 64.17 330 *e*P **P 02 27 13.2 +0.9**
ULN pmax pmax
comp=Z,17nm,1.0s,mb4.3
ULN Ulaanbaatar 64.17 330 *e*P **P 02 27 13.2 +0.8**
comp=Z,17nm,1.0s,mb4.3
SONM Songino Array 64.48 330 P **P 02 27 14.8 +0.5**
comp=Z,17nm,0.9s,mb4.4,baz=142,slow=5.3,SNR=72
SONM PcP PcP 02 27 41.9 -0.1
comp=Z,1.9nm,0.7s,baz=154,slow=5.9,SNR=2.8
SONM pP pP 02 29 16.6 +1.8
comp=Z,0.5nm,0.6s,baz=150,slow=6.1,SNR=1.7
CLNS Chul'man 64.61 346 *e*P **P 02 27 15.5 +0.6**
CLNS pmax pmax
comp=Z,33nm,0.9s,mb4.8
CLNS pmax pmax
comp=N,18nm,0.8s
CLNS pmax pmax
comp=E,7.0nm,0.8s
ATKA Atka Island 64.86 24 *e*P **P 02 27 16.4 -0.1**
comp=E,26nm,0.9s,mb4.7
LSA Lhasa 65.26 306 *e*P **P 02 27 20.5 +0.9**
LSA pmax pmax
comp=Z,9.0nm,0.6s,mb4.4
LSA Lhasa 65.26 306 *e*P **P 02 27 20.5 +0.9**
comp=Z,9.0nm,0.6s,mb4.4
CASY Casey 66.88 196 *e*P **P 02 27 28.1 -0.8**
comp=Z,29nm,1.4s,mb4.5
SEY Seymchan 67.68 2 *d i*P **P 02 27 33.0 -0.7**
ZAK Zakamensk 67.69 330 *e*P **P 02 27 33.9 -0.2**
ZAK pmax pmax
comp=Z,17nm,0.8s,mb4.5
TLY Talaya 68.35 331 *e*P **P 02 27 38.3 +0.3**
TLY pmax pmax
comp=Z,9.0nm,0.9s,mb4.2
TLY Talaya 68.35 331 *e*P **P 02 27 38.3 +0.3**
comp=Z,8.7nm,0.9s,mb4.2
YAK Yakutsk 68.38 350 *e*P **P 02 27 36.2 -1.8**
YAK pmax pmax
comp=E,7.0nm,1.1s
YAK pmax pmax
comp=Z,20nm,1.1s,mb4.5
YAK pmax pmax
comp=N,14nm,1.6s
UNV Unalaska Valle 69.29 26 *e*P **P 02 27 43.7 +0.1**
comp=N,23nm,0.8s,mb4.7
MOY Mondy 69.62 330 *e*P **P 02 27 46.6 +1.0**
MOY pmax pmax
comp=Z,20nm,1.5s,mb4.3
AKUT Akutan 69.81 26 *e*P **P 02 27 46.9 +0.2**
comp=Z,54nm,0.7s,mb5.1
SDPT Sand Point 72.96 27 *e*P **P 02 28 04.1 -0.9**
comp=Z,54nm,0.9s,mb5.1
WMQ Urumqi 73.33 318 *e*P **P 02 28 10.0 +2.6**
SBA Scott Base 73.51 176 *e*P **P 02 28 09.2 +1.4**
SBA pmax pmax
comp=Z,116nm,2.6s,mb5.0
SBA Scott Base 73.51 176 *e*P **P 02 28 09.2 +1.4**
comp=Z,116nm,2.6s,mb5.0
BILL Bilibino 73.76 7 *e*P **P 02 28 09.5 +0.2**
BILL pmax pmax
comp=Z,30nm,1.1s,mb4.7
BILL Bilibino 73.76 7 *e*P **P 02 28 09.5 +0.3**
comp=Z,30nm,1.1s,mb4.7
CHGN Chignik 74.46 27 *e*P **P 02 28 12.8 -0.7**
OHAK Old Harbor 77.33 28 *e*P **P 02 28 29.4 +0.2**
comp=Z,16nm,0.9s,mb4.5
TIXI Tiksi 77.53 354 *e*P **P 02 28 28.7 -1.3**
TIXI pmax pmax
comp=Z,12nm,1.0s,mb4.3
TIXI Tiksi 77.53 354 *e*P **P 02 28 28.7 -1.3**
comp=Z,12nm,1.0s,mb4.3
KDAK Kodiak Island 77.95 28 *i*P **P 02 28 32.9 +0.4**
comp=Z,8.8nm,0.8s,mb4.2,baz=168,slow=3.7,SNR=6.3
KDAK Kodiak Island 77.95 28 *i*P **P 02 28 33.2 +0.7**
MK31 Makanchi Array 77.98 320 *e*P **P 02 28 33.0 0.0**
MKAR Makanchi Array 77.98 320 P **P 02 28 32.8 -0.2**
comp=Z,7.7nm,0.6s,mb4.3,baz=95,slow=8.2,SNR=54
MKAR pP pP 02 30 41.8 +1.6
comp=Z,0.3nm,0.6s,baz=91,slow=8.8,SNR=1.8
MKAR Makanchi Array 77.98 320 *ce*P **P 02 28 33.0 0.0**
MKAR pmax pmax
comp=Z,8.0nm,0.6s
SVW2 Sparrevohn 78.38 24 *e*P **P 02 28 35.7 +1.0**
ZAA0 Zalesovo Array 79.20 327 *e*P **P 02 28 37.8 -1.4**
ZALV Zalesovo Beam 79.20 327 P **P 02 28 37.8 -1.4**
comp=Z,5.2nm,0.4s,mb4.2,baz=111,slow=5.5,SNR=26
RSO Redoubt South 79.22 25 *e*P **P 02 28 39.4 +0.2**
TTA Tatalina 79.23 22 *e*P **P 02 28 39.7 +0.5**
KSH Kashi 80.20 311 *e*P **P 02 28 46.1 +1.3**
KSH pP pP 02 30 53.3 +0.3
KSH sP sP 02 31 52.8 -2.2
KSH PP PP 02 31 59.8 +0.7
KSH SKS 02 38 02.6
KSH sS sS 02 41 43.6 -5.5
KSH SS SS 02 43 31.3 +0.8
KSH pmax pmax
comp=Z,8.0nm,1.0s,mb4.0
KSH pmax pmax
comp=Z,59nm,3.8s
NVS Novosibirsk 80.40 328 *i*P **P 02 28 44.3 -1.2**
NVS pmax pmax
comp=N,10.0nm,1.7s
NVS pmax pmax
comp=E,13nm,1.7s
NVS pmax pmax
comp=Z,24nm,1.7s,mb4.2
SEW Seward 80.49 27 *e*P **P 02 28 45.7 -0.1**
comp=Z,25nm,1.0s,mb4.5
PPLA Purkeypile 80.69 23 *e*P **P 02 28 46.4 -0.4**
comp=Z,14nm,1.1s,mb4.3
RC01 Rabbit Creek A 80.82 26 *e*P **P 02 28 46.9 -0.6**
comp=Z,64nm,1.1s,mb5.0
CHUM Lake Minchumin 81.14 22 *e*P **P 02 28 49.3 +0.2**
comp=Z,61nm,1.0s,mb5.0
PMR Palmer 81.31 25 *e*P **P 02 28 49.4 -0.6**
PMR pmax pmax
comp=Z,26nm,0.9s,mb4.7
PMR Palmer 81.31 25 *e*P **P 02 28 49.4 -0.6**
comp=Z,26nm,0.9s,mb4.7
KZA Kyzart 81.38 314 P **P 02 28 51.6 +0.8**
SNR=21
KTH Kantishna Hill 81.52 23 *e*P **P 02 28 49.9 -1.1**
comp=Z,26nm,0.9s,mb4.8
KURK Kurchatov 81.58 323 P **P 02 28 51.2 -0.4**
comp=Z,15nm,0.7s,mb4.6,baz=115,slow=3.5,SNR=42
KURK pP pP 02 31 02.9 +2.5
comp=Z,0.8nm,0.2s,baz=99,slow=4.8,SNR=1.2
KURK Kurchatov 81.58 323 *d i*P **P 02 28 50.8 -0.8**
KURK pmax pmax
comp=Z,43nm,1.2s,mb4.8
KURK Kurchatov 81.58 323 *e*P **P 02 28 51.3 -0.3**
comp=Z,32nm,1.0s,mb4.8
KBK Karagaybulak 81.74 314 P **P 02 28 53.2 +0.6**
SNR=5.5
BPAW Bear Paw Mtn. 81.76 23 *e*P **P 02 28 50.9 -1.3**
comp=Z,4.9nm,0.5s,mb4.3
BPAW *e*PP PP 02 32 09.3 -1.8
UCH Uchtor 81.94 314 P **P 02 28 55.1 +1.5**
SNR=14
UCH Uchtor 81.94 314 *e*P **P 02 28 54.9 +1.2**
UCH pmax pmax
comp=Z,18nm,1.2s,mb4.5
UCH Uchtor 81.94 314 *e*P **P 02 28 54.9 +1.3**
comp=Z,18nm,1.2s,mb4.5
AAK Ala-Archa 82.06 314 P **P 02 28 54.9 +0.7**
SNR=6.1
AAK Ala-Archa 82.06 314 P **P 02 28 54.7 +0.5**
comp=Z,3.2nm,0.5s,mb4.1,baz=113,slow=5.9,SNR=13
AAK Ala-Archa 82.06 314 *d i*P **P 02 28 54.5 +0.3**
AAK pmax pmax
comp=Z,9.0nm,1.3s,mb4.1
AAK Ala-Archa 82.06 314 *e*P **P 02 28 54.9 +0.6**
comp=Z,16nm,1.2s,mb4.4
USP Ospenovka 82.21 315 P **P 02 28 55.4 +0.5**
SNR=15
MCK McKinley 82.38 23 *e*P **P 02 28 54.7 -0.7**
MCK pmax pmax
comp=Z,57nm,1.0s,mb5.1
MCK McKinley 82.38 23 *e*P **P 02 28 54.7 -0.7**
comp=Z,57nm,1.0s,mb5.1
AML Almayashu 82.51 313 *e*P **P 02 28 57.5 +1.0**
AML pmax pmax
comp=Z,49nm,1.2s,mb4.9
AML Almayashu 82.51 313 *e*P **P 02 28 57.5 +1.0**
comp=Z,49nm,1.2s,mb4.9
DIV Divide 82.57 26 *e*P **P 02 28 57.1 +0.7**
comp=Z,40nm,1.2s,mb4.8
EKS2 Erkin-Say 82.58 314 P **P 02 28 57.7 +0.8**
SNR=20
EKS2 Erkin-Say 82.58 314 *e*P **P 02 28 57.3 +0.5**
EKS2 pmax pmax
comp=Z,21nm,0.9s,mb4.7
EKS2 Erkin-Say 82.58 314 *e*P **P 02 28 57.3 +0.5**
comp=Z,21nm,0.9s,mb4.7
BMRM Bremner River 83.02 27 *e*P **P 02 28 58.8 +0.2**
comp=Z,31nm,1.2s,mb4.7
COLA College 83.32 23 *e*P **P 02 28 59.0 -1.1**
PAX Paxson 83.46 25 *e*P **P 02 29 00.5 -0.2**
PAX pmax pmax
comp=Z,14nm,1.0s,mb4.5
PAX Paxson 83.46 25 *e*P **P 02 29 00.5 -0.2**
comp=Z,14nm,1.0s,mb4.4
COLD Coldfoot 83.58 20 *e*P **P 02 29 01.7 +0.4**
comp=Z,22nm,1.0s,mb4.6
MAW Mawson 84.07 203 P **P 02 29 03.1 -0.6**
comp=Z,5.8nm,1.0s,mb4.1,baz=94,slow=8.8,SNR=10
MAW Mawson 84.07 203 *e*P **P 02 29 03.4 -0.4**
comp=Z,1.3nm,0.8s,mb3.5
KBL Kabul 84.58 305 *e*P **P 02 29 05.6 -1.4**
KBL pmax pmax
comp=Z,4.0nm,0.8s,mb4.1
KBL Kabul 84.58 305 *e*P **P 02 29 05.6 -1.3**
comp=Z,4.1nm,0.8s,mb4.1
PNL Peninsula 84.98 29 *e*P **P 02 29 08.8 +0.5**
comp=Z,34nm,0.9s,mb5.0
QSPA South Pole Qui 85.07 180 *e*P **P 02 29 07.9 -0.5**
comp=Z,8.4nm,1.0s,mb4.3
EGAK Eagle 85.91 24 *e*P **P 02 29 12.8 +0.2**
comp=Z,18nm,1.0s,mb4.7
HYT Haines Junctio 86.23 28 *e*P **P 02 29 15.2 +1.0**
BVAR Borovoye Array 87.11 324 P **P 02 29 16.6 -1.9**
comp=Z,3.1nm,0.6s,mb4.2,baz=106,slow=5.4,SNR=23
BVAR pP pP 02 31 30.5 +0.9
comp=Z,2.1nm,1.0s,baz=108,slow=4.8,SNR=4.2
BRVK Borovoye 87.18 324 *d i*P **P 02 29 17.2 -1.6**
BRVK pmax pmax
comp=Z,8.0nm,1.2s,mb4.3
BRVK Borovoye 87.18 324 *e*P **P 02 29 16.9 -1.9**
comp=Z,2.8nm,0.6s,mb4.2
DLBC Dease Lake 89.36 31 P **P 02 29 29.6 +0.8**
comp=Z,2.4nm,0.8s,mb4.1,baz=255,slow=5.3,SNR=6.8
INK Inuvik 89.87 21 P **P 02 29 30.6 -0.4**
comp=Z,8.6nm,0.9s,mb4.6,baz=237,slow=8.4,SNR=6.2
HUMO Hull Mountain 91.76 48 *e*P **P 02 29 41.7 +1.4**
comp=Z,8.3nm,1.1s,mb4.7
YBH Yreka Blue Hor 91.87 48 P **P 02 29 41.6 +0.8**
comp=Z,3.7nm,1.0s,mb4.4,baz=341,slow=0.4,SNR=7.3
YBH Yreka Blue Hor 91.87 48 *e*P **P 02 29 42.4 +1.6**
YBH pmax pmax
comp=Z,4.0nm,0.9s
YBH Yreka Blue Hor 91.87 48 *e*P **P 02 29 42.4 +1.5**
comp=Z,3.6nm,0.9s,mb4.4
ABKAR Akbulak array 93.11 319 *e*P **P 02 29 44.2 -2.1**
comp=Z,1.4nm,0.6s,mb4.2
AKTK Aktyubinsk 94.42 320 P **P 02 29 51.0 -1.2**
AKTO Aktyubinsk 94.42 320 P **P 02 29 51.0 -1.2**
comp=Z,1.0nm,0.6s,mb4.2,baz=119,slow=11,SNR=3.5
ISA Isabella 94.79 55 *e*pP pP 02 32 03.8 -3.0
WVOR Wild Horse Val 94.94 48 *e*P **P 02 29 55.0 +0.2**
WVOR pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
WVOR Wild Horse Val 94.94 48 *e*P **P 02 29 55.0 +0.1**
comp=Z,1.6nm,0.8s,mb4.2
NVAR Mina Array Bea 95.05 52 P **P 02 29 55.9 +0.6**
comp=Z,0.8nm,0.7s,mb4.0,baz=250,slow=5.9,SNR=5.2
NEW Newport 96.14 42 *e*P **P 02 29 59.9 -0.2**
NEW pmax pmax
comp=Z,2.0nm,0.6s
NEW Newport 96.14 42 *e*P **P 02 29 59.9 -0.2**
comp=Z,2.2nm,0.6s,mb4.6
YKA Yellowknife Ar 97.22 28 P **P 02 30 04.2 -0.4**
comp=Z,1.5nm,0.9s,mb4.2,baz=277,slow=5.1,SNR=11
ELK Elko 97.46 50 P Pdif 02 30 06.5 +0.6
comp=Z,0.3nm,0.3s,baz=198,slow=3.2,SNR=3.3
PDAR Pinedale Array 101.63 47 P Pdif 02 30 24.5 0.0
comp=Z,1.2nm,0.8s,baz=300,slow=3.3,SNR=8.1
ARCES ARCESS Array B 105.85 342 Pdiff Pdif 02 30 41.4 -1.9
comp=Z,2.1nm,0.7s,baz=66,slow=6.8,SNR=6.9
ARCES PKiKP PKiKP 02 34 50.0 -1.2
comp=Z,1.6nm,0.9s,baz=83,slow=1.8,SNR=6.6
JOF Joensuu 106.73 335 *ep* Pdif 02 30 43.9 -3.2
comp=Z,1.3nm,0.3s
JOF Joensuu 106.73 335 *ep* Pdif 02 30 43.9 -3.2
comp=Z,1.3nm,0.3s
FINES FINESS Array B 109.58 335 Pdiff Pdif 02 30 57.5 -2.3
comp=Z,1.2nm,0.7s,baz=77,slow=8.4,SNR=6.6
BRTR Keskin Array B 112.59 311 *c i*PKIKP PKiKP 02 35 06.0 +1.2
IDI Anoyia 120.46 308 PKP PKPdf 02 35 19.5 -0.6
comp=Z,2.6nm,0.7s,baz=90,slow=7.1,SNR=3.6
BRG Berggiesshubel 120.87 329 *e*PKP PKPdf 02 35 19.9 -0.4
comp=Z,3.7nm,0.9s
BRG Berggiesshubel 120.87 329 *e*PKIKP PKPdf 02 35 19.9 -0.5
BRG pmax pmax
comp=Z,2.0nm,0.9s
CLL Collm 121.10 329 ⇑*i*PKIKP PKPdf 02 35 20.2 -0.6
CLL *e* 02 37 38.0
CLL Collm 121.10 329 ⇑*i*PKPdf PKPdf 02 35 20.2 -0.6
comp=Z,3.0nm,1.0s
CONA Conrad Observa 121.44 325 ⇓*i*PKPdf PKPdf 02 35 20.8 -0.8
comp=Z,1.7nm,0.7s
TKL Tuckaleechee C 122.61 50 PKP PKPdf 02 35 23.7 -0.5
comp=Z,2.6nm,0.8s,baz=324,slow=2.3,SNR=3.6
TKL Tuckaleechee C 122.61 50 PKP PKPdf 02 35 23.7 -0.5
MOTA Moosalm 124.44 327 ⇑*i*PKPdf PKPdf 02 35 26.5 -0.9
comp=Z,4.1nm,0.6s
STU Stuttgart 124.59 329 *e*PKIKP PKPdf 02 35 27.8 +0.2
FETA Feichten 124.84 326 ⇑*i*PKPdf PKPdf 02 35 27.7 -0.4
comp=Z,3.8nm,0.8s
EKA Eskdalemuir Ar 124.98 341 PKP PKPdf 02 35 26.5 -1.7
comp=Z,1.5nm,0.7s,baz=19,slow=3.7,SNR=4.1
DAVA Damuels 125.14 327 ⇑*i*PKPdf PKPdf 02 35 28.1 -0.6
comp=Z,5.3nm,0.8s
DAVOX Davos/Dischmat 125.45 327 PKP PKPdf 02 35 29.1 -0.2
comp=Z,2.0nm,0.6s,baz=193,slow=3.3,SNR=6.2
CDF Champ du Feu 125.80 329 *e*PKIKP PKPdf 02 35 29.8 -0.1
HINF Hinteralfeld 126.40 329 *e*PKIKP PKPdf 02 35 30.0 -1.1
HAU Haudompre 126.53 330 *e*PKIKP PKPdf 02 35 30.4 -0.9
comp=Z,3.9nm,0.5s
CABF La Chapelle 127.58 328 *e*PKIKP PKPdf 02 35 33.1 -0.3
LPL La Plagne 127.95 327 *e*PKIKP PKPdf 02 35 33.7 -0.4
LPG La Plagne 127.95 327 *e*PKIKP PKPdf 02 35 33.9 -0.2
comp=Z,4.2nm,0.8s
BNI Bardonecchia 128.27 327 *e*PKIKP PKPdf 02 35 34.7 0.0
PGF Pioggiola 128.45 323 *e*PKIKP PKPdf 02 35 35.0 -0.2
SSF Saint Saulge 128.59 330 *e*PKIKP PKPdf 02 35 35.6 +0.3
comp=Z,4.8nm,0.8s
SMF Signal de Mont 128.71 330 *e*PKIKP PKPdf 02 35 34.2 -1.3
ORIF Oris-en-Rattie 128.79 327 *e*PKIKP PKPdf 02 35 35.2 -0.5
comp=Z,3.9nm,0.7s
AVF Avril sur Loir 128.85 330 *e*PKIKP PKPdf 02 35 34.9 -0.9
FLN La Foliniere 129.20 334 *e*PKIKP PKPdf 02 35 35.2 -1.2
FRF La Foret Royal 129.22 325 *e*PKIKP PKPdf 02 35 35.8 -0.8
BGF Bois d'Agland 129.27 330 *e*PKIKP PKPdf 02 35 36.1 -0.5
LMR La Mourre 129.44 325 *e*PKIKP PKPdf 02 35 37.0 0.0
SMRF Simiane la Rot 129.57 326 *e*PKIKP PKPdf 02 35 37.2 0.0
comp=Z,12nm,1.0s
GRR Gorron 129.64 334 *e*PKIKP PKPdf 02 35 36.9 -0.3
TCF Toulx Ste Croi 129.77 330 *e*PKIKP PKPdf 02 35 37.2 -0.3
comp=Z,6.6nm,0.7s
LASF Ste Croix 130.44 327 *e*PKIKP PKPdf 02 35 38.7 -0.2
comp=Z,3.7nm,0.7s
CAF Calviac 130.80 329 *e*PKIKP PKPdf 02 35 39.4 -0.1
LFF La Frestale 131.45 330 *e*PKIKP PKPdf 02 35 40.7 -0.1
comp=Z,3.8nm,0.6s
MTLF Montolieu 131.81 328 *e*PKIKP PKPdf 02 35 41.0 -0.5
EPF Esparros 133.02 329 *e*PKIKP PKPdf 02 35 43.6 -0.2
ETSF Etsaut 133.57 329 *e*PKIKP PKPdf 02 35 44.5 -0.3
LPAZ La Paz 137.59 121 PKnKP 02 35 50.3
comp=Z,0.7nm,0.8s,baz=127,slow=5.1,SNR=3.5
LPAZ SKPbc SKPbc 02 38 28.7 -1.4
comp=Z,3.4nm,1.1s,baz=223,slow=1.4,SNR=4.1
ESDC Sonseca Array 137.68 329 SKPab 02 38 36.9
comp=Z,0.8nm,0.8s,baz=24,slow=6.4,SNR=4.5
CPUP Villa Florida 139.77 142 SKPbc SKPbc 02 38 36.2 +0.3
comp=Z,0.3nm,0.4s,baz=120,slow=4.5,SNR=4.1
MDT Midelt 142.93 322 PKP PKPdf 02 35 59.3 -2.9
comp=Z,5.4nm,0.7s,baz=41,slow=3.7,SNR=24
DBIC Dimbokro 154.02 275 PKPbc PKPbc 02 36 27.9 -1.2
comp=Z,1.1nm,0.5s,baz=8.1,slow=5.0,SNR=4.3
DBIC PKPab PKPab 02 36 45.3 -0.6
comp=Z,3.3nm,0.7s,baz=120,slow=6.6,SNR=5.0
DBIC Dimbokro 154.02 275 *e*PKPbc PKPbc 02 36 28.6 -0.4

DBIC *e*PKPab PKPab 02 36 45.0 -0.8

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*DDA **20** 02:37:50.7, 36°.23N×35°.79E, h6km±2km, Md3.0*
*ISK **20** 02:37:51.1, 36°.16N×35°.83E, h29km, MD2.9*
*CSEM **20** 02:37:51.0±0.2, 36°.11N×35°.84E, h24km±2km, MD2.9, Error ellipse: s-maj=7.6km s-min=4.3km az=7.0*
*ISCJB **20** 02:37:51.3±0.7, 36°.16N±0°.06×35°.84E±0°.05, h26km±5km, Error ellipse: s-maj=10.9km s-min=6.1km az=12.7*
ISC 20 02:37:51.7±0.7, 36°.19N±0°.06×35°.85E±0°.05, h22km±6km, n25, σ1°.03/37, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTY	**Hatay**	**0.24**	**106**	*e*PG	**Pb**	**02 37 57.7**	**+0.1**
HTY				*e*SG	**Sb**	**02 38 03.6**	**+2.0**
HTY	**Hatay**	**0.24**	**106**	*e*Pg	**Pb**	**02 37 57.7**	**+0.1**
HTY				*e*Sg	**Sb**	**02 38 03.7**	**+2.0**
YAYL	**Yayladag**	**0.26**	**126**	*i* P	**Pb**	**02 37 57.3**	**-0.5**
YAYL				*i* S	**Sb**	**02 38 01.0**	**-1.1**
YAYL	**Yayladag**	**0.26**	**126**	*i* P	**Pb**	**02 37 57.3**	**-0.6**
YAYL				*i* S	**Sb**	**02 38 01.0**	**-1.0**
COBT	**Iskenderun**	**0.47**	**44**	*i* P	**Pb**	**02 37 60.0**	**-1.3**
COBT				*i* S	**Sb**	**02 38 05.7**	**-2.1**
COBT	**Iskenderun**	**0.47**	**44**	*i* P	**Pb**	**02 38 00.0**	**-1.3**
COBT				*i* S	**Sb**	**02 38 05.7**	**-2.1**
KRTS	**Karatas**	**0.55**	**315**	*e*PG	**Pb**	**02 38 03.3**	**+0.6**
KRTS				*e*SG	**Sb**	**02 38 11.8**	**+1.7**
KRTS	**Karatas**	**0.55**	**315**	*e*Pg	**Pb**	**02 38 03.3**	**+0.7**
KRTS				*e*Sg	**Sb**	**02 38 11.8**	**+1.7**
KUZU	**Kuzuini**	**1.15**	**59**	*i* P	**Pn**	**02 38 13.2**	**+0.8**
KUZU				*i* S	**Sn**	**02 38 28.4**	**+1.0**
KUZU	**Kuzuini**	**1.15**	**59**	*i* P	**Pn**	**02 38 13.2**	**+0.8**
KUZU				*i* S	**Sn**	**02 38 28.4**	**+1.0**
KARA	**Karaisali**	**1.25**	**329**	*e*PN	**Pn**	**02 38 13.3**	**-0.5**
KARA				*e*SN	**Sn**	**02 38 29.5**	**-0.5**
KARA	**Karaisali**	**1.25**	**329**	*e*Pn	**Pn**	**02 38 13.3**	**-0.5**
KARA				*e*Sn	**Sn**	**02 38 29.5**	**-0.5**
MERS	**Mersin**	**1.27**	**303**	*e*PN	**Pn**	**02 38 13.3**	**-0.8**
MERS	**Mersin**	**1.27**	**303**	*e*Pn	**Pn**	**02 38 13.3**	**-0.8**
KOZT	**Kozan**	**1.29**	**359**	*e*PN	**Pn**	**02 38 13.9**	**-0.6**
GAZ	**Gaziantep**	**1.47**	**48**	*e*PN	**Pn**	**02 38 16.8**	**-0.1**
GAZ	**Gaziantep**	**1.47**	**48**	*e*Pn	**Pn**	**02 38 16.8**	**-0.1**
KMRS	**Kahramanmaras**	**1.56**	**32**	*e*PN	**Pn**	**02 38 18.4**	**+0.2**
KMRS	**Kahramanmaras**	**1.56**	**32**	*e*Pn	**Pn**	**02 38 18.4**	**+0.3**
IKL	**Isikli**	**1.75**	**272**	*e*PN	**Pn**	**02 38 20.3**	**-0.4**
IKL	**Isikli**	**1.75**	**272**	*e*Pn	**Pn**	**02 38 20.3**	**-0.5**
GZT	**Gaziantep**	**1.80**	**49**	*i* P	**Pn**	**02 38 23.0**	**+1.6**
SARI	**SarD1z-Kayseri**	**2.58**	**15**	*e*PN	**Pn**	**02 38 28.1**	**-4.0**
HDMB	**Hadim**	**2.82**	**287**	*e*PN	**Pn**	**02 38 35.4**	**0.0**
HDMB	**Hadim**	**2.82**	**287**	*e*Pn	**Pn**	**02 38 35.4**	**0.0**

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*CSEM **20** 02:53:52.1±0.1, 47°.44N×12°.82E, h5km, ML2.4/10, Error ellipse: s-maj=2.2km s-min=1.9km az=5.0*
*PRU **20** 02:53:53.0, 47°.43N×12°.83E, h7km*
VIE 20 02:53:52.7±0.1, 47°.36N×12°.79E, h8km±1km, mb1.5/5, ML2.0/11, 15C-9D, Error ellipse: s-maj=1.5km s-min=0.8km az=4.0 4 km NNW of Zell am See, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBA	**Koelnbreinsper**	**0.47**	**126**	⇑*i*Pg	Pg	02 54 02.5	+0.6
	1.4nm,0.1s						
KBA				⇑*i*Sg	Sg	02 54 08.8	+0.6
	5.0nm,0.1s						
KBA	**Koelnbreinsper**	**0.47**	**126**	Pg	Pg	02 54 02.5	+0.6
	1.4nm,0.1s						
KBA				Sg	Sg	02 54 08.8	+0.7
	5.0nm,0.1s						
ABTA	**Abfaltersbach**	**0.64**	**197**	⇑*i*Pg	Pg	02 54 05.9	+0.8
	2.6nm,0.2s						
ABTA				⇑*i*Sg	Sg	02 54 14.5	+1.1
	4.9nm,0.1s						
ABTA	**Abfaltersbach**	**0.64**	**197**	Pg	Pg	02 54 05.9	+0.8
	2.6nm,0.2s						
ABTA				Sg	Sg	02 54 14.5	+1.1
	4.9nm,0.1s						
WTTA	**Wattenberg**	**0.79**	**263**	⇑*i*Pg	Pg	02 54 07.8	-0.1
	1.2nm,0.2s						
WTTA				⇑*i*Sg	Sg	02 54 18.9	+0.8
	7.0nm,0.3s						
WTTA	**Wattenberg**	**0.79**	**263**	Pg	Pg	02 54 07.8	-0.1
	1.2nm,0.2s						
WTTA				Sg	Sg	02 54 18.9	+0.8
	7.0nm,0.3s						
MYKA	**Terra Mystica**	**0.94**	**141**	⇑*i*Pg	Pg	02 54 10.9	+0.2
	0.8nm,0.2s						
MYKA				⇑*i*Sg	Sg	02 54 23.5	+0.6
	3.5nm,0.2s						
MYKA	**Terra Mystica**	**0.94**	**141**	Pg	Pg	02 54 10.9	+0.2
	0.8nm,0.2s						
MYKA				Sg	Sg	02 54 23.5	+0.6
	3.5nm,0.2s						
MOA	**Molln**	**1.11**	**63**	⇑*i*Pg	Pg	02 54 13.6	-0.5
	1.1nm,0.1s						
MOA				⇓*i*Sg	Sg	02 54 29.8	+1.2
	11nm,0.1s						
MOA	**Molln**	**1.11**	**63**	Pg	Pg	02 54 13.6	-0.5
	1.1nm,0.1s						
MOTA	**Moosalm**	**1.14**	**270**	⇑*i*Pg	Pg	02 54 14.7	0.0
	0.8nm,0.1s						
MOTA				⇓*i*Sg	Sg	02 54 31.4	+1.9
	1.3nm,0.1s						
MOTA	**Moosalm**	**1.14**	**270**	Pg	Pg	02 54 14.7	0.0
	0.8nm,0.1s						
MOTA				Sg	Sg	02 54 31.4	+1.9
	1.3nm,0.1s						
COLI	**Coloredo**	**1.29**	**161**	⇓⇓*e*Pg	Sb	02 54 36.7	+2.6
COLI				*e*Sg	Sg	02 54 40.2	+5.9
COLI	**Coloredo**	**1.29**	**161**	*e*Sg	Sg	02 54 40.2	+5.9
DRE	**Drenchia**	**1.33**	**153**	⇑*i*Pg	Sb	02 54 36.2	+1.2
DRE				*i* Sg	Sg	02 54 39.2	+3.8
DRE	**Drenchia**	**1.33**	**153**	*i* Sg	Sg	02 54 39.2	+3.9
RETA	**Reutte**	**1.38**	**276**	⇓⇓*i*Pg	Pg	02 54 19.4	+0.2
	0.7nm,0.2s						
RETA				⇑*i*Sn	Sn	02 54 37.4	+0.8
RETA				⇑*i*Sg	Sg	02 54 38.4	+1.3
	3.5nm,0.2s						
RETA	**Reutte**	**1.38**	**276**	Pg	Pg	02 54 19.4	+0.2
	0.7nm,0.2s						
RETA				Sn	Sn	02 54 37.4	+0.7
RETA				Sg	Sg	02 54 38.4	+1.3
	3.5nm,0.2s						
OBKA	**Obir**	**1.48**	**125**	⇓⇓*i*Pn	Pn	02 54 19.7	+0.1
OBKA				⇑*i*Pg	Pg	02 54 21.1	0.0
	1.0nm,0.1s						
OBKA				⇓⇓*i*Sg	Sg	02 54 41.9	+1.7
	4.9nm,0.2s						
OBKA	**Obir**	**1.48**	**125**	Pn	Pn	02 54 19.7	+0.1
KHC	**Kasperske Hory**	**1.85**	**16**	*e*PN	Pn	02 54 23.6	-1.1
KHC				*e*PG	Pg	02 54 26.1	-2.0
KHC				*e*SN	Sn	02 54 46.3	-1.9
KHC				*e*SG	Sg	02 54 49.5	-2.6
	comp=Z,5.5nm,0.3s						
KHC	**Kasperske Hory**	**1.85**	**16**	Pn	Pn	02 54 23.6	-1.1
DAVA	**Damuels**	**1.98**	**269**	⇓⇓*i*Pn	Pn	02 54 26.9	+0.4
DAVA				⇑*i*Pg	Pg	02 54 30.4	-0.2
	comp=Z,1.0nm,0.2s						
DAVA				⇓⇓*i*Sn	Sn	02 54 52.8	+1.4
DAVA				⇓⇓*i*Sg	Sg	02 54 57.1	+0.8
	comp=Z,9.7nm,0.5s						
DAVA	**Damuels**	**1.98**	**269**	Pn	Pn	02 54 26.9	+0.4
PRU	**Pruhonice**	**2.88**	**23**	*e*SG	Sg	02 55 21.6	-3.4
	comp=Z,2.1nm,0.4s						
PRU	**Pruhonice**	**2.88**	**23**	Sg	Sg	02 55 21.6	-3.4
	comp=Z,2.1nm,0.4s						
NKC	**Novy Kostel**	**2.88**	**356**	*e*SG	Sg	02 55 22.2	-3.1
	comp=Z,4.3nm,0.3s						
NKC	**Novy Kostel**	**2.88**	**356**	Sg	Sg	02 55 22.2	-3.1
	comp=Z,4.3nm,0.3s						
MOX	**Moxa**	**3.38**	**347**	*e*SG	Sg	02 55 39.4	-1.7
DPC	**Dobruska-Polom**	**3.79**	**37**	*e*SG	Sg	02 55 49.7	-4.8
DPC	**Dobruska-Polom**	**3.79**	**37**	Sg	Sg	02 55 49.7	-4.8

MEX 20 03:06:24.7±1.1, 17°.16N×94°.90W, h129km±10km, MD3.9, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.07**	**168**	*i* P	Pn	03 06 40.5	-1.7
CMIG				*i* S	Sn	03 06 53.4	-2.1
TGIG		**1.74**	**102**	*i* P	Pn	03 06 54.6	-1.0
TGIG				*i* S	Sn	03 07 16.9	-2.2
OXX	**Oaxaca**	**1.75**	**268**	*i* P	Pn	03 06 55.0	-0.6
VHO	**Vista Hermosa**	**1.75**	**267**	*e*P	Pn	03 06 54.9	-0.8
VHO				*i* S	Sn	03 07 18.6	-0.8
HUIG	**Huatulco**	**1.81**	**220**	*i* P	Pn	03 06 53.6	-2.8
HUIG				*i* S	Sn	03 07 18.9	-1.6
PCIG		**2.17**	**132**	*i* P	Pn	03 07 00.2	-0.5
PCIG				*i* S	Sn	03 07 27.5	-0.8
TPIG	**Tehuac#an**	**2.66**	**298**	*i* P	Pn	03 07 06.0	-0.9
TPIG				*i* S	Sn	03 07 36.3	-3.0
PNIG	**Pinotepa**	**3.19**	**257**	*e*P	Pn	03 07 10.5	-3.2
PNIG				*i* S	Sn	03 07 48.0	-3.6

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*BJI **20** 03:16:00.6, 4°.60S×149°.15E, h605km, mB4.7/30, mb5.1/57*
*ISCJB **20** 03:16:01.0±0.1, 4°.77S±0°.03×148°.93E±0°.03, h607km, mb5.0/146, Error ellipse: s-maj=4.2km s-min=3.0km az=152.0*
*MOS **20** 03:16:02.1±1.0, 4°.70S×148°.87E, h613km, mb4.9/38, Error ellipse: s-maj=9.4km s-min=6.3km az=104.8*
*NEIC **20** 03:16:02.4±0.1, 4°.78S×148°.92E, mb5.0/91, Error ellipse: s-maj=4.4km s-min=3.2km az=66.0*
*IDC **20** 03:16:02.4±0.4, 4°.80S×148°.91E, h607km±4km, mb4.3/33, mb1 4.3/35, mb1mx4.3/35, mbtmp4.3/35, Error ellipse: s-maj=8.6km s-min=6.5km az=85.0*
*DJA **20** 03:16:03, 4°.82S×149°.00E, h634km, Mw5.4/17*
*GCMT **20** 03:16:04.0±0.2, 4°.81S×148°.99E, h607km±2km, MW5.5, Moment Tensor Solution. s73,c120; Moment tensor: Scale 10^17^Nm; M_{rr}0.53±.04; $M_{\theta\theta}$-1.25±.05; $M_{\phi\phi}$0.71±.06; $M_{r\theta}$-1.16±.05; $M_{r\phi}$-0.06±.05; $M_{\theta\phi}$-1.07±.05; Best double couple: $M_0$1.90000×10^17^ NP1:ϕ_s126.00000°, δ31.00000°, λ161.00000°. NP2:ϕ_s232.00000°, δ81.00000°, λ60.00000°. Principal axes: T 1.8900, Plg46.0000°, Azm112.0000°; N 0.0400, Plg29.0000°, Azm237.0000°; P -1.9400, Plg29.0000°, Azm346.0000°; Data Used: II IU IC G CN.*
ISC 20 03:16:02.5±0.1, 4°.79S±0°.03×148°.96E±0°.03, h609km, h609km±1.4km: pP-P, n445, σ0°.89/321, mb5.0/145, 17C-30D, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**10.74**	**212**	⇓*i*P	**P**	**03 18 28.9**	**+0.2**
	3μm,0.8s						
COEN				*e*S	**S**	**03 20 24.7**	**-4.1**
HNR	**Honiara**	**11.84**	**114**	P	**P**	**03 18 39.3**	**-0.5**
	20nm,0.3s,baz=128,slow=1.4,SNR=4.8						
HNR				S	**S**	**03 20 47.4**	**-1.5**
	24nm,0.3s,baz=344,slow=14,SNR=3.6						
CTA	**Charters Tower**	**15.43**	**190**	⇓⇓*i*P	**P**	**03 19 15.1**	**+0.9**
	160nm,0.4s						
CTA	**Charters Tower**	**15.43**	**190**	P	**P**	**03 19 15.1**	**+0.9**
	35nm,0.3s,baz=4.0,slow=10,SNR=226						
CTA				S	**S**	**03 21 51.8**	**+1.3**
	baz=99,slow=23,SNR=8.2						
CTAO	**Charters Tower**	**15.43**	**190**	⇓⇓*i*P	**P**	**03 19 14.8**	**+0.6**
CTAO				*e*S	**S**	**03 21 49.7**	**-0.8**
CTAO				pmax	pmax		
	comp=Z,239nm,0.6s						
CTAO	**Charters Tower**	**15.43**	**190**	⇓*i*P	**P**	**03 19 14.8**	**+0.6**
	comp=Z,239nm,0.6s						
CTAO				*e*S	**S**	**03 21 49.7**	**-0.8**
KAKA	**Kakadu**	**18.11**	**243**	*e*P	**P**	**03 19 39.9**	**+1.1**
	comp=Z,65nm,0.5s						
KAKA	**Kakadu**	**18.11**	**243**	*e*P	**P**	**03 19 39.9**	**+1.1**
	comp=Z,169nm,0.5s						
KAKA				*e*S	**S**	**03 22 39.4**	**+5.0**
GUMO	**Guam**	**18.71**	**348**	*e*P	**P**	**03 19 44.0**	**-0.2**
GUMO				pmax	pmax		
	comp=Z,848nm,1.7s						
GUMO	**Guam**	**18.71**	**348**	*e*P	**P**	**03 19 44.0**	**-0.3**
	comp=Z,848nm,1.7s						
EIDS	**Eidsvold**	**20.56**	**175**	*e*P	**P**	**03 20 00.7**	**-0.2**
	comp=Z,45nm,1.2s						
WRAB	**Tennant Creek**	**20.70**	**222**	⇓⇓*i*P	**P**	**03 20 02.0**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,32nm,0.8s						
WRAB	**Tennant Creek**	**20.70**	**222**	⇓⇓*i*P	**P**	**03 20 02.0**	**-0.2**
	comp=Z,32nm,0.8s						
WRA	**Warramunga Arr**	**20.72**	**222**	P	**P**	**03 20 02.0**	**-0.3**
	comp=Z,16nm,0.4s,baz=46,slow=9.6,SNR=94						
WRA				S	**S**	**03 23 13.9**	**-1.8**
	comp=Z,14nm,0.9s,baz=46,slow=17,SNR=5.8						
WRA				PcP	PcP	03 23 45.0	+0.4
	comp=Z,13nm,0.5s,baz=41,slow=2.0,SNR=7.5						
WRA				ScP	ScP	03 26 24.9	+0.2
	comp=Z,7.4nm,0.4s,baz=46,slow=2.6,SNR=13						
WRA				ScS	ScS	03 30 10.3	+1.3
	comp=Z,1.6nm,0.9s,baz=43,slow=1.4,SNR=4.6						
WRA	**Warramunga Arr**	**20.72**	**222**	P	**P**	**03 20 02.1**	**-0.2**
WRA				S	**S**	**03 23 13.9**	**-1.8**
WRA						03 23 45.0	
WRA						03 30 10.4	
ASAR	**Alice Springs**	**23.72**	**216**	P	**P**	**03 20 28.9**	**-0.2**
	comp=Z,14nm,0.4s,mb4.9,baz=49,slow=8.0,SNR=225						
ASAR				sP	sP	03 23 08.4	-1.3
	comp=Z,18nm,0.9s,baz=46,slow=9.8,SNR=3.1						
ASAR				PcP	PcP	03 23 51.1	+0.3
	comp=Z,8.0nm,0.6s,baz=31,slow=2.4,SNR=4.9						
ASAR				S	**S**	**03 24 01.1**	**-1.9**
	comp=Z,13nm,0.9s,baz=33,slow=17,SNR=5.6						
ASAR				ScP	ScP	03 26 32.9	+0.4
	comp=Z,7.7nm,0.6s,baz=32,slow=2.8,SNR=7.5						
ASAR				ScS	ScS	03 30 22.1	+1.6
	comp=Z,1.8nm,0.7s,baz=32,slow=4.2,SNR=6.0						
ASAR	**Alice Springs**	**23.72**	**216**	P	**P**	**03 20 28.9**	**-0.1**
ASAR				*SP	sP	03 23 08.5	-1.2
ASAR						03 23 51.1	
ASAR				S	**S**	**03 24 01.1**	**-1.8**
ASAR						03 30 22.1	
DZM	**Mont Dzumac**	**24.12**	**137**	*e*P	**P**	**03 20 32.2**	**-0.4**
	comp=Z,95nm,1.1s,mb5.3						
DZM	**Mont Dzumac**	**24.12**	**137**	*e*P	**P**	**03 20 30.8**	**-1.8**
ARMA	**Armidale**	**25.61**	**175**	⇑*i*P	**P**	**03 20 46.3**	**+0.7**
ARMA	**Armidale**	**25.61**	**175**	*e*P	**P**	**03 20 46.5**	**+0.9**
	comp=Z,32nm,0.8s,mb5.0						
FITZ	**Fitzroy Crossi**	**26.35**	**238**	*e*P	**P**	**03 20 51.3**	**-1.0**
	comp=Z,16nm,0.4s,mb5.0						
FITZ	**Fitzroy Crossi**	**26.35**	**238**	P	**P**	**03 20 51.6**	**-0.7**
	comp=Z,10nm,0.6s,mb4.6,baz=62,slow=7.6,SNR=37						
FITZ				ScP	ScP	03 26 40.9	+0.7
	comp=Z,7.9nm,0.6s,baz=146,slow=1.4,SNR=3.6						
FITZ	**Fitzroy Crossi**	**26.35**	**238**	*e*P	**P**	**03 20 51.2**	**-1.1**
	comp=Z,11nm,0.6s,mb4.7						
BUKP	**Musuan**	**26.96**	**298**	*e*P	**P**	**03 20 58.0**	**+0.3**
STKA	**Stephens Creek**	**27.81**	**194**	⇑*i*P	**P**	**03 21 03.7**	**-1.1**
	comp=Z,11nm,0.4s,mb4.8						
STKA	**Stephens Creek**	**27.81**	**194**	P	**P**	**03 21 03.8**	**-1.0**
	comp=Z,11nm,0.4s,mb4.8,baz=360,slow=8.1,SNR=56						
STKA				S	**S**	**03 25 02.6**	**-4.0**
	comp=Z,13nm,0.8s,baz=150,slow=19,SNR=7.6						
STKA				ScP	ScP	03 26 45.9	+1.5
	comp=Z,7.7nm,0.9s,baz=30,slow=2.8,SNR=3.0						
STKA	**Stephens Creek**	**27.81**	**194**	*e*P	**P**	**03 21 03.5**	**-1.3**
	comp=Z,2.7nm,0.6s,mb4.0						
STKA				*e*pP		03 22 38.6	
PAGZ	**Pagadian**	**28.43**	**296**	*e*P	**P**	**03 21 09.3**	**-1.2**
FUNA	**Funafuti**	**30.26**	**99**	*e*P	**P**	**03 21 26.4**	**+0.2**
	comp=Z,356nm,0.9s,mb6.0						
CNB	**Canberra Magne**	**30.37**	**179**	*e*P	**P**	**03 21 27.2**	**+0.4**
CAN	**Canberra**	**30.38**	**180**	*e*P	**P**	**03 21 27.2**	**+0.4**
CAN				pmax	pmax		
	comp=Z,29nm,0.9s,mb4.9						
CAN	**Canberra**	**30.38**	**180**	*e*P	**P**	**03 21 27.1**	**+0.3**
	comp=Z,29nm,0.9s,mb4.9						
CAN				*e*pP		03 23 00.3	
GUIM	**Jordan**	**30.39**	**300**	*e*P	**P**	**03 21 27.5**	**+0.2**
PVCP	**Virac**	**30.66**	**307**	*e*P	**P**	**03 21 30.0**	**+0.4**
RCP	**Roxas**	**30.72**	**302**	⇓*e*P	**P**	**03 21 30.6**	**+0.5**
OTRP	**Odiongan**	**31.74**	**303**	*e*P	**P**	**03 21 39.0**	**+0.2**
CUYO	**Cuyo Island**	**31.86**	**299**	*e*P	**P**	**03 21 40.7**	**+0.9**
MYLDM	**Lahad Datu**	**31.99**	**288**	P	**P**	**03 21 42.3**	**+1.4**
CBIJ	**Chichi jima**	**32.37**	**349**	P	**P**	**03 21 42.3**	**-1.6**
	comp=Z,89nm,0.4s,mb5.8,baz=292,slow=19,SNR=19						
FORT	**Forrest**	**32.48**	**215**	⇓*i*P	**P**	**03 21 44.1**	**-0.7**
	comp=Z,47nm,0.6s,mb5.3						
FORT	**Forrest**	**32.48**	**215**	⇓⇓*i*P	**P**	**03 21 44.2**	**-0.7**
	comp=Z,45nm,0.6s,mb5.3						
SJMP	**San Jose**	**32.55**	**302**	*e*P	**P**	**03 21 46.6**	**+1.1**
TOO	**Toolangi**	**32.78**	**185**	⇑*i*P	**P**	**03 21 47.3**	**+0.1**
SDKM	**Sandakan**	**33.37**	**288**	P	**P**	**03 21 51.5**	**-1.0**
ENPP	**El Nido**	**33.41**	**299**	*e*P	**P**	**03 21 53.6**	**+0.8**
TGY	**Tagaytay City**	**33.54**	**304**	P	**P**	**03 21 55.1**	**+1.2**
	comp=Z,211nm,0.3s,mb6.2,baz=254,slow=3.1,SNR=5.7						
BATP	**Bataraza**	**33.87**	**293**	*e*P	**P**	**03 21 57.6**	**+1.0**
LUBP	**Lubang**	**33.92**	**303**	*e*P	**P**	**03 21 56.4**	**-0.7**
BALP	**Baler**	**33.92**	**307**	*e*P	**P**	**03 21 57.2**	**+0.1**
KKM	**Kota Kinabalu**	**34.42**	**288**	P	**P**	**03 22 01.1**	**-0.1**
KKM	**Kota Kinabalu**	**34.42**	**288**	*e*P	**P**	**03 22 01.2**	**-0.1**
	comp=Z,51nm,0.7s,mb5.3						
KKM				*e*pP		03 23 40.6	
APYP	**Conner**	**35.42**	**310**	*e*P	**P**	**03 22 09.2**	**-0.3**
BOLP	**Bolinao**	**35.60**	**307**	*e*P	**P**	**03 22 09.9**	**-1.1**
BBP	**Basco**	**36.49**	**314**	*e*P	**P**	**03 22 17.3**	**-0.9**
BTM	**Bintulu**	**36.71**	**282**	P	**P**	**03 22 21.4**	**+1.3**
SBUM	**Sibu**	**37.40**	**280**	P	**P**	**03 22 26.7**	**+0.9**
MOO	**Moorlands**	**37.52**	**182**	*e*P	**P**	**03 22 26.8**	**+0.5**
MOO				*e*		03 24 12.3	
OUZ	**Omahuta**	**37.88**	**146**	*e*P	**P**	**03 22 31.1**	**+1.8**
	comp=Z,20nm,0.4s,mb5.0						
TWG	**Pinlang**	**38.67**	**316**	*e*P	**P**	**03 22 34.4**	**-1.5**
	comp=Z,78nm,0.4s,mb5.6						
JHJ	**Hachijo jima 2**	**38.70**	**348**	P	**P**	**03 22 34.7**	**-1.2**
	comp=Z,57nm,0.3s,mb5.5,baz=142,slow=12,SNR=9.8						
YULB	**Yu-li**	**38.90**	**317**	*e*P	**P**	**03 22 37.1**	**-0.6**
	comp=Z,103nm,0.6s,mb5.5						
YULB				*e*		03 24 24.5	
KSM	**Kuching**	**39.11**	**278**	P	**P**	**03 22 40.3**	**+0.7**
KSM	**Kuching**	**39.11**	**278**	*e*P	**P**	**03 22 39.9**	**+0.3**
	comp=Z,62nm,0.6s,mb5.3						
NACB	**Ninganchiao**	**39.23**	**318**	*e*P	**P**	**03 22 40.4**	**0.0**
	comp=Z,118nm,0.4s,mb5.8						
TPUB	**Ta-pu**	**39.30**	**316**	*e*P	**P**	**03 22 40.0**	**-0.9**
	comp=Z,137nm,0.5s,mb5.7						
SSLB	**Suanglung**	**39.40**	**317**	*e*P	**P**	**03 22 41.2**	**-0.5**
	comp=Z,126nm,0.3s,mb5.9						
KLBR	**Kellerberrin**	**39.58**	**224**	*e*P	**P**	**03 22 41.3**	**-1.8**
	comp=Z,42nm,1.7s,mb4.7						
YHNB	**Yeheng**	**39.72**	**319**	*e*P	**P**	**03 22 44.7**	**+0.4**
	comp=Z,207nm,0.6s,mb5.8						
YHNB				*e*pP		03 24 27.0	
AFI	**Afiamalu**	**39.73**	**106**	P	**P**	**03 22 45.1**	**+0.6**
	comp=Z,57nm,0.4s,mb5.4,baz=274,slow=19,SNR=17						
AFI	**Afiamalu**	**39.73**	**106**	*e*P	**P**	**03 22 44.9**	**+0.4**
AFI				pmax	pmax		
	comp=Z,307nm,1.2s,mb5.7						
AFI	**Afiamalu**	**39.73**	**106**	*e*P	**P**	**03 22 44.9**	**+0.4**
	comp=Z,307nm,1.2s,mb5.7						
TATO	**Taipei**	**39.86**	**319**	*e*P	**P**	**03 22 46.0**	**+0.6**
	comp=Z,154nm,0.6s,mb5.7						
TATO	**Taipei**	**39.86**	**319**	P	**P**	**03 22 46.6**	**+1.2**
	SNR=5.1						
TATO				P		03 22 46.6	
	SNR=5.1						
NWAO	**Narrogin (SRO)**	**40.73**	**223**	P	**P**	**03 22 53.1**	**+1.0**
	comp=Z,7.7nm,0.9s,mb4.2,baz=60,slow=8.1,SNR=2.5						
NWAO				PcP	PcP	03 24 38.9	+0.5
	comp=Z,9.9nm,0.8s,baz=51,slow=10,SNR=4.8						
HIZ	**Hauiti**	**41.00**	**149**	P	**P**	**03 22 56.0**	**+1.8**
QRZ	**Quartz Range**	**41.65**	**153**	P	**P**	**03 23 00.3**	**+1.0**
FWVZ	**Far West T-bar**	**41.91**	**149**	P	**P**	**03 23 03.3**	**+2.0**
URZ	**Urewera**	**42.02**	**146**	P	**P**	**03 23 02.3**	**+0.1**
	comp=Z,29nm,0.4s,mb5.2,baz=307,slow=3.3,SNR=61						
URZ				PcP	PcP	03 24 40.5	-2.1
	comp=Z,20nm,0.6s,baz=316,slow=1.5,SNR=5.1						
URZ				ScP	ScP	03 27 36.8	+0.8
	comp=Z,5.7nm,0.7s,baz=3.2,slow=6.1,SNR=4.0						
URZ				S	**S**	**03 28 37.0**	**-1.7**
	comp=Z,4.1nm,0.7s,baz=180,slow=20,SNR=3.4						
URZ	**Urewera**	**42.02**	**146**	P	**P**	**03 23 02.3**	**+0.1**
MWZ	**Matawai**	**42.31**	**146**	P	**P**	**03 23 05.0**	**+0.5**
MJAR	**Matsushiro Arr**	**42.33**	**347**	P	**P**	**03 23 04.0**	**-0.7**
	comp=Z,32nm,0.6s,mb5.0,baz=177,slow=9.6,SNR=112						
MJAR				ScP	ScP	03 27 37.2	0.0
	comp=Z,7.5nm,0.9s,baz=176,slow=5.0,SNR=9.0						
MJAR	**Matsushiro Arr**	**42.33**	**347**	P	**P**	**03 23 04.0**	**-0.7**
MJAR				ScP	ScP	03 27 37.2	0.0
MAJO	**Matsushiro**	**42.33**	**347**	*e*P	**P**	**03 23 04.1**	**-0.5**

YSS Yuzh-Sakhalins 51.81 355 *e*P **P 03 24 15.0 -0.4**
comp=Z,32nm,0.6s,mb4.8
SNY Shenyang 51.84 336 ⇓P **P 03 24 15.6 -0.1**
SNY S **S 03 30 52.5 -1.4**
SNY pmax pmax
comp=Z,45nm,0.5s,mb5.0
SNY pmax pmax
comp=Z,390nm,3.5s
MDJ Mudanjiang 52.17 343 P **P 03 24 17.8 -0.1**
MDJ pP pP 03 26 07.5 -2.6
MDJ sP sP 03 27 13.6 -2.6
MDJ ScP ScP 03 28 18.8 +0.2
MDJ PcS PcS 03 29 18.1 -0.2
MDJ S **S 03 30 58.5 +0.5**
MDJ pmax pmax
comp=Z,52nm,1.4s,mb4.7
MDJ pmax pmax
comp=Z,190nm,5.0s
MDJ Mudanjiang 52.17 343 *e*P **P 03 24 17.9 0.0**
comp=Z,105nm,1.4s,mb5.0
CN2 Changchun 52.81 339 *e*P **P 03 24 22.1 -0.4**
CN2 *e*S **S 03 31 11.3 +4.7**
CN2 pmax pmax
comp=Z,40nm,1.0s,mb4.7
CN2 pmax pmax
comp=Z,400nm,4.0s
BJT Baijiatuau 53.83 329 *e*P **P 03 24 29.2 -0.6**
BJT pmax pmax
comp=Z,25nm,0.4s
BJT Baijiatuau 53.83 329 *e*P **P 03 24 29.2 -0.5**
comp=Z,25nm,0.4s,mb4.9
BJI Beijing 53.84 329 P **P 03 24 29.6 -0.2**
BJI PP PP 03 26 39.8 -0.7
BJI sP sP 03 27 25.4 -3.5
BJI S **S 03 31 17.9 -2.3**
BJI sS sS 03 34 39.0 -5.1
BJI pmax pmax
comp=Z,62nm,1.7s,mb4.7
BJI pmax pmax
comp=Z,430nm,3.7s
KMI Kunming 53.84 306 P **P 03 24 31.8 +1.7**
KMI pP pP 03 26 25.3 +1.8
KMI PP PP 03 26 43.8 +3.0
KMI sP sP 03 27 29.3 +0.1
KMI S **S 03 31 22.3 +1.5**
KMI sS sS 03 34 44.0 -0.6
KMI SS SS 03 35 18.4 +3.7
KMI pmax pmax
comp=Z,72nm,0.7s,mb5.1
KMI pmax pmax
comp=Z,250nm,4.1s
XAN Xi'an 54.03 319 P **P 03 24 31.0 -0.3**
XAN pmax pmax
comp=Z,32nm,0.8s,mb4.7
XAN pmax pmax
comp=Z,50nm,6.4s
HABR Khabarovsk 54.42 349 *de*P **P 03 24 33.1 -0.6**
HABR *e**PP pP 03 26 23.6 -3.9
HABR *e* 03 26 42.5
HABR *SP sP 03 27 27.9 -5.2
HABR S **S 03 31 28.2 +0.7**
HABR *SS sS 03 34 50.1 -1.8
HABR SS SS 03 35 23.2 +0.1
HABR pmax pmax
comp=N,89nm,1.8s
HABR pmax pmax
comp=Z,256nm,1.5s,mb5.3
HABR pmax pmax
comp=E,28nm,0.3s
HABR MLR MLR
comp=Z,106nm,16.0s
CM31 Chiang Mai Arr 54.43 297 *e*P **P 03 24 35.5 +1.2**
comp=Z,11nm,0.3s,mb4.7
CMAR Chiang Mai Arr 54.43 297 P **P 03 24 35.4 +1.0**
comp=Z,38nm,0.7s,mb4.9,baz=125,slow=5.4,SNR=131
CMAR pP pP 03 26 27.8 -0.3
comp=Z,6.6nm,0.9s,baz=117,slow=5.2,SNR=4.4
CHTO Chiang Mai 54.55 297 ⇓*i*P **P 03 24 35.8 +0.6**
CHTO *e**PP pP 03 26 28.7 -0.3
CHTO pmax pmax
comp=Z,40nm,0.9s,mb4.8
CHTO Chiang Mai 54.55 297 ⇓*i*P **P 03 24 35.8 +0.5**
comp=Z,40nm,0.9s,mb4.8
CHTO *e*pP pP 03 26 28.7 -0.3
CHTO Chiang Mai 54.55 297 P **P 03 24 36.2 +1.0**
SNR=12
CHTO P 03 24 36.2
SNR=12
KLR Kul'dur 55.85 346 *e*P **P 03 24 39.8 -3.8**
KLR *e* pP 03 26 31.6 -6.7
KLR *e*S **S 03 31 40.0 -5.9**
KLR pmax pmax
comp=E,62nm,1.6s
KLR pmax pmax
comp=Z,140nm,1.6s,mb4.9
CD2 Chengdu 55.87 313 ⇓*i*P **P 03 24 44.4 +0.3**
CD2 PP PP 03 27 01.1 +2.5
CD2 sP sP 03 27 42.4 -1.7
CD2 PcS PcS 03 29 33.1 -2.1
CD2 S **S 03 31 48.0 +1.2**
CD2 ScS ScS 03 33 29.6 -1.6
CD2 sS sS 03 35 11.5 -1.2
CD2 SS SS 03 35 50.8 +4.5
CD2 pmax pmax
comp=Z,270nm,0.5s,mb5.7
CD2 pmax pmax
comp=Z,300nm,4.2s
HHC Hu-ho-hao-te 56.87 327 *e*P **P 03 24 50.8 0.0**
HHC PcP PcP 03 25 37.3 -0.2
HHC pP pP 03 26 45.8 -0.3
HHC PP PP 03 27 10.5 +3.3
HHC sP sP 03 27 49.4 -1.8
HHC ScP ScP 03 28 40.6 +1.2
HHC PcS PcS 03 29 38.1 -1.1
HHC S **S 03 32 00.0 +0.7**
HHC ScS ScS 03 33 36.9 -1.3
HHC sS sS 03 35 24.3 -1.9
HHC SS SS 03 36 05.0 +3.3
HHC pmax pmax
comp=Z,32nm,1.0s,mb4.5
HHC pmax pmax
comp=Z,290nm,5.0s
BTO Baotou 57.56 325 *e*P **P 03 24 55.9 +0.4**
PEA0B Petropavlovsk- 58.16 6 *e*P **P 03 24 59.7 +0.5**
PETK Petropavlovsk- 58.16 6 P **P 03 24 59.6 +0.4**
comp=Z,47nm,0.5s,mb4.9,baz=164,slow=6.7,SNR=85
PETK pP pP 03 26 56.1 +0.8
comp=Z,6.5nm,0.8s,baz=160,slow=4.7,SNR=4.4
PET Petropavlovsk 58.18 7 *e*P **P 03 24 59.1 -0.3**
PET *e*S **S 03 32 14.4 -1.1**
PET *e*SP 03 32 35.5
PET pmax pmax
comp=Z,66nm,1.3s,mb4.6
PET pmax pmax
comp=Z,200nm,15.8s
PET MLR MLR
comp=Z,200nm,16.0s
LZH Lanzhou 58.60 318 *e*P **P 03 25 04.1 +1.5**
LZH PcP PcP 03 25 45.8 +1.3
LZH pP pP 03 27 00.8 +1.8
LZH PP PP 03 27 27.3 +4.8
LZH sP sP 03 28 03.8 +0.1
LZH *e*S **S 03 32 23.6 +2.1**
LZH sS sS 03 35 48.5 -1.5
LZH SS SS 03 36 31.3 +2.4
LZH pmax pmax
comp=Z,26nm,1.0s,mb4.3
LZH pmax pmax
comp=Z,170nm,4.6s
HIA Hailar 59.53 338 *e*P **P 03 25 08.7 +0.2**
HIA pmax pmax
comp=Z,89nm,0.6s
HIA Hailar 59.53 338 *e*P **P 03 25 08.7 +0.2**
comp=Z,89nm,0.6s,mb5.2
FX1 Attu Island--F 61.00 17 P **P 03 25 18.4 +0.3**
comp=Z,22nm,0.4s,mb4.7,baz=199,slow=2.7,SNR=105
SMY Shemya 61.13 17 *e*P **P 03 25 19.7 +0.8**
SMY pmax pmax
comp=Z,60nm,0.8s,mb4.9
SMY Shemya 61.13 17 *e*P **P 03 25 19.7 +0.8**
comp=Z,60nm,0.8s,mb4.9
PPT Papeete 61.38 107 P **P 03 25 22.8 +1.5**
comp=Z,24nm,0.6s,mb4.6,baz=315,slow=5.7,SNR=3.4
PAE Paea 61.39 107 *e*P **P 03 25 22.7 +1.4**
comp=Z,46nm,1.4s,mb4.5
PAE Paea 61.39 107 *e*P **P 03 25 22.7 +1.4**
PAE pmax pmax
comp=Z,46nm,1.4s,mb4.5
TIAR Tiarei 61.60 107 *e*P **P 03 25 24.4 +1.7**
comp=Z,306nm,1.1s,mb5.4
PMOR Pomariorio Ree 62.85 104 *e*P **P 03 25 32.3 +1.5**
comp=Z,429nm,1.2s,mb5.7
SHL Shillong 63.02 302 ⇓*i*P **P 03 25 32.0 +0.3**
SHL *ex* x 03 27 30.0
GTA Gaotai 63.09 319 ⇓*i*P **P 03 25 32.9 +1.0**
GTA pP pP 03 27 32.8 +1.9
GTA PP PP 03 28 04.1 +2.5
GTA sP sP 03 28 34.3 -0.6
GTA S **S 03 33 18.8 +2.1**
GTA ScS ScS 03 34 27.0 +1.8
GTA sS sS 03 36 47.5 -1.9
GTA SS SS 03 37 42.3 +3.8
GTA pmax pmax
comp=Z,61nm,1.3s,mb4.8
GTA pmax pmax
comp=Z,280nm,8.1s
ULN Ulaanbaatar 64.02 330 ⇓*i*P **P 03 25 38.5 +0.9**
ULN *e**PP pP 03 27 38.1 +1.0
ULN pmax pmax
comp=Z,67nm,0.8s,mb5.0
ULN Ulaanbaatar 64.02 330 ⇓*i*P **P 03 25 38.5 +0.9**
comp=Z,68nm,0.8s,mb5.0
ULN *e*pP pP 03 27 38.0 +0.9
ULN Ulaanbaatar 64.02 330 P **P 03 25 38.8 +1.2**
SNR=49
ULN P 03 25 38.8
SNR=49
SONM Songino Array 64.33 330 P **P 03 25 40.3 +0.8**
comp=Z,34nm,0.5s,mb5.0,baz=145,slow=4.9,SNR=134
SONM pP pP 03 27 38.9 -0.3
comp=Z,3.8nm,0.8s,baz=141,slow=7.3,SNR=3.3
CLNS Chul'man 64.48 346 *e*P **P 03 25 41.2 +0.9**
CLNS pmax pmax
comp=Z,71nm,0.8s,mb5.0
CLNS pmax pmax
comp=N,36nm,0.9s
CLNS pmax pmax
comp=E,10.0nm,0.7s
LSA Lhasa 65.10 306 P **P 03 25 45.8 +1.0**
LSA pmax pmax
comp=Z,50nm,1.0s,mb4.9
LSA Lhasa 65.10 306 *e*P **P 03 25 45.8 +1.0**
LSA pmax pmax
comp=Z,20nm,0.6s,mb4.7
LSA Lhasa 65.10 306 *e*P **P 03 25 45.8 +1.0**
comp=Z,20nm,0.6s,mb4.7
CASY Casey 66.93 196 ⇑*i*P **P 03 25 54.8 -0.6**
CASY Casey 66.93 196 ⇑*i*P **P 03 25 54.7 -0.7**
comp=Z,18nm,0.6s,mb4.7
TAPN Taplejung 67.14 302 *e*P **P 03 25 57.2 -0.2**
comp=Z,86nm,0.8s,mb5.2
ODAN Odare 67.26 302 *e*P **P 03 25 57.9 -0.3**
comp=Z,140nm,0.7s,mb5.5
ZAK Zakamensk 67.54 330 ⇑*i*P **P 03 25 59.6 +0.2**
ZAK *e* pP 03 27 59.9 -0.9
ZAK *e* 03 34 11.4
ZAK pmax pmax
comp=Z,49nm,0.9s,mb4.9
SEY Seymchan 67.59 2 ⇑*i*P **P 03 25 59.2 -0.2**
RAMN Ramite 67.95 301 *e*P **P 03 26 01.9 -0.5**
comp=Z,29nm,0.4s,mb5.0
TLY Talaya 68.20 332 *e*P **P 03 26 03.6 +0.3**
TLY *e* 03 28 46.5
TLY *e*S S 03 34 25.6 +9.1
TLY pmax pmax
comp=Z,33nm,0.9s,mb4.8
TLY Talaya 68.20 332 *e*P **P 03 26 04.1 +0.8**
comp=Z,11nm,0.7s,mb4.4
TLY Talaya 68.20 332 P **P 03 26 04.2 +0.9**
SNR=8.7
TLY P 03 26 04.2
SNR=8.7
YAK Yakutsk 68.27 350 *e*P **P 03 26 02.3 -1.2**
YAK *e* 03 26 22.7
YAK *e**PP pP 03 28 05.8 +0.5
YAK *e* 03 28 52.8
YAK *e*S S 03 34 17.6 +0.7
YAK *e* 03 35 00.4
YAK *e*SS SS 03 39 03.7 +6.7
YAK pmax pmax
comp=Z,57nm,1.2s,mb4.9
YAK pmax pmax
comp=N,33nm,1.5s
YAK pmax pmax
comp=E,7.0nm,1.2s
YAK pmax pmax
comp=Z,14nm,0.8s,mb4.4
YAK smax
comp=E,54nm,2.2s
YAK smax
comp=N,280nm,3.0s
YAK Yakutsk 68.27 350 *e*P **P 03 26 03.5 +0.1**
comp=N,31nm,0.4s,mb5.1
IRK Irkutsk 68.27 332 *e*P **P 03 26 03.2 -0.5**
IRK pmax pmax
comp=Z,85nm,1.5s,mb5.0
JIRN Jiri 68.52 302 *e*P **P 03 26 05.7 -0.1**
comp=Z,33nm,0.5s,mb5.0
GUN Gumba 68.86 302 *e*P **P 03 26 07.5 -0.3**
comp=Z,158nm,0.5s,mb5.7
PKI Pulchoki 69.15 302 *e*P **P 03 26 09.0 -0.6**
PKI Pulchoki 69.15 302 *e*P **P 03 26 09.7 +0.1**
PKI pmax pmax
comp=Z,65nm,0.7s,mb5.2
PKI Pulchoki 69.15 302 *e*P **P 03 26 09.7 +0.1**
comp=Z,65nm,0.7s,mb5.2
PKIN Phulchoki 69.17 302 *e*P **P 03 26 09.7 0.0**
comp=Z,65nm,0.7s,mb5.1
UNV Unalaska Valle 69.27 26 *e*P **P 03 26 09.3 -0.4**
comp=Z,15nm,0.8s,mb4.5
KKN Kakani 69.33 302 *e*P **P 03 26 10.2 -0.4**
DMN Daman 69.42 302 *e*P **P 03 26 11.0 -0.2**
comp=Z,93nm,0.4s,mb5.5
MOY Mondy 69.47 330 *e*P **P 03 26 11.5 +0.6**
MOY pmax pmax
comp=Z,105nm,2.3s,mb4.9
MIR Mirnyy 72.58 200 ⇑*i*P **P 03 26 28.0 -0.8**
MIR pmax pmax
comp=Z,99nm,1.2s,mb5.2
HYB Hyderabad 72.88 290 *e*P **P 03 26 32.0 +0.5**
HYB Hyderabad 72.88 290 *i*P **P 03 26 32.0 +0.5**
SDPT Sand Point 72.94 27 ⇑*i*P **P 03 26 30.9 -0.1**
comp=Z,38nm,0.9s,mb4.9
WMQ Urumqi 73.17 318 P **P 03 26 33.0 +0.4**
WMQ pP pP 03 28 37.0 +0.1
WMQ sP sP 03 29 38.0 -1.4
WMQ S S 03 35 14.0 +1.2
WMQ ScS ScS 03 35 43.0 -1.5
WMQ SS SS 03 40 15.0 +3.0
WMQ pmax pmax
comp=Z,45nm,1.1s,mb4.9
WMQ pmax pmax
comp=Z,140nm,7.0s
SBA Scott Base 73.61 176 ⇑*i*P **P 03 26 35.3 +0.7**
SBA pmax pmax
comp=Z,58nm,1.4s,mb4.9
SBA Scott Base 73.61 176 ⇑*i*P **P 03 26 35.3 +0.8**
comp=Z,58nm,1.4s,mb4.9
BILL Bilibino 73.68 7 *d i*P **P 03 26 35.4 +0.4**
BILL *e**PP pP 03 28 39.9 +0.4
BILL *e*S S 03 35 18.1 +0.6
BILL pmax pmax
comp=Z,51nm,1.2s,mb4.9
BILL Bilibino 73.68 7 *e*P **P 03 26 34.8 -0.3**
comp=Z,53nm,1.1s,mb5.0
BILL *e*pP pP 03 28 39.8 +0.3
BILL *e*PP PP 03 29 35.2 +4.2
JOSI Joshimath 74.90 303 *ex* x 03 26 42.9
JOSI AMb AMB 03 26 44.8
comp=Z,580nm,0.7s,mb6.2
BHPL Bhopal 75.06 295 *e*PKP **P 03 26 43.5 -0.2**
BHPL AMb AMB 03 26 43.9
comp=Z,45nm,0.6s,mb5.2
RKT Rikitea 75.33 113 *e*P **P 03 26 45.7 +0.4**
comp=Z,175nm,1.2s,mb5.5
RKT Rikitea 75.33 113 *e*P **P 03 26 45.7 +0.4**
RKT pmax pmax
comp=Z,175nm,1.2s,mb5.5
AGRA Agra 75.47 300 *e*PKP **P 03 26 44.4 -1.5**
AGRA AMb AMB 03 26 45.5
comp=Z,105nm,0.5s,mb5.6
BISR Bishrakh 76.21 301 *e*PKP **P 03 26 48.9 -1.1**
BISR AMb AMB 03 26 49.6
comp=Z,322nm,0.4s,mb6.2
KLP Kalpa 76.23 304 *e*PKP **P 03 26 50.9 +0.8**
KLP AMb AMB 03 26 53.1
comp=Z,70nm,1.1s,mb5.0
SONA Sohna 76.44 300 *e*PKP **P 03 26 50.2 -1.1**
SONA AMb AMB 03 26 52.6
comp=Z,24nm,0.3s,mb5.1
AYAN Aya Nagar 76.45 301 *e*PKP **P 03 26 49.8 -1.5**
AYAN AMb AMB 03 26 51.0
comp=Z,32nm,0.4s,mb5.1
KAD Karad 76.97 289 *e*PKP **P 03 26 53.9 -0.4**
KAD AMb AMB 03 26 54.5
comp=Z,30nm,0.5s,mb5.0
TIXI Tiksi 77.42 354 *e*P **P 03 26 54.4 -1.2**
TIXI *e**PP pP 03 29 02.3 +0.4
TIXI pmax pmax
comp=Z,15nm,0.5s,mb4.7
TIXI Tiksi 77.42 354 *e*P **P 03 26 54.4 -1.3**
comp=Z,15nm,0.5s,mb4.7
TIXI *e*pP pP 03 29 02.3 +0.5
POO Poona 77.48 290 *e*PKP **P 03 26 57.0 -0.1**
POO AMb AMB 03 26 59.7
comp=Z,37nm,1.0s,mb4.8
KHET Khetri 77.50 300 *e*PKP **P 03 26 56.5 -0.5**
KHET AMb AMB 03 26 56.9
comp=Z,52nm,0.8s,mb5.0
MK31 Makanchi Array 77.82 320 *e*P **P 03 26 58.3 0.0**
MK31 *e**PP pP 03 29 04.9 +0.2
MKAR Makanchi Array 77.82 320 P **P 03 26 58.5 +0.2**
comp=Z,16nm,0.4s,mb4.8,baz=95,slow=7.8,SNR=85
MKAR pP pP 03 29 05.0 +0.3
comp=Z,16nm,1.1s,baz=98,slow=7.5,SNR=6.8
MKAR S S 03 36 12.4 +10
comp=Z,1.5nm,0.7s,baz=90,slow=12,SNR=6.4
MKAR Makanchi Array 77.82 320 P **P 03 26 58.5 +0.2**
MKAR pP pP 03 29 05.0 +0.3
MKAR S S 03 36 12.4 +10
KDAK Kodiak Island 77.93 28 P **P 03 26 58.9 +0.3**
comp=Z,8.4nm,0.9s,mb4.2,baz=151,slow=0.8,SNR=6.0
KDAK Kodiak Island 77.93 28 *i*P **P 03 26 59.3 +0.7**
AJM Ajmer 78.19 298 *e*PKP **P 03 26 59.9 -0.8**
AJM AMb AMB 03 27 01.2
comp=Z,35nm,0.6s,mb5.0
SVW2 Sparrevohn 78.35 24 *e*P **P 03 27 01.8 +1.0**
ZAA0 Zalesovo Array 79.05 327 *e*P **P 03 27 03.3 -1.3**
ZAA0 *e*pP pP 03 29 12.2 +0.6
ZALV Zalesovo Beam 79.05 327 P **P 03 27 03.5 -1.1**
comp=Z,12nm,0.3s,mb4.6,baz=110,slow=5.5,SNR=58
ZALV pP pP 03 29 11.3 -0.2
comp=Z,5.5nm,0.8s,baz=106,slow=5.3,SNR=4.0
ZALV S S 03 36 12.7 -2.1
comp=Z,0.7nm,0.3s,baz=128,slow=11,SNR=4.6
ZALV Zalesovo Beam 79.05 327 P **P 03 27 03.5 -1.1**
ZALV pP pP 03 29 11.3 -0.3
ZALV S S 03 36 12.7 -2.1
TTA Tatalina 79.19 22 *e*P **P 03 27 05.9 +0.7**
KSH Kashi 80.04 311 P **P 03 27 11.8 +1.6**
KSH pP pP 03 29 18.3 +0.8
KSH sP sP 03 30 18.3 -0.9
KSH PP PP 03 30 20.9 -3.0
KSH SKS 03 36 25.3
KSH pmax pmax
comp=Z,17nm,0.9s,mb4.4
NVS Novosibirsk 80.25 328 ⇑*i*P **P 03 27 09.7 -1.2**
NVS *i* pP 03 29 19.8 +1.4
NVS *i* S S 03 36 24.5 -2.6
NVS pmax pmax
comp=Z,94nm,1.9s,mb4.8
NVS pmax pmax
comp=N,35nm,1.7s
NVS pmax pmax
comp=E,48nm,1.7s
NVS smax
comp=N,32nm,2.0s
NVS smax
comp=E,127nm,2.4s
PPLA Purkeypile 80.66 23 *e*P **P 03 27 12.5 -0.3**
comp=E,11nm,0.8s,mb4.3
RC01 Rabbit Creek A 80.80 26 *e*P **P 03 27 13.2 -0.4**
comp=E,2μm,0.8s
CHUM Lake Minchumin 81.11 23 *e*P **P 03 27 15.4 +0.2**
comp=E,40nm,0.8s,mb4.9
CHUM *e*pP pP 03 29 23.6 +0.6
TKM2 Tokmak 2 81.18 315 P **P 03 27 16.6 +0.7**
SNR=41
TKM2 Tokmak 2 81.18 315 *e*P **P 03 27 16.5 +0.5**
TKM2 *e**PP pP 03 29 25.2 +1.4
TKM2 pmax pmax
comp=Z,29nm,0.6s,mb4.9
TKM2 Tokmak 2 81.18 315 *e*P **P 03 27 16.5 +0.5**
comp=Z,29nm,0.6s,mb4.9
TKM2 *e*pP pP 03 29 25.2 +1.4
KZA Kyzart 81.21 314 P **P 03 27 17.9 +1.8**
SNR=58
PMR Palmer 81.29 25 *e*P **P 03 27 15.8 -0.3**
PMR pmax pmax
comp=Z,33nm,1.2s,mb4.6
PMR Palmer 81.29 25 *e*P **P 03 27 15.8 -0.3**
comp=Z,33nm,1.2s,mb4.6
KURK Kurchatov 81.42 323 P **P 03 27 16.9 -0.1**
comp=Z,30nm,0.7s,mb4.8,baz=115,slow=3.7,SNR=65
KURK pP pP 03 29 24.2 -0.8
comp=Z,3.9nm,0.8s,baz=106,slow=4.5,SNR=4.0
KURK Kurchatov 81.42 323 ⇓*i*P **P 03 27 16.6 -0.4**
KURK *e**PP pP 03 29 25.1 +0.1
KURK pmax pmax
comp=Z,67nm,0.8s,mb5.1
KURK Kurchatov 81.42 323 ⇓*i*P **P 03 27 16.6 -0.4**
comp=Z,67nm,0.8s,mb5.1
KURK *e*pP pP 03 29 25.1 +0.1
KURK Kurchatov 81.42 323 P **P 03 27 17.1 +0.1**
SNR=39
KURK P 03 27 17.1
SNR=39
KTH Kantishna Hill 81.48 23 *e*P **P 03 27 16.1 -1.0**
comp=Z,22nm,0.9s,mb4.6
KTH *e*pP pP 03 29 24.5 -0.6
KTH *e*PP PP 03 30 32.8 -2.2
KBK Karagaybulak 81.58 314 P **P 03 27 19.1 +1.1**
SNR=8.4
TRF Thorofare Moun 81.69 23 *e*P **P 03 27 17.1 -1.0**
comp=Z,18nm,0.7s,mb4.7
TRF *e*pP pP 03 29 25.3 -0.9
BPAW Bear Paw Mtn. 81.73 23 *e*P **P 03 27 17.4 -0.9**
comp=Z,11nm,0.8s,mb4.4
BPAW *e*pP pP 03 29 25.7 -0.7
BPAW *e*PP PP 03 30 34.0 -2.9
UCH Uchtor 81.78 314 P **P 03 27 20.6 +1.6**
SNR=32
UCH Uchtor 81.78 314 *e*P **P 03 27 20.3 +1.2**
comp=Z,35nm,0.9s,mb4.9
UCH *e*pP pP 03 29 29.0 +1.8
CHMS Chumysh 81.80 315 P **P 03 27 19.5 +0.3**
SNR=12
FRU Bishkek 81.86 314 *e*P **P 03 27 18.5 -0.9**
FRU pmax pmax
comp=Z,114nm,1.8s,mb5.1
AAK Ala-Archa 81.89 314 P **P 03 27 20.3 +0.7**
comp=Z,152nm,0.5s,mb5.8,SNR=9.5
AAK Ala-Archa 81.89 314 P **P 03 27 20.4 +0.8**
SNR=20
AAK Ala-Archa 81.89 314 P **P 03 27 20.5 +0.9**
comp=Z,9.3nm,0.4s,mb4.7,baz=103,slow=4.9,SNR=26
AAK pP pP 03 29 27.9 +0.1
comp=Z,2.0nm,0.5s,baz=150,slow=6.6,SNR=2.5
AAK Ala-Archa 81.89 314 *d i*P **P 03 27 20.3 +0.7**
AAK pmax pmax
comp=Z,26nm,1.5s,mb4.5
AAK Ala-Archa 81.89 314 *e*P **P 03 27 20.1 +0.4**
comp=Z,11nm,0.4s,mb4.7
AAK *e*pP pP 03 29 28.9 +1.1
AAK Ala-Archa 81.89 314 P **P 03 27 20.5 +0.9**
SNR=17
AAK P 03 27 20.5
SNR=17
USP Ospenovka 82.05 315 P **P 03 27 20.9 +0.6**
SNR=28
AML Almayashu 82.35 313 P **P 03 27 23.3 +1.3**
SNR=12
AML Almayashu 82.35 313 ⇓*e*P **P 03 27 22.9 +1.0**
comp=Z,48nm,0.8s,mb5.1
AML *e*pP pP 03 29 32.1 +1.8

MCK McKinley 82.35 23 *eP* **P 03 27 20.6 -0.8**
MCK *e**PP pP 03 29 28.9 -0.9
MCK pmax pmax
comp=Z,59nm,0.9s,mb5.1
MCK McKinley 82.35 23 *eP* **P 03 27 20.6 -0.8**
comp=Z,59nm,0.9s,mb5.1
MCK epP pP 03 29 28.9 -1.0
EKS2 Erkin-Say 82.41 314 P **P 03 27 23.2 +1.0**
SNR=36
EKS2 Erkin-Say 82.41 314 *eP* **P 03 27 23.1 +0.9**
comp=Z,57nm,1.0s,mb5.0
EKS2 epP pP 03 29 32.2 +1.6
DIV Divide 82.55 26 *eP* **P 03 27 22.8 +0.3**
comp=Z,15nm,0.9s,mb4.5
BMRM Bremner River 83.00 27 *eP* **P 03 27 24.8 0.0**
comp=Z,35nm,1.3s,mb4.7
BMRM epP pP 03 29 32.7 -0.7
COLA College 83.29 23 *eP* **P 03 27 24.5 -1.6**
COLA pmax pmax
comp=Z,27nm,0.8s,mb4.8
COLA College 83.29 23 *eP* **P 03 27 24.5 -1.6**
comp=Z,27nm,0.8s,mb4.8
PAX Paxson 83.43 25 *eP* **P 03 27 26.7 -0.1**
PAX *e**PP pP 03 29 34.1 -1.6
PAX pmax pmax
comp=Z,7.0nm,0.7s,mb4.3
PAX Paxson 83.43 25 *eP* **P 03 27 26.7 -0.1**
comp=Z,6.7nm,0.7s,mb4.3
PAX epP pP 03 29 34.1 -1.6
COLD Coldfoot 83.54 20 *eP* **P 03 27 27.6 +0.3**
comp=Z,20nm,1.0s,mb4.6
COLD epP pP 03 29 35.7 -0.5
MAW Mawson 84.10 203 P **P 03 27 30.0 -0.1**
comp=Z,36nm,0.7s,mb5.0,baz=92,slow=6.1,SNR=70
MAW pP pP 03 29 39.9 +0.7
comp=Z,1.1nm,0.7s,baz=40,slow=14,SNR=1.7
MAW Mawson 84.10 203 *eP* **P 03 27 29.2 -0.9**
MAW pmax pmax
comp=Z,6.0nm,0.6s
MAW Mawson 84.10 203 *eP* **P 03 27 29.2 -0.9**
comp=Z,5.7nm,0.6s,mb4.3
MENT Mentasta 84.15 25 *eP* **P 03 27 30.6 +0.2**
KBL Kabul 84.42 305 *eP* **P 03 27 31.0 -1.4**
KBL pmax pmax
comp=Z,10.0nm,0.6s,mb4.5
KBL Kabul 84.42 305 *eP* **P 03 27 31.0 -1.3**
comp=Z,9.5nm,0.6s,mb4.5
PNL Peninsula 84.97 29 *eP* **P 03 27 35.2 +0.8**
comp=Z,28nm,0.9s,mb4.9
QSPA South Pole Qui 85.17 180⇑ *iP* **P 03 27 34.2 -0.9**
comp=Z,35nm,0.9s,mb5.0
QSPA epP pP 03 29 44.6 0.0
EGAK Eagle 85.88 24 *eP* **P 03 27 38.6 0.0**
comp=Z,23nm,1.2s,mb4.7
EGAK epP pP 03 29 49.6 +1.1
BVAR Borovoye Array 86.95 324 P **P 03 27 42.6 -1.3**
comp=Z,7.2nm,0.5s,mb4.6,baz=106,slow=5.3,SNR=36
BVAR pP pP 03 29 53.7 -0.6
comp=Z,17nm,0.8s,baz=103,slow=6.4,SNR=22
BVAR S SKSac 03 37 09.8 -3.9
comp=Z,1.3nm,0.9s,baz=138,slow=5.2,SNR=3.7
BRVK Borovoye 87.02 324 *dif P* **P 03 27 42.9 -1.4**
BRVK pmax pmax
comp=Z,21nm,1.7s,mb4.6
BRVK Borovoye 87.02 324 *eP* **P 03 27 42.8 -1.5**
comp=Z,4.5nm,0.5s,mb4.5
BRVK epP pP 03 29 54.7 0.0
BRVK Borovoye 87.02 324 P **P 03 27 43.3 -1.0**
SNR=6.7
BRVK P 03 27 43.3
SNR=6.7
DLBC Dease Lake 89.36 31 P **P 03 27 56.0 +1.0**
comp=Z,0.5nm,0.4s,baz=202,slow=4.1,SNR=4.5
DLBC pP pP 03 30 07.1 +0.9
comp=Z,2.9nm,1.0s,baz=291,slow=7.5,SNR=2.7
DLBC Dease Lake 89.36 31 P **P 03 27 56.0 +1.0**
DLBC pP pP 03 30 07.1 +0.9
INK Inuvik 89.83 21 P **P 03 27 56.4 -0.7**
comp=Z,5.3nm,0.9s,mb4.4,baz=255,slow=12,SNR=5.5
INK pP pP 03 30 08.4 +0.1
comp=Z,14nm,1.1s,baz=264,slow=5.3,SNR=8.6
INK PP PP 03 31 39.6 -1.4
comp=Z,2.3nm,0.8s,baz=220,slow=7.9,SNR=4.1
HUMO Hull Mountain 91.80 48 *eP* **P 03 28 07.3 +0.5**
comp=Z,11nm,1.1s,mb4.8
YBH Yreka Blue Hor 91.91 48 P **P 03 28 08.1 +0.9**
comp=Z,9.1nm,1.1s,mb4.7,baz=213,slow=2.3,SNR=13
YBH Yreka Blue Hor 91.91 48 *eP* **P 03 28 08.2 +0.9**
YBH *e**PP pP 03 30 22.8 +4.0
YBH pmax pmax
comp=Z,12nm,1.2s
YBH Yreka Blue Hor 91.91 48 *eP* **P 03 28 08.2 +0.9**
comp=Z,12nm,1.2s,mb4.8
YBH epP pP 03 30 22.8 +4.0
SYO Syowa Base 92.39 200⇓ *eP* **P 03 28 06.6 -2.2**
SYO Syowa Base 92.39 200⇑ *eP*cP PcP 03 28 09.8 +0.6
ABKAR Akbulak array 92.95 319 *eP* **P 03 28 10.0 -1.8**
comp=Z,2.9nm,0.6s,mb4.5
ABKAR epP pP 03 30 21.6 -1.8
ARU Arti 94.17 326 *eP* **P 03 28 15.3 -1.9**
ARU *PP pP 03 30 27.0 -1.9
ARU 03 32 12.8
ARU S SKSac 03 37 50.8 -3.3
ARU SS SS 03 45 11.1 -5.6
AKTK Aktyubinsk 94.26 320 P **P 03 28 15.9 -1.8**
AKTK pP pP 03 30 30.6 +1.2
AKTO Aktyubinsk 94.26 320 P **P 03 28 15.9 -1.8**
comp=Z,1.4nm,0.5s,mb4.4,baz=86,slow=8.1,SNR=7.3
AKTO pP pP 03 30 30.6 +1.2
comp=Z,1.3nm,0.7s,baz=82,slow=4.5,SNR=4.2
WVOR Wild Horse Val 94.98 48 *eP* **P 03 28 22.2 +1.0**
WVOR *e**PP pP 03 30 36.2 +3.2
WVOR pmax pmax
comp=Z,1.0nm,0.5s,mb4.2
WVOR Wild Horse Val 94.98 48 *eP* **P 03 28 22.2 +0.9**
comp=Z,1.5nm,0.5s,mb4.4
WVOR epP pP 03 30 36.2 +3.2
OD2 Odessa Site #2 95.08 43 *eP* **P 03 28 21.9 +0.4**
comp=Z,5.1nm,1.0s,mb4.6
NVAR Mina Array Bea 95.10 52 P **P 03 28 22.3 +0.5**
comp=Z,0.6nm,0.3s,mb4.2,baz=250,slow=6.6,SNR=9.6
NVAR pP pP 03 30 34.7 +1.1
comp=Z,0.2nm,0.3s,baz=238,slow=5.2,SNR=1.9
NEW Newport 96.16 42 *eP* **P 03 28 26.3 -0.1**
NEW pmax pmax
comp=Z,5.0nm,1.1s
NEW Newport 96.16 42 *eP* **P 03 28 26.3 -0.1**
comp=Z,5.5nm,1.1s,mb4.7
YKA Yellowknife Ar 97.20 28 P **P 03 28 30.0 -0.7**
comp=Z,0.8nm,0.6s,mb4.1,baz=277,slow=5.4,SNR=7.3
YKA pP pP 03 30 41.7 -1.1
comp=Z,2.4nm,0.8s,baz=274,slow=4.5,SNR=10
YKA PP PP 03 32 42.1 +4.5
comp=Z,1.2nm,1.0s,baz=273,slow=6.1,SNR=4.7
YKA PKIKP PKiKP 03 33 01.4 -0.6
comp=Z,0.5nm,0.6s,baz=280,slow=1.7,SNR=5.4
YKA PKKP PKKPbc 03 45 05.4 -4.2
comp=Z,1.0nm,0.6s,baz=89,slow=2.8,SNR=16
YKA Yellowknife Ar 97.20 28 P **P 03 28 30.1 -0.7**
YKA pP pP 03 30 41.7 -1.1
YKA PP PP 03 32 42.1 +4.5
HLID Hailey 98.09 47 *eP*dif Pdif 03 28 36.0 +1.0
comp=Z,1.6nm,1.1s
BOZ Bozeman (W) 99.99 45 *eP* Pdif 03 28 43.8 +0.4
BOZ pmax pmax
comp=Z,1.0nm,0.9s,mb4.2
BOZ Bozeman (W) 99.99 45 *eP*dif Pdif 03 28 43.8 +0.4
comp=Z,1.0nm,0.9s
HWUT Hardware Ranch 100.25 49 *eP*dif Pdif 03 28 44.8 +0.2
TPAW Teton Pass 100.61 47 *eP*dif Pdif 03 28 46.8 +0.6
RES Resolute Bay 101.34 14 P Pdif 03 28 48.2 -1.2
comp=Z,2.5nm,1.0s,baz=247,slow=6.2,SNR=3.9
BW06 Boulder Array 101.67 47 *eP*dif Pdif 03 28 50.6 -0.3
comp=Z,5.9nm,1.4s
PDAR Pinedale Array 101.67 47 P Pdif 03 28 51.1 +0.2
comp=Z,2.3nm,1.0s,baz=267,slow=2.5,SNR=12
PDAR PKKPbc PKKPbc 03 44 55.3 -1.1
comp=Z,0.4nm,0.4s,baz=61,slow=5.6,SNR=3.6
KEV Kevo 105.15 342 *eP* Pdif 03 29 01.1 -5.2
KEV pmax pmax
comp=Z,2.0nm,0.4s
KEV Kevo 105.15 342 *ep* Pdif 03 29 01.1 -5.2
comp=Z,1.9nm,0.4s
KEV Kevo 105.15 342 *ep* Pdif 03 29 01.1 -5.2
comp=Z,1.9nm,0.4s
ARCES ARCESS Array B 105.72 342 Pdiff Pdif 03 29 07.5 -1.4
comp=Z,3.4nm,0.6s,baz=69,slow=7.4,SNR=21
ARCES PKiKP PKiKP 03 33 16.4 -0.8
comp=Z,1.3nm,0.7s,baz=64,slow=2.1,SNR=7.8
ARCES PKKPbc PKKPbc 03 44 41.4 -4.0
comp=Z,2.0nm,0.5s,baz=247,slow=2.5,SNR=21
ARCES ARCESS Array B 105.72 342 Pdif Pdif 03 29 07.5 -1.4
ARCES PKPdif PKiKP 03 33 16.4 -0.8
ARCES PKKPbc PKKPbc 03 44 41.4 -4.0
JOF Joensuu 106.58 335 *ep* Pdif 03 29 08.6 -4.1
comp=Z,2.3nm,0.4s
JOF Joensuu 106.58 335 *ep* Pdif 03 29 08.6 -4.1
comp=Z,2.3nm,0.4s
OBN Obninsk 106.62 326 *eP* Pdif 03 29 11.7 -1.2
OBN *e* 03 33 43.6
OBN *e* 03 39 33.0
OBN pmax pmax
comp=Z,5.0nm,1.7s
TXAR Lajitas Array 107.48 61 PKiKP PKiKP 03 33 22.1 +0.4
comp=Z,0.4nm,0.7s,baz=251,slow=2.8,SNR=4.0
TXAR PP PP 03 33 53.0 -1.2
comp=Z,1.4nm,1.0s,baz=260,slow=7.5,SNR=6.1
KAF Kangasniemi 109.03 335 *eP* Pdif 03 29 19.3 -4.3
KAF pmax pmax
comp=Z,2.0nm,0.5s
KAF Kangasniemi 109.03 335 *ep* Pdif 03 29 19.3 -4.3
comp=Z,1.8nm,0.5s
KAF Kangasniemi 109.03 335 *ep* Pdif 03 29 19.3 -4.3
comp=Z,1.8nm,0.5s
FINES FINESS Array B 109.44 335 Pdiff Pdif 03 29 23.0 -2.4
comp=Z,2.1nm,0.6s,baz=60,slow=5.7,SNR=17
FINES PKiKP PKiKP 03 33 24.1 -0.2
comp=Z,1.3nm,0.6s,baz=72,slow=2.9,SNR=5.4
FINES PP PP 03 34 06.8 0.0
comp=Z,1.3nm,0.6s,baz=51,slow=6.1,SNR=3.7
FINES PKKPbc PKKPbc 03 44 31.1 -2.6
comp=Z,1.4nm,0.7s,baz=212,slow=1.3,SNR=5.7
FINES FINESS Array B 109.44 335 P Pdif 03 29 23.0 -2.4
FINES 03 34 06.8
JCT Junction City 110.71 59 *eP*KIKP PKiKP 03 33 28.7 +0.9
WMOK Wichita Mounta 110.98 55 *eP*KIKP PKiKP 03 33 27.3 -0.9
AKASG Malin Array Be 112.23 323 PP PP 03 34 22.0 -4.9
comp=Z,0.6nm,0.4s,baz=61,slow=7.6,SNR=7.2
AKASG PKKPbc PKKPbc 03 44 21.7 -2.7
comp=Z,2.5nm,0.5s,baz=264,slow=4.0,SNR=8.9
BRTR Keskin Array B 112.43 311 PP PP 03 34 29.4 +0.7
comp=Z,1.5nm,0.9s,baz=115,slow=8.0,SNR=3.7
BRTR PKKPbc PKKPbc 03 44 23.1 -0.3
comp=Z,1.0nm,0.8s,baz=214,slow=5.0,SNR=5.3
EIL Elat 113.19 300 PKKPbc PKKPbc 03 44 21.4 +0.7
comp=Z,2.8nm,0.5s,baz=351,slow=4.7,SNR=6.8
HFS Hagfors 115.22 337 PKKPbc PKKPbc 03 44 10.9 -3.8
comp=Z,0.7nm,0.4s,baz=194,slow=3.0,SNR=11
NOA NORSAR Array B 115.56 339 PKP PKPdf 03 33 35.5 -0.6
comp=Z,0.9nm,0.8s,baz=80,slow=2.1,SNR=3.1
NOA SKP 03 36 14.1
comp=Z,1.7nm,0.8s,baz=28,slow=1.0,SNR=4.1
NOA PKKPbc PKKPbc 03 44 11.1 -2.6
comp=Z,1.8nm,0.5s,baz=230,slow=3.4,SNR=7.0
BOSA Boshof 116.53 235 PKP PKPdf 03 33 38.7 -0.3
comp=Z,2.0nm,0.5s,baz=44,slow=3.7,SNR=15
BOSA Boshof 116.53 235 *e*PKPdf PKPdf 03 33 38.5 -0.5
STHS Stebnicka Huta 117.45 324 *e*PKIKP PKPdf 03 33 42.4 +2.3
STHS Stebnicka Huta 117.45 324 *e*PKP PKPdf 03 33 42.4 +2.3
LBTB Lobatse 117.53 239 *e*PKIKP PKPdf 03 33 40.6 -0.4
LSZ Lusaka 118.05 250 *e*PKIKP PKPdf 03 33 42.1 -0.1
VYHS Vyhne 119.28 324 *e*PKIKP PKPdf 03 33 43.1 -0.6
VYHS Vyhne 119.28 324 *e*PKP PKPdf 03 33 43.1 -0.6
WVT Waverly 119.38 51 *e*PKIKP PKPdf 03 33 43.1 -1.2
WCI Wyandotte Cave 119.90 48 *e*PKIKP PKPdf 03 33 44.5 -0.7
BRG Berggiesshubel 120.72 329 *e*PKP PKPdf 03 33 46.1 -0.2
comp=Z,3.7nm,0.8s
BRG Berggiesshubel 120.72 329 *e*PKIKP PKPdf 03 33 46.1 -0.2
BRG pmax pmax
comp=Z,2.0nm,0.8s
CLL Collm 120.95 329 *i* PKIKP PKPdf 03 33 46.0 -0.8
SWET Sewanee 121.13 51 *e*PKPdif PKPdf 03 33 46.3 -1.3
PLCA Paso Flores 122.03 145 PKP PKPdf 03 33 49.5 +0.3
comp=Z,8.3nm,0.5s,baz=231,slow=2.5,SNR=47
PLCA PKKPbc PKKPbc 03 43 49.1 -1.2
comp=Z,1.2nm,0.6s,baz=122,slow=3.2,SNR=5.8
PLCA Paso Flores 122.03 145 *e*PKPdif PKPdf 03 33 49.7 +0.4
SCHQ Schefferville 122.37 24 PKP PKPdf 03 33 48.9 -0.5
comp=Z,1.5nm,0.6s,baz=314,slow=2.2,SNR=5.5
SCHQ PKKPbc PKKPbc 03 43 46.7 -2.5
comp=Z,4.0nm,0.7s,baz=251,slow=1.1,SNR=6.3
SCHQ Schefferville 122.37 24 PKP PKPdf 03 33 48.9 -0.5
SCHQ PKKPbc PKKPbc 03 43 46.7 -2.5
ABTA Abfaltersbach 123.84 325⇓ *i*PKPdif PKPdf 03 33 51.6 -0.9
comp=Z,1.8nm,0.6s
WTTA Wattenberg 124.04 326⇑ *i*PKPdif PKPdf 03 33 52.8 -0.1
comp=Z,4.0nm,0.5s
MOTA Moosalm 124.28 326⇓ *i*PKPdif PKPdf 03 33 52.9 -0.4
comp=Z,5.3nm,0.6s
STU Stuttgart 124.44 329 *e*PKIKP PKPdf 03 33 53.7 +0.1
FETA Feichten 124.68 326⇑ *i*PKPdif PKPdf 03 33 53.3 -0.7
comp=Z,3.8nm,0.7s
EKA Eskdalemuir Ar 124.85 341 PKKPbc PKKPbc 03 43 37.0 -2.8
comp=Z,2.1nm,0.6s,baz=217,slow=3.9,SNR=12
JSC Jenkinsville 125.07 51 *e*PKIKP PKPdf 03 33 55.5 +0.3
DAVOX Davos/Dischmat 125.29 327 PKKPbc PKKPbc 03 43 36.9 -0.9
comp=Z,3.1nm,0.5s,baz=230,slow=5.1,SNR=9.4
CDF Champ du Feu 125.65 329 *e*PKIKP PKPdf 03 33 56.5 +0.6
GIVF Givet 125.70 332 *e*PKIKP PKPdf 03 33 56.3 +0.4
BAIF Baives 126.01 333 *e*PKIKP PKPdf 03 33 57.4 +0.9
HINF Hinteralfeld 126.25 329 *e*PKIKP PKPdf 03 33 56.8 -0.3
comp=Z,4.1nm,0.5s
HAU Haudompre 126.38 330 *e*PKIKP PKPdf 03 33 57.2 -0.1
comp=Z,6.2nm,0.5s
MEZF Maizieres J'vi 126.69 331 *e*PKIKP PKPdf 03 33 58.8 +0.9
CABF La Chapelle 127.43 328 *e*PKIKP PKPdf 03 33 59.9 +0.6
LPL La Plagne 127.80 327 *e*PKIKP PKPdf 03 34 01.6 +1.5
LPG La Plagne 127.80 327 *e*PKIKP PKPdf 03 34 00.7 +0.6
comp=Z,5.2nm,0.7s
LOR Lormes 128.12 330 *e*PKIKP PKPdf 03 34 01.6 +1.0
MBDF Montbardon 128.27 326 *e*PKIKP PKPdf 03 34 01.7 +0.7
SAOF Saorge 128.29 325 PKP pPKPdf 03 36 24.2 +2.7
PGF Pioggiola 128.29 323 *e*PKIKP PKPdf 03 34 01.7 +0.6
AUTN L'Aution 128.38 325 PKP pPKPdf 03 36 24.2 +2.6
SSF Saint Saulge 128.44 330 *e*PKIKP PKPdf 03 34 01.9 +0.6
TOUF Mont Tournerai 128.45 325 PKP pPKPdf 03 36 24.5 +2.7
LUCF Luceram 128.47 325 PKP pPKPdf 03 36 25.0 +3.2
REVF Revere 128.55 325 PKP pPKPdf 03 36 25.1 +3.1
SMF Signal de Mont 128.56 330 *e*PKIKP PKPdf 03 34 01.6 +0.1
MVIF Mont Vial 128.57 325 PKP pPKPdf 03 36 25.5 +3.5
TRQA Tornquist 128.60 149 *e*PKPdif PKPdf 03 34 01.9 0.0
ORIF Oris-en-Rattie 128.64 327 *e*PKIKP PKPdf 03 34 02.0 +0.3
comp=Z,5.4nm,0.7s
OSPF L'Ospedale 128.68 322 PKP pPKPdf 03 36 25.6 +3.3
AVF Avril sur Loir 128.71 330 *e*PKIKP PKPdf 03 34 01.7 -0.1
CALN Calern 128.81 325 PKP pPKPdf 03 36 25.9 +3.4
FLN La Foliniere 129.05 334 *e*PKIKP PKPdf 03 34 02.3 -0.1
FRF La Foret Royal 129.07 325 *e*PKIKP PKPdf 03 34 02.6 0.0
comp=Z,5.9nm,0.7s
BGF Bois d'Agland 129.12 330 *e*PKIKP PKPdf 03 34 02.5 -0.1
PLDF La Plantade 129.13 329 PKP pPKPdf 03 36 29.1 +6.1
OG26 St.-Nazaire-De 129.17 327 PKP pPKPdf 03 36 28.3 +5.2
LMR La Mourre 129.29 325 *e*PKIKP PKPdf 03 34 04.1 +1.1
comp=Z,3.7nm,0.6s
AGO Saint Agoulin 129.33 330 PKP pPKPdf 03 36 29.7 +6.3
VIVF Saint-Julien-l 129.33 328 *e*PKIKP PKPdf 03 34 03.3 +0.3
COLF Collangettes 129.41 329 PKP pPKPdf 03 36 29.2 +5.7
SMRF Simiane la Rot 129.41 326 *e*PKIKP PKPdf 03 34 04.0 +0.8
comp=Z,8.3nm,0.8s
GRR Gorron 129.50 334 *e*PKIKP PKPdf 03 34 03.5 +0.3
PYM Petit Puy Mans 129.60 329 PKP pPKPdf 03 36 30.9 +7.0
TCF Toulx Ste Croi 129.62 330 *e*PKIKP PKPdf 03 34 03.9 +0.4
comp=Z,2.6nm,0.7s
LBL Lubilhac 129.83 329 PKP pPKPdf 03 36 31.8 +7.4
FRNF Fournols 130.07 329 PKP pPKPdf 03 36 33.1 +8.3
LASF Ste Croix 130.29 327 *e*PKIKP PKPdf 03 34 05.4 +0.5
comp=Z,3.3nm,0.6s
SGMF Saint Gilles 130.32 335 *e*PKIKP PKPdf 03 34 04.9 +0.1
comp=Z,6.9nm,0.7s
MFF Saint Martin d 130.52 332 *e*PKIKP PKPdf 03 34 06.0 +0.8
ROSF Rostrenen 130.56 336 *e*PKIKP PKPdf 03 34 05.4 +0.2
CAF Calviac 130.65 329 *e*PKIKP PKPdf 03 34 06.3 +0.8
RJF Les Rejaudoux 130.66 330 *e*PKIKP PKPdf 03 34 06.6 +1.1
BST Brest 130.90 336 PKP pPKPdf 03 36 33.8 +7.5
BCIP Isla Barro Col 131.41 82 *e*PKPdif PKPdf 03 34 07.4 -0.4
MTLF Montolieu 131.66 328 *e*PKIKP PKPdf 03 34 08.1 +0.6
comp=Z,4.5nm,0.8s
KEST Kesra 131.74 315 PKP PKPdf 03 34 07.5 -0.4
comp=Z,0.6nm,0.6s,baz=143,slow=5.1,SNR=3.6
KEST SKPbc SKPbc 03 36 37.7 -0.1
comp=Z,4.9nm,0.9s,baz=332,slow=3.1,SNR=13
KEST Kesra 131.74 315 PKP PKPdf 03 34 07.5 -0.4
KEST SKPbc SKPbc 03 36 37.7 -0.1
LRDF Laroque-de-Fa 131.76 327 PKP pPKPdf 03 36 37.5 +9.4
SJAF Saint Jean de 131.88 326 PKP pPKPdf 03 36 37.4 +9.1
FILF Fillols 132.00 327 PKP pPKPdf 03 36 38.3 +10
VALF Valcebollere 132.41 327 PKP pPKPdf 03 36 39.8 +10
OTAV Otavalo 132.44 94 *e*PKPdif PKPdf 03 34 10.6 +0.8
MLS Moulis 132.52 328 PKP pPKPdf 03 36 39.5 +10
EPF Esparros 132.86 329 *e*PKIKP PKPdf 03 34 10.8 +1.0
comp=Z,2.6nm,0.6s
RESF Ens 133.02 328 PKP pPKPdf 03 36 42.5 +12
VIEF Viey 133.13 329 PKP pPKPdf 03 36 42.5 +12
REYF Montagne du Re 133.21 329 PKP pPKPdf 03 36 43.3 +12
ATE Arette 133.36 329 PKP pPKPdf 03 36 42.8 +12
ETSF Etsaut 133.42 329 *e*PKIKP PKPdf 03 34 11.4 +0.6
SJPF Ste Jean 133.60 330 *e*PKIKP PKPdf 03 34 11.9 +0.8
comp=Z,4.1nm,0.7s
ROSC El Rosal 136.87 88 PKhKP PKPpre 03 34 09.2
baz=280,slow=16
ROSC PKP PKPdf 03 34 18.6 +0.5
comp=Z,13nm,0.5s,baz=285,slow=20
ROSC El Rosal 136.87 88 *e*PKPpre PKPpre 03 34 08.9
ROSC *e*PKPdif PKPdf 03 34 18.5 +0.4
PBRG Braganca 137.24 333 *e*SKP 03 36 54.8
ESDC Sonseca Array 137.53 329 SKPbc SKPbc 03 36 55.0 -0.9
comp=Z,1.8nm,0.8s,baz=9.1,slow=3.0,SNR=7.5
ESDC SKPab 03 37 03.3
comp=Z,1.7nm,0.7s,baz=32,slow=4.4,SNR=5.9
LPAZ La Paz 137.76 121 PKhKP PKPpre 03 34 09.8
comp=Z,2.5nm,0.4s,baz=273,slow=3.5,SNR=28
LPAZ SKP 03 36 59.9
comp=Z,3.9nm,0.8s,baz=244,slow=1.2,SNR=4.5
LPAZ La Paz 137.76 121 *e*PKPpre PKPpre 03 34 09.6
LPAZ *e*PKPdif PKPdf 03 34 20.9 +1.3
MVO Moncorvo 137.88 333 *e*PKP PKPpre 03 34 09.7
MVO *e*SKP 03 36 56.6
PVRL Vila Real 138.10 333 *e*SKP SKPbc 03 36 57.5 +0.1
PVIS Viseu 138.63 333 *e*SKP SKPbc 03 36 59.1 +0.2
MTE Manteigas 138.72 333 *e*PKP PKPpre 03 34 08.7
MTE *e*SKP 03 36 59.1
PCBR Castelo Branco 139.14 332 *e*SKP SKPbc 03 37 00.4 +0.1
PMRV Marv??o 139.42 331 *e*SKP SKPbc 03 37 01.2 +0.1
PTOM Tomar 139.75 333 *e*PKP PKPpre 03 34 15.6
PTOM *e*SKP 03 37 01.5
CPUP Villa Florida 139.93 142 PKhKP PKPpre 03 34 15.4
comp=Z,1.7nm,0.4s,baz=172,slow=1.2,SNR=18
CPUP SKPbc SKPbc 03 37 03.2 +0.3
comp=Z,2.9nm,0.8s,baz=180,slow=2.0,SNR=2.9
CPUP Villa Florida 139.93 142 PKHKP PKPpre 03 34 15.5
CPUP *e* 03 34 23.9
CPUP Villa Florida 139.93 142 PKP PKPpre 03 34 15.4
CPUP *e*PKPdif PKPdf 03 34 23.9 +0.6
CPUP SKPbc SKPbc 03 37 03.2 +0.3
PBAR Barrancos 140.23 330 *e*SKP SKPbc 03 37 03.4 +0.1
EVO Evora 140.43 331 *e*SKP SKPbc 03 37 04.0 +0.2
PCVE Castro Verde 141.15 330 *e*SKP SKPbc 03 37 06.9 +1.3
CRPR Cabo Rojo, PR 142.38 67 *e*PKPdif PKPdf 03 34 23.7 -4.2
MDT Midelt 142.77 322 SKPbc SKPbc 03 37 10.2 +0.4
comp=Z,2.0nm,0.6s,baz=103,slow=2.5,SNR=7.0
SJG San Juan 143.23 66 *e*PKHKP PKPpre 03 34 26.7
CBYP Canovanas 143.45 66 *e*PKPdif PKPdf 03 34 27.4 -2.3
MTP Monte Pirata 143.78 66 *e*PKPdif PKPdf 03 34 29.0 -1.4
SPB Sao Paulo 147.57 151 *e*PKPbc PKPbc 03 34 40.0 -0.2
PMAR Madeira 149.23 336 *e*PKP PKPbc 03 34 44.7 +0.6
PMAR *e*SKP 03 37 03.4
CAM4 Nova Friburgo 150.76 158⇑ *i*PP PKPbc 03 34 48.1 +0.1
CAM4 *i* 03 34 49.9
CAM4 *i* 03 34 55.4
CAM4 *i* 03 35 10.4
KIC Kosan Boka 153.78 275 *e*PKIKP PKPbc 03 34 54.1 -0.7
comp=Z,9.8nm,0.6s
DBIC Dimbokro 153.88 275 PKPbc PKPbc 03 34 54.4 -0.6
comp=Z,1.8nm,0.4s,baz=54,slow=3.1,SNR=12
DBIC PKPab PKPab 03 35 11.9 +0.4
comp=Z,1.6nm,0.3s,baz=54,slow=8.0,SNR=5.4
DBIC pPKPbc pPKPbc 03 37 15.0 +0.1
comp=Z,3.8nm,0.9s,baz=337,slow=6.5,SNR=2.4
DBIC Dimbokro 153.88 275 *e*PKPbc PKPbc 03 34 54.1 -0.9
TIC Toumodi 154.04 275 *e*PKIKP PKPbc 03 34 54.6 -0.8
comp=Z,4.5nm,0.2s
LIC Lamto 154.06 274 *e*PKIKP PKPbc 03 34 54.6 -0.8
comp=Z,64nm,1.9s

IDC 20 04:12:40.9±7.9, 3°.18N×126°.78E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.7/22, mbtmp3.9/4, Error ellipse: s-maj=131.0km s-min=94.5km az=138.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.18**	**183**	P	P	04 17 28.1	+0.1
2.2nm,0.7s,baz=34,slow=3.6,SNR=5.5							
WRA	**Warramunga Arr**	**24.15**	**162**	P	P	04 17 58.1	-0.7
1.6nm,0.3s,baz=342,slow=10,SNR=9.5							
ASAR	**Alice Springs**	**27.57**	**166**	P	P	04 18 29.7	-0.1
0.8nm,0.5s,baz=348,slow=7.5,SNR=14							
STKA	**Stephens Creek**	**37.60**	**159**	P	P	04 19 58.1	+0.7
2.6nm,0.5s,baz=348,slow=7.3,SNR=8.1							

*CSEM **20** 04:14:53.9±0.5, 37°.78N×27°.01E, h10km, MD2.8, Error ellipse: s-maj=12.7km s-min=4.7km az=39.0*
*ISCJB **20** 04:14:54.2±1.8, 37°.82N±0°.09×27°.0E±0°.1, h32km±11km, Error ellipse: s-maj=19.4km s-min=8.1km az=38.8*
*DDA **20** 04:14:55.8, 38°.28N×27°.30E, h7km±2km, Md2.8*
ISC 20 04:14:54.4±1.6, 37°.83N±0°.09×27°.05E±0°.09, h33km±9km, n8, σ1°.10/16, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IZM	**Izmir**	**0.60**	**16**	*e*PG	**Pb**	**04 15 07.0**	**+0.4**
IZM				*e*SG	**Sb**	**04 15 15.7**	**+0.9**
IZM	**Izmir**	**0.60**	**16**	*e*Pg	**Pb**	**04 15 07.0**	**+0.5**
IZM				*e*Sg	**Sb**	**04 15 15.7**	**+0.9**
URLA	**Izmir**	**0.64**	**326**	*i* P	**Pn**	**04 15 07.1**	**-0.1**
URLA				*i* S	**Sb**	**04 15 14.9**	**-1.1**
URLA	**Izmir**	**0.64**	**326**	*i* P	**Pn**	**04 15 07.1**	**-0.1**
URLA				*i* S	**Sb**	**04 15 14.9**	**-1.1**
AYDN	**Tasoluk**	**0.68**	**104**	*i* P	**Pn**	**04 15 08.0**	**+0.3**
AYDN				*i* S	**Sb**	**04 15 16.4**	**-0.7**
AYDN	**Tasoluk**	**0.68**	**104**	*i* P	**Pn**	**04 15 08.0**	**+0.3**
AYDN				*i* S	**Sb**	**04 15 16.4**	**-0.6**
KULA	**Kula-Manisa**	**1.45**	**61**	*e*PN	**Pn**	**04 15 20.4**	**+2.1**
KULA				*e*SN	**Sn**	**04 15 34.3**	**-1.7**
KULA	**Kula-Manisa**	**1.45**	**61**	*e*Pn	**Pn**	**04 15 20.4**	**+2.2**
KULA				*e*Sn	**Sn**	**04 15 34.3**	**-1.7**

TAP 20 04:22:27.4, 22°.04N×121°.70E, h23km, ML3.5, 1D, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.14**	**271⇓**	*i*P	Pb	04 22 32.4	+0.3
baz=270							
LAY				*i* S	Sb	04 22 36.1	+0.8
baz=270							
TWK1	**Hengchun**	**0.84**	**264**	*e*P	Pb	04 22 43.5	+0.2
baz=263							
EAST	**Anshuo**	**0.86**	**294**	*e*P	Pb	04 22 43.8	+0.1
baz=293							
EAST				*e*S	Sb	04 22 56.1	+1.2
baz=293							

*SZGRF **20** 04:24:31.4, 17°.71S×175°.18W, h33km, Tonga Islands*
*IDC **20** 04:24:31.8±0.6, 15°.37S×174°.59W, h0km, mb4.5/15, mb1 4.7/15, mb1mx4.6/19, mbtmp4.5/15, MS4.4/18, Ms1 4.4/18, ms1mx4.3/21, Error ellipse: s-maj=24.2km s-min=15.9km az=132.0*
*ISCJB **20** 04:24:35.8±4.4, 15°.23S±0°.08×174°.65W±0°.05, h30km±31km, mb4.7/86, MS4.5/26, Error ellipse: s-maj=13.7km s-min=7.8km az=162.0*
*NEIC **20** 04:24:37.6±0.2, 15°.26S×174°.64W, h35km, mb4.8/66, MS4.8/3, Error ellipse: s-maj=8.9km s-min=4.3km az=141.0*
*GCMT **20** 04:24:38.4±0.2, 15°.14S×174°.39W, h25km±1km, MW5.1, Moment Tensor Solution. s36,c43; s85,c122; Moment tensor: Scale 10^{16}Nm; M_{rr}-0.51±.18; $M_{\theta\theta}$2.39±.19; $M_{\phi\phi}$-1.88±.17; $M_{r\theta}$0.53±.32; $M_{\theta\phi}$5.61±.14; $M_{\phi r}$0.88±

δ81.00000°,λ2.00000°. NP2:ϕs10.00000°,δ88.00000°, λ171.00000°. Principal axes: T 6.3800, Plg8.0000°, Azm325.0000°; N -0.6000, Plg81.0000°, Azm177.0000°; P -5.7800, Plg5.0000°, Azm56.0000°; Data Used: II IU IC CN G.

BJI 20 04:24:46.3, 14.78S×174.88W, h99km, mB5.1/17, mb4.8/23

ISC 20 04:24:39.7±1.9,15.29S±0.07×174.65W±0.05, h51km±17km,h99km±2.8km:pP-P,n431,σ0.49/351, mb4.7/86,MS4.5/26,121C-130D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu** 14nm,0.3s,baz=20,slow=10.0,SNR=27	**3.11**	**64**	Pn		**Pn**	**Pn**	**04 25 16.2**	**-10**
AFI	comp=Z,6μm,19.0s,baz=209,slow=36			LR			LR	04 26 21.5	
AFI	**Afiamalu** 160nm,1.1s	**3.11**	**64**	*e*Pn			**Pn**	**04 25 16.0**	**-10**
MSVF	**Nonsavu** 77nm,0.7s	**7.41**	**250**	Pn			**Pn**	**04 26 25.4**	**+0.1**
RAO	**Raoul Island** comp=Z,748nm,18.2s,baz=350,slow=32	**14.21**	**192**	LR			LR	04 32 01.3	
DZM	**Mont Dzumac** 248nm,1.2s	**19.12**	**247**	*e*P			**Pn**	**04 29 00.4**	**+0.5**
DZM	3μm,25.5s			*e*LR			LR	04 33 30.6	
DZM	**Mont Dzumac**	**19.12**	**247**	*e*P			**Pn**	**04 28 59.5**	**-0.4**
DZM	**Mont Dzumac** 77nm,0.7s	**19.12**	**247**	*e*P			**Pn**	**04 28 59.7**	**-0.3**
NOUC	**Port Laguerre**	**19.26**	**247**	*e*P			**Pn**	**04 29 01.4**	**-0.1**
URZ	**Urewera** 29nm,0.7s,mb4.8,baz=160,slow=0.8,SNR=15	**24.01**	**196**	P			**P**	**04 29 50.6**	**+0.9**
URZ	**Urewera** 79nm,1.2s,mb5.0	**24.01**	**196**	*e*P			**P**	**04 29 50.8**	**+1.1**
PPT	**Papeete** 364nm,25.5s	**24.16**	**99**	*e*LR			LR	04 35 35.2	
PPT	**Papeete** comp=Z,176nm,21.7s,MS3.5,baz=270,slow=30	**24.16**	**99**	LR			LR	04 36 27.4	
RPZ	**Rata Peaks** 2.0nm,0.4s,mb4.3,baz=337,slow=12,SNR=2.2	**30.84**	**200**	P			**P**	**04 30 48.9**	**-2.0**
TAOE	**Nuku Hiva Isla** 947nm,26.4s	**34.31**	**83**	*e*LR			LR	04 40 12.8	
ARMA	**Armidale** 18nm,1.1s,mb4.9	**34.37**	**238**	*e*P			**P**	**04 31 25.4**	**+3.4**
CTAO	**Charters Tower** 18nm,1.3s,mb4.7	**37.49**	**257**	*e*P			**P**	**04 31 49.9**	**+1.0**
RKT	**Rikitea** 188nm,22.5s	**38.18**	**108**	*e*LR			LR	04 42 43.5	
COEN	**Coen** 112nm,1.0s,mb5.5	**40.78**	**266**	*e*P			**P**	**04 32 16.8**	**+0.4**
STKA	**Stephens Creek** 14nm,1.0s,mb4.7,baz=68,slow=8.2,SNR=7.2	**43.05**	**240**	P			**P**	**04 32 33.7**	**-1.0**
STKA	comp=Z,448nm,21.2s,MS4.3,baz=278,slow=32			LR			LR	04 47 26.4	
STKA	**Stephens Creek** 3.6nm,1.0s,mb4.1	**43.05**	**240**	*e*P			**P**	**04 32 33.5**	**-1.2**
WRA	**Warramunga Arr** 2.7nm,0.6s,mb4.5,baz=90,slow=7.9,SNR=14	**48.69**	**257**	P			**P**	**04 33 16.9**	**-2.4**
WRA	comp=Z,272nm,19.2s,MS4.2,baz=125,slow=32			LR			LR	04 50 29.0	
ASAR	**Alice Springs** 14nm,0.8s,mb5.0,baz=85,slow=8.1,SNR=76	**48.99**	**252**	P			**P**	**04 33 19.9**	**-1.7**
FITZ	**Fitzroy Crossi** 2.0nm,0.7s,mb4.2,baz=91,slow=14,SNR=3.0	**57.05**	**258**	P			**P**	**04 34 21.5**	**+0.5**
CBIJ	**Chichi jima** comp=Z,539nm,19.4s,MS4.7,baz=133,slow=32	**59.42**	**315**	LR			LR	04 56 48.5	
DAV	**Davao City (W)** comp=Z,217nm,18.4s,MS4.4,baz=235,slow=36	**63.24**	**286**	LR			LR	05 02 02.0	
SBA	**Scott Base** 12nm,1.0s,mb5.0	**63.26**	**184**	P			**P**	**04 35 01.4**	**-1.1**
SBA				*e*				04 35 07.4	
ATKA	**Atka Island** 60nm,1.4s,mb5.4	**67.21**	**0**	*e*P			**P**	**04 35 28.0**	**-0.4**
MJAR	**Matsushiro Arr** 2.5nm,0.8s,mb4.3,baz=158,slow=6.2,SNR=5.1	**68.08**	**320**	P			**P**	**04 35 33.5**	**-0.8**
MJAR	comp=Z,365nm,21.7s,MS4.6,baz=120,slow=31			LR			LR	04 59 33.8	
MAJO	**Matsushiro** 6.4nm,0.8s,mb4.7	**68.08**	**320**	*e*P			**P**	**04 35 33.2**	**-1.0**
CASY	**Casey** 8.1nm,1.0s,mb4.6	**70.00**	**205**	*e*P			**P**	**04 35 46.6**	**+0.9**
ASAJ	**Asahikawa** comp=Z,366nm,21.6s,MS4.6,baz=9.5,slow=32	**70.82**	**329**	LR			LR	05 02 09.4	
PETK	**Petropavlovsk-** 8.2nm,0.9s,mb4.7,baz=136,slow=8.3,SNR=12	**72.17**	**343**	P			**P**	**04 35 58.8**	**-0.1**
PETK	comp=Z,179nm,21.3s,MS4.3,baz=161,slow=30			LR			LR	05 00 27.9	
CHGN	**Chignik**	**72.61**	**9**	*e*P			**P**	**04 36 00.8**	**-0.7**
VES	**Vestal, Richgr** baz=73	**73.11**	**44**	⇑P			**P**	**04 36 05.2**	**+0.4**
MONP	**Monument Peak** baz=74	**73.39**	**48**	⇓P			**P**	**04 36 06.8**	**+0.2**
ISA	**Isabella** baz=74	**73.42**	**45**	⇑P			**P**	**04 36 07.2**	**+0.5**
ISA	**Isabella** 43nm,2.3s,mb5.0	**73.42**	**45**	*e*P			**P**	**04 36 07.3**	**+0.5**
CMB	**Columbia Colle** 4.1nm,1.0s,mb4.3	**73.49**	**42**	*e*P			**P**	**04 36 07.3**	**+0.3**
WDC	**Whiskeytown Da** 19nm,1.6s,mb4.8	**73.65**	**39**	*e*P			**P**	**04 36 07.9**	**0.0**
YBH	**Yreka Blue Hor** 9.6nm,1.4s,mb4.5	**74.25**	**38**	*e*P			**P**	**04 36 11.6**	**+0.2**
MPMC	**Manual Prospec** baz=74,SNR=6.4	**74.31**	**45**	⇓P			**P**	**04 36 12.0**	**+0.1**
WAKR	**Walker**	**74.37**	**42**	*e*P			**P**	**04 36 13.0**	**+0.8**
GSC	**Goldstone** baz=74	**74.38**	**46**	⇑P			**P**	**04 36 12.1**	**-0.2**
GSC	**Goldstone** 13nm,1.5s,mb4.7	**74.38**	**46**	*e*P			**P**	**04 36 12.5**	**+0.1**
BC3	**Big Chuckawall** baz=75	**74.48**	**48**	⇑P			**P**	**04 36 13.3**	**+0.3**
BEKR	**Beckworth** baz=75,SNR=6.4	**74.57**	**40**	⇑P			**P**	**04 36 13.3**	**0.0**
WCN	**Washoe City** baz=75	**74.62**	**41**	⇓P			**P**	**04 36 13.9**	**+0.3**
QSPA	**South Pole Qui** 18nm,1.0s,mb5.0,baz=42,slow=1.7,SNR=7.9	**74.75**	**180**	P			**P**	**04 36 13.6**	**-0.2**
QSPA	**South Pole Qui** 24nm,1.1s,mb5.0	**74.75**	**180**	*e*P			**P**	**04 36 13.7**	**-0.1**
GRAC	**Grapevine Rang** baz=75	**74.90**	**44**	⇓P			**P**	**04 36 15.9**	**+0.6**
IRM	**Iron Mountain** baz=75	**74.95**	**48**	⇓P			**P**	**04 36 15.9**	**+0.2**
FURC	**Furnace Creek,** baz=75	**74.96**	**45**	⇓P			**P**	**04 36 15.8**	**+0.2**
SHOC	**Shoshone** baz=75	**75.06**	**46**	⇓P			**P**	**04 36 16.4**	**+0.2**
TUQ	**Turquoise Moun** baz=75	**75.06**	**46**	⇑P			**P**	**04 36 16.5**	**+0.3**
NVAR	**Mina Array Bea** 3.8nm,1.0s,mb4.3,baz=225,slow=9.2,SNR=15	**75.06**	**43**	P			**P**	**04 36 16.1**	**-0.1**
KSRS	**Korea Array** 1.7nm,0.7s,mb4.1,baz=129,slow=7.2,SNR=15	**75.24**	**316**	P			**P**	**04 36 18.0**	**+0.7**
KSRS	comp=Z,211nm,18.2s,MS4.5,baz=131,slow=34			LR			LR	05 06 44.6	
113A	**Mohawk Valley,** baz=75	**75.26**	**50**	⇑P			**P**	**04 36 17.2**	**-0.4**
U10A	**Ash Meadows, A** baz=76	**75.30**	**45**	⇑P			**P**	**04 36 17.8**	**+0.2**
LDFC	**Landfair** 13nm,1.1s,mb4.8	**75.45**	**47**	*e*P			**P**	**04 36 19.0**	**+0.5**
Z13A	**Yuma Proving G** baz=76	**75.55**	**49**	⇓P			**P**	**04 36 19.1**	**-0.1**
Y13A	**Salome** baz=76	**75.73**	**49**	⇑P			**P**	**04 36 20.5**	**+0.3**
S10A	**Tonopah Range,** baz=76	**75.92**	**44**	⇑P			**P**	**04 36 21.3**	**+0.2**
K05A	**Summer Lake** baz=76	**75.92**	**38**	⇑P			**P**	**04 36 21.8**	**+0.8**
V12A	**Nelson** baz=76	**75.96**	**46**	⇓P			**P**	**04 36 21.9**	**+0.5**
X13A	**Yucca** baz=76	**76.11**	**48**	⇑P			**P**	**04 36 22.4**	**+0.1**
R10A	**Warm Springs** baz=76	**76.31**	**44**	⇓P			**P**	**04 36 23.7**	**+0.3**
W13A	**Hualapai Mount** baz=76	**76.33**	**47**	⇓P			**P**	**04 36 23.7**	**+0.2**
Y14A	**Wickenburg** baz=76	**76.39**	**49**	⇑P			**P**	**04 36 24.2**	**+0.3**
T11A	**Corn Creek, Al** baz=77,SNR=8.2	**76.48**	**45**	⇑P			**P**	**04 36 24.1**	**-0.2**
U12A	**Valley of Fire** baz=77	**76.54**	**46**	⇑P			**P**	**04 36 25.2**	**+0.5**
V13A	**Grand Canyon W** baz=77	**76.63**	**47**	⇓P			**P**	**04 36 25.4**	**+0.2**
X14A	**Yava** baz=77	**76.73**	**48**	⇓P			**P**	**04 36 26.1**	**+0.3**
R11A	**Troy Canyon, C** baz=77	**76.82**	**44**	⇓P			**P**	**04 36 26.5**	**+0.3**
Y15A	**Casa Rosa Ranc** baz=77	**76.89**	**49**	⇑P			**P**	**04 36 27.0**	**+0.2**
S12A	**Delamar Landin** baz=77	**76.93**	**45**	⇑P			**P**	**04 36 27.4**	**+0.5**
U13A	**Pakoon Wash** baz=77,SNR=8.5	**76.93**	**46**	⇑P			**P**	**04 36 27.0**	**+0.1**
W14A	**Seligman** baz=77,SNR=5.3	**76.95**	**48**	⇓P			**P**	**04 36 27.1**	**0.0**
Q11A	**Duckwater** baz=77,SNR=8.0	**77.03**	**43**	⇑P			**P**	**04 36 27.4**	**-0.1**
WVOR	**Wild Horse Val** 9.9nm,1.4s,mb4.5	**77.11**	**39**	*e*P			**P**	**04 36 27.4**	**-0.3**
V14A	**Boquillas Ranc** baz=77,SNR=8.7	**77.14**	**47**	⇑P			**P**	**04 36 28.1**	**-0.1**
X15A	**Humboldt** baz=77	**77.21**	**49**	⇓P			**P**	**04 36 28.9**	**+0.4**
TUC	**Tucson** 9.1nm,1.4s,mb4.5	**77.26**	**51**	*e*P			**P**	**04 36 29.3**	**+0.4**
T13A	**Saint George** baz=77,SNR=6.1	**77.27**	**46**	⇑P			**P**	**04 36 28.7**	**-0.2**
117A	**Oracle** baz=78	**77.42**	**51**	⇑P			**P**	**04 36 30.0**	**+0.3**
R12A	**Pony Springs,** baz=78,SNR=5.8	**77.46**	**44**	⇑P			**P**	**04 36 29.7**	**-0.1**
318A	**Bisbee** baz=78	**77.47**	**52**	⇑P			**P**	**04 36 30.1**	**0.0**
Y16A	**Circle Bar Ran** baz=78	**77.47**	**50**	⇑P			**P**	**04 36 30.4**	**+0.3**
U14A	**Mt Trumbull** baz=78,SNR=15	**77.48**	**47**	⇓P			**P**	**04 36 30.3**	**+0.3**
RSO	**Redoubt South** 18nm,1.1s,mb4.9	**77.52**	**11**	*e*P			**P**	**04 36 29.1**	**-0.6**
I07A	**Izee** baz=78,SNR=5.3	**77.54**	**37**	⇑P			**P**	**04 36 30.3**	**+0.1**
SVW2	**Sparrevohn**	**77.64**	**9**	*e*P			**P**	**04 36 30.0**	**-0.3**
Q12A	**Willow Creek R** baz=78	**77.68**	**44**	⇑P			**P**	**04 36 31.3**	**+0.3**
O11A	**Cowboy Ranch,** baz=78	**77.71**	**42**	⇑P			**P**	**04 36 31.5**	**+0.3**
J08A	**Circle Bar Ran** baz=78	**77.73**	**38**	⇑P			**P**	**04 36 31.5**	**+0.3**
X16A	**Lo Mia Camp, P** baz=78	**77.75**	**49**	⇓P			**P**	**04 36 31.9**	**+0.3**
R13A	**O'Grain Ranch,** baz=78	**77.82**	**45**	⇑P			**P**	**04 36 32.4**	**+0.6**
Y17A	**Roosevelt** baz=78	**77.86**	**50**	⇓P			**P**	**04 36 33.2**	**+1.1**
T14A	**Hurricane** baz=78	**77.86**	**46**	⇑P			**P**	**04 36 32.2**	**+0.1**
V15A	**Kaibab Nationa** baz=78,SNR=9.1	**77.90**	**47**	⇓P			**P**	**04 36 32.8**	**+0.5**
CCUT	**Cedar City** 6.0nm,1.1s,mb4.4	**77.91**	**45**	*e*P			**P**	**04 36 33.3**	**+0.9**
ARUT	**Antelope Range** 6.5nm,1.1s,mb4.5	**77.98**	**45**	*e*P			**P**	**04 36 33.1**	**+0.4**
W16A	**Flagstaff** baz=78	**78.01**	**48**	⇑P			**P**	**04 36 33.6**	**+0.6**
118A	**Homack Ranch,** baz=78	**78.03**	**51**	⇓P			**P**	**04 36 33.4**	**+0.3**
U15A	**North Rim** baz=78,SNR=12	**78.11**	**47**	⇓P			**P**	**04 36 33.9**	**+0.4**
J09A	**Fry Pan Ranch,** baz=78	**78.16**	**39**	⇓P			**P**	**04 36 33.8**	**+0.2**
Q13A	**Wheeler Ranch,** baz=78,SNR=7.9	**78.18**	**44**	⇓P			**P**	**04 36 33.7**	**-0.1**
X17A	**Forest Lakes** baz=78	**78.18**	**49**	⇓P			**P**	**04 36 34.1**	**+0.2**
MDJ	**Mudanjiang**	**78.21**	**323**	P			**P**	**04 36 34.5**	**+0.7**
MDJ	comp=Z,15nm,1.5s,mb4.7			pmax			pmax		
MDJ	comp=Z,130nm,3.6s			pmax			pmax		
L10A	**Juniper Basin** baz=78,SNR=5.8	**78.24**	**40**	⇑P			**P**	**04 36 34.2**	**+0.1**
M11A	**Holland Ranch,** baz=78	**78.32**	**41**	⇓P			**P**	**04 36 35.1**	**+0.6**
WUAZ	**Wupatki** baz=78	**78.32**	**48**	⇓P			**P**	**04 36 35.1**	**+0.4**
WUAZ	**Wupatki** comp=Z,9.6nm,1.1s,mb4.6	**78.32**	**48**	*e*P			**P**	**04 36 35.6**	**+0.9**
T15A	**Red Dirt Ranch** baz=78	**78.33**	**46**	⇓P			**P**	**04 36 35.2**	**+0.5**
O12A	**Currie** baz=78	**78.38**	**43**	⇑P			**P**	**04 36 35.4**	**+0.5**
K10A	**MacKenzie Ranc** baz=78	**78.38**	**39**	⇓P			**P**	**04 36 35.0**	**+0.1**
P13A	**Bates Ranch, G** baz=79,SNR=6.1	**78.44**	**44**	⇑P			**P**	**04 36 35.4**	**+0.1**
N12A	**Clover Valley,** baz=79	**78.49**	**42**	⇓P			**P**	**04 36 35.3**	**-0.2**
N12A	**Clover Valley,** comp=Z,6.1nm,1.0s,mb4.5	**78.49**	**42**	*e*P			**P**	**04 36 35.9**	**+0.4**
Y18A	**Canyon Day Jun** baz=79	**78.49**	**50**	⇓P			**P**	**04 36 35.6**	**-0.1**
G08A	**Pilot Rock** baz=79	**78.56**	**37**	⇓P			**P**	**04 36 36.0**	**+0.2**
Q14A	**Sevier Lake (B** baz=79,SNR=8.9	**78.69**	**44**	⇓P			**P**	**04 36 36.6**	**0.0**
L11A	**Cat Creek Ranc** baz=79,SNR=7.9	**78.74**	**40**	⇓P			**P**	**04 36 36.9**	**+0.1**
V17A	**Tonalea, Kykot** baz=79,SNR=8.9	**78.79**	**48**	⇑P			**P**	**04 36 37.4**	**+0.1**
220A	**Playas Peak, P** baz=79	**78.79**	**52**	⇑P			**P**	**04 36 37.3**	**0.0**
M12A	**Wells** baz=79,SNR=5.4	**78.87**	**41**	⇓P			**P**	**04 36 37.4**	**-0.2**
K11A	**Parker Ranch,** baz=79	**78.89**	**40**	⇑P			**P**	**04 36 37.6**	**0.0**
X18A	**Snowflake** baz=79	**78.90**	**50**	⇓P			**P**	**04 36 37.6**	**-0.3**
T16A	**Glen Canyon Da** baz=79	**78.93**	**47**	⇑P			**P**	**04 36 38.1**	**+0.1**
P14A	**Drum Mountains** baz=79,SNR=9.9	**79.14**	**44**	⇑P			**P**	**04 36 38.9**	**-0.1**
Y19A	**Nutrioso** baz=79	**79.15**	**50**	⇑P			**P**	**04 36 39.4**	**+0.1**
L12A	**House Creek Ra** baz=79	**79.19**	**41**	⇓P			**P**	**04 36 39.6**	**+0.3**
MSU	**Marysvale**	**79.20**	**45**	*e*P			**P**	**04 36 39.9**	**+0.4**
G09A	**Cove** baz=79	**79.24**	**37**	⇓P			**P**	**04 36 39.9**	**+0.4**
PMR	**Palmer** comp=Z,18nm,1.2s,mb4.9	**79.26**	**12**	*e*P			**P**	**04 36 38.5**	**-0.7**
BMO	**Blue Mountains** comp=Z,13nm,1.8s,mb4.6	**79.27**	**38**	*e*P			**P**	**04 36 39.5**	**-0.2**
Z20A	**Nine Sixteen R** baz=79	**79.27**	**51**	⇑P			**P**	**04 36 40.3**	**+0.4**
Q15A	**Fillmore** baz=80	**79.31**	**45**	⇑P			**P**	**04 36 40.6**	**+0.6**
TTA	**Tatalina**	**79.32**	**9**	*e*P			**P**	**04 36 39.4**	**-0.1**
X19A	**St. Johns** baz=80	**79.34**	**50**	⇓P			**P**	**04 36 40.8**	**+0.5**
U17A	**Shonto** baz=80	**79.34**	**47**	⇓P			**P**	**04 36 40.5**	**+0.2**
MFID	**Camas Ranch** baz=80	**79.37**	**39**	⇓P			**P**	**04 36 40.3**	**+0.1**
T17A	**Navajo Res., N** baz=80,SNR=6.6	**79.43**	**47**	⇓P			**P**	**04 36 40.8**	**+0.1**
V18A	**Ganado** baz=80,SNR=5.6	**79.45**	**48**	⇑P			**P**	**04 36 41.1**	**+0.2**
H10A	**Noah's Angus R** baz=80,SNR=7.4	**79.46**	**38**	⇑P			**P**	**04 36 40.2**	**-0.5**
K12A	**Draper Farm, C** baz=80	**79.52**	**40**	⇑P			**P**	**04 36 41.0**	**-0.1**
I11A	**Placerville** baz=80	**79.56**	**39**	⇑P			**P**	**04 36 41.0**	**-0.3**
R16A	**Teasdale** baz=80	**79.57**	**46**	⇑P			**P**	**04 36 42.0**	**+0.5**
DUG	**Dugway** baz=80	**79.61**	**43**	⇓P			**P**	**04 36 41.7**	**+0.1**
DUG	**Dugway** comp=Z,9.2nm,1.4s,mb4.5	**79.61**	**43**	*e*P			**P**	**04 36 41.8**	**+0.1**
G10A	**Bishop Farm, J** baz=80	**79.63**	**37**	⇓P			**P**	**04 36 41.4**	**-0.2**
121A	**Cookes Peak, D** baz=80	**79.63**	**52**	⇑P			**P**	**04 36 42.1**	**+0.2**
BMRM	**Bremner River** comp=Z,31nm,1.2s,mb5.1	**79.71**	**14**	*e*P			**P**	**04 36 41.1**	**-0.6**
J12A	**Stokes Ranch,** baz=80	**79.73**	**40**	⇓P			**P**	**04 36 42.3**	**+0.1**
S17A	**Black Ridge (B** baz=80	**79.73**	**46**	⇑P			**P**	**04 36 42.1**	**-0.3**
Y20A	**Horse Springs,** baz=80	**79.78**	**51**	⇓P			**P**	**04 36 43.0**	**+0.2**
U18A	**Rough Rock, Ch** baz=80	**79.82**	**48**	⇓P			**P**	**04 36 43.1**	**+0.2**
M14A	**Sheep Mountain** baz=80,SNR=12	**79.92**	**42**	⇑P			**P**	**04 36 43.2**	**-0.1**
H11A	**Donnelly** baz=80	**79.96**	**38**	⇓P			**P**	**04 36 43.4**	**0.0**
X20A	**Quemado** baz=80	**79.97**	**50**	⇓P			**P**	**04 36 44.1**	**+0.4**
I12A	**Atlanta** baz=80,SNR=5.8	**80.00**	**39**	⇓P			**P**	**04 36 43.7**	**+0.1**
K13A	**Stover Farm, H** baz=80	**80.04**	**41**	⇑P			**P**	**04 36 43.8**	**-0.1**
Z21A	**St. Cloud Mine** baz=80	**80.05**	**51**	⇑P			**P**	**04 36 44.4**	**+0.2**
N15A	**Stansbury Isla** baz=80	**80.15**	**43**	⇑P			**P**	**04 36 44.3**	**-0.3**
T18A	**Mexican Hat** baz=80,SNR=17	**80.15**	**47**	⇑P			**P**	**04 36 44.8**	**+0.2**
B08A	**Colville Reser** baz=80	**80.16**	**34**	⇑P			**P**	**04 36 43.8**	**-0.6**
R17A	**Hanksville Air** baz=80,SNR=5.9	**80.17**	**46**	⇑P			**P**	**04 36 44.1**	**-0.6**
G11A	**Walters Elk Ra** baz=80,SNR=6.5	**80.19**	**38**	⇓P			**P**	**04 36 44.0**	**-0.6**
CN2	**Changchun**	**80.23**	**321**	*e*P			**P**	**04 36 45.3**	**+0.4**
CN2				*e*S			S	04 46 38.9	-7.4
CN2	comp=Z,10.0nm,1.0s,mb4.7			pmax			pmax		
CN2	comp=Z,200nm,4.0s			pmax			pmax		
CN2	comp=N,1μm,23.0s,MS5.2			LR			LR		
CN2	comp=E,700nm,23.0s,MS5.2			LR			LR		
CN2	comp=Z,3μm,21.0s,MS5.6			LR			LR		
W20A	**Ramah** baz=80,SNR=6.7	**80.23**	**50**	⇑P			**P**	**04 36 45.2**	**+0.1**
U19A	**Dine' College,** baz=80,SNR=6.8	**80.24**	**48**	⇓P			**P**	**04 36 45.4**	**+0.3**
TMUT	**Trail Mountain** comp=Z,6.9nm,1.0s,mb4.5	**80.25**	**45**	*e*P			**P**	**04 36 45.4**	**+0.3**
HLID	**Hailey** baz=80,SNR=12	**80.31**	**40**	⇑P			**P**	**04 36 45.4**	**+0.1**
HLID	**Hailey** comp=Z,5.0nm,0.9s,mb4.4	**80.31**	**40**	*e*P			**P**	**04 36 45.8**	**+0.4**
S18A	**Hurst Farm, Bl** baz=80	**80.32**	**47**	⇓P			**P**	**04 36 46.3**	**+0.7**
Y21A	**Point of Rocks** baz=80	**80.35**	**51**	⇑P			**P**	**04 36 45.9**	**+0.1**
J13A	**Cove Ranch, Pi** baz=80	**80.38**	**40**	⇑P			**P**	**04 36 45.9**	**+0.2**
X21A	**Alamocita Cree** baz=81	**80.46**	**50**	⇑P			**P**	**04 36 46.3**	**0.0**
V20A	**Brimhall** baz=81	**80.56**	**49**	⇓P			**P**	**04 36 46.9**	**0.0**
K14A	**Jones Ranch, D** baz=81	**80.56**	**41**	⇓P			**P**	**04 36 47.0**	**+0.3**
Z22A	**Elephant Butte** baz=81	**80.57**	**52**	⇓P			**P**	**04 36 47.3**	**+0.3**
H12A	**Diamond D Ranc** baz=81	**80.57**	**39**	⇑P			**P**	**04 36 46.7**	**0.0**
T19A	**Beclabito** baz=81	**80.61**	**48**	⇓P			**P**	**04 36 47.4**	**+0.3**
SRU	**San Rafael** baz=81	**80.62**	**45**	⇑P			**P**	**04 36 47.0**	**-0.1**
SRU	**San Rafael** comp=Z,5.1nm,1.0s,mb4.4	**80.62**	**45**	*e*P			**P**	**04 36 47.0**	**-0.1**
I13A	**Wildhorse Cree** baz=81	**80.68**	**40**	⇓P			**P**	**04 36 47.5**	**+0.2**
R18A	**Canyonlands Na** baz=81	**80.72**	**46**	⇓P			**P**	**04 36 47.9**	**+0.2**
KTH	**Kantishna Hill** comp=Z,69nm,2.1s,mb5.2	**80.72**	**11**	*e*P			**P**	**04 36 46.2**	**-0.9**
TRF	**Thorofare Moun** comp=Z,6.4nm,0.8s,mb4.6	**80.74**	**11**	*e*P			**P**	**04 36 46.4**	**-0.8**
J14A	**Carey** baz=81	**80.75**	**40**	⇓P			**P**	**04 36 48.3**	**+0.6**
CHUM	**Lake Minchumin** comp=Z,15nm,1.2s,mb4.8	**80.79**	**10**	*e*P			**P**	**04 36 46.5**	**-1.0**
L15A	**Malad City** baz=81	**80.80**	**42**	⇓P			**P**	**04 36 48.3**	**+0.3**
Y22A	**Socorro** baz=81	**80.85**	**51**	⇓P			**P**	**04 36 48.7**	**+0.2**
Q18A	**Rafter H Ranch** baz=81	**80.89**	**45**	⇓P			**P**	**04 36 49.0**	**+0.5**
H13A	**Challis** baz=81	**80.94**	**39**	⇓P			**P**	**04 36 48.9**	**+0.2**
M16A	**Huntsville** baz=81	**80.94**	**43**	⇓P			**P**	**04 36 48.9**	**+0.1**
S19A	**Harvey Farm, M** baz=81	**80.95**	**47**	⇓P			**P**	**04 36 48.9**	**-0.1**
324A	**Moseley Ranch,** baz=81	**80.95**	**54**	⇓P			**P**	**04 36 48.4**	**-0.7**
F12A	**Elk City** baz=81,SNR=9.8	**80.98**	**38**	⇓P			**P**	**04 36 48.2**	**-0.6**
O17A	**Robinson Place** baz=81	**80.99**	**44**	⇓P			**P**	**04 36 48.9**	**-0.2**
SKAG	**Skagway** comp=Z,16nm,1.2s,mb4.8	**81.03**	**19**	*e*P			**P**	**04 36 49.5**	**+0.7**
K15A	**Arbon** baz=81	**81.05**	**41**	⇓P			**P**	**04 36 49.4**	**+0.1**
I14A	**Mackay** baz=81	**81.10**	**40**	⇓P			**P**	**04 36 50.0**	**+0.4**
R19A	**Curley Farm, L** baz=81	**81.11**	**46**	⇓P			**P**	**04 36 49.8**	**+0.1**
HWUT	**Hardware Ranch** comp=Z,2.4nm,0.8s,mb4.2	**81.13**	**43**	*e*P			**P**	**04 36 49.6**	**-0.2**
MNTX	**Cornudas Mount** comp=Z,3.7nm,1.2s,mb4.2	**81.14**	**54**	*e*P			**P**	**04 36 49.7**	**-0.4**
MVCO	**Mesa Verde** baz=81	**81.16**	**48**	⇓P			**P**	**04 36 50.0**	**-0.1**
224A	**Cornudas Mount** baz=81	**81.18**	**53**	⇓P			**P**	**04 36 50.1**	**-0.1**
BNM	**Barren Site** comp=Z,4.3nm,1.2s,mb4.2	**81.20**	**51**	*e*P			**P**	**04 36 50.3**	**0.0**
BPAW	**Bear Paw Mtn.** comp=Z,3.9nm,1.2s,mb4.2	**81.22**	**10**	*e*P			**P**	**04 36 48.3**	**-1.4**
G13A	**Cobalt** baz=81	**81.23**	**39**	⇓P			**P**	**04 36 50.2**	**-0.1**
MCK	**McKinley** comp=Z,19nm,1.1s,mb4.9	**81.25**	**11**	*e*P			**P**	**04 36 49.8**	**-0.1**
PAX	**Paxson** comp=Z,10nm,1.5s,mb4.5	**81.27**	**13**	*e*P			**P**	**04 36 48.9**	**-1.1**
325A	**Bean Ranch, Si** baz=82	**81.32**	**54**	⇑P			**P**	**04 36 51.0**	**-0.1**
L16A	**Fish Haven** baz=82,SNR=5.1	**81.42**	**42**	⇑P			**P**	**04 36 50.7**	**-0.6**
Q19A	**Hogan Spring (** baz=82	**81.42**	**46**	⇓P			**P**	**04 36 51.4**	**+0.1**
U21A	**Nageezi** baz=82,SNR=8.9	**81.42**	**49**	⇑P			**P**	**04 36 51.8**	**+0.4**
HYT	**Haines Junctio** baz=82,SNR=7.8	**81.47**	**17**	*e*P			**P**	**04 36 51.8**	**+0.7**
J15A	**Blackfoot** baz=82	**81.47**	**41**	⇓P			**P**	**04 36 51.7**	**+0.2**
124A	**Stringfield Ra** baz=82	**81.49**	**53**	⇓P			**P**	**04 36 52.0**	**+0.1**
526A	**Mary Lane Ranc** baz=82	**81.50**	**56**	⇑P			**P**	**04 36 51.8**	**-0.2**
H14A	**Leadore** baz=82	**81.51**	**39**	⇑P			**P**	**04 36 51.7**	**0.0**
PV01	**Paradox Valley**	**81.53**	**47**	*e*P			**P**	**

527A	Woodward Ranch	81.92	56	⇑P		P	04 36 54.1	-0.1
	baz=82							
J16A	Bone	81.92	41	⇓P		P	04 36 54.4	+0.5
	baz=82							
MCMT	McKenzie Canyo	81.93	39	eP		P	04 36 53.9	0.0
	comp=Z,2.0nm,1.0s,mb4.0							
H15A	Lima	81.95	40	⇑P		P	04 36 54.4	+0.4
	baz=82							
E13A	Victor	81.97	37	⇑P		P	04 36 54.3	+0.2
	baz=82							
U22A	Llaves	81.98	49	⇓P		P	04 36 54.7	+0.3
	baz=82							
Y24A	Capitan	82.00	52	⇑P		P	04 36 54.6	0.0
	baz=82							
M18A	Lyman	82.03	43	⇓P		P	04 36 54.4	-0.1
	baz=82							
Q20A	Ridgley Place,	82.09	46	⇑P		P	04 36 55.1	+0.2
	baz=82							
K17A	Gardner Place,	82.11	42	⇑P		P	04 36 54.8	-0.1
	baz=82							
O19A	Miners Draw (B	82.13	45	⇓P		P	04 36 54.7	-0.4
	baz=82							
RRI2	Red Ridge	82.14	41	eP		P	04 36 54.9	-0.2
	comp=Z,8.8nm,1.0s,mb4.6							
D13A	Huson	82.16	37	⇑P		P	04 36 54.3	-0.8
	baz=82,SNR=5.8							
V23A	Ortiz Mt. (NFS	82.20	50	⇓P		P	04 36 55.5	-0.1
	baz=82,SNR=6.2							
T22A	Edith	82.22	48	⇑P		P	04 36 55.0	-0.6
	baz=82							
P20A	De Beque	82.27	46	⇓P		P	04 36 55.8	-0.1
	baz=82							
226A	Malaga, Loving	82.28	54	⇓P		P	04 36 56.1	0.0
	baz=82							
Z25A	Roswell	82.29	53	⇓P		P	04 36 55.8	-0.3
	baz=82							
I16A	Newdale	82.30	41	⇑P		P	04 36 56.1	+0.2
	baz=82							
G15A	Dillon	82.33	39	⇑P		P	04 36 55.9	-0.1
	baz=82,SNR=7.1							
R21A	Cimarron	82.35	47	⇑P		P	04 36 56.5	+0.3
	baz=82							
427A	Hayter Ranch,	82.36	55	⇑P		P	04 36 56.1	-0.4
	baz=82							
E14A	Clinton	82.37	38	⇑P		P	04 36 55.8	-0.3
	baz=82,SNR=5.7							
BSMT	Bassoo Peak	82.38	36	eP		P	04 36 56.0	-0.2
U23A	El Rito	82.44	49	⇑P		P	04 36 56.9	+0.1
	baz=83,SNR=11							
TPAW	Teton Pass	82.45	41	eP		P	04 36 57.3	+0.6
	comp=Z,13nm,1.3s,mb4.7							
REDW	Red Top Meadow	82.45	41	eP		P	04 36 57.1	+0.4
	comp=Z,43nm,2.0s,mb5.0							
COLA	College	82.49	11	eP		P	04 36 55.6	-0.8
	comp=Z,9.5nm,0.8s,mb4.8							
Q21A	Lamborn Mesa,	82.54	47	⇑P		P	04 36 57.3	0.0
	baz=83							
W24A	Lazy 6 Ranch,	82.56	51	⇓P		P	04 36 57.1	-0.4
	baz=83,SNR=7.1							
SNOW	Snow King Moun	82.56	41	eP		P	04 36 57.4	+0.2
	comp=Z,5.0nm,0.7s,mb4.7							
Y25A	Mesa, Roswell	82.57	52	⇑P		P	04 36 57.7	+0.2
	baz=83							
K18A	Toltan Ranch,	82.62	42	⇑P		P	04 36 57.5	-0.1
	baz=83,SNR=9.5							
IMW	Indian Meadow	82.66	41	eP		P	04 36 57.9	+0.1
	comp=Z,11nm,1.2s,mb4.8							
O20A	White River Ci	82.66	45	⇑P		P	04 36 57.8	-0.1
	baz=83							
F15A	Butte	82.67	39	⇑P		P	04 36 57.9	+0.1
	baz=83							
M19A	Rock Springs	82.67	44	⇓P		P	04 36 57.6	-0.3
	baz=83							
LRM	Limekiln Ridge	82.68	39	eP		P	04 36 57.3	-0.5
CHMT	Chamberlain Mo	82.77	37	eP		P	04 36 57.4	-0.9
G16A	Moss Hill, Enn	82.78	39	⇓P		P	04 36 58.4	+0.1
	baz=83							
L19A	Farson	82.81	43	⇓P		P	04 36 58.2	-0.4
	baz=83,SNR=5.8							
B13A	Whitefish	82.84	36	⇑P		P	04 36 58.4	-0.2
	baz=83							
R22A	Saguache, Gunn	82.85	47	⇓P		P	04 36 59.1	+0.2
	baz=83,SNR=11							
H16A	Russell Place,	82.86	40	⇓P		P	04 36 59.0	+0.2
	baz=83,SNR=14							
428A	Kincaid Ranch,	82.88	56	⇓P		P	04 36 58.9	-0.3
	baz=83							
J18A	Kendall Valley	82.91	42	⇑P		P	04 36 58.7	-0.3
	baz=83,SNR=9.8							
N20A	Spence Gulch,	82.96	44	⇑P		P	04 36 59.2	-0.2
	baz=83,SNR=5.9							
BW06	Boulder Array	83.00	42	⇓P		P	04 36 58.9	-0.6
	baz=83,SNR=7.0							
BW06	Boulder Array	83.00	42	eP		P	04 36 59.3	-0.2
	comp=Z,5.2nm,0.9s,mb4.6							
PDAR	Pinedale Array	83.00	42	P		P	04 36 58.7	-0.8
	comp=Z,4.0nm,0.8s,mb4.5,baz=236,slow=2.7,SNR=29							
PDAR				LR		LR	05 09 56.3	
	comp=Z,126nm,18.2s,MS4.3,baz=259,slow=33							
Q22A	Crested Butte,	83.02	47	⇑P		P	04 36 59.4	-0.4
	baz=83,SNR=5.2							
BOZ	Bozeman (W)	83.09	39	⇑P		P	04 37 00.2	+0.2
	baz=83							
BOZ	Bozeman (W)	83.09	39	eP		P	04 36 59.5	-0.5
	comp=Z,36nm,2.5s,mb5.0							
SMCO	Snowmass	83.11	46	eP		P	04 37 00.2	0.0
	comp=Z,15nm,1.2s,mb4.9							
H17A	Grant Village	83.12	40	⇑P		P	04 37 00.8	+0.7
	baz=83							
Y26A	Elida	83.23	52	⇑P		P	04 37 00.9	-0.1
	baz=83							
D15A	Lincoln	83.27	38	⇓P		P	04 37 00.6	-0.2
	baz=83,SNR=5.2							
W25A	X Bar L Ranch,	83.27	51	⇓P		P	04 37 00.7	-0.4
	baz=83							
M20A	Sweetwater, Wa	83.31	44	⇓P		P	04 37 00.9	-0.3
	baz=84							
V25A	Rancho No Teng	83.40	50	⇓P		P	04 37 01.4	-0.4
	baz=84,SNR=8.0							
N21A	Black Mountain	83.43	45	⇓P		P	04 37 01.5	-0.3
	baz=84,SNR=9.4							
L20A	Wamsutter	83.44	43	⇑P		P	04 37 01.6	-0.3
	baz=84,SNR=9.2							
Z27A	Tatum	83.46	53	⇓P		P	04 37 01.8	-0.3
	baz=84							
G17A	Pierce Place,	83.47	40	⇓P		P	04 37 02.9	+0.9
	baz=84							
K19A	Absolon Red Bu	83.49	42	⇑P		P	04 37 01.7	-0.4
	baz=84							
E16A	East Helena	83.51	38	⇓P		P	04 37 01.6	-0.5
	baz=84,SNR=6.7							
B14A	Marquette Ranc	83.51	36	⇓P		P	04 37 01.6	-0.5
	baz=84							
SDCO	Great Sand Dun	83.54	48	eP		P	04 37 02.9	+0.4
	comp=Z,6.4nm,1.3s,mb4.6							
C15A	Salmond Ranch,	83.59	37	⇓P		P	04 37 02.0	-0.5
	baz=84							
K20A	Yellowstone Ra	83.74	43	⇓P		P	04 37 02.6	-0.8
	baz=84,SNR=6.2							
A14A	Double T Ranch	83.75	36	⇑P		P	04 37 02.8	-0.5
	baz=84							
U25A	Circle Dot Ran	83.78	50	⇑P		P	04 37 03.5	-0.3
	baz=84,SNR=5.1							
EGAK	Eagle	83.80	14	eP		P	04 37 02.9	-0.2
	comp=Z,9.8nm,1.2s,mb4.8							
F17A	Fitzpatrick Pl	83.81	39	⇓P		P	04 37 03.6	-0.1
	baz=84,SNR=6.5							
D16A	Dana Ranch, Ca	83.83	38	⇑P		P	04 37 03.3	-0.4
	baz=84,SNR=5.4							
B15A	Bradely Ranch,	83.89	36	⇓P		P	04 37 03.3	-0.7
	baz=84							
M21A	Separation Pea	83.91	44	⇓P		P	04 37 03.8	-0.5
	baz=84,SNR=6.5							
E17A	Martinsdale	83.96	39	⇓P		P	04 37 04.2	-0.2
	baz=84							
V26A	Tequesquite Ra	84.00	51	⇓P		P	04 37 04.7	-0.2
	baz=84							
MSTX	Muleshoe	84.05	53	⇓P		P	04 37 04.9	-0.2
	baz=84							
RWWY	Rawlins	84.05	44	eP		P	04 37 05.6	+0.6
	comp=Z,7.3nm,0.8s,mb4.9							
X27A	F and S Farms,	84.07	52	⇓P		P	04 37 05.0	-0.2
	baz=84							
L21A	Rawlins	84.07	44	⇑P		P	04 37 05.0	-0.1
	baz=84							
T25A	Trinidad	84.08	49	⇓P		P	04 37 05.1	-0.1
	baz=84							
C16A	Fuhringer Ranc	84.10	37	⇓P		P	04 37 04.8	-0.3
	baz=84							
A15A	Johnson Ranch,	84.14	36	⇓P		P	04 37 05.0	-0.2
	baz=84							
N22A	Wattenberg Ran	84.18	45	⇑P		P	04 37 05.4	-0.2
	baz=84,SNR=13							
G18A	Lazy EL Ranch,	84.20	40	⇓P		P	04 37 05.9	+0.3
	baz=84							
COLD	Coldfoot	84.23	9	eP		P	04 37 06.0	+0.7
	comp=Z,6.5nm,1.1s,mb4.7							
BILL	Bilibino	84.25	353	eP		P	04 37 05.1	-0.3
	comp=Z,11nm,1.0s,mb4.9							
W27A	Bowe Ranch, En	84.25	51	⇓P		P	04 37 05.5	-0.7
	baz=84							
U26A	Atchley Ranch,	84.27	50	⇓P		P	04 37 05.8	-0.4
	baz=84							
RLMT	Red Lodge	84.29	40	⇓P		P	04 37 06.1	0.0
	baz=84							
RLMT	Red Lodge	84.29	40	eP		P	04 37 06.8	+0.7
	comp=Z,6.7nm,1.1s,mb4.7							
ISCO	Idaho Springs	84.33	46	eP		P	04 37 07.0	+0.6
	comp=Z,4.9nm,1.1s,mb4.5							
M22A	Cedar Creek Ra	84.34	45	⇑P		P	04 37 06.3	-0.1
	baz=84							
GCMT	Greycliff	84.36	40	eP		P	04 37 06.1	-0.3
	comp=Z,7.6nm,1.4s,mb4.6							
F18A	Big Timber	84.39	39	⇑P		P	04 37 06.7	+0.2
	baz=84							
D17A	Six Diamond Ra	84.40	38	⇓P		P	04 37 06.3	-0.3
	baz=85,SNR=8.7							
B16A	M & M Farms, S	84.44	37	⇑P		P	04 37 06.1	-0.6
	baz=85							
BJI	Beijing	84.52	314	P		P	04 37 08.3	+0.9
BJI				pP		pP	04 37 31.8	+10
BJI				S		S	04 47 28.8	-1.5
BJI				pmax		pmax		
	comp=Z,17nm,1.3s,mb5.0							
BJI				pmax		pmax		
	comp=Z,160nm,6.2s							
BJI				LR		LR		
	comp=N,99nm,23.6s,MS4.5							
BJI				LR		LR		
	comp=E,190nm,20.5s,MS4.5							
BJI				LR		LR		
	comp=Z,140nm,26.6s							
E18A	Harlowton	84.58	39	⇓P		P	04 37 07.2	-0.3
	baz=85,SNR=7.3							
C17A	Wharram Farm,	84.60	38	⇓P		P	04 37 07.2	-0.4
	baz=85,SNR=8.8							
L22A	Ellis Ranch, M	84.72	44	⇑P		P	04 37 08.1	-0.2
	baz=85							
D18A	Linhart Farms,	84.95	38	⇑P		P	04 37 09.4	0.0
	baz=85							
AMTX	Amarillo	85.23	52	eP		P	04 37 09.5	-1.6
	comp=Z,4.2nm,0.8s,mb4.6							
EGMT	Eagleton	85.38	38	eP		P	04 37 11.6	+0.1
	comp=Z,49nm,2.3s,mb5.2							
B18A	Beardsley Farm	85.54	37	⇑P		P	04 37 12.0	-0.3
	baz=86							
A18A	Metzger Ranch,	85.76	37	⇑P		P	04 37 12.7	-0.7
	baz=86							
ENH	Enshi	85.84	303	eP		P	04 37 15.0	+0.7
	comp=Z,14nm,1.2s,mb5.0							
EDM	Edmonton	86.03	32	eP		P	04 37 14.2	-0.5
GYA	Guiyang	86.93	298	eP		P	04 37 20.4	+0.7
GYA				PP		PP	04 40 47.3	+3.9
GYA				SKS			04 47 35.8	
GYA				S		S	04 47 48.3	-6.2
GYA				SS		SS	04 53 35.6	-2.8
GYA				pmax		pmax		
	comp=Z,10.0nm,1.0s,mb5.0							
MAW	Mawson	87.50	199	P		P	04 37 21.1	-0.6
	comp=Z,8.9nm,0.8s,mb5.1,baz=115,slow=6.6,SNR=4.8							
MAW				LR		LR	05 14 32.1	
	comp=Z,261nm,19.3s,MS4.7,baz=282,slow=34							
MAW	Mawson	87.50	199	eP		P	04 37 22.9	+1.2
	comp=Z,2.5nm,0.8s,mb4.5							
XAN	Xi'an	87.59	306	P		P	04 37 23.4	+0.7
XAN				pmax		pmax		
	comp=Z,4.0nm,1.1s,mb4.6							
XAN				pmax		pmax		
	comp=Z,27nm,8.3s							
HHC	Hu-ho-hao-te	88.07	313	eP		P	04 37 25.6	+0.8
HHC				PP		PP	04 40 56.8	+4.5
HHC				SKS			04 47 42.3	
HHC				S		S	04 47 58.9	-6.0
HHC				pmax		pmax		
	comp=Z,15nm,0.8s,mb5.3							
HHC				pmax		pmax		
	comp=Z,160nm,5.3s							
HHC				LR		LR		
	comp=N,160nm,15.6s,MS4.6							
HHC				LR		LR		
	comp=E,150nm,18.0s,MS4.6							
HHC				LR		LR		
	comp=Z,200nm,16.8s,MS4.6							
DGMT	Dagmar	88.90	39	⇓P		P	04 37 28.3	-0.3
	baz=89							
DGMT	Dagmar	88.90	39	eP		P	04 37 28.0	-0.5
	comp=Z,10nm,0.9s,mb5.2							
KMI	Kunming	89.89	296	P		P	04 37 35.0	+1.3
KMI				pP		pP	04 38 01.8	+13
KMI				PP		PP	04 41 11.6	+4.4
KMI				S		S	04 48 15.8	-6.8
KMI				SS		SS	04 54 19.3	-2.3
KMI				pmax		pmax		
	comp=Z,13nm,1.1s,mb5.2							
KMI				pmax		pmax		
	comp=Z,91nm,4.1s							
KMI				LR		LR		
	comp=N,120nm,17.8s,MS4.5							
KMI				LR		LR		
	comp=E,150nm,22.6s,MS4.5							
KMI				LR		LR		
	comp=Z,210nm,27.4s,MS4.4							
PLCA	Paso Flores	90.48	133	LR		LR	05 08 35.4	
	comp=Z,368nm,21.7s,MS4.8,baz=93,slow=29							
YKA	Yellowknife Ar	90.48	24	P		P	04 37 34.6	-0.9
	comp=Z,0.9nm,0.8s,mb4.2,baz=241,slow=4.5,SNR=6.2							
CD2	Chengdu	90.72	302	eP		P	04 37 37.8	+0.3
CD2				pP		pP	04 38 04.8	+12
CD2				pmax		pmax		
	comp=Z,10.0nm,0.6s,mb5.3							
CD2				pmax		pmax		
	comp=Z,30nm,5.2s							
CMAR	Chiang Mai Arr	91.43	289	P		P	04 37 42.0	+1.0
	comp=Z,2.3nm,0.7s,mb4.6,baz=85,slow=2.8,SNR=12							
CMAR				LR		LR	05 13 46.3	
	comp=Z,161nm,19.3s,MS4.5,baz=277,slow=32							
CHTO	Chiang Mai	91.53	289	eP		P	04 37 42.4	+1.0
	comp=Z,4.8nm,0.9s,mb4.8							
FFC	Flin Flon	92.68	34	eP		P	04 37 45.1	-0.8
SONM	Songino Array	93.96	318	LR		LR	05 14 26.6	
	comp=Z,194nm,20.9s,MS4.5,baz=65,slow=32							
TIXI	Tiksi	94.58	345	eP		P	04 37 54.0	-0.3
ULM	Lac du Bonnet	94.61	39	LR		LR	05 13 28.5	
	comp=Z,172nm,20.3s,MS4.5,baz=246,slow=31							
GTA	Gaotai	96.17	309	P		P	04 38 03.0	+0.6
GTA				pP		pP	04 38 29.8	+13
GTA				sP		sP	04 38 40.0	+17
GTA				SKS			04 48 29.3	
GTA				S		S	04 49 14.6	-3.3
GTA				pmax		pmax		
	comp=Z,3.0nm,1.3s,mb4.6							
GTA				pmax		pmax		
	comp=Z,77nm,7.2s							
GTA				LR		LR		
	comp=N,160nm,17.4s,MS4.7							
GTA				LR		LR		
	comp=E,200nm,22.2s,MS4.7							
GTA				LR		LR		
	comp=Z,290nm,24.0s,MS4.7							
MKAR	Makanchi Array	109.89	315	PKiKP		PKiKP	04 43 04.2	-1.2
	comp=Z,0.5nm,0.6s,baz=48,slow=2.1,SNR=4.3							
KSH	Kashi	114.44	307	ePKPbc		PKiKP	04 43 24.0	+10
KSH				sPKP			04 44 01.4	
KSH				PP		PP	04 44 14.6	+3.3
KSH				PKS			04 46 59.6	
KSH				SKS		SKSdf	04 50 25.3	+3.1
KSH				SKKS		SKKSac	04 50 57.5	-11
KSH				SS		SS	04 59 42.5	-18
KSH				AMB		AMB		
	comp=Z,150nm,6.2s							
KSH				LR		LR		
	comp=N,65nm,4.6s							
KSH				LR		LR		
	comp=E,43nm,4.8s							
KSH				LR		LR		
	comp=Z,48nm,4.8s							
BVAR	Borovoye Array	117.06	322	PKP		PKPdf	04 43 18.2	-0.6
	comp=Z,1.2nm,0.7s,baz=48,slow=2.1,SNR=4.8							
AKBB	Malin Array Si	139.77	337	ePKPdf		PKPdf	04 44 00.3	-1.7
BURAR	Bucovina Array	143.81	337	⇑iP		PKPdf	04 44 01.1	-8.2
UPC	Upice	143.83	348	ePKP		PKPdf	04 44 07.1	-2.1
DPC	Dobruska-Polom	143.92	348	ePKPdf		PKPdf	04 44 06.9	-2.5
CRVS	Cervenica-Dubn	143.97	342	ePKP		PKPdf	04 44 07.8	-1.7
CRVS	Cervenica-Dubn	143.97	342	ePKP		PKPdf	04 44 07.8	-1.7
KMBO	Kilima Mbogo	144.49	245	PKP		PKPdf	04 44 10.8	-0.7
	comp=Z,8.0nm,0.9s,baz=70,slow=5.1,SNR=13							
KMBO	Kilima Mbogo	144.49	245	ePKPdf		PKPdf	04 44 11.1	-0.4
PRU	Pruhonice	144.60	350	ePKP		PKPdf	04 44 10.1	-0.5
KECS	Kecovo	144.63	343	ePKP		PKPdf	04 44 09.2	-1.5
KECS	Kecovo	144.63	343	ePKP		PKPdf	04 44 09.2	-1.5
VYHS	Vyhne	145.08	344	ePKP		PKPdf	04 44 10.9	-0.6
VYHS	Vyhne	145.08	344	ePKP		PKPdf	04 44 10.9	-0.6
MLR	Muntele Rosu	145.26	334	⇑iP		PKPbc	04 44 12.2	+0.6
GIVF	Givet	145.28	1	ePKP1		PKPbc	04 44 11.0	-0.5
BR131	Keskin Array S	145.31	320	ePKPbc		PKPbc	04 44 11.6	-0.4
BRTR	Keskin Array B	145.31	320	PKPbc		PKPbc	04 44 11.8	-0.1
	comp=Z,5.4nm,0.9s,baz=93,slow=1.9,SNR=26							
BAIF	Baives	145.31	1	ePKP1		PKPbc	04 44 11.4	-0.3
PSZ	Piszkesteto	145.31	343	ePKPbc		PKPbc	04 44 10.9	-0.9
GRA1	Grafenberg Arr	145.36	353	ePKPbc		PKPbc	04 44 11.8	0.0
GRF	Grafenberg Arr	145.36	353	ePKPbc		PKPbc	04 44 11.8	0.0
GRF	Grafenberg Arr	145.36	353	ePKP		PKPbc	04 44 11.8	0.0
KHC	Kasperske Hory	145.59	350	ePKPbc		PKPbc	04 44 12.6	0.0
KHC	Kasperske Hory	145.59	350	ePKP		PKPdf	04 44 12.7	+0.4
VOIR		145.67	335	⇑iP		PKPdf	04 44 13.3	+0.7
WET	Wettzell	145.68	351	ePKPbc		PKPbc	04 44 12.9	+0.1
WET	Wettzell	145.68	351	ePKPbc		PKPbc	04 44 12.9	+0.1
WLF	Walferdange	145.72	359	ePKPbc		PKPbc	04 44 13.4	+0.5
WLF	Walferdange	145.72	359	ePKPbc		PKPbc	04 44 13.2	+0.3
GEC2	GERESS Array S	145.84	350	ePKPbc		PKPbc	04 44 13.1	-0.3
GEC2	GERESS Array S	145.84	350	ePKPbc		PKPbc	04 44 13.1	-0.3
CONA	Conrad Observa	146.32	347	⇑iPKPdf		PKPdf	04 44 15.1	+1.5
	comp=Z,6.7nm,0.9s							
STU	Stuttgart	146.47	355	ePKPbc		PKPbc	04 44 15.0	-0.2
MOA	Molln	146.71	349	⇑iPKPdf		PKPdf	04 44 15.7	+1.4
	comp=Z,9.7nm,1.2s							
CDF	Champ du Feu	146.94	358	ePKP1		PKPbc	04 44 16.3	-0.3
	comp=Z,16nm,1.0s							
BFO	Black Forest	146.97	356	ePKPbc		PKPbc	04 44 16.1	-0.6
BFO	Black Forest	146.97	356	ePKPbc		PKPbc	04 44 16.1	-0.6
ARSA	Arzberg	147.03	347	⇑iPKPdf		PKPdf	04 44 16.3	+1.5
	comp=Z,6.2nm,1.2s							
RJOB	Jochberg	147.07	351	ePKPbc		PKPbc	04 44 16.7	-0.3
HAU	Haudompre	147.37	359	ePKP1		PKPbc	04 44 17.4	-0.4
HAU				eMLR		MLR		
	comp=Z,85nm,21.0s,MS4.2							
HAU	Haudompre	147.37	359	ePKP		PKPbc	04 44 17.4	-0.4
HAU				LR		LR		
	comp=Z,80nm,21.0s,MS4.5							
KBA	Koelnbreinsper	147.62	350	⇑iPKPdf		PKPbc	04 44 17.6	-0.9
	comp=Z,4.9nm,0.8s							
SOKA	Soboth	147.68	347	⇓iPKPdf		PKPbc	04 44 18.1	-0.6
	comp=Z,9.1nm,1.1s							
WTTA	Wattenberg	147.70	352	⇓iPKPdf		PKPbc	04 44 18.2	-0.5
	comp=Z,4.8nm,0.7s							
DAVA	Damuels	147.88	354	⇑iPKPdf		PKPbc	04 44 19.0	-0.3
	comp=Z,8.0nm,0.9s							
FETA	Feichten	148.05	353	⇓iPKPdf		PKPbc	04 44 19.4	-0.3
	comp=Z,7.0nm,1.2s							
LOR	Lormes	148.09	2	ePKP1		PKPbc	04 44 19.5	-0.3
	comp=Z,7.3nm,0.8s							
LOR				eMLR		MLR		
	comp=Z,171nm,21.0s,MS4.5							
LOR	Lormes	148.09	2	ePKP		PKPbc	04 44 19.5	-0.3
LOR				LR		LR		
	comp=Z,170nm,21.0s,MS4.8							
SSF	Saint Saulge	148.29	2	ePKP1		PKPbc	04 44 20.1	-0.2
	comp=Z,16nm,1.0s							
MFF	Saint Martin d	148.45	7	ePKP1		PKPbc	04 44 20.1	-0.6
AVF	Avril sur Loir	148.55	3	ePKP1		PKPbc	04 44 20.3	-0.7
	comp=Z,9.2nm,0.9s							
BGF	Bois d'Agland	148.76	3	ePKP1		PKPbc	04 44 21.1	-0.4
CABF	La Chapelle	148.77	359	ePKP1		PKPbc	04 44 21.8	+0.2
TCF	Toulx Ste Croi	148.99	4	ePKP1		PKPbc	04 44 21.5	-0.6
LPL	La Plagne	149.85	358	ePKP1		PKPbc	04 44 24.9	+0.6
LPG	La Plagne	149.87	358	ePKP1		PKPbc	04 44 25.0	+0.7
	comp=Z,18nm,1.0s							
RJF	Les Rejaudoux	149.91	5	ePKP1		PKPbc	04 44 24.2	-0.2
RJF				eMLR		MLR		
	comp=Z,176nm,21.5s,MS4.5							
RJF	Les Rejaudoux	149.91	5	ePKP		PKPbc	04 44 24.2	-0.2
RJF				LR		LR		
	comp=Z,180nm,21.5s,MS4.8							
BNI	Bardonecchia	150.31	358	ePKPdf		PKPdf	04 44 19.3	-0.9
BNI				ePKPbc		PKPbc	04 44 25.8	+0.4
CAF	Calviac	150.33	5	ePKP1		PKPbc	04 44 25.1	-0.4
	comp=Z,13nm,1.0s							
ORIF	Oris-en-Rattie	150.47	359	ePKP1		PKPbc	04 44 25.9	+0.1
	comp=Z,8.8nm,0.9s							
ORIF				eMLR		MLR		
	comp=Z,118nm,22.0s,MS4.3							
VIVF	Saint-Julien-l	150.53	1	ePKP1		PKPbc	04 44 25.9	0.0
	comp=Z,12nm,0.9s							
MBDF	Montbardon	150.64	358	ePKP1		PKPbc	04 44 26.2	0.0
LASF	Ste Croix	151.28	2	ePKP1		PKPbc	04 44 27.8	+0.1
	comp=Z,12nm,1.0s							
SMRF	Simiane la Rot	151.41	360	ePKP1		PKPbc	04 44 28.3	+0.3
	comp=Z,39nm,1.4s

KHAL			*i* S	Sg	04 33 54.9	-1.2
KHAL	**Karahalli**	**1.23 143**	*i* P	Pg	04 33 40.0	-0.2
KHAL			*i* S	Sg	04 33 54.9	-1.2
ARMT	**Armutlu**	**1.23 11**	*e*PN	Pn	04 33 39.6	-1.3
ARMT	**Armutlu**	**1.23 11**	*e*Pn	Pn	04 33 39.6	-1.3
ALT	**Altintas**	**1.25 103**	*e*PN	Pn	04 33 40.8	-0.3
ALT	**Altintas**	**1.25 103**	*e*Pn	Pn	04 33 40.8	-0.3
KHL	**Karahalli**	**1.28 143**	*e*PN	Pn	04 33 41.5	0.0
KHL	**Karahalli**	**1.28 143**	*e*Pn	Pn	04 33 41.5	0.0
CAVI	**Cavuskoy**	**1.31 49**	*e*PN	Pn	04 33 41.5	-0.4
CAVI	**Cavuskoy**	**1.31 49**	*e*Pn	Pn	04 33 41.5	-0.4
YLV	**Yalova**	**1.37 27**	*e*PN	Pn	04 33 41.9	-0.8
YLV	**Yalova**	**1.37 27**	*e*Pn	Pn	04 33 41.9	-0.8
KDAG	**Bornova**	**1.38 227**	*i* P	Pn	04 33 42.6	-0.3
KDAG			*i* S	Sg	04 33 59.1	-1.9
KDAG	**Bornova**	**1.38 227**	*i* P	Pn	04 33 42.6	-0.3
KDAG			*i* S	Sg	04 33 59.1	-1.9
IZM	**Izmir**	**1.39 227**	*e*PN	Pn	04 33 43.8	+0.8
ADVT	**Abdulvahap**	**1.41 40**	*e*PN	Pn	04 33 43.3	-0.1
ADVT	**Abdulvahap**	**1.41 40**	*e*Pn	Pn	04 33 43.3	-0.1
AYVA	**Ayvalik**	**1.44 269**	*i* P	Pn	04 33 41.5	-2.3
AYVA			*i* S	Sg	04 34 02.1	-0.9
AYVA	**Ayvalik**	**1.44 269**	*i* P	Pn	04 33 41.5	-2.3
AYVA			*i* S	Sg	04 34 02.1	-0.9
BLCB	**Balcova**	**1.52 231**	*e*PN	Pn	04 33 45.4	+0.6
BLCB	**Balcova**	**1.52 231**	P	Pn	04 33 45.0	+0.1
BLCB			S	Sn	04 34 04.1	-1.1
BLCB	**Balcova**	**1.52 231**	P	Pn	04 33 45.0	+0.1
BLCB	**Balcova**	**1.52 231**	*e*Pn	Pn	04 33 45.4	+0.5
BLCB			S	Sn	04 34 04.1	-1.1
DENT	**Denizli**	**1.64 166**	*e*PN	Pn	04 33 47.4	+0.8
DENT	**Denizli**	**1.64 166**	*e*Pn	Pn	04 33 47.4	+0.9
GPA	**Golpazari**	**1.65 55**	*e*PN	Pn	04 33 46.1	-0.5
GPA	**Golpazari**	**1.65 55**	*e*Pn	Pn	04 33 46.1	-0.5
RKY	**Sarkoy-Tekirda**	**1.70 322**	*e*PN	Pn	04 33 48.0	+0.7
RKY	**Sarkoy-Tekirda**	**1.70 322**	*e*Pn	Pn	04 33 48.0	+0.7
SART	**Tekirdag**	**1.70 322**	*i* P	Pn	04 33 47.7	+0.4
SART			*i* S	Sn	04 34 08.5	-1.1
SART	**Tekirdag**	**1.70 322**	*i* P	Pn	04 33 47.7	+0.4
SART			*i* S	Sn	04 34 08.5	-1.0
DNZL	**Cakiroluk**	**1.71 167**	*i* P	Pn	04 33 47.6	+0.2
DNZL	**Cakiroluk**	**1.71 167**	*i* P	Pn	04 33 47.6	+0.2
LPK	**Lapseki**	**1.71 307**	*e*PN	Pn	04 33 47.5	0.0
LPK	**Lapseki**	**1.71 307**	*e*Pn	Pn	04 33 47.5	0.0
MFT	**Murefte**	**1.73 326**	*e*PN	Pn	04 33 48.3	+0.6
MFT	**Murefte**	**1.73 326**	*e*Pn	Pn	04 33 48.3	+0.6
ISK	**Istanbul-Kandi**	**1.75 13**	*e*PN	Pn	04 33 48.4	+0.3
ISK	**Istanbul-Kandi**	**1.75 13**	*e*Pn	Pn	04 33 48.4	+0.4
SHUT	**Suhut-Afyon**	**1.75 117**	*e*PN	Pn	04 33 48.3	+0.2
SHUT	**Suhut-Afyon**	**1.75 117**	*e*Pn	Pn	04 33 48.3	+0.2
PRK	**Paraskevi**	**1.77 267**	*e*Pb	Pb	04 33 48.1	-1.7
PRK			*e*Sb	Sb	04 34 10.8	-1.6
PRK	**Paraskevi**	**1.77 267**	P	Pn	04 33 48.2	-0.1
PRK			S	Sn	04 34 11.1	-0.2
PRK	**Paraskevi**	**1.77 267**	*e*PB	Pb	04 33 48.1	-1.7
PRK			*e*SB	Sb	04 34 10.8	-1.6
PRK	**Paraskevi**	**1.77 267**	P	Pn	04 33 48.2	-0.1
PRK			*e*Sb	Sb	04 34 10.8	-1.6
PRK			S	Sn	04 34 11.1	-0.2
ESKT	**Eskisehir**	**1.79 84**	*e*PN	Pn	04 33 48.5	0.0
ESKT	**Eskisehir**	**1.79 84**	*i* P	Pn	04 33 47.9	-0.7
ESKT	**Eskisehir**	**1.79 84**	*e*Pn	Pn	04 33 48.5	-0.1
SEYT	**Eskypehyr**	**1.79 84**	*i* P	Pn	04 33 47.9	-0.7
ELBA	**Catalca**	**1.79 357**	*i* P	Pn	04 33 48.6	0.0
ELBA	**Catalca**	**1.79 357**	*i* P	Pn	04 33 48.6	0.0
TKR	**Tekirdag**	**1.81 335**	*e*PN	Pn	04 33 49.3	+0.5
TKR	**Tekirdag**	**1.81 335**	*e*Pn	Pn	04 33 49.3	+0.5
URLA	**Izmir**	**1.82 238**	*i* P	Pn	04 33 47.3	-1.7
URLA	**Izmir**	**1.82 238**	*i* P	Pn	04 33 47.3	-1.7
GULT	**Gulveren**	**1.86 54**	*e*PN	Pn	04 33 50.3	+0.8
GULT	**Gulveren**	**1.86 54**	*e*Pn	Pn	04 33 50.3	+0.8
CRLT	**Corlu**	**1.88 341**	*e*PN	Pn	04 33 50.6	+0.9
CRLT	**Corlu**	**1.88 341**	*e*Pn	Pn	04 33 50.6	+0.8
CTKS	**Kestanelik-??a**	**1.88 359**	*e*PN	Pn	04 33 50.3	+0.5
CTKS	**Kestanelik-??a**	**1.88 359**	*e*Pn	Pn	04 33 50.3	+0.5
SLVT	**Silivri**	**1.89 352**	*e*PN	Pn	04 33 50.6	+0.7
SLVT	**Silivri**	**1.89 352**	*e*Pn	Pn	04 33 50.6	+0.7
KLYT	**Kilyos**	**1.93 11**	*e*PN	Pn	04 33 50.6	+0.1
KLYT	**Kilyos**	**1.93 11**	*e*Pn	Pn	04 33 50.6	+0.1
GCAM	**G?zelcaml?**	**1.95 212**	*i* P	Pn	04 33 49.7	-1.0
GCAM	**G?zelcaml?**	**1.95 212**	*i* P	Pn	04 33 49.7	-1.0
BOLV	**Bolvadin**	**1.98 108**	*i* P	Pn	04 33 51.0	-0.1
BOLV	**Bolvadin**	**1.98 108**	*i* P	Pn	04 33 51.0	-0.1
SILT	**Sile**	**1.98 25**	*e*PN	Pn	04 33 50.9	-0.2
SILT	**Sile**	**1.98 25**	*e*Pn	Pn	04 33 50.9	-0.3
BOZC	**Bozcaada**	**1.99 285**	*i* P	Pn	04 33 50.5	+0.8
BOZC			*i* S	Sn	04 34 14.3	-2.4
SIGR	**SIGRI**	**2.10 267**	P	Pn	04 33 52.6	-0.1
SIGR			S	Sn	04 34 19.1	-0.3
SIGR	**SIGRI**	**2.10 267**	P	Pn	04 33 52.6	-0.1
SIGR			S	Sn	04 34 19.1	-0.3
SMG	**Samos**	**2.12 220**	*e*Pg	Pg	04 33 56.4	-0.9
SMG			*e*Sn	Sn	04 34 22.9	+2.9
SMG	**Samos**	**2.12 220**	*e*PG	Pg	04 33 56.4	-0.9
SMG			*e*SN	Sn	04 34 22.9	+2.9
SMG	**Samos**	**2.12 220**	*e*Pg	Pg	04 33 56.4	-0.9
SMG			*e*Sn	Sn	04 34 22.9	+2.9
CTYL	**Yal??k??y-??at**	**2.13 355**	*e*PN	Pn	04 33 54.2	+1.0
CTYL	**Yal??k??y-??at**	**2.13 355**	*e*Pn	Pn	04 33 54.2	+1.0
MLSB	**Milas**	**2.14 197**	*e*PN	Pn	04 33 54.2	+0.8
MLSB	**Milas**	**2.14 197**	*e*Pn	Pn	04 33 54.2	+0.8
CHOS	**Chios island**	**2.17 244**	P	Pn	04 33 53.5	-0.3
CHOS			S	Sn	04 34 21.1	-0.2
CHOS	**Chios island**	**2.17 244**	*e*PB	Pn	04 33 53.5	-0.3
CHOS	**Chios island**	**2.17 244**	P	Pn	04 33 53.5	-0.3
CHOS			S	Sn	04 34 21.1	-0.2
ISP	**Isparta**	**2.18 134**	*e*PN	Pn	04 33 53.4	-0.5
ISP	**Isparta**	**2.18 134**	P	Pn	04 33 53.2	-0.7
GADA	**Gvkgeada**	**2.21 293**	*e*PN	Pn	04 33 54.2	-0.1
GADA	**Gvkgeada**	**2.21 293**	*e*Pn	Pn	04 33 54.2	-0.1
YER	**Yerkesik**	**2.23 185**	*e*PN	Pn	04 33 55.3	+0.7
YER	**Yerkesik**	**2.23 185**	*e*Pn	Pn	04 33 55.3	+0.7
GOLH	**Golhisar**	**2.26 159**	*i* P	Pn	04 33 55.0	0.0
GOLH	**Golhisar**	**2.26 159**	*i* P	Pn	04 33 55.0	0.0
ENEZ	**Enez**	**2.30 308**	*e*PN	Pn	04 33 55.5	0.0
ENEZ	**Enez**	**2.30 308**	*e*Pn	Pn	04 33 55.6	+0.1
SVRH	**Sivrihisar-ESK**	**2.31 87**	*e*PN	Pn	04 33 55.6	-0.1
SVRH	**Sivrihisar-ESK**	**2.31 87**	*e*Pn	Pn	04 33 55.6	-0.1
HENT	**Hendek**	**2.32 50**	*i* P	Pn	04 33 54.4	-1.5
HENT	**Hendek**	**2.32 50**	*i* P	Pn	04 33 54.4	-1.5
MDU	**Mudurnu**	**2.33 61**	*e*PN	Pn	04 33 56.8	+0.8
MDU	**Mudurnu**	**2.33 61**	*e*Pn	Pn	04 33 56.8	+0.8
ALN	**Alexandroupoli**	**2.46 310**	*e*Pn	Pn	04 33 57.6	-0.2
ALN			*e*Sn	Sn	04 34 27.9	-0.5
ALN	**Alexandroupoli**	**2.46 310**	P	Pn	04 33 57.6	-0.2
ALN			S	Sn	04 34 28.3	-0.1
ALN	**Alexandroupoli**	**2.46 310**	*e*PN	Pn	04 33 57.6	-0.2
ALN			*e*SN	Sn	04 34 27.9	-0.5
ALN	**Alexandroupoli**	**2.46 310**	P	Pn	04 33 57.6	-0.2
ALN			*e*Sn	Sn	04 34 27.9	-0.5
ALN			S	Sn	04 34 28.3	-0.1
BCK	**Bucak**	**2.48 139**	*e*PN	Pn	04 33 58.0	0.0
BCK	**Bucak**	**2.48 139**	*e*Pn	Pn	04 33 58.0	0.0
KIZT	**Kizilcal**	**2.63 99**	*e*PN	Pn	04 34 00.6	+0.4
KIZT	**Kizilcal**	**2.63 99**	*e*Pn	Pn	04 34 00.6	+0.4
LIA	**Limnos Island**	**2.66 283**	*e*Pb	Pb	04 34 00.0	-4.9
LIA	**Limnos Island**	**2.66 283**	*e*PB	Pb	04 34 00.0	-4.9
LIA	**Limnos Island**	**2.66 283**	*e*Pb	Pb	04 34 00.0	-4.9
SUTC	**Sutluce-Ispart**	**2.69 133**	*e*PN	Pn	04 34 01.7	+0.8
SUTC	**Sutluce-Ispart**	**2.69 133**	*e*Pn	Pn	04 34 01.7	+0.8
DAT	**Datca**	**2.73 197**	*e*PN	Pn	04 34 03.3	+1.8
DAT	**Datca**	**2.73 197**	*e*Pn	Pn	04 34 03.3	+1.8
ELL	**Elmali**	**2.82 157**	*e*PN	Pn	04 34 03.6	+1.0
ELL	**Elmali**	**2.82 157**	*e*Pn	Pn	04 34 03.6	+0.9
EDRB	**Edirne**	**2.84 332**	*e*PN	Pn	04 34 03.1	+0.1
EDRB	**Edirne**	**2.84 332**	*e*Pn	Pn	04 34 03.1	+0.1
KDHN	**Kadinhani**	**2.91 106**	*i* P	Pn	04 34 04.2	+0.3
KDHN	**Kadinhani**	**2.91 106**	*i* P	Pn	04 34 04.2	+0.3
RDO	**Rodhopi**	**2.92 309**	*e*PN	Pn	04 34 04.1	+0.1
RDO	**Rodhopi**	**2.92 309**	*e*PN	Pn	04 34 04.1	+0.1
RDO	**Rodhopi**	**2.92 309**	*e*Pn	Pn	04 34 04.1	+0.1
SGKT	**Sivrigoynuk**	**2.96 65**	*i* P	Pn	04 34 04.2	-0.4
SGKT	**Sivrigoynuk**	**2.96 65**	*i* P	Pn	04 34 04.2	-0.4
KDZ	**Kurdzhali**	**3.31 315**	P	Pb	04 34 18.0	+1.9
JMB	**Yambol**	**3.45 335**	*e*P	Pn	04 34 12.8	+1.5
JMB	**Yambol**	**3.45 335**	*e*P	Pn	04 34 12.8	+1.5
SAFT	**Safranbolu**	**3.68 58**	*e*PN	Pn	04 34 15.9	+1.4
SAFT	**Safranbolu**	**3.68 58**	*e*Pn	Pn	04 34 15.9	+1.3
RZN	**Rozhen**	**3.74 310**	P	Pn	04 34 15.4	+0.1
RZN	**Rozhen**	**3.74 310**	P	Pn	04 34 15.4	+0.1
HDMB	**Hadim**	**3.92 126**	*e*PN	Pn	04 34 18.6	+0.8
HDMB	**Hadim**	**3.92 126**	*e*Pn	Pn	04 34 18.6	+0.8
BR131	**Keskin Array S**	**3.95 83**	*e*Pn	Pn	04 34 18.7	+0.4
BR131			*e*Pg	Pg	04 34 31.6	-0.8
BR131			*e*Sn	Sn	04 35 03.7	-1.5
BR131			*e*Sg	Sg	04 35 22.7	-1.0
BR131	**Keskin Array S**	**3.95 83**	*e*Pn	Pn	04 34 18.7	+0.4
MMB	**Musomiste**	**4.30 303**	P	Pn	04 34 23.6	+0.5
MMB	**Musomiste**	**4.30 303**	P	Pn	04 34 23.6	+0.5
SZH	**Strazhica**	**4.38 334**	P	Pn	04 34 23.6	-0.5
SZH	**Strazhica**	**4.38 334**	P	Pn	04 34 23.6	-0.5
CORM	**Corum**	**4.76 78**	*e*PN	Pn	04 34 30.2	+0.8
CORM	**Corum**	**4.76 78**	*e*Pn	Pn	04 34 30.2	+0.8
MLR	**Muntele Rosu**	**6.43 343**	⇓P	Pn	04 34 53.6	+1.4
VOIR		**6.61 338**	⇓*i*P	Pn	04 34 54.5	-0.2
VOIR		**6.61 338**	⇓*i*P	Pn	04 34 54.5	-0.2
BURAR	**Bucovina Array**	**8.60 345**	⇓*i*P	Pn	04 35 23.5	+1.4

NEIC ***20*** *04:50:01.7±1.0, 34°.57N×138°.52E, h206km±7km, mb3.5/3, Error ellipse: s-maj=16.9km s-min=12.7km az=191.0*
JMA ***20*** *04:50:01.4±0.2, 34°.60N×138°.61E, h218km±2km, M3.5*
ISCJB ***20*** *04:50:01.3±0.4, 34°.60N±0°.05×138°.54E±0°.05, h218km±3km, mb3.4/8, Error ellipse: s-maj=8.1km s-min=6.7km az=23.9*
IDC ***20*** *04:50:02.5±0.7, 34°.50N×138°.38E, h209km±8km, mb3.2/5, mb1 3.3/7, mb1mx3.1/26, mbtmp3.1/7, Error ellipse: s-maj=28.5km s-min=8.5km az=65.0*

ISC 20 04:50:02.3±0.4, 34°.61N±0°.05×138°.55E±0°.05, h213km±3km, n32, σ0°70/44, mb3.4/8, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIZS	**Izushimoda**	**0.30**	**68**	P	**Pn**	04 50 30.3	0.0
JIZS				S	**S**	04 50 52.0	0.0
JSG	**Sagara**	**0.30**	**283**	P	**Pn**	04 50 30.6	+0.3
KTJJ	**Kamata 2**	**0.53**	**53**	P	**Pn**	04 50 31.0	0.0
KTJJ				S	**S**	04 50 53.8	+0.5
SHZ3	**Shizuoka 3**	**0.54**	**329**	P	**Pn**	04 50 30.9	-0.1
JOD2	**Odawara 2**	**0.79**	**34**	P	**Pn**	04 50 31.9	+0.2
JOD2				*e*S	**S**	04 50 56.9	+1.4
JYN	**Shimob**	**0.89**	**360**	P	**Pn**	04 50 32.9	+0.2
JRY	**Ryogami san**	**1.44**	**12**	P	**Pn**	04 50 37.0	+0.5
JRY				S	**S**	04 51 04.2	+0.8
JIE	**Ise**	**1.53**	**262**	P	**Pn**	04 50 37.3	-0.1
JIE				S	**S**	04 51 04.4	-0.3
JHJ	**Hachijo jima 2**	**1.81**	**145**	P	**Pn**	04 50 39.9	0.0
	75nm,0.3s,baz=64,slow=23,SNR=22						
JHJ				S	**S**	04 51 09.6	+0.3
	19nm,0.3s,baz=254,slow=23,SNR=6.7						
JHJ2	**Mitsune**	**1.83**	**144**	P	**Pn**	04 50 39.9	-0.2
JGM	**Miyama**	**1.85**	**307**	P	**Pn**	04 50 40.6	+0.3
JGM				S	**S**	04 51 10.8	+0.8
MJAR	**Matsushiro Arr**	**1.95**	**352**	P	**Pn**	04 50 41.0	-0.2
	3.6nm,0.3s,baz=172,slow=11,SNR=21						
MJAR				S	**S**	04 51 13.3	+1.5
	1.1nm,0.3s,baz=185,slow=33,SNR=5.1						
MAJO	**Matsushiro**	**1.95**	**352**	*e*Pn	**Pn**	04 50 40.3	-0.9
MAT	**Matsushiro**	**1.95**	**352**	P	**Pn**	04 50 41.1	-0.1
MAT				S	**S**	04 51 10.5	-1.3
MAT	**Matsushiro**	**1.95**	**352**	P	**Pn**	04 50 41.2	0.0
MAT				*e*S	**S**	04 51 11.7	-0.1
JAG	**Ashikaga**	**1.96**	**22**	P	**Pn**	04 50 40.6	-0.7
JAG				S	**S**	04 51 09.8	-2.1
BSO1	**Boso 1**	**2.01**	**88**	P	**Pn**	04 50 41.0	-0.8
BSO1				S	**S**	04 51 12.3	-0.3
JWZ	**Kozaga**	**2.58**	**246**	P	**Pn**	04 50 47.7	-0.2
JWT	**Wachi**	**2.67**	**286**	P	**Pn**	04 50 49.0	+0.2
JWT				S	**S**	04 51 24.8	-0.4
ERM	**Erimo**	**8.23**	**25**	*e*Pn	**Pn**	04 51 57.6	-0.8
KSRS	**Korea Array**	**9.06**	**291**	P	**Pn**	04 52 07.7	-1.5
	0.2nm,0.3s,baz=118,slow=38,SNR=9.3						
SONM	**Songino Array**	**27.34**	**309**	P	**P**	04 55 28.2	+0.9
	0.6nm,0.5s,mb3.5,baz=97,slow=7.4,SNR=3.6						
ZALV	**Zalesovo Beam**	**41.89**	**314**	P	**P**	04 57 31.9	+0.4
	0.5nm,0.4s,mb3.3,baz=73,slow=6.3,SNR=3.0						
MK31	**Makanchi Array**	**43.48**	**304**	*e*P	**P**	04 57 44.3	-0.1
MKAR	**Makanchi Array**	**43.48**	**304**	P	**P**	04 57 44.7	+0.3
	0.6nm,0.5s,mb3.2,baz=90,slow=11,SNR=5.2						
MKAR	**Makanchi Array**	**43.48**	**304**	P	**P**	04 57 44.7	+0.3
KURK	**Kurchatov**	**45.64**	**310**	*e*P	**P**	04 58 01.0	-0.4
	1.6nm,0.8s,mb3.4						
WRA	**Warramunga Arr**	**54.39**	**185**	P	**P**	04 59 06.9	-0.4
	0.6nm,0.4s,mb3.4,baz=3.6,slow=7.8,SNR=5.1						
ABKAR	**Akbulak array**	**57.73**	**311**	*e*P	**P**	04 59 30.4	-0.2
	0.7nm,0.5s,mb3.5						
HLID	**Hailey**	**77.73**	**45**	*e*P	**P**	05 01 36.5	+0.9
	0.7nm,0.7s,mb3.4						
TXAR	**Lajitas Array**	**93.45**	**51**	P	**P**	05 02 54.9	+1.1
	0.2nm,0.7s,mb3.2,baz=331,slow=7.3,SNR=3.3						
LPAZ	**La Paz**	**149.93**	**59**	PKPbc	PKPbc	05 09 29.1	+1.4
	0.6nm,0.6s,baz=304,slow=3.6,SNR=3.4						

LDG ***20*** *05:01:17.6±0.1, 43°.74N×7°.79E, h25km, Md2.3/1, Ml2.3/6, Error ellipse: s-maj=2.3km s-min=1.2km az=45.0*
ROM ***20*** *05:01:18.9±0.2, 43°.80N×7°.81E, h11km, Md2.1/6, Ml1.8/4, Error ellipse: s-maj=2.8km s-min=1.2km az=176.0*
GEN ***20*** *05:01:18.3, 43°.76N×7°.86E, h13km, ML1.7*
STR ***20*** *05:01:19.1±0.4, 43°.81N×7°.83E, h5km, Ml2.2, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

CSEM 20 05:01:17.0±0.2, 43°.73N×7°.84E, h20km, ML2.5/8, Error ellipse: s-maj=3.9km s-min=2.9km az=158.0, Near south coast of France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEGI	**Seborga**	**0.15**	**320**	P	Pb	05 01 21.9	+0.4
NEGI				S	Sb	05 01 24.5	-0.1
IMI	**Imperia**	**0.18**	**13**	Pg	Pb	05 01 22.4	+0.5
IMI				Sg	Sb	05 01 25.2	-0.1
IMI	**Imperia**	**0.18**	**13**	P	Pb	05 01 22.4	+0.5
IMI				Sg	Sb	05 01 25.2	-0.1
RONM	**Roccetta Nervi**	**0.23**	**310**	P	Pb	05 01 22.9	+0.4
RONM				S	Sb	05 01 26.2	0.0
SBF	**Sospel**	**0.32**	**294**	*e*Pg	Pb	05 01 24.9	+0.9
SBF				*e*Sg	Sb	05 01 28.3	-0.5
	432nm,0.3s						
SBF	**Sospel**	**0.32**	**294**	*e*Pg	Pb	05 01 24.9	+0.9
SBF				*e*Sg	Sb	05 01 28.3	-0.5
	216nm,0.3s						
SAOF	**Saorge**	**0.33**	**321**	Pg	Pb	05 01 24.5	+0.4
SAOF				Sg	Sb	05 01 29.0	+0.1
SAOF	**Saorge**	**0.33**	**321**	Pg	Pb	05 01 24.5	+0.4
SAOF				Sg	Sb	05 01 29.0	+0.1
REVF	**Revere**	**0.34**	**271**	Pg	Pb	05 01 26.5	+2.1
REVF	**Revere**	**0.34**	**271**	Pg	Pb	05 01 26.5	+2.1
MONE	**Monesi**	**0.35**	**350**	P	Pb	05 01 25.0	+0.4
MONE				S	Sb	05 01 29.5	-0.2
LUCF	**Luceram**	**0.39**	**294**	Pg	Pb	05 01 26.0	+0.8
LUCF	**Luceram**	**0.39**	**294**	Pg	Pb	05 01 26.0	+0.8
AUTN	**L'Aution**	**0.40**	**312**	Pg	Pb	05 01 26.0	+0.7
AUTN				Sg	Sb	05 01 31.4	+0.4
AUTN	**L'Aution**	**0.40**	**312**	Pg	Pb	05 01 26.0	+0.7
AUTN				Sg	Sb	05 01 31.4	+0.4
RORO	**Rocca Rossa**	**0.41**	**23**	P	Pb	05 01 25.5	-0.1
RORO				S	Sb	05 01 30.8	-0.7
TOUF	**Mont Tournerai**	**0.51**	**304**	Pg	Pb	05 01 28.1	+0.8
TOUF				Sg	Sb	05 01 34.4	+0.1
TOUF	**Mont Tournerai**	**0.51**	**304**	Pg	Pb	05 01 28.1	+0.8
TOUF				Sg	Sb	05 01 34.4	+0.1
MVIF	**Mont Vial**	**0.52**	**289**	Pg	Pb	05 01 28.2	+0.7
MVIF				Sg	Sb	05 01 35.6	+1.0
MVIF	**Mont Vial**	**0.52**	**289**	Pg	Pb	05 01 28.2	+0.7
MVIF				Sg	Sb	05 01 35.6	+1.0
ENR	**Entracque**	**0.58**	**329**	P	Pb	05 01 29.0	+0.6
ENR				S	Sb	05 01 36.0	-0.2
STV	**Sant Anna di V**	**0.63**	**324**	Pg	Pb	05 01 30.0	+0.7
STV				Sg	Sb	05 01 38.0	+0.2
	71nm,0.2s						
STV	**Sant Anna di V**	**0.63**	**324**	Pg	Pb	05 01 30.0	+0.7
STV				S	Sb	05 01 38.0	+0.2
QLNO	**Quiliano**	**0.70**	**32**	Pg	Pb	05 01 31.2	+0.8
QLNO				Sg	Sb	05 01 40.8	+1.2
	20nm,0.3s						
QLNO	**Quiliano**	**0.70**	**32**	Pg	Pb	05 01 31.2	+0.8
QLNO				Sg	Sb	05 01 40.8	+1.2
	20nm,0.3s						
DOI	**San Damiano**	**0.88**	**331**	Pg	Pb	05 01 34.5	+0.9
DOI				Sg	Sb	05 01 45.7	+0.8
	30nm,0.3s						
DOI	**San Damiano**	**0.88**	**331**	Pg	Pb	05 01 34.5	+0.9
DOI				Sg	Sb	05 01 45.7	+0.8
	30nm,0.3s						
FRF	**La Foret Royal**	**0.88**	**259**	*e*Pg	Pb	05 01 34.0	+0.4
FRF				*e*Sg	Sb	05 01 45.0	+0.1
	9.7nm,0.2s						
FRF	**La Foret Royal**	**0.88**	**259**	*e*Pg	Pb	05 01 34.0	+0.4
FRF				*e*Sg	Sb	05 01 45.0	+0.1
	4.8nm,0.2s						
PZZ	**Stroppo**	**0.93**	**326**	Pg	Pb	05 01 35.5	+1.0
PZZ				Sg	Sb	05 01 47.3	+0.9
	29nm,0.3s						
PZZ	**Stroppo**	**0.93**	**326**	P	Pb	05 01 35.2	+0.7
PZZ	**Stroppo**	**0.93**	**326**	Pg	Pb	05 01 35.5	+1.0
PZZ				S	Sb	05 01 46.6	+0.2
PZZ				Sg	Sb	05 01 47.3	+0.9
	29nm,0.3s						
PCP	**Piancastagn**	**0.96**	**32**	Pg	Pb	05 01 36.2	+1.3
PCP				Sg	Sb	05 01 48.4	+1.3
PCP	**Piancastagn**	**0.96**	**32**	P	Pb	05 01 35.7	+0.8
PCP	**Piancastagn**	**0.96**	**32**	Pg	Pb	05 01 36.2	+1.3
PCP				S	Sb	05 01 47.2	+0.1
PCP				Sg	Sb	05 01 48.4	+1.3
LMR	**La Mourre**	**1.04**	**248**	*e*P	Pb	05 01 36.1	-0.3
LMR				*e*Sn	Sb	05 01 47.0	-2.6
	5.4nm,0.3s						
LMR	**La Mourre**	**1.04**	**248**	*e*P	Pb	05 01 36.1	-0.3
LMR				*e*Sn	Sb	05 01 47.0	-2.6
	2.7nm,0.3s						
MBDF	**Montbardon**	**1.26**	**323**	*e*Pn	Pn	05 01 37.6	-1.8
MBDF	**Montbardon**	**1.26**	**323**	*e*Pg	Pn	05 01 41.1	+1.7
MBDF				*e*Sg	Sn	05 01 56.9	+1.2
	6.2nm,0.3s						
MBDF	**Montbardon**	**1.26**	**323**	*e*Pn	Pn	05 01 37.6	-1.8
MBDF	**Montbardon**	**1.26**	**323**	*e*Pg	Pn	05 01 41.1	+1.7
MBDF				*e*Sg	Sn	05 01 56.9	+1.2
	3.1nm,0.3s						
PGF	**Pioggiola**	**1.46**	**144**	*e*Pn	Pn	05 01 41.3	-0.8
PGF				*e*Sn	Sn	05 01 58.2	-2.4
	5.4nm,0.2s						
PGF	**Pioggiola**	**1.46**	**144**	*e*Pn	Pn	05 01 41.3	-0.8
PGF				*e*Sn	Sn	05 01 58.2	-2.4
	2.7nm,0.2s						
SMRF	**Simiane la Rot**	**1.66**	**279**	*e*Sg	Sn	05 02 08.8	+3.3
	2.9nm,0.3s						
SMRF	**Simiane la Rot**	**1.66**	**279**	*e*Sg	Sn	05 02 08.8	+3.3
	1.5nm,0.

AAK				Lg				05 09 13.0
	2.4nm,0.3s,baz=354,slow=21,SNR=30							
AAK	**Ala-Archa**	**2.76**	**45**	PN		**Pn**	**05 08 31.7**	**+1.0**
AAK							05 08 36.4	
AAK				pmax	pmax			
	comp=Z,8.0nm,0.3s							
AAK				pmax	pmax			
	comp=Z,29nm,0.3s							
AAK	**Ala-Archa**	**2.76**	**45**	*e*Pn		**Pn**	**05 08 31.5**	**+0.8**
AAK				*e*Sn		**Sn**	**05 09 14.0**	**+11**
KZA	**Kyzart**	**2.90**	**61**	P		**Pn**	**05 08 32.9**	**+0.3**
	SNR=46							
FRU	**Bishkek**	**2.96**	**43**	*e*PN		**Pn**	**05 08 39.0**	**+5.5**
FRU				*e*S		**Sn**	**05 09 18.0**	**+10**
FRU				pmax	pmax			
	comp=Z,142nm,1.6s							
FRU				smax				
	comp=E,2μm,1.8s							
KBK	**Karagaybulak**	**3.03**	**49**	P		**Pn**	**05 08 35.7**	**+1.4**
	SNR=30							
CHMS	**Chumysh**	**3.15**	**42**	P		**Pn**	**05 08 37.0**	**+1.0**
	SNR=6.9							
USP	**Ospenovka**	**3.23**	**37**	P		**Pn**	**05 08 38.1**	**+1.0**
	SNR=20							
KSH	**Kashi**	**3.37**	**109**	⇑*i*Pn		**Pn**	**05 08 35.3**	**-3.7**
KSH				Sn		**Sn**	**05 09 13.8**	**-3.9**
KSH				smax				
	comp=N,290nm,0.4s							
KSH				smax				
	comp=E,280nm,0.4s							
TKM2	**Tokmak 2**	**3.57**	**50**	⇑Pn		**Pn**	**05 08 42.2**	**+0.5**
	comp=E,24nm,0.4s							
TKM2				⇓Lg			05 09 37.8	
	comp=E,121nm,0.5s							
TKM2	**Tokmak 2**	**3.57**	**50**	P		**Pn**	**05 08 42.4**	**+0.7**
	SNR=76							
TKM2	**Tokmak 2**	**3.57**	**50**	*e*Pn		**Pn**	**05 08 42.3**	**+0.6**
TKM2				*e*Sn		**Sn**	**05 09 37.2**	**+15**
KBL	**Kabul**	**6.54**	**201**	*e*PN		**Pn**	**05 09 22.5**	**-0.1**
KBL				*e*			05 10 36.3	
KBL				pmax	pmax			
	comp=Z,18nm,0.5s							
KBL	**Kabul**	**6.54**	**201**	*e*Pn		**Pn**	**05 09 22.5**	**0.0**
	comp=Z,18nm,0.5s							
KBL				*e*Sn		**Sn**	**05 10 36.3**	**+0.5**
CEP	**Cherat**	**6.87**	**180**	P		**Pn**	**05 09 26.7**	**-0.3**
CEP				S		**Sn**	**05 10 44.0**	**+0.2**
CHCP	**Chirah Chowk**	**7.12**	**171**	P		**Pn**	**05 09 30.0**	**-0.5**
MK31	**Makanchi Array**	**9.69**	**48**	⇑Pn		**Pn**	**05 10 04.9**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=234,slow=13,SNR=6.9							
MK31				⇑Lg			05 12 46.9	
	comp=Z,8.9nm,0.7s,baz=236,slow=26,SNR=5.0							
MK31	**Makanchi Array**	**9.69**	**48**	*e*Pn		**Pn**	**05 10 04.9**	**-0.7**
MKAR	**Makanchi Array**	**9.69**	**48**	Pn		**Pn**	**05 10 04.9**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=232,slow=14,SNR=7.0							
MKAR				Lg			05 12 48.8	
	comp=Z,0.6nm,0.3s,baz=233,slow=29,SNR=3.8							
KURBB	**Kurchatov Array**	**10.96**	**23**	⇑Pn		**Pn**	**05 10 20.9**	**-2.0**
	comp=Z,0.9nm,0.5s							
KURBB				⇓Lg			05 13 33.3	
	comp=Z,8.5nm,0.8s							
KURK	**Kurchatov**	**11.07**	**23**	⇓Lg			05 13 35.1	
	comp=Z,52nm,1.1s							
KURK	**Kurchatov**	**11.07**	**23**	Pn		**Pn**	**05 10 21.3**	**-3.1**
	comp=Z,0.5nm,0.3s,baz=215,slow=13,SNR=42							
KURK				Sn		**Sn**	**05 12 21.3**	**-5.3**
	baz=212,slow=29,SNR=2.5							
KURK				Lg			05 13 36.9	
	comp=Z,0.3nm,0.3s,baz=210,slow=28,SNR=7.1							
KURK	**Kurchatov**	**11.07**	**23**	*e*Pn		**Pn**	**05 10 22.4**	**-2.0**
AB31	**Akbulak array**	**12.00**	**319**	Pn		**Pn**	**05 10 35.9**	**-1.3**
	baz=130,slow=14,SNR=31							
AB31				⇑Sn		**Sn**	**05 12 50.5**	**+1.0**
	comp=Z,4.7nm,0.9s,baz=134,slow=21,SNR=3.8							
ABKAR	**Akbulak array**	**12.00**	**319**	*e*Pn		**Pn**	**05 10 35.9**	**-1.3**
	comp=Z,2.5nm,0.4s							
ABKAR				*e*Sn		**Sn**	**05 12 43.1**	**-6.4**
VOSK	**Vostochnaya**	**12.04**	**357**	⇓Pn		**Pn**	**05 10 37.4**	**-0.3**
VOSK				⇓Lg			05 14 08.5	
BVA0	**Borovoye Array**	**12.37**	**356**	⇓Pn		**Pn**	**05 10 41.4**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=167,slow=12,SNR=5.4							
BVA0				⇓Sn		**Sn**	**05 13 02.1**	**+3.7**
	comp=Z,0.7nm,0.6s,baz=166,slow=24,SNR=4.4							
BVA0				⇑Lg			05 14 18.5	
	comp=Z,5.1nm,1.6s,baz=156,slow=29,SNR=4.0							
BVAR	**Borovoye Array**	**12.37**	**356**	Pn		**Pn**	**05 10 40.9**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=166,slow=14,SNR=3.7							
BVAR				Sn		**Sn**	**05 12 58.1**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=166,slow=24,SNR=3.4							
BVAR				Lg			05 14 22.3	
	comp=Z,0.7nm,0.3s,baz=151,slow=25,SNR=3.9							
BVAR	**Borovoye Array**	**12.37**	**356**	P		**Pn**	**05 10 40.9**	**-1.3**
BVAR							05 12 58.1	
ZRNK	**Zerenda**	**12.41**	**352**	⇑Pn		**Pn**	**05 10 41.0**	**-1.7**
	comp=Z,0.8nm,0.5s							
ZRNK				⇑Lg			05 14 19.8	
BRVK	**Borovoye**	**12.41**	**356**	*e*P		Px	05 10 54.8	
AKTK	**Aktyubinsk**	**13.72**	**320**	Pn		**Pn**	**05 11 01.5**	**+0.9**
AKTK				Sn		**Sn**	**05 13 30.8**	**-0.4**
AKTK				Lg			05 15 19.2	
AKTO	**Aktyubinsk**	**13.72**	**320**	⇑Pn		**Pn**	**05 10 58.9**	**-1.6**
	comp=Z,0.6nm,1.3s							
AKTO				⇓Sn		**Sn**	**05 13 36.6**	**+5.3**
	comp=Z,0.9nm,0.9s							
AKTO	**Aktyubinsk**	**13.72**	**320**	Pn		**Pn**	**05 11 01.5**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=126,slow=14,SNR=3.7							
AKTO				Sn		**Sn**	**05 13 30.8**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=78,slow=20,SNR=2.2							
AKTO				Lg			05 15 19.2	
	baz=190,slow=17,SNR=3.5							
AKTO	**Aktyubinsk**	**13.72**	**320**	P		**Pn**	**05 11 01.5**	**+0.9**
AKTO							05 13 30.8	
ZALV	**Zalesovo Beam**	**15.86**	**29**	Sn		**Sn**	**05 14 28.5**	**+5.2**
	comp=Z,0.2nm,0.3s,baz=217,slow=17,SNR=2.1							
ZALV				Lg			05 16 13.9	
	comp=Z,0.3nm,0.3s,baz=203,slow=25,SNR=3.4							
ARU	**Arti**	**17.98**	**336**	P		**Pn**	**05 11 54.6**	**-0.5**
ARU	**Arti**	**17.98**	**336**	*e*P		**Pn**	**05 11 54.6**	**-0.5**
	comp=Z,6.8nm,1.2s							
ZAK	**Zakamensk**	**23.88**	**56**	*e*P		**P**	**05 12 58.1**	**+0.3**
ZAK				pmax	pmax			
	comp=Z,2.0nm,0.9s,mb3.5							
SONM	**Songino Array**	**25.58**	**62**	P		**P**	**05 13 13.1**	**-0.2**
	comp=Z,1.1nm,0.7s,mb3.5,baz=277,slow=12,SNR=3.1							
ULN	**Ulaanbaatar**	**26.02**	**62**	*e*P		**P**	**05 13 17.5**	**+0.2**
ULN				pmax	pmax			
	comp=Z,1.0nm,0.4s,mb3.7							
ULN	**Ulaanbaatar**	**26.02**	**62**	*e*P		**P**	**05 13 17.5**	**+0.2**
	comp=Z,1.5nm,0.4s,mb3.9							
BRTR	**Keskin Array B**	**29.05**	**281**	P		**P**	**05 13 45.8**	**+1.3**
	comp=Z,0.8nm,0.7s,mb3.5,baz=91,slow=9.3,SNR=4.5							
FINES	**FINESS Array B**	**34.47**	**323**	P		**P**	**05 14 33.0**	**+1.2**
	comp=Z,0.7nm,0.4s,mb4.0,baz=120,slow=11,SNR=9.0							
ARCES	**ARCESS Array B**	**37.57**	**335**	P		**P**	**05 14 59.4**	**+1.3**
	comp=Z,1.4nm,0.5s,mb4.0,baz=106,slow=9.3,SNR=17							
ARCES	**ARCESS Array B**	**37.57**	**335**	P		**P**	**05 14 59.4**	**+1.3**
NB2	**NORSAR Subarra**	**41.51**	**320**	P		**P**	**05 15 31.5**	**+0.4**
	comp=Z,0.6nm,0.4s,mb3.6,baz=105,slow=8.6							
NOA	**NORSAR Array B**	**41.51**	**320**	P		**P**	**05 15 31.9**	**+0.9**
	comp=Z,0.7nm,0.5s,mb3.6,baz=108,slow=5.7,SNR=3.4							
MJAR	**Matsushiro Arr**	**50.90**	**72**	P		**P**	**05 16 43.7**	**-1.5**
	comp=Z,1.9nm,0.7s,mb4.1,baz=292,slow=10,SNR=4.5							
DBIC	**Dimbokro**	**75.61**	**266**	P		**P**	**05 19 28.5**	**-0.6**
	comp=Z,1.4nm,0.6s,mb4.1,baz=9.5,slow=6.1,SNR=3.4							
DBIC	**Dimbokro**	**75.61**	**266**	P		**P**	**05 19 28.5**	**-0.6**
DBIC				pmax	pmax			
	comp=Z,1.0nm,0.6s							
YKA	**Yellowknife Ar**	**77.02**	**3**	P		**P**	**05 19 36.9**	**+0.7**
	comp=Z,1.3nm,0.6s,mb4.0,baz=351,slow=5.7,SNR=13							
YKA	**Yellowknife Ar**	**77.02**	**3**	P		**P**	**05 19 36.9**	**+0.6**
YKA				pmax	pmax			
	comp=Z,1.0nm,0.6s							
WRA	**Warramunga Arr**	**83.67**	**123**	P		**P**	**05 20 09.4**	**-3.1**
	comp=Z,0.3nm,0.3s,mb3.8,baz=333,slow=5.5,SNR=2.7							
WRA	**Warramunga Arr**	**83.67**	**123**	P		**P**	**05 20 09.4**	**-3.2**

IDC 20 05:12:47.5±46.0, 15°.85S×174°.19W, h0^{km}, mb4.4/3, mb1 4.5/3, mb1mx3.9/16, mbtmp4.4/3, Error ellipse: s-maj=888.4km s-min=176.4km az=78.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**43.15**	**240**	P	P	05 20 50.4	+0.3
	3.5nm,0.9s,baz=99,slow=11,SNR=5.2						
WRA	**Warramunga Arr**	**49.00**	**257**	P	P	05 21 36.2	-0.2
	1.1nm,0.5s,baz=93,slow=8.1,SNR=8.0						
ASAR	**Alice Springs**	**49.25**	**252**	P	P	05 21 38.0	-0.2
	9.2nm,0.5s,baz=88,slow=8.2,SNR=109						

*SKO **20** 05:13:35.2, 39°.39N×21°.08E, h180^{km}*
*TIR **20** 05:13:43.4±1.3, 40°.37N×19°.57E, h6^{km}±298^{km}, ML2.9*
*NEIC **20** 05:13:44.5, 39°.73N×20°.67E, h18^{km}, MD3.3(ATH), After ATH.*
*CSEM **20** 05:13:44.5±0.1, 39°.81N×20°.63E, h12^{km}, MD3.3, Error ellipse: s-maj=4.2km s-min=3.4km az=9.0*
*ATH **20** 05:13:44.5, 39°.73N×20°.67E, h18^{km}±2^{km}, MD3.3/5*
*THE **20** 05:13:44.8, 39°.78N×20°.64E, h2^{km}±1^{km}, ML3.2/4, Error ellipse: s-maj=1.7km s-min=0.4km az=321.0*
*ISCJB **20** 05:13:45.0±0.5, 39°.75N±0°.03×20°.63E±0°.03, h14^{km}±4^{km}, Error ellipse: s-maj=4.6km s-min=3.8km az=43.9*
ISC 20 05:13:45.2±0.4, 39°.75N±0°.02×20°.63E±0°.03, h14^{km}±3^{km}, n46, σ1°27/69, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.19**	**118**	*e*Pb	**Pg**	**05 13 48.6**	**-1.1**
JAN				*e*Sb	**Sg**	**05 13 51.9**	**-0.9**
JAN	**Janina**	**0.19**	**118**	*e*PB	**Pg**	**05 13 48.6**	**-1.1**
JAN				*e*SB	**Sg**	**05 13 51.9**	**-0.9**
JAN	**Janina**	**0.19**	**118**	*e*Pb	**Pg**	**05 13 48.6**	**-1.1**
JAN				*e*Sb	**Sg**	**05 13 51.9**	**-0.9**
IGT	**Igoumenitsa**	**0.31**	**227**	P	**Pg**	**05 13 51.3**	**-0.4**
IGT				S	**Sg**	**05 13 56.6**	**+0.5**
IGT	**Igoumenitsa**	**0.31**	**227**	P	**Pg**	**05 13 51.3**	**-0.4**
IGT				S	**Sg**	**05 13 56.6**	**+0.5**
MEV	**Metsovon**	**0.46**	**85**	P	**Pg**	**05 13 53.1**	**-1.3**
MEV	**Metsovon**	**0.46**	**85**	P	**Pg**	**05 13 53.1**	**-1.3**
SRN	**Sarande**	**0.50**	**285**	*i* PG	**Pg**	**05 13 55.1**	**0.0**
SRN				*i* SG	**Sg**	**05 14 04.2**	**+2.3**
SRN	**Sarande**	**0.50**	**285**	*i* Pg	**Pg**	**05 13 55.1**	**0.0**
	SNR=95						
SRN				*i* Sg	**Sg**	**05 14 04.2**	**+2.3**
	SNR=95						
KEK	**Kerkira**	**0.64**	**267**	*e*Pb	**Pg**	**05 13 57.0**	**-0.8**
KEK				*e*Sn	**Sg**	**05 14 07.8**	**+1.6**
KEK	**Kerkira**	**0.64**	**267**	P	**Pg**	**05 13 57.0**	**-0.8**
KEK				S	**Sg**	**05 14 06.5**	**+0.3**
KEK	**Kerkira**	**0.64**	**267**	*e*PB	**Pg**	**05 13 57.0**	**-0.8**
KEK				*e*SN	**Sg**	**05 14 07.8**	**+1.6**
KEK	**Kerkira**	**0.64**	**267**	P	**Pg**	**05 13 57.0**	**-0.8**
KEK				S	**Sg**	**05 14 06.5**	**+0.3**
KBN	**Korca**	**0.88**	**8**	*i* PG	**Pg**	**05 14 01.5**	**-0.8**
KBN				*i* SG	**Sg**	**05 14 16.8**	**+2.9**
KBN	**Korca**	**0.88**	**8**	*i* Pg	**Pg**	**05 14 01.5**	**-0.8**
	SNR=92						
KZN	**Kozani**	**1.04**	**57**	*e*Pb	**Pb**	**05 14 03.5**	**-1.5**
KZN	**Kozani**	**1.04**	**57**	P	**Pb**	**05 14 04.0**	**-1.0**
KZN	**Kozani**	**1.04**	**57**	*e*PB	**Pb**	**05 14 03.5**	**-1.5**
KZN	**Kozani**	**1.04**	**57**	*e*Pb	**Pb**	**05 14 03.5**	**-1.5**
KZN	**Kozani**	**1.04**	**57**	P	**Pb**	**05 14 04.0**	**-1.0**
FNA	**Florina**	**1.18**	**29**	P	**Pn**	**05 14 06.5**	**-0.8**
FNA				S	**Sb**	**05 14 23.1**	**+0.5**
FNA	**Florina**	**1.18**	**29**	P	**Pn**	**05 14 06.5**	**-0.8**
FNA				S	**Sb**	**05 14 23.1**	**+0.5**
EVR	**Evrytania**	**1.23**	**132**	*e*Pn	**Pn**	**05 14 08.3**	**+0.3**
EVR	**Evrytania**	**1.23**	**132**	*e*PN	**Pn**	**05 14 08.3**	**+0.3**
EVR	**Evrytania**	**1.23**	**132**	*e*Pn	**Pn**	**05 14 08.3**	**+0.3**
OHR	**Ohrid**	**1.37**	**5**	*e*Pn	**Pn**	**05 14 11.1**	**+1.3**
OHR				*e*Sg	**Sg**	**05 14 31.1**	**+1.7**
BIA	**Bitola**	**1.38**	**22**	*e*Pn	**Pn**	**05 14 09.9**	**0.0**
BIA				*e*Sg	**Sg**	**05 14 30.8**	**+1.1**
AGG	**Agios Georgios**	**1.50**	**118**	*e*Pn	**Pn**	**05 14 11.7**	**0.0**
AGG	**Agios Georgios**	**1.50**	**118**	P	**Pn**	**05 14 11.8**	**+0.1**
AGG				S	**Sn**	**05 14 33.3**	**+2.2**
AGG	**Agios Georgios**	**1.50**	**118**	*e*PN	**Pn**	**05 14 11.7**	**0.0**
AGG	**Agios Georgios**	**1.50**	**118**	*e*Pn	**Pn**	**05 14 11.7**	**0.0**
AGG				S	**Sn**	**05 14 33.3**	**+2.2**
VLS	**Valsamata**	**1.57**	**181**	*e*Pn	**Pn**	**05 14 13.6**	**+1.0**
VLS	**Valsamata**	**1.57**	**181**	P	**Pn**	**05 14 13.2**	**+0.6**
VLS	**Valsamata**	**1.57**	**181**	*e*PN	**Pn**	**05 14 13.6**	**+1.0**
VLS	**Valsamata**	**1.57**	**181**	P	**Pn**	**05 14 13.2**	**+0.6**
VLS	**Valsamata**	**1.57**	**181**	*e*Pn	**Pn**	**05 14 13.6**	**+1.0**
KFL	**Anninata**	**1.64**	**176**	P	**Pn**	**05 14 14.4**	**+0.8**
KRUS	**Krusevo**	**1.69**	**16**	*e*Pn	**Pn**	**05 14 15.5**	**+1.3**
KRUS				*e*Sg	**Sg**	**05 14 38.4**	**-1.1**
SCTE	**Santa Cesarea**	**1.69**	**282**	*e*PB	**Pb**	**05 14 14.7**	**-1.4**
SCTE	**Santa Cesarea**	**1.69**	**282**	*e*Pb	**Pb**	**05 14 14.7**	**-1.4**
TIR	**Tirane**	**1.70**	**340**	*e*Pn	**Pn**	**05 14 16.2**	**+1.8**
TIR	**Tirane**	**1.70**	**340**	*e*PN	**Pn**	**05 14 16.2**	**+1.8**
STON	**Ston**	**3.82**	**326**	*e*Pn	**Pn**	**05 14 42.4**	**-1.1**
STON				Sn	**Sn**	**05 15 26.2**	**-2.0**
STON	**Ston**	**3.82**	**326**	*e*Pn	**Pn**	**05 14 42.4**	**-1.2**
STON				Sn	**Sn**	**05 15 26.2**	**-2.1**
NVLJ	**Novalja**	**6.44**	**320**	*e*Pn	**Pn**	**05 15 18.2**	**-1.3**
NVLJ				Sn	**Sn**	**05 16 30.1**	**-2.6**
NVLJ	**Novalja**	**6.44**	**320**	*e*Pn	**Pn**	**05 15 18.2**	**-1.3**
NVLJ				Sn	**Sn**	**05 16 30.1**	**-2.6**

*NEIC **20** 05:24:40.9±4.0, 24°.73N×122°.51E, h10^{km}, MG3.2(JMA), Error ellipse: s-maj=40.2km s-min=13.2km az=55.0*
*TAP **20** 05:24:47.6, 24°.68N×121°.96E, h59^{km}, ML3.8, C*
*JMA **20** 05:24:47.5±0.2, 24°.64N×122°.03E, h69^{km}±2^{km}, M3.2*
*ISCJB **20** 05:24:47.5±0.4, 24°.70N±0°.02×122°.03E±0°.02, h60^{km}±4^{km}, Error ellipse: s-maj=4.3km s-min=2.7km az=158.1*
ISC 20 05:24:48.0±0.4, 24°.71N±0°.02×122°.03E±0°.02, h57^{km}±4^{km}, n63, σ0°62/117, 3C-7D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.20**	**238**	P	**Pn**	**05 24 57.0**	**-0.2**
	baz=235						
TWC				S	**Sn**	**05 25 03.6**	**-0.1**
	baz=235						
ILA	**Ilan**	**0.26**	**282**	*e*P	**Pn**	**05 24 57.5**	**0.0**
	baz=307						
ILA				*e*S	**Sn**	**05 25 05.5**	**+1.0**
	baz=307						
TWB1	**Santiao Chiao**	**0.30**	**352**	*i* P	**Pn**	**05 24 57.9**	**0.0**
	baz=5.0						
TWB1				S	**Sn**	**05 25 04.9**	**0.0**
	baz=5.0						
TWE	**Neicheng**	**0.33**	**272**	⇓*i*P	**Pn**	**05 24 58.2**	**+0.1**
	baz=285						
TWE				*e*S	**Sn**	**05 25 05.4**	**0.0**
	baz=285						
ENA	**Nanau**	**0.39**	**223**	⇓*i*P	**Pn**	**05 24 58.5**	**-0.1**
	baz=219						
ENA				S	**Sn**	**05 25 06.2**	**0.0**
	baz=219						
NWF	**Wu-fen Shan**	**0.42**	**328**	*i* P	**Pn**	**05 24 59.1**	**+0.1**
	baz=338						
NWF				S	**Sn**	**05 25 07.2**	**+0.3**
	baz=338						
ENTT	**Nioudou**	**0.43**	**261**	⇓*i*P	**Pn**	**05 24 59.2**	**+0.2**
	baz=268						
ENTT				S	**Sn**	**05 25 07.1**	**+0.1**
	baz=268						
TWA	**Mucha**	**0.49**	**303**	P	**Pn**	**05 24 59.5**	**-0.2**
	baz=311						
TWA				S	**Sn**	**05 25 07.9**	**-0.2**
	baz=311						
TATO	**Taipei**	**0.56**	**298**	*e*Pg	**Pn**	**05 24 59.7**	**-0.8**
TATO				*e*Sg	**Sn**	**05 25 10.2**	**+0.8**
TAP1	**Taipei**	**0.56**	**305**	P	**Pn**	**05 25 00.2**	**-0.3**
	baz=313						
TAP1				S	**Sn**	**05 25 09.1**	**-0.5**
	baz=313						
YHNB	**Yeheng**	**0.60**	**266**	*e*Pn	**Pn**	**05 25 00.6**	**-0.3**
YHNB				*e*Sn	**Sn**	**05 25 10.0**	**-0.3**
NSK	**Sanguang**	**0.61**	**267**	⇑*i*P	**Pn**	**05 25 00.9**	**-0.1**
	baz=270						
NSK				S	**Sn**	**05 25 10.3**	**-0.3**
	baz=270						
NNS	**Nan Shan**	**0.66**	**246**	⇓*i*P	**Pn**	**05 25 01.5**	**-0.1**
	baz=246						
NNS				*e*S	**Sn**	**05 25 11.0**	**-0.5**
	baz=246						
NACB	**Ninganchiao**	**0.67**	**217**	*e*Pn	**Pn**	**05 25 00.4**	**-1.3**
NACB				*e*Sn	**Sn**	**05 25 11.1**	**-0.6**
TWS1	**Kuangyinshan**	**0.68**	**305**	⇑P	**Pn**	**05 25 01.8**	**0.0**
	baz=318						
TWS1				*e*S	**Sn**	**05 25 12.1**	**+0.2**
	baz=318						
TWY	**Chenhua**	**0.69**	**325**	*e*P	**Pn**	**05 25 01.8**	**-0.1**
	baz=332						
TWY				*e*S	**Sn**	**05 25 12.3**	**+0.2**
	baz=332						
TWD	**Chiawan**	**0.74**	**212**	⇑*i*P	**Pn**	**05 25 02.0**	**-0.6**
	baz=219						
TWD				*e*S	**Sn**	**05 25 13.0**	**-0.4**
	baz=219						
NCU	**National Centr**	**0.81**	**289**	*e*P	**Pn**	**05 25 03.5**	**0.0**
	baz=294						
NCU				*e*S	**Sn**	**05 25 15.2**	**+0.3**
	baz=294						
HWA	**Hwalien**	**0.83**	**208**	*e*P	**Pn**	**05 25 03.8**	**+0.1**
	baz=194						
WHF	**Hehuan Shan**	**0.90**	**231**	⇓*i*P	**Pn**	**05 25 04.4**	**-0.3**
	baz=224						
WHF				S	**Sn**	**05 25 17.0**	**+0.1**
	baz=224						
TWT	**Tachien**	**0.90**	**240**	⇓*i*P	**Pn**	**05 25 05.0**	**+0.4**
	baz=233						
TWT				*e*S	**Sn**	**05 25 17.2**	**+0.2**
	baz=233						
PCYT	**Pengchaiyu**	**0.91**	**2**	*e*P	**Pn**	**05 25 05.2**	**+0.3**
	baz=8.0						
PCYT				*e*S	**Sn**	**05 25 17.6**	**+0.4**
	baz=8.0						
YOJ	**Yonaguni jima**	**0.93**	**105**	P	**Pn**	**05 25 04.9**	**-0.1**
YOJ				S	**Sn**	**05 25 17.6**	**+0.1**
NSTT	**Nanjuang**	**0.94**	**265**	*e*P	**Pn**	**05 25 04.7**	**-0.4**
	baz=267						
NSTT				*e*S	**Sn**	**05 25 17.3**	**-0.5**
	baz=267						
HSN	**Hsinchu**	**0.97**	**276**	*e*P	**Pn**	**05 25 04.9**	**-0.7**
	baz=281						
HSN				*e*S	**Sn**	**05 25 17.8**	**-0.7**
	baz=281						
NSY	**Sanyi**	**1.19**	**256**	P	**Pn**	**05 25 08.7**	**+0.2**
	baz=257						
NSY				*e*S	**Sn**	**05 25 24.0**	**+0.2**
	baz=257						
TWQ1	**Liyutan**	**1.20**	**253**	*e*P	**Pn**	**05 25 08.7**	**+0.1**
	baz=253						
TWQ1				*e*S	**Sn**	**05 25 24.2**	**+0.2**
	baz=253						
SMLT	**Sun Moon Lake**	**1.32**	**232**	*e*P	**Pn**	**05 25 10.4**	**+0.2**
	baz=222						
SMLT				*e*S	**Sn**	**05 25 27.4**	**+0.6**
	baz=222						
TYC	**Yuchr**	**1.34**	**233**	P	**Pn**	**05 25 10.6**	**+0.1**
	baz=231						
TYC				S	**Sn**	**05 25 27.8**	**+0.5**
	baz=231						
SSLB	**Suanglung**	**1.35**	**227**	*e*Pn	**Pn**	**05 25 09.9**	**-0.7**
SSLB				*e*Sn	**Sn**	**05 25 28.5**	**+1.1**
TCU	**Taichung**	**1.36**	**246**	*e*P	**Pn**	**05 25 11.1**	**+0.4**
	baz=244						
TCU				*e*S	**Sn**	**05 25 27.9**	**+0.2**
	baz=244						
EHY	**Hungye**	**1.36**	**209**	*e*P	**Pn**	**05 25 09.3**	**-1.5**
	baz=205						
YULB	**Yu-li**	**1.48**	**207**	*e*Pn	**Pn**	**05 25 10.8**	**-1.5**
YULB				*e*Sn	**Sn**	**05 25 37.0**	**+6.5**
WNT	**Mingjian**	**1.48**	**236**	*e*P	**Pn**	**05 25 12.6**	**+0.2**
	baz=247						
WNT				*e*S	**Sn**	**05 25 31.0**	**+0.3**
	baz=247						
TWF1	**Yuli**	**1.51**	**207**	*e*P	**Pn**	**05 25 12.3**	**-0.5**
	baz=209						
YUS	**Yu-Shan**	**1.57**	**219**	P	**Pn**	**05 25 13.6**	**+0.1**
	baz=208						
YUS				*e*S	**Sn**	**05 25 32.9**	**+0.1**
	baz=208						
IRIF	**Iriomote-Funau**	**1.59**	**103**	P	**Pn**	**05 25 13.7**	**-0.2**
IRIF				S	**Sn**	**05 25 33.3**	**-0.1**
ALS	**Alishan**	**1.64**	**223**	*e*P	**Pn**	**05 25 15.0**	**+0.4**
	baz=231						
ALS				*e*S	**Sn**	**05 25 35.0**	**+0.4**
	baz=231						
CHN5	**Tsauling**	**1.66**	**228**	P	**Pn**	**05 25 15.0**	**+0.2**
	baz=237						
CHN5				*e*S	**Sn**	**05 25 35.7**	**+0.7**
	baz=237						
WGK	**Gukeng**	**1.69**	**233**	*e*P	**Pn**	**05 25 15.0**	**-0.2**
	baz=241						
WGK				*e*S	**Sn**	**05 25 36.2**	**+0.5**
	baz=241						
HATJ	**Hateruma jima**	**1.74**	**112**	P	**Pn**	**05 25 15.5**	**-0.4**
HATJ				*e*S	**Sn**	**05 25 37.3**	**+0.2**
ELDTW	**Lidau**	**1.78**	**212**	*e*P	**Pn**	**05 25 16.0**	**-0.4**
	baz=197						
ELDTW				*e*S	**Sn

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBAL	**Bala**	**0.14**	**22**	*i* P	**Pg**	**05 32 33.2**	**-0.1**
BBAL				*i* S	**Sg**	**05 32 35.3**	**+0.3**
BBAL	**Bala**	**0.14**	**22**	*i* P	**Pg**	**05 32 33.2**	**-0.1**
BBAL				*i* S	**Sg**	**05 32 35.3**	**+0.2**
LOD	**Lodumlu**	**0.52**	**334**	*e*PG	**Pg**	**05 32 40.4**	**-0.2**
LOD				*e*SG	**Sg**	**05 32 48.7**	**+1.2**
LOD	**Lodumlu**	**0.52**	**334**	*e*Pg	**Pg**	**05 32 40.4**	**-0.3**
LOD				*e*Sg	**Sg**	**05 32 48.7**	**+1.3**
CDAG	**Cicekdag**	**1.04**	**78**	*i* P	**Pg**	**05 32 49.5**	**-1.0**
CDAG				*i* S	**Sg**	**05 33 04.3**	**+0.3**
CDAG	**Cicekdag**	**1.04**	**78**	*i* P	**Pg**	**05 32 49.5**	**-1.0**
CDAG				*i* S	**Sg**	**05 33 04.3**	**+0.3**
KIZT	**Kizilcal**	**1.06**	**240**	*e*PG	**Pg**	**05 32 50.8**	**-0.1**
KIZT				*e*SG	**Sg**	**05 33 06.3**	**+1.6**
KIZT	**Kizilcal**	**1.06**	**240**	*e*Pg	**Pg**	**05 32 50.8**	**-0.2**
KIZT				*e*Sg	**Sg**	**05 33 06.3**	**+1.6**
ELDT	**Eldivan**	**1.11**	**15**	*i* P	**Pg**	**05 32 50.6**	**-1.3**
ELDT				*i* S	**Sg**	**05 33 06.3**	**+0.1**
ELDT	**Eldivan**	**1.11**	**15**	*i* P	**Pg**	**05 32 50.6**	**-1.3**
ELDT				*i* S	**Sg**	**05 33 06.3**	**+0.1**
KDHN	**Kadinhani**	**1.16**	**220**	*i* P	**Pg**	**05 32 52.5**	**-0.3**
KDHN	**Kadinhani**	**1.16**	**220**	*i* P	**Pg**	**05 32 52.5**	**-0.3**
SVRH	**Sivrihisar-ESK**	**1.19**	**272**	*e*PN	**Pn**	**05 32 52.5**	**-1.7**
SVRH	**Sivrihisar-ESK**	**1.19**	**272**	*e*Pn	**Pn**	**05 32 52.5**	**-1.7**
CANT	**Cankiri**	**1.26**	**20**	*e*PN	**Pn**	**05 32 54.2**	**-1.0**
SULT	**Sultanhani-AKS**	**1.27**	**163**	*e*PN	**Pn**	**05 32 54.8**	**-0.5**
SULT	**Sultanhani-AKS**	**1.27**	**163**	*e*Pn	**Pn**	**05 32 54.8**	**-0.5**
LADK	**Ladik-KONYA**	**1.33**	**204**	*e*PN	**Pn**	**05 32 55.5**	**-0.6**
LADK	**Ladik-KONYA**	**1.33**	**204**	*e*Pn	**Pn**	**05 32 55.5**	**-0.6**
SGKT	**Sivrigoynuk**	**1.39**	**327**	*i* P	**Pn**	**05 32 56.7**	**-0.2**
SGKT				*i* S	**Sg**	**05 33 14.8**	**-0.4**
SGKT	**Sivrigoynuk**	**1.39**	**327**	*i* P	**Pn**	**05 32 56.7**	**-0.2**
SGKT				*i* S	**Sg**	**05 33 14.8**	**-0.4**
CORM	**Corum**	**1.43**	**57**	*e*PN	**Pn**	**05 32 56.7**	**-0.8**
CORM	**Corum**	**1.43**	**57**	*e*Pn	**Pn**	**05 32 56.7**	**-0.8**
AVNT	**Avonos**	**1.54**	**114**	*i* P	**Pn**	**05 32 59.0**	**0.0**
AVNT				*i* S	**Sn**	**05 33 19.8**	**+0.3**
AVNT	**Avonos**	**1.54**	**114**	*i* P	**Pn**	**05 32 59.0**	**0.0**
AVNT				*i* S	**Sn**	**05 33 19.8**	**+0.3**
KONT	**Konya--Tatoy**	**1.57**	**201**	*e*PN	**Pn**	**05 32 59.4**	**0.0**
KONT	**Konya--Tatoy**	**1.57**	**201**	*e*Pn	**Pn**	**05 32 59.4**	**0.0**
ILGA	**Ilgaz**	**1.71**	**17**	*i* P	**Pn**	**05 33 01.2**	**-0.2**
ILGA	**Ilgaz**	**1.71**	**17**	*i* P	**Pn**	**05 33 01.2**	**-0.1**
ESKT	**Eskisehir**	**1.71**	**274**	*e*PN	**Pn**	**05 33 02.0**	**+0.7**
ESKT	**Eskisehir**	**1.71**	**274**	*i* P	**Pn**	**05 33 00.2**	**-1.1**
ESKT	**Eskisehir**	**1.71**	**274**	*e*Pn	**Pn**	**05 33 02.1**	**+0.7**
SEYT	**Eskypehyr**	**1.71**	**274**	*i* P	**Pn**	**05 33 00.2**	**-1.2**
MDU	**Mudurnu**	**1.76**	**307**	*e*PN	**Pn**	**05 33 01.7**	**-0.3**
MDU	**Mudurnu**	**1.76**	**307**	*e*Pn	**Pn**	**05 33 01.7**	**-0.4**
YOZ	**Yozgat**	**1.76**	**82**	*e*PN	**Pn**	**05 33 02.7**	**+0.6**
YOZ	**Yozgat**	**1.76**	**82**	*e*Pn	**Pn**	**05 33 02.7**	**+0.6**
CTKT	**Corum**	**1.79**	**47**	*i* P	**Pn**	**05 33 02.6**	**+0.1**
CTKT	**Corum**	**1.79**	**47**	*i* P	**Pn**	**05 33 02.6**	**+0.1**
SAFT	**Safranbolu**	**1.84**	**351**	*e*PN	**Pn**	**05 33 03.4**	**+0.2**
SAFT	**Safranbolu**	**1.84**	**351**	*e*Pn	**Pn**	**05 33 03.4**	**+0.2**
BALT	**Daday**	**2.13**	**7**	*i* P	**Pn**	**05 33 09.0**	**+1.8**
BALT	**Daday**	**2.13**	**7**	*i* P	**Pn**	**05 33 09.0**	**+1.9**
HDMB	**Hadim**	**2.49**	**191**	*e*PN	**Pn**	**05 33 12.7**	**+0.6**
HDMB	**Hadim**	**2.49**	**191**	*e*Pn	**Pn**	**05 33 12.7**	**+0.6**
DIKM	**Dikmen**	**2.79**	**36**	*e*PN	**Pn**	**05 33 17.1**	**+0.9**
DIKM	**Dikmen**	**2.79**	**36**	*e*Pn	**Pn**	**05 33 17.1**	**+0.9**
SVSK	**Karacayir**	**3.08**	**79**	*e*PN	**Pn**	**05 33 21.2**	**+1.0**
SVSK	**Karacayir**	**3.08**	**79**	*e*Pn	**Pn**	**05 33 21.2**	**+1.0**

IDC 20 06:02:51.7±2.2, 6°.92S×131°.20E, h0^{km}, mb4.0/2, mb1 4.0/4, mb1mx3.7/15, mbtmp3.9/4, ML4.1/2, Error ellipse: s-maj=148.9km s-min=30.3km az=72.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.30**	**167**	Pn	Pn	06 06 01.9	0.0
	1.0nm,0.3s,baz=350,slow=13,SNR=18						
WRA				Sn	Sn	06 08 20.0	-11
	1.4nm,0.3s,baz=347,slow=22,SNR=8.8						
ASAR	**Alice Springs**	**16.86**	**171**	Pn	Pn	06 06 49.3	+0.1
	0.6nm,0.3s,baz=355,slow=12,SNR=18						
ASAR				Sn	Sn	06 09 46.4	-11
	0.3nm,0.3s,baz=352,slow=26,SNR=4.3						
MKAR	**Makanchi Array**	**68.81**	**326**	P	P	06 13 58.2	+0.4
	0.7nm,0.6s,baz=115,slow=7.0,SNR=6.2						
KURK	**Kurchatov**	**73.07**	**328**	P	P	06 14 23.4	-0.2
	0.2nm,0.2s,baz=134,slow=5.0,SNR=2.1						

*ISK **20** 06:10:41.9, 37°.72N×37°.27E, h5^{km}, MD3.3*
*DDA **20** 06:10:42.3, 37°.71N×37°.27E, h14^{km}±3^{km}, Md3.3*
*CSEM **20** 06:10:42.7±0.1, 37°.71N×37°.29E, h5^{km}, MD3.3, Error ellipse: s-maj=2.1km s-min=1.3km az=144.0*
*ISCJB **20** 06:10:42.8±0.3, 37°.71N±0°.02×37°.31E±0°.03, h10^{km}, Error ellipse: s-maj=3.9km s-min=2.6km az=43.1*
ISC 20 06:10:42.6±0.5, 37°.73N±0°.02×37°.25E±0°.03, h1^{km}±6^{km}, n46, σ0°.99/64, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMRS	**Kahramanmaras**	**0.36**	**231**	*e*PG	**Pg**	**06 10 49.8**	**+0.3**
KMRS				*e*SG	**Sg**	**06 10 54.9**	**+0.8**
KMRS	**Kahramanmaras**	**0.36**	**231**	*e*Pg	**Pg**	**06 10 49.8**	**+0.3**
KMRS				*e*Sg	**Sg**	**06 10 54.9**	**+0.8**
GZT	**Gaziantep**	**0.45**	**146**	*i* P	**Pg**	**06 10 50.7**	**-0.5**
GZT				*i* S	**Sg**	**06 10 57.2**	**0.0**
GAZ	**Gaziantep**	**0.56**	**183**	*e*PG	**Pg**	**06 10 52.9**	**-0.4**
GAZ				*e*SG	**Sg**	**06 11 00.9**	**+0.3**
GAZ	**Gaziantep**	**0.56**	**183**	*e*Pg	**Pg**	**06 10 52.9**	**-0.4**
GAZ				*e*Sg	**Sg**	**06 11 00.9**	**+0.3**
AKCD	**Akcadag**	**0.78**	**43**	*i* P	**Pg**	**06 10 57.3**	**-0.2**
AKCD				*i* S	**Sg**	**06 11 08.2**	**+0.6**
AKCD	**Akcadag**	**0.78**	**43**	*i* P	**Pg**	**06 10 57.3**	**-0.2**
AKCD				*i* S	**Sg**	**06 11 08.2**	**+0.7**
ATAB	**Bozova**	**0.87**	**107**	*i* P	**Pg**	**06 10 58.5**	**-0.8**
ATAB				*i* S	**Sg**	**06 11 10.2**	**-0.4**
ATAB	**Bozova**	**0.87**	**107**	*i* P	**Pg**	**06 10 58.5**	**-0.8**
ATAB				*i* S	**Sg**	**06 11 10.2**	**-0.4**
KUZU	**Kuzuini**	**0.97**	**188**	*i* P	**Pg**	**06 11 01.1**	**0.0**
KUZU				*i* S	**Sg**	**06 11 16.4**	**+2.7**
KUZU	**Kuzuini**	**0.97**	**188**	*i* P	**Pg**	**06 11 01.1**	**0.0**
KUZU				*i* S	**Sg**	**06 11 16.4**	**+2.7**
SARI	**SarD1z-Kayseri**	**1.04**	**336**	*e*PG	**Pg**	**06 11 00.9**	**-1.6**
SARI				*e*SG	**Sg**	**06 11 14.8**	**-1.3**
MYA	**Malataya**	**1.10**	**57**	*e*PN	**Pg**	**06 11 03.1**	**-0.7**
MYA	**Malataya**	**1.10**	**57**	*e*Pn	**Pg**	**06 11 03.1**	**-0.7**
KOZT	**Kozan**	**1.16**	**258**	*e*PN	**Pn**	**06 11 04.3**	**-1.7**
URFA	**Urfa**	**1.28**	**103**	*e*PN	**Pn**	**06 11 06.5**	**-1.2**
URFA	**Urfa**	**1.28**	**103**	*e*Pn	**Pn**	**06 11 06.5**	**-1.2**
DARE	**Darende-Malaty**	**1.29**	**20**	*e*PG	Px	06 10 58.8	
COBT	**Iskenderun**	**1.45**	**214**	*i* P	**Pn**	**06 11 09.9**	**0.0**
COBT				*i* S	**Sg**	**06 11 29.0**	**-0.1**
COBT	**Iskenderun**	**1.45**	**214**	*i* P	**Pn**	**06 11 09.9**	**0.0**
COBT				*i* S	**Sg**	**06 11 29.0**	**-0.1**
ELZG	**Elazig**	**1.57**	**60**	*i* P	**Pn**	**06 11 11.2**	**-0.4**
ELZG				*i* S	**Sg**	**06 11 34.9**	**+1.9**
ELZG	**Elazig**	**1.57**	**60**	*i* P	**Pn**	**06 11 11.2**	**-0.4**
ELZG				*i* S	**Sg**	**06 11 34.9**	**+1.9**
SVRC	**Sivrice-ELAZID**	**1.75**	**68**	*e*PN	**Pn**	**06 11 13.6**	**-0.5**
SVRC	**Sivrice-ELAZID**	**1.75**	**68**	*e*Pn	**Pn**	**06 11 13.6**	**-0.5**
KARA	**Karaisali**	**1.81**	**256**	*e*PN	**Pn**	**06 11 14.9**	**0.0**
KARA	**Karaisali**	**1.81**	**256**	*e*Pn	**Pn**	**06 11 14.9**	**0.0**
KEMA	**Kemaliye**	**1.82**	**32**	*i* P	**Pn**	**06 11 15.6**	**+0.5**
KEMA				*i* S	**Sg**	**06 11 44.1**	**+3.0**
KEMA	**Kemaliye**	**1.82**	**32**	*i* P	**Pn**	**06 11 15.6**	**+0.5**
HTY	**Hatay**	**1.84**	**209**	*e*PN	**Pn**	**06 11 15.6**	**+0.3**
HTY	**Hatay**	**1.84**	**209**	*e*Pn	**Pn**	**06 11 15.6**	**+0.3**
KRTS	**Karatas**	**1.89**	**233**	*e*PN	**Pn**	**06 11 15.6**	**-0.4**
KRTS	**Karatas**	**1.89**	**233**	*e*Pn	**Pn**	**06 11 15.6**	**-0.5**
YAYL	**Yayladag**	**1.93**	**209**	*i* P	**Pg**	**06 11 25.8**	**+6.3**
YAYL				*i* S	**Sg**	**06 11 51.5**	**+7.0**
PTK	**Pertek**	**2.05**	**55**	*e*PN	**Pn**	**06 11 18.0**	**-0.2**
PTK	**Pertek**	**2.05**	**55**	*e*Pn	**Pn**	**06 11 18.0**	**-0.2**
AVNT	**Avonos**	**2.15**	**300**	*i* P	**Pn**	**06 11 21.3**	**+1.6**
AVNT	**Avonos**	**2.15**	**300**	*i* P	**Pn**	**06 11 21.3**	**+1.6**
SVSK	**Karacayir**	**2.19**	**355**	*e*PN	**Pn**	**06 11 21.1**	**+1.0**
SVSK	**Karacayir**	**2.19**	**355**	*e*Pn	**Pn**	**06 11 21.1**	**+0.9**
MERS	**Mersin**	**2.34**	**249**	*e*PN	**Pn**	**06 11 21.8**	**-0.4**
MERS	**Mersin**	**2.34**	**249**	*e*Pn	**Pn**	**06 11 21.8**	**-0.4**
YOZ	**Yozgat**	**2.43**	**322**	*e*PN	**Pn**	**06 11 23.9**	**+0.4**
YOZ	**Yozgat**	**2.43**	**322**	*e*Pn	**Pn**	**06 11 23.9**	**+0.4**
CORM	**Corum**	**3.18**	**321**	*e*PN	**Pn**	**06 11 34.9**	**+1.1**
CORM	**Corum**	**3.18**	**321**	*e*Pn	**Pn**	**06 11 34.9**	**+1.1**
BEST	**Besiri**	**3.19**	**86**	*i* P	**Pg**	**06 11 40.9**	**-2.9**
BEST				*i* S	**Sg**	**06 12 25.8**	**+0.7**

*NEIC **20** 06:32:32.2, 46°.03N×26°.79E, h100^{km}, MD3.2(BUC), After BUC.*
*ISCJB **20** 06:32:33.6±0.5, 45°.77N±0°.03×26°.79E±0°.04, h87^{km}±4^{km}, Error ellipse: s-maj=5.1km s-min=4.7km az=145.4*
*CSEM **20** 06:32:34.7±0.1, 45°.77N×26°.80E, h80^{km}, MD3.9/2, Error ellipse: s-maj=4.1km s-min=3.1km az=59.0*
*BUC **20** 06:32:34.2±0.9, 45°.79N×26°.78E, h82^{km}±9^{km}, MD3.9/2, Error ellipse: s-maj=8.0km s-min=6.5km az=100.0*
*SOF **20** 06:32:35.4, 45°.69N×26°.67E, h52^{km}, MD2.9*
ISC 20 06:32:34.6±0.5, 45°.77N±0°.03×26°.81E±0°.04, h82^{km}±5^{km}, n85, σ0°.76/117, 26C-15D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRI	**Vrincioaia**	**0.11**	**328**	P	**Pn**	**06 32 46.1**	**-0.2**
VRI				S	**Sn**	**06 32 54.2**	**-0.7**
VRI	**Vrincioaia**	**0.11**	**328**	⇑*i*P	**Pn**	**06 32 46.2**	**-0.1**
VRI				*i* S	**Sn**	**06 32 54.2**	**-0.7**
VRI	**Vrincioaia**	**0.11**	**328**	S	**Sn**	**06 32 54.2**	**-0.7**
VRI	**Vrincioaia**	**0.11**	**328**	⇑*i*P	**Pn**	**06 32 46.2**	**-0.1**
VRI				*i* S	**Sn**	**06 32 54.2**	**-0.7**
PLOR	**Plostina**	**0.14**	**304**	⇑*i*P	**Pn**	**06 32 46.1**	**-0.3**
PLOR				*i* S	**Sn**	**06 32 54.2**	**-0.9**
PLOR	**Plostina**	**0.14**	**304**	S	**Sn**	**06 32 54.2**	**-0.9**
PLOR	**Plostina**	**0.14**	**304**	⇑*i*P	**Pn**	**06 32 46.1**	**-0.3**
PLOR				*i* S	**Sn**	**06 32 54.2**	**-0.9**
ODB	**Odobesti**	**0.17**	**90**	P	**Pn**	**06 32 47.2**	**+0.7**
ODB				S	**Sn**	**06 32 56.7**	**+1.4**
ODB	**Odobesti**	**0.17**	**90**	⇓*i*P	**Pn**	**06 32 47.2**	**+0.7**
ODB				*i* S	**Sn**	**06 32 56.7**	**+1.5**
ODB	**Odobesti**	**0.17**	**90**	S	**Sn**	**06 32 56.7**	**+1.5**
ODB	**Odobesti**	**0.17**	**90**	⇓*i*P	**Pn**	**06 32 47.2**	**+0.7**
ODB				*i* S	**Sn**	**06 32 56.7**	**+1.5**
PETR		**0.30**	**100**	⇑P	**Pn**	**06 32 47.5**	**+0.4**
PETR				S	**Sn**	**06 32 57.0**	**+0.8**
PETR		**0.30**	**100**	⇑*i*P	**Pn**	**06 32 47.5**	**+0.4**
PETR				*i* S	**Sn**	**06 32 57.0**	**+0.7**
PETR		**0.30**	**100**	S	**Sn**	**06 32 57.0**	**+0.7**
PETR		**0.30**	**100**	⇑*i*P	**Pn**	**06 32 47.5**	**+0.4**
PETR				*i* S	**Sn**	**06 32 57.0**	**+0.7**
MLR	**Muntele Rosu**	**0.67**	**245**	P	**Pn**	**06 32 50.4**	**+0.3**
MLR	**Muntele Rosu**	**0.67**	**245**	⇑*i*P	**Pn**	**06 32 50.2**	**+0.1**
MLR				*i* S	**Sn**	**06 33 01.4**	**-0.2**
MLR	**Muntele Rosu**	**0.67**	**245**	S	**Sn**	**06 33 01.4**	**-0.2**
MLR	**Muntele Rosu**	**0.67**	**245**	⇑*i*P	**Pn**	**06 32 50.2**	**+0.1**
MLR				*i* S	**Sn**	**06 33 01.4**	**-0.2**
ISR	**Istrita**	**0.68**	**196**	⇓P	**Pn**	**06 32 50.8**	**+0.6**
ISR	**Istrita**	**0.68**	**196**	⇓*i*P	**Pn**	**06 32 50.8**	**+0.6**
ISR	**Istrita**	**0.68**	**196**	⇓*i*P	**Pn**	**06 32 50.8**	**+0.6**
CFR	**Carcaliu**	**1.11**	**122**	⇑P	**Pn**	**06 32 54.8**	**-0.2**
CFR				S	**Sn**	**06 33 09.5**	**-0.8**
CFR	**Carcaliu**	**1.11**	**122**	⇑*i*P	**Pn**	**06 32 54.8**	**-0.2**
CFR				*i* S	**Sn**	**06 33 09.5**	**-0.8**
CFR	**Carcaliu**	**1.11**	**122**	⇑*i*P	**Pn**	**06 32 54.8**	**-0.2**
CFR	**Carcaliu**	**1.11**	**122**	S	**Sn**	**06 33 09.5**	**-0.8**
CFR	**Carcaliu**	**1.11**	**122**	⇑*i*P	**Pn**	**06 32 54.8**	**-0.2**
CFR				*i* S	**Sn**	**06 33 09.5**	**-0.8**
SULR		**1.16**	**200**	⇑*i*P	**Pn**	**06 32 56.6**	**+0.9**
SULR				*i* S	**Sn**	**06 33 12.6**	**+1.0**
SULR		**1.16**	**200**	⇑*i*P	**Pn**	**06 32 56.6**	**+0.9**
SULR		**1.16**	**200**	S	**Sn**	**06 33 12.6**	**+1.0**
SULR		**1.16**	**200**	⇑*i*P	**Pn**	**06 32 56.6**	**+0.9**
SULR				*i* S	**Sn**	**06 33 12.6**	**+1.0**
AMRR	**Amara**	**1.22**	**162**	⇑P	**Pn**	**06 32 56.7**	**+0.3**
AMRR				S	**Sn**	**06 33 13.3**	**+0.4**
AMRR	**Amara**	**1.22**	**162**	⇑*i*P	**Pn**	**06 32 56.7**	**+0.2**
AMRR				*i* S	**Sn**	**06 33 13.3**	**+0.5**
AMRR	**Amara**	**1.22**	**162**	⇑*i*P	**Pn**	**06 32 56.7**	**+0.2**
AMRR	**Amara**	**1.22**	**162**	S	**Sn**	**06 33 13.3**	**+0.5**
AMRR	**Amara**	**1.22**	**162**	⇑*i*P	**Pn**	**06 32 56.7**	**+0.2**
AMRR				*i* S	**Sn**	**06 33 13.3**	**+0.5**
VOIR		**1.28**	**255**	⇑P	**Pn**	**06 32 56.7**	**-0.5**
VOIR				S	**Sn**	**06 33 13.5**	**-0.6**
VOIR		**1.28**	**255**	⇑*i*P	**Pn**	**06 32 56.7**	**-0.5**
VOIR				*i* S	**Sn**	**06 33 13.5**	**-0.7**
VOIR		**1.28**	**255**	S	**Sn**	**06 33 13.5**	**-0.7**
VOIR		**1.28**	**255**	⇑*i*P	**Pn**	**06 32 56.7**	**-0.5**
VOIR				*i* S	**Sn**	**06 33 13.5**	**-0.7**
IAS	**Iasi**	**1.51**	**20**	⇑P	**Pn**	**06 33 00.0**	**-0.1**
IAS				S	**Sn**	**06 33 18.6**	**-0.8**
IAS	**Iasi**	**1.51**	**20**	⇓*i*P	**Pn**	**06 33 00.0**	**-0.1**
IAS				*i* S	**Sn**	**06 33 18.6**	**-0.8**
IAS	**Iasi**	**1.51**	**20**	⇓*i*P	**Pn**	**06 33 00.0**	**-0.1**
IAS	**Iasi**	**1.51**	**20**	S	**Sn**	**06 33 18.6**	**-0.8**
IAS	**Iasi**	**1.51**	**20**	⇓*i*P	**Pn**	**06 33 00.0**	**-0.1**
IAS				*i* S	**Sn**	**06 33 18.6**	**-0.8**
TLCR		**1.53**	**112**	⇓P	**Pn**	**06 33 01.0**	**+0.6**
TLCR				S	**Sn**	**06 33 19.7**	**-0.1**
TLCR		**1.53**	**112**	⇓*i*P	**Pn**	**06 33 01.0**	**+0.7**
TLCR				*i* S	**Sn**	**06 33 19.7**	**-0.1**
TLCR		**1.53**	**112**	⇓*i*P	**Pn**	**06 33 01.0**	**+0.7**
TLCR		**1.53**	**112**	S	**Sn**	**06 33 19.7**	**-0.1**
TLCR		**1.53**	**112**	⇓*i*P	**Pn**	**06 33 01.0**	**+0.7**
TLCR				*i* S	**Sn**	**06 33 19.7**	**-0.1**
BUC1	**Bucharest**	**1.53**	**202**	*i* S	**Sn**	**06 33 19.4**	**-0.4**
BUC1	**Bucharest**	**1.53**	**202**	S	**Sn**	**06 33 19.4**	**-0.4**
BUC1	**Bucharest**	**1.53**	**202**	*i* S	**Sn**	**06 33 19.4**	**-0.4**
TIRR	**Tirgusor**	**1.74**	**139**	*e*Pn	**Pn**	**06 33 02.3**	**-0.7**
TIRR				*e*Sn	**Sn**	**06 33 23.6**	**-1.0**
TIRR	**Tirgusor**	**1.74**	**139**	*e*Pn	**Pn**	**06 33 02.3**	**-0.8**
TIRR				*e*Sn	**Sn**	**06 33 23.6**	**-1.1**
KIS	**Kishinev**	**1.85**	**48**	*i* S	**Sn**	**06 33 26.5**	**-0.8**
	400nm,0.4s						
KIS	**Kishinev**	**1.85**	**48**	*i* S	**Sn**	**06 33 26.5**	**-0.8**
	400nm,0.4s						
BURAR	**Bucovina Array**	**2.14**	**330**	⇑P	**Pn**	**06 33 09.0**	**+0.6**
BURAR	**Bucovina Array**	**2.14**	**330**	⇓*i*P	**Pn**	**06 33 09.0**	**+0.6**
BURAR	**Bucovina Array**	**2.14**	**330**	⇓*i*P	**Pn**	**06 33 09.0**	**+0.6**
BURAR	**Bucovina Array**	**2.14**	**330**	⇓*i*P	**Pn**	**06 33 09.0**	**+0.6**
BUR08	**Bucovina Ar. S**	**2.17**	**330**	*e*Pn	**Pn**	**06 33 08.5**	**-0.4**
BUR08	**Bucovina Ar. S**	**2.17**	**330**	*e*Pn	**Pn**	**06 33 08.5**	**-0.3**
PSN	**Preselentsi**	**2.31**	**154**	P	**Pn**	**06 33 10.9**	**+0.2**
PSN	**Preselentsi**	**2.31**	**154**	P	**Pn**	**06 33 10.9**	**+0.2**
PRD	**Provadia**	**2.61**	**170**	P	**Pn**	**06 33 15.1**	**+0.4**
PRD	**Provadia**	**2.61**	**170**	P	**Pn**	**06 33 15.1**	**+0.4**
DRGR		**3.02**	**291**	*i* S	**Sn**	**06 33 53.7**	**-1.6**
DRGR		**3.02**	**291**	S	**Sn**	**06 33 53.7**	**-1.6**
DRGR		**3.02**	**291**	*i* S	**Sn**	**06 33 53.7**	**-1.6**
MPEP	**Malo Peshtene**	**3.27**	**223**	P	**Pn**	**06 33 22.5**	**-1.0**
PGB	**Panagyurishte**	**3.74**	**211**	P	**Pn**	**06 33 30.2**	**+0.2**
PGB	**Panagyurishte**	**3.74**	**211**	P	**Pn**	**06 33 30.2**	**+0.2**
VTS	**Vitosha**	**4.10**	**220**	P	**Pn**	**06 33 34.1**	**-0.8**
VTS	**Vitosha**	**4.10**	**220**	P	**Pn**	**06 33 34.1**	**-0.8**
KDZ	**Kurdzhali**	**4.25**	**194**	P	**Pn**	**06 33 36.6**	**-0.3**
KDZ	**Kurdzhali**	**4.25**	**194**	P	**Pn**	**06 33 36.6**	**-0.3**
RZN	**Rozhen**	**4.36**	**201**	P	**Pn**	**06 33 38.2**	**-0.2**
RZN	**Rozhen**	**4.36**	**201**	P	**Pn**	**06 33 38.2**	**-0.2**
CRVS	**Cervenica-Dubn**	**4.80**	**313**	*e*PN	**Pn**	**06 33 45.9**	**+1.6**
CRVS	**Cervenica-Dubn**	**4.80**	**313**	*e*Pn	**Pn**	**06 33 45.9**	**+1.6**
KECS	**Kecovo**	**5.10**	**304**	*e*PN	**Pn**	**06 33 50.2**	**+1.8**
STHS	**Stebnicka Huta**	**5.24**	**316**	*e*PN	**Pn**	**06 33 51.2**	**+0.9**
STHS	**Stebnicka Huta**	**5.24**	**316**	*e*Pn	**Pn**	**06 33 51.2**	**+0.9**

*IDC **20** 06:47:44.9±3.1, 38°.48N×141°.12E, h0^{km}, mb3.4/1, mb1 3.5/3, mb1mx3.2/24, mbtmp3.2/3, ML2.8/2, Error ellipse: s-maj=62.0km s-min=26.8km az=156.0*
*JMA **20** 06:47:44.9, 38°.79N×140°.78E, h2^{km}±1^{km}, M2.9*
JMA Felt I J1.
*ISCJB **20** 06:47:44.7±0.8, 38°.78N±0°.05×140°.80E±0°.05, h14^{km}±8^{km}, Error ellipse: s-maj=7.7km s-min=6.2km az=173.6*
ISC 20 06:47:44.8±0.5, 38°.78N±0°.03×140°.78E±0°.05, h11^{km}±6^{km}, n13, σ0°.60/20, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.36**	**293**	P	**Pg**	**06 47 52.0**	**+0.1**
JMK	**Ichinoseki**	**0.38**	**63**	P	**Pg**	**06 47 52.2**	**-0.2**
JMK				*e*S	**Sg**	**06 47 57.7**	**+0.2**
JOU	**Okura**	**0.42**	**193**	P	**Pg**	**06 47 53.4**	**+0.3**
JOU				S	**Sg**	**06 47 59.4**	**+0.6**
JIO	**Ouri**	**0.55**	**126**	P	**Pg**	**06 47 55.3**	**-0.2**
JIO				S	**Sg**	**06 48 03.1**	**+0.4**
JRG	**Rokugo**	**0.63**	**349**	P	**Pg**	**06 47 57.4**	**+0.4**
JYS	**Shirataka**	**0.79**	**225**	P	**Pg**	**06 48 00.3**	**+0.2**
JYS				S	**Sg**	**06 48 11.1**	**+0.7**
JOM	**Ohasama**	**0.80**	**30**	P	**Pg**	**06 47 59.8**	**-0.4**
JYA	**Atsumi**	**0.86**	**258**	P	**Pg**	**06 48 01.2**	**-0.1**
JMM	**Marumori**	**0.91**	**179**	P	**Pg**	**06 48 02.0**	**-0.4**
JMM				S	**Sg**	**06 48 13.7**	**-0.5**
MAT	**Matsushiro**	**3.03**	**223**	P	**Pn**	**06 48 32.8**	**+0.3**
MAT				*e*S	**Sn**	**06 49 08.3**	**-0.4**
MJAR	**Matsushiro Arr**	**3.03**	**223**	Pn	**Pn**	**06 48 33.3**	**+0.8**
	0.3nm,0.3s,baz=39,slow=13,SNR=3.0						
MJAR				Pg	**Pg**	**06 48 40.6**	**-2.2**
	1.0nm,0.3s,baz=25,slow=16,SNR=22						
MJAR				Lg		06 49 20.0	
	0.5nm,0.3s,baz=24,slow=19,SNR=4.8						
KSRS	**Korea Array**	**10.22**	**267**	Pn	**Pn**	**06 50 16.7**	**+5.4**
	0.3nm,0.3s,baz=78,slow=14,SNR=4.7						
WRA	**Warramunga Arr**	**58.72**	**187**	P	**P**	**06 57 42.6**	**+0.2**
	0.4nm,0.8s,baz=4.4,slow=7.4,SNR=2.7						

*UPA **20** 06:55:37.4, 8°.12N×82°.59W, h0^{km}, MW3.9*
*UCR **20** 06:55:37.3, 8°.07N×82°.50W, h8^{km}, MD3.7*
CASC 20 06:55:38.2±2.2, 8°.03N×82°.59W, h18^{km}±8^{km}, MD3.8, 6C, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.77**	**353**	⇑*i*P	Pb	06 55 52.5	-0.6
BRU2				*e*S	Sb	06 56 04.5	+1.3
ACR	**Cerro Adams**	**0.84**	**318**	⇑*i*P	Pb	06 55 53.5	-0.8

0.0nm,0.3s,baz=349,slow=18,SNR=3.8
MKAR Makanchi Array 66.66 327 P P 07 33 28.5 +0.1
0.7nm,0.4s,baz=120,slow=8.0,SNR=7.6
KURK Kurchatov 70.95 329 P P 07 33 54.6 -0.1
0.8nm,0.5s,baz=126,slow=4.8,SNR=5.2

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*ISK **20** 07:23:19.2, 36.°88N×29.°20E, h24km, MD2.8*
*DDA **20** 07:23:20.9, 36.°99N×29.°30E, h11km, Md2.8*
*CSEM **20** 07:23:20.4±0.1, 36.°98N×29.°23E, h20km, MD2.8, Error ellipse: s-maj=3.1km s-min=2.2km az=27.0*
*ISCJB **20** 07:23:20.6±0.6, 36.°99N±0.°04×29.°25E±0.°05, h27km±7km, Error ellipse: s-maj=7.4km s-min=5.5km az=41.6*
ISC 20 07:23:20.7±0.6, 36.°99N±0.°04×29.°24E±0.°05, h22km±9km, n20, σ0.°99/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.35**	**46**	*i* P	**Pb**	**07 23 27.1**	**-1.3**
GOLH				*i* S	**Sb**	**07 23 33.4**	**-0.2**
GOLH	**Golhisar**	**0.35**	**46**	*i* P	**Pb**	**07 23 27.1**	**-1.3**
GOLH				*i* S	**Sb**	**07 23 33.4**	**-0.2**
ELL	**Elmali**	**0.59**	**114**	*e*PG	**Pb**	**07 23 30.9**	**-1.4**
ELL				*e*SG	**Sb**	**07 23 40.7**	**+0.5**
ELL	**Elmali**	**0.59**	**114**	*e*Pg	**Pb**	**07 23 30.9**	**-1.4**
ELL				*e*Sg	**Sb**	**07 23 40.7**	**+0.5**
DNZL	**Cakiroluk**	**0.71**	**347**	*i* P	**Pb**	**07 23 34.3**	**-0.2**
DNZL				*i* S	**Sb**	**07 23 45.4**	**+1.5**
DNZL	**Cakiroluk**	**0.71**	**347**	*i* P	**Pb**	**07 23 34.3**	**-0.2**
DNZL				*i* S	**Sb**	**07 23 45.3**	**+1.4**
YER	**Yerkesik**	**0.78**	**281**	*e*PG	**Pb**	**07 23 35.7**	**+0.1**
YER				*e*SG	**Sb**	**07 23 46.3**	**+0.5**
YER	**Yerkesik**	**0.78**	**281**	*e*Pg	**Pb**	**07 23 35.7**	**+0.1**
YER				*e*Sg	**Sb**	**07 23 46.3**	**+0.5**
AKAS	**Kas**	**0.81**	**159**	*i* P	**Pb**	**07 23 35.5**	**-0.7**
AKAS				*i* S	**Sb**	**07 23 48.5**	**+1.9**
AKAS	**Kas**	**0.81**	**159**	*i* P	**Pb**	**07 23 35.5**	**-0.6**
AKAS				*i* S	**Sb**	**07 23 48.5**	**+1.9**
KHL	**Karahalli**	**1.35**	**9**	*e*PN	**Pn**	**07 23 44.5**	**+0.3**
KHL	**Karahalli**	**1.35**	**9**	*e*Pn	**Pn**	**07 23 44.5**	**+0.3**
DAT	**Datca**	**1.36**	**259**	*e*PN	**Pn**	**07 23 42.2**	**-2.2**
DAT	**Datca**	**1.36**	**259**	*e*Pn	**Pn**	**07 23 42.2**	**-2.2**
SUTC	**Sutluce-Ispart**	**1.48**	**70**	*e*PN	**Pn**	**07 23 46.7**	**+0.7**
SUTC	**Sutluce-Ispart**	**1.48**	**70**	*e*Pn	**Pn**	**07 23 46.7**	**+0.6**
KULA	**Kula-Manisa**	**1.59**	**343**	*e*PN	**Pn**	**07 23 47.5**	**0.0**
KULA	**Kula-Manisa**	**1.59**	**343**	*e*Pn	**Pn**	**07 23 47.5**	**0.0**
HDMB	**Hadim**	**2.60**	**90**	*e*PN	**Pn**	**07 24 01.8**	**+0.4**
HDMB	**Hadim**	**2.60**	**90**	*e*Pn	**Pn**	**07 24 01.8**	**+0.4**

DJA 20 07:30:37, 9.°27S×113.°44E, h32km, MLv3.8/11, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**0.99**	**0**	P	Pn	07 30 54.1	-0.6
GMJI				S	Sn	07 31 07.0	-0.6
BYJI	**Banyuwangi**	**1.39**	**41**	P	Pn	07 31 00.3	+0.2
BYJI				S	Sn	07 31 17.0	-0.4
NBBI	**Negara**	**1.47**	**53**	P	Pn	07 31 03.3	+2.0
KRKI	**Karangkates**	**1.47**	**318**	P	Pn	07 31 01.6	+0.3
KRKI				S	Sn	07 31 21.4	+1.9
ABJI	**Asem Bagus**	**1.66**	**28**	P	Pn	07 31 05.6	+1.7
IGBI	**Denpasar**	**1.74**	**75**	P	Pn	07 31 05.8	+0.8
DNP	**Denpasar**	**1.84**	**72**	P	Pn	07 31 06.9	+0.5
DNP				S	Sn	07 31 28.2	-0.5
PWJI	**Pagerwojo**	**2.04**	**307**	P	Pn	07 31 08.4	-0.7
PWJI				S	Sn	07 31 30.7	-2.8
SRBI	**Singaraja**	**2.11**	**56**	P	Pn	07 31 10.1	0.0
SJI	**Sawahan**	**2.25**	**313**	P	Pn	07 31 12.0	0.0
KMMI	**Kalianget**	**2.27**	**13**	P	Pn	07 31 12.0	-0.3
KHKI	**Kahang-Kahang**	**2.32**	**67**	P	Pn	07 31 11.6	-1.4
PCJI	**Pacitan**	**2.48**	**295**	P	Pn	07 31 14.1	-1.1
GRJI	**Gresik**	**2.53**	**338**	P	Pn	07 31 22.9	+7.1
NGJI	**Ngawi**	**2.72**	**314**	P	Pn	07 31 25.4	+6.9
UGM	**Wanagama**	**3.18**	**295**	P	Pn	07 31 25.6	+0.7
UGM				S	Sn	07 32 02.9	+1.1
SMRI	**Semarang**	**3.70**	**306**	P	Pn	07 31 27.1	-4.9

IDC 20 07:34:34.8±3.2, 15.°12S×167.°90E, h0km, mb3.9/2, mb1 4.0/2, mb1mx3.6/16, mbtmp3.9/2, Error ellipse: s-maj=175.8km s-min=48.4km az=138.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.05**	**191**	*e*P	Pn	07 36 34.0	+15
DZM				*e*S	Sn	07 37 49.8	+10
STKA	**Stephens Creek**	**29.21**	**231**	P	P	07 40 39.0	+0.7
	1.0nm,0.3s,baz=38,slow=8.2,SNR=5.5						
ASAR	**Alice Springs**	**33.11**	**250**	P	P	07 41 12.2	-0.5
	0.6nm,0.5s,baz=88,slow=8.1,SNR=8.8						
ARCES	**ARCESS Array B**	**120.78**	**346**	PKP	PKPdf	07 53 28.2	-0.1
	2.8nm,0.9s,baz=29,slow=2.1,SNR=4.5						

NNC 20 07:35:45.6±5.0, 54.°04N×86.°56E, h0km, mb3.6, mpv3.0, 8C-5D, Error ellipse: s-maj=38.2km s-min=20.7km az=60.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**5.89**	**239**	⇑Pn	Pn	07 37 14.4	+0.3
	6.3nm,1.1s						
KURK				⇑Sn	Sn	07 38 25.4	+3.1
	4.3nm,1.2s						
KURK				⇓Lg		07 38 52.0	
	19nm,1.3s						
KURBB	**Kurchatov Arra**	**6.00**	**238**	⇑Pn	Pn	07 37 16.6	+1.1
	1.3nm,1.4s,baz=56,slow=14						
KURBB				⇑Sn	Sn	07 38 28.2	+3.4
	2.0nm,0.8s,baz=50,slow=21						
KURBB				⇓Lg		07 38 57.9	
	6.5nm,1.0s,baz=49,slow=32						
MK31	**Makanchi Array**	**7.75**	**202**	⇑Pn	Pn	07 37 42.8	+3.3
	0.2nm,0.4s,baz=53,slow=3.1,SNR=6.3						
MK31				⇑Sn	Sn	07 39 13.1	+5.1
	2.8nm,0.9s						
MK31				⇓Lg		07 39 47.9	
	8.1nm,0.9s,baz=23,slow=31,SNR=6.4						
VOSK	**Vostochnaya**	**9.41**	**268**	⇓Pn	Pn	07 38 00.7	-1.6
	1.4nm,0.7s						
VOSK				⇓Sn	Sn	07 39 45.0	-3.6
	18nm,1.1s						
ZRNK	**Zerenda**	**10.52**	**271**	⇑Pn	Pn	07 38 19.8	+2.4
	2.6nm,1.1s						
ZRNK				⇑Sn	Sn	07 40 17.1	+1.2
	5.9nm,1.2s						

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*IDC **20** 07:38:31.8±1.6, 31.°24N×103.°63E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.4/22, mbtmp3.5/5, ML3.6/1, Error ellipse: s-maj=43.3km s-min=24.9km az=50.0*
*ISCJB **20** 07:38:31.0±1.0, 31.°42N±0.°03×103.°83E±0.°07, h0km±7km, mb3.5/4, Error ellipse: s-maj=10.1km s-min=5.5km az=2.9*
*NEIC **20** 07:38:33.6±1.0, 31.°21N×103.°44E, h10km, mb4.0/1, Error ellipse: s-maj=28.0km s-min=14.0km az=51.0*
*BJI **20** 07:38:34.4, 31.°33N×103.°79E, h10km, ML3.6/16, Ms3.7/1, Ms7 3.5/1*
ISC 20 07:38:33.6±1.0, 31.°36N±0.°03×103.°75E±0.°07, h4km±7km, n11, σ1.°02/16, mb3.5/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.45**	**179**	Pg	**Pg**	**07 38 42.0**	**-0.2**
CD2				Sg	**Sg**	**07 38 48.3**	**+0.3**
CD2				smax			
	comp=N,12μm,0.6s						
CD2				smax			
	comp=E,5μm,0.6s						
LZH	**Lanzhou**	**4.72**	**1**	*e*Pg	**Pb**	**07 39 59.0**	**+2.1**
LZH				Sg	**Sg**	**07 41 05.0**	**-0.1**
LZH				smax			
	comp=N,60nm,0.9s						
LZH				smax			
	comp=E,53nm,0.7s						
ENH	**Enshi**	**5.05**	**101**	*e*Pn	**Pn**	**07 39 53.7**	**+3.5**
	comp=E,46nm,0.4s						
ENH				*e*Sn	**Sn**	**07 40 49.5**	**+0.4**
XAN	**Xi'an**	**5.12**	**57**	Pn	**Pn**	**07 39 51.6**	**+0.6**
XAN				Sg	**Sg**	**07 41 16.8**	**-1.1**
XAN				smax			
	comp=N,93nm,0.6s						
XAN				smax			
	comp=E,53nm,0.8s						
GYA	**Guiyang**	**5.51**	**152**	Pn	**Pn**	**07 39 55.8**	**-0.6**
GYA				Sn	**Sn**	**07 41 01.3**	**+1.0**
GYA				smax			
	comp=N,70nm,1.0s						
GYA				smax			
	comp=E,60nm,1.1s						
SONM	**Songino Array**	**16.58**	**6**	Pn	**Pn**	**07 42 27.6**	**+0.8**
	comp=E,0.2nm,0.3s,baz=182,slow=10.0,SNR=3.0						
KSRS	**Korea Array**	**20.83**	**66**	P	**P**	**07 43 16.4**	**-0.2**
	comp=E,3.4nm,0.6s,baz=261,slow=10,SNR=20						
MKAR	**Makanchi Array**	**22.59**	**319**	P	**P**	**07 43 35.3**	**+0.3**
	comp=E,0.2nm,0.4s,mb2.9,baz=122,slow=11,SNR=2.2						
ZALV	**Zalesovo Beam**	**26.36**	**334**	P	**P**	**07 44 09.0**	**-1.6**
	comp=E,0.4nm,0.4s,mb3.4,baz=140,slow=11,SNR=2.6						
WRAB	**Tennant Creek**	**58.85**	**146**	*e*P	**P**	**07 48 32.5**	**-1.1**
	comp=E,0.8nm,0.5s,mb4.0						
ASAR	**Alice Springs**	**61.87**	**149**	P	**P**	**07 48 52.7**	**-1.4**
	comp=E,0.2nm,0.5s,mb3.5,baz=329,slow=6.9,SNR=4.3						

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*IDC **20** 07:46:33.4±0.8, 31.°40N×103.°94E, h0km, mb3.8/13, mb1 3.9/14, mb1mx3.8/25, mbtmp3.8/14, MS3.3/1, Ms1 3.3/1, ms1mx2.5/36, Error ellipse: s-maj=33.1km s-min=15.0km az=54.0*
*NEIC **20** 07:46:34.9±0.5, 31.°43N×104.°07E, h10km, mb4.4/2, Error ellipse: s-maj=15.9km s-min=7.6km az=46.0*
*BJI **20** 07:46:36.5, 31.°42N×104.°05E, h7km, ML3.6/17*
ISC 20 07:46:34.5±0.9, 31.°50N±0.°03×104.°06E±0.°05, h3km±6km, n28, σ1.°08/33, mb3.9/15, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.64**	**204**	Pg	**Pg**	**07 46 47.3**	**+0.5**
CD2				Sg	**Sg**	**07 46 55.6**	**+0.5**
CD2				smax			
	comp=N,9μm,0.8s						
CD2				smax			
	comp=E,7μm,0.7s						
LZH	**Lanzhou**	**4.58**	**358**	*e*Pg	**Pg**	**07 48 01.4**	**-0.9**
LZH				Sg	**Sg**	**07 49 01.8**	**+0.2**
LZH				smax			
	comp=N,67nm,0.6s						
LZH				smax			
	comp=E,72nm,0.5s						
XAN	**Xi'an**	**4.82**	**57**	Pn	**Pn**	**07 47 50.3**	**+2.4**
XAN				Sn	**Sn**	**07 48 46.1**	**+1.9**
XAN				Sg	**Sg**	**07 49 07.8**	**-1.4**
XAN				smax			
	comp=N,130nm,0.6s						
XAN				smax			
	comp=E,54nm,0.8s						
ENH	**Enshi**	**4.82**	**103**	*e*Pn	**Pn**	**07 47 46.6**	**-1.4**
GYA	**Guiyang**	**5.52**	**155**	Pn	**Pn**	**07 47 59.5**	**+2.0**
GYA				Sn	**Sn**	**07 49 00.6**	**-0.9**
GYA				Sg	**Sg**	**07 49 25.0**	**-6.7**
GYA				smax			
	comp=N,130nm,0.8s						
GYA				smax			
	comp=E,100nm,0.8s						
KMI	**Kunming**	**6.46**	**191**	P	**Pg**	**07 48 32.1**	**-6.2**
KMI				pmax	pmax		
	comp=Z,11nm,1.2s						
CMAR	**Chiang Mai Arr**	**13.78**	**201**	Pn	**Pn**	**07 49 57.5**	**+6.7**
	comp=Z,0.5nm,0.3s,baz=11,slow=10,SNR=8.3						
SONM	**Songino Array**	**16.41**	**6**	Pn	**Pn**	**07 50 26.5**	**+0.8**
	baz=187,slow=10,SNR=4.4						
KSRS	**Korea Array**	**20.53**	**67**	P	**P**	**07 51 15.9**	**+2.0**
	comp=Z,1.6nm,0.7s,baz=259,slow=10,SNR=4.5						
MK31	**Makanchi Array**	**22.66**	**319**	*e*P	**P**	**07 51 38.0**	**+1.3**
MKAR	**Makanchi Array**	**22.66**	**319**	P	**P**	**07 51 37.5**	**+0.7**
	comp=Z,1.3nm,0.7s,mb3.5,baz=110,slow=10,SNR=9.6						
ZALV	**Zalesovo Beam**	**26.35**	**334**	P	**P**	**07 52 11.8**	**+0.2**
	comp=Z,2.2nm,0.7s,mb3.8,baz=133,slow=8.9,SNR=9.6						
KURK	**Kurchatov**	**26.91**	**323**	P	**P**	**07 52 15.8**	**-0.8**
	comp=Z,0.7nm,0.4s,mb3.5,baz=135,slow=8.4,SNR=6.1						
BVAR	**Borovoye Array**	**32.46**	**321**	P	**P**	**07 53 06.0**	**+0.2**
	comp=Z,0.3nm,0.3s,mb3.6,baz=132,slow=9.9,SNR=4.0						
BVAR	**Borovoye Array**	**32.46**	**321**	P	**P**	**07 53 06.0**	**+0.2**
AKTO	**Aktyubinsk**	**38.84**	**313**	LR	LR	08 12 20.8	
	comp=Z,41nm,19.4s,baz=11,slow=40						
JOF	**Joensuu**	**54.67**	**328**	*e*p	**P**	**07 56 03.0**	**-1.4**
	comp=Z,1.7nm,0.5s,mb4.3						
JOF	**Joensuu**	**54.67**	**328**	*e*p	**P**	**07 56 03.0**	**-1.4**
	comp=Z,1.7nm,0.5s,mb4.3						
ARCES	**ARCESS Array B**	**56.88**	**336**	P	**P**	**07 56 20.0**	**-0.2**
	comp=Z,1.3nm,0.7s,mb4.1,baz=88,slow=7.3,SNR=6.6						
FINES	**FINESS Array B**	**57.22**	**326**	P	**P**	**07 56 22.0**	**-0.7**
	comp=Z,2.5nm,1.0s,mb4.2,baz=83,slow=8.6,SNR=5.1						
WRA	**Warramunga Arr**	**58.82**	**146**	P	**P**	**07 56 34.1**	**-0.3**
	comp=Z,0.6nm,0.3s,mb4.1,baz=328,slow=9.0,SNR=8.4						
ASAR	**Alice Springs**	**61.85**	**149**	P	**P**	**07 56 54.5**	**-0.5**
	comp=Z,0.3nm,0.4s,mb3.8,baz=336,slow=6.7,SNR=7.2						
NOA	**NORSAR Array B**	**64.31**	**327**	P	**P**	**07 57 09.6**	**-1.3**
	comp=Z,0.7nm,0.6s,mb3.9,baz=75,slow=6.6,SNR=2.7						
BPAW	**Bear Paw Mtn.**	**68.27**	**27**	*e*P	**P**	**07 57 36.3**	**0.0**
	comp=Z,0.9nm,0.6s,mb4.0						
PPLA	**Purkeypile**	**68.34**	**29**	*e*P	**P**	**07 57 37.6**	**+0.8**
	comp=Z,2.8nm,0.6s,mb4.5						
KDAK	**Kodiak Island**	**70.53**	**34**	P	**P**	**07 57 50.3**	**-0.1**
	comp=Z,1.9nm,0.6s,mb4.2,baz=260,slow=6.1,SNR=3.4						
STKA	**Stephens Creek**	**72.36**	**147**	P	**P**	**07 58 00.1**	**-1.6**
	comp=Z,1.1nm,0.7s,mb3.9,baz=346,slow=12,SNR=3.5						
YKA	**Yellowknife Ar**	**81.33**	**17**	P	**P**	**07 58 51.2**	**-0.7**
	comp=Z,0.3nm,0.6s,mb3.4,baz=332,slow=4.6,SNR=4.1						

DJA 20 07:59:09, 0.°42S×123.°00E, h21km, MLv3.9/9, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.66**	**200**	P	Pb	07 59 20.2	-1.6
LUWI				S	Sb	07 59 29.4	-1.2
MRSI	**Marisa**	**1.38**	**310**	P	Pn	07 59 32.6	-0.5
KMSI	**Cibinong**	**1.39**	**45**	P	Pn	07 59 32.9	-0.3
APSI	**Ampana**	**1.44**	**250**	P	Pn	07 59 33.2	-0.6
APSI				S	Sn	07 59 52.0	-0.1
KDI	**Kendari**	**3.53**	**186**	P	Pn	08 00 02.9	+0.2
TTSI	**Tana Toraja**	**4.11**	**231**	P	Pn	08 00 10.6	-0.1
LBMI	**Labuha**	**4.51**	**93**	P	Pn	08 00 16.1	0.0
SPSI	**Sidrap Palu**	**4.78**	**222**	P	Pn	08 00 20.0	+0.2
BNSI	**Bone**	**4.90**	**216**	P	Pn	08 00 21.7	+0.2
NLAI	**Namlea**	**4.96**	**124**	P	Pn	08 00 22.4	0.0
KAPI	**Kappang**	**5.60**	**215**	P	Pn	08 00 31.2	+0.1

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*BJI **20** 08:00:55.6, 16.°39N×148.°14E, h39km, mB5.0/20, mb4.7/29, Ms4.3/14, Ms7 4.2/13*
*IDC **20** 08:00:56.9±0.6, 16.°81N×147.°45E, h0km, mb4.3/19, mb1 4.4/20, mb1mx4.3/27, mbtmp4.3/20, ML4.1/1, MS3.7/10, Ms1 3.7/10, ms1mx3.4/28, Error ellipse: s-maj=20.0km s-min=15.1km az=79.0*
*MOS **20** 08:01:01.0±1.0, 16.°81N×147.°32E, h33km, mb4.7/20, Error ellipse: s-maj=12.5km s-min=8.1km az=98.8*
*ISCJB **20** 08:01:01.7±0.2, 16.°74N±0.°04×147.°42E±0.°04, h40km, mb4.5/72, MS3.8/15, Error ellipse: s-maj=5.8km s-min=5.2km az=22.4*
*NEIC **20** 08:01:03.1±0.2, 16.°78N×147.°40E, mb4.5/34, Error ellipse: s-maj=5.4km s-min=4.4km az=125.0*
ISC 20 08:01:03.6±0.2, 16.°75N±0.°04×147.°44E±0.°04, h42km, h42km±.8km: pP-P, n123, σ0.°90/125, mb4.5/72, MS3.8/15, 3D, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.01**	**219**	*e*Pn	**Pn**	**08 02 02.2**	**-0.3**
GUMO				*e*Sn	**Sn**	**08 02 49.1**	**+0.8**
CBIJ	**Chichi jima**	**11.39**	**336**	Pn	**Pn**	**08 03 41.1**	**-2.6**
	5.5nm,0.3s,baz=216,slow=19,SNR=5.0						
CBIJ				Sn	**Sn**	**08 05 43.6**	**-6.1**
	2.4nm,0.3s,baz=299,slow=19,SNR=2.6						
MJAR	**Matsushiro Arr**	**21.34**	**339**	P	**P**	**08 05 45.2**	**-2.0**
	4.1nm,0.4s,mb4.1,baz=174,slow=10,SNR=13						
MAJO	**Matsushiro**	**21.35**	**339**	*e*P	**P**	**08 05 46.2**	**-1.0**
MAJO				pmax	pmax		
	comp=Z,27nm,1.1s,mb4.5						
MAJO	**Matsushiro**	**21.35**	**339**	*e*P	**P**	**08 05 46.2**	**-1.1**
	comp=Z,28nm,1.1s,mb4.5						
MAT	**Matsushiro**	**21.35**	**339**	P	**P**	**08 05 45.8**	**-1.4**
MAT				S	**S**	**08 09 37.0**	**-4.9**
NACB	**Ninganchiao**	**25.29**	**291**	*e*P	**P**	**08 06 27.1**	**+0.8**
	comp=Z,11nm,0.6s,mb4.6						
YHNB	**Yeheng**	**25.59**	**292**	*e*P	**P**	**08 06 28.5**	**-0.6**
	comp=Z,13nm,0.4s,mb4.8						
KSRS	**Korea Array**	**26.86**	**324**	P	**P**	**08 06 37.8**	**-2.6**
	comp=Z,1.2nm,0.5s,mb3.7,baz=140,slow=9.6,SNR=8.3						
KSRS				LR	LR	08 17 01.9	
	comp=Z,144nm,20.4s,MS3.5,baz=326,slow=36						
NJ2	**Nanjing**	**30.04**	**306**	*e*P	**P**	**08 07 10.8**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
MDJ	**Mudanjiang**	**31.59**	**335**	P	**P**	**08 07 23.3**	**+1.0**
MDJ				pP	pP	08 07 31.8	-1.9
MDJ				sP	sP	08 07 35.8	-2.9
MDJ				PP	PP	08 08 34.5	+0.4
MDJ				S	**S**	**08 12 31.0**	**+2.8**
MDJ				sS	sS	08 12 45.9	-1.3
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.5						
CN2	**Changchun**	**32.77**	**330**	*e*P	**P**	**08 07 35.0**	**+2.3**
CN2				*e*S	**S**	**08 12 48.5**	**+1.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
KAKA	**Kakadu**	**32.82**	**208**	*e*P	**P**	**08 07 33.6**	**+0.3**
	comp=Z,16nm,0.8s,mb5.0						
KAKA	**Kakadu**	**32.82**	**208**	*e*P	**P**	**08 07 33.4**	**+0.1**
KAKA				*e*pP	pP	08 07 44.1	-0.6
MTSU	**Mount Surprise**	**34.80**	**185**	*e*P	**P**	**08 07 50.9**	**+0.4**
	comp=Z,72nm,0.9s,mb5.6						
BJI	**Beijing**	**35.68**	**317**	P	**P**	**08 07 58.6**	**+0.7**
BJI				S	**S**	**08 13 34.0**	**+2.3**
BJI				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.5						
BJI				pmax	pmax		
	comp=Z,81nm,4.8s						
BJI				LR	LR		
	comp=N,130nm,11.3s						
BJI				LR	LR		
	comp=E,140nm,8.5s						
WRAB	**Tennant Creek**	**38.66**	**200**	*e*P	**P**	**08 08 23.1**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.7						
WRAB	**Tennant Creek**	**38.66**	**200**	*e*P	**P**	**08 08 23.1**	**-0.2**
	comp=Z,11nm,0.7s,mb4.7						
WRA	**Warramunga Arr**	**38.67**	**200**	P	**P**	**08 08 22.9**	**-0.5**
	comp=Z,8.9nm,0.7s,mb4.6,baz=23,slow=9.2,SNR=43						
GYA	**Guiyang**	**38.98**	**291**	*e*P	**P**	**08 08 26.0**	**-0.1**
GYA				pP	pP	08 08 37.4	-0.3
GYA				sP	sP	08 08 43.1	+0.5
GYA				PP	PP	08 09 58.4	+2.4
GYA				S	**S**	**08 14 21.6**	**-0.7**
GYA				sS	sS	08 14 40.8	-0.7
GYA				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
GYA				pmax	pmax		
	comp=Z,70nm,4.6s						
GYA				LR	LR		
	comp=N,480nm,14.8s,MS4.6						
GYA				LR	LR		
	comp=E,430nm,15.2s,MS4.6						
GYA				LR	LR		
	comp=Z,460nm,14.0s,MS4.5						
HHC	**Hu-ho-hao-te**	**39.15**	**315**	*e*P	**P**	**08 08 28.1**	**+0.8**
HHC				pP	pP	08 08 40.4	+1.6
HHC				sP	sP	08 08 45.8	+2.0
HHC				PP	PP	08 10 03.4	+5.9
HHC				PcP	PcP	08 10 36.4	+0.2
HHC				ScP	ScP	08 14 21.3	-0.2
HHC				S	**S**	**08 14 25.3**	**+1.0**
HHC				PcS	PcS	08 14 26.8	+1.0
HHC				sS	sS	08 14 45.9	+2.3
HHC				ScS	ScS	08 18 31.3	-1.6
HHC				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.6						
HHC				pmax	pmax		
	comp=Z,110nm,5.2s						
HHC				LR	LR		
	comp=N,73nm,16.8s,MS3.9						
HHC				LR	LR		
	comp=E,130nm,16.8s,MS3.9						
HHC				LR	LR		
	comp=Z,160nm,16.8s,MS3.9						
FITZ	**Fitzroy Crossi**	**40.75**	**213**	*e*P	**P**	**08 08 40.9**	**+0.1**
CD2	**Chengdu**	**42.10**	**298**	*e*P	**P**	**08 08 51.8**	**-0.1**
CD2				pP	pP	08 09 02.3	-1.2
CD2				sP	sP	08 09 06.8	-1.6
CD2				PP	PP	08 10 32.8	+3.0
CD2				S	**S**	**08 15 08.3**	**-0.4**
CD2				sS	sS	08 15 27.5	-0.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.6						
CD2				pmax	pmax		
	comp=Z,40nm,4.6s						
CD2				LR	LR		
	comp=E,260nm,15.6s						
CD2				LR	LR		
	comp=Z,150nm,9.5s						
ASAR	**Alice Springs**	**42.29**	**199**	P	**P**	**08 08 52.9**	**-0.5**
	comp=Z,1.2nm,0.7s,mb3.6,baz=24,slow=8.1,SNR=14						
KMI	**Kunming**	**42.42**	**289**	P	**P**	**08 08 55.0**	**+0.5**
KMI				pP	pP	08 09 05.8	-0.3
KMI				sP	sP	08 09 10.8	-0.3
KMI				PP	PP	08 10 36.1	+2.8
KMI				S	**S**	**08 15 13.8**	**+0.3**
KMI				sS	sS	08 15 32.1	-0.7
KMI				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb4.7						
KMI				pmax	pmax		
	comp=Z,140nm,7.2s						
KMI				LR	LR		
	comp=N,150nm,16.4s,MS4.0						
KMI				LR	LR		
	comp=E,120nm,19.9s,MS4.0						
KMI				LR	LR		
	comp=Z,100nm,21.3s,MS3.7						
LZH	**Lanzhou**	**43.11**	**305**	*e*P	**P**	**08 09 01.4**	**+1.4**
LZH				pP	pP	08 09 11.3	-0.3
LZH				sP	sP	08 09 16.8	+0.2
LZH				PP	PP	08 10 39.6	-1.0
LZH				PcP	PcP	08 10 50.6	+1.3
LZH				*e*S	**S**	**08 15 24.1**	**+0.7**
LZH				sS	sS	08 15 46.3	+3.5
LZH				pmax

comp=Z,37nm,1.7s,mb5.0
STKA Stephens Creek 48.67 187 P **P 08 09 42.3 -1.4**
comp=Z,3.4nm,0.9s,mb4.4,baz=28,slow=15,SNR=6.4
STKA LR LR 08 30 43.1
comp=Z,102nm,18.0s,MS3.9,baz=295,slow=37
STKA Stephens Creek 48.67 187 *e*P **P 08 09 42.5 -1.3**
comp=Z,0.8nm,0.9s,mb3.8
ZAK Zakamensk 48.69 324 *e*P **P 08 09 42.0 -1.7**
ZAK pmax pmax
comp=Z,2.0nm,1.1s,mb4.1
TLY Talaya 49.10 325 *e*P **P 08 09 46.6 -0.2**
TLY *e* 08 11 11.7
TLY pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
TLY MLR MLR
comp=Z,106nm,23.0s,MS3.8
TLY Talaya 49.10 325 *e*P **P 08 09 46.2 -0.6**
comp=Z,2.3nm,0.6s,mb4.4
TLY *ep*P pP 08 09 57.4 -1.2
BBOO Buckleboo 50.47 192 *e*P **P 08 09 56.8 -0.6**
comp=Z,7.8nm,0.6s,mb4.9
FORT Forrest 50.80 202 *e*P **P 08 09 59.6 -0.3**
comp=Z,11nm,0.8s,mb4.8
FORT Forrest 50.80 202 *e*P **P 08 09 59.6 -0.4**
comp=Z,12nm,0.7s,mb4.9
BILL Bilibino 52.66 9‖*e*P **P 08 10 13.7 +0.4**
BILL *e* 08 10 21.7
BILL pmax pmax
comp=Z,5.0nm,1.7s,mb4.2
MORW Morawa 54.73 214 *e*P **P 08 10 28.5 -0.5**
WMQ Urumqi 56.84 312 *e*P **P 08 10 45.0 +1.0**
WMQ pmax pmax
comp=Z,16nm,1.0s,mb5.0
TTA Tatalina 60.24 26 *e*P **P 08 11 07.2 -0.1**
TTA pmax pmax
comp=Z,3.0nm,1.2s,mb4.2
TTA Tatalina 60.24 26 *e*P **P 08 11 07.2 -0.2**
comp=Z,2.7nm,1.2s,mb4.2
ZALV Zalesovo Beam 60.56 323 P **P 08 11 08.5 -1.2**
comp=Z,3.6nm,0.7s,mb4.6,baz=93,slow=7.4,SNR=9.7
ZALV LR LR 08 38 27.8
comp=Z,23nm,19.4s,MS3.3,baz=51,slow=37
MK31 Makanchi Array 61.00 315 *e*P **P 08 11 11.8 -1.1**
MK31 *e**PP pP 08 11 25.9 +0.9
MKAR Makanchi Array 61.00 315 P **P 08 11 12.5 -0.4**
comp=Z,1.4nm,0.6s,mb4.3,baz=89,slow=9.1,SNR=10
MKAR LR LR 08 39 52.2
comp=Z,42nm,19.2s,MS3.6,baz=170,slow=38
BPAW Bear Paw Mtn. 62.76 26 *e*P **P 08 11 23.7 -0.7**
comp=Z,6.2nm,1.2s,mb4.6
BPAW *ep*P pP 08 11 36.1 -0.5
KURK Kurchatov 63.82 319 P **P 08 11 29.8 -1.8**
comp=Z,11nm,0.9s,mb4.9,baz=100,slow=6.4,SNR=22
KURK LR LR 08 41 29.1
comp=Z,79nm,18.2s,MS3.9,baz=195,slow=38
KURK Kurchatov 63.82 319 *e*P **P 08 11 32.1 +0.5**
KURK *e**PP pP 08 11 43.0 -0.8
KURK pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
KURK Kurchatov 63.82 319 *e*P **P 08 11 32.1 +0.5**
comp=Z,8.7nm,1.0s,mb4.7
KURK *ep*P pP 08 11 43.0 -0.8
KSH Kashi 65.35 306 *e*P **P 08 11 44.3 +2.5**
KSH pP pP 08 11 57.3 +3.2
KSH sP sP 08 12 02.1 +3.2
KSH PcP PcP 08 12 15.3 +1.6
KSH PP PP 08 14 11.0 +5.2
KSH ScP 08 16 13.4
KSH PcS 08 16 18.3
KSH S S 08 20 23.3 +0.3
KSH sS sS 08 20 46.6 +3.2
KSH ScS ScS 08 21 32.3 -1.7
KSH pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
KSH pmax pmax
comp=Z,320nm,6.7s
KSH LR LR
comp=N,100nm,5.1s
KSH LR LR
comp=E,55nm,4.9s
KSH LR LR
comp=Z,150nm,7.0s
UCH Uchtor 66.38 309 *e*P **P 08 11 47.6 -0.8**
UCH pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
UCH Uchtor 66.38 309 *e*P **P 08 11 47.6 -0.8**
comp=Z,5.1nm,1.1s,mb4.5
AAK Ala-Archa 66.38 310 LR LR 08 42 43.6
comp=Z,68nm,18.8s,MS3.9,baz=217,slow=38
HYT Haines Junctio 68.24 31 *e*P **P 08 12 00.9 +1.1**
BVAR Borovoye Array 69.03 321 P **P 08 12 03.5 -1.3**
comp=Z,2.6nm,0.4s,mb4.5,baz=100,slow=7.8,SNR=13
BRVK Borovoye 69.09 321‖*e*P **P 08 12 05.6 +0.4**
BRVK pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
BRVK Borovoye 69.09 321 *e*P **P 08 12 04.7 -0.6**
comp=Z,2.9nm,0.6s,mb4.4
PPT Papeete 70.78 116 LR LR 08 35 21.5
comp=Z,296nm,21.0s,MS4.5,baz=110,slow=29
KBL Kabul 71.29 301 *e*P **P 08 12 19.6 +0.5**
KBL pmax pmax
comp=Z,12nm,1.0s,mb4.8
KBL Kabul 71.29 301 *e*P **P 08 12 19.6 +0.4**
comp=Z,12nm,1.0s,mb4.8
DLBC Dease Lake 71.99 33 *e*P **P 08 12 23.9 +1.0**
DLBC *ep*P pP 08 12 35.5 +0.3
ARU Arti 75.61 325*d i*P **P 08 12 43.8 -0.2**
ARU S S 08 22 23.9 +2.0
ARU SS SS 08 27 10.2 -2.9
ARU pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
ABKAR Akbulak array 75.89 318 *e*P **P 08 12 45.6 -0.2**
comp=Z,1.0nm,0.3s,mb4.2
AKTK Aktyubinsk 76.92 319 P **P 08 12 52.5 +0.9**
AKTO Aktyubinsk 76.92 319 P **P 08 12 52.5 +0.9**
comp=Z,1.0nm,0.6s,mb3.9,baz=85,slow=11,SNR=3.7
JCW Jim Creek 78.12 43 *e*P **P 08 12 58.9 +0.5**
JCW *ep*P pP 08 13 11.0 +0.1
HUMO Hull Mountain 78.57 49 *e*P **P 08 13 00.7 -0.3**
comp=Z,5.1nm,1.1s,mb4.4
YKA Yellowknife Ar 78.92 28 P **P 08 13 01.5 -1.0**
comp=Z,0.6nm,0.5s,mb3.8,baz=282,slow=5.7,SNR=7.6
YBH Yreka Blue Hor 78.94 50 P **P 08 13 02.8 -0.2**
comp=Z,2.9nm,0.9s,mb4.2,baz=315,slow=2.8,SNR=8.4
MOD Modoc 80.65 49 *e*P **P 08 13 12.2 -0.2**
comp=Z,3.1nm,1.0s,mb4.2
MOD *ep*P pP 08 13 23.4 -1.5
RES Resolute Bay 80.91 14 P **P 08 13 12.7 -0.4**
comp=Z,1.6nm,0.8s,mb4.0,baz=4.5,slow=5.2,SNR=4.4
NEW Newport 81.23 42 *e*P **P 08 13 14.8 -0.4**
NEW pmax pmax
comp=Z,3.0nm,0.8s
NEW Newport 81.23 42 *e*P **P 08 13 14.8 -0.4**
comp=Z,2.9nm,0.8s,mb4.3
SPITS Spitsbergen Ar 81.34 351 LR LR 08 48 57.2
comp=Z,44nm,18.5s,MS3.9,baz=195,slow=35
CMB Columbia Colle 81.54 53 *e*P **P 08 13 17.2 +0.1**
CMB pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
CMB Columbia Colle 81.54 53 *e*P **P 08 13 17.2 +0.1**
comp=Z,6.0nm,0.6s,mb4.7
WVOR Wild Horse Val 81.72 48 *e*P **P 08 13 17.9 -0.1**
WVOR pmax pmax
comp=Z,4.0nm,1.3s,mb4.2
WVOR Wild Horse Val 81.72 48 *e*P **P 08 13 17.9 0.0**
comp=Z,4.2nm,1.3s,mb4.2
BMO Blue Mountains 82.01 46 *e*P **P 08 13 19.5 0.0**
BMO pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
BMO Blue Mountains 82.01 46 *e*P **P 08 13 19.5 0.0**
comp=Z,3.7nm,1.0s,mb4.3
BSMT Bassoo Peak 82.85 42 *e*P **P 08 13 24.2 +0.5**
BSMT *ep*P pP 08 13 34.9 -1.4
NVAR Mina Array Bea 83.02 52 P **P 08 13 24.9 0.0**
comp=Z,1.4nm,0.8s,mb4.0,baz=257,slow=6.5,SNR=12
HLID Hailey 84.37 46 *e*P **P 08 13 31.8 +0.1**
comp=Z,14nm,2.1s,mb4.7
HLID *ep*P pP 08 13 44.2 -0.1
ARCES ARCESS Array B 84.84 343 P **P 08 13 33.0 -0.5**
comp=Z,2.4nm,0.7s,mb4.4,baz=77,slow=9.4,SNR=6.2
ARCES ARCESS Array B 84.84 343 P **P 08 13 33.0 -0.5**
MCMT McKenzie Canyo 85.05 45 *e*P **P 08 13 35.4 +0.4**
BOZ Bozeman (W) 85.60 44 *e*P **P 08 13 37.5 -0.3**
BOZ *e**PP pP 08 13 50.1 -0.3
BOZ pmax pmax
comp=Z,1.0nm,0.8s,mb4.1
BOZ Bozeman (W) 85.60 44 *e*P **P 08 13 37.5 -0.3**
comp=Z,1.3nm,0.8s,mb4.2
BOZ *ep*P pP 08 13 50.1 -0.4
QLMT Earthquake Lak 86.00 44 *e*P **P 08 13 40.7 +0.9**
QLMT *ep*P pP 08 13 52.3 -0.1
JOF Joensuu 86.47 336 *e*p **P 08 13 39.9 -1.8**
comp=Z,1.4nm,0.3s,mb4.7
JOF Joensuu 86.47 336 *e*p **P 08 13 39.9 -1.8**
comp=Z,1.4nm,0.3s,mb4.7
DUG Dugway 86.56 49 *e*P **P 08 13 42.9 +0.2**
DUG *e**PP pP 08 13 54.1 -1.2
DUG pmax pmax
comp=Z,3.0nm,0.9s,mb4.5
DUG Dugway 86.56 49 *e*P **P 08 13 42.9 +0.2**
comp=Z,3.4nm,0.9s,mb4.6
DUG *ep*P pP 08 13 54.1 -1.3
IMW Indian Meadow 86.65 45 *e*P **P 08 13 43.5 +0.5**
comp=Z,3.4nm,0.8s,mb4.6
IMW *ep*P pP 08 13 55.9 +0.3
HWUT Hardware Ranch 86.99 47 *e*P **P 08 13 44.8 +0.1**
comp=Z,4.9nm,1.0s,mb4.7
HWUT *ep*P pP 08 13 57.6 +0.2
CCUT Cedar City 87.01 52 *e*P **P 08 13 45.1 +0.2**
comp=Z,3.7nm,1.3s,mb4.5
CCUT *ep*P pP 08 13 57.5 -0.1
JLU Jordanelle 87.41 48 *e*P **P 08 13 46.9 +0.1**
comp=Z,2.4nm,0.8s,mb4.5
JLU *ep*P pP 08 13 59.2 -0.3
MSU Marysvale 87.58 51 *e*P **P 08 13 48.3 +0.7**
DAU Daniels Canyon 87.61 49 *e*P **P 08 13 48.4 +0.6**
DAU *e**PP pP 08 14 00.5 +0.1
DAU pmax pmax
comp=Z,3.0nm,1.0s,mb4.5
DAU Daniels Canyon 87.61 49 *e*P **P 08 13 48.4 +0.6**
comp=Z,2.9nm,1.0s,mb4.5
DAU *ep*P pP 08 14 00.5 0.0
OBN Obninsk 87.80 328 *e*P **P 08 13 48.9 +0.6**
OBN pmax pmax
comp=Z,2.0nm,0.6s,mb4.5
FFC Flin Flon 87.82 33 *i*P **P 08 13 48.6 +0.2**
PDAR Pinedale Array 87.99 46 P **P 08 13 49.2 -0.3**
comp=Z,0.4nm,0.6s,mb3.9,baz=280,slow=5.2,SNR=4.5
SRU San Rafael 88.59 50 *e*P **P 08 13 52.8 +0.4**
SRU *e**PP pP 08 14 04.6 -0.5
SRU pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
SRU San Rafael 88.59 50 *e*P **P 08 13 52.8 +0.4**
comp=Z,4.3nm,0.9s,mb4.8
SRU *ep*P pP 08 14 04.6 -0.6
WUAZ Wupatki 89.19 53 *e*P **P 08 13 55.4 +0.1**
comp=Z,6.5nm,0.9s,mb5.0
WUAZ *ep*P pP 08 14 08.2 +0.2
FINES FINESS Array B 89.34 336 P **P 08 13 54.0 -1.4**
comp=Z,1.1nm,0.4s,mb4.6,baz=66,slow=4.5,SNR=11
PV04 Paradox Valley 90.03 50 *e*P **P 08 13 59.0 -0.2**
PV01 Paradox Valley 90.37 50 *e*P **P 08 14 01.0 +0.3**
comp=Z,157nm,1.0s
PV01 *ep*P pP 08 14 13.8 +0.3
SMCO Snowmass 91.14 48 *e*P **P 08 14 05.0 +0.6**
comp=Z,2.9nm,1.1s,mb4.5
SMCO *ep*P pP 08 14 18.3 +1.3
TORD Torodi Ar. Bea 134.97 309 PKP PKPdf 08 20 18.1 -1.1
comp=Z,0.4nm,0.8s,baz=7.5,slow=0.9,SNR=2.9
DBIC Dimbokro 144.05 308 PKP PKPdf 08 20 34.6 -1.2
comp=Z,0.9nm,0.3s,baz=47,slow=2.4,SNR=5.4
KIC Kosan Boka 144.17 308 *e*PKP1 PKPdf 08 20 33.7 -2.3
comp=Z,14nm,1.0s
TIC Toumodi 144.19 308 *e*PKP1 PKPdf 08 20 33.8 -2.2
comp=Z,3.4nm,0.2s
LIC Lamto 144.47 308 *e*PKP1 PKPdf 08 20 32.9 -3.6
comp=Z,74nm,1.9s
LPAZ La Paz 145.92 94 PKPbc PKPbc 08 20 40.2 +0.7
comp=Z,4.2nm,0.9s,baz=273,slow=3.1,SNR=13
LPAZ La Paz 145.92 94 *e*PKPdf PKPdf 08 20 40.5 +1.7

DDA ***20*** *08:06:15.7, 39.°64N×29.°40E, h7km±3km, Md2.9*
ISK ***20*** *08:06:15.0, 39.°65N×29.°44E, h5km, MD2.7*
CSEM ***20*** *08:06:15.7±0.2, 39.°64N×29.°44E, h1km, MD2.9, Error ellipse: s-maj=4.3km s-min=4.1km az=49.0*
ISCJB ***20*** *08:06:15.8±0.4, 39.°67N±0.°03×29.°46E±0.°03, h0km, Error ellipse: s-maj=3.8km s-min=3.6km az=157.9*
ISC 20 08:06:16.1±0.4,**39.°67N**±0.°03×**29.°44E**±0.°03,**h0**km,**n34,**
σ**1**§**12**/49,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	**Gediz**	**0.58**	**177**	*i* P	**Pg**	**08 06 26.4**	**-0.7**
GDZ				*i* S	**Sg**	**08 06 35.9**	**+1.2**
GDZ	**Gediz**	**0.58**	**177**	*i* P	**Pg**	**08 06 26.4**	**-0.7**
GDZ				*i* S	**Sg**	**08 06 35.9**	**+1.3**
CAVI	**Cavuskoy**	**0.62**	**30**	*e*PG	**Pg**	**08 06 27.9**	**+0.1**
CAVI	**Cavuskoy**	**0.62**	**30**	*e*Pg	**Pg**	**08 06 28.0**	**+0.1**
ALT	**Altintas**	**0.80**	**140**	*e*PG	**Pg**	**08 06 30.6**	**-0.8**
ALT				*e*SG	**Sg**	**08 06 43.0**	**+1.2**
ALT	**Altintas**	**0.80**	**140**	*e*Pg	**Pg**	**08 06 30.6**	**-0.8**
ALT				*e*Sg	**Sg**	**08 06 43.0**	**+1.2**
DEMI	**Demirci**	**0.84**	**222**	*i* P	**Pg**	**08 06 30.6**	**-1.5**
DEMI				*i* S	**Sg**	**08 06 46.7**	**+3.6**
DEMI	**Demirci**	**0.84**	**222**	*i* P	**Pg**	**08 06 30.6**	**-1.6**
ARMT	**Armutlu**	**1.00**	**334**	*e*PG	**Pg**	**08 06 35.6**	**+0.3**
ARMT				*e*SG	**Sg**	**08 06 51.0**	**+2.8**
ARMT	**Armutlu**	**1.00**	**334**	*e*Pg	**Pg**	**08 06 35.6**	**+0.3**
ARMT				*e*Sg	**Sg**	**08 06 51.0**	**+2.8**
KCT	**Karacabey**	**1.03**	**306**	*e*PG	**Pg**	**08 06 35.9**	**+0.1**
KCT	**Karacabey**	**1.03**	**306**	*e*Pg	**Pg**	**08 06 35.9**	**+0.2**
ESKT	**Eskisehir**	**1.10**	**97**	*e*PN	**Pn**	**08 06 36.8**	**-1.9**
ESKT	**Eskisehir**	**1.10**	**97**	*i* P	**Pg**	**08 06 37.1**	**0.0**
ESKT				*i* S	**Sg**	**08 06 53.5**	**+2.2**
ESKT	**Eskisehir**	**1.10**	**97**	*e*Pn	**Pn**	**08 06 36.8**	**-1.9**
SEYT	**Eskypehyr**	**1.10**	**97**	*i* P	**Pg**	**08 06 37.1**	**0.0**
SEYT				*i* S	**Sg**	**08 06 53.5**	**+2.2**
GULT	**Gulveren**	**1.12**	**47**	*e*PN	**Pn**	**08 06 38.2**	**-0.8**
GULT				*e*SN	**Sn**	**08 06 55.0**	**-0.1**
GULT	**Gulveren**	**1.12**	**47**	*e*Pn	**Pn**	**08 06 38.2**	**-0.8**
GULT				*e*Sn	**Sn**	**08 06 55.0**	**-0.1**
BALB	**Balikesir**	**1.21**	**269**	*e*PN	**Pn**	**08 06 39.4**	**-0.8**
BALB	**Balikesir**	**1.21**	**269**	*e*Pn	**Pn**	**08 06 39.4**	**-0.8**
KULA	**Kula-Manisa**	**1.30**	**208**	*e*PN	**Pn**	**08 06 41.0**	**-0.5**
KULA	**Kula-Manisa**	**1.30**	**208**	*e*Pn	**Pn**	**08 06 41.0**	**-0.5**
KHL	**Karahalli**	**1.34**	**177**	*e*PN	**Pn**	**08 06 41.4**	**-0.6**
KHL	**Karahalli**	**1.34**	**177**	*e*Pn	**Pn**	**08 06 41.4**	**-0.6**
MANT	**Manisa**	**1.36**	**211**	*i* P	**Pg**	**08 06 40.3**	**-1.9**
MANT				*i* S	**Sg**	**08 07 01.5**	**+1.7**
MANT	**Manisa**	**1.36**	**211**	*i* P	**Pg**	**08 06 40.3**	**-1.9**
MANT				*i* S	**Sg**	**08 07 01.5**	**+1.7**
BALY	**Balya**	**1.41**	**274**	*i* P	**Pn**	**08 06 42.3**	**-0.7**
BALY				*i* S	**Sg**	**08 07 02.5**	**+1.2**
BALY	**Balya**	**1.41**	**274**	*i* P	**Pn**	**08 06 42.3**	**-0.6**
BALY				*i* S	**Sg**	**08 07 02.5**	**+1.2**
ISK	**Istanbul-Kandi**	**1.43**	**348**	*e*PN	**Pn**	**08 06 43.0**	**-0.2**
ISK	**Istanbul-Kandi**	**1.43**	**348**	*e*Pn	**Pn**	**08 06 43.0**	**-0.2**
SVRH	**Sivrihisar-ESK**	**1.62**	**97**	*e*PN	**Pn**	**08 06 45.8**	**-0.1**
SVRH	**Sivrihisar-ESK**	**1.62**	**97**	*e*Pn	**Pn**	**08 06 45.8**	**-0.1**
KIZT	**Kizilcal**	**2.05**	**112**	*e*PN	**Pn**	**08 06 52.2**	**+0.5**
KIZT	**Kizilcal**	**2.05**	**112**	*e*Pn	**Pn**	**08 06 52.2**	**+0.5**

DDA ***20*** *08:20:20.3, 39.°37N×28.°59E, h8km±3km, Md3.0*
ISK ***20*** *08:20:20.4, 39.°39N×28.°54E, h3km, MD3.1*
CSEM ***20*** *08:20:20.9±0.1, 39.°38N×28.°54E, h2km, MD3.0, Error ellipse: s-maj=2.9km s-min=2.8km az=164.0*
ISCJB ***20*** *08:20:21.3±0.3, 39.°37N±0.°02×28.°54E±0.°03, h10km, Error ellipse: s-maj=2.9km s-min=2.7km az=149.1*
ISC 20 08:20:21.2±0.4,**39.°37N**±0.°02×**28.°56E**±0.°03,**h2**km±4km,
n67, σ**6**§**78**/90,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.24**	**345**	*i* P	**Pg**	**08 20 25.4**	**-0.4**
DURS				*i* S	**Sg**	**08 20 29.1**	**+0.1**
DURS	**Dursunbey**	**0.24**	**345**	*i* P	**Pg**	**08 20 25.4**	**-0.4**
DURS				*i* S	**Sg**	**08 20 29.1**	**+0.1**
DEMI	**Demirci**	**0.35**	**159**	*i* P	**Pg**	**08 20 27.6**	**-0.3**
DEMI				*i* S	**Sg**	**08 20 32.8**	**+0.4**
DEMI	**Demirci**	**0.35**	**159**	*i* P	**Pg**	**08 20 27.5**	**-0.4**
DEMI				*i* S	**Sg**	**08 20 32.8**	**+0.4**
BALB	**Balikesir**	**0.59**	**298**	*e*PG	**Pg**	**08 20 32.5**	**0.0**
BALB				*e*SG	**Sg**	**08 20 41.1**	**+1.0**
BALB	**Balikesir**	**0.59**	**298**	*e*Pg	**Pg**	**08 20 32.5**	**0.0**
BALB				*e*Sg	**Sg**	**08 20 41.1**	**+1.0**
AKHS	**Akhisar**	**0.76**	**230**	*i* P	**Pg**	**08 20 35.3**	**-0.4**
AKHS				*i* S	**Sg**	**08 20 46.6**	**+1.1**
AKHS	**Akhisar**	**0.76**	**230**	*i* P	**Pg**	**08 20 35.3**	**-0.4**
AKHS				*i* S	**Sg**	**08 20 46.6**	**+1.1**
AKS	**Akhisar**	**0.76**	**230**	*e*PG	**Pg**	**08 20 35.8**	**+0.1**
AKS				*e*SG	**Sg**	**08 20 47.0**	**+1.5**
AKS	**Akhisar**	**0.76**	**230**	*e*Pg	**Pg**	**08 20 35.8**	**+0.1**
AKS				*e*Sg	**Sg**	**08 20 47.0**	**+1.5**
GDZ	**Gediz**	**0.77**	**111**	*i* P	**Pg**	**08 20 35.3**	**-0.7**
GDZ				*i* S	**Sg**	**08 20 45.4**	**-0.6**
GDZ	**Gediz**	**0.77**	**111**	*i* P	**Pg**	**08 20 35.3**	**-0.7**
GDZ				*i* S	**Sg**	**08 20 45.4**	**-0.6**
BALY	**Balya**	**0.81**	**297**	*i* P	**Pg**	**08 20 36.5**	**-0.3**
BALY				*i* S	**Sg**	**08 20 48.5**	**+1.2**
BALY	**Balya**	**0.81**	**297**	*i* P	**Pg**	**08 20 36.5**	**-0.3**
BALY				*i* S	**Sg**	**08 20 48.5**	**+1.2**
KULA	**Kula-Manisa**	**0.86**	**174**	*e*PG	**Pg**	**08 20 37.5**	**-0.2**
KULA	**Kula-Manisa**	**0.86**	**174**	*e*Pg	**Pg**	**08 20 37.5**	**-0.1**
KCT	**Karacabey**	**0.91**	**350**	*e*PG	**Pg**	**08 20 38.1**	**-0.5**
KCT				*e*SG	**Sg**	**08 20 51.1**	**+0.6**
KCT	**Karacabey**	**0.91**	**350**	*e*Pg	**Pg**	**08 20 38.1**	**-0.5**
KCT				*e*Sg	**Sg**	**08 20 51.1**	**+0.7**
BNT	**Bandirma**	**1.10**	**334**	*e*PN	**Pg**	**08 20 42.0**	**-0.3**
BNT				*e*SN	**Sg**	**08 20 57.2**	**+0.6**
EDC	**Edincik**	**1.11**	**332**	*e*PN	**Pg**	**08 20 41.9**	**-0.6**
EDC	**Edincik**	**1.11**	**332**	*e*Pn	**Pg**	**08 20 41.9**	**-0.6**
GEMT	**Gemlik**	**1.17**	**24**	*e*PN	**Pn**	**08 20 43.4**	**-1.1**
GEMT	**Gemlik**	**1.17**	**24**	*e*Pn	**Pn**	**08 20 43.4**	**-1.1**
ARMT	**Armutlu**	**1.22**	**11**	*e*PN	**Pn**	**08 20 43.9**	**-1.3**
ARMT	**Armutlu**	**1.22**	**11**	*e*Pn	**Pn**	**08 20 43.9**	**-1.3**
ALT	**Altintas**	**1.25**	**104**	*e*PN	**Pn**	**08 20 45.3**	**-0.2**
ALT	**Altintas**	**1.25**	**104**	*e*Pn	**Pn**	**08 20 45.3**	**-0.3**
CAVI	**Cavuskoy**	**1.29**	**50**	*e*PN	**Pn**	**08 20 45.8**	**-0.5**
CAVI	**Cavuskoy**	**1.29**	**50**	*e*Pn	**Pn**	**08 20 45.8**	**-0.4**
YLV	**Yalova**	**1.35**	**27**	*e*PN	**Pn**	**08 20 46.1**	**-0.9**
YLV	**Yalova**	**1.35**	**27**	*e*Pn	**Pn**	**08 20 46.1**	**-0.9**
KDAG	**Bornova**	**1.39**	**227**	*i* P	**Pn**	**08 20 46.0**	**-1.6**
KDAG				*i* S	**Sg**	**08 21 03.9**	**-2.0**
KDAG	**Bornova**	**1.39**	**227**	*i* P	**Pn**	**08 20 46.0**	**-1.6**
KDAG				*i* S	**Sg**	**08 21 03.9**	**-2.1**
IZM	**Izmir**	**1.40**	**227**	*e*PN	**Pn**	**08 20 47.8**	**+0.1**
IZM	**Izmir**	**1.40**	**227**	*e*Pn	**Pn**	**08 20 47.8**	**+0.1**
ADVT	**Abdulvahap**	**1.40**	**40**	*e*PN	**Pn**	**08 20 47.3**	**-0.4**
ADVT	**Abdulvahap**	**1.40**	**40**	*e*Pn	**Pn**	**08 20 47.3**	**-0.4**
AYVA	**Ayvalik**	**1.45**	**268**	*i* P	**Pn**	**08 20 47.6**	**-0.7**
AYVA				*i* S	**Sb**	**08 21 06.8**	**-0.8**
AYVA	**Ayvalik**	**1.45**	**268**	*i* P	**Pn**	**08 20 47.6**	**-0.7**
AYVA				*i* S	**Sb**	**08 21 06.8**	**-0.8**
BLCB	**Balcova**	**1.54**	**231**	*e*PN	**Pn**	**08 20 49.7**	**+0.2**
BLCB	**Balcova**	**1.54**	**231**	*e*Pn	**Pn**	**08 20 49.7**	**+0.2**
GPA	**Golpazari**	**1.63**	**55**	*e*PN	**Pn**	**08 20 51.0**	**+0.1**
GPA	**Golpazari**	**1.63**	**55**	*e*Pn	**Pn**	**08 20 51.0**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.69**	**322**	*e*PN	**Pn**	**08 20 52.0**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.69**	**322**	*e*Pn	**Pn**	**08 20 52.0**	**+0.3**
MFT	**Murefte**	**1.72**	**326**	*e*PN	**Pn**	**08 20 52.7**	**+0.6**
MFT	**Murefte**	**1.72**	**326**	*e*Pn	**Pn**	**08 20 52.7**	**+0.6**
ISK	**Istanbul-Kandi**	**1.74**	**13**	*e*PN	**Pn**	**08 20 52.2**	**-0.1**
ISK	**Istanbul-Kandi**	**1.74**	**13**	*e*Pn	**Pn**	**08 20 52.2**	**-0.1**
SHUT	**Suhut-Afyon**	**1.76**	**117**	*e*PN	**Pn**	**08 20 52.8**	**+0.2**
SHUT				*e*SN	**Sn**	**08 21 16.6**	**+1.2**
SHUT	**Suhut-Afyon**	**1.76**	**117**	*e*Pn	**Pn**	**08 20 52.8**	**+0.2**
SHUT				*e*Sn	**Sn**	**08 21 16.6**	**+1.1**
ESKT	**Eskisehir**	**1.78**	**84**	*e*PN	**Pn**	**08 20 53.4**	**+0.4**
ESKT	**Eskisehir**	**1.78**	**84**	*e*Pn	**Pn**	**08 20 53.4**	**+0.5**
GULT	**Gulveren**	**1.84**	**54**	*e*PN	**Pn**	**08 20 54.5**	**+0.7**
GULT	**Gulveren**	**1.84**	**54**	*e*Pn	**Pn**	**08 20 54.5**	**+0.7**
CTKS	**Kestanelik-??a**	**1.87**	**359**	*e*PN	**Pn**	**08 20 53.7**	**-0.4**
CTKS	**Kestanelik-??a**	**1.87**	**359**	*e*Pn	**Pn**	**08 20 53.7**	**-0.4**
KLYT	**Kilyos**	**1.92**	**11**	*e*PN	**Pn**	**08 20 55.2**	**+0.4**
KLYT	**Kilyos**	**1.92**	**11**	*e*Pn	**Pn**	**08 20 55.3**	**+0.5**
CTYL	**Yal??k??y-??at**	**2.11**	**355**	*e*PN	**Pn**	**08 20 57.2**	**-0.3**
CTYL	**Yal??k??y-??at**	**2.11**	**355**	*e*Pn	**Pn**	**08 20 57.2**	**-0.3**
SVRH	**Sivrihisar-ESK**	**2.30**	**87**	*e*PN	**Pn**	**08 21 01.4**	**+1.4**
SVRH	**Sivrihisar-ESK**	**2.30**	**87**	*e*Pn	**Pn**	**08 21 01.4**	**+1.3**
MDU	**Mudurnu**	**2.32**	**61**	*e*PN	**Pn**	**08 21 01.3**	**+1.0**
MDU	**Mudurnu**	**2.32**	**61**	*e*Pn	**Pn**	**08 21 01.3**	**+1.0**
KIZT	**Kizilcal**	**2.63**	**100**	*e*PN	**Pn**	**08 21 06.0**	**+1.3**
KIZT	**Kizilcal**	**2.63**	**100**	*e*Pn	**Pn**	**08 21 06.0**	**+1.4**

BJI ***20*** *08:23:37.5, 41.°43N×38.°26E, h28km, mB4.7/8, mb4.8/15, Ms4.4/5, Ms7 4.3/5*
DDA ***20*** *08:23:37.3, 41.°41N×38.°76E, h29km, Md3.9*
IDC ***20*** *08:23:37.8±0.7, 41.°20N×38.°71E, h0km, mb4.2/16, mb1 4.2/21, mb1mx4.1/33, mbtmp4.1/21, ML3.3/2, MS3.3/6, Ms1 3.3/6, ms1mx2.7/40, Error ellipse: s-maj=16.2km s-min=9.0km az=14.0*
ISCJB ***20*** *08:23:38.0±0.6, 41.°29N±0.°02×38.°84E±0.°02, h9km±4km, mb4.3/44, MS3.5/7, Error ellipse: s-maj=3.4km s-min=2.6km az=18.7*
CSEM ***20*** *08:23:38.8±0.1, 41.°26N×38.°85E, h5km, mb4.4/23, Error ellipse: s-maj=3.2km s-min=2.7km az=38.0*
MOS ***20*** *08:23:39.9±1.4, 41.°48N×38.°72E, h14km, mb4.5/18, Error ellipse: s-maj=6.1km s-min=4.6km az=103.6*
NEIC ***20*** *08:23:39.5, 41.°15N×38.°87E, h12km, mb4.4/21, ML4.2(ISK), After ISK.*
ISK ***20*** *08:23:39.3, 41.°16N×38.°87E, h12km, ML4.0*
ISC 20 08:23:39.0±0.6,**41.°27N**±0.°02×**38.°85E**±0.°02,**h5**km±4km,
n300, σ**1**§**11**/337,**mb4.3**/44,**MS3.5**/7,**10C-13D,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESPY	**Espiye-Giresun**	**0.36**	**194**	PG	**Pg**	**08 23 45.6**	**-0.2**
ESPY				*e*SG	**Sg**	**08 23 49.5**	**-1.0**
ESPY	**Espiye-Giresun**	**0.36**	**194**	*i* Pg	**Pg**	**08 23 45.7**	**-0.2**
ESPY				*e*Sg	**Sg**	**08 23 49.5**	**-1.1**
GRSN	**GIRESUNGRSN**	**0.55**	**232**	*i* P	**Pg**	**08 23 49.2**	**-0.4**
GRSN				*i* S	**Sg**	**08 24 07.8**	**+11**
GRSN	**GIRESUNGRSN**	**0.55**	**232**	*i* P	**Pg**	**08 23 49.2**	**-0.4**
KTUT	**Trabzon**	**0.75**	**111**	PG	**Pg**	**08 23 53.6**	**+0.3**
KTUT				*e*SG	**Sg**	**08 24 03.7**	**+0.6**
KTUT	**Tr

MYA Malataya 2.95 186 *e*PN **Pn 08 24 25.1 -1.5**
MYA Malataya 2.95 186 *e*Pn **Pn 08 24 25.1 -1.4**
SARI SarD1z-Kayseri 3.06 213 *e*PN **Pb 08 24 33.1 -0.9**
BYBT Boyabat 3.08 275 *e*PN **Pn 08 24 29.4 +1.2**
BYBT Boyabat 3.08 275 *e*Pn **Pn 08 24 29.4 +1.2**
YOZ Yozgat 3.14 240 *e*PN **Pn 08 24 30.3 +1.2**
YOZ Yozgat 3.14 240 *e*Pn **Pn 08 24 30.3 +1.2**
KARS Kars 3.27 100 *e*PN **Pn 08 24 31.7 +0.8**
KARS Kars 3.27 100 *e*Pn **Pn 08 24 31.7 +0.8**
CORM Corum 3.38 253 *e*PN **Pn 08 24 33.6 +1.1**
CORM Corum 3.38 253 *e*Pn **Pn 08 24 33.6 +1.2**
DIY Diyarbakir 3.53 162 *e*PN **Pn 08 24 34.0 -0.4**
DIY Diyarbakir 3.53 162 *e*Pn **Pn 08 24 34.0 -0.4**
TOS Tosya 3.65 268 *e*PN **Pn 08 24 37.3 +1.2**
TOS Tosya 3.65 268 *e*Pn **Pn 08 24 37.3 +1.2**
ANN Anapa 3.68 344 *e*P **Pn 08 24 36.9 +0.4**
ANN *e* 08 25 20.9
ANN pmax pmax
comp=Z,13nm,0.4s
ANN smax
comp=N,60nm,0.6s
ANN smax
comp=E,31nm,0.6s
ANN Anapa 3.68 344 *e*P **Pn 08 24 36.9 +0.4**
comp=E,13nm,0.4s
ANN *e*S **Sn 08 25 20.9 +0.6**
BTMT Batman 3.68 146 *e*PN **Pn 08 24 36.4 -0.2**
ONI Oni 3.68 67 P **Pn 08 24 36.7 +0.1**
ONI S **Sn 08 25 19.5 -0.9**
SHAR Shatzhatmas 3.76 48 *i* P **Pn 08 24 39.9 +2.3**
SHAR Shatzhatmas 3.76 48 *i* P **Pn 08 24 39.9 +2.3**
URFA Urfa 3.82 180 *e*PN **Pn 08 24 38.2 -0.2**
URFA Urfa 3.82 180 *e*Pn **Pn 08 24 38.2 -0.2**
KIV Kislovodsk 3.91 45 *e*P **Pn 08 24 41.8 +2.2**
KIV *e* 08 25 24.3
KIV Kislovodsk 3.91 45 *e*Pn **Pn 08 24 41.8 +2.2**
KIV *e*Sn **Sn 08 25 24.2 -1.6**
KIV Kislovodsk 3.91 45 *e*P **Pn 08 24 41.8 +2.2**
KIV *e*S **Sn 08 25 24.3 -1.6**
KEH Kehvi 3.94 73 P **Pn 08 24 38.8 -1.3**
KEH S **Sn 08 25 23.8 -3.0**
GOR Gori 4.01 78 P **Pn 08 24 40.9 -0.1**
BEYR Belyy Ugol+ 4.01 46 *e*P **Pn 08 24 39.8 -1.3**
BEYR Belyy Ugol+ 4.01 46 *e*P **Pn 08 24 39.8 -1.3**
KMRS Kahramanmaras 4.04 202 *e*PN **Pn 08 24 42.4 +0.9**
KMRS Kahramanmaras 4.04 202 *e*Pn **Pn 08 24 42.4 +0.9**
ZEI Tsey 4.05 67 *e*P **Pn 08 24 42.3 +0.6**
ZEI *e*S **Sn 08 25 30.4 +0.9**
ZEI pmax pmax
comp=Z,47nm,0.5s
ZEI smax
comp=E,384nm,0.9s
ZEI smax
comp=N,377nm,0.8s
ZEI Tsey 4.05 67 *e*S **Sn 08 25 30.4 +0.9**
comp=N,377nm,0.8s
ZEI Tsey 4.05 67 *e*P **Pn 08 24 42.3 +0.6**
comp=N,47nm,0.5s
PYA Pyatigorsk 4.16 47 *e*P **Pn 08 24 43.2 +0.1**
PYA Pyatigorsk 4.16 47 *e*P **Pn 08 24 43.2 +0.1**
BR131 Keskin Array S 4.26 251 *e*Pn **Pn 08 24 45.6 +1.2**
BR131 Keskin Array S 4.26 251 *e*Pn **Pn 08 24 45.6 +1.2**
BRTR Keskin Array B 4.26 251 Pn **Pn 08 24 45.0 +0.6**
comp=N,0.6nm,0.3s,baz=94,slow=13,SNR=6.5
BRTR Keskin Array B 4.26 251 Pn **Pn 08 24 45.0 +0.6**
GAZ Gaziantep 4.28 198 *e*PN **Pn 08 24 45.7 +0.9**
GAZ Gaziantep 4.28 198 *e*Pn **Pn 08 24 45.7 +0.9**
VANB Van 4.39 126 *e*PN **Pn 08 24 46.6 +0.3**
VANB Van 4.39 126 *e*Pn **Pn 08 24 46.6 +0.3**
KERU Kerch 4.40 338 *e*P **Pn 08 24 50.3 +3.9**
KERU Kerch 4.40 338 *e*P **Pn 08 24 50.3 +3.9**
CLDR Caldiran 4.42 117 *e*PN **Pn 08 24 48.0 +1.3**
CLDR Caldiran 4.42 117 *e*Pn **Pn 08 24 48.0 +1.3**
KOZT Kozan 4.44 213 *e*PN **Pn 08 24 47.6 +0.5**
TBLG Delisi 4.45 82 P **Pn 08 24 52.7 +5.6**
MTA Mtatsminda 4.49 83 P **Pn 08 24 52.2 +4.5**
SUDU Sudak 4.59 323 *e*P **Pn 08 24 50.0 +1.0**
SUDU *e*S **Sn 08 25 40.9 -1.8**
SUDU Sudak 4.59 323 *e*P **Pn 08 24 50.0 +1.0**
SUDU *e*S **Sn 08 25 40.9 -1.8**
GNI Garni 4.62 102 Pn **Pn 08 24 54.6 +5.2**
comp=N,1.0nm,0.3s,baz=45,slow=14,SNR=1.9
GNI Garni 4.62 102 *i* P **Pn 08 24 54.7 +5.3**
GNI Garni 4.62 102 *e*Pn **Pn 08 24 45.6 -3.8**
GNI Garni 4.62 102 *e*Pn **Pn 08 24 45.6 -3.8**
YAL Yalta 4.72 315 *e*P **Pn 08 24 51.8 +1.1**
YAL *e*S **Sn 08 25 44.6 -1.2**
YAL Yalta 4.72 315 *e*P **Pn 08 24 51.8 +1.1**
YAL *e*S **Sn 08 25 44.6 -1.2**
ALU Alushta 4.72 318 *e*P **Pn 08 24 53.3 +2.5**
ALU *i* S **Sn 08 25 44.0 -1.9**
ALU Alushta 4.72 318 *e*P **Pn 08 24 53.3 +2.5**
ALU *i* S **Sn 08 25 44.0 -1.9**
CEYT Ceyhan 4.88 211 *e*PN **Pn 08 24 53.6 +0.6**
CEYT Ceyhan 4.88 211 *e*Pn **Pn 08 24 53.6 +0.6**
DGRG David-gareji 4.92 86 P **Pn 08 24 58.7 +5.2**
KARA Karaisali 4.96 218 *e*PN **Pn 08 24 55.5 +1.3**
KARA Karaisali 4.96 218 *e*Pn **Pn 08 24 55.5 +1.3**
SEV Sevastopol' 5.02 312 *e*P **Pn 08 24 54.0 -0.9**
SEV *e*S **Sn 08 25 47.6 -5.7**
SEV Sevastopol' 5.02 312 *e*P **Pn 08 24 54.0 -0.9**
CUKT Cukurca 5.45 136 *e*PN **Pn 08 25 02.0 +1.1**
CUKT Cukurca 5.45 136 *e*Pn **Pn 08 25 02.0 +1.1**
MSL Mosul 5.89 144 *e*Pn **Pn 08 25 06.0 -0.9**
MSL *e*Sn **Sn 08 26 15.0 +0.3**
TLCR 8.30 301 ⇓P **Pn 08 25 38.1 -1.9**
TLCR S **Sn 08 27 06.6 -7.5**
TLCR 8.30 301 ⇓*i*P **Pn 08 25 38.1 -1.9**
TLCR 8.30 301 P **Pn 08 25 38.1 -1.9**
CFR Carcaliu 8.74 300 ⇑P **Pn 08 25 44.8 -1.2**
CFR S **Sn 08 27 17.1 -7.8**
CFR Carcaliu 8.74 300 ⇑*i*P **Pn 08 25 44.8 -1.2**
CFR Carcaliu 8.74 300 P **Pn 08 25 44.8 -1.2**
BHD Baghdad 9.12 149 *e*Pn **Pn 08 25 49.0 -2.2**
BHD *e*Sn **Sn 08 27 33.0 -1.1**
BHD Baghdad 9.12 149 *e*Pn **Pn 08 25 49.0 -2.2**
BHD *e*Sn **Sn 08 27 33.0 -1.1**
ASF Jabal al Asfar 9.21 190 Pn **Pn 08 25 51.9 -0.6**
comp=N,0.2nm,0.3s,baz=97,slow=8.1,SNR=3.0
ASF LR LR 08 29 43.9
comp=N,204nm,18.7s,baz=60,slow=40
VORD Divnogorie 9.71 2 *e*P **Pn 08 26 00.1 +0.9**
VORD pmax pmax
comp=N,30nm,0.5s
VORD pmax pmax
comp=E,30nm,0.5s
VORD pmax pmax
comp=Z,10.0nm,0.5s
VORD Divnogorie 9.71 2 *e*P **Pn 08 26 00.1 +0.9**
VRI Vrincioaia 9.92 302 ⇓P **Pn 08 26 00.9 -1.3**
VRI Vrincioaia 9.92 302 ⇓*i*P **Pn 08 26 00.9 -1.3**
VRI Vrincioaia 9.92 302 P **Pn 08 26 00.9 -1.3**
VSR Storozhevoye 9.96 1 *e*P **Pn 08 26 04.1 +1.5**
VSR *e*S **Sn 08 27 49.9 -4.8**
VSR pmax pmax
comp=N,7.0nm,0.5s
VSR pmax pmax
comp=E,3.0nm,0.5s
VSR pmax pmax
comp=Z,10.0nm,0.5s
VSR smax
comp=N,40nm,0.6s
VSR smax
comp=E,30nm,0.6s
VSR smax
comp=Z,20nm,0.6s
VSR Storozhevoye 9.96 1 *e*P **Pn 08 26 04.1 +1.5**
PLOR Plostina 9.97 301 ⇓P **Pn 08 26 02.1 -0.7**
PLOR Plostina 9.97 301 ⇓*i*P **Pn 08 26 02.1 -0.7**
PLOR Plostina 9.97 301 P **Pn 08 26 02.1 -0.7**
MLR Muntele Rosu 10.29 299 Pn **Pn 08 26 06.8 -0.5**
comp=Z,1.1nm,0.3s,baz=314,slow=12,SNR=4.8
MLR Sn **Sn 08 27 59.8 -3.2**
comp=Z,1.8nm,0.3s,baz=306,slow=22,SNR=6.1
MLR Muntele Rosu 10.29 299 ⇑P **Pn 08 26 07.3 0.0**
MLR Muntele Rosu 10.29 299 ⇑*i*P **Pn 08 26 07.3 0.0**
MLR Muntele Rosu 10.29 299 P **Pn 08 26 07.3 0.0**
VOIR 10.88 297 ⇓P **Pn 08 26 14.2 -1.0**
VOIR S **Sn 08 28 11.4 -5.8**
VOIR 10.88 297 ⇓*i*P **Pn 08 26 14.2 -1.0**
VOIR 10.88 297 P **Pn 08 26 14.2 -1.0**
AKASG Malin Array Be 11.56 328 Pn **Pn 08 26 23.4 -1.2**
comp=Z,5.2nm,0.3s,baz=137,slow=14,SNR=16
AKASG Sn **Sn 08 28 23.2 -11**
comp=Z,3.9nm,0.3s,baz=139,slow=24,SNR=7.1
AKASG Malin Array Be 11.56 328 *i* P **Pn 08 26 23.3 -1.2**
AKASG pmax pmax
comp=Z,2.0nm,0.3s
AKASG Malin Array Be 11.56 328 Pn **Pn 08 26 23.4 -1.1**
AKBB Malin Array Si 11.56 328 *e*Pn **Pn 08 26 23.2 -1.4**
AKBB *e*Sn **Sn 08 28 24.0 -10**
AKBB Malin Array Si 11.56 328 *e*P **Pn 08 26 23.2 -1.3**
KIEV Kiev 11.56 328 *e*P **Pn 08 26 23.2 -1.3**
KIEV pmax pmax
comp=Z,7.0nm,0.6s
KIEV Kiev 11.56 328 *e*Pn **Pn 08 26 23.2 -1.3**
comp=Z,7.4nm,0.6s
KIEV Kiev 11.56 328 *e*P **Pn 08 26 23.2 -1.3**
comp=Z,7.0nm,0.6s
BURAR Bucovina Array 11.62 308 ⇑P **Pn 08 26 24.0 -1.4**
BURAR Bucovina Array 11.62 308 ⇑*i*P **Pn 08 26 24.0 -1.4**
BURAR Bucovina Array 11.62 308 ⇑P **Pn 08 26 24.0 -1.4**
BUR08 Bucovina Ar. S 11.64 308 *e*Pn **Pn 08 26 24.3 -1.4**
BUR08 Bucovina Ar. S 11.64 308 *e*Pn **Pn 08 26 24.3 -1.4**
EIL Elat 11.99 197 LR LR 08 31 33.5
comp=Z,249nm,18.4s,baz=94,slow=40
IDI Anoyia 12.48 246 LR LR 08 32 31.1
comp=Z,50nm,18.9s,baz=68,slow=43
LVV L'vov 13.43 315 *e*P **Pn 08 26 57.3 +7.2**
LVV MLR MLR
comp=N,2μm,12.0s
LVV MLR MLR
comp=E,2μm,12.0s
LVV MLR MLR
comp=Z,200nm,12.0s
OBN Obninsk 13.94 355 *i* P **Pn 08 26 56.4 -0.6**
OBN *e*S **Sn 08 29 27.2 -4.9**
OBN pmax pmax
comp=Z,7.0nm,0.5s
OBN Obninsk 13.94 355 *i* P **Pn 08 26 56.4 -0.6**
comp=Z,7.0nm,0.5s
PSZ Piszkesteto 15.03 303 *e*P **Pn 08 27 12.6 +0.7**
PSZ pmax pmax
comp=Z,5.0nm,0.6s
PSZ Piszkesteto 15.03 303 *e*P **Pn 08 27 12.6 +0.6**
comp=Z,4.5nm,0.6s
AKTK Aktyubinsk 16.16 49 Pn **Pn 08 27 25.8 -0.9**
AKTK Aktyubinsk 16.16 49 Pn **Pn 08 27 25.8 -0.9**
AKTO Aktyubinsk 16.16 49 Pn **Pn 08 27 25.8 -0.9**
comp=Z,0.3nm,0.3s,baz=256,slow=13,SNR=11
ABKAR Akbulak array 16.83 55 *e*P **Pn 08 27 36.6 +1.4**
comp=Z,2.6nm,0.5s
ABKAR Akbulak array 16.83 55 *e*P **Pn 08 27 36.6 +1.4**
comp=Z,2.6nm,0.5s
VSU Vasula 18.85 340 ⇓*e*P **Pn 08 28 00.0 -0.1**
VSU pmax pmax
comp=Z,21nm,1.1s
VSU Vasula 18.85 340 *e*P **Pn 08 28 00.0 -0.1**
comp=Z,21nm,1.1s
ARU Arti 19.86 33 *d i*P **Pn 08 28 10.5 -1.6**
ARU S **Sn 08 31 48.8 -6.6**
ARU pmax pmax
comp=Z,6.0nm,1.0s
ARU Arti 19.86 33 *e*P **Pn 08 28 12.8 +0.7**
comp=Z,12nm,0.2s
ARU Arti 19.86 33 *i* P **Pn 08 28 10.5 -1.6**
comp=Z,6.0nm,1.0s
CLL Collm 20.39 308 P **P 08 28 18.3 +1.8**
CLL Collm 20.39 308 *i* P **P 08 28 18.3 +1.8**
comp=Z,16nm,1.2s
CLL *e*pP 08 28 20.0
CLL Collm 20.39 308 P **P 08 28 18.3 +1.8**
SVE Sverdlovsk 20.99 35 ⇓*e*P **P 08 28 24.2 +1.3**
SVE pmax pmax
comp=Z,39nm,0.6s
SVE Sverdlovsk 20.99 35 *e*P **P 08 28 24.2 +1.3**
comp=Z,39nm,0.6s
SOKR Solikamsk 21.47 25 *e*P **P 08 28 25.8 -2.3**
SOKR pmax pmax
comp=Z,10.0nm,0.9s,mb4.2
DAVOX Davos/Dischmat 21.48 295 P **P 08 28 27.9 -0.3**
comp=Z,4.0nm,0.7s,mb3.9,baz=320,slow=19,SNR=4.4
DAVOX Davos/Dischmat 21.48 295 P **P 08 28 27.9 -0.3**
DAVOX Davos/Dischmat 21.48 295 P **P 08 28 27.9 -0.4**
FINES FINESS Array B 21.64 343 P **P 08 28 30.6 +0.7**
comp=Z,6.6nm,0.6s,mb4.2,baz=139,slow=11,SNR=27
FINES S **S 08 32 18.4 -11**
comp=Z,2.1nm,0.7s,baz=161,slow=18,SNR=3.0
FINES FINESS Array B 21.64 343 P **P 08 28 30.6 +0.7**
JOF Joensuu 22.14 351 *e*p **P 08 28 35.8 +0.5**
comp=Z,8.7nm,0.6s,mb4.4
JOF Joensuu 22.14 351 *e*p **P 08 28 35.8 +0.5**
comp=Z,8.7nm,0.6s,mb4.4
JOF Joensuu 22.14 351 *e*P **P 08 28 35.8 +0.5**
KAF Kangasniemi 22.20 344 *e*P **P 08 28 36.1 +0.3**
KAF pmax pmax
comp=Z,8.0nm,0.7s,mb4.3
KAF Kangasniemi 22.20 344 *e*p **P 08 28 36.1 +0.3**
comp=Z,8.2nm,0.7s,mb4.3
KAF Kangasniemi 22.20 344 *e*p **P 08 28 36.1 +0.3**
comp=Z,8.2nm,0.7s,mb4.3
KAF Kangasniemi 22.20 344 *e*P **P 08 28 36.1 +0.3**
comp=Z,8.2nm,0.7s,mb4.3
MBDF Montbardon 23.63 289 *e*P **P 08 28 51.5 +0.4**
comp=Z,15nm,0.6s,mb4.3
MBDF Montbardon 23.63 289 *e*P **P 08 28 51.5 +0.4**
MBDF pmax pmax
comp=Z,7.0nm,0.6s,mb4.3
MBDF Montbardon 23.63 289 *e*P **P 08 28 51.5 +0.4**
comp=Z,7.4nm,0.6s,mb4.3
MBDF Montbardon 23.63 289 *e*P **P 08 28 51.5 +0.4**
comp=Z,7.4nm,0.6s,mb4.3
KEST Kesra 23.67 266 P **P 08 28 51.7 +0.2**
comp=Z,3.4nm,0.7s,mb3.9,baz=348,slow=2.3,SNR=11
KEST Kesra 23.67 266 *e*P **P 08 28 52.2 +0.7**
KEST Kesra 23.67 266 *e*P **P 08 28 52.2 +0.7**
BNI Bardonecchia 23.68 290 *e*P **P 08 28 53.1 +1.6**
BNI pmax pmax
comp=Z,7.0nm,0.8s,mb4.1
BNI Bardonecchia 23.68 290 *e*P **P 08 28 53.1 +1.5**
comp=Z,6.6nm,0.8s,mb4.1
BNI Bardonecchia 23.68 290 *e*P **P 08 28 53.1 +1.6**
comp=Z,6.6nm,0.8s,mb4.1
CABF La Chapelle 24.08 294 *e*P **P 08 28 55.0 -0.1**
comp=Z,17nm,0.8s,mb4.2
CABF La Chapelle 24.08 294 *e*P **P 08 28 55.0 -0.1**
CABF pmax pmax
comp=Z,9.0nm,0.8s,mb4.2
CABF La Chapelle 24.08 294 *e*P **P 08 28 55.0 -0.1**
comp=Z,8.6nm,0.8s,mb4.2
CABF La Chapelle 24.08 294 *e*P **P 08 28 55.0 -0.1**
comp=Z,8.6nm,0.8s,mb4.2
BRVK Borovoye 24.21 50 ⇑*e*P **P 08 28 56.9 +0.7**
BRVK pmax pmax
comp=Z,4.0nm,1.0s,mb3.8
BRVK MLR MLR
comp=Z,58nm,17.0s,MS3.1
BRVK Borovoye 24.21 50 *e*P **P 08 28 56.4 +0.1**
comp=Z,5.5nm,0.9s,mb4.0
BRVK Borovoye 24.21 50 *e*P **P 08 28 56.4 +0.2**
comp=Z,5.5nm,0.9s,mb4.0
ORIF Oris-en-Rattie 24.25 290 *e*P **P 08 28 57.5 +0.7**
comp=Z,15nm,0.9s,mb4.1
ORIF Oris-en-Rattie 24.25 290 *e*P **P 08 28 57.5 +0.7**
ORIF pmax pmax
comp=Z,7.0nm,0.9s,mb4.1
ORIF Oris-en-Rattie 24.25 290 *e*P **P 08 28 57.5 +0.7**
comp=Z,7.4nm,0.9s,mb4.1
ORIF Oris-en-Rattie 24.25 290 *e*P **P 08 28 57.5 +0.7**
comp=Z,7.4nm,0.9s,mb4.1
BVAR Borovoye Array 24.26 50 P **P 08 28 56.5 -0.2**
comp=Z,1.1nm,0.6s,mb3.5,baz=246,slow=7.4,SNR=7.2
BVAR Borovoye Array 24.26 50 P **P 08 28 56.5 -0.2**
HFS Hagfors 24.45 329 P **P 08 28 56.7 -1.6**
comp=Z,4.0nm,0.6s,mb4.1,baz=132,slow=10,SNR=15
HFS Hagfors 24.45 329 P **P 08 28 56.7 -1.6**
SMRF Simiane la Rot 24.54 288 *e*P **P 08 28 59.8 +0.4**
comp=Z,23nm,0.9s,mb4.4
SMRF Simiane la Rot 24.54 288 *e*P **P 08 28 59.8 +0.4**
comp=Z,23nm,0.9s,mb4.7
SMRF Simiane la Rot 24.54 288 *e*P **P 08 28 59.8 +0.4**
comp=Z,23nm,0.9s,mb4.7
LOR Lormes 25.61 295 *e*P **P 08 29 08.8 -0.3**
LOR Lormes 25.61 295 *e*P **P 08 29 08.8 -0.3**
SMF Signal de Mont 25.62 294 *e*P **P 08 29 09.4 +0.2**
comp=Z,16nm,0.9s,mb4.3
SMF Signal de Mont 25.62 294 *e*P **P 08 29 09.4 +0.2**
SMF pmax pmax
comp=Z,8.0nm,0.9s,mb4.2
SMF Signal de Mont 25.62 294 *e*P **P 08 29 09.4 +0.2**
comp=Z,8.2nm,0.9s,mb4.3
SMF Signal de Mont 25.62 294 *e*P **P 08 29 09.4 +0.2**
comp=Z,8.2nm,0.9s,mb4.3
AVF Avril sur Loir 25.96 294 *e*P **P 08 29 12.8 +0.6**
AVF Avril sur Loir 25.96 294 *e*P **P 08 29 12.8 +0.6**
NOA NORSAR Array B 25.97 329 LR LR 08 41 58.2
comp=Z,24nm,18.0s,MS2.8,baz=0.0,slow=42
TCF Toulx Ste Croi 26.76 293 *e*P **P 08 29 21.4 +1.9**
comp=Z,12nm,0.9s,mb4.1
TCF Toulx Ste Croi 26.76 293 *e*P **P 08 29 21.4 +1.9**
TCF pmax pmax
comp=Z,6.0nm,0.9s,mb4.1
TCF Toulx Ste Croi 26.76 293 *e*P **P 08 29 21.4 +1.9**
comp=Z,5.8nm,0.9s,mb4.1
TCF Toulx Ste Croi 26.76 293 *e*P **P 08 29 21.4 +1.9**
comp=Z,5.8nm,0.9s,mb4.1
KURK Kurchatov 28.90 57 P **P 08 29 38.5 -0.1**
comp=Z,7.8nm,0.6s,mb4.6,baz=274,slow=9.2,SNR=25
KURK Kurchatov 28.90 57 *d i*P **P 08 29 38.8 +0.3**
KURK pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
KURK MLR MLR
comp=Z,88nm,16.0s,MS3.5
KURK Kurchatov 28.90 57 *e*P **P 08 29 39.0 +0.5**
comp=Z,6.9nm,0.6s,mb4.6
KURK Kurchatov 28.90 57 *e*P **P 08 29 39.0 +0.5**
comp=Z,6.9nm,0.6s,mb4.6
ARCES ARCESS Array B 29.19 350 P **P 08 29 40.3 -0.6**
comp=Z,1.8nm,0.9s,mb3.8,baz=164,slow=9.6,SNR=6.1
ARCES LR LR 08 43 38.7
comp=Z,58nm,20.1s,MS3.2,baz=119,slow=41
ARCES ARCESS Array B 29.19 350 P **P 08 29 40.3 -0.6**
ATD Arta Tunnel 29.83 172 LR LR 08 41 48.7
comp=Z,114nm,18.3s,MS3.5,baz=269,slow=37
MK31 Makanchi Array 31.41 65 *e*P **P 08 30 01.1 +0.3**
MK31 Makanchi Array 31.41 65 *e*P **P 08 30 01.1 +0.3**
MKAR Makanchi Array 31.41 65 P **P 08 30 01.1 +0.3**
comp=Z,3.2nm,0.5s,mb4.4,baz=279,slow=7.8,SNR=23
MKAR Makanchi Array 31.41 65 *c e*P **P 08 30 01.3 +0.5**
MKAR pmax pmax
comp=Z,3.0nm,0.5s
MKAR Makanchi Array 31.41 65 *e*P **P 08 30 01.3 +0.5**
comp=Z,3.0nm,0.5s,mb4.4
TAM Tamanrasset 33.45 247 *e*P **P 08 30 18.6 -0.3**
TAM pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
TAM Tamanrasset 33.45 247 *e*P **P 08 30 18.6 -0.3**
comp=Z,4.4nm,1.2s,mb4.3
TAM Tamanrasset 33.45 247 *e*P **P 08 30 18.6 -0.3**
comp=Z,4.4nm,1.2s,mb4.3
MDT Midelt 35.40 270 P **P 08 30 34.9 -0.8**
comp=Z,1.4nm,0.8s,mb3.9,baz=67,slow=6.1,SNR=4.1
MDT Midelt 35.40 270 P **P 08 30 34.9 -0.8**
WMQ Urumqi 35.67 69 *e*P **P 08 30 39.0 +1.1**
SPITS Spitsbergen Ar 38.14 353 P **P 08 30 60.0 +1.4**
comp=Z,3.7nm,0.7s,mb4.2,baz=160,slow=9.8,SNR=7.6
SPITS Spitsbergen Ar 38.14 353 P **P 08 31 00.0 +1.5**
TORD Torodi Ar. Bea 42.79 240 P **P 08 31 35.3 -2.4**
comp=Z,1.9nm,0.7s,mb3.9,baz=36,slow=6.9,SNR=15
SUMG Summit 47.44 336 *e*P **P 08 32 15.4 +1.4**
comp=Z,7.4nm,1.2s,mb4.5
SUMG Summit 47.44 336 *e*P **P 08 32 15.4 +1.4**
comp=Z,7.4nm,1.2s,mb4.5
ULN Ulaanbaatar 47.61 58 *e*P **P 08 32 16.2 +0.6**
ULN pmax pmax
comp=Z,1.0nm,0.6s,mb4.0
ULN Ulaanbaatar 47.61 58 *e*P **P 08 32 16.2 +0.6**
comp=Z,1.4nm,0.6s,mb4.2
ULN Ulaanbaatar 47.61 58 *e*P **P 08 32 16.2 +0.6**
comp=Z,1.4nm,0.6s,mb4.2
CD2 Chengdu 52.37 79 *e*P **P 08 32 52.3 +0.2**
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
CD2 pmax pmax
comp=Z,30nm,4.2s
HHC Hu-ho-hao-te 53.28 65 *e*P **P 08 32 58.8 +0.2**
HHC PcP PcP 08 34 06.9 +0.6
HHC PP PP 08 35 00.8 +2.3
HHC PcS PcS 08 38 03.8 -1.3
HHC S **S 08 40 27.8 -2.6**
HHC ScS ScS 08 42 44.9 -3.9
HHC SS SS 08 44 06.9 -2.8
HHC pmax pmax
comp=Z,16nm,0.9s,mb5.0
HHC pmax pmax
comp=Z,65nm,6.3s
HHC LR LR
comp=N,130nm,13.2s,MS4.2
HHC LR LR
comp=E,93nm,14.4s,MS4.2
HHC LR LR
comp=Z,75nm,15.6s,MS3.9
KMI Kunming 54.68 86 P **P 08 33 10.5 +1.4**
KMI PP PP 08 35 14.3 +2.8
KMI S **S 08 40 48.0 -1.8**
KMI SS SS 08 44 30.4 -2.1
KMI pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
KMI pmax pmax
comp=Z,46nm,4.4s
KMI LR LR
comp=N,120nm,16.4s
KMI LR LR
comp=E,110nm,23.6s
KMI LR LR
comp=Z,120nm,18.5s,MS4.0
CMAR Chiang Mai Arr 55.70 95 P **P 08 33 14.8 -1.7**
comp=Z,0.9nm,0.4s,mb4.2,baz=300,slow=9.0,SNR=6.5
CMAR Chiang Mai Arr 55.70 95 P **P 08 33 14.8 -1.7**
BJI Beijing 56.77 64 P **P 08 33 18.3 -5.6**
BJI pmax pmax
comp=Z,9.0nm,0.5s,mb5.1
GYA Guiyang 56.89 82 P **P 08 33 25.9 +1.0**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
CN2 Changchun 60.95 56 *e*P **P 08 33 54.1 +1.2**
CN2 *e*S **S 08 42 09.9 -1.6**
CN2 pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
CN2 pmax pmax
comp=Z,200nm,4.0s
NJ2 Nanjing 62.74 70 *e*P **P 08 34 07.3 +2.2**
NJ2 pmax pmax
comp=Z,20nm,0.8s,mb5.3
MDJ Mudanjiang 63.07 53 P **P 08 34 05.8 -1.3**
MDJ pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
MDJ pmax pmax
comp=Z,36nm,3.0s
SEY Seymchan 63.48 28 ⇑*e*P **P 08 34 09.3 -0.2**
SEY Seymchan 63.48 28 *e*P **P 08 34 09.3 -0.2**
BILL Bilibino 64.12 19 ⇓*e*P **P 08 34 14.1 +0.4**
BILL *e* 08 34 47.2
BILL *e* 08 36 32.9
BILL pmax pmax
comp=Z,3.0nm,1.2s,mb4.2
BILL Bilibino 64.12 19 *e*P **P 08 34 14.1 +0.4**
comp=Z,3.0nm,1.2s,mb4.2
BILL Bilibino 64.12 19 *e*PcP PcP 08 34 47.2 -1.6
KSRS Korea Array 65.95 61 P **P 08 34 25.0 -1.1**
comp=Z,2.1nm,0.8s,mb4.2,baz=302,slow=6.2,SNR=11
KSRS Korea Array 65.95 61 P **P 08 34 25.0 -1.1**
KSRS pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
KSRS Korea Array 65.95 61 P **P 08 34 25.0 -1.1**
comp=Z,2.0nm,0.8s,mb4.2
COLD Coldfoot 71.62 4 *e*P **P 08 35 01.6 +0.8**
comp=Z,3.6nm,0.9s,mb4.3
COLD Coldfoot 71.62 4 *e*P **P 08 35 01.6 +0.7**
comp=Z,3.6nm,0.9s,mb4.3
COLA College 74.07 3 *e*P **P 08 35 15.8 +0.3**
COLA pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
COLA College 74.07 3 *e*P **P 08 35 15.8 +0.3**
comp=Z,5.1nm,0.8s,mb4.5
COLA College 74.07 3 *e*P **P 08 35 15.8 +0.3**
comp=Z,5.1nm,0.8s,mb4.5
EGAK Eagle 74.30 0 *e*P **P 08 35 17.2 +0.4**
comp=Z,2.3nm,0.6s,mb4.3
EGAK Eagle 74.30 0 *e*P **P 08 35 17.2 +0.4**
comp=Z,2.3nm,0.6s,mb4.3
YKA Yellowknife Ar 74.41 348 P **P 08 35 17.2 -0.3**
comp=Z,2.2nm,0.8s,mb4.2,baz=18,slow=6.2,SNR=9.9
YKA Yellowknife Ar 74.41 348 P **P 08 35 17.2 -0.3**

YKA				pmax	pmax			
	comp=Z,2.0nm,0.8s							
YKA	**Yellowknife Ar**	**74.41**	**348**	P	**P**	**08 35 17.2**	**-0.3**	
	comp=Z,2.0nm,0.8s,mb4.1							
KTH	**Kantishna Hill**	**75.24**	**5**	*e*P	**P**	**08 35 21.8**	**-0.5**	
	comp=Z,4.5nm,1.0s,mb4.3							
KTH	**Kantishna Hill**	**75.24**	**5**	*e*P	**P**	**08 35 21.8**	**-0.5**	
	comp=Z,4.5nm,1.0s,mb4.3							
MIV	**Mineville/With**	**75.61**	**317**	*e*P	**P**	**08 35 27.0**	**+2.2**	
MIV	**Mineville/With**	**75.61**	**317**	*e*P	**P**	**08 35 27.0**	**+2.3**	
MENT	**Mentasta**	**76.12**	**1**	*e*P	**P**	**08 35 27.8**	**+0.4**	
MENT	**Mentasta**	**76.12**	**1**	*e*P	**P**	**08 35 27.8**	**+0.5**	
ATTU	**Attu Island--F**	**78.26**	**26**	P	**P**	**08 35 39.1**	**-0.4**	
	comp=Z,8.0nm,0.7s,mb4.8							
FX1	**Attu Island--F**	**78.26**	**26**	P	**P**	**08 35 39.1**	**-0.5**	
	comp=Z,7.8nm,0.7s,mb4.8,baz=308,slow=3.0,SNR=20							
FX1	**Attu Island--F**	**78.26**	**26**	P	**P**	**08 35 39.1**	**-0.4**	
FX1				pmax	pmax			
	comp=Z,8.0nm,0.7s							
FFC	**Flin Flon**	**78.69**	**338**	*i* P	**P**	**08 35 43.1**	**+1.3**	
FFC	**Flin Flon**	**78.69**	**338**	*i* P	**P**	**08 35 43.1**	**+1.3**	
KDAK	**Kodiak Island**	**80.85**	**6**	*i* P	**P**	**08 35 53.8**	**+0.3**	
KDAK	**Kodiak Island**	**80.85**	**6**	*i* P	**P**	**08 35 53.8**	**+0.3**	
NEW	**Newport**	**88.35**	**344**	*e*P	**P**	**08 36 31.8**	**+0.2**	
NEW				pmax	pmax			
	comp=Z,4.0nm,0.8s							
NEW	**Newport**	**88.35**	**344**	*e*P	**P**	**08 36 31.8**	**+0.2**	
	comp=Z,4.3nm,0.8s,mb4.7							
NEW	**Newport**	**88.35**	**344**	*e*P	**P**	**08 36 31.8**	**+0.2**	
	comp=Z,4.3nm,0.8s,mb4.7							
SLMT	**Seeley Lake**	**88.51**	**342**	*e*P	**P**	**08 36 32.6**	**+0.2**	
SLMT	**Seeley Lake**	**88.51**	**342**	*e*P	**P**	**08 36 32.6**	**+0.2**	
PDAR	**Pinedale Array**	**91.62**	**337**	P	**P**	**08 36 46.1**	**-0.9**	
	comp=Z,0.5nm,0.6s,mb4.0,baz=45,slow=4.4,SNR=5.0							

*IDC **20** 08:39:35.0±0.8, 32°.22N×104°.66E, h0km, mb3.9/10, mb1 3.9/11, mb1mx3.8/26, mbtmp3.8/11, ML3.4/1, Error ellipse: s-maj=43.0km s-min=16.8km az=52.0*
*NEIC **20** 08:39:36.9±0.5, 32°.03N×104°.28E, h10km, mb3.9/1, Error ellipse: s-maj=20.9km s-min=8.5km az=50.0*
*BJI **20** 08:39:38.3, 32°.29N×104°.75E, h15km, ML3.6/12, Ms3.5/2, Ms7 3.6/1*

ISC 20 08:39:35.7±0.7, 32°.35N±0°.03×104°.78E±0°.04, h4km±5km, n24, σ1§04/36, mb3.9/11, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.68**	**212**	Pn	**Pn**	**08 40 05.9**	**0.0**
CD2				Pg	**Pg**	**08 40 09.0**	**+1.1**
CD2				Sn	**Sn**	**08 40 27.8**	**0.0**
CD2				Sg	**Sg**	**08 40 29.6**	**-0.1**
CD2				smax			
	comp=N,7μm,0.7s						
CD2				smax			
	comp=E,3μm,0.5s						
LZH	**Lanzhou**	**3.81**	**348**	*e*Pn	**Pb**	**08 40 40.8**	**-2.6**
LZH				Pg	**Pg**	**08 40 49.3**	**+0.7**
LZH				Sn	**Sb**	**08 41 28.3**	**-1.6**
LZH				Sg	**Sg**	**08 41 38.3**	**+0.3**
LZH				smax			
	comp=N,270nm,0.6s						
LZH				smax			
	comp=E,340nm,0.7s						
LZH				LR	LR		
	comp=E,320nm,5.6s						
LZH				LR	LR		
	comp=Z,540nm,6.4s						
XAN	**Xi'an**	**3.86**	**63**	Pn	**Pn**	**08 40 37.8**	**+2.0**
XAN				Pg	**Pg**	**08 40 48.6**	**-1.0**
XAN				Sn	**Sn**	**08 41 24.9**	**+3.3**
XAN				Sg	**Sg**	**08 41 38.8**	**-0.8**
XAN				smax			
	comp=N,190nm,0.7s						
XAN				smax			
	comp=E,73nm,0.7s						
ENH	**Enshi**	**4.53**	**116**	*e*Pn	**Pn**	**08 40 50.5**	**+5.4**
ENH				*e*Pg	**Pg**	**08 41 01.4**	**-1.2**
ENH				*e*Sg	**Sg**	**08 42 03.3**	**+2.1**
GYA	**Guiyang**	**6.10**	**164**	Pg	**Pn**	**08 41 06.4**	**-0.2**
GYA				Sg	**Sn**	**08 42 14.3**	**-2.5**
GYA				smax			
	comp=N,70nm,0.7s						
GYA				smax			
	comp=E,70nm,0.8s						
GTA	**Gaotai**	**8.11**	**332**	*e*P	**Pg**	**08 42 10.8**	**-0.3**
GTA				pP		08 42 15.1	
GTA				sP		08 42 17.6	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
SONM	**Songino Array**	**15.51**	**4**	Pn	**Pn**	**08 43 20.1**	**+4.9**
	comp=Z,0.1nm,0.3s,baz=172,slow=11,SNR=2.4						
KSRS	**Korea Array**	**19.63**	**69**	P	**Pn**	**08 44 06.8**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=242,slow=11,SNR=2.4						
MK31	**Makanchi Array**	**22.45**	**316**	*e*P	**P**	**08 44 36.6**	**+1.1**
MKAR	**Makanchi Array**	**22.45**	**316**	P	**P**	**08 44 35.4**	**-0.1**
	comp=Z,0.2nm,0.4s,mb2.9,baz=116,slow=11,SNR=4.8						
ZALV	**Zalesovo Beam**	**25.87**	**332**	P	**P**	**08 45 09.3**	**+1.1**
	comp=Z,1.1nm,0.5s,mb3.6,baz=126,slow=10,SNR=4.8						
ZALV	**Zalesovo Beam**	**25.87**	**332**	P	**P**	**08 45 09.3**	**+1.1**
KURK	**Kurchatov**	**26.61**	**321**	P	**P**	**08 45 15.8**	**+0.7**
	comp=Z,0.7nm,0.8s,mb3.2,baz=128,slow=9.0,SNR=4.9						
KURK	**Kurchatov**	**26.61**	**321**	P	**P**	**08 45 15.8**	**+0.7**
ARCES	**ARCESS Array B**	**56.36**	**335**	P	**P**	**08 49 17.6**	**+0.1**
	comp=Z,1.1nm,0.5s,mb4.1,baz=82,slow=8.8,SNR=7.2						
FINES	**FINESS Array B**	**56.86**	**326**	P	**P**	**08 49 21.6**	**+0.4**
	comp=Z,1.7nm,0.4s,mb4.4,baz=91,slow=7.5,SNR=21						
WRAB	**Tennant Creek**	**59.19**	**147**	*e*P	**P**	**08 49 37.3**	**-0.7**
	comp=Z,0.6nm,0.6s,mb3.8						
WRA	**Warramunga Arr**	**59.20**	**147**	P	**P**	**08 49 37.2**	**-0.8**
	comp=Z,1.5nm,0.5s,mb4.3,baz=341,slow=7.4,SNR=6.2						
ASAR	**Alice Springs**	**62.27**	**150**	P	**P**	**08 49 58.6**	**-0.2**
	comp=Z,0.4nm,0.4s,mb3.9,baz=335,slow=6.3,SNR=8.1						
HFS	**Hagfors**	**63.06**	**326**	P	**P**	**08 50 03.7**	**-0.1**
	comp=Z,1.0nm,0.4s,mb4.3,baz=94,slow=8.9,SNR=5.3						
NB2	**NORSAR Subarra**	**63.92**	**327**	P	**P**	**08 50 08.9**	**-0.6**
	comp=Z,0.7nm,0.5s,mb4.0,baz=72,slow=6.5						
NOA	**NORSAR Array B**	**63.92**	**327**	P	**P**	**08 50 09.2**	**-0.2**
	comp=Z,1.2nm,0.6s,mb4.1,baz=72,slow=6.8,SNR=3.9						
TORD	**Torodi Ar. Bea**	**93.80**	**288**	P	**P**	**08 52 55.1**	**+0.5**
	comp=Z,0.4nm,0.9s,mb3.9,baz=90,slow=1.4,SNR=2.9						
TORD	**Torodi Ar. Bea**	**93.80**	**288**	P	**P**	**08 52 55.1**	**+0.5**

*FUNV **20** 08:39:50.9, 10°.42N×62°.35W, h3km, MW3.0*
*ISCJB **20** 08:39:50.1±0.8, 10°.41N±0°.04×62°.33W±0°.02, h15km±6km, Error ellipse: s-maj=6.5km s-min=3.5km az=163.8*
*TRN **20** 08:39:53.6, 10°.33N×62°.05W, h3km, MD2.9*

ISC 20 08:39:49.6±0.6, 10°.41N±0°.04×62°.31W±0°.02, h3km±5km, n20, σ1§10/31, 1C-1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.26**	**20**	*e*P	**Pg**	**08 39 55.9**	**+1.3**
GUIV				*e*S	**Sg**	**08 40 00.4**	**+2.4**
TCE	**Chacachacare**	**0.62**	**62**	*e*P	**Pg**	**08 40 01.8**	**+0.2**
TCE				*e*S	**Sg**	**08 40 10.1**	**+0.5**
GUNV	**Guanoco**	**0.66**	**249**	*i* P	**Pg**	**08 40 02.5**	**+0.1**
GUNV				*e*S	**Sg**	**08 40 12.8**	**+1.8**
TRN	**Trinidad (W)**	**0.93**	**75**	*e*P	**Pg**	**08 40 07.3**	**-0.1**
TRN				*e*S	**Sg**	**08 40 17.1**	**-2.3**
CRUV	**Carupano**	**0.95**	**287**	*e*P	**Pg**	**08 40 07.1**	**-0.7**
CRUV				*e*S	**Sg**	**08 40 18.8**	**-1.3**
TBH	**Brigand Hill**	**1.23**	**86**	*e*P	**Pg**	**08 40 12.9**	**-0.3**
TBH				*e*S	**Sg**	**08 40 26.7**	**-2.4**
ITEV	**Isla Los Testi**	**1.24**	**320**	*e*P	**Pg**	**08 40 12.8**	**-0.6**
ITEV				*e*S	**Sg**	**08 40 29.5**	**0.0**
TPR	**Prospect**	**1.70**	**63**	*e*P	**Pn**	**08 40 22.0**	**+1.9**
TPR				*e*S	**Sn**	**08 40 42.1**	**-0.3**
ORIV	**Oritupano**	**1.71**	**219**	*e*P	**Pn**	**08 40 20.5**	**+0.2**
ORIV				*e*S	**Sn**	**08 40 44.1**	**+1.4**
BOT	**Bacolet**	**1.74**	**64**	*e*P	**Pn**	**08 40 23.0**	**+2.3**
BOT				*e*S	**Sn**	**08 40 42.8**	**-0.7**
PCRV	**Puerto La Cruz**	**2.30**	**265**	*e*P	**Pn**	**08 40 27.7**	**-0.7**
RIOV	**Rio Grande**	**2.37**	**168**	*e*P	**Pn**	**08 40 30.3**	**+0.9**
RIOV				*e*S	**Sn**	**08 40 58.7**	**-0.3**
GURV	**El Guri**	**2.74**	**196**	*e*P	**Pn**	**08 40 35.3**	**+0.9**
CUPV	**Cœpira**	**3.44**	**265**	*e*P	**Pn**	**08 40 44.3**	**+0.3**
BIRV	**Birongo**	**3.89**	**271**	*e*P	**Pn**	**08 40 50.1**	**-0.2**
MERV	**Las Mercedes**	**4.09**	**254**	*e*P	**Pn**	**08 40 52.5**	**-0.5**
CAOV	**Caicara del Or**	**5.00**	**233**	*e*P	**Pn**	**08 41 05.0**	**-0.7**
TURV	**Turiamo**	**5.44**	**271**	*e*P	**Pn**	**08 41 10.7**	**-0.9**
BAUV	**El Baul**	**5.83**	**256**	*e*P	**Pn**	**08 41 16.4**	**-0.6**
MAPV	**Macapo**	**6.08**	**265**	*e*P	**Pn**	**08 41 18.8**	**-1.5**

*IDC **20** 08:42:39.8±0.7, 31°.86N×104°.29E, h0km, mb4.0/15, mb1 4.1/16, mb1mx4.0/28, mbtmp4.0/16, ML3.4/1, MS2.8/1, Ms1 2.8/1, ms1mx2.1/28, Error ellipse: s-maj=29.7km s-min=13.6km az=53.0*
*NEIC **20** 08:42:42.4±0.5, 32°.02N×104°.41E, h10km, mb4.2/6, Error ellipse: s-maj=15.0km s-min=8.7km az=55.0*
*ISCJB **20** 08:42:42.6±1.1, 31°.86N±0°.03×104°.43E±0°.07, h32km±8km, mb4.0/20, Error ellipse: s-maj=9.7km s-min=5.5km az=169.2*
*BJI **20** 08:42:43.3, 31°.97N×104°.33E, h15km, mB4.6/2, mb3.9/2, ML3.8/14, Ms3.7/5, Ms7 3.5/5*

ISC 20 08:42:42.4±0.9, 31°.85N±0°.03×104°.29E±0°.04, h14km±6km, n37, σ0§96/45, mb4.0/20, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.04**	**206**	Pg	**Pg**	**08 43 02.0**	**-0.4**
CD2				Sg	**Sg**	**08 43 17.3**	**+1.3**
CD2				smax			
	comp=N,4μm,0.6s						
CD2				smax			
	comp=E,9μm,0.5s						
LZH	**Lanzhou**	**4.25**	**355**	*e*Pn	**Pn**	**08 43 49.8**	**+3.2**
LZH				Pg	**Pb**	**08 43 55.8**	**-1.0**
LZH				Sn	**Sn**	**08 44 35.9**	**-0.1**
LZH				Sg	**Sb**	**08 44 48.3**	**+0.4**
LZH				smax			
	comp=N,120nm,0.7s						
LZH				smax			
	comp=E,200nm,0.9s						
LZH				LR	LR		
	comp=E,710nm,5.8s						
LZH				LR	LR		
	comp=Z,770nm,6.8s						
XAN	**Xi'an**	**4.46**	**59**	Pn	**Pb**	**08 43 56.8**	**-3.7**
XAN				Pg	**Pg**	**08 44 07.6**	**-0.3**
XAN				Sn	**Sn**	**08 44 42.8**	**+1.5**
XAN				Sg	**Sb**	**08 44 55.8**	**+1.6**
XAN				smax			
	comp=N,180nm,0.8s						
XAN				smax			
	comp=E,88nm,0.8s						
ENH	**Enshi**	**4.72**	**108**	*e*Pn	**Pn**	**08 43 55.4**	**+2.2**
ENH				*e*Pg	**Pg**	**08 44 08.8**	**-4.1**
ENH				*e*Sg	**Sg**	**08 45 13.0**	**-1.1**
GYA	**Guiyang**	**5.75**	**158**	Pg	**Pn**	**08 44 08.1**	**+0.8**
GYA				Sg	**Sn**	**08 45 12.4**	**-0.8**
GYA				smax			
	comp=N,180nm,0.7s						
GYA				smax			
	comp=E,240nm,0.8s						
CMAR	**Chiang Mai Arr**	**14.18**	**201**	Pn	**Pn**	**08 46 08.8**	**+6.0**
	comp=E,1.1nm,0.3s,baz=8.0,slow=8.6,SNR=15						
SONM	**Songino Array**	**16.05**	**5**	Pn	**Pn**	**08 46 27.5**	**0.0**
	comp=E,0.1nm,0.3s,baz=185,slow=14,SNR=4.4						
KSRS	**Korea Array**	**20.21**	**67**	P	**P**	**08 47 16.2**	**-0.5**
	comp=E,0.4nm,0.3s,baz=339,slow=43,SNR=5.2						
MK31	**Makanchi Array**	**22.53**	**318**	*e*P	**P**	**08 47 42.3**	**+0.7**
MKAR	**Makanchi Array**	**22.53**	**318**	P	**P**	**08 47 42.2**	**+0.6**
	comp=E,4.0nm,0.8s,mb3.9,baz=106,slow=13,SNR=25						
MKAR	**Makanchi Array**	**22.53**	**318**	P	**P**	**08 47 42.2**	**+0.5**
KSH	**Kashi**	**24.18**	**296**	*e*P	**P**	**08 48 02.1**	**+3.9**
KSH				pP		08 48 06.6	
KSH				sP	sP	08 48 09.0	+4.8
KSH				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb3.9						
KSH				pmax	pmax		
	comp=Z,100nm,7.4s						
KSH				LR	LR		
	comp=N,58nm,5.4s						
KSH				LR	LR		
	comp=E,95nm,8.2s						
KSH				LR	LR		
	comp=Z,110nm,8.9s						
TKM2	**Tokmak 2**	**25.22**	**304**	*e*P	**P**	**08 48 09.7**	**+2.0**
	comp=Z,2.5nm,0.7s,mb3.9						
UCH	**Uchtor**	**25.81**	**302**	*e*P	**P**	**08 48 14.2**	**+1.1**
	comp=Z,6.4nm,1.1s,mb4.1						
AAK	**Ala-Archa**	**25.93**	**303**	LR	LR	08 59 15.2	
	comp=Z,19nm,19.4s,baz=36,slow=38						
ZALV	**Zalesovo Beam**	**26.13**	**333**	P	**P**	**08 48 15.7**	**-0.1**
	comp=Z,2.9nm,0.7s,mb3.9,baz=136,slow=9.9,SNR=12						
KURK	**Kurchatov**	**26.76**	**322**	P	**P**	**08 48 19.7**	**-1.7**
	comp=Z,2.7nm,0.7s,mb3.9,baz=123,slow=9.4,SNR=19						
KURK	**Kurchatov**	**26.76**	**322**	*e*P	**P**	**08 48 20.1**	**-1.4**
	comp=Z,3.3nm,0.9s,mb3.9						
BVAR	**Borovoye Array**	**32.31**	**321**	P	**P**	**08 49 10.6**	**-0.2**
	comp=Z,0.5nm,0.4s,mb3.7,baz=96,slow=7.6,SNR=5.7						
AKTK	**Aktyubinsk**	**38.75**	**312**	P	**P**	**08 50 05.8**	**-0.3**
AKTO	**Aktyubinsk**	**38.75**	**312**	P	**P**	**08 50 05.8**	**-0.3**
	comp=Z,1.1nm,0.6s,mb3.8,baz=84,slow=11,SNR=5.2						
ARU	**Arti**	**39.95**	**322**	*e*P	**P**	**08 50 15.8**	**-0.2**
	comp=Z,10nm,0.6s,mb4.7						
PETK	**Petropavlovsk-**	**43.55**	**45**	P	**P**	**08 50 44.8**	**-0.7**
	comp=Z,1.4nm,0.6s,mb3.9,baz=280,slow=2.7,SNR=3.9						
JOF	**Joensuu**	**54.49**	**327**	*ep*	**P**	**08 52 07.9**	**-1.3**
	comp=Z,1.2nm,0.5s,mb4.1						
ARCES	**ARCESS Array B**	**56.65**	**336**	P	**P**	**08 52 24.6**	**0.0**
	comp=Z,0.6nm,0.4s,mb4.0,baz=72,slow=7.8,SNR=4.9						
FINES	**FINESS Array B**	**57.05**	**326**	P	**P**	**08 52 27.1**	**-0.4**
	comp=Z,1.7nm,0.5s,mb4.3,baz=82,slow=8.1,SNR=16						
SPITS	**Spitsbergen Ar**	**58.66**	**346**	P	**P**	**08 52 38.0**	**-0.7**
	comp=Z,0.5nm,0.4s,mb3.9,baz=96,slow=8.6,SNR=5.2						
SPITS	**Spitsbergen Ar**	**58.66**	**346**	P	**P**	**08 52 38.0**	**-0.7**
WRAB	**Tennant Creek**	**59.00**	**147**	*e*P	**P**	**08 52 41.4**	**-0.2**
	comp=Z,3.9nm,0.6s,mb4.6						
WRA	**Warramunga Arr**	**59.00**	**147**	P	**P**	**08 52 41.6**	**-0.1**
	comp=Z,2.2nm,0.6s,mb4.4,baz=341,slow=7.8,SNR=21						
ASAR	**Alice Springs**	**62.04**	**149**	P	**P**	**08 53 02.5**	**+0.2**
	comp=Z,1.0nm,0.6s,mb4.2,baz=336,slow=6.7,SNR=19						
NB2	**NORSAR Subarra**	**64.12**	**327**	P	**P**	**08 53 14.9**	**-0.9**
	comp=Z,0.8nm,0.5s,mb4.0,baz=74,slow=6.9						
NOA	**NORSAR Array B**	**64.12**	**327**	P	**P**	**08 53 15.0**	**-0.8**
	comp=Z,0.8nm,0.5s,mb4.0,baz=72,slow=6.9,SNR=3.9						
STKA	**Stephens Creek**	**72.54**	**147**	P	**P**	**08 54 08.5**	**-0.3**
	comp=Z,2.1nm,0.8s,mb4.1,baz=262,slow=17,SNR=4.3						
STKA	**Stephens Creek**	**72.54**	**147**	*e*P	**P**	**08 54 08.9**	**+0.1**
	comp=Z,0.8nm,1.0s,mb3.6						
YKA	**Yellowknife Ar**	**80.94**	**17**	P	**P**	**08 54 55.5**	**-0.5**
	comp=Z,0.6nm,0.7s,mb3.6,baz=325,slow=4.9,SNR=4.4						
OTAV	**Otavalo**	**147.99**	**5**	*e*PKPbc	PKPbc	09 02 30.3	+2.2

*CSEM **20** 09:03:16.9±0.3, 37°.87N×21°.37E, h15km, MD3.3, Error ellipse: s-maj=5.3km s-min=3.8km az=88.0*
*ISCJB **20** 09:03:16.6±0.5, 37°.85N±0°.02×21°.37E±0°.03, h10km, Error ellipse: s-maj=3.7km s-min=3.4km az=2.1*
*NEIC **20** 09:03:17.0, 37°.87N×21°.40E, h5km, MD3.3(ATH), After ATH.*
*ATH **20** 09:03:17.0, 37°.87N×21°.40E, h5km±3km, MD3.3/12*
*THE **20** 09:03:17.0, 37°.86N×21°.43E, h0km±1km, ML3.5/9, Error ellipse: s-maj=1.5km s-min=0.5km az=213.0*

ISC 20 09:03:17.1±0.5, 37°.86N±0°.02×21°.39E±0°.03, h6km±4km, n62, σ0§88/91, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.21**	**16**	*e*Pg	**Pg**	**09 03 21.1**	**-0.2**
RLS				*e*Sg	**Sg**	**09 03 24.7**	**+0.6**
RLS	**Riolos of Patr**	**0.21**	**16**	*e*PG	**Pg**	**09 03 21.1**	**-0.2**
RLS				*e*SG	**Sg**	**09 03 24.7**	**+0.6**
RLS	**Riolos of Patr**	**0.21**	**16**	*e*Pg	**Pg**	**09 03 21.1**	**-0.2**
RLS				*e*Sg	**Sg**	**09 03 24.7**	**+0.6**
UPR	**University Cam**	**0.53**	**36**	P	**Pg**	**09 03 26.4**	**-0.9**
UPR	**University Cam**	**0.53**	**36**	*e*PB	**Pg**	**09 03 27.5**	**+0.2**
UPR				*e*SB	**Sg**	**09 03 35.7**	**+1.5**
UPR	**University Cam**	**0.53**	**36**	*e*Pb	**Pg**	**09 03 27.5**	**+0.2**
UPR				*e*Sb	**Sg**	**09 03 35.7**	**+1.5**
KFL	**Anninata**	**0.54**	**298**	P	**Pg**	**09 03 28.1**	**+0.5**
LAKA	**Lakka**	**0.60**	**50**	P	**Pg**	**09 03 27.9**	**-0.8**
LAKA				S	**Sg**	**09 03 37.1**	**+0.6**
EFP	**Efpalio**	**0.70**	**35**	P	**Pg**	**09 03 29.8**	**-0.8**
EFP				S	**Sg**	**09 03 40.4**	**+0.7**
EFP	**Efpalio**	**0.70**	**35**	*e*PG	**Pg**	**09 03 29.9**	**-0.7**
EFP				*e*SB	**Sb**	**09 03 40.8**	**-0.8**
EFP	**Efpalio**	**0.70**	**35**	*e*Pg	**Pg**	**09 03 29.9**	**-0.7**
EFP				S	**Sg**	**09 03 40.4**	**+0.7**
EFP				*e*Sb	**Sb**	**09 03 40.8**	**-0.8**
VLS	**Valsamata**	**0.71**	**297**	*e*Pg	**Pg**	**09 03 30.6**	**-0.2**
VLS				*e*Sb	**Sg**	**09 03 41.6**	**+1.6**
VLS	**Valsamata**	**0.71**	**297**	P	**Pg**	**09 03 30.8**	**0.0**
VLS				S	**Sg**	**09 03 41.4**	**+1.4**
VLS	**Valsamata**	**0.71**	**297**	*e*PG	**Pg**	**09 03 30.6**	**-0.2**
VLS				*e*SB	**Sg**	**09 03 41.6**	**+1.6**
VLS	**Valsamata**	**0.71**	**297**	*e*Pg	**Pg**	**09 03 30.6**	**-0.2**
VLS				S	**Sg**	**09 03 41.4**	**+1.4**
GUR	**Goura**	**0.76**	**84**	P	**Pg**	**09 03 30.6**	**-1.1**
GUR				S	**Sg**	**09 03 41.9**	**+0.4**
GUR	**Goura**	**0.76**	**84**	*e*PB	**Pg**	**09 03 30.7**	**-1.0**
GUR				*e*SB	**Sg**	**09 03 41.9**	**+0.4**
GUR	**Goura**	**0.76**	**84**	*e*Pb	**Pg**	**09 03 30.7**	**-1.0**
GUR				S	**Sg**	**09 03 41.9**	**+0.4**
KALE	**Kalithea**	**0.80**	**48**	P	**Pg**	**09 03 31.8**	**-0.6**
KALE				S	**Sg**	**09 03 43.3**	**+0.6**
ITM	**Ithomi**	**0.80**	**148**	*e*Pb	**Pg**	**09 03 32.9**	**+0.4**
ITM	**Ithomi**	**0.80**	**148**	P	**Pg**	**09 03 32.5**	**0.0**
ITM	**Ithomi**	**0.80**	**148**	*e*PB	**Pg**	**09 03 32.9**	**+0.4**
ITM	**Ithomi**	**0.80**	**148**	*e*Pb	**Pg**	**09 03 32.9**	**+0.4**
VLX	**Vlachokerasia**	**0.92**	**122**	P	**Pg**	**09 03 34.3**	**-0.5**
VLX				S	**Sg**	**09 03 47.4**	**+0.6**
VLX	**Vlachokerasia**	**0.92**	**122**	*e*PN	**Pg**	**09 03 35.8**	**+1.0**
VLX	**Vlachokerasia**	**0.92**	**122**	*e*Pn	**Pg**	**09 03 35.8**	**+1.0**
VLX				S	**Sg**	**09 03 47.4**	**+0.6**
PYL	**PYLOS**	**1.00**	**164**	P	**Pg**	**09 03 35.7**	**-0.6**
PYL	**PYLOS**	**1.00**	**164**	*e*PG	**Pg**	**09 03 36.0**	**-0.3**
PYL	**PYLOS**	**1.00**	**164**	P	**Pg**	**09 03 35.7**	**-0.6**
PYL	**PYLOS**	**1.00**	**164**	*e*Pg	**Pg**	**09 03 36.0**	**-0.3**
DSF	**Desfina**	**1.05**	**58**	P	**Pg**	**09 03 35.8**	**-1.5**
DSF				S	**Sg**	**09 03 51.0**	**0.0**
EVR	**Evrytania**	**1.11**	**17**	*e*Pg	**Pg**	**09 03 37.5**	**-0.9**
EVR	**Evrytania**	**1.11**	**17**	*e*PG	**Pg**	**09 03 37.5**	**-0.9**
EVR	**Evrytania**	**1.11**	**17**	*e*Pg	**Pg**	**09 03 37.5**	**-0.9**
LTK	**Loutraki**	**1.26**	**82**	P	**Pn**	**09 03 39.7**	**-1.5**
LTK				S	**Sg**	**09 03 58.1**	**+0.6**
LTK	**Loutraki**	**1.26**	**82**	*e*PN	**Pn**	**09 03 39.8**	**-1.4**
LTK	**Loutraki**	**1.26**	**82**	*e*Pn	**Pn**	**09 03 39.8**	**-1.4**
LTK				S	**Sg**	**09 03 58.1**	**+0.6**
AGG	**Agios Georgios**	**1.38**	**32**	*e*Pb	**Pb**	**09 03 43.1**	**-0.2**
AGG	**Agios Georgios**	**1.38**	**32**	P	**Pn**	**09 03 42.4**	**-0.5**
AGG				S	**Sb**	**09 04 02.2**	**+1.1**
AGG	**Agios Georgios**	**1.38**	**32**	*e*PB	**Pb**	**09 03 43.1**	**-0.2**
AGG	**Agios Georgios**	**1.38**	**32**	P	**Pn**	**09 03 42.4**	**-0.5**
AGG	**Agios Georgios**	**1.38**	**32**	*e*Pb	**Pb**	**09 03 43.1**	**-0.2**
AGG				S	**Sb**	**09 04 02.2**	**+1.1**
LKR	**Lokris**	**1.49**	**57**	*e*Pg	**Pg**	**09 03 44.4**	**-1.4**
LKR	**Lokris**	**1.49**	**57**	P	**Pn**	**09 03 43.7**	**-0.8**
LKR				S	**Sn**	**09 04 04.9**	**+0.6**
LKR	**Lokris**	**1.49**	**57**	*e*PG	**Pg**	**09 03 44.4**	**-1.4**
LKR	**Lokris**	**1.49**	**57**	P	**Pn**	**09 03 43.7**	**-0.8**
LKR	**Lokris**	**1.49**	**57**	*e*Pg	**Pg**	**09 03 44.4**	**-1.4**
LKR				S	**Sn**	**09 04 04.9**	**+0.6**
ATAL	**Atalanti**	**1.53**	**56**	P	**Pn**	**09 03 44.6**	**-0.4**
ATAL				S	**Sn**	**09 04 05.2**	**0.0**
ATAL	**Atalanti**	**1.53**	**56**	P	**Pn**	**09 03 44.6**	**-0.4**
ATAL				S	**Sn**	**09 04 05.2**	**0.0**
NAIG	**Nisos Aigina**	**1.66**	**93**	*e*Pb	**Pb**	**09 03 48.6**	**+0.4**
NAIG	**Nisos Aigina**	**1.66**	**93**	*e*PB	**Pb**	**09 03 48.6**	**+0.4**
NAIG	**Nisos Aigina**	**1.66**	**93**	*e*Pb	**Pb**	**09 03 48.6**	**+0.4**
VLI	**Veliai**	**1.68**	**132**	*e*Pb	**Pb**	**09 03 49.7**	**+1.3**
VLI	**Veliai**	**1.68**	**132**	*e*PB	**Pb**	**09 03 49.7**	**+1.3**
VLI	**Veliai**	**1.68**	**132**	*e*Pb	**Pb**	**09 03 49.7**	**+1.3**
THL	**Klokotos Trika**	**1.77**	**16**	*e*PG	**Pg**	**09 03 49.9**	**-1.2**
THL	**Klokotos Trika**	**1.77**	**16**	*e*Pg	**Pg**	**09 03 49.9**	**-1.2**
VLY	**Voula,Athens**	**1.90**	**89**	*e*

LNV	**Longovilo**	**1.28**	**123**	*i* P	Pn	09 29 19.6	+0.4
LNV				*i* S	Sn	09 29 36.5	+1.1
LNV	**Longovilo**	**1.28**	**123**	*i* P	Pn	09 29 19.6	+0.4
LNV				*i* S	Sn	09 29 36.5	+1.1
PEL	**Peldehue**	**1.70**	**86**	⇓*i* P	Pn	09 29 26.5	+1.5
PEL				*i* S	Sn	09 29 48.7	+3.0
PEL				AML	AML	09 29 53.7	
	comp=E,750nm,0.7s						
ANTU	**Antumapu**	**1.76**	**100**	⇓*i* P	Pn	09 29 27.4	+1.6
ANTU				*i* S	Sn	09 29 50.1	+2.9
ANTU	**Antumapu**	**1.76**	**100**	⇓*i* P	Pn	09 29 27.4	+1.6
ANTU				*i* S	Sn	09 29 50.1	+2.9
ANTU				AML	AML	09 29 59.6	
	comp=N,197nm,0.3s						
CHCH	**Chadas Angostu**	**1.84**	**112**	⇑*i* P	Pn	09 29 28.4	+1.5
CHCH				*i* S	Sn	09 29 52.1	+3.0
CHCH	**Chadas Angostu**	**1.84**	**112**	⇑*i* P	Pn	09 29 28.4	+1.5
CHCH				*i* S	Sn	09 29 52.1	+3.0
FCH	**Farellones**	**2.03**	**92**	⇑*i* P	Pn	09 29 31.6	+2.1
FCH				*i* S	Sn	09 29 57.3	+3.5
FCH	**Farellones**	**2.03**	**92**	⇑*i* P	Pn	09 29 31.6	+2.1
FCH				*i* S	Sn	09 29 57.3	+3.5

IDC 20 09:37:57.7±52.0, 30°08S×178°63W, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.6/14, mbtmp3.5/3, Error ellipse: s-maj=938.5km s-min=175.1km az=97.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**34.02**	**257**	P	P	09 44 43.6	+0.2
	1.1nm,0.8s,baz=90,slow=12,SNR=2.2						
ASAR	**Alice Springs**	**42.59**	**267**	P	P	09 45 54.7	-1.0
	0.2nm,0.3s,baz=105,slow=7.5,SNR=4.9						
WRA	**Warramunga Arr**	**43.55**	**272**	P	P	09 46 04.0	+0.6
	0.3nm,0.3s,baz=112,slow=7.7,SNR=6.1						

IDC 20 09:38:25.9±3.9, 6°85S×150°79E, h0km, mb3.2/2, mb1 3.6/2, mb1mx3.4/15, mbtmp3.4/2, Error ellipse: s-maj=168.7km s-min=47.3km az=121.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.60**	**229**	P	P	09 43 06.5	-0.1
	1.1nm,0.9s,baz=54,slow=11,SNR=4.8						
ASAR	**Alice Springs**	**23.30**	**222**	P	P	09 43 35.1	-0.5
	1.1nm,0.8s,baz=54,slow=8.9,SNR=9.0						
TORD	**Torodi Ar. Bea**	**148.95**	**284**	PKPbc	PKPbc	09 58 16.7	-0.1
	0.2nm,0.6s,baz=80,slow=1.8,SNR=2.8						

*NEIC **20** 09:58:10.4±0.7, 1°89N×127°63E, h35km, mb4.1/2, Error ellipse: s-maj=18.4km s-min=11.7km az=74.0*
*IDC **20** 09:58:20.7±6.7, 1°54N×127°12E, h130km±67km, mb3.7/5, mb1 3.8/7, mb1mx3.5/21, mbtmp3.7/7, Error ellipse: s-maj=47.2km s-min=16.1km az=65.0*
*ISCJB **20** 09:58:20.1±4.8, 1°6N±0°1×127°1E±0°2, h141km±48km, mb4.0/6, Error ellipse: s-maj=30.7km s-min=16.9km az=155.4*
ISC 20 09:58:19.7±5.1, 1°6N±0°1×127°2E±0°2, h121km±52km, n13, σ0°69/15, mb4.1/6, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**9.88**	**228**	P	**Pn**	**10 00 40.1**	**+1.5**
	2.4nm,0.3s,baz=70,slow=6.7,SNR=9.4						
KAPI				S	**Sn**	**10 02 25.3**	**-2.4**
	3.7nm,0.3s,baz=239,slow=24,SNR=11						
KAPI	**Kappang**	**9.88**	**228**	*e*Pn	**Pn**	**10 00 37.9**	**-0.8**
KAPI				*e*Sn	**Sn**	**10 02 28.7**	**+1.0**
FITZ	**Fitzroy Crossi**	**19.61**	**184**	P	**P**	**10 02 39.3**	**+0.6**
	0.4nm,0.3s,baz=6.3,slow=9.8,SNR=9.4						
FITZ	**Fitzroy Crossi**	**19.61**	**184**	*e*P	**P**	**10 02 39.5**	**+0.8**
	2.0nm,0.6s						
WRAB	**Tennant Creek**	**22.51**	**162**	*e*P	**P**	**10 03 09.5**	**-0.1**
	6.8nm,0.3s,mb4.5						
WRA	**Warramunga Arr**	**22.51**	**162**	P	**P**	**10 03 09.2**	**-0.4**
	3.3nm,0.4s,mb4.0,baz=341,slow=11,SNR=42						
ASAR	**Alice Springs**	**25.93**	**166**	P	**P**	**10 03 41.0**	**+0.1**
	0.9nm,0.4s,mb3.5,baz=344,slow=7.8,SNR=30						
KSRS	**Korea Array**	**35.71**	**1**	P	**P**	**10 05 06.5**	**-0.1**
	0.8nm,0.7s,mb3.8,baz=178,slow=10.0,SNR=4.5						
STKA	**Stephens Creek**	**35.98**	**159**	P	**P**	**10 05 08.8**	**-0.1**
	1.2nm,0.3s,mb4.3,baz=344,slow=5.8,SNR=3.5						
STKA	**Stephens Creek**	**35.98**	**159**	P	**P**	**10 05 08.8**	**-0.1**
MKAR	**Makanchi Array**	**59.56**	**326**	P	**P**	**10 08 10.8**	**+0.2**
	1.5nm,0.5s,mb4.3,baz=113,slow=8.8,SNR=18						
MKAR	**Makanchi Array**	**59.56**	**326**	P	**P**	**10 08 10.8**	**+0.2**
KBS	**Kingsbay**	**93.19**	**350**	*e*P	**P**	**10 11 19.6**	**-0.2**
	10nm,0.4s						

*BJI **20** 10:01:29.1, 3°86S×101°20E, h48km, mB5.1/25, mb4.9/38, Ms4.6/25, Ms7 4.1/23*
*IDC **20** 10:01:30.6±0.5, 3°02S×101°27E, h0km, mb4.8/21, mb1 4.9/22, mb1mx4.8/26, mbtmp4.9/22, ML5.2/1, MS3.6/18, Ms1 3.6/18, ms1mx3.5/35, Error ellipse: s-maj=20.0km s-min=11.7km az=45.0*
*MOS **20** 10:01:34.6±1.0, 2°93S×101°39E, h33km, mb5.3/33, Error ellipse: s-maj=10.9km s-min=5.8km az=110.6*
*DJA **20** 10:01:37, 3°11S×101°20E, h25km, Mw5.3/7*
*NEIC **20** 10:01:38.6±0.8, 3°09S×101°27E, h58km±6km, mb5.0/47, Error ellipse: s-maj=6.7km s-min=4.4km az=50.0*
NEIC Felt [III] at Bengkulu and Mukomuko.
*ISCJB **20** 10:01:38.5±0.4, 3°02S±0°03×101°31E±0°04, h70km±3km, mb4.9/101, Error ellipse: s-maj=7.7km s-min=3.3km az=138.0*
ISC 20 10:01:39.5±0.4, 3°07S±0°03×101°26E±0°03, h64km±3km, h40km±3.5km: pP-P, n268, σ0°99/256, mb5.0/101, 11C-7D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.45**	**113**	P	**Pn**	**10 02 02.3**	**-1.3**
KSI				S	**Sn**	**10 02 21.5**	**-0.2**
MNAI	**Manna**	**2.12**	**127**	P	**Pn**	**10 02 11.4**	**-1.3**
MNAI				S	**Sn**	**10 02 39.7**	**+1.7**
SDSI	**Sungai Dareh**	**2.13**	**4**	P	**Pn**	**10 02 12.6**	**-0.3**
SDSI				S	**Sn**	**10 02 40.2**	**+1.9**
PDSI	**Padang**	**2.29**	**340**	P	**Pn**	**10 02 13.8**	**-1.2**
PDSI				S	**Sn**	**10 02 43.0**	**+0.9**
PPI	**Padang Panjang**	**2.74**	**342**	P	**Pn**	**10 02 20.5**	**-0.6**
PPI				S	**Sn**	**10 02 54.0**	**+0.9**
SISI	**Saibi**	**2.78**	**309**	P	**Pn**	**10 02 20.8**	**-0.9**
SISI				S	**Sn**	**10 02 54.4**	**+0.3**
MDSI	**Maura Dua**	**3.23**	**116**	P	**Pn**	**10 02 27.8**	**0.0**
MDSI				S	**Sn**	**10 03 09.2**	**+4.1**
BKNI	**Bangkinang**	**3.38**	**356**	P	**Pn**	**10 02 30.1**	**+0.2**
LWLI	**Liwa**	**3.39**	**125**	P	**Pn**	**10 02 30.4**	**+0.4**
KLSI		**3.81**	**115**	P	**Pn**	**10 02 36.4**	**+0.6**
KLI	**Kotabumi**	**4.00**	**117**	P	**Pn**	**10 02 38.9**	**+0.5**
KASI	**Kota Agung**	**4.04**	**127**	P	**Pn**	**10 02 39.1**	**+0.2**
KASI				S	**Sn**	**10 03 27.2**	**+2.2**
MNSI	**Mandailing Nat**	**4.19**	**336**	P	**Pn**	**10 02 40.6**	**-0.4**
PPBI	**Pangkal Pinang**	**4.95**	**80**	P	**Pn**	**10 02 51.3**	**-0.1**
	0.7nm6μm72nm,0.8s						
RBSI	**Rajabasa**	**5.25**	**122**	P	**Pn**	**10 02 56.1**	**+0.7**
	0.8nm3μm292nm,0.9s						
MYKOM	**Kota Tinggi**	**5.48**	**28**	P	**Pn**	**10 02 58.9**	**+0.3**
	0.9nm3μm294nm,0.7s						
CGJI	**Cibinong**	**5.64**	**129**	P	**Pn**	**10 02 59.4**	**-1.5**
	5μm186nm,0.7s						
GSI	**Gunungsitoli**	**5.70**	**320**	P	**Pn**	**10 03 00.1**	**-1.5**
	1.9nm5μm228nm,0.4s						
PSI	**Prapat**	**6.29**	**338**	Pn	**Pn**	**10 03 07.3**	**-2.3**
	7.8nm,0.3s,baz=174,slow=11,SNR=27						
PSI				LR	LR	10 05 56.1	
	comp=Z,1μm,19.8s,baz=146,slow=43						
PSI	**Prapat**	**6.29**	**338**	Pn	**Pn**	**10 03 07.3**	**-2.3**
PSI				LR	LR	10 05 56.1	
LEM	**Lembang**	**7.35**	**121**	P	**Pn**	**10 03 25.1**	**+0.9**
	0.5nm138nm,1.1s						
TPTI		**7.50**	**327**	P	**Pn**	**10 03 25.8**	**-0.5**
	0.3nm1μm29nm,0.7s						
IPM	**Ipoh**	**7.50**	**358**	P	**Pn**	**10 03 28.2**	**+1.8**
IPM	**Ipoh**	**7.50**	**358**	P	**Pn**	**10 03 28.3**	**+1.9**
KULM	**Kulim**	**8.33**	**356**	P	**Pn**	**10 03 38.5**	**+0.8**
KULM	**Kulim**	**8.33**	**356**	*e*Pn	**Pn**	**10 03 38.2**	**+0.6**
	63nm,0.6s						
KTGM	**Kuala Trenggan**	**8.55**	**13**	P	**Pn**	**10 03 42.8**	**+2.1**
COCO	**West Island**	**10.06**	**206**	Pn	**Pn**	**10 03 58.9**	**-2.5**
	1μm,0.4s,SNR=5.9						
COCO	**West Island**	**10.06**	**206**	*e*Pn	**Pn**	**10 03 58.2**	**-3.2**
KSM	**Kuching**	**10.11**	**64**	P	**Pn**	**10 04 06.2**	**+4.2**
KSM	**Kuching**	**10.11**	**64**	*e*Pn	**Pn**	**10 04 02.7**	**+0.7**
	16nm,0.6s						
BSI	**Banda Aceh**	**10.39**	**325**	P	**Pn**	**10 04 04.2**	**-1.6**
	2μm55nm,0.9s						
STKI	**Sintang**	**10.67**	**73**	P	**Pn**	**10 04 05.8**	**-3.9**
SJI	**Sawahan**	**11.44**	**114**	P	**Pn**	**10 04 20.2**	**+0.1**
KKM	**Kota Kinabalu**	**17.46**	**59**	*e*P	**Pn**	**10 05 40.8**	**+1.9**
KAPI	**Kappang**	**18.54**	**97**	P	**Pn**	**10 05 50.6**	**-1.4**
	6.8nm,0.3s,baz=275,slow=10,SNR=26						
KAPI	**Kappang**	**18.54**	**97**	*e*P	**Pn**	**10 05 50.8**	**-1.3**
	74nm,0.9s						
CM31	**Chiang Mai Arr**	**21.52**	**354**	*e*P	**P**	**10 06 24.0**	**+0.7**
	5.4nm,0.4s,mb4.3						
CMAR	**Chiang Mai Arr**	**21.52**	**354**	P	**P**	**10 06 20.1**	**-3.2**
	10nm,0.6s,mb4.4,baz=185,slow=8.7,SNR=15						
CMAR				PcP	PcP	10 10 24.6	+0.6
	2.6nm,0.7s,baz=213,slow=2.8,SNR=8.0						
CMAR				LR	LR	10 15 03.5	
	comp=Z,178nm,19.2s,baz=160,slow=38						
CMAR	**Chiang Mai Arr**	**21.52**	**354**	P	**P**	**10 06 20.2**	**-3.1**
CMAR						10 10 24.6	
CHTO	**Chiang Mai**	**21.87**	**354**	*e*P	**P**	**10 06 26.9**	**-0.2**
	7.2nm,0.9s,mb4.1						
QIZ	**Qiongzhong**	**23.53**	**21**	P	**P**	**10 06 45.5**	**+1.4**
QIZ				pP		10 06 54.1	
QIZ				S	**S**	**10 10 59.3**	**+5.9**
QIZ				LR	LR		
	comp=N,170nm,18.5s						
QIZ				LR	LR		
	comp=Z,240nm,24.3s						
QIZ	**Qiongzhong**	**23.53**	**21**	*e*P	**P**	**10 06 44.4**	**+0.3**
	comp=Z,7.1nm,0.6s,mb4.3						
MBWA	**Marble Bar**	**25.42**	**136**	*e*P	**P**	**10 07 01.7**	**+0.3**
	comp=Z,7.5nm,0.7s,mb4.3						
TGY	**Tagaytay City**	**25.92**	**48**	P	**P**	**10 07 05.8**	**-0.1**
	comp=Z,311nm,0.6s,mb6.0,baz=199,slow=3.8,SNR=7.9						
DAV	**Davao City (W)**	**26.28**	**67**	LR	LR	10 18 07.1	
	comp=Z,161nm,20.7s,baz=218,slow=38						
KMI	**Kunming**	**28.06**	**3**	P	**P**	**10 07 28.8**	**+3.8**
KMI				pP	pP	10 07 38.5	-2.1
KMI				sP	sP	10 07 42.6	-5.6
KMI				PP	PP	10 08 20.3	-9.2
KMI				S	**S**	**10 12 11.6**	**+6.3**
KMI				SS	SS	10 13 36.1	-30
KMI				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.3						
KMI				pmax	pmax		
	comp=Z,70nm,4.5s						
KMI				LR	LR		
	comp=N,260nm,17.3s						
KMI				LR	LR		
	comp=E,170nm,18.1s						
KMI				LR	LR		
	comp=Z,270nm,18.2s						
FITZ	**Fitzroy Crossi**	**28.17**	**124**	P	**P**	**10 07 25.2**	**-0.9**
	comp=Z,7.3nm,0.5s,mb4.6,baz=270,slow=6.4,SNR=14						
FITZ				LR	LR	10 17 49.5	
	comp=Z,148nm,21.8s,baz=299,slow=35						
FITZ	**Fitzroy Crossi**	**28.17**	**124**	*e*P	**P**	**10 07 25.4**	**-0.7**
	comp=Z,13nm,0.9s,mb4.6						
GYA	**Guiyang**	**29.82**	**10**	*e*P	**P**	**10 07 40.0**	**-0.6**
GYA				pP	pP	10 07 53.3	-2.9
GYA				sP	sP	10 07 59.3	-4.5
GYA				PP	PP	10 08 42.1	-6.9
GYA				PcP	PcP	10 10 43.5	+0.7
GYA				S	**S**	**10 12 38.4**	**+5.6**
GYA				SS	SS	10 14 15.8	-26
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.9						
GYA				pmax	pmax		
	comp=Z,130nm,4.9s						
GYA				LR	LR		
	comp=N,880nm,16.8s						
GYA				LR	LR		
	comp=E,730nm,17.2s						
GYA				LR	LR		
	comp=Z,860nm,17.0s						
ODAN	**Odare**	**32.63**	**337**	*e*P	**P**	**10 08 05.4**	**0.0**
	comp=Z,191nm,0.7s,mb6.1						
TAPN	**Taplejung**	**32.95**	**337**	*e*P	**P**	**10 08 08.5**	**+0.4**
	comp=Z,183nm,0.8s,mb6.1						
RAMN	**Ramite**	**33.03**	**336**	*e*P	**P**	**10 08 09.2**	**+0.3**
	comp=Z,48nm,0.4s,mb5.8						
JIRN	**Jiri**	**33.83**	**336**	*e*P	**P**	**10 08 16.2**	**+0.4**
	comp=Z,135nm,0.6s,mb6.1						
CD2	**Chengdu**	**33.88**	**4**	⇓*i* P	**P**	**10 08 14.6**	**-1.5**
CD2				PP	PP	10 09 28.9	-5.1
CD2				S	**S**	**10 13 36.6**	**+0.6**
CD2				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.2						
CD2				pmax	pmax		
	comp=Z,120nm,6.8s						
CD2				LR	LR		
	comp=N,310nm,19.0s						
CD2				LR	LR		
	comp=E,160nm,14.2s						
CD2				LR	LR		
	comp=Z,350nm,19.0s						
LSA	**Lhasa**	**33.99**	**344**	*e*P	**P**	**10 08 17.4**	**+0.2**
LSA				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
LSA	**Lhasa**	**33.99**	**344**	*e*P	**P**	**10 08 17.4**	**+0.2**
	comp=Z,10nm,0.6s,mb4.9						
ENH	**Enshi**	**34.08**	**13**	*e*P	**P**	**10 08 16.7**	**-1.2**
	comp=Z,17nm,0.7s,mb5.1						
PKI	**Pulchoki**	**34.08**	**334**	*e*P	**P**	**10 08 18.1**	**+0.1**
	comp=Z,66nm,0.7s,mb5.7						
PKI	**Pulchoki**	**34.08**	**334**	*e*P	**P**	**10 08 18.4**	**+0.4**
PKI				pmax	pmax		
	comp=Z,51nm,0.6s,mb5.6						
PKI	**Pulchoki**	**34.08**	**334**	*e*P	**P**	**10 08 18.4**	**+0.4**
	comp=Z,51nm,0.6s,mb5.6						
PKIN	**Phulchoki**	**34.09**	**334**	*e*P	**P**	**10 08 18.4**	**+0.3**
	comp=Z,51nm,0.6s,mb5.7						
GUN	**Gumba**	**34.18**	**335**	*e*P	**P**	**10 08 19.4**	**+0.6**
	comp=Z,339nm,0.5s						
DMN	**Daman**	**34.25**	**334**	*e*P	**P**	**10 08 19.5**	**+0.1**
	comp=Z,102nm,0.9s,mb5.8						
KKN	**Kakani**	**34.33**	**334**	*e*P	**P**	**10 08 20.2**	**+0.1**
	comp=Z,221nm,0.7s,mb6.2						
WHN	**Wuhan**	**35.69**	**20**	P	**P**	**10 08 30.0**	**-1.8**
WHN				LR	LR		
	comp=Z,330nm,21.9s						
WRA	**Warramunga Arr**	**36.37**	**120**	P	**P**	**10 08 36.6**	**-1.1**
	comp=Z,19nm,0.4s,mb5.3,baz=302,slow=9.2,SNR=87						
WRAB	**Tennant Creek**	**36.37**	**120**	P	**P**	**10 08 36.0**	**-1.8**
	comp=Z,255nm,0.4s,SNR=55						
WRAB	**Tennant Creek**	**36.37**	**120**	*e*P	**P**	**10 08 36.8**	**-1.0**
	comp=Z,107nm,0.6s,mb6.0						
ASAR	**Alice Springs**	**37.60**	**126**	P	**P**	**10 08 47.9**	**-0.4**
	comp=Z,10nm,0.3s,mb5.0,baz=299,slow=8.3,SNR=174						
ASAR				PcP	PcP	10 11 05.2	+0.2
	comp=Z,3.7nm,0.8s,baz=288,slow=2.5,SNR=7.1						
XAN	**Xi'an**	**37.61**	**10**	P	**P**	**10 08 46.8**	**-1.3**
XAN				S	**S**	**10 14 36.5**	**+3.3**
XAN				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.8						
XAN				LR	LR		
	comp=N,93nm,18.3s						
XAN				LR	LR		
	comp=E,50nm,17.4s						
NJ2	**Nanjing**	**38.72**	**24**	*e*P	**P**	**10 08 58.1**	**+0.6**
NJ2				pP	pP	10 09 08.3	-5.2
NJ2				sP	sP	10 09 12.6	-8.3
NJ2				S	**S**	**10 14 53.4**	**+3.4**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
NJ2				pmax	pmax		
	comp=Z,100nm,5.9s						
NJ2				LR	LR		
	comp=N,610nm,15.6s						
NJ2				LR	LR		
	comp=E,410nm,13.2s						
LZH	**Lanzhou**	**39.03**	**3**	*e*P	**P**	**10 08 59.1**	**-0.9**
LZH				pP	pP	10 09 09.9	-6.1
LZH				sP	sP	10 09 15.5	-7.9
LZH				PP	PP	10 10 34.3	+3.7
LZH				PcP	PcP	10 11 07.3	-1.8
LZH				*e*S	**S**	**10 14 59.5**	**+5.0**
LZH				pmax	pmax		
	comp=Z,24nm,1.0s,mb4.9						
LZH				pmax	pmax		
	comp=Z,100nm,5.7s						
LZH				LR	LR		
	comp=N,440nm,13.5s						
LZH				LR	LR		
	comp=Z,660nm,16.2s						
GTA	**Gaotai**	**42.29**	**358**	⇑P	**P**	**10 09 28.1**	**+1.3**
GTA				pP	pP	10 09 38.3	-4.7
GTA				PP	PP	10 11 10.5	+4.5
GTA				S	**S**	**10 15 48.3**	**+5.3**
GTA				SS	SS	10 18 52.6	-1.2
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.2						
GTA				pmax	pmax		
	comp=Z,79nm,7.5s						
GTA				LR	LR		
	comp=N,180nm,17.7s						
GTA				LR	LR		
	comp=E,110nm,16.8s						
GTA				LR	LR		
	comp=Z,220nm,18.3s						
HHC	**Hu-ho-hao-te**	**44.71**	**11**	*e*P	**P**	**10 09 48.8**	**+2.5**
HHC				pP	pP	10 09 58.8	-3.8
HHC				sP	sP	10 10 02.8	-7.2
HHC				PP	PP	10 11 34.9	+3.0
HHC				S	**S**	**10 16 24.9**	**+6.6**
HHC				SS	SS	10 19 38.3	-2.7
HHC				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.8						
HHC				pmax	pmax		
	comp=Z,73nm,6.8s						
HHC				LR	LR		
	comp=N,99nm,14.4s						
HHC				LR	LR		
	comp=E,96nm,13.2s						
HHC				LR	LR		
	comp=Z,78nm,14.4s						
BJT	**Baijiatuau**	**45.01**	**16**	*e*P	**P**	**10 09 49.0**	**+0.3**
BJT				pmax	pmax		
	comp=Z,17nm,0.5s						
BJT	**Baijiatuau**	**45.01**	**16**	*e*P	**P**	**10 09 49.0**	**+0.3**
	comp=Z,17nm,0.5s,mb5.1						
BJI	**Beijing**	**45.03**	**16**	P	**P**	**10 09 48.5**	**-0.3**
BJI				pmax	pmax		
	comp=Z,23nm,0.5s,mb5.3						
BJI				pmax	pmax		
	comp=Z,95nm,5.5s						
BJI				LR	LR		
	comp=N,97nm,8.8s						
BJI				LR	LR		
	comp=E,97nm,17.7s						
BJI				LR	LR		
	comp=Z,69nm,32.7s						
GUMO	**Guam**	**46.32**	**68**	*e*P	**P**	**10 09 56.5**	**-2.9**
GUMO				pmax	pmax		
	comp=Z,55nm,1.1s,mb5.4						
GUMO	**Guam**	**46.32**	**68**	*e*P	**P**	**10 09 56.5**	**-2.9**
	comp=Z,55nm,1.1s,mb5.4						
CTA	**Charters Tower**	**47.00**	**115**	P	**P**	**10 10 04.0**	**-0.7**
	comp=Z,12nm,0.6s,mb5.0,baz=277,slow=11,SNR=17						
CTAO	**Charters Tower**	**47.00**	**115**	*e*P	**P**	**10 10 04.2**	**-0.5**
CTAO				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.0						
CTAO	**Charters Tower**	**47.00**	**115**	*e*P	**P**	**10 10 04.2**	**-0.5**
	comp=Z,14nm,0.7s,mb5.0						
KS15	**Wonju Array Si**	**47.29**	**29**	*e*P	**P**	**10 10 06.8**	**+0.2**
KSRS	**Korea Array**	**47.31**	**29**	P	**P**	**10 10 06.5**	**-0.3**
	comp=Z,5.6nm,0.9s,mb4.5,baz=223,slow=8.1,SNR=25						
KSRS				PcP	PcP	10 11 36.6	-0.3
	comp=Z,0.9nm,0.8s,baz=224,slow=3.3,SNR=4.8						
KSRS				LR	LR	10 31 12.5	
	comp=Z,35nm,19.6s,baz=332,slow=38						
STKA	**Stephens Creek**	**47.50**	**132**	P	**P**	**10 10 08.3**	**-0.1**
	comp=Z,6.8nm,0.5s,mb4.8,baz=305,slow=8.7,SNR=20						
STKA				LR	LR	10 32 41.7	
	comp=Z,97nm,19.1s,baz=302,slow=39						
STKA	**Stephens Creek**	**47.50**	**132**	*e*P	**P**	**10 10 08.7**	**+0.3**
	comp=Z,2.9nm,0.7s,mb4.3						
KBL	**Kabul**	**48.14**	**324**	*e*P	**P**	**10 10 13.2**	**-0.1**
KBL				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.8						
KBL	**Kabul**	**48.14**	**324**	*e*P	**P**	**10 10 13.2**	**-0.1**
	comp=Z,7.1nm,0.7s,mb4.8						
WMQ	**Urumqi**	**48.25**	**347**	P	**P**	**10 10 14.0**	**+0.1**
WMQ				pP	pP	10 10 24.0	-6.4
WMQ				PP	PP	10 12 06.0	-1.0
WMQ				S	**S**	**10 17 11.0**	**+2.2**
WMQ				ScS	ScS	10 20 01.0	+0.1
WMQ				SS	SS	10 20 35.0	-4.1
WMQ				pmax	pmax		
	comp=Z,1μm,5.0s						
WMQ				LR	LR		
	comp=N,71nm,16.0s						
WMQ				LR	LR		
	comp=E,100nm,16.0s						
WMQ				LR	LR		
	comp=Z,55nm,16.0s						
KSH	**Kashi**	**48.34**	**334**	⇑*i* P	**P**	**10 10 13.5**	**-1.2**
KSH				pP	pP	10 10 23.4	-7.8
KSH				PP	PP	10 12 04.9	-3.0
KSH				PcS	PcS	10 15 36.0	-0.5
KSH				S	**S**	**10 17 07.5**	**-2.8**
KSH				pmax	pmax		
	comp=Z,24nm,0.6s,mb5.4						
KSH				pmax	pmax		
	comp=Z,160nm,5.9s						
KSH				LR	LR		
	comp=N,330nm,10.6s						
KSH				LR	LR		
	comp=E,190nm,7.4s						
KSH				LR	LR		
	comp=Z,340nm,8.9s						
CBIJ	**Chichi jima**	**49.57**	**50**	P	**P**	**10 10 21.5**	**-2.9**
	comp=Z,107nm,1.1s,mb5.8,baz=334,slow=23,SNR=7.4						
CBIJ				LR	LR	10 30 52.5	
	comp=Z,31nm,21.4s,baz=140,slow=36						
KZA	**Kyzart**	**50.76**	**335**	P	**P**	**10 10 34.0**	**+0.9**
	SNR=17						
SONM	**Songino Array**	**50.89**	**4**	P	**P**	**10 10 34.3**	**+0.3**
	comp=Z,12nm,0.6s,mb5.0,baz=185,slow=9.6,SNR=51						
SONM				PcP	PcP	10 11 49.4	-0.3
	comp=Z,3.2nm,0.5s,baz=190,slow=3.8,SNR=7.0						
SONM				LR	LR	10 33 50.5	
	comp=Z,109nm,18.9s,baz=82,slow=38						
SONM	**Songino Array**	**50.89**	**4**	P	**P**	**10 10 34.3**	**+0.3**
SONM						10 11 49.4	
ULN	**Ulaanbaatar**	**50.98**	**5**	*e*P	**P**	**10 10 34.8**	**+0.2**
ULN				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb5.0						
ULN	**Ulaanbaatar**	**50.98**	**5**	*e*P	**P**	**10 10 34.8**	**+0.2**
	comp=Z,9.1nm,0.5s,mb5.0						
UCH	**Uchtor**	**51.20**	**335**	P	**P**	**10 10 37.3

comp=E,54nm,0.7s,mb5.6,baz=139,slow=7.9,SNR=307
MKAR LR LR 10 37 55.5
comp=Z,45nm,20.0s,baz=173,slow=42
MKAR Makanchi Array 52.40 344 *i* P **P 10 10 44.7 -0.5**
MKAR pmax pmax
comp=Z,54nm,0.7s
EIDS Eidsvold 52.73 120 *e*P **P 10 10 47.9 -0.2**
comp=Z,50nm,1.5s,mb5.2
ZAK Zakamensk 53.27 2 *e*P **P 10 10 51.0 -0.6**
ZAK *e* 10 11 57.3
ZAK pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
MDJ Mudanjiang 53.81 25 P **P 10 10 56.8 +1.2**
MDJ pP pP 10 11 06.0 -6.3
MDJ S **S 10 18 31.1 +5.5**
MDJ pmax pmax
comp=Z,13nm,2.0s,mb4.5
MDJ LR LR
comp=N,50nm,30.3s
MDJ LR LR
comp=E,26nm,35.2s
MDJ LR LR
comp=Z,82nm,26.4s
MOY Mondy 54.53 360 *e*P **P 10 11 00.7 0.0**
TLY Talaya 54.58 2 P **P 10 11 01.4 +0.3**
comp=Z,93nm,0.5s,mb6.1,SNR=8.5
TLY Talaya 54.58 2 *e*P **P 10 11 01.3 +0.2**
TLY *e*S **S 10 18 32.2 -3.6**
TLY pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
TLY MLR MLR
comp=Z,126nm,21.0s
TLY Talaya 54.58 2 *e*P **P 10 11 01.7 +0.6**
comp=Z,9.3nm,0.6s,mb5.0
ARMA Armidale 54.76 125 *e*P **P 10 11 04.4 +1.6**
KURK Kurchatov 56.99 343 P **P 10 11 17.4 -1.0**
comp=Z,306nm,0.7s,mb6.4,SNR=42
KURK Kurchatov 56.99 343 LR LR 10 40 32.0
comp=Z,31nm,18.9s,baz=35,slow=41
KURK Kurchatov 56.99 343*c i*P **P 10 11 17.7 -0.7**
KURK pmax pmax
comp=Z,46nm,1.0s,mb5.5
KURK Kurchatov 56.99 343 *e*P **P 10 11 17.8 -0.5**
KLR Kul'dur 58.40 23 *e*P **P 10 11 24.0 -4.3**
ZAA0 Zalesovo Array 58.45 349 *e*P **P 10 11 28.0 -0.6**
ZALV Zalesovo Beam 58.45 349 P **P 10 11 27.9 -0.7**
comp=Z,80nm,0.5s,mb6.0,baz=170,slow=5.3,SNR=332
ZALV LR LR 10 40 28.6
comp=Z,51nm,20.3s,baz=250,slow=40
ZALV Zalesovo Beam 58.45 349 P **P 10 11 27.9 -0.7**
ZALV LR LR 10 40 28.6
HABR Khabarovsk 59.16 26 P **P 10 11 28.5 -5.1**
HABR *e**SP sP 10 11 42.7 -15
HABR 10 13 41.2
HABR *e**SS sS 10 19 51.9 -13
HABR 10 21 17.4
HABR *e*SS SS 10 23 32.1 +0.4
HABR MLR MLR
comp=Z,84nm,21.0s
NVS Novosibirsk 59.61 348 *e*P **P 10 11 35.2 -1.4**
NVS *e*S **S 10 19 39.8 -2.1**
NVS pmax pmax
comp=Z,42nm,0.9s,mb5.5
NVS pmax pmax
comp=N,20nm,0.8s
NVS pmax pmax
comp=E,15nm,0.7s
NVS smax
comp=E,10.0nm,1.4s
QRN Al-Qurain 60.13 306 *e*P **P 10 11 40.7 0.0**
QRN AMb AMB 10 11 41.4
comp=Z,30nm,0.8s,mb5.4
RDF Al-Radifah 60.50 306 *e*P **P 10 11 43.9 +0.7**
RDF AMb AMB 10 11 44.7
comp=Z,32nm,0.8s,mb5.4
NAY Al-Naaiem 60.87 306 *e*P **P 10 11 45.6 -0.1**
NAY AMb AMB 10 11 46.3
comp=Z,16nm,0.6s,mb5.3
MIB Mutribah 61.00 307 *e*P **P 10 11 46.7 +0.1**
MIB AMb AMB 10 11 48.0
comp=Z,40nm,1.1s,mb5.5
BVAR Borovoye Array 61.62 339 P **P 10 11 49.2 -1.1**
comp=Z,20nm,0.6s,mb5.4,baz=144,slow=8.9,SNR=90
BRVK Borovoye 61.69 339 P **P 10 11 49.3 -1.4**
comp=Z,176nm,0.5s,SNR=11
BRVK Borovoye 61.69 339⇓ *e*P **P 10 11 49.3 -1.4**
BRVK pmax pmax
comp=Z,16nm,0.8s,mb5.2
BRVK Borovoye 61.69 339 *e*P **P 10 11 49.6 -1.1**
comp=Z,15nm,0.8s,mb5.2
YSS Yuzh-Sakhalins 61.73 31⇓ *i*P **P 10 11 51.0 -0.2**
YSS *e* pP 10 12 04.0 -4.2
YSS pmax pmax
comp=Z,50nm,0.9s,mb5.6
YSS Yuzh-Sakhalins 61.73 31 *e*P **P 10 11 51.4 +0.2**
comp=Z,566nm,0.8s
ABKAR Akbulak array 63.18 331 *e*P **P 10 11 59.9 -0.9**
comp=Z,25nm,0.6s,mb5.5
KMBO Kilima Mbogo 63.99 270 *i* P **P 10 12 09.1 +2.2**
KMBO Kilima Mbogo 63.99 270 *e*P **P 10 12 08.5 +1.6**
comp=Z,1.8nm,0.8s,mb4.2
AKTO Aktyubinsk 64.90 331 LR LR 10 45 33.7
comp=Z,43nm,18.7s,baz=332,slow=41
GNI Garni 67.17 316 LR LR 10 44 14.9
comp=Z,15nm,21.7s,baz=112,slow=38
GNI Garni 67.17 316 *i* P **P 10 12 28.7 +1.9**
SVE Sverdlovsk 68.15 337⇓ *e*P **P 10 12 32.2 -0.4**
SVE pmax pmax
comp=Z,29nm,0.9s,mb5.3
YAK Yakutsk 68.46 14*c i*P **P 10 12 32.8 -1.7**
YAK pmax pmax
comp=Z,77nm,1.4s,mb5.5
YAK pmax pmax
comp=E,11nm,1.3s
YAK pmax pmax
comp=N,12nm,1.1s
YAK Yakutsk 68.46 14 *e*P **P 10 12 33.1 -1.4**
comp=N,63nm,0.7s,mb5.8
ARU Arti 68.69 336*c i*P **P 10 12 35.1 -0.9**
ARU S S 10 21 37.2 +3.1
ARU SS SS 10 25 57.6 -2.3
ARU pmax pmax
comp=Z,17nm,1.0s,mb4.9
ARU Arti 68.69 336 *e*P **P 10 12 35.4 -0.6**
comp=Z,29nm,1.3s,mb5.0
ZEI Tsey 68.87 318 *e*P **P 10 12 37.5 +0.1**
ZEI pmax pmax
comp=Z,18nm,0.8s,mb5.0
KIV Kislovodsk 70.17 319⇑ *e*P **P 10 12 45.4 -0.1**
KIV *e*S S 10 21 52.5 +0.5
KIV *e*SS SS 10 26 28.4 +5.1
KIV pmax pmax
comp=Z,18nm,1.0s,mb5.0
SOKR Solikamsk 71.52 338*d i*P **P 10 12 53.3 0.0**
SOKR pmax pmax
comp=Z,20nm,0.9s,mb5.0
MMAI Mount Meron Ar 71.68 306 P **P 10 12 56.4 +1.5**
comp=Z,4.3nm,0.5s,mb4.6,baz=85,slow=8.8,SNR=6.0
TARA Tarawa 71.77 88 *e*P **P 10 12 55.8 0.0**
comp=Z,2.7nm,1.3s,mb4.0
PETK Petropavlovsk- 73.12 32 P **P 10 13 02.2 -0.7**
comp=Z,8.9nm,0.7s,mb4.8,baz=272,slow=2.6,SNR=29
PETK LR LR 10 42 56.3
comp=Z,29nm,20.3s,baz=318,slow=34
PETK Petropavlovsk- 73.12 32 P **P 10 13 02.2 -0.7**
PETK LR LR 10 42 56.3
PET Petropavlovsk 73.58 32 *e*P **P 10 13 04.9 -0.8**
PET pmax pmax
comp=Z,50nm,0.8s,mb5.5
BR131 Keskin Array S 74.97 312 *e*P **P 10 13 13.4 -0.7**
comp=Z,4.3nm,0.5s,mb4.6
BRTR Keskin Array B 74.97 312 P **P 10 13 13.5 -0.6**
comp=Z,7.6nm,0.6s,mb4.8,baz=137,slow=7.2,SNR=41
VORD Divnogorie 75.20 325 *e*P **P 10 13 14.1 -1.0**
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,20nm,0.6s
VORD pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VSR Storozhevoye 75.37 325 *e*P **P 10 13 15.6 -0.5**
VSR pmax pmax
comp=Z,30nm,0.7s,mb5.3
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,10.0nm,0.8s
SEY Seymchan 76.15 22⇑ *e*P **P 10 13 19.6 -0.7**
BOSA Boshof 76.25 241 P **P 10 13 22.5 +0.8**
comp=E,1.5nm,0.5s,mb4.2,baz=34,slow=5.7,SNR=4.0
BOSA LR LR 10 42 47.4
comp=E,145nm,19.1s,baz=162,slow=32
TIXI Tiksi 76.71 9 *e*P **P 10 13 21.5 -1.8**
TIXI pmax pmax
comp=Z,46nm,1.4s,mb5.2
TIXI Tiksi 76.71 9 *e*P **P 10 13 21.5 -1.9**
comp=Z,46nm,1.4s,mb5.2
OBN Obninsk 78.37 328⇓ *e*P **P 10 13 33.0 +0.1**
OBN *e* 10 16 30.7
OBN *e*SS SS 10 28 32.4 +5.0
OBN pmax pmax
comp=Z,16nm,0.8s,mb5.0
AKASG Malin Array Be 81.10 322 P **P 10 13 47.0 -0.8**
comp=Z,3.8nm,0.6s,mb4.5,baz=86,slow=5.2,SNR=18
AKBB Malin Array Si 81.10 322 *e*P **P 10 13 47.2 -0.6**
KIEV Kiev 81.11 322 *e*P **P 10 13 47.2 -0.6**
KIEV pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
KIEV Kiev 81.11 322 *e*P **P 10 13 47.2 -0.6**
comp=Z,3.0nm,0.6s,mb4.4
VRI Vrincioaia 81.49 317⇑ *i*P **P 10 13 50.7 +0.7**
FX1 Attu Island--F 81.62 36 P **P 10 13 49.4 -1.1**
comp=Z,2.3nm,0.4s,mb4.5,baz=264,slow=1.5,SNR=16
MLR Muntele Rosu 81.94 317⇑ *i*P **P 10 13 52.9 +0.5**
BURAR Bucovina Array 82.89 319⇓ *i*P **P 10 13 58.4 +1.1**
BUR08 Bucovina Ar. S 82.91 319 *e*P **P 10 13 58.6 +1.2**
BILL Bilibino 83.72 20 *e*P **P 10 14 00.4 -0.7**
BILL pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
BILL Bilibino 83.72 20 *e*P **P 10 14 00.4 -0.7**
comp=Z,5.0nm,0.9s,mb4.6
JOF Joensuu 83.72 334 *ep* **P 10 13 59.7 -1.5**
comp=Z,6.7nm,0.7s,mb4.9
JOF Joensuu 83.72 334 *ep* **P 10 13 59.7 -1.5**
comp=Z,6.7nm,0.7s,mb4.9
APA Apatity 84.53 339⇑ *e*P **P 10 14 12.2 +7.0**
APA *e* 10 17 22.0
APA pmax pmax
comp=Z,11nm,1.0s,mb4.9
APA MLR MLR
comp=Z,300nm,17.0s
VSU Vasula 84.56 329 *i* P **P 10 14 05.6 0.0**
VSU pmax pmax
comp=Z,7.0nm,0.6s,mb5.0
KWP Kalwaria Pacla 84.93 320 *e*P **P 10 14 08.4 +0.8**
BZS Buzias 84.95 316⇑ *i*P **P 10 14 08.1 +0.3**
SUW Suwalki 85.48 325 *e*P **P 10 14 10.2 -0.1**
SUW Suwalki 85.48 325 *e*P **P 10 14 10.3 0.0**
SUW pmax pmax
comp=Z,65nm,1.1s,mb5.7
SUW Suwalki 85.48 325 *e*P **P 10 14 10.3 0.0**
comp=Z,65nm,1.1s,mb5.7
CRVS Cervenica-Dubn 85.60 319 *e*P **P 10 14 12.1 +1.1**
CRVS *e* pP 10 14 27.8 -1.1
CRVS pmax pmax
comp=Z,5.0nm,1.0s,mb4.7
CRVS Cervenica-Dubn 85.60 319 *e*P **P 10 14 12.1 +1.1**
comp=Z,5.1nm,1.0s,mb4.7
CRVS *e* pP 10 14 27.8 -1.1
CRVS Cervenica-Dubn 85.60 319 *e*P **P 10 14 12.1 +1.1**
CRVS *e*pP pP 10 14 27.8 -1.1
FINES FINESS Array B 85.64 332 P **P 10 14 10.7 -0.2**
comp=Z,1.8nm,0.6s,mb4.5,baz=95,slow=6.0,SNR=10
FINES PP PP 10 17 28.6 -1.9
comp=Z,2.6nm,1.0s,baz=120,slow=6.8,SNR=4.0
KAF Kangasniemi 85.71 333 *e*P **P 10 14 10.2 -1.0**
KAF pmax pmax
comp=Z,5.0nm,0.6s,mb4.9
KAF Kangasniemi 85.71 333 *ep* **P 10 14 10.2 -1.0**
comp=Z,4.5nm,0.6s,mb4.9
KAF Kangasniemi 85.71 333 *ep* **P 10 14 10.2 -1.0**
comp=Z,4.5nm,0.6s,mb4.9
STHS Stebnicka Huta 85.83 320 *e*P **P 10 14 12.9 +0.8**
STHS pmax pmax
comp=Z,9.0nm,0.7s,mb5.1
STHS Stebnicka Huta 85.83 320 *e*P **P 10 14 12.9 +0.8**
comp=Z,8.7nm,0.7s,mb5.1
STHS Stebnicka Huta 85.83 320 *e*P **P 10 14 12.9 +0.8**
KECS Kecovo 86.17 319 *e*P **P 10 14 14.1 +0.3**
KECS pmax pmax
comp=Z,3.0nm,0.8s,mb4.6
KECS Kecovo 86.17 319 *e*P **P 10 14 14.1 +0.3**
comp=Z,3.4nm,0.8s,mb4.6
KECS Kecovo 86.17 319 *e*P **P 10 14 14.1 +0.3**
QSPA South Pole Qui 86.90 180 *e*P **P 10 14 18.3 +1.5**
comp=Z,1.7nm,0.9s,mb4.3
VYHS Vyhne 87.26 319 *e*P **P 10 14 19.4 +0.3**
VYHS pmax pmax
comp=Z,5.0nm,1.6s,mb4.5
VYHS Vyhne 87.26 319 *e*P **P 10 14 19.4 +0.3**
comp=Z,4.6nm,1.6s,mb4.5
VYHS Vyhne 87.26 319 *e*P **P 10 14 19.4 +0.3**
KOLL Kolacno 87.56 319 *e*P **P 10 14 21.6 +1.1**
KOLL Kolacno 87.56 319 *e*P **P 10 14 21.6 +1.1**
ARCES ARCESS Array B 87.90 340 P **P 10 14 21.6 -0.1**
comp=Z,6.2nm,0.7s,mb4.9,baz=100,slow=5.1,SNR=16
ARCES LR LR 10 56 05.7
comp=Z,48nm,22.0s,baz=125,slow=37
ZST Bratislava 88.37 318 *e*P **P 10 14 25.4 +1.0**
ZST pmax pmax
comp=Z,8.0nm,0.7s,mb5.1
ZST Bratislava 88.37 318 *e*P **P 10 14 25.4 +1.0**
comp=Z,7.8nm,0.7s,mb5.0
ZST Bratislava 88.37 318 *e*P **P 10 14 25.4 +1.0**
ATKA Atka Island 89.05 38 *e*P **P 10 14 27.2 -0.3**
comp=Z,32nm,1.3s,mb5.5
KSP Ksiaz 89.18 321 *e*P **P 10 14 29.6 +1.4**
KSP Ksiaz 89.18 321 *e*P **P 10 14 28.7 +0.6**
PERS Pernice 89.56 317 *i* P **P 10 14 31.2 +1.1**
VISS Visnje 89.68 316 *i* P **P 10 14 31.2 +0.6**
VNDS Vrh nad Dolski 89.80 316 *i* P **P 10 14 32.0 +0.9**
JAVS Javornik 90.23 316 *i* P **P 10 14 33.5 +0.3**
BRG Berggiesshubel 90.67 321 *e*P **P 10 14 35.8 +0.7**
comp=Z,8.0nm,0.9s,mb5.0
BRG Berggiesshubel 90.67 321 *e*P **P 10 14 35.8 +0.7**
comp=Z,6.5nm,0.7s,mb5.1
BRG Berggiesshubel 90.67 321 *e*P **P 10 14 35.8 +0.7**
BRG pmax pmax
comp=Z,4.0nm,0.7s,mb4.9
GEC2 GERESS Array S 90.68 319 *e*P **P 10 14 35.9 +0.7**
comp=Z,10.0nm,1.0s,mb5.1
GEC2 GERESS Array S 90.68 319 *e*P **P 10 14 35.9 +0.7**
GEC2 pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
RJOB Jochberg 91.22 318 *e*P **P 10 14 37.7 0.0**
comp=Z,6.0nm,0.8s,mb5.0
WET Wettzell 91.24 319 *e*P **P 10 14 38.5 +0.7**
comp=Z,8.0nm,0.9s,mb5.0
WET Wettzell 91.24 319 *e*P **P 10 14 38.5 +0.7**
WET pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
CLL Collm 91.28 321 *e*P **P 10 14 38.0 0.0**
CLL Collm 91.28 321 *e*P **P 10 14 38.0 0.0**
ROTZ Rotzenmuhle 91.71 320 *e*P **P 10 14 41.2 +1.2**
comp=Z,7.0nm,1.1s,mb4.9
GRA1 Grafenberg Arr 92.35 319 *e*P **P 10 14 44.0 +1.1**
comp=Z,7.0nm,1.1s,mb4.9
GRF Grafenberg Arr 92.35 319 *e*P **P 10 14 44.0 +1.1**
comp=Z,7.0nm,1.1s,mb4.9
GRF Grafenberg Arr 92.35 319 *e*P **P 10 14 44.0 +1.1**
GRF pmax pmax
comp=Z,7.0nm,1.1s,mb4.9
GRF Grafenberg Arr 92.35 319 *e*P **P 10 14 44.0 +1.1**
GRF pmax pmax
comp=Z,7.0nm,1.1s,mb4.9
NB2 NORSAR Subarra 92.69 331 P **P 10 14 43.6 -0.6**
comp=Z,0.2nm,0.7s,mb3.7,baz=94,slow=5.6
NOA NORSAR Array B 92.69 331 P **P 10 14 42.9 -1.3**
comp=Z,1.5nm,0.7s,mb4.5,baz=93,slow=4.7,SNR=4.2
NOA LR LR 11 01 21.2
comp=Z,27nm,21.4s,baz=335,slow=39
NOA NORSAR Array B 92.69 331 P **P 10 14 42.9 -1.3**
NOA LR LR 11 01 21.2
KEST Kesra 93.33 305 P **P 10 14 49.0 +1.2**
comp=Z,1.2nm,0.6s,mb4.5,baz=29,slow=2.9,SNR=4.2
KONO Kongsberg 93.47 329 P **P 10 14 47.4 -0.5**
YKA Yellowknife Ar 115.02 17 PKP PKiKP 10 20 11.4 -1.5
comp=Z,0.2nm,0.4s,baz=323,slow=1.5,SNR=4.7
FFC Flin Flon 125.14 16 *i* PKIKP PKPdf 10 20 32.7 +0.1
SCHQ Schefferville 127.50 351 PKP PKPdf 10 20 36.6 -0.5
comp=Z,1.2nm,0.5s,baz=268,slow=14,SNR=5.2
DLMT Dillon 128.49 30 *e*P PKPdf 10 20 40.2 +0.9
NVAR Mina Array Bea 129.61 40 PKP PKPdf 10 20 42.0 +0.4
comp=Z,0.7nm,0.6s,baz=282,slow=1.7,SNR=8.5
ELK Elko 130.13 36 PKP PKPdf 10 20 42.8 +0.2
comp=Z,0.8nm,0.3s,baz=280,slow=11,SNR=4.3
ULM Lac du Bonnet 130.80 14 PKP PKPdf 10 20 42.9 -0.7
comp=Z,3.5nm,0.4s,baz=337,slow=3.1,SNR=3.9
PDAR Pinedale Array 131.88 30 PKP PKPdf 10 20 46.3 +0.5
comp=Z,0.6nm,0.6s,baz=132,slow=2.2,SNR=4.5
MSU Marysvale 133.37 36 *e*PKIKP PKPdf 10 20 50.7 +1.9
RSSD Black Hills 133.40 25 *e*PKIKP PKPdf 10 20 48.5 -0.2
ANMO Albuquerque 139.16 36 PKP PKPdf 10 20 59.8 +0.1
comp=Z,0.4nm,0.5s,baz=123,slow=0.6,SNR=5.9
WMOK Wichita Mounta 143.40 28 *e*PKIKP PKPdf 10 21 03.1 -4.2
CPUP Villa Florida 144.18 214 PKP PKPdf 10 21 07.9 -1.0
comp=Z,1.5nm,0.5s,baz=54,slow=6.8,SNR=4.9
TXAR Lajitas Array 144.75 40 PKP PKPdf 10 21 08.9 -0.9
comp=Z,12nm,0.7s,baz=297,slow=1.2,SNR=202
MIAR Mount Ida 145.78 22 *e*PKP2 PKPab 10 21 11.5 -0.8
ELN Prospectdale 145.96 3 *e*PKPdf PKPdf 10 21 10.7 -0.9
UALR University of 146.01 20 *e*PKPdf PKPdf 10 21 11.8 0.0
WVT Waverly 146.05 13 *e*PKP2 PKPbc 10 21 11.1 -1.6
JCT Junction City 146.24 34 *e*PKP2 PKPbc 10 21 12.8 -0.6
TZTN Tazewell 146.40 7 *e*PKPdf PKPdf 10 21 12.4 0.0
TKL Tuckaleechee C 147.24 8 PKPbc PKPbc 10 21 14.8 -1.3
comp=Z,9.0nm,0.6s,baz=118,slow=4.5,SNR=14
TKL Tuckaleechee C 147.24 8 *e*PKIKP PKPdf 10 21 13.5 -0.3
TKL *e* 10 21 15.0
TKL *e* 10 21 17.8
TKL Tuckaleechee C 147.24 8 *e*PKPdf PKPdf 10 21 13.4 -0.4
TKL PKPbc PKPbc 10 21 14.8 -1.3
TKL *e*PKPbc PKPbc 10 21 15.0 -1.2
TKL *e*PKPab PKPab 10 21 17.8 -0.2
SWET Sewanee 147.33 11 *e*PKPdf PKPdf 10 21 14.6 +0.6
CPCT Cooper Cave 147.34 9 *e*PKPdf PKPdf 10 21 15.6 +1.6
HKT Hockley 148.74 29 *e*PKIKP PKPdf 10 21 17.1 +0.6
HKT *e* 10 21 20.7
HKT *e* 10 21 24.5
JSC Jenkinsville 148.86 4 *e*PKIKP PKPdf 10 21 17.0 +0.5
JSC *e* 10 21 19.8
LRAL Lakeview Retre 149.20 14 *e*PKPdf PKPdf 10 21 16.8 -0.3
LRAL *e*PKPbc PKPbc 10 21 20.1 -1.3
GOGA Godfrey 149.50 8 *e*PKP2 PKPbc 10 21 21.2 -0.9
BRAL Brewton 151.12 15 *e*PKPdf PKPdf 10 21 20.7 +0.5

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*ISCJB **20** 10:03:33.9±2.0, 52°.88N±0°.06×144°.60W±0°.08, h3km±12km, mb4.0/17, MS3.6/4, Error ellipse: s-maj=10.9km s-min=6.4km az=37.2*
*NEIC **20** 10:03:35.7±0.5, 52°.71N×144°.66W, h10km, ML4.4(AEIC), Error ellipse: s-maj=9.1km s-min=5.4km az=223.0*
*BJI **20** 10:03:35.6, 53°.04N×144°.69W, h10km, mB5.2/3, mb4.8/6, Ms4.8/2, Ms7 4.5/3*
*IDC **20** 10:03:35.0±0.9, 52°.91N×144°.69W, h0km, mb3.9/10, mb1 4.1/14, mb1mx3.9/30, mbtmp3.9/14, ML3.8/4, MS3.1/5, Ms1 3.1/5, ms1mx2.7/48, Error ellipse: s-maj=29.0km s-min=13.6km az=24.0*
ISC 20 10:03:37.5±2.0, 52°.81N±0°.05×144°.57W±0°.08, h16km±12km, n49, σ1 19/54, mb4.0/17, MS3.6/4, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**6.68**	**315**	P	**Pn**	**10 05 13.1**	**-1.7**
OHAK				S	**Sn**	**10 06 25.8**	**-4.7**
MID	**Middleton Isla**	**6.71**	**352**	P	**Pn**	**10 05 15.5**	**+0.3**
KDAK	**Kodiak Island**	**6.76**	**321**	Pn	**Pn**	**10 05 14.4**	**-1.5**
	5.3nm,0.3s,baz=141,slow=5.5,SNR=41						
KDAK				Sn	**Sn**	**10 06 28.1**	**-4.5**
	4.2nm,0.3s,baz=309,slow=21,SNR=8.3						
KDAK				LR	LR	10 07 48.4	
	comp=Z,183nm,18.9s,baz=51,slow=38						
KDAK	**Kodiak Island**	**6.76**	**321**	P	**Pn**	**10 05 14.8**	**-1.2**
KDAK				S	**Sn**	**10 06 30.7**	**-1.8**
SIT	**Sitka**	**6.82**	**48**	P	**Pn**	**10 05 14.3**	**-2.3**
SIT				S	**Sn**	**10 06 25.3**	**-8.6**
CRAG	**Craig**	**7.24**	**64**	P	**Pn**	**10 05 17.9**	**-4.5**
CRAG				S	**Sn**	**10 06 35.0**	**-9.2**
DIB	**Dawson Inlet,**	**7.31**	**82**	T		10 12 33.5	
PNL	**Peninsula**	**7.46**	**21**	P	**Pn**	**10 05 26.4**	**+0.9**
PNL				S	**Sn**	**10 06 47.4**	**-2.2**
EYAK	**Cordova Ski Ar**	**7.79**	**356**	P	**Pn**	**10 05 31.2**	**+1.2**
SEW	**Seward**	**7.80**	**342**	P	**Pn**	**10 05 29.6**	**-0.5**
BESE	**Bessie Mountai**	**7.97**	**40**	P	**Pn**	**10 05 33.0**	**+0.5**
BMRM	**Bremner River**	**8.19**	**360**	P	**Pn**	**10 05 36.4**	**+1.0**
SLKM	**Skilak Lake**	**8.32**	**340**	P	**Pn**	**10 05 36.9**	**-0.4**
DIV	**Divide**	**8.37**	**356**	P	**Pn**	**10 05 38.3**	**+0.4**
SKAG	**Skagway**	**8.43**	**34**	P	**Pn**	**10 05 39.5**	**+0.8**
PMR	**Palmer**	**9.15**	**346**	P	**Pn**	**10 05 49.9**	**+1.3**
SML	**Sawmill**	**9.25**	**349**	P	**Pn**	**10 05 51.6**	**+1.6**
WHY	**Whitehorse**	**9.49**	**30**	P	**Pn**	**10 05 54.9**	**+1.5**
DLBC	**Dease Lake**	**9.97**	**50**	Pn	**Pn**	**10 05 59.5**	**-0.3**
	2.3nm,0.3s,baz=229,slow=12,SNR=33						
SVW2	**Sparrevohn**	**10.24**	**329**	P	**Pn**	**10 06 02.5**	**-1.1**
TTA	**Tatalina**	**11.81**	**334**	*e*P	**Pn**	**10 06 23.9**	**-1.1**
EGAK	**Eagle**	**12.14**	**7**	*e*Pn	**Pn**	**10 06 32.0**	**+2.6**
	15nm,0.8s						
COLA	**College**	**12.22**	**353**	*e*Pn	**Pn**	**10 06 31.8**	**+1.2**
	9.4nm,0.8s						
INK	**Inuvik**	**16.43**	**15**	Pn	**Pn**	**10 07 25.9**	**-1.0**
	0.0nm,0.3s,baz=212,slow=10,SNR=2.1						
INK				LR	LR	10 13 03.9	
	comp=Z,63nm,20.8s,baz=50,slow=35						
INK	**Inuvik**	**16.43**	**15**	Pn	**Pn**	**10 07 25.9**	**-1.0**
INK				LR	LR	10 13 03.9	
YBH	**Yreka Blue Hor**	**18.43**	**118**	P	**Pn**	**10 07 51.8**	**-0.3**
	0.0nm,0.3s,baz=350,slow=11,SNR=3.0						
YBH				LR	LR	10 12 31.4	
	comp=Z,44nm,20.7s,baz=316,slow=29						
YKA	**Yellowknife Ar**	**18.56**	**47**	P	**Pn**	**10 07 52.8**	**-0.7**
	0.2nm,0.3s,baz=252,slow=12,SNR=12						
YKA	**Yellowknife Ar**	**18.56**	**47**	P	**Pn**	**10 07 52.8**	**-0.7**
WVOR	**Wild Horse Val**	**20.22**	**110**	*e*P	**P**	**10 08 09.8**	**-1.7**
HLID	**Hailey**	**21.99**	**103**	*e*P	**P**	**10 08 29.8**	**-0.8**
	2.7nm,0.9s,mb3.7						
NVAR	**Mina Array Bea**	**23.16**	**118**	P	**P**	**10 08 44.4**	**+1.4**
	1.5nm,0.9s,mb3.4,baz=302,slow=8.4,SNR=10						
M13A	**Montello**	**23.48**	**107**	P	**P**	**10 08 45.1**	**-1.2**
	2.1nm,0.8s,mb3.6						
FX1	**Attu Island--F**	**25.26**	**287**	P	**P**	**10 09 01.4**	**-1.2**
	3.5nm,0.4s,mb4.2,baz=278,slow=2.1,SNR=27						
PDAR	**Pinedale Array**	**25.34**	**99**	P	**P**	**10 09 03.3**	**-0.1**
	1.2nm,0.7s,mb3.5,baz=314,slow=7.9,SNR=9.0						
RES	**Resolute Bay**	**29.49**	**24**	LR	LR	10 22 20.5	
	comp=Z,33nm,20.6s,MS2.9,baz=197,slow=38						
ANMO	**Albuquerque**	**32.27**	**108**	P	**P**	**10 10 07.9**	**+2.8**
	0.2nm,0.3s,mb3.4,baz=225,slow=2.9,SNR=2.6						
PETK	**Petropavlovsk-**	**33.96**	**294**	P	**P**	**10 10 19.3**	**-0.4**
	2.9nm,0.9s,mb4.2,baz=73,slow=17,SNR=4.1						
TXAR	**Lajitas Array**	**38.01**	**112**	P	**P**	**10 10 55.9**	**+1.3**
	0.3nm,0.7s,mb3.1,baz=310,slow=7.0,SNR=4.2						
TIXI	**Tiksi**	**40.07**	**331**	*e*P	**P**	**10 11 11.8**	**+0.4**
	1.4nm,0.8s,mb3.7						
KVTX	**Kingsville**	**42.66**	**108**	*e*P	**P**	**10 11 32.4**	**-0.7**
	58nm,0.6s						
SCHQ	**Schefferville**	**43.72**	**55**	LR	LR	10 31 40.5	
	comp=Z,31nm,20.0s,MS3.2,baz=44,slow=39						
MDJ	**Mudanjiang**	**54.01**	**298**	P	**P**	**10 13 00.3**	**-0.1**
MDJ				pP	pP	10 13 03.3	-2.2
MDJ				PP	PP	10 15 01.6	+0.1
MDJ				ScP	ScP	10 18 03.3	+0.8
MDJ				PcS	PcS	10 18 04.5	0.0
MDJ				S	**S**	**10 20 37.0**	**+1.6**
MDJ				sS	sS	10 20 42.3	-1.5
MDJ				ScS	ScS	10 22 49.8	+1.0
MDJ				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
MDJ				LR	LR		
	comp=Z,82nm,23.4s,MS3.7						
CN2	**Changchun**	**56.75**	**300**	*e*P	**P**	**10 13 22.4**	**+2.2**
CN2				*e*S	**S**	**10 21 13.3**	**+1.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.1						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
SONM	**Songino Array**	**63.01**	**314**	P	**P**	**10 14 03.5**	**+0.4**
	comp=Z,0.9nm,0.6s,mb4.1,baz=38,slow=5.4,SNR=4.5						
ZALV	**Zalesovo Beam**	**65.96**	**331**	P	**P**	**10 14 22.1**	**-0.2**
	comp=Z,0.7nm,0.4s,mb4.0,baz=5.2,slow=1.6,SNR=2.9						
BVAR	**Borovoye Array**	**70.57**	**338**	P	**P**	**10 14 49.5**	**-1.7**
	comp=Z,0.7nm,0.4s,mb4.0,baz=54,slow=7.3,SNR=3.6						
MKAR	**Makanchi Array**	**73.01**	**328**	P	**P**	**10 15 05.1**	**-0.9**
	comp=Z,1.3nm,0.7s,mb4.0,baz=39,slow=7.8,SNR=4.7						

GYA	**Guiyang**	**79.80 300**	P	**P**	**10 15 45.8**	**+1.0**
GYA			pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7					
KMI	**Kunming**	**82.92 303**	P	**P**	**10 16 01.9**	**+0.5**
KMI			pP	pP	10 16 06.1	-0.6
KMI			sP	sP	10 16 07.3	-1.3
KMI			PP	PP	10 19 14.8	+3.4
KMI			S	S	10 26 19.8	+0.3
KMI			sS	sS	10 26 25.9	-2.3
KMI			SS	SS	10 31 45.9	+4.2
KMI			pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7					
KMI			pmax	pmax		
	comp=Z,72nm,4.0s					
KMI			LR	LR		
	comp=N,120nm,15.1s,MS4.6					
KMI			LR	LR		
	comp=E,170nm,16.7s,MS4.6					
KMI			LR	LR		
	comp=Z,170nm,15.1s,MS4.5					

*IDC **20** 10:07:56.2±9.3, 15°.40N×92°.38W, h0km, mb3.8/5, mb1 4.1/7, mb1mx3.8/24, mbtmp3.8/7, ML3.7/1, Error ellipse: s-maj=197.1km s-min=48.8km az=7.0*
*ISCJB **20** 10:08:10.6±0.4, 15°.67N±0°.04×93°.70W±0°.03, h85km±5km, mb3.9/6, Error ellipse: s-maj=7.3km s-min=4.3km az=19.7*
*MEX **20** 10:08:12.2±0.8, 15°.64N×93°.66W, h88km±8km, MD4.1*
*NEIC **20** 10:08:12.0, 15°.59N×93°.67W, h87km, mb3.9/2, MD4.1(MEX), After MEX.*
*CASC **20** 10:08:25.9±0.8, 15°.22N×92°.69W, h21km±17km, MD4.3, mb3.9(NEIC)*

ISC 20 10:08:11.8±0.4, 15°.67N±0°.04×93°.68W±0°.03, h78km±5km, n30, σ1§17/45, mb3.9/6, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.45**	**86**	*e*P	**Pn**	**10 08 24.8**	**0.0**
PCIG				*i* S	**Sn**	**10 08 35.1**	**+0.6**
TGIG		**1.23**	**26**	*i* P	**Pn**	**10 08 33.6**	**+0.1**
TGIG				*i* S	**Sn**	**10 08 49.2**	**-0.6**
SCX	**San Cristobal**	**1.46**	**43**	*i* P	**Pn**	**10 08 37.4**	**+0.9**
SCX				*i* S	**Sn**	**10 08 56.2**	**+1.1**
THIG		**1.56**	**119**	*e*P	**Pn**	**10 08 36.7**	**-1.1**
THIG				*i* S	**Sn**	**10 08 56.0**	**-1.5**
CMIG	**Matias Romero**	**1.82**	**321**	Pn	**Pn**	**10 08 42.8**	**+1.5**
	18nm,0.3s,baz=148,slow=12,SNR=595						
CMIG				Sn	**Sn**	**10 09 04.4**	**+0.7**
	113nm,0.3s,baz=139,slow=12,SNR=26						
CMIG	**Matias Romero**	**1.82**	**321**	*e*P	**Pn**	**10 08 41.8**	**+0.5**
CMIG				*i* S	**Sn**	**10 09 04.6**	**+0.9**
HUIG	**Huatulco**	**2.34**	**273**	*e*P	**Pn**	**10 08 48.3**	**+0.1**
HUIG				*i* S	**Sn**	**10 09 14.3**	**-1.7**
JAT	**Jato**	**2.39**	**124**	*e*P	**Pn**	**10 08 49.3**	**+0.4**
TUIG	**Tuzandepetl**	**2.46**	**343**	*i* P	**Pn**	**10 08 49.9**	**+0.1**
TUIG				*i* S	**Sn**	**10 09 19.4**	**+0.6**
TP2	**Tecpan 2**	**2.71**	**109**	*e*P	**Pn**	**10 08 53.5**	**+0.2**
TP2				*e*S	**Sn**	**10 09 17.2**	**-7.9**
FG6		**2.92**	**112**	*e*P	**Pn**	**10 08 56.8**	**+0.8**
FUG	**Fuego 3**	**3.00**	**114**	*e*P	**Pn**	**10 08 59.2**	**+2.1**
VHO	**Vista Hermosa**	**3.25**	**296**	*i* P	**Pn**	**10 09 00.2**	**-0.2**
VHO				*i* S	**Sn**	**10 09 37.3**	**-0.7**
NBG	**Las Nubes**	**3.40**	**108**	*e*P	**Pn**	**10 09 02.6**	**+0.2**
NBG				*e*S	**Sn**	**10 09 33.0**	**-8.6**
SCIG	**Sabancuy**	**4.05**	**36**	*e*P	**Pn**	**10 09 10.2**	**-1.2**
SCIG				*i* S	**Sn**	**10 09 55.9**	**-1.8**
PNIG	**Pinotepa**	**4.33**	**280**	*e*P	**Pn**	**10 09 16.1**	**+0.9**
PNIG				*i* S	**Sn**	**10 10 03.6**	**-1.0**
TPIG	**Tehuac#an**	**4.46**	**308**	*i* P	**Pn**	**10 09 16.8**	**-0.1**
TPIG				*i* S	**Sn**	**10 10 08.0**	**+0.4**
UTMO	**Huajuapan**	**4.50**	**299**	*i* P	**Pn**	**10 09 18.1**	**+0.7**
UTMO				*i* S	**Sn**	**10 10 07.8**	**-0.7**
TEIG	**Tepich**	**6.85**	**48**	*e*Pn	**Pn**	**10 09 46.7**	**-2.9**
	148nm,0.3s						
TXAR	**Lajitas Array**	**16.42**	**328**	P	**Pn**	**10 11 60.0**	**+2.6**
	0.1nm,0.3s,baz=146,slow=15,SNR=9.0						
MIAR	**Mount Ida**	**18.80**	**0**	*e*P	**Pn**	**10 12 25.2**	**-1.0**
	2.5nm,0.6s						
SNOW	**Snow King Moun**	**31.30**	**336**	*e*P	**P**	**10 14 26.2**	**+1.8**
	3.9nm,0.8s,mb4.2						
NVAR	**Mina Array Bea**	**31.36**	**321**	P	**P**	**10 14 28.0**	**+3.0**
	0.5nm,0.7s,mb3.4,baz=127,slow=8.0,SNR=6.9						
YKA	**Yellowknife Ar**	**49.04**	**347**	P	**P**	**10 16 49.3**	**-1.3**
	0.7nm,0.5s,mb3.9,baz=153,slow=7.3,SNR=10						
YKA	**Yellowknife Ar**	**49.04**	**347**	P	**P**	**10 16 49.3**	**-1.3**
DLBC	**Dease Lake**	**50.48**	**336**	P	**P**	**10 17 03.4**	**+1.9**
	0.9nm,0.5s,mb4.0,baz=138,slow=16,SNR=3.2						
DLBC	**Dease Lake**	**50.48**	**336**	P	**P**	**10 17 03.4**	**+1.9**
INK	**Inuvik**	**58.39**	**344**	P	**P**	**10 17 56.7**	**-2.0**
	1.1nm,0.5s,mb4.2,baz=170,slow=5.4,SNR=6.4						
INK	**Inuvik**	**58.39**	**344**	P	**P**	**10 17 56.7**	**-2.0**
RES	**Resolute Bay**	**59.02**	**360**	P	**P**	**10 17 58.4**	**-4.7**
	0.7nm,0.8s,mb3.7,baz=158,slow=11,SNR=7.1						

*NSSP **20** 10:17:09.9, 38°.42N×45°.02E, h10km, ML3.6*
*ISK **20** 10:17:18.6, 38°.46N×44°.75E, h4km, ML3.5*
*CSEM **20** 10:17:18.6±0.2, 38°.43N×44°.78E, h2km, ML3.7, Error ellipse: s-maj=4.5km s-min=3.5km az=19.0*
*TEH **20** 10:17:20.9, 38°.51N×44°.93E, h3km*
*DDA **20** 10:17:22.8, 38°.36N×44°.48E, h12km, Md3.3*

ISC 20 10:17:19.3±0.5, 38°.43N±0°.02×44°.82E±0°.03, h3km±4km, n52, σ1§27/79, 2C-7D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISHB	**Shabestar**	**0.64**	**103**	*e*Pg	**Pg**	**10 17 31.5**	**-0.2**
ISHB				*e*Sg	**Sg**	**10 17 38.9**	**-1.1**
ISHB				*e*		10 17 41.6	
	comp=Z,42μm,0.1s						
IMRD	**Marand**	**0.75**	**67**	||*e*Pg	**Pg**	**10 17 32.9**	**-0.8**
IMRD				*e*		10 17 47.6	
	comp=Z,34μm,0.1s						
IMRD	**Marand**	**0.75**	**67**	||*e*Pg	**Pg**	**10 17 32.9**	**-0.8**
NAX	**Nakhchivan**	**0.91**	**35**	P	**Pg**	**10 17 35.9**	**-1.0**
	SNR=84						
CLDR	**Caldiran**	**1.00**	**316**	*e*Pg	**Pg**	**10 17 37.1**	**-1.5**
CLDR				*e*SG	**Sg**	**10 17 50.4**	**-1.2**
CLDR	**Caldiran**	**1.00**	**316**	*e*Pg	**Pg**	**10 17 37.1**	**-1.5**
CLDR				*e*Sg	**Sg**	**10 17 50.4**	**-1.2**
ITBZ	**Tabriz**	**1.06**	**100**	*e*Pg	**Pg**	**10 17 38.6**	**-1.1**
ITBZ				*e*		10 17 42.8	
	comp=Z,8μm,0.1s						
TVAN	**Van**	**1.11**	**276**	*i* P	**Pn**	**10 17 38.2**	**-3.6**
TVAN				*i* S	**Sg**	**10 18 00.8**	**+5.6**
TVAN	**Van**	**1.11**	**276**	*i* P	**Pn**	**10 17 38.2**	**-3.6**
VANB	**Van**	**1.14**	**279**	*e*PG	**Pn**	**10 17 39.5**	**-2.6**
VANB				*e*SG	**Sn**	**10 17 56.0**	**-2.2**
VANB	**Van**	**1.14**	**279**	*e*Pg	**Pn**	**10 17 39.5**	**-2.6**
VANB				*e*Sg	**Sn**	**10 17 56.0**	**-2.1**
IAZR	**Azarshahr**	**1.18**	**129**	*e*Pg	**Pn**	**10 17 41.3**	**-1.4**
IAZR				*e*		10 17 45.6	
	comp=Z,37μm,0.2s						
IAZR				*e*Sg	**Sg**	**10 17 58.1**	**+0.8**
IAZR	**Azarshahr**	**1.18**	**129**	*e*Pg	**Pn**	**10 17 41.3**	**-1.4**
IAZR				*e*Sg	**Sg**	**10 17 58.1**	**+0.8**
HKR	**Hakkari**	**1.20**	**225**	*e*PN	**Pn**	**10 17 41.9**	**-1.1**
HKR	**Hakkari**	**1.20**	**225**	*e*Pn	**Pn**	**10 17 41.9**	**-1.1**
VANT	**Van**	**1.22**	**270**	*e*PN	**Pn**	**10 17 42.2**	**-1.1**
HAKT	**HAKKARI**	**1.23**	**226**	*i* P	**Pg**	**10 17 40.9**	**-2.1**
HAKT				*i* S	**Sg**	**10 18 01.6**	**+2.6**
HAKT	**HAKKARI**	**1.23**	**226**	*i* P	**Pg**	**10 17 40.9**	**-2.1**
HAKT				*i* S	**Sg**	**10 18 01.6**	**+2.6**
DYDN	**Diyadin**	**1.42**	**322**	*i* P	**Pn**	**10 17 46.2**	**+0.2**
DYDN				*i* S	**Sg**	**10 18 09.6**	**+4.6**
DYDN	**Diyadin**	**1.42**	**322**	*i* P	**Pn**	**10 17 46.2**	**+0.2**
CUKT	**Cukurca**	**1.52**	**220**	*e*PN	**Pn**	**10 17 47.2**	**-0.1**
CUKT	**Cukurca**	**1.52**	**220**	*e*Pn	**Pn**	**10 17 47.2**	**-0.2**
GRS	**Goris**	**1.59**	**47**	||P	**Pn**	**10 17 47.0**	**-1.4**
GRS				S	**Sn**	**10 18 08.0**	**-1.5**
GNI	**Garni**	**1.72**	**358**	*e*PN	**Pn**	**10 17 50.5**	**+0.4**
GNI	**Garni**	**1.72**	**358**	||P	**Pn**	**10 17 50.3**	**+0.2**
GNI				S	**Sg**	**10 18 16.6**	**+2.0**
IHRS	**Heris**	**1.75**	**93**	*e*Pn	**Pn**	**10 17 51.0**	**+0.5**
IHRS				*e*		10 17 53.9	
	comp=Z,10μm,0.2s						
IHRS				*e*Sn	**Sn**	**10 18 12.8**	**-0.5**
PAAR	**P'arak'ar**	**1.75**	**349**	||P	**Pn**	**10 17 44.9**	**-5.7**
PAAR				S	**Sn**	**10 18 11.6**	**-1.8**
VNNZ	**Vanand**	**1.84**	**335**	||P	**Pn**	**10 17 46.9**	**-4.9**
VNNZ				S	**Sn**	**10 18 15.3**	**-0.3**
KAPZ	**Kaputan**	**1.89**	**357**	||P	**Pn**	**10 17 47.0**	**-5.5**
KAPZ				S	**Sn**	**10 18 16.0**	**-0.9**
ARUZ	**Aruch**	**1.94**	**343**	||P	**Pn**	**10 17 47.7**	**-5.4**
ARUZ				S	**Sn**	**10 18 18.6**	**+0.7**
AMBZ	**Amberd**	**2.01**	**348**	||P	**Pn**	**10 17 48.7**	**-5.4**
AMBZ				S	**Sn**	**10 18 20.7**	**+1.1**
ISRB	**Sarab**	**2.32**	**104**	*e*Pn	**Pn**	**10 17 59.9**	**+1.5**
ISRB				*e*		10 18 05.3	
	comp=Z,4μm,0.2s						
ISRB				*e*Sn	**Sn**	**10 18 27.9**	**+0.4**
ISRB	**Sarab**	**2.32**	**104**	*e*Pn	**Pn**	**10 17 59.9**	**+1.5**
ISRB				*e*Sn	**Sn**	**10 18 27.9**	**+0.4**
MSL	**Mosul**	**2.44**	**214**	*e*Pn	**Pn**	**10 18 04.0**	**+4.0**
MSL				*e*Sn	**Sb**	**10 18 36.0**	**+1.8**
GANJ	**Ganja**	**2.50**	**27**	P	**Pn**	**10 18 02.1**	**+1.2**
	SNR=19						
KARS	**Kars**	**2.58**	**329**	*e*PN	**Pn**	**10 18 01.4**	**-0.5**
BTMT	**Batman**	**2.63**	**266**	*e*PN	**Pn**	**10 18 04.2**	**+1.6**
GLBA	**Clilabad**	**2.91**	**73**	P	**Pn**	**10 18 08.5**	**+2.1**
	SNR=4.9						
DGRG	**David-gareji**	**3.05**	**8**	P	**Pb**	**10 18 14.1**	**-0.1**
DGRG				S	**Sg**	**10 18 59.1**	**+1.8**
MTA	**Mtatsminda**	**3.26**	**360**	P	**Pb**	**10 18 18.1**	**+0.2**
MTA				S	**Sb**	**10 19 01.0**	**+3.1**
TBLG	**Delisi**	**3.30**	**359**	P	**Pb**	**10 18 17.7**	**-0.7**
TBLG				S	**Sb**	**10 19 01.4**	**+2.4**
GOR	**Gori**	**3.59**	**352**	P	**Pb**	**10 18 24.9**	**+1.4**
BCA	**Borcka**	**3.89**	**322**	*e*PN	**Pn**	**10 18 20.3**	**+0.4**
BCA	**Borcka**	**3.89**	**322**	*e*Pn	**Pn**	**10 18 20.3**	**+0.4**
IDHR	**Dehrash**	**3.93**	**161**	*e*Pn	**Pn**	**10 18 22.2**	**+1.7**
IDHR				*e*		10 19 47.3	
	comp=N,1μm,0.5s						
IDHR	**Dehrash**	**3.93**	**161**	*e*Pn	**Pn**	**10 18 22.2**	**+1.7**
KEH	**Kehvi**	**3.94**	**350**	P	**Pb**	**10 18 29.7**	**+0.4**
PTK	**Pertek**	**4.27**	**278**	*e*PN	**Pn**	**10 18 25.5**	**+0.3**
ONI	**Oni**	**4.29**	**346**	P	**Pb**	**10 18 35.1**	**-0.2**
SVRC	**Sivrice-ELAZID**	**4.33**	**271**	*e*PN	**Pn**	**10 18 26.2**	**+0.2**
BHD	**Baghdad**	**5.16**	**184**	*e*Pn	**Pn**	**10 18 36.0**	**-1.4**
BHD				*e*Sn	**Sn**	**10 19 38.0**	**+0.6**
BHD	**Baghdad**	**5.16**	**184**	*e*Pn	**Pn**	**10 18 36.0**	**-1.4**
BHD				*e*Sn	**Sn**	**10 19 38.0**	**+0.6**

*ISK **20** 10:37:40.4, 40°.16N×26°.90E, h14km, MD2.9*
*ISCJB **20** 10:37:40.7±0.5, 40°.18N±0°.03×26°.91E±0°.04, h9km±6km, Error ellipse: s-maj=5.3km s-min=4.6km az=32.5*
*CSEM **20** 10:37:41.1±0.1, 40°.17N×26°.91E, h13km, MD2.9, Error ellipse: s-maj=1.6km s-min=1.4km az=103.0*
*DDA **20** 10:37:41.1±0.4, 40°.15N×26°.92E, h7km±3km, Md2.9*

ISC 20 10:37:41.1±0.4, 40°.18N±0°.03×26°.90E±0°.04, h13km±5km, n35, σ0§44/47, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPK	**Lapseki**	**0.22**	**332**	PG	**Pg**	**10 37 46.3**	**+0.4**
LPK				*e*SG	**Sg**	**10 37 49.2**	**0.0**
LPK	**Lapseki**	**0.22**	**332**	*i* Pg	**Pg**	**10 37 46.3**	**+0.4**
LPK				*e*Sg	**Sg**	**10 37 49.2**	**0.0**
RKY	**Sarkoy-Tekirda**	**0.55**	**23**	*e*PG	**Pg**	**10 37 52.2**	**+0.3**
RKY				*e*SG	**Sg**	**10 38 00.3**	**+1.0**
RKY	**Sarkoy-Tekirda**	**0.55**	**23**	*e*Pg	**Pg**	**10 37 52.2**	**+0.2**
RKY				*e*Sg	**Sg**	**10 38 00.3**	**+1.0**
EZN	**Ezine**	**0.56**	**232**	*e*PG	**Pg**	**10 37 52.2**	**+0.1**
EZN				*e*SG	**Sg**	**10 37 59.3**	**-0.3**
EZN	**Ezine**	**0.56**	**232**	*e*Pg	**Pg**	**10 37 52.2**	**+0.1**
EZN				*e*Sg	**Sg**	**10 37 59.3**	**-0.3**
MFT	**Murefte**	**0.68**	**25**	*e*PG	**Pg**	**10 37 54.4**	**+0.1**
MFT	**Murefte**	**0.68**	**25**	*e*Pg	**Pg**	**10 37 54.4**	**+0.1**
BALY	**Balya**	**0.70**	**128**	*i* P	**Pg**	**10 37 54.6**	**-0.2**
BALY				*i* S	**Sg**	**10 38 04.2**	**+0.2**
BALY	**Balya**	**0.70**	**128**	*i* P	**Pg**	**10 37 54.6**	**-0.2**
BALY				*i* S	**Sg**	**10 38 04.2**	**+0.1**
EDC	**Edincik**	**0.76**	**77**	*e*PG	**Pg**	**10 37 55.3**	**-0.5**
EDC	**Edincik**	**0.76**	**77**	*e*Pg	**Pg**	**10 37 55.3**	**-0.5**
GADA	**Gvkgeada**	**0.77**	**271**	*e*PG	**Pg**	**10 37 56.3**	**+0.3**
GADA	**Gvkgeada**	**0.77**	**271**	*e*Pg	**Pg**	**10 37 56.3**	**+0.3**
ENEZ	**Enez**	**0.80**	**315**	*e*PG	**Pg**	**10 37 55.9**	**-0.6**
ENEZ	**Enez**	**0.80**	**315**	*e*Pg	**Pg**	**10 37 55.9**	**-0.7**
BNT	**Bandirma**	**0.80**	**77**	*e*PG	**Pg**	**10 37 55.6**	**-1.0**
AYVA	**Ayvalik**	**0.88**	**191**	*i* P	**Pg**	**10 37 58.0**	**-0.2**
AYVA				*i* S	**Sg**	**10 38 10.2**	**+0.6**
AYVA	**Ayvalik**	**0.88**	**191**	*i* P	**Pg**	**10 37 58.0**	**-0.1**
AYVA				*i* S	**Sg**	**10 38 10.2**	**+0.5**
BALB	**Balikesir**	**0.93**	**125**	*e*PG	**Pg**	**10 37 59.0**	**0.0**
BALB	**Balikesir**	**0.93**	**125**	*e*Pg	**Pg**	**10 37 59.0**	**0.0**
KCT	**Karacabey**	**1.12**	**85**	*e*PN	**Pg**	**10 38 02.7**	**0.0**
KCT	**Karacabey**	**1.12**	**85**	*e*Pn	**Pg**	**10 38 02.7**	**0.0**
DURS	**Dursunbey**	**1.34**	**115**	*i* P	**Pn**	**10 38 05.3**	**-0.2**
DURS				*i* S	**Sn**	**10 38 24.1**	**+0.9**
DURS	**Dursunbey**	**1.34**	**115**	*i* P	**Pn**	**10 38 05.3**	**-0.2**
DURS				*i* S	**Sn**	**10 38 24.1**	**+0.9**
SLVT	**Silivri**	**1.45**	**43**	*e*PN	**Pn**	**10 38 07.0**	**0.0**
SLVT	**Silivri**	**1.45**	**43**	*e*Pn	**Pn**	**10 38 07.0**	**0.0**
ARMT	**Armutlu**	**1.55**	**75**	*e*PN	**Pn**	**10 38 08.0**	**-0.3**
ARMT	**Armutlu**	**1.55**	**75**	*e*Pn	**Pn**	**10 38 08.0**	**-0.4**
CTKS	**Kestanelik-??a**	**1.62**	**49**	*e*Pn	**Pn**	**10 38 09.1**	**-0.3**
CTKS	**Kestanelik-??a**	**1.62**	**49**	*e*Pn	**Pn**	**10 38 09.1**	**-0.2**
CTYL	**Yal??k??y-??at**	**1.67**	**39**	*e*PN	**Pn**	**10 38 09.7**	**-0.3**
CTYL	**Yal??k??y-??at**	**1.67**	**39**	*e*Pn	**Pn**	**10 38 09.7**	**-0.4**
KLYT	**Kilyos**	**1.95**	**56**	*e*PN	**Pn**	**10 38 14.1**	**+0.2**
KLYT	**Kilyos**	**1.95**	**56**	*e*Pn	**Pn**	**10 38 14.1**	**+0.2**

*CSEM **20** 10:46:31.7±0.2, 37°.31N×22°.08E, h15km, ML2.6/4, Error ellipse: s-maj=7.4km s-min=3.8km az=103.0*
*ISCJB **20** 10:46:31.8±0.5, 37°.32N±0°.02×22°.09E±0°.04, h9km±8km, Error ellipse: s-maj=5.9km s-min=3.8km az=16.4*
*ATH **20** 10:46:32.2, 37°.32N×22°.10E, h10km±3km, MD3.0/6*
*THE **20** 10:46:32.0, 37°.30N×22°.10E, h11km±1km, ML2.6/4, Error ellipse: s-maj=1.3km s-min=0.3km az=136.0*

ISC 20 10:46:32.3±0.7, 37°.31N±0°.03×22°.09E±0°.05, h12km±9km, n22, σ0§67/38, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITM	**Ithomi**	**0.19**	**226**	P	**Pg**	**10 46 35.9**	**-0.5**
ITM				S	**Sg**	**10 46 39.2**	**0.0**
ITM	**Ithomi**	**0.19**	**226**	*e*PG	**Pg**	**10 46 35.9**	**-0.5**
ITM				*e*SG	**Sg**	**10 46 39.5**	**+0.5**
ITM	**Ithomi**	**0.19**	**226**	P	**Pg**	**10 46 35.9**	**-0.5**
ITM				S	**Sg**	**10 46 39.2**	**0.0**
VLX	**Vlachokerasia**	**0.24**	**75**	P	**Pg**	**10 46 37.1**	**-0.1**
VLX				S	**Sg**	**10 46 40.4**	**-0.2**
VLX	**Vlachokerasia**	**0.24**	**75**	*e*PG	**Pg**	**10 46 37.1**	**-0.1**
VLX	**Vlachokerasia**	**0.24**	**75**	P	**Pg**	**10 46 37.1**	**-0.1**
VLX				S	**Sg**	**10 46 40.4**	**-0.2**
PYL	**PYLOS**	**0.50**	**214**	P	**Pg**	**10 46 41.5**	**-0.6**
PYL				S	**Sg**	**10 46 49.1**	**+0.4**
PYL	**PYLOS**	**0.50**	**214**	*e*PB	**Pg**	**10 46 42.1**	**0.0**
PYL				*e*SB	**Sg**	**10 46 49.9**	**+1.2**
PYL	**PYLOS**	**0.50**	**214**	P	**Pg**	**10 46 41.5**	**-0.6**
PYL	**PYLOS**	**0.50**	**214**	*e*Pb	**Pg**	**10 46 42.1**	**0.0**
PYL				S	**Sg**	**10 46 49.1**	**+0.4**
PYL				*e*Sb	**Sg**	**10 46 49.9**	**+1.2**
GUR	**Goura**	**0.66**	**17**	P	**Pg**	**10 46 44.3**	**-0.7**
GUR				S	**Sg**	**10 46 54.4**	**+0.8**
GUR	**Goura**	**0.66**	**17**	*e*PB	**Pg**	**10 46 44.5**	**-0.5**
GUR	**Goura**	**0.66**	**17**	*e*Pb	**Pg**	**10 46 44.5**	**-0.5**
GUR				S	**Sg**	**10 46 54.4**	**+0.8**
VLI	**Veliai**	**0.90**	**131**	*e*PG	**Pg**	**10 46 49.2**	**-0.4**
VLI				*e*SB	**Sg**	**10 47 01.8**	**+0.5**
LAKA	**Lakka**	**0.93**	**354**	P	**Pg**	**10 46 49.5**	**-0.8**
LAKA				S	**Sg**	**10 47 03.7**	**+1.3**
LAKA	**Lakka**	**0.93**	**354**	P	**Pg**	**10 46 49.5**	**-0.8**
LAKA				S	**Sg**	**10 47 03.7**	**+1.3**
KALE	**Kalithea**	**1.08**	**2**	P	**Pg**	**10 46 51.9**	**-1.2**
KALE				S	**Sg**	**10 47 07.9**	**+0.8**
KALE	**Kalithea**	**1.08**	**2**	P	**Pg**	**10 46 51.9**	**-1.2**
KALE				S	**Sg**	**10 47 07.9**	**+0.8**
EFP	**Efpalio**	**1.12**	**352**	P	**Pg**	**10 46 53.2**	**-0.7**
EFP	**Efpalio**	**1.12**	**352**	P	**Pg**	**10 46 53.2**	**-0.7**
KYTH	**Kithira**	**1.28**	**143**	*e*PB	**Pb**	**10 46 56.6**	**+0.4**
KYTH	**Kithira**	**1.28**	**143**	*e*Pb	**Pb**	**10 46 56.6**	**+0.4**

*IDC **20** 10:55:04.7±0.8, 7°.10S×107°.73E, h0km, mb4.2/10, mb1 4.4/11, mb1mx4.1/24, mbtmp4.2/11, ML3.6/1, MS3.9/13, Ms1 3.9/13, ms1mx3.6/27, Error ellipse: s-maj=41.6km s-min=14.5km az=55.0*

*DJA **20** 10:55:08, 7°.23S×107°.72E, h10km, MLv4.6/15*
*NEIC **20** 10:55:09.9±0.5, 7°.05S×107°.83E, h35km, mb4.0/2, Error ellipse: s-maj=24.1km s-min=8.7km az=54.0*
*ISCJB **20** 10:55:10.1±0.5, 7°.16S±0°.07×107°.76E±0°.04, h57km±6km, mb4.1/11, MS3.9/12, Error ellipse: s-maj=12.6km s-min=5.1km az=22.3*

ISC 20 10:55:11.3±0.5, 7°.18S±0°.07×107°.74E±0°.04, h49km±6km, n50, σ1§19/45, mb4.1/11, MS3.9/12, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	**Lembang**	**0.37**	**342**	P	**Pn**	**10 55 15.5**	**-5.5**
LEM				S	**Sn**	**10 55 23.2**	**-4.7**
SKJI	**Sukabumi**	**1.18**	**278**	P	**Pn**	**10 55 28.9**	**-2.5**
SKJI				S	**Sn**	**10 55 45.3**	**-1.1**
TNG	**Tangerang**	**1.47**	**313**	P	**Pn**	**10 55 34.0**	**-1.4**
TNG	**Tangerang**	**1.47**	**313**	P		10 55 34.8	
SBJI	**Serang**	**1.91**	**303**	P	**Pn**	**10 55 41.6**	**+0.2**
CGJI	**Cibinong**	**2.10**	**285**	P	**Pn**	**10 55 42.8**	**-1.3**
CGJI				S	**Sn**	**10 56 09.8**	**+0.8**
RBSI	**Rajabasa**	**2.38**	**304**	P	**Pn**	**10 55 48.5**	**+0.6**
YOGI	**Yogyakarta**	**2.62**	**104**	P	**Pn**	**10 55 51.4**	**+0.3**
SMRI	**Semarang**	**2.69**	**87**	P	**Pn**	**10 55 52.1**	**0.0**
UGM	**Wanagama**	**2.86**	**105**	P	**Pn**	**10 55 53.6**	**-0.8**
BLSI	**Bandar Lampung**	**3.06**	**306**	P	**Pn**	**10 56 02.1**	**+4.9**
PCJI	**Pacitan**	**3.56**	**107**	P	**Pn**	**10 56 03.0**	**-1.0**
KASI	**Kota Agung**	**3.61**	**297**	P	**Pn**	**10 56 09.2**	**+4.4**
KLI	**Kotabumi**	**3.67**	**309**	P	**Pn**	**10 56 07.6**	**+2.0**
NGJI	**Ngawi**	**3.70**	**93**	P	**Pn**	**10 56 10.4**	**+4.4**
KLSI		**3.88**	**309**	P	**Pn**	**10 56 09.0**	**+0.6**
SJI	**Sawahan**	**4.04**	**98**	P	**Pn**	**10 56 11.8**	**+1.2**
PWJI	**Pagerwojo**	**4.12**	**102**	P	**Pn**	**10 56 11.0**	**-0.7**
LWLI	**Liwa**	**4.24**	**300**	P	**Pn**	**10 56 15.6**	**+2.2**
TPI	**Tanjungpandan**	**4.39**	**359**	P	**Pn**	**10 56 17.7**	**+2.2**
MDSI	**Maura Dua**	**4.43**	**307**	P	**Pn**	**10 56 18.2**	**+2.1**
PPBI	**Pangkal Pinang**	**5.23**	**342**	P	**Pn**	**10 56 27.1**	**+0.1**
PSI	**Prapat**	**13.25**	**318**	Pn	**Pn**	**10 58 14.5**	**-2.4**
	0.3nm,0.3s,baz=180,slow=16,SNR=2.0						
PSI				LR	LR	11 04 10.1	
	comp=Z,2μm,19.1s,baz=147,slow=42						
FITZ	**Fitzroy Crossi**	**20.55**	**124**	*e*P	**P**	**10 59 46.2**	**+0.3**
	42nm,0.8s						
FITZ	**Fitzroy Crossi**	**20.55**	**124**	P	**P**	**10 59 45.8**	**-0.1**
	22nm,0.8s,baz=293,slow=6.3,SNR=18						
FITZ				LR	LR	11 07 10.7	
	comp=Z,248nm,21.6s,MS3.5,baz=308,slow=35						
FITZ	**Fitzroy Crossi**	**20.55**	**124**	*e*P	**P**	**10 59 46.3**	**+0.4**
FITZ				LR	LR	11 07 10.7	
CMAR	**Chiang Mai Arr**	**26.91**	**341**	P	**P**	**11 00 48.2**	**+0.3**
	0.7nm,0.4s,mb3.5,baz=177,slow=8.6,SNR=7.5						
CMAR				LR	LR	11 14 11.1	
	comp=Z,198nm,18.5s,MS3.7,baz=82,slow=43						
NWAO	**Narrogin (SRO)**	**27.10**	**162**	P	**P**	**11 00 51.1**	**+1.6**
	5.9nm,0.8s,mb4.2,baz=343,slow=14,SNR=3.2						
WRA	**Warramunga Arr**	**28.75**	**119**	P	**P**	**11 01 03.8**	**-0.7**
	9.3nm,1.2s,mb4.4,baz=290,slow=11,SNR=15						
ASAR	**Alice Springs**	**29.99**	**126**	P	**P**	**11 01 15.4**	**-0.1**
	3.9nm,0.7s,mb4.2,baz=303,slow=8.3,SNR=23						
ASAR				PcP	PcP	11 04 18.2	+1.3
	0.6nm,0.9s,baz=319,slow=2.3,

ellipse: s-maj=37.0km s-min=17.8km az=58.0
*NEIC **20** 11:31:16.4±0.6, 32°.60N×105°.43E, h10km, Error ellipse: s-maj=15.2km s-min=8.3km az=57.0*
*BJI **20** 11:31:16.7, 32°.58N×105°.36E, h10km, mB4.1/1, mb3.5/1, ML3.7/14, Ms3.5/4, Ms7 3.4/6*

ISC 20 11:31:15.9±1.0, 32.49N±0°.03×105°.28E±0°.04, h4km±8km, n15, σ1§17/26, mb3.4/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.04**	**220**	Pn	**Pn**	**11 31 51.4**	**+0.5**
CD2				Pg	**Pg**	**11 31 53.9**	**-1.0**
CD2				Sg	**Sg**	**11 32 21.8**	**+0.5**
CD2				smax			
	comp=N,4μm,0.7s						
CD2				smax			
	comp=E,4μm,0.8s						
XAN	**Xi'an**	**3.42**	**62**	Pn	**Pn**	**11 32 09.9**	**-0.1**
XAN				Pg	**Pb**	**11 32 16.3**	**-0.8**
XAN				Sn	**Sn**	**11 32 50.3**	**-0.8**
XAN				Sg	**Sb**	**11 33 01.3**	**+2.2**
XAN				smax			
	comp=N,300nm,0.8s						
XAN				smax			
	comp=E,110nm,0.8s						
XAN				LR	LR		
	comp=N,400nm,7.1s						
XAN				LR	LR		
	comp=E,65nm,7.1s						
XAN				LR	LR		
	comp=Z,100nm,9.4s						
LZH	**Lanzhou**	**3.78**	**342**	*e*Pn	**Pn**	**11 32 16.1**	**+1.1**
LZH				Pg	**Pb**	**11 32 22.6**	**-0.6**
LZH				Sn	**Sn**	**11 32 59.6**	**-0.3**
LZH				Sg	**Sb**	**11 33 10.9**	**+1.5**
LZH				smax			
	comp=N,280nm,0.6s						
LZH				smax			
	comp=E,340nm,0.5s						
LZH				LR	LR		
	comp=E,530nm,4.6s						
LZH				LR	LR		
	comp=Z,630nm,5.4s						
ENH	**Enshi**	**4.22**	**120**	*e*Pg	**Pg**	**11 32 35.6**	**-1.2**
ENH				*e*Sg	**Sg**	**11 33 34.9**	**+3.4**
GYA	**Guiyang**	**6.13**	**168**	Pg	**Pn**	**11 32 49.9**	**+2.7**
GYA				Sg	**Sn**	**11 33 55.9**	**-1.9**
GYA				smax			
	comp=N,50nm,0.7s						
GYA				smax			
	comp=E,80nm,0.8s						
GTA	**Gaotai**	**8.21**	**329**	*e*P	**Pn**	**11 33 22.8**	**+7.1**
GTA				pP		11 33 26.8	
GTA				sP		11 33 28.9	
GTA				S	**Sn**	**11 34 53.9**	**+5.0**
GTA				sS		11 34 59.6	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,44nm,4.5s						
GTA				LR	LR		
	comp=N,140nm,9.9s						
GTA				LR	LR		
	comp=E,130nm,9.6s						
GTA				LR	LR		
	comp=Z,250nm,9.6s						
CMAR	**Chiang Mai Arr**	**15.09**	**204**	Pn	**Pn**	**11 34 51.3**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=14,slow=7.9,SNR=2.8						
SONM	**Songino Array**	**15.36**	**3**	Pn	**Pn**	**11 34 51.7**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=172,slow=11,SNR=2.4						
KSRS	**Korea Array**	**19.20**	**69**	P	**Pn**	**11 35 41.5**	**0.0**
	comp=Z,0.1nm,0.3s,baz=257,slow=11,SNR=8.4						
MKAR	**Makanchi Array**	**22.64**	**316**	P	**P**	**11 36 17.9**	**+0.2**
	comp=Z,0.6nm,0.7s,mb3.2,baz=107,slow=12,SNR=5.0						
ZALV	**Zalesovo Beam**	**25.95**	**332**	P	**P**	**11 36 48.0**	**-1.2**
	comp=Z,0.3nm,0.3s,mb3.3,baz=149,slow=6.4,SNR=2.6						
ZALV	**Zalesovo Beam**	**25.95**	**332**	P	**P**	**11 36 48.0**	**-1.2**
KURK	**Kurchatov**	**26.77**	**321**	P	**P**	**11 36 55.5**	**-1.2**
	comp=Z,0.5nm,0.7s,mb3.1,baz=130,slow=8.8,SNR=2.7						
WRA	**Warramunga Arr**	**59.09**	**148**	P	**P**	**11 41 18.1**	**+0.7**
	comp=Z,0.6nm,0.5s,mb3.9,baz=341,slow=7.8,SNR=8.6						
ASAR	**Alice Springs**	**62.17**	**150**	P	**P**	**11 41 39.0**	**+0.6**
	comp=Z,0.2nm,0.4s,mb3.6,baz=332,slow=6.7,SNR=12						

*ISCJB **20** 11:51:23.9±0.4, 32°.69N±0°.03×105°.48E±0°.04, h10km, mb3.9/12, Error ellipse: s-maj=5.2km s-min=4.8km az=172.3*
*IDC **20** 11:51:24.1±0.8, 32°.71N×105°.42E, h0km, mb3.9/8, mb1 3.9/11, mb1mx3.8/27, mbtmp3.8/11, ML3.7/3, MS2.8/1, Ms1 2.8/1, ms1mx2.2/31, Error ellipse: s-maj=35.7km s-min=16.0km az=55.0*
*NEIC **20** 11:51:25.8±0.4, 32°.79N×105°.53E, h10km, mb4.0/4, Error ellipse: s-maj=16.3km s-min=7.4km az=59.0*
*BJI **20** 11:51:25.2, 32°.76N×105°.56E, h10km, mB4.7/2, mb4.0/2, ML3.8/15, Ms3.5/6, Ms7 3.3/6*

ISC 20 11:51:25.9±0.3, 32°.77N±0°.03×105°.49E±0°.04, h10km, n26, σ1§36/39, mb3.9/12, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.37**	**219**	Pn	**Pn**	**11 52 06.0**	**+1.2**
CD2				Pg	**Pg**	**11 52 08.8**	**-2.6**
CD2				Sn	**Sn**	**11 52 36.1**	**+2.1**
CD2				Sg	**Sg**	**11 52 40.4**	**-1.7**
CD2				smax			
	comp=N,2μm,0.9s						
CD2				smax			
	comp=E,1μm,0.6s						
XAN	**Xi'an**	**3.14**	**65**	Pn	**Pn**	**11 52 16.6**	**+1.2**
XAN				Pg	**Pg**	**11 52 23.3**	**-2.7**
XAN				Sn	**Sn**	**11 52 54.3**	**+1.4**
XAN				Sg	**Sg**	**11 53 04.5**	**-2.2**
XAN				smax			
	comp=N,410nm,0.7s						
XAN				smax			
	comp=E,210nm,0.8s						
XAN				LR	LR		
	comp=N,230nm,7.6s						
XAN				LR	LR		
	comp=E,160nm,10.1s						
XAN				LR	LR		
	comp=Z,120nm,8.0s						
LZH	**Lanzhou**	**3.58**	**338**	*e*Pn	**Pn**	**11 52 24.3**	**+2.8**
LZH				Pg	**Pg**	**11 52 30.8**	**-3.7**
LZH				Sn	**Sn**	**11 53 09.8**	**+6.0**
LZH				Sg	**Sg**	**11 53 18.8**	**-2.1**
LZH				smax			
	comp=N,400nm,0.6s						
LZH				smax			
	comp=E,550nm,0.5s						
LZH				LR	LR		
	comp=E,560nm,5.5s						
LZH				LR	LR		
	comp=Z,830nm,6.8s						
ENH	**Enshi**	**4.22**	**125**	*e*Pn	**Pn**	**11 52 31.4**	**+1.1**
ENH				*e*Sg	**Sg**	**11 53 42.5**	**+1.0**
GYA	**Guiyang**	**6.37**	**170**	Pg	**Pn**	**11 53 00.1**	**+0.2**
GYA				Sg	**Sn**	**11 54 09.9**	**-2.8**
GYA				smax			
	comp=N,50nm,0.9s						
GYA				smax			
	comp=E,90nm,1.0s						
WHN	**Wuhan**	**7.87**	**104**	*e*P	**Pb**	**11 53 46.5**	**+4.1**
WHN				S	**Sn**	**11 54 46.0**	**-3.6**
WHN				LR	LR		
	comp=N,420nm,5.4s						
WHN				LR	LR		
	comp=E,550nm,4.5s						
GTA	**Gaotai**	**8.06**	**327**	*e*P	**Pn**	**11 53 24.4**	**+1.3**
GTA				S	**Sn**	**11 55 03.1**	**+8.8**
GTA				sS		11 55 08.5	
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,150nm,5.1s						
GTA				LR	LR		
	comp=N,110nm,7.8s						
GTA				LR	LR		
	comp=E,140nm,8.4s						
GTA				LR	LR		
	comp=Z,110nm,9.6s						
SONM	**Songino Array**	**15.06**	**2**	Pn	**Pn**	**11 54 59.0**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=174,slow=5.8,SNR=3.1						
CMAR	**Chiang Mai Arr**	**15.42**	**204**	Pn	**Pn**	**11 55 04.2**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=13,slow=8.7,SNR=3.4						
KSRS	**Korea Array**	**18.93**	**69**	P	**Pn**	**11 55 48.3**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=254,slow=10,SNR=14						
KSRS				LR	LR	12 04 14.4	
	comp=Z,28nm,18.5s,baz=170,slow=41						
MK31	**Makanchi Array**	**22.57**	**315**	*e*P	**P**	**11 56 27.7**	**+1.6**
MKAR	**Makanchi Array**	**22.57**	**315**	P	**P**	**11 56 27.1**	**+0.9**
	comp=Z,1.4nm,0.5s,mb3.6,baz=100,slow=14,SNR=10						
ZALV	**Zalesovo Beam**	**25.78**	**331**	P	**P**	**11 56 55.1**	**-1.7**
	comp=Z,0.5nm,0.3s,mb3.5,baz=249,slow=2.8,SNR=3.6						
KURK	**Kurchatov**	**26.67**	**320**	P	**P**	**11 57 05.2**	**+0.3**
	comp=Z,1.2nm,0.8s,mb3.5,baz=136,slow=8.9,SNR=7.2						
KURK	**Kurchatov**	**26.67**	**320**	P	**P**	**11 57 04.2**	**-0.7**
	comp=Z,1.4nm,0.6s,mb3.7						
ABKAR	**Akbulak array**	**37.48**	**310**	*e*P	**P**	**11 58 40.7**	**+1.1**
	comp=Z,0.4nm,0.5s,mb3.5						
JOF	**Joensuu**	**54.26**	**327**	*e*p	**P**	**12 00 50.6**	**-1.1**
	comp=Z,1.2nm,0.5s,mb4.1						
KAF	**Kangasniemi**	**56.65**	**326**	*e*p	**P**	**12 01 08.6**	**-0.3**
	comp=Z,1.3nm,0.5s,mb4.2						
FINES	**FINESS Array B**	**56.85**	**326**	P	**P**	**12 01 10.9**	**+0.5**
	comp=Z,1.8nm,0.4s,mb4.4,baz=92,slow=7.2,SNR=25						
AKASG	**Malin Array Be**	**57.12**	**313**	P	**P**	**12 01 11.7**	**-0.8**
	comp=Z,1.1nm,0.4s,mb4.3,baz=68,slow=7.1,SNR=4.6						
COEN	**Coen**	**58.79**	**136**	*e*P	**P**	**12 01 23.9**	**-0.6**
	comp=Z,114nm,1.4s						
WRAB	**Tennant Creek**	**59.23**	**148**	*e*P	**P**	**12 01 27.5**	**+0.1**
	comp=Z,1.7nm,0.8s,mb4.1						
WRA	**Warramunga Arr**	**59.23**	**148**	P	**P**	**12 01 26.5**	**-1.0**
	comp=Z,1.0nm,0.6s,mb4.0,baz=342,slow=7.4,SNR=9.4						
ASAR	**Alice Springs**	**62.33**	**150**	P	**P**	**12 01 48.4**	**-0.2**
	comp=Z,0.6nm,0.7s,mb3.9,baz=330,slow=6.5,SNR=12						
NB2	**NORSAR Subarra**	**63.90**	**327**	P	**P**	**12 01 58.3**	**-0.2**
	comp=Z,1.4nm,0.7s,mb4.1,baz=71,slow=7.4						
NOA	**NORSAR Array B**	**63.90**	**327**	P	**P**	**12 01 58.4**	**-0.1**
	comp=Z,0.8nm,0.5s,mb4.0,baz=74,slow=4.6,SNR=4.5						

*IDC **20** 11:53:42.5±0.6, 57°.07S×24°.93W, h0km, mb4.6/8, mb1 4.6/8, mb1mx4.4/15, mbtmp4.5/8, MS4.0/4, Ms1 4.0/4, ms1mx3.6/17, Error ellipse: s-maj=23.7km s-min=18.8km az=58.0*
*ISCJB **20** 11:53:42.1±0.6, 57°.1S±0°.1×25°.0W±0°.2, h10km, mb4.4/9, MS4.0/4, Error ellipse: s-maj=20.4km s-min=11.7km az=144.4*
*NEIC **20** 11:53:43.9±0.4, 57°.08S×25°.12W, h10km, mb4.9/2, Error ellipse: s-maj=16.1km s-min=12.7km az=219.0*

ISC 20 11:53:44.0±0.6, 57°.1S±0°.1×25°.1W±0°.2, h10km, n28, σ0§88/14, mb4.4/9, MS4.0/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**15.39**	**159**	*e*	**Pn**	**11 57 19.9**	**-0.9**
VNA1				*e*S	Sn	11 59 24.6	-47
MAIT	**Maitri**	**20.72**	**146**	*e*P	**P**	**11 58 24.6**	**+0.6**
USHA	**Ushuaia**	**24.07**	**257**	P	**P**	**11 58 59.2**	**+0.2**
	9.2nm,0.7s,mb4.3,baz=68,slow=10,SNR=8.0						
QSPA	**South Pole Qui**	**33.16**	**180**	P	**P**	**12 00 21.2**	**+1.4**
	3.8nm,0.5s,mb4.6,baz=211,slow=0.6,SNR=59						
QSPA	**South Pole Qui**	**33.16**	**180**	*e*P	**P**	**12 00 21.0**	**+1.2**
	3.1nm,0.5s,mb4.5						
PLCA	**Paso Flores**	**33.33**	**280**	P	**P**	**12 00 19.9**	**-1.8**
	3.1nm,1.1s,mb4.2,baz=149,slow=8.5,SNR=4.2						
CPUP	**Villa Florida**	**38.38**	**310**	P	**P**	**12 01 05.1**	**0.0**
	6.5nm,0.6s,mb4.6,baz=138,slow=7.0,SNR=22						
CPUP	**Villa Florida**	**38.38**	**310**	P	**P**	**12 01 05.1**	**0.0**
MAW	**Mawson**	**38.61**	**142**	P	**P**	**12 01 06.4**	**-0.2**
	1.7nm,0.6s,mb3.9,baz=289,slow=12,SNR=4.5						
BOSA	**Boshof**	**45.13**	**73**	LR	LR	12 17 03.1	
	comp=Z,152nm,18.1s,MS4.0,baz=166,slow=31						
LPAZ	**La Paz**	**51.93**	**304**	P	**P**	**12 02 54.6**	**+1.8**
	23nm,0.5s,mb5.3,baz=146,slow=5.9,SNR=123						
LPAZ	**La Paz**	**51.93**	**304**	*e*P	**P**	**12 02 54.0**	**+1.3**
	22nm,0.5s,mb5.3						
DBIC	**Dimbokro**	**65.66**	**22**	P	**P**	**12 04 27.9**	**-0.3**
	1.7nm,0.7s,mb4.2,baz=191,slow=4.2,SNR=3.7						
DBIC				LR	LR	12 24 59.9	
	comp=Z,56nm,18.0s,MS3.8,baz=118,slow=29						
TORD	**Torodi Ar. Bea**	**73.42**	**27**	P	**P**	**12 05 16.1**	**0.0**
	4.4nm,0.6s,mb4.6,baz=197,slow=6.6,SNR=28						
KEST	**Kesra**	**96.94**	**28**	LR	LR	12 44 59.9	
	comp=Z,42nm,20.5s,MS3.9,baz=268,slow=32						
ASAR	**Alice Springs**	**97.63**	**161**	P	**P**	**12 07 18.2**	**-0.4**
	0.3nm,0.4s,mb4.2,baz=188,slow=4.1,SNR=17						
ESDC	**Sonseca Array**	**98.03**	**16**	LR	LR	12 43 44.8	
	comp=Z,144nm,21.4s,MS4.4,baz=30,slow=31						
CMAR	**Chiang Mai Arr**	**123.61**	**109**	PKP	PKPdf	12 12 40.9	-0.5
	0.8nm,0.6s,baz=237,slow=3.6,SNR=5.2						
FINES	**FINESS Array B**	**124.77**	**27**	PKP	PKPdf	12 12 41.8	-0.4
	1.7nm,0.8s,baz=174,slow=3.8,SNR=6.3						
BVAR	**Borovoye Array**	**134.36**	**57**	PKP	PKPdf	12 13 02.6	+1.8
	0.3nm,0.3s,baz=134,slow=6.2,SNR=2.7						
MKAR	**Makanchi Array**	**136.12**	**71**	PKP	PKPdf	12 13 05.0	+0.8
	0.2nm,0.4s,baz=232,slow=1.6,SNR=2.4						
YKA	**Yellowknife Ar**	**137.73**	**316**	PKP	PKPdf	12 13 06.9	+0.2
	1.3nm,0.6s,baz=126,slow=2.6,SNR=9.9						
YKA	**Yellowknife Ar**	**137.73**	**316**	PKP	PKPdf	12 13 06.9	+0.2
ZALV	**Zalesovo Beam**	**141.78**	**64**	PKhKP		12 13 06.7	
	0.8nm,0.5s,baz=267,slow=2.9,SNR=2.3						
INK	**Inuvik**	**147.35**	**319**	PKPbc	PKPbc	12 13 26.5	+0.4
	3.1nm,0.5s,baz=87,slow=2.7,SNR=9.7						
CBIJ	**Chichi jima**	**148.68**	**158**	PKPbc	PKPbc	12 13 30.0	-0.9
	40nm,0.9s,baz=126,slow=23,SNR=5.3						
SONM	**Songino Array**	**149.63**	**87**	PKPbc	PKPbc	12 13 31.6	-1.0
	1.8nm,0.6s,baz=232,slow=2.6,SNR=9.9						
KDAK	**Kodiak Island**	**152.31**	**294**	PKPbc	PKPbc	12 13 39.0	+0.5
	2.6nm,0.4s,baz=81,slow=5.6,SNR=6.2						
KDAK				PKPab	PKPab	12 13 49.1	+0.4
	5.7nm,0.5s,baz=151,slow=3.2,SNR=6.1						

*ISCJB **20** 12:04:47.9±0.6, 36°.30N±0°.07×1°.09E±0°.07, h19km±16km, Error ellipse: s-maj=13.9km s-min=6.7km az=146.5*
*CSEM **20** 12:04:48.4±0.2, 36°.25N×1°.11E, h10km, ML3.6, Error ellipse: s-maj=7.4km s-min=6.2km az=34.0*
*CRAAG **20** 12:04:49.0, 36°.15N×1°.19E, Ml3.6*
*MDD **20** 12:04:49.1±0.5, 36°.19N×1°.22E, h20km±8km, mb3.7/5, Error ellipse: s-maj=11.1km s-min=6.7km az=138.0, PRIMO*

ISC 20 12:04:48.4±0.6, 36°.27N±0°.06×1°.12E±0°.07, h17km±8km, n55, σ1§37/81, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECHF	**Ech Chlef**	**0.21**	**123**	P	**Pg**	**12 04 52.7**	**-0.7**
ECHF	**Ech Chlef**	**0.21**	**123**	P	**Pg**	**12 04 52.7**	**-0.7**
ECHA	**Ech Chlef**	**0.23**	**121**	P	**Pg**	**12 04 52.7**	**-1.1**
ECHA	**Ech Chlef**	**0.23**	**121**	P	**Pg**	**12 04 52.7**	**-1.1**
EANR	**'Ain N'Sour**	**0.32**	**183**	P	**Pg**	**12 04 54.1**	**-1.1**
EANR	**'Ain N'Sour**	**0.32**	**183**	P	**Pg**	**12 04 54.1**	**-1.1**
EANR	**'Ain N'Sour**	**0.32**	**183**	P	**Pg**	**12 04 54.1**	**-1.1**
EANR	**'Ain N'Sour**	**0.32**	**183**	P	**Pg**	**12 04 54.1**	**-1.1**
EBNR	**Beni Rached**	**0.33**	**87**	P	**Pg**	**12 04 55.9**	**+0.4**
EBNR	**Beni Rached**	**0.33**	**87**	P	**Pg**	**12 04 55.9**	**+0.4**
OKGL	**Djebel Kef Gue**	**0.45**	**239**	P	**Pb**	**12 04 59.0**	**+1.1**
OKGL	**Djebel Kef Gue**	**0.45**	**239**	P	**Pb**	**12 04 59.0**	**+1.1**
OKGL	**Djebel Kef Gue**	**0.45**	**239**	P	**Pb**	**12 04 59.0**	**+1.1**
OKGL	**Djebel Kef Gue**	**0.45**	**239**	P	**Pb**	**12 04 59.0**	**+1.1**
ETRT	**Tiaret**	**0.89**	**170**	P	**Pb**	**12 05 04.5**	**-1.0**
ETRT	**Tiaret**	**0.89**	**170**	P	**Pb**	**12 05 04.5**	**-1.0**
ETRT	**Tiaret**	**0.89**	**170**	P	**Pb**	**12 05 04.5**	**-1.0**
ETRT	**Tiaret**	**0.89**	**170**	P	**Pb**	**12 05 04.5**	**-1.0**
EMHD	**Djebel Mahouad**	**1.49**	**92**	P	**Pn**	**12 05 17.0**	**+2.6**
EMHD	**Djebel Mahouad**	**1.49**	**92**	P	**Pn**	**12 05 17.0**	**+2.6**
EMHD	**Djebel Mahouad**	**1.49**	**92**	P	**Pn**	**12 05 17.0**	**+2.6**
EMHD	**Djebel Mahouad**	**1.49**	**92**	P	**Pn**	**12 05 17.0**	**+2.6**
EBEN	**Beniarda**	**2.65**	**337**	P	**Pn**	**12 05 32.1**	**+1.7**
	0.2nm,0.1s,SNR=7.9						
EBEN				S	**Sn**	**12 06 00.8**	**-1.4**
	0.9nm,0.2s,SNR=7.9					

Ml2.5/9, Error ellipse: s-maj=3.9km s-min=2.5km az=12.0
CSEM ***20*** *12:21:25.5, 41.90N×15.72E, h31km, MD2.5/21, After ROM*
ISCJB ***20*** *12:21:25.1±0.5, 41.97N±0.04×15.75E±0.04, h30km±3km, Error ellipse: s-maj=6.2km s-min=5.4km az=176.5*
ISC 20 12:21:25.6±0.5, 41.95N±0.04×15.73E±0.04, h29km±3km, n45, σ0=79/62, 2D, Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGRT	**San Giovanni R**	**0.19**	**178**	Pg	**Pb**	**12 21 31.8**	**+0.3**
SGRT				Sg	**Sb**	**12 21 35.7**	**+0.1**
2μm,0.2s							
SGRT	**San Giovanni R**	**0.19**	**178**	Pg	**Pb**	**12 21 31.8**	**+0.3**
SGRT				Sg	**Sb**	**12 21 35.7**	**+0.1**
2μm,0.2s							
MSAG	**Monte S. Angel**	**0.27**	**151**	||*i*Pg	**Pb**	**12 21 32.9**	**+0.4**
MSAG				Sg	**Sb**	**12 21 38.1**	**+1.0**
1μm,0.3s							
MSAG	**Monte S. Angel**	**0.27**	**151**	||*i*Pg	**Pb**	**12 21 32.9**	**+0.4**
MSAG				Sg	**Sb**	**12 21 38.1**	**+1.0**
1μm,0.3s							
RGNG	**Rignano Grg**	**0.29**	**202**	Pg	**Pb**	**12 21 32.4**	**-0.4**
RGNG				Sg	**Sb**	**12 21 37.3**	**-0.4**
RGNG	**Rignano Grg**	**0.29**	**202**	Pg	**Pb**	**12 21 32.4**	**-0.4**
RGNG				Sg	**Sb**	**12 21 37.3**	**-0.4**
FG2	**Serracapriola**	**0.45**	**252**	Pg	**Pb**	**12 21 34.7**	**-0.4**
343nm,0.2s							
FG2	**Serracapriola**	**0.45**	**252**	Pg	**Pb**	**12 21 34.7**	**-0.4**
343nm,0.2s							
MELA	**Melanico ??? S**	**0.51**	**242**	Pg	**Pb**	**12 21 35.6**	**-0.5**
MELA				Sg	**Sb**	**12 21 43.2**	**-0.1**
562nm,0.2s							
MELA	**Melanico ??? S**	**0.51**	**242**	Pg	**Pb**	**12 21 35.6**	**-0.5**
MELA				Sg	**Sb**	**12 21 43.2**	**-0.1**
562nm,0.2s							
MOCO	**Biccari - m.te**	**0.72**	**217**	Pg	**Pb**	**12 21 39.1**	**-0.4**
MOCO				Sg	**Sb**	**12 21 49.4**	**+0.3**
FG5	**Orsara di Pugl**	**0.75**	**208**	Pg	**Pb**	**12 21 39.7**	**-0.4**
29nm,0.2s							
FG5	**Orsara di Pugl**	**0.75**	**208**	Pg	**Pb**	**12 21 39.7**	**-0.4**
29nm,0.2s							
FRES	**Fresagrandinar**	**0.79**	**272**	Pg	**Pn**	**12 21 40.6**	**-0.2**
FRES				Sg	**Sb**	**12 21 51.3**	**+0.1**
154nm,0.4s							
FRES	**Fresagrandinar**	**0.79**	**272**	Pg	**Pn**	**12 21 40.6**	**-0.2**
FRES				Sg	**Sb**	**12 21 51.3**	**+0.1**
154nm,0.4s							
SGTA	**Sant Agata di**	**0.86**	**199**	Pg	**Pn**	**12 21 41.1**	**-0.5**
SGTA	**Sant Agata di**	**0.86**	**199**	Pg	**Pn**	**12 21 41.1**	**-0.5**
SACR	**S. Croce Del S**	**0.94**	**235**	Pg	**Pn**	**12 21 42.5**	**-0.4**
SACR				Sg	**Sn**	**12 21 56.2**	**+0.8**
SACR	**S. Croce Del S**	**0.94**	**235**	Pg	**Pn**	**12 21 42.5**	**-0.4**
SACR				Sg	**Sn**	**12 21 56.2**	**+0.8**
MRVN	**Minervino Murg**	**0.95**	**158**	Pg	**Pn**	**12 21 42.0**	**-0.9**
MRVN	**Minervino Murg**	**0.95**	**158**	Pg	**Pn**	**12 21 42.0**	**-0.9**
CAFE	**Carife**	**0.99**	**202**	Pg	**Pn**	**12 21 42.9**	**-0.6**
CAFE	**Carife**	**0.99**	**202**	Pg	**Pn**	**12 21 42.9**	**-0.6**
VULT	**Monte Vulture**	**0.99**	**185**	Pg	**Pn**	**12 21 45.1**	**+1.6**
82nm,0.4s							
VULT	**Monte Vulture**	**0.99**	**185**	Pg	**Pn**	**12 21 45.1**	**+1.6**
82nm,0.4s							
SNAL	**S. Angelo Dei**	**1.09**	**201**	Pg	**Pn**	**12 21 43.6**	**-1.3**
SNAL	**S. Angelo Dei**	**1.09**	**201**	Pg	**Pn**	**12 21 43.6**	**-1.3**
MIDA	**Miranda**	**1.15**	**255**	Pg	**Pn**	**12 21 46.4**	**+0.8**
MIDA				Sg	**Sn**	**12 22 01.5**	**+1.1**
MIDA	**Miranda**	**1.15**	**255**	Pg	**Pn**	**12 21 46.4**	**+0.8**
MIDA				Sg	**Sn**	**12 22 01.5**	**+1.1**
LPEL	**Lama dei Pelig**	**1.16**	**275**	Pg	**Pn**	**12 21 46.3**	**+0.5**
59nm,0.3s							
LPEL	**Lama dei Pelig**	**1.16**	**275**	Pg	**Pn**	**12 21 46.3**	**+0.5**
59nm,0.3s							
ACER	**Acerenza**	**1.17**	**172**	Pg	**Pn**	**12 21 45.4**	**-0.5**
ACER	**Acerenza**	**1.17**	**172**	Pg	**Pn**	**12 21 45.4**	**-0.5**
MRLC	**Muro Lucano**	**1.20**	**189**	Pg	**Pn**	**12 21 47.9**	**+1.5**
30nm,0.6s							
MRLC	**Muro Lucano**	**1.20**	**189**	Pg	**Pn**	**12 21 47.9**	**+1.5**
30nm,0.6s							
AMUR	**Altamura**	**1.23**	**147**	Pg	**Pn**	**12 21 46.2**	**-0.5**
AMUR	**Altamura**	**1.23**	**147**	Pg	**Pn**	**12 21 46.2**	**-0.5**
MCRV	**Calabrutti - M**	**1.24**	**200**	Pg	**Pn**	**12 21 46.2**	**-0.7**
155nm,0.5s							
MCRV	**Calabrutti - M**	**1.24**	**200**	Pg	**Pn**	**12 21 46.2**	**-0.7**
155nm,0.5s							
INTR	**Introdacqua**	**1.36**	**273**	Pg	**Pn**	**12 21 49.5**	**+0.9**
INTR	**Introdacqua**	**1.36**	**273**	Pg	**Pn**	**12 21 49.5**	**+0.9**
CDRU	**Civita di Ruta**	**1.49**	**193**	Pg	**Pn**	**12 21 49.4**	**-1.0**
10.0nm,0.5s							
CDRU	**Civita di Ruta**	**1.49**	**193**	Pg	**Pn**	**12 21 49.4**	**-1.0**
10.0nm,0.5s							
STON	**Ston**	**1.73**	**57**	*e*Pg	**Pn**	**12 21 56.6**	**+3.0**
STON				Sg	**Sn**	**12 22 15.0**	**+0.4**
NVLJ	**Novalja**	**2.69**	**347**	*e*Pn	**Pn**	**12 22 06.3**	**-0.6**
NVLJ				Sn	**Sn**	**12 22 37.5**	**-1.0**

CSEM ***20*** *12:24:52.5±1.3, 37.00N×38.58E, h6km±5km, MD2.9, Error ellipse: s-maj=25.5km s-min=9.8km az=149.0*
ISK ***20*** *12:24:53.5, 37.12N×38.57E, h9km, MD2.8*
DDA ***20*** *12:25:00.5, 37.54N×38.42E, h7km±3km, Md2.9*
ISC 20 12:24:54.7±1.9, 37.10N±0.09×38.64E±0.10, h13km±8km, n15, σ0=89/22, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URFA	**Urfa**	**0.37**	**23**	*e*PG	**Pg**	**12 25 01.5**	**-0.7**
URFA	**Urfa**	**0.37**	**23**	*e*Pg	**Pg**	**12 25 01.5**	**-0.7**
ATAB	**Bozova**	**0.46**	**324**	*i* P	**Pg**	**12 25 03.8**	**-0.1**
ATAB				*i* S	**Sg**	**12 25 09.3**	**-0.8**
ATAB	**Bozova**	**0.46**	**324**	*i* P	**Pg**	**12 25 03.8**	**-0.1**
ATAB				*i* S	**Sg**	**12 25 09.3**	**-0.8**
GZT	**Gaziantep**	**0.90**	**287**	*i* P	**Pg**	**12 25 13.8**	**+1.7**
GZT				*i* S	**Sg**	**12 25 27.9**	**+4.1**
GAZ	**Gaziantep**	**1.15**	**274**	*e*PN	**Pn**	**12 25 14.3**	**-2.0**
MYA	**Malataya**	**1.24**	**352**	*e*PN	**Pn**	**12 25 17.5**	**-0.2**
MYA	**Malataya**	**1.24**	**352**	*e*Pn	**Pn**	**12 25 17.5**	**-0.2**
SVRC	**Sivrice-ELAZID**	**1.39**	**22**	*e*PN	**Pn**	**12 25 19.9**	**+0.2**
SVRC				*e*SN	**Sn**	**12 25 38.3**	**+0.5**
SVRC	**Sivrice-ELAZID**	**1.39**	**22**	*e*Pn	**Pn**	**12 25 19.9**	**+0.2**
SVRC				*e*Sn	**Sn**	**12 25 38.3**	**+0.5**
ELZG	**Elazig**	**1.43**	**11**	*i* P	**Pn**	**12 25 21.2**	**+1.0**
ELZG				*i* S	**Sn**	**12 25 38.8**	**0.0**
ELZG	**Elazig**	**1.43**	**11**	*i* P	**Pn**	**12 25 21.2**	**+1.0**
ELZG				*i* S	**Sn**	**12 25 38.8**	**0.0**
KMRS	**Kahramanmaras**	**1.45**	**287**	*e*PN	**Pn**	**12 25 20.3**	**-0.2**
KMRS	**Kahramanmaras**	**1.45**	**287**	*e*Pn	**Pn**	**12 25 20.3**	**-0.2**
PTK	**Pertek**	**1.89**	**18**	*e*PN	**Pn**	**12 25 26.3**	**-0.3**

BJI ***20*** *12:24:50.0, 2.84S×98.54E, h24km, mB5.1/33, mb4.9/46, Ms4.9/43, Ms7 4.6/42*
IDC ***20*** *12:24:53.2±0.7, 2.14S×98.62E, h0km, mb4.5/19, mb1 4.6/20, mb1mx4.5/24, mbtmp4.5/20, ML3.5/1, MS3.9/16, Ms1 3.9/16, ms1mx3.7/32, Error ellipse: s-maj=22.2km s-min=13.7km az=52.0*
ISCJB ***20*** *12:24:56.2±0.2, 2.08S±0.03×98.69E±0.03, h27km, mb5.0/102, MS4.3/35, Error ellipse: s-maj=4.8km s-min=3.3km az=40.7*
MOS ***20*** *12:24:57.6±1.1, 1.97S×98.71E, h33km, mb5.3/34, Error ellipse: s-maj=13.4km s-min=6.5km az=102.4*
DJA ***20*** *12:24:57, 2.00S×98.71E, h18km, mb5.0/37*
NEIC ***20*** *12:24:58.1±0.3, 2.04S×98.70E, mb5.2/42, Error ellipse: s-maj=9.6km s-min=5.8km az=224.0*
SZGRF ***20*** *12:25:00.1, 3.64S×98.96E, h33km, mb5.2, Southwest of Sumatera, Indonesia*
ISC 20 12:24:58.6±0.2, 2.06S±0.03×98.72E±0.03, h29km, h29km±1.0km: pP-P, n271, σ1=95/236, mb5.0/102, MS4.3/35, 9C-2D, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SISI	**Saibi**	**0.82**	**27**	P	**Pn**	**12 25 13.6**	**-0.6**
PPSI	**Pulau Pagai**	**1.47**	**118**	P	**Pn**	**12 25 22.0**	**-1.2**
PDSI	**Padang**	**2.08**	**57**	P	**Pn**	**12 25 31.2**	**-0.4**
PDSI				S	**Sn**	**12 25 56.6**	**0.0**
PPI	**Padang Panjang**	**2.31**	**47**	P	**Pn**	**12 25 34.7**	**-0.1**
SDSI	**Sungai Dareh**	**2.93**	**68**	P	**Pn**	**12 25 44.3**	**+1.0**
MNSI	**Mandailing Nat**	**2.96**	**17**	P	**Pn**	**12 25 42.6**	**-1.1**
BKNI	**Bangkinang**	**3.32**	**45**	P	**Pn**	**12 25 48.9**	**+0.3**
GSI	**Gunungsitoli**	**3.53**	**341**	P	**Pn**	**12 25 50.0**	**-1.5**
SBSI	**Sibolga**	**3.59**	**3**	P	**Pn**	**12 25 49.9**	**-2.4**
KSI	**Kapahiang**	**4.18**	**112**	P	**Pn**	**12 26 00.3**	**-0.2**
MNAI	**Manna**	**4.81**	**118**	P	**Pn**	**12 26 08.2**	**-1.0**
PSI	**Prapat**	**4.83**	**2**	Pn	**Pn**	**12 26 06.8**	**-2.6**
1.8nm,0.3s,baz=180,slow=10,SNR=59							
PSI				Sn	**Sn**	**12 27 15.1**	**+11**
baz=143,slow=16,SNR=4.5							
TPTI		**5.50**	**344**	P	**Pn**	**12 26 17.9**	**-0.7**
0.4nm1μm140nm,0.9s							
MDSI	**Maura Dua**	**5.96**	**114**	P	**Pn**	**12 26 24.7**	**-0.3**
0.8nm2μm228nm,1.0s							
FRIM	**Kepong**	**6.01**	**29**	P	**Pn**	**12 26 25.1**	**-0.5**
KGM	**Kluang**	**6.13**	**49**	P	**Pn**	**12 26 27.9**	**+0.7**
MYKOM	**Kota Tinggi**	**6.40**	**53**	P	**Pn**	**12 26 31.8**	**+0.8**
MYKOM	**Kota Tinggi**	**6.40**	**53**	P	**Pn**	**12 26 31.3**	**+0.3**
0.6nm1μm139nm,1.2s							
KLSI		**6.55**	**114**	P	**Pn**	**12 26 32.6**	**-0.4**
KASI	**Kota Agung**	**6.72**	**121**	P	**Pn**	**12 26 34.4**	**-1.0**
0.8nm3μm246nm,0.8s							
KLI	**Kotabumi**	**6.73**	**115**	P	**Pn**	**12 26 36.0**	**+0.4**
2.0nm5μm216nm,0.9s							
IPM	**Ipoh**	**6.89**	**20**	P	**Pn**	**12 26 36.3**	**-1.4**
IPM	**Ipoh**	**6.89**	**20**	P	**Pn**	**12 26 36.7**	**-1.0**
0.4nm838nm76nm,1.1s							
PPBI	**Pangkal Pinang**	**7.42**	**91**	P	**Pn**	**12 26 45.0**	**0.0**
1μm31nm,1.5s							
KULM	**Kulim**	**7.55**	**15**	P	**Pn**	**12 26 45.5**	**-1.3**
KULM	**Kulim**	**7.55**	**15**	*e*Pn	**Pn**	**12 26 44.9**	**-1.9**
56nm,0.9s							
KULM	**Kulim**	**7.55**	**15**	P	**Pn**	**12 26 44.4**	**-2.4**
0.3nm1μm64nm,1.2s							
RBSI	**Rajabasa**	**7.96**	**118**	P	**Pn**	**12 26 52.5**	**+0.1**
0.5nm2μm159nm,1.2s							
BSI	**Banda Aceh**	**8.24**	**336**	P	**Pn**	**12 26 52.7**	**-3.6**
73nm,0.9s							
KTGM	**Kuala Trenggan**	**8.56**	**31**	P	**Pn**	**12 27 00.2**	**-0.5**
TPI	**Tanjungpandan**	**8.96**	**95**	P	**Pn**	**12 27 04.4**	**-1.7**
60nm,1.1s							
LEM	**Lembang**	**10.06**	**118**	P	**Pn**	**12 27 22.8**	**+1.6**
140nm,1.0s							
COCO	**West Island**	**10.24**	**190**	P	**Pn**	**12 27 25.2**	**+1.5**
142nm,2.2s							
KSM	**Kuching**	**12.11**	**73**	*e*Pn	**Pn**	**12 27 49.8**	**+0.5**
KSM	**Kuching**	**12.11**	**73**	P	**Pn**	**12 27 55.4**	**+6.1**
SJI	**Sawahan**	**14.17**	**114**	P	**Pn**	**12 28 21.2**	**+3.7**
SBUM	**Sibu**	**14.22**	**72**	P	**Pn**	**12 28 19.9**	**+1.7**
SBUM	**Sibu**	**14.22**	**72**	P	**Pn**	**12 28 19.9**	**+1.7**
718nm60nm,1.5s							
BTM	**Bintulu**	**15.28**	**70**	P	**Pn**	**12 28 35.2**	**+2.8**
KMMI	**Kalianget**	**15.99**	**109**	P	**Pn**	**12 28 44.5**	**+2.9**
KBKI	**Kotabaru**	**17.48**	**94**	P	**Pn**	**12 29 06.2**	**+5.8**
SRBI	**Singaraja**	**17.48**	**111**	P	**Pn**	**12 29 03.6**	**+3.1**
KKM	**Kota Kinabalu**	**19.24**	**65**	*e*P	**Pn**	**12 29 21.4**	**-0.5**
86nm,1.0s							
KKM	**Kota Kinabalu**	**19.24**	**65**	P	**Pn**	**12 29 21.3**	**-0.6**
899nm96nm,1.0s							
SDKM	**Sandakan**	**19.98**	**67**	P	**Pn**	**12 29 29.5**	**-1.2**
CM31	**Chiang Mai Arr**	**20.39**	**1**	*e*P	**P**	**12 29 34.7**	**+1.5**
CMAR	**Chiang Mai Arr**	**20.39**	**1**	P	**P**	**12 29 33.4**	**+0.1**
21nm,0.8s,baz=188,slow=10,SNR=103							
CMAR				LR	LR	12 37 58.8	
comp=Z,302nm,18.3s,MS3.7,baz=180,slow=38							
CHTO	**Chiang Mai**	**20.74**	**1**	*e*P	**P**	**12 29 36.6**	**-0.5**
22nm,1.0s							
CHTO	**Chiang Mai**	**20.74**	**1**	P	**P**	**12 29 37.4**	**+0.3**
25nm,1.1s							
MYLDM	**Lahad Datu**	**21.03**	**70**	P	**P**	**12 29 39.8**	**-0.5**
1μm87nm,1.4s,mb4.9							
TTSI	**Tana Toraja**	**21.11**	**93**	P	**P**	**12 29 40.2**	**-0.9**
696nm51nm,1.4s,mb4.7							
SPSI	**Sidrap Palu**	**21.11**	**96**	P	**P**	**12 29 42.5**	**+1.3**
28nm,1.2s,mb4.5							
KAPI	**Kappang**	**21.20**	**99**	P	**P**	**12 29 37.8**	**-4.4**
11nm,0.9s,mb4.2,baz=254,slow=9.8,SNR=4.3							
KAPI	**Kappang**	**21.20**	**99**	*e*P	**P**	**12 29 43.9**	**+1.7**
90nm,1.1s,mb5.0							
KAPI	**Kappang**	**21.20**	**99**	P	**P**	**12 29 38.3**	**-3.8**
BNSI	**Bone**	**21.48**	**97**	P	**P**	**12 29 43.9**	**-1.3**
BKSI	**Bulukumba**	**21.61**	**99**	P	**P**	**12 29 45.4**	**-1.1**
47nm,0.9s,mb4.9							
APSI	**Ampana**	**22.95**	**87**	P	**P**	**12 30 00.7**	**-0.2**
1μm101nm,1.2s,mb5.1							
MRSI	**Marisa**	**23.36**	**84**	P	**P**	**12 30 05.7**	**+0.6**
57nm,1.2s,mb4.9							
QIZ	**Qiongzhong**	**23.64**	**27**	P	**P**	**12 30 09.3**	**+1.6**
QIZ				pP		12 30 17.8	
QIZ				S	**S**	**12 34 23.3**	**+2.9**
QIZ				LR	LR		
comp=N,1μm,12.3s,MS4.6							
QIZ				LR	LR		
comp=E,400nm,12.3s,MS4.6							
QIZ				LR	LR		
comp=Z,1μm,11.7s,MS4.7							
KDI	**Kendari**	**23.95**	**95**	P	**P**	**12 30 09.5**	**-1.1**
comp=Z,815nmcomp=Z,26nm,1.5s,mb4.4							
LUWI	**Luwuk**	**24.07**	**88**	P	**P**	**12 30 12.1**	**+0.4**
comp=Z,1μmcomp=Z,123nm,1.2s,mb5.2							
MNI	**Manado**	**26.35**	**83**	P	**P**	**12 30 32.8**	**+0.3**
comp=Z,2μmcomp=Z,170nm,1.1s,mb5.5							
TGY	**Tagaytay City**	**27.25**	**53**	P	**P**	**12 30 39.1**	**-1.5**
comp=Z,70nm,0.3s,mb5.7,baz=211,slow=18,SNR=3.1							
KMI	**Kunming**	**27.30**	**8**	P	**P**	**12 30 42.9**	**+2.1**
KMI				pP	pP	12 30 53.3	+4.0
KMI				sP	sP	12 30 57.8	+4.9
KMI				PP		12 31 32.1	
KMI				S	**S**	**12 35 20.8**	**+2.2**
KMI				sS	sS	12 35 37.8	+5.1
KMI				pmax	pmax		
comp=Z,54nm,1.2s,mb5.0							
KMI				pmax	pmax		
comp=Z,180nm,3.1s							
KMI				LR	LR		
comp=N,410nm,12.9s,MS4.5							
KMI				LR	LR		
comp=E,880nm,15.0s,MS4.5							
KMI				LR	LR		
comp=Z,530nm,10.3s,MS4.4							
SHL	**Shillong**	**28.25**	**347**	*e*PKP	**P**	**12 30 50.0**	**+0.7**
GYA	**Guiyang**	**29.37**	**15**	P	**P**	**12 30 59.5**	**+0.2**
GYA				pP	pP	12 31 09.0	+1.2
GYA				sP	sP	12 31 13.0	+1.7
GYA				PP	PP	12 31 54.5	-11
GYA				PcP	PcP	12 34 06.5	+1.3
GYA				S	**S**	**12 35 49.3**	**-1.9**
GYA				pmax	pmax		
comp=Z,20nm,1.0s,mb4.8							
GYA				pmax	pmax		
comp=Z,120nm,5.4s							
GYA				LR	LR		
comp=N,740nm,18.3s,MS4.5							
GYA				LR	LR		
comp=E,710nm,18.6s,MS4.5							
GYA				LR	LR		
comp=Z,1μm,14.9s,MS4.6							
ODAN	**Odare**	**30.75**	**340**	*e*P	**P**	**12 31 11.7**	**+0.2**
comp=Z,58nm,0.9s,mb5.4							
FITZ	**Fitzroy Crossi**	**30.85**	**123**	P	**P**	**12 31 10.1**	**-2.4**
comp=Z,5.7nm,0.8s,mb4.4,baz=291,slow=9.7,SNR=3.8							
FITZ	**Fitzroy Crossi**	**30.85**	**123**	*e*P	**P**	**12 31 12.9**	**+0.4**
comp=Z,27nm,1.1s,mb5.0							
FITZ	**Fitzroy Crossi**	**30.85**	**123**	P	**P**	**12 31 12.6**	**+0.1**
comp=Z,64nm,1.2s,mb5.3							
TAPN	**Taplejung**	**31.10**	**341**	*e*P	**P**	**12 31 15.3**	**+0.7**
comp=Z,105nm,1.0s,mb5.6							
RAMN	**Ramite**	**31.12**	**339**	*e*P	**P**	**12 31 15.4**	**+0.7**
comp=Z,67nm,0.8s,mb5.5							
JIRN	**Jiri**	**31.91**	**339**	*e*P	**P**	**12 31 22.4**	**+0.7**
comp=Z,106nm,0.8s,mb5.7							
PKI	**Pulchoki**	**32.12**	**337**	*e*P	**P**	**12 31 23.6**	**0.0**
PKI	**Pulchoki**	**32.12**	**337**	*e*P	**P**	**12 31 24.4**	**+0.8**
PKI				pmax	pmax		
comp=Z,20nm,0.7s,mb5.1							
PKI	**Pulchoki**	**32.12**	**337**	*e*P	**P**	**12 31 24.4**	**+0.8**
comp=Z,20nm,0.7s,mb5.1							
PKIN	**Phulchoki**	**32.13**	**337**	*e*P	**P**	**12 31 24.4**	**+0.7**
comp=Z,20nm,0.7s,mb5.0							
GUN	**Gumba**	**32.25**	**338**	*e*P	**P**	**12 31 25.4**	**+0.7**
comp=Z,71nm,0.6s,mb5.7							
DMN	**Daman**	**32.27**	**337**	*e*P	**P**	**12 31 25.1**	**+0.2**
comp=Z,30nm,0.8s,mb5.2							
KKN	**Kakani**	**32.37**	**337**	*e*P	**P**	**12 31 25.8**	**+0.1**
comp=Z,56nm,0.8s,mb5.4							
KKN	**Kakani**	**32.37**	**337**	*e*P	**P**	**12 31 25.8**	**+0.1**
KKN				pmax	pmax		
comp=Z,56nm,0.8s,mb5.5							
LSA	**Lhasa**	**32.40**	**348**	P	**P**	**12 31 27.6**	**+1.7**
LSA	**Lhasa**	**32.40**	**348**	*e*P	**P**	**12 31 28.1**	**+2.2**
LSA				*e**PP	pP	12 31 35.6	+1.1
LSA				pmax	pmax		
comp=Z,47nm,0.9s,mb5.3							
LSA	**Lhasa**	**32.40**	**348**	*e*P	**P**	**12 31 28.1**	**+2.2**
comp=Z,47nm,0.9s,mb5.3							
LSA				*e*pP	pP	12 31 35.6	+1.1
KNA	**Kununurra**	**32.59**	**116**	P	**P**	**12 31 27.0**	**-0.8**
comp=Z,81nm,1.1s,mb5.6							
TPUB	**Ta-pu**	**33.03**	**39**	*e*P	**P**	**12 31 31.4**	**-0.2**
comp=Z,40nm,1.0s,mb5.3							
CD2	**Chengdu**	**33.13**	**8⇑**	*i*P	**P**	**12 31 32.5**	**+0.1**
CD2				pP	pP	12 31 42.1	+1.2
CD2				sP	sP	12 31 46.3	+1.8
CD2				PP	PP	12 32 44.1	-3.6
CD2				PcP	PcP	12 34 14.8	-0.4
CD2				S	**S**	**12 36 49.0**	**-1.0**
CD2				sS	sS	12 37 05.0	+0.9
CD2				PcS	PcS	12 37 59.3	-1.4
CD2				ScS	ScS	12 41 54.5	-3.6
CD2				pmax	pmax		
comp=Z,40nm,0.8s,mb5.4							
CD2				pmax	pmax		
comp=Z,180nm,5.2s							
CD2				LR	LR		
comp=N,870nm,13.2s,MS4.8							
CD2				LR	LR		
comp=E,1μm,17.8s,MS4.8							
CD2				LR	LR		
comp=Z,900nm,11.8s							
SSLB	**Suanglung**	**33.59**	**39**	*e*P	**P**	**12 31 37.0**	**+0.5**
comp=Z,28nm,1.1s,mb5.1							
ENH	**Enshi**	**33.75**	**17**	*e*P	**P**	**12 31 37.1**	**-0.7**
comp=Z,30nm,0.9s,mb5.2							
WHN	**Wuhan**	**35.68**	**23**	P	**P**	**12 32 00.4**	**+5.9**
WHN				LR	LR		
comp=N,1μm,15.2s,MS4.8							
WHN				LR	LR		
comp=E,710nm,14.5s,MS4.8							
WHN				LR	LR		
comp=Z,1μm,11.6s,MS4.9							
XAN	**Xi'an**	**37.17**	**14**	P	**P**	**12 32 06.6**	**-0.5**
XAN				pP	pP	12 32 16.3	+0.6
XAN				sP	sP	12 32 20.5	+1.3
XAN				PP	PP	12 33 32.3	+0.1
XAN				pmax	pmax		
comp=Z,10.0nm,0.9s,mb4.7							
XAN				LR	LR		
comp=N,470nm,12.8s,MS4.5							
XAN				LR	LR		
comp=E,280nm,15.7s,MS4.5							
XAN				LR	LR		
comp=Z,240nm,13.4s,MS4.2							
LZH	**Lanzhou**	**38.25**	**7**	*e*P	**P**	**12 32 17.5**	**+1.3**
LZH				pP	pP	12 32 27.6	+2.8
LZH				sP	sP	12 32 31.6	+3.2
LZH				PP	PP	12 33 46.4	+2.3
LZH				*e*S	**S**	**12 38 09.3**	**+1.0**
LZH				sS	sS	12 38 25.3	+2.8
LZH				pmax	pmax		
comp=Z,29nm,1.2s,mb4.9							
LZH				pmax	pmax		
comp=Z,140nm,4.9s							
LZH				LR	LR		
comp=Z,650nm,14.3s,MS4.6							
LZH				LR	LR		
comp=E,700nm,15.9s							
NJ2	**Nanjing**	**38.93**	**28**	*e*P	**P**	**12 32 24.1**	**+2.1**
NJ2				pP	pP	12 32 34.3	+3.7
NJ2				sP	sP	12 32 38.8	+4.6
NJ2				PP	PP	12 33 57.0	+5.4
NJ2				S	**S**	**12 38 21.0**	**+2.3**
NJ2				sS	sS	12 38 37.5	+4.5
NJ2				pmax	pmax		
comp=Z,10.0nm,0.6s,mb4.7							
NJ2				pmax	pmax		
comp=Z,110nm,6.0s							
NJ2				LR	LR		
comp=N,510nm,10.0s,MS4.8							
NJ2				LR	LR		
comp=E,610nm,12.7s,MS4.8							
NJ2				LR	LR		
comp=Z,120nm,12.2s,MS3.9							
WRA	**Warramunga Arr**	**39.08**	**120**	P	**P**	**12 32 22.4**	**-1.1**
comp=Z,5.7nm,0.9s,mb4.3,baz=308,slow=9.1,SNR=5.1							
WRAB	**Tennant Creek**	**39.08**	**120**	*e*P	**P**	**12 32 23.5**	**0.0**
WRAB				pmax	pmax		
comp=Z,30nm,1.2s,mb4.9							
WRAB	**Tennant Creek**	**39.08**	**120**	*e*P	**P**	**12 32 23.5**	**0.0**
comp=Z,30nm,1.2s,mb4.9							
WRAB	**Tennant Creek**	**39.08**	**120**	P	**P**	**12 32 23.9**	**+0.4**
comp=Z,24nm,1.3s,mb4.8							
SSE	**Sheshan**	**39.30**	**31**	P	**P**	**12 32 24.8**	**-0.3**
SSE				S	**S**	**12 38 24.4**	**+0.1**
SSE				pmax	pmax		
comp=Z,39nm,0.7s,mb5.2							
SSE				pmax	pmax		
comp=Z,53nm,3.8s			

KSH ScP ScP 12 38 47.3 -1.2
KSH PcS PcS 12 38 51.3 -0.2
KSH S **S** **12 40 01.4 -6.2**
KSH sS sS 12 40 17.9 -4.1
KSH ScS ScS 12 43 11.4 -4.0
KSH pmax pmax
comp=Z,14nm,1.0s,mb4.8
KSH pmax pmax
comp=Z,200nm,5.5s
KSH LR LR
comp=N,160nm,5.9s
KSH LR LR
comp=E,150nm,7.2s
KSH LR LR
comp=Z,200nm,7.9s
WMQ Urumqi 46.73 349 P **P** **12 33 26.0 +1.0**
WMQ pP pP 12 33 36.0 +2.2
WMQ sP sP 12 33 40.0 +2.7
WMQ PP PP 12 35 15.0 -0.3
WMQ S **S** **12 40 12.0 -1.0**
WMQ ScS ScS 12 43 15.0 -2.8
WMQ pmax pmax
comp=Z,26nm,1.0s,mb5.1
WMQ pmax pmax
comp=Z,98nm,5.0s
WMQ LR LR
comp=N,130nm,16.0s,MS4.2
WMQ LR LR
comp=E,170nm,16.0s,MS4.2
WMQ LR LR
comp=Z,150nm,16.0s,MS4.0
MTSU Mount Surprise 47.47 113 *e*P **P** **12 33 28.6 -2.7**
comp=Z,24nm,0.9s,mb5.1
KSRS Korea Array 47.73 32 P **P** **12 33 32.9 -0.1**
comp=Z,15nm,0.8s,mb5.1,baz=224,slow=8.7,SNR=102
KSRS LR LR 12 56 13.9
comp=Z,218nm,18.1s,MS4.2,baz=126,slow=39
GUMO Guam 48.33 70 P **P** **12 33 37.7 -0.3**
comp=Z,86nm,1.5s,mb5.6
SNY Shenyang 49.16 25 ⇓P **P** **12 33 43.8 -0.1**
SNY S **S** **12 40 53.0 +5.5**
SNY pmax pmax
comp=Z,15nm,0.8s,mb5.1
SNY pmax pmax
comp=Z,190nm,4.5s
SNY LR LR
comp=N,400nm,13.8s,MS4.8
SNY LR LR
comp=E,480nm,13.2s,MS4.8
SNY LR LR
comp=Z,360nm,13.5s,MS4.5
UCH Uchtor 49.22 336 P **P** **12 33 45.5 +1.1**
SNR=8.5
UCH Uchtor 49.22 336 *e*P **P** **12 33 45.3 +0.9**
comp=Z,24nm,1.0s,mb5.2
UCH *e*pP pP 12 33 53.3 +0.1
TKM2 Tokmak 2 49.38 338 P **P** **12 33 46.3 +0.7**
SNR=15
TKM2 Tokmak 2 49.38 338 *e*P **P** **12 33 46.1 +0.5**
TKM2 *e**PP pP 12 33 54.3 -0.1
TKM2 pmax pmax
comp=Z,41nm,1.0s,mb5.4
TKM2 Tokmak 2 49.38 338 *e*P **P** **12 33 46.1 +0.5**
comp=Z,41nm,1.0s,mb5.4
TKM2 *e*pP pP 12 33 54.3 -0.1
KBK Karagaybulak 49.41 337 P **P** **12 33 47.2 +1.4**
SNR=6.1
AAK Ala-Archa 49.57 337 P **P** **12 33 48.0 +0.9**
comp=Z,1.3nm,0.3s,mb4.4,baz=166,slow=8.3,SNR=2.6
AAK LR LR 12 58 36.4
comp=Z,215nm,20.2s,MS4.1,baz=32,slow=41
FRU Bishkek 49.69 337 *e*P **P** **12 33 48.0 +0.1**
CTA Charters Tower 49.74 115 *e*P **P** **12 33 48.8 +0.1**
comp=Z,14nm,0.9s,mb5.0
CTAO Charters Tower 49.74 115 *e*P **P** **12 33 49.3 +0.6**
CTAO *e**PP pP 12 33 56.7 -0.9
CTAO pmax pmax
comp=Z,26nm,1.0s,mb5.2
CTAO Charters Tower 49.74 115 *e*P **P** **12 33 49.3 +0.6**
comp=Z,26nm,1.0s,mb5.2
CTAO *e*pP pP 12 33 56.7 -0.8
CTAO Charters Tower 49.74 115 P **P** **12 33 48.8 +0.1**
comp=Z,28nm,1.0s,mb5.2
EKS2 Erkin-Say 49.88 336 P **P** **12 33 50.5 +1.1**
SNR=10
EKS2 Erkin-Say 49.88 336 *e*P **P** **12 33 50.4 +1.0**
comp=Z,30nm,0.9s,mb5.3
EKS2 *e*pP pP 12 33 57.8 -0.4
EKS2 *e*sP sP 12 34 04.0 +2.3
STKA Stephens Creek 50.08 131 *e*P **P** **12 33 51.5 +0.4**
comp=Z,8.5nm,0.8s,mb4.8
STKA Stephens Creek 50.08 131 P **P** **12 33 51.3 +0.2**
comp=Z,7.2nm,0.9s,mb4.7,baz=312,slow=6.8,SNR=5.4
STKA LR LR 12 55 30.2
comp=Z,149nm,20.2s,MS4.0,baz=326,slow=37
STKA Stephens Creek 50.08 131 *e*P **P** **12 33 52.4 +1.3**
comp=Z,2.5nm,0.8s,mb4.3
USP Ospenovka 50.10 337 P **P** **12 33 51.4 +0.4**
SNR=12
SONM Songino Array 50.14 7 P **P** **12 33 52.4 +1.2**
comp=Z,10.0nm,0.8s,mb4.9,baz=189,slow=8.9,SNR=47
ULN Ulaanbaatar 50.25 7 *e*P **P** **12 33 53.3 +1.2**
ULN *e**PP pP 12 34 00.6 -0.3
ULN pmax pmax
comp=Z,28nm,1.2s,mb5.2
ULN Ulaanbaatar 50.25 7 *e*P **P** **12 33 53.3 +1.2**
comp=Z,28nm,1.2s,mb5.2
ULN *e*pP pP 12 34 00.6 -0.3
ULN Ulaanbaatar 50.25 7 P **P** **12 33 53.1 +1.0**
comp=Z,20nm,1.3s,mb5.0
MK31 Makanchi Array 50.75 345 *e*P **P** **12 33 56.1 +0.2**
MK31 *e**PP pP 12 34 03.8 -0.9
MKAR Makanchi Array 50.75 345 P **P** **12 33 56.1 +0.2**
comp=Z,8.9nm,0.7s,mb4.8,baz=143,slow=8.1,SNR=79
MKAR LR LR 13 00 37.6
comp=Z,72nm,19.3s,MS3.7,baz=166,slow=42
MKAR Makanchi Array 50.75 345 *i* P **P** **12 33 56.0 +0.1**
MKAR pmax pmax
comp=Z,9.0nm,0.7s
CBIJ Chichi jima 50.92 52 LR LR 12 52 12.9
comp=Z,27nm,21.3s,MS3.2,baz=163,slow=32
CN2 Changchun 51.56 25 *e*P **P** **12 34 01.8 -0.2**
CN2 *e*pP pP 12 34 11.6 +0.7
CN2 *e*sP sP 12 34 15.6 +1.2
CN2 *e*S **S** **12 41 19.6 -1.3**
CN2 pmax pmax
comp=Z,20nm,1.0s,mb5.0
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,300nm,14.0s,MS4.5
CN2 LR LR
comp=E,100nm,14.0s,MS4.5
CN2 LR LR
comp=Z,600nm,13.0s,MS4.8
ZAK Zakamensk 52.38 4 *e*P **P** **12 34 07.8 -0.2**
ZAK pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
CMSA Cobar Meteorol 53.08 129 *e*P **P** **12 34 14.0 +0.5**
MAT Matsushiro 53.13 40 P **P** **12 34 12.6 -1.3**
MAT S **S** **12 41 44.0 +1.3**
MJAR Matsushiro Arr 53.13 40 P **P** **12 34 13.1 -0.7**
comp=Z,5.9nm,1.1s,mb4.5,baz=223,slow=7.2,SNR=14
MJAR LR LR 12 59 24.6
comp=Z,100nm,19.0s,MS3.9,baz=235,slow=39
TLY Talaya 53.70 4 *e*P **P** **12 34 18.7 +1.0**
TLY *e*S **S** **12 41 55.0 +5.2**
TLY *e* 12 44 01.8
TLY pmax pmax
comp=Z,15nm,0.9s,mb4.9
TLY MLR MLR
comp=Z,242nm,14.0s,MS4.4
MDJ Mudanjiang 54.01 27 P **P** **12 34 21.1 +1.0**
MDJ pP pP 12 34 30.3 +1.3
MDJ sP sP 12 34 34.1 +1.6
MDJ PP PP 12 36 22.8 +1.0
MDJ ScP ScP 12 39 21.6 +0.3
MDJ PcS PcS 12 39 25.1 +0.9
MDJ S **S** **12 41 55.8 +1.5**
MDJ sS sS 12 42 11.3 +2.3
MDJ pmax pmax
comp=Z,11nm,1.0s,mb4.7
MDJ pmax pmax
comp=Z,120nm,5.7s
MDJ LR LR
comp=N,620nm,14.8s,MS4.8
MDJ LR LR
comp=E,240nm,17.1s,MS4.8
MDJ LR LR
comp=Z,720nm,14.5s,MS4.9
IRK Irkutsk 54.30 4 *e*P **P** **12 34 23.0 +0.9**
IRK pmax pmax
comp=Z,37nm,2.0s,mb5.0
KURK Kurchatov 55.31 345 P **P** **12 34 29.4 0.0**
comp=Z,146nm,1.0s,mb6.0,SNR=6.6
KURK Kurchatov 55.31 345 P **P** **12 34 28.1 -1.3**
comp=Z,4.3nm,0.9s,mb4.5,baz=166,slow=7.0,SNR=18
KURK LR LR 13 02 04.9
comp=Z,104nm,20.1s,MS3.9,baz=145,slow=40
KURK Kurchatov 55.31 345 *e*P **P** **12 34 29.3 -0.1**
KURK pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
KURK Kurchatov 55.31 345 *e*P **P** **12 34 29.3 -0.2**
comp=Z,8.2nm,0.8s,mb4.8
KURK LR LR 13 02 04.9
EIDS Eidsvold 55.44 120 *e*P **P** **12 34 31.9 +0.9**
comp=Z,22nm,1.3s,mb5.0
ZAA0 Zalesovo Array 57.00 350 *e*P **P** **12 34 41.5 0.0**
ZAA0 *e*pP pP 12 34 48.8 -1.6
ZALV Zalesovo Beam 57.00 350 P **P** **12 34 41.5 +0.1**
comp=Z,22nm,0.7s,mb5.3,baz=183,slow=5.5,SNR=71
ZALV LR LR 13 02 38.9
comp=Z,78nm,19.7s,MS3.8,baz=220,slow=40
ZALV Zalesovo Beam 57.00 350 P **P** **12 34 41.5 +0.1**
ZALV LR LR 13 02 39.0
RDF Al-Radifah 57.85 306 *e*P **P** **12 34 47.9 0.0**
RDF AMb AMB 12 34 56.4
comp=Z,32nm,1.1s,mb5.3
NVS Novosibirsk 58.13 350 *e*P **P** **12 34 48.4 -1.0**
NVS *e* pP 12 34 55.8 -2.5
NVS *e*S **S** **12 42 43.5 -5.1**
NVS pmax pmax
comp=Z,27nm,1.4s,mb5.1
NVS pmax pmax
comp=N,25nm,1.6s
NVS pmax pmax
comp=E,15nm,1.4s
NVS smax
comp=E,23nm,1.8s
NVS smax
comp=N,15nm,2.2s
NAY Al-Naaiem 58.22 306 *e*P **P** **12 34 49.8 -0.8**
NAY AMb AMB 12 34 55.6
comp=Z,8.2nm,0.8s,mb4.8
MIB Mutribah 58.36 307 *e*P **P** **12 34 51.2 -0.3**
MIB AMb AMB 12 34 59.5
comp=Z,32nm,0.9s,mb5.3
KLR Kul'dur 58.51 25 *e*P **P** **12 34 48.2 -4.0**
KLR pmax pmax
comp=E,28nm,1.6s
KLR pmax pmax
comp=Z,45nm,1.6s,mb5.2
HABR Khabarovsk 59.39 27 *c*e**P** **P** **12 34 55.1 -3.2**
HABR *e**PP pP 12 35 06.7 -0.6
HABR *e* 12 35 43.6
HABR *e* 12 37 07.5
HABR S **S** **12 43 02.1 -3.2**
HABR 12 44 43.8
HABR *e*SS SS 12 47 00.7 0.0
HABR pmax pmax
comp=N,128nm,3.3s
HABR pmax pmax
comp=Z,178nm,3.3s
HABR pmax pmax
comp=E,169nm,3.8s
HABR MLR MLR
comp=Z,213nm,18.0s,MS4.3
BVAR Borovoye Array 59.80 341 P **P** **12 35 00.0 -1.0**
comp=Z,5.7nm,0.7s,mb4.7,baz=148,slow=8.4,SNR=28
BRVK Borovoye 59.87 341‖ *e*P **P** **12 35 00.3 -1.2**
BRVK pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
BRVK Borovoye 59.87 341 *e*P **P** **12 35 00.5 -0.9**
comp=Z,10nm,0.8s,mb4.9
ABKAR Akbulak array 61.08 332 *e*P **P** **12 35 08.7 -1.2**
comp=Z,16nm,0.9s,mb5.1
ABKAR *e*pP pP 12 35 16.6 -2.3
ABKAR *e*sP sP 12 35 22.3 0.0
YSS Yuzh-Sakhalins 62.22 33 *e*P **P** **12 35 18.0 +0.5**
YSS *e* 12 35 29.0
YSS Yuzh-Sakhalins 62.22 33 *e*P **P** **12 35 18.4 +0.9**
comp=Z,49nm,1.0s,mb5.6
YSS *e*pP pP 12 35 25.6 -1.0
YSS *e*sP sP 12 35 30.7 +0.7
AKTO Aktyubinsk 62.80 332 LR LR 13 05 31.8
comp=Z,98nm,20.8s,MS4.0,baz=309,slow=39
SVE Sverdlovsk 66.25 338‖ *e*P **P** **12 35 43.6 -0.2**
SVE pmax pmax
comp=Z,43nm,1.1s,mb5.4
ZEI Tsey 66.43 319 *e*P **P** **12 35 44.8 -0.4**
ZEI pmax pmax
comp=Z,18nm,1.0s,mb5.1
ARU Arti 66.75 337 *c i*P **P** **12 35 46.2 -0.8**
ARU S S 12 44 37.0 -0.1
ARU SS SS 12 48 53.6 -1.8
ARU pmax pmax
comp=Z,16nm,1.7s,mb4.8
ARU Arti 66.75 337 *e*P **P** **12 35 46.1 -0.9**
KIV Kislovodsk 67.75 320‖ *e*P **P** **12 35 54.1 +0.5**
KIV *e**PP pP 12 36 02.1 -0.6
KIV pmax pmax
comp=Z,14nm,1.4s,mb4.8
KIV Kislovodsk 67.75 320 *e*P **P** **12 35 53.4 -0.2**
comp=Z,29nm,1.0s,mb5.3
YAK Yakutsk 68.13 15 *c i*P **P** **12 35 54.7 -0.9**
YAK pmax pmax
comp=Z,46nm,1.4s,mb5.3
YAK pmax pmax
comp=E,8.0nm,1.6s
YAK pmax pmax
comp=N,12nm,1.4s
YAK Yakutsk 68.13 15 *e*P **P** **12 35 54.9 -0.6**
comp=N,62nm,0.9s,mb5.6
YAK *e*pP pP 12 36 02.2 -2.5
YAK *e*sP sP 12 36 07.7 -0.4
EIL Elat 68.47 303 LR LR 13 05 02.9
comp=N,126nm,18.1s,MS4.2,baz=285,slow=35
KEMA Kemaliye 68.73 314 *i* P **P** **12 36 00.8 +0.9**
SOKR Solikamsk 69.65 339 *e*P **P** **12 35 59.9 -5.2**
SOKR pmax pmax
comp=Z,20nm,0.7s,mb5.2
MAW Mawson 69.92 194 LR LR 13 02 09.2
comp=Z,164nm,20.4s,MS4.3,baz=242,slow=32
PINB Pinarbasi 70.05 312 *i* P **P** **12 36 15.7 +7.7**
ANN Anapa 71.53 319 *e*P **P** **12 36 11.0 -5.9**
ANN pmax pmax
comp=Z,32nm,1.1s,mb5.2
BR131 Keskin Array S 72.42 313 *e*P **P** **12 36 21.6 -0.8**
comp=Z,0.9nm,0.6s,mb3.9
BR131 *e*pP pP 12 36 28.9 -2.6
BR131 *e*sP sP 12 36 32.6 -2.3
BRTR Keskin Array B 72.42 313 P **P** **12 36 21.4 -1.0**
comp=Z,1.4nm,0.8s,mb4.0,baz=116,slow=5.6,SNR=7.5
BRTR Keskin Array B 72.42 313 *i* P **P** **12 36 21.3 -1.0**
PETK Petropavlovsk- 73.62 33 P **P** **12 36 28.6 -0.6**
comp=Z,2.7nm,0.8s,mb4.3,baz=235,slow=4.7,SNR=5.5
PETK LR LR 13 12 45.9
comp=Z,77nm,18.3s,MS4.0,baz=64,slow=39
PETK Petropavlovsk- 73.62 33 P **P** **12 36 28.6 -0.6**
PETK LR LR 13 12 45.9
PET Petropavlovsk 74.10 33 *e*P **P** **12 36 32.3 +0.3**
BOSA Boshof 74.51 241 P **P** **12 36 34.1 -0.8**
comp=Z,2.9nm,0.8s,mb4.2,baz=140,slow=6.9,SNR=3.3
BOSA LR LR 13 01 45.9
comp=Z,135nm,19.6s,MS4.2,baz=258,slow=30
MOS Moscow 75.89 329 *e*P **P** **12 36 40.5 -1.7**
SEY Seymchan 76.16 22‖ *e*P **P** **12 36 44.1 +0.4**
OBN Obninsk 76.17 328 *i* P **P** **12 36 43.3 -0.5**
OBN *e**PP pP 12 36 50.8 -2.3
OBN *e* 12 39 33.4
OBN pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
AKASG Malin Array Be 78.75 323 P **P** **12 36 57.1 -1.2**
comp=Z,0.2nm,0.3s,baz=78,slow=5.8,SNR=4.1
BUR08 Bucovina Ar. S 80.47 319 *e*P **P** **12 37 08.6 +0.8**
JOF Joensuu 81.72 335 *e*p **P** **12 37 12.6 -1.5**
comp=Z,6.8nm,0.8s,mb4.6
JOF Joensuu 81.72 335 *e*p **P** **12 37 12.6 -1.5**
comp=Z,6.8nm,0.8s,mb4.6
APA Apatity 82.69 339‖ *e*P **P** **12 37 17.4 -1.7**
APA pmax pmax
comp=Z,37nm,1.4s,mb5.2
APA MLR MLR
comp=Z,500nm,19.0s,MS4.9
CRVS Cervenica-Dubn 83.18 320 *e*P **P** **12 37 26.2 +4.1**
CRVS *e* pP 12 37 33.1 +1.7
CRVS pmax pmax
comp=Z,10.0nm,1.6s,mb4.6
CRVS Cervenica-Dubn 83.18 320 *e*P **P** **12 37 26.2 +4.1**
comp=Z,9.6nm,1.6s,mb4.6
CRVS *e* pP 12 37 33.1 +1.7
CRVS Cervenica-Dubn 83.18 320 *e*P **P** **12 37 26.2 +4.1**
CRVS *e*pP pP 12 37 33.1 +1.7
STHS Stebnicka Huta 83.42 320 *e*P **P** **12 37 24.3 +1.0**
STHS *e*SP 12 37 31.3
STHS pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
STHS Stebnicka Huta 83.42 320 *e*P **P** **12 37 24.3 +1.0**
comp=Z,7.2nm,1.0s,mb4.7
STHS *e*SP 12 37 31.3
STHS Stebnicka Huta 83.42 320 *e*P **P** **12 37 24.3 +1.0**
STHS *e*pP pP 12 37 31.2 -1.4
FINES FINESS Array B 83.57 333 P **P** **12 37 23.5 -0.3**
comp=Z,3.3nm,0.6s,mb4.6,baz=105,slow=7.0,SNR=9.5
KAF Kangasniemi 83.65 333 *e*P **P** **12 37 22.9 -1.3**
KAF pmax pmax
comp=Z,6.0nm,0.7s,mb4.8
KAF Kangasniemi 83.65 333 *e*p **P** **12 37 22.9 -1.3**
comp=Z,6.1nm,0.7s,mb4.8
KAF Kangasniemi 83.65 333 *e*p **P** **12 37 22.9 -1.3**
comp=Z,6.1nm,0.7s,mb4.8
BILL Bilibino 83.66 20 *e*P **P** **12 37 24.2 +0.1**
BILL *e**PP pP 12 37 34.0 +0.6
BILL *e* 12 40 37.1
VYHS Vyhne 84.83 319 *e*P **P** **12 37 33.3 +2.8**
VYHS *e* 12 37 38.3
VYHS pmax pmax
comp=Z,12nm,2.3s,mb4.6
VYHS Vyhne 84.83 319 *e*P **P** **12 37 33.3 +2.8**
comp=Z,12nm,2.3s,mb4.6
VYHS *e* 12 37 38.3
VYHS Vyhne 84.83 319 *e*P **P** **12 37 33.3 +2.8**
VYHS *e*pP pP 12 37 38.3 -1.5
MORC Moravsky Berou 85.86 320 *e*P **P** **12 37 35.3 -0.3**
comp=Z,0.4nm,0.4s,mb4.0
ARCES ARCESS Array B 86.09 340 P **P** **12 37 34.8 -1.5**
comp=Z,3.4nm,0.8s,mb4.7,baz=72,slow=4.0,SNR=5.4
ARCES LR LR 13 21 17.3
comp=Z,96nm,18.6s,MS4.2,baz=5.5,slow=39
ARCES ARCESS Array B 86.09 340 P **P** **12 37 34.8 -1.5**
ARCES LR LR 13 21 17.3
DPC Dobruska-Polom 86.71 321 *e*P pP 12 37 46.5 -2.6
DPC Dobruska-Polom 86.71 321 *e*pP pP 12 37 46.5 -2.6
BOJS Bojanci 86.87 316 *i* P pP 12 37 47.7 -2.3
BOJS *i* 12 37 57.1
UPC Upice 86.93 321 *e*P pP 12 37 48.8 -1.4
UPC Upice 86.93 321 *e*pP pP 12 37 48.8 -1.4
MAIT Maitri 87.07 199 *e*P **P** **12 37 42.3 +1.2**
PERS Pernice 87.08 317 *i* P pP 12 37 49.2 -1.8
VISS Visnje 87.19 316 *i* P pP 12 37 49.4 -2.2
JAVS Javornik 87.73 316 *i* P pP 12 37 51.7 -2.5
JAVS *i* 12 38 00.2
PRU Pruhonice 87.81 320 *e*P pP 12 37 52.8 -1.7
PRU Pruhonice 87.81 320 *e*pP pP 12 37 52.8 -1.7
GEC2 GERESS Array S 88.25 319 *e*P pP 12 37 54.5 -2.1
comp=Z,18nm,1.4s
GEC2 GERESS Array S 88.25 319 *e*P pP 12 37 54.5 -2.1
GEC2 pmax pmax
comp=Z,18nm,1.4s,mb5.1
BRG Berggiesshubel 88.27 321 *e*P pP 12 37 55.5 -1.2
comp=Z,60nm,2.3s
BRG Berggiesshubel 88.27 321 *e*P pP 12 37 54.6 -2.0
comp=Z,7.8nm,1.2s
BRG Berggiesshubel 88.27 321 *e*P pP 12 37 54.6 -2.1
BRG pmax pmax
comp=Z,5.0nm,1.2s,mb4.6
KHC Kasperske Hory 88.35 319 *e*P pP 12 37 55.8 -1.3
KHC Kasperske Hory 88.35 319 *e*pP pP 12 37 55.8 -1.3
WET Wettzell 88.81 319 *e*P pP 12 37 57.1 -2.1
comp=Z,15nm,1.5s
WET Wettzell 88.81 319 *e*P pP 12 37 57.1 -2.1
WET pmax pmax
comp=Z,15nm,1.5s,mb5.1
CLL Collm 88.90 321 *e*P pP 12 37 57.6 -2.0
comp=Z,12nm,1.4s
CLL Collm 88.90 321 *e*P **P** **12 37 50.0 -0.2**
CLL *e*pP pP 12 37 57.0 -2.6
CLL *e*sP sP 12 38 01.0 -2.0
CLL Collm 88.90 321 *e*P **P** **12 37 50.0 -0.2**
CLL *e*pP pP 12 37 57.0 -2.6
CLL *e*sP sP 12 38 01.0 -2.0
TANN Tannenbergstha 89.18 320 *e*P pP 12 37 58.9 -2.0
comp=Z,10.0nm,1.5s
ROTZ Rotzenmuhle 89.29 320 *e*P pP 12 38 00.2 -1.3
comp=Z,10.0nm,1.3s
MOX Moxa 89.73 321 *e*P pP 12 38 01.6 -1.9
MOX Moxa 89.73 321 *e*P pP 12 38 01.4 -2.1
comp=Z,11nm,1.2s
GRA1 Grafenberg Arr 89.93 320 *e*P pP 12 38 02.8 -1.7
comp=Z,29nm,1.5s
GRF Grafenberg Arr 89.93 320 *e*P pP 12 38 02.8 -1.7
comp=Z,29nm,1.5s
GRF Grafenberg Arr 89.93 320 *e*P pP 12 38 02.8 -1.7
GRF pmax pmax
comp=Z,29nm,1.5s,mb5.4
GRF Grafenberg Arr 89.93 320 *e*P pP 12 38 02.8 -1.7
GRF pmax pmax
comp=Z,29nm,1.5s,mb5.4
NOA NORSAR Array B 90.57 331 LR LR 13 27 07.0
comp=Z,46nm,19.7s,MS3.9,baz=110,slow=41
CLZ Clausthal 90.58 322 *e*P pP 12 38 05.5 -1.9
comp=Z,19nm,1.4s
CLZ Clausthal 90.58 322 *e*P pP 12 38 05.5 -1.9
CLZ pmax pmax
comp=Z,19nm,1.4s,mb5.2
KEST Kesra 90.67 306 P **P** **12 37 56.3 -2.6**
comp=Z,1.0nm,0.7s,mb4.2,baz=315,slow=1.4,SNR=1.8
KEST Kesra 90.67 306 *e*P **P** **12 37 59.2 +0.3**
KEST *e*pP pP 12 38 07.7 -0.6
KEST *e*sP sP 12 38 12.7 +1.1
TNS Taunus Mts 91.74 320 *e*P pP 12 38 11.4 -1.5
comp=Z,23nm,1.1s
TNS Taunus Mts 91.74 320 *e*P pP 12 38 11.4 -1.5
TNS pmax pmax
comp=Z,23nm,1.1s,mb5.4
BFO Black Forest 91.78 318 *e*P pP 12 38 10.8 -2.3
comp=Z,22nm,1.8s
BFO Black Forest 91.78 318 *e*P pP 12 38 10.8 -2.3
BFO pmax pmax
comp=Z,22nm,1.8s,mb5.2
DLMT Dillon 128.85 28 *e*PKPdf PKPdf 12 44 04.5 +0.9
DLMT *e*pPKPdf pPKPdf 12 44 12.6 -0.7
NVAR Mina Array Bea 130.45 38 PKP PKPdf 12 44 06.2 -0.6
comp=Z,0.4nm,0.7s,baz=211,slow=5.1,SNR=3.4
NVAR SKPbc SKPbc 12 47 29.9 +1.5
comp=Z,0.9nm,1.0s,baz=282,slow=1.8,SNR=5.3
PDAR Pinedale Array 132.24 28 PKhKP 12 44 04.8
comp=Z,0.2nm,0.4s,baz=48,slow=1.3,SNR=2.5
MSU Marysvale 134.02 34 *e*PKIKP PKPdf 12 44 14.9 +1.3
MSU *e* 12 44 23.6
ANMO Albuquerque 139.75 33 PKP PKPdf 12 44 24.5 +0.1
comp=Z,1.0nm,0.7s,baz=178,slow=2.9,SNR=3.5
WMOK Wichita Mounta 143.63 25 *e*PKIKP PKPdf 12 44 28.2 -3.1
WMOK *e* 12 44 35.6
ELN Prospectdale 145.00 359 *e*PKPdf PKPdf 12 44 32.4 -1.3
ELN *e*pPKPdf pPKPdf 12 44 39.7 -3.6
TXAR Lajitas Array 145.51 36 PKPbc PKPbc 12 44 35.6 +0.8
comp=Z,5.3nm,0.8s,baz=300,slow=2.5,SNR=35
WVT Waverly 145.56 9 *e*PKIKP PKPdf 12 44 34.5 -0.1
WVT *e* 12 44 41.8
TZTN Tazewell 145.62 3 *e*PKPdf PKPdf 12 44 34.5 -0.2
TZTN *e*pPKPdf pPKPdf 12 44 41.9 -2.5
MIAR Mount Ida 145.71 18 *e*PKPdf PKPdf 12 44 35.0 +0.1
MIAR *e*pPKPdf pPKPdf 12 44 42.9 -1.7
UALR University of 145.86 16 *e*PKPdf PKPdf 12 44 35.9 +0.7
TKL Tuckaleechee C 146.49 4 PKPbc PKPbc 12 44 36.9 -0.7
comp=Z,1.3nm,0.4s,baz=169,slow=4.8,SNR=2.2
JCT Junction City 146.73 30 *e*PKPbc PKPbc 12 44 37.5 -0.9
JCT *e*PKPab PKPab 12 44 39.3 -0.2
JCT *e*pPKPdf pPKPdf 12 44 46.5 0.0
JCT *e*sPKPdf 12 44 51.5
JSC Jenkinsville 147.94 360 *e*PKPbc PKPbc 12 44 41.1 -0.5
JSC *e*pPKPdf pPKPdf 12 44 49.1 +0.7
JSC *e*sPKPdf 12 44 54.0
GOGA Godfrey 148.74 4 *e*PKIKP PKPdf 12 44 39.0 -1.0

GOGA				*e*		12 44 43.2	
GOGA				*e*		12 44 46.7	
GOGA				*e*		12 44 50.6	
HKT	**Hockley**	**149.01**	**25**	*e*PKPbc	PKPbc	12 44 45.6	+1.0
HKT				*e*PKPab	PKPab	12 44 49.6	+0.9

*IDC **20** 12:33:29.3±0.9, 31°.56N×104°.29E, h0km, mb3.7/7, mb1 3.8/9, mb1mx3.7/27, mbtmp3.7/9, ML3.5/2, Error ellipse: s-maj=35.2km s-min=16.9km az=58.0*
*NEIC **20** 12:33:30.9±0.5, 31°.55N×104°.14E, h10km, mb4.2/2, Error ellipse: s-maj=13.9km s-min=8.4km az=64.0*
*BJI **20** 12:33:33.2, 31°.66N×104°.29E, h9km, ML3.2/12, Ms3.6/1, Ms7 3.4/2*

ISC 20 12:33:30.6±0.9, 31°.66N±0°.03×104°.42E±0°.05, h4km±6km, n16, σ1s27/25, mb3.8/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.94**	**217**	Pn	**Pg**	**12 33 49.0**	**+0.4**
CD2				Sg	**Sg**	**12 34 02.3**	**+1.5**
CD2				smax			
	comp=N,1μm,0.7s						
CD2				smax			
	comp=E,2μm,0.7s						
LZH	**Lanzhou**	**4.44**	**354**	*e*Pn	**Pn**	**12 34 44.4**	**+5.7**
LZH				Pg	**Pb**	**12 34 49.1**	**0.0**
LZH				Sn	**Sn**	**12 35 30.4**	**-0.4**
LZH				Sg	**Sb**	**12 35 45.3**	**+2.3**
LZH				smax			
	comp=N,76nm,0.7s						
LZH				smax			
	comp=E,110nm,0.6s						
LZH				LR	LR		
	comp=N,460nm,5.6s						
LZH				LR	LR		
	comp=Z,650nm,6.7s						
XAN	**Xi'an**	**4.47**	**57**	Pn	**Pn**	**12 34 39.4**	**+0.3**
XAN				Pg	**Pg**	**12 34 54.5**	**-1.7**
XAN				Sn	**Sn**	**12 35 33.5**	**+1.9**
XAN				Sg	**Sg**	**12 35 52.8**	**-1.4**
XAN				smax			
	comp=N,85nm,0.7s						
XAN				smax			
	comp=E,38nm,0.7s						
ENH	**Enshi**	**4.57**	**106**	*e*Pn	**Pn**	**12 34 43.4**	**+2.9**
ENH				*e*Sn	**Sn**	**12 35 34.7**	**+0.5**
GYA	**Guiyang**	**5.55**	**159**	Pg	**Pn**	**12 34 55.5**	**+1.5**
GYA				Sg	**Sn**	**12 35 58.0**	**-0.2**
GYA				smax			
	comp=N,70nm,0.8s						
GYA				smax			
	comp=E,90nm,0.9s						
CMAR	**Chiang Mai Arr**	**14.05**	**202**	Pn	**Pn**	**12 36 48.4**	**-2.1**
	comp=E,0.1nm,0.3s,baz=200,slow=21,SNR=2.6						
SONM	**Songino Array**	**16.22**	**5**	Pn	**Pn**	**12 37 21.1**	**+1.8**
	comp=E,0.1nm,0.3s,baz=184,slow=4.3,SNR=2.1						
KSRS	**Korea Array**	**20.18**	**67**	P	**P**	**12 38 06.3**	**+0.1**
	comp=E,1.4nm,0.7s,baz=255,slow=10,SNR=10						
MKAR	**Makanchi Array**	**22.74**	**318**	P	**P**	**12 38 32.5**	**-1.0**
	comp=E,0.5nm,0.8s,mb3.0,baz=116,slow=13,SNR=2.9						
ZALV	**Zalesovo Beam**	**26.34**	**333**	P	**P**	**12 39 07.7**	**+0.2**
	comp=E,0.6nm,0.5s,mb3.4,baz=116,slow=6.6,SNR=2.9						
KURK	**Kurchatov**	**26.96**	**322**	P	**P**	**12 39 12.8**	**-0.3**
	comp=E,0.2nm,0.3s,mb3.1,baz=129,slow=8.5,SNR=2.9						
KURK	**Kurchatov**	**26.96**	**322**	*e*P	**P**	**12 39 11.2**	**-1.9**
	comp=E,0.9nm,0.7s,mb3.4						
FINES	**FINESS Array B**	**57.25**	**326**	P	**P**	**12 43 17.6**	**-1.2**
	comp=E,1.1nm,0.6s,mb4.0,baz=79,slow=9.9,SNR=4.6						
WRAB	**Tennant Creek**	**58.79**	**147**	P	**P**	**12 43 29.0**	**-1.2**
	comp=E,9.0nm,1.4s,mb4.6						
WRA	**Warramunga Arr**	**58.79**	**147**	P	**P**	**12 43 29.5**	**-0.6**
	comp=E,1.5nm,0.6s,mb4.2,baz=340,slow=7.8,SNR=16						
ASAR	**Alice Springs**	**61.83**	**149**	P	**P**	**12 43 50.0**	**-0.9**
	comp=E,0.6nm,0.5s,mb4.0,baz=334,slow=6.3,SNR=22						

*IDC **20** 12:39:57.2±1.8, 39°.12N×141°.23E, h0km, mb3.5/4, mb1 3.6/6, mb1mx3.4/25, mbtmp3.4/6, ML3.0/2, Error ellipse: s-maj=39.3km s-min=24.8km az=72.0*
*ISCJB **20** 12:39:59.8±0.5, 39°.10N±0°.03×140°.93E±0°.04, h11km±5km, mb3.5/4, Error ellipse: s-maj=6.0km s-min=5.2km az=37.9*
*NEIC **20** 12:40:00.0, 39°.09N×140°.90E, h10km, MG3.3(JMA), After JMA.*
*JMA **20** 12:40:00.0, 39°.09N×140°.90E, h10km±1km, M3.3*
JMA Felt I J1.

ISC 20 12:40:00.3±0.5, 39°.09N±0°.03×140°.93E±0°.04, h3km±5km, n14, σ0s84/22, mb3.5/4, 2C-3D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.27**	**121**	P	**Pg**	**12 40 05.6**	**+0.1**
JMK				*e*S	**Sg**	**12 40 09.5**	**+0.5**
JRG	**Rokugo**	**0.38**	**323**	⇓P	**Pg**	**12 40 07.4**	**-0.2**
JRG				*e*S	**Sg**	**12 40 12.8**	**+0.3**
JYK	**Kaneyama**	**0.47**	**249**	⇑P	**Pg**	**12 40 09.0**	**-0.4**
JYK				*e*S	**Sg**	**12 40 15.1**	**-0.5**
JOM	**Ohasama**	**0.47**	**37**	⇑P	**Pg**	**12 40 09.5**	**0.0**
JOM				S	**Sg**	**12 40 16.3**	**+0.7**
JIO	**Ouri**	**0.72**	**152**	⇓P	**Pg**	**12 40 13.7**	**-0.4**
JIO				S	**Sg**	**12 40 23.3**	**-0.1**
JOU	**Okura**	**0.76**	**196**	⇓P	**Pg**	**12 40 14.4**	**-0.4**
JOU				S	**Sg**	**12 40 24.5**	**-0.1**
MJAR	**Matsushiro Arr**	**3.33**	**221**	Pn	**Pn**	**12 40 53.9**	**+0.5**
	0.5nm,0.3s,baz=25,slow=13,SNR=7.3						
MJAR				Pg	**Pg**	**12 40 59.9**	**-4.3**
	1.4nm,0.3s,baz=23,slow=15,SNR=12						
MAJO	**Matsushiro**	**3.33**	**221**	*e*Pn	**Pn**	**12 40 54.2**	**+0.9**
MAT	**Matsushiro**	**3.33**	**221**	P	**Pn**	**12 40 53.9**	**+0.5**
MAT				*e*S	**Sn**	**12 41 34.9**	**+1.4**
KSRS	**Korea Array**	**10.35**	**265**	Pn	**Pn**	**12 42 31.5**	**+1.8**
	0.3nm,0.3s,baz=77,slow=14,SNR=15						
MKAR	**Makanchi Array**	**42.73**	**300**	P	**P**	**12 47 57.6**	**-1.0**
	0.4nm,0.7s,mb3.3,baz=86,slow=9.0,SNR=3.6						
KURK	**Kurchatov**	**44.38**	**306**	P	**P**	**12 48 10.6**	**-1.2**
	0.5nm,0.4s,mb3.6,baz=80,slow=8.4,SNR=4.1						
WRA	**Warramunga Arr**	**59.05**	**187**	P	**P**	**12 50 00.4**	**-1.3**
	0.3nm,0.5s,mb3.6,baz=4.7,slow=7.3,SNR=10						
ASAR	**Alice Springs**	**62.77**	**187**	P	**P**	**12 50 23.4**	**-3.5**
	0.4nm,0.8s,mb3.6,baz=12,slow=5.8,SNR=4.5						

MEX 20 12:44:45.8±0.8, 16°.07N×96°.44W, h45km±11km, MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.44**	**133**	*i* P	Pn	12 44 54.4	-1.7
HUIG				*i* S	Sn	12 45 01.9	-1.4
VHO	**Vista Hermosa**	**1.03**	**344**	*i* P	Pn	12 45 02.0	-1.9
VHO				*i* S	Sn	12 45 14.8	-2.4
OXX	**Oaxaca**	**1.04**	**345**	*i* P	Pn	12 45 03.0	-1.0
OXX				*i* S	Sn	12 45 15.9	-1.5
PNIG	**Pinotepa**	**1.65**	**281**	*i* P	Pn	12 45 09.9	-2.4
PNIG				*i* S	Sn	12 45 29.8	-2.5
UTMO	**Huajuapan**	**2.18**	**324**	*i* P	Pn	12 45 18.4	-1.2
UTMO				*i* S	Sn	12 45 44.1	-1.3
TPIG	**Tehuac#an**	**2.50**	**340**	*i* P	Pn	12 45 23.2	-0.8
TPIG				*i* S	Sn	12 45 51.1	-2.0
PCIG		**3.12**	**96**	*e*P	Pn	12 45 31.9	-0.7
PCIG				*i* S	Sn	12 46 06.0	-2.6
TGIG		**3.26**	**77**	*i* P	Pn	12 45 34.7	+0.2
TGIG				*i* S	Sn	12 46 10.4	-1.7
ACX	**Acapulco**	**3.43**	**284**	*e*P	Pn	12 45 35.5	-1.2
ACX				*i* S	Sn	12 46 14.7	-1.4
PPM	**Popocatepetl**	**3.64**	**325**	*i* P	Pn	12 45 39.3	-0.3
PPM				*e*P		12 45 40.1	
PPM				*i* S	Sn	12 46 22.0	+0.8
PPM				*i* S	Sn	12 46 22.3	+1.0
PLIG	**Platanillo**	**3.73**	**309**	*e*P	Pn	12 45 42.5	+1.7
PLIG				*i* S	Sn	12 46 25.9	+2.4
CAIG	**El Cayaco**	**3.79**	**285**	*e*P	Pn	12 45 43.3	+1.5
CAIG				*i* S	Sn	12 46 24.5	-0.7
MZVM		**4.08**	**320**	*e*P	Pn	12 45 45.1	-0.7
MZVM				*i* S	Sn	12 46 31.9	-0.4
IIO	**Organos**	**4.12**	**329**	*e*P	Pn	12 45 46.1	-0.2
IIO				*i* S	Sn	12 46 34.0	+0.8
PTVM	**Pico Tres Padr**	**4.33**	**324**	*e*P	Pn	12 45 49.2	+0.1
PTVM				*i* S	Sn	12 46 39.0	+0.7
ZIIG	**Zihuatanejo**	**5.05**	**288**	*e*P	Pn	12 46 00.3	+1.3
ZIIG				*i* S	Sn	12 46 49.5	-6.6

DJA 20 12:46:54.8±1.6S×107°.93E, h30km, MLv4.0/9, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	**Lembang**	**1.36**	**347**	P	Pn	12 47 17.5	+0.5
SKJI	**Sukabumi**	**1.78**	**310**	P	Pn	12 47 23.3	+0.6
SKJI				S	Sn	12 47 45.3	+0.9
UGM	**Wanagama**	**2.58**	**85**	P	Pn	12 47 34.1	+0.4
CGJI	**Cibinong**	**2.70**	**305**	P	Pn	12 47 35.1	-0.3
SBJI	**Serang**	**2.70**	**318**	P	Pn	12 47 35.7	+0.3
SMRI	**Semarang**	**2.72**	**66**	P	Pn	12 47 36.2	+0.5
PCJI	**Pacitan**	**3.21**	**91**	P	Pn	12 47 43.3	+0.8
PCJI				S	Sn	12 48 19.6	-0.2
SJI	**Sawahan**	**3.82**	**84**	P	Pn	12 47 51.5	+0.6
PWJI	**Pagerwojo**	**3.84**	**88**	P	Pn	12 47 52.1	+1.0
KLSI		**4.69**	**317**	P	Pn	12 48 01.7	-1.1
GMJI	**Gumukmas**	**5.46**	**92**	P	Pn	12 48 13.5	+0.1
	0.2nm53nm,0.8s						
KMMI	**Kalianget**	**6.08**	**80**	P	Pn	12 48 22.3	+0.3
	0.2nm30nm,1.5s						
SRBI	**Singaraja**	**7.21**	**90**	P	Pn	12 48 38.1	+0.7

*IDC **20** 12:54:58.9±1.0, 26°.77N×56°.35E, h0km, mb3.8/12, mb1 3.9/14, mb1mx3.7/32, mbtmp3.9/14, ML3.8/2, Error ellipse: s-maj=24.1km s-min=18.1km az=167.0*
*ISCJB **20** 12:55:01.0±0.3, 26°.89N±0°.02×56°.25E±0°.04, h10km, mb3.8/15, Error ellipse: s-maj=5.6km s-min=3.3km az=177.0*
*NEIC **20** 12:55:00.5±0.8, 26°.72N×56°.28E, h10km, mb3.8/3, ML3.5(THR), MN3.6(TEH), Error ellipse: s-maj=13.8km s-min=10.9km az=164.0*
*CSEM **20** 12:55:02.2±0.2, 26°.87N×56°.30E, h10km, ML4.2/6, Error ellipse: s-maj=7.9km s-min=4.7km az=87.0*
*OMAN **20** 12:55:03.6±99.0, 26°.73N×56°.41E, h0km±34km, Error ellipse: s-maj=93.1km s-min=13.4km az=357.0*
*THR **20** 12:55:06.2±0.3, 27°.08N×56°.17E, h29km±2km, ML3.6*
*SGS **20** 12:55:07.5, 27°.05N×55°.91E, h14km*
*TEH **20** 12:55:13.2, 27°.57N×56°.41E, h12km*

ISC 20 12:55:02.4±0.3, 26°.86N±0°.02×56°.30E±0°.04, h10km, n100, σ1s22/105, mb3.8/15, 6C-2D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.55**	**348**	*e*Pg	**Pg**	**12 55 14.0**	**+0.9**
BNDS	**Bandar-Abbas**	**0.55**	**348**	*e*Pg	**Pg**	**12 55 14.0**	**+0.9**
BNDS				AML	AML	12 55 24.9	
	comp=N,6μm,0.7s						
BNDS	**Bandar-Abbas**	**0.55**	**348**	*e*Pg	**Pg**	**12 55 14.0**	**+0.9**
IBND	**Bandar-abas**	**0.62**	**20**	*e*Pg	**Pg**	**12 55 16.3**	**+1.7**
IBND				*e*		12 55 36.3	
	comp=Z,99μm,0.2s						
BANOM	**Banah**	**0.93**	**180**	P	**Pg**	**12 55 19.2**	**-1.2**
	SNR=419						
BANOM				P		12 55 19.2	
	SNR=419						
BANOM	**Banah**	**0.93**	**180**	P	**Pg**	**12 55 19.2**	**-1.2**
	SNR=419						
BANOM				S	**Sg**	**12 55 32.6**	**0.0**
NAZ	**Nazwa, Dubai**	**1.95**	**197**	P	**Pn**	**12 55 36.8**	**+1.2**
	SNR=7.0						
NAZ				P		12 55 36.8	
	SNR=7.0						
NAZ	**Nazwa, Dubai**	**1.95**	**197**	P	**Pn**	**12 55 36.5**	**+0.9**
	SNR=20						
NAZ				S	**Sn**	**12 56 02.4**	**+2.3**
HATD	**Hatta, Dubai**	**2.03**	**184**	P	**Pn**	**12 55 37.7**	**+1.0**
	SNR=24						
HATD				P		12 55 37.7	
	SNR=24						
HATD	**Hatta, Dubai**	**2.03**	**184**	P	**Pn**	**12 55 37.7**	**+1.0**
	SNR=24						
ASHO	**Ashiyiah**	**2.18**	**186**	P	**Pn**	**12 55 39.6**	**+0.9**
	SNR=45						
ASHO				P		12 55 39.6	
	SNR=45						
ASHO	**Ashiyiah**	**2.18**	**186**	P	**Pn**	**12 55 39.7**	**+1.0**
	SNR=45						
FAQ	**Al Faqa, Dubai**	**2.20**	**197**	P	**Pn**	**12 55 39.8**	**+0.8**
	SNR=26						
ASUD	**Al Ashush, Dub**	**2.39**	**202**	P	**Pn**	**12 55 43.0**	**+1.4**
	SNR=27						
ASUD				P		12 55 43.0	
	SNR=27						
ASUD	**Al Ashush, Dub**	**2.39**	**202**	P	**Pn**	**12 55 43.0**	**+1.3**
	SNR=27						
KRBR	**Kerman**	**3.14**	**7**	*e*Pn	**Pn**	**12 55 53.0**	**+1.1**
KRBR				*e*Sg	**Sn**	**12 56 31.0**	**+1.6**
KRBR	**Kerman**	**3.14**	**7**	*e*Pn	**Pn**	**12 55 53.5**	**+1.6**
KRBR				AML	AML	12 56 35.8	
	comp=E,249nm,0.7s						
KRBR	**Kerman**	**3.14**	**7**	*e*Pn	**Pn**	**12 55 53.5**	**+1.6**
KRBR				*e*Sg	**Sn**	**12 56 31.1**	**+1.7**
GHIR	**Ghir-Karzin**	**3.26**	**297**	*e*Pn	**Pn**	**12 55 55.1**	**+1.4**
GHIR				AML	AML	12 57 00.1	
	comp=E,164nm,1.0s						
HOQ	**Hoqain**	**3.39**	**164**	⇑P	**Pn**	**12 55 54.4**	**-1.1**
HOQ				⇑P		12 55 54.4	
HOQ	**Hoqain**	**3.39**	**164**	P	**Pn**	**12 55 54.4**	**-1.0**
ARQ	**Araqi**	**3.52**	**177**	⇑P	**Pn**	**12 55 57.9**	**+0.7**
ARQ				⇑P		12 55 57.9	
ARQ	**Araqi**	**3.52**	**177**	P	**Pn**	**12 55 57.9**	**+0.8**
SMDO	**Samad**	**4.11**	**157**	⇑P	**Pn**	**12 56 05.6**	**+0.3**
SMDO				⇑P		12 56 05.6	
SMDO	**Samad**	**4.11**	**157**	P	**Pn**	**12 56 05.6**	**+0.3**
IPAR	**Pars**	**4.12**	**317**	*e*Pn	**Pn**	**12 56 10.8**	**+5.3**
IPAR				*e*		12 57 13.1	
	comp=E,2μm,0.5s						
IPAR	**Pars**	**4.12**	**317**	*e*Pn	**Pn**	**12 56 10.8**	**+5.3**
BSY	**Bisya**	**4.18**	**168**	⇓P	**Pn**	**12 56 06.9**	**+0.6**
BSY				⇓P		12 56 06.9	
BSYO	**Bisya**	**4.20**	**168**	P	**Pn**	**12 56 06.9**	**+0.3**
IMEH	**Mehriz**	**4.75**	**342**	*e*Pn	**Pn**	**12 56 15.8**	**+1.7**
IMEH				*e*Sn	**Sn**	**12 57 01.4**	**-7.8**
IMEH				*e*		12 57 20.3	
	comp=Z,460nm,0.3s						
IMEH	**Mehriz**	**4.75**	**342**	*e*Pn	**Pn**	**12 56 15.8**	**+1.7**
IBAF	**Bafgh**	**4.76**	**352**	*e*Pn	**Pn**	**12 56 14.4**	**+0.2**
IBAF				*e*		12 57 45.3	
	comp=Z,432nm,0.3s						
IBAF	**Bafgh**	**4.76**	**352**	*e*Pn	**Pn**	**12 56 14.4**	**+0.2**
ZHSF	**Zahedan**	**4.81**	**54**	*e*Pn	**Pn**	**12 56 18.0**	**+3.1**
ZHSF	**Zahedan**	**4.81**	**54**	*e*Pn	**Pn**	**12 56 18.8**	**+3.9**
ZHSF	**Zahedan**	**4.81**	**54**	*e*Pn	**Pn**	**12 56 18.8**	**+3.9**
WBK	**Wadi Bani Khal**	**4.88**	**150**	P	**Pn**	**12 56 16.2**	**+0.3**
	SNR=9.1						
WBK				P		12 56 16.2	
	SNR=9.1						
SLWS		**5.49**	**249**	P	**Pn**	**12 56 24.2**	**-0.1**
SLWS		**5.49**	**249**	P	**Pn**	**12 56 24.2**	**-0.1**
ICHK	**Chekchek**	**5.61**	**343**	*e*Pn	**Pn**	**12 56 27.3**	**+1.4**
ICHK				*e*		12 56 55.5	
	comp=Z,259nm,0.2s						
ICHK	**Chekchek**	**5.61**	**343**	*e*Pn	**Pn**	**12 56 27.3**	**+1.4**
BTHS		**5.67**	**242**	P	**Pn**	**12 56 27.1**	**+0.3**
BTHS		**5.67**	**242**	P	**Pn**	**12 56 27.1**	**+0.4**
IKOO	**Kooshah**	**6.02**	**22**	*e*Pn	**Pn**	**12 56 32.7**	**+1.1**
IKOO	**Kooshah**	**6.02**	**22**	*e*Pn	**Pn**	**12 56 32.7**	**+1.1**
BOQSS		**6.29**	**263**	P	**Pn**	**12 56 35.3**	**+0.1**
IGAR	**Gharneh**	**6.65**	**327**	*e*Pn	**Pn**	**12 56 40.8**	**+0.6**
IGAR				*e*		12 56 49.1	
	comp=Z,270nm,0.1s						
IZEF	**Zefreh**	**6.93**	**331**	*e*Pn	**Pn**	**12 56 44.9**	**+0.8**
IZEF				*e*		12 56 56.3	
	comp=Z,145nm,0.2s						
IZEF				*e*Sn	**Sn**	**12 57 55.2**	**-7.8**
IZEF	**Zefreh**	**6.93**	**331**	*e*Pn	**Pn**	**12 56 44.9**	**+0.8**
HRDDS		**7.34**	**239**	P	**Pn**	**12 56 50.0**	**+0.4**
IPIR	**Pirpir**	**7.46**	**322**	*e*Pn	**Pn**	**12 56 53.5**	**+2.1**
IPIR				*e*		12 58 33.6	
	comp=N,325nm,0.4s						
IPIR	**Pirpir**	**7.46**	**322**	*e*Pn	**Pn**	**12 56 53.5**	**+2.1**
KFJS		**7.54**	**282**	P	**Pn**	**12 56 50.5**	**-1.9**
KFJS		**7.54**	**282**	P	**Pn**	**12 56 50.5**	**-1.9**
IKLH	**Kolahrood**	**7.62**	**329**	*e*Pn	**Pn**	**12 56 56.3**	**+2.7**
IKLH				*e*		12 58 23.4	
	comp=N,194nm,0.2s						
IKLH	**Kolahrood**	**7.62**	**329**	*e*Pn	**Pn**	**12 56 56.3**	**+2.7**
QRN	**Al-Qurain**	**7.65**	**286**	*e*P	**Pn**	**12 56 53.3**	**-0.7**
QRN				AML	AML	12 58 18.1	
	comp=Z,26nm,0.5s						
RDF	**Al-Radifah**	**8.01**	**287**	*e*P	**Pn**	**12 56 58.0**	**-0.9**
RDF				AML	AML	12 58 28.9	
	comp=Z,24nm,0.4s						
RDF	**Al-Radifah**	**8.01**	**287**	*e*P	**Pn**	**12 56 58.0**	**-0.9**
NAY	**Al-Naaiem**	**8.35**	**289**	*e*P	**Pn**	**12 57 02.4**	**-1.1**
NAY				AML	AML	12 58 37.1	
	comp=Z,13nm,0.7s						
NAY	**Al-Naaiem**	**8.35**	**289**	*e*P	**Pn**	**12 57 02.4**	**-1.1**
MIB	**Mutribah**	**8.42**	**292**	*e*P	**Pn**	**12 57 03.6**	**-0.9**
MIB				AML	AML	12 58 37.7	
	comp=Z,30nm,0.7s						
MIB	**Mutribah**	**8.42**	**292**	*e*P	**Pn**	**12 57 03.6**	**-0.9**
ASF	**Jabal al Asfar**	**17.69**	**292**	P	**Pn**	**12 59 08.6**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=326,slow=4.4,SNR=7.4						
EIL	**Elat**	**19.01**	**283**	P	**Pn**	**12 59 24.0**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=64,slow=10,SNR=4.9						
EIL	**Elat**	**19.01**	**283**	P	**Pn**	**12 59 24.0**	**-1.1**
EIL	**Elat**	**19.01**	**283**	P	**Pn**	**12 59 24.0**	**-1.1**
EKS2	**Erkin-Say**	**21.26**	**38**	*e*P	**P**	**12 59 48.2**	**-0.5**
	comp=Z,2.0nm,0.5s,mb3.7						
EKS2	**Erkin-Say**	**21.26**	**38**	*e*P	**P**	**12 59 48.2**	**-0.6**
	comp=Z,2.0nm,0.5s,mb3.7						
AAK	**Ala-Archa**	**21.64**	**39**	P	**P**	**12 59 53.0**	**+0.2**
	comp=Z,1.5nm,0.3s,mb3.9,baz=221,slow=7.2,SNR=4.8						
AAK	**Ala-Archa**	**21.64**	**39**	P	**P**	**12 59 53.0**	**+0.2**
ABKAR	**Akbulak array**	**22.54**	**6**	*e*P	**P**	**13 00 01.4**	**-1.0**
	comp=Z,2.8nm,0.7s,mb3.8						
ABKAR	**Akbulak array**	**22.54**	**6**	*e*P	**P**	**13 00 01.4**	**-1.0**
	comp=Z,2.8nm,0.7s,mb3.8						
BRTR	**Keskin Array B**	**22.80**	**310**	P	**P**	**13 00 04.8**	**-0.5**
	comp=Z,1.9nm,0.8s,mb3.6,baz=132,slow=11,SNR=9.6						
BRTR	**Keskin Array B**	**22.80**	**310**	P	**P**	**13 00 04.8**	**-0.5**
AKTK	**Aktyubinsk**	**23.58**	**3**	P	**P**	**13 00 12.2**	**-1.1**
AKTK	**Aktyubinsk**	**23.58**	**3**	P	**P**	**13 00 12.2**	**-1.1**
AKTO	**Aktyubinsk**	**23.58**	**3**	P	**P**	**13 00 12.2**	**-1.1**
	comp=Z,1.2nm,0.7s,mb3.4,baz=187,slow=9.0,SNR=5.2						
BVAR	**Borovoye Array**	**28.17**	**18**	P	**P**	**13 00 53.7**	**-1.1**
	comp=Z,0.6nm,0.5s,mb3.5,baz=241,slow=8.1,SNR=4.4						
BVAR	**Borovoye Array**	**28.17**	**18**	P	**P**	**13 00 53.7**	**-1.1**
MKAR	**Makanchi Array**	**28.57**	**39**	P	**P**	**13 00 57.5**	**-1.0**
	comp=Z,0.6nm,0.6s,mb3.5,baz=225,slow=7.1,SNR=6.8						
MKAR	**Makanchi Array**	**28.57**	**39**	P	**P**	**13 00 57.5**	**-1.0**
KURK	**Kurchatov**	**29.28**	**30**	P	**P**	**13 01 01.0**	**-3.7**
	comp=Z,0.4nm,0.7s,mb3.3,baz=231,slow=8.5,SNR=2.7						
KURK	**Kurchatov**	**29.28**	**30**	*e*P	**P**	**13 01 01.3**	**-3.4**
	comp=Z,1.1nm,0.7s,mb3.7						
KURK	**Kurchatov**	**29.28**	**30**	*e*P	**P**	**13 01 01.3**	**-3.4**
	comp=Z,1.1nm,0.7s,mb3.7						
ZALV	**Zalesovo Beam**	**34.26**	**30**	P	**P**	**13 01 47.1**	**-1.4**
	comp=Z,0.5nm,0.4s,mb3.8,baz=236,slow=9.7,SNR=2.6						
ZALV	**Zalesovo Beam**	**34.26**	**30**	P	**P**	**13 01 47.1**	**-1.4**
JOF	**Joensuu**	**39.63**	**342**	*e*p	**P**	**13 02 32.8**	**-1.2**
	comp=Z,0.6nm,0.3s,mb3.8						
JOF	**Joensuu**	**39.63**	**342**	*e*p	**P**	**13 02 32.8**	**-1.2**
	comp=Z,0.6nm,0.3s,mb3.8						
JOF	**Joensuu**	**39.63**	**342**	*e*P	**P**	**13 02 32.8**	**-1.2**
FINES	**FINESS Array B**	**40.09**	**338**	P	**P**	**13 02 36.2**	**-1.6**
	comp=Z,1.2nm,0.6s,mb3.8,baz=155,slow=9.3,SNR=10						
FINES	**FINESS Array B**	**40.09**	**338**	P	**P**	**13 02 36.2**	**-1.6**
FINES	**FINESS Array B**	**40.09**	**338**	P	**P**	**13 02 36.2**	**-1.6**
TORD	**Torodi Ar. Bea**	**52.73**	**266**	P	**P**	**13 04 15.5**	**-2.2**
	comp=Z,0.8nm,0.6s,mb3.9,baz=61,slow=7.6,SNR=20						
FX1	**Atu Island--F**	**83.52**	**33**	P	**P**	**13 07 27.5**	**-3.0**
	comp=Z,1.4nm,0.6s,mb4.3,baz=74,slow=1.5,SNR=6.8						
WRA	**Warramunga Arr**	**88.75**	**113**	P	**P**	**13 07 54.8**	**-1.9**
	comp=Z,1.0nm,0.7s,mb4.2,baz=310,slow=4.2,SNR=8.8						
WRA	**Warramunga Arr**	**88.75**	**113**	P	**P**	**13 07 54.8**	**-1.9**
ASAR	**Alice Springs**	**90.21**	**116**	P	**P**	**13 08 01.6**	**-1.9**
	comp=Z,0.6nm,0.8s,mb4.0,baz=301,slow=5.0,SNR=9.9						
ASAR	**Alice Springs**	**90.21**	**116**	P	**P**	**13 08 01.6**	**-1.9**
NVAR	**Mina Array Bea**	**114.86**	**355**	PKP	PKiKP	13 13 42.8	-0.8
	comp=Z,0.2nm,0.6s,baz=191,slow=0.9,SNR=3.2						

*ISK **20** 13:05:02.9, 40°.08N×38°.94E, h18km, MD2.8*
*ISCJB **20** 13:05:02.9±1.0, 40°.07N±0°.04×38°.87E±0°.10, h7km±13km, Error ellipse: s-maj=12.9km s-min=4.6km az=162.3*
*CSEM **20** 13:05:03.0±0.2, 40°.05N×38°.87E, h8km, MD2.8, Error ellipse: s-maj=4.6km s-min=3.0km az=83.0*
*DDA **20** 13:05:04.1, 40°.02N×38°.24E, h7km±3km, Md2.9*

ISC 20 13:05:03.2±0.7, 40°.06N±0°.03×38°.87E±0°.07, h5km±9km, n15, σ0s66/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMT	**Gumushane**	**0.62**	**

WRA	**Warramunga Arr**	**27.85**	**163**	P	**P**	**14 07 31.8**	**-0.6**
	0.3nm,0.3s,mb3.3,baz=344,slow=10.0,SNR=5.0						
KSRS	**Korea Array**	**30.61**	**3**	LR	LR	14 21 20.8	
	comp=Z,150nm,20.4s,baz=198,slow=34						
ASAR	**Alice Springs**	**31.28**	**166**	P	**P**	**14 08 02.4**	**-0.3**
	0.6nm,0.3s,mb3.7,baz=347,slow=7.3,SNR=41						
STKA	**Stephens Creek**	**41.29**	**159**	P	**P**	**14 09 28.4**	**+0.5**
	4.7nm,0.7s,mb4.5,baz=334,slow=9.7,SNR=12						

NIED ***20*** *14:10:00, 20°.40N×122°.20E, h44km, Mw4.9 Best double couple: M₀2.27000×10¹⁶ NP1:φs355.00000°, δ70.00000°, λ-38.00000°. NP2:φs100.00000°, δ55.00000°, λ-155.00000°.*

NEIC ***20*** *14:10:15.5±2.6, 20°.10N×122°.22E, h10km±15km, mb4.8/52, MS4.7/1, Error ellipse: s-maj=6.8km s-min=5.5km az=100.0*

MAN ***20*** *14:10:16, 20°.32N×122°.14E, h31km, mb5.5, ML4.5, MS4.8*

ISCJB ***20*** *14:10:16.4±0.6, 20°.18N±0°.02×122°.26E±0°.02, h24km±4km, mb4.7/92, MS4.4/34, Error ellipse: s-maj=4.0km s-min=2.5km az=16.2*

MOS ***20*** *14:10:17.2±1.3, 20°.09N×122°.24E, h33km, mb5.0/44, MS4.5/15, Error ellipse: s-maj=10.2km s-min=5.6km az=115.0*

GCMT ***20*** *14:10:18.8±0.3, 20°.18N×122°.08E, h12km, MW4.9, Moment Tensor Solution. s27,c33; s65,c112; Moment tensor: Scale 10¹⁶Nm; Mrr2.53±.10; Mθθ-1.06±.08; Mφφ-1.46±.11; Mrθ1.31±.39; Mrφ-1.79±.07; Mθφ0.24±.38; Best double couple: M₀3.10000×10¹⁶ NP1:φs203.00000°, δ38.00000°, λ61.00000°. NP2:φs59.00000°, δ58.00000°, λ111.00000°. Principal axes: T 2.9900, Plg69.0000°, Azm14.0000°; N 0.2800, Plg17.0000°, Azm228.0000°; P -3.2600, Plg11.0000°, Azm134.0000°; Data Used: II G IU IC CN.*

BJI ***20*** *14:10:18.4, 20°.28N×122°.04E, h19km, mB5.0/42, mb4.5/43, ML4.2/2, Ms4.6/52, Ms7 4.4/50*

TEH ***20*** *14:10:20.0, 20°.20N×122°.17E, h35km*

JMA ***20*** *14:10:21.1±0.5, 20°.41N×122°.19E, h132km, M4.0*

DJA ***20*** *14:10:22, 20°.19N×122°.14E, h57km, mb4.8/14*

IDC ***20*** *14:10:23.4±2.9, 20°.03N×122°.20E, h75km±28km, mb4.2/23, mb1 4.4/25, mb1mx4.3/28, mbtmp4.3/25, MS4.1/9, Ms1 4.2/9, ms1mx3.8/25, Error ellipse: s-maj=15.7km s-min=10.8km az=81.0*

ISC 20 14:10:18.1±0.6, 20°.18N±0°.02×122°.22E±0°.02, h22km±4km, h31km±2.1km: pP-P, n280, σ1§23/320, mb4.7/92, MS4.4/34, 7C-9D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBP	**Basco**	**0.35**	**317**	*e*P	**Pb**	**14 10 24.0**	**-1.7**
BBP				*e*S	**Sb**	**14 10 29.9**	**-0.9**
SGCP	**Mt. Cagua**	**1.94**	**185**	*e*P	**Pn**	**14 10 48.4**	**-1.3**
APYP	**Conner**	**2.49**	**202**	*e*P	**Pn**	**14 10 55.9**	**-1.4**
CVP	**Callao Caves**	**2.50**	**189**	*e*P	**Pn**	**14 10 56.1**	**-1.3**
CVP				*e*S	**Sn**	**14 11 25.1**	**-2.1**
TWG	**Pinlang**	**2.83**	**338**	*e*Pn	**Pn**	**14 11 00.4**	**-1.6**
TWG				*e*Sn	**Sn**	**14 11 34.8**	**-0.7**
ABRA	**Dolores**	**2.90**	**210**	*e*P	**Pn**	**14 11 01.9**	**-1.0**
PALP	**Palanan**	**3.11**	**176**	*e*P	**Pn**	**14 11 07.5**	**+1.7**
CAUP	**Cauayan**	**3.24**	**187**	*e*P	**Pn**	**14 11 09.9**	**+2.2**
YULB	**Yu-li**	**3.31**	**345**	*e*Pn	**Pn**	**14 11 07.2**	**-1.3**
YULB				*e*Sn	**Sn**	**14 11 47.5**	**+0.3**
TPUB	**Ta-pu**	**3.44**	**335**	*e*Pn	**Pn**	**14 11 10.2**	**-0.1**
TPUB				*e*Sn	**Sn**	**14 11 54.4**	**+4.0**
SSLB	**Suanglung**	**3.77**	**342**	*e*Pn	**Pn**	**14 11 15.8**	**+0.9**
SSLB				*e*Sn	**Sn**	**14 11 59.7**	**+1.0**
NACB	**Ninganchiao**	**4.01**	**352**	*e*Pn	**Pn**	**14 11 16.6**	**-1.7**
NACB				*e*Sn	**Sn**	**14 12 02.0**	**-2.6**
BCPH	**Baguio City Da**	**4.09**	**203**	⇓*e*P	**Pn**	**14 11 19.7**	**+0.4**
HATJ	**Hateruma jima**	**4.13**	**21**	P	**Pn**	**14 11 21.4**	**+1.6**
HATJ				*e*S	**Sn**	**14 12 06.3**	**-1.1**
YOJ	**Yonaguni jima**	**4.32**	**10**	P	**Pn**	**14 11 22.9**	**+0.4**
YOJ				*e*S	**Sn**	**14 12 11.5**	**-0.7**
IRIF	**Iriomote-Funau**	**4.36**	**18**	P	**Pn**	**14 11 24.6**	**+1.5**
IRIF				*e*S	**Sn**	**14 12 13.4**	**+0.2**
JKRS	**Kuro-shima**	**4.36**	**22**	P	**Pn**	**14 11 23.4**	**+0.3**
JKRS				*e*S	**Sn**	**14 12 12.1**	**-1.1**
BOLP	**Bolinao**	**4.37**	**210**	*e*P	**Pn**	**14 11 24.2**	**+1.0**
BALP	**Baler**	**4.46**	**188**	*e*P	**Pn**	**14 11 24.4**	**0.0**
JIJ	**Ishigaki jima**	**4.53**	**23**	P	**Pn**	**14 11 25.2**	**-0.1**
JIJ				*e*S	**Sn**	**14 12 15.1**	**-2.2**
YHNB	**Yeheng**	**4.53**	**350**	*e*Pn	**Pn**	**14 11 25.5**	**+0.1**
YHNB				*e*Sn	**Sn**	**14 12 12.3**	**-5.1**
TATO	**Taipei**	**4.82**	**352**	*e*Pn	**Pn**	**14 11 30.5**	**+1.2**
JTJ	**Tarama**	**5.00**	**27**	P	**Pn**	**14 11 32.3**	**+0.5**
JTJ				*e*S	**Sn**	**14 12 28.1**	**-0.8**
JMJ	**Miyako jima 2**	**5.42**	**31**	P	**Pn**	**14 11 38.6**	**+1.1**
JMJ				*e*S	**Sn**	**14 12 40.8**	**+1.6**
JOGS	**Gusukube**	**5.43**	**32**	P	**Pn**	**14 11 38.5**	**+0.8**
JOGS				*e*S	**Sn**	**14 12 40.6**	**+1.1**
POLP	**Polilio Island**	**5.43**	**183**	*e*P	**Pn**	**14 11 39.8**	**+2.0**
QZH	**Quanzhou**	**5.80**	**325**	⇓*i*Pn	**Pn**	**14 11 41.6**	**-1.2**
QZH				Sn	**Sn**	**14 12 43.4**	**-5.3**
QZH				smax			
	comp=N,800nm,1.7s						
QZH				smax			
	comp=E,450nm,1.3s						
QZH				LR	LR		
	comp=N,4μm,12.1s						
QZH				LR	LR		
	comp=E,5μm,11.2s						
QZH				LR	LR		
	comp=Z,7μm,13.9s						
TGY	**Tagaytay City**	**6.17**	**192**	P	**Pn**	**14 11 51.7**	**+3.8**
	comp=Z,58nm,0.3s,baz=173,slow=16,SNR=4.2						
GQP	**Guinayangan**	**6.25**	**178**	⇓*e*P	**Pn**	**14 11 49.5**	**+0.5**
GQP				*e*S	**Sn**	**14 12 57.0**	**-2.7**
LUBP	**Lubang**	**6.69**	**197**	*e*P	**Pn**	**14 11 57.8**	**+2.8**
BOAC	**Boac**	**6.70**	**183**	*e*P	**Pn**	**14 11 54.7**	**-0.4**
JKE	**Kume jima 2**	**7.42**	**34**	P	**Pn**	**14 12 05.2**	**+0.2**
JKE				*e*S	**Sn**	**14 13 26.8**	**-1.7**
SJMP	**San Jose**	**7.75**	**188**	*e*P	**Pn**	**14 12 13.6**	**+3.9**
JJT2	**Tamagusuku 2**	**7.81**	**40**	P	**Pn**	**14 12 11.2**	**+0.8**
JAGN	**Aguni-jima**	**7.87**	**35**	P	**Pn**	**14 12 12.5**	**+1.3**
JAGN				*e*S	**Sn**	**14 13 37.8**	**-1.9**
BUSP	**Coron**	**8.36**	**194**	*e*P	**Pn**	**14 12 18.3**	**+0.2**
JIH	**Iheya**	**8.62**	**37**	P	**Pn**	**14 12 21.2**	**-0.3**
JIH				*e*S	**Sn**	**14 13 56.9**	**-1.2**
JOW	**Kunigami**	**8.64**	**39**	P	**Pn**	**14 12 22.0**	**+0.2**
JOW				*e*S	**Sn**	**14 13 56.8**	**-1.8**
GZH	**Guangzhou**	**8.74**	**291**	P	**Pn**	**14 12 20.3**	**-2.9**
GZH				S	**Sn**	**14 13 59.3**	**-1.9**
GZH				LR	LR		
	comp=N,3μm,13.1s						
GZH				LR	LR		
	comp=E,1μm,10.2s						
GZH				LR	LR		
	comp=Z,3μm,15.4s						
JTK	**Tokunoshima**	**9.75**	**38**	P	**Pn**	**14 12 36.7**	**-0.4**
JTK				*e*S	**Sn**	**14 14 23.2**	**-2.8**
JMZ	**Minamidaito 2**	**10.01**	**54**	P	**Pn**	**14 12 43.0**	**+2.4**
JAM	**Amami Oshima**	**10.60**	**38**	P	**Pn**	**14 12 47.9**	**-0.8**
JAM				*e*S	**Sn**	**14 14 40.8**	**-6.0**
SSE	**Sheshan**	**10.91**	**355**	P	**Pn**	**14 12 52.0**	**-0.8**
SSE				S	**Sn**	**14 14 51.5**	**-2.7**
SSE				pmax	pmax		
	comp=Z,17nm,0.6s						
SSE				pmax	pmax		
	comp=Z,64nm,7.9s						
SSE				LR	LR		
	comp=N,680nm,13.4s						
SSE				LR	LR		
	comp=E,900nm,14.1s						
SSE				LR	LR		
	comp=Z,1μm,12.6s						
QIZ	**Qiongzhong**	**11.72**	**266**	P	**Pn**	**14 13 02.1**	**-1.9**
QIZ				S	**Sn**	**14 15 14.5**	**+0.3**
QIZ				LR	LR		
	comp=N,1μm,12.7s						
QIZ				LR	LR		
	comp=Z,1μm,12.2s						
QIZ	**Qiongzhong**	**11.72**	**266**	*e*Pn	**Pn**	**14 13 01.9**	**-2.2**
	comp=Z,29nm,0.8s						
NJ2	**Nanjing**	**12.20**	**346**	*e*P	**Pn**	**14 13 14.4**	**+3.9**
NJ2				pP		14 13 21.1	
NJ2				PP		14 13 24.4	
NJ2				S	**Sn**	**14 15 31.8**	**+5.9**
NJ2				sS		14 15 41.0	
NJ2				pmax	pmax		
	comp=Z,20nm,1.3s						
NJ2				pmax	pmax		
	comp=Z,130nm,4.2s						
NJ2				LR	LR		
	comp=N,2μm,9.7s						
NJ2				LR	LR		
	comp=E,2μm,10.8s						
NJ2				LR	LR		
	comp=Z,2μm,9.0s						
WHN	**Wuhan**	**12.52**	**327**	P	**Pn**	**14 13 14.5**	**-0.5**
WHN				LR	LR		
	comp=N,3μm,15.1s						
WHN				LR	LR		
	comp=E,4μm,11.9s						
WHN				LR	LR		
	comp=Z,6μm,18.7s						
DAV	**Davao City (W)**	**13.44**	**165**	LR	LR	14 18 42.7	
	comp=Z,3μm,20.9s,baz=344,slow=38						
ENH	**Enshi**	**15.27**	**314**	*e*Pn	**Pn**	**14 13 52.5**	**+0.2**
	comp=Z,62nm,1.3s						
GYA	**Guiyang**	**15.59**	**297**	P	**Pn**	**14 13 56.4**	**-0.1**
GYA				pP	pP	14 14 03.9	-2.8
GYA				sP	sP	14 14 08.6	-0.9
GYA				S	**Sn**	**14 16 46.3**	**-2.3**
GYA				sS	sS	14 16 58.3	-15
GYA				SS		14 17 04.5	
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,100nm,5.1s						
GYA				LR	LR		
	comp=N,1μm,12.3s						
GYA				LR	LR		
	comp=E,1μm,11.6s						
GYA				LR	LR		
	comp=Z,2μm,11.8s						
TIA	**Tai'an**	**16.58**	**345**	*e*P	**Pn**	**14 14 10.4**	**+1.2**
TIA				LR	LR		
	comp=N,520nm,10.0s						
TIA				LR	LR		
	comp=E,530nm,10.0s						
INCN	**Inchon**	**17.66**	**12**	*e*P	**Pn**	**14 14 27.1**	**+4.4**
	comp=E,369nm,2.1s						
KSRS	**Korea Array**	**17.91**	**15**	P	**Pn**	**14 14 27.9**	**+2.1**
	comp=E,0.8nm,0.3s,baz=192,slow=11,SNR=70						
XAN	**Xi'an**	**18.15**	**322**	P	**Pn**	**14 14 31.0**	**+2.2**
XAN				pP	pP	14 14 39.4	+4.4
XAN				S	**Sn**	**14 17 54.1**	**+3.3**
XAN				pmax	pmax		
	comp=Z,100nm,5.3s						
XAN				LR	LR		
	comp=N,810nm,15.0s						
XAN				LR	LR		
	comp=E,460nm,13.2s						
XAN				LR	LR		
	comp=Z,660nm,16.5s						
KMI	**Kunming**	**18.63**	**289**	P	**Pn**	**14 14 36.3**	**+1.6**
KMI				pP	pP	14 14 44.3	+3.9
KMI				sP	sP	14 14 48.5	+5.3
KMI				PP		14 14 52.8	
KMI				S	**Sn**	**14 17 58.8**	**-3.7**
KMI				sS	sS	14 18 11.9	-3.5
KMI				SS		14 18 23.6	
KMI				pmax	pmax		
	comp=Z,12nm,1.0s						
KMI				pmax	pmax		
	comp=Z,240nm,5.0s						
KMI				LR	LR		
	comp=N,370nm,13.4s						
KMI				LR	LR		
	comp=E,1μm,14.4s						
KMI				LR	LR		
	comp=Z,880nm,13.1s						
TIY	**Taiyuan**	**19.43**	**336**	*e*P	**Pn**	**14 14 46.5**	**+2.3**
TIY				LR	LR		
	comp=N,1μm,10.9s						
TIY				LR	LR		
	comp=E,2μm,11.4s						
TIY				LR	LR		
	comp=Z,1μm,19.0s						
CD2	**Chengdu**	**19.76**	**306**	⇓*i*P	**Pn**	**14 14 48.3**	**+0.1**
CD2				pP	pP	14 14 56.8	+4.1
CD2				sP	sP	14 15 01.3	+5.8
CD2				PP		14 15 07.1	
CD2				S	**Sn**	**14 18 24.0**	**-5.6**
CD2				sS	sS	14 18 36.8	-1.3
CD2				pmax	pmax		
	comp=Z,40nm,1.3s						
CD2				pmax	pmax		
	comp=Z,120nm,4.8s						
CD2				LR	LR		
	comp=N,2μm,17.8s						
CD2				LR	LR		
	comp=E,2μm,13.2s						
CD2				LR	LR		
	comp=Z,1μm,16.8s						
SBUM	**Sibu**	**20.15**	**210**	P	**P**	**14 14 49.8**	**-1.1**
BJT	**Baijiatuau**	**20.44**	**347**	*e*P	**P**	**14 14 53.6**	**-0.3**
BJT				pmax	pmax		
	comp=Z,17nm,0.4s						
BJT	**Baijiatuau**	**20.44**	**347**	*e*P	**P**	**14 14 53.6**	**-0.3**
	comp=Z,17nm,0.4s						
BJI	**Beijing**	**20.46**	**347**	P	**P**	**14 14 55.4**	**+1.3**
BJI				S	**S**	**14 18 46.3**	**+4.1**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BJI				pmax	pmax		
	comp=Z,120nm,5.6s						
BJI				LR	LR		
	comp=N,870nm,14.0s,MS4.3						
BJI				LR	LR		
	comp=E,570nm,16.5s,MS4.3						
BJI				LR	LR		
	comp=Z,530nm,28.8s						
MAJO	**Matsushiro**	**21.48**	**37**	*e*P	**P**	**14 14 59.2**	**-6.0**
MAJO				pmax	pmax		
	comp=Z,53nm,1.2s,mb4.8						
MAJO	**Matsushiro**	**21.48**	**37**	*e*P	**P**	**14 14 59.2**	**-6.0**
	comp=Z,53nm,1.2s,mb4.7						
MAT	**Matsushiro**	**21.48**	**37**	P	**P**	**14 15 08.6**	**+3.4**
MAT				S	**S**	**14 19 04.0**	**+1.6**
MJAR	**Matsushiro Arr**	**21.48**	**37**	P	**P**	**14 15 09.1**	**+3.9**
	comp=Z,7.1nm,1.0s,mb4.0,baz=229,slow=9.1,SNR=17						
SNY	**Shenyang**	**21.61**	**3**	⇓P	**P**	**14 15 11.3**	**+4.8**
SNY				pP		14 15 19.1	
SNY				S	**S**	**14 19 10.3**	**+5.5**
SNY				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.3						
SNY				pmax	pmax		
	comp=Z,220nm,5.2s						
SNY				LR	LR		
	comp=N,420nm,9.9s						
SNY				LR	LR		
	comp=E,900nm,11.7s						
SNY				LR	LR		
	comp=Z,680nm,10.8s,MS4.3						
KSM	**Kuching**	**21.94**	**214**	P	**P**	**14 15 09.8**	**-0.4**
KSM	**Kuching**	**21.94**	**214**	*e*P	**P**	**14 15 09.1**	**-1.2**
	comp=Z,31nm,1.0s,mb4.7						
CHTO	**Chiang Mai**	**21.98**	**270**	*e*P	**P**	**14 15 11.5**	**+0.8**
CHTO				pmax	pmax		
	comp=Z,31nm,1.0s,mb4.7						
CHTO	**Chiang Mai**	**21.98**	**270**	*e*P	**P**	**14 15 11.5**	**+0.8**
	comp=Z,31nm,1.0s,mb4.7						
CM31	**Chiang Mai Arr**	**22.03**	**269**	*e*P	**P**	**14 15 12.0**	**+0.8**
CMAR	**Chiang Mai Arr**	**22.03**	**269**	P	**P**	**14 15 12.8**	**+1.5**
	comp=Z,6.4nm,0.8s,mb4.1,baz=71,slow=8.6,SNR=48						
CMAR				PcP	PcP	14 19 09.3	+0.2
	comp=Z,1.3nm,0.7s,baz=69,slow=1.4,SNR=6.8						
CMAR				LR	LR	14 23 24.6	
	comp=Z,341nm,19.9s,MS3.8,baz=86,slow=36						
CMAR	**Chiang Mai Arr**	**22.03**	**269**	P	**P**	**14 15 12.8**	**+1.6**
CMAR						14 19 09.4	
HHC	**Hu-ho-hao-te**	**22.52**	**339**	*e*P	**P**	**14 15 21.8**	**+5.6**
HHC				PcP	PcP	14 19 16.1	+6.4
HHC				S	**S**	**14 19 26.0**	**+3.6**
HHC				ScP	ScP	14 22 49.3	+3.1
HHC				PcS	PcS	14 22 52.9	+4.5
HHC				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.6						
HHC				pmax	pmax		
	comp=Z,380nm,6.4s						
HHC				LR	LR		
	comp=N,1μm,16.3s,MS4.6						
HHC				LR	LR		
	comp=E,2μm,17.3s,MS4.6						
HHC				LR	LR		
	comp=Z,1μm,23.1s						
LZH	**Lanzhou**	**22.60**	**318**	*e*P	**P**	**14 15 19.0**	**+1.9**
LZH				pP		14 15 28.5	
LZH				PP		14 15 48.1	
LZH				PcP	PcP	14 19 15.8	+5.8
LZH				*e*S	**S**	**14 19 19.3**	**-4.9**
LZH				sS	sS	14 19 34.0	-0.1
LZH				SS		14 20 02.0	
LZH				pmax	pmax		
	comp=Z,43nm,1.2s,mb4.8						
LZH				pmax	pmax		
	comp=Z,170nm,4.2s						
LZH				LR	LR		
	comp=E,1μm,11.0s						
LZH				LR	LR		
	comp=Z,1μm,12.6s,MS4.5						
GUMO	**Guam**	**22.63**	**103**	*e*P	**P**	**14 15 17.3**	**-0.4**
GUMO				pmax	pmax		
	comp=Z,214nm,1.5s,mb5.3						
GUMO	**Guam**	**22.63**	**103**	*e*P	**P**	**14 15 17.3**	**-0.4**
	comp=Z,214nm,1.5s,mb5.3						
BTO	**Baotou**	**22.87**	**336**	*e*P	**P**	**14 15 20.4**	**+0.5**
CN2	**Changchun**	**23.70**	**6**	*e*P	**P**	**14 15 31.4**	**+3.0**
CN2				*e*pP		14 15 40.6	
CN2				*e*S	**S**	**14 19 41.8**	**-0.2**
CN2				SS		14 20 31.9	
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.3						
CN2				pmax	pmax		
	comp=Z,400nm,6.0s						
CN2				LR	LR		
	comp=N,1μm,15.0s,MS4.6						
CN2				LR	LR		
	comp=E,900nm,15.0s,MS4.6						
CN2				LR	LR		
	comp=Z,1μm,16.0s,MS4.4						
KTGM	**Kuala Trenggan**	**23.71**	**234**	P	**P**	**14 15 28.5**	**-0.3**
VLA	**Vladivostok**	**24.27**	**17**	P	**P**	**14 15 36.0**	**+2.4**
VLA				*e*S	**S**	**14 19 50.8**	**-0.4**
VLA				MLR	MLR		
	comp=Z,600nm,13.5s,MS4.2						
MDJ	**Mudanjiang**	**25.12**	**12**	P	**P**	**14 15 41.6**	**+0.3**
MDJ				pP	pP	14 15 50.3	+2.4
MDJ				sP	sP	14 15 54.3	+3.7
MDJ				S	**S**	**14 20 05.0**	**+0.1**
MDJ				sS	sS	14 20 19.8	+4.1
MDJ				ScP	ScP	14 22 52.3	-0.9
MDJ				PcS	PcS	14 22 55.8	+0.4
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.6s,mb4.0						
MDJ				pmax	pmax		
	comp=Z,88nm,3.7s						
MDJ				LR	LR		
	comp=N,520nm,17.9s,MS4.5						
MDJ				LR	LR		
	comp=E,1μm,19.7s,MS4.5						
MDJ				LR	LR		
	comp=Z,580nm,16.0s,MS4.2						
MDJ	**Mudanjiang**	**25.12**	**12**	*e*P	**P**	**14 15 41.3**	**-0.1**
	comp=Z,3.9nm,0.4s,mb4.3						
KAPI	**Kappang**	**25.16**	**186**	P	**P**	**14 15 40.2**	**-1.7**
	comp=Z,6.7nm,0.7s,mb4.3,baz=212,slow=14,SNR=4.4						
KAPI				LR	LR	14 25 38.1	
	comp=Z,314nm,19.6s,MS3.8,baz=1.3,slow=37						
KAPI	**Kappang**	**25.16**	**186**	P	**P**	**14 15 40.1**	**-1.7**
KAPI				LR	LR	14 25 38.1	
MYKOM	**Kota Tinggi**	**25.62**	**227**	P	**P**	**14 15 46.2**	**+0.1**
KULM	**Kulim**	**25.67**	**238**	P	**P**	**14 15 47.0**	**+0.4**
KULM	**Kulim**	**25.67**	**238**	*e*P	**P**	**14 15 45.6**	**-1.0**
	comp=Z,12nm,0.6s,mb4.6						
KGM	**Kluang**	**25.82**	**228**	P	**P**	**14 15 47.9**	**-0.1**
IPM	**Ipoh**	**25.87**	**236**	P	**P**	**14 15 48.6**	**+0.2**
FRIM	**Kepong**	**26.21**	**233**	P	**P**	**14 15 51.6**	**+0.2**
GTA	**Gaotai**	**27.17**	**320**	*e*P	**P**	**14 16 00.8**	**+0.9**
GTA				pP	pP	14 16 10.8	+4.3
GTA				sP	sP	14 16 14.6	+5.4
GTA				S	**S**	**14 20 37.6**	**+0.3**
GTA				sS	sS	14 20 52.6	+4.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.5s,mb3.6						
GTA				pmax	pmax		
	comp=Z,80nm,6.6s						
GTA				LR	LR		
	comp=N,690nm,17.4s,MS4.5						
GTA				LR	LR		
	comp=E,840nm,18.6s,MS4.5						
GTA				LR	LR		
	comp=Z,1μm,18.6s,MS4.5						
SHL	**Shillong**	**28.42**	**287**	*e*PKP	**P**	**14 16 21.5**	**+10**
PSI	**Prapat**	**28.55**	**236**	P	**P**	**14 16 10.8**	**-1.7**
	comp=Z,2.6nm,0.6s,mb4.2,baz=6.7,slow=9.0,SNR=5.1						
PSI				LR	LR	14 26 58.4	
	comp=Z,234nm,19.6s,MS3.8,baz=48,slow=35						
ASAJ	**Asahikawa**	**29.29**	**31**	P	**P**	**14 16 18.9**	**+0.1**
	comp=Z,12nm,1.0s,mb4.6,baz=260,slow=21,SNR=5.4						
LSA	**Lhasa**	**29.64**	**295**	*e*P	**P**	**14 16 20.1**	**-2.0**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
LSA	**Lhasa**	**29.64**	**295**	*e*P	**P**	**14 16 20.1**	**-2.0**
	comp=Z,7.5nm,0.8s,mb4.5						
KLR	**Kul'dur**	**29.97**	**13**	*e*P	**P**	**14 16 21.2**	**-3.5**
KLR				MLR	MLR		
	comp=N,1μm,13.0s,MS4.8						
KLR				MLR	MLR		
	comp=E,900nm,13.0s,MS4.8						
KLR				MLR	MLR		
	comp=Z,1μm,13.0s,MS4.8						
HABR	**Khabarovsk**	**30.06**	**17**	*e*P	**P**	**14 16 24.4**	**-1.1**
HABR				*SP	sP	14 16 38.6	+3.7
HABR				*e*		14 17 24.1	
HABR				*e*		14 19 24.5	
HABR				*e*S	**S**	**14 21 22.7**	**+0.1**
HABR				*e*SS	sS	14 21 39.3	+5.8
HABR				pmax	pmax		
	comp=N,100nm,2.9s						
HABR				pmax	pmax		
	comp=E,85nm,2.6s,mb5.0						
HABR				pmax	pmax		
	comp=E,109nm,2.7s						
HABR				MLR	MLR		
	comp=Z,270nm,18.0s,MS3.9						
ULN	**Ulaanbaatar**	**30.22**	**340**	*e*P	**P**	**14 16 27.5**	**+0.5**
ULN				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.6						
ULN	**Ulaanbaatar**	**30.22**	**340**	*e*P	**P**	**14 16 27.5**	**+0.5**
	comp=Z,12nm,1.0s,mb4.6						
SONM	**Songino Array**	**30.42**	**339**	P	**P**	**14 16 28.5**	**-0.2**
	comp=Z,1.9nm,0.7s,mb3.9,baz=160,slow=8.7,SNR=12						
YSS	**Yuzh-Sakhalins**	**31.52**	**27**	*e*P	**P**	**14 16 40.9**	**+2.5**
YSS				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.3						
YSS				MLR	MLR		
	comp=Z,300nm,13.0s,MS4.2						
YSS	**Yuzh-Sakhalins**	**31.52**	**27**	*e*P	**P**	**14 16 39.0**	**+0.6**
	comp=Z,49nm,1.1s,mb5.2						
ZAK	**Zakamensk**	**33.66**	**338**	*e*P	**P**	**14 16 55.8**	**-1.3**
TLY	**Talaya**	**34.64**	**340**	*e*P	**P**	**14 17 01.6**	**-4.0**
TLY				*e*PPP		14 18 29.2	
TLY				*e*S	**S**	**14 22 29.6**	**-4.2**
TLY				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
TLY				MLR	MLR		
	comp=Z,715nm,18.0s,MS4.5						
MOY	**Mondy**	**35.54**	**337**	*e*P	pP	14 17 23.5	+3.5
MOY				pmax	pmax		
	comp=Z,39nm,2.8s,mb4.8						
WMQ	**Urumqi**	**37.17**	**317**	P	**P**	**14 17 28.0**	**+0.6**
WMQ				pP	pP	14 17 38.0	+3.9
WMQ				sP	sP	14 17 42.0	+5.2
WMQ				PP	PP	14 18 55.0	+2.7
WMQ				S	**S**	**14 23 11.0**	**-1.8**
WMQ				SS

WRAB pmax pmax
comp=Z,35nm,0.9s,mb5.0
WRAB Tennant Creek 41.60 163 *eP* **P 14 18 02.2 -2.4**
comp=Z,36nm,0.9s,mb5.0
WRA Warramunga Arr 41.61 163 P **P 14 18 01.9 -2.7**
comp=Z,25nm,0.9s,mb4.9,baz=345,slow=9.8,SNR=60
MK31 Makanchi Array 41.91 319 *eP* **P 14 18 07.7 +0.8**
MKAR Makanchi Array 41.91 319 P **P 14 18 07.3 +0.4**
comp=Z,9.3nm,0.6s,mb4.6,baz=106,slow=9.6,SNR=74
MKAR Makanchi Array 41.91 319 *ceP* **P 14 18 08.0 +1.1**
MKAR pmax pmax
comp=Z,9.0nm,0.6s
YAK Yakutsk 42.13 5 *eP* **P 14 18 06.6 -1.9**
YAK pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
YAK Yakutsk 42.13 5 *eP* **P 14 18 07.5 -0.9**
comp=Z,12nm,0.6s,mb4.7
PEA0B Petropavlovsk- 42.71 31 *eP* **P 14 18 14.9 +1.6**
PETK Petropavlovsk- 42.71 31 P **P 14 18 14.3 +1.1**
comp=Z,8.1nm,0.8s,mb4.5,baz=229,slow=6.3,SNR=14
PETK LR LR 14 38 40.1
comp=Z,65nm,18.1s,MS3.6,baz=62,slow=40
PET Petropavlovsk 43.13 32 *eP* **P 14 18 14.7 -2.0**
PET pmax pmax
comp=Z,15nm,0.7s,mb4.8
PET Petropavlovsk 43.13 32 *eP* **P 14 18 14.7 -2.0**
comp=Z,15nm,0.7s,mb4.8
KSH Kashi 43.95 306 P **P 14 18 27.6 +4.0**
KSH pP pP 14 18 37.5 +7.2
KSH sP sP 14 18 41.3 +8.3
KSH PcP PcP 14 20 12.6 +3.4
KSH ScP ScP 14 24 00.5 +0.6
KSH PcS PcS 14 24 04.4 +2.2
KSH S **S 14 24 57.6 +3.4**
KSH sS sS 14 25 14.5 +9.2
KSH ScS ScS 14 28 21.0 -0.4
KSH pmax pmax
comp=Z,8.0nm,1.1s,mb4.4
KSH pmax pmax
comp=Z,240nm,6.4s
KSH LR LR
comp=N,240nm,10.8s
KSH LR LR
comp=E,300nm,8.5s
KSH LR LR
comp=Z,450nm,9.3s
ZAA0 Zalesovo Array 44.13 329 *eP* **P 14 18 24.4 -0.3**
ZALV Zalesovo Beam 44.13 329 P **P 14 18 24.4 -0.3**
comp=Z,7.8nm,0.5s,mb4.7,baz=119,slow=7.7,SNR=40
ZALV Zalesovo Beam 44.13 329 P **P 14 18 24.4 -0.3**
TKM2 Tokmak 2 45.04 311 *eP* **P 14 18 33.1 +0.9**
TKM2 pmax pmax
comp=Z,11nm,1.0s,mb4.6
TKM2 Tokmak 2 45.04 311 *eP* **P 14 18 33.1 +1.0**
comp=Z,11nm,1.0s,mb4.7
ASAR Alice Springs 45.05 165 P **P 14 18 30.0 -2.4**
comp=Z,8.5nm,0.8s,mb4.6,baz=343,slow=7.0,SNR=69
NVS Novosibirsk 45.40 329 *eP* **P 14 18 33.5 -1.3**
NVS *eS* **S 14 25 14.0 -0.7**
NVS pmax pmax
comp=Z,39nm,2.2s,mb4.8
NVS pmax pmax
comp=N,27nm,2.1s
NVS pmax pmax
comp=E,35nm,2.3s
NVS smax
comp=N,26nm,2.3s
UCH Uchtor 45.64 310 *eP* **P 14 18 38.9 +2.0**
UCH pmax pmax
comp=Z,23nm,1.2s,mb5.0
UCH Uchtor 45.64 310 *eP* **P 14 18 38.9 +1.9**
comp=Z,23nm,1.2s,mb5.0
AAK Ala-Archa 45.75 310 P **P 14 18 40.1 +2.2**
comp=Z,1.6nm,0.3s,mb4.4,baz=155,slow=6.0,SNR=6.7
KURK Kurchatov 45.80 322 P **P 14 18 38.3 +0.3**
comp=Z,11nm,0.8s,mb4.8,baz=116,slow=8.7,SNR=45
KURK Kurchatov 45.80 322 *c iP* **P 14 18 38.5 +0.5**
KURK pmax pmax
comp=Z,26nm,1.7s,mb4.9
KURK MLR MLR
comp=Z,428nm,19.0s,MS4.4
KURK Kurchatov 45.80 322 *eP* **P 14 18 38.1 +0.1**
comp=Z,212nm,2.8s,mb5.6
EKS2 Erkin-Say 46.27 310 *eP* **P 14 18 42.7 +0.8**
EKS2 pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
EKS2 Erkin-Say 46.27 310 *eP* **P 14 18 42.7 +0.8**
comp=Z,5.0nm,0.8s,mb4.5
CTAO Charters Tower 46.43 148 *eP* **P 14 18 42.7 -0.7**
CTAO pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
CTAO Charters Tower 46.43 148 *eP* **P 14 18 42.7 -0.6**
comp=Z,2.8nm,0.5s,mb4.5
SEY Seymchan 47.43 18⇑ *eP* **P 14 18 53.5 +2.9**
KBL Kabul 48.82 299 *eP* **P 14 19 03.4 +1.5**
KBL pmax pmax
comp=Z,28nm,1.1s,mb5.2
KBL Kabul 48.82 299 *eP* **P 14 19 03.4 +1.4**
comp=Z,28nm,1.1s,mb5.2
FORT Forrest 50.98 174 *eP* **P 14 19 16.3 -1.8**
comp=Z,15nm,0.7s,mb5.0
FORT Forrest 50.98 174 *eP* **P 14 19 16.6 -1.6**
comp=Z,20nm,0.8s,mb5.1
BVAR Borovoye Array 51.39 323 P **P 14 19 21.6 +0.6**
comp=Z,6.1nm,0.5s,mb4.8,baz=105,slow=8.1,SNR=35
BVAR PcP PcP 14 20 34.7 -0.8
comp=Z,2.2nm,0.6s,baz=134,slow=4.2,SNR=4.5
BRVK Borovoye 51.46 323 *c iP* **P 14 19 21.9 +0.3**
BRVK MLR MLR
comp=Z,357nm,16.0s,MS4.5
BRVK Borovoye 51.46 323 *eP* **P 14 19 21.4 -0.1**
comp=Z,12nm,0.7s,mb4.9
TIXI Tiksi 51.62 3 *eP* **P 14 19 20.1 -2.4**
TIXI pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
TIXI Tiksi 51.62 3 *eP* **P 14 19 20.1 -2.4**
comp=Z,8.6nm,1.0s,mb4.6
NWAO Narrogin (SRO) 53.02 185 *eP* **P 14 19 33.6 +0.3**
NWAO pmax pmax
comp=Z,2.0nm,0.6s
NWAO Narrogin (SRO) 53.02 185 *eP* **P 14 19 33.6 +0.3**
comp=Z,2.3nm,0.6s,mb4.3
STKA Stephens Creek 54.99 160 *eP* **P 14 19 46.7 -1.1**
comp=Z,6.1nm,1.1s,mb4.5
STKA Stephens Creek 54.99 160 P **P 14 19 47.1 -0.7**
comp=Z,2.0nm,0.6s,mb4.3,baz=54,slow=22,SNR=6.4
STKA LR LR 14 42 35.0
comp=Z,215nm,21.5s,MS4.2,baz=23,slow=35
STKA Stephens Creek 54.99 160 *eP* **P 14 19 46.6 -1.2**
comp=Z,0.7nm,0.7s,mb3.8
STKA LR LR 14 42 35.0
BILL Bilibino 55.13 19 *d iP* **P 14 19 49.3 +1.0**
BILL *e**PP pP 14 19 58.4 +3.2
BILL *e* 14 21 50.9
BILL *e*SS SS 14 31 16.4 +2.9
BILL pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
BILL MLR MLR
comp=Z,200nm,18.0s,MS4.2
BILL Bilibino 55.13 19 *eP* **P 14 19 48.9 +0.6**
comp=Z,7.5nm,0.8s,mb4.8
IMYA Miami 56.15 301 *eP* **P 14 19 58.6 +2.4**
ABKAR Akbulak array 56.94 316 *eP* **P 14 20 02.2 +0.6**
comp=Z,3.8nm,0.5s,mb4.7
IKRD Kardeh 57.41 301 *eP* **P 14 20 02.6 -2.6**
SVE Sverdlovsk 57.84 325⇑ *eP* **P 14 20 08.1 +0.3**
SVE *e* 14 21 00.3
SVE *e*S **S 14 27 56.0 -10**
SVE *e*SS SS 14 31 58.7 +2.2
SVE pmax pmax
comp=Z,25nm,1.0s,mb5.2
SVE MLR MLR
comp=Z,665nm,18.0s,MS4.8
ARU Arti 58.88 324 *d iP* **P 14 20 14.8 -0.3**
ARU *e* 14 22 23.5
ARU S **S 14 28 20.6 +1.0**
ARU pmax pmax
comp=Z,18nm,1.0s,mb5.1
ARU Arti 58.88 324 *eP* **P 14 20 13.9 -1.2**
comp=Z,14nm,0.6s,mb5.2
IBAF Bafgh 60.23 295 *eP* **P 14 20 25.2 +0.4**
DZM Mont Dzumac 60.25 132 *eS* **S 14 28 40.9 +2.8**
comp=Z,99nm,27.7s
DZM *e*LR LR 14 38 16.7
comp=Z,761nm,23.2s
SOKR Solikamsk 60.39 328 *eP* **P 14 20 28.5 +3.1**
SOKR pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
SOKR MLR MLR
comp=Z,1μm,19.0s,MS5.0
CNB Canberra Magne 60.91 155 *eP* **P 14 20 29.6 +0.4**
IMEH Mehriz 61.06 295 *eP* **P 14 20 30.6 +0.1**
IGLO Ghaloghah 61.19 301 *eP* **P 14 20 32.8 +1.5**
IANJ Anjilo 61.21 300 *eP* **P 14 20 32.6 +1.1**
IKIA Kiasar 61.33 301 *eP* **P 14 20 33.7 +1.4**
ISHM Shahmirzad 61.68 301 *eP* **P 14 20 35.8 +1.2**
ILAS Lasjerd 61.99 300 *eP* **P 14 20 37.5 +0.7**
IALA Alasht 62.05 301 *eP* **P 14 20 37.8 +0.7**
IPRN Peran 62.41 301 *eP* **P 14 20 40.4 +0.9**
IDMV Damavand 62.73 300 *eP* **P 14 20 42.6 +0.9**
IKLH Kolahrood 63.37 298 *eP* **P 14 20 47.2 +1.3**
IR3 Iran Long-Peri 63.55 300 *eP* **P 14 20 48.1 +0.9**
IMHD Mahdasht 63.82 301 *eP* **P 14 20 49.8 +0.9**
IPIR Pirpir 64.03 297 *eP* **P 14 20 51.8 +1.5**
IRAZ Razeghan 64.45 300 *eP* **P 14 20 53.7 +0.7**
ISRB Sarab 65.94 303 *eP* **P 14 21 03.7 +1.0**
RDF Al-Radifah 67.49 294 *eP* **P 14 21 12.2 -0.5**
RDF AMb AMB 14 21 14.1
comp=Z,36nm,0.6s,mb5.6
MIB Mutribah 67.50 295 *eP* **P 14 21 11.6 -1.2**
MIB AMb AMB 14 21 13.3
comp=Z,23nm,0.7s,mb5.3
NAY Al-Naaiem 67.69 294 *eP* **P 14 21 12.8 -1.2**
NAY AMb AMB 14 21 14.5
comp=Z,14nm,0.7s,mb5.1
ZEI Tsey 68.15 309 *eP* **P 14 21 16.4 -0.2**
ZEI pmax pmax
comp=Z,29nm,1.4s,mb5.1
TTA Tatalina 68.50 29 *eP* **P 14 21 20.6 +2.2**
SVW2 Sparrevohn 68.80 31 *eP* **P 14 21 22.7 +2.4**
KIV Kislovodsk 68.87 310 *c iP* **P 14 21 21.5 +0.4**
KIV *e* 14 21 44.0
KIV pmax pmax
comp=Z,31nm,1.0s,mb5.2
KIV MLR MLR
comp=Z,300nm,22.0s,MS4.5
KIV Kislovodsk 68.87 310 *eP* **P 14 21 22.2 +1.1**
comp=Z,28nm,1.0s,mb5.2
RSO Redoubt South 70.23 32 *eP* **P 14 21 30.5 +1.3**
VSR Storozhevoye 70.24 318 *eP* **P 14 21 28.8 -0.6**
VSR pmax pmax
comp=N,10.0nm,0.5s
VSR pmax pmax
comp=E,8.0nm,0.5s
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
COLD Coldfoot 70.65 24 *eP* **P 14 21 32.5 +0.9**
comp=Z,3.8nm,1.0s,mb4.3
BPAW Bear Paw Mtn. 70.66 28 *eP* **P 14 21 31.8 +0.1**
comp=Z,9.2nm,1.1s,mb4.6
TRF Thorofare Moun 71.04 28 *eP* **P 14 21 33.0 -1.1**
comp=Z,13nm,1.3s,mb4.7
APA Apatity 71.08 336⇑ *eP* **P 14 21 35.0 +0.8**
APA MLR MLR
comp=Z,600nm,15.0s,MS5.0
OBN Obninsk 71.24 323⇓ *eP* **P 14 21 34.7 -0.7**
OBN *e**PP pP 14 21 44.4 +1.9
OBN *e*S S 14 30 50.5 -0.9
OBN pmax pmax
comp=Z,31nm,1.7s,mb5.0
OBN MLR MLR
comp=Z,400nm,23.0s,MS4.6
OBN Obninsk 71.24 323 *eP* **P 14 21 34.5 -0.9**
comp=Z,21nm,0.5s,mb5.3
MCK McKinley 71.61 28 *eP* **P 14 21 38.1 +0.6**
MCK pmax pmax
comp=Z,13nm,1.1s,mb4.8
MCK McKinley 71.61 28 *eP* **P 14 21 38.1 +0.6**
comp=Z,13nm,1.1s,mb4.8
RC01 Rabbit Creek A 71.62 31 *eP* **P 14 21 37.0 -0.5**
comp=Z,4μm,1.2s
PMR Palmer 71.83 30 *eP* **P 14 21 38.0 -0.9**
PMR pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
PMR Palmer 71.83 30 *eP* **P 14 21 38.0 -0.9**
comp=Z,6.1nm,0.9s,mb4.5
SEW Seward 71.91 32 *eP* **P 14 21 39.5 +0.1**
comp=Z,9.4nm,1.0s,mb4.7
ANN Anapa 72.44 312 *e**PP **P 14 21 43.6 +0.7**
ANN *e* 14 21 54.4
ANN pmax pmax
comp=Z,64nm,1.7s,mb5.3
ANN MLR MLR
comp=Z,397nm,19.0s,MS4.7
ANN Anapa 72.44 312 *eP* **P 14 21 32.9 -10**
JOF Joensuu 72.65 331 *ep* **P 14 21 42.2 -1.5**
comp=Z,6.1nm,0.5s,mb4.8
JOF Joensuu 72.65 331 *ep* **P 14 21 42.2 -1.5**
comp=Z,6.1nm,0.5s,mb4.8
KEV Kevo 73.03 339 *eP* **P 14 21 44.6 -1.3**
KEV pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
KEV Kevo 73.03 339 *ep* **P 14 21 44.6 -1.3**
comp=Z,8.8nm,0.5s,mb5.0
KEV Kevo 73.03 339 *ep* **P 14 21 44.6 -1.3**
comp=Z,8.8nm,0.5s,mb5.0
ARCES ARCESS Array B 73.59 339 P **P 14 21 48.7 -0.5**
comp=Z,4.1nm,0.6s,mb4.6,baz=71,slow=7.9,SNR=28
ARCES ARCESS Array B 73.59 339 P **P 14 21 48.7 -0.5**
ARE0 ARCESS Array S 73.59 339 *eP* **P 14 21 48.5 -0.7**
MENT Mentasta 74.06 28 *eP* **P 14 21 52.0 0.0**
BMRM Bremner River 74.10 30 *eP* **P 14 21 52.6 +0.3**
comp=Z,9.2nm,1.1s,mb4.6
SIM Simferopol' 74.72 313 *eP* **P 14 21 58.1 +1.9**
SIM pmax pmax
comp=Z,20nm,0.7s,mb5.2
EGAK Eagle 74.72 26 *eP* **P 14 21 56.0 +0.1**
comp=Z,104nm,3.0s
KAF Kangasniemi 75.09 331 *eP* **P 14 21 56.5 -1.6**
KAF pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
KAF Kangasniemi 75.09 331 *ep* **P 14 21 56.5 -1.6**
comp=Z,3.4nm,0.5s,mb4.5
KAF Kangasniemi 75.09 331 *ep* **P 14 21 56.5 -1.6**
comp=Z,3.4nm,0.5s,mb4.5
FINES FINESS Array B 75.37 330 P **P 14 21 58.8 -0.9**
comp=Z,5.2nm,0.6s,mb4.6,baz=53,slow=6.2,SNR=29
VSU Vasula 75.84 327⇓ *eP* **P 14 22 01.9 -0.5**
VSU pmax pmax
comp=Z,27nm,1.1s,mb5.1
BRTR Keskin Array B 76.33 307 P **P 14 22 04.9 -0.7**
comp=Z,0.7nm,0.4s,mb3.9,baz=90,slow=3.7,SNR=7.0
BRTR Keskin Array B 76.33 307 *i* P **P 14 22 06.0 +0.4**
AKASG Malin Array Be 76.50 319 P **P 14 22 04.6 -1.7**
comp=Z,4.4nm,0.7s,mb4.5,baz=61,slow=5.6,SNR=10
AKASG Malin Array Be 76.50 319 *i* P **P 14 22 05.4 -0.9**
AKASG pmax pmax
comp=Z,4.0nm,0.7s
INK Inuvik 76.56 22 *eP* **P 14 22 06.1 -0.3**
INK pmax pmax
comp=Z,9.0nm,1.1s
INK Inuvik 76.56 22 *eP* **P 14 22 06.1 -0.3**
comp=Z,8.7nm,1.1s,mb4.6
PNL Peninsula 76.94 31 *eP* **P 14 22 09.5 +0.9**
comp=Z,11nm,1.4s,mb4.6
HYT Haines Junctio 77.48 30 *eP* **P 14 22 13.5 +1.9**
SKAG Skagway 78.96 31 *eP* **P 14 22 19.0 -0.9**
comp=Z,15nm,0.6s,mb5.1
SUW Suwalki 79.06 324 *eP* **P 14 22 19.6 -0.9**
SUW pmax pmax
comp=Z,38nm,1.0s,mb5.3
SUW Suwalki 79.06 324 *eP* **P 14 22 19.6 -0.9**
comp=Z,38nm,1.0s,mb5.3
BUR08 Bucovina Ar. S 79.92 317 *eP* **P 14 22 24.5 -0.8**
KWP Kalwaria Pacla 80.81 319 *eP* **P 14 22 29.6 -0.5**
KWP pmax pmax
comp=Z,14nm,0.8s,mb4.9
KWP Kalwaria Pacla 80.81 319 *eP* **P 14 22 29.6 -0.5**
comp=Z,14nm,0.8s,mb4.9
UZH Uzhgorod 81.42 319 *eP* **P 14 22 30.0 -3.3**
UZH *e* pP 14 22 37.0 -3.5
STHS Stebnicka Huta 81.78 320 *eP* **P 14 22 35.7 +0.5**
STHS pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
STHS Stebnicka Huta 81.78 320 *eP* **P 14 22 35.7 +0.5**
comp=Z,2.5nm,1.0s,mb4.1
STHS Stebnicka Huta 81.78 320 *eP* **P 14 22 35.7 +0.5**
CRVS Cervenica-Dubn 81.83 319 *eP* **P 14 22 35.1 -0.4**
CRVS pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
CRVS Cervenica-Dubn 81.83 319 *eP* **P 14 22 35.1 -0.4**
comp=Z,8.8nm,1.3s,mb4.5
CRVS Cervenica-Dubn 81.83 319 *eP* **P 14 22 35.1 -0.4**
NB2 NORSAR Subarra 82.20 333 P **P 14 22 36.7 -0.5**
comp=Z,75nm,2.5s,mb5.2,baz=63,slow=5.3
NOA NORSAR Array B 82.20 333 P **P 14 22 36.5 -0.7**
comp=Z,2.1nm,0.8s,mb4.1,baz=62,slow=4.9,SNR=5.4
NOA LR LR 15 02 38.9
comp=Z,592nm,19.6s,MS5.0,baz=60,slow=38
NOA NORSAR Array B 82.20 333 P **P 14 22 36.5 -0.7**
NOA LR LR 15 02 38.9
OJC Ojcow 82.35 321 *eP* **P 14 22 36.2 -2.0**
RES Resolute Bay 82.44 9 *eP* **P 14 22 37.8 -0.4**
RES pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
RES Resolute Bay 82.44 9 *eP* **P 14 22 37.8 -0.4**
comp=Z,9.3nm,1.1s,mb4.6
OKC Ostrava-Krasne 83.48 321 *eP* **P 14 22 43.9 -0.2**
OKC Ostrava-Krasne 83.48 321 *eP* **P 14 22 43.9 -0.2**
VYHS Vyhne 83.60 319 *eP* **P 14 22 44.6 -0.1**
VYHS pmax pmax
comp=Z,7.0nm,1.3s,mb4.6
VYHS Vyhne 83.60 319 *eP* **P 14 22 44.6 -0.1**
comp=Z,6.7nm,1.3s,mb4.6
VYHS Vyhne 83.60 319 *eP* **P 14 22 44.5 -0.2**
KOLL Kolacno 83.83 320 *eP* **P 14 22 45.3 -0.6**
KOLL Kolacno 83.83 320 *eP* **P 14 22 45.3 -0.6**
KSP Ksiaz 84.15 322 *eP* **P 14 22 47.2 -0.3**
DPC Dobruska-Polom 84.34 322 *eP* **P 14 22 48.5 0.0**
DPC *e* 14 22 58.0
DPC MLR MLR
comp=Z,300nm,23.5s,MS4.6
DPC Dobruska-Polom 84.34 322 *eP* **P 14 22 48.5 0.0**
DPC *ex* x 14 22 58.0
DPC AMS AMS 15 04 30.0
comp=Z,300nm,23.5s
UPC Upice 84.46 322 *eP* **P 14 22 49.0 -0.1**
UPC *e* 14 22 58.3
UPC Upice 84.46 322 *eP* **P 14 22 49.0 -0.1**
UPC *ex* x 14 22 58.3
BRG Berggiesshubel 85.48 323 *eP* **P 14 22 54.2 0.0**
comp=Z,9.0nm,1.4s,mb4.7
BRG
comp=N,264nm,23.8s
BRG
comp=E,165nm,20.6s
BRG
comp=Z,312nm,12.5s
BRG Berggiesshubel 85.48 323 *eP* **P 14 22 54.2 0.0**
BRG pmax pmax
comp=Z,5.0nm,1.4s,mb4.5
BRG MLR MLR
comp=N,158nm,23.8s,MS4.4
BRG MLR MLR
comp=E,99nm,20.6s,MS4.4
BRG MLR MLR
comp=Z,187nm,12.5s
PRU Pruhonice 85.53 322 AMS AMS 15 02 20.0
comp=Z,200nm,19.0s
KMBO Kilima Mbogo 85.66 267 P **P 14 22 56.3 +0.5**
comp=Z,6.6nm,0.9s,mb4.8,baz=59,slow=7.4,SNR=8.5
KMBO Kilima Mbogo 85.66 267 *i* P **P 14 22 56.2 +0.4**
KMBO pmax pmax
comp=Z,7.0nm,0.9s
KMBO Kilima Mbogo 85.66 267 *eP* **P 14 22 56.1 +0.3**
comp=Z,11nm,1.1s,mb5.0
CLL Collm 85.82 324 *eP* **P 14 22 55.0 -0.8**
CLL *e* 14 23 04.0
CLL pmax pmax
comp=Z,6.0nm,1.0s,mb4.8
CLL MLR MLR
comp=Z,300nm,21.3s,MS4.7
CLL Collm 85.82 324 *eP* **P 14 22 55.0 -0.8**
comp=Z,6.0nm,1.0s,mb4.8
CLL *e* pP 14 23 01.0 -2.1
CLL *e* 14 23 04.0
CLL LR LR
comp=Z,300nm,21.3s,MS4.7
CLL Collm 85.82 324 *eP* **P 14 22 55.0 -0.8**
comp=Z,6.0nm,1.0s,mb4.8
CLL *es*P sP 14 23 01.0 -4.6
CLL *e* 14 23 04.0
CLL Lm 15 05 00.0
comp=Z,300nm,21.3s
YKA Yellowknife Ar 86.27 23 P **P 14 22 57.9 +0.1**
comp=Z,4.5nm,0.8s,mb4.7,baz=312,slow=4.8,SNR=28
YKA Yellowknife Ar 86.27 23 P **P 14 22 57.9 +0.1**
KHC Kasperske Hory 86.48 321 *eP* **P 14 22 58.5 -0.7**
KHC MLR MLR
comp=Z,300nm,16.9s,MS4.8
KHC Kasperske Hory 86.48 321 *eP* **P 14 22 58.5 -0.7**
KHC AMS AMS 15 06 00.0
comp=Z,300nm,16.9s
SUMG Summit 86.56 354 *eP* **P 14 22 58.4 -0.7**
comp=Z,97nm,2.8s,mb5.5
NKC Novy Kostel 86.62 323 AMS AMS 15 05 10.0
comp=Z,300nm,17.7s
PPT Papeete 94.29 107 *e*LR LR 14 54 01.6
comp=Z,254nm,24.5s
PPT Papeete 94.29 107 LR LR 15 05 53.5
comp=Z,134nm,18.4s,MS4.4,baz=326,slow=35
KEST Kesra 95.60 311 LR LR 15 09 42.0
comp=Z,45nm,18.3s,MS4.0,baz=255,slow=37
NVAR Mina Array Bea 98.67 44 P **P 14 23 56.0 +0.1**
comp=Z,0.6nm,0.8s,mb4.2,baz=256,slow=4.4,SNR=5.5
TAOE Nuku Hiva Isla 100.12 96 *e*LR LR 14 56 44.2
comp=Z,180nm,24.7s

NEIC ***20*** *14:15:16.9±1.0, 23°.99S×179°.59W, h495km±12km, mb4.1/10, Error ellipse: s-maj=17.9km s-min=12.6km az=112.0*
IDC ***20*** *14:15:16.5±1.8, 23°.81S×179°.70W, h481km±17km, mb3.5/8, mb1 3.7/10, mb1mx3.5/18, mbtmp3.6/10, Error ellipse: s-maj=26.1km s-min=16.3km az=126.0*
ISCJB ***20*** *14:15:17.3±1.0, 23°.81S±0°.07×179°.6W±0°.1, h519km±15km, mb4.2/22, Error ellipse: s-maj=15.4km s-min=10.1km az=26.5*

ISC 20 14:15:16.9±0.9, 23°.88S±0°.07×179°.5W±0°.1, h507km±14km, n38, σ1°00/33, mb4.2/22, 3D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.54**	**339**	*eP*	**P**	**14 17 00.3**	**+1.4**
18nm,0.5s							
AFI	**Afiamalu**	**12.28**	**38**	P	**P**	**14 17 59.0**	**+0.5**
3.4nm,0.3s,baz=3.9,slow=17,SNR=7.7							
AFI				S	**S**	**14 20 10.3**	**-1.5**
3.5nm,0.3s,baz=238,slow=21,SNR=4.8							
AFI	**Afiamalu**	**12.28**	**38**	*eP*	**P**	**14 17 59.2**	**+0.6**
12nm,0.4s							
AFI				S	**S**	**14 20 10.3**	**-1.5**
URZ	**Urewera**	**14.64**	**191**	P	**P**	**14 18 21.5**	**-1.5**
5.0nm,0.3s,baz=309,slow=3.2,SNR=37							
URZ				S	**S**	**14 20 56.9**	**+0.4**
2.0nm,0.3s,baz=72,slow=22,SNR=22							
RPZ	**Rata Peaks**	**21.28**	**199**	P	**P**	**14 19 28.1**	**+1.6**
4.5nm,0.5s,mb4.3,baz=53,slow=0.4,SNR=7.0							
EIDS	**Eidsvold**	**26.81**	**261**	*eP*	**P**	**14 20 16.3**	**+0.2**
CTA	**Charters Tower**	**31.98**	**270**	*eP*	**P**	**14 21 01.2**	**+0.2**
18nm,0.3s,mb5.0							
CTAO	**Charters Tower**	**31.98**	**270**	*eP*	**P**	**14 21 01.4**	**+0.3**
MTSU	**Mount Surprise**	**34.24**	**273**	*i P*	**P**	**14 21 20.5**	**+0.3**
38nm,1.1s,mb4.7							
STKA	**Stephens Creek**	**35.20**	**248**	P	**P**	**14 21 26.4**	**-1.7**
1.6nm,0.3s,mb3.9,baz=74,slow=7.4,SNR=8.5							
STKA	**Stephens Creek**	**35.20**	**248**	*eP*	**P**	**14 21 24.8**	**-3.2**
0.4nm,0.4s,mb3.2							
BBOO	**Buckleboo**	**39.92**	**247**	*eP*	**P**	**14 22 06.3**	**-0.4**
7.2nm,1.0s,mb4.1							
ASAR	**Alice Springs**	**42.53**	**260**	P	**P**	**14 22 27.6**	**0.0**
4.9nm,0.4s,mb4.3,baz=95,slow=7.5,SNR=117							
ASAR				ScP	ScP	14 27 13.3	+2.1
1.0nm,0.8s,baz=109,slow=4.3,SNR=6.4							
WRAB	**Tennant Creek**	**42.90**	**266**	*eP*	**P**	**14 22 29.8**	**-0.8**
8.1nm,0.4s,mb4.5							
WRA	**Warramunga Arr**	**42.91**	**266**	P	**P**	**14 22 29.7**	**-0.9**
7.3nm,0.4s,mb4.5,baz=102,slow=7.7,SNR=230							
FORT	**Forrest**	**46.79**	**250**	*eP*	**P**	**14 22 59.9**	**-0.5**
17nm,0.5s,mb4.7							
KAKA	**Kakadu**	**46.81**	**275**	*eP*	**P**	**14 23 01.3**	**+0.6**
6.7nm,0.3s,mb4.5							
KNA	**Kununurra**	**49.16**	**269⇓**	*i P*	**P**	**14 23 18.4**	**0.0**
6.1nm,0.2s,mb4.6							
GUMO	**Guam**	**51.02**	**313**	*eP*	**P**	**14 23 28.9**	**-3.1**
7.2nm,0.3s,mb4.5							

FITZ	Fitzroy Crossi	51.33	265	P	P	14 23 34.4	+0.2
	3.6nm,0.4s,mb4.0,baz=104,slow=5.0,SNR=27						
SBA	Scott Base	54.43	184	*e*P	P	14 24 00.6	+5.1
	6.4nm,1.1s,mb3.9						
KLBR	Kellerberrin	55.46	247	*e*P	P	14 24 03.4	0.0
	26nm,1.5s,mb4.3						
NWAO	Narrogin (SRO)	55.70	245	*e*P	P	14 24 05.1	0.0
	2.2nm,0.6s,mb3.7						
MBWA	Marble Bar	55.87	260	*e*P	P	14 24 05.5	-1.0
	8.3nm,0.8s,mb4.1						
MORW	Morawa	57.35	250	*e*P	P	14 24 16.6	0.0
QSPA	South Pole Qui	66.21	180	*e*P	P	14 25 13.6	+0.1
	3.1nm,0.8s,mb4.0						
MAW	Mawson	77.95	200	*e*P	P	14 26 22.1	+0.3
	0.9nm,0.8s,mb3.2						
KSRS	Korea Array	78.55	320	P	P	14 26 25.0	-0.5
	0.8nm,0.7s,mb3.4,baz=135,slow=6.3,SNR=6.7						
PETK	Petropavlovsk-	79.19	346	P	P	14 26 30.6	+2.1
	1.9nm,0.7s,mb3.7,baz=86,slow=11,SNR=4.7						
CMAR	Chiang Mai Arr	89.99	290	P	P	14 27 24.6	+2.2
	1.0nm,0.8s,mb3.7,baz=156,slow=3.3,SNR=8.1						
BVAR	Borovoye Array	120.75	319	PKP	PKPdf	14 33 12.3	+1.6
	0.5nm,0.4s,baz=129,slow=4.0,SNR=4.1						
ARCES	ARCESS Array B	131.96	348	PKP	PKPdf	14 33 32.2	+0.6
	1.4nm,0.7s,baz=82,slow=2.6,SNR=4.5						
ARCES	ARCESS Array B	131.96	348	PKP	PKPdf	14 33 32.2	+0.6
FINES	FINESS Array B	138.58	342	PKhKP		14 33 37.9	
	0.8nm,0.7s,baz=38,slow=3.4,SNR=3.8						
FINES				PKP	PKPdf	14 33 47.4	+3.3
	0.6nm,0.5s,baz=108,slow=2.0,SNR=6.3						
FINES				SKPbc	SKPbc	14 36 32.6	+1.6
	0.8nm,0.8s,baz=342,slow=5.0,SNR=4.3						
FINES	FINESS Array B	138.58	342	PKP		14 33 37.9	
FINES				PKP	PKPdf	14 33 47.4	+3.3
FINES				SKPbc	SKPbc	14 36 32.6	+1.6
AKASG	Malin Array Be	145.22	328	PKPbc	PKPbc	14 33 58.9	+1.7
	0.9nm,0.3s,baz=39,slow=4.3,SNR=6.4						
BRTR	Keskin Array B	147.96	307	PKPbc	PKPbc	14 34 06.5	+1.4
	0.5nm,0.4s,baz=147,slow=4.6,SNR=4.7						
BRTR				PKPab	PKPab	14 34 11.6	+2.0
	0.9nm,0.4s,baz=116,slow=2.6,SNR=5.6						
CLL	Collm	150.97	344	⇓*i*PKPbc	PKPbc	14 34 14.3	+2.5
	comp=Z,4.0nm,0.8s						

UPA ***20*** *14:23:45.7,* 8.°41*N*×82.°98*W, h*9*km, MW3.5*
UCR ***20*** *14:23:46.3,* 8.°39*N*×83.°10*W, h*3*km, MD3.5*
CASC 20 14:23:45.9±1.2, 8.°40N×82.°99W, h7km±5km, MD3.6, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	Cerro Adams	0.31	325	*e*P	Pg	14 23 52.5	+0.6
ACR				*e*S	Sg	14 23 57.0	+0.9
BRU2	Volcan	0.49	37	*i* P	Pg	14 23 56.6	+1.2
BRU2				*e*S	Sg	14 24 04.1	+2.3
BAR1		0.90	339	*e*P	Pg	14 24 03.0	-0.1
BAR1				*e*S	Sg	14 24 16.0	+1.3
BUS	Buena Vista	1.38	327	*e*P	Pn	14 24 11.1	-0.5
BUS				*e*S	Sb	14 24 30.5	+0.7
PRS1	Puriscal	2.04	320	*e*P	Pn	14 24 20.1	-0.6

JMA ***20*** *14:26:16.9±0.5, 23.°80N×121.°74E, h71km, M2.7*
TAP ***20*** *14:26:16.1, 23.°76N×121.°68E, h39km, ML3.3, C*
ISCJB ***20*** *14:26:16.1±0.3, 23.°74N±0.°02×121.°73E±0.°02, h31km±2km, Error ellipse: s-maj=3.3km s-min=2.1km az=143.9*
ISC 20 14:26:16.7±0.3, 23.°75N±0.°02×121.°70E±0.°02, h31km±2km, n53, σ0.°71/101, 10C-1D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEGC	Jichi Village	0.15	253	*e*P	Pb	14 26 23.0	+0.4
	baz=248						
TEGC				*e*S	Sb	14 26 28.1	+1.6
	baz=248						
HWA	Hwalien	0.24	338	*i* P	Pb	14 26 23.7	+0.2
	baz=351						
HWA				*e*S	Sb	14 26 29.1	+1.0
	baz=351						
ESL	Shilin	0.25	284	⇑*i*P	Pb	14 26 23.6	0.0
	baz=284						
ESL				*e*S	Sb	14 26 28.9	+0.5
	baz=284						
TWD	Chiawan	0.34	344	⇓*i*P	Pb	14 26 24.6	-0.2
	baz=353						
TWD				*e*S	Sb	14 26 31.1	+0.8
	baz=353						
EHY	Hungye	0.43	235	⇑*i*P	Pb	14 26 25.4	-0.6
	baz=240						
EHY				*e*S	Sb	14 26 31.6	-0.8
	baz=240						
TWF1	Yuli	0.55	223	P	Pb	14 26 27.1	-0.8
	baz=232						
TWF1				*e*S	Sb	14 26 34.4	-1.1
	baz=232						
WHF	Hehuan Shan	0.56	314	⇑*i*P	Pb	14 26 27.5	-0.6
	baz=309						
WHF				*e*S	Sb	14 26 35.9	0.0
	baz=309						
ENA	Nanau	0.67	3	*e*P	Pb	14 26 29.1	-0.9
	baz=15						
ENA				*e*S	Sb	14 26 39.0	-0.1
	baz=15						
TWT	Tachien	0.69	316	P	Pb	14 26 29.9	-0.4
	baz=312						
TWT				S	Sb	14 26 39.3	-0.3
	baz=312						
YUS	Yu-Shan	0.74	249	⇑*i*P	Pn	14 26 30.9	-0.1
	baz=247						
YUS				S	Sb	14 26 40.2	-0.6
	baz=247						
SMLT	Sun Moon Lake	0.74	280	⇑*i*P	Pn	14 26 30.5	-0.5
	baz=284						
SMLT				S	Sb	14 26 41.1	+0.1
	baz=284						
NNS	Nan Shan	0.75	336	P	Pn	14 26 30.4	-0.6
	baz=339						
NNS				*e*S	Sb	14 26 40.6	-0.5
	baz=339						
TYC	Yuchr	0.79	281	⇑*i*P	Pn	14 26 30.9	-0.7
	baz=285						
TYC				*e*S	Sb	14 26 42.0	-0.2
	baz=285						
ELDTW	Lidau	0.84	228	P	Pn	14 26 31.1	-1.3
	baz=222						
ELDTW				*e*S	Sn	14 26 41.9	-1.8
	baz=222						
ALS	Alishan	0.86	254	⇑P	Pn	14 26 32.5	-0.1
	baz=252						
ALS				*e*S	Sn	14 26 43.7	-0.4
	baz=252						
TWC	Suao	0.86	9	P	Pn	14 26 32.8	+0.1
	baz=12						
TWC				*e*S	Sn	14 26 43.8	-0.4
	baz=12						
ENTT	Nioudou	0.89	352	P	Pn	14 26 32.5	-0.6
	baz=347						
ENTT				*e*S	Sn	14 26 44.6	-0.3
	baz=347						
WNT	Mingjian	0.94	278	*e*P	Pn	14 26 34.1	+0.3
	baz=277						
WNT				*e*S	Sn	14 26 46.7	+0.6
	baz=277						
CHN5	Tsauling	0.95	261	⇑*i*P	Pn	14 26 34.0	+0.1
	baz=259						
CHN5				*e*S	Sn	14 26 46.8	+0.4
	baz=259						
TWE	Neicheng	0.96	358	*e*P	Pn	14 26 33.4	-0.7
	baz=353						
TWE				*e*S	Sn	14 26 45.9	-0.8
	baz=353						
NSK	Sanguang	0.97	341	⇑*i*P	Pn	14 26 33.9	-0.3
	baz=344						
NSK				S	Sn	14 26 46.0	-0.8
	baz=344						
TCU	Taichung	1.02	293	*e*P	Pn	14 26 35.0	+0.2
	baz=293						
TCU				*e*S	Sn	14 26 48.6	+0.6
	baz=293						
TWQ1	Liyutan	1.03	305	⇑*i*P	Pn	14 26 35.6	+0.6
	baz=306						
TWQ1				*e*S	Sn	14 26 48.5	+0.1
	baz=306						
WGK	Gukeng	1.05	267	*e*P	Pn	14 26 35.3	+0.1
	baz=265						
WGK				*e*S	Sn	14 26 49.7	+1.0
	baz=265						
STYT	Tauyuan	1.05	236	*e*P	Pn	14 26 35.0	-0.2
	baz=229						
STYT				*e*S	Sn	14 26 48.4	-0.4
	baz=229						
NSTT	Nanjuang	1.08	324	P	Pn	14 26 36.0	+0.3
	baz=326						
NSTT				S	Sn	14 26 49.8	+0.1
	baz=326						
NSY	Sanyi	1.08	308	*e*P	Pn	14 26 35.9	+0.2
	baz=309						
NSY				*e*S	Sn	14 26 50.1	+0.5
	baz=309						
CHN4	Tsaushan	1.09	249	*e*P	Pn	14 26 36.6	+0.8
	baz=247						
CHN4				*e*S	Sn	14 26 50.7	+0.8
	baz=247						
TWG	Pinlang	1.09	212	*e*P	Pn	14 26 35.0	-0.9
	baz=209						
TWG				*e*S	Sn	14 26 47.9	-2.0
	baz=209						
WTP	Ta-pu	1.12	243	*e*P	Pn	14 26 36.4	+0.2
	baz=241						
WTP				*e*S	Sn	14 26 51.0	+0.4
	baz=241						
CHY	Chiayi	1.20	258	*e*P	Pn	14 26 37.7	+0.4
	baz=256						
CHY				*e*S	Sn	14 26 53.2	+0.7
	baz=256						
TWK	Hsinying	1.21	247	*e*P	Pn	14 26 38.4	+0.8
	baz=244						
TWK				*e*S	Sn	14 26 53.3	+0.4
	baz=244						
CHN1	Nanshi	1.22	242	*e*P	Pn	14 26 38.0	+0.5
	baz=240						
CHN1				*e*S	Sn	14 26 54.1	+1.1
	baz=240						
SGST	Jiashian	1.23	237	*e*P	Pn	14 26 37.6	-0.1
	baz=229						
SGST				*e*S	Sn	14 26 53.5	+0.3
	baz=229						
TWB1	Santiao Chiao	1.28	12	*e*P	Pn	14 26 39.1	+0.7
	baz=13						
WTCT	Ta-ch'eng	1.30	275	*e*P	Pn	14 26 38.9	+0.1
	baz=274						
WTCT				*e*S	Sn	14 26 56.9	+1.7
	baz=274						
NWF	Wu-fen Shan	1.31	3	*e*P	Pn	14 26 39.0	+0.1
	baz=353						
NWF				*e*S	Sn	14 26 55.0	-0.3
	baz=353						
TWS1	Kuangyinshan	1.36	349	*e*P	Pn	14 26 39.5	-0.2
	baz=351						
YOJ	Yonaguni jima	1.39	59	P	Pn	14 26 40.2	+0.3
YOJ				*e*S	Sn	14 26 57.1	-0.1
SSD	Sandimen	1.41	225	*e*P	Pn	14 26 40.5	+0.4
	baz=209						
SSD				*e*S	Sn	14 26 57.8	+0.2
	baz=209						
CHN8	Yiju	1.43	254	*e*P	Pn	14 26 40.6	+0.2
	baz=252						
CHN8				*e*S	Sn	14 26 58.6	+0.5
	baz=252						
TWM1	Shoushan	1.50	232	*e*P	Pn	14 26 41.4	0.0
	baz=245						
EAST	Anshuo	1.57	210	*e*P	Pn	14 26 42.8	+0.3
	baz=203						
SCZT	Fangliau	1.70	216	*e*P	Pn	14 26 44.8	+0.6
	baz=213						
SCZT				*e*S	Sn	14 27 06.2	+1.3
	baz=213						
LAY	Lan-yu	1.71	185	*e*P	Pn	14 26 42.4	-2.0
	baz=183						
IRIF	Iriomote-Funau	1.94	72	P	Pn	14 26 48.4	+0.9
IRIF				*e*S	Sn	14 27 11.4	+0.5
HATJ	Hateruma jima	1.95	81	P	Pn	14 26 47.5	-0.1
HATJ				*e*S	Sn	14 27 11.5	+0.5
PNG	Penghu	1.98	265	*e*P	Pn	14 26 47.6	-0.4
	baz=264						
PNG				*e*S	Sn	14 27 11.1	-0.6
	baz=264						
JKRS	Kuro-shima	2.17	77	P	Pn	14 26 51.1	+0.5
JKRS				*e*S	Sn	14 27 17.9	+1.5
JIJ	Ishigaki jima	2.31	74	P	Pn	14 26 52.3	-0.3
JIJ				*e*S	Sn	14 27 19.1	-0.9
JTJ	Tarama	2.88	72	P	Pn	14 27 00.2	-0.2
JTJ				*e*S	Sn	14 27 33.9	-0.1
QZH	Quanzhou	3.07	293	*e*Pn	Pn	14 27 02.3	-0.8
QZH				Sn	Sn	14 27 36.0	-2.8
QZH				smax			
	comp=N,50nm,0.4s						
QZH				smax			
	comp=E,50nm,0.4s						
JOGS	Gusukube	3.53	73	P	Pn	14 27 10.0	+0.7
JOGS				*e*S	Sn	14 27 50.3	+0.3

IDC ***20*** *15:38:03.9±1.0, 30.°79N×103.°37E, h0km, mb3.7/8, mb1 3.8/9, mb1mx3.6/25, mbtmp3.7/9, ML3.4/1, Error ellipse: s-maj=41.1km s-min=18.8km az=54.0*
NEIC ***20*** *15:38:05.3±0.5, 30.°73N×103.°35E, h10km, Error ellipse: s-maj=14.3km s-min=9.4km az=63.0*
BJI ***20*** *15:38:06.9, 30.°89N×103.°72E, h17km, mb4.2/2, ML3.4/13, Ms3.5/1, Ms7 3.2/3*
ISCJB ***20*** *15:38:06.6±0.8, 30.°90N±0.°05×103.°55E±0.°06, h29km±5km, mb3.8/8, Error ellipse: s-maj=10.3km s-min=6.5km az=145.8*
ISC 20 15:38:07.0±1.0, 30.°91N±0.°05×103.°49E±0.°06, h17km±5km, n20, σ0.°93/28, mb3.8/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.23	90	Pg	Pg	15 38 11.8	-0.5
CD2				Sg	Sg	15 38 16.5	+0.5
CD2				smax			
	comp=N,11μm,0.5s						
CD2				smax			
	comp=E,15μm,0.6s						
LZH	Lanzhou	5.17	3	*e*Pg	Pb	15 39 36.4	-0.6
LZH				Sg	Sb	15 40 40.1	+1.3
LZH				smax			
	comp=N,34nm,0.6s						
LZH				smax			
	comp=E,35nm,0.5s						
ENH	Enshi	5.21	95	*e*Pn	Pn	15 39 24.1	0.0
	comp=E,21nm,0.7s						
ENH				*e*Sn	Sn	15 40 24.7	+0.9
GYA	Guiyang	5.24	147	Pg	Pn	15 39 25.0	+0.5
GYA				Sg	Sn	15 40 25.5	+1.0
GYA				smax			
	comp=N,70nm,0.8s						
GYA				smax			
	comp=E,90nm,0.9s						
XAN	Xi'an	5.55	54	Pn	Pn	15 39 27.8	-1.0
XAN				Pg	Pg	15 39 47.3	-6.0
XAN				Sn	Sn	15 40 31.1	-1.1
XAN				Sg	Sg	15 40 56.8	-8.4
XAN				smax			
	comp=N,89nm,0.9s						
XAN				smax			
	comp=E,49nm,0.8s						
XAN				LR	LR		
	comp=Z,48nm,10.0s						
WHN	Wuhan	9.36	89	*e*P	Pn	15 40 20.0	-1.1
WHN				S	Sn	15 41 57.5	-8.4
CHTO	Chiang Mai	12.73	200	Pn	Pn	15 41 03.6	-3.6
	comp=Z,0.7nm,0.6s						
SONM	Songino Array	17.05	7	Pn	Pn	15 42 07.3	+2.8
	comp=Z,0.1nm,0.3s,baz=186,slow=9.8,SNR=3.6						
KSRS	Korea Array	21.21	65	P	P	15 42 52.0	+0.2
	comp=Z,0.8nm,0.5s,mb3.3,baz=241,slow=9.3,SNR=7.1						
MK31	Makanchi Array	22.79	320	*e*P	P	15 43 08.0	-0.6
MKAR	Makanchi Array	22.79	320	P	P	15 43 10.1	+1.6
	comp=Z,0.3nm,0.4s,mb3.1,baz=150,slow=12,SNR=3.7						
ZALV	Zalesovo Beam	26.67	335	P	P	15 43 45.2	+0.4
	comp=Z,2.4nm,0.7s,mb3.8,baz=135,slow=9.9,SNR=8.8						
ZALV	Zalesovo Beam	26.67	335	P	P	15 43 45.2	+0.4
FINES	FINESS Array B	57.43	326	P	P	15 47 54.0	-0.4
	comp=Z,2.1nm,0.9s,mb4.2,baz=64,slow=8.7,SNR=5.8						
WRA	Warramunga Arr	58.61	146	P	P	15 48 02.8	-0.4
	comp=Z,0.7nm,0.4s,mb4.1,baz=337,slow=7.7,SNR=2.4						
ASAR	Alice Springs	61.60	148	P	P	15 48 23.3	-0.3
	comp=Z,0.2nm,0.7s,mb3.4,baz=336,slow=7.3,SNR=7.7						
HFS	Hagfors	63.64	326	P	P	15 48 36.3	-0.4
	comp=Z,1.1nm,0.5s,mb4.2,baz=100,slow=8.1,SNR=6.6						
NB2	NORSAR Subarra	64.54	327	P	P	15 48 42.2	-0.5
	comp=Z,1.2nm,0.7s,mb4.0,baz=59,slow=6.2						
NOA	NORSAR Array B	64.54	327	P	P	15 48 41.7	-1.0
	comp=Z,1.0nm,0.8s,mb3.9,baz=261,slow=5.8,SNR=3.3						
NOA	NORSAR Array B	64.54	327	P	P	15 48 41.7	-1.0

IDC ***20*** *15:53:59.0±2.5, 1.°64N×127.°06E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/19, mbtmp3.4/3, Error ellipse: s-maj=223.4km s-min=27.0km az=66.0*
DJA ***20*** *15:54:05, 1.°54N×127.°11E, h70km, MLv3.8/5*
ISCJB ***20*** *15:54:05.2±1.8, 1.°6N±0.°2×127.°07E±0.°09, h69km±14km, mb3.3/3, Error ellipse: s-maj=28.2km s-min=10.9km az=22.8*
ISC 20 15:54:06.0±2.1, 1.°6N±0.°2×127.°1E±0.°1, h58km±18km, n8, σ0.°94/10, mb3.3/3, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	0.89	163	P	Pn	15 54 23.1	+0.5
TNTI				S	Sn	15 54 35.4	+0.7
MNI	Manado	2.27	265	P	Pn	15 54 40.4	-0.8
KMSI	Cibinong	3.29	252	P	Pn	15 54 54.4	-0.8
KMSI				S	Sn	15 55 33.6	+0.5
NLAI	Namlea	4.83	180	P	Pn	15 55 14.6	-1.7
LUWI	Luwuk	5.08	239	P	Pn	15 55 20.7	+1.0
WRA	Warramunga Arr	22.58	162	P	P	15 59 00.4	-1.2
	0.6nm,0.5s,mb3.3,baz=340,slow=11,SNR=2.5						
ASAR	Alice Springs	26.00	166	P	P	15 59 34.6	+1.0
	0.3nm,0.4s,mb3.2,baz=345,slow=12,SNR=9.6						
MKAR	Makanchi Array	59.49	326	P	P	16 04 03.8	+0.6
	0.4nm,0.7s,mb3.6,baz=114,slow=8.8,SNR=4.7						

IDC 20 16:04:24.0±1.4, 52.°98N×172.°80E, h63km±14km, mb3.3/2, mb1 3.6/3, mb1mx3.1/27, mbtmp3.3/3, MS3.2/1, Ms1 3.1/1, ms1mx2.2/18, Error ellipse: s-maj=50.4km s-min=25.0km az=177.0, Near Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FX1	Attu Island--F	0.24	113	P	Pn	16 04 35.2	+1.3
	252nm,0.3s,baz=303,slow=3.7,SNR=3098						
FX1				S	Sn	16 04 43.5	+2.3
	1μm,0.3s,baz=183,slow=20,SNR=253						
PETK	Petropavlovsk-	9.10	277	P	Pn	16 06 31.7	-0.7
	0.7nm,0.3s,baz=94,slow=19,SNR=22						
YKA	Yellowknife Ar	37.87	46	P	P	16 11 34.0	-0.2
	0.3nm,0.3s,baz=289,slow=7.8,SNR=4.4						
ULM	Lac du Bonnet	53.01	53	LR	LR	16 35 19.4	
	comp=Z,23nm,21.1s,baz=259,slow=35						
TXAR	Lajitas Array	63.41	76	P	P	16 14 46.9	+0.1
	0.4nm,0.7s,baz=310,slow=5.9,SNR=4.1						

DDA ***20*** *16:10:19.7, 37.°64N×36.°13E, h7km±3km, Md2.8*
ISK ***20*** *16:10:20.8, 37.°69N×36.°26E, h5km, ML2.2*
CSEM ***20*** *16:10:21.0±0.1, 37.°72N×36.°24E, h0km±1km, ML2.2, Error ellipse: s-maj=2.2km s-min=1.7km az=170.0*
ISCJB ***20*** *16:10:21.1±0.6, 37.°66N±0.°05×36.°25E±0.°05, h10km, Error ellipse: s-maj=6.9km s-min=5.2km az=173.5*
ISC 20 16:10:21.5±0.7, 37.°68N±0.°04×36.°24E±0.°05, h1km±17km, n16, σ0.°50/23, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMRS	Kahramanmaras	0.55	109	*e*PG	Pg	16 10 32.2	+0.2
KMRS				*e*SG	Sg	16 10 39.0	-0.2
KMRS	Kahramanmaras	0.55	109	*e*Pg	Pg	16 10 32.2	+0.2
KMRS				*e*Sg	Sg	16 10 39.0	-0.2
CEYT	Ceyhan	0.78	211	*e*PG	Pg	16 10 36.5	+0.1
CEYT	Ceyhan	0.78	211	*e*Pg	Pg	16 10 36.5	+0.1
GAZ	Gaziantep	0.93	123	*e*PG	Pg	16 10 39.5	+0.3
GAZ	Gaziantep	0.93	123	*e*Pg	Pg	16 10 39.5	+0.3
PINB	Pinarbasi	1.00	7	*e*P	Pg	16 10 39.8	-0.8
PINB				*e*S	Sg	16 10 54.2	+0.6
PINB	Pinarbasi	1.00	7	*e*P	Pg	16 10 39.8	-0.8
PINB				*e*S	Sg	16 10 54.2	+0.6
KARA	Karaisali	1.04	246	*e*PG	Pg	16 10 41.0	-0.3
KARA	Karaisali	1.04	246	*e*Pg	Pg	16 10 41.0	-0.3
SARI	SarD1z-Kayseri	1.05	20	*e*PG	Pg	16 10 35.2	-6.5
SARI				*e*SG	Sg	16 10 45.6	-10
GULE	Gulek	1.23	252	*i* P	Pg	16 10 41.2	-4.0
GULE				*e*S	Sg	16 11 01.5	+0.4
GULE	Gulek	1.23	252	*i* P	Pg	16 10 41.2	-3.9
GULE				*e*S	Sg	16 11 01.5	+0.4
DARE	Darende-Malaty	1.76	44	*e*PN	Pn	16 10 46.5	-6.6
URFA	Urfa	2.06	96	*e*PN	Pn	16 10 57.2	0.0
URFA	Urfa	2.06	96	*e*Pn	Pn	16 10 57.2	0.0

JMA ***20*** *16:34:19.9±0.1, 24.°17N×122.°51E, h40km±4km, M3.0*
NEIC ***20*** *16:34:19.5±7.8, 24.°04N×122.°80E, h35km, MG3.0(JMA), Error ellipse: s-maj=93.1km s-min=16.9km az=91.0*
TAP ***20*** *16:34:20.3, 24.°08N×122.°71E, h47km, ML3.7, C*
ISCJB ***20*** *16:34:20.9±0.5, 24.°04N±0.°02×122.°64E±0.°02, h27km±4km, Error ellipse: s-maj=4.1km s-min=2.6km az=171.0*
ISC 20 16:34:21.0±0.5, 24.°05N±0.°03×122.°64E±0.°02, h22km±5km, n63, σ0.°94/92, 2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.53	40	P	Pb	16 34 31.2	-0.5
YOJ				*e*S	Sb	16 34 39.2	+0.3
ENA	Nanau	0.90	295	⇓*i*P	Pb	16 34 37.6	-0.3
	baz=292						
ENA				*e*S	Sb	16 34 50.1	+0.6
	baz=292						
TWC	Suao	0.91	308	P	Pb	16 34 37.7	-0.4
	baz=304						
TWC				S	Sb	16 34 50.3	+0.5
	baz=304						
HWA	Hwalien	0.95	266	*e*P	Pb	16 34 38.1	-0.6
	baz=254						
TWD	Chiawan	0.95	272	*e*P	Pb	16 34 38.0	-0.9
	baz=270						
TWD				*e*S	Sb	16 34 50.9	-0.2
	baz=270						
NACB	Ninganchiao	0.96	277	*e*Pn	Pn	16 34 37.6	-1.6
IRIF	Iriomote-Funau	1.04	74	P	Pn	16 34 39.8	-0.4
IRIF				*e*S	Sb	16 34 53.9	+0.4
HATJ	Hateruma jima	1.07	89	P	Pn	16 34 40.5	-0.2
HATJ				*e*S	Sb	16 34 55.8	+1.5
ILA	Ilan	1.08	311	*e*P	Pn	16 34 39.9	-1.0
	baz=308						
ILA				*e*S	Sb	16 34 55.9	+1.2
	baz=308						
TWE	Neicheng	1.11	307	*i* P	Pn	16 34 40.9	-0.3
	baz=296						
TWE				S	Sb	16 34 56.4	+0.9
	baz=296						
TWB1	Santiao Chiao	1.12	328	P	Pn	16 34 40.2	-1.2
	baz=325						
TWB1				S	Sb	16 34 55.6	-0.3
	baz=325						
ESL	Shilin	1.13	258	*e*P	Pn	16 34 40.0	-1.5
	baz=250						
ENTT	Nioudou	1.14	301	P	Pn	16 34 41.5	-0.2
	baz=298						
ENTT				*e*S	Sb	16 34 56.6	+0.2
	baz=298						
WHF	Hehuan Shan	1.26	275	P	Pn	16 34 42.7	-0.6
	baz=273						
JKRS	Kuro-shima	1.27	81	P	Pn	16 34 43.2	-0.2
JKRS				*e*S	Sn	16 35 01.6	+1.8
NWF	Wu-fen Shan	1.28	323	*i* P	Pn	16 34 42.9	-0.7
	baz=320						
NWF				*e*S	Sn	16 34 59.4	-0.7
	baz=320						
YHNB	Yeheng	1.30	298	*e*Pn	Pn	16 34 43.4	-0.5
YHNB				*e*S	Sn	16 35 01.0	+0.3
EHY	Hungye	1.32	246	P	Pn	16 34 43.3	-0.9
	baz=250						
NSK

YULB	Yu-li	1.39 242	*e*Pn	Pn	16 34 44.0	-1.1
YULB			*e*Sn	Sn	16 35 01.8	-1.1
TATO	Taipei	1.39 312	*e*Pn	Pn	16 34 44.3	-0.9
JIJ	Ishigaki jima	1.41 77	P	Pn	16 34 44.6	-0.8
JIJ			*e*S	Sn	16 35 03.0	-0.3
TAP1	Taipei baz=312	1.41 314	*e*P	Pn	16 34 44.3	-1.1
TWF1	Yuli baz=232	1.41 241	P	Pn	16 34 44.8	-0.6
TWS1	Kuangyinshan baz=311	1.52 313	*e*P	Pn	16 34 46.9	-0.1
TWY	Chenhua baz=320	1.54 322	*e*P	Pn	16 34 47.0	-0.3
SSLB	Suanglung	1.56 261	*e*P	Pn	16 34 46.5	-1.0
SSLB			*e*S	Sn	16 35 06.2	-0.9
SMLT	Sun Moon Lake baz=263	1.60 264	*e*P	Pn	16 34 47.9	-0.1
SMLT			*e*S	Sn	16 35 07.5	-0.5
NSTT	Nanjuang baz=290	1.60 291	*e*P	Pn	16 34 48.6	+0.6
TYC	Yuchr baz=264	1.64 265	P	Pn	16 34 48.4	-0.1
YUS	Yu-Shan baz=242	1.64 250	*e*P	Pn	16 34 48.8	+0.2
ELDTW	Lidau baz=240	1.72 240	*e*P	Pn	16 34 48.6	-1.0
ELDTW			*e*S	Sn	16 35 08.8	-2.0
TWQ1	Liyutan baz=279	1.73 280	*e*P	Pn	16 34 50.5	+0.7
NSY	Sanyi baz=281	1.75 282	*e*P	Pn	16 34 50.4	+0.3
NSY			*e*S	Sn	16 35 13.8	+2.0
ALS	Alishan baz=252	1.76 253	*e*P	Pn	16 34 50.9	+0.7
TCU	Taichung baz=272	1.80 273	*e*P	Pn	16 34 51.4	+0.7
WNT	Mingjian baz=264	1.80 265	*e*P	Pn	16 34 51.4	+0.7
CHN5	Tsauling baz=255	1.85 256	*e*P	Pn	16 34 52.3	+0.8
TTN	Taitung baz=218	1.88 227	*e*P	Pn	16 34 51.0	-0.9
TWG	Pinlang	1.89 230	*e*Pn	Pn	16 34 50.1	-1.9
TWG			*e*Sn	Sn	16 35 13.7	-1.4
TWG	Pinlang baz=238	1.89 230	*e*P	Pn	16 34 51.3	-0.7
WGK	Gukeng baz=259	1.94 260	*e*P	Pn	16 34 52.5	-0.1
STYT	Tauyuan baz=234	1.94 243	*e*P	Pn	16 34 52.9	+0.2
JTJ	Tarama	1.97 72	P	Pn	16 34 53.1	0.0
JTJ			*e*S	Sn	16 35 18.0	+0.8
TPUB	Ta-pu	1.99 248	*e*Pn	Pn	16 34 54.0	+0.7
TPUB			*e*Sn	Sn	16 35 18.0	+0.4
CHN4	Tsaushan baz=249	2.00 250	*e*P	Pn	16 34 55.4	+1.9
CHN4			*e*S	Sn	16 35 19.9	+2.0
WTP	Ta-pu baz=238	2.02 247	*e*P	Pn	16 34 54.6	+0.8
CHY	Chiayi baz=254	2.10 255	*e*P	Pn	16 34 56.2	+1.3
SGST	Jiashian baz=236	2.12 243	*e*P	Pn	16 34 56.1	+1.0
SGST			*e*S	Sn	16 35 22.9	+2.1
CHN1	Nanshi baz=246	2.12 246	*e*P	Pn	16 34 56.2	+1.1
CHN1			*e*S	Sn	16 35 23.3	+2.5
ECL	Taimali baz=236	2.12 227	*e*P	Pn	16 34 54.0	-1.2
TWK	Hsinying baz=248	2.12 249	*e*P	Pn	16 34 56.1	+0.9
TWK			*e*S	Sn	16 35 22.7	+1.8
LAY	Lan-yu baz=207	2.24 207	*e*P	Pn	16 34 54.7	-2.1
SSD	Sandimen baz=230	2.25 235	*e*P	Pn	16 34 57.4	+0.4
CHN8	Yiju baz=252	2.33 253	*e*P	Pn	16 34 58.8	+0.7
EAST	Anshuo baz=225	2.34 225	*e*P	Pn	16 34 57.4	-0.8
TWM1	Shoushan baz=239	2.37 239	*e*P	Pn	16 35 00.5	+1.8
SCZT	Fangliau baz=222	2.50 228	*e*P	Pn	16 35 01.1	+0.7
JOGS	Gusukube	2.62 74	P	Pn	16 35 02.5	+0.5
JOGS			*e*S	Sn	16 35 32.8	-0.4
TWK1	Hengchun baz=212	2.69 219	*e*P	Pn	16 35 02.8	-0.2
PNG	Penghu baz=260	2.87 261	*e*P	Pn	16 35 04.9	-0.5

*IDC **20** 16:40:48.8±1.9, 2°.68S×153°.25E, h0km, mb3.9/9, mb1 4.0/9, mb1mx3.9/17, mbtmp3.9/9, Error ellipse: s-maj=66.9km s-min=21.4km az=103.0*
*ICSJB **20** 16:40:51.3±1.6, 2°.8S±0°.1×153°.4E±0°.4, h33km, mb3.8/10, Error ellipse: s-maj=53.8km s-min=14.8km az=14.3*
*NEIC **20** 16:40:54.1±1.2, 2°.70S×153°.23E, h35km, mb3.5/2, Error ellipse: s-maj=43.2km s-min=13.1km az=104.0*
ISC 20 16:40:53.8±1.6, 2°.7S±0°.1×153°.3E±0°.4, h35km, n15, σ0°79/14, mb3.7/10, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRAB	Tennant Creek 2.3nm,0.6s,mb3.9	25.21	226	*e*P	P	16 46 16.4	0.0
WRA	Warramunga Arr 2.5nm,0.7s,mb3.9,baz=50,slow=9.2,SNR=10	25.22	226	P	P	16 46 16.5	0.0
WRA	Warramunga Arr	25.22	226	P	P	16 46 16.5	0.0
ASAR	Alice Springs 1.2nm,0.9s,mb3.5,baz=53,slow=8.6,SNR=13	28.04	220	P	P	16 46 42.0	+0.1
STKA	Stephens Creek 1.8nm,0.8s,mb4.0,baz=134,slow=22,SNR=3.4	31.03	200	P	P	16 47 08.4	+0.1
STKA	Stephens Creek 0.2nm,0.6s,mb3.1	31.03	200	*e*P	P	16 47 08.4	+0.1
PETK	Petropavlovsk- 1.9nm,1.0s,mb4.1,baz=152,slow=6.7,SNR=2.1	55.74	3	P	P	16 50 28.2	+1.3
PETK	Petropavlovsk-	55.74	3	P	P	16 50 28.2	+1.3
CMAR	Chiang Mai Arr 0.4nm,0.4s,mb3.8,baz=103,slow=5.7,SNR=5.1	57.48	294	P	P	16 50 41.2	+1.3
MK31	Makanchi Array	79.11	319	*e*P	P	16 52 54.0	-0.7
MKAR	Makanchi Array 0.4nm,0.7s,mb3.4,baz=100,slow=6.3,SNR=4.5	79.11	319	P	P	16 52 55.2	+0.5
ZALV	Zalesovo Beam 0.8nm,0.6s,mb3.8,baz=112,slow=6.6,SNR=4.4	79.72	326	P	P	16 52 57.1	-0.8
KURK	Kurchatov 0.2nm,0.5s,mb3.3,baz=168,slow=17,SNR=3.0	82.45	322	P	P	16 53 11.3	-1.3
BVAR	Borovoye Array 0.8nm,0.6s,mb4.1,baz=115,slow=5.2,SNR=4.0	87.89	323	P	P	16 53 39.1	-0.6
TORD	Torodi Ar. Bea 0.1nm,0.5s,baz=80,slow=35,SNR=2.9	150.08	292	PKP	PKPdf	17 00 38.4	+1.5
TORD	0.6nm,0.7s,baz=32,slow=2.0,SNR=3.3			PKPbc	PKPbc	17 00 42.6	+0.7
TORD	0.6nm,0.7s,baz=68,slow=3.5,SNR=3.6			PKPab	PKPab	17 00 46.6	-1.1

IDC 20 16:41:22.6±8.4, 10°.51N×91°.69E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.2/23, mbtmp3.4/3, Error ellipse: s-maj=427.7km s-min=31.0km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array 0.3nm,0.6s,baz=161,slow=7.1,SNR=3.6	37.03	349	P	P	16 48 34.0	0.0
WRA	Warramunga Arr 0.5nm,0.4s,baz=306,slow=8.6,SNR=4.7	51.75	126	P	P	16 50 32.0	-0.3
ASAR	Alice Springs 0.3nm,0.8s,baz=302,slow=7.7,SNR=5.0	53.45	130	P	P	16 50 45.1	+0.3

IDC 20 16:46:06.7±2.4, 1°.73N×125°.76E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/19, mbtmp3.3/3, Error ellipse: s-maj=242.5km s-min=27.0km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.7nm,0.4s,baz=338,slow=11,SNR=2.7	23.13	159	P	P	16 51 14.5	-0.1
ASAR	Alice Springs 0.3nm,0.5s,baz=340,slow=7.5,SNR=5.5	26.46	163	P	P	16 51 45.8	+0.1
MKAR	Makanchi Array 0.2nm,0.5s,baz=105,slow=9.4,SNR=5.1	58.65	326	P	P	16 56 05.9	+0.1

*CASC **20** 16:53:21.0±1.8, 15°.44N×93°.24W, h137km±20km, MD4.3, ML4.2, mb4.5(NEIC)*
*MEX **20** 16:53:22.2±1.2, 15°.31N×93°.31W, h104km±9km, MD4.4*
*NEIC **20** 16:53:22.0, 15°.32N×93°.33W, h98km, mb4.5/50, MD4.4(MEX), After MEX.*
*IDC **20** 16:53:22.8±0.8, 15°.46N×93°.20W, h92km±7km, mb3.9/10, mb1 4.2/13, mb1mx3.9/26, mbtmp4.0/13, MS3.2/3, Ms1 3.2/3, ms1mx2.8/25, Error ellipse: s-maj=29.7km s-min=8.8km az=47.0*
*ISCJB **20** 16:53:22.1±0.3, 15°.40N±0°.03×93°.25W±0°.03, h95km±2km, mb4.4/50, Error ellipse: s-maj=6.7km s-min=2.7km az=37.2*
ISC 20 16:53:23.2±0.3, 15°.41N±0°.03×93°.27W±0°.03, h85km±2km, h97km±3.2km: pP-P, n314, σ1.00/327, mb4.4/50, 85C-94D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		0.29	10	*e*P	Pn	16 53 36.5	+0.5
PCIG				*i* S	Sn	16 53 48.0	+2.5
THIG		1.09	117	*e*P	Pn	16 53 42.8	-0.8
THIG				*i* S	Sn	16 53 57.8	-1.2
TGIG		1.36	6	*i* P	Pn	16 53 47.2	+0.2
TGIG				*i* S	Sn	16 54 06.0	+1.1
SCX	San Cristobal	1.45	25	*i* P	Pn	16 53 49.3	+1.3
SCX				*i* S	Sn	16 54 09.7	+2.8
JAT	Jato	1.92	124	*e*P	Pn	16 53 54.6	+0.4
TP2	Tecpan 2	2.26	106	*e*P	Pn	16 53 59.9	+1.2
CMIG	Matias Romero 134nm,0.3s,baz=140,slow=13,SNR=1112	2.27	317	P	Pn	16 53 59.5	+0.6
CMIG				S	Sn	16 54 26.3	+0.1
CMIG	Matias Romero 504nm,0.3s,baz=139,slow=13,SNR=36	2.27	317	P	Pn	16 53 59.5	+0.6
CMIG				S	Sn	16 54 26.3	+0.1
FG6		2.46	110	*e*P	Pn	16 54 02.4	+1.0
FG6				*e*S	Sn	16 54 33.0	+2.4
FUG	Fuego 3	2.54	112	*e*P	Pn	16 54 03.0	+0.6
APG	El Apazote 136nm,0.3s,baz=312,slow=11,SNR=890	2.74	98	P	Pn	16 54 05.0	-0.1
APG				LR	LR	16 55 14.2	
	comp=Z,272nm,21.8s,baz=73,slow=42						
HUIG	Huatulco	2.76	278	*e*P	Pn	16 54 02.9	-2.5
HUIG				*i* S	Sn	16 54 33.0	-4.8
PCG	Pacaya	2.77	111	*e*P	Pn	16 54 06.4	+0.9
PCG				*e*S	Sn	16 54 41.8	+3.7
TUIG	Tuzandepetl	2.83	337	*i* P	Pn	16 54 05.5	-0.8
TUIG				*i* S	Sn	16 54 39.3	-0.2
NBG	Las Nubes	2.94	106	*e*P	Pn	16 54 08.7	+0.8
IXG	Ixpaco	2.99	114	*e*P	Pn	16 54 09.1	+0.6
MRL	Marmol	3.47	95	*e*P	Pn	16 54 15.0	-0.1
RBDL	Robledal	3.70	110	*e*P	Pn	16 54 17.4	-0.7
OXX	Oaxaca	3.71	297	*i* P	Pn	16 54 18.4	+0.2
OXX				*i* S	Sn	16 54 58.8	-2.0
VHO	Vista Hermosa	3.71	297	*e*P	Pn	16 54 19.0	+0.8
VHO				*i* S	Sn	16 54 59.0	-1.9
RTR	El Retiro	3.82	113	*e*P	Pn	16 54 19.2	-0.6
SBLS	San Blas	3.86	113	*e*P	Pn	16 54 20.5	+0.2
SBLS				*e*P		16 54 21.1	
SBLS				*e*S	Sn	16 55 05.7	+1.1
SBLS				*e*S	Sn	16 55 06.5	+1.9
SNJE	San Jose	3.87	113	*e*P	Pn	16 54 19.9	-0.5
MTO2	Montecristo 2	3.91	104	*e*P	Pn	16 54 20.7	-0.3
SCIG	Sabancuy	4.06	29	*e*P	Pn	16 54 22.2	-0.7
SCIG				*i* S	Sn	16 55 09.1	-0.2
BOQS	Boqueron	4.21	113	*e*P	Pn	16 54 24.4	-0.6
BOQS				*e*P		16 54 24.7	
BOQS				*e*S	Sn	16 55 15.4	+2.4
BOQS				*e*S	Sn	16 55 16.0	+3.0
LFRS	El Faro	4.45	113	*e*P	Pn	16 54 28.5	+0.2
LFRS				*e*S	Sn	16 55 20.1	+1.2
PNIG	Pinotepa	4.77	282	*i* P	Pn	16 54 31.3	-1.3
PNIG				*i* S	Sn	16 55 22.5	-4.2
TPIG	Tehuac#an	4.92	308	*e*P	Pn	16 54 34.9	+0.2
TPIG				*i* S	Sn	16 55 29.0	-1.4
UTMO	Huajuapan	4.96	300	*i* P	Pn	16 54 33.8	-1.5
UTMO				*i* S	Sn	16 55 30.9	-0.5
CAHU	Cacacuatique	5.17	108	*e*P	Pn	16 54 37.0	-1.0
LVIG	Laguna Verde	5.23	325	*e*P	Pn	16 54 36.2	-2.7
LVIG				*i* S	Sn	16 55 35.1	-2.8
BLLM	Bellamira	5.26	111	*e*P	Pn	16 54 38.6	-0.7
CNCH	Conchagua	5.68	111	*e*P	Pn	16 54 44.3	-0.8
CNCH				*e*P		16 54 44.6	
TGUH	Tegucigalpa,Un	5.96	102	*e*Pn	Pn	16 54 48.3	-0.6
TGUH	Tegucigalpa,Un	5.96	102	*e*P	Pn	16 54 48.5	-0.3
PPM	Popocatepetl	6.27	306	*i* P	Pn	16 54 54.0	+0.9
ACX	Acapulco	6.49	284	*e*P	Pn	16 54 55.6	-0.6
TEIG	Tepich	6.75	44	*e*Pn	Pn	16 54 58.3	-1.3
TEIG	Tepich	6.75	44	*e*P	Pn	16 54 58.2	-1.4
LEON	Leon	6.87	115	*e*P	Pn	16 55 01.6	+0.2
CNGN	Cerro Negro	7.01	114	*e*P	Pn	16 55 02.8	-0.4
CNGN				*e*S	Sn	16 56 14.6	-6.8
CNGN				AML	AML	16 56 21.9	
	comp=N,226nm,0.4s						
MOMN	Momotombo	7.19	114	*e*P	Pn	16 55 05.6	0.0
COPN	Copaltepe	7.24	116	*e*P	Pn	16 55 05.1	-1.3
CSAN		7.39	115	*e*P	Pn	16 55 07.7	-0.7
APYN	Apoyeque	7.43	114	*e*P	Pn	16 55 08.2	-0.7
BOAB	BOACO BROADBAN	7.95	111	*e*P	Pn	16 55 15.6	-0.4
SSN	San Juan del S	8.30	119	*e*P	Pn	16 55 20.1	-0.6
CONN	Concepcion	8.36	116	*e*P	Pn	16 55 20.8	-0.9
HKT	Hockley comp=N,98nm,1.9s	14.66	351	*e*Pn	Pn	16 56 46.1	-0.1
JCT	Junction City comp=N,26nm,0.8s	16.15	339	*e*Pn	Pn	16 57 04.6	-0.5
BRAL	Brewton comp=N,32nm,0.3s	16.54	19	*e*Pn	Pn	16 57 10.6	+0.7
628A	Black Gap, Mar baz=17,SNR=47	16.57	329	⇓P	Pn	16 57 11.3	+1.0
627A	Terlingua Ranc baz=17,SNR=87	16.80	328	⇓P	Pn	16 57 14.3	+1.2
TXAR	Lajitas Array comp=N,0.6nm,0.3s,baz=149,slow=14,SNR=70	16.85	327	P	Pn	16 57 14.8	+1.1
626A	Big Bend Ranch baz=17,SNR=31	17.27	326	⇑P	Pn	16 57 20.7	+1.8
527A	Woodward Ranch baz=18,SNR=20	17.47	329	⇑P	Pn	16 57 22.4	+1.0
428A	Kincaid Ranch, baz=18,SNR=21	17.51	332	⇑P	Pn	16 57 22.6	+0.7
526A	Mary Lane Ranc baz=18,SNR=24	17.65	328	⇓P	Pn	16 57 24.7	+1.2
427A	Hayter Ranch, baz=18,SNR=13	17.95	331	⇑P	Pn	16 57 28.1	+0.9
426A	McDonald Obser baz=18,SNR=19	18.11	329	⇑P	Pn	16 57 29.7	+0.7
328A	Wristen Ranch, baz=18,SNR=57	18.13	333	⇓P	Pn	16 57 29.3	0.0
LRAL	Lakeview Retre comp=N,7.3nm,0.5s	18.44	17	*e*Pn	Pn	16 57 31.9	-1.1
326A	Caldwell Ranch baz=19,SNR=5.6	18.61	330	⇓P	Pn	16 57 34.7	-0.4
425A	Indio Mountain baz=19,SNR=14	18.69	327	⇓P	Pn	16 57 35.8	-0.3
227A	Bennet, Jal baz=19,SNR=12	18.88	333	⇓P	Pn	16 57 37.4	-0.9
MIAR	Mount Ida comp=N,23nm,0.6s	19.05	359	⇓*i*P	Pn	16 57 37.0	-3.3
325A	Bean Ranch, Si baz=19	19.15	328	⇓P	Pn	16 57 41.4	0.0
226A	Malaga, Loving baz=19,SNR=16	19.29	331	⇓P	Pn	16 57 42.0	-1.2
UALR	University of comp=N,26nm,0.9s	19.30	2	*e*P	Pn	16 57 39.6	-3.6
324A	Moseley Ranch, baz=20,SNR=11	19.47	327	⇑P	Pn	16 57 43.8	-1.4
127A	Arkansas Junct baz=20,SNR=13	19.48	334	⇑P	Pn	16 57 43.3	-2.1
GDL2	Guadalupe Moun	19.52	331	*e*P	Pn	16 57 45.0	-0.9
MNTX	Cornudas Mount comp=N,7.1nm,0.8s	19.62	328	*e*P	Pn	16 57 44.8	-2.3
225A	Deer Hill, Car baz=20,SNR=21	19.67	330	⇑P	Pn	16 57 46.4	-1.2
126A	Clayton Basin, baz=20,SNR=30	19.74	332	⇓P	Pn	16 57 46.4	-2.0
WMOK	Wichita Mounta	19.87	347	*e*P	Pn	16 57 45.7	-4.2
	comp=N,7.4nm,0.6s						
Z27A	Tatum baz=20,SNR=122	19.97	335	⇓P	Pn	16 57 48.3	-2.7
224A	Cornudas Mount baz=20,SNR=21	19.99	328	⇓P	Pn	16 57 49.3	-2.0
GOGA	Godfrey comp=N,10nm,0.8s	20.00	25	*e*P	Pn	16 57 46.5	-4.9
CPRX	Cap Rock comp=N,25nm,0.8s	20.00	333	*e*P	Pn	16 57 49.0	-2.5
125A	Gardner Draw, baz=20,SNR=48	20.04	331	⇓P	P	16 57 49.9	+0.4
Z26A	Caprock baz=20,SNR=49	20.25	333	⇓P	P	16 57 51.5	-0.2
MSTX	Muleshoe baz=20,SNR=25	20.37	337	⇑P	P	16 57 52.3	-0.7
Y27A	Causey baz=20,SNR=14	20.45	336	⇓P	P	16 57 53.2	-0.6
124A	Stringfield Ra baz=21,SNR=45	20.46	329	⇓P	P	16 57 55.2	+1.3
Z25A	Roswell baz=21,SNR=22	20.59	332	⇑P	P	16 57 55.5	+0.2
Y26A	Elida baz=21,SNR=34	20.75	335	⇑P	P	16 57 56.8	-0.3
SWET	Sewanee	20.79	17	*e*P	P	16 57 54.9	-2.6
AMTX	Amarillo comp=N,151nm,0.7s	20.81	340	*e*P	P	16 57 56.8	-0.9
123A	Bell Site, Whi baz=21	20.81	328	⇑P	P	16 57 58.4	+0.6
222A	Williams Famil baz=21	20.85	325	⇓P	P	16 57 59.4	+1.2
X27A	F and S Farms, baz=21,SNR=17	21.09	337	⇑P	P	16 58 00.0	-0.7
320A	Kipp Ranch, An baz=21	21.11	321	⇑P	P	16 58 02.8	+1.8
Y25A	Mesa, Roswell baz=21,SNR=37	21.12	333	⇑P	P	16 58 01.4	+0.3
221A	Mesquite Ranch baz=21	21.16	324	⇓P	P	16 58 03.3	+1.9
WVT	Waverly comp=N,5.2nm,0.6s,mb4.0	21.20	12	*e*P	P	16 57 60.0	-1.9
X26A	CR and CF Fran baz=21,SNR=12	21.29	335	⇑P	P	16 58 02.3	-0.5
SDDR	Presa de Saban comp=N,12nm,0.8s,mb4.3	21.30	77	*e*P	P	16 57 56.9	-6.1
Z23A	Rita Site, Whi baz=21,SNR=13	21.30	329	⇓P	P	16 58 03.9	+0.9
CPCT	Cooper Cave	21.44	20	*e*P	P	16 58 06.5	+2.1
W27A	Bowe Ranch, En baz=22,SNR=36	21.45	338	⇑P	P	16 58 03.7	-0.9
Y24A	Capitan baz=22,SNR=36	21.46	331	⇓P	P	16 58 05.2	+0.6
220A	Playas Peak, P baz=22,SNR=13	21.51	322	⇑P	P	16 58 06.4	+1.1
121A	Cookes Peak, D baz=22,SNR=13	21.55	325	⇓P	P	16 58 07.0	+1.4
319A	Douglas baz=22,SNR=7.4	21.60	320	⇓P	P	16 58 07.6	+1.4
X25A	Clemmons Ranch baz=22	21.62	334	⇑P	P	16 58 06.4	0.0
Z22A	Elephant Butte baz=22,SNR=30	21.66	328	⇓P	P	16 58 07.3	+0.4
W26A	Owens Ranch, T baz=22,SNR=10	21.74	336	⇓P	P	16 58 06.8	-0.9
Y23A	Lovelace Mesa, baz=22,SNR=28	21.75	330	⇓P	P	16 58 08.4	+0.6
TKL	Tuckaleechee C comp=N,3.9nm,1.0s,mb3.7,baz=188,slow=12,SNR=2.3	21.88	21	P	P	16 58 07.1	-2.0
TKL	Tuckaleechee C	21.88	21	P	P	16 58 07.1	-2.1
X24A	Lazy VL Ranch, baz=22,SNR=6.2	21.99	332	⇓P	P	16 58 10.0	-0.3
219A	White Tail Can baz=22,SNR=6.7	22.02	321	⇓P	P	16 58 11.7	+1.1
120A	U Bar Ranch, L baz=22	22.04	323	⇑P	P	16 58 12.3	+1.4
318A	Bisbee baz=22	22.08	319	⇑P	P	16 58 13.0	+1.6
W25A	X Bar L Ranch, baz=22,SNR=26	22.13	335	⇓P	P	16 58 11.5	-0.2
Y22A	Socorro baz=22	22.20	329	⇓P	P	16 58 13.1	+0.5
BNM	Barren Site comp=N,9.6nm,0.9s,mb4.1	22.21	330	*e*P	P	16 58 13.8	+1.1
LPM	Los Pinos Moun	22.34	330	*e*P	P	16 58 14.5	+0.5
V26A	Tequesquite Ra baz=22,SNR=12	22.37	337	⇑P	P	16 58 13.4	-1.0
LENM	Lemitar comp=N,5.9nm,0.8s,mb4.0	22.39	329	*e*P	P	16 58 15.3	+0.7
Z20A	Nine Sixteen R baz=23	22.43	324	⇑P	P	16 58 16.3	+1.2
218A	Dragoon baz=23	22.48	320	⇓P	P	16 58 16.9	+1.3
SIUC	Southern Illin comp=N,33nm,0.8s,mb4.7	22.50	8	*e*P	P	16 58 15.2	-0.5
W24A	Lazy 6 Ranch, baz=23,SNR=20	22.52	333	⇓P	P	16 58 15.8	-0.1
119A	Ashpeak Ranch, baz=23	22.59	323	⇓P	P	16 58 18.0	+1.4
Y21A	Point of Rocks baz=23,SNR=9.9	22.62	328	⇑P	P	16 58 17.7	+0.7
CCM	Cathedral Cave comp=N,8.2nm,0.6s,mb4.2	22.62	4	*e*P	P	16 58 13.3	-3.7
LAZ	Ladron comp=N,7.3nm,1.0s,mb4.0	22.66	329	*e*P	P	16 58 17.1	-0.3
X22A	Bernardo baz=23,SNR=6.7	22.68	329	⇓P	P	16 58 18.6	+1.1
V25A	Rancho No Teng baz=23,SNR=31	22.73	336	⇓P	P	16 58 17.2	-0.9
TZTN	Tazewell	22.76	21	*e*P	pP	16 58 33.9	-1.7
ANMO	Albuquerque comp=N,8.8nm,0.7s,mb4.2,baz=152,slow=10,SNR=9.3	22.78	331	P	P	16 58 18.8	+0.1
ANMO				pP		16 58 36.7	
	comp=N,4.8nm,0.8s,baz=147,slow=14,SNR=4.0						
ANMO	Albuquerque	22.78	331	*e*P	P	16 58 18.7	+0.1
	comp=N,2.4nm,0.9s,mb3.5						
U26A	Atchley Ranch, baz=23,SNR=58	22.89	338	⇓P	P	16 58 19.2	-0.6
Y20A	Horse Springs, baz=23,SNR=12	22.91	326	⇓P	P	16 58 21.0	+0.9
X21A	Alamocita Cree baz=23,SNR=13	23.02	328	⇑P	P	16 58 21.9	+0.8
U25A	Circle Dot Ran baz=23,SNR=33	23.14	337	⇑P	P	16 58 22.0	-0.1
TUC	Tucson comp=N,5.3nm,0.9s,mb3.9	23.17	320	*e*P	P	16 58 23.3	+0.9
V23A	Ortiz Mt. (NFS baz=23,SNR=5.7	23.31	333	⇓P	P	16 58 24.5	+0.9
117A	Oracle baz=24	23.32	320	⇑P	P	16 58 25.5	+1.7
216A	Three Points, baz=24	23.39	318	⇓P	P	16 58 26.3	+1.9
Y19A	Nutrioso baz=24,SNR=6.9	23.43	325	⇑P	P	16 58 26.2	+1.4
OLIL	Olney comp=N,29nm,1.0s,mb4.6	23.67	10	*e*P	P	16 58 23.7	-3.2
Y18A	Canyon Day Jun baz=24	23.74	323	⇓P	P	16 58 29.4	+1.8
V22A	San Miguel Ran baz=24,SNR=5.0	23.78	332	⇓P	P	16 58 28.1	+0.2
T25A	Trinidad baz=24,SNR=22	23.79	338	⇑P	P	16 58 28.5	+0.4
X19A	St. Johns baz=24	23.80	326	⇑P	P	16 58 29.7	+1.5
U23A	El Rito baz=24,SNR=5.5	23.80	333	⇓P	P	16 58 28.9	+0.7
W20A	Ramah baz=24	23.92	328	⇑P	P	16 58 29.9	+0.6
CBKS	Cedar Bluff comp=N,27nm,0.8s,mb4.6	23.99	348	*e*P	P	16 58 28.5	-1.4
W19A	Sanders baz=24	24.37	327	⇓P	P	16 58 34.4	+1.0
U21A	Nageezi baz=25,SNR=5.7	24.54	331	⇓P	P	16 58 35.8	+0.9
T22A	Edith baz=25,SNR=9.5	24.69	333	⇓P	P	16 58 37.0	+0.

R22A	Saguache, Gunn	25.65	335	⇑P	P	16 58 45.3 +0.4
	baz=26,SNR=9.6					
WUAZ	Wupatki	25.76	324	eP	P	16 58 47.0 +1.1
	comp=N,9.1nm,1.0s,mb4.2					
Q22A	Crested Butte,	26.26	335	⇓P	P	16 58 50.7 +0.3
	baz=26					
S19A	Harvey Farm, M	26.30	331	⇓P	P	16 58 52.4 +1.6
	baz=26					
PV01	Paradox Valley	26.36	332	eP	P	16 58 52.3 +1.0
	comp=N,428nm,0.9s					
Q21A	Lamborn Mesa,	26.51	334	⇑P	P	16 58 53.0 +0.3
	baz=27					
OGNE	Ogallala	26.55	345	eP	P	16 58 52.1 -0.9
	comp=N,44nm,1.3s,mb4.8					
SMCO	Snowmass	26.55	336	eP	P	16 58 53.5 +0.4
	comp=N,22nm,1.4s,mb4.5					
ISCO	Idaho Springs	26.59	338	eP	P	16 58 52.9 -0.4
	comp=N,3.5nm,0.7s,mb4.0					
ISCO				epP	pP	16 59 14.6 +1.9
PV04	Paradox Valley	26.72	332	eP	P	16 58 55.8 +1.2
PV04				epP	pP	16 59 19.4 +5.5
ATAH	Atahualpa	26.82	146	LR	LR	17 06 39.7
	comp=N,62nm,21.6s,baz=348,slow=30					
R18A	Canyonlands Na	27.17	331	⇑P	P	16 58 59.0 +0.3
	baz=27					
Q19A	Hogan Spring (	27.34	332	⇓P	P	16 59 00.3 +0.1
	baz=28,SNR=6.8					
P20A	De Beque	27.41	334	⇑P	P	16 59 01.0 +0.2
	baz=28					
R17A	Hanksville Air	27.59	329	⇓P	P	16 59 03.6 +1.2
	baz=28					
N21A	Black Mountain	28.13	337	⇓P	P	16 59 08.0 +0.9
	baz=28,SNR=11					
ECSD	EROS Data Cent	28.37	355	eP	P	16 59 06.3 -2.9
	comp=N,8.0nm,0.8s,mb4.3					
ECSD				epP	pP	16 59 29.9 +1.2
N20A	Spence Gulch,	28.48	336	⇓P	P	16 59 10.5 +0.3
	baz=29,SNR=14					
M21A	Separation Pea	28.80	338	⇓P	P	16 59 12.9 -0.2
	baz=29,SNR=12					
RWWY	Rawlins	28.82	338	eP	P	16 59 13.2 0.0
	comp=N,18nm,0.9s,mb4.7					
N19A	John Jarvie Ra	28.90	335	⇑P	P	16 59 14.0 0.0
	baz=29					
O17A	Robinson Place	29.01	332	⇑P	P	16 59 15.3 +0.3
	baz=29					
M20A	Sweetwater, Wa	29.01	337	⇑P	P	16 59 14.8 -0.2
	baz=29,SNR=9.2					
L21A	Rawlins	29.12	338	⇑P	P	16 59 15.4 -0.6
	baz=29,SNR=19					
N18A	Larsen Ranch,	29.18	334	⇑P	P	16 59 16.5 0.0
	baz=29,SNR=5.4					
M17A	Scullys Gap (B	30.01	333	⇓P	P	16 59 23.4 -0.5
	baz=30					
RSSD	Black Hills	30.04	344	eP	P	16 59 23.4 -0.6
	comp=N,8.8nm,0.7s,mb4.5					
K20A	Yellowstone Ra	30.08	338	⇑P	P	16 59 24.1 -0.3
	baz=30					
L18A	Fontenelle, Gr	30.12	335	⇑P	P	16 59 25.2 +0.5
	baz=30					
K19A	Absolon Red Bu	30.41	337	⇑P	P	16 59 26.6 -0.7
	baz=30					
L17A	Cokeville	30.61	334	⇓P	P	16 59 28.8 -0.4
	baz=31,SNR=5.9					
BW06	Boulder Array	30.63	336	⇓P	P	16 59 29.0 -0.3
	baz=31					
PDAR	Pinedale Array	30.63	336	P	P	16 59 28.9 -0.4
	comp=N,1.9nm,0.6s,mb4.0,baz=124,slow=9.5,SNR=15					
PDAR				pP	pP	16 59 49.5 +0.6
	comp=N,1.0nm,0.8s,baz=114,slow=13,SNR=2.5					
K18A	Toltan Ranch,	30.72	335	⇓P	P	16 59 30.1 +0.1
	baz=31,SNR=5.1					
COWI	Conover	30.79	6	eP	P	16 59 26.6 -4.0
	comp=N,2.7nm,0.5s,mb4.2					
M15A	Larsen Ranch,	30.80	331	⇓P	P	16 59 31.7 +0.9
	baz=31					
K17A	Gardner Place,	31.17	334	⇑P	P	16 59 34.2 +0.2
	baz=31					
J18A	Kendall Valley	31.19	336	⇓P	P	16 59 34.4 +0.2
	baz=31					
L15A	Malad City	31.20	332	⇓P	P	16 59 34.9 +0.6
	baz=31					
M14A	Sheep Mountain	31.26	330	⇓P	P	16 59 35.3 +0.4
	baz=31,SNR=6.5					
K16A	Soda Springs	31.52	334	⇓P	P	16 59 37.4 +0.3
	baz=32					
I18A	Diamond G Ranc	31.53	337	⇑P	P	16 59 36.8 -0.4
	baz=32,SNR=7.0					
M13A	Montello	31.55	329	⇑P	P	16 59 38.9 +1.5
	baz=32					
REDW	Red Top Meadow	31.65	335	eP	P	16 59 38.1 -0.1
	comp=N,40nm,1.0s,mb5.1					
SNOW	Snow King Moun	31.69	335	eP	P	16 59 39.5 +0.9
	comp=N,53nm,0.7s,mb5.4					
LOHW	Long Hollow	31.76	336	eP	P	16 59 38.8 -0.4
	comp=N,15nm,0.6s,mb4.9					
TPAW	Teton Pass	31.79	335	eP	P	16 59 40.3 +0.8
	comp=N,17nm,0.8s,mb4.8					
NVAR	Mina Array Bea	31.80	321	P	P	16 59 41.0 +1.3
	comp=N,1.1nm,0.6s,mb3.7,baz=132,slow=8.2,SNR=4.4					
NVAR				pP	pP	17 00 01.4 +2.1
	comp=N,2.9nm,0.7s,baz=134,slow=9.2,SNR=6.8					
RRI2	Red Ridge	31.83	335	eP	P	16 59 40.5 +0.7
	comp=N,40nm,1.4s,mb5.0					
J16A	Bone	31.89	334	⇑P	P	16 59 40.6 +0.3
	baz=32,SNR=6.4					
M12A	Wells	31.97	328	⇑P	P	16 59 42.2 +1.1
	baz=32					
I17A	Pilgrim Ck.	32.00	336	⇑P	P	16 59 41.7 +0.4
	baz=32					
IMW	Indian Meadow	32.13	336	eP	P	16 59 42.9 +0.4
	comp=N,10nm,0.6s,mb4.7					
J15A	Blackfoot	32.34	333	⇑P	P	16 59 44.8 +0.5
	baz=32					
H17A	Grant Village	32.41	337	⇓P	P	16 59 45.6 +0.8
	baz=32					
RLMT	Red Lodge	32.55	339	⇓P	P	16 59 45.1 -1.0
	baz=33,SNR=6.4					
RLMT	Red Lodge	32.55	339	eP	P	16 59 45.9 -0.2
	comp=N,9.6nm,0.6s,mb4.8					
YFT	Old Faithful	32.55	336	eP	P	16 59 47.4 +1.3
	comp=N,16nm,1.0s,mb4.8					
J14A	Carey	32.76	332	⇓P	P	16 59 48.3 +0.4
	baz=33,SNR=6.8					
G18A	Lazy EL Ranch,	32.82	339	⇑P	P	16 59 47.6 -0.9
	baz=33,SNR=18					
AGMN	Agassiz Nation	32.86	357	eP	P	16 59 45.2 -3.6
	comp=N,4.1nm,0.6s,mb4.4					
H16A	Russell Place,	32.92	336	⇓P	P	16 59 49.3 -0.1
	baz=33,SNR=7.5					
L11A	Cat Creek Ranc	32.95	328	⇑P	P	16 59 50.0 +0.4
	baz=33					
LAO	LASA Array	33.00	344	eP	P	16 59 48.5 -1.5
	comp=N,6.9nm,0.6s,mb4.7					
QLMT	Earthquake Lak	33.10	336	eP	P	16 59 52.3 +1.4
I14A	Mackay	33.21	333	⇑P	P	16 59 52.4 +0.5
	baz=33,SNR=8.3					
HLID	Hailey	33.35	332	⇑P	P	16 59 53.9 +0.8
	baz=34					
HLID	Hailey	33.35	332	eP	P	16 59 53.7 +0.6
	comp=N,27nm,2.3s,mb4.7					
F18A	Big Timber	33.38	339	⇑P	P	16 59 52.6 -0.7
	baz=34,SNR=21					
H15A	Lima	33.41	335	⇓P	P	16 59 54.5 +0.9
	baz=34,SNR=5.8					
J12A	Stokes Ranch,	33.43	330	⇓P	P	16 59 55.1 +1.2
	baz=34					
I13A	Wildhorse Cree	33.49	332	⇑P	P	16 59 55.2 +0.9
	baz=34,SNR=7.0					
G16A	Moss Hill, Enn	33.58	336	⇑P	P	16 59 55.3 +0.2
	baz=34,SNR=8.6					
MCMT	McKenzie Canyo	33.67	335	eP	P	16 59 57.1 +1.2
	comp=N,12nm,1.0s,mb4.7					
F17A	Fitzpatrick Pl	33.72	338	⇑P	P	16 59 56.2 -0.1
	baz=34,SNR=17					
H14A	Leadore	33.72	334	⇑P	P	16 59 56.8 +0.5
	baz=34					
G15A	Dillon	33.80	335	⇑P	P	16 59 57.5 +0.5
	baz=34,SNR=7.0					
BOZ	Bozeman (W)	33.86	337	⇓P	P	16 59 57.0 -0.6
	baz=34,SNR=13					
BOZ	Bozeman (W)	33.86	337	eP	P	16 59 57.3 -0.2
	comp=N,6.0nm,0.9s,mb4.4					
I12A	Atlanta	33.86	331	⇓P	P	16 59 58.2 +0.7
	baz=34					
F16A	Kennard Place,	33.98	337	⇓P	P	16 59 58.6 +0.1
	baz=34					
DLMT	Dillon	34.01	335	eP	P	16 59 58.9 +0.2
	comp=N,13nm,0.9s,mb4.8					
E18A	Harlowton	34.03	339	⇓P	P	16 59 58.3 -0.6
	baz=34,SNR=14					
H13A	Challis	34.06	333	⇓P	P	16 59 59.6 +0.3
	baz=34,SNR=15					
DGMT	Dagmar	34.17	347	⇑P	P	16 59 59.3 -0.8
	baz=34					
G14A	Jackson	34.26	334	⇑P	P	17 00 01.6 +0.6
	baz=34					
E17A	Martinsdale	34.27	338	⇓P	P	17 00 00.5 -0.5
	baz=34,SNR=9.1					
H12A	Diamond D Ranc	34.32	332	⇑P	P	17 00 01.8 +0.3
	baz=34,SNR=8.7					
LRM	Limekiln Ridge	34.33	336	eP	P	17 00 01.7 +0.2
I11A	Placerville	34.34	330	⇑P	P	17 00 02.6 +0.9
	baz=34					
F15A	Butte	34.36	336	⇓P	P	17 00 01.5 -0.3
	baz=34,SNR=15					
G13A	Cobalt	34.47	333	⇑P	P	17 00 03.2 +0.4
	baz=35					
E16A	East Helena	34.62	337	⇑P	P	17 00 03.7 -0.4
	baz=35,SNR=19					
F14A	Wisdom	34.69	335	⇓P	P	17 00 05.0 +0.3
	baz=35					
D17A	Six Diamond Ra	34.80	339	⇓P	P	17 00 05.0 -0.6
	baz=35,SNR=18					
HRY	Holter Researc	34.83	337	eP	P	17 00 05.3 -0.6
	comp=N,5.1nm,0.6s,mb4.5					
E15A	Deer Lodge	34.90	336	⇓P	P	17 00 06.1 -0.4
	baz=35,SNR=5.8					
H11A	Donnelly	34.97	331	⇓P	P	17 00 07.7 +0.6
	baz=35					
D16A	Dana Ranch, Ca	35.00	338	⇑P	P	17 00 06.7 -0.7
	baz=35,SNR=6.4					
F13A	Darby	35.07	334	⇓P	P	17 00 07.4 -0.5
	baz=35,SNR=7.4					
E14A	Clinton	35.23	336	⇑P	P	17 00 09.1 -0.2
	baz=35					
C17A	Wharram Farm,	35.24	339	⇓P	P	17 00 08.2 -1.2
	baz=35,SNR=9.3					
EGMT	Eagleton	35.25	341	⇑P	P	17 00 08.5 -1.0
	baz=35,SNR=13					
EGMT	Eagleton	35.25	341	eP	P	17 00 08.8 -0.7
	comp=N,19nm,0.8s,mb5.0					
I09A	Lost Marbles R	35.26	329	⇑P	P	17 00 09.5 -0.1
	baz=35,SNR=7.2					
D15A	Lincoln	35.37	337	⇑P	P	17 00 10.0 -0.5
	baz=36,SNR=7.1					
F12A	Elk City	35.44	333	⇑P	P	17 00 10.6 -0.5
	baz=36,SNR=22					
E13A	Victor	35.53	335	⇓P	P	17 00 11.3 -0.6
	baz=36,SNR=6.3					
CHMT	Chamberlain Mo	35.54	336	eP	P	17 00 11.7 -0.3
B18A	Beardsley Farm	35.59	341	⇑P	P	17 00 11.1 -1.2
	baz=36,SNR=5.5					
G11A	Walters Elk Ra	35.61	332	⇑P	P	17 00 12.6 0.0
	baz=36					
C16A	Fuhringer Ranc	35.73	339	⇓P	P	17 00 12.9 -0.7
	baz=36,SNR=8.3					
MSO	Missoula	35.74	335	eP	P	17 00 13.4 -0.3
	comp=N,5.1nm,1.0s,mb4.4					
D14A	Greenough	35.78	336	⇑P	P	17 00 13.1 -0.9
	baz=36,SNR=7.7					
B17A	L&G Farms, Che	35.83	340	⇓P	P	17 00 13.5 -0.9
	baz=36					
SLMT	Seeley Lake	35.90	336	eP	P	17 00 14.5 -0.6
C15A	Salmond Ranch,	36.01	338	⇑P	P	17 00 15.3 -0.7
	baz=36,SNR=5.7					
A18A	Metzger Ranch,	36.07	341	⇓P	P	17 00 15.3 -1.2
	baz=36,SNR=9.8					
E12A	Beaver Dam Sad	36.09	334	⇓P	P	17 00 15.7 -1.0
	baz=36,SNR=5.2					
D13A	Huson	36.17	335	⇑P	P	17 00 16.6 -0.7
	baz=36,SNR=9.7					
G09A	Cove	36.23	330	⇑P	P	17 00 18.1 +0.3
	baz=36					
I07A	Izee	36.23	327	⇓P	P	17 00 18.0 +0.1
	baz=36					
SWMT	Swartz Lake	36.32	336	eP	P	17 00 18.0 -0.6
B15A	Bradely Ranch,	36.45	338	⇑P	P	17 00 18.8 -0.9
	baz=36,SNR=5.1					
F10A	Beach Ranch, E	36.49	332	⇓P	P	17 00 19.4 -0.6
	baz=37,SNR=11					
JTMT	Jette	36.62	336	eP	P	17 00 21.2 0.0
C13A	Hot Springs	36.69	336	⇓P	P	17 00 21.1 -0.6
	baz=37					
C12B	Naegeli Ranch,	37.07	335	⇑P	P	17 00 25.0 0.0
	baz=37					
A15A	Johnson Ranch,	37.07	339	⇑P	P	17 00 24.3 -0.7
	baz=37,SNR=13					
B13A	Whitefish	37.21	337	⇑P	P	17 00 25.6 -0.5
	baz=37					
A14A	Double T Ranch	37.31	338	⇓P	P	17 00 26.3 -0.7
	baz=37,SNR=10					
C11A	Tepee Creek (N	37.50	334	⇓P	P	17 00 28.4 -0.2
	baz=38					
WALA	Waterton Lakes	37.56	338	eP	P	17 00 29.1 0.0
	comp=N,0.3nm,1.3s					
LPAZ	La Paz	40.10	141	P	P	17 00 51.1 +0.4
	comp=N,1.5nm,0.6s,mb4.0,baz=356,slow=5.1,SNR=8.3					
EDM	Edmonton	40.91	342	eP	P	17 00 55.5 -1.5
SCHQ	Schefferville	44.35	22	LR	LR	17 20 43.9
	comp=N,54nm,18.1s,baz=99,slow=37					
SIV	San Ignacio	44.55	133	P	P	17 01 25.2 -1.6
	comp=N,1.8nm,0.7s,mb3.9,baz=315,slow=8.0,SNR=10					
SIV				pP	pP	17 01 46.8 -0.5
	comp=N,1.2nm,0.6s,baz=341,slow=8.4,SNR=3.0					
YKA	Yellowknife Ar	49.38	347	P	P	17 02 01.7 -2.1
	comp=N,6.0nm,0.5s,mb4.8,baz=152,slow=7.3,SNR=51					
YKA				pP	pP	17 02 23.8 -0.7
	comp=N,1.0nm,0.5s,baz=152,slow=7.3,SNR=2.9					
YKA	Yellowknife Ar	49.38	347	P	P	17 02 01.7 -2.1
YKA				pP	pP	17 02 23.8 -0.8
INK	Inuvik	58.74	344	P	P	17 03 10.4 -1.4
	comp=N,12nm,0.8s,mb5.0,baz=132,slow=7.3,SNR=28					
PLCA	Paso Flores	59.71	160	P	P	17 03 16.6 -2.2
	comp=N,1.4nm,0.8s,mb4.1,baz=346,slow=8.1,SNR=3.9					
TRF	Thorofare Moun	61.84	335	eP	P	17 03 31.8 -1.3
	comp=N,7.9nm,0.8s,mb4.8					
BPAW	Bear Paw Mtn.	62.38	335	eP	P	17 03 34.6 -2.0
	comp=N,5.2nm,1.0s,mb4.5					
TTA	Tatalina	64.09	333	eP	P	17 03 45.7 -2.3
	comp=N,2.5nm,0.9s,mb4.0					
ARCES	ARCESS Array B	85.18	18	P	P	17 05 47.5 -2.3
	comp=N,2.6nm,0.9s,mb4.2,baz=347,slow=5.0,SNR=5.7					
CN2	Changchun	111.27	331	ePKP	PKiKP	17 11 45.0 -2.4
CN2				PP	PP	17 12 30.6 +3.3
HHC	Hu-ho-hao-te	119.47	339	ePKP	PKPdf	17 12 01.0 -2.2
HHC				PP	PP	17 13 31.9 +7.2
HHC				PKS		17 15 36.9
HHC				SKS	SKSdf	17 18 56.3 -12
HHC				SS	SS	17 29 36.5 -4.0
HHC				AMB	AMB	
	comp=Z,77nm,5.8s					
HHC				LR	LR	
	comp=N,120nm,19.2s					
HHC				LR	LR	
	comp=E,97nm,18.0s					
HHC				LR	LR	
	comp=Z,81nm,20.4s					
WMQ	Urumqi	121.05	359	ePKP	PKPdf	17 11 59.0 -7.2
NJ2	Nanjing	123.65	327	ePKP	PKPdf	17 12 05.8 -5.7
CD2	Chengdu	131.12	340	ePKP	PKPdf	17 12 22.5 -3.3
GYA	Guiyang	134.09	335	ePdif	Pdif	17 09 26.4 -3.9
GYA				PP	PP	17 15 03.8 +2.2
GYA				AMB	AMB	
	comp=Z,70nm,7.9s					
KMI	Kunming	136.79	339	PKP	PKPdf	17 12 32.3 -4.3

NIED ***20*** *16:55:00,39.°20N×141.°00E,h5km,Mw3.9 Best double couple: M₀7.00000×10¹⁴ NP1:φ₀27.00000°,δ46.00000°, λ,97.00000°. NP2:φ₀198.00000°,δ45.00000°,λ,83.00000°.*
ISCJB ***20*** *16:55:29.9±0.5,39.°18N±0.°02×140.°96E±0.°04,h14km±3km, mb4.1/20, Error ellipse: s-maj=5.0km s-min=4.2km az=6.9*
NEIC ***20*** *16:55:30.1,39.°17N×140.°96E,h10km,mb4.5/4, MW3.8(NIED), After JMA.*
JMA ***20*** *16:55:30.0,39.°17N×140.°96E,h10km±1km,M4.0*
JMA Felt II J1.
MOS ***20*** *16:55:32.3±1.1,39.°12N×140.°94E,h33km,mb4.5/8, Error ellipse: s-maj=14.2km s-min=8.5km az=77.3*
IDC ***20*** *16:55:35.5±2.5,39.°18N×140.°74E,h44km±24km,mb3.7/12, mb1 3.8/14,mb1mx3.6/27,mbtmp3.7/14,ML3.2/2,MS2.6/2, Ms1 2.6/2,ms1mx2.3/33, Error ellipse: s-maj=20.2km s-min=16.2km az=107.0*

ISC 20 16:55:30.4±0.5,39.°17N±0.°02×140.°95E±0.°04,h7km±3km, n51,σ0.97/56,mb4.1/20,4C-5D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	Ichinoseki	0.30	136	⇓P	Pg	16 55 36.0	-0.3
JMK				eS	Sg	16 55 40.3	+0.1
JRG	Rokugo	0.34	313	⇓P	Pg	16 55 36.9	-0.1
JRG				eS	Sg	16 55 42.0	+0.5
JOM	Ohasama	0.41	41	⇑P	Pg	16 55 37.8	-0.5
JOM				eS	Sg	16 55 43.4	-0.2
JYK	Kaneyama	0.52	242	⇓P	Pg	16 55 40.3	-0.2
JYK				S	Sg	16 55 47.4	0.0
OFUJ	Ofunato	0.56	99	P	Pg	16 55 40.9	-0.4
JIO	Ouri	0.78	156	⇓P	Pg	16 55 44.5	-0.8
JIO				S	Sg	16 55 55.9	+0.5
JOU	Okura	0.83	196	P	Pg	16 55 45.9	-0.5
JOU				S	Sg	16 55 57.1	0.0
ERM	Erimo	3.30	30	iP	Pn	16 56 24.3	+1.7
MJAR	Matsushiro Arr	3.40	220	P	Pn	16 56 26.0	+2.1
	1.7nm,0.3s,baz=28,slow=12,SNR=16						
MAJO	Matsushiro	3.40	221	eP	Pn	16 56 24.3	+0.4
MAT	Matsushiro	3.40	221	P	Pn	16 56 25.5	+1.6
MAT				S	Sn	16 57 06.4	+1.8
ASAJ	Asahikawa	5.10	13	P	Pn	16 56 48.5	+1.3
	0.9nm,0.3s,baz=78,slow=33,SNR=14						
ASAJ	Asahikawa	5.10	13	P	Pn	16 56 48.6	+1.4
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS	Korea Array	10.38	265	P	Pn	16 58 03.9	+4.2
	comp=Z,1.0nm,0.3s,baz=78,slow=14,SNR=32						
KSRS				LR	LR	17 01 46.1	
	comp=Z,39nm,19.0s,baz=80,slow=36						
CBIJ	Chichi jima	12.08	175	LR	LR	17 02 53.8	
	comp=Z,28nm,21.9s,baz=186,slow=36						
NJ2	Nanjing	19.29	255	eP	Pn	16 59 57.3	+0.4
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
SEY	Seymchan	24.78	12	⇑eP	P	17 00 53.5	+0.9
GUMO	Guam	25.71	171	eP	P	17 00 59.5	-1.9
	comp=Z,115nm,1.3s,mb5.2						
FX1	Attu Island--F	25.98	48	P	P	17 01 04.5	+1.0
	comp=Z,1.4nm,0.6s,mb3.7,baz=65,slow=14,SNR=3.9						
BILL	Bilibino	32.10	18	⇑eP	P	17 01 58.0	+0.2
BILL				e		17 03 01.4	
BILL				pmax	pmax		
	comp=Z,6.0nm,2.5s,mb4.0						
ZALV	Zalesovo Beam	40.23	311	P	P	17 03 06.7	-0.8
	comp=Z,1.1nm,0.6s,mb3.7,baz=94,slow=6.4,SNR=6.0						
ZALV	Zalesovo Beam	40.23	311	P	P	17 03 06.7	-0.8
MK31	Makanchi Array	42.71	300	eP	P	17 03 26.0	-1.9
MKAR	Makanchi Array	42.71	300	P	P	17 03 25.9	-2.0
	comp=Z,1.3nm,0.9s,mb3.7,baz=82,slow=12,SNR=12						
MKAR	Makanchi Array	42.71	300	P	P	17 03 25.9	-2.0
SVW2	Sparrevohn	44.07	39	eP	P	17 03 39.0	+0.3
KURK	Kurchatov	44.35	306	⇑eP	P	17 03 40.8	-0.3
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.0						
KDAK	Kodiak Island	45.78	43	iP	P	17 03 53.0	+0.6
TKM2	Tokmak 2	48.32	297	eP	P	17 04 12.8	+0.3
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
TKM2	Tokmak 2	48.32	297	eP	P	17 04 12.8	+0.3
	comp=Z,3.1nm,0.8s,mb4.4						
BVAR	Borovoye Array	48.89	311	P	P	17 04 14.8	-1.9
	comp=Z,0.7nm,0.6s,mb3.9,baz=90,slow=10,SNR=5.7						
INK	Inuvik	52.67	28	P	P	17 04 45.5	+0.6
	comp=Z,1.1nm,0.4s,mb4.1,baz=265,slow=5.3,SNR=3.2						
ARU	Arti	54.53	317	diP	P	17 04 58.7	-0.1
ARU				e		17 06 57.1	
ARU				S	S	17 12 36.0	-2.0
ARU				SS	SS	17 16 12.0	-7.9
ARU				pmax	pmax		
	comp=Z,8.0nm,1.7s,mb4.5						
KBL	Kabul	56.34	289	eP	P	17 05 11.4	-0.7
KBL				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
KBL	Kabul	56.34	289	eP	P	17 05 11.4	-0.7
	comp=Z,2.3nm,0.6s,mb4.4						
WRAB	Tennant Creek	59.11	187	eP	P	17 05 30.3	-1.3
WRAB				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
WRAB	Tennant Creek	59.11	187	eP	P	17 05 30.3	-1.2
	comp=Z,4.1nm,1.0s,mb4.4						
WRA	Warramunga Arr	59.12	187	P	P	17 05 30.8	-0.9
	comp=Z,1.4nm,0.5s,mb4.2,baz=2.8,slow=6.9,SNR=6.5						
ASAR	Alice Springs	62.85	187	P	P	17 05 56.5	-0.4
	comp=Z,0.9nm,0.8s,mb4.0,baz=357,slow=4.8,SNR=11						
FINES	FINESS Array B	66.77	332	P	P	17 06 21.6	-0.5
	comp=Z,2.3nm,0.7s,mb4.3,baz=46,slow=5.5,SNR=6.4						
FINES	FINESS Array B	66.77	332	P	P	17 06 21.6	-0.5
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	FINESS Array B	66.77	332	P	P	17 06 21.6	-0.5
KIV	Kislovodsk	69.25	310	iP	P	17 06 39.0	+1.0
KIV				e		17 07 02.3	
KIV				pmax	pmax		
	comp=Z,10.0nm,1.5s,mb4.5						
AKASG	Malin Array Be	72.40	322	P	P	17 06 56.4	-0.7
	comp=Z,0.4nm,0.4s,mb3.7,baz=45,slow=6.1,SNR=5.0						
AKASG	Malin Array Be	72.40	322	P	P	17 06 56.4	-0.7
NVAR	Mina Array Bea	74.01	53	P	P	17 07 08.2	+1.5
	comp=Z,0.6nm,0.5s,mb3.8,baz=312,slow=14,SNR=4.9						
PDAR	Pinedale Array	76.44	46	P	P	17 07 20.8	+0.1
	comp=Z,0.4nm,0.3s,mb3.8,baz=314,slow=3.9,SNR=4.0						
BRTR	Keskin Array B	77.17	311	P	P	17 07 24.8	-0.1
	comp=Z,0.5nm,0.9s,mb3.4,baz=101,slow=5.2,SNR=3.7						
BRTR	Keskin Array B	77.17	311	P	P	17 07 24.8	-0.1
LPAZ	La Paz	145.87	56	PKPbc	PKPbc	17 15 11.0	+0.1
	comp=Z,0.7nm,0.6s,baz=239,slow=5.3,SNR=3.7						
LPAZ	La Paz	145.87	56	PKPbc	PKPbc	17 15 11.0	+0.1

ISCJB ***20*** *17:20:00.7±0.4,9.°17S±0.°06×125.°2E±0.°1,h16km, mb4.0/15,MS3.2/2, Error ellipse: s-maj=18.6km s-min=6.2km az=160.6*
DJA ***20*** *17:20:01,8.°69S×125.°64E,h30km,mb4.6/11*
NEIC ***20*** *17:20:02.7±0.3,

1.3nm,0.7s,baz=189,slow=8.5,SNR=3.1
ULN Ulaanbaatar 58.99 346 *eP* **P 17 30 00.4 -1.1**
3.4nm,0.9s,mb4.4
SONM Songino Array 59.12 345 P **P 17 30 02.5 +0.1**
1.7nm,0.9s,mb4.1,baz=149,slow=6.7,SNR=2.8
SONM pP pP 17 30 07.6 -0.4
1.8nm,0.9s,baz=152,slow=9.9,SNR=6.1
MK31 Makanchi Array 67.54 330 *eP* **P 17 30 57.5 -0.8**
MKAR Makanchi Array 67.54 330 P **P 17 30 58.2 -0.1**
4.7nm,0.6s,mb4.7,baz=126,slow=8.0,SNR=28
MKAR pP pP 17 31 02.7 -1.1
4.7nm,0.6s,baz=130,slow=6.9,SNR=28
MKAR Makanchi Array 67.54 330 P **P 17 30 58.2 -0.1**
MKAR pP pP 17 31 02.7 -1.1
UCH Uchtor 68.98 322 P **P 17 31 08.0 +0.6**
AAK Ala-Archa 69.23 322 P **P 17 31 09.4 +0.5**
1.1nm,0.4s,mb4.1,baz=220,slow=7.9,SNR=3.8
EKS2 Erkin-Say 69.68 322 P **P 17 31 12.4 +0.7**
1.5nm,0.6s,mb4.1
MAW Mawson 71.29 201 P **P 17 31 19.9 -1.2**
ZAA0 Zalesovo Array 71.50 336 *eP* **P 17 31 21.7 -0.9**
ZALV Zalesovo Beam 71.50 336 P **P 17 31 21.2 -1.3**
1.3nm,0.5s,mb4.1,baz=134,slow=4.3,SNR=4.9
ZALV pP pP 17 31 25.8 -2.4
1.8nm,0.7s,baz=128,slow=4.8,SNR=6.3
KURK Kurchatov 71.97 331 P **P 17 31 25.1 -0.4**
2.5nm,0.7s,mb4.2,baz=142,slow=5.1,SNR=12
KURK pP pP 17 31 29.5 -1.7
2.5nm,0.7s,baz=142,slow=5.0,SNR=13
BVAR Borovoye Array 77.42 330 P **P 17 31 56.6 -0.5**
1.0nm,0.7s,mb3.8,baz=141,slow=9.6,SNR=5.5
BRVK Borovoye 77.50 330 P **P 17 31 57.7 +0.2**
2.7nm,1.0s,mb4.1
PPT Papeete 82.72 107 *e*LR LR 17 32 06.8
193nm,30.0s
PPT *e*LR LR 18 30 22.0
163nm,26.2s
AKTK Aktyubinsk 82.92 324 P **P 17 32 26.3 -0.5**
AKTK pP pP 17 32 31.9 -0.6
AKTO Aktyubinsk 82.92 324 P **P 17 32 26.3 -0.5**
1.2nm,0.8s,mb4.0,baz=124,slow=7.3,SNR=2.4
AKTO pP pP 17 32 31.9 -0.6
1.8nm,0.8s,baz=158,slow=2.3,SNR=4.6
TORD Torodi Ar. Bea 124.58 280 PKP PKPdf 17 39 03.4 +0.9
0.4nm,0.7s,baz=35,slow=2.1,SNR=3.3
TXAR Lajitas Array 130.04 59 pPKP pPKPdf 17 39 16.2 -2.2
0.7nm,0.9s,baz=144,slow=9.2,SNR=4.2

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*IDC **20** 17:31:58.0±4.4, 36.°30N×70.°94E, h178km±39km, mb3.1/8, mb1 3.1/13, mb1mx3.0/29, mbtmp3.0/13, Error ellipse: s-maj=30.8km s-min=17.9km az=29.0*
*NEIC **20** 17:32:02.2±0.7, 36.°50N×71.°13E, h215km±8km, mb4.4/8, Error ellipse: s-maj=9.8km s-min=6.9km az=61.0*
*ISCJB **20** 17:32:02.2±0.5, 36.°60N±0.°03×71.°18E±0.°07, h223km±6km, mb3.4/8, Error ellipse: s-maj=9.5km s-min=5.5km az=175.7*
*NNC **20** 17:32:06.6±3.2, 37.°35N×70.°70E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=25.9km s-min=24.7km az=79.0*
ISC 20 17:32:03.1±0.4, 36.°60N±0.°03×71.°23E±0.°07, h215km±6km, n39, σ1°14/49, mb3.4/8, 4C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.72**	**222**	*e*Pn	**Pn**	**17 32 49.0**	**-1.5**
KBL				*e*Sn	**S**	**17 33 21.1**	**-6.3**
CEP	**Cherat**	**2.83**	**168**	⇑P	**Pn**	**17 32 52.4**	**+0.8**
CEP				S	**S**	**17 33 30.0**	**+0.3**
CHCP	**Chirah Chowk**	**3.38**	**150**	P	**Pn**	**17 32 59.6**	**+1.6**
KSH	**Kashi**	**4.74**	**51**	Pn	**Pn**	**17 33 12.0**	**-2.5**
KSH				Sn	**S**	**17 34 02.8**	**-8.2**
KSH				smax			
	comp=N,34nm,0.8s						
KSH				smax			
	comp=E,27nm,0.2s						
SARP	**Sargodha**	**4.82**	**165**	P	**Pn**	**17 33 16.0**	**+0.3**
UCH	**Uchtor**	**6.16**	**23**	*e*Pn	**Pn**	**17 33 33.2**	**+0.7**
	comp=E,4.2nm,0.6s						
UCH				*e*Sn	**S**	**17 34 40.4**	**-3.4**
EKS2	**Erkin-Say**	**6.36**	**17**	*e*Pn	**Pn**	**17 33 34.6**	**-0.4**
EKS2				*e*Sn	**S**	**17 34 39.6**	**-8.7**
KK31	**Karatay Array**	**6.51**	**355**	Pn	**Pn**	**17 33 36.3**	**-0.8**
	comp=E,2.1nm,0.4s,baz=182,slow=12,SNR=65						
KK31				⇓Sn	**S**	**17 34 46.3**	**-5.5**
	comp=E,4.7nm,0.4s,baz=191,slow=25,SNR=14						
AAK	**Ala-Archa**	**6.53**	**22**	P	**Pn**	**17 33 38.4**	**+1.2**
	comp=E,0.0nm,0.3s,baz=191,slow=3.2,SNR=4.6						
AAK				S	**S**	**17 34 51.9**	**-0.3**
	comp=E,0.0nm,0.3s,baz=262,slow=0.3,SNR=3.7						
TKM2	**Tokmak 2**	**7.15**	**27**	⇓Pn	**Pn**	**17 33 46.0**	**+0.7**
	comp=E,1.6nm,0.7s						
TKM2				⇓Sn	**S**	**17 35 05.0**	**-1.7**
	comp=E,2.5nm,0.6s						
TKM2	**Tokmak 2**	**7.15**	**27**	*e*Pn	**Pn**	**17 33 44.9**	**-0.3**
	comp=E,2.0nm,0.5s						
MK31	**Makanchi Array**	**13.10**	**36**	*e*Pn	**Pn**	**17 35 02.4**	**+1.2**
MKAR	**Makanchi Array**	**13.10**	**36**	P	**Pn**	**17 35 02.8**	**+1.7**
	comp=E,0.1nm,0.3s,baz=212,slow=9.3,SNR=4.1						
DMN	**Daman**	**14.78**	**123**	*e*P	**Pn**	**17 35 23.0**	**+1.0**
	comp=E,6.4nm,0.3s						
KKN	**Kakani**	**14.78**	**123**	*e*P	**Pn**	**17 35 22.8**	**+0.8**
	comp=E,13nm,0.4s						
PKIN	**Phulchoki**	**14.99**	**123**	*e*P	**Pn**	**17 35 24.0**	**-0.6**
	comp=E,9.7nm,0.4s						
PKI	**Pulchoki**	**15.01**	**123**	*e*P	**Pn**	**17 35 24.0**	**-0.8**
	comp=E,6.7nm,0.2s						
KURK	**Kurchatov**	**15.07**	**18**	P	**Pn**	**17 35 25.5**	**+0.2**
	comp=E,0.0nm,0.3s,baz=209,slow=11,SNR=3.1						
AB31	**Akbulak array**	**15.08**	**330**	Pn	**Pn**	**17 35 26.4**	**+0.9**
	comp=E,1.2nm,0.5s,baz=141,slow=12,SNR=25						
AB31				⇑Sn	**S**	**17 38 12.2**	**-0.2**
	comp=E,0.6nm,0.6s,baz=160,slow=22,SNR=4.1						
ABKAR	**Akbulak array**	**15.08**	**330**	*e*P	**Pn**	**17 35 26.5**	**+1.0**
	comp=E,1.7nm,0.5s						
GUN	**Gumba**	**15.11**	**121**	*e*P	**Pn**	**17 35 25.8**	**-0.2**
	comp=E,16nm,0.4s						
JIRN	**Jiri**	**15.48**	**121**	*e*P	**Pn**	**17 35 27.6**	**-2.9**
	comp=E,26nm,0.4s						
BVAR	**Borovoye Array**	**16.43**	**358**	P	**P**	**17 35 43.2**	**+2.7**
	comp=E,0.2nm,0.3s,baz=164,slow=15,SNR=4.2						
AKTK	**Aktyubinsk**	**16.78**	**330**	P	**P**	**17 35 44.6**	**+0.3**
AKTO	**Aktyubinsk**	**16.78**	**330**	⇑Pn	**Pn**	**17 35 52.5**	**+6.7**
	comp=E,0.4nm,0.8s						
AKTO				⇑Sn	**S**	**17 38 49.0**	**+0.7**
	comp=E,0.2nm,0.7s						
AKTO	**Aktyubinsk**	**16.78**	**330**	P	**P**	**17 35 44.6**	**+0.3**
	comp=E,0.3nm,0.3s,baz=134,slow=9.6,SNR=5.7						
ZALV	**Zalesovo Beam**	**19.74**	**24**	P	**P**	**17 36 17.9**	**+1.5**
	comp=E,0.8nm,0.4s,baz=216,slow=12,SNR=3.8						
JOF	**Joensuu**	**35.87**	**330**	*ep*	**P**	**17 38 42.0**	**-0.1**
	comp=E,2.0nm,0.3s,mb4.1						
JOF	**Joensuu**	**35.87**	**330**	*ep*	**P**	**17 38 42.0**	**-0.1**
	comp=E,2.0nm,0.3s,mb4.1						
FINES	**FINESS Array B**	**37.50**	**326**	P	**P**	**17 38 55.8**	**0.0**
	comp=E,0.6nm,0.3s,mb3.5,baz=124,slow=9.2,SNR=9.6						
ARCES	**ARCESS Array B**	**41.12**	**337**	P	**P**	**17 39 25.4**	**-0.2**
	comp=E,1.7nm,0.9s,mb3.5,baz=122,slow=8.7,SNR=5.0						
ARCES	**ARCESS Array B**	**41.12**	**337**	P	**P**	**17 39 25.4**	**-0.2**
TIP	**Timpagrande**	**42.52**	**291**	P	**P**	**17 39 35.7**	**-1.7**
NOA	**NORSAR Array B**	**44.41**	**323**	P	**P**	**17 39 50.6**	**-1.5**
	comp=E,0.9nm,0.8s,mb3.1,baz=114,slow=7.8,SNR=2.6						
TORD	**Torodi Ar. Bea**	**65.90**	**269**	P	**P**	**17 42 23.2**	**-3.0**
	comp=E,0.4nm,0.4s,mb3.4,baz=51,slow=6.0,SNR=15						
YKA	**Yellowknife Ar**	**81.13**	**3**	P	**P**	**17 43 54.7**	**+0.7**
	comp=E,0.4nm,0.6s,mb3.2,baz=357,slow=11,SNR=4.4						
YKA	**Yellowknife Ar**	**81.13**	**3**	P	**P**	**17 43 54.7**	**+0.7**
WRA	**Warramunga Arr**	**81.89**	**122**	P	**P**	**17 43 58.0**	**-0.6**
	comp=E,0.2nm,0.3s,mb3.2,baz=308,slow=8.4,SNR=3.2						
ASAR	**Alice Springs**	**84.16**	**125**	P	**P**	**17 44 09.3**	**-0.8**
	comp=E,0.2nm,0.5s,mb3.1,baz=316,slow=5.0,SNR=6.5						

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*ISCJB **20** 17:54:05.9±0.8, 39.°50N±0.°04×142.°0E±0.°1, h93km±4km, mb3.8/3, Error ellipse: s-maj=13.6km s-min=5.6km az=11.7*
*JMA **20** 17:54:07.3±0.1, 39.°49N×141.°93E, h88km±1km, M3.4 Broadband fault plane solution: P waves. NP1: ϕ_s=91.00000°, δ20.00000°, λ9.00000°. NP2:ϕ_s=352.00000°, δ87.00000°, λ109.00000°. Principal axes: T Plg45.0000°, Azm281.0000°; N Plg19.0000°, Azm170.0000°; P Plg39.0000°, Azm64.0000°;*
JMA Felt I J1.

*IDC **20** 17:54:07.1±3.1, 40.°12N×140.°45E, h0km, mb3.9/3, mb1 3.6/5, mb1mx3.3/26, mbtmp3.6/5, ML2.9/2 Error ellipse: s-maj=60.3km s-min=27.9km az=116.0*
ISC 20 17:54:06.8±0.8, 39.°50N±0.°04×142.°0E±0.°1, h88km±4km, n16, σ0°49/28, mb3.8/3, 1C-9D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**0.16**	**299**	⇓P	**Pn**	**17 54 20.1**	**+0.6**
MIYJ				S	**Sn**	**17 54 29.3**	**+0.5**
JTH	**Tanohata**	**0.45**	**347**	⇑P	**Pn**	**17 54 21.5**	**+0.5**
JTH				S	**Sn**	**17 54 31.7**	**+0.1**
OFUJ	**Ofunato**	**0.49**	**211**	⇓P	**Pn**	**17 54 21.7**	**+0.4**
OFUJ				S	**Sn**	**17 54 32.0**	**-0.1**
JOM	**Ohasama**	**0.55**	**267**	⇓P	**Pn**	**17 54 21.9**	**+0.1**
JOM				S	**Sn**	**17 54 32.8**	**-0.1**
JMK	**Ichinoseki**	**0.82**	**228**	⇓P	**Pn**	**17 54 24.3**	**-0.1**
JMK				S	**Sn**	**17 54 37.0**	**-0.5**
JANG	**Nango**	**0.95**	**337**	⇓P	**Pn**	**17 54 25.9**	**+0.1**
JANG				S	**Sn**	**17 54 40.0**	**0.0**
JIO	**Ouri**	**1.16**	**206**	⇓P	**Pn**	**17 54 28.1**	**-0.2**
JIO				S	**Sn**	**17 54 43.1**	**-1.3**
JAH	**Hinai**	**1.25**	**304**	⇓P	**Pn**	**17 54 29.6**	**+0.2**
JAH				S	**Sn**	**17 54 46.4**	**0.0**
JYK	**Kaneyama**	**1.40**	**246**	⇓P	**Pn**	**17 54 31.3**	**+0.1**
JYK				S	**Sn**	**17 54 49.6**	**0.0**
JTM	**Tenmabayashi**	**1.47**	**331**	P	**Pn**	**17 54 32.2**	**+0.1**
JTM				S	**Sn**	**17 54 51.2**	**0.0**
JOU	**Okura**	**1.54**	**223**	⇓P	**Pn**	**17 54 33.0**	**0.0**
JOU				S	**Sn**	**17 54 52.5**	**-0.3**
MJAR	**Matsushiro Arr**	**4.20**	**227**	Pn	**Pn**	**17 55 09.6**	**+1.0**
	0.5nm,0.3s,baz=29,slow=14,SNR=5.5						
ASAJ	**Asahikawa**	**4.63**	**5**	Pn	**Pn**	**17 55 14.3**	**0.0**
	0.7nm,0.3s,baz=152,slow=32,SNR=8.7						
ASAJ				Sn	**Sn**	**17 56 05.3**	**-1.6**
	0.9nm,0.3s,baz=210,slow=20,SNR=3.6						
ZALV	**Zalesovo Beam**	**40.63**	**310**	P	**P**	**18 01 37.8**	**-0.1**
	0.6nm,0.4s,mb3.8,baz=85,slow=8.6,SNR=5.0						
MKAR	**Makanchi Array**	**43.24**	**300**	P	**P**	**18 01 59.4**	**+0.2**
	0.6nm,0.7s,mb3.4,baz=85,slow=9.7,SNR=8.0						
KURK	**Kurchatov**	**44.81**	**306**	P	**P**	**18 02 11.8**	**+0.2**
	2.1nm,0.6s,mb4.1,baz=80,slow=8.4,SNR=14						

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*IDC **20** 18:05:54.9±0.8, 27.°79N×85.°65E, h0km, mb3.9/11, mb1 4.0/14, mb1mx3.8/28, mbtmp3.9/14, ML3.7/3, MS3.3/1, Ms1 3.4/1, ms1mx2.4/32, Error ellipse: s-maj=26.2km s-min=16.2km az=52.0*
*NEIC **20** 18:05:56.9±0.4, 27.°86N×85.°71E, h13km±3km, mb4.1/14, Error ellipse: s-maj=5.4km s-min=3.4km az=198.0*
NEIC Felt at Lalitpur.
*DMN **20** 18:05:56.4±0.3, 27.°97N×85.°73E, h10km, Ml4.8/3, Error ellipse: s-maj=7.3km s-min=2.2km az=177.0*
*ISCJB **20** 18:05:56.8±0.5, 27.°94N±0.°04×85.°69E±0.°03, h21km±4km, mb4.1/20, Error ellipse: s-maj=6.6km s-min=4.1km az=2.0*
ISC 20 18:05:57.2±0.4, 27.°91N±0.°04×85.°72E±0.°02, h12km±3km, n66, σ0°89/77, mb4.1/20, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUN	**Gumba**	**0.14**	**89**	*e*Pg	**Pg**	**18 06 00.9**	**+0.3**
GUN				*e*Sg	**Sg**	**18 06 02.9**	**-0.2**
	59μm,0.3s						
KKN	**Kakani**	**0.41**	**253**	*e*Pg	**Pg**	**18 06 04.9**	**-0.4**
KKN				*e*Sg	**Sg**	**18 06 11.6**	**+0.9**
PKI	**Pulchoki**	**0.43**	**219**	*e*Pg	**Pg**	**18 06 05.8**	**0.0**
PKI				*e*Sg	**Sg**	**18 06 12.2**	**+0.6**
	4μm,0.4s						
PKI	**Pulchoki**	**0.43**	**219**	*e*Pg	**Pg**	**18 06 05.8**	**0.0**
PKI				*e*Sg	**Sg**	**18 06 11.9**	**+0.3**
PKI				*e*Sg	**Sg**	**18 06 12.2**	**+0.6**
PKIN	**Phulchoki**	**0.44**	**221**	*e*Pg	**Pg**	**18 06 05.9**	**+0.1**
PKIN				*e*Sg	**Sg**	**18 06 11.9**	**+0.2**
	5μm,0.3s						
JIRN	**Jiri**	**0.48**	**121**	*e*Pg	**Pg**	**18 06 06.4**	**-0.3**
JIRN				*e*Sg	**Sg**	**18 06 13.7**	**+0.5**
	6μm,0.2s						
DMN	**Daman**	**0.62**	**241**	*e*Pg	**Pg**	**18 06 09.4**	**+0.1**
DMN				*e*Sg	**Sg**	**18 06 18.7**	**+1.2**
	3μm,0.4s						
RAMN	**Ramite**	**1.23**	**140**	*e*Pg	**Pg**	**18 06 19.8**	**-1.1**
RAMN				*e*Sg	**Sg**	**18 06 37.2**	**+0.2**
	2μm,0.3s						
ODAN	**Odare**	**1.82**	**125**	*e*Pg	**Pg**	**18 06 31.2**	**-0.8**
ODAN				*e*Sg	**Sg**	**18 06 56.1**	**+0.5**
	2μm,0.2s						
TAPN	**Taplejung**	**1.85**	**107**	*e*Pg	**Pg**	**18 06 31.1**	**-1.6**
TAPN				*e*Sg	**Sg**	**18 06 56.0**	**-0.7**
	966nm,0.4s						
GTK	**Gangtok**	**2.63**	**102**	*e*PKP	**Pn**	**18 06 43.0**	**+3.6**
LSA	**Lhasa**	**5.09**	**68**	*e*Pn	**Pn**	**18 07 17.1**	**+3.9**
LSA				*e*Sn	**Sn**	**18 08 14.2**	**+2.3**
SHL	**Shillong**	**5.98**	**112**	*ex*	**Pn**	**18 07 28.0**	**+2.5**
SHL				*ex*	x	18 08 41.0	
SHL				*ex*	x	18 09 04.0	
NDI	**New Delhi**	**7.54**	**278**	*ex*	x	18 09 06.0	
CHCP	**Chirah Chowk**	**12.14**	**301**	P	**Pn**	**18 08 48.1**	**-1.8**
CEP	**Cherat**	**13.24**	**300**	P	**Pn**	**18 09 01.9**	**-3.1**
POO	**Poona**	**14.35**	**232**	*e*PKP	**Sn**	**18 12 11.0**	**+12**
CHTO	**Chiang Mai**	**15.13**	**124**	Pn	**Pn**	**18 09 30.4**	**-0.4**
	3.0nm,1.1s						
CMAR	**Chiang Mai Arr**	**15.36**	**125**	Pn	**Pn**	**18 09 33.6**	**-0.1**
	0.2nm,0.3s,baz=312,slow=9.5,SNR=2.7						
KBL	**Kabul**	**15.71**	**299**	*e*Pn	**Pn**	**18 09 36.6**	**-1.7**
	7.2nm,0.9s						
GTA	**Gaotai**	**16.39**	**42**	*e*P	**Pn**	**18 09 50.5**	**+3.6**
GTA				pP	pP	18 09 54.5	+1.3
GTA				sP	sP	18 09 56.3	+1.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
UCH	**Uchtor**	**16.95**	**330**	*e*Pn	**Pn**	**18 09 52.8**	**-1.3**
	comp=Z,7.8nm,1.1s						
TKM2	**Tokmak 2**	**17.08**	**334**	P	**Pn**	**18 09 55.6**	**0.0**
	comp=Z,2.0nm,0.7s						
AAK	**Ala-Archa**	**17.29**	**331**	P	**Pn**	**18 09 59.2**	**+0.9**
	comp=Z,0.0nm,0.3s,baz=174,slow=10,SNR=3.6						
AAK	**Ala-Archa**	**17.29**	**331**	P	**Pn**	**18 09 59.2**	**+0.9**
EKS2	**Erkin-Say**	**17.63**	**330**	*e*P	**Pn**	**18 10 03.3**	**+0.9**
	comp=Z,2.9nm,0.9s						
MK31	**Makanchi Array**	**19.04**	**353**	*e*P	**Pn**	**18 10 19.8**	**0.0**
MKAR	**Makanchi Array**	**19.04**	**353**	P	**Pn**	**18 10 19.9**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=169,slow=11,SNR=51						
MKAR	**Makanchi Array**	**19.04**	**353**	P	**Pn**	**18 10 19.9**	**+0.2**
ENH	**Enshi**	**20.90**	**78**	*e*P	**P**	**18 10 39.7**	**+0.3**
	comp=Z,7.3nm,1.1s						
KURK	**Kurchatov**	**23.41**	**349**	P	**P**	**18 11 05.9**	**0.0**
	comp=Z,2.4nm,0.6s,mb3.8,baz=169,slow=10,SNR=18						
SONM	**Songino Array**	**25.59**	**33**	P	**P**	**18 11 27.8**	**+1.8**
	comp=Z,2.5nm,0.8s,mb3.8,baz=219,slow=9.6,SNR=8.2						
ZAA0	**Zalesovo Array**	**26.02**	**359**	*e*P	**P**	**18 11 30.8**	**+1.0**
ZALV	**Zalesovo Beam**	**26.02**	**359**	P	**P**	**18 11 31.3**	**+1.5**
	comp=Z,2.5nm,0.6s,mb3.9,baz=185,slow=9.6,SNR=15						
BVAR	**Borovoye Array**	**27.55**	**340**	P	**P**	**18 11 44.2**	**+0.6**
	comp=Z,0.4nm,0.4s,mb3.4,baz=182,slow=8.1,SNR=2.1						
ABKAR	**Akbulak array**	**29.09**	**324**	*e*P	**P**	**18 11 57.6**	**+0.3**
	comp=Z,0.7nm,0.4s,mb3.7						
KSRS	**Korea Array**	**36.52**	**64**	P	**P**	**18 13 00.8**	**-1.6**
	comp=Z,0.4nm,0.5s,mb3.5,baz=264,slow=7.8,SNR=4.1						
JOF	**Joensuu**	**49.48**	**331**	*ep*	**P**	**18 14 46.8**	**-0.2**
	comp=Z,5.6nm,0.6s,mb4.8						
JOF	**Joensuu**	**49.48**	**331**	*ep*	**P**	**18 14 46.8**	**-0.2**
	comp=Z,5.6nm,0.6s,mb4.8						
TIXI	**Tiksi**	**49.75**	**16**	*e*P	**P**	**18 14 48.4**	**-0.4**
	comp=Z,2.1nm,0.6s,mb4.3						
FINES	**FINESS Array B**	**51.45**	**328**	P	**P**	**18 15 01.7**	**-0.2**
	comp=Z,1.6nm,0.6s,mb4.1,baz=101,slow=9.9,SNR=10						
FINES	**FINESS Array B**	**51.45**	**328**	P	**P**	**18 15 01.7**	**-0.2**
ARCES	**ARCESS Array B**	**53.81**	**338**	P	**P**	**18 15 19.3**	**0.0**
	comp=Z,1.9nm,0.6s,mb4.2,baz=82,slow=8.7,SNR=6.8						
ARCES				LR	LR	18 39 28.7	
	comp=Z,30nm,19.3s,baz=71,slow=37						
ARCES	**ARCESS Array B**	**53.81**	**338**	P	**P**	**18 15 19.3**	**0.0**
ARCES				LR	LR	18 39 28.7	
LPG	**La Plagne**	**63.25**	**309**	*e*P	**P**	**18 16 25.7**	**+0.2**
	comp=Z,6.2nm,0.7s,mb4.6						
LPG	**La Plagne**	**63.25**	**309**	*e*P	**P**	**18 16 25.7**	**+0.2**
	comp=Z,3.1nm,0.7s,mb4.5						
LPL	**La Plagne**	**63.26**	**309**	*e*P	**P**	**18 16 25.7**	**+0.2**
	comp=Z,8.2nm,0.8s,mb4.6						
LPL	**La Plagne**	**63.26**	**309**	*e*P	**P**	**18 16 25.7**	**+0.2**
	comp=Z,4.1nm,0.8s,mb4.6						
MBDF	**Montbardon**	**63.42**	**309**	*e*P	**P**	**18 16 25.8**	**-0.8**
KEST	**Kesra**	**63.88**	**298**	P	**P**	**18 16 29.8**	**0.0**
	comp=Z,2.1nm,0.8s,mb4.2,baz=185,slow=6.8,SNR=5.2						
ORIF	**Oris-en-Rattie**	**63.99**	**309**	*e*P	**P**	**18 16 30.2**	**-0.1**
SMRF	**Simiane la Rot**	**64.44**	**308**	*e*P	**P**	**18 16 33.0**	**-0.3**
VIVF	**Saint-Julien-l**	**64.83**	**309**	*e*P	**P**	**18 16 36.2**	**+0.3**
	comp=Z,3.8nm,0.7s,mb4.2						
VIVF	**Saint-Julien-l**	**64.83**	**309**	*e*P	**P**	**18 16 36.2**	**+0.3**
	comp=Z,1.9nm,0.7s,mb4.2						
LASF	**Ste Croix**	**65.60**	**308**	*e*P	**P**	**18 16 40.8**	**-0.1**
TCF	**Toulx Ste Croi**	**66.12**	**311**	*e*P	**P**	**18 16 44.0**	**-0.2**
	comp=Z,6.9nm,1.0s,mb4.3						
TCF	**Toulx Ste Croi**	**66.12**	**311**	*e*P	**P**	**18 16 44.0**	**-0.2**
	comp=Z,3.5nm,1.0s,mb4.3						
CAF	**Calviac**	**66.60**	**310**	*e*P	**P**	**18 16 47.2**	**-0.1**
WRA	**Warramunga Arr**	**66.89**	**130**	P	**P**	**18 16 49.4**	**0.0**
	comp=Z,1.1nm,0.7s,mb4.0,baz=326,slow=6.1,SNR=4.1						
WRAB	**Tennant Creek**	**66.89**	**130**	P	**P**	**18 16 54.1**	**+4.7**
	comp=Z,8.2nm,1.1s,mb4.7						
GRR	**Gorron**	**67.53**	**314**	*e*P	**P**	**18 16 53.1**	**0.0**
MFF	**Saint Martin d**	**67.59**	**312**	*e*P	**P**	**18 16 53.4**	**-0.1**
ASAR	**Alice Springs**	**69.20**	**133**	P	**P**	**18 17 03.7**	**-0.1**
	comp=Z,0.7nm,0.9s,mb3.6,baz=316,slow=6.5,SNR=7.9						
CTAO	**Charters Tower**	**75.51**	**122**	*e*P	**P**	**18 17 40.3**	**-1.3**
	comp=Z,14nm,1.2s,mb4.8						
TORD	**Torodi Ar. Bea**	**78.76**	**279**	P	**P**	**18 17 59.4**	**-0.7**
	comp=Z,0.4nm,0.6s,mb3.5,baz=43,slow=3.8,SNR=3.4						
TORD	**Torodi Ar. Bea**	**78.76**	**279**	P	**P**	**18 17 59.4**	**-0.7**

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*ATH **20** 18:10:34.5, 38.°32N×23.°95E, h18km±5km, MD2.9/8, ML2.4*
*CSEM **20** 18:10:34.8±0.3, 38.°28N×23.°98E, h20km, ML2.4, Error ellipse: s-maj=8.0km s-min=3.8km az=88.0*
*ISCJB **20** 18:10:34.8±0.8, 38.°29N±0.°05×23.°96E±0.°07, h14km±8km, Error ellipse: s-maj=9.7km s-min=6.4km az=35.3*
*THE **20** 18:10:35.3, 38.°33N×23.°90E, h10km±1km, ML3.0/6, Error ellipse: s-maj=1.7km s-min=0.9km az=111.0*
ISC 20 18:10:34.8±0.7, 38.°31N±0.°03×23.°95E±0.°06, h14km±5km, n33, σ0°65/55, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTL	**Penteli**	**0.27**	**194**	*e*PB	**Pg**	**18 10 40.8**	**+0.3**
PTL				*e*SB	**Sg**	**18 10 44.5**	**+0.1**
PTL	**Penteli**	**0.27**	**194**	*e*Pb	**Pg**	**18 10 40.8**	**+0.3**
PTL				*e*Sb	**Sg**	**18 10 44.5**	**+0.1**
ATHU	**Athens Univers**	**0.37**	**200**	P	**Pg**	**18 10 42.4**	**+0.1**
ATHU				S	**Sg**	**18 10 47.4**	**+0.1**
ATHU	**Athens Univers**	**0.37**	**200**	P	**Pg**	**18 10 42.4**	**+0.1**
ATHU				S	**Sg**	**18 10 47.4**	**+0.1**
ATH	**Athens Observa**	**0.39**	**208**	*e*PB	**Pg**	**18 10 42.8**	**+0.2**
ATH				*e*SB	**Sg**	**18 10 48.2**	**+0.4**
ATH	**Athens Observa**	**0.39**	**208**	*e*Pb	**Pg**	**18 10 42.8**	**+0.2**
ATH				*e*Sb	**Sg**	**18 10 48.2**	**+0.4**
VLY	**Voula,Athens**	**0.48**	**195**	*e*PB	**Pg**	**18 10 44.3**	**+0.1**
VLY				*e*SB	**Sg**	**18 10 50.4**	**-0.2**
VLY	**Voula,Athens**	**0.48**	**195**	*e*Pb	**Pg**	**18 10 44.3**	**+0.1**
VLY				*e*Sb	**Sg**	**18 10 50.4**	**-0.2**
NAIG	**Nisos Aigina**	**0.66**	**213**	*e*PN	**Pg**	**18 10 47.7**	**0.0**
NAIG	**Nisos Aigina**	**0.66**	**213**	*e*Pn	**Pg**	**18 10 47.7**	**0.0**
LKR	**Lokris**	**0.82**	**295**	P	**Pg**	**18 10 49.6**	**-1.1**
LKR				S	**Sg**	**18 11 01.1**	**-0.3**
LKR	**Lokris**	**0.82**	**295**	*e*PB	**Pg**	**18 10 49.6**	**-1.1**
LKR	**Lokris**	**0.82**	**295**	P	**Pg**	**18 10 49.6**	**-1.1**
LKR				S	**Sg**	**18 11 01.1**	**-0.3**
ATAL	**Atalanti**	**0.82**	**298**	P	**Pg**	**18 10 49.8**	**-0.9**
ATAL				S	**Sg**	**18 11 01.5**	**0.0**
ATAL	**Atalanti**	**0.82**	**298**	P	**Pg**	**18 10 49.8**	**-0.9**
ATAL				S	**Sg**	**18 11 01.5**	**0.0**
LTK	**Loutraki**	**0.83**	**250**	P	**Pg**	**18 10 51.0**	**+0.2**
LTK				S	**Sg**	**18 11 02.2**	**+0.6**
LTK	**Loutraki**	**0.83**	**250**	*e*PN	**Pg**	**18 10 50.9**

	baz=9.0						
SSD	**Sandimen**	**1.02 257**	⇑*i*P		**Pg**	**18 19 58.4**	**-0.8**
	baz=257						
SGST	**Jiashian**	**1.04 276**	⇓*i*P		**Pg**	**18 19 59.6**	**-0.1**
	baz=276						
SGST			*e*S		**Sg**	**18 20 13.2**	**-0.1**
	baz=276						
WTP	**Ta-pu**	**1.05 285**	⇓*i*P		**Pg**	**18 19 59.5**	**-0.2**
	baz=295						
WTP			*e*S		**Sg**	**18 20 14.1**	**+0.8**
	baz=295						
TPUB	**Ta-pu**	**1.05 288**	*e*Pg		**Pg**	**18 19 59.1**	**-0.6**
SSLB	**Suanglung**	**1.07 319**	*e*Pg		**Pg**	**18 19 59.1**	**-1.0**
CHN4	**Tsaushan**	**1.09 290**	*e*P		**Pg**	**18 20 00.7**	**+0.1**
	baz=291						
TWD	**Chiawan**	**1.11 355**	P		**Pg**	**18 20 00.2**	**-0.7**
	baz=7.0						
TWD			S		**Sg**	**18 20 13.8**	**-1.4**
	baz=7.0						
CHN1	**Nanshi**	**1.11 281**	⇓P		**Pg**	**18 20 01.0**	**0.0**
	baz=282						
CHN1			*e*S		**Sg**	**18 20 16.2**	**+0.9**
	baz=282						
CHN5	**Tsauling**	**1.13 303**	⇓*i*P		**Pg**	**18 20 01.7**	**+0.3**
	baz=305						
CHN5			S		**Sg**	**18 20 17.4**	**+1.2**
	baz=305						
TWK	**Hsinying**	**1.16 285**	*e*P		**Pg**	**18 20 02.2**	**+0.3**
	baz=295						
TWK			*e*S		**Sg**	**18 20 17.8**	**+0.8**
	baz=295						
SMLT	**Sun Moon Lake**	**1.17 321**	*e*P		**Pg**	**18 20 01.6**	**-0.5**
	baz=329						
SMLT			*e*S		**Sg**	**18 20 17.2**	**-0.2**
	baz=329						
SCZT	**Fangliau**	**1.17 239**	*e*P		**Pg**	**18 20 01.8**	**-0.3**
	baz=232						
TWM1	**Shoushan**	**1.20 263**	*e*P		**Pg**	**18 20 02.9**	**+0.2**
	baz=263						
NACB	**Ninganchiao**	**1.20 355**	*e*Pg		**Pg**	**18 20 00.9**	**-1.8**
NACB			*e*Sg		**Sg**	**18 20 15.6**	**-2.6**
TYC	**Yuchr**	**1.21 320**	P		**Pg**	**18 20 02.7**	**-0.3**
	baz=321						
TYC			*e*S		**Sg**	**18 20 19.4**	**+0.8**
	baz=321						
WHF	**Hehuan Shan**	**1.23 341**	⇓*i*P		**Pg**	**18 20 02.5**	**-0.9**
	baz=342						
WHF			*e*S		**Sg**	**18 20 18.0**	**-1.4**
	baz=342						
CHN3	**Shinhua**	**1.24 275**	*e*P		**Pb**	**18 20 04.3**	**+0.8**
	baz=275						
WGK	**Gukeng**	**1.27 304**	P		**Pn**	**18 20 03.8**	**-0.1**
	baz=320						
WGK			*e*S		**Sg**	**18 20 21.2**	**+0.6**
	baz=320						
CHY	**Chiayi**	**1.29 294**	*e*P		**Pn**	**18 20 03.8**	**-0.4**
	baz=295						
CHY			*e*S		**Sb**	**18 20 21.2**	**0.0**
	baz=295						
WNT	**Mingjian**	**1.30 314**	P		**Pn**	**18 20 04.5**	**+0.2**
	baz=315						
WNT			S		**Sb**	**18 20 21.2**	**-0.3**
	baz=315						
TSEB	**Hengchuen, Pin**	**1.31 215**	*e*P		**Pn**	**18 20 04.8**	**+0.4**
	baz=216						
HEN	**Hengchun**	**1.32 223**	*e*P		**Pn**	**18 20 03.1**	**-1.4**
	baz=222						
HEN			*e*S		**Sb**	**18 20 20.7**	**-1.2**
	baz=222						
TWK1	**Hengchun**	**1.32 219**	*e*P		**Pn**	**18 20 03.9**	**-0.7**
	baz=218						
TWT	**Tachien**	**1.36 339**	P		**Pn**	**18 20 04.9**	**-0.3**
	baz=340						
TWT			*e*S		**Sb**	**18 20 21.2**	**-2.0**
	baz=340						
TWP	**Hsiaoliuchiu**	**1.39 244**	*e*P		**Pn**	**18 20 07.7**	**+2.2**
	baz=243						
CHN8	**Yiju**	**1.43 285**	*e*P		**Pn**	**18 20 04.4**	**-1.7**
	baz=286						
CHN8			*e*S		**Sb**	**18 20 25.7**	**+0.6**
	baz=286						
ENA	**Nanau**	**1.45 1**	*e*P		**Pn**	**18 20 05.0**	**-1.3**
	baz=12						
NNS	**Nan Shan**	**1.49 348**	P		**Pn**	**18 20 06.6**	**-0.4**
	baz=350						
NNS			*e*S		**Sn**	**18 20 26.2**	**-0.5**
	baz=350						
TCU	**Taichung**	**1.50 321**	*e*P		**Pn**	**18 20 08.1**	**+1.0**
	baz=322						
TCU			*e*S		**Sn**	**18 20 28.1**	**+1.0**
	baz=322						
WTCT	**Ta-ch'eng**	**1.58 304**	*e*P		**Pn**	**18 20 06.7**	**-1.5**
	baz=305						
TWQ1	**Liyutan**	**1.61 328**	*e*P		**Pn**	**18 20 09.0**	**+0.3**
	baz=329						
TWQ1			*e*S		**Sn**	**18 20 30.2**	**+0.5**
	baz=329						
TWC	**Suao**	**1.63 4**	*e*P		**Pn**	**18 20 08.9**	**0.0**
	baz=5.0						
ENTT	**Nioudou**	**1.66 355**	P		**Pn**	**18 20 08.8**	**-0.5**
	baz=356						
NSY	**Sanyi**	**1.68 329**	*e*P		**Pn**	**18 20 09.8**	**+0.3**
	baz=330						
YHNB	**Yeheng**	**1.71 350**	*e*Pn		**Pn**	**18 20 09.8**	**-0.3**
NSK	**Sanguang**	**1.73 349**	P		**Pn**	**18 20 10.2**	**0.0**
	baz=351						
NSK			*e*S		**Sn**	**18 20 31.6**	**-0.9**
	baz=351						
TWE	**Neicheng**	**1.74 359**	P		**Pn**	**18 20 09.8**	**-0.6**
	baz=347						
NSTT	**Nanjuang**	**1.77 339**	P		**Pn**	**18 20 11.5**	**+0.7**
	baz=340						
NSTT			*e*S		**Sn**	**18 20 33.5**	**-0.2**
	baz=340						
YOJ	**Yonaguni jima**	**1.90 39**	P		**Pn**	**18 20 13.4**	**+0.8**
YOJ			S		**Sn**	**18 20 36.3**	**-0.5**
TWA	**Mucha**	**2.00 357**	*e*P		**Pn**	**18 20 14.1**	**+0.2**
	baz=357						
TATO	**Taipei**	**2.00 354**	*e*Pn		**Pn**	**18 20 12.7**	**-1.3**
PNG	**Penghu**	**2.07 287**	*e*P		**Pn**	**18 20 14.2**	**-0.7**
	baz=288						
PNG			*e*S		**Sn**	**18 20 39.7**	**-1.3**
	baz=288						
NWF	**Wu-fen Shan**	**2.09 2**	*e*P		**Pn**	**18 20 16.6**	**+1.4**
	baz=351						
TWS1	**Kuangyinshan**	**2.13 353**	*e*P		**Pn**	**18 20 16.1**	**+0.3**
	baz=354						
HATJ	**Hateruma jima**	**2.20 60**	P		**Pn**	**18 20 17.3**	**+0.6**
HATJ			S		**Sn**	**18 20 44.1**	**-0.2**
IRIF	**Iriomote-Funau**	**2.29 53**	P		**Pn**	**18 20 19.2**	**+1.2**
IRIF			S		**Sn**	**18 20 46.7**	**+0.2**
JKRS	**Kuro-shima**	**2.46 59**	P		**Pn**	**18 20 21.3**	**+1.1**
JKRS			S		**Sn**	**18 20 50.6**	**+0.1**
JIJ	**Ishigaki jima**	**2.62 58**	P		**Pn**	**18 20 23.3**	**+0.8**
JIJ			S		**Sn**	**18 20 54.4**	**-0.3**
JTJ	**Tarama**	**3.20 58**	P		**Pn**	**18 20 31.5**	**+1.0**
JTJ			S		**Sn**	**18 21 08.9**	**-0.1**
JOGS	**Gusukube**	**3.82 62**	P		**Pn**	**18 20 40.5**	**+1.5**
JOGS			S		**Sn**	**18 21 25.2**	**+1.0**
KSRS	**Korea Array**	**15.39 19**	P		**Pn**	**18 23 19.4**	**+2.1**
	0.1nm,0.3s,baz=192,slow=12,SNR=5.6						
CMAR	**Chiang Mai Arr**	**21.76 262**	P		**P**	**18 24 39.9**	**+7.8**
	0.5nm,0.7s,mb3.1,baz=54,slow=9.3,SNR=4.9						
MKAR	**Makanchi Array**	**39.54 317**	P		**P**	**18 27 11.9**	**+0.6**
	0.9nm,0.7s,mb3.6,baz=102,slow=10,SNR=12						
ZALV	**Zalesovo Beam**	**41.52 328**	P		**P**	**18 27 27.2**	**-0.3**
	0.9nm,0.4s,mb3.7,baz=110,slow=9.3,SNR=5.6						
KURK	**Kurchatov**	**43.33 321**	P		**P**	**18 27 42.2**	**-0.1**
	0.3nm,0.5s,mb3.3,baz=112,slow=9.5,SNR=4.5						

IDC 20 18:20:14.8±10.0, 24°.04S×179°.92E, h618km±141km, mb3.2/4, mb1 3.4/5, mb1mx3.0/16, mbtmp3.3/5, Error ellipse: s-maj=180.9km s-min=49.1km az=66.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.38**	**189**	P	P	18 23 17.0	+0.8
	0.8nm,0.3s,baz=353,slow=8.1,SNR=6.7						
URZ				S	S	18 25 41.7	-2.7
	0.1nm,0.3s,baz=180,slow=20,SNR=1.8						
CTA	**Charters Tower**	**31.41**	**271**	P	P	18 25 47.3	-0.3
	5.0nm,0.6s,baz=92,slow=12,SNR=11						
STKA	**Stephens Creek**	**34.60**	**248**	P	P	18 26 14.8	+0.5
	2.6nm,0.6s,baz=88,slow=9.7,SNR=9.2						
ASAR	**Alice Springs**	**41.94**	**261**	P	P	18 27 13.8	+0.2
	2.3nm,0.8s,baz=95,slow=8.2,SNR=24						
WRA	**Warramunga Arr**	**42.33**	**266**	P	P	18 27 16.3	-0.3
	2.7nm,0.5s,baz=103,slow=8.3,SNR=11						

*IDC **20** 18:26:01.5±1.0, 30°.70N×101°.69E, h0km, mb3.7/6, mb1 3.8/7, mb1mx3.5/25, mbtmp3.6/7, ML3.2/1, MS3.0/1, Ms1 3.0/1, ms1mx2.3/35, Error ellipse: s-maj=36.4km s-min=18.5km az=59.0*
*NEIC **20** 18:26:02.5±0.6, 30°.56N×101°.54E, h10km, mb4.1/2, Error ellipse: s-maj=16.6km s-min=9.2km az=64.0*
*BJI **20** 18:26:03.3, 30°.44N×101°.51E, h10km, mb4.4/1, ML3.6/14*
ISC 20 18:26:01.6±1.8, 30°.71N±0°.05×101°.65E±0°.07, h5km±12km, n19, σ1§12/23, mb3.8/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.82**	**83**	Pg	**Pg**	**18 26 38.0**	**+1.4**
CD2				Sg	**Sg**	**18 27 03.9**	**+3.7**
CD2				smax			
	comp=N,1μm,0.8s						
CD2				smax			
	comp=E,2μm,0.6s						
LZH	**Lanzhou**	**5.66**	**18**	*e*Pg	**Pg**	**18 27 47.3**	**-2.8**
LZH				Sg	**Sg**	**18 29 02.9**	**-0.6**
LZH				smax			
	comp=N,77nm,0.8s						
LZH				smax			
	comp=E,28nm,0.6s						
GYA	**Guiyang**	**6.11**	**133**	Pg	**Pn**	**18 27 32.0**	**-0.7**
GYA				Sg	**Sn**	**18 28 42.8**	**-0.2**
GYA				smax			
	comp=N,40nm,0.8s						
GYA				smax			
	comp=E,30nm,0.8s						
ENH	**Enshi**	**6.78**	**92**	*e*Pn	**Pn**	**18 27 42.5**	**+0.7**
	comp=E,23nm,0.8s						
XAN	**Xi'an**	**6.99**	**60**	Pg	**Pg**	**18 28 14.3**	**-1.1**
XAN				Sg	**Sg**	**18 29 45.3**	**-0.6**
XAN				smax			
	comp=N,38nm,1.0s						
XAN				smax			
	comp=E,16nm,1.1s						
CM31	**Chiang Mai Arr**	**12.45**	**192**	*e*Pn	**Pn**	**18 29 00.8**	**+1.3**
	comp=E,0.9nm,0.6s						
CMAR	**Chiang Mai Arr**	**12.45**	**192**	Pn	**Pn**	**18 28 58.1**	**-1.4**
	comp=E,0.0nm,0.3s,baz=11,slow=12,SNR=4.2						
SONM	**Songino Array**	**17.48**	**11**	P	**Pn**	**18 30 10.3**	**+4.2**
	comp=E,0.1nm,0.3s,baz=192,slow=14,SNR=5.6						
ULN	**Ulaanbaatar**	**17.62**	**12**	*e*P	**Pn**	**18 30 13.9**	**+6.0**
	comp=E,4.4nm,1.2s						
MK31	**Makanchi Array**	**21.95**	**322**	*e*P	**P**	**18 30 55.4**	**-0.6**
MKAR	**Makanchi Array**	**21.95**	**322**	P	**P**	**18 30 57.0**	**+0.9**
	comp=E,0.4nm,0.6s,mb3.0,baz=128,slow=13,SNR=5.4						
KSRS	**Korea Array**	**22.73**	**66**	P	**P**	**18 31 03.9**	**-0.6**
	comp=E,1.0nm,0.7s,mb3.4,baz=248,slow=8.9,SNR=2.9						
ZAA0	**Zalesovo Array**	**26.21**	**337**	P	**P**	**18 31 38.0**	**+0.9**
ZALV	**Zalesovo Beam**	**26.21**	**337**	P	**P**	**18 31 38.3**	**+1.1**
	comp=E,1.1nm,0.5s,mb3.6,baz=146,slow=8.8,SNR=6.5						
ZALV				LR	LR	18 43 14.1	
	comp=E,31nm,19.3s,baz=47,slow=39						
KURK	**Kurchatov**	**26.34**	**326**	P	**P**	**18 31 38.8**	**+0.3**
	comp=E,0.6nm,0.5s,mb3.4,baz=132,slow=9.6,SNR=5.4						
KKM	**Kota Kinabalu**	**28.10**	**148**	*e*P	**P**	**18 31 53.1**	**-1.4**
WRAB	**Tennant Creek**	**59.36**	**144**	*e*P	**P**	**18 36 03.1**	**-1.8**
	comp=E,6.2nm,0.8s,mb4.7						
WRA	**Warramunga Arr**	**59.36**	**144**	P	**P**	**18 36 05.5**	**+0.5**
	comp=E,4.2nm,0.8s,mb4.5,baz=336,slow=7.5,SNR=8.8						
ASAR	**Alice Springs**	**62.29**	**146**	P	**P**	**18 36 25.8**	**+0.9**
	comp=E,0.7nm,0.8s,mb3.9,baz=338,slow=7.0,SNR=2.2						

*IDC **20** 18:27:41.2±2.9, 19°.44N×145°.26E, h207km±26km, mb3.3/13, mb1 3.5/14, mb1mx3.4/24, mbtmp3.4/14, MS3.5/1, Ms1 3.5/1, ms1mx2.5/17, Error ellipse: s-maj=23.9km s-min=11.9km az=88.0*
*ISCJB **20** 18:27:41.5±2.2, 19°.45N±0°.09×145°.1E±0°.2, h221km±19km, mb3.5/15, Error ellipse: s-maj=27.2km s-min=14.4km az=1.1*
*NEIC **20** 18:27:54.2±3.1, 19°.32N×145°.07E, h338km±32km, Error ellipse: s-maj=19.0km s-min=10.2km az=95.0*
ISC 20 18:27:43.0±2.4, 19°.40N±0°.10×145°.2E±0°.2, h222km±21km, n19, σ1§02/20, mb3.5/15, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**8.13**	**341**	P	**Pn**	**18 29 37.1**	**-0.7**
	3.3nm,0.3s,baz=279,slow=22,SNR=8.2						
CBIJ				S	**S**	**18 31 04.5**	**-5.4**
	10.0nm,0.3s,baz=286,slow=21,SNR=9.6						
MJAR	**Matsushiro Arr**	**18.13**	**342**	P	**P**	**18 31 43.7**	**+5.1**
	0.2nm,0.3s,baz=169,slow=8.4,SNR=4.3						
KSRS	**Korea Array**	**23.44**	**324**	P	**P**	**18 32 33.0**	**+0.6**
	3.2nm,0.6s,mb4.0,baz=146,slow=8.8,SNR=25						
PETK	**Petropavlovsk-**	**35.02**	**13**	P	**P**	**18 34 15.9**	**+1.7**
	1.1nm,0.6s,mb3.6,baz=200,slow=12,SNR=4.6						
WRA	**Warramunga Arr**	**40.51**	**196**	P	**P**	**18 35 00.6**	**+0.1**
	0.8nm,0.7s,mb3.3,baz=12,slow=9.3,SNR=2.5						
FITZ	**Fitzroy Crossi**	**41.91**	**208**	P	**P**	**18 35 12.4**	**+0.5**
	3.9nm,0.9s,mb3.9,baz=118,slow=19,SNR=6.4						
FITZ				LR	LR	18 52 06.8	
	comp=Z,71nm,21.6s,baz=199,slow=35						
SONM	**Songino Array**	**42.27**	**321**	P	**P**	**18 35 16.0**	**+1.5**
	0.4nm,0.5s,mb3.1,baz=134,slow=8.3,SNR=3.2						
CMAR	**Chiang Mai Arr**	**43.61**	**277**	P	**P**	**18 35 26.9**	**+1.2**
	1.0nm,0.9s,mb3.2,baz=68,slow=6.3,SNR=7.6						
ASAR	**Alice Springs**	**44.19**	**195**	P	**P**	**18 35 29.4**	**-0.7**
	1.6nm,1.0s,mb3.3,baz=346,slow=10,SNR=3.0						
ZALV	**Zalesovo Beam**	**57.14**	**322**	P	**P**	**18 37 06.1**	**-0.3**
	0.3nm,0.3s,mb3.4,baz=108,slow=4.7,SNR=2.8						
MKAR	**Makanchi Array**	**57.60**	**314**	P	**P**	**18 37 08.9**	**-0.8**
	0.2nm,0.4s,mb3.1,baz=84,slow=10,SNR=4.9						
MKAR				PcP	PcP	18 37 59.9	-0.4
	0.1nm,0.3s,baz=106,slow=3.7,SNR=3.1						
KURK	**Kurchatov**	**60.40**	**318**	P	**P**	**18 37 28.9**	**+0.1**
	0.6nm,0.4s,mb3.6,baz=92,slow=7.4,SNR=8.9						
KURK	**Kurchatov**	**60.40**	**318**	P	**P**	**18 37 28.9**	**+0.1**
BVAR	**Borovoye Array**	**65.60**	**320**	P	**P**	**18 38 02.9**	**0.0**
	0.6nm,0.4s,mb3.6,baz=74,slow=8.0,SNR=4.9						
YKA	**Yellowknife Ar**	**77.61**	**28**	P	**P**	**18 39 14.0**	**-0.3**
	0.5nm,0.6s,mb3.3,baz=289,slow=4.8,SNR=3.3						
NVAR	**Mina Array Bea**	**83.12**	**52**	P	**P**	**18 39 45.0**	**+0.8**
	0.7nm,0.7s,mb3.5,baz=268,slow=5.9,SNR=6.2						
JOF	**Joensuu**	**83.16**	**335**	*ep*	**P**	**18 39 41.7**	**-2.1**
	1.5nm,0.4s,mb4.1						
JOF	**Joensuu**	**83.16**	**335**	*ep*	**P**	**18 39 41.7**	**-2.1**
	1.5nm,0.4s,mb4.1						
FINES	**FINESS Array B**	**86.03**	**335**	P	**P**	**18 39 56.3**	**-1.9**
	1.2nm,0.5s,mb3.9,baz=62,slow=4.7,SNR=20						

*DJA **20** 18:30:18.4, 4°.30S×127°.74E, h117km, MLv3.9/8*
*IDC **20** 18:30:18.4±1.5, 4°.69S×128°.17E, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.6/20, mbtmp3.8/5, ML4.3/1, Error ellipse: s-maj=115.2km s-min=26.5km az=63.0*
*ISCJB **20** 18:30:20.6±0.6, 4°.84S±0°.05×128°.0E±0°.1, h33km, mb3.6/4, Error ellipse: s-maj=16.8km s-min=7.0km az=171.5*
ISC 20 18:30:22.8±0.6, 4°.77S±0°.05×128°.1E±0°.1, h35km, n16, σ1§34/13, mb3.6/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**1.08**	**5**	P	**Pn**	**18 30 40.7**	**-0.7**
AAI				S	**Sn**	**18 30 54.0**	**-1.2**
NLAI	**Namlea**	**1.82**	**327**	P	**Pn**	**18 30 45.1**	**-6.5**
TLE	**Tual**	**4.70**	**101**	P	**Pn**	**18 31 34.2**	**+3.0**
	1.2nm220nm,1.9s						
TNTI	**Ternate**	**5.55**	**352**	P	Px	18 31 31.2	
	90nm,1.9s,0.4nm						
LUWI	**Luwuk**	**6.48**	**305**	P	Px	18 31 42.8	
	34nm,1.3s,0.2nm						
BKSI	**Bulukumba**	**7.96**	**266**	P	Px	18 32 07.2	
	11nm,1.7s,0.1nm						
SPSI	**Sidrap Palu**	**8.34**	**275**	P	Px	18 32 10.9	
	9.2nm,1.5s,0.1nm						
KAKA	**Kakadu**	**8.98**	**152**	P	**Pn**	**18 32 31.2**	**+1.1**
	18nm,1.1s						
KNA	**Kununurra**	**10.93**	**177**	P	**Pn**	**18 32 56.4**	**-0.4**
	43nm,1.1s						
WRAB	**Tennant Creek**	**16.26**	**159**	P	**Pn**	**18 34 06.3**	**-2.2**
WRA	**Warramunga Arr**	**16.26**	**159**	Pn	**Pn**	**18 34 05.1**	**-3.5**
	0.4nm,0.3s,baz=341,slow=11,SNR=6.4						
ASAR	**Alice Springs**	**19.61**	**164**	P	**Pn**	**18 34 49.0**	**-0.7**
	1.0nm,0.3s,baz=345,slow=11,SNR=175						
ASAR				PcP	PcP	18 39 08.5	+1.2
	0.0nm,0.3s,baz=336,slow=2.0,SNR=4.4						
CMAR	**Chiang Mai Arr**	**36.86**	**310**	P	**P**	**18 37 28.4**	**+0.3**
	0.3nm,0.7s,mb3.3,baz=134,slow=7.7,SNR=3.5						
MKAR	**Makanchi Array**	**65.34**	**327**	P	**P**	**18 41 03.0**	**+1.6**
	0.8nm,0.6s,mb3.9,baz=115,slow=8.3,SNR=13						
ZALV	**Zalesovo Beam**	**68.76**	**334**	P	**P**	**18 41 22.5**	**-0.5**
	0.3nm,0.3s,mb3.7,baz=120,slow=5.3,SNR=3.6						
KURK	**Kurchatov**	**69.64**	**329**	P	**P**	**18 41 30.0**	**+1.4**
	0.5nm,0.5s,mb3.7,baz=134,slow=5.8,SNR=4.3						

*IDC **20** 18:31:36.2±3.7, 14°.13N×93°.18W, h0km, mb3.9/1, mb1 3.8/4, mb1mx3.6/22, mbtmp3.4/4, ML3.3/3, MS2.8/1, Ms1 2.8/1, ms1mx2.4/32, Error ellipse: s-maj=80.0km s-min=33.4km az=19.0*
*ISCJB **20** 18:31:40.2±1.0, 14°.29N±0°.07×93°.24W±0°.04, h33km, Error ellipse: s-maj=9.7km s-min=5.4km az=178.1*
*MEX **20** 18:31:42.0±1.5, 14°.26N×93°.26W, h19km±132km, MD4.0*
ISC 20 18:31:41.8±1.0, 14°.30N±0°.07×93°.17W±0°.04, h35km, n15, σ1§03/23, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.06**	**55**	*i*P	**Pn**	**18 31 59.1**	**-1.1**
THIG				*i*S	**Sn**	**18 32 14.2**	**+0.4**
PCIG		**1.40**	**358**	*i*P	**Pn**	**18 32 04.4**	**-0.4**
PCIG				*i*S	**Sn**	**18 32 19.7**	**-2.3**
TGIG		**2.47**	**1**	*i*P	**Pn**	**18 32 19.7**	**+0.2**
TGIG				*i*S	**Sn**	**18 32 48.6**	**+0.2**
SCX	**San Cristobal**	**2.48**	**12**	*e*P	**Pn**	**18 32 19.4**	**-0.3**
SCX				*i*S	**Sn**	**18 32 49.7**	**+1.0**
APG	**El Apazote**	**2.71**	**75**	Pn	**Pn**	**18 32 22.8**	**-0.1**
	3.8nm,0.3s,baz=255,slow=3.6,SNR=36						
HUIG	**Huatulco**	**3.19**	**298**	*e*P	**Pn**	**18 32 29.0**	**-0.5**
HUIG				*i*S	**Sn**	**18 33 04.0**	**-2.4**
CMIG	**Matias Romero**	**3.23**	**329**	Pn	**Pn**	**18 32 30.7**	**+0.7**
	1.9nm,0.3s,baz=148,slow=10,SNR=17						
CMIG				Sn	**Sn**	**18 33 06.2**	**-1.1**
	3.3nm,0.3s,baz=130,slow=20,SNR=5.2						
PNIG	**Pinotepa**	**5.21**	**294**	*i*P	**Pn**	**18 32 56.0**	**-1.3**
PNIG				*i*S	**Sn**	**18 33 50.6**	**-5.7**
UTMO	**Huajuapan**	**5.67**	**309**	*e*P	**Pn**	**18 33 04.0**	**+0.4**
UTMO				*i*S	**Sn**	**18 34 08.1**	**+0.6**
PPM	**Popocatepetl**	**7.06**	**313**	*e*P	**Pn**	**18 33 23.6**	**+1.0**
PPM				*i*S	**Sn**	**18 34 43.1**	**+1.5**
MZVM		**7.57**	**311**	*e*P	**Pn**	**18 33 30.4**	**+0.7**
MZVM				*i*S	**Sn**	**18 35 01.6**	**+7.3**
TXAR	**Lajitas Array**	**17.84**	**329**	P	**Pn**	**18 35 49.1**	**+1.8**
	0.0nm,0.3s,baz=143,slow=14,SNR=3.4						
TKL	**Tuckaleechee C**	**22.88**	**20**	LR	LR	18 47 17.9	
	comp=Z,22nm,20.0s,baz=144,slow=41						
YKA	**Yellowknife Ar**	**50.48**	**347**	P	**P**	**18 40 35.9**	**0.0**
	1.2nm,0.7s,baz=152,slow=7.5,SNR=7.9						
CMAR	**Chiang Mai Arr**	**145.33**	**340**	PKPbc	PKPbc	18 51 16.6	0.0
	0.3nm,0.6s,baz=23,slow=1.6,SNR=4.5						

*IDC **20** 18:46:59.7±1.6, 5°.50S×140°.54E, h0km, mb3.9/4, mb1 4.1/8, mb1mx3.8/15, mbtmp3.9/8, ML3.9/4, MS3.1/2, Ms1 3.1/2, ms1mx2.6/20, Error ellipse: s-maj=51.3km s-min=19.5km az=84.0*
*NEIC **20** 18:47:02.1±0.8, 5°.51S×140°.35E, h10km, mb4.3/4, Error ellipse: s-maj=19.5km s-min=9.7km az=78.0*
*DJA **20** 18:47:06, 5°.68S×140°.70E, h30km, mb4.7/7*
*ISCJB **20** 18:47:07.5±1.4, 5°.70S±0°.06×140°.3E±0°.1, h70km±12km, mb3.8/7, Error ellipse: s-maj=21.1km s-min=9.9km az=167.8*
ISC 20 18:47:08.4±1.3, 5°.71S±0°.07×140°.4E±0°.1, h65km±12km, n30, σ0§97/27, mb3.9/7, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPI	**Merauke**	**2.74**	**180**	P	**Pn**	**18 47 50.5**	**+0.5**
MMPI				S	Sx	18 48 36.4	
SMPI	**Sarmi**	**4.05**	**336**	P	**Pn**	**18 48 08.0**	**0.0**
TLE	**Tual**	**7.60**	**270**	P	**Pn**	**18 48 57.9**	**+1.3**
	1.3nm181nm,1.5s						
COEN	**Coen**	**8.64**	**162**	P	**Pn**	**18 49 07.1**	**-3.7**
	67nm,1.6s						
KAKA	**Kakadu**	**10.47**	**228**	*e*Pn	**Pn**	**18 49 36.4**	**+0.6**
	57nm,0.6s						
KAKA				*e*Sn	Sx	18 51 30.0	
KAKA	**Kakadu**	**10.47**	**228**	P	**Pn**	**18 49 34.5**	**-1.3**
	518nm36nm,0.5s						
KNA	**Kununurra**	**15.14**	**228**	P	**Pn**	**18 50 43.7**	**+5.1**
	76nm,1.1s						
WRAB	**Tennant Creek**	**15.30**	**202**	*e*Pn	**Pn**	**18 50 40.2**	**-0.5**
WRAB				*e*Sn	Sx	18 53 21.8	
WRAB	**Tennant Creek**	**15.30**	**202**	P	**Pn**	**18 50 40.5**	**-0.1**
	15nm,2.8s						
WRA	**Warramunga Arr**	**15.31**	**202**	Pn	**Pn**	**18 50 39.2**	**-1.6**
	0.4nm,0.3s,baz=26,slow=13,SNR=4.2						
WRA				Sn	Sx	18 53 27.6	
	0.6nm,0.3s,baz=29,slow=24,SNR=5.4						
WRA				Lg		18 55 14.6	
	0.6nm,0.3s,baz=27,slow=24,SNR=4.6						
WRA	**Warramunga Arr**	**15.31**	**202**	Pn	**Pn**	**18 50 39.2**	**-1.6**
WRA				Sn	Sx	18 53 27.6	
WRA				Lg		18 55 14.6	
CTA	**Charters Tower**	**15.39**	**159**	Pn	**Pn**	**18 50 42.1**	**+0.4**
	0.5nm,0.3s,baz=335,slow=9.9,SNR=5.5						

NLC	**Nalytchevo**	**2.39 351**	P	**Pn**	**18 56 53.3**	**-0.2**
NLC			*i* S	**Sn**	**18 57 20.5**	**-1.0**
SKR	**Severo-Kuril's**	**2.45 268**	*e*PN	**Pn**	**18 56 54.0**	**-0.5**
SKR			*e*S	**Sn**	**18 57 22.5**	**-0.7**
SKR			pmax	pmax		
	comp=N,30nm,0.5s					
SKR			pmax	pmax		
	comp=E,40nm,0.5s					
SKR			pmax	pmax		
	comp=Z,80nm,0.5s					
SKR			smax			
	comp=N,150nm,0.5s					
SKR			smax			
	comp=E,190nm,0.5s					
SKR			smax			
	comp=Z,50nm,0.5s					
MIPR	**Malaya Ipel'ka**	**2.48 307**	*e*P	**Pn**	**18 56 55.5**	**+0.7**
MIPR			*i* S	**Sn**	**18 57 24.2**	**+0.4**
AVH	**Avacha**	**2.56 343**	*e*P	**Pn**	**18 56 56.5**	**+0.5**
AVH			*e*S	**Sn**	**18 57 26.0**	**+0.1**
PETK	**Petropavlovsk-**	**2.69 329**	Pn	**Pn**	**18 56 58.3**	**+0.6**
	comp=Z,2.5nm,0.3s,baz=124,slow=18,SNR=31					
PETK			Sn	**Sn**	**18 57 31.6**	**+2.6**
	comp=Z,4.4nm,0.3s,baz=149,slow=17,SNR=7.6					
PETK	**Petropavlovsk-**	**2.69 329**	PN	**Pn**	**18 56 58.3**	**+0.6**
PETK					18 57 31.6	
PETK			pmax	pmax		
	comp=Z,3.0nm,0.3s					
PETK			smax			
	comp=N,4.0nm,0.3s					
ALID	**Alaid**	**2.80 273**	*e*P	**Pn**	**18 56 59.7**	**+0.4**
ALID			*e*S	**Sn**	**18 57 31.4**	**-0.4**
GNL	**Ganaly**	**3.14 337**	*e*P	**Pn**	**18 57 04.3**	**+0.4**
GNL			*i* S	**Sn**	**18 57 39.4**	**-0.6**
KMNR	**Kamenistaya**	**4.95 2**	P	**Pn**	**18 57 30.5**	**+1.8**
FX1	**Attu Island--F**	**8.43 71**	Pn	**Pn**	**18 58 13.3**	**-3.1**
	comp=N,1.7nm,0.3s,baz=337,slow=5.1,SNR=19					
FX1			Sn	**Sn**	**18 59 40.0**	**-10**
	comp=N,1.2nm,0.3s,baz=213,slow=23,SNR=7.3					
FX1	**Attu Island--F**	**8.43 71**	PN	**Pn**	**18 58 13.3**	**-3.1**
FX1			pmax	pmax		
	comp=Z,2.0nm,0.3s					
BILL	**Bilibino**	**17.55 8**	*e*P	**Pn**	**19 00 21.9**	**+3.4**
BILL			pmax	pmax		
	comp=Z,2.0nm,0.9s					
MKAR	**Makanchi Array**	**49.10 297**	P	**P**	**19 05 00.4**	**-0.3**
	comp=Z,0.4nm,0.5s,mb3.7,baz=55,slow=8.3,SNR=11					
MKAR	**Makanchi Array**	**49.10 297**	*e*P	**P**	**19 05 01.4**	**+0.8**
BVAR	**Borovoye Array**	**51.77 310**	P	**P**	**19 05 18.4**	**-2.2**
	comp=Z,0.4nm,0.5s,mb3.6,baz=64,slow=10,SNR=4.2					
BVAR	**Borovoye Array**	**51.77 310**	*e*P	**P**	**19 05 21.3**	**+0.7**
TXAR	**Lajitas Array**	**71.61 66**	P	**P**	**19 07 35.4**	**+0.7**
	comp=Z,0.4nm,0.7s,mb3.5,baz=302,slow=4.3,SNR=6.9					
TXAR	**Lajitas Array**	**71.61 66**	P	**P**	**19 07 35.4**	**+0.7**

*IDC **20** 19:00:01.3±2.4,4.°10N×95.°75E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.3/23, mbtmp3.4/4, ML3.1/1, Error ellipse: s-maj=96.7km s-min=23.8km az=49.0*
*ISCJB **20** 19:00:03.9±3.9,3.°7N±0.°1×95.°5E±0.°1, h33km±31km, mb3.4/3, Error ellipse: s-maj=24.7km s-min=8.1km az=137.9*
*DJA **20** 19:00:09,4.°58N×96.°52E, h30km, MLv3.6/4*
ISC 20 19:00:04.5±4.1,**3.°8N**±0.°1×**95.°6E**±0.°1,**h25**km±31km,**n10, σ0°99/11, mb3.4/3, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**1.69**	**107**	P	**Pn**	**19 00 31.4**	**-1.1**
TPTI				S	**Sn**	**19 00 52.3**	**-1.0**
BSI	**Banda Aceh**	**1.75**	**351**	P	**Pn**	**19 00 33.3**	**0.0**
BSI				S	**Sn**	**19 00 54.6**	**-0.1**
GSI	**Gunungsitoli**	**3.16**	**140**	P	Px	19 01 03.4	
PSI	**Prapat**	**3.49**	**106**	Pn	**Pn**	**19 00 57.1**	**-0.1**
	1.7nm,0.3s,baz=322,slow=15,SNR=12						
PSI				Sn	**Sn**	**19 01 38.7**	**+0.9**
	1.9nm,0.3s,baz=143,slow=18,SNR=5.2						
KULM	**Kulim**	**5.30**	**73**	P	Px	19 01 10.6	
IPM	**Ipoh**	**5.50**	**82**	P	**Pn**	**19 01 16.5**	**-8.4**
CMAR	**Chiang Mai Arr**	**14.98**	**13**	Pn	**Pn**	**19 03 36.1**	**+1.4**
	0.1nm,0.3s,baz=201,slow=11,SNR=5.1						
MKAR	**Makanchi Array**	**44.39**	**347**	P	**P**	**19 08 11.2**	**-1.8**
	0.8nm,0.6s,mb2.9,baz=142,slow=8.3,SNR=3.3						
WRA	**Warramunga Arr**	**44.78**	**123**	P	**P**	**19 08 16.8**	**+0.2**
	0.8nm,0.6s,mb3.7,baz=301,slow=9.4,SNR=5.4						
ASAR	**Alice Springs**	**46.24**	**128**	P	**P**	**19 08 29.5**	**+1.5**
	0.3nm,0.4s,mb3.6,baz=301,slow=7.7,SNR=22						

*ISCJB **20** 19:00:08.5±0.5,43.°68N±0.°02×8.°15E±0.°03, h10km, Error ellipse: s-maj=3.4km s-min=3.3km az=136.8*
*CSEM **20** 19:00:09.7±0.2,43.°71N×8.°13E, h20km, ML2.5/13, Error ellipse: s-maj=3.8km s-min=3.6km az=128.0*
*LDG **20** 19:00:10.2±0.1,43.°73N×8.°16E, h18km, Md2.4/1, Ml2.4/10, Error ellipse: s-maj=1.9km s-min=1.5km az=60.0*
*GEN **20** 19:00:11.0,43.°74N×8.°10E, h1km, ML1.8*
*STR **20** 19:00:11.0±0.1,43.°72N×8.°12E, h10km, Ml2.3, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*ROM **20** 19:00:11.4±0.5,43.°78N×8.°10E, h8km±2km, Md2.3/4, Ml1.9/5, Error ellipse: s-maj=6.0km s-min=2.7km az=2.0*
ISC 20 19:00:08.8±0.6,**43.°67N**±0.°02×**8.°18E**±0.°03,**h10**km,**n62, σ0°96/113, Corsica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMI	**Imperia**	**0.32**	**319**	Pg	**Pg**	**19 00 16.0**	**+0.9**
IMI				Sg	**Sg**	**19 00 19.5**	**+0.1**
	102nm,0.1s						
IMI	**Imperia**	**0.32**	**319**	P	**Pg**	**19 00 16.0**	**+0.9**
IMI				S	**Sg**	**19 00 19.5**	**+0.1**
NEGI	**Seborga**	**0.39**	**297**	P	**Pg**	**19 00 17.3**	**+0.8**
NEGI				S	**Sg**	**19 00 21.6**	**0.0**
RORO	**Rocca Rossa**	**0.45**	**349**		**Pg**	**19 00 18.0**	**+0.4**
RORO	**Rocca Rossa**	**0.45**	**349**	P	**Pg**	**19 00 18.0**	**+0.4**
RORO				S	**Sg**	**19 00 23.2**	**-0.3**
RONM	**Roccetta Nervi**	**0.47**	**296**	P	**Pg**	**19 00 18.6**	**+0.6**
RONM				S	**Sg**	**19 00 24.4**	**+0.2**
MONE	**Monesi**	**0.51**	**323**	P	**Pg**	**19 00 19.4**	**+0.6**
MONE				S	**Sg**	**19 00 25.2**	**-0.3**
SAOF	**Saorge**	**0.55**	**305**	Pg	**Pg**	**19 00 20.4**	**+0.9**
SAOF				Sg	**Sg**	**19 00 27.7**	**+0.9**
SAOF	**Saorge**	**0.55**	**305**	Pg	**Pg**	**19 00 20.4**	**+0.9**
SAOF				Sg	**Sg**	**19 00 27.7**	**+0.9**
SBF	**Sospel**	**0.57**	**289**	*e*Pg	**Pg**	**19 00 21.1**	**+1.1**
SBF	**Sospel**	**0.57**	**289**	*e*Pn	**Pg**	**19 00 22.0**	**+2.0**
SBF				*e*Sg	**Sg**	**19 00 28.3**	**+0.8**
	254nm,0.4s						
SBF	**Sospel**	**0.57**	**289**	*e*Pg	**Pg**	**19 00 21.1**	**+1.1**
SBF	**Sospel**	**0.57**	**289**	*e*Pn	**Pg**	**19 00 22.0**	**+2.0**
SBF				*e*Sg	**Sg**	**19 00 28.3**	**+0.8**
	127nm,0.4s						
AUTN	**L'Aution**	**0.63**	**301**	Pg	**Pg**	**19 00 22.0**	**+0.9**
AUTN				Sg	**Sg**	**19 00 30.0**	**+0.6**
AUTN	**L'Aution**	**0.63**	**301**	Pg	**Pg**	**19 00 22.0**	**+0.9**
AUTN				Sg	**Sg**	**19 00 30.0**	**+0.6**
LUCF	**Luceram**	**0.64**	**290**	Pg	**Pg**	**19 00 22.3**	**+1.0**
LUCF				Sg	**Sg**	**19 00 31.2**	**+1.5**
LUCF	**Luceram**	**0.64**	**290**	Pg	**Pg**	**19 00 22.3**	**+1.0**
LUCF				Sg	**Sg**	**19 00 31.2**	**+1.5**
QLNO	**Quiliano**	**0.66**	**10**	Pg	**Pg**	**19 00 22.8**	**+1.2**
QLNO				Sg	**Sg**	**19 00 31.4**	**+1.1**
	23nm,0.2s						
QLNO	**Quiliano**	**0.66**	**10**	Pg	**Pg**	**19 00 22.8**	**+1.2**
QLNO				Sg	**Sg**	**19 00 31.4**	**+1.1**
	23nm,0.2s						
TOUF	**Mont Tournerai**	**0.76**	**297**	Pg	**Pg**	**19 00 24.4**	**+1.0**
TOUF				Sg	**Sg**	**19 00 34.1**	**+0.8**
TOUF	**Mont Tournerai**	**0.76**	**297**	Pg	**Pg**	**19 00 24.4**	**+1.0**
TOUF				Sg	**Sg**	**19 00 34.1**	**+0.8**
MVIF	**Mont Vial**	**0.78**	**287**	Pg	**Pg**	**19 00 24.7**	**+0.9**
MVIF				Sg	**Sg**	**19 00 35.0**	**+1.0**
MVIF	**Mont Vial**	**0.78**	**287**	Pg	**Pg**	**19 00 24.7**	**+0.9**
MVIF				Sg	**Sg**	**19 00 35.0**	**+1.0**
ENR	**Entracque**	**0.78**	**315**	P	**Pg**	**19 00 24.2**	**+0.3**
ENR				S	**Sg**	**19 00 33.3**	**-0.7**
STV	**Sant Anna di V**	**0.84**	**313**	Pg	**Pg**	**19 00 25.6**	**+0.5**
STV				Sg	**Sg**	**19 00 35.2**	**-0.8**
	133nm,0.3s						
STV	**Sant Anna di V**	**0.84**	**313**	Pg	**Pg**	**19 00 25.6**	**+0.5**
STV				S	**Sg**	**19 00 35.1**	**-0.9**
PCP	**Piancastagn**	**0.91**	**17**		**Pg**	**19 00 27.7**	**+1.4**
PCP	**Piancastagn**	**0.91**	**17**	P	**Pg**	**19 00 27.6**	**+1.3**
PCP				S	**Sg**	**19 00 38.8**	**+0.7**
DOI	**San Damiano**	**1.07**	**321**	Pg	**Pg**	**19 00 29.7**	**+0.3**
DOI				Sg	**Sg**	**19 00 43.0**	**-0.3**
	43nm,0.3s						
DOI	**San Damiano**	**1.07**	**321**	Pg	**Pg**	**19 00 29.7**	**+0.3**
DOI				Sg	**Sg**	**19 00 43.0**	**-0.3**
	43nm,0.3s						
FRF	**La Foret Royal**	**1.12**	**265**	*e*Pn	**Pn**	**19 00 29.5**	**-1.1**
FRF	**La Foret Royal**	**1.12**	**265**	*e*Pg	**Pg**	**19 00 31.1**	**+0.7**
FRF				*e*Sn	**Sn**	**19 00 42.9**	**-3.1**
FRF				*e*Sg	**Sg**	**19 00 45.6**	**+0.7**
	11nm,0.2s						
FRF	**La Foret Royal**	**1.12**	**265**	*e*Pn	**Pn**	**19 00 29.5**	**-1.1**
FRF	**La Foret Royal**	**1.12**	**265**	*e*Pg	**Pg**	**19 00 31.1**	**+0.7**
FRF				*e*Sn	**Sn**	**19 00 42.9**	**-3.1**
FRF				*e*Sg	**Sg**	**19 00 45.6**	**+0.7**
	5.7nm,0.2s						
PZZ	**Stroppo**	**1.13**	**318**	Pg	**Pg**	**19 00 30.8**	**+0.2**
PZZ				Sg	**Sg**	**19 00 44.7**	**-0.6**
	32nm,0.4s						
PZZ	**Stroppo**	**1.13**	**318**	P	**Pg**	**19 00 30.8**	**+0.2**
PZZ				S	**Sb**	**19 00 44.3**	**-1.0**
PZZ				Sg	**Sg**	**19 00 44.7**	**-0.6**
	32nm,0.4s						
LMR	**La Mourre**	**1.26**	**255**	*e*Pn	**Pn**	**19 00 31.5**	**-1.0**
LMR	**La Mourre**	**1.26**	**255**	*e*P	**Pn**	**19 00 33.5**	**+1.0**
LMR				*e*Sn	**Sn**	**19 00 46.1**	**-3.4**
	5.5nm,0.3s						
LMR	**La Mourre**	**1.26**	**255**	*e*Pn	**Pn**	**19 00 31.5**	**-1.0**
LMR	**La Mourre**	**1.26**	**255**	*e*P	**Pn**	**19 00 33.5**	**+1.0**
LMR				*e*Sn	**Sn**	**19 00 46.1**	**-3.4**
	2.8nm,0.3s						
PGF	**Pioggiola**	**1.27**	**152**	*e*Pn	**Pn**	**19 00 32.7**	**0.0**
PGF				*e*Sn	**Sn**	**19 00 48.3**	**-1.5**
	1.6nm,0.2s						
PGF	**Pioggiola**	**1.27**	**152**	*e*Pn	**Pn**	**19 00 32.7**	**0.0**
PGF				*e*Sn	**Sn**	**19 00 48.3**	**-1.5**
	0.8nm,0.2s						
MBDF	**Montbardon**	**1.46**	**317**	*e*Pn	**Pn**	**19 00 33.6**	**-1.6**
MBDF	**Montbardon**	**1.46**	**317**	*e*Pg	**Pg**	**19 00 36.8**	**-0.1**
MBDF				*e*Sg	**Sg**	**19 00 54.5**	**-1.4**
	11nm,0.3s						
MBDF	**Montbardon**	**1.46**	**317**	*e*Pn	**Pn**	**19 00 33.6**	**-1.6**
MBDF	**Montbardon**	**1.46**	**317**	*e*Pg	**Pg**	**19 00 36.8**	**-0.1**
MBDF				*e*Sg	**Sg**	**19 00 54.5**	**-1.4**
	5.3nm,0.3s						
SMRF	**Simiane la Rot**	**1.91**	**280**	*e*P	**Pn**	**19 00 41.6**	**+0.2**
SMRF	**Simiane la Rot**	**1.91**	**280**	*e*Pg	**Pg**	**19 00 45.2**	**-0.3**
SMRF				*e*Sg	**Sg**	**19 01 09.9**	**-0.3**
	11nm,0.3s						
SMRF	**Simiane la Rot**	**1.91**	**280**	*e*P	**Pn**	**19 00 41.6**	**+0.2**
SMRF	**Simiane la Rot**	**1.91**	**280**	*e*Pg	**Pg**	**19 00 45.2**	**-0.3**
SMRF				*e*Sg	**Sg**	**19 01 09.9**	**-0.3**
	5.4nm,0.3s						
ORIF	**Oris-en-Rattie**	**2.07**	**308**	*e*Pg	**Pg**	**19 00 47.9**	**-0.6**
ORIF				*e*Sg	**Sg**	**19 01 14.5**	**-0.8**
	7.6nm,0.3s						
ORIF	**Oris-en-Rattie**	**2.07**	**308**	*e*Pg	**Pg**	**19 00 47.9**	**-0.6**
ORIF				*e*Sg	**Sg**	**19 01 14.5**	**-0.8**
	3.8nm,0.3s						
LPG	**La Plagne**	**2.09**	**331**	*e*Pn	**Pn**	**19 00 42.4**	**-1.5**
LPG	**La Plagne**	**2.09**	**331**	*e*Pg	**Pg**	**19 00 48.4**	**-0.5**
LPG				*e*Sg	**Sg**	**19 01 14.8**	**-1.2**
	0.9nm,0.2s						
LPG	**La Plagne**	**2.09**	**331**	*e*Pn	**Pn**	**19 00 42.4**	**-1.5**
LPG	**La Plagne**	**2.09**	**331**	*e*Pg	**Pg**	**19 00 48.4**	**-0.5**
LPG				*e*Sg	**Sg**	**19 01 14.8**	**-1.2**
	0.4nm,0.2s						
LPL	**La Plagne**	**2.11**	**331**	*e*Pn	**Pn**	**19 00 42.5**	**-1.7**
LPL	**La Plagne**	**2.11**	**331**	*e*Pg	**Pg**	**19 00 48.6**	**-0.7**
LPL				*e*Sg	**Sg**	**19 01 15.5**	**-1.2**
	3.7nm,0.3s						
LPL	**La Plagne**	**2.11**	**331**	*e*Pn	**Pn**	**19 00 42.5**	**-1.7**
LPL	**La Plagne**	**2.11**	**331**	*e*Pg	**Pg**	**19 00 48.6**	**-0.7**
LPL				*e*Sg	**Sg**	**19 01 15.5**	**-1.2**
	1.9nm,0.3s						
VIVF	**Saint-Julien-l**	**2.78**	**296**	*e*Pg	**Pg**	**19 01 00.7**	**-1.5**
VIVF				*e*Sn	**Sn**	**19 01 22.8**	**-4.2**
VIVF				*e*Sg	**Sg**	**19 01 36.6**	**-1.6**
	2.4nm,0.3s						
VIVF	**Saint-Julien-l**	**2.78**	**296**	*e*Pg	**Pg**	**19 01 00.7**	**-1.5**
VIVF				*e*Sn	**Sn**	**19 01 22.8**	**-4.2**
VIVF				*e*Sg	**Sg**	**19 01 36.6**	**-1.6**
	1.2nm,0.3s						

*IDC **20** 19:18:58.1±1.4,36.°57N×25.°52E, h0km, mb3.4/3, mb1 3.5/5, mb1mx3.3/26, mbtmp3.4/5, ML3.6/2, MS2.8/1, Ms1 2.8/1, ms1mx2.0/26, Error ellipse: s-maj=25.4km s-min=16.0km az=123.0*
*ATH **20** 19:19:00.1,36.°53N×25.°48E, h21km±2km, MD3.6/9, ML3.6*
*THE **20** 19:19:00.8,36.°55N×25.°55E, h4km, ML3.9/3, Error ellipse: s-maj=1.0km s-min=0.4km az=268.0*
*NEIC **20** 19:19:00.1,36.°53N×25.°48E, h21km, ML3.6(ATH), After ATH.*
*ISCJB **20** 19:19:00.3±0.5,36.°56N±0.°02×25.°49E±0.°04, h12km±3km, mb3.2/3, Error ellipse: s-maj=5.5km s-min=3.4km az=175.5*
*CSEM **20** 19:19:00.5±0.1,36.°53N×25.°52E, h10km, ML3.9/3, Error ellipse: s-maj=4.3km s-min=2.9km az=87.0*
ISC 20 19:19:00.8±0.5,**36.°53N**±0.°02×**25.°51E**±0.°04,**h11**km±3km, **n111, σ0°88**/128,**mb3.2**/3,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THR2	**Thira island,**	**0.10**	**215**	P	**Pg**	**19 19 03.8**	**+0.3**
THR2	**Thira island,**	**0.10**	**215**	P	**Pg**	**19 19 03.8**	**+0.3**
THR1	**Thera Island**	**0.17**	**194**	P	**Pg**	**19 19 04.9**	**+0.4**
THR1				S	**Sg**	**19 19 07.5**	**+0.5**
THR1	**Thera Island**	**0.17**	**194**	P	**Pg**	**19 19 04.9**	**+0.4**
THR1				S	**Sg**	**19 19 07.5**	**+0.5**
THR5	**Thira Island,**	**0.17**	**229**	P	**Pg**	**19 19 04.8**	**+0.2**
THR5	**Thira Island,**	**0.17**	**229**	P	**Pg**	**19 19 04.8**	**+0.2**
APE	**Apeiranthos**	**0.54**	**2**	*e*Pn	**Pg**	**19 19 11.2**	**-0.1**
APE				*e*Sn	**Sg**	**19 19 19.0**	**+0.7**
APE	**Apeiranthos**	**0.54**	**2**	P	**Pg**	**19 19 11.2**	**-0.1**
APE				S	**Sg**	**19 19 18.7**	**+0.4**
APE	**Apeiranthos**	**0.54**	**2**	*e*PN	**Pg**	**19 19 11.2**	**-0.1**
APE				*e*SN	**Sg**	**19 19 19.0**	**+0.7**
APE	**Apeiranthos**	**0.54**	**2**	P	**Pg**	**19 19 11.2**	**-0.1**
APE				S	**Sg**	**19 19 18.7**	**+0.4**
NPS	**Neapolis**	**1.27**	**176**	*e*Pn	**Pn**	**19 19 23.5**	**-1.0**
NPS	**Neapolis**	**1.27**	**176**	*e*PN	**Pn**	**19 19 23.5**	**-1.0**
NPS	**Neapolis**	**1.27**	**176**	*e*Pn	**Pn**	**19 19 23.5**	**-1.0**
IDI	**Anoyia**	**1.34**	**202**	Pg	**Pg**	**19 19 24.8**	**-1.7**
	39nm,0.3s,baz=31,slow=11,SNR=274						
IDI				Lg		19 19 41.9	
	34nm,0.3s,baz=279,slow=19,SNR=7.7						
IDI	**Anoyia**	**1.34**	**202**	Pg	**Pg**	**19 19 24.8**	**-1.7**
IDI				Lg		19 19 41.8	
LAST	**Lasithi**	**1.37**	**181**	P	**Pn**	**19 19 24.8**	**-1.0**
LAST				S	**Sb**	**19 19 45.0**	**+1.1**
LAST	**Lasithi**	**1.37**	**181**	P	**Pn**	**19 19 24.8**	**-1.0**
LAST				S	**Sb**	**19 19 45.0**	**+1.1**
ZKR	**Zakros**	**1.53**	**158**	*e*Pn	**Pn**	**19 19 28.1**	**+0.1**
ZKR	**Zakros**	**1.53**	**158**	P	**Pn**	**19 19 27.9**	**-0.1**
ZKR				S	**Sn**	**19 19 48.2**	**+0.3**
ZKR	**Zakros**	**1.53**	**158**	*e*PN	**Pn**	**19 19 28.1**	**+0.1**
ZKR	**Zakros**	**1.53**	**158**	P	**Pn**	**19 19 27.9**	**-0.1**
ZKR				S	**Sn**	**19 19 48.2**	**+0.3**
VAM	**Vamos**	**1.54**	**224**	*e*Pn	**Pn**	**19 19 27.9**	**-0.4**
VAM	**Vamos**	**1.54**	**224**	*e*PN	**Pn**	**19 19 27.9**	**-0.4**
VAM	**Vamos**	**1.54**	**224**	*e*Pn	**Pn**	**19 19 27.9**	**-0.4**
SMG	**Samos**	**1.58**	**42**	*e*Pn	**Pn**	**19 19 30.6**	**+1.8**
SMG	**Samos**	**1.58**	**42**	*e*PN	**Pn**	**19 19 30.6**	**+1.8**
SMG	**Samos**	**1.58**	**42**	*e*Pn	**Pn**	**19 19 30.6**	**+1.8**
SIVA	**Sivas**	**1.61**	**201**	*e*Pn	**Pn**	**19 19 30.1**	**+0.9**
SIVA	**Sivas**	**1.61**	**201**	P	**Pn**	**19 19 29.5**	**+0.3**
SIVA				S	**Sn**	**19 19 51.8**	**+1.8**
SIVA	**Sivas**	**1.61**	**201**	*e*PN	**Pn**	**19 19 30.1**	**+0.9**
SIVA	**Sivas**	**1.61**	**201**	P	**Pn**	**19 19 29.5**	**+0.3**
SIVA	**Sivas**	**1.61**	**201**	*e*Pn	**Pn**	**19 19 30.1**	**+0.9**
SIVA				S	**Sn**	**19 19 51.8**	**+1.8**
KARP	**Karpathos**	**1.66**	**126**	*e*Pn	**Pn**	**19 19 30.4**	**+0.5**
KARP	**Karpathos**	**1.66**	**126**	*e*PN	**Pn**	**19 19 30.4**	**+0.5**
KARP	**Karpathos**	**1.66**	**126**	*e*Pn	**Pn**	**19 19 30.4**	**+0.5**
KARN	**Karanos**	**1.71**	**229**	P	**Pn**	**19 19 30.5**	**-0.1**
KARN	**Karanos**	**1.71**	**229**	*e*PN	**Pn**	**19 19 31.0**	**+0.4**
KARN	**Karanos**	**1.71**	**229**	P	**Pn**	**19 19 30.5**	**-0.1**
KARN	**Karanos**	**1.71**	**229**	*e*Pn	**Pn**	**19 19 31.0**	**+0.4**
VLY	**Voula,Athens**	**1.90**	**314**	*e*Pb	**Pn**	**19 19 32.9**	**-0.3**
VLY				P		19 19 37.3	
VLY	**Voula,Athens**	**1.90**	**314**	*e*PB	**Pn**	**19 19 32.9**	**-0.3**
VLY	**Voula,Athens**	**1.90**	**314**	*e*Pb	**Pn**	**19 19 32.9**	**-0.3**
CHOS	**Chios island**	**1.90**	**13**	P	**Pn**	**19 19 32.7**	**-0.5**
CHOS				S	**Sn**	**19 19 57.8**	**+0.6**
CHOS	**Chios island**	**1.90**	**13**	*e*PB	**Pn**	**19 19 33.0**	**-0.2**
CHOS	**Chios island**	**1.90**	**13**	P	**Pn**	**19 19 32.7**	**-0.5**
CHOS	**Chios island**	**1.90**	**13**	*e*Pb	**Pn**	**19 19 33.0**	**-0.2**
CHOS				S	**Sn**	**19 19 57.8**	**+0.6**
ATHU	**Athens Univers**	**1.99**	**317**	P	**Pn**	**19 19 34.2**	**-0.1**
ATHU				S	**Sn**	**19 20 00.0**	**+0.8**
ATHU	**Athens Univers**	**1.99**	**317**	P	**Pn**	**19 19 34.2**	**-0.1**
ATHU				S	**Sn**	**19 20 00.0**	**+0.8**
PTL	**Penteli**	**2.00**	**320**	*e*Pb	**Pn**	**19 19 34.3**	**-0.3**
PTL	**Penteli**	**2.00**	**320**	*e*PB	**Pn**	**19 19 34.3**	**-0.3**
PTL	**Penteli**	**2.00**	**320**	*e*Pb	**Pn**	**19 19 34.3**	**-0.3**
KYTH	**Kithira**	**2.01**	**264**	*e*Pn	**Pn**	**19 19 34.6**	**-0.1**
KYTH	**Kithira**	**2.01**	**264**	*e*PN	**Pn**	**19 19 34.6**	**-0.1**
KYTH	**Kithira**	**2.01**	**264**	*e*Pn	**Pn**	**19 19 34.6**	**-0.1**
ATH	**Athens Observa**	**2.03**	**316**	*e*Pn	**Pn**	**19 19 34.9**	**0.0**
ATH				P		19 19 40.2	
ATH	**Athens Observa**	**2.03**	**316**	*e*PN	**Pn**	**19 19 34.9**	**0.0**
ATH	**Athens Observa**	**2.03**	**316**	*e*Pn	**Pn**	**19 19 34.9**	**0.0**
GVD	**Gavdhos**	**2.05**	**215**	*e*Pn	**Pn**	**19 19 35.5**	**+0.4**
GVD	**Gavdhos**	**2.05**	**215**	*e*Pn	**Pn**	**19 19 35.5**	**+0.3**
VLI	**Veliai**	**2.08**	**276**	*e*Pb	**Pn**	**19 19 35.2**	**-0.4**
VLI	**Veliai**	**2.08**	**276**	*e*PB	**Pn**	**19 19 35.2**	**-0.4**
VLI	**Veliai**	**2.08**	**276**	*e*Pb	**Pn**	**19 19 35.2**	**-0.4**
ARG	**Arkhangelos**	**2.14**	**98**	P	**Pn**	**19 19 37.5**	**+1.1**
ARG	**Arkhangelos**	**2.14**	**98**	P	**Pn**	**19 19 37.5**	**+1.1**
BLCB	**Balcova**	**2.22**	**33**	P	**Pn**	**19 19 36.8**	**-0.7**
BLCB	**Balcova**	**2.22**	**33**	P	**Pn**	**19 19 36.8**	**-0.7**
LTK	**Loutraki**	**2.52**	**307**	P	**Pn**	**19 19 41.8**	**+0.2**
LTK	**Loutraki**	**2.52**	**307**	P	**Pn**	**19 19 41.8**	**+0.2**
SIGR	**SIGRI**	**2.69**	**6**	P	**Pn**	**19 19 43.3**	**-0.7**
SIGR	**SIGRI**	**2.69**	**6**	P	**Pn**	**19 19 43.3**	**-0.7**
PRK	**Paraskevi**	**2.78**	**12**	*e*Pn	**Pn**	**19 19 44.4**	**-0.8**
PRK	**Paraskevi**	**2.78**	**12**	P	**Pn**	**19 19 44.6**	**-0.6**
PRK	**Paraskevi**	**2.78**	**12**	*e*PN	**Pn**	**19 19 44.4**	**-0.8**
PRK	**Paraskevi**	**2.78**	**12**	P	**Pn**	**19 19 44.6**	**-0.6**
GUR	**Goura**	**2.89**	**300**	P	**Pn**	**19 19 47.3**	**+0.5**
GUR	**Goura**	**2.89**	**300**	*e*PN	**Pn**	**19 19 47.3**	**+0.5**
GUR	**Goura**	**2.89**	**300**	P	**Pn**	**19 19 47.3**	**+0.5**
LKR	**Lokris**	**2.91**	**317**	*e*Pn	**Pn**	**19 19 47.0**	**0.0**
LKR	**Lokris**	**2.91**	**317**	P	**Pn**	**19 19 47.0**	**0.0**
LKR	**Lokris**	**2.91**	**317**	*e*PN	**Pn**	**19 19 47.0**	**0.0**
LKR	**Lokris**	**2.91**	**317**	P	**Pn**	**19 19 47.0**	**0.0**
ATAL	**Atalanti**	**2.92**	**318**	P	**Pn**	**19 19 47.2**	**-0.1**
ATAL				S	**Sn**	**19 20 23.1**	**+0.7**
ATAL	**Atalanti**	**2.92**	**318**	P	**Pn**	**19 19 47.2**	**-0.1**
ATAL				S	**Sn**	**19 20 23.1**	**+0.7**
AOS	**Alonnisos**	**2.93**	**334**	P	**Pn**	**19 19 47.3**	**-0.1**
AOS	**Alonnisos**	**2.93**	**334**	P	**Pn**	**19 19 47.3**	**-0.1**
ITM	**Ithomi**	**2.94**	**284**	*e*Pb	**Pb**	**19 19 50.3**	**-3.0**
ITM	**Ithomi**	**2.94**	**284**	*e*PB	**Pb**	**19 19 50.3**	**-3.0**
ITM	**Ithomi**	**2.94**	**284**	*e*Pb	**Pb**	**19 19 50.3**	**-3.0**
DSF	**Desfina**	**3.02**	**309**	P	**Pn**	**19 19 48.9**	**+0.3**
DSF	**Desf

UTMO *i* S Sn 19 26 36.4 -6.8
TPIG Tehuac#an 4.86 314 *e*P Pn 19 25 43.0 -6.3
TPIG *e*S Sn 19 26 40.3 -3.9
PPM Popocatepetl 6.18 311 *e*P Pn 19 26 02.9 -4.6
PPM *i* S Sn 19 27 12.4 -4.4
TGUH Tegucigalpa,Un 6.30 98 Pn Pn 19 26 08.5 -0.6
48nm,0.6s
PLIG Platanillo 6.48 302 *e*P Pn 19 26 08.0 -3.6
PLIG *e*P 19 26 08.6
IIO Organos 6.59 314 *e*P Pn 19 26 13.5 +0.4
IIO *i* S Sn 19 27 31.4 +4.4
CAIG El Cayaco 6.62 288 *e*P Px 19 25 53.7
CAIG *i* S Sn 19 27 14.2 -13
MZVM 6.70 309 *e*P Pn 19 26 13.9 -0.7
MZVM *i* S Sn 19 27 25.3 -4.3
PTVM Pico Tres Padr 6.87 312 *e*P Pn 19 26 12.0 -4.9
TEIG Tepich 7.30 44 *e*Pn Pn 19 26 23.6 +0.8
5.0nm,0.6s
TEIG *e*Sn Sn 19 27 32.6 -12
ZIIG Zihuatanejo 7.88 290 *i* P Px 19 26 19.1
ZIIG *i* S Sn 19 27 40.5 -18
HKT Hockley 14.97 353 *e*Pn Pn 19 28 05.7 -1.4
5.8nm,0.8s
JCT Junction City 16.36 341 *e*Pn Pn 19 28 24.5 -0.3
45nm,1.0s
628A Black Gap, Mar 16.69 331 ⇓P Pn 19 28 27.8 -1.2
baz=17,SNR=34
627A Terlingua Ranc 16.90 330 ⇓P Pn 19 28 31.0 -0.7
baz=17,SNR=49
TXAR Lajitas Array 16.94 329 P Pn 19 28 31.6 -0.6
0.2nm,0.3s,baz=146,slow=10,SNR=22
TXAR LR LR 19 35 10.8
comp=Z,147nm,21.3s,baz=305,slow=37
DWPF Disney 17.28 39 *e*P Pn 19 28 37.3 +0.9
41nm,1.3s
626A Big Bend Ranch 17.36 328 ⇓P Pn 19 28 37.3 -0.1
baz=17,SNR=24
527A Woodward Ranch 17.58 330 ⇓P Pn 19 28 39.9 -0.2
baz=18,SNR=27
428A Kincaid Ranch, 17.66 334 ⇑P Pn 19 28 40.9 -0.1
baz=18,SNR=22
526A Mary Lane Ranc 17.75 329 ⇓P Pn 19 28 42.4 +0.3
baz=18,SNR=22
427A Hayter Ranch, 18.08 332 ⇑P Pn 19 28 46.5 +0.3
baz=18,SNR=13
426A McDonald Obser 18.22 330 ⇑P Pn 19 28 48.2 +0.4
baz=18,SNR=20
328A Wristen Ranch, 18.28 334 ⇓P Pn 19 28 47.5 -1.1
baz=18,SNR=24
326A Caldwell Ranch 18.73 332 ⇑P Pn 19 28 53.4 -0.7
baz=19,SNR=5.5
425A Indio Mountain 18.78 328 ⇓P Pn 19 28 53.3 -1.5
baz=19,SNR=17
227A Bennet, Jal 19.03 334 ⇓P Pn 19 28 56.5 -1.1
baz=19
325A Bean Ranch, Si 19.25 330 ⇑P Pn 19 28 58.9 -1.4
baz=19
226A Malaga, Loving 19.42 333 ⇑P Pn 19 29 00.6 -1.7
baz=19
MIAR Mount Ida 19.42 0 *e*P Pn 19 29 00.5 -1.8
18nm,0.6s
CLNB Carlsbad 19.49 333 *e*P Pn 19 29 01.5 -1.7
4.5nm,0.7s
324A Moseley Ranch, 19.56 329 ⇑P Pn 19 29 01.6 -2.5
baz=20,SNR=15
127A Arkansas Junct 19.63 335 ⇑P Pn 19 29 02.4 -2.4
baz=20
GDL2 Guadalupe Moun 19.65 332 *e*P Pn 19 29 01.6 -3.5
6.7nm,0.7s
UALR University of 19.69 3 *e*P Pn 19 29 01.4 -4.0
25nm,0.9s
MNTX Cornudas Mount 19.72 329 *e*P Pn 19 29 03.0 -2.9
8.1nm,0.8s
225A Deer Hill, Car 19.79 331 ⇓P Pn 19 29 04.4 -2.3
baz=20
126A Clayton Basin, 19.88 334 ⇑P Pn 19 29 05.4 -2.4
baz=20
224A Cornudas Mount 20.09 330 ⇑P P 19 29 07.4 -0.8
baz=20,SNR=14
Z27A Tatum 20.14 336 ⇓P P 19 29 07.9 -0.7
baz=20,SNR=43
WMOK Wichita Mounta 20.14 348 *e*P P 19 29 08.3 -0.3
11nm,0.9s
WMOK *e*S S 19 32 50.2 -1.7
CPRX Cap Rock 20.15 335 *e*P P 19 29 08.7 0.0
11nm,0.8s
125A Gardner Draw, 20.17 332 ⇓P P 19 29 08.0 -1.0
baz=20,SNR=15
Z26A Caprock 20.41 335 ⇑P P 19 29 10.8 -0.7
baz=20,SNR=27
GOGA Godfrey 20.51 25 *e*P P 19 29 09.5 -3.1
9.9nm,0.8s
MSTX Muleshoe 20.55 338 ⇑P P 19 29 12.4 -0.6
baz=21,SNR=15
124A Stringfield Ra 20.57 331 ⇓P P 19 29 13.3 0.0
baz=21,SNR=13
Y27A Causey 20.62 337 ⇓P P 19 29 13.2 -0.5
baz=21,SNR=11
Z25A Roswell 20.73 333 ⇑P P 19 29 14.6 -0.4
baz=21,SNR=15
Y26A Elida 20.91 336 ⇓P P 19 29 16.4 -0.6
baz=21,SNR=11
123A Bell Site, Whi 20.91 329 ⇑P P 19 29 16.5 -0.5
baz=21
222A Williams Famil 20.93 327 ⇑P P 19 29 16.8 -0.3
baz=21,SNR=7.4
AMTX Amarillo 21.02 341 *e*P P 19 29 17.6 -0.5
75nm,0.9s,mb5.0
Z24A Sheeppen Canyo 21.06 332 ⇓P P 19 29 18.7 +0.2
baz=21,SNR=10
320A Kipp Ranch, An 21.15 323 ⇑P P 19 29 19.5 0.0
baz=21,SNR=12
221A Mesquite Ranch 21.22 325 ⇑P P 19 29 20.6 +0.4
baz=21
Y25A Mesa, Roswell 21.27 334 ⇑P P 19 29 20.8 +0.1
baz=21,SNR=26
X27A F and S Farms, 21.28 338 ⇓P P 19 29 20.1 -0.7
baz=21
122A Conniff Cattle 21.34 328 ⇓P P 19 29 21.3 -0.2
baz=21
Z23A Rita Site, Whi 21.41 330 ⇓P P 19 29 22.3 0.0
baz=21,SNR=15
X26A CR and CF Fran 21.46 337 ⇓P P 19 29 22.2 -0.6
baz=22,SNR=18
220A Playas Peak, P 21.56 324 ⇑P P 19 29 23.9 0.0
baz=22,SNR=14
ROSC El Rosal 21.57 116 P P 19 29 24.9 +0.7
7.6nm,0.5s,mb4.4,baz=95,slow=20,SNR=6.8
ROSC El Rosal 21.57 116 *e*P P 19 29 25.2 +1.0
Y24A Capitan 21.59 333 ⇓P P 19 29 24.3 +0.1
baz=22,SNR=31
121A Cookes Peak, D 21.62 326 ⇓P P 19 29 25.0 +0.5
baz=22,SNR=51
319A Douglas 21.62 321 ⇓P P 19 29 24.5 -0.1
baz=22
W27A Bowe Ranch, En 21.64 339 ⇑P P 19 29 24.1 -0.6
baz=22,SNR=24
WVT Waverly 21.65 13 *e*P P 19 29 24.3 -0.5
5.5nm,0.5s,mb4.2
Z22A Elephant Butte 21.76 329 ⇑P P 19 29 26.1 0.0
baz=22,SNR=18
X25A Clemmons Ranch 21.77 335 ⇓P P 19 29 25.6 -0.6
baz=22
Y23A Lovelace Mesa, 21.87 331 ⇓P P 19 29 27.3 +0.1
baz=22,SNR=21
W26A Owens Ranch, T 21.92 337 ⇑P P 19 29 27.6 -0.1
baz=22
CPCT Cooper Cave 21.93 20 *e*P P 19 29 27.8 0.0
219A White Tail Can 22.05 323 ⇓P P 19 29 29.5 +0.3
baz=22
120A U Bar Ranch, L 22.10 325 ⇓P P 19 29 30.0 +0.3
baz=22
318A Bisbee 22.10 320 ⇓P P 19 29 29.8 +0.1
baz=22,SNR=6.5
X24A Lazy VL Ranch, 22.13 334 ⇑P P 19 29 29.7 -0.3
baz=22,SNR=8.2
Z21A St. Cloud Mine 22.16 328 ⇓P P 19 29 30.8 +0.4
baz=22
W25A X Bar L Ranch, 22.30 336 ⇓P P 19 29 31.3 -0.4
baz=22,SNR=25
Y22A Socorro 22.31 330 ⇑P P 19 29 32.0 +0.1
baz=22
BNM Barren Site 22.32 331 *e*P P 19 29 32.0 0.0
24nm,1.3s,mb4.5
TKL Tuckaleechee C 22.38 22 P P 19 29 33.4 +0.8
2.3nm,0.6s,mb3.8,baz=166,slow=8.6,SNR=3.5
TKL LR LR 19 40 41.0
comp=Z,331nm,18.1s,MS3.8,baz=354,slow=42
X23A Hourglass Bar 22.48 332 ⇓P P 19 29 33.3 -0.3
baz=22
LENM Lemitar 22.50 330 *e*P P 19 29 33.8 -0.1
11nm,0.9s,mb4.3
Z20A Nine Sixteen R 22.50 326 ⇑P P 19 29 34.1 +0.1
baz=22
218A Dragoon 22.50 321 ⇑P P 19 29 34.2 +0.2
baz=22
V26A Tequesquite Ra 22.56 338 ⇑P P 19 29 34.5 0.0
baz=23
119A Ashpeak Ranch, 22.64 324 ⇓P P 19 29 35.2 -0.1
baz=23
W24A Lazy 6 Ranch, 22.67 334 ⇓P P 19 29 35.7 0.0
baz=23,SNR=20
Y21A Point of Rocks 22.72 329 ⇑P P 19 29 36.1 -0.2
baz=23,SNR=16
LAZ Ladron 22.77 330 *e*P P 19 29 37.2 +0.4
16nm,1.3s,mb4.3
X22A Bernardo 22.79 331 ⇑P P 19 29 37.5 +0.5
baz=23
V25A Rancho No Teng 22.90 337 ⇑P P 19 29 37.7 -0.4
baz=23,SNR=26
ANMO Albuquerque 22.91 332 P P 19 29 38.0 -0.2
3.1nm,0.6s,mb3.9,baz=140,slow=12,SNR=9.4
ANMO Albuquerque 22.91 332 *e*P P 19 29 37.8 -0.4
1.6nm,1.0s,mb3.4
SIUC Southern Illin 22.93 9 *e*P P 19 29 37.6 -0.8
56nm,1.2s,mb4.9
W23A Werner Place, 22.95 333 ⇑P P 19 29 38.9 +0.3
baz=23
Y20A Horse Springs, 23.00 327 ⇑P P 19 29 38.9 -0.3
baz=23,SNR=14
Z19A T-Link Ranch, 23.01 325 ⇑P P 19 29 39.5 +0.2
baz=23
U26A Atchley Ranch, 23.08 339 ⇓P P 19 29 39.8 -0.2
baz=23,SNR=11
X21A Alamocita Cree 23.12 329 ⇓P P 19 29 40.6 +0.1
baz=23,SNR=24
W22A Albuquerque 23.19 332 ⇑P P 19 29 41.2 0.0
baz=23
TZTN Tazewell 23.25 21 *e*P P 19 29 39.8 -2.0
18nm,1.0s,mb4.5
Z18A Geronimo 23.29 323 ⇑P P 19 29 42.3 +0.1
baz=23
U25A Circle Dot Ran 23.32 338 ⇓P P 19 29 42.4 0.0
baz=23,SNR=13
117A Oracle 23.34 321 ⇑P P 19 29 42.6 0.0
baz=23
216A Three Points, 23.39 319 ⇑P P 19 29 43.2 0.0
baz=23
USIN University of 23.45 12 *e*P P 19 29 43.5 -0.1
19nm,0.6s,mb4.7
V23A Ortiz Mt. (NFS 23.45 334 ⇑P P 19 29 44.4 +0.8
baz=24,SNR=11
Y19A Nutrioso 23.50 326 ⇑P P 19 29 44.5 +0.4
baz=24
X20A Quemado 23.56 328 ⇓P P 19 29 45.2 +0.6
baz=24,SNR=17
W21A San Fidel 23.59 330 ⇓P P 19 29 45.4 +0.4
baz=24
Z17A San Carlos Hig 23.70 323 ⇓P P 19 29 46.2 +0.3
baz=24
Y18A Canyon Day Jun 23.80 325 ⇓P P 19 29 46.9 +0.1
baz=24
X19A St. Johns 23.88 327 ⇓P P 19 29 48.3 +0.8
baz=24
V22A San Miguel Ran 23.91 333 ⇓P P 19 29 48.1 +0.2
baz=24,SNR=5.6
U23A El Rito 23.96 335 ⇑P P 19 29 48.7 +0.4
baz=24,SNR=12
T25A Trinidad 23.98 339 ⇑P P 19 29 49.5 +1.0
baz=24,SNR=5.1
WCI Wyandotte Cave 24.01 14 *e*P P 19 29 48.2 -0.5
26nm,0.7s,mb4.8
W20A Ramah 24.02 329 ⇓P P 19 29 49.5 +0.7
baz=24,SNR=6.8
OLIL Olney 24.11 11 *e*P P 19 29 49.0 -0.6
26nm,0.9s,mb4.7
V21A Milan 24.15 331 ⇑P P 19 29 50.1 +0.1
baz=24
Y17A Roosevelt 24.20 323 ⇓P P 19 29 51.3 +0.9
baz=24
CBKS Cedar Bluff 24.27 348 *e*P P 19 29 51.0 -0.1
28nm,0.7s,mb4.8
W19A Sanders 24.46 328 ⇓P P 19 29 53.5 +0.7
baz=24
V20A Brimhall 24.54 330 ⇓P P 19 29 53.9 +0.3
baz=25
U21A Nageezi 24.67 332 ⇑P P 19 29 55.6 +0.9
baz=25
Y16A Circle Bar Ran 24.70 323 ⇓P P 19 29 56.0 +0.9
baz=25
V19A Window Rock 24.75 329 ⇑P P 19 29 56.2 +0.7
baz=25
T22A Edith 24.84 334 ⇑P P 19 29 57.4 +1.1
baz=25,SNR=8.8
ELN Prospectdale 24.91 25 *e*P P 19 29 56.2 -0.8
SDCO Great Sand Dun 24.91 337 *e*P P 19 29 57.1 +0.2
6.9nm,1.0s,mb4.1
X16A Lo Mia Camp, P 25.06 324 ⇓P P 19 30 00.2 +1.9
baz=25
T21A Navajo Lake 25.09 333 ⇑P P 19 29 59.5 +0.9
baz=25
V18A Ganado 25.20 328 ⇑P P 19 30 01.0 +1.4
baz=25
Y15A Casa Rosa Ranc 25.26 322 ⇓P P 19 30 01.6 +1.4
baz=25
U19A Dine' College, 25.29 330 ⇑P P 19 30 00.5 +0.1
baz=25,SNR=6.8
X15A Humboldt 25.57 323 ⇓P P 19 30 03.6 +0.6
baz=26
V17A Tonalea, Kykot 25.59 326 ⇑P P 19 30 03.2 +0.2
baz=26,SNR=5.5
T19A Beclabito 25.64 331 ⇑P P 19 30 03.6 +0.1
baz=26
MVCO Mesa Verde 25.70 332 ⇓P P 19 30 04.3 +0.2
baz=26,SNR=7.8
MVCO Mesa Verde 25.70 332 *e*P P 19 30 04.2 +0.1
17nm,1.0s,mb4.5
U18A Rough Rock, Ch 25.72 329 ⇑P P 19 30 04.4 +0.2
baz=26
S21A Coal Bank Pass 25.76 334 ⇓P P 19 30 04.8 +0.2
baz=26
WUAZ Wupatki 25.82 325 ⇑P P 19 30 05.5 +0.3
baz=26
WUAZ Wupatki 25.82 325 *e*P P 19 30 05.3 +0.1
16nm,0.9s,mb4.5
GLA Glamis 26.25 317 ⇓P P 19 30 09.4 +0.3
baz=26
GLA Glamis 26.25 317 *e*P P 19 30 08.0 -1.1
5.1nm,0.6s,mb4.2
R21A Cimarron 26.26 335 ⇑P P 19 30 08.9 -0.2
baz=26
T18A Mexican Hat 26.29 330 ⇓P P 19 30 08.8 -0.6
baz=26,SNR=5.7
Q22A Crested Butte, 26.43 336 ⇓P P 19 30 10.8 +0.2
baz=26
S19A Harvey Farm, M 26.43 332 ⇑P P 19 30 11.2 +0.5
baz=26
R20A Redvale 26.46 333 ⇑P P 19 30 11.5 +0.6
baz=26
V15A Kaibab Nationa 26.49 325 ⇓P P 19 30 11.3 0.0
baz=26
PV01 Paradox Valley 26.49 333 *e*P P 19 30 12.0 +0.7
1um,0.9s
T17A Navajo Res., N 26.64 328 ⇑P P 19 30 13.0 +0.4
baz=27
ATAH Atahualpa 26.75 144 LR LR 19 38 35.9
comp=Z,109nm,20.9s,MS3.4,baz=126,slow=32
SCIA State Center 26.77 1 *e*P P 19 30 12.7 -1.0
58nm,0.3s,mb5.6
ISCO Idaho Springs 26.78 339 *e*P P 19 30 14.3 +0.5
8.6nm,1.1s,mb4.2
S18A Hurst Farm, Bl 26.79 330 ⇓P P 19 30 14.0 +0.1
baz=27,SNR=8.0
OGNE Ogallala 26.81 346 *e*P P 19 30 14.3 +0.3
43nm,1.1s,mb4.9
PV04 Paradox Valley 26.86 333 *e*P P 19 30 14.9 +0.4
V14A Boquillas Ranc 26.88 323 ⇑P P 19 30 15.0 +0.2
baz=27,SNR=5.2
W13A Hualapai Mount 26.98 321 ⇓P P 19 30 15.5 -0.2
baz=27
U15A North Rim 27.00 325 ⇓P P 19 30 16.5 +0.7
baz=27,SNR=5.7
BC3 Big Chuckawall 27.03 317 ⇑P P 19 30 15.6 -0.5
baz=27,SNR=11
S17A Black Ridge (B 27.13 329 ⇑P P 19 30 17.0 0.0
baz=27
IRM Iron Mountain 27.15 318 ⇑P P 19 30 17.2 0.0
baz=27
MONP Monument Peak 27.23 315 ⇑P P 19 30 17.5 -0.4
baz=27
R18A Canyonlands Na 27.30 331 ⇓P P 19 30 18.3 -0.1
baz=27
Q19A Hogan Spring (27.48 333 ⇓P P 19 30 20.6 +0.5
baz=28,SNR=5.9
T15A Red Dirt Ranch 27.48 326 ⇑P P 19 30 20.9 +0.7
baz=28
U14A Mt Trumbull 27.48 324 ⇑P P 19 30 20.5 +0.3
baz=28
V13A Grand Canyon W 27.55 322 ⇑P P 19 30 20.7 -0.1
baz=28,SNR=5.4
P20A De Beque 27.56 335 ⇑P P 19 30 21.3 +0.5
baz=28
BELC Belle Mtn. Jos 27.60 317 ⇓P P 19 30 21.0 -0.2
baz=28
R17A Hanksville Air 27.71 330 ⇓P P 19 30 22.5 +0.3
baz=28
GMRC Granite Mounta 27.87 319 ⇓P P 19 30 23.7 +0.1
baz=28
P19A Cripple Cowboy 27.92 334 ⇓P P 19 30 24.8 +0.7
baz=28
U13A Pakoon Wash 27.93 323 ⇑P P 19 30 23.8 -0.4
baz=28
N22A Wattenberg Ran 27.96 339 ⇓P P 19 30 25.7 +1.3
baz=28
R16A Teasdale 27.98 329 ⇑P P 19 30 25.1 +0.5
baz=28
V12A Nelson 27.98 321 ⇑P P 19 30 24.6 0.0
baz=28
Q18A Rafter H Ranch 27.99 332 ⇑P P 19 30 25.0 +0.3
baz=28
SRU San Rafael 28.17 332 ⇑P P 19 30 26.6 +0.4
baz=28
U12A Valley of Fire 28.27 323 ⇑P P 19 30 27.6 +0.4
baz=28
N21A Black Mountain 28.31 338 ⇑P P 19 30 28.3 +0.9
baz=28
T13A Saint George 28.32 324 ⇑P P 19 30 28.0 +0.4
baz=28
HEC Hector,Ludlow 28.33 318 ⇓P P 19 30 27.9 +0.2
baz=28,SNR=5.5
P18A Preston Nutter 28.46 333 ⇑P P 19 30 29.0 +0.2
baz=28
MSU Marysvale 28.50 329 P P 19 30 28.4 -0.8
23nm,2.1s,mb4.4
P17A Butcher Ranch, 28.56 332 ⇑P P 19 30 29.9 +0.1
baz=29
N20A Spence Gulch, 28.65 337 ⇓P P 19 30 31.7 +1.1
baz=29,SNR=7.0
ECSD EROS Data Cent 28.70 356 *e*P P 19 30 29.9 -1.0
16nm,0.6s,mb4.9
BFSC Mount Baldy Ra 28.85 316 ⇓P P 19 30 32.2 -0.2
baz=29
M21A Separation Pea 29.00 339 ⇑P P 19 30 35.2 +1.6
baz=29,SNR=6.9
RWWY Rawlins 29.01 339 *e*P P 19 30 35.1 +1.4
5.0nm,0.8s,mb4.3
O17A Robinson Place 29.14 333 ⇓P P 19 30 35.6 +0.7
baz=29,SNR=7.5
R13A O'Grain Ranch, 29.19 326 ⇑P P 19 30 36.5 +1.2
baz=29,SNR=7.7
T11A Corn Creek, Al 29.22 323 ⇓P P 19 30 36.0 +0.3
baz=29
S12A Delamar Landin 29.27 324 ⇓P P 19 30 36.1 +0.1
baz=29
L21A Rawlins 29.31 339 ⇑P P 19 30 36.7 +0.3
baz=29
N18A Larsen Ranch, 29.34 335 ⇑P P 19 30 37.0 +0.4
baz=29,SNR=5.9
Q14A Sevier Lake (B 29.42 328 ⇓P P 19 30 37.9 +0.5
baz=30,SNR=7.9
O16A Springville 29.50 332 ⇓P P 19 30 38.2 +0.2
baz=30
DAU Daniels Canyon 29.55 332 *e*P P 19 30 39.3 +0.8
5.4nm,0.8s,mb4.3
LRMC Laurel Mountai 29.60 318 ⇑P P 19 30 39.0 0.0
baz=30
P14A Drum Mountains 29.77 329 ⇓P P 19 30 40.9 +0.5
baz=30
Q13A Wheeler Ranch, 29.78 327 ⇓P P 19 30 41.4 +0.8
baz=30,SNR=17
MPMC Manual Prospec 29.83 319 ⇑P P 19 30 40.4 -0.7
baz=30,SNR=7.2
M18A Lyman 29.88 335 ⇑P P 19 30 41.1 -0.2
baz=30
P13A Bates Ranch, G 30.15 328 ⇓P P 19 30 44.6 +0.8
baz=30
R11A Troy Canyon, C 30.20 324 ⇓P P 19 30 44.9 +0.7
baz=30,SNR=5.6
ISA Isabella 30.23 317 ⇑P P 19 30 44.6 0.0
baz=30
Q12A Willow Creek R 30.27 326 ⇑P P 19 30 45.7 +0.8
baz=30
L18A Fontenelle, Gr 30.28 335 ⇓P P 19 30 45.4 +0.5
baz=30
S10A Tonopah Range, 30.49 323 ⇓P P 19 30 47.4 +0.6
baz=30,SNR=9.3
N15A Stansbury Isla 30.51 331 ⇓P P 19 30 47.5 +0.5
baz=31
R10A Warm Springs 30.57 324 ⇓P P 19 30 48.2 +0.6
baz=31
Q11A Duckwater 30.59 325 ⇑P P 19 30 48.2 +0.5
baz=31,SNR=6.3
HWUT Hardware Ranch 30.66 333 *e*P P 19 30 47.7 -0.5
2.3nm,0.3s,mb4.5
L17A Cokeville 30.77 335 ⇓P P 19 30 49.4 +0.1
baz=31
PDAR Pinedale Array 30.81 337 P P 19 30 49.4 -0.2
1.3nm,0.9s,mb3.8,baz=132,slow=8.8,SNR=6.3
PDAR LR LR 19 44 26.0
comp=Z,252nm,18.1s,MS3.9,baz=50,slow=38
K18A Toltan Ranch, 30.88 336 ⇓P P 19 30 50.6 +0.4
baz=31
L16A Fish Haven 30.93 334 ⇓P P 19 30 51.1 +0.4
baz=31
M15A Larsen Ranch, 30.93 332 ⇓P P 19 30 51.0 +0.3
baz=31
Q10A Clear Creek Ra 30.99 324 ⇓P P 19 30 52.1 +0.9
baz=31,SNR=7.1
O12A Currie 31.13 328 ⇑P P 19 30 53.1 +0.6
baz=31,SNR=12
L15A Malad City 31.34 333 ⇓P P 19 30 55.2 +0.9
baz=31
M14A Sheep Mountain 31.38 331 ⇓P P 19 30 55.1 +0.4
baz=31,SNR=10
O11A Cowboy Ranch, 31.50 327 ⇑P P 19 30 56.8 +1.1
baz=32,SNR=5.4
P10A Eureka 31.58 325 ⇓P P 19 30 57.2 +0.8
baz=32
M13A Montello 31.66 330 ⇑P P 19 30 58.0 +0.9
baz=32,SNR=11
M13A Montello 31.66 330 *e*P P 19 30 57.5 +0.3
16nm,1.3s,mb4.7
K16A Soda Springs 31.67 335 ⇓P P 19 30 57.6 +0.4
baz=32
I18A Diamond G Ranc 31.71 337 ⇑P P 19 30 58.3 +0.8
baz=32
N12A Clover Valley, 31.71 328 ⇑P P 19 30 58.7 +1.2
baz=32
N12A Clover Valley, 31.71 328 *e*P P 19 30 58.1 +0.6
21nm,1.3s,mb4.8
N12A *e* 19 31 05.4
REDW Red Top Meadow 31.81 336 *e*P P 19 30 59.0 +0.6
7.0nm,1.0s,mb4.5
NVAR Mina Array Bea 31.83 322 P P 19 30 59.4 +0.7
7.0nm,0.9s,mb4.5,baz=146,slow=9.6,SNR=49
NVAR PcP PcP 19 33 47.4 -1.3
1.0nm,0.8s,baz=128,slow=2.4,SNR=4.7
LOHW Long Hollow 31.93 336 *e*P P 19 30 59.8 +0.4
1.7nm,0.6s,mb4.0
K15A Arbon 31.95 333 ⇓P P 19 31 00.1 +0.5
baz=32
TPAW Teton Pass 31.96 336 *e*P P 19 31 00.8 +1.1
6.8nm,1.1s,mb4.4
J16A Bone 32.05 335 ⇑P P 19 31 01.0 +0.5
baz=32
M12A Wells 32.07 329 ⇑P P 19 31 01.2 +0.5
baz=32,SNR=7.2
L13A Double Diamond 32.12 331 ⇑P P 19 31 01.3 +0.1
baz=32
K14A Jones Ranch, D 32.12 332 ⇑P P 19 31 01.8 +0.6
baz=32
J15A Blackfoot 32.49 334 ⇓P P 19 31 04.8 +0.4
baz=32

M11A **Holland Ranch,** 32.52 328 ⇑P P 19 31 05.4 +0.7
baz=33,SNR=5.1
L12A **House Creek Ra** 32.67 330 ⇓P P 19 31 06.9 +0.9
baz=33
RLMT **Red Lodge** 32.75 339 ⇑P P 19 31 07.2 +0.6
baz=33
RLMT **Red Lodge** 32.75 339 *e*P P 19 31 06.6 0.0
13nm,1.4s,mb4.7
RLMT *e* pP 19 31 15.2 -4.6
J14A **Carey** 32.90 333 ⇑P P 19 31 08.3 +0.4
baz=33
M10A **I.L. Ranch, Tu** 32.97 328 ⇑P P 19 31 08.9 +0.3
baz=33
G18A **Lazy EL Ranch,** 33.02 339 ⇑P P 19 31 08.9 -0.1
baz=33,SNR=5.1
H16A **Russell Place,** 33.10 337 ⇓P P 19 31 09.9 +0.2
baz=33
AGMN **Agassiz Nation** 33.21 357 *e*P P 19 31 08.8 -1.7
14nm,0.7s,mb5.0
J13A **Cove Ranch, Pi** 33.25 332 ⇑P P 19 31 10.9 -0.1
baz=33
WCN **Washoe City** 33.26 322 ⇓P P 19 31 11.5 +0.3
baz=33
L10A **Juniper Basin** 33.34 328 ⇓P P 19 31 12.7 +0.9
baz=33
I14A **Mackay** 33.35 334 ⇓P P 19 31 13.1 +1.2
baz=33
HLID **Hailey** 33.48 332 ⇑P P 19 31 13.6 +0.6
baz=34,SNR=8.0
HLID **Hailey** 33.48 332 *e*P P 19 31 13.0 0.0
4.8nm,1.0s,mb4.4
J12A **Stokes Ranch,** 33.55 331 ⇓P P 19 31 14.0 +0.3
baz=34
H15A **Lima** 33.58 335 ⇑P P 19 31 14.5 +0.7
baz=34
F18A **Big Timber** 33.58 340 ⇓P P 19 31 14.3 +0.5
baz=34,SNR=5.2
I13A **Wildhorse Cree** 33.63 333 ⇑P P 19 31 14.6 +0.3
baz=34
K11A **Parker Ranch,** 33.64 330 ⇑P P 19 31 14.8 +0.4
baz=34
G16A **Moss Hill, Enn** 33.75 337 ⇓P P 19 31 16.2 +0.8
baz=34
MCMT **McKenzie Canyo** 33.83 335 *e*P P 19 31 17.0 +0.9
3.5nm,0.9s,mb4.3
H14A **Leadore** 33.87 334 ⇓P P 19 31 17.3 +0.9
baz=34,SNR=6.2
F17A **Fitzpatrick Pl** 33.91 339 ⇑P P 19 31 17.4 +0.7
baz=34,SNR=19
G15A **Dillon** 33.97 336 ⇓P P 19 31 17.8 +0.6
baz=34
I12A **Atlanta** 33.99 332 ⇓P P 19 31 18.1 +0.6
baz=34,SNR=5.1
MFID **Camas Ranch** 34.02 331 ⇑P P 19 31 17.7 0.0
baz=34
BOZ **Bozeman (W)** 34.04 337 ⇑P P 19 31 19.0 +1.1
baz=34
BOZ **Bozeman (W)** 34.04 337 *e*P P 19 31 18.3 +0.4
2.7nm,1.0s,mb4.1
K10A **MacKenzie Ranc** 34.05 329 ⇑P P 19 31 18.2 +0.2
baz=34
F16A **Kennard Place,** 34.16 337 ⇑P P 19 31 19.6 +0.8
baz=34
DLMT **Dillon** 34.17 336 *e*P P 19 31 19.5 +0.5
14nm,1.4s,mb4.7
DLMT *e* 19 31 27.5
H13A **Challis** 34.21 333 ⇓P P 19 31 20.2 +0.9
baz=34
E18A **Harlowton** 34.23 340 ⇓P P 19 31 20.0 +0.6
baz=34,SNR=9.3
H12A **Diamond D Ranc** 34.46 333 ⇑P P 19 31 22.0 +0.5
baz=34,SNR=10
E17A **Martinsdale** 34.46 339 ⇑P P 19 31 21.7 +0.3
baz=34
I11A **Placerville** 34.46 331 ⇓P P 19 31 22.1 +0.6
baz=34,SNR=9.1
LRM **Limekiln Ridge** 34.50 337 *e*P P 19 31 21.2 -0.6
84nm,1.4s,mb5.5
F15A **Butte** 34.53 337 ⇓P P 19 31 22.7 +0.6
baz=35
G13A **Cobalt** 34.62 334 ⇓P P 19 31 22.9 0.0
baz=35
WVOR **Wild Horse Val** 34.72 327 *e*P P 19 31 23.3 -0.4
25nm,1.4s,mb5.0
WVOR *e* pP 19 31 31.5 -5.6
E16A **East Helena** 34.81 338 ⇑P P 19 31 24.6 +0.1
baz=35,SNR=6.6
F14A **Wisdom** 34.85 336 ⇓P P 19 31 25.1 +0.2
baz=35
J09A **Fry Pan Ranch,** 34.91 329 ⇑P P 19 31 25.6 +0.2
baz=35,SNR=5.6
D17A **Six Diamond Ra** 35.00 340 ⇑P P 19 31 26.5 +0.4
baz=35,SNR=11
E15A **Deer Lodge** 35.08 337 ⇑P P 19 31 27.0 +0.2
baz=35
H11A **Donnelly** 35.09 332 ⇑P P 19 31 27.1 +0.1
baz=35,SNR=10
ULM **Lac du Bonnet** 35.16 358 P P 19 31 25.7 -1.7
9.5nm,0.8s,mb4.8,baz=184,slow=9.3,SNR=6.9
ULM LR LR 19 48 23.8
comp=Z,128nm,18.1s,MS3.7,baz=191,slow=40
ULM **Lac du Bonnet** 35.16 358 *e*P P 19 31 25.4 -2.0
4.0nm,0.6s,mb4.5
D16A **Dana Ranch, Ca** 35.19 339 ⇑P P 19 31 28.1 +0.3
baz=35
F13A **Darby** 35.22 335 ⇑P P 19 31 27.9 -0.1
baz=35
MOD **Modoc** 35.26 325 *e*P P 19 31 28.2 -0.3
J08A **Circle Bar Ran** 35.29 328 ⇓P P 19 31 28.5 -0.2
baz=35,SNR=11
H10A **Noah's Angus R** 35.35 331 ⇓P P 19 31 29.0 -0.1
baz=35
I09A **Lost Marbles R** 35.36 329 ⇑P P 19 31 29.1 -0.2
baz=35,SNR=10
E14A **Clinton** 35.40 336 ⇑P P 19 31 29.6 +0.1
baz=35
C17A **Wharram Farm,** 35.45 340 ⇑P P 19 31 30.2 +0.3
baz=36,SNR=9.2
D15A **Lincoln** 35.55 338 ⇑P P 19 31 30.8 -0.1
baz=36
F12A **Elk City** 35.58 334 ⇑P P 19 31 31.1 -0.1
baz=36,SNR=19
E13A **Victor** 35.69 335 ⇑P P 19 31 31.9 -0.1
baz=36
CHMT **Chamberlain Mo** 35.72 337 *e*P P 19 31 31.9 -0.4
2.0nm,0.7s,mb4.2
G11A **Walters Elk Ra** 35.75 332 ⇑P P 19 31 31.9 -0.7
baz=36,SNR=12
B18A **Beardsley Farm** 35.80 342 ⇑P P 19 31 33.2 +0.2
baz=36
BMO **Blue Mountains** 35.81 331 *e*P P 19 31 31.6 -1.5
8.7nm,1.8s,mb4.4
MSO **Missoula** 35.91 336 *e*P P 19 31 33.8 -0.1
3.5nm,1.0s,mb4.2
C16A **Fuhringer Ranc** 35.92 339 ⇓P P 19 31 33.8 -0.2
baz=36,SNR=7.1
D14A **Greenough** 35.95 337 ⇓P P 19 31 34.0 -0.3
baz=36
B17A **L&G Farms, Che** 36.03 341 ⇑P P 19 31 35.2 +0.3
baz=36
G10A **Bishop Farm, J** 36.05 332 ⇑P P 19 31 34.9 -0.3
baz=36
C15A **Salmond Ranch,** 36.20 338 ⇑P P 19 31 36.6 +0.2
baz=36
H08A **Prairie City** 36.22 329 ⇓P P 19 31 36.5 -0.1
baz=36,SNR=5.4
A18A **Metzger Ranch,** 36.29 342 ⇑P P 19 31 37.6 +0.4
baz=36
I07A **Izee** 36.33 328 ⇓P P 19 31 36.9 -0.7
baz=36
D13A **Huson** 36.33 336 ⇓P P 19 31 37.4 -0.1
baz=36
G09A **Cove** 36.35 331 ⇓P P 19 31 37.2 -0.5
baz=36,SNR=9.7
SWMT **Swartz Lake** 36.49 337 *e*P P 19 31 37.8 -1.1
3.2nm,0.9s,mb4.2
F10A **Beach Ranch, E** 36.62 332 ⇑P P 19 31 39.7 -0.3
baz=37,SNR=13
YBMT **Yellow Bay** 36.79 337 *e*P P 19 31 41.3 -0.2
3.5nm,0.8s,mb4.2
C13A **Hot Springs** 36.86 336 ⇓P P 19 31 41.5 -0.5
baz=37
B13A **Whitefish** 37.39 337 ⇓P P 19 31 46.7 +0.2
baz=37
A14A **Double T Ranch** 37.51 339 ⇑P P 19 31 47.7 +0.2
baz=38,SNR=5.8
IRO **Indian Ridge** 37.73 326 P P 19 31 48.9 -0.5
A13A **Flathead Natio** 37.83 338 ⇑P P 19 31 50.3 +0.1
baz=38
KEBM **Edson Butte** 38.19 323 P P 19 31 53.3 0.0
LON **Longmire** 39.35 329 *e*P P 19 32 02.4 -0.6
6.0nm,0.9s,mb4.3
LPAZ **La Paz** 40.08 140 P P 19 32 06.6 -2.8
0.5nm,0.5s,mb3.5,baz=5.5,slow=11,SNR=3.9
LPAZ LR LR 19 47 09.2
comp=Z,154nm,20.2s,MS3.8,baz=195,slow=34
LPAZ **La Paz** 40.08 140 P P 19 32 06.6 -2.8
LPAZ LR LR 19 47 09.2
NLWA **Neilton Lookou** 40.82 329 ⇓P P 19 32 14.9 -0.3
baz=41
SIV **San Ignacio** 44.60 132 P P 19 32 41.5 -4.7
0.8nm,0.7s,mb3.7,baz=277,slow=13,SNR=3.5
SCHQ **Schefferville** 44.85 22 LR LR 19 53 10.4
comp=Z,317nm,19.4s,MS4.2,baz=110,slow=38
YKA **Yellowknife Ar** 49.65 347 P P 19 33 24.2 -0.7
6.0nm,0.7s,mb4.7,baz=151,slow=7.5,SNR=41
YKA PcP PcP 19 34 43.2 -2.4
0.9nm,0.8s,baz=153,slow=4.4,SNR=4.9
YKA **Yellowknife Ar** 49.65 347 P P 19 33 24.2 -0.7
YKA PcP PcP 19 34 43.2 -2.4
RKT **Rikitea** 55.40 228 *e*LR LR 19 50 09.3
222nm,29.0s
BMRM **Bremner River** 58.51 334 *e*P P 19 34 29.5 0.0
15nm,1.4s,mb4.8
EGAK **Eagle** 59.14 338 *e*P P 19 34 32.5 -1.3
2.0nm,0.8s,mb4.2
PLCA **Paso Flores** 59.50 160 LR LR 19 55 35.8
comp=Z,181nm,21.7s,MS4.2,baz=90,slow=31
PAX **Paxson** 59.83 335 *e*P P 19 34 37.8 -0.8
18nm,1.6s,mb4.8
TRF **Thorofare Moun** 62.00 335 *e*P P 19 34 52.5 -0.8
47nm,1.6s,mb5.4
KTH **Kantishna Hill** 62.30 335 *e*P P 19 34 53.6 -1.7
5.2nm,0.8s,mb4.7
BPAW **Bear Paw Mtn.** 62.55 335 *e*P P 19 34 55.2 -1.7
5.3nm,0.8s,mb4.7
PPLA **Purkeypile** 62.58 334 *e*P P 19 34 55.7 -1.5
28nm,1.6s,mb5.2
PPT **Papeete** 63.92 242 *e*LR LR 19 54 04.6
90nm,25.5s
PPT **Papeete** 63.92 242 LR LR 19 55 59.7
comp=Z,111nm,20.2s,MS4.0,baz=11,slow=30
TTA **Tatalina** 64.23 333 *e*P P 19 35 06.1 -2.0
8.2nm,1.4s,mb4.6
SUMG **Summit** 65.68 16 *e*P P 19 35 18.0 +0.6
11nm,0.8s,mb5.0
EVO **Evora** 77.47 53 *e*P P 19 36 27.5 -1.5
EVO *e*MLR MLR
comp=Z,104nm,19.8s,MS3.9
EKA **Eskdalemuir Ar** 78.09 36 P P 19 36 30.9 -1.1
comp=Z,4.2nm,0.8s,mb4.4,baz=279,slow=5.4,SNR=11
BILL **Bilibino** 79.88 338 *e*P P 19 36 40.8 -0.8
comp=Z,12nm,1.1s,mb4.8
ESDC **Sonseca Array** 80.36 52 P P 19 36 44.5 -0.3
comp=Z,0.7nm,0.3s,mb4.0,baz=313,slow=6.9,SNR=14
ESDC LR LR 20 07 17.2
comp=Z,71nm,20.5s,MS4.0,baz=275,slow=32
GRR **Gorron** 80.78 42 *e*P P 19 36 45.8 -1.0
FLN **La Foliniere** 80.94 42 *e*P P 19 36 46.9 -0.8
FLN *e*MLR MLR
comp=Z,171nm,23.0s,MS4.0
FLN **La Foliniere** 80.94 42 *e*P P 19 36 46.9 -0.8
FLN LR LR
comp=Z,170nm,23.0s,MS4.3
LDF **La Druitiere** 81.21 42 *e*P P 19 36 47.5 -1.6
comp=Z,12nm,0.9s,mb4.5
LDF **La Druitiere** 81.21 42 *e*P P 19 36 47.5 -1.6
comp=Z,5.8nm,0.9s,mb4.5
MDT **Midelt** 81.25 58 P P 19 36 50.1 +0.4
comp=Z,1.6nm,0.9s,mb4.0,baz=315,slow=5.7,SNR=3.3
MFF **Saint Martin d** 81.64 44 *e*P P 19 36 49.6 -1.8
comp=Z,6.0nm,0.9s,mb4.2
MFF **Saint Martin d** 81.64 44 *e*P P 19 36 49.6 -1.8
comp=Z,3.0nm,0.9s,mb4.2
SJPF **Ste Jean** 81.66 48 *e*P P 19 36 51.6 0.0
comp=Z,55nm,1.6s,mb4.9
SJPF **Ste Jean** 81.66 48 *e*P P 19 36 51.6 0.0
comp=Z,27nm,1.6s,mb4.9
ETSF **Etsaut** 82.18 48 *e*P P 19 36 53.9 -0.5
comp=Z,3.7nm,0.6s,mb4.2
ETSF **Etsaut** 82.18 48 *e*P P 19 36 53.9 -0.5
comp=Z,1.9nm,0.6s,mb4.2
LFF **La Frestale** 82.62 46 *e*P P 19 36 55.8 -0.8
EPF **Esparros** 82.79 48 *e*P P 19 36 56.9 -0.7
comp=Z,8.2nm,0.8s,mb4.5
EPF **Esparros** 82.79 48 *e*P P 19 36 56.9 -0.7
comp=Z,4.1nm,0.8s,mb4.5
RJF **Les Rejaudoux** 83.07 45 *e*P P 19 36 58.0 -0.9
RJF *e*MLR MLR
comp=Z,138nm,22.0s,MS4.0
RJF **Les Rejaudoux** 83.07 45 *e*P P 19 36 58.0 -0.9
RJF LR LR
comp=Z,140nm,22.0s,MS4.3
TCF **Toulx Ste Croi** 83.29 44 *e*P P 19 36 58.9 -1.2
comp=Z,6.8nm,0.8s,mb4.4
TCF **Toulx Ste Croi** 83.29 44 *e*P P 19 36 58.9 -1.2
comp=Z,3.4nm,0.8s,mb4.4
CAF **Calviac** 83.54 45 *e*P P 19 37 00.3 -1.1
BGF **Bois d'Agland** 83.65 44 *e*P P 19 37 00.7 -1.2
comp=Z,12nm,0.7s,mb4.8
BGF **Bois d'Agland** 83.65 44 *e*P P 19 37 00.7 -1.2
comp=Z,6.1nm,0.7s,mb4.8
AVF **Avril sur Loir** 83.92 43 *e*P P 19 37 01.9 -1.4
comp=Z,6.9nm,0.8s,mb4.6
AVF **Avril sur Loir** 83.92 43 *e*P P 19 37 01.9 -1.4
comp=Z,3.5nm,0.8s,mb4.5
SSF **Saint Saulge** 83.95 43 *e*P P 19 37 02.2 -1.2
comp=Z,6.5nm,0.7s,mb4.6
SSF **Saint Saulge** 83.95 43 *e*P P 19 37 02.2 -1.2
comp=Z,3.3nm,0.7s,mb4.6
NB2 **NORSAR Subarra** 84.02 28 P P 19 37 04.3 +0.8
comp=Z,3.8nm,0.7s,mb4.6,baz=291,slow=5.1
NOA **NORSAR Array B** 84.02 28 P P 19 37 04.6 +1.2
comp=Z,6.3nm,0.8s,mb4.8,baz=293,slow=5.0,SNR=16
NOA LR LR 20 13 57.2
comp=Z,65nm,18.6s,MS4.0,baz=300,slow=35
MTLF **Montolieu** 84.05 47 *e*P P 19 37 03.0 -1.0
comp=Z,7.6nm,0.9s,mb4.5
MTLF **Montolieu** 84.05 47 *e*P P 19 37 03.0 -1.0
comp=Z,3.8nm,0.9s,mb4.5
LOR **Lormes** 84.13 43 *e*P P 19 37 03.3 -1.0
comp=Z,8.9nm,0.9s,mb4.6
LOR *e*MLR MLR
comp=Z,116nm,18.2s,MS4.0
LOR **Lormes** 84.13 43 *e*P P 19 37 03.3 -1.0
comp=Z,4.4nm,0.9s,mb4.6
LOR LR LR
comp=Z,120nm,18.3s,MS4.3
SMF **Signal de Mont** 84.29 43 *e*P P 19 37 04.6 -0.5
WLF **Walferdange** 84.92 40 *e*P P 19 37 08.9 +0.7
comp=Z,14nm,1.1s,mb5.0
LASF **Ste Croix** 85.00 46 *e*P P 19 37 08.5 -0.3
comp=Z,9.2nm,1.0s,mb4.6
BUG **Bochum--Univer** 85.06 38 *e*P P 19 37 09.0 +0.1
comp=Z,8.0nm,0.7s,mb5.0
IBBN **Ibbenburen** 85.08 37 *e*P P 19 37 09.9 +0.9
comp=Z,10.0nm,0.8s,mb5.0
VIVF **Saint-Julien-l** 85.34 45 *e*P P 19 37 10.3 -0.2
comp=Z,17nm,1.1s,mb4.8
VIVF **Saint-Julien-l** 85.34 45 *e*P P 19 37 10.3 -0.2
comp=Z,8.6nm,1.1s,mb4.8
HFS **Hagfors** 85.49 29 P P 19 37 11.9 +1.0
comp=Z,2.1nm,0.7s,mb4.3,baz=267,slow=9.2,SNR=3.5
HAU **Haudompre** 85.53 42 *e*P P 19 37 10.7 -0.7
comp=Z,20nm,0.8s,mb5.1
HAU *e*MLR MLR
comp=Z,104nm,19.8s,MS3.9
HAU **Haudompre** 85.53 42 *e*P P 19 37 10.7 -0.7
comp=Z,9.8nm,0.8s,mb5.1
HAU LR LR
comp=Z,100nm,19.8s,MS4.2
ARCES **ARCESS Array B** 85.66 18 P P 19 37 10.8 -0.8
comp=Z,3.6nm,0.8s,mb4.6,baz=305,slow=4.3,SNR=8.2
ARCES LR LR 20 14 09.1
comp=Z,92nm,21.9s,MS4.1,baz=102,slow=35
ARCES **ARCESS Array B** 85.66 18 P P 19 37 10.8 -0.8
ARCES LR LR 20 14 09.1
CABF **La Chapelle** 85.78 43 *e*P P 19 37 12.1 -0.5
comp=Z,22nm,1.0s,mb5.0
CABF **La Chapelle** 85.78 43 *e*P P 19 37 12.1 -0.5
comp=Z,11nm,1.0s,mb5.0
HINF **Hinteralfeld** 85.91 42 *e*P P 19 37 12.3 -1.0
comp=Z,13nm,0.8s,mb4.9
HINF **Hinteralfeld** 85.91 42 *e*P P 19 37 12.3 -1.0
comp=Z,6.7nm,0.8s,mb4.9
ECH **Echery** 85.99 41 *e*P P 19 37 13.4 -0.2
comp=Z,3.9nm,0.8s,mb4.7
CDF **Champ du Feu** 86.00 41 *e*P P 19 37 13.0 -0.7
comp=Z,13nm,0.9s,mb4.8
CDF **Champ du Feu** 86.00 41 *e*P P 19 37 13.0 -0.7
comp=Z,6.4nm,0.9s,mb4.8
BSEG **Bad Segeberg** 86.01 35 *e*P P 19 37 14.2 +0.6
comp=Z,19nm,1.0s,mb5.3
ORIF **Oris-en-Rattie** 86.14 45 *e*P P 19 37 14.2 -0.3
comp=Z,5.9nm,0.8s,mb4.6
ORIF *e*MLR MLR
comp=Z,125nm,22.0s,MS4.0
ORIF **Oris-en-Rattie** 86.14 45 *e*P P 19 37 14.2 -0.3
comp=Z,3.0nm,0.8s,mb4.6
TNS **Taunus Mts** 86.16 39 *e*P P 19 37 14.5 +0.1
comp=Z,25nm,0.9s,mb5.4
SMRF **Simiane la Rot** 86.22 46 *e*P P 19 37 14.9 +0.1
comp=Z,22nm,0.9s,mb5.1
SMRF **Simiane la Rot** 86.22 46 *e*P P 19 37 14.9 +0.1
comp=Z,22nm,0.9s,mb5.4
NRDL **Niedersach Rie** 86.38 37 *e*P P 19 37 16.2 +0.7
comp=Z,9.0nm,1.1s,mb4.9
LPL **La Plagne** 86.54 44 *e*P P 19 37 16.3 -0.1
LPG **La Plagne** 86.56 44 *e*P P 19 37 16.7 +0.2
MBDF **Montbardon** 86.81 45 *e*P P 19 37 18.2 +0.5
comp=Z,17nm,0.8s,mb5.0
MBDF **Montbardon** 86.81 45 *e*P P 19 37 18.2 +0.5
comp=Z,8.4nm,0.8s,mb5.0
LMR **La Mourre** 87.05 46 *e*P P 19 37 18.1 -0.9
comp=Z,16nm,1.0s,mb4.9
LMR **La Mourre** 87.05 46 *e*P P 19 37 18.1 -0.9
comp=Z,7.8nm,1.0s,mb4.9
FRF **La Foret Royal** 87.08 46 *e*P P 19 37 18.3 -0.8
comp=Z,12nm,0.9s,mb4.8
FRF **La Foret Royal** 87.08 46 *e*P P 19 37 18.3 -0.8
comp=Z,5.9nm,0.9s,mb4.8
DBIC **Dimbokro** 87.19 84 P P 19 37 18.3 -1.8
comp=Z,5.0nm,0.9s,mb4.7,baz=250,slow=4.9,SNR=4.5
MOX **Moxa** 87.92 38 *e*P P 19 37 23.1 +0.2
comp=Z,2.0nm,0.9s,mb4.3
GRA1 **Grafenberg Arr** 88.02 39 *e*P P 19 37 24.1 +0.7
comp=Z,6.0nm,0.9s,mb4.8
GRF **Grafenberg Arr** 88.02 39 *e*P P 19 37 24.1 +0.7
comp=Z,6.0nm,0.9s,mb4.8
GUNZ **Gunzen** 88.44 38 *e*P P 19 37 26.4 +1.0
CLL **Collm** 88.48 37 *e*P P 19 37 25.6 0.0
comp=Z,3.0nm,0.9s,mb4.5
WERN **Wernitzgruen** 88.50 38 *e*P P 19 37 25.6 -0.1
TANN **Tannenbergstha** 88.50 38 *e*P P 19 37 26.2 +0.5
comp=Z,3.0nm,1.0s,mb4.6
NKC **Novy Kostel** 88.56 38 *e*P P 19 37 26.4 +0.4
ROTZ **Rotzenmuhle** 88.59 39 *e*P P 19 37 26.6 +0.5
comp=Z,8.0nm,1.5s,mb4.8
PGF **Pioggiola** 89.04 46 *e*P P 19 37 27.9 -0.5
comp=Z,25nm,1.1s,mb5.1
PGF **Pioggiola** 89.04 46 *e*P P 19 37 27.9 -0.5
comp=Z,13nm,1.1s,mb5.2
BRG **Berggiesshubel** 89.20 37 *e*P P 19 37 29.1 +0.1
comp=Z,6.0nm,1.1s,mb4.8
WET **Wettzell** 89.23 39 *e*P P 19 37 29.4 +0.3
comp=Z,5.0nm,1.0s,mb4.8
GEC2 **GERESS Array S** 89.84 39 *e*P P 19 37 31.8 -0.2
FINES **FINESS Array B** 90.25 25 P P 19 37 34.2 +0.5
comp=Z,1.2nm,0.7s,mb4.4,baz=321,slow=2.4,SNR=5.7
FINES LR LR 20 17 54.1
comp=Z,78nm,19.9s,MS4.1,baz=174,slow=35
FINES **FINESS Array B** 90.25 25 P P 19 37 34.2 +0.5
FINES LR LR 20 17 54.1
TORD **Torodi Ar. Bea** 91.73 76 P P 19 37 39.8 -1.7
comp=Z,0.4nm,0.5s,mb4.0,baz=291,slow=5.0,SNR=5.3
KOLL **Kolacno** 92.79 38 *e*P P 19 37 46.9 +1.2
VYHS **Vyhne** 93.08 38 *e*P P 19 37 47.6 +0.5
comp=Z,3.1nm,1.3s,mb4.6
KECS **Kecovo** 94.06 37 *e*P P 19 37 52.5 +0.9
comp=Z,2.6nm,1.0s,mb4.6
CRVS **Cervenica-Dubn** 94.43 37 *e*P P 19 37 57.1 +3.8
AKASG **Malin Array Be** 97.75 33 P P 19 38 07.0 -1.3
comp=Z,0.4nm,0.2s,mb4.5,baz=306,slow=6.3,SNR=3.7
AKASG LR LR 20 24 53.1
comp=Z,70nm,18.5s,MS4.2,baz=285,slow=37
CN2 **Changchun** 111.39 331 *e*PKP PKiKP 19 43 03.0 -4.3
MKAR **Makanchi Array** 118.35 3 PKP PKPdf 19 43 17.5 -3.0
comp=Z,0.4nm,0.7s,baz=35,slow=4.4,SNR=4.7
MKAR **Makanchi Array** 118.35 3 PKP PKPdf 19 43 17.5 -3.1
HHC **Hu-ho-hao-te** 119.66 338 *e*PKP PKPdf 19 43 20.3 -3.0
HHC PP PP 19 44 50.3 +5.1
HHC PKS 19 46 55.8
HHC SKS SKSdf 19 50 27.5 -3.7
HHC SKKS SKKSac 19 51 35.3 -6.8
HHC SS SS 20 01 08.9 +4.1
HHC AMB AMB
comp=Z,61nm,5.7s
HHC LR LR
comp=N,75nm,16.8s,MS4.5
HHC LR LR
comp=E,77nm,18.0s,MS4.5
HHC LR LR
comp=Z,66nm,18.0s,MS4.3
WMQ **Urumqi** 121.41 359 *e*PKP PKPdf 19 43 21.0 -5.6
KSH **Kashi** 124.88 10 PKP PKPdf 19 43 33.4 +0.1
KSH sPKP 19 43 47.9
KSH PKS 19 47 09.0
KSH SKS SKSdf 19 50 40.6 -0.6
KSH AMB AMB
comp=Z,180nm,7.1s
CD2 **Chengdu** 131.33 340 *e*PKP PKPdf 19 43 45.3 -0.6
WRA **Warramunga Arr** 134.04 257 PKP PKPdf 19 43 48.5 -2.7
comp=Z,0.5nm,0.7s,baz=338,slow=0.3,SNR=3.0
GYA **Guiyang** 134.24 334 *e*Pdif Pdif 19 40 47.3 -3.2
GYA PKP PKPdf 19 43 48.5 -3.0
GYA sPKP 19 44 12.4
GYA PP PP 19 46 23.8 +2.0
GYA AMB AMB
comp=Z,60nm,7.6s
KMI **Kunming** 136.98 338 PKP PKPdf 19 43 53.0 -3.6
CMAR **Chiang Mai Arr** 144.46 339 PKP PKPdf 19 44 07.1 -3.1
comp=Z,3.4nm,0.8s,baz=344,slow=3.5,SNR=29

MOS ***20*** *19:40:29.8±0.7,47°.02N×154°.16E,h60km,mb3.9/1,Error ellipse: s-maj=36.1km s-min=15.6km az=58.7*
ISCJB ***20*** *19:40:29.9±1.9,47°.0N±0°.2×154°.2E±0°.2,h59km±19km, mb3.7/3,Error ellipse: s-maj=42.9km s-min=11.2km az=141.4*
IDC ***20*** *19:40:31.6±3.5,47°.02N×154°.10E,h56km±29km,mb3.2/3, mb1 3.5/6,mb1mx3.1/27,mbtmp3.4/6,ML3.3/3,Error ellipse: s-maj=71.6km s-min=21.4km az=148.0*
ISC 20 19:40:31.5±1.4,47.0N±0°.2×154°.3E±0°.2,h59km±15km**,n11,** σ0**.**79/13**,mb3.7/3,East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	3.90	17	*e*PN	Pn	19 41 28.9	+0.1
SKR				*e*		19 42 11.5	
PETK	**Petropavlovsk-**	6.52	18	P	Pn	19 42 05.0	+0.4
0.5nm,0.3s,baz=177,slow=12,SNR=19							
PETK	**Petropavlovsk-**	6.52	18	*e*PN	Pn	19 42 04.9	+0.3
PETK				pmax	pmax		
comp=Z,1.0nm,0.3s							
ASAJ	**Asahikawa**	8.69	255	P	Pn	19 42 33.5	-0.8
comp=Z,0.2nm,0.3s,baz=111,slow=17,SNR=2.0							
ERM	**Erimo**	9.37	242	*i* PN	Pn	19 42 44.6	+0.9
FX1	**Attu Island--F**	13.50	57	P	Pn	19 43 40.0	0.0
comp=Z,1.0nm,0.3s,baz=232,slow=9.1,SNR=5.6							
FX1				S	Sn	19 46 04.5	-3.7
comp=Z,0.6nm,0.3s,baz=72,slow=19,SNR=4.6							
FX1	**Attu Island--F**	13.50	57	P	Pn	19 43 40.0	+0.1
FX1				S	Sn	19 46 04.5	-3.6
FX1				pmax	pmax		
comp=Z,1.0nm,0.3s							
FX1				smax			
comp=N,1.0nm,0.3s							
KSRS	**Korea Array**	21.63	253	P	P	19 45 15.8	-0.7
comp=N,0.3nm,0.3s,mb3.3,baz=69,slow=9.9,SNR=4.7							
KSRS	**Korea Array**	21.63	253	*e*P	P	19 45 16.1	-0.5
KSRS				pmax	pmax		
comp=Z,1.0nm,0.3s,mb3.7							
YKA	**Yellowknife Ar**	50.26	37	P	P	19 49 22.3	+1.1
comp=Z,0.4nm,0.5s,mb3.7,baz=301,slow=7.2,SNR=3.1							
FINES	**FINESS Array B**	64.17	335	P	P	19 50 58.8	-0.5
comp=Z,0.4nm,0.3s,mb3.9,baz=47,slow=8.6,SNR=6.8							

SSS ***20*** *19:43:28.1,12°.38N×87°.76W,h21km,MD3.2*
INET ***20*** *19:43:29.1,12°.50N×87°.66W,h70km,MD3.3,ML3.2*

CASC 20 19:43:28.9±1.7, 12°.54N×87°.63W, h77km±23km, MD3.5, ML3.2, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.58**	**74**	*e*P	Pn	19 43 44.0	+0.9
CRIN				*e*S	Sn	19 43 55.8	+2.1
CNCH	**Conchagua**	**0.76**	**345**	*e*P	Pn	19 43 45.3	+0.3
CNCH				*e*P		19 43 45.6	
CNCH				*e*S	Sn	19 43 57.4	+0.4
CNCH				*e*S	Sn	19 43 57.9	+0.8
TELN	**Telica**	**0.78**	**85**	*e*P	Pn	19 43 46.0	+0.8
TELN				*e*S	Sn	19 43 57.9	+0.6
MOMN	**Momotombo**	**1.07**	**97**	*e*P	Pn	19 43 49.3	+0.7
MOMN				*e*S	Sn	19 44 03.4	0.0
COPN	**Copaltepe**	**1.07**	**109**	*e*P	Pn	19 43 48.0	-0.6
COPN				*e*P		19 43 48.1	
BLLM	**Bellamira**	**1.08**	**327**	*e*P	Pn	19 43 48.7	-0.1
CSAN		**1.23**	**106**	*e*P	Pn	19 43 50.6	0.0
APYN	**Apoyeque**	**1.28**	**103**	*e*P	Pn	19 43 51.4	+0.1
APYN				*e*S	Sn	19 44 08.2	0.0
APYN				AML	AML	19 44 10.7	
	comp=Z,347nm,0.3s						
CAHU	**Cacacuatique**	**1.35**	**335**	*e*P	Pn	19 43 53.6	+1.4
BOAB	**BOACO BROADBAN**	**.92**	**92**	*e*P	Pn	19 43 59.1	-0.5

ISC 20 19:49:38.4±2.6, 40°.20N±0°.08×77°.75E±0°.2, h10km, n10, σ0s89/13, 2C-3D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.36**	**240**	⇓*i*Pg	**Pg**	**19 50 04.3**	**-0.2**
KSH				Sg	**Sg**	**19 50 22.4**	**+0.2**
KSH				smax			
	comp=N,160nm,0.3s						
KSH				smax			
	comp=E,170nm,0.4s						
ULHL	**Ulahol**	**2.25**	**335**	P	**Pn**	**19 50 16.1**	**+0.4**
	SNR=47						
KZA	**Kyzart**	**2.53**	**318**	P	**Pn**	**19 50 15.9**	**-3.6**
	SNR=115						
UCH	**Uchtor**	**3.03**	**313**	P	**Pn**	**19 50 21.8**	**-4.6**
	SNR=16						
TKM2	**Tokmak 2**	**3.07**	**333**	⇑Pn	**Pn**	**19 50 26.2**	**-0.7**
	comp=E,24nm,0.5s						
TKM2				⇑Sn	**Sn**	**19 51 04.6**	**+0.9**
	comp=E,36nm,0.6s						
TKM2	**Tokmak 2**	**3.07**	**333**	P	**Pn**	**19 50 26.8**	**-0.2**
	SNR=17						
KBK	**Karagaybulak**	**3.12**	**323**	P	**Pn**	**19 50 28.1**	**+0.6**
	SNR=7.6						
CHMS	**Chumysh**	**3.48**	**324**	P	**Sn**	**19 51 12.8**	**-0.8**
	SNR=5.7						
EKS2	**Erkin-Say**	**3.73**	**312**	P	**Pn**	**19 50 31.8**	**-4.2**
	SNR=8.2						
KK31	**Karatay Array**	**5.99**	**301**	⇓Pn	**Pn**	**19 51 10.9**	**+3.9**
	comp=E,0.6nm,0.5s,baz=134,slow=16,SNR=9.7						
KK31				⇓Sn	**Sn**	**19 52 20.8**	**+5.2**
	comp=E,1.5nm,0.5s,baz=126,slow=28,SNR=6.7						

*ISCJB **20** 19:50:47.2±0.5, 43°.70N×0°.03×8°.16E±0°.03, h10km, Error ellipse: s-maj=3.6km s-min=3.0km az=177.5*
*LDG **20** 19:50:48.5±0.1, 43°.74N×8°.17E, h18km, Md2.3/1, Ml2.3/10, Error ellipse: s-maj=2.0km s-min=1.6km az=46.0*
*CSEM **20** 19:50:48.2±0.2, 43°.71N×8°.13E, h20km, ML2.6/13, Error ellipse: s-maj=3.7km s-min=3.3km az=166.0*
*GEN **20** 19:50:49.5, 43°.75N×8°.11E, h2km, ML1.7*
*ROM **20** 19:50:49.9±0.5, 43°.79N×8°.10E, h8km±2km, Md2.2/5, Ml2.0/4, Error ellipse: s-maj=5.7km s-min=2.9km az=179.0*
*STR **20** 19:50:49.1±0.3, 43°.69N×8°.14E, h10km, Ml2.3, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 20 19:50:47.3±0.5, 43°.68N±0°.03×8°.19E±0°.03, h10km, n59, σ0s99/110, Corsica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMI	**Imperia**	**0.32**	**317**	Pg	**Pg**	**19 50 54.5**	**+0.9**
IMI				Sg	**Sg**	**19 50 58.0**	**+0.2**
IMI	**Imperia**	**0.32**	**317**	Pg	**Pg**	**19 50 54.5**	**+0.9**
IMI				S	**Sg**	**19 50 57.7**	**-0.1**
IMI				Sg	**Sg**	**19 50 58.0**	**+0.2**
NEGI	**Seborga**	**0.39**	**296**	P	**Pg**	**19 50 55.7**	**+0.7**
RORO	**Rocca Rossa**	**0.44**	**348**	P	**Pg**	**19 50 56.2**	**+0.3**
RONM	**Roccetta Nervi**	**0.47**	**295**	P	**Pg**	**19 50 57.1**	**+0.6**
MONE	**Monesi**	**0.51**	**322**	P	**Pg**	**19 50 57.8**	**+0.6**
SAOF	**Saorge**	**0.55**	**304**	Pg	**Pg**	**19 50 59.3**	**+1.3**
SAOF				Sg	**Sg**	**19 51 06.2**	**+0.9**
SAOF	**Saorge**	**0.55**	**304**	Pg	**Pg**	**19 50 59.3**	**+1.3**
SAOF				Sg	**Sg**	**19 51 06.2**	**+0.9**
SBF	**Sospel**	**0.58**	**289**	*e*Pg	**Pg**	**19 50 59.5**	**+1.0**
SBF	**Sospel**	**0.58**	**289**	*e*Pn	**Pg**	**19 51 00.4**	**+1.9**
SBF				*e*Sg	**Sg**	**19 51 06.5**	**+0.4**
	215nm,0.3s						
SBF	**Sospel**	**0.58**	**289**	*e*Pg	**Pg**	**19 50 59.5**	**+1.0**
SBF	**Sospel**	**0.58**	**289**	*e*Pn	**Pg**	**19 51 00.4**	**+1.9**
SBF				*e*Sg	**Sg**	**19 51 06.5**	**+0.4**
	107nm,0.3s						
AUTN	**L'Aution**	**0.64**	**300**	Pg	**Pg**	**19 51 00.6**	**+1.0**
AUTN				Sg	**Sg**	**19 51 09.4**	**+1.5**
AUTN	**L'Aution**	**0.64**	**300**	Pg	**Pg**	**19 51 00.6**	**+1.0**
AUTN				Sg	**Sg**	**19 51 09.4**	**+1.5**
LUCF	**Luceram**	**0.65**	**290**	Pg	**Pg**	**19 51 00.8**	**+1.0**
LUCF				Sg	**Sg**	**19 51 09.6**	**+1.3**
LUCF	**Luceram**	**0.65**	**290**	Pg	**Pg**	**19 51 00.8**	**+1.0**
LUCF				Sg	**Sg**	**19 51 09.6**	**+1.3**
QLNO	**Quiliano**	**0.66**	**10**	Pg	**Pg**	**19 51 01.2**	**+1.3**
QLNO				Sg	**Sg**	**19 51 09.9**	**+1.4**
	36nm,0.4s						
QLNO	**Quiliano**	**0.66**	**10**	Pg	**Pg**	**19 51 01.2**	**+1.3**
QLNO				Sg	**Sg**	**19 51 09.9**	**+1.4**
	36nm,0.4s						
TOUF	**Mont Tournerai**	**0.76**	**296**	Pg	**Pg**	**19 51 02.8**	**+0.9**
TOUF				Sg	**Sg**	**19 51 12.4**	**+0.5**
TOUF	**Mont Tournerai**	**0.76**	**296**	Pg	**Pg**	**19 51 02.8**	**+0.9**
TOUF				Sg	**Sg**	**19 51 12.4**	**+0.5**
ENR	**Entracque**	**0.78**	**315**	P	**Pg**	**19 51 02.8**	**+0.5**
ENR				S	**Sg**	**19 51 11.9**	**-0.6**
MVIF	**Mont Vial**	**0.78**	**286**	Pg	**Pg**	**19 51 03.1**	**+0.7**
MVIF				Sg	**Sg**	**19 51 13.7**	**+1.1**
MVIF	**Mont Vial**	**0.78**	**286**	Pg	**Pg**	**19 51 03.1**	**+0.7**
MVIF				Sg	**Sg**	**19 51 13.7**	**+1.1**
STV	**Sant Anna di V**	**0.84**	**312**	Pg	**Pg**	**19 51 03.9**	**+0.4**
STV				Sg	**Sg**	**19 51 13.8**	**-0.7**
	111nm,0.3s						
STV	**Sant Anna di V**	**0.84**	**312**	Pg	**Pg**	**19 51 03.9**	**+0.4**
STV				S	**Sg**	**19 51 13.5**	**-1.0**
STV				Sg	**Sg**	**19 51 13.8**	**-0.7**
	111nm,0.3s						
PCP	**Piancastagn**	**0.90**	**16**	P	**Pg**	**19 51 05.5**	**+0.9**
PCP				S	**Sg**	**19 51 16.3**	**0.0**
DOI	**San Damiano**	**1.07**	**321**	Pg	**Pg**	**19 51 08.4**	**+0.6**
DOI				Sg	**Sg**	**19 51 21.4**	**-0.3**
	43nm,0.3s						
DOI	**San Damiano**	**1.07**	**321**	Pg	**Pg**	**19 51 08.4**	**+0.6**
DOI				Sg	**Sg**	**19 51 21.4**	**-0.3**
	43nm,0.3s						
FRF	**La Foret Royal**	**1.13**	**265**	*e*Pn	**Pg**	**19 51 07.9**	**-1.0**
FRF	**La Foret Royal**	**1.13**	**265**	*e*Pg	**Pg**	**19 51 09.5**	**+0.6**
FRF				*e*Sn	**Sg**	**19 51 21.3**	**-2.3**
FRF				*e*Sg	**Sg**	**19 51 23.9**	**+0.3**
	8.8nm,0.2s						
FRF	**La Foret Royal**	**1.13**	**265**	*e*Pn	**Pg**	**19 51 07.9**	**-1.0**
FRF	**La Foret Royal**	**1.13**	**265**	*e*Pg	**Pg**	**19 51 09.5**	**+0.6**
FRF				*e*Sn	**Sg**	**19 51 21.3**	**-2.3**
FRF				*e*Sg	**Sg**	**19 51 23.9**	**+0.3**
	4.4nm,0.2s						
PZZ	**Stroppo**	**1.13**	**317**	Pg	**Pg**	**19 51 09.5**	**+0.4**
PZZ				Sg	**Sg**	**19 51 23.1**	**-0.7**
	32nm,0.4s						
PZZ	**Stroppo**	**1.13**	**317**	P	**Pg**	**19 51 09.2**	**+0.1**
PZZ	**Stroppo**	**1.13**	**317**	Pg	**Pg**	**19 51 09.5**	**+0.4**
PZZ				S	**Sg**	**19 51 22.5**	**-1.3**
PZZ				Sg	**Sg**	**19 51 23.1**	**-0.7**
	32nm,0.4s						
SC2M	**Scurtabo**	**1.21**	**53**	P	**Pn**	**19 51 10.3**	**+0.1**
SC2M				S	**Sb**	**19 51 25.4**	**-0.5**
LMR	**La Mourre**	**1.27**	**255**	*e*Pn	**Pn**	**19 51 09.9**	**-1.2**
LMR	**La Mourre**	**1.27**	**255**	*e*P	**Pn**	**19 51 12.0**	**+0.9**
LMR				*e*Sn	**Sn**	**19 51 24.8**	**-3.4**
	5.3nm,0.2s						
LMR	**La Mourre**	**1.27**	**255**	*e*Pn	**Pn**	**19 51 09.9**	**-1.2**
LMR	**La Mourre**	**1.27**	**255**	*e*P	**Pn**	**19 51 12.0**	**+0.9**
LMR				*e*Sn	**Sn**	**19 51 24.8**	**-3.4**
	2.7nm,0.2s						
PGF	**Pioggiola**	**1.27**	**152**	*e*Pn	**Pn**	**19 51 11.0**	**-0.1**
PGF				*e*Sn	**Sn**	**19 51 26.6**	**-1.6**
	1.5nm,0.2s						
PGF	**Pioggiola**	**1.27**	**152**	*e*Pn	**Pn**	**19 51 11.0**	**-0.1**
PGF				*e*Sn	**Sn**	**19 51 26.6**	**-1.6**
	0.8nm,0.2s						
MBDF	**Montbardon**	**1.46**	**316**	*e*Pn	**Pn**	**19 51 11.9**	**-1.8**
MBDF	**Montbardon**	**1.46**	**316**	*e*Pg	**Pg**	**19 51 15.1**	**-0.2**
MBDF				*e*Sg	**Sg**	**19 51 32.7**	**-1.6**
	10nm,0.3s						
MBDF	**Montbardon**	**1.46**	**316**	*e*Pn	**Pn**	**19 51 11.9**	**-1.8**
MBDF	**Montbardon**	**1.46**	**316**	*e*Pg	**Pg**	**19 51 15.1**	**-0.2**
MBDF				*e*Sg	**Sg**	**19 51 32.7**	**-1.6**
	5.2nm,0.3s						
RSP	**Reno Superiore**	**1.61**	**336**	P	**Pn**	**19 51 16.4**	**+0.6**
RSP				S	**Sn**	**19 51 34.7**	**-1.9**
SMRF	**Simiane la Rot**	**1.92**	**280**	*e*P	**Pn**	**19 51 20.1**	**+0.2**
SMRF	**Simiane la Rot**	**1.92**	**280**	*e*Pg	**Pg**	**19 51 23.6**	**-0.4**
SMRF				*e*Sg	**Sg**	**19 51 48.4**	**-0.5**
	14nm,0.3s						
SMRF	**Simiane la Rot**	**1.92**	**280**	*e*P	**Pn**	**19 51 20.1**	**+0.2**
SMRF	**Simiane la Rot**	**1.92**	**280**	*e*Pg	**Pg**	**19 51 23.6**	**-0.4**
SMRF				*e*Sg	**Sg**	**19 51 48.4**	**-0.5**
	6.9nm,0.3s						
ORIF	**Oris-en-Rattie**	**2.07**	**308**	*e*Pg	**Pg**	**19 51 26.3**	**-0.7**
ORIF				*e*Sg	**Sg**	**19 51 53.0**	**-0.8**
	7.5nm,0.3s						
ORIF	**Oris-en-Rattie**	**2.07**	**308**	*e*Pg	**Pg**	**19 51 26.3**	**-0.7**
ORIF				*e*Sg	**Sg**	**19 51 53.0**	**-0.8**
	3.8nm,0.3s						
LPG	**La Plagne**	**2.09**	**331**	*e*Pg	**Pg**	**19 51 26.4**	**-0.9**
LPG				*e*Sg	**Sg**	**19 51 53.2**	**-1.2**
	1.3nm,0.3s						
LPG	**La Plagne**	**2.09**	**331**	*e*Pg	**Pg**	**19 51 26.4**	**-0.9**
LPG				*e*Sg	**Sg**	**19 51 53.2**	**-1.2**
	0.6nm,0.3s						
LPL	**La Plagne**	**2.11**	**331**	*e*Pg	**Pg**	**19 51 27.0**	**-0.8**
LPL				*e*Sg	**Sg**	**19 51 54.1**	**-1.0**
	1.6nm,0.3s						
LPL	**La Plagne**	**2.11**	**331**	*e*Pg	**Pg**	**19 51 27.0**	**-0.8**
LPL				*e*Sg	**Sg**	**19 51 54.1**	**-1.0**
	0.8nm,0.3s						
VIVF	**Saint-Julien-l**	**2.79**	**296**	*e*Pg	**Pg**	**19 51 39.1**	**-1.6**
VIVF				*e*Sn	**Sn**	**19 52 01.0**	**-4.6**
VIVF				*e*Sg	**Sg**	**19 52 14.9**	**-1.9**
	2.7nm,0.3s						
VIVF	**Saint-Julien-l**	**2.79**	**296**	*e*Pg	**Pg**	**19 51 39.1**	**-1.6**
VIVF				*e*Sn	**Sn**	**19 52 01.0**	**-4.6**
VIVF				*e*Sg	**Sg**	**19 52 14.9**	**-1.9**
	1.4nm,0.3s						

*ISCJB **20** 19:52:24.0±0.5, 22°.97N±0°.02×121°.72E±0°.02, h8km±3km, mb3.5/4, Error ellipse: s-maj=3.3km s-min=2.9km az=146.6*
*TAP **20** 19:52:25.9, 22°.97N×121°.66E, h23km, ML3.7, C*
*NEIC **20** 19:52:25.2±1.6, 23°.03N×121°.64E, h10km, Error ellipse: s-maj=18.4km s-min=10.1km az=134.0*
*JMA **20** 19:52:26.6±0.2, 22°.97N×121°.66E, h59km, M3.5*
*IDC **20** 19:52:34.8±9.8, 24°.11N×120°.88E, h0km, mb3.5/4, mb1 3.6/5, mb1mx3.4/25, mbtmp3.5/5, ML3.2/1, Error ellipse: s-maj=181.9km s-min=39.8km az=131.0*

ISC 20 19:52:24.4±0.5, 22°.98N±0°.02×121°.71E±0°.02, h6km±4km, n69, σ0s84/96, mb3.5/4, 1C-16D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWF1	**Yuli**	**0.53**	**315**	⇓*i*P	**Pg**	**19 52 35.3**	**+0.6**
	baz=327						
TWF1				*i* S	**Sg**	**19 52 43.5**	**+1.9**
	baz=327						
TTN	**Taitung**	**0.56**	**247**	⇓*i*P	**Pg**	**19 52 36.0**	**+0.8**
	baz=245						
TTN				S	**Sg**	**19 52 44.0**	**+1.5**
	baz=245						
YULB	**Yu-li**	**0.56**	**318**	*e*Pg	**Pg**	**19 52 35.4**	**+0.2**
YULB				*e*Sg	**Sg**	**19 52 43.8**	**+1.2**
TWG	**Pinlang**	**0.60**	**255**	*e*Pg	**Pg**	**19 52 35.6**	**-0.4**
TWG	**Pinlang**	**0.60**	**255**	⇓*i*P	**Pg**	**19 52 36.2**	**+0.2**
	baz=246						
TWG				*e*S	**Sg**	**19 52 44.9**	**+0.9**
	baz=246						
EHY	**Hungye**	**0.64**	**326**	⇓*i*P	**Pg**	**19 52 37.2**	**+0.6**
	baz=330						
EHY				S	**Sg**	**19 52 46.5**	**+1.6**
	baz=330						
ELDTW	**Lidau**	**0.67**	**289**	⇓*i*P	**Pg**	**19 52 37.1**	**-0.2**
	baz=290						
ELDTW				S	**Sg**	**19 52 45.2**	**-0.8**
	baz=290						
ECL	**Taimali**	**0.79**	**242**	⇓*i*P	**Pg**	**19 52 39.3**	**-0.2**
	baz=254						
ECL				*e*S	**Sg**	**19 52 50.3**	**+0.5**
	baz=254						
YUS	**Yu-Shan**	**0.86**	**307**	⇓*i*P	**Pg**	**19 52 41.3**	**+0.3**
	baz=308						
YUS				*e*S	**Sg**	**19 52 51.1**	**-1.1**
	baz=308						
ESL	**Shilin**	**0.87**	**343**	⇓*i*P	**Pg**	**19 52 41.2**	**0.0**
	baz=355						
ESL				S	**Sg**	**19 52 52.3**	**-0.2**
	baz=355						
STYT	**Tauyuan**	**0.89**	**282**	*e*S	**Sg**	**19 52 51.9**	**-1.3**
	baz=290						
LAY	**Lan-yu**	**0.94**	**189**	P	**Pg**	**19 52 41.9**	**-0.6**
	baz=186						
LAY				*e*S	**Sg**	**19 52 54.4**	**-0.4**
	baz=186						
ALS	**Alishan**	**0.99**	**303**	⇓*i*P	**Pg**	**19 52 43.5**	**+0.2**
	baz=304						
ALS				*e*S	**Sg**	**19 52 57.7**	**+1.6**
	baz=304						
EAST	**Anshuo**	**0.99**	**234**	⇓*i*P	**Pg**	**19 52 42.5**	**-0.8**
	baz=244						
HWA	**Hwalien**	**1.00**	**355**	*e*P	**Pg**	**19 52 43.6**	**-0.1**
	baz=9.0						
SSD	**Sandimen**	**1.02**	**257**	⇑P	**Pg**	**19 52 43.0**	**-0.9**
	baz=256						
SGST	**Jiashian**	**1.04**	**276**	⇓*i*P	**Pg**	**19 52 44.3**	**0.0**
	baz=276						
WTP	**Ta-pu**	**1.04**	**285**	*i* P	**Pg**	**19 52 44.1**	**-0.2**
	baz=286						
WTP				*e*S	**Sg**	**19 52 58.0**	**+0.1**
	baz=286						
TPUB	**Ta-pu**	**1.04**	**288**	*e*Pg	**Pg**	**19 52 43.8**	**-0.7**
SSLB	**Suanglung**	**1.06**	**320**	*e*Pg	**Pg**	**19 52 43.5**	**-1.4**
CHN4	**Tsaushan**	**1.09**	**290**	⇓*i*P	**Pg**	**19 52 45.4**	**0.0**
	baz=291						
CHN1	**Nanshi**	**1.10**	**281**	⇓*i*P	**Pg**	**19 52 45.7**	**+0.1**
	baz=281						
TWD	**Chiawan**	**1.10**	**355**	P	**Pg**	**19 52 44.7**	**-0.9**
	baz=7.0						
TWD				*e*S	**Sg**	**19 52 58.8**	**-1.2**
	baz=7.0						
CHN5	**Tsauling**	**1.13**	**303**	⇓*i*P	**Pg**	**19 52 46.4**	**+0.3**
	baz=304						
CHN5				*e*S	**Sg**	**19 53 01.8**	**+1.0**
	baz=304						
TWK	**Hsinying**	**1.16**	**285**	*e*P	**Pg**	**19 52 46.3**	**-0.3**
	baz=285						
SCZT	**Fangliau**	**1.17**	**239**	*e*P	**Pg**	**19 52 45.6**	**-1.2**
	baz=232						
SMLT	**Sun Moon Lake**	**1.17**	**321**	⇓*i*P	**Pg**	**19 52 46.3**	**-0.5**
	baz=332						
SMLT				*e*S	**Sg**	**19 53 02.6**	**+0.6**
	baz=332						
TWM1	**Shoushan**	**1.19**	**263**	*e*P	**Pg**	**19 52 48.0**	**+0.7**
	baz=262						
NACB	**Ninganchiao**	**1.20**	**355**	*e*Pn	**Pn**	**19 52 45.7**	**-2.0**
TYC	**Yuchr**	**1.21**	**320**	*e*P	**Pg**	**19 52 47.0**	**-0.6**
	baz=332						
TYC				*e*S	**Sg**	**19 53 04.1**	**+0.7**
	baz=332						
WHF	**Hehuan Shan**	**1.23**	**341**	P	**Pg**	**19 52 47.1**	**-1.0**
	baz=343						
WHF				*e*S	**Sg**	**19 53 03.0**	**-1.1**
	baz=343						
WGK	**Gukeng**	**1.27**	**304**	*e*P	**Pn**	**19 52 48.9**	**+0.2**
	baz=305						
CHY	**Chiayi**	**1.29**	**294**	*e*P	**Pn**	**19 52 49.1**	**+0.1**
	baz=294						
CHY				*e*S	**Sg**	**19 53 06.0**	**+0.1**
	baz=294						
WNT	**Mingjian**	**1.30**	**314**	⇓P	**Pn**	**19 52 49.5**	**+0.4**
	baz=315						
WNT				*e*S	**Sb**	**19 53 06.4**	**+0.2**
	baz=315						
TSEB	**Hengchuen, Pin**	**1.30**	**215**	*e*P	**Pn**	**19 52 48.8**	**-0.3**
	baz=215						
HEN	**Hengchun**	**1.32**	**223**	*e*P	**Pn**	**19 52 48.0**	**-1.3**
	baz=221						
TWK1	**Hengchun**	**1.32**	**219**	*e*P	**Pn**	**19 52 47.8**	**-1.6**
	baz=217						
TAI1	**Yung-k'ang**	**1.36**	**273**	*e*P	**Pn**	**19 52 50.0**	**0.0**
	baz=272						
TWT	**Tachien**	**1.36**	**339**	*e*P	**Pn**	**19 52 49.4**	**-0.6**
	baz=351						
TWT				*e*S	**Sb**	**19 53 06.6**	**-1.4**
	baz=351						
TWP	**Hsiaoliuchiu**	**1.39**	**244**	*e*P	**Pn**	**19 52 52.3**	**+2.0**
	baz=226						
CHN8	**Yiju**	**1.43**	**285**	*e*P	**Pn**	**19 52 51.4**	**+0.5**
	baz=285						
ENA	**Nanau**	**1.45**	**1**	*e*P	**Pn**	**19 52 49.9**	**-1.2**
	baz=3.0						
NNS	**Nan Shan**	**1.49**	**348**	*e*P	**Pn**	**19 52 51.2**	**-0.5**
	baz=350						
TCU	**Taichung**	**1.50**	**321**	*e*P	**Pn**	**19 52 52.6**	**+0.7**
	baz=322						
TWQ1	**Liyutan**	**1.61**	**328**	*e*P	**Pn**	**19 52 54.2**	**+0.8**
	baz=329						
ENTT	**Nioudou**	**1.66**	**356**	*e*P	**Pn**	**19 52 53.4**	**-0.7**
	baz=357						
NSY	**Sanyi**	**1.68**	**329**	*e*P	**Pn**	**19 52 54.3**	**0.0**
	baz=330						
YHNB	**Yeheng**	**1.71**	**350**	*e*Pn	**Pn**	**19 52 54.4**	**-0.4**
NSK	**Sanguang**	**1.72**	**349**	*e*P	**Pn**	**19 52 54.5**	**-0.4**
	baz=351						
TWE	**Neicheng**	**1.74**	**359**	*e*P	**Pn**	**19 52 54.7**	**-0.4**
	baz=349						
NSTT	**Nanjuang**	**1.77**	**339**	*e*P	**Pn**	**19 52 55.8**	**+0.2**
	baz=340						
YOJ	**Yonaguni jima**	**1.90**	**39**	P	**Pn**	**19 52 58.0**	**+0.6**
YOJ				S	**Sn**	**19 53 21.0**	**-0.7**
TWA	**Mucha**	**2.00**	**357**	*e*P	**Pn**	**19 52 58.3**	**-0.4**
	baz=359						
TATO	**Taipei**	**2.00**	**354**	*e*Pn	**Pn**	**19 52 58.8**	**0.0**
PNG	**Penghu**	**2.06**	**287**	*e*P	**Pn**	**19 52 59.1**	**-0.5**
	baz=286						
NWF	**Wu-fen Shan**	**2.09**	**2**	*e*P	**Pn**	**19 52 59.9**	**-0.1**
	baz=350						
TWS1	**Kuangyinshan**	**2.13**	**353**	*e*P	**Pn**	**19 52 59.3**	**-1.2**
	baz=9.0						
HATJ	**Hateruma jima**	**2.21**	**60**	P	**Pn**	**19 53 02.2**	**+0.6**
HATJ				S	**Sn**	**19 53 28.7**	**-0.5**
IRIF	**Iriomote-Funau**	**2.30**	**53**	P	**Pn**	**19 53 03.6**	**+0.8**
IRIF				*e*S	**Sn**	**19 53 31.6**	**+0.2**
JKRS	**Kuro-shima**	**2.46**	**59**	P	**Pn**	**19 53 06.1**	**+1.1**
JKRS				S	**Sn**	**19 53 35.4**	**0.0**
JIJ	**Ishigaki jima**	**2.63**	**58**	P	**Pn**	**19 53 07.8**	**+0.4**
JIJ				S	**Sn**	**19 53 39.2**	**-0.4**
JTJ	**Tarama**	**3.21**	**58**	P	**Pn**	**19 53 16.1**	**+0.8**
JTJ				S	**Sn**	**19 53 53.8**	**-0.1**
JMJ	**Miyako jima 2**	**3.76**	**60**	P	**Pn**	**19 53 24.6**	**+1.7**
JOGS	**Gusukube**	**3.83**	**62**	P	**Pn**	**19 53 24.8**	**+1.0**
JOGS				S	**Sn**	**19 54 11.3**	**+2.2**
KSRS	**Korea Array**	**15.39**	**19**	Pn	**Pn**	**19 56 03.5**	**+1.4**
	0.1nm,0.3s,baz=204,slow=12,SNR=5.2						
CMAR	**Chiang Mai Arr**	**21.75**	**262**	P	**P**	**19 57 22.1**	**+5.3**
	0.5nm,0.6s,mb3.1,baz=67,slow=8.9,SNR=3.6						
MKAR	**Makanchi Array**	**39.54**	**317**	P	**P**	**19 59 56.9**	**+0.8**
	0.8nm,0.7s,mb3.6,baz=102,slow=10.0,SNR=10.0						
ZALV	**Zalesovo Beam**	**41.52**	**328**	P	**P**	**20 00 11.4**	**-0.9**
	0.9nm,0.4s,mb3.7,baz=119,slow=7.8,SNR=5.7						
KURK	**Kurchatov**	**43.33**	**321**	P	**P**	**20 00 27.3**	**+0.2**
	0.5nm,0.6s,mb3.5,baz=101,slow=9.3,SNR=5.0						

*ISCJB **20** 19:59:47.6±1.0, 19°.41N±0°.04×145°.46E±0°.08, h154km±10km, mb4.2/38, Error ellipse: s-maj=12.8km s-min=7.1km az=168.5*
*NEIC **20** 19:59:49.1±1.4, 19°.39N×145°.51E, h155km±13km, mb4.2/14, Error ellipse: s-maj=12.3km s-min=8.3km az=78.0*
*IDC **20** 19:59:50.4±3.2, 19°.35N×145°.53E, h165km±29km, mb3.8/18, mb1 4.0/20, mb1mx3.8/29, mbtmp3.8/20, Error ellipse: s-maj=16.3km s-min=12.6km az=91.0*
*BJI **20** 19:59:55.2, 20°.09N×144°.75E, h154km, mB4.8/10, mb4.6/14*

ISC 20 19:59:49.0±1.0, 19°.37N±0°.05×145°.53E±0°.08, h153km±9km, n55, σ1s00/56, mb4.2/38, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.79**	**186**	*e*Pn	**Pn**	**20 01 13.6**	**+0.7**
GUMO				*e*Sn	**Sn**	**20 02 18.0**	**-0.6**
CBIJ	**Chichi jima**	**8.28**	**339**	P	**Pn**	**20 01 46.6**	**+0.5**
	5.7nm,0.3s,baz=97,slow=22,SNR=11						
CBIJ				S	**Sn**	**20 03 14.8**	**-3.5**
	15nm,0.3s,baz=296,slow=23,SNR=12						
MJAR	**Matsushiro Arr**	**18.27**	**341**	P	**P**	**20 03 52.2**	**+1.3**
	0.8nm,0.3s,baz=163,slow=10,SNR=9.9						
MAJO	**Matsushiro**	**18.27**	**341**	*e*Pn	**Pn**	**20 03 49.7**	**-3.1**
	6.0nm,0.6s						
MAT	**Matsushiro**	**18.27**	**341**	P	**P**	**20 03 50.8**	**-0.1**
**KSRS

MKAR	**Makanchi Array**	**57.88**	**314**	P	**P**		**20 09 25.6**	**+0.8**
	comp=Z,1.2nm,0.6s,mb3.9,baz=87,slow=9.4,SNR=14							
MKAR				PcP	PcP		20 10 15.1	-0.4
	comp=Z,0.6nm,0.4s,baz=74,slow=4.3,SNR=16							
KURK	**Kurchatov**	**60.66**	**318**	*eP*	**P**		**20 09 44.3**	**+0.5**
	comp=Z,3.0nm,0.4s,mb4.5,baz=92,slow=7.5,SNR=29							
KURK	**Kurchatov**	**60.66**	**318**	*eP*	**P**		**20 09 43.5**	**-0.3**
	comp=Z,1.7nm,0.4s,mb4.2							
BVAR	**Borovoye Array**	**65.86**	**320**	P	**P**		**20 10 18.2**	**+0.3**
	comp=Z,1.7nm,0.3s,mb4.3,baz=98,slow=7.1,SNR=19							
BRVK	**Borovoye**	**65.92**	**320**	*eP*	**P**		**20 10 16.3**	**-2.0**
	comp=Z,2.2nm,0.8s,mb4.0							
INK	**Inuvik**	**68.82**	**23**	P	**P**		**20 10 35.3**	**-1.0**
	comp=Z,4.0nm,0.8s,mb4.2,baz=264,slow=7.6,SNR=8.7							
DLBC	**Dease Lake**	**70.82**	**34**	P	**P**		**20 10 49.9**	**+1.1**
	comp=Z,1.7nm,0.4s,mb4.2,baz=176,slow=6.6,SNR=6.5							
ABKAR	**Akbulak array**	**72.74**	**317**	*eP*	**P**		**20 10 60.0**	**-0.4**
	comp=Z,2.2nm,0.6s,mb4.1							
YKA	**Yellowknife Ar**	**77.47**	**28**	P	**P**		**20 11 27.0**	**-0.2**
	comp=Z,3.9nm,0.6s,mb4.2,baz=290,slow=5.5,SNR=20							
YBH	**Yreka Blue Hor**	**78.64**	**50**	P	**P**		**20 11 35.1**	**+1.0**
	comp=Z,1.2nm,0.6s,mb3.7,baz=107,slow=6.7,SNR=4.3							
NEW	**Newport**	**80.52**	**42**	P	**P**		**20 11 43.5**	**-0.6**
KEV	**Kevo**	**81.25**	**342**	*ep*	**P**		**20 11 46.1**	**-1.4**
KEV	**Kevo**	**81.25**	**342**	*ep*	**P**		**20 11 46.1**	**-1.4**
CMB	**Columbia Colle**	**81.42**	**53**	*eP*	**P**		**20 11 49.1**	**+0.1**
	comp=Z,3.6nm,0.7s,mb4.1							
BMO	**Blue Mountains**	**81.49**	**46**	*eP*	**P**		**20 11 49.5**	**+0.2**
	comp=Z,3.9nm,1.2s,mb3.9							
ARCES	**ARCESS Array B**	**81.81**	**342**	P	**P**		**20 11 50.5**	**0.0**
	comp=Z,4.7nm,0.7s,mb4.3,baz=71,slow=8.0,SNR=18							
NVAR	**Mina Array Bea**	**82.85**	**52**	P	**P**		**20 11 57.2**	**+0.7**
	comp=Z,4.9nm,0.6s,mb4.4,baz=265,slow=5.8,SNR=40							
NVAR	**Mina Array Bea**	**82.85**	**52**	P	**P**		**20 11 57.2**	**+0.7**
JOF	**Joensuu**	**83.34**	**335**	*ep*	**P**		**20 11 56.1**	**-2.4**
	comp=Z,2.0nm,0.3s,mb4.3							
JOF	**Joensuu**	**83.34**	**335**	*ep*	**P**		**20 11 56.1**	**-2.4**
	comp=Z,2.0nm,0.3s,mb4.3							
HLID	**Hailey**	**83.88**	**46**	P	**P**		**20 12 01.0**	**-0.7**
	comp=Z,0.9nm,0.5s,mb3.8							
ELK	**Elko**	**84.30**	**49**	P	**P**		**20 12 04.5**	**+0.6**
	comp=Z,3.9nm,0.9s,mb4.2,baz=289,slow=4.9,SNR=14							
M13A	**Montello**	**84.84**	**48**	*eP*	**P**		**20 12 07.1**	**+0.5**
	comp=Z,1.2nm,0.7s,mb3.7							
KAF	**Kangasniemi**	**85.74**	**336**	*ep*	**P**		**20 12 08.5**	**-2.0**
	comp=Z,0.7nm,0.3s,mb3.9							
KAF	**Kangasniemi**	**85.74**	**336**	*ep*	**P**		**20 12 08.5**	**-2.0**
	comp=Z,0.7nm,0.3s,mb3.9							
FINES	**FINESS Array B**	**86.21**	**335**	P	**P**		**20 12 11.5**	**-1.4**
	comp=Z,1.7nm,0.3s,mb4.2,baz=65,slow=4.6,SNR=39							
HWUT	**Hardware Ranch**	**86.56**	**47**	*eP*	**P**		**20 12 14.7**	**-0.4**
	comp=Z,4.5nm,0.8s,mb4.3							
PDAR	**Pinedale Array**	**87.47**	**45**	P	**P**		**20 12 19.1**	**-0.3**
	comp=Z,0.3nm,0.3s,mb3.6,baz=252,slow=1.4,SNR=3.1							
LPAZ	**La Paz**	**147.84**	**90**	PKPbc	PKPbc		20 19 17.7	+0.9
	comp=Z,0.8nm,0.4s,baz=38,slow=2.0,SNR=5.5							
LPAZ	**La Paz**	**147.84**	**90**	PKPbc	PKPbc		20 19 17.7	+0.9

*ISCJB **20** 20:31:31.9±0.7, 44°.22N±0°.03×17°.90E±0°.04, h7km±5km, Error ellipse: s-maj=4.7km s-min=4.1km az=41.9*
*BEO **20** 20:31:32.5±0.4, 44°.22N×17°.79E, h12km±3km, ML2.6/9*
*CSEM **20** 20:31:32.3±0.2, 44°.20N×17°.83E, h10km, ML2.6, Error ellipse: s-maj=5.1km s-min=3.8km az=56.0*

ISC 20 20:31:32.8±0.7,**44°.22N**±0°.03×**17°.84E**±0°.04,**h12**km±**4**km, **n27**,σ0**84**/51,**10C-3D**,**Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BLY	**Banja Luka**	**0.71**	**319**	*eP*		**Pg**	**Pg**	**20 31 46.3**	**-0.4**
BLY				*i*		Sg	**Sg**	20 31 56.0	0.0
BLY	**Banja Luka**	**0.71**	**319**	*eP*		**Pg**	**Pg**	**20 31 46.3**	**-0.4**
BLY				*i*		Sg	**Sg**	20 31 56.0	0.0
BBLS	**Lazići**	**1.18**	**107**	↑*iP*		**Pg**	**Pg**	**20 31 53.5**	**-2.0**
BBLS				*i*		Sg	**Sg**	**20 32 11.7**	**+0.9**
BBLS	**Lazići**	**1.18**	**107**	↑*iP*		**Pg**	**Pg**	**20 31 53.5**	**-2.0**
BBLS				*i*		Sg	**Sg**	**20 32 11.7**	**+0.9**
STON	**Ston**	**1.35**	**185**	*ePn*		**Pn**	**Pn**	20 31 56.1	-1.3
STON				Sn		**Sn**	**Sn**	**20 32 15.5**	**+0.3**
STON	**Ston**	**1.35**	**185**	*ePn*		**Pn**	**Pn**	20 31 56.1	-1.3
STON				Sn		**Sn**	**Sn**	**20 32 15.5**	**+0.3**
TREB	**Trebinje**	**1.54**	**166**	*ePn*		**Pn**	**Pn**	20 31 59.9	-0.2
TREB				*i*		Sg	**Sg**	**20 32 22.2**	**-0.2**
TREB	**Trebinje**	**1.54**	**166**	*ePn*		**Pn**	**Pn**	20 31 59.9	-0.2
TREB				*i*		Sg	**Sg**	**20 32 22.2**	**-0.2**
DIVS	**Divibare**	**1.55**	**94**	↑*iPn*		**Pn**	**Pn**	**20 32 00.8**	**+0.6**
DIVS				*i*		Sg	**Sg**	**20 32 22.1**	**-0.6**
DIVS	**Divibare**	**1.55**	**94**	↑*iPn*		**Pn**	**Pn**	**20 32 00.8**	**+0.6**
DIVS				*i*		Sg	**Sg**	**20 32 22.1**	**-0.6**
FRGS	**Fruska Gora**	**1.69**	**55**	*ePn*		**Pn**	**Pn**	**20 32 02.7**	**+0.6**
FRGS				*i*		Sg	**Sg**	**20 32 27.5**	**+0.3**
FRGS	**Fruska Gora**	**1.69**	**55**	*ePn*		**Pn**	**Pn**	**20 32 02.7**	**+0.6**
FRGS				*i*		Sg	**Sg**	**20 32 27.5**	**+0.3**
RHK3	**Tenkes**	**1.70**	**10**	↓*ePn*		**Pn**	**Pn**	**20 32 02.4**	**+0.1**
RHK3				*eSn*		**Sn**	**Sn**	**20 32 27.8**	**+3.9**
TRUS	**Trudelj**	**1.84**	**89**	↑*iPn*		**Pn**	**Pn**	**20 32 03.5**	**-0.7**
TRUS				*eSg*		**Sg**	**Sg**	**20 32 32.7**	**+0.6**
TRUS	**Trudelj**	**1.84**	**89**	↑*iPn*		**Pn**	**Pn**	**20 32 03.5**	**-0.7**
TRUS				*eSg*		**Sg**	**Sg**	**20 32 32.7**	**+0.6**
PKSM	**Moragy**	**2.08**	**15**	↑*iPn*		**Pn**	**Pn**	**20 32 06.8**	**-0.6**
PKSM				*i*	Sn	**Sn**	**Sn**	**20 32 33.3**	**+0.1**
PKSM	**Moragy**	**2.08**	**15**	↑*iPn*		**Pn**	**Pn**	**20 32 06.8**	**-0.6**
PKSM				*i*	Sn	**Sn**	**Sn**	**20 32 33.3**	**+0.1**
GRUS	**Gruza**	**2.10**	**98**	*ePn*		**Pn**	**Pn**	**20 32 08.2**	**+0.5**
GRUS				*eSg*		**Sg**	**Sg**	**20 32 40.1**	**-0.1**
GRUS	**Gruza**	**2.10**	**98**	*ePn*		**Pn**	**Pn**	**20 32 08.2**	**+0.5**
GRUS				*eSg*		**Sg**	**Sg**	**20 32 40.1**	**-0.1**
NVLJ	**Novalja**	**2.16**	**280**	*ePn*		**Pn**	**Pn**	**20 32 10.3**	**+1.7**
NVLJ				Sn		**Sn**	**Sn**	**20 32 40.0**	**+4.7**
PKS9	**Tamasi**	**2.39**	**7**	*ePn*		**Pn**	**Pn**	**20 32 13.5**	**+1.7**
PKS2	**Kecel**	**2.47**	**22**	*eSn*		**Sn**	**Sn**	**20 32 41.8**	**-1.2**
PKS6	**Bocsa**	**2.68**	**26**	*eSn*		**Sn**	**Sn**	**20 32 46.8**	**-1.2**
BZS	**Buzias**	**3.02**	**61**	↑*iPn*		**Pn**	**Pn**	**20 32 20.7**	**+0.2**
BZS				*eSn*		**Sn**	**Sn**	**20 32 57.1**	**+0.5**
BZS	**Buzias**	**3.02**	**61**	↑*iPn*		**Pn**	**Pn**	**20 32 20.7**	**+0.2**
BZS				*eSn*		**Sn**	**Sn**	**20 32 57.1**	**+0.5**
BARS	**Barje**	**3.21**	**114**	↓*iPn*		**Pn**	**Pn**	**20 32 22.5**	**-0.5**
BARS				*eSg*		**Sg**	**Sg**	**20 33 16.6**	**+0.7**
BARS	**Barje**	**3.21**	**114**	↓*iPn*		**Pn**	**Pn**	**20 32 22.5**	**-0.5**
BARS				*eSg*		**Sg**	**Sg**	**20 33 16.6**	**+0.7**

*IDC **20** 20:38:38.5±0.7, 55°.29S×29°.27W, h0km, mb4.2/9, mb1 4.4/9, mb1mx4.2/17, mbtmp4.2/9, MS3.8/8, Ms1 3.8/8, ms1mx3.7/13, Error ellipse: s-maj=23.7km s-min=17.6km az=29.0*
*ISCJB **20** 20:38:38.3±0.6, 55°.2S±0°.1×29°.2W±0°.2, h10km, mb4.3/11, MS3.9/8, Error ellipse: s-maj=16.5km s-min=11.5km az=34.0*
*NEIC **20** 20:38:39.7±0.3, 55°.25S×29°.14W, h10km, mb4.5/5, Error ellipse: s-maj=13.5km s-min=9.0km az=193.0*

ISC 20 20:38:40.3±0.6,**55°.2S**±0°.1×**29°.2W**±0°.2,**h10**km,**n32**, σ1**9**02/15,**mb4.3**/11,**MS3.9**/8,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**18.04**	**157**	*e*			**Pn**	**20 42 52.2**	**+1.5**
USHA	**Ushuaia**	**22.30**	**255**	P			**P**	**20 43 37.7**	**+0.3**
	15nm,0.8s,mb4.4,baz=72,slow=9.7,SNR=5.2								
TRQA	**Tornquist**	**27.92**	**294**	*eP*			**P**	**20 44 30.6**	**+0.4**
	4.8nm,0.7s,mb4.2								
PLCA	**Paso Flores**	**30.71**	**281**	P			**P**	**20 44 54.6**	**-0.5**
	3.5nm,1.0s,mb4.1,baz=105,slow=6.1,SNR=4.6								
QSPA	**South Pole Qui**	**35.08**	**180**	P			**P**	**20 45 32.4**	**-0.4**
	2.1nm,0.5s,mb4.3,baz=200,slow=3.0,SNR=19								
CPUP	**Villa Florida**	**35.37**	**313**	P			**P**	**20 45 35.2**	**-0.6**
	2.5nm,0.7s,mb4.3,baz=134,slow=8.0,SNR=6.0								
CPUP				LR		LR	LR	20 59 16.6	
	comp=Z,146nm,21.2s,MS3.7,baz=143,slow=35								
CFAA	**Coronel Fontan**	**36.15**	**294**	P			**P**	**20 45 41.8**	**-0.7**
	0.5nm,0.7s,mb3.5,baz=170,slow=12,SNR=5.4								
MAW	**Mawson**	**41.53**	**145**	P			**P**	**20 46 25.4**	**-1.8**
	2.4nm,0.7s,mb4.0,baz=252,slow=8.1,SNR=4.8								
MAW				LR			LR	21 00 37.5	
	comp=Z,204nm,20.1s,MS4.0,baz=58,slow=32								
MAW	**Mawson**	**41.53**	**145**	*eP*			**P**	**20 46 24.8**	**-2.4**
	2.3nm,1.3s,mb3.6								
MAW				LR			LR	21 00 37.5	
BOSA	**Boshof**	**46.90**	**79**	LR			LR	21 03 14.0	
	comp=Z,120nm,18.4s,MS3.9,baz=343,slow=31								
LPAZ	**La Paz**	**48.93**	**307**	P			**P**	**20 47 28.0**	**+1.6**
	7.3nm,0.5s,mb4.9,baz=144,slow=5.7,SNR=40								
LPAZ				LR			LR	21 06 04.1	
	comp=Z,95nm,21.7s,MS3.8,baz=325,slow=34								
LPAZ	**La Paz**	**48.93**	**307**	*eP*			**P**	**20 47 27.9**	**+1.4**
	5.8nm,0.5s,mb4.9								
LPAZ				LR			LR	21 06 04.1	
LBTB	**Lobatse**	**49.88**	**76**	P			**P**	**20 47 35.8**	**+2.1**
	2.4nm,0.7s,mb4.3,baz=203,slow=8.5,SNR=5.1								
LBTB	**Lobatse**	**49.88**	**76**	P			**P**	**20 47 32.5**	**-1.2**
	6.4nm,1.1s,mb4.6								
TSUM	**Tsumeb**	**50.29**	**64**	P			**P**	**20 47 36.8**	**0.0**
	9.5nm,1.3s,mb4.7								
LSZ	**Lusaka**	**59.16**	**71**	LR			LR	21 10 56.8	
	comp=Z,86nm,19.9s,MS3.9,baz=263,slow=33								
DBIC	**Dimbokro**	**64.88**	**27**	LR			LR	21 12 22.9	
	comp=Z,66nm,18.3s,MS3.9,baz=139,slow=31								
ROSC	**El Rosal**	**70.46**	**311**	LR			LR	21 22 11.2	
	comp=Z,54nm,21.0s,MS3.8,baz=172,slow=37								
TORD	**Torodi Ar. Bea**	**72.89**	**32**	P			**P**	**20 50 09.4**	**+0.2**
	2.2nm,0.7s,mb4.2,baz=199,slow=6.3,SNR=12								
KEST	**Kesra**	**96.39**	**31**	LR			LR	21 30 41.0	
	comp=Z,39nm,18.4s,MS3.9,baz=320,slow=32								
ASAR	**Alice Springs**	**100.16**	**164**	P			Pdif	20 52 23.9	-2.5
	0.3nm,0.9s,baz=182,slow=4.4,SNR=4.6								
FINES	**FINESS Array B**	**124.15**	**29**	PKP			PKPdf	20 57 37.5	0.0
	1.9nm,0.8s,baz=198,slow=0.9,SNR=7.1								
FINES	**FINESS Array B**	**124.15**	**29**	PKP			PKPdf	20 57 37.5	0.0
YKA	**Yellowknife Ar**	**134.75**	**319**	PKP			PKPdf	20 57 57.4	-0.2
	0.6nm,0.8s,baz=148,slow=1.3,SNR=4.3								
BVAR	**Borovoye Array**	**135.28**	**58**	PKP			PKPdf	20 57 59.4	+0.5
	1.2nm,0.8s,baz=200,slow=3.8,SNR=6.4								
INK	**Inuvik**	**144.40**	**322**	PKP			PKPdf	20 58 13.0	-1.9
	2.2nm,0.5s,baz=103,slow=3.2,SNR=9.3								
INK	**Inuvik**	**144.40**	**322**	PKP			PKPdf	20 58 13.0	-1.9
KDAK	**Kodiak Island**	**149.39**	**299**	PKPbc			PKPbc	20 58 28.1	+0.1
	3.9nm,0.5s,baz=174,slow=5.9,SNR=7.1								
OHAK	**Old Harbor**	**149.56**	**297**	*e*PKPbc			PKPbc	20 58 28.6	+0.1
COLD	**Coldfoot**	**150.39**	**318**	*e*PKPbc			PKPbc	20 58 30.0	-0.2
CHUM	**Lake Minchumin**	**150.82**	**310**	*e*PKPdf			PKPdf	20 58 25.1	-0.5
CHUM				*e*PKPbc			PKPbc	20 58 30.9	-0.5
CHUM				*e*PKPab			PKPab	20 58 37.7	-1.0
SONM	**Songino Array**	**151.82**	**86**	PKPbc			PKPbc	20 58 33.5	-0.6
	1.9nm,0.8s,baz=223,slow=3.7,SNR=11								

*IDC **20** 20:46:57.9±1.1, 2°.38S×100°.57E, h0km, mb4.0/11, mb1 4.1/12, mb1mx3.9/23, mbtmp4.0/12, ML2.9/1, MS3.2/2, Ms1 3.2/2, ms1mx2.7/31, Error ellipse: s-maj=57.2km s-min=14.9km az=55.0*
*ISCJB **20** 20:47:00.8±0.9, 2°.4S±0°.1×100°.5E±0°.2, h33km, mb4.1/11, Error ellipse: s-maj=36.4km s-min=11.7km az=149.4*
*NEIC **20** 20:47:01.5±6.1, 2°.49S×100°.42E, h28km±39km, mb4.3/1, Error ellipse: s-maj=45.7km s-min=10.8km az=54.0*

ISC 20 20:47:02.9±0.9,**2°.5S**±0°.1×**100°.5E**±0°.2,**h35**km,**n23**, σ0**67**/20,**mb4.1**/11,**Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**5.46**	**343**	Pn			**Pn**	**20 48 17.9**	**-4.0**
	0.4nm,0.3s,baz=204,slow=20,SNR=5.6								
PSI				LR			LR	20 50 49.5	
	comp=Z,91nm,20.1s,baz=347,slow=44								
KULM	**Kulim**	**7.71**	**1**	*e*Pn			**Pn**	**20 48 54.4**	**+1.7**
	11nm,1.1s								
CMAR	**Chiang Mai Arr**	**20.85**	**356**	P			**P**	**20 51 41.1**	**-0.7**
	0.9nm,0.7s,baz=184,slow=9.1,SNR=8.1								
WRA	**Warramunga Arr**	**37.34**	**120**	P			**P**	**20 54 11.4**	**-0.8**
	1.2nm,0.5s,mb4.0,baz=301,slow=9.1,SNR=5.3								
ASAR	**Alice Springs**	**38.59**	**126**	P			**P**	**20 54 22.9**	**+0.1**
	2.4nm,0.6s,mb4.1,baz=302,slow=7.9,SNR=41								
ASAR				PcP			PcP	20 56 35.5	+0.7
	0.4nm,0.4s,baz=300,slow=2.2,SNR=4.8								
STKA	**Stephens Creek**	**48.48**	**132**	P			**P**	**20 55 43.2**	**+0.9**
	2.0nm,0.8s,mb4.2,baz=322,slow=11,SNR=6.8								
STKA	**Stephens Creek**	**48.48**	**132**	P			**P**	**20 55 43.2**	**+0.9**
SONM	**Songino Array**	**50.36**	**5**	P			**P**	**20 55 55.8**	**-0.5**
	0.5nm,0.5s,mb3.8,baz=184,slow=9.2,SNR=7.6								
MK31	**Makanchi Array**	**51.61**	**344**	*eP*			**P**	**20 56 05.7**	**0.0**
MKAR	**Makanchi Array**	**51.61**	**344**	P			**P**	**20 56 06.2**	**+0.4**
	4.0nm,0.6s,mb4.5,baz=151,slow=8.7,SNR=57								
KURK	**Kurchatov**	**56.19**	**343**	P			**P**	**20 56 38.9**	**-0.2**
	1.6nm,0.8s,mb4.1,baz=165,slow=7.2,SNR=9.7								
KURK	**Kurchatov**	**56.19**	**343**	P			**P**	**20 56 38.9**	**-0.3**
ZAA0	**Zalesovo Array**	**57.72**	**349**	*eP*			**P**	**20 56 49.2**	**-0.7**
ZALV	**Zalesovo Beam**	**57.72**	**349**	P			**P**	**20 56 49.8**	**-0.1**
	1.6nm,0.3s,mb4.5,baz=168,slow=5.2,SNR=24								
BVAR	**Borovoye Array**	**60.79**	**340**	P			**P**	**20 57 11.0**	**-0.2**
	0.5nm,0.4s,mb4.0,baz=149,slow=10,SNR=7.4								
ABKAR	**Akbulak array**	**62.28**	**331**	*eP*			**P**	**20 57 21.3**	**0.0**
	1.4nm,0.6s,mb4.3								
BRTR	**Keskin Array B**	**73.99**	**312**	P			**P**	**20 58 35.7**	**+0.7**
	0.3nm,0.6s,mb3.4,baz=111,slow=7.9,SNR=2.8								
BRTR	**Keskin Array B**	**73.99**	**312**	P			**P**	**20 58 35.7**	**+0.7**
ARCES	**ARCESS Array B**	**87.08**	**340**	P			**P**	**20 59 44.7**	**+0.1**
	2.2nm,0.9s,mb4.4,baz=94,slow=3.6,SNR=4.0								
ARCES	**ARCESS Array B**	**87.08**	**340**	P			**P**	**20 59 44.7**	**+0.1**
VRAC	**Vranov**	**87.87**	**319**	LR			LR	21 42 45.4	
	comp=Z,28nm,18.5s,baz=211,slow=38								
TXAR	**Lajitas Array**	**144.78**	**38**	PKP			PKPdf	21 06 35.9	-0.9
	1.1nm,0.6s,baz=306,slow=1.2,SNR=19								
MIAR	**Mount Ida**	**145.50**	**21**	*e*PKPdf			PKPdf	21 06 37.3	-0.6

MEX 20 21:05:07.7±1.3,**16°.97N**×**94°.13W**,**h151**km±**23**km,**MD3.8, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TGIG		**0.99**	**101**	*iP*			Pn	21 05 30.7	-1.7
TGIG				*i*			Sn	21 05 49.5	-1.7
PCIG		**1.53**	**145**	*iP*			Pn	21 05 37.0	-0.6
PCIG				*i*			Sn	21 05 58.5	-2.1
HUIG	**Huatulco**	**2.24**	**238**	*iP*			Pn	21 05 43.0	-2.7
HUIG				*i*			Sn	21 06 13.3	-1.5
VHO	**Vista Hermosa**	**2.49**	**273**	*iP*			Pn	21 05 48.7	0.0
VHO				*i*			Sn	21 06 19.3	-1.0
UTMO	**Huajuapan**	**3.61**	**284**	*iP*			Pn	21 06 02.3	-0.6
UTMO				*i*			Sn	21 06 43.0	-2.7
PNIG	**Pinotepa**	**3.87**	**262**	*eP*			Pn	21 06 04.8	-1.5
PNIG				*i*			Sn	21 06 49.2	-2.5
PPM	**Popocatepetl**	**4.76**	**297**	*iP*			Pn	21 06 18.2	+0.2
PPM				*i*			Sn	21 07 10.6	-2.0
MZVM		**5.33**	**295**	*iP*			Pn	21 06 24.2	-1.2
MZVM				*i*			Sn	21 07 25.1	-1.1

*ISCJB **20** 21:09:05.8±0.5, 30°.64N±0°.05×139°.1E±0°.1, h436km±7km, mb3.3/8, Error ellipse: s-maj=19.6km s-min=7.3km az=167.3*
*JMA **20** 21:09:06.0±0.2, 30°.65N×139°.24E, h443km, M3.5*
*IDC **20** 21:09:06.8±1.6, 30°.61N×138°.73E, h417km±19km, mb3.0/8, mb1 3.0/10, mb1mx2.8/26, mbtmp2.9/10, Error ellipse: s-maj=44.5km s-min=11.9km az=73.0*
*NEIC **20** 21:09:07.0±1.2, 30°.58N×138°.62E, h417km±18km, mb3.4/1, Error ellipse: s-maj=41.4km s-min=10.5km az=70.0*

ISC 20 21:09:07.8±0.6,**30°.79N**±0°.07×**139°.1E**±0°.1,**h440**km±**8**km, **n29**,σ1**9**11/40,**mb3.3**/8,**Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.39**	**14**	P			**P**	**21 10 10.4**	**+0.8**
JIE	**Ise**	**4.14**	**331**	P			**P**	**21 10 23.2**	**-0.1**
BSO1	**Boso 1**	**4.16**	**21**	P			**P**	**21 10 23.8**	**+0.3**
BSO1				*eS*			**S**	**21 11 26.2**	**+0.9**
JAA	**Atsumi**	**4.19**	**337**	P			**P**	**21 10 24.0**	**+0.2**
TATJ	**Tateyama 2**	**4.28**	**8**	P			**P**	**21 10 27.2**	**+2.6**
TATJ				*eS*			**S**	**21 11 25.6**	**-1.7**
BSO4	**Boso 4**	**4.31**	**13**	*eS*			**S**	**21 11 30.7**	**+2.8**
CBIJ	**Chichi jima**	**4.54**	**143**	P			**P**	**21 10 23.6**	**-3.7**
CBIJ				S			**S**	**21 11 25.8**	**-6.2**
JNY	**Yasuok**	**4.68**	**347**	P			**P**	**21 10 29.6**	**+1.2**
JHU	**Hanno**	**5.05**	**1**	P			**P**	**21 10 33.3**	**+1.3**
JHU				S			**S**	**21 11 39.2**	**-1.5**
JRY	**Ryogami san**	**5.22**	**358**	P			**P**	**21 10 35.3**	**+1.7**
JRY				S			**S**	**21 11 44.2**	**+0.5**
JYT	**Yasato**	**5.50**	**9**	P			**P**	**21 10 36.3**	**-0.1**
JYT				*eS*			**S**	**21 11 47.1**	**-1.7**
JAG	**Ashikaga**	**5.63**	**3**	P			**P**	**21 10 37.4**	**-0.3**
JAG				S			**S**	**21 11 47.7**	**-3.6**
MJAR	**Matsushiro Arr**	**5.79**	**353**	P			**P**	**21 10 39.7**	**+0.3**
	0.3nm,0.3s,baz=184,slow=6.8,SNR=4.4								
MJAR				S			**S**	**21 11 53.9**	**-0.4**
	0.3nm,0.3s,baz=183,slow=18,SNR=3.6								
JHO	**Hitachi**	**5.93**	**11**	P			**P**	**21 10 41.7**	**+0.9**
JHO				S			**S**	**21 11 56.4**	**-0.5**
JFK	**Kawauchi**	**6.72**	**12**	P			**P**	**21 10 48.8**	**-0.3**
JFK				*eS*			**S**	**21 12 10.8**	**-1.2**
JMM	**Marumori**	**7.19**	**11**	P			**P**	**21 10 56.1**	**+2.0**
JMM				*eS*			**S**	**21 12 20.2**	**-1.1**
KSRS	**Korea Array**	**11.42**	**309**	P			**P**	**21 11 39.1**	**-1.1**
	0.2nm,0.3s,baz=128,slow=11,SNR=5.1								
ZALV	**Zalesovo Beam**	**44.97**	**317**	P			**P**	**21 16 41.1**	**-0.6**
	0.4nm,0.4s,mb3.1,baz=101,slow=7.5,SNR=2.4								
MK31	**Makanchi Array**	**46.10**	**307**	*eP*			**P**	**21 16 50.1**	**-0.5**
MKAR	**Makanchi Array**	**46.10**	**307**	P			**P**	**21 16 49.9**	**-0.7**
	0.4nm,0.5s,mb3.0,baz=78,slow=13,SNR=6.8								
MKAR				PcP			PcP	21 18 18.6	+0.5
	0.4nm,0.8s,baz=95,slow=4.6,SNR=4.2								
MKAR	**Makanchi Array**	**46.10**	**307**	P			**P**	**21 16 49.9**	**-0.7**
MKAR				PcP			PcP	21 18 18.6	+0.5
KURK	**Kurchatov**	**48.52**	**312**	P			**P**	**21 17 08.8**	**0.0**
	0.6nm,0.3s,mb3.4,baz=93,slow=9.4,SNR=9.4								
KURK	**Kurchatov**	**48.52**	**312**	*eP*			**P**	**21 17 08.3**	**-0.5**
	1.0nm,0.5s,mb3.4								
WRA	**Warramunga Arr**	**50.65**	**186**	P			**P**	**21 17 24.2**	**-0.8**
BVAR	**Borovoye Array**	**53.54**	**316**	P			**P**	**21 17 45.8**	**+0.3**
	0.4nm,0.2s,mb3.2,baz=99,slow=9.0,SNR=6.0								
BVAR				PcP			PcP	21 18 46.9	+1.3
	0.3nm,0.4s,baz=94,slow=2.1,SNR=4.0								
ASAR	**Alice Springs**	**54.37**	**186**	P			**P**	**21 17 51.1**	**-0.7**
	0.6nm,0.4s,mb3.1,baz=355,slow=5.2,SNR=18								
STKA	**Stephens Creek**	**62.36**	**178**	P			**P**	**21 18 46.1**	**+0.1**
	2.0nm,1.0s,mb3.6,baz=18,slow=20,SNR=2.8

QIZ				LR	LR		
	comp=N,400nm,8.8s						
QIZ				LR	LR		
	comp=Z,650nm,10.4s,MS4.3						
ZAA0	**Zalesovo Array**	**21.38**	**348**	*e*P	**P**	**21 21 08.6**	**-0.9**
ZALV	**Zalesovo Beam**	**21.38**	**348**	P	**P**	**21 21 08.6**	**-0.9**
	comp=Z,6.9nm,0.9s,mb4.0,baz=163,slow=9.5,SNR=19						
ZALV				LR	LR	21 30 26.3	
	comp=Z,73nm,19.2s,MS3.1,baz=185,slow=40						
BVAR	**Borovoye Array**	**25.20**	**328**	P	**P**	**21 21 47.0**	**-0.5**
	comp=Z,3.2nm,0.7s,mb4.0,baz=132,slow=13,SNR=15						
BRVK	**Borovoye**	**25.27**	**328**	*e*P	**P**	**21 21 48.0**	**-0.3**
	comp=Z,12nm,1.0s,mb4.4						
ABKAR	**Akbulak array**	**28.75**	**314**	*e*P	**P**	**21 22 19.3**	**-0.3**
	comp=Z,1.3nm,0.6s,mb3.8						
KSRS	**Korea Array**	**29.42**	**71**	P	**P**	**21 22 24.4**	**-1.2**
	comp=Z,1.1nm,0.6s,mb3.7,baz=279,slow=10.0,SNR=5.8						
KSRS				LR	LR	21 35 14.5	
	comp=Z,195nm,18.4s,MS3.8,baz=92,slow=39						
AKTK	**Aktyubinsk**	**30.34**	**315**	P	**P**	**21 22 33.8**	**+0.1**
AKTK				LR	LR	21 36 14.0	
AKTO	**Aktyubinsk**	**30.34**	**315**	P	**P**	**21 22 33.8**	**+0.1**
	comp=Z,1.5nm,0.8s,mb3.8,baz=100,slow=9.9,SNR=5.3						
AKTO				LR	LR	21 36 14.0	
	comp=Z,198nm,19.2s,MS3.8,baz=353,slow=39						
ARU	**Arti**	**32.72**	**325**	*e*P	**P**	**21 22 54.3**	**-0.1**
	comp=Z,15nm,1.5s,mb4.7						
KSM	**Kuching**	**35.89**	**148**	*e*P	**P**	**21 23 19.8**	**-2.6**
	comp=Z,2.6nm,0.5s,mb4.4						
MJAR	**Matsushiro Arr**	**37.70**	**72**	LR	LR	21 40 19.4	
	comp=Z,202nm,18.2s,MS4.0,baz=305,slow=38						
GNI	**Garni**	**38.25**	**294**	LR	LR	21 43 50.1	
	comp=Z,72nm,18.4s,MS3.5,baz=67,slow=43						
TIXI	**Tiksi**	**43.14**	**16**	*e*P	**P**	**21 24 20.7**	**-1.5**
	comp=Z,1.7nm,0.6s,mb4.0						
ASF	**Jabal al Asfar**	**46.01**	**285**	P	**P**	**21 24 45.2**	**-0.5**
	comp=Z,1.1nm,0.4s,mb4.1,baz=77,slow=3.6,SNR=3.4						
BR131	**Keskin Array S**	**46.76**	**296**	*e*P	**P**	**21 24 50.8**	**-0.7**
	comp=Z,3.1nm,0.8s,mb4.3						
BRTR	**Keskin Array B**	**46.76**	**296**	P	**P**	**21 24 50.9**	**-0.6**
	comp=Z,3.0nm,0.8s,mb4.2,baz=96,slow=7.1,SNR=18						
BRTR				PP	PP	21 26 45.1	+3.9
MMAI	**Mount Meron Ar**	**46.98**	**286**	P	**P**	**21 24 53.1**	**-0.2**
	comp=Z,0.6nm,0.4s,mb3.9,baz=90,slow=8.6,SNR=3.4						
MMAI				LR	LR	21 48 55.6	
	comp=Z,75nm,20.9s,MS3.6,baz=55,slow=42						
EIL	**Elat**	**48.38**	**282**	P	**P**	**21 25 03.4**	**-0.8**
	comp=Z,6.1nm,0.6s,mb4.8,baz=29,slow=6.7,SNR=9.0						
EIL	**Elat**	**48.38**	**282**	P	**P**	**21 25 03.4**	**-0.8**
AKASG	**Malin Array Be**	**48.42**	**311**	P	**P**	**21 25 03.2**	**-1.0**
	comp=Z,1.0nm,0.6s,mb4.0,baz=81,slow=6.2,SNR=5.1						
AKASG				LR	LR	21 47 29.3	
	comp=Z,134nm,20.7s,MS3.9,baz=200,slow=39						
AKASG	**Malin Array Be**	**48.42**	**311**	P	**P**	**21 25 03.2**	**-1.0**
AKASG				LR	LR	21 47 29.3	
AKBB	**Malin Array Si**	**48.42**	**311**	*e*P	**P**	**21 25 03.3**	**-0.9**
KIEV	**Kiev**	**48.43**	**311**	*e*P	**P**	**21 25 04.5**	**+0.2**
	comp=Z,4.4nm,0.8s,mb4.5						
FINES	**FINESS Array B**	**50.09**	**325**	P	**P**	**21 25 16.6**	**-0.2**
	comp=Z,0.9nm,0.5s,mb4.0,baz=85,slow=8.5,SNR=8.0						
FINES				LR	LR	21 48 20.8	
	comp=Z,124nm,18.2s,MS4.0,baz=259,slow=38						
ARCES	**ARCESS Array B**	**51.15**	**336**	P	**P**	**21 25 24.5**	**-0.2**
	comp=Z,2.8nm,0.9s,mb4.2,baz=94,slow=7.3,SNR=4.3						
ARCES				LR	LR	21 47 39.3	
	comp=Z,86nm,20.6s,MS3.8,baz=203,slow=37						
ARCES	**ARCESS Array B**	**51.15**	**336**	P	**P**	**21 25 24.5**	**-0.2**
ARCES				LR	LR	21 47 39.3	
MLR	**Muntele Rosu**	**51.27**	**304**	P	**P**	**21 25 27.1**	**+1.2**
	comp=Z,2.2nm,0.7s,mb4.2,baz=134,slow=6.7,SNR=5.4						
IDI	**Anoyia**	**54.62**	**292**	P	**P**	**21 25 50.2**	**-0.7**
	comp=Z,8.6nm,0.8s,mb4.8,baz=78,slow=9.3,SNR=5.2						
MORC	**Moravsky Berou**	**55.97**	**311**	*e*P	**P**	**21 26 00.8**	**+0.5**
	comp=Z,1.3nm,0.7s,mb4.1						
HFS	**Hagfors**	**56.21**	**324**	P	**P**	**21 26 00.8**	**-1.1**
	comp=Z,1.6nm,0.6s,mb4.2,baz=80,slow=12,SNR=3.0						
NB2	**NORSAR Subarra**	**57.27**	**325**	P	**P**	**21 26 07.8**	**-1.6**
	comp=Z,3.9nm,1.1s,mb4.3,baz=80,slow=7.4						
NOA	**NORSAR Array B**	**57.27**	**325**	P	**P**	**21 26 08.3**	**-1.2**
	comp=Z,1.1nm,0.7s,mb4.0,baz=97,slow=7.7,SNR=3.7						
NOA				LR	LR	21 52 31.8	
	comp=Z,123nm,18.9s,MS4.0,baz=70,slow=38						
LPG	**La Plagne**	**64.20**	**309**	*e*P	**P**	**21 27 00.6**	**+3.7**
	comp=Z,5.7nm,0.8s,mb4.4						
LPG	**La Plagne**	**64.20**	**309**	*e*P	**P**	**21 27 00.6**	**+3.7**
	comp=Z,2.8nm,0.8s,mb4.3						
LPL	**La Plagne**	**64.21**	**309**	*e*P	**P**	**21 27 00.6**	**+3.6**
CABF	**La Chapelle**	**64.22**	**310**	*e*P	**P**	**21 26 59.7**	**+2.7**
	comp=Z,3.3nm,0.6s,mb4.2						
CABF	**La Chapelle**	**64.22**	**310**	*e*P	**P**	**21 26 59.7**	**+2.7**
	comp=Z,1.6nm,0.6s,mb4.2						
BNI	**Bardonecchia**	**64.42**	**308**	*e*P	**P**	**21 26 59.0**	**+0.7**
	comp=Z,2.5nm,0.8s,mb4.3						
KEST	**Kesra**	**66.25**	**298**	LR	LR	21 59 45.2	
	comp=Z,31nm,18.9s,MS3.5,baz=334,slow=39						
WRA	**Warramunga Arr**	**66.47**	**136**	P	**P**	**21 27 10.4**	**-1.4**
	comp=Z,3.9nm,0.9s,mb4.5,baz=323,slow=6.9,SNR=5.5						
ASAR	**Alice Springs**	**69.17**	**139**	P	**P**	**21 27 28.1**	**-0.7**
	comp=Z,4.2nm,0.6s,mb4.5,baz=326,slow=6.4,SNR=38						
STKA	**Stephens Creek**	**79.81**	**139**	P	**P**	**21 28 29.1**	**-1.3**
	comp=Z,1.7nm,0.6s,mb4.2,baz=0.0,slow=1.0,SNR=3.4						
YKA	**Yellowknife Ar**	**82.25**	**12**	P	**P**	**21 28 42.0**	**-1.1**
	comp=Z,0.9nm,0.8s,mb3.8,baz=333,slow=4.8,SNR=5.7						
YKA	**Yellowknife Ar**	**82.25**	**12**	P	**P**	**21 28 42.0**	**-1.1**
LBTB	**Lobatse**	**85.75**	**237**	*e*P	**P**	**21 29 00.7**	**-0.9**
	comp=Z,6.2nm,0.8s,mb4.9						
BOSA	**Boshof**	**88.27**	**234**	LR	LR	22 05 40.9	
	comp=Z,89nm,20.3s,MS4.2,baz=346,slow=34						
ULM	**Lac du Bonnet**	**96.62**	**5**	LR	LR	22 20 24.5	
	comp=Z,80nm,19.3s,MS4.2,baz=348,slow=40						

NDI 20 21:19:41.0±4.3, 23°.15N×70°.32E, h10km, ML3.8, Southern India

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHJ	**Bhuj**	**0.62**	**280**	*e*PKP	Pg	21 19 52.2	-0.8
BHJ				*e*S	Sg	21 20 02.2	+1.0
BHJ				AML	AML	21 20 02.5	
	comp=E,8μm,0.2s						
BHJ				AML	AML	21 20 02.6	
	comp=N,22μm,0.2s						
BHV	**Bhavnagar**	**2.19**	**129**	*e*PKP	Pn	21 20 15.0	-2.4
BHV				*e*SG	Sg	21 20 54.0	+2.6
AJM	**Ajmer**	**5.14**	**49**	*e*PKP	Pn	21 20 59.1	+1.1
AJM				*e*S	Sn	21 21 52.7	-4.6
AJM				AML	AML	21 22 23.1	
	comp=N,149nm,0.6s						
AJM				AML	AML	21 22 24.9	
	comp=E,259nm,0.5s						
POO	**Poona**	**5.66**	**144**	*e*PKP	Pn	21 21 05.5	+0.3
POO				*e*S	Sn	21 22 08.1	-2.2
POO				AML	AML	21 22 45.9	
	comp=N,60nm,1.1s						
POO				AML	AML	21 22 47.5	
	comp=E,90nm,0.6s						
BHPL	**Bhopal**	**6.54**	**88**	*e*PKP	Pn	21 21 18.5	+1.2
BHPL				*e*S	Sn	21 22 25.0	-6.9
BHPL				AML	AML	21 23 07.5	
	comp=N,66nm,0.7s						
BHPL				AML	AML	21 23 07.9	
	comp=E,59nm,0.6s						
NDI	**New Delhi**	**8.30**	**47**	*e*S	Sn	21 23 10.0	-5.2
SDNR	**Sundarnagar**	**10.20**	**34**	*e*PKP	Pn	21 22 07.1	-0.4
THN	**Thein Dam**	**10.40**	**26**	*ex*	Pn	21 22 03.5	-6.8
CEP	**Cherat**	**10.72**	**7**	P	Pn	21 22 13.5	-1.1

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*IDC **20** 21:42:43.5±1.1, 19°.90N×121°.98E, h0km, mb3.5/6, mb1 3.6/7, mb1mx3.4/23, mbtmp3.5/7, ML3.5/1, Error ellipse: s-maj=41.8km s-min=19.1km az=65.0*
*ISCJB **20** 21:42:46.4±0.8, 19°.90N±0°.10×122°.0E±0°.2, h33km, mb3.5/8, Error ellipse: s-maj=21.4km s-min=13.8km az=173.9*
*NEIC **20** 21:42:48.6±0.8, 19°.87N×121°.95E, h35km, mb3.8/2, Error ellipse: s-maj=23.5km s-min=11.9km az=66.0*
ISC 20 21:42:48.5±0.8, 19°.90N±0°.10×122°.0E±0°.2, h35km, n11, σ0s60/11, mb3.5/8, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**18.24**	**15**	P	**Pn**	**21 46 58.4**	**-0.4**
	0.2nm,0.3s,baz=190,slow=13,SNR=5.0						
CMAR	**Chiang Mai Arr**	**21.81**	**270**	P	**P**	**21 47 37.5**	**-0.2**
	0.2nm,0.5s,mb2.8,baz=84,slow=8.3,SNR=3.0						
KULM	**Kulim**	**25.33**	**238**	*e*P	**P**	**21 48 11.7**	**-0.5**
	2.7nm,0.9s,mb3.8						
WRA	**Warramunga Arr**	**41.40**	**162**	P	**P**	**21 50 30.9**	**-0.6**
	0.5nm,0.5s,mb3.4,baz=345,slow=9.5,SNR=5.7						
MK31	**Makanchi Array**	**41.99**	**319**	*e*P	**P**	**21 50 36.9**	**+0.7**
MKAR	**Makanchi Array**	**41.99**	**319**	P	**P**	**21 50 37.0**	**+0.9**
	0.6nm,0.6s,mb3.4,baz=103,slow=9.5,SNR=9.9						
ZALV	**Zalesovo Beam**	**44.26**	**329**	P	**P**	**21 50 53.7**	**-0.8**
	0.6nm,0.4s,mb3.6,baz=120,slow=8.2,SNR=4.3						
ASAR	**Alice Springs**	**44.83**	**164**	P	**P**	**21 51 00.2**	**+0.9**
	0.3nm,0.5s,mb3.4,baz=351,slow=9.8,SNR=5.3						
KURK	**Kurchatov**	**45.89**	**323**	P	**P**	**21 51 07.3**	**0.0**
	baz=116,slow=7.7						
KURK	**Kurchatov**	**45.89**	**323**	*e*P	**P**	**21 51 07.3**	**-0.1**
	0.7nm,0.6s,mb3.8						
BVAR	**Borovoye Array**	**51.48**	**323**	P	**P**	**21 51 50.5**	**+0.1**
	0.5nm,0.5s,mb3.7,baz=114,slow=8.3,SNR=3.9						

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*DDA **20** 21:58:16.2, 36°.27N×35°.73E, h7km±2km, Md2.9*
*ISK **20** 21:58:17.1, 36°.18N×35°.64E, h23km, MD2.8*
*CSEM **20** 21:58:17.7±0.6, 36°.23N×35°.78E, h15km, MD2.9, Error ellipse: s-maj=15.7km s-min=8.3km az=36.0*
*ISCJB **20** 21:58:18.1±0.9, 36°.24N±0°.06×35°.76E±0°.06, h23km±8km, Error ellipse: s-maj=11.6km s-min=6.3km az=29.9*
ISC 20 21:58:18.1±0.9, 36°.26N±0°.06×35°.77E±0°.06, h19km±5km, n18, σ1s16/28, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTY	**Hatay**	**0.33**	**114**	*e*PG	**Pg**	**21 58 26.4**	**+1.1**
HTY				*e*SG	**Sg**	**21 58 32.7**	**+2.7**
HTY	**Hatay**	**0.33**	**114**	*e*Pg	**Pg**	**21 58 26.4**	**+1.1**
HTY				*e*Sg	**Sg**	**21 58 32.7**	**+2.6**
YAYL	**Yayladag**	**0.35**	**128**	*e*P	**Pg**	**21 58 23.7**	**-2.0**
YAYL				*e*S	**Sg**	**21 58 30.5**	**-0.2**
YAYL	**Yayladag**	**0.35**	**128**	*e*P	**Pg**	**21 58 23.7**	**-2.0**
YAYL				*e*S	**Sg**	**21 58 30.5**	**-0.2**
KRTS	**Karatas**	**0.45**	**315**	*e*PG	**Pg**	**21 58 26.8**	**-0.5**
KRTS				*e*SG	**Sg**	**21 58 34.1**	**+0.6**
KRTS	**Karatas**	**0.45**	**315**	*e*Pg	**Pg**	**21 58 26.8**	**-0.5**
KRTS				*e*Sg	**Sg**	**21 58 34.1**	**+0.6**
COBT	**Iskenderun**	**0.48**	**56**	*e*P	**Pg**	**21 58 25.9**	**-1.9**
COBT				*e*S	**Sg**	**21 58 33.6**	**-0.7**
COBT	**Iskenderun**	**0.48**	**56**	*e*P	**Pg**	**21 58 25.9**	**-1.9**
COBT				*e*S	**Sg**	**21 58 33.6**	**-0.7**
CEYT	**Ceyhan**	**0.75**	**359**	*e*PG	**Pg**	**21 58 34.0**	**+1.0**
CEYT	**Ceyhan**	**0.75**	**359**	*e*Pg	**Pg**	**21 58 34.0**	**+1.0**
KARA	**Karaisali**	**1.15**	**331**	*e*PN	**Pn**	**21 58 38.9**	**-0.4**
KARA	**Karaisali**	**1.15**	**331**	*e*Pn	**Pn**	**21 58 38.9**	**-0.4**
KUZU	**Kuzuini**	**1.18**	**64**	‖*i*P	**Pn**	**21 58 39.3**	**-0.3**
KUZU				*i* S	**Sb**	**21 58 55.2**	**+0.5**
KUZU	**Kuzuini**	**1.18**	**64**	*i* P	**Pn**	**21 58 39.3**	**-0.3**
KUZU				*i* S	**Sb**	**21 58 55.2**	**+0.5**
KOZT	**Kozan**	**1.22**	**2**	*e*PN	**Pn**	**21 58 40.2**	**0.0**
KMRS	**Kahramanmaras**	**1.54**	**36**	*e*PN	**Pn**	**21 58 45.8**	**+1.1**
KMRS	**Kahramanmaras**	**1.54**	**36**	*e*Pn	**Pn**	**21 58 45.8**	**+1.2**
SARI	**SarD1z-Kayseri**	**2.53**	**17**	*e*PN	**Pn**	**21 58 54.7**	**-3.5**

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*ISCJB **20** 22:06:55.4±1.9, 2°.6S±0°.3×68°.1E±0°.2, h10km, mb3.9/11, MS3.5/12, Error ellipse: s-maj=44.6km s-min=23.1km az=43.4*
*IDC **20** 22:06:56.8±1.9, 2°.50S×68°.26E, h0km, mb3.6/6, mb1 3.7/6, mb1mx3.5/22, mbtmp3.6/6, MS3.5/12, Ms1 3.5/12, ms1mx3.3/29, Error ellipse: s-maj=49.7km s-min=32.7km az=47.0*
*NEIC **20** 22:06:58.2±1.4, 2°.50S×68°.17E, h10km, mb4.2/5, Error ellipse: s-maj=34.7km s-min=22.5km az=219.0*
ISC 20 22:06:58.0±1.9, 2°.5S±0°.2×68°.1E±0°.2, h10km, n22, σ1s08/11, mb3.9/11, MS3.5/12, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATD	**Arta Tunnel**	**28.77**	**300**	LR	LR	22 22 07.3	
	comp=Z,35nm,20.7s,MS3.0,baz=152,slow=32						
CMAR	**Chiang Mai Arr**	**36.81**	**54**	P	**P**	**22 14 07.6**	**+1.2**
	1.1nm,0.9s,mb3.7,baz=226,slow=7.2,SNR=4.4						
CMAR				LR	LR	22 27 33.1	
	comp=Z,42nm,18.2s,MS3.3,baz=210,slow=34						
CHTO	**Chiang Mai**	**36.99**	**54**	*e*P	**P**	**22 14 08.3**	**+0.4**
	2.7nm,0.9s,mb4.1						
EKS2	**Erkin-Say**	**45.28**	**6**	*e*P	**P**	**22 15 17.1**	**+1.3**
	2.9nm,0.9s,mb4.1						
AAK	**Ala-Archa**	**45.33**	**7**	LR	LR	22 32 41.0	
	comp=Z,71nm,18.0s,MS3.6,baz=191,slow=34						
ASF	**Jabal al Asfar**	**45.49**	**322**	LR	LR	22 31 50.0	
	comp=Z,49nm,18.0s,MS3.5,baz=299,slow=33						
TKM2	**Tokmak 2**	**45.75**	**8**	*e*P	**P**	**22 15 19.7**	**+0.2**
	6.4nm,1.1s,mb4.5						
GNI	**Garni**	**47.58**	**336**	LR	LR	22 35 14.0	
	comp=Z,76nm,19.5s,MS3.7,baz=54,slow=36						
BOSA	**Boshof**	**48.35**	**233**	LR	LR	22 35 20.9	
	comp=Z,61nm,18.8s,MS3.6,baz=321,slow=35						
MKAR	**Makanchi Array**	**50.68**	**13**	P	**P**	**22 15 57.5**	**-0.1**
	0.7nm,0.8s,mb3.7,baz=191,slow=6.9,SNR=3.2						
MKAR				LR	LR	22 37 45.3	
	comp=Z,38nm,20.8s,MS3.4,baz=174,slow=36						
ABKAR	**Akbulak array**	**52.07**	**353**	*e*P	**P**	**22 16 06.4**	**-1.6**
	0.8nm,0.6s,mb3.8						
BRTR	**Keskin Array B**	**52.63**	**327**	P	**P**	**22 16 14.3**	**+2.1**
	0.6nm,0.9s,mb3.5,baz=126,slow=6.1,SNR=3.8						
AKTO	**Aktyubinsk**	**53.48**	**352**	LR	LR	22 39 14.4	
	comp=Z,28nm,20.9s,MS3.3,baz=127,slow=36						
KURK	**Kurchatov**	**53.80**	**8**	LR	LR	22 38 47.9	
	comp=Z,28nm,20.5s,MS3.3,baz=100,slow=36						
KURK	**Kurchatov**	**53.80**	**8**	*e*P	**P**	**22 16 19.7**	**-1.0**
	2.8nm,0.8s,mb4.2						
ZALV	**Zalesovo Beam**	**57.98**	**12**	P	**P**	**22 16 49.1**	**-1.4**
	0.3nm,0.3s,mb3.8,baz=207,slow=9.3,SNR=4.1						
SONM	**Songino Array**	**60.26**	**29**	P	**P**	**22 17 06.0**	**-0.5**
	1.3nm,0.7s,mb4.1,baz=217,slow=7.2,SNR=6.9						
MAW	**Mawson**	**65.05**	**182**	LR	LR	22 38 26.7	
	comp=Z,114nm,21.2s,MS4.0,baz=319,slow=29						
ASAR	**Alice Springs**	**66.82**	**115**	P	**P**	**22 17 50.1**	**-0.3**
	0.4nm,0.7s,mb3.6,baz=283,slow=6.4,SNR=4.6						
NOA	**NORSAR Array B**	**76.88**	**335**	LR	LR	22 50 07.5	
	comp=Z,13nm,21.8s,MS3.2,baz=65,slow=34						
ARCES	**ARCESS Array B**	**77.45**	**346**	LR	LR	22 54 07.7	
	comp=Z,36nm,20.9s,MS3.7,baz=80,slow=37						
TXAR	**Lajitas Array**	**152.24**	**345**	PKPbc	PKPbc	22 26 55.3	+0.6
	0.5nm,0.8s,baz=32,slow=3.6,SNR=4.9						

IDC 20 22:23:16.5±3.8, 18°.94N×147°.33E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.5/23, mbtmp3.8/4, Error ellipse: s-maj=165.6km s-min=28.0km az=85.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.69**	**199**	P	P	22 30 59.7	+0.8
	1.3nm,0.6s,baz=23,slow=9.0,SNR=4.7						
ASAR	**Alice Springs**	**44.33**	**198**	P	P	22 31 27.4	-1.0
	0.4nm,0.6s,baz=14,slow=6.9,SNR=4.8						
KURK	**Kurchatov**	**62.13**	**318**	P	P	22 33 39.5	+0.2
	0.2nm,0.3s,baz=92,slow=7.6,SNR=2.6						
FINES	**FINESS Array B**	**87.31**	**336**	P	P	22 36 05.2	+0.2
	2.6nm,1.1s,baz=91,slow=7.2,SNR=3.4						

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*ISK **20** 22:42:22.3, 38°.93N×25°.49E, h5km, MD2.9*
*DDA **20** 22:42:24.1, 38°.85N×25°.63E, h7km±5km, Md2.8*
*ISCJB **20** 22:42:24.4±1.0, 38°.88N±0°.03×25°.57E±0°.07, h8km±7km, Error ellipse: s-maj=9.1km s-min=5.0km az=165.5*
*THE **20** 22:42:25.6, 38°.85N×25°.63E, h15km±2km, ML2.7/4, Error ellipse: s-maj=3.9km s-min=0.8km az=90.0*
*CSEM **20** 22:42:25.2±0.5, 38°.88N×25°.58E, h15km, ML2.7/4, Error ellipse: s-maj=10.8km s-min=5.9km az=72.0*
ISC 20 22:42:25.0±1.0, 38°.87N±0°.03×25°.58E±0°.07, h11km±6km, n19, σ0s82/34, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.41**	**32**	P	**Pg**	**22 42 33.4**	**+0.4**
SIGR				S	**Sg**	**22 42 39.5**	**+1.0**
SIGR	**SIGRI**	**0.41**	**32**	P	**Pg**	**22 42 33.4**	**+0.4**
SIGR				S	**Sg**	**22 42 39.5**	**+1.0**
CHOS	**Chios island**	**0.61**	**142**	P	**Pg**	**22 42 37.0**	**+0.1**
CHOS				S	**Sg**	**22 42 44.8**	**-0.1**
CHOS	**Chios island**	**0.61**	**142**	P	**Pg**	**22 42 37.0**	**+0.1**
CHOS				S	**Sg**	**22 42 44.8**	**-0.1**
PRK	**Paraskevi**	**0.66**	**55**	P	**Pg**	**22 42 37.6**	**-0.2**
PRK				S	**Sg**	**22 42 47.5**	**+1.0**
PRK	**Paraskevi**	**0.66**	**55**	P	**Pg**	**22 42 37.6**	**-0.2**
PRK				S	**Sg**	**22 42 47.5**	**+1.0**
AYVA	**Ayvalik**	**0.97**	**63**	*e*P	**Pg**	**22 42 43.6**	**-0.2**
AYVA				*e*S	**Sg**	**22 42 55.6**	**-0.8**
AYVA	**Ayvalik**	**0.97**	**63**	*e*P	**Pg**	**22 42 43.6**	**-0.1**
AYVA				*e*S	**Sg**	**22 42 55.6**	**-0.8**
BOZC	**Bozcaada**	**1.04**	**21**	*e*P	**Pg**	**22 42 44.3**	**-0.7**
BOZC				*e*S	**Sg**	**22 42 58.3**	**-0.2**
LIA	**Limnos Island**	**1.07**	**344**	P	**Pg**	**22 42 45.9**	**+0.3**
LIA				S	**Sg**	**22 43 00.5**	**+0.9**
LIA	**Limnos Island**	**1.07**	**344**	P	**Pg**	**22 42 45.9**	**+0.3**
LIA				S	**Sg**	**22 43 00.5**	**+0.9**
EZN	**Ezine**	**1.12**	**31**	*e*PN	**Pg**	**22 42 44.7**	**-1.9**
EZN				*e*SN	**Sg**	**22 43 01.0**	**-0.1**
EZN	**Ezine**	**1.12**	**31**	*e*Pn	**Pg**	**22 42 44.7**	**-1.8**
EZN				*e*Sn	**Sg**	**22 43 01.0**	**-0.1**
BLCB	**Balcova**	**1.25**	**112**	*e*PN	**Pn**	**22 42 48.7**	**+0.4**
BLCB	**Balcova**	**1.25**	**112**	*e*Pn	**Pn**	**22 42 48.7**	**+0.4**
GADA	**Gvkgeada**	**1.34**	**11**	*e*PN	**Pn**	**22 42 47.9**	**-1.8**
GADA				*e*SN	**Sn**	**22 43 07.8**	**+0.4**
GADA	**Gvkgeada**	**1.34**	**11**	*e*Pn	**Pn**	**22 42 47.9**	**-1.7**
GADA				*e*Sn	**Sn**	**22 43 07.8**	**+0.3**
IZM	**Izmir**	**1.40**	**109**	*e*PN	**Pn**	**22 42 51.7**	**+1.2**
IZM	**Izmir**	**1.40**	**109**	*e*Pn	**Pn**	**22 42 51.7**	**+1.2**

CASC 20 22:51:43.7±1.9, 11°.90N×86°.57W, h96km±7km, MD3.8, ML3.3, 1D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.28**	**356**	*e*P	Pn	22 51 57.9	+0.2
COPN				*e*P		22 51 58.0	
COPN				*e*S	Sn	22 52 08.8	+0.7
COPN				*e*S	Sn	22 52 09.1	+1.0
CSAN		**0.32**	**27**	*e*P	Pn	22 51 58.3	+0.4
APON	**Apoyo**	**0.49**	**88**	*e*P	Pn	22 51 59.0	0.0
MOMN	**Momotombo**	**0.51**	**3**	*e*P	Pn	22 51 59.4	+0.3
MOMN				*e*S	Sn	22 52 12.1	+1.4
HUEN		**0.58**	**42**	*e*P	Pn	22 51 59.7	0.0
LEON	**Leon**	**0.60**	**328**	*e*P	Pn	22 51 60.0	+0.1
CNGN	**Cerro Negro**	**0.61**	**348**	*e*P	Pn	22 51 60.0	0.0
SSN	**San Juan del S**	**0.92**	**130**	*e*P	Pn	22 52 03.4	+0.4
SSN				*e*P		22 52 03.6	
SSN				*e*S	Sn	22 52 18.9	+1.5
CRIN	**San Cristobal**	**0.92**	**330**	*e*P	Pn	22 52 03.4	+0.4
BOAB	**BOACO BROADBAN**	**.04**	**58**	*e*P	Pn	22 52 03.5	-0.7
GBS2	**Las Lilas**	**1.52**	**134**	*i* P	Pn	22 52 09.9	-0.1
LAPC	**Finca la Perla**	**1.58**	**135**	*i* P	Pn	22 52 10.3	-0.5
LAPC				*i* S	Sn	22 52 31.8	+0.5
NY14	**Universidad de**	**1.61**	**141**	*i* P	Pn	22 52 11.8	+0.7
CNCH	**Conchagua**	**1.84**	**318**	*e*P	Pn	22 52 14.3	+0.3
CNCH				*e*S	Sn	22 52 38.5	+1.3
PTEN	**Parque Tenorio**	**1.95**	**127**	*i* P	Pn	22 52 14.9	-0.6
BLLM	**Bellamira**	**2.24**	**313**	*e*P	Pn	22 52 19.1	-0.1
TGUH	**Tegucigalpa,Un**	**2.25**	**342**	*e*P	Pn	22 52 19.4	0.0
TGUH				*e*S	Sn	22 52 46.5	-0.3
CAHU	**Cacacuatique**	**2.45**	**319**	*e*P	Pn	22 52 22.4	+0.3
CAHU				*e*S	Sn	22 52 53.9	+2.3
JCR	**Jicaral**	**2.49**	**145**	*e*P	Pn	22 52 23.6	+1.0
JCR				*e*S	Sn	22 52 52.3	-0.1
CGA2	**Cerro Gallo 2**	**2.79**	**132**	*e*P	Pn	22 52 28.9	+2.4
CGA2				*e*S	Sn	22 53 00.3	+0.8
PRS1	**Puriscal**	**2.92**	**130**	*e*P

az=25.8
*IDC **20** 23:04:20.3±1.0, 32.°51N×104.°97E, h0km, mb3.8/7, mb1 3.9/9, mb1mx3.7/26, mbtmp3.8/9, ML3.7/2, MS2.8/1, Ms1 2.8/1, ms1mx2.2/30, Error ellipse: s-maj=60.6km s-min=17.0km az=59.0*
*NEIC **20** 23:04:21.2±0.4, 32.°49N×105.°06E, h10km, mb4.1/8, Error ellipse: s-maj=11.3km s-min=6.7km az=63.0*
*BJI **20** 23:04:21.0, 32.°63N×105.°28E, h11km, mB4.2/1, mb3.6/1, ML3.6/16, Ms3.4/5, Ms7 3.4/5*
ISC 20 23:04:20.6±0.3, 32.°49N±0.°03×105.°31E±0.°04, h10km, n31, σ1§17/44, mb3.9/13, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.06**	**220**	Pn	**Pn**	**23 04 58.1**	**+2.8**
CD2				Pg	**Pg**	**23 05 02.1**	**+1.9**
CD2				Sn	**Sn**	**23 05 21.8**	**+0.7**
CD2				Sg	**Sg**	**23 05 25.8**	**-1.1**
CD2				smax			
	comp=N,2μm,0.8s						
CD2				smax			
	comp=E,1μm,0.7s						
XAN	**Xi'an**	**3.39**	**62**	Pn	**Pn**	**23 05 14.8**	**+1.2**
XAN				Pg	**Pg**	**23 05 25.6**	**0.0**
XAN				Sn	**Sn**	**23 05 53.6**	**-0.3**
XAN				Sg	**Sg**	**23 06 05.3**	**-4.3**
XAN				smax			
	comp=N,220nm,0.6s						
XAN				smax			
	comp=E,140nm,0.8s						
XAN				LR	LR		
	comp=N,240nm,8.4s						
XAN				LR	LR		
	comp=E,84nm,9.1s						
XAN				LR	LR		
	comp=Z,110nm,7.4s						
LZH	**Lanzhou**	**3.79**	**342**	*e*Pn	**Pn**	**23 05 21.3**	**+2.3**
LZH				Pg	**Pg**	**23 05 30.8**	**-2.3**
LZH				Sn	**Sn**	**23 06 09.3**	**+5.7**
LZH				Sg	**Sg**	**23 06 18.3**	**-3.9**
LZH				smax			
	comp=N,320nm,0.7s						
LZH				smax			
	comp=E,380nm,0.6s						
LZH				LR	LR		
	comp=N,500nm,4.8s						
LZH				LR	LR		
	comp=Z,560nm,6.6s						
ENH	**Enshi**	**4.20**	**121**	*e*Pn	**Pn**	**23 05 27.2**	**+2.5**
ENH				*e*Pg	**Pg**	**23 05 39.7**	**-1.4**
ENH				*e*Sg	**Sg**	**23 06 35.0**	**-0.6**
GYA	**Guiyang**	**6.13**	**169**	Pg	**Pn**	**23 05 51.5**	**+0.3**
GYA				Sg	**Sn**	**23 06 59.4**	**-2.0**
GYA				smax			
	comp=N,50nm,0.7s						
GYA				smax			
	comp=E,60nm,0.7s						
GTA	**Gaotai**	**8.21**	**329**	*e*P	**Pn**	**23 06 20.1**	**+0.3**
GTA				pP		23 06 24.4	
GTA				sP		23 06 26.3	
GTA				S	**Sn**	**23 07 53.3**	**+0.6**
GTA				sS		23 07 58.3	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,66nm,5.1s						
GTA				LR	LR		
	comp=N,120nm,10.2s						
GTA				LR	LR		
	comp=E,140nm,9.6s						
GTA				LR	LR		
	comp=Z,120nm,9.0s						
CMAR	**Chiang Mai Arr**	**15.11**	**204**	Pn	**Pn**	**23 07 52.0**	**-2.2**
	comp=Z,0.3nm,0.3s,baz=17,slow=12,SNR=4.1						
SONM	**Songino Array**	**15.35**	**3**	Pn	**Pn**	**23 07 56.8**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=190,slow=14,SNR=3.5						
ULN	**Ulaanbaatar**	**15.41**	**4**	*e*Pn	**Pn**	**23 07 59.2**	**+1.2**
	comp=Z,2.4nm,0.9s						
KSRS	**Korea Array**	**19.16**	**69**	P	**Pn**	**23 08 44.9**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=247,slow=11,SNR=7.0						
KSRS				LR	LR	23 16 09.7	
	comp=Z,27nm,18.4s,baz=240,slow=37						
MK31	**Makanchi Array**	**22.66**	**316**	*e*P	**P**	**23 09 21.9**	**+0.1**
MKAR	**Makanchi Array**	**22.66**	**316**	P	**P**	**23 09 21.2**	**-0.6**
	comp=Z,1.6nm,0.8s,mb3.5,baz=109,slow=12,SNR=14						
ZAA0	**Zalesovo Array**	**25.95**	**332**	*e*P	**P**	**23 09 52.9**	**-0.2**
ZALV	**Zalesovo Beam**	**25.95**	**332**	P	**P**	**23 09 52.8**	**-0.2**
	comp=Z,1.0nm,0.5s,mb3.6,baz=132,slow=8.3,SNR=3.8						
KURK	**Kurchatov**	**26.79**	**321**	P	**P**	**23 10 00.5**	**-0.1**
	comp=Z,0.9nm,0.8s,mb3.4,baz=133,slow=9.0,SNR=9.2						
KURK	**Kurchatov**	**26.79**	**321**	*e*P	**P**	**23 10 00.5**	**-0.1**
	comp=Z,1.9nm,0.8s,mb3.7						
AML	**Almayashu**	**26.80**	**300**	*e*P	**P**	**23 09 60.0**	**-0.8**
	comp=Z,3.0nm,0.5s,mb4.1						
EKS2	**Erkin-Say**	**26.84**	**301**	*e*P	**P**	**23 10 00.8**	**-0.3**
	comp=Z,1.0nm,0.5s,mb3.6						
BVAR	**Borovoye Array**	**32.37**	**320**	P	**P**	**23 10 49.8**	**-0.3**
	comp=Z,0.3nm,0.5s,mb3.4,baz=111,slow=11,SNR=4.3						
BRVK	**Borovoye**	**32.44**	**320**	*e*P	**P**	**23 10 49.3**	**-1.4**
	comp=Z,1.2nm,0.7s,mb3.8						
FINES	**FINESS Array B**	**57.00**	**326**	P	**P**	**23 14 05.3**	**-0.8**
	comp=Z,1.6nm,0.8s,mb4.1,baz=90,slow=6.9,SNR=4.3						
WRA	**Warramunga Arr**	**59.08**	**148**	P	**P**	**23 14 23.6**	**+2.5**
	comp=Z,2.4nm,0.7s,mb4.3,baz=346,slow=7.5,SNR=4.8						
KWP	**Kalwaria Pacla**	**61.52**	**313**	*e*P	**P**	**23 14 37.4**	**-0.2**
	comp=Z,2.5nm,0.7s,mb4.5						
ASAR	**Alice Springs**	**62.16**	**150**	P	**P**	**23 14 44.9**	**+2.8**
	comp=Z,0.7nm,0.5s,mb4.1,baz=336,slow=7.1,SNR=6.5						
CDF	**Champ du Feu**	**71.34**	**316**	*e*P	**P**	**23 15 40.6**	**+0.1**
LPG	**La Plagne**	**73.05**	**313**	*e*P	**P**	**23 15 50.8**	**0.0**
	comp=Z,4.3nm,0.6s,mb4.2						
LPG	**La Plagne**	**73.05**	**313**	*e*P	**P**	**23 15 50.8**	**0.0**
	comp=Z,2.2nm,0.6s,mb4.3						
LPL	**La Plagne**	**73.05**	**313**	*e*P	**P**	**23 15 50.8**	**0.0**
	comp=Z,3.1nm,0.5s,mb4.2						
LPL	**La Plagne**	**73.05**	**313**	*e*P	**P**	**23 15 50.8**	**0.0**
	comp=Z,1.5nm,0.5s,mb4.2						
SMF	**Signal de Mont**	**74.23**	**315**	*e*P	**P**	**23 15 57.6**	**-0.1**
TCF	**Toulx Ste Croi**	**75.38**	**316**	*e*P	**P**	**23 16 04.2**	**-0.2**

IDC 20 23:06:16.4±8.0, 19.°90N×144.°85E, h0km, mb3.9/4, mb1 3.9/4, mb1mx3.6/22, mbtmp3.9/4, Error ellipse: s-maj=425.0km s-min=114.9km az=63.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**22.88**	**323**	P	P	23 11 21.8	+0.1
	2.4nm,0.7s,baz=145,slow=9.2,SNR=10						
MKAR	**Makanchi Array**	**57.06**	**313**	P	P	23 16 04.5	+0.2
	0.7nm,0.6s,baz=84,slow=9.5,SNR=9.1						
KURK	**Kurchatov**	**59.85**	**318**	P	P	23 16 23.8	+0.1
	1.9nm,0.6s,baz=92,slow=7.6,SNR=8.5						
BVAR	**Borovoye Array**	**65.05**	**320**	P	P	23 16 58.7	+0.2
	1.1nm,0.4s,baz=96,slow=7.9,SNR=8.9						

*NIED **20** 23:21:00.25.°80N×128.°40E, h14km, Mw4.3 Best double couple: M0=3.16000×10^15 NP1:φs=43.00000°, δ55.00000°, λ89.00000°. NP2:φs=225.00000°, δ35.00000°, λ91.00000°.*
*JMA **20** 23:21:35.2±0.3, 25.°78N×128.°36E, h49km, M3.8*
*ISCJB **20** 23:21:35.4±1.1, 25.°78N±0.°03×128.°35E±0.°03, h33km±7km, mb4.2/26, MS3.4/3, Error ellipse: s-maj=6.3km s-min=4.3km az=140.8*
*IDC **20** 23:21:37.4±0.9, 25.°89N×128.°26E, h27km±3km, mb3.9/13, mb1 4.0/14, mb1mx3.9/26, mbtmp3.9/14, ML3.2/1, MS3.5/4, Ms1 3.5/4, ms1mx2.9/33, Error ellipse: s-maj=33.2km s-min=14.2km az=70.0*
*NEIC **20** 23:21:38.5±0.5, 25.°77N×127.°99E, mb4.4/14, Error ellipse: s-maj=14.0km s-min=10.1km az=83.0*
ISC 20 23:21:36.3±1.0, 25.°83N±0.°04×128.°32E±0.°04, h26km±6km, h30km±.5km:pP-P, n51, σ1§04/63, mb4.2/26, MS3.4/3, 1D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT2	**Tamagusuku 2**	**0.60**	**301**	P	**Pb**	**23 21 48.6**	**+0.4**
JJT2				*e*S	**Sb**	**23 21 58.1**	**+1.8**
NAH1	**Naha**	**0.68**	**303**	P	**Pb**	**23 21 49.1**	**-0.4**
NAH1				*e*S	**Sb**	**23 21 59.5**	**+1.0**
JOW	**Kunigami**	**0.99**	**358**	P	**Pn**	**23 21 54.0**	**-0.7**
JOW				S	**Sb**	**23 22 07.3**	**-0.3**
JAGN	**Aguni-jima**	**1.23**	**308**	P	**Pn**	**23 21 57.6**	**-0.2**
JAGN				*e*S	**Sn**	**23 22 13.6**	**0.0**
JIH	**Iheya**	**1.24**	**345**	P	**Pn**	**23 21 57.6**	**-0.4**
JIH				*e*S	**Sn**	**23 22 13.7**	**-0.1**
JKE	**Kume jima 2**	**1.47**	**290**	P	**Pn**	**23 22 00.4**	**-0.7**
JKE				*e*S	**Sn**	**23 22 19.6**	**+0.1**
JTK	**Tokunoshima**	**2.02**	**16**	P	**Pn**	**23 22 08.2**	**-0.6**
JTK				*e*S	**Sn**	**23 22 32.0**	**-1.3**
JMZ	**Minamidaito 2**	**2.61**	**90**	P	**Pn**	**23 22 14.8**	**-2.1**
JMZ				*e*S	**Sn**	**23 22 43.4**	**-4.4**
JAM	**Amami Oshima**	**2.81**	**24**	P	**Pn**	**23 22 19.0**	**-0.6**
JAM				*e*S	**Sn**	**23 22 50.5**	**-2.2**
JOGS	**Gusukube**	**2.85**	**249**	*e*S	**Sn**	**23 22 53.0**	**-0.6**
JZK	**Kikaishima**	**2.88**	**30**	P	**Pn**	**23 22 21.4**	**+0.9**
JZK				*e*S	**Sn**	**23 22 54.4**	**+0.1**
JMJ	**Miyako jima 2**	**2.92**	**250**	P	**Pn**	**23 22 21.1**	**-0.1**
JMJ				*e*S	**Sn**	**23 22 54.5**	**-0.9**
JTJ	**Tarama**	**3.49**	**251**	P	**Pn**	**23 22 27.9**	**-1.0**
JTJ				*e*S	**Sn**	**23 23 06.6**	**-2.8**
JIJ	**Ishigaki jima**	**4.06**	**250**	P	**Pn**	**23 22 35.6**	**-1.2**
JIJ				*e*S	**Sn**	**23 23 19.4**	**-4.2**
JKRS	**Kuro-shima**	**4.22**	**249**	*e*S	**Sn**	**23 23 27.6**	**+0.1**
JNN	**Nakanoshima**	**4.22**	**19**	P	**Pn**	**23 22 41.4**	**+2.4**
TPUB	**Ta-pu**	**7.44**	**252**	Pn	**Pn**	**23 23 21.4**	**-1.9**
KSRS	**Korea Array**	**11.59**	**358**	Pn	**Pn**	**23 24 18.2**	**-1.9**
	0.2nm,0.3s,baz=176,slow=13,SNR=3.9						
KSRS				LR	LR	23 29 07.3	
	comp=Z,248nm,18.2s,baz=175,slow=39						
LZH	**Lanzhou**	**23.29**	**302**	*e*P	**P**	**23 26 42.8**	**+0.6**
LZH				pP		23 26 48.5	
LZH				sP	sP	23 26 51.4	-1.2
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.3						
GTA	**Gaotai**	**27.43**	**307**	⇓*i*P	**P**	**23 27 19.8**	**-0.2**
GTA				pP	pP	23 27 27.9	+0.3
GTA				sP	sP	23 27 31.4	+0.7
GTA				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.5						
SONM	**Songino Array**	**27.93**	**328**	P	**P**	**23 27 26.3**	**+2.0**
	comp=Z,2.4nm,0.6s,mb4.0,baz=136,slow=10.0,SNR=15						
SONM				LR	LR	23 40 27.9	
	comp=Z,166nm,18.4s,MS3.7,baz=252,slow=41						
CHTO	**Chiang Mai**	**28.02**	**262**	*e*P	**P**	**23 27 24.9**	**-0.6**
	comp=Z,1.4nm,0.6s,mb3.8						
CMAR	**Chiang Mai Arr**	**28.14**	**261**	P	**P**	**23 27 27.6**	**+1.0**
	comp=Z,0.6nm,0.6s,mb3.4,baz=58,slow=8.6,SNR=4.8						
CMAR				LR	LR	23 39 48.3	
	comp=Z,68nm,18.5s,MS3.3,baz=70,slow=39						
KULM	**Kulim**	**33.44**	**237**	*e*P	**P**	**23 28 12.3**	**-1.0**
	comp=Z,4.5nm,0.9s,mb4.4						
MK31	**Makanchi Array**	**41.86**	**312**	*e*P	**P**	**23 29 23.4**	**-0.8**
MKAR	**Makanchi Array**	**41.86**	**312**	P	**P**	**23 29 23.6**	**-0.6**
	comp=Z,2.7nm,0.6s,mb4.1,baz=90,slow=10,SNR=35						
MKAR				pP	pP	23 29 32.1	+0.2
	comp=Z,1.9nm,0.5s,baz=88,slow=12,SNR=11						
ZALV	**Zalesovo Beam**	**42.61**	**323**	P	**P**	**23 29 29.0**	**-1.2**
	comp=Z,0.8nm,0.5s,mb3.8,baz=110,slow=8.7,SNR=5.3						
ZALV				pP	pP	23 29 37.8	-0.2
	comp=Z,0.9nm,0.4s,baz=113,slow=8.3,SNR=4.0						
KURK	**Kurchatov**	**45.16**	**317**	P	**P**	**23 29 50.6**	**-0.2**
	comp=Z,1.2nm,0.5s,mb4.0,baz=106,slow=9.0,SNR=15						
KURK				pP	pP	23 29 59.1	+0.5
	comp=Z,1.2nm,0.4s,baz=105,slow=8.9,SNR=12						
KURK	**Kurchatov**	**45.16**	**317**	*e*P	**P**	**23 29 50.9**	**+0.2**
	comp=Z,4.4nm,0.9s,mb4.3						
KURK				pP	pP	23 29 59.1	+0.5
WRAB	**Tennant Creek**	**45.87**	**172**	*e*P	**P**	**23 29 58.0**	**+1.4**
	comp=Z,13nm,1.2s,mb4.7						
WRA	**Warramunga Arr**	**45.88**	**172**	P	**P**	**23 29 57.3**	**+0.6**
	comp=Z,1.8nm,0.7s,mb4.1,baz=353,slow=8.5,SNR=8.0						
TKM2	**Tokmak 2**	**45.97**	**306**	*e*P	**P**	**23 29 57.5**	**+0.3**
	comp=Z,3.5nm,0.8s,mb4.3						
UCH	**Uchtor**	**46.73**	**305**	*e*P	**P**	**23 30 04.1**	**+0.9**
	comp=Z,3.8nm,1.0s,mb4.3						
UCH				*e*pP	pP	23 30 13.1	+2.0
ASAR	**Alice Springs**	**49.50**	**173**	P	**P**	**23 30 26.1**	**+1.3**
	comp=Z,1.3nm,0.8s,mb4.0,baz=4.1,slow=11,SNR=9.4						
ASAR				pP	pP	23 30 34.4	+1.8
	comp=Z,0.9nm,0.7s,baz=357,slow=6.9,SNR=4.6						
BVAR	**Borovoye Array**	**50.62**	**319**	P	**P**	**23 30 33.9**	**+0.9**
	comp=Z,0.8nm,0.4s,mb4.0,baz=98,slow=10,SNR=15						
BVAR				pP	pP	23 30 41.5	+0.6
	comp=Z,3.5nm,0.8s,baz=79,slow=7.9,SNR=16						
BRVK	**Borovoye**	**50.69**	**319**	*e*P	**P**	**23 30 33.7**	**+0.2**
	comp=Z,8.1nm,0.8s,mb4.7						
BRVK				*e*pP	pP	23 30 42.4	+1.0
KBL	**Kabul**	**51.34**	**295**	*e*P	**P**	**23 30 39.2**	**+0.5**
	comp=Z,3.8nm,0.6s,mb4.5						
KBL				*e*pP	pP	23 30 48.5	+1.9
ABKAR	**Akbulak array**	**56.98**	**313**	*e*P	**P**	**23 31 20.4**	**+0.8**
	comp=Z,2.7nm,0.6s,mb4.5						
ABKAR				*e*pP	pP	23 31 28.8	+1.3
ARU	**Arti**	**57.75**	**322**	*e*P	**P**	**23 31 25.0**	**+0.1**
	comp=Z,5.8nm,1.1s,mb4.5						
ARU				*e*pP	pP	23 31 33.4	+0.5
AKTO	**Aktyubinsk**	**58.17**	**315**	LR	LR	00 01 27.4	
	comp=Z,17nm,20.3s,MS3.2,baz=174,slow=41						
INK	**Inuvik**	**69.22**	**23**	P	**P**	**23 32 41.6**	**+1.1**
	comp=Z,0.7nm,0.6s,mb3.8,baz=297,slow=2.3,SNR=3.6						
INK	**Inuvik**	**69.22**	**23**	*e*P	**P**	**23 32 44.5**	**+4.0**
	comp=Z,3.9nm,1.2s,mb4.2						
FINES	**FINESS Array B**	**73.25**	**331**	P	**P**	**23 33 05.3**	**+0.4**
	comp=Z,1.6nm,0.5s,mb4.2,baz=39,slow=6.6,SNR=16						
FINES				pP	pP	23 33 14.9	+1.8
	comp=Z,3.1nm,0.7s,baz=64,slow=4.4,SNR=4.4						
AKASG	**Malin Array Be**	**75.89**	**320**	P	**P**	**23 33 20.5**	**0.0**
	comp=Z,2.5nm,0.6s,mb4.3,baz=59,slow=7.0,SNR=9.2						
AKASG				pP	pP	23 33 30.3	+1.6
	comp=Z,0.7nm,0.5s,baz=57,slow=6.4,SNR=3.0						
AKBB	**Malin Array Si**	**75.89**	**320**	*e*P	**P**	**23 33 20.7**	**+0.2**
RES	**Resolute Bay**	**75.92**	**11**	*e*P	**P**	**23 33 25.0**	**+4.7**
	comp=Z,4.1nm,0.7s,mb4.5						
BR131	**Keskin Array S**	**77.34**	**308**	*e*P	**P**	**23 33 29.7**	**+0.8**
	comp=Z,1.3nm,0.6s,mb4.0						
BRTR	**Keskin Array B**	**77.34**	**308**	P	**P**	**23 33 30.3**	**+1.4**
	comp=Z,2.4nm,0.8s,mb4.2,baz=95,slow=5.1,SNR=18						
BRTR				pP	pP	23 33 38.9	+1.7
	comp=Z,2.3nm,0.9s,baz=103,slow=5.5,SNR=7.8						
CSS	**Prodhromos**	**79.47**	**304**	*e*P	**P**	**23 33 43.0**	**+2.3**
	comp=Z,4.3nm,0.6s,mb4.6						
BUR08	**Bucovina Ar. S**	**79.58**	**318**	*e*P	**P**	**23 33 42.4**	**+1.3**
NOA	**NORSAR Array B**	**79.70**	**334**	P	**P**	**23 33 42.0**	**+0.4**
	comp=Z,0.9nm,0.6s,mb3.9,baz=51,slow=5.5,SNR=4.0						

*DDA **20** 23:35:03.5, 37.°00N×29.°19E, h7km±4km, Md3.4, Ml3.5*
*ISK **20** 23:35:03.5, 37.°01N×29.°20E, h8km, MD3.1*
*CSEM **20** 23:35:03.6±0.1, 36.°98N×29.°19E, h5km, ML3.5, Error ellipse: s-maj=3.2km s-min=2.3km az=21.0*
*ISCJB **20** 23:35:04.0±0.6, 37.°01N±0.°02×29.°20E±0.°03, h6km±5km, Error ellipse: s-maj=4.2km s-min=3.6km az=21.3*
ISC 20 23:35:04.5±0.5, 37.°01N±0.°02×29.°21E±0.°03, h7km±4km, n58, σ0§85/74, 2C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.36**	**51**	⇑*i*P	**Pg**	**23 35 11.2**	**-0.4**
GOLH				*i* S	**Sg**	**23 35 17.2**	**+0.8**
GOLH	**Golhisar**	**0.36**	**51**	*i* P	**Pg**	**23 35 11.2**	**-0.4**
GOLH				*i* S	**Sg**	**23 35 17.2**	**+0.8**
TURN	**Turunc**	**0.50**	**254**	*e*P	**Pg**	**23 35 17.9**	**+3.7**
TURN				*e*S	**Sg**	**23 35 30.4**	**+10**
ELL	**Elmali**	**0.62**	**115**	*e*PG	**Pg**	**23 35 15.3**	**-1.1**
ELL				*e*SG	**Sg**	**23 35 25.7**	**+1.2**
ELL	**Elmali**	**0.62**	**115**	*e*Pg	**Pg**	**23 35 15.3**	**-1.2**
DNZL	**Cakiroluk**	**0.69**	**349**	⇑*i*P	**Pg**	**23 35 16.8**	**-1.0**
DNZL				*i* S	**Sg**	**23 35 27.8**	**+0.9**
DNZL	**Cakiroluk**	**0.69**	**349**	*i* P	**Pg**	**23 35 16.8**	**-1.0**
DNZL				*i* S	**Sg**	**23 35 27.8**	**+1.0**
YER	**Yerkesik**	**0.75**	**280**	*e*PG	**Pg**	**23 35 18.0**	**-0.9**
YER				*e*SG	**Sg**	**23 35 29.1**	**+0.5**
YER	**Yerkesik**	**0.75**	**280**	*e*Pg	**Pg**	**23 35 18.0**	**-0.9**
YER				*e*Sg	**Sg**	**23 35 29.2**	**+0.5**
DENT	**Denizli**	**0.76**	**349**	*e*PG	**Pg**	**23 35 18.3**	**-0.8**
DENT				*e*SG	**Sg**	**23 35 29.9**	**+0.9**
DENT	**Denizli**	**0.76**	**349**	*e*Pg	**Pg**	**23 35 18.3**	**-0.8**
DENT				*e*Sg	**Sg**	**23 35 29.9**	**+1.0**
AKAS	**Kas**	**0.84**	**157**	*i* P	**Pg**	**23 35 19.4**	**-1.2**
AKAS				*i* S	**Sg**	**23 35 34.6**	**+3.1**
AKAS	**Kas**	**0.84**	**157**	*i* P	**Pg**	**23 35 19.4**	**-1.2**
KSL	**Kastellorizon**	**0.91**	**160**	*e*P	**Pg**	**23 35 21.0**	**-1.0**
KORT	**Korkueli**	**0.92**	**90**	*e*P	**Pg**	**23 35 21.9**	**-0.2**
KORT				*e*S	**Sg**	**23 35 38.1**	**+4.1**
KORT	**Korkueli**	**0.92**	**90**	*e*P	**Pg**	**23 35 21.9**	**-0.2**
ANTB	**Antalya**	**1.16**	**95**	*e*PN	**Pn**	**23 35 26.2**	**-1.0**
ANTB	**Antalya**	**1.16**	**95**	*e*Pn	**Pn**	**23 35 26.2**	**-1.0**
ARG	**Arkhangelos**	**1.18**	**228**	*e*P	**Pg**	**23 35 27.2**	**+0.1**
MLSB	**Milas**	**1.18**	**284**	*e*PN	**Pn**	**23 35 26.1**	**-1.3**
MLSB	**Milas**	**1.18**	**284**	*e*Pn	**Pn**	**23 35 26.2**	**-1.2**
BCK	**Bucak**	**1.19**	**67**	*e*PN	**Pn**	**23 35 26.7**	**-0.9**
BCK	**Bucak**	**1.19**	**67**	*e*Pn	**Pn**	**23 35 26.7**	**-0.9**
AYDN	**Tasoluk**	**1.24**	**302**	*e*P	**Pn**	**23 35 27.4**	**-0.9**
AYDN				*e*S	**Sb**	**23 35 44.4**	**-0.1**
AYDN	**Tasoluk**	**1.24**	**302**	*e*P	**Pn**	**23 35 27.4**	**-0.9**
AYDN				*e*S	**Sb**	**23 35 44.4**	**-0.1**
ISP	**Isparta**	**1.33**	**51**	*e*PN	**Pn**	**23 35 29.2**	**-0.3**
ISP	**Isparta**	**1.33**	**51**	*e*Pn	**Pn**	**23 35 29.2**	**-0.3**
KHL	**Karahalli**	**1.33**	**11**	*e*PN	**Pn**	**23 35 29.0**	**-0.6**
KHL	**Karahalli**	**1.33**	**11**	*e*Pn	**Pn**	**23 35 29.0**	**-0.6**
DAT	**Datca**	**1.34**	**258**	*e*PN	**Pn**	**23 35 29.2**	**-0.4**
DAT	**Datca**	**1.34**	**258**	*e*Pn	**Pn**	**23 35 29.2**	**-0.4**
KHAL	**Karahalli**	**1.38**	**9**	*e*P	**Pn**	**23 35 30.6**	**+0.4**
KHAL				*e*S	**Sb**	**23 35 49.8**	**+1.4**
KHAL	**Karahalli**	**1.38**	**9**	*e*P	**Pn**	**23 35 30.6**	**+0.4**
KHAL				*e*S	**Sb**	**23 35 49.8**	**+1.4**
SUTC	**Sutluce-Ispart**	**1.50**	**71**	*e*PN	**Pn**	**23 35 31.7**	**-0.2**
SUTC	**Sutluce-Ispart**	**1.50**	**71**	*e*Pn	**Pn**	**23 35 31.7**	**-0.2**
KULA	**Kula-Manisa**	**1.56**	**344**	*e*PN	**Pn**	**23 35 32.1**	**-0.6**
KULA	**Kula-Manisa**	**1.56**	**344**	*e*Pn	**Pn**	**23 35 32.2**	**-0.5**
SHUT	**Suhut-Afyon**	**1.87**	**34**	*e*PN	**Pn**	**23 35 36.8**	**-0.2**
SHUT	**Suhut-Afyon**	**1.87**	**34**	*e*Pn	**Pn**	**23 35 36.8**	**-0.2**
SMG	**Samos**	**2.01**	**291**	*e*P	**Pn**	**23 35 38.5**	**-0.4**
IZM	**Izmir**	**2.07**	**313**	*e*PN	**Pn**	**23 35 39.4**	**-0.3**
ALT	**Altintas**	**2.16**	**19**	*e*PN	**Pn**	**23 35 40.5**	**-0.4**
ALT	**Altintas**	**2.16**	**19**	*e*Pn	**Pn**	**23 35 40.5**	**-0.5**
BLCB	**Balcova**	**2.20**	**309**	*e*PN	**Pn**	**23 35 41.0**	**-0.4**
KARP	**Karpathos**	**2.21**	**229**	*e*P	**Pn**	**23 35 42.5**	**+1.0**
HDMB	**Hadim**	**2.63**	**90**	*e*PN	**Pn**	**23 35 47.8**	**+0.5**
HDMB	**Hadim**	**2.63**	**90**	*e*Pn	**Pn**	**23 35 47.8**	**+0.5**
KONT	**Konya--Tatoy**	**2.68**	**69**	*e*PN	**Pn**	**23 35 48.3**	**+0.2**
LADK	**Ladik-KONYA**	**2.77**	**64**	*e*PN	**Pn**	**23 35 49.6**	**+0.3**
LADK	**Ladik-KONYA**	**2.77**	**64**	*e*Pn	**Pn**	**23 35 49.7**	**+0.3**
ESKT	**Eskisehir**	**2.82**	**27**	*e*PN	**Pn**	**23 35 50.2**	**+0.2**
ESKT	**Eskisehir**	**2.82**	**27**	*e*Pn	**Pn**	**23 35 50.2**	**+0.2**
KIZT	**Kizilcal**	**2.82**	**48**	*e*PN	**Pn**	**23 35 50.4**	**+0.4**
KIZT	**Kizilcal**	**2.82**	**48**	*e*Pn	**Pn**	**23 35 50.4**	**+0.4**
ZKR	**Zakros**	**3.07**	**233**	*e*P	**Pn**	**23 35 54.9**	**+1.4**
PRK	**Paraskevi**	**3.22**	**315**	*e*P	**Pn**	**23 35 55.7**	**+0.3**
NPS	**Neapolis**	**3.39**	**240**	*e*P	**Pn**	**23 35 59.0**	**+1.2**
LAST	**Lasithi**	**3.54**	**240**	*e*P	**Pn**	**23 36 01.1**	**+1.2**

*NSSP **20** 23:41:42.0, 41.°08N×45.°13E, h8km, ML3.4*
*ISCJB **20** 23:41:44.4±0.6, 41.°02N±0.°02×45.°19E±0.°03, h3km±4km, Error ellipse: s-maj=3.6km s-min=2.3km az=29.0*
*TIF **20** 23:41:45.8, 41.°12N×45.°17E, h11km*
*MOS **20** 23:41:45.2±0.9, 41.°07N×45.°28E, h6km, mb4.3/1, Error ellipse: s-maj=11.9km s-min=5.9km az=90.2*
*CSEM **20** 23:41:45.3±0.2, 41.°01N×45.°20E, h2km, ML3.4, Error ellipse: s-maj=3.8km s-min=2.5km az=127.0*
ISC 20 23:41:45.0±0.5, 41.°02N±0.°02×45.°19E±0.°03, h5km±4km, n63, σ1§33/115, 7C-13D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGRG	**David-gareji**	**0.45**	**18**	P	**Pg**	**23 41 54.3**	**+0.7**
DGRG				S	**Sg**	**23 42 01.2**	**+1.7**
DGRG	**David-gareji**	**0.45**	**18**	P	**Pg**	**23 41 54.3**	**+0.7**
DGRG				S	**Sg**	**23 42 01.2**	**+1.7**
STE	**Stepanavan**	**0.62**	**268**	⇑P	**Pg**

KSMR				*e*Sn		**Sn**		**23 42 55.0**	**+3.1**
DBC	**Dubki**	**2.34**	**31**	*e*PN		**Pn**		**23 42 24.0**	**0.0**
DBC				*e*S		**Sn**		**23 42 51.0**	**-2.2**
DBC	**Dubki**	**2.34**	**31**	*e*Pn		**Pn**		**23 42 24.0**	**0.0**
DBC				*e*Sn		**Sn**		**23 42 51.0**	**-2.2**
BTKR	**Batakoyurt**	**2.40**	**349**	*e*PN		**Pn**		**23 42 25.6**	**+0.8**
BTKR				*e*S		**Sn**		**23 42 55.4**	**+0.9**
BTKR	**Batakoyurt**	**2.40**	**349**	*e*Pn		**Pn**		**23 42 25.6**	**+0.8**
BTKR				*e*Sn		**Sn**		**23 42 55.4**	**+0.9**
KMSR	**Komsomolskaya**	**2.44**	**344**	⇑*i*PN		**Pn**		**23 42 26.5**	**+1.1**
KMSR				*e*S		**Sn**		**23 42 56.9**	**+1.3**
KMSR	**Komsomolskaya**	**2.44**	**344**	*i* Pn		**Pn**		**23 42 26.5**	**+1.1**
KMSR				*e*Sn		**Sn**		**23 42 56.9**	**+1.3**
LSNR	**Lesken**	**2.47**	**336**	⇓*i*PN		**Pn**		**23 42 29.2**	**+3.4**
LSNR				*e*S		**Sn**		**23 43 00.5**	**+4.1**
LSNR	**Lesken**	**2.47**	**336**	*i* Pn		**Pn**		**23 42 29.2**	**+3.4**
LSNR				*e*Sn		**Sn**		**23 43 00.5**	**+4.1**
MAK	**Makhachkala**	**2.59**	**41**	*e*PN		**Pn**		**23 42 25.6**	**-1.9**
MAK				pmax		pmax			
	comp=N,331nm,0.6s								
MAK	**Makhachkala**	**2.59**	**41**	*e*Pn		**Pn**		**23 42 25.6**	**-1.9**
	comp=N,331nm,0.6s								
PRTR	**Priterechnaya**	**2.81**	**346**	*e*PN		**Pn**		**23 42 31.4**	**+0.9**
PRTR				*e*S		**Sn**		**23 43 05.1**	**+0.4**
PRTR	**Priterechnaya**	**2.81**	**346**	*e*Pn		**Pn**		**23 42 31.4**	**+0.9**
PRTR				*e*Sn		**Sn**		**23 43 05.1**	**+0.4**
KIV	**Kislovodsk**	**3.46**	**329**	*e*PG		**Sn**		**23 43 09.0**	**-12**
KIV						**Sg**		**23 43 34.2**	**-2.0**
KIV				pmax		pmax			
	comp=Z,5.0nm,0.8s								
KIV	**Kislovodsk**	**3.46**	**329**	Sb		**Sg**		**23 43 34.2**	**-2.0**

*JMA **20** 23:42:09.7±0.5, 46°.75N×147°.39E, h428km, M3.4*
*ISCJB **20** 23:42:09.4±0.9, 46°.8N±0°.3×147°.2E±0°.4, h431km±24km, mb3.0/2, Error ellipse: s-maj=59.1km s-min=12.4km az=137.5*
*IDC **20** 23:42:13.4±3.1, 47°.40N×146°.86E, h416km±92km, mb2.6/2, mb1 2.9/4, mb1mx2.6/25, mbtmp2.8/4, Error ellipse: s-maj=117.3km s-min=30.6km az=132.0*
ISC 20 23:42:10.7±0.9, 46°.6N±0°.3×147°.2E±0°.4, h432km±23km, n13, σ1§13/20, mb3.0/2, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**3.43**	**198**	P	**P**	**23 43 20.0**	**+0.2**
NEM2				*e*S	**S**	**23 44 14.7**	**-1.2**
JTKR	**Abashiri--Toko**	**3.53**	**222**	P	**P**	**23 43 21.6**	**+1.0**
JAK	**Akkeshi**	**4.05**	**207**	P	**P**	**23 43 26.0**	**+0.8**
JAK				*e*S	**S**	**23 44 25.0**	**-0.7**
JAR	**Ashorobuto**	**4.12**	**217**	P	**P**	**23 43 27.4**	**+1.5**
JAR				*e*S	**S**	**23 44 28.3**	**+1.3**
JCH	**Churui**	**4.86**	**215**	P	**P**	**23 43 33.6**	**+0.8**
JCH				*e*S	**S**	**23 44 37.5**	**-2.2**
JNBK	**Urakawa-nobuka**	**5.38**	**218**	P	**P**	**23 43 38.9**	**+0.8**
JNBK				*e*S	**S**	**23 44 47.9**	**-1.4**
JKB	**Kayabe**	**6.48**	**225**	P	**P**	**23 43 50.4**	**+1.0**
JKB				*e*S	**S**	**23 45 08.1**	**-2.0**
JOT	**Ohata**	**6.86**	**222**	P	**P**	**23 43 54.9**	**+1.4**
JOT				*e*S	**S**	**23 45 17.7**	**0.0**
JANG	**Nango**	**7.49**	**215**	*e*S	**S**	**23 45 30.6**	**+0.5**
PETK	**Petropavlovsk-**	**9.38**	**43**	P	**P**	**23 44 19.5**	**-1.3**
	0.5nm,0.3s,baz=230,slow=9.0,SNR=12						
MJAR	**Matsushiro Arr**	**12.11**	**217**	P	**P**	**23 44 59.4**	**+8.5**
	0.7nm,0.3s,baz=18,slow=10,SNR=6.9						
MKAR	**Makanchi Array**	**43.32**	**295**	P	**P**	**23 49 32.3**	**-0.1**
	0.2nm,0.5s,mb2.7,baz=71,slow=11,SNR=2.9						
FINES	**FINESS Array B**	**62.32**	**332**	P	**P**	**23 51 47.7**	**-1.0**
	0.8nm,0.8s,mb3.3,baz=34,slow=7.6,SNR=6.5						

*SZGRF **20** 23:59:17.5, 22°.66S×167°.65E, h33km, New Caledonia*
*IDC **20** 23:59:24.0±0.9, 17°.88S×168°.45E, h0km, mb4.2/7, mb1 4.3/7, mb1mx4.2/15, mbtmp4.2/7, MS2.7/1, Ms1 2.6/1, ms1mx2.3/19, Error ellipse: s-maj=30.3km s-min=26.7km az=117.0*
*LDG **20** 23:59:26.1±0.2, 17°.75S×167°.95E, h10km, Mb4.3/1, Error ellipse: s-maj=28.0km s-min=4.4km az=101.0*
*NOU **20** 23:59:29.4±0.9, 17°.90S×168°.26E, h30km, MD2.9, ML4.0*
*ISCJB **20** 23:59:29.5±2.3, 18°.2S±0°.1×168°.4E±0°.1, h52km±21km, mb4.3/16, Error ellipse: s-maj=19.8km s-min=16.5km az=27.5*
*NEIC **20** 23:59:33.9±5.2, 18°.03S×168°.53E, h84km±45km, mb4.3/10, Error ellipse: s-maj=24.4km s-min=15.5km az=199.0*
ISC 20 23:59:30.4±2.3, 18°.1S±0°.1×168°.5E±0°.1, h48km±21km, n87, σ1§00/23, mb4.3/17, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**4.26**	**200**	*e*P	**Pn**	**00 00 33.7**	**+1.0**
BAYA				*e*S	**Sn**	**00 01 20.7**	**-0.4**
DZM	**Mont Dzumac**	**4.34**	**205**	*e*P	**Pn**	**00 00 33.9**	**0.0**
DZM				*e*S	**Sn**	**00 01 21.8**	**-1.5**
DZM				AMP		00 01 26.2	
	comp=Z,3μm,0.5s						
NOUC	**Port Laguerre**	**4.43**	**207**	*e*P	**Pn**	**00 00 35.5**	**+0.4**
NOUC				*e*S	**Sn**	**00 01 24.8**	**-0.6**
NOUC				AMP		00 01 25.5	
	comp=Z,144nm,0.6s						
CTAO	**Charters Tower**	**21.07**	**261**	*e*P	**P**	**00 04 11.5**	**+0.7**
	comp=Z,12nm,1.1s,mb4.2						
URZ	**Urewera**	**21.43**	**161**	P	**P**	**00 04 17.1**	**+2.7**
	comp=Z,13nm,0.8s,mb4.3,baz=354,slow=8.1,SNR=6.9						
STKA	**Stephens Creek**	**27.83**	**235**	P	**P**	**00 05 17.2**	**+1.8**
	comp=Z,1.5nm,0.6s,mb3.8,baz=60,slow=8.1,SNR=2.6						
STKA				LR	LR	00 14 59.3	
	comp=Z,13nm,19.1s,baz=206,slow=33						
ASAR	**Alice Springs**	**32.69**	**254**	P	**P**	**00 05 57.5**	**-1.0**
	comp=Z,2.4nm,0.6s,mb4.3,baz=83,slow=8.8,SNR=21						
FORT	**Forrest**	**38.66**	**243**	*e*P	**P**	**00 06 50.7**	**+1.1**
	comp=Z,12nm,1.0s,mb4.6						
KSM	**Kuching**	**60.41**	**282**	*e*P	**P**	**00 09 35.2**	**-0.3**
	comp=Z,9.8nm,0.6s,mb5.0						
KSRS	**Korea Array**	**67.19**	**326**	P	**P**	**00 10 19.3**	**-0.3**
	comp=Z,1.0nm,0.6s,mb4.0,baz=137,slow=8.1,SNR=5.0						
KULM	**Kulim**	**70.77**	**282**	*e*P	**P**	**00 10 42.1**	**-0.3**
	comp=Z,3.6nm,0.6s,mb4.5						
QSPA	**South Pole Qui**	**71.91**	**180**	*e*P	**P**	**00 10 48.3**	**+0.2**
	comp=Z,4.2nm,0.9s,mb4.4						
QSPA				*e*pP	pP	00 11 03.9	+2.1
CMAR	**Chiang Mai Arr**	**77.38**	**294**	P	**P**	**00 11 21.9**	**+1.1**
	comp=Z,0.7nm,0.3s,mb4.0,baz=135,slow=4.7,SNR=7.1						
CHTO	**Chiang Mai**	**77.52**	**295**	*e*P	**P**	**00 11 20.9**	**-0.8**
	comp=Z,2.0nm,0.7s,mb4.2						
ULN	**Ulaanbaatar**	**85.54**	**324**	*e*P	**P**	**00 12 03.3**	**0.0**
	comp=Z,1.6nm,0.5s,mb4.5						
SONM	**Songino Array**	**85.90**	**323**	P	**P**	**00 12 05.0**	**-0.1**
	comp=Z,1.1nm,0.4s,mb4.4,baz=140,slow=4.8,SNR=4.9						
BILL	**Bilibino**	**85.95**	**359**	*e*P	**P**	**00 12 04.3**	**-0.5**
	comp=Z,2.9nm,0.7s,mb4.6						
NVAR	**Mina Array Bea**	**88.64**	**49**	P	**P**	**00 12 18.8**	**+0.2**
	comp=Z,0.9nm,1.0s,mb4.0,baz=259,slow=9.1,SNR=3.3						
WVOR	**Wild Horse Val**	**90.06**	**45**	*e*P	**P**	**00 12 21.3**	**-3.9**
	comp=Z,1.5nm,0.6s,mb4.5						
TUC	**Tucson**	**92.02**	**57**	*e*P	**P**	**00 12 32.2**	**-2.4**
	comp=Z,0.7nm,0.6s,mb4.2						
MKAR	**Makanchi Array**	**100.44**	**316**	P	Pdif	00 13 12.7	+0.3
	comp=Z,5.2nm,1.0s,baz=86,slow=6.4,SNR=5.8						
ARCES	**ARCESS Array B**	**123.82**	**345**	PKP	PKPdf	00 18 21.4	-1.0
	comp=Z,5.2nm,1.0s,baz=60,slow=2.4,SNR=9.8						
FINES	**FINESS Array B**	**129.29**	**338**	PKP	PKPdf	00 18 32.2	-0.9
	comp=Z,1.0nm,0.7s,baz=48,slow=2.1,SNR=6.6						
BRTR	**Keskin Array B**	**135.55**	**309**	PKP	PKPdf	00 18 46.0	+0.5
	comp=Z,0.2nm,0.4s,baz=119,slow=4.4,SNR=2.5						
NRDL	**Niedersach Rie**	**141.75**	**339**	*e*PKPbc	PKPdf	00 18 53.4	-3.1
MOX	**Moxa**	**142.68**	**336**	*e*PKPbc	PKPdf	00 18 53.7	-4.5
BUG	**Bochum--Univer**	**143.58**	**340**	*e*PKPbc	PKPdf	00 18 59.1	-0.7
GRA1	**Grafenberg Arr**	**143.59**	**335**	*e*PKPbc	PKPdf	00 18 57.0	-2.9
GRF	**Grafenberg Arr**	**143.59**	**335**	*e*PKPbc	PKPdf	00 18 57.0	-2.9
GRF	**Grafenberg Arr**	**143.59**	**335**	*e*PKP	PKPdf	00 18 57.0	-2.9
TNS	**Taunus Mts**	**144.21**	**338**	*e*PKPbc	PKPdf	00 18 57.6	-3.3
TNS	**Taunus Mts**	**144.21**	**338**	*e*PKPbc	PKPdf	00 18 57.6	-3.3
RJOB	**Jochberg**	**144.41**	**331**	*e*PKPbc	PKPdf	00 18 59.6	-1.8
VNDS	**Vrh nad Dolski**	**144.66**	**328**	*i* PKPbc	PKPdf	00 19 00.3	-1.6
FUR	**Furstenfeldbru**	**144.75**	**333**	*e*PKPbc	PKPdf	00 19 01.1	-0.8
FUR	**Furstenfeldbru**	**144.75**	**333**	*e*PKPbc	PKPdf	00 19 01.1	-0.8
LJU	**Ljubljana**	**144.78**	**328**	*i* PKPbc	PKPdf	00 19 00.8	-1.3
CEY	**Cerknica**	**145.05**	**328**	*i* PKPbc	PKPbc	00 19 01.6	-0.4
JAVS	**Javornik**	**145.12**	**328**	*i* PKPbc	PKPbc	00 19 01.5	-0.7
STU	**Stuttgart**	**145.12**	**336**	*e*PKPbc	PKPbc	00 19 01.6	-0.5
STU	**Stuttgart**	**145.12**	**336**	*e*PKPdf	PKPdf	00 19 01.4	-1.2
SKDS	**Skadanscina**	**145.39**	**328**	*i* PKPbc	PKPbc	00 19 02.2	-0.9
WLF	**Walferdange**	**145.47**	**340**	*e*PKPbc	PKPbc	00 19 03.7	+0.5
WLF	**Walferdange**	**145.47**	**340**	*e*PKPbc	PKPbc	00 19 03.4	+0.1
GIVF	**Givet**	**145.52**	**341**	*e*PKP1	PKPbc	00 19 02.6	-0.7
BAIF	**Baives**	**145.74**	**342**	*e*PKP1	PKPbc	00 19 03.5	-0.5
	comp=Z,6.9nm,0.7s						
BFO	**Black Forest**	**145.82**	**336**	*e*PKPbc	PKPbc	00 19 03.8	-0.5
CDF	**Champ du Feu**	**146.15**	**337**	*e*PKP1	PKPbc	00 19 04.8	-0.5
	comp=Z,16nm,0.7s						
HINF	**Hinteralfeld**	**146.80**	**337**	*e*PKP1	PKPbc	00 19 06.3	-1.0
	comp=Z,4.2nm,0.7s						
HAU	**Haudompre**	**146.82**	**338**	*e*PKP1	PKPbc	00 19 06.6	-0.7
	comp=Z,7.4nm,0.6s						
MEZF	**Maizieres J'vi**	**146.84**	**340**	*e*PKP1	PKPbc	00 19 07.2	-0.2
	comp=Z,16nm,0.6s						
TUE	**Stuetta**	**146.89**	**333**	*e*PKPbc	PKPbc	00 19 07.5	0.0
TIP	**Timpagrande**	**147.72**	**316**	*e*PKPbc	PKPbc	00 19 09.3	-0.8
AQU	**L'Aquila**	**147.87**	**324**	*e*PKPdf	PKPdf	00 19 05.8	-1.6
AQU				*e*PKPbc	PKPbc	00 19 09.7	-0.7
CABF	**La Chapelle**	**148.09**	**337**	*e*PKP1	PKPbc	00 19 10.7	-0.2
	comp=Z,13nm,0.6s						
FLN	**La Foliniere**	**148.16**	**346**	*e*PKP1	PKPbc	00 19 10.0	-1.0
LDF	**La Druitiere**	**148.24**	**346**	*e*PKP1	PKPbc	00 19 10.2	-1.0
	comp=Z,12nm,0.9s						
LOR	**Lormes**	**148.31**	**340**	*e*PKP1	PKPbc	00 19 10.8	-0.6
	comp=Z,13nm,0.8s						
GRR	**Gorron**	**148.60**	**346**	*e*PKP1	PKPbc	00 19 11.3	-0.8
SSF	**Saint Saulge**	**148.61**	**340**	*e*PKP1	PKPbc	00 19 11.7	-0.5
	comp=Z,15nm,0.6s						
HYF	**Humbligny**	**148.70**	**341**	*e*PKP1	PKPbc	00 19 12.2	-0.2
LPL	**La Plagne**	**148.75**	**335**	*e*PKP1	PKPbc	00 19 12.6	0.0
	comp=Z,6.8nm,0.5s						
LPG	**La Plagne**	**148.76**	**335**	*e*PKP1	PKPbc	00 19 12.7	+0.1
	comp=Z,10nm,0.6s						
SMF	**Signal de Mont**	**148.87**	**339**	*e*PKP1	PKPbc	00 19 11.9	-1.0
	comp=Z,12nm,1.0s						
AVF	**Avril sur Loir**	**148.90**	**340**	*e*PKP1	PKPbc	00 19 12.0	-0.9
	comp=Z,9.5nm,1.1s						
SGMF	**Saint Gilles**	**149.08**	**348**	*e*PKP1	PKPbc	00 19 12.4	-0.9
ROSF	**Rostrenen**	**149.14**	**349**	*e*PKP1	PKPbc	00 19 12.4	-1.1
BNI	**Bardonecchia**	**149.15**	**334**	*e*PKPbc	PKPbc	00 19 13.1	-0.5
BGF	**Bois d'Agland**	**149.27**	**340**	*e*PKP1	PKPbc	00 19 13.3	-0.6
	comp=Z,11nm,0.6s						
MBDF	**Montbardon**	**149.38**	**334**	*e*PKP1	PKPbc	00 19 14.6	+0.4
QUIF	**Quistinic**	**149.52**	**349**	*e*PKP1	PKPbc	00 19 13.3	-1.1
ORIF	**Oris-en-Rattie**	**149.59**	**335**	*e*PKP1	PKPbc	00 19 14.3	-0.4
	comp=Z,12nm,0.6s						
TCF	**Toulx Ste Croi**	**149.71**	**341**	*e*PKP1	PKPbc	00 19 14.3	-0.7
SBF	**Sospel**	**149.78**	**332**	*e*PKP1	PKPbc	00 19 14.1	-1.1
	comp=Z,31nm,1.1s						
PGF	**Pioggiola**	**150.06**	**329**	*e*PKP1	PKPbc	00 19 15.2	-0.7
	comp=Z,29nm,0.8s						
MFF	**Saint Martin d**	**150.10**	**344**	*e*PKP1	PKPbc	00 19 15.2	-0.7
	comp=Z,7.9nm,0.5s						
VIVF	**Saint-Julien-l**	**150.11**	**337**	*e*PKP1	PKPbc	00 19 15.5	-0.5
	comp=Z,9.3nm,0.8s						
FRF	**La Foret Royal**	**150.37**	**333**	*e*PKP1	PKPbc	00 19 15.6	-1.1
	comp=Z,7.1nm,0.7s						
SMRF	**Simiane la Rot**	**150.49**	**334**	*e*PKP1	PKPbc	00 19 16.6	-0.3
	comp=Z,18nm,0.9s						
LMR	**La Mourre**	**150.61**	**333**	*e*PKP1	PKPbc	00 19 16.3	-0.9
	comp=Z,21nm,1.0s						
RJF	**Les Rejaudoux**	**150.81**	**341**	*e*PKP1	PKPbc	00 19 16.8	-0.8
	comp=Z,11nm,0.9s						
CAF	**Calviac**	**150.97**	**340**	*e*PKP1	PKPbc	00 19 17.5	-0.5
	comp=Z,2.5nm,0.5s						
LASF	**Ste Croix**	**151.08**	**337**	*e*PKP1	PKPbc	00 19 17.9	-0.4
	comp=Z,12nm,0.7s						
LFF	**La Frestale**	**151.37**	**342**	*e*PKP1	PKPbc	00 19 18.4	-0.6
	comp=Z,8.3nm,0.6s						
MTLF	**Montolieu**	**152.31**	**338**	*e*PKP1	PKPbc	00 19 20.4	-0.8
	comp=Z,4.2nm,0.8s						
EPF	**Esparros**	**153.22**	**340**	*e*PKP1	PKPbc	00 19 22.8	-0.4
	comp=Z,4.1nm,0.8s						
SJPF	**Ste Jean**	**153.62**	**343**	*e*PKP1	PKPbc	00 19 23.1	-0.9

*NEIC **21** 00:00:02.0, 48°.56N×122°.66W, h17km, MD2.9(SEA), After SEA.*
*PNSN **21** 00:00:02.0, 48°.55N×122°.66W, h17km, MD2.9, Fault plane solution: NP1:φ₀65.00000°, δ90.00000°, NP2: φ₀335.00000°, δ10.00000°, Principal axes: T Plg44.0000°, Azm165.0000°; P Plg44.0000°, Azm325.0000°;*
*PGC **21** 00:00:01.4±0.0, 48°.53N×122°.61W, h24km, ML2.4/7, 56km east of Victoria, Bc Washington*
*ISCJB **21** 00:00:01.3±0.4, 48°.56N±0°.03×122°.64W±0°.04, h16km±15km, Error ellipse: s-maj=5.3km s-min=4.0km az=37.5*
ISC 21 00:00:01.3±0.5, 48°.57N±0°.03×122°.65W±0°.04, h19km±4km, n24, σ0§67/32, 4C-14D, Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCW	**Mount Constitu**	**0.17**	**313**	⇑P	**Pg**	**00 00 06.2**	**+0.3**
CMW	**Cultus Mountai**	**0.38**	**112**	⇓P	**Pg**	**00 00 09.1**	**-0.2**
SNB	**Saturna Island**	**0.40**	**301**	⇓P	**Pg**	**00 00 10.1**	**+0.4**
SNB				⇑S	**Sg**	**00 00 16.3**	**+1.0**
VGZ	**Gonzales**	**0.47**	**251**	⇓P	**Pg**	**00 00 10.7**	**-0.3**
VGZ				⇓S	**Sg**	**00 00 17.0**	**-0.4**
PGC	**Sidney**	**0.54**	**279**	⇓P	**Pb**	**00 00 11.9**	**-0.2**
PGC				⇑S	**Sg**	**00 00 19.2**	**-0.1**
MBW	**Mount Baker**	**0.54**	**66**	P	**Pb**	**00 00 12.3**	**+0.2**
SQM	**Sequim**	**0.56**	**208**	⇑P	**Pb**	**00 00 12.6**	**+0.2**
JCW	**Jim Creek**	**0.61**	**128**	⇓P	**Pb**	**00 00 12.7**	**-0.5**
GOBB	**Galiano Island**	**0.69**	**304**	⇓P	**Pb**	**00 00 14.5**	**-0.1**
GOBB				⇓S	**Sb**	**00 00 24.2**	**+0.5**
HNB	**Haney**	**0.71**	**4**	⇓P	**Pb**	**00 00 14.6**	**-0.4**
HNB				⇓S	**Sb**	**00 00 24.2**	**-0.1**
RPW	**Rockport**	**0.76**	**99**	P	**Pb**	**00 00 15.6**	**-0.4**
LZB	**Mount Lazard**	**0.78**	**274**	⇓P	**Pb**	**00 00 15.6**	**-0.7**
LZB				⇑S	**Sb**	**00 00 25.9**	**-0.4**
BLH	**Bald Hill**	**0.84**	**150**	P	**Pb**	**00 00 18.0**	**+0.8**
BIB	**Bowen Island**	**0.94**	**333**	⇓P	**Pb**	**00 00 18.7**	**-0.3**
BIB				⇑S	**Sb**	**00 00 31.1**	**0.0**
HDW	**Hoodsport**	**0.96**	**197**	P	**Pb**	**00 00 18.3**	**-1.0**
HTW	**Haystack Looko**	**0.96**	**142**	⇑P	**Pb**	**00 00 18.8**	**-0.5**
GNW	**Green Mountain**	**1.01**	**187**	P	**Pb**	**00 00 19.0**	**-1.1**
OBC	**Olympics--Boni**	**1.09**	**241**	⇑P	**Pn**	**00 00 20.8**	**-0.7**
NLLB	**Nanaimo Lost L**	**1.10**	**307**	⇓P	**Pn**	**00 00 20.9**	**-0.7**
NLLB				⇓S	**Sb**	**00 00 35.5**	**-0.2**
OTR	**Olympics--Tyee**	**1.23**	**247**	P	**Pn**	**00 00 25.3**	**+1.9**
RMW	**Rattlesnake Mo**	**1.25**	**153**	P	**Pn**	**00 00 24.0**	**+0.4**
OOW	**Octopus West**	**1.32**	**232**	P	**Pn**	**00 00 25.9**	**+1.2**
WRW	**Wenatchee Ridg**	**1.38**	**120**	P	**Pn**	**00 00 25.8**	**+0.3**
WPW	**White Pass**	**2.01**	**158**	P	**Pn**	**00 00 35.7**	**+1.6**

*CSEM **21** 00:06:54.9, 41°.17N×20°.24E, h12km, ML3.2/1, After THE THE **21** 00:06:54.9, 41°.17N×20°.24E, h12km±5km, ML3.2/1, Error ellipse: s-maj=12.5km s-min=0.5km az=19.0*
*ISCJB **21** 00:06:54.8±1.0, 41°.15N±0°.09×20°.22E±0°.06, h10km, Error ellipse: s-maj=13.9km s-min=4.3km az=21.3*
*SKO **21** 00:06:55.9, 41°.14N×20°.21E, h3km*
ISC 21 00:06:54.9±1.3, 41°.10N±0°.10×20°.19E±0°.07, h2km±16km, n13, σ0§92/25, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.35**	**315**	P	**Pg**	**00 07 01.4**	**-0.2**
TIR				S	**Sg**	**00 07 06.7**	**+0.6**
TIR	**Tirane**	**0.35**	**315**	P	**Pg**	**00 07 01.4**	**-0.2**
TIR				S	**Sg**	**00 07 06.7**	**+0.6**
OHR	**Ohrid**	**0.46**	**88**	*i* Pg	**Pg**	**00 07 03.0**	**-0.6**
OHR				*i* Sg	**Sg**	**00 07 10.5**	**+0.9**
OHR	**Ohrid**	**0.46**	**88**	P	**Pg**	**00 07 03.0**	**-0.7**
OHR				S	**Sg**	**00 07 09.8**	**+0.2**
OHR	**Ohrid**	**0.46**	**88**	P	**Pg**	**00 07 03.0**	**-0.7**
OHR				S	**Sg**	**00 07 09.8**	**+0.2**
KRUS	**Krusevo**	**0.84**	**71**	*i* Pg	**Pg**	**00 07 09.3**	**-1.7**
KRUS				*i* Sg	**Sg**	**00 07 21.4**	**-0.5**
KRUS				*i* Sg	**Sg**	**00 07 21.5**	**-0.4**
BIA	**Bitola**	**0.86**	**95**	*e*Pg	**Pg**	**00 07 10.3**	**-1.1**
BIA				*i* Sg	**Sg**	**00 07 23.2**	**+0.7**
BIA	**Bitola**	**0.86**	**95**	P	**Pg**	**00 07 10.3**	**-1.1**
BIA				S	**Sg**	**00 07 22.8**	**+0.3**
BIA	**Bitola**	**0.86**	**95**	P	**Pg**	**00 07 10.3**	**-1.1**
BIA				S	**Sg**	**00 07 22.8**	**+0.3**
FNA	**Florina**	**0.95**	**109**	P	**Pg**	**00 07 12.7**	**-0.4**
FNA				S	**Sg**	**00 07 27.2**	**+1.8**
FNA	**Florina**	**0.95**	**109**	P	**Pg**	**00 07 12.7**	**-0.4**
FNA				S	**Sg**	**00 07 27.2**	**+1.8**
SKO	**Skopje**	**1.28**	**47**	*e*Pg	**Pg**	**00 07 20.7**	**+1.3**
VAY	**Valandovo**	**1.81**	**82**	*e*Pn	**Pn**	**00 07 27.1**	**0.0**

MEX 21 00:18:47.1±0.8, 16°.27N×98°.15W, h12km±4km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.12**	**11**	*i* P	Pg	00 18 49.3	-0.9
PNIG				*i* S	Sg	00 18 52.0	-0.4
VHO	**Vista Hermosa**	**1.57**	**59**	*i* P	Pn	00 19 12.1	-2.8
VHO				*i* S	Sn	00 19 29.7	-5.6
UTMO	**Huajuapan**	**1.58**	**12**	*i* P	Pn	00 19 10.8	-4.2
UTMO				*i* S	Sn	00 19 30.8	-4.7
ACX	**Acapulco**	**1.79**	**289**	*i* P	Pn	00 19 15.9	-2.0
ACX				*i* S	Sn	00 19 35.7	-4.9
HUIG	**Huatulco**	**2.03**	**104**	*i* P	Pn	00 19 18.9	-2.2
HUIG				*i* S	Sn	00 19 43.2	-3.3
CAIG	**El Cayaco**	**2.17**	**291**	*e*P	Pn	00 19 20.9	-2.2
CAIG				*i* S	Sn	00 19 47.2	-2.7
TPIG	**Tehuac#an**	**2.26**	**19**	*e*P	Pn	00 19 22.3	-2.1
TPIG				*i* S	Sn	00 19 48.5	-3.8
PLIG	**Platanillo**	**2.47**	**329**	*e*P	Pn	00 19 25.1	-2.2
PLIG				*i* S	Sn	00 19 52.4	-5.0
YAIG	**Yautepec**	**2.72**	**341**	*e*P	Pn	00 19 28.8	-1.9
YAIG				*e*S	Sn	00 20 00.1	-3.4
PPM	**Popocatepetl**	**2.81**	**351**	*i* P	Pn	00 19 31.0	-0.9
PPM				*i* S	Sn	00 20 03.6	-2.3
MZVM		**3.08**	**341**	*e*P	Pn	00 19 33.1	-2.4
MZVM				*i* S	Sn	00 20 09.6	-2.7
IIO	**Organos**	**3.34**	**351**	*e*P	Pn	00 19 41.1	+1.8
IIO				*i* S	Sn	00 20 21.0	+2.0

*NOU **21** 00:29:06.0±1.0, 20°.05S×171°.04E, h10km, MD3.3, ML4.3, MS2.0*
*IDC **21** 00:29:06.5±0.5, 22°.57S×171°.25E, h0km, mb4.7/16, mb1 4.9/17, mb1mx4.9/18, mbtmp4.7/17, ML3.2/1, MS4.5/17, Ms1 4.5/17, ms1mx4.3/22, Error ellipse: s-maj=17.9km s-min=15.9km az=119.0*
*LDG **21** 00:29:08.5±0.1, 21°.77S×171°.42E, h10km, Mb5.4/4, Ms4.6/7, Error ellipse: s-maj=16.4km s-min=2.6km az=171.0*
*SZGRF **21** 00:29:11.4, 22°.94S×171°.73E, h38km, Southeast of Loyalty Islands*
*GCMT **21** 00:29:13.4±0.2, 22°.74S×171°.14E, h21km, MW5.2, Moment Tensor Solution. s46,c59; s77,c115; Moment tensor: Scale 10¹⁶Nm; Mrr-4.54±.24; Mθθ1.47±.17; Mφφ3.07±.17; Mrθ0.78±.28; Mrφ-3.23±.11; Mθφ4.62±.32; Best double couple: M₀6.90000×10¹⁶ NP1:φ₀297.00000°, δ35.00000°, λ-137.00000°. NP2:φ₀170.00000°, δ67.00000°, λ-63.00000°. Principal axes: T 6.6300, Plg18.0000°, Azm240.0000°; N 0.6200, Plg25.0000°, Azm339.0000°; P -7.2500, Plg59.0000°, Azm118.0000°; Data Used: IU II IC G CN.*
*NEIC **21** 00:29:14.2±1.0, 22°.63S×171°.16E, h53km±8km, mb5.1/50 Error ellipse: s-maj=6.9km s-min=4.8km az=166.0*
*BJI **21** 00:29:14.6, 22°.70S

comp=Z,0.3nm,0.5s,baz=281,slow=4.3,SNR=4.6
ASAR Alice Springs 34.11 261 P **P 00 35 54.8 +0.1**
ASAR ScP ScP 00 42 19.6 +10
ASAR *e* 01 06 56.2
WRAB Tennant Creek 34.25 268 *e*P **P 00 35 55.5 -0.4**
WRAB pmax pmax
comp=Z,16nm,1.0s,mb4.8
WRAB Tennant Creek 34.25 268 *e*P **P 00 35 55.5 -0.5**
comp=Z,9.5nm,1.0s,mb4.6
WRA Warramunga Arr 34.26 268 P **P 00 35 55.5 -0.5**
comp=Z,1.7nm,0.3s,mb4.3,baz=96,slow=8.6,SNR=10
WRA LR LR 00 50 05.4
comp=Z,2μm,19.1s,baz=100,slow=36
WRA Warramunga Arr 34.26 268 P **P 00 35 55.5 -0.5**
WRA LR LR 00 50 05.4
PPT Papeete 37.24 89 *e*S **S 00 42 11.6 +8.2**
comp=Z,212nm,24.8s
PPT *e*LR LR 00 46 30.4
comp=Z,963nm,27.2s,baz=252
PPT Papeete 37.24 89 LR LR 00 47 23.3
comp=Z,366nm,19.7s,baz=270,slow=30
KAKA Kakadu 38.00 278 *e*P **P 00 36 30.4 +2.4**
comp=Z,26nm,0.6s,mb5.2
FORT Forrest 39.06 249 *e*P **P 00 36 36.5 -0.2**
comp=Z,15nm,0.5s,mb5.1
FORT Forrest 39.06 249 *e*P **P 00 36 35.6 -1.1**
comp=Z,26nm,0.7s,mb5.2
FITZ Fitzroy Crossi 42.69 268 *e*P **P 00 37 07.5 +0.8**
comp=Z,53nm,0.9s,mb5.3
FITZ Fitzroy Crossi 42.69 268 *e*P **P 00 37 07.5 +0.8**
comp=Z,34nm,0.9s,mb5.1
MBWA Marble Bar 47.45 262 *e*P **P 00 37 44.9 +0.4**
comp=Z,37nm,0.9s,mb5.1
KLBR Kellerberrin 47.87 247 *e*P **P 00 37 47.4 -0.2**
comp=Z,43nm,1.0s,mb5.2
NWAO Narrogin (SRO) 48.26 245 *e*P **P 00 37 50.3 -0.2**
NWAO pmax pmax
comp=Z,28nm,1.0s
NWAO Narrogin (SRO) 48.26 245 *e*P **P 00 37 50.3 -0.2**
comp=Z,28nm,1.0s,mb5.0
TAOE Nuku Hiva Isla 48.71 82 *e*S **S 00 44 55.8 +4.3**
comp=Z,211nm,25.0s
TAOE *e*LR LR 00 51 37.9
comp=Z,717nm,23.4s
RKT Rikitea 49.48 102 *e*S **S 00 45 12.6 +10**
comp=Z,167nm,26.2s
RKT *e*LR LR 00 51 53.5
comp=Z,644nm,30.5s,baz=270
KAPI Kappang 52.51 282 P **P 00 38 23.0 +0.1**
comp=Z,274nm,1.4s,mb6.1,SNR=5.1
KAPI Kappang 52.51 282 LR LR 00 59 52.7
comp=Z,420nm,20.7s,baz=33,slow=35
KAPI Kappang 52.51 282 *e*P **P 00 38 23.4 +0.5**
comp=Z,60nm,1.1s,mb5.5
KAPI Kappang 52.51 282 P **P 00 38 23.3 +0.4**
comp=Z,274nm,1.4s,mb6.1,SNR=5.1
SBA Scott Base 55.28 181 *e*P **P 00 38 42.9 +0.8**
SBA pmax pmax
comp=Z,16nm,0.9s,mb5.0
SBA Scott Base 55.28 181 *e*P **P 00 38 42.9 +0.8**
comp=Z,16nm,0.9s,mb5.0
CBIJ Chichi jima 56.80 329 LR LR 01 00 10.2
comp=Z,271nm,20.3s,baz=199,slow=33
CASY Casey 57.71 205 *e*P **P 00 38 58.7 -0.8**
CASY Casey 57.71 205 *e*P **P 00 38 58.4 -1.1**
comp=Z,9.9nm,1.1s,mb4.8
PWJI Pagerwojo 58.61 274 P PcP 00 40 25.6 +29
SJI Sawahan 58.75 275 P PcP 00 40 24.8 +28
PCJI Pacitan 59.13 274 P PcP 00 40 19.9 +22
UGM Wanagama 59.83 274 P PcP 00 40 15.6 +15
YOGI Yogyakarta 60.08 274 P PcP 00 40 10.2 +8.2
KKM Kota Kinabalu 60.73 291 *e*P **P 00 39 23.0 +1.8**
comp=Z,50nm,1.3s,mb5.4
CLJI Cilicap 61.30 274 P PcP 00 40 11.0 +4.1
LEM Lembang 62.91 274 P **P 00 39 37.9 +2.1**
KSM Kuching 63.80 284 *e*P **P 00 39 43.0 +1.3**
comp=Z,54nm,0.9s,mb5.4
SBJI Serang 64.54 274 P **P 00 39 51.2 +4.6**
CGJI Cibinong 64.76 273 P **P 00 39 48.4 +0.4**
RBSI Rajabasa 65.00 274 P **P 00 39 44.6 -5.0**
KASI Kota Agung 66.27 274 P **P 00 39 58.3 +0.5**
KLSI 66.37 275 P **P 00 39 57.6 -0.8**
MJAR Matsushiro Arr 66.55 332 P **P 00 39 58.2 -0.8**
comp=Z,1.7nm,0.6s,mb4.1,baz=172,slow=6.5,SNR=6.5
MAJO Matsushiro 66.56 332 *e*P **P 00 39 58.9 -0.1**
MAT Matsushiro 66.56 332 P **P 00 39 58.8 -0.2**
MDSI Maura Dua 66.96 275 P **P 00 40 02.2 +0.1**
TPUB Ta-pu 67.02 310 *e*P **P 00 40 01.2 -1.1**
comp=Z,25nm,0.8s,mb5.1
SSLB Suanglung 67.10 310 *e*P **P 00 40 01.8 -1.0**
comp=Z,23nm,0.8s,mb5.0
QSPA South Pole Qui 67.41 180 P **P 00 40 04.1 +0.2**
comp=Z,33nm,1.0s,mb5.1,baz=19,slow=1.5,SNR=99
QSPA South Pole Qui 67.41 180 *e*P **P 00 40 03.9 0.0**
comp=Z,52nm,1.1s,mb5.3
MNAI Manna 68.13 274 P x 00 39 52.5
JMBI JAMBI 68.56 277 P pP 00 40 25.8 -5.9
KSI Kapahiang 68.74 275 P **P 00 40 13.4 +0.1**
ASAJ Asahikawa 71.39 339 LR LR 01 08 24.1
comp=Z,383nm,20.6s,baz=1.8,slow=33
KSRS Korea Array 72.27 325 P **P 00 40 34.5 +0.3**
comp=Z,1.2nm,0.5s,mb4.0,baz=146,slow=5.2,SNR=7.5
KSRS LR LR 01 11 54.3
comp=Z,248nm,18.7s,baz=154,slow=36
QIZ Qiongzhong 72.74 300 P **P 00 40 37.1 -0.4**
QIZ sP sP 00 41 03.8 -1.4
QIZ S S 00 49 57.3 -0.3
QIZ pmax pmax
comp=Z,10.0nm,1.9s,mb4.3
QIZ pmax pmax
comp=Z,92nm,3.6s
QIZ LR LR
comp=N,410nm,13.1s
QIZ LR LR
comp=E,140nm,17.7s
QIZ LR LR
comp=Z,430nm,10.8s
NJ2 Nanjing 73.83 316 *e*P **P 00 40 44.3 +0.7**
NJ2 pP pP 00 41 04.1 +0.8
NJ2 sP sP 00 41 12.9 +1.5
NJ2 PP PP 00 43 31.3 +1.8
NJ2 S S 00 50 08.0 -1.4
NJ2 SKS 00 50 39.0
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
NJ2 pmax pmax
comp=Z,120nm,8.6s
NJ2 LR LR
comp=N,250nm,14.3s
NJ2 LR LR
comp=E,360nm,15.7s
YSS Yuzh-Sakhalins 73.85 340⇑ *e*P **P 00 40 44.0 +0.6**
YSS MLR MLR
comp=N,300nm,18.0s
YSS MLR MLR
comp=Z,400nm,18.0s
KULM Kulim 74.14 283 *e*P **P 00 40 46.6 +0.8**
comp=Z,29nm,1.1s,mb4.9
PSI Prapat 74.66 280 LR LR 01 18 08.3
comp=Z,554nm,18.3s,baz=129,slow=39
MAW Mawson 75.92 202 *e*P **P 00 40 55.3 +0.2**
comp=Z,3.9nm,0.6s,mb4.3
MAW Mawson 75.92 202 P **P 00 40 55.5 +0.4**
comp=Z,4.9nm,0.7s,mb4.3,baz=112,slow=6.9,SNR=24
MAW LR LR 01 11 50.9
comp=Z,191nm,18.1s,baz=237,slow=34
MAW Mawson 75.92 202 *e*P **P 00 40 55.6 +0.5**
MAW pmax pmax
comp=Z,1.0nm,0.6s
MAW Mawson 75.92 202 *e*P **P 00 40 55.6 +0.5**
comp=Z,1.3nm,0.6s,mb3.8
PETK Petropavlovsk- 76.34 352 P **P 00 40 57.0 -0.4**
comp=Z,6.5nm,0.8s,mb4.4,baz=132,slow=5.8,SNR=16
PETK LR LR 01 11 29.8
comp=Z,162nm,18.5s,baz=170,slow=33
MDJ Mudanjiang 76.92 331 P **P 00 41 02.1 +1.1**
MDJ pP pP 00 41 21.0 +0.1
MDJ sP sP 00 41 29.0 +0.1
MDJ PP PP 00 43 56.3 +0.9
MDJ S S 00 50 47.3 +4.2
MDJ sS sS 00 51 21.8 +5.0
MDJ pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
MDJ pmax pmax
comp=Z,27nm,3.7s
MDJ LR LR
comp=N,160nm,17.1s
MDJ LR LR
comp=E,150nm,13.1s
MDJ LR LR
comp=Z,180nm,18.4s
HABR Khabarovsk 77.80 336 *e*P **P 00 41 05.7 -0.1**
HABR *e**PP pP 00 41 24.1 -1.6
HABR *e* 00 51 16.4
HABR *e**SS sS 00 51 25.9 -0.3
HABR *e*SS SS 00 55 56.3 +1.5
HABR MLR MLR
comp=Z,77nm,19.0s
CN2 Changchun 78.25 328 *e*P **P 00 41 07.8 -0.6**
CN2 *e*PP PP 00 44 11.8 +5.3
CN2 *e*S S 00 50 58.5 +1.1
CN2 *e*SS SS 00 56 05.9 +4.1
CN2 pmax pmax
comp=Z,20nm,1.0s,mb4.8
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,300nm,27.0s
ENH Enshi 79.14 309 *e*P **P 00 41 13.8 +0.1**
comp=Z,37nm,0.9s,mb5.2
GYA Guiyang 79.16 305 P **P 00 41 14.1 +0.3**
GYA PcP PcP 00 41 24.3 +2.3
GYA pP pP 00 41 35.4 +1.7
GYA sP sP 00 41 43.1 +1.3
GYA PP PP 00 44 17.6 +3.2
GYA S S 00 51 08.0 +0.1
GYA SKS 00 51 20.3
GYA SS SS 00 56 20.4 +4.4
GYA pmax pmax
comp=Z,20nm,0.9s,mb5.0
GYA pmax pmax
comp=Z,100nm,7.7s
GYA LR LR
comp=N,640nm,19.8s
GYA LR LR
comp=E,520nm,20.1s
GYA LR LR
comp=Z,730nm,19.4s
KLR Kul'dur 79.67 335 *e*P **P 00 41 13.0 -3.1**
BJT Baijiatuau 80.64 320 *e*P **P 00 41 21.2 -0.3**
BJT pmax pmax
comp=Z,13nm,0.6s
BJT Baijiatuau 80.64 320 *e*P **P 00 41 21.2 -0.3**
comp=Z,13nm,0.6s,mb4.9
BJI Beijing 80.65 320 P **P 00 41 21.4 -0.2**
BJI PP PP 00 44 25.8 -0.8
BJI S S 00 51 29.1 +6.1
BJI SS SS 00 56 38.1 +0.2
BJI pmax pmax
comp=Z,20nm,0.9s,mb5.0
BJI pmax pmax
comp=Z,48nm,3.6s
BJI LR LR
comp=N,230nm,20.6s
BJI LR LR
comp=E,220nm,19.9s
BJI LR LR
comp=Z,160nm,20.6s
CMAR Chiang Mai Arr 81.45 294 P **P 00 41 28.1 +1.8**
comp=Z,15nm,0.8s,mb4.9,baz=136,slow=4.3,SNR=66
KMI Kunming 81.51 302 P **P 00 41 28.4 +1.9**
KMI pP pP 00 41 47.9 +1.4
KMI sP sP 00 41 55.5 +1.0
KMI PP PP 00 44 37.8 +3.8
KMI S S 00 51 34.3 +1.7
KMI sS sS 00 52 07.3 +0.7
KMI SS SS 00 56 56.5 +5.2
KMI pmax pmax
comp=Z,23nm,1.3s,mb4.8
KMI pmax pmax
comp=Z,140nm,4.2s
KMI LR LR
comp=N,150nm,13.7s
KMI LR LR
comp=E,200nm,10.3s
CHTO Chiang Mai 81.61 294 *e*P **P 00 41 29.0 +1.9**
CHTO pmax pmax
comp=Z,32nm,1.0s,mb5.1
CHTO Chiang Mai 81.61 294 *e*P **P 00 41 29.0 +1.8**
comp=Z,32nm,1.0s,mb5.1
CHTO *e*pP pP 00 41 40.6 -6.6
XAN Xi'an 81.66 312 P **P 00 41 27.6 +0.5**
XAN pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
XAN pmax pmax
comp=Z,22nm,8.5s
XAN LR LR
comp=N,110nm,13.6s
XAN LR LR
comp=E,48nm,12.5s
XAN LR LR
comp=Z,67nm,14.6s
SYO Syowa Base 82.13 196⇑ *i*P **P 00 41 26.6 -2.4**
SYO Syowa Base 82.13 196⇓ *i*PcP PcP 00 41 30.6 -3.7
CD2 Chengdu 83.65 307 *e*P **P 00 41 38.3 +0.8**
CD2 pP pP 00 41 58.8 +1.2
CD2 sP sP 00 42 07.0 +1.4
CD2 PP PP 00 44 54.6 +3.2
CD2 S S 00 51 54.8 +0.6
CD2 sS sS 00 52 30.0 +1.6
CD2 SS SS 00 57 26.9 +4.0
CD2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
CD2 pmax pmax
comp=Z,40nm,4.8s
CD2 LR LR
comp=N,200nm,16.8s
CD2 LR LR
comp=E,220nm,14.2s
CD2 LR LR
comp=Z,190nm,16.8s
HHC Hu-ho-hao-te 83.91 319 *e*P **P 00 41 39.8 +1.2**
HHC pP pP 00 42 00.3 +1.6
HHC sP sP 00 42 08.6 +1.9
HHC PP PP 00 44 56.8 +3.5
HHC SKS 00 51 52.9
HHC S S 00 51 57.3 +1.0
HHC sS sS 00 52 33.4 +2.9
HHC SS SS 00 57 30.9 +4.6
HHC pmax pmax
comp=Z,18nm,1.0s,mb4.9
HHC pmax pmax
comp=Z,85nm,5.1s
HHC LR LR
comp=N,200nm,17.8s
HHC LR LR
comp=E,180nm,21.4s
HHC LR LR
comp=Z,170nm,20.8s
OHAK Old Harbor 85.02 19 *e*P **P 00 41 43.3 -0.4**
NVL N'lazarevskaya 85.69 187 *i*P **P 00 41 43.7 -3.4**
NVL pmax pmax
comp=Z,24nm,1.1s,mb5.0
MAIT Maitri 85.69 187 *e*P **P 00 41 45.6 -1.5**
LZH Lanzhou 86.26 312⇑ P **P 00 41 52.5 +2.0**
LZH pP pP 00 42 10.6 -0.1
LZH sP sP 00 42 20.4 +1.7
LZH PP PP 00 45 18.0 +5.4
LZH *e*SKS 00 52 09.0
LZH *e*S S 00 52 20.1 +0.3
LZH sS sS 00 52 55.0 +0.8
LZH SS SS 00 58 04.3 +3.1
LZH pmax pmax
comp=Z,48nm,1.0s,mb5.4
LZH pmax pmax
comp=Z,130nm,4.0s
LZH LR LR
comp=E,490nm,16.0s
LZH LR LR
comp=Z,610nm,16.8s
SEY Seymchan 86.58 352 *d i*P **P 00 41 51.5 +0.2**
KCPM Cahto Peak 86.93 45 *e*P **P 00 41 54.5 +0.9**
VNA1 Neumayer--Stat 86.95 180 *e*P **P 00 41 52.2 -1.1**
VNA1 *e* 00 41 54.3
PKM Peak Mountain 87.00 50⇓ P **P 00 41 54.6 +0.6**
baz=87
SMMC Simmler 87.08 50⇓ P **P 00 41 55.1 +0.6**
baz=87
KHMM Horse Mountain 87.48 44 *e*P **P 00 41 57.4 +1.1**
ARVC Arvin 87.81 50⇓ P **P 00 41 57.5 -0.5**
baz=88
MWC Mount Wilson 87.93 52 *e*P **P 00 41 58.7 +0.1**
WDC Whiskeytown Da 88.08 44 *e*P **P 00 41 59.1 -0.1**
WDC pmax pmax
comp=Z,25nm,1.4s,mb5.0
WDC Whiskeytown Da 88.08 44 *e*P **P 00 41 59.1 -0.1**
comp=Z,25nm,1.4s,mb5.0
CMB Columbia Colle 88.19 47 *e*P **P 00 41 59.4 -0.3**
BFSC Mount Baldy Ra 88.22 52⇓ P **P 00 41 59.7 -0.2**
baz=88,SNR=6.7
EDW2 Edwards Air Fo 88.29 51⇓ P **P 00 42 00.0 -0.3**
baz=88
ISA Isabella 88.33 50⇑ P **P 00 42 00.5 0.0**
baz=88
ISA Isabella 88.33 50 *e*P **P 00 42 00.6 +0.1**
MONP Monument Peak 88.49 53⇑ P **P 00 42 01.4 +0.2**
baz=89,SNR=8.0
YBH Yreka Blue Hor 88.59 43 *e*P **P 00 42 01.6 +0.1**
YBH pmax pmax
comp=Z,8.0nm,0.9s
YBH Yreka Blue Hor 88.59 43 *e*P **P 00 42 01.6 +0.1**
comp=Z,8.0nm,0.9s,mb4.8
DVTC Desert V Tower 88.62 54⇓ P **P 00 42 01.8 -0.1**
baz=89
LRMC Laurel Mountai 88.80 51⇓ P **P 00 42 02.4 -0.3**
baz=89
PFO Pinyon Flat Ob 88.80 53⇑ P **P 00 42 02.3 -0.4**
baz=89
HUMO Hull Mountain 88.90 42 *e*P **P 00 42 02.8 -0.2**
comp=Z,39nm,1.6s,mb5.2
SWSC Sam W. Stewart 88.98 54⇑ P **P 00 42 03.2 -0.3**
baz=89,SNR=7.6
CWC Cottonwood Cre 88.99 50⇑ P **P 00 42 03.7 +0.2**
baz=89,SNR=14
WAKR Walker 89.07 47 *e*P **P 00 42 04.3 +0.5**
MTUM Tungsten Hills 89.10 49 *e*P **P 00 42 04.4 +0.3**
BEKR Beckworth 89.14 46⇓ P **P 00 42 03.9 -0.2**
baz=89,SNR=10
MPMC Manual Prospec 89.22 50⇑ P **P 00 42 04.4 -0.2**
baz=89,SNR=19
BELC Belle Mtn. Jos 89.32 53⇑ P **P 00 42 04.8 -0.3**
baz=89,SNR=18
GSC Goldstone 89.35 51⇑ P **P 00 42 04.8 -0.4**
baz=89,SNR=10
GSC Goldstone 89.35 51 *e*P **P 00 42 04.9 -0.3**
GSC pmax pmax
comp=Z,27nm,1.4s,mb5.1
GSC Goldstone 89.35 51 *e*P **P 00 42 04.9 -0.4**
comp=Z,27nm,1.4s,mb5.1
BC3 Big Chuckawall 89.56 53⇑ P **P 00 42 06.3 0.0**
baz=90,SNR=9.6
PAHR Pah Rah Range 89.71 46 *e*P **P 00 42 07.2 +0.4**
GLA Glamis 89.75 54⇑ P **P 00 42 07.6 +0.4**
baz=90,SNR=9.8
GLA Glamis 89.75 54 *e*P **P 00 42 08.0 +0.8**
GRAC Grapevine Rang 89.76 49⇓ P **P 00 42 07.2 +0.1**
baz=90,SNR=11
NVAR Mina Array Bea 89.81 48 P **P 00 42 07.4 +0.1**
comp=Z,11nm,0.9s,mb5.0,baz=223,slow=8.4,SNR=36
FURC Furnace Creek, 89.86 50 P **P 00 42 07.6 0.0**
baz=90,SNR=16
GMRC Granite Mounta 89.93 52⇑ P **P 00 42 07.9 -0.1**
baz=90,SNR=9.3
SHOC Shoshone 90.01 51⇑ P **P 00 42 08.2 -0.2**
baz=90,SNR=6.2
IRM Iron Mountain 90.02 53⇓ P **P 00 42 07.5 -0.9**
baz=90,SNR=19
TUQ Turquoise Moun 90.05 51⇑ P **P 00 42 08.6 +0.1**
baz=90,SNR=7.7
MOD Modoc 90.21 44 *e*P **P 00 42 09.0 -0.1**
comp=Z,7.8nm,1.0s,mb4.8
U10A Ash Meadows, A 90.22 50⇑ P **P 00 42 09.5 +0.3**
baz=90,SNR=15
K05A Summer Lake 90.26 43⇓ P **P 00 42 09.5 +0.2**
baz=90
Y12C Blythe 90.29 53⇓ P **P 00 42 08.7 -0.9**
baz=90,SNR=10
SHL Shillong 90.44 297 *e*PKP **P 00 42 14.0 +3.4**
LDFC Landfair 90.47 52 *e*P **P 00 42 10.6 +0.1**
comp=Z,49nm,1.1s,mb5.5
BILL Bilibino 90.50 358⇓ *i*P **P 00 42 09.1 -0.7**
BILL pmax pmax
comp=Z,5.0nm,1.4s,mb4.5
BILL Bilibino 90.50 358 *e*P **P 00 42 08.3 -1.5**
comp=Z,2.2nm,0.5s,mb4.5
V11A Goodsprings 90.59 51⇓ P **P 00 42 10.9 -0.1**
baz=91,SNR=10
ULN Ulaanbaatar 90.61 323 *e*P **P 00 42 11.2 +0.4**
ULN pmax pmax
comp=Z,20nm,1.1s,mb5.2
ULN Ulaanbaatar 90.61 323 *e*P **P 00 42 11.2 +0.4**
comp=Z,20nm,1.1s,mb5.2
NEE2 Needles Airpor 90.69 52⇓ P **P 00 42 11.8 +0.3**
baz=91
Z13A Yuma Proving G 90.69 54⇑ P **P 00 42 11.4 -0.2**
baz=91,SNR=19
GTA Gaotai 90.69 313⇑ P **P 00 42 12.9 +1.5**
GTA pP pP 00 42 33.6 +1.9
GTA sP sP 00 42 42.0 +2.3
GTA PP PP 00 45 53.3 +5.3
GTA SKS 00 52 36.1
GTA S S 00 53 03.1 +1.6
GTA sS sS 00 53 39.1 +2.9
GTA pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
GTA pmax pmax
comp=Z,91nm,5.1s
GTA LR LR
comp=N,190nm,20.4s
GTA LR LR
comp=E,240nm,21.9s
GTA LR LR
comp=Z,130nm,22.5s
S10A Tonopah Range, 90.74 49⇓ P **P 00 42 11.7 0.0**
baz=91,SNR=41
214A Organ Pipe Nat 90.78 56⇓ P **P 00 42 12.1 +0.1**
baz=91
PDMCI Parker Dam,Lak 90.83 53⇑ P **P 00 42 12.5 +0.3**
baz=91,SNR=5.4
Y13A Salome 90.84 54⇓ P **P 00 42 12.0 -0.2**
baz=91,SNR=17
V12A Nelson 90.96 52⇑ P **P 00 42 12.6 -0.1**
baz=91,SNR=12
SONM Songino Array 90.96 322 P **P 00 42 13.1 +0.7**
comp=Z,12nm,1.0s,mb5.0,baz=141,slow=5.1,SNR=32
114A Black Gap (USA 91.07 55⇓ P **P 00 42 12.8 -0.5**
baz=91,SNR=7.0
R10A Warm Springs 91.12 49⇓ P **P 00 42 13.6 +0.2**
baz=91,SNR=7.3
X13A Yucca 91.19 53⇓ P **P 00 42 14.0 +0.2**
baz=91
Z14A Wintersburg 91.30 54⇑ P **P 00 42 14.4 +0.1**
baz=91,SNR=5.7
Q10A Clear Creek Ra 91.30 48⇑ P **P 00 42 14.0 -0.3**
baz=91,SNR=12
W13A Hualapai Mount 91.37 52⇓ P **P 00 42 14.6 -0.1**
baz=92,SNR=12
T11A Corn Creek, Al 91.39 50⇑ P **P 00 42 14.5 -0.2**
baz=92,SNR=18
U12A Valley of Fire 91.50 51⇓ P **P 00 42 15.6 +0.4**
baz=92,SNR=6.6
Y14A Wickenburg 91.51 54⇓ P **P 00 42 14.7 -0.7**
baz=92
BMN Battle Mountai 91.51 46 *e*P **P 00 42 15.3 +0.1**
BMN pmax pmax
comp=Z,34nm,1.4s,mb5.4
BMN Battle Mountai 91.51 46 *e*P **P 00 42 15.3 +0.1**
comp=Z,34nm,1.4s,mb5.4
115A Sonoran Desert 91.55 55⇓ P **P 00 42 15.2 -0.4**
baz=92
WVOR Wild Horse Val 91.55 44 *e*P **P 00 42 15.1 -0.2**
WVOR pmax pmax
comp=Z,25nm,1.5s,mb5.2
WVOR Wild Horse Val 91.55 44 *e*P **P 00 42 15.1 -0.2**
comp=Z,26nm,1.5s,mb5.2
P10A Eureka 91.63 47⇓ P **P 00 42 16.1 +0.3**
baz=92
V13A Grand Canyon W 91.64 52 P **P 00 42 16.0 +0.1**
baz=92,SNR=20
R11A Troy Canyon, C 91.64 49 P **P 00 42 15.8 -0.1**
baz=92,SNR=16
S12A Delamar Landin 91.82 50⇑ P **P 00 42 16.9 +0.2**
baz=92,SNR=17
I07A Izee 91.82 42⇓ P **P 00 42 16.0 -0.5**
baz=92,SNR=10
X14A Yava 91.83 53 P **P 00 42 17.2 +0.4**
baz=92,SNR=11
Q11A Duckwater 91.83 48⇓ P **P 00 42 16.8 +0.1**

baz=92,SNR=17
U13A **Pakoon Wash** 91.91 51 ⇓P P 00 42 17.1 -0.1
baz=92,SNR=15
W14A **Seligman** 92.01 53 ⇓P P 00 42 18.0 +0.3
baz=92,SNR=15
Y15A **Casa Rosa Ranc** 92.01 54 ⇓P P 00 42 17.7 0.0
baz=92,SNR=13
P11A **Circle Ranch,** 92.09 48 ⇑P P 00 42 18.7 +0.8
baz=92
J08A **Circle Bar Ran** 92.11 43 ⇑P P 00 42 18.0 +0.1
baz=92,SNR=5.7
V14A **Boquillas Ranc** 92.18 52 ⇑P P 00 42 18.7 +0.3
baz=92,SNR=24
T13A **Saint George** 92.22 51 ⇓P P 00 42 19.0 +0.5
baz=92,SNR=7.7
R12A **Pony Springs,** 92.32 49 P P 00 42 19.4 +0.4
baz=92,SNR=11
X15A **Humboldt** 92.32 54 ⇓P P 00 42 19.4 +0.3
baz=92,SNR=15
O11A **Cowboy Ranch,** 92.42 47 ⇑P P 00 42 19.6 +0.2
baz=92,SNR=6.6
Z16A **Peralta Trail,** 92.43 55 ⇑P P 00 42 20.0 +0.4
baz=92
U14A **Mt Trumbull** 92.47 51 ⇓P P 00 42 19.9 +0.2
baz=93,SNR=32
TUC **Tucson** 92.48 56 *e*P P 00 42 20.3 +0.4
TUC pmax pmax
comp=Z,10.0nm,1.0s,mb5.0
TUC **Tucson** 92.48 56 *e*P P 00 42 20.3 +0.5
comp=Z,10.0nm,1.0s,mb5.0
M10A **I.L. Ranch, Tu** 92.48 46 ⇑P P 00 42 20.1 +0.4
baz=93,SNR=7.8
Q12A **Willow Creek R** 92.49 49 ⇓P P 00 42 20.1 +0.4
baz=93
S13A **Holt Ranch, En** 92.51 50 ⇓P P 00 42 20.0 +0.1
baz=93
J09A **Fry Pan Ranch,** 92.56 44 ⇓P P 00 42 20.1 +0.2
baz=93
Y16A **Circle Bar Ran** 92.62 54 ⇑P P 00 42 20.8 +0.3
baz=93,SNR=15
117A **Oracle** 92.62 56 ⇑P P 00 42 20.6 +0.1
baz=93,SNR=13
P12A **McGill** 92.63 48 ⇑P P 00 42 20.6 +0.3
baz=93
R13A **O'Grain Ranch,** 92.70 50 ⇓P P 00 42 21.3 +0.5
baz=93
318A **Bisbee** 92.72 57 ⇑P P 00 42 21.3 +0.3
baz=93,SNR=10
LSA **Lhasa** 92.75 301 *e*P P 00 42 23.1 +1.9
LSA pmax pmax
comp=Z,4.0nm,0.5s,mb5.0
LSA **Lhasa** 92.75 301 *e*P P 00 42 23.1 +1.9
comp=Z,4.4nm,0.5s,mb5.0
G08A **Pilot Rock** 92.76 42 ⇑P P 00 42 20.8 0.0
baz=93
T14A **Hurricane** 92.83 51 ⇑P P 00 42 21.7 +0.3
baz=93,SNR=7.8
CCUT **Cedar City** 92.85 50 *e*P P 00 42 21.8 +0.4
comp=Z,14nm,1.2s,mb5.2
K10A **MacKenzie Ranc** 92.86 45 ⇓P P 00 42 21.3 -0.1
baz=93,SNR=8.3
I09A **Lost Marbles R** 92.87 43 ⇓P P 00 42 20.8 -0.6
baz=93
X16A **Lo Mia Camp, P** 92.88 54 ⇑P P 00 42 21.5 -0.2
baz=93,SNR=18
218A **Dragoon** 92.91 57 ⇑P P 00 42 21.6 -0.2
baz=93,SNR=6.0
M11A **Holland Ranch,** 92.94 46 ⇑P P 00 42 21.9 +0.2
baz=93
V15A **Kaibab Nationa** 92.94 52 P P 00 42 22.7 +0.8
baz=93,SNR=11
ELK **Elko** 92.99 47 *e*P P 00 42 23.0 +1.0
Q13A **Wheeler Ranch,** 93.01 49 ⇑P P 00 42 22.4 +0.2
baz=93
Y17A **Roosevelt** 93.02 55 ⇑P P 00 42 22.4 +0.1
baz=93,SNR=5.2
O12A **Currie** 93.10 48 ⇑P P 00 42 22.6 0.0
baz=93
W16A **Flagstaff** 93.11 53 ⇓P P 00 42 22.6 -0.1
baz=93
U15A **North Rim** 93.12 52 ⇑P P 00 42 22.9 +0.2
baz=93
Z17A **San Carlos Hig** 93.14 55 ⇓P P 00 42 22.9 0.0
baz=93
N12A **Clover Valley,** 93.17 47 ⇓P P 00 42 22.9 0.0
baz=93,SNR=6.3
N12A **Clover Valley,** 93.17 47 *e*P P 00 42 22.8 0.0
comp=Z,5.2nm,0.5s,mb5.1
118A **Homack Ranch,** 93.24 56 ⇑P P 00 42 23.0 -0.3
baz=93,SNR=11
319A **Douglas** 93.25 57 ⇓P P 00 42 22.3 -1.1
baz=93
L11A **Cat Creek Ranc** 93.30 45 ⇓P P 00 42 23.4 0.0
baz=93,SNR=8.6
T15A **Red Dirt Ranch** 93.31 51 ⇑P P 00 42 23.3 -0.3
baz=93,SNR=12
X17A **Forest Lakes** 93.32 54 ⇑P P 00 42 23.6 -0.1
baz=93,SNR=5.9
K11A **Parker Ranch,** 93.40 45 ⇓P P 00 42 23.8 -0.1
baz=94
WUAZ **Wupatki** 93.40 53 ⇑P P 00 42 24.1 +0.1
baz=94,SNR=8.2
WUAZ **Wupatki** 93.40 53 *e*P P 00 42 24.2 +0.1
comp=Z,17nm,1.3s,mb5.2
M12A **Wells** 93.51 46 ⇑P P 00 42 24.5 +0.1
baz=94
219A **White Tail Can** 93.52 57 ⇓P P 00 42 24.1 -0.6
baz=94,SNR=11
Q14A **Sevier Lake (B** 93.54 49 ⇑P P 00 42 24.6 0.0
baz=94,SNR=6.2
D08A **Wollman Farm,** 93.66 40 ⇓P P 00 42 24.9 -0.1
baz=94
Y18A **Canyon Day Jun** 93.67 55 ⇑P P 00 42 25.2 -0.1
baz=94,SNR=11
L12A **House Creek Ra** 93.78 46 ⇑P P 00 42 25.7 +0.1
baz=94,SNR=6.4
H10A **Noah's Angus R** 93.80 43 ⇑P P 00 42 24.9 -0.8
baz=94
320A **Kipp Ranch, An** 93.82 58 ⇑P P 00 42 26.1 0.0
baz=94
U16A **Tuba City** 93.85 52 ⇓P P 00 42 26.5 +0.5
baz=94,SNR=11
V17A **Tonalea, Kykot** 93.87 53 ⇑P P 00 42 26.4 +0.2
baz=94,SNR=14
I11A **Placerville** 93.98 44 ⇑P P 00 42 26.1 -0.3
baz=94
M13A **Montello** 93.99 47 ⇓P P 00 42 26.5 -0.1
baz=94
M13A **Montello** 93.99 47 *e*P P 00 42 26.4 -0.2
comp=Z,5.1nm,0.8s,mb4.9
ZAK **Zakamensk** 94.05 324 *e*P Px 00 42 37.9
ZAK pmax pmax
comp=Z,5.0nm,1.2s,mb4.7
220A **Playas Peak, P** 94.05 57 ⇓P P 00 42 27.5 +0.4
baz=94,SNR=5.9
MSU **Marysvale** 94.11 50 *e*P P 00 42 27.7 +0.5
MSU pmax pmax
comp=Z,3.0nm,1.0s,mb4.6
MSU **Marysvale** 94.11 50 *e*P P 00 42 27.7 +0.5
comp=Z,3.0nm,1.0s,mb4.6
COLD **Coldfoot** 94.15 14 *e*P P 00 42 25.7 -1.0
comp=Z,2.7nm,0.9s,mb4.6
F10A **Beach Ranch, E** 94.15 42 ⇓P P 00 42 27.4 +0.1
baz=94
J12A **Stokes Ranch,** 94.23 45 ⇑P P 00 42 27.6 0.0
baz=94
120A **U Bar Ranch, L** 94.23 57 ⇑P P 00 42 27.5 -0.4
baz=94
Y19A **Nutrioso** 94.33 55 ⇓P P 00 42 28.4 0.0
baz=94,SNR=8.1
DUG **Dugway** 94.40 48 *e*P P 00 42 28.2 -0.3
N14A **Grayback Hills** 94.43 48 ⇑P P 00 42 28.0 -0.7
baz=94
T17A **Navajo Res., N** 94.45 52 ⇑P P 00 42 29.0 +0.2
baz=94,SNR=7.6
I12A **Atlanta** 94.45 44 ⇑P P 00 42 28.5 -0.2
baz=95
G11A **Walters Elk Ra** 94.48 42 ⇑P P 00 42 28.3 -0.4
baz=95
Z20A **Nine Sixteen R** 94.49 56 ⇓P P 00 42 29.7 +0.5
baz=95,SNR=6.3
TLY **Talaya** 94.52 325 *e*P P 00 42 28.9 +0.1
TLY *e*S S 00 53 31.1 -3.9
TLY pmax pmax
comp=Z,7.0nm,0.8s,mb5.1
EGAK **Eagle** 94.60 19 *e*P P 00 42 27.3 -1.5
comp=Z,3.8nm,0.9s,mb4.8
M14A **Sheep Mountain** 94.61 47 ⇓P P 00 42 29.1 -0.3
baz=95,SNR=6.9
HLID **Hailey** 94.81 45 ⇑P P 00 42 30.1 -0.2
baz=95
HLID **Hailey** 94.81 45 *e*P P 00 42 30.0 -0.3
comp=Z,2.2nm,0.9s,mb4.6
PLCA **Paso Flores** 94.86 138 P P 00 42 31.0 +0.2
comp=Z,1.1nm,0.6s,mb4.5,baz=189,slow=7.5,SNR=3.9
PLCA LR LR 01 16 37.5
comp=Z,145nm,21.1s,baz=104,slow=30
PLCA **Paso Flores** 94.86 138 *e*P P 00 42 31.0 +0.2
PLCA pmax pmax
comp=Z,10.0nm,1.5s
PLCA **Paso Flores** 94.86 138 *e*P P 00 42 31.0 +0.2
comp=Z,10nm,1.5s,mb5.0
121A **Cookes Peak, D** 94.88 57 ⇑P P 00 42 30.7 -0.2
baz=95,SNR=5.5
G12A **Big Creek, Yel** 94.94 43 ⇓P P 00 42 30.4 -0.5
baz=95
T18A **Mexican Hat** 95.18 52 ⇓P P 00 42 31.6 -0.6
baz=95
M15A **Larsen Ranch,** 95.20 47 ⇓P P 00 42 31.3 -0.8
baz=95
F12A **Elk City** 95.27 42 ⇓P P 00 42 31.4 -1.0
baz=95
Z21A **St. Cloud Mine** 95.28 56 ⇓P P 00 42 32.1 -0.6
baz=95,SNR=7.3
NEW **Newport** 95.30 40 *e*P P 00 42 32.1 -0.3
NEW pmax pmax
comp=Z,2.0nm,0.8s
NEW **Newport** 95.30 40 *e*P P 00 42 32.1 -0.3
comp=Z,1.8nm,0.8s,mb4.5
SRU **San Rafael** 95.53 50 ⇓P P 00 42 33.5 -0.2
baz=96
SRU **San Rafael** 95.53 50 *e*P P 00 42 33.4 -0.3
SRU pmax pmax
comp=Z,2.0nm,0.6s,mb4.7
SRU **San Rafael** 95.53 50 *e*P P 00 42 33.4 -0.3
comp=Z,2.2nm,0.6s,mb4.8
Y21A **Point of Rocks** 95.56 56 ⇑P P 00 42 34.0 0.0
baz=96,SNR=6.0
I14A **Mackay** 95.60 45 ⇑P P 00 42 34.1 +0.1
baz=96
R18A **Canyonlands Na** 95.68 51 ⇑P P 00 42 34.3 -0.1
baz=96
O17A **Robinson Place** 95.83 49 ⇓P P 00 42 34.3 -0.7
baz=96
HWUT **Hardware Ranch** 95.86 47 *e*P P 00 42 34.4 -0.8
324A **Moseley Ranch,** 96.25 59 ⇑P P 00 42 36.3 -0.9
baz=96
Q19A **Hogan Spring (** 96.36 51 ⇑P P 00 42 37.8 +0.3
baz=96
MNTX **Cornudas Mount** 96.43 58 *e*P P 00 42 37.4 -0.6
comp=Z,2.5nm,0.9s,mb4.6
224A **Cornudas Mount** 96.47 58 ⇑P P 00 42 37.9 -0.2
baz=96
U21A **Nageezi** 96.52 53 ⇓P P 00 42 38.1 -0.2
baz=97
626A **Big Bend Ranch** 96.61 61 ⇓P P 00 42 38.1 -0.8
baz=97
ANMO **Albuquerque** 96.84 55 ⇓*e*P P 00 42 39.1 -0.7
ANMO pmax pmax
comp=Z,2.0nm,1.2s
ANMO **Albuquerque** 96.84 55 *e*P P 00 42 38.9 -0.9
comp=Z,0.6nm,1.1s,mb3.9
TXAR **Lajitas Array** 96.91 61 P P 00 42 39.9 -0.3
comp=Z,1.4nm,0.9s,mb4.4,baz=222,slow=5.0,SNR=9.7
TXAR LR LR 01 18 04.5
comp=Z,255nm,19.2s,baz=10.0,slow=30
TPAW **Teton Pass** 97.06 46 *e*P P 00 42 40.7 +0.2
comp=Z,2.6nm,1.0s,mb4.6
Y24A **Capitan** 97.24 56 ⇓P P 00 42 39.8 -1.8
baz=97
BOZ **Bozeman (W)** 97.51 44 *e*P P 00 42 42.4 -0.1
427A **Hayter Ranch,** 97.68 60 ⇑P P 00 42 42.9 -0.8
baz=98
BW06 **Boulder Array** 97.69 47 *e*P P 00 42 44.0 +0.6
comp=Z,1.0nm,0.7s,mb4.5
PDAR **Pinedale Array** 97.69 47 P P 00 42 43.9 +0.4
comp=Z,0.8nm,0.7s,mb4.4,baz=245,slow=3.1,SNR=6.2
PDAR PP PP 00 46 39.2 -3.2
comp=Z,0.3nm,0.7s,baz=260,slow=2.7,SNR=3.9
PDAR LR LR 01 23 36.2
comp=Z,236nm,18.1s,baz=248,slow=34
Y25A **Mesa, Roswell** 97.81 57 ⇑P P 00 42 42.5 -1.6
baz=98
Z26A **Caprock** 98.12 57 ⇓P P 00 42 45.4 -0.2
baz=98
INK **Inuvik** 99.25 18 *e*P P 00 42 51.3 +1.5
comp=Z,66nm,1.1s,mb6.1
WMQ **Urumqi** 100.78 313 *e*P Pdif 00 42 58.0 +0.8
WMQ PP PP 00 47 10.0 +4.0
WMQ SKS 00 53 29.0
WMQ S Sdif 00 54 26.0 -2.7
WMQ SS SS 01 01 29.0 +0.7
WMQ pmax pmax
comp=Z,16nm,1.0s
WMQ LR LR
comp=N,75nm,20.0s
WMQ LR LR
comp=E,140nm,20.0s
WMQ LR LR
comp=Z,110nm,20.0s
MK31 **Makanchi Array** 105.35 315 *e*PKP PKiKP 00 47 30.2 -0.7
MKAR **Makanchi Array** 105.35 315 Pdiff Pdif 00 43 17.8 +0.3
comp=Z,0.7nm,0.6s,baz=88,slow=6.3,SNR=4.3
MKAR PKiKP PKiKP 00 47 30.4 -0.6
comp=Z,1.3nm,0.9s,baz=92,slow=4.3,SNR=5.0
ZALV **Zalesovo Beam** 105.85 322 Pdiff Pdif 00 43 19.3 -0.5
comp=Z,0.5nm,0.4s,baz=64,slow=6.6,SNR=2.9
ZALV PKiKP PKiKP 00 47 30.6 -1.1
comp=Z,0.5nm,0.5s,baz=37,slow=0.7,SNR=4.6
KURK **Kurchatov** 108.70 318 *e*PKP PKiKP 00 47 36.4 -0.7
TKM2 **Tokmak 2** 108.93 309 *e*PKP PKiKP 00 47 38.4 +0.7
ULM **Lac du Bonnet** 108.99 43 *e*PKP PKiKP 00 47 37.3 -0.3
UCH **Uchtor** 109.55 308 *e*PKP PKiKP 00 47 40.1 +1.2
EKS2 **Erkin-Say** 110.18 309 *e*PKP PKiKP 00 47 40.4 +0.3
KBL **Kabul** 112.02 299 *e*PKIKP PKiKP 00 47 45.2 +1.3
BVAR **Borovoye Array** 114.11 319 PKP PKiKP 00 47 46.8 -0.5
comp=Z,3.6nm,0.7s,baz=101,slow=3.0,SNR=26
BVAR SKP 00 51 21.8
comp=Z,0.3nm,0.7s,baz=104,slow=4.9,SNR=3.8
BRVK **Borovoye** 114.18 319 *c i*PKIKP PKiKP 00 47 47.7 +0.3
BRVK pmax pmax
comp=Z,8.0nm,1.2s
BRVK **Borovoye** 114.18 319 *e*PKP PKiKP 00 47 47.0 -0.3
SIV **San Ignacio** 116.14 122 PKP PKPdf 00 47 50.9 -1.4
comp=Z,0.4nm,0.5s,baz=206,slow=4.8,SNR=3.8
BOSA **Boshof** 119.29 215 PKP PKPdf 00 47 58.5 +0.3
comp=Z,1.0nm,0.4s,baz=266,slow=12,SNR=9.7
BOSA **Boshof** 119.29 215 PKP PKPdf 00 47 58.5 +0.3
SVE **Sverdlovsk** 119.81 324 *e*PKIKP PKPdf 00 47 58.3 +0.2
SVE pmax pmax
comp=Z,12nm,0.9s
ITEG **Tejag** 120.14 296 *e*P PKPdf 00 47 59.4 -0.1
IPAY **Payeh** 120.42 300 *e*P PKPdf 00 48 00.9 +1.0
ABKAR **Akbulak array** 120.49 315 *e*PKPdf PKPdf 00 47 59.5 -0.1
IKRD **Kardeh** 120.84 300 *e*P PKPdf 00 48 01.0 +0.3
ARU **Arti** 120.99 323 *i* PKIKP PKPdf 00 48 00.3 -0.1
ARU 00 49 27.1
ARU 00 54 51.6
ARU **Arti** 120.99 323 *e*PKPdf PKPdf 00 47 59.8 -0.6
ISFR **Sfrayin** 121.28 301 *e*P PKPdf 00 48 02.8 +1.2
ISRV **Sarvestan** 124.39 291 *e*P PKPdf 00 48 07.3 -0.5
IPAR **Pars** 124.51 291 *e*P PKPdf 00 48 09.6 +1.6
IGLO **Ghaloghah** 124.57 300 *e*P PKPdf 00 48 08.5 +0.6
IKIA **Kiasar** 124.67 299 *e*P PKPdf 00 48 09.3 +1.2
IGAR **Gharneh** 125.68 294 *e*P PKPdf 00 48 10.8 +0.6
ISFB **Sefidab** 125.70 297 *e*P PKPdf 00 48 11.4 +1.3
IPRN **Peran** 125.75 299 *e*P PKPdf 00 48 11.1 +0.9
IDMV **Damavand** 125.96 298 *e*P PKPdf 00 48 11.3 +0.7
IKLH **Kolahrood** 126.16 295 *e*P PKPdf 00 48 11.7 +0.6
SCHQ **Schefferville** 126.62 38 PKP PKPdf 00 48 10.4 -0.9
comp=Z,1.6nm,0.7s,baz=346,slow=8.0,SNR=3.2
IPIR **Pirpir** 126.68 295 *e*P PKPdf 00 48 13.5 +1.4
ARCES **ARCESS Array B** 128.79 345 PKP PKPdf 00 48 14.5 -0.5
comp=Z,4.0nm,0.4s,baz=67,slow=1.7,SNR=45
ISRB **Sarab** 129.53 301 *e*P PKPdf 00 48 18.0 +0.7
IVIS **Veis** 130.16 297 *e*P PKPdf 00 48 18.7 +0.1
IGHG **Ghaleghazi** 130.38 296 *e*P PKPdf 00 48 24.9 +5.8
JOF **Joensuu** 131.55 337 *e*PKIKP PKPdf 00 48 18.3 -2.1
JOF pmax pmax
comp=Z,12nm,0.8s
JOF **Joensuu** 131.55 337 *e*p PKPdf 00 48 18.3 -2.1
comp=Z,12nm,0.8s
VRHR **Novokhopersk** 131.86 319 *e*PKIKP PKPdf 00 48 21.6 +0.3
VRHR pmax pmax
comp=Z,10.0nm,0.7s
VRHR pmax pmax
comp=N,10.0nm,0.8s
VRHR pmax pmax
comp=E,3.0nm,0.5s
ZEI **Tsey** 132.07 308 *e*PKIKP PKPdf 00 48 23.5 +1.5
ZEI pmax pmax
comp=Z,7.0nm,0.5s
KIV **Kislovodsk** 132.77 310 ⇑*i*PKIKP PKPdf 00 48 23.9 +0.6
KIV *i* 00 48 37.0
KIV pmax pmax
comp=Z,7.0nm,1.1s
KIV **Kislovodsk** 132.77 310 *e*PKPdf PKPdf 00 48 23.8 +0.5
OBN **Obninsk** 133.27 326 ⇓*i*PKIKP PKPdf 00 48 24.5 +0.6
OBN pmax pmax
comp=Z,13nm,0.8s
VSR **Storozhevoye** 133.29 320 *e*PKIKP PKPdf 00 48 24.4 +0.4
VSR pmax pmax
comp=N,2.0nm,0.6s
VSR pmax pmax
comp=Z,8.0nm,0.6s
VSR pmax pmax
comp=E,9.0nm,0.5s
VORD **Divnogorie** 133.30 320 *e*PKIKP PKPdf 00 48 24.6 +0.6
VORD pmax pmax
comp=Z,7.0nm,0.4s
VORD pmax pmax
comp=N,10.0nm,0.5s
VORD pmax pmax
comp=E,8.0nm,0.6s
KAF **Kangasniemi** 133.85 338 *e*PKIKP PKPdf 00 48 21.0 -3.7
KAF pmax pmax
comp=Z,5.0nm,0.6s
KAF **Kangasniemi** 133.85 338 *e*p PKPdf 00 48 21.0 -3.7
comp=Z,5.4nm,0.6s
FINES **FINESS Array B** 134.38 337 PKhKP PKPpre 00 48 11.9
comp=Z,0.7nm,0.5s,baz=64,slow=3.1,SNR=6.8
FINES PKP PKPdf 00 48 25.1 -0.7
comp=Z,7.1nm,0.9s,baz=62,slow=1.4,SNR=15
FINES SKPbc SKPbc 00 51 53.3 +4.3
comp=Z,5.8nm,1.0s,baz=127,slow=4.2,SNR=5.2
FINES **FINESS Array B** 134.38 337 PKHKP PKPpre 00 48 12.0
FINES 00 48 25.1
SIM **Simferopol'** 138.50 313 *e*PKIKP PKPdf 00 48 35.0 +1.1
NB2 **NORSAR Subarra** 139.17 345 PKPdf PKPpre 00 48 25.8
comp=Z,4.9nm,1.0s,baz=27,slow=1.8
NOA **NORSAR Array B** 139.17 345 PKhKP PKPpre 00 48 27.2
comp=Z,1.5nm,0.7s,baz=32,slow=2.6,SNR=3.3
NOA PKP PKPdf 00 48 33.6 -1.0
comp=Z,1.1nm,0.5s,baz=36,slow=2.0,SNR=5.1
NOA **NORSAR Array B** 139.17 345 PKP PKPpre 00 48 27.2
NOA PKP PKPdf 00 48 33.6 -1.0
AKASG **Malin Array Be** 139.24 323 PKP PKPdf 00 48 34.9 -0.2
comp=Z,2.8nm,0.6s,baz=64,slow=2.3,SNR=12
AKASG SKPbc SKPbc 00 52 09.6 +5.7
comp=Z,3.8nm,0.9s,baz=50,slow=3.2,SNR=13
AKBB **Malin Array Si** 139.24 323 *e*PKIKP PKPdf 00 48 35.1 0.0
KIEV **Kiev** 139.25 323 *e*PKIKP PKPdf 00 48 34.8 -0.3
MMAI **Mount Meron Ar** 139.71 295 PKP PKPdf 00 48 34.3 -2.2
comp=Z,1.8nm,0.7s,baz=34,slow=5.6,SNR=3.2
MMAI SKP 00 52 13.5
comp=Z,4.3nm,1.0s,baz=278,slow=8.1,SNR=5.4
BR131 **Keskin Array S** 140.21 305 *e*PKPdf PKPdf 00 48 34.9 -2.4
BRTR **Keskin Array B** 140.21 305 PKhKP PKPpre 00 48 29.9
comp=Z,0.4nm,0.7s,baz=98,slow=6.0,SNR=3.7
BRTR PKP PKPdf 00 48 35.2 -2.0
comp=Z,1.5nm,0.8s,baz=103,slow=2.5,SNR=9.2
BRTR SKP 00 52 13.6
comp=Z,1.0nm,0.9s,baz=116,slow=2.9,SNR=4.1
CSS **Prodhromos** 141.25 298 *e*PKPdf PKPdf 00 48 39.6 +0.4
BUR08 **Bucovina Ar. S** 143.05 321 *e*PKPdf PKPdf 00 48 40.5 -1.5
KWP **Kalwaria Pacla** 143.35 325 *e*PKHKP PKPpre 00 48 39.4
MLR **Muntele Rosu** 143.63 317 PKIKP PKPdf 00 48 41.5 -1.6
BMR **Baia Mare** 144.02 322 PKIKP PKPdf 00 48 43.1 -0.6
VOIR 144.22 318 PKIKP PKPdf 00 48 43.6 -0.6
STHS **Stebnicka Huta** 144.25 326 *e*PKIKP PKPdf 00 48 43.9 -0.2
CRVS **Cervenica-Dubn** 144.44 325 *e*PKP PKPdf 00 48 44.0 -0.4
CRVS *e* 01 03 13.2
OJC **Ojcow** 144.47 328 *e*PKP PKPdf 00 48 41.9 -2.5
NIE **Niedzica** 144.72 326 *e*PKP PKPdf 00 48 44.7 -0.2
MCD **Coleburn Disti** 144.87 355 *e*P PKPdf 00 48 42.5 -2.4
DRGR 144.94 321 PKIKP PKPdf 00 48 45.6 +0.2
KAC **Achnashellach** 145.10 357 *e*P PKPbc 00 48 44.1 -0.7
MDO **Dochfour** 145.10 356 *e*P PKPbc 00 48 43.4 -1.5
KECS **Kecovo** 145.21 325 *e*PKP PKPdf 00 48 46.5 +0.7
KECS *e* 01 03 21.1
KPL **Plockton** 145.28 357 *e*P PKPbc 00 48 44.4 -1.1
RUE **Ruedersdorf** 145.50 335 *e*PKPdf PKPdf 00 48 46.7 +0.6
OKC **Ostrava-Krasne** 145.53 329 *e*PKIKP PKPdf 00 48 47.0 +0.7
OKC *e* 00 48 58.5
OKC **Ostrava-Krasne** 145.53 329 *e*PKP PKPdf 00 48 47.0 +0.7
OKC *ex* x 00 48 58.5
BSEG **Bad Segeberg** 145.54 340 *e*PKPbc PKPbc 00 48 46.5 +0.1
BSEG *ep*PKPbc pPKPbc 00 48 58.3 -8.9
GZR **Gura Zlata** 145.64 319 PKHKP PKPdf 00 48 47.2 +0.6
KSP **Ksiaz** 145.69 331 *e*PKP PKPdf 00 48 47.6 +1.1
KSP **Ksiaz** 145.69 331 *e*PKIKP PKPdf 00 48 47.4 +0.9
KSP *e* 00 48 58.8
KAR1 **Arisaig** 145.71 357 *e*P PKPdf 00 48 46.6 +0.2
MORC **Moravsky Berou** 145.86 329 PKP2 PKPab 00 48 47.5 -0.6
MORC **Moravsky Berou** 145.86 329 *e*PKPbc PKPbc 00 48 47.1 -0.4
PSZ **Piszkesteto** 145.87 325 *e*PKPbc PKPbc 00 48 47.8 +0.1
DPC **Dobruska-Polom** 146.03 331 *e*PKP2 PKPab 00 48 48.9 +0.2
DPC **Dobruska-Polom** 146.03 331 *e*PKP PKPdf 00 48 48.9 +1.8
DPC *ex* x 00 49 00.0
UPC **Upice** 146.05 331 *e*PKP2 PKPab 00 48 48.8 0.0
UPC **Upice** 146.05 331 *e*PKP PKPdf 00 48 48.8 +1.7
UPC *ex* x 00 48 59.8
VYHS **Vyhne** 146.06 326 *e*PKIKP PKPdf 00 48 47.4 +0.2
VYHS *e* 00 48 49.3
VYHS **Vyhne** 146.06 326 *e*PKP PKPdf 00 48 47.4 +0.2
VYHS *e* 00 48 49.3
VYHS *e* 01 03 23.3
VYHS *e* 01 03 40.1
BZS **Buzias** 146.22 320 PKIKP PKPdf 00 48 47.6 0.0
KOLL **Kolacno** 146.23 327 *e*PKP2 PKPab 00 48 49.8 +0.3
LIA **Limnos Island** 146.41 309 P PKPdf 00 48 49.2 +1.1
ESY **Stoneypath** 146.46 354 *e*P PKPdf 00 48 48.1 +0.5
EDI **Edinburgh** 146.51 354 *e*P PKPdf 00 48 46.7 -1.0
EAU **Auchinoon** 146.61 354 *e*P PKPdf 00 48 48.6 +0.7
EBL **Broad Law** 146.64 354 *e*P PKPdf 00 48 48.7 +0.7
PVCC **Panska Ves** 146.67 332 *e*PKP2 PKPbc 00 48 50.5 +0.6
PVCC **Panska Ves** 146.67 332 *e*PKP PKPbc 00 48 50.5 +0.6
BRG **Berggiesshubel** 146.67 333 *e*PKPbc PKPbc 00 48 50.2 +0.3
BRG **Berggiesshubel** 146.67 333 *e*PKP PKPdf 00 48 48.4 +0.2
comp=Z,6.7nm,1.3s
BRG *i* 00 48 50.3
comp=Z,84nm,1.0s
BRG *i* 00 49 01.6
comp=Z,34nm,1.1s
BRG *e* 00 52 28.1
comp=Z,2.8nm,0.9s
BRG *e* 00 55 56.5
comp=Z,7.8nm,1.6s
BRG **Berggiesshubel** 146.67 333 *e*PKIKP PKPdf 00 48 48.4 +0.2
BRG *i* 00 48 50.3
BRG *i* 00 49 01.6
BRG *e* 00 55 56.5
BRG pmax pmax
comp=Z,4.0nm,1.3s
BRG pmax pmax
comp=Z,50nm,1.0s
VTS **Vitosha** 146.70 314 PKIKP PKPdf 00 48 48.5 0.0
CLL **Collm** 146.72 335 *e*PKPbc PKPbc 00 48 50.0 0.0
CLL **Collm** 146.72 335 ⇓*i*PKP2 PKPbc 00 48 50.1 +0.1
CLL pmax pmax
comp=Z,72nm,0.9s
CLL MLR MLR
comp=Z,100nm,22.0s
CLL **Collm** 146.72 335 ⇓*i*PKP PKPbc 00 48 50.1 +0.1
CLL *e* 00 48 59.0
CLL *i* 00 49 01.7
CLL LR LR
comp=Z,100nm,22.0s
SMOL **Smolenice** 146.76 327 *e*PKIKP PKPdf 00 48 49.1 +0.7
SMOL *e* 00 48 51.6
NRDL **Niedersach Rie** 146.82 339 *e*PKPbc PKPbc 00 48 50.3 0.0
SRS **Serrai** 147.07 312 PKIKP PKPdf 00 48 50.6 +1.4
PRU **Pruhonice** 147.08 332 *e*PKP2 PKPbc 00 48 51.8 +0.7
PRU MLR MLR
comp=Z,100nm,18.9s
PRU **Pruhonice** 147.08 332 *e*PKP PKPbc 00 48 51.8 +0.7
PRU *ex* x 00 49 03.2

PRU AMS AMS 01 52 40.0
comp=Z,100nm,18.9s
OUR Ouranopolis 147.10 310 PKIKP PKPdf 00 48 50.8 +1.5
ESK Eskdalemuir 147.11 354 *i* PKP2 PKPab 00 48 53.9 +1.2
ESK Eskdalemuir 147.11 354 *e*PKPbc PKPbc 00 48 50.5 -0.5
ZST Bratislava 147.14 327 *e*PKIKP PKPdf 00 48 50.1 +1.1
ZST *e* 00 48 53.0
TREC Trest 147.16 330 *e*PKIKP PKPdf 00 48 49.3 +0.3
TREC *e* 00 48 51.8
TREC *e* 00 49 02.9
TREC Trest 147.16 330 *e*PKP PKPdf 00 48 49.3 +0.3
TREC *ex* x 00 48 51.8
TREC *ex* x 00 49 02.9
ECK Cauldkaine Hil 147.23 354 *e*P PKPdf 00 48 50.3 +1.3
CLZ Clausthal 147.27 338 *e*PKPbc PKPbc 00 48 51.9 +0.3
XAL Allendale 147.45 353 *e*P PKPdf 00 48 50.7 +1.3
PLG Polygyros 147.47 310 PKIKP PKPdf 00 48 51.5 +1.6
PAIG Paliouri 147.47 310 PKIKP PKPdf 00 48 51.6 +1.7
LAST Lasithi 147.56 300 P PKPbc 00 48 53.8 +0.9
PKSM Moragy 147.58 323 PKIKP PKPdf 00 48 49.7 -0.2
TANN Tannenbergstha 147.63 334 *e*PKPbc PKPbc 00 48 52.9 +0.3
TANN *ep*PKPbc pPKPbc 00 49 04.4 -9.1
GAL1 Galloway 147.68 355 *e*P PKPdf 00 48 49.1 -0.6
IBBN Ibbenburen 147.74 341 *e*PKPbc PKPbc 00 48 52.8 0.0
NKC Novy Kostel 147.78 334 *e*PKP2 PKPbc 00 48 53.5 +0.5
NKC Novy Kostel 147.78 334 *e*PKP PKPbc 00 48 53.5 +0.5
NKC *ex* x 00 49 05.2
MOX Moxa 147.78 335 *e*PKP PKPbc 00 48 53.0 0.0
comp=Z,46nm,1.1s
MOX Moxa 147.78 335 *e*PKPbc PKPbc 00 48 53.1 +0.1
MOX Moxa 147.78 335 *e*PKP2 PKPbc 00 48 53.0 0.0
MOX pmax pmax
comp=Z,46nm,1.1s
CONA Conrad Observa 147.93 328 ⇑*i*PKPdf PKPdf 00 48 50.6 +0.3
comp=Z,10.0nm,1.5s,SNR=22
XDE Dent Fell 147.94 354 *e*P PKPbc 00 48 53.2 -0.1
XOR Xorichti 148.03 309 P PKPdf 00 48 53.2 +2.4
KHC Kasperske Hory 148.14 332 *e*PKIKP PKPdf 00 48 50.9 +0.2
KHC *e* 00 48 54.5
KHC MLR MLR
comp=Z,200nm,18.2s
KHC Kasperske Hory 148.14 332 *e*PKPdf PKPdf 00 48 50.6 -0.1
KHC *e*PKPbc PKPbc 00 48 54.4 +0.4
KHC Kasperske Hory 148.14 332 *e*PKP PKPdf 00 48 50.9 +0.2
KHC *ex* x 00 48 54.5
KHC AMS AMS 01 53 20.0
comp=Z,200nm,18.2s
UBBA Unterbreizbach 148.25 337 *e*PKPbc PKPbc 00 48 54.0 -0.2
GEC2 GERESS Array S 148.29 331 *e*PKPbc PKPbc 00 48 54.7 +0.3
WET Wettzell 148.43 332 *e*PKPbc PKPbc 00 48 55.1 +0.3
ARSA Arzberg 148.56 327 ⇑*i*PKPdf PKPdf 00 48 51.1 -0.3
comp=Z,3.7nm,1.1s,SNR=8.8
BUG Bochum--Univer 148.64 340 *e*PKPbc PKPbc 00 48 55.1 -0.1
BUG *ep*PKPbc pPKPbc 00 48 06.8 -9.4
GRA1 Grafenberg Arr 148.69 334 *e*PKPbc PKPbc 00 48 55.7 +0.3
GRA1 *ep*PKPbc pPKPbc 00 49 07.1 -9.3
GRF Grafenberg Arr 148.69 334 *e*PKPbc PKPbc 00 48 55.7 +0.3
GRF *ep*PKPbc pPKPbc 00 49 07.1 -9.3
LHO Holmfirth 148.70 352 *e*P PKPbc 00 48 54.9 -0.4
KOGS Kog 148.72 325 *e*PKPdf PKPdf 00 48 51.4 -0.3
KOGS *e*PKPbc PKPbc 00 48 55.4 -0.2
FNA Florina 148.73 312 PKIKP PKPbc 00 48 55.1 -0.7
GVD Gavdhos 148.74 300 *e*PKPbc PKPbc 00 48 56.3 +0.3
MOA Molln 148.76 329 ⇑*i*PKPdf PKPdf 00 48 51.4 -0.3
comp=Z,5.9nm,1.4s,SNR=16
KBI1 Birley Grange 148.94 351 *e*P PKPbc 00 48 55.1 -0.8
OHR Ohrid 148.98 313 PKIKP PKPbc 00 48 55.8 -0.6
PERS Pernice 149.18 327 *e*PKPdf PKPdf 00 48 52.1 -0.4
PERS *e*PKPbc PKPbc 00 48 56.8 0.0
PERS *ep*PKP pPKPdf 00 49 08.1 -5.5
PERS Pernice 149.18 327 *e*PKPdf PKPdf 00 48 52.1 -0.4
PERS *e*PKPbc PKPbc 00 48 56.8 0.0
STNC Stoke 149.19 352 *e*P PKPdf 00 48 54.2 +2.0
SOKA Soboth 149.20 327 ⇑*i*PKPdf PKPdf 00 48 52.3 -0.2
comp=Z,9.5nm,1.1s
TNS Taunus Mts 149.30 338 *e*PKPbc PKPbc 00 48 57.1 +0.2
CWF Charnwood Fore 149.41 351 *e*P PKPbc 00 48 56.5 -0.5
TIR Tirane 149.49 314 *e*PKP2 PKPbc 00 48 58.5 +0.8
RJOB Jochberg 149.52 330 *e*PKPbc PKPbc 00 48 57.5 0.0
CRES Cresnjev 149.55 325 *e*PKPdf PKPdf 00 48 52.9 -0.1
CRES *e*PKPbc PKPbc 00 48 58.0 +0.3
CRES *e*PKPab PKPab 00 49 03.1 +0.3
CRES *i* pPKP pPKPdf 00 49 09.5 -4.7
CRES Cresnjev 149.55 325 *e*PKPdf PKPdf 00 48 52.9 -0.1
CRES *e*PKPbc PKPbc 00 48 58.0 +0.3
CRES *e*PKPab PKPab 00 49 03.1 +0.3
OBKA Obir 149.56 327 ⇑*i*PKPdf PKPdf 00 48 52.7 -0.3
comp=Z,9.0nm,1.4s,SNR=10
TOD Tromm 149.69 337 PKP PKPbc 00 48 57.9 0.0
ITM Ithomi 149.74 306 P PKPbc 00 48 57.6 -0.8
KBA Koelnbreinsper 149.75 329 ⇑*i*PKPdf PKPdf 00 48 52.8 -0.5
comp=Z,8.3nm,1.1s,SNR=12
HLM1 Long Mynd 149.83 353 *e*P PKPdf 00 48 52.6 -0.7
FUR Furstenfeldbru 149.87 333 *e*PKPbc PKPbc 00 48 58.5 +0.1
LJU Ljubljana 149.89 326 *e*PKPdf PKPdf 00 48 53.9 +0.3
LJU *i* PKPbc PKPbc 00 48 58.8 +0.3
LJU *ep*KP pPKPdf 00 49 10.3 -4.5
LJU Ljubljana 149.89 326 *e*PKPdf PKPdf 00 48 53.9 +0.3
LJU *i* PKPbc PKPbc 00 48 58.8 +0.3
ABH Alteburg 149.89 339 PKP PKPbc 00 48 58.3 -0.1
MYKA Terra Mystica 149.92 328 ⇑*i*PKPdf PKPdf 00 48 52.8 -0.9
comp=Z,6.8nm,1.4s
IGT Igoumenitsa 150.00 311 PKHKP PKPbc 00 48 58.7 -0.3
KTD Kalmit 150.18 337 PKHKP PKPbc 00 48 59.0 -0.1
VOY Vojsko 150.22 327 *e*PKPdf PKPdf 00 48 54.4 +0.3
VOY *e*PKPbc PKPbc 00 48 58.9 -0.4
PTCC Patocco-Chiusa 150.22 328 PKP PKPbc 00 48 58.6 -0.7
STU Stuttgart 150.23 335 *e*PKPbc PKPbc 00 48 59.4 +0.2
STU Stuttgart 150.23 335 *e*PKPbc PKPbc 00 48 59.6 +0.4
HTR Trewern Hill 150.31 353 *e*P PKPbc 00 48 58.4 -0.9
WATA Walderalm 150.37 331 ⇓*i*PKPdf PKPdf 00 48 54.1 -0.2
comp=Z,1.3nm,0.5s,SNR=31
ABTA Abfaltersbach 150.38 329 ⇑*i*PKPdf PKPdf 00 48 53.7 -0.7
comp=Z,14nm,1.1s,SNR=23
WTTA Wattenberg 150.40 331 ⇑*i*PKPdf PKPdf 00 48 54.3 -0.1
comp=Z,15nm,1.6s,SNR=39
TRI Trieste 150.50 327 *e*PKPdf PKPdf 00 48 54.8 +0.2
TRI *e*PKPbc PKPbc 00 48 59.6 -0.3
WLF Walferdange 150.54 340 *e*PKPbc PKPbc 00 49 00.4 +0.5
WLF Walferdange 150.54 340 *e*PKPbc PKPbc 00 49 00.5 +0.6
GIVF Givet 150.55 342 *e*PKIKP PKPdf 00 48 53.9 -0.6
LANF Langenberg 150.57 337 PKP PKPbc 00 49 00.1 +0.1
MOTA Moosalm 150.57 332 ⇑*i*PKPdf PKPdf 00 48 54.4 -0.3
comp=Z,4.4nm,1.0s,SNR=54
RETA Reutte 150.61 332 ⇑*i*PKPdf PKPdf 00 48 54.3 -0.4
comp=Z,7.8nm,1.6s,SNR=22
SWN1 Swindon 150.67 351 *e*P PKPdf 00 48 57.8 +3.1
HGH Gray Hill 150.69 352 *e*P PKPbc 00 48 59.5 -0.7
BAIF Baives 150.77 343 *e*PKIKP PKPdf 00 48 54.2 -0.6
MENF Mencas 150.83 345 PKP PKPbc 00 49 00.3 -0.3
BFO Black Forest 150.92 336 *e*PKPbc PKPbc 00 49 01.6 +0.7
BFO *ep*PKPbc pPKPbc 00 49 12.5 -9.4
BFO Black Forest 150.92 336 *e*PKPbc PKPbc 00 49 00.4 -0.4
BFO *ep*PKPbc pPKPbc 00 49 12.5 -9.4
SPAK Spaichingen-Ko 150.93 335 PKP PKPbc 00 49 00.7 -0.2
FETA Feichten 150.98 332 ⇑*i*PKPdf PKPdf 00 48 55.4 +0.1
comp=Z,9.2nm,1.4s,SNR=44
DAVA Damuels 151.14 333 ⇑*i*PKPdf PKPdf 00 48 55.3 -0.2
comp=Z,4.6nm,1.1s,SNR=17
CDF Champ du Feu 151.24 337 *e*PKIKP PKPdf 00 48 54.7 -0.9
HEX Exmoor 151.37 353 *e*P PKPbc 00 49 01.3 -0.5
FELD Feldberg im Sc 151.42 336 PKP PKPbc 00 49 01.6 -0.4
ECH Echery 151.44 337 PKP PKPbc 00 49 01.6 -0.5
ECH Echery 151.44 337 *e*PKPdf PKPdf 00 48 55.8 -0.2
ECH PKP PKPdf 00 49 01.6 +5.7
ECH *e*PKPbc PKPbc 00 49 01.8 -0.3
ECH *e*PKPab PKPab 00 49 10.9 +0.4
HTL Hartland 151.51 354 *e*P PKPbc 00 49 01.6 -0.5
MOF Molkenrain 151.76 337 PKP PKPbc 00 49 01.8 -1.0
HINF Hinteralfeld 151.89 337 *e*PKIKP PKPdf 00 48 55.7 -0.9
comp=Z,28nm,1.2s
MEZF Maizieres J'vi 151.91 340 *e*PKIKP PKPdf 00 48 56.3 -0.3
HAU Haudompre 151.91 338 *e*PKIKP PKPdf 00 48 55.9 -0.7
comp=Z,10nm,0.9s
HAU *e*MLR MLR
comp=Z,138nm,20.8s
HAU Haudompre 151.91 338 *e*PKPdf PKPdf 00 48 55.9 -0.7
HAU LR LR
comp=Z,140nm,20.8s
BBS Basel-Blauen 151.94 336 PKP PKPbc 00 49 02.5 -0.8
DYA Yadsworthy 152.00 353 *e*P PKPbc 00 49 02.5 -0.8
TUE Stuetta 152.01 332 *e*PKPdf PKPdf 00 48 56.5 -0.4
TUE *e*PKPbc PKPbc 00 49 03.4 -0.1
LOMF Lomont 152.29 337 PKP PKPbc 00 49 03.7 -0.4
TIP Timpagrande 152.62 313 *e*PKPbc PKPbc 00 49 05.8 +0.7
TIP *e*PKPab PKPab 00 49 16.9 +1.1
VAI Varese 152.73 332 PKP PKPdf 00 48 57.6 -0.3
AQU L'Aquila 152.93 322 *e*PKIKP PKPbc 00 49 05.7 +0.1
AQU L'Aquila 152.93 322 ⇑*i*P PKPdf 00 49 05.5 +7.2
FLN La Foliniere 153.10 348 *e*PKIKP PKPdf 00 48 57.7 -0.7
FLN *e*MLR MLR
comp=Z,202nm,20.8s
FLN La Foliniere 153.10 348 *e*PKPdf PKPdf 00 48 57.7 -0.7
FLN LR LR
comp=Z,200nm,20.8s
LDF La Druitiere 153.19 347 *e*PKIKP PKPdf 00 48 57.8 -0.7
CABF La Chapelle 153.19 337 *e*PKIKP PKPdf 00 48 58.3 -0.3
comp=Z,36nm,1.0s
LOR Lormes 153.37 340 *e*PKIKP PKPdf 00 48 58.1 -0.7
comp=Z,6.3nm,0.9s
LOR *e*MLR MLR
comp=Z,146nm,20.5s
LOR Lormes 153.37 340 *e*PKPdf PKPdf 00 48 58.1 -0.7
LOR LR LR
comp=Z,150nm,20.5s
GRR Gorron 153.53 348 *e*PKIKP PKPdf 00 48 58.3 -0.7
comp=Z,15nm,1.1s
CEL Celeste 153.66 312 *e*PKPdf PKPdf 00 48 59.2 -0.3
CEL *e*PKPbc PKPbc 00 49 07.6 +0.2
CEL *e*PKPab PKPab 00 49 21.4 +1.2
SSF Saint Saulge 153.67 341 *e*PKIKP PKPdf 00 48 58.6 -0.6
comp=Z,13nm,1.1s
HYF Humbligny 153.74 342 *e*PKIKP PKPdf 00 48 59.2 -0.1
LPL La Plagne 153.86 334 *e*PKIKP PKPdf 00 48 59.4 -0.2
LPG La Plagne 153.87 334 *e*PKIKP PKPdf 00 48 59.5 -0.1
SMF Signal de Mont 153.93 340 *e*PKIKP PKPdf 00 48 58.7 -0.9
AVF Avril sur Loir 153.96 341 *e*PKIKP PKPdf 00 48 58.7 -1.0
comp=Z,8.5nm,1.1s
SGMF Saint Gilles 153.96 350 *e*PKIKP PKPdf 00 48 58.6 -1.0
comp=Z,78nm,1.6s
ROSF Rostrenen 153.98 351 *e*PKIKP PKPdf 00 48 58.8 -0.9
BNI Bardonecchia 154.26 334 *e*PKPdf PKPdf 00 49 00.4 +0.3
BNI *e*PKPbc PKPbc 00 49 08.7 +0.3
BGF Bois d'Agland 154.32 341 *e*PKIKP PKPdf 00 48 59.6 -0.6
comp=Z,35nm,1.4s
MBDF Montbardon 154.49 333 *e*PKIKP PKPdf 00 48 59.9 -0.6
PLDF La Plantade 154.60 339 PKIKP PKPdf 00 49 01.5 +0.9
ORIF Oris-en-Rattie 154.69 335 *e*PKIKP PKPdf 00 49 00.2 -0.6
ORIF *e*MLR MLR
comp=Z,228nm,19.5s
SAOF Saorge 154.75 331 PKP PKPbc 00 49 08.9 -0.6
TCF Toulx Ste Croi 154.75 342 *e*PKIKP PKPdf 00 49 00.2 -0.6
comp=Z,25nm,1.1s
TOUF Mont Tournerai 154.86 332 PKP PKPbc 00 49 09.2 -0.5
SSB Saint Sauveur 154.89 337 *e*PKPdf PKPdf 00 49 01.0 0.0
SSB *e*PKPbc PKPbc 00 49 10.1 +0.4
SBF Sospel 154.90 331 *e*PKIKP PKPdf 00 49 00.0 -1.1
PYM Petit Puy Mans 154.99 340 PKIKP PKPdf 00 49 01.0 -0.1
MFF Saint Martin d 155.07 346 *e*PKIKP PKPdf 00 49 00.6 -0.6
comp=Z,31nm,1.1s
PGF Pioggiola 155.16 327 *e*PKIKP PKPdf 00 49 00.5 -1.0
VIVF Saint-Julien-l 155.20 336 *e*PKIKP PKPdf 00 49 01.0 -0.5
comp=Z,17nm,1.3s
LBL Lubilhac 155.38 339 PKIKP PKPdf 00 49 02.5 +0.8
FRF La Foret Royal 155.48 332 *e*PKIKP PKPdf 00 49 01.1 -0.8
SMRF Simiane la Rot 155.60 334 *e*PKIKP PKPdf 00 49 01.8 -0.2
LMR La Mourre 155.73 332 *e*PKIKP PKPdf 00 49 01.3 -0.9
comp=Z,22nm,1.4s
RJF Les Rejaudoux 155.85 342 *e*PKIKP PKPdf 00 49 01.8 -0.5
comp=Z,70nm,1.7s
RJF *e*MLR MLR
comp=Z,179nm,21.5s
RJF Les Rejaudoux 155.85 342 *e*PKPdf PKPdf 00 49 01.8 -0.5
RJF LR LR
comp=Z,180nm,21.5s
CAF Calviac 156.03 340 *e*PKIKP PKPdf 00 49 02.1 -0.5
comp=Z,18nm,1.3s
LASF Ste Croix 156.17 337 *e*PKIKP PKPdf 00 49 02.5 -0.3
comp=Z,18nm,1.2s
LFF La Frestale 156.40 343 *e*PKIKP PKPdf 00 49 02.5 -0.6
MTLF Montolieu 157.39 338 *e*PKIKP PKPdf 00 49 03.9 -0.5
EPF Esparros 158.27 341 *e*PKIKP PKPdf 00 49 05.1 -0.4
comp=Z,9.5nm,1.2s
ETSF Etsaut 158.65 343 *e*PKIKP PKPdf 00 49 05.8 -0.1
KEST Kesra 159.44 313 PKP PKPdf 00 49 07.2 +0.2
comp=Z,2.0nm,0.9s,baz=309,slow=2.5,SNR=5.4
KEST PKPab PKPab 00 49 45.7 +0.5
comp=Z,2.7nm,1.0s,baz=317,slow=4.9,SNR=5.8
KEST Kesra 159.44 313 *e*PKPdf PKPdf 00 49 07.3 +0.2
KEST *e*PKPab PKPab 00 49 45.6 +0.4
MVO Moncorvo 161.48 355 *e*PKPdf PKPdf 00 49 08.3 -0.9
MTE Manteigas 162.28 356 *e*PKPdf PKPdf 00 49 10.4 +0.4
ESDC Sonseca Array 162.52 347 PKPab PKPab 00 49 57.1 -1.2
comp=Z,0.2nm,0.3s,baz=14,slow=4.4,SNR=6.4
PCBR Castelo Branco 162.83 356 *e*PKPdf PKPdf 00 49 11.0 +0.4
LIC Lamto 163.23 194 *e*PKP1 PKPab 00 50 02.7 +0.6
comp=Z,49nm,1.4s
KIC Kosan Boka 163.29 195 *e*PKP1 PKPab 00 50 03.5 +1.1
comp=Z,10nm,0.8s
DBIC Dimbokro 163.62 195 PKP PKPdf 00 49 12.4 +0.3
comp=Z,3.7nm,0.9s,baz=45,slow=5.3,SNR=3.7
DBIC PKPab PKPab 00 50 03.8 0.0
comp=Z,4.1nm,0.7s,baz=153,slow=5.1,SNR=6.4
DBIC Dimbokro 163.62 195 *e*PKPdf PKPdf 00 49 12.4 +0.3
DBIC *e*PKPab PKPab 00 50 03.6 -0.3
TIC Toumodi 163.63 194 *e*PKP1 PKPab 00 50 03.7 -0.2
comp=Z,2.7nm,0.2s
TAM Tamanrasset 166.65 273 *e*PKIKP PKPdf 00 49 15.9 +1.5
TAM *e* 00 50 18.1

JMA ***21*** *00:33:19.9, 35.°20N×137.°95E, h15km±1km, M2.7*
ISCJB ***21*** *00:33:19.9±0.7, 35.°19N±0.°04×137.°95E±0.°06, h15km±14km, Error ellipse: s-maj=8.3km s-min=6.4km az=2.1*
ISC 21 00:33:19.9±0.7, 35.°19N±0.°04×137.°95E±0.°06, h15km±5km, n7, ∘0°29/11, 1D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
JNY	**Yasuok**	**0.18**	**336**	P	**Pg**	**00 33 24.4**	**+0.1**
JNY				S	**Sg**	**00 33 27.5**	**+0.2**
SHZ3	**Shizuoka 3**	**0.24**	**121**	⇓P	**Pg**	**00 33 25.4**	**+0.1**
SHZ3				*e*S	**Sg**	**00 33 29.1**	**+0.2**
JYZW	**Yoshizawa**	**0.27**	**223**	P	**Pg**	**00 33 25.5**	**-0.1**
JYZW				S	**Sg**	**00 33 29.2**	**-0.3**
JYN	**Shimob**	**0.57**	**58**	P	**Pg**	**00 33 31.0**	**-0.2**
TK04	**Tokai 4**	**0.81**	**185**	P	**Pb**	**00 33 36.2**	**+0.6**
JOD2	**Odawara 2**	**0.93**	**85**	P	**Pb**	**00 33 37.3**	**-0.4**
MAT	**Matsushiro**	**1.36**	**9**	P	**Pn**	**00 33 44.1**	**-0.3**
MAT				S	**Sn**	**00 34 02.4**	**+0.2**

IDC ***21*** *00:51:16.4±0.7, 20.°46N×120.°23E, h0km, mb4.2/16, mb1 4.3/17, mb1mx4.2/25, mbtmp4.2/17, ML3.7/1, MS3.6/1, Ms1 3.8/1, ms1mx3.0/34, Error ellipse: s-maj=28.6km s-min=14.3km az=68.0*
ISCJB ***21*** *00:51:19.0±0.4, 20.°43N±0.°06×120.°18E±0.°08, h26km, mb4.5/54, Error ellipse: s-maj=11.1km s-min=8.1km az=165.8*
NEIC ***21*** *00:51:23.4±2.0, 20.°43N×120.°18E, h51km±17km, mb4.6/29, Error ellipse: s-maj=9.7km s-min=6.8km az=71.0*
SZGRF ***21*** *00:51:24.1, 20.°58N×119.°48E, h33km, mb4.8, Philippine Islands region*
BJI ***21*** *00:51:26.3, 21.°21N×119.°48E, h15km, mB4.7/3, mb4.1/5, ML3.8/4, Ms3.8/1, Ms7 3.8/1*
ISC 21 00:51:21.2±3.5, 20.°45N±0.°06×120.°22E±0.°08, h31km±24km, h28km±2.4km; pP-P, n84, ∘0°80/86, mb4.5/54, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
QZH	**Quanzhou**	**4.72**	**342**	*e*Pn	**Pn**	**00 52 22.4**	**-7.9**
QZH				Sn	**Sn**	**00 53 15.3**	**-8.7**
QZH				smax			
comp=N,90nm,0.6s							
QZH				smax			
comp=E,130nm,0.5s							
QZH				LR	LR		
comp=N,1μm,10.0s							
QZH				LR	LR		
comp=E,920nm,12.6s							
QZH				LR	LR		
comp=Z,1μm,10.6s							
GZH	**Guangzhou**	**6.91**	**294**	Pn	**Pn**	**00 52 54.6**	**-5.8**
GZH				Sn	**Sn**	**00 54 06.4**	**-12**
GZH				smax			
comp=N,130nm,0.7s							
GZH				smax			
comp=E,110nm,0.6s							
KSRS	**Korea Array**	**18.22**	**20**	P	**Pn**	**00 55 32.0**	**+0.3**
comp=E,0.2nm,0.3s,baz=202,slow=12,SNR=8.4							
BJT	**Baijiatuau**	**19.81**	**351**	*e*P	**Pn**	**00 55 50.1**	**-0.7**
comp=E,20nm,0.8s							
CHTO	**Chiang Mai**	**20.11**	**269**	*e*P	**P**	**00 55 52.5**	**-0.1**
comp=E,9.6nm,1.3s							
CMAR	**Chiang Mai Arr**	**20.16**	**268**	P	**P**	**00 55 53.7**	**+0.5**
comp=E,0.6nm,0.3s,baz=81,slow=7.8,SNR=4.0							
CMAR				LR	LR	01 03 51.8	
comp=E,160nm,18.8s,baz=125,slow=38							
LZH	**Lanzhou**	**21.18**	**321**	*e*P	**P**	**00 56 04.0**	**-0.1**
LZH				pP		00 56 10.0	
LZH				sP	sP	00 56 13.5	-2.7
LZH				pmax	pmax		
comp=Z,24nm,1.5s,mb4.3							
LZH				pmax	pmax		
comp=Z,130nm,4.6s							
MJAR	**Matsushiro Arr**	**22.45**	**41**	P	**P**	**00 56 20.2**	**+2.5**
comp=Z,0.8nm,0.4s,mb3.5,baz=235,slow=8.5,SNR=4.3							
KULM	**Kulim**	**24.26**	**234**	*e*P	**P**	**00 56 35.4**	**-0.4**
comp=Z,5.4nm,0.7s,mb4.1							
GTA	**Gaotai**	**25.78**	**322**	*e*P	**P**	**00 56 49.5**	**+0.2**
GTA				pP	pP	00 56 56.1	-2.1
GTA				sP	sP	00 56 59.0	-2.9
GTA				pmax	pmax		
comp=Z,3.0nm,1.1s,mb3.7							
PSI	**Prapat**	**27.18**	**233**	P	**P**	**00 57 02.5**	**+0.3**
comp=Z,2.6nm,0.4s,mb4.1,baz=40,slow=5.0,SNR=4.1							
SONM	**Songino Array**	**29.52**	**341**	P	**P**	**00 57 21.1**	**-1.6**
comp=Z,1.3nm,0.7s,mb3.7,baz=163,slow=8.4,SNR=4.6							
MK31	**Makanchi Array**	**40.49**	**319**	*e*P	**P**	**00 58 55.2**	**-1.9**
MKAR	**Makanchi Array**	**40.49**	**319**	P	**P**	**00 58 56.5**	**-0.7**
comp=Z,2.8nm,0.7s,mb4.1,baz=108,slow=12,SNR=17							
WRAB	**Tennant Creek**	**42.45**	**160**	*e*P	**P**	**00 59 13.4**	**0.0**
comp=Z,21nm,1.0s,mb4.7							
WRA	**Warramunga Arr**	**42.45**	**160**	P	**P**	**00 59 12.9**	**-0.6**
comp=Z,5.7nm,0.7s,mb4.3,baz=342,slow=9.0,SNR=17							
ZAA0	**Zalesovo Array**	**42.95**	**330**	*e*P	**P**	**00 59 16.9**	**-0.2**
ZALV	**Zalesovo Beam**	**42.95**	**330**	P	**P**	**00 59 16.8**	**-0.4**
comp=Z,7.4nm,0.9s,mb4.4,baz=116,slow=7.4,SNR=19							
TKM2	**Tokmak 2**	**43.45**	**311**	*e*P	**P**	**00 59 22.2**	**+0.8**
comp=Z,1.2nm,0.6s,mb3.8							
UCH	**Uchtor**	**44.03**	**310**	*e*P	**P**	**00 59 28.1**	**+2.0**
comp=Z,6.8nm,1.4s,mb4.2							
UCH				*ep*P	pP	00 59 37.5	+2.3
KURK	**Kurchatov**	**44.45**	**323**	P	**P**	**00 59 29.7**	**+0.5**
comp=Z,8.5nm,0.7s,mb4.6,baz=125,slow=7.5,SNR=30							
KURK	**Kurchatov**	**44.45**	**323**	*e*P	**P**	**00 59 28.8**	**-0.4**
comp=Z,8.2nm,1.0s,mb4.4							
ASAR	**Alice Springs**	**45.83**	**162**	P	**P**	**00 59 41.0**	**+0.5**
comp=Z,3.2nm,0.8s,mb4.3,baz=330,slow=6.9,SNR=18							
CTAO	**Charters Tower**	**47.67**	**146**	*e*P	**P**	**00 59 54.3**	**-0.7**
comp=Z,22nm,1.2s,mb5.0							
BVAR	**Borovoye Array**	**50.05**	**323**	P	**P**	**01 00 13.4**	**+0.5**
comp=Z,1.8nm,0.6s,mb4.3,baz=100,slow=9.0,SNR=16							
BVAR				PcP	PcP	01 01 31.7	-0.6
comp=Z,0.7nm,0.7s,baz=108,slow=4.8,SNR=4.4							
BRVK	**Borovoye**	**50.12**	**323**	*e*P	**P**	**01 00 13.6**	**+0.3**
comp=Z,2.8nm,0.6s,mb4.5							
TIXI	**Tiksi**	**51.46**	**3**	*e*P	**P**	**01 00 22.6**	**-0.6**
comp=Z,1.5nm,0.5s,mb4.2							
ABKAR	**Akbulak array**	**55.46**	**316**	*e*P	**P**	**01 00 52.7**	**-0.2**
comp=Z,0.6nm,0.5s,mb3.9							
ABKAR				*e*	pP	01 01 00.4	-1.9
STKA	**Stephens Creek**	**55.91**	**158**	P	**P**	**01 00 55.9**	**-0.4**
comp=Z,1.9nm,0.8s,mb4.2,baz=303,slow=14,SNR=3.8							
AKTK	**Aktyubinsk**	**56.86**	**318**	P	**P**	**01 01 03.3**	**+0.4**
AKTO	**Aktyubinsk**	**56.86**	**318**	P	**P**	**01 01 03.3**	**+0.4**
comp=Z,1.2nm,0.6s,mb4.1,baz=94,slow=16,SNR=6.8							
ARU	**Arti**	**57.58**	**325**	*e*P	**P**	**01 01 07.2**	**-0.6**
comp=Z,6.0nm,0.7s,mb4.7							
JOF	**Joensuu**	**71.52**	**331**	*ep*	**P**	**01 02 37.7**	**-1.1**
comp=Z,8.5nm,0.7s,mb4.8							
KAF	**Kangasniemi**	**73.95**	**331**	*ep*	**P**	**01 02 50.4**	**-2.9**
comp=Z,7.4nm,0.8s,mb4.7							
FINES	**FINESS Array B**	**74.22**	**330**	P	**P**	**01 02 55.0**	**+0.2**
comp=Z,6.2nm,0.8s,mb4.6,baz=49,slow=7.5,SNR=17							
BRTR	**Keskin Array B**	**74.68**	**307**	P	**P**	**01 02 59.0**	**+1.0**
comp=Z,0.9nm,0.9s,mb3.7,baz=93,slow=6.2,SNR=3.9							
AKASG	**Malin Array Be**	**75.07**	**319**	P	**P**	**01 02 59.3**	**-0.7**
comp=Z,2.7nm,0.8s,mb4.2,baz=60,slow=6.8,SNR=6.9							
CSS	**Prodhromos**	**76.12**	**302**	*e*P	**P**	**01 03 05.5**	**-0.8**
comp=Z,5.6nm,0.7s,mb4.6							
INK	**Inuvik**	**77.01**	**21**	*e*P	**P**	**01 03 09.3**	**-1.4**
comp=Z,3.6nm,1.2s,mb4.2							
KWP	**Kalwaria Pacla**	**79.39**	**319**	*e*P	**P**	**01 03 24.5**	**+0.2**
comp=Z,5.6nm,0.6s,mb4.7							
NB2	**NORSAR Subarra**	**81.10**	**332**	P	**P**	**01 03 31.1**	**-2.1**
comp=Z,2.3nm,0.7s,mb4.2,baz=66,slow=5.3							
NOA	**NORSAR Array B**	**81.10**	**332**	P	**P**	**01 03 31.5**	**-1.7**
comp=Z,14nm,0.8s,mb4.0,baz=64,slow=5.1,SNR=3.9							
NOA	**NORSAR Array B**	**81.10**	**332**	P	**P**	**01 03 31.5**	**-1.7**
RES	**Resolute Bay**	**82.47**	**9**	*e*P	**P**	**01 03 40.7**	**+0.5**
comp=Z,3.6nm,0.8s,mb4.3							
BRG	**Berggiesshubel**	**84.14**	**322**	*e*P	**P**	**01 03 49.7**	**+0.5**
comp=Z,6.0nm,1.4s,mb4.5							
CLL	**Collm**	**84.48**	**323**	*e*P	**P**	**01 03 51.5**	**+0.5**
comp=Z,6.0nm,1.2s,mb4.6							
BSEG	**Bad Segeberg**	**84.76**	**326**	*e*P	**P**	**01 03 53.2**	**+0.9**
comp=Z,1nm,1.4s,mb4.9							
GEC2	**GERESS Array S**	**85.15**	**321**	*e*P	**P**	**01 03 54.2**	**-0.2**
comp=Z,4.0nm,1.1s,mb4.5							
TANN	**Tannenbergstha**	**85.19**	**322**	*e*P	**P**	**01 03 55.2**	**+0.7**
comp=Z,13nm,1.9s,mb4.7							
NEUB	**Neuenburg**	**85.22**	**323**	*e*P	**P**	**01 03 54.5**	**-0.2**
comp=Z,6.0nm,0.8s,mb4.8							
WERD	**Werda**	**85.26**	**322**	*e*P	**P**	**01 03 55.6**	**+0.7**
comp=Z,8.0nm,1.6s,mb4.6							
GUNZ	**Gunzen**	**85.28**	**322**	*e*P	**P**	**01 03 55.9**	**+0.9**
comp=Z,7.0nm,1.2s,mb4.7							
WERN	**Wernitzgruen**	**85.29**	**322**	*e*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LASF	Ste Croix	93.41	320	eP	P	01 04 32.9	-0.7
CAF	Calviac	94.01	321	eP	P	01 04 36.3	-0.1
ETSF	Etsaut	96.72	321	eP	P	01 04 48.2	-0.6
SJPF	Ste Jean	96.99	321	eP	P	01 04 48.8	-1.2

*IDC **21** 00:54:50.7±1.0, 19°.92N×122°.06E, h0km, mb3.7/8, mb1 3.9/9, mb1mx3.8/24, mbtmp3.8/9, ML3.7/1, Error ellipse: s-maj=30.6km s-min=18.9km az=69.0*
*NEIC **21** 00:54:55.3±4.6, 19°.98N×122°.11E, h33km±34km, mb4.1/4, Error ellipse: s-maj=18.5km s-min=10.6km az=61.0*
*ISCJB **21** 00:54:55.0±1.1, 20°.09N±0°.05×122°.2E±0°.1, h48km±11km, mb3.9/11, Error ellipse: s-maj=19.4km s-min=8.0km az=175.7*
ISC 21 00:54:56.7±1.0, 20°.07N±0°.05×122°.2E±0°.1, h46km±10km, n26, σ1°09/27, mb3.9/11, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBP	Basco	0.42	332	eP	Pn	00 54 59.9	-6.9
APYP	Conner	2.37	202	eP	Pn	00 55 32.9	-0.2
PALP	Palpanan	3.00	175	eP	Pn	00 55 45.9	+4.2
TPUB	Ta-pu	3.53	336	ePn	Pn	00 55 49.2	+0.2
BCPH	Baguio City Da	3.97	203	eS	Sn	00 56 49.9	+10
BOLP	Bolinao	4.25	211	eP	Pn	00 56 00.4	+1.4
YHNB	Yeheng	4.64	351	ePn	Pn	00 56 02.4	-1.9
YHNB				eSn	Sn	00 56 55.9	-1.0
KSRS	Korea Array	18.03	15	P	Pn	00 59 05.6	+1.7
	0.3nm,0.3s,baz=200,slow=11,SNR=10						
MJAR	Matsushiro Arr	21.60	37	P	P	00 59 45.2	+2.5
	0.5nm,0.3s,mb3.4,baz=219,slow=7.5,SNR=2.9						
MJAR	Matsushiro Arr	21.60	37	P	P	00 59 45.2	+2.5
CMAR	Chiang Mai Arr	21.99	270	P	P	00 59 46.7	-0.3
	0.6nm,0.3s,mb3.5,baz=84,slow=10,SNR=3.5						
COEN	Coen	39.62	147	eP	P	01 02 23.4	-0.7
	137nm,1.2s						
WRAB	Tennant Creek	41.50	163	eP	P	01 02 38.9	-0.6
	17nm,1.2s,mb4.5						
WRA	Warramunga Arr	41.51	163	P	P	01 02 38.5	-1.1
	2.5nm,0.6s,mb4.0,baz=343,slow=8.9,SNR=5.7						
WRA	Warramunga Arr	41.51	163	P	P	01 02 38.5	-1.1
MK31	Makanchi Array	41.98	319	eP	P	01 02 45.5	+2.3
MKAR	Makanchi Array	41.98	319	P	P	01 02 44.4	+1.2
	0.8nm,0.6s,mb3.5,baz=104,slow=10,SNR=5.1						
ZALV	Zalesovo Beam	44.21	329	P	P	01 03 00.8	-0.4
	0.5nm,0.3s,mb3.7,baz=114,slow=6.5,SNR=3.4						
ZALV	Zalesovo Beam	44.21	329	P	P	01 03 00.8	-0.4
ASAR	Alice Springs	44.95	165	P	P	01 03 06.9	-0.4
	2.0nm,0.8s,mb4.0,baz=345,slow=6.7,SNR=7.6						
TKM2	Tokmak 2	45.09	311	eP	P	01 03 07.9	-0.4
	1.2nm,0.8s,mb3.8						
KURK	Kurchatov	45.87	322	P	P	01 03 14.8	+0.5
	1.1nm,0.8s,mb3.8,baz=116,slow=7.7,SNR=7.1						
KURK	Kurchatov	45.87	322	eP	P	01 03 14.3	-0.1
	1.9nm,0.8s,mb4.1						
BVAR	Borovoye Array	51.46	323	P	P	01 03 57.1	-0.2
	0.5nm,0.4s,mb3.8,baz=90,slow=5.9,SNR=3.6						
ABKAR	Akbulak array	57.00	316	eP	P	01 04 36.7	-0.9
RES	Resolute Bay	82.56	9	eP	P	01 07 14.2	-0.2
	2.5nm,1.1s,mb4.2						

*NOU **21** 01:01:43.8±1.1, 18°.07S×170°.26E, h30km, MD3.6, ML3.2, MS3.2*
*IDC **21** 01:01:53.2±3.8, 18°.86S×169°.40E, h247km±32km, mb4.0/9, mb1 4.1/9, mb1mx4.0/14, mbtmp4.0/9, Error ellipse: s-maj=29.7km s-min=16.6km az=122.0*
*ISCJB **21** 01:01:53.7±0.7, 18°.89S±0°.10×169°.38E±0°.08, h267km±7km, mb4.3/27, Error ellipse: s-maj=17.3km s-min=9.1km az=148.5*
*NEIC **21** 01:01:54.7±0.9, 18°.91S×169°.43E, h266km±9km, mb4.3/19, Error ellipse: s-maj=13.9km s-min=7.0km az=153.0*
ISC 21 01:01:54.4±0.7, 18°.87S±0°.10×169°.41E±0°.08, h260km±7km, n54, σ0°82/51, mb4.3/27, 1C-1D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	Yate Dam	4.04	216	eP	Pn	01 02 58.0	-1.0
DZM	Mont Dzumac	4.23	221	eP	Pn	01 03 00.2	-1.0
DZM				eS	S	01 03 56.8	+2.2
DZM				AMP		01 04 19.2	
	comp=Z,716nm,13.6s						
DZM	Mont Dzumac	4.23	221	⇑iPn	Pn	01 03 00.9	-0.3
PLUM	Mont Dore	4.27	217	eP	Pn	01 03 01.1	-0.5
NORM	Noumea	4.32	219	eP	Pn	01 03 01.9	-0.4
NOUC	Port Laguerre	4.34	222	eP	Pn	01 03 02.3	-0.2
NOUC				eS	S	01 04 02.0	+5.2
NOUC				AMP		01 04 16.1	
	comp=Z,57nm,0.0s						
MVNO	Noumea	4.38	219	eP	Pn	01 03 02.7	-0.3
ONTRN	Noumea	4.40	219	eP	Pn	01 03 03.0	-0.2
MSVF	Nonsavu	8.28	84	⇓iP	Pn	01 03 52.0	+0.7
	comp=Z,45nm,0.8s						
EIDS	Eidsvold	18.16	246	eP	P	01 05 49.4	+1.2
	comp=Z,19nm,0.6s						
ARMA	Armidale	19.81	231	eP	P	01 06 06.9	+1.2
ARMA	Armidale	19.81	231	eP	P	01 06 06.8	+1.1
	comp=Z,9.6nm,0.6s						
CTA	Charters Tower	21.87	263	eP	P	01 06 26.7	+0.2
	comp=Z,9.9nm,0.4s,mb4.5						
CTA	Charters Tower	21.87	263	P	P	01 06 26.5	0.0
	comp=Z,12nm,0.6s,mb4.5,baz=91,slow=11,SNR=28						
CTAO	Charters Tower	21.87	263	eP	P	01 06 27.5	+1.0
	comp=Z,17nm,0.7s,mb4.5						
CNB	Canberra Magne	24.15	223	eP	P	01 06 47.7	+0.6
COEN	Coen	25.63	277	eP	P	01 06 60.0	-0.6
	comp=Z,83nm,0.9s,mb5.2						
TOO	Toolangi	28.00	223	eP	P	01 07 21.8	+0.3
STKA	Stephens Creek	28.18	237	eP	P	01 07 23.4	+0.2
	comp=Z,20nm,0.6s,mb4.7						
STKA	Stephens Creek	28.18	237	P	P	01 07 23.9	+0.7
	comp=Z,23nm,0.6s,mb4.8,baz=63,slow=8.1,SNR=59						
MOO	Moorlands	30.12	214	eP	P	01 07 40.6	+0.6
WRAB	Tennant Creek	33.05	262	eP	P	01 08 04.7	-1.3
	comp=Z,10.0nm,0.7s,mb4.5						
WRA	Warramunga Arr	33.06	262	P	P	01 08 05.0	-1.0
	comp=Z,10nm,0.5s,mb4.6,baz=96,slow=8.4,SNR=28						
ASAR	Alice Springs	33.38	255	P	P	01 08 08.4	-0.3
	comp=Z,91nm,0.5s,baz=82,slow=8.9,SNR=1385						
ASAR				ScP	ScP	01 14 04.8	+1.3
	comp=Z,0.5nm,0.8s,baz=96,slow=3.9,SNR=4.2						
KAKA	Kakadu	36.05	274	eP	P	01 08 32.7	+1.1
	comp=Z,50nm,1.4s,mb4.8						
FORT	Forrest	39.16	244	eP	P	01 08 56.6	-0.8
	comp=Z,9.5nm,0.8s,mb4.3						
FORT	Forrest	39.16	244	eP	P	01 08 56.5	-0.8
	comp=Z,9.0nm,0.6s,mb4.4						
FITZ	Fitzroy Crossi	41.45	264	eP	P	01 09 16.5	+0.3
	comp=Z,31nm,0.4s,mb4.9						
KLBR	Kellerberrin	48.02	244	eP	P	01 10 06.6	-1.2
	comp=Z,10nm,0.4s,mb4.5						
CASY	Casey	60.53	203	eP	P	01 11 35.7	-1.3
	comp=Z,3.3nm,0.7s,mb4.0						
MJAR	Matsushiro Arr	62.51	332	P	P	01 11 50.2	-0.3
	comp=Z,2.8nm,0.7s,mb4.0,baz=169,slow=7.0,SNR=7.6						
MAJO	Matsushiro	62.51	332	eP	P	01 11 50.2	-0.3
	comp=Z,4.6nm,0.6s,mb4.3						
QSPA	South Pole Qui	71.18	180	eP	P	01 12 43.6	-0.9
	comp=Z,7.6nm,0.9s,mb4.3						
PEA0B	Petropavlovsk-	72.39	353	eP	P	01 12 52.0	+0.1
PETK	Petropavlovsk-	72.39	353	P	P	01 12 52.5	+0.6
	comp=Z,8.6nm,0.7s,mb4.5,baz=142,slow=7.9,SNR=20						
CMAR	Chiang Mai Arr	78.50	294	P	P	01 13 28.6	+1.2
	comp=Z,0.6nm,0.3s,mb3.9,baz=125,slow=2.7,SNR=4.8						
MAW	Mawson	78.84	202	P	P	01 13 28.7	+0.4
	comp=Z,4.2nm,0.9s,mb4.2,baz=124,slow=9.9,SNR=9.7						
SVW2	Sparrevohn	84.50	16	eP	P	01 13 57.3	-0.4
ULN	Ulaanbaatar	86.67	323	eP	P	01 14 09.1	+0.5
	comp=Z,1.3nm,0.6s,mb3.9						
BILL	Bilibino	86.69	359	eP	P	01 14 08.2	-0.1
	comp=Z,4.2nm,0.7s,mb4.4						
CMB	Columbia Colle	86.79	48	eP	P	01 14 09.3	-0.2
	comp=Z,3.7nm,1.0s,mb4.2						
SONM	Songino Array	87.03	323	P	P	01 14 11.1	+0.7
	comp=Z,1.5nm,0.8s,mb3.9,baz=147,slow=5.8,SNR=6.1						
HUMO	Hull Mountain	87.18	43	eP	P	01 14 11.7	+0.4
	comp=Z,3.1nm,0.8s,mb4.2						
TRF	Thorofare Moun	87.86	17	eP	P	01 14 12.4	-1.5
	comp=Z,2.9nm,0.9s,mb4.1						
NVAR	Mina Array Bea	88.43	48	P	P	01 14 17.6	+0.4
	comp=Z,0.4nm,0.3s,mb3.7,baz=224,slow=8.3,SNR=4.3						
WVOR	Wild Horse Val	89.94	45	eP	P	01 14 24.5	+0.3
	comp=Z,2.9nm,1.0s,mb4.1						
TUC	Tucson	91.66	56	eP	P	01 14 33.6	+1.2
	comp=Z,3.2nm,1.0s,mb4.2						
HLID	Hailey	93.22	45	eP	P	01 14 39.8	+0.4
	comp=Z,1.3nm,0.8s,mb3.9						
NEW	Newport	93.39	40	eP	P	01 14 38.5	-1.4
	comp=Z,2.1nm,0.8s,mb4.1						
ARCES	ARCESS Array B	124.75	345	PKP	PKPdf	01 20 20.7	-1.8
	comp=Z,5.0nm,0.9s,baz=15,slow=5.1,SNR=4.5						
ARCES	ARCESS Array B	124.75	345	PKP	PKPdf	01 20 20.7	-1.8
FINES	FINESS Array B	130.31	338	SKPbc	SKPbc	01 23 31.1	-0.7
	comp=Z,1.1nm,0.5s,baz=74,slow=5.1,SNR=11						
AKASG	Malin Array Be	135.29	325	SKPbc	SKPbc	01 23 49.2	+0.1
	comp=Z,0.9nm,0.6s,baz=49,slow=3.4,SNR=5.5						
BRTR	Keskin Array B	136.72	308	SKPbc	SKPbc	01 23 54.1	+0.2
	comp=Z,0.5nm,0.9s,baz=28,slow=6.5,SNR=2.9						

*CSEM **21** 01:11:27.9±1.3, 39°.30N×41°.22E, h20km, MD2.8, Error ellipse: s-maj=35.4km s-min=10.5km az=119.0*
*DDA **21** 01:11:27.3, 39°.32N×41°.15E, h7km±6km, Md2.8*
*ISCJB **21** 01:11:28.9±0.8, 39°.35N±0°.04×41°.11E±0°.06, h8km±7km, Error ellipse: s-maj=8.6km s-min=4.5km az=31.4*
*ISK **21** 01:11:29.2, 39°.41N×40°.95E, h3km, MD2.8*
ISC 21 01:11:29.3±0.7, 39°.34N±0°.04×41°.12E±0°.06, h10km±8km, n11, σ1°14/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZM	Erzurum	0.59	18	ePG	Pg	01 11 42.2	+1.4
EZM				eSG	Sg	01 11 49.8	+1.2
ERZM	Erzurum	0.59	18	eP	Pg	01 11 39.3	-1.5
ERZM				eS	Sg	01 11 47.3	-1.4
ERZM	Erzurum	0.59	18	eP	Pg	01 11 39.3	-1.5
ERZM				eS	Sg	01 11 47.3	-1.3
BINT	Bingol	0.68	227	ePG	Pg	01 11 42.0	-0.4
BINT				eSG	Sg	01 11 51.8	+0.6
BINT	Bingol	0.68	227	ePg	Pg	01 11 42.0	-0.4
BINT				eSg	Sg	01 11 51.8	+0.6
KOPT	Kop Dagi	0.83	325	eP	Pg	01 11 43.1	-2.2
KOPT				eS	Sg	01 11 57.4	+1.3
KOPT	Kop Dagi	0.83	325	eP	Pg	01 11 43.1	-2.2
KOPT				eS	Sg	01 11 57.4	+1.3
HOMI	Horasan	0.93	40	eP	Pg	01 11 47.8	+0.7
HOMI				eS	Sg	01 11 59.4	+0.2
PTK	Pertek	1.42	252	ePN	Pn	01 11 54.2	-0.9
PTK				eSN	Sn	01 12 14.4	+0.5
PTK	Pertek	1.42	252	ePn	Pn	01 11 54.2	-0.9
PTK				eSn	Sn	01 12 14.4	+0.5
BEST	Besiri	1.45	175	eP	Pn	01 11 54.4	-1.2
BEST				eS	Sn	01 12 15.7	+1.1

*SKO **21** 01:16:41.6, 41°.03N×20°.11E, h0km, M3.0, ML3.4*
*ISCJB **21** 01:16:42.5±0.3, 41°.16N±0°.01×20°.20E±0°.02, h1km±3km, Error ellipse: s-maj=2.9km s-min=1.8km az=140.9*
*TIR **21** 01:16:42.6±3.4, 41°.19N×20°.24E, h6km±27km, ML3.0*
*THE **21** 01:16:43.2, 41°.19N×20°.26E, h0km±2km, ML4.2/3, Error ellipse: s-maj=2.7km s-min=1.0km az=327.0*
*NEIC **21** 01:16:43.4, 41°.19N×20°.16E, h6km, ML3.5(PDG), ML3.4(ATH), After PDG.*
*BEO **21** 01:16:43.0±0.7, 41°.08N×20°.22E, h0km±2km, ML3.2/8*
*PDG **21** 01:16:43.4±1.1, 41°.19N×20°.16E, h6km±2km, MD3.5/4, ML3.5/10, Error ellipse: s-maj=1.3km s-min=1.5km az=0.0*
*CSEM **21** 01:16:43.3±0.1, 41°.13N×20°.20E, h2km, ML3.0, Error ellipse: s-maj=4.0km s-min=2.5km az=47.0*
ISC 21 01:16:43.6±0.4, 41°.14N±0°.01×20°.20E±0°.02, h3km±2km, n198, σ1°08/268, 39C-12D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.32	309	ePG	Pg	01 16 49.1	-0.8
TIR	Tirane	0.32	309	⇑iPg	Pg	01 16 49.6	-0.3
TIR				iSg	Sg	01 16 55.4	+1.3
TIR	Tirane	0.32	309	P	Pg	01 16 49.4	-0.5
TIR				S	Sg	01 16 54.7	+0.6
TIR	Tirane	0.32	309	⇑iPg	Pg	01 16 49.6	-0.3
TIR				S	Sg	01 16 54.7	+0.6
TIR				iSg	Sg	01 16 55.4	+1.3
OHR	Ohrid	0.46	94	⇑iPg	Pg	01 16 51.1	-1.3
OHR				iSg	Sg	01 16 58.5	+0.2
OHR	Ohrid	0.46	94	P	Pg	01 16 50.9	-1.5
OHR				S	Sg	01 16 58.5	+0.2
OHR	Ohrid	0.46	94	P	Pg	01 16 50.9	-1.5
OHR				S	Sg	01 16 58.5	+0.2
KBN	Korca	0.69	139	ePG	Pg	01 16 53.7	-3.1
KBN				eSG	Sg	01 17 07.2	+1.5
KBN	Korca	0.69	139	ePg	Pg	01 16 53.7	-3.1
	SNR=92						
KRUS	Krusevo	0.82	74	ePg	Pg	01 16 57.4	-2.1
KRUS				eSg	Sg	01 17 09.6	-0.5
BIA	Bitola	0.86	98	ePg	Pg	01 16 58.0	-2.1
BIA				eSg	Sg	01 17 11.2	-0.1
BIA	Bitola	0.86	98	P	Pg	01 16 57.9	-2.2
BIA				S	Sg	01 17 10.8	-0.5
BIA	Bitola	0.86	98	P	Pg	01 16 57.9	-2.2
BIA				S	Sg	01 17 10.8	-0.5
PUK	Puka	0.93	346	ePG	Pg	01 17 01.6	+0.2
PUK				eSG	Sg	01 17 15.0	+1.6
PUK	Puka	0.93	346	ePg	Pg	01 17 01.6	+0.2
	SNR=91						
PUK				eSg	Sg	01 17 15.0	+1.6
	SNR=91						
FNA	Florina	0.96	112	P	Pg	01 17 00.4	-1.7
FNA				S	Sg	01 17 14.8	+0.2
FNA	Florina	0.96	112	P	Pg	01 17 00.4	-1.7
FNA				S	Sg	01 17 14.8	+0.2
ULC	Ulcinj	1.08	319	⇑iPg	Pg	01 17 02.5	-1.9
ULC				eSg	Sg	01 17 18.9	+0.4
ULC	Ulcinj	1.08	319	⇑iPg	Pg	01 17 02.5	-1.9
ULC				eSg	Sg	01 17 18.9	+0.4
BCI	Bajram Curri	1.23	356	ePG	Pn	01 17 05.3	-2.3
BCI				iSG	Sg	01 17 23.0	0.0
BCI	Bajram Curri	1.23	356	ePg	Pn	01 17 05.3	-2.3
	SNR=91						
BCI				iSg	Sg	01 17 23.0	0.0
	SNR=91						
SKO	Skopje	1.25	48	⇑iPg	Pn	01 17 06.3	-1.6
SKO				iSg	Sg	01 17 23.9	+0.2
SKO	Skopje	1.25	48	iPn	Pn	01 17 06.9	-1.0
SKO				eLg		01 17 23.9	
	comp=N,990nm,0.5s						
SKO				eLg		01 17 24.1	
	comp=E,531nm,0.7s						
SKO	Skopje	1.25	48	P	Pn	01 17 06.1	-1.8
SKO				S	Sg	01 17 23.9	+0.2
SKO	Skopje	1.25	48	⇑iPg	Pn	01 17 06.3	-1.6
SKO				S	Sg	01 17 23.9	+0.2
SRN	Sarande	1.27	187	ePG	Pg	01 17 09.1	+1.1
SRN				iSG	Sg	01 17 29.2	+4.7
SRN	Sarande	1.27	187	ePg	Pg	01 17 09.1	+1.1
	SNR=91						
KZN	Kozani	1.46	124	P	Pn	01 17 10.6	-0.2
KZN	Kozani	1.46	124	P	Pn	01 17 09.8	-1.0
KZN				S	Sg	01 17 31.3	+0.8
KZN	Kozani	1.46	124	eP	Pn	01 17 10.2	-0.6
KZN	Kozani	1.46	124	P	Pn	01 17 09.8	-1.0
KZN				S	Sg	01 17 31.3	+0.8
PVY	Plav	1.46	354	⇑iPg	Pn	01 17 09.2	-1.6
PVY				eSg	Sg	01 17 31.5	+0.9
PVY	Plav	1.46	354	⇑iPg	Pn	01 17 09.2	-1.6
PVY				eSg	Sg	01 17 31.5	+0.9
KEK	Kerkira	1.46	192	P	Pn	01 17 12.0	+1.1
KEK	Kerkira	1.46	192	P	Pn	01 17 11.2	+0.3
KEK	Kerkira	1.46	192	eP	Pn	01 17 11.3	+0.4
KEK	Kerkira	1.46	192	P	Pn	01 17 11.2	+0.3
PDG	Podgorica	1.46	332	⇑iPg	Pn	01 17 09.3	-1.6
PDG				eSg	Sg	01 17 31.6	+0.9
TTG	Podgorica	1.46	332	⇑iPg	Pn	01 17 09.3	-1.6
TTG				eSg	Sg	01 17 31.6	+0.9
TTG	Podgorica	1.46	332	⇑iPg	Pn	01 17 09.3	-1.6
TTG				eSg	Sg	01 17 31.6	+0.9
BUM	Brajici-Budva	1.51	320	⇑iPg	Pn	01 17 10.4	-1.1
BUM				eSg	Sg	01 17 33.7	+1.5
BUM	Brajici-Budva	1.51	320	⇑iPg	Pn	01 17 10.4	-1.1
BUM				eSg	Sg	01 17 33.7	+1.5
JAN	Janina	1.57	161	P	Pg	01 17 14.3	+0.6
JAN	Janina	1.57	161	eP	Pn	01 17 13.3	+1.0
JAN	Janina	1.57	161	P	Pg	01 17 14.3	+0.6
MEV	Metsovon	1.57	150	P	Pn	01 17 12.8	+0.5
MEV	Metsovon	1.57	150	P	Pn	01 17 12.8	+0.5
IGT	Igoumenitsa	1.61	176	P	Pn	01 17 13.5	+0.6
IGT				S	Sg	01 17 35.8	+0.4
IGT	Igoumenitsa	1.61	176	P	Pn	01 17 13.5	+0.6
IGT				S	Sg	01 17 35.8	+0.4
BEY	Berane	1.74	353	⇑iPn	Pn	01 17 14.7	0.0
BEY				eSn	Sg	01 17 39.5	-0.1
IVA	Berane	1.74	353	⇑iPn	Pn	01 17 14.7	0.0
IVA				eSn	Sg	01 17 39.5	-0.1
IVA	Berane	1.74	353	⇑iPn	Pn	01 17 14.7	0.0
IVA				eSn	Sg	01 17 39.5	-0.1
VAY	Valandovo	1.80	84	ePn	Pn	01 17 14.5	-1.0
VAY				eLg		01 17 40.8	
VAY				eLg		01 17 41.2	
	comp=E,192nm,0.7s						
VAY	Valandovo	1.80	84	P	Pn	01 17 13.3	-2.2
VAY				S	Sn	01 17 38.5	-0.3
VAY	Valandovo	1.80	84	P	Pn	01 17 13.3	-2.2
VAY				S	Sn	01 17 38.5	-0.3
HCY	Herceg Novi	1.82	316	⇑iPn	Pn	01 17 15.8	0.0
HCY				eSn	Sg	01 17 41.9	-0.2
HCY	Herceg Novi	1.82	316	⇑iPn	Pn	01 17 15.8	0.0
HCY				eSn	Sg	01 17 41.9	-0.2
NKY	Niksic	1.89	332	⇑iPn	Pn	01 17 16.8	0.0
NKY				eSn	Sg	01 17 43.0	-1.4
NKY	Niksic	1.89	332	⇑iPn	Pn	01 17 16.8	0.0
NKY				eSn	Sg	01 17 43.0	-1.4
BARS	Barje	2.06	35	ePg	Pb	01 17 20.8	-0.9
BARS				eSg	Sg	01 17 49.6	-0.3
TREB	Trebinje	2.09	319	ePn	Pn	01 17 19.6	+0.1
TREB				eSg	Sg	01 17 50.9	+0.1
TREB	Trebinje	2.09	319	ePn	Pn	01 17 19.6	+0.1
TREB				eSg	Sg	01 17 50.9	+0.1
THL	Klokotos Trika	2.10	138	P	Pn	01 17 19.4	-0.3
THL	Klokotos Trika	2.10	138	eP	Pn	01 17 19.7	0.0
THL	Klokotos Trika	2.10	138	P	Pn	01 17 19.4	-0.3
SJES	Sjenica	2.12	356	ePg	Pb	01 17 22.7	0.0
SJES				eSg	Sg	01 17 52.7	+0.9
BRY	Bratogost	2.15	325	ePn	Pn	01 17 20.3	0.0
BRY				eSn	Sn	01 17 48.9	+1.6
BRY	Bratogost	2.15	325	ePn	Pn	01 17 20.3	0.0
BRY				eSn	Sn	01 17 48.9	+1.6
THE	Thessaloniki	2.16	103	P	Pn	01 17 20.1	-0.4
THE	Thessaloniki	2.16	103	P	Pn	01 17 20.1	-0.4
PLE	Pljevlja	2.26	345	⇑iPn	Pn	01 17 22.3	+0.4
PLE				eSn	Sb	01 17 51.9	-1.6
PLE	Pljevlja	2.26	345	⇑iPn	Pn	01 17 22.3	+0.4
PLE				eSn	Sb	01 17 51.9	-1.6
HORT	Hortiatis	2.27	103	P	Pn	01 17 20.8	-1.1
HORT	Hortiatis	2.27	103	P	Pn	01 17 20.8	-1.1
UPM	Unac-Piva	2.27	335	⇑iPn	Pn	01 17 22.4	+0.4
UPM				eSn	Sb	01 17 51.8	-1.8
UPM	Unac-Piva	2.27	335	⇑iPn	Pn	01 17 22.4	+0.4
UPM				eSn	Sb	01 17 51.8	-1.8
SOH	Sokhos	2.41	97	P	Pn	01 17 23.4	-0.5
SOH	Sokhos	2.41	97	P	Pn	01 17 23.3	-0.6
SOH	Sokhos	2.41	97	eP	Pn	01 17 23.8	-0.1
SOH	Sokhos	2.41	97	P	Pn	01 17 23.4	-0.5
BAI	Bari	2.51	270	ePn	Pn	01 17 24.1	-1.1
BAI				eSn	Sn	01 17 55.4	-0.9
STON	Ston	2.54	314	ePn	Pn	01 17 25.6	-0.1
STON				Sn	Sn	01 17 57.3	+0.2
STON	Ston	2.54	314	ePn	Pn	01 17 25.6	-0.1
STON				Sn	Sn	01 17 57.3	+0.2
EVR	Evrytania	2.54	150	P	Pb	01 17 29.3	-0.6
EVR	Evrytania	2.54	150	eP	Pb	01 17 28.2	-1.7
EVR	Evrytania	2.54	150	P	Pb	01 17 29.3	-0.6
SRS	Serrai	2.56	89	P	Pn	01 17 25.2	-0.8
SRS	Serrai	2.56	89	P	Pn	01 17 25.2	-0.8
PLG	Polygyros	2.58	106	P	Pn	01 17 27.0	+0.7
PLG	Polygyros	2.58	106	P	Pn	01 17 25.5	-0.8
PLG	Polygyros	2.58	106	eP	Pn	01 17 25.7	-0.6
PLG	Polygyros	2.58	106	P	Pn	01 17 25.5	-0.8
NISS		2.60	29	ePn	Pn	01 17 27.5	+0.9
NISS		2.60	29	ePn	Pn	01 17 27.5	+0.9
VTS	Vitosha	2.67	56	⇑iPn	Pn	01 17 27.3	-0.2
VTS				iSn	Sn	01 18 00.8	+0.4
VTS	Vitosha	2.67	56	P	Pn	01 17 27.2	-0.3
VTS	Vitosha	2.67	56	⇑iPn	Pn	01 17 27.3	-0.2
VTS				iSn	Sn	01 18 00.8	+0.4
AGG	Agios Georgios	2.68	142	P	Pn	01 17 28.7	+1.1
AGG	Agios Georgios	2.68	142	P	Pn	01 17 27.4	-0.2
AGG	Agios Georgios	2.68	142	eP	Pn	01 17 28.5	+0.9
AGG	Agios Georgios	2.68	142	P	Pn	01 17 27.4	-0.2
SG1	Sgolgore (BA)	2.68	265	ePn	Pn	01 17 28.0	+0.4
SG1				eSn	Sn	01 18 00.4	-0.2
GRUS	Gruza	2.77	8	ePn	Pn	01 17 28.7	-0.1
GRUS	

VOIR		5.56	38	⇑P		Pn	01 18 08.9	+1.7
BOJS	Bojanci	5.66	322	*i* Pn		Pn	01 18 08.0	-0.6
BOJS	Bojanci	5.66	322	*i* Pn		Pn	01 18 07.9	-0.6
MLR	Muntele Rosu	6.04	42	⇓P		Pn	01 18 16.0	+2.3
MLR	Muntele Rosu	6.04	42	⇓⇑P		Pn	01 18 16.0	+2.3
MLR	Muntele Rosu	6.04	42	⇓P		Pn	01 18 16.0	+2.3
PDKS	Podkum	6.20	324	*i* Pn		Pn	01 18 14.9	-1.0
PDKS	Podkum	6.20	324	*i* Pn		Pn	01 18 14.9	-1.0
PLOR	Plostina	6.64	43	⇑*i*P		Pn	01 18 24.0	+1.9
PLOR	Plostina	6.64	43	⇑*i*P		Pn	01 18 24.0	+1.9
VOY	Vojsko	6.69	319	*e*Pn		Pn	01 18 22.6	-0.1
VOY				*e*Sn		Sn	01 19 38.3	-1.1
VOY				*e*			01 19 40.0	
VOY	Vojsko	6.69	319	*e*Pn		Pn	01 18 22.6	-0.1
VOY				*e*Sn		Sn	01 19 38.3	-1.1
VRI	Vrincioaia	6.69	43	⇓P		Pn	01 18 24.3	+1.6
VRI	Vrincioaia	6.69	43	⇓*i*P		Pn	01 18 24.3	+1.6
VRI	Vrincioaia	6.69	43	⇓P		Pn	01 18 24.3	+1.6
PTCC	Patocco-Chiusa	7.22	319	Pn		Pn	01 18 29.6	-0.4
KECS	Kecovo	7.34	2	*e*Pn		Pn	01 18 33.9	+2.3
KECS				*e*			01 19 54.0	
KECS	Kecovo	7.34	2	*e*PN		Pn	01 18 33.9	+2.3
KECS				*e*			01 19 54.0	
KECS	Kecovo	7.34	2	*e*Pn		Pn	01 18 33.9	+2.3
BURAR	Bucovina Array	7.40	27	⇓P		Pn	01 18 34.7	+2.3
BURAR	Bucovina Array	7.40	27	⇓*i*P		Pn	01 18 34.7	+2.3
BURAR	Bucovina Array	7.40	27	⇓P		Pn	01 18 34.7	+2.3
VYHS	Vyhne	7.41	353	*e*Pn		Pn	01 18 33.3	+0.7
VYHS				*e*			01 19 58.4	
VYHS	Vyhne	7.41	353	*e*PN		Pn	01 18 33.3	+0.7
VYHS				*e*			01 19 58.4	
VYHS	Vyhne	7.41	353	*e*Pn		Pn	01 18 33.3	+0.7
CRVS	Cervenica-Dubn	7.81	6	*e*Pn		Pn	01 18 40.9	+2.9
CRVS	Cervenica-Dubn	7.81	6	*e*PN		Pn	01 18 40.9	+2.9
STHS	Stebnicka Huta	8.31	5	*e*Pn		Pn	01 18 49.9	+5.1
STHS	Stebnicka Huta	8.31	5	*e*PN		Pn	01 18 49.8	+5.0

IDC 21 01:17:28.7±1.3, 57.15S×141.08W, h0km, mb4.0/4, mb1 4.2/4, mb1mx4.0/12, mbtmp4.0/4, MS4.1/8, Ms1 4.0/8, ms1mx3.8/18, Error ellipse: s-maj=219.7km s-min=26.1km az=178.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKT	Rikitea	34.29	10	*e*LQ		01 31 52.0	
	310nm,28.8s						
RKT				*e*LR	LR	01 33 17.8	
	221nm,26.5s						
RKT				*e*T		01 59 57.3	
	1.8nm,0.2s						
PPT	Papeete	40.03	347	*e*LR	LR	01 35 44.6	
	299nm,25.0s						
PPT	Papeete	40.03	347	LR	LR	01 36 40.0	
	comp=Z,244nm,20.2s,baz=164,slow=29						
PLCA	Paso Flores	46.92	101	P	P	01 26 00.7	+0.1
	2.0nm,1.1s,baz=207,slow=9.8,SNR=3.2						
TAOE	Nuku Hiva Isla	48.19	1	*e*LR	LR	01 39 41.6	
	196nm,27.8s						
DZM	Mont Dzumac	51.60	290	*e*LR	LR	01 41 38.6	
	142nm,23.2s						
MAW	Mawson	54.30	191	LR	LR	01 47 41.1	
	comp=Z,135nm,20.3s,baz=346,slow=33						
LPAZ	La Paz	67.22	85	P	P	01 28 25.4	+0.8
	1.8nm,0.8s,baz=210,slow=6.9,SNR=4.8						
LPAZ				LR	LR	01 51 21.4	
	comp=Z,76nm,18.2s,baz=301,slow=30						
ASAR	Alice Springs	67.78	261	P	P	01 28 28.6	+0.4
	1.0nm,0.8s,baz=140,slow=8.2,SNR=6.1						
ATAH	Atahualpa	69.42	70	LR	LR	01 51 05.2	
	comp=Z,134nm,21.4s,baz=358,slow=29						
WRA	Warramunga Arr	70.57	263	P	P	01 28 45.2	-0.3
	0.8nm,0.8s,baz=148,slow=5.1,SNR=2.6						
FITZ	Fitzroy Crossi	76.75	257	LR	LR	02 00 54.0	
	comp=Z,108nm,20.3s,baz=324,slow=34						
PCRV	Puerto La Cruz	91.23	73	LR	LR	02 05 30.9	
	comp=Z,92nm,19.4s,baz=25,slow=32						
BOSA	Boshof	93.79	168	LR	LR	02 08 57.0	
	comp=Z,92nm,19.7s,baz=163,slow=33						
LBTB	Lobatse	97.39	168	LR	LR	02 13 17.6	
	comp=Z,85nm,18.8s,baz=15,slow=34						
MKAR	Makanchi Array	151.81	267	PKPbc	PKPbc	01 37 24.1	-0.1
	0.9nm,0.9s,baz=96,slow=2.9,SNR=5.5						

IDC 21 01:37:15.7±1.1, 5.41S×152.18E, h0km, mb4.2/12, mb1 4.3/12, mb1mx4.2/18, mbtmp4.2/12, Error ellipse: s-maj=40.1km s-min=17.8km az=118.0
NEIC 21 01:37:25.1±3.7, 5.49S×152.16E, h72km±35km, mb4.5/11, Error ellipse: s-maj=18.4km s-min=12.0km az=149.0
ISC 21 01:37:24.9±5.3, 5.5S±0.2×152.2E±0.1, h69km±51km, n30, σ0.9=74/29, mb4.2/23, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	15.61	201	Pn	Pn	01 41 01.2	+0.4
	0.3nm,0.3s,baz=20,slow=11,SNR=3.6						
WRAB	Tennant Creek	22.50	229	*e*P	P	01 42 19.7	+0.8
	4.2nm,0.5s,mb4.0						
WRA	Warramunga Arr	22.52	229	P	P	01 42 18.1	-0.9
	2.3nm,0.5s,mb3.8,baz=52,slow=10,SNR=9.2						
ASAR	Alice Springs	25.22	222	P	P	01 42 45.0	+0.5
	4.1nm,0.5s,mb4.1,baz=57,slow=9.0,SNR=48						
STKA	Stephens Creek	28.06	199	P	P	01 43 08.5	-1.3
	3.4nm,1.0s,mb3.9,baz=4.4,slow=13,SNR=2.6						
STKA	Stephens Creek	28.06	199	P	P	01 43 08.5	-1.3
FITZ	Fitzroy Crossi	28.78	242	P	P	01 43 15.7	-0.7
	3.0nm,0.4s,mb4.2,baz=331,slow=6.5,SNR=14						
FORT	Forrest	33.86	219	*e*P	P	01 44 01.7	+0.7
	16nm,0.9s,mb4.8						
CMAR	Chiang Mai Arr	57.60	296	P	P	01 47 07.9	-0.3
	0.5nm,0.3s,mb4.0,baz=132,slow=5.2,SNR=4.5						
PETK	Petropavlovsk-	58.56	4	P	P	01 47 13.8	-0.4
	0.7nm,0.5s,mb4.0,baz=131,slow=5.7,SNR=4.2						
PETK				PcP	PcP	01 48 04.3	+0.5
	2.6nm,0.8s,baz=182,slow=4.3,SNR=3.8						
SONM	Songino Array	66.57	328	P	P	01 48 08.2	+0.5
	0.8nm,0.5s,mb3.9,baz=142,slow=5.6,SNR=5.5						
KDAK	Kodiak Island	77.07	27	P	P	01 49 09.9	-0.6
	5.3nm,0.9s,mb4.2,baz=230,slow=6.0,SNR=3.0						
SVW2	Sparrevohn	77.70	23	*e*P	P	01 49 14.6	+0.7
TTA	Tatalina	78.64	22	*e*P	P	01 49 19.2	+0.2
	6.0nm,0.7s,mb4.5						
MK31	Makanchi Array	80.43	319	*e*P	P	01 49 29.3	+0.2
MKAR	Makanchi Array	80.43	319	P	P	01 49 29.5	+0.4
	1.6nm,0.9s,mb3.8,baz=92,slow=9.7,SNR=5.2						
MKAR	Makanchi Array	80.43	319	P	P	01 49 29.5	+0.4
BPAW	Bear Paw Mtn.	81.16	22	*e*P	P	01 49 32.1	-0.5
	3.7nm,1.1s,mb4.1						
ZALV	Zalesovo Beam	81.37	327	P	P	01 49 32.3	-1.6
	1.1nm,0.5s,mb3.9,baz=120,slow=7.4,SNR=5.4						
MCK	McKinley	81.74	23	*e*P	P	01 49 35.4	-0.3
	22nm,1.0s,mb5.0						
COLA	College	82.72	22	*e*P	P	01 49 39.5	-1.2
	10nm,1.0s,mb4.6						
TKM2	Tokmak 2	83.95	314	*e*P	P	01 49 47.6	0.0
	1.4nm,0.6s,mb4.0						
UCH	Uchtor	84.58	313	*e*P	P	01 49 52.2	+1.4
	2.2nm,1.0s,mb4.0						
EKS2	Erkin-Say	85.20	314	*e*P	P	01 49 54.5	+0.5
	1.7nm,0.6s,mb4.2						
EGAK	Eagle	85.24	23	*e*P	P	01 49 54.1	+0.5
	8.6nm,1.0s,mb4.6						
INK	Inuvik	89.32	21	*e*P	P	01 50 13.0	-0.2
	3.2nm,1.0s,mb4.3						
BVAR	Borovoye Array	89.41	323	P	P	01 50 13.6	-0.4
	1.4nm,0.7s,mb4.1,baz=104,slow=6.3,SNR=6.7						
NVAR	Mina Array Bea	93.00	52	P	P	01 50 32.1	+1.1
	0.4nm,0.5s,mb4.0,baz=262,slow=6.3,SNR=3.1						
YKW3	Yellowknife Ar	96.32	28	*e*P	P	01 50 46.0	+0.4
DBIC	Dimbokro	157.12	274	PKPab	PKPab	01 57 44.9	+0.1
	3.0nm,0.8s,baz=77,slow=3.3,SNR=5.0						

IDC 21 01:38:06.4±1.2, 13.32N×89.72W, h0km, mb4.1/10, mb1 4.4/10, mb1mx4.1/21, mbtmp4.1/10, MS3.3/1, Ms1 3.3/1, ms1mx2.8/23, Error ellipse: s-maj=38.1km s-min=20.5km az=49.0
CASC 21 01:38:07.1±1.3, 12.76N×90.45W, h12km±10km, MD4.0, ML3.5, mb4.4(NEIC)
ISCJB 21 01:38:13.3±0.8, 13.08N±0.07×90.11W±0.05, h77km±5km, mb4.3/48, Error ellipse: s-maj=13.2km s-min=6.4km az=32.0

BJI 21 01:38:16.6, 13.20N×90.00W, h99km, mB5.1/4
NEIC 21 01:38:17.6±1.4, 13.18N×89.96W, h100km±11km, mb4.4/43, Error ellipse: s-maj=13.5km s-min=8.5km az=224.0
ISC 21 01:38:14.5±0.8, 13.12N±0.07×90.10W±0.06, h69km±5km, n234, σ0.9=97/230, mb4.3/48, 65C-74D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	San Blas	0.85	33	*e*P	Pn	01 38 31.2	+0.1
SBLS				⇑*e*P		01 38 31.2	
SBLS				*e*S	Sn	01 38 49.9	+6.5
SNJE	San Jose	0.88	33	⇑*e*P	Pn	01 38 31.5	0.0
SNJE				*e*S	Sn	01 38 50.8	+6.7
RTR	El Retiro	0.89	30	*e*P	Pn	01 38 31.7	+0.1
BOQS	Boqueron	1.00	53	*e*P	Pn	01 38 33.5	+0.5
BOQS				*e*P		01 38 33.8	
RBDL	Robledal	1.06	22	⇑*i*P	Pn	01 38 34.1	+0.3
LFRS	El Faro	1.13	64	⇑*e*P	Pn	01 38 34.7	+0.2
LBRS	Las Brisas	1.20	59	*e*P	Pn	01 38 36.1	+0.6
MTO2	Montecristo 2	1.46	29	*e*P	Pn	01 38 39.6	+0.7
NBG	Las Nubes	1.48	351	*e*P	Pn	01 38 38.7	-0.5
FUG	Fuego 3	1.50	331	*e*P	Pn	01 38 37.9	-1.6
FG6		1.62	332	*e*P	Pn	01 38 38.7	-2.4
VSM	San Miguel	1.80	80	*e*P	Pn	01 38 44.7	+1.2
BLLM	Bellamira	1.84	80	*e*P	Pn	01 38 43.4	-0.6
TP2	Tecpan 2	1.88	332	*e*P	Pn	01 38 41.9	-2.6
APG	El Apazote	1.90	349	Pn	Pn	01 38 44.0	-0.9
	64nm,0.3s,baz=159,slow=8.2,SNR=307						
APG				Lg		01 39 13.3	
	17nm,0.3s,baz=94,slow=22,SNR=4.2						
JAT	Jato	1.91	309	*e*P	Pn	01 38 38.9	-6.1
CAHU	Cacacuatique	1.95	70	*e*P	Pn	01 38 45.9	+0.4
CAHU				*e*P		01 38 46.6	
MRL	Marmol	1.97	12	*e*P	Pn	01 38 47.8	+2.0
CNCH	Conchagua	2.21	86	*e*P	Pn	01 38 49.0	0.0
CNCH				*e*P		01 38 49.2	
CNCH				*e*S	Sn	01 39 21.4	+6.0
TGUH	Tegucigalpa,Un	2.90	71	*e*Pn	Pn	01 38 59.9	+1.5
TGUH	Tegucigalpa,Un	2.90	71	*e*P	Pn	01 38 59.6	+1.2
CRIN	San Cristobal	3.00	98	*e*P	Pn	01 38 59.0	-0.8
CRIN				AML	AML	01 39 44.2	
	comp=N,334nm,0.5s						
COPN	Copaltepe	3.55	105	AML	AML	01 39 51.6	
	comp=Z,110nm,0.4s						
SSN	San Juan del S	4.53	113	*e*P	Pn	01 39 19.1	-1.5
CMIG	Matias Romero	6.08	311	Pn	Pn	01 39 36.4	-5.4
	comp=Z,1.1nm,0.3s,baz=112,slow=11,SNR=10						
CMIG				Sn	Sn	01 40 40.3	-10
	comp=Z,1.1nm,0.3s,baz=220,slow=18,SNR=2.2						
TEIG	Tepich	7.28	14	*e*Pn	Pn	01 40 00.4	+2.2
TEIG	Tepich	7.28	14	*e*P	Pn	01 40 00.4	+2.2
JCT	Jution City	19.46	334	*e*Pn	Pn	01 42 37.6	+0.1
	comp=Z,4.2nm,0.8s						
LRAL	Lakeview Retre	20.02	8	*e*P	P	01 42 43.8	+2.1
	comp=Z,8.2nm,0.9s						
628A	Black Gap, Mar	20.15	326	⇓P	P	01 42 43.8	+0.6
	baz=20,SNR=9.8						
627A	Terlingua Ranc	20.40	325	⇓P	P	01 42 46.4	+0.6
	baz=20,SNR=9.3						
TXAR	Lajitas Array	20.46	324	P	P	01 42 47.0	+0.4
	comp=Z,7.7nm,0.8s,baz=151,slow=12,SNR=35						
TXAR	Lajitas Array	20.46	324	P	P	01 42 47.0	+0.4
528A	Cox Ranch, San	20.62	327	⇑P	P	01 42 48.7	+0.5
	baz=21,SNR=6.2						
626A	Big Bend Ranch	20.90	324	⇑P	P	01 42 51.3	0.0
	baz=21,SNR=9.2						
428A	Kincaid Ranch,	21.02	328	⇑P	P	01 42 52.7	+0.1
	baz=21						
527A	Woodward Ranch	21.05	326	P	P	01 42 53.2	+0.3
	baz=21,SNR=22						
526A	Mary Lane Ranc	21.25	325	P	P	01 42 55.7	+0.6
	baz=21,SNR=29						
427A	Hayter Ranch,	21.49	327	⇓P	P	01 42 57.1	-0.5
	baz=22,SNR=5.5						
MIAR	Mount Ida	21.56	352	*e*P	P	01 42 58.3	0.0
	comp=Z,8.2nm,0.8s,mb4.1						
328A	Wristen Ranch,	21.61	329	⇑P	P	01 42 57.8	-1.0
	baz=22,SNR=30						
UALR	University of	21.65	355	*e*P	P	01 43 01.0	+1.7
	comp=Z,14nm,0.8s,mb4.4						
426A	McDonald Obser	21.68	326	⇑P	P	01 42 59.0	-0.7
	baz=22,SNR=18						
326A	Caldwell Ranch	22.16	327	⇓P	P	01 43 04.1	-0.7
	baz=22,SNR=8.1						
425A	Indio Mountain	22.31	324	⇑P	P	01 43 05.5	-0.8
	baz=22,SNR=28						
SWET	Sewanee	22.32	9	*e*P	P	01 43 06.9	+0.6
227A	Bennet, Jal	22.36	329	⇑P	P	01 43 05.6	-1.3
	baz=23						
325A	Bean Ranch, Si	22.74	325	⇓P	P	01 43 09.9	-1.0
	baz=23						
226A	Malaga, Loving	22.81	328	⇑P	P	01 43 11.2	-0.4
	baz=23						
WMOK	Wichita Mounta	22.91	341	*e*P	P	01 43 11.0	-1.6
	comp=Z,2.8nm,1.0s,mb3.5						
127A	Arkansas Junct	22.93	330	⇓P	P	01 43 11.9	-1.0
	baz=23						
WVT	Waverly	23.00	5	*e*P	P	01 43 13.5	0.0
	comp=Z,6.9nm,0.8s,mb4.0						
324A	Moseley Ranch,	23.08	325	⇓P	P	01 43 12.9	-1.5
	baz=23,SNR=10						
TKL	Tuckaleechee C	23.15	13	P	P	01 43 12.5	-2.5
	comp=Z,2.4nm,0.5s,mb3.8,baz=175,slow=9.6,SNR=5.0						
TKL				LR	LR	01 52 46.6	
	comp=Z,81nm,19.6s,baz=228,slow=38						
MNTX	Cornudas Mount	23.22	325	*e*P	P	01 43 14.2	-1.5
	comp=Z,6.9nm,0.8s,mb4.0						
225A	Deer Hill, Car	23.23	327	P	P	01 43 15.4	-0.3
	baz=23,SNR=8.7						
Z27A	Tatum	23.39	331	⇑P	P	01 43 14.8	-2.5
	baz=24,SNR=7.3						
125A	Gardner Draw,	23.57	328	⇓P	P	01 43 19.2	+0.3
	baz=24,SNR=8.8						
224A	Cornudas Mount	23.58	326	⇑P	P	01 43 18.4	-0.6
	baz=24,SNR=9.5						
Z26A	Caprock	23.72	330	⇑P	P	01 43 18.1	-2.2
	baz=24						
MSTX	Muleshoe	23.74	333	⇑P	P	01 43 19.5	-0.9
	baz=24						
Y27A	Causey	23.84	332	⇓P	P	01 43 20.0	-1.3
	baz=24,SNR=10.0						
124A	Stringfield Ra	24.02	327	⇓P	P	01 43 23.3	+0.3
	baz=24,SNR=7.0						
AMTX	Amarillo	24.07	336	*e*P	P	01 43 23.7	+0.3
	comp=Z,9.0nm,0.9s,mb4.1						
Z25A	Roswell	24.09	329	⇓P	P	01 43 22.5	-1.2
	baz=24						
Y26A	Elida	24.18	331	⇑P	P	01 43 23.0	-1.4
	baz=24						
222A	Williams Famil	24.50	323	⇑P	P	01 43 27.4	0.0
	baz=25						
SIUC	Southern Illin	24.50	2	*e*P	P	01 43 27.9	+0.5
	comp=Z,21nm,0.9s,mb4.6						
Y25A	Mesa, Roswell	24.60	330	⇓P	P	01 43 27.9	-0.3
	baz=25,SNR=5.5						
W27A	Bowe Ranch, En	24.79	334	⇓P	P	01 43 28.6	-1.4
	baz=25						
CCM	Cathedral Cave	24.85	358	*e*P	P	01 43 29.6	-1.0
	comp=Z,10nm,0.7s,mb4.4						
121A	Cookes Peak, D	25.20	323	⇑P	P	01 43 35.5	+1.7
	baz=25,SNR=13						
220A	Playas Peak, P	25.21	321	⇑P	P	01 43 35.1	+1.2
	baz=25,SNR=16						
WCI	Wyandotte Cave	25.23	7	*e*P	P	01 43 34.5	+0.6
	comp=Z,27nm,0.8s,mb4.7						
Y23A	Lovelace Mesa,	25.29	328	⇓P	P	01 43 34.1	-0.5
	baz=25						
OLIL	Olney	25.57	4	*e*P	P	01 43 37.5	+0.5
	comp=Z,15nm,0.6s,mb4.6						
120A	U Bar Ranch, L	25.72	322	⇓P	P	01 43 40.6	+2.1
	baz=26,SNR=6.6						
V26A	Tequesquite Ra	25.73	334	⇑P	P	01 43 38.5	0.0
	baz=26						
219A	White Tail Can	25.73	320	⇑P	P	01 43 39.6	+1.0
	baz=26,SNR=17						
BNM	Barren Site	25.76	327	*e*P	P	01 43 39.5	+0.7
	comp=Z,2.3nm,0.8s,mb3.7						
Y22A	Socorro	25.78	326	⇑P	P	01 43 39.1	+0.1
	baz=26						
318A	Bisbee	25.82	318	⇑P	P	01 43 39.8	+0.3
	baz=26,SNR=6.8						
W24A	Lazy 6 Ranch,	25.98	330	⇑P	P	01 43 39.9	-0.9
	baz=26						
Z20A	Nine Sixteen R	26.09	323	⇓P	P	01 43 42.9	+1.1
	baz=26,SNR=8.9						

V25A	Rancho No Teng	26.13	332	⇑P		P	01 43 42.1	0.0
	baz=26							
U26A	Atchley Ranch,	26.21	334	⇓P		P	01 43 41.5	-1.4
	baz=26,SNR=5.2							
ANMO	Albuquerque	26.30	329	P		P	01 43 44.2	+0.5
	comp=Z,0.4nm,0.4s,mb3.2,baz=142,slow=12,SNR=3.7							
ANMO	Albuquerque	26.30	329	*e*P		P	01 43 44.2	+0.5
	comp=Z,0.2nm,0.7s							
U25A	Circle Dot Ran	26.50	333	⇓P		P	01 43 45.5	0.0
	baz=27							
Y20A	Horse Springs,	26.54	324	⇓P		P	01 43 46.7	+0.8
	baz=27							
118A	Homack Ranch,	26.60	320	⇑P		P	01 43 46.7	+0.2
	baz=27							
X21A	Alamocita Cree	26.61	326	⇓P		P	01 43 47.1	+0.6
	baz=27							
TUC	Tucson	26.90	319	*e*P		P	01 43 50.7	+1.6
	comp=Z,19nm,2.2s,mb4.2							
T25A	Trinidad	27.13	334	⇓P		P	01 43 52.6	+1.5
	baz=27							
U23A	El Rito	27.26	331	⇓P		P	01 43 52.2	0.0
	baz=27							
Y18A	Canyon Day Jun	27.42	322	⇓P		P	01 43 55.6	+1.9
	baz=28							
X19A	St. Johns	27.44	324	⇓P		P	01 43 55.6	+1.7
	baz=28							
ACSO	Alum Creek Sta	27.72	12	*e*P		P	01 43 57.5	+1.2
	comp=Z,13nm,0.8s,mb4.5							
X16A	Lo Mia Camp, P	28.71	321	⇓P		P	01 44 06.1	+0.9
	baz=29,SNR=8.2							
V17A	Tonalea, Kykot	29.15	324	⇑P		P	01 44 09.3	+0.1
	baz=29							
WUAZ	Wupatki	29.42	323	⇑P		P	01 44 12.3	+0.8
	baz=30							
WUAZ	Wupatki	29.42	323	*e*P		P	01 44 13.0	+1.5
	comp=Z,5.3nm,0.9s,mb4.2							
V14A	Boquillas Ranc	30.53	321	⇑P		P	01 44 23.0	+1.6
	baz=31,SNR=8.2							
U15A	North Rim	30.58	323	⇓P		P	01 44 22.5	+0.7
	baz=31							
BC3	Big Chuckawall	30.82	316	⇓P		P	01 44 24.1	+0.1
	baz=31							
IRM	Iron Mountain	30.91	317	⇑P		P	01 44 24.5	-0.3
	baz=31							
ECSD	EROS Data Cent	31.01	351	*e*P		P	01 44 24.5	-1.0
	comp=Z,8.3nm,0.8s,mb4.5							
MONP	Monument Peak	31.06	314	⇑P		P	01 44 26.9	+0.8
	baz=31							
U14A	Mt Trumbull	31.10	322	⇓P		P	01 44 27.9	+1.5
	baz=31,SNR=5.9							
R17A	Hanksville Air	31.14	328	⇑P		P	01 44 27.6	+0.9
	baz=31							
V13A	Grand Canyon W	31.22	321	⇑P		P	01 44 28.2	+0.8
	baz=31,SNR=5.3							
O20A	White River Ci	31.28	333	⇓P		P	01 44 29.1	+1.2
	baz=31							
U13A	Pakoon Wash	31.57	321	⇑P		P	01 44 32.0	+1.5
	baz=32,SNR=6.3							
P18A	Preston Nutter	31.82	330	⇓P		P	01 44 32.3	-0.4
	baz=32							
N20A	Spence Gulch,	31.86	333	⇑P		P	01 44 31.9	-1.1
	baz=32							
CCUT	Cedar City	31.98	324	*e*P		P	01 44 36.6	+2.6
	comp=Z,34nm,2.7s,mb4.6							
MSU	Marysvale	31.99	326	*e*P		P	01 44 35.8	+1.7
O18A	Roosevelt	32.20	331	⇑P		P	01 44 36.5	+0.5
	baz=32							
O17A	Robinson Place	32.50	330	⇑P		P	01 44 38.9	+0.3
	baz=33							
COWI	Conover	32.88	1	*e*P		P	01 44 40.8	-1.0
	comp=Z,13nm,0.7s,mb4.9							
Q14A	Sevier Lake (B	32.93	326	⇑P		P	01 44 43.3	+1.0
	baz=33							
U10A	Ash Meadows, A	33.05	319	⇑P		P	01 44 44.0	+0.6
	baz=33							
RSSD	Black Hills	33.12	341	*e*P		P	01 44 44.7	+0.7
	comp=Z,1.9nm,0.7s,mb4.0							
FURC	Furnace Creek,	33.42	319	⇓P		P	01 44 47.3	+0.7
	baz=34							
MPMC	Manual Prospec	33.58	318	⇓P		P	01 44 48.9	+0.8
	baz=34,SNR=9.0							
P13A	Bates Ranch, G	33.67	326	⇑P		P	01 44 49.3	+0.6
	baz=34,SNR=5.4							
R11A	Troy Canyon, C	33.81	323	⇓P		P	01 44 50.9	+0.8
	baz=34,SNR=7.0							
HWUT	Hardware Ranch	33.99	331	*e*P		P	01 44 52.1	+0.6
	comp=Z,4.4nm,0.8s,mb4.3							
BW06	Boulder Array	34.00	334	*e*P		P	01 44 51.1	-0.5
	comp=Z,1.1nm,0.7s,mb3.8							
PDAR	Pinedale Array	34.00	334	P		P	01 44 51.6	0.0
	comp=Z,0.7nm,0.6s,mb3.6,baz=123,slow=5.5,SNR=5.4							
K18A	Toltan Ranch,	34.10	333	⇓P		P	01 44 53.2	+0.7
	baz=34							
S10A	Tonopah Range,	34.

baz=37,SNR=7.8
MCMT McKenzie Canyo 37.08 333 *e*P **P 01 45 19.1 +1.1**
comp=Z,4.4nm,0.8s,mb4.4
K11A Parker Ranch, 37.08 328 ⇑P **P 01 45 17.1 -1.0**
baz=37
DGMT Dagmar 37.14 344 *e*P **P 01 45 18.7 +0.3**
comp=Z,18nm,0.9s,mb5.0
H14A Leadore 37.15 332 ⇓P **P 01 45 19.1 +0.5**
baz=37,SNR=5.8
G15A Dillon 37.19 334 ⇑P **P 01 45 19.2 +0.3**
baz=37,SNR=6.2
BOZ Bozeman (W) 37.20 335 *e*P **P 01 45 19.6 +0.6**
comp=Z,1.8nm,0.8s,mb4.0
ULM Lac du Bonnet 37.32 354 P **P 01 45 18.4 -1.6**
comp=Z,7.9nm,0.8s,mb4.7,baz=177,slow=7.5,SNR=6.1
ULM Lac du Bonnet 37.32 354 *e*P **P 01 45 18.4 -1.6**
comp=Z,3.9nm,0.8s,mb4.4
I12A Atlanta 37.37 330 P **P 01 45 21.2 +0.8**
baz=38,SNR=7.4
DLMT Dillon 37.39 334 *e*P **P 01 45 21.5 +0.9**
comp=Z,5.1nm,1.1s,mb4.4
MFID Camas Ranch 37.44 329 ⇑P **P 01 45 21.3 +0.2**
baz=38
H13A Challis 37.52 331 ⇓P **P 01 45 22.2 +0.5**
baz=38
K10A MacKenzie Ranc 37.53 327 ⇑P **P 01 45 21.8 0.0**
baz=38
BEKR Beckworth 37.66 321 ⇓P **P 01 45 22.0 -0.9**
baz=38,SNR=6.2
LRM Limekiln Ridge 37.69 334 *e*P **P 01 45 23.8 +0.7**
F15A Butte 37.72 334 ⇑P **P 01 45 23.3 -0.1**
baz=38,SNR=7.1
H12A Diamond D Ranc 37.79 331 ⇓P **P 01 45 22.8 -1.2**
baz=38,SNR=5.6
G13A Cobalt 37.91 332 ⇓P **P 01 45 24.9 0.0**
baz=38
E16A East Helena 37.94 336 ⇑P **P 01 45 25.1 -0.1**
baz=38
WVOR Wild Horse Val 38.26 325 *e*P **P 01 45 28.7 +0.8**
comp=Z,3.4nm,0.8s,mb4.2
D16A Dana Ranch, Ca 38.30 336 ⇓P **P 01 45 27.5 -0.7**
baz=38
I10A Payette 38.41 329 ⇓P **P 01 45 29.4 +0.1**
baz=38
G12A Big Creek, Yel 38.44 331 ⇑P **P 01 45 29.3 -0.2**
baz=38
H11A Donnelly 38.46 330 ⇑P **P 01 45 29.7 0.0**
baz=38,SNR=6.1
F13A Darby 38.48 333 ⇑P **P 01 45 29.5 -0.3**
baz=39
D15A Lincoln 38.69 335 ⇓P **P 01 45 30.6 -1.0**
baz=39
H10A Noah's Angus R 38.74 329 ⇓P **P 01 45 31.4 -0.6**
baz=39
J08A Circle Bar Ran 38.78 326 ⇓P **P 01 45 32.1 -0.2**
baz=39
I09A Lost Marbles R 38.81 328 ⇑P **P 01 45 32.9 +0.3**
baz=39,SNR=5.1
F12A Elk City 38.88 332 P **P 01 45 33.1 0.0**
baz=39,SNR=19
CHMT Chamberlain Mo 38.89 335 *e*P **P 01 45 33.4 +0.2**
E13A Victor 38.92 333 ⇓P **P 01 45 32.7 -0.8**
baz=39,SNR=5.6
C16A Fuhringer Ranc 39.00 337 ⇑P **P 01 45 33.7 -0.4**
baz=39
G11A Walters Elk Ra 39.09 330 ⇓P **P 01 45 34.4 -0.6**
baz=39,SNR=8.5
D14A Greenough 39.13 335 ⇓P **P 01 45 34.1 -1.1**
baz=39
C15A Salmond Ranch, 39.32 336 ⇓P **P 01 45 36.3 -0.5**
baz=39
G10A Bishop Farm, J 39.43 330 ⇓P **P 01 45 35.8 -1.9**
baz=40
E12A Beaver Dam Sad 39.52 332 ⇓P **P 01 45 36.1 -2.4**
baz=40,SNR=5.1
D13A Huson 39.55 334 ⇓P **P 01 45 35.6 -3.0**
baz=40
H08A Prairie City 39.67 328 ⇓P **P 01 45 37.8 -2.0**
baz=40
G09A Cove 39.75 329 ⇑P **P 01 45 38.6 -1.8**
baz=40
I07A Izee 39.82 326 ⇓P **P 01 45 40.1 -0.9**
baz=40
D12A Red Ives Fores 39.91 333 ⇓P **P 01 45 40.3 -1.4**
baz=40
F10A Beach Ranch, E 39.97 330 ⇓P **P 01 45 41.5 -0.7**
baz=40,SNR=5.4
C13A Hot Springs 40.05 334 ⇓P **P 01 45 42.5 -0.3**
baz=40
KHMM Horse Mountain 40.34 320 *e*P **P 01 45 46.8 +1.4**
comp=Z,7.5nm,0.8s,mb4.6
A15A Johnson Ranch, 40.35 337 ⇑P **P 01 45 43.8 -1.4**
baz=40
A14A Double T Ranch 40.61 336 ⇑P **P 01 45 47.2 -0.3**
baz=41,SNR=10
SIV San Ignacio 40.75 134 P **P 01 45 48.5 -0.5**
comp=Z,1.1nm,0.7s,mb3.8,baz=307,slow=11,SNR=6.8
C11A Tepee Creek (N 40.90 333 ⇓P **P 01 45 48.7 -1.2**
baz=41
FFC Flin Flon 42.54 350 *e*P **P 01 46 02.8 -0.4**
comp=Z,3.9nm,0.7s,mb4.2
EDM Edmonton 44.07 340 *e*P **P 01 46 15.1 -0.4**
SCHQ Schefferville 45.43 19 P **P 01 46 25.7 -0.5**
comp=Z,21nm,1.0s,mb4.8,baz=224,slow=6.7,SNR=37
SCHQ Schefferville 45.43 19 *e*P **P 01 46 25.5 -0.8**
comp=Z,13nm,0.8s,mb4.7
YKA Yellowknife Ar 52.31 346 P **P 01 47 17.4 -1.4**
comp=Z,2.0nm,0.8s,mb4.2,baz=150,slow=7.6,SNR=9.8
PLCA Paso Flores 56.56 162 *e*P **P 01 47 50.0 +0.1**
comp=Z,3.9nm,1.1s,mb4.3
BPAW Bear Paw Mtn. 65.74 335 *e*P **P 01 48 51.0 -0.7**
comp=Z,5.9nm,1.5s,mb4.2
ESDC Sonseca Array 78.81 52 P **P 01 50 08.4 -1.7**
comp=Z,0.5nm,0.7s,mb3.5,baz=295,slow=5.5,SNR=4.9
BILL Bilibino 82.95 338 *e*P **P 01 50 31.6 0.0**
comp=Z,3.7nm,0.7s,mb4.3
BJI Beijing 121.74 336 PKP PKPdf 01 56 59.4 -1.5
HHC Hu-ho-hao-te 122.67 341 *e*PKP PKPdf 01 57 01.3 -1.4
HHC sPKP 01 57 38.8
HHC PP PP 01 58 43.3 +3.7
HHC PKS 02 00 37.4
HHC SKS SKSdf 02 04 02.4 -6.4
HHC SKKS SKKSac 02 05 24.3 -9.4
HHC SS SS 02 15 12.5 -3.3
HHC AMB AMB
comp=Z,92nm,4.3s
HHC LR LR
comp=N,83nm,20.2s
HHC LR LR
comp=E,78nm,21.4s
HHC LR LR
comp=Z,84nm,20.2s
LZH Lanzhou 129.32 345 *e*PKP PKPdf 01 57 13.0 -2.6
CD2 Chengdu 134.24 343 *e*PKP PKPdf 01 57 22.8 -2.2
GYA Guiyang 137.41 338 *e*Pdif Pdif 01 54 35.8 -2.5
GYA PKP PKPdf 01 57 28.3 -2.7
GYA sPKP 01 58 05.9
GYA PP PP 02 00 18.0 +2.5
GYA AMB AMB
comp=Z,70nm,7.8s
KMI Kunming 139.98 342 PKP PKPdf 01 57 32.8 -3.0
CMAR Chiang Mai Arr 147.38 344 PKPbc PKPbc 01 57 52.3 +1.0
comp=Z,1.2nm,0.4s,baz=331,slow=2.5,SNR=5.1

TRN ***21*** *02:05:26.2, 19°.31N×64°.56W, h3km*
NEIC ***21*** *02:05:28.1, 19°.61N×64°.36W, h15km, MD3.6(RSPR), After RSPR.*
RSPR ***21*** *02:05:28.1, 19°.61N×64°.36W, h15km±23km, MD3.6/4, MD3.6/4*
ISC 21 02:05:26.5±3.2, 19°.6N±0°.1×64°.4W±0°.2, h16km±43km, n18, σ0s43/26, 18C, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**1.15**	**191**⇑	*e*P	**Pn**	**02 05 47.3**	**-0.5**
TBVI				*e*S	**Sb**	**02 06 02.6**	**+0.1**
TBVI	**Tortola**	**1.15**	**191**⇑	*e*P	**Pn**	**02 05 47.3**	**-0.5**
TBVI				*e*S	**Sb**	**02 06 02.6**	**+0.1**
STVI	**Saint Thomas**	**1.30**	**204**⇑	*e*P	**Pn**	**02 05 49.7**	**-0.3**
STVI				*e*S	**Sn**	**02 06 06.9**	**-0.1**
STVI	**Saint Thomas**	**1.30**	**204**⇑	*e*P	**Pn**	**02 05 49.7**	**-0.3**
STVI				*e*S	**Sn**	**02 06 06.9**	**-0.1**
MTP	**Monte Pirata**	**1.81**	**217**⇑	*e*P	**Pn**	**02 05 57.5**	**+0.5**
MTP	**Monte Pirata**	**1.81**	**217**⇑	*e*P	**Pn**	**02 05 57.5**	**+0.5**
CDVI	**St. Croix**	**1.82**	**191**⇑	*e*P	**Pn**	**02 05 58.0**	**+0.9**
CDVI	**St. Croix**	**1.82**	**191**⇑	*e*P	**Pn**	**02 05 58.0**	**+0.9**
CBYP	**Canovanas**	**1.88**	**228**⇑	*e*P	**Pn**	**02 05 57.3**	**-0.6**
CBYP	**Canovanas**	**1.88**	**228**⇑	*e*P	**Pn**	**02 05 57.3**	**-0.6**
HUMP	**Col San Antoni**	**1.96**	**225**⇑	*e*P	**Pn**	**02 05 59.0**	**-0.1**
HUMP				*e*S	**Sn**	**02 06 23.2**	**-0.1**
HUMP	**Col San Antoni**	**1.96**	**225**⇑	*e*P	**Pn**	**02 05 59.0**	**-0.1**
HUMP				*e*S	**Sn**	**02 06 23.2**	**-0.1**
SJG	**San Juan**	**2.19**	**230**⇑	*e*P	**Pn**	**02 06 01.7**	**-0.5**
SJG	**San Juan**	**2.19**	**230**⇑	*e*P	**Pn**	**02 06 01.7**	**-0.5**
AOPR	**Arecibo Observ**	**2.54**	**242**⇑	*e*P	**Pn**	**02 06 07.3**	**+0.4**
AOPR	**Arecibo Observ**	**2.54**	**242**⇑	*e*P	**Pn**	**02 06 07.3**	**+0.4**
CELP	**Cerrillos**	**2.54**	**235**⇑	*e*P	**Pn**	**02 06 07.2**	**+0.3**
CELP				*e*S	**Sn**	**02 06 37.8**	**+0.2**
CELP	**Cerrillos**	**2.54**	**235**⇑	*e*P	**Pn**	**02 06 07.2**	**+0.3**
CELP				*e*S	**Sn**	**02 06 37.8**	**+0.2**

ISCJB ***21*** *02:34:38.0±0.5, 39°.11N±0°.02×41°.71E±0°.04, h1km±8km, Error ellipse: s-maj=5.2km s-min=3.6km az=8.4*
CSEM ***21*** *02:34:38.8±0.3, 39°.06N×41°.65E, h1km±2km, MD3.1, Error ellipse: s-maj=3.7km s-min=3.2km az=96.0*
DDA ***21*** *02:34:38.4, 39°.10N×41°.71E, h8km±2km, Md3.1*
ISK ***21*** *02:34:38.2, 39°.07N×41°.64E, h5km, MD3.2*
ISC 21 02:34:39.2±0.5, 39°.11N±0°.02×41°.70E±0°.04, h10km±6km, n25, σ1s01/40, 1C-2D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERZM	**Erzurum**	**0.84**	**342**⇓	*i*P	**Pg**	**02 34 54.9**	**-0.5**
ERZM				*i*S	**Sg**	**02 35 06.4**	**+0.1**
ERZM	**Erzurum**	**0.84**	**342**	*i*P	**Pg**	**02 34 54.8**	**-0.5**
ERZM				*i*S	**Sg**	**02 35 06.4**	**+0.2**
EZM	**Erzurum**	**0.84**	**342**	*e*Pg	**Pg**	**02 34 54.9**	**-0.5**
EZM				*e*SG	**Sg**	**02 35 07.6**	**+1.3**
BTMT	**Batman**	**0.93**	**190**	*e*PG	**Pg**	**02 34 57.3**	**+0.2**
BTMT				*e*SG	**Sg**	**02 35 11.6**	**+2.4**
HOMI	**Horasan**	**0.95**	**10**	*e*P	**Pg**	**02 34 57.5**	**0.0**
HOMI				*e*S	**Sg**	**02 35 11.7**	**+1.9**
BINT	**Bingol**	**0.97**	**257**	*e*PG	**Pg**	**02 34 56.7**	**-1.2**
BINT				*e*SG	**Sg**	**02 35 09.6**	**-0.9**
BINT	**Bingol**	**0.97**	**257**	*e*Pg	**Pg**	**02 34 56.7**	**-1.2**
BINT				*e*Sg	**Sg**	**02 35 09.6**	**-0.9**
BEST	**Besiri**	**1.26**	**196**⇓	*i*P	**Pn**	**02 35 02.2**	**-0.7**
BEST				*i*S	**Sg**	**02 35 20.2**	**+0.4**
KOPT	**Kop Dagi**	**1.30**	**315**⇑	*i*P	**Pn**	**02 35 02.8**	**-0.6**
KOPT				*i*S	**Sg**	**02 35 21.8**	**+0.8**
KOPT	**Kop Dagi**	**1.30**	**315**	*i*P	**Pn**	**02 35 02.8**	**-0.6**
KOPT				*i*S	**Sg**	**02 35 21.8**	**+0.8**
VANB	**Van**	**1.42**	**111**	*e*PN	**Pg**	**02 35 06.7**	**+0.4**
VANB	**Van**	**1.42**	**111**	*e*Pn	**Pg**	**02 35 06.7**	**+0.3**
DYDN	**Diyadin**	**1.60**	**74**	*e*P	**Pg**	**02 35 08.9**	**-1.0**
DYDN				*e*S	**Sg**	**02 35 30.4**	**-0.3**
DYDN	**Diyadin**	**1.60**	**74**	*e*P	**Pg**	**02 35 08.9**	**-1.1**
DYDN				*e*S	**Sg**	**02 35 30.4**	**-0.4**
DDEM	**Demirkent**	**1.78**	**1**	*e*P	**Pg**	**02 35 11.7**	**-1.7**
DDEM				*e*S	**Sg**	**02 35 37.2**	**+0.7**
DDEM	**Demirkent**	**1.78**	**1**	*e*P	**Pg**	**02 35 11.7**	**-1.7**
DDEM				*e*S	**Sg**	**02 35 37.2**	**+0.7**
PTK	**Pertek**	**1.81**	**264**	*e*PN	**Pn**	**02 35 10.1**	**-0.3**
PTK	**Pertek**	**1.81**	**264**	*e*Pn	**Pn**	**02 35 10.1**	**-0.3**
EZC	**Erzincan**	**1.93**	**290**	*e*PN	**Pn**	**02 35 12.5**	**+0.5**
SVRC	**Sivrice-ELAZID**	**2.01**	**249**	*e*PN	**Pn**	**02 35 13.1**	**0.0**
SVRC	**Sivrice-ELAZID**	**2.01**	**249**	*e*Pn	**Pn**	**02 35 13.1**	**0.0**
ARTV	**Artvin**	**2.08**	**5**	*e*P	**Pg**	**02 35 16.1**	**-3.0**
ARTV				*e*S	**Sg**	**02 35 45.4**	**-0.7**
ARTV	**Artvin**	**2.08**	**5**	*e*P	**Pn**	**02 35 16.1**	**+2.0**
URFA	**Urfa**	**2.81**	**235**	*e*PN	**Pn**	**02 35 24.3**	**+0.1**
URFA	**Urfa**	**2.81**	**235**	*e*Pn	**Pn**	**02 35 24.3**	**+0.1**

MEX 21 02:54:58.3±1.4, 17°.40N×94°.74W, h142km±20km, MD4.0, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUIG	**Tuzandepetl**	**0.70**	**26**	*i*P	Pn	02 55 18.5	-1.5
TUIG				*i*S	Sn	02 55 33.7	-2.7
TGIG		**1.67**	**112**	*i*P	Pn	02 55 27.9	-1.2
TGIG				*e*S	Sn	02 55 51.0	-1.7
VHO	**Vista Hermosa**	**1.93**	**261**	*e*P	Pn	02 55 31.0	-1.1
VHO				*i*S	Sn	02 55 57.9	-0.1
HUIG	**Huatulco**	**2.09**	**219**	*i*P	Pn	02 55 31.3	-2.7
HUIG				*e*S	Sn	02 55 58.5	-2.9
PCIG		**2.23**	**139**	*i*P	Pn	02 55 35.8	0.0
PCIG				*i*S	Sn	02 56 02.3	-2.2
TPIG	**Tehuac#an**	**2.69**	**292**	*i*P	Pn	02 55 39.4	-2.0
TPIG				*i*S	Sn	02 56 11.3	-3.3

IDC ***21*** *03:32:10.3±4.5, 31°.91N×105°.27E, h0km, mb3.7/4, mb1 3.7/6, mb1mx3.5/26, mbtmp3.6/6, ML3.5/1, Error ellipse: s-maj=104.7km s-min=35.5km az=7.0*
BJI ***21*** *03:32:15.8, 32°.76N×105°.51E, h14km, mb3.8/1, ML3.5/11, Ms3.5/1*
ISCJB ***21*** *03:32:18.4±2.0, 32°.63N±0°.04×105°.62E±0°.06, h15km±13km, mb3.7/4, Error ellipse: s-maj=8.0km s-min=6.1km az=6.7*
ISC 21 03:32:16.6±1.4, 32°.64N±0°.03×105°.58E±0°.05, h9km±10km, n11, σ1s14/21, mb3.7/4, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.32**	**222**	Pn	**Pn**	**03 32 56.8**	**+1.8**
CD2				Pg	**Pb**	**03 32 58.4**	**-0.2**
CD2				Sn	**Sn**	**03 33 25.9**	**+2.3**
CD2				Sg	**Sg**	**03 33 30.0**	**-1.3**
CD2				smax			
comp=N,1μm,0.8s
CD2 smax
comp=E,700nm,0.7s
XAN Xi'an 3.12 63 Pn **Pn 03 33 06.5 +0.5**
XAN Pg **Pb 03 33 13.1 +0.8**
XAN Sn **Sn 03 33 42.8 -0.6**
XAN Sg **Sg 03 33 52.3 -4.7**
XAN smax
comp=N,130nm,0.8s
XAN smax
comp=E,100nm,0.8s
LZH Lanzhou 3.72 338 ⇑Pn **Pn 03 33 14.3 +0.1**
LZH Pg **Pb 03 33 23.3 +0.8**
LZH Sn **Sn 03 33 58.6 +0.5**
LZH Sg **Sb 03 34 08.8 +1.1**
LZH smax
comp=N,240nm,0.8s
LZH smax
comp=E,200nm,0.7s
LZH LR LR
comp=E,510nm,6.3s
GYA Guiyang 6.24 171 Pn **Pn 03 33 50.1 +1.3**
GYA Sn **Sn 03 34 59.3 -0.8**
GYA smax
comp=N,30nm,0.8s
GYA smax
comp=E,30nm,0.8s
GTA Gaotai 8.21 327 *e*P **Pn 03 34 14.5 -1.3**
GTA pP 03 34 18.4
GTA sP 03 34 20.8
GTA pmax pmax
comp=Z,4.0nm,0.8s
SONM Songino Array 15.19 2 Pn **Pn 03 35 55.2 +4.1**
comp=Z,0.2nm,0.3s,baz=156,slow=11,SNR=2.6
KSRS Korea Array 18.90 69 P **Pn 03 36 38.1 +0.2**
baz=249,slow=11,SNR=4.7
MKAR Makanchi Array 22.71 315 P **P 03 37 17.8 -0.6**
comp=Z,0.5nm,0.4s,mb3.3,baz=104,slow=10,SNR=4.4
KURK Kurchatov 26.82 320 P **P 03 37 56.0 -0.9**
comp=Z,0.6nm,0.6s,mb3.3,baz=140,slow=8.9,SNR=5.1
FINES FINESS Array B 57.00 326 P **P 03 42 00.6 -1.6**
comp=Z,1.5nm,0.6s,mb4.2,baz=94,slow=10,SNR=7.3
NOA NORSAR Array B 64.04 327 P **P 03 42 48.3 -2.0**
comp=Z,1.3nm,0.8s,mb4.0,baz=72,slow=6.9,SNR=3.8

ISCJB ***21*** *03:36:38.3±1.6, 2°.12S±0°.05×98°.62E±0°.05, h22km±11km, mb4.2/18, Error ellipse: s-maj=9.9km s-min=6.8km az=144.1*
NEIC ***21*** *03:36:40.6±0.6, 2°.18S×98°.41E, mb4.4/8, Error ellipse: s-maj=21.1km s-min=10.7km az=73.0*
DJA ***21*** *03:36:40, 2°.07S×98°.68E, h28km, MLv4.3/9*
IDC ***21*** *03:36:40.6±1.0, 2°.12S×98°.54E, h23km±3km, mb3.9/12, mb1 4.0/13, mb1mx3.8/22, mbtmp3.9/13, ML3.3/1, Error ellipse: s-maj=32.5km s-min=14.9km az=55.0*
ISC 21 03:36:39.5±1.6, 2°.08S±0°.05×98°.66E±0°.05, h15km±9km, h25km±.6km: pP-P, n46, σ0s80/42, mb4.2/18, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**0.86**	**30**	P	**Pg**	**03 36 56.8**	**+0.5**
PPSI	**Pulau Pagai**	**1.50**	**117**	P	**Pn**	**03 37 04.5**	**-1.5**
PDSI	**Padang**	**2.14**	**57**	P	**Pn**	**03 37 14.3**	**-0.4**
PDSI				S	**Sn**	**03 37 40.4**	**-0.7**
PPI	**Padang Panjang**	**2.37**	**47**	P	**Pn**	**03 37 17.9**	**0.0**
PPI				S	**Sn**	**03 37 47.1**	**+0.3**
SDSI	**Sungai Dareh**	**2.99**	**68**	P	**Pn**	**03 37 27.6**	**+1.2**
MNSI	**Mandailing Nat**	**3.00**	**18**	P	**Pn**	**03 37 25.5**	**-1.1**
GSI	**Gunungsitoli**	**3.54**	**342**	P	**Pn**	**03 37 33.0**	**-0.9**
KSI	**Kapahiang**	**4.22**	**112**	P	**Pn**	**03 37 43.8**	**+0.4**
MNAI	**Manna**	**4.84**	**118**	P	**Pn**	**03 37 55.8**	**+3.9**
PSI	**Prapat**	**4.86**	**3**	Pn	**Pn**	**03 37 50.0**	**-2.2**
1.2nm,0.3s,baz=169,slow=8.4,SNR=9.8
PSI Prapat 4.86 3 Pn **Pn 03 37 50.0 -2.2**
TPTI 5.51 344 P **Pn 03 38 01.5 +0.4**
0.1nm29nm,0.8s
MDSI Maura Dua 6.00 114 P **Pn 03 38 07.9 +0.1**
0.2nm55nm,1.1s
LWLI Liwa 6.12 119 P **Pn 03 38 09.1 -0.4**
299nm,0.8s
MYKOM Kota Tinggi 6.46 53 P **Pn 03 38 14.9 +0.8**
31nm,0.7s
KLSI 6.59 113 P **Pn 03 38 15.6 -0.3**
0.3nm90nm,0.8s
KASI Kota Agung 6.75 121 P **Pn 03 38 17.9 -0.2**
KULM Kulim 7.59 15 *e*Pn **Pn 03 38 34.5 +4.8**
9.9nm,0.8s
CMAR Chiang Mai Arr 20.41 1 P **P 03 41 17.1 +0.9**
4.4nm,0.7s,baz=189,slow=9.7,SNR=21
CMAR pP 03 41 24.6
5.4nm,0.8s,baz=187,slow=9.8,SNR=5.9
CHTO Chiang Mai 20.77 1 *e*P **P 03 41 20.3 +0.3**
3.5nm,0.8s
LZH Lanzhou 38.28 7 *e*P **P 03 44 05.0 +5.6**
LZH pP pP 03 44 14.3 +10
LZH sP sP 03 44 20.0 +14
LZH pmax pmax
comp=Z,18nm,1.4s,mb4.6
WRA Warramunga Arr 39.11 120 P **P 03 44 06.5 -0.1**
comp=Z,0.8nm,0.4s,mb3.8,baz=288,slow=9.2,SNR=5.3
FORT Forrest 39.85 139 *e*P **P 03 44 12.3 -0.3**
comp=Z,13nm,0.9s,mb4.7
ASAR Alice Springs 40.29 125 P **P 03 44 16.4 -0.1**
comp=Z,1.1nm,0.6s,mb3.7,baz=303,slow=7.6,SNR=3.9
KSRS Korea Array 47.78 32 P **P 03 45 16.0 -0.3**
comp=Z,3.4nm,0.8s,mb4.4,baz=222,slow=9.1,SNR=13
KSRS pP pP 03 45 23.0 +2.1
comp=Z,4.8nm,0.8s,baz=223,slow=8.5,SNR=11
UCH Uchtor 49.23 336 *e*P **P 03 45 28.3 +1.0**
comp=Z,2.9nm,1.0s,mb4.3
UCH *e*pP pP 03 45 35.7 +3.7
TKM2 Tokmak 2 49.39 338 *e*P **P 03 45 29.3 +0.7**
comp=Z,0.8nm,0.5s,mb4.0
TKM2 *e*pP pP 03 45 36.7 +3.5
EKS2 Erkin-Say 49.88 336 *e*P **P 03 45 33.3 +0.9**
comp=Z,1.6nm,0.6s,mb4.2
EKS2 *e*pP pP 03 45 40.5 +3.5
STKA Stephens Creek 50.10 131 P **P 03 45 35.9 +1.7**
comp=Z,2.7nm,0.8s,mb4.3,baz=318,slow=8.4,SNR=3.2
SONM Songino Array 50.17 7 P **P 03 45 35.5 +1.0**
comp=Z,1.5nm,0.8s,mb4.1,baz=189,slow=9.5,SNR=8.2
SONM pP pP 03 45 42.8 +3.8
comp=Z,2.8nm,0.8s,baz=191,slow=9.3,SNR=9.0
ULN Ulaanbaatar 50.28 7 *e*P **P 03 45 36.0 +0.7**
comp=Z,5.2nm,1.0s,mb4.5
ULN *e*pP pP 03 45 43.5 +3.6
MK31 Makanchi Array 50.76 346 *e*P **P 03 45 39.1 +0.2**
MK31 *e*pP pP 03 45 46.5 +2.9
MKAR Makanchi Array 50.76 346 P **P 03 45 39.2 +0.3**
comp=Z,1.7nm,0.6s,mb4.1,baz=140,slow=8.1,SNR=14
MKAR pP pP 03 45 46.0 +2.4
comp=Z,3.0nm,0.7s,baz=145,slow=6.7,SNR=14
MJAR Matsushiro Arr 53.19 40 pP pP 03 46 04.0 +2.1
comp=Z,2.2nm,1.0s,baz=222,slow=7.6,SNR=3.7
KURK Kurchatov 55.32 345 P **P 03 46 12.2 -0.3**
comp=Z,0.9nm,0.9s,mb3.8,baz=164,slow=6.6,SNR=4.0
KURK pP pP 03 46 19.2 +2.0
comp=Z,1.6nm,0.9s,baz=167,slow=7.0,SNR=7.5
KURK Kurchatov 55.32 345 *e*P **P 03 46 12.5 0.0**
comp=Z,3.7nm,1.0s,mb4.4
KURK pP pP 03 46 19.2 +2.0
ZALV Zalesovo Beam 57.02 350 P **P 03 46 24.5 -0.1**
comp=Z,3.5nm,0.5s,mb4.7,baz=182,slow=5.6,SNR=20
ZALV pP pP 03 46 31.9 +2.7
comp=Z,7.4nm,0.7s,baz=181,slow=5.3,SNR=14
BVAR Borovoye Array 59.81 341 P **P 03 46 43.0 -1.1**
comp=Z,1.4nm,0.6s,mb4.2,baz=147,slow=9.6,SNR=7.6
BVAR pP pP 03 46 50.2 +1.4
comp=Z,1.7nm,0.6s,baz=134,slow=8.5,SNR=6.6
ABKAR Akbulak array 61.08 332 *e*P **P 03 46 51.7 -1.2**
comp=Z,2.1nm,0.8s,mb4.3
ABKAR *e*pP pP 03 46 58.8 +1.3
BRTR Keskin Array B 72.40 313 P **P 03 48 04.4 -0.9**
comp=Z,0.4nm,0.8s,mb3.4,baz=105,slow=11,SNR=2.7
FINES FINESS Array B 83.57 333 P **P 03 49 06.9 0.0**
comp=Z,1.4nm,0.8s,mb4.2,baz=90,slow=3.8,SNR=4.7
FINES pP pP 03 49 14.1 +2.4
comp=Z,2.3nm,0.9s,baz=104,slow=8.0,SNR=2.0
WMOK Wichita Mounta 143.68 25 *e*PKPdf PKPdf 03 56 11.0 -3.6
TXAR Lajitas Array 145.57 36 PKPbc PKPbc 03 56 18.1 0.0
comp=Z,1.1nm,0.8s,baz=314,slow=2.3,SNR=10
TXAR pPKPbc pPKPbc 03 56 25.7 +2.7
comp=Z,2.3nm,0.8s,baz=316,slow=1.9,SNR=14
WVT Waverly 145.59 9 *e*PKPbc PKPbc 03 56 17.5 -0.5
MIAR Mount Ida 145.75 18 *e*PKPbc PKPbc 03 56 18.8 +0.3
JCT Junction City 146.78 30 *e*PKPbc PKPbc 03 56 21.8 0.0

IDC ***21*** *03:37:53.5±0.7, 14°.57N×93°.98W, h0km, mb4.3/12, mb1 4.5/15, mb1mx4.4/22, mbtmp4.3/15, ML4.1/3, MS3.7/7, Ms1 3.7/7, ms1mx3.3/30, Error ellipse: s-maj=26.4km s-min=15.2km az=61.0*
MEX ***21*** *03:37:57.8±0.9, 14°.57N×94°.13W, h16km±19km, MD4.7*
ISCJB ***21*** *03:37:58.7±0.8, 14°.75N±0°.05×93°.92W±0°.03, h38km±6km, mb4.5/123, MS3.7/7, Error ellipse: s-maj=9.1km s-min=3.7km az=24.2*
BJI ***21*** *03:38:00.0, 14°.70N×93°.90W, h40km, mB5.2/4, Ms4.9/3, Ms7 4.4/3*
NEIC ***21*** *03:38:00.1±0.9, 14°.73N×93°.87W, h40km±7km, mb4.5/112, Error ellipse: s-maj=8.5km s-min=4.2km az=215.0*
ISC 21 03:38:01.3±0.8, 14°.83N±0°.05×93°.82W±0°.03, h42km±5km, n477, σ0s83/464, mb4.5/123, MS3.7/7, 130C-119D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.05**	**34**	*i*P	**Pn**	**03 38 19.2**	**-0.4**
PCIG				*e*S	**Sn**	**03 38 36.7**	**+3.7**
THIG		**1.51**	**87**	*i*P	**Pn**	**03 38 25.6**	**-0.2**
THIG				*e*S	**Sn**	**03 38 46.2**	**+2.0**
TGIG		**2.05**	**19**	*i*P	**Pn**	**03 38 33.1**	**-0.3**
TGIG				*e*S	**Sn**	**03 39 01.3**	**+3.6**
HUIG	**Huatulco**	**2.40**	**293**	*i*P	**Pn**	**03 38 30.4**	**-7.6**
HUIG				*e*S	**Sn**	**03 38 58.0**	**-8.2**
CMIG	**Matias Romero**	**2.47**	**336**	Pn	**Pn**	**03 38 36.4**	**-2.7**
90nm,0.3s,baz=157,slow=11,SNR=286
CMIG Sn **Sn 03 39 06.2 -1.9**
88nm,0.3s,baz=173,slow=8.1,SNR=8.6
CMIG LR LR 03 39 37.0
comp=Z,1μm,18.5s,baz=158,slow=39
APG El Apazote 3.25 86 Pn **Pn 03 38 50.4 +0.6**
6.3nm,0.3s,baz=274,slow=5.6,SNR=51
APG Sn **Sn 03 39 39.2 +12**
25nm,0.3s,baz=356,slow=19,SNR=5.5
VHO Vista Hermosa 3.58 309 *i*P **Pn 03 38 50.9 -3.4**
VHO *e*S **Sn 03 39 29.8 -5.6**
PNIG Pinotepa 4.43 291 *i*P **Pn 03 38 59.8 -6.2**
PNIG *e*S **Sn 03 39 46.4 -10**
TPIG Tehuac#an 4.93 317 *i*P **Pn 03 39 09.3 -3.6**
TPIG *e*S **Sn 03 40 04.9 -3.7**
TGUH Tegucigalpa,Un 6.39 96 *e*Pn **Pn 03 39 32.4 -0.5**
120nm,0.9s
TEIG Tepich 7.54 44 *e*Pn **Pn 03 39 49.0 +0.4**
HKT Hockley 15.17 353 *e*Pn **Pn 03 41 33.8 +1.2**
18nm,1.3s
MTDJ Mount Denham 15.98 76 *e*P Px 03 41 54.6

JCT	Junction City	16.52	342	ePn	Pn	03 41 48.9 -1.1
	50nm,1.2s					
628A	Black Gap, Mar	16.82	332	P	Pn	03 41 53.9 +0.2
	baz=17,SNR=29					
627A	Terlingua Ranc	17.03	330	⇑P	Pn	03 41 56.5 +0.2
	baz=17,SNR=32					
TXAR	Lajitas Array	17.06	329	P	Pn	03 41 56.5 -0.2
	0.2nm,0.3s,baz=150,slow=10,SNR=20					
626A	Big Bend Ranch	17.48	329	⇑P	Pn	03 42 02.4 +0.5
	baz=18,SNR=11					
527A	Woodward Ranch	17.71	331	⇓P	Pn	03 42 04.7 -0.1
	baz=18,SNR=22					
428A	Kincaid Ranch,	17.80	334	⇑P	Pn	03 42 06.2 +0.4
	baz=18,SNR=23					
526A	Mary Lane Ranc	17.87	330	⇑P	Pn	03 42 07.1 +0.3
	baz=18,SNR=23					
427A	Hayter Ranch,	18.21	333	⇑P	Pn	03 42 11.2 +0.2
	baz=18,SNR=12					
426A	McDonald Obser	18.34	331	⇓P	Pn	03 42 12.0 -0.5
	baz=18,SNR=17					
328A	Wristen Ranch,	18.42	335	⇑P	Pn	03 42 13.4 -0.1
	baz=19,SNR=19					
GTBY	Guantanamo Bay	18.56	71	ePn	Px	03 42 25.3
326A	Caldwell Ranch	18.87	332	⇑P	Pn	03 42 18.5 -0.3
	baz=19,SNR=5.9					
425A	Indio Mountain	18.90	329	⇑P	Pn	03 42 18.8 -0.5
	baz=19,SNR=19					
LRAL	Lakeview Retre	19.16	18	eP	Pn	03 42 26.5 +4.2
	8.5nm,1.0s					
325A	Bean Ranch, Si	19.38	330	⇑P	Pn	03 42 22.7 -2.2
	baz=20,SNR=5.3					
226A	Malaga, Loving	19.55	333	⇑P	Pn	03 42 25.1 -2.0
	baz=20					
CLNB	Carlsbad	19.63	334	eP	Pn	03 42 26.8 -1.2
	32nm,1.4s					
MIAR	Mount Ida	19.64	1	ePn	Pn	03 42 25.6 -2.4
	17nm,1.1s					
324A	Moseley Ranch,	19.68	329	⇓P	Pn	03 42 26.3 -2.4
	baz=20,SNR=11					
127A	Arkansas Junct	19.78	336	⇑P	Pn	03 42 26.9 -2.8
	baz=20,SNR=12					
GDL2	Guadalupe Moun	19.79	333	eP	Pn	03 42 28.9 -0.9
MNTX	Cornudas Mount	19.84	330	eP	Pn	03 42 28.0 -2.5
	12nm,1.0s					
UALR	University of	19.91	4	eP	Pn	03 42 28.6 -2.7
	39nm,1.4s					
225A	Deer Hill, Car	19.92	332	⇓P	Pn	03 42 29.1 -2.3
	baz=20					
126A	Clayton Basin,	20.02	334	⇑P	P	03 42 30.6 0.0
	baz=20					
224A	Cornudas Mount	20.22	330	⇓P	P	03 42 32.5 -0.2
	baz=20,SNR=16					
Z27A	Tatum	20.29	337	⇓P	P	03 42 32.9 -0.5
	baz=20,SNR=35					
CPRX	Cap Rock	20.29	335	eP	P	03 42 33.6 0.0
	8.7nm,0.8s					
125A	Gardner Draw,	20.31	333	⇑P	P	03 42 33.4 -0.3
	baz=20,SNR=15					
WMOK	Wichita Mounta	20.32	348	eP	P	03 42 33.4 -0.5
	8.7nm,0.8s					
Z26A	Caprock	20.55	335	⇑P	P	03 42 36.0 -0.3
	baz=21,SNR=11					
124A	Stringfield Ra	20.70	331	⇓P	P	03 42 38.2 +0.2
	baz=21,SNR=12					
MSTX	Muleshoe	20.71	339	⇑P	P	03 42 37.2 -0.8
	baz=21,SNR=15					
GOGA	Godfrey	20.75	25	eP	P	03 42 40.3 +1.8
	13nm,0.9s					
Y27A	Causey	20.77	338	⇓P	P	03 42 37.9 -0.8
	baz=21,SNR=18					
Z25A	Roswell	20.86	334	⇓P	P	03 42 39.7 0.0
	baz=21,SNR=5.7					
OTAV	Otavalo	21.00	132	eP	P	03 42 41.5 +0.1
	8.8nm,1.1s,mb4.0					
222A	Williams Famil	21.04	327	⇑P	P	03 42 41.6 -0.1
	baz=21,SNR=16					
Y26A	Elida	21.06	336	⇑P	P	03 42 42.0 +0.2
	baz=21					
AMTX	Amarillo	21.19	342	eP	P	03 42 42.4 -0.8
	41nm,0.7s,mb4.9					
Z24A	Sheeppen Canyo	21.19	332	⇓P	P	03 42 44.0 +0.8
	baz=21,SNR=21					
320A	Kipp Ranch, An	21.25	323	⇑P	P	03 42 44.5 +0.6
	baz=21,SNR=12					
221A	Mesquite Ranch	21.33	326	⇓P	P	03 42 45.8 +1.1
	baz=21					
Y25A	Mesa, Roswell	21.41	335	⇑P	P	03 42 46.2 +0.7
	baz=22					
X27A	F and S Farms,	21.43	339	⇑P	P	03 42 45.4 -0.4
	baz=22,SNR=9.6					
122A	Conniff Cattle	21.46	328	⇓P	P	03 42 46.8 +0.7
	baz=22					
SWET	Sewanee	21.51	18	eP	P	03 42 46.3 -0.3
Z23A	Rita Site, Whi	21.54	331	⇑P	P	03 42 47.3 +0.4
	baz=22,SNR=9.4					
ROSC	El Rosal	21.59	115	P	P	03 42 49.9 +2.2
	17nm,0.9s,mb4.5,baz=99,slow=2.3,SNR=16					
ROSC	El Rosal	21.59	115	eP	P	03 42 49.8 +2.1
X26A	CR and CF Fran	21.61	337	P	P	03 42 48.0 +0.3
	baz=22,SNR=8.6					
220A	Playas Peak, P	21.66	324	⇑P	P	03 42 49.1 +0.7
	baz=22,SNR=19					
319A	Douglas	21.72	322	⇓P	P	03 42 49.6 +0.7
	baz=22,SNR=13					
Y24A	Capitan	21.73	333	P	P	03 42 49.6 +0.6
	baz=22,SNR=38					
121A	Cookes Peak, D	21.73	327	⇓P	P	03 42 49.8 +0.8
	baz=22,SNR=46					
W27A	Bowe Ranch, En	21.80	339	⇓P	P	03 42 49.9 +0.2
	baz=22,SNR=11					
WVT	Waverly	21.88	13	eP	P	03 42 50.4 -0.2
	13nm,1.0s,mb4.3					
Z22A	Elephant Butte	21.88	329	⇓P	P	03 42 51.2 +0.5
	baz=22,SNR=14					
X25A	Clemmons Ranch	21.92	335	⇓P	P	03 42 51.8 +0.8
	baz=22					
Y23A	Lovelace Mesa,	22.01	332	⇓P	P	03 42 52.3 +0.3
	baz=22,SNR=29					
W26A	Owens Ranch, T	22.07	338	⇑P	P	03 42 53.7 +1.0
	baz=22					
219A	White Tail Can	22.15	323	⇓P	P	03 42 54.1 +0.5
	baz=22,SNR=7.1					
318A	Bisbee	22.19	321	⇓P	P	03 42 55.1 +1.2
	baz=22					
120A	U Bar Ranch, L	22.20	325	⇓P	P	03 42 55.0 +0.9
	baz=22,SNR=8.9					
Z21A	St. Cloud Mine	22.28	328	⇓P	P	03 42 54.7 -0.2
	baz=22,SNR=9.2					
Y22A	Socorro	22.44	330	⇓P	P	03 42 57.1 +0.5
	baz=23,SNR=14					
W25A	X Bar L Ranch,	22.45	337	⇑P	P	03 42 56.9 +0.3
	baz=23,SNR=23					
BNM	Barren Site	22.45	331	eP	P	03 42 57.5 +0.8
	20nm,1.1s,mb4.5					
LPM	Los Pinos Moun	22.59	331	eP	P	03 42 59.2 +1.1
218A	Dragoon	22.60	322	⇑P	P	03 42 58.6 +0.3
	baz=23					
X23A	Hourglass Bar	22.61	333	⇓P	P	03 42 58.8 +0.4
	baz=23					
Z20A	Nine Sixteen R	22.61	326	⇑P	P	03 42 58.5 +0.1
	baz=23					
TKL	Tuckaleechee C	22.62	22	P	P	03 42 59.9 +1.5
	3.2nm,0.8s,mb3.8,baz=193,slow=13,SNR=3.7					
TKL				LR	LR	03 54 08.2
	comp=Z,137nm,20.0s,MS3.4,baz=280,slow=42					
TKL	Tuckaleechee C	22.62	22	P	P	03 42 59.9 +1.5
TKL				LR	LR	03 54 08.2
LENM	Lemitar	22.63	331	eP	P	03 42 58.9 +0.3
LENM				epP		03 43 11.3
V26A	Tequesquite Ra	22.71	339	⇑P	P	03 42 59.9 +0.4
	baz=23					
119A	Ashpeak Ranch,	22.74	324	⇑P	P	03 43 00.1 +0.3
	baz=23					
W24A	Lazy 6 Ranch,	22.81	335	⇑P	P	03 43 00.7 +0.2
	baz=23,SNR=16					
Y21A	Point of Rocks	22.84	329	⇓P	P	03 43 01.5 +0.7
	baz=23,SNR=11					
LAZ	Ladron	22.90	331	eP	P	03 43 02.4 +1.0
	4.4nm,0.8s,mb3.9					
118A	Homack Ranch,	23.03	323	⇑P	P	03 43 04.3 +1.4
	baz=23,SNR=6.5					
ANMO	Albuquerque	23.04	333	P	P	03 43 02.5 -0.4
	3.1nm,0.7s,mb3.9,baz=149,slow=14,SNR=12					
ANMO				LR	LR	03 52 56.4
	comp=Z,71nm,20.4s,MS3.1,baz=346,slow=39					
ANMO	Albuquerque	23.04	333	eP	P	03 43 02.8 -0.2
	2.1nm,1.0s,mb3.5					
V25A	Rancho No Teng	23.05	337	⇑P	P	03 43 03.2 +0.2
	baz=23,SNR=22					
W23A	Werner Place,	23.08	333	⇑P	P	03 43 03.7 +0.3
	baz=23					
Y20A	Horse Springs,	23.12	328	⇑P	P	03 43 04.9 +1.2
	baz=23,SNR=19					
SIUC	Southern Illin	23.16	9	eP	P	03 43 03.5 -0.6
	32nm,0.9s,mb4.8					
SIUC				epP		03 43 14.0
U26A	Atchley Ranch,	23.24	339	⇑P	P	03 43 04.6 -0.4
	baz=23,SNR=14					
X21A	Alamocita Cree	23.25	330	⇓P	P	03 43 05.7 +0.6
	baz=23,SNR=25					
CCM	Cathedral Cave	23.25	5	eP	P	03 43 02.6 -2.5
	8.9nm,0.8s,mb4.2					
TUC	Tucson	23.28	321	eP	P	03 43 05.4 -0.1
	44nm,1.7s,mb4.6					
117A	Oracle	23.44	322	⇑P	P	03 43 07.2 +0.3
	baz=24,SNR=11					
U25A	Circle Dot Ran	23.48	338	⇓P	P	03 43 07.0 -0.2
	baz=24,SNR=6.3					
216A	Three Points,	23.48	320	⇑P	P	03 43 07.5 +0.1
	baz=24					
V23A	Ortiz Mt. (NFS	23.60	334	⇑P	P	03 43 09.2 +0.8
	baz=24,SNR=19					
Y19A	Nutrioso	23.61	326	⇓P	P	03 43 09.7 +1.1
	baz=24,SNR=16					
X20A	Quemado	23.68	329	⇓P	P	03 43 10.5 +1.4
	baz=24,SNR=28					
USIN	University of	23.68	12	eP	P	03 43 09.1 -0.1
	18nm,0.9s,mb4.5					
W21A	San Fidel	23.72	331	⇓P	P	03 43 10.7 +1.2
	baz=24					
U24A	Moreno Valley	23.81	337	⇓P	P	03 43 11.6 +1.3
	baz=24					
Y18A	Canyon Day Jun	23.90	325	⇓P	P	03 43 11.8 +0.6
	baz=24					
X19A	St. Johns	23.99	327	P	P	03 43 13.7 +1.7
	baz=24,SNR=6.2					
116A	Eloy	24.02	320	⇓P	P	03 43 12.2 -0.1
	baz=24					
V22A	San Miguel Ran	24.05	333	⇑P	P	03 43 13.2 +0.6
	baz=24,SNR=8.8					
U23A	El Rito	24.10	335	⇓P	P	03 43 13.3 +0.3
	baz=24,SNR=18					
T25A	Trinidad	24.14	339	⇓P	P	03 43 14.7 +1.4
	baz=24					
W20A	Ramah	24.14	329	⇓P	P	03 43 13.7 +0.3
	baz=24,SNR=7.5					
WCI	Wyandotte Cave	24.24	15	eP	P	03 43 12.1 -2.2
	12nm,0.8s,mb4.4					
V21A	Milan	24.29	332	⇓P	P	03 43 15.7 +1.1
	baz=24					
Y17A	Roosevelt	24.30	324	⇑P	P	03 43 15.3 +0.5
	baz=24					
214A	Organ Pipe Nat	24.31	318	P	P	03 43 15.2 +0.2
	baz=24,SNR=12					
OLIL	Olney	24.34	11	eP	P	03 43 14.6 -0.6
	14nm,0.9s,mb4.4					
U22A	Llaves	24.42	334	⇓P	P	03 43 16.1 +0.2
	baz=25					
X18A	Snowflake	24.42	326	⇑P	P	03 43 16.8 +0.9
	baz=24					
115A	Sonoran Desert	24.43	320	⇓P	P	03 43 16.7 +0.6
	baz=24,SNR=6.2					
CBKS	Cedar Bluff	24.46	349	eP	P	03 43 16.7 +0.5
	22nm,0.6s,mb4.8					
W19A	Sanders	24.57	328	⇓P	P	03 43 18.3 +0.9
	baz=25					
V20A	Brimhall	24.67	330	P	P	03 43 19.3 +1.2
	baz=25,SNR=5.2					
X17A	Forest Lakes	24.75	325	⇑P	P	03 43 19.6 +0.7
	baz=25,SNR=5.3					
Y16A	Circle Bar Ran	24.80	323	⇑P	P	03 43 20.6 +1.3
	baz=25,SNR=5.0					
U21A	Nageezi	24.81	333	⇑P	P	03 43 20.7 +1.3
	baz=25,SNR=7.4					
T22A	Edith	24.98	335	⇓P	P	03 43 21.7 +0.7
	baz=25,SNR=12					
SDCO	Great Sand Dun	25.07	338	eP	P	03 43 22.5 +0.7
	6.4nm,0.9s,mb4.2					
U20A	Newcomb	25.16	331	⇓P	P	03 43 21.5 -1.1
	baz=25					
X16A	Lo Mia Camp, P	25.16	324	⇓P	P	03 43 22.9 +0.2
	baz=25,SNR=12					
T21A	Navajo Lake	25.23	334	⇓P	P	03 43 24.3 +1.1
	baz=25					
W17A	Winslow	25.25	326	⇓P	P	03 43 24.5 +1.1
	baz=25					
V18A	Ganado	25.32	328	⇑P	P	03 43 24.0 -0.1
	baz=25					
Y15A	Casa Rosa Ranc	25.35	322	⇓P	P	03 43 24.6 +0.2
	baz=26,SNR=12					
U19A	Dine' College,	25.42	330	⇑P	P	03 43 25.4 +0.5
	baz=26,SNR=14					
113A	Mohawk Valley,	25.45	318	⇑P	P	03 43 25.0 -0.3
	baz=26					
Z13A	Yuma Proving G	25.66	319	⇑P	P	03 43 26.5 -0.7
	baz=26,SNR=9.3					
X15A	Humboldt	25.67	323	⇓P	P	03 43 27.6 +0.3
	baz=26,SNR=5.3					
V17A	Tonalea, Kykot	25.70	327	⇑P	P	03 43 27.3 -0.3
	baz=26,SNR=8.5					
Y14A	Wickenburg	25.75	321	⇑P	P	03 43 27.8 -0.2
	baz=26					
T19A	Beclabito	25.76	331	⇓P	P	03 43 28.5 +0.3
	baz=26					
MVCO	Mesa Verde	25.83	332	⇑P	P	03 43 29.2 +0.5
	baz=26,SNR=7.0					
MVCO	Mesa Verde	25.83	332	eP	P	03 43 29.2 +0.5
	9.9nm,0.8s,mb4.4					
112A	Yuma	25.84	317	⇑P	P	03 43 28.1 -0.8
	baz=26					
U18A	Rough Rock, Ch	25.84	329	⇑P	P	03 43 28.1 -0.8
	baz=26					
S21A	Coal Bank Pass	25.90	334	⇑P	P	03 43 29.1 -0.3
	baz=26					
WUAZ	Wupatki	25.93	326	P	P	03 43 30.6 +0.9
	baz=26,SNR=14					
WUAZ	Wupatki	25.93	326	eP	P	03 43 30.2 +0.6
	18nm,1.0s,mb4.6					
R22A	Saguache, Gunn	25.97	336	⇑P	P	03 43 29.9 0.0
	baz=26					
X14A	Yava	26.04	322	⇓P	P	03 43 31.0 +0.3
	baz=26					
Y13A	Salome	26.17	320	⇑P	P	03 43 31.8 -0.1
	baz=26					
W15A	Williams	26.18	324	⇓P	P	03 43 32.0 +0.1
	baz=26					
U16A	Tuba City	26.27	327	⇑P	P	03 43 32.5 -0.2
	baz=26					
GLA	Glamis	26.32	317	⇓P	P	03 43 33.1 -0.1
	baz=26					
U17A	Shonto	26.38	328	⇓P	P	03 43 32.4 -1.2
	baz=26					
T18A	Mexican Hat	26.41	330	⇑P	P	03 43 33.6 -0.4
	baz=26,SNR=7.8					
S19A	Harvey Farm, M	26.56	332	⇑P	P	03 43 34.3 -1.0
	baz=27					
V15A	Kaibab Nationa	26.59	325	⇓P	P	03 43 35.5 -0.2
	baz=27					
R20A	Redvale	26.60	334	⇓P	P	03 43 35.5 -0.1
	baz=27					
PV01	Paradox Valley	26.63	333	eP	P	03 43 37.1 +1.2
	1μm,0.9s					
ATAH	Atahualpa	26.65	144	P	P	03 43 37.4 +1.1
	6.2nm,0.7s,mb4.2,baz=84,slow=6.4,SNR=5.2					
ATAH				LR	LR	03 52 25.3
	comp=Z,184nm,18.7s,MS3.7,baz=280,slow=33					
W14A	Seligman	26.68	323	⇑P	P	03 43 36.8 +0.4
	baz=27					
PDMCI	Parker Dam,Lak	26.69	320	⇓P	P	03 43 36.9 +0.4
	baz=27					
X13A	Yucca	26.69	321	⇑P	P	03 43 34.6 -1.9
	baz=27					
T17A	Navajo Res., N	26.76	329	⇑P	P	03 43 35.8 -1.4
	baz=27,SNR=7.0					
Q21A	Lamborn Mesa,	26.81	336	⇑P	P	03 43 38.1 +0.6
	baz=27					
SMCO	Snowmass	26.88	337	eP	P	03 43 38.9 +0.8
	11nm,1.1s,mb4.3					
SWSC	Sam W. Stewart	26.90	316	⇑P	P	03 43 38.8 +0.3
	baz=27					
S18A	Hurst Farm, Bl	26.91	331	⇓P	P	03 43 38.1 -0.4
	baz=27,SNR=9.7					
ISCO	Idaho Springs	26.94	340	eP	P	03 43 39.2 +0.5
	6.3nm,1.0s,mb4.1					
V14A	Boquillas Ranc	26.99	324	⇑P	P	03 43 38.8 -0.4
	baz=27,SNR=7.1					
OGNE	Ogallala	26.99	346	eP	P	03 43 39.0 -0.1
	28nm,0.9s,mb4.8					
SCIA	State Center	26.99	1	eP	P	03 43 37.6 -1.5
	18nm,0.6s,mb4.8					
PV04	Paradox Valley	26.99	333	eP	P	03 43 39.9 +0.7
R19A	Curley Farm, L	27.07	333	⇑P	P	03 43 39.6 -0.3
	baz=27					
U15A	North Rim	27.11	326	⇑P	P	03 43 39.7 -0.6
	baz=27,SNR=7.8					
BC3	Big Chuckawall	27.11	318	⇑P	P	03 43 39.8 -0.5
	baz=27,SNR=14					
IRM	Iron Mountain	27.23	319	⇑P	P	03 43 39.7 -1.7
	baz=27,SNR=7.3					
S17A	Black Ridge (B	27.26	330	⇓P	P	03 43 40.5 -1.1
	baz=27					
MONP	Monument Peak	27.29	315	⇑P	P	03 43 41.7 -0.3
	baz=27					
P21A	Newcastle	27.36	337	⇓P	P	03 43 41.5 -1.0
	baz=28					
R18A	Canyonlands Na	27.43	332	⇑P	P	03 43 42.6 -0.5
	baz=28					
U14A	Mt Trumbull	27.59	325	⇑P	P	03 43 45.3 +0.7
	baz=28,SNR=6.7					
T15A	Red Dirt Ranch	27.59	327	⇑P	P	03 43 44.8 +0.2
	baz=28,SNR=5.6					
Q19A	Hogan Spring (	27.62	333	⇓P	P	03 43 44.1 -0.7
	baz=28					
V13A	Grand Canyon W	27.65	323	⇑P	P	03 43 45.0 -0.1
	baz=28,SNR=8.4					
BELC	Belle Mtn. Jos	27.68	318	⇑P	P	03 43 45.5 +0.1
	baz=28					
P20A	De Beque	27.71	335	⇑P	P	03 43 45.2 -0.3
	baz=28					
S16A	Weppner Ranch,	27.72	329	⇑P	P	03 43 45.4 -0.3
	baz=28					
R17A	Hanksville Air	27.84	331	⇑P	P	03 43 46.3 -0.4
	baz=28,SNR=7.8					
GMRC	Granite Mounta	27.95	319	⇓P	P	03 43 47.0 -0.9
	baz=28					
T14A	Hurricane	28.00	326	⇑P	P	03 43 48.4 +0.2
	baz=28					
U13A	Pakoon Wash	28.03	324	⇑P	P	03 43 48.9 +0.4
	baz=28,SNR=6.3					
V12A	Nelson	28.07	322	⇓P	P	03 43 49.0 +0.1
	baz=28,SNR=11					
R16A	Teasdale	28.10	330	⇓P	P	03 43 50.0 +0.9
	baz=28					
Q18A	Rafter H Ranch	28.12	332	⇓P	P	03 43 48.6 -0.7
	baz=28					
N22A	Wattenberg Ran	28.12	339	⇓P	P	03 43 50.1 +0.8
	baz=28					
JFWS	Jewell Farm	28.16	6	eP	P	03 43 48.0 -1.5
O20A	White River Ci	28.19	336	⇓P	P	03 43 50.4 +0.5
	baz=28					
SRU	San Rafael	28.30	332	⇑P	P	03 43 51.6 +0.7
	baz=28					
U12A	Valley of Fire	28.37	323	⇑P	P	03 43 52.3 +0.7
	baz=28					
HEC	Hector,Ludlow	28.41	319	⇓P	P	03 43 51.2 -0.7
	baz=28					
T13A	Saint George	28.43	325	⇑P	P	03 43 52.2 +0.2
	baz=28,SNR=5.9					
Q16A	Castle Valley	28.45	331	⇓P	P	03 43 53.3 +1.0
	baz=29					
N21A	Black Mountain	28.46	338	⇑P	P	03 43 52.7 +0.4
	baz=29					
V11A	Goodsprings	28.50	321	⇓P	P	03 43 53.1 +0.4
	baz=29					
CCUT	Cedar City	28.51	326	eP	P	03 43 54.0 +1.2
	6.4nm,1.0s,mb4.3					
TUQ	Turquoise Moun	28.54	320	⇓P	P	03 43 53.4 +0.3
	baz=29					
S14A	Cedar City	28.56	327	⇓P	P	03 43 54.2 +1.0
	baz=29					
P18A	Preston Nutter	28.60	333	⇓P	P	03 43 53.7 +0.1
	baz=29					
MSU	Marysvale	28.62	329	eP	P	03 43 54.0 +0.2
	3.8nm,0.9s,mb4.1					
P17A	Butcher Ranch,	28.70	332	⇓P	P	03 43 52.3 -2.0
	baz=29,SNR=11					
TMUT	Trail Mountain	28.77	331	eP	P	03 43 54.1 -0.9
	11nm,1.0s,mb4.6					
N20A	Spence Gulch,	28.80	337	⇓P	P	03 43 55.7 +0.4
	baz=29					
PCRV	Puerto La Cruz	28.85	96	LR	LR	03 57 04.3
	comp=Z,174nm,18.1s,MS3.7,baz=292,slow=40					
ECSD	EROS Data Cent	28.91	356	eP	P	03 43 54.8 -1.4
	8.3nm,0.7s,mb4.6					
O18A	Roosevelt	29.02	334	⇑P	P	03 43 58.2 +0.9
	baz=29					
Q15A	Fillmore	29.10	329	⇓P	P	03 43 58.4 +0.4
	baz=29					
M21A	Separation Pea	29.15	339	⇓P	P	03 43 59.5 +1.1
	baz=29					
RWWY	Rawlins	29.17	339	eP	P	03 43 59.6 +1.0
	12nm,1.1s,mb4.5					
O17A	Robinson Place	29.28	333	⇓P	P	03 43 59.5 -0.1
	baz=29,SNR=14					
R13A	O'Grain Ranch,	29.30	326	⇓P	P	03 44 00.6 +0.9
	baz=29					
T11A	Corn Creek, Al	29.33	324	⇑P	P	03 43 58.9 -1.1
	baz=29					
U10A	Ash Meadows, A	29.43	321	⇓P	P	03 43 59.9 -1.1
	baz=30					
L21A	Rawlins	29.47	339	⇑P	P	03 43 58.9 -2.3
	baz=30					
N18A	Larsen Ranch,	29.48	335	⇓P	P	03 44 00.0 -1.3
	baz=30,SNR=5.9					
Q14A	Sevier Lake (B	29.54	328	⇓P	P	03 44 02.5 +0.6
	baz=30,SNR=6.9					
Q16A	Springville	29.63	332	⇓P	P	03 44 03.6 +0.9
	baz=30					
DAU	Daniels Canyon	29.69	332	eP	P	03 44 04.2 +1.0
	7.8nm,0.9s,mb4.4					
FURC	Furnace Creek,	29.79	321	⇓P	P	03 44 04.4 +0.3
	baz=30					
Q13A	Wheeler Ranch,	29.90	327	⇓P	P	03 44 06.1 +1.1
	baz=30,SNR=14					
S11A	Rachel	29.91	324	⇑P	P	03 44 06.4 +1.2
	baz=30					
MPMC	Manual Prospec	29.92	319	⇑P	P	03 44 05.3 0.0
	baz=30,SNR=6.3					
DUG	Dugway	30.24	330	eP	P	03 44 08.0 0.0
P13A	Bates Ranch, G	30.27	328	⇑P	P	03 44 08.0 -0.3
	baz=30					
R11A	Troy Canyon, C	30.31	325	⇓P	P	03 44 07.5 -1.2
	baz=30,SNR=6.1					
L19A	Farson	30.31	337	⇑P	P	03 44 08.4 -0.2
	baz=30					
GRAC	Grapevine Rang	30.44	321	⇑P	P	03 44 10.8 +0.9
	baz=30					
S10A	Tonopah Range,	30.59	323	⇑P	P	03 44 11.5 +0.3
	baz=31,SNR=8.9					
R10A	Warm Springs	30.67	324	⇑P	P	03 44 12.9 +1.0
	baz=31					
Q11A	Duckwater	30.69	325	⇑P	P	03 44 12.8 +0.7
	baz=31					
HWUT	Hardware Ranch	30.80	333	eP	P	03 44 12.8 -0.1
	4.0nm,0.9s,mb4.2					
N14A	Grayback Hills	30.93	331	⇓P	P	03 44 13.8 -0.3
	baz=31,SNR=5.4					
BW06	Boulder Array	30.96	337	eP	P	03 44 14.5 +0.1
	1.4nm,0.8s,mb3.8					
PDAR	Pinedale Array	30.96	337	P	P	03 44 13.8 -0.6
	1.3nm,0.9s,mb3.

baz=32
M13A **Montello** 31.79 330 ⇑P P 03 44 22.1 +0.4
baz=32,SNR=8.3
M13A **Montello** 31.79 330 *eP* P 03 44 22.6 +0.9
12nm,1.1s,mb4.6
N12A **Clover Valley,** 31.83 329 ⇑P P 03 44 21.7 -0.4
baz=32
N12A **Clover Valley,** 31.83 329 *eP* P 03 44 23.1 +1.0
17nm,1.2s,mb4.8
ELK **Elko** 31.85 328 *eP* P 03 44 22.5 +0.3
6.4nm,0.7s,mb4.6
L14A **Malta** 31.88 332 ⇓P P 03 44 23.0 +0.5
baz=32,SNR=10
NVAR **Mina Array Bea** 31.93 322 P P 03 44 23.8 +0.8
9.0nm,1.0s,mb4.6,baz=146,slow=9.4,SNR=42
NVAR PcP PcP 03 47 12.7 0.0
1.1nm,0.7s,baz=155,slow=3.3,SNR=5.0
REDW **Red Top Meadow** 31.96 336 *eP* P 03 44 23.7 +0.5
18nm,1.3s,mb4.7
SNOW **Snow King Moun** 32.01 336 *eP* P 03 44 24.2 +0.6
12nm,0.9s,mb4.7
LOHW **Long Hollow** 32.08 337 *eP* P 03 44 24.4 +0.2
3.2nm,0.8s,mb4.2
K15A **Arbon** 32.09 334 ⇑P P 03 44 24.8 +0.5
baz=32
TPAW **Teton Pass** 32.11 336 *eP* P 03 44 25.6 +1.2
9.9nm,1.1s,mb4.5
RRI2 **Red Ridge** 32.13 336 *eP* P 03 44 24.0 -0.7
6.2nm,1.1s,mb4.3
J16A **Bone** 32.19 335 ⇓P P 03 44 24.7 -0.5
baz=32
M12A **Wells** 32.19 329 ⇓P P 03 44 25.2 0.0
baz=32,SNR=8.4
K14A **Jones Ranch, D** 32.26 333 ⇑P P 03 44 24.9 -0.9
baz=32
J15A **Blackfoot** 32.63 334 ⇓P P 03 44 29.1 0.0
baz=33
M11A **Holland Ranch,** 32.64 329 ⇑P P 03 44 29.2 0.0
baz=33
RLMT **Red Lodge** 32.91 340 ⇑P P 03 44 31.3 -0.1
baz=33
RLMT **Red Lodge** 32.91 340 *eP* P 03 44 31.6 +0.2
2.6nm,0.6s,mb4.3
CMB **Columbia Colle** 32.96 320 *eP* P 03 44 31.5 -0.5
2.8nm,0.9s,mb4.2
J14A **Carey** 33.03 333 ⇑P P 03 44 32.4 -0.2
baz=33
L11A **Cat Creek Ranc** 33.17 330 ⇑P P 03 44 33.9 +0.1
baz=33,SNR=11
G18A **Lazy EL Ranch,** 33.18 340 ⇑P P 03 44 33.6 -0.2
baz=33
J13A **Cove Ranch, Pi** 33.38 333 ⇓P P 03 44 36.1 +0.4
baz=34
AGMN **Agassiz Nation** 33.42 358 *eP* P 03 44 34.4 -1.5
14nm,0.8s,mb5.0
LAO **LASA Array** 33.42 344 *eP* P 03 44 35.7 -0.1
4.2nm,0.8s,mb4.4
L10A **Juniper Basin** 33.46 329 ⇑P P 03 44 36.8 +0.5
baz=34
I14A **Mackay** 33.49 334 ⇓P P 03 44 36.3 -0.3
baz=34
HLID **Hailey** 33.62 332 ⇓P P 03 44 37.3 -0.4
baz=34,SNR=8.1
HLID **Hailey** 33.62 332 *eP* P 03 44 38.0 +0.4
3.2nm,0.8s,mb4.3
GCMT **Greycliff** 33.63 340 *eP* P 03 44 37.9 +0.1
3.7nm,0.8s,mb4.4
H15A **Lima** 33.72 335 ⇑P P 03 44 39.6 +1.1
baz=34
F18A **Big Timber** 33.74 340 ⇑P P 03 44 38.5 -0.2
baz=34,SNR=8.1
I13A **Wildhorse Cree** 33.77 333 ⇑P P 03 44 38.9 -0.1
baz=34
MCMT **McKenzie Canyo** 33.98 335 *eP* P 03 44 42.1 +1.3
2.1nm,0.8s,mb4.1
H14A **Leadore** 34.01 335 ⇑P P 03 44 41.3 +0.2
baz=34
F17A **Fitzpatrick Pl** 34.07 339 ⇓P P 03 44 41.9 +0.4
baz=34,SNR=16
BEKR **Beckworth** 34.08 322 ⇑P P 03 44 42.1 +0.4
baz=34,SNR=8.0
G15A **Dillon** 34.12 336 ⇓P P 03 44 42.2 +0.2
baz=34,SNR=5.3
I12A **Atlanta** 34.12 332 ⇓P P 03 44 42.3 +0.3
baz=34,SNR=6.2
K10A **MacKenzie Ranc** 34.18 329 ⇓P P 03 44 42.0 -0.6
baz=34
BOZ **Bozeman (W)** 34.19 338 *eP* P 03 44 43.5 +0.9
2.5nm,1.1s,mb4.1
DLMT **Dillon** 34.32 336 *eP* P 03 44 44.6 +0.8
10nm,1.3s,mb4.6
H13A **Challis** 34.34 334 ⇑P P 03 44 44.9 +0.9
baz=34,SNR=8.4
E18A **Harlowton** 34.39 340 P P 03 44 44.6 +0.3
baz=35,SNR=7.4
H12A **Diamond D Ranc** 34.59 333 ⇑P P 03 44 46.5 +0.4
baz=35,SNR=11
I11A **Placerville** 34.59 331 ⇓P P 03 44 46.7 +0.6
baz=35,SNR=13
LRM **Limekiln Ridge** 34.65 337 *eP* P 03 44 47.0 +0.4
43nm,1.2s,mb5.2
F15A **Butte** 34.68 337 ⇓P P 03 44 47.4 +0.6
baz=35
G13A **Cobalt** 34.76 334 ⇑P P 03 44 47.9 +0.3
baz=35
WVOR **Wild Horse Val** 34.83 327 *eP* P 03 44 48.3 0.0
22nm,1.1s,mb5.0
D18A **Linhart Farms,** 34.91 341 P P 03 44 49.5 +0.7
baz=35,SNR=6.4
E16A **East Helena** 34.97 338 ⇓P P 03 44 49.7 +0.4
baz=35,SNR=6.9
J09A **Fry Pan Ranch,** 35.03 329 ⇓P P 03 44 49.7 -0.3
baz=35,SNR=5.6
I10A **Payette** 35.12 331 ⇑P P 03 44 51.3 +0.6
baz=35
D17A **Six Diamond Ra** 35.16 340 P P 03 44 51.4 +0.5
baz=35,SNR=10.0
E15A **Deer Lodge** 35.23 337 ⇑P P 03 44 51.8 +0.3
baz=35
H11A **Donnelly** 35.23 332 ⇓P P 03 44 51.9 +0.3
baz=35,SNR=11
G12A **Big Creek, Yel** 35.26 333 ⇓P P 03 44 51.3 -0.5
baz=35
ULM **Lac du Bonnet** 35.37 358 P P 03 44 50.8 -1.9
5.7nm,0.7s,mb4.6,baz=172,slow=11,SNR=5.3
ULM **Lac du Bonnet** 35.37 358 *eP* P 03 44 50.4 -2.3
6.1nm,0.8s,mb4.6
H10A **Noah's Angus R** 35.48 331 ⇑P P 03 44 52.8 -0.9
baz=36
I09A **Lost Marbles R** 35.49 330 ⇑P P 03 44 53.5 -0.3
baz=36,SNR=6.8
C17A **Wharram Farm,** 35.61 340 ⇓P P 03 44 54.7 -0.1
baz=36,SNR=5.8
EGMT **Eagleton** 35.63 342 ⇓P P 03 44 54.7 -0.3
baz=36
EGMT **Eagleton** 35.63 342 *eP* P 03 44 55.0 0.0
12nm,1.2s,mb4.7
D15A **Lincoln** 35.70 338 ⇑P P 03 44 55.4 -0.2
baz=36
F12A **Elk City** 35.72 334 ⇑P P 03 44 55.4 -0.5
baz=36,SNR=14
E13A **Victor** 35.84 336 ⇓P P 03 44 56.6 -0.2
baz=36,SNR=5.6
CHMT **Chamberlain Mo** 35.87 337 *eP* P 03 44 57.0 0.0
3.8nm,1.3s,mb4.2
G11A **Walters Elk Ra** 35.88 333 ⇑P P 03 44 57.1 -0.1
baz=36,SNR=9.9
BMO **Blue Mountains** 35.94 331 *eP* P 03 44 55.7 -1.9
3.2nm,1.1s,mb4.2
MSO **Missoula** 36.06 336 *eP* P 03 44 58.5 -0.2
3.6nm,1.0s,mb4.3
C16A **Fuhringer Ranc** 36.08 339 ⇑P P 03 44 58.8 -0.1
baz=36,SNR=5.5
G10A **Bishop Farm, J** 36.18 332 ⇓P P 03 44 58.7 -1.1
baz=36
H08A **Prairie City** 36.34 330 ⇑P P 03 44 59.4 -1.8
baz=36,SNR=5.1
C15A **Salmond Ranch,** 36.36 339 ⇓P P 03 45 00.3 -0.9
baz=36
E12A **Beaver Dam Sad** 36.38 334 ⇓P P 03 45 01.0 -0.4
baz=36
I07A **Izee** 36.45 328 ⇓P P 03 45 01.7 -0.4
baz=37
A18A **Metzger Ranch,** 36.46 342 ⇓P P 03 45 01.1 -1.0
baz=37
G09A **Cove** 36.48 331 ⇑P P 03 45 01.4 -0.9
baz=37,SNR=7.6
D13A **Huson** 36.48 336 ⇑P P 03 45 01.6 -0.7
baz=37,SNR=5.8

YBH **Yreka Blue Hor** 36.64 323 *eP* P 03 45 01.7 -2.0
1.3nm,0.7s,mb3.9
SWMT **Swartz Lake** 36.65 337 *eP* P 03 45 03.1 -0.6
2.6nm,0.8s,mb4.1
F10A **Beach Ranch, E** 36.75 332 ⇑P P 03 45 04.3 -0.3
baz=37,SNR=10
D12A **Red Ives Fores** 36.80 335 ⇓P P 03 45 04.2 -0.9
baz=37
YBMT **Yellow Bay** 36.94 337 *eP* P 03 45 06.4 +0.2
2.6nm,0.8s,mb4.1
A15A **Johnson Ranch,** 37.43 339 ⇓P P 03 45 08.9 -1.4
baz=38
B13A **Whitefish** 37.54 337 ⇑P P 03 45 10.7 -0.5
baz=38
A14A **Double T Ranch** 37.66 339 ⇑P P 03 45 12.0 -0.3
baz=38,SNR=5.0
C11A **Tepee Creek (N** 37.80 335 ⇓P P 03 45 12.6 -0.9
baz=38
NEW **Newport** 38.49 335 *eP* P 03 45 18.0 -1.3
1.9nm,0.6s,mb4.0
OD2 **Odessa Site #2** 38.49 333 *eP* P 03 45 18.8 -0.5
5.9nm,0.9s,mb4.3
LPAZ **La Paz** 39.99 140 P P 03 45 30.3 -1.9
1.4nm,0.8s,mb3.8,baz=321,slow=7.8,SNR=6.4
LPAZ **La Paz** 39.99 140 *eP* P 03 45 30.6 -1.6
1.6nm,0.7s,mb3.9
FFC **Flin Flon** 40.32 353 *eP* P 03 45 33.8 -0.6
4.8nm,0.9s,mb4.2
SCHQ **Schefferville** 45.09 22 LR LR 04 06 55.8
comp=Z,160nm,18.3s,MS4.0,baz=65,slow=38
YKA **Yellowknife Ar** 49.83 348 P P 03 46 49.1 -0.7
6.2nm,0.9s,mb4.6,baz=151,slow=7.4,SNR=25
CPUP **Villa Florida** 54.16 139 P P 03 47 19.4 -3.1
1.7nm,0.6s,mb4.1,baz=320,slow=8.1,SNR=5.3
CPUP **Villa Florida** 54.16 139 P P 03 47 19.4 -3.1
EGAK **Eagle** 59.30 339 *eP* P 03 47 57.4 -1.0
5.1nm,1.2s,mb4.4
PAX **Paxson** 59.98 336 *eP* P 03 48 02.4 -0.7
7.9nm,1.2s,mb4.6
PMR **Palmer** 60.89 333 *eP* P 03 48 08.4 -1.0
4.2nm,0.9s,mb4.6
MCK **McKinley** 61.72 336 *eP* P 03 48 14.6 -0.4
12nm,1.0s,mb5.0
TRF **Thorofare Moun** 62.14 335 *eP* P 03 48 17.1 -0.8
13nm,1.1s,mb5.0
BPAW **Bear Paw Mtn.** 62.69 335 *eP* P 03 48 20.2 -1.3
7.3nm,1.0s,mb4.8
SVW2 **Sparrevohn** 63.60 331 *eP* P 03 48 25.9 -1.7
12nm,1.5s,mb4.7
COLD **Coldfoot** 63.72 339 *eP* P 03 48 28.5 +0.2
12nm,1.5s,mb4.7
TTA **Tatalina** 64.37 333 *eP* P 03 48 31.2 -1.4
BILL **Bilibino** 80.04 338 *eP* P 03 50 05.6 -0.5
3.2nm,0.4s,mb4.6
ESDC **Sonseca Array** 80.59 51 P P 03 50 09.9 +0.3
1.5nm,0.8s,mb4.0,baz=299,slow=5.2,SNR=9.5
GRR **Gorron** 81.01 42 *eP* P 03 50 11.1 -0.6
30nm,1.2s,mb4.8
GRR **Gorron** 81.01 42 *eP* P 03 50 11.1 -0.6
15nm,1.2s,mb4.8
FLN **La Foliniere** 81.18 42 *eP* P 03 50 11.9 -0.7
21nm,1.0s,mb4.7
FLN **La Foliniere** 81.18 42 *eP* P 03 50 11.9 -0.7
10nm,1.0s,mb4.7
LDF **La Druitiere** 81.45 42 *eP* P 03 50 13.5 -0.5
12nm,0.9s,mb4.5
LDF **La Druitiere** 81.45 42 *eP* P 03 50 13.5 -0.5
5.9nm,0.9s,mb4.5
MFF **Saint Martin d** 81.87 44 *eP* P 03 50 15.5 -0.8
SJPF **Ste Jean** 81.89 48 *eP* P 03 50 16.0 -0.5
24nm,1.3s,mb4.7
SJPF **Ste Jean** 81.89 48 *eP* P 03 50 16.0 -0.5
12nm,1.3s,mb4.7
ETSF **Étsaut** 82.41 48 *eP* P 03 50 19.0 -0.2
LFF **La Frestale** 82.86 46 *eP* P 03 50 20.7 -0.8
EPF **Esparros** 83.03 47 *eP* P 03 50 21.9 -0.5
9.7nm,1.1s,mb4.5
EPF **Esparros** 83.03 47 *eP* P 03 50 21.9 -0.5
4.8nm,1.1s,mb4.4
RJF **Les Rejaudoux** 83.30 45 *eP* P 03 50 23.1 -0.7
TCF **Toulx Ste Croi** 83.53 44 *eP* P 03 50 23.9 -1.0
CAF **Calviac** 83.77 45 *eP* P 03 50 25.4 -0.8
15nm,1.3s,mb4.7
CAF **Calviac** 83.77 45 *eP* P 03 50 25.4 -0.8
7.6nm,1.3s,mb4.7
BGF **Bois d'Agland** 83.88 44 *eP* P 03 50 25.9 -0.8
14nm,1.0s,mb4.8
BGF **Bois d'Agland** 83.88 44 *eP* P 03 50 25.9 -0.8
7.3nm,1.0s,mb4.8
AVF **Avril sur Loir** 84.16 43 *eP* P 03 50 27.7 -0.4
7.3nm,1.0s,mb4.5
AVF **Avril sur Loir** 84.16 43 *eP* P 03 50 27.7 -0.4
3.7nm,1.0s,mb4.5
SSF **Saint Saulge** 84.19 43 *eP* P 03 50 27.3 -1.0
10nm,0.9s,mb4.6
SSF **Saint Saulge** 84.19 43 *eP* P 03 50 27.3 -1.0
5.1nm,0.9s,mb4.7
NB2 **NORSAR Subarra** 84.26 28 P P 03 50 29.0 +0.7
comp=Z,7.3nm,0.9s,mb4.8,baz=290,slow=5.1
NOA **NORSAR Array B** 84.26 28 P P 03 50 29.3 +1.0
comp=Z,5.5nm,0.9s,mb4.7,baz=291,slow=4.9,SNR=9.9
NOA LR LR 04 26 25.5
comp=Z,36nm,18.0s,MS3.8,baz=160,slow=34
MTLF **Montolieu** 84.28 47 *eP* P 03 50 28.1 -0.7
comp=Z,4.4nm,0.9s,mb4.3
MTLF **Montolieu** 84.28 47 *eP* P 03 50 28.1 -0.7
comp=Z,2.2nm,0.9s,mb4.3
LOR **Lormes** 84.37 43 *eP* P 03 50 28.3 -0.9
comp=Z,8.3nm,0.9s,mb4.5
LOR **Lormes** 84.37 43 *eP* P 03 50 28.3 -0.9
comp=Z,4.2nm,0.9s,mb4.6
WLF **Walferdange** 85.16 40 P P 03 50 33.0 -0.1
comp=Z,5.8nm,1.3s,mb4.5
WLF **Walferdange** 85.16 40 *eP* P 03 50 32.7 -0.4
comp=Z,6.1nm,0.9s,mb4.7
LASF **Ste Croix** 85.23 46 *eP* P 03 50 33.5 -0.1
comp=Z,24nm,1.5s,mb4.8
BUG **Bochum--Univer** 85.30 38 *eP* P 03 50 33.2 -0.6
comp=Z,30nm,1.7s,mb5.2
IBBN **Ibbenburen** 85.32 37 *eP* P 03 50 34.1 +0.2
comp=Z,21nm,1.2s,mb5.1
VIVF **Saint-Julien-I** 85.58 45 *eP* P 03 50 35.4 +0.1
comp=Z,13nm,1.2s,mb4.7
VIVF **Saint-Julien-I** 85.58 45 *eP* P 03 50 35.4 +0.1
comp=Z,6.6nm,1.2s,mb4.7
HAU **Haudompre** 85.77 42 *eP* P 03 50 35.7 -0.5
comp=Z,18nm,0.9s,mb5.0
HAU **Haudompre** 85.77 42 *eP* P 03 50 35.7 -0.5
comp=Z,8.9nm,0.9s,mb5.0
ARCES **ARCESS Array B** 85.90 18 P P 03 50 36.2 -0.2
comp=Z,4.8nm,1.0s,mb4.7,baz=294,slow=3.9,SNR=4.5
ARCES **ARCESS Array B** 85.90 18 P P 03 50 36.2 -0.2
CABF **La Chapelle** 86.02 43 *eP* P 03 50 37.2 -0.2
comp=Z,9.2nm,0.9s,mb4.7
CABF **La Chapelle** 86.02 43 *eP* P 03 50 37.2 -0.2
comp=Z,4.6nm,0.9s,mb4.7
HINF **Hinteralfeld** 86.15 42 *eP* P 03 50 37.3 -0.8
comp=Z,13nm,1.0s,mb4.8
HINF **Hinteralfeld** 86.15 42 *eP* P 03 50 37.3 -0.8
comp=Z,6.3nm,1.0s,mb4.8
ECH **Echery** 86.22 41 *eP* P 03 50 38.3 -0.1
comp=Z,2.8nm,0.8s,mb4.5
CDF **Champ du Feu** 86.24 41 *eP* P 03 50 38.0 -0.5
comp=Z,23nm,1.2s,mb5.0
CDF **Champ du Feu** 86.24 41 *eP* P 03 50 38.0 -0.5
comp=Z,11nm,1.2s,mb5.0
BSEG **Bad Segeberg** 86.25 35 *eP* P 03 50 38.7 +0.3
comp=Z,17nm,1.1s,mb5.2
ORIF **Oris-en-Rattie** 86.38 45 *eP* P 03 50 39.2 -0.1
comp=Z,12nm,1.1s,mb4.7
ORIF **Oris-en-Rattie** 86.38 45 *eP* P 03 50 39.2 -0.1
comp=Z,6.1nm,1.1s,mb4.7
TNS **Taunus Mts** 86.39 39 *eP* P 03 50 39.6 +0.4
comp=Z,17nm,0.9s,mb5.3
SMRF **Simiane la Rot** 86.45 46 *eP* P 03 50 39.9 +0.3
comp=Z,17nm,1.0s,mb4.9
SMRF **Simiane la Rot** 86.45 46 *eP* P 03 50 39.9 +0.3
comp=Z,17nm,1.0s,mb5.2
LPG **La Plagne** 86.79 44 *eP* P 03 50 41.7 +0.4
BNI **Bardonecchia** 86.88 44 *eP* P 03 50 41.9 +0.2
comp=Z,9.4nm,0.8s,mb5.1
MBDF **Montbardon** 87.04 45 *eP* P 03 50 42.5 0.0
comp=Z,9.5nm,0.8s,mb4.8
MBDF **Montbardon** 87.04 45 *eP* P 03 50 42.5 0.0
comp=Z,4.8nm,0.8s,mb4.8
LMR **La Mourre** 87.29 46 *eP* P 03 50 43.2 -0.5
comp=Z,14nm,1.1s,mb4.8
LMR **La Mourre** 87.29 46 *eP* P 03 50 43.2 -0.5
comp=Z,6.8nm,1.1s,mb4.8

FRF **La Foret Royal** 87.31 46 *eP* P 03 50 43.4 -0.5
comp=Z,24nm,1.4s,mb5.0
FRF **La Foret Royal** 87.31 46 *eP* P 03 50 43.4 -0.5
comp=Z,12nm,1.4s,mb4.9
GRA1 **Grafenberg Arr** 88.26 39 *eP* P 03 50 48.0 -0.2
comp=Z,6.0nm,1.1s,mb4.7
GRF **Grafenberg Arr** 88.26 39 *eP* P 03 50 48.0 -0.2
comp=Z,6.0nm,1.1s,mb4.7
WERD **Werda** 88.64 38 *eP* P 03 50 51.6 +1.6
comp=Z,7.0nm,1.3s,mb4.8
GUNZ **Gunzen** 88.68 38 *eP* P 03 50 52.0 +1.8
comp=Z,6.0nm,1.2s,mb4.8
WERN **Wernitzgruen** 88.74 38 *eP* P 03 50 51.1 +0.6
comp=Z,5.0nm,1.3s,mb4.7
TANN **Tannenbergstha** 88.74 38 *eP* P 03 50 50.7 +0.2
comp=Z,10.0nm,1.5s,mb4.9
NKC **Novy Kostel** 88.80 38 *eP* P 03 50 51.2 +0.4
comp=Z,6.0nm,1.0s,mb4.9
ROTZ **Rotzenmuhle** 88.83 39 *eP* P 03 50 50.8 -0.1
comp=Z,18nm,2.1s,mb5.0
PGF **Pioggiola** 89.27 46 *eP* P 03 50 52.3 -0.9
comp=Z,8.1nm,1.0s,mb4.7
PGF **Pioggiola** 89.27 46 *eP* P 03 50 52.3 -0.9
comp=Z,4.1nm,1.0s,mb4.7
BRG **Berggiesshubel** 89.44 37 *eP* P 03 50 54.2 +0.4
comp=Z,5.0nm,0.9s,mb4.8
WET **Wettzell** 89.47 39 *eP* P 03 50 54.2 +0.3
comp=Z,4.0nm,0.9s,mb4.8
KHC **Kasperske Hory** 89.90 39 *eP* P 03 50 56.3 +0.3
comp=Z,2.3nm,1.0s,mb4.5
GEC2 **GERESS Array S** 90.08 39 *eP* P 03 50 56.8 0.0
comp=Z,5.0nm,1.2s,mb4.7
FINES **FINESS Array B** 90.50 25 P P 03 50 58.5 +0.1
comp=Z,2.1nm,0.8s,mb4.5,baz=325,slow=1.7,SNR=3.4
MORC **Moravsky Berou** 92.00 37 *eP* P 03 51 05.8 +0.1
comp=Z,7nm,1.0s,mb4.5
AQU **L'Aquila** 92.38 45 *eP* P 03 51 08.8 +1.1
comp=Z,19nm,1.2s,mb5.3
KOLL **Kolacno** 93.03 38 *eP* P 03 51 12.1 +1.6
VYHS **Vyhne** 93.32 38 *eP* P 03 51 12.5 +0.7
comp=Z,8.3nm,2.1s,mb4.8
KECS **Kecovo** 94.30 37 *eP* P 03 51 16.9 +0.6
comp=Z,2.4nm,1.5s,mb4.4
KURK **Kurchatov** 114.41 5 PKP PKiKP 03 56 35.6 -1.0
comp=Z,0.2nm,0.3s,baz=345,slow=2.9,SNR=3.0
MKAR **Makanchi Array** 118.57 3 PKP PKPdf 03 56 42.6 -2.1
comp=Z,0.2nm,0.4s,baz=9.5,slow=3.5,SNR=3.1
BJI **Beijing** 118.69 334 PKP PKPdf 03 56 42.0 -3.2
HHC **Hu-ho-hao-te** 119.81 338 *e*PKP PKPdf 03 56 44.3 -3.0
HHC PP PP 03 58 13.0 +3.1
HHC PKS 04 00 19.8
HHC SS SS 04 14 29.0 -2.2
HHC AMB AMB
comp=Z,71nm,4.0s
HHC LR LR
comp=N,180nm,19.0s,MS4.8
HHC LR LR
comp=E,94nm,21.4s,MS4.8
HHC LR LR
comp=Z,79nm,22.6s,MS4.3
UCH **Uchtor** 122.22 10 *e*PKPdf PKPdf 03 56 52.0 +0.2
BOSA **Boshof** 122.30 115 PKP PKPdf 03 56 49.7 -2.6
comp=Z,4.7nm,1.2s,baz=333,slow=4.5,SNR=3.8
BOSA **Boshof** 122.30 115 PKP PKPdf 03 56 49.7 -2.6
CASY **Casey** 126.08 192 *e*PKPdf PKPdf 03 56 56.8 -1.7
LZH **Lanzhou** 126.68 342 *e*PKP PKPdf 03 57 04.1 +3.5
STKA **Stephens Creek** 126.92 241 PKP PKPdf 03 56 59.2 -1.9
comp=Z,1.2nm,0.8s,baz=63,slow=2.3,SNR=4.7
STKA **Stephens Creek** 126.92 241 PKP PKPdf 03 56 59.2 -1.9
CD2 **Chengdu** 131.49 340 *e*PKP PKPdf 03 57 08.9 -1.0
WRA **Warramunga Arr** 133.88 256 PKP PKPdf 03 57 12.7 -1.9
comp=Z,0.5nm,0.7s,baz=87,slow=2.6,SNR=5.0
ASAR **Alice Springs** 134.27 251 PKP PKPdf 03 57 12.9 -2.4
comp=Z,1.0nm,1.0s,baz=136,slow=1.5,SNR=4.1
KMI **Kunming** 137.13 338 PKP PKPdf 03 57 19.8 -0.8
CMAR **Chiang Mai Arr** 144.62 339 PKP PKPdf 03 57 31.6 -2.6
comp=Z,4.0nm,0.8s,baz=343,slow=4.2,SNR=17
NWAO **Narrogin (SRO)** 146.55 232 PKPbc PKPbc 03 57 36.9 -1.7
comp=Z,8.4nm,0.9s,baz=90,slow=1.0,SNR=3.2
KSM **Kuching** 151.15 302 *e*PKPbc PKPbc 03 57 49.7 -1.3

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*IDC **21** 03:39:17.2±10.0, 6°.27S×130°.09E, h71km±107km, mb3.4/3, mb1 3.8/6, mb1mx3.5/19, mbtmp3.6/6, ML4.0/3, MS3.0/1, Ms1 3.0/1, ms1mx2.3/18, Error ellipse: s-maj=94.4km s-min=50.4km az=57.0*
*ISCJB **21** 03:39:21.8±4.5, 6°.5S±0°.2×130°.0E±0°.3, h143km±52km, mb3.7/5, Error ellipse: s-maj=45.7km s-min=36.0km az=161.6*
*NEIC **21** 03:39:22.7±3.3, 6°.50S×129°.97E, h132km±38km, mb4.0/2, Error ellipse: s-maj=39.0km s-min=24.7km az=72.0*
ISC 21 03:39:23.9±4.0, 6°.6S±0°.2×130°.0E±0°.3, h147km±47km, n12, σ0.9 77/11, mb3.7/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	6.55	159	*e*Pn	Pn	03 40 58.5	+0.4
	66nm,0.7s						
KAKA				*e*Sn	Sx	03 42 09.0	
FITZ	**Fitzroy Crossi**	12.22	200	P	Pn	03 42 13.0	-0.2
	1.0nm,0.3s,baz=31,slow=12,SNR=27						
FITZ				S	Sx	03 44 23.2	
	0.8nm,0.3s,baz=80,slow=17,SNR=3.8						
WRAB	**Tennant Creek**	13.94	163	*e*Pn	Pn	03 42 35.0	-0.2
WRAB				*e*Sn	Sx	03 45 01.0	
WRA	**Warramunga Arr**	13.94	163	P	Pn	03 42 33.4	-1.8
	0.6nm,0.3s,baz=346,slow=13,SNR=5.2						
WRA				S	Sx	03 45 00.8	
	0.9nm,0.3s,baz=347,slow=22,SNR=5.9						
ASAR	**Alice Springs**	17.40	168	P	Pn	03 43 19.5	+1.7
	0.5nm,0.3s,baz=354,slow=11,SNR=22						
KSRS	**Korea Array**	43.84	358	LR	LR	04 04 14.6	
	comp=Z,18nm,21.5s,baz=230,slow=34						
ULN	**Ulaanbaatar**	57.86	342	*e*P	P	03 49 00.0	-0.1
	0.6nm,0.3s,mb3.9						
SONM	**Songino Array**	58.04	341	P	P	03 49 01.4	+0.1
	0.4nm,0.5s,mb3.5,baz=163,slow=7.5,SNR=2.2						
MK31	**Makanchi Array**	67.87	327	*e*P	P	03 50 06.4	0.0
MKAR	**Makanchi Array**	67.87	327	P	P	03 50 06.9	+0.5
	0.8nm,0.3s,mb3.9,baz=110,slow=9.6,SNR=7.5						
KURK	**Kurchatov**	72.16	329	P	P	03 50 32.5	+0.1
	0.2nm,0.4s,mb3.2,baz=134,slow=4.7,SNR=3.0						
BRVK	**Borovoye**	77.78	328	*e*P	P	03 51 04.0	-0.7
	1.5nm,0.5s,mb3.9						

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*ISCJB **21** 03:54:31.1±0.4, 10°.85N±0°.02×62°.24W±0°.03, h100km±5km, Error ellipse: s-maj=5.1km s-min=3.2km az=40.5*
*FUNV **21** 03:54:32.5, 10°.86N×62°.16W, h94km, MW3.7*
*TRN **21** 03:54:35.3, 10°.94N×61°.90W, h89km, MD3.6, MS3.8(FDF)*
ISC 21 03:54:32.1±0.4, 10°.85N±0°.02×62°.23W±0°.03, h94km±6km, n44, σ1.9 23/68, 5C-3D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	0.20	178	⇓*e*P	Pn	03 54 46.0	+0.3
GUIV				*e*S	Sn	03 54 55.0	-0.7
TCE	**Chacachacare**	0.49	108	*e*P	Pn	03 54 48.0	+0.8
TRN	**Trinidad (W)**	0.83	104	⇑*e*P	Pn	03 54 50.4	0.0
TRN				*e*S	Sn	03 55 02.3	-1.7
ALNG	**Atlantic LNG**	0.85	141	*e*P	Pn	03 54 53.0	+2.5
ALNG				*e*S	Sn	03 55 06.0	+1.7
BUAY	**Buenos Aires**	0.91	144	*e*P	Pn	03 54 54.0	+2.9
BUAY				*e*S	Sn	03 55 06.4	+1.1
TPP	**Pointe-a-Pierr**	0.93	125	*e*P	Pn	03 54 52.1	+0.8
TPP				*e*S	Sn	03 55 05.2	-0.6
GUNV	**Guanoco**	0.98	226	⇑*i*P	Pn	03 54 53.2	+1.4
GUNV				*e*S	Sn	03 55 08.0	+1.2
CRUV	**Carupano**	1.00	260	⇓*e*P	Pn	03 54 52.8	+0.7
CRUV				*e*S	Sn	03 55 06.7	-0.6
ITEV	**Isla Los Testi**	1.02	300	⇓*i*P	Pn	03 54 52.9	+0.6
ITEV				*e*S	Sn	03 55 07.6	+0.1
TBH	**Brigand Hill**	1.20	107	*e*P	Pn	03 54 54.4	0.0
TBH				*e*S	Sn	03 55 08.1	-3.1
GRW	**Mount Saint Ca**	1.42	23	*e*P	Pn	03 54 57.4	+0.3
TPR	**Prospect**	1.47	77	*e*P	Pn	03 54 57.4	-0.3
TPR				*e*S	Sn	03 55 12.3	-4.7
BOT	**Bacolet**	1.52	78	*e*P	Pn	03 54 57.7	-0.6
TOSP	**Speyside**	1.72	75	*e*P	Pn	03 55 00.1	-0.8
TOSP				*e*S	Sn	03 55 16.8	-6.0
ORIV	**Oritupano**	2.12	213	⇑*i*P	Pn	03 55 06.9	+0.9
ORIV				*e*S	Sn	03 55 31.6	-0.3
PCRV	**Puerto La Cruz**	2.46	254	⇑*e*P	Pn	03 55 11.3	+0.8
PCRV				*e*S	Sn	03 55 39.4	-0.6

FCV	Fort Charlotte	2.49	23	eP	Pn	03 55 11.9	+1.0
FCV				eS	Sn	03 55 38.9	-1.8
SVB	Belmont	2.59	22	eP	Pn	03 55 12.6	+0.2
SVB				eS	Sn	03 55 40.3	-2.9
SVV	Soufriere Volc	2.65	22	eP	Pn	03 55 14.3	+1.2
SVV				eS	Sn	03 55 41.3	-3.2
SSV	Crater Summit	2.66	22	eP	Pn	03 55 14.6	+1.3
SSV				eS	Sn	03 55 42.9	-2.0
RIOV	Rio Grande	2.79	172	eP	Pn	03 55 14.9	-0.1
RIOV				eS	Sn	03 55 45.8	-2.1
MCLT	Moule a Chique	3.11	24	eP	Pn	03 55 19.5	+0.2
MCLT				eS	Sn	03 55 52.8	-2.8
PRGV	PARIAGUAN	3.16	229	eS	Sn	03 55 55.6	-1.1
GURV	El Guri	3.18	195	⇑iP	Pn	03 55 20.0	-0.2
CUPV	Cœpira	3.59	258	eP	Pn	03 55 26.3	+0.7
CUPV				eS	Sn	03 56 05.8	-1.3
BIM	Bigot	3.82	17	eP	Pn	03 55 29.0	+0.2
BIM				eS	Sn	03 56 12.1	-0.6
MVM	Montagne Vaucl	3.91	19	eP	Pn	03 55 30.5	+0.5
MVM				eS	Sn	03 56 14.8	0.0
BIRV	Birongo	3.99	265	eP	Pn	03 55 31.4	+0.3
FDF	Fort de France	4.00	15	eP	Pn	03 55 31.4	+0.1
FDF				eS	Sn	03 56 15.4	-1.8
MERV	Las Mercedes	4.31	249	eP	Pn	03 55 35.5	+0.1
DLPL	La Plaine	4.56	12	eP	Pn	03 55 40.7	+1.8
LUEV	Luepa	5.03	171	eP	Pn	03 55 43.9	-1.3
HMG	Houelmont	5.13	6	eP	Pn	03 55 48.3	+1.7
PHG	Guadaloupe-2	5.17	6	eP	Pn	03 55 48.4	+1.3
SCG	Saint Claude	5.18	6	eP	Pn	03 55 49.7	+2.4
BCG	Bois Riant Cap	5.24	6	eP	Pn	03 55 50.5	+2.4
LZG	Guadaloupe-1	5.28	5	eP	Pn	03 55 52.7	+4.1
CAOV	Caicara del Or	5.35	229	eP	Pn	03 55 48.2	-1.4
CAOV				eS	Sn	03 56 45.0	-4.8
TURV	Turiamo	5.53	266	eP	Pn	03 55 52.0	0.0
BAUV	El Baul	6.03	252	eP	Pn	03 55 57.7	-1.2
MAPV	Macapo	6.21	261	eP	Pn	03 56 00.6	-0.7
SKI	Saint Kitts	6.47	356	eP	Pn	03 56 07.4	+2.6
TEPV	Terepaima	6.91	263	eP	Pn	03 56 09.5	-1.2
MONV	Montecano	7.67	279	eP	Pn	03 56 19.9	-1.3

DDA ***21*** *03:58:34.8, 38.°95N×41.°25E, h14km±2km, Ml4.4*
TEH ***21*** *03:58:34.9, 38.°90N×41.°32E, h7km*
IDC ***21*** *03:58:34.0±0.7, 38.°79N×41.°20E, h0km, mb4.0/18, mb1 4.1/23, mb1mx4.0/29, mbtmp4.0/23, ML3.7/4, MS3.1/11, Ms1 3.1/11, ms1mx2.8/40, Error ellipse: s-maj=17.8km s-min=9.6km az=173.0*
MOS ***21*** *03:58:34.5±1.0, 38.°84N×41.°23E, h10km, mb4.4/34, Error ellipse: s-maj=6.5km s-min=4.5km az=117.2*
NEIC ***21*** *03:58:35.0, 38.°89N×41.°32E, h7km, mb4.3/37, ML4.1(ISK), After ISK.*
ISK ***21*** *03:58:35.4, 38.°90N×41.°32E, h8km, ML4.0*
SZGRF ***21*** *03:58:36.0, 38.°26N×41.°51E, h33km, mb4.4, Turkey*
CSEM ***21*** *03:58:38.1±0.1, 38.°93N×41.°30E, h20km, mb4.4/18, Error ellipse: s-maj=3.6km s-min=3.0km az=143.0*
NSSC ***21*** *03:58:41, 38.°84N×41.°04E, h40km*
ISC 21 03:58:37.3±0.7, 38.°92N±0.°02×41.°29E±0.°02, h13km±5km, n352, σ1°09/391, mb4.1/51, MS3.1/6, 6C-20D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BINT	Bingol	0.63	266	PG	Pg	03 58 48.9	-0.6
BINT	Bingol	0.63	266	*i* Pg	Pg	03 58 48.9	-0.7
BTMT	Batman	0.74	168	PG	Pg	03 58 50.1	-1.5
ERZM	Erzurum	0.99	3	⇓*i*P	Pb	03 58 53.1	-3.2
ERZM				*i* S	Sb	03 59 07.9	-1.3
ERZM	Erzurum	0.99	3	*i* P	Pb	03 58 53.1	-3.1
ERZM				*i* S	Sb	03 59 07.9	-1.3
BEST	Besiri	1.03	181	⇓*i*P	Pb	03 58 55.6	-1.3
BEST				*i* S	Sb	03 59 10.6	+0.3
HOMI	Horasan	1.22	23	⇓*i*P	Pn	03 58 57.0	-3.0
HOMI				*i* S	Sb	03 59 14.9	-1.0
KOPT	Kop Dagi	1.26	331	⇓*i*P	Pn	03 58 58.0	-2.5
KOPT				*i* S	Sb	03 59 15.3	-1.7
KOPT	Kop Dagi	1.26	331	*i* P	Pn	03 58 58.0	-2.6
KOPT				*i* S	Sb	03 59 15.3	-1.7
DIY	Diyarbakir	1.32	220	PN	Pn	03 59 00.6	-0.8
DIY	Diyarbakir	1.32	220	*i* Pn	Pn	03 59 00.6	-0.8
DIYA	Diyarbakir	1.35	223	⇑*i*P	Pn	03 59 01.2	-0.6
DIYA				*i* S	Sn	03 59 20.2	+0.5
DIYA	Diyarbakir	1.35	223	*i* P	Pn	03 59 01.2	-0.7
DIYA				*i* S	Sn	03 59 20.2	+0.5
AGRB	Hanur-Agry	1.47	63	*e*PN	Pn	03 59 02.1	-1.4
AGRB				*e*SN	Sn	03 59 22.6	0.0
AGRB	Hanur-Agry	1.47	63	*e*Pn	Pn	03 59 02.1	-1.4
AGRB				*e*Sn	Sn	03 59 22.6	0.0
PTK	Pertek	1.48	270	*e*PN	Pn	03 59 02.9	-0.8
PTK				*e*SN	Sn	03 59 23.7	+0.8
PTK	Pertek	1.48	270	*e*Pn	Pn	03 59 02.9	-0.8
PTK				*e*Sn	Sn	03 59 23.7	+0.8
VANT	Van	1.62	107	*e*PN	Pn	03 59 04.8	-0.8
SVRC	Sivrice-ELAZID	1.65	252	*e*PN	Pn	03 59 05.6	-0.3
SVRC				*e*SN	Sn	03 59 27.9	+1.0
SVRC	Sivrice-ELAZID	1.65	252	*e*Pn	Pn	03 59 05.6	-0.3
SVRC				*e*Sn	Sn	03 59 27.9	+1.0
MARD	Mardin	1.65	194	⇓*i*P	Pn	03 59 05.7	-0.3
MARD				*i* S	Sn	03 59 27.6	+0.6
VANB	Van	1.67	101	*e*PN	Pn	03 59 05.7	-0.5
VANB	Van	1.67	101	*e*Pn	Pn	03 59 05.7	-0.5
TVAN	Van	1.70	103	⇓*i*P	Pn	03 59 07.1	+0.6
TVAN				*i* S	Sn	03 59 31.7	+3.5
TVAN	Van	1.70	103	*i* P	Pn	03 59 07.1	+0.5
TVAN				*i* S	Sn	03 59 31.7	+3.5
EZC	Erzincan	1.72	300	*e*PN	Pn	03 59 06.0	-0.8
ELZG	Elazig	1.85	258	⇑*i*P	Pn	03 59 08.1	-0.7
ELZG				*i* S	Sn	03 59 36.3	+4.2
ELZG	Elazig	1.85	258	*i* P	Pn	03 59 08.1	-0.7
ELZG				*i* S	Sn	03 59 36.3	+4.3
DYDN	Diyadin	1.96	71	⇓*i*P	Pn	03 59 10.0	-0.2
DYDN				*i* S	Sn	03 59 40.3	+5.6
DYDN	Diyadin	1.96	71	*i* P	Pn	03 59 10.0	-0.2
DDEM	Demirkent	2.00	10	⇓*i*P	Pn	03 59 10.2	-0.6
DDEM				*i* S	Sn	03 59 37.5	+1.9
DDEM	Demirkent	2.00	10	*i* P	Pn	03 59 10.2	-0.6
DDEM				*i* S	Sn	03 59 37.5	+1.8
KBSD	Kabsdagh	2.00	197	⇓P	Pn	03 59 11.0	+0.2
KBSD				⇓S	Sn	03 59 33.0	-2.7
KBSD	Kabsdagh	2.00	197	⇓*i*P	Pn	03 59 11.3	+0.5
KBSD				⇓*i*S	Sn	03 59 33.2	-2.5
CLDR	Caldiran	2.06	83	*e*PN	Pn	03 59 11.7	+0.2
CLDR	Caldiran	2.06	83	*e*Pn	Pn	03 59 11.7	+0.2
GUMT	Gumushane	2.08	318	*e*PN	Pn	03 59 12.0	+0.2
GUMT	Gumushane	2.08	318	*e*Pn	Pn	03 59 12.0	+0.1
KARS	Kars	2.19	38	*e*PN	Pn	03 59 12.8	-0.6
KARS	Kars	2.19	38	*e*Pn	Pn	03 59 12.8	-0.6
PZAR	Pazar-Rize	2.28	352	*e*PN	Pn	03 59 14.5	0.0
PZAR	Pazar-Rize	2.28	352	*e*Pn	Pn	03 59 14.5	-0.1
ARTV	Artvin	2.31	12	⇓*i*P	Pn	03 59 14.7	-0.4
ARTV				*i* S	Sn	03 59 46.5	+3.1
ARTV	Artvin	2.31	12	*i* P	Pn	03 59 14.7	-0.4
ARTV				*i* S	Sn	03 59 46.5	+3.1
MYA	Malataya	2.32	256	*e*PN	Pn	03 59 14.7	-0.5
MYA	Malataya	2.32	256	*e*Pn	Pn	03 59 14.7	-0.5
KTUT	Trabzon	2.38	331	*e*PN	Pn	03 59 16.3	+0.4
KTUT	Trabzon	2.38	331	*e*Pn	Pn	03 59 16.3	+0.4
URFA	Urfa	2.44	234	*e*PN	Pn	03 59 16.3	-0.6
URFA	Urfa	2.44	234	*e*Pn	Pn	03 59 16.3	-0.6
CUKT	Cukurca	2.47	132	*e*PN	Pn	03 59 17.2	-0.1
CUKT	Cukurca	2.47	132	*e*Pn	Pn	03 59 17.2	-0.1
BCA	Borcka	2.54	6	*e*PN	Pn	03 59 17.5	-0.6
BCA	Borcka	2.54	6	*e*Pn	Pn	03 59 17.5	-0.6
SFNV	Sufian	2.67	201	⇓P	Pn	03 59 20.0	+0.1
SFNV				⇓S	Sn	03 59 48.0	-4.1
SFNV	Sufian	2.67	201	⇓*i*P	Pn	03 59 21.0	+1.1
SFNV				⇓*i*S	Sn	03 59 48.5	-3.6
ATAB	Bozova	2.77	239	⇑*i*P	Pn	03 59 19.8	-1.5
ATAB	Bozova	2.77	239	*i* P	Pn	03 59 19.8	-1.5
ESPY	Espiye-Giresun	2.81	316	*e*PN	Pn	03 59 22.8	+0.9
ESPY	Espiye-Giresun	2.81	316	*e*Pn	Pn	03 59 22.8	+1.0
GNI	Garni	2.94	64	*e*PN	Pn	03 59 24.4	+0.8
GNI	Garni	2.94	64	Pn	Pn	03 59 24.0	+0.4
	15nm,0.3s,baz=280,slow=4.5,SNR=29						
GNI				Lg		04 00 12.8	
	4.1nm,0.3s,baz=49,slow=19,SNR=4.0						
GNI	Garni	2.94	64	*d*iP	Pn	03 59 24.1	+0.5
GNI	Garni	2.94	64	*i* P	Pn	03 59 24.1	+0.5
GNI				Lg		04 00 12.8	
ISHB	Shabestar	3.45	99	*e*Pn	Pn	03 59 31.7	+1.1
ISHB				*e*		03 59 50.2	
	comp=Z,1μm,0.3s						
ISHB	Shabestar	3.45	99	*e*Pn	Pn	03 59 31.7	+1.1
IMRD	Marand	3.45	92	*e*Pn	Pn	03 59 36.8	+6.1
IMRD				*e*		03 59 56.9	
	comp=Z,3μm,0.3s						
SVSK	Karacayir	3.47	288	*e*PN	Pn	03 59 31.6	+0.6
SVSK	Karacayir	3.47	288	*e*Pn	Pn	03 59 31.6	+0.6
SARI	SarD1z-Kayseri	3.60	268	*e*PN	Pn	03 59 37.5	+4.7
GAZ	Gaziantep	3.66	243	*e*PN	Pn	03 59 34.5	+0.8
GAZ	Gaziantep	3.66	243	*e*Pn	Pn	03 59 34.5	+0.9
KMRS	Kahramanmaras	3.74	249	*e*PN	Pn	03 59 35.4	+0.8
KMRS	Kahramanmaras	3.74	249	*e*Pn	Pn	03 59 35.4	+0.8
SLMH	Al Salmeh	3.80	226	⇑P	Pn	03 59 35.0	-0.5
SLMH				⇑S	Sn	04 00 14.0	-6.0
SLMH	Al Salmeh	3.80	226	⇑*i*P	Pn	03 59 35.1	-0.4
TBLG	Delisi	3.85	42	P	Pn	03 59 36.5	+0.3
TBLG				S	Sg	04 00 38.5	-2.4
TBLG	Delisi	3.85	42	P	Pn	03 59 36.5	+0.3
MTA	Mtatsminda	3.85	43	P	Pn	03 59 36.2	0.0
MTA				S	Sg	04 00 49.5	+8.5
TOKT	Tokat	3.93	292	*e*PN	Pn	03 59 38.7	+1.4
TOKT	Tokat	3.93	292	*e*Pn	Pn	03 59 38.7	+1.5
JHLN	Al Jahlan	3.96	216	⇑P	Pn	03 59 38.0	+0.3
JHLN				⇑S	Sn	04 00 19.0	-5.0
JHLN	Al Jahlan	3.96	216	⇑*i*P	Pn	03 59 38.3	+0.6
ONI	Oni	4.02	23	P	Pn	03 59 38.4	-0.1
ONI				S	Sg	04 00 47.2	+0.9
DGRG	David-gareji	4.02	50	P	Pn	03 59 39.7	+1.2
DGRG				S	Sg	04 00 50.9	+4.6
DRWC	Darouich	4.32	239	⇑P	Pn	03 59 42.0	-0.7
DRWC				⇑S	Sn	04 00 26.0	-7.0
DRWC	Darouich	4.32	239	⇑*i*P	Pn	03 59 42.6	-0.1
ZEI	Tsey	4.33	26	*e*P	Pn	03 59 44.2	+1.5
ZEI				pmax	pmax		
	comp=Z,32nm,0.7s						
ZEI	Tsey	4.33	26	*e*P	Pn	03 59 44.2	+1.5
	comp=Z,32nm,0.7s						
DOMR	Dombai	4.38	3	*i* P	Pn	03 59 45.2	+1.8
DOMR	Dombai	4.38	3	*i* P	Pn	03 59 45.2	+1.8
KOZT	Kozan	4.54	253	*e*PN	Pn	03 59 47.0	+1.4
IHRS	Heris	4.54	96	*e*Pn	Pn	03 59 52.9	+7.2
KVT	Kavak	4.57	300	*e*PN	Pn	03 59 47.8	+1.7
KVT	Kavak	4.57	300	*e*Pn	Pn	03 59 47.8	+1.7
CEYT	Ceyhan	4.78	248	*e*PN	Pn	03 59 50.4	+1.5
CEYT	Ceyhan	4.78	248	*e*Pn	Pn	03 59 50.4	+1.4
BTCH	Batrach	4.80	235	⇑P	Pn	03 59 49.0	-0.3
BTCH				⇑S	Sn	04 00 38.0	-6.7
BTCH	Batrach	4.80	235	⇑*i*P	Pn	03 59 49.3	0.0
SOC	Sochi	4.81	346	*e*P	Pn	03 59 49.3	-0.1
SOC				pmax	pmax		
	comp=Z,87nm,0.9s						
SOC	Sochi	4.81	346	*e*P	Pn	03 59 49.3	-0.1
	comp=Z,87nm,0.9s						
SHAR	Shatzhatmas	4.93	12	*i* P	Pn	03 59 52.5	+1.5
SHAR	Shatzhatmas	4.93	12	*i* P	Pn	03 59 52.5	+1.5
KUBR	Kubataba	5.13	17	*i* P	Pn	04 00 01.1	+7.3
KIV	Kislovodsk	5.14	11	⇑*i*P	Pn	03 59 54.8	+0.9
KIV				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KIV	Kislovodsk	5.14	11	*e*Pn	Pn	03 59 54.5	+0.6
	comp=Z,40nm,0.9s						
KIV				*e*Pg	Pg	04 00 12.0	-3.7
KIV	Kislovodsk	5.14	11	*e*Pn	Pn	03 59 54.5	+0.6
	comp=Z,40nm,0.9s						
KIV	Kislovodsk	5.14	11	*i* P	Pn	03 59 54.8	+0.9
	comp=Z,4.0nm,0.5s						
KIV	Kislovodsk	5.14	11	*e*Pg	Pg	04 00 12.0	-3.7
KARA	Karaisali	5.19	253	*e*PN	Pn	03 59 56.4	+1.8
KARA	Karaisali	5.19	253	*e*Pn	Pn	03 59 56.4	+1.8
SLNF	Slenfeh	5.23	232	⇑P	Pn	03 59 55.0	-0.2
SLNF				⇑S	Sn	04 00 49.0	-6.3
SLNF	Slenfeh	5.23	232	⇑*i*P	Pn	03 59 55.2	0.0
KRTS	Karatas	5.24	245	*e*PN	Pn	03 59 57.1	+1.7
KRTS	Karatas	5.24	245	*e*Pn	Pn	03 59 57.1	+1.8
CORM	Corum	5.30	286	*e*PN	Pn	03 59 58.2	+2.1
CORM	Corum	5.30	286	*e*Pn	Pn	03 59 58.2	+2.1
DIKM	Dikmen	5.36	302	*e*PN	Pn	03 59 59.2	+2.3
DIKM	Dikmen	5.36	302	*e*Pn	Pn	03 59 59.2	+2.3
MERS	Mersin	5.73	251	*e*PN	Pn	04 00 04.0	+1.9
MERS	Mersin	5.73	251	*e*Pn	Pn	04 00 04.0	+1.9
IDHR	Dehrash	5.87	134	*e*Pn	Pn	04 00 04.7	+0.8
IDHR				*e*		04 02 04.5	
	comp=N,1μm,0.4s						
IDHR	Dehrash	5.87	134	*e*Pn	Pn	04 00 04.7	+0.8
BR131	Keskin Array S	5.99	280	*e*Pn	Pn	04 00 05.8	+0.2
	comp=N,5.1nm,0.6s						
BR131	Keskin Array S	5.99	280	*e*Pn	Pn	04 00 05.8	+0.2
	comp=N,5.1nm,0.6s						
BRTR	Keskin Array B	5.99	280	Pn	Pn	04 00 05.3	-0.2
	comp=N,0.5nm,0.3s,baz=102,slow=14,SNR=37						
BRTR	Keskin Array B	5.99	280	*i* P	Pn	04 00 06.0	+0.4
BRTR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BRTR	Keskin Array B	5.99	280	Pn	Pn	04 00 05.3	-0.3
BRTR	Keskin Array B	5.99	280	*i* P	Pn	04 00 06.0	+0.4
	comp=Z,6.0nm,0.7s						
SULT	Sultanhani-AKS	6.14	266	*e*PN	Pn	04 00 10.0	+2.4
SULT	Sultanhani-AKS	6.14	266	*e*Pn	Pn	04 00 10.0	+2.4
MAK	Makhachkala	6.20	47	*e*P	Pn	04 00 18.0	+10
MAK				MLR	MLR		
	comp=Z,311nm,9.0s						
IGHG	Ghaleghazi	6.24	136	*e*Pn	Pn	04 00 09.8	+0.7
IGHG				*e*		04 02 20.9	
	comp=Z,1μm,0.6s						
IGHG	Ghaleghazi	6.24	136	*e*Pn	Pn	04 00 09.8	+0.7
IVIS	Veis	6.25	133	*e*Pn	Pn	04 00 10.0	+0.8
IVIS				*e*		04 00 46.3	
	comp=Z,253nm,0.2s						
IVIS	Veis	6.25	133	*e*Pn	Pn	04 00 10.0	+0.8
HWQ	Hawqa	6.32	225	*e*Pn	Pn	04 00 09.8	-0.4
ANN	Anapa	6.54	335	*e*P	Pn	04 00 14.1	+0.9
ANN				*e*S	Sn	04 01 34.4	+6.8
ANN	Anapa	6.54	335	*e*P	Pn	04 00 14.1	+0.9
BHL	Bhannes	6.76	224	*e*Pn	Pn	04 00 16.7	+0.5
ZALF	Zalf	6.79	209	⇑P	Pn	04 00 16.0	-0.6
ZALF				⇑S	Sn	04 01 26.0	-7.8
ZALF	Zalf	6.79	209	⇑*i*P	Pn	04 00 17.0	+0.4
TOTH	TOTAH	6.80	217	⇑P	Pn	04 00 18.0	+1.3
TOTH	TOTAH	6.80	217	⇑*i*P	Pn	04 00 18.4	+1.7
SALA	Sala	7.22	212	⇓P	Pn	04 00 23.0	+0.6
SALA	Sala	7.22	212	⇓*i*P	Pn	04 00 23.6	+1.2
MMAI	Mount Meron Ar	7.58	221	Pn	Pn	04 00 29.5	+2.1
	comp=Z,10nm,0.3s,baz=64,slow=14,SNR=38						
MMAI				Lg		04 02 33.4	
	comp=Z,4.2nm,0.3s,baz=59,slow=21,SNR=3.1						
MMAI				LR	LR	04 03 29.8	
	comp=Z,154nm,18.6s,baz=230,slow=40						
SUDU	Sudak	7.59	324	*e*P	Pn	04 00 31.9	+4.4
SUDU				*e*S	Sn	04 02 04.3	+11
ASF	Jabal al Asfar	7.62	209	Pn	Pn	04 00 28.3	+0.3
	comp=Z,1.0nm,0.3s,baz=260,slow=12,SNR=20						
ASF				Lg		04 02 31.5	
	baz=90,slow=20,SNR=3.6						
ASF				LR	LR	04 03 29.3	
	comp=Z,135nm,20.8s,baz=52,slow=40						
ASF	Jabal al Asfar	7.62	209	P	Pn	04 00 28.3	+0.3
ASF				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASF				MLR	MLR		
	comp=Z,135nm,20.8s						
EIL	Elat	10.61	211	Lg		04 04 17.6	
	comp=Z,1.0nm,0.3s,baz=62,slow=20,SNR=4.1						
EIL				LR	LR	04 05 14.6	
	comp=Z,66nm,18.9s,baz=263,slow=38						
VSR	Storozhevoye	12.39	354	*e*P	Pn	04 01 33.3	+0.1
VSR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
VSR				pmax	pmax		
	comp=N,4.0nm,0.5s						
VSR				pmax	pmax		
	comp=E,10.0nm,0.9s						
VSR	Storozhevoye	12.39	354	*e*P	Pn	04 01 33.3	+0.1
	comp=E,4.0nm,0.5s						
MLR	Muntele Rosu	13.13	305	Pn	Pn	04 01 41.7	-1.6
	comp=E,0.1nm,0.3s,baz=176,slow=16,SNR=2.1						
MLR				LR	LR	04 07 34.2	
	comp=E,38nm,21.5s,baz=297,slow=41						
MLR	Muntele Rosu	13.13	305	P	Pn	04 01 41.7	-1.6
	comp=E,38nm,21.5s						
AKASG	Malin Array Be	14.54	328	Pn	Pn	04 02 01.1	-1.5
	comp=E,0.7nm,0.3s,baz=131,slow=13,SNR=9.1						
AKASG	Malin Array Be	14.54	328	P	Pn	04 02 01.1	-1.5
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	Malin Array Be	14.54	328	Pn	Pn	04 02 01.1	-1.5
AKBB	Malin Array Si	14.54	328	*e*P	Pn	04 02 02.8	+0.2
AKBB	Malin Array Si	14.54	328	*e*Pn	Pn	04 02 02.8	+0.2
KIEV	Kiev	14.54	328	*e*P	Pn	04 02 04.5	+1.9
KIEV				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KIEV	Kiev	14.54	328	*e*Pn	Pn	04 02 04.5	+1.9
	comp=Z,6.6nm,0.7s						
KIEV	Kiev	14.54	328	*e*Pn	Pn	04 02 04.5	+1.9
	comp=Z,6.6nm,0.7s						
LVV	L'vov	16.42	317	*e*P	Pn	04 02 31.0	+3.7
LVV	L'vov	16.42	317	*e*P	Pn	04 02 31.0	+3.7
AKTK	Aktyubinsk	16.51	40	Pn	Pn	04 02 27.9	-0.4
AKTK				LR	LR	04 10 40.7	
AKTK	Aktyubinsk	16.51	40	Pn	Pn	04 02 28.0	-0.4
AKTO	Aktyubinsk	16.51	40	Pn	Pn	04 02 27.9	-0.4
	comp=Z,0.1nm,0.3s,baz=234,slow=14,SNR=7.5						
AKTO				LR	LR	04 10 40.7	
	comp=Z,33nm,22.0s,baz=233,slow=44						
OBN	Obninsk	16.51	350	⇑*e*P	Pn	04 02 31.4	+3.0
OBN				pmax	pmax		
	comp=Z,6.0nm,0.6s						
OBN				MLR	MLR		
	comp=Z,100nm,14.0s						
OBN	Obninsk	16.51	350	*e*P	Pn	04 02 31.4	+3.0
	comp=Z,100nm,14.0s						
ABKAR	Akbulak array	16.88	46	*e*P	Pn	04 02 33.1	+0.1
	comp=Z,2.1nm,0.6s						
ABKAR	Akbulak array	16.88	46	*e*P	Pn	04 02 33.1	+0.1
	comp=Z,2.1nm,0.6s						
KWP	Kalwaria Pacla	17.04	315	*e*P	Pn	04 02 34.6	-0.5
KWP				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KWP	Kalwaria Pacla	17.04	315	*e*P	Pn	04 02 34.5	-0.5
	comp=Z,5.7nm,0.8s						
CRVS	Cervenica-Dubn	17.38	311	*e*P	Pn	04 02 40.1	+0.7
CRVS				pmax	pmax		
	comp=Z,81nm,3.7s						
CRVS	Cervenica-Dubn	17.38	311	*e*P	Pn	04 02 40.1	+0.7
	comp=Z,81nm,3.7s						
CRVS				*e*		04 02 46.0	
CRVS	Cervenica-Dubn	17.38	311	*e*P	Pn	04 02 40.1	+0.7
CRVS				*e*		04 02 46.0	
CRVS	Cervenica-Dubn	17.38	311	*e*P	Pn	04 02 40.1	+0.7
	comp=Z,81nm,3.7s						
PSZ	Piszkesteto	17.91	307	*e*P	Pn	04 02 46.8	+0.8
PSZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
PSZ	Piszkesteto	17.91	307	*e*P	Pn	04 02 46.8	+0.8
	comp=Z,5.5nm,1.0s						
PSZ	Piszkesteto	17.91	307	*e*P	Pn	04 02 46.8	+0.8
	comp=Z,5.5nm,1.0s						
NIE	Niedzica	18.29	312	*e*P	Pn	04 02 50.5	-0.1
NIE	Niedzica	18.29	312	*e*P	Pn	04 02 50.5	-0.1
VYHS	Vyhne	18.79	308	*e*P	Pn	04 02 57.5	+0.9
VYHS				pmax	pmax		
	comp=Z,12nm,2.3s						
VYHS	Vyhne	18.79	308	*e*P	Pn	04 02 57.5	+0.9
	comp=Z,12nm,2.3s						
VYHS	Vyhne	18.79	308	*e*P	Pn	04 02 57.5	+0.9
VYHS	Vyhne	18.79	308	*e*P	Pn	04 02 57.5	+0.9
	comp=Z,12nm,2.3s						
TIP	Timpagrande	19.05	279	*e*P	Pn	04 02 58.6	-1.3
	comp=Z,12nm,1.1s						
TIP	Timpagrande	19.05	279	*e*P	Pn	04 02 58.6	-1.3
	comp=Z,12nm,1.1s						
CEL	Celeste	19.85	276	*e*P	Pn	04 03 08.0	-1.5
	comp=Z,6.6nm,0.6s						
CEL	Celeste	19.85	276	*e*P	Pn	04 03 08.0	-1.5
	comp=Z,6.6nm,0.6s						
ARU	Arti	20.92	28	*c iP*	P	04 03 19.9	+0.6
ARU				S	S	04 07 16.0

comp=Z,1.0nm,0.7s
PGF Pioggiola 24.66 289 *e*P **P 04 03 55.4 -2.1**
comp=Z,14nm,0.8s,mb4.2
PGF Pioggiola 24.66 289 *e*P **P 04 03 55.4 -2.1**
PGF pmax pmax
comp=Z,7.0nm,0.8s,mb4.2
PGF Pioggiola 24.66 289 *e*P **P 04 03 55.4 -2.1**
comp=Z,6.9nm,0.8s,mb4.2
PGF Pioggiola 24.66 289 *e*P **P 04 03 55.4 -2.1**
comp=Z,6.9nm,0.8s,mb4.2
JOF Joensuu 24.78 349 *e*P **P 04 03 56.9 -1.6**
JOF pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
JOF Joensuu 24.78 349 *e*p **P 04 03 56.9 -1.6**
comp=Z,5.3nm,0.7s,mb4.2
JOF Joensuu 24.78 349 *e*p **P 04 03 56.9 -1.6**
comp=Z,5.3nm,0.7s,mb4.2
EKS2 Erkin-Say 24.79 71 *e*P **P 04 03 59.2 +0.4**
comp=Z,5.3nm,0.8s,mb4.1
KAF Kangasniemi 24.97 343 *e*P **P 04 03 56.1 -4.1**
KAF pmax pmax
comp=Z,6.0nm,0.9s,mb4.1
KAF Kangasniemi 24.97 343 *e*p **P 04 03 56.1 -4.1**
comp=Z,6.3nm,0.9s,mb4.2
KAF Kangasniemi 24.97 343 *e*p **P 04 03 56.1 -4.1**
comp=Z,6.3nm,0.9s,mb4.2
AAK Ala-Archa 25.32 71 P **P 04 04 05.4 +1.8**
comp=Z,1.5nm,0.4s,mb3.8,baz=233,slow=10,SNR=3.7
AAK Ala-Archa 25.32 71 P **P 04 04 05.4 +1.8**
AAK pmax pmax
comp=Z,2.0nm,0.4s,mb4.0
UCH Uchtor 25.36 72 *e*P **P 04 04 05.5 +1.5**
comp=Z,2.0nm,0.9s,mb3.6
KEST Kesra 25.54 273 P **P 04 04 04.8 -0.8**
comp=Z,5.9nm,0.9s,mb4.1,baz=347,slow=4.3,SNR=14
SBF Sospel 25.76 292 *e*P **P 04 04 07.5 -0.1**
comp=Z,33nm,0.9s,mb4.6
SBF Sospel 25.76 292 *e*P **P 04 04 07.5 -0.1**
SBF pmax pmax
comp=Z,17nm,0.9s,mb4.6
SBF Sospel 25.76 292 *e*P **P 04 04 07.5 -0.1**
comp=Z,17nm,0.9s,mb4.6
SBF Sospel 25.76 292 *e*P **P 04 04 07.5 -0.1**
comp=Z,17nm,0.9s,mb4.6
TKM2 Tokmak 2 26.12 70 *e*P **P 04 04 12.2 +1.4**
TKM2 pmax pmax
comp=Z,16nm,0.6s,mb4.7
TKM2 Tokmak 2 26.12 70 *e*P **P 04 04 12.2 +1.4**
comp=Z,16nm,0.6s,mb4.7
CDF Champ du Feu 26.19 302 *e*P **P 04 04 10.6 -0.8**
CDF Champ du Feu 26.19 302 *e*P **P 04 04 10.6 -0.8**
MBDF Montbardon 26.24 294 *e*P **P 04 04 11.8 -0.1**
comp=Z,12nm,0.8s,mb4.2
MBDF Montbardon 26.24 294 *e*P **P 04 04 11.8 -0.1**
MBDF pmax pmax
comp=Z,6.0nm,0.8s,mb4.2
MBDF Montbardon 26.24 294 *e*P **P 04 04 11.8 -0.1**
comp=Z,6.2nm,0.8s,mb4.2
MBDF Montbardon 26.24 294 *e*P **P 04 04 11.8 -0.1**
comp=Z,6.2nm,0.8s,mb4.2
LPG La Plagne 26.27 296 *e*P **P 04 04 11.6 -0.6**
comp=Z,12nm,0.8s,mb4.2
LPG La Plagne 26.27 296 *e*P **P 04 04 11.6 -0.6**
LPG pmax pmax
comp=Z,6.0nm,0.8s,mb4.2
LPG La Plagne 26.27 296 *e*P **P 04 04 11.6 -0.6**
comp=Z,5.9nm,0.8s,mb4.2
LPG La Plagne 26.27 296 *e*P **P 04 04 11.6 -0.6**
comp=Z,5.9nm,0.8s,mb4.2
LPL La Plagne 26.29 296 *e*P **P 04 04 11.8 -0.5**
comp=Z,22nm,1.2s,mb4.3
LPL La Plagne 26.29 296 *e*P **P 04 04 11.8 -0.5**
LPL pmax pmax
comp=Z,11nm,1.2s,mb4.3
LPL La Plagne 26.29 296 *e*P **P 04 04 11.8 -0.5**
comp=Z,11nm,1.2s,mb4.3
LPL La Plagne 26.29 296 *e*P **P 04 04 11.8 -0.5**
comp=Z,11nm,1.2s,mb4.3
BNI Bardonecchia 26.31 295 *e*P **P 04 04 12.2 -0.3**
BNI pmax pmax
comp=Z,10.0nm,1.0s,mb4.3
BNI Bardonecchia 26.31 295 *e*P **P 04 04 12.2 -0.3**
comp=Z,9.9nm,1.0s,mb4.3
FRF La Foret Royal 26.34 291 *e*P **P 04 04 12.3 -0.5**
FRF La Foret Royal 26.34 291 *e*P **P 04 04 12.3 -0.5**
HINF Hinteralfeld 26.39 301 *e*P **P 04 04 12.2 -1.0**
HINF Hinteralfeld 26.39 301 *e*P **P 04 04 12.2 -1.0**
LMR La Mourre 26.45 291 *e*P **P 04 04 13.2 -0.6**
comp=Z,8.7nm,1.0s,mb3.9
LMR La Mourre 26.45 291 *e*P **P 04 04 13.2 -0.6**
LMR pmax pmax
comp=Z,4.0nm,1.0s,mb3.9
LMR La Mourre 26.45 291 *e*P **P 04 04 13.2 -0.6**
comp=Z,4.3nm,1.0s,mb3.9
LMR La Mourre 26.45 291 *e*P **P 04 04 13.2 -0.6**
comp=Z,4.3nm,1.0s,mb3.9
HAU Haudompre 26.75 301 *e*P **P 04 04 15.7 -0.7**
HAU Haudompre 26.75 301 *e*P **P 04 04 15.7 -0.7**
CABF La Chapelle 26.79 298 *e*P **P 04 04 16.8 -0.1**
comp=Z,36nm,1.1s,mb4.5
CABF La Chapelle 26.79 298 *e*P **P 04 04 16.8 -0.1**
CABF pmax pmax
comp=Z,18nm,1.1s,mb4.5
CABF La Chapelle 26.79 298 *e*P **P 04 04 16.8 -0.1**
comp=Z,18nm,1.1s,mb4.5
CABF La Chapelle 26.79 298 *e*P **P 04 04 16.8 -0.1**
comp=Z,18nm,1.1s,mb4.5
ORIF Oris-en-Rattie 26.88 294 *e*P **P 04 04 17.0 -0.6**
comp=Z,6.6nm,0.8s,mb3.9
ORIF Oris-en-Rattie 26.88 294 *e*P **P 04 04 17.0 -0.6**
ORIF pmax pmax
comp=Z,3.0nm,0.8s,mb3.9
ORIF Oris-en-Rattie 26.88 294 *e*P **P 04 04 17.0 -0.6**
comp=Z,3.3nm,0.8s,mb3.9
ORIF Oris-en-Rattie 26.88 294 *e*P **P 04 04 17.0 -0.6**
comp=Z,3.3nm,0.8s,mb3.9
SMRF Simiane la Rot 27.11 292 *e*P **P 04 04 18.8 -0.9**
comp=Z,9.7nm,1.1s,mb3.9
SMRF Simiane la Rot 27.11 292 *e*P **P 04 04 18.8 -0.9**
comp=Z,9.7nm,1.1s,mb4.2
SMRF Simiane la Rot 27.11 292 *e*P **P 04 04 18.8 -0.9**
comp=Z,4.8nm,1.1s,mb3.9
ATD Arta Tunnel 27.31 177 LR LR 04 14 58.8
comp=Z,64nm,19.0s,MS3.2,baz=293,slow=36
HFS Hagfors 27.42 330 P **P 04 04 21.5 -0.8**
comp=Z,3.7nm,0.8s,mb3.9,baz=187,slow=5.7,SNR=3.6
HFS LR LR 04 16 16.6
comp=Z,27nm,21.0s,MS2.8,baz=237,slow=39
VIVF Saint-Julien-l 27.73 294 *e*P **P 04 04 24.1 -1.2**
comp=Z,3.8nm,0.7s,mb3.8
VIVF Saint-Julien-l 27.73 294 *e*P **P 04 04 24.1 -1.2**
VIVF pmax pmax
comp=Z,2.0nm,0.7s,mb3.9
VIVF Saint-Julien-l 27.73 294 *e*P **P 04 04 24.1 -1.2**
comp=Z,1.9nm,0.7s,mb3.8
VIVF Saint-Julien-l 27.73 294 *e*P **P 04 04 24.1 -1.2**
comp=Z,1.9nm,0.7s,mb3.8
SMF Signal de Mont 28.34 298 *e*P **P 04 04 29.8 -0.9**
comp=Z,6.5nm,0.8s,mb4.0
SMF Signal de Mont 28.34 298 *e*P **P 04 04 29.8 -0.9**
SMF pmax pmax
comp=Z,3.0nm,0.8s,mb4.0
SMF Signal de Mont 28.34 298 *e*P **P 04 04 29.8 -0.9**
comp=Z,3.3nm,0.8s,mb4.0
SMF Signal de Mont 28.34 298 *e*P **P 04 04 29.8 -0.9**
comp=Z,3.2nm,0.8s,mb4.0
SSF Saint Saulge 28.59 299 *e*P **P 04 04 32.9 0.0**
SSF Saint Saulge 28.59 299 *e*P **P 04 04 32.9 0.0**
KURK Kurchatov 28.68 53 P **P 04 04 33.4 -0.3**
comp=Z,1.2nm,0.8s,mb3.7,baz=267,slow=9.0,SNR=7.7
KURK PcP PcP 04 07 43.0 -0.9
comp=Z,0.8nm,0.6s,baz=263,slow=2.8,SNR=3.8
KURK Kurchatov 28.68 53 P **P 04 04 33.4 -0.3**
KURK 04 07 43.0
KURK pmax pmax
comp=Z,1.0nm,0.8s,mb3.6
KURK Kurchatov 28.68 53 *e*P **P 04 04 33.0 -0.7**
comp=Z,10nm,1.5s,mb4.3
KURK PcP PcP 04 07 43.0 -0.9
AVF Avril sur Loir 28.68 298 *e*P **P 04 04 32.7 -1.1**
comp=Z,13nm,1.1s,mb4.3
AVF Avril sur Loir 28.68 298 *e*P **P 04 04 32.7 -1.1**
AVF pmax pmax
comp=Z,6.0nm,1.1s,mb4.2
AVF Avril sur Loir 28.68 298 *e*P **P 04 04 32.7 -1.1**
comp=Z,6.3nm,1.1s,mb4.3
AVF Avril sur Loir 28.68 298 *e*P **P 04 04 32.7 -1.1**
comp=Z,6.3nm,1.1s,mb4.3
NOA NORSAR Array B 28.94 330 P **P 04 04 35.2 -0.7**
comp=Z,0.6nm,0.6s,mb3.5,baz=135,slow=9.0,SNR=2.7
NOA LR LR 04 16 19.1
comp=Z,23nm,20.3s,MS2.8,baz=235,slow=37
NOA NORSAR Array B 28.94 330 P **P 04 04 35.2 -0.7**
NOA LR LR 04 16 19.1
TCF Toulx Ste Croi 29.46 297 *e*P **P 04 04 40.0 -0.7**
comp=Z,3.9nm,0.8s,mb3.9
TCF Toulx Ste Croi 29.46 297 *e*P **P 04 04 40.0 -0.7**
TCF pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
TCF Toulx Ste Croi 29.46 297 *e*P **P 04 04 40.0 -0.7**
comp=Z,2.0nm,0.8s,mb3.9
TCF Toulx Ste Croi 29.46 297 *e*P **P 04 04 40.0 -0.7**
comp=Z,2.0nm,0.8s,mb3.9
LFF La Frestale 30.52 295 *e*P **P 04 04 49.7 -0.4**
comp=Z,13nm,0.9s,mb4.5
LFF La Frestale 30.52 295 *e*P **P 04 04 49.7 -0.4**
LFF pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
LFF La Frestale 30.52 295 *e*P **P 04 04 49.7 -0.4**
comp=Z,6.5nm,0.9s,mb4.5
LFF La Frestale 30.52 295 *e*P **P 04 04 49.7 -0.4**
comp=Z,6.5nm,0.9s,mb4.5
MK31 Makanchi Array 30.78 62 *e*P **P 04 04 51.3 -1.1**
MKAR Makanchi Array 30.78 62 P **P 04 04 52.7 +0.3**
comp=Z,0.6nm,0.7s,mb3.5,baz=268,slow=9.5,SNR=5.2
MKAR PcP PcP 04 07 49.0 -0.4
comp=Z,0.3nm,0.5s,baz=267,slow=2.6,SNR=3.3
MKAR Makanchi Array 30.78 62 P **P 04 04 52.7 +0.3**
MKAR 04 07 49.0
MKAR pmax pmax
comp=Z,1.0nm,0.7s
MKAR Makanchi Array 30.78 62 P **P 04 04 52.7 +0.3**
MKAR PcP PcP 04 07 49.0 -0.4
ETSF Etsaut 31.64 291 *e*P **P 04 04 59.6 -0.4**
ETSF Etsaut 31.64 291 *e*P **P 04 04 59.6 -0.4**
ARCES ARCESS Array B 31.82 350 P **P 04 05 01.4 +0.2**
comp=Z,4.2nm,1.0s,mb4.2,baz=158,slow=7.8,SNR=4.5
ARCES LR LR 04 18 45.2
comp=Z,82nm,18.5s,MS3.4,baz=16,slow=38
ARCES ARCESS Array B 31.82 350 P **P 04 05 01.5 +0.3**
ARCES pmax pmax
comp=Z,4.0nm,1.0s
ARCES MLR MLR
comp=Z,82nm,18.5s
SGMF Saint Gilles 32.71 301 *e*P **P 04 05 08.8 -0.5**
comp=Z,42nm,1.3s,mb4.9
SGMF Saint Gilles 32.71 301 *e*P **P 04 05 08.8 -0.5**
SGMF pmax pmax
comp=Z,21nm,1.3s,mb4.9
SGMF Saint Gilles 32.71 301 *e*P **P 04 05 08.8 -0.5**
comp=Z,21nm,1.3s,mb4.9
SGMF Saint Gilles 32.71 301 *e*P **P 04 05 08.8 -0.5**
comp=Z,21nm,1.3s,mb4.9
ZALV Zalesovo Beam 32.97 48 P **P 04 05 12.8 +1.4**
comp=Z,0.3nm,0.4s,mb3.5,baz=267,slow=5.8,SNR=2.1
ZALV LR LR 04 19 28.8
comp=Z,36nm,20.2s,MS3.1,baz=233,slow=38
QUIF Quistinic 33.12 300 *e*P **P 04 05 11.4 -1.5**
comp=Z,76nm,1.5s,mb5.1
QUIF Quistinic 33.12 300 *e*P **P 04 05 11.4 -1.5**
QUIF pmax pmax
comp=Z,38nm,1.5s,mb5.1
QUIF Quistinic 33.12 300 *e*P **P 04 05 11.4 -1.5**
comp=Z,38nm,1.5s,mb5.1
QUIF Quistinic 33.12 300 *e*P **P 04 05 11.4 -1.5**
comp=Z,38nm,1.5s,mb5.1
ROSF Rostrenen 33.19 301 *e*P **P 04 05 12.3 -1.2**
ROSF Rostrenen 33.19 301 *e*P **P 04 05 12.3 -1.2**
TAM Tamanrasset 34.40 253 *e*P **P 04 05 24.8 +0.5**
TAM pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
TAM Tamanrasset 34.40 253 *e*P **P 04 05 24.8 +0.5**
comp=Z,2.1nm,0.7s,mb4.2
ESDC Sonseca Array 34.75 286 P **P 04 05 25.6 -1.5**
comp=Z,2.0nm,0.8s,mb4.1,baz=68,slow=8.3,SNR=7.2
BTO Baotou 51.60 65 *e*P **P 04 07 41.1 -2.2**
DBIC Dimbokro 52.48 245 P **P 04 07 47.2 -2.9**
comp=Z,4.1nm,0.7s,mb4.5,baz=46,slow=9.2,SNR=7.0
DBIC Dimbokro 52.48 245 *e*P **P 04 07 47.8 -2.3**
DBIC pmax pmax
comp=Z,9.0nm,0.9s
DBIC Dimbokro 52.48 245 *e*P **P 04 07 47.8 -2.2**
comp=Z,8.9nm,0.9s,mb4.7
CMAR Chiang Mai Arr 53.62 95 P **P 04 07 57.8 -0.6**
comp=Z,0.7nm,0.3s,mb4.0,baz=304,slow=9.7,SNR=3.8
CMAR Chiang Mai Arr 53.62 95 P **P 04 07 57.8 -0.7**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
KSRS Korea Array 65.46 61 P **P 04 09 19.4 -0.5**
comp=Z,0.3nm,0.3s,mb3.8,baz=293,slow=10,SNR=3.2
SCHQ Schefferville 68.29 324 P **P 04 09 37.1 -0.6**
comp=Z,1.4nm,0.7s,mb4.1,baz=359,slow=3.6,SNR=3.4
BOSA Boshof 68.83 195 P **P 04 09 38.9 -2.3**
comp=Z,2.6nm,1.0s,mb4.1,baz=357,slow=7.2,SNR=3.8
BOSA Boshof 68.83 195 P **P 04 09 38.9 -2.3**
BOSA pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
YKA Yellowknife Ar 77.09 349 P **P 04 10 28.8 -0.9**
comp=Z,1.0nm,0.9s,mb3.8,baz=11,slow=7.4,SNR=3.9
YKA Yellowknife Ar 77.09 349 P **P 04 10 28.8 -1.0**
YKA pmax pmax
comp=Z,1.0nm,0.9s
YKA Yellowknife Ar 77.09 349 P **P 04 10 28.8 -1.0**

*IDC **21** 03:59:14.1±3.0, 3°.31S×138°.65E, h0km, mb4.1/4, mb1 4.3/6, mb1mx3.9/15, mbtmp4.1/6, ML3.8/2, Error ellipse: s-maj=112.7km s-min=23.4km az=92.0*
*NEIC **21** 03:59:16.8±1.4, 3°.39S×139°.28E, h35km, mb4.2/5, Error ellipse: s-maj=49.4km s-min=10.0km az=95.0*
ISC 21 03:59:21.6±3.8, 3°.5S±0°.1×138°.9E±0°.4, h70km±26km, n13, σ0§90/14, mb4.0/5, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**11.11**	**215**	*e*Pn	**Pn**	**04 01 58.3**	**+0.6**
KAKA	52nm,0.6s			*e*Sn	Sx	04 03 54.8	
WRAB	**Tennant Creek**	**16.88**	**195**	*e*P	**Pn**	**04 03 12.7**	**-0.7**
	7.5nm,0.8s						
WRA	**Warramunga Arr**	**16.89**	**195**	P	**Pn**	**04 03 12.7**	**-0.9**
	0.4nm,0.3s,baz=16,slow=12,SNR=3.9						
WRA				S	Sx	04 06 14.5	
	0.3nm,0.3s,baz=12,slow=23,SNR=4.9						
FITZ	**Fitzroy Crossi**	**19.43**	**221**	P	**Pn**	**04 03 42.2**	**-2.0**
	0.2nm,0.3s,baz=41,slow=8.6,SNR=8.9						
FITZ				S	Sx	04 07 07.4	
	0.3nm,0.3s,baz=357,slow=18,SNR=4.7						
FITZ	**Fitzroy Crossi**	**19.43**	**221**	*e*P	**Pn**	**04 03 45.0**	**+0.9**
	9.6nm,0.9s						
ASAR	**Alice Springs**	**20.58**	**193**	P	**P**	**04 03 57.5**	**+2.6**
	3.9nm,0.5s,baz=20,slow=8.9,SNR=49						
ASAR				S	**S**	**04 07 41.2**	**0.0**
	1.5nm,1.0s,baz=12,slow=28,SNR=3.7						
MK31	**Makanchi Array**	**70.54**	**323**	*e*P	**P**	**04 10 28.9**	**-0.1**
MKAR	**Makanchi Array**	**70.54**	**323**	P	**P**	**04 10 29.2**	**+0.2**
	2.3nm,0.6s,mb4.2,baz=106,slow=7.9,SNR=10						
KURK	**Kurchatov**	**74.48**	**325**	P	**P**	**04 10 52.5**	**+0.1**
	0.9nm,0.8s,mb3.6,baz=113,slow=5.1,SNR=3.4						
KURK	**Kurchatov**	**74.48**	**325**	*e*P	**P**	**04 10 52.5**	**+0.1**
	3.3nm,1.1s,mb4.0						
BVAR	**Borovoye Array**	**80.08**	**325**	P	**P**	**04 11 24.2**	**+0.5**
	1.3nm,0.6s,mb3.9,baz=124,slow=7.9,SNR=7.0						
BRVK	**Borovoye**	**80.15**	**325**	*e*P	**P**	**04 11 23.1**	**-0.9**
	2.6nm,0.7s,mb4.2						
ABKAR	**Akbulak array**	**85.45**	**320**	*e*P	**P**	**04 11 51.6**	**0.0**
	1.1nm,0.6s,mb4.0						

*ISCJB **21** 04:03:00.3±0.3, 32°.30N±0°.03×105°.19E±0°.03, h10km, mb4.1/33, Error ellipse: s-maj=4.3km s-min=3.8km az=7.1*
*IDC **21** 04:03:01.4±0.7, 32°.44N×105°.14E, h0km, mb4.0/17, mb1 4.2/18, mb1mx4.1/29, mbtmp4.1/18, ML3.7/2, Error ellipse: s-maj=35.7km s-min=13.9km az=56.0*
*NEIC **21** 04:03:02.7±0.4, 32°.34N×105°.05E, h10km, mb4.2/23, Error ellipse: s-maj=8.1km s-min=7.8km az=64.0*
*BJI **21** 04:03:03.1, 32°.35N×105°.30E, h14km, mB4.5/3, mb4.0/3, ML3.8/16, Ms3.9/6, Ms7 3.5/6*
*MOS **21** 04:03:04.5±0.9, 32°.37N×105°.06E, h33km, mb4.4/21, Error ellipse: s-maj=14.2km s-min=7.9km az=116.6*
ISC 21 04:03:02.4±0.3, 32°.30N±0°.03×105°.14E±0°.03, h10km, n92, σ1§11/103, mb4.1/33, 9C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.81**	**221**	Pg	**Pg**	**04 03 36.8**	**-0.3**
CD2				Sg	**Sg**	**04 04 01.1**	**+0.4**
CD2				smax			
	comp=N,5μm,0.7s						
CD2				smax			
	comp=E,3μm,0.6s						
XAN	**Xi'an**	**3.62**	**60**	Pn	**Pn**	**04 03 59.9**	**+1.4**
XAN				Sn	**Sn**	**04 04 44.3**	**+3.1**
XAN				Sg	**Sg**	**04 04 58.4**	**-0.2**
XAN				smax			
	comp=N,410nm,0.7s						
XAN				smax			
	comp=E,190nm,0.8s						
LZH	**Lanzhou**	**3.93**	**345**	Pn	**Pn**	**04 04 04.5**	**+1.7**
LZH				Pg	**Pg**	**04 04 15.0**	**-2.7**
LZH				Sn	**Sn**	**04 04 48.8**	**-0.1**
LZH				Sg	**Sg**	**04 05 03.5**	**-5.1**
LZH				smax			
	comp=N,470nm,0.6s						
LZH				smax			
	comp=E,1μm,0.7s						
LZH				LR	LR		
	comp=E,1μm,4.7s						
LZH				LR	LR		
	comp=Z,2μm,5.7s						
ENH	**Enshi**	**4.24**	**117**	*e*Pn	**Pn**	**04 04 06.6**	**-0.3**
ENH				*e*Pg	**Pg**	**04 04 21.2**	**-2.3**
ENH				*e*Sn	**Sn**	**04 04 55.0**	**-1.4**
ENH				*e*Sg	**Sg**	**04 05 17.6**	**-0.8**
GYA	**Guiyang**	**5.97**	**167**	Pg	**Pn**	**04 04 37.4**	**+6.7**
GYA				Sg	**Sn**	**04 05 42.4**	**+3.3**
GYA				smax			
	comp=N,190nm,0.8s						
GYA				smax			
	comp=E,180nm,0.8s						
WHN	**Wuhan**	**8.06**	**100**	*e*P	**Pn**	**04 04 50.0**	**-10**
WHN				S	**Sn**	**04 06 30.3**	**-0.5**
WHN				LR	LR		
	comp=N,920nm,6.4s						
WHN				LR	LR		
	comp=E,530nm,3.1s						
WHN				LR	LR		
	comp=Z,260nm,8.6s						
GTA	**Gaotai**	**8.31**	**330**	*e*P	**Pn**	**04 05 09.1**	**+6.2**
GTA				pP		04 05 13.1	
GTA				sP		04 05 15.4	
GTA				S	**Sn**	**04 06 44.3**	**+7.5**
GTA				sS		04 06 49.9	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,51nm,4.5s						
GTA				LR	LR		
	comp=N,390nm,11.1s						
GTA				LR	LR		
	comp=E,490nm,10.2s						
GTA				LR	LR		
	comp=Z,300nm,10.2s						
CMAR	**Chiang Mai Arr**	**14.87**	**204**	Pn	**Pn**	**04 06 35.2**	**+2.6**
	comp=Z,0.3nm,0.3s,baz=14,slow=13,SNR=4.2						
SONM	**Songino Array**	**15.55**	**3**	Pn	**Pn**	**04 06 39.1**	**-2.5**
	comp=Z,0.1nm,0.3s,baz=183,slow=5.8,SNR=2.6						
ULN	**Ulaanbaatar**	**15.62**	**5**	*e*P	**Pn**	**04 06 44.4**	**+1.9**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ULN	**Ulaanbaatar**	**15.62**	**5**	*e*P	**Pn**	**04 06 44.4**	**+1.9**
	comp=Z,2.5nm,0.9s						
RAMN	**Ramite**	**16.97**	**256**	*e*P	**Pn**	**04 06 57.2**	**-2.7**
	comp=Z,38nm,0.9s						
GUN	**Gumba**	**17.22**	**260**	*e*P	**Pn**	**04 07 02.4**	**-0.7**
	comp=Z,16nm,0.7s						
PKI	**Pulchoki**	**17.73**	**260**	*e*P	**Pn**	**04 07 08.3**	**-1.1**
	comp=Z,14nm,0.5s						
PKI	**Pulchoki**	**17.73**	**260**	*e*P	**Pn**	**04 07 08.8**	**-0.6**
PKI				pmax	pmax		
	comp=Z,11nm,0.5s						
PKI	**Pulchoki**	**17.73**	**260**	*e*P	**Pn**	**04 07 08.8**	**-0.6**
	comp=Z,11nm,0.5s						
PKIN	**Phulchoki**	**17.74**	**260**	*e*P	**Pn**	**04 07 08.8**	**-0.7**
	comp=Z,11nm,0.5s						
KKN	**Kakani**	**17.76**	**261**	*e*P	**Pn**	**04 07 09.0**	**-0.8**
	comp=Z,10nm,0.5s						
KKN	**Kakani**	**17.76**	**261**	*e*P	**Pn**	**04 07 09.0**	**-0.8**
KKN				pmax	pmax		
	comp=Z,11nm,0.5s						
DMN	**Daman**	**17.97**	**260**	*e*P	**Pn**	**04 07 11.1**	**-1.2**
	comp=Z,22nm,0.8s						
KSRS	**Korea Array**	**19.38**	**68**	P	**Pn**	**04 07 33.5**	**+4.1**
	comp=Z,0.2nm,0.3s,baz=256,slow=11,SNR=3.3						
MK31	**Makanchi Array**	**22.69**	**316**	*e*P	**P**	**04 08 04.3**	**+0.4**
MKAR	**Makanchi Array**	**22.69**	**316**	P	**P**	**04 08 04.1**	**+0.1**
	comp=Z,0.5nm,0.3s,mb3.4,baz=108,slow=11,SNR=8.1						
TKM2	**Tokmak 2**	**25.57**	**303**	*e*P	**P**	**04 08 33.0**	**+1.6**
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.9						
TKM2	**Tokmak 2**	**25.57**	**303**	*e*P	**P**	**04 08 33.0**	**+1.6**
	comp=Z,2.1nm,0.5s,mb3.9						
ZALV	**Zalesovo Beam**	**26.06**	**332**	P	**P**	**04 08 35.5**	**-0.2**
	comp=Z,0.7nm,0.5s,mb3.5,baz=128,slow=13,SNR=3.2						
ZALV	**Zalesovo Beam**	**26.06**	**332**	P	**P**	**04 08 35.6**	**-0.1**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.6						
UCH	**Uchtor**	**26.19**	**301**	*e*P	**P**	**04 08 34.6**	**-2.5**
	comp=Z,3.9nm,1.3s,mb3.8						
AML	**Almayashu**	**26.77**	**301**	*e*P	**P**	**04 08 43.7**	**+1.4**
	comp=Z,2.3nm,0.4s,mb4.1						
KURK	**Kurchatov**	**26.85**	**321**	P	**P**	**04 08 42.2**	**-0.6**
	comp=Z,0.5nm,0.4s,mb3.4,baz=134,slow=8.5,SNR=6.0						
KURK	**Kurchatov**	**26.85**	**321**	*e*P	**P**	**04 08 42.7**	**-0.2**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.5						
KURK	**Kurchatov**	**26.85**	**321**	*e*P	**P**	**04 08 42.7**	**-0.2**
	comp=Z,1.5nm,0.7s,mb3.6						
BVAR	**Borovoye Array**	**32.42**	**320**	P	**P**	**04 09 33.2**	**+0.8**
	comp=Z,0.6nm,0.6s,mb3.6,baz=90,slow=7.2,SNR=3.7						
BVAR	**Borovoye Array**	**32.42**	**320**	P	**P**	**04 09 33.2**	**+0.9**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ABKAR	**Akbulak array**	**37.56**	**310**	*e*P	**P**	**04 10 17.2**	**+0.6**
	comp=Z,0.8nm,0.6s,mb3.6						
AKTK	**Aktyubinsk**	**38.98**	**312**	P	**P**	**04 10 29.1**	**+0.4**
AKTO	**Aktyubinsk**	**38.98**	**312**	P	**P**	**04 10 29.1**	**+0.4**
	comp=Z,1.1nm,0.7s,mb3.7,baz=100,slow=11,SNR=4.3						
AKTO	**Aktyubinsk**	**38.98**	**312**	P	**P**	**04 10 29.1**	**+0.5**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.6						
ARU	**Arti**	**40.05**	**321**	*e*P	**P**	**04 10 37.7**	**+0.3**
ARU				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.2						
ARU	**Arti**	**40.05**	**321**	*e*P	**P**	**04 10 37.7**	**+0.3**
	comp=Z,2.3nm,0.4s,mb4.3						
JOF	**Joensuu**	**54.50**	**327**	*e*P	**P**	**04 12 28.9**	**-1.0**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
JOF	**Joensuu**	**54.50**	**327**	*e*p	**P**	**04 12 28.9**	**-1.0**
	comp=Z,0.9nm,0.4s,mb4.0						
JOF	**Joensuu**	**54.50**	**327**	*e*p	**P**	**04 12 28.9**	**-1.0**
	comp=Z,0.9nm,0.4s,mb4.0						
ARCES	**ARCESS Array B**	**56.54**	**336**	P	**P**	**04 12 44.2**	**-0.3**
	comp=Z,5.7nm,1.1s,mb4.5,baz=90,slow=8.1,SNR=6.2						
ARCES	**ARCESS Array B**	**56.54**	**336**	P	**P**	**04 12 44.2**	**-0.3**
ARCES				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KAF	**Kangasniemi**	**56.88**	**327**	*e*P	**P**	**04 12 44.8**	**-2.2**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
KAF	**Kangasniemi**	**56.88**	**327**	*e*p	**P**	**04 12 44.8**	**-2.2**
	comp=Z,2.7nm,0.6s,mb4.5						
KAF	**Kangasniemi**	**56.88**	**327**	*e*p	**P**	**04 12 44.8**	**-2.2**
	comp=Z,2.7nm,0.6s,mb4.5						
BR131	**Keskin Array S**	**56.92**	**299**	*e*P	**P**	**04 12 47.6**	**0.0**
	comp=Z,2.3nm,0.9s,mb4.2						
BRTR	**Keskin Array B**	**56.92**	**299**	P	**P**	**04 12 48.0**	**+0.3**
	comp=Z,1.6nm,0.7s,mb4.2,baz=77,slow=6.2,SNR=10						
BRTR	**Keskin Array B**	**56.92**	**299**	P	**P**	**04 12 48.0**	**+0.3**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	**FINESS Array B**	**57.08**	**326**	P	**P**	**04 12 48.4**	**0.0**
	comp=Z,1.9nm,0.5s

comp=Z,1.5nm,0.4s,mb4.4,baz=67,slow=7.2,SNR=4.4
AKASG Malin Array Be 57.22 313 P **P 04 12 49.1 -0.5**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
WRA Warramunga Arr 58.99 148 P **P 04 13 03.9 +1.7**
comp=Z,1.6nm,0.6s,mb4.3,baz=340,slow=7.7,SNR=5.1
WRA Warramunga Arr 58.99 148 P **P 04 13 03.9 +1.7**
WRA pmax pmax
comp=Z,2.0nm,0.6s
WRA Warramunga Arr 58.99 148 P **P 04 13 03.9 +1.7**
EIL Elat 59.22 288 P **P 04 13 03.9 0.0**
comp=Z,0.9nm,0.5s,mb4.1,baz=66,slow=10.0,SNR=3.7
KWP Kalwaria Pacla 61.54 313 *e*P **P 04 13 19.7 +0.2**
KWP pmax pmax
comp=Z,6.0nm,0.7s,mb4.8
KWP Kalwaria Pacla 61.54 313 *e*P **P 04 13 19.7 +0.2**
comp=Z,6.1nm,0.7s,mb4.8
ASAR Alice Springs 62.06 150 P **P 04 13 24.9 +1.7**
comp=Z,0.6nm,0.5s,mb4.0,baz=332,slow=6.7,SNR=16
ASAR Alice Springs 62.06 150 P **P 04 13 24.9 +1.7**
ASAR pmax pmax
comp=Z,1.0nm,0.5s
HFS Hagfors 63.28 326 P **P 04 13 30.4 -0.5**
comp=Z,1.9nm,0.4s,mb4.6,baz=74,slow=6.3,SNR=20
HFS Hagfors 63.28 326 P **P 04 13 30.4 -0.5**
HFS pmax pmax
comp=Z,2.0nm,0.4s
NOA NORSAR Array B 64.13 327 P **P 04 13 35.8 -0.7**
comp=Z,2.4nm,0.6s,mb4.4,baz=77,slow=6.0,SNR=9.0
NOA NORSAR Array B 64.13 327 P **P 04 13 35.8 -0.7**
NOA pmax pmax
comp=Z,2.0nm,0.6s
BPAW Bear Paw Mtn. 67.14 28 *e*P **P 04 13 55.9 0.0**
comp=Z,0.8nm,0.6s,mb3.9
DAVOX Davos/Dischmat 70.56 313 P **P 04 14 17.4 -0.1**
comp=Z,2.5nm,0.7s,mb4.3,baz=326,slow=3.6,SNR=3.9
INK Inuvik 70.74 20 *e*P **P 04 14 18.0 -0.2**
INK pmax pmax
comp=Z,1.0nm,0.8s
INK Inuvik 70.74 20 *e*P **P 04 14 18.0 -0.3**
comp=Z,1.4nm,0.8s,mb3.9
CDF Champ du Feu 71.38 316 *e*P **P 04 14 22.4 0.0**
STKA Stephens Creek 72.54 148 P **P 04 14 30.6 +1.1**
comp=Z,0.9nm,0.4s,mb4.1,baz=338,slow=11,SNR=4.6
LPG La Plagne 73.08 313⇑ *i*P **P 04 14 33.5 +0.8**
comp=Z,7.8nm,0.5s,mb4.6
LPG La Plagne 73.08 313⇑ *i*P **P 04 14 33.5 +0.8**
LPG pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
LPG La Plagne 73.08 313⇑ *i*P **P 04 14 33.5 +0.8**
comp=Z,3.9nm,0.5s,mb4.6
LPL La Plagne 73.08 313⇑ *i*P **P 04 14 33.3 +0.6**
comp=Z,8.9nm,0.5s,mb4.6
LPL La Plagne 73.08 313⇑ *i*P **P 04 14 33.3 +0.6**
LPL pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
LPL La Plagne 73.08 313⇑ *i*P **P 04 14 33.3 +0.6**
comp=Z,4.4nm,0.5s,mb4.6
BNI Bardonecchia 73.34 313 *e*P **P 04 14 34.5 +0.3**
BNI pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
BNI Bardonecchia 73.34 313 *e*P **P 04 14 34.5 +0.3**
comp=Z,1.6nm,0.8s,mb4.0
ORIF Oris-en-Rattie 73.90 313⇑ *i*P **P 04 14 37.7 +0.2**
comp=Z,4.3nm,0.7s,mb4.2
ORIF Oris-en-Rattie 73.90 313⇑ *i*P **P 04 14 37.7 +0.2**
ORIF pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
ORIF Oris-en-Rattie 73.90 313⇑ *i*P **P 04 14 37.7 +0.2**
comp=Z,2.2nm,0.7s,mb4.2
SMF Signal de Mont 74.27 315 *e*P **P 04 14 39.3 -0.4**
comp=Z,4.2nm,0.8s,mb4.1
SMF Signal de Mont 74.27 315 *e*P **P 04 14 39.3 -0.4**
SMF pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
SMF Signal de Mont 74.27 315 *e*P **P 04 14 39.3 -0.4**
comp=Z,2.1nm,0.8s,mb4.1
CAF Calviac 76.22 315 *e*P **P 04 14 51.2 +0.3**
comp=Z,3.5nm,0.8s,mb4.1
CAF Calviac 76.22 315 *e*P **P 04 14 51.2 +0.3**
CAF pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
CAF Calviac 76.22 315 *e*P **P 04 14 51.2 +0.3**
comp=Z,1.8nm,0.8s,mb4.0
YKA Yellowknife Ar 80.30 18 P **P 04 15 13.5 +0.4**
comp=Z,0.9nm,0.5s,mb3.9,baz=327,slow=5.0,SNR=6.5
OTAV Otavalo 147.47 7 *e*PKPbc PKPbc 04 22 48.8 +1.5

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*ISCJB **21** 04:09:02.6±0.8, 24°.32S±0°.04×67°.09W±0°.05, h148km±7km, mb4.2/50, Error ellipse: s-maj=7.7km s-min=5.9km az=166.6*
*NEIC **21** 04:09:04.3±0.7, 24°.30S×67°.05W, h150km±6km, mb4.2/39, Error ellipse: s-maj=7.4km s-min=5.2km az=75.0*
*BJI **21** 04:09:05.8, 24°.30S×67°.00W, h150km, mB4.9/5*
*IDC **21** 04:09:05.3±1.2, 24°.27S×67°.06W, h162km±10km, mb4.0/12, mb1 4.2/15, mb1mx4.1/18, mbtmp4.1/15, Error ellipse: s-maj=17.1km s-min=11.0km az=75.0*
ISC 21 04:09:03.8±0.7, 24°.33S±0°.04×67°.04W±0°.05, h144km±6km, n337, σ0.66/320, mb4.2/50, 111C-117D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**5.70**	**214**	*e*Pn	**Pn**	**04 10 26.5**	**+0.1**
LCO				*e*Sn	**Sn**	**04 11 29.8**	**-0.9**
CFAA	**Coronel Fontan**	**7.33**	**188**	P	**Pn**	**04 10 49.0**	**+0.8**
0.7nm,0.3s,baz=5.1,slow=12,SNR=94							
CFAA				S	**Sn**	**04 12 07.9**	**-2.0**
2.4nm,0.3s,baz=246,slow=20,SNR=17							
LPAZ	**La Paz**	**8.06**	**353**	P	**Pn**	**04 10 59.2**	**+1.0**
57nm,0.3s,baz=159,slow=6.9,SNR=837							
LPAZ				S	**Sn**	**04 12 23.2**	**-4.8**
1.3nm,0.3s,baz=222,slow=15,SNR=1.8							
LPAZ	**La Paz**	**8.06**	**353**	*e*Pn	**Pn**	**04 10 59.4**	**+1.2**
123nm,0.4s							
LPAZ				*e*Sn	**Sn**	**04 12 28.7**	**+0.8**
CPUP	**Villa Florida**	**9.01**	**105**	P	**Pn**	**04 11 12.3**	**+1.5**
0.8nm,0.3s,baz=266,slow=16,SNR=35							
CPUP	**Villa Florida**	**9.01**	**105**	*e*Pn	**Pn**	**04 11 12.1**	**+1.3**
SIV	**San Ignacio**	**10.01**	**35**	P	**Pn**	**04 11 23.9**	**-0.2**
11nm,0.3s,baz=220,slow=13,SNR=186							
SIV				S	**Sn**	**04 13 04.2**	**-11**
0.5nm,0.3s,baz=223,slow=17,SNR=9.2							
TRQA	**Tornquist**	**14.35**	**164**	*e*Pn	**Pn**	**04 12 19.5**	**-0.7**
TRQA				*e*S	**Sn**	**04 15 06.2**	**+7.0**
PLCA	**Paso Flores**	**16.62**	**189**	P	**Pn**	**04 12 49.1**	**+0.8**
2.2nm,0.3s,baz=7.1,slow=13,SNR=80							
PLCA				PcP	PcP	04 17 27.4	-1.9
0.1nm,0.3s,baz=36,slow=1.7,SNR=3.8							
PLCA				ScP	ScP	04 20 48.1	-2.5
0.0nm,0.3s,baz=22,slow=4.7,SNR=4.8							
PLCA	**Paso Flores**	**16.62**	**189**	*e*P	**Pn**	**04 12 49.5**	**+1.3**
66nm,0.6s							
SPB	**Sao Paulo**	**17.94**	**92**	*e*P	**Pn**	**04 13 04.2**	**-0.1**
57nm,0.8s							
ILCA	**Isla Las Cabra**	**18.26**	**193**	*i*P	**P**	**04 13 06.9**	**+0.7**
CAM4	**Nova Friburgo**	**22.55**	**90**	⇓*i*P	**P**	**04 13 51.9**	**-0.2**
CAM4				*i*		04 13 55.0	
CAM4				*i*		04 14 00.3	
CAM4				*i*		04 14 17.9	
CAM4				*i*		04 14 29.2	
CAM4				*i*		04 15 08.5	
USHA	**Ushuaia**	**30.48**	**182**	P	**P**	**04 15 03.1**	**+0.3**
14nm,0.7s,mb4.8,baz=9.1,slow=11,SNR=12							
RCBR	**Riachuelo**	**35.10**	**63**	*e*P	**P**	**04 15 43.4**	**-0.2**
37nm,0.8s,mb5.1							
APG	**El Apazote**	**45.29**	**327**	P	**P**	**04 17 07.7**	**+0.4**
8.4nm,1.0s,mb4.3,baz=191,slow=11,SNR=7.1							
VNA1	**Neumayer--Stat**	**57.05**	**160**	*e*PKPdf	**P**	**04 18 34.8**	**+0.5**
HKT	**Hockley**	**60.63**	**331**	*e*P	**P**	**04 18 58.9**	**-0.6**
3.4nm,1.1s,mb4.1							
JCT	**Junction City**	**62.90**	**328**	*e*P	**P**	**04 19 13.8**	**-0.9**
5.7nm,0.8s,mb4.5							
WVT	**Waverly**	**63.26**	**341**	*e*P	**P**	**04 19 14.8**	**-2.2**
4.2nm,0.8s,mb4.3							
628A	**Black Gap, Mar**	**63.63**	**325**	⇓P	**P**	**04 19 19.2**	**-0.3**
baz=64,SNR=6.7							
627A	**Terlingua Ranc**	**63.87**	**325**	⇑P	**P**	**04 19 20.4**	**-0.7**
baz=64							
TXAR	**Lajitas Array**	**63.92**	**325**	P	**P**	**04 19 20.7**	**-0.7**
0.8nm,0.7s,mb3.6,baz=159,slow=7.7,SNR=7.1							
528A	**Cox Ranch, San**	**64.12**	**326**	⇑P	**P**	**04 19 21.2**	**-1.5**
baz=64							
626A	**Big Bend Ranch**	**64.34**	**324**	⇓P	**P**	**04 19 23.7**	**-0.4**
baz=65,SNR=8.3							
428A	**Kincaid Ranch,**	**64.52**	**326**	⇓P	**P**	**04 19 24.9**	**-0.4**
baz=65							
527A	**Woodward Ranch**	**64.54**	**325**	⇓P	**P**	**04 19 24.9**	**-0.5**
baz=65							
526A	**Mary Lane Ranc**	**64.72**	**325**	P	**P**	**04 19 26.8**	**+0.2**
baz=65,SNR=5.7							
WCI	**Wyandotte Cave**	**64.80**	**343**	*e*P	**P**	**04 19 24.6**	**-2.4**
3.6nm,0.6s,mb4.4							
427A	**Hayter Ranch,**	**64.99**	**326**	⇓P	**P**	**04 19 27.6**	**-0.8**
baz=65							
328A	**Wristen Ranch,**	**65.12**	**327**	⇑P	**P**	**04 19 28.8**	**-0.4**
baz=65							
426A	**McDonald Obser**	**65.17**	**325**	⇓P	**P**	**04 19 29.3**	**-0.3**
baz=65,SNR=7.2							
326A	**Caldwell Ranch**	**65.66**	**326**	⇑P	**P**	**04 19 32.0**	**-0.6**
baz=66							
425A	**Indio Mountain**	**65.77**	**325**	⇓P	**P**	**04 19 32.9**	**-0.4**
baz=66,SNR=5.3							
QSPA	**South Pole Qui**	**65.88**	**180**	*e*P	**P**	**04 19 34.0**	**+0.7**
26nm,0.7s,mb5.2							
325A	**Bean Ranch, Si**	**66.22**	**325**	⇓P	**P**	**04 19 35.2**	**-1.0**
baz=66,SNR=7.4							
226A	**Malaga, Loving**	**66.31**	**326**	⇓P	**P**	**04 19 36.6**	**-0.2**
baz=66							
324A	**Moseley Ranch,**	**66.54**	**325**	P	**P**	**04 19 37.1**	**-1.1**
baz=67,SNR=5.4							
GDL2	**Guadalupe Moun**	**66.56**	**326**	*e*P	**P**	**04 19 38.2**	**-0.1**
0.7nm,0.3s,mb4.0							
MNTX	**Cornudas Mount**	**66.69**	**325**	*e*P	**P**	**04 19 37.8**	**-1.4**
5.5nm,1.3s,mb4.2							
126A	**Clayton Basin,**	**66.74**	**326**	⇑P	**P**	**04 19 39.3**	**-0.3**
baz=67							
Z27A	**Tatum**	**66.88**	**327**	⇑P	**P**	**04 19 39.3**	**-1.1**
baz=67,SNR=6.1							
224A	**Cornudas Mount**	**67.06**	**325**	⇓P	**P**	**04 19 40.6**	**-0.9**
baz=67,SNR=7.9							
125A	**Gardner Draw,**	**67.07**	**326**	⇓P	**P**	**04 19 40.7**	**-0.9**
baz=67							
MSTX	**Muleshoe**	**67.19**	**328**	⇓P	**P**	**04 19 40.4**	**-2.0**
baz=67,SNR=6.5							
Y27A	**Causey**	**67.31**	**328**	⇓P	**P**	**04 19 41.8**	**-1.3**
baz=68,SNR=6.3							
124A	**Stringfield Ra**	**67.52**	**325**	⇑P	**P**	**04 19 44.0**	**-0.4**
baz=68,SNR=9.0							
LIC	**Lamto**	**67.58**	**72**	*e*PKIKP	**P**	**04 19 45.7**	**+0.5**
45nm,1.3s,mb5.0							
Y26A	**Elida**	**67.67**	**327**	⇓P	**P**	**04 19 45.5**	**+0.1**
baz=68							
TIC	**Toumodi**	**67.79**	**71**	*e*PKIKP	**P**	**04 19 45.5**	**-1.0**
8.2nm,0.5s,mb4.8							
KIC	**Kosan Boka**	**67.89**	**72**	*e*PKIKP	**P**	**04 19 46.0**	**-1.2**
16nm,0.6s,mb4.9							
222A	**Williams Famil**	**67.92**	**324**	⇑P	**P**	**04 19 47.5**	**+0.5**
baz=68							
DBIC	**Dimbokro**	**67.94**	**71**	P	**P**	**04 19 46.7**	**-0.8**
11nm,0.9s,mb4.6,baz=220,slow=8.3,SNR=12							
DBIC	**Dimbokro**	**67.94**	**71**	*e*P	**P**	**04 19 46.5**	**-1.0**
9.2nm,0.8s,mb4.6							
Z24A	**Sheeppen Canyo**	**67.97**	**326**	⇓P	**P**	**04 19 46.6**	**-0.6**
baz=68,SNR=7.8							
Y25A	**Mesa, Roswell**	**68.10**	**327**	⇓P	**P**	**04 19 47.0**	**-1.0**
baz=68							
W27A	**Bowe Ranch, En**	**68.22**	**329**	⇑P	**P**	**04 19 48.3**	**-0.5**
baz=68							
Z23A	**Rita Site, Whi**	**68.36**	**325**	⇓P	**P**	**04 19 49.6**	**0.0**
baz=69							
220A	**Playas Peak, P**	**68.54**	**323**	⇑P	**P**	**04 19 50.1**	**-0.7**
baz=69							
W26A	**Owens Ranch, T**	**68.58**	**328**	⇑P	**P**	**04 19 50.8**	**-0.2**
baz=69							
121A	**Cookes Peak, D**	**68.62**	**324**	⇓P	**P**	**04 19 51.2**	**-0.1**
baz=69							
Z22A	**Elephant Butte**	**68.74**	**325**	⇓P	**P**	**04 19 52.3**	**+0.3**
baz=69,SNR=12							
Y23A	**Lovelace Mesa,**	**68.79**	**326**	⇑P	**P**	**04 19 52.7**	**+0.3**
baz=69							
W25A	**X Bar L Ranch,**	**69.02**	**328**	⇑P	**P**	**04 19 52.9**	**-0.8**
baz=69							
219A	**White Tail Can**	**69.02**	**322**	P	**P**	**04 19 54.4**	**+0.5**
baz=69,SNR=5.5							
120A	**U Bar Ranch, L**	**69.09**	**323**	⇓P	**P**	**04 19 54.9**	**+0.7**
baz=69							
Z21A	**St. Cloud Mine**	**69.15**	**324**	⇓P	**P**	**04 19 54.7**	**+0.1**
baz=69							
V26A	**Tequesquite Ra**	**69.16**	**329**	⇓P	**P**	**04 19 54.3**	**-0.3**
baz=69							
BNM	**Barren Site**	**69.26**	**326**	*e*P	**P**	**04 19 55.9**	**+0.7**
2.4nm,1.0s,mb3.9							
W24A	**Lazy 6 Ranch,**	**69.48**	**327**	⇓P	**P**	**04 19 55.8**	**-0.7**
baz=70							
V25A	**Rancho No Teng**	**69.59**	**328**	⇓P	**P**	**04 19 57.2**	**0.0**
baz=70							
U26A	**Atchley Ranch,**	**69.63**	**329**	⇑P	**P**	**04 19 57.1**	**-0.3**
baz=70							
Y21A	**Point of Rocks**	**69.69**	**325**	⇑P	**P**	**04 19 57.6**	**-0.3**
baz=70							
ANMO	**Albuquerque**	**69.80**	**326**	*e*P	**P**	**04 19 58.8**	**+0.3**
1.0nm,0.9s,mb3.5							
CBKS	**Cedar Bluff**	**69.88**	**333**	*e*P	**P**	**04 19 58.4**	**-0.5**
9.8nm,0.9s,mb4.5							
118A	**Homack Ranch,**	**69.90**	**322**	⇑P	**P**	**04 19 58.8**	**-0.3**
baz=70							
U25A	**Circle Dot Ran**	**69.94**	**329**	⇓P	**P**	**04 19 59.5**	**+0.1**
baz=70							
Y20A	**Horse Springs,**	**69.99**	**324**	⇓P	**P**	**04 20 00.1**	**+0.4**
baz=70							
X21A	**Alamocita Cree**	**70.09**	**325**	⇑P	**P**	**04 20 00.2**	**-0.1**
baz=70,SNR=5.8							
TUC	**Tucson**	**70.11**	**321**	*e*P	**P**	**04 20 00.7**	**+0.2**
4.0nm,1.3s,mb4.0							
216A	**Three Points,**	**70.27**	**321**	⇑P	**P**	**04 20 02.1**	**+0.6**
baz=70							
117A	**Oracle**	**70.28**	**322**	⇑P	**P**	**04 20 01.4**	**-0.1**
baz=70							
Y19A	**Nutrioso**	**70.50**	**324**	⇑P	**P**	**04 20 03.9**	**+1.1**
baz=71,SNR=12							
X20A	**Quemado**	**70.54**	**325**	⇑P	**P**	**04 20 03.0**	**-0.1**
baz=71							
T25A	**Trinidad**	**70.54**	**329**	⇓P	**P**	**04 20 03.1**	**+0.1**
baz=71							
U23A	**El Rito**	**70.75**	**327**	⇓P	**P**	**04 20 04.8**	**+0.5**
baz=71							
V22A	**San Miguel Ran**	**70.78**	**327**	⇓P	**P**	**04 20 04.1**	**-0.4**
baz=71							
W20A	**Ramah**	**70.99**	**325**	⇑P	**P**	**04 20 06.3**	**+0.5**
baz=71							
V21A	**Milan**	**71.07**	**326**	⇑P	**P**	**04 20 06.9**	**+0.7**
baz=71							
U22A	**Llaves**	**71.12**	**327**	⇓P	**P**	**04 20 07.5**	**+1.1**
baz=71							
Y17A	**Roosevelt**	**71.17**	**322**	⇓P	**P**	**04 20 07.1**	**+0.2**
baz=71,SNR=6.3							
X18A	**Snowflake**	**71.31**	**324**	⇑P	**P**	**04 20 07.9**	**+0.2**
baz=72							
SDCO	**Great Sand Dun**	**71.55**	**329**	*e*P	**P**	**04 20 09.2**	**+0.2**
1.8nm,0.6s,mb4.0							
U21A	**Nageezi**	**71.56**	**326**	P	**P**	**04 20 09.6**	**+0.4**
baz=72,SNR=5.8							
X17A	**Forest Lakes**	**71.63**	**323**	⇓P	**P**	**04 20 10.9**	**+1.3**
baz=72							
114A	**Black Gap (USA**	**71.64**	**320**	⇑P	**P**	**04 20 09.8**	**0.0**
baz=72							
T22A	**Edith**	**71.64**	**327**	⇑P	**P**	**04 20 09.2**	**-0.4**
baz=72							
Y16A	**Circle Bar Ran**	**71.66**	**322**	⇑P	**P**	**04 20 09.5**	**-0.3**
baz=72							
T21A	**Navajo Lake**	**71.94**	**327**	⇓P	**P**	**04 20 11.5**	**+0.1**
baz=72							
U20A	**Newcomb**	**71.96**	**326**	⇓P	**P**	**04 20 11.7**	**+0.2**
baz=72							
X16A	**Lo Mia Camp, P**	**72.04**	**323**	⇑P	**P**	**04 20 13.0**	**+0.9**
baz=72,SNR=7.1							
Y15A	**Casa Rosa Ranc**	**72.20**	**322**	⇓P	**P**	**04 20 12.7**	**-0.3**
baz=72							
U19A	**Dine' College,**	**72.25**	**325**	⇓P	**P**	**04 20 13.3**	**0.0**
baz=72							
Z13A	**Yuma Proving G**	**72.41**	**320**	⇑P	**P**	**04 20 14.2**	**-0.1**
baz=73							
R22A	**Saguache, Gunn**	**72.53**	**328**	⇑P	**P**	**04 20 15.5**	**+0.6**
baz=73							
X15A	**Humboldt**	**72.53**	**322**	⇑P	**P**	**04 20 15.2**	**+0.2**
baz=73,SNR=5.1							
T19A	**Beclabito**	**72.57**	**326**	⇓P	**P**	**04 20 14.0**	**-1.2**
baz=73,SNR=6.4							
Y14A	**Wickenburg**	**72.57**	**321**	⇑P	**P**	**04 20 14.4**	**-0.8**
baz=73							
V17A	**Tonalea, Kykot**	**72.58**	**324**	⇑P	**P**	**04 20 15.3**	**+0.1**
baz=73,SNR=7.5							
S21A	**Coal Bank Pass**	**72.59**	**327**	⇑P	**P**	**04 20 15.6**	**+0.3**
baz=73							
W16A	**Flagstaff**	**72.59**	**323**	⇑P	**P**	**04 20 16.2**	**+0.9**
baz=73							
MVCO	**Mesa Verde**	**72.59**	**326**	⇑P	**P**	**04 20 15.6**	**+0.3**
baz=73							
MVCO	**Mesa Verde**	**72.59**	**326**	*e*P	**P**	**04 20 15.4**	**+0.1**
3.2nm,0.7s,mb4.2							
U18A	**Rough Rock, Ch**	**72.69**	**325**	⇑P	**P**	**04 20 16.6**	**+0.7**
baz=73,SNR=5.5							
WUAZ	**Wupatki**	**72.82**	**323**	⇓P	**P**	**04 20 16.8**	**+0.2**
baz=73,SNR=5.9							
WUAZ	**Wupatki**	**72.82**	**323**	*e*P	**P**	**04 20 17.7**	**+1.1**
6.7nm,0.9s,mb4.4							
X14A	**Yava**	**72.89**	**322**	⇑P	**P**	**04 20 16.6**	**-0.5**
baz=73							
ECSD	**EROS Data Cent**	**72.97**	**338**	*e*P	**P**	**04 20 15.8**	**-1.5**
4.7nm,1.2s,mb4.1							
GLA	**Glanis**	**73.00**	**319**	⇓P	**P**	**04 20 17.3**	**-0.5**
baz=73							
U16A	**Tuba City**	**73.15**	**324**	⇑P	**P**	**04 20 18.3**	**-0.3**
baz=73							
T18A	**Mexican Hat**	**73.24**	**325**	P	**P**	**04 20 19.6**	**+0.5**
baz=74,SNR=8.1							
ISCO	**Idaho Springs**	**73.25**	**330**	*e*P	**P**	**04 20 19.9**	**+0.8**
SYO	**Syowa Base**	**73.26**	**159**	⇑*i*P	**P**	**04 20 17.6**	**-1.2**
R20A	**Redvale**	**73.29**	**327**	⇓P	**P**	**04 20 20.2**	**+0.9**
baz=74,SNR=5.1							
Y12C	**Blythe**	**73.31**	**320**	⇑P	**P**	**04 20 19.5**	**-0.1**
baz=74							
S19A	**Harvey Farm, M**	**73.33**	**326**	⇓P	**P**	**04 20 19.7**	**+0.1**
baz=74,SNR=7.1							
SBA	**Scott Base**	**73.37**	**190**	*e*P	**P**	**04 20 21.0**	**+1.7**
SMCO	**Snowmass**	**73.38**	**329**	*e*P	**P**	**04 20 21.2**	**+1.3**
V15A	**Kaibab Nationa**	**73.48**	**323**	⇑P	**P**	**04 20 20.2**	**-0.3**
baz=74,SNR=5.6							
X13A	**Yucca**	**73.52**	**321**	⇑P	**P**	**04 20 19.9**	**-0.9**
baz=74							
T17A	**Navajo Res., N**	**73.62**	**325**	⇑P	**P**	**04 20 19.9**	**-1.4**
baz=74,SNR=7.1							
S18A	**Hurst Farm, Bl**	**73.72**	**326**	⇓P	**P**	**04 20 19.8**	**-2.1**
baz=74,SNR=10							
BC3	**Big Chuckawall**	**73.79**	**319**	⇑P	**P**	**04 20 22.8**	**+0.3**
baz=74,SNR=5.1							
V14A	**Boquillas Ranc**	**73.86**	**322**	⇓P	**P**	**04 20 22.8**	**+0.1**
baz=74,SNR=6.9							
IRM	**Iron Mountain**	**73.97**	**320**	⇑P	**P**	**04 20 23.5**	**0.0**
baz=74,SNR=5.4							
U15A	**North Rim**	**73.99**	**323**	⇓P	**P**	**04 20 24.2**	**+0.7**
baz=74,SNR=6.7							
S17A	**Black Ridge (B**	**74.10**	**325**	⇓P	**P**	**04 20 24.9**	**+0.8**
baz=74							
R18A	**Canyonlands Na**	**74.20**	**326**	⇑P	**P**	**04 20 24.8**	**+0.1**
baz=74							
P20A	**De Beque**	**74.32**	**328**	⇓P	**P**	**04 20 26.2**	**+0.9**
baz=75							
U14A	**Mt Trumbull**	**74.47**	**323**	⇑P	**P**	**04 20 26.9**	**+0.6**
baz=75,SNR=7.9							
T15A	**Red Dirt Ranch**	**74.48**	**324**	⇓P	**P**	**04 20 27.3**	**+1.0**
baz=75,SNR=5.0							
V13A	**Grand Canyon W**	**74.51**	**322**	⇓P	**P**	**04 20 27.0**	**+0.5**
baz=75							
S16A	**Weppner Ranch,**	**74.58**	**325**	⇑P	**P**	**04 20 27.1**	**+0.3**
baz=75							
R17A	**Hanksville Air**	**74.64**	**326**	⇓P	**P**	**04 20 27.4**	**+0.2**
baz=75,SNR=8.2							
GMRC	**Granite Mounta**	**74.70**	**320**	⇑P	**P**	**04 20 28.2**	**+0.6**
baz=75,SNR=6.6							
P19A	**Cripple Cowboy**	**74.71**	**328**	⇓P	**P**	**04 20 28.1**	**+0.6**
baz=75,SNR=6.7							
O20A	**White River Ci**	**74.74**	**328**	⇓P	**P**	**04 20 28.0**	**+0.3**
baz=75,SNR=5.2							
T14A	**Hurricane**	**74.89**	**323**	⇑P	**P**	**04 20 29.6**	**+0.9**
baz=75							
V12A	**Nelson**	**74.91**	**321**	⇑P	**P**	**04 20 29.2**	**+0.4**
baz=75,SNR=7.1							
R16A	**Teasdale**	**74.94**	**325**	⇑P	**P**	**04 20 29.1**	**+0.2**
baz=75							
SRU	**San Rafael**	**75.07**	**326**	⇑P	**P**	**04 20 29.8**	**+0.2**
baz=75							
U12A	**Valley of Fire**	**75.24**	**322**	⇓P	**P**	**04 20 31.1**	**+0.4**
baz=76,SNR=7.3							
Q16A	**Castle Valley**	**75.26**	**326**	⇑P	**P**	**04 20 30.4**	**-0.3**
baz=76							
N20A	**Spence Gulch,**	**75.30**	**329**	⇑P	**P**	**04 20 31.0**	**+0.1**
baz=76							
R15A	**Junction**	**75.30**	**325**	⇑P	**P**	**04 20 31.1**	**+0.1**
baz=76							
T13A	**Saint George**	**75.31**	**323**	⇑P	**P**	**04 20 31.7**	**+0.6**
baz=76							
V11A	**Goodsprings**	**75.32**	**321**	⇓P	**P**	**04 20 31.5**	**+0.4**
baz=76							
P18A	**Preston Nutter**	**75.33**	**327**	⇓P	**P**	**04 20 31.7**	**+0.6**
baz=76,SNR=6.9							
CCUT	**Cedar City**	**75.40**	**324**	*e*P	**P**	**04 20 33.0**	**+1.4**
P17A	**Butcher Ranch,**	**75.46**	**326**	⇓P	**P**	**04 20 32.1**	**+0.2**
baz=76							
MSU	**Marysvale**	**75.47**	**325**	*e*P	**P**	**04 20 32.5**	**+0.5**
ARUT	**Antelope Range**	**75.61**	**324**	*e*P	**P**	**04 20 33.7**	**+0.9**
4.1nm,1.0s,mb4.0							
S13A	**Holt Ranch, En**	**75.69**	**323**	⇑P	**P**	**04 20 33.9**	**+0.7**
baz=76							
GSC	**Goldstone**	**75.74**	**320**	⇑P	**P**	**04 20 33.2**	**-0.4**
baz=76							
GSC	**Goldstone**	**75.74**	**320**	*e*P	**P**	**04 20 34.5**	**+0.9**
L21A	**Rawlins**	**75.77**	**330**	⇓P	**P**	**04 20 33.8**	**+0.2**
baz=76							
N19A	**John Jarvie Ra**	**75.78**	**328**	⇓P	**

baz=78,SNR=7.0
HWUT Hardware Ranch 77.48 327 eP P 04 20 42.9 -0.3
2.1nm,0.7s,mb3.9
K18A Toltan Ranch, 77.53 329 ⇓P P 04 20 44.0 +0.5
baz=78,SNR=6.3
R10A Warm Springs 77.54 322 ⇓P P 04 20 44.5 +0.9
baz=78,SNR=6.4
Q11A Duckwater 77.58 323 ⇓P P 04 20 44.1 +0.3
baz=78,SNR=5.9
P12A McGill 77.62 324 ⇓P P 04 20 44.6 +0.5
baz=78
SMMC Simmler 77.66 318 ⇑P P 04 20 45.1 +0.8
baz=78
SPUT South Promonto 77.70 327 eP P 04 20 45.4 +1.0
BGU Big Grassy Mou 77.70 326 eP P 04 20 44.6 +0.1
2.3nm,1.0s,mb3.8
L16A Fish Haven 77.72 328 ⇑P P 04 20 44.8 +0.2
baz=78
N14A Grayback Hills 77.73 326 ⇑P P 04 20 44.0 -0.6
baz=78
M15A Larsen Ranch, 77.81 327 ⇓P P 04 20 44.9 -0.1
baz=78,SNR=5.7
J18A Kendall Valley 77.97 329 ⇓P P 04 20 46.0 +0.2
baz=78,SNR=6.3
Q10A Clear Creek Ra 77.97 323 ⇓P P 04 20 46.4 +0.4
baz=78
K17A Gardner Place, 78.04 329 ⇓P P 04 20 46.3 +0.1
baz=78
O12A Currie 78.11 325 ⇑P P 04 20 45.9 -0.9
baz=78,SNR=5.1
L15A Malad City 78.18 327 ⇓P P 04 20 46.9 -0.1
baz=78,SNR=5.5
M14A Sheep Mountain 78.29 326 ⇓P P 04 20 48.1 +0.4
baz=78,SNR=5.5
J17A Brown Place, J 78.41 329 ⇑P P 04 20 48.0 -0.2
baz=79
K16A Soda Springs 78.42 328 ⇓P P 04 20 48.6 +0.2
baz=79,SNR=7.3
O11A Cowboy Ranch, 78.50 324 ⇓P P 04 20 48.5 -0.3
baz=79
ULM Lac du Bonnet 78.52 342 P P 04 20 47.6 -1.1
3.3nm,0.6s,mb4.1,baz=162,slow=1.9,SNR=3.2
LOHW Long Hollow 78.55 329 eP P 04 20 49.4 +0.3
1.8nm,0.6s,mb3.9
M13A Montello 78.60 326 ⇓P P 04 20 49.7 +0.3
baz=79
TPAW Teton Pass 78.62 329 eP P 04 20 49.8 +0.4
5.5nm,1.3s,mb4.0
L14A Malta 78.63 327 ⇓P P 04 20 48.8 -0.7
baz=79
K15A Arbon 78.76 328 ⇓P P 04 20 50.1 -0.1
baz=79
NVAR Mina Array Bea 78.77 321 P P 04 20 49.8 -0.6
2.0nm,1.0s,mb3.7,baz=134,slow=6.4,SNR=8.6
SCHQ Schefferville 78.83 0 P P 04 20 49.2 -1.1
1.8nm,0.6s,mb3.9,baz=186,slow=6.9,SNR=9.6
SCHQ Schefferville 78.83 0 eP P 04 20 49.3 -1.0
2.5nm,0.8s,mb3.9
IMW Indian Meadow 78.92 329 eP P 04 20 51.1 +0.1
1.2nm,0.4s,mb3.9
L13A Double Diamond 79.03 326 ⇑P P 04 20 52.5 +0.8
baz=79
M12A Wells 79.03 325 ⇑P P 04 20 51.2 -0.5
baz=79
I16A Newdale 79.16 329 ⇓P P 04 20 53.1 +0.7
baz=79
J15A Blackfoot 79.25 328 P P 04 20 53.5 +0.6
baz=80,SNR=5.7
G18A Lazy EL Ranch, 79.39 331 ⇓P P 04 20 53.7 +0.1
baz=80
M11A Holland Ranch, 79.50 325 ⇓P P 04 20 52.9 -1.3
baz=80
K13A Stover Farm, H 79.51 327 ⇑P P 04 20 55.0 +0.7
baz=80
L12A House Creek Ra 79.61 326 ⇑P P 04 20 55.3 +0.4
baz=80
H16A Russell Place, 79.68 330 ⇑P P 04 20 56.1 +0.9
baz=80
J14A Carey 79.72 327 ⇑P P 04 20 55.1 -0.3
baz=80
K12A Draper Farm, C 79.91 326 P P 04 20 57.3 +0.9
baz=80,SNR=5.1
F18A Big Timber 79.92 331 ⇓P P 04 20 56.4 0.0
baz=80
L11A Cat Creek Ranc 80.01 325 ⇑P P 04 20 57.3 +0.3
baz=80,SNR=5.0
J13A Cove Ranch, Pi 80.10 327 ⇑P P 04 20 57.9 +0.4
baz=80
I14A Mackay 80.14 328 ⇑P P 04 20 57.7 +0.1
baz=80
F17A Fitzpatrick Pl 80.33 331 ⇑P P 04 20 59.2 +0.5
baz=81,SNR=6.1
G16A Moss Hill, Enn 80.34 330 ⇓P P 04 20 57.7 -1.0
baz=81
HLID Hailey 80.34 327 P P 04 20 59.5 +0.7
baz=81,SNR=12
HLID Hailey 80.34 327 eP P 04 20 59.2 +0.5
7.9nm,1.0s,mb4.3
I13A Wildhorse Cree 80.45 328 ⇑P P 04 20 59.4 +0.1
baz=81,SNR=5.8
J12A Stokes Ranch, 80.45 327 ⇓P P 04 20 58.9 -0.5
baz=81,SNR=7.3
MCMT McKenzie Canyo 80.52 329 eP P 04 21 00.4 +0.7
3.6nm,1.2s,mb3.9
K11A Parker Ranch, 80.58 326 ⇓P P 04 20 59.4 -0.7
baz=81,SNR=5.8
G15A Dillon 80.61 329 ⇓P P 04 20 59.4 -0.8
baz=81
H14A Leadore 80.61 328 ⇑P P 04 21 00.4 +0.3
baz=81
BOSA Boshof 80.62 117 P P 04 21 00.7 -0.1
4.5nm,0.7s,mb4.2,baz=246,slow=5.5,SNR=14
BOSA Boshof 80.62 117 eP P 04 21 00.7 -0.1
8.5nm,1.0s,mb4.3
DLMT Dillon 80.80 329 eP P 04 21 01.5 +0.3
5.2nm,1.1s,mb4.1
E17A Martinsdale 80.85 331 ⇑P P 04 21 01.4 0.0
baz=81
I12A Atlanta 80.87 327 ⇓P P 04 21 02.3 +0.8
baz=81
BEKR Beckworth 80.92 321 ⇓P P 04 21 02.3 +0.4
baz=81
MFID Camas Ranch 80.94 326 ⇓P P 04 21 02.5 +0.5
baz=81
D18A Linhart Farms, 80.96 332 ⇑P P 04 21 02.0 +0.1
baz=81
H13A Challis 81.00 328 P P 04 21 03.0 +0.8
baz=81,SNR=9.3
K10A MacKenzie Ranc 81.02 325 ⇑P P 04 21 02.7 +0.3
baz=81
LRM Limekiln Ridge 81.08 330 eP P 04 21 03.9 +1.2
F15A Butte 81.11 330 ⇓P P 04 21 03.0 +0.2
baz=81
MAW Mawson 81.14 163 P P 04 21 03.4 +0.6
9.0nm,0.6s,mb4.6,baz=224,slow=8.5,SNR=24
H12A Diamond D Ranc 81.28 328 ⇑P P 04 21 04.0 +0.3
baz=82
D17A Six Diamond Ra 81.31 332 ⇑P P 04 21 03.5 -0.3
baz=82,SNR=7.3
G13A Cobalt 81.38 328 ⇑P P 04 21 04.7 +0.5
baz=82,SNR=13
EGMT Eagleton 81.58 333 ⇓P P 04 21 04.8 -0.4
baz=82
D16A Dana Ranch, Ca 81.59 331 ⇑P P 04 21 05.2 -0.1
baz=82,SNR=11
B18A Beardsley Farm 81.88 333 ⇑P P 04 21 06.8 0.0
baz=82
I10A Payette 81.92 326 ⇓P P 04 21 07.4 +0.3
baz=82
G12A Big Creek, Yel 81.93 328 ⇑P P 04 21 07.2 +0.1
baz=82
F13A Darby 81.94 329 ⇑P P 04 21 07.2 +0.1
baz=82,SNR=7.9
H11A Donnelly 81.96 327 ⇑P P 04 21 07.4 +0.1
baz=82
E14A Clinton 82.01 330 ⇓P P 04 21 07.2 -0.2
baz=82
D15A Lincoln 82.03 331 ⇓P P 04 21 07.5 -0.1
baz=82
B17A L&G Farms, Che 82.23 332 ⇓P P 04 21 07.9 -0.7
baz=82
H10A Noah's Angus R 82.25 327 ⇑P P 04 21 08.6 -0.2
baz=82
C16A Fuhringer Ranc 82.27 331 ⇓P P 04 21 08.4 -0.4
baz=82
J08A Circle Bar Ran 82.27 325 ⇑P P 04 21 08.9 0.0
baz=82,SNR=6.2
LBTB Lobatse 82.29 114 eP P 04 21 09.7 +0.1
3.5nm,0.5s,mb4.2
I09A Lost Marbles R 82.31 326 ⇓P P 04 21 08.8 -0.4
baz=82
A18A Metzger Ranch, 82.32 333 ⇓P P 04 21 07.9 -1.1
baz=83
E13A Victor 82.35 329 ⇓P P 04 21 09.4 +0.2
baz=83,SNR=7.5
F12A Elk City 82.35 328 ⇓P P 04 21 08.8 -0.5
baz=83
G11A Walters Elk Ra 82.59 327 ⇑P P 04 21 10.7 +0.2
baz=83
C15A Salmond Ranch, 82.62 331 ⇓P P 04 21 10.8 +0.1
baz=83,SNR=7.4
F11A Grangeville 82.88 328 ⇑P P 04 21 11.0 -1.1
baz=83
G10A Bishop Farm, J 82.93 327 ⇓P P 04 21 11.4 -0.9
baz=83
D13A Huson 82.96 330 ⇓P P 04 21 12.1 -0.2
baz=83
E12A Beaver Dam Sad 82.98 329 ⇑P P 04 21 12.3 -0.3
baz=83
C14A Swan Lake 83.13 330 ⇓P P 04 21 12.6 -0.7
baz=83
K05A Summer Lake 83.13 323 ⇓P P 04 21 13.6 +0.2
baz=83,SNR=6.9
H08A Prairie City 83.17 326 ⇓P P 04 21 13.6 0.0
baz=83
G09A Cove 83.25 327 ⇓P P 04 21 13.6 -0.4
baz=84,SNR=6.3
I07A Izee 83.31 325 ⇑P P 04 21 14.1 -0.2
baz=84
YBMT Yellow Bay 83.32 330 eP P 04 21 13.9 -0.3
3.0nm,1.0s,mb4.0
D12A Red Ives Fores 83.34 329 ⇑P P 04 21 13.5 -0.9
baz=84
C13A Hot Springs 83.44 330 ⇑P P 04 21 15.0 +0.2
baz=84
A14A Double T Ranch 83.88 331 ⇓P P 04 21 16.8 -0.3
baz=84
B13A Whitefish 83.90 330 ⇑P P 04 21 16.8 -0.4
baz=84
A13A Flathead Natio 84.29 331 ⇑P P 04 21 19.4 +0.2
baz=84
C11A Tepee Creek (N 84.33 329 ⇓P P 04 21 18.7 -0.7
baz=85
TAM Tamanrasset 84.58 62 eP P 04 21 21.6 +0.4
8.8nm,1.1s,mb4.4
D08A Wollman Farm, 85.06 327 ⇑P P 04 21 22.9 -0.2
baz=85
PAB San Pablo 86.34 44 eP P 04 21 29.6 +0.1
4.2nm,0.8s,mb4.2
ESDC Sonseca Array 86.66 44 P P 04 21 31.3 +0.2
2.3nm,0.8s,mb4.1,baz=226,slow=5.3,SNR=9.4
JCW Jim Creek 87.33 327 eP P 04 21 32.0 -2.2
3.6nm,0.6s,mb4.4
A05A Maple Falls 87.94 327 ⇑P P 04 21 35.9 -1.1
baz=88
LSZ Lusaka 88.45 106 eP P 04 21 40.6 +0.3
18nm,1.4s,mb4.7
CASY Casey 89.66 179 eP P 04 21 45.6 +0.7
21nm,0.8s,mb5.1
YKA Yellowknife Ar 94.42 340 P P 04 22 05.7 -1.1
1.3nm,0.7s,mb4.2,baz=136,slow=4.4,SNR=7.3
AKASG Malin Array Be 112.30 43 PKKPab PKKPab 04 38 20.2 0.0
0.2nm,0.3s,baz=65,slow=5.5,SNR=4.5
BRTR Keskin Array B 113.03 55 PKKPab PKKPab 04 38 19.4 +1.8
0.7nm,0.8s,baz=108,slow=3.4,SNR=4.4
ASAR Alice Springs 128.14 205 PKP PKPdf 04 27 52.5 -1.0
4.2nm,0.8s,baz=134,slow=1.8,SNR=34
AKTO Aktyubinsk 130.54 44 SKPbc SKPbc 04 31 05.2 -2.2
2.3nm,0.8s,baz=297,slow=2.3,SNR=6.6
WRA Warramunga Arr 131.32 207 PKP PKPdf 04 27 58.7 -1.0
2.8nm,0.6s,baz=167,slow=1.5,SNR=10
WRA SKPbc SKPbc 04 31 07.4 -4.0
1.7nm,0.7s,baz=154,slow=3.7,SNR=5.0
WRAB Tennant Creek 131.32 207 ePKPdf PKPdf 04 27 59.4 -0.2
PETK Petropavlovsk- 135.85 322 PKhKP 04 27 55.1
1.8nm,0.5s,baz=217,slow=0.7,SNR=6.4
KURK Kurchatov 142.66 36 PKP PKPdf 04 28 15.8 -3.7
0.2nm,0.2s,baz=288,slow=3.5,SNR=3.0
KURK SKP 04 31 36.7
0.4nm,0.4s,baz=308,slow=2.8,SNR=4.1
KURK Kurchatov 142.66 36 PKP PKPdf 04 28 15.8 -3.7
KURK SKP 04 31 36.7
ZALV Zalesovo Beam 143.70 28 PKP PKPdf 04 28 19.0 -2.2
2.0nm,0.4s,baz=320,slow=4.0,SNR=14
ZALV SKPbc SKPbc 04 31 43.6 -2.9
2.8nm,0.9s,baz=306,slow=3.5,SNR=6.2
KSH Kashi 145.42 55 PKPbc PKPbc 04 28 24.8 -0.2
KSH sPKP 04 29 24.1
KSH PKS 04 31 59.8
KSH SKS SKSdf 04 35 18.3 -2.1
KSH AMB AMB
comp=Z,170nm,6.0s
KSH LR LR
comp=N,30nm,4.1s
KSH LR LR
comp=Z,130nm,8.0s
MK31 Makanchi Array 146.80 40 ePKPdf PKPdf 04 28 26.5 -0.3
MK31 ePKPbc PKPbc 04 28 28.2 -0.6
MKAR Makanchi Array 146.80 40 PKPbc PKPbc 04 28 26.9 -1.9
comp=Z,2.3nm,0.5s,baz=338,slow=2.5,SNR=17
MKAR Makanchi Array 146.80 40 PKPbc PKPbc 04 28 26.9 -1.9
KAPI Kappang 150.09 194 PKPbc PKPbc 04 28 37.6 -0.8
comp=Z,9.3nm,0.6s,baz=90,slow=6.1,SNR=5.6
KAPI PKPab PKPab 04 28 43.9 -0.6
comp=Z,12nm,0.7s,baz=202,slow=20,SNR=6.9
MJAR Matsushiro Arr 155.14 305 PKPab PKPab 04 29 04.3 -1.0
comp=Z,1.4nm,0.4s,baz=69,slow=2.6,SNR=7.3
MAT Matsushiro 155.14 305 PKP2 PKPab 04 29 04.7 -0.6
SONM Songino Array 155.97 11 PKP PKPdf 04 28 41.4 +0.8
comp=Z,0.2nm,0.3s,baz=350,slow=3.2,SNR=2.9
SONM PKPab PKPab 04 29 08.3 -0.1
comp=Z,0.7nm,0.6s,baz=355,slow=3.2,SNR=3.3
CN2 Changchun 158.04 335 ePKP PKPdf 04 28 41.3 -2.1
KSRS Korea Array 161.70 319 PKPab PKPab 04 29 33.5 -0.1
comp=Z,0.5nm,0.3s,baz=57,slow=4.5,SNR=4.4
HHC Hu-ho-hao-te 163.48 4 ePKP PKPdf 04 28 46.3 -3.1
HHC pPKP pPKPdf 04 29 28.8 +0.8
HHC sPKP 04 29 45.4
HHC PKS 04 32 18.3
HHC PP PP 04 33 26.4 +0.5
HHC SKS SKSdf 04 35 33.3 -7.2
HHC SKKS SKKSac 04 39 56.3 -4.5
HHC SS SS 04 53 37.5 -2.5
HHC AMB AMB
comp=Z,56nm,8.4s
HHC LR LR
comp=N,130nm,19.0s
HHC LR LR
comp=E,150nm,20.2s
HHC LR LR
comp=Z,150nm,20.2s
CMAR Chiang Mai Arr 165.70 111 PKPab PKPab 04 29 52.4 +0.6
comp=Z,0.9nm,0.3s,baz=255,slow=4.8,SNR=4.8
CD2 Chengdu 169.54 49 ePKP PKPdf 04 28 51.3 -3.0

ISK ***21*** *04:21:34.2, 37˚.20N×30˚.34E, h93km, MD3.0*
ISCJB ***21*** *04:21:34.9±0.8, 37˚.24N±0˚.05×30˚.39E±0˚.05, h99km±7km, Error ellipse: s-maj=8.5km s-min=6.7km az=7.9*
CSEM ***21*** *04:21:35.2±0.1, 37˚.24N×30˚.35E, h100km, MD3.0, Error ellipse: s-maj=3.9km s-min=3.2km az=3.0*
DDA ***21*** *04:21:38.7, 37˚.58N×30˚.34E, h7km±7km, Md2.9*
ISC 21 04:21:35.5±0.8, 37˚.25N±0˚.05×30˚.39E±0˚.05, h96km±7km, n39,σ0°61/52, 3C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KORT	Korkueli	0.25	187	⇑iP	Pn	04 21 50.0	+0.6
KORT				i S	Sn	04 22 00.5	+0.8
KORT	Korkueli	0.25	187	i P	Pn	04 21 50.0	+0.6
KORT				i S	Sn	04 22 00.5	+0.8
BCK	Bucak	0.27	36	ePG	Pn	04 21 49.6	+0.2
BCK	Bucak	0.27	36	ePg	Pn	04 21 49.6	+0.1
ANTB	Antalya	0.41	148	ePG	Pn	04 21 48.8	-1.4
ANTB	Antalya	0.41	148	ePg	Pn	04 21 48.8	-1.4
SUTC	Sutluce-Ispart	0.54	64	ePG	Pn	04 21 50.7	-0.4
SUTC				eSG	Sn	04 22 02.0	-0.8
SUTC	Sutluce-Ispart	0.54	64	ePg	Pn	04 21 50.7	-0.4
SUTC				eSg	Sn	04 22 02.0	-0.8
ISP	Isparta	0.60	9	ePG	Pn	04 21 50.9	-0.8
ISP				eSG	Sn	04 22 03.5	-0.2
GOLH	Golhisar	0.66	269	⇑iP	Pn	04 21 52.9	+0.7
GOLH				i S	Sn	04 22 04.9	+0.3
GOLH	Golhisar	0.66	269	i P	Pn	04 21 52.9	+0.7
GOLH				i S	Sn	04 22 04.9	+0.3
DNZL	Cakiroluk	1.16	293	eP	Pn	04 21 58.1	+0.7
DNZL				eS	Sn	04 22 13.8	-0.1
DNZL	Cakiroluk	1.16	293	eP	Pn	04 21 58.1	+0.7
DNZL				eS	Sn	04 22 13.8	-0.1
AKAS	Kas	1.19	212	⇑iP	Pn	04 21 58.2	+0.5
AKAS				eS	Sn	04 22 18.9	+4.3
AKAS	Kas	1.19	212	i P	Pn	04 21 58.2	+0.4
AKAS				eS	Sn	04 22 18.9	+4.3
KHL	Karahalli	1.28	328	ePN	Pn	04 21 58.0	-0.8
KHL	Karahalli	1.28	328	ePn	Pn	04 21 58.0	-0.8
KHAL	Karahalli	1.33	328	eP	Pn	04 21 59.6	+0.2
KHAL				eS	Sn	04 22 17.4	0.0
KHAL	Karahalli	1.33	328	eP	Pn	04 21 59.6	+0.2
KHAL				eS	Sn	04 22 17.5	0.0
BOLV	Bolvadin	1.54	17	eP	Pn	04 22 02.6	+0.7
BOLV	Bolvadin	1.54	17	eP	Pn	04 22 02.7	+0.7
YER	Yerkesik	1.69	267	ePN	Pn	04 22 03.3	-0.5
YER	Yerkesik	1.69	267	ePn	Pn	04 22 03.3	-0.5
HDMB	Hadim	1.70	99	ePN	Pn	04 22 04.5	+0.5
HDMB	Hadim	1.70	99	ePn	Pn	04 22 04.5	+0.5
KONT	Konya--Tatoy	1.71	65	ePN	Pn	04 22 04.7	+0.5
KONT	Konya--Tatoy	1.71	65	ePn	Pn	04 22 04.7	+0.5
LADK	Ladik-KONYA	1.83	58	ePN	Pn	04 22 06.0	+0.2
LADK	Ladik-KONYA	1.83	58	ePn	Pn	04 22 06.0	+0.3
KULA	Kula-Manisa	1.86	313	ePN	Pn	04 22 06.0	-0.1
KULA	Kula-Manisa	1.86	313	ePn	Pn	04 22 06.0	-0.1
GDZ	Gediz	1.97	339	eP	Pn	04 22 07.7	+0.1
GDZ	Gediz	1.97	339	eP	Pn	04 22 07.7	+0.1
KIZT	Kizilcal	2.01	35	ePN	Pn	04 22 08.6	+0.5
KIZT	Kizilcal	2.01	35	ePn	Pn	04 22 08.6	+0.6
DAT	Datca	2.31	258	ePN	Pn	04 22 10.9	-1.0
DAT	Datca	2.31	258	ePn	Pn	04 22 10.9	-1.0
LEF	Lefka	2.93	136	ePN	Pn	04 22 19.7	-0.5
LEF	Lefka	2.93	136	ePn	Pn	04 22 19.7	-0.5

TEH ***21*** *04:46:32.9, 38˚.92N×41˚.32E, h2km*
DDA ***21*** *04:46:33.6, 38˚.96N×41˚.32E, h12km±1km, Md3.5*
NEIC ***21*** *04:46:33.0, 38˚.93N×41˚.33E, h5km, mb4.0/7, ML3.6(ISK), After ISK.*
ISK ***21*** *04:46:34.0, 38˚.93N×41˚.33E, h8km, ML3.5*
IDC ***21*** *04:46:34.4±1.1, 38˚.99N×41˚.33E, h0km, mb3.6/5, mb1 3.6/10, mb1mx3.5/26, mbtmp3.6/10, ML3.2/3, MS2.9/2, Ms1 2.9/2, ms1mx2.4/34, Error ellipse: s-maj=23.6km s-min=13.4km az=158.0*
ISCJB ***21*** *04:46:34.4±0.3, 38˚.96N±0˚.02×41˚.32E±0˚.03, h10km, mb3.6/10, Error ellipse: s-maj=3.5km s-min=2.4km az=31.8*
CSEM ***21*** *04:46:34.3±0.1, 38˚.96N×41˚.32E, h2km, mb3.7/7, Error ellipse: s-maj=4.5km s-min=3.6km az=140.0*
MOS ***21*** *04:46:34.0±1.4, 38˚.98N×41˚.15E, h10km, mb4.0/7, Error ellipse: s-maj=12.4km s-min=6.9km az=82.1*
ISC 21 04:46:34.3±0.5, 38˚.95N±0˚.02×41˚.31E±0˚.03, h0km±4km, n131,σ1°14/153, mb3.7/10, 3C-6D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BINT	Bingol	0.65	264	PG	Pg	04 46 47.5	+0.9
BINT	Bingol	0.65	264	i Pg	Pg	04 46 47.6	+1.0
BTMT	Batman	0.77	169	ePG	Pg	04 46 49.3	+0.4
EZM	Erzurum	0.96	2	ePG	Pg	04 46 52.5	-0.2
EZM	Erzurum	0.96	2	ePg	Pg	04 46 52.5	-0.2
ERZM	Erzurum	0.96	2	⇓iP	Pg	04 46 51.9	-0.8
ERZM				i S	Sg	04 47 06.3	+1.2
ERZM	Erzurum	0.96	2	i P	Pg	04 46 51.9	-0.8
ERZM				i S	Sg	04 47 06.3	+1.2
BEST	Besiri	1.05	182	⇓iP	Pg	04 46 54.4	0.0
BEST				i S	Sg	04 47 09.6	+1.5
HOMI	Horasan	1.19	23	⇓iP	Pg	04 46 55.7	-1.4
HOMI				i S	Sg	04 47 14.3	+1.8
KOPT	Kop Dagi	1.24	330	⇓iP	Pg	04 46 56.8	-1.3
KOPT				i S	Sg	04 47 15.2	+1.0
KOPT	Kop Dagi	1.24	330	i P	Pg	04 46 56.8	-1.3
KOPT				i S	Sg	04 47 15.2	+1.0
DIY	Diyarbakir	1.35	219	ePN	Pn	04 46 59.8	-0.6
DIY				eSN	Sn	04 47 17.7	-1.3
DIY	Diyarbakir	1.35	219	ePn	Pn	04 46 59.8	-0.6
DIY				eSn	Sn	04 47 17.7	-1.3
PTK	Pertek	1.50	269	ePN	Pn	04 47 01.6	-0.8
PTK	Pertek	1.50	269	ePn	Pn	04 47 01.6	-0.8
VANB	Van	1.66	102	ePN	Pn	04 47 04.0	-0.7
VANB	Van	1.66	102	ePn	Pn	04 47 04.0	-0.6
SVRC	Sivrice-ELAZID	1.67	251	ePN	Pn	04 47 04.4	-0.3
SVRC				eSN	Sn	04 47 26.5	-0.3
SVRC	Sivrice-ELAZID	1.67	251	ePn	Pn	04 47 04.4	-0.3
SVRC				eSn	Sn	04 47 26.5	-0.3
EZC	Erzincan	1.72	299	ePN	Pn	04 47 05.0	-0.4
ELZG	Elazig	1.87	257	eP	Pb	04 47 08.2	-1.2
ELZG				eS	Sg	04 47 34.3	-0.2
ELZG	Elazig	1.87	257	eP	Pb	04 47 08.2	-1.2
ELZG				eS	Sg	04 47 34.3	-0.2
DYDN	Diyadin	1.94	71	eP	Pb	04 47 08.7	-1.8
DYDN				eS	Sg	04 47 35.2	-1.5
DYDN	Diyadin	1.94	71	eP	Pb	04 47 08.7	-1.8
DYDN				eS	Sg	04 47 35.2	-1.4
DDEM	Demirkent	1.97	10	⇓iP	Pb	04 47 09.2	-1.8
DDEM				i S	Sg	04 47 38.2	+0.5
DDEM	Demirkent	1.97	10	i P	Pb	04 47 09.2	-1.9
DDEM				i S	Sg	04 47 38.2	+0.5
CLDR	Caldiran	2.04	84	ePN	Pn	04 47 09.4	-0.4
CLDR	Caldiran	2.04	84	ePn	Pn	04 47 09.4	-0.4
GUMT	Gumushane	2.07	318	ePN	Pn	04 47 10.3	0.0
GUMT	Gumushane	2.07	318	ePn	Pn	04 47 10.3	0.0
KARS	Kars	2.16	38	ePN	Pn	04 47 11.6	+0.1
KARS	Kars	2.16	38	ePn	Pn	04 47 11.6	+0.1
PZAR	Pazar-Rize	2.25	352	ePN	Pn	04 47 12.6	-0.2
PZAR	Pazar-Rize	2.25	352	ePn	Pn	04 47 12.6	-0.2
ARTV	Artvin	2.29	12	⇓iP	Pn	04 47 13.5	+0.3
ARTV				i S	Sb	04 47 44.8	-0.4
ARTV	Artvin	2.29	12	i P	Pn	04 47 13.5	+0.3
ARTV				i S	Sb	04 47 44.8	-0.4
MYA	Malataya	2.34	256	ePN	Pn	04 47 13.9	-0.1
MYA	Malataya	2.34	256	ePn	Pn	04 47 13.9	-0.1
KTUT	Trabzon	2.36	330	ePN	Pn	04 47 14.5	+0.2
KTUT	Trabzon	2.36	330	ePn	Pn	04 47 14.5	+0.3
URFA	Urfa	2.47	233	ePN	Pn	04 47 15.5	-0.2
URFA	Urfa	2.47	233	ePn	Pn	04 47 15.5	-0.3
CUKT	Cukurca	2.48	132	ePN	Pn	04 47 15.6	-0.3
CUKT	Cukurca	2.48	132	ePn	Pn	04 47 15.6	-0.3
BCA	Borcka	2.51	5	ePN	Pn	04 47 15.6	-0.7
BCA	Borcka	2.51	5	ePn	Pn	04 47 15.6	-0.7
ESPY	Espiye-Giresun	2.80	316	ePN	Pn	04 47 20.7	+0.5
ESPY	Espiye-Giresun	2.80	316	ePn	Pn	04 47 20.7	+0.4
GNI	Garni	2.91	65	ePN	Pn	04 47 22.4	+0.5
GNI	Garni	2.91	65	Pn	Pn	04 47 23.1	+1.3
4.7nm,0.3s,baz=258,slow=2.1,SNR=11
GNI Garni 2.91 65 ⇑eP Pn 04 47 23.0 +1.2
GNI Garni 2.91 65 ePn Pn 04 47 22.4 +0.6
GNI Garni 2.91 65 eP Pn 04 47 23.0 +1.2
ISHB Shabestar 3.44 100 ePn Pg 04 47 36.4 -3.7
ISHB e 04 47 54.0
comp=Z,311nm,0.3s
IMRD Marand 3.44 92 ePn Pg 04 47 37.9 -2.3
IMRD e 04 47 55.7
comp=Z,1μm,0.4s
SVSK Karacayir 3.48 288 ePN Pn 04 47 30.2 +0.6
SVSK Karacayir 3.48 288 ePn Pn 04 47 30.2 +0.6
SARI SarD1z-Kayseri 3.62 267 ePN Pn 04 47 35.4 +3.9
GAZ Gaziantep 3.69 243 ePN Pn 04 47 33.3 +0.8
GAZ Gaziantep 3.69 243 ePn Pn 04 47 33.3 +0.8
KMRS Kahramanmaras 3.76 249 ePN Pn 04 47 34.0 +0.5
KMRS Kahramanmaras 3.76 249 ePn Pn 04 47 34.0 +0.5
ONI Oni 3.99 23 P Pg 04 47 49.5 -1.2
ONI S Sg 04 48 46.3 +4.0
DGRG David-gareji 3.99 50 P Pn 04 47 38.6 +1.9
DGRG S Sg 04 48 44.4 +1.9
ZEI Tsey 4.29 26 eP Pn 04 47 41.7 +0.9
ZEI pmax pmax
comp=Z,5.0nm,0.5s
ZEI Tsey 4.29 26 eP Pn 04 47 41.7 +0.9
comp=Z,5.0nm,0.5s
KOZT Kozan 4.56 253 ePN Pn 04 47 45.7 +1.2
SOC Sochi 4.79 346 i P Pn 04 47 48.6 +1.0
SOC Sochi 4.79 346 i P Pn 04 47 48.6 +1.0
SHAR Shatzhatmas 4.90 12 i P Pn 04 47 50.8 +1.6
SHAR Shatzhatmas 4.90 12 i P Pn 04 47 50.8 +1.6

KUBR	Kubataba	5.10	17⇑	eP	Pn	04 47 49.6	-2.3
KUBR	Kubataba	5.10	17	eP	Pn	04 47 49.6	-2.3
KIV	Kislovodsk	5.11	11	P	Pn	04 47 50.9	-1.1
KIV	Kislovodsk	5.11	11	P	Pn	04 47 50.9	-1.1
IDHR	Dehrash	5.88	135	ePn	Pn	04 48 04.4	+1.8
IDHR				e		04 49 55.1	
	comp=N,563nm,0.4s						
IDHR	Dehrash	5.88	135	ePn	Pn	04 48 04.4	+1.8
BR131	Keskin Array S	6.00	280	ePn	Pn	04 48 03.9	-0.4
	comp=N,2.4nm,0.6s						
BR131	Keskin Array S	6.00	280	ePn	Pn	04 48 03.8	-0.5
	comp=N,2.4nm,0.6s						
BRTR	Keskin Array B	6.00	280	Pn	Pn	04 48 04.6	+0.3
	comp=N,0.1nm,0.3s,baz=100,slow=14,SNR=9.0						
BRTR	Keskin Array B	6.00	280	P	Pn	04 48 04.6	+0.3
HWQ	Hawqa	6.35	224	ePn	Pn	04 48 09.8	+0.7
HWQ	Hawqa	6.35	224	ePn	Pn	04 48 09.8	+0.7
ANN	Anapa	6.53	335	eP	Pn	04 48 11.3	-0.2
ANN				eS	Sn	04 49 26.9	+0.3
ANN				pmax	pmax		
	comp=Z,14nm,0.9s						
ANN	Anapa	6.53	335	eP	Pn	04 48 11.3	-0.2
	comp=Z,14nm,0.9s						
ANN				eS	Sn	04 49 26.9	+0.3
CSS	Prodhromos	7.52	241	ePn	Pn	04 48 22.0	-3.2
MMAI	Mount Meron Ar	7.61	221	Pn	Pn	04 48 28.1	+1.7
	comp=Z,3.6nm,0.3s,baz=68,slow=14,SNR=12						
MMAI				Lg		04 50 35.9	
	comp=Z,1.9nm,0.3s,baz=59,slow=20,SNR=3.3						
ASF	Jabal al Asfar	7.65	209	Pn	Pn	04 48 27.7	+0.7
	comp=Z,0.5nm,0.3s,baz=248,slow=5.8,SNR=7.7						
ASF				Lg		04 50 33.8	
	comp=Z,0.4nm,0.3s,baz=274,slow=19,SNR=3.1						
ASF				LR	LR	04 51 42.2	
	comp=Z,66nm,19.1s,baz=90,slow=40						
EIL	Elat	10.64	211	Lg		04 52 16.9	
	comp=Z,0.3nm,0.3s,baz=45,slow=20,SNR=2.3						
EIL				LR	LR	04 53 46.2	
	comp=Z,83nm,18.9s,baz=73,slow=40						
AKASG	Malin Array Be	14.53	328	Pn	Pn	04 49 59.8	-1.2
	comp=Z,0.4nm,0.3s,baz=129,slow=12,SNR=4.6						
AKASG	Malin Array Be	14.53	328	Pn	Pn	04 49 59.8	-1.1
KIEV	Kiev	14.53	328	eP	Pn	04 49 59.4	-1.6
KIEV	Kiev	14.53	328	ePn	Pn	04 49 59.3	-1.7
AKTK	Aktyubinsk	16.48	40	Pn	Pn	04 50 27.3	+0.6
AKTK	Aktyubinsk	16.48	40	P	Pn	04 50 27.3	+0.6
AKTO	Aktyubinsk	16.48	40	Pn	Pn	04 50 27.3	+0.6
	comp=Z,0.1nm,0.3s,baz=232,slow=14,SNR=6.6						
OBN	Obninsk	16.49	350	eP	Pn	04 50 28.7	+1.9
OBN				pmax	pmax		
	comp=Z,3.0nm,0.6s						
OBN	Obninsk	16.49	350	eP	Pn	04 50 28.7	+1.9
	comp=Z,3.0nm,0.6s						
ABKAR	Akbulak array	16.85	46	eP	Pn	04 50 32.8	+1.4
	comp=Z,0.6nm,0.5s						
ABKAR	Akbulak array	16.85	46	eP	Pn	04 50 32.8	+1.4
	comp=Z,0.6nm,0.5s						
ARU	Arti	20.89	28	c iP	P	04 51 20.4	+2.5
ARU						04 51 36.1	
ARU				S	S	04 55 16.1	+4.7
ARU				SS		04 55 36.5	
ARU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ARU	Arti	20.89	28	eP	P	04 51 16.2	-1.6
	comp=Z,4.4nm,0.6s						
ARU	Arti	20.89	28	eP	P	04 51 16.2	-1.7
	comp=Z,4.3nm,0.6s						
CLL	Collm	23.32	311	eP	P	04 51 43.0	-0.9
CLL				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.0						
CLL	Collm	23.32	311	eP	P	04 51 43.0	-0.9
	comp=Z,7.0nm,1.3s,mb4.0						
CLL	Collm	23.32	311	eP	P	04 51 43.0	-0.9
	comp=Z,7.0nm,1.3s,mb4.0						
CLL	Collm	23.32	311	eP	P	04 51 43.0	-0.9
	comp=Z,7.0nm,1.3s,mb4.0						
BRVK	Borovoye	24.37	45	i P	P	04 51 55.9	+2.1
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.5						
BRVK	Borovoye	24.37	45	i P	P	04 51 55.9	+2.1
	comp=Z,1.0nm,0.7s,mb3.5						
BVAR	Borovoye Array	24.41	45	P	P	04 51 55.6	+1.4
	comp=Z,0.6nm,0.7s,mb3.2,baz=248,slow=12,SNR=3.8						
BVAR	Borovoye Array	24.41	45	P	P	04 51 55.6	+1.4
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BVAR	Borovoye Array	24.41	45	P	P	04 51 55.6	+1.4
	comp=Z,1.0nm,0.7s,mb3.5						
FINES	FINESS Array B	24.42	342	P	P	04 51 53.2	-0.9
	comp=Z,2.3nm,0.9s,mb3.7,baz=151,slow=3.2,SNR=3.8						
FINES	FINESS Array B	24.42	342	P	P	04 51 53.2	-0.9
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FINES	FINESS Array B	24.42	342	P	P	04 51 53.2	-0.9
	comp=Z,2.0nm,0.9s,mb3.6						
EKS2	Erkin-Say	24.77	71	eP	P	04 51 54.8	-2.7
	comp=Z,3.2nm,0.9s,mb4.0						
EKS2	Erkin-Say	24.77	71	eP	P	04 51 54.8	-2.7
	comp=Z,3.2nm,0.9s,mb4.0						
KEST	Kesra	25.55	273	P	P	04 52 05.1	+0.5
	comp=Z,0.8nm,0.7s,mb3.5,baz=27,slow=9.0,SNR=4.2						
KEST	Kesra	25.55	273	P	P	04 52 05.1	+0.4
TKM2	Tokmak 2	26.09	70	eP	P	04 52 08.9	-0.7
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.8						
TKM2	Tokmak 2	26.09	70	eP	P	04 52 08.9	-0.6
	comp=Z,2.3nm,0.9s,mb3.8						
TKM2	Tokmak 2	26.09	70	eP	P	04 52 08.9	-0.7
	comp=Z,2.3nm,0.9s,mb3.8						
BNI	Bardonecchia	26.31	295	eP	P	04 52 08.0	-3.5
BNI				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.1						
BNI	Bardonecchia	26.31	295	eP	P	04 52 08.0	-3.5
	comp=Z,5.1nm,1.1s,mb4.1						
KURK	Kurchatov	28.65	53	P	P	04 52 32.1	-0.3
	comp=Z,0.9nm,0.8s,mb3.7,baz=266,slow=8.9,SNR=4.2						
KURK	Kurchatov	28.65	53	P	P	04 52 32.1	-0.3
KURK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.7						
KURK	Kurchatov	28.65	53	eP	P	04 52 30.5	-1.9
	comp=Z,1.9nm,0.9s,mb3.9						
KURK	Kurchatov	28.65	53	P	P	04 52 32.1	-0.3
	comp=Z,1.0nm,0.8s,mb3.7						
MKAR	Makanchi Array	30.76	62	P	P	04 52 51.0	-0.1
	comp=Z,0.4nm,0.7s,mb3.5,baz=264,slow=7.1,SNR=2.6						
MKAR	Makanchi Array	30.76	62	P	P	04 52 51.0	-0.1
CMAR	Chiang Mai Arr	53.61	95	i P	P	04 56 04.2	+6.8

IDC 21 05:17:10.8±8.0,5.°45S×150.°37E,h0km,mb4.2/3, mb1 4.4/3,mb1mx3.8/15,mbtmp4.3/3,Error ellipse: s-maj=123.7km s-min=83.3km az=17.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.23	226	P	P	05 21 58.4	-0.1
	11nm,0.5s,baz=52,slow=11,SNR=55						
ASAR	Alice Springs	24.07	220	P	P	05 22 27.5	-0.5
	1.6nm,0.4s,baz=58,slow=8.8,SNR=20						
STKA	Stephens Creek	27.54	196	P	P	05 23 00.2	+0.8
	2.4nm,0.6s,baz=27,slow=13,SNR=4.0						

*CSEM **21** 05:19:36.8, 12.°20N×43.°97E, h2km, ML4.0, After DHMR*

DHMR 21 05:19:36.8±1.4,12.°20N×43.°97E,h2km±19km,ML4.0, 3C-2D,Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UDYN	Al 'Udayn	1.76	360	i P	Pn	05 20 09.4	+1.1
UDYN				i S	Sn	05 20 33.4	+2.1
UDYN				AML	AML	05 20 50.5	
	comp=Z,2μm,0.6s						
UDYN	Al 'Udayn	1.76	360	i P	Pn	05 20 09.4	+1.1
UDYN				i S	Sn	05 20 33.4	+2.1
	comp=Z,847nm,0.6s						
LBOS		2.08	37	⇑iP	Pn	05 20 13.9	+1.2
LBOS				i S	Sn	05 20 42.9	+3.8
BDHA	Al Bayda'	2.35	41	⇓iP	Pn	05 20 17.9	+1.5
BDHA				i S	Sn	05 20 51.6	+5.7
BDHA				AML	AML	05 21 02.7	
	comp=E,1μm,1.0s						
BDHA	Al Bayda'	2.35	41	⇓iP	Pn	05 20 18.0	+1.5
BDHA				i S	Sn	05 20 51.7	+5.7
	comp=E,532nm,1.0s						
DHBB	Dhamar BB	2.40	10	i P	Pn	05 20 19.9	+2.9
DHBB				i S	Sn	05 20 52.2	+5.3
HAJJ	Hajjah	3.50	354	⇑iP	Pn	05 20 34.5	+2.3
HAJJ				i S	Sn	05 21 20.6	+6.3
HAJJ				AML	AML	05 21 47.0	
	comp=Z,752nm,0.6s						
HAJJ	Hajjah	3.50	354	⇑iP	Pn	05 20 34.5	+2.3
HAJJ				i S	Sn	05 21 20.6	+6.4
	comp=Z,376nm,0.6s						

*IDC **21** 05:28:49.9±1.0,5.°44S×152.°19E, h0km, mb4.3/16, mb1 4.5/16, mb1mx4.4/19, mbtmp4.3/16, MS3.9/8, Ms1 3.9/8, ms1mx3.5/31, Error ellipse: s-maj=32.2km s-min=16.7km az=116.0*

*BJI **21** 05:28:50.2, 5.°80S×152.°73E, h37km, mB5.0/15, mb4.9/21, Ms4.8/16, Ms7 4.3/13*

*ISCJB **21** 05:28:51.5±2.1, 5.°48S±0.°06×152.°24E±0.°07, h19km±15km, mb4.7/45, MS4.1/13, Error ellipse: s-maj=12.1km s-min=9.5km az=38.0*

*NEIC **21** 05:28:58.9±2.0, 5.°50S×152.°15E, h68km±19km, mb4.7/24, Error ellipse: s-maj=10.1km s-min=8.6km az=113.0*

ISC 21 05:28:56.6±1.6,5.°55S±0.°07×152.°29E±0.°07,h46km±15km, h35km±.5km:pP-P,n76,σ1$00/70,mb4.7/44,MS4.1/13,1D, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	15.60	202	Pn	Pn	05 32 35.5	+2.0
	0.4nm,0.3s,baz=34,slow=13,SNR=5.3						
CTA				LR	LR	05 37 50.9	
	comp=Z,424nm,19.2s,baz=38,slow=34						
CTAO	Charters Tower	15.60	202	eP	Pn	05 32 35.1	+1.7
	14nm,0.9s						
EIDS	Eidsvold	19.74	183	eP	Pn	05 33 23.2	-1.2
	29nm,1.2s						
GUMO	Guam	20.39	339	eP	P	05 33 29.2	-0.4
	80nm,1.0s						
KAKA	Kakadu	20.84	249	eP	P	05 33 34.4	-0.1
	22nm,0.4s						
KAKA	Kakadu	20.84	249	eP	P	05 33 34.1	-0.4
DZM	Mont Dzumac	21.39	142	eP	P	05 33 41.2	+0.8
	28nm,1.2s,mb4.5						
DZM				eLR	LR	05 38 45.8	
	746nm,26.1s						
WRAB	Tennant Creek	22.56	229	eP	P	05 33 53.6	+0.7
	30nm,1.2s,mb4.6						
WRA	Warramunga Arr	22.57	229	P	P	05 33 50.9	-2.1
	6.5nm,0.6s,mb4.2,baz=54,slow=9.9,SNR=6.8						
ASAR	Alice Springs	25.26	223	P	P	05 34 18.6	+0.1
	5.1nm,0.5s,mb4.3,baz=57,slow=9.1,SNR=72						
ASAR	Alice Springs	25.26	223	P	P	05 34 18.6	+0.1
STKA	Stephens Creek	28.04	200	eP	P	05 34 43.2	-0.3
	4.8nm,0.9s,mb4.1						
STKA	Stephens Creek	28.04	200	P	P	05 34 43.0	-0.5
	4.3nm,0.9s,mb4.1,baz=3.6,slow=12,SNR=5.2						
STKA				LR	LR	05 46 05.0	
	comp=Z,290nm,21.9s,MS3.8,baz=25,slow=37						
FITZ	Fitzroy Crossi	28.86	242	eP	P	05 34 50.0	-0.9
	16nm,0.6s,mb4.9						
FITZ	Fitzroy Crossi	28.86	242	P	P	05 34 50.7	-0.2
	8.3nm,0.5s,mb4.7,baz=60,slow=8.4,SNR=27						
FITZ	Fitzroy Crossi	28.86	242	eP	P	05 34 50.0	-0.9
	12nm,0.7s,mb4.7						
AFI	Afiamalu	36.34	106	LR	LR	05 47 49.7	
	comp=Z,124nm,20.7s,MS3.7,baz=275,slow=31						
URZ	Urewera	39.61	149	LR	LR	05 50 45.9	
	comp=Z,167nm,20.0s,MS3.9,baz=313,slow=33						
RPZ	Rata Peaks	41.45	159	LR	LR	05 51 20.7	
	comp=Z,359nm,18.4s,MS4.3,baz=191,slow=32						
MJAR	Matsushiro Arr	43.89	344	LR	LR	05 53 02.9	
	comp=Z,96nm,19.9s,MS3.7,baz=195,slow=33						
KSRS	Korea Array	48.44	334	P	P	05 37 33.3	-1.0
	1.0nm,0.7s,mb3.9,baz=148,slow=14,SNR=3.1						
NJ2	Nanjing	49.10	322	eP	P	05 37 41.9	+2.3
NJ2				pP	pP	05 37 51.4	-1.0
NJ2				sP	sP	05 37 56.0	-1.8
NJ2				PP	PP	05 39 36.8	+3.1
NJ2				S	S	05 44 42.5	+1.0
NJ2				sS	sS	05 44 58.5	-4.5
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s,mb5.4						
NJ2				pmax	pmax		
	comp=Z,120nm,7.1s						
NJ2				LR	LR		
	comp=N,330nm,21.2s,MS4.8						
NJ2				LR	LR		
	comp=E,960nm,21.0s,MS4.8						
MDJ	Mudanjiang	53.94	340	P	P	05 38 16.5	+1.0
MDJ				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
MDJ				pmax	pmax		
	comp=Z,54nm,4.1s						
GYA	Guiyang	54.44	308	P	P	05 38 21.0	+1.5
GYA				pP	pP	05 38 31.3	-1.2
GYA				sP	sP	05 38 37.6	-0.3
GYA				PP	PP	05 40 24.8	+2.7
GYA				S	S	05 45 55.8	+0.7
GYA				sS	sS	05 46 12.9	-3.9
GYA				SS	SS	05 49 36.8	-1.5
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
GYA				pmax	pmax		
	comp=Z,90nm,5.4s						
GYA				LR	LR		
	comp=N,540nm,19.0s,MS4.7						
GYA				LR	LR		
	comp=E,420nm,20.5s,MS4.7						
GYA				LR	LR		
	comp=Z,530nm,19.9s,MS4.6						
CN2	Changchun	54.77	336	eP	P	05 38 21.9	+0.4
BJI	Beijing	56.23	327	P	P	05 38 32.4	+0.3
BJI				S	S	05 46 27.4	+8.8
BJI				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb5.0						
BJI				LR	LR		
	comp=N,89nm,23.7s,MS3.9						
BJI				LR	LR		
	comp=E,93nm,26.0s,MS3.9						
BJI				LR	LR		
	comp=Z,66nm,22.0s,MS3.7						
KMI	Kunming	56.98	305	P	P	05 38 39.3	+1.5
KMI				pP	pP	05 38 49.1	-1.7
KMI				sP	sP	05 38 54.1	-2.1
KMI				PP	PP	05 40 47.0	+2.1
KMI				S	S	05 46 28.9	-0.1
KMI				sS	sS	05 46 46.3	-4.6
KMI				SS	SS	05 50 18.0	-0.3
KMI				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
KMI				pmax	pmax		
	comp=Z,77nm,4.2s						
KMI				LR	LR		
	comp=N,100nm,15.0s,MS4.2						
KMI				LR	LR		
	comp=E,130nm,16.0s,MS4.2						
KMI				LR	LR		
	comp=Z,140nm,16.0s,MS4.2						
CMAR	Chiang Mai Arr	57.73	296	P	P	05 38 43.2	+0.1
	comp=Z,2.0nm,0.7s,mb4.3,baz=124,slow=5.8,SNR=11						
CMAR				PcP	PcP	05 39 35.8	+0.1
	comp=Z,0.4nm,0.3s,baz=115,slow=4.1,SNR=4.3						
PPT	Papeete	57.99	107	eLR	LR	05 55 53.6	
	comp=Z,63nm,22.0s						
PETK	Petropavlovsk-	58.61	4	P	P	05 38 47.8	-0.8
	comp=Z,0.8nm,0.5s,mb4.0,baz=182,slow=5.7,SNR=6.6						
PETK				PcP	PcP	05 39 38.6	+0.3
	comp=Z,4.9nm,0.8s,baz=167,slow=7.4,SNR=6.5						
CD2	Chengdu	58.84	311	eP	P	05 38 50.3	-0.4
CD2				pP	pP	05 39 00.4	-3.4
CD2				sP	sP	05 39 04.3	-4.8
CD2				PP	PP	05 41 02.1	+0.8
CD2				S	S	05 46 51.3	-1.8
CD2				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.3						
CD2				pmax	pmax		
	comp=Z,100nm,5.8s						
CD2				LR	LR		
	comp=N,170nm,16.6s,MS4.4						
CD2				LR	LR		
	comp=E,240nm,20.2s,MS4.4						
CD2				LR	LR		
	comp=Z,170nm,15.5s,MS4.3						
HHC	Hu-ho-hao-te	59.35	325	eP	P	05 38 56.6	+2.6
HHC				pP	pP	05 39 06.8	-0.4
HHC				sP	sP	05 39 10.6	-1.9
HHC				PcP	PcP	05 39 43.9	+2.3
HHC				PP	PP	05 41 09.6	+3.9
HHC				ScP	ScP	05 43 40.8	+2.0
HHC				PcS	PcS	05 43 44.8	+1.2
HHC				S	S	05 47 01.1	+1.6
HHC				sS	sS	05 47 18.4	-3.0
HHC				ScS	ScS	05 48 40.9	+0.5
HHC				SS	SS	05 50 57.6	+2.5
HHC				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.2						
HHC				pmax	pmax		
	comp=Z,120nm,6.6s						
HHC				LR	LR		
	comp=N,80nm,17.8s,MS4.2						
HHC				LR	LR		
	comp=E,170nm,20.2s,MS4.2						
HHC				LR	LR		
	comp=Z,150nm,20.2s,MS4.1						
FX1	Attu Island--F	60.84	14	LR	LR	06 06 17.9	
	comp=Z,86nm,18.4s,MS3.9,baz=38,slow=37						
GTA	Gaotai	65.86	318	eP	P	05 39 37.8	+0.3
GTA				pP	pP	05 39 48.4	-2.4
GTA				sP	sP	05 39 51.9	-4.2
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.4						
ULN	Ulaanbaatar	66.36	329	eP	P	05 39 40.7	+0.2
	comp=Z,5.6nm,1.1s,mb4.5						
SONM	Songino Array	66.68	328	P	P	05 39 42.2	-0.3
	comp=Z,2.6nm,0.7s,mb4.3,baz=138,slow=4.6,SNR=16						
SONM				PcP	PcP	05 40 11.3	-0.1
	comp=Z,1.4nm,0.9s,baz=132,slow=6.2,SNR=4.2						
LSA	Lhasa	68.24	305	eP	P	05 39 52.9	+0.1
	comp=Z,2.3nm,0.4s,mb4.6						
WMQ	Urumqi	75.94	318	eP	P	05 40 38.0	-0.6
KDAK	Kodiak Island	77.07	27	LR	LR	06 06 38.8	
	comp=Z,98nm,21.2s,MS4.1,baz=272,slow=30						
SVW2	Sparrevohn	77.71	23	eP	P	05 40 48.7	+0.6
TTA	Tatalina	78.65	21	eP	P	05 40 53.9	+0.6
SEW	Seward	79.68	26	eP	P	05 40 58.3	-0.7
	comp=Z,18nm,1.1s,mb4.9						
PPLA	Purkeypile	80.05	23	eP	P	05 41 00.4	-0.6
	comp=Z,14nm,1.3s,mb4.7						
MK31	Makanchi Array	80.55	319	eP	P	05 41 03.1	-0.9
MKAR	Makanchi Array	80.55	319	P	P	05 41 03.1	-0.9
	comp=Z,3.8nm,0.9s,mb4.3,baz=101,slow=6.6,SNR=17						
CHUM	Lake Minchumin	80.56	22	eP	P	05 41 04.1	+0.4
	comp=Z,37nm,0.9s,mb5.3						
PMR	Palmer	80.57	24	eP	P	05 41 03.3	-0.5
	comp=Z,26nm,1.4s,mb5.0						
KTH	Kantishna Hill	80.89	22	eP	P	05 41 04.3	-1.2
	comp=Z,42nm,1.4s,mb5.2						
TRF	Thorofare Moun	81.08	23	eP	P	05 41 05.1	-1.3
	comp=Z,6.9nm,0.7s,mb4.7						
BPAW	Bear Paw Mtn.	81.17	22	eP	P	05 41 05.7	-1.2
	comp=Z,8.3nm,1.1s,mb4.6						
ZAA0	Zalesovo Array	81.49	326	eP	P	05 41 07.0	-1.8
ZALV	Zalesovo Beam	81.49	326	P	P	05 41 07.3	-1.5
	comp=Z,2.0nm,0.6s,mb4.3,baz=111,slow=6.3,SNR=10						
MCK	McKinley	81.74	23	eP	P	05 41 09.4	-0.6
	comp=Z,84nm,1.3s,mb5.5						
DIV	Divide	81.76	26	eP	P	05 41 10.7	+0.6
	comp=Z,33nm,1.1s,mb5.2						
BMRM	Bremner River	82.19	26	eP	P	05 41 12.6	+0.2
	comp=Z,13nm,1.0s,mb4.8						
COLA	College	82.73	22	eP	P	05 41 13.9	-1.2
	comp=Z,24nm,0.8s,mb5.3						
KSH	Kashi	83.03	311	eP	P	05 41 18.8	+1.6
KSH				pP	pP	05 41 29.3	-1.7
KSH				sP	sP	05 41 33.3	-2.9
KSH				S	S	05 51 32.3	-1.0
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
KSH				pmax	pmax		
	comp=Z,38nm,4.2s						
KSH				LR	LR		
	comp=N,47nm,4.0s						
KSH				LR	LR		
	comp=E,78nm,4.8s						
KSH				LR	LR		
	comp=Z,83nm,3.7s						
COLD	Coldfoot	83.12	19	eP	P	05 41 17.2	+0.1
	comp=Z,10nm,1.2s,mb4.7						
KURK	Kurchatov	84.04	322	P	P	05 41 20.9	-1.3
	comp=Z,1.5nm,0.8s,mb4.2,baz=102,slow=3.8,SNR=5.1						
KURK	Kurchatov	84.04	322	eP	P	05 41 20.8	-1.4
	comp=Z,2.9nm,0.3s,mb4.9						
QSPA	South Pole Qui	84.42	180	eP	P	05 41 24.6	+1.0
	comp=Z,4.1nm,1.0s,mb4.5						
UCH	Uchtor	84.70	313	eP	P	05 41 26.2	+0.5
	comp=Z,5.4nm,1.0s,mb4.6						
AAK	Ala-Archa	84.81	314	P	P	05 41 26.2	0.0
	comp=Z,0.9nm,0.3s,mb4.4,baz=231,slow=12,SNR=5.0						
HYT	Haines Junctio	85.33	28	eP	P	05 41 29.5	+1.1
EKS2	Erkin-Say	85.33	314	eP	P	05 41 28.8	-0.1
	comp=Z,6.5nm,1.1s,mb4.7						
SKAG	Skagway	85.91	29	eP	P	05 41 31.7	+0.4
	comp=Z,12nm,1.4s,mb4.9						
DLBC	Dease Lake	88.28	31	eP	P	05 41 44.4	+1.6
INK	Inuvik	89.33	21	eP	P	05 41 47.6	0.0
BVAR	Borovoye Array	89.53	323	P	P	05 41 47.5	-1.3
	comp=Z,2.4nm,0.7s,mb4.7,baz=103,slow=4.6,SNR=13						
NVAR	Mina Array Bea	92.94	52	P	P	05 42 06.5	+1.5
	comp=Z,0.9nm,0.7s,mb4.3,baz=249,slow=6.7,SNR=11						
YKA	Yellowknife Ar	96.32	28	P	P	05 42 19.9	-0.1
	comp=Z,0.7nm,0.6s,mb4.2,baz=278,slow=4.3,SNR=4.7						
PDAR	Pinedale Array	99.73	48	P	Pdif	05 42 36.0	+0.6
	comp=Z,0.3nm,0.7s,baz=294,slow=6.6,SNR=3.0						
KIC	Kosan Boka	157.14	273	ePKP1	PKPab	05 49 18.7	-0.4
	comp=Z,9.8nm,0.7s						
DBIC	Dimbokro	157.25	274	PKPab	PKPab	05 49 19.2	-0.4
	comp=Z,5.0nm,0.8s,baz=83,slow=4.4,SNR=5.8						
TIC	Toumodi	157.41	274	ePKP1	PKPab	05 49 19.7	-0.6
	comp=Z,75nm,1.6s						
LIC	Lamto	157.43	273	ePKP1	PKPab	05 49 19.0	-1.4
	comp=Z,50nm,1.6s						

*CSEM **21** 05:29:17.6, 12.°26N×43.°92E, h10km, ML3.8, After DHMR*

DHMR 21 05:29:17.6±1.4,12.°26N×43.°92E,h10km±19km,ML3.8, 2C-3D,Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UDYN	Al 'Udayn	1.69	2	i P	Pn	05 29 48.0	+0.8
UDYN				i S	Sn	05 30 11.7	+2.8
UDYN				AML	AML	05 30 28.0	
	comp=Z,2μm,0.6s						
UDYN	Al 'Udayn	1.69	2	i P	Pn	05 29 48.0

σ1§35/18, **mb3.9**/14, **MS4.2**/9, **Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGAR	**Diego Garcia**	**6.28**	**142**	*e*Pn	**Pn**	**05 36 29.0**	**+0.6**
ATD	**Arta Tunnel**	**29.09**	**299**	LR	LR	05 50 05.6	
	comp=Z,154nm,19.9s,MS3.6,baz=114,slow=31						
COCO	**West Island**	**29.64**	**110**	*e*P	**P**	**05 41 07.4**	**+5.9**
	36nm,0.5s						
CMAR	**Chiang Mai Arr**	**36.41**	**54**	P	**P**	**05 42 00.8**	**+0.1**
	0.7nm,0.4s,mb4.0,baz=245,slow=11,SNR=4.9						
CMAR				LR	LR	05 55 51.2	
	comp=Z,110nm,20.3s,MS3.6,baz=255,slow=35						
CMAR	**Chiang Mai Arr**	**36.41**	**54**	P	**P**	**05 42 00.8**	**+0.1**
CMAR				LR	LR	05 55 51.2	
LSZ	**Lusaka**	**41.77**	**250**	P	**P**	**05 42 45.5**	**-0.1**
	2.0nm,0.7s,mb3.8,baz=46,slow=5.5,SNR=3.6						
LSZ				LR	LR	05 57 53.6	
	comp=Z,510nm,18.3s,MS4.4,baz=98,slow=33						
EKS2	**Erkin-Say**	**45.14**	**5**	*e*P	**P**	**05 43 13.8**	**+1.5**
	12nm,1.4s,mb4.5						
TKM2	**Tokmak 2**	**45.60**	**7**	*e*P	**P**	**05 43 16.6**	**+0.7**
	12nm,1.3s,mb4.7						
LBTB	**Lobatse**	**47.06**	**238**	LR	LR	06 01 07.5	
	comp=Z,220nm,19.5s,MS4.1,baz=182,slow=33						
BOSA	**Boshof**	**48.74**	**233**	LR	LR	06 02 11.9	
	comp=Z,175nm,18.8s,MS4.1,baz=291,slow=34						
MKAR	**Makanchi Array**	**50.50**	**12**	P	**P**	**05 43 52.1**	**-1.6**
	0.2nm,0.4s,mb3.5,baz=201,slow=7.1,SNR=3.0						
GTA	**Gaotai**	**50.59**	**31**	*e*P	**P**	**05 43 56.8**	**+2.2**
GTA				pP	pP	05 44 00.9	+3.1
GTA				sP	sP	05 44 03.3	+4.3
GTA				pmax	pmax		
	comp=Z,2.0nm,1.7s,mb3.8						
BRTR	**Keskin Array B**	**52.77**	**326**	P	**P**	**05 44 11.6**	**+0.6**
	comp=Z,1.5nm,1.1s,mb3.8,baz=141,slow=7.4,SNR=3.3						
BRTR	**Keskin Array B**	**52.77**	**326**	P	**P**	**05 44 11.6**	**+0.6**
KURK	**Kurchatov**	**53.65**	**8**	P	**P**	**05 44 16.3**	**-0.9**
	comp=Z,0.4nm,0.3s,mb3.8,baz=201,slow=7.9,SNR=4.5						
NWAO	**Narrogin (SRO)**	**54.71**	**129**	LR	LR	06 01 20.4	
	comp=Z,5.0nm,19.4s,baz=6.5,slow=29						
ZALV	**Zalesovo Beam**	**57.80**	**11**	P	**P**	**05 44 44.5**	**-2.4**
	comp=Z,0.4nm,0.5s,mb3.7,baz=202,slow=7.3,SNR=3.6						
FITZ	**Fitzroy Crossi**	**58.03**	**110**	LR	LR	06 05 46.0	
	comp=Z,191nm,18.3s,MS4.2,baz=250,slow=32						
SONM	**Songino Array**	**59.98**	**29**	P	**P**	**05 45 03.0**	**+0.8**
	comp=Z,1.0nm,0.7s,mb4.0,baz=228,slow=6.3,SNR=7.7						
AKASG	**Malin Array Be**	**62.69**	**333**	P	**P**	**05 45 17.9**	**-2.6**
	comp=Z,0.2nm,0.3s,mb3.7,baz=124,slow=4.9,SNR=2.9						
MAW	**Mawson**	**65.16**	**182**	LR	LR	06 07 37.5	
	comp=Z,236nm,20.1s,MS4.4,baz=53,slow=30						
WRA	**Warramunga Arr**	**66.43**	**111**	P	**P**	**05 45 44.7**	**-0.9**
	comp=Z,1.2nm,0.8s,mb4.0,baz=285,slow=5.4,SNR=4.5						
ASAR	**Alice Springs**	**66.49**	**115**	P	**P**	**05 45 45.3**	**-0.6**
	comp=Z,0.7nm,0.7s,mb3.8,baz=287,slow=6.0,SNR=11						
STKA	**Stephens Creek**	**74.33**	**122**	LR	LR	06 13 32.4	
	comp=Z,167nm,21.5s,MS4.3,baz=25,slow=31						
ARCES	**ARCESS Array B**	**77.45**	**346**	LR	LR	06 23 19.3	
	comp=Z,477nm,21.1s,MS4.8,baz=182,slow=38						
ESDC	**Sonseca Array**	**78.18**	**311**	P	**P**	**05 46 58.4**	**+2.9**
	comp=Z,0.9nm,0.6s,mb3.9,baz=87,slow=4.9,SNR=5.7						
TXAR	**Lajitas Array**	**152.25**	**345**	PKPbc	PKPbc	05 54 52.3	-0.1
	comp=Z,0.4nm,0.8s,baz=306,slow=0.8,SNR=4.7						

*IDC **21** 05:44:41.8±1.3, 5.39S×152.24E, h0km, mb4.2/11, mb1 4.3/11, mb1mx4.2/17, mbtmp4.2/11, MS3.6/1, Ms1 3.6/1, ms1mx2.8/20, Error ellipse: s-maj=41.7km s-min=18.6km az=113.0*

*ISCJB **21** 05:44:46.9±3.4, 5.5S±0.1×152.20E±0.09, h45km±31km, mb4.4/29, Error ellipse: s-maj=20.3km s-min=12.0km az=148.1*

*NEIC **21** 05:44:52.0±2.3, 5.46S×152.26E, h78km±23km, mb4.5/22, Error ellipse: s-maj=17.1km s-min=9.8km az=146.0*

ISC 21 05:44:50.5±2.5, 5.5S±0.1×152.24E±0.09, h65km±25km, n36, σ1§04/36, mb4.3/29, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**8.58**	**117**	*e*Pn	**Pn**	**05 46 53.0**	**+1.0**
CTA	**Charters Tower**	**15.62**	**201**	Pn	**Pn**	**05 48 30.2**	**+3.5**
	0.1nm,0.3s,baz=25,slow=15,SNR=3.1						
CTA				LR	LR	05 53 51.8	
	comp=Z,236nm,19.8s,baz=230,slow=35						
CTAO	**Charters Tower**	**15.62**	**201**	*e*P	**Pn**	**05 48 31.2**	**+4.5**
	31nm,1.3s						
EIDS	**Eidsvold**	**19.78**	**183**	*e*P	**Pn**	**05 49 15.7**	**-1.9**
	13nm,1.0s						
KAKA	**Kakadu**	**20.80**	**249**	*e*P	**P**	**05 49 26.1**	**-0.5**
	50nm,0.6s						
DZM	**Mont Dzumac**	**21.45**	**141**	*e*P	**P**	**05 49 32.9**	**-0.6**
	16nm,1.0s,mb4.3						
WRAB	**Tennant Creek**	**22.54**	**229**	*e*P	**P**	**05 49 47.1**	**+1.9**
	7.7nm,0.7s,mb4.1						
WRA	**Warramunga Arr**	**22.56**	**229**	P	**P**	**05 49 44.5**	**-0.8**
	5.8nm,0.8s,mb4.0,baz=54,slow=9.9,SNR=8.6						
ASAR	**Alice Springs**	**25.25**	**223**	P	**P**	**05 50 11.4**	**+0.8**
	3.4nm,0.8s,mb3.8,baz=57,slow=9.0,SNR=22						
STKA	**Stephens Creek**	**28.06**	**200**	P	**P**	**05 50 34.6**	**-1.2**
	2.0nm,0.6s,mb3.8,baz=4.4,slow=14,SNR=2.9						
FITZ	**Fitzroy Crossi**	**28.83**	**242**	P	**P**	**05 50 42.1**	**-0.8**
	7.6nm,1.1s,mb4.2,baz=64,slow=11,SNR=6.1						
FITZ	**Fitzroy Crossi**	**28.83**	**242**	*e*P	**P**	**05 50 42.7**	**-0.2**
	15nm,1.1s,mb4.5						
CMAR	**Chiang Mai Arr**	**57.67**	**296**	P	**P**	**05 54 34.8**	**+0.1**
	1.2nm,0.7s,mb4.0,baz=120,slow=5.3,SNR=6.2						
CMAR	**Chiang Mai Arr**	**57.67**	**296**	P	**P**	**05 54 34.8**	**+0.1**
PETK	**Petropavlovsk-**	**58.58**	**4**	P	**P**	**05 54 38.0**	**-2.4**
	1.0nm,0.6s,mb4.0,baz=170,slow=8.8,SNR=4.0						
SONM	**Songino Array**	**66.62**	**328**	P	**P**	**05 55 34.4**	**+0.4**
	1.0nm,0.6s,mb3.9,baz=151,slow=3.8,SNR=8.5						
SEW	**Seward**	**79.67**	**26**	*e*P	**P**	**05 56 49.6**	**-1.1**
	9.7nm,0.9s,mb4.6						
MKAR	**Makanchi Array**	**80.49**	**319**	P	**P**	**05 56 55.5**	**0.0**
	1.5nm,0.8s,mb3.9,baz=99,slow=7.8,SNR=7.7						
CHUM	**Lake Minchumin**	**80.54**	**22**	*e*P	**P**	**05 56 56.1**	**+0.7**
	20nm,0.9s,mb5.0						
PMR	**Palmer**	**80.56**	**24**	*e*P	**P**	**05 56 55.6**	**+0.1**
	14nm,1.2s,mb4.7						
KTH	**Kantishna Hill**	**80.88**	**22**	*e*P	**P**	**05 56 56.8**	**-0.4**
	6.0nm,0.6s,mb4.6						
TRF	**Thorofare Moun**	**81.06**	**23**	*e*P	**P**	**05 56 57.5**	**-0.7**
	5.3nm,0.7s,mb4.5						
BPAW	**Bear Paw Mtn.**	**81.15**	**22**	*e*P	**P**	**05 56 57.9**	**-0.7**
	7.2nm,1.1s,mb4.4						
ZALV	**Zalesovo Beam**	**81.43**	**326**	P	**P**	**05 56 59.7**	**-0.6**
	1.0nm,0.5s,mb4.0,baz=112,slow=6.4,SNR=6.7						
MCK	**McKinley**	**81.73**	**23**	*e*P	**P**	**05 57 01.7**	**0.0**
	26nm,0.9s,mb5.1						
BMRM	**Bremner River**	**82.19**	**26**	*e*P	**P**	**05 57 04.6**	**+0.5**
	11nm,1.3s,mb4.5						
COLA	**College**	**82.71**	**22**	*e*P	**P**	**05 57 06.2**	**-0.6**
	14nm,0.8s,mb4.8						
COLD	**Coldfoot**	**83.11**	**19**	*e*P	**P**	**05 57 09.7**	**+0.9**
	3.8nm,0.9s,mb4.2						
KURK	**Kurchatov**	**83.98**	**322**	*e*P	**P**	**05 57 13.6**	**-0.1**
	1.1nm,0.7s,mb3.8						
PNL	**Peninsula**	**84.03**	**28**	*e*P	**P**	**05 57 12.3**	**-1.4**
	24nm,1.3s,mb4.9						
QSPA	**South Pole Qui**	**84.45**	**180**	*e*P	**P**	**05 57 17.0**	**+1.5**
	4.8nm,1.3s,mb4.2						
UCH	**Uchtor**	**84.64**	**313**	*e*P	**P**	**05 57 18.8**	**+1.6**
	2.2nm,1.1s,mb4.0						
AML	**Almayashu**	**85.22**	**313**	*e*P	**P**	**05 57 21.6**	**+1.5**
	4.4nm,1.1s,mb4.3						
EGAK	**Eagle**	**85.23**	**23**	*e*P	**P**	**05 57 20.4**	**+0.8**
	8.5nm,0.9s,mb4.7						
BVAR	**Borovoye Array**	**89.47**	**323**	P	**P**	**05 57 39.5**	**-0.8**
	1.3nm,0.6s,mb4.1,baz=116,slow=9.8,SNR=6.4						
NVAR	**Mina Array Bea**	**92.96**	**52**	P	**P**	**05 57 58.8**	**+1.9**
	0.8nm,0.7s,mb4.2,baz=248,slow=6.5,SNR=7.0						

*BJI **21** 05:57:13.1, 36.21N×21.80E, h18km, mB5.2/29, mb5.2/42, Ms5.0/33, Ms7 4.6/30*

*IDC **21** 05:57:13.0±0.4, 36.13N×22.07E, h0km, mb4.6/35, mb1 4.6/45, mb1mx4.6/49, mbtmp4.5/45, ML4.1/9, MS4.5/28, Ms1 4.5/28, ms1mx4.4/40, Error ellipse: s-maj=10.6km s-min=10.4km az=57.0*

*ISCJB **21** 05:57:13.5±0.1, 36.02N±0.01×21.86E±0.01, h10km, mb4.9/177, MS4.6/53, Error ellipse: s-maj=1.6km s-min=1.4km az=11.8*

*HLW **21** 05:57:14.6, 36.42N×22.28E, h33km±51km, Md4.8, Ml4.9*

*PRU **21** 05:57:15.1, 36.20N×21.21E, h0km, M4.8*

*THE **21** 05:57:15.6, 36.06N×21.86E, h1km±2km, ML5.6/8, Error ellipse: s-maj=3.8km s-min=1.1km az=229.0*

*MOS **21** 05:57:16.2±1.3, 36.13N×21.91E, h28km, mb5.0/73, MS4.6/47, Error ellipse: s-maj=3.7km s-min=2.0km az=101.1*

*ATH **21** 05:57:16.2, 36.10N×21.93E, h17km±2km, MD4.5/18, ML4.8*

*NEIC **21** 05:57:16.2, 36.10N×21.93E, h17km, mb4.8/145, ML4.8(ATH), After ATH.*

*PDG **21** 05:57:17.2±0.7, 36.23N×21.62E, h12km±3km, MD5.5/10, ML5.5/10, Error ellipse: s-maj=2.9km s-min=2.3km az=90.0*

*CSEM **21** 05:57:18.0±0.1, 36.07N×21.88E, h31km, mb5.0/99, Ms4.5, Mw5.2, Error ellipse: s-maj=2.7km s-min=2.3km az=30.0*

*GCMT **21** 05:57:21.0±0.2, 36.11N×21.82E, h13km, MW5.2, Moment Tensor Solution. s65,c94; s88,c173; Moment tensor: Scale 10^{16}Nm; M_{rr}7.02±.19; $M_{\theta\theta}$-6.22±.13; $M_{\phi\phi}$-0.80±.14; $M_{r\theta}$2.95±.34; $M_{\theta\phi}$4.23±.10; $M_{\phi r}$-1.57±.39; Best double couple: $M_0$8.50000×10^{16} NP1:ϕ_s299.00000°, δ33.00000°, λ91.00000°. NP2:ϕ_s118.00000°, δ57.00000°, λ90.00000°. Principal axes: T 7.7100, Plg78.0000°, Azm27.0000°; N 1.5100, Plg0.0000°, Azm119.0000°; P -9.2200, Plg12.0000°, Azm209.0000°; Data Used: II IC IU CN G.*

*SZGRF **21** 05:57:37.2, 37.28N×21.06E, h33km, mb4.7, Southern Greece*

ISC 21 05:57:15.2±0.1, 36.03N±0.01×21.85E±0.01, h10km, (h33km±1.2km:pP-P), n1482, σ1§33/1630, mb4.9/177, **MS4.6**/53, **123C-109D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.87**	**354**	P	**Pg**	**05 57 30.3**	**-1.6**
PYL				S	**Sg**	**05 57 43.5**	**+0.3**
PYL	**PYLOS**	**0.87**	**354**	*e*PB	**Pg**	**05 57 31.2**	**-0.7**
PYL				*e*SN	**Sg**	**05 57 43.8**	**+0.6**
PYL	**PYLOS**	**0.87**	**354**	P	**Pg**	**05 57 30.3**	**-1.6**
PYL	**PYLOS**	**0.87**	**354**	*e*Pb	**Pg**	**05 57 31.2**	**-0.7**
PYL				S	**Sg**	**05 57 43.5**	**+0.3**
KYTH	**Kithira**	**0.99**	**75**	*e*Pn	**Pg**	**05 57 34.5**	**+0.2**
KYTH	**Kithira**	**0.99**	**75**	*e*PN	**Pg**	**05 57 34.5**	**+0.2**
KYTH	**Kithira**	**0.99**	**75**	*e*Pn	**Pg**	**05 57 34.5**	**+0.2**
VLI	**Veliai**	**1.11**	**52**	*e*Pn	**Pg**	**05 57 36.0**	**-0.6**
VLI				*e*Sn	**Sg**	**05 57 49.8**	**-1.3**
VLI	**Veliai**	**1.11**	**52**	*e*PN	**Pg**	**05 57 36.0**	**-0.6**
VLI				*e*SN	**Sg**	**05 57 49.8**	**-1.3**
VLI	**Veliai**	**1.11**	**52**	*e*Pn	**Pg**	**05 57 36.0**	**-0.6**
ITM	**Ithomi**	**1.15**	**3**	P	**Pg**	**05 57 35.8**	**-1.5**
ITM				S	**Sg**	**05 57 53.2**	**+1.0**
ITM	**Ithomi**	**1.15**	**3**	P	**Pg**	**05 57 35.8**	**-1.5**
ITM				S	**Sg**	**05 57 53.2**	**+1.0**
ITM	**Ithomi**	**1.15**	**3**	*e*PB	**Pg**	**05 57 36.1**	**-1.2**
ITM				*e*SN	**Sg**	**05 57 51.2**	**-1.0**
ITM	**Ithomi**	**1.15**	**3**	P	**Pg**	**05 57 35.8**	**-1.5**
ITM	**Ithomi**	**1.15**	**3**	*e*Pb	**Pg**	**05 57 36.1**	**-1.2**
ITM				*e*Sn	**Sg**	**05 57 51.2**	**-1.0**
ITM				S	**Sg**	**05 57 53.2**	**+1.0**
VLX	**Vlachokerasia**	**1.40**	**18**	P	**Pn**	**05 57 40.0**	**-0.8**
VLX				S	**Sb**	**05 58 01.5**	**+2.1**
VLX	**Vlachokerasia**	**1.40**	**18**	*e*PB	**Pn**	**05 57 40.3**	**-0.5**
VLX	**Vlachokerasia**	**1.40**	**18**	P	**Pn**	**05 57 40.0**	**-0.8**
VLX				S	**Sb**	**05 58 01.5**	**+2.1**
KARN	**Karanos**	**1.80**	**110**	P	**Pn**	**05 57 48.5**	**+2.3**
KARN	**Karanos**	**1.80**	**110**	*e*PN	**Pn**	**05 57 48.8**	**+2.6**
KARN	**Karanos**	**1.80**	**110**	P	**Pn**	**05 57 48.5**	**+2.3**
KARN	**Karanos**	**1.80**	**110**	*e*Pn	**Pn**	**05 57 48.8**	**+2.6**
GUR	**Goura**	**1.94**	**12**	P	**Pn**	**05 57 48.6**	**+0.4**
GUR				S	**Sb**	**05 58 15.1**	**+0.2**
GUR	**Goura**	**1.94**	**12**	*e*PN	**Pn**	**05 57 50.3**	**+2.1**
GUR	**Goura**	**1.94**	**12**	P	**Pn**	**05 57 48.6**	**+0.4**
GUR	**Goura**	**1.94**	**12**	*e*Pn	**Pn**	**05 57 50.3**	**+2.1**
GUR				S	**Sb**	**05 58 15.1**	**+0.2**
VAM	**Vamos**	**2.01**	**107**	*e*P	**Pn**	**05 57 51.6**	**+2.4**
VAM	**Vamos**	**2.01**	**107**	*e*PN	**Pn**	**05 57 51.6**	**+2.4**
VAM	**Vamos**	**2.01**	**107**	*e*Pn	**Pn**	**05 57 51.6**	**+2.4**
RLS	**Riolos of Patr**	**2.04**	**351**	*e*Pn	**Pn**	**05 57 51.9**	**+2.2**
RLS	**Riolos of Patr**	**2.04**	**351**	*e*PN	**Pn**	**05 57 51.9**	**+2.2**
RLS	**Riolos of Patr**	**2.04**	**351**	*e*Pn	**Pn**	**05 57 51.9**	**+2.2**
NAIG	**Nisos Aigina**	**2.17**	**37**	*e*Pn	**Pn**	**05 57 53.2**	**+1.9**
NAIG	**Nisos Aigina**	**2.17**	**37**	*e*PN	**Pn**	**05 57 53.2**	**+1.9**
NAIG	**Nisos Aigina**	**2.17**	**37**	*e*Pn	**Pn**	**05 57 53.2**	**+1.9**
LTK	**Loutraki**	**2.18**	**24**	P	**Pn**	**05 57 51.9**	**+0.4**
LTK				S	**Sb**	**05 58 20.7**	**-1.1**
LTK	**Loutraki**	**2.18**	**24**	*e*PN	**Pn**	**05 57 54.5**	**+3.0**
LTK	**Loutraki**	**2.18**	**24**	P	**Pn**	**05 57 51.9**	**+0.4**
LTK	**Loutraki**	**2.18**	**24**	*e*Pn	**Pn**	**05 57 54.5**	**+3.0**
LTK				S	**Sb**	**05 58 20.7**	**-1.1**
GVD	**Gavdhos**	**2.18**	**122**	P	**Pn**	**05 57 52.8**	**+1.3**
GVD	**Gavdhos**	**2.18**	**122**	P	**Pn**	**05 57 52.8**	**+1.3**
GVD	**Gavdhos**	**2.18**	**122**	*e*PN	**Pn**	**05 57 53.5**	**+2.0**
GVD	**Gavdhos**	**2.18**	**122**	P	**Pn**	**05 57 52.8**	**+1.3**
GVD	**Gavdhos**	**2.18**	**122**	*e*Pn	**Pn**	**05 57 53.5**	**+2.0**
LAKA	**Lakka**	**2.21**	**3**	P	**Pn**	**05 57 54.0**	**+2.1**
LAKA				S	**Sb**	**05 58 22.4**	**-0.2**
LAKA	**Lakka**	**2.21**	**3**	P	**Pn**	**05 57 54.0**	**+2.1**
LAKA				S	**Sb**	**05 58 22.4**	**-0.2**
KFL	**Anninata**	**2.24**	**338**	P	**Pn**	**05 57 53.3**	**+1.0**
UPR	**University Cam**	**2.25**	**359**	P	**Pn**	**05 57 54.3**	**+1.9**
UPR	**University Cam**	**2.25**	**359**	*e*PN	**Pb**	**05 57 55.2**	**-0.7**
UPR	**University Cam**	**2.25**	**359**	P	**Pn**	**05 57 54.3**	**+1.9**
UPR	**University Cam**	**2.25**	**359**	*e*Pn	**Pb**	**05 57 55.2**	**-0.7**
KALE	**Kalithea**	**2.37**	**6**	P	**Pn**	**05 57 55.3**	**+1.2**
KALE				S	**Sb**	**05 58 26.4**	**-0.8**
KALE	**Kalithea**	**2.37**	**6**	P	**Pn**	**05 57 55.3**	**+1.2**
KALE				S	**Sb**	**05 58 26.4**	**-0.8**
VLS	**Valsamata**	**2.37**	**335**	P	**Pn**	**05 57 55.4**	**+1.3**
VLS				S	**Sn**	**05 58 24.3**	**+1.1**
VLS	**Valsamata**	**2.37**	**335**	P	**Pn**	**05 57 55.4**	**+1.3**
VLS				S	**Sn**	**05 58 24.3**	**+1.1**
VLS	**Valsamata**	**2.37**	**335**	*e*PB	**Pn**	**05 57 55.3**	**+1.2**
VLS	**Valsamata**	**2.37**	**335**	P	**Pn**	**05 57 55.4**	**+1.3**
VLS				S	**Sn**	**05 58 24.3**	**+1.1**
EFP	**Efpalio**	**2.39**	**1**	P	**Pn**	**05 57 56.4**	**+2.0**
EFP				S	**Sn**	**05 58 25.4**	**+1.6**
EFP	**Efpalio**	**2.39**	**1**	*e*PN	**Pn**	**05 57 57.1**	**+2.7**
EFP	**Efpalio**	**2.39**	**1**	P	**Pn**	**05 57 56.4**	**+2.0**
EFP	**Efpalio**	**2.39**	**1**	*e*Pn	**Pn**	**05 57 57.1**	**+2.7**
EFP				S	**Sn**	**05 58 25.4**	**+1.6**
VLY	**Voula,Athens**	**2.39**	**40**	*e*Pn	**Pn**	**05 57 56.7**	**+2.3**
VLY	**Voula,Athens**	**2.39**	**40**	*e*PN	**Pn**	**05 57 56.7**	**+2.3**
VLY	**Voula,Athens**	**2.39**	**40**	*e*Pn	**Pn**	**05 57 56.7**	**+2.3**
DSF	**Desfina**	**2.44**	**13**	P	**Pn**	**05 57 55.5**	**+0.5**
DSF				S	**Sn**	**05 58 26.1**	**+1.2**
DSF	**Desfina**	**2.44**	**13**	P	**Pn**	**05 57 55.5**	**+0.5**
DSF				S	**Sn**	**05 58 26.1**	**+1.2**
ATH	**Athens Observa**	**2.45**	**37**	P	**Pn**	**05 57 56.4**	**+1.2**
ATH	**Athens Observa**	**2.45**	**37**	*e*PN	**Pn**	**05 57 57.2**	**+2.0**
ATH	**Athens Observa**	**2.45**	**37**	*e*Pn	**Pn**	**05 57 57.2**	**+2.0**
ATHU	**Athens Univers**	**2.48**	**38**	P	**Pn**	**05 57 56.4**	**+0.8**
ATHU	**Athens Univers**	**2.48**	**38**	P	**Pn**	**05 57 56.4**	**+0.8**
PTL	**Penteli**	**2.58**	**38**	*e*Pb	**Pn**	**05 57 58.3**	**+1.3**
PTL	**Penteli**	**2.58**	**38**	*e*PB	**Pn**	**05 57 58.3**	**+1.3**
IDI	**Anoyia**	**2.58**	**106**	Pn	**Pn**	**05 57 58.9**	**+1.8**
	35nm,0.3s,baz=295,slow=15,SNR=124						
IDI				LR	LR	05 58 29.5	
	comp=Z,2μm,20.3s,baz=109,slow=31						
IDI	**Anoyia**	**2.58**	**106**	*e*Pb	**Pn**	**05 57 59.6**	**+2.5**
IDI	**Anoyia**	**2.58**	**106**	*e*PB	**Pn**	**05 57 59.6**	**+2.5**
SIVA	**Sivas**	**2.62**	**112**	P	**Pn**	**05 57 59.2**	**+1.7**
SIVA	**Sivas**	**2.62**	**112**	P	**Pn**	**05 57 59.2**	**+1.7**
SIVA	**Sivas**	**2.62**	**112**	*e*PN	**Pn**	**05 57 59.3**	**+1.8**
SIVA	**Sivas**	**2.62**	**112**	P	**Pn**	**05 57 59.2**	**+1.7**
LKR	**Lokris**	**2.77**	**19**	P	**Pn**	**05 57 59.5**	**-0.1**
LKR	**Lokris**	**2.77**	**19**	P	**Pn**	**05 57 59.5**	**-0.1**
LKR	**Lokris**	**2.77**	**19**	*e*PN	**Pn**	**05 58 00.5**	**+0.9**
LKR	**Lokris**	**2.77**	**19**	P	**Pn**	**05 57 59.5**	**-0.1**
LKR	**Lokris**	**2.77**	**19**	*e*Pn	**Pn**	**05 58 00.5**	**+0.9**
ATAL	**Atalanti**	**2.81**	**19**	P	**Pn**	**05 58 00.7**	**+0.5**
ATAL	**Atalanti**	**2.81**	**19**	P	**Pn**	**05 58 00.7**	**+0.5**
THR5	**Thira Island,**	**2.85**	**81**	P	**Pn**	**05 58 01.4**	**+0.6**
THR5	**Thira Island,**	**2.85**	**81**	P	**Pn**	**05 58 01.4**	**+0.6**
THR5	**Thira Island,**	**2.85**	**81**	P	**Pn**	**05 58 01.4**	**+0.6**
EVR	**Evrytania**	**2.88**	**359**	*e*Pb	**Pn**	**05 58 04.5**	**+3.4**
EVR	**Evrytania**	**2.88**	**359**	*e*PB	**Pn**	**05 58 04.5**	**+3.4**
AGG	**Agios Georgios**	**3.01**	**7**	P	**Pn**	**05 58 04.7**	**+1.8**
AGG	**Agios Georgios**	**3.01**	**7**	P	**Pn**	**05 58 04.7**	**+1.8**
AGG	**Agios Georgios**	**3.01**	**7**	*e*PB	**Pn**	**05 58 05.6**	**+2.7**
AGG	**Agios Georgios**	**3.01**	**7**	P	**Pn**	**05 58 04.7**	**+1.8**
LAST	**Lasithi**	**3.08**	**105**	P	**Pn**	**05 58 04.5**	**+0.6**
LAST	**Lasithi**	**3.08**	**105**	P	**Pn**	**05 58 04.5**	**+0.6**
LAST	**Lasithi**	**3.08**	**105**	*e*PN	**Pn**	**05 58 06.4**	**+2.5**
LAST	**Lasithi**	**3.08**	**105**	P	**Pn**	**05 58 04.5**	**+0.6**
LAST	**Lasithi**	**3.08**	**105**	*e*Pn	**Pn**	**05 58 06.4**	**+2.5**
APE	**Apeiranthos**	**3.14**	**70**	P	**Pn**	**05 58 05.8**	**+1.1**
APE	**Apeiranthos**	**3.14**	**70**	P	**Pn**	**05 58 05.8**	**+1.1**
APE	**Apeiranthos**	**3.14**	**70**	||*e*P	**Pn**	**05 58 10.2**	**+5.5**
APE	**Apeiranthos**	**3.14**	**70**	*e*PN	**Pn**	**05 58 05.8**	**+1.1**
APE	**Apeiranthos**	**3.14**	**70**	P	**Pn**	**05 58 05.8**	**+1.1**
NPS	**Neapolis**	**3.16**	**103**	*e*P	**Pn**	**05 58 06.5**	**+1.5**
NPS	**Neapolis**	**3.16**	**103**	*e*PN	**Pn**	**05 58 06.5**	**+1.5**
NPS	**Neapolis**	**3.16**	**103**	*e*Pn	**Pn**	**05 58 06.5**	**+1.5**
XRY	**Khrisi**	**3.34**	**109**	*e*Pn	**Pn**	**05 58 08.6**	**+1.1**
XRY	**Khrisi**	**3.34**	**109**	*e*PN	**Pn**	**05 58 08.6**	**+1.1**
XRY	**Khrisi**	**3.34**	**109**	*e*Pn	**Pn**	**05 58 08.6**	**+1.1**
NEO	**Neokhori**	**3.45**	**18**	*e*Pn	**Pn**	**05 58 09.3**	**+0.4**
NEO	**Neokhori**	**3.45**	**18**	*e*PN	**Pn**	**05 58 09.3**	**+0.4**
NEO	**Neokhori**	**3.45**	**18**	*e*Pn	**Pn**	**05 58 09.3**	**+0.4**
XOR	**Xorichti**	**3.49**	**17**	P	**Pn**	**05 58 09.2**	**-0.4**
XOR	**Xorichti**	**3.49**	**17**	P	**Pn**	**05 58 09.2**	**-0.4**
XOR	**Xorichti**	**3.49**	**17**	P	**Pn**	**05 58 09.2**	**-0.4**
AOS	**Alonnisos**	**3.52**	**27**	P	**Pn**	**05 58 09.5**	**-0.5**
AOS	**Alonnisos**	**3.52**	**27**	P	**Pn**	**05 58 09.5**	**-0.5**
AOS	**Alonnisos**	**3.52**	**27**	P	**Pn**	**05 58 09.5**	**-0.5**
THL	**Klokotos Trika**	**3.53**	**2**	P	**Pn**	**05 58 10.7**	**+0.6**
THL	**Klokotos Trika**	**3.53**	**2**	*e*PN	**Pn**	**05 58 11.9**	**+1.8**
THL	**Klokotos Trika**	**3.53**	**2**	P	**Pn**	**05 58 10.7**	**+0.6**
THL	**Klokotos Trika**	**3.53**	**2**	*e*Pn	**Pn**	**05 58 11.9**	**+1.8**
ZKR	**Zakros**	**3.67**	**103**	P	**Pn**	**05 58 13.7**	**+1.6**
ZKR	**Zakros**	**3.67**	**103**	P	**Pn**	**05 58 13.7**	**+1.6**
ZKR	**Zakros**	**3.67**	**103**	*e*PN	**Pn**	**05 58 14.4**	**+2.3**
ZKR	**Zakros**	**3.67**	**103**	P	**Pn**	**05 58 13.7**	**+1.6**
ZKR	**Zakros**	**3.67**	**103**	*e*Pn	**Pn**	**05 58 14.4**	**+2.3**
IGT	**Igoumenitsa**	**3.69**	**341**	P	**Pn**	**05 58 13.2**	**+0.9**
IGT	**Igoumenitsa**	**3.69**	**341**	P	**Pn**	**05 58 13.2**	**+0.9**
IGT	**Igoumenitsa**	**3.69**	**341**	P	**Pn**	**05 58 13.2**	**+0.9**
JAN	**Janina**	**3.70**	**348**	*e*P	**Pn**	**05 58 14.2**	**+1.7**

VAY	Valandovo	5.31	6	i Pn	Pn	05 58 34.8	+0.3	
VAY				eSg	Sn	05 59 33.8	-1.9	
VAY				eSg	Sn	05 59 35.8	0.0	
VAY	Valandovo	5.31	6	P	Pn	05 58 35.2	+0.7	
VAY	Valandovo	5.31	6	P	Pn	05 58 35.2	+0.7	
SLUM		5.32	147	P	Pn	05 58 33.9	-0.8	
	baz=152							
SLUM				AMP		05 59 00.0		
	comp=E,1000µm,0.6s,logA/T=6.2,baz=152							
SLUM				S	Sn	05 59 29.8	-6.4	
	baz=152							
SLUM		5.32	147	P	Pn	05 58 33.9	-0.8	
KRUS	Krusevo	5.35	355	i Pn	Pn	05 58 35.4	+0.3	
KRUS				eSg	Sn	05 59 34.4	-2.3	
KRUS				eSg	Sn	05 59 35.6	-1.1	
KAVA	Kavala	5.38	22	P	Pn	05 58 37.1	+1.6	
KAVA	Kavala	5.38	22	P	Pn	05 58 37.1	+1.6	
TURN	Turunc	5.51	79	⇑iP	Pn	05 58 34.9	-2.4	
AKHS	Akhisar	5.53	57	⇓iP	Pn	05 58 41.2	+3.6	
TIR	Tirane	5.53	344	P	Pn	05 58 38.6	+1.1	
TIR	Tirane	5.53	344	P	Pn	05 58 38.6	+1.1	
TIR	Tirane	5.53	344	ePN	Pn	05 58 38.8	+1.3	
TIR	Tirane	5.53	344	P	Pn	05 58 38.6	+1.1	
NVR	Nevrokopi	5.54	16	ePn	Pn	05 58 38.8	+1.1	
NVR	Nevrokopi	5.54	16	ePN	Pn	05 58 38.8	+1.1	
NVR	Nevrokopi	5.54	16	ePn	Pn	05 58 38.8	+1.1	
ENEZ	Enez	5.79	34	ePN	Pn	05 58 43.9	+2.9	
LPK	Lapseki	5.81	40	ePN	Pn	05 58 44.1	+2.8	
RDO	Rodhopi	5.87	28	P	Pn	05 58 44.2	+2.0	
RDO	Rodhopi	5.87	28	P	Pn	05 58 44.2	+2.0	
ALN	Alexandroupoli	5.87	33	P	Pn	05 58 43.6	+1.4	
ALN	Alexandroupoli	5.87	33	P	Pn	05 58 43.6	+1.4	
ALN	Alexandroupoli	5.87	33	ePN	Pn	05 58 44.0	+1.8	
ALN	Alexandroupoli	5.87	33	P	Pn	05 58 43.6	+1.4	
ALN	Alexandroupoli	5.87	33	ePn	Pn	05 58 44.0	+1.8	
BALY	Balya	5.88	49	⇓iP	Pn	05 58 46.5	+4.2	
MANT	Manisa	5.88	63	⇓iP	Pn	05 58 47.0	+4.6	
SKO	Skopje	5.94	357	P	Pn	05 58 44.4	+1.2	
SKO	Skopje	5.94	357	i Pn	Pn	05 58 44.6	+1.4	
SKO	Skopje	5.94	357	P	Pn	05 58 44.4	+1.2	
SKO	Skopje	5.94	357	P	Pn	05 58 44.4	+1.2	
WDD	Wield Dalam	5.95	271	ePn	Pn	05 58 43.6	+0.4	
	comp=E,295nm,0.5s							
WDD				eSn	Sn	05 59 50.2	-1.2	
WDD	Wield Dalam	5.95	271	ePn	Pn	05 58 43.7	+0.4	
	comp=E,295nm,0.5s							
WDD				eSn	Sn	05 59 50.2	-1.2	
KULA	Kula-Manisa	5.97	63	ePN	Pn	05 58 45.8	+2.2	
BALB	Balikesir	5.98	51	ePN	Pn	05 58 45.8	+2.1	
DNZL	Cakiroluk	6.00	72	⇑iP	Pn	05 58 46.9	+2.9	
DENT	Denizli	6.01	71	ePN	Pn	05 58 45.7	+1.6	
VAE	Valguarnera	6.14	286	Pn	Pn	05 58 48.0	+2.0	
	comp=E,7.0nm,0.3s,baz=307,slow=0.4,SNR=15							
VAE				Sn	Sn	05 59 52.7	-3.6	
	comp=E,25nm,0.3s,baz=17,slow=14,SNR=3.0							
VAE				LR	LR	06 00 52.4		
	comp=E,530nm,18.8s,baz=355,slow=35							
VAE	Valguarnera	6.14	286	Pn	Pn	05 58 48.0	+2.0	
VAE				Sn	Sn	05 59 52.7	-3.6	
PUK	Puka	6.19	346	ePN	Pn	05 58 47.2	+0.6	
PUK				eSN	Sn	05 59 55.6	-1.9	
PUK	Puka	6.19	346	ePn	Pn	05 58 47.2	+0.6	
DEMI	Demirci	6.23	59	⇑iP	Pn	05 58 49.4	+2.2	
DEMI	Demirci	6.23	59	i P	Pn	05 58 49.4	+2.3	
RKY	Sarkoy-Tekirda	6.25	40	eP	Pn	05 58 50.9	+3.4	
SART	Tekirdag	6.26	40	⇓iP	Pn	05 58 51.0	+3.4	
ULC	Ulcinj	6.26	342	⇓iPn	Pn	05 58 46.7	-0.9	
ULC				eSn	Sn	05 59 54.8	-4.3	
ULC	Ulcinj	6.26	342	⇓iPn	Pn	05 58 46.7	-0.9	
KSL	Kastellorizon	6.26	87	ePn	Pn	05 58 48.7	+1.1	
KSL	Kastellorizon	6.26	87	ePN	Pn	05 58 48.7	+1.1	
KSL	Kastellorizon	6.26	87	ePn	Pn	05 58 48.7	+1.1	
AKAS	Kas	6.28	86	⇑iP	Pn	05 58 48.5	+0.6	
GOLH	Golhisar	6.32	77	⇑iP	Pn	05 58 50.8	+2.4	
DURS	Dursunbey	6.34	54	i P	Pn	05 58 52.8	+4.1	
BNT	Bandirma	6.44	46	eP	Pn	05 58 52.6	+2.6	
PLD	Plovdiv	6.46	19	P	Pn	05 58 53.2	+2.9	
BCI	Bajram Curri	6.47	348	ePN	Pn	05 58 51.5	+1.0	
BCI				eSN	Sn	06 00 02.2	-2.2	
BCI	Bajram Curri	6.47	348	ePn	Pn	05 58 51.5	+1.0	
KHAL	Karahalli	6.53	67	⇑iP	Pn	05 58 54.1	+2.8	
KHL	Karahalli	6.54	67	eP	Pn	05 58 53.4	+2.0	
LSRT	Sirt	6.57	223	i P	Pn	05 58 52.3	+0.5	
	comp=E,263nm,1.8s,SNR=41							
VTS	Vitosha	6.63	9	P	Pn	05 58 55.8	+3.1	
VTS	Vitosha	6.63	9	P	Pn	05 58 55.8	+3.1	
BUM	Brajici-Budva	6.67	341	⇓iPn	Pn	05 58 52.2	-0.9	
BUM				eSn	Sn	06 00 05.3	-3.8	
BUM	Brajici-Budva	6.67	341	⇓iPn	Pn	05 58 52.2	-0.9	
PDG	Podgorica	6.70	343	⇓iPn	Pn	05 58 52.9	-0.7	
TTG	Podgorica	6.70	343	⇓iPn	Pn	05 58 52.9	-0.7	
TTG				eSn	Sn	06 00 06.0	-3.9	
TTG	Podgorica	6.70	343	⇓iPn	Pn	05 58 52.9	-0.7	
TTG				eSn	Sn	06 00 06.0	-3.9	
PVY	Plav	6.71	348	⇑iPn	Pn	05 58 54.2	+0.4	
PVY				eSn	Sn	06 00 06.8	-3.5	
PVY	Plav	6.71	348	⇑iPn	Pn	05 58 54.2	+0.4	
BARS	Barje	6.78	360	P	Pn	05 58 55.1	+0.5	
BARS	Barje	6.78	360	P	Pn	05 58 55.1	+0.5	
LMSR	Misrath	6.78	239	i P	Pn	05 58 55.5	+0.8	
	comp=E,114nm,1.4s,SNR=41							
GDZ	Gediz	6.79	61	⇑iP	Pn	05 58 57.1	+2.3	
LUJL	Ujela	6.91	184	i P	Pn	05 58 58.0	+1.5	
	SNR=41							
KORT	Korkueli	6.91	79	⇑iP	Pn	05 58 58.3	+1.7	
HCY	Herceg Novi	6.91	339	⇓iPn	Pn	05 58 54.9	-1.6	
HCY				eSn	Sn	06 00 10.6	-4.6	
HCY	Herceg Novi	6.91	339	⇓iPn	Pn	05 58 54.9	-1.6	
EDRB	Edirne	6.95	32	eP	Pn	05 59 00.0	+3.0	
BEY	Berane	7.00	348	⇓iPn	Pn	05 58 58.2	+0.5	
IVA	Berane	7.00	348	⇓iPn	Pn	05 58 58.2	+0.5	
IVA				eSn	Sn	06 00 13.5	-3.7	
IVA	Berane	7.00	348	⇓iPn	Pn	05 58 58.2	+0.5	
IVA				eSn	Sn	06 00 13.5	-3.7	
ULDT	Uludag	7.06	52	⇑iP	Pn	05 59 03.2	+4.7	
NKY	Niksic	7.12	343	⇓iPn	Pn	05 58 58.6	-0.8	
NKY				eSn	Sn	06 00 16.4	-3.9	
NKY	Niksic	7.12	343	⇓iPn	Pn	05 58 58.6	-0.8	
ANTB	Antalya	7.15	80	eP	Pn	05 59 00.9	+1.1	
BCK	Bucak	7.16	76	eP	Pn	05 59 01.2	+1.3	
ISP	Isparta	7.17	73	eP	Pn	05 59 01.5	+1.4	
ISP	Isparta	7.17	73	P	Pn	05 59 01.1	+1.0	
ISP	Isparta	7.17	73	P	Pn	05 59 01.1	+1.0	
ISP	Isparta	7.17	73	⇑iP	Pn	05 59 03.4	+3.3	
ISP	Isparta	7.17	73	P	Pn	05 59 01.1	+1.0	
ALT	Altintas	7.22	63	eP	Pn	05 59 02.5	+1.7	
ELBA	Catalca	7.25	43	⇓iP	Pn	05 59 04.8	+3.6	
BRY	Bratogost	7.32	341	⇑iPn	Pn	05 59 00.9	-1.2	
BRY				eSn	Sn	06 00 20.5	-4.7	
BRY	Bratogost	7.32	341	⇑iPn	Pn	05 59 00.9	-1.2	
CTKS	Kestanelik-??a	7.36	43	eP	Pn	05 59 05.2	+2.5	
SHUT	Suhut-Afyon	7.38	67	eP	Pn	05 59 04.7	+1.8	
JMB	Yambol	7.40	28	P	Pn	05 59 06.5	+3.3	
SWA2		7.42	155	P	Pn	05 59 04.4	+0.8	
	baz=158							
SWA2				S	Sn	06 00 23.6	-4.2	
	baz=158							
SWA2				AMP		06 01 00.0		
	comp=E,920µm,0.6s,logA/T=6.2,baz=158							
SWA2		7.42	155	P	Pn	05 59 04.4	+0.9	
BGKT	Bogazkoy	7.47	44	eP	Pn	05 59 06.7	+2.5	
SUTC	Sutluce-Ispart	7.49	76	eP	Pn	05 59 04.8	+0.4	
UPM	Unac-Piva	7.51	343	⇑iPn	Pn	05 59 04.8	+0.1	
UPM				eSn	Sn	06 00 26.0	-3.9	
UPM	Unac-Piva	7.51	343	⇑iPn	Pn	05 59 04.8	+0.1	
PLE	Pljevlja	7.53	346	⇑iPn	Pn	05 59 05.3	+0.3	
PLE				eSn	Sn	06 00 26.9	-3.5	
PLE	Pljevlja	7.53	346	⇑iPn	Pn	05 59 05.3	+0.3	
STON	Ston	7.55	336	ePn	Pn	05 59 01.6	-3.6	
STON				Sn	Sn	06 00 21.6	-9.1	
STON	Ston	7.55	336	ePn	Pn	05 59 01.6	-3.6	
STON				Sn	Sn	06 00 21.6	-9.2	
ISK	Istanbul-Kandi	7.56	46	eP	Pn	05 59 07.9	+2.5	
ADVT	Abdulvahap	7.60	52	eP	Pn	05 59 08.0	+2.0	
KLYT	Kilyos	7.67	45	eP	Pn	05 59 09.4	+2.5	
BOLV	Bolvadin	7.72	67	⇑iP	Pn	05 59 10.3	+2.6	
GRUS	Gruza	7.89	354	P	Pn	05 59 08.7	-1.3	
GRUS	Gruza	7.89	354	P	Pn	05 59 08.7	-1.3	
ESKT	Eskisehir	7.93	61	eP	Pn	05 59 12.0	+1.5	
ESKT	Eskisehir	7.93	61	⇑iP	Pn	05 59 14.7	+4.2	
SILT	Sile	7.96	48	eP	Pn	05 59 13.2	+2.3	
BBLS	Lazići	8.05	347	P	Pn	05 59 11.7	-0.4	
BBLS	Lazići	8.05	347	P	Pn	05 59 11.7	-0.4	
GULT	Gulveren	8.11	55	eP	Pn	05 59 14.3	+1.4	
GHAR	Gharyan	8.25	244	i P	Pn	05 59 14.0	-0.9	
	comp=E,76nm,1.6s,SNR=41							
LZLA	Zalla	8.29	207	i P	Pn	05 59 15.5	0.0	
	SNR=41							
SVRH	Sivrihisar-ESK	8.39	63	eP	Pn	05 59 18.1	+1.4	
KIZT	Kizilcal	8.47	67	eP	Pn	05 59 19.1	+1.3	
GAZI	Gazipasa	8.47	86	i P	Pn	05 59 15.6	-2.4	
KDHN	Kadinhani	8.55	70	⇑iP	Pn	05 59 21.7	+2.6	
LJFR	Jufra	8.58	218	i P	Pn	05 59 19.0	-0.5	
	SNR=41							
MDU	Mudurnu	8.59	56	eP	Pn	05 59 21.5	+1.9	
DJES	Djerdap	8.64	3	P	Pn	05 59 21.7	+1.5	
LSHF	Shwairf	8.78	229	i P	Pn	05 59 21.7	-0.5	
	comp=E,148nm,1.9s,SNR=41							
ALAS	Alassa	9.03	252	i P	Pn	05 59 25.3	-0.4	
	SNR=41							
AQU	L'Aquila	9.10	316	⇓iP	Pn	05 59 30.0	+3.5	
AQU	L'Aquila	9.10	316	ePn	Pn	05 59 28.3	+1.8	
SGKT	Sivrigoynuk	9.21	57	⇑iP	Pn	05 59 31.6	+3.6	
GZR	Gura Zlata	9.38	4	P	Pn	05 59 30.4	+0.1	
GZR	Gura Zlata	9.38	4	⇓iP	Pn	05 59 30.3	0.0	
GZR	Gura Zlata	9.38	4	P	Pn	05 59 30.4	+0.1	
BLY	Banja Luka	9.40	339	P	Pn	05 59 31.5	+0.8	
BLY	Banja Luka	9.40	339	P	Pn	05 59 31.5	+0.8	
CSS	Prodhromos	9.42	93	ePn	Pn	05 59 27.5	-3.5	
	comp=E,22nm,0.6s							
CSS				eSn	Sn	06 01 07.2	-10	
CSS	Prodhromos	9.42	93	ePn	Pn	05 59 27.5	-3.5	
	comp=E,22nm,0.6s							
CSS				eSn	Sn	06 01 07.2	-10	
BZS	Buzias	9.58	359	P	Pn	05 59 31.6	-1.4	
BZS	Buzias	9.58	359	⇑iP	Pn	05 59 30.9	-2.1	
BZS	Buzias	9.58	359	P	Pn	05 59 31.6	-1.4	
BBAL	Bala	9.59	65	⇑iP	Pn	05 59 36.5	+3.3	
VOIR		9.70	13	⇑iP	Pn	05 59 36.1	+1.4	
VOIR		9.70	13	⇑iP	Pn	05 59 36.1	+1.3	
VOIR		9.70	13	⇑iP	Pn	05 59 36.1	+1.3	
AWBH		9.73	140	P	Pn	05 59 35.4	+0.1	
	baz=143							
AWBH		9.73	140	P	Pn	05 59 35.4	+0.1	
MLR	Muntele Rosu	9.94	17	Pn	Pn	05 59 37.1	-1.0	
	comp=E,0.3nm,0.3s,baz=183,slow=11,SNR=8.8							
MLR	Muntele Rosu	9.94	17	⇑iP	Pn	05 59 38.8	+0.7	
MLR	Muntele Rosu	9.94	17	⇑iP	Pn	05 59 38.8	+0.7	
MLR	Muntele Rosu	9.94	17	⇑iP	Pn	05 59 38.8	+0.7	
BR131	Keskin Array S	10.02	65	ePn	Pn	05 59 42.5	+3.3	
BR131	Keskin Array S	10.02	65	ePn	Pn	05 59 42.5	+3.3	
BRTR	Keskin Array B	10.02	65	Pn	Pn	05 59 41.0	+1.9	
	comp=E,0.7nm,0.3s,baz=247,slow=12,SNR=70							
BRTR				LR	LR	06 03 18.1		
	comp=E,654nm,21.9s,baz=62,slow=37							
BRTR	Keskin Array B	10.02	65	P	Pn	05 59 41.0	+1.8	
BRTR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
BRTR				MLR	MLR			
	comp=Z,654nm,21.9s							
BRTR	Keskin Array B	10.02	65	Pn	Pn	05 59 41.0	+1.8	
AYT	Al 'Ayyat	10.05	126	P	Pn	05 59 38.2	-1.4	
	baz=129							
AYT	Al 'Ayyat	10.05	126	P	Pn	05 59 38.2	-1.4	
NVLJ	Novalja	10.05	330	ePn	Pn	05 59 37.1	-2.4	
NVLJ				Sn	Sn	06 01 21.8	-10	
NVLJ	Novalja	10.05	330	ePn	Pn	05 59 37.1	-2.4	
NVLJ				Sn	Sn	06 01 21.8	-10	
KEST	Kesra	10.15	272	Pn	Pn	05 59 42.3	+1.3	
	comp=Z,0.4nm,0.3s,baz=147,slow=2.3,SNR=15							
KEST				Sn	Sn	06 01 31.7	-3.2	
	comp=Z,0.5nm,0.3s,baz=48,slow=19,SNR=4.2							
KEST				LR	LR	06 04 41.1		
	comp=Z,239nm,19.2s,baz=196,slow=43							
KEST	Kesra	10.15	272	ePn	Pn	05 59 42.8	+1.9	
KEST	Kesra	10.15	272	ePn	Pn	05 59 42.8	+1.8	
SISC	Sisak	10.30	338	ePn	Pn	05 59 40.7	-2.2	
SISC	Sisak	10.30	338	ePn	Pn	05 59 40.7	-2.3	
KOT	Kottamia	10.35	123	P	Pn	05 59 40.8	-2.9	
	baz=126							
HSAF	As Saff	10.37	125	P	Pn	05 59 42.6	-1.3	
	baz=128							
HSAF	As Saff	10.37	125	P	Pn	05 59 42.6	-1.3	
PKSM	Moragy	10.45	348	P	Pn	05 59 43.3	-1.7	
PKSM	Moragy	10.45	348	⇓iP	Pn	05 59 43.0	-2.0	
PKSM	Moragy	10.45	348	P	Pn	05 59 43.3	-1.7	
PLOR	Plostina	10.46	19	⇓iP	Pn	05 59 46.3	+1.2	
PLOR	Plostina	10.46	19	⇓iP	Pn	05 59 46.3	+1.2	
PLOR	Plostina	10.46	19	P	Pn	05 59 46.3	+1.2	
GULE	Gulek	10.46	79	i P	Pn	05 59 44.8	-0.4	
VSL	Villasalto	10.46	293	ePn	Pn	05 59 45.0	-0.2	
VSL	Villasalto	10.46	293	ePn	Pn	05 59 45.0	-0.2	
VRI	Vrincioaia	10.49	19	⇑iP	Pn	05 59 48.0	+2.4	
GLL	Jalalah	10.49	125	P	Pn	05 59 44.3	-1.4	
	baz=128							
GLL	Jalalah	10.49	125	P	Pn	05 59 44.3	-1.4	
CDAG	Cicekdag	10.53	66	⇑iP	Pn	05 59 33.7	-12	
ILGA	Ilgaz	10.56	58	⇑iP	Pn	05 59 49.0	+2.5	
PKS6	Bocsa	10.70	351	⇑iP	Pn	05 59 47.3	-1.1	
BOJS	Bojanci	10.70	334	i Pn	Pn	05 59 47.7	-0.7	
BOJS				eSn	Sn	06 01 37.5	-11	
BOJS	Bojanci	10.70	334	i Pn	Pn	05 59 47.7	-0.7	
BOJS				eSn	Sn	06 01 37.5	-11	
DRGR		10.77	3	P	Pn	05 59 50.1	+0.7	
DRGR		10.77	3	⇑P	Pn	05 59 48.6	-0.7	
DRGR		10.77	3	⇑iP	Pn	05 59 48.6	-0.8	
DRGR		10.77	3	⇑iP	Pn	05 59 48.6	-0.8	
PKS9	Tamasi	10.88	347	⇑iP	Pn	05 59 49.6	-1.3	
CORM	Corum	10.89	64	eP	Pn	05 59 52.3	+1.3	
AMAG	Maghara	10.91	116	P	Pn	05 59 48.5	-2.9	
	baz=119							
KRTS	Karatas	10.93	83	eP	Pn	05 59 51.4	-0.3	
SUZ		11.10	121	P	Pn	05 59 51.4	-2.5	
	baz=123							
BEHE	Becsehely	11.10	341	⇑eP	Pn	05 59 52.8	-1.1	
PDKS	Podkum	11.27	335	i Pn	Pn	05 59 55.1	-1.1	
PDKS				eSn	Sn	06 01 51.8	-10	
KOZT	Kozan	11.31	79	eP	Pn	05 59 56.8	0.0	
LJU	Ljubljana	11.42	333	ePn	Pn	05 59 58.5	+0.2	
LJU				eSn	Sn	06 01 59.0	-6.9	
TRI	Trieste	11.43	330	eP	Pn	05 59 57.6	-0.9	
TRI				pmax	pmax			
	comp=Z,47nm,1.0s							
TRI	Trieste	11.43	330	ePn	Pn	05 59 57.6	-0.9	
	comp=Z,47nm,1.0s							
TRI	Trieste	11.43	330	ePn	Pn	05 59 57.6	-0.9	
	comp=Z,47nm,1.0s							
MMAI	Mount Meron Ar	11.58	101	Pn	Pn	05 59 57.4	-3.1	
	comp=Z,4.6nm,0.3s,baz=305,slow=12,SNR=13							
MMAI				Sn	Sn	06 02 01.3	-8.5	
	comp=Z,4.7nm,0.3s,baz=297,slow=22,SNR=3.6							
VOY	Vojsko	11.65	331	ePn	Pn	06 00 00.8	-0.6	
VOY				e		06 00 02.2		
VOY				eSn	Sn	06 02 00.5	-11	
VOY	Vojsko	11.65	331	ePn	Pn	06 00 00.8	-0.6	
PERS	Pernice	11.73	337	i Pn	Pn	06 00 00.8	-1.7	
PERS				eSn	Sn	06 02 00.9	-13	
PERS	Pernice	11.73	337	i Pn	Pn	06 00 00.8	-1.8	
PERS				eSn	Sn	06 02 00.9	-13	
SOKA	Soboth	11.80	336	⇑iPn	Pn	06 00 01.3	-2.1	
SOKA				⇓iSn	Sn	06 02 05.5	-10	
OBKA	Obir	11.81	335	P	Pn	06 00 03.1	-0.6	
OBKA	Obir	11.81	335	⇑iPn	Pn	06 00 01.9	-1.8	
	SNR=6.0							
OBKA				⇑iSn	Sn	06 02 06.1	-9.4	
OBKA	Obir	11.81	335	P	Pn	06 00 03.1	-0.6	
BUR01	Bucovina Ar. S	11.84	11	P	Pn	06 00 05.8	+1.7	
BUR01	Bucovina Ar. S	11.84	11	P	Pn	06 00 05.8	+1.8	
BURAR	Bucovina Array	11.84	11	⇓iP	Pn	06 00 04.3	+0.3	
BURAR	Bucovina Array	11.84	11	⇓iP	Pn	06 00 04.3	+0.3	
BURAR	Bucovina Array	11.84	11	⇓iP	Pn	06 00 04.3	+0.3	
DIKM	Dikmen	11.86	58	eP	Pn	06 00 06.3	+2.0	
HNKL	Nakhl	11.86	117	P	Pn	06 00 02.3	-2.0	
	baz=120							
BUR08	Bucovina Ar. S	11.87	11	ePn	Pn	06 00 05.2	+0.8	
BUR08	Bucovina Ar. S	11.87	11	ePn	Pn	06 00 05.2	+0.8	
PGF	Pioggiola	11.89	307	eP	Pn	06 00 05.1	+0.4	
	comp=Z,53nm,1.0s							
PGF	Pioggiola	11.89	307	eP	Pn	06 00 05.1	+0.4	
PGF				pmax	pmax			
	comp=Z,27nm,1.0s							
PGF	Pioggiola	11.89	307	eP	Pn	06 00 05.1	+0.4	
	comp=Z,27nm,1.0s							
PGF	Pioggiola	11.89	307	eP	Pn	06 00 05.1	+0.4	
	comp=Z,27nm,1.0s							
ASUT		11.93	133	P	Pn	06 00 04.5	-0.9	
	baz=136							
ASUT		11.93	133	P	Pn	06 00 04.4	-0.9	
PSZ	Piszkesteto	11.97	354	P	Pn	06 00 04.4	-1.3	
PSZ	Piszkesteto	11.97	354	⇑eP	Pn	06 00 04.3	-1.4	
PSZ				eS	Sn	06 02 13.0	-6.2	
PSZ	Piszkesteto	11.97	354	⇑iP	Pn	06 00 03.9	-1.8	
PSZ	Piszkesteto	11.97	354	ePn	Pn	06 00 04.2	-1.5	
GRB	Gharib	12.07	127	P	Pn	06 00 06.2	-1.0	
	baz=129							
GRB	Gharib	12.07	127	P	Pn	06 00 06.2	-1.0	
SARI	SarD1z-Kayseri	12.11	73	eP	Pn	06 00 04.0	-3.7	
KIS	Kishinev	12.13	23	⇓iP	Pn	06 00 07.0	-1.0	
	comp=Z,500nm,7.0s							
KIS	Kishinev	12.13	23	ePP		06 00 20.0		
KIS				eS	Sn	06 02 23.0	-0.2	
KIS				i Li		06 03 25.0		
KIS				i LQ		06 03 40.0		
KIS				i LR	LR	06 05 18.0		
	comp=Z,4µm,12.0s							
KIS	Kishinev	12.13	23	d iP	Pn	06 00 07.0	-1.0	
KIS				eS	Sn	06 02 23.0	-0.2	
KIS				pmax	pmax			
	comp=Z,1.0nm,7.0s							
KIS				MLR	MLR			
	comp=Z,6µm,10.0s							
KIS				MLR	MLR			
	comp=N,4µm,12.0s							
KIS				MLR	MLR			
	comp=E,5µm,11.0s							
KIS				MLR	MLR			
	comp=Z,4µm,12.0s							
KIS	Kishinev	12.13	23	i P	Pn	06 00 07.0	-1.0	
	comp=Z,1.0nm,7.0s							
ARSA	Arzberg	12.16	339	P	Pn	06 00 06.5	-1.9	
ARSA	Arzberg	12.16	339	⇓iPn	Pn	06 00 06.0	-2.4	
	SNR=7.8							
ARSA				⇑iSn	Sn	06 02 15.2	-8.8	
ARSA	Arzberg	12.16	339	P	Pn	06 00 06.5	-1.9	
KECS	Kecovo	12.48	356	ePn	Pn	06 00 12.3	-0.5	
KECS				eSn	Sn	06 02 23.2	-8.6	
KECS	Kecovo	12.48	356	ePN	Pn	06 00 12.2	-0.6	
KECS	Kecovo	12.48	356	ePn	Pn	06 00 12.3	-0.5	
KECS				eSn	Sn	06 02 23.2	-8.6	
SVSK	Karacayir	12.56	67	eP	Pn	06 00 14.5	+0.6	
UZH	Uzhgorod	12.60	1	eP	Pn	06 00 15.0	+0.7	
UZH				eS	Sn	06 02 33.8	-0.8	
UZH				MLR	MLR			
	comp=N,4µm,10.0s							
UZH				MLR	MLR			
	comp=E,4µm,10.0s							
UZH				MLR	MLR			
	comp=Z,4µm,10.0s							
UZH	Uzhgorod	12.60	1	eP	Pn	06 00 15.0	+0.7	
VYHS	Vyhne	12.65	351	eP	Pn	06 00 13.9	-1.2	
VYHS				e		06 02 27.7		
VYHS				MLR	MLR			
	comp=Z,2µm,19.3s							
VYHS	Vyhne	12.65	351	ePn	Pn	06 00 13.9	-1.2	
VYHS				eSn	Sn	06 02 27.7	-8.2	
VYHS	Vyhne	12.65	351	ePN	Pn	06 00 13.9	-1.2	
VYHS	Vyhne	12.65	351	ePn	Pn	06 00 13.9	-1.2	
VYHS			

AUTN	**L'Aution**	**13.60**	**310**	*eP*	**Pn**	**06 00 31.3 +3.2**
AUTN	**L'Aution**	**13.60**	**310**	*eP*	**Pn**	**06 00 31.3 +3.2**
KWP	**Kalwaria Pacla**	**13.61**	**2**	*eP*	**Pn**	**06 00 29.6 +1.5**
KWP				*eS*	Sn	06 03 23.8 +25
KWP	**Kalwaria Pacla**	**13.61**	**2**	⇑*P*	**Pn**	**06 00 28.3 +0.2**
KWP	**Kalwaria Pacla**	**13.61**	**2**	*ePn*	**Pn**	**06 00 29.1 +0.9**
	comp=Z,28nm,0.9s					
KWP	**Kalwaria Pacla**	**13.61**	**2**	⇑*iP*	**Pn**	**06 00 28.3 +0.2**
KWP	**Kalwaria Pacla**	**13.61**	**2**	*P*	**Pn**	**06 00 28.3 +0.2**
KWP	**Kalwaria Pacla**	**13.61**	**2**	*ePn*	**Pn**	**06 00 29.1 +1.0**
	comp=Z,28nm,0.9s					
WATA	**Walderalm**	**13.64**	**329**	⇑*iPn*	**Pn**	**06 00 27.3 -1.3**
	SNR=11					
WATA				⇑*iSn*	**Sn**	**06 02 51.6 -8.5**
URFA	**Urfa**	**13.69**	**79**	*eP*	**Pn**	**06 00 28.7 -0.6**
TOUF	**Mont Tournerai**	**13.72**	**310**	*eP*	**Pn**	**06 00 32.9 +3.1**
TOUF	**Mont Tournerai**	**13.72**	**310**	*eP*	**Pn**	**06 00 32.9 +3.1**
MVIF	**Mont Vial**	**13.73**	**309**	*eP*	**Pn**	**06 00 33.4 +3.6**
VRAC	**Vranov**	**13.81**	**345**	Pn	**Pn**	**06 00 29.5 -1.4**
	comp=Z,0.5nm,0.3s,baz=155,slow=10.0,SNR=4.8					
VRAC	**Vranov**	**13.81**	**345**	⇑*P*	**Pn**	**06 00 30.0 -1.0**
VRAC	**Vranov**	**13.81**	**345**	⇑*iP*	**Pn**	**06 00 30.0 -1.0**
VRAC	**Vranov**	**13.81**	**345**	⇑*P*	**Pn**	**06 00 30.0 -1.0**
LMR	**La Mourre**	**13.87**	**306**	*eP*	**Pn**	**06 00 33.3 +1.5**
LMR	**La Mourre**	**13.87**	**306**	*eP*	**Pn**	**06 00 33.3 +1.5**
LVV	**L'vov**	**13.87**	**6**	*eP*	**Pn**	**06 00 36.0 +4.3**
LVV				*eS*	**Sn**	**06 03 10.0 +4.3**
LVV				pmax	pmax	
	comp=Z,2μm,4.5s					
LVV				MLR	MLR	
	comp=E,1μm,11.0s					
LVV				MLR	MLR	
	comp=Z,2μm,11.0s					
LVV				MLR	MLR	
	comp=N,1μm,10.0s					
FRF	**La Foret Royal**	**13.88**	**307**	*eP*	**Pn**	**06 00 34.7 +2.7**
	comp=N,14nm,0.8s					
FRF	**La Foret Royal**	**13.88**	**307**	*eP*	**Pn**	**06 00 34.7 +2.7**
FRF				pmax	pmax	
	comp=Z,7.0nm,0.8s					
FRF	**La Foret Royal**	**13.88**	**307**	*eP*	**Pn**	**06 00 34.7 +2.7**
	comp=Z,7.3nm,0.8s					
FRF	**La Foret Royal**	**13.88**	**307**	*eP*	**Pn**	**06 00 34.7 +2.7**
	comp=Z,7.2nm,0.8s					
HSFG		**13.98**	**129**	P	**Pn**	**06 00 33.6 +0.3**
	baz=131					
HSFG		**13.98**	**129**	P	**Pn**	**06 00 33.6 +0.3**
DAVOX	**Davos/Dischmat**	**13.98**	**324**	Pn	**Pn**	**06 00 33.8 +0.5**
	comp=Z,0.6nm,0.3s,baz=141,slow=18,SNR=4.3					
DAVOX				Sn	**Sn**	**06 02 55.9 -13**
	comp=Z,1.1nm,0.3s,baz=156,slow=20,SNR=3.8					
DAVOX	**Davos/Dischmat**	**13.98**	**324**	Pn	**Pn**	**06 00 33.8 +0.5**
DAVOX				Sn	**Sn**	**06 02 55.9 -13**
TUE	**Stuetta**	**14.03**	**322**	*ePn*	**Pn**	**06 00 34.1 +0.3**
	comp=Z,24nm,0.8s					
TUE	**Stuetta**	**14.03**	**322**	*ePn*	**Pn**	**06 00 34.1 +0.2**
	comp=Z,24nm,0.8s					
TREC	**Trest**	**14.05**	**343**	*eP*	**Pn**	**06 00 39.7 +5.5**
TREC				MLR	MLR	
	comp=Z,7μm,10.6s					
TREC	**Trest**	**14.05**	**343**	*eP*	**Pn**	**06 00 39.7 +5.5**
TREC				AMS	AMS	06 06 40.0
	comp=Z,7μm,10.6s					
OKC	**Ostrava-Krasne**	**14.06**	**350**	*eP*	**Pn**	**06 00 36.3 +2.0**
OKC				*eS*	**Sn**	**06 03 06.0 -4.3**
OKC				MLR	MLR	
	comp=Z,4μm,10.7s					
OKC	**Ostrava-Krasne**	**14.06**	**350**	*eP*	**Pn**	**06 00 36.3 +2.0**
OKC				*ex*	x	06 00 42.7
OKC				*eS*	**Sn**	**06 03 06.0 -4.3**
OKC				AMS	AMS	06 07 40.0
	comp=Z,4μm,10.7s					
OKC	**Ostrava-Krasne**	**14.06**	**350**	*eP*	**Pn**	**06 00 36.3 +2.0**
MORC	**Moravsky Berou**	**14.09**	**348**	⇑*P*	**Pn**	**06 00 34.3 -0.4**
MORC	**Moravsky Berou**	**14.09**	**348**	⇑*iP*	**Pn**	**06 00 34.3 -0.4**
MORC	**Moravsky Berou**	**14.09**	**348**	*ePn*	**Pn**	**06 00 32.9 -1.8**
SVRC	**Sivrice-ELAZID**	**14.11**	**75**	*eP*	**Pn**	**06 00 34.2 -0.9**
GEC2	**GERESS Array S**	**14.13**	**337**	*eP*	**Pn**	**06 00 34.2 -1.1**
GEC2	**GERESS Array S**	**14.13**	**337**	*eP*	**Pn**	**06 00 34.2 -1.1**
PTK	**Pertek**	**14.22**	**73**	*eP*	**Pn**	**06 00 36.2 -0.4**
OJC	**Ojcow**	**14.26**	**355**	*eP*	**Pn**	**06 00 35.5 -1.5**
OJC				*ePP*		06 00 46.6
OJC				*eS*	**Sn**	**06 03 18.1 +2.9**
OJC				L		06 06 50.2
	comp=Z,4.7nm,16.0s					
MBDF	**Montbardon**	**14.39**	**312**	*eP*	**Pn**	**06 00 42.9 +4.1**
	comp=Z,54nm,0.8s					
MBDF	**Montbardon**	**14.39**	**312**	*eP*	**Pn**	**06 00 42.9 +4.1**
FUR	**Furstenfeldbru**	**14.42**	**330**	*eP*	**Pn**	**06 00 41.6 +2.3**
FUR				*eS*	**Sn**	**06 03 07.9 -11**
FUR	**Furstenfeldbru**	**14.42**	**330**	*eP*	**Pn**	**06 00 41.6 +2.3**
FUR				*eS*	**Sn**	**06 03 07.9 -11**
KHC	**Kasperske Hory**	**14.43**	**338**	*eP*	**Pn**	**06 00 37.5 -1.8**
KHC				MLR	MLR	
	comp=Z,7μm,11.2s					
KHC	**Kasperske Hory**	**14.43**	**338**	*ePn*	**Pn**	**06 00 37.4 -1.9**
	comp=Z,23nm,0.9s					
KHC	**Kasperske Hory**	**14.43**	**338**	*eP*	**Pn**	**06 00 37.5 -1.8**
KHC				*ex*	x	06 00 47.5
KHC				*es*P	sP	06 00 58.5 +8.1
KHC				*eS*	**Sn**	**06 03 08.3 -11**
KHC				AMS	AMS	06 07 00.0
	comp=Z,7μm,11.2s					
KHC	**Kasperske Hory**	**14.43**	**338**	*ePn*	**Pn**	**06 00 37.4 -1.9**
	comp=Z,23nm,0.9s					
BNI	**Bardonecchia**	**14.62**	**313**	*eP*	**Pn**	**06 00 42.6 +0.7**
BNI				pmax	pmax	
	comp=Z,13nm,0.9s					
BNI	**Bardonecchia**	**14.62**	**313**	*ePn*	**Pn**	**06 00 42.6 +0.6**
	comp=Z,13nm,0.9s					
BNI	**Bardonecchia**	**14.62**	**313**	*ePn*	**Pn**	**06 00 42.6 +0.7**
	comp=Z,13nm,0.9s					
WET	**Wettzell**	**14.66**	**336**	*eP*	**Pn**	**06 00 41.1 -1.4**
WET				*eS*	**Sn**	**06 03 14.3 -11**
WET	**Wettzell**	**14.66**	**336**	*eP*	**Pn**	**06 00 41.1 -1.4**
WET				*eS*	**Sn**	**06 03 14.3 -11**
ANN	**Anapa**	**14.73**	**49***c*	*iP*	**Pn**	**06 00 41.8 -1.7**
ANN				*eS*	**Sn**	**06 03 23.2 -3.6**
ANN				pmax	pmax	
	comp=Z,136nm,1.1s					
ANN				MLR	MLR	
	comp=Z,544nm,9.0s					
SMRF	**Simiane la Rot**	**14.77**	**307**	*eP*	**Pn**	**06 00 47.8 +3.8**
	comp=Z,22nm,1.0s					
SMRF	**Simiane la Rot**	**14.77**	**307**	*eP*	**Pn**	**06 00 47.8 +3.8**
LPG	**La Plagne**	**14.82**	**314**	*eP*	**Pn**	**06 00 46.4 +1.7**
	comp=Z,36nm,1.1s					
LPG	**La Plagne**	**14.82**	**314**	*eP*	**Pn**	**06 00 46.4 +1.7**
LPL	**La Plagne**	**14.84**	**314**	*eP*	**Pn**	**06 00 46.6 +1.6**
	comp=Z,30nm,0.9s					
LPL	**La Plagne**	**14.84**	**314**	*eP*	**Pn**	**06 00 46.6 +1.6**
DPC	**Dobruska-Polom**	**14.86**	**346**	*eP*	**Pn**	**06 00 43.6 -1.6**
DPC				MLR	MLR	
	comp=Z,4μm,9.4s					
DPC	**Dobruska-Polom**	**14.86**	**346**	*eP*	**Pn**	**06 00 43.6 -1.6**
DPC				*ex*	x	06 00 51.4
DPC				AMS	AMS	06 07 40.0
	comp=Z,4μm,9.4s					
PRU	**Pruhonice**	**14.93**	**341**	*eP*	**Pn**	**06 00 45.6 -0.5**
PRU				MLR	MLR	
	comp=Z,6μm,10.7s					
PRU	**Pruhonice**	**14.93**	**341**	*eP*	**Pn**	**06 00 45.6 -0.5**
PRU				*ex*	x	06 00 56.1
PRU				AMS	AMS	06 07 10.0
	comp=Z,6μm,10.7s					
ORIF	**Oris-en-Rattie**	**15.03**	**311**	*eP*	**Pn**	**06 00 48.4 +0.8**
	comp=Z,89nm,1.5s					
ORIF				*e*MLR	MLR	
	comp=Z,4μm,20.0s					
ORIF	**Oris-en-Rattie**	**15.03**	**311**	*eP*	**Pn**	**06 00 48.4 +0.8**
PRA	**Prague**	**15.03**	**341**	P	**Pn**	**06 00 46.0 -1.5**
UPC	**Upice**	**15.07**	**346**	*eP*	**Pn**	**06 00 47.7 -0.4**
UPC	**Upice**	**15.07**	**346**	*eP*	**Pn**	**06 00 47.7 -0.4**
UPC				*ex*	x	06 00 54.1
EMHD	**Djebel Mahouad**	**15.28**	**276**	P	**Pn**	**06 00 58.5 +7.6**
KSP	**Ksiaz**	**15.34**	**347**	*eP*	**Pn**	**06 00 54.1 +2.6**
KSP				*ep*P	pP	06 01 01.3 +2.1
KSP				*eS*	**Sn**	**06 03 54.9 +13**
KSP				LMZ		06 08 19.9
	comp=Z,5μm,16.6s					
KSP	**Ksiaz**	**15.34**	**347**	*eP*	**Pn**	**06 00 56.4 +4.8**
KSP				*eS*	**Sn**	**06 03 44.0 +2.6**
KSP	**Ksiaz**	**15.34**	**347**	*eP*	**Pn**	**06 00 56.4 +4.8**
OG01	**Vacheresse**	**15.34**	**317**	*eP*	**Pn**	**06 00 56.4 +4.7**
OG01	**Vacheresse**	**15.34**	**317**	*eP*	**Pn**	**06 00 56.4 +4.7**
PVCC	**Panska Ves**	**15.42**	**342**	*eP*	**Pn**	**06 00 51.9 -0.7**
PVCC				MLR	MLR	
	comp=Z,6μm,10.7s					
PVCC	**Panska Ves**	**15.42**	**342**	*eP*	**Pn**	**06 00 51.9 -0.7**
PVCC				*ex*	x	06 00 59.6
PVCC				AMS	AMS	06 07 30.0
	comp=Z,6μm,10.7s					
ROTZ	**Rotzenmuhle**	**15.42**	**336**	*eP*	**Pn**	**06 00 52.0 -0.6**
ROTZ				*eS*	**Sn**	**06 03 32.7 -11**
SPAK	**Spaichingen-Ko**	**15.45**	**325**	*eP*	**Pn**	**06 00 53.1 0.0**
ETOS	**Mallorca**	**15.48**	**290**	P	**Pn**	**06 00 55.5 +1.9**
	comp=Z,335nm,3.3s					
ETOS	**Mallorca**	**15.48**	**290**	P	**Pn**	**06 00 55.5 +2.0**
	comp=Z,335nm,3.3s					
KIEV	**Kiev**	**15.59**	**18**	*eP*	**Pn**	**06 00 51.9 -3.0**
KIEV				pmax	pmax	
	comp=Z,32nm,0.9s					
KIEV	**Kiev**	**15.59**	**18**	*eP*	**Pn**	**06 00 51.9 -3.0**
	comp=Z,32nm,0.9s					
KIEV	**Kiev**	**15.59**	**18**	*eP*	**Pn**	**06 00 51.9 -3.0**
	comp=Z,32nm,0.9s					
AKASG	**Malin Array Be**	**15.60**	**18**	Pn	**Pn**	**06 00 51.3 -3.7**
	comp=Z,2.0nm,0.3s,baz=208,slow=12,SNR=13					
AKASG				Sn	**Sn**	**06 03 46.2 -1.6**
	baz=195,slow=10,SNR=2.3					
AKASG				LR	LR	06 07 37.3
	comp=Z,2μm,18.3s,baz=205,slow=40					
AKASG	**Malin Array Be**	**15.60**	**18**	P	**Pn**	**06 00 51.3 -3.7**
AKASG						06 03 46.2
AKASG				pmax	pmax	
	comp=Z,2.0nm,0.3s					
AKASG				MLR	MLR	
	comp=Z,2μm,18.3s					
AKASG	**Malin Array Be**	**15.60**	**18**	Pn	**Pn**	**06 00 51.3 -3.7**
AKASG				Sn	**Sn**	**06 03 46.2 -1.6**
AKBB	**Malin Array Si**	**15.60**	**18**	*eP*	**Pn**	**06 00 52.0 -3.0**
AKBB	**Malin Array Si**	**15.60**	**18**	*eP*	**Pn**	**06 00 52.0 -3.0**
BBS	**Basel-Blauen**	**15.62**	**321**	*eP*	**Pn**	**06 00 58.3 +3.0**
BBS	**Basel-Blauen**	**15.62**	**321**	*eP*	**Pn**	**06 00 58.3 +3.0**
SOC	**Sochi**	**15.65**	**56**	*eP*	**Pn**	**06 00 55.8 +0.1**
SOC				*e*		06 03 50.9
SOC				pmax	pmax	
	comp=Z,13nm,0.6s					
FELD	**Feldberg im Sc**	**15.66**	**323**	*eP*	**Pn**	**06 00 56.2 +0.4**
GRA1	**Grafenberg Arr**	**15.70**	**334**	*eP*	**Pn**	**06 00 54.9 -1.4**
GRA1				*eS*	**Sn**	**06 03 35.8 -14**
GRA1	**Grafenberg Arr**	**15.70**	**334**	*eP*	**Pn**	**06 00 54.9 -1.4**
GRA1				*eS*	**Sn**	**06 03 35.8 -14**
GRF	**Grafenberg Arr**	**15.70**	**334**	*eP*	**Pn**	**06 00 54.9 -1.4**
GRF				*eS*	**Sn**	**06 03 35.8 -14**
GRF				*eL*		06 08 25.4
	comp=Z,6μm,20.3s					
GRF	**Grafenberg Arr**	**15.70**	**334**	*eP*	**Pn**	**06 00 54.9 -1.4**
GRF				*eS*	**Sn**	**06 03 35.8 -14**
GRF	**Grafenberg Arr**	**15.70**	**334**	*eP*	**Pn**	**06 00 54.9 -1.4**
GRF				*eS*	**Sn**	**06 03 35.8 -14**
NKC	**Novy Kostel**	**15.75**	**337**	AMS	AMS	06 07 50.0
	comp=Z,7μm,11.5s					
VIVF	**Saint-Julien-l**	**15.75**	**309**	*eP*	**Pn**	**06 01 00.1 +3.1**
	comp=Z,63nm,1.4s					
VIVF	**Saint-Julien-l**	**15.75**	**309**	*eP*	**Pn**	**06 01 00.1 +3.1**
VIVF				pmax	pmax	
	comp=Z,32nm,1.4s					
VIVF	**Saint-Julien-l**	**15.75**	**309**	*eP*	**Pn**	**06 01 00.1 +3.1**
	comp=Z,32nm,1.4s					
VIVF	**Saint-Julien-l**	**15.75**	**309**	*eP*	**Pn**	**06 01 00.1 +3.1**
	comp=Z,32nm,1.4s					
STU	**Stuttgart**	**15.77**	**328**	*eP*	**Pn**	**06 00 56.8 -0.4**
STU				*eS*	**Sn**	**06 03 38.3 -14**
BFO	**Black Forest**	**15.83**	**325**	*eP*	**Pn**	**06 01 00.0 +2.0**
BFO				*eS*	**Sn**	**06 03 38.4 -15**
BFO	**Black Forest**	**15.83**	**325**	*eP*	**Pn**	**06 01 00.0 +2.0**
CABF	**La Chapelle**	**15.84**	**317**	*eP*	**Pn**	**06 00 56.5 -1.7**
	comp=Z,34nm,0.9s					
CABF	**La Chapelle**	**15.84**	**317**	*eP*	**Pn**	**06 00 56.5 -1.7**
CABF				pmax	pmax	
	comp=Z,17nm,0.9s					
CABF	**La Chapelle**	**15.84**	**317**	*eP*	**Pn**	**06 00 56.5 -1.7**
	comp=Z,17nm,0.9s					
BRG	**Berggiesshubel**	**15.89**	**341**	*eP*	**Pn**	**06 00 57.6 -1.2**
BRG	**Berggiesshubel**	**15.89**	**341**	*eP*	**Pn**	**06 00 58.6 -0.1**
	comp=Z,7.5nm,1.0s					
BRG				*i*		06 01 10.4
	comp=Z,21nm,1.2s					
BRG				*i*		06 01 25.0
	comp=Z,30nm,1.4s					
BRG				S	**Sn**	**06 03 59.0 +4.1**
BRG						
	comp=N,3μm,11.9s					
BRG						
	comp=E,2μm,11.7s					
BRG						
	comp=Z,6μm,10.6s					
BRG	**Berggiesshubel**	**15.89**	**341**	*eP*	**Pn**	**06 00 58.6 -0.2**
BRG				S	**Sn**	**06 03 59.0 +4.1**
BRG				pmax	pmax	
	comp=Z,5.0nm,1.0s					
BRG				MLR	MLR	
	comp=N,2μm,11.9s					
BRG				MLR	MLR	
	comp=E,1μm,11.7s					
BRG				MLR	MLR	
	comp=Z,3μm,10.6s					
LOMF	**Lomont**	**15.90**	**320**	*eP*	**Pn**	**06 00 59.0 +0.1**
TANN	**Tannenbergstha**	**15.90**	**338**	*eP*	**Pn**	**06 00 58.8 -0.1**
LASF	**Ste Croix**	**15.93**	**306**	*eP*	**Pn**	**06 01 00.3 +1.0**
	comp=Z,34nm,1.1s					
EJON	**La Jonquera**	**16.01**	**299**	P	**Pn**	**06 01 00.2 -0.2**
SSB	**Saint Sauveur**	**16.03**	**310**	*eP*	**Pn**	**06 01 01.4 +0.8**
SSB				pmax	pmax	
	comp=Z,55nm,1.8s					
SSB	**Saint Sauveur**	**16.03**	**310**	*eP*	**Pn**	**06 01 01.4 +0.7**
	comp=Z,55nm,1.8s					
SSB	**Saint Sauveur**	**16.03**	**310**	*eP*	**Pn**	**06 01 01.4 +0.8**
	comp=Z,55nm,1.8s					
MOF	**Molkenrain**	**16.07**	**322**	*eP*	**Pn**	**06 01 02.9 +1.8**
MOF	**Molkenrain**	**16.07**	**322**	*eP*	**Pn**	**06 01 02.9 +1.8**
CFON	**Fontmartina**	**16.15**	**297**	P	**Pn**	**06 01 01.9 -0.3**
HINF	**Hinteralfeld**	**16.19**	**321**	*eP*	**Pn**	**06 01 02.8 +0.1**
	comp=Z,34nm,0.9s					
HINF	**Hinteralfeld**	**16.19**	**321**	*eP*	**Pn**	**06 01 02.8 +0.1**
HINF				pmax	pmax	
	comp=Z,17nm,0.9s					
HINF	**Hinteralfeld**	**16.19**	**321**	*eP*	**Pn**	**06 01 02.8 +0.1**
	comp=Z,17nm,0.9s					
WAR	**Warsaw**	**16.22**	**358**	*eP*	**Pn**	**06 01 06.4 +3.5**
WAR				*eS*	**Sn**	**06 04 13.8 +11**
WAR	**Warsaw**	**16.22**	**358**	*eP*	**Pn**	**06 01 06.4 +3.4**
ECH	**Echery**	**16.30**	**323**	*eP*	**Pn**	**06 01 04.2 +0.1**
ECH	**Echery**	**16.30**	**323**	*eP*	**Pn**	**06 01 03.6 -0.5**
ECH				pmax	pmax	
	comp=Z,25nm,1.0s					
ECH	**Echery**	**16.30**	**323**	*eP*	**Pn**	**06 01 03.6 -0.5**
	comp=Z,26nm,1.0s					
MOX	**Moxa**	**16.37**	**336**	*eP*	**Pn**	**06 01 03.9 -1.0**
MOX				*eS*	**Sn**	**06 03 55.5 -11**
MOX						
	comp=Z,4μm,17.0s					
MOX	**Moxa**	**16.37**	**336**	*eP*	**Pn**	**06 01 03.8 -1.1**
MOX				*eS*	**Sn**	**06 03 55.5 -11**
MOX	**Moxa**	**16.37**	**336**	*eP*	**Pn**	**06 01 03.9 -1.0**
MOX				*eS*	**Sn**	**06 03 55.5 -11**
MOX				MLR	MLR	
	comp=Z,4μm,17.0s					
MOX	**Moxa**	**16.37**	**336**	*eP*	**Pn**	**06 01 03.9 -1.0**
MOX				*eS*	**Sn**	**06 03 55.5 -11**
MOX	**Moxa**	**16.37**	**336**	*eP*	**Pn**	**06 01 03.9 -1.0**
MOX				*eS*	**Sn**	**06 03 55.5 -11**
CDF	**Champ du Feu**	**16.38**	**324**	*eP*	**Pn**	**06 01 04.2 -0.9**
	comp=Z,50nm,0.8s					
CDF	**Champ du Feu**	**16.38**	**324**	*eP*	**Pn**	**06 01 04.2 -0.9**
CDF				pmax	pmax	
	comp=Z,25nm,0.8s					
CDF	**Champ du Feu**	**16.38**	**324**	*eP*	**Pn**	**06 01 04.2 -0.9**
	comp=Z,25nm,0.8s					
CLL	**Collm**	**16.54**	**340**	*eP*	**Pn**	**06 01 06.4 -0.7**
CLL	**Collm**	**16.54**	**340**	*eP*	**Pn**	**06 01 05.0 -2.1**
CLL				*eS*	**Sn**	**06 04 11.0 +0.5**
CLL				MLR	MLR	
	comp=Z,3μm,18.8s					
CLL	**Collm**	**16.54**	**340**	*eP*	**Pn**	**06 01 05.0 -2.1**
CLL				*e*		06 01 11.0
CLL				*i*		06 01 19.2
CLL				*eS*	**Sn**	**06 04 11.0 +0.5**
CLL	**Collm**	**16.54**	**340**	*eP*	**Pn**	**06 01 05.0 -2.1**
CLL				*ep*P	pP	06 01 11.0 -1.4
	comp=Z,28nm,1.4s					
CLL				*i* PP		06 01 19.2
CLL				*i* sPP		06 01 23.1
CLL				*i* sPPP		06 01 28.8
CLL				*eS*	**Sn**	**06 04 11.0 +0.5**
CLL				*e*SS		06 04 30.0
CLL				*e*		06 04 47.0
CLL				LmV		06 08 06.0
	comp=Z,3μm,18.8s					
CLL				*e*Lmax		06 08 12.0
CLL	**Collm**	**16.54**	**340**	*eP*	**Pn**	**06 01 05.0 -2.1**
LANF	**Langenberg**	**16.54**	**326**	*eP*	**Pn**	**06 01 10.7 +3.6**
LANF	**Langenberg**	**16.54**	**326**	*eP*	**Pn**	**06 01 10.7 +3.6**
EIBI	**Ibiza**	**16.54**	**287**	P	**Pn**	**06 01 09.1 +2.0**
	comp=Z,329nm,3.4s					
EIBI	**Ibiza**	**16.54**	**287**	P	**Pn**	**06 01 09.1 +1.9**
	comp=Z,329nm,3.4s					
TOD	**Tromm**	**16.57**	**329**	*eP*	**Pn**	**06 01 06.6 -0.9**
HAU	**Haudompre**	**16.57**	**321**	*eP*	**Pn**	**06 01 06.8 -0.7**
	comp=Z,68nm,0.9s					
HAU				*e*MLR	MLR	
	comp=Z,3μm,19.5s					
HAU	**Haudompre**	**16.57**	**321**	*eP*	**Pn**	**06 01 06.8 -0.7**
HAU				pmax	pmax	
	comp=Z,34nm,0.9s					
HAU	**Haudompre**	**16.57**	**321**	*eP*	**Pn**	**06 01 06.8 -0.7**
	comp=Z,34nm,0.9s					
VALF	**Valcebollere**	**16.62**	**299**	*eP*	**Pn**	**06 01 12.0 +3.8**
VALF	**Valcebollere**	**16.62**	**299**	*eP*	**Pn**	**06 01 12.0 +3.8**
KTD	**Kalmit**	**16.66**	**327**	*eP*	**Pn**	**06 01 11.3 +2.7**
KTD	**Kalmit**	**16.66**	**327**	*eP*	**Pn**	**06 01 11.3 +2.7**
CLLI	**Llivia**	**16.67**	**299**	P	**Pn**	**06 01 09.6 +0.7**
CLLI	**Llivia**	**16.67**	**299**	P	**Pn**	**06 01 09.6 +0.8**
MTLF	**Montolieu**	**16.76**	**302**	*eP*	**Pn**	**06 01 09.7 -0.3**
LBL	**Lubilhac**	**16.82**	**309**	*eP*	**Pn**	**06 01 14.6 +3.9**
LBL	**Lubilhac**	**16.82**	**309**	*eP*	**Pn**	**06 01 14.6 +3.9**
EPOB	**Poblet**	**17.05**	**294**	P	**Pn**	**06 01 10.6 -3.0**
UBBA	**Unterbreizbach**	**17.07**	**334**	*eP*	**Pn**	**06 01 15.4 +1.6**
SMF	**Signal de Mont**	**17.14**	**314**	*eP*	**Pn**	**06 01 13.0 -1.8**
	comp=Z,21nm,0.8s					
SMF	**Signal de Mont**	**17.14**	**314**	*eP*	**Pn**	**06 01 13.0 -1.8**
SMF				pmax	pmax	
	comp=Z,11nm,0.8s					
SMF	**Signal de Mont**	**17.14**	**314**	*eP*	**Pn**	**06 01 13.0 -1.8**
	comp=Z,11nm,0.8s					
TNS	**Taunus Mts**	**17.19**	**330**	*eP*	**Pn**	**06 01 16.3 +1.0**
TNS				*eS*	**Sn**	**06 04 13.7 -13**
TNS	**Taunus Mts**	**17.19**	**330**	*eP*	**Pn**	**06 01 16.3 +1.0**
PYM	**Petit Puy Mans**	**17.20**	**310**	*eP*	**Pn**	**06 01 16.0 +0.5**
PYM	**Petit Puy Mans**	**17.20**	**310**	*eP*	**Pn**	**06 01 16.0 +0.5**
CSOR	**Sort**	**17.24**	**298**	P	**Pn**	**06 01 17.9 +1.9**
	comp=Z,294nm,3.5s					
CSOR	**Sort**	**17.24**	**298**	P	**Pn**	**06 01 17.9 +1.9**
	comp=Z,294nm,3.5s					
SALF	**Salau**	**17.30**	**299**	*eP*	**Pn**	**06 01 21.6 +4.8**
RUE	**Ruedersdorf**	**17.41**	**343**	*eP*	**Pn**	**06 01 12.3 -5.8**
	comp=Z,34nm,0.8s					
RUE	**Ruedersdorf**	**17.41**	**343**	*eP*	**Pn**	**06 01 12.3 -5.7**
	comp=Z,34nm,0.8s					
CAF	**Calviac**	**17.44**	**307**	*eP*	**Pn**	**06 01 19.4 +0.9**
	comp=Z,52nm,1.3s					
CAF	**Calviac**	**17.44**	**307**	*eP*	**Pn**	**06 01 19.4 +0.9**
CAF				pmax	pmax	
	comp=Z,26nm,1.3s					
CAF	**Calviac**	**17.44**	**307**	*eP*	**Pn**	**06 01 19.4 +0.9**
	comp=Z,26nm,1.3s					
CAF	**Calviac**	**17.44**	**307**	*eP*	**Pn**	**06 01 19.4 +0.9**
	comp=Z,26nm,1.3s					
LOR	**Lormes**	**17.47**	**316**	*eP*	**Pn**	**06 01 16.0 -2.8**
	comp=Z,32nm,1.0s					
LOR				*e*MLR	MLR	
	comp=Z,3μm,17.2s					
LOR	**Lormes**	**17.47**	**316**	*eP*	**Pn**	**06 01 16.0 -2.8**
LOR				pmax	pmax	
	comp=Z,16nm,1.0s					
LOR	**Lormes**	**17.47**	**316**	*eP*	**Pn**	**06 01 16.0 -2.8**
	comp=Z,16nm,1.0s					
AVF	**Avril sur Loir**	**17.51**	**314**	*eP*	**Pn**	**06 01 17.9 -1.4**
	comp=Z,15nm,0.8s					
AVF	**Avril sur Loir**	**17.51**	**314**	*eP*	**Pn**	**06 01 17.9 -1.4**
AVF				pmax	pmax	
	comp=Z,7.0nm,0.8s					
AVF	**Avril sur Loir**	**17.51**	**314**	*eP*	**Pn**	**06 01 17.9 -1.4**
	comp=Z,7.4nm,0.8s					
ERTA	**Horta de San J**	**17.53**	**293**	P	**Pn**	**06 01 21.5 +1.8**
	comp=Z,94nm,3.1s					
ERTA	**Horta de San J**	**17.53**	**293**	P	**Pn**	**06 01 21.5 +1.8**
	comp=Z,94nm,3.1s					
MEZF	**Maizieres J'vi**	**17.55**	**320**	*eP*	**Pn**	**06 01 20.4 +0.6**
	comp=Z,86nm,1.0s					
MEZF	**Maizieres J'vi**	**17.55**	**320**	*eP*	**Pn**	**06 01 20.4 +0.6**
	comp=Z,86nm,1.0s					

SUW	Suwalki	18.00	3	eP		Pn	06 01 24.4 -1.0
	comp=Z,199nm,0.7s						
SUW	Suwalki	18.00	3	eP		Pn	06 01 24.4 -1.0
	comp=Z,199nm,0.7s						
EBIE	Bielsa	18.03	298	P		Pn	06 01 26.7 +0.9
	comp=Z,531nm,3.5s						
EBIE	Bielsa	18.03	298	P		Pn	06 01 26.7 +0.9
	comp=Z,531nm,3.5s						
EMOS	Mosqueruela	18.06	291	P		Pn	06 01 28.1 +1.9
	comp=Z,732nm,5.6s						
EMOS	Mosqueruela	18.06	291	P		Pn	06 01 28.1 +1.9
	comp=Z,732nm,5.6s						
VIEF	Viey	18.16	299	eP		Pn	06 01 31.4 +4.0
ESAC	San Caprasio	18.26	295	P		Pn	06 01 29.4 +0.8
	comp=Z,266nm,2.8s						
ESAC	San Caprasio	18.26	295	P		Pn	06 01 29.4 +0.7
	comp=Z,266nm,2.8s						
ZEI	Tsey	18.29	62	eP		Pn	06 01 29.0 0.0
ZEI				eS		Sn	06 04 53.1 -0.1
ZEI				pmax		pmax	
	comp=Z,42nm,1.0s						
ZEI	Tsey	18.29	62	eP		Pn	06 01 29.0 0.0
	comp=Z,42nm,1.0s						
LFF	La Frestale	18.32	306	eP		Pn	06 01 30.0 +0.7
	comp=Z,62nm,1.2s						
LFF	La Frestale	18.32	306	eP		Pn	06 01 30.0 +0.7
LFF				pmax		pmax	
	comp=Z,31nm,1.2s						
LFF	La Frestale	18.32	306	eP		Pn	06 01 30.0 +0.7
	comp=Z,31nm,1.2s						
LFF	La Frestale	18.32	306	eP		Pn	06 01 30.0 +0.7
	comp=Z,31nm,1.2s						
CART	Cartagena	18.36	282	i P		Pn	06 01 30.5 +0.6
ECHE	Chera	18.37	288	P		Pn	06 01 31.6 +1.7
ECHE				pmax		pmax	
	comp=Z,39nm,1.2s						
ECHE	Chera	18.37	288	P		Pn	06 01 31.6 +1.7
	comp=Z,39nm,1.2s						
ECHE	Chera	18.37	288	P		Pn	06 01 31.6 +1.7
	comp=Z,39nm,1.2s						
GOF	Gofitskoye	18.41	54⇓	iP		Px	06 01 44.3
GOF				pmax		pmax	
	comp=Z,70nm,0.9s						
NRDL	Niedersach Rie	18.44	337	eP		Pn	06 01 31.6 +0.9
GNI	Garni	18.47	70	Pn		Pn	06 01 29.0 -2.2
	comp=Z,2.3nm,0.3s,baz=306,slow=4.0,SNR=19						
GNI				LR		LR	06 10 13.2
	comp=Z,2μm,18.7s,baz=94,slow=43						
GNI	Garni	18.47	70	ceP		Pn	06 01 30.1 -1.1
GNI				pmax		pmax	
	comp=Z,169nm,1.7s						
GNI	Garni	18.47	70	eP		Pn	06 01 32.0 +0.8
	comp=Z,74nm,0.9s						
GNI				LR		LR	06 10 13.2
GNI	Garni	18.47	70	P		Pn	06 01 31.6 +0.5
	SNR=32						
GNI				P			06 01 31.6
	SNR=32						
GNI	Garni	18.47	70	eP		Pn	06 01 32.0 +0.8
	comp=Z,74nm,0.9s						
REYF	Montagne du Re	18.51	299	eP		Pn	06 01 32.5 +0.9
REYF	Montagne du Re	18.51	299	eP		Pn	06 01 32.5 +0.9
MEM	Membach	18.52	327	P		Pn	06 01 31.5 -0.2
MEM				AP		pP	06 01 38.5 +4.2
ETSF	Etsaut	18.58	298	eP		Pn	06 01 36.3 +3.8
	comp=Z,11nm,0.4s						
BUG	Bochum--Univer	18.61	330	eP		Pn	06 01 33.7 +1.0
HGN	Heimansgroeve	18.66	327⇓	eP		Pn	06 01 35.3 +1.9
	comp=Z,63nm,3.9s						
BCLA	Clavier	18.70	325	P		Pn	06 01 34.5 +0.6
GIVF	Givet	18.71	324	eP		Pn	06 01 34.9 +0.9
	comp=Z,146nm,1.2s						
GIVF	Givet	18.71	324	eP		Pn	06 01 34.9 +0.9
GIVF				pmax		pmax	
	comp=Z,73nm,1.2s						
GIVF	Givet	18.71	324	eP		Pn	06 01 34.9 +0.9
	comp=Z,73nm,1.2s						
GIVF	Givet	18.71	324	eP		Pn	06 01 34.9 +0.9
	comp=Z,73nm,1.2s						
MTA	Mtatsminda	18.72	65	P		Pn	06 01 27.5 -6.7
ATE	Arette	18.73	299	eP		Pn	06 01 35.4 +1.1
ATE	Arette	18.73	299	eP		Pn	06 01 35.4 +1.1
ETOB	Tobarra	18.78	285	P		Pn	06 01 35.2 +0.2
	comp=Z,391nm,4.4s						
ETOB	Tobarra	18.78	285	P		Pn	06 01 35.2 +0.2
	comp=Z,391nm,4.4s						
BEBN	Eben Emael	18.80	327	P		Pn	06 01 36.6 +1.5
DOU	Dourbes	18.82	324	P		Pn	06 01 35.5 +0.2
MNK	Minsk	18.93	11	eP		Pn	06 01 31.0 -5.6
MNK				eS		Sn	06 04 52.0 -16
MNK				MLR		MLR	
	comp=N,8μm,12.0s						
MNK				MLR		MLR	
	comp=Z,8μm,12.0s						
MNK				MLR		MLR	
	comp=E,5μm,8.0s						
MICGM	Minsk	18.94	11⇓	eP		Pn	06 01 31.0 -5.7
BAIF	Baives	18.98	323	eP		Pn	06 01 36.8 -0.5
	comp=E,52nm,1.1s						
BAIF	Baives	18.98	323	eP		Pn	06 01 36.8 -0.5
BAIF				pmax		pmax	
	comp=Z,26nm,1.1s						
BAIF	Baives	18.98	323	eP		Pn	06 01 36.8 -0.5
	comp=Z,26nm,1.1s						
BAIF	Baives	18.98	323	eP		Pn	06 01 36.8 -0.5
	comp=Z,26nm,1.1s						
IBBN	Ibbenburen	19.10	333	eP		Pn	06 01 39.8 +1.1
DGRG	David-gareji	19.11	66	P		Pn	06 01 37.2 -1.7
SJPF	Ste Jean	19.11	299	eP		Pn	06 01 40.0 +1.1
	comp=Z,60nm,0.9s						
SJPF	Ste Jean	19.11	299	eP		Pn	06 01 40.0 +1.1
SJPF				pmax		pmax	
	comp=Z,30nm,0.9s						
SJPF	Ste Jean	19.11	299	eP		Pn	06 01 40.0 +1.1
	comp=Z,30nm,0.9s						
SJPF	Ste Jean	19.11	299	eP		Pn	06 01 40.0 +1.1
	comp=Z,30nm,0.9s						
NACGM	Naroch	19.17	9	eP		Pn	06 01 34.0 -5.6
WTSB	Winterswijk	19.20	331⇑	iP		Pn	06 01 41.2 +1.3
	comp=Z,62nm,2.2s						
SNF	Seneffe	19.24	324	P		Pn	06 01 40.0 -0.4
ETOR	Torete	19.31	292	P		Pn	06 01 42.8 +1.5
ETOR				pmax		pmax	
	comp=Z,14nm,1.1s						
ETOR	Torete	19.31	292	P		Pn	06 01 42.8 +1.5
	comp=Z,14nm,1.1s						
ETOR	Torete	19.31	292	P		Pn	06 01 42.8 +1.5
	comp=Z,14nm,1.1s						
EALK	Alkurruntz	19.33	299	P		Pn	06 01 41.2 -0.4
	comp=Z,574nm,3.3s						
EALK	Alkurruntz	19.33	299	P		Pn	06 01 41.2 -0.4
	comp=Z,574nm,3.3s						
ELIZ	Elizondo	19.34	299	P		Pn	06 01 42.1 +0.5
ELIZ				pmax		pmax	
	comp=Z,44nm,0.9s						
ELIZ	Elizondo	19.34	299	P		Pn	06 01 42.1 +0.4
	comp=Z,44nm,0.9s						
ELIZ	Elizondo	19.34	299	P		Pn	06 01 42.1 +0.5
	comp=Z,44nm,0.9s						
ENIJ	Nijar	19.36	280	P		Pn	06 01 40.2 -1.7
ENIJ				pmax		pmax	
	comp=Z,32nm,0.9s						
ENIJ	Nijar	19.36	280	P		Pn	06 01 40.2 -1.7
	comp=Z,32nm,0.9s						
ENIJ	Nijar	19.36	280	P		Pn	06 01 40.2 -1.7
	comp=Z,32nm,0.9s						
TAM	Tamanrasset	19.36	231	eP		Pn	06 01 44.8 +2.7
TAM				pmax		pmax	
	comp=Z,13nm,0.9s						
TAM	Tamanrasset	19.36	231	eP		Pn	06 01 44.8 +2.7
	comp=Z,13nm,0.9s						
TAM	Tamanrasset	19.36	231	eP		Pn	06 01 44.8 +2.7
	comp=Z,13nm,0.9s						
VORD	Divnogorie	19.49	35	eP		Pn	06 01 42.4 -1.1
VORD				pmax		pmax	
	comp=N,40nm,0.8s						
VORD				pmax		pmax	
	comp=E,60nm,0.8s						
VORD				pmax		pmax	
	comp=Z,30nm,0.8s						
VORD				MLR		MLR	
	comp=N,720nm,15.0s						
VORD				MLR		MLR	
	comp=E,2μm,15.0s						
VORD				MLR		MLR	
	comp=Z,2μm,15.0s						
VORD	Divnogorie	19.49	35	eP		Pn	06 01 42.4 -1.1
EVIA	Vianos	19.53	285	P		Pn	06 01 44.7 +0.7
EVIA				pmax		pmax	
	comp=Z,20nm,0.7s						
EVIA	Vianos	19.53	285	P		Pn	06 01 44.7 +0.8
	comp=Z,20nm,0.7s						
EVIA	Vianos	19.53	285	P		Pn	06 01 44.7 +0.7
	comp=Z,20nm,0.7s						
MFF	Saint Martin d	19.55	309	eP		Pn	06 01 44.0 -0.1
	comp=Z,30nm,0.8s						
MFF	Saint Martin d	19.55	309	eP		Pn	06 01 44.0 -0.1
MFF				pmax		pmax	
	comp=Z,15nm,0.8s						
MFF	Saint Martin d	19.55	309	eP		Pn	06 01 44.0 -0.1
	comp=Z,15nm,0.8s						
MFF	Saint Martin d	19.55	309	eP		Pn	06 01 44.0 -0.1
	comp=Z,15nm,0.8s						
VSR	Storozhevoye	19.61	34	eP		Pn	06 01 43.5 -1.3
VSR				eS		Sn	06 05 15.0 -10
VSR				pmax		pmax	
	comp=E,10.0nm,0.3s						
VSR				pmax		pmax	
	comp=Z,10.0nm,0.3s						
VSR				pmax		pmax	
	comp=N,10.0nm,0.2s						
VSR				smax			
	comp=N,560nm,3.6s						
VSR				smax			
	comp=E,370nm,3.6s						
VSR				smax			
	comp=Z,100nm,1.8s						
VSR				MLR		MLR	
	comp=N,1μm,14.0s						
VSR				MLR		MLR	
	comp=E,2μm,14.0s						
VSR				MLR		MLR	
	comp=Z,3μm,14.0s						
VSR	Storozhevoye	19.61	34	eP		Pn	06 01 43.5 -1.3
	comp=Z,10.0nm,0.2s						
EHUE	Huescar	19.61	282	P		Pn	06 01 46.1 +1.1
EHUE				pmax		pmax	
	comp=Z,20nm,1.1s						
EHUE	Huescar	19.61	282	P		Pn	06 01 46.1 +1.1
	comp=Z,20nm,1.1s						
EHUE	Huescar	19.61	282	P		Pn	06 01 46.1 +1.1
	comp=Z,20nm,1.1s						
BSEG	Bad Segeberg	19.63	339	eP		Pn	06 01 44.3 -0.7
BSEG	Bad Segeberg	19.63	339	eP		Pn	06 01 44.3 -0.7
BSD	Bornholm Skovb	19.67	348	i P		Pn	06 01 41.8 -3.7
BSD				i S		Sn	06 05 17.5 -8.8
BSD				pmax		pmax	
	comp=Z,35nm,1.1s						
BSD				MLR		MLR	
	comp=Z,960nm,19.0s						
BSD	Bornholm Skovb	19.67	348	i P		Pn	06 01 41.8 -3.7
	comp=Z,35nm,1.1s						
BSD				i S		Sn	06 05 17.5 -8.8
BSD							
	comp=Z,960nm,19.0s						
EBER	Berja	19.91	280	P		Pn	06 01 48.3 -0.2
	comp=Z,400nm,3.2s						
EBER	Berja	19.91	280	P		Pn	06 01 48.3 -0.2
	comp=Z,400nm,3.2s						
VOR	Voronezh	19.98	33	eP		Pn	06 01 45.0 -4.3
VOR				pmax		pmax	
	comp=Z,160nm,1.6s						
EQES	Quesada	19.99	283	P		Pn	06 01 48.9 -0.7
	comp=Z,136nm,2.0s						
EQES	Quesada	19.99	283	P		Pn	06 01 48.9 -0.6
	comp=Z,136nm,2.0s						
EALB	Alboran	20.13	277	P		P	06 01 52.0 +2.7
	comp=Z,682nm,3.1s						
EALB	Alboran	20.13	277	P		P	06 01 52.0 +2.7
	comp=Z,682nm,3.1s						
MELI	Melilla	20.14	275	i P		P	06 01 51.4 +1.9
ECOG	Cogollos-Vega	20.42	281	P		P	06 01 52.2 -0.2
ECOG				pmax		pmax	
	comp=Z,16nm,1.0s						
ECOG	Cogollos-Vega	20.42	281	P		P	06 01 52.2 -0.3
	comp=Z,16nm,1.0s						
ECOG	Cogollos-Vega	20.42	281	P		P	06 01 52.2 -0.2
	comp=Z,16nm,1.0s						
LDF	La Druitiere	20.45	315	eP		P	06 01 52.3 -0.3
	comp=Z,49nm,0.8s						
LDF	La Druitiere	20.45	315	eP		P	06 01 52.3 -0.3
LDF				pmax		pmax	
	comp=Z,24nm,0.8s						
LDF	La Druitiere	20.45	315	eP		P	06 01 52.3 -0.3
	comp=Z,24nm,0.8s						
LDF	La Druitiere	20.45	315	eP		P	06 01 52.3 -0.3
	comp=Z,24nm,0.8s						
EGUA	Guajares	20.45	280	P		P	06 01 54.4 +1.6
EGUA				pmax		pmax	
	comp=Z,236nm,0.9s						
EGUA	Guajares	20.45	280	P		P	06 01 54.4 +1.6
	comp=Z,236nm,0.9s						
EGUA	Guajares	20.45	280	P		P	06 01 54.4 +1.6
	comp=Z,236nm,0.9s						
EBAN	Banos Encina	20.54	284	P		P	06 01 55.0 +1.2
EBAN				pmax		pmax	
	comp=Z,15nm,0.7s						
EBAN	Banos Encina	20.54	284	P		P	06 01 55.0 +1.2
	comp=Z,15nm,0.7s						
EBAN	Banos Encina	20.54	284	P		P	06 01 55.0 +1.2
	comp=Z,15nm,0.7s						
ERON	Agron	20.63	280	P		P	06 01 54.5 -0.2
	comp=Z,12nm,0.7s						
ERON	Agron	20.63	280	P		P	06 01 54.5 -0.2
	comp=Z,12nm,0.7s						
ESBB	Sonseca Array	20.68	288	P		P	06 01 57.0 +1.7
	comp=Z,167nm,2.5s						
ESBB	Sonseca Array	20.68	288	P		P	06 01 57.0 +1.8
	comp=Z,167nm,2.5s						
ESDC	Sonseca Array	20.68	288	P		P	06 01 55.8 +0.5
	comp=Z,3.8nm,0.6s,baz=84,slow=11,SNR=18						
ESDC	Sonseca Array	20.68	288	P		P	06 01 55.6 +0.3
	comp=Z,41nm,2.6s						
ESDC	Sonseca Array	20.68	288	P		P	06 01 55.6 +0.3
	comp=Z,41nm,2.6s						
ESLA	Sonseca Array	20.68	288	eP		P	06 01 56.4 +1.2
ESLA	Sonseca Array	20.68	288	eP		P	06 01 56.4 +1.1
VRHR	Novokhopersk	20.69	37	eP		P	06 01 56.5 +1.3
VRHR				eS		S	06 05 38.9 -7.2
VRHR				pmax		pmax	
	comp=Z,100nm,0.9s						
VRHR				pmax		pmax	
	comp=N,20nm,0.4s						
VRHR				pmax		pmax	
	comp=E,20nm,0.4s						
VRHR				smax			
	comp=N,790nm,2.2s						
VRHR				smax			
	comp=E,290nm,1.1s						
VRHR				smax			
	comp=Z,50nm,1.1s						
VRHR				MLR		MLR	
	comp=N,1μm,13.0s,MS4.6						
VRHR				MLR		MLR	
	comp=E,1μm,13.0s,MS4.6						
VRHR				MLR		MLR	
	comp=Z,750nm,13.0s,MS4.2						
VRHR	Novokhopersk	20.69	37	eP		P	06 01 56.5 +1.3
	comp=Z,100nm,0.9s						
ELAN	Lanestosa	20.71	298	P		P	06 01 58.1 +2.5
	comp=Z,204nm,1.8s						
ELAN	Lanestosa	20.71	298	P		P	06 01 58.1 +2.6
	comp=Z,204nm,1.8s						
FLN	La Foliniere	20.74	315	eP		P	06 01 55.3 -0.5
	comp=Z,65nm,0.7s						
FLN				eMLR		MLR	
	comp=Z,2μm,20.2s,MS4.2						
FLN	La Foliniere	20.74	315	eP		P	06 01 55.3 -0.5
FLN				pmax		pmax	
	comp=Z,33nm,0.7s						
FLN				MLR		MLR	
	comp=Z,2μm,20.3s,MS4.5						
FLN	La Foliniere	20.74	315	eP		P	06 01 55.3 -0.5
	comp=Z,32nm,0.7s						
FLN				LR		LR	
	comp=Z,2μm,20.3s,MS4.5						
FLN	La Foliniere	20.74	315	eP		P	06 01 55.3 -0.5
	comp=Z,32nm,0.7s						
GRR	Gorron	20.77	313	eP		P	06 01 57.1 +0.9
	comp=Z,26nm,0.8s						
GRR	Gorron	20.77	313	eP		P	06 01 57.1 +0.9
GRR				pmax		pmax	
	comp=Z,13nm,0.8s						
GRR	Gorron	20.77	313	eP		P	06 01 57.1 +0.9
	comp=Z,13nm,0.8s						
GRR	Gorron	20.77	313	eP		P	06 01 57.1 +0.9
	comp=Z,13nm,0.8s						
GUD	Guadarrama	20.88	291	P		P	06 01 57.8 +0.4
GUD				pmax		pmax	
	comp=Z,45nm,0.7s						
GUD	Guadarrama	20.88	291	P		P	06 01 57.8 +0.4
	comp=Z,45nm,0.7s						
GUD	Guadarrama	20.88	291	P		P	06 01 57.8 +0.4
	comp=Z,45nm,0.7s						
ELOJ	Sierra Loja	20.89	281	P		P	06 02 06.7 +9.1
ELOJ				pmax		pmax	
	comp=Z,21nm,1.0s						
ELOJ	Sierra Loja	20.89	281	P		P	06 02 06.7 +9.1
	comp=Z,21nm,1.0s						
ELOJ	Sierra Loja	20.89	281	P		P	06 02 06.7 +9.1
	comp=Z,21nm,1.0s						
MAK	Makhachkala	20.92	63	eP		P	06 01 57.4 -0.5
MAK				i			06 02 13.7
MAK				eS		S	06 05 49.6 -1.4
MAK				eSSS			06 06 28.0
MAK				pmax		pmax	
	comp=Z,273nm,1.0s						
MAK				MLR		MLR	
	comp=Z,1μm,14.0s,MS4.5						
MAK	Makhachkala	20.92	63	eP		P	06 01 57.4 -0.5
	comp=Z,273nm,1.0s						
ELUQ	Luque	20.95	282	P		P	06 01 59.2 +1.0
ELUQ				pmax		pmax	
	comp=Z,45nm,1.0s						
ELUQ	Luque	20.95	282	P		P	06 01 59.2 +1.0
	comp=Z,45nm,1.0s						
ELUQ	Luque	20.95	282	P		P	06 01 59.2 +1.0
	comp=Z,45nm,1.0s						
PAB	San Pablo	20.97	288	eP		P	06 01 59.2 +0.8
PAB				pmax		pmax	
	comp=Z,36nm,0.9s						
PAB	San Pablo	20.97	288	eP		P	06 01 59.2 +0.7
	comp=Z,36nm,0.9s						
PAB	San Pablo	20.97	288	eP		P	06 01 59.2 +0.8
	comp=Z,36nm,0.9s						
EADA	Adamuz	21.16	284	P		P	06 02 01.1 +0.6
	comp=Z,126nm,2.0s,mb4.9						
EADA	Adamuz	21.16	284	P		P	06 02 01.1 +0.6
	comp=Z,126nm,2.0s,mb4.9						
EMIJ	Mijas	21.45	279	P		P	06 02 05.1 +1.6
	comp=Z,73nm,1.4s,mb4.8						
EMIJ	Mijas	21.45	279	P		P	06 02 05.1 +1.6
	comp=Z,73nm,1.4s,mb4.8						
OBN	Obninsk	21.60	23⇑	iP		P	06 02 03.1 -1.9
OBN				i S		S	06 05 58.8 -5.3
OBN				i SS			06 06 27.8
OBN				pmax		pmax	
	comp=Z,83nm,1.0s,mb5.1						
OBN				MLR		MLR	
	comp=Z,900nm,18.0s,MS4.2						
OBN	Obninsk	21.60	23	eP		P	06 02 02.4 -2.6
	comp=Z,48nm,0.6s,mb5.1						
OBN	Obninsk	21.60	23	eP		P	06 02 02.4 -2.6
	comp=Z,48nm,0.6s,mb5.1						
SGMF	Saint Gilles	21.73	312	eP		P	06 02 04.9 -1.6
	comp=Z,68nm,1.2s,mb4.6						
SGMF	Saint Gilles	21.73	312	eP		P	06 02 04.9 -1.6
SGMF				pmax		pmax	
	comp=Z,34nm,1.2s,mb4.7						
SGMF	Saint Gilles	21.73	312	eP		P	06 02 04.9 -1.6
	comp=Z,34nm,1.2s,mb4.7						
SGMF	Saint Gilles	21.73	312	eP		P	06 02 04.9 -1.6
	comp=Z,34nm,1.2s,mb4.6						
ECAB	El Cabril	21.83	284	P		P	06 02 08.9 +1.2
	comp=Z,52nm,1.3s,mb4.8						
ECAB	El Cabril	21.83	284	P		P	06 02 08.9 +1.2
	comp=Z,52nm,1.3s,mb4.8						
QUIF	Quistinic	21.96	310	eP		P	06 02 09.5 +0.6
	comp=Z,46nm,0.8s,mb4.7						
QUIF	Quistinic	21.96	310	eP		P	06 02 09.5 +0.6
QUIF				pmax		pmax	
	comp=Z,23nm,0.8s,mb4.7						
QUIF	Quistinic	21.96	310	eP		P	06 02 09.5 +0.6
	comp=Z,23nm,0.8s,mb4.7						
QUIF	Quistinic	21.96	310	eP		P	06 02 09.5 +0.6
	comp=Z,23nm,0.8s,mb4.7						
EARI	Arriondas	22.00	298	P		P	06 02 11.1 +1.7
	comp=Z,92nm,1.9s,mb4.9						
EARI	Arriondas	22.00	298	P		P	06 02 11.1 +1.7
	comp=Z,92nm,1.9s,mb4.9						
EJIF	Jimena Fronter	22.02	279	P		P	06 02 11.2 +1.5
EJIF				pmax		pmax	
	comp=Z,68nm,1.2s,mb5.0						
EJIF	Jimena Fronter	22.02	279	P		P	06 02 11.2 +1.5
	comp=Z,68nm,1.2s,mb5.0						
EJIF	Jimena Fronter	22.02	279	P		P	06 02 11.2 +1.5
	comp=Z,68nm,1.2s,mb5.0						
MDT	Midelt	22.04	269	P		P	06 02 11.0 +1.0
	comp=Z,14nm,0.9s,mb4.4,baz=85,slow=12,SNR=32						
MDT				LR		LR	06 12 56.6
	comp=Z,974nm,18.5s,MS4.2,baz=85,slow=42						
MDT	Midelt	22.04	269	P		P	06 02 11.0 +1.0
MUD	Monsted U'grnd	22.16	341	eP		P	06 02 13.6 +2.6
MUD				pmax		pmax	
	comp=Z,30nm,0.9s,mb4.7						
MUD				MLR		MLR	
	comp=Z,1μm,18.0s,MS4.4						
MUD	Monsted U'grnd	22.16	341	i P		P	06 02 13.6 +2.6
	comp=Z,30nm,0.9s,mb4.7						
MUD							
	comp=Z,1μm,18.0s						
MUD	Monsted U'grnd	22.16	341	eP		P	06 02 13.6 +2.6
	comp=Z,1μm,18.0s						
ROSF	Rostrenen	22.20	311	eP		P	06 02 08.9 -2.6
	comp=Z,44nm,0.9s,mb4.6						
ROSF	Rostrenen	22.20	311	eP		P	06 02 08.9 -2.6
ROSF				pmax		pmax	
	comp=Z,22nm,0.9s,mb4.6						
ROSF	Rostrenen	22.20	311	eP		P	06 02 08.9 -2.6
	comp=Z,22nm,0.9s,mb4.6						
MIB	Mutribah	22.25	99	eP		P	06 02 11.1 -1.0
MIB				AMb		AMB	06 02 13.8
	comp=Z,312nm,1.2s,mb5.6						
MIB	Mutribah	22.25	99	eP		P	06 02 11.1 -1.1
	comp=Z,312nm,1.2s,mb5.6						
ESPR	Espera	22.28	280	P		P	06 02 12.7 +0.3
	comp=Z,405nm,2.9s,mb5.3						
ESPR	Espera	22.28	280	P		P	06 02 12.7 +0.3
	comp=Z,405nm,2.9s,mb5.3						
EPLA	Plasencia	22.32	289	P		P	06 02 13.6 +0.7
EPLA				pmax		pmax	
	comp=Z,29nm,0.8s,mb4.8						
EPLA	Plasencia	22.32	289	P		P	06 02 13.6 +0.7
	comp=Z,29nm,0.8s,mb4.8						
EPLA	Plasencia	22.32	289	P		P	06 02 13.6 +0.7
	comp=Z,29nm,0.8s,mb4.8						
NAY	Al-Naaiem	22.39	100	eP		P	06 02 12.6 -1.1
NAY				AMb		AMB	06 02 16.2
	comp=Z,171nm,1.2s,mb5.4						
NAY	Al-Naaiem	22.39	100	eP		P	06 02 12.6 -1.1
	comp=Z,171nm,1.2s,mb5.3						
MOS	Moscow	22.46	24	eP		P	06 02 12.3 -1.9
MOS				e*PP			06 02 22.4
MOS				eS		S	06 06 12.5 -8.3
MOS				e*SS		sS	06 06 28.1 +2.7
MOS				pmax		pmax	
	comp=Z,324nm,1.4s,mb5.6						
MOS				pmax		pmax	
	comp=Z,300nm,1.4s,mb5.5						
MOS				pmax		pmax	
	comp=E,116nm,1.1s						
MOS				smax			
	comp=E,400nm,2.3s						
MOS				smax			
	comp=N,500nm,2.3s						
MOS				MLR		MLR	
	comp=N,1μm,10.0s						
MOS				MLR		MLR	
	comp=Z,2μm,11.0s,MS4.8						
SFS	San Fernando	22.60	279	i P		P	06 02 17.3 +1.4
VSU	Vasula	22.67	7	eP		P	06 02 14.6 -1.8
VSU				pmax		pmax	
	comp=Z,67nm,1.0s,mb5.0						
RDF	Al-Radifah	22.77	101	eP		P	06 02 17.1 -0.7
RDF				AMb		AMB	06 02 18.4
	comp=Z,46nm,0.3s,mb5.3						
RDF	Al-Radif

EMIN	Mina Concepcio	22.84	283	P		P	06 02 19.3	+0.9
	comp=Z,61nm,1.3s,mb4.9							
PBRG	Braganca	22.92	293	*e*P		P	06 02 21.2	+2.0
	comp=Z,31nm,1.2s,mb4.6							
PBRG	Braganca	22.92	293	*e*P		P	06 02 21.2	+2.0
	comp=Z,31nm,1.2s,mb4.6							
ECAL	Calabor	22.93	294	P		P	06 02 18.7	-0.6
	comp=Z,61nm,1.2s,mb4.9							
ECAL	Calabor	22.93	294	P		P	06 02 18.7	-0.6
	comp=Z,61nm,1.2s,mb4.9							
EBAD	Badajoz	23.05	285	P		P	06 02 20.5	-0.1
	comp=Z,56nm,1.1s,mb4.9							
EBAD	Badajoz	23.05	285	P		P	06 02 20.5	-0.2
	comp=Z,56nm,1.1s,mb4.9							
MVO	Moncorvo	23.09	292	P		P	06 02 20.3	-0.7
MVO	Moncorvo	23.09	292	*e*P		P	06 02 20.9	-0.1
	comp=Z,43nm,1.3s,mb4.7							
MVO				*e*S		S	06 06 34.2	+2.2
MVO				*e*LR		LR	06 13 04.2	
	comp=Z,738nm,14.0s							
MVO	Moncorvo	23.09	292	*e*P		P	06 02 20.9	-0.1
	comp=Z,43nm,1.3s,mb4.7							
PBAR	Barrancos	23.10	284	*e*P		P	06 02 22.4	+1.2
	comp=Z,69nm,1.3s,mb4.9							
PBAR				*e*S		S	06 06 30.7	-1.6
PBAR				*e*LR		LR	06 15 26.0	
	comp=Z,672nm,16.0s							
QRN	Al-Qurain	23.14	101	*e*P		P	06 02 20.4	-1.2
QRN				AMb		AMB	06 02 23.3	
	comp=Z,184nm,1.2s,mb5.4							
ERUA	La Rua	23.28	295	P		P	06 02 24.1	+1.1
ERUA				pmax		pmax		
	comp=Z,5.0nm,1.0s,mb3.9							
ERUA	La Rua	23.28	295	P		P	06 02 24.1	+1.1
	comp=Z,4.6nm,1.0s,mb3.9							
ERUA	La Rua	23.28	295	P		P	06 02 24.1	+1.1
	comp=Z,4.6nm,1.0s,mb3.9							
PMRV	Marv??o	23.33	287	*e*P		P	06 02 23.0	-0.6
	comp=Z,39nm,1.6s,mb4.6							
PMRV				*e*S		S	06 06 34.2	-1.7
PMRV				*e*LR		LR	06 15 06.5	
	comp=Z,524nm,18.0s							
PCBR	Castelo Branco	23.39	288	*e*P		P	06 02 23.6	-0.6
	comp=Z,24nm,1.4s,mb4.4							
MTE	Manteigas	23.45	290	*e*P		P	06 02 23.1	-1.7
	comp=Z,15nm,0.8s,mb4.5							
MTE	Manteigas	23.45	290	*e*P		P	06 02 25.3	+0.5
	comp=Z,35nm,1.4s,mb4.6							
MTE				*e*S		S	06 06 40.3	+2.4
MTE				*e*LR		LR	06 13 37.0	
	comp=Z,928nm,18.0s							
MTE	Manteigas	23.45	290	*e*P		P	06 02 23.1	-1.7
	comp=Z,15nm,0.8s,mb4.5							
PESTR	Estremoz	23.50	286	*e*P		P	06 02 25.4	0.0
	comp=Z,45nm,1.5s,mb4.7							
PESTR				*e*S		S	06 06 40.7	+2.0
PESTR				*e*LR		LR	06 14 42.0	
	comp=Z,722nm,16.0s							
EGRO	El Granado	23.50	282	P		P	06 02 26.2	+0.8
	comp=Z,244nm,3.5s							
EGRO	El Granado	23.50	282	P		P	06 02 26.2	+0.8
	comp=Z,244nm,3.5s							
PVRL	Vila Real	23.61	292	*e*P		P	06 02 26.9	+0.5
	comp=Z,19nm,1.4s,mb4.3							
PVAQ	Vaqueiros	23.70	282	*e*P		P	06 02 28.1	+0.8
	comp=Z,47nm,1.6s,mb4.7							
PVAQ				*e*S		S	06 06 44.3	+2.3
PVAQ				*e*LR		LR	06 15 22.2	
	comp=Z,443nm,18.0s							
PVIS	Viseu	23.72	290	*e*P		P	06 02 27.5	+0.1
	comp=Z,25nm,1.1s,mb4.6							
PBEJ	Beja	23.76	284	*e*P		P	06 02 31.2	+3.4
	comp=Z,52nm,1.5s,mb4.7							
EVO	Evora	23.85	285⇑	*i*P		P	06 02 29.7	+1.1
	comp=Z,57nm,1.3s,mb4.5							
EVO				*e*MLR		MLR		
	comp=Z,706nm,18.0s,MS3.9							
EVO	Evora	23.85	285	*e*P		P	06 02 29.1	+0.5
	comp=Z,39nm,1.6s,mb4.6							
PCAB	Cabril	23.87	293	*e*P		P	06 02 29.4	+0.6
	comp=Z,34nm,1.3s,mb4.6							
PBDV	Barranco-do-Ve	23.89	282	*e*P		P	06 02 30.0	+1.0
	comp=Z,89nm,1.4s,mb5.0							
PBDV				*e*S		S	06 06 47.5	+2.5
PBDV				*e*LR		LR	06 15 53.1	
	comp=Z,432nm,18.0s							
ELOB	Lobios	23.91	293	P		P	06 02 29.9	+0.7
	comp=Z,236nm,3.0s							
ELOB	Lobios	23.91	293	P		P	06 02 29.9	+0.8
	comp=Z,236nm,3.0s							
EVOP	Sao Brissos	23.93	285	*e*P		P	06 02 29.6	+0.2
EVOP				AMb		AMB	06 02 43.6	
	comp=Z,35nm,1.3s,mb4.6							
EVOP				*e*S		S	06 06 45.3	-0.5
EVOP				*e*S		S	06 06 45.4	-0.3
EVOP	Sao Brissos	23.93	285	*e*P		P	06 02 29.6	+0.2
EVOP				*e*S		S	06 06 45.3	-0.4
PCVE	Castro Verde	23.93	283	*e*P		P	06 02 31.5	+2.1
	comp=Z,51nm,1.6s,mb4.7							
PCVE				*e*S		S	06 06 50.5	+4.7
PCVE				*e*LR		LR	06 15 26.4	
	comp=Z,450nm,20.0s							
PTOM	Tomar	24.11	288	*e*P		P	06 02 30.9	-0.1
	comp=Z,31nm,1.3s,mb4.6							
MORF	Marmelete	24.45	282	*e*P		P	06 02 34.4	+0.3
MORF				*e*S		S	06 06 54.1	0.0
MORF	Marmelete	24.45	282	*e*S		S	06 06 56.7	+2.6
MORF				*e*LR		LR	06 16 14.3	
	comp=Z,453nm,18.0s							
PFVI	Vila Bisbo	24.61	282	*e*P		P	06 02 37.4	+1.8
	comp=Z,93nm,1.4s,mb5.1							
PFVI				*e*S		S	06 06 59.4	+2.7
PFVI				*e*LR		LR	06 16 47.8	
	comp=Z,558nm,18.0s							
HFS	Hagfors	24.69	350	P		P	06 02 34.6	-1.4
	comp=Z,13nm,0.5s,mb4.7,baz=161,slow=9.4,SNR=42							
HFS	Hagfors	24.69	350	P		P	06 02 34.6	-1.4
HFS				pmax		pmax		
	comp=Z,13nm,0.5s							
HFS	Hagfors	24.69	350	P		P	06 02 34.6	-1.4
HFA0	Hagfors New Ar	24.70	350	P		P	06 02 34.0	-2.1
HFA0	Hagfors New Ar	24.70	350	P		P	06 02 34.0	-2.1
LIS	Lisbon	24.72	286	*e*P		P	06 02 36.8	+0.2
LIS				AMb		AMB	06 02 42.1	
	comp=Z,79nm,0.9s,mb5.2							
PMAFR	Mafra	24.81	286	*e*S		S	06 06 58.6	-1.4
PMAFR	Mafra	24.81	286	*e*LR		LR	06 18 10.7	
	comp=Z,635nm,16.0s							
KONO	Kongsberg	24.94	345	*e*P		P	06 02 39.7	+1.4
KONO				*e*S		S	06 07 00.6	-1.0
KONO				*i*			06 07 04.0	
KONO	Kongsberg	24.94	345	*e*P		P	06 02 38.0	-0.3
KONO				pmax		pmax		
	comp=Z,31nm,1.0s,mb4.8							
KONO	Kongsberg	24.94	345	*e*P		P	06 02 38.0	-0.3
	comp=Z,31nm,1.0s,mb4.8							
KONO				*e*			06 02 40.1	
KONO	Kongsberg	24.94	345	*e*P		P	06 02 38.0	-0.3
KONO				*e*S		S	06 07 00.6	-0.9
	SNR=29							
OSL	Oslo	24.98	347	*e*P		P	06 02 38.8	+0.1
OSL	Oslo	24.98	347	*e*P		P	06 02 38.8	+0.1
	SNR=28							
FINES	FINESS Array B	25.57	5	P		P	06 02 41.9	-2.2
	comp=Z,5.6nm,0.4s,mb4.4,baz=165,slow=10,SNR=50							
FINES				LR		LR	06 13 06.5	
	comp=Z,1μm,19.2s,MS4.4,baz=289,slow=37							
FINES	FINESS Array B	25.57	5	P		P	06 02 41.9	-2.2
FINES				pmax		pmax		
	comp=Z,6.0nm,0.4s							
FINES				MLR		MLR		
	comp=Z,1μm,19.2s							
FINES	FINESS Array B	25.57	5	P		P	06 02 41.9	-2.2
EKA	Eskdalemuir Ar	25.80	326	P		P	06 02 46.0	-0.1
	comp=Z,7.3nm,0.5s,mb4.4,baz=128,slow=9.0,SNR=33							
EKA	Eskdalemuir Ar	25.80	326	P		P	06 02 46.1	0.0
EKA				pmax		pmax		
	comp=Z,7.0nm,0.5s							
EKA	Eskdalemuir Ar	25.80	326	P		P	06 02 46.0	-0.1
NAO01	NORSAR Array S	25.80	348	*e*P		P	06 02 44.4	-1.8
	comp=Z,27nm,0.8s,mb4.8							
NAO01	NORSAR Array S	25.80	348	*e*P		P	06 02 44.4	-1.7
	comp=Z,27nm,0.8s,mb4.8							
ESK	Eskdalemuir	25.81	326	*e*P		P	06 02 45.6	-0.6
ESK				pmax		pmax		
	comp=Z,24nm,0.9s,mb4.7							
ESK	Eskdalemuir	25.81	326	*e*P		P	06 02 45.6	-0.6
	comp=Z,24nm,0.9s,mb4.7							
ESK	Eskdalemuir	25.81	326	*e*P		P	06 02 45.6	-0.6
	comp=Z,24nm,0.9s,mb4.7							
NB2	NORSAR Subarra	25.93	348	P		P	06 02 46.3	-1.0
	comp=Z,24nm,1.0s,mb4.7,baz=161,slow=10							
NB2	NORSAR Subarra	25.93	348	P		P	06 02 46.3	-1.0
	SNR=28							
NOA	NORSAR Array B	25.93	348	P		P	06 02 45.4	-1.9
	comp=Z,3.6nm,0.7s,mb4.0,baz=155,slow=9.4,SNR=24							
NOA				LR		LR	06 13 17.2	
	comp=Z,758nm,21.2s,MS4.2,baz=165,slow=37							
NOA	NORSAR Array B	25.93	348	P		P	06 02 45.4	-1.9
NOA				pmax		pmax		
	comp=Z,4.0nm,0.7s							
NOA				MLR		MLR		
	comp=Z,758nm,21.2s							
NOA	NORSAR Array B	25.93	348	P		P	06 02 45.4	-1.9
KAF	Kangasniemi	26.25	5	*e*P		P	06 02 49.2	-1.0
KAF				pmax		pmax		
	comp=Z,35nm,0.8s,mb4.9							
KAF	Kangasniemi	26.25	5	*e*p		P	06 02 49.2	-1.0
	comp=Z,35nm,0.8s,mb4.9							
KAF	Kangasniemi	26.25	5	*e*P		P	06 02 49.2	-1.0
	comp=Z,35nm,0.8s,mb4.9							
BER	Bergen	26.58	342	*e*S		S	06 07 27.8	+0.3
BER				*e*			06 07 45.0	
BER	Bergen	26.58	342	*e*P		Sx	06 07 45.0	
BER	Bergen	26.58	342	*e*S		S	06 07 27.8	+0.3
	SNR=28							
JOF	Joensuu	27.55	9	*e*P		P	06 02 59.0	-2.8
JOF				pmax		pmax		
	comp=Z,8.0nm,0.5s,mb4.6							
JOF	Joensuu	27.55	9	*e*p		P	06 02 59.0	-2.8
	comp=Z,7.8nm,0.5s,mb4.6							
JOF	Joensuu	27.55	9	*e*P		P	06 02 59.0	-2.8
NSS	Namsos	29.15	351	*e*P		P	06 03 15.6	-0.5
NSS				AMS		AMS	06 16 32.7	
	comp=Z,2μm,13.7s,MS5.0							
NSS	Namsos	29.15	351	*e*P		P	06 03 15.6	-0.5
NSS				LR		LR		
	comp=Z,2μm,13.7s,MS5.0							
NSS	Namsos	29.15	351	*e*P		P	06 03 15.6	-0.5
	SNR=28							
AKTK	Aktyubinsk	29.69	50	P		P	06 03 18.3	-2.8
AKTK				LR		LR	06 18 55.2	
AKTK	Aktyubinsk	29.69	50	P		P	06 03 18.3	-2.8
AKTO	Aktyubinsk	29.69	50	P		P	06 03 18.3	-2.8
	comp=Z,3.9nm,0.3s,mb4.6,baz=256,slow=8.8,SNR=33							
AKTO				LR		LR	06 18 55.2	
	comp=Z,600nm,20.1s,MS4.2,baz=61,slow=44							
AKTO	Aktyubinsk	29.69	50	P		P	06 03 18.3	-2.8
AKTO				pmax		pmax		
	comp=Z,4.0nm,0.3s,mb4.6							
AKTO				MLR		MLR		
	comp=Z,600nm,20.1s,MS4.2							
ABKAR	Akbulak array	30.64	52	*e*P		P	06 03 28.2	-1.3
	comp=Z,4.1nm,0.4s,mb4.6							
ABKAR	Akbulak array	30.64	52	*e*P		P	06 03 28.2	-1.3
	comp=Z,4.1nm,0.4s,mb4.6							
NAZ	Nazwa, Dubai	31.00	101	P		P	06 03 33.7	+0.8
	SNR=5.7							
ARU	Arti	32.01	39	*d*i P		P	06 03 39.8	-1.7
ARU				*e*			06 04 47.5	
ARU				S		S	06 08 48.1	-4.8
ARU				SS		SS	06 10 34.5	-35
ARU				pmax		pmax		
	comp=Z,47nm,1.7s,mb5.0							
ARU				MLR		MLR		
	comp=Z,969nm,14.0s,MS4.6							
ARU	Arti	32.01	39	*e*P		P	06 03 39.8	-1.7
	comp=Z,40nm,1.1s,mb5.2							
ARU	Arti	32.01	39	*e*P		P	06 03 39.8	-1.7
	comp=Z,40nm,1.1s,mb5.2							
SOKR	Solikamsk	32.61	33⇑	*i*P		P	06 03 45.8	-0.9
SOKR				pmax		pmax		
	comp=Z,60nm,1.0s,mb5.5							
SOKR				MLR		MLR		
	comp=Z,620nm,15.0s,MS4.4							
SVE	Sverdlovsk	33.22	39⇓	*e*P		P	06 03 51.5	-0.6
SVE				*e*			06 05 07.0	
SVE				*e*S		S	06 09 00.0	-12
SVE				pmax		pmax		
	comp=Z,53nm,1.1s,mb5.4							
SVE				MLR		MLR		
	comp=Z,1μm,13.0s,MS4.8							
ARE0	ARCESS Array S	33.62	2	*e*P		P	06 03 54.0	-1.3
ARE0	ARCESS Array S	33.62	2	*e*P		P	06 03 54.0	-1.4
ARCES	ARCESS Array B	33.62	2	P		P	06 03 54.1	-1.3
	comp=Z,17nm,0.8s,mb5.0,baz=188,slow=8.8,SNR=45							
ARCES	ARCESS Array B	33.62	2	P		P	06 03 54.1	-1.3
ARCES				pmax		pmax		
	comp=Z,17nm,0.8s							
ARCES	ARCESS Array B	33.62	2	P		P	06 03 54.1	-1.3
TRO	Tromso	33.70	358	*e*		P	06 03 55.8	-0.2
TRO				*e*S		S	06 09 09.6	-9.2
TRO				AMS		AMS	06 19 44.4	
	comp=Z,2μm,14.6s,MS4.9							
TRO	Tromso	33.70	358	*e*P		P	06 03 55.8	-0.2
KEV	Kevo	33.90	3	*e*P		P	06 03 53.4	-4.4
KEV				pmax		pmax		
	comp=Z,15nm,0.6s,mb5.1							
KEV	Kevo	33.90	3	*e*p		P	06 03 53.4	-4.4
	comp=Z,15nm,0.6s,mb5.1							
BRVK	Borovoye	37.67	48	*ce*P		P	06 04 29.4	-0.9
BRVK				pmax		pmax		
	comp=Z,24nm,1.7s,mb4.7							
BRVK	Borovoye	37.67	48	*e*P		P	06 04 29.1	-1.2
	comp=Z,19nm,0.9s,mb4.8							
BRVK				*e*PP		PP	06 05 58.1	+2.0
BRVK	Borovoye	37.67	48	P		P	06 04 29.7	-0.6
	SNR=10							
BRVK				P			06 04 29.7	
	SNR=10							
BRVK	Borovoye	37.67	48	*e*P		P	06 04 29.1	-1.2
	comp=Z,19nm,0.9s,mb4.8							
BVAR	Borovoye Array	37.73	48	P		P	06 04 29.1	-1.8
	comp=Z,5.1nm,0.7s,mb4.4,baz=263,slow=6.4,SNR=26							
BVAR	Borovoye Array	37.73	48	P		P	06 04 29.1	-1.7
BVAR				pmax		pmax		
	comp=Z,5.0nm,0.7s							
BVAR	Borovoye Array	37.73	48	P		P	06 04 29.1	-1.7
DBIC	Dimbokro	38.11	226	P		P	06 04 35.6	+1.2
	comp=Z,18nm,0.6s,mb5.0,baz=20,slow=10,SNR=30							
DBIC				LR		LR	06 22 20.7	
	comp=Z,1μm,18.4s,MS4.8,baz=14,slow=39							
DBIC	Dimbokro	38.11	226	*e*P		P	06 04 35.4	+1.0
DBIC				pmax		pmax		
	comp=Z,24nm,0.8s							
DBIC	Dimbokro	38.11	226	*e*P		P	06 04 35.4	+0.9
	comp=Z,24nm,0.8s,mb5.0							
DBIC	Dimbokro	38.11	226	*e*P		P	06 04 35.4	+1.0
	comp=Z,24nm,0.8s,mb5.0							
TIC	Toumodi	38.23	227	*e*P		P	06 04 35.8	+0.4
	comp=Z,47nm,0.9s,mb5.2							
TIC	Toumodi	38.23	227	*e*P		P	06 04 35.8	+0.4
TIC				pmax		pmax		
	comp=Z,47nm,0.9s,mb5.2							
TIC	Toumodi	38.23	227	*e*P		P	06 04 35.8	+0.4
	comp=Z,47nm,0.9s,mb5.2							
KBL	Kabul	38.26	78	*e*P		P	06 04 36.3	+0.7
KBL				pmax		pmax		
	comp=Z,5.0nm,0.4s,mb4.6							
KBL	Kabul	38.26	78	*e*P		P	06 04 36.3	+0.7
	comp=Z,4.7nm,0.4s,mb4.6							
KBL	Kabul	38.26	78	*e*P		P	06 04 36.3	+0.7
	comp=Z,4.7nm,0.4s,mb4.6							
KIC	Kosan Boka	38.29	226	*e*P		P	06 04 37.1	+1.1
	comp=Z,54nm,0.9s,mb5.3							
KIC	Kosan Boka	38.29	226	*e*P		P	06 04 37.1	+1.1
	comp=Z,54nm,0.9s,mb5.3							
BORG	Borgarnes	38.50	332	LR		LR	06 22 35.6	
	comp=Z,1μm,18.5s,MS4.8,baz=118,slow=40							
JMIC	Jan Mayen	38.51	345	*e*S		S	06 10 33.6	+1.2
JMIC				*e*SS		SS	06 13 19.9	-1.4
JMIC	Jan Mayen	38.51	345	LR		LR	06 19 29.4	
	comp=Z,334nm,21.7s,MS4.1,baz=128,slow=35							
LIC	Lamto	38.57	226	*e*P		P	06 04 38.7	+0.4
	comp=Z,86nm,0.7s,mb5.6							
LIC	Lamto	38.57	226	*e*P		P	06 04 38.7	+0.4
	comp=Z,86nm,0.7s,mb5.6							
KMBO	Kilima Mbogo	39.66	155	*e*P		P	06 04 50.6	+3.2
KMBO				pmax		pmax		
	comp=Z,13nm,1.5s							
KMBO	Kilima Mbogo	39.66	155	*e*P		P	06 04 50.6	+3.2
	comp=Z,13nm,1.5s,mb4.4							
EKS2	Erkin-Say	40.17	64	P		P	06 04 51.2	-0.3
	SNR=32							
EKS2	Erkin-Say	40.17	64	*e*P		P	06 04 51.0	-0.4
	comp=Z,26nm,0.8s,mb5.0							
EKS2	Erkin-Say	40.17	64	*e*P		P	06 04 51.0	-0.4
	comp=Z,26nm,0.8s,mb5.0							
AML	Almayashu	40.19	65	P		P	06 04 51.5	-0.1
	SNR=13							
AML	Almayashu	40.19	65	*e*P		P	06 04 51.4	-0.2
	comp=Z,6.4nm,0.6s,mb4.5							
AML	Almayashu	40.19	65	*e*P		P	06 04 51.4	-0.2
	comp=Z,6.4nm,0.6s,mb4.5							
USP	Ospenovka	40.61	63	P		P	06 04 55.5	+0.4
	SNR=5.6							
AAK	Ala-Archa	40.70	64	P		P	06 04 56.1	+0.4
	SNR=13							
AAK	Ala-Archa	40.70	64	P		P	06 04 54.5	-1.3
	comp=Z,12nm,0.8s,mb4.6,baz=216,slow=5.9,SNR=28							
AAK	Ala-Archa	40.70	64	P		P	06 04 54.5	-1.3
AAK				pmax		pmax		
	comp=Z,12nm,0.8s,mb4.6							
AAK	Ala-Archa	40.70	64	P		P	06 04 54.5	-1.3
FRU	Bishkek	40.76	64	*e*P		P	06 04 55.0	-1.3
FRU				pmax		pmax		
	comp=Z,290nm,2.2s,mb5.5							
UCH	Uchtor	40.77	65	P		P	06 04 56.4	-0.1
	SNR=11							
UCH	Uchtor	40.77	65	*e*P		P	06 04 56.2	-0.2
	comp=Z,10nm,0.8s,mb4.5							
UCH				*ep*P		pP	06 05 07.0	+7.4
UCH	Uchtor	40.77	65	*e*P		P	06 04 56.2	-0.2
	comp=Z,10nm,0.8s,mb4.5							
UCH				*ep*P		pP	06 05 06.9	+7.3
CHMS	Chumysh	40.83	64	P		P	06 04 58.1	+1.3
	SNR=6.4							
KZA	Kyzart	41.34	65	P		P	06 05 02.1	+1.0
	SNR=18							
TKM2	Tokmak 2	41.45	63	P		P	06 05 01.3	-0.8
	SNR=12							
TKM2	Tokmak 2	41.45	63	*e*P		P	06 05 01.3	-0.7
TKM2				*e**PP		pP	06 05 15.1	+10
TKM2				pmax		pmax		
	comp=Z,22nm,1.1s,mb4.7							
TKM2	Tokmak 2	41.45	63	*e*P		P	06 05 01.3	-0.7
	comp=Z,22nm,1.1s,mb4.7							
TKM2				*ep*P		pP	06 05 15.1	+10
TKM2	Tokmak 2	41.45	63	*e*P		P	06 05 01.3	-0.7
	comp=Z,22nm,1.1s,mb4.7							
SCO	Scoresbysund	41.56	339	*i* P		P	06 05 03.5	+0.9
SCO				pmax		pmax		
	comp=Z,19nm,0.9s,mb4.7							
SCO				MLR		MLR		
	comp=Z,350nm,18.0s,MS4.3							
ULHL	Ulahol	42.04	64	P		P	06 05 06.5	-0.3
	SNR=24							
SPITS	Spitsbergen Ar	42.32	358	P		P	06 05 07.8	-0.8
	comp=Z,2.9nm,0.4s,mb4.3,baz=154,slow=10,SNR=32							
SPITS	Spitsbergen Ar	42.32	358	P		P	06 05 07.8	-0.8
SPITS				pmax		pmax		
	comp=Z,3.0nm,0.4s							
SPITS	Spitsbergen Ar	42.32	358	P		P	06 05 07.8	-0.8
KSH	Kashi	42.39	68	P		P	06 05 08.3	-1.4
KSH				pP		pP	06 05 18.1	+5.3
KSH				sP		sP	06 05 22.0	+7.9
KSH				PP		PP	06 06 49.3	+1.5
KSH				PcP		PcP	06 07 03.6	+0.7
KSH				ScP		ScP	06 10 50.1	-3.5
KSH				PcS		PcS	06 10 54.0	-0.7
KSH				S		S	06 11 23.6	-7.4
KSH				sS		sS	06 11 40.9	+4.7
KSH				SS		SS	06 14 26.8	-13
KSH				ScS		ScS	06 15 05.9	-5.8
KSH				pmax		pmax		
	comp=Z,20nm,1.1s,mb4.7							
KSH				pmax		pmax		
	comp=Z,240nm,2.9s,mb5.3							
KSH				LR		LR		
	comp=N,350nm,13.7s							
KSH				LR		LR		
	comp=E,210nm,8.6s							
KSH				LR		LR		
	comp=Z,150nm,6.3s							
KURK	Kurchatov	42.74	52	P		P	06 05 09.1	-3.3
	comp=Z,11nm,0.7s,mb4.7,baz=275,slow=8.5,SNR=49							
KURK	Kurchatov	42.74	52	*ce*P		P	06 05 10.9	-1.5
KURK				pmax		pmax		
	comp=Z,23nm,1.7s,mb4.6							
KURK	Kurchatov	42.74	52	*e*P		P	06 05 10.6	-1.8
	comp=Z,12nm,0.9s,mb4.6							
KURK	Kurchatov	42.74	52	P		P	06 05 11.2	-1.2
	SNR=9.7							
KURK				P			06 05 11.2	
	SNR=9.7							
KURK	Kurchatov	42.74	52	*e*P		P	06 05 10.6	-1.8
	comp=Z,12nm,0.9s,mb4.6							
KBS	Kingsbay	43.20	357	*e*S		S	06 11 31.5	-11
KBS				*e*SS		SS	06 14 39.4	-15
KBS				AMS		AMS	06 25 55.5	
	comp=Z,588nm,15.5s,MS4.6							
KBS	Kingsbay	43.20	357	*e*P		P	06 05 15.9	+0.1
KBS				*e**PP		pP	06 05 25.3	+6.4
KBS				*e*S		S	06 11 31.5	-11
KBS				*e*SS		SS	06 14 39.4	-15
KBS				pmax		pmax		
	comp=Z,25nm,1.1s,mb4.9							
KBS				MLR		MLR		
	comp=Z,590nm,15.5s,MS4.6							
KBS	Kingsbay	43.20	357	*e*P		P	06 05 15.9	+0.1
	comp=Z,25nm,1.1s,mb4.8							
KBS				*ep*P		pP	06 05 25.3	+6.4
KBS				*e*S		S	06 11 31.5	-11
KBS				*e*SS		SS	06 14 39.4	-15
KBS				LR		LR		
	comp=Z,590nm,15.5s,MS4.6							
KBS	Kingsbay	43.20

SUMG				*e*pP	pP	06 05 58.7	+7.9
SUMG	**Summit**	**47.20**	**339**	*e*P	**P**	**06 05 49.0**	**+1.4**
comp=Z,21nm,1.0s,mb5.0							
SUMG				*e*pP	pP	06 05 58.7	+7.9
POO	**Poona**	**48.82**	**97**	*e*PKP	**P**	**06 05 58.4**	**-2.4**
BHPL	**Bhopal**	**49.36**	**89**	*e*PKP	**P**	**06 06 04.3**	**-0.7**
KAD	**Karad**	**49.73**	**98**	*e*PKP	**P**	**06 06 07.7**	**-0.1**
KAD				AMb	AMB	06 06 11.1	
comp=Z,26nm,1.0s,mb5.2							
WMQ	**Urumqi**	**49.90**	**60**	P	**P**	**06 06 08.0**	**-0.8**
WMQ				pP	pP	06 06 18.0	+6.1
WMQ				sP	sP	06 06 22.0	+8.8
WMQ				PP	PP	06 08 03.0	-0.4
WMQ				S	**S**	**06 13 14.0**	**-4.8**
WMQ				ScS	ScS	06 15 54.0	-6.3
WMQ				SS	SS	06 16 43.0	-8.2
WMQ				pmax	pmax		
comp=Z,21nm,1.0s,mb5.1							
WMQ				pmax	pmax		
comp=Z,97nm,5.0s							
WMQ				LR	LR		
comp=N,1μm,16.0s,MS5.0							
WMQ				LR	LR		
comp=E,540nm,16.0s,MS5.0							
WMQ				LR	LR		
comp=Z,540nm,16.0s,MS4.7							
LSZ	**Lusaka**	**51.38**	**172**	P	**P**	**06 06 19.5**	**-0.6**
comp=Z,5.8nm,0.9s,mb4.5,baz=8.7,slow=11,SNR=7.8							
LSZ				LR	LR	06 29 39.3	
comp=Z,773nm,19.0s,MS4.8,baz=350,slow=38							
LSZ	**Lusaka**	**51.38**	**172**	P	**P**	**06 06 19.5**	**-0.6**
LSZ				pmax	pmax		
comp=Z,6.0nm,0.9s,mb4.5							
LSZ				MLR	MLR		
comp=Z,773nm,19.0s,MS4.8							
LSZ	**Lusaka**	**51.38**	**172**	*e*P	**P**	**06 06 21.7**	**+1.6**
comp=Z,7.1nm,0.9s,mb4.6							
LSZ				*e*pP	pP	06 06 34.7	+11
LSZ	**Lusaka**	**51.38**	**172**	*e*P	**P**	**06 06 21.7**	**+1.6**
comp=Z,7.1nm,0.9s,mb4.6							
NGP	**Nagpur**	**51.69**	**90**	*e*PKP	**P**	**06 06 21.5**	**-1.1**
HYB	**Hyderabad**	**53.20**	**95**	*e*P	**P**	**06 06 32.0**	**-1.8**
HYB	**Hyderabad**	**53.20**	**95**	*i* P	**P**	**06 06 32.5**	**-1.3**
HYB	**Hyderabad**	**53.20**	**95**	*e*P	**P**	**06 06 32.0**	**-1.8**
DMN	**Daman**	**53.58**	**80**	*e*P	**P**	**06 06 35.2**	**-1.3**
comp=Z,94nm,0.7s,mb5.8							
DMN	**Daman**	**53.58**	**80**	*e*P	**P**	**06 06 35.2**	**-1.3**
comp=Z,94nm,0.7s,mb5.8							
KKN	**Kakani**	**53.64**	**80**	*e*P	**P**	**06 06 35.4**	**-1.6**
comp=Z,56nm,0.6s,mb5.7							
KKN	**Kakani**	**53.64**	**80**	*e*P	**P**	**06 06 35.4**	**-1.6**
comp=Z,56nm,0.6s,mb5.7							
PKIN	**Phulchoki**	**53.83**	**80**	*e*P	**P**	**06 06 37.0**	**-1.3**
comp=Z,78nm,0.8s,mb5.7							
PKI	**Pulchoki**	**53.84**	**80**	*e*P	**P**	**06 06 36.8**	**-1.6**
PKI	**Pulchoki**	**53.84**	**80**	*e*P	**P**	**06 06 37.0**	**-1.4**
comp=Z,78nm,0.8s,mb5.7							
PKI	**Pulchoki**	**53.84**	**80**	*e*P	**P**	**06 06 37.0**	**-1.4**
comp=Z,78nm,0.8s,mb5.7							
GUN	**Gumba**	**54.07**	**79**	*e*P	**P**	**06 06 38.6**	**-1.5**
GUN	**Gumba**	**54.07**	**79**	*e*P	**P**	**06 06 38.6**	**-1.5**
JIRN	**Jiri**	**54.42**	**79**	*e*P	**P**	**06 06 41.9**	**-0.8**
JIRN	**Jiri**	**54.42**	**79**	*e*P	**P**	**06 06 41.9**	**-0.8**
RAMN	**Ramite**	**55.06**	**80**	*e*P	**P**	**06 06 45.4**	**-1.9**
RAMN	**Ramite**	**55.06**	**80**	*e*P	**P**	**06 06 45.4**	**-1.9**
TSUM	**Tsumeb**	**55.08**	**185**	P	**P**	**06 06 47.1**	**-0.3**
comp=Z,4.6nm,1.0s,mb4.5,baz=291,slow=5.1,SNR=5.3							
TSUM				LR	LR	06 32 12.8	
comp=Z,1μm,18.8s,MS5.0,baz=349,slow=38							
TSUM	**Tsumeb**	**55.08**	**185**	P	**P**	**06 06 47.1**	**-0.2**
ODAN	**Odare**	**55.74**	**80**	*e*P	**P**	**06 06 50.3**	**-1.9**
ODAN	**Odare**	**55.74**	**80**	*e*P	**P**	**06 06 50.3**	**-1.9**
TAPN	**Taplejung**	**55.77**	**79**	*e*P	**P**	**06 06 50.9**	**-1.5**
comp=Z,105nm,1.1s,mb5.8							
TAPN	**Taplejung**	**55.77**	**79**	*e*P	**P**	**06 06 50.9**	**-1.5**
comp=Z,105nm,1.1s,mb5.8							
LSA	**Lhasa**	**57.45**	**75**	*e*P	**P**	**06 07 04.3**	**-0.1**
comp=Z,66nm,0.8s,mb5.7							
LSA	**Lhasa**	**57.45**	**75**	*e*P	**P**	**06 07 04.3**	**-0.1**
comp=Z,66nm,0.8s,mb5.7							
TLY	**Talaya**	**57.97**	**47**	*e*P	**P**	**06 07 07.0**	**-0.7**
TLY				*e*S	**S**	**06 15 10.8**	**+3.0**
TLY				*e*PS		06 15 29.2	
TLY				*e*SSS		06 21 21.5	
TLY				pmax	pmax		
comp=Z,9.0nm,0.9s,mb4.8							
TLY				MLR	MLR		
comp=Z,336nm,15.0s,MS4.6							
TLY	**Talaya**	**57.97**	**47**	P	**P**	**06 07 07.6**	**-0.1**
SNR=6.6							
TLY				P		06 07 07.6	
SNR=6.6							
IRK	**Irkutsk**	**58.16**	**46**	*e*P	**P**	**06 07 06.3**	**-2.7**
IRK				*e*		06 09 17.9	
IRK				pmax	pmax		
comp=Z,32nm,2.1s,mb5.0							
ZAK	**Zakamensk**	**58.18**	**48**	*e*P	**P**	**06 07 08.2**	**-1.0**
ZAK				pmax	pmax		
comp=Z,5.0nm,0.9s,mb4.5							
SHL	**Shillong**	**59.91**	**79**	*e*PKP	**P**	**06 07 20.5**	**-1.0**
GTA	**Gaotai**	**59.92**	**61**	⇑P	**P**	**06 07 20.6**	**-0.8**
GTA				pP	pP	06 07 30.6	+6.0
GTA				sP	sP	06 07 34.5	+8.7
GTA				PP	PP	06 09 34.4	+1.1
GTA				S	**S**	**06 15 27.8**	**-5.6**
GTA				sS	sS	06 15 44.8	+6.1
GTA				SS	SS	06 19 25.4	-3.9
GTA				pmax	pmax		
comp=Z,25nm,1.9s,mb4.9							
GTA				pmax	pmax		
comp=Z,200nm,8.4s							
GTA				LR	LR		
comp=N,450nm,22.8s,MS4.6							
GTA				LR	LR		
comp=E,340nm,23.4s,MS4.6							
GTA				LR	LR		
comp=Z,440nm,21.6s,MS4.6							
SCHQ	**Schefferville**	**60.76**	**318**	P	**P**	**06 07 27.1**	**+0.2**
comp=Z,6.2nm,0.7s,mb4.9,baz=59,slow=8.6,SNR=18							
SCHQ				LR	LR	06 33 24.7	
comp=Z,432nm,18.2s,MS4.6,baz=60,slow=36							
SCHQ	**Schefferville**	**60.76**	**318**	*e*P	**P**	**06 07 26.7**	**-0.1**
comp=Z,5.8nm,0.6s,mb4.9							
SCHQ	**Schefferville**	**60.76**	**318**	*e*P	**P**	**06 07 26.7**	**-0.2**
comp=Z,5.8nm,0.6s,mb4.9							
LBTB	**Lobatse**	**60.82**	**176**	P	**P**	**06 07 28.4**	**+0.9**
comp=Z,4.2nm,0.9s,mb4.5,baz=22,slow=12,SNR=5.2							
LBTB				LR	LR	06 36 10.3	
comp=Z,683nm,18.4s,MS4.8,baz=13,slow=38							
LBTB	**Lobatse**	**60.82**	**176**	P	**P**	**06 07 28.4**	**+0.9**
LBTB				pmax	pmax		
comp=Z,4.0nm,0.9s,mb4.5							
LBTB				MLR	MLR		
comp=Z,683nm,18.4s,MS4.8							
LBTB	**Lobatse**	**60.82**	**176**	P	**P**	**06 07 28.4**	**+0.9**
SONM	**Songino Array**	**61.01**	**50**	P	**P**	**06 07 27.0**	**-1.7**
comp=Z,4.6nm,0.8s,mb4.7,baz=281,slow=8.3,SNR=32							
SONM				LR	LR	06 38 49.7	
comp=Z,439nm,18.0s,MS4.7,baz=183,slow=41							
SONM	**Songino Array**	**61.01**	**50**	P	**P**	**06 07 27.0**	**-1.7**
SONM				pmax	pmax		
comp=Z,5.0nm,0.8s							
SONM				MLR	MLR		
comp=Z,439nm,18.0s							
SONM	**Songino Array**	**61.01**	**50**	P	**P**	**06 07 26.9**	**-1.7**
SONM				LR	LR	06 38 49.7	
SONM	**Songino Array**	**61.01**	**50**	P	**P**	**06 07 27.0**	**-1.7**
TIXI	**Tiksi**	**61.29**	**20**	*e*P	**P**	**06 07 29.0**	**-1.2**
TIXI				pmax	pmax		
comp=Z,18nm,0.9s,mb5.2							
TIXI	**Tiksi**	**61.29**	**20**	*e*P	**P**	**06 07 29.0**	**-1.3**
comp=Z,18nm,0.9s,mb5.2							
TIXI	**Tiksi**	**61.29**	**20**	*e*P	**P**	**06 07 29.0**	**-1.2**
comp=Z,18nm,0.9s,mb5.2							
ULN	**Ulaanbaatar**	**61.41**	**50**	*e*P	**P**	**06 07 29.9**	**-1.5**
ULN				pmax	pmax		
comp=Z,9.0nm,0.8s,mb5.0							
ULN	**Ulaanbaatar**	**61.41**	**50**	*e*P	**P**	**06 07 29.9**	**-1.5**
comp=Z,9.5nm,0.8s,mb5.0							
ULN	**Ulaanbaatar**	**61.41**	**50**	P	**P**	**06 07 30.7**	**-0.7**
SNR=7.5							
ULN				P		06 07 30.7	
SNR=7.5							
ULN	**Ulaanbaatar**	**61.41**	**50**	*e*P	**P**	**06 07 29.9**	**-1.5**
comp=Z,9.5nm,0.8s,mb5.0							

RES	**Resolute Bay**	**62.12**	**344**	P	**P**	**06 07 35.4**	**-0.4**
comp=Z,1.9nm,0.7s,mb4.4,baz=29,slow=9.1,SNR=7.1							
RES	**Resolute Bay**	**62.12**	**344**	P	**P**	**06 07 35.4**	**-0.4**
RES				pmax	pmax		
comp=Z,2.0nm,0.7s,mb4.4							
RES	**Resolute Bay**	**62.12**	**344**	P	**P**	**06 07 35.4**	**-0.4**
RES	**Resolute Bay**	**62.12**	**344**	P	**P**	**06 07 35.4**	**-0.4**
LZH	**Lanzhou**	**64.22**	**63**	⇑P	**P**	**06 07 50.3**	**-0.1**
LZH				pP	pP	06 07 59.6	+6.0
LZH				sP	sP	06 08 03.5	+8.7
LZH				PP	PP	06 10 12.0	+0.7
LZH				*e*S	**S**	**06 16 23.0**	**-4.9**
LZH				sS	sS	06 16 41.0	+7.8
LZH				pmax	pmax		
comp=Z,36nm,1.0s,mb5.4							
LZH				pmax	pmax		
comp=Z,170nm,4.0s							
LZH				LR	LR		
comp=N,1μm,14.2s							
LZH				LR	LR		
comp=Z,2μm,16.8s,MS5.3							
BOSA	**Boshof**	**64.38**	**177**	P	**P**	**06 07 51.6**	**+0.4**
comp=Z,3.3nm,0.6s,mb4.5,baz=7.3,slow=8.2,SNR=8.3							
BOSA				LR	LR	06 37 26.0	
comp=Z,910nm,19.9s,MS5.0,baz=359,slow=37							
BOSA	**Boshof**	**64.38**	**177**	P	**P**	**06 07 51.6**	**+0.4**
BOSA				pmax	pmax		
comp=Z,3.0nm,0.6s,mb4.5							
BOSA				MLR	MLR		
comp=Z,910nm,19.9s,MS5.0							
BOSA	**Boshof**	**64.38**	**177**	*e*P	**P**	**06 07 53.4**	**+2.1**
comp=Z,6.3nm,0.9s,mb4.7							
BOSA				*e*pP	pP	06 08 02.3	+7.8
BOSA	**Boshof**	**64.38**	**177**	*e*P	**P**	**06 07 53.4**	**+2.2**
comp=Z,6.3nm,0.9s,mb4.7							
BOSA				*e*pP	pP	06 08 02.3	+7.8
YAK	**Yakutsk**	**66.46**	**29**	*e*P	**P**	**06 08 02.2**	**-2.2**
YAK				*e**PP	pP	06 08 14.2	+6.6
YAK				*e*		06 08 34.6	
YAK				*e*S	S	06 16 48.0	-6.4
YAK				*e*		06 17 59.9	
YAK				pmax	pmax		
comp=Z,49nm,0.9s,mb5.5							
YAK				pmax	pmax		
comp=N,5.0nm,1.0s							
YAK				pmax	pmax		
comp=E,5.0nm,1.1s							
YAK				smax			
comp=N,120nm,3.0s							
YAK				smax			
comp=E,47nm,2.8s							
YAK				MLR	MLR		
comp=Z,443nm,24.0s,MS4.6							
YAK				MLR	MLR		
comp=N,310nm,25.0s,MS4.6							
YAK				MLR	MLR		
comp=E,375nm,23.0s,MS4.6							
YAK	**Yakutsk**	**66.46**	**29**	*e*P	**P**	**06 08 03.0**	**-1.4**
comp=E,53nm,0.8s,mb5.6							
YAK	**Yakutsk**	**66.46**	**29**	*e*P	**P**	**06 08 03.0**	**-1.4**
comp=E,53nm,0.8s,mb5.6							
CD2	**Chengdu**	**66.58**	**68**	*e*P	**P**	**06 08 04.8**	**-0.9**
CD2				pP	pP	06 08 15.1	+6.1
CD2				sP	sP	06 08 20.1	+10
CD2				PP	PP	06 10 32.8	+0.7
CD2				S	S	06 16 51.3	-5.6
CD2				sS	sS	06 17 06.9	+4.6
CD2				SS	SS	06 21 07.8	-5.9
CD2				pmax	pmax		
comp=Z,20nm,0.8s,mb5.2							
CD2				pmax	pmax		
comp=Z,60nm,4.2s							
CD2				LR	LR		
comp=N,130nm,15.2s							
CD2				LR	LR		
comp=Z,150nm,16.2s,MS4.3							
HHC	**Hu-ho-hao-te**	**67.38**	**55**	*e*P	**P**	**06 08 09.9**	**-0.7**
HHC				pP	pP	06 08 20.3	+6.4
HHC				sP	sP	06 08 24.1	+9.0
HHC				PcP	PcP	06 08 38.3	+0.1
HHC				PP	PP	06 10 39.1	+0.3
HHC				ScP		06 12 38.4	
HHC				PcS		06 12 41.9	
HHC				S	S	06 17 00.1	-6.1
HHC				sS	sS	06 17 16.8	+5.2
HHC				ScS	ScS	06 18 01.1	-7.7
HHC				SS	SS	06 21 20.1	-5.5
HHC				pmax	pmax		
comp=Z,15nm,0.9s,mb5.0							
HHC				pmax	pmax		
comp=Z,140nm,5.8s							
HHC				LR	LR		
comp=N,350nm,15.3s,MS4.9							
HHC				LR	LR		
comp=E,400nm,15.0s,MS4.9							
HHC				LR	LR		
comp=Z,410nm,24.2s							
HIA	**Hailar**	**68.31**	**44**	*e*P	**P**	**06 08 15.9**	**-0.4**
HIA				pmax	pmax		
comp=Z,18nm,0.8s							
HIA	**Hailar**	**68.31**	**44**	*e*P	**P**	**06 08 15.9**	**-0.5**
comp=Z,18nm,0.8s,mb5.2							
HIA	**Hailar**	**68.31**	**44**	*e*P	**P**	**06 08 15.9**	**-0.4**
comp=Z,18nm,0.8s,mb5.2							
KMI	**Kunming**	**68.68**	**74**	P	**P**	**06 08 18.3**	**-0.7**
KMI				pP	pP	06 08 27.1	+4.8
KMI				sP	sP	06 08 31.3	+7.8
KMI				PP	PP	06 10 52.4	+1.9
KMI				S	S	06 17 18.3	-3.9
KMI				sS	sS	06 17 34.9	+7.3
KMI				SS	SS	06 21 42.8	-3.6
KMI				pmax	pmax		
comp=Z,29nm,0.8s,mb5.3							
KMI				pmax	pmax		
comp=Z,170nm,4.8s							
KMI				LR	LR		
comp=N,300nm,22.5s,MS4.6							
KMI				LR	LR		
comp=E,230nm,22.5s,MS4.6							
KMI				LR	LR		
comp=Z,260nm,25.4s,MS4.4							
XAN	**Xi'an**	**68.86**	**63**	P	**P**	**06 08 18.3**	**-1.7**
XAN				pP	pP	06 08 28.1	+4.8
XAN				pmax	pmax		
comp=Z,6.0nm,1.7s,mb4.2							
XAN				pmax	pmax		
comp=Z,36nm,7.6s							
XAN				LR	LR		
comp=N,190nm,20.4s,MS4.4							
XAN				LR	LR		
comp=E,120nm,20.4s,MS4.4							
XAN				LR	LR		
comp=Z,120nm,16.7s,MS4.2							
CHTO	**Chiang Mai**	**68.95**	**82**	*e*P	**P**	**06 08 19.5**	**-1.3**
CHTO				*e**PP	pP	06 08 29.3	+5.2
CHTO				pmax	pmax		
comp=Z,25nm,1.3s,mb5.0							
CHTO	**Chiang Mai**	**68.95**	**82**	*e*P	**P**	**06 08 19.5**	**-1.3**
comp=Z,25nm,1.3s,mb5.0							
CHTO				*e*pP	pP	06 08 29.3	+5.2
CHTO	**Chiang Mai**	**68.95**	**82**	P	**P**	**06 08 20.2**	**-0.6**
SNR=8.6							
CHTO				P		06 08 20.2	
SNR=8.6							
CHTO	**Chiang Mai**	**68.95**	**82**	*e*P	**P**	**06 08 19.5**	**-1.3**
comp=Z,25nm,1.3s,mb5.0							
CHTO				*e*pP	pP	06 08 29.3	+5.2
CMAR	**Chiang Mai Arr**	**69.14**	**82**	P	**P**	**06 08 20.1**	**-1.9**
comp=Z,9.4nm,0.8s,mb4.8,baz=303,slow=7.8,SNR=36							
CMAR				LR	LR	06 42 59.4	
comp=Z,195nm,19.7s,MS4.3,baz=94,slow=40							
CMAR	**Chiang Mai Arr**	**69.14**	**82**	P	**P**	**06 08 20.1**	**-1.9**
CMAR				pmax	pmax		
comp=Z,9.0nm,0.8s							
CMAR				MLR	MLR		
comp=Z,195nm,19.7s							
CMAR	**Chiang Mai Arr**	**69.14**	**82**	P	**P**	**06 08 20.1**	**-1.9**
BJI	**Beijing**	**70.83**	**54**	P	**P**	**06 08 31.1**	**-1.0**
BJI				PP	PP	06 11 07.5	-1.1
BJI				S	S	06 17 44.3	-2.8
BJI				SS	SS	06 22 13.4	-5.4
BJI				pmax	pmax		
comp=Z,25nm,1.1s,mb5.1							
BJI				pmax	pmax		
comp=Z,150nm,5.1s							

BJI				LR	LR		
comp=N,290nm,25.2s,MS4.6							
BJI				LR	LR		
comp=E,280nm,26.2s,MS4.6							
BJI				LR	LR		
comp=Z,290nm,30.4s,MS4.3							
GYA	**Guiyang**	**71.02**	**71**	P	**P**	**06 08 32.4**	**-1.1**
GYA				pP	pP	06 08 45.5	+8.8
GYA				sP	sP	06 08 46.9	+9.0
GYA				PcP	PcP	06 08 55.3	+1.5
GYA				PP	PP	06 11 13.0	+2.3
GYA				S	S	06 17 44.6	-5.1
GYA				sS	sS	06 18 01.0	+5.9
GYA				SKS		06 18 30.4	
GYA				SS	SS	06 22 19.3	-3.1
GYA				pmax	pmax		
comp=Z,10.0nm,1.0s,mb4.7							
GYA				pmax	pmax		
comp=Z,50nm,6.5s							
GYA				LR	LR		
comp=N,550nm,18.6s,MS5.0							
GYA				LR	LR		
comp=E,520nm,19.7s,MS5.0							
GYA				LR	LR		
comp=Z,730nm,18.9s,MS5.0							
ENH	**Enshi**	**71.18**	**66**	*e*P	**P**	**06 08 33.2**	**-1.1**
comp=Z,24nm,0.8s,mb5.2							
ENH	**Enshi**	**71.18**	**66**	*e*P	**P**	**06 08 33.2**	**-1.1**
comp=Z,24nm,0.8s,mb5.2							
BILL	**Bilibino**	**72.86**	**13**	⇓*i*P	**P**	**06 08 43.0**	**-0.8**
BILL				*i*		06 08 52.4	
BILL				pmax	pmax		
comp=Z,7.0nm,1.6s,mb4.3							
BILL				MLR	MLR		
comp=Z,300nm,17.0s,MS4.6							
BILL	**Bilibino**	**72.86**	**13**	*e*P	**P**	**06 08 43.3**	**-0.5**
comp=Z,14nm,1.0s,mb4.9							
BILL				*e*pP	pP	06 08 52.4	+5.4
BILL	**Bilibino**	**72.86**	**13**	*e*P	**P**	**06 08 43.3**	**-0.5**
comp=Z,14nm,1.0s,mb4.9							
BILL				*e*pP	pP	06 08 52.4	+5.3
SEY	**Seymchan**	**73.75**	**21**	*c*e*P	**P**	**06 08 49.2**	**+0.1**
INK	**Inuvik**	**74.35**	**351**	P	**P**	**06 08 51.2**	**-1.3**
comp=Z,1.3nm,0.6s,mb4.0,baz=20,slow=10.0,SNR=4.5							
INK	**Inuvik**	**74.35**	**351**	P	**P**	**06 08 51.3**	**-1.2**
INK				pmax	pmax		
comp=Z,1.0nm,0.6s							
INK	**Inuvik**	**74.35**	**351**	P	**P**	**06 08 51.2**	**-1.3**
CN2	**Changchun**	**74.58**	**47**	*e*P	**P**	**06 08 53.3**	**-1.0**
CN2				*e*PP	PP	06 11 41.3	+0.8
CN2				*e*S	S	06 18 22.1	-7.6
CN2				*e*SS	SS	06 23 10.3	-5.5
CN2				pmax	pmax		
comp=Z,50nm,0.9s,mb5.4							
CN2				pmax	pmax		
comp=Z,200nm,5.0s							
CN2				LR	LR		
comp=N,300nm,15.0s,MS4.9							
CN2				LR	LR		
comp=E,300nm,15.0s,MS4.9							
CN2				LR	LR		
comp=Z,500nm,18.0s,MS4.8							
KLR	**Kul'dur**	**74.85**	**40**	*e*P	**P**	**06 08 50.7**	**-5.0**
YKA	**Yellowknife Ar**	**75.77**	**341**	P	**P**	**06 09 00.0**	**-0.7**
comp=Z,1.2nm,0.6s,mb4.0,baz=34,slow=5.3,SNR=13							
YKA	**Yellowknife Ar**	**75.77**	**341**	P	**P**	**06 09 00.0**	**-0.8**
YKA				pmax	pmax		
comp=Z,1.0nm,0.6s							
YKA	**Yellowknife Ar**	**75.77**	**341**	P	**P**	**06 09 00.1**	**-0.7**
MDJ	**Mudanjiang**	**76.50**	**44**	P	**P**	**06 09 05.3**	**0.0**
MDJ				pP	pP	06 09 11.8	+3.2
MDJ				sP	sP	06 09 14.3	+4.5
MDJ				PP	PP	06 11 51.3	-5.3
MDJ				S	S	06 18 47.5	-3.4
MDJ				SS	SS	06 23 42.4	-2.4
MDJ				pmax	pmax		
comp=Z,5.0nm,1.0s,mb4.4							
MDJ				pmax	pmax		
comp=Z,87nm,6.2s							
MDJ				LR	LR		
comp=N,310nm,16.3s,MS5.0							
MDJ				LR	LR		
comp=E,400nm,14.3s,MS5.0							
MDJ				LR	LR		
comp=Z,510nm,15.3s,MS5.0							
COLD	**Coldfoot**	**76.88**	**357**	*e*P	**P**	**06 09 06.7**	**-0.4**
comp=Z,10nm,1.1s,mb4.7							
COLD				*e*pP	pP	06 09 15.1	+4.8
COLD	**Coldfoot**	**76.88**	**357**	*e*P	**P**	**06 09 06.7**	**-0.3**
comp=Z,10nm,1.1s,mb4.7							
COLD				*e*pP	pP	06 09 15.1	+4.8
NJ2	**Nanjing**	**76.98**	**60**	*e*P	**P**	**06 09 08.6**	**+0.4**
NJ2				pmax	pmax		
comp=Z,20nm,0.7s,mb5.2							
HABR	**Khabarovsk**	**77.02**	**39**	*c*e*P	**P**	**06 09 06.1**	**-2.0**
HABR				*e*		06 09 16.4	
HABR						06 11 58.6	
HABR				*e*PPP		06 13 45.6	
HABR				pmax	pmax		
comp=N,23nm,1.8s							
HABR				pmax	pmax		
comp=E,70nm,2.5s							
HABR				pmax	pmax		
comp=Z,63nm,2.0s,mb5.2							
COWI	**Conover**	**77.37**	**318**	*e*P	**P**	**06 09 10.2**	**+0.1**
comp=Z,4.4nm,0.6s,mb4.6							
COWI	**Conover**	**77.37**	**318**	*e*P	**P**	**06 09 10.2**	**0.0**
comp=Z,4.4nm,0.6s,mb4.6							
EYMN	**Ely**	**77.43**	**321**	*e*P	**P**	**06 09 06.8**	**-3.6**
comp=Z,19nm,1.6s,mb4.8							
QIZ	**Qiongzhong**	**77.49**	**76**	P	**P**	**06 09 07.1**	**-4.2**
QIZ				S	S	06 18 51.6	-11
QIZ				pmax	pmax		
comp=Z,12nm,1.4s,mb4.6							
QIZ				pmax	pmax		
comp=Z,100nm,5.6s							
QIZ				LR	LR		
comp=N,200nm,21.9s							
QIZ				LR	LR		
comp=Z,140nm,18.1s,MS4.3							
FFC	**Flin Flon**	**77.57**	**330**	*e*P	**P**	**06 09 11.3**	**+0.2**
FFC				pmax	pmax		
comp=Z,7.0nm,1.0s,mb4.5							
FFC	**Flin Flon**	**77.57**	**330**	*e*P	**P**	**06 09 11.3**	**+0.2**
comp=Z,7.0nm,1.0s,mb4.5							
FFC	**Flin Flon**	**77.57**	**330**	*e*P	**P**	**06 09 11.3**	**+0.2**
comp=Z,7.0nm,1.0s,mb4.5							
KULM	**Kulim**	**77.85**	**92**	*e*P	**P**	**06 09 12.7**	**-0.7**
comp=Z,23nm,1.0s,mb5.1							
KULM				*e*pP	pP	06 09 21.5	+4.9
KULM	**Kulim**	**77.85**	**92**	*e*P	**P**	**06 09 12.7**	**-0.7**
comp=Z,23nm,1.0s,mb5.1							
KULM				*e*pP	pP	06 09 21.5	+4.8
PSI	**Prapat**	**77.91**	**95**	P	**P**	**06 09 12.1**	**-1.5**
comp=Z,5.6nm,0.8s,mb4.6,baz=257,slow=6.3,SNR=11							
PSI	**Prapat**	**77.91**	**95**	P	**P**	**06 09 12.1**	**-1.6**
PSI				pmax	pmax		
comp=Z,6.0nm,0.8s,mb4.6							
ULM	**Lac du Bonnet**	**78.06**	**324**	P	**P**	**06 09 12.2**	**-1.8**
comp=Z,3.0nm,0.6s,mb4.4,baz=38,slow=10,SNR=3.6			

comp=Z,30nm,1.2s,mb5.1
CHUM *e*pP pP 06 09 36.2 +6.9
CHUM Lake Minchumin 80.31 357 *e*P **P 06 09 26.4 +0.4**
comp=Z,30nm,1.2s,mb5.1
CHUM *e*pP pP 06 09 36.2 +6.9
KTH Kantishna Hill 80.59 357 *e*P **P 06 09 27.3 -0.1**
comp=Z,10.0nm,1.1s,mb4.7
KTH *e*pP pP 06 09 37.1 +6.3
KTH Kantishna Hill 80.59 357 *e*P **P 06 09 27.3 -0.2**
comp=Z,10.0nm,1.1s,mb4.7
KTH *e*pP pP 06 09 37.1 +6.3
TRF Thorofare Moun 80.66 356 *e*P **P 06 09 27.5 -0.4**
comp=Z,14nm,1.1s,mb4.8
TRF *e*pP pP 06 09 37.6 +6.4
TRF Thorofare Moun 80.66 356 *e*P **P 06 09 27.5 -0.3**
comp=Z,14nm,1.1s,mb4.8
TRF *e*pP pP 06 09 37.6 +6.4
MENT Mentasta 80.69 353 *e*P **P 06 09 29.0 +0.9**
MENT *e*pP pP 06 09 39.8 +8.4
MENT Mentasta 80.69 353 *e*P **P 06 09 29.0 +1.0**
MENT *e*pP pP 06 09 39.8 +8.4
PPLA Purkeypile 81.30 357 *e*P **P 06 09 31.5 +0.3**
comp=Z,20nm,1.1s,mb5.0
PPLA *e*pP pP 06 09 40.1 +5.5
PPLA Purkeypile 81.30 357 *e*P **P 06 09 31.5 +0.2**
comp=Z,20nm,1.1s,mb5.0
PPLA *e*pP pP 06 09 40.1 +5.5
TTA Tatalina 81.36 359 *e*P **P 06 09 31.8 +0.2**
TTA Tatalina 81.36 359 *e*P **P 06 09 31.8 +0.2**
YSS Yuzh-Sakhalins 81.87 36⇑ *e*P **P 06 09 34.0 -0.6**
YSS *e* 06 09 40.2
YSS *e*S S 06 19 44.0 -4.0
YSS pmax pmax
comp=Z,30nm,0.8s,mb5.3
YSS MLR MLR
comp=N,500nm,16.0s
YSS MLR MLR
comp=Z,500nm,16.0s,MS5.0
YSS Yuzh-Sakhalins 81.87 36 *e*P **P 06 09 34.1 -0.5**
comp=Z,57nm,1.1s,mb5.4
YSS *e*pP pP 06 09 42.5 +4.6
YSS Yuzh-Sakhalins 81.87 36 *e*P **P 06 09 34.1 -0.5**
comp=Z,57nm,1.1s,mb5.4
YSS *e*pP pP 06 09 42.5 +4.6
PMR Palmer 82.44 356 *e*P **P 06 09 37.3 0.0**
PMR pmax pmax
comp=Z,16nm,1.5s,mb4.7
PMR Palmer 82.44 356 *e*P **P 06 09 37.3 0.0**
comp=Z,16nm,1.5s,mb4.7
PMR Palmer 82.44 356 *e*P **P 06 09 37.3 0.0**
comp=Z,16nm,1.5s,mb4.7
BMRM Bremner River 82.71 353 *e*P **P 06 09 38.8 +0.1**
comp=Z,8.9nm,0.8s,mb4.8
BMRM *e*pP pP 06 09 48.4 +6.4
BMRM Bremner River 82.71 353 *e*P **P 06 09 38.8 +0.1**
comp=Z,8.9nm,0.8s,mb4.8
BMRM *e*pP pP 06 09 48.4 +6.3
ECSD EROS Data Cent 82.91 320 *e*P **P 06 09 40.4 +0.2**
comp=Z,10nm,1.2s,mb4.7
ECSD EROS Data Cent 82.91 320 *e*P **P 06 09 40.4 +0.3**
comp=Z,10nm,1.2s,mb4.7
WVT Waverly 82.95 310 *e*P **P 06 09 39.5 -1.0**
WVT pmax pmax
comp=Z,14nm,1.6s,mb4.7
WVT Waverly 82.95 310 *e*P **P 06 09 39.5 -1.0**
comp=Z,14nm,1.6s,mb4.8
WVT Waverly 82.95 310 *e*P **P 06 09 39.5 -1.0**
comp=Z,14nm,1.6s,mb4.8
SKAG Skagway 82.99 348 *e*P **P 06 09 40.6 +0.4**
comp=Z,13nm,1.7s,mb4.7
SKAG Skagway 82.99 348 *e*P **P 06 09 40.6 +0.4**
comp=Z,13nm,1.7s,mb4.7
YHNB Yeheng 83.05 65 *e*P **P 06 09 40.5 -0.7**
comp=Z,11nm,0.8s,mb5.0
YHNB Yeheng 83.05 65 *e*P **P 06 09 40.5 -0.7**
comp=Z,11nm,0.8s,mb5.0
SVW2 Sparrevohn 83.19 359 *e*P **P 06 09 41.4 +0.2**
SVW2 Sparrevohn 83.19 359 *e*P **P 06 09 41.4 +0.2**
PETK Petropavlovsk- 83.30 25 P **P 06 09 40.1 -1.9**
comp=Z,1.8nm,0.8s,mb4.1,baz=324,slow=6.2,SNR=3.2
PETK LR LR 06 54 07.4
comp=Z,214nm,19.3s,MS4.5,baz=314,slow=41
PETK Petropavlovsk- 83.30 25 P **P 06 09 40.1 -1.9**
CCM Cathedral Cave 83.77 313 *e*P **P 06 09 45.1 +0.4**
CCM *e**PP pP 06 09 51.6 +3.6
CCM pmax pmax
comp=Z,3.0nm,0.7s,mb4.5
CCM Cathedral Cave 83.77 313 *e*P **P 06 09 45.1 +0.4**
comp=Z,3.1nm,0.7s,mb4.5
CCM *e*pP pP 06 09 51.6 +3.6
CCM Cathedral Cave 83.77 313 *e*P **P 06 09 45.1 +0.4**
comp=Z,3.1nm,0.7s,mb4.5
CCM *e*pP pP 06 09 51.6 +3.6
A18A Metzger Ranch, 85.15 330⇑P **P 06 09 50.2 -1.2**
baz=85,SNR=18
B18A Beardsley Farm 85.54 330⇓PcP **P 06 09 54.5 +1.1**
baz=85,SNR=14
EGMT Eagleton 85.83 330 PcP **P 06 09 56.0 +1.1**
baz=86,SNR=15
EGMT Eagleton 85.83 330 *e*P **P 06 09 55.6 +0.8**
comp=Z,38nm,1.3s,mb5.5
EGMT *e*pP pP 06 10 06.1 +7.9
EGMT Eagleton 85.83 330 *e*P **P 06 09 55.6 +0.8**
comp=Z,38nm,1.3s,mb5.5
EGMT *e*pP pP 06 10 06.1 +7.9
B17A L&G Farms, Che 86.03 331⇑P **P 06 09 54.3 -1.6**
baz=86
A15A Johnson Ranch, 86.23 332⇓P **P 06 09 54.8 -2.0**
baz=86
A15A ⇑PcP PcP 06 09 57.1 -2.3
baz=86,SNR=24
B16A M & M Farms, S 86.30 331⇓P **P 06 09 55.6 -1.5**
baz=86
KDAK Kodiak Island 86.43 357 P **P 06 09 57.3 -0.3**
comp=Z,3.6nm,0.7s,mb4.7,baz=65,slow=5.2,SNR=4.4
KDAK Kodiak Island 86.43 357 P **P 06 09 57.3 -0.3**
KDAK pmax pmax
comp=Z,4.0nm,0.7s,mb4.8
KDAK Kodiak Island 86.43 357 P **P 06 09 57.3 -0.3**
A14A Double T Ranch 86.50 332⇓P **P 06 09 56.5 -1.6**
baz=86
A14A ⇑PcP PcP 06 09 58.8 -1.8
baz=86,SNR=14
D18A Linhart Farms, 86.50 329⇓PcP PcP 06 09 59.1 -1.5
baz=86,SNR=5.2
C17A Wharram Farm, 86.55 330⇓PcP PcP 06 09 58.9 -1.9
baz=86
B15A Bradely Ranch, 86.71 331⇓PcP PcP 06 09 59.3 -2.2
baz=86,SNR=11
MAJO Matsushiro 86.71 46 *e*P **P 06 09 58.9 -0.5**
MAJO pmax pmax
comp=Z,7.0nm,0.8s,mb4.9
MAJO Matsushiro 86.71 46 *e*P **P 06 09 58.9 -0.6**
comp=Z,7.4nm,0.8s,mb5.0
MAJO Matsushiro 86.71 46 *e*P **P 06 09 58.8 -0.6**
comp=Z,7.4nm,0.8s,mb5.0
MJAR Matsushiro Arr 86.71 46 P **P 06 09 58.2 -1.2**
comp=Z,7.3nm,0.8s,mb4.9,baz=310,slow=5.5,SNR=21
MJAR LR LR 06 54 13.0
comp=Z,296nm,18.6s,MS4.7,baz=335,slow=40
MJAR Matsushiro Arr 86.71 46 P **P 06 09 58.2 -1.2**
C16A Fuhringer Ranc 86.81 331⇑P **P 06 09 58.1 -1.5**
baz=86
C16A ⇓PcP PcP 06 09 59.7 -2.3
baz=86,SNR=5.3
D17A Six Diamond Ra 86.90 330⇓PcP PcP 06 10 01.0 -1.4
baz=87
B14A Marquette Ranc 86.94 332⇓P **P 06 09 58.7 -1.6**
baz=87
B14A ⇓PcP PcP 06 10 00.8 -1.8
baz=87
OHAK Old Harbor 87.01 357 *e*P **P 06 10 00.9 +0.4**
comp=Z,107nm,2.6s,mb5.6
OHAK Old Harbor 87.01 357 *e*P **P 06 10 00.9 +0.4**
comp=Z,107nm,2.6s,mb5.6
E18A Harlowton 87.05 329⇑P **P 06 09 59.3 -1.6**
baz=87,SNR=7.1
E18A ⇑PcP PcP 06 10 01.5 -1.6
baz=87
D16A Dana Ranch, Ca 87.35 330⇑PcP PcP 06 10 03.0 -1.4
baz=87,SNR=12
B13A Whitefish 87.39 333⇓PcP PcP 06 10 03.3 -1.2
baz=87,SNR=5.6
F18A Big Timber 87.50 328⇑PcP PcP 06 10 03.2 -1.8
baz=87,SNR=6.3
MIAR Mount Ida 87.52 312 *e*P **P 06 10 04.1 +0.7**
MIAR pmax pmax
comp=Z,5.0nm,1.0s,mb4.7
MIAR Mount Ida 87.52 312 *e*P **P 06 10 04.1 +0.7**
comp=Z,4.6nm,1.0s,mb4.7
MIAR Mount Ida 87.52 312 *e*P **P 06 10 04.1 +0.7**
comp=Z,4.6nm,1.0s,mb4.7
E17A Martinsdale 87.53 329⇑P **P 06 10 01.9 -1.3**
baz=87
E17A ⇑PcP PcP 06 10 03.9 -1.2
baz=87,SNR=6.7
GCMT Greycliff 87.56 328 *e*P **P 06 10 04.5 +1.2**
comp=Z,2.0nm,0.7s,mb4.5
GCMT Greycliff 87.56 328 *e*P **P 06 10 04.5 +1.1**
comp=Z,2.0nm,0.7s,mb4.5
C14A Swan Lake 87.61 332⇓PcP PcP 06 10 03.9 -1.6
baz=87
YBMT Yellow Bay 87.64 332 *e*P **P 06 10 03.5 -0.2**
comp=Z,12nm,1.3s,mb5.0
YBMT Yellow Bay 87.64 332 *e*P **P 06 10 03.5 -0.2**
comp=Z,12nm,1.3s,mb5.0
D15A Lincoln 87.73 331⇓P **P 06 10 02.5 -1.6**
baz=87
JTMT Jette 87.84 332 *e*P **P 06 10 05.1 +0.5**
comp=Z,25nm,1.4s,mb5.2
JTMT Jette 87.84 332 *e*P **P 06 10 05.1 +0.5**
comp=Z,25nm,1.4s,mb5.2
F17A Fitzpatrick Pl 87.89 329⇓PcP PcP 06 10 06.4 -0.4
baz=88,SNR=5.7
G18A Lazy EL Ranch, 87.90 328⇓PcP **P 06 10 04.9 -0.1**
baz=88
RLMT Red Lodge 87.92 328⇑PcP **P 06 10 05.3 +0.2**
baz=88
RLMT Red Lodge 87.92 328 *e*P **P 06 10 06.8 +1.7**
comp=Z,15nm,1.5s,mb5.0
RLMT Red Lodge 87.92 328 *e*P **P 06 10 06.8 +1.7**
comp=Z,15nm,1.5s,mb5.0
SWMT Swartz Lake 87.92 332 *e*P **P 06 10 05.8 +0.8**
comp=Z,12nm,1.3s,mb5.0
SWMT Swartz Lake 87.92 332 *e*P **P 06 10 05.8 +0.8**
comp=Z,11nm,1.3s,mb4.9
BSMT Bassoo Peak 87.94 332 *e*P **P 06 10 05.0 -0.1**
comp=Z,5.9nm,1.3s,mb4.7
BSMT Bassoo Peak 87.94 332 *e*P **P 06 10 05.0 -0.1**
comp=Z,5.9nm,1.3s,mb4.7
SLMT Seeley Lake 87.95 331 *e*P **P 06 10 05.2 0.0**
comp=Z,5.1nm,1.1s,mb4.7
SLMT Seeley Lake 87.95 331 *e*P **P 06 10 05.2 0.0**
comp=Z,5.1nm,1.1s,mb4.7
FX1 Attu Island--F 88.00 17 P **P 06 10 03.0 -2.3**
comp=Z,2.0nm,0.6s,mb4.5,baz=347,slow=14,SNR=3.0
FX1 Attu Island--F 88.00 17 P **P 06 10 03.0 -2.3**
FX1 pmax pmax
comp=Z,2.0nm,0.6s
FX1 Attu Island--F 88.00 17 P **P 06 10 03.0 -2.3**
FX1 Attu Island--F 88.00 17 P **P 06 10 03.0 -2.3**
C13A Hot Springs 88.00 332⇑P **P 06 10 03.7 -1.7**
baz=88
C13A ⇑PcP PcP 06 10 05.9 -1.3
baz=88
D14A Greenough 88.09 331⇓P **P 06 10 04.0 -1.9**
baz=88
D14A ⇓PcP PcP 06 10 06.2 -1.4
baz=88
CHMT Chamberlain Mo 88.12 331 *e*P **P 06 10 06.5 +0.5**
comp=Z,4.2nm,1.3s,mb4.5
CHMT Chamberlain Mo 88.12 331 *e*P **P 06 10 06.5 +0.5**
comp=Z,4.2nm,1.3s,mb4.5
E15A Deer Lodge 88.28 330⇓PcP **P 06 10 06.6 -0.2**
baz=88
C12B Naegeli Ranch, 88.31 333⇓P **P 06 10 05.3 -1.6**
baz=88
C12B ⇓PcP PcP 06 10 07.8 -0.8
baz=88
F16A Kennard Place, 88.39 329⇓PcP PcP 06 10 08.5 -0.5
baz=88
G17A Pierce Place, 88.39 329⇑PcP PcP 06 10 08.3 -0.7
baz=88
NEW Newport 88.45 334 *e*P **P 06 10 07.6 +0.1**
NEW pmax pmax
comp=Z,5.0nm,0.8s
NEW Newport 88.45 334 *e*P **P 06 10 07.6 +0.1**
comp=Z,5.2nm,0.8s,mb4.8
NEW Newport 88.45 334 *e*P **P 06 10 07.6 +0.1**
comp=Z,5.2nm,0.8s,mb4.8
BOZ Bozeman (W) 88.50 329⇑P **P 06 10 06.2 -1.6**
baz=88
BOZ ⇑PcP PcP 06 10 08.1 -1.4
baz=88
BOZ Bozeman (W) 88.50 329 *e*P **P 06 10 08.6 +0.8**
BOZ pmax pmax
comp=Z,4.0nm,1.1s,mb4.7
BOZ Bozeman (W) 88.50 329 *e*P **P 06 10 08.6 +0.8**
comp=Z,4.2nm,1.1s,mb4.7
BOZ Bozeman (W) 88.50 329 *e*P **P 06 10 08.6 +0.8**
comp=Z,4.2nm,1.1s,mb4.7
E14A Clinton 88.63 331⇑PcP PcP 06 10 08.2 -1.8
baz=88
LRM Limekiln Ridge 88.70 330 *e*P **P 06 10 09.4 +0.6**
comp=Z,27nm,1.2s,mb5.5
LRM Limekiln Ridge 88.70 330 *e*P **P 06 10 09.4 +0.7**
comp=Z,27nm,1.2s,mb5.5
F15A Butte 88.70 330⇓PcP **P 06 10 09.0 +0.2**
baz=88
D12A Red Ives Fores 88.82 332⇑P **P 06 10 07.8 -1.5**
baz=88
D12A ⇑PcP PcP 06 10 09.6 -1.3
baz=88
E13A Victor 88.88 331⇑PcP PcP 06 10 10.1 -1.0
baz=88
G16A Moss Hill, Enn 88.91 329⇑P **P 06 10 08.4 -1.3**
baz=89
G16A ⇓PcP PcP 06 10 10.7 -0.6
baz=89,SNR=6.1
L22A Ellis Ranch, M 89.06 324⇓PcP **P 06 10 10.3 -0.2**
baz=89
H17A Grant Village 89.07 328⇓P **P 06 10 08.9 -1.6**
baz=89
F14A Wisdom 89.08 330⇓P **P 06 10 08.8 -1.7**
baz=89
H16A Russell Place, 89.11 329⇓P **P 06 10 09.1 -1.6**
baz=89
DLMT Dillon 89.13 330 *e*P **P 06 10 11.5 +0.7**
comp=Z,6.6nm,1.2s,mb4.8
DLMT Dillon 89.13 330 *e*P **P 06 10 11.5 +0.7**
comp=Z,6.6nm,1.2s,mb4.8
G15A Dillon 89.25 330⇑P **P 06 10 09.5 -1.8**
baz=89
E12A Beaver Dam Sad 89.43 332⇓PcP PcP 06 10 11.7 -1.8
baz=89
K20A Yellowstone Ra 89.45 326⇓P **P 06 10 10.7 -1.6**
baz=89
K20A ⇓PcP PcP 06 10 12.0 -1.8
baz=89,SNR=5.3
F13A Darby 89.47 331⇓PcP **P 06 10 12.3 -0.1**
baz=89
K19A Absolon Red Bu 89.55 326⇑PcP **P 06 10 12.7 -0.1**
baz=89
M22A Cedar Creek Ra 89.62 324⇓PcP **P 06 10 13.0 -0.2**
baz=89
MCMT McKenzie Canyo 89.67 330 *e*P **P 06 10 13.5 +0.2**
comp=Z,0.9nm,1.0s,mb4.0
MCMT McKenzie Canyo 89.67 330 *e*P **P 06 10 13.5 +0.2**
comp=Z,0.9nm,1.0s,mb4.0
H15A Lima 89.76 329⇓P **P 06 10 11.5 -2.3**
baz=89
J18A Kendall Valley 89.77 327⇓PcP **P 06 10 13.8 0.0**
baz=89,SNR=11
M21A Separation Pea 89.82 324⇓P **P 06 10 12.8 -1.3**
baz=90
F12A Elk City 89.86 332⇓PcP **P 06 10 13.6 -0.6**
baz=90
BW06 Boulder Array 89.92 326⇓P **P 06 10 13.0 -1.6**
baz=90
BW06 Boulder Array 89.92 326 *e*P **P 06 10 13.9 -0.6**
comp=Z,6.1nm,1.3s,mb4.8
BW06 Boulder Array 89.92 326 *e*P **P 06 10 13.9 -0.6**
comp=Z,6.1nm,1.3s,mb4.8
PDAR Pinedale Array 89.92 326 P **P 06 10 14.3 -0.3**
comp=Z,1.1nm,0.7s,mb4.3,baz=70,slow=4.9,SNR=9.4
PDAR LR LR 06 50 14.7
comp=Z,521nm,21.7s,MS4.9,baz=34,slow=35
PDAR Pinedale Array 89.92 326 P **P 06 10 14.3 -0.2**
TPAW Teton Pass 89.95 328 *e*P **P 06 10 15.6 +0.9**
comp=Z,2.5nm,0.8s,mb4.6
TPAW Teton Pass 89.95 328 *e*P **P 06 10 15.6 +0.9**
comp=Z,2.5nm,0.8s,mb4.6
L20A Wamsutter 89.97 325⇑P **P 06 10 13.5 -1.3**
baz=90
G13A Cobalt 90.01 331⇑PcP PcP 06 10 15.2 -0.9
baz=90
H14A Leadore 90.06 330⇓PcP **P 06 10 14.6 -0.6**
baz=90
RRI2 Red Ridge 90.23 328 *e*P **P 06 10 16.8 +0.8**
comp=Z,26nm,1.8s,mb5.2
K18A Toltan Ranch, 90.24 327⇓PcP PcP 06 10 16.5 -0.7
baz=90,SNR=5.2
M20A Sweetwater, Wa 90.30 325⇑P **P 06 10 15.0 -1.4**
baz=90
L19A Farson 90.36 326⇑P **P 06 10 14.9 -1.7**
baz=90
ISCO Idaho Springs 90.37 322 *e*P **P 06 10 17.2 +0.5**
ISCO pmax pmax
comp=Z,7.0nm,1.4s,mb4.8
ISCO Idaho Springs 90.37 322 *e*P **P 06 10 17.2 +0.5**
comp=Z,6.7nm,1.4s,mb4.8
ISCO Idaho Springs 90.37 322 *e*P **P 06 10 17.2 +0.5**
comp=Z,6.7nm,1.4s,mb4.8
G12A Big Creek, Yel 90.41 331⇑P **P 06 10 14.9 -1.9**
baz=90
F10A Beach Ranch, E 90.43 333⇑P **P 06 10 15.2 -1.6**
baz=90
WMOK Wichita Mounta 90.45 315 *e*P **P 06 10 17.8 +0.6**
WMOK pmax pmax
comp=Z,3.0nm,0.8s,mb4.7
WMOK Wichita Mounta 90.45 315 *e*P **P 06 10 17.8 +0.6**
comp=Z,3.0nm,0.8s,mb4.7
WMOK Wichita Mounta 90.45 315 *e*P **P 06 10 17.8 +0.6**
comp=Z,3.0nm,0.8s,mb4.7
H13A Challis 90.46 330⇑P **P 06 10 14.5 -2.5**
baz=90
N21A Black Mountain 90.56 324⇑P **P 06 10 17.2 -0.4**
baz=90,SNR=6.3
I14A Mackay 90.66 329⇓P **P 06 10 17.9 0.0**
baz=90
J15A Blackfoot 90.66 329⇓P **P 06 10 17.0 -1.0**
baz=90
H12A Diamond D Ranc 90.71 331⇑P **P 06 10 15.7 -2.5**
baz=90
M19A Rock Springs 90.74 325⇑P **P 06 10 17.6 -0.8**
baz=90
N20A Spence Gulch, 90.85 325⇑P **P 06 10 18.1 -0.8**
baz=90
G09A Cove 91.22 333⇑P **P 06 10 19.7 -0.8**
baz=91
N19A John Jarvie Ra 91.23 325⇑P **P 06 10 19.3 -1.4**
baz=91
K15A Arbon 91.29 328⇓P **P 06 10 21.0 +0.1**
baz=91
L16A Fish Haven 91.35 327⇓P **P 06 10 20.1 -1.1**
baz=91
O20A White River Ci 91.39 324⇓P **P 06 10 20.1 -1.3**
baz=91
N18A Larsen Ranch, 91.39 325⇓P **P 06 10 19.5 -1.9**
baz=91
BMO Blue Mountains 91.41 332 *e*P **P 06 10 21.1 -0.3**
BMO pmax pmax
comp=Z,5.0nm,1.3s,mb4.7
BMO Blue Mountains 91.41 332 *e*P **P 06 10 21.1 -0.3**
comp=Z,4.7nm,1.3s,mb4.7
BMO Blue Mountains 91.41 332 *e*P **P 06 10 21.1 -0.3**
comp=Z,4.7nm,1.3s,mb4.7
H10A Noah's Angus R 91.42 332⇓P **P 06 10 19.2 -2.2**
baz=91
M17A Scullys Gap (B 91.45 326⇑P **P 06 10 19.9 -1.7**
baz=91
I12A Atlanta 91.45 330⇑P **P 06 10 21.4 -0.2**
baz=91
K14A Jones Ranch, D 91.67 328⇓P **P 06 10 22.8 +0.1**
baz=91
O19A Miners Draw (B 91.67 325⇑P **P 06 10 22.6 -0.2**
baz=91
Q22A Crested Butte, 91.73 322⇓P **P 06 10 22.5 -0.5**
baz=91
HWUT Hardware Ranch 91.74 327 *e*P **P 06 10 22.9 -0.2**
comp=Z,13nm,1.3s,mb5.1
HWUT Hardware Ranch 91.74 327 *e*P **P 06 10 22.9 -0.1**
comp=Z,13nm,1.3s,mb5.1
P20A De Beque 91.96 324⇓P **P 06 10 23.4 -0.6**
baz=92
U26A Atchley Ranch, 91.99 319⇑P **P 06 10 23.6 -0.7**
baz=92
M16A Huntsville 92.00 327⇑P **P 06 10 23.0 -1.3**
baz=92
U25A Circle Dot Ran 92.34 319⇑P **P 06 10 26.6 +0.7**
baz=92
L13A Double Diamond 92.37 329⇓P **P 06 10 27.2 +1.3**
baz=92
V26A Tequesquite Ra 92.46 319⇓P **P 06 10 26.6 +0.1**
baz=92
O17A Robinson Place 92.50 326⇓P **P 06 10 26.5 -0.1**
baz=92
M14A Sheep Mountain 92.60 328⇓P **P 06 10 27.0 -0.1**
baz=92
K11A Parker Ranch, 92.66 330⇓P **P 06 10 28.4 +1.1**
baz=92
P18A Preston Nutter 92.73 325⇑P **P 06 10 28.1 +0.5**
baz=92
L12A House Creek Ra 92.77 329⇑P **P 06 10 27.8 0.0**
baz=92
Q19A Hogan Spring (92.80 324⇑P **P 06 10 28.9 +0.9**
baz=92
J09A Fry Pan Ranch, 92.85 332⇓P **P 06 10 28.6 +0.5**
baz=92
I07A Izee 92.88 333⇓P **P 06 10 26.5 -1.8**
baz=92
R20A Redvale 92.98 323⇓P **P 06 10 26.4 -2.4**
baz=93
N14A Grayback Hills 93.07 328⇑P **P 06 10 27.8 -1.4**
baz=93
PV04 Paradox Valley 93.07 323 *e*P **P 06 10 30.4 +1.1**
PV04 Paradox Valley 93.07 323 *e*P **P 06 10 30.4 +1.1**
Q18A Rafter H Ranch 93.10 325⇓P **P 06 10 29.6 +0.2**
baz=93
PV01 Paradox Valley 93.11 323 *e*P **P 06 10 29.8 +0.3**
comp=Z,373nm,1.1s
PV01 Paradox Valley 93.11 323 *e*P **P 06 10 29.8 +0.4**
comp=Z,373nm,1.1s
PV10 Paradox Valley 93.15 323 *e*P **P 06 10 30.7 +1.1**
comp=Z,51nm,0.7s,mb6.1
PV10 Paradox Valley 93.15 323 *e*P **P 06 10 30.7 +1.1**
comp=Z,51nm,0.7s,mb6.1
W25A X Bar L Ranch, 93.26 319⇓P **P 06 10 30.1 0.0**
baz=93
SRU San Rafael 93.27 325⇓P **P 06 10 29.6 -0.5**
baz=93
M12A Wells 93.34 329⇑P **P 06 10 28.5 -1.9**
baz=93
S19A Harvey Farm, M 93.69 323⇓P **P 06 10 31.0 -1.1**
baz=93
W24A Lazy 6 Ranch, 93.77 319⇓P **P 06 10 29.4 -3.1**
baz=94
R17A Hanksville Air 93.91 325⇑P **P 06 10 31.3 -1.9**
baz=94
T18A Mexican Hat 94.53 323⇓P **P 06 10 35.0 -1.0**
baz=94
S16A Weppner Ranch, 94.89 325⇑P **P 06 10 37.0 -0.7**
baz=95
CPUP Villa Florida 97.00 243 LR LR 06 56 29.1
comp=Z,502nm,18.8s,MS5.0,baz=33,slow=37
TXAR Lajitas Array 97.22 314 P **P 06 10 49.1 +0.7**
comp=Z,0.9nm,1.0s,mb4.2,baz=26,slow=3.8,SNR=6.8
TXAR LR LR 06 58 25.9
comp=Z,267nm,18.1s,MS4.8,baz=295,slow=38
TXAR Lajitas Array 97.22 314 P **P 06 10 49.1 +0.7**
NVAR Mina Array Bea 97.25 330 P **P 06 10 48.3 0.0**
comp=Z,0.5nm,0.8s,mb4.0,baz=33,slow=2.2,SNR=3.1
NVAR Mina Array Bea 97.25 330 P **P 06 10 48.3 -0.1**
LPAZ La Paz 99.38 257 LR LR 06 59 08.5
comp=Z,286nm,18.6s,MS4.8,baz=248,slow=37
WRA Warramunga Arr 119.36 94 PKP PKPdf 06 16 04.7 -0.5
comp=Z,1.2nm,0.5s,baz=319,slow=1.8,SNR=4.6
WRA Warramunga Arr 119.36 94 PKIKP PKPdf 06 16 04.7 -0.5
WRA pmax pmax
comp=Z,1.0nm,0.5s
WRA Warramunga Arr 119.36 94 PKIKP PKPdf 06 16 04.7 -0.5
WRAB Tennant Creek 119.36 94 *e*PKIKP PKPdf 06 16 04.4 -0.8
WRAB Tennant Creek 119.36 94 *e*PKIKP PKPdf 06 16 04.4 -0.8
ASAR Alice Springs 120.85 98 PKP PKPdf 06 16 07.5 -0.5
comp=Z,1.1nm,0.4s,baz=331,slow=1.5,SNR=19
ASAR Alice Springs 120.85 98 PKIKP PKPdf 06 16 07.5 -0.4
ASAR pmax pmax
comp=Z,1.0nm,0.4s
QSPA South Pole Qui 125.89 180 *e*PKPdf PKPdf 06 16 16.3 +0.4
QSPA South Pole Qui 125.89 180 *e*PKIKP PKPdf 06 16 16.3 +0.4
STKA Stephens Creek 130.53 104 PKP PKPdf 06 16 26.5 +0.3
comp=Z,2.1nm,0.4s,baz=307,slow=5.1,SNR=3.4

*CSEM **21** 06:15:09.1±0.6, 36°.04N×21°.74E, h2km, ML4.4/2, Error ellipse: s-maj=12.2km s-min=5.5km az=57.0*
*ATH **21** 06:15:11.6, 36°.10N×21°.87E, h5km±5km, MD3.3/11*
*NEIC **21** 06:15:11.6, 36°.10N×21°.87E, h5km, MD3.3(ATH), After ATH.*
*THE **21** 06:15:12.0, 36°.14N×21°.90E, h0km±2km, ML4.4/2, Error ellipse: s-maj=3.8km s-min=1.1km az=249.0*
*IDC **21** 06:15:15.7±4.2, 35°.94N×21°.82E, h69km±27km, mb3.6/7, mb1 3.6/10, mb1mx3.4/29, mbtmp3.5/10, Error ellipse: s-maj=60.5km s-min=24.4km az=31.0*
ISC 21 06:15:09.2±1.1, 36°.04N±0°.04×21°.70E±0°.06, h3km±5km, n66, σ1§09/85, mb3.8/7, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.86**	**2**	P	**Pg**	**06 15 26.1**	**+0.5**
PYL				S	**Sg**	**06 15 38.5**	**+1.8**
PYL	**PYLOS**	**0.86**	**2**	*e*PG	**Pg**	**06 15 26.5**	**+0.9**
PYL				*e*SB	**Sb**	**06 15 39.3**	**+0.7**
PYL	**PYLOS**	**0.86**	**2**	P	**Pg**	**06 15 26.1**	**+0.5**
PYL	**PYLOS**	**0.86**	**2**	*e*Pg	**Pg**	**06 15 26.5**	**+0.9**
PYL				S	**Sg**	**06 15 38.5**	**+1.8**
PYL				*e*Sb	**Sb**	**06 15 39.3**	**+0.7**
KYTH	**Kithira**	**1.11**	**77**	*e*Pn	**Pg**	**06 15 30.7**	**+0.3**
KYTH	**Kithira**	**1.11**	**77**	*e*PN	**Pg**	**06 15 30.7**	**+0.3**
KYTH	**Kithira**	**1.11**	**77**	*e*Pn	**Pg**	**06 15 30.7**	**+0.3**
ITM	**Ithomi**	**1.15**	**9**	*e*Pg	**Pg**	**06 15 31.7**	**+0.4**
ITM				*e*Sb	**Sb**	**06 15 47.5**	**+0.4**
ITM	**Ithomi**	**1.15**	**9**	P	**Pg**	**06 15 31.1**	**-0.2**
ITM				S	**Sg**	**06 15 46.7**	**+0.4**
ITM	**Ithomi**	**1.15**	**9**	*e*PG	**Pg**	**06 15 31.7**	**+0.4**
ITM				*e*SB	**Sb**	**06 15 47.5**	**+0.4**
ITM	**Ithomi**	**1.15**	**9**	P	**Pg**	**06 15 31.1**	**-0.2**
ITM	**Ithomi**	**1.15**	**9**	*e*Pg	**Pg**	**06 15 31.7**	**+0.4**
ITM				S	**Sg**	**06 15 46.7**	**+0.4**
ITM				*e*Sb	**Sb**	**06 15 47.5**	**+0.4**
VLI	**Veliai**	**1.21**	**55**	*e*Pg	**Pg**	**06 15 31.6**	**-0.7**
VLI				*e*Sb	**Sg**	**06 15 47.2**	**-0.7**
VLI	**Veliai**	**1.21**	**55**	*e*PG	**Pg**	**06 15 31.6**	**-0.7**
VLI				*e*SB	**Sg**	**06 15 47.2**	**-0.7**
VLI	**Veliai**	**1.21**	**55**	*e*Pg	**Pg**	**06 15 31.6**	**-0.7**
VLI				*e*Sb	**Sg**	**06 15 47.2**	**-0.7**
VLX	**Vlachokerasia**	**1.44**	**22**	P	**Pn**	**06 15 35.9**	**-0.2**
VLX				S	**Sb**	**06 15 54.5**	**-0.8**
VLX	**Vlachokerasia**	**1.44**	**22**	*e*PN	**Pn**	**06 15 35.9**	**-0.2**
VLX				*e*SB	**Sb**	**06 15 54.9**	**-0.4**
VLX	**Vlachokerasia**	**1.44**	**22**	P	**Pn**	**06 15 35.9**	**-0.2**
VLX				S	**Sb**	**06 15 54.5**	**-0.8**
VLX				*e*Sb	**Sb**	**06 15 54.9**	**-0.4**
KARN	**Karanos**	**1.91**	**109**	P	**Pn**	**06 15 43.5**	**+0.9**
KARN				S	**Sn**	**06 16 08.1**	**+0.9**
KARN	**Karanos**	**1.91**	**109**	*e*PG	**Pg**	**06 15 45.3**	**-0.5**
KARN	**Karanos**	**1.91**	**109**	P	**Pn**	**06 15 43.5**	**+0.9**
KARN	**Karanos**	**1.91**	**109**	*e*Pg	**Pg**	**06 15 45.3**	**-0.5**
KARN				S	**Sn**	**06 16 08.1**	**+0.9**
GUR	**Goura**	**1.96**	**15**	P	**Pn**	**06 15 45.0**	**+1.7**
GUR	**Goura**	**1.96**	**15**	*e*PG	**Pg**	**06 15 46.2**	**-0.6**
GUR	**Goura**	**1.96**	**15**	P	**Pn**	**06 15 45.0**	**+1.7**
GUR	**Goura**	**1.96**	**15**	*e*Pg	**Pg**	**06 15 46.2**	**-0.6**
RLS	**Riolos of Patr**	**2.02**	**355**	*e*Pn	**Pg**	**06 15 49.0**	**+1.0**
RLS	**Riolos of Patr**	**2.02**	**355**	*e*PN	**Pg**	**06 15 49.0**	**+1.0**
RLS	**Riolos of Patr**	**2.02**	**355**	*e*Pn	**Pg**	**06 15 49.0**	**+1.0**
VAM	**Vamos**	**2.13**	**106**	*e*Pn	**Pb**	**06 15 49.3**	**+1.0**
VAM	**Vamos**	**2.13**	**106**	*e*PN	**Pb**	**06 15 49.2**	**+0.9**
VAM	**Vamos**	**2.13**	**106**	*e*Pn	**Pb**	**06 15 49.3**	**+1.0**
LTK	**Loutraki**	**2.23**	**27**	*e*PN	**Pb**	**06 15 50.5**	**+0.5**
LTK	**Loutraki**	**2.23**	**27**	*e*Pn	**Pb**	**06 15 50.5**	**+0.5**
NAIG	**Nisos Aigina**	**2.24**	**39**	*e*Pg	**Pg**	**06 15 50.8**	**-1.2**
NAIG	**Nisos Aigina**	**2.24**	**39**	*e*PG	**Pg**	**06 15 50.8**	**-1.2**
NAIG	**Nisos Aigina**	**2.24**	**39**	*e*Pg	**Pg**	**06 15 50.8**	**-1.2**
EFP	**Efpalio**	**2.39**	**4**	*e*PG	**Pg**	**06 15 54.2**	**-0.8**
EFP	**Efpalio**	**2.39**	**4**	*e*Pg	**Pg**	**06 15 54.3**	**-0.7**
VLY	**Voula,Athens**	**2.47**	**42**	*e*Pg	**Pg**	**06 15 55.2**	**-1.3**
VLY	**Voula,Athens**	**2.47**	**42**	*e*PG	**Pg**	**06 15 55.2**	**-1.3**
VLY	**Voula,Athens**	**2.47**	**42**	*e*Pg	**Pg**	**06 15 55.2**	**-1.3**
IDI	**Anoyia**	**2.70**	**105**	P	**Pn**	**06 15 55.3**	**+1.9**
	2.8nm,0.3s,baz=274,slow=16,SNR=9.0						
LKR	**Lokris**	**2.81**	**21**	P	**Pb**	**06 15 58.9**	**-1.0**
LKR	**Lokris**	**2.81**	**21**	P	**Pb**	**06 15 58.9**	**-1.0**
AGG	**Agios Georgios**	**3.02**	**9**	*e*Pn	**Pb**	**06 16 03.0**	**-0.6**
AGG	**Agios Georgios**	**3.02**	**9**	*e*PN	**Pb**	**06 16 03.0**	**-0.6**
AGG	**Agios Georgios**	**3.02**	**9**	*e*Pn	**Pb**	**06 16 03.0**	**-0.6**
NEO	**Neokhori**	**3.48**	**20**	P	**Pn**	**06 16 08.8**	**+4.6**
NEO	**Neokhori**	**3.48**	**20**	P	**Pn**	**06 16 08.8**	**+4.6**
AOS	**Alonnisos**	**3.57**	**28**	P	**Pn**	**06 16 09.7**	**+4.2**
AOS	**Alonnisos**	**3.57**	**28**	P	**Pn**	**06 16 09.7**	**+4.2**
KEK	**Kerkira**	**3.97**	**338**	P	**Pb**	**06 16 20.9**	**+1.2**
PAIG	**Paliouri**	**4.19**	**21**	P	**Pn**	**06 16 17.4**	**+3.5**
PAIG	**Paliouri**	**4.19**	**21**	P	**Pn**	**06 16 17.4**	**+3.5**
STON	**Ston**	**7.49**	**337**	*i* Pn	**Pn**	**06 16 57.4**	**-1.9**
STON				Sn	**Sn**	**06 18 17.8**	**-6.9**
STON	**Ston**	**7.49**	**337**	*i* Pn	**Pn**	**06 16 57.4**	**-1.9**
MLR	**Muntele Rosu**	**9.97**	**17**	P	**Pn**	**06 17 37.6**	**+4.3**
	0.9nm,0.3s,baz=145,slow=8.9,SNR=6.3						
BRTR	**Keskin Array B**	**10.13**	**65**	P	**Pn**	**06 17 37.3**	**+1.9**
	0.1nm,0.3s,baz=255,slow=14,SNR=4.2						
HFS	**Hagfors**	**24.66**	**350**	P	**P**	**06 20 30.1**	**-0.7**
	0.8nm,0.4s,mb3.6,baz=172,slow=12,SNR=7.1						
FINES	**FINESS Array B**	**25.58**	**5**	P	**P**	**06 20 39.0**	**-0.1**
	1.7nm,0.9s,mb3.6,baz=199,slow=10,SNR=3.6						
EKA	**Eskdalemuir Ar**	**25.72**	**326**	P	**P**	**06 20 40.9**	**+0.3**
	0.7nm,0.6s,mb3.4,baz=128,slow=9.8,SNR=4.2						
ARCES	**ARCESS Array B**	**33.62**	**2**	P	**P**	**06 21 49.5**	**-0.9**
	3.7nm,0.9s,mb4.3,baz=185,slow=9.8,SNR=5.7						
BVAR	**Borovoye Array**	**37.81**	**48**	P	**P**	**06 22 25.5**	**-1.0**
	0.6nm,0.7s,mb3.5,baz=282,slow=8.5,SNR=3.4						
MKAR	**Makanchi Array**	**45.65**	**57**	P	**P**	**06 23 29.0**	**-1.8**
	0.7nm,0.3s,mb4.0,baz=277,slow=6.7,SNR=16						
ZALV	**Zalesovo Beam**	**46.44**	**47**	P	**P**	**06 23 34.9**	**-2.1**
	1.4nm,0.6s,mb4.1,baz=276,slow=8.8,SNR=6.5						

*IDC **21** 06:17:08.7±1.2, 8°.46N×103°.06W, h0km, mb3.7/7, mb1 4.1/9, mb1mx4.0/20, mbtmp3.8/9, ML4.0/1, MS3.8/7, Ms1 3.8/7, ms1mx3.6/19, Error ellipse: s-maj=38.9km s-min=19.9km az=63.0*
*NEIC **21** 06:17:11.6±1.0, 8°.56N×102°.99W, h10km, mb4.2/29, Error ellipse: s-maj=19.7km s-min=10.7km az=215.0*
*ISCJB **21** 06:17:13.4±0.9, 8°.6N±0°.1×102°.9W±0°.1, h33km, mb4.1/33, MS3.8/5, Error ellipse: s-maj=19.0km s-min=9.9km az=40.4*
ISC 21 06:17:15.7±0.8, 8°.6N±0°.1×102°.88W±0°.09, h35km, n52, σ1§05/40, mb4.1/33, MS3.8/5, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**11.48**	**42**	Pn	**Pn**	**06 19 55.4**	**-1.8**
	0.1nm,0.3s,baz=209,slow=13,SNR=2.5						
CMIG				LR	LR	06 23 31.5	
	comp=Z,1μm,20.8s,baz=206,slow=33						
APG	**El Apazote**	**13.71**	**61**	Pn	**Pn**	**06 20 27.4**	**-0.3**
	0.7nm,0.3s,baz=229,slow=4.1,SNR=19						
APG				LR	LR	06 23 59.1	
	comp=Z,142nm,22.0s,baz=239,slow=29						
TGUH	**Tegucigalpa,Un**	**16.23**	**69**	P	**Pn**	**06 21 03.4**	**+2.3**
	42nm,1.4s						
TXAR	**Lajitas Array**	**20.63**	**358**	P	**P**	**06 21 52.0**	**-0.2**
	1.3nm,0.8s,baz=184,slow=12,SNR=15						
TXAR				LR	LR	06 29 24.0	
	comp=Z,545nm,18.3s,MS4.0,baz=355,slow=35						
JCT	**Junction City**	**21.95**	**7**	*e*P	**P**	**06 22 05.7**	**-0.7**
	6.1nm,0.9s,mb4.0						
HKT	**Hockley**	**22.23**	**16**	*e*P	**P**	**06 22 10.3**	**+1.0**
	25nm,1.6s,mb4.4						
MNTX	**Cornudas Mount**	**23.09**	**355**	*e*P	**P**	**06 22 17.3**	**-1.2**
	5.1nm,1.3s,mb3.8						
TUC	**Tucson**	**24.70**	**344**	*e*P	**P**	**06 22 33.3**	**-0.2**
	5.9nm,1.0s,mb4.1						
OTAV	**Otavalo**	**25.72**	**108**	*e*P	**P**	**06 22 44.4**	**+1.4**
	4.9nm,1.1s,mb4.0						
LAZ	**Ladron**	**25.97**	**352**	*e*P	**P**	**06 22 45.6**	**+0.5**
	4.1nm,1.4s,mb3.8						
ANMO	**Albuquerque**	**26.42**	**353**	P	**P**	**06 22 48.9**	**-0.2**
	0.2nm,0.4s,mb3.0,baz=170,slow=9.5,SNR=3.0						
MIAR	**Mount Ida**	**27.19**	**17**	*e*P	**P**	**06 22 55.8**	**-0.3**
	5.1nm,1.1s,mb4.0						
WUAZ	**Wupatki**	**27.89**	**345**	*e*P	**P**	**06 23 02.7**	**+0.4**
	4.6nm,0.9s,mb4.1						
MVCO	**Mesa Verde**	**28.93**	**351**	*e*P	**P**	**06 23 12.5**	**+1.0**
	4.4nm,1.1s,mb4.1						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**28.99**	**122**	LR	LR	06 30 17.6	
	comp=Z,64nm,21.4s,MS3.2,baz=272,slow=27						
CCUT	**Cedar City**	**30.34**	**343**	*e*P	**P**	**06 23 24.6**	**+0.6**
	2.8nm,1.1s,mb3.9						
SMCO	**Snowmass**	**30.66**	**354**	*e*P	**P**	**06 23 26.0**	**-0.8**
	1.0nm,0.8s,mb3.7						
SRU	**San Rafael**	**31.14**	**348**	*e*P	**P**	**06 23 31.3**	**+0.2**
	6.1nm,1.3s,mb4.3						
MPU	**Maple Canyon**	**32.24**	**347**	*e*P	**P**	**06 23 41.8**	**+1.1**
	9.9nm,1.1s,mb4.5						
DAU	**Daniels Canyon**	**32.54**	**348**	*e*P	**P**	**06 23 45.0**	**+1.6**
DUG	**Dugway**	**32.68**	**346**	*e*P	**P**	**06 23 45.0**	**+0.5**
	5.0nm,1.1s,mb4.4						
NVAR	**Mina Array Bea**	**32.78**	**337**	P	**P**	**06 23 45.8**	**+0.3**
	0.2nm,0.3s,mb3.5,baz=149,slow=13,SNR=3.4						
HWUT	**Hardware Ranch**	**33.75**	**348**	*e*P	**P**	**06 23 55.3**	**+1.4**
	7.7nm,1.3s,mb4.5						
HDIL	**Hopedale**	**34.04**	**19**	*e*P	**P**	**06 23 55.9**	**-0.5**
	5.5nm,0.8s,mb4.5						
M13A	**Montello**	**34.12**	**345**	*e*P	**P**	**06 23 58.8**	**+1.7**
	4.3nm,1.0s,mb4.3						
PAHR	**Pah Rah Range**	**34.30**	**337**	*e*P	**P**	**06 23 56.3**	**-2.5**
	6.1nm,1.1s,mb4.4						
BW06	**Boulder Array**	**34.52**	**351**	*e*P	**P**	**06 23 59.5**	**-1.1**
	6.4nm,1.0s,mb4.5						
PDAR	**Pinedale Array**	**34.52**	**351**	P	**P**	**06 23 59.9**	**-0.8**
	2.2nm,1.0s,mb4.0,baz=155,slow=4.2,SNR=14						
LOHW	**Long Hollow**	**35.52**	**350**	*e*P	**P**	**06 24 09.2**	**0.0**
	2.7nm,0.8s,mb4.2						
HLID	**Hailey**	**36.25**	**346**	*e*P	**P**	**06 24 16.7**	**+1.2**
	5.3nm,1.5s,mb4.2						
MCMT	**McKenzie Canyo**	**37.10**	**348**	*e*P	**P**	**06 24 23.5**	**+0.8**
	1.1nm,0.9s,mb3.7						
YBH	**Yreka Blue Hor**	**37.35**	**335**	*e*P	**P**	**06 24 22.7**	**-2.2**
	1.9nm,0.9s,mb3.9						
GCMT	**Greycliff**	**37.51**	**352**	*e*P	**P**	**06 24 26.0**	**-0.1**
	6.9nm,1.5s,mb4.2						
DLMT	**Dillon**	**37.57**	**349**	*e*P	**P**	**06 24 27.9**	**+1.2**
	5.7nm,1.1s,mb4.2						
LRM	**Limekiln Ridge**	**37.98**	**349**	*e*P	**P**	**06 24 29.8**	**-0.4**
AGMN	**Agassiz Nation**	**40.00**	**7**	*e*P	**P**	**06 24 46.5**	**-0.5**
	4.6nm,0.7s,mb4.3						
TAOE	**Nuku Hiva Isla**	**40.98**	**246**	*e*LR	LR	06 35 36.7	
	135nm,23.8s						
TAOE				*e*T		07 07 25.3	
	53nm,0.3s						
NEW	**Newport**	**41.32**	**346**	*e*P	**P**	**06 24 56.8**	**-1.0**
	5.6nm,1.0s,mb4.2						
LPAZ	**La Paz**	**42.36**	**126**	P	**P**	**06 25 07.0**	**+0.2**
	1.7nm,0.9s,mb3.7,baz=300,slow=8.6,SNR=6.0						
LPAZ	**La Paz**	**42.36**	**126**	*e*P	**P**	**06 25 06.4**	**-0.4**
	11nm,1.4s,mb4.3						
RKT	**Rikitea**	**44.50**	**224**	*e*LR	LR	06 37 42.9	
	337nm,28.5s						
RKT				*e*T		07 11 56.0	
	9.8nm,0.3s						
PMOR	**Pomariorio Ree**	**50.41**	**242**	*e*T		07 19 12.4	
	2.6nm,0.2s						
PPT	**Papeete**	**52.96**	**240**	*e*LR	LR	06 41 13.1	
	233nm,25.5s						
PPT	**Papeete**	**52.96**	**240**	LR	LR	06 42 24.8	
	comp=Z,138nm,19.2s,MS4.0,baz=2.7,slow=29						
YKA	**Yellowknife Ar**	**54.46**	**353**	P	**P**	**06 26 38.2**	**-1.2**
	0.3nm,0.6s,mb3.4,baz=161,slow=7.8,SNR=2.9						
CPUP	**Villa Florida**	**56.23**	**130**	P	**P**	**06 26 51.0**	**-1.7**
	3.4nm,1.0s,mb4.3,baz=17,slow=5.0,SNR=3.7						
NOA	**NORSAR Array B**	**93.82**	**26**	LR	LR	07 11 21.3	
	comp=Z,47nm,19.3s,MS4.0,baz=100,slow=35						
ARCES	**ARCESS Array B**	**94.40**	**16**	LR	LR	07 14 04.4	
	comp=Z,59nm,19.9s,MS4.0,baz=15,slow=36						
HHC	**Hu-ho-hao-te**	**121.45**	**330**	*e*PKP	PKPdf	06 36 05.9	+0.1
HHC				PP	PP	06 37 41.3	+4.7
HHC				PKS		06 39 40.9	
HHC				SKS	SKSdf	06 43 15.0	-0.3
HHC				SKKS	SKKSac	06 44 29.8	-4.6
HHC				SS	SS	06 54 10.8	+2.3
HHC				AMB	AMB		
	comp=Z,160nm,5.0s						
ASAR	**Alice Springs**	**123.78**	**247**	PKP	PKPdf	06 36 08.1	-2.6
	comp=Z,0.7nm,0.9s,baz=60,slow=2.2,SNR=4.4						
CD2	**Chengdu**	**133.13**	**328**	*e*PKP	PKPdf	06 36 26.6	-1.7
CMAR	**Chiang Mai Arr**	**145.55**	**321**	PKPbc	PKPbc	06 36 48.4	-2.9
	comp=Z,2.4nm,0.7s,baz=5.6,slow=3.8,SNR=5.9						

*IDC **21** 06:55:31.5±1.2, 31°.59N×103°.67E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.5/23, mbtmp3.6/5, Error ellipse: s-maj=103.6km s-min=23.3km az=62.0*
*ISCJB **21** 06:55:31.0±1.0, 31°.58N±0°.09×103°.8E±0°.1, h10km, mb3.8/4, Error ellipse: s-maj=18.2km s-min=10.9km az=153.3*
*NEIC **21** 06:55:32.9±1.0, 31°.58N×103°.80E, h10km, Error ellipse: s-maj=29.6km s-min=14.4km az=55.0*
*BJI **21** 06:55:33.7, 31°.68N×104°.37E, h10km, ML3.3/9*
ISC 21 06:55:33.6±0.9, 31°.59N±0°.09×104°.0E±0°.1, h10km, n10, σ1§56/11, mb3.8/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.48**	**358**	*e*Pn	**Pn**	**06 56 42.8**	**+1.2**
LZH				Pg	**Pb**	**06 56 48.5**	**-3.9**
LZH				smax			
	comp=N,110nm,0.6s						
LZH				smax			
	comp=E,180nm,0.7s						
XAN	**Xi'an**	**4.80**	**58**	Pg	**Pn**	**06 56 48.8**	**+2.9**
XAN				Sn	**Sn**	**06 57 39.5**	**-2.1**
XAN				smax			
	comp=N,9.0nm,0.7s						
XAN				smax			
	comp=E,44nm,0.9s						
ENH	**Enshi**	**4.89**	**104**	*e*Pn	**Pn**	**06 56 47.9**	**+0.8**
	comp=E,13nm,0.4s						
GYA	**Guiyang**	**5.62**	**155**	Pg	**Pg**	**06 57 15.3**	**-6.0**
GYA				smax			
	comp=N,40nm,0.7s						
GYA				smax			
	comp=E,30nm,0.8s						
SONM	**Songino Array**	**16.32**	**6**	Pn	**Pn**	**06 59 24.0**	**+1.2**
	comp=E,0.2nm,0.3s,baz=182,slow=12,SNR=4.4						
ZALV	**Zalesovo Beam**	**26.25**	**334**	P	**P**	**07 01 06.0**	**-2.6**
	comp=E,0.7nm,0.5s,mb3.5,baz=126,slow=9.8,SNR=3.4						
FINES	**FINESS Array B**	**57.12**	**326**	P	**P**	**07 05 18.5**	**-1.5**
	comp=E,0.8nm,0.4s,mb4.1,baz=101,slow=8.1,SNR=12						
WRA	**Warramunga Arr**	**58.92**	**146**	P	**P**	**07 05 33.6**	**+0.5**
	comp=E,0.5nm,0.6s,mb3.7,baz=341,slow=7.8,SNR=2.7						
ASAR	**Alice Springs**	**61.95**	**149**	P	**P**	**07 05 54.4**	**+0.7**
	comp=E,0.7nm,0.9s,mb3.8,baz=339,slow=6.8,SNR=3.6						
PPT	**Papeete**	**112.73**	**97**	*e*LR	LR	07 10 33.7	
	comp=E,251nm,24.5s						

*THE **21** 07:20:13.7, 36°.07N×21°.46E, h19km±1km, ML4.4/1, Error ellipse: s-maj=3.0km s-min=0.8km az=254.0*
*ATH **21** 07:20:14.8, 36°.08N×21°.86E, h4km±4km, MD3.9/8*
*NEIC **21** 07:20:14.8, 36°.08N×21°.86E, h4km, MD3.9(ATH), After ATH.*
*CSEM **21** 07:20:15.5±0.7, 36°.16N×21°.86E, h2km, MD3.9, Error ellipse: s-maj=15.2km s-min=6.0km az=62.0*
*ISCJB **21** 07:20:15.6±1.0, 36°.13N±0°.04×21°.84E±0°.08, h10km, Error ellipse: s-maj=10.2km s-min=4.7km az=152.9*
ISC 21 07:20:16.0±1.0, 36°.13N±0°.04×21°.84E±0°.08, h10km, n46, σ1§05/61, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.77**	**354**	P	**Pg**	**07 20 29.3**	**-1.5**
PYL				S	**Sg**	**07 20 42.0**	**+1.1**
PYL	**PYLOS**	**0.77**	**354**	*e*PG	**Pg**	**07 20 29.4**	**-1.4**
PYL				*e*SG	**Sg**	**07 20 42.1**	**+1.2**
PYL	**PYLOS**	**0.77**	**354**	*e*Pg	**Pg**	**07 20 29.4**	**-1.4**
PYL				S	**Sg**	**07 20 42.0**	**+1.1**
KYTH	**Kithira**	**0.98**	**81**	*e*Pg	**Pg**	**07 20 34.1**	**-0.8**
KYTH	**Kithira**	**0.98**	**81**	*e*PG	**Pg**	**07 20 34.1**	**-0.8**
KYTH	**Kithira**	**0.98**	**81**	*e*Pg	**Pg**	**07 20 34.1**	**-0.8**
ITM	**Ithomi**	**1.05**	**4**	*e*Pb	**Pg**	**07 20 35.0**	**-1.2**
ITM				*e*Sb	**Sb**	**07 20 51.2**	**+1.1**
ITM	**Ithomi**	**1.05**	**4**	P	**Pg**	**07 20 34.5**	**-1.7**
ITM				S	**Sg**	**07 20 50.4**	**+0.5**
ITM	**Ithomi**	**1.05**	**4**	*e*PB	**Pg**	**07 20 35.0**	**-1.2**
ITM				*e*SB	**Sb**	**07 20 51.2**	**+1.1**
ITM	**Ithomi**	**1.05**	**4**	P	**Pg**	**07 20 34.5**	**-1.7**
ITM	**Ithomi**	**1.05**	**4**	*e*Pb	**Pg**	**07 20 35.0**	**-1.2**
ITM				S	**Sg**	**07 20 50.4**	**+0.5**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITM				*e*Sb	**Sb**	**07 20 51.2**	**+1.1**
VLI	**Veliai**	**1.06**	**56**	*e*Pg	**Pg**	**07 20 35.2**	**-1.3**
VLI				*e*Sg	**Sg**	**07 20 50.1**	**-0.2**
VLI	**Veliai**	**1.06**	**56**	*e*PG	**Pg**	**07 20 35.2**	**-1.3**
VLI				*e*SG	**Sg**	**07 20 50.1**	**-0.2**
VLI	**Veliai**	**1.06**	**56**	*e*Pg	**Pg**	**07 20 35.2**	**-1.3**
VLI				*e*Sg	**Sg**	**07 20 50.1**	**-0.2**
VLX	**Vlachokerasia**	**1.31**	**19**	P	**Pn**	**07 20 38.5**	**-1.9**
VLX				S	**Sb**	**07 20 58.1**	**+0.5**
VLX	**Vlachokerasia**	**1.31**	**19**	*e*PB	**Pb**	**07 20 39.2**	**-1.5**
VLX				*e*SB	**Sb**	**07 20 58.7**	**+1.1**
VLX	**Vlachokerasia**	**1.31**	**19**	P	**Pn**	**07 20 38.5**	**-1.9**
VLX	**Vlachokerasia**	**1.31**	**19**	*e*Pb	**Pb**	**07 20 39.2**	**-1.5**
VLX				S	**Sb**	**07 20 58.1**	**+0.5**
VLX				*e*Sb	**Sb**	**07 20 58.7**	**+1.1**
KARN	**Karanos**	**1.84**	**113**	*e*PB	**Pb**	**07 20 49.6**	**-0.2**
KARN	**Karanos**	**1.84**	**113**	*e*Pb	**Pb**	**07 20 49.6**	**-0.2**
GUR	**Goura**	**1.85**	**12**	*e*PN	**Pn**	**07 20 48.9**	**+1.2**
GUR	**Goura**	**1.85**	**12**	*e*Pn	**Pn**	**07 20 48.9**	**+1.2**
RLS	**Riolos of Patr**	**1.95**	**351**	*e*Pg	**Pg**	**07 20 53.1**	**-0.2**
RLS	**Riolos of Patr**	**1.95**	**351**	*e*PG	**Pg**	**07 20 53.1**	**-0.2**
RLS	**Riolos of Patr**	**1.95**	**351**	*e*Pg	**Pg**	**07 20 53.1**	**-0.2**
VAM	**Vamos**	**2.05**	**110**	*e*Pn	**Pn**	**07 20 51.8**	**+1.2**
VAM	**Vamos**	**2.05**	**110**	*e*PN	**Pn**	**07 20 51.8**	**+1.2**
VAM	**Vamos**	**2.05**	**110**	*e*Pn	**Pn**	**07 20 51.8**	**+1.2**
LTK	**Loutraki**	**2.09**	**25**	*e*PG	**Pb**	**07 20 54.0**	**-0.1**
LTK	**Loutraki**	**2.09**	**25**	*e*Pg	**Pb**	**07 20 54.0**	**-0.1**
NAIG	**Nisos Aigina**	**2.10**	**39**	*e*Pn	**Pn**	**07 20 53.1**	**+1.9**
NAIG	**Nisos Aigina**	**2.10**	**39**	*e*PN	**Pn**	**07 20 53.1**	**+1.9**
NAIG	**Nisos Aigina**	**2.10**	**39**	*e*Pn	**Pn**	**07 20 53.1**	**+1.9**
EFP	**Efpalio**	**2.29**	**1**	*e*PN	**Pb**	**07 20 57.2**	**-0.3**
VLY	**Voula,Athens**	**2.33**	**42**	*e*Pg	**Pb**	**07 20 57.6**	**-0.4**
VLY	**Voula,Athens**	**2.33**	**42**	*e*PG	**Pb**	**07 20 57.6**	**-0.4**
VLY	**Voula,Athens**	**2.33**	**42**	*e*Pg	**Pb**	**07 20 57.6**	**-0.4**
IDI	**Anoyia**	**2.62**	**108**	*e*Pn	**Pn**	**07 20 58.2**	**-0.2**
IDI	**Anoyia**	**2.62**	**108**	*e*PN	**Pn**	**07 20 58.2**	**-0.2**
IDI	**Anoyia**	**2.62**	**108**	*e*Pn	**Pn**	**07 20 58.2**	**-0.2**
LAST	**Lasithi**	**3.12**	**107**	*e*Pn	**Pn**	**07 21 05.7**	**+0.5**
LAST	**Lasithi**	**3.12**	**107**	*e*PN	**Pn**	**07 21 05.7**	**+0.5**
LAST	**Lasithi**	**3.12**	**107**	*e*Pn	**Pn**	**07 21 05.7**	**+0.5**
NPS	**Neapolis**	**3.19**	**105**	*e*Pn	**Pn**	**07 21 07.6**	**+1.4**
NPS	**Neapolis**	**3.19**	**105**	*e*PN	**Pn**	**07 21 07.6**	**+1.4**
NPS	**Neapolis**	**3.19**	**105**	*e*Pn	**Pn**	**07 21 07.6**	**+1.4**

IDC 21 07:27:08.7±5.5, 17°.43N×146°.15E, h0km, mb4.0/8, mb1 4.1/8, mb1mx3.9/23, mbtmp4.0/8, Error ellipse: s-maj=197.1km s-min=40.6km az=18.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**25.59**	**325**	P	P	07 32 39.1	-0.5
	1.0nm,0.5s,baz=149,slow=9.3,SNR=3.9			

comp=Z,1.7nm,1.0s,baz=46,slow=2.8,SNR=4.3
ASAR Alice Springs 25.26 222 P **P** **07 34 03.7 -0.6**
ASAR S **S** **07 38 31.0 +5.7**
STKA Stephens Creek 28.13 199 *e*P **P** **07 34 28.2 -1.8**
comp=Z,12nm,0.8s,mb4.5
STKA Stephens Creek 28.13 199 P **P** **07 34 28.6 -1.4**
comp=Z,7.4nm,0.8s,mb4.3,baz=18,slow=6.8,SNR=9.8
STKA LR LR 07 45 39.3
comp=Z,985nm,19.5s,baz=154,slow=36
STKA Stephens Creek 28.13 199 *e*P **P** **07 34 28.3 -1.8**
comp=Z,3.5nm,0.8s,mb3.9
FITZ Fitzroy Crossi 28.79 242 *e*P **P** **07 34 35.4 -0.6**
comp=Z,72nm,0.9s,mb5.3
FITZ Fitzroy Crossi 28.79 242 P **P** **07 34 34.8 -1.2**
comp=Z,40nm,0.8s,mb5.1,baz=76,slow=7.9,SNR=24
CBIJ Chichi jima 33.70 344 LR LR 07 47 31.3
comp=Z,473nm,21.5s,baz=209,slow=34
FORT Forrest 33.91 219 *e*P **P** **07 35 19.9 -1.0**
comp=Z,22nm,0.6s,mb5.2
FORT Forrest 33.91 219 *e*P **P** **07 35 20.0 -0.9**
comp=Z,27nm,0.7s,mb5.2
MBWA Marble Bar 35.09 240 *e*P **P** **07 35 30.4 -0.9**
comp=Z,17nm,0.8s,mb4.9
AFI Afiamalu 36.53 106 LR LR 07 48 21.2
comp=Z,292nm,20.8s,baz=279,slow=32
JHJ Hachijo jima 2 40.05 344 LR LR 07 49 59.6
comp=Z,290nm,19.7s,baz=82,slow=32
KLBR Kellerberrin 41.41 227 *e*P **P** **07 36 26.6 +2.4**
comp=Z,28nm,1.0s,mb5.0
YHNB Yeheng 42.29 316 *e*P **P** **07 36 32.6 +1.1**
MJAR Matsushiro Arr 43.70 344 P **P** **07 36 40.5 -2.2**
comp=Z,0.6nm,0.3s,baz=161,slow=9.0,SNR=3.4
MJAR PcP PcP 07 38 28.7 0.0
comp=Z,8.2nm,0.8s,baz=168,slow=3.4,SNR=12
MJAR ScP ScP 07 42 19.2 +4.6
comp=Z,4.9nm,1.2s,baz=176,slow=4.8,SNR=5.5
MJAR LR LR 07 52 46.9
comp=Z,355nm,20.6s,baz=190,slow=33
MJAR Matsushiro Arr 43.70 344 P **P** **07 36 40.5 -2.2**
MJAR 07 38 28.7
MJAR Matsushiro Arr 43.70 344 P **P** **07 36 40.5 -2.2**
MJAR PcP PcP 07 38 28.7 0.0
MJAR ScP ScP 07 42 19.2 +4.6
MJAR LR LR 07 52 46.9
MAT Matsushiro 43.70 344 P **P** **07 36 39.1 -3.6**
MAT S **S** **07 43 21.0 +13**
QIZ Qiongzhong 48.20 301 P **P** **07 37 15.3 -3.1**
QIZ S **S** **07 44 10.9 -2.0**
QIZ pmax pmax
comp=Z,17nm,1.7s,mb4.6
QIZ LR LR
comp=N,220nm,21.4s
QIZ LR LR
comp=Z,420nm,21.7s
QIZ Qiongzhong 48.20 301 *e*P **P** **07 37 18.9 +0.6**
comp=Z,38nm,1.1s,mb5.1
KSRS Korea Array 48.23 334 P **P** **07 37 18.1 -0.2**
comp=Z,6.8nm,1.0s,mb4.4,baz=148,slow=9.2,SNR=19
KSRS PcP PcP 07 38 45.6 +1.1
comp=Z,4.0nm,0.6s,baz=153,slow=3.6,SNR=10
NJ2 Nanjing 48.89 322 *e*P **P** **07 37 28.8 +5.4**
NJ2 pP pP 07 37 37.4 -3.3
NJ2 sP sP 07 37 43.1 -5.4
NJ2 PP PP 07 39 21.8 +4.4
NJ2 S **S** **07 44 29.3 +7.0**
NJ2 sS sS 07 44 45.9 -5.7
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
NJ2 pmax pmax
comp=Z,180nm,8.8s
NJ2 LR LR
comp=N,670nm,22.4s
NJ2 LR LR
comp=E,340nm,20.8s
NJ2 LR LR
comp=Z,9μm,21.4s
ASAJ Asahikawa 50.02 351 LR LR 07 56 49.9
comp=Z,181nm,19.8s,baz=182,slow=34
WHN Wuhan 50.82 317 P **P** **07 37 38.0 -0.2**
WHN S **S** **07 44 54.4 +5.1**
WHN pmax pmax
comp=Z,42nm,0.9s,mb5.5
WHN LR LR
comp=N,340nm,9.1s
WHN LR LR
comp=E,590nm,16.4s
WHN LR LR
comp=Z,1μm,19.2s
DL2 Dalian 52.34 330 P **P** **07 37 49.5 +0.2**
DL2 pmax pmax
comp=Z,20nm,0.9s,mb5.2
KULM Kulim 52.48 281 *e*P **P** **07 37 49.6 -1.3**
comp=Z,21nm,1.0s,mb5.1
SNY Shenyang 53.73 334 ⇑P **P** **07 37 57.5 -2.0**
SNY LR LR
comp=N,210nm,14.4s
SNY LR LR
comp=E,230nm,21.0s
SNY LR LR
comp=Z,290nm,21.0s
MDJ Mudanjiang 53.74 340 P **P** **07 38 01.4 +1.9**
MDJ pP pP 07 38 19.0 +2.0
MDJ sP sP 07 38 27.6 +2.9
MDJ PP PP 07 40 03.3 +2.1
MDJ S **S** **07 45 32.8 +4.0**
MDJ pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
MDJ pmax pmax
comp=Z,80nm,4.4s
MDJ LR LR
comp=N,130nm,17.4s
MDJ LR LR
comp=E,150nm,15.4s
MDJ LR LR
comp=Z,200nm,16.4s
ENH Enshi 54.07 314 *e*P **P** **07 38 02.4 +0.1**
comp=Z,66nm,1.1s,mb5.6
GYA Guiyang 54.22 308 P **P** **07 38 04.4 +1.0**
GYA pP pP 07 38 23.3 +2.4
GYA sP sP 07 38 33.0 +4.4
GYA PcP PcP 07 39 07.8 +0.7
GYA PP PP 07 40 08.3 +2.4
GYA ScP ScP 07 42 58.6 -0.9
GYA S **S** **07 45 35.5 -0.4**
GYA SS SS 07 49 18.0 -0.9
GYA pmax pmax
comp=Z,20nm,0.8s,mb5.2
GYA pmax pmax
comp=Z,140nm,4.4s
GYA LR LR
comp=N,400nm,14.3s
GYA LR LR
comp=E,420nm,14.1s
GYA LR LR
comp=Z,590nm,13.9s
CN2 Changchun 54.57 336 *e*P **P** **07 38 09.4 +3.8**
CN2 *e*pP pP 07 38 28.5 +5.4
CN2 *e*S **S** **07 45 42.8 +2.9**
CN2 pmax pmax
comp=Z,20nm,0.9s,mb5.2
CN2 pmax pmax
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,200nm,17.0s
CN2 LR LR
comp=E,200nm,17.0s
CN2 LR LR
comp=Z,200nm,19.0s
BJI Beijing 56.02 327 P **P** **07 38 15.4 -0.7**
BJI sP sP 07 38 43.1 +1.7
BJI PP PP 07 40 22.3 +0.6
BJI pmax pmax
comp=Z,9.0nm,1.5s,mb4.6
BJI pmax pmax
comp=Z,120nm,4.4s
BJI LR LR
comp=N,310nm,21.5s
BJI LR LR
comp=E,250nm,21.2s
BJI LR LR
comp=Z,240nm,24.2s
XAN Xi'an 56.59 317 P **P** **07 38 19.3 -1.0**
XAN pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
XAN pmax pmax
comp=Z,29nm,13.1s
XAN LR LR
comp=N,160nm,19.8s
XAN LR LR
comp=E,110nm,21.4s
XAN LR LR
comp=Z,130nm,19.8s
KMI Kunming 56.76 305 P **P** **07 38 23.0 +1.3**
KMI pP pP 07 38 43.5 +4.2
KMI sP sP 07 38 52.1 +5.1
KMI PP PP 07 40 32.8 +4.1
KMI S **S** **07 46 09.6 -0.3**
KMI sS sS 07 46 43.4 +3.6
KMI SS SS 07 49 59.6 +0.6
KMI pmax pmax
comp=Z,37nm,1.0s,mb5.4
KMI pmax pmax
comp=Z,89nm,3.8s
KMI LR LR
comp=N,180nm,20.5s
KMI LR LR
comp=E,140nm,23.1s
KMI LR LR
comp=Z,270nm,18.7s
CMAR Chiang Mai Arr 57.52 296 P **P** **07 38 28.4 +1.2**
comp=Z,9.6nm,0.7s,mb4.9,baz=118,slow=5.2,SNR=30
CMAR LR LR 08 03 17.9
comp=Z,193nm,18.5s,baz=288,slow=36
CHTO Chiang Mai 57.64 296 *e*P **P** **07 38 28.5 +0.5**
CHTO pmax pmax
comp=Z,30nm,1.3s,mb5.2
CHTO Chiang Mai 57.64 296 *e*P **P** **07 38 28.5 +0.5**
comp=Z,30nm,1.3s,mb5.2
PPT Papeete 58.19 107 *e*LR LR 07 55 46.2
comp=Z,246nm,21.8s
PPT Papeete 58.19 107 LR LR 07 58 38.6
comp=Z,298nm,19.0s,baz=316,slow=31
PET Petropavlovsk 58.46 5 *e*P **P** **07 38 41.3 +8.3**
PET *e*S **S** **07 46 41.7 +11**
PET *e*SS SS 07 50 32.4 +7.8
PET pmax pmax
comp=Z,100nm,15.8s
PET MLR MLR
comp=Z,200nm,14.0s
PETK Petropavlovsk- 58.47 4 P **P** **07 38 32.7 -0.4**
comp=Z,4.5nm,0.5s,mb4.7,baz=152,slow=6.5,SNR=10
PETK PcP PcP 07 39 23.5 +0.5
comp=Z,16nm,0.9s,baz=134,slow=4.3,SNR=8.7
PETK LR LR 07 59 47.4
comp=Z,191nm,20.6s,baz=211,slow=32
PETK Petropavlovsk- 58.47 4 P **P** **07 38 32.7 -0.4**
PETK 07 39 23.5
PETK Petropavlovsk- 58.47 4 P **P** **07 38 32.7 -0.4**
PETK PcP PcP 07 39 23.5 +0.5
PETK LR LR 07 59 47.4
CD2 Chengdu 58.62 311 P **P** **07 38 36.3 +1.7**
CD2 pP pP 07 38 55.5 +3.2
CD2 sP sP 07 39 04.3 +4.4
CD2 PP PP 07 40 48.8 +3.8
CD2 PcS PcS 07 43 25.1 -0.8
CD2 S **S** **07 46 33.9 0.0**
CD2 sS sS 07 47 07.3 +3.3
CD2 ScS ScS 07 48 15.3 -3.3
CD2 SS SS 07 50 29.9 +2.0
CD2 pmax pmax
comp=Z,40nm,0.6s,mb5.6
CD2 pmax pmax
comp=Z,160nm,5.2s
CD2 LR LR
comp=N,240nm,15.6s
CD2 LR LR
comp=E,310nm,14.8s
CD2 LR LR
comp=Z,180nm,16.2s
HHC Hu-ho-hao-te 59.14 325 *e*P **P** **07 38 38.5 +0.5**
HHC pP pP 07 38 57.8 +2.0
HHC sP sP 07 39 06.5 +3.1
HHC PcP PcP 07 39 26.3 +0.3
HHC PP PP 07 40 52.8 +3.3
HHC ScP ScP 07 43 18.1 -2.8
HHC PcS PcS 07 43 26.3 -1.5
HHC S **S** **07 46 39.5 -0.8**
HHC sS sS 07 47 14.0 +3.6
HHC ScS ScS 07 48 17.8 -4.2
HHC SS SS 07 50 37.8 +2.0
HHC pmax pmax
comp=Z,21nm,0.7s,mb5.3
HHC pmax pmax
comp=Z,120nm,5.7s
HHC LR LR
comp=N,210nm,19.1s
HHC LR LR
comp=E,220nm,18.9s
HHC LR LR
comp=Z,340nm,21.2s
FX1 Attu Island--F 60.73 14 P **P** **07 38 48.1 -0.6**
comp=Z,7.7nm,0.6s,mb4.9,baz=222,slow=6.7,SNR=7.8
FX1 LR LR 08 03 12.3
comp=Z,321nm,19.4s,baz=223,slow=34
LZH Lanzhou 61.19 316 ⇑P **P** **07 38 53.3 +1.2**
LZH pP pP 07 39 12.6 +2.6
LZH sP sP 07 39 19.9 +2.3
LZH PP PP 07 41 11.3 +3.6
LZH *e*S **S** **07 47 06.9 +0.1**
LZH SS SS 07 51 08.8 +0.7
LZH pmax pmax
comp=Z,36nm,1.0s,mb5.4
LZH pmax pmax
comp=Z,120nm,5.2s
GTA Gaotai 65.64 318 P **P** **07 39 22.1 +0.7**
GTA pP pP 07 39 43.4 +3.9
GTA sP sP 07 39 53.9 +6.9
GTA PP PP 07 41 49.5 +2.8
GTA S S 07 48 00.9 -1.2
GTA sS sS 07 48 34.1 +1.5
GTA SS SS 07 52 19.8 +2.3
GTA pmax pmax
comp=Z,20nm,1.2s,mb4.8
GTA pmax pmax
comp=Z,190nm,6.6s
GTA LR LR
comp=N,120nm,18.6s
GTA LR LR
comp=E,180nm,18.0s
GTA LR LR
comp=Z,300nm,19.2s
SHL Shillong 66.03 301 ⇑*i*P **P** **07 39 24.0 -0.2**
ULN Ulaanbaatar 66.14 329 *e*P **P** **07 39 24.9 +0.4**
ULN pmax pmax
comp=Z,22nm,1.0s,mb4.9
ULN Ulaanbaatar 66.14 329 *e*P **P** **07 39 24.9 +0.4**
comp=Z,22nm,1.0s,mb4.9
SONM Songino Array 66.47 328 P **P** **07 39 27.1 +0.6**
comp=Z,19nm,1.0s,mb4.9,baz=137,slow=5.3,SNR=56
SONM LR LR 08 07 10.3
comp=Z,256nm,19.1s,baz=66,slow=35
LSA Lhasa 68.02 305 *e*P **P** **07 39 37.9 +1.1**
LSA pmax pmax
comp=Z,33nm,0.8s,mb5.2
LSA Lhasa 68.02 305 *e*P **P** **07 39 37.9 +1.1**
comp=Z,33nm,0.8s,mb5.2
SEY Seymchan 68.13 0 *ce*P **P** **07 39 37.4 +0.6**
ZAK Zakamensk 69.65 329 ⇓*i*P **P** **07 39 46.3 -0.2**
ZAK pmax pmax
comp=Z,18nm,1.1s,mb4.8
TAPN Taplejung 70.14 301 *e*P **P** **07 39 49.5 -0.5**
comp=Z,89nm,1.0s,mb5.5
TLY Talaya 70.25 330 *e*P **P** **07 39 50.4 +0.3**
TLY *e*S S 07 48 52.2 -4.5
TLY pmax pmax
comp=Z,12nm,0.9s,mb4.7
TLY Talaya 70.25 330 *e*P **P** **07 39 50.6 +0.4**
comp=Z,8.7nm,0.8s,mb4.6
ODAN Odare 70.27 301 *e*P **P** **07 39 50.1 -0.7**
comp=Z,107nm,0.9s,mb5.7
RAMN Ramite 70.97 301 *e*P **P** **07 39 54.2 -0.8**
comp=Z,24nm,0.8s,mb5.1
MOY Mondy 71.58 329 *e*P **P** **07 39 59.0 +0.8**
MOY pmax pmax
comp=Z,25nm,1.5s,mb4.8
GUN Gumba 71.85 302 *e*P **P** **07 40 00.0 -0.4**
comp=Z,105nm,0.7s,mb5.8
SDPT Sand Point 72.04 26 *e*P **P** **07 39 59.8 -1.1**
comp=Z,164nm,1.2s,mb5.7
PKI Pulchoki 72.16 301 *e*P **P** **07 40 01.6 -0.6**
comp=Z,66nm,1.1s,mb5.4
PKI Pulchoki 72.16 301 *e*P **P** **07 40 02.1 -0.1**
PKI pmax pmax
comp=Z,55nm,1.0s,mb5.3
PKI Pulchoki 72.16 301 *e*P **P** **07 40 02.1 -0.1**
comp=Z,55nm,1.0s,mb5.3
PKIN Phulchoki 72.17 301 *e*P **P** **07 40 02.1 -0.2**
comp=Z,55nm,1.0s,mb5.3
RKT Rikitea 72.18 112 *e*LR LR 08 02 19.6
comp=Z,325nm,27.0s
KKN Kakani 72.33 301 *e*P **P** **07 40 02.6 -0.6**
comp=Z,67nm,0.8s,mb5.5
KKN Kakani 72.33 301 *e*P **P** **07 40 02.6 -0.6**
KKN pmax pmax
comp=Z,67nm,0.8s,mb5.5
DMN Daman 72.43 301 *e*P **P** **07 40 03.3 -0.5**
comp=Z,140nm,1.0s,mb5.8
SBA Scott Base 72.82 177 *e*P **P** **07 40 07.1 +1.9**
SBA pmax pmax
comp=Z,20nm,1.5s,mb4.7
SBA Scott Base 72.82 177 *e*P **P** **07 40 07.1 +1.9**
comp=Z,20nm,1.5s,mb4.7
MIR Mirnyy 73.13 201 *e*P **P** **07 40 12.0 +4.8**
MIR pmax pmax
comp=Z,70nm,1.8s,mb5.2
CHGN Chignik 73.55 26 *e*P **P** **07 40 08.8 -1.0**
BILL Bilibino 73.94 5 ⇓*i*P **P** **07 40 12.1 +0.3**
BILL pmax pmax
comp=Z,16nm,1.0s,mb4.7
BILL MLR MLR
comp=Z,200nm,19.0s
BILL Bilibino 73.94 5 *e*P **P** **07 40 12.0 +0.2**
comp=Z,13nm,0.8s,mb4.7
GAMB Gambell 74.13 16 *e*P **P** **07 40 13.3 +0.3**
comp=Z,48nm,1.1s,mb5.1
WMQ Urumqi 75.72 318 P **P** **07 40 23.0 +0.3**
WMQ pP pP 07 40 43.0 +1.9
WMQ sP sP 07 40 52.0 +3.4
WMQ PP PP 07 43 16.0 +2.6
WMQ S S 07 49 58.0 -1.1
WMQ ScS ScS 07 50 27.0 -3.9
WMQ SS SS 07 54 54.0 +1.8
WMQ pmax pmax
comp=Z,24nm,1.0s,mb4.9
WMQ pmax pmax
comp=Z,98nm,7.0s
WMQ LR LR
comp=N,130nm,18.0s
WMQ LR LR
comp=E,130nm,18.0s
WMQ LR LR
comp=Z,130nm,18.0s
HYB Hyderabad 76.05 289 *e*P **P** **07 40 24.0 -1.1**
HYB Hyderabad 76.05 289 *i*P **P** **07 40 23.0 -2.1**
OHAK Old Harbor 76.38 27 *e*P **P** **07 40 26.3 +0.2**
comp=Z,85nm,1.0s,mb5.4
TNA Tin City 76.55 16 *e*P **P** **07 40 26.8 -0.1**
comp=Z,20nm,0.9s,mb4.8
KDAK Kodiak Island 77.00 27 P **P** **07 40 29.6 0.0**
comp=Z,303nm,1.1s,mb5.9,SNR=12
KDAK Kodiak Island 77.00 27 P **P** **07 40 29.9 +0.3**
comp=Z,45nm,1.0s,mb5.2,baz=191,slow=2.6,SNR=24
KDAK LR LR 08 09 25.1
comp=Z,216nm,20.1s,baz=232,slow=32
KDAK Kodiak Island 77.00 27 *i*P **P** **07 40 30.7 +1.1**
KDAK Kodiak Island 77.00 27 *e*P **P** **07 40 30.6 +1.0**
comp=Z,80nm,1.2s,mb5.3
SVW2 Sparrevohn 77.63 23 *e*P **P** **07 40 33.4 +0.4**
TIXI Tiksi 78.39 353 *e*P **P** **07 40 37.4 +0.3**
TIXI pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
TIXI Tiksi 78.39 353 *e*P **P** **07 40 37.4 +0.3**
comp=Z,2.7nm,0.6s,mb4.2
RSO Redoubt South 78.40 25 *e*P **P** **07 40 36.6 -0.7**
TTA Tatalina 78.56 22 *e*P **P** **07 40 38.2 +0.1**
SEW Seward 79.61 26 *e*P **P** **07 40 43.5 -0.4**
comp=Z,121nm,1.0s,mb5.7
PPLA Purkeypile 79.98 23 *e*P **P** **07 40 44.7 -1.1**
comp=Z,96nm,1.4s,mb5.4
MK31 Makanchi Array 80.33 319 *e*P **P** **07 40 47.9 -0.2**
MKAR Makanchi Array 80.33 319 P **P** **07 40 48.0 -0.1**
comp=Z,19nm,0.9s,mb4.9,baz=95,slow=7.4,SNR=73
MKAR LR LR 08 14 19.0
comp=Z,191nm,20.7s,baz=248,slow=34
CHUM Lake Minchumin 80.47 22 *e*P **P** **07 40 48.6 +0.1**
comp=Z,160nm,0.8s,mb5.9
PMR Palmer 80.50 24 *e*P **P** **07 40 48.3 -0.4**
PMR pmax pmax
comp=Z,123nm,1.3s,mb5.6
PMR Palmer 80.50 24 *e*P **P** **07 40 48.3 -0.4**
comp=Z,123nm,1.3s,mb5.6
MID Middleton Isla 80.66 27 *e*P **P** **07 40 50.0 +0.4**
MID pmax pmax
comp=Z,146nm,1.1s,mb5.7
MID Middleton Isla 80.66 27 *e*P **P** **07 40 50.0 +0.4**
comp=Z,146nm,1.1s,mb5.7
KTH Kantishna Hill 80.81 22 *e*P **P** **07 40 49.2 -1.1**
comp=Z,76nm,0.9s,mb5.5
TRF Thorofare Moun 81.00 23 *e*P **P** **07 40 50.0 -1.4**
comp=Z,38nm,0.7s,mb5.3
BPAW Bear Paw Mtn. 81.08 22 *e*P **P** **07 40 50.9 -0.8**
comp=Z,44nm,1.0s,mb5.2
ZAA0 Zalesovo Array 81.27 327 *e*P **P** **07 40 52.2 -0.7**
ZALV Zalesovo Beam 81.27 327 P **P** **07 40 51.4 -1.6**
comp=Z,9.7nm,0.6s,mb4.8,baz=109,slow=5.5,SNR=48
ZALV LR LR 08 16 24.0
comp=Z,146nm,19.8s,baz=231,slow=35
MCK McKinley 81.67 23 *e*P **P** **07 40 54.3 -0.6**
comp=Z,262nm,1.0s,mb6.0
DIV Divide 81.69 26 *e*P **P** **07 40 55.1 0.0**
comp=Z,115nm,1.1s,mb5.6
BMRM Bremner River 82.13 26 *e*P **P** **07 40 57.4 +0.1**
comp=Z,115nm,1.2s,mb5.6
NVS Novosibirsk 82.46 327 *e*P **P** **07 40 57.1 -2.1**
NVS pmax pmax
comp=Z,54nm,2.3s,mb5.0
NVS pmax pmax
comp=E,21nm,1.5s
COLA College 82.65 22 *e*P **P** **07 40 58.8 -1.2**
COLA pmax pmax
comp=Z,116nm,0.8s,mb5.8
COLA College 82.65 22 *e*P **P** **07 40 58.8 -1.2**
comp=Z,116nm,0.8s,mb5.8
PAX Paxson 82.67 24 *e*P **P** **07 40 59.7 -0.4**
PAX pmax pmax
comp=Z,24nm,0.8s,mb5.1
PAX Paxson 82.67 24 *e*P **P** **07 40 59.7 -0.4**
comp=Z,24nm,0.8s,mb5.1
KSH Kashi 82.81 311 P **P** **07 41 03.4 +2.0**
KSH pP pP 07 41 23.8 +3.8
KSH sP sP 07 41 32.1 +4.6
KSH PP PP 07 44 16.8 +4.3
KSH S S 07 51 12.6 -1.9
KSH SKS 07 51 14.3
KSH sS sS 07 51 50.3 +4.1
KSH SS SS 07 56 43.3 +4.6
KSH pmax pmax
comp=Z,18nm,1.0s,mb4.9
KSH LR LR
comp=N,96nm,5.6s
KSH LR LR
comp=E,110nm,6.1s
KSH LR LR
comp=Z,150nm,6.0s
COLD Coldfoot 83.03 19 *e*P **P** **07 41 02.1 +0.2**
comp=Z,52nm,1.1s,mb5.3
MENT Mentasta 83.37 24 *e*P **P** **07 41 04.1 +0.4**
KURK Kurchatov 83.82 322 P **P** **07 41 05.3 -1.0**
comp=Z,95nm,0.9s,mb5.6,SNR=14
KURK Kurchatov 83.82 322 P **P** **07 41 06.0 -0.3**
comp=Z,7.8nm,0.8s,mb4.6,baz=108,slow=4.0,SNR=30
KURK LR LR 08 16 50.6
comp=Z,191nm,20.4s,baz=90,slow=34
KURK Kurchatov 83.82 322 *ce*P **P** **07 41 06.1 -0.2**
KURK pmax pmax
comp=Z,23nm,1.2s,mb4.9
KURK Kurchatov 83.82 322 *e*P **P** **07 41 05.5 -0.8**
comp=Z,16nm,1.0s,mb4.8
TKM2 Tokmak 2 83.86 314 P **P** **07 41 07.4 +0.8**
SNR=11
TKM2 Tokmak 2 83.86 314 *e*P **P** **07 41 07.2 +0.5**
TKM2 pmax pmax
comp=Z,16nm,0.8s,mb4.9
TKM2 Tokmak 2 83.86 314 *e*P **P** **07 41 07.2 +0.5**
comp=Z,16nm,0.8s,mb4.9
KZA Kyzart 83.92 313 P **P** **07 41 08.8 +1.8**
SNR=51

PNL	Peninsula	83.98	28	eP	P	07 41 07.3	+0.4
	comp=Z,127nm,1.2s,mb5.6						
KBK	Karagaybulak	84.26	314	P	P	07 41 10.0	+1.2
	SNR=12						
CHMS	Chumysh	84.48	314	P	P	07 41 10.7	+0.9
	SNR=9.8						
UCH	Uchtor	84.48	313	P	P	07 41 11.5	+1.6
	SNR=36						
UCH	Uchtor	84.48	313	eP	P	07 41 11.2	+1.4
	comp=Z,33nm,1.1s,mb5.1						
QSPA	South Pole Qui	84.57	180	PKKPbc	PKKPbc	07 59 19.9	-3.4
	comp=Z,1.3nm,0.7s,baz=138,slow=3.1,SNR=6.7						
QSPA	South Pole Qui	84.57	180	eP	P	07 41 09.2	-0.4
	comp=Z,20nm,1.0s,mb5.0						
AAK	Ala-Archa	84.58	314	P	P	07 41 11.5	+1.1
	comp=Z,124nm,0.8s,mb5.9,SNR=5.3						
AAK	Ala-Archa	84.58	314	P	P	07 41 11.3	+0.9
	SNR=9.1						
AAK	Ala-Archa	84.58	314	P	P	07 41 11.2	+0.8
	comp=Z,9.6nm,0.7s,mb4.8,baz=128,slow=3.2,SNR=30						
AAK				LR	LR	08 19 34.8	
	comp=Z,297nm,20.4s,baz=77,slow=36						
USP	Ospenovka	84.72	314	P	P	07 41 11.7	+0.7
	SNR=21						
MAW	Mawson	84.77	203	P	P	07 41 10.6	-0.2
	comp=Z,4.1nm,0.9s,mb4.4,baz=92,slow=8.9,SNR=8.1						
MAW				LR	LR	08 16 32.0	
	comp=Z,337nm,19.1s,baz=107,slow=34						
MAW	Mawson	84.77	203	eP	P	07 41 10.6	-0.2
	comp=Z,1.8nm,1.0s,mb4.0						
AML	Almayashu	85.06	313	P	P	07 41 14.6	+1.8
	SNR=6.2						
AML	Almayashu	85.06	313	eP	P	07 41 14.1	+1.3
	comp=Z,84nm,1.1s,mb5.6						
EKS2	Erkin-Say	85.11	314	P	P	07 41 14.0	+1.0
	SNR=34						
EKS2	Erkin-Say	85.11	314	eP	P	07 41 13.7	+0.7
	comp=Z,41nm,1.1s,mb5.3						
SIT	Sitka	85.13	32	eP	P	07 41 13.2	+0.4
SIT				pmax	pmax		
	comp=Z,73nm,1.7s,mb5.3						
SIT	Sitka	85.13	32	eP	P	07 41 13.2	+0.4
	comp=Z,73nm,1.7s,mb5.3						
EGAK	Eagle	85.17	23	eP	P	07 41 13.1	+0.3
	comp=Z,128nm,1.1s,mb5.8						
HYT	Haines Junctio	85.27	28	eP	P	07 41 14.3	+1.0
SKAG	Skagway	85.86	29	eP	P	07 41 16.8	+0.5
	comp=Z,79nm,1.7s,mb5.4						
DLBC	Dease Lake	88.23	31	eP	P	07 41 29.0	+1.1
KCPM	Cahto Peak	89.02	50	eP	P	07 41 34.0	+1.9
KHMM	Horse Mountain	89.07	49	eP	P	07 41 33.6	+1.4
INK	Inuvik	89.25	21	P	P	07 41 32.1	-0.3
	comp=Z,42nm,1.0s,mb5.4,baz=258,slow=5.4,SNR=47						
BVAR	Borovoye Array	89.31	323	P	P	07 41 32.2	-0.9
	comp=Z,14nm,0.8s,mb5.1,baz=101,slow=6.2,SNR=67						
BRVK	Borovoye	89.38	323	P	P	07 41 32.7	-0.7
	comp=Z,102nm,1.0s,mb5.8,SNR=6.5						
BRVK	Borovoye	89.38	323	ceP	P	07 41 32.5	-0.9
BRVK				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.1						
BRVK	Borovoye	89.38	323	eP	P	07 41 32.4	-0.9
	comp=Z,18nm,1.1s,mb5.0						
RNO	Roman Nose	89.48	46	P	P	07 41 35.4	+1.3
OOW	Octopus West	89.71	42	P	P	07 41 36.3	+1.2
HUMO	Hull Mountain	89.88	47	eP	P	07 41 36.2	+0.2
	comp=Z,19nm,1.1s,mb5.1						
NLWA	Neilton Lookou	89.88	43	⇓P	P	07 41 36.3	+0.4
	baz=90						
NLWA	Neilton Lookou	89.88	43	eP	P	07 41 36.7	+0.9
	comp=Z,22nm,1.1s,mb5.2						
F03A	Seaside	89.89	44	⇓P	P	07 41 34.6	-1.4
	baz=90						
WDC	Whiskeytown Da	89.93	49	eP	P	07 41 35.9	-0.4
WDC				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.6						
WDC	Whiskeytown Da	89.93	49	eP	P	07 41 35.9	-0.3
	comp=Z,6.7nm,1.3s,mb4.6						
YBH	Yreka Blue Hor	89.95	48	eP	P	07 41 36.7	+0.4
YBH				pmax	pmax		
	comp=Z,12nm,1.2s						
YBH	Yreka Blue Hor	89.95	48	eP	P	07 41 36.7	+0.4
	comp=Z,12nm,1.2s,mb4.9						
PGC	Sidney	90.33	41	eP	P	07 41 38.2	+0.3
G04A	Mulino	90.55	45	⇓P	P	07 41 38.9	-0.1
	baz=91						
GNW	Green Mountain	90.60	42	eP	P	07 41 39.1	-0.1
	comp=Z,8.8nm,1.0s,mb4.8						
F04A	Amboy	90.68	44	⇓P	P	07 41 39.6	0.0
	baz=91						
H04A	Detroit Lake	90.69	45	⇓P	P	07 41 39.6	-0.1
	baz=91						
MCW	Mount Constitu	90.74	41	P	P	07 41 40.6	+0.8
FL2	Flat Top 2	90.76	44	P	P	07 41 40.7	+0.7
LTIM	Timbered Crate	90.79	49	P	P	07 41 41.0	+0.7
TDL	Tradedollar La	90.87	44	P	P	07 41 41.3	+0.8
BKCOR	Black Crater	90.99	46	P	P	07 41 41.5	+0.4
D05A	Enumclaw	91.12	43	⇓P	P	07 41 41.7	0.0
	baz=91						
LON	Longmire	91.19	43	eP	P	07 41 41.6	-0.4
LON				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.7						
LON	Longmire	91.19	43	eP	P	07 41 41.6	-0.4
	comp=Z,9.5nm,1.3s,mb4.8						
A05A	Maple Falls	91.27	41	⇑P	P	07 41 41.5	-0.8
	baz=91						
VFP	Flag Point	91.27	45	P	P	07 41 43.0	+0.6
JCW	Jim Creek	91.28	42	eP	P	07 41 42.9	+0.5
K05A	Summer Lake	91.40	47	⇓P	P	07 41 42.4	-0.7
	baz=92						
PKM	Peak Mountain	91.45	55	⇑P	P	07 41 43.2	-0.3
	baz=92						
BEKR	Beckworth	91.51	50	⇑P	P	07 41 43.3	-0.4
	baz=92						
RPW	Rockport	91.58	42	eP	P	07 41 43.8	+0.1
MOD	Modoc	91.75	48	eP	P	07 41 44.8	+0.1
	comp=Z,19nm,1.3s,mb5.2						
WCN	Washoe City	91.92	51	⇓P	P	07 41 45.7	+0.1
	baz=92						
WRW	Wenatchee Ridg	91.94	42	P	P	07 41 45.6	+0.2
WAKR	Walker	92.10	52	eP	P	07 41 47.6	+1.3
ETW	Entiat	92.28	43	eP	P	07 41 47.4	+0.4
I07A	Izee	92.54	46	⇑P	P	07 41 47.8	-0.5
	baz=93						
ISA	Isabella	92.62	55	⇓P	P	07 41 48.2	-0.6
	baz=93						
ISA	Isabella	92.62	55	eP	P	07 41 48.9	0.0
ISA				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.5						
ISA	Isabella	92.62	55	eP	P	07 41 48.9	0.0
	comp=Z,2.2nm,0.9s,mb4.5						
RSW	Rattlesnake Hi	92.68	44	eP	P	07 41 49.7	+0.8
MTUM	Tungsten Hills	92.69	53	eP	P	07 41 50.4	+1.3
HAWA	Hanford	92.72	44	eP	P	07 41 49.3	+0.3
	comp=Z,21nm,1.1s,mb5.4						
PASC	Pasadena Art C	92.73	56	eP	P	07 41 49.7	+0.3
	comp=Z,60nm,1.1s,mb5.8						
MWC	Mount Wilson	92.84	56	eP	P	07 41 51.2	+1.3
MWC				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.5						
MWC	Mount Wilson	92.84	56	eP	P	07 41 51.2	+1.3
	comp=Z,23nm,1.0s,mb5.5						
EDW2	Edwards Air Fo	92.95	55	⇓P	P	07 41 49.8	-0.7
	baz=93,SNR=5.9						
NVAR	Mina Array Bea	92.98	52	P	P	07 41 51.5	+1.0
	comp=Z,6.2nm,0.7s,mb5.0,baz=251,slow=6.8,SNR=50						
NVAR	Mina Array Bea	92.98	52	P	P	07 41 51.5	+1.0
CWC	Cottonwood Cre	93.00	54	⇓P	P	07 41 50.9	+0.3
	baz=93						
B08A	Colville Reser	93.02	42	⇓P	P	07 41 49.8	-0.6
	baz=93,SNR=9.3						
G08A	Pilot Rock	93.03	45	⇓P	P	07 41 50.5	0.0
	baz=93,SNR=18						
WVOR	Wild Horse Val	93.04	48	eP	P	07 41 50.4	-0.2
WVOR				pmax	pmax		
	comp=Z,14nm,1.1s,mb5.2						
WVOR	Wild Horse Val	93.04	48	eP	P	07 41 50.4	-0.3
	comp=Z,14nm,1.1s,mb5.2						
E08A	Dider Farm, El	93.05	44	⇑P	P	07 41 50.8	+0.2
	baz=93,SNR=6.3						
H08A	Prairie City	93.17	46	⇑P	P	07 41 51.5	+0.3
	baz=93,SNR=12						
D08A	Wollman Farm,	93.19	43	⇑P	P	07 41 51.1	-0.1
	baz=93,SNR=5.2						
J08A	Circle Bar Ran	93.23	47	⇑P	P	07 41 51.2	-0.2
	baz=93						
LRMC	Laurel Mountai	93.24	55	⇓P	P	07 41 52.2	+0.5
	baz=93,SNR=12						
OD2	Odessa Site #2	93.36	43	P	P	07 41 52.1	+0.2
MPMC	Manual Prospec	93.45	54	⇓P	P	07 41 53.0	+0.3
	baz=94,SNR=12						
GRAC	Grapevine Rang	93.61	53	⇓P	P	07 41 53.1	-0.3
	baz=94						
E09A	Wood Farm, Sta	93.69	44	⇑P	P	07 41 53.5	0.0
	baz=94,SNR=6.0						
J09A	Fry Pan Ranch,	93.75	47	⇑P	P	07 41 54.2	+0.3
	baz=94,SNR=22						
I09A	Lost Marbles R	93.80	46	⇑P	P	07 41 53.9	-0.2
	baz=94,SNR=12						
G09A	Cove	93.86	45	⇓P	P	07 41 54.3	0.0
	baz=94,SNR=16						
H09A	Durkee	93.90	46	⇑P	P	07 41 54.5	-0.1
	baz=94						
GSC	Goldstone	93.95	55	⇑P	P	07 41 55.2	+0.2
	baz=94						
GSC	Goldstone	93.95	55	eP	P	07 41 55.1	+0.1
GSC				pmax	pmax		
	comp=Z,16nm,1.4s,mb5.2						
GSC	Goldstone	93.95	55	eP	P	07 41 55.0	0.0
	comp=Z,16nm,1.4s,mb5.2						
FURC	Furnace Creek,	93.98	54	⇓P	P	07 41 55.8	+0.6
	baz=94,SNR=6.6						
MONP	Monument Peak	94.11	57	⇑P	P	07 41 57.1	+1.3
	baz=94,SNR=5.5						
PFO	Pinyon Flat Ob	94.13	57	⇑P	P	07 41 56.5	+0.6
	baz=94						
BMO	Blue Mountains	94.17	45	eP	P	07 41 55.3	-0.5
BMO				pmax	pmax		
	comp=Z,16nm,1.3s,mb5.2						
BMO	Blue Mountains	94.17	45	eP	P	07 41 55.3	-0.4
	comp=Z,16nm,1.3s,mb5.2						
S10A	Tonopah Range,	94.28	52	P	P	07 41 57.2	+0.7
	baz=94,SNR=23						
F10A	Beach Ranch, E	94.29	44	⇓P	P	07 41 55.9	-0.4
	baz=94,SNR=17						
HEC	Hector,Ludlow	94.31	56	⇓P	P	07 41 56.7	0.0
	baz=94						
G10A	Bishop Farm, J	94.32	45	P	P	07 41 56.4	0.0
	baz=94,SNR=24						
K10A	MacKenzie Ranc	94.36	48	⇓P	P	07 41 56.2	-0.5
	baz=94,SNR=13						
U10A	Ash Meadows, A	94.41	54	⇓P	P	07 41 57.6	+0.5
	baz=94,SNR=6.7						
SHOC	Shoshone	94.42	54	⇑P	P	07 41 56.8	-0.3
	baz=94,SNR=7.3						
J10A	Berg Farm, Mel	94.47	47	⇓P	P	07 41 58.1	+0.9
	baz=94						
I10A	Payette	94.48	46	⇓P	P	07 41 58.3	+1.1
	baz=95						
NEW	Newport	94.48	42	eP	P	07 41 56.9	-0.2
NEW				pmax	pmax		
	comp=Z,15nm,1.0s						
NEW	Newport	94.48	42	eP	P	07 41 56.9	-0.3
	comp=Z,15nm,1.0s,mb5.3						
P10A	Eureka	94.49	51	⇑P	P	07 41 57.9	+0.5
	baz=95						
Q10A	Clear Creek Ra	94.49	52	⇓P	P	07 41 57.3	-0.1
	baz=95						
BELC	Belle Mtn. Jos	94.53	56	⇑P	P	07 41 57.7	0.0
	baz=95,SNR=8.4						
H10A	Noah's Angus R	94.55	46	⇑P	P	07 41 56.9	-0.6
	baz=95,SNR=22						
L10A	Juniper Basin	94.62	48	⇑P	P	07 41 57.9	0.0
	baz=95						
TUQ	Turquoise Moun	94.68	55	⇓P	P	07 41 58.8	+0.5
	baz=95,SNR=5.2						
GMRC	Granite Mounta	94.86	56	⇓P	P	07 41 59.0	-0.2
	baz=95,SNR=7.2						
G11A	Walters Elk Ra	94.93	45	P	P	07 41 58.8	-0.5
	baz=95,SNR=13						
S11A	Rachel	94.94	53	⇑P	P	07 41 59.3	-0.2
	baz=95						
BC3	Big Chuckawall	94.97	57	⇑P	P	07 41 59.3	-0.4
	baz=95,SNR=7.2						
K11A	Parker Ranch,	94.98	48	⇓P	P	07 41 59.2	-0.3
	baz=95,SNR=13						
F11A	Grangeville	95.03	44	⇓P	P	07 41 58.1	-1.5
	baz=95,SNR=9.3						
C11A	Tepee Creek (N	95.05	43	⇓P	P	07 41 58.9	-0.9
	baz=95						
Q11A	Duckwater	95.07	52	⇑P	P	07 41 60.0	-0.1
	baz=95,SNR=9.5						
H11A	Donnelly	95.08	46	P	P	07 41 59.8	-0.2
	baz=95,SNR=12						
I11A	Placerville	95.08	46	⇑P	P	07 41 59.9	0.0
	baz=95,SNR=14						
M11A	Holland Ranch,	95.09	49	⇑P	P	07 41 59.9	-0.2
	baz=95						
V11A	Goodsprings	95.10	55	⇑P	P	07 42 00.8	+0.5
	baz=95,SNR=7.7						
R11A	Troy Canyon, C	95.10	52	⇓P	P	07 41 59.9	-0.3
	baz=95,SNR=12						
O11A	Cowboy Ranch,	95.13	50	⇑P	P	07 42 00.3	0.0
	baz=95						
L11A	Cat Creek Ranc	95.15	48	⇓P	P	07 42 00.6	+0.3
	baz=95,SNR=6.4						
MFID	Camas Ranch	95.16	47	⇓P	P	07 42 00.5	+0.1
	baz=95						
IRM	Iron Mountain	95.25	56	⇑P	P	07 42 01.1	+0.2
	baz=95						
SVE	Sverdlovsk	95.29	327	eP	P	07 41 59.5	-1.1
SVE				pmax	pmax		
	comp=Z,15nm,1.2s,mb5.3						
T11A	Corn Creek, Al	95.34	53	⇓P	P	07 42 01.8	+0.5
	baz=95,SNR=8.7						
E12A	Beaver Dam Sad	95.46	44	⇑P	P	07 42 00.4	-1.3
	baz=96						
B12A	Libby	95.52	42	⇑P	P	07 42 01.9	+0.1
	baz=96						
W12A	Cal Nev Ari	95.53	55	⇓P	P	07 42 02.7	+0.5
	baz=96						
V12A	Nelson	95.57	55	⇑P	P	07 42 02.2	-0.2
	baz=96,SNR=6.3						
G12A	Big Creek, Yel	95.58	45	⇑P	P	07 42 01.6	-0.7
	baz=96						
D12A	Red Ives Fores	95.63	43	⇑P	P	07 42 01.7	-0.7
	baz=96						
N12A	Clover Valley,	95.64	50	⇑P	P	07 42 02.3	-0.2
	baz=96,SNR=6.5						
N12A	Clover Valley,	95.64	50	eP	P	07 42 03.2	+0.7
	comp=Z,8.3nm,1.0s,mb5.1						
S12A	Delamar Landin	95.65	53	⇓P	P	07 42 02.7	0.0
	baz=96,SNR=8.6						
F12A	Elk City	95.65	45	⇓P	P	07 42 01.5	-1.0
	baz=96,SNR=8.3						
I12A	Atlanta	95.67	47	⇓P	P	07 42 01.7	-1.0
	baz=96						
J12A	Stokes Ranch,	95.68	47	⇑P	P	07 42 02.5	-0.3
	baz=96,SNR=15						
P12A	McGill	95.68	51	⇑P	P	07 42 02.4	-0.5
	baz=96,SNR=6.9						
M12A	Wells	95.75	49	⇑P	P	07 42 03.8	+0.7
	baz=96						
K12A	Draper Farm, C	95.80	48	⇓P	P	07 42 03.1	-0.2
	baz=96						
O12A	Currie	95.84	50	⇓P	P	07 42 02.7	-0.8
	baz=96,SNR=10.0						
U12A	Valley of Fire	95.85	54	⇓P	P	07 42 04.0	+0.3
	baz=96,SNR=5.4						
R12A	Pony Springs,	95.87	52	⇓P	P	07 42 03.4	-0.3
	baz=96,SNR=12						
H12A	Diamond D Ranc	95.90	46	⇓P	P	07 42 04.1	+0.4
	baz=96						
BSMT	Bassoo Peak	96.03	43	eP	P	07 42 04.6	+0.4
C13A	Hot Springs	96.17	43	⇓P	P	07 42 04.3	-0.5
	baz=96						
HLID	Hailey	96.19	47	⇑P	P	07 42 04.5	-0.6
	baz=96,SNR=8.5						
HLID	Hailey	96.19	47	eP	P	07 42 05.3	+0.2
	comp=Z,9.6nm,1.4s,mb5.0						
D13A	Huson	96.24	43	⇓P	P	07 42 05.0	-0.2
	baz=96						
B13A	Whitefish	96.26	42	⇓P	P	07 42 05.2	-0.1
	baz=96,SNR=18						
YKA	Yellowknife Ar	96.26	28	P	P	07 42 05.0	+0.1
	comp=Z,3.2nm,0.7s,mb4.9,baz=274,slow=5.0,SNR=16						
V13A	Grand Canyon W	96.28	55	⇓P	P	07 42 06.1	+0.5
	baz=96,SNR=8.0						
F13A	Darby	96.30	45	⇓P	P	07 42 05.1	-0.4
	baz=96,SNR=15						
M13A	Montello	96.31	49	⇓P	P	07 42 05.3	-0.3
	baz=96,SNR=7.2						
M13A	Montello	96.31	49	eP	P	07 42 06.2	+0.5
	comp=Z,7.0nm,1.2s,mb5.0						
U13A	Pakoon Wash	96.31	54	⇓P	P	07 42 05.7	-0.1
	baz=96						
Y13A	Salome	96.33	57	⇓P	P	07 42 05.5	-0.4
	baz=96						
H13A	Challis	96.33	46	⇑P	P	07 42 05.1	-0.5
	baz=96,SNR=8.7						
W13A	Hualapai Mount	96.33	55	⇓P	P	07 42 04.9	-1.0
	baz=96,SNR=7.0						
Q13A	Wheeler Ranch,	96.35	52	⇓P	P	07 42 06.3	+0.4
	baz=96						
X13A	Yucca	96.36	56	⇓P	P	07 42 06.4	+0.4
	baz=96						
G13A	Cobalt	96.36	45	⇓P	P	07 42 05.8	0.0
	baz=96						
J13A	Cove Ranch, Pi	96.36	47	⇑P	P	07 42 06.0	+0.2
	baz=96						
R13A	O'Grain Ranch,	96.37	52	⇓P	P	07 42 05.7	-0.2
	baz=96						
P13A	Bates Ranch, G	96.37	51	⇑P	P	07 42 05.8	-0.1
	baz=96,SNR=6.1						
T13A	Saint George	96.38	53	⇓P	P	07 42 06.5	+0.5
	baz=96,SNR=13						
I13A	Wildhorse Cree	96.41	47	⇓P	P	07 42 05.7	-0.4
	baz=96						
E13A	Victor	96.41	44	⇑P	P	07 42 05.9	0.0
	baz=96						
ARU	Arti	96.43	326	ciP	P	07 42 03.8	-2.0
ARU				S	SKSac	07 52 37.5	+1.1
ARU				SS	SS	07 59 49.3	-5.7
ARU				pmax	pmax		
	comp=Z,17nm,1.2s,mb5.3						
ARU				MLR	MLR		
	comp=Z,369nm,20.0s						
ARU	Arti	96.43	326	eP	P	07 42 04.4	-1.5
	comp=Z,13nm,1.1s,mb5.3						
S13A	Holt Ranch, En	96.44	53	⇓P	P	07 42 06.4	+0.1
	baz=96						
Z13A	Yuma Proving G	96.45	57	⇓P	P	07 42 06.4	0.0
	baz=96,SNR=5.5						
L13A	Double Diamond	96.50	48	⇓P	P	07 42 07.3	+0.9
	baz=97						
WALA	Waterton Lakes	96.64	41	eP	P	07 42 07.9	+0.9
AKTK	Aktyubinsk	96.74	320	P	P	07 42 05.7	-1.7
AKTK				LR	LR	08 26 23.1	
AKTO	Aktyubinsk	96.74	320	P	P	07 42 05.7	-1.7
	comp=Z,2.4nm,0.8s,mb4.7,baz=138,slow=4.8,SNR=6.0						
AKTO				LR	LR	08 26 23.1	
	comp=Z,185nm,20.5s,baz=86,slow=36						
CCUT	Cedar City	96.83	53	eP	P	07 42 09.6	+1.5
	comp=Z,6.1nm,1.2s,mb4.9						
I14A	Mackay	96.89	47	⇓P	P	07 42 08.2	0.0
	baz=97						
M14A	Sheep Mountain	96.93	49	⇓P	P	07 42 08.3	-0.1
	baz=97,SNR=8.5						
Q14A	Sevier Lake (B	96.93	51	⇓P	P	07 42 08.3	-0.3
	baz=97,SNR=6.9						
U14A	Mt Trumbull	96.94	54	⇓P	P	07 42 09.0	+0.3
	baz=97,SNR=9.4						
A14A	Double T Ranch	96.96	41	⇓P	P	07 42 08.4	0.0
	baz=97,SNR=13						
H14A	Leadore	96.96	46	⇓P	P	07 42 07.8	-0.8
	baz=97						
V14A	Boquillas Ranc	96.98	55	P	P	07 42 09.9	+1.1
	baz=97,SNR=6.9						
W14A	Seligman	96.99	55	⇓P	P	07 42 08.8	-0.1
	baz=97						
EDM	Edmonton	97.00	37	eP	P	07 42 09.1	+0.6
Y14A	Wickenburg	97.02	57	⇑P	P	07 42 09.2	+0.2
	baz=97						
L14A	Malta	97.02	48	⇓P	P	07 42 09.1	+0.3
	baz=97,SNR=8.4						
T14A	Hurricane	97.04	53	⇓P	P	07 42 09.2	+0.1
	baz=97						
N14A	Grayback Hills	97.04	50	⇓P	P	07 42 09.2	+0.2
	baz=97						
B14A	Marquette Ranc	97.06	42	⇓P	P	07 42 08.5	-0.3
	baz=97,SNR=7.4						
CHMT	Chamberlain Mo	97.06	44	eP	P	07 42 08.8	-0.1
K14A	Jones Ranch, D	97.08	48	⇑P	P	07 42 08.5	-0.5
	baz=97,SNR=5.2						
P14A	Drum Mountains	97.11	51	⇑P	P	07 42 09.0	-0.3
	baz=97						
DUG	Dugway	97.31	50	⇓P	P	07 42 10.1	-0.2
	baz=97						
MCMT	McKenzie Canyo	97.33	46	eP	P	07 42 10.6	+0.4
	comp=Z,2.1nm,1.0s,mb4.5						
A15A	Johnson Ranch,	97.41	41	⇓P	P	07 42 10.2	-0.2
	baz=98,SNR=17						
H15A	Lima	97.48	46	⇑P	P	07 42 10.2	-0.6
	baz=98						
E15A	Deer Lodge	97.48	44	⇓P	P	07 42 10.5	-0.3
	baz=98,SNR=10.0						
C15A	Salmond Ranch,	97.50	43	P	P	07 42 10.9	+0.1
	baz=98,SNR=6.9						
DLMT	Dillon	97.52	45	eP	P	07 42 11.3	+0.4
	comp=Z,2.1nm,0.8s,mb4.7						
B15A	Bradely Ranch,	97.53	42	⇓P	P	07 42 10.6	-0.4
	baz=98						
K15A	Arbon	97.55	48	⇓P	P	07 42 10.7	-0.6
	baz=98						
F15A	Butte	97.59	45	⇓P	P	07 42 10.6	-0.7
	baz=98						
G15A	Dillon	97.59	45	⇑P	P	07 42 10.7	-0.6
	baz=98						
T15A	Red Dirt Ranch	97.60	53	⇑P	P	07 42 11.0	-0.5
	baz=98						
M15A	Larsen Ranch,	97.61	49	⇑P	P	07 42 11.3	-0.2
	baz=98,SNR=5.7						
LRM	Limekiln Ridge	97.62	45	eP	P	07 42 11.2	-0.3
	comp=Z,17nm,1.1s,mb5.5						
J15A	Blackfoot	97.63	47	⇑P	P	07 42 11.8	+0.3
	baz=98						
L15A	Malad City	97.66	48	⇓P	P	07 42 10.9	-0.8
	baz=98						
U15A	North Rim	97.66	54	⇑P	P	07 42 11.3	-0.5
	baz=98,SNR=6.1						
X15A	Humboldt	97.67	56	⇑P	P	07 42 12.7	+0.8
	baz=98						
V15A	Kaibab Nationa	97.75	55	⇑P	P	07 42 12.0	-0.3
	baz=98,SNR=6.9						
G16A	Moss Hill, Enn	98.07	45	⇑P	P	07 42 13.3	-0.2
	baz=98						
BOZ	Bozeman (W)	98.19	45	⇑P	P	07 42 13.4	-0.6
	baz=98,SNR=8.8						
BOZ	Bozeman (W)	98.19	45	eP	P	07 42 14.4	+0.4

baz=99,SNR=9.1
SNOW Snow King Moun 98.85 47 *e*P **P 07 42 17.7 +0.7**
comp=Z,4.6nm,1.0s,mb5.0
T17A Navajo Res., N 98.86 54 ⇓P **P 07 42 17.7 +0.5**
baz=99
S17A Black Ridge (B 98.86 53 ⇓P **P 07 42 17.3 +0.1**
baz=99,SNR=6.6
V17A Tonalea, Kykot 98.87 55 ⇑P **P 07 42 16.6 -0.7**
baz=99
F17A Fitzpatrick Pl 98.87 45 P **P 07 42 17.9 +0.9**
baz=99,SNR=9.0
J17A Brown Place, J 98.88 47 ⇓P **P 07 42 16.3 -0.9**
baz=99
O17A Robinson Place 98.90 50 ⇓P **P 07 42 16.7 -0.6**
baz=99
R17A Hanksville Air 98.94 52 ⇓P **P 07 42 17.7 +0.2**
baz=99
A18A Metzger Ranch, 99.32 41 ⇓P **P 07 42 18.5 -0.5**
baz=99
E18A Harlowton 99.36 44 ⇓P **P 07 42 18.9 -0.4**
baz=99,SNR=7.5
Q18A Rafter H Ranch 99.38 51 ⇓P **P 07 42 18.9 -0.6**
baz=99
B18A Beardsley Farm 99.39 42 ⇑P **P 07 42 19.2 -0.1**
baz=99
K18A Toltan Ranch, 99.39 48 ⇓P **P 07 42 19.6 +0.2**
baz=99,SNR=7.6
J18A Kendall Valley 99.39 47 ⇑P **P 07 42 19.3 -0.2**
baz=100
EGMT Eagleton 99.42 42 ⇓P **P 07 42 18.3 -1.2**
baz=100
O18A Roosevelt 99.46 50 ⇑P 07 42 19.3
baz=100
S18A Hurst Farm, Bl 99.50 53 ⇓P Pdif 07 42 19.9 +0.2
baz=100,SNR=7.3
F18A Big Timber 99.53 44 ⇑P Pdif 07 42 20.3 +0.5
baz=100
I18A Diamond G Ranc 99.53 47 ⇑P Pdif 07 42 19.6 -0.2
baz=100
GCMT Greycliff 99.56 45 *e*P Pdif 07 42 21.5 +1.6
comp=Z,1.4nm,0.7s
R18A Canyonlands Na 99.58 52 ⇑P Pdif 07 42 19.3 -0.7
baz=100
BW06 Boulder Array 99.74 48 ⇓P Pdif 07 42 20.4 -0.3
baz=100,SNR=6.0
BW06 Boulder Array 99.74 48 *e*P Pdif 07 42 20.7 0.0
comp=Z,4.9nm,1.1s
PDAR Pinedale Array 99.74 48 P Pdif 07 42 20.8 0.0
comp=Z,2.0nm,0.7s,baz=270,slow=3.0,SNR=18
PDAR PP PP 07 46 27.9 +1.7
comp=Z,0.5nm,0.7s,baz=270,slow=5.9,SNR=4.6
PDAR LR LR 08 28 16.0
comp=Z,287nm,18.2s,baz=272,slow=36
RLMT Red Lodge 99.87 45 *e*P Pdif 07 42 22.2 +0.8
comp=Z,3.7nm,0.9s
Q19A Hogan Spring (100.06 52 ⇓P Pdif 07 42 22.4 +0.2
baz=100
O19A Miners Draw (B 100.14 50 ⇑P Pdif 07 42 22.1 -0.4
baz=100
U19A Dine' College, 100.15 54 ⇓P Pdif 07 42 23.9 +1.3
baz=100,SNR=5.6
S19A Harvey Farm, M 100.18 53 ⇑P Pdif 07 42 22.5 -0.2
baz=100,SNR=12
K19A Absolon Red Bu 100.26 48 ⇓P Pdif 07 42 22.6 -0.5
baz=100
T19A Beclabito 100.29 54 ⇓P Pdif 07 42 23.9 +0.7
baz=100
K20A Yellowstone Ra 100.64 48 ⇓P Pdif 07 42 24.3 -0.4
baz=101
MVCO Mesa Verde 100.70 53 *e*Pdif Pdif 07 42 26.2 +1.2
P20A De Beque 100.72 51 ⇓P Pdif 07 42 24.9 -0.2
baz=101
Q20A Ridgley Place, 100.81 52 ⇑P Pdif 07 42 25.4 -0.1
baz=101
N21A Black Mountain 101.34 50 ⇓P Pdif 07 42 27.3 -0.5
baz=101
Q21A Lamborn Mesa, 101.38 52 ⇓P Pdif 07 42 28.6 +0.6
baz=101,SNR=6.3
U21A Nageezi 101.40 54 ⇓P Pdif 07 42 27.7 -0.4
baz=102
M21A Separation Pea 101.42 49 ⇓P Pdif 07 42 27.6 -0.6
baz=102
SMCO Snowmass 101.83 51 *e*Pdif Pdif 07 42 31.5 +1.4
comp=Z,5.9nm,1.2s
Q22A Crested Butte, 101.90 52 ⇓P Pdif 07 42 30.9 +0.6
baz=102
Z22A Elephant Butte 102.06 57 ⇑P Pdif 07 42 31.2 +0.1
baz=102
TXAR Lajitas Array 105.00 61 Pdiff Pdif 07 42 48.6 +4.4
comp=Z,0.2nm,0.7s,baz=328,slow=3.2,SNR=2.1
TXAR PKiKP PKiKP 07 46 59.7 +0.3
comp=Z,0.4nm,0.9s,baz=219,slow=1.6,SNR=3.7
TXAR PKKPab PKKPab 07 58 44.9 +0.3
comp=Z,0.4nm,0.7s,baz=116,slow=5.7,SNR=4.6
TXAR Lajitas Array 105.00 61 Pdif Pdif 07 42 48.6 +4.4
TXAR PKPdf PKiKP 07 46 59.7 +0.3
TXAR PKKPab PKKPab 07 58 44.9 +0.3
FINES FINESS Array B 111.31 335 Pdiff Pdif 07 43 10.5 -1.7
comp=Z,2.6nm,0.8s,baz=89,slow=7.2,SNR=4.1
FINES PKiKP PKiKP 07 47 10.0 -0.2
comp=Z,1.6nm,0.9s,baz=69,slow=7.6,SNR=2.8
AKASG Malin Array Be 114.58 324 PKP PKiKP 07 47 17.9 +1.1
comp=Z,0.2nm,0.3s,baz=73,slow=1.9,SNR=4.2
NB2 NORSAR Subarra117.24 340 PKPdf PKPdf 07 47 21.0 -0.6
comp=Z,1.1nm,0.6s,baz=41,slow=1.9
NOA NORSAR Array B117.24 340 PKP PKPdf 07 47 21.3 -0.3
comp=Z,2.0nm,0.7s,baz=44,slow=1.9,SNR=5.3
PLCA Paso Flores 119.71 144 PKKPbc PKKPbc 07 57 37.0 -1.7
comp=Z,3.4nm,0.8s,baz=57,slow=2.3,SNR=9.3
STHS Stebnicka Huta 119.75 325 *e*PKIKP PKPdf 07 47 28.0 +1.2
CRVS Cervenica-Dubn 119.89 325 *e*PKIKP PKPdf 07 47 28.0 +1.0
LSZ Lusaka 120.80 249 *e*PKIKP PKPdf 07 47 29.9 +0.2
DPC Dobruska-Polom 121.94 328 *e*PKIKP PKPdf 07 47 31.2 +0.3
DPC Dobruska-Polom 121.94 328 *e*PKPdf PKPdf 07 47 31.2 +0.3
BRG Berggiesshubel 122.85 330 *e*P PKPdf 07 47 37.1 +4.4
comp=Z,6.0nm,1.2s
BRG Berggiesshubel 122.85 330 *e*PKIKP PKPdf 07 47 37.1 +4.4
BRG pmax pmax
comp=Z,4.0nm,1.2s
CLL Collm 123.04 331 *e*PKIKP PKPdf 07 47 33.0 0.0
CLL pmax pmax
comp=Z,5.0nm,1.0s
CLL MLR MLR
comp=Z,100nm,19.9s
PRU Pruhonice 123.08 329 *e*PKIKP PKPdf 07 47 34.0 +0.9
PRU Pruhonice 123.08 329 *e*PKPdf PKPdf 07 47 34.0 +0.9
BINY Binghamton 123.81 42 *e*PKPdf PKPdf 07 47 34.0 -0.7
KHC Kasperske Hory 124.10 328 *e*PKPdf PKPdf 07 47 35.0 -0.1
KHC Kasperske Hory 124.10 328 *e*PKPdf PKPdf 07 47 35.0 -0.1
NCB Newcomb 124.11 39 *e*PKPdf PKPdf 07 47 35.3 0.0
GRA1 Grafenberg Arr 124.95 330 *e*PKPdf PKPdf 07 47 36.6 -0.1
GRF Grafenberg Arr 124.95 330 *e*PKPdf PKPdf 07 47 36.6 -0.1
CDF Champ du Feu 127.74 331 *e*PKP1 PKPdf 07 47 41.5 -0.6
ATAH Atahualpa 128.07 103 PKP PKPdf 07 47 44.8 +1.1
comp=Z,7.8nm,0.8s,baz=337,slow=8.3,SNR=5.3
HINF Hinteralfeld 128.35 331 *e*PKP1 PKPdf 07 47 43.0 -0.3
HAU Haudompre 128.47 331 *e*PKP1 PKPdf 07 47 43.4 -0.1
LOR Lormes 130.17 332 *e*PKP1 PKPdf 07 47 51.0 +4.2
comp=Z,22nm,1.3s
BNI Bardonecchia 130.32 328 *e*PKIKP PKPdf 07 47 50.1 +3.0
SSF Saint Saulge 130.49 332 *e*PKP1 PKPdf 07 47 50.9 +3.5
SMF Signal de Mont 130.63 331 *e*PKP1 PKPdf 07 47 51.8 +4.1
LMR La Mourre 131.56 327 *e*PKP1 PKPdf 07 47 49.7 +0.2
comp=Z,22nm,1.2s
TCF Toulx Ste Croi 131.66 332 *e*PKP1 PKPdf 07 47 54.0 +4.4
comp=Z,24nm,1.3s
ROSC El Rosal 133.74 88 PKP PKPdf 07 47 56.2 +1.7
comp=Z,3.0nm,0.8s,baz=253,slow=6.1,SNR=5.0
ROSC El Rosal 133.74 88 *e*PKPdf PKPdf 07 47 55.9 +1.4
KEST Kesra 134.38 316 PKP PKPdf 07 47 56.5 +1.5
comp=Z,0.9nm,0.6s,baz=63,slow=2.3,SNR=2.4
KEST SKPbc SKPbc 07 51 23.2 +4.1
comp=Z,1.5nm,0.9s,baz=45,slow=14,SNR=3.9
KEST Kesra 134.38 316 PKP PKPdf 07 47 56.5 +1.5
KEST SKPbc SKPbc 07 51 23.2 +4.1
LPAZ La Paz 134.72 119 PKP PKPdf 07 47 58.1 +1.8
comp=Z,1.4nm,0.7s,baz=252,slow=3.2,SNR=4.8
LPAZ La Paz 134.72 119 *e*PKPdf PKPdf 07 47 55.2 -1.0
MVO Moncorvo 139.79 335 *e*PKPdf PKPdf 07 48 06.3 +1.4
MTE Manteigas 140.65 335 *e*PKPdf PKPdf 07 48 03.9 -2.6
SIV San Ignacio 140.87 123 PKhKP PKPpre 07 48 00.1
comp=Z,1.3nm,0.7s,baz=248,slow=5.4,SNR=3.9
PMRV Marv??o 141.39 334 *e*PKPdf PKPdf 07 48 02.3 -5.6
PBAR Barrancos 142.27 333 *e*PKPdf PKPdf 07 48 05.2 -4.3
EVO Evora 142.41 334 *e*PKPdf PKPdf 07 48 06.1 -3.6
PBEJ Beja 142.76 333 *e*PKPdf PKPdf 07 48 07.5 -2.9

TAM Tamanrasset 143.42 302 *e*PKIKP PKPdf 07 48 10.0 -2.0
PFVI Vila Bisbo 143.93 334 *e*PKPdf PKPdf 07 48 11.8 -0.6
TORD Torodi Ar. Bea 149.84 287 PKPbc PKPbc 07 48 27.9 +0.2
baz=71,slow=2.3
KIC Kosan Boka 156.97 274 *e*PKP2 PKPab 07 49 03.7 +0.1
comp=Z,55nm,0.8s
DBIC Dimbokro 157.07 274 PKPab PKPab 07 49 04.2 +0.1
comp=Z,5.4nm,0.8s,baz=87,slow=3.5,SNR=4.2
TIC Toumodi 157.24 274 *e*PKP2 PKPab 07 49 04.8 0.0
comp=Z,54nm,1.0s
LIC Lamto 157.26 273 *e*PKP2 PKPab 07 49 04.8 -0.1
comp=Z,49nm,0.8s

NIED ***21*** *07:29:00,22.°00N×121.°80E,h11km,Mw4.0 Best double couple: M0 1.18000×10^15 NP1:φ=290.00000°,δ70.00000°, λ-79.00000°. NP2:φ=81.00000°,δ23.00000°, λ-117.00000°.*
TAP ***21*** *07:29:32.0,21.°89N×121.°76E,h20km,ML4.2,D*
ISCJB ***21*** *07:29:32.1±0.5,21.°93N±0.°03×121.°83E±0.°02,h10km, mb3.9/7,Error ellipse: s-maj=3.8km s-min=2.6km az=162.9*
IDC ***21*** *07:29:33.7±1.2,21.°98N×121.°77E,h0km,mb3.9/8, mb1 4.0/9,mb1mx3.8/23,mbtmp3.9/9,ML3.3/1,MS3.1/1, Ms1 3.1/1,ms1mx1.7/34,Error ellipse: s-maj=31.1km s-min=24.1km az=72.0*
JMA ***21*** *07:29:34.7±0.2,21.°98N×121.°78E,h95km,M3.6*
NEIC ***21*** *07:29:38.3±1.4,22.°34N×121.°61E,h10km,MG3.6(JMA), Error ellipse: s-maj=18.1km s-min=13.5km az=154.0*
ISC 21 07:29:33.1±0.5,21.°94N±0.°03×121.°78E±0.°02,h10km,n69, σ1§31/114,mb3.9/7,1C-3D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu** baz=307	**0.23**	**295**	⇓*i*P	**Pg**	**07 29 37.8**	**0.0**
TSEB	**Hengchuen, Pin** baz=284	**0.81**	**267**	P	**Pg**	**07 29 48.6**	**-0.2**
TSEB	baz=284			*i* S	**Sg**	**07 30 00.7**	**+1.3**
TWK1	**Hengchun** baz=286	**0.90**	**270**	*e*P	**Pg**	**07 29 48.9**	**-1.6**
TWK1	baz=286			*e*S	**Sg**	**07 30 01.1**	**-1.1**
TAW	**Tawu** baz=300	**0.91**	**297**	P	**Pg**	**07 29 49.2**	**-1.5**
TAW	baz=300			S	**Sg**	**07 30 00.8**	**-1.8**
EAST	**Anshuo** baz=300	**0.96**	**297**	*e*P	**Pg**	**07 29 49.7**	**-2.0**
HEN	**Hengchun** baz=289	**0.96**	**274**	*e*P	**Pg**	**07 29 50.7**	**-0.9**
HEN	baz=289			S	**Sg**	**07 30 03.9**	**-0.4**
TTN	**Taitung** baz=337	**0.99**	**324**	*e*P	**Pg**	**07 29 50.9**	**-1.4**
ECL	**Taimali** baz=302	**1.00**	**311**	*e*P	**Pg**	**07 29 50.4**	**-2.0**
ECL	baz=302			*e*S	**Sg**	**07 30 02.6**	**-2.8**
TWG	**Pinlang**	**1.09**	**323**	*e*Pn	**Pn**	**07 29 51.8**	**-2.6**
TWG				*e*Sn	**Sn**	**07 30 09.7**	**+0.2**
TWG	**Pinlang** baz=308	**1.09**	**323**	⇓*i*P	**Pb**	**07 29 52.2**	**-1.9**
TWG	baz=308			S	**Sg**	**07 30 07.1**	**-1.1**
SCZT	**Fangliau** baz=304	**1.15**	**292**	⇑P	**Pb**	**07 29 53.4**	**-1.7**
SCZT	baz=304			*e*S	**Sb**	**07 30 09.3**	**-0.9**
SSD	**Sandimen** baz=309	**1.33**	**307**	*e*P	**Pn**	**07 29 55.8**	**-1.9**
SSD	baz=309			*e*S	**Sb**	**07 30 14.5**	**-0.6**
TWP	**Hsiaoliuchiu** baz=289	**1.37**	**287**	*e*P	**Pn**	**07 29 59.0**	**+0.8**
ELDTW	**Liu** baz=338	**1.43**	**331**	*e*P	**Pn**	**07 29 57.2**	**-1.9**
TWF1	**Yuli** baz=353	**1.47**	**343**	⇓*i*P	**Pn**	**07 29 58.0**	**-1.6**
TWF1	baz=353			*e*S	**Sn**	**07 30 18.6**	**-0.4**
YULB	**Yu-li**	**1.51**	**343**	*e*Pn	**Pn**	**07 29 58.3**	**-1.9**
TWM1	**Shoushan** baz=307	**1.53**	**305**	*e*P	**Pn**	**07 30 00.8**	**+0.3**
STYT	**Tauyuan** baz=324	**1.54**	**322**	*e*P	**Pn**	**07 29 59.8**	**-0.8**
STYT	baz=324			*e*S	**Sn**	**07 30 21.4**	**+0.8**
SGST	**Jiashian** baz=317	**1.58**	**316**	*e*P	**Pn**	**07 30 00.5**	**-0.7**
SGST	baz=317			*e*S	**Sn**	**07 30 24.1**	**+2.3**
EHY	**Hungye** baz=355	**1.61**	**345**	P	**Pn**	**07 29 60.0**	**-1.6**
EHY	baz=355			*e*S	**Sn**	**07 30 22.3**	**-0.2**
WTP	**Ta-pu** baz=322	**1.68**	**321**	*e*P	**Pn**	**07 30 01.6**	**-1.0**
WTP	baz=322			*e*S	**Sn**	**07 30 26.3**	**+2.1**
CHN1	**Nanshi** baz=319	**1.69**	**317**	*e*P	**Pn**	**07 30 02.9**	**+0.2**
CHN1	baz=319			*e*S	**Sn**	**07 30 26.0**	**+1.6**
TPUB	**Ta-pu**	**1.72**	**322**	*e*Pn	**Pn**	**07 30 02.9**	**-0.2**
TPUB				*e*Sn	**Sn**	**07 30 19.0**	**-6.1**
YUS	**Yu-Shan** baz=335	**1.72**	**334**	*e*P	**Pn**	**07 30 02.6**	**-0.4**
TWK	**Hsinying** baz=319	**1.78**	**318**	*e*P	**Pn**	**07 30 03.8**	**0.0**
TWK	baz=319			*e*S	**Sn**	**07 30 28.9**	**+2.4**
CHN4	**Tsaushan** baz=310	**1.78**	**322**	*e*P	**Pn**	**07 30 04.9**	**+1.0**
CHN4	baz=310			*e*S	**Sn**	**07 30 29.9**	**+3.3**
ALS	**Alishan** baz=331	**1.80**	**330**	*e*P	**Pn**	**07 30 03.8**	**-0.4**
ESL	**Shilin** baz=359	**1.89**	**350**	*e*P	**Pn**	**07 30 04.1**	**-1.3**
ESL	baz=359			*e*S	**Sn**	**07 30 27.3**	**-2.0**
CHN5	**Tsauling** baz=312	**1.93**	**329**	*e*P	**Pn**	**07 30 06.9**	**+0.9**
CHN5	baz=312			*e*S	**Sn**	**07 30 32.9**	**+2.5**
SSLB	**Suanglung**	**1.99**	**338**	*e*Pn	**Pn**	**07 30 06.4**	**-0.3**
CHY	**Chiayi** baz=322	**1.99**	**321**	*e*P	**Pn**	**07 30 06.8**	**0.0**
CHY	baz=322			*e*S	**Sn**	**07 30 33.9**	**+2.1**
SMLT	**Sun Moon Lake** baz=350	**2.09**	**337**	*e*P	**Pn**	**07 30 09.0**	**+0.8**
SMLT	baz=350			*e*S	**Sn**	**07 30 36.1**	**+1.8**
TYC	**Yuchr** baz=349	**2.13**	**337**	*e*P	**Pn**	**07 30 09.9**	**+1.2**
TYC	baz=349			*e*S	**Sn**	**07 30 36.8**	**+1.6**
TWD	**Chiawan** baz=7.0	**2.13**	**356**	*e*P	**Pn**	**07 30 07.5**	**-1.3**
TWD	baz=7.0			*e*S	**Sn**	**07 30 34.9**	**-0.5**
WNT	**Mingjian** baz=316	**2.17**	**333**	*e*P	**Pn**	**07 30 10.1**	**+0.8**
NACB	**Ninganchiao**	**2.23**	**356**	*e*Pn	**Pn**	**07 30 08.3**	**-1.7**
NACB				*e*Sn	**Sn**	**07 30 35.5**	**-2.1**
WHF	**Hehuan Shan** baz=348	**2.24**	**348**	P	**Pn**	**07 30 09.8**	**-0.5**
WHF	baz=348			*e*S	**Sn**	**07 30 37.9**	**-0.1**
TWT	**Tachien** baz=354	**2.37**	**347**	*e*P	**Pn**	**07 30 12.1**	**+0.1**
TWT	baz=354			*e*S	**Sn**	**07 30 41.5**	**+0.4**
TCU	**Taichung** baz=319	**2.42**	**335**	*e*P	**Pn**	**07 30 12.7**	**0.0**
TCU	baz=319			*e*S	**Sn**	**07 30 43.7**	**+1.4**
NNS	**Nan Shan** baz=2.0	**2.51**	**352**	*e*P	**Pn**	**07 30 14.6**	**+0.6**
TWQ1	**Liyutan** baz=323	**2.57**	**339**	*e*P	**Pn**	**07 30 16.6**	**+1.8**
TWQ1	baz=323			*e*S	**Sn**	**07 30 48.1**	**+2.1**
PNG	**Penghu** baz=310	**2.61**	**309**	*e*P	**Pn**	**07 30 14.3**	**-1.0**
PNG	baz=310			*e*S	**Sn**	**07 30 45.6**	**-1.5**
NSY	**Sanyi** baz=324	**2.63**	**339**	*e*P	**Pn**	**07 30 17.1**	**+1.4**
NSY	baz=324			*e*S	**Sn**	**07 30 50.7**	**+3.1**
TWC	**Suao** baz=12	**2.66**	**1**	*e*P	**Pn**	**07 30 15.9**	**0.0**
TWC	baz=12			*e*S	**Sn**	**07 30 47.3**	**-1.0**
ENTT	**Nioudou** baz=8.0	**2.69**	**356**	*e*P	**Pn**	**07 30 16.4**	**-0.1**
ENTT	baz=8.0			*e*S	**Sn**	**07 30 49.4**	**+0.2**
YHNB	**Yeheng**	**2.74**	**352**	*e*Pn	**Pn**	**07 30 16.9**	**-0.2**
YHNB				*e*Sn	**Sn**	**07 30 55.2**	**+4.9**
NSK	**Sanguang** baz=5.0	**2.75**	**352**	*e*P	**Pn**	**07 30 17.5**	**+0.2**
NSK	baz=5.0			*e*S	**Sn**	**07 30 51.0**	**+0.5**
YOJ	**Yonaguni jima**	**2.75**	**24**	P	**Pn**	**07 30 17.1**	**-0.2**
YOJ				S	**Sn**	**07 30 50.1**	**-0.5**
TWE	**Neicheng** baz=7.0	**2.77**	**358**	*e*P	**Pn**	**07 30 19.1**	**+1.6**
NSTT	**Nanjuang** baz=358	**2.77**	**345**	*e*P	**Pn**	**07 30 18.7**	**+1.2**
NSTT	baz=358			*e*S	**Sn**	**07 30 53.5**	**+2.5**
HATJ	**Hateruma jima**	**2.81**	**41**	P	**Pn**	**07 30 18.0**	**-0.2**
HATJ				S	**Sn**	**07 30 51.1**	**-1.1**
IRIF	**Iriomote-Funau**	**2.98**	**37**	P	**Pn**	**07 30 20.7**	**+0.2**
IRIF				*e*S	**Sn**	**07 30 55.3**	**-1.0**
TWA	**Mucha** baz=357	**3.03**	**357**	*e*P	**Pn**	**07 30 22.2**	**+1.2**
TWA	baz=357			*e*S	**Sn**	**07 30 58.6**	**+1.2**
TATO	**Taipei**	**3.03**	**355**	*e*Pn	**Pn**	**07 30 22.2**	**+1.1**
TATO				*e*Sn	**Sn**	**07 30 58.0**	**+0.6**
JKRS	**Kuro-shima**	**3.07**	**42**	P	**Pn**	**07 30 22.0**	**+0.3**
JKRS				*e*S	**Sn**	**07 30 57.5**	**-1.0**
NWF	**Wu-fen Shan**	**3.11**	**0**	*e*P	**Pn**	**07 30 22.6**	**+0.4**
NWF				*e*S	**Sn**	**07 31 00.5**	**+0.9**
JIJ	**Ishigaki jima**	**3.25**	**42**	P	**Pn**	**07 30 23.8**	**-0.3**
JIJ				*e*S	**Sn**	**07 31 01.0**	**-1.9**
JTJ	**Tarama**	**3.80**	**44**	P	**Pn**	**07 30 31.7**	**0.0**
JTJ				S	**Sn**	**07 31 14.6**	**-1.9**
JMJ	**Miyako jima 2**	**4.32**	**48**	*e*S	**Sn**	**07 31 28.1**	**-1.1**
KSRS	**Korea Array** 0.1nm,0.3s,baz=201,slow=12,SNR=10	**16.35**	**18**	Pn	**Pn**	**07 33 23.9**	**+1.2**
KSRS				LR	LR	07 40 35.9	
	comp=Z,66nm,18.4s,baz=180,slow=41						
MJAR	**Matsushiro Arr** 1.9nm,0.8s,baz=229,slow=9.6,SNR=4.9	**20.38**	**41**	P	**P**	**07 34 13.1**	**+3.1**
CMAR	**Chiang Mai Arr** 0.9nm,0.4s,mb3.5,baz=67,slow=9.1,SNR=4.7	**21.70**	**265**	P	**P**	**07 34 27.7**	**+3.3**
MKAR	**Makanchi Array** 2.0nm,0.7s,mb3.9,baz=108,slow=9.5,SNR=10.0	**40.34**	**318**	P	**P**	**07 37 11.8**	**+1.1**
ZAA0	**Zalesovo Array**	**42.42**	**328**	*e*P	**P**	**07 37 30.4**	**+2.6**
ZALV	**Zalesovo Beam** 2.9nm,0.6s,mb4.1,baz=111,slow=7.3,SNR=9.9	**42.42**	**328**	P	**P**	**07 37 29.1**	**+1.3**
KURK	**Kurchatov** 1.5nm,0.6s,mb3.9,baz=112,slow=8.4,SNR=9.2	**44.16**	**321**	P	**P**	**07 37 45.1**	**+3.2**
ASAR	**Alice Springs** 0.8nm,0.8s,mb3.7,baz=340,slow=7.3,SNR=3.2	**46.84**	**165**	P	**P**	**07 38 05.6**	**+2.3**
FINES	**FINESS Array B** 1.4nm,0.7s,mb4.0,baz=48,slow=4.1,SNR=2.9	**73.65**	**330**	P	**P**	**07 41 08.6**	**+2.0**
NOA	**NORSAR Array B** 1.0nm,0.8s,mb3.8,baz=58,slow=5.6,SNR=3.2	**80.45**	**332**	P	**P**	**07 41 46.7**	**+1.9**

ISCJB ***21*** *07:32:04.1±0.8,43.°38N±0.°06×46.°36E±0.°06,h5km±6km, Error ellipse: s-maj=11.8km s-min=3.4km az=37.8*
MOS ***21*** *07:32:06.4±1.4,43.°18N×46.°30E,h16km,mb3.9/1,Error ellipse: s-maj=14.6km s-min=8.3km az=22.2*
CSEM ***21*** *07:32:06.4,43.°18N×46.°30E,h16km,mb3.9,After OBN*
TIF ***21*** *07:32:06.1,43.°08N×46.°27E,h38km*
ISC 21 07:32:04.7±0.9,43.°40N±0.°05×46.°38E±0.°06,h11km±5km, n34,σ0§84/58,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBC	**Dubki**	**0.50**	**139**	*e*PG	**Pg**	**07 32 14.0**	**-0.4**
DBC				*i* S	**Sg**	**07 32 21.5**	**+0.6**
DBC	**Dubki**	**0.50**	**139**	*e*Pg	**Pg**	**07 32 14.0**	**-0.4**
DBC				*i* Sg	**Sg**	**07 32 21.5**	**+0.6**
UNCR	**Uncukul**	**0.75**	**156**	*i* PG	**Pg**	**07 32 19.0**	**0.0**
UNCR				*i* S	**Sg**	**07 32 29.0**	**+0.2**
UNCR	comp=Z,34nm,0.2s			pmax	pmax		
UNCR	**Uncukul** comp=Z,34nm,0.2s	**0.75**	**156**	*i* Pg	**Pg**	**07 32 19.0**	**0.0**
UNCR				*i* Sg	**Sg**	**07 32 29.0**	**+0.2**
XNZR	**Khunzakh**	**0.89**	**164**	*i* PG	**Pg**	**07 32 21.0**	**-0.7**
XNZR				*i* S	**Sg**	**07 32 32.5**	**-0.8**
XNZR	**Khunzakh**	**0.89**	**164**	*i* Pg	**Pg**	**07 32 21.0**	**-0.7**
XNZR				*i* Sg	**Sg**	**07 32 32.5**	**-0.8**
SNJR	**Sundja**	**1.19**	**255**	*e*PG	**Pn**	**07 32 26.4**	**-0.9**
SNJR				*e*S	**Sb**	**07 32 41.2**	**-1.5**
SNJR	**Sundja**	**1.19**	**255**	*e*Pg	**Pn**	**07 32 26.4**	**-0.9**
SNJR				*e*Sg	**Sb**	**07 32 41.2**	**-1.5**
TRKR	**Terskaya**	**1.24**	**286**	*e*PG	**Pg**	**07 32 29.9**	**+1.4**
TRKR				*e*S	**Sg**	**07 32 47.0**	**+2.3**
TRKR	**Terskaya**	**1.24**	**286**	*e*Pg	**Pg**	**07 32 29.9**	**+1.4**
TRKR				*e*Sg	**Sg**	**07 32 47.0**	**+2.3**
VLKR	**Vladikavkaz**	**1.29**	**255**	*e*PG	**Pn**	**07 32 28.2**	**-0.5**
VLKR				*e*S	**Sb**	**07 32 44.1**	**-1.5**
VLKR	**Vladikavkaz**	**1.29**	**255**	*e*Pg	**Pn**	**07 32 28.2**	**-0.5**
VLKR				*e*Sg	**Sb**	**07 32 44.1**	**-1.5**
BTKR	**Batakoyurt**	**1.34**	**270**	*e*PG	**Pg**	**07 32 30.2**	**-0.2**
BTKR				*e*S	**Sg**	**07 32 47.7**	**-0.1**
BTKR	**Batakoyurt**	**1.34**	**270**	*e*Pg	**Pg**	**07 32 30.2**	**-0.2**
BTKR				*e*Sg	**Sg**	**07 32 47.7**	**-0.1**
KMKR	**Kumukh**	**1.37**	**157**	*e*PG	**Pg**	**07 32 31.0**	**+0.1**
KMKR				*i* S	**Sg**	**07 32 49.0**	**+0.3**
KMKR	comp=Z,35nm,0.2s			pmax	pmax		
KMKR	**Kumukh** comp=Z,35nm,0.2s	**1.37**	**157**	*e*Pg	**Pg**	**07 32 31.0**	**+0.1**
KMKR				*i* Sg	**Sg**	**07 32 49.0**	**+0.3**
KMSR	**Komsomolskaya**	**1.52**	**270**	*e*PG	**Pn**	**07 32 32.6**	**+0.8**
KMSR				*e*S	**Sn**	**07 32 51.9**	**+0.3**
KMSR	**Komsomolskaya**	**1.52**	**270**	*e*Pg	**Pn**	**07 32 32.6**	**+0.8**
KMSR				*e*Sg	**Sn**	**07 32 51.9**	**+0.3**
ARNR	**Ardon**	**1.55**	**263**	*e*PG	**Pn**	**07 32 32.3**	**+0.1**
ARNR				*e*S	**Sn**	**07 32 51.5**	**-0.8**
ARNR	**Ardon**	**1.55**	**263**	*e*Pg	**Pn**	**07 32 32.3**	**+0.1**
ARNR				*e*Sg	**Sn**	**07 32 51.5**	**-0.8**
PRTR	**Priterechnaya**	**1.57**	**284**	*e*PG	**Pg**	**07 32 34.0**	**-0.7**
PRTR				*e*S	**Sg**	**07 32 54.7**	**-0.3**
PRTR	**Priterechnaya**	**1.57**	**284**	*e*Pg	**Pg**	**07 32 34.0**	**-0.7**
PRTR				*e*Sg	**Sg**	**07 32 54.7**	**-0.3**
LACR	**Lac**	**1.63**	**250**	*e*PG	**Pn**	**07 32 32.4**	**-0.9**
LACR	**Lac**	**1.63**	**250**	*e*Pg	**Pn**	**07 32 32.4**	**-0.9**
ZEI	**Tsey**	**1.92**	**252**	*e*PN	**Pn**	**07 32 36.5**	**-0.8**
ZEI	**Tsey**	**1.92**	**252**	*e*Pn	**Pn**	**07 32 36.5**	**-0.8**
TBLG	**Delisi**	**2.06**	**217**	P	**Sn**	**07 33 05.5**	**+0.6**
MTA	**Mtatsminda**	**2.07**	**215**	P	**Sn**	**07 33 05.9**	**+0.9**
DGRG	**David-gareji**	**2.08**	**201**	P	**Pb**	**07 32 42.1**	**-0.4**
DGRG				S	**Sb**	**07 33 09.3**	**+1.0**
DIGR	**Digorskoe uzhe**	**2.11**	**257**	*e*PN	**Pn**	**07 32 39.4**	**-0.5**
DIGR	**Digorskoe uzhe**	**2.11**	**257**	*e*Pn	**Pn**	**07 32 39.4**	**-0.5**
ONI	**Oni**	**2.29**	**250**	P	**Pn**	**07 32 43.9**	**+1.4**
ONI				S	**Sn**	**07 33 12.0**	**+1.4**
KIV	**Kislovodsk** comp=Z,3.0nm,0.5s	**2.74**	**283**	*e*PN	**Pb**	**07 32 53.8**	**+0.2**
KIV				pmax	pmax		
KIV	**Kislovodsk** comp=Z,3.0nm,0.5s	**2.74**	**283**	*e*Pn	**Pb**	**07 32 53.8**	**+0.2**

ISCJB ***21*** *07:40:40.2±0.3,35.°78S±0.°03×71.°39W±0.°07,h100km±3km, mb4.2/12,Error ellipse: s-maj=10.3km s-min=3.9km az=21.2*
GUC ***21*** *07:40:41.4±0.7,35.°76S×71.°40W,h91km±4km,ML4.4*
NEIC ***21*** *07:40:41.4,35.°76S×71.°40W,h91km,mb4.5/7,After GUC.*
*NEIC Felt [II] at Constit

s-maj=31.6km s-min=13.1km az=97.0

ISC 21 07:40:41.3±0.3, 35°77S±0°03×71°41W±0°07, h94km±3km, n65, σ0°80/81, mb4.2/12, 11C-7D, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TALC	**Talca**	**0.41**	**334⇑**	*i* P	**Pn**	**07 40 55.6**	**-0.3**
TALC				*i* S	**Sn**	**07 41 06.3**	**-0.4**
TALC	**Talca**	**0.41**	**334⇑**	*i* P	**Pn**	**07 40 55.6**	**-0.3**
TALC				*i* S	**Sn**	**07 41 06.3**	**-0.4**
TALC				AML	AML	07 41 07.2	
	comp=E,45μm,0.2s						
NICH	**Los Niches**	**0.78**	**11⇓**	*i* P	**Pn**	**07 40 59.2**	**+0.2**
NICH				*i* S	**Sn**	**07 41 11.9**	**-0.3**
CNCO	**Chanco**	**0.91**	**272⇑**	*i* P	**Pn**	**07 41 00.5**	**+0.2**
CNCO				*i* S	**Sn**	**07 41 14.9**	**+0.4**
CNCO	**Chanco**	**0.91**	**272⇑**	*i* P	**Pn**	**07 41 00.5**	**+0.2**
CNCO				*i* S	**Sn**	**07 41 14.9**	**+0.4**
CCHI	**Chillan**	**0.99**	**213⇓**	*i* P	**Pn**	**07 41 01.4**	**+0.2**
CCHI				*i* S	**Sn**	**07 41 16.4**	**+0.3**
CCHI	**Chillan**	**0.99**	**213⇓**	*i* P	**Pn**	**07 41 01.4**	**+0.2**
CCHI				*i* S	**Sn**	**07 41 16.4**	**+0.3**
CCHI				AML	AML	07 41 17.5	
	comp=N,6μm,0.7s						
CACH	**El Canelo**	**1.78**	**22⇓**	*i* P	**Pn**	**07 41 11.2**	**+0.4**
CACH				*i* S	**Sn**	**07 41 34.0**	**+0.8**
CACH	**El Canelo**	**1.78**	**22⇓**	*i* P	**Pn**	**07 41 11.2**	**+0.4**
CACH				*i* S	**Sn**	**07 41 34.0**	**+0.8**
LNV	**Longovilo**	**1.81**	**0**	*e* P	**Pn**	**07 41 11.4**	**+0.2**
LNV				*i* S	**Sn**	**07 41 33.8**	**-0.1**
LNV	**Longovilo**	**1.81**	**0**	*e* P	**Pn**	**07 41 11.4**	**+0.2**
LNV				*i* S	**Sn**	**07 41 33.8**	**-0.1**
TACH	**Talagante**	**2.15**	**11⇑**	*i* P	**Pn**	**07 41 15.5**	**-0.1**
TACH	**Talagante**	**2.15**	**11⇑**	*i* P	**Pn**	**07 41 15.5**	**-0.1**
PCH	**Pirque**	**2.27**	**19**	*e* P	**Pn**	**07 41 17.5**	**+0.3**
PCH				*i* S	**Sn**	**07 41 45.0**	**+0.3**
PCH	**Pirque**	**2.27**	**19**	*e* P	**Pn**	**07 41 17.5**	**+0.3**
PCH				*i* S	**Sn**	**07 41 45.0**	**+0.3**
ANTU	**Antumapu**	**2.29**	**17⇑**	*e* P	**Pn**	**07 41 17.6**	**+0.2**
ANTU				*e* S	**Sn**	**07 41 45.3**	**+0.2**
ANTU	**Antumapu**	**2.29**	**17⇑**	*e* P	**Pn**	**07 41 17.6**	**+0.2**
ANTU				*e* S	**Sn**	**07 41 45.3**	**+0.2**
ANTU				AML	AML	07 41 47.7	
	comp=N,2μm,0.4s						
LCCH	**Las Cruces**	**2.29**	**357**	P	**Pn**	**07 41 16.5**	**-1.0**
LCCH	**Las Cruces**	**2.29**	**357**	*e* P	**Pn**	**07 41 16.5**	**-1.0**
SAN	**Santiago**	**2.39**	**15⇑**	*e* P	**Pn**	**07 41 18.8**	**-0.1**
SAN	**Santiago**	**2.39**	**15⇑**	*e* P	**Pn**	**07 41 18.8**	**-0.1**
FSR	**Penalolen**	**2.40**	**18**	*e* P	**Pn**	**07 41 19.3**	**+0.4**
FSR				*e* S	**Sn**	**07 41 48.3**	**+0.6**
FSR	**Penalolen**	**2.40**	**18**	*e* P	**Pn**	**07 41 19.3**	**+0.4**
FSR				*e* S	**Sn**	**07 41 48.3**	**+0.6**
CLCH	**Cerro Calan**	**2.48**	**17**	*e* P	**Pn**	**07 41 20.6**	**+0.7**
CLCH				*i* S	**Sn**	**07 41 49.9**	**+0.4**
CLCH	**Cerro Calan**	**2.48**	**17**	*e* P	**Pn**	**07 41 20.6**	**+0.7**
CLCH				*i* S	**Sn**	**07 41 49.9**	**+0.4**
CLCH				AML	AML	07 41 53.8	
	comp=E,2μm,0.3s						
FCH	**Farellones**	**2.61**	**21⇓**	*i* P	**Pn**	**07 41 23.8**	**+2.1**
FCH				*i* S	**Sn**	**07 41 52.6**	**0.0**
FCH				AML	AML	07 41 54.8	
	comp=E,1μm,0.3s						
PEL	**Peldehue**	**2.69**	**13⇑**	*i* P	**Pn**	**07 41 23.0**	**+0.2**
PEL				*e* S	**Sn**	**07 41 55.2**	**+0.6**
PEL				AML	AML	07 41 57.6	
	comp=N,2μm,0.1s						
TMU	**Temuco**	**3.10**	**197**	*e* P	**Pn**	**07 41 27.3**	**-1.0**
TMU				*i* S	**Sn**	**07 42 03.6**	**-0.9**
TMU	**Temuco**	**3.10**	**197**	*e* P	**Pn**	**07 41 27.3**	**-1.0**
TMU				*i* S	**Sn**	**07 42 03.6**	**-0.9**
JACH	**Jahuel**	**3.16**	**13**	P	**Pn**	**07 41 28.5**	**-0.5**
JACH	**Jahuel**	**3.16**	**13**	*e* P	**Pn**	**07 41 28.5**	**-0.5**
CFAA	**Coronel Fontan**	**4.93**	**33**	P	**Pn**	**07 41 52.1**	**-0.9**
	comp=N,1.8nm,0.3s,baz=199,slow=12,SNR=122						
CFAA				S	**Sn**	**07 42 47.9**	**-0.8**
	comp=N,2.6nm,0.3s,baz=192,slow=20,SNR=12						
PLCA	**Paso Flores**	**5.00**	**172**	P	**Pn**	**07 41 54.6**	**+0.7**
	comp=N,1.7nm,0.3s,baz=325,slow=9.9,SNR=32						
PLCA	**Paso Flores**	**5.00**	**172**	*e* Pn	**Pn**	**07 41 54.4**	**+0.5**
	comp=N,16nm,0.8s						
TLL	**Tololo Astrono**	**5.61**	**5**	P	**Pn**	**07 42 01.5**	**-0.8**
TLL	**Tololo Astrono**	**5.61**	**5**	*e* P	**Pn**	**07 42 01.5**	**-0.8**
LCO	**Las Campanas**	**6.77**	**5**	*e* Pn	**Pn**	**07 42 16.2**	**-1.8**
	comp=N,13nm,0.4s						
LCO				*e* Sn	**Sn**	**07 43 29.5**	**-4.1**
TRQA	**Tornquist**	**7.89**	**110**	*e* Pn	**Pn**	**07 42 32.4**	**-0.9**
	comp=N,29nm,0.6s						
USHA	**Ushuaia**	**19.17**	**175**	P	**Pn**	**07 44 59.0**	**0.0**
	comp=N,0.4nm,0.3s,baz=346,slow=11,SNR=4.0						
LPAZ	**La Paz**	**19.62**	**9**	P	**Pn**	**07 45 04.0**	**-0.6**
	comp=N,0.5nm,0.3s,baz=161,slow=6.5,SNR=29						
LPAZ	**La Paz**	**19.62**	**9**	*e* P	**Pn**	**07 45 03.0**	**-1.6**
	comp=N,4.0nm,0.6s						
SIV	**San Ignacio**	**21.76**	**28**	P	**P**	**07 45 24.2**	**-1.1**
	comp=N,3.4nm,0.7s,mb3.8,baz=222,slow=11,SNR=16						
QSPA	**South Pole Qui**	**54.47**	**180**	P	**P**	**07 49 60.0**	**+1.6**
	comp=N,0.9nm,0.8s,mb3.9,baz=160,slow=12,SNR=5.2						
SYO	**Syowa Base**	**64.03**	**158⇓**	*e* P	**P**	**07 51 06.2**	**+1.8**
TXAR	**Lajitas Array**	**71.53**	**331**	P	**P**	**07 51 52.7**	**+0.8**
	comp=N,1.4nm,0.5s,mb4.0,baz=156,slow=9.3,SNR=35						
TXAR	**Lajitas Array**	**71.53**	**331**	P	**P**	**07 51 52.7**	**+0.8**
SWET	**Sewanee**	**71.91**	**348**	*e* P	**P**	**07 51 53.9**	**-0.1**
OXF	**Oxford**	**71.91**	**344**	*e* P	**P**	**07 51 53.8**	**-0.2**
	comp=N,9.5nm,0.6s,mb4.8						
CCM	**Cathedral Cave**	**75.72**	**344**	*e* P	**P**	**07 52 15.9**	**-0.3**
	comp=N,12nm,1.1s,mb4.5						
BOSA	**Boshof**	**78.80**	**117**	P	**P**	**07 52 33.5**	**-0.4**
	comp=N,1.6nm,0.5s,mb4.1,baz=233,slow=10,SNR=2.8						
LBTB	**Lobatse**	**81.10**	**114**	*e* P	**P**	**07 52 50.7**	**+4.3**
	comp=N,3.6nm,0.5s,mb4.5						
PV10	**Paradox Valley**	**81.58**	**331**	*e* P	**P**	**07 52 49.2**	**+0.8**
	comp=N,28nm,0.6s,mb5.3						
HWUT	**Hardware Ranch**	**85.34**	**331**	*e* P	**P**	**07 53 08.0**	**+0.4**
	comp=N,2.5nm,0.8s,mb4.2						
PDAR	**Pinedale Array**	**85.57**	**333**	P	**P**	**07 53 08.0**	**-0.6**
	comp=N,0.6nm,0.6s,mb3.7,baz=93,slow=4.8,SNR=6.5						
NVAR	**Mina Array Bea**	**85.63**	**325**	P	**P**	**07 53 09.9**	**+0.8**
	comp=N,0.4nm,0.6s,mb3.5,baz=168,slow=5.3,SNR=5.5						
SAO	**San Andreas Ge**	**85.83**	**322**	*e* P	**P**	**07 53 07.8**	**-2.3**
	comp=N,3.9nm,0.9s,mb4.3						
BVAR	**Borovoye Array**	**148.19**	**45**	PKPbc	PKPbc	08 00 13.7	-1.9
	comp=N,0.8nm,0.5s,baz=270,slow=1.4,SNR=3.4						
KURK	**Kurchatov**	**153.78**	**46**	PKPbc	PKPbc	08 00 27.7	-1.1
	comp=N,0.4nm,0.3s,baz=298,slow=2.7,SNR=2.3						
ZALV	**Zalesovo Beam**	**155.41**	**35**	PKPbc	PKPdf	08 00 30.8	+7.9
	comp=N,0.4nm,0.3s,baz=300,slow=2.8,SNR=3.1						
MKAR	**Makanchi Array**	**157.48**	**53**	PKP	PKPdf	08 00 26.0	+0.1
	comp=N,0.2nm,0.5s,baz=276,slow=1.3,SNR=3.1						
MKAR				PKPab	PKPab	08 00 57.7	-0.4
	comp=N,0.2nm,0.5s,baz=284,slow=5.7,SNR=3.4						
CN2	**Changchun**	**164.78**	**307**	*e* PKP	PKPdf	08 00 31.9	-1.8
KMI	**Kunming**	**168.25**	**153**	PKP	PKPdf	08 00 38.9	+1.9
GYA	**Guiyang**	**170.57**	**169**	*e* PKP	PKPdf	08 00 39.6	+1.2
GYA				pPKP	pPKPdf	08 01 00.8	-3.9
GYA				sPKP		08 01 08.3	
GYA				PKPab	PKPab	08 01 59.8	+3.9
GYA				PKS		08 04 09.5	
GYA				PP	PP	08 05 50.4	+5.0
GYA				AMB	AMB		
	comp=Z,80nm,8.6s						
CD2	**Chengdu**	**173.69**	**139**	*e* PKP	PKPdf	08 00 39.9	+0.3
HHC	**Hu-ho-hao-te**	**174.42**	**336**	*e* PKP	PKPdf	08 00 37.9	-1.7
HHC				PKS		08 04 08.9	
HHC				PP	PP	08 06 05.1	+0.5
HHC				SKS	SKSdf	08 07 36.1	+2.1
HHC				SKKS	SKKSac	08 12 45.8	+3.4
HHC				SS	SS	08 27 18.4	+1.5
HHC				AMB	AMB		
	comp=Z,150nm,5.6s						
HHC				LR	LR		
	comp=N,140nm,26.2s						
HHC				LR	LR		
	comp=E,150nm,25.0s						
HHC				LR	LR		
	comp=Z,140nm,25.0s						

IDC 21 08:01:59.6±20.0, 13°28N×145°80E, h0km, mb3.8/4, mb1 3.8/4, mb1mx3.6/23, mbtmp3.8/4, Error ellipse: s-maj=589.9km s-min=294.2km az=90.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**47.51**	**325**	P	P	08 10 36.5	0.0
	0.7nm,0.6s,baz=115,slow=6.8,SNR=4.2						
MKAR	**Makanchi Array**	**62.35**	**316**	P	P	08 12 24.3	+0.3
	0.4nm,0.5s,baz=97,slow=6.2,SNR=5.6						
ZALV	**Zalesovo Beam**	**62.41**	**324**	P	P	08 12 24.7	+0.5
	0.3nm,0.3s,baz=119,slow=8.9,SNR=2.6						
KURK	**Kurchatov**	**65.41**	**320**	P	P	08 12 44.0	-0.1
	2.0nm,0.7s,baz=97,slow=6.9,SNR=9.7						

*ISCJB **21** 08:05:01.4±2.1, 5°69S±0°10×131°4E±0°1, h73km±21km, mb4.2/11, Error ellipse: s-maj=20.8km s-min=13.3km az=145.1*

*NEIC **21** 08:05:04.1±0.6, 5°70S×131°46E, mb4.7/3, Error ellipse: s-maj=19.1km s-min=9.1km az=66.0*

*IDC **21** 08:05:05.2±1.1, 5°61S×131°27E, h90km±7km, mb4.0/8, mb1 4.1/10, mb1mx3.9/17, mbtmp4.1/10, Error ellipse: s-maj=45.2km s-min=18.2km az=67.0*

ISC 21 08:05:03.9±1.7, 5°72S±0°10×131°4E±0°1, h81km±17km, h93km±1.6km: pP-P, n31, σ1°19/32, mb4.2/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**7.03**	**171**	*e* P	**Pn**	**08 06 45.3**	**+1.1**
	83nm,0.5s						
KAKA				*e* S	Sx	08 08 00.9	
KAKA	**Kakadu**	**7.03**	**171**	*e* Pn	**Pn**	**08 06 45.0**	**+0.9**
	215nm,0.6s						
KAKA				*e* Sn	Sx	08 08 00.4	
KAPI	**Kappang**	**11.58**	**273**	P	**Pn**	**08 07 46.7**	**+0.4**
	1.2nm,0.3s,baz=164,slow=4.6,SNR=7.6						
KAPI	**Kappang**	**11.58**	**273**	*e* Pn	**Pn**	**08 07 48.3**	**+2.0**
FITZ	**Fitzroy Crossi**	**13.52**	**204**	*e* P	**Pn**	**08 08 08.0**	**-4.2**
	31nm,0.2s						
FITZ				*e* S	Sx	08 10 30.3	
FITZ	**Fitzroy Crossi**	**13.52**	**204**	P	**Pn**	**08 08 08.4**	**-3.9**
	8.8nm,0.3s,baz=40,slow=13,SNR=108						
FITZ				S	Sx	08 10 32.0	
	2.2nm,0.3s,baz=78,slow=20,SNR=4.5						
FITZ	**Fitzroy Crossi**	**13.52**	**204**	*e* Pn	**Pn**	**08 08 08.0**	**-4.2**
FITZ				S	Sx	08 10 32.0	
COEN	**Coen**	**14.22**	**126**	*e* Pn	**Pn**	**08 08 21.7**	**+0.3**
WRAB	**Tennant Creek**	**14.43**	**169**	*e* Pn	**Pn**	**08 08 21.8**	**-2.3**
	16nm,0.6s						
WRAB				*e* Sn	Sx	08 10 56.2	
WRA	**Warramunga Arr**	**14.43**	**169**	P	**Pn**	**08 08 21.4**	**-2.7**
	4.8nm,0.3s,baz=354,slow=14,SNR=34						
WRA				S	Sx	08 10 52.6	
	2.5nm,0.3s,baz=346,slow=23,SNR=5.7						
WRA	**Warramunga Arr**	**14.43**	**169**	P	**Pn**	**08 08 21.4**	**-2.7**
WRA				S	Sx	08 10 52.6	
ASAR	**Alice Springs**	**18.01**	**172**	P	**Pn**	**08 09 08.9**	**+0.1**
	3.7nm,0.3s,baz=352,slow=12,SNR=88						
ASAR				S	Sx	08 12 17.2	
	0.2nm,0.3s,baz=356,slow=28,SNR=3.9						
MBWA	**Marble Bar**	**19.05**	**215**	*e* P	**Pn**	**08 09 20.4**	**-0.8**
	111nm,1.6s						
FORT	**Forrest**	**25.12**	**187**	*e* P	**P**	**08 10 23.6**	**+2.4**
	18nm,0.8s,mb4.6						
FORT	**Forrest**	**25.12**	**187**	*e* P	**P**	**08 10 23.3**	**+2.1**
	26nm,0.8s,mb4.7						
STKA	**Stephens Creek**	**27.73**	**161**	*e* P	**P**	**08 10 48.2**	**+3.5**
	0.7nm,0.3s,mb3.7						
STKA	**Stephens Creek**	**27.73**	**161**	P	**P**	**08 10 47.1**	**+2.4**
	1.2nm,0.3s,mb3.9,baz=356,slow=8.5,SNR=7.3						
STKA	**Stephens Creek**	**27.73**	**161**	*e* P	**P**	**08 10 47.6**	**+2.9**
	0.3nm,0.4s,mb3.2						
KLBR	**Kellerberrin**	**28.72**	**205**	*e* P	**P**	**08 10 53.9**	**+0.3**
	32nm,1.4s,mb4.8						
CMAR	**Chiang Mai Arr**	**39.99**	**308**	P	**P**	**08 12 29.8**	**-1.1**
	1.3nm,0.3s,mb4.2,baz=134,slow=7.1,SNR=7.8						
HHC	**Hu-ho-hao-te**	**49.78**	**340**	*e* P	**P**	**08 13 50.3**	**+2.1**
HHC				pP	pP	08 14 13.8	+5.5
HHC				sP	sP	08 14 25.0	+7.5
HHC				PcP	PcP	08 15 09.3	+1.3
HHC				PP	PP	08 15 48.1	+4.4
HHC				ScP	ScP	08 18 54.3	-2.2
HHC				PcS	PcS	08 19 04.6	-0.2
HHC				S	**S**	**08 20 52.3**	**+0.8**
HHC				sS	sS	08 21 33.4	+7.6
HHC				ScS	ScS	08 23 27.8	-4.2
HHC				SS	SS	08 24 24.3	-1.0
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
HHC				pmax	pmax		
	comp=Z,57nm,4.7s						
HHC				LR	LR		
	comp=N,73nm,17.8s						
HHC				LR	LR		
	comp=E,140nm,19.0s						
HHC				LR	LR		
	comp=Z,120nm,17.8s						
SONM	**Songino Array**	**57.68**	**340**	P	**P**	**08 14 45.7**	**-0.1**
	comp=Z,1.0nm,0.5s,mb4.1,baz=167,slow=7.1,SNR=5.3						
MK31	**Makanchi Array**	**67.92**	**326**	*e* P	**P**	**08 15 53.5**	**-0.4**
MK31				*e* pP	pP	08 16 16.7	+1.8
MKAR	**Makanchi Array**	**67.92**	**326**	P	**P**	**08 15 53.7**	**-0.1**
	comp=Z,4.0nm,0.4s,mb4.6,baz=108,slow=8.9,SNR=50						
MKAR				pP	pP	08 16 16.6	+1.7
	comp=Z,1.4nm,0.5s,baz=99,slow=8.0,SNR=3.6						
MKAR	**Makanchi Array**	**67.92**	**326**	P	**P**	**08 15 53.7**	**-0.1**
MKAR				pP	pP	08 16 16.6	+1.7
ZALV	**Zalesovo Beam**	**71.05**	**333**	P	**P**	**08 16 11.9**	**-1.1**
	comp=Z,2.2nm,0.5s,mb4.2,baz=130,slow=6.4,SNR=11						
ZALV				pP	pP	08 16 35.1	+0.9
	comp=Z,0.9nm,0.6s,baz=103,slow=6.4,SNR=2.4						
KURK	**Kurchatov**	**72.15**	**328**	P	**P**	**08 16 19.2**	**-0.5**
	comp=Z,2.8nm,0.6s,mb4.3,baz=126,slow=4.9,SNR=13						
KURK				pP	pP	08 16 42.6	+1.7
	comp=Z,2.1nm,0.8s,baz=130,slow=5.1,SNR=5.4						
KURK	**Kurchatov**	**72.15**	**328**	*e* P	**P**	**08 16 19.1**	**-0.5**
	comp=Z,3.5nm,1.0s,mb4.1						
KURK				*e* pP	pP	08 16 42.8	+1.9
BVAR	**Borovoye Array**	**77.72**	**327**	P	**P**	**08 16 51.4**	**-0.3**
	comp=Z,1.8nm,0.7s,mb3.9,baz=134,slow=8.5,SNR=7.4						
AKTK	**Aktyubinsk**	**83.90**	**322**	P	**P**	**08 17 24.5**	**-0.2**
AKTO	**Aktyubinsk**	**83.90**	**322**	P	**P**	**08 17 24.5**	**-0.2**
	comp=Z,0.6nm,0.5s,mb3.7,baz=104,slow=11,SNR=3.7						

MEX 21 08:13:18.6±0.5, 18°00N×100°36W, h66km±7km, MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEIG	**Mezcala**	**0.70**	**96**	*i* P	Pn	08 13 32.0	-1.2
MEIG				*i* S	Sn	08 13 42.2	-1.9
PLIG	**Platanillo**	**0.90**	**64**	*i* P	Pn	08 13 34.2	-1.5
PLIG				*i* S	Sn	08 13 47.2	-1.1
CAIG	**El Cayaco**	**0.95**	**175**	*i* P	Pn	08 13 35.1	-1.2
CAIG				*i* S	Sn	08 13 47.5	-1.8
ZIIG	**Zihuatanejo**	**1.13**	**250**	*i* P	Pn	08 13 37.1	-1.4
ZIIG				*i* S	Sn	08 13 51.4	-2.0
ACX	**Acapulco**	**1.22**	**157**	*e* P	Pn	08 13 37.9	-1.8
ACX				*i* S	Sn	08 13 53.2	-2.3
MZVM		**1.60**	**42**	*e* P	Pn	08 13 43.1	-1.6
MZVM				*i* S	Sn	08 14 01.2	-3.3
PPM	**Popocatepetl**	**1.96**	**57**	*i* P	Pn	08 13 49.5	0.0
PPM				*i* S	Sn	08 14 13.2	0.0
UTMO	**Huajuapan**	**2.44**	**93**	*i* P	Pn	08 13 55.5	-0.6
UTMO				*i* S	Sn	08 14 23.0	-1.8
PNIG	**Pinotepa**	**2.66**	**126**	*i* P	Pn	08 13 57.5	-1.6
PNIG				*i* S	Sn	08 14 28.0	-2.3

*CSEM **21** 08:26:16.8, 40°45N×21°56E, h15km, ML3.6/3, After THE*
*THE **21** 08:26:16.8, 40°45N×21°56E, h15km±1km, ML3.6/3, Error ellipse: s-maj=1.9km s-min=0.8km az=65.0*
*ISCJB **21** 08:26:16.9±0.5, 40°46N±0°03×21°60E±0°07, h21km±6km, Error ellipse: s-maj=9.3km s-min=3.9km az=157.6*

ISC 21 08:26:16.9±0.5, 40°46N±0°03×21°60E±0°07, h19km±4km, n23, σ1°03/40, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZN	**Kozani**	**0.20**	**140**	P	**Pg**	**08 26 21.8**	**-0.2**
KZN				S	**Sg**	**08 26 25.8**	**+0.3**
KZN	**Kozani**	**0.20**	**140**	P	**Pg**	**08 26 21.8**	**-0.2**
KZN				S	**Sg**	**08 26 25.8**	**+0.3**
FNA	**Florina**	**0.36**	**332**	P	**Pg**	**08 26 24.2**	**-0.4**
FNA				S	**Sg**	**08 26 30.0**	**+0.2**
FNA	**Florina**	**0.36**	**332**	P	**Pg**	**08 26 24.2**	**-0.4**
FNA				S	**Sg**	**08 26 30.0**	**+0.2**
BIA	**Bitola**	**0.59**	**339**	*e* Pg	**Pg**	**08 26 27.5**	**-1.2**
BIA	**Bitola**	**0.59**	**339**	P	**Pb**	**08 26 27.4**	**-1.3**
BIA				S	**Sb**	**08 26 37.2**	**+0.5**
BIA	**Bitola**	**0.59**	**339**	P	**Pb**	**08 26 27.4**	**-1.3**
BIA				S	**Sb**	**08 26 37.2**	**+0.5**
MEV	**Metsovon**	**0.74**	**203**	P	**Pb**	**08 26 30.1**	**-1.0**
MEV				S	**Sb**	**08 26 41.5**	**+0.8**
MEV	**Metsovon**	**0.74**	**203**	P	**Pb**	**08 26 30.1**	**-1.0**
MEV				S	**Sb**	**08 26 41.5**	**+0.8**
OHR	**Ohrid**	**0.89**	**317**	*i* Pn	**Pn**	**08 26 32.8**	**-1.6**
OHR				*e* Sg	**Sg**	**08 26 47.2**	**+1.2**
OHR				*e* Sg	**Sg**	**08 26 48.1**	**+2.1**
OHR	**Ohrid**	**0.89**	**317**	P	**Pb**	**08 26 32.4**	**-1.3**
OHR				S	**Sb**	**08 26 46.4**	**+1.2**
OHR	**Ohrid**	**0.89**	**317**	P	**Pb**	**08 26 32.4**	**-1.3**
OHR				S	**Sb**	**08 26 46.4**	**+1.2**
KRUS	**Krusevo**	**0.94**	**344**	*i* Pn	**Pn**	**08 26 33.6**	**-1.5**
KRUS				*e* Sg	**Sg**	**08 26 49.3**	**+1.6**
THL	**Klokotos Trika**	**0.95**	**160**	P	**Pb**	**08 26 33.6**	**-1.2**
THL				S	**Sb**	**08 26 47.1**	**+0.1**
THL	**Klokotos Trika**	**0.95**	**160**	P	**Pb**	**08 26 33.6**	**-1.2**
THL				S	**Sb**	**08 26 47.1**	**+0.1**
VAY	**Valandovo**	**1.13**	**40**	*i* Pn	**Pn**	**08 26 38.1**	**+0.5**
HORT	**Hortiatis**	**1.15**	**83**	P	**Pn**	**08 26 38.4**	**+0.4**
HORT	**Hortiatis**	**1.15**	**83**	P	**Pn**	**08 26 38.4**	**+0.4**
SKO	**Skopje**	**1.51**	**355**	*e* Pn	**Pn**	**08 26 47.5**	**+4.5**
AGG	**Agios Georgios**	**1.55**	**158**	P	**Pn**	**08 26 43.8**	**+0.4**
AGG				S	**Sn**	**08 27 04.7**	**+1.8**
AGG	**Agios Georgios**	**1.55**	**158**	P	**Pn**	**08 26 43.8**	**+0.4**
AGG				S	**Sn**	**08 27 04.7**	**+1.8**
XOR	**Xorichti**	**1.64**	**131**	P	**Pn**	**08 26 45.0**	**+0.3**
XOR	**Xorichti**	**1.64**	**131**	P	**Pn**	**08 26 45.0**	**+0.3**

*CSEM **21** 08:32:28.8±0.1, 40°10N×34°59E, h5km, MD2.8, Error ellipse: s-maj=1.8km s-min=1.3km az=74.0*
*DDA **21** 08:32:28.9, 40°12N×34°61E, h7km±3km, Md2.7*
*ISK **21** 08:32:28.3, 40°18N×34°74E, h5km, MD2.8*
*ISCJB **21** 08:32:29.1±0.6, 40°12N±0°03×34°64E±0°06, h4km±7km, Error ellipse: s-maj=7.6km s-min=5.0km az=165.4*

ISC 21 08:32:29.6±0.6, 40°12N±0°03×34°64E±0°05, h5km±9km, n14, σ0°82/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CORM	**Corum**	**0.05**	**353**	PG	**Pg**	**08 32 30.3**	**-0.6**
CORM				*e* SG	**Sg**	**08 32 31.9**	**0.0**
CORM	**Corum**	**0.05**	**353**	*i* Pg	**Pg**	**08 32 30.3**	**-0.6**
CORM				*e* Sg	**Sg**	**08 32 31.9**	**0.0**
CTKT	**Corum**	**0.51**	**13**	*i* P	**Pg**	**08 32 39.7**	**+0.3**
CTKT				*i* S	**Sg**	**08 32 46.7**	**+0.6**
CTKT	**Corum**	**0.51**	**13**	*i* P	**Pg**	**08 32 39.7**	**+0.2**
CTKT				*i* S	**Sg**	**08 32 46.7**	**+0.6**
CDAG	**Cicekdag**	**0.54**	**202**	*i* P	**Pg**	**08 32 38.8**	**-1.2**
CDAG				*i* S	**Sg**	**08 32 47.7**	**+0.6**
CDAG	**Cicekdag**	**0.54**	**202**	*i* P	**Pg**	**08 32 38.8**	**-1.2**
CDAG				*i* S	**Sg**	**08 32 47.7**	**+0.7**
YOZ	**Yozgat**	**0.71**	**132**	*e* PG	**Pg**	**08 32 42.7**	**-0.6**
YOZ				*e* SG	**Sg**	**08 32 53.7**	**+1.2**
YOZ	**Yozgat**	**0.71**	**132**	*e* Pg	**Pg**	**08 32 42.7**	**-0.6**
YOZ				*e* Sg	**Sg**	**08 32 53.7**	**+1.2**
ELDT	**Eldivan**	**1.00**	**292**	*i* P	**Pg**	**08 32 47.7**	**-1.1**
ELDT				*i* S	**Sg**	**08 33 03.2**	**+1.6**
ELDT	**Eldivan**	**1.00**	**292**	*i* P	**Pg**	**08 32 47.7**	**-1.0**
ELDT				*i* S	**Sg**	**08 33 03.2**	**+1.5**
TOS	**Tosya**	**1.02**	**333**	*e* PG	**Pg**	**08 32 48.8**	**-0.5**
TOS	**Tosya**	**1.02**	**333**	*e* Pg	**Pg**	**08 32 48.8**	**-0.5**
SVSK	**Karacayir**	**1.82**	**96**	*e* PN	**Pn**	**08 33 01.4**	**-0.2**
SVSK	**Karacayir**	**1.82**	**96**	*e* Pn	**Pn**	**08 33 01.4**	**-0.3**

IDC 21 08:45:29.8±4.5, 6°08S×147°48E, h0km, mb3.6/2, mb1 3.7/3, mb1mx3.4/16, mbtmp3.5/3, MS3.7/1, Ms1 3.7/1, ms1mx2.6/19, Error ellipse: s-maj=150.7km s-min=48.0km az=114.0, Eastern New Guinea region

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

EFP	**Efpalio**	**0.28 345**	P	**Pn**	**09 58 59.1**	**-0.3**
EFP			S	**Sn**	**09 59 07.1**	**+1.1**
EFP	**Efpalio**	**0.28 345**	*e*P	**Pn**	**09 58 59.2**	**-0.2**
EFP			*e*S	**Sn**	**09 59 06.8**	**+0.8**
EFP	**Efpalio**	**0.28 345**	*e*P	**Pn**	**09 58 59.2**	**-0.2**
EFP			*e*S	**Sn**	**09 59 06.8**	**+0.8**
GUR	**Goura**	**0.35 128**	P	**Pn**	**09 58 59.6**	**-0.4**
GUR			S	**Sn**	**09 59 06.7**	**-0.3**
GUR	**Goura**	**0.35 128**	*e*P	**Pn**	**09 58 59.8**	**-0.2**
GUR	**Goura**	**0.35 128**	*e*P	**Pn**	**09 58 59.8**	**-0.2**
GUR			S	**Sn**	**09 59 06.7**	**-0.3**
RLS	**Riolos of Patr**	**0.43 257**	*e*P	**Pn**	**09 58 59.8**	**-1.0**
RLS	**Riolos of Patr**	**0.43 257**	*e*P	**Pn**	**09 58 59.8**	**-1.0**
RLS	**Riolos of Patr**	**0.43 257**	*e*P	**Pn**	**09 58 59.8**	**-1.0**
DSF	**Desfina**	**0.49 58**	P	**Pn**	**09 59 01.2**	**-0.3**
DSF			S	**Sn**	**09 59 09.7**	**+0.1**
DSF	**Desfina**	**0.49 58**	P	**Pn**	**09 59 01.2**	**-0.3**
DSF			S	**Sn**	**09 59 09.7**	**+0.1**
EVR	**Evrytania**	**0.78 349**	*e*P	**Pn**	**09 59 05.8**	**+0.8**
EVR	**Evrytania**	**0.78 349**	*e*P	**Pn**	**09 59 05.8**	**+0.8**
EVR	**Evrytania**	**0.78 349**	*e*P	**Pn**	**09 59 05.8**	**+0.8**
LTK	**Loutraki**	**0.78 99**	P	**Pn**	**09 59 04.7**	**-0.3**
LTK			S	**Sn**	**09 59 15.3**	**-0.5**
LTK	**Loutraki**	**0.78 99**	P	**Pn**	**09 59 04.7**	**-0.3**
LTK			S	**Sn**	**09 59 15.3**	**-0.5**
VLX	**Vlachokerasia**	**0.84 159**	*e*P	**Pn**	**09 59 06.7**	**+0.9**
VLX	**Vlachokerasia**	**0.84 159**	*e*P	**Pn**	**09 59 06.7**	**+0.9**
AGG	**Agios Georgios**	**0.91 17**	P	**Pn**	**09 59 07.4**	**+0.7**
AGG	**Agios Georgios**	**0.91 17**	P	**Pn**	**09 59 07.4**	**+0.7**
LKR	**Lokris**	**0.93 57**	P	**Pn**	**09 59 07.0**	**0.0**
LKR			S	**Sn**	**09 59 19.7**	**+0.3**
LKR	**Lokris**	**0.93 57**	P	**Pn**	**09 59 07.0**	**0.0**
LKR			S	**Sn**	**09 59 19.7**	**+0.3**
ATAL	**Atalanti**	**0.97 56**	P	**Pn**	**09 59 07.5**	**0.0**
ATAL			S	**Sn**	**09 59 20.5**	**+0.2**
ATAL	**Atalanti**	**0.97 56**	P	**Pn**	**09 59 07.5**	**0.0**
ATAL			S	**Sn**	**09 59 20.5**	**+0.2**
ITM	**Ithomi**	**0.97 183**	*e*P	**Pn**	**09 59 08.2**	**+0.6**
ITM	**Ithomi**	**0.97 183**	P	**Pn**	**09 59 08.1**	**+0.5**
ITM	**Ithomi**	**0.97 183**	*e*P	**Pn**	**09 59 08.2**	**+0.6**
ITM	**Ithomi**	**0.97 183**	P	**Pn**	**09 59 08.1**	**+0.5**
VLS	**Valsamata**	**1.11 272**	*e*P	**Pn**	**09 59 08.1**	**-1.3**
VLS	**Valsamata**	**1.11 272**	*e*P	**Pn**	**09 59 08.1**	**-1.3**
VLS	**Valsamata**	**1.11 272**	*e*P	**Pn**	**09 59 08.1**	**-1.3**
NAIG	**Nisos Aigina**	**1.24 108**	*e*P	**Pn**	**09 59 10.9**	**-0.3**
NAIG	**Nisos Aigina**	**1.24 108**	*e*P	**Pn**	**09 59 10.9**	**-0.3**
NAIG	**Nisos Aigina**	**1.24 108**	*e*P	**Pn**	**09 59 10.9**	**-0.3**
PYL	**PYLOS**	**1.27 189**	P	**Pn**	**09 59 12.6**	**+1.0**
PYL	**PYLOS**	**1.27 189**	*e*P	**Pn**	**09 59 12.3**	**+0.7**
PYL	**PYLOS**	**1.27 189**	P	**Pn**	**09 59 12.6**	**+1.0**
VLI	**Veliai**	**1.62 152**	*e*P	**Pn**	**09 59 16.8**	**+0.5**
VLI	**Veliai**	**1.62 152**	*e*P	**Pn**	**09 59 16.8**	**+0.5**
VLI	**Veliai**	**1.62 152**	*e*P	**Pn**	**09 59 16.8**	**+0.5**
AOS	**Alonnisos**	**1.79 55**	P	**Pn**	**09 59 18.3**	**-0.4**
AOS			S	**Sn**	**09 59 39.6**	**-0.6**
AOS	**Alonnisos**	**1.79 55**	P	**Pn**	**09 59 18.3**	**-0.4**
AOS			S	**Sn**	**09 59 39.6**	**-0.6**

*JMA **21** 10:07:49.8±0.5, 22.°02N×121.°82E, h126km, M2.8*
TAP 21 10:07:48.3, 21.°97N×121.°71E, h16km, ML3.4, 1D, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu** baz=302	**0.16 295**	⇓	*i*P	Pg	10 07 52.6	+0.1
TSEB	**Hengchuen, Pin** baz=282	**0.76 265**		P	Pg	10 08 04.3	+1.2
TSEB	baz=282			*e*S	Sg	10 08 14.7	+1.6
TWK1	**Hengchun** baz=285	**0.84 268**		*e*P	Pb	10 08 03.8	-0.8
TAW	**Tawu** baz=297	**0.85 297**		*e*P	Pb	10 08 05.2	+0.5
TAW	baz=297			*e*S	Sb	10 08 15.8	-0.1
EAST	**Anshuo** baz=299	**0.90 297**		P	Pb	10 08 04.7	-0.9
HEN	**Hengchun** baz=298	**0.91 272**		*e*P	Pb	10 08 06.7	+1.0
ECL	**Taimali** baz=313	**0.94 312**		P	Pb	10 08 05.0	-1.3
TWG	**Pinlang** baz=336	**1.03 325**		*e*P	Pb	10 08 07.5	-0.3
SCZT	**Fangliau** baz=303	**1.09 292**		*e*P	Pb	10 08 08.1	-0.7
SSD	**Sandimen** baz=309	**1.26 308**		*e*P	Pn	10 08 12.2	+0.9
TWP	**Hsiaoliuchiu** baz=289	**1.31 287**		*e*P	Pn	10 08 14.5	+2.6
ELDTW	**Lidau** baz=340	**1.37 332**		*e*P	Pn	10 08 11.9	-0.9
TWF1	**Yuli** baz=355	**1.43 345**		*e*P	Pn	10 08 12.4	-1.2
TWM1	**Shoushan** baz=316	**1.47 306**		*e*P	Pn	10 08 16.3	+2.2
SGST	**Jiashian** baz=323	**1.52 317**		*e*P	Pn	10 08 16.0	+1.2
SGST	baz=323			*e*S	Sn	10 08 36.5	+2.1
EHY	**Hungye** baz=357	**1.57 347**		*e*P	Pn	10 08 14.9	-0.6
WTP	**Ta-pu** baz=323	**1.62 322**		*e*P	Pn	10 08 18.1	+1.8
CHN1	**Nanshi** baz=318	**1.63 318**		P	Pn	10 08 18.4	+2.0
CHN1	baz=318			*e*S	Sn	10 08 40.4	+3.4
YUS	**Yu-Shan** baz=336	**1.67 335**		*e*P	Pn	10 08 17.8	+0.9
TWK	**Hsinying** baz=329	**1.72 319**		*e*P	Pn	10 08 19.2	+1.7
CHN4	**Tsaushan** baz=333	**1.72 323**		*e*P	Pn	10 08 20.2	+2.6
ALS	**Alishan** baz=332	**1.75 332**		*e*P	Pn	10 08 20.6	+2.7
ESL	**Shilin** baz=358	**1.85 352**		*e*P	Pn	10 08 18.5	-1.0
CHN5	**Tsauling** baz=329	**1.88 330**		*e*P	Pn	10 08 21.6	+1.8
CHN5	baz=329			*e*S	Sn	10 08 46.7	+3.5
SMLT	**Sun Moon Lake** baz=347	**2.05 339**		*e*P	Pn	10 08 23.6	+1.5
TYC	**Yuchr** baz=342	**2.08 338**		*e*P	Pn	10 08 24.9	+2.4
TYC	baz=342			*e*S	Sn	10 08 52.4	+4.2
WHF	**Hehuan Shan** baz=349	**2.20 349**		*e*P	Pn	10 08 23.7	-0.6
TWQ1	**Liyutan** baz=323	**2.52 340**		*e*P	Pn	10 08 31.4	+2.8
TWQ1	baz=323			*e*S	Sn	10 09 03.7	+4.7
ENTT	**Nioudou** baz=357	**2.66 357**		*e*P	Pn	10 08 31.4	+0.8
NSK	**Sanguang** baz=1.0	**2.71 353**		*e*P	Pn	10 08 32.2	+0.9
YOJ	**Yonaguni jima**	**2.75 25**		P	Pn	10 08 32.6	+0.8
YOJ				*e*S	Sn	10 09 04.8	+0.1
IRIF	**Iriomote-Funau**	**3.00 38**		P	Pn	10 08 35.4	+0.2
IRIF				*e*S	Sn	10 09 10.3	-0.5
JKRS	**Kuro-shima**	**3.09 43**		P	Pn	10 08 37.0	+0.5
JKRS				*e*S	Sn	10 09 14.0	+0.9
JIJ	**Ishigaki jima**	**3.27 43**		P	Pn	10 08 38.6	-0.3
JIJ				*e*S	Sn	10 09 15.9	-1.6
JTJ	**Tarama**	**3.82 45**		P	Pn	10 08 46.7	+0.2
JTJ				*e*S	Sn	10 09 29.8	-1.4

NEIC 21 10:09:36.9, 61.°25N×146.°23W, h16km, ML3.9(PMR), ML3.7(AEIC), After AEIC., Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DIV	**Divide**	**0.25 119**		P	Pg	10 09 42.3	-0.1
DIV				S	Sg	10 09 47.0	+0.8
DIV				*e*Sb	Sg	10 09 47.1	+0.9
EYAK	**Cordova Ski Ar**	**0.74 162**		P	Pb	10 09 49.7	-1.7
EYAK				S	Sg	10 10 01.3	+0.2
BMRM	**Bremner River**	**0.84 109**		P	Pb	10 09 50.4	-2.6
BMRM				S	Sb	10 10 02.1	-1.8
SML	**Sawmill**	**1.15 300**		P	Pn	10 09 55.6	-2.7
SML				S	Sb	10 10 10.4	-2.5
PMR	**Palmer**	**1.44 285**		P	Pn	10 10 00.4	-1.7
PMR				S	Sn	10 10 18.4	-2.2
RC01	**Rabbit Creek A**	**1.71 266**		P	Pn	10 10 04.0	-1.8
PAX	**Paxson**	**1.76 11**		P	Pn	10 10 05.1	-1.4
PAX				S	Sn	10 10 27.3	-1.2
MID	**Middleton Isla**	**1.83 182**		P	Pn	10 10 05.8	-1.7
FIB	**Fire Island**	**1.91 269**		P	Pn	10 10 07.0	-1.6
SEW	**Seward**	**1.96 235**		P	Pn	10 10 07.6	-1.7
MENT	**Mentasta**	**2.06 34**		*e*P	Pn	10 10 10.2	-0.5
SLKM	**Skilak Lake**	**2.09 251**		P	Pn	10 10 09.9	-1.2
RND	**Reindeer**	**2.48 332**		P	Pn	10 10 14.6	-1.9
BCA3	**Beaver Creek A**	**2.77 47**		P	Pn	10 10 18.6	-1.8
MCK	**McKinley**	**2.79 334**		P	Pn	10 10 19.0	-1.7
TRF	**Thorofare Moun**	**2.91 321**		P	Pn	10 10 20.5	-1.8
KTH	**Kantishna Hill**	**3.18 319**		P	Pn	10 10 24.5	-1.5
PPLA	**Purkeypile**	**3.25 303**		P	Pn	10 10 25.3	-1.7
RSO	**Redoubt South**	**3.29 259**		*e*Pn	Pn	10 10 26.2	-1.4
BPAW	**Bear Paw Mtn.**	**3.60 325**		P	Pn	10 10 30.2	-1.6
COLA	**College**	**3.71 349**		P	Pn	10 10 32.2	-1.1
PNL	**Peninsula**	**3.74 112**		P	Pn	10 10 32.3	-1.4
CHUM	**Lake Minchumin**	**3.86 316**		P	Pn	10 10 34.1	-1.3
EGAK	**Eagle**	**4.22 31**		P	Pn	10 10 39.2	-1.1
HYT	**Haines Junctio**	**4.26 92**		*e*Pn	Pn	10 10 39.9	-1.1
SVW2	**Sparrevohn**	**4.53 272**		P	Pn	10 10 42.2	-2.5
KDAK	**Kodiak Island**	**4.75 226**		P	Pn	10 10 45.4	-2.3
TTA	**Tatalina**	**4.90 294**		*e*P	Pn	10 10 47.9	-1.7
OHAK	**Old Harbor**	**5.43 225**		*e*Pn	Pn	10 10 54.4	-2.5
SKAG	**Skagway**	**5.70 104**		*e*P	Pn	10 11 00.1	-0.5

IDC 21 10:09:49.5±7.2, 21.°14S×68.°75W, h134km±54km, mb3.3/1, mb1 3.5/2, mb1mx3.2/13, mbtmp3.1/2, Error ellipse: s-maj=128.3km s-min=60.3km az=96.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz** 1.0nm,0.3s,baz=173,slow=6.1,SNR=60	**4.86**	**7**	P	Pn	10 11 01.5	+0.5
LPAZ	baz=259,slow=19,SNR=1.8			S	Sn	10 11 58.0	+1.6
TXAR	**Lajitas Array** 0.3nm,0.9s,baz=162,slow=6.2,SNR=3.4	**60.42**	**325**	PcP	PcP	10 20 28.3	-0.2
YKA	**Yellowknife Ar** 0.2nm,0.5s,baz=138,slow=5.3,SNR=4.4	**90.90**	**341**	P	P	10 22 37.5	0.0
ASAR	**Alice Springs** 0.3nm,0.7s,baz=125,slow=1.9,SNR=3.4	**130.30**	**208**	PKP	PKPdf	10 28 44.4	-0.2
MKAR	**Makanchi Array** 0.6nm,0.6s,baz=329,slow=4.2,SNR=6.2	**145.26**	**36**	PKPbc	PKPbc	10 29 10.4	-0.8

*DDA **21** 10:21:42.3, 34.°55N×36.°99E, h5km±1km, Md3.2*
*GRAL **21** 10:21:42.9±0.3, 34.°49N×36.°72E, h0km±3km, MD3.2*
*NSSC **21** 10:21:42, 34.°53N×36.°74E, h14km±1km*
*ISCJB **21** 10:21:44.7±0.4, 34.°36N±0.°02×36.°67E±0.°03, h10km, Error ellipse: s-maj=3.9km s-min=3.0km az=2.2*
*CSEM **21** 10:21:44.3±0.2, 34.°36N×36.°66E, h2km, Mc1.7, Error ellipse: s-maj=5.5km s-min=4.1km az=99.0*
ISC 21 10:21:44.4±0.7, 34.°37N±0.°02×36.°69E±0.°04, h2km±5km, n33, σ1.°15/61, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FKH	**Fakeheh**	**0.27 241**		*e*P	**Pg**	**10 21 49.1**	**-0.5**
FKH				*e*S	**Sg**	**10 21 54.0**	**+0.9**
FKH	**Fakeheh**	**0.27 241**		*e*P	**Pg**	**10 21 49.1**	**-0.5**
FKH				*e*S	**Sg**	**10 21 54.0**	**+0.9**
HAWK	**Haweek**	**0.28 303**		⇑P	**Pg**	**10 21 48.0**	**-1.8**
HAWK				⇑S	**Sg**	**10 21 53.0**	**-0.4**
HAWK	**Haweek**	**0.28 303**		⇑*i*P	**Pg**	**10 21 49.0**	**-0.8**
HAWK				⇑*i*S	**Sg**	**10 21 53.3**	**-0.1**
ROOS	**tl_alroos**	**0.54 111**		⇑P	**Pg**	**10 21 53.0**	**-1.7**
ROOS				⇑S	**Sg**	**10 22 02.0**	**+0.3**
ROOS	**tl_alroos**	**0.54 111**		⇑*i*P	**Pg**	**10 21 53.8**	**-0.9**
ROOS				⇑*i*S	**Sg**	**10 22 02.8**	**+1.1**
HWQ	**Hawqa**	**0.62 262**		*e*P	**Pg**	**10 21 55.0**	**-1.3**
HWQ				*e*S	**Sg**	**10 22 03.9**	**-0.4**
HWQ	**Hawqa**	**0.62 262**		*e*P	**Pg**	**10 21 55.0**	**-1.3**
HWQ				*e*S	**Sg**	**10 22 03.9**	**-0.4**
BIDA	**Albida**	**0.71 335**		⇑P	**Pg**	**10 21 54.0**	**-4.0**
BIDA				⇑S	**Sg**	**10 22 03.0**	**-4.3**
QASN	**Qassioun**	**0.90 202**		⇑P	**Pg**	**10 22 02.0**	**+0.3**
QASN				⇑S	**Sg**	**10 22 17.0**	**+3.7**
QASN	**Qassioun**	**0.90 202**		⇑*i*P	**Pg**	**10 22 02.7**	**+1.1**
BHL	**Bhannes**	**0.97 242**		*e*P	**Pg**	**10 22 02.0**	**-1.1**
BHL				*e*S	**Sg**	**10 22 16.0**	**+0.3**
BHL	**Bhannes**	**0.97 242**		*e*P	**Pg**	**10 22 02.0**	**-1.1**
BHL				*e*S	**Sg**	**10 22 16.0**	**+0.3**
TOTH	**TOTAH**	**1.03 192**		⇑P	**Pg**	**10 22 04.0**	**-0.1**
TOTH				⇑S	**Sg**	**10 22 20.0**	**+2.6**
TOTH	**TOTAH**	**1.03 192**		⇑*i*P	**Pg**	**10 22 04.7**	**+0.6**
BRBR	**Barbar**	**1.13 213**		⇑P	**Pg**	**10 22 06.0**	**-0.1**
BRBR				⇑S	**Sg**	**10 22 23.0**	**+2.2**
BRBR	**Barbar**	**1.13 213**		⇑*i*P	**Pg**	**10 22 06.9**	**+0.8**
RCY	**Rachaya**	**1.14 220**		*e*P	**Pg**	**10 22 05.0**	**-1.2**
RCY				*e*S	**Sg**	**10 22 21.3**	**+0.3**
RCY	**Rachaya**	**1.14 220**		*e*P	**Pg**	**10 22 05.0**	**-1.2**
RCY				*e*S	**Sg**	**10 22 21.3**	**+0.3**
ZALF	**Zalf**	**1.54 159**		⇑P	**Pn**	**10 22 11.0**	**-1.8**
ZALF				⇑S	**Sn**	**10 22 32.0**	**-1.3**
ZALF	**Zalf**	**1.54 159**		⇑*i*P	**Pn**	**10 22 12.0**	**-0.8**
ZALF				⇑*i*S	**Sn**	**10 22 32.4**	**-0.9**
SALA	**Sala**	**1.65 179**		⇑P	**Pn**	**10 22 13.0**	**-1.4**
SALA				⇑S	**Sn**	**10 22 35.0**	**-1.1**
SALA	**Sala**	**1.65 179**		⇑*i*P	**Pn**	**10 22 13.9**	**-0.5**
SALA				⇑*i*S	**Sn**	**10 22 35.4**	**-0.7**
YAYL	**Yayladag**	**1.73 344**		*i*P	**Pn**	**10 22 14.0**	**-1.4**
YAYL				*i*S	**Sn**	**10 22 38.5**	**+0.4**
YAYL	**Yayladag**	**1.73 344**		*i*P	**Pn**	**10 22 14.0**	**-1.4**
YAYL				*i*S	**Sn**	**10 22 38.5**	**+0.5**
HTY	**Hatay**	**1.81 346**		*e*PN	**Pn**	**10 22 17.1**	**+0.6**
HTY				*e*SN	**Sn**	**10 22 39.1**	**-0.8**
HTY	**Hatay**	**1.81 346**		*e*Pn	**Pn**	**10 22 17.1**	**+0.6**
HTY				*e*Sn	**Sn**	**10 22 39.1**	**-0.8**
COBT	**Iskenderun**	**2.18 351**		*i*P	**Pn**	**10 22 21.2**	**-0.4**
COBT				*i*S	**Sn**	**10 22 50.4**	**+1.4**
COBT	**Iskenderun**	**2.18 351**		*i*P	**Pn**	**10 22 21.2**	**-0.4**
COBT				*i*S	**Sn**	**10 22 50.4**	**+1.3**
KUZU	**Kuzuini**	**2.42 7**		*i*P	**Pn**	**10 22 27.0**	**+2.0**
KUZU				*i*S	**Sn**	**10 22 56.1**	**+1.0**
KUZU	**Kuzuini**	**2.42 7**		*i*P	**Pn**	**10 22 27.0**	**+2.1**
KUZU				*i*S	**Sn**	**10 22 56.1**	**+1.0**
GAZ	**Gaziantep**	**2.83 9**		*e*PN	**Pn**	**10 22 32.1**	**+1.6**
GAZ	**Gaziantep**	**2.83 9**		*e*Pn	**Pn**	**10 22 32.2**	**+1.6**

OTT 21 10:23:30.4±2.1, 77.°18N×125.°16W, h18km, ML3.3/4, 183km northwest from Mould Bay, Nt, Arctic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RES	**Resolute Bay**	**7.71 94**		PN	Pn	10 25 20.2	-1.3
RES				SN	Sn	10 26 42.1	-6.0
RES	comp=Z,0.8nm,0.2s			Trac		10 26 50.7	
INK	**Inuvik**	**9.24 200**		PN	Pn	10 25 40.7	-1.7
INK				SN	Sn	10 27 18.3	-7.4
INK	comp=Z,1.9nm,0.4s			Trac		10 27 23.4	
JERN	**Jeri Cho Mine,**	**11.96 152**		PN	Pn	10 26 21.0	+1.4
JERN				SN	Sn	10 28 32.3	0.0
JERN	comp=Z,1.0nm,0.4s			Trac		10 28 35.0	
COWN	**Contwyoto Lake**	**12.72 153**		PN	Pn	10 26 34.2	+4.2
COWN				SN	Sn	10 28 48.9	-1.9
COWN	comp=Z,1.0nm,0.5s			Trac		10 28 53.9	
ROMN	**Roman Lake**	**13.12 166**		PN	Pn	10 26 38.5	+3.0
ROMN				SN	Sn	10 28 57.3	-3.4
CTLN	**Castor Lake**	**13.13 162**		PN	Pn	10 26 36.8	+1.2
CTLN				SN	Sn	10 28 58.4	-2.5
GIFN	**Gifford Fjord,**	**13.85 98**		PN	Pn	10 26 44.9	-0.5

*ISK **21** 10:34:06.8, 38.°73N×39.°30E, h7km, MD3.0*
*CSEM **21** 10:34:07.1±0.1, 38.°75N×39.°21E, h5km, MD2.8, Error ellipse: s-maj=3.4km s-min=2.1km az=123.0*
*ISCJB **21** 10:34:07.4±0.6, 38.°77N±0.°03×39.°21E±0.°04, h2km±7km, Error ellipse: s-maj=6.1km s-min=4.6km az=41.1*
*DDA **21** 10:34:10.9, 38.°46N×39.°09E, h4km±5km, Md2.8*
ISC 21 10:34:07.9±0.5, 38.°76N±0.°03×39.°23E±0.°04, h6km±7km, n21, σ0.°98/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTK	**Pertek**	**0.18 44**		PG	**Pg**	**10 34 10.9**	**-0.7**
PTK				*e*SG	**Sg**	**10 34 14.8**	**+0.7**
PTK	**Pertek**	**0.18 44**		*i*Pg	**Pg**	**10 34 10.9**	**-0.7**
PTK				*e*Sg	**Sg**	**10 34 14.8**	**+0.8**
ELZG	**Elazig**	**0.33 216**		*i*P	**Pg**	**10 34 13.7**	**-0.5**
ELZG				*i*S	**Sg**	**10 34 19.9**	**+1.5**
ELZG	**Elazig**	**0.33 216**		*i*P	**Pg**	**10 34 13.7**	**-0.5**
ELZG				*i*S	**Sg**	**10 34 19.9**	**+1.5**
SVRC	**Sivrice-ELAZID**	**0.39 171**		*e*PG	**Pg**	**10 34 13.8**	**-1.6**
SVRC				*e*SG	**Sg**	**10 34 19.9**	**-0.5**
SVRC	**Sivrice-ELAZID**	**0.39 171**		*e*Pg	**Pg**	**10 34 13.8**	**-1.5**
SVRC				*e*Sg	**Sg**	**10 34 19.9**	**-0.5**
MYA	**Malataya**	**0.77 236**		*e*PG	**Pg**	**10 34 21.7**	**-0.8**
MYA				*e*SG	**Sg**	**10 34 34.2**	**+1.8**
MYA	**Malataya**	**0.77 236**		*e*Pg	**Pg**	**10 34 21.7**	**-0.9**
MYA				*e*Sg	**Sg**	**10 34 34.2**	**+1.7**
EZC	**Erzincan**	**0.99 6**		*e*PG	**Pg**	**10 34 26.9**	**-0.1**
DIYA	**Diyarbakir**	**1.09 140**		*i*P	**Pg**	**10 34 28.3**	**-0.5**
DIYA				*i*S	**Sg**	**10 34 45.2**	**+2.2**
DIYA	**Diyarbakir**	**1.09 140**		*i*P	**Pg**	**10 34 28.3**	**-0.5**
AKCD	**Akcadag**	**1.12 246**		*i*P	**Pg**	**10 34 28.3**	**-1.2**
AKCD				*i*S	**Sg**	**10 34 43.7**	**-0.3**
AKCD	**Akcadag**	**1.12 246**		*i*P	**Pg**	**10 34 28.3**	**-1.1**
AKCD				*i*S	**Sg**	**10 34 43.7**	**-0.3**
URFA	**Urfa**	**1.36 194**		*e*PN	**Pn**	**10 34 32.3**	**-0.9**
URFA	**Urfa**	**1.36 194**		*e*Pn	**Pn**	**10 34 32.3**	**-1.0**
GUMT	**Gumushane**	**1.71 6**		*e*PN	**Pn**	**10 34 38.2**	**+0.1**
GUMT	**Gumushane**	**1.71 6**		*e*Pn	**Pn**	**10 34 38.3**	**+0.2**
MARD	**Mardin**	**1.89 139**		*i*P	**Pn**	**10 34 40.8**	**+0.2**
SARI	**SarD1z-Kayseri**	**1.98 268**		*e*PN	**Pg**	**10 34 46.0**	**+0.2**
SVSK	**Karacayir**	**2.08 304**		*e*PN	**Pn**	**10 34 44.2**	**+1.0**
SVSK	**Karacayir**	**2.08 304**		*e*Pn	**Pn**	**10 34 44.2**	**+1.0**

*ISCJB **21** 10:45:52.1±0.8, 24.°06S±0.°05×66.°8W±0.°1, h188km±12km, mb3.2/4, Error ellipse: s-maj=20.2km s-min=7.2km az=6.9*
*NEIC **21** 10:45:53.0±1.0, 24.°01S×66.°73W, h185km±11km, Error ellipse: s-maj=22.9km s-min=10.1km az=99.0*
*IDC **21** 10:45:53.8±1.8, 23.°95S×66.°65W, h190km±17km, mb3.1/4, mb1 3.3/8, mb1mx3.2/18, mbtmp3.0/8, Error ellipse: s-maj=31.8km s-min=16.2km az=90.0*
ISC 21 10:45:52.6±0.8, 24.°05S±0.°05×66.°8W±0.°1, h177km±11km, n16, σ1.°05/18, mb3.2/4, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**6.06 215**		*e*Pn	**Pn**	**10 47 19.3**	**-1.0**
LCO				*e*Sn	**Sn**	**10 48 29.2**	**-0.3**
CFAA	**Coronel Fontan** 0.2nm,0.3s,baz=16,slow=13,SNR=31	**7.64 189**		P	**Pn**	**10 47 43.5**	**+2.5**
CFAA	0.3nm,0.3s,baz=284,slow=22,SNR=13			S	**Sn**	**10 49 05.5**	**-1.3**
CFAA	**Coronel Fontan**	**7.64 189**		P	**Pn**	**10 47 43.5**	**+2.5**
CFAA				S	**Sn**	**10 49 05.5**	**-1.3**
LPAZ	**La Paz** 1.6nm,0.3s,baz=171,slow=6.7,SNR=31	**7.83 350**		P	**Pn**	**10 47 45.3**	**+1.6**
LPAZ	baz=350,slow=16,SNR=2.1			S	**Sn**	**10 49 11.1**	**-0.5**
LPAZ	**La Paz**	**7.83 350**		P	**Pn**	**10 47 45.3**	**+1.6**
LPAZ				S	**Sn**	**10 49 11.1**	**-0.5**
SIV	**San Ignacio** 0.4nm,0.3s,baz=223,slow=14,SNR=10.0	**9.64 35**		P	**Pn**	**10 48 06.9**	**-0.6**
TRQA	**Tornquist**	**14.55 165**		*e*Pn	**Pn**	**10 49 10.5**	**+0.3**
PLCA	**Paso Flores** 0.1nm,0.3s,baz=8.5,slow=14,SNR=2.9	**16.93 190**		P	**Pn**	**10 49 40.6**	**+1.4**
TXAR	**Lajitas Array** 0.2nm,0.7s,mb3.0,baz=153,slow=8.4,SNR=4.3	**63.84 324**		P	**P**	**10 56 06.2**	**0.0**
TORD	**Torodi Ar. Bea** 0.3nm,0.6s,mb3.1,baz=244,slow=5.6,SNR=3.0	**76.39 69**		P	**P**	**10 57 22.0**	**-0.9**
PDAR	**Pinedale Array** 0.2nm,0.5s,mb3.0,baz=163,slow=3.5,SNR=2.6	**77.30 329**		P	**P**	**10 57 27.7**	**+0.4**
YKA	**Yellowknife Ar** 0.2nm,0.5s,mb3.5,baz=137,slow=4.6,SNR=6.8	**94.24 340**		P	**P**	**10 58 50.2**	**-0.8**
YKA	**Yellowknife Ar**	**94.24 340**		P	**P**	**10 58 50.2**	**-0.8**
ASAR	**Alice Springs** 0.3nm,0.7s,baz=146,slow=2.2,SNR=4.1	**128.50 204**		PKP	PKPdf	11 04 38.0	-1.0
WRA	**Warramunga Arr** 0.6nm,0.9s,baz=150,slow=1.8,SNR=3.3	**131.68 207**		PKP	PKPdf	11 04 45.0	-0.1
MKAR	**Makanchi Array** 0.7nm,0.6s,baz=321,slow=3.1,SNR=8.5	**146.43 40**		PKPbc	PKPbc	11 05 11.1	-1.6

*GRAL **21** 11:34:22.3±0.3, 34.°29N×36.°89E, h4km±6km, MD3.0*
ISC 21 11:34:22.3±3.6, 34.°2N±0.°1×36.°8E±0.°2, h12km±18km, n4, σ0.°48/7, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FKH	**Fakeheh**	**0.37 280**		*e*P	**Pg**	**11 34 29.6**	**-0.1**
FKH				*e*S	**Sg**	**11 34 34.9**	**+0.2**
HWQ	**Hawqa**	**0.75 278**		*e*P	**Pg**

MS5.3/240, **248C-187D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.85**	**348**	*e*PB	**Pb**	**11 36 38.7**	**-2.4**
PYL				*e*SB	**Sb**	**11 36 52.3**	**+0.2**
PYL	**PYLOS**	**0.85**	**348**	*e*Pb	**Pb**	**11 36 38.7**	**-2.4**
PYL				*e*Sb	**Sb**	**11 36 52.3**	**+0.2**
KYTH	**Kithira**	**0.89**	**76**	*e*Pb	**Pb**	**11 36 42.1**	**+0.2**
KYTH	**Kithira**	**0.89**	**76**	*e*PB	**Pb**	**11 36 42.1**	**+0.2**
KYTH	**Kithira**	**0.89**	**76**	*e*Pb	**Pb**	**11 36 42.1**	**+0.2**
VLI	**Veliai**	**1.02**	**50**	*e*Pb	**Pn**	**11 36 45.0**	**+1.1**
VLI				*e*Sb	**Sb**	**11 37 00.1**	**+3.1**
VLI	**Veliai**	**1.02**	**50**	*e*PB	**Pn**	**11 36 45.0**	**+1.1**
VLI				*e*SB	**Sb**	**11 37 00.1**	**+3.1**
VLI	**Veliai**	**1.02**	**50**	*e*Pb	**Pn**	**11 36 45.0**	**+1.1**
VLI				*e*Sb	**Sb**	**11 37 00.1**	**+3.1**
ITM	**Ithomi**	**1.11**	**359**	P	**Pn**	**11 36 44.0**	**-1.2**
ITM				S	**Sb**	**11 36 59.7**	**0.0**
ITM	**Ithomi**	**1.11**	**359**	P	**Pn**	**11 36 44.0**	**-1.2**
ITM				S	**Sb**	**11 36 59.7**	**0.0**
ITM	**Ithomi**	**1.11**	**359**	*e*PG	**Pn**	**11 36 44.2**	**-1.0**
ITM				*e*SB	**Sb**	**11 36 59.7**	**0.0**
ITM	**Ithomi**	**1.11**	**359**	*e*Pg	**Pn**	**11 36 44.2**	**-1.0**
ITM				*e*Sb	**Sb**	**11 36 59.7**	**0.0**
VLX	**Vlachokerasia**	**1.34**	**14**	P	**Pn**	**11 36 48.1**	**-0.3**
VLX				S	**Sn**	**11 37 06.2**	**+0.7**
VLX	**Vlachokerasia**	**1.34**	**14**	*e*PN	**Pn**	**11 36 48.3**	**-0.1**
VLX				*e*SB	**Sb**	**11 37 09.5**	**+3.2**
VLX	**Vlachokerasia**	**1.34**	**14**	*e*Pn	**Pn**	**11 36 48.3**	**-0.1**
VLX				S	**Sn**	**11 37 06.2**	**+0.7**
VLX				*e*Sb	**Sb**	**11 37 09.5**	**+3.2**
KARN	**Karanos**	**1.72**	**112**	P	**Pn**	**11 36 55.9**	**+2.3**
KARN				S	**Sn**	**11 37 16.5**	**+1.7**
KARN	**Karanos**	**1.72**	**112**	*e*PG	**Pn**	**11 36 56.3**	**+2.7**
KARN	**Karanos**	**1.72**	**112**	P	**Pn**	**11 36 56.9**	**+2.3**
KARN	**Karanos**	**1.72**	**112**	*e*Pg	**Pn**	**11 36 56.3**	**+2.7**
GUR	**Goura**	**1.89**	**9**	P	**Pn**	**11 36 55.6**	**-0.3**
GUR				S	**Sn**	**11 37 19.7**	**+0.7**
GUR	**Goura**	**1.89**	**9**	*e*PG	**Pn**	**11 36 58.7**	**+2.8**
GUR	**Goura**	**1.89**	**9**	P	**Pn**	**11 36 55.6**	**-0.3**
GUR	**Goura**	**1.89**	**9**	*e*Pg	**Pn**	**11 36 58.7**	**+2.8**
GUR				S	**Sn**	**11 37 19.7**	**+0.7**
VAM	**Vamos**	**1.94**	**109**	*e*P	**Pb**	**11 36 59.6**	**0.0**
VAM	**Vamos**	**1.94**	**109**	*e*PN	**Pb**	**11 36 59.6**	**0.0**
VAM	**Vamos**	**1.94**	**109**	*e*Pn	**Pb**	**11 36 59.6**	**0.0**
RLS	**Riolos of Patr**	**2.03**	**349**	*e*Pg	**Pb**	**11 37 00.5**	**-0.7**
RLS	**Riolos of Patr**	**2.03**	**349**	*e*PG	**Pb**	**11 37 00.5**	**-0.7**
RLS	**Riolos of Patr**	**2.03**	**349**	*e*Pg	**Pb**	**11 37 00.5**	**-0.7**
NAIG	**Nisos Aigina**	**2.08**	**35**	*e*Pn	**Pb**	**11 37 00.8**	**-1.4**
NAIG	**Nisos Aigina**	**2.08**	**35**	*e*PN	**Pb**	**11 37 00.8**	**-1.4**
NAIG	**Nisos Aigina**	**2.08**	**35**	*e*Pn	**Pb**	**11 37 00.8**	**-1.4**
LTK	**Loutraki**	**2.11**	**22**	P	**Pn**	**11 37 00.1**	**+1.2**
LTK				S	**Sn**	**11 37 26.8**	**+2.4**
LTK	**Loutraki**	**2.11**	**22**	*e*PG	**Pb**	**11 37 02.8**	**+0.1**
LTK	**Loutraki**	**2.11**	**22**	P	**Pn**	**11 37 00.1**	**+1.2**
LTK	**Loutraki**	**2.11**	**22**	*e*Pg	**Pb**	**11 37 02.8**	**+0.1**
LTK				S	**Sn**	**11 37 26.8**	**+2.4**
GVD	**Gavdhos**	**2.12**	**125**	P	**Pn**	**11 37 00.7**	**+1.6**
GVD	**Gavdhos**	**2.12**	**125**	P	**Pn**	**11 37 00.7**	**+1.6**
GVD	**Gavdhos**	**2.12**	**125**	*e*PN	**Pb**	**11 37 01.2**	**-1.6**
GVD	**Gavdhos**	**2.12**	**125**	P	**Pn**	**11 37 00.7**	**+1.6**
GVD	**Gavdhos**	**2.12**	**125**	*e*Pn	**Pb**	**11 37 01.3**	**-1.5**
LAKA	**Lakka**	**2.17**	**0**	P	**Pn**	**11 37 00.1**	**+0.4**
LAKA	**Lakka**	**2.17**	**0**	P	**Pn**	**11 37 00.1**	**+0.4**
UPR	**University Cam**	**2.22**	**356**	*e*PN	**Pb**	**11 37 02.8**	**-1.7**
UPR	**University Cam**	**2.22**	**356**	*e*Pn	**Pb**	**11 37 02.8**	**-1.7**
KFL	**Anninata**	**2.25**	**336**	P	**Pn**	**11 37 00.8**	**0.0**
VLY	**Voula,Athens**	**2.31**	**39**	*e*Pn	**Pb**	**11 37 04.4**	**-1.6**
VLY	**Voula,Athens**	**2.31**	**39**	*e*PN	**Pb**	**11 37 04.4**	**-1.6**
VLY	**Voula,Athens**	**2.31**	**39**	*e*Pn	**Pb**	**11 37 04.4**	**-1.6**
KALE	**Kalithea**	**2.33**	**3**	P	**Pb**	**11 37 03.5**	**-2.8**
KALE	**Kalithea**	**2.33**	**3**	P	**Pb**	**11 37 03.5**	**-2.8**
EFP	**Efpalio**	**2.36**	**359**	P	**Pb**	**11 37 03.8**	**-3.0**
EFP	**Efpalio**	**2.36**	**359**	*e*PN	**Pb**	**11 37 05.0**	**-1.8**
EFP	**Efpalio**	**2.36**	**359**	P	**Pb**	**11 37 03.8**	**-3.0**
EFP	**Efpalio**	**2.36**	**359**	*e*Pn	**Pb**	**11 37 05.0**	**-1.8**
ATH	**Athens Observa**	**2.36**	**36**	P	**Pn**	**11 37 04.0**	**+1.6**
ATH				S	**Sn**	**11 37 32.0**	**+1.4**
ATH	**Athens Observa**	**2.36**	**36**	*e*PN	**Pb**	**11 37 04.9**	**-2.1**
ATH	**Athens Observa**	**2.36**	**36**	*e*Pn	**Pb**	**11 37 04.9**	**-2.1**
VLS	**Valsamata**	**2.38**	**333**	P	**Pn**	**11 37 02.5**	**0.0**
VLS				S	**Sn**	**11 37 32.6**	**+1.7**
VLS	**Valsamata**	**2.38**	**333**	P	**Pn**	**11 37 02.5**	**0.0**
VLS				S	**Sn**	**11 37 32.6**	**+1.7**
VLS	**Valsamata**	**2.38**	**333**	*e*PB	**Pn**	**11 37 03.0**	**+0.5**
VLS	**Valsamata**	**2.38**	**333**	P	**Pn**	**11 37 02.5**	**0.0**
VLS	**Valsamata**	**2.38**	**333**	*e*Pb	**Pn**	**11 37 03.0**	**+0.5**
VLS				S	**Sn**	**11 37 32.6**	**+1.7**
DSF	**Desfina**	**2.38**	**11**	P	**Pn**	**11 37 03.3**	**+0.6**
DSF	**Desfina**	**2.38**	**11**	P	**Pn**	**11 37 03.3**	**+0.6**
ATHU	**Athens Univers**	**2.39**	**37**	P	**Pn**	**11 37 04.0**	**+1.2**
ATHU				S	**Sn**	**11 37 32.0**	**+0.7**
ATHU	**Athens Univers**	**2.39**	**37**	P	**Pn**	**11 37 04.0**	**+1.2**
PTL	**Penteli**	**2.50**	**37**	*e*Pb	**Pn**	**11 37 06.7**	**+2.5**
PTL	**Penteli**	**2.50**	**37**	*e*PB	**Pn**	**11 37 06.7**	**+2.5**
PTL	**Penteli**	**2.50**	**37**	*e*Pb	**Pn**	**11 37 06.7**	**+2.5**
IDI	**Anoyia**	**2.51**	**107**	Pn	**Pn**	**11 37 06.7**	**+2.4**
	66nm,0.3s,baz=282,slow=14,SNR=173						
IDI				Sn	**Sn**	**11 37 46.8**	**+13**
	293nm,0.3s,baz=1.6,slow=18,SNR=7.0						
IDI				LR	LR	11 38 00.8	
	comp=Z,2μm,19.8s,baz=5.9,slow=40						
IDI	**Anoyia**	**2.51**	**107**	*e*Pn	**Pn**	**11 37 07.3**	**+3.0**
IDI	**Anoyia**	**2.51**	**107**	*e*PN	**Pn**	**11 37 07.3**	**+3.0**
IDI	**Anoyia**	**2.51**	**107**	*e*Pn	**Pn**	**11 37 07.3**	**+3.0**
SIVA	**Sivas**	**2.55**	**113**	P	**Pn**	**11 37 06.7**	**+1.8**
SIVA	**Sivas**	**2.55**	**113**	P	**Pn**	**11 37 06.7**	**+1.8**
SIVA	**Sivas**	**2.55**	**113**	*e*PB	**Pn**	**11 37 06.6**	**+1.7**
SIVA	**Sivas**	**2.55**	**113**	*e*Pb	**Pn**	**11 37 06.6**	**+1.7**
LKR	**Lokris**	**2.71**	**17**	P	**Pn**	**11 37 07.8**	**+0.7**
LKR	**Lokris**	**2.71**	**17**	P	**Pn**	**11 37 07.8**	**+0.7**
LKR	**Lokris**	**2.71**	**17**	*e*PN	**Pn**	**11 37 08.1**	**+1.0**
LKR	**Lokris**	**2.71**	**17**	P	**Pn**	**11 37 07.8**	**+0.7**
LKR	**Lokris**	**2.71**	**17**	*e*Pn	**Pn**	**11 37 08.1**	**+1.0**
ATAL	**Atalanti**	**2.75**	**18**	P	**Pn**	**11 37 08.3**	**+0.6**
ATAL	**Atalanti**	**2.75**	**18**	P	**Pn**	**11 37 08.3**	**+0.6**
THR5	**Thira Island,**	**2.76**	**82**	P	**Pn**	**11 37 09.5**	**+1.7**
THR5	**Thira Island,**	**2.76**	**82**	P	**Pn**	**11 37 09.5**	**+1.7**
THR5	**Thira Island,**	**2.76**	**82**	P	**Pn**	**11 37 09.5**	**+1.7**
THR1	**Thera Island**	**2.84**	**83**	P	**Pn**	**11 37 10.9**	**+1.9**
THR1	**Thera Island**	**2.84**	**83**	P	**Pn**	**11 37 10.9**	**+1.9**
EVR	**Evrytania**	**2.85**	**358**	*e*Pb	**Pb**	**11 37 12.9**	**-2.3**
EVR	**Evrytania**	**2.85**	**358**	*e*PB	**Pb**	**11 37 12.9**	**-2.3**
EVR	**Evrytania**	**2.85**	**358**	*e*Pb	**Pb**	**11 37 12.9**	**-2.3**
AGG	**Agios Georgios**	**2.96**	**6**	P	**Pn**	**11 37 10.7**	**+0.1**
AGG	**Agios Georgios**	**2.96**	**6**	P	**Pn**	**11 37 10.7**	**+0.1**
AGG	**Agios Georgios**	**2.96**	**6**	*e*PB	**Pb**	**11 37 13.7**	**-3.5**
AGG	**Agios Georgios**	**2.96**	**6**	P	**Pn**	**11 37 10.7**	**+0.1**
AGG	**Agios Georgios**	**2.96**	**6**	*e*Pb	**Pb**	**11 37 13.7**	**-3.5**
LAST	**Lasithi**	**3.00**	**106**	P	**Pn**	**11 37 12.7**	**+1.5**
LAST	**Lasithi**	**3.00**	**106**	P	**Pn**	**11 37 12.7**	**+1.5**
LAST	**Lasithi**	**3.00**	**106**	*e*PB	**Pb**	**11 37 15.3**	**-2.5**
LAST	**Lasithi**	**3.00**	**106**	P	**Pn**	**11 37 12.7**	**+1.5**
LAST	**Lasithi**	**3.00**	**106**	*e*Pb	**Pb**	**11 37 15.3**	**-2.5**
APE	**Apeiranthos**	**3.04**	**70**	⇑P	**Pb**	**11 37 20.2**	**+1.7**
APE	**Apeiranthos**	**3.04**	**70**	P	**Pn**	**11 37 12.7**	**+1.0**
APE	**Apeiranthos**	**3.04**	**70**	⇑*i*P	**Pb**	**11 37 20.2**	**+1.7**
APE	**Apeiranthos**	**3.04**	**70**	*e*PN	**Pb**	**11 37 14.0**	**-4.5**
APE	**Apeiranthos**	**3.04**	**70**	P	**Pn**	**11 37 12.7**	**+1.0**
APE	**Apeiranthos**	**3.04**	**70**	*e*Pn	**Pb**	**11 37 14.0**	**-4.5**
NPS	**Neapolis**	**3.08**	**104**	*e*P	**Pn**	**11 37 14.1**	**+1.9**
NPS	**Neapolis**	**3.08**	**104**	*e*PN	**Pn**	**11 37 14.1**	**+1.9**
NPS	**Neapolis**	**3.08**	**104**	*e*Pn	**Pn**	**11 37 14.1**	**+1.9**
XRY	**Khrisi**	**3.27**	**110**	*e*Pn	**Pb**	**11 37 18.1**	**-4.3**
XRY	**Khrisi**	**3.27**	**110**	*e*PN	**Pb**	**11 37 18.1**	**-4.3**
XRY	**Khrisi**	**3.27**	**110**	*e*Pn	**Pb**	**11 37 18.1**	**-4.3**
NEO	**Neokhori**	**3.39**	**17**	*e*Pn	**Pn**	**11 37 17.2**	**+0.8**
NEO	**Neokhori**	**3.39**	**17**	*e*PN	**Pn**	**11 37 17.2**	**+0.8**
NEO	**Neokhori**	**3.39**	**17**	*e*Pn	**Pn**	**11 37 17.2**	**+0.8**
XOR	**Xorichti**	**3.44**	**16**	P	**Pn**	**11 37 17.6**	**+0.5**
XOR	**Xorichti**	**3.44**	**16**	P	**Pn**	**11 37 17.6**	**+0.5**
XOR	**Xorichti**	**3.44**	**16**	P	**Pn**	**11 37 17.6**	**+0.5**
AOS	**Alonnisos**	**3.45**	**26**	P	**Pn**	**11 37 17.8**	**+0.5**
AOS	**Alonnisos**	**3.45**	**26**	P	**Pn**	**11 37 17.8**	**+0.5**
AOS	**Alonnisos**	**3.45**	**26**	P	**Pn**	**11 37 17.8**	**+0.5**
THL	**Klokotos Trika**	**3.49**	**1**	P	**Pn**	**11 37 19.1**	**+1.2**
THL				S	**Sn**	**11 37 59.1**	**+0.6**
THL	**Klokotos Trika**	**3.49**	**1**	*e*PN	**Pb**	**11 37 20.8**	**-5.4**
THL	**Klokotos Trika**	**3.49**	**1**	P	**Pn**	**11 37 19.1**	**+1.2**
THL				S	**Sn**	**11 37 59.1**	**+0.6**
ZKR	**Zakros**	**3.59**	**104**	P	**Pn**	**11 37 21.8**	**+2.5**
ZKR	**Zakros**	**3.59**	**104**	P	**Pn**	**11 37 21.8**	**+2.5**
ZKR	**Zakros**	**3.59**	**104**	*e*PN	**Pb**	**11 37 22.5**	**-5.4**
ZKR	**Zakros**	**3.59**	**104**	P	**Pn**	**11 37 21.8**	**+2.5**
ZKR	**Zakros**	**3.59**	**104**	*e*Pn	**Pb**	**11 37 22.5**	**-5.4**
JAN	**Janina**	**3.69**	**347**	*e*P	**Pn**	**11 37 22.3**	**+1.7**
JAN	**Janina**	**3.69**	**347**	*e*PN	**Pn**	**11 37 22.3**	**+1.7**
JAN	**Janina**	**3.69**	**347**	*e*Pn	**Pn**	**11 37 22.3**	**+1.7**
IGT	**Igoumenitsa**	**3.69**	**340**	P	**Pn**	**11 37 20.6**	**-0.1**
IGT	**Igoumenitsa**	**3.69**	**340**	P	**Pn**	**11 37 20.6**	**-0.1**
IGT	**Igoumenitsa**	**3.69**	**340**	P	**Pn**	**11 37 20.6**	**-0.1**
CHOS	**Chios island**	**4.00**	**53**	P	**Pn**	**11 37 27.2**	**+2.3**
CHOS	**Chios island**	**4.00**	**53**	*e*PN	**Pb**	**11 37 28.8**	**-6.1**
CHOS	**Chios island**	**4.00**	**53**	P	**Pn**	**11 37 27.2**	**+2.3**
CHOS	**Chios island**	**4.00**	**53**	*e*Pn	**Pb**	**11 37 28.8**	**-6.1**
KEK	**Kerkira**	**4.02**	**335**	*e*Pn	**Pn**	**11 37 25.0**	**-0.2**
KEK	**Kerkira**	**4.02**	**335**	*e*PN	**Pn**	**11 37 25.0**	**-0.2**
KEK	**Kerkira**	**4.02**	**335**	*e*Pn	**Pn**	**11 37 25.0**	**-0.2**
PAIG	**Paliouri**	**4.09**	**19**	P	**Pn**	**11 37 27.3**	**+1.3**
PAIG	**Paliouri**	**4.09**	**19**	P	**Pn**	**11 37 27.3**	**+1.3**
PAIG	**Paliouri**	**4.09**	**19**	P	**Pn**	**11 37 27.3**	**+1.3**
SRN	**Sarande**	**4.11**	**338**	*e*PN	**Pn**	**11 37 26.0**	**-0.4**
SRN	**Sarande**	**4.11**	**338**	*e*Pn	**Pn**	**11 37 26.0**	**-0.4**
KZN	**Kozani**	**4.24**	**358**	P	**Pn**	**11 37 29.9**	**+1.8**
KZN	**Kozani**	**4.24**	**358**	P	**Pn**	**11 37 29.9**	**+1.8**
KZN	**Kozani**	**4.24**	**358**	*e*PN	**Pn**	**11 37 30.1**	**+2.0**
KZN	**Kozani**	**4.24**	**358**	*e*Pn	**Pn**	**11 37 30.1**	**+2.0**
SMG	**Samos**	**4.24**	**66**	*e*Pn	**Pn**	**11 37 30.9**	**+2.8**
SMG	**Samos**	**4.24**	**66**	*e*PN	**Pn**	**11 37 30.9**	**+2.8**
SMG	**Samos**	**4.24**	**66**	*e*Pn	**Pn**	**11 37 30.9**	**+2.8**
KARP	**Karpathos**	**4.26**	**95**	*e*Pn	**Pn**	**11 37 30.2**	**+1.8**
KARP	**Karpathos**	**4.26**	**95**	*e*PN	**Pn**	**11 37 30.2**	**+1.8**
KARP	**Karpathos**	**4.26**	**95**	*e*Pn	**Pn**	**11 37 30.2**	**+1.8**
LTBQ	**Tobruq**	**4.32**	**157**	*i* P	**Pn**	**11 37 31.2**	**+1.9**
	SNR=36						
LTBQ				⇑*e*S	**Sn**	**11 38 19.2**	**+0.3**
	SNR=45						
URLA	**Izmir**	**4.35**	**57**	⇑*i*P	**Pn**	**11 37 30.6**	**+0.9**
URLA	**Izmir**	**4.35**	**57**	*i* P	**Pn**	**11 37 30.6**	**+0.9**
SIGR	**SIGRI**	**4.40**	**43**	P	**Pn**	**11 37 33.2**	**+2.8**
SIGR	**SIGRI**	**4.40**	**43**	P	**Pn**	**11 37 33.2**	**+2.8**
PLG	**Polygyros**	**4.46**	**15**	P	**Pn**	**11 37 31.7**	**+0.6**
PLG	**Polygyros**	**4.46**	**15**	P	**Pn**	**11 37 31.7**	**+0.6**
PLG	**Polygyros**	**4.46**	**15**	*e*PN	**Pn**	**11 37 32.0**	**+0.9**
PLG	**Polygyros**	**4.46**	**15**	P	**Pn**	**11 37 31.7**	**+0.6**
PLG	**Polygyros**	**4.46**	**15**	*e*Pn	**Pn**	**11 37 32.0**	**+0.9**
BDRM	**Kayabasi**	**4.52**	**76**	⇑*i*P	**Pn**	**11 37 33.7**	**+1.6**
BDRM	**Kayabasi**	**4.52**	**76**	*i* P	**Pn**	**11 37 33.7**	**+1.6**
GCAM	**G?zelcaml?**	**4.53**	**67**	⇑*i*P	**Pn**	**11 37 33.8**	**+1.6**
GCAM	**G?zelcaml?**	**4.53**	**67**	*i* P	**Pn**	**11 37 33.8**	**+1.7**
OUR	**Ouranopolis**	**4.55**	**20**	P	**Pn**	**11 37 33.3**	**+0.9**
OUR	**Ouranopolis**	**4.55**	**20**	P	**Pn**	**11 37 33.3**	**+0.9**
OUR	**Ouranopolis**	**4.55**	**20**	P	**Pn**	**11 37 33.3**	**+0.9**
LIA	**Limnos Island**	**4.59**	**33**	*e*Pn	**Pn**	**11 37 36.4**	**+3.4**
LIA	**Limnos Island**	**4.59**	**33**	*e*PN	**Pn**	**11 37 36.4**	**+3.4**
LIA	**Limnos Island**	**4.59**	**33**	*e*Pn	**Pn**	**11 37 36.4**	**+3.4**
HORT	**Hortiatis**	**4.61**	**11**	P	**Pn**	**11 37 34.0**	**+0.7**
HORT	**Hortiatis**	**4.61**	**11**	P	**Pn**	**11 37 34.0**	**+0.7**
HORT	**Hortiatis**	**4.61**	**11**	P	**Pn**	**11 37 34.0**	**+0.7**
THE	**Thessaloniki**	**4.63**	**9**	P	**Pn**	**11 37 34.7**	**+1.2**
THE	**Thessaloniki**	**4.63**	**9**	P	**Pn**	**11 37 34.7**	**+1.2**
THE	**Thessaloniki**	**4.63**	**9**	P	**Pn**	**11 37 34.7**	**+1.2**
KBN	**Korca**	**4.64**	**349**	*e*PN	**Pn**	**11 37 36.0**	**+2.3**
KBN	**Korca**	**4.64**	**349**	*e*Pn	**Pn**	**11 37 36.0**	**+2.3**
PRK	**Paraskevi**	**4.67**	**46**	*e*P	**Pn**	**11 37 36.8**	**+2.8**
PRK	**Paraskevi**	**4.67**	**46**	*e*PN	**Pn**	**11 37 36.8**	**+2.8**
PRK	**Paraskevi**	**4.67**	**46**	*e*Pn	**Pn**	**11 37 36.8**	**+2.8**
FNA	**Florina**	**4.73**	**355**	P	**Pn**	**11 37 35.6**	**+0.7**
FNA	**Florina**	**4.73**	**355**	P	**Pn**	**11 37 35.6**	**+0.7**
FNA	**Florina**	**4.73**	**355**	P	**Pn**	**11 37 35.6**	**+0.7**
KDAG	**Bornova**	**4.83**	**60**	*i* P	**Pn**	**11 37 38.6**	**+2.3**
KDAG	**Bornova**	**4.83**	**60**	*i* P	**Pn**	**11 37 38.6**	**+2.3**
SOH	**Sokhos**	**4.87**	**13**	P	**Pn**	**11 37 37.6**	**+0.8**
SOH	**Sokhos**	**4.87**	**13**	P	**Pn**	**11 37 37.6**	**+0.8**
SOH	**Sokhos**	**4.87**	**13**	*e*PN	**Pn**	**11 37 39.3**	**+2.5**
SOH	**Sokhos**	**4.87**	**13**	P	**Pn**	**11 37 37.6**	**+0.8**
SOH	**Sokhos**	**4.87**	**13**	*e*Pn	**Pn**	**11 37 39.3**	**+2.5**
AYVA	**Ayvalik**	**4.95**	**48**	*i* P	**Pn**	**11 37 40.6**	**+2.6**
AYVA	**Ayvalik**	**4.95**	**48**	*i* P	**Pn**	**11 37 40.6**	**+2.6**
BIA	**Bitola**	**4.97**	**354**	P	**Pn**	**11 37 37.7**	**-0.5**
BIA	**Bitola**	**4.97**	**354**	*i* Pn	**Pn**	**11 37 39.1**	**+0.9**
BIA				*e*Sn	**Sn**	**11 38 37.2**	**+2.3**
BIA	**Bitola**	**4.97**	**354**	P	**Pn**	**11 37 37.7**	**-0.5**
ARG	**Arkhangelos**	**4.99**	**86**	*e*P	**Pn**	**11 37 40.9**	**+2.4**
ARG	**Arkhangelos**	**4.99**	**86**	*e*PN	**Pn**	**11 37 40.9**	**+2.4**
ARG	**Arkhangelos**	**4.99**	**86**	*e*Pn	**Pn**	**11 37 40.9**	**+2.4**
AYDN	**Tasoluk**	**5.00**	**70**	*i* P	**Pn**	**11 37 41.1**	**+2.5**
AYDN	**Tasoluk**	**5.00**	**70**	*i* P	**Pn**	**11 37 41.1**	**+2.4**
OHR	**Ohrid**	**5.12**	**350**	*i* Pn	**Pn**	**11 37 40.6**	**+0.4**
OHR				*e*Sn	**Sn**	**11 38 40.0**	**+1.5**
OHR				*e*Sn	**Sn**	**11 38 40.7**	**+2.2**
OHR				*e*Lg		11 39 23.4	
OHR	**Ohrid**	**5.12**	**350**	P	**Pn**	**11 37 40.2**	**0.0**
SOI	**Samo**	**5.13**	**295**	P	**Pn**	**11 37 39.2**	**-1.2**
TIP	**Timpagrande**	**5.17**	**308**	*e*Pn	**Pn**	**11 37 39.9**	**-1.1**
TIP				*e*Sn	**Sn**	**11 38 39.2**	**-0.6**
TIP	**Timpagrande**	**5.17**	**308**	*e*Pn	**Pn**	**11 37 39.9**	**-1.0**
TIP				*e*Sn	**Sn**	**11 38 39.2**	**-0.6**
GRI	**Girifalco**	**5.20**	**304**	P	**Pn**	**11 37 42.0**	**+0.7**
SRS	**Serrai**	**5.20**	**14**	P	**Pn**	**11 37 41.6**	**+0.2**
VAY	**Valandovo**	**5.27**	**5**	*i* Pn	**Pn**	**11 37 42.4**	**+0.1**
VAY				*e*Sn	Sn	11 39 51.0	+69
VAY				*e*Lg		11 39 54.6	
	comp=N,64μm,6.7s						
VAY	**Valandovo**	**5.27**	**5**	P	**Pn**	**11 37 42.5**	**+0.2**
SLUM		**5.30**	**148**	P	**Pn**	**11 37 41.9**	**-1.0**
	baz=151						
SLUM				AMP		11 38 00.0	
	comp=N,2870μm,1.2s,logA/T=6.4,baz=151						
SLUM				S	**Sn**	**11 38 41.0**	**-2.2**
	baz=151						
SLUM		**5.30**	**148**	P	**Pn**	**11 37 41.8**	**-1.0**
SLUM				S	**Sn**	**11 38 41.0**	**-2.2**
CEL	**Celeste**	**5.32**	**296**	*e*Pn	**Pn**	**11 37 41.8**	**-1.2**
	comp=N,582nm,0.8s						
CEL				*e*Sn	**Sn**	**11 38 38.3**	**-5.1**
CEL	**Celeste**	**5.32**	**296**	*e*Pn	**Pn**	**11 37 41.8**	**-1.2**
	comp=N,582nm,0.8s						
CEL				*e*Sn	**Sn**	**11 38 38.3**	**-5.2**
KRUS	**Krusevo**	**5.32**	**354**	*i* Pn	**Pn**	**11 37 42.5**	**-0.5**
KRUS				*e*Sn	**Sn**	**11 38 45.9**	**+2.3**
LJBD	**Adjabya**	**5.35**	**197**	⇓*i*P	**Pn**	**11 37 43.0**	**-0.4**
	SNR=45						
MTTG	**Motta San Giov**	**5.37**	**293**	P	**Pn**	**11 37 42.5**	**-1.3**
MTTG	**Motta San Giov**	**5.37**	**293**	P	**Pn**	**11 37 42.5**	**-1.3**
TURN	**Turunc**	**5.41**	**79**	⇑*i*P	**Pn**	**11 37 42.7**	**-1.6**
AKHS	**Akhisar**	**5.43**	**57**	*i* P	**Pn**	**11 37 49.4**	**+4.8**
SCLL	**Scilla**	**5.45**	**296**	P	**Pn**	**11 37 44.4**	**-0.4**
SCLL	**Scilla**	**5.45**	**296**	P	**Pn**	**11 37 44.4**	**-0.4**
NVR	**Nevrokopi**	**5.48**	**15**	*e*Pn	**Pn**	**11 37 47.7**	**+2.5**
NVR	**Nevrokopi**	**5.48**	**15**	*e*PN	**Pn**	**11 37 47.7**	**+2.5**
NVR	**Nevrokopi**	**5.48**	**15**	*e*Pn	**Pn**	**11 37 47.7**	**+2.5**
TIR	**Tirane**	**5.52**	**343**	*e*P	**Pn**	**11 37 45.8**	**0.0**
TIR				*e*		11 38 45.1	
TIR				pmax	pmax		
	comp=Z,953nm,0.6s						
TIR	**Tirane**	**5.52**	**343**	*e*Pn	**Pn**	**11 37 45.8**	**0.0**
	comp=Z,953nm,0.6s						
TIR				*e*Sn	**Sn**	**11 38 45.1**	**-3.4**
TIR	**Tirane**	**5.52**	**343**	*e*Pn	**Pn**	**11 37 45.8**	**0.0**
	comp=Z,953nm,0.6s						
TIR				*e*Sn	**Sn**	**11 38 45.1**	**-3.4**
AGST	**Augusta-Monte**	**5.54**	**284**	P	**Pn**	**11 37 48.0**	**+1.9**
AGST	**Augusta-Monte**	**5.54**	**284**	P	**Pn**	**11 37 48.0**	**+1.9**
HAVL	**Avola**	**5.58**	**281**	P	**Pn**	**11 37 45.6**	**-1.0**
HAVL	**Avola**	**5.58**	**281**	P	**Pn**	**11 37 45.6**	**-1.0**
SSY	**Sortino**	**5.65**	**283**	P	**Pn**	**11 37 46.8**	**-0.7**
SSY	**Sortino**	**5.65**	**283**	P	**Pn**	**11 37 46.8**	**-0.7**
MMB	**Musomiste**	**5.68**	**13**	P	**Pn**	**11 37 49.8**	**+1.8**
BALY	**Balya**	**5.78**	**49**	*i* P	**Pn**	**11 37 53.1**	**+3.7**
MANT	**Manisa**	**5.79**	**63**	⇓*i*P	**Pn**	**11 37 52.7**	**+3.3**
ALN	**Alexandroupoli**	**5.79**	**32**	*e*P	**Pn**	**11 37 54.5**	**+5.1**
ALN	**Alexandroupoli**	**5.79**	**32**	*e*PN	**Pn**	**11 37 54.5**	**+5.1**
ALN	**Alexandroupoli**	**5.79**	**32**	*e*Pn	**Pn**	**11 37 54.5**	**+5.1**
RDO	**Rodhopi**	**5.79**	**28**	*e*Pn	**Pn**	**11 37 51.1**	**+1.6**
RDO	**Rodhopi**	**5.79**	**28**	*e*PN	**Pn**	**11 37 51.1**	**+1.6**
RDO	**Rodhopi**	**5.79**	**28**	*e*Pn	**Pn**	**11 37 51.1**	**+1.6**
HMDC	**Modica**	**5.85**	**281**	P	**Pn**	**11 37 49.6**	**-0.7**
HMDC	**Modica**	**5.85**	**281**	P	**Pn**	**11 37 49.6**	**-0.7**
KKB	**Krupnik**	**5.86**	**8**	P	**Pn**	**11 37 52.4**	**+2.0**
ORI	**Oriolo Calabro**	**5.90**	**314**	P	**Pn**	**11 37 49.2**	**-1.8**
DNZL	**Cakiroluk**	**5.91**	**72**	⇑*i*P	**Pn**	**11 37 54.5

MIDA	Miranda	8.19	315	P	Pn	11 38 22.8	+0.4
MIDA	Miranda	8.19	315	P	Pn	11 38 22.8	+0.4
VENT	Ventotene	8.20	308	P	Pn	11 38 22.5	0.0
VENT	Ventotene	8.20	308	P	Pn	11 38 22.5	0.0
SVIS	Svilajnac	8.21	356	P	Pn	11 38 25.5	+2.9
PRD	Provadia	8.27	29	P	Pn	11 38 24.1	+0.7
RNI2	Rionero Sannit	8.29	315	P	Pn	11 38 24.5	+0.7
RNI2	Rionero Sannit	8.29	315	P	Pn	11 38 24.5	+0.7
GAZI	Gazipasa	8.38	86	⇑*i*P	Pn	11 38 23.4	-1.6
KDHN	Kadinhani	8.46	70	*i* P	Pn	11 38 29.2	+3.2
HENT	Hendek	8.47	53	*i* P	Pn	11 38 30.6	+4.5
PPCY	Paphos	8.55	95	P	Pn	11 38 24.4	-3.0
PPCY	Paphos	8.55	95	P	Pn	11 38 24.4	-3.0
DJES	Djerdap	8.60	3	P	Pn	11 38 28.7	+0.7
INTR	Introdacqua	8.63	316	P	Pn	11 38 28.6	+0.2
INTR	Introdacqua	8.63	316	P	Pn	11 38 28.6	+0.2
VVLD	Villa Vallelon	8.70	314	P	Pn	11 38 28.7	-0.7
VVLD	Villa Vallelon	8.70	314	P	Pn	11 38 28.7	-0.7
ALFC	Alevga	8.71	93	P	Pn	11 38 27.3	-2.2
	comp=N,8.7nm,0.5s						
ALFC				S	Sn	11 40 04.5	-2.5
ALFC	Alevga	8.71	93	P	Pn	11 38 27.3	-2.2
	comp=N,8.7nm,0.5s						
ALFC				S	Sn	11 40 04.5	-2.5
GUAR	Guarcino	8.84	313	P	Pn	11 38 30.7	-0.6
GUAR	Guarcino	8.84	313	P	Pn	11 38 30.7	-0.6
CERT	Cerreto	9.13	313	P	Pn	11 38 35.1	-0.1
CERT	Cerreto	9.13	313	P	Pn	11 38 35.1	-0.1
AQU	L'Aquila	9.14	316	P	Pn	11 38 36.0	+0.6
AQU	L'Aquila	9.14	316	*e*Pn	Pn	11 38 35.0	-0.4
AQU				*e*Sn	Sn	11 40 17.8	+0.3
AQU	L'Aquila	9.14	316	⇑*i*P	Pn	11 38 37.5	+2.1
AQU	L'Aquila	9.14	316	*e*Pn	Pn	11 38 35.0	-0.4
AQU				*e*Sn	Sn	11 40 17.8	+0.4
TERO	Teramo	9.20	318	P	Pn	11 38 36.1	-0.2
TERO	Teramo	9.20	318	P	Pn	11 38 36.1	-0.2
MAMC	Mammari	9.21	92	P	Pn	11 38 33.7	-2.7
MAMC	Mammari	9.21	92	P	Pn	11 38 33.7	-2.7
FIAM	Fiamignano	9.24	315	P	Pn	11 38 36.7	-0.2
FIAM	Fiamignano	9.24	315	P	Pn	11 38 36.7	-0.2
MTCE	Montecelio	9.31	312	P	Pn	11 38 38.4	+0.6
MTCE	Montecelio	9.31	312	P	Pn	11 38 38.4	+0.6
CSS	Prodhromos	9.33	93	P	Pn	11 38 35.5	-2.6
CSS				S	Sn	11 40 20.6	-1.7
CSS	Prodhromos	9.33	93	P	Pn	11 38 35.5	-2.6
CSS				S	Sn	11 40 20.6	-1.7
GZR	Gura Zlata	9.34	4	P	Pn	11 38 38.7	+0.6
GZR	Gura Zlata	9.34	4	⇑P	Pn	11 38 39.7	+1.6
GZR	Gura Zlata	9.34	4	⇑*i*P	Pn	11 38 39.7	+1.6
GZR	Gura Zlata	9.34	4	⇑*i*P	Pn	11 38 39.7	+1.6
ROM9	Roma	9.34	311	P	Pn	11 38 39.6	+1.5
ROM9	Roma	9.34	311	P	Pn	11 38 39.6	+1.5
OFFI	Offida	9.38	320	P	Pn	11 38 39.6	+1.0
OFFI	Offida	9.38	320	P	Pn	11 38 39.6	+1.0
BLY	Banja Luka	9.40	339	P	Pn	11 38 38.1	-0.9
BLY	Banja Luka	9.40	339	P	Pn	11 38 38.1	-0.9
CVD	Cernavoda	9.45	28	⇑P	Pn	11 38 43.4	+3.7
CVD	Cernavoda	9.45	28	⇑*i*P	Pn	11 38 43.3	+3.6
CVD	Cernavoda	9.45	28	⇑*i*P	Pn	11 38 43.3	+3.6
MANS	Anshas	9.46	120	P	Pn	11 38 42.4	+2.5
AMRR	Amara	9.47	24	P	Pn	11 38 43.9	+4.0
AMRR	Amara	9.47	24	P	Pn	11 38 43.8	+3.9
BBAL	Bala	9.49	65	⇑*i*P	Pn	11 38 44.4	+4.1
BZS	Buzias	9.54	359	⇑P	Pn	11 38 39.4	-1.6
BZS	Buzias	9.54	359	⇑*i*P	Pn	11 38 39.4	-1.5
BZS	Buzias	9.54	359	⇑*i*P	Pn	11 38 39.4	-1.5
MNS	Montasola	9.57	314	P	Pn	11 38 42.3	+1.0
AWBH		9.70	141	P	Pn	11 38 42.2	-1.0
	baz=143						
AWBH		9.70	141	P	Pn	11 38 42.2	-1.0
HMYD	Mayadein	9.71	128	P	Pn	11 38 41.7	-1.5
	baz=130						
HMYD	Mayadein	9.71	128	P	Pn	11 38 41.7	-1.5
AANS		9.78	123	P	Pn	11 38 42.4	-1.8
	baz=126						
TOLF	Tolfa	9.79	311	P	Pn	11 38 45.2	+0.9
TOLF	Tolfa	9.79	311	P	Pn	11 38 45.2	+0.9
DEV	Deva	9.83	4	⇑P	Pn	11 38 45.0	+0.1
DEV	Deva	9.83	4	⇑*i*P	Pn	11 38 45.0	+0.1
DEV	Deva	9.83	4	⇑*i*P	Pn	11 38 45.0	+0.1
AOI	Ancona	9.86	322	P	Pn	11 38 44.6	-0.6
AOI	Ancona	9.86	322	P	Pn	11 38 44.6	-0.6
MLR	Muntele Rosu	9.88	17	Pn	Pn	11 38 46.8	+1.2
MLR	Muntele Rosu	9.88	17	P	Pn	11 38 47.9	+2.3
MLR	Muntele Rosu	9.88	17	⇓*i*P	Pn	11 38 48.1	+2.5
MLR	Muntele Rosu	9.88	17	P	Pn	11 38 47.9	+2.3
SQR		9.90	126	P	Pn	11 38 44.0	-1.9
	baz=128						
SQR		9.90	126	P	Pn	11 38 44.0	-2.0
BR131	Keskin Array S	9.92	65	*e*Pn	Pn	11 38 49.4	+3.2
BR131				*e*Sn	Sn	11 40 52.8	+16
BR131	Keskin Array S	9.92	65	*e*Pn	Pn	11 38 49.4	+3.2
BR131				*e*Sn	Sn	11 40 52.8	+16
CING	Cingoli	9.94	320	P	Pn	11 38 45.6	-0.8
CING	Cingoli	9.94	320	P	Pn	11 38 45.6	-0.8
ELDT	Eldivan	10.04	60	⇑*i*P	Pn	11 38 50.4	+2.7
NVLJ	Novalja	10.06	330	*e*Pn	Pn	11 38 47.5	-0.5
NVLJ				Sn	Sn	11 40 33.9	-6.2
NVLJ	Novalja	10.06	330	*e*Pn	Pn	11 38 47.5	-0.5
NVLJ				Sn	Sn	11 40 33.9	-6.2
MURB	Monte Urbino	10.22	318	P	Pn	11 38 51.0	+0.8
MURB	Monte Urbino	10.22	318	P	Pn	11 38 51.0	+0.8
LATE	Laterza	10.22	313	P	Pn	11 38 51.5	+1.2
LATE	Laterza	10.22	313	P	Pn	11 38 51.5	+1.2
MGAB	Montegabbione	10.23	315	P	Pn	11 38 51.5	+1.2
MGAB	Montegabbione	10.23	315	P	Pn	11 38 51.5	+1.2
KEST	Kesra	10.24	272	Pn	Pn	11 38 50.8	+0.2
	comp=N,0.3nm,0.3s,baz=33,slow=9.3,SNR=11						
KEST				Sn	Sn	11 40 42.2	-2.4
	comp=N,0.8nm,0.3s,baz=56,slow=22,SNR=5.7						
KEST				LR	LR	11 43 41.7	
	comp=N,3µm,18.6s,baz=32,slow=43						
KEST	Kesra	10.24	272	*e*Pn	Pn	11 38 49.8	-0.7
KEST				*e*Sn	Sn	11 40 43.4	-1.2
KEST	Kesra	10.24	272	*e*Pn	Pn	11 38 49.8	-0.8
KEST				*e*Sn	Sn	11 40 43.4	-1.2
KOT	Kottamia	10.30	124	P	Pn	11 38 49.9	-1.4
	baz=126						
KOT	Kottamia	10.30	124	P	Pn	11 38 49.9	-1.4
SISC	Sisak	10.30	337	*e*Pn	Pn	11 38 47.0	-4.3
SISC				Sn	Sn	11 40 38.9	-7.2
SISC	Sisak	10.30	337	*e*Pn	Pn	11 38 47.0	-4.3
SISC				Sn	Sn	11 40 38.9	-7.1
HSAF	As Saff	10.31	126	P	Pn	11 38 49.5	-2.1
	baz=128						
HSAF	As Saff	10.31	126	P	Pn	11 38 49.5	-2.0
GULE	Gulek	10.37	79	⇑*i*P	Pn	11 38 53.1	+0.9
FSSB	Fossombrone	10.38	320	P	Pn	11 38 52.5	+0.1
FSSB	Fossombrone	10.38	320	P	Pn	11 38 52.5	+0.1
PLOR	Plostina	10.39	18	⇑P	Pn	11 38 54.4	+1.8
PLOR	Plostina	10.39	18	⇑*i*P	Pn	11 38 54.4	+1.8
PLOR	Plostina	10.39	18	⇑*i*P	Pn	11 38 54.4	+1.8
PIEI	Pieia	10.40	319	P	Pn	11 38 52.3	-0.3
PIEI	Pieia	10.40	319	P	Pn	11 38 52.3	-0.3
HFRF	Wahat Farafira	10.40	147	P	Pn	11 38 51.7	-1.1
	baz=148						
HFRF	Wahat Farafira	10.40	147	P	Pn	11 38 51.7	-1.1
VRI	Vrincioaia	10.43	19	P	Pn	11 38 55.5	+2.5
VRI	Vrincioaia	10.43	19	⇑*i*P	Pn	11 39 00.8	+7.7
VRI	Vrincioaia	10.43	19	P	Pn	11 38 55.5	+2.4
CDAG	Cicekdag	10.44	66	*i* P	Pn	11 38 54.9	+1.8
PKSM	Moragy	10.44	347	P	Pn	11 38 50.5	-2.7
PKSM	Moragy	10.44	347	⇑*i*P	Pn	11 38 50.3	-2.9
PKSM	Moragy	10.44	347	⇑*i*P	Pn	11 38 50.3	-2.9
GLL	Jalalah	10.44	126	P	Pn	11 38 50.8	-2.5
	baz=128						
GLL	Jalalah	10.44	126	P	Pn	11 38 50.8	-2.5
BALT	Daday	10.45	55	*i* P	Pn	11 38 57.3	+3.9
ILGA	Ilgaz	10.46	58	⇑*i*P	Pn	11 38 56.3	+2.8
TLCR		10.49	28	⇓P	Pn	11 38 57.3	+3.4
TLCR		10.49	28	⇓*i*P	Pn	11 38 57.3	+3.4
TLCR		10.49	28	⇓*i*P	Pn	11 38 57.3	+3.4
CDCA	Citt' di Caste	10.51	318	P	Pn	11 38 56.7	+2.5
CDCA	Citt' di Caste	10.51	318	P	Pn	11 38 56.7	+2.5
VSL	Villasalto	10.53	293	*e*Pn	Pn	11 38 54.0	-0.5
VSL				*e*Sn	Sn	11 40 46.2	-5.5
VSL	Villasalto	10.53	293	*e*Pn	Pn	11 38 54.0	-0.5
VSL				*e*Sn	Sn	11 40 46.2	-5.5
BADI	Badiali	10.54	318	P	Pn	11 38 56.2	+1.6
BADI	Badiali	10.54	318	P	Pn	11 38 56.2	+1.6
DGI	Dorgali Grotta	10.61	297	P	Pn	11 38 54.5	-1.0
DGI	Dorgali Grotta	10.61	297	P	Pn	11 38 54.5	-1.0
BOJS	Bojanci	10.71	334	*i* Pn	Pn	11 38 55.0	-1.8
BOJS				*e*Sn	Sn	11 40 48.3	-7.6
BOJS	Bojanci	10.71	334	*i* Pn	Pn	11 38 55.0	-1.9
BOJS				*e*Sn	Sn	11 40 48.3	-7.6
DRGR		10.73	3	P	Pn	11 38 57.4	+0.2
DRGR		10.73	3	⇓P	Pn	11 38 57.2	+0.1
DRGR		10.73	3	⇓*i*P	Pn	11 38 57.2	0.0
DRGR		10.73	3	⇓*i*P	Pn	11 38 57.2	0.0
CRE	Caprese Michel	10.77	317	P	Pn	11 38 59.5	+1.8
AMAG	Maghara	10.85	117	P	Pn	11 38 56.2	-2.6
	baz=119						
AMAG	Maghara	10.85	117	P	Pn	11 38 56.2	-2.6
SFI	Santa Sofia	11.02	318	P	Pn	11 39 02.2	+1.1
CTKT	Corum	11.05	62	⇑*i*P	Pn	11 39 05.2	+3.6
RSH		11.05	114	P	Pn	11 38 59.1	-2.6
CEY	Cerknica	11.21	332	P	Pn	11 39 02.0	-1.8
CEY	Cerknica	11.21	332	P	Pn	11 39 02.0	-1.8
VMG	Vicchio	11.22	318	P	Pn	11 39 06.1	+2.2
VMG	Vicchio	11.22	318	P	Pn	11 39 06.1	+2.2
KOGS	Kog	11.22	339	*e*Pn	Pn	11 39 00.2	-3.7
KOGS	Kog	11.22	339	*e*Pn	Pn	11 39 00.2	-3.7
OSPF	L'Ospedale	11.41	303	*e*P	Pn	11 39 06.4	-0.1
OSPF	L'Ospedale	11.41	303	*e*P	Pn	11 39 06.4	-0.1
LJU	Ljubljana	11.43	333	*i* Pn	Pn	11 39 05.2	-1.6
LJU				*e*Sn	Sn	11 41 10.5	-3.2
LJU	Ljubljana	11.43	333	*i* Pn	Pn	11 39 05.2	-1.6
BHL	Bhannes	11.44	97	*e*Pn	Pn	11 39 05.1	-1.8
TRI	Trieste	11.45	330	*e*P	Pn	11 39 05.3	-1.7
TRI				*e*		11 41 05.1	
TRI				pmax	pmax		
	comp=Z,82nm,0.8s						
TRI	Trieste	11.45	330	*e*Pn	Pn	11 39 05.3	-1.7
	comp=Z,82nm,0.8s						
TRI				*e*Sn	Sn	11 41 05.1	-9.0
TRI	Trieste	11.45	330	*e*Pn	Pn	11 39 05.3	-1.7
	comp=Z,82nm,0.8s						
TRI				*e*Sn	Sn	11 41 05.1	-9.0
YAYL	Yayladag	11.45	86	⇑*i*P	Pn	11 39 05.1	-2.0
MMAI	Mount Meron Ar	11.49	101	Pn	Pn	11 39 05.4	-2.3
	comp=Z,6.5nm,0.3s,baz=306,slow=11,SNR=22						
MMAI				Sn	Sn	11 41 08.7	-6.6
	comp=Z,14nm,0.3s,baz=288,slow=15,SNR=5.0						
COBT	Iskenderun	11.54	84	⇑*i*P	Pn	11 39 07.5	-0.9
FNVD	Fontana Vidola	11.58	318	P	Pn	11 39 10.3	+1.5
FNVD	Fontana Vidola	11.58	318	P	Pn	11 39 10.3	+1.5
HWQ	Hawqa	11.58	95	*e*Pn	Pn	11 39 05.6	-3.3
PII	Pisa	11.64	315	P	Pn	11 39 12.5	+2.9
BMR	Baia Mare	11.65	5	⇑*i*P	Pn	11 39 16.9	+7.1
VOY	Vojsko	11.66	331	*e*Pn	Pn	11 39 07.8	-2.1
VOY				*e*Sn	Sn	11 41 10.4	-8.9
VOY	Vojsko	11.66	331	*e*Pn	Pn	11 39 07.8	-2.1
VOY				*e*Sn	Sn	11 41 10.4	-8.9
ABSA	Djebel Ababsia	11.71	275	P	Pn	11 39 19.8	+9.1
ABSA	Djebel Ababsia	11.71	275	P	Pn	11 39 19.8	+9.1
CMAH	Djebel Manchou	11.74	277	P	Pn	11 39 12.3	+1.2
CMAH	Djebel Manchou	11.74	277	P	Pn	11 39 12.3	+1.2
PINB	Pinarbasi	11.78	73	⇑*i*P	Pn	11 39 13.6	+2.0
BURAR	Bucovina Array	11.79	11	⇑P	Pn	11 39 14.1	+2.4
BURAR	Bucovina Array	11.79	11	⇑*i*P	Pn	11 39 14.1	+2.4
BURAR	Bucovina Array	11.79	11	⇑*i*P	Pn	11 39 14.1	+2.4
HNKL	Nakhl	11.79	118	P	Pn	11 39 09.5	-2.4
	baz=120						
HNKL	Nakhl	11.79	118	P	Pn	11 39 09.5	-2.3
SOKA	Soboth	11.80	336	⇓*i*Pn	Pn	11 39 08.8	-3.1
SOKA				⇑*i*Sn	Sn	11 41 13.7	-9.0
SOKA	Soboth	11.80	336	Pn	Pn	11 39 08.8	-3.1
BUR08	Bucovina Ar. S	11.82	11	*e*Pn	Pn	11 39 13.1	+1.0
BUR08	Bucovina Ar. S	11.82	11	*e*Pn	Pn	11 39 13.1	+1.1
OBKA	Obir	11.82	334	P	Pn	11 39 11.5	-0.6
OBKA	Obir	11.82	334	⇑*i*Pn	Pn	11 39 09.9	-2.3
	SNR=11						
OBKA				⇓*i*Sn	Sn	11 41 19.2	-4.0
OBKA	Obir	11.82	334	Pn	Pn	11 39 09.9	-2.2
	SNR=11						
OBKA	Obir	11.82	334	P	Pn	11 39 11.5	-0.6
CADS	Cadrg	11.89	331	*i* Pn	Pn	11 39 11.1	-1.9
CADS				*e*Sn	Sn	11 41 14.7	-10
CADS	Cadrg	11.89	331	*i* Pn	Pn	11 39 11.1	-1.9
CADS				*e*Sn	Sn	11 41 14.7	-10
PGF	Pioggiola	11.94	307	*e*P	Pn	11 39 13.4	-0.3
	comp=Z,419nm,1.4s						
PGF	Pioggiola	11.94	307	*e*P	Pn	11 39 13.4	-0.3
PGF				pmax	pmax		
	comp=Z,209nm,1.4s						
PGF	Pioggiola	11.94	307	*e*P	Pn	11 39 13.4	-0.3
	comp=Z,209nm,1.4s						
PGF	Pioggiola	11.94	307	*e*P	Pn	11 39 13.4	-0.3
	comp=Z,209nm,1.4s						
PSZ	Piszkesteto	11.94	353	P	Pn	11 39 12.9	-0.8
PSZ	Piszkesteto	11.94	353	*e*Pn	Pn	11 39 12.4	-1.4
PSZ				*e*Sn	Sn	11 41 20.1	-6.0
PSZ	Piszkesteto	11.94	353	*e*P	Pn	11 39 13.9	+0.2
PSZ	Piszkesteto	11.94	353	*e*P	Pn	11 39 14.1	+0.4
PSZ	Piszkesteto	11.94	353	⇓*i*P	Pn	11 39 12.7	-1.0
PSZ	Piszkesteto	11.94	353	*e*Pn	Pn	11 39 12.4	-1.3
PSZ	Piszkesteto	11.94	353	⇓*i*P	Pn	11 39 12.7	-1.0
PSZ				*e*Sn	Sn	11 41 20.1	-6.0
FKH	Fakeheh	11.96	95	*e*Pn	Pn	11 39 11.1	-3.0
VLC	Villacollemand	11.98	316	*e*Pn	Pn	11 39 14.3	0.0
VLC	Villacollemand	11.98	316	*e*Pn	Pn	11 39 14.4	+0.1
KIS	Kishinev	12.06	23	*i*P	Pn	11 39 17.0	+1.6
	comp=Z,2µm,6.0s						
KIS	Kishinev	12.06	23	*i*P	Pn	11 39 17.0	+1.6
KIS				*i* S	Sn	11 41 33.0	+3.9
KIS				pmax	pmax		
	comp=N,1µm,6.0s						
KIS				pmax	pmax		
	comp=E,1µm,5.0s						
KIS				pmax	pmax		
	comp=Z,3µm,10.0s						
KIS				MLR	MLR		
	comp=N,21µm,9.0s						
KIS				MLR	MLR		
	comp=Z,27µm,9.0s						
KIS				MLR	MLR		
	comp=E,10µm,7.0s						
KIS				MLR	MLR		
	comp=Z,30µm,8.0s						
KIS	Kishinev	12.06	23	⇓*i*P	Pn	11 39 17.0	+1.6
	comp=Z,2µm,6.0s						
ERBM	Eremo	12.13	317	P	Pn	11 39 19.0	+2.6
ERBM	Eremo	12.13	317	P	Pn	11 39 19.0	+2.6
ARSA	Arzberg	12.16	339	P	Pn	11 39 16.0	-0.7
ARSA	Arzberg	12.16	339	⇓*i*Pn	Pn	11 39 14.2	-2.5
	SNR=22						
ARSA				⇑*i*Sn	Sn	11 41 25.4	-6.1
ARSA	Arzberg	12.16	339	Pn	Pn	11 39 14.2	-2.5
	SNR=22						
ARSA	Arzberg	12.16	339	P	Pn	11 39 16.0	-0.7
TOKA	Tokat	12.18	65	⇑*i*P	Pn	11 39 19.0	+2.0
PTCC	Patocco-Chiusa	12.18	331	P	Pn	11 39 15.2	-1.9
PTCC	Patocco-Chiusa	12.18	331	P	Pn	11 39 15.2	-1.9
KUZU	Kuzuini	12.20	82	*i* P	Pn	11 39 13.9	-3.4
MYKA	Terra Mystica	12.26	332	⇑*i*Pn	Pn	11 39 16.1	-1.9
MYKA				⇓*i*Sn	Sn	11 41 28.7	-5.2
MYKA	Terra Mystica	12.26	332	Pn	Pn	11 39 16.1	-2.0
CKFL	Kef-Lekhel	12.32	276	P	Pn	11 39 22.9	+4.0
CKFL	Kef-Lekhel	12.32	276	P	Pn	11 39 22.9	+4.0
KECS	Kecovo	12.46	355	*e*P	Pn	11 39 19.9	-0.9
KECS				*e*		11 41 37.9	
KECS	Kecovo	12.46	355	*e*PN	Pn	11 39 19.9	-0.9
KECS				*e*		11 39 25.9	
ERBA	Erbaa	12.49	64	⇑*i*P	Pn	11 39 22.6	+1.4
CASM	Ain Smara	12.51	275	P	Pn	11 39 25.5	+3.9
CASM	Ain Smara	12.51	275	P	Pn	11 39 25.5	+3.9
UZH	Uzhgorod	12.56	1	*e*P	Pn	11 39 22.4	+0.2
UZH				*e*S	Sn	11 41 41.4	+0.2
UZH				MLR	MLR		
	comp=N,13µm,10.0s						
UZH				MLR	MLR		
	comp=E,14µm,10.0s						
UZH				MLR	MLR		
	comp=Z,12µm,10.0s						
GZT	Gaziantep	12.59	80	⇓*i*P	Pn	11 39 22.3	-0.3
VYHS	Vyhne	12.63	350	*e*P	Pn	11 39 21.1	-2.1
VYHS				*e*		11 41 35.3	
VYHS				MLR	MLR		
	comp=Z,4µm,27.6s						
VYHS	Vyhne	12.63	350	*e*Pn	Pn	11 39 21.1	-2.1
VYHS				*e*Sn	Sn	11 41 35.3	-7.7
VYHS	Vyhne	12.63	350	*e*PN	Pn	11 39 21.0	-2.2
VYHS				*e*		11 39 29.6	
VYHS	Vyhne	12.63	350	*e*SN	Sn	11 41 35.3	-7.7
VYHS	Vyhne	12.63	350	*e*Pn	Pn	11 39 21.1	-2.1
VYHS				*e*Sn	Sn	11 41 35.3	-7.7
CTI	Castel Tesino	12.64	325	P	Pn	11 39 21.7	-1.5
EIL	Elat	12.64	117	Pn	Pn	11 39 20.4	-3.0
	comp=Z,2.8nm,0.3s,baz=306,slow=8.6,SNR=22						
EIL				Sn	Sn	11 41 35.5	-7.9
	comp=Z,4.3nm,0.3s,baz=287,slow=20,SNR=4.3						
EIL	Elat	12.64	117	Pn	Pn	11 39 20.4	-3.0
EIL				Sn	Sn	11 41 35.5	-7.8
ZST	Bratislava	12.64	345	*e*P	Pn	11 39 28.1	+4.8
ZST				*e*		11 41 35.0	
ZST				MLR	MLR		
	comp=Z,30µm,13.7s						
ZST	Bratislava	12.64	345	*e*P	Pn	11 39 28.1	+4.8
ZST				*e*Sn	Sn	11 41 35.0	-8.2
ZST	Bratislava	12.64	345	*e*SN	Sn	11 41 35.0	-8.2
ZST	Bratislava	12.64	345	*e*P	Pn	11 39 28.1	+4.8
ZST				*e*Sn	Sn	11 41 35.0	-8.2
HKAT	Jabal Katrina	12.65	123	P	Pn	11 39 21.1	-2.3
	baz=125						
HKAT	Jabal Katrina	12.65	123	P	Pn	11 39 21.1	-2.4
CONA	Conrad Observa	12.69	341	⇑*i*Pn	Pn	11 39 21.6	-2.2
	SNR=12						
CONA				⇑*i*Sn	Sn	11 41 36.9	-7.4
CONA	Conrad Observa	12.69	341	Pn	Pn	11 39 21.6	-2.3
	SNR=12						
HBST	Basata	12.74	119	P	Pn	11 39 22.6	-2.2
	baz=121						
HBST	Basata	12.74	119	P	Pn	11 39 22.6	-2.1
KBA	Koelnbreinsper	12.74	332	⇓*i*Pn	Pn	11 39 22.8	-1.9
	SNR=18						
KBA				⇑*i*Sn	Sn	11 41 37.9	-7.8
KBA	Koelnbreinsper	12.74	332	Pn	Pn	11 39 22.8	-1.9
	SNR=18						
KBA	Koelnbreinsper	12.74	332	P	Pn	11 39 23.7	-1.0
KOLL	Kolacno	12.78	349	*e*P	Pn	11 39 21.3	-3.8
KOLL				*e*		11 41 38.7	
KOLL	Kolacno	12.78	349	*e*PN	Pn	11 39 21.3	-3.8
KOLL				*e*		11 39 30.0	
KOLL	Kolacno	12.78	349	*e*SN	Sn	11 41 38.7	-7.8
ABTA	Abfaltersbach	12.80	329	⇓*i*Pn	Pn	11 39 23.1	-2.3
	SNR=16						
ABTA				⇑*i*Sn	Sn	11 41 39.5	-7.7
ABTA	Abfaltersbach	12.80	329	Pn	Pn	11 39 23.1	-2.4
	SNR=16						
SIM	Simferopol'	12.80	42	*ce*P	Pn	11 39 27.0	+1.5
SIM				*e*S	Sn	11 41 50.0	+2.8
SIM				pmax	pmax		
	comp=Z,118nm,0.8s						
SIM				MLR	MLR		
	comp=Z,9µm,15.8s						
CRVS	Cervenica-Dubn	12.83	359	*e*P	Pn	11 39 25.1	-0.8
CRVS				*e*		11 41 46.7	
CRVS	Cervenica-Dubn	12.83	359	*e*PN	Pn	11 39 25.1	-0.8
CRVS	Cervenica-Dubn	12.83	359	*e*Pn	Pn	11 39 25.1	-0.8
GTR	Jabal at Tayr	12.85	143	P	Pn	11 39 26.2	-0.1
	baz=144						
GTR	Jabal at Tayr	12.85	143	P	Pn	11 39 26.2	-0.1
SMOL	Smolenice	12.88	346	*e*P	Pn	11 39 25.7	-0.8
SMOL				*e*		11 41 40.3	
SMOL	Smolenice	12.88	346	*e*PN	Pn	11 39 25.7	-0.8
SMOL				*e*		11 39 32.0	
SMOL	Smolenice	12.88	346	*e*SN	Sn	11 41 40.3	-8.7
AKCD	Akcadag	12.92	75	*i* P	Pn	11 39 27.9	+0.7
MAGA	Magasa	12.93	322	P	Pn	11 39 25.7	-1.5
MAGA	Magasa	12.93

VRAC Vranov 13.80 345 Pn **Pn 11 39 36.4 -2.7**
comp=Z,0.5nm,0.3s,baz=168,slow=12,SNR=15
VRAC Vranov 13.80 345 ⇓P **Pn 11 39 38.0 -1.2**
VRAC Vranov 13.80 345 ⇓*i*P **Pn 11 39 38.0 -1.2**
VRAC Vranov 13.80 345 ⇓*i*P **Pn 11 39 38.0 -1.2**
LVV L'vov 13.83 6 *e*P **Pn 11 39 42.0 +2.5**
LVV *i* S **Sn 11 42 14.6 +2.4**
LVV MLR MLR
comp=E,4μm,11.0s
LVV MLR MLR
comp=N,6μm,10.0s
STV Sant Anna di V 13.84 311 P **Pn 11 39 42.0 +2.3**
MOTA Moosalm 13.87 328 ⇑*i*Pn **Pn 11 39 39.2 -0.9**
SNR=15
MOTA Moosalm 13.87 328 Pn **Pn 11 39 39.2 -0.8**
SNR=15
MOTA Moosalm 13.87 328 P **Pn 11 39 40.0 0.0**
CALN Calern 13.87 308 *e*P **Pn 11 39 42.0 +1.9**
CALN Calern 13.87 308 *e*P **Pn 11 39 42.0 +1.9**
LMR La Mourre 13.93 306 *e*P **Pn 11 39 40.6 -0.2**
comp=N,144nm,1.4s
LMR La Mourre 13.93 306 *e*P **Pn 11 39 40.6 -0.2**
LMR pmax pmax
comp=Z,72nm,1.4s
LMR La Mourre 13.93 306 *e*P **Pn 11 39 40.6 -0.2**
comp=Z,72nm,1.4s
LMR La Mourre 13.93 306 *e*P **Pn 11 39 40.6 -0.2**
comp=Z,72nm,1.4s
FRF La Foret Royal 13.94 307 *e*P **Pn 11 39 40.9 -0.1**
comp=Z,72nm,1.0s
FRF La Foret Royal 13.94 307 *e*P **Pn 11 39 40.9 -0.1**
FRF pmax pmax
comp=Z,36nm,1.0s
FRF La Foret Royal 13.94 307 *e*P **Pn 11 39 40.9 -0.1**
comp=Z,36nm,1.0s
FRF La Foret Royal 13.94 307 *e*P **Pn 11 39 40.9 -0.1**
comp=Z,36nm,1.0s
DAVOX Davos/Dischmat 14.01 324 Pn **Pn 11 39 42.5 +0.6**
comp=Z,0.6nm,0.3s,baz=149,slow=20,SNR=9.0
DAVOX Sn **Sn 11 42 06.7 -10**
comp=Z,1.7nm,0.3s,baz=144,slow=19,SNR=3.3
DAVOX Davos/Dischmat 14.01 324 Pn **Pn 11 39 42.5 +0.5**
DAVOX Sn **Sn 11 42 06.7 -10**
AKF Akfadou 14.04 277 P **Pn 11 39 47.3 +4.9**
AKF Akfadou 14.04 277 P **Pn 11 39 47.3 +4.9**
OKC Ostrava-Krasne 14.04 350 *e*P **Pn 11 39 40.9 -1.5**
OKC *e*S **Sn 11 42 12.3 -5.1**
OKC MLR MLR
comp=Z,16μm,10.1s
OKC Ostrava-Krasne 14.04 350 *e*P **Pn 11 39 40.9 -1.5**
OKC *ex* x 11 39 48.8
OKC *e*S **Sn 11 42 12.3 -5.1**
OKC AMS AMS 11 46 50.0
comp=Z,16μm,10.1s
OKC Ostrava-Krasne 14.04 350 P **Pn 11 39 40.9 -1.5**
TREC Trest 14.04 342 *e*P **Pn 11 39 40.3 -2.1**
TREC MLR MLR
comp=Z,30μm,10.9s
TREC Trest 14.04 342 *e*P **Pn 11 39 40.3 -2.1**
TREC *ex* x 11 39 48.3
TREC AMS AMS 11 45 50.0
comp=Z,30μm,10.9s
TREC Trest 14.04 342 P **Pn 11 39 40.3 -2.1**
TUE Stuetta 14.05 322 *e*Pn **Pn 11 39 41.9 -0.7**
comp=Z,268nm,1.1s
TUE *e*Sn **Sn 11 42 08.9 -8.8**
TUE Stuetta 14.05 322 *e*Pn **Pn 11 39 41.9 -0.7**
comp=Z,268nm,1.1s
TUE *e*Sn **Sn 11 42 08.9 -8.8**
MORC Moravsky Berou 14.08 348 ⇑P **Pn 11 39 41.6 -1.3**
MORC Moravsky Berou 14.08 348 *e*Pn **Pn 11 39 40.7 -2.2**
MORC *e*Sn **Sn 11 42 12.6 -5.6**
MORC Moravsky Berou 14.08 348 ⇑*i*P **Pn 11 39 41.6 -1.3**
MORC Moravsky Berou 14.08 348 *e*Pn **Pn 11 39 40.7 -2.2**
MORC Moravsky Berou 14.08 348 ⇑*i*P **Pn 11 39 41.6 -1.3**
MORC *e*Sn **Sn 11 42 12.6 -5.6**
GEC2 GERESS Array S 14.14 337 *e*P **Pn 11 39 40.8 -2.9**
GEC2 GERESS Array S 14.14 337 *e*P **Pn 11 39 40.8 -2.9**
OJC Ojcow 14.23 354 *e*P **Pn 11 39 43.5 -1.5**
OJC *e*S **Sn 11 42 26.8 +4.8**
OJC L 11 46 52.3
comp=Z,12nm,15.3s
OJC Ojcow 14.23 354 P **Pn 11 39 43.5 -1.5**
RAC Raciborz 14.28 350 *e*P **Pn 11 39 45.7 +0.1**
RAC MLR MLR
comp=E,25μm,20.0s
RAC MLR MLR
comp=Z,5μm,10.0s
RAC MLR MLR
comp=N,11μm,12.0s
RAC Raciborz 14.28 350 *e*P **Pn 11 39 45.7 +0.1**
SURF Saint Ours 14.28 311 *e*P **Pn 11 39 49.2 +3.5**
SURF Saint Ours 14.28 311 *e*P **Pn 11 39 49.2 +3.5**
SURF Saint Ours 14.28 311 *e*P **Pn 11 39 49.2 +3.5**
ATAF Djebel Tarf 14.33 274 P pP 11 39 58.9 -0.9
ATAF Djebel Tarf 14.33 274 P pP 11 39 58.9 -0.9
DAVA Damuels 14.37 325 ⇓*i*Pn **Pn 11 39 48.1 +1.1**
SNR=11
KHC Kasperske Hory 14.43 337 *e*P **Pn 11 39 44.0 -3.7**
KHC *e* 11 42 19.0
KHC pmax pmax
comp=Z,159nm,1.3s
KHC Kasperske Hory 14.43 337 *e*Pn **Pn 11 39 44.0 -3.7**
comp=Z,158nm,1.3s
KHC *e*Sn **Sn 11 42 19.0 -7.8**
KHC Kasperske Hory 14.43 337 *e*P **Pn 11 39 43.8 -3.9**
KHC *ex* x 11 39 51.5
KHC *e*S **Sn 11 42 30.1 +3.3**
KHC AMS AMS 11 46 20.0
comp=Z,27μm,11.1s
KHC Kasperske Hory 14.43 337 *e*Pn **Pn 11 39 44.0 -3.7**
comp=Z,158nm,1.3s
KHC *e*Sn **Sn 11 42 19.0 -7.8**
MBDF Montbardon 14.43 311 *e*P **Pn 11 39 47.6 -0.2**
comp=Z,403nm,1.2s
MBDF Montbardon 14.43 311 *e*P **Pn 11 39 47.6 -0.2**
MBDF pmax pmax
comp=Z,201nm,1.2s
MBDF Montbardon 14.43 311 *e*P **Pn 11 39 47.6 -0.2**
comp=Z,201nm,1.2s
MBDF Montbardon 14.43 311 *e*P **Pn 11 39 47.6 -0.2**
comp=Z,201nm,1.2s
FUR Furstenfeldbru 14.44 330 *e*P **Pn 11 39 46.6 -1.2**
FUR Furstenfeldbru 14.44 330 *e*P **Pn 11 39 46.6 -1.2**
MAHO Mahon 14.47 291 *i* P **Pn 11 39 48.2 -0.1**
MAHO *e*S Sn 11 41 55.1 -33
TBKS Tabuk 14.61 118 P **Pn 11 39 58.2 +8.0**
TBKS Tabuk 14.61 118 P **Pn 11 39 58.2 +8.0**
AKET Djebel Ketaf 14.63 275 P **Pn 11 39 59.3 +8.8**
AKET Djebel Ketaf 14.63 275 P **Pn 11 39 59.3 +8.8**
DIYA Diyarbakir 14.63 77 ⇑*i*P **Pn 11 39 51.4 +0.8**
ANN Anapa 14.64 49 *d*P **Pn 11 39 50.2 -0.4**
ANN *e*S **Sn 11 42 26.0 -6.0**
ANN pmax pmax
comp=Z,2μm,6.3s
ANN pmax pmax
comp=Z,295nm,1.2s
ANN MLR MLR
comp=Z,3μm,9.0s
ANN Anapa 14.64 49 *i* P **Pn 11 39 51.1 +0.5**
ANN Anapa 14.64 49 *i* P **Pn 11 39 51.1 +0.5**
BNI Bardonecchia 14.66 312 *e*Pn **Pn 11 39 50.4 -0.4**
BNI Bardonecchia 14.66 312 *e*Pn **Pn 11 39 50.4 -0.5**
WET Wettzell 14.67 336 *e*P **Pn 11 39 47.8 -3.1**
WET Wettzell 14.67 336 *e*P **Pn 11 39 47.8 -3.1**
SMRF Simiane la Rot 14.82 307 *e*P **Pn 11 39 55.5 +2.5**
comp=Z,62nm,1.1s
SMRF Simiane la Rot 14.82 307 *e*P **Pn 11 39 55.5 +2.5**
comp=Z,62nm,1.1s
SMRF Simiane la Rot 14.82 307 *e*P **Pn 11 39 55.5 +2.5**
comp=Z,31nm,1.1s
DBAS Duba 14.83 123 P **Pn 11 39 51.9 -1.3**
DBAS Duba 14.83 123 P **Pn 11 39 51.9 -1.4**
DPC Dobruska-Polom 14.85 346 P **Pn 11 39 52.5 -0.9**
DPC Dobruska-Polom 14.85 346 *e*P **Pn 11 39 50.2 -3.2**
DPC *e*pP pP 11 40 00.0 -5.4
DPC AMS AMS 11 46 40.0
comp=Z,21μm,11.1s
LPG La Plagne 14.86 314 *e*P **Pn 11 39 54.2 +0.6**
comp=Z,159nm,1.1s
LPG La Plagne 14.86 314 *e*P **Pn 11 39 54.2 +0.6**
LPG pmax pmax
comp=Z,79nm,1.1s
LPG La Plagne 14.86 314 *e*P **Pn 11 39 54.2 +0.6**
comp=Z,79nm,1.1s
LPG La Plagne 14.86 314 *e*P **Pn 11 39 54.2 +0.6**
comp=Z,79nm,1.1s
LPL La Plagne 14.88 314 *e*P **Pn 11 39 54.8 +0.9**
comp=Z,81nm,1.1s
LPL La Plagne 14.88 314 *e*P **Pn 11 39 54.8 +0.9**
LPL pmax pmax
comp=Z,41nm,1.0s
LPL La Plagne 14.88 314 *e*P **Pn 11 39 54.8 +0.9**
comp=Z,41nm,1.0s
LPL La Plagne 14.88 314 *e*P **Pn 11 39 54.8 +0.9**
comp=Z,41nm,1.1s
PRU Pruhonice 14.92 341 *e*P **Pn 11 39 53.3 -1.1**
PRU *e*S **Sn 11 42 41.8 +3.0**
PRU MLR MLR
comp=Z,28μm,10.2s
PRU Pruhonice 14.92 341 *e*P **Pn 11 39 53.3 -1.1**
PRU *e*pP pP 11 40 01.3 -4.9
PRU *e*S **Sn 11 42 41.8 +3.0**
PRU AMS AMS 11 46 30.0
comp=Z,28μm,10.2s
PRU Pruhonice 14.92 341 P **Pn 11 39 53.3 -1.1**
ADJB Djebel Djouab 14.98 276 P **Pn 11 40 02.8 +7.6**
ADJB Djebel Djouab 14.98 276 P **Pn 11 40 02.8 +7.6**
PRA Prague 15.03 341 P **Pn 11 39 55.0 -0.8**
UPC Upice 15.06 345 *e*P **Pn 11 39 53.1 -3.1**
UPC Upice 15.06 345 *e*P **Pn 11 39 53.1 -3.1**
UPC *e*pP pP 11 40 00.2 -7.6
ORIF Oris-en-Rattie 15.07 311 *e*P **Pn 11 39 57.0 +0.6**
comp=Z,169nm,1.2s
ORIF *e*MLR MLR
comp=Z,19μm,20.5s
ORIF Oris-en-Rattie 15.07 311 *e*P **Pn 11 39 57.0 +0.6**
ORIF pmax pmax
comp=Z,85nm,1.2s
ORIF Oris-en-Rattie 15.07 311 *e*P **Pn 11 39 57.0 +0.6**
comp=Z,85nm,1.2s
ORIF Oris-en-Rattie 15.07 311 *e*P **Pn 11 39 57.0 +0.6**
comp=Z,85nm,1.2s
GDM Grand'Maison 15.08 312 *e*P **Pn 11 40 00.1 +3.6**
GDM Grand'Maison 15.08 312 *e*P **Pn 11 40 00.1 +3.6**
KOPT Kop Dagi 15.12 69 ⇑*i*P **Pn 11 39 58.4 +1.2**
MARD Mardin 15.15 80 ⇑*i*P **Pn 11 39 57.4 0.0**
ABA Alger-Bouzarea 15.26 278 P **Pn 11 39 50.4 -8.5**
ABA Alger-Bouzarea 15.26 278 P **Pn 11 39 50.4 -8.5**
OCF Saint Nazaire 15.27 309 *e*P **Pn 11 40 00.7 +1.7**
OCF Saint Nazaire 15.27 309 *e*P **Pn 11 40 00.7 +1.7**
OG26 St.-Nazaire-De 15.27 309 *e*P **Pn 11 40 00.7 +1.7**
OG26 St.-Nazaire-De 15.27 309 *e*P **Pn 11 40 00.7 +1.7**
KSP Ksiaz 15.32 346 *e*P **Pn 11 40 01.8 +2.1**
KSP *e*pP pP 11 40 10.4 -0.3
KSP *e*S **Sn 11 42 56.5 +7.9**
KSP Ksiaz 15.32 346 *e*P **Pn 11 40 00.6 +0.9**
KSP *e*S **Sn 11 42 47.5 -1.1**
EMHD Djebel Mahouad 15.37 276 P **Pn 11 40 06.5 +6.2**
EMHD Djebel Mahouad 15.37 276 P **Pn 11 40 06.5 +6.2**
PVCC Panska Ves 15.41 342 P **Pn 11 39 59.4 -1.4**
PVCC Panska Ves 15.41 342 *e*P **Pn 11 39 59.3 -1.5**
PVCC *e*pP pP 11 40 08.2 -3.5
PVCC AMS AMS 11 46 50.0
comp=Z,24μm,9.4s
PVCC Panska Ves 15.41 342 P **Pn 11 39 59.4 -1.4**
ROTZ Rotzenmuhle 15.43 336 *e*P **Pn 11 39 58.9 -2.1**
WJHS 15.43 123 P **Pn 11 39 59.5 -1.7**
WJHS 15.43 123 P **Pn 11 39 59.5 -1.6**
BUCH Bad Urach 15.47 327 P **Pn 11 40 02.4 +0.8**
SPAK Spaichingen-Ko 15.47 325 *e*P **Pn 11 40 02.9 +1.3**
SPAK Spaichingen-Ko 15.47 325 *e*P **Pn 11 40 02.9 +1.3**
BNGL BINGOL 15.50 74 ⇑*i*P **Pn 11 40 03.1 +1.1**
KIEV Kiev 15.53 17 *e*P **Pn 11 39 59.5 -2.8**
KIEV *e* 11 42 51.0
KIEV pmax pmax
comp=Z,66nm,0.9s
KIEV Kiev 15.53 17 *e*Pn **Pn 11 39 59.5 -2.8**
comp=Z,66nm,0.9s
KIEV *e*Sn **Sn 11 42 51.0 -2.6**
KIEV Kiev 15.53 17 *e*Pn **Pn 11 39 59.5 -2.8**
comp=Z,66nm,0.9s
KIEV *e*Sn **Sn 11 42 51.0 -2.5**
AKASG Malin Array Be 15.54 17 Pn **Pn 11 39 59.7 -2.8**
comp=Z,2.5nm,0.3s,baz=209,slow=12,SNR=14
AKASG Sn **Sn 11 42 59.6 +5.8**
baz=206,slow=20,SNR=4.1
AKASG LR LR 11 46 24.4
comp=Z,5μm,21.3s,baz=200,slow=39
AKASG Malin Array Be 15.54 17 P **Pn 11 39 59.7 -2.8**
AKASG 11 42 59.6
AKASG pmax pmax
comp=Z,3.0nm,0.3s
AKASG MLR MLR
comp=Z,5μm,21.3s
AKASG Malin Array Be 15.54 17 Pn **Pn 11 39 59.7 -2.8**
AKASG Sn **Sn 11 42 59.6 +5.8**
AKASG LR LR 11 46 24.4
AKASG Malin Array Be 15.54 17 Pn **Pn 11 39 59.7 -2.8**
AKASG Sn **Sn 11 42 59.6 +5.8**
AKBB Malin Array Si 15.54 17 *e*P **Pn 11 39 59.8 -2.7**
AKBB *e*S **Sn 11 42 54.4 +0.6**
AKBB Malin Array Si 15.54 17 *e*Pn **Pn 11 39 59.8 -2.7**
AKBB *e*S **Sn 11 42 54.3 +0.5**
BEST Besiri 15.54 78 ⇓*i*P **Pn 11 40 03.5 +0.9**
SOC Sochi 15.55 56 *c i*P **Pn 11 40 01.5 -1.2**
SOC *e* 11 42 57.8
SOC pmax pmax
comp=Z,1μm,4.8s
SOC pmax pmax
comp=Z,55nm,0.9s
SOC MLR MLR
comp=Z,7μm,12.0s
ETOS Mallorca 15.56 289 ⇓P **Pn 11 40 05.5 +2.7**
comp=Z,2μm,5.2s
ETOS Mallorca 15.56 289 ⇓P **Pn 11 40 05.4 +2.6**
comp=Z,2μm,5.2s
BBS Basel-Blauen 15.65 321 *e*P **Pn 11 40 06.3 +2.3**
BBS Basel-Blauen 15.65 321 *e*P **Pn 11 40 06.3 +2.3**
FELD Feldberg im Sc 15.69 323 *e*P **Pn 11 40 04.8 +0.4**
FELD Feldberg im Sc 15.69 323 *e*P **Pn 11 40 04.8 +0.4**
GRA1 Grafenberg Arr 15.71 333 *e*P **Pn 11 40 00.9 -3.7**
GRA1 Grafenberg Arr 15.71 333 *e*P **Pn 11 40 00.9 -3.7**
GRF Grafenberg Arr 15.71 333 *e*P **Pn 11 40 00.9 -3.7**
GRF *e*L 11 47 31.4
comp=Z,22μm,19.7s
GRF Grafenberg Arr 15.71 333 *e*P **Pn 11 40 00.9 -3.7**
BIDS Bi'r al Bayda' 15.72 121 P **Pn 11 40 04.2 -0.9**
BIDS Bi'r al Bayda' 15.72 121 P **Pn 11 40 04.2 -0.8**
NKC Novy Kostel 15.75 337 *e*P **Pn 11 40 03.2 -2.0**
NKC *e*S **Sn 11 42 56.0 -2.9**
NKC MLR MLR
comp=Z,26μm,10.6s
NKC Novy Kostel 15.75 337 P **Pn 11 40 05.3 +0.1**
NKC Novy Kostel 15.75 337 *e*P **Pn 11 40 03.2 -2.0**
NKC *e*pP pP 11 40 13.5 -1.9
NKC *e*S **Sn 11 42 56.0 -2.9**
NKC AMS AMS 11 47 10.0
comp=Z,26μm,10.6s
NKC Novy Kostel 15.75 337 P **Pn 11 40 05.3 +0.1**
ERZM Erzurum 15.77 70 ⇓*i*P **Pn 11 40 07.2 +1.7**
KIZ Kirchzarten 15.78 323 P **Pn 11 40 06.1 +0.4**
KIZ Kirchzarten 15.78 323 P **Pn 11 40 06.1 +0.4**
STU Stuttgart 15.79 327 *e*P **Pn 11 40 04.0 -1.7**
STU Stuttgart 15.79 327 *e*P **Pn 11 40 04.3 -1.4**
STU pmax pmax
comp=Z,108nm,1.0s
STU Stuttgart 15.79 327 *e*Pn **Pn 11 40 04.3 -1.4**
comp=Z,108nm,1.0s
STU Stuttgart 15.79 327 *e*Pn **Pn 11 40 04.3 -1.4**
comp=Z,108nm,1.0s
VIVF Saint-Julien-I 15.79 309 *e*P **Pn 11 40 07.0 +1.2**
comp=Z,174nm,1.3s
VIVF Saint-Julien-I 15.79 309 *e*P **Pn 11 40 07.0 +1.2**
VIVF pmax pmax
comp=Z,87nm,1.3s
VIVF Saint-Julien-I 15.79 309 *e*P **Pn 11 40 07.0 +1.2**
comp=Z,87nm,1.3s
VIVF Saint-Julien-I 15.79 309 *e*P **Pn 11 40 07.0 +1.2**
comp=Z,87nm,1.3s
WERN Wernitzgruen 15.82 337 *e*P **Pn 11 40 05.8 -0.3**
BFO Black Forest 15.85 325 Pn **Pn 11 40 08.1 +1.6**
comp=Z,401nm,0.8s,SNR=11
BFO Black Forest 15.85 325 *e*P **Pn 11 40 05.7 -0.8**
comp=Z,135nm,1.5s
BFO Black Forest 15.85 325 *e*P **Pn 11 40 05.7 -0.8**
BFO pmax pmax
comp=Z,135nm,1.5s
BFO Black Forest 15.85 325 *e*P **Pn 11 40 05.7 -0.8**
comp=Z,135nm,1.5s
CABF La Chapelle 15.88 316 *e*P **Pn 11 40 04.8 -2.1**
comp=Z,152nm,1.1s
CABF La Chapelle 15.88 316 *e*P **Pn 11 40 04.8 -2.1**
CABF pmax pmax
comp=Z,76nm,1.1s
CABF La Chapelle 15.88 316 *e*P **Pn 11 40 04.8 -2.1**
comp=Z,76nm,1.1s
CABF La Chapelle 15.88 316 *e*P **Pn 11 40 04.8 -2.1**
comp=Z,76nm,1.1s
LBG Lerchenberg 15.88 327 P **Pn 11 40 08.4 +1.5**
LBG Lerchenberg 15.88 327 P **Pn 11 40 08.4 +1.5**
BRG Berggiesshubel 15.89 341 *e*P **Pn 11 40 05.3 -1.7**
BRG Berggiesshubel 15.89 341 *e*P **Pn 11 40 05.2 -1.8**
comp=Z,17nm,1.2s
BRG *i* PP 11 40 13.7
comp=Z,126nm,1.4s
BRG *i* 11 40 18.7
comp=Z,175nm,1.2s
BRG S **Sn 11 43 07.0 +4.7**
BRG
comp=N,19μm,20.7s
BRG
comp=E,37μm,17.8s
BRG
comp=Z,21μm,27.7s
BRG Berggiesshubel 15.89 341 *e*P **Pn 11 40 05.2 -1.8**
BRG S **Sn 11 43 07.0 +4.7**
BRG pmax pmax
comp=Z,10.0nm,1.2s
BRG MLR MLR
comp=N,11μm,20.7s
BRG MLR MLR
comp=Z,13μm,20.7s
BRG MLR MLR
comp=E,22μm,17.8s
BRG Berggiesshubel 15.89 341 P **Pn 11 40 06.5 -0.5**
GUNZ Gunzen 15.90 337 *e*P **Pn 11 40 07.5 +0.4**
TANN Tannenbergstha 15.90 337 *e*P **Pn 11 40 06.6 -0.6**
comp=Z,176nm,1.3s
TANN Tannenbergstha 15.90 337 P **Pn 11 40 06.7 -0.5**
TANN Tannenbergstha 15.90 337 P **Pn 11 40 06.7 -0.5**
LOMF Lomont 15.93 320 *e*P **Pn 11 40 06.3 -1.3**
LOMF Lomont 15.93 320 *e*P **Pn 11 40 06.3 -1.3**
WERD Werda 15.98 337 *e*P **Pn 11 40 08.2 0.0**
comp=Z,188nm,1.3s
LASF Ste Croix 15.98 306 *e*P **Pn 11 40 07.1 -1.1**
comp=Z,80nm,1.0s
LASF Ste Croix 15.98 306 *e*P **Pn 11 40 07.1 -1.1**
comp=Z,40nm,1.0s
SIND Sindeldorf 16.05 330 P **Pn 11 40 08.7 -0.4**
SIND Sindeldorf 16.05 330 P **Pn 11 40 08.7 -0.4**
LIBD Limburg 16.07 323 *e*P **Pn 11 40 08.3 -1.1**
LIBD Limburg 16.07 323 *e*P **Pn 11 40 08.3 -1.1**
EJON La Jonquera 16.08 299 ⇑P **Pn 11 40 10.2 +0.7**
comp=Z,565nm,4.7s
EJON La Jonquera 16.08 299 ⇑P **Pn 11 40 10.1 +0.6**
comp=Z,565nm,4.7s
SSB Saint Sauveur 16.08 310 *e*P **Pn 11 40 08.9 -0.6**
SSB Saint Sauveur 16.08 310 *e*P **Pn 11 40 08.8 -0.7**
SSB pmax pmax
comp=Z,43nm,1.0s
SSB Saint Sauveur 16.08 310 *e*Pn **Pn 11 40 08.8 -0.7**
comp=Z,43nm,1.0s
SSB Saint Sauveur 16.08 310 *e*Pn **Pn 11 40 08.8 -0.7**
comp=Z,43nm,1.0s
SJAF Saint Jean de 16.09 299 *e*P **Pn 11 40 08.5 -1.2**
SJAF Saint Jean de 16.09 299 *e*P **Pn 11 40 08.5 -1.2**
MOF Molkenrain 16.10 322 *e*P **Pn 11 40 10.0 +0.3**
MOF Molkenrain 16.10 322 *e*P **Pn 11 40 10.0 +0.3**
WAR Warsaw 16.19 358 *e*P **Pn 11 40 13.1 +2.3**
WAR *e*S **Sn 11 43 20.4 +11**
HOMI Horasan 16.20 70 ⇑*i*P **Pn 11 40 12.0 +0.9**
CFON Fontmartina 16.22 296 ⇑P **Pn 11 40 12.6 +1.3**
comp=Z,1μm,3.9s
CFON Fontmartina 16.22 296 ⇑P **Pn 11 40 12.6 +1.3**
comp=Z,1μm,3.9s
DDEM Demirkent 16.22 67 ⇑*i*P **Pn 11 40 11.8 +0.5**
HINF Hinteralfeld 16.22 321 *e*P **Pn 11 40 10.8 -0.5**
comp=Z,107nm,0.8s
HINF Hinteralfeld 16.22 321 *e*P **Pn 11 40 10.8 -0.5**
HINF pmax pmax
comp=Z,53nm,0.8s
HINF Hinteralfeld 16.22 321 *e*P **Pn 11 40 10.8 -0.5**
comp=Z,54nm,0.8s
HINF Hinteralfeld 16.22 321 *e*P **Pn 11 40 10.8 -0.5**
comp=Z,54nm,0.8s
ECH Echery 16.33 323 *e*P **Pn 11 40 11.1 -1.6**
ECH *e* 11 43 11.6
ECH pmax pmax
comp=Z,130nm,1.1s
ECH Echery 16.33 323 *e*Pn **Pn 11 40 11.1 -1.6**
comp=Z,130nm,1.1s
ECH *e*Sn **Sn 11 43 11.6 -1.5**
ECH Echery 16.33 323 *e*P **Pn 11 40 11.1 -1.6**
ECH *e*Sn **Sn 11 43 11.6 -1.5**
FILF Fillols 16.34 299 *e*P **Pn 11 40 12.8 -0.1**
FILF Fillols 16.34 299 *e*P **Pn 11 40 13.1 +0.2**
FILF Fillols 16.34 299 *e*P **Pn 11 40 13.1 +0.2**
FILF Fillols 16.34 299 *e*P **Pn 11 40 13.1 +0.2**
MOX Moxa 16.37 336 *e*P **Pn 11 40 13.1 -0.1**
comp=Z,139nm,1.4s
MOX *e*S **Sn 11 43 20.0 +5.9**
MOX
comp=Z,12μm,13.0s
MOX Moxa 16.37 336 *e*P **Pn 11 40 13.0 -0.2**
comp=Z,119nm,1.3s
MOX Moxa 16.37 336 *e*P **Pn 11 40 13.1 -0.1**
MOX *e*S **Sn 11 43 20.0 +5.9**
MOX pmax pmax
comp=Z,139nm,1.4s
MOX MLR MLR
comp=Z,12μm,13.0s
MOX Moxa 16.37 336 *e*P **Pn 11 40 13.1 -0.1**
comp=Z,139nm,1.4s
MOX *e*S **Sn 11 43 20.0 +5.9**
MOX Moxa 16.37 336 *e*P **Pn 11 40 13.1 -0.1**
comp=Z,139nm,1.4s
MOX *e*S **Sn 11 43 20.0 +5.9**
ARTV Artvin 16.41 66 *i* P **Pn 11 40 13.7 0.0**
CDF Champ du Feu 16.41 323 *e*P **Pn 11 40 12.1 -1.6**
comp=Z,243nm,1.0s
CDF Champ du Feu 16.41 323 *e*P **Pn 11 40 12.1 -1.6**
CDF pmax pmax
comp=Z,121nm,1.0s
CDF Champ du Feu 16.41 323 *e*P **Pn 11 40 12.1 -1.6**
comp=Z,121nm,1.0s
CDF Champ du Feu 16.41 323 *e*P **Pn 11 40 12.1 -1.6**
comp=Z,121nm,1.0s
EBNR Beni Rached 16.50 277 P **Pn 11 40 19.2 +4.2**
EBNR Beni Rached 16.50 277 P **Pn 11 40 19.2 +4.2**
CLL Collm 16.54 340 *e*P **Pn 11 40 14.6 -0.7**
comp=Z,266nm,1.3s
CLL Collm 16.54 340 *e*P **Pn 11 40 15.0 -0.3**
CLL *e* 11 40 18.0
CLL *e*pP pP 11 40 23.0 -1.1
CLL *i* 11 40 25.5
CLL *e*S **Sn 11 43 23.0 +5.0**
CLL Collm 16.54 340 *e*P **Pn 11 40 15.0 -0.3**
CLL *e*(sP) sP 11 40 18.0 -9.2
CLL *e* 11 40 23.0
CLL *i* PP 11 40 25.5
comp=Z,267nm,1.3s
CLL *i* 11 40 37.8
CLL *i* 11 40 46.4
CLL *e*S **Sn 11 43 23.0 +5.0**
CLL Lmax 11 47 00.0
CLL Collm 16.54 340 *e*P **Pn 11 40 15.0 -0.3**
CLL *e*S **Sn 11 43 23.0 +5.0**
TOD Tromm 16.59 329 *e*P **Pn 11 40 14.8 -1.1**
HAU Haudompre 16.60 321 *e*P **Pn 11 40 15.3 -0.8**
comp=Z,317nm,1.1s
HAU *e*MLR MLR
comp=Z,13μm,18.5s
HAU Haudompre 16.60 321 *e*P **Pn 11 40 15.3 -0.8**
HAU pmax pmax
comp=Z,158nm,1.1s
HAU Haudompre 16.60 321 *e*P **Pn 11 40 15.3 -0.8**
comp=Z,158nm,1.1s
EIBI Ibiza 16.62 286 ⇓P **Pn 11 40 18.4 +2.0**
comp=Z,1μm,3.6s
EIBI Ibiza 16.62 286 ⇓P **Pn 11 40 18.4 +2.0**
comp=Z,1μm,3.6s
ECHA Ech Chlef 16.65 276 P **Pn 11 40 21.0 +4.2**

ECHA	Ech Chlef	16.65	276	P	Pn	11 40 21.0 +4.2
KTD	Kalmit	16.68	327	eP	Pn	11 40 17.6 +0.5
KTD	Kalmit	16.68	327	eP	Pn	11 40 17.6 +0.5
VALF	Valcebollere	16.68	298	eP	Pn	11 40 19.7 +2.5
VALF	Valcebollere	16.68	298	eP	Pn	11 40 19.7 +2.5
COLF	Collangettes	16.72	310	eP	Pn	11 40 15.7 -1.9
COLF	Collangettes	16.72	310	eP	Pn	11 40 15.7 -1.9
CLLI	Llivia	16.73	299	⇑P	Pn	11 40 20.6 +2.8
CLLI	Llivia	16.73	299	⇑P	Pn	11 40 20.6 +2.8
ETRT	Tiaret	16.80	274	P	Pn	11 40 22.3 +3.6
ETRT	Tiaret	16.80	274	P	Pn	11 40 22.3 +3.6
MTLF	Montolieu	16.82	302	eP	Pn	11 40 18.5 -0.4
	comp=Z,59nm,1.1s					
MTLF	Montolieu	16.82	302	eP	Pn	11 40 18.5 -0.4
MTLF				pmax	pmax	
	comp=Z,29nm,1.1s					
MTLF	Montolieu	16.82	302	eP	Pn	11 40 18.5 -0.4
	comp=Z,29nm,1.1s					
MTLF	Montolieu	16.82	302	eP	Pn	11 40 18.5 -0.4
	comp=Z,29nm,1.1s					
LBL	Lubilhac	16.87	309	eP	Pn	11 40 20.4 +0.9
LBL	Lubilhac	16.87	309	eP	Pn	11 40 20.4 +0.9
EANR	'Ain N'Sour	16.88	276	P	Pn	11 40 22.6 +2.8
EANR	'Ain N'Sour	16.88	276	P	Pn	11 40 22.6 +2.8
PLDF	La Plantade	16.98	311	eP	Pn	11 40 21.1 +0.2
PLDF	La Plantade	16.98	311	eP	Pn	11 40 21.1 +0.2
UMJS	Umm Lajj	17.04	125	P	Pn	11 40 22.4 +0.7
UMJS	Umm Lajj	17.04	125	P	Pn	11 40 22.4 +0.7
UBBA	Unterbreizbach	17.08	333	eP	Pn	11 40 23.1 +1.0
	comp=Z,272nm,1.6s					
EPOB	Poblet	17.12	294	⇓P	Pn	11 40 23.2 +0.5
	comp=Z,746nm,4.2s					
EPOB	Poblet	17.12	294	⇓P	Pn	11 40 23.2 +0.5
	comp=Z,746nm,4.2s					
SMF	Signal de Mont	17.19	314	eP	Pn	11 40 21.0 -2.5
	comp=Z,126nm,1.2s					
SMF	Signal de Mont	17.19	314	eP	Pn	11 40 21.0 -2.5
SMF				pmax	pmax	
	comp=Z,63nm,1.2s					
SMF	Signal de Mont	17.19	314	eP	Pn	11 40 21.0 -2.5
	comp=Z,63nm,1.2s					
TNS	Taunus Mts	17.21	330	eP	Pn	11 40 23.0 -0.7
	comp=Z,660nm,1.4s					
TNS	Taunus Mts	17.21	330	eP	Pn	11 40 23.0 -0.7
TNS				pmax	pmax	
	comp=Z,660nm,1.4s					
TNS	Taunus Mts	17.21	330	eP	Pn	11 40 23.0 -0.7
	comp=Z,660nm,1.4s					
OJGS	Djebel Guires	17.22	274	P	Pn	11 40 26.0 +2.0
OJGS	Djebel Guires	17.22	274	P	Pn	11 40 26.0 +2.0
PYM	Petit Puy Mans	17.25	310	eP	Pn	11 40 23.2 -1.1
PYM	Petit Puy Mans	17.25	310	eP	Pn	11 40 23.2 -1.1
CSOR	Sort	17.31	298	⇓P	Pn	11 40 26.5 +1.4
	comp=Z,992nm,2.9s					
CSOR	Sort	17.31	298	⇓P	Pn	11 40 26.5 +1.5
	comp=Z,992nm,2.9s					
AGO	Saint Agoulin	17.32	311	eP	Pn	11 40 23.8 -1.3
AGO	Saint Agoulin	17.32	311	eP	Pn	11 40 23.8 -1.3
SALF	Salau	17.37	299	eP	Pn	11 40 27.4 +1.6
SALF	Salau	17.37	299	eP	Pn	11 40 27.4 +1.6
RUE	Ruedersdorf	17.41	343	eP	Pn	11 40 27.4 +1.3
	comp=Z,466nm,1.1s					
RUE	Ruedersdorf	17.41	343	eP	Pn	11 40 27.4 +1.3
	comp=Z,448nm,1.1s					
RUE				eS	Sn	11 43 49.7 +11
RUE	Ruedersdorf	17.41	343	eP	Pn	11 40 27.4 +1.3
	comp=Z,448nm,1.1s					
RUE				eS	Sn	11 43 49.7 +11
HAKT	HAKKARI	17.48	79	⇑iP	Pn	11 40 26.5 -0.7
MLS	Moulis	17.49	300	eP	Pn	11 40 27.6 +0.3
MLS	Moulis	17.49	300	eP	Pn	11 40 27.6 +0.3
CAF	Calviac	17.50	306	eP	Pn	11 40 26.2 -1.2
	comp=Z,196nm,1.2s					
CAF	Calviac	17.50	306	eP	Pn	11 40 26.2 -1.2
CAF				pmax	pmax	
	comp=Z,98nm,1.2s					
CAF	Calviac	17.50	306	eP	Pn	11 40 26.2 -1.2
	comp=Z,98nm,1.2s					
CAF	Calviac	17.50	306	eP	Pn	11 40 26.2 -1.2
	comp=Z,98nm,1.2s					
DYDN	Diyadin	17.51	72	⇑iP	Pn	11 40 28.5 +0.9
LOR	Lormes	17.51	315	eP	Pn	11 40 25.9 -1.6
	comp=Z,145nm,1.1s					
LOR				eMLR	MLR	
	comp=Z,12μm,18.0s					
LOR	Lormes	17.51	315	eP	Pn	11 40 25.9 -1.6
LOR				pmax	pmax	
	comp=Z,73nm,1.1s					
LOR	Lormes	17.51	315	eP	Pn	11 40 25.9 -1.6
	comp=Z,73nm,1.1s					
LOR	Lormes	17.51	315	eP	Pn	11 40 25.9 -1.6
	comp=Z,73nm,1.1s					
GKP	Gorka Klasztor	17.52	351	eP	Pn	11 40 28.5 +1.0
GKP				epP	pP	11 40 34.8 -0.2
GKP				eS	Sn	11 43 49.1 +7.3
GKP				LMZ		11 49 00.7
	comp=Z,11μm,18.6s					
OJBR	Djebel Berber	17.54	275	P	Pn	11 40 25.0 -2.9
OJBR	Djebel Berber	17.54	275	P	Pn	11 40 25.0 -2.9
AVF	Avril sur Loir	17.55	313	eP	Pn	11 40 27.1 -0.9
	comp=Z,103nm,1.1s					
AVF	Avril sur Loir	17.55	313	eP	Pn	11 40 27.1 -0.9
AVF				pmax	pmax	
	comp=Z,51nm,1.1s					
AVF	Avril sur Loir	17.55	313	eP	Pn	11 40 27.1 -0.9
	comp=Z,51nm,1.1s					
AVF	Avril sur Loir	17.55	313	eP	Pn	11 40 27.1 -0.9
	comp=Z,51nm,1.1s					
MEZF	Maizieres J'vi	17.59	320	eP	Pn	11 40 28.3 -0.1
	comp=Z,426nm,1.0s					
MEZF	Maizieres J'vi	17.59	320	eP	Pn	11 40 28.3 -0.1
	comp=Z,426nm,1.0s					
MEZF	Maizieres J'vi	17.59	320	eP	Pn	11 40 28.3 -0.1
	comp=Z,213nm,1.0s					
SSF	Saint Saulge	17.60	314	eP	Pn	11 40 26.3 -2.3
	comp=Z,88nm,1.0s					
SSF	Saint Saulge	17.60	314	eP	Pn	11 40 26.3 -2.3
SSF				pmax	pmax	
	comp=Z,44nm,1.0s					
SSF	Saint Saulge	17.60	314	eP	Pn	11 40 26.3 -2.3
	comp=Z,44nm,1.0s					
SSF	Saint Saulge	17.60	314	eP	Pn	11 40 26.3 -2.3
	comp=Z,44nm,1.0s					
ERTA	Horta de San J	17.61	293	⇓P	Pn	11 40 29.4 +0.7
	comp=Z,1μm,5.3s					
ERTA	Horta de San J	17.61	293	⇓P	Pn	11 40 29.4 +0.7
	comp=Z,1μm,5.3s					
KIV	Kislovodsk	17.69	57	Pn	Pn	11 40 30.3 +0.5
	comp=Z,2μm,1.0s,SNR=31					
KIV	Kislovodsk	17.69	57	c iP	Pn	11 40 30.0 +0.2
KIV				i S	Sn	11 43 49.3 +3.2
KIV				pmax	pmax	
	comp=Z,349nm,1.2s					
KIV				MLR	MLR	
	comp=Z,4μm,14.0s					
KIV	Kislovodsk	17.69	57	eP	Pn	11 40 29.9 +0.1
	comp=Z,437nm,1.0s					
KIV				eS	Sn	11 43 50.4 +4.2
KIV	Kislovodsk	17.69	57	P	Pn	11 40 31.1 +1.4
	SNR=123					
KIV				P		11 40 31.1
	SNR=123					
KIV	Kislovodsk	17.69	57	Pn	Pn	11 40 31.1 +1.4
	SNR=123					
KIV				Pn	Pn	11 40 31.1 +1.4
	SNR=123					
KIV	Kislovodsk	17.69	57	eP	Pn	11 40 29.9 +0.1
	comp=Z,437nm,1.0s					
KIV	Kislovodsk	17.69	57	Pn	Pn	11 40 31.1 +1.3
	SNR=123					
KIV				eS	Sn	11 43 50.3 +4.2
MELF	Melles	17.70	299	eP	Pn	11 40 30.7 +0.8
MELF	Melles	17.70	299	eP	Pn	11 40 30.7 +0.8
BGF	Bois d'Agland	17.73	312	eP	Pn	11 40 29.2 -1.1
	comp=Z,326nm,1.2s					
BGF	Bois d'Agland	17.73	312	eP	Pn	11 40 29.2 -1.1
BGF				pmax	pmax	
	comp=Z,163nm,1.2s					
BGF	Bois d'Agland	17.73	312	eP	Pn	11 40 29.2 -1.1
	comp=Z,163nm,1.2s					
BGF	Bois d'Agland	17.73	312	eP	Pn	11 40 29.2 -1.1
	comp=Z,163nm,1.2s					
CLZ	Clausthal	17.80	336	eP	Pn	11 40 29.5 -1.6
	comp=Z,230nm,1.3s					
CLZ	Clausthal	17.80	336	eP	Pn	11 40 29.5 -1.6
CLZ				pmax	pmax	
	comp=Z,230nm,1.3s					
CLZ	Clausthal	17.80	336	eP	Pn	11 40 29.5 -1.6
	comp=Z,230nm,1.3s					
WLF	Walferdange	17.81	325	P	Pn	11 40 31.3 +0.2
	comp=Z,134nm,1.3s					
WLF	Walferdange	17.81	325	eP	Pn	11 40 32.0 +0.8
	comp=Z,182nm,1.0s					
WLF	Walferdange	17.81	325	eP	Pn	11 40 33.6 +2.4
WLF				pmax	pmax	
	comp=Z,153nm,0.9s					
WLF	Walferdange	17.81	325	ePn	Pn	11 40 33.6 +2.5
	comp=Z,153nm,0.9s					
WLF	Walferdange	17.81	325	P	Pn	11 40 31.3 +0.1
	comp=Z,134nm,1.3s					
WLF	Walferdange	17.81	325	ePn	Pn	11 40 33.6 +2.4
	comp=Z,153nm,0.9s					
EBEN	Beniarda	17.82	285	P	Pn	11 40 33.3 +1.8
	comp=Z,267nm,4.1s					
EBEN	Beniarda	17.82	285	P	Pn	11 40 33.3 +1.9
	comp=Z,267nm,4.1s					
ONI	Oni	17.83	62	P	Pn	11 40 31.4 -0.2
ONI				S	Sn	11 44 08.7 +19
SUW	Suwalki	17.97	2	eP	Pn	11 40 31.6 -1.5
SUW				e		11 40 37.3
SUW				e		11 40 42.7
SUW				eS	Sn	11 44 00.5 +7.9
SUW				LMZ		11 47 31.2
	comp=Z,8μm,22.8s					
SUW	Suwalki	17.97	2	ePn	Pn	11 40 31.9 -1.2
	comp=Z,1μm,1.0s					
SUW	Suwalki	17.97	2	ePn	Pn	11 40 31.9 -1.2
	comp=Z,1μm,1.0s					
RESF	Ens	17.98	299	eP	Pn	11 40 35.7 +2.3
RESF	Ens	17.98	299	eP	Pn	11 40 35.7 +2.3
TCF	Toulx Ste Croi	17.99	311	eP	Pn	11 40 31.2 -2.2
	comp=Z,190nm,1.1s					
TCF	Toulx Ste Croi	17.99	311	eP	Pn	11 40 31.2 -2.2
TCF				pmax	pmax	
	comp=Z,95nm,1.1s					
TCF	Toulx Ste Croi	17.99	311	eP	Pn	11 40 31.2 -2.2
	comp=Z,95nm,1.1s					
TCF	Toulx Ste Croi	17.99	311	eP	Pn	11 40 31.2 -2.2
	comp=Z,95nm,1.1s					
RJF	Les Rejaudoux	18.00	307	eP	Pn	11 40 34.6 +1.0
	comp=Z,377nm,1.4s					
RJF				eMLR	MLR	
	comp=Z,7μm,17.2s					
RJF	Les Rejaudoux	18.00	307	eP	Pn	11 40 34.6 +1.0
RJF				pmax	pmax	
	comp=Z,189nm,1.4s					
RJF	Les Rejaudoux	18.00	307	eP	Pn	11 40 34.6 +1.0
	comp=Z,189nm,1.4s					
RJF	Les Rejaudoux	18.00	307	eP	Pn	11 40 34.6 +1.0
	comp=Z,189nm,1.4s					
EPF	Esparros	18.04	299	eP	Pn	11 40 36.7 +2.6
	comp=Z,216nm,1.6s					
EPF	Esparros	18.04	299	eP	Pn	11 40 36.7 +2.6
EPF				pmax	pmax	
	comp=Z,108nm,1.6s					
EPF	Esparros	18.04	299	eP	Pn	11 40 36.7 +2.6
	comp=Z,108nm,1.6s					
EPF	Esparros	18.04	299	eP	Pn	11 40 36.7 +2.6
	comp=Z,108nm,1.6s					
EBIE	Bielsa	18.09	298	⇓P	Pn	11 40 36.8 +2.0
	comp=Z,2μm,4.8s					
EBIE	Bielsa	18.09	298	⇓P	Pn	11 40 36.8 +2.1
	comp=Z,2μm,4.8s					
KEH	Kehvi	18.11	63	P	Pn	11 40 33.9 -1.1
EMOS	Mosqueruela	18.13	290	⇓P	Pn	11 40 37.6 +2.4
	comp=Z,2μm,4.1s					
EMOS	Mosqueruela	18.13	290	⇓P	Pn	11 40 37.6 +2.4
	comp=Z,2μm,4.1s					
ZEI	Tsey	18.20	62	eP	Pn	11 40 36.7 +0.7
ZEI				eS	Sn	11 44 01.3 +2.9
ZEI				pmax	pmax	
	comp=Z,93nm,1.1s					
VIEF	Viey	18.23	299	eP	Pn	11 40 37.5 +1.1
VIEF	Viey	18.23	299	eP	Pn	11 40 37.5 +1.1
USTO	Oran	18.24	276	P	Pn	11 40 43.0 +6.4
ESAC	San Caprasio	18.33	295	P	Pn	11 40 39.1 +1.5
	comp=Z,502nm,2.1s					
ESAC	San Caprasio	18.33	295	P	Pn	11 40 39.2 +1.6
	comp=Z,502nm,2.1s					
GNI	Garni	18.37	70	P	Pn	11 40 38.1 0.0
	comp=Z,7.8nm,0.3s,baz=58,slow=0.8,SNR=47					
GNI				LR	LR	11 48 10.0
	comp=Z,5μm,18.1s,baz=86,slow=39					
GNI	Garni	18.37	70	ceP	Pn	11 40 37.1 -1.0
GNI				pmax	pmax	
	comp=Z,281nm,1.7s					
GNI				MLR	MLR	
	comp=Z,10μm,19.0s					
GNI	Garni	18.37	70	eP	Pn	11 40 38.0 -0.2
	comp=Z,292nm,1.1s					
GNI				eS	Sn	11 44 03.8 +1.2
GNI	Garni	18.37	70	P	Pn	11 40 38.6 +0.5
	SNR=63					
GNI				P		11 40 38.6
	SNR=63					
GNI	Garni	18.37	70	Pn	Pn	11 40 38.6 +0.5
	SNR=63					
GNI				Pn	Pn	11 40 38.6 +0.5
	SNR=63					
GNI	Garni	18.37	70	P	Pn	11 40 38.1 0.0
	SNR=36					
GNI				eS	Sn	11 44 03.8 +1.2
LFF	La Frestale	18.37	305	eP	Pn	11 40 37.9 -0.2
	comp=Z,84nm,1.0s					
LFF	La Frestale	18.37	305	eP	Pn	11 40 37.9 -0.2
LFF				pmax	pmax	
	comp=Z,42nm,1.0s					
LFF	La Frestale	18.37	305	eP	Pn	11 40 37.9 -0.2
	comp=Z,42nm,1.0s					
LFF	La Frestale	18.37	305	eP	Pn	11 40 37.9 -0.2
	comp=Z,42nm,1.0s					
CART	Cartagena	18.44	282	i P	Pn	11 40 37.9 -1.1
CART				i S	Sn	11 44 02.3 -2.1
MEM	Membach	18.54	327	P	Pn	11 40 41.6 +1.5
	comp=Z,82nm,1.6s					
REYF	Montagne du Re	18.57	299	eP	Pn	11 40 40.3 -0.2
REYF	Montagne du Re	18.57	299	eP	Pn	11 40 40.3 -0.2
TBLG	Delisi	18.59	65	P	Pn	11 40 41.2 +0.5
MTA	Mtatsminda	18.62	66	P	Pn	11 40 39.7 -1.5
MTA				S	Sn	11 44 26.1 +18
BUG	Bochum--Univer	18.62	330	eP	Pn	11 40 41.5 +0.4
	comp=Z,535nm,1.3s					
ETSF	Etsaut	18.65	298	eP	Pn	11 40 41.1 -0.4
	comp=Z,150nm,1.1s					
ETSF	Etsaut	18.65	298	eP	Pn	11 40 41.1 -0.4
ETSF				pmax	pmax	
	comp=Z,75nm,1.1s					
ETSF	Etsaut	18.65	298	eP	Pn	11 40 41.1 -0.4
	comp=Z,75nm,1.1s					
ETSF	Etsaut	18.65	298	eP	Pn	11 40 41.1 -0.4
	comp=Z,75nm,1.1s					
HGN	Heimansgroeve	18.68	327	⇓eP	Pn	11 40 42.8 +1.0
	comp=Z,135nm,3.7s					
HGN	Heimansgroeve	18.68	327	eS	Sn	11 44 11.3 +1.2
BCLA	Clavier	18.73	325	P	Pn	11 40 43.3 +0.9
	comp=Z,128nm,1.7s					
GIVF	Givet	18.74	324	eP	Pn	11 40 43.1 +0.6
	comp=Z,1μm,1.1s					
GIVF	Givet	18.74	324	eP	Pn	11 40 43.1 +0.6
GIVF				pmax	pmax	
	comp=Z,553nm,1.1s					
GIVF	Givet	18.74	324	eP	Pn	11 40 43.1 +0.6
	comp=Z,552nm,1.1s					
GIVF	Givet	18.74	324	eP	Pn	11 40 43.1 +0.6
	comp=Z,552nm,1.1s					
ATE	Arette	18.79	299	eP	Pn	11 40 42.5 -0.7
ATE	Arette	18.79	299	eP	Pn	11 40 42.5 -0.7
BEBN	Ebert Emael	18.82	327	P	Pn	11 40 45.6 +2.0
DOU	Dourbes	18.84	323	P	Pn	11 40 44.3 +0.6
	comp=Z,140nm,1.4s					
ODZI	Dzioula	18.86	274	P	Pn	11 40 45.0 +1.0
ETOB	Tobarra	18.86	285	P	Pn	11 40 45.0 +1.0
	comp=Z,662nm,4.0s					
ETOB	Tobarra	18.86	285	P	Pn	11 40 45.0 +0.9
	comp=Z,662nm,4.0s					
MNK	Minsk	18.88	11	⇑iP	Pn	11 40 38.0 -6.2
MNK				eS	Sn	11 44 04.0 -11
MNK				pmax	pmax	
	comp=E,320nm,1.0s					
MNK				pmax	pmax	
	comp=Z,170nm,1.0s					
MNK				pmax	pmax	
	comp=N,260nm,1.0s					
MNK				pmax	pmax	
	comp=Z,5μm,5.0s					
MNK				MLR	MLR	
	comp=Z,12μm,8.0s					
MNK				MLR	MLR	
	comp=N,15μm,8.0s					
MNK				MLR	MLR	
	comp=E,18μm,8.0s					
MICGM	Minsk	18.89	11	⇑iP	Pn	11 40 38.0 -6.2
ISHB	Shabestar	18.97	76	eP	Pn	11 40 44.1 -1.3
ISHB	Shabestar	18.97	76	eP	Pn	11 40 44.1 -1.3
ORDF	Ordiarp	18.99	299	eP	Pn	11 40 44.8 -0.8
ORDF	Ordiarp	18.99	299	eP	Pn	11 40 44.8 -0.8
BAIF	Baives	19.01	323	eP	Pn	11 40 45.3 -0.5
	comp=E,408nm,1.3s					
BAIF	Baives	19.01	323	eP	Pn	11 40 45.3 -0.5
BAIF				pmax	pmax	
	comp=Z,204nm,1.3s					
BAIF	Baives	19.01	323	eP	Pn	11 40 45.3 -0.5
	comp=Z,204nm,1.3s					
BAIF	Baives	19.01	323	eP	Pn	11 40 45.3 -0.5
	comp=Z,204nm,1.3s					
DGRG	David-gareji	19.01	66	P	Pn	11 40 45.5 -0.4
DGRG				S	Sn	11 44 34.2 +16
IBBN	Ibbenburen	19.11	333	eP	Pn	11 40 45.4 -1.6
	comp=Z,348nm,1.3s					
NACGM	Naroch	19.13	9	eP	Pn	11 40 42.0 -5.1
SJPF	Ste Jean	19.17	299	eP	Pn	11 40 47.3 -0.5
	comp=Z,186nm,1.0s					
SJPF	Ste Jean	19.17	299	eP	Pn	11 40 47.3 -0.5
SJPF				pmax	pmax	
	comp=Z,93nm,1.0s					
SJPF	Ste Jean	19.17	299	eP	Pn	11 40 47.3 -0.5
	comp=Z,93nm,1.0s					
SJPF	Ste Jean	19.17	299	eP	Pn	11 40 47.3 -0.5
	comp=Z,93nm,1.0s					
WTSB	Winterswijk	19.21	331	⇓eP	Pn	11 40 49.0 +0.8
	comp=Z,126nm,1.2s					
OSSF	Osses	19.23	299	eP	Pn	11 40 48.1 -0.4
OSSF	Osses	19.23	299	eP	Pn	11 40 48.1 -0.4
SNF	Seneffe	19.27	324	P	Pn	11 40 48.9 +0.1
	comp=Z,136nm,1.9s					
IAZR	Azarshahr	19.27	78	eP	Pn	11 40 48.3 -0.8
IAZR	Azarshahr	19.27	78	eP	Pn	11 40 48.3 -0.8
ETOR	Torete	19.38	291	P	Pn	11 40 52.4 +2.1
ETOR				pmax	pmax	
	comp=Z,32nm,2.3s					
ETOR	Torete	19.38	291	P	Pn	11 40 52.4 +2.1
	comp=Z,32nm,2.3s					
ETOR	Torete	19.38	291	P	Pn	11 40 52.4 +2.1
	comp=Z,32nm,2.3s					
ITBZ	Tabriz	19.39	76	eP	Pn	11 40 48.7 -1.7
EALK	Alkurruntz	19.40	299	P	Pn	11 40 51.2 +0.7
	comp=Z,2μm,2.8s					
EALK	Alkurruntz	19.40	299	P	Pn	11 40 51.2 +0.7
	comp=Z,2μm,2.8s					
ELIZ	Elizondo	19.40	299	P	Pn	11 40 51.1 +0.5
	comp=Z,2μm,3.1s					
ELIZ	Elizondo	19.40	299	P	Pn	11 40 51.1 +0.6
	comp=Z,2μm,3.1s					
ENIJ	Nijar	19.44	280	P	Pn	11 40 51.4 +0.3
ENIJ				pmax	pmax	
	comp=Z,125nm,1.0s					
ENIJ	Nijar	19.44	280	P	Pn	11 40 51.4 +0.3
	comp=Z,125nm,1.0s					
ENIJ	Nijar	19.44	280	P	Pn	11 40 51.4 +0.3
	comp=Z,125nm,1.0s					
TAM	Tamanrasset	19.46	232	eP	Pn	11 40 51.1 -0.2
TAM				eS	Sn	11 44 31.5 +2.5
TAM				pmax	pmax	
	comp=Z,50nm,1.3s					
TAM	Tamanrasset	19.46	232	eP	Pn	11 40 51.1 -0.3
	comp=Z,50nm,1.3s					
TAM				eS	Sn	11 44 31.5 +2.5
TAM	Tamanrasset	19.46	232	eP	Pn	11 40 51.1 -0.2
	comp=Z,50nm,1.3s					
TAM				eS	Sn	11 44 31.5 +2.5
VSR	Storozhevoye	19.53	34	eP	Pn	11 40 50.3 -1.7
VSR				eS	Sn	11 44 21.8 -8.6
VSR				pmax	pmax	
	comp=N,60nm,0.9s					
VSR				pmax	pmax	
	comp=E,50nm,0.9s					
VSR				pmax	pmax	
	comp=Z,50nm,0.9s					
VSR				smax		
	comp=E,680nm,2.3s					
VSR				smax		
	comp=Z,360nm,2.3s					
VSR				smax		
	comp=N,250nm,1.2s					
VSR				MLR	MLR	
	comp=N,4μm,13.0s					
VSR				MLR	MLR	
	comp=E,4μm,13.0s					
VSR				MLR	MLR	
	comp=Z,8μm,13.0s					
MFF	Saint Martin d	19.59	309	eP	Pn	11 40 51.5 -1.3
	comp=Z,113nm,0.9s					
MFF	Saint Martin d	19.59	309	eP	Pn	11 40 51.5 -1.3
MFF				pmax	pmax	
	comp=Z,57nm,0.9s					
MFF	Saint Martin d	19.59	309	eP	Pn	11 40 51.5 -1.3
	comp=Z,56nm,0.9s					
MFF	Saint Martin d	19.59	309	eP	Pn	11 40 51.5 -1.3
	comp=Z,56nm,0.9s					
EVIA	Vianos	19.61	285	P	Pn	11 40 53.8 +0.8
EVIA				pmax	pmax	
	comp=Z,76nm,1.4s					
EVIA	Vianos	19.61	285	P	Pn	11 40 53.8 +0.8
	comp=Z,76nm,1.4s					
EVIA	Vianos	19.61	285	P	Pn	11 40 53.8 +0.8
	comp=Z,76nm,1.4s					
BSEG	Bad Segeberg	19.63	339	eP	Pn	11 40 51.6 -1.5
	comp=Z,288nm,1.2s					
BSEG	Bad Segeberg	19.63	339	eP	Pn	11 40 51.6 -1.5
BSEG				pmax	pmax	
	comp=Z,288nm,1.2s					
BSEG	Bad Segeberg	19.63	339	eP	Pn	11 40 51.6 -1.5
BSD	Bornholm Skovb	19.66	348	i P	Pn	11 40 51.5 -2.0
BSD				i S	Sn	11 44 25.2 -8.2
BSD				pmax	pmax	
	comp=Z,440nm,1.0s					
BSD	Bornholm Skovb	19.66	348	i P	Pn	11 40 51.5 -2.0
	comp=Z,438nm,1.0s					
BSD				i S	Sn	11 44 25.2 -8.2
BSD	Bornholm Skovb	19.66	348	i P	Pn	11 40 51.5 -2.0
	comp=Z,438nm,1.0s,SNR=35					
BSD				i S	Sn	11 44 25.2 -8.2
	SNR=47					
EHUE	Huescar	19.70	282	P	Pn	11 40 54.6 +0.5
EHUE				pmax	pmax	
	comp=Z,63nm,1.1s					
EHUE	Huescar	19.70	282	P	Pn	11 40 54.6 +0.5
	comp=Z,62nm,1.1s					
EHUE	Huescar	19.70	282	P	Pn	11 40 54.6 +0.5
	comp=Z,62nm,1.1s					
WIT	Witteveen	19.92	332	eP	Pn	11 41 06.3 +10
	comp=Z,678nm,3.4s					
IDHR	Dehrash	19.95	87	eP	Pn	11 40 56.0 -1.2
IDHR	Dehrash	19.95	87	eP	Pn	11 40 56.0 -1.2
EBER	Berja	19.99	280	⇑P	Pn	11 40 58.7 +1.1
	comp=Z,745nm,3.4s					
EBER	Berja	19.99	280	⇑P	Pn	11 40 58.7 +1.1
	comp=Z,745nm,3.4s					
EQES	Quesada	20.07	282	P	P	11 40 58.9 +2.2
	comp=Z,493nm,3.5s					
EQES	Quesada	20.07	282	P	P	11 40 58.9 +2.2
	comp=Z,493nm,3.5s					
IHRS	Heris	20.09	76	eP	P	11 40

LDF La Druitiere 20.49 315 *e*P **P 11 41 00.0 -1.1**
LDF pmax pmax
comp=Z,62nm,0.8s
LDF La Druitiere 20.49 315 *e*P **P 11 41 00.0 -1.1**
comp=Z,62nm,0.8s
LDF La Druitiere 20.49 315 *e*P **P 11 41 00.0 -1.1**
comp=Z,62nm,0.8s
EGUA Guajares 20.54 280 P **P 11 41 02.6 +0.9**
EGUA pmax pmax
comp=Z,1μm,1.6s
EGUA Guajares 20.54 280 P **P 11 41 02.6 +0.8**
comp=Z,1μm,1.6s
EGUA Guajares 20.54 280 P **P 11 41 02.6 +0.9**
comp=Z,1μm,1.6s
ISRB Sarab 20.60 77 *e*P **P 11 41 01.6 -0.8**
ISRB Sarab 20.60 77 *e*P **P 11 41 01.6 -0.8**
VRHR Novokhopersk 20.61 37 *e*P **P 11 41 03.7 +1.4**
VRHR *e*S **S 11 44 52.6 +1.2**
VRHR pmax pmax
comp=N,60nm,0.6s
VRHR pmax pmax
comp=E,80nm,0.6s
VRHR pmax pmax
comp=Z,130nm,0.6s
VRHR smax
comp=N,450nm,1.4s
VRHR smax
comp=E,1μm,1.4s
VRHR smax
comp=Z,50nm,0.5s
VRHR MLR MLR
comp=N,2μm,18.0s,MS4.7
VRHR MLR MLR
comp=E,2μm,18.0s,MS4.7
VRHR MLR MLR
comp=Z,5μm,18.0s,MS4.9
EBAN Banos Encina 20.62 284 P **P 11 41 03.2 +0.5**
EBAN pmax pmax
comp=Z,51nm,1.3s
EBAN Banos Encina 20.62 284 P **P 11 41 03.2 +0.6**
comp=Z,51nm,1.3s
EBAN Banos Encina 20.62 284 P **P 11 41 03.2 +0.5**
comp=Z,51nm,1.3s
COP Copenhagen 20.68 345 *i* P **P 11 41 06.4 +3.3**
COP *i* S **S 11 44 51.7 -1.0**
COP pmax pmax
comp=Z,87nm,0.9s
COP MLR MLR
comp=Z,4μm,18.0s,MS4.8
COP Copenhagen 20.68 345 *i* P **P 11 41 06.4 +3.3**
comp=Z,87nm,0.9s
COP *i* S **S 11 44 51.7 -1.0**
COP
comp=Z,4μm,18.0s
COP Copenhagen 20.68 345 *i* P **P 11 41 06.5 +3.4**
comp=Z,87nm,0.9s,SNR=35
COP *i* S **S 11 44 51.7 -1.0**
SNR=37
ERON Agron 20.71 280 P **P 11 41 04.7 +1.1**
comp=Z,25nm,1.0s
ERON Agron 20.71 280 P **P 11 41 04.7 +1.1**
comp=Z,25nm,1.0s
ESDC Sonseca Array 20.76 288 P **P 11 41 04.0 -0.1**
comp=Z,125nm,1.3s,baz=85,slow=10,SNR=34
ESDC ScP ScP 11 48 49.8 +1.8
comp=Z,0.1nm,0.3s,baz=191,slow=6.3,SNR=3.7
ESDC Sonseca Array 20.76 288 P **P 11 41 04.8 +0.7**
comp=Z,23nm,1.8s
ESDC Sonseca Array 20.76 288 P **P 11 41 04.8 +0.7**
comp=Z,23nm,1.8s
ESLA Sonseca Array 20.76 288 PFAKE 11 41 20.0 +16
ESLA LR LR
comp=Z,12μm,19.0s,MS5.3
ELAN Lanestosa 20.77 298 ||P **P 11 41 05.9 +1.6**
comp=Z,1μm,2.6s
ELAN Lanestosa 20.77 298 ||P **P 11 41 05.9 +1.6**
comp=Z,1μm,2.6s
FLN La Foliniere 20.78 315 *e*P **P 11 41 03.6 -0.6**
comp=Z,316nm,1.2s
FLN *e*MLR MLR
comp=Z,9μm,20.5s,MS4.8
FLN La Foliniere 20.78 315 *e*P **P 11 41 03.6 -0.6**
FLN pmax pmax
comp=Z,158nm,1.2s
FLN MLR MLR
comp=Z,9μm,20.5s,MS5.1
FLN La Foliniere 20.78 315 *e*P **P 11 41 03.6 -0.6**
comp=Z,158nm,1.2s
FLN LR LR
comp=Z,9μm,20.5s,MS5.1
FLN La Foliniere 20.78 315 *e*P **P 11 41 03.6 -0.6**
comp=Z,158nm,1.2s
MAK Makhachkala 20.83 63 *e*P **P 11 41 04.4 -0.4**
MAK *i* 11 41 26.8
MAK *e*PPP 11 41 37.9
MAK *e*S **S 11 44 55.8 -0.2**
MAK *e* 11 45 15.9
MAK *e*SS 11 45 23.7
MAK *e*SSS 11 45 35.8
MAK pmax pmax
comp=Z,2μm,1.6s
MAK MLR MLR
comp=Z,9μm,17.0s,MS5.2
GUD Guadarrama 20.95 290 P **P 11 41 06.1 -0.1**
comp=Z,9μm,3.9s
GUD Guadarrama 20.95 290 P **P 11 41 06.1 -0.1**
comp=Z,9μm,3.9s
IKOM Komasi 20.97 88 *e*P **P 11 41 06.6 +0.2**
IKOM Komasi 20.97 88 *e*P **P 11 41 06.6 +0.2**
ELOJ Sierra Loja 20.98 281 P **P 11 41 07.8 +1.3**
ELOJ pmax pmax
comp=Z,121nm,1.7s
ELOJ Sierra Loja 20.98 281 P **P 11 41 07.8 +1.3**
comp=Z,121nm,1.7s
ELOJ Sierra Loja 20.98 281 P **P 11 41 07.8 +1.3**
comp=Z,121nm,1.7s
ELUQ Luque 21.04 282 P **P 11 41 08.2 +1.1**
ELUQ pmax pmax
comp=Z,93nm,1.0s,mb5.1
ELUQ Luque 21.04 282 P **P 11 41 08.2 +1.0**
comp=Z,93nm,1.0s,mb5.1
ELUQ Luque 21.04 282 P **P 11 41 08.2 +1.1**
comp=Z,93nm,1.0s,mb5.1
PAB San Pablo 21.05 287 *e*P **P 11 41 06.9 -0.4**
PAB pmax pmax
comp=Z,125nm,1.1s,mb5.2
PAB MLR MLR
comp=Z,3μm,20.0s,MS4.6
PAB San Pablo 21.05 287 *e*P **P 11 41 06.9 -0.4**
comp=Z,125nm,1.1s,mb5.2
PAB LR LR
comp=Z,3μm,20.0s,MS4.6
PAB San Pablo 21.05 287 *e*P **P 11 41 06.9 -0.4**
comp=Z,125nm,1.1s,mb5.2
TFO1 Folkestone 21.19 322 *e*P **P 11 41 08.3 -0.4**
TFO1 *e* 11 44 59.6
TFO1 AMS AMS 11 50 37.1
comp=Z,10μm,15.5s,MS5.3
TFO1 Folkestone 21.19 322 P **P 11 41 08.3 -0.4**
TFO1 11 44 59.6
TFO1 AMS AMS 11 50 37.1
comp=Z,10μm,15.5s
TFO1 Folkestone 21.19 322 *e*P **P 11 41 08.3 -0.4**
EMAL Malaga-Limoner 21.23 280 *i* P **P 11 41 10.7 +1.4**
EMAL *e*S **S 11 45 03.0 -1.1**
EADA Adamuz 21.25 284 P **P 11 41 08.9 -0.5**
comp=Z,327nm,2.0s,mb5.3
EADA Adamuz 21.25 284 P **P 11 41 08.9 -0.5**
comp=Z,327nm,2.0s,mb5.3
EMIJ Mijas 21.53 279 P **P 11 41 13.8 +1.3**
comp=Z,426nm,3.2s
EMIJ Mijas 21.53 279 P **P 11 41 13.8 +1.3**
comp=Z,426nm,3.2s
OBN Obninsk 21.54 23 P **P 11 41 10.5 -1.8**
comp=Z,3μm,1.7s,mb6.4,SNR=9.7
OBN Obninsk 21.54 23 ||*i*P **P 11 41 10.7 -1.6**
OBN *i* 11 41 21.2
OBN *i* S **S 11 45 06.1 -3.6**
OBN pmax pmax
comp=Z,247nm,1.5s,mb5.4
OBN MLR MLR
comp=Z,4μm,16.0s,MS4.9
OBN Obninsk 21.54 23 *e*P **P 11 41 10.2 -2.1**
comp=Z,740nm,1.2s,mb6.0
OBN LR LR
comp=Z,7μm,22.0s,MS5.0

OBN Obninsk 21.54 23 *e*P **P 11 41 10.2 -2.1**
comp=Z,740nm,1.2s,mb6.0
GOTU Gotland 21.75 355 P **P 11 41 14.2 -0.4**
comp=Z,171nm,1.0s,mb5.1
SGMF Saint Gilles 21.77 312 *e*P **P 11 41 13.4 -1.6**
comp=Z,171nm,1.0s,mb5.1
SGMF Saint Gilles 21.77 312 *e*P **P 11 41 13.4 -1.6**
SGMF pmax pmax
comp=Z,85nm,1.0s,mb5.1
SGMF Saint Gilles 21.77 312 *e*P **P 11 41 13.4 -1.6**
comp=Z,85nm,1.0s,mb5.1
SGMF Saint Gilles 21.77 312 *e*P **P 11 41 13.4 -1.6**
comp=Z,85nm,1.0s,mb5.1
JSA Saint Aubin 21.96 314 AMS AMS 11 52 04.3
comp=Z,6μm,15.7s,MS5.1
LIJA Lijar 22.00 280 *i* P **P 11 41 20.0 +2.5**
QUIF Quistinic 22.01 310 *e*P **P 11 41 17.0 -0.5**
comp=Z,210nm,0.9s,mb5.2
QUIF Quistinic 22.01 310 *e*P **P 11 41 17.0 -0.5**
QUIF pmax pmax
comp=Z,105nm,0.9s,mb5.3
QUIF Quistinic 22.01 310 *e*P **P 11 41 17.0 -0.5**
comp=Z,105nm,0.9s,mb5.3
QUIF Quistinic 22.01 310 *e*P **P 11 41 17.0 -0.5**
comp=Z,105nm,0.9s,mb5.2
EARI Arriondas 22.06 297 P **P 11 41 18.1 0.0**
comp=Z,679nm,3.4s
EARI Arriondas 22.06 297 P **P 11 41 18.1 0.0**
comp=Z,679nm,3.4s
EJIF Jimena Fronter 22.10 279 P **P 11 41 20.0 +1.4**
EJIF pmax pmax
comp=Z,272nm,1.3s,mb5.5
EJIF Jimena Fronter 22.10 279 P **P 11 41 20.0 +1.5**
comp=Z,272nm,1.3s,mb5.5
EJIF Jimena Fronter 22.10 279 P **P 11 41 20.0 +1.4**
comp=Z,272nm,1.3s,mb5.5
MDT Midelt 22.13 269 P **P 11 41 18.7 -0.2**
comp=Z,50nm,1.0s,mb4.9,baz=81,slow=11,SNR=44
MDT LR LR 11 51 55.9
comp=Z,4μm,20.3s,MS4.8,baz=84,slow=42
MDT Midelt 22.13 269 P **P 11 41 18.7 -0.3**
MUD Monsted U'grnd 22.16 341 *i* P **P 11 41 20.9 +1.9**
MUD *i* S **S 11 45 27.6 +5.8**
MUD pmax pmax
comp=Z,140nm,0.9s,mb5.4
MUD Monsted U'grnd 22.16 341 *i* P **P 11 41 20.9 +1.9**
comp=Z,142nm,0.9s,mb5.4
MUD *i* S **S 11 45 27.6 +5.8**
MUD Monsted U'grnd 22.16 341 *i* P **P 11 41 20.9 +1.9**
comp=Z,142nm,0.9s,mb5.4,SNR=34
MUD *i* S **S 11 45 27.7 +5.9**
SNR=36
MIB Mutribah 22.16 99 *e*P **P 11 41 18.8 -0.5**
MIB AMb AMB 11 41 20.7
comp=Z,1μm,0.9s,mb6.3
MIB Mutribah 22.16 99 *e*P **P 11 41 18.8 -0.5**
comp=Z,1μm,0.9s,mb6.3
ROSF Rostrenen 22.24 311 *e*P **P 11 41 17.9 -2.1**
comp=Z,100nm,0.8s,mb5.0
ROSF Rostrenen 22.24 311 *e*P **P 11 41 17.9 -2.1**
ROSF pmax pmax
comp=Z,50nm,0.8s,mb5.0
ROSF Rostrenen 22.24 311 *e*P **P 11 41 17.9 -2.1**
comp=Z,50nm,0.8s,mb5.0
ROSF Rostrenen 22.24 311 *e*P **P 11 41 17.9 -2.1**
comp=Z,50nm,0.8s,mb5.0
NAY Al-Naaiem 22.31 101 *e*P **P 11 41 20.3 -0.6**
NAY AMb AMB 11 41 23.5
comp=Z,287nm,0.7s,mb5.8
NAY Al-Naaiem 22.31 101 *e*P **P 11 41 20.3 -0.5**
comp=Z,287nm,0.7s,mb5.8
ESPR Espera 22.36 280 P **P 11 41 21.8 +0.5**
comp=Z,612nm,2.9s,mb5.5
ESPR Espera 22.36 280 P **P 11 41 21.8 +0.5**
comp=Z,612nm,2.9s,mb5.5
MOS Moscow 22.39 24 *e*P **P 11 41 18.5 -3.0**
MOS *e* 11 41 42.6
MOS *e*PPP 11 41 53.3
MOS *e*S **S 11 45 20.2 -6.1**
MOS *e* 11 52 34.7
MOS pmax pmax
comp=Z,600nm,1.3s,mb5.9
MOS pmax pmax
comp=Z,294nm,1.0s,mb5.7
MOS MLR MLR
comp=N,6.0nm,10.0s
MOS MLR MLR
comp=Z,6μm,9.0s
MOS MLR MLR
comp=N,4μm,10.0s
EPLA Plasencia 22.40 289 P **P 11 41 22.2 +0.5**
EPLA pmax pmax
comp=Z,342nm,2.6s,mb5.3
EPLA Plasencia 22.40 289 P **P 11 41 22.2 +0.5**
comp=Z,342nm,2.6s,mb5.3
EPLA Plasencia 22.40 289 P **P 11 41 22.2 +0.5**
comp=Z,342nm,2.6s,mb5.3
UMR Umm Al-Rimmam 22.56 99 *e*P **P 11 41 23.2 -0.3**
UMR AMb AMB 11 41 25.3
comp=Z,1μm,0.9s,mb6.3
UMR Umm Al-Rimmam 22.56 99 *e*P **P 11 41 23.2 -0.3**
comp=Z,1μm,0.9s,mb6.3
CNIL Conil 22.58 279 *i* P **P 11 41 25.0 +1.3**
VSU Vasula 22.63 7 *e*P **P 11 41 21.7 -2.2**
VSU pmax pmax
comp=Z,198nm,1.2s,mb5.4
IRAZ Razeghan 22.68 83 *e*P **P 11 41 24.2 -0.6**
IRAZ Razeghan 22.68 83 *e*P **P 11 41 24.2 -0.6**
RDF Al-Radifah 22.68 101 *e*P **P 11 41 24.0 -0.8**
RDF AMb AMB 11 41 29.0
comp=Z,231nm,0.9s,mb5.6
RDF Al-Radifah 22.68 101 *e*P **P 11 41 24.0 -0.8**
comp=Z,231nm,0.9s,mb5.6
SFS San Fernando 22.69 279 *e*P **P 11 41 25.9 +1.1**
SFS pmax pmax
comp=Z,426nm,1.1s,mb5.8
SFS MLR MLR
comp=Z,5μm,19.0s,MS5.0
SFS San Fernando 22.69 279 *e*P **P 11 41 25.9 +1.0**
comp=Z,426nm,1.1s,mb5.8
SFS LR LR
comp=Z,5μm,19.0s,MS5.0
SFS San Fernando 22.69 279 *e*P **P 11 41 25.9 +1.1**
comp=Z,426nm,1.1s,mb5.8
SFS *e*S **S 11 45 24.6 -7.5**
BST Brest 22.71 311 *e*P **P 11 41 26.9 +2.0**
BST Brest 22.71 311 *e*P **P 11 41 26.9 +2.0**
EMIN Mina Concepcio 22.92 283 P **P 11 41 27.9 +0.6**
comp=Z,631nm,2.6s,mb5.6
EMIN Mina Concepcio 22.92 283 P **P 11 41 27.9 +0.6**
comp=Z,631nm,2.6s,mb5.6
SWN1 Swindon 22.93 320 *e*P **P 11 41 27.5 +0.3**
SWN1 AMb AMB 11 41 36.5
comp=Z,315nm,1.3s,mb5.6
SWN1 *e* 11 45 29.1
SWN1 AMS AMS 11 53 19.3
comp=Z,11μm,12.5s,MS5.5
SWN1 Swindon 22.93 320 P **P 11 41 27.5 +0.3**
SWN1 AMb AMB 11 41 36.5
comp=Z,315nm,1.3s,mb5.6
SWN1 11 45 29.1
SWN1 AMS AMS 11 53 19.3
comp=Z,11μm,12.5s
SWN1 Swindon 22.93 320 *e*P **P 11 41 27.5 +0.3**
comp=Z,315nm,1.3s,mb5.6
PBRG Braganca 22.99 293 *e*P **P 11 41 29.1 +1.1**
comp=Z,87nm,1.6s,mb4.9
PBRG *e*S **S 11 45 39.6 +2.6**
PBRG Braganca 22.99 293 *e*P **P 11 41 29.1 +1.1**
comp=Z,87nm,1.6s,mb4.9
PBRG *e*S **S 11 45 39.6 +2.6**
ECAL Calabor 23.00 294 P **P 11 41 27.2 -0.8**
comp=Z,312nm,2.3s,mb5.3
ECAL Calabor 23.00 294 P **P 11 41 27.2 -0.9**
comp=Z,312nm,2.3s,mb5.3
QRN Al-Qurain 23.05 101 *e*P **P 11 41 28.2 -0.5**
QRN AMb AMB 11 41 30.9
comp=Z,614nm,0.9s,mb6.0
EBAD Badajoz 23.13 285 P **P 11 41 29.7 +0.2**
comp=Z,473nm,2.6s,mb5.5
EBAD Badajoz 23.13 285 P **P 11 41 29.7 +0.2**
comp=Z,473nm,2.6s,mb5.5
MVO Moncorvo 23.16 292 P **P 11 41 28.7 -1.0**
MVO Moncorvo 23.16 292 *e*P **P 11 41 30.1 +0.3**
comp=Z,136nm,1.6s,mb5.1
MVO *e*S **S 11 45 38.4 -1.4**
MVO *e*LR LR 11 52 31.5

comp=Z,2μm,16.0s
MVO Moncorvo 23.16 292 *e*P **P 11 41 30.1 +0.3**
comp=Z,136nm,1.6s,mb5.1
MVO *e*S **S 11 45 38.4 -1.4**
PBAR Barrancos 23.18 284 *e*P **P 11 41 30.6 +0.6**
comp=Z,203nm,1.9s,mb5.2
PBAR *e*S **S 11 45 38.8 -1.4**
PBAR *e*LR LR 11 54 21.8
comp=Z,4μm,18.0s
PBAR Barrancos 23.18 284 *e*P **P 11 41 30.6 +0.6**
comp=Z,203nm,1.9s,mb5.2
PBAR *e*S **S 11 45 38.8 -1.4**
IMHD Mahdasht 23.23 82 *e*P **P 11 41 30.2 -0.4**
IMHD Mahdasht 23.23 82 *e*P **P 11 41 30.2 -0.4**
CWF Charnwood Fore 23.38 323 *e*P **P 11 41 31.5 -0.5**
CWF AMb AMB 11 41 35.5
comp=Z,112nm,2.2s,mb4.9
CWF AMS AMS 11 51 48.0
comp=Z,6μm,22.5s,MS5.0
CWF Charnwood Fore 23.38 323 P **P 11 41 31.5 -0.5**
CWF AMb AMB 11 41 35.5
comp=Z,112nm,2.2s,mb4.9
CWF AMS AMS 11 51 48.0
comp=Z,6μm,22.5s
CWF Charnwood Fore 23.38 323 *e*P **P 11 41 31.5 -0.4**
comp=Z,112nm,2.2s,mb4.9
PMRV Marv??o 23.41 287 *e*P **P 11 41 32.5 +0.1**
comp=Z,138nm,1.3s,mb5.2
PMRV *e*S **S 11 45 44.0 +0.2**
PMRV *e*LR LR 11 54 03.4
comp=Z,2μm,18.0s
PMRV Marv??o 23.41 287 *e*P **P 11 41 32.5 +0.1**
comp=Z,138nm,1.3s,mb5.2
PMRV *e*S **S 11 45 44.0 +0.2**
PCBR Castelo Branco 23.47 288 *e*P **P 11 41 33.3 +0.3**
comp=Z,115nm,1.4s,mb5.1
PCBR *e*S **S 11 45 51.1 +6.3**
PCBR Castelo Branco 23.47 288 *e*P **P 11 41 33.3 +0.3**
comp=Z,115nm,1.4s,mb5.1
PCBR *e*S **S 11 45 51.1 +6.3**
MTE Manteigas 23.52 290 P **P 11 41 30.9 -2.7**
comp=Z,78nm,1.1s,mb5.0
MTE LR LR
comp=Z,4μm,19.0s,MS4.9
MTE Manteigas 23.52 290 *e*P **P 11 41 33.6 +0.1**
comp=Z,102nm,0.7s,mb5.4
MTE *e*S **S 11 45 47.7 +2.0**
MTE *e*LR LR 11 52 52.9
comp=Z,4μm,18.0s
MTE Manteigas 23.52 290 *e*P **P 11 41 33.6 +0.1**
comp=Z,102nm,0.7s,mb5.4
MTE *e*S **S 11 45 47.7 +2.0**
HGH Gray Hill 23.53 319 *e*P **P 11 41 33.9 +0.5**
HGH Gray Hill 23.53 319 P **P 11 41 33.9 +0.5**
HGH Gray Hill 23.53 319 *e*P **P 11 41 33.9 +0.5**
DYA Yadsworthy 23.55 316 AMS AMS 11 54 11.4
comp=Z,6μm,13.9s,MS5.2
IR3 Iran Long-Peri 23.55 83 *e*P **P 11 41 33.5 -0.3**
PESTR Estremoz 23.58 286 *e*P **P 11 41 34.2 +0.2**
comp=Z,130nm,1.3s,mb5.2
PESTR *e*S **S 11 45 47.1 +0.5**
PESTR *e*LR LR 11 54 05.3
comp=Z,4μm,16.0s
PESTR Estremoz 23.58 286 *e*P **P 11 41 34.2 +0.2**
comp=Z,130nm,1.3s,mb5.2
PESTR *e*S **S 11 45 47.1 +0.5**
EGRO El Granado 23.59 282 P **P 11 41 33.8 -0.3**
comp=Z,693nm,3.3s
EGRO El Granado 23.59 282 P **P 11 41 33.8 -0.3**
comp=Z,693nm,3.3s
PVRL Vila Real 23.68 292 *e*P **P 11 41 36.8 +1.8**
comp=Z,56nm,2.0s,mb4.7
PVRL *e*S **S 11 45 53.3 +5.0**
PVRL Vila Real 23.68 292 *e*P **P 11 41 36.8 +1.8**
comp=Z,56nm,2.0s,mb4.7
PVRL *e*S **S 11 45 53.3 +5.0**
PVAQ Vaqueiros 23.78 282 *e*P **P 11 41 37.1 +1.2**
comp=Z,144nm,1.4s,mb5.2
PVAQ *e*S **S 11 45 49.0 -0.9**
PVAQ *e*LR LR 11 54 52.5
comp=Z,2μm,18.0s
PVAQ Vaqueiros 23.78 282 *e*P **P 11 41 37.1 +1.2**
comp=Z,144nm,1.4s,mb5.2
PVAQ *e*S **S 11 45 49.0 -0.9**
KBI1 Birley Grange 23.79 324 *e*P **P 11 41 35.1 -0.7**
KBI1 Birley Grange 23.79 324 P **P 11 41 35.1 -0.7**
KBI1 Birley Grange 23.79 324 *e*P **P 11 41 35.2 -0.6**
PVIS Viseu 23.80 290 *e*P **P 11 41 37.3 +1.3**
comp=Z,84nm,0.9s,mb5.2
PVIS *e*S **S 11 45 56.5 +6.4**
PVIS Viseu 23.80 290 *e*P **P 11 41 37.3 +1.3**
comp=Z,84nm,0.9s,mb5.2
PVIS *e*S **S 11 45 56.5 +6.4**
PBEJ Beja 23.84 284 *e*P **P 11 41 36.7 +0.2**
comp=Z,184nm,1.6s,mb5.3
PBEJ *e*S **S 11 45 59.9 +9.0**
PBEJ Beja 23.84 284 *e*P **P 11 41 36.7 +0.2**
comp=Z,184nm,1.6s,mb5.3
PBEJ *e*S **S 11 45 59.9 +9.0**
EVO Evora 23.93 285 *e*P **P 11 41 37.0 -0.2**
comp=Z,57nm,1.0s,mb4.7
EVO *e*MLR MLR
comp=Z,4μm,18.2s,MS4.7
EVO Evora 23.93 285 *e*P **P 11 41 37.9 +0.7**
comp=Z,132nm,2.2s,mb5.0
EVO *e*S **S 11 45 52.9 +0.7**
EVO Evora 23.93 285 *e*P **P 11 41 37.9 +0.7**
comp=Z,132nm,2.2s,mb5.0
EVO *e*S **S 11 45 52.9 +0.7**
PCAB Cabril 23.94 293 *e*P **P 11 41 38.4 +1.1**
comp=Z,96nm,0.8s,mb5.3
PCAB Cabril 23.94 293 *e*P **P 11 41 38.4 +1.1**
comp=Z,96nm,0.8s,mb5.3
PBDV Barranco-do-Ve 23.97 282 *e*P **P 11 41 38.3 +0.7**
comp=Z,236nm,1.2s,mb5.5
PBDV *e*S **S 11 45 54.0 +1.0**
PBDV *e*LR LR 11 54 59.0
comp=Z,2μm,18.0s
PBDV Barranco-do-Ve 23.97 282 *e*P **P 11 41 38.3 +0.7**
comp=Z,236nm,1.2s,mb5.5
PBDV *e*S **S 11 45 54.0 +1.0**
ELOB Lobios 23.98 293 P **P 11 41 38.2 +0.5**
comp=Z,740nm,4.2s
ELOB Lobios 23.98 293 P **P 11 41 38.2 +0.5**
comp=Z,740nm,4.2s
HTR Trewern Hill 24.00 320 *e*P **P 11 41 38.1 +0.3**
HTR Trewern Hill 24.00 320 P **P 11 41 38.1 +0.3**
HTR Trewern Hill 24.00 320 *e*P **P 11 41 38.1 +0.3**
EVOP Sao Brissos 24.01 285 *e*P **P 11 41 38.0 0.0**
EVOP AMb AMB 11 41 45.2
comp=Z,116nm,2.2s,mb4.9
EVOP *e*S **S 11 45 54.5 +0.9**
EVOP *e*S **S 11 45 54.5 +0.9**
EVOP Sao Brissos 24.01 285 *e*P **P 11 41 37.0 -1.0**
comp=Z,29nm,1.0s,mb4.7
PCVE Castro Verde 24.02 283 *e*P **P 11 41 39.3 +1.3**
comp=Z,154nm,1.6s,mb5.2
PCVE *e*S **S 11 45 57.1 +3.4**
PCVE *e*LR LR 11 54 48.8
comp=Z,3μm,20.0s
PCVE Castro Verde 24.02 283 *e*P **P 11 41 39.3 +1.3**
comp=Z,154nm,1.6s,mb5.2
PCVE *e*S **S 11 45 57.1 +3.4**
HLM1 Long Mynd 24.04 321 *e*P **P 11 41 38.8 +0.7**
HLM1 Long Mynd 24.04 321 P **P 11 41 38.8 +0.7**
HLM1 Long Mynd 24.04 321 *e*P **P 11 41 38.8 +0.7**
IPIR Pirpir 24.07 90 *e*P **P 11 41 39.6 +1.0**
IPIR Pirpir 24.07 90 *e*P **P 11 41 39.6 +1.0**
HTL Hartland 24.12 316 *e* **S 11 45 49.5 -5.6**
HTL AMS AMS 11 53 48.9
comp=Z,7μm,11.3s,MS5.4
LHO Holmfirth 24.12 324 *e*P **P 11 41 38.7 -0.1**
LHO Holmfirth 24.12 324 P **P 11 41 38.7 -0.1**
LHO Holmfirth 24.12 324 *e*P **P 11 41 38.7 -0.2**
CCA1 Carnmenellis 24.18 314 *e*P **P 11 41 41.0 +1.6**
CCA1 AMb AMB 11 41 53.3
comp=Z,126nm,2.2s,mb5.0
CCA1 AMS AMS 11 52 42.3
comp=Z,5μm,12.9s,MS5.2
CCA1 Carnmenellis 24.18 314 P **P 11 41 41.0 +1.6**
CCA1 AMb AMB 11 41 53.3
comp=Z,126nm,2.2s,mb5.0
CCA1 AMS AMS 11 52 42.3
comp=Z,5μm,12.9s
CCA1 Carnmenellis 24.18 314 *e*P **P 11 41 41.0 +1.6**

comp=Z,126nm,2.2s,mb5.0
PTOM Tomar 24.19 288 *e*P **P 11 41 39.8 +0.2**
comp=Z,84nm,1.1s,mb5.1
PTOM Tomar 24.19 288 *e*P **P 11 41 39.8 +0.2**
comp=Z,84nm,1.1s,mb5.1
IVRN Varamin 24.21 84 *e*P **P 11 41 39.2 -0.6**
IVRN Varamin 24.21 84 *e*P **P 11 41 39.2 -0.6**
HPK Haverah Park 24.27 325 *e*P **P 11 41 41.1 +0.9**
HPK AMS AMS 11 52 42.7
comp=Z,6μm,14.0s,MS5.2
HPK Haverah Park 24.27 325 P **P 11 41 41.1 +0.9**
HPK AMS AMS 11 52 42.7
comp=Z,6μm,14.0s
HPK Haverah Park 24.27 325 *e*P **P 11 41 41.1 +1.0**
PUL Pulkovo 24.33 10 *c e*P **P 11 41 41.7 +1.1**
PUL pmax pmax
comp=Z,418nm,1.2s,mb5.7
IDMV Damavand 24.34 82 *e*P **P 11 41 41.9 +0.8**
IDMV Damavand 24.34 82 *e*P **P 11 41 41.9 +0.8**
IKLH Kolahrood 24.46 88 *e*P **P 11 41 44.3 +2.1**
IKLH Kolahrood 24.46 88 *e*P **P 11 41 44.3 +2.1**
MORF Marmelete 24.53 282 *e*P **P 11 41 43.0 +0.2**
MORF *e*S **S 11 46 03.0 +0.9**
MORF Marmelete 24.53 282 *e*P **P 11 41 44.1 +1.3**
comp=Z,92nm,1.2s,mb5.2
MORF *e*S **S 11 46 10.6 +8.5**
MORF *e*LR LR 11 55 14.9
comp=Z,2μm,20.0s
MORF Marmelete 24.53 282 *e*P **P 11 41 44.1 +1.3**
comp=Z,92nm,1.2s,mb5.2
MORF *e*S **S 11 46 10.6 +8.5**
PTEO Sao Teotonio 24.57 283 *e*P **P 11 41 44.3 +1.3**
comp=Z,225nm,2.4s,mb5.3
PTEO Sao Teotonio 24.57 283 *e*P **P 11 41 44.3 +1.3**
comp=Z,225nm,2.4s,mb5.3
HFS Hagfors 24.67 350 P **P 11 41 42.3 -1.4**
comp=Z,15nm,0.5s,mb4.8,baz=156,slow=9.7,SNR=66
HFS Hagfors 24.67 350 P **P 11 41 42.3 -1.4**
HFS pmax pmax
comp=Z,15nm,0.5s
HFS Hagfors 24.67 350 P **P 11 41 42.3 -1.4**
HFA0 Hagfors New Ar 24.68 350 P **P 11 41 42.0 -1.8**
HFA0 Hagfors New Ar 24.68 350 P **P 11 41 42.0 -1.8**
PFVI Vila Bisbo 24.69 282 P **P 11 41 45.9 +1.7**
PFVI Vila Bisbo 24.69 282 *e*P **P 11 41 45.4 +1.2**
comp=Z,176nm,1.6s,mb5.3
PFVI *e*S **S 11 46 08.4 +3.8**
PFVI *e*LR LR 11 55 41.6
comp=Z,3μm,18.0s
PFVI Vila Bisbo 24.69 282 P **P 11 41 45.9 +1.7**
PFVI *e*S **S 11 46 08.4 +3.8**
EMAZ Mazaricos 24.75 296 P **P 11 41 46.3 +1.6**
comp=Z,740nm,3.8s
EMAZ Mazaricos 24.75 296 P **P 11 41 46.3 +1.7**
comp=Z,740nm,3.8s
ISFB Sefidab 24.75 85 *e*P **P 11 41 44.8 0.0**
ISFB Sefidab 24.75 85 *e*P **P 11 41 44.8 0.0**
LIS Lisbon 24.80 286 *e*P **P 11 41 45.2 0.0**
LIS AMb AMB 11 41 52.5
comp=Z,314nm,1.8s,mb5.5
LIS *e*S **S 11 46 07.2 +0.8**
LIS *e*S **S 11 46 07.2 +0.8**
LIS Lisbon 24.80 286 *e*P **P 11 41 45.0 -0.2**
LIS *e*S **S 11 46 07.2 +0.8**
PMAFR Mafra 24.89 286 *e*P **P 11 41 47.5 +1.5**
comp=Z,222nm,1.7s,mb5.4
PMAFR Mafra 24.89 286 *e*P **P 11 41 47.5 +1.5**
comp=Z,222nm,1.7s,mb5.4
IFIR Firoozkooh 24.91 82 *e*P **P 11 41 47.1 +0.9**
IFIR Firoozkooh 24.91 82 *e*P **P 11 41 47.1 +0.9**
KONO Kongsberg 24.93 345 *e*P **P 11 41 48.0 +1.9**
KONO AMb AMB 11 41 56.4
comp=Z,198nm,1.8s,mb5.3
KONO *e*S **S 11 46 11.8 +3.9**
KONO Kongsberg 24.93 345 *e*P **P 11 41 48.4 +2.3**
KONO pmax pmax
comp=Z,408nm,1.3s,mb5.8
KONO MLR MLR
comp=Z,7μm,21.0s,MS5.2
KONO Kongsberg 24.93 345 *e*P **P 11 41 48.4 +2.3**
comp=Z,408nm,1.3s,mb5.8
KONO LR LR
comp=Z,7μm,21.0s,MS5.2
KONO Kongsberg 24.93 345 *e*P **P 11 41 48.4 +2.3**
comp=Z,408nm,1.3s,mb5.8
OSL Oslo 24.97 347 *e*P **P 11 41 47.0 +0.5**
OSL AMb AMB 11 41 55.9
comp=Z,326nm,1.3s,mb5.7
OSL Oslo 24.97 347 *e*P **P 11 41 47.0 +0.5**
comp=Z,326nm,1.3s,mb5.7
OSL Oslo 24.97 347 *e*P **P 11 41 47.0 +0.5**
comp=Z,326nm,1.3s,mb5.7,SNR=28
IGAR Gharneh 25.09 90 *e*P **P 11 41 49.1 +1.3**
XAL Allendale 25.10 326 *e*P **P 11 41 48.5 +0.8**
XAL Allendale 25.10 326 P **P 11 41 48.5 +0.8**
XAL Allendale 25.10 326 *e*P **P 11 41 48.5 +0.8**
ILAS Lasjerd 25.12 82 *e*P **P 11 41 47.6 -0.6**
ILAS Lasjerd 25.12 82 *e*P **P 11 41 47.6 -0.6**
IZEF Zefreh 25.18 88 *e*P **P 11 41 48.5 -0.2**
IZEF Zefreh 25.18 88 *e*P **P 11 41 48.5 -0.2**
ISHM Shahmirzad 25.32 81 *e*P **P 11 41 50.4 +0.5**
ISHM Shahmirzad 25.32 81 *e*P **P 11 41 50.4 +0.5**
BLS5 Blasjo 25.46 341 *e*P **P 11 41 52.5 +1.5**
BLS5 AMb AMB 11 42 02.3
comp=Z,90nm,1.1s,mb5.2
BLS5 Blasjo 25.46 341 *e*P **P 11 41 52.5 +1.5**
comp=Z,90nm,1.1s,mb5.2
BLS5 Blasjo 25.46 341 *e*P **P 11 41 52.5 +1.6**
comp=Z,90nm,1.1s,mb5.2,SNR=28
FINES FINESS Array B 25.53 5 P **P 11 41 50.4 -1.2**
comp=Z,71nm,0.9s,mb5.2,baz=180,slow=8.3,SNR=53
FINES PcP PcP 11 45 20.9 -1.5
comp=Z,6.0nm,0.6s,baz=146,slow=3.2,SNR=2.3
FINES LR LR 11 53 05.2
comp=Z,11μm,21.4s,MS5.3,baz=186,slow=40
FINES FINESS Array B 25.53 5 P **P 11 41 50.4 -1.2**
FINES 11 45 20.9
FINES pmax pmax
comp=Z,71nm,0.9s
FINES MLR MLR
comp=Z,11μm,21.4s
FINES FINESS Array B 25.53 5 P **P 11 41 50.4 -1.2**
FINES FINESS Array B 25.53 5 PcP PcP 11 45 20.9 -1.4
ECK Cauldkaine Hil 25.71 326 *e*P **P 11 41 53.5 +0.3**
ECK Cauldkaine Hil 25.71 326 P **P 11 41 53.5 +0.3**
ECK Cauldkaine Hil 25.71 326 *e*P **P 11 41 53.5 +0.3**
NAO01 NORSAR Array S 25.79 348 *e*P **P 11 41 52.8 -1.1**
comp=Z,98nm,0.8s,mb5.4
NAO01 LR LR
comp=Z,9μm,19.0s,MS5.3
NAO01 NORSAR Array S 25.79 348 *e*P **P 11 41 52.8 -1.1**
comp=Z,98nm,0.8s,mb5.4
EKA Eskdalemuir Ar 25.82 326 P **P 11 41 53.4 -0.8**
comp=Z,17nm,0.6s,mb4.8,baz=129,slow=9.6,SNR=33
EKA PcP PcP 11 45 23.8 +0.7
comp=Z,2.8nm,0.7s,baz=103,slow=2.1,SNR=3.6
EKA Eskdalemuir Ar 25.82 326 P **P 11 41 53.4 -0.8**
EKA 11 45 23.8
EKA pmax pmax
comp=Z,17nm,0.6s
EKA Eskdalemuir Ar 25.82 326 P **P 11 41 53.4 -0.8**
EKA Eskdalemuir Ar 25.82 326 PcP PcP 11 45 23.8 +0.7
ESK Eskdalemuir 25.83 326 P **P 11 41 55.7 +1.4**
comp=Z,534nm,1.0s,mb6.0,SNR=9.7
ESK Eskdalemuir 25.83 326 *e*P **P 11 41 54.8 +0.5**
ESK AMb AMB 11 42 05.5
comp=Z,94nm,1.1s,mb5.2
ESK AMS AMS 11 53 36.3
comp=Z,7μm,20.2s,MS5.2
ESK Eskdalemuir 25.83 326 P **P 11 41 54.8 +0.5**
ESK AMb AMB 11 42 05.5
comp=Z,94nm,1.1s,mb5.2
ESK AMS AMS 11 53 36.3
comp=Z,7μm,20.2s
ESK Eskdalemuir 25.83 326 *e*P **P 11 41 54.3 0.0**
ESK pmax pmax
comp=Z,111nm,0.9s,mb5.4
ESK MLR MLR
comp=Z,8μm,19.0s,MS5.3
ESK Eskdalemuir 25.83 326 *e*P **P 11 41 54.3 0.0**
comp=Z,111nm,0.9s,mb5.4
ESK LR LR
comp=Z,8μm,19.0s,MS5.3
ESK Eskdalemuir 25.83 326 *e*P **P 11 41 54.8 +0.5**
comp=Z,94nm,1.1s,mb5.2

ODD1 Odda 25.84 342 *e* **P 11 42 03.9 +10**
ODD1 Odda 25.84 342 *e*P **P 11 42 04.0 +10**
IANJ Anjilo 25.88 82 *e*P **P 11 41 53.9 -1.1**
IANJ Anjilo 25.88 82 *e*P **P 11 41 53.9 -1.1**
GCD Castle Douglas 25.90 325 *e*P **P 11 41 54.7 -0.2**
GCD Castle Douglas 25.90 325 P **P 11 41 54.7 -0.2**
GCD Castle Douglas 25.90 325 *e*P **P 11 41 54.7 -0.2**
NB2 NORSAR Subarra 25.91 348 P **P 11 41 54.2 -0.8**
comp=Z,294nm,1.2s,mb5.7,baz=160,slow=10
NB2 NORSAR Subarra 25.91 348 P **P 11 41 54.2 -0.8**
comp=Z,294nm,1.2s,mb5.7,SNR=3.1
NOA NORSAR Array B 25.91 348 P **P 11 41 53.7 -1.3**
comp=Z,9.2nm,0.7s,mb4.4,baz=158,slow=9.5,SNR=25
NOA LR LR 11 53 46.1
comp=Z,4μm,20.4s,MS4.9,baz=155,slow=40
NOA NORSAR Array B 25.91 348 P **P 11 41 53.7 -1.3**
NOA pmax pmax
comp=Z,9.0nm,0.7s
NOA MLR MLR
comp=Z,4μm,20.4s
NOA NORSAR Array B 25.91 348 P **P 11 41 53.8 -1.2**
ESY Stoneypath 25.94 328 *e*P **P 11 41 55.2 -0.2**
ESY Stoneypath 25.94 328 P **P 11 41 55.2 -0.2**
ESY Stoneypath 25.94 328 *e*P **P 11 41 55.2 -0.2**
EBL Broad Law 26.04 327 *e*P **P 11 41 56.1 -0.2**
EBL Broad Law 26.04 327 P **P 11 41 56.1 -0.2**
EBL Broad Law 26.04 327 *e*P **P 11 41 56.1 -0.1**
EDI Edinburgh 26.20 327 *e*P **P 11 41 57.0 -0.6**
EDI AMb AMB 11 42 09.5
comp=Z,166nm,1.3s,mb5.4
EDI AMS AMS 11 53 58.3
comp=Z,9μm,19.5s,MS5.3
EDI Edinburgh 26.20 327 P **P 11 41 57.0 -0.6**
EDI AMb AMB 11 42 09.5
comp=Z,166nm,1.3s,mb5.4
EDI AMS AMS 11 53 58.3
comp=Z,9μm,19.5s
EDI Edinburgh 26.20 327 *e*P **P 11 41 57.0 -0.6**
comp=Z,166nm,1.3s,mb5.4
KAF Kangasniemi 26.21 5 *e*P **P 11 41 56.3 -1.4**
KAF pmax pmax
comp=Z,192nm,1.0s,mb5.6
KAF Kangasniemi 26.21 5 *e*p **P 11 41 56.3 -1.4**
comp=Z,192nm,1.0s,mb5.6
KAF Kangasniemi 26.21 5 *e*p **P 11 41 56.3 -1.4**
comp=Z,192nm,1.0s,mb5.6
KAF Kangasniemi 26.21 5 *e*P **P 11 41 56.3 -1.4**
comp=Z,192nm,1.0s,mb5.6
DSB Dublin 26.23 320 *e*P **P 11 41 58.3 +0.3**
comp=Z,58nm,1.1s,mb5.0
DSB Dublin 26.23 320 *e*P **P 11 41 58.3 +0.3**
comp=Z,58nm,1.1s,mb5.0
GAL1 Galloway 26.26 324 *e*P **P 11 41 58.5 +0.2**
GAL1 AMb AMB 11 42 13.3
comp=Z,72nm,1.2s,mb5.1
GAL1 AMS AMS 11 55 02.1
comp=Z,6μm,15.4s,MS5.3
GAL1 Galloway 26.26 324 P **P 11 41 58.5 +0.2**
GAL1 AMb AMB 11 42 13.3
comp=Z,72nm,1.2s,mb5.1
GAL1 AMS AMS 11 55 02.1
comp=Z,6μm,15.4s
GAL1 Galloway 26.26 324 *e*P **P 11 41 58.5 +0.3**
comp=Z,72nm,1.2s,mb5.1
EAU Auchinoon 26.26 327 *e*P **P 11 41 58.8 +0.6**
EAU Auchinoon 26.26 327 P **P 11 41 58.8 +0.6**
EAU Auchinoon 26.26 327 *e*P **P 11 41 58.8 +0.6**
GMM Mts of Mourne 26.52 322 *e*P **P 11 42 02.0 +1.4**
GMM Mts of Mourne 26.52 322 P **P 11 42 02.0 +1.4**
GMM Mts of Mourne 26.52 322 *e*P **P 11 42 02.0 +1.4**
EBH Black Hill 26.54 328 *e*P **P 11 42 00.8 +0.1**
EBH Black Hill 26.54 328 P **P 11 42 00.8 +0.1**
EBH Black Hill 26.54 328 *e*P **P 11 42 00.8 +0.1**
ISAD Sadrabad 26.56 90 *e*P **P 11 42 01.0 -0.2**
ISAD Sadrabad 26.56 90 *e*P **P 11 42 01.0 -0.2**
BER Bergen 26.58 341 *e*P **P 11 42 04.5 +3.4**
BER *e*S **S 11 46 36.3 +2.3**
BER AMS AMS 11 54 48.5
comp=Z,9μm,12.1s,MS5.5
PGBU Glenifferbraes 26.71 326 *e*P **P 11 42 02.5 +0.3**
PGBU AMb AMB 11 42 18.4
comp=Z,88nm,3.1s
PGBU AMS AMS 11 54 12.7
comp=Z,6μm,20.4s,MS5.1
PGBU Glenifferbraes 26.71 326 P **P 11 42 02.5 +0.3**
PGBU AMb AMB 11 42 18.4
comp=Z,88nm,3.1s
PGBU AMS AMS 11 54 12.7
comp=Z,6μm,20.4s
IPAR Pars 26.74 94 *e*P **P 11 42 03.4 +0.6**
IPAR Pars 26.74 94 *e*P **P 11 42 03.4 +0.6**
IMOK Mouk 26.77 96 *e*P **P 11 42 03.1 0.0**
IMOK Mouk 26.77 96 *e*Pn **P 11 42 03.1 0.0**
EAB Aberfoyle 26.87 327 *e*P **P 11 42 03.2 -0.5**
EAB Aberfoyle 26.87 327 P **P 11 42 03.2 -0.5**
EAB Aberfoyle 26.87 327 *e*P **P 11 42 03.2 -0.5**
ISRV Sarvestan 26.97 95 *e*P **P 11 42 05.3 +0.4**
ISRV Sarvestan 26.97 95 *e*P **P 11 42 05.3 +0.4**
MME1 Meikle Cairn 27.00 330 *e*P **P 11 42 05.0 +0.1**
MME1 Meikle Cairn 27.00 330 P **P 11 42 05.0 +0.1**
MME1 Meikle Cairn 27.00 330 *e*P **P 11 42 05.0 +0.1**
ICHK Chekchek 27.05 89 *e*P **P 11 42 05.1 -0.5**
ICHK Chekchek 27.05 89 *e*P **P 11 42 05.1 -0.5**
MCD Coleburn Disti 27.29 330 *e*P **P 11 42 06.7 -0.8**
MCD Coleburn Disti 27.29 330 P **P 11 42 06.7 -0.8**
MCD Coleburn Disti 27.29 330 *e*P **P 11 42 06.7 -0.8**
IMEH Mehriz 27.48 90 *e*P **P 11 42 09.7 +0.3**
IMEH Mehriz 27.48 90 *e*P **P 11 42 09.7 +0.3**
JOF Joensuu 27.50 9 *e*P **P 11 42 07.8 -1.5**
JOF pmax pmax
comp=Z,44nm,0.5s,mb5.2
JOF Joensuu 27.50 9 *e*p **P 11 42 07.8 -1.5**
comp=Z,44nm,0.5s,mb5.2
JOF Joensuu 27.50 9 *e*p **P 11 42 07.8 -1.5**
comp=Z,44nm,0.5s,mb5.2
JOF Joensuu 27.50 9 *e*P **P 11 42 07.8 -1.5**
FOO Floro 27.70 343 *e*S **S 11 46 56.7 +5.1**
FOO AMS AMS 11 55 23.5
comp=Z,10μm,14.9s,MS5.5
FOO Floro 27.70 343 PFAKE 11 42 20.0 +8.9
FOO LR LR
comp=Z,10μm,14.9s,MS5.5
MVH1 Achvaich 27.89 330 *e*P **P 11 42 12.8 -0.1**
MVH1 Achvaich 27.89 330 P **P 11 42 12.8 -0.1**
MVH1 Achvaich 27.89 330 *e*P **P 11 42 12.8 -0.1**
KSB Sheil Bridge 27.97 328 *e*P **P 11 42 13.4 -0.1**
KSB Sheil Bridge 27.97 328 P **P 11 42 13.4 -0.1**
KSB Sheil Bridge 27.97 328 *e*P **P 11 42 13.4 -0.1**
KAR1 Arisaig 27.97 327 *e*P **P 11 42 13.1 -0.5**
KAR1 Arisaig 27.97 327 P **P 11 42 13.1 -0.5**
KAR1 Arisaig 27.97 327 *e*P **P 11 42 13.1 -0.5**
KPL Plockton 28.14 328 *e*P **P 11 42 14.3 -0.8**
KPL AMb AMB 11 42 27.1
comp=Z,118nm,3.4s
KPL AMS AMS 11 55 16.3
comp=Z,10μm,19.7s,MS5.4
KPL Plockton 28.14 328 P **P 11 42 14.3 -0.8**
KPL AMb AMB 11 42 27.1
comp=Z,118nm,3.4s
KPL AMS AMS 11 55 16.3
comp=Z,10μm,19.7s
KPL Plockton 28.14 328 *e*P **P 11 42 14.3 -0.8**
comp=Z,118nm,3.4s
IBAF Bafgh 28.19 89 *e*P **P 11 42 15.4 -0.4**
IBAF Bafgh 28.19 89 *e*P **P 11 42 15.4 -0.4**
ABKT Ailbek 28.83 75 P **P 11 42 21.9 +0.5**
comp=Z,352nm,0.6s,mb6.3,SNR=15
ISFR Sfrayin 28.86 77 *e*P **P 11 42 21.2 -0.5**
ISFR Sfrayin 28.86 77 *e*P **P 11 42 21.2 -0.5**
NSS Namsos 29.13 351 *e*P **P 11 42 24.1 +0.3**
NSS *e*S **S 11 47 16.5 +2.4**
NSS AMS AMS 11 54 49.8
comp=Z,5μm,21.8s,MS5.1
NSS Namsos 29.13 351 *e*P **P 11 42 24.1 +0.3**
SNR=28
NSS *e*S **S 11 47 16.5 +2.4**
SNR=28
TORD Torodi Ar. Bea 29.21 224 PcP PcP 11 45 32.6 +0.7
comp=Z,4.0nm,0.9s,baz=9.7,slow=2.7,SNR=3.1
TORD ScP ScP 11 49 13.3 +1.2
comp=Z,2.5nm,1.1s,baz=0.0,slow=2.2,SNR=2.8
TORD LR LR 11 56 26.4
comp=Z,10μm,20.1s,MS5.4,baz=10.0,slow=41
IKRD Kardeh 29.31 78 *e*P **P 11 42 35.1 +9.4**

IAKL Akhelmad 29.53 78 *e*P **P 11 42 27.4 -0.3**
DESE Dese 29.54 143 *e*P **P 11 42 31.4 +3.5**
AKTK Aktyubinsk 29.60 50 P **P 11 42 26.6 -1.5**
AKTK LR LR 11 57 11.1
AKTK Aktyubinsk 29.60 50 P **P 11 42 26.6 -1.5**
AKTO Aktyubinsk 29.60 50 P **P 11 42 26.6 -1.5**
comp=Z,10nm,0.5s,mb4.8,baz=252,slow=10,SNR=42
AKTO LR LR 11 57 11.1
comp=Z,5μm,19.9s,MS5.1,baz=58,slow=42
AKTO Aktyubinsk 29.60 50 P **P 11 42 26.7 -1.4**
AKTO pmax pmax
comp=Z,10.0nm,0.5s,mb4.8
AKTO MLR MLR
comp=Z,5μm,19.9s,MS5.1
IMOG Moghan 30.09 79 *e*P **P 11 42 31.3 -1.3**
IMOG Moghan 30.09 79 *e*P **P 11 42 31.3 -1.3**
ISRO Mashad 30.15 78 *e*P **P 11 42 32.7 -0.5**
ITEG Tejag 30.37 85 *e*P **P 11 42 35.9 +0.7**
ITEG Tejag 30.37 85 *e*P **P 11 42 35.9 +0.7**
MOR8 Moi Rana 30.47 354 *e*P **P 11 42 38.1 +2.5**
MOR8 Moi Rana 30.47 354 *e*P **P 11 42 38.1 +2.5**
SNR=27
ABKAR Akbulak array 30.55 53 *e*P **P 11 42 35.2 -1.3**
comp=Z,20nm,0.5s,mb5.2
ABKAR Akbulak array 30.55 53 *e*P **P 11 42 35.2 -1.3**
comp=Z,20nm,0.5s,mb5.2
IMYA Miami 30.65 78 *e*P **P 11 42 37.5 0.0**
IMYA Miami 30.65 78 *e*P **P 11 42 37.5 0.0**
ASUD Al Ashush, Dub 30.83 102 P **P 11 42 40.5 +1.3**
SNR=10.0
ASUD Al Ashush, Dub 30.83 102 P **P 11 42 40.5 +1.3**
SNR=10.0
ASUD Al Ashush, Dub 30.83 102 P **P 11 42 40.0 +0.8**
SNR=17
NAZ Nazwa, Dubai 30.91 101 P **P 11 42 40.7 +0.7**
SNR=18
NAZ Nazwa, Dubai 30.91 101 P **P 11 42 40.7 +0.7**
SNR=18
NAZ Nazwa, Dubai 30.91 101 P **P 11 42 40.6 +0.6**
SNR=16
FAQ Al Faqa, Dubai 30.98 102 P **P 11 42 40.9 +0.3**
SNR=23
BANOM Banah 30.98 99 P **P 11 42 40.7 +0.1**
SNR=14
HATD Hatta, Dubai 31.37 101 P **P 11 42 44.5 +0.5**
SNR=16
HATD Hatta, Dubai 31.37 101 P **P 11 42 44.5 +0.5**
SNR=16
HATD Hatta, Dubai 31.37 101 P **P 11 42 44.5 +0.5**
SNR=16
ASHO Ashiyiah 31.38 102 P **P 11 42 44.5 +0.4**
SNR=18
ASHO Ashiyiah 31.38 102 P **P 11 42 44.5 +0.4**
SNR=18
ASHO Ashiyiah 31.38 102 P **P 11 42 44.5 +0.4**
SNR=18
PMPS Porto Santo 31.55 276 *e*P **P 11 42 50.9 +5.4**
comp=Z,92nm,1.6s,mb5.4
PMPS Porto Santo 31.55 276 *e*P **P 11 42 50.9 +5.4**
comp=Z,92nm,1.6s,mb5.4
ARU Arti 31.93 39 P **P 11 42 47.3 -1.3**
comp=Z,700nm,1.0s,mb6.5,SNR=20
ARU Arti 31.93 39 *c i*P **P 11 42 47.0 -1.6**
ARU *e* 11 43 52.0
ARU *e*PPP 11 44 04.1
ARU 11 45 38.7
ARU S **S 11 47 54.8 -3.3**
ARU SSS 11 50 13.1
ARU 11 53 22.3
ARU pmax pmax
comp=Z,88nm,1.2s,mb5.5
ARU MLR MLR
comp=Z,5μm,17.0s,MS5.2
ARU Arti 31.93 39 *e*P **P 11 42 46.0 -2.6**
comp=Z,142nm,1.0s,mb5.8
ARU LR LR
comp=Z,5μm,20.0s,MS5.2
ARU Arti 31.93 39 *e*P **P 11 42 46.0 -2.6**
comp=Z,142nm,1.0s,mb5.8
PMAR Madeira 32.11 276 *e*P **P 11 42 55.9 +5.4**
comp=Z,170nm,1.8s,mb5.6
PMAR Madeira 32.11 276 *e*P **P 11 42 55.9 +5.4**
comp=Z,170nm,1.8s,mb5.6
APA Apatity 32.22 8 ⇓ *i*P **P 11 42 53.2 +2.2**
APA *i* 11 43 56.0
APA *i* S **S 11 48 04.0 +1.5**
APA *i* SS SS 11 50 02.0 -19
APA pmax pmax
comp=Z,31nm,1.0s,mb5.1
APA MLR MLR
comp=Z,9μm,11.0s,MS5.7
ARQ Araqi 32.42 103 P **P 11 42 54.2 +0.9**
SNR=12
ARQ Araqi 32.42 103 P **P 11 42 54.2 +0.9**
SNR=12
SOKR Solikamsk 32.54 33 *c i*P **P 11 42 52.2 -1.7**
SOKR S **S 11 48 02.5 -5.0**
SOKR pmax pmax
comp=Z,370nm,1.2s,mb6.2
SOKR MLR MLR
comp=Z,4μm,16.0s,MS5.2
WNDE Wendo Genet 32.62 148 *e*P **P 11 42 59.2 +4.2**
HOQ Hoqain 32.91 102 P **P 11 42 57.9 +0.3**
SNR=16
HOQ Hoqain 32.91 102 P **P 11 42 57.9 +0.3**
SNR=16
KTK1 Kautokeino 33.01 1 *e*P **P 11 42 59.5 +1.6**
KTK1 *e*S **S 11 48 16.2 +1.5**
KTK1 Kautokeino 33.01 1 *e*P **P 11 42 59.5 +1.6**
SNR=27
KTK1 *e*S **S 11 48 16.2 +1.5**
SNR=28
SVE Sverdlovsk 33.14 39 ⇑ *e*P **P 11 42 57.9 -1.3**
SVE *e*S **S 11 48 12.8 -4.2**
SVE pmax pmax
comp=Z,369nm,1.1s,mb6.2
SVE MLR MLR
comp=Z,5μm,17.0s,MS5.3
BSY Bisya 33.26 104 P **P 11 43 01.5 +0.9**
SNR=11
BSY Bisya 33.26 104 P **P 11 43 01.5 +0.9**
SNR=11
ARCES ARCESS Array B 33.58 2 P **P 11 43 02.1 -0.8**
comp=Z,26nm,0.6s,mb5.4,baz=187,slow=10,SNR=52
ARCES LR LR 11 57 42.6
comp=Z,7μm,19.1s,MS5.4,baz=85,slow=38
ARCES ARCESS Array B 33.58 2 P **P 11 43 02.1 -0.8**
ARCES pmax pmax
comp=Z,26nm,0.6s
ARCES MLR MLR
comp=Z,7μm,19.2s
ARCES ARCESS Array B 33.58 2 P **P 11 43 02.1 -0.8**
ARE0 ARCESS Array S 33.58 2 *e*P **P 11 43 00.7 -2.2**
ARE0 ARCESS Array S 33.58 2 *e*P **P 11 43 00.7 -2.2**
TRO Tromso 33.66 358 *e*P **P 11 43 05.3 +1.7**
TRO AMb AMB 11 43 14.1
comp=Z,115nm,1.3s,mb5.7
TRO *e*S **S 11 48 23.9 -0.9**
TRO AMS AMS 11 58 52.0
comp=Z,7μm,13.9s,MS5.5
TRO Tromso 33.66 358 *e*P **P 11 43 05.3 +1.7**
TRO pmax pmax
comp=Z,115nm,1.3s,mb5.7
TRO MLR MLR
comp=Z,7μm,13.9s,MS5.5
TRO Tromso 33.66 358 *e*P **P 11 43 05.3 +1.7**
comp=Z,115nm,1.3s,mb5.7
TRO LR LR
comp=Z,7μm,13.9s,MS5.5
TRO Tromso 33.66 358 *e*P **P 11 43 05.3 +1.7**
comp=Z,115nm,1.3s,mb5.7,SNR=27
SMDO Samad 33.76 103 P **P 11 43 05.2 +0.2**
SNR=16
SMDO Samad 33.76 103 P **P 11 43 05.2 +0.2**
SNR=16
KEV Kevo 33.86 3 *e*P **P 11 43 03.2 -2.1**
KEV pmax pmax
comp=Z,37nm,0.7s,mb5.4
KEV Kevo 33.86 3 *e*p **P 11 43 03.2 -2.1**
comp=Z,36nm,0.7s,mb5.4
KEV Kevo 33.86 3 *e*p **P 11 43 03.2 -2.1**
comp=Z,36nm,0.7s,mb5.4
KEV Kevo 33.86 3 *e*P **P 11 43 03.2 -2.1**
comp=Z,36nm,0.7s,mb5.4
JMDO Jabal Madar 34.16 104 P **P 11 43 08.5 0.0**
SNR=7.9

JMDO Jabal Madar 34.16 104 P **P** **11 43 08.5 0.0**
SNR=7.9
JMDO Jabal Madar 34.16 104 P **P** **11 43 08.5 0.0**
SNR=7.9
WBK Wadi Bani Khal 34.72 102 P **P** **11 43 15.7 +2.4**
SNR=12
WBK Wadi Bani Khal 34.72 102 P **P** **11 43 15.7 +2.4**
SNR=12
BRVK Borovoye 37.58 48 P **P** **11 43 37.3 -0.1**
comp=Z,799nm,0.8s,mb6.5,SNR=19
BRVK Borovoye 37.58 48 *ce*P **P** **11 43 36.9 -0.5**
BRVK pmax pmax
comp=Z,71nm,1.2s,mb5.3
BRVK Borovoye 37.58 48 *e*P **P** **11 43 36.4 -1.0**
comp=Z,188nm,1.1s,mb5.7
BRVK *e*PP PP 11 45 02.6 -0.6
BRVK LR LR
comp=Z,3μm,19.0s,MS5.1
BRVK Borovoye 37.58 48 P **P** **11 43 36.7 -0.7**
SNR=56
BRVK P 11 43 36.7
SNR=56
BRVK Borovoye 37.58 48 P **P** **11 43 36.7 -0.7**
SNR=56
BRVK P 11 43 36.7
SNR=56
BRVK Borovoye 37.58 48 *e*P **P** **11 43 36.4 -1.0**
comp=Z,188nm,1.1s,mb5.7
BRVK Borovoye 37.58 48 *e*PP PP 11 45 02.6 -0.6
BVAR Borovoye Array 37.64 48 P **P** **11 43 37.3 -0.7**
comp=Z,20nm,0.6s,mb5.0,baz=256,slow=6.0,SNR=48
BVAR Borovoye Array 37.64 48 P **P** **11 43 37.3 -0.6**
BVAR pmax pmax
comp=Z,20nm,0.6s
BVAR Borovoye Array 37.64 48 P **P** **11 43 37.3 -0.6**
CMLA Cha da Macela 37.69 287 PFAKE 11 43 50.0 +11
CMLA LR LR
comp=Z,1μm,19.0s,MS4.8
KBL Kabul 38.16 78 *e*P **P** **11 43 42.7 +0.1**
KBL pmax pmax
comp=Z,24nm,0.8s,mb5.0
KBL Kabul 38.16 78 *e*P **P** **11 43 42.7 +0.1**
comp=Z,24nm,0.8s,mb5.0
KBL Kabul 38.16 78 *e*P **P** **11 43 42.7 +0.1**
comp=Z,24nm,0.8s,mb5.0
DBIC Dimbokro 38.20 226 P **P** **11 43 43.3 +0.2**
comp=Z,67nm,0.9s,mb5.4,baz=20,slow=10.0,SNR=43
DBIC LR LR 12 01 27.9
comp=Z,6μm,18.1s,MS5.5,baz=14,slow=39
DBIC Dimbokro 38.20 226 *e*P **P** **11 43 43.4 +0.4**
DBIC *e*S **S** **11 49 32.6 -2.8**
DBIC pmax pmax
comp=Z,91nm,1.0s
DBIC MLR MLR
comp=Z,6μm,19.0s
DBIC Dimbokro 38.20 226 *e*P **P** **11 43 43.4 +0.3**
comp=Z,91nm,1.0s,mb5.5
DBIC *e*S **S** **11 49 32.6 -2.7**
DBIC LR LR
comp=Z,6μm,19.0s,MS5.5
DBIC Dimbokro 38.20 226 *e*P **P** **11 43 43.4 +0.4**
comp=Z,91nm,1.0s,mb5.5
TIC Toumodi 38.32 227 *e*P **P** **11 43 44.3 +0.3**
comp=Z,184nm,1.0s,mb5.8
TIC Toumodi 38.32 227 *e*P **P** **11 43 44.3 +0.3**
TIC pmax pmax
comp=Z,184nm,1.0s,mb5.8
TIC Toumodi 38.32 227 *e*P **P** **11 43 44.3 +0.3**
comp=Z,184nm,1.0s,mb5.8
KIC Kosan Boka 38.38 226 *e*P **P** **11 43 45.0 +0.4**
comp=Z,138nm,0.7s,mb5.8
KIC Kosan Boka 38.38 226 *e*P **P** **11 43 45.0 +0.4**
comp=Z,138nm,0.7s,mb5.8
JMIC Jan Mayen 38.50 345 *e*P **P** **11 43 44.8 -0.2**
JMIC *e*S **S** **11 49 43.0 +4.2**
JMIC Jan Mayen 38.50 345 LR LR 12 00 41.1
comp=Z,1μm,19.2s,MS4.8,baz=331,slow=38
JMIC Jan Mayen 38.50 345 *e*P **P** **11 43 44.8 -0.2**
SNR=26
BORG Borgarnes 38.52 332 P **P** **11 43 47.3 +2.1**
comp=Z,12nm,0.9s,mb4.6,baz=147,slow=9.2,SNR=4.7
BORG LR LR 12 01 35.0
comp=Z,4μm,18.8s,MS5.3,baz=299,slow=39
BORG Borgarnes 38.52 332 *e*P **P** **11 43 43.8 -1.4**
BORG pmax pmax
comp=Z,124nm,1.4s
BORG Borgarnes 38.52 332 *e*P **P** **11 43 43.8 -1.4**
comp=Z,124nm,1.4s,mb5.5
BORG LR LR 12 01 35.0
BORG Borgarnes 38.52 332 *e*P **P** **11 43 43.8 -1.4**
comp=Z,124nm,1.4s,mb5.5
BJO1 Bjornoya 38.55 359 *e*P **P** **11 43 47.6 +2.3**
BJO1 LR LR
comp=Z,3μm,15.7s,MS5.3
BJO1 Bjornoya 38.55 359 *e*P **P** **11 43 47.6 +2.3**
BJO Bjornoya 38.55 359 *e*P **P** **11 43 47.6 +2.3**
BJO *e*S **S** **11 49 42.1 +2.6**
BJO AMS AMS 12 03 38.9
comp=Z,3μm,15.7s,MS5.3
BJO Bjornoya 38.55 359 *e*P **P** **11 43 47.6 +2.3**
SNR=26
BJO *e*S **S** **11 49 42.1 +2.7**
SNR=27
LIC Lamto 38.66 226 *e*P **P** **11 43 47.4 +0.5**
comp=Z,231nm,0.7s,mb6.0
LIC Lamto 38.66 226 *e*P **P** **11 43 47.4 +0.5**
comp=Z,231nm,0.7s,mb6.0
KMBO Kilima Mbogo 39.65 156 *e*P **P** **11 43 57.7 +2.5**
KMBO pmax pmax
comp=Z,15nm,1.1s
KMBO MLR MLR
comp=Z,4μm,20.0s
KMBO Kilima Mbogo 39.65 156 *e*P **P** **11 43 57.7 +2.5**
comp=Z,15nm,1.1s,mb4.6
KMBO LR LR
comp=Z,4μm,20.0s,MS5.2
KMBO Kilima Mbogo 39.65 156 *e*P **P** **11 43 57.7 +2.5**
comp=Z,15nm,1.1s,mb4.6
EKS2 Erkin-Say 40.07 64 P **P** **11 43 58.6 +0.1**
SNR=40
EKS2 Erkin-Say 40.07 64 *e*P **P** **11 43 58.6 +0.2**
comp=Z,114nm,1.0s,mb5.6
EKS2 LR LR
comp=Z,3μm,19.0s,MS5.2
EKS2 Erkin-Say 40.07 64 *e*P **P** **11 43 58.6 +0.1**
comp=Z,114nm,1.0s,mb5.6
AML Almayashu 40.09 65 *e*P **P** **11 43 59.1 +0.5**
comp=Z,35nm,0.9s,mb5.1
AML LR LR
comp=Z,3μm,21.0s,MS5.1
AML Almayashu 40.09 65 P **P** **11 43 58.7 +0.1**
SNR=13
USP Ospenovka 40.51 63 P **P** **11 44 01.1 -1.0**
SNR=17
AAK Ala-Archa 40.60 64 P **P** **11 44 03.2 +0.4**
comp=Z,718nm,0.9s,mb6.3,SNR=14
AAK Ala-Archa 40.60 64 P **P** **11 44 03.1 +0.2**
SNR=29
AAK Ala-Archa 40.60 64 P **P** **11 44 03.6 +0.8**
baz=223,slow=7.0
AAK LR LR 12 04 07.9
comp=Z,3μm,20.3s,MS5.2,baz=279,slow=41
AAK Ala-Archa 40.60 64 P **P** **11 44 03.6 +0.8**
FRU Bishkek 40.66 64 *e*P **P** **11 44 02.0 -1.3**
FRU *e*S **S** **11 50 13.0 +1.2**
FRU pmax pmax
comp=Z,360nm,2.0s,mb5.7
FRU smax
comp=E,520nm,2.3s
UCH Uchtor 40.68 65 P **P** **11 44 03.9 +0.5**
SNR=22
UCH Uchtor 40.68 65 *e*P **P** **11 44 03.9 +0.4**
comp=E,50nm,1.0s,mb5.1
UCH LR LR
comp=Z,3μm,20.0s,MS5.1
UCH Uchtor 40.68 65 *e*P **P** **11 44 03.9 +0.4**
comp=Z,50nm,1.0s,mb5.1
CHMS Chumysh 40.73 64 P **P** **11 44 03.8 -0.1**
SNR=23
KBK Karagaybulak 40.93 64 P **P** **11 44 05.9 +0.4**
SNR=24
KZA Kyzart 41.24 65 P **P** **11 44 09.0 +0.8**
SNR=43
TKM2 Tokmak 2 41.36 64 P **P** **11 44 08.9 -0.2**
SNR=38
TKM2 Tokmak 2 41.36 64 *e*P **P** **11 44 08.8 -0.3**
TKM2 pmax pmax
comp=Z,64nm,0.9s,mb5.2
TKM2 MLR MLR
comp=Z,1μm,20.0s,MS4.8
TKM2 Tokmak 2 41.36 64 *e*P **P** **11 44 08.8 -0.3**
comp=Z,64nm,0.9s,mb5.2
TKM2 LR LR
comp=Z,1μm,20.0s,MS4.8
TKM2 Tokmak 2 41.36 64 *e*P **P** **11 44 08.8 -0.3**
comp=Z,64nm,0.9s,mb5.2
SCO Scoresbysund 41.56 339 *i*P **P** **11 44 08.6 -1.8**
SCO *i*S **S** **11 50 31.1 +6.5**
SCO pmax pmax
comp=Z,44nm,1.0s,mb5.0
SCO MLR MLR
comp=Z,2μm,22.0s,MS5.0
SCO Scoresbysund 41.56 339 *i*P **P** **11 44 08.6 -1.8**
comp=Z,44nm,1.0s,mb5.0
SCO *i*S **S** **11 50 31.1 +6.5**
SCO
comp=Z,2μm,22.0s
SCO Scoresbysund 41.56 339 *i*P **P** **11 44 08.7 -1.7**
comp=Z,44nm,1.0s,mb5.0,SNR=25
ULHL Ulahol 41.94 64 P **P** **11 44 14.5 +0.6**
SNR=17
AAA Alma-Ata 42.28 63 *i*P **P** **11 44 17.0 +0.4**
AAA *i*S **S** **11 50 33.0 -2.8**
AAA pmax pmax
comp=Z,1μm,5.2s
AAA smax
comp=N,2μm,11.0s
AAA MLR MLR
comp=Z,2μm,18.0s,MS5.0
SPITS Spitsbergen Ar 42.28 358 P **P** **11 44 16.1 -0.1**
comp=Z,27nm,0.5s,mb5.1,baz=156,slow=11,SNR=50
SPITS LR LR 12 03 53.7
comp=Z,3μm,20.3s,MS5.2,baz=155,slow=39
SPITS Spitsbergen Ar 42.28 358 P **P** **11 44 16.1 -0.1**
SPITS pmax pmax
comp=Z,27nm,0.5s
SPITS MLR MLR
comp=Z,3μm,20.3s
SPITS Spitsbergen Ar 42.28 358 P **P** **11 44 16.1 -0.1**
KSH Kashi 42.29 68⇑ *i*P **P** **11 44 15.8 -0.9**
KSH pP pP 11 44 20.3 -3.6
KSH sP sP 11 44 22.8 -4.0
KSH PP PP 11 45 55.8 +1.1
KSH PcP PcP 11 46 12.4 +2.2
KSH ScP ScP 11 50 00.9 +1.6
KSH PcS PcS 11 50 02.6 +0.6
KSH S **S** **11 50 32.3 -3.8**
KSH SS SS 11 53 33.3 -11
KSH ScS ScS 11 54 16.3 -0.9
KSH pmax pmax
comp=Z,38nm,1.1s,mb4.9
KSH pmax pmax
comp=Z,800nm,5.8s
KSH LR LR
comp=N,2μm,15.9s
KSH LR LR
comp=E,750nm,10.8s
KSH LR LR
comp=Z,780nm,9.8s
JASL Jaisalmer 42.34 88 *e*PKP **P** **11 44 16.2 -1.1**
KURK Kurchatov 42.65 52 P **P** **11 44 18.1 -1.4**
comp=Z,375nm,1.1s,mb6.0,SNR=26
KURK Kurchatov 42.65 52 LR LR 12 04 03.3
comp=Z,2μm,20.0s,MS5.0,baz=275,slow=39
KURK Kurchatov 42.65 52 *ce*P **P** **11 44 18.3 -1.2**
KURK pmax pmax
comp=Z,31nm,0.8s,mb5.1
KURK Kurchatov 42.65 52 *e*P **P** **11 44 17.8 -1.7**
comp=Z,70nm,1.0s,mb5.3
KURK LR LR
comp=Z,3μm,22.0s,MS5.2
KURK Kurchatov 42.65 52 P **P** **11 44 18.4 -1.1**
SNR=38
KURK P 11 44 18.4
SNR=38
KURK Kurchatov 42.65 52 P **P** **11 44 18.4 -1.1**
SNR=38
KURK P 11 44 18.4
SNR=38
KURK Kurchatov 42.65 52 *e*P **P** **11 44 17.8 -1.7**
comp=Z,70nm,1.0s,mb5.3
KBS Kingsbay 43.17 357 *e*P **P** **11 44 25.0 +1.6**
KBS AMb AMB 11 44 35.4
comp=Z,67nm,0.8s,mb5.4
KBS *e*S **S** **11 50 49.7 +1.6**
KBS *e*SS SS 11 54 07.0 +6.1
KBS Kingsbay 43.17 357 *ce*P **P** **11 44 24.0 +0.6**
KBS pmax pmax
comp=Z,93nm,1.7s,mb5.2
KBS Kingsbay 43.17 357 *e*P **P** **11 44 23.5 +0.1**
comp=Z,69nm,1.0s,mb5.3
KBS *e*PcP PcP 11 46 10.8 -1.6
KBS LR LR
comp=Z,3μm,21.0s,MS5.1
KBS Kingsbay 43.17 357 *e*P **P** **11 44 25.0 +1.6**
comp=Z,67nm,0.8s,mb5.4,SNR=25
KBS Kingsbay 43.17 357 *e*PcP PcP 11 46 10.8 -1.7
KBS *e*S **S** **11 50 49.7 +1.6**
SNR=26
THN Thein Dam 44.12 78 *e*PKP **P** **11 44 29.0 -2.6**
DAG Danmarks Havn 44.60 348⇑ *e*P **P** **11 44 34.9 0.0**
DAG pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
DAG Danmarks Havn 44.60 348⇑ *i*P **P** **11 44 34.9 0.0**
comp=Z,2.7nm,0.6s
BHK Bhakra 45.03 80 *ex* x 11 44 33.8
NVS Novosibirsk 45.30 46⇑ *i*P **P** **11 44 39.8 -0.9**
NVS *e* 11 46 31.1
NVS *i*S **S** **11 51 16.8 -2.8**
NVS pmax pmax
comp=E,127nm,1.0s
NVS pmax pmax
comp=Z,195nm,1.0s,mb5.9
NVS pmax pmax
comp=N,80nm,1.4s
NVS pmax pmax
comp=Z,132nm,2.0s,mb5.4
NVS pmax pmax
comp=N,52nm,1.8s
NVS pmax pmax
comp=E,56nm,1.5s
NVS smax
comp=N,240nm,2.0s
NVS smax
comp=E,90nm,1.8s
SDNR Sundarnagar 45.44 79 *e*PKP **P** **11 44 41.1 -1.1**
MK31 Makanchi Array 45.46 57 *e*P **P** **11 44 41.1 -1.0**
MK31 Makanchi Array 45.46 57 *e*P **P** **11 44 41.1 -1.0**
MKAR Makanchi Array 45.46 57 P **P** **11 44 41.0 -1.1**
comp=E,46nm,0.7s,mb5.4,baz=280,slow=7.0,SNR=102
MKAR LR LR 12 06 55.0
comp=E,3μm,21.1s,MS5.2,baz=267,slow=40
MKAR Makanchi Array 45.46 57 P **P** **11 44 41.0 -1.1**
MKAR pmax pmax
comp=Z,47nm,0.7s
MKAR MLR MLR
comp=Z,3μm,21.1s
MKAR Makanchi Array 45.46 57 P **P** **11 44 41.0 -1.1**
AJM Ajmer 45.56 87 *e*PKP **P** **11 44 43.5 +0.4**
AJM AMb AMB 11 44 47.8
comp=Z,58nm,1.4s,mb5.3
SMLA Simla 45.73 80 *i*P **P** **11 44 44.1 -0.4**
SMLA E 11 44 48.3
comp=Z,661nm,0.7s
SMLA *i*x x 11 51 24.4
KHET Khetri 45.83 84 *e*PKP **P** **11 44 45.4 +0.1**
KHET AMb AMB 11 44 46.7
comp=Z,48nm,1.0s,mb5.4
KHET *e*S **S** **11 51 28.8 +0.9**
ZAA0 Zalesovo Array 46.27 47 *e*P **P** **11 44 46.7 -1.7**
ZAA0 Zalesovo Array 46.27 47 *e*P **P** **11 44 46.7 -1.7**
ZALV Zalesovo Beam 46.27 47 P **P** **11 44 46.7 -1.7**
comp=Z,16nm,0.4s,mb5.3,baz=274,slow=8.2,SNR=58
ZALV LR LR 12 07 14.7
comp=Z,2μm,19.3s,MS5.0,baz=132,slow=40
ZALV Zalesovo Beam 46.27 47 P **P** **11 44 46.7 -1.7**
ZALV pmax pmax
comp=Z,16nm,0.4s,mb5.3
ZALV MLR MLR
comp=Z,2μm,19.3s,MS5.0
ZALV Zalesovo Beam 46.27 47 P **P** **11 44 46.7 -1.7**
ZALV LR LR 12 07 14.7
KLP Kalpa 46.45 79 *e*PKP **P** **11 44 50.0 -0.1**
KLP AMb AMB 11 44 51.5
comp=Z,116nm,0.8s,mb5.9
KLP *ex* x 11 51 34.8
DDI Dehra Dun 46.74 80 *e*PKP **P** **11 44 50.0 -2.4**
DDI *ex* x 11 51 48.6
SONA Sohna 46.79 83 *e*PKP **P** **11 44 52.8 0.0**
SONA AMb AMB 11 44 54.7
comp=Z,58nm,0.7s,mb5.6
SONA *ex* x 11 51 40.2
SUMG Summit 47.20 339 *e*P **P** **11 44 56.4 +0.9**
comp=Z,102nm,1.3s,mb5.6
SUMG Summit 47.20 339 *i*P **P** **11 44 55.6 +0.2**
SUMG *i*S **S** **11 51 50.8 +4.3**
SUMG Summit 47.20 339 *e*P **P** **11 44 56.4 +1.0**
comp=Z,102nm,1.3s,mb5.6
SUMG *i*S **S** **11 51 50.9 +4.4**
SNR=26
JOSI Joshimath 47.85 79 *e*PKP **P** **11 45 01.0 -0.1**
JOSI *e*S **S** **11 51 57.5 +0.7**
AGRA Agra 47.90 84 *e*PKP **P** **11 45 01.1 -0.4**
AGRA AMb AMB 11 45 01.8
comp=Z,73nm,0.4s,mb6.0
AGRA *ex* x 11 51 56.2
POO Poona 48.73 97⇑ *i*P **P** **11 45 08.5 +0.6**
comp=Z,90nm,1.0s,mb5.8
PTH Pithoragarh 48.77 80 *e*PKP **P** **11 45 08.0 -0.2**
BHPL Bhopal 49.27 89 *e*PKP **P** **11 45 12.5 +0.4**
BHPL AMb AMB 11 45 14.5
comp=Z,32nm,0.4s,mb5.7
KAD Karad 49.65 98 *e*PKP **P** **11 45 13.7 -1.3**
KAD AMb AMB 11 45 17.6
comp=Z,60nm,0.8s,mb5.7
WMQ Urumqi 49.80 60 P **P** **11 45 15.0 -0.8**
WMQ sP sP 11 45 22.0 -4.0
WMQ PP PP 11 47 10.0 -0.4
WMQ S **S** **11 52 22.0 -1.9**
WMQ ScS ScS 11 55 03.0 -2.8
WMQ SS SS 11 55 50.0 -6.2
WMQ pmax pmax
comp=Z,82nm,1.0s,mb5.7
WMQ pmax pmax
comp=Z,170nm,5.0s
WMQ LR LR
comp=N,5μm,16.0s,MS5.7
WMQ LR LR
comp=E,3μm,16.0s,MS5.7
WMQ LR LR
comp=Z,3μm,16.0s,MS5.4
SFJD Kangerlussuaq 50.63 331 P **P** **11 45 22.3 +0.5**
comp=Z,28nm,1.0s,mb5.1,baz=84,slow=6.6,SNR=7.4
SFJD Kangerlussuaq 50.63 331⇑ *i*P **P** **11 45 21.4 -0.4**
SFJD *i*S **S** **11 52 36.9 +2.1**
SFJD pmax pmax
comp=Z,20nm,1.1s,mb5.0
SFJD MLR MLR
comp=Z,4μm,19.0s,MS5.5
SFJD Kangerlussuaq 50.63 331 *e*P **P** **11 45 22.6 +0.8**
comp=Z,101nm,1.4s,mb5.6
SFJD LR LR
comp=Z,4μm,19.0s,MS5.5
SFJD Kangerlussuaq 50.63 331⇑ *i*P **P** **11 45 21.4 -0.4**
comp=Z,20nm,1.1s,mb5.0
SFJD *i*S **S** **11 52 36.9 +2.1**
SFJD
comp=Z,4μm,19.0s
SFJD Kangerlussuaq 50.63 331 *e*P **P** **11 45 22.6 +0.8**
comp=Z,101nm,1.4s,mb5.6
SFJD *i*S **S** **11 52 37.0 +2.2**
SNR=25
MSEY Mahe Island 51.26 135 PFAKE 11 45 40.0 +13
MSEY LR LR
comp=Z,1μm,22.0s,MS5.0
LSZ Lusaka 51.40 172 *e*P **P** **11 45 29.5 +1.4**
LSZ pmax pmax
comp=Z,25nm,0.9s,mb5.1
LSZ MLR MLR
comp=Z,4μm,19.0s,MS5.4
LSZ Lusaka 51.40 172 *e*P **P** **11 45 29.5 +1.4**
comp=Z,25nm,0.9s,mb5.1
LSZ LR LR
comp=Z,4μm,19.0s,MS5.4
LSZ Lusaka 51.40 172 *e*P **P** **11 45 29.5 +1.4**
comp=Z,25nm,0.9s,mb5.1
HYB Hyderabad 53.11 95 *e*P **P** **11 45 41.0 +0.1**
HYB Hyderabad 53.11 95 *i*P **P** **11 45 42.0 +1.1**
HYB Hyderabad 53.11 95 *e*P **P** **11 45 41.0 +0.1**
DMN Daman 53.49 80 *e*P **P** **11 45 43.3 -0.3**
comp=Z,564nm,1.1s,mb6.4
DMN Daman 53.49 80 *e*P **P** **11 45 43.3 -0.3**
comp=Z,564nm,1.1s,mb6.4
KKN Kakani 53.55 80 *e*P **P** **11 45 43.4 -0.6**
comp=Z,111nm,0.6s,mb6.0
KKN Kakani 53.55 80 *e*P **P** **11 45 43.4 -0.6**
KKN pmax pmax
comp=Z,111nm,0.6s,mb6.0
KKN Kakani 53.55 80 *e*P **P** **11 45 43.4 -0.6**
comp=Z,111nm,0.6s,mb6.0
PKIN Phulchoki 53.73 80 *e*P **P** **11 45 45.0 -0.4**
comp=Z,272nm,1.0s,mb6.1
PKI Pulchoki 53.74 80 *e*P **P** **11 45 45.0 -0.5**
comp=Z,285nm,0.9s,mb6.2
PKI Pulchoki 53.74 80 *e*P **P** **11 45 45.0 -0.5**
comp=Z,272nm,1.0s,mb6.1
GUN Gumba 53.97 79 *e*P **P** **11 45 46.8 -0.4**
GUN Gumba 53.97 79 *e*P **P** **11 45 46.8 -0.4**
JIRN Jiri 54.33 79 *e*P **P** **11 45 49.8 0.0**
comp=Z,19nm,0.2s,mb5.6
RAMN Ramite 54.97 80 *e*P **P** **11 45 53.4 -1.0**
comp=Z,252nm,0.9s,mb6.3
RAMN Ramite 54.97 80 *e*P **P** **11 45 53.4 -1.0**
comp=Z,252nm,0.9s,mb6.2
TSUM Tsumeb 55.12 185 *e*P **P** **11 45 56.0 +0.6**
comp=Z,10nm,0.9s,mb4.9
TSUM LR LR
comp=Z,6μm,20.0s,MS5.7
TSUM Tsumeb 55.12 185 *e*P **P** **11 45 56.0 +0.6**
comp=Z,10nm,0.9s,mb4.9
ASCN Ascension 55.51 225 PFAKE 11 46 10.0 +12
ASCN LR LR
comp=Z,2μm,19.0s,MS5.2
ODAN Odare 55.64 80 *e*P **P** **11 45 58.7 -0.6**
comp=Z,233nm,1.2s,mb6.1
ODAN Odare 55.64 80 *e*P **P** **11 45 58.7 -0.6**
comp=Z,233nm,1.2s,mb6.1
TAPN Taplejung 55.68 79 *e*P **P** **11 45 59.0 -0.5**
comp=Z,177nm,0.9s,mb6.1
TAPN Taplejung 55.68 79 *e*P **P** **11 45 59.0 -0.5**
comp=Z,177nm,0.9s,mb6.1
MOY Mondy 56.32 47 *e*P **P** **11 46 03.5 -0.2**
LSA Lhasa 57.36 75 P **P** **11 46 11.9 +0.5**
LSA pP pP 11 46 17.6 -1.3
LSA sP sP 11 46 25.5 +3.8
LSA S **S** **11 54 02.3 -4.4**
LSA pmax pmax
comp=Z,70nm,1.0s,mb5.7
LSA pmax pmax
comp=Z,500nm,8.0s
LSA LR LR
comp=N,1μm,36.0s
LSA LR LR
comp=E,1μm,25.0s
LSA LR LR
comp=Z,2μm,33.0s,MS4.9
LSA Lhasa 57.36 75 *e*P **P** **11 46 12.1 +0.7**
LSA pmax pmax
comp=Z,127nm,0.8s,mb6.0
LSA MLR MLR
comp=Z,2μm,22.0s,MS5.1
LSA Lhasa 57.36 75 *e*P **P** **11 46 12.1 +0.6**
comp=Z,127nm,0.8s,mb6.0
LSA LR LR
comp=Z,2μm,22.0s,MS5.1
LSA Lhasa 57.36 75 P **P** **11 46 12.2 +0.8**
TLY Talaya 57.88 47 *e*P **P** **11 46 14.8 0.0**
TLY *e*PPP 11 49 53.9
TLY *e*S **S** **11 54 14.0 +1.0**
TLY *e*PS 11 54 22.0
TLY *e*SSS 12 00 29.3
TLY pmax pmax
comp=Z,54nm,1.6s,mb5.3
TLY MLR MLR
comp=Z,2μm,16.0s,MS5.4
TLY Talaya 57.88 47⇑ *i*P **P** **11 46 14.3 -0.5**
TLY LR LR
comp=Z,2μm,20.0s,MS5.2
TLY Talaya 57.88 47 P **P** **11 46 15.2 +0.5**

SNR=11
TLY P 11 46 15.2
SNR=11
TLY Talaya 57.88 47 P P 11 46 15.2 +0.5
SNR=11
TLY P 11 46 15.2
SNR=11
TLY Talaya 57.88 47 P P 11 46 15.2 +0.4
SNR=11
SHEL Horse Pasture 58.00 212 PFAKE 11 46 30.0 +14
SHEL LR LR
comp=Z,1μm,19.0s,MS5.1
IRK Irkutsk 58.07 46⇓ *i*P **P 11 46 14.6 -1.5**
IRK *e*S **S 11 54 20.4 +5.0**
IRK pmax pmax
comp=Z,99nm,1.7s,mb5.6
ZAK Zakamensk 58.09 48⇓ *i*P **P 11 46 15.6 -0.7**
ZAK pmax pmax
comp=Z,15nm,1.0s,mb5.0
ABPO Ambohimpanom 59.78 152 PFAKE 11 46 40.0 +12
ABPO LR LR
comp=Z,2μm,19.0s,MS5.2
SHL Shillong 59.81 79⇑ *i*P **P 11 46 27.5 -1.1**
SHL *i* x x 11 54 37.4
GTA Gaotai 59.82 61 ⇑P **P 11 46 27.6 -0.9**
GTA pP pP 11 46 32.3 -3.6
GTA sP sP 11 46 34.8 -4.0
GTA PP PP 11 48 41.3 +1.0
GTA S **S 11 54 36.3 -2.2**
GTA SS SS 11 58 32.3 -2.1
GTA pmax pmax
comp=Z,34nm,1.7s,mb5.1
GTA pmax pmax
comp=Z,750nm,4.8s
GTA LR LR
comp=N,1μm,18.6s,MS5.2
GTA LR LR
comp=E,1μm,21.6s,MS5.2
GTA LR LR
comp=Z,2μm,20.4s,MS5.2
SCHQ Schefferville 60.80 318 P **P 11 46 34.6 -0.2**
comp=Z,21nm,1.0s,mb5.2,baz=68,slow=6.7,SNR=19
SCHQ LR LR 12 12 41.9
comp=Z,2μm,18.2s,MS5.2,baz=64,slow=36
SCHQ Schefferville 60.80 318 *e*P **P 11 46 34.7 -0.2**
comp=Z,58nm,1.1s,mb5.6
SCHQ LR LR
comp=Z,2μm,19.0s,MS5.3
SCHQ Schefferville 60.80 318 *e*P **P 11 46 34.7 -0.2**
comp=Z,58nm,1.1s,mb5.6
LBTB Lobatse 60.85 176 *e*P **P 11 46 37.2 +1.8**
LBTB pmax pmax
comp=Z,20nm,0.9s,mb5.2
LBTB MLR MLR
comp=Z,5μm,21.0s,MS5.7
LBTB Lobatse 60.85 176 *e*P **P 11 46 37.2 +1.7**
comp=Z,20nm,0.9s,mb5.2
LBTB LR LR
comp=Z,5μm,21.0s,MS5.7
LBTB Lobatse 60.85 176 *e*P **P 11 46 37.2 +1.8**
comp=Z,20nm,0.9s,mb5.2
SONM Songino Array 60.92 50 P **P 11 46 35.0 -0.9**
comp=Z,8.9nm,0.8s,mb4.9,baz=282,slow=8.3,SNR=50
SONM LR LR 12 16 23.1
comp=Z,2μm,21.3s,MS5.3,baz=293,slow=40
SONM Songino Array 60.92 50 P **P 11 46 35.0 -0.8**
SONM pmax pmax
comp=Z,9.0nm,0.8s
SONM MLR MLR
comp=Z,2μm,21.3s
SONM Songino Array 60.92 50 P **P 11 46 35.0 -0.8**
TIXI Tiksi 61.23 20 *e*P **P 11 46 36.8 -0.8**
TIXI pmax pmax
comp=Z,39nm,0.1s,mb6.5
TIXI Tiksi 61.23 20 *e*P **P 11 46 36.7 -0.8**
comp=Z,50nm,0.9s,mb5.7
TIXI LR LR
comp=Z,4μm,19.0s,MS5.6
TIXI Tiksi 61.23 20 *e*P **P 11 46 36.7 -0.9**
comp=Z,50nm,0.9s,mb5.7
ULN Ulaanbaatar 61.31 50 *e*P **P 11 46 37.8 -0.7**
ULN *e* 11 48 52.9
ULN pmax pmax
comp=Z,34nm,0.8s,mb5.5
ULN MLR MLR
comp=Z,2μm,21.0s,MS5.3
ULN Ulaanbaatar 61.31 50 *e*P **P 11 46 37.8 -0.7**
comp=Z,34nm,0.8s,mb5.5
ULN *e*PP PP 11 48 52.9 -0.3
ULN LR LR
comp=Z,2μm,21.0s,MS5.3
ULN Ulaanbaatar 61.31 50 P **P 11 46 38.2 -0.3**
SNR=23
ULN P 11 46 38.2
SNR=23
ULN Ulaanbaatar 61.31 50 P **P 11 46 38.2 -0.3**
SNR=23
ULN P 11 46 38.2
SNR=23
ULN Ulaanbaatar 61.31 50 P **P 11 46 38.2 -0.3**
SNR=23
LZH Lanzhou 64.13 63 ⇑P **P 11 46 57.8 +0.3**
LZH pP pP 11 47 01.3 -3.7
LZH sP sP 11 47 02.6 -5.2
LZH PP PP 11 49 19.3 +1.0
LZH S **S 11 55 31.3 -1.7**
LZH SS SS 11 59 38.0 -3.8
LZH pmax pmax
comp=Z,160nm,1.2s,mb5.9
LZH pmax pmax
comp=Z,680nm,5.6s
LZH LR LR
comp=N,3μm,15.2s
LZH LR LR
comp=Z,4μm,16.4s,MS5.7
DGAR Diego Garcia 64.14 122 PFAKE 11 47 10.0 +12
DGAR LR LR
comp=Z,682nm,20.0s,MS4.8
BOSA Boshof 64.41 177 P **P 11 47 00.3 +1.1**
comp=Z,11nm,0.9s,mb4.9,baz=10,slow=4.6,SNR=10
BOSA LR LR 12 16 56.3
comp=Z,6μm,20.2s,MS5.8,baz=358,slow=38
BOSA Boshof 64.41 177 P **P 11 47 00.3 +1.2**
BOSA pmax pmax
comp=Z,11nm,0.9s,mb4.9
BOSA MLR MLR
comp=Z,6μm,20.2s,MS5.8
BOSA Boshof 64.41 177 P **P 11 47 00.3 +1.1**
BOSA LR LR 12 16 56.3
BOSA Boshof 64.41 177 P **P 11 47 00.3 +1.2**
BTO Baotou 66.36 56 *e*P **P 11 47 10.6 -1.3**
YAK Yakutsk 66.38 29 *e*P **P 11 47 09.9 -1.7**
YAK *e**PP pP 11 47 21.9 +2.8
YAK *e* 11 47 40.5
YAK *e* 11 49 43.7
YAK *e*S S 11 55 53.6 -6.2
YAK *e**SS sS 11 56 17.4 +5.2
YAK *e* 11 57 07.6
YAK *e*SS SS 12 00 16.6 +0.9
YAK pmax pmax
comp=N,5.0nm,0.9s
YAK pmax pmax
comp=Z,59nm,1.0s,mb5.6
YAK pmax pmax
comp=E,19nm,1.1s
YAK pmax pmax
comp=Z,76nm,1.9s,mb5.4
YAK pmax pmax
comp=E,83nm,2.2s
YAK pmax pmax
comp=N,93nm,2.3s
YAK smax
comp=N,526nm,5.8s
YAK smax
comp=E,327nm,6.1s
YAK MLR MLR
comp=Z,1μm,15.0s,MS5.3
YAK MLR MLR
comp=N,1μm,15.0s,MS5.3
YAK MLR MLR
comp=E,591nm,12.0s,MS5.3
YAK Yakutsk 66.38 29 *e*P **P 11 47 10.1 -1.5**
comp=E,71nm,0.7s,mb5.8
YAK LR LR
comp=Z,2μm,21.0s,MS5.3
YAK Yakutsk 66.38 29 *e*P **P 11 47 10.1 -1.5**
comp=Z,71nm,0.7s,mb5.8
CD2 Chengdu 66.49 68⇑ *i*P **P 11 47 12.5 -0.3**
CD2 pP pP 11 47 17.3 -3.1
CD2 sP sP 11 47 19.8 -3.4
CD2 PP PP 11 49 41.0 +1.9
CD2 PcS 11 51 45.3
CD2 S S 11 56 00.5 -1.6
CD2 sS sS 11 56 08.4 -6.1
CD2 ScS ScS 11 57 05.6 -2.8
CD2 SS SS 12 00 18.6 -0.2
CD2 pmax pmax
comp=Z,220nm,0.8s,mb6.2
CD2 pmax pmax
comp=Z,420nm,6.2s
CD2 LR LR
comp=N,2μm,26.2s,MS5.3
CD2 LR LR
comp=E,1μm,22.6s,MS5.3
CD2 LR LR
comp=Z,1μm,23.8s,MS5.0
CLNS Chul'man 67.04 36 *e*P **P 11 47 14.4 -1.5**
CLNS *e* 11 47 40.3
CLNS *e* 11 49 39.9
CLNS *e*PPP 11 51 19.0
CLNS *e*S S 11 56 02.1 -5.9
CLNS pmax pmax
comp=E,9.0nm,1.1s
CLNS pmax pmax
comp=N,19nm,1.2s
CLNS pmax pmax
comp=Z,20nm,1.2s,mb5.0
CLNS pmax pmax
comp=E,13nm,1.4s
CLNS pmax pmax
comp=N,15nm,1.1s
CLNS pmax pmax
comp=Z,17nm,1.0s,mb5.0
CLNS smax
comp=E,317nm,10.9s
CLNS smax
comp=N,271nm,12.7s
CLNS MLR MLR
comp=E,1μm,16.0s,MS5.4
CLNS MLR MLR
comp=N,1μm,16.0s,MS5.4
CLNS MLR MLR
comp=Z,888nm,14.0s,MS5.1
HHC Hu-ho-hao-te 67.28 55 *e*P **P 11 47 17.4 -0.3**
HHC pP pP 11 47 22.1 -3.2
HHC sP sP 11 47 24.4 -3.7
HHC PcP PcP 11 47 45.8 +0.4
HHC PP PP 11 49 46.4 +0.6
HHC ScP 11 51 47.5
HHC PcS 11 51 49.6
HHC S S 11 56 09.3 -2.1
HHC sS sS 11 56 16.6 -7.3
HHC ScS ScS 11 57 11.3 -2.9
HHC SS SS 12 00 30.0 -0.7
HHC pmax pmax
comp=Z,40nm,0.9s,mb5.5
HHC pmax pmax
comp=Z,770nm,5.6s
HHC LR LR
comp=N,1μm,15.5s,MS5.4
HHC LR LR
comp=E,2μm,14.8s,MS5.4
HHC LR LR
comp=Z,1μm,12.9s,MS5.3
SUR Sutherland 68.10 181 PFAKE 11 47 40.0 +17
SUR LR LR
comp=Z,7μm,21.0s,MS5.9
HIA Hailar 68.22 44 *e*P **P 11 47 23.4 -0.1**
HIA pmax pmax
comp=Z,46nm,1.0s
HIA MLR MLR
comp=Z,2μm,20.0s
HIA Hailar 68.22 44 *e*P **P 11 47 23.4 -0.1**
comp=Z,46nm,1.0s,mb5.5
HIA LR LR
comp=Z,2μm,20.0s,MS5.3
HIA Hailar 68.22 44 *e*P **P 11 47 23.4 -0.1**
comp=Z,46nm,1.0s,mb5.5
RCBR Riachuelo 68.31 245 PFAKE 11 47 40.0 +15
RCBR LR LR
comp=Z,5μm,20.0s,MS5.7
LBNH Lisbon 68.41 310 *e*P **P 11 47 26.9 +2.1**
LBNH pmax pmax
comp=Z,144nm,1.1s,mb5.9
LBNH MLR MLR
comp=Z,1μm,20.0s,MS5.2
LBNH Lisbon 68.41 310 *e*P **P 11 47 26.9 +2.1**
comp=Z,144nm,1.1s,mb5.9
LBNH LR LR
comp=Z,1μm,20.0s,MS5.2
LBNH Lisbon 68.41 310 *e*P **P 11 47 26.9 +2.1**
comp=Z,144nm,1.1s,mb5.9
KMI Kunming 68.58 74 P **P 11 47 25.9 -0.3**
KMI pP pP 11 47 32.6 -1.1
KMI sP sP 11 47 35.5 -1.0
KMI PP PP 11 50 00.8 +3.3
KMI S S 11 56 25.9 -1.5
KMI sS sS 11 56 35.8 -4.1
KMI SKS 11 57 21.9
KMI SS SS 12 00 51.4 -0.1
KMI pmax pmax
comp=Z,55nm,0.8s,mb5.5
KMI pmax pmax
comp=Z,550nm,4.9s
KMI LR LR
comp=N,970nm,24.6s,MS5.1
KMI LR LR
comp=E,830nm,20.9s,MS5.1
KMI LR LR
comp=Z,930nm,22.2s,MS5.0
XAN Xi'an 68.76 63 P **P 11 47 26.5 -0.6**
XAN pP pP 11 47 36.8 +2.1
XAN S S 11 56 22.6 -6.7
XAN sS sS 11 56 43.3 +1.6
XAN ScS ScS 11 57 24.9 -1.1
XAN pmax pmax
comp=Z,15nm,1.3s,mb4.8
XAN pmax pmax
comp=Z,160nm,7.3s
XAN LR LR
comp=N,860nm,22.6s,MS5.0
XAN LR LR
comp=E,520nm,21.6s,MS5.0
XAN LR LR
comp=Z,500nm,21.6s,MS4.7
CHTO Chiang Mai 68.85 82 *e*P **P 11 47 27.3 -0.6**
CHTO pmax pmax
comp=Z,43nm,1.1s,mb5.3
CHTO MLR MLR
comp=Z,483nm,20.0s,MS4.7
CHTO Chiang Mai 68.85 82 *e*P **P 11 47 27.3 -0.7**
comp=Z,43nm,1.1s,mb5.3
CHTO LR LR
comp=Z,483nm,20.0s,MS4.7
CHTO Chiang Mai 68.85 82 P **P 11 47 27.5 -0.4**
SNR=15
CHTO P 11 47 27.5
SNR=15
CHTO Chiang Mai 68.85 82 P **P 11 47 27.5 -0.4**
SNR=15
CHTO P 11 47 27.5
SNR=15
CHTO Chiang Mai 68.85 82 P **P 11 47 27.5 -0.4**
CM31 Chiang Mai Arr 69.04 82 *e*P **P 11 47 28.8 -0.3**
comp=Z,23nm,0.8s,mb5.2
CM31 LR LR
comp=Z,636nm,19.0s,MS4.9
CM31 Chiang Mai Arr 69.04 82 *e*P **P 11 47 28.8 -0.3**
comp=Z,23nm,0.8s,mb5.2
CMAR Chiang Mai Arr 69.04 82 P **P 11 47 28.5 -0.6**
comp=Z,31nm,0.9s,mb5.2,baz=302,slow=7.7,SNR=102
CMAR PP PP 11 49 53.8 -7.8
comp=Z,4.3nm,0.8s,baz=296,slow=9.9,SNR=5.2
CMAR LR LR 12 22 07.3
comp=Z,799nm,21.7s,MS4.9,baz=90,slow=40
CMAR Chiang Mai Arr 69.04 82 P **P 11 47 28.5 -0.6**
BBSR BB Station 69.37 295 PFAKE 11 47 40.0 +9.0
BBSR LR LR
comp=Z,792nm,20.0s,MS5.0
TIY Taiyuan 69.41 58 *e*P **P 11 47 30.9 -0.2**
TIY S S 11 56 32.8 -4.0
TIY pmax pmax
comp=Z,620nm,5.5s
TIY LR LR
comp=N,230nm,7.8s
TIY LR LR
comp=E,870nm,12.3s
TIY LR LR
comp=Z,1μm,25.1s
LONY Lake Ozonia 69.86 311 *e*P **P 11 47 34.4 +0.6**
comp=Z,14nm,1.0s,mb4.9
LONY LR LR
comp=Z,2μm,19.0s,MS5.4
LONY Lake Ozonia 69.86 311 *e*P **P 11 47 34.4 +0.6**
comp=Z,14nm,1.0s,mb4.9
NCB Newcomb 69.97 310 PFAKE 11 47 50.0 +16
NCB LR LR
comp=Z,2μm,19.0s,MS5.3
BJI Beijing 70.74 54 P **P 11 47 38.8 -0.4**
BJI S S 11 56 52.8 +0.5
BJI pmax pmax
comp=Z,37nm,0.9s,mb5.3
BJI pmax pmax
comp=Z,630nm,5.7s
BJI LR LR
comp=N,2μm,24.7s
BJI LR LR
comp=E,1μm,19.5s
BJI LR LR
comp=Z,1μm,38.5s
BJT Baijiatuau 70.75 54 *e*P **P 11 47 38.7 -0.6**
BJT pmax pmax
comp=Z,33nm,0.7s
BJT MLR MLR
comp=Z,3μm,21.0s
BJT Baijiatuau 70.75 54 *e*P **P 11 47 38.7 -0.6**
comp=Z,33nm,0.7s,mb5.4
BJT LR LR
comp=Z,3μm,21.0s,MS5.5
BJT Baijiatuau 70.75 54 *e*P **P 11 47 38.7 -0.6**
comp=Z,33nm,0.7s,mb5.4
GYA Guiyang 70.92 71⇑ *i*P **P 11 47 39.9 -0.7**
GYA PcP PcP 11 48 01.5 +0.5
GYA PP PP 11 50 17.8 +0.1
GYA S S 11 56 50.4 -4.5
GYA SKS 11 57 39.0
GYA SS SS 12 01 23.3 -4.2
GYA pmax pmax
comp=Z,50nm,1.0s,mb5.4
GYA pmax pmax
comp=Z,390nm,9.3s
GYA LR LR
comp=N,3μm,18.5s,MS5.6
GYA LR LR
comp=E,2μm,19.1s,MS5.6
GYA LR LR
comp=Z,4μm,18.1s,MS5.7
ENH Enshi 71.08 66 *e*P **P 11 47 40.6 -0.9**
comp=Z,72nm,0.9s,mb5.6
ENH LR LR
comp=Z,1μm,20.0s,MS5.2
ENH Enshi 71.08 66 *e*P **P 11 47 40.6 -0.9**
comp=Z,72nm,0.9s,mb5.6
BINY Binghamton 72.00 309 *e*P **P 11 47 47.9 +1.0**
comp=Z,9.9nm,0.6s,mb4.9
BINY LR LR
comp=Z,1μm,19.0s,MS5.1
BINY Binghamton 72.00 309 *e*P **P 11 47 47.9 +1.1**
comp=Z,9.9nm,0.6s,mb4.9
BILL Bilibino 72.81 13⇓ *i*P **P 11 47 50.6 -0.6**
BILL *i* 11 48 02.8
BILL *e* 11 50 28.5
BILL *e*S S 11 57 16.9 +1.6
BILL *e*SS SS 12 01 54.9 +0.7
BILL pmax pmax
comp=Z,43nm,1.5s,mb5.2
BILL MLR MLR
comp=Z,2μm,17.0s,MS5.3
BILL Bilibino 72.81 13 *e*P **P 11 47 50.3 -0.9**
comp=Z,106nm,1.4s,mb5.6
BILL LR LR
comp=Z,3μm,19.0s,MS5.5
BILL Bilibino 72.81 13 *e*P **P 11 47 50.3 -0.9**
comp=Z,106nm,1.4s,mb5.6
SEY Seymchan 73.69 21 *c*e**P P 11 47 56.8 +0.4**
SEY Seymchan 73.69 21⇑ *e*P **P 11 47 56.8 +0.4**
SSPA Standing Stone 74.05 309 *e*P **P 11 47 48.1 -11**
SSPA LR LR
comp=Z,2μm,21.0s,MS5.3
SNY Shenyang 74.48 49 ⇑P **P 11 48 00.3 -1.2**
SNY S S 11 57 30.1 -4.9
SNY pmax pmax
comp=Z,21nm,1.1s,mb5.0
SNY pmax pmax
comp=Z,490nm,5.1s
SNY LR LR
comp=N,1μm,17.4s,MS5.6
SNY LR LR
comp=E,2μm,15.6s,MS5.6
SNY LR LR
comp=Z,2μm,16.2s,MS5.5
CN2 Changchun 74.49 47 *e*P **P 11 48 00.8 -0.7**
CN2 *e*PP PP 11 50 48.6 +1.1
CN2 *e*S S 11 57 29.6 -5.4
CN2 *e*SS SS 12 02 17.8 -3.1
CN2 pmax pmax
comp=Z,90nm,1.0s,mb5.7
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,600nm,17.0s,MS5.1
CN2 LR LR
comp=E,600nm,17.0s,MS5.1
CN2 LR LR
comp=Z,700nm,18.0s,MS5.0
WHN Wuhan 74.50 63 P **P 11 48 01.5 -0.3**
WHN pmax pmax
comp=Z,1μm,5.9s
WHN LR LR
comp=N,2μm,27.7s
WHN LR LR
comp=E,3μm,19.1s
WHN LR LR
comp=Z,3μm,17.7s
ERPA Erie 74.53 311 *e*P **P 11 48 02.3 +0.6**
comp=Z,20nm,0.6s,mb5.2
ERPA LR LR
comp=Z,2μm,20.0s,MS5.3
ERPA Erie 74.53 311 *e*P **P 11 48 02.3 +0.6**
comp=Z,20nm,0.6s,mb5.2
KLR Kul'dur 74.76 40 *i*P **P 11 47 58.2 -4.8**
KLR *e* 11 50 46.0
KLR *e*S S 11 57 29.0 -8.9
KLR pmax pmax
comp=E,100nm,2.0s
KLR pmax pmax
comp=Z,120nm,2.0s,mb5.5
KLR smax
comp=N,600nm,10.0s
KLR smax
comp=E,800nm,10.0s
ANWB Willy Bob 74.88 281 PFAKE 11 48 20.0 +16
ANWB LR LR
comp=Z,678nm,20.0s,MS4.9
DL2 Dalian 74.90 53⇑ *i*P **P 11 48 02.5 -1.5**
DL2 S S 11 57 34.3 -5.5
DL2 pmax pmax
comp=Z,20nm,0.9s,mb5.0
DL2 pmax pmax
comp=Z,190nm,5.4s
DL2 LR LR
comp=N,540nm,16.7s,MS5.1
DL2 LR LR
comp=E,610nm,17.5s,MS5.1
DL2 LR LR
comp=Z,750nm,18.2s,MS5.0
CBN Corbin 75.08 306 PFAKE 11 48 20.0 +15
CBN LR LR
comp=Z,2μm,21.0s,MS5.3
YKA Yellowknife Ar 75.76 341 P **P 11 48 08.0 -0.5**
comp=Z,3.6nm,0.6s,mb4.5,baz=36,slow=5.6,SNR=32
YKA PP PP 11 50 54.8 -3.0
comp=Z,5.5nm,1.0s,baz=23,slow=7.3,SNR=3.5
YKA Yellowknife Ar 75.76 341 P **P 11 48 08.0 -0.5**
YKA PP PP 11 50 54.8 -3.0
YKA Yellowknife Ar 75.76 341 P **P 11 48 08.0 -0.5**
MCWV Mont Chateau 75.84 309 *e*P **P 11 48 09.8 +0.4**

comp=Z,18nm,0.8s,mb5.0
MCWV LR LR
comp=Z,2μm,21.0s,MS5.4
MCWV Mont Chateau 75.84 309 *e*P **P 11 48 09.8 +0.5**
comp=Z,18nm,0.8s,mb5.0
FDF Fort de France 75.99 278 PFAKE 11 48 20.0 +9.5
FDF LR LR
comp=Z,595nm,20.0s,MS4.9
MDJ Mudanjiang 76.41 44 P **P 11 48 12.0 -0.5**
MDJ pP pP 11 48 15.3 -4.8
MDJ sP sP 11 48 16.4 -6.5
MDJ PcP PcP 11 48 24.0 -0.2
MDJ PP PP 11 51 00.3 -3.4
MDJ S S 11 57 53.3 -3.0
MDJ ScS ScS 11 58 26.3 -0.2
MDJ pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
MDJ pmax pmax
comp=Z,340nm,6.5s
MDJ LR LR
comp=N,1μm,19.4s,MS5.5
MDJ LR LR
comp=E,2μm,16.1s,MS5.5
MDJ LR LR
comp=Z,1μm,16.1s,MS5.3
MDJ Mudanjiang 76.41 44 *e*P **P 11 48 11.4 -1.1**
comp=Z,24nm,1.1s,mb5.0
MDJ LR LR
comp=Z,1μm,20.0s,MS5.2
MDJ Mudanjiang 76.41 44 *e*P **P 11 48 11.4 -1.1**
comp=Z,24nm,1.1s,mb5.0
AAM Ann Arbor 76.63 313 PFAKE 11 48 30.0 +16
AAM LR LR
comp=Z,2μm,22.0s,MS5.5
COLD Coldfoot 76.86 357 *e*P **P 11 48 14.3 -0.2**
comp=Z,37nm,1.0s,mb5.3
COLD Coldfoot 76.86 357 *e*P **P 11 48 14.4 -0.2**
comp=Z,37nm,1.0s,mb5.3
NJ2 Nanjing 76.88 60 *e*P **P 11 48 15.1 -0.3**
NJ2 pP pP 11 48 20.3 -2.7
NJ2 sP sP 11 48 22.8 -3.0
NJ2 PP PP 11 51 08.1 0.0
NJ2 S S 11 57 59.8 -2.1
NJ2 pmax pmax
comp=Z,30nm,1.0s,mb5.2
NJ2 pmax pmax
comp=Z,560nm,5.0s
NJ2 LR LR
comp=N,2μm,19.6s,MS5.3
NJ2 LR LR
comp=E,720nm,24.2s,MS5.3
NJ2 LR LR
comp=Z,10μm,23.9s,MS6.1
HABR Khabarovsk 76.94 39 *c*e*P **P 11 48 13.8 -1.6**
HABR *e**PP pP 11 48 25.2 +2.2
HABR *e*S S 11 57 57.9 -4.0
HABR *e**SS sS 11 58 18.5 +4.0
HABR *e*SS SS 12 02 55.0 -2.7
HABR *e*SSS 12 06 19.1
HABR pmax pmax
comp=E,50nm,2.0s
HABR pmax pmax
comp=Z,64nm,2.0s,mb5.2
HABR pmax pmax
comp=N,27nm,1.8s
HABR MLR MLR
comp=Z,1μm,18.0s,MS5.2
CNNC Cliffs of the 77.10 304 PFAKE 11 48 30.0 +13
CNNC LR LR
comp=Z,942nm,19.0s,MS5.1
QIZ Qiongzhong 77.39 76 P **P 11 48 18.6 +0.2**
QIZ S S 11 58 00.8 -6.9
QIZ pmax pmax
comp=Z,40nm,1.3s,mb5.2
QIZ pmax pmax
comp=Z,410nm,7.0s
QIZ LR LR
comp=N,590nm,22.0s,MS4.9
QIZ LR LR
comp=E,260nm,19.4s,MS4.9
QIZ LR LR
comp=Z,620nm,16.6s,MS5.0
QIZ Qiongzhong 77.39 76 *e*P **P 11 48 18.0 -0.5**
comp=Z,39nm,1.1s,mb5.2
QIZ LR LR
comp=Z,656nm,19.0s,MS5.0
QIZ Qiongzhong 77.39 76 *e*P **P 11 48 18.0 -0.4**
comp=Z,39nm,1.1s,mb5.2
COWI Conover 77.41 318 *e*P **P 11 48 18.4 +0.4**
comp=Z,41nm,1.0s,mb5.3
COWI LR LR
comp=Z,1μm,22.0s,MS5.2
COWI Conover 77.41 318 *e*P **P 11 48 18.5 +0.4**
comp=Z,41nm,1.0s,mb5.3
ACSO Alum Creek Sta 77.46 311 PFAKE 11 48 30.0 +12
ACSO LR LR
comp=Z,1μm,19.0s,MS5.3
EYMN Ely 77.46 321 *e*P **P 11 48 18.0 -0.4**
comp=Z,30nm,1.3s,mb5.1
EYMN LR LR
comp=Z,2μm,20.0s,MS5.5
EYMN Ely 77.46 321 *e*P **P 11 48 18.0 -0.3**
comp=Z,30nm,1.3s,mb5.1
FFC Flin Flon 77.58 330 P **P 11 48 19.3 +0.4**
comp=Z,180nm,1.4s,mb5.8,SNR=16
FFC Flin Flon 77.58 330 *i*P **P 11 48 19.6 +0.7**
FFC Flin Flon 77.58 330 *e*P **P 11 48 19.0 +0.1**
comp=Z,55nm,1.3s,mb5.3
FFC LR LR
comp=Z,2μm,20.0s,MS5.5
FFC Flin Flon 77.58 330 *e*P **P 11 48 19.0 +0.1**
comp=Z,55nm,1.3s,mb5.3
BLA Blacksburg 77.63 307 PFAKE 11 48 30.0 +11
BLA LR LR
comp=Z,1μm,19.0s,MS5.3
KULM Kulim 77.76 92 P **P 11 48 20.0 -0.6**
KULM Kulim 77.76 92 *e*P **P 11 48 20.0 -0.5**
comp=Z,43nm,1.1s,mb5.3
KULM Kulim 77.76 92 *e*P **P 11 48 20.0 -0.6**
comp=Z,43nm,1.1s,mb5.3
PSI Prapat 77.82 95 P **P 11 48 20.8 -0.1**
comp=Z,17nm,0.8s,mb5.0,baz=280,slow=8.9,SNR=7.4
PSI Prapat 77.82 95 P **P 11 48 20.8 -0.1**
PSI pmax pmax
comp=Z,17nm,0.8s,mb5.0
PSI Prapat 77.82 95 P **P 11 48 20.8 -0.1**
GRGR Grenville 77.85 276 PFAKE 11 48 30.0 +9.0
GRGR LR LR
comp=Z,401nm,20.0s,MS4.7
ULM Lac du Bonnet 78.08 325 P **P 11 48 21.4 -0.3**
comp=Z,16nm,0.9s,mb5.0,baz=41,slow=4.9,SNR=10
ULM LR LR 12 22 27.5
comp=Z,4μm,21.3s,MS5.7,baz=45,slow=35
ULM Lac du Bonnet 78.08 325 *e*P **P 11 48 21.3 -0.5**
comp=Z,33nm,1.2s,mb5.1
ULM LR LR
comp=Z,5μm,22.0s,MS5.8
ULM Lac du Bonnet 78.08 325 *e*P **P 11 48 21.3 -0.4**
comp=Z,33nm,1.2s,mb5.1
SJG San Juan 78.08 284 PFAKE 11 48 40.0 +18
SJG LR LR
comp=Z,663nm,21.0s,MS4.9
TNA Tin City 78.41 4 *e*P **P 11 48 22.9 -0.4**
comp=Z,49nm,1.1s,mb5.3
TNA Tin City 78.41 4 *e*P **P 11 48 22.9 -0.4**
comp=Z,49nm,1.1s,mb5.3
IPM Ipoh 78.54 93 P **P 11 48 24.2 -0.6**
EGAK Eagle 78.62 353 *e*P **P 11 48 24.3 -0.1**
EGAK LR LR
comp=Z,907nm,22.0s,MS5.1
EGAK Eagle 78.62 353 *e*P **P 11 48 24.3 -0.1**
VLA Vladivostok 78.64 45 *e*P **P 11 48 23.6 -1.4**
VLA *e* 11 48 33.7
VLA *e*S S 11 58 16.7 -3.8
VLA pmax pmax
comp=Z,71nm,1.1s,mb5.5
VLA MLR MLR
comp=Z,900nm,16.0s,MS5.2
INCN Inchon 78.94 52 *e*P **P 11 48 26.3 -0.4**
comp=Z,40nm,0.9s,mb5.3
INCN LR LR
comp=Z,1μm,19.0s,MS5.3
INCN Inchon 78.94 52 *e*P **P 11 48 26.3 -0.4**
comp=Z,40nm,0.9s,mb5.3
SSE Sheshan 79.06 60 P **P 11 48 24.3 -3.2**
SSE PP PP 11 51 24.8 -1.6
SSE S S 11 58 19.8 -5.6
SSE pmax pmax
comp=Z,32nm,0.7s,mb5.4
SSE pmax pmax
comp=Z,310nm,7.7s
SSE LR LR
comp=N,1μm,21.4s,MS5.3
SSE LR LR
comp=E,830nm,22.3s,MS5.3
SSE LR LR
comp=Z,840nm,19.1s,MS5.1
COLA College 79.08 356 *e*P **P 11 48 27.1 +0.2**
COLA pmax pmax
comp=Z,15nm,0.9s,mb4.9
COLA MLR MLR
comp=Z,822nm,22.0s,MS5.0
COLA College 79.08 356 *e*P **P 11 48 27.1 +0.1**
comp=Z,15nm,0.9s,mb4.9
COLA LR LR
comp=Z,822nm,22.0s,MS5.0
COLA College 79.08 356 *e*P **P 11 48 27.1 +0.2**
comp=Z,15nm,0.9s,mb4.9
AGMN Agassiz Nation 79.41 323 *e*P **P 11 48 29.2 +0.1**
comp=Z,66nm,1.8s,mb5.3
AGMN LR LR
comp=Z,3μm,22.0s,MS5.6
AGMN Agassiz Nation 79.41 323 *e*P **P 11 48 29.2 +0.1**
comp=Z,66nm,1.8s,mb5.3
FRIM Kepong 79.74 93 P **P 11 48 31.1 -0.4**
KSRS Korea Array 79.77 51 P **P 11 48 30.8 -0.4**
comp=Z,37nm,0.9s,mb5.3,baz=307,slow=4.7,SNR=61
KSRS LR LR 12 27 55.1
comp=Z,1μm,19.5s,MS5.2,baz=307,slow=39
KSRS Korea Array 79.77 51 P **P 11 48 30.8 -0.4**
KSRS pmax pmax
comp=Z,37nm,0.9s,mb5.3
KSRS MLR MLR
comp=Z,1μm,19.5s,MS5.2
NHSC New Hope 79.89 304 PFAKE 11 48 40.0 +8.0
NHSC LR LR
comp=Z,1μm,20.0s,MS5.2
BPAW Bear Paw Mtn. 80.01 357 *e*P **P 11 48 31.7 -0.4**
comp=Z,65nm,1.2s,mb5.4
BPAW Bear Paw Mtn. 80.01 357 *e*P **P 11 48 31.7 -0.4**
comp=Z,65nm,1.2s,mb5.4
TZTN Tazewell 80.04 308 P **P 11 48 36.0 +3.3**
GRTK Grand Turk 80.04 289 PFAKE 11 48 50.0 +17
GRTK LR LR
comp=Z,700nm,19.0s,MS5.0
JFWS Jewell Farm 80.06 316 *e*P **P 11 48 33.0 +0.3**
JFWS pmax pmax
comp=Z,16nm,0.8s,mb5.0
JFWS MLR MLR
comp=Z,1μm,19.0s,MS5.2
JFWS Jewell Farm 80.06 316 *e*P **P 11 48 33.0 +0.3**
comp=Z,16nm,0.8s,mb5.0
JFWS LR LR
comp=Z,1μm,19.0s,MS5.2
JFWS Jewell Farm 80.06 316 *e*P **P 11 48 33.0 +0.3**
comp=Z,16nm,0.8s,mb5.0
BLO Bloomington 80.27 312 *e*P **P 11 48 34.5 +0.6**
BLO pmax pmax
comp=Z,43nm,0.9s,mb5.4
BLO Bloomington 80.27 312 *e*P **P 11 48 34.5 +0.6**
comp=Z,43nm,0.9s,mb5.4
BLO Bloomington 80.27 312 *e*P **P 11 48 34.5 +0.6**
comp=Z,43nm,0.9s,mb5.4
MCK McKinley 80.28 356 *e*P **P 11 48 33.1 -0.4**
MCK McKinley 80.28 356 *e*P **P 11 48 33.0 -0.5**
CHUM Lake Minchumin 80.28 357 *e*P **P 11 48 33.6 +0.1**
CHUM Lake Minchumin 80.28 357 *e*P **P 11 48 33.6 +0.1**
KTH Kantishna Hill 80.56 357 *e*P **P 11 48 35.6 +0.6**
comp=Z,25nm,0.9s,mb5.2
KTH Kantishna Hill 80.56 357 *e*P **P 11 48 35.6 +0.6**
comp=Z,25nm,0.9s,mb5.2
TRF Thorofare Moun 80.63 356 *e*P **P 11 48 35.4 0.0**
comp=Z,27nm,0.9s,mb5.2
TRF Thorofare Moun 80.63 356 *e*P **P 11 48 35.3 -0.1**
comp=Z,27nm,0.9s,mb5.2
MENT Mentasta 80.67 353 *e*P **P 11 48 35.7 +0.1**
MENT Mentasta 80.67 353 *e*P **P 11 48 35.7 +0.1**
WCI Wyandotte Cave 80.72 311 *e*P **P 11 48 36.7 +0.3**
WCI pmax pmax
comp=Z,47nm,1.1s,mb5.3
WCI MLR MLR
comp=Z,2μm,19.0s,MS5.4
WCI Wyandotte Cave 80.72 311 *e*P **P 11 48 36.7 +0.3**
comp=Z,47nm,1.1s,mb5.3
WCI LR LR
comp=Z,2μm,19.0s,MS5.4
WCI Wyandotte Cave 80.72 311 *e*P **P 11 48 36.7 +0.3**
comp=Z,47nm,1.1s,mb5.3
TKL Tuckaleechee C 80.72 307 LR LR 12 25 13.1
comp=Z,2μm,21.2s,MS5.4,baz=53,slow=36
TKL Tuckaleechee C 80.72 307 *e*P **P 11 48 39.1 +2.7**
TKL Tuckaleechee C 80.72 307 *e*P **P 11 48 39.1 +2.7**
QZH Quanzhou 80.74 66 ⇑*i*P **P 11 48 35.8 -0.9**
QZH S S 11 58 39.4 -3.9
QZH pmax pmax
comp=Z,820nm,7.3s
QZH LR LR
comp=N,1μm,11.2s,MS5.5
QZH LR LR
comp=E,760nm,15.0s,MS5.5
QZH LR LR
comp=Z,2μm,16.5s,MS5.5
PAX Paxson 80.79 354 *e*P **P 11 48 35.9 -0.3**
PAX Paxson 80.79 354 *e*P **P 11 48 35.9 -0.3**
HDIL Hopedale 81.04 314 PFAKE 11 48 50.0 +12
HDIL LR LR
comp=Z,2μm,22.0s,MS5.4
PPLA Purkeypile 81.27 357 *e*P **P 11 48 39.4 +0.6**
comp=Z,51nm,0.8s,mb5.5
PPLA Purkeypile 81.27 357 *e*P **P 11 48 39.4 +0.6**
comp=Z,51nm,0.8s,mb5.5
TTA Tatalina 81.33 359 *e*P **P 11 48 39.0 -0.1**
TTA Tatalina 81.33 359 *e*P **P 11 48 39.0 -0.1**
CPCT Cooper Cave 81.33 308 *e*P **P 11 48 40.0 +0.3**
CPCT Cooper Cave 81.33 308 *e*P **P 11 48 40.0 +0.3**
SDDR Presa de Saban 81.60 287 *e*P **P 11 48 44.8 +3.4**
comp=Z,40nm,1.1s,mb5.3
SDDR LR LR
comp=Z,1μm,20.0s,MS5.2
SDDR Presa de Saban 81.60 287 *e*P **P 11 48 44.8 +3.4**
comp=Z,40nm,1.1s,mb5.3
YSS Yuzh-Sakhalins 81.79 36α *i*P **P 11 48 41.0 -0.9**
YSS *e**PP pP 11 48 50.0 +0.5
YSS *e*S S 11 58 52.0 -1.4
YSS pmax pmax
comp=Z,110nm,1.1s,mb5.7
YSS pmax pmax
comp=Z,600nm,6.0s
YSS smax
comp=E,1μm,11.0s
YSS Yuzh-Sakhalins 81.79 36 *e*P **P 11 48 41.5 -0.4**
comp=E,132nm,1.0s,mb5.8
YSS LR LR
comp=Z,524nm,19.0s,MS4.9
YSS Yuzh-Sakhalins 81.79 36 *e*P **P 11 48 41.5 -0.4**
comp=Z,132nm,1.0s,mb5.8
GOGA Godfrey 81.90 305 *e*P **P 11 48 43.6 +0.9**
GOGA pmax pmax
comp=Z,17nm,1.2s,mb4.8
GOGA MLR MLR
comp=Z,1μm,22.0s,MS5.3
GOGA Godfrey 81.90 305 *e*P **P 11 48 43.6 +0.9**
comp=Z,17nm,1.2s,mb4.8
GOGA LR LR
comp=Z,1μm,22.0s,MS5.3
GOGA Godfrey 81.90 305 *e*P **P 11 48 43.6 +0.9**
comp=Z,17nm,1.2s,mb4.8
SCIA State Center 82.37 317 PFAKE 11 49 00.0 +15
SCIA LR LR
comp=Z,2μm,19.0s,MS5.5
PMR Palmer 82.42 356 *e*P **P 11 48 44.8 -0.1**
PMR pmax pmax
comp=Z,58nm,1.4s,mb5.3
PMR Palmer 82.42 356 *e*P **P 11 48 44.8 -0.1**
comp=Z,58nm,1.4s,mb5.3
PMR Palmer 82.42 356 *e*P **P 11 48 44.8 -0.1**
comp=Z,58nm,1.4s,mb5.3
BMRM Bremner River 82.69 353 *e*P **P 11 48 46.4 +0.1**
comp=Z,28nm,0.8s,mb5.3
BMRM Bremner River 82.69 353 *e*P **P 11 48 46.3 0.0**
comp=Z,28nm,0.8s,mb5.3
SIUC Southern Illin 82.83 312 *e*P **P 11 48 47.2 -0.3**
comp=Z,52nm,1.1s,mb5.5
SIUC Southern Illin 82.83 312 *e*P **P 11 48 47.2 -0.3**
comp=Z,52nm,1.1s,mb5.5
TATO Taipei 82.85 64 PFAKE 11 49 00.0 +12
TATO LR LR
comp=Z,1μm,20.0s,MS5.2
ECSD EROS Data Cent 82.94 320 *e*P **P 11 48 48.2 +0.2**
comp=Z,49nm,1.3s,mb5.4
ECSD LR LR
comp=Z,2μm,20.0s,MS5.5
ECSD EROS Data Cent 82.94 320 *e*P **P 11 48 48.2 +0.2**
comp=Z,49nm,1.3s,mb5.4
YHNB Yeheng 82.95 65 *e*P **P 11 48 48.5 +0.2**
comp=Z,34nm,0.8s,mb5.4
YHNB LR LR
comp=Z,387nm,22.0s,MS4.7
YHNB Yeheng 82.95 65 *e*P **P 11 48 48.5 +0.2**
comp=Z,34nm,0.8s,mb5.4
RC01 Rabbit Creek A 82.95 356 *e*P **P 11 48 47.6 0.0**
RC01 Rabbit Creek A 82.95 356 *e*P **P 11 48 47.6 -0.1**
SKAG Skagway 82.98 349 *e*P **P 11 48 49.5 +1.7**
comp=Z,58nm,1.5s,mb5.4
SKAG Skagway 82.98 349 *e*P **P 11 48 49.5 +1.7**
comp=Z,58nm,1.5s,mb5.4
WVT Waverly 83.00 310 PFAKE 11 49 00.0 +12
WVT LR LR
comp=Z,2μm,21.0s,MS5.5
DGMT Dagmar 83.15 327 ⇑P **P 11 48 50.2 +1.3**
baz=83
DGMT Dagmar 83.15 327 *e*P **P 11 48 49.4 +0.5**
comp=Z,119nm,1.6s,mb5.7
DGMT LR LR
comp=Z,2μm,20.0s,MS5.5
DGMT Dagmar 83.15 327 *e*P **P 11 48 49.4 +0.5**
comp=Z,119nm,1.6s,mb5.7
SVW2 Sparrevohn 83.16 359 *e*P **P 11 48 49.3 +0.5**
SVW2 Sparrevohn 83.16 359 *e*P **P 11 48 49.3 +0.5**
TPUB Ta-pu 83.21 66 *e*P **P 11 48 49.6 -0.1**
comp=Z,20nm,1.0s,mb5.1
TPUB Ta-pu 83.21 66 *e*P **P 11 48 49.6 -0.1**
comp=Z,20nm,1.0s,mb5.1
PEA0B Petropavlovsk- 83.23 25 *e*P **P 11 48 47.2 -2.0**
PEA0B Petropavlovsk- 83.23 25 *e*P **P 11 48 47.2 -2.1**
PETK Petropavlovsk- 83.23 25 P **P 11 48 46.9 -2.4**
comp=Z,6.6nm,1.0s,mb4.6,baz=36,slow=5.5,SNR=7.4
PETK LR LR 12 33 15.9
comp=Z,1μm,19.1s,MS5.4,baz=207,slow=41
PETK Petropavlovsk- 83.23 25 P **P 11 48 46.9 -2.4**
PNL Peninsula 83.38 351 *e*P **P 11 48 50.1 +0.2**
comp=Z,43nm,0.9s,mb5.5
PNL Peninsula 83.38 351 *e*P **P 11 48 50.1 +0.2**
comp=Z,43nm,0.9s,mb5.5
FVM French Village 83.38 313 *e*P **P 11 48 50.7 +0.4**
FVM pmax pmax
comp=Z,31nm,1.0s,mb5.3
FVM French Village 83.38 313 *e*P **P 11 48 50.7 +0.4**
comp=Z,31nm,1.0s,mb5.3
FVM French Village 83.38 313 *e*P **P 11 48 50.7 +0.4**
comp=Z,31nm,1.0s,mb5.3
UTMT University of 83.50 311 *e*P **P 11 48 51.9 +0.9**
UTMT University of 83.50 311 *e*P **P 11 48 51.8 +0.8**
PET Petropavlovsk 83.63 25 *e*P **P 11 48 48.9 -2.4**
PET *e* 11 52 01.7
PET *e*S S 11 59 00.4 -12
PET *e*PS 12 00 02.8
PET pmax pmax
comp=Z,400nm,6.6s
PET pmax pmax
comp=Z,200nm,19.7s
PET pmax pmax
comp=Z,30nm,0.9s,mb5.4
PET pmax pmax
comp=Z,200nm,13.9s
PET pmax pmax
comp=Z,200nm,15.6s
PET MLR MLR
comp=Z,1μm,21.0s,MS5.3
PET MLR MLR
comp=Z,1μm,17.0s
PET Petropavlovsk 83.63 25 *e*P **P 11 48 51.3 0.0**
comp=Z,21nm,0.9s,mb5.3
PET LR LR
comp=Z,2μm,19.0s,MS5.5
PET Petropavlovsk 83.63 25 *e*P **P 11 48 51.3 0.0**
comp=Z,21nm,0.9s,mb5.3
YULB Yu-li 83.65 66 *e*P **P 11 48 52.0 0.0**
comp=Z,24nm,0.9s,mb5.3
YULB Yu-li 83.65 66 *e*P **P 11 48 52.0 0.0**
comp=Z,24nm,0.9s,mb5.3
RSO Redoubt South 83.72 357 *e*P **P 11 48 52.1 +0.4**
RSO Redoubt South 83.72 357 *e*P **P 11 48 52.1 +0.5**
DWPF Disney 83.75 300 PFAKE 11 49 00.0 +7.6
DWPF LR LR
comp=Z,544nm,19.0s,MS5.0
CCM Cathedral Cave 83.81 313 *e*P **P 11 48 52.4 -0.2**
CCM pmax pmax
comp=Z,25nm,1.1s,mb5.3
CCM MLR MLR
comp=Z,2μm,19.0s,MS5.5
CCM Cathedral Cave 83.81 313 *e*P **P 11 48 52.4 -0.1**
comp=Z,25nm,1.1s,mb5.3
CCM LR LR
comp=Z,2μm,19.0s,MS5.5
CCM Cathedral Cave 83.81 313 *e*P **P 11 48 52.4 -0.2**
comp=Z,25nm,1.1s,mb5.3
PARMO Parma 83.83 311 *e*P **P 11 48 55.4 +2.7**
PARMO Parma 83.83 311 *e*P **P 11 48 55.4 +2.7**
SEW Seward 83.92 356 *e*P **P 11 48 52.6 0.0**
comp=Z,30nm,0.9s,mb5.4
SEW Seward 83.92 356 *e*P **P 11 48 52.6 -0.1**
comp=Z,30nm,0.9s,mb5.4
GTBY Guantanamo Bay 83.99 290 PFAKE 11 49 10.0 +16
GTBY LR LR
comp=Z,672nm,21.0s,MS5.0
LRAL Lakeview Retre 84.44 307 *e*P **P 11 48 55.5 -0.3**
comp=Z,42nm,1.4s,mb5.4
LRAL LR LR
comp=Z,1μm,21.0s,MS5.3
LRAL Lakeview Retre 84.44 307 *e*P **P 11 48 55.5 -0.3**
comp=Z,42nm,1.4s,mb5.4
SKR Severo-Kuril's 84.65 27 *e*P **P 11 48 54.0 -2.6**
SKR MLR MLR
comp=N,2μm,20.0s,MS5.7
SKR MLR MLR
comp=E,2μm,20.0s,MS5.7
SKR MLR MLR
comp=Z,2μm,20.0s,MS5.6
OXF Oxford 85.02 309 *e*P **P 11 49 00.6 +1.8**
OXF pmax pmax
comp=Z,64nm,1.3s,mb5.6
OXF MLR MLR
comp=Z,2μm,20.0s,MS5.5
OXF Oxford 85.02 309 *e*P **P 11 49 00.6 +1.9**
comp=Z,64nm,1.3s,mb5.6
OXF LR LR
comp=Z,2μm,20.0s,MS5.5
OXF Oxford 85.02 309 *e*P **P 11 49 00.6 +1.8**
comp=Z,64nm,1.3s,mb5.6
A18A Metzger Ranch, 85.17 330 ⇑P **P 11 48 59.5 +0.3**
baz=85
SIT Sitka 85.27 348 *e*P **P 11 48 59.4 -0.1**
SIT pmax pmax
comp=Z,37nm,1.0s,mb5.5
SIT Sitka 85.27 348 *e*P **P 11 48 59.4 -0.2**
comp=Z,37nm,1.0s,mb5.5
SIT Sitka 85.27 348 *e*P **P 11 48 59.4 -0.1**
comp=Z,37nm,1.0s,mb5.5
LAO LASA Array 85.39 327 *e*P **P 11 49 01.3 +1.0**
comp=Z,78nm,1.3s,mb5.7
LAO LR LR
comp=Z,2μm,19.0s,MS5.6
LAO LASA Array 85.39 327 *e*P **P 11 49 01.3 +0.9**
comp=Z,78nm,1.3s,mb5.7
YUK Yuzh-Kuril'sk 85.41 37 *i*P **P 11 49 01.8 +1.3**
YUK *i*S S 11 59 26.1 -4.0
YUK *i*SS SS 12 05 00.6 -3.4
YUK pmax pmax
comp=Z,154nm,5.8s
YUK pmax pmax
comp=N,233nm,1.4s
YUK pmax pmax
comp=E,301nm,1.4s
YUK pmax pmax
comp=Z,462nm,1.4s,mb6.4
ERM Erimo 85.52 40 P **P 11 49 02.6 +1.5**
ERM MLR MLR
comp=Z,2μm,19.0s,MS5.4
ERM Erimo 85.52 40 P **P 11 49 02.6 +1.5**

B18A Beardsley Farm 85.56 330 ⇓P P **11 49 01.6 +0.5**
baz=85
BRAL Brewton 85.77 306 PFAKE 11 49 20.0 +17
BRAL LR LR
comp=Z,1µm,20.0s,MS5.2
EGMT Eagleton 85.84 330 ⇑P P **11 49 02.7 +0.1**
baz=86
EGMT Eagleton 85.84 330 eP P **11 49 03.5 +0.9**
comp=Z,89nm,1.0s,mb6.0
EGMT LR LR
comp=Z,4µm,21.0s,MS5.8
EGMT Eagleton 85.84 330 eP P **11 49 03.5 +0.9**
comp=Z,89nm,1.0s,mb6.0
B17A L&G Farms, Che 86.05 331 ⇓P P **11 49 03.5 0.0**
baz=86
KSU1 Kansas State U 86.18 317 P P **11 49 06.2 +1.7**
KSU1 LR LR
comp=Z,3µm,20.0s,MS5.6
KSU1 Kansas State U 86.18 317 P P **11 49 06.2 +1.8**
A15A Johnson Ranch, 86.25 332 ⇑P P **11 49 04.4 -0.2**
baz=86,SNR=91
B16A M & M Farms, S 86.31 331 ⇑P P **11 49 04.5 -0.4**
baz=86
RSSD Black Hills 86.35 324 eP P **11 49 05.9 +0.7**
RSSD pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
RSSD MLR MLR
comp=Z,3µm,22.0s,MS5.7
RSSD Black Hills 86.35 324 eP P **11 49 05.9 +0.8**
comp=Z,8.8nm,1.0s,mb4.9
RSSD LR LR
comp=Z,3µm,22.0s,MS5.7
RSSD Black Hills 86.35 324 eP P **11 49 05.9 +0.7**
comp=Z,8.8nm,1.0s,mb4.9
KDAK Kodiak Island 86.40 357 P P **11 49 05.2 +0.1**
comp=Z,362nm,1.6s,mb6.4,SNR=6.8
KDAK Kodiak Island 86.40 357 eP P **11 49 04.9 -0.2**
KDAK LR LR
comp=Z,877nm,20.0s,MS5.2
KDAK Kodiak Island 86.40 357 eP P **11 49 04.9 -0.2**
A14A Double T Ranch 86.51 332 ⇑P P **11 49 05.6 -0.2**
baz=86,SNR=66
D18A Linhart Farms, 86.52 329 ⇓P P **11 49 06.1 +0.2**
baz=86
C17A Wharram Farm, 86.56 330 ⇑P P **11 49 05.6 -0.5**
baz=86,SNR=19
MAJO Matsushiro 86.62 46 eP P **11 49 05.5 -1.1**
MAJO pmax pmax
comp=Z,23nm,0.9s,mb5.4
MAJO MLR MLR
comp=Z,1µm,19.0s,MS5.4
MAJO Matsushiro 86.62 46 eP P **11 49 05.5 -1.1**
comp=Z,23nm,0.9s,mb5.4
MAJO LR LR
comp=Z,1µm,19.0s,MS5.4
MAJO Matsushiro 86.62 46 eP P **11 49 05.5 -1.1**
comp=Z,23nm,0.9s,mb5.4
MAT Matsushiro 86.62 46 P P **11 49 06.0 -0.6**
MAT S S 11 59 39.0 -3.2
MJAR Matsushiro Arr 86.62 46 P P **11 49 06.3 -0.3**
comp=Z,14nm,1.0s,mb5.2,baz=309,slow=5.3,SNR=27
MJAR LR LR 12 33 31.3
comp=Z,1µm,18.9s,MS5.4,baz=330,slow=40
MJAR Matsushiro Arr 86.62 46 P P **11 49 06.3 -0.3**
UALR University of 86.66 311 eP P **11 49 06.9 0.0**
comp=Z,39nm,1.2s,mb5.5
UALR University of 86.66 311 eP P **11 49 06.9 0.0**
comp=Z,39nm,1.2s,mb5.5
B15A Bradely Ranch, 86.72 332 ⇑P P **11 49 06.3 -0.6**
baz=86,SNR=48
C16A Fuhringer Ranc 86.82 331 ⇑P P **11 49 07.0 -0.4**
baz=86,SNR=15
MTDJ Mount Denham 86.84 290 PFAKE 11 49 20.0 +12
MTDJ LR LR
comp=Z,440nm,20.0s,MS4.9
A13A Flathead Natio 86.91 333 ⇑P P **11 49 07.1 -0.7**
baz=86
D17A Six Diamond Ra 86.92 330 ⇓P P **11 49 07.3 -0.6**
baz=87,SNR=20
B14A Marquette Ranc 86.96 332 ⇓P P **11 49 07.2 -0.9**
baz=87,SNR=27
OHAK Old Harbor 86.98 357 eP P **11 49 08.4 +0.4**
OHAK Old Harbor 86.98 357 eP P **11 49 08.4 +0.4**
E18A Harlowton 87.07 329 ⇓P P **11 49 07.7 -0.9**
baz=87
C15A Salmond Ranch, 87.18 331 ⇓P P **11 49 08.0 -1.1**
baz=87,SNR=11
VBMS Vicksburg 87.23 308 eP P **11 49 10.4 +0.8**
comp=Z,65nm,0.9s,mb5.9
VBMS LR LR
comp=Z,2µm,20.0s,MS5.4
VBMS Vicksburg 87.23 308 eP P **11 49 10.4 +0.7**
comp=Z,65nm,0.9s,mb5.9
A12A Yaak River Ran 87.36 334 ⇓P P **11 49 10.2 +0.2**
baz=87
D16A Dana Ranch, Ca 87.37 330 ⇓P P **11 49 09.6 -0.5**
baz=87,SNR=43
B13A Whitefish 87.40 333 ⇑P P **11 49 09.2 -1.0**
baz=87,SNR=18
F18A Big Timber 87.51 329 ⇓P P **11 49 11.0 +0.2**
baz=87
E17A Martinsdale 87.55 330 ⇓P P **11 49 11.3 +0.4**
baz=87,SNR=23
MIAR Mount Ida 87.56 312 eP P **11 49 12.2 +0.9**
MIAR pmax pmax
comp=Z,91nm,1.5s,mb5.8
MIAR MLR MLR
comp=Z,3µm,19.0s,MS5.7
MIAR Mount Ida 87.56 312 eP P **11 49 12.2 +0.9**
comp=Z,91nm,1.5s,mb5.8
MIAR LR LR
comp=Z,3µm,19.0s,MS5.7
MIAR Mount Ida 87.56 312 eP P **11 49 12.2 +0.9**
comp=Z,91nm,1.5s,mb5.8
GCMT Greycliff 87.58 328 eP P **11 49 12.1 +1.0**
comp=Z,48nm,1.6s,mb5.5
GCMT Greycliff 87.58 328 eP P **11 49 12.1 +1.0**
comp=Z,48nm,1.6s,mb5.5
C14A Swan Lake 87.63 332 ⇓P P **11 49 11.6 +0.3**
baz=87
YBMT Yellow Bay 87.65 332 eP P **11 49 12.3 +0.9**
comp=Z,68nm,1.5s,mb5.7
YBMT Yellow Bay 87.65 332 eP P **11 49 12.3 +0.9**
comp=Z,68nm,1.5s,mb5.7
OGNE Ogallala 87.74 321 PFAKE 11 49 20.0 +8.0
OGNE LR LR
comp=Z,2µm,19.0s,MS5.5
HRY Holter Researc 87.74 330 eP P **11 49 12.9 +1.1**
comp=Z,50nm,1.4s,mb5.5
HRY Holter Researc 87.74 330 eP P **11 49 12.9 +1.0**
comp=Z,50nm,1.4s,mb5.5
D15A Lincoln 87.75 331 ⇑P P **11 49 12.0 +0.1**
baz=87,SNR=11
KSM Kuching 87.80 90 P P **11 49 14.3 +1.6**
KSM Kuching 87.80 90 eP P **11 49 14.0 +1.3**
comp=Z,32nm,1.0s,mb5.5
KSM LR LR
comp=Z,172nm,20.0s,MS4.5
KSM Kuching 87.80 90 eP P **11 49 14.0 +1.3**
comp=Z,32nm,1.0s,mb5.5
JTMT Jette 87.85 332 eP P **11 49 13.0 +0.6**
comp=Z,47nm,1.1s,mb5.6
JTMT Jette 87.85 332 eP P **11 49 13.0 +0.7**
comp=Z,47nm,1.1s,mb5.6
F17A Fitzpatrick Pl 87.91 329 ⇑P P **11 49 12.5 -0.2**
baz=88,SNR=23
G18A Lazy EL Ranch, 87.92 328 ⇑P P **11 49 13.2 +0.4**
baz=88
SWMT Swartz Lake 87.94 332 eP P **11 49 13.2 +0.4**
comp=Z,26nm,1.0s,mb5.4
SWMT Swartz Lake 87.94 332 eP P **11 49 13.2 +0.4**
comp=Z,26nm,1.0s,mb5.4
RLMT Red Lodge 87.94 328 eP P **11 49 12.8 0.0**
comp=Z,80nm,1.5s,mb5.7
RLMT LR LR
comp=Z,2µm,20.0s,MS5.6
RLMT Red Lodge 87.94 328 eP P **11 49 12.8 -0.1**
comp=Z,80nm,1.5s,mb5.7
BSMT Bassoo Peak 87.95 332 eP P **11 49 13.5 +0.6**
comp=Z,53nm,1.7s,mb5.5
BSMT Bassoo Peak 87.95 332 eP P **11 49 13.5 +0.7**
comp=Z,53nm,1.7s,mb5.5
SLMT Seeley Lake 87.96 331 eP P **11 49 13.4 +0.5**
comp=Z,91nm,1.8s,mb5.7
SLMT Seeley Lake 87.96 331 eP P **11 49 13.4 +0.5**
comp=Z,91nm,1.8s,mb5.7
C13A Hot Springs 88.01 332 ⇑P P **11 49 13.7 +0.6**
baz=88,SNR=17
CBKS Cedar Bluff 88.09 318 eP P **11 49 14.2 +0.5**
CBKS pmax pmax
comp=Z,53nm,1.2s,mb5.7
CBKS MLR MLR
comp=Z,2µm,19.0s,MS5.5
CBKS Cedar Bluff 88.09 318 eP P **11 49 14.2 +0.5**
comp=Z,53nm,1.2s,mb5.6
CBKS LR LR
comp=Z,2µm,19.0s,MS5.5
CBKS Cedar Bluff 88.09 318 eP P **11 49 14.2 +0.5**
comp=Z,53nm,1.2s,mb5.6
D14A Greenough 88.10 331 P P **11 49 13.5 -0.1**
baz=88,SNR=19
CHMT Chamberlain Mo 88.14 331 eP P **11 49 14.2 +0.4**
comp=Z,27nm,1.5s,mb5.3
CHMT Chamberlain Mo 88.14 331 eP P **11 49 14.2 +0.5**
comp=Z,27nm,1.5s,mb5.3
E15A Deer Lodge 88.30 330 ⇑P P **11 49 14.5 0.0**
baz=88,SNR=14
C12B Naegeli Ranch, 88.33 333 ⇑P P **11 49 15.2 +0.6**
baz=88
SPB Sao Paulo 88.38 239 PFAKE 11 49 30.0 +15
SPB LR LR
comp=Z,623nm,20.0s,MS5.0
F16A Kennard Place, 88.41 330 ⇑P P **11 49 13.2 -1.9**
baz=88
G17A Pierce Place, 88.41 329 ⇓P P **11 49 13.9 -1.1**
baz=88
D13A Huson 88.46 332 ⇓P P **11 49 14.6 -0.7**
baz=88,SNR=16
NEW Newport 88.46 334 eP P **11 49 14.3 -0.9**
NEW pmax pmax
comp=Z,128nm,1.7s
NEW MLR MLR
comp=Z,1µm,21.0s
NEW Newport 88.46 334 eP P **11 49 14.3 -0.9**
comp=Z,128nm,1.7s,mb5.9
NEW LR LR
comp=Z,1µm,21.0s,MS5.3
NEW Newport 88.46 334 eP P **11 49 14.3 -0.9**
comp=Z,128nm,1.7s,mb5.9
MSO Missoula 88.48 331 eP P **11 49 15.3 -0.1**
comp=Z,30nm,1.5s,mb5.3
MSO LR LR
comp=Z,945nm,19.0s,MS5.2
MSO Missoula 88.48 331 eP P **11 49 15.3 0.0**
comp=Z,30nm,1.5s,mb5.3
C11A Tepee Creek (N 88.50 333 ⇓P P **11 49 15.0 -0.4**
baz=88
BOZ Bozeman (W) 88.52 329 ⇓P P **11 49 15.8 +0.2**
baz=88,SNR=20
BOZ Bozeman (W) 88.52 329 eP P **11 49 16.4 +0.8**
BOZ pmax pmax
comp=Z,32nm,1.4s,mb5.5
BOZ MLR MLR
comp=Z,3µm,20.0s,MS5.7
BOZ Bozeman (W) 88.52 329 eP P **11 49 16.4 +0.9**
comp=Z,32nm,1.4s,mb5.5
BOZ LR LR
comp=Z,3µm,20.0s,MS5.7
BOZ Bozeman (W) 88.52 329 eP P **11 49 16.4 +0.8**
comp=Z,32nm,1.4s,mb5.5
E14A Clinton 88.64 331 ⇑P P **11 49 15.3 -0.8**
baz=88
LRM Limekiln Ridge 88.71 330 eP P **11 49 17.0 +0.5**
comp=Z,50nm,1.0s,mb5.8
LRM Limekiln Ridge 88.71 330 eP P **11 49 17.0 +0.5**
comp=Z,50nm,1.0s,mb5.8
F15A Butte 88.72 330 ⇓P P **11 49 15.8 -0.7**
baz=88,SNR=11
SBUM Sibu 88.78 88 P P **11 49 19.3 +2.0**
D12A Red Ives Fores 88.83 332 ⇑P P **11 49 16.5 -0.5**
baz=88
LKWY Lake 88.88 328 eP P **11 49 19.6 +2.3**
LKWY pmax pmax
comp=Z,17nm,1.0s,mb5.3
LKWY MLR MLR
comp=Z,3µm,19.0s,MS5.8
LKWY Lake 88.88 328 eP P **11 49 19.6 +2.3**
comp=Z,17nm,1.0s,mb5.3
LKWY LR LR
comp=Z,3µm,19.0s,MS5.8
LKWY Lake 88.88 328 eP P **11 49 19.6 +2.3**
comp=Z,17nm,1.0s,mb5.3
E13A Victor 88.89 331 P P **11 49 17.7 +0.4**
baz=88,SNR=14
G16A Moss Hill, Enn 88.93 329 ⇑P P **11 49 16.7 -0.8**
baz=89,SNR=12
YMR Madison River 89.03 328 eP P **11 49 19.2 +1.2**
comp=Z,53nm,1.4s,mb5.7
YMR Madison River 89.03 328 eP P **11 49 19.2 +1.2**
comp=Z,53nm,1.4s,mb5.7
L22A Ellis Ranch, M 89.08 324 ⇑P P **11 49 17.3 -1.0**
baz=89
H17A Grant Village 89.09 328 ⇓P P **11 49 18.9 +0.7**
baz=89
F14A Wisdom 89.09 331 ⇑P P **11 49 18.5 +0.2**
baz=89,SNR=7.1
QLMT Earthquake Lak 89.10 329 eP P **11 49 19.8 +1.5**
comp=Z,2.3nm,0.4s,mb4.9
QLMT Earthquake Lak 89.10 329 eP P **11 49 19.8 +1.5**
comp=Z,2.3nm,0.4s,mb4.9
H16A Russell Place, 89.12 329 ⇑P P **11 49 19.4 +1.0**
baz=89,SNR=12
B08A Colville Reser 89.14 335 ⇓P P **11 49 18.2 -0.2**
baz=89,SNR=9.5
DLMT Dillon 89.15 330 eP P **11 49 19.4 +0.8**
comp=Z,30nm,1.3s,mb5.5
DLMT Dillon 89.15 330 eP P **11 49 19.4 +0.9**
comp=Z,30nm,1.3s,mb5.5
YFT Old Faithful 89.15 328 eP P **11 49 21.7 +3.2**
comp=Z,63nm,1.4s,mb5.8
YFT Old Faithful 89.15 328 eP P **11 49 21.7 +3.1**
comp=Z,63nm,1.4s,mb5.8
PHWY Pilot Hill 89.17 323 eP P **11 49 19.4 +0.6**
comp=Z,29nm,1.0s,mb5.6
PHWY Pilot Hill 89.17 323 eP P **11 49 19.4 +0.7**
comp=Z,29nm,1.0s,mb5.6
G15A Dillon 89.26 330 ⇑P P **11 49 19.3 +0.2**
baz=89,SNR=10
E12A Beaver Dam Sad 89.44 332 ⇓P P **11 49 19.0 -0.9**
baz=89
K20A Yellowstone Ra 89.48 326 ⇓P P **11 49 19.7 -0.4**
baz=89,SNR=20
F13A Darby 89.49 331 ⇑P P **11 49 19.4 -0.7**
baz=89,SNR=26
L21A Rawlins 89.57 325 ⇑P P **11 49 18.9 -1.7**
baz=89,SNR=11
K19A Absolon Red Bu 89.58 326 ⇓P P **11 49 20.0 -0.6**
baz=89,SNR=11
G14A Jackson 89.59 330 ⇓P P **11 49 20.7 +0.1**
baz=89
IMW Indian Meadow 89.64 328 eP P **11 49 22.3 +1.4**
comp=Z,64nm,1.5s,mb5.7
IMW Indian Meadow 89.64 328 eP P **11 49 22.3 +1.4**
comp=Z,64nm,1.5s,mb5.7
M22A Cedar Creek Ra 89.64 324 ⇓P P **11 49 20.7 -0.3**
baz=89
MCMT McKenzie Canyo 89.69 330 eP P **11 49 22.2 +1.2**
comp=Z,9.3nm,1.3s,mb5.0
MCMT McKenzie Canyo 89.69 330 eP P **11 49 22.2 +1.1**
comp=Z,9.3nm,1.3s,mb5.0
RWWY Rawlins 89.71 325 eP P **11 49 21.0 -0.3**
comp=Z,48nm,1.4s,mb5.6
RWWY Rawlins 89.71 325 eP P **11 49 21.0 -0.3**
comp=Z,48nm,1.4s,mb5.6
LOHW Long Hollow 89.73 328 eP P **11 49 22.1 +0.8**
comp=Z,22nm,1.4s,mb5.3
LOHW Long Hollow 89.73 328 eP P **11 49 22.1 +0.8**
comp=Z,22nm,1.4s,mb5.3
OD2 Odessa Site #2 89.76 334 eP P **11 49 21.6 +0.3**
comp=Z,27nm,0.6s,mb5.8
OD2 Odessa Site #2 89.76 334 eP P **11 49 21.6 +0.2**
comp=Z,27nm,0.6s,mb5.8
H15A Lima 89.78 329 ⇓P P **11 49 22.1 +0.6**
baz=89,SNR=10.0
J18A Kendall Valley 89.79 327 ⇓P P **11 49 21.5 -0.1**
baz=89,SNR=4
M21A Separation Pea 89.85 325 ⇓P P **11 49 21.5 -0.4**
baz=90,SNR=15
F12A Elk City 89.88 332 ⇑P P **11 49 21.6 -0.3**
baz=90,SNR=30
I16A Newdale 89.89 328 ⇑P P **11 49 21.4 -0.7**
baz=90
KKM Kota Kinabalu 89.91 83 PFAKE 11 49 40.0 +17
KKM LR LR
comp=Z,607nm,20.0s,MS5.0
SNOW Snow King Moun 89.91 328 eP P **11 49 22.8 +0.7**
comp=Z,4.9nm,0.4s,mb5.2
SNOW Snow King Moun 89.91 328 eP P **11 49 22.8 +0.6**
comp=Z,4.9nm,0.4s,mb5.2
BW06 Boulder Array 89.94 327 ⇓P P **11 49 21.5 -0.8**
baz=90,SNR=17
BW06 Boulder Array 89.94 327 PFAKE 11 49 40.0 +18
BW06 LR LR
comp=Z,2µm,19.0s,MS5.6
PDAR Pinedale Array 89.94 327 P P **11 49 22.0 -0.3**
comp=Z,4.5nm,0.9s,mb4.8,baz=64,slow=3.4,SNR=28
PDAR LR LR 12 31 24.3
comp=Z,2µm,19.4s,MS5.6,baz=39,slow=37
PDAR Pinedale Array 89.94 327 P P **11 49 22.0 -0.3**
J17A Brown Place, J 89.97 328 ⇓P P **11 49 23.2 +0.7**
baz=90
TPAW Teton Pass 89.97 328 eP P **11 49 23.4 +1.0**
comp=Z,32nm,1.4s,mb5.5
TPAW epP pP 11 49 29.3 -0.9
TPAW Teton Pass 89.97 328 eP P **11 49 23.4 +1.0**
comp=Z,32nm,1.4s,mb5.5
TPAW epP pP 11 49 29.3 -0.9
L20A Wamsutter 89.99 325 ⇑P P **11 49 22.1 -0.4**
baz=90,SNR=16
DCID1 Drake Creek 89.99 328 eP P **11 49 24.5 +2.0**
comp=Z,54nm,1.2s,mb5.8
DCID1 Drake Creek 89.99 328 eP P **11 49 24.5 +2.0**
comp=Z,54nm,1.2s,mb5.8
G13A Cobalt 90.03 331 ⇓P P **11 49 22.3 -0.4**
baz=90,SNR=16
REDW Red Top Meadow 90.03 328 eP P **11 49 23.5 +0.8**
comp=Z,46nm,1.6s,mb5.6
REDW Red Top Meadow 90.03 328 eP P **11 49 23.5 +0.8**
comp=Z,46nm,1.6s,mb5.6
N22A Wattenberg Ran 90.04 324 ⇓P P **11 49 23.1 +0.3**
baz=90
H14A Leadore 90.07 330 ⇑P P **11 49 22.2 -0.7**
baz=90,SNR=17
F11A Grangeville 90.11 332 ⇑P P **11 49 21.4 -1.6**
baz=90,SNR=12
D08A Wollman Farm, 90.12 334 ⇓P P **11 49 22.5 -0.5**
baz=90
NATX Nacogdoches 90.13 310 P P **11 49 23.2 -0.2**
NATX LR LR
comp=Z,2µm,20.0s,MS5.5
JCW Jim Creek 90.14 337 eP P **11 49 22.7 -0.4**
comp=Z,8.4nm,0.5s,mb5.3
JCW Jim Creek 90.14 337 eP P **11 49 22.7 -0.4**
comp=Z,8.4nm,0.5s,mb5.3
I15A Monteview 90.21 329 ⇓P P **11 49 23.8 +0.2**
baz=90
RRI2 Red Ridge 90.25 328 eP P **11 49 23.8 +0.1**
comp=Z,55nm,1.4s,mb5.7
K18A Toltan Ranch, 90.26 327 ⇑P P **11 49 23.4 -0.4**
baz=90,SNR=14
M20A Sweetwater, Wa 90.32 325 ⇓P P **11 49 23.8 -0.3**
baz=90,SNR=24
L19A Farson 90.38 326 ⇓P P **11 49 23.5 -0.8**
baz=90,SNR=13
ISCO Idaho Springs 90.40 322 eP P **11 49 25.4 +0.9**
ISCO e*PP pP 11 49 30.3 -2.0
ISCO pmax pmax
comp=Z,20nm,1.3s,mb5.3
ISCO MLR MLR
comp=Z,2µm,20.0s,MS5.5
ISCO Idaho Springs 90.40 322 eP P **11 49 25.4 +0.9**
comp=Z,20nm,1.3s,mb5.3
ISCO epP pP 11 49 30.3 -2.0
ISCO LR LR
comp=Z,2µm,20.0s,MS5.5
ISCO Idaho Springs 90.40 322 eP P **11 49 25.4 +0.9**
comp=Z,20nm,1.3s,mb5.3
ISCO epP pP 11 49 30.3 -2.0
G12A Big Creek, Yel 90.43 331 ⇓P P **11 49 24.8 +0.2**
baz=90
J16A Bone 90.43 328 ⇑P P **11 49 24.1 -0.5**
baz=90,SNR=8.4
H13A Challis 90.47 330 ⇓P P **11 49 23.5 -1.2**
baz=90,SNR=24
WMOK Wichita Mounta 90.50 315 eP P **11 49 25.3 +0.2**
WMOK pmax pmax
comp=Z,14nm,0.9s,mb5.3
WMOK MLR MLR
comp=Z,882nm,21.0s,MS5.2
WMOK Wichita Mounta 90.50 315 eP P **11 49 25.3 +0.3**
comp=Z,14nm,0.9s,mb5.3
WMOK LR LR
comp=Z,882nm,21.0s,MS5.2
WMOK Wichita Mounta 90.50 315 eP P **11 49 25.3 +0.2**
comp=Z,14nm,0.9s,mb5.3
G11A Walters Elk Ra 90.56 332 ⇑P P **11 49 24.4 -0.8**
baz=90
N21A Black Mountain 90.58 324 ⇓P P **11 49 25.0 -0.4**
baz=90,SNR=16
AHID Auburn Hatcher 90.62 327 PFAKE 11 49 40.0 +15
AHID LR LR
comp=Z,3µm,22.0s,MS5.7
I14A Mackay 90.67 330 ⇑P P **11 49 25.1 -0.6**
baz=90
J15A Blackfoot 90.68 329 ⇓P P **11 49 25.2 -0.5**
baz=90,SNR=14
H12A Diamond D Ranc 90.72 331 ⇑P P **11 49 25.4 -0.5**
baz=90,SNR=11
M19A Rock Springs 90.76 326 ⇓P P **11 49 25.3 -0.9**
baz=90,SNR=12
L18A Fontenelle, Gr 90.83 326 ⇓P P **11 49 25.8 -0.6**
baz=90,SNR=10
N20A Spence Gulch, 90.87 325 ⇑P P **11 49 26.1 -0.6**
baz=90,SNR=28
HAWA Hanford 90.91 334 eP P **11 49 27.7 +1.0**
comp=Z,49nm,1.5s,mb5.6
HAWA LR LR
comp=Z,1µm,19.0s,MS5.3
HAWA Hanford 90.91 334 eP P **11 49 27.7 +1.0**
comp=Z,49nm,1.5s,mb5.6
RSW Rattlesnake Hi 90.92 335 eP P **11 49 28.4 +1.6**
comp=Z,41nm,1.2s,mb5.6
RSW Rattlesnake Hi 90.92 335 eP P **11 49 28.4 +1.6**
comp=Z,41nm,1.2s,mb5.6
OBC Olympics--Boni 90.95 338 P P **11 49 29.7 +2.8**
OBC Olympics--Boni 90.95 338 P P **11 49 29.7 +2.8**
I13A Wildhorse Cree 90.95 330 ⇓P P **11 49 26.7 -0.3**
baz=91,SNR=17
G10A Bishop Farm, J 90.97 332 ⇑P P **11 49 26.2 -0.8**
baz=91,SNR=13
GNW Green Mountain 90.98 337 eP P **11 49 28.6 +1.6**
comp=Z,26nm,1.5s,mb5.3
GNW Green Mountain 90.98 337 eP P **11 49 28.6 +1.6**
comp=Z,26nm,1.5s,mb5.3
H11A Donnelly 91.05 331 ⇓P P **11 49 26.7 -0.8**
baz=91
L17A Cokeville 91.06 327 ⇓P P **11 49 26.7 -0.8**
baz=91
J14A Carey 91.20 329 ⇓P P **11 49 27.8 -0.4**
baz=91
G09A Cove 91.23 333 ⇓P P **11 49 27.1 -1.2**
baz=91,SNR=10
M18A Lyman 91.24 326 ⇓P P **11 49 28.2 -0.2**
baz=91
N19A John Jarvie Ra 91.25 325 ⇑P P **11 49 27.0 -1.4**
baz=91
K15A Arbon 91.31 328 ⇑P P **11 49 28.5 -0.2**
baz=91,SNR=10
HLID Hailey 91.37 330 ⇓P P **11 49 27.9 -1.1**
baz=91
HLID Hailey 91.37 330 eP P **11 49 27.7 -1.2**
comp=Z,4.9nm,1.1s,mb4.8
HLID LR LR
comp=Z,4µm,20.0s,MS5.8
HLID Hailey 91.37 330 eP P **11 49 27.7 -1.2**
comp=Z,4.9nm,1.1s,mb4.8
LON Longmire 91.37 336 eP P **11 49 28.6 -0.3**
LON e 11 53 04.6
LON pmax pmax
comp=Z,15nm,1.2s,mb5.2
LON Longmire 91.37 336 eP P **11 49 28.6 -0.3**
comp=Z,16nm,1.2s,mb5.2
LON ePP PP 11 53 04.6 -0.9
LON Longmire 91.37 336 eP P **11 49 28.6 -0.3**
comp=Z,16nm,1.2s,mb5.2
L16A Fish Haven 91.37 327 ⇑P P **11 49 28.9 0.0**
baz=91
J13A Cove Ranch, Pi 91.41 330 ⇑P P **11 49 28.3 -0.8**
baz=91,SNR=7.8
O20A White River Ci 91.41 324 ⇓P P **11 49 28.5 -0.8**
baz=91,SNR=14
N18A Larsen Ranch, 91.42 326 ⇓P P **11 49 28.2 -1.0**
baz=91,SNR=7.7
BMO Blue Mountains 91.42 332 eP P **11 49 28.4 -0.8**

comp=Z,24nm,1.4s,mb5.3
BMO Blue Mountains 91.42 332 *e*P **P 11 49 28.4 -0.7**
comp=Z,24nm,1.4s,mb5.3
H10A Noah's Angus R 91.43 332 ⇑P **P 11 49 28.2 -1.0**
baz=91,SNR=13
NLWA Neilton Lookou 91.46 338 *e*P **P 11 49 30.1 +0.9**
comp=Z,21nm,1.4s,mb5.3
NLWA LR LR
comp=Z,3μm,19.0s,MS5.8
NLWA Neilton Lookou 91.46 338 *e*P **P 11 49 30.1 +0.8**
comp=Z,21nm,1.4s,mb5.3
I12A Atlanta 91.46 330 ⇑P **P 11 49 28.0 -1.4**
baz=91,SNR=9.2
P21A Newcastle 91.51 323 ⇓P **P 11 49 30.4 +0.7**
baz=91
SMCO Snowmass 91.55 323 *e*P **P 11 49 30.4 +0.6**
comp=Z,9.7nm,1.1s,mb5.0
SMCO Snowmass 91.55 323 *e*P **P 11 49 30.4 +0.6**
comp=Z,9.7nm,1.1s,mb5.0
G08A Pilot Rock 91.65 334 ⇓P **P 11 49 30.5 +0.3**
baz=91
I11A Placerville 91.69 331 ⇑P **P 11 49 30.3 -0.1**
baz=91,SNR=7.5
K14A Jones Ranch, D 91.69 329 ⇓P **P 11 49 31.8 +1.4**
baz=91
O19A Miners Draw (B 91.70 325 ⇑P **P 11 49 29.9 -0.6**
baz=91,SNR=11
Q22A Crested Butte, 91.76 323 ⇑P **P 11 49 31.2 +0.4**
baz=91,SNR=12
HWUT Hardware Ranch 91.76 327 PFAKE 11 49 40.0 +9.2
HWUT LR LR
comp=Z,3μm,21.0s,MS5.7
L15A Malad City 91.80 328 ⇑P **P 11 49 30.0 -0.9**
baz=91
T25A Trinidad 91.81 320 ⇑P **P 11 49 30.7 -0.4**
baz=92
I10A Payette 91.88 332 ⇑P **P 11 49 31.5 +0.3**
baz=92,SNR=9.8
J12A Stokes Ranch, 91.90 330 ⇓P **P 11 49 31.1 -0.3**
baz=92
SDCO Great Sand Dun 91.91 321 *e*P **P 11 49 31.6 +0.1**
comp=Z,18nm,1.4s,mb5.2
SDCO LR LR
comp=Z,2μm,19.0s,MS5.7
SDCO Great Sand Dun 91.91 321 *e*P **P 11 49 31.6 0.0**
comp=Z,18nm,1.4s,mb5.2
N17A Moffit Pass 91.97 326 ⇓P **P 11 49 32.1 +0.3**
baz=92
P20A De Beque 91.98 324 ⇑P **P 11 49 31.0 -0.8**
baz=92,SNR=11
K13A Stover Farm, H 91.99 329 ⇓P **P 11 49 31.1 -0.8**
baz=92
U26A Atchley Ranch, 92.02 319 ⇑P **P 11 49 31.7 -0.4**
baz=92,SNR=14
AMTX Amarillo 92.03 317 PFAKE 11 49 50.0 +18
AMTX LR LR
comp=Z,2μm,20.0s,MS5.5
M16A Huntsville 92.03 327 ⇑P **P 11 49 31.0 -1.0**
baz=92
MFID Camas Ranch 92.06 331 ⇑P **P 11 49 31.0 -1.2**
baz=92,SNR=16
HKT Hockley 92.11 310 *e*P **P 11 49 33.7 +1.1**
HKT pmax pmax
comp=Z,5.0nm,0.5s,mb5.1
HKT MLR MLR
comp=Z,2μm,20.0s,MS5.5
HKT Hockley 92.11 310 *e*P **P 11 49 33.7 +1.1**
comp=Z,5.1nm,0.5s,mb5.1
HKT LR LR
comp=Z,2μm,20.0s,MS5.5
HKT Hockley 92.11 310 *e*P **P 11 49 33.7 +1.1**
comp=Z,5.1nm,0.5s,mb5.1
Q21A Lamborn Mesa, 92.11 323 ⇓P **P 11 49 32.0 -0.4**
baz=92,SNR=8.3
O18A Roosevelt 92.14 325 ⇑P **P 11 49 31.8 -0.7**
baz=92
L14A Malta 92.14 328 ⇑P **P 11 49 32.8 +0.3**
baz=92,SNR=9.3
HVU Hansel Valley 92.15 328 *e*P **P 11 49 33.1 +0.5**
HVU pmax pmax
comp=Z,23nm,1.2s,mb5.4
HVU Hansel Valley 92.15 328 *e*P **P 11 49 33.1 +0.6**
comp=Z,23nm,1.2s,mb5.4
HVU Hansel Valley 92.15 328 *e*P **P 11 49 33.1 +0.5**
comp=Z,23nm,1.2s,mb5.4
P19A Cripple Cowboy 92.16 324 ⇑P **P 11 49 32.7 0.0**
baz=92
R22A Saguache, Gunn 92.17 322 ⇑P **P 11 49 33.5 +0.7**
baz=92
ROSC El Rosal 92.25 278 P **P 11 49 34.3 +0.8**
comp=Z,3.8nm,0.3s,mb5.1,baz=280,slow=23,SNR=4.0
ROSC El Rosal 92.25 278 P **P 11 49 34.3 +0.8**
M15A Larsen Ranch, 92.27 327 ⇓P **P 11 49 33.1 0.0**
baz=92,SNR=5.9
N16A Rees Ranch, Co 92.29 327 ⇑P **P 11 49 32.8 -0.5**
baz=92
F04A Amboy 92.29 336 ⇑P **P 11 49 32.2 -0.9**
baz=92
G06A Carlson Farm, 92.29 335 ⇓P **P 11 49 32.6 -0.6**
baz=92
VTHM Trough 92.31 334 P **P 11 49 35.2 +1.9**
VTHM Trough 92.31 334 P **P 11 49 35.2 +1.9**
I09A Lost Marbles R 92.33 332 ⇑P **P 11 49 33.5 +0.2**
baz=92
K12A Draper Farm, C 92.34 330 ⇓P **P 11 49 33.6 +0.2**
baz=92
Q20A Ridgley Place, 92.36 323 ⇑P **P 11 49 32.1 -1.5**
baz=92,SNR=9.0
U25A Circle Dot Ran 92.37 319 ⇑P **P 11 49 33.7 0.0**
baz=92,SNR=19
L13A Double Diamond 92.39 329 ⇑P **P 11 49 34.6 +0.9**
baz=92,SNR=11
J10A Berg Farm, Mel 92.42 331 ⇑P **P 11 49 32.5 -1.2**
baz=92
R21A Cimarron 92.46 323 ⇑P **P 11 49 34.7 +0.6**
baz=92
JLU Jordanelle 92.52 326 *e*P **P 11 49 35.0 +0.7**
comp=Z,40nm,1.5s,mb5.6
JLU Jordanelle 92.52 326 *e*P **P 11 49 35.0 +0.7**
comp=Z,40nm,1.5s,mb5.6
O17A Robinson Place 92.53 326 ⇑P **P 11 49 34.0 -0.4**
baz=92
CTU Camp Tracy 92.58 327 *e*P **P 11 49 35.8 +1.1**
comp=Z,25nm,1.2s,mb5.5
CTU Camp Tracy 92.58 327 *e*P **P 11 49 35.8 +1.2**
comp=Z,25nm,1.2s,mb5.5
M14A Sheep Mountain 92.62 328 ⇓P **P 11 49 34.4 -0.4**
baz=92,SNR=17
F03A Seaside 92.66 337 ⇓P **P 11 49 34.5 -0.4**
baz=92
K11A Parker Ranch, 92.68 330 ⇓P **P 11 49 35.3 +0.3**
baz=92,SNR=15
P18A Preston Nutter 92.75 325 ⇓P **P 11 49 35.1 -0.3**
baz=92,SNR=16
N15A Stansbury Isla 92.76 327 ⇑P **P 11 49 34.1 -1.3**
baz=92
L12A House Creek Ra 92.79 329 ⇓P **P 11 49 35.5 0.0**
baz=92
Q19A Hogan Spring (92.83 324 ⇓P **P 11 49 35.2 -0.5**
baz=92,SNR=7.9
J09A Fry Pan Ranch, 92.87 332 ⇑P **P 11 49 35.8 -0.1**
baz=92,SNR=33
I07A Izee 92.89 333 ⇑P **P 11 49 36.6 +0.7**
baz=92,SNR=15
V25A Rancho No Teng 92.91 319 ⇓P **P 11 49 36.3 +0.1**
baz=93
G04A Mulino 92.95 336 ⇓P **P 11 49 36.1 -0.1**
baz=93
BGU Big Grassy Mou 92.96 328 *e*P **P 11 49 37.0 +0.6**
comp=Z,35nm,1.5s,mb5.6
BGU Big Grassy Mou 92.96 328 *e*P **P 11 49 37.0 +0.7**
comp=Z,35nm,1.5s,mb5.6
R20A Redvale 93.01 323 ⇑P **P 11 49 35.7 -0.9**
baz=93,SNR=10
K10A MacKenzie Ranc 93.01 331 ⇑P **P 11 49 36.3 -0.2**
baz=93
W26A Owens Ranch, T 93.01 318 ⇑P **P 11 49 36.5 -0.2**
baz=93
L11A Cat Creek Ranc 93.08 330 ⇑P **P 11 49 36.6 -0.2**
baz=93,SNR=12
MPU Maple Canyon 93.08 326 *e*P **P 11 49 37.3 +0.4**
comp=Z,19nm,1.4s,mb5.3
MPU *e*pP pP 11 49 42.1 -2.6
MPU Maple Canyon 93.08 326 *e*P **P 11 49 37.3 +0.4**
comp=Z,19nm,1.4s,mb5.3
MPU *e*pP pP 11 49 42.1 -2.6
N14A Grayback Hills 93.09 328 ⇓P **P 11 49 36.2 -0.8**
baz=93,SNR=9.8

M13A Montello 93.09 329 ⇑P **P 11 49 37.1 +0.2**
baz=93,SNR=12
M13A Montello 93.09 329 *e*P **P 11 49 37.2 +0.3**
comp=Z,15nm,1.4s,mb5.2
M13A Montello 93.09 329 *e*P **P 11 49 37.2 +0.3**
comp=Z,15nm,1.4s,mb5.2
PV04 Paradox Valley 93.10 323 *e*P **P 11 49 37.5 +0.5**
PV04 Paradox Valley 93.10 323 *e*P **P 11 49 37.5 +0.5**
Q18A Rafter H Ranch 93.12 325 ⇓P **P 11 49 36.4 -0.7**
baz=93,SNR=6.4
S21A Coal Bank Pass 93.13 322 ⇓P **P 11 49 36.5 -0.7**
baz=93,SNR=8.6
J08A Circle Bar Ran 93.13 332 ⇓P **P 11 49 37.6 +0.5**
baz=93
PV01 Paradox Valley 93.14 323 *e*P **P 11 49 37.8 +0.5**
comp=Z,1μm,0.9s
PV01 *e*pP pP 11 49 43.4 -1.6
PV01 *e*sP sP 11 49 46.3 -1.5
PV01 Paradox Valley 93.14 323 *e*P **P 11 49 37.8 +0.6**
comp=Z,1μm,0.9s
PV01 *e*pP pP 11 49 43.3 -1.7
T22A Edith 93.19 321 P **P 11 49 38.2 +0.7**
baz=93,SNR=10.0
W25A X Bar L Ranch, 93.29 319 ⇓P **P 11 49 37.0 -1.0**
baz=93,SNR=8.3
SRU San Rafael 93.30 325 ⇓P **P 11 49 37.0 -0.9**
baz=93,SNR=14
SRU San Rafael 93.30 325 *e*P **P 11 49 37.8 -0.1**
SRU pmax pmax
comp=Z,25nm,1.3s,mb5.5
SRU San Rafael 93.30 325 *e*P **P 11 49 37.8 -0.1**
comp=Z,25nm,1.3s,mb5.5
SRU San Rafael 93.30 325 *e*P **P 11 49 37.8 -0.1**
comp=Z,25nm,1.3s,mb5.5
MSTX Muleshoe 93.31 317 ⇓P **P 11 49 38.2 +0.1**
baz=93
H04A Detroit Lake 93.31 335 ⇓P **P 11 49 37.9 +0.1**
baz=93
R19A Curley Farm, L 93.35 324 ⇑P **P 11 49 38.6 +0.4**
baz=93
U23A El Rito 93.35 320 ⇑P **P 11 49 38.5 +0.3**
baz=93
M12A Wells 93.36 329 ⇑P **P 11 49 38.9 +0.7**
baz=93,SNR=12
X26A CR and CF Fran 93.44 318 ⇓P **P 11 49 36.8 -1.9**
baz=93,SNR=6.3
DUG Dugway 93.46 327 ⇑P **P 11 49 37.9 -0.8**
baz=93
DUG Dugway 93.46 327 *e*P **P 11 49 38.7 0.0**
DUG pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
DUG MLR MLR
comp=Z,2μm,19.0s,MS5.7
DUG Dugway 93.46 327 *e*P **P 11 49 38.7 +0.1**
comp=Z,6.8nm,1.0s,mb5.0
DUG LR LR
comp=Z,2μm,19.0s,MS5.7
DUG Dugway 93.46 327 *e*P **P 11 49 38.7 0.0**
comp=Z,6.8nm,1.0s,mb5.0
TEIG Tepich 93.54 298 PFAKE
TEIG LR LR
comp=Z,881nm,19.0s,MS5.2
R18A Canyonlands Na 93.58 324 ⇑P **P 11 49 38.5 -0.7**
baz=93,SNR=11
Y27A Causey 93.59 317 ⇑P **P 11 49 38.8 -0.6**
baz=93
U22A Llaves 93.66 321 ⇓P **P 11 49 39.0 -0.7**
baz=93
S19A Harvey Farm, M 93.72 323 ⇓P **P 11 49 39.8 -0.2**
baz=93,SNR=22
Q16A Castle Valley 93.75 325 ⇓P **P 11 49 39.1 -0.9**
baz=93
COR Corvallis 93.77 336 P **P 11 49 41.7 +1.7**
COR pmax pmax
comp=Z,63nm,1.6s,mb5.8
COR MLR MLR
comp=Z,2μm,19.0s,MS5.5
COR Corvallis 93.77 336 P **P 11 49 41.6 +1.7**
comp=Z,63nm,1.6s,mb5.8
COR LR LR
comp=Z,2μm,19.0s,MS5.5
COR Corvallis 93.77 336 P **P 11 49 41.7 +1.7**
comp=Z,63nm,1.6s,mb5.8
W24A Lazy 6 Ranch, 93.80 319 ⇑P **P 11 49 40.6 +0.3**
baz=94,SNR=9.0
MVCO Mesa Verde 93.83 322 ⇓P **P 11 49 40.8 +0.4**
baz=94
MVCO Mesa Verde 93.83 322 *e*P **P 11 49 40.9 +0.4**
comp=Z,12nm,1.0s,mb5.3
MVCO *e*PP PP 11 53 28.8 +3.6
MVCO LR LR
comp=Z,2μm,19.0s,MS5.5
MVCO Mesa Verde 93.83 322 *e*P **P 11 49 40.9 +0.5**
comp=Z,12nm,1.0s,mb5.3
MVCO Mesa Verde 93.83 322 *e*PP PP 11 53 28.8 +3.6
N12A Clover Valley, 93.88 329 *e*P **P 11 49 41.2 +0.7**
comp=Z,6.8nm,0.4s,mb5.4
N12A Clover Valley, 93.88 329 *e*P **P 11 49 41.2 +0.6**
comp=Z,6.8nm,0.4s,mb5.4
X25A Clemmons Ranch 93.92 318 ⇑P **P 11 49 39.7 -1.2**
baz=94
Y26A Elida 93.92 317 ⇑P **P 11 49 40.1 -0.8**
baz=94
R17A Hanksville Air 93.94 325 ⇓P **P 11 49 39.2 -1.7**
baz=94,SNR=12
WVOR Wild Horse Val 93.98 332 *e*P **P 11 49 41.5 +0.5**
WVOR pmax pmax
comp=Z,16nm,1.4s,mb5.3
WVOR MLR MLR
comp=Z,2μm,19.0s,MS5.5
WVOR Wild Horse Val 93.98 332 *e*P **P 11 49 41.5 +0.5**
comp=Z,16nm,1.4s,mb5.3
WVOR LR LR
comp=Z,2μm,19.0s,MS5.5
WVOR Wild Horse Val 93.98 332 *e*P **P 11 49 41.5 +0.5**
comp=Z,16nm,1.4s,mb5.3
U21A Nageezi 94.03 321 ⇓P **P 11 49 40.3 -1.1**
baz=94
Z27A Tatum 94.04 317 ⇑P **P 11 49 42.1 +0.7**
baz=94
V22A San Miguel Ran 94.04 321 ⇓P **P 11 49 42.2 +0.8**
baz=94
ELK Elko 94.05 329 LR LR 12 35 18.3
comp=Z,3μm,19.2s,MS5.7,baz=27,slow=38
ELK Elko 94.05 329 PFAKE 11 49 50.0 +8.6
ELK LR LR
comp=Z,3μm,20.0s,MS5.7
BCIP Isla Barro Col 94.06 284 PFAKE 11 49 50.0 +8.1
BCIP LR LR
comp=Z,544nm,22.0s,MS5.0
P14A Drum Mountains 94.07 327 ⇑P **P 11 49 40.9 -0.6**
baz=94
JCT Junction City 94.15 313 *e*P **P 11 49 40.6 -1.4**
JCT *e**PP pP 11 49 46.9 -2.9
JCT pmax pmax
comp=Z,19nm,1.5s,mb5.3
JCT MLR MLR
comp=Z,1μm,21.0s,MS5.4
JCT Junction City 94.15 313 *e*P **P 11 49 40.6 -1.5**
comp=Z,20nm,1.5s,mb5.3
JCT *e*pP pP 11 49 46.9 -2.9
JCT LR LR
comp=Z,1μm,21.0s,MS5.4
JCT Junction City 94.15 313 *e*P **P 11 49 40.6 -1.4**
comp=Z,20nm,1.5s,mb5.3
JCT *e*pP pP 11 49 46.9 -2.9
S18A Hurst Farm, Bl 94.18 324 ⇓P **P 11 49 41.7 -0.4**
baz=94
T19A Beclabito 94.39 323 ⇓P **P 11 49 41.0 -2.0**
baz=94
Y25A Mesa, Roswell 94.39 318 ⇑P **P 11 49 41.7 -1.4**
baz=94
R16A Teasdale 94.41 325 ⇑P **P 11 49 41.5 -1.5**
baz=94
Z26A Caprock 94.50 317 ⇑P **P 11 49 43.3 -0.3**
baz=94,SNR=15
RNO Roman Nose 94.51 336 P **P 11 49 45.9 +2.5**
RNO Roman Nose 94.51 336 P **P 11 49 45.9 +2.5**
MSU Marysvale 94.54 326 *e*P **P 11 49 44.8 +1.1**
MSU *e* 11 53 33.6
MSU pmax pmax
comp=Z,7.0nm,1.2s,mb5.0
MSU Marysvale 94.54 326 *e*P **P 11 49 44.8 +1.1**
comp=Z,6.9nm,1.2s,mb5.0
MSU *e*PP PP 11 53 33.6 +2.9
MSU Marysvale 94.54 326 *e*P **P 11 49 44.8 +1.1**
comp=Z,6.9nm,1.2s,mb5.0

ANMO Albuquerque 94.55 320 LR LR 12 35 55.4
comp=Z,2μm,19.0s,MS5.5,baz=293,slow=38
ANMO Albuquerque 94.55 320 *ce*P **P 11 49 43.7 -0.1**
ANMO pmax pmax
comp=Z,6.0nm,1.7s
ANMO Albuquerque 94.55 320 *e*P **P 11 49 43.6 -0.2**
comp=Z,1.2nm,1.2s
ANMO LR LR
comp=Z,1μm,19.0s,MS5.5
ANMO Albuquerque 94.55 320 *e*P **P 11 49 43.6 -0.2**
comp=Z,1.2nm,1.2s
T18A Mexican Hat 94.56 323 P **P 11 49 44.1 +0.3**
baz=94,SNR=16
MVU Marysvale 94.57 326 PFAKE 11 50 00.0 +16
MVU LR LR
comp=Z,3μm,19.0s,MS5.7
K05A Summer Lake 94.57 333 ⇓P **P 11 49 44.5 +0.8**
baz=94
P13A Bates Ranch, G 94.59 327 ⇓P **P 11 49 42.9 -1.0**
baz=94
S17A Black Ridge (B 94.61 324 ⇓P **P 11 49 43.2 -0.8**
baz=94
Q14A Sevier Lake (B 94.65 327 ⇓P **P 11 49 42.1 -2.1**
baz=94
Y24A Capitan 94.79 318 ⇑P **P 11 49 45.5 +0.6**
baz=94,SNR=7.0
Z25A Roswell 94.89 318 ⇓P **P 11 49 45.5 +0.1**
baz=95,SNR=5.8
U19A Dine' College, 94.91 322 ⇑P **P 11 49 44.4 -0.9**
baz=94
S16A Weppner Ranch, 94.91 325 ⇑P **P 11 49 45.7 +0.3**
baz=94,SNR=9.8
126A Clayton Basin, 94.99 317 ⇓P **P 11 49 45.2 -0.6**
baz=95
Q13A Wheeler Ranch, 95.01 327 ⇓P **P 11 49 46.3 +0.5**
baz=95
MOD Modoc 95.07 333 *e*P **P 11 49 47.1 +1.1**
comp=Z,17nm,1.4s,mb5.3
MOD LR LR
comp=Z,1μm,20.0s,MS5.4
MOD Modoc 95.07 333 *e*P **P 11 49 47.1 +1.1**
comp=Z,17nm,1.4s,mb5.3
KVTX Kingsville 95.08 309 PFAKE 11 50 00.0 +14
KVTX LR LR
comp=Z,1μm,19.0s,MS5.5
Y23A Lovelace Mesa, 95.12 319 ⇑P **P 11 49 45.7 -0.7**
baz=95
U18A Rough Rock, Ch 95.13 323 ⇑P **P 11 49 46.2 -0.2**
baz=95
BMN Battle Mountai 95.13 330 PFAKE 11 50 00.0 +14
BMN LR LR
comp=Z,3μm,20.0s,MS5.7
CLNB Carlsbad 95.20 316 *e*P **P 11 49 48.3 +1.5**
comp=Z,0.9nm,0.6s,mb4.4
CLNB Carlsbad 95.20 316 *e*P **P 11 49 48.3 +1.5**
comp=Z,0.9nm,0.6s,mb4.4
Z24A Sheeppen Canyo 95.21 318 ⇑P **P 11 49 47.3 +0.4**
baz=95,SNR=7.6
BNM Barren Site 95.26 319 *e*P **P 11 49 47.9 +0.9**
comp=Z,6.4nm,1.2s,mb4.9
BNM Barren Site 95.26 319 *e*P **P 11 49 47.9 +0.9**
comp=Z,6.4nm,1.2s,mb4.9
Q12A Willow Creek R 95.29 328 ⇓P **P 11 49 47.4 +0.3**
baz=95
LAZ Ladron 95.33 320 *e*P **P 11 49 48.1 +0.7**
comp=Z,5.5nm,1.3s,mb4.8
LAZ Ladron 95.33 320 *e*P **P 11 49 48.1 +0.7**
comp=Z,5.5nm,1.3s,mb4.8
125A Gardner Draw, 95.33 317 ⇓P **P 11 49 46.4 -1.0**
baz=95,SNR=7.7
HUMO Hull Mountain 95.40 335 *e*P **P 11 49 48.1 +0.6**
comp=Z,11nm,1.3s,mb5.1
HUMO LR LR
comp=Z,1μm,22.0s,MS5.3
HUMO Hull Mountain 95.40 335 *e*P **P 11 49 48.1 +0.6**
comp=Z,11nm,1.3s,mb5.1
226A Malaga, Loving 95.47 316 ⇓P **P 11 49 46.8 -1.2**
baz=95
P10A Eureka 95.50 329 ⇑P **P 11 49 48.3 +0.3**
baz=95
GDL2 Guadalupe Moun 95.51 317 *e*P **P 11 49 47.7 -0.5**
comp=Z,3.5nm,1.0s,mb4.7
GDL2 Guadalupe Moun 95.51 317 *e*P **P 11 49 47.7 -0.5**
comp=Z,3.5nm,1.0s,mb4.7
Y22A Socorro 95.60 319 ⇓P **P 11 49 49.4 +0.8**
baz=95
R13A O'Grain Ranch, 95.62 327 ⇓P **P 11 49 48.5 -0.1**
baz=95
X21A Alamocita Cree 95.63 320 ⇑P **P 11 49 48.9 +0.2**
baz=95,SNR=8.2
124A Stringfield Ra 95.74 318 ⇑P **P 11 49 49.5 +0.3**
baz=95
Q11A Duckwater 95.81 328 ⇓P **P 11 49 49.9 +0.5**
baz=95
T15A Red Dirt Ranch 95.85 325 ⇓P **P 11 49 49.6 -0.1**
baz=96
Y21A Point of Rocks 95.91 320 ⇑P **P 11 49 51.3 +1.3**
baz=96
X20A Quemado 95.92 321 ⇓P **P 11 49 51.4 +1.3**
baz=96
U16A Tuba City 95.96 324 ⇓P **P 11 49 51.1 +0.9**
baz=96,SNR=9.1
S13A Holt Ranch, En 96.07 326 ⇓P **P 11 49 50.0 -0.6**
baz=96
YBH Yreka Blue Hor 96.09 334 PFAKE 11 50 00.0 +9.3
YBH LR LR
comp=Z,1μm,20.0s,MS5.5
Z22A Elephant Butte 96.12 319 ⇑P **P 11 49 50.1 -0.9**
baz=96,SNR=10
528A Cox Ranch, San 96.14 314 ⇓P **P 11 49 51.1 -0.1**
baz=96
Q10A Clear Creek Ra 96.14 329 ⇑P **P 11 49 50.1 -0.9**
baz=96
R11A Troy Canyon, C 96.19 328 ⇑P **P 11 49 50.2 -1.0**
baz=96
V17A Tonalea, Kykot 96.22 323 ⇑P **P 11 49 51.1 -0.2**
baz=96,SNR=6.7
224A Cornudas Mount 96.25 317 ⇑P **P 11 49 51.8 +0.2**
baz=96
U15A North Rim 96.28 324 ⇑P **P 11 49 51.6 -0.1**
baz=96
Y20A Horse Springs, 96.36 320 ⇓P **P 11 49 52.2 +0.2**
baz=96
Z21A St. Cloud Mine 96.46 320 ⇓P **P 11 49 51.8 -0.7**
baz=96
MNTX Cornudas Mount 96.46 317 *e*P **P 11 49 51.8 -0.7**
comp=Z,3.4nm,1.0s,mb4.7
MNTX *e*PP PP 11 53 47.1 +1.3
MNTX LR LR
comp=Z,1μm,19.0s,MS5.4
MNTX Cornudas Mount 96.46 317 *e*P **P 11 49 51.8 -0.7**
comp=Z,3.4nm,1.0s,mb4.7
426A McDonald Obser 96.48 315 ⇓P **P 11 49 53.3 +0.6**
baz=96,SNR=8.6
S12A Delamar Landin 96.49 327 ⇓P **P 11 49 51.9 -0.7**
baz=96
T13A Saint George 96.55 326 ⇑P **P 11 49 52.2 -0.7**
baz=96,SNR=6.6
R10A Warm Springs 96.55 328 ⇑P **P 11 49 52.5 -0.3**
baz=96
WUAZ Wupatki 96.58 323 ⇑P **P 11 49 51.8 -1.2**
baz=96
WUAZ Wupatki 96.58 323 *e*P **P 11 49 53.0 -0.1**
comp=Z,5.0nm,0.9s,mb4.9
WUAZ LR LR
comp=Z,1μm,22.0s,MS5.4
WUAZ Wupatki 96.58 323 *e*P **P 11 49 53.0 0.0**
comp=Z,5.0nm,0.9s,mb4.9
324A Moseley Ranch, 96.71 317 ⇑P **P 11 49 53.0 -0.7**
baz=96,SNR=9.8
U14A Mt Trumbull 96.71 325 ⇓P **P 11 49 53.3 -0.3**
baz=96,SNR=9.9
V15A Kaibab Nationa 96.72 324 ⇑P **P 11 49 53.9 +0.3**
baz=96,SNR=6.1
TGUH Tegucigalpa,Un 96.75 293 PFAKE 11 50 10.0 +16
TGUH LR LR
comp=Z,606nm,21.0s,MS5.1
DAV Davao City (W) 96.76 76 PFAKE 11 50 10.0 +16
DAV LR LR
comp=Z,1μm,21.0s,MS5.3
Y19A Nutrioso 96.77 321 ⇑P **P 11 49 52.8 -1.1**
baz=96
T11A Corn Creek, Al 96.96 327 ⇓P **P 11 49 53.6 -1.1**
baz=97
S10A Tonopah Range, 96.98 328 ⇑P **P 11 49 53.7 -1.1**
baz=97
627A Terlingua Ranc 97.02 314 ⇑P **P 11 49 54.3 -0.8**
baz=97

WDC Whiskeytown Da 97.04 334 PFAKE 11 50 10.0 +15
WDC LR LR
comp=Z,1μm,20.0s,MS5.4
U13A Pakoon Wash 97.07 326 ⇓P **P** **11 49 54.6 -0.7**
baz=97
Z20A Nine Sixteen R 97.09 320 ⇓P **P** **11 49 54.8 -0.6**
baz=97
CPUP Villa Florida 97.09 243 LR LR 12 38 38.6
comp=Z,2μm,18.4s,MS5.7,baz=32,slow=38
CPUP Villa Florida 97.09 243 PFAKE 11 50 10.0 +15
CPUP LR LR
comp=Z,523nm,20.0s,MS5.0
TPH Tonopah 97.12 329 PFAKE 11 50 10.0 +15
TPH LR LR
comp=Z,3μm,20.0s,MS5.7
X17A Forest Lakes 97.25 322 ⇓P **P** **11 49 54.9 -1.2**
baz=97
TXAR Lajitas Array 97.27 314 P **P** **11 49 56.6 +0.4**
comp=Z,2.8nm,1.0s,mb4.7,baz=62,slow=3.2,SNR=18
TXAR PP PP 11 53 53.8 +1.7
comp=Z,0.9nm,1.0s,baz=64,slow=6.0,SNR=3.6
TXAR LR LR 12 37 35.0
comp=Z,1μm,18.6s,MS5.4,baz=170,slow=38
TXAR Lajitas Array 97.27 314 P **P** **11 49 56.7 +0.5**
TXAR 11 53 53.8
TXAR pmax pmax
comp=Z,3.0nm,1.0s
TXAR pmax pmax
comp=Z,1.0nm,1.0s
TXAR Lajitas Array 97.27 314 P **P** **11 49 56.7 +0.5**
TXAR Lajitas Array 97.27 314 PP PP 11 53 53.8 +1.7
NVAR Mina Array Bea 97.27 330 P **P** **11 49 57.6 +1.6**
comp=Z,1.5nm,0.9s,mb4.4,baz=56,slow=3.3,SNR=10
NVAR PP PP 11 53 50.2 -1.5
comp=Z,0.2nm,0.5s,baz=56,slow=6.9,SNR=2.7
NVAR PKKP PKKPbc 12 06 35.1 +1.0
comp=Z,1.5nm,0.9s,baz=211,slow=5.8,SNR=9.2
NVAR Mina Array Bea 97.27 330 P **P** **11 49 57.7 +1.6**
NVAR Mina Array Bea 97.27 330 PP PP 11 53 50.2 -1.5
V14A Boquillas Ranc 97.31 325 ⇓P **P** **11 49 56.0 -0.3**
baz=97,SNR=6.3
X16A Lo Mia Camp, P 97.50 323 ⇓P **P** **11 49 56.2 -1.0**
baz=97
V13A Grand Canyon W 97.54 325 ⇑P **P** **11 49 57.0 -0.3**
baz=97,SNR=6.7
W14A Seligman 97.65 324 ⇓P **P** **11 49 57.3 -0.5**
baz=97,SNR=5.6
X15A Humboldt 97.83 323 ⇑P **P** **11 49 58.9 +0.3**
baz=98
OTAV Otavalo 98.28 276 PFAKE 11 50 10.0 +9.0
OTAV LR LR
comp=Z,601nm,19.0s,MS5.1
219A White Tail Can 98.31 320 ⇓P **P** **11 50 00.3 -0.6**
baz=98,SNR=6.9
320A Kipp Ranch, An 98.44 319 ⇓P **P** **11 50 02.9 +1.4**
baz=98
CMB Columbia Colle 98.45 331 *e*P **P** **11 50 02.6 +1.2**
CMB pmax pmax
comp=Z,6.0nm,1.4s,mb4.9
CMB MLR MLR
comp=Z,2μm,19.0s,MS5.6
CMB Columbia Colle 98.45 331 *e*P **P** **11 50 02.6 +1.2**
comp=Z,6.0nm,1.4s,mb4.9
CMB LR LR
comp=Z,2μm,19.0s,MS5.6
CMB Columbia Colle 98.45 331 *e*P **P** **11 50 02.6 +1.2**
comp=Z,6.0nm,1.4s,mb4.9
X13A Yucca 98.50 324 ⇑P **P** **11 50 02.1 +0.4**
baz=98
APG El Apazote 98.51 295 LR LR 12 27 50.5
comp=Z,141nm,21.7s,MS4.4,baz=235,slow=31
HOPS Hopland 98.63 333 PFAKE 11 50 20.0 +18
HOPS LR LR
comp=Z,1μm,20.0s,MS5.4
DAC Darwin (Calif) 98.80 328 PFAKE 11 50 20.0 +17
DAC LR LR
comp=Z,2μm,20.0s,MS5.5
TUC Tucson 98.85 321 *e*P **P** **11 50 03.2 -0.1**
TUC pmax pmax
comp=Z,18nm,1.7s,mb5.3
TUC MLR MLR
comp=Z,2μm,22.0s,MS5.6
TUC Tucson 98.85 321 *e*P **P** **11 50 03.1 -0.2**
comp=Z,18nm,1.7s,mb5.3
TUC LR LR
comp=Z,2μm,22.0s,MS5.6
TUC Tucson 98.85 321 *e*P **P** **11 50 03.2 -0.1**
comp=Z,18nm,1.7s,mb5.3
KAPI Kappang 99.22 89 PFAKE 11 50 20.0 +15
KAPI LR LR
comp=Z,661nm,21.0s,MS5.1
MCCM Marconi Confer 99.31 333 PFAKE 11 50 20.0 +15
MCCM LR LR
comp=Z,1μm,20.0s,MS5.3
LPAZ La Paz 99.48 257 PP PP 11 54 14.6 +4.5
comp=Z,0.8nm,0.7s,baz=52,slow=12,SNR=3.1
LPAZ LR LR 12 36 59.1
comp=Z,1μm,18.3s,MS5.4,baz=233,slow=36
LPAZ La Paz 99.48 257 PFAKE 11 50 20.0 +14
LPAZ LR LR
comp=Z,1μm,20.0s,MS5.4
ISA Isabella 99.70 328 ⇑P Pdif 11 50 06.6 -0.3
baz=99
ISA Isabella 99.70 328 *e*P Pdif 11 50 07.5 +0.6
ISA pmax pmax
comp=Z,6.0nm,1.1s,mb4.9
ISA Isabella 99.70 328 *e*P Pdif 11 50 07.5 +0.6
comp=Z,6.0nm,1.1s
ISA Isabella 99.70 328 *e*P Pdif 11 50 07.5 +0.6
comp=Z,6.0nm,1.1s
SAO San Andreas Ge 99.97 331 PFAKE 11 50 20.0 +12
SAO LR LR
comp=Z,2μm,19.0s,MS5.5
PFO Pinyon Flat Ob 100.54 326 PFAKE 11 50 20.0 +9.4
PFO LR LR
comp=Z,2μm,20.0s,MS5.5
NNA Nana 104.02 265 PFAKE 11 50 40.0 +14
NNA LR LR
comp=Z,1μm,21.0s,MS5.4
TRQA Tornquist 107.00 235 PFAKE 11 55 00.0 +11
TRQA LR LR
comp=Z,2μm,20.0s,MS5.7
MBWA Marble Bar 108.21 103 PFAKE 11 55 10.0 +19
MBWA LR LR
comp=Z,723nm,21.0s,MS5.2
PAYG Puerto Ayora 108.28 283 PFAKE 11 55 10.0 +18
PAYG LR LR
comp=Z,512nm,21.0s,MS5.1
LCO Las Campanas 108.41 247 PFAKE 11 55 10.0 +18
LCO LR LR
comp=Z,2μm,20.0s,MS5.7
NWAO Narrogin (SRO) 112.31 115 PFAKE 11 55 10.0 +11
NWAO LR LR
comp=Z,602nm,22.0s,MS5.1
PLCA Paso Flores 114.08 236 PFAKE 11 55 20.0 +18
PLCA LR LR
comp=Z,2μm,19.0s,MS5.8
WAKE Wake Island 115.60 37 PFAKE 11 55 20.0 +14
WAKE LR LR
comp=Z,662nm,22.0s,MS5.2
WRA Warramunga Arr 119.27 94 PKP PKPdf 11 55 11.8 -0.7
comp=Z,4.4nm,0.8s,baz=301,slow=2.0,SNR=15
WRA Warramunga Arr 119.27 94 PKIKP PKPdf 11 55 11.9 -0.7
WRA pmax pmax
comp=Z,4.0nm,0.9s
WRA Warramunga Arr 119.27 94 PKIKP PKPdf 11 55 11.9 -0.7
WRAB Tennant Creek 119.27 94 PFAKE 11 55 30.0 +17
WRAB LR LR
comp=Z,564nm,21.0s,MS5.2
ASAR Alice Springs 120.77 98 PKP PKPdf 11 55 15.1 -0.3
comp=Z,7.8nm,0.9s,baz=322,slow=1.6,SNR=35
ASAR PP PP 11 56 48.6 +4.6
comp=Z,1.8nm,0.9s,baz=316,slow=5.2,SNR=3.9
ASAR PKKPab PKKPab 12 05 21.6 +1.4
comp=Z,0.7nm,0.9s,baz=112,slow=3.7,SNR=5.7
ASAR Alice Springs 120.77 98 PKIKP PKPdf 11 55 15.1 -0.3
ASAR 11 56 48.7
ASAR pmax pmax
comp=Z,8.0nm,0.9s
ASAR pmax pmax
comp=Z,2.0nm,0.9s
ASAR Alice Springs 120.77 98 PKIKP PKPdf 11 55 15.1 -0.3
CASY Casey 121.86 152 PFAKE 11 55 30.0 +14
CASY LR LR
comp=Z,1μm,20.0s,MS5.6
KIP Kipapa 122.83 360 PFAKE 11 55 30.0 +10
KIP LR LR
comp=Z,1μm,19.0s,MS5.5
POHA Pohakuloa 124.43 357 PFAKE 11 55 40.0 +17
POHA LR LR
comp=Z,606nm,21.0s,MS5.2
QSPA South Pole Qui 125.92 180 PKP PKPdf 11 55 24.1 +0.5
comp=Z,29nm,1.1s,baz=250,slow=1.3,SNR=32
QSPA South Pole Qui 125.92 180 PKIKP PKPdf 11 55 24.1 +0.5
CTA Charters Tower 128.99 88 PKP PKPdf 11 55 31.0 -0.2
comp=Z,11nm,1.0s,baz=265,slow=2.0,SNR=4.4
CTA Charters Tower 128.99 88 PKIKP PKPdf 11 55 31.0 -0.2
CTA pmax pmax
comp=Z,11nm,1.0s
CTA Charters Tower 128.99 88 PKIKP PKPdf 11 55 31.0 -0.2
CTAO Charters Tower 128.99 88 PFAKE 11 55 50.0 +19
CTAO LR LR
comp=Z,333nm,20.0s,MS5.0
STKA Stephens Creek 130.46 104 PKP PKPdf 11 55 34.7 +1.0
comp=Z,9.3nm,1.0s,baz=274,slow=3.9,SNR=9.3
STKA Stephens Creek 130.46 104 PKIKP PKPdf 11 55 34.7 +1.0
HNR Honiara 133.58 66 PFAKE 11 55 50.0 +10
HNR LR LR
comp=Z,552nm,20.0s,MS5.3
SBA Scott Base 135.48 170 PFAKE 11 56 00.0 +18
SBA LR LR
comp=Z,2μm,22.0s,MS5.7
FUNA Funafuti 145.62 43 PFAKE 11 56 20.0 +18
FUNA LR LR
comp=Z,10μm,19.0s,MS6.6
DZM Mont Dzumac 146.17 75 *e*SS SS 12 18 23.9 +2.8
comp=Z,350nm,26.5s
DZM *e*LR LR 12 44 12.9
comp=Z,692nm,28.2s
DZM Mont Dzumac 146.17 75 *e*P PKPdf 11 56 04.3 +1.7
DZM Mont Dzumac 146.17 75 *e*PKPbc PKPbc 11 56 04.7 +1.1
DZM Mont Dzumac 146.17 75 *e*PKPbc PKPbc 11 56 04.7 +1.1
TAOE Nuku Hiva Isla 148.39 325 *e*LR LR 12 45 21.4
comp=Z,880nm,37.5s
MSVF Nonsavu 152.05 56 PFAKE 11 56 30.0 +18
MSVF LR LR
comp=Z,484nm,20.0s,MS5.3
RKT Rikitea 156.22 297 *e*LR LR 12 49 03.7
comp=Z,452nm,27.5s
SNZO South Karori 158.13 112 PFAKE 11 56 30.0 +10
SNZO LR LR
comp=Z,990nm,20.0s,MS5.6
URZ Urewera 160.09 104 PKPab PKPab 11 57 01.8 -0.4
comp=Z,34nm,0.8s,baz=313,slow=0.9,SNR=10
PPT Papeete 160.11 336 *e*PP PP 12 00 58.2 +15
comp=Z,129nm,25.0s
PPT *e*LR LR 12 50 32.8
comp=Z,1μm,24.2s
RAO Raoul Island 161.95 74 PFAKE 11 56 40.0 +16
RAO LR LR
comp=Z,814nm,19.0s

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*IDC **21** 11:45:10.2±7.4, 31°.53S×179°.73E, h468km±94km, mb3.3/3, mb1 3.5/4, mb1mx3.2/15, mbtmp3.4/4, Error ellipse: s-maj=100.4km s-min=34.1km az=6.0*

NEIC 21 11:45:09.2±4.0, 31°.31S×179°.78E, h463km±52km, mb4.0/1, Error ellipse: s-maj=69.5km s-min=29.8km az=185.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**6.87**	**190**	P	P	11 46 53.5	+0.8
MWZ	**Matawai**	**7.25**	**194**	*e*P	P	11 46 56.5	-0.2
MWZ				S	S	11 48 22.8	-2.1
URZ	**Urewera**	**7.28**	**197**	P	P	11 46 56.8	-0.2
	9.4nm,0.3s,baz=295,slow=0.6,SNR=99						
URZ				S	S	11 48 21.2	-4.1
	3.8nm,0.3s,baz=240,slow=23,SNR=12						
URZ	**Urewera**	**7.28**	**197**	*e*P	P	11 46 56.6	-0.4
URZ				*e*S	S	11 48 23.4	-1.9
KNZ	**Kokohu**	**7.89**	**192**	*e*P	P	11 47 03.8	+0.4
BFZ	**Birch Farm**	**9.78**	**196**	P	P	11 47 23.9	+0.1
MRZ	**Mangatainoka R**	**9.93**	**199**	P	P	11 47 24.8	-0.6
STKA	**Stephens Creek**	**32.42**	**259**	P	P	11 51 00.8	+1.1
	0.9nm,0.3s,baz=118,slow=15,SNR=4.5						
STKA	**Stephens Creek**	**32.42**	**259**	P	P	11 51 00.8	+1.1
ASAR	**Alice Springs**	**41.17**	**269**	P	P	11 52 12.1	0.0
	0.9nm,0.4s,baz=107,slow=7.4,SNR=32						
WRAB	**Tennant Creek**	**42.23**	**274**	*e*P	P	11 52 20.3	-0.4
	2.1nm,0.4s						
WRA	**Warramunga Arr**	**42.24**	**274**	P	P	11 52 20.5	-0.2
	1.9nm,0.3s,baz=111,slow=8.1,SNR=16						
WRA	**Warramunga Arr**	**42.24**	**274**	P	P	11 52 20.5	-0.2
FINES	**FINESS Array B**	**145.30**	**338**	PKPbc	PKPbc	12 03 53.6	+0.1
	1.6nm,0.4s,baz=45,slow=3.3,SNR=26						

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*IDC **21** 12:10:37.8±0.9, 31°.63N×104°.35E, h0km, mb3.8/8, mb1 3.9/10, mb1mx3.7/26, mbtmp3.7/10, ML3.8/1, Error ellipse: s-maj=33.8km s-min=17.7km az=59.0*
*NEIC **21** 12:10:39.8±0.5, 31°.67N×104°.25E, h10km, Error ellipse: s-maj=14.9km s-min=9.4km az=63.0*
*BJI **21** 12:10:39.7, 31°.67N×104°.35E, h14km, ML3.7/17, Ms3.8/3, Ms7 3.7/3*

ISC 21 12:10:39.4±0.9, 31°.59N±0°.03×104°.30E±0°.05, h6km±7km, n17, σ1§16/26, mb3.6/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.82**	**215**	Pg	**Pg**	**12 10 54.6**	**-0.5**
CD2				Sg	**Sg**	**12 11 06.5**	**+0.8**
CD2				smax			
	comp=N,3μm,0.8s						
CD2				smax			
	comp=E,2μm,1.1s						
LZH	**Lanzhou**	**4.50**	**355**	Pn	**Pn**	**12 11 48.8**	**+0.7**
LZH				Pg	**Pb**	**12 12 01.5**	**+2.7**
LZH				Sn	**Sn**	**12 12 42.0**	**+1.2**
LZH				Sg	**Sg**	**12 13 03.6**	**-0.5**
LZH				smax			
	comp=N,100nm,0.6s						
LZH				smax			
	comp=E,130nm,0.7s						
LZH				LR	LR		
	comp=N,460nm,6.2s						
LZH				LR	LR		
	comp=Z,900nm,7.7s						
XAN	**Xi'an**	**4.60**	**57**	Pn	**Pn**	**12 11 49.0**	**-0.3**
XAN				Sn	**Sn**	**12 12 47.5**	**+4.5**
XAN				Sg	**Sg**	**12 13 02.9**	**-4.1**
XAN				smax			
	comp=N,300nm,0.8s						
XAN				smax			
	comp=E,130nm,0.7s						
ENH	**Enshi**	**4.64**	**105**	*e*Pn	**Pn**	**12 11 52.1**	**+2.1**
ENH				*e*Sg	**Sg**	**12 13 08.6**	**+0.1**
GYA	**Guiyang**	**5.51**	**157**	Pn	**Pn**	**12 12 03.3**	**+1.4**
GYA				Sn	**Sn**	**12 13 09.8**	**+4.2**
GYA				Sg	**Sg**	**12 13 34.0**	**-2.4**
GYA				smax			
	comp=N,120nm,0.9s						
GYA				smax			
	comp=E,120nm,0.9s						
CMAR	**Chiang Mai Arr**	**13.94**	**202**	Pn	**Pn**	**12 13 59.5**	**+2.0**
	comp=E,0.2nm,0.3s,baz=12,slow=9.7,SNR=4.0						
SONM	**Songino Array**	**16.31**	**5**	Pn	**Pn**	**12 14 28.6**	**-0.2**
	baz=193,slow=12,SNR=4.5						
KSRS	**Korea Array**	**20.30**	**67**	P	**P**	**12 15 15.2**	**-0.6**
	comp=E,1.5nm,0.7s,baz=252,slow=9.9,SNR=5.9						
CN2	**Changchun**	**20.64**	**48**	*e*P	**P**	**12 15 20.4**	**+0.9**
MKAR	**Makanchi Array**	**22.73**	**318**	P	**P**	**12 15 41.6**	**-0.3**
	comp=E,0.9nm,0.7s,mb3.3,baz=114,slow=12,SNR=8.8						
ZALV	**Zalesovo Beam**	**26.36**	**334**	P	**P**	**12 16 15.1**	**-1.0**
	comp=E,0.8nm,0.6s,mb3.5,baz=130,slow=8.0,SNR=5.6						
KURK	**Kurchatov**	**26.96**	**323**	P	**P**	**12 16 21.1**	**-0.4**
	comp=E,0.5nm,0.3s,mb3.6,baz=129,slow=9.0,SNR=2.9						
ABKAR	**Akbulak array**	**37.48**	**311**	*e*P	**P**	**12 17 52.2**	**-1.4**
	comp=E,0.1nm,0.3s,mb3.1						
FINES	**FINESS Array B**	**57.26**	**326**	P	**P**	**12 20 26.0**	**-1.3**
	comp=E,3.9nm,1.0s,mb4.4,baz=100,slow=6.1,SNR=3.3						
WRA	**Warramunga Arr**	**58.78**	**147**	P	**P**	**12 20 37.9**	**-0.6**
	comp=E,0.8nm,0.6s,mb3.9,baz=339,slow=7.6,SNR=4.8						
ASAR	**Alice Springs**	**61.81**	**149**	P	**P**	**12 20 58.6**	**-0.5**
	comp=E,0.3nm,0.6s,mb3.6,baz=336,slow=6.7,SNR=3.5						
YKA	**Yellowknife Ar**	**81.18**	**17**	P	**P**	**12 22 54.5**	**-1.0**
	comp=E,0.4nm,0.5s,mb3.6,baz=326,slow=5.3,SNR=8.3						

IDC 21 12:14:08.0±1.7, 5°.52N×122°.77E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.6/22, mbtmp3.7/4, Error ellipse: s-maj=244.3km s-min=21.3km az=63.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**27.74**	**156**	P	P	12 19 57.9	-0.6
	0.5nm,0.8s,baz=333,slow=11,SNR=3.1						
ASAR	**Alice Springs**	**30.97**	**160**	P	P	12 20 27.9	+0.7
	0.4nm,0.3s,baz=337,slow=7.5,SNR=14						
MKAR	**Makanchi Array**	**53.87**	**326**	P	P	12 23 33.9	+0.9
	0.2nm,0.4s,baz=109,slow=7.1,SNR=5.0						
KURK	**Kurchatov**	**58.14**	**329**	P	P	12 24 02.6	-0.8
	0.9nm,0.2s,baz=133,slow=6.6,SNR=2.7						

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*IDC **21** 12:18:03.5±4.6, 14°.31N×92°.98W, h0km, mb3.4/2, mb1 3.6/5, mb1mx3.5/21, mbtmp3.2/5, ML3.0/2, Error ellipse: s-maj=85.5km s-min=24.0km az=15.0*
*MEX **21** 12:18:04.5±1.0, 13°.99N×93°.25W, h18km±999km, MD4.3*

ISC 21 12:18:03.9±2.1, 14°.18N±0°.09×93°.09W±0°.07, h8km±11km, n8, σ1§32/13, mb3.5/2, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.07**	**48**	*i* P	**Pg**	**12 18 23.1**	**-1.5**
THIG				*e*S	**Sg**	**12 18 41.3**	**+2.8**
PCIG		**1.52**	**355**	*i* P	**Pn**	**12 18 29.8**	**-1.6**
PCIG				*e*S	**Sn**	**12 18 49.8**	**-1.6**
TGIG		**2.58**	**359**	*i* P	**Pn**	**12 18 46.7**	**+0.8**
TGIG				*i* S	**Sn**	**12 19 18.1**	**+0.5**
APG	**El Apazote**	**2.67**	**72**	Pn	**Pn**	**12 18 46.3**	**-0.8**
	4.3nm,0.3s,baz=228,slow=4.3,SNR=28						
APG				Sn	**Sn**	**12 19 20.1**	**+0.5**
	4.3nm,0.3s,baz=267,slow=19,SNR=4.1						
CMIG	**Matias Romero**	**3.37**	**329**	Pn	**Pn**	**12 18 56.6**	**-0.2**
	0.9nm,0.3s,baz=148,slow=12,SNR=6.8						
CMIG				Sn	**Sn**	**12 19 37.3**	**+0.2**
	2.4nm,0.3s,baz=73,slow=15,SNR=7.5						
TXAR	**Lajitas Array**	**17.98**	**329**	P	**Pn**	**12 22 16.5**	**+2.2**
	0.0nm,0.3s,baz=146,slow=12,SNR=2.7						
NVAR	**Mina Array Bea**	**32.88**	**322**	P	**P**	**12 24 40.1**	**+1.7**
	0.3nm,0.7s,mb3.3,baz=129,slow=7.1,SNR=3.2						
YKA	**Yellowknife Ar**	**50.61**	**347**	P	**P**	**12 27 01.7**	**-1.3**
	0.5nm,0.7s,mb3.6,baz=151,slow=7.2,SNR=4.1						

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*CSEM **21** 12:29:41.2±0.7, 35°.92N×21°.82E, h2km, ML3.9/2, Error ellipse: s-maj=15.0km s-min=4.6km az=56.0*
*ATH **21** 12:29:42.2, 35°.95N×21°.78E, h5km, MD3.7/3*
*THE **21** 12:29:44.8, 36°.07N×21°.72E, h8km±1km, ML3.9/2, Error ellipse: s-maj=4.0km s-min=0.8km az=261.0*

ISC 21 12:29:40.8±1.7, 35°.90N±0°.06×21°.7E±0°.1, h5km±6km, n27, σ0§65/39, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.99**	**1**	P	**Pg**	**12 30 00.1**	**+0.3**
PYL				S	**Sg**	**12 30 12.1**	**-0.6**
PYL	**PYLOS**	**0.99**	**1**	*e*PB	**Pg**	**12 30 00.7**	**+0.9**
PYL				*e*SB	**Sb**	**12 30 15.0**	**+1.2**
PYL	**PYLOS**	**0.99**	**1**	P	**Pg**	**12 30 00.1**	**+0.3**
PYL	**PYLOS**	**0.99**	**1**	*e*Pg	**Pg**	**12 30 00.7**	**+0.9**
PYL				S	**Sg**	**12 30 12.1**	**-0.6**
PYL				*e*Sb	**Sb**	**12 30 15.0**	**+1.2**
KYTH	**Kithira**	**1.13**	**70**	*e*PB	**Pg**	**12 30 02.7**	**+0.2**
KYTH	**Kithira**	**1.13**	**70**	*e*Pn	**Pg**	**12 30 02.7**	**+0.2**
VLI	**Veliai**	**1.27**	**50**	*e*PN	**Pn**	**12 30 04.8**	**-0.5**
VLI	**Veliai**	**1.27**	**50**	*e*Pn	**Pn**	**12 30 04.8**	**-0.5**
ITM	**Ithomi**	**1.28**	**7**	P	**Pn**	**12 30 05.2**	**-0.2**
ITM				S	**Sg**	**12 30 22.1**	**0.0**
ITM	**Ithomi**	**1.28**	**7**	*e*PG	**Pg**	**12 30 05.5**	**0.0**
ITM	**Ithomi**	**1.28**	**7**	P	**Pn**	**12 30 05.2**	**-0.2**
ITM	**Ithomi**	**1.28**	**7**	*e*Pn	**Pg**	**12 30 05.5**	**0.0**
ITM				S	**Sg**	**12 30 22.1**	**0.0**
VLX	**Vlachokerasia**	**1.56**	**20**	P	**Pn**	**12 30 09.7**	**+0.5**
VLX				S	**Sn**	**12 30 28.9**	**-0.8**
VLX	**Vlachokerasia**	**1.56**	**20**	*e*PG	**Pg**	**12 30 10.2**	**-0.5**
VLX				*e*SB	**Sg**	**12 30 31.8**	**+1.0**
VLX	**Vlachokerasia**	**1.56**	**20**	P	**Pn**	**12 30 09.7**	**+0.5**
VLX	**Vlachokerasia**	**1.56**	**20**	*e*Pg	**Pg**	**12 30 10.2**	**-0.5**
VLX				S	**Sn**	**12 30 28.9**	**-0.8**
VLX				*e*Sb	**Sg**	**12 30 31.8**	**+1.0**
KARN	**Karanos**	**1.86**	**105**	P	**Pg**	**12 30 17.0**	**+0.6**
KARN	**Karanos**	**1.86**	**105**	*e*PN	**Pg**	**12 30 17.1**	**+0.7**
KARN	**Karanos**	**1.86**	**105**	*e*Pn	**Pg**	**12 30 17.1**	**+0.7**
VAM	**Vamos**	**2.08**	**103**	*e*PN	**Pg**	**12 30 20.2**	**-0.5**
VAM	**Vamos**	**2.08**	**103**	*e*Pg	**Pg**	**12 30 20.2**	**-0.5**
GUR	**Goura**	**2.09**	**14**	P	**Pn**	**12 30 17.4**	**+0.9**
GUR				S	**Sn**	**12 30 42.5**	**-0.4**
GUR	**Goura**	**2.09**	**14**	*e*PN	**Pg**	**12 30 19.6**	**-1.3**
GUR	**Goura**	**2.09**	**14**	P	**Pn**	**12 30 17.4**	**+0.9**
GUR	**Goura**	**2.09**	**14**	*e*Pg	**Pg**	**12 30 19.6**	**-1.3**
GUR				S	**Sn**	**12 30 42.5**	**-0.4**
EFP	**Efpalio**	**2.52**	**3**	*e*Pg	**Pg**	**12 30 29.4**	**+0.2**
EVR	**Evrytania**	**3.01**	**1**	*e*Pg	**Pg**	**12 30 38.0**	**-0.5**

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*IDC **21** 12:35:46.1±1.9, 6°.30S×103°.64E, h0km, mb3.9/9, mb1 4.0/9, mb1mx3.8/20, mbtmp3.9/9, Error ellipse: s-maj=79.3km s-min=18.0km az=56.0*
*NEIC **21** 12:35:51.0±1.5, 6°.36S×103°.59E, h35km, mb4.2/1, Error ellipse: s-maj=68.5km s-min=9.2km az=53.0*
*DJA **21** 12:35:52.6, 6°.30S×103°.83E, h10km, MLv3.8/6*
*ISCJB **21** 12:35:52.3±1.4, 6°.37S±0°.07×103°.68E±0°.07, h66km±11km, mb3.9/10, Error ellipse: s-maj=16.0km s-min=6.9km az=44.6*

ISC 21 12:35:53.6±1.3, 6°.35S±0°.07×103°.71E±0°.07, h58km±11km, n21, σ0§94/27, mb4.0/10, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**1.14**	**44**	P	**Pn**	**12 36 10.1**	**-3.3**
KASI				S	**Sn**	**12 36 24.1**	**-4.0**
LWLI	**Liwa**	**1.37**	**15**	P	**Pn**	**12 36 15.2**	**-1.3**
LWLI				S	**Sn**	**12 36 33.1**	**-0.6**
BLSI	**Bandar Lampung**	**1.81**	**58**	S	**Sn**	**12 36 44.3**	**-0.2**
MDSI	**Maura Dua**	**1.91**	**14**	P	**Pn**	**12 36 23.0**	**-0.9**
MDSI				S	**Sn**	**12 36 47.5**	**+0.7**
KLSI		**1.94**	**32**	P	**Pn**	**12 36 23.6**	**-0.6**
KLSI				S	**Sn**	**12 36 48.7**	**+1.2**
CGJI	**Cibinong**	**1.99**	**98**	P	**Pn**	**12 36 23.8**	**-1.1**
CGJI				S	**Sn**	**12 36 49.2**	**+0.5**
RBSI	**Rajabasa**	**2.08**	**76**	P	**Pn**	**12 36 25.0**	**-1.2**
RBSI				S	**Sn**	**12 36 51.6**	**+0.6**
MNAI	**Manna**	**2.11**	**339**	P	**Pn**	**12 36 28.1**	**+1.4**
MNAI				S	**Sn**	**12 36 53.2**	**+1.4**
CBJI	**Citeko**	**3.12**	**91**	P	**Pn**	**12 36 42.0**	**+1.6**
CMAR	**Chiang Mai Arr**	**25.09**	**349**	P	**P**	**12 41 12.4**	**-0.6**
	1.0nm,0.7s,mb3.5,baz=180,slow=8.9,SNR=7.2						
WRA	**Warramunga Arr**	**32.66**	**117**	P	**P**	**12 42 20.5**	**0.0**
	0.5nm,0.4s,mb3.8,baz=286,slow=12,SNR=3.5						
WRAB	**Tennant Creek**	**32.67**	**117**	*e*P	**P**	**12 42 21.4**	**+0.8**
	1.4nm,0.4s,mb4.2						
WRAB				*e*pP	pP	12 42 34.4	-0.6
WRAB				*e*sP	sP	12 42 42.3	+0.4
ASAR	**Alice Springs**	**33.74**	**124**	P	**P**	**12 42 30.3**	**+0.4**
	1.1nm,0.9s,mb3.8,baz=303,slow=8.1,SNR=6.5						
STKA	**Stephens Creek**	**43.52**	**131**	P	**P**	**12 43 52.5**	**+0.8**
	1.3nm,0.4s,mb4.0,baz=304,slow=7.9,SNR=4.9						
KSRS	**Korea Array**	**49.09**	**26**	P	**P**	**12 44 34.5**	**-0.7**
	1.3nm,0.7s,mb4.1,baz=220,slow=6.6,SNR=4.7						
SONM	**Songino Array**	**54.00**	**2**	P	**P**	**12 45 12.1**	**+0.4**
	0.9nm,0.5s,mb4.0,baz=178,slow=9.1,SNR=7.8						
MKAR	**Makanchi Array**	**56.23**	**342**	P	**P**	**12 45 27.3**	**-0.5**
	0.4nm,0.3s,mb3.9,baz=166,slow=7.2,SNR=5.1						
ZALV	**Zalesovo Beam**	**62.14**	**347**	P	**P**	**12 46 08.1**	**-0.5**
	0.8nm,0.3s,mb4.3,baz=148,slow=3.3,SNR=7.1						
ZALV	**Zalesovo Beam**	**62.14**	**347**	P	**P**	**12 46 08.1**	**-0.5**
BVAR	**Borovoye Array**	**65.53**	**339**	P	**P**	**12 46 30.6**	**-0.3**
	0.7nm,0.4s,mb4.0,baz=169,slow=4.4,SNR=4.2						
TXAR	**Lajitas Array**	**145.51**	**45**	PKPbc	PKPbc	12 55 27.3	+1.2
	0.6nm,0.6s,baz=295,slow=1.0,SNR=15						

IDC 21 12:38:54.3±1.9, 13°.74N×56°.57E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.6/24, mbtmp3.8/6, Error ellipse: s-maj=67.5km s-min=27.8km az=58.0, Socotra region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**39.38**	**28**	P	P	12 46 25.8	+0.2
	0.3nm,0.4s,baz=204,slow=3.2,SNR=2.6						
AKASG	**Malin Array Be**	**43.02**	**335**	P	P	12 46 55.6	+0

0.6nm,0.5s,baz=141,slow=7.3,SNR=3.2
ZALV Zalesovo Beam 45.86 23 P P 12 47 17.9 -0.3
0.5nm,0.4s,baz=218,slow=8.5,SNR=2.8
FINES FINESS Array B 52.46 342 P P 12 48 08.4 -0.2
0.7nm,0.4s,baz=147,slow=8.3,SNR=8.9
WRA Warramunga Arr 83.48 112 P P 12 51 24.5 0.0
1.2nm,0.8s,baz=298,slow=4.4,SNR=3.4
ASAR Alice Springs 84.20 116 P P 12 51 28.3 +0.2
0.8nm,0.6s,baz=289,slow=4.8,SNR=15

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*ATH **21** 12:43:49.6,35°.38N×21°.24E,h37km,MD3.5/3*
*ISCJB **21** 12:43:56.9±1.7,36°.00N±0°.06×21°.5E±0°.1,h3km±9km,*
Error ellipse: s-maj=15.8km s-min=10.1km az=164.6
*CSEM **21** 12:43:57.8±0.7,36°.00N×21°.45E,h10km,ML3.4/1,Error*
ellipse: s-maj=18.2km s-min=7.5km az=64.0
*THE **21** 12:44:00.2,36°.07N×21°.60E,h5km±1km,ML3.4/1,Error*
ellipse: s-maj=3.2km s-min=0.6km az=260.0
ISC 21 12:43:58.5±1.9,36°.02N±0°.07×21°.4E±0°.1,h12km±8km,n30,
σ0°82/47,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.91**	**15**	P	**Pg**	**12 44 16.0**	**0.0**
PYL				S	**Sg**	**12 44 27.6**	**-0.3**
PYL	**PYLOS**	**0.91**	**15**	*e*PN	**Pg**	**12 44 16.1**	**+0.1**
PYL	**PYLOS**	**0.91**	**15**	P	**Pg**	**12 44 16.0**	**0.0**
PYL				S	**Sg**	**12 44 27.6**	**-0.3**
ITM	**Ithomi**	**1.22**	**18**	P	**Pn**	**12 44 21.4**	**0.0**
ITM				S	**Sg**	**12 44 37.8**	**-0.1**
ITM	**Ithomi**	**1.22**	**18**	*e*PB	**Pb**	**12 44 21.7**	**+0.1**
ITM	**Ithomi**	**1.22**	**18**	P	**Pn**	**12 44 21.4**	**0.0**
ITM	**Ithomi**	**1.22**	**18**	*e*Pb	**Pb**	**12 44 21.7**	**+0.1**
ITM				S	**Sg**	**12 44 37.8**	**-0.1**
KYTH	**Kithira**	**1.31**	**78**	*e*PN	**Pn**	**12 44 18.6**	**-4.1**
KYTH	**Kithira**	**1.31**	**78**	*e*Pn	**Pn**	**12 44 18.6**	**-4.1**
VLI	**Veliai**	**1.39**	**60**	*e*PN	**Pn**	**12 44 22.0**	**-1.8**
VLI	**Veliai**	**1.39**	**60**	*e*Pn	**Pn**	**12 44 22.0**	**-1.8**
VLX	**Vlachokerasia**	**1.54**	**29**	P	**Pn**	**12 44 25.9**	**0.0**
VLX				S	**Sn**	**12 44 46.1**	**+0.3**
VLX	**Vlachokerasia**	**1.54**	**29**	*e*PN	**Pn**	**12 44 25.1**	**-0.8**
VLX	**Vlachokerasia**	**1.54**	**29**	*e*Pn	**Pn**	**12 44 25.1**	**-0.8**
VLX	**Vlachokerasia**	**1.54**	**29**	P	**Pn**	**12 44 25.9**	**0.0**
VLX				S	**Sn**	**12 44 46.1**	**+0.3**
RLS	**Riolos of Patr**	**2.03**	**1**	*e*PN	**Pn**	**12 44 32.9**	**+0.3**
RLS	**Riolos of Patr**	**2.03**	**1**	*e*Pn	**Pn**	**12 44 32.9**	**+0.3**
KARN	**Karanos**	**2.10**	**106**	P	**Pn**	**12 44 33.5**	**-0.1**
KARN				S	**Sn**	**12 45 00.4**	**+0.7**
KARN	**Karanos**	**2.10**	**106**	P	**Pn**	**12 44 33.5**	**-0.1**
KARN				S	**Sn**	**12 45 00.4**	**+0.7**
KFL	**Anninata**	**2.15**	**346**	P	**Pn**	**12 44 39.8**	**+5.6**
KFL				S	**Pg**	**12 44 50.2**	**+10**
LAKA	**Lakka**	**2.26**	**11**	P	**Pn**	**12 44 35.9**	**+0.2**
LAKA				S	**Pg**	**12 44 41.9**	**+0.1**
LAKA	**Lakka**	**2.26**	**11**	P	**Pn**	**12 44 35.9**	**+0.2**
LAKA				S	**Pg**	**12 44 41.9**	**+0.1**
VLS	**Valsamata**	**2.26**	**343**	P	**Pn**	**12 44 42.8**	**+7.1**
VLS				S	**Pg**	**12 44 55.5**	**+14**
VLS	**Valsamata**	**2.26**	**343**	P	**Pn**	**12 44 42.8**	**+7.1**
VLS				S	**Pg**	**12 44 55.5**	**+14**
EFP	**Efpalio**	**2.43**	**9**	P	**Pn**	**12 44 37.1**	**-1.0**
EFP				S	**Pg**	**12 44 44.3**	**-0.8**
EFP	**Efpalio**	**2.43**	**9**	*e*PN	**Pn**	**12 44 37.2**	**-0.9**
EFP	**Efpalio**	**2.43**	**9**	*e*Pn	**Pn**	**12 44 37.2**	**-0.9**
EFP	**Efpalio**	**2.43**	**9**	P	**Pn**	**12 44 37.1**	**-1.0**
EFP				S	**Pg**	**12 44 44.3**	**-0.8**
KALE	**Kalithea**	**2.43**	**13**	P	**Pn**	**12 44 38.9**	**+0.8**
KALE				S	**Pg**	**12 44 47.7**	**+2.6**
KALE	**Kalithea**	**2.43**	**13**	P	**Pn**	**12 44 38.9**	**+0.8**
KALE				S	**Pg**	**12 44 47.7**	**+2.6**

IDC 21 13:00:55.2±6.6,7°.48S×156°.22E,h0km,mb3.9/4,
mb1 4.0/4,mb1mx3.7/16,mbtmp3.9/4,Error ellipse:
s-maj=197.9km s-min=45.1km az=115.0,Bougainville -
Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.56**	**238**	P	P	13 06 17.3	+0.3
0.6nm,0.6s,baz=63,slow=9.4,SNR=2.5							
SONM	**Songino Array**	**70.40**	**327**	P	P	13 12 12.2	+1.1
0.2nm,0.5s,baz=137,slow=7.1,SNR=4.6							
MKAR	**Makanchi Array**	**84.57**	**318**	P	P	13 13 30.3	-0.2
1.7nm,0.8s,baz=96,slow=7.4,SNR=8.8							
ZALV	**Zalesovo Beam**	**85.26**	**326**	P	P	13 13 33.0	-0.7
1.3nm,0.4s,baz=104,slow=6.1,SNR=4.2							

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*ISCJB **21** 13:04:26.2±0.8,36°.04N±0°.03×21°.88E±0°.05,h6km±5km,*
mb3.8/14,Error ellipse: s-maj=7.2km s-min=4.4km
az=142.1
*CSEM **21** 13:04:27.7±0.5,36°.11N×21°.91E,h2km,ML3.6,Error*
ellipse: s-maj=11.4km s-min=7.3km az=37.0
*IDC **21** 13:04:27.5±0.8,36°.49N×22°.28E,h0km,mb3.8/15,*
mb1 3.9/19,mb1mx3.9/32,mbtmp3.8/19,ML3.5/4,Error
ellipse: s-maj=19.8km s-min=15.3km az=19.0
*NEIC **21** 13:04:29.6,36°.25N×21°.96E,h5km,ML3.6(ATH),After*
ATH.
*ATH **21** 13:04:29.8,36°.23N×22°.01E,h5km,MD3.9/4*
*THE **21** 13:04:29.3,36°.18N×22°.04E,h0km±4km,ML4.4/5,Error*
ellipse: s-maj=5.3km s-min=2.1km az=227.0
ISC 21 13:04:28.5±0.8,36°.11N±0°.03×21°.97E±0°.05,h13km±4km,
n119,σ1°39/131,mb3.8/14,1C,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.81**	**347**	P	**Pg**	**13 04 42.5**	**-1.6**
PYL				S	**Sg**	**13 04 54.7**	**0.0**
PYL	**PYLOS**	**0.81**	**347**	*e*PG	**Pg**	**13 04 42.7**	**-1.4**
PYL	**PYLOS**	**0.81**	**347**	P	**Pg**	**13 04 42.5**	**-1.6**
PYL				S	**Sg**	**13 04 54.7**	**0.0**
KYTH	**Kithira**	**0.88**	**78**	*e*Pb	**Pg**	**13 04 45.4**	**-0.1**
KYTH	**Kithira**	**0.88**	**78**	*e*PG	**Pg**	**13 04 45.4**	**-0.1**
KYTH	**Kithira**	**0.88**	**78**	*e*Pb	**Pg**	**13 04 45.4**	**-0.1**
VLI	**Veliai**	**0.99**	**52**	*e*Pb	**Pg**	**13 04 47.5**	**-0.1**
VLI	**Veliai**	**0.99**	**52**	*e*PB	**Pg**	**13 04 47.5**	**-0.1**
VLI	**Veliai**	**0.99**	**52**	*e*PB	**Pg**	**13 04 47.5**	**-0.1**
ITM	**Ithomi**	**1.07**	**358**	*e*Pn	**Pg**	**13 04 48.0**	**-1.1**
ITM	**Ithomi**	**1.07**	**358**	P	**Pg**	**13 04 47.7**	**-1.4**
ITM				S	**Sg**	**13 05 02.5**	**-0.6**
ITM	**Ithomi**	**1.07**	**358**	*e*PB	**Pg**	**13 04 48.0**	**-1.1**
ITM	**Ithomi**	**1.07**	**358**	P	**Pg**	**13 04 47.7**	**-1.4**
ITM	**Ithomi**	**1.07**	**358**	*e*Pn	**Pg**	**13 04 48.0**	**-1.1**
ITM				S	**Sg**	**13 05 02.5**	**-0.6**
VLX	**Vlachokerasia**	**1.30**	**15**	P	**Pn**	**13 04 52.0**	**-0.4**
VLX				S	**Sb**	**13 05 09.7**	**+0.2**
VLX	**Vlachokerasia**	**1.30**	**15**	*e*PB	**Pb**	**13 04 52.1**	**-0.7**
VLX	**Vlachokerasia**	**1.30**	**15**	P	**Pn**	**13 04 52.0**	**-0.4**
VLX				S	**Sb**	**13 05 09.7**	**+0.2**
KARN	**Karanos**	**1.73**	**113**	P	**Pn**	**13 04 59.1**	**+0.8**
KARN	**Karanos**	**1.73**	**113**	*e*PN	**Pg**	**13 05 02.9**	**+1.1**
KARN	**Karanos**	**1.73**	**113**	P	**Pn**	**13 04 59.1**	**+0.8**
KARN	**Karanos**	**1.73**	**113**	*e*Pg	**Pg**	**13 05 02.9**	**+1.1**
GUR	**Goura**	**1.85**	**9**	P	**Pn**	**13 05 01.2**	**+1.3**
GUR	**Goura**	**1.85**	**9**	P	**Pn**	**13 05 01.2**	**+1.3**
VAM	**Vamos**	**1.95**	**110**	P	**Pn**	**13 05 02.8**	**+1.6**
VAM	**Vamos**	**1.95**	**110**	*e*PN	**Pg**	**13 05 07.4**	**+1.6**
VAM	**Vamos**	**1.95**	**110**	*e*Pn	**Pg**	**13 05 07.4**	**+1.6**
RLS	**Riolos of Patr**	**1.99**	**349**	*e*Pn	**Pb**	**13 05 05.1**	**+0.6**
RLS	**Riolos of Patr**	**1.99**	**349**	*e*PN	**Pb**	**13 05 05.1**	**+0.6**
RLS	**Riolos of Patr**	**1.99**	**349**	*e*Pn	**Pb**	**13 05 05.1**	**+0.6**
NAIG	**Nisos Aigina**	**2.05**	**36**	*e*Pn	**Pb**	**13 05 06.7**	**+1.2**
NAIG	**Nisos Aigina**	**2.05**	**36**	*e*PN	**Pb**	**13 05 06.7**	**+1.2**
NAIG	**Nisos Aigina**	**2.05**	**36**	*e*Pn	**Pb**	**13 05 06.7**	**+1.2**
LTK	**Loutraki**	**2.07**	**22**	P	**Pn**	**13 05 04.8**	**+1.9**
LTK	**Loutraki**	**2.07**	**22**	*e*PN	**Pb**	**13 05 06.4**	**+0.5**
LTK	**Loutraki**	**2.07**	**22**	P	**Pn**	**13 05 04.8**	**+1.9**
LTK	**Loutraki**	**2.07**	**22**	*e*Pn	**Pb**	**13 05 06.4**	**+0.5**
LAKA	**Lakka**	**2.13**	**0**	P	**Pn**	**13 05 05.4**	**+1.7**
LAKA				S	**Sn**	**13 05 31.9**	**+1.9**
LAKA	**Lakka**	**2.13**	**0**	P	**Pn**	**13 05 05.4**	**+1.7**
LAKA				S	**Sn**	**13 05 31.9**	**+1.9**
KFL	**Anninata**	**2.21**	**335**	P	**Pn**	**13 05 06.4**	**+1.6**
VLY	**Voula,Athens**	**2.28**	**39**	*e*Pn	**Pb**	**13 05 09.1**	**-0.3**
VLY	**Voula,Athens**	**2.28**	**39**	*e*PN	**Pb**	**13 05 09.1**	**-0.3**
VLY	**Voula,Athens**	**2.28**	**39**	*e*Pn	**Pb**	**13 05 09.1**	**-0.3**
KALE	**Kalithea**	**2.29**	**3**	P	**Pn**	**13 05 07.1**	**+1.3**
KALE	**Kalithea**	**2.29**	**3**	P	**Pn**	**13 05 07.1**	**+1.3**
ATH	**Athens Observa**	**2.33**	**36**	*e*Pg	**Pg**	**13 05 12.1**	**-1.0**
ATH	**Athens Observa**	**2.33**	**36**	*e*Pg	**Pg**	**13 05 12.1**	**-1.0**
VLS	**Valsamata**	**2.34**	**332**	*e*Pb	**Pn**	**13 05 08.2**	**+1.6**
VLS	**Valsamata**	**2.34**	**332**	P	**Pn**	**13 05 07.2**	**+0.6**
VLS	**Valsamata**	**2.34**	**332**	P	**Pn**	**13 05 07.2**	**+0.6**
VLS	**Valsamata**	**2.34**	**332**	*e*Pb	**Pn**	**13 05 08.2**	**+1.6**
DSF	**Desfina**	**2.34**	**11**	P	**Pn**	**13 05 07.1**	**+0.5**
DSF	**Desfina**	**2.34**	**11**	P	**Pn**	**13 05 07.1**	**+0.5**
PTL	**Penteli**	**2.46**	**37**	*e*Pg	**Pb**	**13 05 13.7**	**+1.1**
PTL	**Penteli**	**2.46**	**37**	*e*Pg	**Pb**	**13 05 13.7**	**+1.1**
IDI	**Anoyia**	**2.52**	**108**	Pn	**Pn**	**13 05 09.8**	**+0.8**
2.8nm,0.3s,baz=294,slow=16,SNR=17							
IDI				Sn	**Sg**	**13 05 49.6**	**+0.3**
30nm,0.3s,baz=302,slow=15,SNR=7.8							
IDI	**Anoyia**	**2.52**	**108**	Pn	**Pn**	**13 05 09.8**	**+0.8**
IDI				*e*Pg	**Pg**	**13 05 16.6**	**-0.1**
IDI				Sn	**Sg**	**13 05 49.6**	**+0.3**
IDI	**Anoyia**	**2.52**	**108**	*e*Pg	**Pg**	**13 05 16.6**	**-0.1**
LKR	**Lokris**	**2.67**	**18**	*e*Pn	**Pb**	**13 05 14.5**	**-1.6**
LKR	**Lokris**	**2.67**	**18**	*e*PN	**Pb**	**13 05 14.5**	**-1.6**
LKR	**Lokris**	**2.67**	**18**	*e*Pn	**Pb**	**13 05 14.5**	**-1.6**
EVR	**Evrytania**	**2.81**	**357**	*e*Pg	**Pg**	**13 05 19.8**	**-2.5**
EVR	**Evrytania**	**2.81**	**357**	*e*PN	**Pb**	**13 05 17.5**	**-1.0**
EVR	**Evrytania**	**2.81**	**357**	*e*Pg	**Pg**	**13 05 19.8**	**-2.5**
AGG	**Agios Georgios**	**2.92**	**6**	*e*Pn	**Pb**	**13 05 18.9**	**-1.5**
AGG	**Agios Georgios**	**2.92**	**6**	*e*PN	**Pb**	**13 05 18.9**	**-1.5**
AGG	**Agios Georgios**	**2.92**	**6**	*e*Pn	**Pb**	**13 05 18.9**	**-1.5**
NEO	**Neokhori**	**3.35**	**17**	*e*Pb	**Pn**	**13 05 22.6**	**+2.2**
NEO	**Neokhori**	**3.35**	**17**	*e*PB	**Pn**	**13 05 22.6**	**+2.2**
NEO	**Neokhori**	**3.35**	**17**	*e*Pb	**Pn**	**13 05 22.6**	**+2.2**
AOS	**Alonnisos**	**3.42**	**26**	P	**Pn**	**13 05 25.0**	**+3.6**
AOS	**Alonnisos**	**3.42**	**26**	P	**Pn**	**13 05 25.0**	**+3.6**
THL	**Klokotos Trika**	**3.45**	**1**	*e*Pb	**Pn**	**13 05 23.7**	**+1.8**
JAN	**Janina**	**3.65**	**346**	*e*Pn	**Pn**	**13 05 26.1**	**+1.5**
JAN	**Janina**	**3.65**	**346**	*e*Pn	**Pn**	**13 05 26.1**	**+1.5**
KEK	**Kerkira**	**3.99**	**335**	*e*Pn	**Pn**	**13 05 30.4**	**+1.2**
KEK	**Kerkira**	**3.99**	**335**	*e*Pn	**Pn**	**13 05 30.4**	**+1.2**
PAIG	**Paliouri**	**4.05**	**19**	P	**Pn**	**13 05 31.4**	**+1.3**
PAIG	**Paliouri**	**4.05**	**19**	P	**Pn**	**13 05 31.4**	**+1.3**
PLG	**Polygyros**	**4.42**	**15**	P	**Pn**	**13 05 39.6**	**+4.5**
PLG	**Polygyros**	**4.42**	**15**	P	**Pn**	**13 05 39.6**	**+4.5**
FNA	**Florina**	**4.69**	**355**	P	**Pn**	**13 05 40.0**	**+1.1**
FNA	**Florina**	**4.69**	**355**	P	**Pn**	**13 05 40.0**	**+1.1**
SOH	**Sokhos**	**4.83**	**13**	*e*Pn	**Pn**	**13 05 43.7**	**+2.9**
SOH	**Sokhos**	**4.83**	**13**	*e*Pn	**Pn**	**13 05 43.7**	**+2.9**
TIP	**Timpagrande**	**5.15**	**308**	P	**Pn**	**13 05 46.9**	**+1.7**
CEL	**Celeste**	**5.30**	**296**	P	**Pn**	**13 05 48.0**	**+0.7**
CEL	**Celeste**	**5.30**	**296**	P	**Pn**	**13 05 48.0**	**+0.7**
VAE	**Valguarnera**	**6.21**	**285**	Pn	**Pn**	**13 06 03.8**	**+4.0**
2.0nm,0.3s,baz=100,slow=6.1,SNR=3.8							
VAE				Sn	**Sn**	**13 07 09.9**	**-0.9**
0.7nm,0.3s,baz=120,slow=20,SNR=2.5							
VAE	**Valguarnera**	**6.21**	**285**	Sn	**Sn**	**13 07 09.9**	**-0.8**
SG1	**Sgolgore (BA)**	**6.29**	**320**	*e*Pn	**Pn**	**13 06 02.1**	**+1.3**
BARS	**Barje**	**6.70**	**359**	*e*Pn	**Pn**	**13 06 06.5**	**0.0**
STON	**Ston**	**7.52**	**335**	*e*Pn	**Pn**	**13 06 14.7**	**-3.0**
STON				Sn	Px	13 06 46.3	
STON	**Ston**	**7.52**	**335**	*e*Pn	**Pn**	**13 06 14.7**	**-3.0**
DIVS	**Divibare**	**8.12**	**350**	l/Pn	**Pn**	**13 06 24.5**	**-1.5**
MMAI	**Mount Meron Ar**	**11.50**	**102**	Pn	**Pn**	**13 07 10.3**	**-2.0**
1.1nm,0.3s,baz=8.2,slow=13,SNR=4.4							
EIL	**Elat**	**12.65**	**117**	Pn	**Pn**	**13 07 26.5**	**-1.6**
0.2nm,0.3s,baz=344,slow=15,SNR=2.9							
EIL				Sn	**Sn**	**13 09 36.4**	**-13**
0.2nm,0.3s,baz=354,slow=18,SNR=2.2							
EIL	**Elat**	**12.65**	**117**	Pn	**Pn**	**13 07 26.5**	**-1.6**
EIL				Sn	**Sn**	**13 09 36.4**	**-13**
EIL	**Elat**	**12.65**	**117**	Pn	**Pn**	**13 07 26.5**	**-1.6**
ESDC	**Sonseca Array**	**20.75**	**288**	P	**P**	**13 09 10.8**	**+2.0**
1.2nm,0.7s,baz=84,slow=8.8,SNR=3.7							
ESDC	**Sonseca Array**	**20.75**	**288**	P	**P**	**13 09 10.8**	**+2.0**
HFS	**Hagfors**	**24.63**	**350**	P	**P**	**13 09 46.6**	**-1.7**
1.9nm,0.5s,mb3.9,baz=163,slow=11,SNR=9.1							
FINES	**FINESS Array B**	**25.49**	**5**	P	**P**	**13 09 54.1**	**-2.0**
2.9nm,0.8s,mb3.9,baz=153,slow=12,SNR=7.0							
EKA	**Eskdalemuir Ar**	**25.79**	**326**	P	**P**	**13 09 58.7**	**-0.1**
1.5nm,0.8s,mb3.6,baz=129,slow=8.5,SNR=6.2							
EKA	**Eskdalemuir Ar**	**25.79**	**326**	P	**P**	**13 09 58.7**	**-0.1**
NOA	**NORSAR Array B**	**25.88**	**348**	P	**P**	**13 09 57.4**	**-2.2**
1.2nm,0.8s,mb3.5,baz=160,slow=10,SNR=2.9							
TORD	**Torodi Ar. Bea**	**29.24**	**224**	P	**P**	**13 10 36.1**	**+5.9**
0.6nm,0.7s,mb3.5,baz=34,slow=9.5							
ARCES	**ARCESS Array B**	**33.54**	**2**	P	**P**	**13 11 05.8**	**-1.7**
1.9nm,0.7s,mb4.2,baz=187,slow=8.6,SNR=9.1							
BVAR	**Borovoye Array**	**37.61**	**48**	P	**P**	**13 11 40.3**	**-2.3**
0.3nm,0.3s,mb3.5,baz=263,slow=11,SNR=2.9							
SPITS	**Spitsbergen Ar**	**42.24**	**358**	P	**P**	**13 12 19.6**	**-1.2**
5.3nm,1.0s,mb4.1,baz=194,slow=4.0,SNR=6.1							
MKAR	**Makanchi Array**	**45.43**	**57**	P	**P**	**13 12 44.6**	**-2.2**
1.0nm,0.4s,mb4.0,baz=274,slow=6.8,SNR=24							
ZALV	**Zalesovo Beam**	**46.24**	**47**	P	**P**	**13 12 50.4**	**-2.7**
1.5nm,0.5s,mb4.2,baz=260,slow=8.9,SNR=5.3							
SONM	**Songino Array**	**60.89**	**50**	P	**P**	**13 14 39.1**	**-1.5**
0.4nm,0.4s,mb3.9,baz=282,slow=7.2,SNR=3.0							
YKA	**Yellowknife Ar**	**75.73**	**341**	P	**P**	**13 16 12.2**	**-1.1**
0.3nm,0.7s,mb3.4,baz=37,slow=5.1,SNR=3.5							
KSRS	**Korea Array**	**79.74**	**51**	P	**P**	**13 16 34.6**	**-1.6**
0.6nm,0.5s,mb3.8,baz=313,slow=4.6,SNR=3.4							
PDAR	**Pinedale Array**	**89.91**	**327**	P	**P**	**13 17 26.7**	**-0.5**
0.2nm,0.4s,mb3.8,baz=32,slow=7.5,SNR=2.7							
PDAR	**Pinedale Array**	**89.91**	**327**	P	**P**	**13 17 26.7**	**-0.5**
PDAR	**Pinedale Array**	**89.91**	**327**	P	**P**	**13 17 26.7**	**-0.5**
ASAR	**Alice Springs**	**120.77**	**98**	PKP	PKPdf	13 23 21.3	+0.8
0.5nm,0.8s,baz=347,slow=2.9,SNR=3.6							
ASAR	**Alice Springs**	**120.77**	**98**	PKIKP	PKPdf	13 23 21.2	+0.7

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*IDC **21** 13:17:47.2±1.4,36°.22N×21°.86E,h0km,mb3.9/5,*
mb1 3.7/7,mb1mx3.5/28,mbtmp3.7/7,ML3.1/2,Error
ellipse: s-maj=27.8km s-min=25.4km az=175.0
*ISCJB **21** 13:17:47.6±0.9,35°.97N±0°.04×21°.80E±0°.06,h7km±5km,*
mb3.8/6,Error ellipse: s-maj=9.4km s-min=5.6km
az=150.2
*CSEM **21** 13:17:48.5±0.4,36°.02N×21°.77E,h2km,MD3.7,Error*
ellipse: s-maj=11.1km s-min=6.5km az=69.0
*THE **21** 13:17:50.0,36°.07N×21°.75E,h8km±1km,ML4.1/2,Error*
ellipse: s-maj=5.0km s-min=1.0km az=254.0
*NEIC **21** 13:17:56.4,36°.39N×22°.29E,h5km,ML3.3(ATH),After*
ATH.
*ATH **21** 13:17:56.4,36°.39N×22°.29E,h5km,MD3.7/5*
ISC 21 13:17:48.3±1.0,36°.01N±0°.04×21°.73E±0°.06,h5km±5km,
n55,σ1°28/68,mb3.8/6,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.89**	**1**	P	**Pg**	**13 18 05.3**	**+0.1**
PYL				S	**Sg**	**13 18 18.3**	**+1.6**
PYL	**PYLOS**	**0.89**	**1**	*e*PG	**Pg**	**13 18 09.3**	**+4.1**
PYL				*e*SG	**Sg**	**13 18 22.3**	**+5.6**
PYL	**PYLOS**	**0.89**	**1**	P	**Pg**	**13 18 05.3**	**+0.1**
PYL				S	**Sg**	**13 18 18.3**	**+1.6**
KYTH	**Kithira**	**1.10**	**75**	*e*Pg	**Pg**	**13 18 08.1**	**-1.2**
KYTH	**Kithira**	**1.10**	**75**	*e*PG	**Pg**	**13 18 08.1**	**-1.2**
KYTH	**Kithira**	**1.10**	**75**	*e*Pg	**Pg**	**13 18 08.1**	**-1.2**
ITM	**Ithomi**	**1.18**	**8**	*e*Pb	**Pb**	**13 18 11.8**	**+0.6**
ITM	**Ithomi**	**1.18**	**8**	P	**Pg**	**13 18 10.2**	**-0.7**
ITM				S	**Sg**	**13 18 27.3**	**+1.1**
ITM	**Ithomi**	**1.18**	**8**	*e*PB	**Pb**	**13 18 11.8**	**+0.6**
ITM	**Ithomi**	**1.18**	**8**	P	**Pg**	**13 18 10.2**	**-0.7**
ITM	**Ithomi**	**1.18**	**8**	*e*Pb	**Pb**	**13 18 11.8**	**+0.6**
ITM				S	**Sg**	**13 18 27.3**	**+1.1**
VLX	**Vlachokerasia**	**1.46**	**21**	P	**Pn**	**13 18 14.8**	**-0.5**
VLX				S	**Sb**	**13 18 34.2**	**-0.5**
VLX	**Vlachokerasia**	**1.46**	**21**	*e*PG	**Pg**	**13 18 14.9**	**-1.3**
VLX	**Vlachokerasia**	**1.46**	**21**	P	**Pn**	**13 18 14.8**	**-0.5**
VLX				S	**Sb**	**13 18 34.2**	**-0.5**
KARN	**Karanos**	**1.89**	**108**	P	**Pn**	**13 18 21.7**	**+0.6**
KARN				S	**Sn**	**13 18 46.9**	**+1.6**
KARN	**Karanos**	**1.89**	**108**	P	**Pn**	**13 18 21.7**	**+0.6**
KARN				S	**Sn**	**13 18 46.9**	**+1.6**
GUR	**Goura**	**1.99**	**14**	P	**Pn**	**13 18 23.2**	**+0.6**
GUR	**Goura**	**1.99**	**14**	*e*PB	**Pb**	**13 18 25.7**	**+0.8**
GUR	**Goura**	**1.99**	**14**	P	**Pn**	**13 18 23.2**	**+0.6**
GUR	**Goura**	**1.99**	**14**	*e*Pb	**Pb**	**13 18 25.7**	**+0.8**
RLS	**Riolos of Patr**	**2.06**	**354**	P	**Pg**	**13 18 30.4**	**+2.7**
VAM	**Vamos**	**2.10**	**106**	P	**Pg**	**13 18 28.7**	**+0.2**
VAM				*e*Pn	**Pn**	**13 18 31.8**	**+7.7**
VAM	**Vamos**	**2.10**	**106**	P	**Pg**	**13 18 28.7**	**+0.2**
VLS	**Valsamata**	**2.35**	**338**	*e*Pn	**Pg**	**13 18 37.6**	**+4.4**
VLS	**Valsamata**	**2.35**	**338**	*e*PN	**Pg**	**13 18 37.6**	**+4.4**
EFP	**Efpalio**	**2.42**	**3**	*e*PN	**Pg**	**13 18 33.5**	**-1.1**
VLY	**Voula,Athens**	**2.48**	**41**	P	**Pn**	**13 18 32.3**	**+3.0**
VLY	**Voula,Athens**	**2.48**	**41**	P	**Pn**	**13 18 32.3**	**+3.0**
IDI	**Anoyia**	**2.68**	**105**	Pn	**Pn**	**13 18 31.8**	**-0.3**
1.1nm,0.3s,baz=101,slow=8.8,SNR=7.7							
IDI	**Anoyia**	**2.68**	**105**	Pn	**Pn**	**13 18 31.8**	**-0.3**
IDI				P		13 18 38.3	
IDI	**Anoyia**	**2.68**	**105**	Pn	**Pn**	**13 18 31.8**	**-0.2**
LKR	**Lokris**	**2.83**	**21**	P	**Pn**	**13 18 36.8**	**+2.7**
LKR	**Lokris**	**2.83**	**21**	P	**Pn**	**13 18 34.4**	**+0.3**
LKR				S	**Sn**	**13 19 08.2**	**-0.3**
LKR	**Lokris**	**2.83**	**21**	P	**Pn**	**13 18 34.4**	**+0.3**
LKR				S	**Sn**	**13 19 08.2**	**-0.3**
EVR	**Evrytania**	**2.90**	**1**	*e*Pg	**Pg**	**13 18 43.6**	**-0.3**
EVR	**Evrytania**	**2.90**	**1**	*e*PG	**Pg**	**13 18 43.6**	**-0.3**
EVR	**Evrytania**	**2.90**	**1**	*e*Pg	**Pg**	**13 18 43.6**	**-0.3**
AGG	**Agios Georgios**	**3.05**	**9**	P	**Pb**	**13 18 42.6**	**-0.4**
NEO	**Neokhori**	**3.50**	**19**	P	**Pn**	**13 18 45.5**	**+2.1**
NEO	**Neokhori**	**3.50**	**19**	P	**Pn**	**13 18 45.5**	**+2.1**
JAN	**Janina**	**3.71**	**350**	P	**Pb**	**13 18 51.5**	**-2.7**
JAN	**Janina**	**3.71**	**350**	P	**Pb**	**13 18 51.5**	**-2.7**
SOH	**Sokhos**	**4.97**	**14**	P	**Pn**	**13 19 08.5**	**+4.9**
SOH	**Sokhos**	**4.97**	**14**	P	**Pn**	**13 19 08.5**	**+4.9**
TIP	**Timpagrande**	**5.06**	**310**	P	**Pb**	**13 19 16.9**	**-0.3**
MMAI	**Mount Meron Ar**	**11.67**	**101**	Pn	**Pn**	**13 20 34.8**	**-0.8**
0.4nm,0.3s,baz=288,slow=14,SNR=2.7							
MMAI				Sn	**Sn**	**13 22 46.3**	**+0.1**
1.1nm,0.3s,baz=288,slow=23,SNR=5.2							
HFS	**Hagfors**	**24.69**	**350**	P	**P**	**13 23 10.9**	**+0.9**
1.5nm,0.7s,mb3.6,baz=125,slow=12,SNR=2.5							
HFS	**Hagfors**	**24.69**	**350**	P	**P**	**13 23 10.9**	**+1.0**
TORD	**Torodi Ar. Bea**	**29.03**	**223**	P	**P**	**13 23 51.1**	**+1.7**
0.7nm,0.6s,mb3.6,baz=34,slow=9.2,SNR=4.9							
ARCES	**ARCESS Array B**	**33.65**	**2**	P	**P**	**13 24 28.1**	**-1.4**
1.0nm,0.8s,mb3.8,baz=193,slow=7.4,SNR=3.

VHO			*i* S	Sn	13 29 47.2	-7.3	
PNIG	**Pinotepa**	**4.37 295**	*i* P	Pn	13 29 16.2	-5.4	
PNIG			*i* S	Sn	13 30 02.4	-11	
UTMO	**Huajuapan**	**4.88 312**	*eP*	Pn	13 29 24.4	-4.2	
UTMO			*i* S	Sn	13 30 19.1	-6.6	
TPIG	**Tehuac#an**	**5.00 320**	*eP*	Pn	13 29 27.5	-2.8	
TPIG			*i* S	Sn	13 30 24.0	-4.6	
SCIG	**Sabancuy**	**5.13 31**	*i* P	Pn	13 29 32.4	+0.3	
SCIG			*i* S	Sn	13 30 34.4	+2.3	
LVIG	**Laguna Verde**	**5.61 336**	*eP*	Pn	13 29 35.9	-2.9	
LVIG			*i* S	Sn	13 30 34.8	-9.1	
PPM	**Popocatepetl**	**6.29 316**	*eP*	Pn	13 29 44.7	-3.3	
PPM			*i* S	Sn	13 30 59.8	-0.7	
CAIG	**El Cayaco**	**6.51 293**	*eP*	Pn	13 29 45.7	-5.4	
CAIG			*i* S	Sn	13 31 01.4	-4.6	
IIO	**Organos**	**6.72 319**	*eP*	Pn	13 29 51.0	-3.0	
IIO			*i* S	Sn	13 31 06.2	-5.0	
MZVM		**6.79 313**	*eP*	Pn	13 29 51.1	-3.7	
MZVM			*i* S	Sn	13 31 09.2	-3.6	
TEIG	**Tepich**	**7.84 43**	*e*Pn	Pn	13 30 08.8	-0.5	
JCT	**Junction City** 17nm,1.0s	**16.70 342**	*eP*	Pn	13 32 12.9	+3.5	
628A	**Black Gap, Mar** baz=17,SNR=10	**16.96 333**	⇓P	Pn	13 32 13.4	+0.7	
627A	**Terlingua Ranc** baz=17,SNR=18	**17.16 331**	⇓P	Pn	13 32 16.3	+1.1	
TXAR	**Lajitas Array** 0.1nm,0.3s,baz=159,slow=13,SNR=10	**17.19 330** Pn		Pn	13 32 16.2	+0.6	
TXAR	**Lajitas Array**	**17.19 330** Pn		Pn	13 32 16.2	+0.6	
626A	**Big Bend Ranch** baz=18,SNR=9.1	**17.60 330**	⇓P	Pn	13 32 22.2	+1.5	
527A	**Woodward Ranch** baz=18,SNR=11	**17.84 332**	⇓P	Pn	13 32 23.8	0.0	
428A	**Kincaid Ranch,** baz=18,SNR=8.7	**17.95 335**	⇓P	Pn	13 32 26.2	+1.2	
427A	**Hayter Ranch,** baz=18	**18.35 334**	⇑P	Pn	13 32 32.0	+2.0	
426A	**McDonald Obser** baz=18,SNR=7.4	**18.48 332**	⇑P	Pn	13 32 32.6	+1.1	
328A	**Wristen Ranch,** baz=18	**18.57 336**	⇓P	Pn	13 32 33.1	+0.5	
326A	**Caldwell Ranch** baz=19	**19.01 333**	⇑P	Pn	13 32 37.4	-0.5	
425A	**Indio Mountain** baz=19	**19.03 330**	⇓P	Pn	13 32 35.6	-2.6	
325A	**Bean Ranch, Si** baz=19,SNR=7.3	**19.50 331**	⇓P	Pn	13 32 45.7	+1.7	
226A	**Malaga, Loving** baz=20	**19.70 334**	⇓P	Pn	13 32 45.7	-0.5	
CLNB	**Carlsbad** 19nm,0.8s	**19.78 335**	*eP*	Pn	13 32 46.5	-0.7	
324A	**Moseley Ranch,** baz=20	**19.81 330**	⇓P	Pn	13 32 47.2	-0.3	
MIAR	**Mount Ida** 5.5nm,0.6s	**19.89 1**	*eP*	Pn	13 32 45.2	-3.3	
MNTX	**Cornudas Mount** 6.1nm,1.0s	**19.97 331**	*eP*	Pn	13 32 47.1	-2.4	
126A	**Clayton Basin,** baz=20	**20.17 335**	⇑P	P	13 32 50.5	+0.5	
224A	**Cornudas Mount** baz=20	**20.35 331**	⇑P	P	13 32 50.6	-1.4	
Z27A	**Tatum** baz=20,SNR=11	**20.45 337**	⇓P	P	13 32 51.3	-1.7	
125A	**Gardner Draw,** baz=20	**20.45 333**	⇑P	P	13 32 52.2	-0.8	
WMOK	**Wichita Mounta** 6.1nm,1.0s	**20.53 349**	*eP*	P	13 32 54.1	+0.2	
Z26A	**Caprock** baz=21	**20.70 336**	⇓P	P	13 32 54.6	-1.2	
124A	**Stringfield Ra** baz=21	**20.84 332**	⇓P	P	13 32 56.7	-0.5	
MSTX	**Muleshoe** baz=21	**20.88 339**	⇑P	P	13 32 57.0	-0.7	
Y27A	**Causey** baz=21	**20.94 338**	⇑P	P	13 32 56.9	-1.4	
Z25A	**Roswell** baz=21	**21.01 334**	⇓P	P	13 32 58.1	-1.0	
Z24A	**Sheeppen Canyo** baz=21,SNR=9.3	**21.33 333**	⇑P	P	13 33 02.5	-0.1	
AMTX	**Amarillo** 20nm,0.8s,mb4.5	**21.37 342**	*eP*	P	13 33 02.6	-0.4	
Y25A	**Mesa, Roswell** baz=21	**21.56 335**	⇑P	P	13 33 04.7	-0.3	
X27A	**F and S Farms,** baz=22	**21.60 339**	⇓P	P	13 33 05.3	-0.2	
ROSC	**El Rosal** 3.6nm,0.3s,mb4.3,baz=265,slow=23,SNR=6.7	**21.64 115** P		P	13 33 07.4	+1.3	
ROSC	**El Rosal**	**21.64 115** *eP*		P	13 33 10.8	+4.7	
Z23A	**Rita Site, Whi** baz=22	**21.67 331**	⇑P	P	13 33 05.5	-0.7	
220A	**Playas Peak, P** baz=22,SNR=6.1	**21.76 325**	⇑P	P	13 33 07.0	-0.2	
X26A	**CR and CF Fran** baz=22	**21.77 338**	⇑P	P	13 33 07.0	-0.2	
121A	**Cookes Peak, D** baz=22,SNR=9.9	**21.85 327**	⇓P	P	13 33 08.5	+0.4	
Y24A	**Capitan** baz=22,SNR=12	**21.87 334**	⇓P	P	13 33 08.4	+0.1	
W27A	**Bowe Ranch, En** baz=22	**21.97 340**	⇑P	P	13 33 09.8	+0.4	
Z22A	**Elephant Butte** baz=22	**22.01 330**	⇓P	P	13 33 10.9	+1.0	
Y23A	**Lovelace Mesa,** baz=22,SNR=5.7	**22.14 333**	⇓P	P	13 33 11.7	+0.4	
219A	**White Tail Can** baz=22	**22.25 324**	⇓P	P	13 33 12.6	+0.2	
219A	baz=22,SNR=6.6		⇓pP		13 33 21.2		
318A	**Bisbee** baz=22	**22.27 322**	⇓P	P	13 33 13.8	+1.1	
120A	**U Bar Ranch, L** baz=22	**22.31 326**	⇑P	P	13 33 13.6	+0.5	
Z21A	**St. Cloud Mine** baz=22	**22.40 329**	⇓P	P	13 33 15.0	+0.9	
Z21A	baz=22		⇑pP		13 33 21.8		
X24A	**Lazy VL Ranch,** baz=22	**22.42 335**	⇓P	P	13 33 14.1	-0.1	
Y22A	**Socorro** baz=22	**22.57 331**	⇑P	P	13 33 16.5	+0.7	
BNM	**Barren Site** 9.9nm,1.1s,mb4.2	**22.59 332**	*eP*	P	13 33 17.7	+1.7	
W25A	**X Bar L Ranch,** baz=22,SNR=5.2	**22.60 337**	⇓P	P	13 33 15.9	-0.3	
218A	**Dragoon** baz=23	**22.69 322**	⇑P	P	13 33 17.4	+0.3	
218A	baz=23,SNR=5.2		⇓pP		13 33 25.9		
Z20A	**Nine Sixteen R** baz=23	**22.72 327**	⇓P	P	13 33 18.5	+1.0	
Z20A	baz=23		⇓pP		13 33 26.2		
LENM	**Lemitar**	**22.76 331** *e*pP		pP	13 33 24.9	+6.6	
V26A	**Tequesquite Ra** baz=23	**22.88 339**	⇑P	P	13 33 18.7	-0.4	
V26A	baz=23		⇑pP		13 33 27.6		
Y21A	**Point of Rocks** baz=23	**22.96 330**	⇑P	P	13 33 20.0	0.0	
Y21A	baz=23		⇓pP		13 33 28.7		
W24A	**Lazy 6 Ranch,** baz=23,SNR=7.6	**22.97 335**	⇓P	P	13 33 19.0	-1.0	
LAZ	**Ladron** 4.5nm,1.2s,mb3.8	**23.03 331**	*eP*	P	13 33 20.4	-0.3	
ANMO	**Albuquerque** 1.1nm,0.6s,mb3.5,baz=148,slow=11,SNR=4.9	**23.18 333** P		P	13 33 22.2	-0.1	
ANMO	**Albuquerque** 1.0nm,1.0s,mb3.2	**23.18 333** *eP*		P	13 33 24.5	+2.2	
V25A	**Rancho No Teng** baz=23,SNR=8.2	**23.21 338**	⇑P	P	13 33 22.6	0.0	
W23A	**Werner Place,** baz=23	**23.23 334**	⇓P	P	13 33 23.2	+0.4	
Y20A	**Horse Springs,** baz=23,SNR=6.9	**23.23 328**	⇑P	P	13 33 21.9	-0.9	
Y20A	baz=23		⇑pP		13 33 31.6		
TUC	**Tucson** 40nm,2.2s,mb4.5	**23.36 322** *eP*		P	13 33 25.2	+0.9	
X21A	**Alamocita Cree** baz=23,SNR=8.3	**23.37 330**	⇑P	P	13 33 25.3	+1.0	
U26A	**Atchley Ranch,** baz=23	**23.41 340**	⇓P	P	13 33 24.9	+0.2	
SIUC	**Southern Illin**	**23.43 10**	*e*pP	Px	13 33 34.7		
CCM	**Cathedral Cave** 4.4nm,0.8s,mb3.9	**23.51 5**	*eP*	P	13 33 25.2	-0.5	
117A	**Oracle**	**23.52 322**	⇑P	P	13 33 26.4	+0.5	
	baz=23						
U25A	**Circle Dot Ran** baz=24	**23.64 339**	⇓P	P	13 33 26.8	-0.2	
X20A	**Quemado** baz=24,SNR=8.1	**23.80 329**	⇓P	P	13 33 29.6	+1.1	
U23A	**El Rito** baz=24	**24.25 335**	⇑P	P	13 33 33.1	+0.5	
T25A	**Trinidad** baz=24	**24.31 339**	⇑P	P	13 33 33.2	+0.1	
214A	**Organ Pipe Nat** baz=24	**24.38 318**	⇑P	P	13 33 35.5	+1.7	
115A	**Sonoran Desert** baz=24	**24.51 321**	⇓P	P	13 33 36.5	+1.5	
CBKS	**Cedar Bluff**	**24.67 349** *eP*		P	13 33 35.5	-0.9	
U21A	**Nageezi** baz=25	**24.95 333**	⇓P	P	13 33 40.5	+1.5	
T22A	**Edith** baz=25	**25.13 335**	⇓P	P	13 33 41.2	+0.6	
SDCO	**Great Sand Dun** 4.8nm,1.2s,mb3.9	**25.23 338** *eP*		P	13 33 42.4	+0.8	
U19A	**Dine' College,** baz=26	**25.55 331**	⇑P	P	13 33 45.2	+0.8	
Z13A	**Yuma Proving G** baz=26	**25.73 320**	⇑P	P	13 33 48.3	+2.1	
V17A	**Tonalea, Kykot** baz=26	**25.81 327**	⇓P	P	13 33 47.7	+0.9	
U18A	**Rough Rock, Ch** baz=26	**25.97 330**	⇓P	P	13 33 48.8	+0.5	
MVCO	**Mesa Verde** baz=26	**25.97 333**	⇓P	P	13 33 48.4	+0.1	
MVCO	**Mesa Verde** 8.4nm,1.1s,mb4.2	**25.97 333** *eP*		P	13 33 48.3	0.0	
WUAZ	**Wupatki** baz=26	**26.04 326**	⇑P	P	13 33 49.9	+1.0	
WUAZ	**Wupatki** 7.7nm,0.9s,mb4.2	**26.04 326** *eP*		P	13 33 52.8	+3.9	
T18A	**Mexican Hat** baz=26	**26.54 331**	⇑P	P	13 33 53.5	+0.1	
V15A	**Kaibab Nationa** baz=27	**26.70 326**	⇓P	P	13 33 56.2	+1.4	
PV01	**Paradox Valley** 499nm,0.9s	**26.78 334** *eP*		P	13 33 56.3	+0.8	
X13A	**Yucca** baz=27	**26.78 322**	⇑P	P	13 33 56.5	+0.9	
SJG	**San Juan** 4.2nm,0.4s,mb4.3	**26.95 79** *eP*		P	13 33 53.1	-4.2	
SMCO	**Snowmass**	**27.04 337** *e*pP		Px	13 34 08.2		
ISCO	**Idaho Springs** 3.6nm,1.1s,mb3.8	**27.11 340** *eP*		P	13 33 59.6	+1.1	
PV04	**Paradox Valley**	**27.14 334** *eP*		P	13 34 00.3	+1.5	
BC3	**Big Chuckawall** baz=27	**27.17 318** ⇑P		P	13 34 00.0	+0.9	
IRM	**Iron Mountain** baz=27	**27.30 319** ⇓P		P	13 34 00.6	+0.3	
U14A	**Mt Trumbull** baz=28	**27.69 325** ⇑P		P	13 34 04.5	+0.7	
T15A	**Red Dirt Ranch** baz=28	**27.70 327** ⇓P		P	13 34 04.4	+0.5	
V13A	**Grand Canyon W** baz=28	**27.74 323** ⇑P		P	13 34 04.1	-0.1	
R17A	**Hanksville Air** baz=28	**27.97 331** ⇑P		P	13 34 07.0	+0.7	
U13A	**Pakoon Wash** baz=28	**28.13 324** ⇓P		P	13 34 07.5	-0.2	
V12A	**Nelson** baz=28	**28.16 322** ⇓P		P	13 34 07.8	-0.2	
Q16A	**Castle Valley** baz=28	**28.58 331** ⇑P		P	13 34 12.6	+0.9	
CCUT	**Cedar City** 3.7nm,1.0s,mb4.1	**28.62 327** *eP*		P	13 34 14.8	+2.7	
MSU	**Marysvale** 3.4nm,1.2s,mb4.0	**28.74 329** *eP*		P	13 34 11.7	-1.5	
AAM	**Ann Arbor**	**29.04 16** *e*pP		Px	13 34 29.1		
ECSD	**EROS Data Cent** 3.6nm,0.6s,mb4.3	**29.14 356** *eP*		P	13 34 15.1	-1.5	
O17A	**Robinson Place** baz=29	**29.42 333** ⇓P		P	13 34 19.3	+0.2	
MPMC	**Manual Prospec** baz=30	**29.99 320** ⇑P		P	13 34 23.8	-0.5	
Q13A	**Wheeler Ranch,** baz=30	**30.01 328** ⇑P		P	13 34 24.2	-0.2	
P13A	**Bates Ranch, G** baz=30	**30.39 328** ⇑P		P	13 34 28.2	+0.5	
R11A	**Toy Canyon, C** baz=30	**30.41 325** ⇑P		P	13 34 28.6	+0.7	
S10A	**Tonopah Range,** baz=31	**30.68 323** ⇓P		P	13 34 31.6	+1.2	
PDAR	**Pinedale Array** 0.2nm,0.5s,mb3.2,baz=126,slow=4.6,SNR=2.8	**31.12 338** P		P	13 34 31.1	-3.0	
N13A	**Wendover, West** 14nm,0.6s,mb5.0	**31.55 330** *eP*		P	13 34 32.6	-5.3	
BINY	**Binghamton** 4.4nm,0.3s,mb4.8	**31.62 26** *eP*		P	13 34 34.2	-4.4	
M14A	**Sheep Mountain** baz=32	**31.65 332** ⇑P		P	13 34 39.2	+0.4	
M13A	**Montello** baz=32	**31.92 331** ⇑P		P	13 34 41.7	+0.5	
M13A	**Montello** 10nm,1.3s,mb4.5	**31.92 331** *eP*		P	13 34 42.8	+1.7	
NVAR	**Mina Array Bea** 2.8nm,1.0s,mb4.0,baz=141,slow=8.7,SNR=19	**32.02 322** P		P	13 34 42.2	+0.1	
NVAR	**Mina Array Bea**	**32.02 322** P		P	13 34 42.2	+0.1	
L14A	**Malta** baz=32	**32.02 332** ⇓P		P	13 34 41.4	-0.6	
M12A	**Wells** baz=32	**32.32 330** ⇓P		P	13 34 45.0	+0.3	
L11A	**Cat Creek Ranc** baz=33	**33.30 330** ⇑P		P	13 34 53.6	+0.3	
I14A	**Mackay** baz=34	**33.64 334** ⇓P		P	13 34 55.8	-0.4	
AGMN	**Agassiz Nation** 6.1nm,1.0s,mb4.5	**33.66 358** *eP*		P	13 34 54.3	-2.0	
HLID	**Hailey** baz=34	**33.76 333** ⇑P		P	13 34 57.5	+0.3	
HLID	**Hailey** 2.2nm,0.9s,mb4.1	**33.76 333** *eP*		P	13 34 58.3	+1.1	
MCMT	**McKenzie Canyo** 1.2nm,0.9s,mb3.8	**34.13 336** *eP*		P	13 35 01.2	+0.7	
BEKR	**Beckworth** baz=34	**34.16 323** ⇑P		P	13 35 01.8	+0.9	
F17A	**Fitzpatrick Pl** baz=34	**34.23 339** ⇓P		P	13 35 01.4	0.0	
I12A	**Atlanta** baz=34	**34.26 332** ⇓P		P	13 35 01.3	-0.3	
DLMT	**Dillon** 5.9nm,1.1s,mb4.4	**34.48 337** *eP*		P	13 35 05.0	+1.5	
H13A	**Challis** baz=34	**34.49 334** ⇓P		P	13 35 03.7	+0.1	
E18A	**Harlowton** baz=34	**34.57 341** ⇑P		P	13 35 01.1	-3.1	
I11A	**Placerville** baz=35	**34.73 332** ⇑P		P	13 35 05.9	+0.3	
H12A	**Diamond D Ranc** baz=35	**34.74 333** ⇑P		P	13 35 05.9	+0.2	
LRM	**Limekiln Ridge** 15nm,1.1s,mb4.8	**34.81 337** *eP*		P	13 35 04.5	-1.8	
WVOR	**Wild Horse Val** 8.3nm,1.1s,mb4.6	**34.95 327** *eP*		P	13 35 05.1	-2.5	
E16A	**East Helena** baz=35	**35.13 339** ⇓P		P	13 35 09.1	0.0	
F13A	**Darby** baz=35	**35.52 335** ⇓P		P	13 35 12.3	-0.1	
J08A	**Circle Bar Ran** baz=35	**35.52 329** ⇓P		P	13 35 12.5	0.0	
I09A	**Lost Marbles R** baz=36	**35.61 330** ⇑P		P	13 35 13.0	-0.3	
F12A	**Elk City** baz=36	**35.87 334** ⇑P		P	13 35 15.5	0.0	
E13A	**Victor** baz=36	**35.99 336** ⇓P		P	13 35 16.2	-0.4	
G11A	**Walters Elk Ra** baz=36	**36.02 333** ⇑P		P	13 35 16.6	-0.2	
G10A	**Bishop Farm, J** baz=36	**36.32 332** ⇑P		P	13 35 18.5	-0.9	
F10A	**Beach Ranch, E** baz=37	**36.89 333** ⇑P		P	13 35 24.3	+0.1	
KEBM	**Edson Butte**	**38.38 323** *e*pP		Px	13 35 46.2		
LON	**Longmire**	**39.60 330** *e*pP		Px	13 35 55.2		
LPAZ	**La Paz** 0.6nm,0.8s,mb3.4,baz=311,slow=11,SNR=2.1	**39.92 139** P		P	13 35 46.3	-3.7	
LPAZ	**La Paz**	**39.92 139** *eP*		P	13 35 46.0	-4.0	
FCC	**Fort Churchill** 1.0nm,2.4s,mb3.1	**44.11 360** *eP*		P	13 36 23.1	-0.7	
SIV	**San Ignacio** 0.4nm,0.3s,mb3.7,baz=304,slow=11,SNR=2.5	**44.51 132** P		P	13 36 27.1	-0.4	
YKA	**Yellowknife Ar** 2.3nm,0.8s,mb4.2,baz=150,slow=7.4,SNR=14	**50.04 348** P		P	13 37 08.5	-1.4	
PLCA	**Paso Flores**	**59.17 159** *eP*		P	13 38 11.4	-5.2	
	0.8nm,0.6s,mb3.9						
RES	**Resolute Bay** 1.1nm,0.6s,mb4.1,baz=191,slow=7.2,SNR=5.0	**60.11 360** P		P	13 38 20.4	-2.2	
PAX	**Paxson** 5.0nm,1.3s,mb4.4	**60.13 336** *eP*		P	13 38 21.0	-1.9	
TRF	**Thorofare Moun** 6.7nm,1.2s,mb4.7	**62.29 335** *eP*		P	13 38 36.4	-1.2	
BPAW	**Bear Paw Mtn.** 4.7nm,1.2s,mb4.5	**62.84 336** *eP*		P	13 38 39.2	-2.1	
SPITS	**Spitsbergen Ar** 2.7nm,0.8s,mb4.2,baz=224,slow=5.4,SNR=4.0	**79.91 11** P		P	13 40 23.8	-0.4	
ESDC	**Sonseca Array** 0.4nm,0.6s,mb3.5,baz=298,slow=5.6,SNR=3.5	**80.88 51** P		P	13 40 29.1	-1.0	
NB2	**NORSAR Subarra** comp=Z,10nm,1.4s,mb4.8,baz=288,slow=5.1	**84.56 28** P		P	13 40 49.0	+0.2	
NOA	**NORSAR Array B** comp=Z,2.4nm,0.9s,mb4.3,baz=291,slow=4.9,SNR=3.8	**84.56 28** P		P	13 40 48.3	-0.5	
ARCES	**ARCESS Array B** comp=Z,0.9nm,0.5s,mb4.3,baz=300,slow=5.5,SNR=6.0	**86.19 18** P		P	13 40 56.2	-0.6	
TORD	**Torodi Ar. Bea** comp=Z,0.3nm,0.6s,mb3.8,baz=280,slow=4.9,SNR=3.8	**92.13 76** P		P	13 41 23.1	-2.9	
HHC	**Hu-ho-hao-te**	**119.98 338** *e*PKP		PKPdf	13 47 07.1	+0.3	
HHC		PP		PP	13 48 34.1	+4.4	
HHC		PKS			13 50 42.1		
HHC		SKS		SKSdf	13 54 14.3	-5.8	
HHC		SKKS		SKKSac	13 55 23.3	-8.8	
HHC		SS		SS	14 04 52.1	-3.8	
HHC	comp=N,72nm,15.5s	LR		LR			
HHC	comp=E,120nm,16.7s	LR		LR			
HHC	comp=Z,110nm,19.0s	LR		LR			
CD2	**Chengdu**	**131.66 339** *e*PKP		PKPdf	13 47 28.6	-0.8	
KMI	**Kunming**	**137.30 337** PKP		PKPdf	13 47 40.0	-0.1	
CMAR	**Chiang Mai Arr** comp=Z,0.8nm,0.6s,baz=352,slow=3.6,SNR=5.5	**144.78 338** PKP		PKPdf	13 47 51.4	-2.3	

ISK ***21*** *13:31:26.9, 39°.33N×28°.59E, h12km, ML1.9*
CSEM ***21*** *13:31:27.5±0.1, 39°.36N×28°.60E, h8km, MD2.8, Error ellipse: s-maj=1.3km s-min=1.2km az=123.0*
DDA ***21*** *13:31:27.0, 39°.37N×28°.59E, h8km±4km, Md2.8*
ISCJB ***21*** *13:31:27.3±0.6, 39°.35N±0°.03×28°.59E±0°.03, h9km±5km, Error ellipse: s-maj=4.6km s-min=4.1km az=149.4*
ISC 21 13:31:27.7±0.4, 39°.36N±0°.03×28°.59E±0°.03, h9km±6km, n32, σ0°.43/54, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEMI	**Demirci**	**0.33**	**163**	*i* P	**Pg**	**13 31 34.4**	**+0.2**
DEMI				*i* S	**Sg**	**13 31 39.4**	**+0.8**
DEMI	**Demirci**	**0.33**	**163**	*i* P	**Pg**	**13 31 34.4**	**+0.2**
DEMI				*i* S	**Sg**	**13 31 39.4**	**+0.8**
BALB	**Balikesir**	**0.62**	**297**	*e*PG	**Pg**	**13 31 40.0**	**+0.4**
BALB				*e*SG	**Sg**	**13 31 48.5**	**+0.8**
BALB	**Balikesir**	**0.62**	**297**	*e*Pg	**Pg**	**13 31 40.0**	**+0.4**
BALB				*e*Sg	**Sg**	**13 31 48.5**	**+0.8**
GDZ	**Gediz**	**0.74**	**111**	*i* P	**Pg**	**13 31 41.8**	**-0.2**
GDZ				*i* S	**Sg**	**13 31 52.1**	**+0.5**
GDZ	**Gediz**	**0.74**	**111**	*i* P	**Pg**	**13 31 41.8**	**-0.1**
GDZ				*i* S	**Sg**	**13 31 52.2**	**+0.6**
AKHS	**Akhisar**	**0.78**	**232**	*i* P	**Pg**	**13 31 42.5**	**-0.1**
AKHS				*i* S	**Sg**	**13 31 52.9**	**+0.3**
AKHS	**Akhisar**	**0.78**	**232**	*i* P	**Pg**	**13 31 42.5**	**-0.1**
AKHS				*i* S	**Sg**	**13 31 52.9**	**+0.2**
AKS	**Akhisar**	**0.78**	**232**	*e*PG	**Pg**	**13 31 42.3**	**-0.3**
AKS				*e*SG	**Sg**	**13 31 52.6**	**0.0**
AKS	**Akhisar**	**0.78**	**232**	*e*Pg	**Pg**	**13 31 42.3**	**-0.3**
AKS				*e*Sg	**Sg**	**13 31 52.7**	**0.0**
BALY	**Balya**	**0.84**	**297**	*i* P	**Pg**	**13 31 43.7**	**-0.2**
BALY				*i* S	**Sg**	**13 31 54.2**	**-0.6**
BALY	**Balya**	**0.84**	**297**	*i* P	**Pg**	**13 31 43.7**	**-0.2**
BALY				*i* S	**Sg**	**13 31 54.2**	**-0.6**
KULA	**Kula-Manisa**	**0.85**	**176**	*e*PG	**Pg**	**13 31 43.4**	**-0.6**
KULA				*e*SG	**Sg**	**13 31 54.5**	**-0.5**
KULA	**Kula-Manisa**	**0.85**	**176**	*e*Pg	**Pg**	**13 31 43.4**	**-0.6**
KULA				*e*Sg	**Sg**	**13 31 54.5**	**-0.5**
MANT	**Manisa**	**0.87**	**182**	*i* P	**Pg**	**13 31 44.2**	**-0.2**
MANT				*i* S	**Sg**	**13 31 55.8**	**+0.1**
MANT	**Manisa**	**0.87**	**182**	*i* P	**Pg**	**13 31 44.2**	**-0.2**
MANT				*i* S	**Sg**	**13 31 55.8**	**+0.1**
ULDT	**Uludag**	**0.88**	**28**	*i* P	**Pg**	**13 31 44.1**	**-0.6**
ULDT				*i* S	**Sg**	**13 31 56.1**	**-0.1**
ULDT	**Uludag**	**0.88**	**28**	*i* P	**Pg**	**13 31 44.1**	**-0.6**
ULDT				*i* S	**Sg**	**13 31 56.1**	**-0.1**
ALT	**Altintas**	**1.22**	**104**	*e*PN	**Pn**	**13 31 50.7**	**-0.2**
ALT	**Altintas**	**1.22**	**104**	*e*Pn	**Pn**	**13 31 50.7**	**-0.2**
ARMT	**Armutlu**	**1.22**	**10**	*e*PN	**Pn**	**13 31 50.9**	**0.0**
ARMT				*e*SN	**Sn**	**13 32 07.5**	**-0.1**
ARMT	**Armutlu**	**1.22**	**10**	*e*Pn	**Pn**	**13 31 50.9**	**0.0**
ARMT				*e*Sn	**Sn**	**13 32 07.5**	**-0.1**
CAVI	**Cavuskoy**	**1.28**	**49**	*e*PN	**Pn**	**13 31 51.7**	**0.0**
CAVI				*e*SN	**Sn**	**13 32 09.4**	**+0.4**
CAVI	**Cavuskoy**	**1.28**	**49**	*e*Pn	**Pn**	**13 31 51.7**	**0.0**
CAVI				*e*Sn	**Sn**	**13 32 09.4**	**+0.4**
ADVT	**Abdulvahap**	**1.39**	**39**	*e*PN	**Pn**	**13 31 53.2**	**0.0**
ADVT	**Abdulvahap**	**1.39**	**39**	*e*Pn	**Pn**	**13 31 53.2**	**0.0**
GULT	**Gulveren**	**1.82**	**54**	*e*PN	**Pn**	**13 31 58.6**	**-0.6**
GULT	**Gulveren**	**1.82**	**54**	*e*Pn	**Pn**	**13 31 58.6**	**-0.6**
CTKS	**Kestanelik-??a**	**1.87**	**358**	*e*PN	**Pn**	**13 32 00.9**	**+1.0**
CTKS	**Kestanelik-??a**	**1.87**	**358**	*e*Pn	**Pn**	**13 32 00.9**	**+1.0**
MDU	**Mudurnu**	**2.30**	**61**	*e*PN	**Pn**	**13 32 05.5**	**-0.2**
MDU	**Mudurnu**	**2.30**	**61**	*e*Pn	**Pn**	**13 32 05.5**	**-0.2**

IDC 21 13:39:40.5±5.7, 6°.50N×94°.41E, h200km±39km, mb2.8/3, mb1 3.1/5, mb1mx2.8/24, mbtmp2.8/5, Error ellipse: s-maj=113.9km s-min=21.4km az=64.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat** 1.3nm,0.3s,baz=323,slow=17,SNR=7.5	**5.81**	**129**	P	Pn	13 41 06.2	+0.9
CMAR	**Chiang Mai Arr** 0.1nm,0.3s,baz=211,slow=11,SNR=5.8	**12.68**	**20**	P	Pn	13 42 34.5	+0.5
MKAR	**Makanchi Array** 0.1nm,0.5s,baz=177,slow=5.8,SNR=3.2	**41.48**	**347**	P	P	13 47 07.6	-0.1
WRA	**Warramunga Arr** 0.4nm,0.6s,baz=306,slow=8.5,SNR=2.5	**47.26**	**125**	P	P	13 47 53.3	-0.5
ASAR	**Alice Springs** 0.4nm,0.7s,baz=306,slow=7.3,SNR=5.8	**48.84**	**129**	P	P	13 48 06.3	+0.4

BJI ***21*** *13:43:29.9, 36°.31N×21°.70E, h20km, mB5.0/21, mb4.9/30, Ms4.7/19, Ms7 4.3/19*
NEIC ***21*** *13:43:29.0, 35°.99N×21°.70E, h5km, mb4.4/38, ML4.8(ATH), After ATH.*
ATH ***21*** *13:43:29.0, 35°.99N×21°.70E, h5km±4km, MD4.3/8, ML4.6*
ISCJB ***21*** *13:43:29.8±0.2, 35°.99N±0°.01×21°.83E±0°.02, h10km, mb4.6/82, MS4.2/30, Error ellipse: s-maj=2.1km s-min=1.7km az=27.7*
IDC ***21*** *13:43:30.3±0.6, 36°.12N×22°.05E, h0km, mb4.2/23, mb1 4.2/30, mb1mx4.2/39, mbtmp4.1/30, ML4.0/6, MS4.1/19, Ms1 4.1/19, ms1mx3.8/40, Error ellipse: s-maj=14.5km s-min=11.7km az=175.0*
HLW ***21*** *13:43:30.4, 36°.56N×22

Azm47.0000°; N 0.0100, Plg4.0000°, Azm298.0000°; P -3.3000, Plg11.0000°, Azm207.0000°; Data Used: II IC IU CN G.

ISC 21 13:43:31.5±0.1,36°00'N±0'.01×21°89E±0'.02,h10km, (h35km±.8km:pP-P),n781,σ1°38/861,mb4.6/83,MS4.2/30, 44C-27D,Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.90**	**353**	P	**Pg**	**13 43 46.4**	**-2.5**
PYL				S	**Sg**	**13 43 59.5**	**-1.2**
PYL	**PYLOS**	**0.90**	**353**	*e*PN	**Pg**	**13 43 46.8**	**-2.1**
PYL	**PYLOS**	**0.90**	**353**	P	**Pg**	**13 43 46.4**	**-2.5**
PYL	**PYLOS**	**0.90**	**353**	*e*Pn	**Pg**	**13 43 46.8**	**-2.1**
PYL				S	**Sg**	**13 43 59.5**	**-1.2**
KYTH	**Kithira**	**0.97**	**73**	*e*Pb	**Pg**	**13 43 50.7**	**+0.5**
KYTH	**Kithira**	**0.97**	**73**	*e*PB	**Pg**	**13 43 50.7**	**+0.5**
KYTH	**Kithira**	**0.97**	**73**	*e*Pb	**Pg**	**13 43 50.7**	**+0.5**
VLI	**Veliai**	**1.11**	**49**	*e*Pn	**Pg**	**13 43 51.8**	**-1.1**
VLI				*e*Sb	**Sg**	**13 44 10.3**	**+2.9**
VLI	**Veliai**	**1.11**	**49**	*e*PN	**Pg**	**13 43 51.8**	**-1.1**
VLI				*e*SB	**Sg**	**13 44 10.3**	**+2.9**
VLI	**Veliai**	**1.11**	**49**	*e*Pn	**Pg**	**13 43 51.8**	**-1.1**
VLI				*e*Sb	**Sg**	**13 44 10.3**	**+2.9**
ITM	**Ithomi**	**1.18**	**2**	P	**Pg**	**13 43 51.6**	**-2.6**
ITM	**Ithomi**	**1.18**	**2**	P	**Pg**	**13 43 51.5**	**-2.7**
ITM				S	**Sg**	**13 44 08.2**	**-1.4**
ITM	**Ithomi**	**1.18**	**2**	*e*PG	**Pg**	**13 43 51.6**	**-2.6**
ITM				*e*SB	**Sg**	**13 44 08.4**	**-1.2**
ITM	**Ithomi**	**1.18**	**2**	*e*Pg	**Pg**	**13 43 51.6**	**-2.6**
ITM				*e*Sb	**Sg**	**13 44 08.4**	**-1.2**
VLX	**Vlachokerasia**	**1.43**	**16**	P	**Pn**	**13 43 56.3**	**-1.2**
VLX				S	**Sn**	**13 44 17.3**	**+1.0**
VLX	**Vlachokerasia**	**1.43**	**16**	*e*PG	**Pn**	**13 43 56.4**	**-1.1**
VLX				*e*SB	**Sg**	**13 44 18.0**	**+0.6**
VLX	**Vlachokerasia**	**1.43**	**16**	*e*Pg	**Pn**	**13 43 56.4**	**-1.1**
VLX				S	**Sn**	**13 44 17.3**	**+1.0**
VLX				*e*Sb	**Sg**	**13 44 18.0**	**+0.6**
GUR	**Goura**	**1.97**	**11**	P	**Pn**	**13 44 05.3**	**+0.4**
GUR				S	**Sn**	**13 44 31.1**	**+1.4**
GUR	**Goura**	**1.97**	**11**	*e*PN	**Pn**	**13 44 06.4**	**+1.5**
GUR	**Goura**	**1.97**	**11**	P	**Pn**	**13 44 05.3**	**+0.4**
GUR	**Goura**	**1.97**	**11**	*e*Pn	**Pn**	**13 44 06.4**	**+1.5**
GUR				S	**Sn**	**13 44 31.1**	**+1.4**
VAM	**Vamos**	**1.97**	**107**	P	**Pb**	**13 44 07.9**	**+0.4**
VAM	**Vamos**	**1.97**	**107**	*e*PN	**Pb**	**13 44 07.8**	**+0.3**
VAM	**Vamos**	**1.97**	**107**	P	**Pb**	**13 44 07.9**	**+0.4**
RLS	**Riolos of Patr**	**2.08**	**351**	P	**Pb**	**13 44 08.8**	**-0.6**
RLS	**Riolos of Patr**	**2.08**	**351**	*e*PG	**Pb**	**13 44 08.0**	**-1.4**
RLS	**Riolos of Patr**	**2.08**	**351**	*e*Pg	**Pb**	**13 44 08.0**	**-1.4**
RLS	**Riolos of Patr**	**2.08**	**351**	P	**Pb**	**13 44 08.8**	**-0.6**
GVD	**Gavdhos**	**2.14**	**122**	*e*Pn	**Pb**	**13 44 10.1**	**-0.2**
GVD				*e*Sn	**Sg**	**13 44 44.3**	**+4.1**
GVD	**Gavdhos**	**2.14**	**122**	*e*Pn	**Pb**	**13 44 10.1**	**-0.2**
GVD				*e*Sn	**Sg**	**13 44 44.3**	**+4.1**
NAIG	**Nisos Aigina**	**2.18**	**36**	*e*Pg	**Pb**	**13 44 11.2**	**+0.2**
NAIG	**Nisos Aigina**	**2.18**	**36**	*e*PG	**Pb**	**13 44 11.2**	**+0.2**
NAIG	**Nisos Aigina**	**2.18**	**36**	*e*Pg	**Pb**	**13 44 11.2**	**+0.2**
LTK	**Loutraki**	**2.20**	**23**	P	**Pn**	**13 44 09.3**	**+1.2**
LTK	**Loutraki**	**2.20**	**23**	*e*PN	**Pn**	**13 44 09.6**	**+1.5**
LTK	**Loutraki**	**2.20**	**23**	P	**Pn**	**13 44 09.3**	**+1.2**
LTK	**Loutraki**	**2.20**	**23**	*e*Pn	**Pn**	**13 44 09.6**	**+1.5**
LAKA	**Lakka**	**2.24**	**2**	P	**Pn**	**13 44 09.8**	**+1.1**
LAKA	**Lakka**	**2.24**	**2**	P	**Pn**	**13 44 09.8**	**+1.1**
UPR	**University Cam**	**2.28**	**358**	*e*PG	**Pb**	**13 44 11.9**	**-0.9**
UPR	**University Cam**	**2.28**	**358**	*e*Pg	**Pb**	**13 44 11.9**	**-0.9**
KFL	**Anninata**	**2.28**	**338**	P	**Pn**	**13 44 10.2**	**+0.9**
KALE	**Kalithea**	**2.40**	**5**	P	**Pn**	**13 44 12.2**	**+1.4**
KALE	**Kalithea**	**2.40**	**5**	P	**Pn**	**13 44 12.2**	**+1.4**
VLY	**Voula,Athens**	**2.40**	**39**	P	**Pb**	**13 44 13.5**	**-1.3**
VLY	**Voula,Athens**	**2.40**	**39**	*e*PB	**Pn**	**13 44 11.5**	**+0.6**
VLY	**Voula,Athens**	**2.40**	**39**	*e*Pb	**Pn**	**13 44 11.5**	**+0.6**
VLY	**Voula,Athens**	**2.40**	**39**	P	**Pb**	**13 44 13.5**	**-1.3**
VLS	**Valsamata**	**2.41**	**335**	P	**Pn**	**13 44 11.9**	**+0.9**
VLS	**Valsamata**	**2.41**	**335**	P	**Pn**	**13 44 11.3**	**+0.3**
VLS	**Valsamata**	**2.41**	**335**	*e*PN	**Pn**	**13 44 11.3**	**+0.3**
VLS	**Valsamata**	**2.41**	**335**	*e*Pn	**Pn**	**13 44 11.3**	**+0.3**
VLS	**Valsamata**	**2.41**	**335**	P	**Pn**	**13 44 11.9**	**+0.9**
EFP	**Efpalio**	**2.42**	**0**	P	**Pn**	**13 44 12.9**	**+1.7**
EFP	**Efpalio**	**2.42**	**0**	*e*PN	**Pn**	**13 44 12.6**	**+1.4**
EFP	**Efpalio**	**2.42**	**0**	*e*Pn	**Pn**	**13 44 12.6**	**+1.4**
EFP	**Efpalio**	**2.42**	**0**	P	**Pn**	**13 44 12.9**	**+1.7**
ATH	**Athens Observa**	**2.46**	**36**	P	**Pn**	**13 44 12.8**	**+1.2**
ATH				S	**Sn**	**13 44 44.0**	**+2.3**
ATH	**Athens Observa**	**2.46**	**36**	*e*PN	**Pb**	**13 44 14.1**	**-1.7**
ATH	**Athens Observa**	**2.46**	**36**	*e*Pn	**Pb**	**13 44 14.1**	**-1.7**
DSF	**Desfina**	**2.46**	**12**	P	**Pn**	**13 44 12.2**	**+0.5**
DSF	**Desfina**	**2.46**	**12**	P	**Pn**	**13 44 12.2**	**+0.5**
ATHU	**Athens Univers**	**2.48**	**37**	P	**Pn**	**13 44 12.8**	**+0.8**
ATHU				S	**Sn**	**13 44 44.0**	**+1.6**
ATHU	**Athens Univers**	**2.48**	**37**	P	**Pn**	**13 44 12.8**	**+0.8**
ATHU				S	**Sn**	**13 44 44.0**	**+1.6**
IDI	**Anoyia**	**2.55**	**105**	Pn	**Pb**	**13 44 16.0**	**-1.3**
	14nm,0.3s,baz=286,slow=15,SNR=74						
IDI				LR	LR	13 44 53.6	
	comp=Z,730nm,18.2s,baz=10,slow=34						
IDI				Sn	**Sg**	**13 44 55.9**	**+2.6**
	66nm,0.3s,baz=90,slow=23,SNR=5.7						
IDI	**Anoyia**	**2.55**	**105**	Pn	**Pb**	**13 44 16.0**	**-1.3**
SIVA	**Sivas**	**2.58**	**111**	P	**Pb**	**13 44 18.9**	**+1.1**
SIVA	**Sivas**	**2.58**	**111**	P	**Pb**	**13 44 18.9**	**+1.1**
PTL	**Penteli**	**2.59**	**37**	P	**Pn**	**13 44 15.4**	**+2.0**
PTL	**Penteli**	**2.59**	**37**	*e*PN	**Pn**	**13 44 15.8**	**+2.4**
PTL	**Penteli**	**2.59**	**37**	P	**Pn**	**13 44 15.4**	**+2.0**
PTL	**Penteli**	**2.59**	**37**	*e*Pn	**Pn**	**13 44 15.8**	**+2.4**
LKR	**Lokris**	**2.79**	**18**	P	**Pn**	**13 44 16.8**	**+0.5**
LKR	**Lokris**	**2.79**	**18**	*e*PB	**Pn**	**13 44 16.7**	**+0.4**
LKR	**Lokris**	**2.79**	**18**	P	**Pn**	**13 44 16.8**	**+0.5**
ATAL	**Atalanti**	**2.84**	**18**	P	**Pn**	**13 44 17.0**	**+0.1**
ATAL	**Atalanti**	**2.84**	**18**	P	**Pn**	**13 44 17.0**	**+0.1**
AGG	**Agios Georgios**	**3.04**	**7**	P	**Pb**	**13 44 23.6**	**-2.1**
LAST	**Lasithi**	**3.04**	**105**	P	**Pn**	**13 44 23.1**	**+3.4**
LAST	**Lasithi**	**3.04**	**105**	P	**Pn**	**13 44 23.1**	**+3.4**
NPS	**Neapolis**	**3.12**	**103**	P	**Pb**	**13 44 25.6**	**-1.5**
NPS	**Neapolis**	**3.12**	**103**	*e*PB	**Pn**	**13 44 24.2**	**+3.4**
NPS	**Neapolis**	**3.12**	**103**	*e*Pb	**Pn**	**13 44 24.2**	**+3.4**
NPS	**Neapolis**	**3.12**	**103**	P	**Pb**	**13 44 25.6**	**-1.5**
APE	**Apeiranthos**	**3.12**	**69**	⇓*i*P	**Pn**	**13 44 23.8**	**+3.0**
APE	**Apeiranthos**	**3.12**	**69**	*e*P	**Pn**	**13 44 22.3**	**+1.5**
XRY	**Khrisi**	**3.31**	**109**	*e*PB	**Pn**	**13 44 26.8**	**+3.5**
XRY	**Khrisi**	**3.31**	**109**	*e*Pg	**Pg**	**13 44 33.4**	**-1.5**
NEO	**Neokhori**	**3.47**	**17**	P	**Pn**	**13 44 26.2**	**+0.6**
NEO	**Neokhori**	**3.47**	**17**	P	**Pn**	**13 44 26.2**	**+0.6**
XOR	**Xorichti**	**3.52**	**17**	P	**Pn**	**13 44 29.5**	**+3.3**
XOR	**Xorichti**	**3.52**	**17**	P	**Pn**	**13 44 29.5**	**+3.3**
AOS	**Alonnisos**	**3.54**	**26**	P	**Pn**	**13 44 29.3**	**+2.8**
AOS	**Alonnisos**	**3.54**	**26**	P	**Pn**	**13 44 29.3**	**+2.8**
JAN	**Janina**	**3.74**	**348**	P	**Pn**	**13 44 30.4**	**+1.1**
JAN	**Janina**	**3.74**	**348**	P	**Pn**	**13 44 30.4**	**+1.1**
KEK	**Kerkira**	**4.06**	**337**	P	**Pn**	**13 44 34.0**	**+0.3**
KEK	**Kerkira**	**4.06**	**337**	P	**Pn**	**13 44 34.0**	**+0.3**
SRN	**Sarande**	**4.15**	**340**	*e*PN	**Pn**	**13 44 34.9**	**0.0**
SRN	**Sarande**	**4.15**	**340**	*e*Pn	**Pn**	**13 44 34.9**	**0.0**
PAIG	**Paliouri**	**4.17**	**19**	P	**Pn**	**13 44 36.4**	**+1.2**
PAIG	**Paliouri**	**4.17**	**19**	P	**Pn**	**13 44 36.4**	**+1.2**
LTBQ	**Tobruq**	**4.28**	**156**	*i* P	**Pn**	**13 44 41.1**	**+4.4**
	154nm,0.7s,SNR=36						
LTBQ				*e*S	**Sn**	**13 45 30.1**	**+3.4**
	SNR=36						
KZN	**Kozani**	**4.30**	**359**	P	**Pn**	**13 44 39.4**	**+2.4**
KZN	**Kozani**	**4.30**	**359**	P	**Pn**	**13 44 39.4**	**+2.4**
KARP	**Karpathos**	**4.31**	**94**	P	**Pn**	**13 44 41.4**	**+4.2**
KARP	**Karpathos**	**4.31**	**94**	P	**Pn**	**13 44 41.4**	**+4.2**
URLA	**Izmir**	**4.44**	**57**	*i* P	**Sn**	**13 45 36.1**	**+5.5**
PLG	**Polygyros**	**4.54**	**15**	P	**Pn**	**13 44 42.8**	**+2.6**
PLG	**Polygyros**	**4.54**	**15**	P	**Pn**	**13 44 42.8**	**+2.6**
DAT	**Datca**	**4.65**	**79**	*e*P	**Pn**	**13 44 38.7**	**-3.1**
DAT	**Datca**	**4.65**	**79**	*e*P	**Pn**	**13 44 38.7**	**-3.1**
HORT	**Hortiatis**	**4.69**	**11**	P	**Pn**	**13 44 45.9**	**+3.6**
HORT	**Hortiatis**	**4.69**	**11**	P	**Pn**	**13 44 45.9**	**+3.6**
KBN	**Korca**	**4.70**	**350**	*e*PN	**Pn**	**13 44 45.4**	**+2.9**
KBN	**Korca**	**4.70**	**350**	*e*Pn	**Pn**	**13 44 45.4**	**+2.9**
THE	**Thessaloniki**	**4.70**	**10**	P	**Pn**	**13 44 45.8**	**+3.3**
THE	**Thessaloniki**	**4.70**	**10**	P	**Pn**	**13 44 45.8**	**+3.3**
BLCB	**Balcova**	**4.76**	**58**	*e*P	Px	13 45 16.2	
FNA	**Florina**	**4.79**	**355**	P	**Pn**	**13 44 45.3**	**+1.5**
FNA	**Florina**	**4.79**	**355**	P	**Pn**	**13 44 45.3**	**+1.5**
MLSB	**Milas**	**4.91**	**73**	*e*P	**Pb**	**13 44 59.9**	**+2.3**
IZM	**Izmir**	**4.91**	**59**	*e*P	**Pb**	**13 44 54.2**	**-3.4**
SOH	**Sokhos**	**4.95**	**13**	P	**Pn**	**13 44 48.3**	**+2.4**
SOH	**Sokhos**	**4.95**	**13**	P	**Pn**	**13 44 48.3**	**+2.4**
BIA	**Bitola**	**5.03**	**355**	P	**Pn**	**13 44 48.4**	**+1.4**
BIA	**Bitola**	**5.03**	**355**	*e*Pn	**Pn**	**13 44 48.5**	**+1.4**
BIA				*e*Sn	**Sn**	**13 45 43.8**	**-1.4**
BIA				*e*Sn	**Sn**	**13 45 44.0**	**-1.3**
BIA	**Bitola**	**5.03**	**355**	P	**Pn**	**13 44 48.4**	**+1.4**
ARG	**Arkhangelos**	**5.06**	**86**	P	**Pn**	**13 44 50.6**	**+3.2**
ARG	**Arkhangelos**	**5.06**	**86**	P	**Pn**	**13 44 50.6**	**+3.2**
TIP	**Timpagrande**	**5.16**	**309**	*e*Pn	**Pn**	**13 44 48.5**	**-0.3**
TIP	**Timpagrande**	**5.16**	**309**	*e*Pn	**Pn**	**13 44 48.5**	**-0.3**
OHR	**Ohrid**	**5.18**	**351**	*e*Pn	**Pn**	**13 44 49.6**	**+0.5**
OHR				*e*Sn	**Sn**	**13 45 48.5**	**-0.3**
OHR				*i* Lg		13 46 26.4	
	comp=E,4μm,3.2s						
OHR				*i* Lg		13 46 31.8	
	comp=N,1μm,1.8s						
OHR	**Ohrid**	**5.18**	**351**	P	**Pn**	**13 44 50.0**	**+1.0**
GADA	**Gvkgeada**	**5.25**	**36**	*e*P	**Pg**	**13 45 14.8**	**+2.8**
LJBD	**Adjabya**	**5.26**	**196**	*i* P	**Pn**	**13 44 53.7**	**+3.5**
	comp=N,414nm,1.3s,SNR=36						
YER	**Yerkesik**	**5.27**	**76**	*e*P	**Pn**	**13 44 53.5**	**+3.2**
YER	**Yerkesik**	**5.27**	**76**	*e*P	**Pn**	**13 44 53.5**	**+3.2**
SLUM		**5.28**	**147**	P	**Pn**	**13 44 52.4**	**+2.0**
	baz=153						
SLUM				AMP		13 45 00.0	
	comp=N,450μm,0.8s,logA/T=5.8,baz=153						
SLUM				S	**Sn**	**13 45 49.7**	**-1.6**
	baz=153						
SLUM		**5.28**	**147**	P	**Pn**	**13 44 52.4**	**+1.9**
SLUM				S	**Sn**	**13 45 49.7**	**-1.7**
SRS	**Serrai**	**5.28**	**14**	P	**Pn**	**13 44 51.8**	**+1.3**
CEL	**Celeste**	**5.29**	**297**	P	**Pn**	**13 44 50.8**	**+0.2**
CEL	**Celeste**	**5.29**	**297**	P	**Pn**	**13 44 50.8**	**+0.2**
VAY	**Valandovo**	**5.34**	**6**	*e*Pn	**Pn**	**13 44 52.4**	**+1.1**
VAY				*e*Sn	**Sn**	**13 45 40.2**	**-13**
VAY				*e*Lg		13 46 07.9	
VAY				*e*Lg		13 47 05.5	
VAY	**Valandovo**	**5.34**	**6**	P	**Pn**	**13 44 52.6**	**+1.3**
KRUS	**Krusevo**	**5.39**	**355**	*e*Pn	**Pn**	**13 44 51.5**	**-0.4**
KRUS				*e*Sn	**Sn**	**13 45 50.5**	**-3.5**
TURN	**Turunc**	**5.49**	**79**	*i* P	**Sn**	**13 45 55.8**	**-0.6**
AKHS	**Akhisar**	**5.52**	**57**	*i* P	**Sb**	**13 46 11.5**	**-2.8**
NVR	**Nevrokopi**	**5.56**	**16**	P	**Pn**	**13 44 56.9**	**+2.6**
NVR	**Nevrokopi**	**5.56**	**16**	*e*Pg	**Pn**	**13 44 55.9**	**+1.6**
NVR	**Nevrokopi**	**5.56**	**16**	P	**Pn**	**13 44 56.9**	**+2.6**
TIR	**Tirane**	**5.57**	**344**	⇑*i*Pn	**Pn**	**13 44 54.0**	**-0.4**
TIR	**Tirane**	**5.57**	**344**	P	**Pn**	**13 44 57.0**	**+2.6**
TIR	**Tirane**	**5.57**	**344**	⇑*i*Pn	**Pn**	**13 44 54.0**	**-0.4**
TIR	**Tirane**	**5.57**	**344**	P	**Pn**	**13 44 57.0**	**+2.6**
MMB	**Musomiste**	**5.76**	**14**	P	**Pn**	**13 44 59.0**	**+1.9**
ENEZ	**Enez**	**5.80**	**34**	*e*P	**Pb**	**13 45 14.8**	**+2.1**
BALY	**Balya**	**5.88**	**49**	*i* P	**Sn**	**13 46 12.2**	**+6.2**
RDO	**Rodhopi**	**5.88**	**28**	P	**Pn**	**13 44 59.7**	**+1.0**
RDO	**Rodhopi**	**5.88**	**28**	P	**Pn**	**13 44 59.7**	**+1.0**
KKB	**Krupnik**	**5.93**	**9**	P	**Pn**	**13 45 01.2**	**+1.8**
KULA	**Kula-Manisa**	**5.96**	**63**	*e*P	**Pg**	**13 45 28.3**	**+2.7**
BALB	**Balikesir**	**5.98**	**51**	*e*P	Px	13 45 43.2	
SKO	**Skopje**	**5.98**	**357**	*e*Pn	**Pn**	**13 44 59.0**	**-1.0**
SKO	**Skopje**	**5.98**	**357**	P	**Pn**	**13 45 02.9**	**+2.9**
SKO	**Skopje**	**5.98**	**357**	*e*Pn	**Pn**	**13 45 01.4**	**+1.4**
SKO				*e*Sn	**Sn**	**13 46 06.5**	**-1.9**
SKO				*i* Lg		13 46 51.3	
	comp=E,3μm,3.6s						
SKO				*e*Lg		13 47 25.4	
	comp=N,2μm,2.9s						
SKO	**Skopje**	**5.98**	**357**	*e*Pn	**Pn**	**13 44 59.0**	**-1.0**
SKO	**Skopje**	**5.98**	**357**	P	**Pn**	**13 45 02.9**	**+2.9**
WDD	**Wield Dalam**	**5.98**	**271**	*e*Pn	**Pn**	**13 45 01.1**	**+1.1**
	comp=N,102nm,0.6s						
WDD				*e*Sn	**Sn**	**13 46 06.4**	**-2.1**
WDD	**Wield Dalam**	**5.98**	**271**	*e*Pn	**Pn**	**13 45 01.1**	**+1.1**
	comp=N,102nm,0.6s						
WDD				*e*Sn	**Sn**	**13 46 06.4**	**-2.1**
DNZL	**Cakiroluk**	**5.99**	**71**	*i* P	**Sb**	**13 46 26.4**	**-1.2**
RZN	**Rozhen**	**6.09**	**20**	P	**Pn**	**13 45 03.1**	**+1.5**
VAE	**Valguarnera**	**6.18**	**286**	Pn	**Pn**	**13 45 08.5**	**+5.7**
	comp=N,2.0nm,0.3s,baz=124,slow=15,SNR=6.8						
VAE				Sn	**Sn**	**13 46 18.1**	**+4.5**
	comp=N,16nm,0.3s,baz=32,slow=12,SNR=3.8						
VAE	**Valguarnera**	**6.18**	**286**	Pn	**Pn**	**13 45 08.5**	**+5.7**
VAE				Sn	**Sn**	**13 46 18.1**	**+4.5**
VAE	**Valguarnera**	**6.18**	**286**	Pn	**Pn**	**13 45 08.5**	**+5.7**
VAE				Sn	**Sn**	**13 46 18.1**	**+4.5**
PUK	**Puka**	**6.23**	**346**	*e*PN	**Pn**	**13 45 03.9**	**+0.4**
KSL	**Kastellorizon**	**6.24**	**86**	*e*Pg	**Pn**	**13 45 04.9**	**+1.3**
KSL	**Kastellorizon**	**6.24**	**86**	*e*Pg	**Pn**	**13 45 04.9**	**+1.3**
AKAS	**Kas**	**6.25**	**86**	*i* P	**Pn**	**13 45 05.0**	**+1.2**
RKY	**Sarkoy-Tekirda**	**6.26**	**40**	*e*P	**Pn**	**13 45 08.4**	**+4.5**
KDZ	**Kurdzhali**	**6.28**	**25**	P	**Pn**	**13 45 06.5**	**+2.3**
GOLH	**Golhisar**	**6.29**	**76**	*i* P	**Pn**	**13 45 10.9**	**+6.5**
ULC	**Ulcinj**	**6.30**	**342**	⇑*i*Pn	**Pn**	**13 45 02.9**	**-1.6**
ULC				*e*Sn	**Sn**	**13 46 10.7**	**-5.8**
ULC	**Ulcinj**	**6.30**	**342**	⇑*i*Pn	**Pn**	**13 45 02.9**	**-1.6**
ULC				*e*Sn	**Sn**	**13 46 10.7**	**-5.8**
DURS	**Dursunbey**	**6.33**	**53**	*i* P	**Sn**	**13 46 25.3**	**+8.0**
MFT	**Murefte**	**6.39**	**40**	*e*P	**Pn**	**13 45 13.4**	**+7.8**
PLD	**Plovdiv**	**6.48**	**19**	P	**Pn**	**13 45 12.1**	**+5.2**
BCI	**Bajram Curri**	**6.51**	**348**	*e*PN	**Pn**	**13 45 07.4**	**0.0**
KHAL	**Karahalli**	**6.52**	**66**	*i* P	**Sb**	**13 46 45.4**	**+2.1**
VTS	**Vitosha**	**6.66**	**8**	*e*Pn	**Pn**	**13 45 11.1**	**+1.7**
VTS	**Vitosha**	**6.66**	**8**	P	**Pn**	**13 45 11.8**	**+2.4**
VTS	**Vitosha**	**6.66**	**8**	P	**Pn**	**13 45 12.5**	**+3.1**
VTS	**Vitosha**	**6.66**	**8**	*e*Pn	**Pn**	**13 45 11.1**	**+1.7**
VTS	**Vitosha**	**6.66**	**8**	P	**Pn**	**13 45 11.8**	**+2.4**
BUM	**Brajici-Budva**	**6.71**	**341**	⇑*i*Pn	**Pn**	**13 45 08.5**	**-1.5**
BUM				*e*Sn	**Sn**	**13 46 19.4**	**-7.1**
BUM	**Brajici-Budva**	**6.71**	**341**	⇑*i*Pn	**Pn**	**13 45 08.5**	**-1.5**
BUM				*e*Sn	**Sn**	**13 46 19.4**	**-7.1**
PDG	**Podgorica**	**6.74**	**343**	⇓*i*Pn	**Pn**	**13 45 09.5**	**-1.0**
PDG				*e*Sn	**Sn**	**13 46 21.7**	**-5.5**
TTG	**Podgorica**	**6.74**	**343**	⇓*i*Pn	**Pn**	**13 45 09.5**	**-1.0**
TTG				*e*Sn	**Sn**	**13 46 21.7**	**-5.5**
TTG	**Podgorica**	**6.74**	**343**	⇓*i*Pn	**Pn**	**13 45 09.5**	**-1.0**
TTG				*e*Sn	**Sn**	**13 46 21.7**	**-5.5**
PVY	**Plav**	**6.75**	**348**	⇑*i*Pn	**Pn**	**13 45 11.6**	**+0.9**
PVY				*e*Sn	**Sn**	**13 46 24.8**	**-2.8**
PVY	**Plav**	**6.75**	**348**	⇑*i*Pn	**Pn**	**13 45 11.6**	**+0.9**
PVY				*e*Sn	**Sn**	**13 46 24.8**	**-2.8**
GDZ	**Gediz**	**6.78**	**61**	*i* P	**Pn**	**13 45 16.2**	**+5.2**
PGB	**Panagyurishte**	**6.78**	**14**	P	**Pb**	**13 45 22.7**	**-6.7**
BARS	**Barje**	**6.81**	**360**	⇑*i*Pn	**Pn**	**13 45 11.0**	**-0.4**
BARS	**Barje**	**6.81**	**360**	⇑*i*Pn	**Pn**	**13 45 11.0**	**-0.4**
LUJL	**Ujela**	**6.88**	**184**	*i* P	**Pn**	**13 45 15.4**	**+3.0**
	comp=N,126nm,1.2s,SNR=34						
HCY	**Herceg Novi**	**6.96**	**339**	⇓*i*Pn	**Pn**	**13 45 10.9**	**-2.5**
HCY				*e*Sn	**Sn**	**13 46 24.0**	**-8.6**
HCY	**Herceg Novi**	**6.96**	**339**	⇓*i*Pn	**Pn**	**13 45 10.9**	**-2.5**
HCY				*e*Sn	**Sn**	**13 46 24.0**	**-8.6**
EDRB	**Edirne**	**6.96**	**31**	*e*P	**Pn**	**13 45 14.1**	**+0.6**
BEY	**Berane**	**7.04**	**348**	⇑*i*Pn	**Pn**	**13 45 14.9**	**+0.4**
BEY				*e*Sn	**Sn**	**13 46 31.4**	**-3.1**
IVA	**Berane**	**7.04**	**348**	⇑*i*Pn	**Pn**	**13 45 14.9**	**+0.4**
IVA				*e*Sn	**Sn**	**13 46 31.4**	**-3.1**
IVA	**Berane**	**7.04**	**348**	⇑*i*Pn	**Pn**	**13 45 14.9**	**+0.4**
IVA				*e*Sn	**Sn**	**13 46 31.4**	**-3.1**
ANTB	**Antalya**	**7.12**	**80**	*e*P	**Pb**	**13 45 36.1**	**+0.8**
ARMT	**Armutlu**	**7.13**	**48**	*e*P	**Pn**	**13 45 19.1**	**+3.2**
BCK	**Bucak**	**7.14**	**76**	*e*P	**Pn**	**13 45 20.5**	**+4.5**
ISP	**Isparta**	**7.15**	**73**	*e*P	**Pn**	**13 45 17.8**	**+1.6**
ISP	**Isparta**	**7.15**	**73**	*e*P	**Pn**	**13 45 17.0**	**+0.8**
ISP	**Isparta**	**7.15**	**73**	*e*P	**Pn**	**13 45 17.0**	**+0.8**
NKY	**Niksic**	**7.16**	**343**	⇑*i*Pn	**Pn**	**13 45 14.9**	**-1.4**
NKY				*e*Sn	**Sn**	**13 46 31.6**	**-6.1**
NKY	**Niksic**	**7.16**	**343**	⇑*i*Pn	**Pn**	**13 45 14.9**	**-1.4**
NKY				*e*Sn	**Sn**	**13 46 31.6**	**-6.1**
ALT	**Altintas**	**7.21**	**63**	*e*P	**Pb**	**13 45 41.8**	**+5.0**
TREB	**Trebinje**	**7.25**	**339**	⇑*i*Pn	**Pn**	**13 45 15.0**	**-2.4**
TREB	**Trebinje**	**7.25**	**339**	⇑*i*Pn	**Pn**	**13 45 15.0**	**-2.4**
ELBA	**Catalca**	**7.26**	**43**	*i* P	Sx	13 46 51.5	
ZAPS	**Zavoj**	**7.29**	**4**	*e*Pn	**Pn**	**13 45 14.8**	**-3.2**
CTKS	**Kestanelik-??a**	**7.36**	**43**	*e*P	**Pn**	**13 45 23.3**	**+4.3**
BRY	**Bratogost**	**7.36**	**340**	⇑*i*Pn	**Pn**	**13 45 16.6**	**-2.4**
BRY				*e*Sn	**Sn**	**13 46 34.9**	**-7.7**
BRY	**Bratogost**	**7.36**	**340**	⇑*i*Pn	**Pn**	**13 45 16.6**	**-2.4**
BRY				*e*Sn	**Sn**	**13 46 34.9**	**-7.7**
SHUT	**Suhut-Afyon**	**7.36**	**67**	*e*P	**Pn**	**13 45 17.6**	**-1.4**
SWA2		**7.38**	**155**	S	**Sn**	**13 46 40.8**	**-2.2**
	baz=159						
SWA2		**7.38**	**155**	S	**Sn**	**13 46 40.8**	**-2.2**
JMB	**Yambol**	**7.42**	**28**	P	**Pn**	**13 45 23.7**	**+3.9**
YLV	**Yalova**	**7.45**	**50**	*e*P	**Pn**	**13 45 23.1**	**+2.9**
SUTC	**Sutluce-Ispart**	**7.46**	**76**	*e*P	**Pn**	**13 45 26.9**	**+6.4**
BGKT	**Bogazkoy**	**7.47**	**44**	*e*P	**Pn**	**13 45 31.1**	**+11**
CAVI	**Cavuskoy**	**7.55**	**54**	*e*P	**Pn**	**13 45 21.9**	**+0.3**
UPM	**Unac-Piva**	**7.55**	**343**	⇑*i*Pn	**Pn**	**13 45 20.8**	**-0.8**
UPM				*e*Sn	**Sn**	**13 46 41.1**	**-6.2**
UPM	**Unac-Piva**	**7.55**	**343**	⇑*i*Pn	**Pn**	**13 45 20.8**	**-0.8**
UPM				*e*Sn	**Sn**	**13 46 41.1**	**-6.2**
ISK	**Istanbul-Kandi**	**7.56**	**46**	*e*P	**Pn**	**13 45 29.7**	**+7.9**
PLE	**Pljevlja**	**7.57**	**346**	⇑*i*Pn	**Pn**	**13 45 22.2

BUR08	Bucovina Ar. S	11.89	11	*e*Pn	Pn	13 46 21.9 +0.8
BUR08	Bucovina Ar. S	11.89	11	*e*Pn	Pn	13 46 21.9 +0.8
CADS	Cadrg	11.92	332	*e*Pn	Pn	13 46 20.0 -1.4
CADS	Cadrg	11.92	332	*e*Pn	Pn	13 46 20.0 -1.4
PSZ	Piszkesteto	12.00	354	*e*P	Pn	13 46 21.6 -1.0
PSZ	Piszkesteto	12.00	354	*e*P	Pn	13 46 21.7 -0.9
PSZ				*e*S	Sn	13 48 28.9 -7.5
PSZ	Piszkesteto	12.00	354	⇑*i*P	Pn	13 46 22.1 -0.5
PSZ	Piszkesteto	12.00	354	*e*Pn	Pn	13 46 21.6 -1.0
PSZ	Piszkesteto	12.00	354	⇑*i*P	Pn	13 46 22.1 -0.5
KIS	Kishinev	12.15	23	*e*P	Pn	13 46 28.0 +3.4
KIS				*e*S	Sn	13 48 44.0 +4.0
KIS				LRM		13 51 56.0
	comp=E,1μm,10.0s					
KIS	Kishinev	12.15	23	*e*P	Pn	13 46 28.0 +3.4
KIS				*e*S	Sn	13 48 44.0 +4.0
KIS				MLR	MLR	
	comp=Z,2μm,9.0s					
KIS				MLR	MLR	
	comp=N,2μm,8.0s					
KIS				MLR	MLR	
	comp=Z,1μm,10.0s					
KECS	Kecovo	12.52	356	*e*P	Pn	13 46 30.8 +1.2
KECS	Kecovo	12.52	356	*e*PN	Pn	13 46 30.8 +1.2
SVSK	Karacayir	12.55	67	*e*P	Pn	13 46 31.4 +1.3
UZH	Uzhgorod	12.63	1	*e*P	Pn	13 46 31.2 +0.1
UZH				*e*S	Sn	13 48 50.0 -1.7
UZH				MLR	MLR	
	comp=N,900nm,11.0s					
UZH				MLR	MLR	
	comp=E,500nm,11.0s					
UZH				MLR	MLR	
	comp=Z,800nm,11.0s					
GZT	Gaziantep	12.66	79	*i* P	Pn	13 46 29.7 -2.0
EIL	Elat	12.66	116	Pn	Pn	13 46 29.6 -2.1
	comp=Z,0.6nm,0.3s,baz=310,slow=7.9,SNR=4.6					
EIL	Elat	12.66	116	Pn	Pn	13 46 29.6 -2.1
VYHS	Vyhne	12.69	351	*e*P	Pn	13 46 30.6 -1.3
VYHS				*e*		13 48 45.0
VYHS				MLR	MLR	
	comp=Z,400nm,19.1s					
VYHS	Vyhne	12.69	351	*e*Pn	Pn	13 46 30.6 -1.3
VYHS				*e*Sn	Sn	13 48 45.0 -8.2
VYHS	Vyhne	12.69	351	*e*PN	Pn	13 46 30.6 -1.3
VYHS	Vyhne	12.69	351	*e*SN	Sn	13 48 45.0 -8.2
VYHS	Vyhne	12.69	351	*e*Pn	Pn	13 46 30.6 -1.3
VYHS				*e*Sn	Sn	13 48 45.0 -8.2
HBST	Basata	12.76	118	P	Pn	13 46 32.0 -1.0
	baz=121					
HBST	Basata	12.76	118	P	Pn	13 46 32.0 -1.0
SIM	Simferopol'	12.89	42	*e*P	Pn	13 46 42.0 +7.2
SIM				*e*S	Sn	13 49 07.0 +8.7
SIM				pmax	pmax	
	comp=Z,12nm,0.8s					
SIM				MLR	MLR	
	comp=Z,580nm,15.9s					
CRVS	Cervenica-Dubn	12.90	359	*e*P	Pn	13 46 36.2 +1.4
CRVS				*e*		13 48 53.7
CRVS				MLR	MLR	
	comp=Z,200nm,41.3s					
CRVS	Cervenica-Dubn	12.90	359	*e*Pn	Pn	13 46 36.2 +1.4
CRVS				*e*		13 46 47.2
CRVS				*e*		13 48 53.7
CRVS	Cervenica-Dubn	12.90	359	*e*PN	Pn	13 46 36.2 +1.4
CRVS				*e*		13 46 47.2
CRVS	Cervenica-Dubn	12.90	359	*e*SN	Sn	13 48 53.7 -4.7
CRVS	Cervenica-Dubn	12.90	359	*e*Pn	Pn	13 46 36.2 +1.4
ASF	Jabal al Asfar	13.01	103	Pn	Pn	13 46 35.1 -1.4
	comp=Z,0.2nm,0.3s,baz=342,slow=3.2,SNR=2.5					
ASF				Sn	Sn	13 48 59.9 -1.5
	comp=Z,0.3nm,0.3s,baz=334,slow=14,SNR=2.7					
MOA	Molln	13.12	337	⇑*i*Pn	Pn	13 46 36.7 -1.1
MOA				⇓*i*Sn	Sn	13 48 53.7 -10
STHS	Stebnicka Huta	13.42	358	*e*P	Px	13 46 53.3
STHS				*e*		13 49 02.8
STHS	Stebnicka Huta	13.42	358	*e*SN	Sn	13 49 02.8 -8.2
STHS	Stebnicka Huta	13.42	358	*e*P	Px	13 46 53.3
RJOB	Jochberg	13.53	333	*e*P	Pn	13 46 43.4 -0.1
SBF	Sospel	13.58	310	*e*P	Pn	13 46 44.0 -0.1
	comp=Z,64nm,1.4s					
SBF	Sospel	13.58	310	*e*P	Pn	13 46 44.0 -0.1
SBF				pmax	pmax	
	comp=Z,32nm,1.4s					
SBF	Sospel	13.58	310	*e*P	Pn	13 46 44.0 -0.1
	comp=Z,32nm,1.4s					
SBF	Sospel	13.58	310	*e*P	Pn	13 46 44.0 -0.1
	comp=Z,32nm,1.4s					
KWP	Kalwaria Pacla	13.64	2	*e*P	Pn	13 46 46.4 +1.5
KWP				pmax	pmax	
	comp=Z,43nm,1.4s					
KWP	Kalwaria Pacla	13.64	2	*e*Pn	Pn	13 46 46.4 +1.5
	comp=Z,43nm,1.4s					
KWP	Kalwaria Pacla	13.64	2	*e*Pn	Pn	13 46 46.4 +1.5
	comp=Z,43nm,1.4s					
VRAC	Vranov	13.86	345	Pn	Pn	13 46 47.4 -0.4
	comp=Z,0.3nm,0.3s,baz=171,slow=13,SNR=2.6					
VRAC	Vranov	13.86	345	⇓*i*P	Pn	13 46 48.1 +0.2
VRAC	Vranov	13.86	345	Pn	Pn	13 46 47.4 -0.5
LVV	L'vov	13.90	6	*e*P	Pn	13 46 51.0 +2.5
LVV				*e*S	Sn	13 49 25.0 +2.2
LVV				MLR	MLR	
	comp=E,200nm,11.0s					
LVV				MLR	MLR	
	comp=Z,400nm,11.0s					
LVV				MLR	MLR	
	comp=N,400nm,10.0s					
DAVOX	Davos/Dischmat	14.03	324	Pn	Pn	13 46 52.2 +2.0
	comp=N,0.5nm,0.3s,baz=158,slow=18,SNR=3.4					
DAVOX				Sn	Sn	13 49 17.9 -7.9
	comp=N,0.3nm,0.3s,baz=154,slow=22,SNR=3.6					
DAVOX	Davos/Dischmat	14.03	324	Pn	Pn	13 46 52.2 +2.0
DAVOX				Sn	Sn	13 49 17.9 -8.0
TREC	Trest	14.09	343	AMS	AMS	13 53 10.0
	comp=N,2μm,9.8s					
OKC	Ostrava-Krasne	14.10	350	*e*P	Pn	13 46 50.4 -0.8
OKC				MLR	MLR	
	comp=Z,1μm,9.1s					
OKC	Ostrava-Krasne	14.10	350	*e*P	Pn	13 46 50.4 -0.8
OKC				*ex*	x	13 46 59.7
OKC				AMS	AMS	13 54 00.0
	comp=Z,1μm,9.1s					
MORC	Moravsky Berou	14.13	348	*e*Pn	Pn	13 46 50.9 -0.7
MORC				*e*P		13 47 03.0
MORC	Moravsky Berou	14.13	348	⇑*i*P	Pn	13 46 52.2 +0.6
MORC	Moravsky Berou	14.13	348	*e*Pn	Pn	13 46 50.9 -0.7
MORC	Moravsky Berou	14.13	348	*e*P	Px	13 47 03.0
MBDF	Montbardon	14.43	312	*e*P	Pn	13 46 56.8 +1.0
	comp=Z,16nm,0.8s					
MBDF	Montbardon	14.43	312	*e*P	Pn	13 46 56.8 +1.0
MBDF				pmax	pmax	
	comp=Z,8.0nm,0.8s					
MBDF	Montbardon	14.43	312	*e*P	Pn	13 46 56.8 +1.0
	comp=Z,8.1nm,0.8s					
MBDF	Montbardon	14.43	312	*e*P	Pn	13 46 56.8 +1.0
	comp=Z,8.1nm,0.8s					
KHC	Kasperske Hory	14.47	338	*e*P	Pn	13 46 54.9 -1.3
KHC				pmax	pmax	
	comp=Z,12nm,1.1s					
KHC	Kasperske Hory	14.47	338	*e*P	Pn	13 46 54.9 -1.3
	comp=Z,12nm,1.1s					
KHC	Kasperske Hory	14.47	338	*e*P	Pn	13 46 56.1 -0.1
KHC				*ep*P	pP	13 47 03.9 -1.9
KHC				*ex*	x	13 47 20.5
KHC				AMS	AMS	13 53 30.0
	comp=Z,2μm,10.8s					
KHC	Kasperske Hory	14.47	338	*e*P	Pn	13 46 54.9 -1.3
	comp=Z,12nm,1.1s					
ANN	Anapa	14.73	49	*e*P	Pn	13 47 02.4 +2.6
ANN				*e*S	Sn	13 49 45.6 +2.5
ANN				pmax	pmax	
	comp=Z,105nm,1.4s					
ANN				MLR	MLR	
	comp=Z,190nm,10.0s					
DPC	Dobruska-Polom	14.90	346	*e*P	Pn	13 47 03.3 +1.2
DPC				MLR	MLR	
	comp=Z,2μm,9.7s					
DPC	Dobruska-Polom	14.90	346	*e*P	Pn	13 47 03.3 +1.2
DPC				*ep*P	pP	13 47 07.8 -2.8
DPC				AMS	AMS	13 53 50.0
	comp=Z,2μm,9.7s					
PRU	Pruhonice	14.97	341	*e*P	Pn	13 47 02.3 -0.7
PRU				MLR	MLR	
	comp=Z,2μm,9.6s					
PRU	Pruhonice	14.97	341	*e*P	Pn	13 47 02.3 -0.7
PRU				*ex*	x	13 47 11.1
PRU				AMS	AMS	13 53 40.0
	comp=Z,2μm,9.6s					
PRA	Prague	15.07	341	P	Pn	13 47 03.0 -1.4
UPC	Upice	15.11	345	*e*P	Pn	13 47 10.7 +5.7
UPC	Upice	15.11	345	*e*P	Pn	13 47 10.7 +5.7
UPC				*ex*	x	13 47 17.1
KSP	Ksiaz	15.38	347	*e*P	Pn	13 47 12.6 +4.2
KSP				*e*S	Sn	13 49 59.0 +0.3
PVCC	Panska Ves	15.46	342	AMS	AMS	13 53 50.0
	comp=Z,1μm,8.6s					
KIEV	Kiev	15.61	18	*e*P	Pn	13 47 12.2 +0.7
KIEV				pmax	pmax	
	comp=Z,7.0nm,0.6s					
KIEV	Kiev	15.61	18	*e*P	Pn	13 47 12.2 +0.7
	comp=Z,6.8nm,0.6s					
KIEV	Kiev	15.61	18	*e*P	Pn	13 47 12.2 +0.7
	comp=Z,6.8nm,0.6s					
AKASG	Malin Array Be	15.62	18	Pn	Pn	13 47 09.5 -2.1
	comp=Z,1.1nm,0.3s,baz=207,slow=12,SNR=5.5					
AKASG	Malin Array Be	15.62	18	P	Pn	13 47 09.5 -2.1
AKASG				pmax	pmax	
	comp=Z,1.0nm,0.3s					
AKASG	Malin Array Be	15.62	18	Pn	Pn	13 47 09.5 -2.1
AKBB	Malin Array Si	15.62	18	*e*P	Pn	13 47 11.0 -0.6
AKBB	Malin Array Si	15.62	18	*e*P	Pn	13 47 11.0 -0.6
SOC	Sochi	15.64	56	*e*P	Pn	13 47 07.2 -4.7
SOC				*e*		13 49 59.8
SOC				MLR	MLR	
	comp=Z,451nm,11.0s					
GRA1	Grafenberg Arr	15.74	334	*e*P	Pn	13 47 11.4 -1.8
	comp=Z,22nm,1.5s					
GRA1	Grafenberg Arr	15.74	334	*e*P	Pn	13 47 11.4 -1.8
	comp=Z,22nm,1.5s					
GRF	Grafenberg Arr	15.74	334	*e*P	Pn	13 47 11.4 -1.8
	comp=Z,22nm,1.5s					
GRF				*e*L		13 54 38.9
	comp=Z,1μm,19.4s					
GRF	Grafenberg Arr	15.74	334	*e*P	Pn	13 47 11.4 -1.8
GRF				pmax	pmax	
	comp=Z,22nm,1.5s					
GRF				MLR	MLR	
	comp=Z,1μm,19.4s					
GRF	Grafenberg Arr	15.74	334	*e*P	Pn	13 47 11.4 -1.8
	comp=Z,22nm,1.5s					
NKC	Novy Kostel	15.79	337	*e*P	Pn	13 47 12.7 -1.1
NKC				MLR	MLR	
	comp=Z,2μm,10.1s					
NKC	Novy Kostel	15.79	337	*e*P	Pn	13 47 12.7 -1.1
NKC				*ep*P	pP	13 47 17.8 -2.7
NKC				AMS	AMS	13 54 20.0
	comp=Z,2μm,10.1s					
VIVF	Saint-Julien-l	15.79	309	*e*P	Pn	13 47 16.7 +2.8
VIVF	Saint-Julien-l	15.79	309	*e*P	Pn	13 47 16.7 +2.8
BFO	Black Forest	15.87	325	*i* P	Pn	13 47 18.3 +3.4
BRG	Berggiesshubel	15.93	341	*e*P	Pn	13 47 15.3 -0.4
	comp=Z,4.7nm,1.1s					
BRG				*e*		13 47 27.3
	comp=Z,7.8nm,0.9s					
BRG				S	Sn	13 50 19.0 +6.8
BRG						
	comp=N,675nm,7.9s					
BRG						
	comp=E,1μm,11.5s					
BRG						
	comp=Z,1μm,8.8s					
BRG	Berggiesshubel	15.93	341	*e*P	Pn	13 47 15.3 -0.4
BRG				S	Sn	13 50 19.0 +6.8
BRG				pmax	pmax	
	comp=Z,3.0nm,1.1s					
BRG				MLR	MLR	
	comp=N,404nm,7.9s					
BRG				MLR	MLR	
	comp=E,753nm,11.5s					
BRG				MLR	MLR	
	comp=Z,740nm,8.8s					
LASF	Ste Croix	15.97	306	*e*P	Pn	13 47 16.7 +0.5
LASF	Ste Croix	15.97	306	*e*P	Pn	13 47 16.7 +0.5
HINF	Hinteralfeld	16.23	321	*e*P	Pn	13 47 19.1 -0.5
	comp=Z,46nm,1.5s					
HINF	Hinteralfeld	16.23	321	*e*P	Pn	13 47 19.1 -0.5
HINF				pmax	pmax	
	comp=Z,23nm,1.5s					
HINF	Hinteralfeld	16.23	321	*e*P	Pn	13 47 19.1 -0.5
	comp=Z,23nm,1.5s					
HINF	Hinteralfeld	16.23	321	*e*P	Pn	13 47 19.1 -0.5
	comp=Z,23nm,1.5s					
ECH	Echery	16.35	323	*e*P	Pn	13 47 20.0 -1.0
ECH				pmax	pmax	
	comp=Z,8.0nm,1.1s					
ECH	Echery	16.35	323	*e*Pn	Pn	13 47 20.0 -1.1
	comp=Z,7.9nm,1.1s					
ECH	Echery	16.35	323	*e*Pn	Pn	13 47 20.0 -1.0
	comp=Z,7.9nm,1.1s					
MOX	Moxa	16.41	336	*e*P	Pn	13 47 22.4 +0.6
	comp=Z,19nm,1.8s					
MOX	Moxa	16.41	336	*e*P	Pn	13 47 22.4 +0.6
MOX				pmax	pmax	
	comp=Z,19nm,1.8s					
MOX	Moxa	16.41	336	*e*P	Pn	13 47 22.4 +0.6
	comp=Z,19nm,1.8s					
CDF	Champ du Feu	16.43	324	*e*P	Pn	13 47 21.9 -0.1
	comp=Z,26nm,1.1s					
CDF	Champ du Feu	16.43	324	*e*P	Pn	13 47 21.9 -0.1
CDF				pmax	pmax	
	comp=Z,13nm,1.1s					
CDF	Champ du Feu	16.43	324	*e*P	Pn	13 47 21.9 -0.1
	comp=Z,13nm,1.1s					
CDF	Champ du Feu	16.43	324	*e*P	Pn	13 47 21.9 -0.1
	comp=Z,13nm,1.1s					
CLL	Collm	16.58	340	*e*P	Pn	13 47 26.1 +2.2
CLL	Collm	16.58	340	*e*P	Pn	13 47 24.0 +0.1
CLL				*i*		13 47 26.1
CLL				*i*		13 47 33.4
CLL				*e*S	Sn	13 50 32.0 +4.1
CLL	Collm	16.58	340	*e*P	Pn	13 47 24.0 +0.1
HAU	Haudompre	16.61	321	*e*P	Pn	13 47 25.0 +0.6
HAU				*e*MLR	MLR	
	comp=Z,711nm,18.5s					
HAU	Haudompre	16.61	321	*e*P	Pn	13 47 25.0 +0.6
UBBA	Unterbreizbach	17.11	334	*e*P	Pn	13 47 31.0 +0.3
TNS	Taunus Mts	17.23	330	*e*P	Pn	13 47 31.8 -0.4
TNS	Taunus Mts	17.23	330	*e*P	Pn	13 47 31.8 -0.4
CAF	Calviac	17.49	307	*e*P	Pn	13 47 35.7 +0.3
	comp=Z,39nm,1.4s					
CAF	Calviac	17.49	307	*e*P	Pn	13 47 35.7 +0.3
CAF				pmax	pmax	
	comp=Z,20nm,1.4s					
CAF	Calviac	17.49	307	*e*P	Pn	13 47 35.7 +0.3
	comp=Z,20nm,1.4s					
CAF	Calviac	17.49	307	*e*P	Pn	13 47 35.7 +0.3
	comp=Z,20nm,1.4s					
LOR	Lormes	17.52	316	*e*P	Pn	13 47 35.3 -0.4
LOR				*e*MLR	MLR	
	comp=Z,669nm,17.8s					
LOR	Lormes	17.52	316	*e*P	Pn	13 47 35.3 -0.4
HAKT	HAKKARI	17.55	78	*i* P	Pn	13 47 27.6 -8.6
MEZF	Maizieres J'vi	17.60	320	*e*P	Pn	13 47 38.6 +1.9
MEZF	Maizieres J'vi	17.60	320	*e*P	Pn	13 47 38.6 +1.9
SSF	Saint Saulge	17.61	315	*e*P	Pn	13 47 35.8 -1.0
	comp=Z,8.6nm,0.9s					
SSF	Saint Saulge	17.61	315	*e*P	Pn	13 47 35.8 -1.0
SSF				pmax	pmax	
	comp=Z,4.0nm,0.9s					
SSF	Saint Saulge	17.61	315	*e*P	Pn	13 47 35.8 -1.0
	comp=Z,4.3nm,0.9s					
SSF	Saint Saulge	17.61	315	*e*P	Pn	13 47 35.8 -1.0
	comp=Z,4.3nm,0.9s					
KIV	Kislovodsk	17.78	57	⇓*i*P	Pn	13 47 39.1 +0.1
KIV				*i* S	Sn	13 51 04.4 +7.2
KIV				pmax	pmax	
	comp=Z,52nm,1.2s					
KIV				MLR	MLR	
	comp=Z,200nm,14.0s					
KIV	Kislovodsk	17.78	57	*e*Pn	Pn	13 47 40.4 +1.4
	comp=Z,45nm,1.1s					
KIV	Kislovodsk	17.78	57	*e*Pn	Pn	13 47 40.4 +1.4
	comp=Z,45nm,1.1s					
WLF	Walferdange	17.83	325	P	Pn	13 47 41.7 +2.1
ONI	Oni	17.92	62	P	Pn	13 47 39.3 -1.5
TCF	Toulx Ste Croi	17.99	311	*e*P	Pn	13 47 40.8 -0.8
TCF	Toulx Ste Croi	17.99	311	*e*P	Pn	13 47 40.8 -0.8
RJF	Les Rejaudoux	18.00	307	*e*P	Pn	13 47 44.2 +2.5
	comp=Z,53nm,1.4s					
RJF				*e*MLR	MLR	
	comp=Z,296nm,20.5s					
RJF	Les Rejaudoux	18.00	307	*e*P	Pn	13 47 44.2 +2.5
RJF				pmax	pmax	
	comp=Z,26nm,1.4s					
RJF	Les Rejaudoux	18.00	307	*e*P	Pn	13 47 44.2 +2.5
	comp=Z,26nm,1.4s					
RJF	Les Rejaudoux	18.00	307	*e*P	Pn	13 47 44.2 +2.5
	comp=Z,26nm,1.4s					
EPF	Esparros	18.02	299	*e*P	Pn	13 47 46.4 +4.4
EPF	Esparros	18.02	299	*e*P	Pn	13 47 46.4 +4.4
SUW	Suwalki	18.04	2	*e*P	Pn	13 47 42.2 +0.1
SUW				pmax	pmax	
	comp=Z,149nm,1.1s					
SUW	Suwalki	18.04	2	*e*P	Pn	13 47 42.2 +0.1
	comp=Z,149nm,1.1s					
SUW	Suwalki	18.04	2	*e*P	Pn	13 47 42.2 +0.1
	comp=Z,149nm,1.1s					
KEH	Kehvi	18.20	63	P	Pn	13 47 42.6 -1.6
ZEI	Tsey	18.28	62	*e*P	Pn	13 47 44.7 -0.5
ZEI				*e*S	Sn	13 51 09.9 +0.6
ZEI				pmax	pmax	
	comp=Z,18nm,1.1s					
LFF	La Frestale	18.36	306	*e*P	Pn	13 47 47.6 +1.5
LFF	La Frestale	18.36	306	*e*P	Pn	13 47 47.6 +1.5
GNI	Garni	18.45	70	P	Pn	13 47 47.7 +0.4
	comp=Z,1.4nm,0.3s,baz=70,slow=2.3,SNR=14					
GNI				LR	LR	13 54 53.0
	comp=Z,253nm,19.1s,baz=88,slow=37					
GNI	Garni	18.45	70	*ce*P	Pn	13 47 46.9 -0.4
GNI				pmax	pmax	
	comp=Z,89nm,1.7s					
GNI	Garni	18.45	70	P	Pn	13 47 47.8 +0.5
NRDL	Niedersach Rie	18.48	337	*e*P	Pn	13 47 47.5 -0.1
ETSF	Etsaut	18.62	299	*e*P	Pn	13 47 50.5 +1.1
	comp=Z,31nm,1.3s					
ETSF	Etsaut	18.62	299	*e*P	Pn	13 47 50.5 +1.1
ETSF				pmax	pmax	
	comp=Z,15nm,1.3s					
ETSF	Etsaut	18.62	299	*e*P	Pn	13 47 50.5 +1.1
	comp=Z,15nm,1.3s					
ETSF	Etsaut	18.62	299	*e*P	Pn	13 47 50.5 +1.1
	comp=Z,15nm,1.3s					
BUG	Bochum--Univer	18.65	330	*e*P	Pn	13 47 50.9 +1.3
TBLG	Delisi	18.67	65	*e*P	Pn	13 47 50.5 +0.5
TBLG	Delisi	18.67	65	P	Pn	13 47 50.5 +0.6
MTA	Mtatsminda	18.70	65	P	Pn	13 47 50.5 +0.1
HGN	Heimansgroeve	18.71	327	*e*P	Pn	13 47 51.5 +1.2
	comp=Z,22nm,1.8s					
HGN	Heimansgroeve	18.71	327	*e*S	Sn	13 51 22.9 +3.4
BCLA	Clavier	18.75	325	P	Pn	13 47 51.4 +0.6
	comp=Z,22nm,2.4s					
GIVF	Givet	18.76	324	*e*P	Pn	13 47 51.9 +1.0
GIVF	Givet	18.76	324	*e*P	Pn	13 47 51.9 +1.0
BEBN	Eben Emael	18.84	327	P	Pn	13 47 52.7 +0.7
DOU	Dourbes	18.86	324	P	Pn	13 47 53.0 +0.8
	comp=Z,14nm,2.0s					
MNK	Minsk	18.96	11	*e*P	Pn	13 47 49.0 -4.3
BAIF	Baives	19.02	323	*e*P	Pn	13 47 54.9 +0.7
BAIF	Baives	19.02	323	*e*P	Pn	13 47 54.9 +0.7
DGRG	David-gareji	19.09	66	P	Pn	13 47 55.6 +0.5
IBBN	Ibbenburen	19.14	333	*e*P	Pn	13 47 56.1 +0.6
	comp=Z,38nm,1.5s					
SJPF	Ste Jean	19.15	299	*e*P	Pn	13 47 54.5 -1.2
	comp=Z,19nm,0.8s					
SJPF	Ste Jean	19.15	299	*e*P	Pn	13 47 54.5 -1.2
SJPF				pmax	pmax	
	comp=Z,10.0nm,0.8s					
SJPF	Ste Jean	19.15	299	*e*P	Pn	13 47 54.5 -1.2
	comp=Z,9.5nm,0.8s					
SJPF	Ste Jean	19.15	299	*e*P	Pn	13 47 54.5 -1.2
	comp=Z,9.5nm,0.8s					
WTSB	Winterswijk	19.24	331	*e*P	Pn	13 47 57.7 +1.0
	comp=Z,22nm,1.5s					
SNF	Seneffe	19.29	324	P	Pn	13 47 59.2 +1.9
	comp=Z,21nm,2.3s					
UCC	Uccle	19.45	325	P	Pn	13 48 01.1 +1.8
VORD	Divnogorie	19.50	35	*e*P	Pn	13 47 57.6 -2.3
VORD				*e*S	Sn	13 51 26.6 -12
VORD				pmax	pmax	
	comp=N,10.0nm,0.6s					
VORD				pmax	pmax	
	comp=E,10.0nm,0.6s					
VORD				pmax	pmax	
	comp=Z,10.0nm,0.6s					
VORD				smax		
	comp=E,190nm,3.1s					
VORD				smax		
	comp=Z,90nm,3.1s					
VORD				smax		
	comp=N,30nm,0.8s					
VORD				MLR	MLR	
	comp=N,310nm,15.0s					
VORD				MLR	MLR	
	comp=E,300nm,15.0s					
VORD				MLR	MLR	
	comp=Z,510nm,15.0s					
MFF	Saint Martin d	19.59	310	*e*P	Pn	13 48 00.8 -0.2
MFF	Saint Martin d	19.59	310	*e*P	Pn	13 48 00.8 -0.2
VSR	Storozhevoye	19.62	34	*e*P	Pn	13 47 58.8 -2.5
VSR				*e*S	Sn	13 51 31.4 -10
VSR				pmax	pmax	
	comp=E,30nm,0.9s					
VSR				pmax	pmax	
	comp=Z,10.0nm,0.9s					
VSR				pmax	pmax	
	comp=N,10.0nm,0.5s					
VSR				smax		
	comp=N,130nm,3.2s					
VSR				smax		
	comp=E,140nm,3.2s					
VSR				smax		
	comp=Z,80nm,3.2s					
VSR				MLR	MLR	
	comp=N,280nm,13.0s					
VSR				MLR	MLR	
	comp=E,360nm,13.0s					
VSR				MLR	MLR	
	comp=Z,550nm,13.0s					
BSD	Bornholm Skovb	19.71	348	*e*P	Pn	13 48 00.6 -1.7
BSD				*i* S	Sn	13 51 37.6 -6.0
BSD				MLR	MLR	
	comp=Z,310nm,18.0s					
BSD	Bornholm Skovb	19.71	348	*i* P	Pn	13 48 00.6 -1.7
BSD				*i* S	Sn	13 51 37.6 -6.0
BSD						
	comp=Z,310nm,18.0s					
LDF	La Druitiere	20.49	315	*e*P	P	13 48 09.5 +0.1
	comp=Z,28nm,1.0s					
LDF	La Druitiere	20.49	315	*e*P	P	13 48 09.5 +0.1
LDF				pmax	pmax	
	comp=Z,14nm,1.0s					
LDF	La Druitiere	20.49	315	*e*P	P	13 48 09.5 +0.1
	comp=Z,14nm,1.0s					
LDF	La Druitiere	20.49	315	*e*P	P	13 48 09.5 +0.1
	comp=Z,14nm,1.0s					
VRHR	Novokhopersk	20.70	37	*e*P	P	13 48 12.1 +0.5
VRHR				*e**PP		13 48 20.8
VRHR				*e*S	S	13 51 59.4 -3.3
VRHR				pmax	pmax	
	comp=Z,10.0nm,0.4s					
VRHR				pmax	pmax	
	comp=N,20nm,0.8s					
VRHR				pmax	pmax	
	comp=E,10.0nm,0.8s					
VRHR				smax		
	comp=N,160nm,1.9s					
VRHR				smax		
	comp=E,110nm,1.9s					
VRHR				smax		
	comp=Z,10.0nm,0.9s					
VRHR	Novokhopersk	20.70	37	*e*P	P	13 48 12.1 +0.5
	comp=Z

FLN	**La Foliniere**	**20.78**	**315**	*e*P	**P**	**13 48 13.3**	**+0.7**
	comp=Z,16nm,1.0s						
FLN				LR	LR		
	comp=Z,430nm,20.3s,MS3.8						
FLN	**La Foliniere**	**20.78**	**315**	*e*P	**P**	**13 48 13.3**	**+0.7**
	comp=Z,16nm,1.0s						
MAK	**Makhachkala**	**20.91**	**63**	*e*P	**P**	**13 48 11.7**	**-2.4**
MAK				*e*S	**S**	**13 52 03.1**	**-4.0**
MAK				*e*SS		13 52 23.7	
MAK				*e*SSS		13 52 39.3	
MAK				pmax	pmax		
	comp=Z,188nm,1.5s						
MAK				MLR	MLR		
	comp=Z,297nm,9.0s						
MAK	**Makhachkala**	**20.91**	**63**	*e*P	**P**	**13 48 11.7**	**-2.4**
	comp=Z,188nm,1.5s						
PAB	**San Pablo**	**21.01**	**288**	*e*P	**P**	**13 48 17.7**	**+2.5**
PAB				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.2						
PAB	**San Pablo**	**21.01**	**288**	*e*P	**P**	**13 48 17.7**	**+2.5**
	comp=Z,17nm,1.2s,mb4.3						
PAB	**San Pablo**	**21.01**	**288**	*e*P	**P**	**13 48 17.7**	**+2.5**
	comp=Z,17nm,1.2s,mb4.3						
OBN	**Obninsk**	**21.62**	**23** ‖	*i*P	**P**	**13 48 19.5**	**-2.1**
OBN				*i* S	**S**	**13 52 22.0**	**+1.2**
OBN				pmax	pmax		
	comp=Z,107nm,1.7s,mb5.0						
OBN				MLR	MLR		
	comp=Z,200nm,18.0s,MS3.6						
OBN	**Obninsk**	**21.62**	**23**	*e*P	**P**	**13 48 16.8**	**-4.8**
	comp=Z,211nm,1.8s,mb5.3						
OBN	**Obninsk**	**21.62**	**23**	*i* P	**P**	**13 48 19.5**	**-2.1**
	comp=Z,107nm,1.7s,mb5.0						
SGMF	**Saint Gilles**	**21.77**	**312**	*e*P	**P**	**13 48 23.0**	**-0.3**
SGMF	**Saint Gilles**	**21.77**	**312**	*e*P	**P**	**13 48 23.0**	**-0.3**
QUIF	**Quistinic**	**22.00**	**311**	*e*P	**P**	**13 48 26.0**	**+0.2**
	comp=Z,36nm,1.0s,mb4.5						
QUIF	**Quistinic**	**22.00**	**311**	*e*P	**P**	**13 48 26.0**	**+0.2**
QUIF				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.5						
QUIF	**Quistinic**	**22.00**	**311**	*e*P	**P**	**13 48 26.0**	**+0.2**
	comp=Z,18nm,1.0s,mb4.5						
QUIF	**Quistinic**	**22.00**	**311**	*e*P	**P**	**13 48 26.0**	**+0.2**
	comp=Z,18nm,1.0s,mb4.5						
MDT	**Midelt**	**22.07**	**269**	P	**P**	**13 48 28.3**	**+1.7**
	comp=Z,1.9nm,0.8s,mb3.6,baz=216,slow=2.1,SNR=3.7						
MDT	**Midelt**	**22.07**	**269**	P	**P**	**13 48 28.3**	**+1.7**
MIB	**Mutribah**	**22.21**	**99**	*e*P	**P**	**13 48 27.5**	**-0.7**
MIB				AMb	AMB	13 48 29.1	
	comp=Z,214nm,1.0s,mb5.5						
MIB	**Mutribah**	**22.21**	**99**	*e*P	**P**	**13 48 27.5**	**-0.6**
	comp=Z,215nm,1.0s,mb5.5						
ROSF	**Rostrenen**	**22.24**	**311**	*e*P	**P**	**13 48 27.5**	**-0.8**
ROSF	**Rostrenen**	**22.24**	**311**	*e*P	**P**	**13 48 27.5**	**-0.8**
NAY	**Al-Naaiem**	**22.36**	**100**	*e*P	**P**	**13 48 29.3**	**-0.3**
NAY				AMb	AMB	13 48 31.4	
	comp=Z,95nm,1.0s,mb5.2						
NAY	**Al-Naaiem**	**22.36**	**100**	*e*P	**P**	**13 48 29.3**	**-0.4**
	comp=Z,95nm,1.0s,mb5.2						
MOS	**Moscow**	**22.48**	**24**	*e*P	**P**	**13 48 27.8**	**-2.9**
MOS				*e*		13 49 07.6	
MOS				*e*S	**S**	**13 52 29.4**	**-8.1**
MOS				pmax	pmax		
	comp=Z,200nm,1.6s,mb5.3						
MOS				pmax	pmax		
	comp=Z,129nm,1.3s,mb5.2						
MOS				MLR	MLR		
	comp=Z,700nm,12.0s,MS4.3						
VSU	**Vasula**	**22.70**	**7**	*e*P	**P**	**13 48 33.5**	**+0.4**
VSU				pmax	pmax		
	comp=Z,50nm,1.0s,mb4.9						
VSU	**Vasula**	**22.70**	**7**	*e*P	**P**	**13 48 33.5**	**+0.4**
QRN	**Al-Qurain**	**23.10**	**101**	*e*P	**P**	**13 48 37.3**	**-0.3**
QRN				AMb	AMB	13 48 40.2	
	comp=Z,151nm,1.7s,mb5.2						
MVO	**Moncorvo**	**23.13**	**292**	*e*P	**P**	**13 48 37.8**	**0.0**
	comp=Z,24nm,1.6s,mb4.4						
MVO	**Moncorvo**	**23.13**	**292**	*e*P	**P**	**13 48 37.8**	**0.0**
	comp=Z,24nm,1.6s,mb4.4						
PBAR	**Barrancos**	**23.14**	**284**	*e*P	**P**	**13 48 37.7**	**-0.2**
	comp=Z,21nm,1.8s,mb4.3						
PBAR				*e*S	**S**	**13 52 51.8**	**+2.6**
PBAR	**Barrancos**	**23.14**	**284**	*e*P	**P**	**13 48 37.7**	**-0.2**
	comp=Z,21nm,1.8s,mb4.3						
PBAR				*e*S	**S**	**13 52 51.8**	**+2.6**
PMRV	**Marv??o**	**23.37**	**287**	*e*P	**P**	**13 48 39.8**	**-0.5**
	comp=Z,15nm,1.5s,mb4.2						
PMRV	**Marv??o**	**23.37**	**287**	*e*P	**P**	**13 48 39.8**	**-0.5**
	comp=Z,15nm,1.5s,mb4.2						
PESTR	**Estremoz**	**23.54**	**286**	*e*P	**P**	**13 48 42.1**	**0.0**
	comp=Z,16nm,2.5s,mb4.0						
PESTR	**Estremoz**	**23.54**	**286**	*e*P	**P**	**13 48 42.1**	**0.0**
	comp=Z,16nm,2.5s,mb4.0						
PVIS	**Viseu**	**23.76**	**290**	*e*P	**P**	**13 48 44.4**	**+0.3**
	comp=Z,13nm,1.7s,mb4.1						
PVIS	**Viseu**	**23.76**	**290**	*e*P	**P**	**13 48 44.4**	**+0.3**
	comp=Z,13nm,1.7s,mb4.1						
PBDV	**Barranco-do-Ve**	**23.92**	**282**	*e*P	**P**	**13 48 46.8**	**+1.2**
	comp=Z,18nm,0.9s,mb4.5						
PBDV	**Barranco-do-Ve**	**23.92**	**282**	*e*P	**P**	**13 48 46.8**	**+1.2**
	comp=Z,18nm,0.9s,mb4.5						
HFS	**Hagfors**	**24.73**	**350**	P	**P**	**13 48 51.6**	**-1.1**
	comp=Z,2.3nm,0.3s,mb4.1,baz=162,slow=11,SNR=28						
HFS	**Hagfors**	**24.73**	**350**	P	**P**	**13 48 51.6**	**-1.1**
HFS				pmax	pmax		
	comp=Z,2.0nm,0.4s						
HFS	**Hagfors**	**24.73**	**350**	P	**P**	**13 48 51.6**	**-1.1**
HFA0	**Hagfors New Ar**	**24.73**	**350**	P	**P**	**13 48 51.0**	**-1.8**
HFA0	**Hagfors New Ar**	**24.73**	**350**	P	**P**	**13 48 51.0**	**-1.8**
FINES	**FINESS Array B**	**25.61**	**5**	P	**P**	**13 48 59.4**	**-1.3**
	comp=Z,4.8nm,0.6s,mb4.2,baz=160,slow=12,SNR=23						
FINES				LR	LR	14 00 01.4	
	comp=Z,601nm,21.1s,MS4.1,baz=183,slow=39						
FINES	**FINESS Array B**	**25.61**	**5**	P	**P**	**13 48 59.4**	**-1.3**
FINES				pmax	pmax		
	comp=Z,5.0nm,0.6s						
FINES				MLR	MLR		
	comp=Z,601nm,21.1s						
FINES	**FINESS Array B**	**25.61**	**5**	P	**P**	**13 48 59.4**	**-1.3**
FINES				LR	LR	14 00 01.4	
FINES	**FINESS Array B**	**25.61**	**5**	P	**P**	**13 48 59.4**	**-1.3**
EKA	**Eskdalemuir Ar**	**25.84**	**326**	P	**P**	**13 49 02.8**	**-0.1**
	comp=Z,1.2nm,0.5s,mb3.7,baz=126,slow=7.5,SNR=14						
EKA	**Eskdalemuir Ar**	**25.84**	**326**	P	**P**	**13 49 02.8**	**-0.1**
ESK	**Eskdalemuir**	**25.85**	**326**	*e*P	**P**	**13 49 00.8**	**-2.2**
ESK	**Eskdalemuir**	**25.85**	**326**	*e*P	**P**	**13 49 00.8**	**-2.2**
NB2	**NORSAR Subarra**	**25.97**	**348**	P	**P**	**13 49 03.6**	**-0.4**
	comp=Z,9.1nm,1.1s,mb4.2,baz=160,slow=9.3						
NB2	**NORSAR Subarra**	**25.97**	**348**	P	**P**	**13 49 03.6**	**-0.4**
	comp=Z,9.1nm,1.1s,mb4.2,SNR=6.5						
NOA	**NORSAR Array B**	**25.97**	**348**	P	**P**	**13 49 03.1**	**-0.9**
	comp=Z,2.7nm,0.9s,mb3.8,baz=159,slow=9.6,SNR=4.4						
NOA				LR	LR	13 59 33.4	
	comp=Z,268nm,21.7s,MS3.7,baz=180,slow=37						
NOA	**NORSAR Array B**	**25.97**	**348**	P	**P**	**13 49 03.1**	**-0.9**
KAF	**Kangasniemi**	**26.29**	**5**	*e*P	**P**	**13 49 06.1**	**-0.7**
KAF				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.5						
KAF	**Kangasniemi**	**26.29**	**5**	*e*p	**P**	**13 49 06.1**	**-0.7**
	comp=Z,14nm,0.9s,mb4.5						
KAF	**Kangasniemi**	**26.29**	**5**	*e*p	**P**	**13 49 06.1**	**-0.7**
	comp=Z,14nm,0.9s,mb4.5						
KAF	**Kangasniemi**	**26.29**	**5**	*e*P	**P**	**13 49 06.1**	**-0.7**
	comp=Z,14nm,0.9s,mb4.5						
JOF	**Joensuu**	**27.57**	**9**	*e*P	**P**	**13 49 14.3**	**-4.1**
JOF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.2						
JOF	**Joensuu**	**27.57**	**9**	*e*p	**P**	**13 49 14.3**	**-4.1**
	comp=Z,3.7nm,0.7s,mb4.1						
JOF	**Joensuu**	**27.57**	**9**	*e*p	**P**	**13 49 14.3**	**-4.1**
	comp=Z,3.7nm,0.7s,mb4.1						
TOA0	**Torodi Ar. Sit**	**29.12**	**224**	*e*P	**P**	**13 49 34.2**	**+1.6**
TOA0	**Torodi Ar. Sit**	**29.12**	**224**	*e*P	**P**	**13 49 34.2**	**+1.6**
TORD	**Torodi Ar. Bea**	**29.12**	**224**	P	**P**	**13 49 34.9**	**+2.3**
	comp=Z,4.0nm,0.8s,mb4.2,baz=33,slow=8.9,SNR=26						
TORD	**Torodi Ar. Bea**	**29.12**	**224**	P	**P**	**13 49 34.9**	**+2.3**
AKTK	**Aktyubinsk**	**29.69**	**50**	P	**P**	**13 49 35.8**	**-1.6**
AKTK				LR	LR	14 04 19.3	
AKTK	**Aktyubinsk**	**29.69**	**50**	P	**P**	**13 49 35.8**	**-1.6**
AKTO	**Aktyubinsk**	**29.69**	**50**	P	**P**	**13 49 35.8**	**-1.6**
	comp=Z,2.6nm,0.7s,mb4.0,baz=254,slow=9.9,SNR=12						
AKTO				LR	LR	14 04 19.3	
	comp=Z,233nm,20.5s,MS3.8,baz=50,slow=42						
AKTO	**Aktyubinsk**	**29.69**	**50**	P	**P**	**13 49 35.8**	**-1.6**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
AKTO				MLR	MLR		
	comp=Z,233nm,20.5s,MS3.8						
ABKAR	**Akbulak array**	**30.64**	**52**	*e*P	**P**	**13 49 44.0**	**-1.7**
	comp=Z,1.6nm,0.4s,mb4.2						
ABKAR	**Akbulak array**	**30.64**	**52**	*e*P	**P**	**13 49 44.0**	**-1.8**
	comp=Z,1.6nm,0.4s,mb4.2						
ARU	**Arti**	**32.02**	**39**	*c i*P	**P**	**13 49 55.5**	**-2.4**
ARU				*e*		13 50 58.6	
ARU				S	**S**	**13 55 03.4**	**-5.9**
ARU				pmax	pmax		
	comp=Z,30nm,1.7s,mb4.8						
ARU	**Arti**	**32.02**	**39**	*e*P	**P**	**13 49 55.1**	**-2.8**
	comp=Z,17nm,1.1s,mb4.8						
APA	**Apatity**	**32.30**	**8** ‖	*e*P	Px	13 50 10.0	
APA				MLR	MLR		
	comp=Z,600nm,16.0s,MS4.4						
SOKR	**Solikamsk**	**32.63**	**33** ⇑	*i*P	**P**	**13 50 02.4**	**-0.7**
SOKR				pmax	pmax		
	comp=Z,40nm,1.4s,mb5.2						
SOKR				MLR	MLR		
	comp=Z,150nm,15.0s,MS3.8						
SVE	**Sverdlovsk**	**33.23**	**39** ‖	*e*P	**P**	**13 50 07.6**	**-0.9**
SVE				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.1						
ARCES	**ARCESS Array B**	**33.65**	**2**	P	**P**	**13 50 10.9**	**-1.0**
	comp=Z,2.1nm,0.4s,mb4.4,baz=186,slow=9.1,SNR=29						
ARCES				LR	LR	14 04 28.3	
	comp=Z,273nm,18.3s,MS4.0,baz=183,slow=38						
ARCES	**ARCESS Array B**	**33.65**	**2**	P	**P**	**13 50 11.0**	**-1.0**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ARCES				MLR	MLR		
	comp=Z,273nm,18.3s						
ARCES	**ARCESS Array B**	**33.65**	**2**	P	**P**	**13 50 10.9**	**-1.1**
ARE0	**ARCESS Array S**	**33.65**	**2**	*e*P	**P**	**13 50 10.6**	**-1.4**
ARE0	**ARCESS Array S**	**33.65**	**2**	*e*P	**P**	**13 50 10.6**	**-1.4**
BRVK	**Borovoye**	**37.67**	**48**	*ce*P	**P**	**13 50 47.1**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.3						
BRVK	**Borovoye**	**37.67**	**48** ‖	*e*P	**P**	**13 50 47.2**	**+0.5**
BRVK	**Borovoye**	**37.67**	**48** ‖	*e*P	**P**	**13 50 47.2**	**+0.5**
BVAR	**Borovoye Array**	**37.73**	**48**	P	**P**	**13 50 46.2**	**-1.0**
	comp=Z,1.7nm,0.7s,mb3.9,baz=266,slow=12,SNR=10						
BVAR	**Borovoye Array**	**37.73**	**48**	P	**P**	**13 50 46.2**	**-1.0**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BVAR	**Borovoye Array**	**37.73**	**48**	P	**P**	**13 50 46.2**	**-1.0**
DBIC	**Dimbokro**	**38.11**	**226**	P	**P**	**13 50 52.7**	**+1.9**
	comp=Z,7.0nm,0.9s,mb4.4,baz=335,slow=1.1,SNR=5.3						
DBIC				LR	LR	14 08 26.9	
	comp=Z,406nm,18.0s,MS4.3,baz=18,slow=39						
DBIC	**Dimbokro**	**38.11**	**226**	P	**P**	**13 50 52.7**	**+1.9**
DBIC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
DBIC				MLR	MLR		
	comp=Z,406nm,18.0s						
DBIC	**Dimbokro**	**38.11**	**226**	P	**P**	**13 50 52.7**	**+1.9**
DBIC				LR	LR	14 08 26.9	
DBIC	**Dimbokro**	**38.11**	**226**	P	**P**	**13 50 52.7**	**+1.9**
TIC	**Toumodi**	**38.22**	**227**	*e*PKIKP	**P**	**13 50 54.3**	**+2.6**
	comp=Z,9.0nm,0.2s,mb5.2						
KIC	**Kosan Boka**	**38.29**	**226**	*e*PKIKP	**P**	**13 50 54.1**	**+1.8**
	comp=Z,52nm,1.3s,mb5.1						
LIC	**Lamto**	**38.56**	**226**	*e*PKIKP	**P**	**13 50 54.0**	**-0.6**
	comp=Z,54nm,1.3s,mb5.1						
EKS2	**Erkin-Say**	**40.16**	**64**	*e*P	**P**	**13 51 07.6**	**0.0**
	comp=Z,22nm,1.4s,mb4.7						
EKS2	**Erkin-Say**	**40.16**	**64**	*e*P	**P**	**13 51 07.6**	**-0.1**
	comp=Z,22nm,1.4s,mb4.7						
AML	**Almayashu**	**40.18**	**65**	*e*P	**P**	**13 51 07.9**	**+0.1**
	comp=Z,3.5nm,0.8s,mb4.1						
AML	**Almayashu**	**40.18**	**65**	*e*P	**P**	**13 51 07.9**	**+0.1**
	comp=Z,3.5nm,0.8s,mb4.1						
AAK	**Ala-Archa**	**40.69**	**64**	P	**P**	**13 51 12.8**	**+0.7**
	comp=Z,2.2nm,0.4s,mb4.1,baz=213,slow=6.0,SNR=13						
AAK	**Ala-Archa**	**40.69**	**64**	P	**P**	**13 51 12.8**	**+0.8**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.1						
AAK	**Ala-Archa**	**40.69**	**64**	P	**P**	**13 51 12.8**	**+0.8**
FRU	**Bishkek**	**40.74**	**64**	*i* P	**P**	**13 51 12.0**	**-0.5**
FRU				pmax	pmax		
	comp=Z,120nm,1.9s,mb5.2						
UCH	**Uchtor**	**40.76**	**65**	*e*P	**P**	**13 51 12.6**	**-0.1**
	comp=Z,11nm,1.3s,mb4.3						
UCH	**Uchtor**	**40.76**	**65**	*e*P	**P**	**13 51 12.6**	**-0.1**
	comp=Z,11nm,1.3s,mb4.3						
TKM2	**Tokmak 2**	**41.44**	**63**	*e*P	**P**	**13 51 17.9**	**-0.4**
TKM2				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.4						
TKM2	**Tokmak 2**	**41.44**	**63**	*e*P	**P**	**13 51 17.9**	**-0.4**
	comp=Z,14nm,1.3s,mb4.5						
TKM2	**Tokmak 2**	**41.44**	**63**	*e*P	**P**	**13 51 17.9**	**-0.4**
	comp=Z,14nm,1.3s,mb4.5						
SPITS	**Spitsbergen Ar**	**42.35**	**358**	P	**P**	**13 51 25.2**	**0.0**
	comp=Z,1.6nm,0.4s,mb4.0,baz=155,slow=10,SNR=14						
SPITS	**Spitsbergen Ar**	**42.35**	**358**	P	**P**	**13 51 25.3**	**0.0**
SPITS				pmax	pmax		
	comp=Z,2.0nm,0.4s						
SPITS	**Spitsbergen Ar**	**42.35**	**358**	P	**P**	**13 51 25.2**	**-0.1**
KSH	**Kashi**	**42.37**	**68**	P	**P**	**13 51 24.1**	**-1.8**
KSH				pP	pP	13 51 33.8	+4.8
KSH				sP	sP	13 51 37.9	+7.6
KSH				PP	PP	13 53 04.4	+0.5
KSH				PcP	PcP	13 53 20.4	+1.2
KSH				ScP	ScP	13 57 06.8	-3.1
KSH				PcS	PcS	13 57 10.6	-0.4
KSH				S	**S**	**13 57 38.4**	**-8.7**
KSH				sS	sS	13 57 55.4	+3.1
KSH				SS	SS	14 00 40.4	-15
KSH				ScS	ScS	14 01 22.1	-5.8
KSH				pmax	pmax		
	comp=Z,22nm,1.4s,mb4.6						
KSH				pmax	pmax		
	comp=Z,180nm,5.9s						
KSH				LR	LR		
	comp=N,180nm,8.6s						
KSH				LR	LR		
	comp=E,180nm,10.8s						
KSH				LR	LR		
	comp=Z,130nm,5.6s						
JASL	**Jaisalmer**	**42.41**	**88**	*e*PKP	**P**	**13 51 25.2**	**-1.2**
KURK	**Kurchatov**	**42.74**	**52**	P	**P**	**13 51 27.0**	**-1.7**
	comp=Z,1.4nm,0.3s,mb4.1,baz=275,slow=8.5,SNR=20						
KURK	**Kurchatov**	**42.74**	**52**	*ce*P	**P**	**13 51 27.7**	**-1.0**
KURK				pmax	pmax		
	comp=Z,12nm,1.7s,mb4.3						
KURK	**Kurchatov**	**42.74**	**52**	*e*P	**P**	**13 51 27.4**	**-1.3**
	comp=Z,6.7nm,1.0s,mb4.3						
KURK	**Kurchatov**	**42.74**	**52**	*e*P	**P**	**13 51 27.4**	**-1.3**
	comp=Z,6.7nm,1.0s,mb4.3						
KBS	**Kingsbay**	**43.24**	**357**	*e*P	**P**	**13 51 32.9**	**+0.5**
KBS				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.0						
KBS	**Kingsbay**	**43.24**	**357**	*e*P	**P**	**13 51 32.9**	**+0.5**
NVS	**Novosibirsk**	**45.39**	**45**	*i* P	**P**	**13 51 49.2**	**-0.8**
NVS				*e*		13 53 41.0	
NVS				*e*		13 54 14.4	
NVS				*i* S	**S**	**13 58 25.5**	**-5.3**
NVS				pmax	pmax		
	comp=E,15nm,1.9s						
NVS				pmax	pmax		
	comp=Z,40nm,1.9s,mb4.9						
NVS				pmax	pmax		
	comp=N,14nm,1.8s						
NVS				smax			
	comp=N,27nm,2.0s						
NVS				smax			
	comp=E,20nm,2.7s						
MK31	**Makanchi Array**	**45.55**	**57**	*e*P	**P**	**13 51 50.5**	**-0.8**
MK31	**Makanchi Array**	**45.55**	**57**	*e*P	**P**	**13 51 50.5**	**-0.8**
MKAR	**Makanchi Array**	**45.55**	**57**	P	**P**	**13 51 50.2**	**-1.1**
	comp=E,2.9nm,0.4s,mb4.6,baz=292,slow=6.4,SNR=31						
MKAR				LR	LR	14 14 03.6	
	comp=E,160nm,21.4s,MS3.9,baz=262,slow=40						
MKAR	**Makanchi Array**	**45.55**	**57**	P	**P**	**13 51 50.2**	**-1.1**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.4s						
MKAR				MLR	MLR		
	comp=Z,160nm,21.4s						
MKAR	**Makanchi Array**	**45.55**	**57**	P	**P**	**13 51 50.2**	**-1.1**
MKAR				LR	LR	14 14 03.6	
MKAR	**Makanchi Array**	**45.55**	**57**	P	**P**	**13 51 50.2**	**-1.1**
KHET	**Khetri**	**45.90**	**84**	*ex*	x	13 51 49.8	
ZAA0	**Zalesovo Array**	**46.36**	**47**	*e*P	**P**	**13 51 55.6**	**-2.0**
ZAA0	**Zalesovo Array**	**46.36**	**47**	*e*P	**P**	**13 51 55.6**	**-2.0**
ZALV	**Zalesovo Beam**	**46.36**	**47**	P	**P**	**13 51 56.1**	**-1.5**
	comp=Z,1.6nm,0.3s,mb4.4,baz=272,slow=8.9,SNR=13						
ZALV	**Zalesovo Beam**	**46.36**	**47**	P	**P**	**13 51 56.2**	**-1.4**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.5						
KLP	**Kalpa**	**46.52**	**78**	*e*PKP	**P**	**13 51 58.2**	**-1.0**
KLP				AMb	AMB	13 52 02.2	
	comp=Z,13nm,1.3s,mb4.7						
SONA	**Sohna**	**46.85**	**83**	*e*PKP	**P**	**13 52 00.5**	**-1.4**
SUMG	**Summit**	**47.24**	**339**	*e*P	**P**	**13 52 13.4**	**+9.2**
SUMG	**Summit**	**47.24**	**339**	*i* P	**P**	**13 52 14.3**	**+10**
	comp=Z,3.6nm,1.0s,mb4.3						
JOSI	**Joshimath**	**47.93**	**79**	*e*PKP	**P**	**13 52 09.4**	**-0.7**
BHPL	**Bhopal**	**49.33**	**89**	*e*PKP	**P**	**13 52 20.4**	**-0.7**
WMQ	**Urumqi**	**49.89**	**60**	P	**P**	**13 52 25.0**	**0.0**
WMQ				pP	pP	13 52 35.0	+6.8
WMQ				sP	sP	13 52 39.0	+10
WMQ				PP	PP	13 54 20.0	+0.4
WMQ				S	**S**	**13 59 31.0**	**-4.0**
WMQ				ScS	ScS	14 02 10.0	-6.6
WMQ				SS	SS	14 03 00.0	-7.4
WMQ				pmax	pmax		
	comp=Z,35nm,1.0s,mb5.3						
WMQ				pmax	pmax		
	comp=Z,98nm,5.0s						
WMQ				LR	LR		
	comp=N,280nm,16.0s,MS4.4						
WMQ				LR	LR		
	comp=E,140nm,16.0s,MS4.4						
WMQ				LR	LR		
	comp=Z,160nm,16.0s,MS4.1						
AKL	**Akola**	**50.23**	**92**	*e*PKP	**P**	**13 52 27.1**	**-0.8**
NGP	**Nagpur**	**51.66**	**90**	*ex*	x	13 51 43.4	
DMN	**Daman**	**53.56**	**80**	*e*P	**P**	**13 52 52.1**	**-0.6**
	comp=Z,95nm,1.0s,mb5.7						
DMN	**Daman**	**53.56**	**80**	*e*P	**P**	**13 52 52.1**	**-0.6**
	comp=Z,95nm,1.0s,mb5.7						
KKN	**Kakani**	**53.62**	**80**	*e*P	**P**	**13 52 52.1**	**-1.0**
	comp=Z,24nm,0.6s,mb5.3						
KKN	**Kakani**	**53.62**	**80**	*e*P	**P**	**13 52 52.1**	**-1.0**
KKN				pmax	pmax		
	comp=Z,24nm,0.6s,mb5.3						
KKN	**Kakani**	**53.62**	**80**	*e*P	**P**	**13 52 52.1**	**-1.0**
	comp=Z,24nm,0.6s,mb5.3						
PKIN	**Phulchoki**	**53.80**	**80**	*e*P	**P**	**13 52 54.0**	**-0.5**
	comp=Z,58nm,1.2s,mb5.4						
PKI	**Pulchoki**	**53.82**	**80**	*e*P	**P**	**13 52 54.0**	**-0.6**
PKI	**Pulchoki**	**53.82**	**80**	*e*P	**P**	**13 52 54.0**	**-0.6**
GUN	**Gumba**	**54.05**	**79**	*e*P	**P**	**13 52 55.5**	**-0.8**
	comp=Z,104nm,1.2s,mb5.7						
GUN	**Gumba**	**54.05**	**79**	*e*P	**P**	**13 52 55.5**	**-0.8**
	comp=Z,104nm,1.2s,mb5.6						
RAMN	**Ramite**	**55.04**	**80**	*e*P	**P**	**13 53 02.1**	**-1.4**
	comp=Z,74nm,1.1s,mb5.6						
RAMN	**Ramite**	**55.04**	**80**	*e*P	**P**	**13 53 02.1**	**-1.4**
	comp=Z,74nm,1.1s,mb5.6						
ODAN	**Odare**	**55.71**	**80**	*e*P	**P**	**13 53 07.2**	**-1.1**
ODAN	**Odare**	**55.71**	**80**	*e*P	**P**	**13 53 07.2**	**-1.1**
TAPN	**Taplejung**	**55.75**	**79**	*e*P	**P**	**13 53 07.6**	**-1.0**
TAPN	**Taplejung**	**55.75**	**79**	*e*P	**P**	**13 53 07.6**	**-1.0**
LSA	**Lhasa**	**57.43**	**75**	*e*P	**P**	**13 53 20.9**	**+0.3**
LSA				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.1						
LSA	**Lhasa**	**57.43**	**75**	*e*P	**P**	**13 53 20.9**	**+0.3**
	comp=Z,15nm,0.8s,mb5.1						
LSA	**Lhasa**	**57.43**	**75**	*e*P	**P**	**13 53 20.9**	**+0.3**
	comp=Z,15nm,0.8s,mb5.1						
TLY	**Talaya**	**57.98**	**47**	*e*P	**P**	**13 53 20.5**	**-3.5**
TLY				*e*		13 56 56.8	
TLY				pmax	pmax		
	comp=Z,13nm,1.8s,mb4.7						
TLY				MLR	MLR		
	comp=Z,99nm,16.0s,MS4.0						
ZAK	**Zakamensk**	**58.18**	**48**	*e*P	**P**	**13 53 23.8**	**-1.7**
SHL	**Shillong**	**59.89**	**79**	*e*PKP	**P**	**13 53 37.2**	**-0.5**
GTA	**Gaotai**	**59.91**	**61**	P	**P**	**13 53 37.1**	**-0.5**
GTA				pP	pP	13 53 47.4	+6.5
GTA				sP	sP	13 53 51.3	+9.2
GTA				PP	PP	13 55 51.1	+1.6
GTA				S	**S**	**14 01 45.3**	**-4.3**
GTA				sS	sS	14 02 01.8	+6.9
GTA				SS	SS	14 05 42.4	-3.1
GTA				pm

KMI SS SS 14 08 00.0 -2.5
KMI pmax pmax
comp=Z,16nm,1.0s,mb4.9
KMI pmax pmax
comp=Z,77nm,4.5s
KMI LR LR
comp=N,120nm,20.5s,MS4.2
KMI LR LR
comp=E,69nm,22.8s,MS4.2
KMI LR LR
comp=Z,110nm,21.0s,MS4.1
CHTO Chiang Mai 68.92 82 *e*P **P 13 54 36.1 -0.9**
CHTO pmax pmax
comp=Z,17nm,1.4s,mb4.8
CHTO Chiang Mai 68.92 82 *e*P **P 13 54 36.1 -0.9**
comp=Z,18nm,1.4s,mb4.8
CHTO Chiang Mai 68.92 82 *e*P **P 13 54 36.1 -0.9**
comp=Z,18nm,1.4s,mb4.8
CMAR Chiang Mai Arr 69.11 82 P **P 13 54 37.7 -0.4**
comp=Z,3.8nm,0.8s,mb4.4,baz=302,slow=7.3,SNR=21
CMAR Chiang Mai Arr 69.11 82 P **P 13 54 37.7 -0.4**
CMAR pmax pmax
comp=Z,4.0nm,0.8s
CMAR Chiang Mai Arr 69.11 82 P **P 13 54 37.7 -0.4**
BJI Beijing 70.83 54 P **P 13 54 47.9 -0.5**
BJI S S 14 03 57.6 -5.8
BJI pmax pmax
comp=Z,16nm,1.5s,mb4.7
BJI pmax pmax
comp=Z,85nm,3.5s
BJI LR LR
comp=N,110nm,26.9s,MS4.2
BJI LR LR
comp=E,160nm,25.1s,MS4.2
BJI LR LR
comp=Z,87nm,27.8s,MS3.9
GYA Guiyang 71.00 71 P **P 13 54 50.0 +0.3**
GYA pP pP 13 55 01.3 +8.3
GYA PP PP 13 57 29.3 +2.5
GYA S S 14 04 01.8 -4.1
GYA SS SS 14 08 36.4 -2.1
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
GYA pmax pmax
comp=Z,80nm,5.2s
GYA LR LR
comp=N,470nm,19.5s,MS4.9
GYA LR LR
comp=E,380nm,20.1s,MS4.9
GYA LR LR
comp=Z,480nm,19.1s,MS4.8
BILL Bilibino 72.89 13 *e*P **P 13 54 59.2 -1.1**
BILL pmax pmax
comp=Z,8.0nm,1.7s,mb4.4
SEY Seymchan 73.77 21 *e*P **P 13 55 04.6 -1.0**
CN2 Changchun 74.58 47 *e*P **P 13 55 10.0 -0.6**
CN2 pmax pmax
comp=Z,20nm,1.0s,mb5.0
KLR Kul'dur 74.86 40 *e*P **P 13 55 07.2 -4.9**
YKA Yellowknife Ar 75.81 341 P **P 13 55 17.3 0.0**
comp=Z,1.3nm,0.9s,mb3.9,baz=36,slow=5.9,SNR=8.9
YKA Yellowknife Ar 75.81 341 P **P 13 55 17.3 0.0**
YKA pmax pmax
comp=Z,1.0nm,0.9s
YKA Yellowknife Ar 75.81 341 P **P 13 55 17.3 0.0**
YKA Yellowknife Ar 75.81 341 P **P 13 55 17.3 0.0**
HABR Khabarovsk 77.03 39 *e*P **P 13 55 23.0 -1.5**
HABR 13 55 34.5
HABR *e*S S 14 05 08.1 -4.8
HABR *e* 14 05 36.9
HABR *e*SS SS 14 10 04.4 -4.5
HABR pmax pmax
comp=Z,40nm,2.5s,mb4.9
HABR pmax pmax
comp=N,24nm,2.9s
HABR pmax pmax
comp=E,44nm,2.3s
HABR MLR MLR
comp=Z,58nm,18.0s,MS3.9
FFC Flin Flon 77.61 330 *i*P **P 13 55 29.1 +1.4**
FFC Flin Flon 77.61 330 *i*P **P 13 55 29.2 +1.5**
ULM Lac du Bonnet 78.10 325 LR LR 14 29 23.3
comp=Z,250nm,20.8s,MS4.5,baz=350,slow=35
KSRS Korea Array 79.86 51 P **P 13 55 40.1 -0.2**
comp=Z,7.2nm,1.0s,mb4.6,baz=308,slow=4.6,SNR=14
KSRS LR LR 14 34 41.6
comp=Z,81nm,18.6s,MS4.1,baz=139,slow=39
KSRS Korea Array 79.86 51 P **P 13 55 40.2 -0.2**
KSRS pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
KSRS MLR MLR
comp=Z,81nm,18.6s,MS4.1
BPAW Bear Paw Mtn. 80.08 357 *e*P **P 13 55 40.8 -0.3**
comp=Z,9.6nm,1.4s,mb4.5
BPAW Bear Paw Mtn. 80.08 357 *e*P **P 13 55 40.8 -0.2**
comp=Z,9.6nm,1.4s,mb4.5
PAX Paxson 80.85 354 *e*P **P 13 55 47.7 +2.5**
PAX pmax pmax
comp=Z,3.0nm,1.3s,mb4.1
PAX Paxson 80.85 354 *e*P **P 13 55 47.7 +2.5**
comp=Z,3.4nm,1.3s,mb4.1
PAX Paxson 80.85 354 *e*P **P 13 55 47.7 +2.5**
comp=Z,3.4nm,1.3s,mb4.1
TTA Tatalina 81.40 359 *e*P **P 13 55 49.3 +1.2**
TTA pmax pmax
comp=Z,11nm,1.5s,mb4.6
TTA Tatalina 81.40 359 *e*P **P 13 55 49.3 +1.2**
comp=Z,11nm,1.5s,mb4.6
TTA Tatalina 81.40 359 *e*P **P 13 55 49.3 +1.2**
comp=Z,11nm,1.5s,mb4.6
PETK Petropavlovsk- 83.32 25 LR LR 14 40 32.9
comp=Z,87nm,18.4s,MS4.2,baz=304,slow=41
EGMT Eagleton 85.87 330 *e*P **P 13 56 11.7 +0.3**
comp=Z,9.2nm,1.0s,mb5.0
EGMT Eagleton 85.87 330 *e*P **P 13 56 11.7 +0.3**
comp=Z,9.2nm,1.0s,mb5.0
MJAR Matsushiro Arr 86.71 46 P **P 13 56 15.9 +0.1**
comp=Z,1.8nm,0.9s,mb4.3,baz=297,slow=5.5,SNR=6.3
MJAR LR LR 14 40 38.6
comp=Z,132nm,18.3s,MS4.4,baz=285,slow=40
MJAR Matsushiro Arr 86.71 46 P **P 13 56 15.9 +0.1**
JTMT Jette 87.88 332 *e*P **P 13 56 22.2 +1.1**
comp=Z,2.6nm,0.8s,mb4.5
JTMT Jette 87.88 332 *e*P **P 13 56 22.2 +1.0**
comp=Z,2.6nm,0.8s,mb4.5
SWMT Swartz Lake 87.97 332 *e*P **P 13 56 22.4 +0.8**
comp=Z,6.3nm,1.3s,mb4.7
SWMT Swartz Lake 87.97 332 *e*P **P 13 56 22.4 +0.8**
comp=Z,6.3nm,1.3s,mb4.7
NEW Newport 88.49 334 *e*P **P 13 56 24.8 +0.8**
NEW pmax pmax
comp=Z,2.0nm,0.6s
NEW Newport 88.49 334 *e*P **P 13 56 24.8 +0.7**
comp=Z,1.5nm,0.6s,mb4.4
NEW Newport 88.49 334 *e*P **P 13 56 24.8 +0.8**
comp=Z,1.5nm,0.6s,mb4.4
PDAR Pinedale Array 89.96 326 P **P 13 56 31.6 +0.6**
comp=Z,0.3nm,0.5s,mb3.9,baz=35,slow=8.0,SNR=4.6
PDAR LR LR 14 36 38.8
comp=Z,109nm,19.1s,MS4.3,baz=142,slow=36
PDAR Pinedale Array 89.96 326 P **P 13 56 31.6 +0.5**
CPUP Villa Florida 97.01 243 LR LR 14 44 39.8
comp=Z,153nm,18.5s,MS4.5,baz=28,slow=38
TXAR Lajitas Array 97.27 314 LR LR 14 39 44.3
comp=Z,64nm,20.0s,MS4.1,baz=180,slow=35
LPAZ La Paz 99.40 257 LR LR 14 48 33.8
comp=Z,92nm,18.2s,MS4.3,baz=123,slow=39
WRA Warramunga Arr 119.32 94 PKP PKPdf 14 02 21.3 -0.1
comp=Z,0.5nm,0.5s,baz=324,slow=1.7,SNR=2.7
WRA Warramunga Arr 119.32 94 PKIKP PKPdf 14 02 21.3 -0.1
WRA pmax pmax
comp=Z,1.0nm,0.5s
WRA Warramunga Arr 119.32 94 PKIKP PKPdf 14 02 21.3 -0.1
ASAR Alice Springs 120.82 98 PKP PKPdf 14 02 24.1 0.0
comp=Z,0.6nm,0.7s,baz=309,slow=1.6,SNR=5.8
ASAR Alice Springs 120.82 98 PKIKP PKPdf 14 02 24.2 0.0
ASAR pmax pmax
comp=Z,1.0nm,0.7s
ASAR Alice Springs 120.82 98 PKIKP PKPdf 14 02 24.1 -0.1
QSPA South Pole Qui 125.85 180 PKP PKPdf 14 02 33.0 +0.8
comp=Z,2.7nm,1.0s,baz=293,slow=5.2,SNR=5.9
QSPA South Pole Qui 125.85 180 PKIKP PKPdf 14 02 33.0 +0.8

ISCJB ***21*** *13:53:41.7±3.1,20°.6S±0°.1×168°.9E±0°.1,h17km±23km, mb4.2/12, Error ellipse: s-maj=29.3km s-min=7.6km az=144.3*
NOU ***21*** *13:53:42.4±1.2,20°.15S×168°.74E,h10km,MD3.0,ML4.0*
IDC ***21*** *13:53:42.2±1.0,20°.38S×168°.69E,h0km,mb4.1/8, mb1 4.3/8,mb1mx4.1/15,mbtmp4.1/8,MS3.3/2,Ms1 3.3/2, ms1mx3.1/17, Error ellipse: s-maj=33.4km s-min=24.0km az=136.0*
NEIC ***21*** *13:53:45.8±0.6,20°.72S×168°.88E,h35km,mb4.5/7, Error ellipse: s-maj=24.4km s-min=10.7km az=153.0*
ISC 21 13:53:42.8±3.2,20°.7S±0°.1×168°.9E±0°.1,h14km±21km,n24, σ0°.99/26,mb4.2/12,Loyalty Islands
Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
BAYA Yate Dam 2.38 233 *e*P **Pn 13 54 22.4 +1.0**
BAYA *e*S **Sn 13 54 50.7 +0.3**
DZM Mont Dzumac 2.68 239 *e*P **Pn 13 54 24.3 -1.2**
DZM *e*S **Sn 13 54 57.3 -0.4**
DZM AMP 13 54 59.4
comp=Z,1μm,0.5s
DZM Mont Dzumac 2.68 239 *e*Pn **Pn 13 54 24.6 -0.9**
NORM Noumea 2.73 236 *e*P **Pn 13 54 26.8 +0.6**
NORM *e*S **Sn 13 54 58.0 -1.0**
NOUC Port Laguerre 2.81 240 *e*P **Pn 13 54 27.2 0.0**
NOUC *e*S **Sn 13 55 01.1 +0.2**
NOUC AMP 13 55 10.3
comp=Z,109nm,8.3s
AFI Afiamalu 19.61 73 LR LR 14 04 09.2
comp=Z,119nm,21.3s,baz=87,slow=32
AFI Afiamalu 19.61 73 *e*P **Pn 13 58 11.3 -0.9**
comp=Z,81nm,1.5s
CTA Charters Tower 21.26 268 P **P 13 58 32.1 +3.4**
comp=Z,6.6nm,0.6s,mb4.1,baz=82,slow=4.6,SNR=5.1
CTA LR LR 14 05 39.6
comp=Z,78nm,21.7s,baz=60,slow=34
CTAO Charters Tower 21.26 268 *e*P **P 13 58 29.0 +0.2**
comp=Z,27nm,1.3s,mb4.4
STKA Stephens Creek 26.84 240 P **P 13 59 25.0 +2.2**
comp=Z,5.5nm,0.9s,mb4.1,baz=72,slow=7.0,SNR=7.0
STKA Stephens Creek 26.84 240 *e*P **P 13 59 24.0 +1.2**
comp=Z,1.9nm,1.1s,mb3.5
WRAB Tennant Creek 32.40 265 *e*P **P 14 00 12.0 -0.3**
comp=Z,9.2nm,1.3s,mb4.5
WRA Warramunga Arr 32.41 265 P **P 14 00 11.0 -1.4**
comp=Z,0.5nm,0.3s,mb3.8,baz=91,slow=8.5,SNR=7.1
ASAR Alice Springs 32.52 258 P **P 14 00 13.1 -0.2**
comp=Z,3.9nm,0.7s,mb4.4,baz=86,slow=9.0,SNR=32
NWAO Narrogin (SRO) 47.29 244 *e*P **P 14 02 14.4 -1.6**
comp=Z,3.3nm,0.6s,mb4.4
PUH Pauahi 53.10 44 *e*P **P 14 02 58.5 -1.5**
QSPA South Pole Qui 69.35 180 P **P 14 04 53.7 +4.4**
comp=Z,1.9nm,1.0s,mb4.0,baz=2.4,slow=3.1,SNR=3.6
QSPA South Pole Qui 69.35 180 *e*P **P 14 04 50.8 +1.4**
comp=Z,5.8nm,1.3s,mb4.3
PETK Petropavlovsk- 74.15 353 P **P 14 05 18.3 -0.1**
comp=Z,3.7nm,0.8s,mb4.4,baz=140,slow=5.4,SNR=7.8
CMAR Chiang Mai Arr 78.84 295 P **P 14 05 47.4 +1.6**
comp=Z,0.7nm,0.9s,mb3.6,baz=128,slow=5.7,SNR=4.1
ULN Ulaanbaatar 87.87 324 *e*P **P 14 06 32.3 +0.7**
comp=Z,2.8nm,1.0s,mb4.5
SONM Songino Array 88.22 323 P **P 14 06 33.3 +0.1**
comp=Z,1.5nm,1.0s,mb4.2,baz=142,slow=4.5,SNR=5.7
NVAR Mina Array Bea 89.99 49 P **P 14 06 43.0 +1.2**
comp=Z,1.1nm,0.8s,mb4.2,baz=229,slow=9.1,SNR=7.7
ARCES ARCESS Array B 126.41 345 PKP PKPdf 14 12 45.4 +1.0
comp=Z,2.4nm,0.9s,baz=48,slow=1.3,SNR=3.5

IDC ***21*** *14:03:57.6±2.4,22°.60S×179°.41W,h493km±31km, mb3.5/4, mb1 3.6/6,mb1mx3.3/18,mbtmp3.6/6, Error ellipse: s-maj=40.8km s-min=22.5km az=148.0*
NEIC ***21*** *14:03:58.3±1.5,22°.87S×179°.05W,h541km±25km,mb3.9/4, Error ellipse: s-maj=24.8km s-min=20.8km az=128.0*
ISC 21 14:03:57.3±1.0,22°.7S±0°.2×179°.3W±0°.2,h500km,n15, σ0°.75/12,mb4.0/7,South of Fiji Islands
Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
AFI Afiamalu 11.30 41 P **P 14 06 28.9 +0.3**
2.4nm,0.3s,baz=39,slow=18,SNR=6.4
URZ Urewera 15.80 190 P **P 14 07 16.4 +0.7**
2.5nm,0.3s,baz=77,slow=12,SNR=9.7
CTA Charters Tower 32.12 268 P **P 14 09 43.7 +0.7**
6.6nm,0.4s,mb4.4,baz=92,slow=11,SNR=14
CTAO Charters Tower 32.12 268 *e*P **P 14 09 43.7 +0.7**
STKA Stephens Creek 35.76 247 P **P 14 10 14.6 +1.0**
2.6nm,0.6s,mb3.8,baz=79,slow=11,SNR=7.3
STKA Stephens Creek 35.76 247 *e*P **P 14 10 14.1 +0.5**
0.5nm,0.6s,mb3.1
ASAR Alice Springs 42.86 259 P **P 14 11 10.4 -0.7**
3.5nm,0.7s,mb3.9,baz=96,slow=7.0,SNR=39
ASAR PcP PcP 14 12 52.0 +1.1
0.4nm,0.5s,baz=110,slow=4.2,SNR=5.5
WRAB Tennant Creek 43.12 265 *e*P **P 14 11 13.0 -0.1**
3.1nm,0.6s,mb3.9
WRA Warramunga Arr 43.12 265 P **P 14 11 13.2 0.0**
1.6nm,0.3s,mb4.0,baz=96,slow=8.5,SNR=11
MBWA Marble Bar 56.20 259 *e*P **P 14 12 49.0 -0.7**
5.8nm,0.5s,mb4.2
CASY Casey 61.45 206 *e*P **P 14 13 19.1 -5.2**
5.9nm,1.2s,mb3.9
QSPA South Pole Qui 67.37 180 *e*P **P 14 13 58.1 -3.5**
AKASG Malin Array Be 144.29 329 PKP PKPdf 14 22 35.5 -0.2
0.6nm,0.3s,baz=43,slow=4.7,SNR=6.1
MMAI Mount Meron Ar 147.76 296 PKPbc PKPbc 14 22 46.0 +0.3
1.1nm,0.6s,baz=82,slow=6.9,SNR=3.6
CLL Collm 149.89 345 *e*PKPbc PKPbc 14 22 52.0 +1.6

CSEM ***21*** *14:17:47.5±0.7,36°.06N×21°.84E,h5km,MD3.4, Error ellipse: s-maj=13.7km s-min=6.0km az=44.0*
THE ***21*** *14:17:49.0,36°.11N×21°.71E,h10km±4km,ML3.7/1, Error ellipse: s-maj=12.5km s-min=1.2km az=270.0*
ATH ***21*** *14:17:50.2,36°.17N×21°.90E,h5km,MD3.4/4*
NEIC ***21*** *14:17:50.2,36°.17N×21°.90E,h5km,MD3.4(ATH), After ATH.*
ISC 21 14:17:47.4±2.1,36°.05N±0°.08×21°.81E±0°.10,h7km±11km, n22,σ0°.66/35,Southern Greece
Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
PYL PYLOS 0.85 356 P **Pg 14 18 03.6 -0.1**
PYL S **Sg 14 18 15.2 +0.4**
PYL PYLOS 0.85 356 *e*PG **Pg 14 18 04.0 +0.3**
PYL PYLOS 0.85 356 P **Pg 14 18 03.6 -0.1**
PYL PYLOS 0.85 356 *e*Pg **Pg 14 18 04.0 +0.3**
PYL S **Sg 14 18 15.2 +0.4**
KYTH Kithira 1.02 76 *e*Pb **Pg 14 18 07.9 +0.9**
KYTH Kithira 1.02 76 *e*PB **Pg 14 18 07.9 +0.9**
KYTH Kithira 1.02 76 *e*Pb **Pg 14 18 07.9 +0.9**
VLI Veliai 1.13 53 *e*Pn **Pg 14 18 09.7 +0.6**
VLI *e*Sb **Sg 14 18 23.2 -0.6**
VLI Veliai 1.13 53 *e*PN **Pg 14 18 09.7 +0.6**
VLI *e*SB **Sg 14 18 23.2 -0.6**
VLI Veliai 1.13 53 *e*Pn **Pg 14 18 09.7 +0.6**
VLI *e*Sb **Sg 14 18 23.2 -0.6**
ITM Ithomi 1.14 5 *e*Pg **Pg 14 18 09.0 -0.2**
ITM *e*Sb **Sg 14 18 24.2 +0.2**
ITM Ithomi 1.14 5 P **Pg 14 18 09.2 0.0**
ITM S **Sg 14 18 25.2 +1.2**
ITM Ithomi 1.14 5 *e*PG **Pg 14 18 09.0 -0.2**
ITM *e*SB **Sg 14 18 24.2 +0.2**
ITM Ithomi 1.14 5 P **Pg 14 18 09.2 0.0**
ITM *e*Sb **Sg 14 18 24.2 +0.2**
ITM S **Sg 14 18 25.2 +1.2**
VLX Vlachokerasia 1.40 19 P **Pn 14 18 13.5 +0.1**
VLX S **Sb 14 18 32.1 +0.1**
VLX Vlachokerasia 1.40 19 *e*PN **Pn 14 18 13.3 -0.1**
VLX *e*SB **Sb 14 18 32.0 0.0**
VLX Vlachokerasia 1.40 19 P **Pn 14 18 13.5 +0.1**
VLX *e*Sb **Sb 14 18 32.0 0.0**
EFP Efpalio 2.38 2 *e*PG **Pg 14 18 31.8 -1.2**
EFP Efpalio 2.38 2 *e*Pg **Pg 14 18 31.8 -1.2**
VLY Voula,Athens 2.41 41 *e*Pg **Pg 14 18 32.5 -1.0**
VLY Voula,Athens 2.41 41 *e*PG **Pg 14 18 32.5 -1.0**
VLY Voula,Athens 2.41 41 *e*Pg **Pg 14 18 32.5 -1.0**

CSEM ***21*** *14:43:40.9±0.8,35°.83N×21°.81E,h2km,MD3.6, Error ellipse: s-maj=21.0km s-min=8.0km az=58.0*
THE ***21*** *14:43:42.8,35°.96N×21°.60E,h0km±3km,ML3.7/2, Error ellipse: s-maj=9.2km s-min=1.4km az=255.0*
ATH ***21*** *14:43:44.5,36°.06N×21°.88E,h21km,MD3.6/4*
ISC 21 14:43:41.0±2.0,35°.85N±0°.08×21°.8E±0°.1,h0km±7km,n20, σ0°.76/29,Central Mediterranean Sea
Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
PYL PYLOS 1.04 359 P **Pg 14 44 00.7 -0.2**
PYL S **Sg 14 44 14.3 -0.1**
PYL PYLOS 1.04 359 *e*PN **Pg 14 44 00.7 -0.2**
PYL PYLOS 1.04 359 P **Pg 14 44 00.7 -0.2**
PYL S **Sg 14 44 14.3 -0.1**
KYTH Kithira 1.12 67 *e*PN **Pg 14 44 03.0 +0.5**
KYTH Kithira 1.12 67 *e*Pn **Pg 14 44 03.0 +0.5**
VLI Veliai 1.29 48 *e*PN **Pn 14 44 05.1 -1.1**
VLI *e*SN **Sn 14 44 20.3 -3.8**
VLI Veliai 1.29 48 *e*Pn **Pn 14 44 05.1 -1.1**
ITM Ithomi 1.33 6 P **Pg 14 44 05.9 -0.6**
ITM S **Sg 14 44 23.7 0.0**
ITM Ithomi 1.33 6 *e*PN **Pn 14 44 06.0 -0.8**
ITM Ithomi 1.33 6 P **Pg 14 44 05.9 -0.6**
ITM S **Sg 14 44 23.7 0.0**
VLX Vlachokerasia 1.59 18 P **Pn 14 44 10.7 +0.3**
VLX S **Sn 14 44 32.9 +1.2**
VLX Vlachokerasia 1.59 18 *e*PN **Pn 14 44 10.4 0.0**
VLX Vlachokerasia 1.59 18 *e*Pn **Pn 14 44 10.4 0.0**
VLX Vlachokerasia 1.59 18 P **Pn 14 44 10.7 +0.3**
VLX S **Sn 14 44 32.9 +1.2**
KARN Karanos 1.82 104 P **Pg 14 44 16.5 +0.7**
KARN Karanos 1.82 104 P **Pg 14 44 16.5 +0.7**
GUR Goura 2.13 13 P **Pn 14 44 18.6 +0.8**
GUR S **Sn 14 44 45.9 +1.0**
GUR Goura 2.13 13 *e*PN **Pn 14 44 18.0 +0.2**
GUR Goura 2.13 13 *e*Pn **Pn 14 44 18.0 +0.2**
GUR Goura 2.13 13 P **Pn 14 44 18.6 +0.8**
GUR S **Sn 14 44 45.9 +1.0**

CSEM ***21*** *14:51:19.5±0.8,35°.86N×21°.65E,h5km,ML3.8/1, Error ellipse: s-maj=16.0km s-min=9.3km az=49.0*
ATH ***21*** *14:51:22.3,35°.97N×21°.76E,h5km,MD3.5/5*
NEIC ***21*** *14:51:22.3,35°.97N×21°.76E,h5km,MD3.5(ATH), After ATH.*
THE ***21*** *14:51:24.6,36°.05N×21°.73E,h6km±2km,ML3.8/1, Error ellipse: s-maj=8.2km s-min=1.3km az=261.0*
ISC 21 14:51:21.3±1.7,35°.92N±0°.06×21°.7E±0°.1,h6km±8km,n24, σ0°.67/35,Central Mediterranean Sea
Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
PYL PYLOS 0.98 2 P **Pg 14 51 40.3 +0.2**
PYL S **Sg 14 51 53.7 +0.9**
PYL PYLOS 0.98 2 *e*PN **Pg 14 51 40.5 +0.5**
PYL PYLOS 0.98 2 *e*Pn **Pg 14 51 40.5 +0.5**
PYL S **Sg 14 51 53.7 +0.9**
KYTH Kithira 1.15 71 *e*Pb **Pg 14 51 43.0 -0.2**
KYTH Kithira 1.15 71 *e*PB **Pg 14 51 43.0 -0.2**
KYTH Kithira 1.15 71 *e*Pb **Pg 14 51 43.0 -0.2**
ITM Ithomi 1.27 8 *e*Pb **Pb 14 51 45.6 -0.1**
ITM *e*Sb **Sb 14 52 02.2 -0.1**
ITM Ithomi 1.27 8 P **Pn 14 51 45.7 +0.1**
ITM S **Sg 14 52 02.1 -0.2**
ITM Ithomi 1.27 8 *e*PB **Pb 14 51 45.6 -0.1**
ITM *e*SB **Sb 14 52 02.2 -0.1**
ITM Ithomi 1.27 8 *e*Pb **Pb 14 51 45.6 -0.1**
ITM S **Sg 14 52 02.1 -0.2**
VLI Veliai 1.28 51 *e*Pn **Pn 14 51 44.5 -1.2**
VLI *e*Sb **Sb 14 52 02.8 +0.3**
VLI Veliai 1.28 51 *e*PN **Pn 14 51 44.5 -1.2**
VLI *e*SB **Sb 14 52 02.8 +0.3**
VLI Veliai 1.28 51 *e*Pn **Pn 14 51 44.5 -1.2**
VLI *e*Sb **Sb 14 52 02.8 +0.3**
VLX Vlachokerasia 1.55 21 P **Pn 14 51 49.9 +0.5**
VLX S **Sn 14 52 09.8 0.0**
VLX Vlachokerasia 1.55 21 *e*PG **Pn 14 51 49.8 +0.4**
VLX Vlachokerasia 1.55 21 P **Pn 14 51 49.9 +0.5**
VLX S **Sn 14 52 09.8 0.0**
KARN Karanos 1.88 105 P **Pb 14 51 57.0 +1.0**
GUR Goura 2.08 14 *e*PN **Pb 14 52 00.1 +0.7**
GUR Goura 2.08 14 *e*Pn **Pb 14 52 00.1 +0.7**
EFP Efpalio 2.51 4 *e*PG **Pg 14 52 08.1 -1.3**
EFP Efpalio 2.51 4 *e*Pg **Pg 14 52 08.1 -1.3**
VLY Voula,Athens 2.56 40 *e*Pn **Pb 14 52 06.7 -0.9**
VLY Voula,Athens 2.56 40 *e*PN **Pb 14 52 06.7 -0.9**
VLY Voula,Athens 2.56 40 *e*Pn **Pb 14 52 06.7 -0.9**

IDC ***21*** *15:00:34.3±1.8,33°.17N×92°.23E,h0km,mb3.5/3, mb1 3.5/5,mb1mx3.3/25,mbtmp3.5/5,ML3.1/2, Error ellipse: s-maj=71.5km s-min=24.2km az=66.0*
NEIC ***21*** *15:00:37.1±0.9,33°.38N×92°.27E,h10km,mb3.4/1, Error ellipse: s-maj=25.8km s-min=12.6km az=84.0*
ISCJB ***21*** *15:00:37.1±1.0,33°.52N±0°.06×92°.1E±0°.2,h10km,mb3.5/2, Error ellipse: s-maj=27.4km s-min=8.0km az=4.0*
ISC 21 15:00:38.8±1.0,33°.52N±0°.06×92°.1E±0°.2,h10km,n9, σ0°.98/10,mb3.5/2,Qinghai
Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
LSA Lhasa 3.90 193 *e*Pn **Pn 15 01 37.1 -1.6**
LSA *e*Sn **Sn 15 02 25.8 +1.3**
MK31 Makanchi Array 15.22 333 Pn **Pn 15 04 14.9 +1.3**
MKAR Makanchi Array 15.22 333 Pn **Pn 15 04 13.3 -0.3**
0.0nm,0.3s,baz=132,slow=13,SNR=2.9
MKAR Makanchi Array 15.22 333 Pn **Pn 15 04 13.3 -0.3**
SONM Songino Array 17.89 33 P **Pn 15 04 48.1 +0.5**
0.1nm,0.3s,baz=222,slow=9.7,SNR=5.9
KURK Kurchatov 19.83 334 P **Pn 15 05 10.5 -0.6**
0.6nm,0.3s,baz=144,slow=12,SNR=4.3
KURK Kurchatov 19.83 334 *e*P **Pn 15 05 10.2 -0.8**
1.3nm,0.7s
ZALV Zalesovo Beam 21.07 348 P **P 15 05 22.7 -0.1**
1.6nm,1.0s,mb3.3,baz=160,slow=8.9,SNR=3.3
ASAR Alice Springs 69.41 139 P **P 15 11 42.3 -4.7**
0.4nm,0.5s,mb3.6,baz=325,slow=6.6,SNR=14

CSEM ***21*** *15:09:17.4±0.5,36°.62N×21°.70E,h2km,ML3.3/4, Error ellipse: s-maj=11.0km s-min=5.5km az=66.0*
ATH ***21*** *15:09:17.4,36°.63N×21°.65E,h12km±1km,MD3.3/4*
THE ***21*** *15:09:18.6,36°.66N×21°.74E,h0km±2km,ML3.3/4, Error ellipse: s-maj=3.2km s-min=1.7km az=165.0*
ISCJB ***21*** *15:09:18.4±1.1,36°.63N±0°.05×21°.75E±0°.07,h10km, Error ellipse: s-maj=8.9km s-min=6.4km az=151.9*
ISC 21 15:09:18.6±1.1,36°.63N±0°.05×21°.74E±0°.07,h10km,n32, σ0°.94/48,Southern Greece
Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
PYL PYLOS 0.27 0 P **Pg 15 09 22.8 -1.3**
PYL S **Sg 15 09 26.5 -1.3**
PYL PYLOS 0.27 0 *e*PG **Pg 15 09 22.8 -1.3**
PYL *e*SG **Sg 15 09 27.4 -0.4**
PYL PYLOS 0.27 0 P **Pg 15 09 22.8 -1.3**
PYL S **Sg 15 09 26.5 -1.3**
PYL *e*Sg **Sg 15 09 27.4 -0.4**
ITM Ithomi 0.57 15 P **Pg 15 09 28.4 -1.4**
ITM S **Sg 15 09 36.6 -0.7**
ITM Ithomi 0.57 15 *e*PB **Pg 15 09 28.9 -0.9**
ITM Ithomi 0.57 15 P **Pg 15 09 28.4 -1.4**
ITM Ithomi 0.57 15 *e*Pb **Pg 15 09 28.9 -0.9**
ITM S **Sg 15 09 36.6 -0.7**
VLX Vlachokerasia 0.90 34 P **Pg 15 09 35.0 -1.0**
VLX S **Sg 15 09 48.1 +0.3**
VLX Vlachokerasia 0.90 34 *e*PB **Pg 15 09 35.4 -0.6**
VLX *e*SB **Sg 15 09 48.1 +0.3**
VLX Vlachokerasia 0.90 34 P **Pg 15 09 35.0 -1.0**
VLX Vlachokerasia 0.90 34 *e*Pb **Pg 15 09 35.4 -0.6**
VLX S **Sg 15 09 48.1 +0.3**
VLI Veliai 0.97 84 *e*PB **Pg 15 09 37.2 0.0**
VLI Veliai 0.97 84 *e*Pb **Pg 15 09 37.3 +0.1**
KYTH Kithira 1.10 108 *e*PB **Pb 15 09 39.5 -0.2**
KYTH Kithira 1.10 108 *e*Pb **Pb 15 09 39.5 -0.2**
GUR Goura 1.39 20 P **Pn 15 09 43.1 -1.0**
GUR S **Sn 15 10 03.2 +0.6**
GUR Goura 1.39 20 *e*PG **Pn 15 09 43.5 -0.6**
GUR Goura 1.39 20 P **Pn 15 09 43.1 -1.0**
GUR Goura 1.39 20 *e*Pg **Pn 15 09 43.5 -0.6**
GUR S **Sn 15 10 03.2 +0.6**
LAKA Lakka 1.62 7 P **Pn 15 09 46.9 -0.4**
LAKA S **Sn 15 10 09.6 +1.4**
LAKA Lakka 1.62 7 P **Pn 15 09 46.9 -0.4**

LAKA S **Sn** **15 10 09.6 +1.4**
KFL Anninata 1.66 333 P **Pn** **15 09 47.1 -0.8**
KFL S **Sn** **15 10 10.9 +1.6**
LTK Loutraki 1.70 35 P **Pn** **15 09 48.9 +0.5**
LTK S **Sn** **15 10 11.4 +1.2**
LTK Loutraki 1.70 35 *e*PG **Pg** **15 09 50.1 -1.2**
LTK Loutraki 1.70 35 P **Pn** **15 09 48.9 +0.5**
LTK Loutraki 1.70 35 *e*Pg **Pg** **15 09 50.1 -1.2**
LTK S **Sn** **15 10 11.4 +1.2**
KALE Kalithea 1.79 10 P **Pn** **15 09 50.2 +0.6**
KALE Kalithea 1.79 10 P **Pn** **15 09 50.2 +0.6**
DSF Desfina 1.89 19 P **Pn** **15 09 51.7 +0.8**
DSF Desfina 1.89 19 P **Pn** **15 09 51.7 +0.8**
VLY Voula,Athens 2.05 53 *e*PN **Pn** **15 09 54.6 +1.5**
VLY Voula,Athens 2.05 53 *e*Pn **Pn** **15 09 54.6 +1.5**

*DJA **21** 15:24:00, 1.°53N×95.°51E, h30km, MLv4.0/5*
*IDC **21** 15:24:09.8±1.9, 2.°12N×96.°16E, h0km, mb3.6/5, mb1 3.7/7, mb1mx3.5/22, mbtmp3.6/7, ML3.2/2, Error ellipse: s-maj=55.0km s-min=21.2km az=55.0*
*ISCJB **21** 15:24:12.9±1.1, 2.°18N±0.°09×96.°25E±0.°09, h33km, mb3.7/5, Error ellipse: s-maj=16.2km s-min=8.0km az=44.7*
*NEIC **21** 15:24:15.3±0.9, 2.°22N×96.°26E, h35km, mb3.4/1, Error ellipse: s-maj=16.4km s-min=10.0km az=52.0*
ISC 21 15:24:15.5±1.1, 2.°25N±0.°09×96.°29E±0.°10, h35km, n16, σ0°79/17, mb3.7/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TPTI		**1.34**	**41**	P	**Pn**	**15 24 37.0**	**-0.7**
GSI	**Gunungsitoli**	**1.59**	**126**	P	Px	15 24 30.5	
GSI				S	**Sn**	**15 25 02.0**	**+1.5**
PSI	**Prapat**	**2.68**	**78**	Pn	**Pn**	**15 24 57.0**	**+0.7**
	2.3nm,0.3s,baz=267,slow=7.1,SNR=16						
PSI	**Prapat**	**2.68**	**78**	Pn	**Pn**	**15 24 57.0**	**+0.7**
MNSI	**Mandailing Nat**	**3.59**	**114**	P	**Pn**	**15 25 05.8**	**-2.9**
MNSI				S	**Sn**	**15 25 49.3**	**-0.6**
IPM	**Ipoh**	**5.22**	**65**	P	**Pn**	**15 25 31.4**	**+0.3**
	0.1nm14nm,0.9s						
KULM	**Kulim**	**5.29**	**55**	*e*Pn	**Pn**	**15 25 32.4**	**+0.2**
	30nm,0.8s						
KULM	**Kulim**	**5.29**	**55**	P	**Pn**	**15 25 32.6**	**+0.5**
	0.1nm543nm42nm,0.8s						
CM31	**Chiang Mai Arr**	**16.32**	**9**	P	**Pn**	**15 28 02.4**	**+0.3**
	3.4nm,1.0s						
CMAR	**Chiang Mai Arr**	**16.32**	**9**	Pn	**Pn**	**15 28 01.4**	**-0.6**
	0.0nm,0.3s,baz=197,slow=10,SNR=8.0						
WRA	**Warramunga Arr**	**43.36**	**122**	P	**P**	**15 32 14.2**	**-0.6**
	0.4nm,0.3s,mb3.6,baz=301,slow=9.2,SNR=2.9						
ASAR	**Alice Springs**	**44.75**	**127**	P	**P**	**15 32 25.6**	**-0.2**
	0.4nm,0.9s,mb3.2,baz=296,slow=7.8,SNR=4.0						
MK31	**Makanchi Array**	**46.01**	**347**	*e*P	**P**	**15 32 35.6**	**+0.1**
MKAR	**Makanchi Array**	**46.01**	**347**	P	**P**	**15 32 36.1**	**+0.6**
	1.6nm,0.9s,mb4.0,baz=144,slow=7.9,SNR=14						
SONM	**Songino Array**	**46.24**	**9**	P	**P**	**15 32 37.3**	**+0.1**
	0.8nm,0.7s,mb3.8,baz=192,slow=8.6,SNR=4.7						
ZALV	**Zalesovo Beam**	**52.39**	**351**	P	**P**	**15 33 24.4**	**+0.2**
	1.4nm,0.6s,mb4.1,baz=172,slow=5.5,SNR=6.6						

*ISCJB **21** 15:37:25.7±0.8, 37.°28N±0.°05×11.°11E±0.°04, h6km±8km, mb3.4/3, Error ellipse: s-maj=8.6km s-min=4.8km az=177.6*
*IDC **21** 15:37:27.0±1.2, 37.°44N×11.°53E, h0km, mb3.6/3, mb1 3.7/6, mb1mx3.5/27, mbtmp3.6/6, ML3.8/3, MS2.5/1, Ms1 2.5/1, ms1mx2.0/48, Error ellipse: s-maj=31.6km s-min=19.9km az=130.0*
*ROM **21** 15:37:27.0±0.3, 37.°30N×11.°12E, h10km, Md3.5/9, Ml3.5/10, Error ellipse: s-maj=5.7km s-min=3.2km az=44.0*
*CSEM **21** 15:37:28.2±0.2, 37.°38N×11.°25E, h2km, MD3.5, Error ellipse: s-maj=8.7km s-min=3.4km az=158.0*
*TUN **21** 15:37:32.9, 37.°03N×10.°64E, h9km, MD3.5*
ISC 21 15:37:27.0±0.9, 37.°29N±0.°06×11.°12E±0.°04, h8km±9km, n56, σ0°92/62, mb3.4/3, Sicily

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MBZ	**Menzel Bouzelf**	**0.70**	**211**	*i* P	**Pg**	**15 37 44.2**	**+3.6**
PTS	**Pantelleria**	**0.85**	**124**	Pn	**Pg**	**15 37 43.0**	**-0.4**
	440nm,0.2s						
KCHT	**Kechabta**	**0.95**	**260**	*i* P	**Pg**	**15 37 49.2**	**+3.8**
ERC	**Erice**	**1.39**	**57**	Pn	**Pn**	**15 37 51.7**	**-1.0**
ERC	**Erice**	**1.39**	**57**	Pn	**Pn**	**15 37 51.7**	**-1.0**
BLIT	**Baltah**	**1.82**	**252**	*i* P	**Pg**	**15 38 02.8**	**+0.8**
CORL	**Corleone**	**1.84**	**70**	Pn	**Pg**	**15 38 00.8**	**-1.5**
	575nm,0.7s						
CORL	**Corleone**	**1.84**	**70**	Pn	**Pg**	**15 38 00.8**	**-1.5**
	575nm,0.7s						
KRIT	**Krib**	**1.89**	**241**	*i* P	**Pg**	**15 38 03.5**	**+0.2**
FAVR	**Favara**	**2.04**	**90**	Pn	**Pn**	**15 38 02.6**	**+1.0**
	593nm,1.1s						
FAVR	**Favara**	**2.04**	**90**	Pn	**Pn**	**15 38 02.6**	**+1.0**
	593nm,1.1s						
KEST	**Kesra**	**2.11**	**223**	Pn	**Pg**	**15 38 06.6**	**-0.8**
	4.9nm,0.3s,baz=16,slow=4.9,SNR=79						
KEST				Sn	**Sg**	**15 38 34.9**	**+0.1**
	6.4nm,0.3s,baz=78,slow=23,SNR=3.8						
TROT	**Trozza**	**2.11**	**216**	*i* P	**Pg**	**15 38 07.2**	**-0.3**
ALJA	**Alia**	**2.15**	**77**	Pn	**Pn**	**15 38 03.7**	**+0.6**
ALJA	**Alia**	**2.15**	**77**	Pn	**Pn**	**15 38 03.7**	**+0.6**
USI	**Ustica**	**2.16**	**48**	Pn	**Pn**	**15 38 03.8**	**+0.5**
USI	**Ustica**	**2.16**	**48**	Pn	**Pn**	**15 38 03.8**	**+0.5**
GHAT	**Ghardimaou**	**2.39**	**251**	*i* P	**Pb**	**15 38 09.4**	**-0.9**
GIB	**Gibilmanna**	**2.41**	**72**	Pn	**Pn**	**15 38 06.8**	**0.0**
GIB				Sn	**Sn**	**15 38 36.4**	**-0.2**
	447nm,0.5s						
GIB	**Gibilmanna**	**2.41**	**72**	Pn	**Pn**	**15 38 06.8**	**0.0**
GIB				Sn	**Sn**	**15 38 36.4**	**-0.2**
	447nm,0.5s						
RAFF	**Raffo Rosso**	**2.59**	**90**	Pn	**Pn**	**15 38 09.2**	**0.0**
RAFF				Sn	**Sn**	**15 38 40.7**	**-0.2**
	189nm,0.9s						
RAFF	**Raffo Rosso**	**2.59**	**90**	Pn	**Pn**	**15 38 09.2**	**0.0**
RAFF				Sn	**Sn**	**15 38 40.7**	**-0.2**
	189nm,0.9s						
VSL	**Villasalto**	**2.59**	**329**	Pn	**Pn**	**15 38 10.0**	**+0.7**
VSL				Sn	**Sn**	**15 38 39.3**	**-1.7**
	83nm,0.3s						
VAE	**Valguarnera**	**2.63**	**85**	Pn	**Pn**	**15 38 05.7**	**-4.1**
	baz=40,slow=7.9,SNR=1.8						
GALF	**Gagliano Caste**	**2.78**	**80**	Pn	**Pn**	**15 38 13.4**	**+1.6**
GALF	**Gagliano Caste**	**2.78**	**80**	Pn	**Pn**	**15 38 13.4**	**+1.6**
ACL	**Alicudi**	**2.85**	**63**	Pn	**Pn**	**15 38 12.6**	**-0.2**
IACL	**Alicudi**	**2.85**	**63**	Pn	**Pn**	**15 38 12.6**	**-0.2**
HVZN	**Vizzini**	**2.88**	**91**	Pn	**Pn**	**15 38 13.2**	**+0.1**
	290nm,0.5s						
HVZN	**Vizzini**	**2.88**	**91**	Pn	**Pn**	**15 38 13.2**	**+0.1**
	290nm,0.5s						
ECNV	**Catenanuova**	**2.88**	**83**	Pn	**Pn**	**15 38 15.0**	**+1.8**
ECNV	**Catenanuova**	**2.88**	**83**	Pn	**Pn**	**15 38 15.0**	**+1.8**
HMDC	**Modica**	**2.95**	**95**	Pn	**Pn**	**15 38 14.0**	**-0.2**
HMDC	**Modica**	**2.95**	**95**	Pn	**Pn**	**15 38 14.0**	**-0.2**
SSY	**Sortino**	**3.16**	**91**	Pn	**Pn**	**15 38 16.8**	**-0.3**
	233nm,0.4s						
SSY	**Sortino**	**3.16**	**91**	Pn	**Pn**	**15 38 16.8**	**-0.3**
	233nm,0.4s						
HAVL	**Avola**	**3.22**	**95**	Pn	**Pn**	**15 38 17.1**	**-0.8**
	170nm,0.3s						
HAVL	**Avola**	**3.22**	**95**	Pn	**Pn**	**15 38 17.1**	**-0.8**
	170nm,0.3s						
DGI	**Dorgali Grotta**	**3.25**	**339**	Pn	**Pn**	**15 38 19.4**	**+1.1**
	24nm,0.8s						
DGI	**Dorgali Grotta**	**3.25**	**339**	Pn	**Pn**	**15 38 19.4**	**+1.1**
	24nm,0.8s						
VPL	**Vulcano Piano**	**3.25**	**69**	Pn	**Pn**	**15 38 18.0**	**-0.3**
	111nm,0.5s						
VPL	**Vulcano Piano**	**3.25**	**69**	Pn	**Pn**	**15 38 18.0**	**-0.3**
	111nm,0.5s						
MMME	**Mongiuffi-Meli**	**3.35**	**78**	Pn	**Pn**	**15 38 20.2**	**+0.5**
MMME	**Mongiuffi-Meli**	**3.35**	**78**	Pn	**Pn**	**15 38 20.2**	**+0.5**
MILZ	**Milazzo**	**3.41**	**72**	Pn	**Pn**	**15 38 19.8**	**-0.6**
	67nm,0.8s						
MILZ	**Milazzo**	**3.41**	**72**	Pn	**Pn**	**15 38 19.8**	**-0.6**
	67nm,0.8s						
BERT	**Berda**	**3.49**	**210**	*i* P	**Pb**	**15 38 25.7**	**-3.3**
MSRU	**Castanea**	**3.61**	**73**	Pn	**Pn**	**15 38 23.2**	**-0.1**
MSRU	**Castanea**	**3.61**	**73**	Pn	**Pn**	**15 38 23.2**	**-0.1**
SOI	**Samo**	**4.00**	**77**	Pn	**Pn**	**15 38 29.5**	**+0.9**
	12nm,0.4s						
SOI	**Samo**	**4.00**	**77**	Pn	**Pn**	**15 38 29.5**	**+0.9**
	12nm,0.4s						
DAVOX	**Davos/Dischmat**	**9.53**	**355**	Pn	**Pn**	**15 39 44.8**	**+0.3**
	0.1nm,0.3s,baz=166,slow=19,SNR=1.9						
DAVOX				LR	LR	15 43 14.1	
	comp=Z,32nm,19.9s,baz=266,slow=37						
ESDC	**Sonseca Array**	**12.06**	**286**	Pn	**Pn**	**15 40 23.3**	**+4.2**
	0.8nm,0.3s,baz=94,slow=14,SNR=9.7						
TORD	**Torodi Ar. Bea**	**25.47**	**202**	P	**P**	**15 43 00.5**	**+4.8**
	0.8nm,0.7s,mb3.4,baz=23,slow=8.2,SNR=5.7						
FINES	**FINESS Array B**	**25.94**	**16**	P	**P**	**15 42 59.4**	**-0.1**
	2.5nm,1.0s,mb3.7,baz=214,slow=12,SNR=5.1						
MKAR	**Makanchi Array**	**52.04**	**56**	P	**P**	**15 46 33.8**	**-3.2**
	0.1nm,0.5s,mb3.0,baz=298,slow=6.2,SNR=2.4						

IDC 21 15:37:58.9±1.9, 37.°51N×11.°34E, h0km, mb3.8/2, mb1 3.9/4, mb1mx3.4/27, mbtmp3.8/4, ML4.3/2, MS3.1/1, Ms1 3.1/1, ms1mx2.1/47, Error ellipse: s-maj=55.8km s-min=24.9km az=115.0, Sicily

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEST	**Kesra**	**2.39**	**223**	Pn	Pn	15 38 39.5	+0.2
	19nm,0.3s,baz=264,slow=10,SNR=7.2						
ESDC	**Sonseca Array**	**12.17**	**285**	Pn	Pn	15 40 53.5	0.0
	0.9nm,0.3s,baz=92,slow=14,SNR=7.0						
FINES	**FINESS Array B**	**25.68**	**16**	P	P	15 43 30.3	+0.1
	1.1nm,0.6s,baz=201,slow=8.0,SNR=4.9						
TORD	**Torodi Ar. Bea**	**25.74**	**202**	P	P	15 43 31.2	0.0
	1.3nm,0.7s,baz=18,slow=9.2,SNR=6.6						

*IDC **21** 15:47:05.5±0.9, 3.°46N×125.°20E, h0km, mb3.8/7, mb1 4.0/7, mb1mx3.8/20, mbtmp3.8/7, Error ellipse: s-maj=59.2km s-min=16.5km az=76.0*
*ISCJB **21** 15:47:08.5±0.3, 3.°31N±0.°03×124.°89E±0.°05, h33km, mb3.9/9, Error ellipse: s-maj=6.7km s-min=4.0km az=9.9*
*DJA **21** 15:47:09, 3.°19N×124.°89E, h16km, mb4.6/10*
*NEIC **21** 15:47:10.7±0.7, 3.°32N×125.°06E, h35km, mb4.6/3, Error ellipse: s-maj=31.9km s-min=10.1km az=80.0*
ISC 21 15:47:10.3±0.3, 3.°31N±0.°03×124.°96E±0.°05, h35km, n38, σ1°14/42, mb3.9/9, 3C, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**0.68**	**57**	P	**Pn**	**15 47 23.9**	**+0.4**
MNI	**Manado**	**1.86**	**184**	P	**Pn**	**15 47 39.3**	**-0.5**
MNI				S	**Sn**	**15 48 00.8**	**-1.3**
GSPH	**General Santos**	**2.75**	**360**	*e*P	**Pn**	**15 47 50.5**	**-1.5**
TNTI	**Ternate**	**3.49**	**136**	P	**Pn**	**15 48 00.1**	**-2.0**
DAV	**Davao City (W)**	**3.78**	**9**	Pn	**Pn**	**15 48 08.4**	**+2.3**
DAV	**Davao City (W)**	**3.78**	**9**	P	**Pn**	**15 48 09.3**	**+3.1**
DMPH	**Davao City--Mi**	**3.78**	**8**	*e*P	**Pn**	**15 48 07.5**	**+1.3**
DMPH				*e*S	**Sn**	**15 48 53.6**	**+4.0**
MATI	**Mati**	**3.83**	**20**	*e*P	**Pn**	**15 48 06.1**	**-0.8**
MRSI	**Marisa**	**4.13**	**227**	P	**Pn**	**15 48 10.1**	**-0.8**
BUKP	**Musuan**	**4.54**	**1**	*e*P	**Pn**	**15 48 16.8**	**+0.3**
ZMPH	**Zamboanga City**	**4.62**	**322**	*i* P	**Pn**	**15 48 14.8**	**-2.9**
ZMPH				*i* S	**Sn**	**15 49 01.0**	**-9.2**
PAGZ	**Pagadian**	**4.77**	**341**	*e*P	**Pn**	**15 48 17.8**	**-2.0**
LUWI	**Luwuk**	**4.85**	**207**	P	**Pn**	**15 48 21.9**	**+1.1**
IPIL	**Ipil**	**5.04**	**332**	*e*P	**Pn**	**15 48 22.4**	**-1.1**
APSI	**Ampana**	**5.34**	**218**	P	**Pn**	**15 48 28.4**	**+0.7**
	0.8nm9μm139nm,0.6s						
BUTP	**Butuan**	**5.66**	**7**	*e*P	**Pn**	**15 48 33.1**	**+1.1**
MPSI	**Mapaga**	**5.86**	**240**	P	**Pn**	**15 48 34.7**	**0.0**
	1μm,0.7s						
MPSI				S	**Sn**	**15 49 39.8**	**-0.9**
	1μm,0.7s						
PCI	**Palu**	**6.62**	**231**	P	**Pn**	**15 48 44.6**	**-0.6**
	0.0nm50nm3.0nm,1.0s						
MYLDM	**Lahad Datu**	**6.70**	**286**	P	**Pn**	**15 48 47.2**	**+0.9**
	0.5nm111nm,0.9s						
NLAI	**Namlea**	**6.85**	**162**	P	**Pn**	**15 48 48.5**	**+0.1**
	0.2nm52nm,0.9s						
KDI	**Kendari**	**7.59**	**198**	P	**Pn**	**15 49 00.5**	**+1.9**
	0.2nm37nm,0.8s						
TTSI	**Tana Toraja**	**8.14**	**219**	P	**Pn**	**15 49 07.3**	**+1.2**
	22nm,0.9s						
BNSI	**Bone**	**9.07**	**212**	P	**Pn**	**15 49 14.1**	**-4.7**
	20nm,1.4s						
SBUM	**Sibu**	**12.75**	**266**	P	**Pn**	**15 50 09.6**	**+0.3**
	7.7nm,1.1s						
KNA	**Kununurra**	**19.31**	**169**	P	**Pn**	**15 51 33.3**	**-0.5**
FITZ	**Fitzroy Crossi**	**21.29**	**178**	P	**P**	**15 51 54.4**	**+0.4**
	3.0nm,0.7s,mb3.7,baz=11,slow=10,SNR=7.4						
WRAB	**Tennant Creek**	**24.88**	**159**	*e*P	**P**	**15 52 30.1**	**+0.2**
	14nm,1.1s,mb4.4						
WRA	**Warramunga Arr**	**24.88**	**159**	P	**P**	**15 52 30.4**	**+0.5**
	3.8nm,0.6s,mb4.1,baz=339,slow=10.0,SNR=11						
COEN	**Coen**	**24.92**	**134**	*e*P	**P**	**15 52 28.4**	**-1.9**
	88nm,1.0s						
ASAR	**Alice Springs**	**28.20**	**162**	P	**P**	**15 53 00.4**	**+0.6**
	0.6nm,0.6s,mb3.4,baz=339,slow=7.2,SNR=7.9						
MJAR	**Matsushiro Arr**	**35.25**	**19**	P	**P**	**15 53 59.6**	**-2.0**
	1.0nm,0.8s,mb3.8,baz=187,slow=9.5,SNR=3.8						
MAJO	**Matsushiro**	**35.25**	**19**	*e*P	**P**	**15 54 02.3**	**+0.7**
	2.0nm,0.3s,mb4.5						
STKA	**Stephens Creek**	**38.41**	**157**	P	**P**	**15 54 30.0**	**+1.5**
	2.0nm,0.9s,mb3.8,baz=322,slow=12,SNR=3.6						
STKA	**Stephens Creek**	**38.41**	**157**	*e*P	**P**	**15 54 30.3**	**+1.8**
	0.4nm,0.9s,mb3.1						
SONM	**Songino Array**	**47.15**	**343**	P	**P**	**15 55 39.5**	**+0.3**
	0.3nm,0.4s,mb3.6,baz=161,slow=9.2,SNR=3.2						
MK31	**Makanchi Array**	**56.90**	**326**	*e*P	**P**	**15 56 52.3**	**+0.5**
MKAR	**Makanchi Array**	**56.90**	**326**	P	**P**	**15 56 52.4**	**+0.6**
	0.3nm,0.4s,mb3.6,baz=110,slow=8.2,SNR=9.8						
MKAR	**Makanchi Array**	**56.90**	**326**	P	**P**	**15 56 52.4**	**+0.6**

*IDC **21** 15:54:00.7±1.2, 0.°73S×98.°69E, h0km, mb4.1/10, mb1 4.1/12, mb1mx3.9/23, mbtmp4.0/12, ML3.9/2, MS3.2/3, Ms1 3.2/3, ms1mx2.8/34, Error ellipse: s-maj=56.8km s-min=14.8km az=59.0*
*NEIC **21** 15:54:06.0±0.6, 0.°66S×98.°91E, h35km, mb3.8/2, Error ellipse: s-maj=23.5km s-min=8.5km az=64.0*
*ISCJB **21** 15:54:06.3±0.7, 0.°66S±0.°04×98.°76E±0.°07, h58km±7km, mb4.0/11, MS3.3/2, Error ellipse: s-maj=11.8km s-min=5.9km az=154.7*
*DJA **21** 15:54:07, 0.°69S×98.°77E, h37km, MLv4.0/12*
ISC 21 15:54:07.6±0.7, 0.°65S±0.°04×98.°77E±0.°06, h49km±7km, n42, σ1°07/38, mb4.0/11, MS3.3/2, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SISI	**Saibi**	**0.75**	**154**	P	**Pn**	**15 54 22.1**	**+0.2**
PPI	**Padang Panjang**	**1.64**	**83**	P	**Pn**	**15 54 33.8**	**-0.2**
MNSI	**Mandailing Nat**	**1.65**	**30**	P	**Pn**	**15 54 33.4**	**-0.7**
PDSI	**Padang**	**1.71**	**99**	P	**Pn**	**15 54 34.8**	**-0.2**
PDSI				S	**Sn**	**15 54 56.2**	**+0.4**
GSI	**Gunungsitoli**	**2.27**	**328**	P	**Pn**	**15 54 43.2**	**+0.5**
PPSI	**Pulau Pagai**	**2.44**	**149**	P	**Pn**	**15 54 43.7**	**-1.3**
PPSI				S	**Sn**	**15 55 13.7**	**+0.1**
BKNI	**Bangkinang**	**2.47**	**67**	P	**Pn**	**15 54 48.5**	**+3.1**
SDSI	**Sungai Dareh**	**2.68**	**96**	P	**Pn**	**15 54 49.9**	**+1.7**
PSI	**Prapat**	**3.43**	**3**	Pn	**Pn**	**15 54 55.7**	**-2.8**
	3.8nm,0.3s,baz=167,slow=10,SNR=11						
PSI				LR	LR	15 56 36.6	
	comp=Z,252nm,18.3s,baz=186,slow=46						
TPTI		**4.19**	**338**	P	**Pn**	**15 55 09.0**	**0.0**
KSI	**Kapahiang**	**4.85**	**128**	P	**Pn**	**15 55 16.2**	**-1.8**
IPM	**Ipoh**	**5.57**	**24**	P	**Pn**	**15 55 28.7**	**+0.8**
	0.1nm19nm,0.8s						
MNAI	**Manna**	**5.58**	**131**	P	**Pn**	**15 55 28.9**	**+0.9**
	1.0nm186nm,1.5s						
MYKOM	**Kota Tinggi**	**5.63**	**65**	P	**Pn**	**15 55 27.4**	**-1.3**
	0.1nm26nm,1.7s						
LHSI	**Lahat**	**5.71**	**124**	P	**Pn**	**15 55 30.3**	**+0.5**
KULM	**Kulim**	**6.19**	**18**	*e*Pn	**Pn**	**15 55 34.9**	**-1.5**
	8.7nm,0.7s						
KULM	**Kulim**	**6.19**	**18**	P	**Pn**	**15 55 38.0**	**+1.6**
	1μm15nm,1.1s						
MDSI	**Maura Dua**	**6.61**	**125**	P	**Pn**	**15 55 42.7**	**+0.4**
	0.1nm13nm,1.2s						
KLSI		**7.18**	**124**	P	**Pn**	**15 55 51.1**	**+1.0**
	20nm,2.1s						
COCO	**West Island**	**11.63**	**189**	P	**Pn**	**15 56 51.0**	**+0.1**
CMAR	**Chiang Mai Arr**	**18.98**	**1**	P	**Pn**	**15 58 24.8**	**-1.4**
	0.3nm,0.3s,baz=188,slow=10,SNR=7.0						
FITZ	**Fitzroy Crossi**	**31.59**	**125**	P	**P**	**16 00 24.6**	**-1.2**
	8.4nm,1.1s,mb4.5,baz=37,slow=5.1,SNR=3.9						
WRA	**Warramunga Arr**	**39.74**	**121**	P	**P**	**16 01 34.1**	**-1.6**
	0.7nm,0.8s,mb3.5,baz=286,slow=9.8,SNR=2.8						
WRAB	**Tennant Creek**	**39.74**	**121**	P	**P**	**16 01 34.8**	**-1.0**
	1.5nm,0.4s,mb4.1						
ASAR	**Alice Springs**	**41.04**	**127**	P	**P**	**16 01 46.9**	**+0.5**
	1.1nm,0.4s,mb3.8,baz=301,slow=8.0,SNR=18						
COEN	**Coen**	**45.88**	**109**	*e*P	**P**	**16 02 22.2**	**-3.3**
	48nm,0.8s						
KSRS	**Korea Array**	**46.52**	**32**	LR	LR	16 24 23.3	
	comp=Z,19nm,19.1s,MS3.1,baz=235,slow=39						
SONM	**Songino Array**	**48.74**	**7**	P	**P**	**16 02 48.5**	**+1.3**
	1.1nm,0.7s,mb4.0,baz=189,slow=9.5,SNR=7.7						
SONM				PcP	PcP	16 04 13.1	+1.4
	0.7nm,0.6s,baz=197,slow=3.5,SNR=3.9						
MK31	**Makanchi Array**	**49.41**	**345**	*e*P	**P**	**16 02 53.1**	**+0.7**
MKAR	**Makanchi Array**	**49.41**	**345**	P	**P**	**16 02 53.5**	**+1.1**
	2.8nm,0.6s,mb4.5,baz=140,slow=7.7,SNR=43						
MKAR	**Makanchi Array**	**49.41**	**345**	P	**P**	**16 02 53.5**	**+1.1**
STKA	**Stephens Creek**	**50.96**	**132**	P	**P**	**16 03 05.7**	**+1.3**
	1.4nm,0.5s,mb4.2,baz=310,slow=6.5,SNR=6.5						
STKA	**Stephens Creek**	**50.96**	**132**	*e*P	**P**	**16 03 05.5**	**+1.1**
	0.3nm,0.5s,mb3.5						
KURK	**Kurchatov**	**53.98**	**344**	P	**P**	**16 03 26.3**	**-0.1**
	0.9nm,0.7s,mb3.8,baz=169,slow=7.1,SNR=5.3						
ZALV	**Zalesovo Beam**	**55.63**	**350**	P	**P**	**16 03 38.2**	**0.0**
	2.6nm,0.6s,mb4.5,baz=170,slow=6.1,SNR=15						
BVAR	**Borovoye Array**	**58.50**	**340**	P	**P**	**16 03 58.4**	**-0.2**
	1.0nm,0.7s,mb4.0,baz=140,slow=7.8,SNR=7.5						
ASF	**Jabal al Asfar**	**66.81**	**306**	LR	LR	16 37 07.7	
	comp=Z,29nm,18.3s,MS3.5,baz=157,slow=39						
FINES	**FINESS Array B**	**82.35**	**332**	P	**P**	**16 06 24.6**	**+0.7**
	1.7nm,0.9s,mb4.0,baz=103,slow=6.1,SNR=5.0						
NVAR	**Mina Array Bea**	**129.31**	**38**	PKP	PKPdf	16 13 10.1	-1.0
	0.1nm,0.5s,baz=234,slow=3.1,SNR=2.3						
TXAR	**Lajitas Array**	**144.34**	**35**	PKP	PKPdf	16 13 37.8	-1.2
	0.2nm,0.5s,baz=60,slow=0.4,SNR=6.6						
CPUP	**Villa Florida**	**144.63**	**219**	PKP	PKPdf	16 13 40.4	+0.8
	0.3nm,0.4s,baz=124,slow=3.6,SNR=3.6						
JCT	**Junction City**	**145.48**	**29**	*e*PKP	PKPdf	16 13 41.4	+0.5

*CSEM **21** 16:11:28.3±0.1, 38.°12N×22.°69E, h12km, MD3.4, Error ellipse: s-maj=3.7km s-min=2.9km az=103.0*
*ATH **21** 16:11:28.3, 38.°13N×22.°69E, h12km±2km, MD3.4/5*
*THE **21** 16:11:28.5, 38.°11N×22.°66E, h12km±1km, ML3.1/8, Error ellipse: s-maj=1.4km s-min=0.6km az=214.0*
*NEIC **21** 16:11:28.3, 38.°13N×22.°69E, h12km, MD3.4(ATH), After ATH.*
*ISCJB **21** 16:11:28.2±0.4, 38.°12N±0.°02×22.°67E±0.°03, h10km±4km, Error ellipse: s-maj=4.0km s-min=3.4km az=28.3*
ISC 21 16:11:28.6±0.4, 38.°12N±0.°02×22.°67E±0.°03, h13km±5km, n44, σ0°68/66, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LTK	**Loutraki**	**0.25**	**112**	P	**Pg**	**16 11 33.6**	**-0.3**
LTK				S	**Sg**	**16 11 38.2**	**+0.8**
LTK	**Loutraki**	**0.25**	**112**	*e*PG	**Pg**	**16 11 33.5**	**-0.4**
LTK				*e*SG	**Sg**	**16 11 37.7**	**+0.3**
LTK	**Loutraki**	**0.25**	**112**	P	**Pg**	**16 11 33.6**	**-0.3**
LTK				*e*Sg	**Sg**	**16 11 37.7**	**+0.3**
LTK				S	**Sg**	**16 11 38.2**	**+0.8**
DSF	**Desfina**	**0.32**	**339**	P	**Pg**	**16 11 34.7**	**-0.3**
DSF				S	**Sg**	**16 11 39.4**	**+0.1**
DSF	**Desfina**	**0.32**	**339**	P	**Pg**	**16 11 34.7**	**-0.3**
DSF				S	**Sg**	**16 11 39.4**	**+0.1**
GUR	**Goura**	**0.32**	**235**	P	**Pg**	**16 11 34.8**	**-0.2**
GUR				S	**Sg**	**16 11 39.5**	**+0.1**
GUR	**Goura**	**0.32**	**235**	*e*PG	**Pg**	**16 11 34.8**	**-0.2**
GUR				*e*SB	**Sg**	**16 11 39.8**	**+0.4**
GUR	**Goura**	**0.32**	**235**	P	**Pg**	**16 11 34.8**	**-0.2**
GUR				S	**Sg**	**16 11 39.5**	**+0.1**
GUR				*e*Sb	**Sg**	**16 11 39.8**	**+0.4**
**

*TEH **21** 16:21:17.6, 30°.83N×57°.58E, h6km*
*THR **21** 16:21:17.7±0.9, 30°.41N×57°.55E, h14km±8km, ML4.1*
ISC 21 16:21:14.0±0.8, 30°.58N±0°.04×57°.58E±0°.03, h3km±7km, n79, σ1§20/86, mb3.6/5, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRBR	**Kerman**	**0.92**	**230**	*e*Pg	**Pg**	**16 21 32.9**	**+1.3**
KRBR	**Kerman**	**0.92**	**230**	*e*Pg	**Pg**	**16 21 32.9**	**+1.3**
IBAF	**Bafgh**	**2.00**	**301**	Pn	**Pn**	**16 21 50.0**	**+1.3**
IBAF				Sg	**Sg**	**16 22 16.3**	**-1.9**
IBAF	**Bafgh**	**2.00**	**301**	*e*Pn	**Pn**	**16 21 50.1**	**+1.4**
IBAF	comp=Z,47μm,0.1s			*e*		16 21 52.0	
IBAF				*e*Sg	**Sg**	**16 22 16.3**	**-1.9**
IBAF	**Bafgh**	**2.00**	**301**	Pn	**Pn**	**16 21 50.0**	**+1.3**
IBAF				Sg	**Sg**	**16 22 16.3**	**-1.9**
IKOO	**Kooshah**	**2.21**	**33**	*e*Pn	**Pn**	**16 21 51.5**	**0.0**
IKOO	comp=Z,89μm,0.1s			*e*		16 22 29.9	
IKOO	**Kooshah**	**2.21**	**33**	*e*Pn	**Pn**	**16 21 51.5**	**0.0**
ITEG	**Tejag**	**2.52**	**23**	*e*Pn	**Pn**	**16 21 55.7**	**-0.1**
ITEG	comp=Z,42μm,0.2s			*e*		16 22 37.2	
ITEG	**Tejag**	**2.52**	**23**	*e*Pn	**Pn**	**16 21 55.7**	**-0.1**
IMEH	**Mehriz**	**2.67**	**288**	Pn	**Pn**	**16 21 58.6**	**+0.7**
IMEH	**Mehriz**	**2.67**	**288**	*e*Pn	**Pn**	**16 21 58.6**	**+0.7**
IMEH	comp=Z,23μm,0.2s			*e*		16 22 37.9	
IMEH	**Mehriz**	**2.67**	**288**	*e*Pn	**Pn**	**16 21 58.6**	**+0.7**
IDAH	**Dahanechah**	**2.91**	**42**	*e*	**Pg**	**16 22 15.6**	**+5.9**
IDAH	comp=Z,12μm,0.2s			*e*Pn	**Pn**	**16 22 02.3**	**+1.1**
ZHSF	**Zahedan**	**2.93**	**108**	*e*Pn	**Pb**	**16 22 06.0**	**-0.9**
ZHSF				*e*Pg	**Pg**	**16 22 10.0**	**-0.2**
ZHSF				*e*Sg	**Sg**	**16 22 48.3**	**+0.1**
ZHSF	comp=N,960nm,0.6s			AML	AML	16 22 58.0	
ZHSF				AML	AML	16 22 58.5	
ICHK	**Chekchek**	**3.18**	**302**	Pn	**Pn**	**16 22 06.1**	**+1.2**
ICHK	**Chekchek**	**3.18**	**302**	*e*	**Sg**	**16 22 55.0**	**-1.2**
ICHK	comp=Z,13μm,0.2s			*e*Pn	**Pn**	**16 22 06.1**	**+1.2**
IBND	**Bandar-abas**	**3.25**	**197**	*e*Pn	**Pb**	**16 22 11.7**	**-0.6**
IBND				*e*Pn	**Pn**	**16 22 12.4**	**+6.6**
IBND	comp=Z,9μm,0.3s			*e*		16 23 14.0	
BNDS	**Bandar-Abbas**	**3.40**	**202**	*e*Pn	**Pn**	**16 22 10.5**	**+2.6**
BNDS	comp=N,307nm,0.6s			AML	AML	16 23 14.7	
BNDS	**Bandar-Abbas**	**3.40**	**202**	*e*Pn	**Pn**	**16 22 09.4**	**+1.5**
ISAD	**Sadrabad**	**3.59**	**293**	Pn	**Pn**	**16 22 12.1**	**+1.5**
ISAD	**Sadrabad**	**3.59**	**293**	*e*Pn	**Pn**	**16 22 12.2**	**+1.6**
ISAD	comp=Z,10μm,0.2s			*e*		16 23 16.7	
ISAD	**Sadrabad**	**3.59**	**293**	Pn	**Pn**	**16 22 12.1**	**+1.5**
IPAR	**Pars**	**3.99**	**261**	Pn	**Pn**	**16 22 19.5**	**+3.5**
IPAR	**Pars**	**3.99**	**261**	*e*Pn	**Pn**	**16 22 19.6**	**+3.6**
IPAR	comp=Z,4μm,0.4s			*e*		16 23 29.6	
IPAR	**Pars**	**3.99**	**261**	Pn	**Pn**	**16 22 19.5**	**+3.5**
IZEF	**Zefreh**	**5.03**	**299**	Pn	**Pn**	**16 22 31.2**	**+0.8**
IZEF	**Zefreh**	**5.03**	**299**	*e*Pn	**Pn**	**16 22 31.3**	**+0.9**
IZEF	**Zefreh**	**5.03**	**299**	Pn	**Pn**	**16 22 31.2**	**+0.8**
IKLH	**Kolahrood**	**5.79**	**300**	Pn	**Pn**	**16 22 41.8**	**+1.1**
IKLH	**Kolahrood**	**5.79**	**300**	*e*Pn	**Pn**	**16 22 41.8**	**+1.1**
IKLH	**Kolahrood**	**5.79**	**300**	*e*Pn	**Pn**	**16 22 41.8**	**+1.1**
IMYA	**Miami**	**6.12**	**19**	Pn	**Pn**	**16 22 44.4**	**-1.0**
IMYA	**Miami**	**6.12**	**19**	*e*Pn	**Pn**	**16 22 44.5**	**-0.9**
IMYA	**Miami**	**6.12**	**19**	*e*Pn	**Pn**	**16 22 44.5**	**-0.9**
IVRN	**Varamin**	**6.61**	**313**	Pn	**Pn**	**16 22 52.3**	**+0.3**
IVRN	**Varamin**	**6.61**	**313**	*e*Pn	**Pn**	**16 22 52.2**	**+0.2**
IVRN				*e*Pn	**Pn**	**16 22 52.4**	**+0.4**
IVRN	**Varamin**	**6.61**	**313**	*e*Pn	**Pn**	**16 22 52.4**	**+0.4**
IDMV	**Damavand**	**6.82**	**318**	Pn	**Pn**	**16 22 55.3**	**+0.4**
IDMV	**Damavand**	**6.82**	**318**	*e*Pn	**Pn**	**16 22 55.3**	**+0.4**
IDMV	**Damavand**	**6.82**	**318**	*e*Pn	**Pn**	**16 22 55.3**	**+0.4**
SLWS		**8.42**	**229**	P	**Pn**	**16 23 17.2**	**+0.3**
SLWS		**8.42**	**229**	P	**Pn**	**16 23 17.2**	**+0.3**
QRN	**Al-Qurain**	**8.60**	**260**	*e*P	**Pn**	**16 23 19.1**	**-0.3**
QRN	comp=Z,23nm,0.5s			AML	AML	16 24 56.9	
BTHS		**8.84**	**224**	P	**Pn**	**16 23 21.9**	**-0.8**
BTHS		**8.84**	**224**	P	**Pn**	**16 23 21.9**	**-0.8**
RDF	**Al-Radifah**	**8.87**	**262**	*e*P	**Pn**	**16 23 23.0**	**-0.1**
RDF	**Al-Radifah**	**8.87**	**262**	*e*P	**Pn**	**16 23 23.0**	**-0.1**
MIB	**Mutribah**	**8.90**	**268**	*e*P	**Pn**	**16 23 23.3**	**-0.1**
MIB	**Mutribah**	**8.90**	**268**	*e*P	**Pn**	**16 23 23.3**	**-0.1**
NAY	**Al-Naaiem**	**9.07**	**264**	*e*P	**Pn**	**16 23 26.2**	**+0.4**
NAY	comp=Z,4.8nm,0.6s			AML	AML	16 25 09.8	
NAY	**Al-Naaiem**	**9.07**	**264**	*e*P	**Pn**	**16 23 26.2**	**+0.4**
HRDDS		**10.52**	**226**	P	**Pn**	**16 23 43.4**	**-2.3**
LYLS		**12.57**	**230**	S	**Sn**	**16 26 23.9**	**-11**
LYLS		**12.57**	**230**	P	**Pn**	**16 24 09.8**	**-4.0**
GNI	**Garni**	**14.16**	**316**	LR	LR	16 30 09.1	
GNI	**Garni**	**14.16**	**316**	Pn	**Pn**	**16 24 34.4**	**-1.0**
GNI	**Garni**	**14.16**	**316**	Pn	**Pn**	**16 24 34.4**	**-1.0**
AML	**Almayashu**	**17.33**	**44**	*e*Pn	**Pn**	**16 25 19.1**	**+2.3**
AML	**Almayashu**	**17.33**	**44**	*e*Pn	**Pn**	**16 25 19.1**	**+2.2**
AAK	**Ala-Archa**	**18.11**	**44**	P	**Pn**	**16 25 29.4**	**+2.9**
AAK	**Ala-Archa**	**18.11**	**44**	P	**Pn**	**16 25 29.4**	**+2.9**
TKM2	**Tokmak 2**	**18.93**	**44**	*e*Pn	**Pn**	**16 25 37.4**	**+0.8**
TKM2	**Tokmak 2**	**18.93**	**44**	*e*Pn	**Pn**	**16 25 37.4**	**+0.8**
AKTK	**Aktyubinsk**	**19.84**	**1**	P	**Pn**	**16 25 43.9**	**-3.5**
AKTK	**Aktyubinsk**	**19.84**	**1**	P	**Pn**	**16 25 43.9**	**-3.5**
AKTO	**Aktyubinsk**	**19.84**	**1**	P	**Pn**	**16 25 43.9**	**-3.5**
BR131	**Keskin Array S**	**21.55**	**302**	*e*P	**P**	**16 26 02.6**	**-1.9**
BR131	**Keskin Array S**	**21.55**	**302**	*e*P	**P**	**16 26 02.6**	**-1.8**
ATD	**Arta Tunnel**	**23.36**	**219**	LR	LR	16 36 03.2	
BRVK	**Borovoye**	**24.30**	**19**	*e*P	**P**	**16 26 32.2**	**-0.3**
BRVK	**Borovoye**	**24.30**	**19**	*e*P	**P**	**16 26 32.2**	**-0.3**
BVAR	**Borovoye Array**	**24.30**	**19**	P	**P**	**16 26 32.7**	**+0.2**
BVAR	**Borovoye Array**	**24.30**	**19**	P	**P**	**16 26 32.7**	**+0.2**
MKAR	**Makanchi Array**	**25.03**	**43**	P	**P**	**16 26 39.5**	**+0.2**
MKAR	**Makanchi Array**	**25.03**	**43**	P	**P**	**16 26 39.5**	**+0.3**
KURK	**Kurchatov**	**25.52**	**32**	P	**P**	**16 26 41.2**	**-2.4**
ZALV	**Zalesovo Beam**	**30.51**	**32**	P	**P**	**16 27 27.2**	**-1.0**
ASAR	**Alice Springs**	**90.86**	**117**	P	**P**	**16 34 17.7**	**-1.5**
ASAR	**Alice Springs**	**90.86**	**117**	P	**P**	**16 34 17.7**	**-1.5**

*IDC **21** 16:22:44.0±3.0, 56°.42N×161°.81W, h175km±24km, mb3.3/4, mb1 3.6/8, mb1mx3.2/29, mbtmp3.3/8, MS3.2/1, Ms1 3.2/1, ms1mx2.5/17, Error ellipse: s-maj=38.0km s-min=24.3km az=174.0*
*ISCJB **21** 16:22:43.2±0.4, 56°.28N±0°.06×161°.93W±0°.09, h199km±6km, mb3.4/4, Error ellipse: s-maj=11.5km s-min=4.9km az=142.0*
*NEIC **21** 16:22:44.3±0.5, 56°.30N×161°.88W, h192km±7km, mb4.3/13, Error ellipse: s-maj=12.0km s-min=6.0km az=141.0*
ISC 21 16:22:44.2±0.4, 56°.30N±0°.06×161°.96W±0°.09, h194km±6km, n33, σ1§13/41, mb3.4/4, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDPT	**Sand Point**	**1.27**	**138**	*e*Pn	**Pn**	**16 23 15.7**	**+0.4**
SDPT				*e*S	**Sn**	**16 23 40.0**	**+0.7**
CHGN	**Chignik**	**1.98**	**89**	*e*Pn	**Pn**	**16 23 22.3**	**+0.4**
CHGN				*e*S	**Sn**	**16 23 51.9**	**+0.7**
AKUT	**Akutan**	**3.08**	**227**	*e*P	**Pn**	**16 23 35.0**	**+0.6**
UNV	**Unalaska Valle**	**3.59**	**229**	*e*Pn	**Pn**	**16 23 40.4**	**-0.1**
UNV				*e*Sn	**Sn**	**16 24 23.3**	**-1.4**
OHAK	**Old Harbor**	**4.86**	**75**	*e*P	**Pn**	**16 23 54.9**	**-1.6**
NIKO	**Nikolski**	**5.21**	**233**	*e*Pn	**Pn**	**16 24 01.2**	**+0.2**
NIKO				*e*S	**Sn**	**16 25 01.1**	**-0.5**
KDAK	**Kodiak Island**	**5.33**	**70**	P	**Pn**	**16 24 01.9**	**-0.6**
KDAK	5.9nm,0.3s,baz=248,slow=6.2,SNR=90			S	**Sn**	**16 24 59.8**	**-4.5**
	3.8nm,0.3s,baz=9.7,slow=24,SNR=15						
SVW2	**Sparrevohn**	**5.84**	**32**	*e*P	**Pn**	**16 24 09.9**	**+0.8**
RSO	**Redoubt South**	**6.39**	**45**	*e*Pn	**Pn**	**16 24 17.2**	**+1.1**
RSO				*e*S	**Sn**	**16 25 31.1**	**+2.1**
TTA	**Tatalina**	**7.30**	**22**	*e*P	**Pn**	**16 24 29.7**	**+1.7**
SEW	**Seward**	**7.62**	**55**	*e*Pn	**Pn**	**16 24 30.9**	**-1.3**
RC01	**Rabbit Creek A**	**7.96**	**48**	*e*Pn	**Pn**	**16 24 36.1**	**-0.6**
RC01	46nm,0.7s 5.5nm,0.3s			*e*S	**Sn**	**16 25 59.6**	**-6.6**
PPLA	**Purkeypile**	**8.26**	**33**	*e*Pn	**Pn**	**16 24 42.3**	**+1.8**
CHUM	**Lake Minchumin**	**8.99**	**28**	*e*Pn	**Pn**	**16 24 50.2**	**+0.2**
KTH	**Kantishna Hill**	**9.13**	**33**	*e*Pn	**Pn**	**16 24 53.0**	**+1.1**
TRF	**Thorofare Moun**	**9.25**	**34**	*e*Pn	**Pn**	**16 24 51.6**	**-1.9**
TRF	6.1nm,0.8s			*e*S	**Sn**	**16 26 35.2**	**-1.5**
BPAW	**Bear Paw Mtn.**	**9.52**	**30**	*e*Pn	**Pn**	**16 24 57.4**	**+0.4**
BMRM	**Bremner River**	**10.17**	**56**	*e*Pn	**Pn**	**16 25 02.7**	**-2.7**
PAX	**Paxson**	**10.67**	**44**	*e*Pn	**Pn**	**16 25 10.1**	**-1.7**
PAX	3.2nm,0.7s			*e*S	**Sn**	**16 27 03.8**	**-6.7**
MENT	**Mentasta**	**11.35**	**47**	*e*Pn	**Pn**	**16 25 19.6**	**-1.0**
AMKA	**Amchitka**	**12.10**	**254**	*e*P	**Pn**	**16 25 29.9**	**-0.4**
COLD	**Coldfoot**	**12.26**	**22**	*e*Pn	**Pn**	**16 25 32.8**	**+0.6**
PNL	**Peninsula**	**12.42**	**65**	*e*Pn	**Pn**	**16 25 32.6**	**-1.6**
EGAK	**Eagle**	**13.23**	**42**	*e*Pn	**Pn**	**16 25 44.2**	**-0.3**
FX1	**Attu Island--F**	**14.79**	**267**	P	**Pn**	**16 26 04.8**	**+1.0**
DLBC	**Dease Lake**	**17.27**	**70**	P	**Pn**	**16 26 33.0**	**-0.6**
INK	**Inuvik**	**17.64**	**36**	P	**Pn**	**16 26 34.1**	**-3.8**
YKA	**Yellowknife Ar**	**24.40**	**56**	P	**P**	**16 27 45.2**	**+0.9**
YKA	**Yellowknife Ar**	**24.40**	**56**	P	**P**	**16 27 45.2**	**+0.9**
NVAR	**Mina Array Bea**	**33.84**	**103**	P	**P**	**16 29 09.6**	**+1.8**
PDAR	**Pinedale Array**	**35.70**	**90**	P	**P**	**16 29 24.4**	**+0.6**
TXAR	**Lajitas Array**	**48.67**	**98**	P	**P**	**16 31 08.9**	**+0.4**
ZALV	**Zalesovo Beam**	**57.33**	**320**	LR	LR	16 56 59.0	

*ZUR **21** 17:27:59.9, 46°.56N×10°.57E, h10km±2km, ML2.1/5*
*CSEM **21** 17:27:59.7±0.1, 46°.58N×10°.59E, h10km, ML2.8/15, Error ellipse: s-maj=2.0km s-min=1.4km az=164.0*
*VIE **21** 17:27:59.7±0.1, 46°.58N×10°.59E, h10km±1km, mb2.2/9, ML2.3/12, Error ellipse: s-maj=1.6km s-min=0.8km az=158.0 10 km SSE of Glorenza*
*ISCJB **21** 17:27:59.5±0.3, 46°.57N±0°.02×10°.61E±0°.02, h4km±5km, Error ellipse: s-maj=3.2km s-min=2.4km az=173.4*
*ROM **21** 17:28:00.1±0.2, 46°.55N×10°.55E, h10km±1km, Md2.4/14, Ml2.0/8, Error ellipse: s-maj=2.4km s-min=1.6km az=177.0*
*PRU **21** 17:28:04.3, 46°.68N×10°.78E, h0km*
ISC 21 17:28:00.1±0.3, 46°.58N±0°.02×10°.59E±0°.02, h7km±4km, n59, σ0§69/103, 11C-8D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRMO	**Bormio**	**0.18**	**236**	Pg	**Pg**	**17 28 04.1**	**+0.4**
BRMO	485nm,0.1s			Sg	**Sg**	**17 28 06.6**	**+0.4**
BRMO	**Bormio**	**0.18**	**236**	Pg	**Pg**	**17 28 04.1**	**+0.4**
BRMO	485nm,0.1s			Sg	**Sg**	**17 28 06.6**	**+0.4**
FUORN	**Ofenpass-Fuorn**	**0.23**	**281**	⇑*i*Pg	**Pg**	**17 28 05.2**	**+0.6**
FUORN	1μm,0.2s			*i* Sg	**Sg**	**17 28 08.4**	**+0.7**
FUORN	**Ofenpass-Fuorn**	**0.23**	**281**	⇑*i*Pg	**Pg**	**17 28 05.2**	**+0.6**
FUORN	1μm,0.2s			*i* Sg	**Sg**	**17 28 08.4**	**+0.7**
BERNI	**Berninapass**	**0.43**	**248**	Pg	**Pg**	**17 28 08.5**	**+0.2**
BERNI				Sg	**Sg**	**17 28 14.2**	**+0.3**
BERNI	**Berninapass**	**0.43**	**248**	⇑*i*Pg	**Pg**	**17 28 08.4**	**+0.1**
BERNI	**Berninapass**	**0.43**	**248**	Pg	**Pg**	**17 28 08.5**	**+0.2**
BERNI	286nm,0.1s			Sg	**Sg**	**17 28 14.2**	**+0.3**
APPI	**Appiano**	**0.45**	**102**	Pg	**Pg**	**17 28 09.3**	**+0.5**
APPI	180nm,0.2s			Sg	**Sg**	**17 28 15.4**	**+0.7**
APPI	**Appiano**	**0.45**	**102**	Pg	**Pg**	**17 28 09.3**	**+0.5**
APPI	180nm,0.2s			Sg	**Sg**	**17 28 15.4**	**+0.7**
FETA	**Feichten**	**0.45**	**12**	*e*Pg	**Pg**	**17 28 09.3**	**+0.5**
FETA	SNR=18			⇑*i*Sg	**Sg**	**17 28 15.2**	**+0.4**
FETA	**Feichten**	**0.45**	**12**	Pg	**Pg**	**17 28 09.3**	**+0.4**
FETA	SNR=18			Sg	**Sg**	**17 28 15.2**	**+0.4**
MABI	**Malga Bissina**	**0.53**	**186**	Pg	**Pg**	**17 28 10.3**	**+0.1**
MABI	66nm,0.1s			Sg	**Sg**	**17 28 16.6**	**-0.4**
MABI	**Malga Bissina**	**0.53**	**186**	Pg	**Pg**	**17 28 10.3**	**+0.1**
MABI	66nm,0.1s			Sg	**Sg**	**17 28 16.6**	**-0.4**
DAVOX	**Davos/Dischmat**	**0.53**	**293**	Pg	**Pg**	**17 28 10.5**	**+0.2**
DAVOX	238nm,0.5s			Sg	**Sg**	**17 28 17.8**	**+0.6**
DAVOX	**Davos/Dischmat**	**0.53**	**293**	⇑*i*Pg	**Pg**	**17 28 10.4**	**+0.1**
DAVOX	238nm,0.5s			*e*Sg	**Sg**	**17 28 17.7**	**+0.5**
DAVOX	**Davos/Dischmat**	**0.53**	**293**	Pg	**Pg**	**17 28 10.5**	**+0.2**
DAVOX	238nm,0.5s			*e*Sg	**Sg**	**17 28 17.7**	**+0.5**
VDL	**Val di Lei**	**0.79**	**264**	*e*Pg	**Pg**	**17 28 14.6**	**-0.7**
MAGA	**Magasa**	**0.80**	**178**	Pg	**Pg**	**17 28 15.8**	**+0.3**
MAGA	126nm,0.3s			Sg	**Sg**	**17 28 25.3**	**-0.6**
MAGA	**Magasa**	**0.80**	**178**	Pg	**Pg**	**17 28 15.8**	**+0.3**
MAGA	126nm,0.3s			Sg	**Sg**	**17 28 25.3**	**-0.6**
MOTA	**Moosalm**	**0.84**	**24**	⇑*e*Pg	**Pg**	**17 28 16.4**	**+0.1**
MOTA	SNR=18			⇑*i*Sg	**Sg**	**17 28 27.8**	**+0.5**
MOTA	**Moosalm**	**0.84**	**24**	Pg	**Pg**	**17 28 16.4**	**+0.1**
MOTA	SNR=18			Sg	**Sg**	**17 28 27.8**	**+0.5**
DAVA	**Damuels**	**0.86**	**326**	⇑*i*Pg	**Pg**	**17 28 16.4**	**-0.2**
DAVA	**Damuels**	**0.86**	**326**	Pg	**Pg**	**17 28 16.4**	**-0.2**
TUE	**Stuetta**	**0.86**	**263**	Pg	**Pg**	**17 28 15.9**	**-0.8**
TUE	27nm,0.2s			Sg	**Sg**	**17 28 27.8**	**-0.1**
TUE	**Stuetta**	**0.86**	**263**	Pg	**Pg**	**17 28 15.9**	**-0.8**
TUE	27nm,0.2s			Sg	**Sg**	**17 28 27.8**	**-0.1**
CTI	**Castel Tesino**	**0.91**	**125**	Pg	**Pg**	**17 28 17.4**	**0.0**
CTI	87nm,3.2s			Sg	**Sg**	**17 28 29.7**	**+0.5**
CTI	**Castel Tesino**	**0.91**	**125**	Pg	**Pg**	**17 28 17.4**	**0.0**
CTI	87nm,3.2s			Sg	**Sg**	**17 28 29.7**	**+0.5**
WTTA	**Wattenberg**	**0.99**	**46**	⇓*i*Pg	**Pg**	**17 28 19.0**	**-0.1**
WTTA	7.3nm,0.3s			⇓*i*Sg	**Sg**	**17 28 32.9**	**+0.9**
WTTA	**Wattenberg**	**0.99**	**46**	Pg	**Pg**	**17 28 19.0**	**-0.1**
WTTA	7.3nm,0.3s			Sg	**Sg**	**17 28 32.9**	**+0.9**
MDI	**Monti di Nese**	**1.01**	**218**	Pg	**Pg**	**17 28 19.4**	**0.0**
MDI	**Monti di Nese**	**1.01**	**218**	Pg	**Pg**	**17 28 19.4**	**0.0**
WATA	**Walderalm**	**1.01**	**41**	⇓*i*Pg	**Pg**	**17 28 19.6**	**0.0**
WATA	3.8nm,0.2s			⇑*i*Sg	**Sg**	**17 28 33.7**	**+1.0**
WATA	**Walderalm**	**1.01**	**41**	Pg	**Pg**	**17 28 19.6**	**0.0**
WATA	3.8nm,0.2s			Sg	**Sg**	**17 28 33.7**	**+1.0**
CGRP	**Cima Grappa**	**1.09**	**129**	*e*Pg	**Pg**	**17 28 21.6**	**+0.5**
CGRP				*e*Sg	**Sg**	**17 28 35.5**	**+0.3**
CGRP	**Cima Grappa**	**1.09**	**129**	*e*Pg	**Pg**	**17 28 21.5**	**+0.5**
CGRP				*e*Sg	**Sg**	**17 28 35.5**	**+0.4**
SEST	**Monte Rota**	**1.13**	**81**	Pg	**Pg**	**17 28 22.0**	**+0.2**
SEST				Sg	**Sg**	**17 28 36.1**	**-0.4**
SEST	**Monte Rota**	**1.13**	**81**	Pg	**Pg**	**17 28 22.0**	**+0.2**
SEST				Sg	**Sg**	**17 28 36.1**	**-0.4**
VARN	**Col Varnada, M**	**1.20**	**119**	*e*Pg	**Pg**	**17 28 23.1**	**0.0**
VARN				*e*Sg	**Sg**	**17 28 39.2**	**+0.5**
VARN	**Col Varnada, M**	**1.20**	**119**	*e*Pg	**Pg**	**17 28 23.1**	**0.0**
VARN				*e*Sg	**Sg**	**17 28 39.2**	**+0.5**
MUGIO	**Muggio**	**1.26**	**239**	⇓*i*P	**Pn**	**17 28 23.3**	**-0.8**
MUGIO	**Muggio**	**1.26**	**239**	⇓*i*P	**Pn**	**17 28 23.3**	**-0.8**
CIMO	**Cimolais**	**1.31**	**101**	⇑*e*Pg	**Pg**	**17 28 24.8**	**-0.4**
CIMO				*e*Sg	**Sg**	**17 28 41.4**	**-0.7**
CIMO	**Cimolais**	**1.31**	**101**	*e*Pg	**Pg**	**17 28 24.8**	**-0.3**
CIMO				*e*Sg	**Sg**	**17 28 41.4**	**-0.6**
ABTA	**Abfaltersbach**	**1.33**	**82**	⇓*e*Pg	**Pg**	**17 28 25.1**	**-0.5**
ABTA	SNR=19			⇑*i*Sn	**Sn**	**17 28 43.2**	**0.0**
ABTA	**Abfaltersbach**	**1.33**	**82**	Pg	**Pg**	**17 28 25.1**	**-0.6**
ABTA	SNR=19			Sn	**Sn**	**17 28 43.2**	**+0.1**
VAI	**Varese**	**1.45**	**241**	Pg	**Pg**	**17 28 27.4**	**-0.5**
VAI	**Varese**	**1.45**	**241**	Pg	**Pg**	**17 28 27.4**	**-0.5**
FVI	**Forni Avoltri**	**1.51**	**88**	Pg	**Pg**	**17 28 28.3**	**-0.7**
FVI	14nm,0.2s			Sg	**Sg**	**17 28 48.8**	**+0.2**
FVI	**Forni Avoltri**	**1.51**	**88**	Pg	**Pg**	**17 28 28.3**	**-0.7**
FVI	14nm,0.2s			Sg	**Sg**	**17 28 48.8**	**+0.2**
VINO	**Villanova**	**1.89**	**99**	*e*Pg	**Pg**	**17 28 35.6**	**-0.7**
VINO	**Villanova**	**1.89**	**99**	*e*Pg	**Pg**	**17 28 35.6**	**-0.7**
PTCC	**Patocco-Chiusa**	**1.92**	**94**	Pg	**Pb**	**17 28 35.5**	**+0.2**
PTCC	**Patocco-Chiusa**	**1.92**	**94**	Pg	**Pb**	**17 28 35.5**	**+0.2**
KBA	**Koelnbreinsper**	**1.96**	**74**	⇓*e*Pn	**Pn**	**17 28 33.1**	**-0.6**
KBA	SNR=6.8			⇓*i*Sn	**Sn**	**17 28 58.8**	**+0.3**
KBA	**Koelnbreinsper**	**1.96**	**74**	Pn	**Pn**	**17 28 33.1**	**-0.6**
KBA	SNR=6.8			Sn	**Sn**	**17 28 58.8**	**+0.3**
KHC	**Kasperske Hory**	**3.25**	**37**	*e*PN	**Pn**	**17 28 54.9**	**+3.4**
KHC				*e*PG	**Pg**	**17 29 00.4**	**-2.0**
KHC				*e*SN	**Sn**	**17 29 31.8**	**+1.4**
KHC				*e*SG	**Sg**	**17 29 42.1**	**-2.4**
KHC	**Kasperske Hory**	**3.25**	**37**	Pn	**Pn**	**17 28 54.9**	**+3.4**
NKC	**Novy Kostel**	**3.86**	**18**	*e*SG	**Sg**	**17 30 02.6**	**-1.4**
NKC	**Novy Kostel**	**3.86**	**18**	Sg	**Sg**	**17 30 02.6**	**-1.4**

*IDC **21** 17:28:30.6±2.1, 1°.91N×127°.36E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.5/18, mbtmp3.8/4, Error ellipse: s-maj=180.0km s-min=24.1km az=66.0*
*DJA **21** 17:28:32, 1°.26N×127°.42E, h167km, MLv4.1/7*
*ISCJB **21** 17:28:39.8±0.9, 1°.70N±0°.09×127°.0E±0°.1, h90km±9km, mb3.7/4, Error ellipse: s-maj=21.3km s-min=10.1km az=146.6*
ISC 21 17:28:40.9±0.8, 1°.69N±0°.08×127°.0E±0°.1, h83km±9km, n12, σ0§97/14, mb3.7/4, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.97**	**160**	P	**Pn**	**17 28 59.5**	**-0.4**
TNTI				S	**Sn**	**17 29 14.6**	**+0.5**
MNI	**Manado**	**2.20**	**264**	P	**Pn**	**17 29 15.9**	**+0.3**
SGSI	**Sangihe**	**2.48**	**323**	P	**Pn**	**17 29 20.9**	**+1.5**
KMSI	**Cibinong**	**3.24**	**250**	P	**Pn**	**17 29 28.4**	**-1.2**
KMSI				S	**Sn**	**17 30 10.7**	**+3.4**
LUWI	**Luwuk**	**5.05**	**237**	P	**Pn**	**17 29 46.5**	**-7.7**
MRSI	**Marisa**	**5.23**	**257**	P	**Pn**	**17 29 52.6**	**-4.0**
DAV	**Davao City (W)**	**5.53**	**345**	P	**Pn**	**17 29 59.6**	**-1.2**
TTSI	**Tana Toraja**	**8.61**	**237**	P	**Pn**	**17 30 35.1**	**-7.7**
WRA	**Warramunga Arr**	**22.66**	**162**	P	**P**	**17 33 35.1**	**-0.3**
ASAR	**Alice Springs**	**26.08**	**166**	P	**P**	**17 34 07.5**	**+0.7**
STKA	**Stephens Creek**	**36.13**	**159**	P	**P**	**17 35 34.7**	**-0.4**
MKAR	**Makanchi Array**	**59.39**	**326**	P	**P**	**17 38 35.1**	**+0.5**

IDC 21 17:31:59.2±1.2, 31°.78N×104°.61E, h0km, mb3.5/4, mb1 3.6/5, mb1mx3.3/25, mbtmp3.4/5, ML3.1/1, Error ellipse: s-maj=94.0km s-min=20.5km az=60.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.22**	**202**	Pn	Pn	17 35 27.0	+5.1
SONM	**Songino Array**	**16.09**	**4**	Pn	Pn	17 35 47.2	+0.5
MKAR	**Makanchi Array**	**22.76**	**318**	P	P	17 37 03.0	0.0
ZALV	**Zalesovo Beam**	**26.31**	**333**	P	P	17 37 36.4	+0.1
WRA	**Warramunga Arr**	**58.80**	**147**	P	P	17 41 59.5	+0.2
ASAR	**Alice Springs**	**61.85**	**149**	P	P	17 42 20.1	-0.1

0.2nm,0.4s,mb4.0,baz=330,slow=10,SNR=6.6
0.8nm,0.4s,mb3.5,baz=112,slow=7.9,SNR=5.8
0.3nm,0.9s,baz=334,slow=7.4,SNR=3.4
1.3nm,0.7s,baz=137,slow=9.4,SNR=6.5
0.6nm,0.8s,baz=339,slow=7.2,SNR=3.1

*IDC **21** 17:40:19.6±1.1, 31°.10N×103°.93E, h0km, mb3.4/6, mb1 3.6/6, mb1mx3.4/22, mbtmp3.5/6, Error ellipse: s-maj=46.2km s-min=19.7km az=53.0*
*ISCJB **21** 17:40:19.9±0.7, 31°.29N±0°.05×104°.10E±0°.07, h10km, mb3.4/5, Error ellipse: s-maj=9.0km s-min=6.9km az=12.3*
ISC 21 17:40:21.4±0.7, 31°.19N±0°.04×103°.98E±0°.07, h10km, n9, σ1§03/15, mb3.4/5, Sichuan

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

*ISCJB **21** 17:47:57.1±0.9, 46°.89N×0°.10×156°.3E±0°.1, h33km, mb3.9/11, Error ellipse: s-maj=18.0km s-min=8.6km az=44.0*
*MOS **21** 17:47:58.6±2.2, 46°.96N×155°.97E, h42km, mb4.3/6, Error ellipse: s-maj=15.1km s-min=10.2km az=75.0*

ISC 21 17:47:60.0±0.9, 46°.93N±0°.10×156°.2E±0°.1, h35km, n29, σ1§25/35, mb3.9/11, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.76**	**359**	*e*PN	**Pn**	**17 48 53.5**	**-1.9**
SKR				pmax	pmax		
	comp=Z,40nm,0.5s						
SKR				pmax	pmax		
	comp=N,50nm,0.3s						
KUR	**Kuril'sk**	**6.06**	**257**	PN	**Pn**	**17 49 23.0**	**-4.1**
KUR				pmax	pmax		
	comp=Z,40nm,0.5s						
PEA0B	**Petropavlovsk-**	**6.26**	**8**	*e*Pn	**Pn**	**17 49 29.8**	**+0.1**
PEA0B				*e*Sn	**Sn**	**17 50 45.4**	**+5.5**
PETK	**Petropavlovsk-**	**6.26**	**8**	Pn	**Pn**	**17 49 29.2**	**-0.5**
	comp=Z,2.0nm,0.3s,baz=180,slow=12,SNR=45						
PETK				Sn	**Sn**	**17 50 46.8**	**+6.9**
	comp=Z,0.7nm,0.3s,baz=257,slow=18,SNR=6.3						
PETK	**Petropavlovsk-**	**6.26**	**8**	*e*PN	**Pn**	**17 49 29.2**	**-0.5**
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PET	**Petropavlovsk**	**6.30**	**13**	*e*PN	**Pn**	**17 49 28.5**	**-1.8**
PET	**Petropavlovsk**	**6.30**	**13**	*e*Pn	**Pn**	**17 49 27.4**	**-2.9**
	comp=Z,5.9nm,0.5s						
PET				*e*Sn	**Sn**	**17 50 35.8**	**-5.1**
YSS	**Yuzh-Sakhalins**	**9.23**	**275**	PN	**Pn**	**17 50 09.0**	**-1.4**
ASAJ	**Asahikawa**	**9.98**	**259**	Pn	**Pn**	**17 50 16.6**	**-4.2**
	comp=Z,0.1nm,0.3s,baz=124,slow=11,SNR=1.8						
ERM	**Erimo**	**10.56**	**247**	*e*PN	**Pn**	**17 50 27.6**	**-1.1**
FX1	**Attu Island--F**	**12.42**	**55**	Pn	**Pn**	**17 50 53.2**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=169,slow=5.2,SNR=2.5						
FX1				Sn	**Sn**	**17 53 04.4**	**-6.7**
	comp=Z,1.2nm,0.3s,baz=48,slow=20,SNR=6.7						
FX1				LR	LR	17 55 41.9	
	comp=Z,23nm,19.4s,baz=16,slow=37						
FX1	**Attu Island--F**	**12.42**	**55**	Pn	**Pn**	**17 50 53.2**	**-0.8**
FX1				Sn	**Sn**	**17 53 04.4**	**-6.7**
FX1				LR	LR	17 55 41.9	
BILL	**Bilibino**	**21.79**	**10**	*e*P	**P**	**17 52 51.1**	**+2.7**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.8						
TIXI	**Tiksi**	**27.94**	**342**	*e*P	**P**	**17 53 47.4**	**+0.9**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
TIXI	**Tiksi**	**27.94**	**342**	*e*P	**P**	**17 53 47.4**	**+0.9**
	comp=Z,2.2nm,0.6s,mb4.0						
HHC	**Hu-ho-hao-te**	**32.41**	**276**	*e*P	**P**	**17 54 26.5**	**+0.1**
HHC				pP	pP	17 54 30.9	-5.5
HHC				sP	sP	17 54 33.5	-7.2
HHC				PP	PP	17 55 34.3	-5.5
HHC				PcP	PcP	17 57 13.9	+0.9
HHC				S	**S**	**17 59 39.3**	**+1.0**
HHC				sS	sS	17 59 46.8	-8.2
HHC				ScP	ScP	18 00 56.5	+2.6
HHC				PcS	PcS	18 00 58.3	+0.3
HHC				SS	SS	18 01 34.6	-24
HHC				ScS	ScS	18 04 53.6	+0.5
HHC				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.0						
HHC				pmax	pmax		
	comp=Z,53nm,5.7s						
HHC				LR	LR		
	comp=N,85nm,15.5s						
HHC				LR	LR		
	comp=E,59nm,16.6s						
HHC				LR	LR		
	comp=Z,80nm,16.6s						
ZALV	**Zalesovo Beam**	**44.24**	**307**	P	**P**	**17 56 06.8**	**+1.3**
	comp=Z,0.3nm,0.3s,mb3.5,baz=98,slow=7.9,SNR=3.0						
MKAR	**Makanchi Array**	**48.75**	**299**	P	**P**	**17 56 41.2**	**+0.3**
	comp=Z,0.1nm,0.5s,mb3.1,baz=57,slow=6.6,SNR=3.1						
KURK	**Kurchatov**	**49.04**	**305**	P	**P**	**17 56 44.3**	**+1.2**
	comp=Z,1.7nm,0.6s,mb4.2,baz=68,slow=8.5,SNR=18						
KURK	**Kurchatov**	**49.04**	**305**	*e*P	**P**	**17 56 43.2**	**+0.1**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
KURK	**Kurchatov**	**49.04**	**305**	*e*P	**P**	**17 56 43.2**	**+0.1**
	comp=Z,3.0nm,0.8s,mb4.4						
BVAR	**Borovoye Array**	**52.39**	**310**	P	**P**	**17 57 08.3**	**0.0**
	comp=Z,0.8nm,0.3s,mb4.1,baz=69,slow=8.2,SNR=12						
BVAR	**Borovoye Array**	**52.39**	**310**	P	**P**	**17 57 08.3**	**0.0**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**54.50**	**259**	P	**P**	**17 57 24.4**	**+0.2**
	comp=Z,0.3nm,0.4s,mb3.7,baz=40,slow=7.2,SNR=3.0						
FINES	**FINESS Array B**	**64.77**	**336**	P	**P**	**17 58 36.4**	**+2.1**
	comp=Z,2.9nm,0.9s,mb4.3,baz=35,slow=7.2,SNR=9.5						
FINES	**FINESS Array B**	**64.77**	**336**	P	**P**	**17 58 36.4**	**+2.0**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ASAR	**Alice Springs**	**73.10**	**201**	P	**P**	**17 59 25.9**	**-0.6**
	comp=Z,0.4nm,0.7s,mb3.5,baz=17,slow=6.2,SNR=7.8						
TXAR	**Lajitas Array**	**75.52**	**63**	P	**P**	**17 59 44.0**	**+3.2**
	comp=Z,0.9nm,0.5s,mb4.0,baz=304,slow=4.7,SNR=18						
TXAR	**Lajitas Array**	**75.52**	**63**	P	**P**	**17 59 44.0**	**+3.2**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						

GUC 21 17:54:59.0±0.6, 33°.18S×70°.32W, h15km±14km, MD3.6, ML2.3, 1C-3D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FCH	**Farellones**	**0.15**	**169**	↑*i*P	Pg	17 55 02.7	-0.2
FCH				*i* S	Sg	17 55 05.6	0.0
FCH				AML	AML	17 55 06.4	
	comp=E,2μm,0.3s						
PEL	**Peldehue**	**0.30**	**277**	↓↓*i*P	Pg	17 55 05.1	-0.3
PEL				*i* S	Sg	17 55 09.8	+0.2
PEL				AML	AML	17 55 10.8	
	comp=N,393nm,0.4s						
CHCH	**Chadas Angostu**	**0.80**	**200**	*e*P	Pg	17 55 13.7	-0.8
CACH	**El Canelo**	**0.96**	**194**	↓↓*i*P	Pb	17 55 17.6	+0.2
CACH				*i* S	Sb	17 55 31.7	+1.8
LNV	**Longovilo**	**1.19**	**229**	↓↓*i*P	Pn	17 55 20.8	-0.4
LNV				*i* S	Sb	17 55 37.3	+0.8

*TEH **21** 17:55:34.4, 34°.07N×45°.21E, h3km*
*KISR **21** 17:55:34.5±0.7, 33°.52N×44°.50E, h7km±999km, ML2.7*
*ISCJB **21** 17:55:35.4±1.2, 34°.04N±0°.04×45°.28E±0°.10, h10km, Error ellipse: s-maj=11.9km s-min=5.3km az=17.7*

ISC 21 17:55:35.7±1.2, 34°.09N±0°.04×45°.29E±0°.10, h10km, n9, σ0§89/14, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGHG	**Ghaleghazi**	**1.09**	**77**	*e*Pg	**Pg**	**17 55 55.1**	**-1.5**
IGHG				*e*		17 55 58.0	
	comp=Z,4μm,0.1s						
IGHG				*e*Sg	**Sg**	**17 56 10.9**	**+0.2**
IDHR	**Dehrash**	**1.09**	**56**	*e*Pg	**Pg**	**17 55 55.0**	**-1.7**
IDHR				*e*		17 56 13.3	
	comp=N,6μm,0.1s						
IVIS	**Veis**	**1.36**	**71**	*e*Pn	**Pn**	**17 56 00.4**	**-0.3**
IVIS				*e*		17 56 03.9	
	comp=Z,2μm,0.1s						
ILIN	**Lien**	**1.61**	**58**	*e*Sn	**Sn**	**17 56 27.2**	**+2.2**
ILIN				*e*Pn	**Pn**	**17 56 04.4**	**+0.2**
ILIN				*e*		17 56 32.5	
	comp=N,3μm,0.2s						
ITBZ	**Tabriz**	**4.20**	**9**	*e*Pn	**Pn**	**17 56 39.8**	**+0.1**
MIB	**Mutribah**	**4.61**	**157**	*e*P	**Pn**	**17 56 46.0**	**+0.6**
MIB				*e*S	**Sn**	**17 57 39.4**	**+0.4**
MIB				AML	AML	17 57 45.2	
	comp=Z,7.1nm,0.6s						
IPIR	**Pirpir**	**4.89**	**105**	*e*Pn	**Pn**	**17 56 49.7**	**+0.5**
NAY	**Al-Naaiem**	**5.10**	**160**	*e*P	**Pn**	**17 56 51.9**	**-0.2**
NAY				*e*S	**Sn**	**17 57 50.1**	**-1.0**
NAY				AML	AML	17 57 51.9	
	comp=Z,2.6nm,0.5s						
RDF	**Al-Radifah**	**5.49**	**159**	*e*P	**Pn**	**17 56 58.1**	**+0.6**
RDF				*e*S	**Sn**	**17 58 00.9**	**+0.1**
RDF				AML	AML	17 58 03.0	
	comp=Z,7.9nm,0.3s						

*NEIC **21** 17:59:47.0, 29°.78N×30°.64E, h6km, mb3.9/6, MD4.3(GII), ML4.0(HLW), After HLW.*
NEIC Felt at Cairo.
*IDC **21** 17:59:46.8±2.5, 29°.94N×30°.65E, h0km, mb3.7/7, mb1 3.9/12, mb1mx3.7/27, mbtmp3.8/12, ML4.1/4, MS3.6/1, Ms1 3.5/1, ms1mx2.3/31, Error ellipse: s-maj=43.0km s-min=15.6km az=16.0*
*ISCJB **21** 17:59:46.1±0.6, 29°.85N±0°.03×30°.58E±0°.03, h20km±5km, mb3.7/10, Error ellipse: s-maj=5.9km s-min=4.6km az=175.7*
*GII **21** 17:59:47.7±0.0, 29°.90N×30°.76E, h1km, Mb4.4/4, Md4.3/4*
*CSEM **21** 17:59:47.0, 29°.78N×30°.64E, h6km, mb3.9/6, After NEIC*

ISC 21 17:59:46.5±0.8, 29°.83N±0°.04×30°.61E±0°.03, h8km±5km, n126, σ0§78/146, mb3.7/10, Egypt

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMYD	**Mayadein**	**0.17**	**100**	P	**Pg**	**17 59 50.3**	**+0.3**
HMYD	**Mayadein**	**0.17**	**100**	P	**Pg**	**17 59 50.3**	**+0.2**
AYT	**Al 'Ayyat**	**0.49**	**104**	P	**Pg**	**17 59 56.0**	**0.0**
AYT	**Al 'Ayyat**	**0.49**	**104**	P	**Pg**	**17 59 56.0**	**0.0**
SQR		**0.52**	**84**	P	**Pg**	**17 59 56.7**	**+0.2**
SQR		**0.52**	**84**	P	**Pg**	**17 59 56.7**	**+0.2**
GLL	**Jalalah**	**0.99**	**104**	P	**Pg**	**18 00 04.6**	**-0.9**
GLL	**Jalalah**	**0.99**	**104**	P	**Pg**	**18 00 04.6**	**-0.9**
KOT	**Kottamia**	**1.07**	**84**	P	**Pg**	**18 00 06.2**	**-0.8**
KOT				S	**Sg**	**18 00 21.6**	**+0.7**
KOT	**Kottamia**	**1.07**	**84**	P	**Pg**	**18 00 06.2**	**-0.8**
KOT				S	**Sg**	**18 00 21.6**	**+0.7**
HHAG	**Hagoal**	**1.30**	**84**	P	**Pn**	**18 00 10.6**	**-0.4**
HHAG				S	**Sb**	**18 00 29.2**	**+1.1**
HHAG	**Hagoal**	**1.30**	**84**	P	**Pn**	**18 00 10.6**	**-0.5**
HHAG				S	**Sb**	**18 00 29.2**	**+1.0**
ZAF		**1.78**	**107**	P	**Pn**	**18 00 17.6**	**+0.1**
ZAF		**1.78**	**107**	P	**Pn**	**18 00 17.6**	**0.0**
AWBH		**2.11**	**225**	P	**Pn**	**18 00 21.1**	**-1.2**
AWBH		**2.11**	**225**	P	**Pn**	**18 00 21.1**	**-1.1**
GRB	**Gharib**	**2.46**	**129**	P	**Pn**	**18 00 26.5**	**-0.5**
GRB	**Gharib**	**2.46**	**129**	P	**Pn**	**18 00 26.5**	**-0.5**
HFRF	**Wahat Farafira**	**3.35**	**218**	P	**Pn**	**18 00 39.1**	**-0.1**
HFRF	**Wahat Farafira**	**3.35**	**218**	P	**Pn**	**18 00 39.1**	**-0.1**
KZIT	**Kziot**	**3.45**	**71**	Pn	**Pn**	**18 00 40.3**	**-0.3**
KZIT	**Kziot**	**3.45**	**71**	Pn	**Pn**	**18 00 40.3**	**-0.3**
KZIT	**Kziot**	**3.45**	**71**	Pn	**Pn**	**18 00 40.3**	**-0.3**
KRMI	**Paran Flat**	**3.58**	**84**	Pn	**Pn**	**18 00 41.7**	**-0.8**
KRMI	**Paran Flat**	**3.58**	**84**	Pn	**Pn**	**18 00 41.7**	**-0.8**
KRMI	**Paran Flat**	**3.58**	**84**	Pn	**Pn**	**18 00 41.7**	**-0.8**
HBST	**Basata**	**3.65**	**99**	P	**Pn**	**18 00 42.2**	**-1.1**
HBST	**Basata**	**3.65**	**99**	P	**Pn**	**18 00 42.2**	**-1.1**
HDHB	**Dhahab**	**3.67**	**106**	P	**Pn**	**18 00 43.8**	**+0.1**
HDHB	**Dhahab**	**3.67**	**106**	P	**Pn**	**18 00 43.8**	**+0.1**
RMNI	**Mount Ramon**	**3.68**	**77**	Pn	**Pn**	**18 00 44.3**	**+0.6**
RMNI	**Mount Ramon**	**3.68**	**77**	Pn	**Pn**	**18 00 44.3**	**+0.6**
RMNI	**Mount Ramon**	**3.68**	**77**	Pn	**Pn**	**18 00 44.3**	**+0.6**
RTMI	**Retamim**	**3.73**	**70**	Pn	**Pn**	**18 00 44.6**	**+0.1**
RTMI	**Retamim**	**3.73**	**70**	Pn	**Pn**	**18 00 44.6**	**+0.1**
RTMI	**Retamim**	**3.73**	**70**	Pn	**Pn**	**18 00 44.6**	**+0.1**
MBRI	**Mt Berech**	**3.74**	**89**	Pn	**Pn**	**18 00 45.7**	**+1.1**
EIL	**Elat**	**3.78**	**91**	Pn	**Pn**	**18 00 45.0**	**-0.2**
	0.6nm,0.3s,baz=296,slow=14,SNR=8.7						
EIL				Pg	**Pb**	**18 00 53.8**	**+0.3**
	10nm,0.3s,baz=288,slow=11,SNR=40						
EIL				Lg		18 01 46.0	
	25nm,0.3s,baz=50,slow=20,SNR=7.9						
EIL	**Elat**	**3.78**	**91**	Pn	**Pn**	**18 00 45.0**	**-0.2**
EIL				Pg	**Pb**	**18 00 53.8**	**+0.3**
EIL				Lg		18 01 46.0	
EIL	**Elat**	**3.78**	**91**	Pn	**Pn**	**18 00 45.0**	**-0.2**
EIL	**Elat**	**3.78**	**91**	Pg	**Pb**	**18 00 53.8**	**+0.2**
PRNI	**Paran**	**3.85**	**81**	Pn	**Pn**	**18 00 45.7**	**-0.4**
PRNI	**Paran**	**3.85**	**81**	Pn	**Pn**	**18 00 45.7**	**-0.4**
PRNI	**Paran**	**3.85**	**81**	Pn	**Pn**	**18 00 45.7**	**-0.4**
HRFI	**Mount Harif**	**3.85**	**86**	Pn	**Pn**	**18 00 46.4**	**+0.3**
HRFI	**Mount Harif**	**3.85**	**86**	Pn	**Pn**	**18 00 46.4**	**+0.3**
HRFI	**Mount Harif**	**3.85**	**86**	Pn	**Pn**	**18 00 46.4**	**+0.3**
AQBJ	**Aqaba**	**3.86**	**90**	Pn	**Pn**	**18 00 47.0**	**+0.7**
GTR	**Jabal at Tayr**	**4.30**	**181**	P	**Pn**	**18 00 52.0**	**-0.3**
GTR	**Jabal at Tayr**	**4.30**	**181**	P	**Pn**	**18 00 52.0**	**-0.3**
SLTI	**Sal'it**	**4.50**	**57**	Pn	**Pn**	**18 00 54.7**	**-0.4**
SLTI				S	**Sn**	**18 01 47.4**	**-0.3**
SLTI	**Sal'it**	**4.50**	**57**	Pn	**Pn**	**18 00 54.7**	**-0.4**
SLTI				S	**Sn**	**18 01 47.4**	**-0.3**
SLTI	**Sal'it**	**4.50**	**57**	Pn	**Pn**	**18 00 54.7**	**-0.4**
SLTI				Sn	**Sn**	**18 01 47.4**	**-0.3**
OFRI	**'Ofer**	**4.67**	**52**	Pn	**Pn**	**18 00 57.2**	**-0.2**
OFRI	**'Ofer**	**4.67**	**52**	Pn	**Pn**	**18 00 57.2**	**-0.2**
OFRI	**'Ofer**	**4.67**	**52**	Pn	**Pn**	**18 00 57.2**	**-0.2**
HMDT	**Nahal Hemdat**	**4.87**	**59**	Pn	**Pn**	**18 01 00.2**	**+0.1**
HMDT				S	**Sn**	**18 01 57.4**	**+0.8**
HMDT	**Nahal Hemdat**	**4.87**	**59**	Pn	**Pn**	**18 01 00.2**	**+0.1**
HMDT				S	**Sn**	**18 01 57.4**	**+0.8**
HMDT	**Nahal Hemdat**	**4.87**	**59**	Pn	**Pn**	**18 01 00.2**	**+0.1**
HMDT				Sn	**Sn**	**18 01 57.4**	**+0.8**
MMLI	**Mount Malkishu**	**4.88**	**57**	Pn	**Pn**	**18 01 00.3**	**0.0**
MMLI				S	**Sn**	**18 01 56.1**	**-0.9**
MMLI	**Mount Malkishu**	**4.88**	**57**	Pn	**Pn**	**18 01 00.3**	**0.0**
MMLI				S	**Sn**	**18 01 56.1**	**-0.9**
MMLI	**Mount Malkishu**	**4.88**	**57**	Pn	**Pn**	**18 01 00.3**	**0.0**
MMLI				Sn	**Sn**	**18 01 56.1**	**-0.9**
MMAI	**Mount Meron Ar**	**5.19**	**51**	Pn	**Pn**	**18 01 04.2**	**-0.3**
	11nm,0.3s,baz=241,slow=12,SNR=51						
MMAI				Sn	**Sn**	**18 02 03.3**	**-1.3**
	14nm,0.3s,baz=240,slow=23,SNR=9.7						
MMA1	**Mount Meron ar**	**5.19**	**51**	Pn	**Pn**	**18 01 04.6**	**+0.1**
HEDF	**Idfu**	**5.24**	**154**	P	**Pn**	**18 01 04.7**	**-0.5**
HEDF	**Idfu**	**5.24**	**154**	P	**Pn**	**18 01 04.7**	**-0.5**
KSHT	**Keshet**	**5.45**	**53**	Pn	**Pn**	**18 01 07.9**	**-0.2**
KSHT	**Keshet**	**5.45**	**53**	Pn	**Pn**	**18 01 07.9**	**-0.2**
KSHT	**Keshet**	**5.45**	**53**	Pn	**Pn**	**18 01 07.9**	**-0.2**
KSDI	**Kefar Szold**	**5.46**	**51**	Pn	**Pn**	**18 01 08.1**	**-0.2**
KSDI	**Kefar Szold**	**5.46**	**51**	Pn	**Pn**	**18 01 08.1**	**-0.2**
KSDI	**Kefar Szold**	**5.46**	**51**	Pn	**Pn**	**18 01 08.1**	**-0.2**
HRI	**Mount Hermon**	**5.56**	**51**	Pn	**Pn**	**18 01 10.7**	**+1.1**
HRI	**Mount Hermon**	**5.56**	**51**	Pn	**Pn**	**18 01 10.7**	**+1.1**
HRI	**Mount Hermon**	**5.56**	**51**	Pn	**Pn**	**18 01 10.7**	**+1.1**
CSS	**Prodhromos**	**5.62**	**24**	Pn	**Pn**	**18 01 10.2**	**-0.1**
CSS				*e*Sn	**Sn**	**18 02 10.5**	**-4.6**
CSS	**Prodhromos**	**5.62**	**24**	Pn	**Pn**	**18 01 10.2**	**-0.2**
CSS				*e*Sn	**Sn**	**18 02 10.5**	**-4.6**
HADB		**5.71**	**140**	P	**Pn**	**18 01 11.7**	**+0.1**
HADB		**5.71**	**140**	P	**Pn**	**18 01 11.7**	**+0.1**
ASF	**Jabal al Asfar**	**5.88**	**65**	Pn	**Pn**	**18 01 14.1**	**0.0**
	1.0nm,0.3s,baz=85,slow=2.6,SNR=3.6						
ASF				Sn	**Sn**	**18 02 20.5**	**-1.3**
	1.0nm,0.3s,baz=94,slow=15,SNR=2.9						
ASF				Lg		18 02 53.4	
	1.7nm,0.3s,baz=277,slow=17,SNR=3.9						
LTBQ	**Tobruq**	**6.16**	**293**	*e*P	**Pn**	**18 01 13.1**	**-4.7**
	SNR=37						
HAGS	**Hagol**	**6.68**	**143**	P	**Pn**	**18 01 25.8**	**+0.7**
HAGS	**Hagol**	**6.68**	**143**	P	**Pn**	**18 01 25.8**	**+0.8**
IDI	**Anoyia**	**7.28**	**320**	Pn	**Pn**	**18 01 33.2**	**0.0**
	0.6nm,0.3s,baz=151,slow=18,SNR=4.9						
IDI				Sn	**Sn**	**18 02 56.0**	**+0.1**
	1.7nm,0.3s,baz=285,slow=19,SNR=4.2						
IDI	**Anoyia**	**7.28**	**320**	Pn	**Pn**	**18 01 33.2**	**0.0**
IDI				Sn	**Sn**	**18 02 56.0**	**0.0**
GVD	**Gavdhos**	**7.44**	**314**	Pn	**Pn**	**18 01 35.0**	**-0.5**
GVD	**Gavdhos**	**7.44**	**314**	Pn	**Pn**	**18 01 35.0**	**-0.5**
ISP	**Isparta**	**7.98**	**360**	Pn	**Pn**	**18 01 44.9**	**+2.1**
LKFR	**Kufra**	**8.68**	**231**	*e*P	Px	**18 02 17.3**	
	SNR=34						
BR131	**Keskin Array S**	**10.19**	**13**	Pn	**Pn**	**18 02 08.9**	**-4.1**
BR131	**Keskin Array S**	**10.19**	**13**	Pn	**Pn**	**18 02 08.9**	**-4.2**
TIP	**Timpagrande**	**14.73**	**313**	*e*Pn	**Pn**	**18 03 13.9**	**-1.3**
	5.3nm,0.8s						
MLR	**Muntele Rosu**	**16.06**	**348**	Pn	**Pn**	**18 03 32.9**	**+0.2**
	0.5nm,0.3s,baz=259,slow=5.2,SNR=2.8						
MLR	**Muntele Rosu**	**16.06**	**348**	Pn	**Pn**	**18 03 32.9**	**+0.2**
PSZ	**Piszkesteto**	**19.86**	**338**	*e*P	**Pn**	**18 04 18.3**	**-1.2**
	5.4nm,0.8s						
PSZ	**Piszkesteto**	**19.86**	**338**	*e*P	**Pn**	**18 04 18.8**	**-0.8**
PSZ	**Piszkesteto**	**19.86**	**338**	*e*P	**Pn**	**18 04 18.3**	**-1.3**
	5.4nm,0.8s						
KIEV	**Kiev**	**20.87**	**358**	*e*P	**P**	**18 04 28.4**	**-0.5**
	5.2nm,0.9s						
KIEV	**Kiev**	**20.87**	**358**	*e*P	**P**	**18 04 28.4**	**-0.5**
	5.2nm,0.9s						
AKASG	**Malin Array Be**	**20.88**	**358**	P	**P**	**18 04 28.8**	**-0.2**
	1.8nm,0.6s,baz=184,slow=9.0,SNR=8.1						
AKASG	**Malin Array Be**	**20.88**	**358**	P	**P**	**18 04 28.8**	**-0.2**
AKASG	**Malin Array Be**	**20.88**	**358**	P	**P**	**18 04 28.8**	**-0.2**
TAM	**Tamanrasset**	**23.52**	**259**	P	**P**	**18 05 00.1**	**+2.7**
	1.1nm,0.5s,mb3.5						
TAM	**Tamanrasset**	**23.52**	**259**	P	**P**	**18 05 00.1**	**+2.7**
	1.1nm,0.5s,mb3.5						
CLL	**Collm**	**25.16**	**333**	*e*P	**P**	**18 05 13.0**	**+0.9**
	4.0nm,1.1s,mb3.9						
CLL	**Collm**	**25.16**	**333**	*e*P	**P**	**18 05 13.0**	**+0.9**
	comp=Z,4.0nm,1.1s,mb3.9						
CLL	**Collm**	**25.16**	**333**	*e*P	**P**	**18 05 13.0**	**+0.9**
	comp=Z,4.0nm,1.1s,mb3.9						
ABKAR	**Akbulak array**	**29.52**	**41**	*e*P	**P**	**18 05 51.5**	**+0.2**
	comp=Z,0.5nm,0.5s,mb3.5						
ABKAR	**Akbulak array**	**29.52**	**41**	*e*P	**P**	**18 05 51.5**	**+0.2**
	comp=Z,0.5nm,0.5s,mb3.5						
BRVK	**Borovoye**	**37.04**	**40**	*e*P	**P**	**18 06 56.8**	**0.0**
	comp=Z,1.7nm,0.7s,mb4.0						
BRVK	**Borovoye**	**37.04**	**40**	*e*P	**P**	**18 06 56.8**	**+0.1**
	comp=Z,1.7nm,0.7s,mb4.0						
BVAR	**Borovoye Array**	**37.09**	**40**	P	**P**	**18 06 56.8**	**-0.3**
	comp=Z,1.0nm,0.8s,mb3.7,baz=243,slow=6.0,SNR=5.9						
BVAR	**Borovoye Array**	**37.09**	**40**	P	**P**	**18 06 56.8**	**-0.3**
ARCES	**ARCESS Array B**	**39.86**	**357**	P	**P**	**18 07 20.7**	**+0.4**
	comp=Z,2.9nm,0.8s,mb4.0,baz=173,slow=8.0,SNR=4.3						
ARCES	**ARCESS Array B**	**39.86**	**357**	P	**P**	**18 07 20.7**	**+0.5**
KURK	**Kurchatov**	**41.28**	**46**	P	**P**	**18 07 32.0**	**-0.2**
	comp=Z,0.7nm,0.6s,mb3.5,baz=265,slow=8.6,SNR=5.5						
KURK	**Kurchatov**	**41.28**	**46**	P	**P**	**18 07 32.0**	**-0.2**
MK31	**Makanchi Array**	**43.14**	**52**	*e*P	**P**	**18 07 48.5**	**+1.0**
MK31	**Makanchi Array**	**43.14**	**52**	*e*P	**P**	**18 07 48.5**	**+1.1**
MKAR	**Makanchi Array**	**43.14**	**52**	P	**P**	**18 07 48.3**	**+0.9**
	comp=Z,0.6nm,0.7s,mb3.4,baz=259,slow=6.0,SNR=8.4						
MKAR	**Makanchi Array**	**43.14**	**52**	P	**P**	**18 07 48.3**	**+0.9**
ZALV	**Zalesovo Beam**	**45.61**	**42**	P	**P**	**18 08 09.4**	**+2.3**
	comp=Z,0.3nm,0.4s,mb3.5,baz=286,slow=10,SNR=2.6						
BOSA	**Boshof**	**58.34**	**186**	LR	LR	18 36 40.6	
	comp=Z,48nm,18.7s,baz=314,slow=38						
SONM	**Songino Array**	**59.38**	**49**	P	**P**	**18 09 50.4**	**+1.1**
	comp=Z,0.7nm,0.8s,mb3.8,baz=282,slow=7.4,SNR=6.7						
SONM	**Songino Array**	**59.38**	**49**	P	**P**	**18 09 50.4**	**+1.1**
HHC	**Hu-ho-hao-te**	**64.78**	**56**	*e*P	**P**	**18 10 24.0**	**-1.8**
HHC				pP	pP	18 10 28.8	+0.6
HHC				sP	sP	18 10 31.0	+1.9
HHC				PcP	PcP	18 10 58.1	-1.2
HHC				PP	PP	18 12 48.0	0.0
HHC				ScP		18 14 58.6	
HHC				PcS		18 15 01.1	
HHC				S	**S**	**18 19 02.1**	**-4.7**
HHC				sS	sS	18 19 08.8	-2.1
HHC				ScS	ScS	18 20 14.3	-6.6
HHC				SS	SS	18 23 12.6	-5.0
HHC				pmax	pmax		
	comp=Z,20nm,0.6s						
HHC				pmax	pmax		
	comp=Z,77nm,5.9s						
HHC				LR	LR		
	comp=N,63nm,16.6s						
HHC				LR	LR		
	comp=E,89nm,15.5s						
HHC				LR	LR		
	comp=Z,98nm,16.7s						

IDC 21 18:08:19.3±3.2, 2°.41S×140°.41E, h0km, mb3.7/4, mb1 4.0/5, mb1mx3.7/15, mbtmp3.8/5, ML4.2/1, MS3.3/1, Ms1 3.3/1, ms1mx2.7/19, Error ellipse: s-maj=111.4km s-min=25.0km az=94.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.41**	**198**	P	Pn	18 12 36.8	+0.6
	0.7nm,0.3s,baz

PGC 21 18:28:22.0±8.2, 51°.50N×131°.05W, h10km, ML3.1/11, Mw3.7, 22D, 225km Wsw of Bella Bella, Bc Queen Charlotte Islands Region, Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNB	**Barry Inlet**	**1.39**	**342**	⇓Pn	Pn	18 28 45.7	-1.8
BNB				⇓Sn	Sn	18 29 01.8	-4.1
HOLB	**Holberg**	**1.95**	**107**	⇑Pn	Pn	18 28 53.4	-1.7
HOLB				⇓Sn	Sn	18 29 16.0	-3.6
MOBC	**Moresby Island**	**1.98**	**344**	⇓Pn	Pn	18 28 54.4	-1.2
MOBC				⇑Sn	Sn	18 29 16.1	-4.2
DIB	**Dawson Inlet,**	**2.14**	**336**	⇑Pn	Pn	18 28 55.8	-2.0
DIB				⇑Sn	Sn	18 29 19.6	-4.8
PHC	**Port Hardy**	**2.35**	**102**	⇓Pn	Pn	18 28 58.3	-2.4
PHC				⇓Sn	Sn	18 29 25.4	-4.2
BPBC	**Brooks Peninsu**	**2.36**	**116**	⇑Pn	Pn	18 28 58.7	-2.0
MAYB	**Maynard**	**2.60**	**108**	⇑Pn	Pn	18 29 02.6	-1.5
MAYB				⇓Sn	Sn	18 29 33.1	-2.7
EDB	**Eliza Dome**	**2.86**	**117**	⇑Pn	Pn	18 29 06.4	-1.3
EDB				⇓Sn	Sn	18 29 39.0	-3.1
NDB	**Naden**	**2.94**	**338**	⇑Pn	Pn	18 29 07.5	-1.3
NDB				⇓Sn	Sn	18 29 41.1	-2.9
WOSB	**Woss**	**3.05**	**109**	⇓Pn	Pn	18 29 09.5	-0.8
ETB	**Estevan Point**	**3.45**	**121**	⇑Pn	Pn	18 29 14.4	-1.3
GDR	**Gold River**	**3.53**	**113**	⇓Pn	Pn	18 29 15.7	-1.1

MEX 21 19:19:51.2±1.3, 14°.01N×93°.33W, h15km±999km, MD4.4, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.36**	**49**	*i* P	Pn	19 20 11.7	-4.0
THIG				*e*S	Sn	19 20 28.5	-5.0
PCIG		**1.69**	**4**	*i* P	Pn	19 20 15.9	-4.2
PCIG				*e*S	Sn	19 20 36.2	-5.2
TGIG		**2.76**	**4**	*i* P	Pn	19 20 33.3	-1.6
TGIG				*e*S	Sn	19 21 04.5	-3.3

*IDC **21** 19:42:55.1±2.5, 59°.09N×152°.91W, h44km±30km, mb3.6/14, mb1 3.8/16, mb1mx3.7/26, mbtmp3.6/16, ML4.8/2, MS3.0/2, Ms1 3.1/2, ms1mx2.6/27, Error ellipse: s-maj=19.5km s-min=14.3km az=3.0*
*ISCJB **21** 19:42:55.8±0.4, 59°.04N±0°.03×152°.71W±0°.07, h77km±4km, mb3.9/17, Error ellipse: s-maj=5.9km s-min=5.3km az=44.5*
*NEIC **21** 19:42:58.0, 58°.97N×152°.61W, h61km, mb4.3/4, ML3.7(AEIC), After AEIC.*

ISC 21 19:42:57.1±0.4, 59°.02N±0°.03×152°.70W±0°.07, h69km±4km, n59, σ1=02/65, mb3.9/17, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUL	**Augustine Lava**	**0.53**	**314**	P	**Pn**	**19 43 10.7**	**+0.6**
AUL				S	**Sn**	**19 43 20.7**	**+1.1**
KDAK	**Kodiak Island**	**1.24**	**177**	P	**Pn**	**19 43 18.1**	**-0.4**
	144nm,0.3s,baz=20,slow=7.6,SNR=511						
KDAK				S	**Sn**	**19 43 33.1**	**-1.5**
	266nm,0.3s,baz=300,slow=20,SNR=41						
KDAK	**Kodiak Island**	**1.24**	**177**	P	**Pn**	**19 43 18.1**	**-0.4**
KDAK				S	**Sn**	**19 43 33.2**	**-1.4**
RSO	**Redoubt South**	**1.45**	**359**	*e*Pn	**Pn**	**19 43 22.0**	**+0.7**
OHAK	**Old Harbor**	**1.83**	**190**	P	**Pn**	**19 43 25.7**	**-0.6**
SLKM	**Skilak Lake**	**1.95**	**39**	P	**Pn**	**19 43 28.2**	**+0.2**
SEW	**Seward**	**1.98**	**55**	P	**Pn**	**19 43 28.0**	**-0.4**
SEW				S	**Sn**	**19 43 51.0**	**-1.2**
FIB	**Fire Island**	**2.50**	**29**	P	**Pn**	**19 43 37.2**	**+1.8**
SVW2	**Sparrevohn**	**2.54**	**327**	P	**Pn**	**19 43 36.3**	**+0.4**
RC01	**Rabbit Creek A**	**2.56**	**34**	P	**Pn**	**19 43 36.8**	**+0.7**
SKT	**Skwentna**	**3.03**	**11**	P	**Pn**	**19 43 42.8**	**+0.2**
PMR	**Palmer**	**3.13**	**33**	P	**Pn**	**19 43 44.0**	**0.0**
MID	**Middleton Isla**	**3.29**	**80**	P	**Pn**	**19 43 45.6**	**-0.6**
SML	**Sawmill**	**3.54**	**36**	P	**Pn**	**19 43 49.6**	**+0.1**
EYAK	**Cordova Ski Ar**	**3.83**	**63**	P	**Pn**	**19 43 53.1**	**-0.4**
PPLA	**Purkeypile**	**3.90**	**3**	P	**Pn**	**19 43 54.5**	**0.0**
DIV	**Divide**	**4.07**	**56**	P	**Pn**	**19 43 56.4**	**-0.2**
CHGN	**Chignik**	**4.10**	**231**	*e*Pn	**Pn**	**19 43 57.1**	**-0.1**
TT01	**Tatalina**	**4.22**	**339**	P	**Pn**	**19 43 59.0**	**+0.2**
TTA	**Tatalina**	**4.25**	**339**	*e*P	**Pn**	**19 44 00.0**	**+0.9**
BMRM	**Bremner River**	**4.51**	**61**	P	**Pn**	**19 44 02.1**	**-0.7**
TRF	**Thorofare Moun**	**4.60**	**14**	P	**Pn**	**19 44 03.8**	**-0.1**
KTH	**Kantishna Hill**	**4.63**	**10**	P	**Pn**	**19 44 04.2**	**-0.2**
RND	**Reindeer**	**4.78**	**21**	P	**Pn**	**19 44 06.2**	**-0.2**
CHUM	**Lake Minchumin**	**4.89**	**2**	P	**Pn**	**19 44 07.8**	**-0.1**
MCK	**McKinley**	**5.07**	**19**	*e*Pn	**Pn**	**19 44 10.7**	**+0.4**
	52nm,0.5s						
MCK				*e*Sn	**Sn**	**19 45 05.6**	**-1.8**
BPAW	**Bear Paw Mtn.**	**5.17**	**8**	*e*Pn	**Pn**	**19 44 11.7**	**0.0**
	44nm,0.2s						
PAX	**Paxson**	**5.30**	**38**	*e*Pn	**Pn**	**19 44 13.8**	**+0.3**
	54nm,0.5s						
PAX				*e*Sn	**Sn**	**19 45 09.8**	**-3.4**
MENT	**Mentasta**	**5.88**	**44**	Pn	**Pn**	**19 44 24.6**	**+3.1**
PNL	**Peninsula**	**6.84**	**79**	*e*Pn	**Pn**	**19 44 33.9**	**-0.6**
	157nm,0.7s						
PNL				*e*Sn	**Sn**	**19 45 46.0**	**-4.7**
EGAK	**Eagle**	**7.93**	**38**	*e*Pn	**Pn**	**19 44 49.0**	**-0.5**
	11nm,0.7s						
COLD	**Coldfoot**	**8.32**	**7**	*e*Pn	**Pn**	**19 44 54.4**	**-0.3**
	5.9nm,0.5s						
SKAG	**Skagway**	**8.91**	**80**	*e*P	**Pn**	**19 45 04.6**	**+1.7**
SIT	**Sitka**	**9.42**	**95**	*e*Pn	**Pn**	**19 45 07.3**	**-2.5**
TNA	**Tin City**	**9.64**	**319**	*e*Pn	**Pn**	**19 45 13.7**	**+1.0**
	9.6nm,0.8s						
DLBC	**Dease Lake**	**11.79**	**83**	P	**Pn**	**19 45 43.3**	**+1.3**
	3.5nm,0.3s,baz=237,slow=11,SNR=36						
DLBC				S	**Sn**	**19 47 45.5**	**-6.0**
	0.2nm,0.3s,baz=150,slow=20,SNR=2.7						
INK	**Inuvik**	**12.55**	**34**	LR	LR	19 50 59.3	
	comp=Z,55nm,20.4s,baz=122,slow=39						
YKA	**Yellowknife Ar**	**18.74**	**63**	P	**Pn**	**19 47 10.8**	**-0.2**
	0.1nm,0.3s,baz=273,slow=11,SNR=8.2						
FX1	**Attu Island--F**	**19.91**	**267**	P	**Pn**	**19 47 22.5**	**-2.4**
	6.8nm,0.3s,baz=10.0,slow=2.4,SNR=25						
BILL	**Bilibino**	**19.99**	**314**	*e*P	**P**	**19 47 23.1**	**-0.4**
	7.3nm,0.8s						
PETK	**Petropavlovsk-**	**27.76**	**280**	P	**P**	**19 48 38.7**	**-0.1**
	1.3nm,0.4s,mb3.8,baz=68,slow=14,SNR=13						
NVAR	**Mina Array Bea**	**30.12**	**118**	P	**P**	**19 49 02.3**	**+2.4**
	0.5nm,0.7s,mb3.2,baz=305,slow=9.4,SNR=5.9						
PDAR	**Pinedale Array**	**31.02**	**102**	P	**P**	**19 49 10.4**	**+2.6**
	0.6nm,0.6s,mb3.5,baz=320,slow=6.6,SNR=5.9						
YAK	**Yakutsk**	**36.20**	**309**	*e*P	**P**	**19 49 51.2**	**-1.3**
	17nm,0.8s,mb5.0						
WMOK	**Wichita Mounta**	**42.58**	**100**	*e*P	**P**	**19 50 47.0**	**+1.2**
	2.0nm,0.9s,mb3.9						
TXAR	**Lajitas Array**	**44.50**	**110**	P	**P**	**19 51 03.6**	**+2.3**
	0.7nm,1.0s,mb3.3,baz=338,slow=12,SNR=3.5						
TXAR				LR	LR	20 07 47.8	
	comp=Z,28nm,19.8s,baz=0.0,slow=33						
JCT	**Junction City**	**45.47**	**105**	*e*P	**P**	**19 51 10.8**	**+1.8**
	6.9nm,0.8s,mb4.4						
MJAR	**Matsushiro Arr**	**49.00**	**275**	P	**P**	**19 51 37.4**	**+1.0**
	0.4nm,0.5s,mb3.6,baz=15,slow=5.1,SNR=4.1						
MJAR	**Matsushiro Arr**	**49.00**	**275**	P	**P**	**19 51 37.4**	**+1.0**
ARCES	**ARCESS Array B**	**51.74**	**1**	P	**P**	**19 51 55.9**	**-0.7**
	2.8nm,0.8s,mb4.3,baz=36,slow=10,SNR=4.3						
KSRS	**Korea Array**	**53.55**	**283**	P	**P**	**19 52 10.8**	**+0.4**
	1.0nm,0.5s,mb4.1,baz=40,slow=7.2,SNR=4.5						
SONM	**Songino Array**	**55.50**	**307**	P	**P**	**19 52 24.8**	**+0.5**
	1.1nm,0.4s,mb4.2,baz=43,slow=6.4,SNR=18						
SONM				pP	pP	19 52 35.3	-6.9
	0.6nm,0.7s,baz=45,slow=7.3,SNR=3.6						
SONM				sP	sP	19 52 43.3	-6.7
	1.1nm,0.6s,baz=47,slow=5.4,SNR=5.5						
ZALV	**Zalesovo Beam**	**58.26**	**324**	P	**P**	**19 52 43.0**	**-0.8**
	1.5nm,0.6s,mb4.2,baz=32,slow=7.2,SNR=7.8						
FINES	**FINESS Array B**	**59.87**	**1**	P	**P**	**19 52 54.2**	**-0.6**
	2.4nm,0.9s,mb4.2,baz=15,slow=7.9,SNR=3.5						
KURK	**Kurchatov**	**62.93**	**326**	P	**P**	**19 53 14.9**	**-0.7**
	0.2nm,0.3s,mb3.5,baz=24,slow=7.0,SNR=3.9						
BVAR	**Borovoye Array**	**63.01**	**332**	P	**P**	**19 53 15.7**	**-0.4**
	1.3nm,0.6s,mb4.0,baz=35,slow=8.0,SNR=9.1						
MKAR	**Makanchi Array**	**65.30**	**322**	P	**P**	**19 53 29.9**	**-1.3**
	0.2nm,0.7s,mb3.1,baz=50,slow=9.6,SNR=3.9						
AKASG	**Malin Array Be**	**70.63**	**359**	P	**P**	**19 54 03.9**	**-0.6**
	0.2nm,0.3s,mb3.5,baz=4.0,slow=6.2,SNR=4.7						
ESDC	**Sonseca Array**	**78.30**	**24**	pP	pP	19 55 06.5	-1.4
	0.7nm,0.5s,baz=343,slow=5.3,SNR=4.9						

*BJI **21** 19:52:15.4, 36°.50N×70°.20E, h222km, mB4.4/2, mb4.6/5*
*ISCJB **21** 19:52:15.5±0.4, 36°.45N±0°.03×70°.31E±0°.04, h221km±4km, mb3.8/13, Error ellipse: s-maj=5.7km s-min=4.1km az=160.8*
*NEIC **21** 19:52:16.8±0.7, 36°.47N×70°.23E, h223km±7km, mb5.1/18, Error ellipse: s-maj=8.3km s-min=5.7km az=58.0*
*IDC **21** 19:52:17.9±2.0, 36°.50N×70°.31E, h238km±20km, mb3.3/10, mb1 3.5/15, mb1mx3.2/29, mbtmp3.4/15, Error ellipse: s-maj=13.9km s-min=12.7km az=176.0*

ISC 21 19:52:16.5±0.4, 36°.47N±0°.03×70°.25E±0°.04, h215km±4km, n74, σ1=13/86, mb3.8/13, 3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.17**	**207**	*e*Pn	**Pn**	**19 52 58.8**	**+0.9**
KBL				*e*S	**S**	**19 53 30.4**	**+0.2**
KSH	**Kashi**	**5.44**	**54**	⇓*i* P	**Pn**	**19 53 33.1**	**-3.7**
KSH				S	**S**	**19 54 28.1**	**-12**
KSH				smax			
	comp=N,130nm,0.6s						
KSH				smax			
	comp=E,91nm,0.4s						
THN	**Thein Dam**	**6.05**	**130**	*e*PKP	**Pn**	**19 53 44.6**	**0.0**
THN				*ex*	**S**	**19 54 52.4**	**-2.2**
AML	**Almayashu**	**6.25**	**24**	P	**Pn**	**19 53 47.8**	**+0.8**
	SNR=121						
AML	**Almayashu**	**6.25**	**24**	*e*Pn	**Pn**	**19 53 47.6**	**+0.6**
	comp=E,168nm,0.4s						
AML				*e*S	**S**	**19 54 57.0**	**-2.1**
UCH	**Uchtor**	**6.63**	**29**	P	**Pn**	**19 53 53.0**	**+1.1**
	SNR=113						
UCH	**Uchtor**	**6.63**	**29**	*e*Pn	**Pn**	**19 53 52.5**	**+0.6**
	comp=E,53nm,0.4s						
UCH				*e*S	**S**	**19 55 04.1**	**-3.8**
EKS2	**Erkin-Say**	**6.75**	**23**	P	**Pn**	**19 53 54.4**	**+0.9**
	SNR=81						
EKS2	**Erkin-Say**	**6.75**	**23**	*e*Pn	**Pn**	**19 53 54.1**	**+0.6**
	comp=E,56nm,0.5s						
EKS2				*e*S	**S**	**19 55 06.4**	**-4.4**
KZA	**Kyzart**	**6.81**	**33**	P	**Pn**	**19 53 55.1**	**+0.9**
	SNR=83						
AAK	**Ala-Archa**	**6.97**	**27**	Pn	**Pn**	**19 53 57.4**	**+1.1**
	comp=E,817nm,0.4s,SNR=34						
AAK	**Ala-Archa**	**6.97**	**27**	P	**Pn**	**19 53 57.3**	**+1.0**
	SNR=62						
AAK	**Ala-Archa**	**6.97**	**27**	P	**Pn**	**19 53 57.2**	**+0.9**
	comp=E,0.3nm,0.3s,baz=200,slow=7.4,SNR=119						
AAK				S	**S**	**19 55 12.8**	**-3.1**
	comp=E,0.1nm,0.3s,baz=317,slow=23,SNR=7.4						
KBK	**Karagaybulak**	**7.16**	**29**	P	**Pn**	**19 54 00.0**	**+1.3**
	SNR=35						
BHK	**Bhakra**	**7.19**	**133**	*e*S	**S**	**19 55 14.7**	**-6.5**
CHMS	**Chumysh**	**7.38**	**27**	P	**Pn**	**19 54 01.9**	**+0.3**
	SNR=26						
ULHL	**Ulahol**	**7.40**	**37**	P	**Pn**	**19 54 02.6**	**+0.8**
	SNR=54						
SDNR	**Sundarnagar**	**7.46**	**130**	*e*PKP	**Pn**	**19 54 01.1**	**-1.7**
SDNR				*e*S	**S**	**19 55 22.1**	**-5.6**
USP	**Ospenovka**	**7.53**	**24**	P	**Pn**	**19 54 04.5**	**+0.9**
	SNR=26						
TKM2	**Tokmak 2**	**7.64**	**31**	P	**Pn**	**19 54 05.8**	**+0.8**
	SNR=68						
TKM2	**Tokmak 2**	**7.64**	**31**	*e*Pn	**Pn**	**19 54 05.3**	**+0.3**
	comp=E,38nm,0.7s						
TKM2				*e*		19 54 20.0	
SMLA	**Simla**	**7.84**	**131**	*i* P	**Pn**	**19 54 07.6**	**-0.1**
SMLA				*i* S	**S**	**19 55 30.9**	**-5.7**
SMLA				⇓E		19 55 35.9	
	comp=E,3μm,0.4s						
SMLA				⇓E		19 55 36.4	
	comp=N,3μm,0.2s						
KLP	**Kalpa**	**8.27**	**124**	*e*PKP	**Pn**	**19 54 13.8**	**+0.7**
KLP				*e*S	**S**	**19 55 39.9**	**-6.7**
KLP				AML	AML	19 55 49.6	
	comp=E,591nm,0.5s						
KLP				AML	AML	19 55 50.7	
	comp=N,517nm,0.7s						
DDI	**Dehra Dun**	**8.95**	**131**	*e*PKP	**Pn**	**19 54 21.0**	**-1.0**
DDI				*e*S	**S**	**19 55 56.0**	**-6.8**
KHET	**Khetri**	**9.60**	**149**	*e*S	**S**	**19 56 09.6**	**-8.7**
NDI	**New Delhi**	**9.73**	**141**	*ex*	x	19 56 11.0	
ABKT	**Ailbek**	**9.79**	**282**	Pn	**Pn**	**19 54 31.5**	**-1.2**
	comp=N,77nm,0.5s,SNR=6.2						
SONA	**Sohna**	**10.03**	**143**	*e*PKP	**Pn**	**19 54 36.4**	**+0.5**
SONA				*e*S	**S**	**19 56 20.4**	**-7.9**
AGRA	**Agra**	**11.29**	**143**	*e*S	**S**	**19 56 46.8**	**-12**
MK31	**Makanchi Array**	**13.67**	**37**	*e*Pn	**Pn**	**19 55 21.6**	**0.0**
MKAR	**Makanchi Array**	**13.67**	**37**	P	**Pn**	**19 55 21.6**	**0.0**
	comp=N,0.9nm,0.3s,baz=230,slow=9.4,SNR=51						
ABKAR	**Akbulak array**	**14.82**	**333**	*e*Pn	**Pn**	**19 55 34.7**	**-1.0**
	comp=N,5.7nm,0.5s						
ABKAR				*e*S	**S**	**19 58 18.2**	**-1.7**
DMN	**Daman**	**15.37**	**121**	*e*P	**Pn**	**19 55 41.7**	**-0.9**
	comp=N,22nm,0.4s						
KKN	**Kakani**	**15.38**	**120**	*e*P	**Pn**	**19 55 41.7**	**-1.0**
	comp=N,116nm,0.5s						
KURK	**Kurchatov**	**15.46**	**20**	P	**Pn**	**19 55 41.1**	**-2.2**
	comp=N,0.3nm,0.3s,baz=209,slow=11,SNR=37						
PKIN	**Phulchoki**	**15.59**	**120**	*e*P	**Pn**	**19 55 45.0**	**-0.2**
	comp=N,30nm,0.3s						
PKI	**Pulchoki**	**15.61**	**120**	*e*P	**Pn**	**19 55 44.8**	**-0.6**
	comp=N,48nm,0.6s						
PKI	**Pulchoki**	**15.61**	**120**	*e*P	**Pn**	**19 55 45.0**	**-0.4**
	comp=N,30nm,0.3s						
GUN	**Gumba**	**15.73**	**118**	*e*P	**Pn**	**19 55 46.9**	**0.0**
	comp=N,81nm,0.6s						
JIRN	**Jiri**	**16.10**	**119**	*e*P	**P**	**19 55 51.1**	**+0.6**
	comp=N,70nm,0.5s						
AKTK	**Aktyubinsk**	**16.51**	**332**	P	**P**	**19 55 55.6**	**+0.9**
AKTO	**Aktyubinsk**	**16.51**	**332**	P	**P**	**19 55 55.6**	**+0.9**
	comp=N,0.5nm,0.3s,baz=144,slow=10.0,SNR=9.0						
BVAR	**Borovoye Array**	**16.55**	**0**	P	**P**	**19 55 55.8**	**+0.6**
	comp=N,1.0nm,0.3s,baz=163,slow=11,SNR=19						
BRVK	**Borovoye**	**16.58**	**0**	*e*P	**P**	**19 55 56.6**	**+1.1**
	comp=N,5.7nm,0.6s						
RAMN	**Ramate**	**16.82**	**120**	*e*P	**P**	**19 55 59.2**	**+0.8**
	comp=N,105nm,0.6s						
TAPN	**Taplejung**	**17.37**	**117**	*e*P	**P**	**19 56 05.6**	**+1.2**
	comp=N,66nm,0.5s						
ODAN	**Odare**	**17.43**	**119**	*e*P	**P**	**19 56 06.1**	**+1.0**
	comp=N,94nm,0.7s						
LSA	**Lhasa**	**18.75**	**105**	*e*P	**P**	**19 56 22.6**	**+3.2**
	comp=N,11nm,0.6s						
ZAA0	**Zalesovo Array**	**20.19**	**26**	*e*P	**P**	**19 56 34.2**	**-0.3**
ZALV	**Zalesovo Beam**	**20.19**	**26**	P	**P**	**19 56 34.5**	**-0.1**
	comp=N,4.7nm,0.5s,baz=220,slow=11,SNR=34						
ZALV				S	**S**	**20 00 06.5**	**-2.4**
	comp=N,1.5nm,0.8s,baz=218,slow=19,SNR=4.8						
MIB	**Mutribah**	**20.29**	**257**	*e*P	**P**	**19 56 35.3**	**-0.5**
MIB				AMb	AMB	19 56 38.6	
	comp=Z,19nm,0.8s						
GNI	**Garni**	**20.33**	**288**	P	**P**	**19 56 38.1**	**+1.9**
	comp=Z,1.8nm,0.4s,baz=335,slow=2.7,SNR=4.2						
GNI	**Garni**	**20.33**	**288**	*e*P	**P**	**19 56 38.1**	**+1.9**
	comp=Z,10.0nm,1.1s						
RDF	**Al-Radifah**	**20.51**	**255**	*e*P	**P**	**19 56 37.8**	**-0.4**
NAY	**Al-Naaiem**	**20.60**	**256**	*e*P	**P**	**19 56 38.5**	**-0.7**
NAY				AMb	AMB	19 56 41.5	
	comp=Z,8.6nm,0.6s						
ARU	**Arti**	**21.47**	**342**	*e*P	**P**	**19 56 48.4**	**+0.4**
	comp=Z,4.4nm,0.8s,mb4.0						
GTA	**Gaotai**	**23.45**	**74**	*e*P	**P**	**19 57 08.8**	**+2.3**
GTA				sP	sP	19 58 19.8	+7.1
SONM	**Songino Array**	**28.85**	**55**	P	**P**	**19 57 55.5**	**+0.8**
	comp=Z,1.3nm,0.8s,mb3.6,baz=262,slow=9.6,SNR=11						
ULN	**Ulaanbaatar**	**29.29**	**56**	*e*P	**P**	**19 57 59.6**	**+1.0**
CHTO	**Chiang Mai**	**30.74**	**117**	*e*P	**P**	**19 58 12.5**	**+0.8**
	comp=Z,1.6nm,0.6s,mb3.8						
CMAR	**Chiang Mai Arr**	**30.97**	**118**	P	**P**	**19 58 13.7**	**-0.1**
	comp=Z,2.3nm,0.8s,mb3.9,baz=298,slow=8.2,SNR=13						
HHC	**Hu-ho-hao-te**	**32.34**	**69**	*e*P	**P**	**19 58 25.8**	**+0.4**
HHC				pP	pP	19 59 11.5	+2.4
HHC				sP	sP	19 59 36.9	+3.0
HHC				PP	PP	19 59 43.5	+0.5
HHC				PcP	PcP	20 01 08.3	+0.5
HHC				S	**S**	**20 03 21.8**	**-1.3**
HHC				ScP	ScP	20 04 29.1	-1.8
HHC				sS	sS	20 04 42.8	+1.8
HHC				PcS	PcS	20 04 52.5	-0.4
HHC				SS	SS	20 05 37.0	-7.4
HHC				ScS	ScS	20 08 27.9	-2.5
HHC				pmax	pmax		
	comp=Z,15nm,0.7s,mb4.6						
HHC				pmax	pmax		
	comp=Z,60nm,4.5s						
HHC				LR	LR		
	comp=N,72nm,15.5s						
HHC				LR	LR		
	comp=E,83nm,16.6s						
HHC				LR	LR		
	comp=Z,70nm,15.5s						
GYA	**Guiyang**	**32.46**	**97**	P	**P**	**19 58 27.8**	**+1.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.5						
AKASG	**Malin Array Be**	**32.49**	**309**	pP	pP	19 59 14.4	+4.0
	comp=Z,0.7nm,0.5s,baz=83,slow=7.6,SNR=5.3						
FINES	**FINESS Array B**	**37.17**	**326**	P	**P**	**19 59 06.0**	**-0.4**
	comp=Z,1.6nm,0.8s,mb3.6,baz=165,slow=7.9,SNR=3.6						
GVD	**Gavdhos**	**37.27**	**282**	*e*P	**P**	**19 59 11.0**	**+3.3**
	comp=Z,69nm,0.5s						
ARCES	**ARCESS Array B**	**40.94**	**338**	P	**P**	**19 59 37.5**	**0.0**
	comp=Z,3.2nm,0.8s,mb3.8,baz=106,slow=8.5,SNR=3.8						
NOA	**NORSAR Array B**	**44.04**	**323**	P	**P**	**20 00 01.4**	**-1.2**
	comp=Z,0.8nm,0.8s,mb3.1,baz=105,slow=6.8,SNR=2.7						
KMBO	**Kilima Mbogo**	**48.37**	**227**	*e*P	**P**	**20 00 37.4**	**+0.5**
	comp=Z,3.5nm,1.0s,mb3.6						
TORD	**Torodi Ar. Bea**	**65.11**	**268**	P	**P**	**20 02 32.2**	**-2.3**
	comp=Z,0.3nm,0.4s,mb3.2,baz=39,slow=5.2,SNR=7.2						
YKA	**Yellowknife Ar**	**81.30**	**2**	pP	pP	20 05 02.2	+2.1
	comp=Z,0.5nm,0.6s,baz=347,slow=5.8,SNR=5.8						
WRA	**Warramunga Arr**	**82.49**	**121**	P	**P**	**20 04 13.0**	**-2.1**
	comp=Z,1.4nm,0.8s,mb3.7,baz=324,slow=4.7,SNR=5.0						
WRA	**Warramunga Arr**	**82.49**	**121**	P	**P**	**20 04 13.0**	**-2.1**
ASAR	**Alice Springs**	**84.73**	**124**	P	**P**	**20 04 24.4**	**-2.0**
	comp=Z,0.6nm,0.6s,mb3.5,baz=314,slow=4.6,SNR=16						

CASC 21 20:45:14.7±2.0, 13°.25N×90°.22W, h29km±6km, MD3.6, 1C-1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.82**	**45**	*e*P	Pn	20 45 30.5	+0.2
SBLS				*e*S	Sb	20 45 41.8	+0.5
BOQS	**Boqueron**	**1.03**	**62**	⇓*e*P	Pn	20 45 33.3	+0.1
BOQS				*e*P		20 45 33.4	
BOQS				*e*S	Sn	20 45 48.0	+1.3
SNET	**Serv Nac Est T**	**1.05**	**66**	*e*P	Pn	20 45 33.4	-0.1
LFRS	**El Faro**	**1.19**	**72**	⇑*i* Pg	Pn	20 45 35.1	-0.2
PCG	**Pacaya**	**1.19**	**342**	*e*P	Pn	20 45 36.6	+1.2
FUG	**Fuego 3**	**1.33**	**333**	*e*P	Pn	20 45 37.3	0.0
NBG	**Las Nubes**	**1.33**	**355**	*e*P	Pn	20 45 39.0	+1.7
NBG				*e*S	Sn	20 45 56.8	+2.7
TP2	**Tecpan 2**	**1.71**	**333**	*e*P	Pn	20 45 43.8	+1.3
TP2				*e*S	Sn	20 46 04.7	+1.3
JAT	**Jato**	**1.73**	**308**	*e*P	Pn	20 45 43.2	+0.4
MRL	**Marmol**	**1.87**	**16**	*e*P	Pn	20 45 46.4	+1.6
CAHU	**Cacacuatique**	**2.02**	**75**	*e*P	Pn	20 45 47.2	+0.4
CAHU				*e*P		20 45 47.3	
CNCH	**Conchagua**	**2.33**	**89**	*e*P	Pn	20 45 51.2	+0.2
CNCH				*e*P		20 45 51.4	
TGUH	**Tegucigalpa,Un**	**2.98**	**74**	*e*P	Pn	20 45 59.4	-0.6
CRIN	**San Cristobal**	**3.14**	**100**	*e*P	Pn	20 46 02.4	+0.2

IDC 21 20:57:11.3±1.2, 31°.16N×103°.78E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.4/22, mbtmp3.5/5, MS2.9/1, Ms1 2.9/1, ms1mx2.4/20, Error ellipse: s-maj=89.1km s-min=20.3km az=61.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**16.77**	**6**	Pn	Pn	21 01 09.5	+2.0
	0.1nm,0.3s,baz=185,slow=12,SNR=6.0						
SONM				LR	LR	21 08 16.4	
	comp=Z,40nm,20.9s,baz=59,slow=40						
MKAR	**Makanchi Array**	**22.76**	**319**	P		21 02 16.2	+1.2
	1.7nm,1.1s,baz=122,slow=11,SNR=7.8						
ZALV	**Zalesovo Beam**	**26.55**	**335**	P	P	21 02 49.3	-1.3
	0.

KUR pmax pmax
comp=E,200nm,0.4s
KUR pmax pmax
comp=Z,930nm,0.4s
KUR pmax pmax
comp=Z,2μm,1.0s
KUR smax
comp=N,22μm,1.2s
KUR smax
comp=E,12μm,1.2s
KUR smax
comp=N,10μm,0.5s
KUR smax
comp=E,6μm,0.5s
KUR Kuril'sk 0.84 288 ⇑*i*P **Pn 21 09 24.3 -1.4**
KUR AMB AMB 21 09 24.7
comp=E,220nm,0.4s
KUR AMB AMB 21 09 24.7
comp=E,200nm,0.4s
KUR AMB AMB 21 09 24.7
comp=E,930nm,0.4s
KUR AMB AMB 21 09 25.0
comp=E,2μm,1.0s
KUR *i*S **Sn 21 09 36.0 -1.9**
KUR A 21 09 39.4
comp=E,22μm,1.2s
KUR A 21 09 39.4
comp=E,12μm,1.2s
KUR A 21 09 40.0
comp=E,10μm,0.5s
KUR A 21 09 40.0
comp=E,6μm,0.5s
YUK Yuzh-Kuril'sk 2.43 248 *e*PN **Pn 21 09 47.3 +0.6**
YUK *i*S **Sn 21 10 18.2 +2.8**
YUK pmax pmax
comp=Z,960nm,1.6s
YUK pmax pmax
comp=N,450nm,0.5s
YUK pmax pmax
comp=E,280nm,0.5s
YUK pmax pmax
comp=Z,580nm,0.5s
YUK smax
comp=N,3μm,0.8s
YUK smax
comp=E,5μm,0.7s
YUK smax
comp=N,2μm,0.5s
YUK smax
comp=E,3μm,0.5s
YUK Yuzh-Kuril'sk 2.43 248 *e*P **Pn 21 09 47.3 +0.6**
YUK AMB AMB 21 09 53.8
comp=E,450nm,0.5s
YUK AMB AMB 21 09 53.8
comp=E,280nm,0.5s
YUK AMB AMB 21 09 53.8
comp=E,580nm,0.5s
YUK *i*S **Sn 21 10 18.2 +2.8**
YUK A 21 10 24.1
comp=E,5μm,0.7s
YUK A 21 10 24.1
comp=E,3μm,0.8s
YUK A 21 10 24.5
comp=E,3μm,0.5s
YUK A 21 10 24.5
comp=E,3μm,0.5s
NEM2 Nemuro 2 2.84 237 P **Pn 21 09 51.1 -1.2**
NEM2 *e*S **Sn 21 10 22.8 -2.6**
JRA Rausu 2.96 251 P **Pn 21 09 55.2 +1.3**
JRA *e*S **Sn 21 10 30.4 +2.1**
JNK Nakash 3.37 247 P **Pn 21 10 00.3 +0.8**
JNK *e*S **Sn 21 10 37.4 -0.9**
JAK Akkeshi 3.68 239 P **Pn 21 10 03.1 -0.6**
JAK *e*S **Sn 21 10 44.0 -1.9**
JTKR Abashiri--Toko 3.78 256 P **Pn 21 10 06.4 +1.3**
JAR Ashorobuto 4.12 248 P **Pn 21 10 11.5 +1.8**
JAR *e*S **Sn 21 10 58.2 +1.5**
JMP Maruseppu 4.15 258 P **Pn 21 10 12.0 +1.9**
JOB Onbets 4.27 243 P **Pn 21 10 12.5 +0.8**
JOB *e*S **Sn 21 10 59.6 -0.6**
JKK2 Kamakawa 2 4.61 258 P **Pn 21 10 18.7 +2.3**
ASAJ Asahikawa 4.66 262 P **Pn 21 10 19.5 +2.5**
ASAJ Asahikawa 4.66 262 P **Pn 21 10 19.2 +2.1**
comp=E,3.6nm,0.3s,baz=77,slow=17,SNR=30
ASAJ S **Sn 21 11 18.4 +8.7**
comp=E,3.2nm,0.3s,baz=72,slow=20,SNR=2.0
ASAJ LR LR 21 12 10.3
comp=E,135nm,20.2s,baz=180,slow=38
ASAJ Asahikawa 4.66 262 PN **Pn 21 10 19.2 +2.2**
ASAJ S **Sn 21 11 18.5 +8.8**
ASAJ pmax pmax
comp=Z,4.0nm,0.3s
ASAJ smax
comp=N,3.0nm,0.3s
ASAJ MLR MLR
comp=Z,135nm,20.2s
JCH Churui 4.71 242 P **Pn 21 10 18.0 +0.2**
JCH *e*S **Sn 21 11 10.5 -0.7**
YSS Yuzh-Sakhalins 4.78 297 ⇑*i*PN **Pn 21 10 20.5 +1.8**
YSS *i*S **Sn 21 11 12.0 -0.8**
YSS pmax pmax
comp=Z,20nm,0.6s
YSS smax
comp=E,90nm,1.0s
YSS Yuzh-Sakhalins 4.78 297 *e*Pn **Pn 21 10 19.6 +0.9**
YSS *e*S **Sn 21 11 11.9 -0.8**
YSS Yuzh-Sakhalins 4.78 297 ⇑*i*P **Pn 21 10 20.5 +1.8**
YSS AMB AMB 21 10 21.3
comp=E,20nm,0.6s
YSS *i*S **Sn 21 11 12.0 -0.8**
YSS A 21 11 15.9
comp=E,90nm,1.0s
JFR Furan 4.96 251 P **Pn 21 10 24.2 +3.0**
ERM Erimo 5.18 237 *e*PN **Pn 21 10 26.2 +2.0**
ERM *e* 21 11 22.3
ERM pmax pmax
comp=Z,247nm,0.4s
ERM Erimo 5.18 237 *e*Pn **Pn 21 10 26.2 +2.0**
comp=Z,247nm,0.4s
ERM *e*Sn **Sn 21 11 22.3 -0.2**
JEM Erimo 5.18 237 P **Pn 21 10 25.5 +1.3**
JEM *e*S **Sn 21 11 21.3 -1.2**
JNBK Urakawa-nobuka 5.27 241 P **Pn 21 10 25.8 +0.3**
JBT2 Biratori 2 5.28 248 P **Pn 21 10 27.0 +1.5**
JEW Eniwo 5.86 251 P **Pn 21 10 36.9 +3.5**
JNB Noboribetsu 6.29 249 P **Pn 21 10 41.3 +1.9**
JNB *e*S **Sn 21 11 49.5 -0.3**
JKB Kayabe 6.57 245 P **Pn 21 10 43.5 +0.3**
JKB *e*S **Sn 21 11 54.3 -2.3**
JYM2 Yakumo 2 6.89 249 P **Pn 21 10 48.6 +1.0**
JTM Tenmabayashi 7.17 237 P **Pn 21 10 51.0 -0.4**
JTM *e*S **Sn 21 12 06.4 -5.0**
JANG Nango 7.18 233 P **Pn 21 10 49.5 -2.0**
JANG *e*S **Sn 21 12 04.6 -7.0**
TYV Tymovskoe 7.27 326 *e*P **Pn 21 10 53.0 +0.3**
TYV AMB AMB 21 10 57.5
comp=Z,18nm,1.0s
TYV AMB AMB 21 10 57.5
comp=Z,13nm,0.8s
TYV AMB AMB 21 10 57.5
comp=Z,22nm,0.8s
JTH Tanohata 7.29 229 *e*S **Sn 21 12 07.6 -6.7**
SKR Severo-Kuril's 7.45 37 *e*PN **Pn 21 10 55.0 -0.2**
SKR *e* 21 12 18.1
SKR pmax pmax
comp=N,40nm,0.5s
SKR pmax pmax
comp=E,40nm,0.5s
SKR pmax pmax
comp=Z,50nm,0.5s
SKR Severo-Kuril's 7.45 37 *e*P **Pn 21 10 55.0 -0.2**
SKR AMB AMB 21 10 56.5
comp=Z,40nm,0.5s
SKR AMB AMB 21 10 56.5
comp=Z,50nm,0.5s
OFUJ Ofunato 8.03 225 P **Pn 21 11 00.7 -2.4**
PEA0B Petropavlovsk- 9.94 32 *e*Pn **Pn 21 11 29.4 +0.3**
PETK Petropavlovsk- 9.94 32 P **Pn 21 11 28.6 -0.5**
comp=Z,1.5nm,0.3s,baz=208,slow=12,SNR=19
PETK LR LR 21 15 12.1
comp=Z,81nm,21.0s,baz=251,slow=37
PET Petropavlovsk 10.24 35 *e*PN **Pn 21 11 30.0 -3.3**
MAJO Matsushiro 11.73 228 *e*PN **Pn 21 11 52.1 -1.6**
MAJO pmax pmax
comp=Z,4.0nm,0.6s
MAJO Matsushiro 11.73 228 *e*Pn **Pn 21 11 52.1 -1.7**
comp=Z,4.3nm,0.6s
MAT Matsushiro 11.73 228 P **Pn 21 11 52.0 -1.7**
MAT S **Sn 21 14 06.6 +3.7**
MJAR Matsushiro Arr 11.73 228 P **Pn 21 11 52.4 -1.3**
comp=Z,0.6nm,0.3s,baz=26,slow=15,SNR=14
MJAR LR LR 21 16 55.4
comp=Z,41nm,19.1s,baz=60,slow=39
MDJ Mudanjiang 13.79 275 P **Pn 21 12 19.6 -1.8**
MDJ pmax pmax
comp=Z,3.0nm,1.0s
MDJ pmax pmax
comp=Z,69nm,4.2s
CN2 Changchun 16.87 274 *e*P **Pn 21 12 57.9 -2.9**
KSRS Korea Array 17.52 252 LR LR 21 19 28.9
comp=Z,34nm,18.5s,baz=160,slow=35
FX1 Attu Island--F 17.68 55 P **Pn 21 13 10.8 +0.2**
comp=Z,2.5nm,0.3s,baz=54,slow=11,SNR=10
FX1 S **S 21 16 10.8 -20**
comp=Z,0.6nm,0.3s,baz=285,slow=20,SNR=2.9
FX1 Attu Island--F 17.68 55 P **Pn 21 13 10.8 +0.2**
FX1 S **S 21 16 10.8 -20**
FX1 pmax pmax
comp=Z,3.0nm,0.3s
FX1 smax
comp=N,1.0nm,0.3s
FX1 Attu Island--F 17.68 55 P **Pn 21 13 10.8 +0.2**
FX1 S **S 21 16 10.8 -20**
CBIJ Chichi jima 18.66 199 LR LR 21 20 34.6
comp=N,32nm,19.1s,baz=164,slow=36
YAK Yakutsk 20.44 333 *e*P **P 21 13 40.9 +0.1**
YAK pmax pmax
comp=Z,13nm,1.0s
YAK pmax pmax
comp=N,8.0nm,1.3s
YAK pmax pmax
comp=E,4.0nm,1.0s
YAK Yakutsk 20.44 333 *e*P **P 21 13 37.8 -3.0**
comp=E,18nm,1.1s
BJI Beijing 24.59 270 P **P 21 14 21.4 -1.5**
BJI pmax pmax
comp=Z,5.0nm,0.6s,mb4.1
BILL Bilibino 24.82 15 *e*P **P 21 14 22.1 -2.5**
BILL pmax pmax
comp=Z,2.0nm,0.9s,mb3.5
HHC Hu-ho-hao-te 27.56 275 *e*P **P 21 14 48.8 -0.8**
HHC pP pP 21 15 10.3 +4.4
HHC sP sP 21 15 22.1 +8.2
HHC PP PP 21 15 38.6 -14
HHC PcP PcP 21 18 06.8 +1.0
HHC S **S 21 19 19.9 -6.0**
HHC sS sS 21 19 56.1 +2.3
HHC SS 21 20 42.1
HHC ScP ScP 21 21 37.1 -3.1
HHC PcS PcS 21 21 47.8 +0.2
HHC ScS ScS 21 25 29.3 -2.7
HHC pmax pmax
comp=Z,6.0nm,0.8s,mb4.2
HHC pmax pmax
comp=Z,64nm,5.4s
HHC LR LR
comp=N,52nm,14.3s
HHC LR LR
comp=E,85nm,14.3s
HHC LR LR
comp=Z,68nm,14.3s
SONM Songino Array 29.25 291 P **P 21 15 07.1 +2.6**
comp=Z,0.1nm,0.4s,baz=73,slow=9.5,SNR=2.3
LZH Lanzhou 35.06 271 *e*P **P 21 15 55.1 -0.5**
LZH pmax pmax
comp=Z,13nm,1.0s,mb4.7
SVW2 Sparrevohn 35.77 43 *e*P **P 21 16 01.7 +0.5**
RSO Redoubt South 37.16 44 *e*P **P 21 16 13.2 +0.1**
KDAK Kodiak Island 37.44 49 P **P 21 16 14.6 -1.0**
comp=Z,3.2nm,0.4s,mb4.6,baz=296,slow=0.8,SNR=5.5
KDAK Kodiak Island 37.44 49 *i*P **P 21 16 14.4 -1.2**
CD2 Chengdu 37.85 264 *e*P **P 21 16 20.3 +1.0**
CD2 pP pP 21 16 38.6 +2.6
CD2 sP sP 21 16 47.6 +3.7
CD2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
CD2 pmax pmax
comp=Z,30nm,6.8s
KTH Kantishna Hill 37.97 39 *e*P **P 21 16 20.3 +0.4**
comp=Z,19nm,1.2s,mb4.8
GYA Guiyang 38.51 256 P **P 21 16 24.0 -0.9**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
KMI Kunming 42.07 258 P **P 21 16 54.3 -0.1**
KMI pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
EGAK Eagle 42.16 37 *e*P **P 21 16 53.7 -0.9**
comp=Z,17nm,1.5s,mb4.6
WMQ Urumqi 42.88 291 *e*P **P 21 17 02.0 +1.2**
HYT Haines Junctio 44.53 42 *e*P **P 21 17 15.3 +1.6**
INK Inuvik 44.67 31 *e*P **P 21 17 14.9 +0.1**
INK pmax pmax
comp=Z,5.0nm,0.9s
INK Inuvik 44.67 31 *e*P **P 21 17 14.8 +0.1**
comp=Z,4.7nm,0.9s,mb4.2
MKAR Makanchi Array 45.20 297 P **P 21 17 20.9 +1.7**
comp=Z,0.3nm,0.6s,mb3.2,baz=72,slow=8.3,SNR=3.6
KURK Kurchatov 45.95 304 P **P 21 17 25.7 +0.6**
comp=Z,0.1nm,0.3s,mb3.0,baz=74,slow=8.3,SNR=2.8
CMAR Chiang Mai Arr 49.14 254 P **P 21 17 51.5 +1.3**
comp=Z,0.4nm,0.4s,mb3.7,baz=46,slow=8.1,SNR=4.3
CMAR LR LR 21 40 16.5
comp=Z,21nm,20.7s,baz=190,slow=38
YKA Yellowknife Ar 54.04 35 P **P 21 18 25.7 -0.5**
comp=Z,2.3nm,0.7s,mb4.3,baz=298,slow=7.1,SNR=16
YKA Yellowknife Ar 54.04 35 P **P 21 18 25.7 -0.5**
YKA pmax pmax
comp=Z,2.0nm,0.7s
FFC Flin Flon 63.92 38 *i*P **P 21 19 34.8 +0.1**
FFC Flin Flon 63.92 38 *e*P **P 21 19 34.6 0.0**
comp=Z,3.1nm,0.7s,mb4.2
FCC Fort Churchill 64.29 31 *e*P **P 21 19 36.2 -0.8**
comp=Z,0.1nm,0.6s
FINES FINESS Array B 64.38 333 P **P 21 19 37.1 -0.4**
comp=Z,3.1nm,1.0s,mb4.1,baz=28,slow=8.6,SNR=6.0
FINES FINESS Array B 64.38 333 P **P 21 19 37.1 -0.4**
FINES pmax pmax
comp=Z,3.0nm,1.0s
LRM Limekiln Ridge 64.55 50 *e*P **P 21 19 39.8 +0.8**
BOZ Bozeman (W) 65.11 50 *e*P **P 21 19 43.3 +0.8**
BOZ pmax pmax
comp=Z,1.0nm,0.6s,mb3.8
BOZ Bozeman (W) 65.11 50 *e*P **P 21 19 43.3 +0.7**
comp=Z,1.4nm,0.6s,mb4.0
NVAR Mina Array Bea 65.81 59 P **P 21 19 48.0 +0.8**
comp=Z,1.9nm,0.8s,mb4.0,baz=292,slow=7.6,SNR=8.8
NVAR Mina Array Bea 65.81 59 P **P 21 19 48.0 +0.8**
WRA Warramunga Arr 65.97 195 P **P 21 19 48.2 -0.1**
comp=Z,0.9nm,0.7s,mb3.7,baz=14,slow=6.8,SNR=3.4
WRA Warramunga Arr 65.97 195 P **P 21 19 48.2 -0.1**
WRA pmax pmax
comp=Z,1.0nm,0.7s
TPAW Teton Pass 66.86 51 *e*P **P 21 19 53.0 -0.8**
comp=Z,3.2nm,0.9s,mb4.2
BW06 Boulder Array 68.11 51 *e*P **P 21 20 02.1 +0.4**
PDAR Pinedale Array 68.11 51 P **P 21 20 01.5 -0.2**
comp=Z,1.5nm,0.7s,mb3.9,baz=302,slow=2.8,SNR=12
NOA NORSAR Array B 68.93 339 P **P 21 20 05.4 -1.1**
comp=Z,0.5nm,0.5s,mb3.6,baz=29,slow=6.5,SNR=4.7
NOA LR LR 21 52 16.4
comp=Z,12nm,19.4s,baz=90,slow=38
NOA NORSAR Array B 68.93 339 P **P 21 20 05.4 -1.1**
NOA pmax pmax
comp=Z,1.0nm,0.5s
NOA MLR MLR
comp=Z,12nm,19.4s
ASAR Alice Springs 69.69 195 P **P 21 20 12.3 +0.8**
comp=Z,0.5nm,0.5s,mb3.6,baz=11,slow=5.8,SNR=8.4
ASAR Alice Springs 69.69 195 P **P 21 20 12.4 +0.9**
ASAR pmax pmax
comp=Z,1.0nm,0.5s
AKASG Malin Array Be 71.37 324 P **P 21 20 19.6 -2.0**
comp=Z,0.4nm,0.4s,mb3.6,baz=37,slow=5.7,SNR=3.0
SCHQ Scheefferville 76.02 20 LR LR 21 55 59.3
comp=Z,28nm,20.4s,baz=129,slow=37
CLL Collm 76.83 333 *e*P **P 21 20 53.0 -0.4**
CLL *e* 21 21 00.0
CLL Collm 76.83 333 *e*P **P 21 20 53.0 -0.4**
TXAR Lajitas Array 80.87 58 P **P 21 21 16.1 +0.1**
comp=Z,1.9nm,0.5s,mb4.2,baz=295,slow=4.0,SNR=31
TXAR Lajitas Array 80.87 58 P **P 21 21 16.1 +0.2**
TXAR pmax pmax
comp=Z,2.0nm,0.5s

MAN 21 21:11:21.6±22.2N×125.52E, h23km, mb5.4, ML4.4, MS4.7, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.58**	**257**	⇓*i*P		Pb	21 11 29.5	-3.0
GSPH				*i*S		Sb	21 11 37.9	-2.5
MATI	**Mati**	**1.03**	**45**	*e*P		Pn	21 11 39.5	-0.5
MATI				*e*S		Sb	21 11 49.6	-3.6
BUKP	**Musuan**	**1.71**	**345**	*e*P		Pn	21 11 49.7	+0.2
BUKP				*e*S		Sn	21 12 05.1	-5.5

IDC 21 21:12:11.4±2.4, 17.43S×176.82W, h0km, mb4.7/3, mb1 4.8/4, mb1mx4.0/17, mbtmp4.7/4, ML2.7/1, Error ellipse: s-maj=157.0km s-min=30.7km az=150.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.98**	**55**	Pn		Pn	21 13 41.3	+0.1
AFI	12nm,0.3s,baz=17,slow=2.7,SNR=13			Sn		Sn	21 14 36.2	-14
	19nm,0.3s,baz=190,slow=23,SNR=12							
STKA	**Stephens Creek**	**40.19**	**241**	P		P	21 19 50.2	+0.5
	1.3nm,0.3s,baz=91,slow=7.2,SNR=11							
WRA	**Warramunga Arr**	**46.21**	**259**	P		P	21 20 38.4	-0.1
	4.1nm,0.5s,baz=96,slow=6.9,SNR=42							
ASAR	**Alice Springs**	**46.38**	**254**	P		P	21 20 39.4	-0.5
	17nm,0.5s,baz=88,slow=9.5,SNR=259							

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*BJI **21** 21:31:18.6, 39.41N×74.84E, h24km, ML3.1/6*
ISC 21 21:31:17.1±4.6, 39.2N±0.4×75.1E±0.1, h10km, n11, σ1972/14, 5C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.71**	**64**	⇓*i*Pg		**Pg**	**21 31 25.8**	**-5.1**
KSH				Sg		**Sg**	**21 31 38.1**	**-2.1**
KSH				smax				
	comp=N,4μm,0.3s							
KSH				smax				
	comp=E,2μm,0.2s							
KZA	**Kyzart**	**2.87**	**2**	P		**Pn**	**21 32 05.3**	**+2.4**
	SNR=7.8							
UCH	**Uchtor**	**3.06**	**351**	P		**Pn**	**21 32 06.8**	**+1.3**
	SNR=27							
AML	**Almayashu**	**3.12**	**340**	P		**Pn**	**21 32 06.4**	**0.0**
	SNR=43							
KBK	**Karagaybulak**	**3.45**	**358**	P		**Pn**	**21 32 09.1**	**-1.8**
	SNR=10							
AAK	**Ala-Archa**	**3.46**	**352**	P		**Pb**	**21 32 16.1**	**-2.4**
	SNR=21							
EKS2	**Erkin-Say**	**3.61**	**344**	P		**Pn**	**21 32 14.7**	**+1.7**
	SNR=9.8							
TKM2	**Tokmak 2**	**3.73**	**5**	⇑Pn		**Pn**	**21 32 15.9**	**+1.2**
	comp=E,17nm,0.6s							
TKM2				⇑Lg			21 32 55.6	
	comp=E,85nm,0.6s							
TKM2	**Tokmak 2**	**3.73**	**5**	P		**Pn**	**21 32 16.5**	**+1.8**
	SNR=20							
CHMS	**Chumysh**	**3.80**	**356**	P		**Pn**	**21 32 17.6**	**+1.8**
	SNR=7.0							
KK31	**Karatay Array**	**5.23**	**320**	⇑Pn		**Pn**	**21 32 34.8**	**-0.6**
	comp=E,1.0nm,0.5s,baz=125,slow=14,SNR=33							
KK31				⇑Pg		**Pb**	**21 32 46.5**	**-2.1**
	comp=E,7.5nm,0.7s,baz=131,slow=16,SNR=34							
KK31				⇓Sn		**Sn**	**21 33 30.6**	**-5.1**
	comp=E,9.0nm,0.5s,baz=130,slow=23							
KK31				⇑Lg			21 33 51.6	
	comp=E,25nm,0.9s,baz=135,slow=29							

IDC 21 21:46:35.7±2.3, 7.98S×122.09E, h0km, mb3.3/1, mb1 3.5/3, mb1mx3.3/19, mbtmp3.3/3, ML3.6/2, Error ellipse: s-maj=290.5km s-min=30.7km az=55.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.79**	**136**	Pn		Pn	21 50 33.0	+0.6
	0.3nm,0.3s,baz=313,slow=13,SNR=3.9							
WRA				Sn		Sn	21 53 30.7	-9.0
	0.4nm,0.3s,baz=162,slow=42,SNR=3.0							
ASAR	**Alice Springs**	**19.27**	**145**	P		Pn	21 51 01.9	-1.1
	0.1nm,0.3s,baz=325,slow=11,SNR=9.8							
ASAR				S		Sn	21 54 28.8	-11
	0.0nm,0.3s,baz=311,slow=22,SNR=3.1							
MKAR	**Makanchi Array**	**65.00**	**331**	P		P	21 57 17.6	+0.1
	0.1nm,0.4s,baz=126,slow=7.3,SNR=3.4							

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*ISCJB **21** 22:07:27.5±1.1, 36.02N±0.04×21.81E±0.05, h2km±6km, mb3.7/5, MS3.0/5, Error ellipse: s-maj=8.2km s-min=4.2km az=136.3*
*THE **21** 22:07:28.7, 36.05N×21.64E, h0km±5km, ML4.6/2, Error ellipse: s-maj=8.7km s-min=1.6km az=249.0*
*NEIC **21** 22:07:29.0, 36.05N×21.83E, h5km, ML3.7(ATH), After ATH.*
*ATH **21** 22:07:29.0, 36.05N×21.83E, h5km±4km, MD4.0/6, ML3.7*
*CSEM **21** 22:07:30.8±0.4, 36.18N×21.85E, h2km, ML4.6/2, Error ellipse: s-maj=10.6km s-min=5.7km az=50.0*
*IDC **21** 22:07:36.3±2.0, 36.13N×22.17E, h56km±31km, mb3.4/6, mb1 3.5/9, mb1mx3.4/28, mbtmp3.4/9, ML3.2/3, MS3.0/7, Ms1 3.1/7, ms1mx2.7/28, Error ellipse: s-maj=52.1km s-min=14.5km az=15.0*
ISC 21 22:07:29.3±1.1, 36.05N±0.04×21.87E±0.05, h4km±6km, n107, σ1921/127, mb3.7/5, MS3.0/5, 5D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.85**	**353**	P		**Pg**	**22 07 43.6**	**-2.0**
PYL				S		**Sg**	**22 07 58.0**	**+1.4**
PYL	**PYLOS**	**0.85**	**353**	*e*PB		**Pg**	**22 07 44.1**	**-1.5**
PYL				*e*SB		**Sg**	**22 07 57.1**	**+0.5**
PYL	**PYLOS**	**0.85**	**353**	P		**Pg**	**22 07 43.6**	**-2.0**
PYL	**PYLOS**	**0.85**	**353**	*e*Pb		**Pg**	**22 07 44.1**	**-1.5**
PYL				*e*Sb		**Sg**	**22 07 57.1**	**+0.5**
PYL				S		**Sg**	**22 07 58.0**	**+1.4**
KYTH	**Kithira**	**0.97**	**76**	*e*Pn		**Pg**	**22 07 48.5**	**+0.6**
KYTH	**Kithira**	**0.97**	**76**	*e*PN		**Pg**	**22 07 48.5**	**+0.6**
KYTH	**Kithira**	**0.97**	**76**	*e*Pn		**Pg**	**22 07 48.5**	**+0.6**
VLI	**Veliai**	**1.09**	**52**	*e*Pn		**Pg**	**22 07 50.3**	**+0.1**
VLI				*e*Sb		**Sg**	**22 08 05.5**	**+1.2**
VLI	**Veliai**	**1.09**	**52**	*e*PN		**Pg**	**22 07 50.3**	**+0.1**
VLI				*e*SB		**Sg**	**22 08 05.5**	**+1.2**
VLI	**Veliai**	**1.09**	**52**	*e*Pn		**Pg**	**22 07 50.3**	**+0.1**
VLI				*e*Sb		**Sg**	**22 08 05.5**	**+1.2**
ITM	**Ithomi**	**1.13**	**2**	*e*Pb		**Pg**	**22 07 49.3**	**-1.6**
ITM				*e*Sb		**Sg**	**22 08 06.5**	**+0.9**
ITM	**Ithomi**	**1.13**	**2**	P		**Pg**	**22 07 49.1**	**-1.8**
ITM				S		**Sg**	**22 08 07.7**	**+2.1**
ITM	**Ithomi**	**1.13**	**2**	*e*PB		**Pg**	**22 07 49.3**	**-1.6**
ITM				*e*SB		**Sg**	**22 08 06.5**	**+0.9**
ITM	**Ithomi**	**1.13**	**2**	P		**Pg**	**22 07 49.1**	**-1.8**
ITM	**Ithomi**	**1.13**	**2**	*e*Pb		**Pg**	**22 07 49.3**	**-1.6**
ITM				*e*Sb		**Sg**	**22 08 06.5**	**+0.9**
ITM				S		**Sg**	**22 08 07.7**	**+2.1**
VLX	**Vlachokerasia**	**1.38**	**17**	P		**Pn**	**22 07 53.7**	**-1.6**
VLX				S		**Sg**	**22 08 15.7**	**+2.1**
VLX	**Vlachokerasia**	**1.38**	**17**	*e*PN		**Pn**	**22 07 53.5**	**-1.8**
VLX	**Vlachokerasia**	**1.38**	**17**	*e*Pn		**Pn**	**22 07 53.5**	**-1.8**
VLX	**Vlachokerasia**	**1.38**	**17**	P		**Pn**	**22 07 53.7**	**-1.6**
VLX				S		**Sg**	**22 08 15.7**	**+2.1**
KARN	**Karanos**	**1.79**	**111**	P		**Pg**	**22 08 03.0**	**-0.6**
KARN				S		**Sg**	**22 08 28.9**	**+2.2**
KARN	**Karanos**	**1.79**	**111**	P		**Pg**	**22 08 03.0**	**-0.6**
KARN				S		**Sg**	**22 08 28.9**	**+2.2**
GUR	**Goura**	**1.92**	**11**	P		**Pn**	**22 08 02.4**	**-0.3**
GUR				S		**Sg**	**22 08 29.5**	**-1.5**
GUR	**Goura**	**1.92**	**11**	*e*PN		**Pn**	**22 08 03.9**	**+1.2**
GUR	**Goura**	**1.92**	**11**	P		**Pn**	**22 08 02.4**	**-0.3**
GUR	**Goura**	**1.92**	**11**	*e*Pn		**Pn**	**22 08 03.9**	**+1.2**
GUR				S		**Sg**	**22 08 29.5**	**-1.5**
VAM	**Vamos**	**2.00**	**108**	*e*Pn		**Pb**	**22 08 06.2**	**0.0**
VAM	**Vamos**	**2.00**	**108**	*e*PN		**Pb**	**22 08 06.2**	**0.0**
VAM	**Vamos**	**2.00**	**108**	*e*Pn		**Pb**	**22 08 06.2**	**0.0**
RLS	**Riolos of Patr**	**2.03**	**351**	*e*Pg		**Pg**	**22 08 07.2**	**-1.0**

RLS	Riolos of Patr	2.03	351	*e*PG		Pg	22 08 07.2 -1.0
RLS	Riolos of Patr	2.03	351	*e*Pg		Pg	22 08 07.2 -1.0
NAIG	Nisos Aigina	2.14	37	*e*Pn		Pb	22 08 07.1 -1.5
NAIG	Nisos Aigina	2.14	37	*e*Pn		Pb	22 08 07.1 -1.5
NAIG	Nisos Aigina	2.14	37	*e*Pn		Pb	22 08 07.1 -1.5
LTK	Loutraki	2.15	24	P		Pn	22 08 06.9 +1.0
LTK	Loutraki	2.15	24	*e*PN		Pb	22 08 07.4 -1.4
LTK	Loutraki	2.15	24	P		Pn	22 08 06.9 +1.0
LTK	Loutraki	2.15	24	*e*Pn		Pb	22 08 07.4 -1.4
GVD	Gavdhos	2.18	123	*e*Pn		Pb	22 08 10.1 +0.9
GVD	Gavdhos	2.18	123	P		Pb	22 08 08.0 -1.2
GVD	Gavdhos	2.18	123	P		Pb	22 08 08.0 -1.2
GVD	Gavdhos	2.18	123	*e*Pn		Pb	22 08 10.1 +0.9
KALE	Kalithea	2.35	5	P		Pn	22 08 08.7 +0.1
KALE	Kalithea	2.35	5	P		Pn	22 08 08.7 +0.1
VLS	Valsamata	2.36	335	*e*Pg		Pb	22 08 12.1 -0.2
VLS	Valsamata	2.36	335	*e*PG		Pb	22 08 12.1 -0.2
VLS	Valsamata	2.36	335	*e*Pg		Pb	22 08 12.1 -0.2
VLY	Voula,Athens	2.37	40	*e*Pn		Pb	22 08 12.0 -0.5
VLY	Voula,Athens	2.37	40	*e*PN		Pb	22 08 12.0 -0.5
VLY	Voula,Athens	2.37	40	*e*Pn		Pb	22 08 12.0 -0.5
EFP	Efpalio	2.37	1	*e*PN		Pb	22 08 11.0 -1.5
EFP	Efpalio	2.37	1	*e*Pn		Pb	22 08 11.0 -1.5
DSF	Desfina	2.41	12	P		Pn	22 08 09.7 +0.2
DSF	Desfina	2.41	12	P		Pn	22 08 09.7 +0.2
ATH	Athens Observa	2.42	37	*e*Pn		Pb	22 08 12.7 -0.7
ATH	Athens Observa	2.42	37	*e*PN		Pb	22 08 12.7 -0.7
ATH	Athens Observa	2.42	37	*e*Pn		Pb	22 08 12.7 -0.7
PTL	Penteli	2.55	38	*e*Pb		Pn	22 08 12.3 +0.9
PTL	Penteli	2.55	38	*e*PB		Pn	22 08 12.3 +0.9
PTL	Penteli	2.55	38	*e*Pb		Pn	22 08 12.3 +0.9
IDI	Anoyia	2.57	106	P		Pb	22 08 13.7 -2.3
2.1nm,0.3s,baz=285,slow=16,SNR=14							
IDI	Anoyia	2.57	106	*e*Pn		Pb	22 08 13.7 -2.3
IDI	Anoyia	2.57	106	*e*Pn		Pb	22 08 13.7 -2.3
AGG	Agios Georgios	2.99	7	P		Pn	22 08 17.4 0.0
AGG	Agios Georgios	2.99	7	P		Pn	22 08 17.4 0.0
LAST	Lasithi	3.07	106	P		Pn	22 08 21.1 +2.6
LAST	Lasithi	3.07	106	P		Pn	22 08 21.1 +2.6
AOS	Alonnisos	3.50	27	P		Pn	22 08 24.0 -0.4
AOS	Alonnisos	3.50	27	P		Pn	22 08 24.0 -0.4
THL	Klokotos Trika	3.51	2	*e*PN		Pn	22 08 26.2 +1.7
THL	Klokotos Trika	3.51	2	*e*Pn		Pn	22 08 26.2 +1.7
IGT	Igoumenitsa	3.68	341	P		Pn	22 08 26.9 0.0
IGT	Igoumenitsa	3.68	341	P		Pn	22 08 26.9 0.0
TIP	Timpagrande	5.12	309	*e*Pn		Pn	22 08 47.6 +0.9
9.6nm,0.6s							
TIP				*e*S		Sn	22 09 39.9 -6.2
TIP	Timpagrande	5.12	309	*e*Pn		Pn	22 08 47.6 +0.9
9.6nm,0.6s							
CEL	Celeste	5.26	297	*e*Pn		Pn	22 08 49.1 +0.5
25nm,1.0s							
CEL				*e*S		Sn	22 09 50.0 +0.4
CEL	Celeste	5.26	297	*e*Pn		Pn	22 08 49.1 +0.5
25nm,1.0s							
CEL				*e*S		Sn	22 09 50.0 +0.4
VAE	Valguarnera	6.15	286	P		Pn	22 09 07.5 +6.6
0.5nm,0.3s,baz=61,slow=8.9,SNR=2.3							
VAE				S		Sn	22 10 20.9 +9.3
1.0nm,0.3s,baz=155,slow=23,SNR=2.3							
VAE	Valguarnera	6.15	286	P		Pn	22 09 07.5 +6.6
VAE				S		Sn	22 10 20.9 +9.3
BARS	Barje	6.76	360	*e*Pn		Pn	22 09 09.7 +0.6
STON	Ston	7.54	336	*e*Pn		Pn	22 09 20.8 +1.0
STON				Sn		Sn	22 10 37.4 -8.2
STON	Ston	7.54	336	*e*Pn		Pn	22 09 20.8 +1.0
BBLS	Lazići	8.03	347	*e*Pn		Pn	22 09 25.8 -0.8
BZS	Buzias	9.56	359	⇓P		Pn	22 09 48.2 +0.7
BZS	Buzias	9.56	359	⇓*i*P		Pn	22 09 48.2 +0.6
BZS	Buzias	9.56	359	⇓P		Pn	22 09 48.2 +0.6
MLR	Muntele Rosu	9.92	17	LR		LR	22 14 28.6
comp=Z,162nm,18.6s,baz=342,slow=42							
BR131	Keskin Array S	10.00	65	*e*Pn		Pn	22 09 56.2 +2.6
1.4nm,0.8s							
BR131	Keskin Array S	10.00	65	*e*Pn		Pn	22 09 56.2 +2.6
1.4nm,0.8s							
NVLJ	Novalja	10.04	330	*e*Pn		Pn	22 09 55.4 +1.2
NVLJ				Sn		Sn	22 11 40.7 -6.4
NVLJ	Novalja	10.04	330	*e*Pn		Pn	22 09 55.3 +1.2
VRI	Vrincioaia	10.47	19	⇓P		Pn	22 10 04.8 +4.8
VRI	Vrincioaia	10.47	19	⇓*i*P		Pn	22 10 04.8 +4.8
MMAI	Mount Meron Ar	11.56	101	P		Pn	22 10 14.3 -0.7
0.5nm,0.3s,baz=303,slow=13,SNR=4.2							
DAVOX	Davos/Dischmat	13.98	324	LR		LR	22 17 14.9
comp=Z,29nm,19.0s,baz=269,slow=41							
CLL	Collm	16.52	340	P		Pn	22 11 21.0 -0.7
CLL				*e*			22 11 27.0
CLL				*e*			22 11 30.0
CLL	Collm	16.52	340	*e*P		Pn	22 11 21.0 -0.7
CLL				*e*(sP)		sP	22 11 27.0 +0.8
CLL				*e*PP			22 11 30.0
CLL				LmH			22 16 00.0
comp=N,100nm,20.6s							
CLL				LmH			22 16 00.0
comp=E,100nm,21.3s							
ESDC	Sonseca Array	20.69	288	P		P	22 12 13.6 +3.4
comp=E,0.9nm,0.8s,baz=84,slow=11,SNR=6.5							
ESDC	Sonseca Array	20.69	288	P		P	22 12 13.6 +3.4
HFS	Hagfors	24.67	350	P		P	22 12 51.8 +1.0
comp=E,2.4nm,0.8s,mb3.8,baz=149,slow=12,SNR=5.0							
HFS				LR		LR	22 22 56.8
comp=E,10nm,18.5s,MS2.4,baz=17,slow=37							
FINES	FINESS Array B	25.55	5	P		P	22 12 58.8 0.0
comp=E,3.9nm,1.0s,mb3.9,baz=159,slow=12,SNR=2.9							
FINES				LR		LR	22 24 28.0
comp=E,30nm,20.3s,MS2.8,baz=137,slow=40							
NOA	NORSAR Array B	25.91	348	LR		LR	22 25 10.7
comp=E,33nm,19.1s,MS2.9,baz=170,slow=41							
ARCES	ARCESS Array B	33.60	2	LR		LR	22 28 49.7
comp=E,31nm,19.6s,MS3.0,baz=2.1,slow=38							
MKAR	Makanchi Array	45.53	57	P		P	22 15 48.0 -1.8
comp=E,0.4nm,0.4s,mb3.7,baz=275,slow=6.9,SNR=11							
ZALV	Zalesovo Beam	46.34	47	P		P	22 15 53.7 -2.3
comp=E,0.3nm,0.3s,mb3.7,baz=280,slow=8.3,SNR=2.6							
BOSA	Boshof	64.40	177	LR		LR	22 45 54.4
comp=E,58nm,20.1s,MS3.8,baz=335,slow=36							
CMAR	Chiang Mai Arr	69.12	82	P		P	22 18 35.7 -1.1
comp=E,0.6nm,0.7s,mb3.6,baz=311,slow=8.2,SNR=3.5							

NIED ***21*** *22:19:00,22.°60N×121.°50E,h35km,Mw4.2 Best double couple: M₀2.29000×10¹⁵ NP1:φs219.00000°,δ68.00000°, λ156.00000°. NP2:φs318.00000°,δ68.00000°,λ23.00000°.*
NEIC ***21*** *22:19:17.6±0.5,22.°56N×121.°45E,h10km,MG4.2(JMA), Error ellipse: s-maj=11.4km s-min=6.9km az=67.0*
ISCJB ***21*** *22:19:18.6±0.3,22.°56N±0.°02×121.°44E±0.°02,h22km±3km, mb4.1/17,MS3.6/10,Error ellipse: s-maj=3.2km s-min=3.0km az=147.1*
TAP ***21*** *22:19:20.1,22.°64N×121.°30E,h16km,ML4.6,B*
JMA ***21*** *22:19:21.0±0.3,22.°56N×121.°51E,h72km,M4.2*
IDC ***21*** *22:19:25.6±4.6,22.°52N×121.°40E,h75km±44km,mb3.8/17, mb1 3.9/18,mb1mx3.8/27,mbtmp3.8/18,ML3.6/1,MS3.5/12, Ms1 3.5/12,ms1mx3.4/31,Error ellipse: s-maj=21.4km s-min=12.0km az=65.0*
BJI ***21*** *22:19:26.8,22.°82N×120.°49E,h15km,mB4.4/5,mb4.1/8, ML3.9/5,Ms3.8/7,Ms7 3.8/7*
ISC 21 22:19:18.5±0.4,22.°60N±0.°02×121.°43E±0.°02,h11km±2km, n109,σ1§12/149,mb4.1/17,MS3.6/10,20C-8D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTN	Taitung	0.30	301	⇓*i*P		Pg	22 19 25.5 +0.8
baz=308							
TWG	Pinlang	0.40	304	*e*Pg		Pg	22 19 26.3 0.0
TWG				*e*Sg		Sg	22 19 32.7 +1.0
TWG	Pinlang	0.40	304	⇓*i*P		Pg	22 19 26.5 +0.1
baz=296							
TWG				*i* S		Sg	22 19 31.9 +0.2
baz=296							
ECL	Taimali	0.44	270	⇑*i*P		Pg	22 19 27.1 0.0
baz=262							
ECL				*e*S		Sg	22 19 32.3 -0.7
baz=262							
TAW	Tawu	0.55	244	⇑*i*P		Pg	22 19 29.6 +0.4
baz=233							
TAW				*i* S		Sg	22 19 36.1 -0.3
baz=233							
LAY	Lan-yu	0.57	168	⇑*i*P		Pg	22 19 31.4 +1.8
baz=158							
LAY				*e*S		Sg	22 19 40.6 +3.5
baz=158							
EAST	Anshuo	0.58	248	⇑*i*P		Pg	22 19 29.9 +0.2
baz=249							
EAST				*e*S		Sg	22 19 36.5 -0.9
baz=249							
ELDTW	Lidau	0.70	327	⇑*i*P		Pg	22 19 31.5 -0.6
baz=334							
SSD	Sandimen	0.75	282	⇑*i*P		Pg	22 19 32.0 -1.1
baz=280							
SSD				*e*S		Sg	22 19 39.9 -2.9
baz=280							
TWF1	Yuli	0.76	351	⇑*i*P		Pg	22 19 33.0 -0.3
baz=348							
SCZT	Fangliau	0.78	253	⇑*i*P		Pg	22 19 33.1 -0.5
baz=247							
YULB	Yu-li	0.80	351	*e*Pg		Pg	22 19 33.2 -0.8
YULB				*e*S		Sg	22 19 45.7 +1.2
STYT	Tauyuan	0.84	312	⇑*i*P		Pg	22 19 33.9 -0.8
baz=325							
STYT				*e*S		Sg	22 19 42.7 -2.9
baz=325							
TSEB	Hengchuen, Pin	0.85	215	⇓*i*P		Pg	22 19 35.5 +0.5
baz=209							
TSEB				*e*S		Sg	22 19 46.8 +0.8
baz=209							
HEN	Hengchun	0.87	227	⇓*i*P		Pg	22 19 35.4 +0.1
baz=210							
HEN				*e*S		Sg	22 19 46.4 -0.3
baz=210							
TWK1	Hengchun	0.87	222	⇓*i*P		Pg	22 19 35.2 -0.1
baz=213							
TWK1				S		Sg	22 19 46.6 -0.1
baz=213							
EHY	Hungye	0.91	354	P		Pg	22 19 35.0 -1.1
baz=1.0							
SGST	Jiashian	0.92	302	⇑*i*P		Pg	22 19 36.0 -0.2
baz=304							
SGST				*e*S		Sg	22 19 47.8 -0.4
baz=304							
TWM1	Shoushan	0.95	284	⇑*i*P		Pg	22 19 37.3 +0.3
baz=283							
WTP	Ta-pu	0.99	311	⇑*i*P		Pg	22 19 37.2 -0.4
baz=324							
YUS	Yu-Shan	0.99	334	⇑P		Pg	22 19 37.0 -0.7
baz=340							
YUS				*e*S		Sg	22 19 48.2 -2.3
baz=340							
CHN1	Nanshi	1.01	305	⇑*i*P		Pg	22 19 38.1 0.0
baz=308							
CHN1				*e*S		Sg	22 19 51.0 -0.3
baz=308							
TPUB	Ta-pu	1.01	314	*e*Pg		Pg	22 19 37.4 -0.7
TWP	Hsiaoliuchiu	1.02	256	⇑*e*P		Pg	22 19 40.2 +2.0
baz=252							
TWP				*e*S		Sg	22 19 54.6 +3.3
baz=252							
KAU	Kaohsiung	1.03	269	P		Pg	22 19 39.7 +1.2
baz=266							
KAU				S		Sg	22 19 55.2 +3.2
baz=266							
ALS	Alishan	1.07	328	⇑*i*P		Pb	22 19 38.6 -0.6
baz=332							
CHN4	Tsaushan	1.07	314	⇑*i*P		Pb	22 19 38.8 -0.4
baz=326							
CHN4				*e*S		Sg	22 19 53.1 -0.1
baz=326							
CHN3	Shinhua	1.09	296	*e*P		Pb	22 19 40.2 +0.8
baz=297							
CHN3				*e*S		Sb	22 19 56.2 +2.6
baz=297							
TWK	Hsinying	1.09	308	⇑P		Pb	22 19 38.9 -0.6
baz=322							
TWK				*e*S		Sb	22 19 53.2 -0.6
baz=322							
CHN5	Tsauling	1.21	325	⇑*i*P		Pn	22 19 41.1 -0.4
baz=329							
ESL	Shilin	1.21	0	*e*P		Pn	22 19 39.6 -1.9
baz=5.0							
SSLB	Suanglung	1.26	340	*e*Pn		Pn	22 19 41.1 -1.1
SCLT	Jiali	1.27	297	*e*P		Pn	22 19 41.8 -0.5
baz=298							
SCLT				*e*S		Sb	22 19 59.4 +0.4
baz=298							
CHY	Chiayi	1.29	314	⇑*i*P		Pn	22 19 42.7 +0.2
baz=298							
CHY				*e*S		Sb	22 19 58.9 -0.4
baz=298							
WGK	Gukeng	1.34	324	*e*P		Pn	22 19 43.8 +0.5
baz=328							
WGK				*e*S		Sb	22 20 01.3 +0.3
baz=328							
CHN8	Yiju	1.35	304	*e*P		Pn	22 19 42.9 -0.4
baz=306							
CHN8				*e*S		Sb	22 20 01.0 0.0
baz=306							
SMLT	Sun Moon Lake	1.37	339	P		Pn	22 19 43.6 0.0
baz=345							
SMLT				*e*S		Sb	22 20 00.9 -0.8
baz=345							
HWA	Hwalien	1.38	7	*e*P		Pn	22 19 44.2 +0.4
baz=358							
HWA				*e*S		Sb	22 20 03.3 +1.2
baz=358							
TYC	Yuchr	1.40	338	⇓P		Pn	22 19 44.6 +0.6
baz=353							
WNT	Mingjian	1.45	332	P		Pn	22 19 45.8 +1.2
baz=336							
WNT				*e*S		Sn	22 20 04.4 +0.7
baz=336							
TWD	Chiawan	1.48	6	*e*P		Pn	22 19 44.5 -0.7
baz=358							
WHF	Hehuan Shan	1.55	355	⇓*i*P		Pn	22 19 45.6 -0.5
baz=9.0							
NACB	Ninganchiao	1.58	6	*e*Pn		Pn	22 19 45.5 -0.9
WTCT	Ta-ch'eng	1.64	320	*e*P		Pn	22 19 47.6 +0.2
baz=323							
WTCT				*e*S		Sn	22 20 08.0 -0.5
baz=323							
TWT	Tachien	1.66	352	*e*P		Pn	22 19 47.9 +0.3
baz=354							
TCU	Taichung	1.69	336	*e*P		Pn	22 19 49.1 +1.1
baz=337							
NNS	Nan Shan	1.83	358	*e*P		Pn	22 19 51.3 +1.2
baz=15							
TWQ1	Liyutan	1.84	341	*e*P		Pn	22 19 51.4 +1.3
baz=345							
TWQ1				*e*S		Sn	22 20 15.3 +1.8
baz=345							
ENA	Nanau	1.84	9	*e*P		Pn	22 19 49.4 -0.7
NSY	Sanyi	1.91	341	*e*P		Pn	22 19 52.9 +1.8
baz=345							
NSY				*e*S		Sn	22 20 17.3 +2.2
baz=345							
PNG	Penghu	1.98	300	P		Pn	22 19 50.8 -1.2
baz=300							
PNG				*e*S		Sn	22 20 13.7 -3.0
baz=300							
ENTT	Nioudou	2.04	4	*e*P		Pn	22 19 53.0 +0.2
baz=6.0							
TWC	Suao	2.04	11	*e*P		Pn	22 19 54.2 +1.4
baz=1.0							
NSTT	Nanjuang	2.06	349	*e*P		Pn	22 19 53.8 +0.6
baz=351							
YHNB	Yeheng	2.06	359	*e*Pn		Pn	22 19 53.8 +0.7
YHNB				*e*S		Sn	22 20 21.1 +2.2
NSK	Sanguang	2.07	358	P		Pn	22 19 53.7 +0.5
baz=16							
TWE	Neicheng	2.12	6	*e*P		Pn	22 19 54.3 +0.3
baz=8.0							
ILA	Ilan	2.18	8	*e*P		Pn	22 19 58.0 +3.2
baz=9.0							
YOJ	Yonaguni jima	2.36	38	P		Pn	22 19 58.3 +1.1
YOJ				S		Sn	22 20 25.1 -1.0
YOJ	Yonaguni jima	2.36	38	*e*P		Pn	22 19 58.0 +0.8
baz=41							
TATO	Taipei	2.37	1	*e*Pn		Pn	22 19 57.6 +0.2
TWA	Mucha	2.38	3	*e*P		Pn	22 19 59.8 +2.3
baz=18							
TAP1	Taipei	2.43	2	*e*P		Pn	22 20 00.8 +2.5
baz=18							
NWF	Wu-fen Shan	2.48	7	*e*P		Pn	22 20 00.6 +1.6
baz=8.0							
TWS1	Kuangyinshan	2.49	360	*e*P		Pn	22 20 01.5 +2.4
baz=16							
HATJ	Hateruma jima	2.62	56	P		Pn	22 20 01.4 +0.5
HATJ				S		Sn	22 20 31.5 -1.2
TWY	Chenhua	2.67	3	*e*P		Pn	22 20 01.1 -0.4
baz=4.0							
IRIF	Iriomote-Funau	2.73	50	P		Pn	22 20 03.0 +0.6
IRIF				S		Sn	22 20 35.9 +0.5
JKRS	Kuro-shima	2.88	55	P		Pn	22 20 05.2 +0.8
JKRS				S		Sn	22 20 38.9 -0.1
JIJ	Ishigaki jima	3.05	54	P		Pn	22 20 07.1 +0.4
JIJ				S		Sn	22 20 41.5 -1.8
KNM	Kinmen	3.29	304	*e*P		Pn	22 20 10.3 +0.2
baz=302							
KNM				*e*S		Sn	22 20 48.6 -0.6
baz=302							
QZH	Quanzhou	3.49	313	⇓*i*Pn		Pn	22 20 11.8 -1.0
QZH				Sn		Sn	22 20 50.1 -4.1
QZH				smax			
comp=N,620nm,0.4s							
QZH				smax			
comp=E,830nm,0.8s							
JTJ	Tarama	3.63	55	P		Pn	22 20 15.4 +0.7
JTJ				S		Sn	22 20 57.6 +0.1
JMJ	Miyako jima 2	4.17	57	P		Pn	22 20 23.0 +0.8
JMJ				S		Sn	22 21 10.2 -0.8
JMJ	Miyako jima 2	4.17	57	*e*P		Pn	22 20 22.7 +0.5
baz=68							
JOGS	Gusukube	4.24	59	P		Pn	22 20 24.0 +1.0
JOGS				*e*S		Sn	22 21 12.7 +0.2
JKE	Kume jima 2	6.13	52	P		Pn	22 20 48.4 -0.7
JKE				*e*S		Sn	22 21 55.7 -3.6
GZH	Guangzhou	7.47	275	P		Pn	22 21 04.0 -3.5
GZH				S		Sn	22 22 19.0 -13
GZH				smax			
comp=N,69nm,1.1s							
GZH				smax			
comp=E,74nm,0.9s							
JOW	Kunigami	7.52	55	P		Pn	22 21 06.5 -1.6
JOW				*e*S		Sn	22 22 31.4 -2.0
JTK	Tokunoshima	8.55	51	P		Pn	22 21 20.4 -1.9
JAM	Amami Oshima	9.38	50	P		Pn	22 21 31.7 -2.0
WHN	Wuhan	10.13	323	P		Pn	22 21 43.8 -0.2
WHN				LR		LR	
comp=N,470nm,9.7s							
WHN				LR		LR	
comp=E,420nm,10.9s							
WHN				LR		LR	
comp=Z,820nm,10.7s							
KSRS	Korea Array	15.83	19	P		Pn	22 23 04.6 +3.2
comp=Z,0.2nm,0.3s,baz=195,slow=11,SNR=3.9							
KSRS				LR		LR	22 30 03.4
comp=Z,76nm,19.6s,baz=200,slow=40							
CBIJ	Chichi jima	19.36	72	LR		LR	22 31 14.2
comp=Z,38nm,19.5s,baz=121,slow=36							
MJAR	Matsushiro Arr	20.11	43	P		P	22 23 54.4 +2.0
comp=Z,2.6nm,0.8s,baz=234,slow=9.8,SNR=12							
MJAR				LR		LR	22 32 38.7
comp=Z,75nm,19.3s,MS3.0,baz=265,slow=39							
LZH	Lanzhou	20.34	315	*e*P		P	22 23 58.6 +3.7
LZH				pmax		pmax	
comp=Z,17nm,1.0s							
LZH				pmax		pmax	
comp=Z,90nm,5.3s							
CMAR	Chiang Mai Arr	21.45	263	P		P	22 24 08.7 +1.6
comp=Z,1.3nm,0.6s,mb3.5,baz=66,slow=8.5,SNR=8.5							
CMAR				LR		LR	22 33 32.3
comp=Z,269nm,19.0s,MS3.7,baz=80,slow=40							
GTA	Gaotai	24.88	317	*e*P		P	22 24 45.9 +4.6
GTA				pP			22 24 50.9
GTA				sP		sP	22 24 53.0 +7.0
GTA				pmax		pmax	
comp=Z,3.0nm,1.0s,mb3.8							
ASAJ	Asahikawa	27.66	34	P		P	22 25 08.8 +2.5
comp=Z,3.5nm,0.7s,mb4.1,baz=249,slow=8.6,SNR=4.0							
SONM	Songino Array	27.91	338	P		P	22 25 08.0 -0.6
comp=Z,0.5nm,0.6s,mb3.3,baz=156,slow=10,SNR=5.2							
SONM				LR		LR	22 37 39.5
comp=Z,250nm,18.0s,MS3.8,baz=138,slow=39							
MKAR	Makanchi Array	39.64	317	P		P	22 26 51.0 +0.8
comp=Z,3.6nm,0.8s,mb4.1,baz=98,slow=11,SNR=20							
MKAR				LR		LR	22 44 23.7
comp=Z,44nm,18.8s,MS3.3,baz=256,slow=38							
PETK	Petropavlovsk-	41.06	33	LR		LR	22 45 00.5
comp=Z,26nm,18.7s,MS3.1,baz=48,slow=37							
ZAA0	Zalesovo Array	41.70	328	*e*P		P	22 27 06.4 -0.7
ZALV	Zalesovo Beam	41.70	328	P		P	22 27 06.7 -0.5
comp=Z,3.5nm,0.5s,mb4.2,baz=122,slow=7.9,SNR=16							
ZALV				LR		LR	22 45 29.9
comp=Z,36nm,19.8s,MS3.2,baz=73,slow=38							
KURK	Kurchatov	43.45	321	P		P	22 27 21.1 -0.3
comp=Z,2.9nm,0.8s,mb4.0,baz=111,slow=10,SNR=8.2							
WRA	Warramunga Arr	44.12	162	P		P	22 27 25.3 -1.8
comp=Z,3.7nm,0.9s,mb4.1,baz=346,slow=8.6,SNR=8.6							
ASAR	Alice Springs	47.56	164	P		P	22 27 53.1 -1.1
comp=Z,1.1nm,0.3s,mb4.3,baz=344,slow=7.7,SNR=36							
CTA	Charters Tower	48.86	148	P		P	22 28 02.4 -2.0
comp=Z,9.0nm,0.9s,mb4.8,baz=300,slow=11,SNR=3.5							
BVAR	Borovoye Array	49.04	322	P		P	22 28 05.5 +0.1
comp=Z,2.0nm,0.5s,mb4.4,baz=111,slow=7.9,SNR=10.0							
BVAR				PcP		PcP	22 29 28.2 -0.9
comp=Z,2.2nm,0.6s,baz=105,slow=3.3,SNR=8.7							
STKA	Stephens Creek	57.50	160	P		P	22 29 07.1 -0.7
comp=Z,0.9nm,0.4s,mb4.1,baz=359,slow=21,SNR=4.7							
SPITS	Spitsbergen Ar	71.08	348	LR		LR	23 06 36.3
comp=Z,38nm,19.7s,MS3.7,baz=15,slow=40							
ARCES	ARCESS Array B	71.09	338	P		P	22 30 35.9 -0.5
comp=Z,6.8nm,1.0s,mb4.5,baz=75,slow=8.5,SNR=4.7							
ARCES				LR		LR	23 05 23.2
comp=Z,38nm,18.2s,MS3.7,baz=51,slow=39							
FINES	FINESS Array B	72.92	330	P		P	22 30 46.8 -0.8
comp=Z,2.8nm,0.8s,mb4.3,baz=98,slow=2.9,SNR=5.9							
AKASG	Malin Array Be	74.20	319	P		P	22 30 54.2 -1.1
comp=Z,0.4nm,0.3s,mb3.8,baz=63,slow=6.3,SNR=3.2							
NOA	NORSAR Array B	79.73	332	P		P	22 31 24.5 -1.7
comp=Z,1.2nm,0.6s,mb4.0,baz=57,slow=5.8,SNR=4.5							
NOA				LR		LR	23 10 08.7
comp=Z,74nm,19.4s,MS4.0,baz=55,slow=38							
NOA	NORSAR Array B	79.73	332	P		P	22 31 24.5 -1.7
NOA				LR		LR	23 10 08.7
RES	Resolute Bay	80.19	9	LR		LR	23 10 21.3
comp=Z,64nm,

THN ex Sn 22 25 30.0 +1.5
EKS2 Erkin-Say 5.79 16 P Pn 22 24 25.3 +0.5
SNR=49
EKS2 Erkin-Say 5.79 16 *e*Pn **Pn 22 24 25.7 +1.0**
comp=E,23nm,0.5s
EKS2 *e*S **Sn 22 25 28.9 -0.9**
AAK Ala-Archa 5.94 21 P Pn 22 24 28.4 +1.7
SNR=24
AAK Ala-Archa 5.94 21 P Pn 22 24 28.3 +1.6
comp=E,0.1nm,0.3s,baz=178,slow=6.0,SNR=36
AAK S **Sn 22 25 32.5 -1.0**
comp=E,0.0nm,0.3s,baz=3.4,slow=19,SNR=2.4
KK31 Karatay Array 6.06 352 ⇑Pn **Pn 22 24 26.8 -1.6**
comp=E,27nm,0.5s,baz=183,slow=14,SNR=117
KK31 ⇓Sn **Sn 22 25 31.6 -4.8**
comp=E,3.5nm,0.3s
KK31 ⇑Lg 22 26 10.2
comp=E,45nm,0.9s
KBK Karagaybulak 6.10 23 P Pn 22 24 31.5 +2.5
SNR=9.0
ULHL Ulahol 6.24 33 P Pn 22 24 33.6 +2.9
SNR=12
CHMS Chumysh 6.35 21 P Pn 22 24 33.4 +1.0
SNR=33
USP Ospenovka 6.53 19 P Pn 22 24 35.2 +0.4
SNR=14
TKM2 Tokmak 2 6.55 26 ⇓Pn **Pn 22 24 36.5 +1.5**
comp=E,11nm,0.5s
TKM2 Tokmak 2 6.55 26 P Pn 22 24 36.5 +1.5
SNR=26
TKM2 Tokmak 2 6.55 26 *e*Pn **Pn 22 24 36.7 +1.6**
comp=E,13nm,0.5s
BHK Bhakra 6.90 144 *e*S **Sn 22 25 53.5 -3.4**
SDNR Sundarnagar 7.11 140 *e*PKP **Pn 22 24 43.1 +0.5**
SDNR *e*S **Sn 22 25 59.5 -2.4**
SMLA Simla 7.50 141 *i* P **Pn 22 24 48.9 +0.9**
SMLA *i* S **Sn 22 26 07.9 -3.7**
SMLA *i* S **Sn 22 26 08.0 -3.6**
SMLA ⇓E 22 26 13.1
comp=E,2μm,0.3s
SMLA ⇓E 22 26 13.1
comp=N,2μm,0.3s
KLP Kalpa 7.78 134 *e*S **Sn 22 26 15.4 -2.9**
KLP AML AML 22 26 21.5
comp=E,264nm,0.4s
KLP AML AML 22 26 23.1
comp=N,256nm,0.7s
DDI Dehra Dun 8.61 140 *e*x x 22 26 36.0
KHET Khetri 9.65 158 *e*S **Sn 22 26 55.7 -8.0**
SONA Sohna 9.94 151 *e*S **Sn 22 27 06.2 -4.3**
AGRA Agra 11.19 150 *e*S **Sn 22 27 32.9 -7.9**
MK31 Makanchi Array 12.50 36 Pn **Pn 22 25 55.8 +1.0**
comp=N,1.4nm,0.8s,baz=223,slow=12,SNR=11
MK31 Makanchi Array 12.50 36 *e*Pn **Pn 22 25 53.3 -1.5**
MKAR Makanchi Array 12.50 36 P **Pn 22 25 56.0 +1.2**
comp=N,0.1nm,0.3s,baz=226,slow=13,SNR=13
KURK Kurchatov 14.50 18 P **Pn 22 26 17.1 -3.5**
comp=N,0.1nm,0.3s,baz=209,slow=11,SNR=5.7
KKN Kakani 14.77 125 *e*P **Pn 22 26 24.3 +0.1**
comp=N,9.4nm,0.4s
DMN Daman 14.78 126 *e*P **Pn 22 26 23.8 -0.5**
comp=N,7.5nm,0.4s
AB31 Akbulak array 14.83 329 ⇑P **Pn 22 26 20.1 -4.6**
comp=N,1.7nm,0.3s,baz=133,slow=15,SNR=96
ABKAR Akbulak array 14.83 329 *e*Pn **Pn 22 26 20.3 -4.5**
comp=N,3.8nm,0.3s
ABKAR *e*S **Sn 22 28 50.7 -18**
PKIN Phulchoki 14.99 125 *e*P **Pn 22 26 26.5 -0.4**
comp=N,9.9nm,0.4s
PKI Pulchoki 15.00 125 *e*P **Pn 22 26 26.5 -0.6**
comp=N,7.0nm,0.3s
GUN Gumba 15.08 123 *e*P **Pn 22 26 30.0 +1.9**
JIRN Jiri 15.46 123 *e*P **Pn 22 26 33.1 +0.3**
comp=N,19nm,0.3s
VOSK Vostochnaya 15.63 358 ⇑Pn **Pn 22 26 32.2 -2.5**
comp=N,4.1nm,1.0s
BVA0 Borovoye Array 15.95 357 Pn **Pn 22 26 37.0 -1.7**
comp=N,0.2nm,0.5s,baz=153,slow=14,SNR=15
BVAR Borovoye Array 15.95 357 P **Pn 22 26 36.6 -2.1**
comp=N,0.5nm,0.3s,baz=164,slow=14,SNR=13
ZRNK Zerenda 15.96 354 ⇑Pn **Pn 22 26 38.1 -0.8**
comp=N,2.0nm,0.4s
BRVK Borovoye 15.99 357 *e*P **Pn 22 26 37.2 -1.9**
comp=N,2.5nm,0.4s
RAMN Ramite 16.20 124 *e*P **Pn 22 26 41.1 -0.9**
comp=N,17nm,0.6s
AKTK Aktyubinsk 16.54 328 P **Pn 22 26 43.3 -2.6**
AKTO Aktyubinsk 16.54 328 ⇑P **Pn 22 26 43.0 -2.9**
comp=N,1.9nm,0.8s
AKTO Aktyubinsk 16.54 328 P **Pn 22 26 43.3 -2.6**
comp=N,1.4nm,0.3s,baz=139,slow=11,SNR=19
TAPN Taplejung 16.68 121 *e*P **Pn 22 26 49.7 +1.7**
comp=N,14nm,0.5s
ODAN Odare 16.78 123 *e*P **Pn 22 26 49.5 +0.3**
comp=N,8.6nm,0.4s
FINES FINESS Array B 37.28 325 P **P 22 30 02.4 +1.0**
comp=N,0.7nm,0.3s,mb4.0,baz=122,slow=8.6,SNR=13
ARCES ARCESS Array B 40.80 337 P **P 22 30 31.8 +1.3**
comp=N,3.7nm,1.0s,mb4.2,baz=114,slow=9.0,SNR=6.0
ARCES ARCESS Array B 40.80 337 P **P 22 30 31.8 +1.3**
HFS Hagfors 42.92 321 P **P 22 30 48.9 +1.1**
comp=N,1.6nm,0.5s,mb4.0,baz=89,slow=12,SNR=12
HFS pP pP 22 31 12.9 -1.8
comp=N,1.2nm,0.6s,baz=106,slow=14,SNR=1.4
NOA NORSAR Array B 44.22 323 P **P 22 30 58.7 +0.5**
comp=N,1.1nm,1.0s,mb3.5,baz=90,slow=7.2,SNR=2.7
ESDC Sonseca Array 57.64 298 pP pP 22 33 03.5 -3.8
comp=N,0.3nm,0.5s,baz=51,slow=8.3,SNR=5.0
YKA Yellowknife Ar 80.62 3 P **P 22 35 02.3 +1.9**
comp=N,0.6nm,0.7s,mb3.6,baz=354,slow=4.7,SNR=5.5

SZGRF ***21*** *22:41:18.7, 16˚.30S×176˚.65W, h391km, Fiji Islands region*
BJI ***21*** *22:41:59.2, 15˚.80S×176˚.20W, h381km, mB4.9/10, mb4.6/14*
NEIC ***21*** *22:42:00.2±0.7, 15˚.76S×176˚.18W, h382km±6km, mb4.5/43, Error ellipse: s-maj=12.6km s-min=6.0km az=149.0*
ISCJB ***21*** *22:42:00.1±0.6, 15˚.85S±0˚.08×176˚.15W±0˚.05, h393km±6km, mb4.3/69, Error ellipse: s-maj=13.6km s-min=5.4km az=152.3*
IDC ***21*** *22:42:01.0±0.9, 15˚.74S×176˚.27W, h390km±8km, mb3.8/16, mb1 4.0/16, mb1mx3.9/20, mbtmp3.8/16, Error ellipse: s-maj=27.5km s-min=11.1km az=146.0*
ISC 21 22:42:01.0±0.6, 15˚.83S±0˚.08×176˚.15W±0˚.05, h389km±6km, h385km±2.7km: pP-P, n483, σ0=60/371, mb4.3/69, 123C-121D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.64**	**66**	P	**Pn**	**22 43 15.3**	**-3.5**
	131nm,0.3s,baz=208,slow=0.1,SNR=95						
AFI				S	**S**	**22 44 18.0**	**-3.9**
	3.5nm,0.3s,baz=272,slow=23,SNR=3.1						
AFI	**Afiamalu**	**4.64**	**66**	*e*Pn	**Pn**	**22 43 15.3**	**-3.6**
AFI				*e*S	**S**	**22 44 21.9**	**0.0**
MSVF	**Nonsavu**	**5.87**	**250**	*e*Pn	**Pn**	**22 43 31.7**	**-0.1**
	679nm,1.0s						
MSVF				*e*S	**S**	**22 44 45.8**	**+0.2**
FUNA	**Funafuti**	**8.57**	**327**	*e*Pn	**Pn**	**22 44 02.9**	**+0.5**
	298nm,1.3s						
RAO	**Raoul Island**	**13.46**	**187**	S	**S**	**22 47 13.2**	**-9.4**
	57nm,0.3s,baz=72,slow=20,SNR=3.4						
DZM	**Mont Dzumac**	**17.59**	**247**	*e*P	**P**	**22 45 43.3**	**+1.6**
	36nm,1.4s						
URZ	**Urewera**	**23.12**	**194**	P	**P**	**22 46 29.4**	**-5.0**
	7.2nm,0.3s,mb4.5,baz=343,slow=8.2,SNR=6.8						
PPT	**Papeete**	**25.51**	**98**	*e*LR	LR	22 52 58.5	
	182nm,26.8s						
CTA	**Charters Tower**	**35.96**	**258**	*e*P	**P**	**22 48 28.2**	**+1.4**
	5.7nm,0.6s,mb4.1						
CTAO	**Charters Tower**	**35.96**	**258**	*e*P	**P**	**22 48 27.3**	**+0.6**
	2.4nm,0.6s,mb3.7						
CMSA	**Cobar Meteorol**	**38.06**	**239**	*e*P	**P**	**22 48 43.8**	**-0.2**
COEN	**Coen**	**39.31**	**267**	*e*P	**P**	**22 48 55.3**	**+0.8**
STKA	**Stephens Creek**	**41.53**	**240**	P	**P**	**22 49 11.7**	**-0.6**
	3.3nm,0.3s,mb4.1,baz=58,slow=9.2,SNR=5.7						
BBOO	**Buckleboo**	**46.31**	**240**	*e*P	**P**	**22 49 48.4**	**-1.3**
	8.7nm,0.3s,mb4.6						
WRAB	**Tennant Creek**	**47.15**	**257**	*e*P	**P**	**22 49 56.5**	**+0.1**
	32nm,0.8s,mb4.7						
WRA	**Warramunga Arr**	**47.16**	**257**	P	**P**	**22 49 55.3**	**-1.1**
	21nm,0.7s,mb4.6,baz=90,slow=7.2,SNR=91						
WRA				PcP	PcP	22 51 20.7	-0.3
	2.1nm,0.5s,baz=94,slow=3.6,SNR=3.7						
ASAR	**Alice Springs**	**47.46**	**252**	P	**P**	**22 49 57.3**	**-1.4**
	77nm,0.4s,mb5.4,baz=89,slow=7.9,SNR=423						
ASAR				pP	pP	22 51 14.8	-1.7
	7.5nm,1.0s,baz=86,slow=8.4,SNR=2.1						
KAKA	**Kakadu**	**49.82**	**267**	*e*P	**P**	**22 50 16.6**	**0.0**
	22nm,0.4s,mb4.8						
KAKA	**Kakadu**	**49.82**	**267**	*e*P	**P**	**22 50 17.2**	**+0.6**
	81nm,0.6s,mb5.2						
FORT	**Forrest**	**52.86**	**243**	*e*P	**P**	**22 50 37.2**	**-1.4**
	44nm,0.5s,mb5.0						
KMBL	**Kambalda**	**58.17**	**243**	*e*P	**P**	**22 51 15.6**	**-0.3**
	78nm,1.2s,mb4.9						
MBWA	**Marble Bar**	**60.69**	**254**	*e*P	**P**	**22 51 33.8**	**+0.6**
KLBR	**Kellerberrin**	**61.69**	**242**	*e*P	**P**	**22 51 39.8**	**+0.2**
	22nm,0.8s,mb4.8						
SBA	**Scott Base**	**62.62**	**184**	*e*P	**P**	**22 51 45.3**	**+0.4**
	2.4nm,0.8s,mb3.8						
CASY	**Casey**	**68.92**	**205**	*e*P	**P**	**22 52 25.1**	**+0.4**
	5.6nm,1.0s,mb4.2						
PETK	**Petropavlovsk-**	**72.26**	**344**	P	**P**	**22 52 44.5**	**-0.3**
	5.1nm,0.8s,mb4.1,baz=122,slow=8.2,SNR=6.8						
KHMM	**Horse Mountain**	**74.43**	**39**	*e*P	**P**	**22 52 58.9**	**+1.3**
	12nm,0.9s,mb4.5						
BFSC	**Mount Baldy Ra**	**74.64**	**47**	⇑P	**P**	**22 52 58.8**	**-0.1**
	baz=75						
EDW2	**Edwards Air Fo**	**74.74**	**46**	⇑P	**P**	**22 52 59.8**	**+0.3**
	baz=75,SNR=8.3						
ISA	**Isabella**	**74.83**	**45**	*e*P	**P**	**22 53 00.4**	**+0.4**
MONP	**Monument Peak**	**74.83**	**49**	⇑P	**P**	**22 53 00.6**	**+0.5**
	baz=75,SNR=6.1						
DVTC	**Desert V Tower**	**74.94**	**49**	⇑P	**P**	**22 53 01.1**	**+0.4**
	baz=75						
WDC	**Whiskeytown Da**	**74.97**	**39**	*e*P	**P**	**22 53 01.3**	**+0.6**
	16nm,1.2s,mb4.5						
SWSC	**Sam W. Stewart**	**75.31**	**49**	⇓P	**P**	**22 53 03.3**	**+0.5**
	baz=76						
YBH	**Yreka Blue Hor**	**75.56**	**38**	P	**P**	**22 53 04.4**	**+0.4**
	12nm,0.8s,mb4.6,baz=160,slow=1.6,SNR=42						
YBH	**Yreka Blue Hor**	**75.56**	**38**	*e*P	**P**	**22 53 04.7**	**+0.7**
	6.9nm,0.7s,mb4.4						
BELC	**Belle Mtn. Jos**	**75.69**	**48**	⇓P	**P**	**22 53 05.2**	**+0.3**
	baz=76,SNR=6.1						
MPMC	**Manual Prospec**	**75.71**	**46**	⇑P	**P**	**22 53 05.1**	**+0.1**
	baz=76,SNR=9.4						
WAKR	**Walker**	**75.74**	**43**	*e*P	**P**	**22 53 05.6**	**+0.6**
GSC	**Goldstone**	**75.79**	**47**	⇓P	**P**	**22 53 05.7**	**+0.3**
	baz=76,SNR=6.1						
GSC	**Goldstone**	**75.79**	**47**	*e*P	**P**	**22 53 05.8**	**+0.3**
HEC	**Hector,Ludlow**	**75.88**	**47**	⇑P	**P**	**22 53 06.0**	**0.0**
	baz=76						
KDAK	**Kodiak Island**	**75.89**	**13**	P	**P**	**22 53 05.3**	**-0.1**
	3.2nm,0.5s,mb4.2,baz=190,slow=6.1,SNR=5.2						
BEKR	**Beckworth**	**75.91**	**41**	⇓P	**P**	**22 53 06.6**	**+0.6**
	baz=76						
BC3	**Big Chuckawall**	**75.91**	**49**	⇑P	**P**	**22 53 06.2**	**0.0**
	baz=76						
HUMO	**Hull Mountain**	**75.94**	**38**	*e*P	**P**	**22 53 06.8**	**+0.7**
	3.0nm,0.6s,mb4.1						
WCN	**Washoe City**	**75.98**	**42**	⇑P	**P**	**22 53 07.1**	**+0.7**
	baz=76						
GLA	**Glamis**	**76.07**	**49**	⇑P	**P**	**22 53 07.1**	**+0.1**
	baz=76						
GRAC	**Grapevine Rang**	**76.29**	**45**	⇓P	**P**	**22 53 08.9**	**+0.7**
	baz=76						
GMRC	**Granite Mounta**	**76.33**	**47**	⇓P	**P**	**22 53 08.4**	**-0.1**
	baz=76						
FURC	**Furnace Creek,**	**76.36**	**45**	⇑P	**P**	**22 53 08.4**	**-0.2**
	baz=76						
IRM	**Iron Mountain**	**76.38**	**48**	⇓P	**P**	**22 53 08.8**	**0.0**
	baz=76,SNR=7.2						
NVAR	**Mina Array Bea**	**76.44**	**43**	P	**P**	**22 53 09.2**	**+0.2**
	5.8nm,0.8s,mb4.3,baz=223,slow=9.4,SNR=32						
PAHR	**Pah Rah Range**	**76.44**	**42**	*e*P	**P**	**22 53 09.6**	**+0.6**
SHOC	**Shoshone**	**76.47**	**46**	⇓P	**P**	**22 53 08.9**	**-0.2**
	baz=77						
Y12C	**Blythe**	**76.63**	**49**	⇓P	**P**	**22 53 10.1**	**-0.1**
	baz=77						
U10A	**Ash Meadows, A**	**76.70**	**46**	⇓P	**P**	**22 53 10.8**	**+0.3**
	baz=77,SNR=6.6						
Z13A	**Yuma Proving G**	**77.00**	**50**	⇑P	**P**	**22 53 12.2**	**0.0**
	baz=77,SNR=6.1						
V11A	**Goodsprings**	**77.03**	**47**	⇑P	**P**	**22 53 12.0**	**-0.3**
	baz=77,SNR=5.6						
Y13A	**Salome**	**77.17**	**49**	⇓P	**P**	**22 53 12.9**	**-0.2**
	baz=77						
K05A	**Summer Lake**	**77.24**	**38**	P	**P**	**22 53 14.3**	**+1.1**
	baz=77,SNR=6.6						
S10A	**Tonopah Range,**	**77.30**	**44**	⇓P	**P**	**22 53 13.4**	**-0.4**
	baz=78,SNR=14						
X13A	**Yucca**	**77.55**	**48**	P	**P**	**22 53 15.6**	**+0.4**
	baz=78,SNR=5.7						
Z14A	**Wintersburg**	**77.60**	**50**	⇑P	**P**	**22 53 15.6**	**+0.1**
	baz=78						
R10A	**Warm Springs**	**77.69**	**44**	⇑P	**P**	**22 53 16.2**	**+0.3**
	baz=78,SNR=16						
S11A	**Rachel**	**77.73**	**45**	⇑P	**P**	**22 53 16.1**	**0.0**
	baz=78						
W13A	**Hualapai Mount**	**77.75**	**48**	⇓P	**P**	**22 53 16.6**	**+0.3**
	baz=78						
Y14A	**Wickenburg**	**77.83**	**49**	⇑P	**P**	**22 53 16.2**	**-0.5**
	baz=78,SNR=6.6						
T11A	**Corn Creek, Al**	**77.89**	**46**	⇑P	**P**	**22 53 16.9**	**-0.1**
	baz=78,SNR=15						
Q10A	**Clear Creek Ra**	**77.91**	**44**	⇓P	**P**	**22 53 16.9**	**-0.2**
	baz=78						
U12A	**Valley of Fire**	**77.95**	**47**	⇓P	**P**	**22 53 17.5**	**+0.2**
	baz=78						
V13A	**Grand Canyon W**	**78.05**	**47**	⇓P	**P**	**22 53 18.2**	**+0.3**
	baz=78,SNR=5.6						
216A	**Three Points,**	**78.08**	**52**	⇑P	**P**	**22 53 18.0**	**-0.1**
	baz=78						
X14A	**Yava**	**78.17**	**49**	⇑P	**P**	**22 53 18.7**	**+0.1**
	baz=78,SNR=8.1						
R11A	**Troy Canyon, C**	**78.20**	**44**	⇓P	**P**	**22 53 18.6**	**0.0**
	baz=78,SNR=8.9						
BMN	**Battle Mountai**	**78.22**	**42**	*e*P	**P**	**22 53 19.0**	**+0.3**
	6.7nm,0.7s,mb4.4						
F04A	**Amboy**	**78.27**	**35**	⇑P	**P**	**22 53 19.1**	**+0.3**
	baz=78						
S12A	**Delamar Landin**	**78.33**	**45**	⇑P	**P**	**22 53 19.5**	**+0.2**
	baz=78,SNR=11						
Y15A	**Casa Rosa Ranc**	**78.33**	**50**	⇓P	**P**	**22 53 19.2**	**-0.3**
	baz=78						
U13A	**Pakoon Wash**	**78.34**	**47**	⇑P	**P**	**22 53 19.1**	**-0.4**
	baz=78,SNR=8.6						
W14A	**Seligman**	**78.38**	**48**	⇑P	**P**	**22 53 19.8**	**+0.1**
	baz=78,SNR=11						
Q11A	**Duckwater**	**78.42**	**44**	⇓P	**P**	**22 53 19.7**	**-0.1**
	baz=79,SNR=12						
VFP	**Flag Point**	**78.44**	**36**	P	**P**	**22 53 19.7**	**0.0**
OOW	**Octopus West**	**78.44**	**33**	P	**P**	**22 53 20.7**	**+1.0**
V14A	**Bucquillas Ranc**	**78.57**	**48**	⇑P	**P**	**22 53 20.9**	**+0.2**
	baz=79,SNR=9.5						
X15A	**Humboldt**	**78.65**	**49**	⇓P	**P**	**22 53 21.3**	**+0.1**
	baz=79,SNR=9.7						
Z16A	**Peralta Trail,**	**78.71**	**51**	⇑P	**P**	**22 53 21.7**	**+0.2**
	baz=79						
TUC	**Tucson**	**78.72**	**52**	*e*P	**P**	**22 53 22.2**	**+0.6**
	6.8nm,1.1s,mb4.2						
I07A	**Izee**	**78.85**	**38**	⇑P	**P**	**22 53 22.1**	**+0.1**
	baz=79,SNR=9.0						
R12A	**Pony Springs,**	**78.86**	**45**	⇓P	**P**	**22 53 22.5**	**+0.4**
	baz=79						
117A	**Oracle**	**78.88**	**51**	P	**P**	**22 53 23.4**	**+1.0**
	baz=79,SNR=7.5						
U14A	**Mt Trumbull**	**78.90**	**47**	⇑P	**P**	**22 53 22.8**	**+0.3**
	baz=79,SNR=9.5						
S13A	**Holt Ranch, En**	**78.99**	**46**	⇑P	**P**	**22 53 23.3**	**+0.3**
	baz=79						
J08A	**Circle Bar Ran**	**79.05**	**39**	P	**P**	**22 53 23.4**	**+0.3**
	baz=79,SNR=7.5						
Q12A	**Willow Creek R**	**79.07**	**44**	P	**P**	**22 53 23.4**	**+0.1**
	baz=79,SNR=5.7						
O11A	**Cowboy Ranch,**	**79.08**	**43**	⇑P	**P**	**22 53 23.8**	**+0.4**
	baz=79						
218A	**Dragoon**	**79.14**	**52**	⇓P	**P**	**22 53 24.0**	**+0.2**
	baz=79,SNR=7.2						
X16A	**Lo Mia Camp, P**	**79.20**	**50**	⇓P	**P**	**22 53 24.6**	**+0.5**
	baz=79,SNR=5.8						
P12A	**McGill**	**79.24**	**44**	⇑P	**P**	**22 53 23.6**	**-0.6**
	baz=79						
D05A	**Enumclaw**	**79.27**	**34**	⇑P	**P**	**22 53 24.8**	**+0.6**
	baz=80						
Y17A	**Roosevelt**	**79.31**	**50**	⇓P	**P**	**22 53 24.8**	**+0.1**
	baz=79						
CCUT	**Cedar City**	**79.32**	**46**	*e*P	**P**	**22 53 25.7**	**+1.0**
N11A	**Elko Archery C**	**79.39**	**42**	⇓P	**P**	**22 53 25.4**	**+0.5**
	baz=80						
319A	**Douglas**	**79.46**	**53**	⇑P	**P**	**22 53 25.3**	**-0.2**
	baz=80						
J09A	**Fry Pan Ranch,**	**79.48**	**39**	⇑P	**P**	**22 53 25.6**	**+0.2**
	baz=80,SNR=6.9						
118A	**Homack Ranch,**	**79.49**	**52**	⇓P	**P**	**22 53 25.2**	**-0.5**
	baz=80						
U15A	**North Rim**	**79.53**	**47**	⇑P	**P**	**22 53 25.7**	**-0.2**
	baz=80,SNR=9.1						
Q13A	**Wheeler Ranch,**	**79.57**	**44**	⇓P	**P**	**22 53 26.1**	**+0.1**
	baz=80						
L10A	**Juniper Basin**	**79.59**	**41**	P	**P**	**22 53 26.3**	**+0.3**
	baz=80,SNR=9.0						
H08A	**Prairie City**	**79.59**	**38**	⇑P	**P**	**22 53 26.0**	**+0.1**
	baz=80						
ELK	**Elko**	**79.67**	**42**	P	**P**	**22 53 26.7**	**+0.2**
	6.3nm,0.9s,mb4.2,baz=245,slow=6.1,SNR=22						
M11A	**Holland Ranch,**	**79.67**	**42**	⇓P	**P**	**22 53 26.9**	**+0.4**
	baz=80						
K10A	**MacKenzie Ranc**	**79.71**	**40**	P	**P**	**22 53 26.9**	**+0.3**
	baz=80,SNR=17						
CN2	**Changchun**	**79.73**	**321**	*e*P	**P**	**22 53 29.1**	**+2.4**
T15A	**Red Dirt Ranch**	**79.75**	**47**	⇓P	**P**	**22 53 27.6**	**+0.6**
	baz=80,SNR=6.2						
O12A	**Currie**	**79.75**	**43**	⇓P	**P**	**22 53 26.6**	**-0.3**
	baz=80						
WUAZ	**Wupatki**	**79.76**	**49**	⇓P	**P**	**22 53 26.8**	**-0.3**
	baz=80						
WUAZ	**Wupatki**	**79.76**	**49**	*e*P	**P**	**22 53 28.1**	**+1.1**
P13A	**Bates Ranch, G**	**79.82**	**44**	⇓P	**P**	**22 53 27.1**	**-0.2**
	baz=80,SNR=8.3						
I09A	**Lost Marbles R**	**79.84**	**39**	⇓P	**P**	**22 53 26.8**	**-0.5**
	baz=80						
G08A	**Pilot Rock**	**79.86**	**37**	P	**P**	**22 53 27.6**	**+0.3**
	baz=80,SNR=11						
N12A	**Clover Valley,**	**79.86**	**42**	⇓P	**P**	**22 53 27.1**	**-0.4**
	baz=80,SNR=8.4						
N12A	**Clover Valley,**	**79.86**	**42**	*e*P	**P**	**22 53 27.8**	**+0.3**
	4.1nm,0.7s,mb4.2						
JCW	**Jim Creek**	**79.92**	**33**	*e*P	**P**	**22 53 27.9**	**+0.3**
Y18A	**Canyon Day Jun**	**79.95**	**51**	⇓P	**P**	**22 53 27.7**	**-0.4**
	baz=80						
119A	**Ashpeak Ranch,**	**80.05**	**52**	⇓P	**P**	**22 53 28.9**	**+0.2**
	baz=80						
L11A	**Cat Creek Ranc**	**80.09**	**41**	⇓P	**P**	**22 53 28.7**	**+0.1**
	baz=80,SNR=12						
Q14A	**Sevier Lake (B**	**80.09**	**45**	P	**P**	**22 53 29.2**	**+0.4**
	baz=80,SNR=12						
RSW	**Rattlesnake Hi**	**80.13**	**36**	*e*P	**P**	**22 53 29.3**	**+0.5**
HAWA	**Hanford**	**80.16**	**36**	*e*P	**P**	**22 53 29.1**	**+0.2**
	6.7nm,0.8s,mb4.3						
U16A	**Tuba City**	**80.22**	**48**	⇑P	**P**	**22 53 29.0**	**-0.5**
	baz=80						
V17A	**Tonalea, Kykot**	**80.22**	**49**	P	**P**	**22 53 30.1**	**+0.5**
	baz=80,SNR=8.3						
M12A	**Wells**	**80.23**	**42**	⇓P	**P**	**22 53 29.3**	**-0.1**
	baz=80,SNR=8.1						
K11A	**Parker Ranch,**	**80.23**	**40**	⇑P	**P**	**22 53 29.8**	**+0.4**
	baz=80,SNR=11						
H09A	**Durkee**	**80.27**	**38**	⇑P	**P**	**22 53 29.5**	**0.0**
	baz=80,SNR=5.1						
220A	**Playas Peak, P**	**80.27**	**53**	⇓P	**P**	**22 53 30.6**	**+0.8**
	baz=80,SNR=9.1						
ETW	**Entiat**	**80.42**	**35**	P	**P**	**22 53 30.6**	**+0.3**
E08A	**Dider Farm, El**	**80.48**	**36**	⇓P	**P**	**22 53 30.1**	**-0.5**
	baz=81						
P14A	**Drum Mountains**	**80.52**	**44**	⇓P	**P**	**22 53 30.6**	**-0.5**
	baz=81,SNR=13						
G09A	**Cove**	**80.54**	**38**	P	**P**	**22 53 31.1**	**+0.2**
	baz=81,SNR=7.2						
MSU	**Marysvale**	**80.61**	**46**	*e*P	**P**	**22 53 32.1**	**+0.7**
Y19A	**Nutrioso**	**80.61**	**51**	⇑P	**P**	**22 53 32.5**	**+0.9**
	baz=81,SNR=5.8						
M13A	**Montello**	**80.69**	**42**	⇓P	**P**	**22 53 31.6**	**-0.2**
	baz=81						
M13A	**Montello**	**80.69**	**42**	*e*P	**P**	**22 53 32.2**	**+0.4**
	4.9nm,1.0s,mb4.2						
MFID	**Camas Ranch**	**80.70**	**40**	⇓P	**P**	**22 53 31.3**	**-0.5**
	baz=81,SNR=10						
Q15A	**Fillmore**	**80.70**	**45**	⇑P	**P**	**22 53 32.6**	**+0.7**
	baz=81						
Z20A	**Nine Sixteen R**	**80.74**	**52**	⇑P	**P**	**22 53 32.8**	**+0.6**
	baz=81,SNR=7.3						
H10A	**Noah's Angus R**	**80.77**	**39**	⇑P	**P**	**22 53 31.7**	**-0.5**
	baz=81,SNR=14						
X19A	**St. Johns**	**80.79**	**50**	⇑P	**P**	**22 53 33.6**	**+1.0**
	baz=81,SNR=7.2						
K12A	**Draper Farm, C**	**80.87**	**41**	⇑P	**P**	**22 53 32.0**	**-0.7**
	baz=81						
D08A	**Wollman Farm,**	**80.89**	**36**	⇑P	**P**	**22 53 32.5**	**-0.2**
	baz=81,SNR=6.1						
G10A	**Bishop Farm, J**	**80.93**	**38**	⇑P	**P**	**22 53 32.8**	**-0.2**
	baz=81						
R16A	**Teasdale**	**80.98**	**46**	⇓P	**P**	**22 53 34.1**	**+0.6**
	baz=81,SNR=5.4						
DUG	**Dugway**	**80.99**	**44**	P	**P**	**22 53 33.5**	**0.0**
	baz=81,SNR=6.3						
DUG	**Dugway**	**80.99**	**44**	*e*P	**P**	**22 53 33.6**	**+0.1**
	6.0nm,1.1s,mb4.2						
J12A	**Stokes Ranch,**	**81.07**	**40**	⇓P	**P**	**22 53 33.7**	**-0.1**
	baz=81,SNR=12						
121A	**Cookes Peak, D**	**81.10**	**53**	⇓P	**P**	**22 53 34.1**	**-0.2**
	baz=81						
OD2	**Odessa Site #2**	**81.20**	**35**	P	**P**	**22 53 34.4**	**+0.1**
L13A	**Double Diamond**	**81.20**	**42**	⇑P	**P**	**22 53 34.6**	**+0.1**
	baz=81,SNR=6.0						
Y20A	**Horse Springs,**	**81.24**	**51**	⇑P	**P**	**22 53 36.1**	**+1.2**
	baz=81						
F10A	**Beach Ranch, E**	**81.25**	**37**	P	**P**

V20A	Brimhall	82.00	49	⇑P		P	22 53 39.2	+0.5
	baz=82							
I13A	Wildhorse Cree	82.02	40	⇑P		P	22 53 38.7	0.0
	baz=82,SNR=8.4							
SRU	San Rafael	82.03	46	⇓P		P	22 53 39.2	+0.4
	baz=82,SNR=10.0							
SRU	San Rafael	82.03	46	eP		P	22 53 39.2	+0.4
	21nm,1.1s,mb4.8							
T19A	Beclabito	82.05	48	⇓P		P	22 53 39.6	+0.6
	baz=82,SNR=6.0							
P17A	Butcher Ranch,	82.05	45	⇑P		P	22 53 39.0	+0.1
	baz=82							
J14A	Carey	82.09	41	⇑P		P	22 53 38.8	-0.3
	baz=82,SNR=17							
R18A	Canyonlands Na	82.13	47	⇓P		P	22 53 39.7	+0.3
	baz=82,SNR=13							
DAU	Daniels Canyon	82.14	44	eP		P	22 53 39.8	+0.4
L15A	Malad City	82.16	42	⇑P		P	22 53 38.9	-0.6
	baz=82,SNR=11							
H13A	Challis	82.27	40	⇓P		P	22 53 40.1	+0.1
	baz=82							
F12A	Elk City	82.29	38	P		P	22 53 40.0	0.0
	baz=82,SNR=32							
Q18A	Rafter H Ranch	82.29	46	⇑P		P	22 53 40.0	-0.2
	baz=82,SNR=9.3							
W21A	San Fidel	82.31	50	⇑P		P	22 53 41.0	+0.6
	baz=82							
S19A	Harvey Farm, M	82.37	47	⇓P		P	22 53 40.8	+0.1
	baz=82,SNR=9.1							
O17A	Robinson Place	82.39	45	⇓P		P	22 53 41.1	+0.4
	baz=82,SNR=29							
K15A	Arbon	82.40	42	P		P	22 53 41.0	+0.4
	baz=83,SNR=7.1							
324A	Moseley Ranch,	82.44	54	⇓P		P	22 53 40.6	-0.6
	baz=82,SNR=14							
I14A	Mackay	82.44	40	⇓P		P	22 53 40.4	-0.5
	baz=83,SNR=6.5							
P18A	Preston Nutter	82.46	45	⇓P		P	22 53 41.1	+0.1
	baz=83,SNR=6.4							
HWUT	Hardware Ranch	82.50	43	eP		P	22 53 40.8	-0.4
	5.5nm,0.9s,mb4.3							
R19A	Curley Farm, L	82.53	47	⇑P		P	22 53 41.4	-0.1
	baz=83,SNR=16							
G13A	Cobalt	82.56	39	⇑P		P	22 53 40.1	-1.3
	baz=83,SNR=8.9							
425A	Indio Mountain	82.57	55	⇑P		P	22 53 42.0	+0.1
	baz=83,SNR=14							
MNTX	Cornudas Mount	82.62	54	eP		P	22 53 42.1	+0.1
	8.9nm,1.0s,mb4.5							
224A	Cornudas Mount	82.66	54	⇑P		P	22 53 42.4	+0.1
	baz=83,SNR=19							
PV10	Paradox Valley	82.72	47	eP		P	22 53 42.8	+0.3
	290nm,0.8s							
626A	Big Bend Ranch	82.77	57	⇑P		P	22 53 42.3	-0.6
	baz=83,SNR=8.4							
325A	Bean Ranch, Si	82.81	55	⇓P		P	22 53 41.4	-1.7
	baz=83,SNR=11							
J15A	Blackfoot	82.82	41	⇑P		P	22 53 43.0	+0.2
	baz=83,SNR=21							
C11A	Tepee Creek (N	82.83	36	⇓P		P	22 53 42.5	-0.2
	baz=83							
PV04	Paradox Valley	82.83	47	eP		P	22 53 43.1	+0.1
Q19A	Hogan Spring (	82.83	46	⇓P		P	22 53 42.0	-1.0
	baz=83,SNR=7.7							
H14A	Leadore	82.84	40	⇑P		P	22 53 42.6	-0.2
	baz=83,SNR=12							
F13A	Darby	82.86	38	⇑P		P	22 53 41.7	-1.2
	baz=83,SNR=14							
U21A	Nageezi	82.86	49	⇑P		P	22 53 42.6	-0.5
	baz=83,SNR=23							
D12A	Red Ives Fores	82.92	37	⇓P		P	22 53 42.7	-0.5
	baz=83							
PV01	Paradox Valley	82.95	47	eP		P	22 53 43.6	0.0
	865nm,1.0s							
124A	Stringfield Ra	82.96	53	⇓P		P	22 53 43.8	0.0
	baz=83,SNR=6.8							
526A	Mary Lane Ranc	83.00	56	⇑P		P	22 53 44.0	-0.1
	baz=83							
M17A	Scullys Gap (B	83.03	44	⇑P		P	22 53 43.2	-0.7
	baz=83,SNR=9.0							
TXAR	Lajitas Array	83.06	57	P		P	22 53 45.0	+0.6
	4.0nm,0.9s,mb4.1,baz=224,slow=5.2,SNR=31							
K16A	Soda Springs	83.08	42	⇓P		P	22 53 44.2	+0.1
	baz=83,SNR=6.7							
DLBC	Dease Lake	83.09	22	P		P	22 53 43.3	-0.5
	2.6nm,0.8s,mb4.0,baz=271,slow=22,SNR=3.3							
R20A	Redvale	83.11	47	⇓P		P	22 53 44.1	-0.3
	baz=83,SNR=5.3							
ANMO	Albuquerque	83.12	51	eP		P	22 53 44.6	+0.1
	0.9nm,1.0s,mb3.5							
T21A	Navajo Lake	83.19	49	⇑P		P	22 53 45.2	+0.4
	baz=83							
225A	Deer Hill, Car	83.22	54	P		P	22 53 45.8	+0.7
	baz=83,SNR=9.4							
MCMT	McKenzie Canyo	83.27	40	eP		P	22 53 45.7	+0.7
	7.5nm,1.0s,mb4.4							
J16A	Bone	83.28	42	⇓P		P	22 53 45.6	+0.4
	baz=83,SNR=12							
E13A	Victor	83.28	38	⇑P		P	22 53 44.6	-0.4
	baz=84,SNR=8.1							
426A	McDonald Obser	83.28	56	⇓P		P	22 53 44.8	-0.6
	baz=83,SNR=15							
Z24A	Sheeppen Canyo	83.28	53	⇑P		P	22 53 45.6	+0.2
	baz=83							
H15A	Lima	83.29	40	⇓P		P	22 53 45.4	+0.3
	baz=84,SNR=8.1							
S21A	Coal Bank Pass	83.30	48	⇑P		P	22 53 45.4	+0.1
	baz=83,SNR=7.4							
COLA	College	83.30	12	eP		P	22 53 43.7	-1.0
	13nm,0.8s,mb4.7							
627A	Terlingua Ranc	83.33	57	⇑P		P	22 53 45.8	+0.1
	baz=83							
M18A	Lyman	83.41	44	⇑P		P	22 53 45.9	0.0
	baz=84,SNR=6.9							
527A	Woodward Ranch	83.41	56	⇑P		P	22 53 46.3	+0.2
	baz=84							
F14A	Wisdom	83.44	39	⇓P		P	22 53 46.2	+0.3
	baz=84							
D13A	Huson	83.46	37	⇓P		P	22 53 45.2	-0.7
	baz=84,SNR=9.3							
Y24A	Capitan	83.47	52	P		P	22 53 47.0	+0.7
	baz=84,SNR=12							
K17A	Gardner Place,	83.47	42	⇑P		P	22 53 46.4	+0.3
	baz=84							
RRI2	Red Ridge	83.50	42	eP		P	22 53 46.9	+0.7
	14nm,1.0s,mb4.6							
Q20A	Ridgley Place,	83.50	47	⇓P		P	22 53 45.5	-0.8
	baz=84,SNR=5.9							
O19A	Miners Draw (B	83.53	45	⇑P		P	22 53 45.8	-0.7
	baz=84,SNR=5.9							
125A	Gardner Draw,	83.56	54	⇓P		P	22 53 46.2	-0.6
	baz=84							
326A	Caldwell Ranch	83.57	55	⇓P		P	22 53 46.9	+0.1
	baz=84							
MSO	Missoula	83.62	38	eP		P	22 53 46.2	-0.5
	3.8nm,1.0s,mb4.1							
I16A	Newdale	83.65	41	⇓P		P	22 53 47.9	+1.0
	baz=84							
V23A	Ortiz Mt. (NFS	83.65	50	⇓P		P	22 53 47.8	+0.6
	baz=84,SNR=5.6							
G15A	Dillon	83.66	40	⇓P		P	22 53 47.3	+0.4
	baz=84,SNR=12							
T22A	Edith	83.66	49	⇑P		P	22 53 47.7	+0.5
	baz=84							
L18A	Fontenelle, Gr	83.66	43	⇑P		P	22 53 47.0	0.0
	baz=84							
BSMT	Bassoo Peak	83.67	36	eP		P	22 53 46.7	-0.2
E14A	Clinton	83.68	38	⇓P		P	22 53 47.2	+0.2
	baz=84							
P20A	De Beque	83.68	46	⇓P		P	22 53 46.7	-0.5
	baz=84,SNR=6.4							
DLMT	Dillon	83.69	39	eP		P	22 53 47.2	+0.1
	16nm,1.0s,mb4.7							
628A	Black Gap, Mar	83.75	57	⇑P		P	22 53 47.6	-0.2
	baz=84							
226A	Malaga, Loving	83.76	54	⇑P		P	22 53 47.9	+0.1
	baz=84,SNR=11							
Z25A	Roswell	83.76	53	⇑P		P	22 53 48.0	+0.2
	baz=84							
N19A	John Jarvie Ra	83.76	45	⇓P		P	22 53 47.4	-0.2
	baz=84							
R21A	Cimarron	83.77	47	⇓P		P	22 53 47.9	+0.2
	baz=84,SNR=7.2							
TPAW	Teton Pass	83.80	42	eP		P	22 53 48.4	+0.6
	12nm,1.2s,mb4.5							
427A	Hayter Ranch,	83.85	56	⇓P		P	22 53 48.7	+0.4
	baz=84							
BJI	Beijing	83.86	314	P		P	22 53 46.6	-1.5
BJI				pP		pP	22 55 19.3	+2.3
BJI				S		S	23 03 37.5	-0.7
BJI				pmax		pmax		
	comp=Z,6.0nm,0.6s,mb4.5							
BJI				pmax		pmax		
	comp=Z,62nm,4.5s							
U23A	El Rito	83.89	50	⇓P		P	22 53 48.4	0.0
	baz=84,SNR=7.6							
J17A	Brown Place, J	83.90	42	⇓P		P	22 53 48.1	-0.1
	baz=84,SNR=7.4							
Q21A	Lamborn Mesa,	83.96	47	⇓P		P	22 53 49.1	+0.5
	baz=84							
F15A	Butte	83.99	39	⇑P		P	22 53 48.8	+0.2
	baz=84,SNR=6.8							
K18A	Toltan Ranch,	83.99	43	P		P	22 53 49.1	+0.4
	baz=84,SNR=10							
LRM	Limekiln Ridge	84.00	39	eP		P	22 53 49.0	+0.3
IMW	Indian Meadow	84.01	41	eP		P	22 53 49.2	+0.5
	comp=Z,10nm,1.1s,mb4.5							
D14A	Greenough	84.01	38	P		P	22 53 47.9	-0.8
	baz=84,SNR=5.4							
W24A	Lazy 6 Ranch,	84.01	51	⇑P		P	22 53 48.5	-0.5
	baz=84							
S22A	4UR Ranch, Cre	84.02	48	⇓P		P	22 53 49.6	+0.7
	baz=84							
Y25A	Mesa, Roswell	84.03	52	⇑P		P	22 53 49.0	-0.2
	baz=84							
126A	Clayton Basin,	84.05	54	⇑P		P	22 53 49.3	0.0
	baz=84							
CHMT	Chamberlain Mo	84.08	38	eP		P	22 53 48.6	-0.4
LOHW	Long Hollow	84.08	42	eP		P	22 53 49.1	0.0
G16A	Moss Hill, Enn	84.11	40	⇓P		P	22 53 49.0	-0.2
	baz=84,SNR=8.2							
B13A	Whitefish	84.12	36	⇑P		P	22 53 48.7	-0.5
	baz=84							
E15A	Deer Lodge	84.19	38	⇓P		P	22 53 49.2	-0.4
	baz=84,SNR=6.5							
L19A	Farson	84.19	43	⇓P		P	22 53 49.2	-0.6
	baz=84,SNR=7.7							
H16A	Russell Place,	84.20	40	⇓P		P	22 53 50.4	+0.7
	baz=84,SNR=7.8							
J18A	Kendall Valley	84.27	42	⇑P		P	22 53 49.7	-0.3
	baz=84,SNR=7.4							
R22A	Saguache, Gunn	84.28	48	⇓P		P	22 53 50.8	+0.6
	baz=84,SNR=5.5							
Z26A	Caprock	84.33	53	⇓P		P	22 53 49.8	-0.8
	baz=84							
N20A	Spence Gulch,	84.36	45	⇑P		P	22 53 50.4	-0.2
	baz=84,SNR=6.6							
LCCM	Lewis and Clar	84.36	39	P		P	22 53 50.8	+0.3
BW06	Boulder Array	84.37	43	⇑P		P	22 53 50.1	-0.5
	baz=84,SNR=5.5							
PDAR	Pinedale Array	84.37	43	P		P	22 53 49.9	-0.7
	comp=Z,2.6nm,0.8s,mb4.0,baz=222,slow=2.0,SNR=19							
PDAR				pP		pP	22 55 19.5	-0.2
	comp=Z,0.4nm,0.7s,baz=226,slow=2.4,SNR=1.9							
428A	Kincaid Ranch,	84.37	56	⇓P		P	22 53 50.1	-0.8
	baz=84							
BOZ	Bozeman (W)	84.42	40	P		P	22 53 50.9	+0.1
	baz=85,SNR=13							
BOZ	Bozeman (W)	84.42	40	eP		P	22 53 50.7	0.0
	comp=Z,10nm,1.2s,mb4.4							
A13A	Flathead Natio	84.45	36	⇓P		P	22 53 50.2	-0.6
	baz=85							
F16A	Kennard Place,	84.49	39	⇑P		P	22 53 51.0	-0.1
	baz=85,SNR=8.8							
SMCO	Snowmass	84.53	47	eP		P	22 53 51.7	+0.2
	comp=Z,3.5nm,0.8s,mb4.1							
D15A	Lincoln	84.57	38	⇑P		P	22 53 51.4	-0.1
	baz=85							
127A	Arkansas Junct	84.58	54	⇑P		P	22 53 51.2	-0.7
	baz=85							
BILL	Bilibino	84.61	353	eP		P	22 53 50.8	-0.3
	comp=Z,9.7nm,0.9s,mb4.5							
EGAK	Eagle	84.67	14	eP		P	22 53 51.6	0.0
	comp=Z,10nm,1.2s,mb4.4							
Y26A	Elida	84.70	53	⇓P		P	22 53 51.2	-1.2
	baz=85							
M20A	Sweetwater, Wa	84.70	44	⇑P		P	22 53 51.9	-0.4
	baz=85							
W25A	X Bar L Ranch,	84.72	51	⇓P		P	22 53 51.6	-0.9
	baz=85							
B14A	Marquette Ranc	84.80	37	⇑P		P	22 53 51.4	-1.1
	baz=85,SNR=11							
HRY	Holter Researc	84.82	39	eP		P	22 53 52.8	+0.1
	comp=Z,4.9nm,0.6s,mb4.4							
E16A	East Helena	84.82	39	⇑P		P	22 53 52.7	0.0
	baz=85,SNR=5.3							
L20A	Wamsutter	84.83	44	⇓P		P	22 53 52.4	-0.4
	baz=85							
N21A	Black Mountain	84.83	45	⇓P		P	22 53 53.1	+0.2
	baz=85							
V25A	Rancho No Teng	84.86	51	⇓P		P	22 53 52.4	-0.8
	baz=85							
C15A	Salmond Ranch,	84.89	37	⇑P		P	22 53 52.4	-0.6
	baz=85,SNR=10							
SDCO	Great Sand Dun	84.98	49	eP		P	22 53 53.5	-0.2
	comp=Z,0.9nm,0.8s,mb3.5							
COLD	Coldfoot	85.00	10	eP		P	22 53 53.3	+0.2
	comp=Z,4.5nm,1.0s,mb4.2							
A14A	Double T Ranch	85.03	36	⇑P		P	22 53 52.8	-0.9
	baz=85,SNR=12							
K20A	Yellowstone Ra	85.12	43	⇓P		P	22 53 53.3	-1.0
	baz=85							
F17A	Fitzpatrick Pl	85.14	40	P		P	22 53 55.0	+0.7
	baz=85,SNR=10							
D16A	Dana Ranch, Ca	85.14	38	⇓P		P	22 53 54.6	+0.3
	baz=85,SNR=14							
B15A	Bradely Ranch,	85.18	37	⇓P		P	22 53 53.0	-1.5
	baz=85,SNR=7.0							
Y27A	Causey	85.19	53	⇑P		P	22 53 54.2	-0.6
	baz=85							
U25A	Circle Dot Ran	85.23	50	⇓P		P	22 53 53.8	-1.2
	baz=85							
C16A	Fuhringer Ranc	85.41	38	⇑P		P	22 53 54.5	-1.0
	baz=86,SNR=8.4							
A15A	Johnson Ranch,	85.42	36	⇓P		P	22 53 54.6	-1.0
	baz=86,SNR=10							
G18A	Lazy EL Ranch,	85.54	41	⇓P		P	22 53 55.5	-0.8
	baz=86							
N22A	Wattenberg Ran	85.58	46	⇓P		P	22 53 56.3	-0.3
	baz=86							
RLMT	Red Lodge	85.64	41	⇓P		P	22 53 56.4	-0.4
	baz=86							
RLMT	Red Lodge	85.64	41	eP		P	22 53 57.4	+0.6
	comp=Z,4.2nm,0.8s,mb4.2							
GCMT	Greycliff	85.70	40	eP		P	22 53 57.7	+0.7
	comp=Z,3.9nm,1.0s,mb4.1							
S25A	Robets Cordova	85.72	49	⇓P		P	22 53 56.4	-1.0
	baz=86							
D17A	Six Diamond Ra	85.72	39	⇑P		P	22 53 56.8	-0.3
	baz=86,SNR=17							
W27A	Bowe Ranch, En	85.72	52	⇑P		P	22 53 56.7	-0.8
	baz=86							
F18A	Big Timber	85.72	40	⇓P		P	22 53 56.8	-0.4
	baz=86,SNR=6.5							
U26A	Atchley Ranch,	85.72	50	⇑P		P	22 53 56.4	-0.9
	baz=86							
B16A	M & M Farms, S	85.73	37	⇓P		P	22 53 56.4	-0.7
	baz=86,SNR=7.7							
C17A	Wharram Farm,	85.90	38	⇑P		P	22 53 57.5	-0.5
	baz=86,SNR=15							
E18A	Harlowton	85.91	39	⇓P		P	22 53 58.4	+0.3
	baz=86,SNR=9.4							
GYA	Guiyang	85.91	299	P		P	22 53 59.6	+1.0
GYA				pP		pP	22 55 27.4	-0.6
GYA				sP		sP	22 56 06.3	-2.2
GYA				PP		PP	22 57 28.0	+2.9
GYA				SKS			23 03 45.9	
GYA				pmax		pmax		
	comp=Z,10.0nm,1.0s,mb4.5							
B17A	L&G Farms, Che	86.20	37	⇑P		P	22 53 58.4	-0.9
	baz=86							
D18A	Linhart Farms,	86.27	39	⇑P		P	22 53 59.6	-0.2
	baz=86,SNR=5.6							
PHWY	Pilot Hill	86.47	45	eP		P	22 54 00.8	-0.1
MAW	Mawson	86.53	199	P		P	22 54 01.6	+0.8
	comp=Z,5.2nm,0.7s,mb4.4,baz=130,slow=6.0,SNR=11							
B18A	Beardsley Farm	86.85	38	⇑P		P	22 54 02.7	+0.2
	baz=87							
A18A	Metzger Ranch,	87.05	37	⇓P		P	22 54 02.6	-0.9
	baz=87							
EDM	Edmonton	87.25	32	eP		P	22 54 03.9	-0.4
HHC	Hu-ho-hao-te	87.39	314	eP		P	22 54 07.0	+1.8
HHC				pP		pP	22 55 35.5	+0.5
HHC				sP		sP	22 56 14.0	-1.4
HHC				PP		PP	22 57 40.1	+3.6
HHC				SKS			23 03 56.8	
HHC				S		S	23 04 13.1	+0.9
HHC				sS		sS	23 06 50.3	-1.4
HHC				SS		SS	23 10 14.0	+5.9
HHC				pmax		pmax		
	comp=Z,15nm,0.8s,mb4.8							
HHC				pmax		pmax		
	comp=Z,45nm,7.3s							
HHC				LR		LR		
	comp=N,92nm,15.5s							
HHC				LR		LR		
	comp=E,72nm,15.5s							
HHC				LR		LR		
	comp=Z,63nm,14.3s							
RSSD	Black Hills	88.58	43	eP		P	22 54 10.0	-0.7
	comp=Z,5.9nm,0.9s,mb4.3							
KMI	Kunming	88.83	296	P		P	22 54 13.3	+0.9
KMI				pP		pP	22 55 41.3	-1.2
KMI				sP		sP	22 56 19.6	-3.2
KMI				PP		PP	22 57 51.8	+3.5
KMI				S		S	23 04 27.5	+1.2
KMI				sS		sS	23 07 02.5	-3.9
KMI				SS		SS	23 10 33.1	+3.5
KMI				pmax		pmax		
	comp=Z,9.0nm,0.9s,mb4.5							
KMI				pmax		pmax		
	comp=Z,72nm,6.4s							
KMI				LR		LR		
	comp=N,61nm,21.9s							
KMI				LR		LR		
	comp=E,100nm,15.0s							
KMI				LR		LR		
	comp=Z,140nm,16.2s							
INK	Inuvik	89.33	15	P		P	22 54 13.5	-0.2
	comp=Z,1.0nm,0.7s,mb3.7,baz=188,slow=8.6,SNR=3.1							
CD2	Chengdu	89.78	302	eP		P	22 54 16.9	+0.2
CD2				pP		pP	22 55 45.9	-1.0
CD2				sP		sP	22 56 24.5	-2.7
CD2				pmax		pmax		
	comp=Z,10.0nm,0.6s,mb4.8							
CD2				pmax		pmax		
	comp=Z,40nm,5.2s							
DGMT	Dagmar	90.22	39	⇓P		P	22 54 18.5	+0.3
	baz=90							
DGMT	Dagmar	90.22	39	eP		P	22 54 18.6	+0.3
	comp=Z,21nm,1.1s,mb4.9							
CMAR	Chiang Mai Arr	90.24	289	P		P	22 54 17.7	-1.3
	comp=Z,0.5nm,0.5s,mb3.6,baz=219,slow=31,SNR=3.9							
PLCA	Paso Flores	91.17	133	P		P	22 54 25.0	+2.0
	comp=Z,1.3nm,0.9s,mb3.8,baz=297,slow=2.3,SNR=2.7							
LZH	Lanzhou	91.36	307	eP		P	22 54 28.8	+5.0
LZH				pP		pP	22 55 57.8	+3.6
LZH				sP		sP	22 56 32.8	-1.6
LZH				pmax		pmax		
	comp=Z,13nm,1.0s,mb4.7							
YKA	Yellowknife Ar	91.56	24	P		P	22 54 22.3	-1.8
	comp=Z,0.5nm,0.8s,mb3.5,baz=241,slow=4.1,SNR=4.6							
SYO	Syowa Base	91.64	192	⇓eP		eP	22 54 23.0	-1.5
SONM	Songino Array	93.41	319	P		P	22 54 33.1	+0.1
	comp=Z,0.3nm,0.5s,mb3.5,baz=42,slow=45,SNR=3.5							
ECSD	EROS Data Cent	93.44	46	eP		P	22 54 31.5	-1.7
	comp=Z,6.9nm,1.1s,mb4.5							
MKAR	Makanchi Array	109.24	315	PKiKP		PKiKP	22 59 43.6	-1.8
	comp=Z,0.4nm,0.6s,baz=51,slow=4.8,SNR=5.1							
BVAR	Borovoye Array	116.58	322	PKP		PKPdf	22 59 57.8	-1.4
	comp=Z,1.2nm,0.5s,baz=48,slow=2.2,SNR=6.8							
ARU	Arti	122.30	328	ePKPdf		PKPdf	23 00 08.8	-1.3
ARCES	ARCESS Array B	124.64	351	PKP		PKPdf	23 00 13.2	-1.0
	comp=Z,1.9nm,0.5s,baz=15,slow=1.2,SNR=15							
FINES	FINESS Array B	131.75	346	PKP		PKPdf	23 00 27.9	-0.1
	comp=Z,0.7nm,0.5s,baz=6.7,slow=2.4,SNR=10							
KMBO	Kilima Mbogo	142.95	246	ePKPdf		PKPdf	23 00 47.6	-2.4
KWP	Kalwaria Pacla	142.96	340	⇑iP		PKPdf	23 00 46.0	-2.9
OJC	Ojcow	143.35	343	ePKP		PKPdf	23 00 44.8	-4.8
IBBN	Ibbenburen	143.48	356	ePKPbc		PKPdf	23 00 47.5	-2.2
STHS	Stebnicka Huta	143.63	341	ePKP		PKPdf	23 00 48.3	-1.8
STHS	Stebnicka Huta	143.63	341	ePKP		PKPdf	23 00 48.3	-1.8
CLZ	Clausthal	143.70	353	ePKPbc		PKPdf	23 00 47.5	-2.6
BUR08	Bucovina Ar. S	143.70	335	ePKPdf		PKPdf	23 00 48.5	-1.8
BURAR	Bucovina Array	143.72	335	⇑iP		PKPdf	23 00 48.4	-1.9
CLL	Collm	143.86	350	ePKPbc		PKPdf	23 00 46.7	-3.7
CLL	Collm	143.86	350	i PKP		PKPdf	23 00 46.7	-3.7
CLL				i			23 00 47.8	
CLL				ePKP		pPKPdf	23 02 24.0	-2.0
CLL	Collm	143.86	350	i PKPdf		PKPdf	23 00 46.7	-3.7
	comp=Z,2.0nm,0.7s							
CLL				i			23 00 47.8	
	comp=Z,8.0nm,0.9s							
CLL				ePKPdf		pPKPdf	23 02 24.0	-2.0
CLL				ePKSdf			23 04 25.0	
CLL				i (PKSbc)			23 04 33.3	
NIE	Niedzica	143.91	342	ePKP		PKPdf	23 00 49.2	-1.4
CRVS	Cervenica-Dubn	144.01	340	ePKP		PKPdf	23 00 49.4	-1.3
CRVS	Cervenica-Dubn	144.01	340	ePKP		PKPdf	23 00 49.4	-1.3
UPC	Upice	144.04	347	ePKP		PKPdf	23 00 49.2	-1.6
BRG	Berggiesshubel	144.11	349	ePKPbc		PKPdf	23 00 48.3	-2.6
BRG	Berggiesshubel	144.11	349	ePKP		PKPdf	23 00 48.8	-2.1
	comp=Z,6.3nm,0.8s							
DPC	Dobruska-Polom	144.12	346	ePKP		PKPdf	23 00 49.7	-1.2
OKC	Ostrava-Krasne	144.15	344	ePKP		PKPdf	23 00 49.7	-1.3
PVCC	Panska Ves	144.32	348	ePKP		PKPdf	23 00 49.7	-1.5
MORC	Moravsky Berou	144.36	345	ePKPdf		PKPdf	23 00 50.6	-0.8
MORC	Moravsky Berou	144.36	345	⇓iP		PKPdf	23 00 50.6	-0.7
BUG	Bochum-Univer	144.37	356	ePKPbc		PKPdf	23 00 49.4	-1.9

BFO	Black Forest	147.38	354	*e*PKPbc	PKPbc	23 00 58.7	-0.8
CDF	Champ du Feu	147.39	356	*e*PKP1	PKPbc	23 00 58.6	-0.9
	comp=Z,21nm,1.0s						
MEZF	Maizieres J'vi	147.41	359	*e*PKP1	PKPbc	23 00 58.8	-0.8
	comp=Z,13nm,0.9s						
HAU	Haudompre	147.85	357	*e*PKP1	PKPbc	23 00 59.7	-1.1
	comp=Z,17nm,0.9s						
HINF	Hinteralfeld	148.01	356	*e*PKP1	PKPbc	23 00 59.9	-1.3
LJU	Ljubljana	148.58	346	*e*PKPbc	PKPbc	23 01 01.8	-0.9
LOR	Lormes	148.65	360	*e*PKP1	PKPbc	23 01 01.9	-0.9
	comp=Z,18nm,1.0s						
SSF	Saint Saulge	148.86	0	*e*PKP1	PKPbc	23 01 02.4	-1.0
	comp=Z,33nm,1.3s						
BOJS	Bojanci	148.90	344	*e*PKPbc	PKPbc	23 01 03.1	-0.4
TUE	Stuetta	149.11	353	*e*PKPbc	PKPbc	23 01 04.0	+0.1
AVF	Avril sur Loir	149.13	1	*e*PKP1	PKPbc	23 01 02.5	-1.5
	comp=Z,30nm,1.4s						
MFF	Saint Martin d	149.14	5	*e*PKP1	PKPbc	23 01 02.7	-1.4
	comp=Z,54nm,1.4s						
CABF	La Chapelle	149.25	357	*e*PKP1	PKPbc	23 01 04.0	-0.3
	comp=Z,38nm,1.0s						
SMF	Signal de Mont	149.28	0	*e*PKP1	PKPbc	23 01 03.1	-1.3
BGF	Bois d'Agland	149.35	1	*e*PKP1	PKPbc	23 01 03.5	-1.1
	comp=Z,10nm,0.7s						
TCF	Toulx Ste Croi	149.60	2	*e*PKP1	PKPbc	23 01 03.9	-1.3
	comp=Z,25nm,1.4s						
PYM	Petit Puy Mans	150.16	1	PKP	PKPbc	23 01 06.4	-0.1
LPL	La Plagne	150.31	356	*e*PKP1	PKPbc	23 01 06.8	-0.1
	comp=Z,22nm,1.0s						
LPG	La Plagne	150.32	356	*e*PKP1	PKPbc	23 01 06.9	0.0
	comp=Z,18nm,1.0s						
RJF	Les Rejaudoux	150.55	3	*e*PKP1	PKPbc	23 01 06.2	-1.3
SSB	Saint Sauveur	150.64	359	*e*PKPbc	PKPbc	23 01 07.6	-0.1
LBL	Lubilhac	150.69	1	PKP	PKPbc	23 01 07.8	0.0
BNI	Bardonecchia	150.77	356	*e*PKPbc	PKPbc	23 01 08.3	+0.4
LFF	La Frestale	150.87	5	*e*PKP1	PKPbc	23 01 07.0	-1.2
	comp=Z,20nm,1.0s						
ORIF	Oris-en-Rattie	150.95	357	*e*PKP1	PKPbc	23 01 07.6	-0.8
	comp=Z,16nm,1.1s						
CAF	Calviac	150.96	3	*e*PKP1	PKPbc	23 01 07.4	-1.0
	comp=Z,14nm,1.0s						
VIVF	Saint-Julien-l	151.06	359	*e*PKP1	PKPbc	23 01 08.0	-0.6
	comp=Z,7.9nm,0.8s						
MBDF	Montbardon	151.09	356	*e*PKP1	PKPbc	23 01 08.0	-0.7
	comp=Z,12nm,0.8s						
SAOF	Saorge	151.76	354	PKP	PKPbc	23 01 10.0	-0.3
TOUF	Mont Tournerai	151.76	355	PKP	PKPbc	23 01 10.0	-0.3
LASF	Ste Croix	151.85	360	*e*PKP1	PKPbc	23 01 09.7	-0.8
	comp=Z,13nm,1.0s						
SBF	Sospel	151.89	354	*e*PKP1	PKPbc	23 01 09.0	-1.6
	comp=Z,9.6nm,0.7s						
SMRF	Simiane la Rot	151.91	357	*e*PKP1	PKPbc	23 01 10.1	-0.5
	comp=Z,19nm,1.1s						
FRF	La Foret Royal	152.26	356	*e*PKP1	PKPbc	23 01 10.0	-1.4
	comp=Z,15nm,1.2s						
AQU	L'Aquila	152.32	345	⇑*i*P	PKPbc	23 01 14.1	+2.5
LMR	La Mourre	152.50	356	*e*PKP1	PKPbc	23 01 10.7	-1.2
	comp=Z,7.4nm,1.1s						
ETSF	Etsaut	152.76	7	*e*PKP1	PKPbc	23 01 11.7	-0.8
PGF	Pioggiola	153.01	352	*e*PKP1	PKPbc	23 01 11.5	-1.6
	comp=Z,18nm,1.3s						
ESDC	Sonseca Array	155.28	15	PKPab	PKPab	23 01 35.3	-0.6
	comp=Z,0.2nm,0.4s,baz=305,slow=3.6,SNR=5.3						

NIED ***21*** *23:10:00,22.°50N×121.°50E,h104km,Mw4.4 Best double couple: M₀3.96000×10¹⁵ NP1:φ₀20.00000°, δ65.00000°,λ-56.00000°. NP2:φ₀142.00000°,δ41.00000°, λ-140.00000°.*
ISCJB ***21*** *23:10:31.0±0.5,22.°57N±0.°02×121.°46E±0.°02,h12km±3km, mb3.9/11,MS3.4/4,Error ellipse: s-maj=3.3km s-min=2.7km az=156.3*
NEIC ***21*** *23:10:31.3±0.6,22.°63N×121.°45E,h10km,MG3.8(JMA), Error ellipse: s-maj=12.3km s-min=8.6km az=68.0*
TAP ***21*** *23:10:33.1,22.°65N×121.°30E,h16km,ML4.4,B*
JMA ***21*** *23:10:34.0±0.2,22.°54N×121.°53E,h73km,M3.8*
IDC ***21*** *23:10:38.6±5.7,22.°56N×121.°50E,h76km±54km,mb3.5/11, mb1 3.7/11,mb1mx3.5/23,mbtmp3.5/11,MS3.3/5, Ms1 3.3/5,ms1mx2.8/29,Error ellipse: s-maj=28.9km s-min=16.1km az=65.0*
BJI ***21*** *23:10:42.3,23.°10N×120.°53E,h15km,ML3.6/4,Ms3.4/3, Ms7 3.4/3*

ISC 21 23:10:31.7±0.4,22.°62N±0.°02×121.°43E±0.°02,h8km±2km, n94,σ0°98/130,mb3.9/11,MS3.4/4,19C-5D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTN	Taitung	0.29	298	⇓*i*P		Pg	23 10 38.4 +0.9
baz=307							
TWG	Pinlang	0.39	302	*e*Pg		Pg	23 10 39.5 +0.3
TWG				*e*S		Sg	23 10 44.9 +0.5
TWG	Pinlang	0.39	302	⇓*i*P		Pg	23 10 39.5 +0.3
baz=315							
TWG				S		Sg	23 10 44.9 +0.6
baz=315							
ECL	Taimali	0.44	268	⇑*i*P		Pg	23 10 40.1 0.0
baz=260							
ECL				*e*S		Sg	23 10 45.1 -0.8
baz=260							
TAW	Tawu	0.55	243	⇑*i*P		Pg	23 10 42.6 +0.2
baz=242							
TAW				*e*S		Sg	23 10 49.2 -0.4
baz=242							
EAST	Anshuo	0.58	247	⇑*i*P		Pg	23 10 42.9 0.0
baz=248							
EAST				*e*S		Sg	23 10 49.7 -0.8
baz=248							
LAY	Lan-yu	0.58	169	⇑*i*P		Pg	23 10 44.5 +1.6
baz=158							
LAY				*e*S		Sg	23 10 53.9 +3.3
baz=158							
ELDTW	Lidau	0.69	327	⇑*i*P		Pg	23 10 44.5 -0.4
baz=335							
ELDTW				*e*S		Sg	23 10 52.7 -1.1
baz=335							
TWF1	Yuli	0.74	351	⇑*i*P		Pg	23 10 45.9 -0.1
baz=344							
TWF1				*e*S		Sg	23 10 55.7 0.0
baz=344							
SSD	Sandimen	0.74	280	⇑*i*P		Pg	23 10 44.9 -1.1
baz=279							
SSD				*e*S		Sg	23 10 52.5 -3.2
baz=279							
YULB	Yu-li	0.78	351	*e*Pg		Pg	23 10 46.0 -0.8
SCZT	Fangliau	0.78	252	⇑*i*P		Pg	23 10 46.1 -0.6
baz=246							
TSEB	Hengchuen, Pin	0.86	215	P		Pg	23 10 48.4 +0.2
baz=208							
TSEB				*e*S		Sg	23 11 00.6 +1.1
baz=208							
HEN	Hengchun	0.88	227	⇓*i*P		Pg	23 10 48.3 -0.2
baz=210							
TWK1	Hengchun	0.88	221	⇓*i*P		Pg	23 10 48.2 -0.4
baz=212							
TWK1				*e*S		Sg	23 10 58.3 -1.8
baz=212							
EHY	Hungye	0.89	354	P		Pg	23 10 48.0 -0.8
baz=1.0							
SGST	Jiashian	0.91	301	⇑*i*P		Pg	23 10 49.0 -0.1
baz=316							
TWM1	Shoushan	0.95	283	⇑*i*P		Pg	23 10 50.3 +0.4
baz=282							
YUS	Yu-Shan	0.97	333	*e*P		Pg	23 10 49.7 -0.7
baz=339							
WTP	Ta-pu	0.98	310	⇑*i*P		Pg	23 10 50.2 -0.3
baz=323							
WTP				*e*S		Sg	23 11 02.8 -0.4
baz=323							
TPUB	Ta-pu	1.00	313	*e*Pg		Pg	23 10 50.2 -0.7
CHN1	Nanshi	1.00	305	⇑*i*P		Pg	23 10 51.0 0.0
baz=308							
CHN1				S		Sg	23 11 04.2 +0.2
baz=308							
TWP	Hsiaoliuchiu	1.02	255	*e*P		Pg	23 10 53.3 +2.1
baz=244							
KAU	Kaohsiung	1.03	268	P		Pg	23 10 53.1 +1.6
baz=265							
KAU				*e*S		Sg	23 11 07.9 +2.9
baz=265							
ALS	Alishan	1.06	327	⇑*i*P		Pg	23 10 51.6 -0.4
baz=333							
CHN4	Tsaushan	1.06	314	⇑*i*P		Pg	23 10 51.7 -0.3
baz=317							
CHN3	Shinhua	1.08	295	*e*P		Pg	23 10 52.9 +0.5
baz=296							
TWK	Hsinying	1.08	307	⇑*i*P		Pg	23 10 52.1 -0.3
baz=321							
TWK				S		Sg	23 11 06.1 -0.4
baz=321							
TAI1	Yung-k'ang	1.18	291	*e*P		Pb	23 10 54.6 +0.3
baz=292							
ESL	Shilin	1.19	0	*e*P		Pb	23 10 53.0 -1.5
baz=6.0							
CHN5	Tsauling	1.20	325	⇑*i*P		Pb	23 10 54.0 -0.5
baz=329							
SSLB	Suanglung	1.25	340	*e*Pn		Pn	23 10 54.2 -1.1
SCLT	Jiali	1.27	296	P		Pn	23 10 55.1 -0.5
baz=298							
SCLT				*e*S		Sb	23 11 12.9 +0.7
baz=298							
CHY	Chiayi	1.27	314	⇑*i*P		Pn	23 10 55.6 -0.1
baz=328							
CHY				*i* S		Sb	23 11 12.3 -0.1
baz=328							
WGK	Gukeng	1.33	323	*e*P		Pn	23 10 56.8 +0.3
baz=328							
WGK				*e*S		Sb	23 11 14.7 +0.7
baz=328							
CHN8	Yiju	1.34	303	*e*P		Pn	23 10 56.2 -0.4
baz=305							
CHN8				*e*S		Sb	23 11 14.3 +0.1
baz=305							
SMLT	Sun Moon Lake	1.35	339	P		Pn	23 10 56.6 -0.1
baz=345							
SMLT				*e*S		Sb	23 11 14.6 0.0
baz=345							
HWA	Hwalien	1.37	7	*e*P		Pn	23 10 58.0 +1.1
baz=358							
TYC	Yuchr	1.39	338	P		Pn	23 10 57.3 0.0
baz=344							
TYC				S		Sb	23 11 15.7 0.0
baz=344							
WNT	Mingjian	1.43	332	P		Pn	23 10 58.8 +0.9
baz=336							
WNT				*e*S		Sn	23 11 17.1 +0.3
baz=336							
TWD	Chiawan	1.47	6	*e*P		Pn	23 10 57.5 -0.9
baz=358							
WHF	Hehuan Shan	1.53	354	P		Pn	23 10 58.6 -0.6
baz=9.0							
NACB	Ninganchiao	1.56	6	*e*Pn		Pn	23 10 58.3 -1.3
WTCT	Ta-ch'eng	1.63	320	*e*P		Pn	23 11 00.4 -0.2
baz=323							
WTCT				*e*S		Sn	23 11 20.9 -0.9
baz=323							
TWT	Tachien	1.65	352	*e*P		Pn	23 11 02.5 +1.7
baz=355							
TCU	Taichung	1.67	336	*e*P		Pn	23 11 01.8 +0.6
baz=339							
TCU				*e*S		Sn	23 11 23.5 +0.7
baz=339							
NNS	Nan Shan	1.82	358	*e*P		Pn	23 11 03.9 +0.7
baz=15							
TWQ1	Liyutan	1.83	341	⇓*i*P		Pn	23 11 04.9 +1.6
baz=344							
TWQ1				*e*S		Sn	23 11 27.6 +1.0
baz=344							
ENA	Nanau	1.83	9	*e*P		Pn	23 11 02.6 -0.8
baz=1.0							
NSY	Sanyi	1.89	341	*e*P		Pn	23 11 05.5 +1.3
baz=345							
NSY				*e*S		Sn	23 11 30.4 +2.1
baz=345							
PNG	Penghu	1.97	299	⇑P		Pn	23 11 03.9 -1.4
baz=300							
PNG				*e*S		Sn	23 11 26.6 -3.5
baz=300							
ENTT	Nioudou	2.02	4	*e*P		Pn	23 11 06.3 +0.3
baz=6.0							
TWC	Suao	2.02	11	*e*P		Pn	23 11 07.4 +1.4
baz=2.0							
NSTT	Nanjuang	2.04	349	*e*P		Pn	23 11 06.6 +0.2
baz=4.0							
YHNB	Yeheng	2.05	359	*e*Pn		Pn	23 11 07.1 +0.7
YHNB				*e*S		Sn	23 11 34.9 +2.8
NSK	Sanguang	2.05	358	*e*P		Pn	23 11 06.8 +0.4
baz=16							
TWE	Neicheng	2.11	6	*e*P		Pn	23 11 08.3 +1.1
baz=9.0							
YOJ	Yonaguni jima	2.34	38	P		Pn	23 11 11.3 +0.9
YOJ				S		Sn	23 11 38.8 -0.6
YOJ	Yonaguni jima	2.34	38	*e*P		Pn	23 11 10.7 +0.2
baz=53							
YOJ				*e*S		Sn	23 11 39.4 0.0
baz=53							
TATO	Taipei	2.35	1	*e*Pn		Pn	23 11 08.7 -1.8
TATO				*e*S		Sn	23 11 40.2 +0.7
NCU	National Centr	2.35	355	*e*P		Pn	23 11 13.2 +2.6
baz=354							
TWA	Mucha	2.36	3	*e*P		Pn	23 11 12.0 +1.4
baz=19							
TAP1	Taipei	2.42	2	*e*P		Pn	23 11 12.0 +0.6
baz=19							
NWF	Wu-fen Shan	2.47	8	*e*P		Pn	23 11 12.9 +0.7
baz=9.0							
TWS1	Kuangyinshan	2.48	360	*e*P		Pn	23 11 13.3 +1.1
baz=17							
HATJ	Hateruma jima	2.62	56	P		Pn	23 11 14.4 +0.2
HATJ				S		Sn	23 11 44.5 -1.6
TWY	Chenhua	2.65	3	*e*P		Pn	23 11 15.2 +0.5
baz=4.0							
IRIF	Iriomote-Funau	2.72	51	P		Pn	23 11 16.1 +0.5
IRIF				S		Sn	23 11 48.8 +0.1
JKRS	Kuro-shima	2.87	55	P		Pn	23 11 18.2 +0.5
JKRS				*e*S		Sn	23 11 51.5 -0.9
JIJ	Ishigaki jima	3.04	55	P		Pn	23 11 20.2 +0.2
JIJ				S		Sn	23 11 55.4 -1.2
KNM	Kinmen	3.28	304	*e*P		Pn	23 11 23.1 -0.2
baz=302							
KNM				*e*S		Sn	23 12 01.3 -1.2
baz=302							
QZH	Quanzhou	3.48	312	⇑*i*Pn		Pn	23 11 25.1 -1.0
QZH				Sn		Sn	23 12 03.1 -4.3
QZH				smax			
comp=N,590nm,0.2s							
QZH				smax			
comp=E,410nm,0.3s							
JTJ	Tarama	3.62	55	P		Pn	23 11 28.4 +0.4
JTJ				S		Sn	23 12 08.8 -2.1
JMJ	Miyako jima 2	4.17	58	P		Pn	23 11 36.1 +0.6
JMJ				*e*S		Sn	23 12 23.5 -0.9
JOGS	Gusukube	4.23	59	P		Pn	23 11 37.0 +0.7
JKE	Kume jima 2	6.12	52	P		Pn	23 12 01.7 -0.7
KSRS	Korea Array	15.81	19	LR		LR	23 20 57.2
comp=E,31nm,19.6s,baz=205,slow=39							
MJAR	Matsushiro Arr	20.10	43	P		P	23 15 07.1 +1.4
comp=E,1.1nm,0.6s,baz=212,slow=8.8,SNR=5.2							
CMAR	Chiang Mai Arr	21.45	263	P		P	23 15 21.6 +1.1
comp=E,0.8nm,0.7s,mb3.2,baz=66,slow=8.7,SNR=4.5							
SONM	Songino Array	27.90	338	P		P	23 16 20.8 -1.1
comp=E,0.4nm,0.6s,mb3.2,baz=151,slow=12,SNR=3.7							
SONM				LR		LR	23 29 01.8
comp=E,102nm,18.6s,MS3.4,baz=247,slow=39							
MK31	Makanchi Array	39.62	317	*e*P		P	23 18 03.9 +0.2
MKAR	Makanchi Array	39.62	317	P		P	23 18 03.8 +0.1
comp=E,1.8nm,0.8s,mb3.9,baz=101,slow=10,SNR=15							
PETK	Petropavlovsk-	41.05	33	LR		LR	23 38 58.5
comp=E,19nm,18.2s,MS3.0,baz=242,slow=41							
ZAA0	Zalesovo Array	41.68	328	*e*P		P	23 18 19.3 -1.2
ZALV	Zalesovo Beam	41.68	328	P		P	23 18 19.6 -0.9
comp=E,1.8nm,0.3s,mb4.2,baz=123,slow=7.9,SNR=14							
ZALV				PcP		PcP	23 20 14.8 -2.3
comp=E,0.4nm,0.5s,baz=126,slow=2.0,SNR=2.7							
KURK	Kurchatov	43.44	321	P		P	23 18 34.5 -0.4
comp=E,2.3nm,0.9s,mb3.9,baz=116,slow=8.3,SNR=6.9							
AAK	Ala-Archa	43.64	309	LR		LR	23 37 25.9
comp=E,43nm,21.1s,MS3.3,baz=296,slow=37							
WRA	Warramunga Arr	44.14	162	P		P	23 18 38.4 -2.3
comp=E,1.4nm,0.7s,mb3.8,baz=344,slow=8.8,SNR=3.3							
ASAR	Alice Springs	47.58	164	P		P	23 19 06.5 -1.3
comp=E,0.7nm,0.3s,mb4.1,baz=341,slow=7.3,SNR=18							
BVAR	Borovoye Array	49.03	322	P		P	23 19 19.8 +1.0
comp=E,1.0nm,0.5s,mb4.1,baz=107,slow=7.9,SNR=7.8							
BVAR				PcP		PcP	23 20 41.1 -1.5
comp=E,1.6nm,0.6s,baz=111,slow=2.9,SNR=9.9							
STKA	Stephens Creek	57.52	160	P		P	23 20 22.8 +1.3
comp=E,3.2nm,1.0s,mb4.3,baz=346,slow=12,SNR=3.6							
STKA	Stephens Creek	57.52	160	P		P	23 20 22.8 +1.3
FINES	FINESS Array B	72.91	330	P		P	23 21 59.8 -1.3
comp=E,2.0nm,0.9s,mb4.0,baz=64,slow=4.4,SNR=5.0							
NOA	NORSAR Array B	79.71	332	P		P	23 22 37.2 -2.4
comp=E,0.5nm,0.5s,mb3.7,baz=57,slow=7.4,SNR=3.1							
NOA				LR		LR	00 01 21.7
comp=E,36nm,18.0s,MS3.8,baz=315,slow=38							

IDC ***21*** *23:23:24.1±1.0,31.°30N×103.°94E,h0km,mb3.7/8, mb1 3.8/9,mb1mx3.6/23,mbtmp3.6/9,ML3.3/1,Error ellipse: s-maj=67.1km s-min=19.1km az=58.0*
ISCJB ***21*** *23:23:24.6±0.9,31.°29N±0.°04×103.°99E±0.°05,h14km±6km, mb3.6/8,Error ellipse: s-maj=7.5km s-min=6.5km az=29.2*
NEIC ***21*** *23:23:25.7±0.6,31.°23N×103.°83E,h10km,Error ellipse: s-maj=19.2km s-min=8.6km az=225.0*
BJI ***21*** *23:23:28.7,31.°24N×103.°99E,h12km,ML3.5/14*

ISC 21 23:23:26.7±0.9,31.°27N±0.°04×103.°89E±0.°05,h16km±6km, n17,σ0°63/21,mb3.6/8,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.38	198	Pg		Pg	23 23 33.6 -0.9
CD2				Sg		Sg	23 23 40.1 +0.4
CD2				smax			
comp=N,2μm,0.8s							
CD2				smax			
comp=E,6μm,0.7s							
ENH	Enshi	4.92	100	*e*Pn		Pn	23 24 40.7 +0.7
ENH				*e*Sn		Sn	23 25 35.8 -0.7
XAN	Xi'an	5.06	56	Pg		Sn	23 25 44.4 +4.4
XAN				Sg		Sg	23 26 09.4 +0.3
XAN				smax			
comp=N,49nm,0.8s							
XAN				smax			
comp=E,24nm,0.9s							
XAN	Xi'an	5.06	56	Pn		Pn	23 24 41.3 -0.6
XAN				smax			
comp=N,10.0nm,0.9s							
XAN				smax			
comp=E,5.0nm,0.9s							
GYA	Guiyang	5.38	152	Pg		Pb	23 24 55.1 -5.2
GYA				Sg		Sn	23 25 48.5 +0.6
GYA				smax			
comp=N,70nm,1.0s							
GYA				smax			
comp=E,80nm,0.9s							
SONM	Songino Array	16.65	6	Pn		Pn	23 27 20.1 +0.7
comp=E,0.1nm,0.3s,baz=181,slow=14,SNR=3.0							
MK31	Makanchi Array	22.73	319	*e*P		P	23 28 28.1 +0.2
MKAR	Makanchi Array	22.73	319	P		P	23 28 28.6 +0.7
comp=E,0.6nm,0.8s,mb3.1,baz=120,slow=8.7,SNR=7.1							
ZAA0	Zalesovo Array	26.49	334	P		P	23 29 03.8 +0.7
ZALV	Zalesovo Beam	26.49	334	P		P	23 29 02.4 -0.7
comp=E,0.6nm,0.4s,mb3.4,baz=133,slow=11,SNR=4.4							
KURK	Kurchatov	27.00	323	P		P	23 29 08.3 +0.6
comp=E,1.0nm,0.7s,mb3.4,baz=129,slow=8.6,SNR=9.2							
FINES	FINESS Array B	57.33	326	P		P	23 33 12.9 -0.7
comp=E,1.5nm,0.8s,mb4.1,baz=67,slow=3.6,SNR=3.9							
WRA	Warramunga Arr	58.71	146	P		P	23 33 23.8 0.0
comp=E,1.6nm,0.7s,mb4.2,baz=338,slow=7.8,SNR=6.0							
ASAR	Alice Springs	61.73	149	P		P	23 33 44.6 +0.2
comp=E,0.5nm,0.8s,mb3.7,baz=332,slow=6.0,SNR=3.2							
NOA	NORSAR Array B	64.42	327	P		P	23 34 00.8 -1.0
comp=E,0.7nm,0.8s,mb3.8,baz=71,slow=5.5,SNR=2.7							
NOA	NORSAR Array B	64.42	327	P		P	23 34 00.8 -1.0
YKA	Yellowknife Ar	81.58	17	P		P	23 35 43.1 -0.3
comp=E,0.3nm,0.6s,mb3.4,baz=330,slow=4.3,SNR=2.7							

CSEM ***21*** *23:26:14.3,35.°97N×21.°51E,h16km,ML3.6/1,After THE*

THE 21 23:26:14.3,35.°97N×21.°51E,h16km±2km,ML3.6/1,Error ellipse: s-maj=4.0km s-min=0.5km az=248.0,Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.94	11	P		Pb	23 26 31.6 -0.7
PYL				S		Sb	23 26 45.4 +0.9
PYL	PYLOS	0.94	11	P		Pb	23 26 31.6 -0.7
PYL				S		Sb	23 26 45.4 +0.9
ITM	Ithomi	1.25	15	P		Pn	23 26 36.5 -0.7
ITM				S		Sb	23 26 53.5 +0.1
ITM	Ithomi	1.25	15	P		Pn	23 26 36.5 -0.7
ITM				S		Sb	23 26 53.5 +0.1
VLX	Vlachokerasia	1.56	26	P		Pn	23 26 40.7 -0.7
VLX				S		Sn	23 27 01.4 +0.1
VLX	Vlachokerasia	1.56	26	P		Pn	23 26 40.7 -0.7
VLX				S		Sn	23 27 01.4 +0.1
KARN	Karanos	2.04	105	P		Pn	23 26 47.6 -0.4
KARN				S		Sn	23 27 13.4 +0.2
KARN	Karanos	2.04	105	P		Pn	23 26 47.6 -0.4
KARN				S		Sn	23 27 13.4 +0.2

PDG ***21*** *23:37:35.9±0.7,43.°87N×17.°09E,h8km±2km,ML3.0/10, Error ellipse: s-maj=1.4km s-min=1.4km az=90.0*
VIE ***21*** *23:37:35.7±0.6,43.°95N×17.°45E,h10km,mb2.6/6,ML2.6/7, Error ellipse: s-maj=7.0km s-min=4.4km az=50.0 79 km W of Sarajevo*
ISCJB ***21*** *23:37:35.5±0.6,43.°98N±0.°02×17.°17E±0.°03,h0km±4km, Error ellipse: s-maj=4.5km s-min=2.3km az=137.6*
NEIC ***21*** *23:37:35.9,43.°87N×17.°09E,h8km,ML3.1(ZAG), ML3.0(PDG),ML2.5(BRA),After PDG.*
CSEM ***21*** *23:37:36.6±0.2,43.°93N×17.°06E,h10km,ML3.1,Error ellipse: s-maj=5.2km s-min=3.1km az=42.0*
LDG ***21*** *23:37:36.0±0.1,43.°90N×17.°10E,h10km,Ml2.8/4,Error ellipse: s-maj=4.3km s-min=3.1km az=22.0*
PRU ***21*** *23:37:37.1,43.°85N×17.°19E,h15km*
BEO ***21*** *23:37:37.3±0.6,43.°94N×17.°06E,h23km±4km,ML3.1/5*

ISC 21 23:37:36.0±0.6,43.°93N±0.°02×17.°10E±0.°03,h1km±4km, n112,σ1°36/190,25C-30D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLY	Banja Luka	0.82	4	⇑*i*Pg		Pg	23 37 52.4 +0.7
BLY				*i* Sg		Sg	23 38 06.2 +3.8
BLY	Banja Luka	0.82	4	⇑*i*Pg		Pg	23 37 52.4 +0.7
STON	Ston	1.14	157	*e*Pg		Pn	23 37 54.8 -4.3
STON				Sg		Sg	23 38 11.3 -1.4
BRY	Bratogost	1.47	134	⇑*i*Pg		Pn	23 38 02.0 -1.6
BRY				*e*Sg		Sg	23 38 24.6 +1.4
BRY	Bratogost	1.47	134	⇑*i*Pg		Pn	23 38 02.0 -1.6
BRY				*e*Sg		Sg	23 38 24.6 +1.4
UPM	Unac-Piva	1.50	118	⇓*i*Pg		Pn	23 38 02.5 -1.5
UPM				*e*Sg		Sg	23 38 26.5 +2.2
UPM	Unac-Piva	1.50	118	⇓*i*Pg

DIVS	**Divibare**	**2.10**	**84**	*e*Pn	**Pn**	**23 38 10.7**	**-1.4**
DIVS				*e*Sg	**Sg**	**23 38 44.0**	**+0.7**
RHK3	**Tenkes**	**2.12**	**22**	⇓*e*Pn	**Pn**	**23 38 11.8**	**-0.8**
PDG	**Podgorica**	**2.18**	**133**	⇑*i*Pn	**Pn**	**23 38 13.6**	**+0.3**
PDG				*e*Sn	**Sn**	**23 38 41.8**	**+0.9**
TTG	**Podgorica**	**2.18**	**133**	⇑*i*Pn	**Pn**	**23 38 13.6**	**+0.3**
TTG				*e*Sn	**Sn**	**23 38 41.8**	**+0.9**
TTG	**Podgorica**	**2.18**	**133**	⇑*i*Pn	**Pn**	**23 38 13.6**	**+0.3**
TTG				*e*Sn	**Sn**	**23 38 41.8**	**+0.9**
BEY	**Berane**	**2.30**	**116**	⇓*i*Pn	**Pn**	**23 38 15.5**	**+0.6**
BEY				*e*Sn	**Sn**	**23 38 45.4**	**+1.6**
IVA	**Berane**	**2.30**	**116**	⇓*i*Pn	**Pn**	**23 38 15.5**	**+0.6**
IVA				*e*Sn	**Sn**	**23 38 45.4**	**+1.6**
IVA	**Berane**	**2.30**	**116**	⇓*i*Pn	**Pn**	**23 38 15.5**	**+0.6**
IVA				*e*Sn	**Sn**	**23 38 45.4**	**+1.6**
TRUS	**Trudelj**	**2.40**	**82**	*e*Pn	**Pn**	**23 38 16.8**	**+0.4**
TRUS	**Trudelj**	**2.40**	**82**	*e*Pn	**Pn**	**23 38 16.8**	**+0.4**
PVY	**Plav**	**2.49**	**121**	⇓*i*Pn	**Pn**	**23 38 18.3**	**+0.8**
PVY				*e*Sn	**Sn**	**23 38 49.9**	**+1.4**
PVY	**Plav**	**2.49**	**121**	⇓*i*Pn	**Pn**	**23 38 18.3**	**+0.8**
PVY				*e*Sn	**Sn**	**23 38 49.9**	**+1.4**
ULC	**Ulcinj**	**2.52**	**140**	⇓*i*Pn	**Pn**	**23 38 17.2**	**-0.8**
ULC				*e*Sn	**Sn**	**23 38 49.1**	**-0.2**
ULC	**Ulcinj**	**2.52**	**140**	⇓*i*Pn	**Pn**	**23 38 17.2**	**-0.8**
ULC				*e*Sn	**Sn**	**23 38 49.1**	**-0.2**
PKSM	**Moragy**	**2.53**	**25**	⇓*i*Pn	**Pn**	**23 38 17.0**	**-1.1**
PKSM				*e*Sn	**Sn**	**23 38 47.9**	**-1.7**
PKSM	**Moragy**	**2.53**	**25**	⇑P	**Pn**	**23 38 16.9**	**-1.3**
PKSM	**Moragy**	**2.53**	**25**	⇑*i*P	**Pn**	**23 38 16.9**	**-1.2**
PKSM	**Moragy**	**2.53**	**25**	⇓*i*Pn	**Pn**	**23 38 17.0**	**-1.1**
PKSM				*e*Sn	**Sn**	**23 38 47.9**	**-1.7**
BEHE	**Becsehely**	**2.55**	**355**	⇑*e*Pn	**Pn**	**23 38 18.8**	**+0.4**
GRUS	**Gruza**	**2.62**	**90**	*e*Pn	**Pn**	**23 38 19.6**	**+0.3**
GRUS	**Gruza**	**2.62**	**90**	*e*Pn	**Pn**	**23 38 19.6**	**+0.3**
BCI	**Bajram Curri**	**2.68**	**125**	*e*PN	**Pn**	**23 38 22.2**	**+2.1**
BCI				*i* SN	**Sg**	**23 39 00.5**	**-1.4**
BCI	**Bajram Curri**	**2.68**	**125**	*e*Pn	**Pn**	**23 38 22.2**	**+2.1**
SKDS	**Skadanscina**	**2.73**	**307**	*i* Pn	**Pn**	**23 38 21.4**	**+0.6**
VNDS	**Vrh nad Dolski**	**2.76**	**323**	*i* Pn	**Pn**	**23 38 20.9**	**-0.3**
PUK	**Puka**	**2.79**	**132**	*e*PN	**Pg**	**23 38 26.5**	**-2.8**
PUK				*i* SN	**Sg**	**23 39 03.5**	**-1.9**
PUK	**Puka**	**2.79**	**132**	*e*Pn	**Pg**	**23 38 26.5**	**-2.8**
PKS9	**Tamasi**	**2.79**	**17**	*e*Pn	**Pn**	**23 38 24.0**	**+2.4**
PKS9				*e*Sn	**Sn**	**23 38 55.6**	**-0.3**
TRI	**Trieste**	**2.96**	**308**	*e*Pn	**Pn**	**23 38 24.7**	**+0.6**
TRI				*e*S	**Sn**	**23 39 03.7**	**+3.4**
TRI	**Trieste**	**2.96**	**308**	*e*Pn	**Pn**	**23 38 24.7**	**+0.6**
TRI				*e*S	**Sn**	**23 39 03.7**	**+3.4**
VOY	**Vojsko**	**3.10**	**314**	*e*Pn	**Pn**	**23 38 27.3**	**+1.4**
VOY				*e*Sn	**Sn**	**23 39 04.8**	**+1.3**
VOY				*e*		23 39 08.2	
VOY	**Vojsko**	**3.10**	**314**	*e*Pn	**Pn**	**23 38 27.3**	**+1.4**
VOY				*e*Sn	**Sn**	**23 39 04.8**	**+1.3**
SOKA	**Soboth**	**3.11**	**333**	⇓*i*Pn	**Pn**	**23 38 26.2**	**+0.1**
SOKA				⇓*i*Sn	**Sn**	**23 39 06.3**	**+2.4**
SOKA	**Soboth**	**3.11**	**333**	Pn	**Pn**	**23 38 26.2**	**+0.1**
SOKA				Sn	**Sn**	**23 39 06.3**	**+2.4**
AQU	**L'Aquila**	**3.13**	**241**	*e*Pn	**Pn**	**23 38 25.4**	**-1.0**
AQU				*e*Sn	**Sn**	**23 39 02.1**	**-2.2**
AQU	**L'Aquila**	**3.13**	**241**	⇓*i*P	**Pn**	**23 38 26.0**	**-0.3**
AQU	**L'Aquila**	**3.13**	**241**	*e*Pn	**Pn**	**23 38 25.4**	**-0.9**
AQU	**L'Aquila**	**3.13**	**241**	⇓*i*P	**Pn**	**23 38 26.0**	**-0.3**
AQU				*e*Sn	**Sn**	**23 39 02.1**	**-2.2**
OBKA	**Obir**	**3.15**	**326**	⇓*i*Pn	**Pn**	**23 38 27.1**	**+0.5**
OBKA				⇓*i*Sn	**Sn**	**23 39 08.5**	**+3.8**
OBKA	**Obir**	**3.15**	**326**	Pn	**Pn**	**23 38 27.1**	**+0.5**
OBKA				Sn	**Sn**	**23 39 08.5**	**+3.8**
ARSA	**Arzberg** SNR=27	**3.50**	**342**	⇓*i*Pn	**Pn**	**23 38 31.2**	**-0.3**
ARSA				⇓*i*Sn	**Sn**	**23 39 13.9**	**+0.4**
ARSA	**Arzberg** SNR=27	**3.50**	**342**	Pn	**Pn**	**23 38 31.2**	**-0.3**
ARSA				Sn	**Sn**	**23 39 13.9**	**+0.4**
PKSG		**3.58**	**14**	*e*Pn	**Pn**	**23 38 32.6**	**0.0**
PKSG				*e*Sn	**Sn**	**23 39 14.4**	**-1.0**
BARS	**Barje**	**3.62**	**106**	⇑*i*Pn	**Pn**	**23 38 31.7**	**-1.3**
BARS	**Barje**	**3.62**	**106**	⇑*i*Pn	**Pn**	**23 38 31.7**	**-1.3**
BZS	**Buzias**	**3.63**	**61**	*e*Pn	**Pn**	**23 38 32.6**	**-0.7**
BZS				*e*Sn	**Sn**	**23 39 14.2**	**-2.6**
BZS	**Buzias**	**3.63**	**61**	⇓P	**Pn**	**23 38 31.9**	**-1.4**
BZS	**Buzias**	**3.63**	**61**	⇓*i*P	**Pn**	**23 38 31.9**	**-1.4**
BZS	**Buzias**	**3.63**	**61**	⇓P	**Pn**	**23 38 31.9**	**-1.4**
BZS	**Buzias**	**3.63**	**61**	*e*Pn	**Pn**	**23 38 32.6**	**-0.7**
BZS				*e*Sn	**Sn**	**23 39 14.2**	**-2.6**
ZAPS	**Zavoj**	**4.08**	**97**	*e*Pn	**Pn**	**23 38 38.8**	**-0.6**
CONA	**Conrad Observa** SNR=16	**4.09**	**348**	⇑*i*Pn	**Pn**	**23 38 39.5**	**0.0**
CONA	**Conrad Observa** SNR=16	**4.09**	**348**	Pn	**Pn**	**23 38 39.5**	**-0.1**
PENC	**Penc**	**4.15**	**21**	*e*Sn	**Sn**	**23 39 28.2**	**-1.4**
ZST	**Bratislava**	**4.27**	**0**	*e*Pn	**Pn**	**23 38 41.5**	**-0.5**
ZST				*e*Sn	**Sn**	**23 39 27.6**	**-4.8**
ZST	**Bratislava**	**4.27**	**0**	*e*PN	**Pn**	**23 38 41.5**	**-0.5**
ZST				*e*SN	**Sn**	**23 39 27.6**	**-4.8**
ZST	**Bratislava**	**4.27**	**0**	*e*Pn	**Pn**	**23 38 41.5**	**-0.5**
ZST				*e*Sn	**Sn**	**23 39 27.6**	**-4.8**
MOA	**Molln**	**4.39**	**334**	⇑*i*Pn	**Pn**	**23 38 44.4**	**+0.8**
MOA				⇓*i*Sn	**Sn**	**23 39 37.2**	**+1.8**
MOA	**Molln**	**4.39**	**334**	Pn	**Pn**	**23 38 44.4**	**+0.7**
MOA				Sn	**Sn**	**23 39 37.2**	**+1.8**
PSZ	**Piszkesteto**	**4.44**	**25**	*e*Pn	**Pn**	**23 38 44.3**	**-0.1**
PSZ	**Piszkesteto**	**4.44**	**25**	⇓*e*Pn	**Pn**	**23 38 46.3**	**+1.9**
PSZ	**Piszkesteto**	**4.44**	**25**	⇑*i*P	**Pn**	**23 38 44.2**	**-0.2**
PSZ	**Piszkesteto**	**4.44**	**25**	⇑*i*P	**Pn**	**23 38 44.2**	**-0.2**
VYHS	**Vyhne**	**4.72**	**14**	*e*Pn	**Pn**	**23 38 48.3**	**+0.1**
VYHS				*e*Sn	**Sn**	**23 39 41.8**	**-1.8**
VYHS	**Vyhne**	**4.72**	**14**	*e*PN	**Pn**	**23 38 48.3**	**+0.1**
VYHS				*e*SN	**Sn**	**23 39 41.8**	**-1.8**
VYHS	**Vyhne**	**4.72**	**14**	*e*Pn	**Pn**	**23 38 48.3**	**+0.1**
VYHS				*e*Sn	**Sn**	**23 39 41.8**	**-1.8**
KOLL	**Kolacno**	**4.74**	**11**	*e*Pn	**Pn**	**23 38 48.8**	**+0.3**
KOLL				*e*Sn	**Sn**	**23 39 41.5**	**-2.5**
KOLL	**Kolacno**	**4.74**	**11**	*e*PN	**Pn**	**23 38 48.8**	**+0.3**
KOLL				*e*SN	**Sn**	**23 39 41.5**	**-2.5**
KOLL	**Kolacno**	**4.74**	**11**	*e*Pn	**Pn**	**23 38 48.8**	**+0.3**
KOLL				*e*Sn	**Sn**	**23 39 41.5**	**-2.5**
WTTA	**Wattenberg** SNR=7.6	**5.08**	**313**	⇑*i*Pn	**Pn**	**23 38 53.5**	**+0.4**
WTTA				⇑*i*Sn	**Sn**	**23 39 56.1**	**+3.8**
WTTA	**Wattenberg** SNR=7.6	**5.08**	**313**	Pn	**Pn**	**23 38 53.5**	**+0.4**
WTTA				Sn	**Sn**	**23 39 56.1**	**+3.7**
WATA	**Walderalm** SNR=8.2	**5.16**	**313**	*i* Pn	**Pn**	**23 38 55.9**	**+1.7**
WATA	**Walderalm** SNR=8.2	**5.16**	**313**	Pn	**Pn**	**23 38 55.9**	**+1.7**
MOTA	**Moosalm** SNR=9.4	**5.42**	**311**	⇑*i*Pn	**Pn**	**23 38 59.2**	**+1.4**
MOTA				⇓*i*Sn	**Sn**	**23 40 04.1**	**+3.5**
MOTA	**Moosalm** SNR=9.4	**5.42**	**311**	Pn	**Pn**	**23 38 59.2**	**+1.4**
KHC	**Kasperske Hory**	**5.74**	**336**	*e*Pn	**Pn**	**23 39 03.7**	**+1.5**
KHC	**Kasperske Hory**	**5.74**	**336**	*e*PN	**Pn**	**23 39 03.0**	**+0.8**
KHC				*e*SN	**Sn**	**23 40 07.0**	**-1.7**
KHC	**Kasperske Hory**	**5.74**	**336**	Pn	**Pn**	**23 39 03.0**	**+0.8**
KHC				Sn	**Sn**	**23 40 07.0**	**-1.7**
PGF	**Pioggiola**	**6.07**	**260**	*e*Pn	**Pn**	**23 39 03.8**	**-3.0**
PGF				*e*Sn	**Sn**	**23 40 09.5**	**-7.4**
PGF	**Pioggiola** 0.2nm,0.3s	**6.07**	**260**	*e*Pn	**Pn**	**23 39 03.8**	**-3.0**
PGF				*e*Sn	**Sn**	**23 40 09.5**	**-7.4**
PGF	**Pioggiola** 0.1nm,0.3s	**6.07**	**260**	*e*Pn	**Pn**	**23 39 03.8**	**-3.0**
PGF				*e*Sn	**Sn**	**23 40 09.5**	**-7.4**
LPG	**La Plagne** 4.4nm,0.5s	**7.54**	**286**	*e*Pn	**Pn**	**23 39 24.7**	**-2.2**
LPG				*e*Sn	**Sn**	**23 40 44.6**	**-8.3**
LPG	**La Plagne** 2.2nm,0.5s	**7.54**	**286**	*e*Pn	**Pn**	**23 39 24.7**	**-2.2**
LPG				*e*Sn	**Sn**	**23 40 44.6**	**-8.3**
FRF	**La Foret Royal**	**7.58**	**271**	*e*Pn	**Pn**	**23 39 24.4**	**-3.0**
FRF	**La Foret Royal**	**7.58**	**271**	*e*Pn	**Pn**	**23 39 24.4**	**-3.0**
HINF	**Hinteralfeld** 1.2nm,0.4s	**8.14**	**302**	*e*Pn	**Pn**	**23 39 31.9**	**-3.2**
HINF				*e*Sn	**Sn**	**23 40 59.2**	**-8.4**
HINF	**Hinteralfeld** 0.6nm,0.4s	**8.14**	**302**	*e*Pn	**Pn**	**23 39 31.9**	**-3.2**
HINF				*e*Sn	**Sn**	**23 40 59.2**	**-8.4**
CDF	**Champ du Feu** 0.4nm,0.2s	**8.16**	**307**	*e*Pn	**Pn**	**23 39 32.4**	**-3.0**
CDF				*e*Sn	**Sn**	**23 40 59.7**	**-8.4**
CDF	**Champ du Feu**	**8.16**	**307**	*e*Pn	**Pn**	**23 39 32.4**	**-3.0**
CDF				*e*Sn	**Sn**	**23 40 59.7**	**-8.4**

0.2nm,0.2s

*CSEM **21** 23:49:45.3, 36°.10N×21°.66E, h6km, ML3.7/1, After THE*
THE 21 23:49:45.3, 36°.10N×21°.66E, h6km±3km, ML3.7/1, Error ellipse: s-maj=8.1km s-min=1.7km az=259.0, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.80**	**5**	P	Pg	23 50 00.0	-0.6
PYL				S	Sg	23 50 13.4	+2.4
PYL	**PYLOS**	**0.80**	**5**	P	Pg	23 50 00.0	-0.6
PYL				S	Sg	23 50 13.4	+2.4
ITM	**Ithomi**	**1.10**	**11**	P	Pg	23 50 05.2	-1.2
ITM				S	Sg	23 50 21.4	+0.7
ITM	**Ithomi**	**1.10**	**11**	P	Pg	23 50 05.2	-1.2
ITM				S	Sg	23 50 21.4	+0.7
VLX	**Vlachokerasia**	**1.40**	**24**	P	Pn	23 50 09.8	-1.5
VLX				S	Sb	23 50 29.6	-0.3
VLX	**Vlachokerasia**	**1.40**	**24**	P	Pn	23 50 09.8	-1.5
VLX				S	Sb	23 50 29.6	-0.3
GUR	**Goura**	**1.91**	**16**	P	Pn	23 50 18.8	+0.3
GUR	**Goura**	**1.91**	**16**	P	Pn	23 50 18.8	+0.3
KARN	**Karanos**	**1.96**	**110**	P	Pn	23 50 18.6	-0.5
KARN				S	Sn	23 50 44.7	+0.6
KARN	**Karanos**	**1.96**	**110**	P	Pn	23 50 18.6	-0.5
KARN				S	Sn	23 50 44.7	+0.6

*ISCJB **22** 00:04:38.7±0.8, 36°.03N±0°.03×21°.77E±0°.05, h1km±4km, mb4.0/10, Error ellipse: s-maj=6.9km s-min=4.2km az=148.7*
*ATH **22** 00:04:40.0, 36°.05N×21°.78E, h5km±4km, MD3.9/5, ML3.7*
*NEIC **22** 00:04:40.0, 36°.05N×21°.78E, h5km, ML3.7(ATH), After ATH.*
*CSEM **22** 00:04:40.9±0.3, 36°.08N×21°.91E, h2km, ML4.5/3, Error ellipse: s-maj=8.2km s-min=6.3km az=55.0*
*THE **22** 00:04:43.3, 36°.18N×21°.83E, h0km±3km, ML4.5/3, Error ellipse: s-maj=4.3km s-min=1.3km az=250.0*
*IDC **22** 00:04:47.5±2.3, 36°.09N×22°.08E, h56km±27km, mb3.5/10, mb1 3.5/14, mb1mx3.5/28, mbtmp3.5/14, ML3.2/3, Error ellipse: s-maj=42.8km s-min=15.9km az=12.0*
ISC 22 00:04:40.7±0.9, 36°.07N±0°.03×21°.86E±0°.05, h3km±5km, n114, σ1§10/133, mb3.9/10, 1D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.83**	**354**	P	**Pg**	**00 04 56.5**	**-0.2**
PYL				S	**Sg**	**00 05 08.4**	**+0.9**
PYL	**PYLOS**	**0.83**	**354**	*e*PB	**Pg**	**00 04 56.2**	**-0.5**
PYL				*e*SB	**Sb**	**00 05 08.7**	**-0.7**
PYL	**PYLOS**	**0.83**	**354**	P	**Pg**	**00 04 56.5**	**-0.2**
PYL				S	**Sg**	**00 05 08.4**	**+0.9**
PYL				*e*Sb	**Sb**	**00 05 08.7**	**-0.7**
KYTH	**Kithira**	**0.98**	**77**	*e*Pn	**Pg**	**00 05 00.6**	**+1.2**
KYTH	**Kithira**	**0.98**	**77**	*e*PN	**Pg**	**00 05 00.6**	**+1.2**
KYTH	**Kithira**	**0.98**	**77**	*e*Pn	**Pg**	**00 05 00.6**	**+1.2**
VLI	**Veliai**	**1.09**	**53**	*e*Pg	**Pg**	**00 05 01.5**	**0.0**
VLI	**Veliai**	**1.09**	**53**	*e*PG	**Pg**	**00 05 01.5**	**0.0**
VLI	**Veliai**	**1.09**	**53**	*e*Pg	**Pg**	**00 05 01.5**	**0.0**
ITM	**Ithomi**	**1.11**	**3**	*e*Pn	**Pg**	**00 05 01.4**	**-0.6**
ITM				*e*Sb	**Sb**	**00 05 17.8**	**+0.3**
ITM	**Ithomi**	**1.11**	**3**	P	**Pg**	**00 05 01.6**	**-0.4**
ITM				S	**Sg**	**00 05 17.2**	**+0.7**
ITM	**Ithomi**	**1.11**	**3**	*e*PN	**Pg**	**00 05 01.4**	**-0.6**
ITM				*e*SB	**Sb**	**00 05 17.8**	**+0.3**
ITM	**Ithomi**	**1.11**	**3**	P	**Pg**	**00 05 01.6**	**-0.4**
ITM				S	**Sg**	**00 05 17.2**	**+0.7**
ITM				*e*Sb	**Sb**	**00 05 17.8**	**+0.3**
VLX	**Vlachokerasia**	**1.37**	**18**	P	**Pn**	**00 05 06.3**	**-0.4**
VLX				S	**Sg**	**00 05 25.3**	**+0.7**
VLX	**Vlachokerasia**	**1.37**	**18**	*e*PG	**Pn**	**00 05 06.4**	**-0.3**
VLX				*e*SB	**Sg**	**00 05 26.1**	**+1.5**
VLX	**Vlachokerasia**	**1.37**	**18**	P	**Pn**	**00 05 06.3**	**-0.4**
VLX				S	**Sg**	**00 05 25.3**	**+0.7**
VLX				*e*Sb	**Sg**	**00 05 26.1**	**+1.5**
KARN	**Karanos**	**1.80**	**111**	P	**Pg**	**00 05 15.1**	**-0.1**
KARN				S	**Sg**	**00 05 41.6**	**+3.0**
KARN	**Karanos**	**1.80**	**111**	*e*PN	**Pg**	**00 05 15.0**	**-0.2**
KARN	**Karanos**	**1.80**	**111**	P	**Pg**	**00 05 15.1**	**-0.1**
KARN				S	**Sg**	**00 05 41.6**	**+3.0**
GUR	**Goura**	**1.91**	**12**	P	**Pb**	**00 05 15.6**	**-0.5**
GUR				S	**Sn**	**00 05 38.7**	**+0.1**
GUR	**Goura**	**1.91**	**12**	*e*PG	**Pb**	**00 05 16.0**	**-0.1**
GUR	**Goura**	**1.91**	**12**	P	**Pb**	**00 05 15.6**	**-0.5**
GUR	**Goura**	**1.91**	**12**	*e*Pg	**Pb**	**00 05 16.0**	**-0.1**
GUR				S	**Sn**	**00 05 38.7**	**+0.1**
RLS	**Riolos of Patr**	**2.01**	**351**	*e*Pn	**Pg**	**00 05 18.9**	**-0.4**
RLS	**Riolos of Patr**	**2.01**	**351**	*e*PN	**Pg**	**00 05 18.9**	**-0.4**
RLS	**Riolos of Patr**	**2.01**	**351**	*e*Pn	**Pg**	**00 05 18.9**	**-0.4**
VAM	**Vamos**	**2.02**	**108**	*e*Pn	**Pb**	**00 05 18.1**	**+0.1**
VAM	**Vamos**	**2.02**	**108**	*e*PN	**Pb**	**00 05 18.1**	**+0.1**
VAM	**Vamos**	**2.02**	**108**	*e*Pn	**Pb**	**00 05 18.1**	**+0.1**
NAIG	**Nisos Aigina**	**2.14**	**37**	*e*Pg	**Pg**	**00 05 20.3**	**-1.3**
NAIG	**Nisos Aigina**	**2.14**	**37**	*e*PG	**Pg**	**00 05 20.3**	**-1.3**
NAIG	**Nisos Aigina**	**2.14**	**37**	*e*Pg	**Pg**	**00 05 20.3**	**-1.3**
LTK	**Loutraki**	**2.15**	**24**	P	**Pb**	**00 05 18.9**	**-1.3**
LTK				S	**Sn**	**00 05 45.4**	**+0.9**
LTK	**Loutraki**	**2.15**	**24**	*e*PG	**Pb**	**00 05 20.7**	**+0.5**
LTK	**Loutraki**	**2.15**	**24**	P	**Pb**	**00 05 18.9**	**-1.3**
LTK	**Loutraki**	**2.15**	**24**	*e*Pg	**Pb**	**00 05 20.7**	**+0.5**
LTK				S	**Sn**	**00 05 45.4**	**+0.9**
GVD	**Gavdhos**	**2.19**	**123**	Pn	**Pn**	**00 05 18.2**	**+0.2**
GVD	**Gavdhos**	**2.19**	**123**	Pn	**Pn**	**00 05 18.2**	**+0.2**
KALE	**Kalithea**	**2.33**	**5**	P	**Pb**	**00 05 21.4**	**-2.0**
KALE	**Kalithea**	**2.33**	**5**	P	**Pb**	**00 05 21.4**	**-2.0**
VLS	**Valsamata**	**2.34**	**335**	*e*Pn	**Pb**	**00 05 21.6**	**-1.9**
VLS	**Valsamata**	**2.34**	**335**	P	**Pb**	**00 05 20.7**	**-2.8**
VLS	**Valsamata**	**2.34**	**335**	*e*PN	**Pb**	**00 05 21.6**	**-1.9**
VLS	**Valsamata**	**2.34**	**335**	P	**Pb**	**00 05 20.7**	**-2.8**
VLS	**Valsamata**	**2.34**	**335**	*e*Pn	**Pb**	**00 05 21.6**	**-1.9**
EFP	**Efpalio**	**2.36**	**1**	*e*PG	**Pg**	**00 05 24.4**	**-1.4**
EFP	**Efpalio**	**2.36**	**1**	*e*Pg	**Pg**	**00 05 24.4**	**-1.4**
VLY	**Voula,Athens**	**2.36**	**40**	*e*Pg	**Pb**	**00 05 24.2**	**+0.3**
VLY	**Voula,Athens**	**2.36**	**40**	*e*PG	**Pb**	**00 05 24.2**	**+0.3**
VLY	**Voula,Athens**	**2.36**	**40**	*e*Pg	**Pb**	**00 05 24.2**	**+0.3**
DSF	**Desfina**	**2.40**	**13**	P	**Pn**	**00 05 21.3**	**+0.4**
DSF	**Desfina**	**2.40**	**13**	P	**Pn**	**00 05 21.3**	**+0.4**
ATH	**Athens Observa**	**2.42**	**37**	*e*Pn	**Pb**	**00 05 24.4**	**-0.4**
ATH	**Athens Observa**	**2.42**	**37**	*e*PN	**Pb**	**00 05 24.4**	**-0.4**
ATH	**Athens Observa**	**2.42**	**37**	*e*Pn	**Pb**	**00 05 24.4**	**-0.4**
PTL	**Penteli**	**2.55**	**38**	*e*Pn	**Pn**	**00 05 24.7**	**+1.8**
PTL	**Penteli**	**2.55**	**38**	*e*PN	**Pn**	**00 05 24.7**	**+1.8**
PTL	**Penteli**	**2.55**	**38**	*e*Pn	**Pn**	**00 05 24.7**	**+1.8**
IDI	**Anoyia** 2.1nm,0.3s,baz=282,slow=19,SNR=18	**2.59**	**107**	P	**Pn**	**00 05 25.0**	**+1.5**
IDI	**Anoyia**	**2.59**	**107**	*e*Pn	**Pn**	**00 05 25.4**	**+2.0**
IDI	**Anoyia**	**2.59**	**107**	*e*PN	**Pb**	**00 05 26.2**	**-1.5**
IDI	**Anoyia**	**2.59**	**107**	*e*Pn	**Pn**	**00 05 25.4**	**+1.9**
LKR	**Lokris**	**2.73**	**19**	*e*Pn	**Pb**	**00 05 28.7**	**-1.5**
LKR	**Lokris**	**2.73**	**19**	*e*PN	**Pb**	**00 05 28.7**	**-1.5**
LKR	**Lokris**	**2.73**	**19**	*e*Pn	**Pb**	**00 05 28.7**	**-1.5**
THL	**Klokotos Trika**	**3.50**	**2**	*e*PB	**Pb**	**00 05 38.9**	**-4.3**
THL	**Klokotos Trika**	**3.50**	**2**	*e*Pb	**Pb**	**00 05 38.9**	**-4.3**
IGT	**Igoumenitsa**	**3.67**	**341**	P	**Pn**	**00 05 39.4**	**+1.1**
IGT	**Igoumenitsa**	**3.67**	**341**	P	**Pn**	**00 05 39.4**	**+1.1**
JAN	**Janina**	**3.67**	**348**	P	**Pn**	**00 05 40.8**	**+2.4**
JAN	**Janina**	**3.67**	**348**	P	**Pn**	**00 05 40.8**	**+2.4**
KEK	**Kerkira**	**3.99**	**337**	P	**Pb**	**00 05 47.9**	**-3.7**
KEK	**Kerkira**	**3.99**	**337**	P	**Pb**	**00 05 47.9**	**-3.7**
FNA	**Florina**	**4.72**	**356**	P	**Pn**	**00 05 55.0**	**+2.2**
FNA	**Florina**	**4.72**	**356**	P	**Pn**	**00 05 54.1**	**+1.3**
FNA	**Florina**	**4.72**	**356**	P	**Pn**	**00 05 54.1**	**+1.3**
BIA	**Bitola**	**4.96**	**355**	*e*Pn	**Pn**	**00 05 57.1**	**+1.0**
TIP	**Timpagrande**	**5.10**	**309**	*e*Pn	**Pn**	**00 05 58.8**	**+0.8**
TIP	**Timpagrande**	**5.10**	**309**	*e*Pn	**Pn**	**00 05 58.8**	**+0.8**
CEL	**Celeste**	**5.24**	**296**	*e*Pn	**Pn**	**00 06 00.4**	**+0.5**
CEL	**Celeste**	**5.24**	**296**	*e*Pn	**Pn**	**00 06 00.4**	**+0.5**
VAY	**Valandovo**	**5.28**	**6**	*e*Pn	**Pb**	**00 06 07.5**	**-6.1**
KRUS	**Krusevo**	**5.32**	**355**	*e*Pn	**Pn**	**00 06 02.0**	**+1.0**
VAE	**Valguarnera** 0.6nm,0.3s,baz=76,slow=12,SNR=2.2	**6.14**	**285**	P	**Pb**	**00 06 20.1**	**-8.1**
BARS	**Barje**	**6.74**	**360**	*e*Pn	**Pn**	**00 06 21.0**	**+0.5**
DIVS	**Divibare**	**8.15**	**350**	⇓*i*Pn	**Pn**	**00 06 38.7**	**-1.1**
AQU	**L'Aquila**	**9.08**	**316**	P	**Pn**	**00 06 59.3**	**+6.7**
MLR	**Muntele Rosu** 0.1nm,0.3s,baz=130,slow=13,SNR=3.0	**9.91**	**17**	P	**Pn**	**00 07 15.1**	**+11**
NVLJ	**Novalja**	**10.02**	**330**	Sn	**Sn**	**00 08 50.2**	**-8.2**
MMAI	**Mount Meron Ar** 0.4nm,0.3s,baz=289,slow=10,SNR=2.1	**11.58**	**101**	P	**Pn**	**00 07 26.3**	**-0.6**
GNI	**Garni** 0.3nm,0.3s,baz=4.0,slow=7.8,SNR=4.6	**18.45**	**70**	P	**Pn**	**00 08 57.2**	**-0.2**
GNI	**Garni**	**18.45**	**70**	P	**Pn**	**00 08 57.2**	**-0.2**
ESDC	**Sonseca Array** 0.5nm,0.5s,baz=81,slow=9.3,SNR=5.4	**20.68**	**288**	P	**P**	**00 09 23.2**	**+1.5**
ESDC	**Sonseca Array**	**20.68**	**288**	P	**P**	**00 09 23.2**	**+1.5**
HFS	**Hagfors** 1.5nm,0.7s,mb3.6,baz=148,slow=14,SNR=1.6	**24.65**	**350**	P	**P**	**00 10 02.8**	**+0.5**
HFS	**Hagfors**	**24.65**	**350**	P	**P**	**00 10 02.8**	**+0.5**
FINES	**FINESS Array B** 3.9nm,1.1s,mb3.9,baz=212,slow=18,SNR=3.8	**25.54**	**5**	P	**P**	**00 10 10.6**	**+0.3**
FINES	**FINESS Array B**	**25.54**	**5**	P	**P**	**00 10 10.6**	**+0.3**
ARCES	**ARCESS Array B** 4.2nm,0.8s,mb4.4,baz=354,slow=11,SNR=4.0	**33.59**	**2**	P	**P**	**00 11 21.0**	**-0.7**
ARCES	**ARCESS Array B**	**33.59**	**2**	P	**P**	**00 11 21.0**	**-0.7**
BVAR	**Borovoye Array** 0.4nm,0.5s,mb3.4,baz=242,slow=43,SNR=2.2	**37.70**	**48**	P	**P**	**00 11 57.0**	**-0.2**
BVAR	**Borovoye Array**	**37.70**	**48**	P	**P**	**00 11 57.0**	**-0.2**
MKAR	**Makanchi Array** 0.5nm,0.3s,mb3.9,baz=278,slow=6.7,SNR=9.7	**45.53**	**57**	P	**P**	**00 12 59.9**	**-1.5**
MKAR	**Makanchi Array**	**45.53**	**57**	P	**P**	**00 12 59.9**	**-1.5**
ZALV	**Zalesovo Beam** 0.6nm,0.4s,mb3.9,baz=281,slow=9.0,SNR=2.7	**46.33**	**47**	P	**P**	**00 13 05.1**	**-2.6**
ZALV	**Zalesovo Beam**	**46.33**	**47**	P	**P**	**00 13 05.1**	**-2.6**
SCHQ	**Schefferville** 1.1nm,0.6s,mb4.2,baz=58,slow=9.5,SNR=3.4	**60.74**	**318**	P	**P**	**00 14 53.8**	**+0.4**
SCHQ	**Schefferville**	**60.74**	**318**	P	**P**	**00 14 53.8**	**+0

VLS	**Valsamata**	**2.42**	**334**	P	**Pn**	**00 28 13.4**	**+0.6**
VLS				S	**Sb**	**00 28 45.8**	**-0.9**
VLS	**Valsamata**	**2.42**	**334**	*e*PN	**Pn**	**00 28 14.4**	**+1.6**
VLS	**Valsamata**	**2.42**	**334**	P	**Pn**	**00 28 13.4**	**+0.6**
VLS	**Valsamata**	**2.42**	**334**	*e*Pn	**Pn**	**00 28 14.4**	**+1.6**
VLS				S	**Sb**	**00 28 45.8**	**-0.9**
DSF	**Desfina**	**2.44**	**11**	P	**Pn**	**00 28 13.4**	**+0.5**
DSF				S	**Sn**	**00 28 44.5**	**+1.7**
DSF	**Desfina**	**2.44**	**11**	P	**Pn**	**00 28 13.4**	**+0.5**
DSF				S	**Sn**	**00 28 44.5**	**+1.7**
IDI	**Anoyia**	**2.49**	**106**	P	**Pn**	**00 28 14.8**	**+1.1**
	2.1nm,0.3s,baz=290,slow=14,SNR=16						
IDI	**Anoyia**	**2.49**	**106**	*e*Pn	**Pn**	**00 28 15.5**	**+1.8**
IDI	**Anoyia**	**2.49**	**106**	*e*PN	**Pn**	**00 28 15.5**	**+1.8**
IDI	**Anoyia**	**2.49**	**106**	*e*Pn	**Pn**	**00 28 15.5**	**+1.8**
PTL	**Penteli**	**2.54**	**36**	*e*Pb	**Pn**	**00 28 15.7**	**+1.3**
PTL	**Penteli**	**2.54**	**36**	*e*PB	**Pn**	**00 28 15.7**	**+1.3**
PTL	**Penteli**	**2.54**	**36**	*e*Pb	**Pn**	**00 28 15.7**	**+1.3**
LKR	**Lokris**	**2.76**	**17**	P	**Pb**	**00 28 20.0**	**-2.5**
LKR	**Lokris**	**2.76**	**17**	P	**Pb**	**00 28 20.0**	**-2.5**
EVR	**Evrytania**	**2.90**	**358**	*e*Pn	**Pn**	**00 28 21.4**	**+2.1**
EVR	**Evrytania**	**2.90**	**358**	*e*PN	**Pn**	**00 28 21.4**	**+2.1**
EVR	**Evrytania**	**2.90**	**358**	*e*Pn	**Pn**	**00 28 21.4**	**+2.1**
LAST	**Lasithi**	**2.99**	**105**	*e*Pb	**Pn**	**00 28 22.4**	**+1.9**
LAST	**Lasithi**	**2.99**	**105**	P	**Pn**	**00 28 22.4**	**+1.9**
LAST	**Lasithi**	**2.99**	**105**	*e*PB	**Pn**	**00 28 22.4**	**+1.9**
LAST	**Lasithi**	**2.99**	**105**	P	**Pn**	**00 28 22.4**	**+1.9**
AGG	**Agios Georgios**	**3.02**	**5**	P	**Pb**	**00 28 24.4**	**-2.5**
AGG	**Agios Georgios**	**3.02**	**5**	P	**Pn**	**00 28 23.1**	**+2.1**
AGG	**Agios Georgios**	**3.02**	**5**	P	**Pb**	**00 28 24.4**	**-2.5**
APE	**Apeiranthos**	**3.06**	**69**	⇓*i*P	**Pb**	**00 28 25.9**	**-1.8**
APE	**Apeiranthos**	**3.06**	**69**	⇓*i*P	**Pb**	**00 28 25.9**	**-1.8**
AOS	**Alonnisos**	**3.50**	**25**	P	**Pn**	**00 28 30.8**	**+3.2**
AOS	**Alonnisos**	**3.50**	**25**	P	**Pn**	**00 28 30.8**	**+3.2**
THL	**Klokotos Trika**	**3.55**	**1**	P	**Pn**	**00 28 29.3**	**+1.1**
THL	**Klokotos Trika**	**3.55**	**1**	*e*PN	**Pn**	**00 28 30.1**	**+1.9**
THL	**Klokotos Trika**	**3.55**	**1**	P	**Pn**	**00 28 29.3**	**+1.1**
THL	**Klokotos Trika**	**3.55**	**1**	*e*Pn	**Pn**	**00 28 30.1**	**+1.9**
ZKR	**Zakros**	**3.58**	**103**	*e*Pb	**Pn**	**00 28 32.7**	**+4.0**
ZKR	**Zakros**	**3.58**	**103**	*e*PB	**Pn**	**00 28 32.7**	**+4.0**
IGT	**Igoumenitsa**	**3.75**	**340**	P	**Pn**	**00 28 33.2**	**+2.3**
IGT	**Igoumenitsa**	**3.75**	**340**	P	**Pn**	**00 28 33.2**	**+2.3**
PAIG	**Paliouri**	**4.14**	**19**	P	**Pn**	**00 28 37.5**	**+1.2**
PAIG	**Paliouri**	**4.14**	**19**	P	**Pn**	**00 28 37.5**	**+1.2**
LTBQ	**Tobruq**	**4.27**	**157**	*e*P	**Pn**	**00 28 40.5**	**+2.4**
	SNR=135						
KZN	**Kozani**	**4.29**	**358**	*e*Pn	**Pn**	**00 28 41.4**	**+3.0**
KZN	**Kozani**	**4.29**	**358**	*e*PN	**Pn**	**00 28 41.4**	**+3.0**
KZN	**Kozani**	**4.29**	**358**	*e*Pn	**Pn**	**00 28 41.4**	**+3.0**
HORT	**Hortiatis**	**4.67**	**11**	P	**Pn**	**00 28 44.3**	**+0.7**
HORT	**Hortiatis**	**4.67**	**11**	P	**Pn**	**00 28 44.3**	**+0.7**
FNA	**Florina**	**4.79**	**355**	P	**Pn**	**00 28 45.6**	**+0.4**
FNA	**Florina**	**4.79**	**355**	P	**Pn**	**00 28 45.6**	**+0.4**
SOH	**Sokhos**	**4.93**	**12**	P	**Pn**	**00 28 50.4**	**+3.3**
SOH	**Sokhos**	**4.93**	**12**	P	**Pn**	**00 28 50.4**	**+3.3**
BIA	**Bitola**	**5.03**	**354**	*e*Pn	**Pn**	**00 28 50.3**	**+1.8**
BIA				*e*Sg	**Sb**	**00 30 02.0**	**+0.5**
OHR	**Ohrid**	**5.17**	**350**	*e*Pn	**Pn**	**00 28 50.1**	**-0.4**
OHR				*e*Sg	**Sb**	**00 30 01.6**	**-4.2**
TIP	**Timpagrande**	**5.20**	**309**	*e*Pn	**Pn**	**00 28 50.4**	**-0.6**
TIP	**Timpagrande**	**5.20**	**309**	*e*Pn	**Pn**	**00 28 50.4**	**-0.5**
SRS	**Serrai**	**5.26**	**14**	P	**Pn**	**00 28 52.4**	**+0.7**
SRS	**Serrai**	**5.26**	**14**	P	**Pn**	**00 28 52.4**	**+0.7**
VAY	**Valandovo**	**5.32**	**5**	*e*Pn	**Pn**	**00 28 53.1**	**+0.5**
VAY				*e*Sg	**Sn**	**00 29 59.9**	**+5.9**
CEL	**Celeste**	**5.34**	**297**	*e*Pn	**Pn**	**00 28 52.1**	**-0.7**
	39nm,0.8s						
CEL	**Celeste**	**5.34**	**297**	*e*Pn	**Pn**	**00 28 52.1**	**-0.8**
	39nm,0.8s						
KRUS	**Krusevo**	**5.38**	**354**	*e*Pn	**Pn**	**00 28 49.0**	**-4.3**
KRUS				*e*Sg	**Sn**	**00 30 00.2**	**+4.9**
MMB	**Musomiste**	**5.74**	**13**	P	**Pn**	**00 28 59.6**	**+1.3**
MMB	**Musomiste**	**5.74**	**13**	P	**Pn**	**00 28 59.6**	**+1.3**
KKB	**Krupnik**	**5.91**	**8**	*e*P	**Pn**	**00 29 07.5**	**+6.8**
WDD	**Wield Dalam**	**6.04**	**271**	*e*Pn	**Pb**	**00 29 11.8**	**-6.6**
WDD				*e*S	**Sb**	**00 30 23.9**	**-6.8**
RZN	**Rozhen**	**6.06**	**20**	P	**Pn**	**00 29 02.8**	**+0.1**
RZN	**Rozhen**	**6.06**	**20**	P	**Pn**	**00 29 02.8**	**+0.1**
PUK	**Puka**	**6.23**	**346**	*e*PN	**Pn**	**00 29 05.6**	**+0.5**
PUK	**Puka**	**6.23**	**346**	*e*Pn	**Pn**	**00 29 05.6**	**+0.5**
VAE	**Valguarnera**	**6.24**	**286**	S	**Sb**	**00 30 34.3**	**-2.1**
	4.0nm,0.3s,baz=274,slow=7.1,SNR=3.7						
BCI	**Bajram Curri**	**6.51**	**348**	*e*PN	**Pn**	**00 29 08.5**	**-0.5**
BCI	**Bajram Curri**	**6.51**	**348**	*e*Pn	**Pn**	**00 29 08.5**	**-0.5**
VTS	**Vitosha**	**6.64**	**8**	*e*P	**Pn**	**00 29 14.3**	**+3.6**
VTS	**Vitosha**	**6.64**	**8**	*e*P	**Pn**	**00 29 14.3**	**+3.6**
LUJL	**Ujela**	**6.89**	**185**	*e*P	**Pn**	**00 29 15.0**	**+0.8**
	SNR=120						
LZLA	**Zalla**	**8.31**	**208**	*e*P	**Pn**	**00 29 35.0**	**+1.3**
	SNR=115						
MMAI	**Mount Meron Ar**	**11.48**	**101**	P	**Pn**	**00 30 15.2**	**-1.9**
	0.3nm,0.3s,baz=289,slow=13,SNR=3.0						
EIL	**Elat**	**12.62**	**116**	P	**Pn**	**00 30 33.3**	**+0.7**
	0.2nm,0.3s,baz=280,slow=21,SNR=2.8						
EIL	**Elat**	**12.62**	**116**	P	**Pn**	**00 30 33.3**	**+0.7**
ESDC	**Sonseca Array**	**20.77**	**288**	P	**P**	**00 32 18.1**	**+3.9**
	0.2nm,0.4s,baz=81,slow=11,SNR=4.0						
MIB	**Mutribah**	**22.16**	**99**	*e*P	**P**	**00 32 27.1**	**-2.0**
MIB				AMb	AMB	00 32 28.8	
	comp=Z,29nm,0.9s,mb4.7						
MIB	**Mutribah**	**22.16**	**99**	*e*P	**P**	**00 32 27.1**	**-2.0**
	comp=Z,29nm,0.9s,mb4.7						
NAY	**Al-Naaiem**	**22.30**	**100**	*e*P	**P**	**00 32 29.2**	**-1.4**
NAY				AMb	AMB	00 32 31.0	
	comp=Z,13nm,1.1s,mb4.3						
NAY	**Al-Naaiem**	**22.30**	**100**	*e*P	**P**	**00 32 29.2**	**-1.4**
	comp=Z,13nm,1.1s,mb4.3						
UMR	**Umm Al-Rimmam**	**22.55**	**99**	*e*P	**P**	**00 32 31.4**	**-2.0**
UMR				AMb	AMB	00 32 33.8	
	comp=Z,35nm,1.1s,mb4.7						
UMR	**Umm Al-Rimmam**	**22.55**	**99**	*e*P	**P**	**00 32 31.4**	**-2.0**
	comp=Z,35nm,1.1s,mb4.7						
HFS	**Hagfors**	**24.72**	**350**	P	**P**	**00 32 56.2**	**+2.0**
	comp=Z,0.6nm,0.4s,mb3.5,baz=156,slow=11,SNR=1.2						
HFS	**Hagfors**	**24.72**	**350**	P	**P**	**00 32 56.2**	**+2.0**
FINES	**FINESS Array B**	**25.59**	**5**	P	**P**	**00 33 02.8**	**+0.7**
	comp=Z,3.3nm,0.9s,mb3.9,baz=169,slow=11,SNR=5.1						
FINES	**FINESS Array B**	**25.59**	**5**	P	**P**	**00 33 02.8**	**+0.7**
NOA	**NORSAR Array B**	**25.97**	**348**	P	**P**	**00 33 06.4**	**+0.9**
	comp=Z,0.5nm,0.7s,mb3.1,baz=130,slow=25,SNR=2.9						
NOA	**NORSAR Array B**	**25.97**	**348**	P	**P**	**00 33 06.4**	**+0.9**
ARCES	**ARCESS Array B**	**33.64**	**2**	P	**P**	**00 34 12.3**	**-1.1**
	comp=Z,5.4nm,0.9s,mb4.5,baz=20,slow=5.4,SNR=5.6						
DBIC	**Dimbokro**	**38.16**	**226**	P	**P**	**00 34 52.5**	**-0.3**
	comp=Z,2.3nm,0.8s,mb4.0,baz=45,slow=10.0,SNR=3.6						
DBIC	**Dimbokro**	**38.16**	**226**	P	**P**	**00 34 52.5**	**-0.3**
MKAR	**Makanchi Array**	**45.49**	**57**	P	**P**	**00 35 49.6**	**-2.8**
	comp=Z,1.0nm,0.6s,mb3.8,baz=290,slow=6.1,SNR=15						
ZALV	**Zalesovo Beam**	**46.31**	**47**	P	**P**	**00 35 56.1**	**-2.7**
	comp=Z,0.5nm,0.3s,mb3.9,baz=275,slow=9.2,SNR=3.9						
SONM	**Songino Array**	**60.95**	**50**	P	**P**	**00 37 43.2**	**-3.0**
	comp=Z,0.2nm,0.3s,mb3.7,baz=305,slow=47,SNR=2.6						

PRU ***22*** *00:28:21.7, 43°.83N×17°.00E, h0km*

CSEM ***22*** *00:28:21.9±0.2, 43°.92N×17°.05E, h2km, ML3.4, Error ellipse: s-maj=5.4km s-min=3.2km az=43.0*

ISCJB ***22*** *00:28:21.4±0.5, 43°.99N±0°.02×17°.14E±0°.03, h3km±3km, Error ellipse: s-maj=4.3km s-min=2.2km az=135.8*

LDG ***22*** *00:28:22.7±0.1, 43°.97N×17°.13E, h10km, Ml3.1/4, Error ellipse: s-maj=4.6km s-min=3.1km az=32.0*

VIE ***22*** *00:28:22.4±0.6, 43°.91N×17°.23E, h10km, mb2.8/6, ML2.7/7, Error ellipse: s-maj=6.3km s-min=4.2km az=71.0 75 km NE of Split*

PDG ***22*** *00:28:22.7±0.5, 43°.83N×17°.16E, h0km±11km, ML3.0/10, Error ellipse: s-maj=1.7km s-min=2.5km az=0.0*

NEIC ***22*** *00:28:22.7, 43°.83N×17°.16E, h0km, ML3.1(ZAG), ML3.0(PDG), ML2.6(BRA), After PDG.*

BEO ***22*** *00:28:22.9±0.7, 43°.96N×17°.06E, h25km±5km, ML3.4/4*

ISC 22 00:28:21.9±0.5, 43°.92N±0°.02×17°.07E±0°.03, h1km±3km, n137, σ1§31/207, 38C-15D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLY	**Banja Luka**	**0.83**	**5**	⇑*i*Pg	**Pg**	**00 28 38.4**	**+0.6**
BLY				*i* Sg	**Sg**	**00 28 50.4**	**+1.8**
BLY	**Banja Luka**	**0.83**	**5**	⇑*i*Pg	**Pg**	**00 28 38.4**	**+0.6**
STON	**Ston**	**1.15**	**156**	*e*Pg	**Pg**	**00 28 40.9**	**-3.0**
STON				Sg	**Sg**	**00 28 56.8**	**-1.8**
STON	**Ston**	**1.15**	**156**	*e*Pg	**Pg**	**00 28 40.8**	**-3.0**
STON				Sg	**Sg**	**00 28 56.8**	**-1.8**
BRY	**Bratogost**	**1.48**	**133**	⇑*i*Pg	**Pn**	**00 28 48.2**	**-1.4**
BRY				*e*Sg	**Sg**	**00 29 09.4**	**0.0**
BRY	**Bratogost**	**1.48**	**133**	⇑*i*Pg	**Pn**	**00 28 48.2**	**-1.4**
BRY				*e*Sg	**Sg**	**00 29 09.4**	**0.0**
UPM	**Unac-Piva**	**1.52**	**118**	⇓*i*Pg	**Pn**	**00 28 48.6**	**-1.5**
UPM				*e*Sg	**Sg**	**00 29 11.0**	**+0.4**
UPM	**Unac-Piva**	**1.52**	**118**	⇓*i*Pg	**Pn**	**00 28 48.6**	**-1.5**
UPM				*e*Sg	**Sg**	**00 29 11.0**	**+0.4**
TREB	**Trebinje**	**1.52**	**142**	*e*Pn	**Pn**	**00 28 49.0**	**-1.2**
TREB				*e*Sg	**Sg**	**00 29 12.9**	**+2.1**
TREB	**Trebinje**	**1.52**	**142**	*e*Pn	**Pn**	**00 28 49.0**	**-1.2**
TREB				*e*Sg	**Sg**	**00 29 12.9**	**+2.1**
BBLS	**Lazići**	**1.69**	**91**	⇑*i*Pn	**Pn**	**00 28 51.8**	**-0.7**
BBLS				*e*Sg	**Sg**	**00 29 17.2**	**+1.2**
BBLS	**Lazići**	**1.69**	**91**	⇑*i*Pn	**Pn**	**00 28 51.8**	**-0.7**
BBLS				*e*Sg	**Sg**	**00 29 17.2**	**+1.2**
NVLJ	**Novalja**	**1.71**	**293**	*i* Pn	**Pn**	**00 28 53.3**	**+0.6**
NVLJ				Sn	**Sg**	**00 29 17.9**	**+1.2**
NVLJ	**Novalja**	**1.71**	**293**	*i* Pn	**Pn**	**00 28 53.3**	**+0.5**
NVLJ				Sn	**Sg**	**00 29 17.9**	**+1.1**
PLE	**Pljevlja**	**1.79**	**109**	⇓*i*Pn	**Pn**	**00 28 53.7**	**-0.1**
PLE				*e*Sn	**Sg**	**00 29 19.5**	**+0.3**
PLE	**Pljevlja**	**1.79**	**109**	⇓*i*Pn	**Pn**	**00 28 53.7**	**-0.1**
PLE				*e*Sn	**Sg**	**00 29 19.5**	**+0.3**
NKY	**Niksic**	**1.79**	**128**	⇑*i*Pn	**Pn**	**00 28 53.8**	**-0.1**
NKY				*e*Sn	**Sg**	**00 29 19.4**	**+0.1**
NKY	**Niksic**	**1.79**	**128**	⇑*i*Pn	**Pn**	**00 28 53.8**	**-0.1**
NKY				*e*Sn	**Sg**	**00 29 19.4**	**+0.1**
HCY	**Herceg Novi**	**1.81**	**144**	⇑*i*Pn	**Pn**	**00 28 53.4**	**-0.7**
HCY				*e*Sn	**Sg**	**00 29 19.9**	**+0.1**
HCY	**Herceg Novi**	**1.81**	**144**	⇑*i*Pn	**Pn**	**00 28 53.4**	**-0.7**
HCY				*e*Sn	**Sg**	**00 29 19.9**	**+0.1**
BOJS	**Bojanci**	**2.05**	**321**	*i* Pn	**Pn**	**00 28 57.4**	**0.0**
BOJS				*i* Sn	**Sg**	**00 29 28.3**	**+0.6**
BOJS	**Bojanci**	**2.05**	**321**	*i* Pn	**Pn**	**00 28 57.4**	**0.0**
BOJS				*i* Sn	**Sg**	**00 29 28.3**	**+0.7**
BUM	**Brajici-Budva**	**2.10**	**140**	⇑*i*Pn	**Pn**	**00 28 58.4**	**+0.3**
BUM				*e*Sn	**Sn**	**00 29 26.9**	**+2.0**
BUM	**Brajici-Budva**	**2.10**	**140**	⇑*i*Pn	**Pn**	**00 28 58.4**	**+0.3**
BUM				*e*Sn	**Sn**	**00 29 26.9**	**+2.0**
DIVS	**Divibare**	**2.11**	**84**	*e*Pn	**Pn**	**00 28 57.2**	**-1.1**
DIVS				*e*Sg	**Sg**	**00 29 30.2**	**+0.5**
DIVS	**Divibare**	**2.11**	**84**	*e*Pn	**Pn**	**00 28 57.2**	**-1.1**
DIVS				*e*Sg	**Sg**	**00 29 30.2**	**+0.5**
PDG	**Podgorica**	**2.19**	**132**	⇑*i*Pn	**Pn**	**00 28 59.6**	**+0.3**
PDG				*e*Sn	**Sn**	**00 29 28.9**	**+1.9**
TTG	**Podgorica**	**2.19**	**132**	⇑*i*Pn	**Pn**	**00 28 59.6**	**+0.3**
TTG				*e*Sn	**Sn**	**00 29 28.9**	**+1.9**
TTG	**Podgorica**	**2.19**	**132**	⇑*i*Pn	**Pn**	**00 28 59.6**	**+0.3**
TTG				*e*Sn	**Sn**	**00 29 28.9**	**+1.9**
CRES	**Cresnjev**	**2.22**	**329**	*i* Pn	**Pn**	**00 28 59.8**	**-0.1**
CRES	**Cresnjev**	**2.22**	**329**	*i* Pn	**Pn**	**00 28 59.8**	**-0.1**
BEY	**Berane**	**2.31**	**116**	⇓*i*Pn	**Pn**	**00 29 01.6**	**+0.6**
BEY				*e*Sn	**Sn**	**00 29 32.0**	**+1.9**
IVA	**Berane**	**2.31**	**116**	⇓*i*Pn	**Pn**	**00 29 01.6**	**+0.6**
IVA				*e*Sn	**Sn**	**00 29 32.0**	**+1.9**
IVA	**Berane**	**2.31**	**116**	⇓*i*Pn	**Pn**	**00 29 01.6**	**+0.6**
IVA				*e*Sn	**Sn**	**00 29 32.0**	**+1.9**
TRUS	**Trudelj**	**2.42**	**82**	*e*Pn	**Pn**	**00 29 01.9**	**-0.7**
TRUS	**Trudelj**	**2.42**	**82**	*e*Pn	**Pn**	**00 29 01.9**	**-0.7**
PVY	**Plav**	**2.50**	**121**	⇑*i*Pn	**Pn**	**00 29 04.8**	**+1.2**
PVY				*e*Sn	**Sn**	**00 29 36.5**	**+1.8**
PVY	**Plav**	**2.50**	**121**	⇑*i*Pn	**Pn**	**00 29 04.8**	**+1.2**
PVY				*e*Sn	**Sn**	**00 29 36.5**	**+1.8**
ULC	**Ulcinj**	**2.53**	**140**	⇑*i*Pn	**Pn**	**00 29 04.5**	**+0.5**
ULC				*e*Sn	**Sn**	**00 29 37.3**	**+1.9**
ULC	**Ulcinj**	**2.53**	**140**	⇑*i*Pn	**Pn**	**00 29 04.5**	**+0.5**
PKSM	**Moragy**	**2.54**	**25**	*e*Pn	**Pn**	**00 29 03.2**	**-1.1**
PKSM	**Moragy**	**2.54**	**25**	⇑*i*P	**Pn**	**00 29 06.9**	**+2.6**
PKSM	**Moragy**	**2.54**	**25**	*e*Pn	**Pn**	**00 29 03.2**	**-1.1**
PKSM	**Moragy**	**2.54**	**25**	⇓*e*P	**Pn**	**00 29 03.5**	**-0.8**
BEHE	**Becsehely**	**2.56**	**355**	⇑*e*P	**Pn**	**00 29 05.0**	**+0.6**
CEY	**Cerknica**	**2.62**	**315**	*i* Pn	**Pn**	**00 29 06.6**	**+1.4**
CEY				*i* Sn	**Sb**	**00 29 41.5**	**-0.7**
CEY	**Cerknica**	**2.62**	**315**	*i* Pn	**Pn**	**00 29 06.6**	**+1.3**
CEY				*i* Sn	**Sb**	**00 29 41.5**	**-0.7**
GRUS	**Gruza**	**2.63**	**89**	*e*Pn	**Pn**	**00 29 03.7**	**-1.8**
GRUS	**Gruza**	**2.63**	**89**	*e*Pn	**Pn**	**00 29 03.7**	**-1.8**
JAVS	**Javornik**	**2.91**	**314**	*i* Pn	**Pn**	**00 29 09.9**	**+0.6**
JAVS				*i* Sn	**Sn**	**00 29 47.6**	**+2.8**
JAVS	**Javornik**	**2.91**	**314**	*i* Pn	**Pn**	**00 29 09.9**	**+0.6**
JAVS				*i* Sn	**Sn**	**00 29 47.6**	**+2.8**
TRI	**Trieste**	**2.96**	**308**	*e*Pn	**Pn**	**00 29 10.2**	**+0.2**
TRI	**Trieste**	**2.96**	**308**	*e*Pn	**Pn**	**00 29 10.1**	**+0.2**
PERS	**Pernice**	**3.04**	**334**	*i* Pn	**Pn**	**00 29 11.0**	**-0.1**
PERS				*i* Sn	**Sn**	**00 29 48.0**	**-0.2**
PERS	**Pernice**	**3.04**	**334**	*i* Pn	**Pn**	**00 29 11.0**	**-0.1**
PERS				*i* Sn	**Sn**	**00 29 48.0**	**-0.2**
VOY	**Vojsko**	**3.09**	**314**	*e*Pn	**Pn**	**00 29 13.7**	**+2.0**
VOY				*e*Sn	**Sb**	**00 29 53.4**	**-2.4**
VOY				*e*		00 29 59.8	
VOY	**Vojsko**	**3.09**	**314**	*e*Pn	**Pn**	**00 29 13.7**	**+2.0**
VOY				*e*Sn	**Sb**	**00 29 53.4**	**-2.4**
SOKA	**Soboth**	**3.11**	**333**	⇑*i*Pn	**Pn**	**00 29 11.9**	**-0.1**
SOKA				⇓*i*Sn	**Sn**	**00 29 51.3**	**+1.5**
SOKA	**Soboth**	**3.11**	**333**	Pn	**Pn**	**00 29 11.9**	**-0.1**
SOKA				Sn	**Sn**	**00 29 51.3**	**+1.5**
AQU	**L'Aquila**	**3.11**	**241**	*e*Pn	**Pn**	**00 29 12.7**	**+0.7**
AQU	**L'Aquila**	**3.11**	**241**	⇑*i*P	**Pn**	**00 29 14.8**	**+2.8**
AQU	**L'Aquila**	**3.11**	**241**	*e*Pn	**Pn**	**00 29 12.7**	**+0.7**
AQU	**L'Aquila**	**3.11**	**241**	⇑*i*P	**Pn**	**00 29 14.8**	**+2.8**
OBKA	**Obir**	**3.14**	**326**	⇑*i*Pn	**Pn**	**00 29 13.2**	**+0.7**
	SNR=7.0						
OBKA	**Obir**	**3.14**	**326**	Pn	**Pn**	**00 29 13.2**	**+0.7**
	SNR=7.0						
TIR	**Tirane**	**3.29**	**140**	Pn	**Pn**	**00 29 12.4**	**-2.2**
TIR	**Tirane**	**3.29**	**140**	Pn	**Pn**	**00 29 12.4**	**-2.2**
ARSA	**Arzberg**	**3.50**	**342**	*i* Pn	**Pn**	**00 29 17.4**	**0.0**
	SNR=51						
ARSA	**Arzberg**	**3.50**	**342**	Pn	**Pn**	**00 29 17.4**	**0.0**
	SNR=51						
PKSG		**3.59**	**14**	⇑*e*P	**Pn**	**00 29 18.6**	**0.0**
BARS	**Barje**	**3.63**	**106**	*e*Pn	**Pn**	**00 29 17.6**	**-1.6**
BARS	**Barje**	**3.63**	**106**	*e*Pn	**Pn**	**00 29 17.6**	**-1.6**
BZS	**Buzias**	**3.65**	**61**	*e*Pn	**Pn**	**00 29 18.2**	**-1.3**
BZS	**Buzias**	**3.65**	**61**	⇑*i*P	**Pg**	**00 29 30.6**	**-1.3**
BZS	**Buzias**	**3.65**	**61**	*e*Pn	**Pn**	**00 29 18.2**	**-1.3**
ZAPS	**Zavoj**	**4.09**	**97**	*e*Pn	**Pn**	**00 29 23.3**	**-2.2**
CONA	**Conrad Observa**	**4.09**	**349**	⇓*i*Pn	**Pn**	**00 29 25.7**	**+0.1**
	SNR=17						
CONA				⇓*i*Sn	**Sn**	**00 30 15.1**	**+1.1**
CONA	**Conrad Observa**	**4.09**	**349**	Pn	**Pn**	**00 29 25.7**	**+0.1**
	SNR=17						
CONA				Sn	**Sn**	**00 30 15.1**	**+1.0**
PENC	**Penc**	**4.17**	**21**	⇑*e*P	**Pn**	**00 29 26.6**	**+0.1**
ZST	**Bratislava**	**4.28**	**0**	*e*Pn	**Pn**	**00 29 27.9**	**-0.1**
ZST				*e*Sn	**Sn**	**00 30 14.9**	**-3.6**
ZST	**Bratislava**	**4.28**	**0**	*e*PN	**Pn**	**00 29 27.9**	**-0.1**
ZST				*e*SN	**Sn**	**00 30 14.9**	**-3.6**
ZST	**Bratislava**	**4.28**	**0**	*e*Pn	**Pn**	**00 29 27.9**	**-0.1**
ZST				*e*Sn	**Sn**	**00 30 14.9**	**-3.6**
GZR	**Gura Zlata**	**4.33**	**68**	⇑*i*P	**Pn**	**00 29 32.0**	**+3.3**
GZR	**Gura Zlata**	**4.33**	**68**	⇑*i*P	**Pn**	**00 29 32.0**	**+3.3**
MOA	**Molln**	**4.39**	**334**	⇑*i*Pn	**Pn**	**00 29 30.6**	**+1.0**
MOA				⇓*i*Sn	**Sn**	**00 30 22.9**	**+1.6**
MOA	**Molln**	**4.39**	**334**	Pn	**Pn**	**00 29 30.6**	**+1.0**
MOA				Sn	**Sn**	**00 30 22.9**	**+1.6**
PSZ	**Piszkesteto**	**4.46**	**25**	*e*Pn	**Pn**	**00 29 30.2**	**-0.3**
PSZ	**Piszkesteto**	**4.46**	**25**	⇑*e*Pn	**Pn**	**00 29 30.2**	**-0.3**
PSZ	**Piszkesteto**	**4.46**	**25**	⇑*i*P	**Pn**	**00 29 29.9**	**-0.6**
PSZ	**Piszkesteto**	**4.46**	**25**	⇑*e*P	**Pn**	**00 29 30.2**	**-0.3**
SMOL	**Smolenice**	**4.60**	**3**	*e*Pn	**Pn**	**00 29 33.8**	**+1.3**
SMOL	**Smolenice**	**4.60**	**3**	*e*PN	**Pn**	**00 29 33.8**	**+1.3**
SMOL	**Smolenice**	**4.60**	**3**	*e*Pn	**Pn**	**00 29 33.8**	**+1.3**
VYHS	**Vyhne**	**4.73**	**14**	*e*Pn	**Pn**	**00 29 34.9**	**+0.6**
VYHS				*e*Sn	**Sn**	**00 30 27.4**	**-2.4**
VYHS	**Vyhne**	**4.73**	**14**	*e*PN	**Pn**	**00 29 34.9**	**+0.6**
VYHS				*e*SN	**Sn**	**00 30 27.4**	**-2.4**
VYHS	**Vyhne**	**4.73**	**14**	*e*Pn	**Pn**	**00 29 34.9**	**+0.6**
VYHS				*e*Sn	**Sn**	**00 30 27.4**	**-2.4**
KOLL	**Kolacno**	**4.75**	**11**	*e*Pn	**Pn**	**00 29 34.2**	**-0.3**
KOLL				*e*Sn	**Sn**	**00 30 27.8**	**-2.4**
KOLL	**Kolacno**	**4.75**	**11**	*e*PN	**Pn**	**00 29 34.2**	**-0.3**
KOLL				*e*SN	**Sn**	**00 30 27.8**	**-2.4**
KOLL	**Kolacno**	**4.75**	**11**	*e*Pn	**Pn**	**00 29 34.2**	**-0.3**
KOLL				*e*Sn	**Sn**	**00 30 27.8**	**-2.4**
WTTA	**Wattenberg**	**5.07**	**313**	⇑*i*Pn	**Pn**	**00 29 39.5**	**+0.6**
	SNR=7.8						
WTTA				⇓*i*Sn	**Sn**	**00 30 40.4**	**+2.3**
WTTA	**Wattenberg**	**5.07**	**313**	Pn	**Pn**	**00 29 39.5**	**+0.5**
	SNR=7.8						
WTTA				Sn	**Sn**	**00 30 40.4**	**+2.2**
KECS	**Kecovo**	**5.14**	**26**	*e*Pn	**Pn**	**00 29 41.0**	**+1.1**
	1.3nm,0.7s						
KECS				*e*		00 30 38.3	
KECS	**Kecovo**	**5.14**	**26**	*e*PN	**Pn**	**00 29 41.0**	**+1.1**
KECS				*e*SN	**Sn**	**00 30 38.3**	**-1.5**
MOTA	**Moosalm**	**5.41**	**311**	⇑*i*Pn	**Pn**	**00 29 45.1**	**+1.5**
	SNR=9.0						
MOTA	**Moosalm**	**5.41**	**311**	Pn	**Pn**	**00 29 45.1**	**+1.5**
	SNR=9.0						
KHC	**Kasperske Hory**	**5.74**	**336**	*e*PN	**Pn**	**00 29 48.7**	**+0.5**
KHC				*e*SN	**Sn**	**00 30 53.5**	**-1.1**
KHC	**Kasperske Hory**	**5.74**	**336**	Pn	**Pn**	**00 29

LAKA	Lakka	2.09	1	P	Pn	00 40 47.6	+2.2
LAKA	Lakka	2.09	1	P	Pn	00 40 47.6	+2.2
UPR	University Cam	2.13	357	ePN	Pn	00 40 47.5	+1.4
UPR				eSN	Sn	00 41 13.2	+0.6
UPR	University Cam	2.13	357	ePn	Pn	00 40 47.5	+1.4
UPR				eSn	Sn	00 41 13.2	+0.6
GVD	Gavdhos	2.20	126	ePn	Pn	00 40 47.2	+0.2
GVD	Gavdhos	2.20	126	ePn	Pn	00 40 47.2	+0.3
KALE	Kalithea	2.25	4	P	Pn	00 40 49.6	+2.0
KALE	Kalithea	2.25	4	P	Pn	00 40 49.6	+2.0
VLY	Voula,Athens	2.27	41	ePb	Pn	00 40 48.9	+1.0
VLY				eSn	Sn	00 41 15.8	-0.1
VLY	Voula,Athens	2.27	41	ePB	Pn	00 40 48.9	+1.0
VLY				eSN	Sn	00 41 15.8	-0.1
VLY	Voula,Athens	2.27	41	ePb	Pn	00 40 48.9	+1.0
VLY				eSn	Sn	00 41 15.8	-0.1
EFP	Efpalio	2.28	360	ePB	Pn	00 40 49.7	+1.7
EFP	Efpalio	2.28	360	ePb	Pn	00 40 49.7	+1.7
VLS	Valsamata	2.29	333	eP	Pn	00 40 49.4	+1.2
VLS	Valsamata	2.29	333	P	Pn	00 40 48.6	+0.4
VLS	Valsamata	2.29	333	ePN	Pn	00 40 49.4	+1.2
VLS	Valsamata	2.29	333	P	Pn	00 40 48.6	+0.4
VLS	Valsamata	2.29	333	ePn	Pn	00 40 49.4	+1.2
DSF	Desfina	2.31	12	P	Pn	00 40 49.6	+1.1
DSF				S	Sn	00 41 17.6	+0.6
DSF	Desfina	2.31	12	P	Pn	00 40 49.6	+1.1
DSF				S	Sn	00 41 17.6	+0.6
ATH	Athens Observa	2.32	38	eP	Pn	00 40 49.4	+0.8
ATH	Athens Observa	2.32	38	ePN	Pn	00 40 49.4	+0.8
ATH	Athens Observa	2.32	38	ePn	Pn	00 40 49.4	+0.8
ATHU	Athens Univers	2.35	39	P	Pn	00 40 49.9	+0.9
ATHU	Athens Univers	2.35	39	P	Pn	00 40 49.9	+0.9
PTL	Penteli	2.45	39	ePb	Pn	00 40 51.4	+0.9
PTL	Penteli	2.45	39	ePB	Pn	00 40 51.4	+0.9
PTL	Penteli	2.45	39	ePb	Pn	00 40 51.4	+0.9
IDI	Anoyia	2.56	109	Pn	Pn	00 40 53.3	+1.4
	15nm,0.3s,baz=300,slow=15,SNR=113						
IDI				Lg		00 41 35.3	
	41nm,0.3s,baz=82,slow=23,SNR=3.7						
IDI	Anoyia	2.56	109	ePn	Pn	00 40 52.8	+0.8
IDI	Anoyia	2.56	109	ePN	Pn	00 40 52.8	+0.8
IDI	Anoyia	2.56	109	ePn	Pn	00 40 52.8	+0.8
LKR	Lokris	2.64	19	ePn	Pn	00 40 53.3	+0.3
LKR	Lokris	2.64	19	P	Pn	00 40 53.9	+0.9
LKR	Lokris	2.64	19	ePN	Pn	00 40 53.3	+0.3
LKR	Lokris	2.64	19	ePn	Pn	00 40 53.3	+0.3
LKR	Lokris	2.64	19	P	Pn	00 40 53.9	+0.9
ATAL	Atalanti	2.69	19	P	Pn	00 40 54.4	+0.7
ATAL	Atalanti	2.69	19	P	Pn	00 40 54.4	+0.7
EVR	Evrytania	2.77	358	ePb	Pn	00 40 57.4	+2.7
EVR	Evrytania	2.77	358	ePB	Pn	00 40 57.4	+2.7
EVR	Evrytania	2.77	358	ePb	Pn	00 40 57.4	+2.7
AGG	Agios Georgios	2.89	6	eP	Pn	00 40 58.9	+2.5
AGG	Agios Georgios	2.89	6	P	Pn	00 40 57.9	+1.5
AGG	Agios Georgios	2.89	6	ePB	Pn	00 40 58.9	+2.5
AGG	Agios Georgios	2.89	6	P	Pn	00 40 57.9	+1.5
AGG	Agios Georgios	2.89	6	ePb	Pn	00 40 58.9	+2.5
LAST	Lasithi	3.06	108	P	Pn	00 40 59.3	+0.5
LAST	Lasithi	3.06	108	P	Pn	00 40 59.3	+0.5
NPS	Neapolis	3.13	105	eP	Pn	00 41 00.8	+1.0
NPS	Neapolis	3.13	105	ePN	Pn	00 41 00.8	+1.0
NPS	Neapolis	3.13	105	ePn	Pn	00 41 00.8	+1.0
XOR	Xorichti	3.37	17	P	Pn	00 41 03.5	+0.5
XOR	Xorichti	3.37	17	P	Pn	00 41 03.5	+0.5
AOS	Alonnisos	3.40	27	P	Pn	00 41 04.2	+0.8
AOS	Alonnisos	3.40	27	P	Pn	00 41 03.7	+0.3
AOS	Alonnisos	3.40	27	P	Pn	00 41 04.2	+0.8
THL	Klokotos Trika	3.41	1	P	Pn	00 41 05.2	+1.6
THL	Klokotos Trika	3.41	1	ePN	Pn	00 41 05.1	+1.5
THL	Klokotos Trika	3.41	1	ePn	Pn	00 41 05.1	+1.5
JAN	Janina	3.60	347	eP	Pn	00 41 07.5	+1.2
JAN	Janina	3.60	347	ePN	Pn	00 41 07.5	+1.2
JAN	Janina	3.60	347	ePn	Pn	00 41 07.5	+1.2
IGT	Igoumenitsa	3.60	340	P	Pn	00 41 06.7	+0.4
IGT	Igoumenitsa	3.60	340	P	Pn	00 41 06.7	+0.4
MEV	Metsovon	3.67	352	P	Pn	00 41 09.9	+2.7
MEV	Metsovon	3.67	352	P	Pn	00 41 09.9	+2.7
KEK	Kerkira	3.94	335	ePn	Pn	00 41 12.6	+1.8
KEK	Kerkira	3.94	335	P	Pn	00 41 10.8	0.0
KEK	Kerkira	3.94	335	ePN	Pn	00 41 12.6	+1.8
KEK	Kerkira	3.94	335	P	Pn	00 41 10.8	0.0
KEK	Kerkira	3.94	335	ePn	Pn	00 41 12.6	+1.8
CHOS	Chios island	3.98	55	ePN	Pn	00 41 12.5	+1.0
CHOS	Chios island	3.98	55	ePn	Pn	00 41 12.5	+1.0
PAIG	Paliouri	4.02	20	P	Pn	00 41 12.4	+0.4
PAIG	Paliouri	4.02	20	P	Pn	00 41 12.1	+0.1
PAIG	Paliouri	4.02	20	P	Pn	00 41 12.4	+0.4
SRN	Sarande	4.02	338	ePn	Pn	00 41 12.1	+0.1
SRN				eSN	Sn	00 42 00.1	+0.9
SRN	Sarande	4.02	338	ePn	Pn	00 41 12.1	+0.1
	SNR=35						
SRN				eSn	Sn	00 42 00.1	+0.9
	SNR=35						
KZN	Kozani	4.15	358	eP	Pn	00 41 16.1	+2.3
KZN	Kozani	4.15	358	ePN	Pn	00 41 16.1	+2.3
KZN	Kozani	4.15	358	ePn	Pn	00 41 16.1	+2.3
SMG	Samos	4.24	67	ePn	Pn	00 41 15.9	+0.9
SMG	Samos	4.24	67	ePN	Pn	00 41 15.9	+0.9
SMG	Samos	4.24	67	ePn	Pn	00 41 15.9	+0.9
KARP	Karpathos	4.30	96	ePn	Pn	00 41 16.9	+1.1
KARP	Karpathos	4.30	96	ePN	Pn	00 41 16.9	+1.1
KARP	Karpathos	4.30	96	ePn	Pn	00 41 16.9	+1.1
PLG	Polygyros	4.39	15	eP	Pn	00 41 18.6	+1.6
PLG	Polygyros	4.39	15	ePN	Pn	00 41 18.6	+1.6
PLG	Polygyros	4.39	15	ePn	Pn	00 41 18.6	+1.6
LTBQ	Tobruq	4.41	157	eP	Pn	00 41 18.5	+1.2
	69nm,0.8s,SNR=23						
LTBQ				eS	Sn	00 42 06.0	-2.7
	73nm,0.6s,SNR=23						
KBN	Korca	4.56	349	ePN	Pn	00 41 22.3	+3.0
KBN	Korca	4.56	349	ePn	Pn	00 41 22.3	+3.0
	SNR=35						
PRK	Paraskevi	4.63	47	eP	Pn	00 41 22.2	+1.8
PRK	Paraskevi	4.63	47	ePN	Pn	00 41 22.2	+1.8
PRK	Paraskevi	4.63	47	ePn	Pn	00 41 22.2	+1.8
FNA	Florina	4.65	355	P	Pn	00 41 21.7	+1.1
FNA	Florina	4.65	355	P	Pn	00 41 21.6	+1.0
FNA	Florina	4.65	355	P	Pn	00 41 21.7	+1.1
SOH	Sokhos	4.80	13	eP	Pn	00 41 24.3	+1.6
SOH	Sokhos	4.80	13	ePN	Pn	00 41 24.3	+1.6
SOH	Sokhos	4.80	13	ePn	Pn	00 41 24.3	+1.6
BIA	Bitola	4.89	355	*i* Pn	Pn	00 41 25.0	+1.1
BIA				eSg	Sn	00 42 20.1	-0.4
ARG	Arkhangelos	5.02	87	P	Pn	00 41 28.1	+2.4
ARG	Arkhangelos	5.02	87	P	Pn	00 41 28.1	+2.4
OHR	Ohrid	5.03	350	ePn	Pn	00 41 26.9	+1.1
OHR				eSg	Sn	00 42 22.8	-1.3
TIP	Timpagrande	5.09	308	ePn	Pn	00 41 26.5	-0.2
TIP				eSg	Sn	00 42 25.2	-0.3
TIP	Timpagrande	5.09	308	ePn	Pn	00 41 26.5	-0.2
SRS	Serrai	5.13	14	P	Pn	00 41 28.1	+0.8
SRS	Serrai	5.13	14	P	Pn	00 41 28.1	+0.8
VAY	Valandovo	5.19	5	ePn	Pn	00 41 28.8	+0.8
VAY				eSg	Sn	00 42 21.5	-6.5
KRUS	Krusevo	5.24	354	*i* Pn	Pn	00 41 29.0	+0.3
KRUS				eSg	Sn	00 42 27.7	-1.5
CEL	Celeste	5.25	295	ePn	Pn	00 41 28.2	-0.6
	62nm,0.6s						
CEL				eS	Sn	00 42 28.1	-1.4
CEL	Celeste	5.25	295	ePn	Pn	00 41 28.2	-0.7
	62nm,0.6s						
CEL				eS	Sn	00 42 28.0	-1.5
NVR	Nevrokopi	5.41	16	ePn	Pn	00 41 32.4	+1.3
NVR	Nevrokopi	5.41	16	ePN	Pn	00 41 32.4	+1.3
NVR	Nevrokopi	5.41	16	ePn	Pn	00 41 32.4	+1.3
LJBD	Adjabya	5.41	196	eP	Pn	00 41 31.6	+0.4
	50nm,0.9s,SNR=23						
LJBD				eS	Sn	00 42 33.5	0.0
	87nm,0.4s,SNR=23						
TIR	Tirane	5.43	343	ePn	Pn	00 41 31.1	-0.3
TIR	Tirane	5.43	343	eP	Pn	00 41 32.4	+1.0
TIR				eS	Sn	00 42 35.3	+1.3
TIR				pmax	pmax		
	comp=Z,104nm,0.6s						
TIR	Tirane	5.43	343	ePn	Pn	00 41 32.4	+0.9
	comp=Z,104nm,0.6s						
TIR				eS	Sn	00 42 35.3	+1.3
TIR	Tirane	5.43	343	eP	Pn	00 41 32.4	+1.0
	comp=Z,104nm,0.6s						
TIR				eS	Sn	00 42 35.3	+1.3
MMB	Musomiste	5.61	14	P	Pn	00 41 34.9	+1.0
RDO	Rodhopi	5.74	28	ePn	Pn	00 41 36.8	+1.2
RDO	Rodhopi	5.74	28	ePN	Pn	00 41 36.8	+1.2
RDO	Rodhopi	5.74	28	ePn	Pn	00 41 36.8	+1.2
KKB	Krupnik	5.78	9	P	Pn	00 41 37.9	+1.7
SKO	Skopje	5.83	356	ePn	Pn	00 41 37.8	+1.0
SKO	Skopje	5.83	356	ePn	Pn	00 41 37.9	+1.1
SKO				eSg	Sn	00 42 42.0	-1.7
SKO	Skopje	5.83	356	ePn	Pn	00 41 37.8	+1.0
RZN	Rozhen	5.95	21	eP	Pn	00 41 40.9	+2.5
WDD	Wield Dalam	6.00	270	ePn	Pn	00 41 39.1	-0.1
	comp=Z,123nm,0.7s						
WDD				eS	Sn	00 42 46.1	-1.9
WDD	Wield Dalam	6.00	270	ePn	Pn	00 41 39.1	-0.1
	comp=Z,123nm,0.7s						
PUK	Puka	6.09	346	ePN	Pn	00 41 40.2	-0.3
PUK				eSN	Sn	00 42 48.2	-2.0
KDZ	Kurdzhali	6.13	25	P	Pn	00 41 42.9	+1.9
ULC	Ulcinj	6.17	341	⇓*i* Pn	Pn	00 41 40.4	-1.1
ULC				eSn	Sn	00 42 49.1	-2.9
ULC	Ulcinj	6.17	341	⇓*i* Pn	Pn	00 41 40.4	-1.1
VAE	Valguarnera	6.17	285	Pn	Pn	00 41 44.3	+2.8
	comp=Z,1.6nm,0.3s,baz=294,slow=3.3,SNR=7.6						
VAE				Sn	Sn	00 42 54.2	+2.2
	comp=Z,9.1nm,0.3s,baz=143,slow=7.9,SNR=5.2						
VAE	Valguarnera	6.17	285	Pn	Pn	00 41 44.3	+2.8
VAE				Sn	Sn	00 42 54.2	+2.2
VAE	Valguarnera	6.17	285	Pn	Pn	00 41 44.3	+2.8
VAE				Sn	Sn	00 42 54.2	+2.1
KSL	Kastellorizon	6.20	88	ePn	Pn	00 41 43.2	+1.2
KSL	Kastellorizon	6.20	88	ePN	Pn	00 41 43.2	+1.2
KSL	Kastellorizon	6.20	88	ePn	Pn	00 41 43.2	+1.2
BCI	Bajram Curri	6.38	348	ePN	Pn	00 41 45.2	+0.9
VTS	Vitosha	6.51	8	ePn	Pn	00 41 48.1	+1.9
VTS	Vitosha	6.51	8	P	Pn	00 41 50.8	+4.6
VTS	Vitosha	6.51	8	ePn	Pn	00 41 48.1	+1.9
BUM	Brajici-Budva	6.58	340	⇓*i* Pn	Pn	00 41 45.3	-1.8
BUM				eSn	Sn	00 42 58.9	-3.2
PDG	Podgorica	6.60	343	⇓*i* Pn	Pn	00 41 46.5	-1.0
PDG				eSn	Sn	00 43 00.1	-2.7
TTG	Podgorica	6.60	343	⇓*i* Pn	Pn	00 41 46.5	-1.0
TTG				eSn	Sn	00 43 00.1	-2.7
TTG	Podgorica	6.60	343	*i* P	Pn	00 41 46.5	-1.0
TTG				eS	Sn	00 43 00.1	-2.7
PVY	Plav	6.61	347	⇓*i* Pn	Pn	00 41 47.7	+0.1
PVY				eSn	Sn	00 43 01.9	-1.1
PVY	Plav	6.61	347	⇓*i* Pn	Pn	00 41 47.7	+0.1
PVY				eSn	Sn	00 43 01.9	-1.1
BARS	Barje	6.66	359	ePn	Pn	00 41 48.6	+0.4
BARS	Barje	6.66	359	ePn	Pn	00 41 48.6	+0.4
HCY	Herceg Novi	6.83	338	⇑*i* Pn	Pn	00 41 48.7	-1.8
HCY				eSn	Sn	00 43 03.9	-4.4
BEY	Berane	6.89	348	⇑*i* Pn	Pn	00 41 52.0	+0.6
BEY				eSn	Sn	00 43 08.6	-1.3
IVA	Berane	6.89	348	⇑*i* Pn	Pn	00 41 52.0	+0.6
IVA				eSn	Sn	00 43 08.6	-1.3
IVA	Berane	6.89	348	⇑*i* Pn	Pn	00 41 52.0	+0.6
IVA				eSn	Sn	00 43 08.6	-1.3
LUJL	Ujela	7.03	184	eP	Pn	00 41 52.6	-0.7
	comp=Z,37nm,1.7s,SNR=22						
NKY	Niksic	7.03	342	⇑*i* Pn	Pn	00 41 52.8	-0.5
NKY				eSn	Sn	00 43 10.2	-3.0
NKY	Niksic	7.03	342	⇑*i* Pn	Pn	00 41 52.8	-0.5
ISP	Isparta	7.09	74	eP	Pn	00 41 55.5	+1.4
ISP	Isparta	7.09	74	eP	Pn	00 41 55.5	+1.4
TREB	Trebinje	7.12	338	ePn	Pn	00 41 52.6	-1.9
ZAPS	Zavoj	7.14	4	ePn	Pn	00 41 56.2	+1.4
BRY	Bratogost	7.23	340	⇑*i* Pn	Pn	00 41 54.5	-1.6
BRY				eSn	Sn	00 43 14.4	-3.8
NISS		7.25	0	ePn	Pn	00 41 56.6	+0.3
NISS		7.25	0	ePn	Pn	00 41 56.6	+0.3
JMB	Yambol	7.27	28	eP	Pn	00 42 02.1	+5.5
UPM	Unac-Piva	7.42	343	⇑*i* Pn	Pn	00 41 58.3	-0.3
UPM				eSn	Sn	00 43 19.9	-2.9
UPM	Unac-Piva	7.42	343	⇑*i* Pn	Pn	00 41 58.3	-0.3
PLE	Pljevlja	7.43	346	⇑*i* Pn	Pn	00 41 58.7	-0.1
PLE				eSn	Sn	00 43 20.8	-2.3
PLE	Pljevlja	7.43	346	⇑*i* Pn	Pn	00 41 58.7	-0.1
PLE				eSn	Sn	00 43 20.8	-2.3
STON	Ston	7.46	335	*i* Pn	Pn	00 41 57.0	-2.3
STON				Sn	Sn	00 43 17.4	-6.5
BOLS	Boljevac	7.67	0	ePn	Pn	00 42 01.8	-0.3
BOLS	Boljevac	7.67	0	ePn	Pn	00 42 01.8	-0.3
GRUS	Gruza	7.79	354	ePn	Pn	00 42 03.5	-0.2
GRUS	Gruza	7.79	354	ePn	Pn	00 42 03.5	-0.2
BBLS	Lazići	7.95	347	ePn	Pn	00 42 03.7	-2.2
DIVS	Divibare	8.08	350	ePn	Pn	00 42 06.2	-1.5
TRUS	Trudelj	8.15	352	ePn	Pn	00 42 08.4	-0.3
TRUS	Trudelj	8.15	352	ePn	Pn	00 42 08.4	-0.3
GHAR	Gharyan	8.35	244	eP	Pn	00 42 14.5	+3.0
	comp=Z,11nm,0.9s,SNR=22						
LZLA	Zalla	8.42	207	eP	Pn	00 42 12.8	+0.4
	SNR=22						
AQU	L'Aquila	9.05	316	eP	Pn	00 42 21.4	+0.3
AQU	L'Aquila	9.05	316	⇓*i* P	Pn	00 42 22.7	+1.6
AQU	L'Aquila	9.05	316	eP	Pn	00 42 21.4	+0.3
GZR	Gura Zlata	9.26	4	⇑*i* P	Pn	00 42 25.6	+1.7
BLY	Banja Luka	9.32	339	ePn	Pn	00 42 23.5	-1.2
BLY	Banja Luka	9.32	339	ePn	Pn	00 42 23.5	-1.2
BZS	Buzias	9.46	359	ePn	Pn	00 42 26.9	+0.2
BZS	Buzias	9.46	359	⇑*i* P	Pn	00 42 26.0	-0.7
BZS	Buzias	9.46	359	ePn	Pn	00 42 26.9	+0.2
TIRR	Tirgusor	9.67	29	eP	Pn	00 42 31.9	+2.5
TIRR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TIRR	Tirgusor	9.67	29	ePn	Pn	00 42 31.9	+2.5
	comp=Z,10.0nm,0.9s						
TIRR	Tirgusor	9.67	29	eP	Pn	00 42 31.9	+2.5
	comp=Z,10.0nm,0.9s						
MLR	Muntele Rosu	9.82	17	Pn	Pn	00 42 35.4	+3.9
	comp=Z,0.4nm,0.3s,baz=181,slow=12,SNR=13						
MLR	Muntele Rosu	9.82	17	⇓*i* P	Pn	00 42 38.2	+6.7
BR131	Keskin Array S	9.92	65	ePn	Pn	00 42 36.1	+3.1
BR131	Keskin Array S	9.92	65	ePn	Pn	00 42 36.1	+3.1
NVLJ	Novalja	9.97	330	ePn	Pn	00 42 33.0	-0.7
NVLJ				Sn	Sn	00 44 18.4	-7.3
NVLJ	Novalja	9.97	330	ePn	Pn	00 42 33.0	-0.7
RHK3	Tenkes	10.12	345	eP	Pn	00 42 34.9	-0.7
KEST	Kesra	10.21	271	Pn	Pn	00 42 38.1	+1.2
	comp=Z,0.1nm,0.3s,baz=17,slow=6.5,SNR=5.3						
KEST				Sn	Sn	00 44 33.9	+2.5
	comp=Z,0.1nm,0.3s,baz=225,slow=21,SNR=5.7						
KEST	Kesra	10.21	271	ePn	Pn	00 42 36.8	0.0
KEST				eS	Sn	00 44 28.0	-3.3
KEST	Kesra	10.21	271	ePn	Pn	00 42 36.8	-0.1
PLOR	Plostina	10.33	19	⇑*i* P	Pn	00 42 43.7	+5.2
PKSM	Moragy	10.35	347	ePn	Pn	00 42 36.4	-2.4
PKSM	Moragy	10.35	347	⇑*i* P	Pn	00 42 37.6	-1.2
PKSM	Moragy	10.35	347	⇑*i* P	Pn	00 42 37.6	-1.2
VRI	Vrincioaia	10.36	19	⇓*i* P	Pn	00 42 43.8	+4.8
VSL	Villasalto	10.47	292	ePn	Pn	00 42 38.8	-1.6
PKS2	Kecel	10.53	350	eP	Pn	00 42 42.4	+1.1
BOJS	Bojanci	10.62	334	*i* Pn	Pn	00 42 40.8	-1.7
BOJS				*i* Sn	Sn	00 44 34.4	-7.1
DRGR		10.65	3	⇓*i* P	Pn	00 42 44.2	+1.3
PKS9	Tamasi	10.78	346	eS	Sn	00 44 45.7	+0.3
PKSN	Nyarlorinc	10.85	353	eP	Pn	00 42 47.4	+1.8
PKS7	Kunszentmiklos	11.08	350	eP	Pn	00 42 48.4	-0.4
PKS7				eS	Sn	00 44 50.1	-2.7
CEY	Cerknica	11.12	332	*i* Pn	Pn	00 42 48.3	-1.1
CEY				*i* Sn	Sn	00 44 46.2	-7.6
CEY	Cerknica	11.12	332	*i* Pn	Pn	00 42 48.3	-1.1
PDKS	Podkum	11.19	334	*i* Pn	Pn	00 42 48.4	-1.9
PDKS				eSn	Sn	00 44 48.4	-7.0
TRI	Trieste	11.36	330	eP	Pn	00 42 52.6	-0.1
TRI				eS	Sn	00 44 52.8	-6.8
TRI				pmax	pmax		
	comp=Z,17nm,1.0s						
TRI	Trieste	11.36	330	ePn	Pn	00 42 52.6	-0.1
	comp=Z,17nm,1.0s						
TRI				eS	Sn	00 44 52.8	-6.8
TRI	Trieste	11.36	330	eP	Pn	00 42 52.6	-0.1
	comp=Z,17nm,1.0s						
JAVS	Javornik	11.39	331	*i* Pn	Pn	00 42 50.9	-2.2
JAVS				*i* Sn	Sn	00 44 54.4	-6.0
PKSG		11.54	348	eP	Pn	00 42 55.4	+0.3
MMAI	Mount Meron Ar	11.54	102	Pn	Pn	00 42 52.6	-2.7
	comp=Z,2.0nm,0.3s,baz=288,slow=11,SNR=12						
MMAI				Sn	Sn	00 44 58.7	-5.5
	comp=Z,1.7nm,0.3s,baz=300,slow=28,SNR=4.6						
VOY	Vojsko	11.58	331	ePn	Pn	00 42 55.2	-0.4
VOY				eSn	Sn	00 44 56.7	-8.1
VOY	Vojsko	11.58	331	ePn	Pn	00 42 55.2	-0.4
PERS	Pernice	11.65	336	*i* Pn	Pn	00 42 55.3	-1.3
PERS				*i* Sn	Sn	00 44 59.0	-7.7
SOKA	Soboth	11.72	336	⇑*i* Pn	Pn	00 42 54.9	-2.6
SOKA				⇓*i* Sn	Sn	00 44 58.4	-10
BURAR	Bucovina Array	11.72	11	⇓*i* P	Pn	00 43 02.2	+4.7
OBKA	Obir	11.73	334	⇑*i* Pn	Pn	00 42 56.4	-1.3
OBKA				⇓*i* Sn	Sn	00 45 01.6	-7.1
BUR08	Bucovina Ar. S	11.74	11	ePn	Pn	00 43 01.0	+3.2
BUR08	Bucovina Ar. S	11.74	11	ePn	Pn	00 43 01.0	+3.1
PENC	Penc	11.80	351	eP	Pn	00 42 57.7	-0.9
PSZ	Piszkesteto	11.86	353	eP	Pn	00 43 00.5	+1.1
PSZ	Piszkesteto	11.86	353	⇑eP	Pn	00 43 00.6	+1.2
PSZ				eS	Sn	00 45 09.4	-2.3
PSZ	Piszkesteto	11.86	353	⇑*i* P	Pn	00 43 00.8	+1.4
PSZ	Piszkesteto	11.86	353	eP	Pn	00 43 00.5	+1.1
PSZ				eS	Sn	00 45 09.4	-2.3
KIS	Kishinev	12.00	23	eP	Px	00 43 12.0	
KIS				eS	Sx	00 45 26.0	
KIS				LRM		00 48 30.0	
	comp=Z,1μm,10.0s						
KIS	Kishinev	12.00	23	eP	Px	00 43 12.0	
KIS				eS	Sx	00 45 26.0	
KIS				MLR	MLR		
	comp=N,1μm,9.0s						
KIS				MLR	MLR		
	comp=Z,2μm,9.0s						
KIS				MLR	MLR		
	comp=Z,1μm,10.0s						
ARSA	Arzberg	12.07	339	⇑*i* Pn	Pn	00 43 00.3	-2.1
ARSA				⇓*i* Sn	Sn	00 45 08.1	-8.9
LGHD	Ghdames	12.11	243	eP	Pn	00 43 03.5	+0.5
	comp=Z,3.8nm,2.1s,SNR=22						
KECS	Kecovo	12.37	356	ePn	Pn	00 43 07.8	+1.3
KECS				eSn	Sn	00 45 16.5	-7.8
KECS	Kecovo	12.37	356	ePN	Pn	00 43 07.8	+1.3
KECS	Kecovo	12.37	356	eP	Pn	00 43 07.8	+1.3
UZH	Uzhgorod	12.48	1	eP	Pn	00 42 59.6	-8.3
VYHS	Vyhne	12.55	351	eP	Pn	00 43 08.8	0.0
VYHS				MLR	MLR		
	comp=Z,300nm,28.9s						
VYHS	Vyhne	12.55	351	ePn	Pn	00 43 08.8	0.0
VYHS				eSn	Sn	00 45 19.2	-9.3
VYHS	Vyhne	12.55	351	ePN	Pn	00 43 08.8	0.0
VYHS				*e*		00 43 17.6	
VYHS	Vyhne	12.55	351	eP	Pn	00 43 08.8	0.0
	comp=Z,300nm,28.9s						
KOLL	Kolacno	12.69	349	ePn	Pn	00 43 14.0	+3.2
KOLL				eSn	Sn	00 45 25.7	-6.4
KOLL	Kolacno	12.69	349	ePN	Pn	00 43 14.0	+3.2
KOLL				*e*		00 43 21.1	
KOLL	Kolacno	12.69	349	eP	Pn	00 43 14.0	+3.2
EIL	Elat	12.71	117	Pn	Pn	00 43 09.6	-1.5
	comp=Z,0.6nm,0.3s,baz=338,slow=12,SNR=11						
EIL	Elat	12.71	117	Pn	Pn	00 43 09.6	-1.5
CRVS	Cervenica-Dubn	12.75	359	eP	Pn	00 43 13.9	+2.3
CRVS				MLR	MLR		
	comp=Z,200nm,21.8s						
CRVS	Cervenica-Dubn	12.75	359	ePN	Pn	00 43 13.9	+2.3
CRVS	Cervenica-Dubn	12.75	359	eP	Pn	00 43 13.9	+2.3
	comp=Z,200nm,

SMRF	**Simiane la Rot**	**14.74 307**	*eP*	**Pn**	**00 43 40.8**	**+2.0**
DPC	**Dobruska-Polom**	**14.76 346**	*eP*	**Pn**	**00 43 40.1**	**+1.0**
DPC			MLR	MLR		
	comp=Z,1μm,10.5s					
DPC	**Dobruska-Polom**	**14.76 346**	*eP*	**Pn**	**00 43 40.1**	**+1.0**
DPC			AMS	AMS	00 50 30.0	
	comp=Z,1μm,10.5s					
LPG	**La Plagne**	**14.78 314**	*eP*	**Pn**	**00 43 39.9**	**+0.6**
LPL	**La Plagne**	**14.80 314**	*eP*	**Pn**	**00 43 39.1**	**-0.5**
PRU	**Pruhonice**	**14.84 341**	*eP*	**Pn**	**00 43 41.0**	**+0.9**
PRU			*eS*	**Sn**	**00 46 33.6**	**+9.2**
PRU			MLR	MLR		
	comp=Z,1μm,9.9s					
PRU	**Pruhonice**	**14.84 341**	*eP*	**Pn**	**00 43 41.0**	**+0.9**
PRU			*eS*	**Sn**	**00 46 33.6**	**+9.2**
PRU			AMS	AMS	00 50 10.0	
	comp=Z,1μm,9.9s					
UPC	**Upice**	**14.97 345**	*eP*	**Pn**	**00 43 48.3**	**+6.3**
UPC	**Upice**	**14.97 345**	*eP*	**Pn**	**00 43 48.3**	**+6.3**
UPC	**Upice**	**14.97 345**	*eP*	**Pn**	**00 43 48.3**	**+6.3**
ORIF	**Oris-en-Rattie**	**15.00 311**	*eP*	**Pn**	**00 43 42.4**	**+0.1**
	comp=Z,12nm,1.0s					
ORIF			*e*MLR	MLR		
	comp=Z,644nm,21.5s					
ORIF	**Oris-en-Rattie**	**15.00 311**	*eP*	**Pn**	**00 43 42.4**	**+0.1**
ORIF			pmax	pmax		
	comp=Z,6.0nm,1.0s					
ORIF	**Oris-en-Rattie**	**15.00 311**	*eP*	**Pn**	**00 43 42.4**	**+0.1**
	comp=Z,6.1nm,1.0s					
KSP	**Ksiaz**	**15.24 346**	*eP*	**Pn**	**00 43 51.3**	**+5.9**
KSP	**Ksiaz**	**15.24 346**	*eP*	**Pn**	**00 43 51.3**	**+5.9**
PVCC	**Panska Ves**	**15.32 342**	*eP*	**Pn**	**00 43 47.5**	**+0.9**
PVCC			MLR	MLR		
	comp=Z,1μm,9.4s					
PVCC	**Panska Ves**	**15.32 342**	*eP*	**Pn**	**00 43 47.5**	**+0.9**
PVCC			AMS	AMS	00 50 40.0	
	comp=Z,1μm,9.4s					
ROTZ	**Rotzenmuhle**	**15.34 336**	*e*Sn	**Sn**	**00 46 26.7**	**-10**
SPAK	**Spaichingen-Ko**	**15.39 325**	*eP*	**Pn**	**00 43 50.7**	**+3.3**
SPAK	**Spaichingen-Ko**	**15.39 325**	*eP*	**Pn**	**00 43 50.7**	**+3.3**
AKASG	**Malin Array Be**	**15.47 18**	Pn	**Pn**	**00 43 46.2**	**-2.3**
	comp=Z,0.5nm,0.3s,baz=208,slow=12,SNR=4.4					
AKASG	**Malin Array Be**	**15.47 18**	P	**Pn**	**00 43 46.3**	**-2.2**
AKASG			pmax	pmax		
	comp=Z,1.0nm,0.3s					
SOC	**Sochi**	**15.54 56**	*eP*	**Pn**	**00 43 42.0**	**-7.4**
SOC			MLR	MLR		
	comp=Z,220nm,12.0s					
BBS	**Basel-Blauen**	**15.57 321**	*eP*	**Pn**	**00 43 55.3**	**+5.5**
BBS	**Basel-Blauen**	**15.57 321**	*eP*	**Pn**	**00 43 55.3**	**+5.5**
GRA1	**Grafenberg Arr**	**15.62 333**	*eP*	**Pn**	**00 43 49.7**	**-0.7**
	comp=Z,36nm,1.7s					
GRA1			*e*Sn	**Sn**	**00 46 32.3**	**-11**
GRF	**Grafenberg Arr**	**15.62 333**	*eP*	**Pn**	**00 43 49.7**	**-0.7**
	comp=Z,36nm,1.7s					
GRF			*e*Sn	**Sn**	**00 46 32.3**	**-11**
GRF			*e*L		00 51 14.3	
	comp=Z,1μm,19.2s					
GRF	**Grafenberg Arr**	**15.62 333**	*eP*	**Pn**	**00 43 49.7**	**-0.7**
GRF			pmax	pmax		
	comp=Z,36nm,1.7s					
GRF			MLR	MLR		
	comp=Z,1μm,19.2s					
GRF	**Grafenberg Arr**	**15.62 333**	*eP*	**Pn**	**00 43 49.7**	**-0.7**
	comp=Z,36nm,1.7s					
GRF			*e*Sn	**Sn**	**00 46 32.3**	**-11**
NKC	**Novy Kostel**	**15.66 337**	*eP*	**Pn**	**00 43 54.5**	**+3.5**
NKC			MLR	MLR		
	comp=Z,1μm,10.3s					
NKC	**Novy Kostel**	**15.66 337**	*eP*	**Pn**	**00 43 54.5**	**+3.5**
NKC			AMS	AMS	00 50 50.0	
	comp=Z,1μm,10.3s					
NKC	**Novy Kostel**	**15.66 337**	*eP*	**Pn**	**00 43 54.5**	**+3.5**
	comp=Z,1μm,10.3s					
STU	**Stuttgart**	**15.70 327**	*eP*	**Pn**	**00 43 51.6**	**+0.1**
	comp=Z,9.0nm,1.0s					
VIVF	**Saint-Julien-I**	**15.72 309**	*eP*	**Pn**	**00 43 52.7**	**+1.0**
	comp=Z,14nm,1.1s					
VIVF	**Saint-Julien-I**	**15.72 309**	*eP*	**Pn**	**00 43 52.7**	**+1.0**
VIVF			pmax	pmax		
	comp=Z,7.0nm,1.1s					
VIVF	**Saint-Julien-I**	**15.72 309**	*eP*	**Pn**	**00 43 52.7**	**+1.0**
	comp=Z,7.2nm,1.1s					
BFO	**Black Forest**	**15.76 325**	*eP*	**Pn**	**00 43 53.6**	**+1.3**
	comp=Z,5.0nm,0.9s					
BFO	**Black Forest**	**15.76 325**	*eP*	**Pn**	**00 43 53.6**	**+1.3**
BFO			pmax	pmax		
	comp=Z,5.0nm,0.9s					
BFO	**Black Forest**	**15.76 325**	*eP*	**Pn**	**00 43 53.6**	**+1.3**
	comp=Z,5.0nm,0.9s					
CABF	**La Chapelle**	**15.80 316**	*eP*	**Pn**	**00 43 49.7**	**-3.1**
	comp=Z,30nm,1.3s					
CABF	**La Chapelle**	**15.80 316**	*eP*	**Pn**	**00 43 49.7**	**-3.1**
CABF			pmax	pmax		
	comp=Z,15nm,1.3s					
CABF	**La Chapelle**	**15.80 316**	*eP*	**Pn**	**00 43 49.7**	**-3.1**
	comp=Z,15nm,1.3s					
BRG	**Berggiesshubel**	**15.80 341**	*eP*	**Pn**	**00 43 53.4**	**+0.6**
	comp=Z,5.0nm,1.2s					
BRG			*e*		00 43 58.1	
	comp=Z,5.2nm,1.3s					
BRG			*e*		00 47 07.7	
	comp=Z,3.8nm,1.0s					
BRG						
	comp=N,613nm,9.8s					
BRG						
	comp=E,536nm,9.2s					
BRG						
	comp=Z,1μm,9.0s					
TANN	**Tannenbergstha**	**15.82 337**	*eP*	**Pn**	**00 43 51.3**	**-1.7**
	comp=Z,8.0nm,1.2s					
LOMF	**Lomont**	**15.85 320**	*eP*	**Pn**	**00 44 02.8**	**+9.4**
LASF	**Ste Croix**	**15.91 305**	*eP*	**Pn**	**00 43 55.2**	**+1.0**
	comp=Z,23nm,1.2s					
MOF	**Molkenrain**	**16.02 321**	*eP*	**Pn**	**00 44 02.0**	**+6.4**
HINF	**Hinteralfeld**	**16.14 321**	*eP*	**Pn**	**00 43 56.8**	**-0.3**
	comp=Z,14nm,0.8s					
HINF	**Hinteralfeld**	**16.14 321**	*eP*	**Pn**	**00 43 56.8**	**-0.3**
HINF			pmax	pmax		
	comp=Z,7.0nm,0.8s					
HINF	**Hinteralfeld**	**16.14 321**	*eP*	**Pn**	**00 43 56.8**	**-0.3**
	comp=Z,7.3nm,0.8s					
ECH	**Echery**	**16.25 322**	*eP*	**Pn**	**00 44 00.0**	**+1.4**
ECH	**Echery**	**16.25 322**	*eP*	**Pn**	**00 43 58.6**	**0.0**
ECH			*eS*	**Sn**	**00 46 49.8**	**-8.9**
ECH			pmax	pmax		
	comp=Z,12nm,1.0s					
ECH	**Echery**	**16.25 322**	*e*Pn	**Pn**	**00 43 58.6**	**0.0**
	comp=Z,12nm,1.0s					
ECH			*eS*	**Sn**	**00 46 49.8**	**-8.9**
ECH	**Echery**	**16.25 322**	*e*Pn	**Pn**	**00 43 58.6**	**0.0**
	comp=Z,12nm,1.0s					
ECH	**Echery**	**16.25 322**	*eP*	**Pn**	**00 44 00.0**	**+1.4**
MOX	**Moxa**	**16.29 336**	*eP*	**Pn**	**00 43 56.2**	**-2.8**
MOX						
	comp=Z,700nm,12.0s					
MOX	**Moxa**	**16.29 336**	*eP*	**Pn**	**00 43 59.5**	**+0.5**
	comp=Z,6.0nm,1.3s					
CDF	**Champ du Feu**	**16.32 323**	*eP*	**Pn**	**00 43 59.2**	**-0.3**
	comp=Z,28nm,0.9s					
CDF	**Champ du Feu**	**16.32 323**	*eP*	**Pn**	**00 43 59.2**	**-0.3**
CDF			pmax	pmax		
	comp=Z,14nm,0.9s					
CDF	**Champ du Feu**	**16.32 323**	*eP*	**Pn**	**00 43 59.2**	**-0.3**
	comp=Z,14nm,0.9s					
CLL	**Collm**	**16.45 340**	*eP*	**Pn**	**00 44 02.1**	**+1.0**
	comp=Z,10.0nm,1.4s					
CLL	**Collm**	**16.45 340**	*eP*	**Pn**	**00 44 02.0**	**+0.9**
CLL			*e*		00 44 05.0	
CLL			*i*		00 44 10.4	
CLL			*eS*	**Sn**	**00 47 07.0**	**+3.5**
CLL	**Collm**	**16.45 340**	*eP*	**Pn**	**00 44 02.0**	**+0.9**
CLL			*ep*P	pP	00 44 05.0	-1.6
CLL			*i* PP		00 44 10.4	
CLL			*i* (sPP)		00 44 15.0	
CLL			*i*		00 44 39.3	
CLL			*eS*	**Sn**	**00 47 07.0**	**+3.5**
CLL			Lmax		00 51 00.0	
CLL	**Collm**	**16.45 340**	*eP*	**Pn**	**00 44 02.0**	**+0.9**
LANF	**Langenberg**	**16.47 325**	*eP*	**Pn**	**00 44 07.8**	**+6.4**
TOD	**Tromm**	**16.50 329**	*eP*	**Pn**	**00 44 05.2**	**+3.4**
TOD	**Tromm**	**16.50 329**	*eP*	**Pn**	**00 44 05.2**	**+3.4**
HAU	**Haudompre**	**16.52 321**	*eP*	**Pn**	**00 44 01.1**	**-0.9**
	comp=Z,65nm,1.3s					
HAU			*e*MLR	MLR		
	comp=Z,458nm,18.5s					
HAU	**Haudompre**	**16.52 321**	*eP*	**Pn**	**00 44 01.1**	**-0.9**
HAU			pmax	pmax		
	comp=Z,33nm,1.3s					
HAU	**Haudompre**	**16.52 321**	*eP*	**Pn**	**00 44 01.1**	**-0.9**
	comp=Z,33nm,1.3s					
MTLF	**Montolieu**	**16.75 301**	*eP*	**Pn**	**00 44 03.4**	**-1.6**
	comp=Z,19nm,1.5s					
MTLF	**Montolieu**	**16.75 301**	*eP*	**Pn**	**00 44 03.4**	**-1.6**
MTLF			pmax	pmax		
	comp=Z,9.0nm,1.5s					
MTLF	**Montolieu**	**16.75 301**	*eP*	**Pn**	**00 44 03.4**	**-1.6**
	comp=Z,9.4nm,1.5s					
SMF	**Signal de Mont**	**17.11 313**	*eP*	**Pn**	**00 44 06.2**	**-3.3**
	comp=Z,66nm,1.7s					
SMF	**Signal de Mont**	**17.11 313**	*eP*	**Pn**	**00 44 06.2**	**-3.3**
SMF			pmax	pmax		
	comp=Z,33nm,1.7s					
SMF	**Signal de Mont**	**17.11 313**	*eP*	**Pn**	**00 44 06.2**	**-3.3**
	comp=Z,33nm,1.7s					
TNS	**Taunus Mts**	**17.12 329**	*eP*	**Pn**	**00 44 11.3**	**+1.7**
	comp=Z,59nm,1.6s					
TNS	**Taunus Mts**	**17.12 329**	*eP*	**Pn**	**00 44 11.3**	**+1.7**
TNS			pmax	pmax		
	comp=Z,59nm,1.6s					
TNS	**Taunus Mts**	**17.12 329**	*eP*	**Pn**	**00 44 11.3**	**+1.7**
	comp=Z,59nm,1.6s					
CSOR	**Sort**	**17.24 297**	P	**Pn**	**00 44 12.8**	**+1.7**
	comp=Z,13nm,1.2s					
CSOR	**Sort**	**17.24 297**	P	**Pn**	**00 44 12.8**	**+1.7**
	comp=Z,13nm,1.2s					
CAF	**Calviac**	**17.42 306**	*eP*	**Pn**	**00 44 13.3**	**-0.1**
	comp=Z,28nm,1.3s					
CAF	**Calviac**	**17.42 306**	*eP*	**Pn**	**00 44 13.3**	**-0.1**
CAF			pmax	pmax		
	comp=Z,14nm,1.3s					
CAF	**Calviac**	**17.42 306**	*eP*	**Pn**	**00 44 13.3**	**-0.1**
	comp=Z,14nm,1.3s					
CAF	**Calviac**	**17.42 306**	*eP*	**Pn**	**00 44 13.3**	**-0.1**
	comp=Z,14nm,1.3s					
LOR	**Lormes**	**17.43 315**	*eP*	**Pn**	**00 44 10.2**	**-3.3**
	comp=Z,34nm,1.3s					
LOR			*e*MLR	MLR		
	comp=Z,326nm,18.5s					
LOR	**Lormes**	**17.43 315**	*eP*	**Pn**	**00 44 10.2**	**-3.3**
LOR			pmax	pmax		
	comp=Z,17nm,1.3s					
LOR	**Lormes**	**17.43 315**	*eP*	**Pn**	**00 44 10.2**	**-3.3**
	comp=Z,17nm,1.3s					
AVF	**Avril sur Loir**	**17.47 313**	*eP*	**Pn**	**00 44 11.3**	**-2.7**
	comp=Z,16nm,1.1s					
AVF	**Avril sur Loir**	**17.47 313**	*eP*	**Pn**	**00 44 11.3**	**-2.7**
AVF			pmax	pmax		
	comp=Z,8.0nm,1.1s					
AVF	**Avril sur Loir**	**17.47 313**	*eP*	**Pn**	**00 44 11.3**	**-2.7**
	comp=Z,8.1nm,1.1s					
MEZF	**Maizieres J'vi**	**17.50 320**	*eP*	**Pn**	**00 44 15.5**	**+1.1**
	comp=Z,51nm,1.1s					
MEZF	**Maizieres J'vi**	**17.50 320**	*eP*	**Pn**	**00 44 15.5**	**+1.1**
	comp=Z,51nm,1.1s					
MEZF	**Maizieres J'vi**	**17.50 320**	*eP*	**Pn**	**00 44 15.5**	**+1.1**
	comp=Z,26nm,1.1s					
SSF	**Saint Saulge**	**17.52 314**	*eP*	**Pn**	**00 44 12.2**	**-2.4**
	comp=Z,22nm,1.3s					
SSF	**Saint Saulge**	**17.52 314**	*eP*	**Pn**	**00 44 12.2**	**-2.4**
SSF			pmax	pmax		
	comp=Z,11nm,1.3s					
SSF	**Saint Saulge**	**17.52 314**	*eP*	**Pn**	**00 44 12.2**	**-2.4**
	comp=Z,11nm,1.3s					
BGF	**Bois d'Agland**	**17.65 312**	*eP*	**Pn**	**00 44 08.8**	**-7.5**
	comp=Z,32nm,1.1s					
BGF	**Bois d'Agland**	**17.65 312**	*eP*	**Pn**	**00 44 08.8**	**-7.5**
BGF			pmax	pmax		
	comp=Z,16nm,1.1s					
BGF	**Bois d'Agland**	**17.65 312**	*eP*	**Pn**	**00 44 08.8**	**-7.5**
	comp=Z,16nm,1.1s					
KIV	**Kislovodsk**	**17.68 57**	*eP*	**Pn**	**00 44 12.6**	**-4.0**
KIV			*eS*	**Sn**	**00 47 27.5**	**-6.0**
KIV			pmax	pmax		
	comp=Z,14nm,1.2s					
KIV			MLR	MLR		
	comp=Z,104nm,12.0s					
KIV	**Kislovodsk**	**17.68 57**	*e*Pn	**Pn**	**00 44 17.2**	**+0.5**
	comp=Z,21nm,1.0s					
KIV	**Kislovodsk**	**17.68 57**	*e*Pn	**Pn**	**00 44 17.2**	**+0.6**
	comp=Z,21nm,1.0s					
CLZ	**Clausthal**	**17.72 336**	*eP*	**Pn**	**00 44 17.5**	**+0.5**
	comp=Z,5.0nm,0.9s					
CLZ	**Clausthal**	**17.72 336**	*eP*	**Pn**	**00 44 17.5**	**+0.5**
CLZ			pmax	pmax		
	comp=Z,5.0nm,0.9s					
CLZ	**Clausthal**	**17.72 336**	*eP*	**Pn**	**00 44 17.5**	**+0.5**
	comp=Z,5.0nm,0.9s					
WLF	**Walferdange**	**17.72 325**	P	**Pn**	**00 44 19.2**	**+2.1**
WLF	**Walferdange**	**17.72 325**	*eP*	**Pn**	**00 44 19.0**	**+1.9**
	comp=Z,17nm,1.2s					
WLF	**Walferdange**	**17.72 325**	*eP*	**Pn**	**00 44 18.4**	**+1.3**
WLF			pmax	pmax		
	comp=Z,24nm,1.1s					
WLF	**Walferdange**	**17.72 325**	*e*Pn	**Pn**	**00 44 18.4**	**+1.3**
	comp=Z,24nm,1.1s					
WLF	**Walferdange**	**17.72 325**	*eP*	**Pn**	**00 44 18.4**	**+1.3**
	comp=Z,24nm,1.1s					
SUW	**Suwalki**	**17.89 2**	*eP*	**Pn**	**00 44 15.5**	**-3.6**
TCF	**Toulx Ste Croi**	**17.91 311**	*eP*	**Pn**	**00 44 16.3**	**-3.2**
	comp=Z,48nm,1.4s					
TCF	**Toulx Ste Croi**	**17.91 311**	*eP*	**Pn**	**00 44 16.3**	**-3.2**
TCF			pmax	pmax		
	comp=Z,24nm,1.4s					
TCF	**Toulx Ste Croi**	**17.91 311**	*eP*	**Pn**	**00 44 16.3**	**-3.2**
	comp=Z,24nm,1.4s					
RJF	**Les Rejaudoux**	**17.93 307**	*eP*	**Pn**	**00 44 16.1**	**-3.6**
	comp=Z,55nm,1.6s					
RJF			*e*MLR	MLR		
	comp=Z,214nm,20.0s					
RJF	**Les Rejaudoux**	**17.93 307**	*eP*	**Pn**	**00 44 16.1**	**-3.6**
RJF			pmax	pmax		
	comp=Z,28nm,1.6s					
RJF	**Les Rejaudoux**	**17.93 307**	*eP*	**Pn**	**00 44 16.1**	**-3.6**
	comp=Z,28nm,1.6s					
EPF	**Esparros**	**17.97 299**	*eP*	**Pn**	**00 44 22.0**	**+1.8**
	comp=Z,4.2nm,0.7s					
EPF	**Esparros**	**17.97 299**	*eP*	**Pn**	**00 44 22.0**	**+1.8**
EPF			pmax	pmax		
	comp=Z,2.0nm,0.7s					
EPF	**Esparros**	**17.97 299**	*eP*	**Pn**	**00 44 22.0**	**+1.8**
	comp=Z,2.1nm,0.7s					
EPF	**Esparros**	**17.97 299**	*eP*	**Pn**	**00 44 22.0**	**+1.8**
	comp=Z,2.1nm,0.7s					
EBIE	**Bielsa**	**18.02 298**	P	**Pn**	**00 44 21.7**	**+0.8**
	comp=Z,13nm,1.2s					
EBIE	**Bielsa**	**18.02 298**	P	**Pn**	**00 44 21.7**	**+0.8**
	comp=Z,13nm,1.2s					
ZEI	**Tsey**	**18.19 62**	*eP*	**Pn**	**00 44 21.9**	**-1.0**
ZEI			*eS*	**Sn**	**00 47 37.8**	**-8.1**
ZEI			pmax	pmax		
	comp=Z,9.0nm,0.7s					
ZEI	**Tsey**	**18.19 62**	*eP*	**Pn**	**00 44 21.9**	**-1.0**
	comp=Z,9.0nm,0.7s					
LFF	**La Frestale**	**18.30 305**	*eP*	**Pn**	**00 44 23.9**	**-0.3**
	comp=Z,14nm,0.8s					
LFF	**La Frestale**	**18.30 305**	*eP*	**Pn**	**00 44 23.9**	**-0.3**
LFF			pmax	pmax		
	comp=Z,7.0nm,0.8s					
LFF	**La Frestale**	**18.30 305**	*eP*	**Pn**	**00 44 23.9**	**-0.3**
	comp=Z,7.1nm,0.8s					
LFF	**La Frestale**	**18.30 305**	*eP*	**Pn**	**00 44 23.9**	**-0.3**
	comp=Z,7.1nm,0.8s					
NRDL	**Niedersach Rie**	**18.36 337**	*eP*	**Pn**	**00 44 27.1**	**+2.2**
	comp=Z,44nm,2.0s					
GNI	**Garni**	**18.38 71**	P	**Pn**	**00 44 23.5**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=319,slow=3.2,SNR=5.8					
GNI	**Garni**	**18.38 71**	*ce*P	**Pn**	**00 44 22.3**	**-2.9**
GNI			pmax	pmax		
	comp=Z,21nm,1.7s					
GNI	**Garni**	**18.38 71**	*eP*	**Pn**	**00 44 23.8**	**-1.5**
	comp=Z,18nm,0.9s					
GNI	**Garni**	**18.38 71**	*eP*	**Pn**	**00 44 23.8**	**-1.4**
	comp=Z,18nm,0.9s					
BUG	**Bochum--Univer**	**18.53 330**	*eP*	**Pn**	**00 44 28.2**	**+1.2**
	comp=Z,27nm,1.3s					
ETSF	**Etsaut**	**18.58 298**	*eP*	**Pn**	**00 44 29.0**	**+1.4**
	comp=Z,7.1nm,0.7s					
ETSF	**Etsaut**	**18.58 298**	*eP*	**Pn**	**00 44 29.0**	**+1.4**
ETSF			pmax	pmax		
	comp=Z,4.0nm,0.7s					
ETSF	**Etsaut**	**18.58 298**	*eP*	**Pn**	**00 44 29.0**	**+1.4**
	comp=Z,3.5nm,0.7s					
ETSF	**Etsaut**	**18.58 298**	*eP*	**Pn**	**00 44 29.0**	**+1.4**
	comp=Z,3.5nm,0.7s					
TBLG	**Delisi**	**18.59 66**	*eP*	**Pn**	**00 44 29.8**	**+2.0**
TBLG	**Delisi**	**18.59 66**	P	**Pn**	**00 44 29.8**	**+2.1**
BCLA	**Clavier**	**18.64 325**	P	**Pn**	**00 44 29.3**	**+1.0**
	comp=Z,12nm,1.6s					
GIVF	**Givet**	**18.65 324**	*eP*	**Pn**	**00 44 29.2**	**+0.7**
	comp=Z,58nm,0.9s					
GIVF	**Givet**	**18.65 324**	*eP*	**Pn**	**00 44 29.2**	**+0.7**
GIVF			pmax	pmax		
	comp=Z,29nm,0.9s					
GIVF	**Givet**	**18.65 324**	*eP*	**Pn**	**00 44 29.2**	**+0.7**
	comp=Z,29nm,0.9s					
GIVF	**Givet**	**18.65 324**	*eP*	**Pn**	**00 44 29.2**	**+0.7**
	comp=Z,29nm,0.9s					
DOU	**Dourbes**	**18.76 323**	P	**Pn**	**00 44 31.3**	**+1.6**
	comp=Z,11nm,1.6s					
BAIF	**Baives**	**18.92 323**	*eP*	**Pn**	**00 44 31.4**	**-0.3**
	comp=Z,37nm,1.2s					
BAIF	**Baives**	**18.92 323**	*eP*	**Pn**	**00 44 31.4**	**-0.3**
BAIF			pmax	pmax		
	comp=Z,19nm,1.2s					
BAIF	**Baives**	**18.92 323**	*eP*	**Pn**	**00 44 31.4**	**-0.3**
	comp=Z,19nm,1.2s					
BAIF	**Baives**	**18.92 323**	*eP*	**Pn**	**00 44 31.4**	**-0.3**
	comp=Z,19nm,1.2s					
IBBN	**Ibbenburen**	**19.02 333**	*eP*	**Pn**	**00 44 35.7**	**+2.8**
	comp=Z,24nm,1.3s					
SJPF	**Ste Jean**	**19.10 298**	*eP*	**Pn**	**00 44 34.4**	**+0.4**
	comp=Z,19nm,1.0s					
SJPF	**Ste Jean**	**19.10 298**	*eP*	**Pn**	**00 44 34.4**	**+0.4**
SJPF			pmax	pmax		
	comp=Z,9.0nm,1.0s					
SJPF	**Ste Jean**	**19.10 298**	*eP*	**Pn**	**00 44 34.4**	**+0.4**
	comp=Z,9.4nm,1.0s					
SJPF	**Ste Jean**	**19.10 298**	*eP*	**Pn**	**00 44 34.4**	**+0.4**
	comp=Z,9.4nm,1.0s					
SNF	**Seneffe**	**19.18 324**	P	**Pn**	**00 44 35.1**	**+0.2**
ETOR	**Torete**	**19.32 291**	P	**Pn**	**00 44 37.1**	**+0.5**
ETOR			pmax	pmax		
	comp=Z,6.0nm,1.2s					
ETOR	**Torete**	**19.32 291**	P	**Pn**	**00 44 37.1**	**+0.5**
	comp=Z,6.1nm,1.2s					
ETOR	**Torete**	**19.32 291**	P	**Pn**	**00 44 37.1**	**+0.5**
	comp=Z,6.1nm,1.2s					
ELIZ	**Elizondo**	**19.33 298**	P	**Pn**	**00 44 35.6**	**-1.1**
ELIZ	**Elizondo**	**19.33 298**	P	**Pn**	**00 44 35.6**	**-1.1**
VORD	**Divnogorie**	**19.37 35**	*eP*	**Pn**	**00 44 37.3**	**+0.2**
VORD			pmax	pmax		
	comp=E,10.0nm,0.9s					
VORD			pmax	pmax		
	comp=Z,10.0nm,0.9s					
VORD			pmax	pmax		
	comp=N,7.0nm,0.4s					
VORD	**Divnogorie**	**19.37 35**	*eP*	**Pn**	**00 44 37.3**	**+0.2**
	comp=N,7.0nm,0.4s					
VSR	**Storozhevoye**	**19.48 34**	*eP*	**Pn**	**00 44 36.6**	**-1.9**
VSR			pmax	pmax		
	comp=N,3.0nm,0.5s					
VSR			pmax	pmax		
	comp=E,4.0nm,0.5s					
VSR			pmax	pmax		
	comp=Z,7.0nm,0.5s					
VSR	**Storozhevoye**	**19.48 34**	*eP*	**Pn**	**00 44 36.6**	**-1.9**
MFF	**Saint Martin d**	**19.52 309**	*eP*	**Pn**	**00 44 38.3**	**-0.6**
	comp=Z,60nm,1.3s					
MFF	**Saint Martin d**	**19.52 309**	*eP*	**Pn**	**00 44 38.3**	**-0.6**
MFF			pmax	pmax		
	comp=Z,30nm,1.3s					
MFF	**Saint Martin d**	**19.52 309**	*eP*	**Pn**	**00 44 38.3**	**-0.6**
	comp=Z,30nm,1.3s					
MFF	**Saint Martin d**	**19.52 309**	*eP*	**Pn**	**00 44 38.3**	**-0.6**
	comp=Z,30nm,1.3s					
BSEG	**Bad Segeberg**	**19.54 339**	*eP*	**Pn**	**00 44 37.9**	**-1.2**
	comp=Z,19nm,1.5s					
BSEG	**Bad Segeberg**	**19.54 339**	*eP*	**Pn**	**00 44 37.9**	**-1.2**
BSEG			pmax	pmax		
	comp=Z,19nm,1.5s					
BSEG	**Bad Segeberg**	**19.54 339**	*eP*	**Pn**	**00 44 37.9**	**-1.2**
	comp=Z,19nm,1.5s					
EVIA	**Vianos**	**19.55 285**	P	**Pn**	**00 44 41.2**	**+1.8**
EVIA			pmax	pmax		
	comp=Z,5.0nm,0.8s					
EVIA	**Vianos**	**19.55 285**	P	**Pn**	**00 44 41.2**	**+1.8**
	comp=Z,5.2nm,0.8s					
BSD	**Bornholm Skovb**	**19.57 348**	*i* P	**Pn**	**00 44 35.7**	**-3.8**
BSD			*i* S	**Sn**	**00 48 13.7**	**-5.4**
BSD			MLR	MLR		
	comp=Z,260nm,19.0s					
BSD	**Bornholm Skovb**	**19.57 348**	*i* P	**Pn**	**00 44 35.7**	**-3.8**
BSD			*i* S	**Sn**	**00 48 13.7**	**-5.4**
BSD						
	comp=Z,260nm,19.0s					
BSD	**Bornholm Skovb**	**19.57 348**	*i* P	**Pn**	**00 44 35.7**	**-3.8**
	comp=Z,260nm,19.0s					
EHUE	**Huescar**	**19.64 282**	P	**Pn**	**00 44 41.0**	**+0.5**
EHUE			pmax	pmax		
	comp=Z,6.0nm,1.0s					
EHUE	**Huescar**	**19.64 282**	P	**Pn**	**00 44 41.0**	**+0.5**
	comp=Z,5.7nm,1.0s					
EHUE	**Huescar**	**19.64 282**	P	**Pn**	**00 44 41.0**	**+0.5**
	comp=Z,5.7nm,1.0s					
ECRI	**Cripan**	**19.92 296**	P	**Pn**	**00 44 42.9**	**-0.9**
	comp=Z,0.2nm,0.9s					
ECRI	**Cripan**	**19.92 296**	P	**Pn**	**00 44 42.9**	**-0.9**
	comp=Z,0.2nm,0.9s					
EBER	**Berja**	**19.94 280**	P	**Pn**	**00 44 46.5**	**+2.3**
	comp=Z,49nm,1.8s					
EQES	**Quesada**	**20.02 282**	P	**P**	**00 44 46.7**	**+3.4**
	comp=Z,4.9nm,1.0s					
LDF	**La Druitiere**	**20.41 314**	*eP*	**P**	**00 44 46.3**	**-1.0**
	comp=Z,38nm,1.1s					
LDF	**La Druitiere**	**20.41 314**	*eP*	**P**	**00 44 46.

MAK	**Makhachkala**	**20.82**	**63**	*e*P	**P**	**00 44 48.1**	**-3.8**
MAK				*e*		00 45 10.9	
MAK				*e*S	**S**	**00 48 37.7**	**-6.4**
MAK				*e*SS		00 48 57.2	
MAK				*e*SSS		00 49 11.7	
MAK				pmax	pmax		
	comp=Z,39nm,0.7s						
MAK				MLR	MLR		
	comp=Z,323nm,17.0s,MS3.8						
MAK	**Makhachkala**	**20.82**	**63**	*e*PcP	PcP	00 48 57.2	-3.3
	comp=Z,323nm,17.0s						
GUD	**Guadarrama**	**20.89**	**290**	P	**P**	**00 44 52.8**	**+0.1**
GUD				pmax	pmax		
	comp=Z,11nm,1.0s						
GUD	**Guadarrama**	**20.89**	**290**	P	**P**	**00 44 52.8**	**+0.1**
	comp=Z,11nm,1.0s						
GUD	**Guadarrama**	**20.89**	**290**	P	**P**	**00 44 52.8**	**+0.1**
	comp=Z,11nm,1.0s						
ELOJ	**Sierra Loja**	**20.93**	**281**	P	**P**	**00 44 55.4**	**+2.3**
ELOJ	**Sierra Loja**	**20.93**	**281**	P	**P**	**00 44 55.4**	**+2.3**
ELUQ	**Luque**	**20.98**	**282**	P	**P**	**00 44 53.8**	**+0.1**
	comp=Z,2.6nm,1.1s						
ELUQ	**Luque**	**20.98**	**282**	P	**P**	**00 44 53.8**	**+0.1**
	comp=Z,2.6nm,1.1s						
PAB	**San Pablo**	**20.99**	**287**	*e*P	**P**	**00 44 54.7**	**+0.9**
PAB				pmax	pmax		
	comp=Z,11nm,0.8s						
PAB	**San Pablo**	**20.99**	**287**	*e*P	**P**	**00 44 54.7**	**+0.9**
	comp=Z,11nm,0.8s						
PAB	**San Pablo**	**20.99**	**287**	*e*P	**P**	**00 44 54.7**	**+0.9**
	comp=Z,11nm,0.8s						
EADA	**Adamuz**	**21.19**	**283**	P	**P**	**00 44 56.6**	**+0.6**
	comp=Z,2.5nm,0.7s,mb3.6						
EADA	**Adamuz**	**21.19**	**283**	P	**P**	**00 44 56.6**	**+0.6**
	comp=Z,2.5nm,0.7s,mb3.6						
OBN	**Obninsk**	**21.48**	**23**	*e*P	**P**	**00 44 56.4**	**-2.4**
OBN				*i*		00 45 16.7	
OBN				*i* S	**S**	**00 48 59.7**	**+2.9**
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb3.8						
OBN				MLR	MLR		
	comp=Z,100nm,11.0s,MS3.5						
OBN	**Obninsk**	**21.48**	**23**	*e*P	**P**	**00 44 57.4**	**-1.4**
	comp=Z,21nm,0.6s,mb4.6						
OBN	**Obninsk**	**21.48**	**23**	*e*P	**P**	**00 44 57.4**	**-1.4**
	comp=Z,21nm,0.6s,mb4.6						
EMIJ	**Mijas**	**21.48**	**279**	P	**P**	**00 45 02.0**	**+2.9**
SGMF	**Saint Gilles**	**21.69**	**311**	*e*P	**P**	**00 44 59.6**	**-1.7**
SGMF	**Saint Gilles**	**21.69**	**311**	*e*P	**P**	**00 44 59.6**	**-1.7**
QUIF	**Quistinic**	**21.93**	**310**	*e*P	**P**	**00 45 04.2**	**+0.4**
QUIF	**Quistinic**	**21.93**	**310**	*e*P	**P**	**00 45 04.2**	**+0.4**
MUD	**Monsted U'grnd**	**22.07**	**341**	*i* P	**P**	**00 45 07.8**	**+2.6**
MUD				MLR	MLR		
	comp=Z,240nm,18.0s,MS3.7						
MUD	**Monsted U'grnd**	**22.07**	**341**	*i* P	**P**	**00 45 07.8**	**+2.6**
MUD				*i* S	**S**	**00 48 55.8**	**-13**
MUD							
	comp=Z,240nm,18.0s						
MDT	**Midelt**	**22.10**	**269**	P	**P**	**00 45 06.0**	**+0.2**
	comp=Z,6.1nm,0.9s,mb4.0,baz=83,slow=10,SNR=15						
MDT	**Midelt**	**22.10**	**269**	P	**P**	**00 45 06.0**	**+0.2**
ROSF	**Rostrenen**	**22.16**	**311**	*e*P	**P**	**00 45 04.0**	**-2.3**
	comp=Z,33nm,1.0s,mb4.4						
ROSF	**Rostrenen**	**22.16**	**311**	*e*P	**P**	**00 45 04.0**	**-2.3**
ROSF				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.4						
ROSF	**Rostrenen**	**22.16**	**311**	*e*P	**P**	**00 45 04.0**	**-2.3**
	comp=Z,17nm,1.0s,mb4.4						
ROSF	**Rostrenen**	**22.16**	**311**	*e*P	**P**	**00 45 04.0**	**-2.3**
	comp=Z,17nm,1.0s,mb4.4						
MIB	**Mutribah**	**22.21**	**99**	*e*P	**P**	**00 45 05.2**	**-1.8**
MIB				AMb	AMB	00 45 06.2	
	comp=Z,61nm,0.5s,mb5.3						
MIB	**Mutribah**	**22.21**	**99**	*e*P	**P**	**00 45 05.2**	**-1.8**
	comp=Z,61nm,0.5s,mb5.3						
MOS	**Moscow**	**22.33**	**24**	*e*P	**P**	**00 45 09.6**	**+1.6**
MOS				*e*		00 49 00.0	
MOS				*e*S	**S**	**00 49 16.1**	**+2.6**
MOS				*e*SS		00 49 45.2	
MOS				pmax	pmax		
	comp=Z,44nm,0.9s,mb4.9						
MOS	**Moscow**	**22.33**	**24**	*e*P	**P**	**00 45 09.6**	**+1.6**
	comp=Z,44nm,0.9s,mb4.9						
NAY	**Al-Naaiem**	**22.36**	**101**	*e*P	**P**	**00 45 06.7**	**-1.9**
NAY				AMb	AMB	00 45 07.5	
	comp=Z,26nm,0.5s,mb4.9						
NAY	**Al-Naaiem**	**22.36**	**101**	*e*P	**P**	**00 45 06.7**	**-1.8**
	comp=Z,26nm,0.5s,mb4.9						
VSU	**Vasula**	**22.55**	**7**	*e*P	**P**	**00 45 07.6**	**-2.7**
VSU				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.4						
VSU	**Vasula**	**22.55**	**7**	*e*P	**P**	**00 45 07.6**	**-2.7**
	comp=Z,17nm,1.0s,mb4.4						
UMR	**Umm Al-Rimmam**	**22.61**	**100**	*e*P	**P**	**00 45 09.7**	**-1.5**
UMR				AMb	AMB	00 45 12.2	
	comp=Z,76nm,1.1s,mb5.0						
UMR	**Umm Al-Rimmam**	**22.61**	**100**	*e*P	**P**	**00 45 09.7**	**-1.5**
	comp=Z,76nm,1.1s,mb5.0						
EMIN	**Mina Concepcio**	**22.87**	**283**	P	**P**	**00 45 15.6**	**+1.7**
	comp=Z,7.2nm,0.7s,mb4.2						
EMIN	**Mina Concepcio**	**22.87**	**283**	P	**P**	**00 45 15.6**	**+1.7**
	comp=Z,7.2nm,0.7s,mb4.2						
PBRG	**Braganca**	**22.93**	**293**	*e*P	**P**	**00 45 14.8**	**+0.3**
	comp=Z,14nm,1.3s,mb4.2						
PBRG	**Braganca**	**22.93**	**293**	*e*P	**P**	**00 45 14.8**	**+0.3**
	comp=Z,14nm,1.3s,mb4.2						
EBAD	**Badajoz**	**23.08**	**285**	P	**P**	**00 45 16.7**	**+0.6**
EBAD	**Badajoz**	**23.08**	**285**	P	**P**	**00 45 16.7**	**+0.6**
MVO	**Moncorvo**	**23.10**	**291**	P	**P**	**00 45 16.4**	**+0.1**
MVO	**Moncorvo**	**23.10**	**291**	*e*P	**P**	**00 45 16.3**	**0.0**
	comp=Z,25nm,1.4s,mb4.5						
MVO	**Moncorvo**	**23.10**	**291**	*e*P	**P**	**00 45 16.3**	**0.0**
	comp=Z,25nm,1.4s,mb4.5						
PBAR	**Barrancos**	**23.13**	**284**	*e*P	**P**	**00 45 17.8**	**+1.2**
	comp=Z,30nm,1.3s,mb4.6						
PBAR				*e*S	**S**	**00 49 31.8**	**+3.9**
PBAR	**Barrancos**	**23.13**	**284**	*e*P	**P**	**00 45 17.8**	**+1.2**
	comp=Z,30nm,1.3s,mb4.6						
PMRV	**Marv??o**	**23.35**	**287**	*e*P	**P**	**00 45 18.2**	**-0.7**
	comp=Z,22nm,1.6s,mb4.3						
PMRV				*e*S	**S**	**00 49 29.8**	**-1.6**
PMRV	**Marv??o**	**23.35**	**287**	*e*P	**P**	**00 45 18.2**	**-0.7**
	comp=Z,22nm,1.6s,mb4.3						
PCBR	**Castelo Branco**	**23.41**	**288**	*e*P	**P**	**00 45 19.2**	**-0.4**
	comp=Z,19nm,1.3s,mb4.4						
PCBR	**Castelo Branco**	**23.41**	**288**	*e*P	**P**	**00 45 19.2**	**-0.4**
	comp=Z,19nm,1.3s,mb4.4						
MTE	**Manteigas**	**23.46**	**289**	*e*P	**P**	**00 45 19.7**	**-0.4**
	comp=Z,14nm,1.3s,mb4.2						
MTE				*e*S	**S**	**00 49 38.5**	**+5.2**
MTE				*e*LR	LR	00 56 07.9	
	comp=Z,142nm,18.0s						
PESTR	**Estremoz**	**23.52**	**286**	*e*P	**P**	**00 45 19.8**	**-1.0**
	comp=Z,30nm,1.2s,mb4.6						
PESTR	**Estremoz**	**23.52**	**286**	*e*P	**P**	**00 45 19.8**	**-1.0**
	comp=Z,30nm,1.2s,mb4.6						
EGRO	**El Granado**	**23.53**	**282**	P	**P**	**00 45 21.5**	**+0.6**
	comp=Z,6.9nm,0.7s,mb4.2						
EGRO	**El Granado**	**23.53**	**282**	P	**P**	**00 45 21.5**	**+0.6**
	comp=Z,6.9nm,0.7s,mb4.2						
PVAQ	**Vaqueiros**	**23.73**	**282**	*e*P	**P**	**00 45 23.7**	**+1.0**
	comp=Z,43nm,1.7s,mb4.6						
PVAQ				*e*S	**S**	**00 49 40.6**	**+2.9**
PVAQ				*e*LR	LR	00 58 37.4	
	comp=Z,96nm,18.0s						
PVAQ	**Vaqueiros**	**23.73**	**282**	*e*P	**P**	**00 45 23.7**	**+1.0**
	comp=Z,43nm,1.7s,mb4.6						
PVIS	**Viseu**	**23.74**	**290**	*e*P	**P**	**00 45 23.3**	**+0.6**
	comp=Z,20nm,1.6s,mb4.3						
PVIS	**Viseu**	**23.74**	**290**	*e*P	**P**	**00 45 23.3**	**+0.6**
	comp=Z,20nm,1.6s,mb4.3						
PBEJ	**Beja**	**23.79**	**283**	*e*P	**P**	**00 45 22.6**	**-0.7**
	comp=Z,30nm,1.5s,mb4.5						
PBEJ	**Beja**	**23.79**	**283**	*e*P	**P**	**00 45 22.6**	**-0.7**
	comp=Z,30nm,1.5s,mb4.5						
EVO	**Evora**	**23.87**	**285**	*e*P	**P**	**00 45 24.3**	**+0.3**
	comp=Z,14nm,0.9s,mb4.1						
EVO				*e*MLR	MLR		
	comp=Z,174nm,18.5s,MS3.3						
EVO	**Evora**	**23.87**	**285**	*e*P	**P**	**00 45 23.3**	**-0.7**
	comp=Z,14nm,1.3s,mb4.2						
EVO	**Evora**	**23.87**	**285**	*e*P	**P**	**00 45 23.3**	**-0.7**
	comp=Z,14nm,1.3s,mb4.2						
PBDV	**Barranco-do-Ve**	**23.92**	**282**	*e*S	**S**	**00 49 46.5**	**+5.8**
PBDV				*e*LR	LR	00 58 45.9	
	comp=Z,88nm,18.0s						
EVOP	**Sao Brissos**	**23.96**	**285**	*e*P	**P**	**00 45 24.3**	**-0.5**
	comp=Z,6.8nm,0.9s,mb4.1						
PCVE	**Castro Verde**	**23.96**	**283**	*e*P	**P**	**00 45 23.6**	**-1.2**
	comp=Z,47nm,1.7s,mb4.6						
PCVE				*e*S	**S**	**00 49 59.8**	**+18**
PCVE				*e*LR	LR	00 58 20.3	
	comp=Z,105nm,18.0s						
PCVE	**Castro Verde**	**23.96**	**283**	*e*P	**P**	**00 45 23.6**	**-1.2**
	comp=Z,47nm,1.7s,mb4.6						
PTOM	**Tomar**	**24.13**	**287**	*e*P	**P**	**00 45 26.2**	**-0.2**
	comp=Z,19nm,1.5s,mb4.3						
PTOM	**Tomar**	**24.13**	**287**	*e*P	**P**	**00 45 26.2**	**-0.2**
	comp=Z,19nm,1.5s,mb4.3						
HFS	**Hagfors**	**24.58**	**350**	P	**P**	**00 45 27.5**	**-2.7**
	comp=Z,3.7nm,0.5s,mb4.2,baz=154,slow=11,SNR=21						
HFS				LR	LR	00 56 11.2	
	comp=Z,299nm,19.1s,MS3.8,baz=166,slow=39						
HFS	**Hagfors**	**24.58**	**350**	P	**P**	**00 45 27.5**	**-2.7**
HFS				pmax	pmax		
	comp=Z,4.0nm,0.5s						
HFS				MLR	MLR		
	comp=Z,299nm,19.1s						
IZEF	**Zefreh**	**25.21**	**88**	*e*P	**P**	**00 45 35.2**	**-1.1**
IZEF	**Zefreh**	**25.21**	**88**	*e*P	**P**	**00 45 35.2**	**-1.1**
FINES	**FINESS Array B**	**25.45**	**5**	P	**P**	**00 45 36.2**	**-2.0**
	comp=Z,2.8nm,0.6s,mb4.0,baz=153,slow=11,SNR=18						
FINES				LR	LR	00 56 49.9	
	comp=Z,498nm,21.2s,MS4.0,baz=170,slow=39						
FINES	**FINESS Array B**	**25.45**	**5**	P	**P**	**00 45 36.2**	**-1.9**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
FINES				MLR	MLR		
	comp=Z,498nm,21.2s						
FINES	**FINESS Array B**	**25.45**	**5**	P	**P**	**00 45 36.2**	**-2.0**
FINES				LR	LR	00 56 49.9	
FINES	**FINESS Array B**	**25.45**	**5**	P	**P**	**00 45 36.2**	**-1.9**
	comp=Z,498nm,21.2s						
EKA	**Eskdalemuir Ar**	**25.73**	**326**	P	**P**	**00 45 40.0**	**-0.8**
	comp=Z,3.4nm,0.6s,mb4.0,baz=131,slow=8.9,SNR=13						
EKA	**Eskdalemuir Ar**	**25.73**	**326**	P	**P**	**00 45 40.0**	**-0.7**
EKA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
EKA	**Eskdalemuir Ar**	**25.73**	**326**	P	**P**	**00 45 40.0**	**-0.7**
	comp=Z,3.0nm,0.6s,mb4.0						
NB2	**NORSAR Subarra**	**25.83**	**348**	P	**P**	**00 45 39.8**	**-1.7**
	comp=Z,6.0nm,0.8s,mb4.2,baz=160,slow=9.3						
NB2	**NORSAR Subarra**	**25.83**	**348**	P	**P**	**00 45 39.8**	**-1.7**
	comp=Z,6.0nm,0.8s,mb4.2,baz=160,slow=9.0,SNR=4.7						
NOA	**NORSAR Array B**	**25.83**	**348**	P	**P**	**00 45 39.9**	**-1.7**
	comp=Z,2.9nm,0.7s,mb3.9,baz=156,slow=9.1,SNR=9.5						
NOA				LR	LR	00 57 29.8	
	comp=Z,202nm,19.7s,MS3.6,baz=165,slow=40						
NOA	**NORSAR Array B**	**25.83**	**348**	P	**P**	**00 45 39.9**	**-1.6**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NOA				MLR	MLR		
	comp=Z,202nm,19.7s						
NOA	**NORSAR Array B**	**25.83**	**348**	P	**P**	**00 45 39.9**	**-1.6**
	comp=Z,202nm,19.7s						
KAF	**Kangasniemi**	**26.14**	**5**	*e*P	**P**	**00 45 42.3**	**-2.0**
KAF				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.4						
KAF	**Kangasniemi**	**26.14**	**5**	*e*p	**P**	**00 45 42.3**	**-2.0**
	comp=Z,8.6nm,0.7s,mb4.4						
KAF	**Kangasniemi**	**26.14**	**5**	*e*p	**P**	**00 45 42.3**	**-2.0**
	comp=Z,8.6nm,0.7s,mb4.4						
KAF	**Kangasniemi**	**26.14**	**5**	*e*P	**P**	**00 45 42.3**	**-2.0**
	comp=Z,8.6nm,0.7s,mb4.4						
JOF	**Joensuu**	**27.42**	**9**	*e*P	**P**	**00 45 54.7**	**-1.2**
JOF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.2						
JOF	**Joensuu**	**27.42**	**9**	*e*p	**P**	**00 45 54.7**	**-1.2**
	comp=Z,6.2nm,0.7s,mb4.2						
JOF	**Joensuu**	**27.42**	**9**	*e*p	**P**	**00 45 54.7**	**-1.2**
	comp=Z,6.2nm,0.7s,mb4.2						
JOF	**Joensuu**	**27.42**	**9**	*e*P	**P**	**00 45 54.7**	**-1.2**
	comp=Z,6.0nm,0.7s,mb4.2						
AKTK	**Aktyubinsk**	**29.57**	**50**	P	**P**	**00 46 12.4**	**-2.8**
AKTK				LR	LR	01 00 56.6	
AKTK	**Aktyubinsk**	**29.57**	**50**	P	**P**	**00 46 12.4**	**-2.8**
	comp=Z,209nm,20.8s						
AKTO	**Aktyubinsk**	**29.57**	**50**	P	**P**	**00 46 12.4**	**-2.8**
	comp=Z,1.2nm,0.4s,mb4.0,baz=221,slow=4.2,SNR=7.2						
AKTO				LR	LR	01 00 56.7	
	comp=Z,209nm,20.8s,MS3.7,baz=110,slow=42						
AKTO	**Aktyubinsk**	**29.57**	**50**	P	**P**	**00 46 12.4**	**-2.8**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
AKTO				MLR	MLR		
	comp=Z,209nm,20.8s,MS3.7						
ABKAR	**Akbulak array**	**30.52**	**53**	*e*P	**P**	**00 46 22.0**	**-1.6**
	comp=Z,2.6nm,0.7s,mb4.2						
ABKAR	**Akbulak array**	**30.52**	**53**	*e*P	**P**	**00 46 22.0**	**-1.6**
	comp=Z,2.5nm,0.7s,mb4.2						
ARU	**Arti**	**31.89**	**39**	*d i* P	**P**	**00 46 33.8**	**-1.7**
ARU				*e*		00 47 36.4	
ARU				*e*		00 49 25.9	
ARU				S	**S**	**00 51 42.5**	**-3.6**
ARU				pmax	pmax		
	comp=Z,12nm,1.7s,mb4.5						
ARU	**Arti**	**31.89**	**39**	*e*P	**P**	**00 46 33.1**	**-2.4**
	comp=Z,10.0nm,1.0s,mb4.6						
ARU	**Arti**	**31.89**	**39**	*i* P	**P**	**00 46 33.8**	**-1.7**
	comp=Z,12nm,1.7s,mb4.5						
SOKR	**Solikamsk**	**32.49**	**33**	*c i* P	**P**	**00 46 44.2**	**+3.4**
SOKR				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.9						
SOKR				MLR	MLR		
	comp=Z,130nm,17.0s,MS3.7						
SVE	**Sverdlovsk**	**33.10**	**39**	*e*P	**P**	**00 46 44.9**	**-1.2**
SVE				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
SVE	**Sverdlovsk**	**33.10**	**39**	*e*P	**P**	**00 46 44.9**	**-1.2**
	comp=Z,16nm,0.9s,mb5.0						
ARCES	**ARCESS Array B**	**33.50**	**2**	P	**P**	**00 46 47.4**	**-2.2**
	comp=Z,4.6nm,0.8s,mb4.5,baz=188,slow=9.1,SNR=16						
ARCES				LR	LR	01 01 28.3	
	comp=Z,280nm,18.5s,MS4.0,baz=182,slow=38						
ARCES	**ARCESS Array B**	**33.50**	**2**	P	**P**	**00 46 47.4**	**-2.1**
ARCES				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ARCES				MLR	MLR		
	comp=Z,280nm,18.5s						
ARCES	**ARCESS Array B**	**33.50**	**2**	P	**P**	**00 46 47.4**	**-2.1**
	comp=Z,280nm,18.5s						
BRVK	**Borovoye**	**37.55**	**48**	*e*P	**P**	**00 47 24.1**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.5						
BRVK	**Borovoye**	**37.55**	**48**	*e*P	**P**	**00 47 24.1**	**-0.4**
	comp=Z,6.1nm,0.6s,mb4.5						
BRVK	**Borovoye**	**37.55**	**48**	*e*P	**P**	**00 47 24.1**	**-0.4**
	comp=Z,6.1nm,0.6s,mb4.5						
BVAR	**Borovoye Array**	**37.61**	**48**	P	**P**	**00 47 23.9**	**-1.1**
	comp=Z,1.1nm,0.5s,mb3.8,baz=264,slow=6.1,SNR=11						
BVAR	**Borovoye Array**	**37.61**	**48**	P	**P**	**00 47 23.9**	**-1.1**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR	**Borovoye Array**	**37.61**	**48**	P	**P**	**00 47 23.9**	**-1.1**
	comp=Z,1.0nm,0.5s,mb3.8						
DBIC	**Dimbokro**	**38.23**	**226**	P	**P**	**00 47 29.2**	**-1.4**
	comp=Z,4.3nm,0.8s,mb4.3,baz=28,slow=4.5,SNR=6.4						
DBIC				LR	LR	01 05 23.3	
	comp=Z,170nm,20.5s,MS3.9,baz=10.0,slow=39						
DBIC	**Dimbokro**	**38.23**	**226**	P	**P**	**00 47 29.2**	**-1.4**
DBIC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
DBIC				MLR	MLR		
	comp=Z,170nm,20.5s						
DBIC	**Dimbokro**	**38.23**	**226**	P	**P**	**00 47 29.2**	**-1.4**
	comp=Z,170nm,20.5s						
TIC	**Toumodi**	**38.34**	**227**	*e*P	**P**	**00 47 37.1**	**+5.5**
	comp=Z,46nm,1.2s,mb5.1						
KIC	**Kosan Boka**	**38.41**	**226**	*e*P	**P**	**00 47 37.6**	**+5.4**
	comp=Z,30nm,1.1s,mb4.9						
LIC	**Lamto**	**38.69**	**226**	*e*P	**P**	**00 47 36.1**	**+1.6**
	comp=Z,34nm,0.8s,mb5.1						
KMBO	**Kilima Mbogo**	**39.74**	**156**	LR	LR	01 06 04.3	
	comp=Z,134nm,20.4s,MS3.8,baz=90,slow=39						
EKS2	**Erkin-Say**	**40.07**	**64**	*e*P	**P**	**00 47 45.2**	**-0.6**
	comp=Z,6.0nm,0.8s,mb4.4						
EKS2	**Erkin-Say**	**40.07**	**64**	*e*P	**P**	**00 47 45.2**	**-0.6**
	comp=Z,6.0nm,0.8s,mb4.4						
AAK	**Ala-Archa**	**40.60**	**64**	P	**P**	**00 47 49.3**	**-0.9**
	comp=Z,1.6nm,0.4s,mb4.0,baz=210,slow=4.8,SNR=6.7						
AAK	**Ala-Archa**	**40.60**	**64**	P	**P**	**00 47 49.3**	**-0.8**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.1						
AAK	**Ala-Archa**	**40.60**	**64**	P	**P**	**00 47 49.3**	**-0.8**
	comp=Z,2.0nm,0.4s,mb4.1						
UCH	**Uchtor**	**40.68**	**65**	*e*P	**P**	**00 47 51.0**	**+0.2**
	comp=Z,3.1nm,0.8s,mb4.0						
UCH	**Uchtor**	**40.68**	**65**	*e*P	**P**	**00 47 51.0**	**+0.2**
	comp=Z,3.1nm,0.8s,mb4.0						
SCO	**Scoresbysund**	**41.48**	**339**	*i* P	**P**	**00 48 00.6**	**+3.6**
SCO				MLR	MLR		
	comp=Z,89nm,22.0s,MS3.6						
SCO	**Scoresbysund**	**41.48**	**339**	*i* P	**P**	**00 48 00.6**	**+3.6**
SCO							
	comp=Z,80nm,22.0s						
KSH	**Kashi**	**42.29**	**69**	*e*P	**P**	**00 48 15.0**	**+11**
KSH				pP	pP	00 48 24.9	+18
KSH				sP	sP	00 48 28.9	+20
KSH				PP	PP	00 49 58.5	+17
KSH				PcP	PcP	00 50 02.6	+4.9
KSH				ScP	ScP	00 53 50.4	+2.0
KSH				PcS	PcS	00 53 54.3	+4.8
KSH				S	**S**	**00 54 40.5**	**+16**
KSH				sS	sS	00 54 58.0	+28
KSH				SS	SS	00 57 49.6	+17
KSH				ScS	ScS	00 58 09.5	+3.2
KSH				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.2						
KSH				pmax	pmax		
	comp=Z,80nm,5.0s						
KSH				LR	LR		
	comp=N,52nm,4.7s						
KSH				LR	LR		
	comp=E,62nm,4.5s						
KSH				LR	LR		
	comp=Z,59nm,4.3s						
KURK	**Kurchatov**	**42.62**	**52**	P	**P**	**00 48 03.7**	**-2.9**
	comp=Z,2.2nm,0.6s,mb4.1,baz=279,slow=8.7,SNR=12						
KURK				LR	LR	01 09 01.9	
	comp=Z,98nm,21.1s,MS3.7,baz=270,slow=41						
KURK	**Kurchatov**	**42.62**	**52**	P	**P**	**00 48 03.7**	**-2.9**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
KURK				MLR	MLR		
	comp=Z,98nm,21.1s,MS3.7						
KBS	**Kingsbay**	**43.09**	**357**	*ce*P	**P**	**00 48 09.2**	**-0.9**
KBS				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.5						
KBS	**Kingsbay**	**43.09**	**357**	*e*P	**P**	**00 48 09.2**	**-0.9**
	comp=Z,11nm,1.2s,mb4.5						
MK31	**Makanchi Array**	**45.44**	**57**	*e*P	**P**	**00 48 27.5**	**-1.8**
MK31	**Makanchi Array**	**45.44**	**57**	*e*P	**P**	**00 48 27.5**	**-1.8**
MKAR	**Makanchi Array**	**45.44**	**57**	P	**P**	**00 48 27.3**	**-2.0**
	comp=Z,2.3nm,0.3s,mb4.4,baz=287,slow=6.0,SNR=25						
MKAR				LR	LR	01 10 40.4	
	comp=Z,115nm,21.3s,MS3.8,baz=134,slow=40						
MKAR	**Makanchi Array**	**45.44**	**57**	P	**P**	**00 48 27.3**	**-2.0**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MKAR				MLR	MLR		
	comp=Z,115nm,21.3s						
ZAA0	**Zalesovo Array**	**46.24**	**47**	*e*P	**P**	**00 48 33.0**	**-2.5**
ZALV	**Zalesovo Beam**	**46.24**	**47**	P	**P**	**00 48 33.1**	**-2.4**
	comp=Z,4.3nm,0.6s,mb4.5,baz=273,slow=8.4,SNR=17						
ZALV				LR	LR	01 10 50.9	
	comp=Z,68nm,18.9s,MS3.6,baz=65,slow=40						
ZALV	**Zalesovo Beam**	**46.24**	**47**	P	**P**	**00 48 33.1**	**-2.4**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
ZALV				MLR	MLR		
	comp=Z,68nm,18.9s,MS3.6						
ZALV	**Zalesovo Beam**	**46.24**	**47**	P	**P**	**00 48 33.1**	**-2.4**
	comp=Z,68nm,18.9s						
WMQ	**Urumqi**	**49.79**	**60**	*e*P	**P**	**00 49 05.0**	**+1.9**
DMN	**Daman**	**53.51**	**80**	*e*P	**P**	**00 49 29.5**	**-1.7**
	comp=Z,30nm,0.7s,mb5.3						
DMN	**Daman**	**53.51**	**80**	*e*P	**P**	**00 49 29.5**	**-1.7**
	comp=Z,30nm,0.7s,mb5.3						
KKN	**Kakani**	**53.57**	**80**	*e*P	**P**	**00 49 29.5**	**-2.1**
	comp=Z,17nm,0.6s,mb5.1						
KKN	**Kakani**	**53.57**	**80**	*e*P	**P**	**00 49 29.5**	**-2.1**
KKN	**Kakani**	**53.57**	**80**	*e*P	**P**	**00 49 29.5**	**-2.1**
	comp=Z,17nm,0.6s,mb5.2						
PKIN	**Phulchoki**	**53.75**	**80**	*e*P	**P**	**00 49 31.0**	**-2.0**
	comp=Z,18nm,0.7s,mb5.1						
PKI	**Pulchoki**	**53.77**	**80**	*e*P	**P**	**00 49 31.2**	**-1.9**
	comp=Z,27nm,0.8s,mb5.2						
PKI	**Pulchoki**	**53.77**	**80**	*e*P	**P**	**00 49 31.2**	**-1.9**
	comp=Z,27n

	comp=Z,2.4nm,0.6s,mb4.3,baz=301,slow=7.4,SNR=8.1							
CMAR				LR	LR		01 23 35.3	
	comp=Z,29nm,20.9s,MS3.5,baz=196,slow=38							
CMAR	**Chiang Mai Arr**	**69.06**	**82**	P	**P**		**00 51 15.8**	**-0.9**
CMAR				pmax	pmax			
	comp=Z,2.0nm,0.6s							
CMAR				MLR	MLR			
	comp=Z,29nm,20.9s							
BJI	**Beijing**	**70.72**	**54**	P	**P**		**00 51 25.1**	**-1.5**
BJI				pmax	pmax			
	comp=Z,10.0nm,0.6s,mb4.9							
BJI				LR	LR			
	comp=Z,76nm,30.2s,MS3.8							
GYA	**Guiyang**	**70.93**	**71**	*eP*	**P**		**00 51 27.0**	**-1.1**
GYA				pmax	pmax			
	comp=Z,10.0nm,1.0s,mb4.7							
BILL	**Bilibino**	**72.74**	**13**	*eP*	**P**		**00 51 37.0**	**-1.2**
BILL				*e*			00 51 52.4	
BILL				*i* S	S		01 00 53.7	-10
BILL				pmax	pmax			
	comp=Z,6.0nm,1.6s,mb4.3							
BILL				MLR	MLR			
	comp=Z,100nm,19.0s,MS4.1							
CN2	**Changchun**	**74.46**	**47**	*eP*	**P**		**00 51 48.3**	**-0.5**
KLR	**Kul'dur**	**74.72**	**40**	*eP*	**P**		**00 51 46.8**	**-3.4**
YKA	**Yellowknife Ar**	**75.67**	**341**	P	**P**		**00 51 54.6**	**-0.8**
	comp=Z,0.9nm,0.7s,mb3.8,baz=36,slow=5.6,SNR=9.3							
YKA	**Yellowknife Ar**	**75.67**	**341**	P	**P**		**00 51 54.6**	**-0.8**
YKA				pmax	pmax			
	comp=Z,1.0nm,0.7s							
FFC	**Flin Flon**	**77.50**	**330**	*ceP*	**P**		**00 52 07.6**	**+1.7**
ULM	**Lac du Bonnet**	**78.00**	**325**	LR	LR		01 26 00.3	
	comp=Z,180nm,21.2s,MS4.4,baz=38,slow=35							
KSRS	**Korea Array**	**79.75**	**51**	P	**P**		**00 52 16.6**	**-2.0**
	comp=Z,2.8nm,0.8s,mb4.3,baz=309,slow=5.3,SNR=6.6							
KSRS				LR	LR		01 31 39.7	
	comp=Z,58nm,20.7s,MS3.9,baz=170,slow=39							
KSRS	**Korea Array**	**79.75**	**51**	P	**P**		**00 52 16.6**	**-2.0**
KSRS				pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.3							
KSRS				MLR	MLR			
	comp=Z,58nm,20.7s,MS3.9							
BPAW	**Bear Paw Mtn.**	**79.93**	**357**	*eP*	**P**		**00 52 18.4**	**-0.7**
	comp=Z,2.8nm,0.7s,mb4.3							
PPLA	**Purkeypile**	**81.18**	**357**	*eP*	**P**		**00 52 26.0**	**+0.2**
	comp=Z,4.3nm,0.7s,mb4.5							
YSS	**Yuzh-Sakhalins**	**81.74**	**36**	*eP*	**P**		**00 52 29.1**	**0.0**
PETK	**Petropavlovsk-**	**83.18**	**25**	LR	LR		01 37 10.1	
	comp=Z,71nm,18.7s,MS4.1,baz=108,slow=41							
EGMT	**Eagleton**	**85.76**	**330**	*eP*	**P**		**00 52 50.1**	**+0.4**
	comp=Z,9.9nm,0.9s,mb5.0							
MJAR	**Matsushiro Arr**	**86.59**	**46**	P	**P**		**00 52 52.9**	**-1.1**
	comp=Z,1.3nm,0.7s,mb4.3,baz=319,slow=4.1,SNR=5.5							
MJAR	**Matsushiro Arr**	**86.59**	**46**	P	**P**		**00 52 52.9**	**-1.1**
MJAR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
FX1	**Attu Island--F**	**87.87**	**17**	LR	LR		01 34 48.5	
	comp=Z,59nm,18.6s,MS4.0,baz=324,slow=37							
PDAR	**Pinedale Array**	**89.85**	**327**	P	**P**		**00 53 08.5**	**-0.9**
	comp=Z,0.5nm,0.7s,mb3.9,baz=351,slow=4.7,SNR=4.0							
HWUT	**Hardware Ranch**	**91.67**	**327**	*eP*	**P**		**00 53 18.8**	**+0.9**
	comp=Z,5.1nm,1.2s,mb4.7							
ASAR	**Alice Springs**	**120.81**	**98**	PKP	PKPdf		00 59 01.6	-1.4
	comp=Z,1.0nm,0.7s,baz=312,slow=1.7,SNR=14							
ASAR	**Alice Springs**	**120.81**	**98**	PKIKP	PKPdf		00 59 01.7	-1.3
ASAR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
ASAR	**Alice Springs**	**120.81**	**98**	PKIKP	PKPdf		00 59 01.6	-1.4

*IDC **22** 00:48:57.7±11.0, 36°.25N×80°.47E, h0km, mb4.0/2, mb1 3.8/4, mb1mx3.4/23, mbtmp3.7/4, ML3.5/2, MS3.0/1, Ms1 3.0/1, ms1mx2.3/26, Error ellipse: s-maj=214.2km s-min=74.4km az=127.0*

*BJI **22** 00:49:05.0, 36°.93N×80°.61E, h28km, ML3.4/5*

ISC 22 00:49:02.3±2.8, 36°.5N±0°.3×80°.0E±0°.2, h10km, n6, σ0°38/6, mb3.8/2, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**4.40**	**315**	*e*Pn	**Pn**	**00 50 13.9**	**+4.8**
KSH				Sn	**Sn**	**00 51 00.3**	**-0.1**
KSH				smax			
	comp=N,63nm,0.5s						
KSH				smax			
	comp=E,45nm,0.6s						
MKAR	**Makanchi Array**	**10.48**	**9**	Pn	**Pn**	**00 51 32.3**	**-0.2**
	comp=E,0.2nm,0.3s,baz=182,slow=12,SNR=3.1						
KURK	**Kurchatov**	**14.29**	**357**	LR	LR	00 58 37.0	
	comp=E,65nm,20.6s,baz=255,slow=40						
BVAR	**Borovoye Array**	**17.89**	**341**	P	**Pn**	**00 53 11.5**	**+0.5**
	comp=E,0.3nm,0.3s,baz=148,slow=12,SNR=4.2						
FINES	**FINESS Array B**	**41.66**	**324**	P	**P**	**00 56 50.5**	**-0.1**
	comp=E,1.5nm,0.8s,mb3.6,baz=120,slow=11,SNR=5.3						
ARCES	**ARCESS Array B**	**44.06**	**336**	P	**P**	**00 57 09.8**	**-0.1**
	comp=E,2.8nm,0.9s,mb4.0,baz=99,slow=8.3,SNR=9.0						

*ISCJB **22** 01:18:49.8±0.7, 43°.97N±0°.03×17°.09E±0°.04, h0km±4km, Error ellipse: s-maj=6.3km s-min=2.7km az=44.7*

*CSEM **22** 01:18:51.4±0.2, 43°.94N×17°.11E, h2km, ML3.1, Error ellipse: s-maj=7.3km s-min=3.2km az=49.0*

*VIE **22** 01:18:51.6±1.3, 44°.14N×17°.59E, h10km, mb2.4/3, ML2.3/3, Error ellipse: s-maj=15.1km s-min=10.2km az=55.0 74 km WNW of Sarajevo*

*BEO **22** 01:18:51.7±0.8, 43°.96N×17°.06E, h14km±5km, ML3.1/5*

*PDG **22** 01:18:52.2±0.5, 43°.78N×17°.18E, h0km±11km, ML2.8/9, Error ellipse: s-maj=1.4km s-min=2.2km az=0.0*

*NEIC **22** 01:18:52.2, 43°.78N×17°.18E, h0km, ML2.8(PDG), ML2.7(ZAG), ML2.2(BRA), After PDG.*

ISC 22 01:18:51.3±0.7, 43°.95N±0°.03×17°.07E±0°.04, h5km±4km, n52, σ1°17/95, 16C-14D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLY	**Banja Luka**	**0.80**	**6**	⇓*i*Pg	**Pg**	**01 19 07.4**	**+0.7**
BLY				*i* Sg	**Sg**	**01 19 18.5**	**+1.3**
BLY	**Banja Luka**	**0.80**	**6**	⇓*i*Pg	**Pg**	**01 19 07.4**	**+0.7**
BLY				*i* Sg	**Sg**	**01 19 18.5**	**+1.3**
STON	**Ston**	**1.17**	**157**	⇓*i*Pg	**Pn**	**01 19 09.5**	**-4.8**
STON				Sg	**Sn**	**01 19 25.2**	**-5.3**
STON	**Ston**	**1.17**	**157**	⇓*i*Pg	**Pn**	**01 19 09.5**	**-4.8**
STON				Sg	**Sn**	**01 19 25.2**	**-5.3**
BRY	**Bratogost**	**1.50**	**134**	*e*Pg	**Pn**	**01 19 16.8**	**-2.0**
BRY				*e*Sg	**Sn**	**01 19 37.3**	**-1.4**
BRY	**Bratogost**	**1.50**	**134**	*e*Pg	**Pn**	**01 19 16.8**	**-2.0**
BRY				*e*Sg	**Sn**	**01 19 37.3**	**-1.4**
UPM	**Unac-Piva**	**1.53**	**119**	⇑*i*Pg	**Pn**	**01 19 17.7**	**-1.5**
UPM				*e*Sg	**Sn**	**01 19 39.8**	**+0.4**
UPM	**Unac-Piva**	**1.53**	**119**	⇑*i*Pg	**Pn**	**01 19 17.7**	**-1.5**
UPM				*e*Sg	**Sn**	**01 19 39.8**	**+0.4**
TREB	**Trebinje**	**1.54**	**142**	*e*Pn	**Pn**	**01 19 18.3**	**-1.1**
TREB				*i* Sg	**Sg**	**01 19 41.3**	**+0.4**
TREB	**Trebinje**	**1.54**	**142**	*e*Pn	**Pn**	**01 19 18.3**	**-1.1**
TREB				*i* Sg	**Sg**	**01 19 41.3**	**+0.4**
BBLS	**Lazići**	**1.69**	**92**	⇑*i*Pn	**Pn**	**01 19 20.6**	**-0.8**
BBLS				*i* Sg	**Sg**	**01 19 45.4**	**-0.1**
BBLS	**Lazići**	**1.69**	**92**	⇑*i*Pn	**Pn**	**01 19 20.6**	**-0.8**
BBLS				*i* Sg	**Sg**	**01 19 45.4**	**-0.1**
NVLJ	**Novalja**	**1.70**	**292**	*i* Pn	**Pn**	**01 19 22.1**	**+0.6**
NVLJ				Sn	**Sg**	**01 19 46.9**	**+1.1**
NVLJ	**Novalja**	**1.70**	**292**	*i* Pn	**Pn**	**01 19 22.1**	**+0.6**
NVLJ				Sn	**Sg**	**01 19 46.9**	**+1.1**
PLE	**Pljevlja**	**1.79**	**109**	⇓*i*Pn	**Pn**	**01 19 22.9**	**0.0**
PLE				*e*Sn	**Sg**	**01 19 49.2**	**+0.3**
PLE	**Pljevlja**	**1.79**	**109**	⇓*i*Pn	**Pn**	**01 19 22.9**	**0.0**
PLE				*e*Sn	**Sg**	**01 19 49.2**	**+0.3**
NKY	**Niksic**	**1.81**	**128**	⇑*i*Pn	**Pn**	**01 19 22.3**	**-0.7**
NKY				*e*Sn	**Sg**	**01 19 48.5**	**-0.8**
NKY	**Niksic**	**1.81**	**128**	⇑*i*Pn	**Pn**	**01 19 22.3**	**-0.7**
NKY				*e*Sn	**Sg**	**01 19 48.5**	**-0.8**
HCY	**Herceg Novi**	**1.83**	**145**	⇑*i*Pn	**Pn**	**01 19 22.1**	**-1.2**
HCY				*e*Sn	**Sn**	**01 19 47.3**	**+0.5**
HCY	**Herceg Novi**	**1.83**	**145**	⇑*i*Pn	**Pn**	**01 19 22.1**	**-1.2**
HCY				*e*Sn	**Sn**	**01 19 47.3**	**+0.5**
DIVS	**Divibare**	**2.11**	**85**	*e*Pn	**Pn**	**01 19 27.0**	**-0.2**
DIVS				*i* Sg	**Sg**	**01 19 59.0**	**-0.1**
DIVS	**Divibare**	**2.11**	**85**	*e*Pn	**Pn**	**01 19 27.0**	**-0.2**
DIVS				*i* Sg	**Sg**	**01 19 59.0**	**-0.1**
BUM	**Brajici-Budva**	**2.12**	**140**	⇓*i*Pn	**Pn**	**01 19 27.1**	**-0.2**
BUM				*e*Sn	**Sn**	**01 19 55.2**	**+1.2**
BUM	**Brajici-Budva**	**2.12**	**140**	⇓*i*Pn	**Pn**	**01 19 27.1**	**-0.2**
BUM				*e*Sn	**Sn**	**01 19 55.2**	**+1.2**
PDG	**Podgorica**	**2.21**	**133**	⇓*i*Pn	**Pn**	**01 19 28.4**	**-0.1**
PDG				*e*Sn	**Sn**	**01 19 57.3**	**+1.2**
TTG	**Podgorica**	**2.21**	**133**	⇓*i*Pn	**Pn**	**01 19 28.4**	**-0.1**
TTG				*e*Sn	**Sn**	**01 19 57.3**	**+1.2**
TTG	**Podgorica**	**2.21**	**133**	⇓*i*Pn	**Pn**	**01 19 28.4**	**-0.1**
TTG				*e*Sn	**Sn**	**01 19 57.3**	**+1.2**
BEY	**Berane**	**2.32**	**117**	⇑*i*Pn	**Pn**	**01 19 31.5**	**+1.4**
BEY				*e*Sn	**Sn**	**01 20 01.6**	**+2.6**
IVA	**Berane**	**2.32**	**117**	⇑*i*Pn	**Pn**	**01 19 31.5**	**+1.4**
IVA				*e*Sn	**Sn**	**01 20 01.6**	**+2.6**
IVA	**Berane**	**2.32**	**117**	⇑*i*Pn	**Pn**	**01 19 31.5**	**+1.4**
IVA				*e*Sn	**Sn**	**01 20 01.6**	**+2.6**
TRUS	**Trudelj**	**2.42**	**82**	*e*Pn	**Pn**	**01 19 31.6**	**+0.2**
TRUS	**Trudelj**	**2.42**	**82**	*e*Pn	**Pn**	**01 19 31.6**	**+0.2**
PVY	**Plav**	**2.51**	**122**	⇑*i*Pn	**Pn**	**01 19 33.7**	**+1.0**
PVY				*e*Sn	**Sn**	**01 20 06.3**	**+2.6**
PVY	**Plav**	**2.51**	**122**	⇑*i*Pn	**Pn**	**01 19 33.7**	**+1.0**
PVY				*e*Sn	**Sn**	**01 20 06.3**	**+2.6**
TRI	**Trieste**	**2.94**	**308**	*e*Pn	**Pb**	**01 19 42.2**	**-2.0**
TRI	**Trieste**	**2.94**	**308**	*e*Pn	**Pb**	**01 19 42.2**	**-1.9**
VOY	**Vojsko**	**3.07**	**314**	*e*Pn	**Pb**	**01 19 42.8**	**-3.6**
VOY				*e*		01 19 49.9	
VOY				*e*Sn	**Sb**	**01 20 20.8**	**-3.3**
VOY	**Vojsko**	**3.07**	**314**	*e*Pn	**Pb**	**01 19 42.8**	**-3.6**
VOY				*e*Sn	**Sb**	**01 20 20.8**	**-3.3**
OBKA	**Obir**	**3.12**	**326**	⇑*i*Pn	**Pn**	**01 19 42.4**	**+1.3**
OBKA				⇓*i*Sn	**Sn**	**01 20 20.7**	**+2.0**
OBKA	**Obir**	**3.12**	**326**	Pn	**Pn**	**01 19 42.4**	**+1.3**
OBKA				Sn	**Sn**	**01 20 20.7**	**+2.0**
ARSA	**Arzberg**	**3.48**	**342**	⇓*i*Pn	**Pn**	**01 19 45.6**	**-0.4**
ARSA				⇑*i*Sn	**Sn**	**01 20 25.7**	**-1.8**
ARSA	**Arzberg**	**3.48**	**342**	Pn	**Pn**	**01 19 45.6**	**-0.4**
ARSA				Sn	**Sn**	**01 20 25.7**	**-1.8**
BARS	**Barje**	**3.64**	**106**	*e*Pn	**Pn**	**01 19 47.4**	**-0.8**
BARS	**Barje**	**3.64**	**106**	*e*Pn	**Pn**	**01 19 47.4**	**-0.8**
ZAPS	**Zavoj**	**4.09**	**98**	*e*Pn	**Pn**	**01 19 54.2**	**-0.3**
MOA	**Molln**	**4.37**	**334**	⇑*i*Pn	**Pn**	**01 19 58.2**	**0.0**
MOA				⇓*i*Sn	**Sn**	**01 20 51.8**	**+2.4**
MOA	**Molln**	**4.37**	**334**	Pn	**Pn**	**01 19 58.2**	**0.0**
MOA				Sn	**Sn**	**01 20 51.8**	**+2.4**
VYHS	**Vyhne**	**4.71**	**14**	*e*Pn	**Pn**	**01 20 03.4**	**+0.5**
VYHS				*e*Sn	**Sn**	**01 20 57.1**	**-0.7**
VYHS	**Vyhne**	**4.71**	**14**	*e*Pn	**Pn**	**01 20 03.4**	**+0.5**
VYHS				*e*SN	**Sn**	**01 20 57.1**	**-0.7**
VYHS	**Vyhne**	**4.71**	**14**	*e*Pn	**Pn**	**01 20 03.4**	**+0.5**
VYHS				*e*Sn	**Sn**	**01 20 57.1**	**-0.7**
KOLL	**Kolacno**	**4.72**	**11**	*e*SN	**Sn**	**01 20 56.5**	**-1.7**
KOLL	**Kolacno**	**4.72**	**11**	*e*Sn	**Sn**	**01 20 56.5**	**-1.7**

GUC 22 01:22:57.3±0.6, 33°.47S×72°.89W, h30km±4km, MD3.5, ML3.0, 3C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNV	**Longovilo**	**1.33**	**112**	⇑*i*P	Pn	01 23 20.2	+0.5
LNV				*i* S	Sn	01 23 37.8	+1.4
PEL	**Peldehue**	**1.88**	**81**	⇓*i*P	Pn	01 23 28.9	+1.6
PEL				*i* S	Sn	01 23 53.2	+3.2
PEL				AML	AML	01 23 58.4	
	comp=N,286nm,0.2s						
ANTU	**Antumapu**	**1.89**	**94**	*i* S	Sn	01 23 53.1	+2.8
ANTU				AML	AML	01 23 55.4	
	comp=E,141nm,0.5s						
CHCH	**Chadas Angostu**	**1.92**	**104**	*e*P	Pn	01 23 29.5	+1.5
CHCH				*i* S	Sn	01 23 53.7	+2.6
CACH	**El Canelo**	**2.02**	**109**	⇑*i*P	Pn	01 23 31.5	+2.2
CACH				*i* S	Sn	01 23 57.8	+4.4
FCH	**Farellones**	**2.18**	**87**	⇑*i*P	Pn	01 23 33.7	+2.2
FCH				*i* S	Sn	01 24 01.0	+3.5
FCH				AML	AML	01 24 02.6	
	comp=N,124nm,0.2s						

*DDA **22** 01:23:19.0, 39°.74N×40°.71E, h7km±2km, Md3.3*

*ISK **22** 01:23:19.4, 39°.77N×40°.57E, h3km, MD3.6, ML3.6*

*ISCJB **22** 01:23:19.7±0.3, 39°.75N±0°.02×40°.68E±0°.03, h10km, Error ellipse: s-maj=2.9km s-min=2.5km az=12.1*

*CSEM **22** 01:23:20.6±0.2, 39°.78N×40°.61E, h5km, MD3.3, Error ellipse: s-maj=4.8km s-min=4.2km az=113.0*

ISC 22 01:23:19.6±0.4, 39°.75N±0°.02×40°.73E±0°.03, h4km±4km, n71, σ1°15/92, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOPT	**Kop Dagi**	**0.33**	**327**	*i* P	**Pg**	**01 23 26.1**	**+0.3**
KOPT				*i* S	**Sg**	**01 23 32.2**	**+2.1**
KOPT	**Kop Dagi**	**0.33**	**327**	*i* P	**Pg**	**01 23 26.1**	**+0.2**
KOPT				*i* S	**Sg**	**01 23 32.2**	**+2.1**
BNGL	**BINGOL**	**0.86**	**158**	*i* P	**Pg**	**01 23 35.8**	**-0.2**
BNGL				*i* S	**Sg**	**01 23 48.0**	**+1.0**
BINT	**Bingol**	**0.89**	**192**	PG	**Pg**	**01 23 37.8**	**+1.2**
BINT				*e*SG	**Sg**	**01 23 50.7**	**+2.6**
BINT	**Bingol**	**0.89**	**192**	*i* Pg	**Pg**	**01 23 37.8**	**+1.2**
BINT				*e*Sg	**Sg**	**01 23 50.7**	**+2.6**
HOMI	**Horasan**	**0.95**	**71**	*i* P	**Pg**	**01 23 37.6**	**-0.1**
HOMI				*i* S	**Sg**	**01 23 54.3**	**+4.2**
EZC	**Erzincan**	**1.06**	**271**	PG	**Pg**	**01 23 38.0**	**-1.9**
GUMT	**Gumushane**	**1.20**	**307**	PN	**Pg**	**01 23 41.1**	**-1.4**
GUMT	**Gumushane**	**1.20**	**307**	*i* Pn	**Pg**	**01 23 41.1**	**-1.4**
PTK	**Pertek**	**1.34**	**231**	*e*PN	**Pn**	**01 23 43.5**	**-1.6**
PTK	**Pertek**	**1.34**	**231**	*e*Pn	**Pn**	**01 23 43.5**	**-1.6**
DDEM	**Demirkent**	**1.39**	**34**	*i* P	**Pn**	**01 23 45.2**	**-0.5**
DDEM				*i* S	**Sg**	**01 24 07.2**	**+3.1**
DDEM	**Demirkent**	**1.39**	**34**	*i* P	**Pn**	**01 23 45.2**	**-0.5**
MACK	**Trabzon**	**1.40**	**329**	*i* P	**Pn**	**01 23 45.5**	**-0.5**
MACK	**Trabzon**	**1.40**	**329**	*i* P	**Pn**	**01 23 45.5**	**-0.4**
PZAR	**Pazar-Rize**	**1.44**	**5**	*e*PN	**Pn**	**01 23 47.1**	**+0.8**
PZAR	**Pazar-Rize**	**1.44**	**5**	*e*Pn	**Pn**	**01 23 47.1**	**+0.7**
KTUT	**Trabzon**	**1.44**	**330**	*e*PN	**Pn**	**01 23 46.0**	**-0.5**
KTUT	**Trabzon**	**1.44**	**330**	*e*Pn	**Pn**	**01 23 46.0**	**-0.4**
DBAD	**Bademkaya**	**1.47**	**30**	*i* P	**Pn**	**01 23 47.0**	**+0.2**
DBAD				*i* S	**Sn**	**01 24 06.1**	**-0.4**
DBAD	**Bademkaya**	**1.47**	**30**	*i* P	**Pn**	**01 23 47.0**	**+0.2**
DBAD				*i* S	**Sn**	**01 24 06.1**	**-0.4**
BTMT	**Batman**	**1.66**	**159**	*e*PN	**Pn**	**01 23 50.6**	**+1.2**
ARTV	**Artvin**	**1.70**	**32**	*i* P	**Pn**	**01 23 51.0**	**+0.9**
ARTV				*i* S	**Sg**	**01 24 15.0**	**+0.8**
ARTV	**Artvin**	**1.70**	**32**	*i* P	**Pn**	**01 23 51.0**	**+1.0**
ARTV				*i* S	**Sg**	**01 24 15.0**	**+0.7**
SVRC	**Sivrice-ELAZID**	**1.76**	**220**	*e*PN	**Pn**	**01 23 51.1**	**+0.3**
SVRC	**Sivrice-ELAZID**	**1.76**	**220**	*e*Pn	**Pn**	**01 23 51.1**	**+0.3**
BCA	**Borcka**	**1.83**	**22**	*e*PN	**Pn**	**01 23 52.4**	**+0.7**
BCA	**Borcka**	**1.83**	**22**	*e*Pn	**Pn**	**01 23 52.4**	**+0.7**
ELZG	**Elazig**	**1.84**	**228**	*i* P	**Pn**	**01 23 52.6**	**+0.6**
ELZG				*e*S	**Sn**	**01 24 14.2**	**-1.4**
ELZG	**Elazig**	**1.84**	**228**	*i* P	**Pn**	**01 23 52.6**	**+0.7**
ELZG				*e*S	**Sn**	**01 24 14.2**	**-1.5**
DIYA	**Diyarbakir**	**1.88**	**195**	*i* P	**Pb**	**01 23 53.8**	**-0.7**
DIYA				*i* S	**Sg**	**01 24 18.9**	**-1.1**
DIYA	**Diyarbakir**	**1.88**	**195**	*i* P	**Pb**	**01 23 53.8**	**-0.6**
DIYA				*i* S	**Sg**	**01 24 18.9**	**-1.1**
DIY	**Diyarbakir**	**1.89**	**192**	*e*PN	**Pn**	**01 23 53.6**	**+1.0**
DIY	**Diyarbakir**	**1.89**	**192**	*e*Pn	**Pn**	**01 23 53.6**	**+1.0**
BEST	**Besiri**	**1.90**	**167**	*i* P	**Pn**	**01 23 54.1**	**+1.4**
BEST				*i* S	**Sg**	**01 24 22.5**	**+1.9**
ESPY	**Espiye-Giresun**	**1.93**	**308**	*e*PN	**Pn**	**01 23 53.1**	**0.0**
ESPY	**Espiye-Giresun**	**1.93**	**308**	*e*Pn	**Pn**	**01 23 53.1**	**0.0**
KARS	**Kars**	**2.00**	**63**	*e*PN	**Pb**	**01 23 56.1**	**-0.4**
KARS	**Kars**	**2.00**	**63**	*e*Pn	**Pb**	**01 23 56.1**	**-0.4**
GRSN	**GIRESUNGRSN**	**2.22**	**303**	*i* P	**Pb**	**01 23 58.5**	**-1.7**
GRSN				*i* S	**Sg**	**01 24 29.1**	**-1.8**
GRSN	**GIRESUNGRSN**	**2.22**	**303**	*i* P	**Pb**	**01 23 58.5**	**-1.7**
MYA	**Malataya**	**2.29**	**232**	*e*PN	**Pn**	**01 23 58.2**	**+0.2**
MYA	**Malataya**	**2.29**	**232**	*e*Pn	**Pn**	**01 23 58.2**	**+0.1**
DYDN	**Diyadin**	**2.29**	**94**	*i* P	**Pg**	**01 24 01.5**	**-2.0**
DYDN				*i* S	**Sg**	**01 24 33.9**	**+0.8**
DYDN	**Diyadin**	**2.29**	**94**	*i* P	**Pg**	**01 24 01.5**	**-2.0**
VANB	**Van**	**2.36**	**118**	*e*PN	**Pg**	**01 24 02.6**	**-2.2**
VANB	**Van**	**2.36**	**118**	*e*Pn	**Pg**	**01 24 02.6**	**-2.2**
VANT	**Van**	**2.38**	**123**	*e*PN	**Pg**	**01 24 03.1**	**-1.9**
MARD	**Mardin**	**2.43**	**179**	*i* P	**Pn**	**01 23 59.9**	**-0.1**
MARD				*i* S	**Sb**	**01 24 33.3**	**-0.7**
CLDR	**Caldiran**	**2.54**	**103**	*e*PN	**Pb**	**01 24 05.0**	**-0.7**
CLDR	**Caldiran**	**2.54**	**103**	*e*Pn	**Pb**	**01 24 05.0**	**-0.7**
URFA	**Urfa**	**2.75**	**214**	*e*PN	**Pn**	**01 24 04.7**	**+0.4**
URFA	**Urfa**	**2.75**	**214**	*e*Pn	**Pn**	**01 24 04.7**	**+0.4**
SVSK	**Karacayir**	**2.88**	**275**	*e*PN	**Pn**	**01 24 06.5**	**+0.3**
SVSK	**Karacayir**	**2.88**	**275**	*e*Pn	**Pn**	**01 24 06.5**	**+0.3**
GNI	**Garni**	**3.11**	**81**	*e*PN	**Pb**	**01 24 13.4**	**-2.0**
GNI	**Garni**	**3.11**	**81**	*e*Pn	**Pb**	**01 24 13.4**	**-2.0**
ERBA	**Erbaa**	**3.19**	**288**	*e*P	**Pb**	**01 24 16.0**	**-0.7**
ERBA				*e*S	**Sg**	**01 25 02.0**	**+0.1**
SARI	**SarD1z-Kayseri**	**3.31**	**253**	*e*PN	**Pb**	**01 24 17.2**	**-1.6**
TOKA	**Tokat**	**3.32**	**281**	*e*P	**Pb**	**01 24 19.6**	**+0.8**
TOKA				*e*S	**Sg**	**01 25 07.0**	**+1.0**
CUKT	**Cukurca**	**3.36**	**137**	*e*PN	**Pb**	**01 24 16.3**	**-3.4**
CUKT	**Cukurca**	**3.36**	**137**	*e*Pn	**Pb**	**01 24 16.3**	**-3.4**
YOZ	**Yozgat**	**4.18**	**270**	*e*PN	**Pn**	**01 24 25.0**	**+1.0**
YOZ	**Yozgat**	**4.18**	**270**	*e*Pn	**Pn**	**01 24 25.0**	**+1.0**
KOZT	**Kozan**	**4.46**	**241**	*e*PN	**Pn**	**01 24 28.9**	**+1.0**
DIKM	**Dikmen**	**4.57**	**296**	*e*PN	**Pn**	**01 24 30.1**	**+0.6**
DIKM	**Dikmen**	**4.57**	**296**	*e*Pn	**Pn**	**01 24 30.1**	**+0.6**
CORM	**Corum**	**4.71**	**277**	*e*PN	**Pn**	**01 24 32.0**	**+0.7**
CORM	**Corum**	**4.71**	**277**	*e*Pn	**Pn**	**01 24 32.0**	**+0.7**
BYBT	**Boyabat**	**4.86**	**293**	*e*PN	**Pn**	**01 24 34.2**	**+0.9**
BYBT	**Boyabat**	**4.86**	**293**	*e*Pn	**Pn**	**01 24 34.2**	**+0.9**

*NIED **22** 01:28:00, 36°.70N×141°.00E, h53km, Mw4.0 Best double couple: M0 1.23000×10^15 NP1: φ±25.00000°, δ67.00000°, λ91.00000°. NP2: φ±201.00000°, δ23.00000°, λ87.00000°.*

*ISCJB **22** 01:28:36.7±0.6, 36°.63N±0°.03×141°.08E±0°.06, h51km±4km, mb4.2/26, Error ellipse: s-maj=8.1km s-min=4.6km az=23.3*

*JMA **22** 01:28:38.2±0.1, 36°.63N×140°.95E, h49km±1km, M4.2 Broadband fault plane solution: P waves. NP1: φ±218.00000°, δ18.00000°, λ117.00000°. NP2: φ±10.00000°, δ74.00000°, λ82.00000°. Principal axes: T Plg60.0000°, Azm269.0000°; N Plg8.0000°, Azm13.0000°; P Plg29.0000°, Azm107.0000°;*

JMA Felt III J1.

*NEIC **22** 01:28:39.0±1.0, 36°.62N×140°.94E, h53km±7km, mb4.4/14, MW4.0(NIED) Error ellipse: s-maj=9.5km s-min=7.7km az=133.0*

NEIC Recorded [3 JMA] in Ibaraki and [2 JMA] in Fukushima and Tochigi.

*IDC **22** 01:28:40.0±0.7, 36°.62N×141°.02E, h63km±5km, mb3.9/12, mb1 4.0/16, mb1mx3.8/28, mbtmp3.9/16, MS3.1/1, Ms1 3.3/1, ms1mx2.4/31, Error ellipse: s-maj=10.5km s-min=9.3km az=119.0*

ISC 22 01:28:38.2±0.6, 36°.64N±0°.03×141°.03E±0°.06, h45km±4km, h67km±2.1km; pP-P, n56, σ0°94/66, mb4.2/26, 8D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.37**	**266**	⇓P	**Pn**	**01 28 47.4**	**-0.1**
JHO				S	**Sn**	**01 28 53.5**	**-0.7**
ONAJ	**Iwakimizuishiy**	**0.49**	**339**	⇓P	**Pn**	**01 28 48.9**	**-0.2**
ONAJ

LPAZ pPKPbc pPKPbc 01 48 33.9 +3.3
comp=Z,0.8nm,0.5s,baz=4.2,slow=4.3,SNR=2.8
LPAZ La Paz 147.16 60 PKPbc PKPbc 01 48 18.1 +1.4
LPAZ pPKPbc pPKPbc 01 48 33.9 +3.3

ISCJB ***22*** *01:29:57.8±0.8, 60°.3S±0°.2×25°.0W±0°.2, h10km, mb4.3/9, MS3.4/2, Error ellipse: s-maj=30.8km s-min=12.9km az=10.7*
IDC ***22*** *01:29:58.4±1.1, 60°.30S×25°.00W, h0km, mb4.1/5, mb1 4.3/5, mb1mx4.0/13, mbtmp4.1/5, MS3.5/2, Ms1 3.4/2, ms1mx3.2/9, Error ellipse: s-maj=50.5km s-min=21.9km az=25.0*
NEIC ***22*** *01:30:03.5±0.7, 60°.30S×25°.02W, h35km, mb4.4/7, Error ellipse: s-maj=27.0km s-min=11.5km az=191.0*
ISC 22 01:29:59.8±0.8, 60°.3S±0°.2×25°.0W±0°.2, h10km, n15, σ0.68/13, mb4.3/9, MS3.4/2, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRQA	**Tornquist**	**32.19**	**297**	*e*P	**P**	**01 36 28.0**	**+0.5**
	5.2nm,0.7s,mb4.5						
PLCA	**Paso Flores**	**34.03**	**284**	P	**P**	**01 36 43.8**	**+0.2**
	3.3nm,0.7s,mb4.4,baz=133,slow=6.6,SNR=16						
PLCA				LR	LR	01 50 26.4	
	comp=Z,91nm,21.0s,MS3.5,baz=92,slow=36						
MAW	**Mawson**	**36.07**	**139**	P	**P**	**01 37 00.9**	**0.0**
	3.3nm,1.0s,mb4.2,baz=296,slow=11,SNR=4.8						
CPUP	**Villa Florida**	**40.53**	**312**	P	**P**	**01 37 37.8**	**-1.0**
	0.8nm,0.5s,mb3.6,baz=135,slow=8.2,SNR=7.0						
CPUP	**Villa Florida**	**40.53**	**312**	*e*P	**P**	**01 37 38.5**	**-0.3**
	5.3nm,0.4s,mb4.5						
LCO	**Las Campanas**	**43.70**	**295**	*e*P	**P**	**01 38 03.3**	**-1.3**
	5.3nm,0.6s,mb4.5						
BOSA	**Boshof**	**46.15**	**70**	P	**P**	**01 38 24.3**	**+0.1**
	2.2nm,0.8s,mb4.2,baz=215,slow=11,SNR=5.0						
BOSA				LR	LR	01 55 48.0	
	comp=Z,41nm,19.0s,MS3.4,baz=122,slow=34						
BOSA	**Boshof**	**46.15**	**70**	*e*P	**P**	**01 38 24.0**	**-0.1**
	2.5nm,0.7s,mb4.2						
BOSA				LR	LR	01 55 48.0	
LBTB	**Lobatse**	**49.37**	**68**	*e*P	**P**	**01 38 49.0**	**-0.2**
TSUM	**Tsumeb**	**50.98**	**55**	*e*P	**P**	**01 39 01.5**	**0.0**
	5.2nm,1.2s,mb4.3						
LPAZ	**La Paz**	**53.80**	**306**	P	**P**	**01 39 24.0**	**+1.7**
	1.4nm,0.4s,mb4.2,baz=130,slow=5.0,SNR=19						
LPAZ	**La Paz**	**53.80**	**306**	*e*P	**P**	**01 39 23.5**	**+1.2**
	1.9nm,0.5s,mb4.3						
LSZ	**Lusaka**	**59.03**	**64**	*e*P	**P**	**01 39 59.8**	**+0.1**
	1.6nm,0.7s,mb4.2						
YKA	**Yellowknife Ar**	**140.05**	**314**	PKP	PKPdf	01 49 28.3	+1.7
	0.2nm,0.6s,baz=173,slow=24,SNR=4.2						
YKA	**Yellowknife Ar**	**140.05**	**314**	PKP	PKPdf	01 49 28.3	+1.6

SZGRF ***22*** *01:31:53.7, 15°.63N×93°.15W, h33km, mb5.2, Near coast of Chiapas, Mexico*
IDC ***22*** *01:32:04.8±0.5, 16°.75N×93°.90W, h114km±5km, mb4.5/22, mb1 4.6/22, mb1mx4.6/23, mbtmp4.5/22, MS3.8/13, Ms1 3.8/13, ms1mx3.6/26, Error ellipse: s-maj=15.7km s-min=8.5km az=45.0*
BJI ***22*** *01:32:04.8, 16°.70N×93°.90W, h132km, mB5.1/10*
ISCJB ***22*** *01:32:06.3±0.2, 16°.76N±0°.03×93°.96W±0°.02, h136km±2km, mb4.8/216, Error ellipse: s-maj=5.0km s-min=2.1km az=36.0*
NEIC ***22*** *01:32:06.9±0.5, 16°.70N×93°.94W, h132km±3km, mb5.0/190, Error ellipse: s-maj=4.9km s-min=2.5km az=211.0*
NEIC Felt at San Cristobal de las Casas.
MEX ***22*** *01:32:07.6±1.0, 16°.60N×94°.26W, h114km±15km, MD4.7*
GCG ***22*** *01:32:08.0, 16°.99N×93°.85W, h31km, MD5.1*
GCMT ***22*** *01:32:09.2±0.3, 16°.87N×94°.18W, h131km±1km, MW5.1, Moment Tensor Solution. s55,c71; s77,c140; Moment tensor: Scale 10^16 Nm; Mrr=1.22±.14; Mθθ=3.97±.14; Mφφ=5.19±.16; Mrθ=0.46±.10; Mθφ=-3.16±.15; Mφr=4.21±.11; Best double couple: M0=6.60000×10^16 NP1:φs=114.00000°, δ=59.00000°, λ=175.00000°. NP2:φs=206.00000°, δ=86.00000°, λ=31.00000°. Principal axes: T 8.0500, Plg24.0000°, Azm74.0000°; N -2.8300, Plg59.0000°, Azm213.0000°; P -5.2200, Plg18.0000°, Azm336.0000°; Data Used: II IU IC G CN.*
CASC ***22*** *01:32:09.9±2.6, 16°.71N×93°.65W, h144km±30km, mb5.7, MD4.7, ML4.5*
ISC 22 01:32:08.0±0.2, 16°.79N±0°.02×93°.88W±0°.02, h135km±2km, h130km±3.3km: pP-P, n835, σ0.74/833, mb4.8/216, 169C-218D, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**0.72**	**91**	*i* P	**Pn**	**01 32 28.8**	**-0.1**
TGIG				*e*S	**Sn**	**01 32 45.2**	**+0.3**
CMIG	**Matias Romero**	**1.01**	**287**	P	**Pn**	**01 32 26.1**	**-5.3**
	5μm,0.3s,baz=114,slow=5.6						
CMIG				S	**Sn**	**01 32 42.9**	**-6.3**
	8μm,0.3s,baz=35,slow=23,SNR=20						
PCIG		**1.25**	**150**	*i* P	**Pn**	**01 32 31.7**	**-2.0**
PCIG				*e*S	**Sn**	**01 32 50.7**	**-2.7**
TUIG	**Tuzandepetl**	**1.34**	**337**	*i* P	**Pn**	**01 32 32.6**	**-2.1**
TUIG				*e*S	**Sn**	**01 32 52.3**	**-2.7**
HUIG	**Huatulco**	**2.38**	**245**	*i* P	**Pn**	**01 32 37.7**	**-9.1**
HUIG				*e*S	**Sn**	**01 33 03.9**	**-13**
THIG		**2.43**	**140**	*i* P	**Pn**	**01 32 46.8**	**-0.8**
THIG				*e*S	**Sn**	**01 33 17.7**	**-0.3**
VHO	**Vista Hermosa**	**2.75**	**276**	*i* P	**Pn**	**01 32 46.4**	**-5.2**
VHO				*e*S	**Sn**	**01 33 14.7**	**-10**
JAT	**Jato**	**3.27**	**138**	⇓*e*P	**Pn**	**01 32 59.1**	**+0.7**
TP2	**Tecpan 2**	**3.40**	**126**	⇓*e*P	**Pn**	**01 33 01.0**	**+1.1**
TPIG	**Tehuac#an**	**3.70**	**296**	*i* P	**Pn**	**01 32 59.5**	**-4.4**
TPIG				*e*S	**Sn**	**01 33 38.2**	**-9.0**
APG	**El Apazote**	**3.73**	**118**	P	**Pn**	**01 33 03.8**	**-0.5**
	34nm,0.3s,baz=319,slow=12,SNR=225						
APG				S	**Sn**	**01 33 46.0**	**-2.0**
	960nm,0.3s,baz=341,slow=23,SNR=14						
APG				LR	LR	01 34 29.3	
	comp=Z,2μm,19.2s,baz=267,slow=39						
FUG	**Fuego 3**	**3.74**	**128**	*e*P	**Pn**	**01 33 05.7**	**+1.3**
PCG	**Pacaya**	**3.95**	**127**	*e*P	**Pn**	**01 33 08.9**	**+1.7**
PNIG	**Pinotepa**	**4.10**	**265**	*i* P	**Pn**	**01 33 01.2**	**-8.0**
PNIG				*e*S	**Sn**	**01 33 44.2**	**-12**
MRL	**Marmol**	**4.38**	**113**	*e*P	**Pn**	**01 33 13.7**	**+0.8**
RBDL	**Robledal**	**4.84**	**123**	*e*P	**Pn**	**01 33 18.9**	**-0.1**
MTO2	**Montecristo 2**	**4.96**	**118**	*e*P	**Pn**	**01 33 19.9**	**-0.7**
MTO2				*e*S	**Sn**	**01 34 16.6**	**-0.5**
RTR	**El Retiro**	**4.99**	**125**	*e*P	**Pn**	**01 33 22.2**	**+1.1**
SNJE	**San Jose**	**5.04**	**125**	*e*P	**Pn**	**01 33 22.6**	**+0.8**
SBLS	**San Blas**	**5.04**	**125**	*e*P	**Pn**	**01 33 22.7**	**+1.0**
SBLS				AML	AML	01 34 23.0	
	comp=Z,394nm,0.8s						
BOQS	**Boqueron**	**5.38**	**124**	*e*P	**Pn**	**01 33 27.3**	**+1.1**
LBRS	**Las Brisas**	**5.56**	**122**	*e*P	**Pn**	**01 33 28.6**	**-0.1**
LFRS	**El Faro**	**5.61**	**124**	*e*P	**Pn**	**01 33 29.8**	**+0.4**
CAIG	**El Cayaco**	**6.12**	**273**	*i* P	**Pn**	**01 33 29.4**	**-6.8**
CAIG				*e*S	**Sn**	**01 34 33.2**	**-12**
CAHU	**Cacacuatique**	**6.24**	**118**	*e*P	**Pn**	**01 33 38.7**	**+0.9**
TEIG	**Tepich**	**6.31**	**56**	⇑*i*Pn	**Pn**	**01 33 38.8**	**0.0**
TEIG	**Tepich**	**6.31**	**56**	*i* P	**Pn**	**01 33 38.8**	**0.0**
TEIG	**Tepich**	**6.31**	**56**	*e*P	**Pn**	**01 33 38.9**	**+0.2**
TEIG				*e*S	**Sn**	**01 34 52.8**	**+3.1**
TEIG				AML	AML	01 35 00.8	
	comp=Z,587nm,0.4s						
CNCH	**Conchagua**	**6.80**	**120**	*e*P	**Pn**	**01 33 46.3**	**+0.9**
TGUH	**Tegucigalpa,Un**	**6.92**	**112**	*e*Pn	**Pn**	**01 33 47.1**	**+0.1**
TGUH	**Tegucigalpa,Un**	**6.92**	**112**	*e*P	**Pn**	**01 33 46.8**	**-0.2**
TGUH				AML	AML	01 35 25.1	
	comp=N,2μm,0.6s						
COPN	**Copaltepe**	**8.41**	**122**	*e*P	**Pn**	**01 34 08.3**	**+1.3**
BOAB	**BOACO BROADBAN**	**9.04**	**117**	*e*P	**Pn**	**01 34 16.1**	**+0.6**
JTS	**JuntasAbangare**	**10.82**	**126**	Pn	**Pn**	**01 34 38.3**	**-0.8**
	comp=N,1μm,0.5s,SNR=22						
KVTX	**Kingsville**	**11.33**	**342**	*e*Pn	**Pn**	**01 34 44.6**	**-1.2**
HKT	**Hockley**	**13.22**	**353**	⇓*i*Pn	**Pn**	**01 35 09.1**	**-1.3**
	comp=N,175nm,1.5s						
JCT	**Junction City**	**14.66**	**339**	*e*Pn	**Pn**	**01 35 27.7**	**-1.1**
JCT				*e*Sn	**Sn**	**01 38 08.1**	**-3.1**
NATX	**Nacogdoches**	**14.92**	**357**	*e*Pn	**Pn**	**01 35 31.8**	**-0.2**
NATX				*e*Sn	**Sn**	**01 38 05.7**	**-12**
628A	**Black Gap, Mar**	**15.10**	**328**	P	**Pn**	**01 35 34.3**	**0.0**
	baz=15,SNR=347						
627A	**Terlingua Ranc**	**15.33**	**327**	P	**Pn**	**01 35 37.1**	**0.0**
	baz=15,SNR=330						
TXAR	**Lajitas Array**	**15.38**	**326**	P	**Pn**	**01 35 37.4**	**-0.5**
	comp=N,4.6nm,0.3s,baz=147,slow=13,SNR=762						
BRAL	**Brewton**	**15.46**	**22**	*e*P	**Pn**	**01 35 40.9**	**+2.2**
	comp=N,852nm,2.5s						
BRAL				*e*Sn	**Sn**	**01 38 29.7**	**-0.7**
MCJ	**Malvern**	**15.50**	**83**	⇓*e*P	**Pn**	**01 35 43.0**	**+3.7**
528A	**Cox Ranch, San**	**15.61**	**330**	⇓P	**Pn**	**01 35 40.3**	**-0.3**
	baz=16,SNR=76						
BCIP	**Isla Barro Col**	**15.63**	**117**	*e*Pn	**Pn**	**01 35 40.4**	**-0.6**
	comp=N,120nm,1.4s						
BCIP	**Isla Barro Col**	**15.63**	**117**	*e*P	**Pn**	**01 35 40.7**	**-0.4**
BCIP				AMb	AMB	01 35 43.4	
	comp=Z,423nm,1.5s						
MTDJ	**Mount Denham**	**15.65**	**82**	*e*Pn	**Pn**	**01 35 42.4**	**+1.2**
	comp=Z,179nm,1.0s						
MTDJ	**Mount Denham**	**15.65**	**82**	*e*P	**Pn**	**01 35 43.8**	**+2.5**
VBMS	**Vicksburg**	**15.66**	**11**	*e*Pn	**Pn**	**01 35 41.3**	**+0.1**
	comp=Z,112nm,0.7s						
626A	**Big Bend Ranch**	**15.81**	**325**	⇓P	**Pn**	**01 35 42.3**	**-0.7**
	baz=16,SNR=398						
BBJ	**Bamboo Saint A**	**15.91**	**82**	⇑*i*P	**Pn**	**01 35 47.1**	**+2.7**
527A	**Woodward Ranch**	**16.00**	**328**	⇓P	**Pn**	**01 35 45.3**	**-0.2**
	baz=16,SNR=149						
428A	**Kincaid Ranch,**	**16.03**	**331**	⇓P	**Pn**	**01 35 46.0**	**+0.2**
	baz=16,SNR=150						
DWPF	**Disney**	**16.08**	**43**	*e*P	**Pn**	**01 35 47.9**	**+1.4**
	comp=Z,136nm,0.6s						
DWPF				*e*Sn	**Sn**	**01 38 44.9**	**-0.5**
526A	**Mary Lane Ranc**	**16.18**	**327**	P	**Pn**	**01 35 47.7**	**0.0**
	baz=16,SNR=156						
STH	**Stony Hill**	**16.34**	**83**	⇓*i*P	**Pn**	**01 35 51.4**	**+1.7**
STH	**Stony Hill**	**16.34**	**83**	*i* P	**Pn**	**01 35 51.6**	**+1.9**
HOJ	**Hope**	**16.39**	**83**	⇓*i*P	**Pn**	**01 35 51.2**	**+0.9**
HOJ	**Hope**	**16.39**	**83**	*i* P	**Pn**	**01 35 51.7**	**+1.4**
GWJ	**Greenwich**	**16.41**	**83**	⇑*i*P	**Pn**	**01 35 52.5**	**+1.9**
427A	**Hayter Ranch,**	**16.47**	**330**	⇑P	**Pn**	**01 35 51.1**	**-0.1**
	baz=17,SNR=136						
426A	**McDonald Obser**	**16.63**	**328**	⇓P	**Pn**	**01 35 53.3**	**+0.1**
	baz=17,SNR=238						
328A	**Wristen Ranch,**	**16.64**	**332**	⇑P	**Pn**	**01 35 52.9**	**-0.4**
	baz=17,SNR=270						
327A	**Balmorhea Ranc**	**16.95**	**331**	⇑P	**Pn**	**01 35 57.0**	**0.0**
	baz=17,SNR=8.2						
326A	**Caldwell Ranch**	**17.13**	**329**	⇓P	**Pn**	**01 35 58.7**	**-0.6**
	baz=17,SNR=109						
425A	**Indio Mountain**	**17.23**	**326**	⇑P	**Pn**	**01 35 59.7**	**-0.7**
	baz=17,SNR=141						
LRAL	**Lakeview Retre**	**17.32**	**20**	*e*P	**Pn**	**01 36 02.4**	**+0.9**
	comp=Z,18nm,0.6s						
LRAL				*e*S	**S**	**01 39 04.5**	**-10**
227A	**Bennet, Jal**	**17.39**	**332**	⇑P	**Pn**	**01 36 01.9**	**-0.5**
	baz=18,SNR=43						
325A	**Bean Ranch, Si**	**17.68**	**327**	⇓P	**Pn**	**01 36 04.2**	**-1.6**
	baz=18,SNR=66						
MIAR	**Mount Ida**	**17.68**	**1**	*e*P	**Pn**	**01 36 04.8**	**-1.0**
	comp=Z,105nm,0.6s						
MIAR				*e*S	**S**	**01 39 12.1**	**-9.2**
226A	**Malaga, Loving**	**17.81**	**330**	⇓P	**Pn**	**01 36 05.3**	**-2.0**
	baz=18,SNR=72						
UALR	**University of**	**17.96**	**4**	⇓*i*P	**Pn**	**01 36 09.0**	**-0.1**
	comp=Z,182nm,1.1s						
127A	**Arkansas Junct**	**17.99**	**333**	⇓P	**Pn**	**01 36 07.7**	**-1.8**
	baz=18,SNR=139						
324A	**Moseley Ranch,**	**18.00**	**326**	⇑P	**P**	**01 36 07.8**	**-0.6**
	baz=18,SNR=131						
GTBY	**Guantanamo Bay**	**18.08**	**77**	*e*P	**P**	**01 36 09.9**	**+0.6**
	comp=Z,461nm,0.8s						
GTBY	**Guantanamo Bay**	**18.08**	**77**	*e*P	**P**	**01 36 10.6**	**+1.3**
GTBY				AMb	AMB	01 36 14.6	
	comp=Z,2μm,0.7s						
OXF	**Oxford**	**18.09**	**12**	*e*P	**P**	**01 36 09.2**	**-0.1**
	comp=Z,93nm,0.6s						
OXF				*e*S	**S**	**01 39 17.9**	**-12**
MNTX	**Cornudas Mount**	**18.15**	**327**	⇓*e*P	**P**	**01 36 09.1**	**-0.9**
	comp=Z,23nm,0.7s						
225A	**Deer Hill, Car**	**18.20**	**329**	⇑P	**P**	**01 36 10.3**	**-0.1**
	baz=18,SNR=141						
126A	**Clayton Basin,**	**18.26**	**332**	⇑P	**P**	**01 36 10.9**	**-0.2**
	baz=18,SNR=193						
WMOK	**Wichita Mounta**	**18.40**	**347**	*e*P	**P**	**01 36 11.9**	**-0.8**
	comp=Z,67nm,0.7s						
WMOK				*e*S	**S**	**01 39 29.6**	**-6.2**
Z27A	**Tatum**	**18.48**	**335**	⇓P	**P**	**01 36 13.1**	**-0.4**
	baz=19,SNR=1000						
224A	**Cornudas Mount**	**18.52**	**327**	⇓P	**P**	**01 36 13.6**	**-0.4**
	baz=19,SNR=280						
125A	**Gardner Draw,**	**18.56**	**330**	⇓P	**P**	**01 36 14.3**	**-0.1**
	baz=19,SNR=266						
Z26A	**Caprock**	**18.77**	**333**	⇑P	**P**	**01 36 16.0**	**-0.6**
	baz=19,SNR=419						
MSTX	**Muleshoe**	**18.88**	**337**	⇓P	**P**	**01 36 17.2**	**-0.7**
	baz=19,SNR=236						
HBAR	**Harrisburg**	**18.90**	**8**	*e*P	**P**	**01 36 19.2**	**+1.1**
223A	**Chaparral, Ant**	**18.95**	**325**	⇓P	**P**	**01 36 17.8**	**-0.8**
	baz=19,SNR=7.9						
Y27A	**Causey**	**18.96**	**336**	⇑P	**P**	**01 36 18.1**	**-0.6**
	baz=19,SNR=466						
124A	**Stringfield Ra**	**18.98**	**329**	P	**P**	**01 36 19.6**	**+0.6**
	baz=19,SNR=266						
GOGA	**Godfrey**	**19.02**	**28**	*e*P	**P**	**01 36 18.7**	**-0.7**
	comp=Z,31nm,0.7s						
GOGA				*e*S	**S**	**01 39 38.9**	**-9.2**
Z25A	**Roswell**	**19.11**	**331**	⇑P	**P**	**01 36 20.0**	**-0.3**
	baz=19,SNR=231						
Y26A	**Elida**	**19.26**	**334**	⇑P	**P**	**01 36 21.6**	**-0.3**
	baz=19,SNR=687						
AMTX	**Amarillo**	**19.32**	**340**	⇓*i*P	**P**	**01 36 22.2**	**-0.4**
	comp=Z,1μm,0.6s						
123A	**Bell Site, Whi**	**19.35**	**327**	⇑P	**P**	**01 36 22.0**	**-0.9**
	baz=19,SNR=5.4						
222A	**Williams Famil**	**19.39**	**324**	⇑P	**P**	**01 36 22.8**	**-0.7**
	baz=20,SNR=22						
Z24A	**Sheeppen Canyo**	**19.45**	**330**	⇓P	**P**	**01 36 23.6**	**-0.5**
	baz=20,SNR=422						
HALT	**Halls**	**19.46**	**11**	*e*P	**P**	**01 36 24.8**	**+0.7**
X27A	**F and S Farms,**	**19.60**	**337**	⇓P	**P**	**01 36 25.3**	**-0.4**
	baz=20,SNR=31						
Y25A	**Mesa, Roswell**	**19.63**	**332**	⇑P	**P**	**01 36 26.1**	**+0.1**
	baz=20,SNR=586						
SWET	**Sewanee**	**19.67**	**20**	*e*P	**P**	**01 36 26.3**	**-0.2**
320A	**Kipp Ranch, An**	**19.68**	**320**	⇓P	**P**	**01 36 27.2**	**+0.6**
	baz=20,SNR=74						
221A	**Mesquite Ranch**	**19.71**	**323**	⇑P	**P**	**01 36 27.6**	**+0.7**
	baz=20,SNR=17						
122A	**Conniff Cattle**	**19.79**	**326**	⇑P	**P**	**01 36 28.3**	**+0.6**
	baz=20,SNR=10						
X26A	**CR and CF Fran**	**19.80**	**335**	⇑P	**P**	**01 36 27.3**	**-0.5**
	baz=20,SNR=272						
Z23A	**Rita Site, Whi**	**19.82**	**328**	⇓P	**P**	**01 36 28.5**	**+0.4**
	baz=20,SNR=217						
W27A	**Bowe Ranch, En**	**19.96**	**337**	⇑P	**P**	**01 36 28.8**	**-0.8**
	baz=20,SNR=323						
Y24A	**Capitan**	**19.98**	**331**	⇑P	**P**	**01 36 30.2**	**+0.4**
	baz=20,SNR=246						
WVT	**Waverly**	**19.99**	**14**	*e*P	**P**	**01 36 29.4**	**-0.5**
	comp=Z,26nm,0.8s						
WVT				*e*S	**S**	**01 40 07.5**	**+0.2**
220A	**Playas Peak, P**	**20.08**	**321**	⇓P	**P**	**01 36 31.3**	**+0.4**
	baz=20,SNR=131						
121A	**Cookes Peak, D**	**20.10**	**324**	⇑P	**P**	**01 36 31.9**	**+0.8**
	baz=20,SNR=266						
PARMO	**Parma**	**20.13**	**10**	*e*P	**P**	**01 36 32.3**	**+1.0**
PARMO				*e*pP		01 36 46.9	
X25A	**Clemmons Ranch**	**20.13**	**333**	⇑P	**P**	**01 36 31.5**	**+0.1**
	baz=20,SNR=53						
319A	**Douglas**	**20.18**	**319**	⇑P	**P**	**01 36 31.9**	**-0.1**
	baz=20,SNR=26						
Z22A	**Elephant Butte**	**20.20**	**327**	⇑P	**P**	**01 36 32.5**	**+0.4**
	baz=20,SNR=243						
W26A	**Owens Ranch, T**	**20.25**	**336**	⇑P	**P**	**01 36 32.1**	**-0.5**
	baz=20,SNR=83						
Y23A	**Lovelace Mesa,**	**20.27**	**330**	⇑P	**P**	**01 36 33.5**	**+0.5**
	baz=20,SNR=284						
COW	**Cow Castle Cre**	**20.34**	**33**	*e*P	**P**	**01 36 33.9**	**+0.3**
CPCT	**Cooper Cave**	**20.37**	**22**	*e*P	**P**	**01 36 35.6**	**+1.7**
X24A	**Lazy VL Ranch,**	**20.50**	**332**	⇓P	**P**	**01 36 35.8**	**+0.4**
	baz=21,SNR=19						
219A	**White Tail Can**	**20.59**	**320**	⇑P	**P**	**01 36 36.3**	**0.0**
	baz=21,SNR=48						
120A	**U Bar Ranch, L**	**20.60**	**322**	⇑P	**P**	**01 36 36.6**	**+0.2**
	baz=21,SNR=92						
Z21A	**St. Cloud Mine**	**20.62**	**325**	⇓P	**P**	**01 36 37.2**	**+0.5**
	baz=21,SNR=110						
W25A	**X Bar L Ranch,**	**20.64**	**335**	⇓P	**P**	**01 36 36.7**	**-0.2**
	baz=21,SNR=162						
318A	**Bisbee**	**20.67**	**318**	⇑P	**P**	**01 36 37.5**	**+0.2**
	baz=21,SNR=204						
Y22A	**Socorro**	**20.73**	**328**	⇑P	**P**	**01 36 38.2**	**+0.4**
	baz=21,SNR=410						
JSC	**Jenkinsville**	**20.77**	**31**	*e*P	**P**	**01 36 38.8**	**+0.6**
Y22D	**IRIS PASSCAL I**	**20.82**	**328**	⇑P	**P**	**01 36 39.4**	**+0.6**
	baz=21,SNR=23						
TKL	**Tuckaleechee C**	**20.83**	**24**	P	**P**	**01 36 38.3**	**-0.6**
	comp=Z,3.7nm,0.5s,baz=190,slow=12,SNR=9.8						
TKL	**Tuckaleechee C**	**20.83**	**24**	*e*P	**P**	**01 36 39.8**	**+0.9**
TKL				*e*S	**S**	**01 40 24.7**	**+0.9**
X23A	**Hourglass Bar**	**20.87**	**330**	⇓P	**P**	**01 36 40.3**	**+1.0**
	baz=21,SNR=14						
V26A	**Tequesquite Ra**	**20.88**	**337**	⇓P	**P**	**01 36 38.9**	**-0.5**
	baz=21,SNR=91						
Z20A	**Nine Sixteen R**	**20.98**	**323**	⇓P	**P**	**01 36 40.9**	**+0.4**
	baz=21,SNR=80						
W24A	**Lazy 6 Ranch,**	**21.04**	**333**	⇓P	**P**	**01 36 41.3**	**+0.3**
	baz=21,SNR=241						
218A	**Dragoon**	**21.06**	**319**	⇓P	**P**	**01 36 41.4**	**0.0**
	baz=21,SNR=11						
119A	**Ashpeak Ranch,**	**21.15**	**322**	⇑P	**P**	**01 36 42.6**	**+0.3**
	baz=21,SNR=50						
Y21A	**Point of Rocks**	**21.16**	**327**	⇑P	**P**	**01 36 42.9**	**+0.6**
	baz=21,SNR=24						
X22A	**Bernardo**	**21.20**	**329**	⇓P	**P**	**01 36 44.1**	**+1.2**
	baz=21,SNR=30						
SIUC	**Southern Illin**	**21.24**	**10**	*e*P	**P**	**01 36 43.4**	**+0.1**
	comp=Z,87nm,0.7s,mb5.2						
SIUC				*e*S	**S**	**01 40 30.8**	**-0.9**
V25A	**Rancho No Teng**	**21.24**	**335**	P	**P**	**01 36 43.4**	**+0.1**
	baz=21,SNR=187						
ANMO	**Albuquerque**	**21.30**	**330**	P	**P**	**01 36 44.0**	**+0.1**
	comp=Z,46nm,0.6s,mb5.0,baz=146,slow=12,SNR=109						
ANMO	**Albuquerque**	**21.30**	**330**	⇓*i*P	**P**	**01 36 43.9**	**+0.1**
	comp=Z,13nm,0.7s,mb4.4						
CCM	**Cathedral Cave**	**21.31**	**6**	*e*P	**P**	**01 36 43.0**	**-0.9**
	comp=Z,25nm,0.6s,mb4.7						
CCM				*e*PcP	PcP	01 40 42.6	-0.4
FVM	**French Village**	**21.33**	**8**	*e*P	**P**	**01 36 45.4**	**+1.2**
	comp=Z,33nm,1.0s,mb4.6						
W23A	**Werner Place,**	**21.33**	**331**	⇑P	**P**	**01 36 44.5**	**+0.3**
	baz=21,SNR=92						
U26A	**Atchley Ranch,**	**21.40**	**338**	P	**P**	**01 36 44.8**	**-0.2**
	baz=22,SNR=240						
V24A	**Rampart Ranch,**	**21.41**	**334**	⇓P	**P**	**01 36 45.4**	**+0.3**
	baz=22						
Y20A	**Horse Springs,**	**21.45**	**325**	⇑P	**P**	**01 36 46.2**	**+0.6**
	baz=22						
118A	**Homack Ranch,**	**21.46**	**320**	⇓P	**P**	**01 36 45.6**	**-0.1**
	baz=22,SNR=46						
Z19A	**T-Link Ranch,**	**21.50**	**323**	⇓P	**P**	**01 36 46.5**	**+0.4**
	baz=22,SNR=12						
X21A	**Alamocita Cree**	**21.55**	**327**	⇑P	**P**	**01 36 47.2**	**+0.6**
	baz=22,SNR=161						
W22A	**Albuquerque**	**21.59**	**330**	⇓P	**P**	**01 36 47.5**	**+0.6**
	baz=22,SNR=6.2						
SDDR	**Presa de Saban**	**21.60**	**81**	*e*P	**P**	**01 36 47.8**	**+0.5**
	comp=Z,472nm,2.5s,mb5.5						
U25A	**Circle Dot Ran**	**21.65**	**336**	⇓P	**P**	**01 36 47.7**	**+0.1**
	baz=22,SNR=175						
TZTN	**Tazewell**	**21.70**	**23**	*e*P	**P**	**01 36 47.9**	**-0.1**
	comp=Z,34nm,0.6s,mb5.0						
TZTN				*e*pP		01 37 09.0	
TUC	**Tucson**	**21.75**	**318**	⇓*i*P	**P**	**01 36 48.5**	**-0.2**
	comp=Z,39nm,0.8s,mb4.9						
USIN	**University of**	**21.79**	**13**	*e*P	**P**	**01 36 48.9**	**-0.1**
USIN				*e*pP		01 37 13.7	
Z18A	**Geronimo**	**21.81**	**321**	⇓P	**P**	**01 36 49.4**	**0.0**
	baz=22,SNR=7.3						
V23A	**Ortiz Mt. (NFS**	**21.83**	**332**	⇓P	**P**	**01 36 50.1**	**+0.7**
	baz=22,SNR=79						
117A	**Oracle**	**21.90**	**319**	⇑P	**P**	**01 36 50.1**	**-0.1**
	baz=22,SNR=71						
Y19A	**Nutrioso**	**21.98**	**324**	⇓P	**P**	**01 36 51.5

U19A **Dine' College,** 23.71 328 ⇓P P 01 37 07.4 -0.2
baz=24,SNR=53
Y15A **Casa Rosa Ranc** 23.81 319 ⇑P P 01 37 08.0 -0.4
baz=24,SNR=32
Z14A **Wintersburg** 23.82 317 ⇓P P 01 37 08.1 -0.4
baz=24,SNR=27
Q25A **Bedland, Calha** 23.83 340 ⇑P P 01 37 08.7 +0.1
baz=24
113A **Mohawk Valley,** 24.00 315 ⇓P P 01 37 09.4 -0.8
baz=24,SNR=35
HDIL **Hopedale** 24.01 9 eP P 01 37 08.4 -1.7
T19A **Beclabito** 24.04 329 ⇓P P 01 37 10.7 +0.2
baz=24,SNR=29
V17A **Tonalea, Kykot** 24.06 324 ⇓P P 01 37 10.8 +0.1
baz=24,SNR=67
MVCO **Mesa Verde** 24.09 330 ⇓P P 01 37 11.3 +0.4
baz=24,SNR=88
MVCO **Mesa Verde** 24.09 330 ⇓iP P 01 37 11.3 +0.3
comp=Z,69nm,0.7s,mb5.3
W16A **Flagstaff** 24.10 322 ⇑P P 01 37 11.5 +0.4
baz=24,SNR=34
X15A **Humboldt** 24.10 320 ⇓P P 01 37 11.0 -0.1
baz=24,SNR=49
S21A **Coal Bank Pass** 24.14 332 ⇓P P 01 37 11.7 +0.3
baz=24,SNR=35
U18A **Rough Rock, Ch** 24.15 327 P P 01 37 12.1 +0.5
baz=24,SNR=32
R22A **Saguache, Gunn** 24.17 335 ⇓P P 01 37 13.5 +1.9
baz=24
Z13A **Yuma Proving G** 24.18 316 ⇓P P 01 37 11.5 -0.4
baz=24,SNR=75
Y14A **Wickenburg** 24.22 318 ⇓P P 01 37 11.5 -0.7
baz=24,SNR=43
WUAZ **Wupatki** 24.31 323 ⇓P P 01 37 13.2 +0.2
baz=24,SNR=49
WUAZ **Wupatki** 24.31 323 ⇓iP P 01 37 13.0 0.0
comp=Z,50nm,0.8s,mb5.1
P25A **Willow Gulch B** 24.35 340 ⇓P P 01 37 14.2 +0.9
baz=24
112A **Yuma** 24.42 314 ⇑P P 01 37 14.0 0.0
baz=24,SNR=8.6
X14A **Yava** 24.50 320 ⇑P P 01 37 14.8 +0.1
baz=25,SNR=17
S20A **Disappointment** 24.53 332 ⇑P P 01 37 15.9 +1.0
baz=25
W15A **Williams** 24.59 322 ⇓P P 01 37 16.1 +0.6
baz=25,SNR=22
P24A **Kohler Place,** 24.60 339 ⇑P P 01 37 16.2 +0.7
baz=25
R21A **Cimarron** 24.62 334 ⇓P P 01 37 17.0 +1.3
baz=25,SNR=28
U16A **Tuba City** 24.62 325 ⇓P P 01 37 15.8 -0.1
baz=25,SNR=28
Y13A **Salome** 24.68 317 ⇓P P 01 37 15.8 -0.5
baz=25,SNR=13
T18A **Mexican Hat** 24.71 328 ⇑P P 01 37 16.4 -0.2
baz=25,SNR=30
Q22A **Crested Butte,** 24.77 335 ⇓P P 01 37 18.3 +1.1
baz=25,SNR=33
S19A **Harvey Farm, M** 24.82 330 P P 01 37 17.9 +0.3
baz=25,SNR=30
R20A **Redvale** 24.83 332 ⇓P P 01 37 18.2 +0.5
baz=25,SNR=79
PV01 **Paradox Valley** 24.87 332 eP P 01 37 19.0 +0.9
comp=Z,3μm,0.8s
GLA **Glamis** 24.89 314 ⇑P P 01 37 17.9 -0.3
baz=25,SNR=18
GLA **Glamis** 24.89 314 eP P 01 37 17.8 -0.4
V15A **Kaibab Nationa** 24.98 323 ⇓P P 01 37 19.0 -0.1
baz=25,SNR=22
Q21A **Lamborn Mesa,** 25.02 334 ⇑P P 01 37 20.2 +0.8
baz=25,SNR=38
SCIA **State Center** 25.03 1 eP P 01 37 18.9 -0.6
comp=Z,133nm,0.6s,mb5.7
SMCO **Snowmass** 25.07 335 eP P 01 37 20.9 +1.1
OGNE **Ogallala** 25.08 345 eP P 01 37 20.2 +0.3
T17A **Navajo Res., N** 25.08 327 ⇑P P 01 37 20.3 +0.3
baz=25,SNR=47
Y12C **Blythe** 25.09 316 P P 01 37 20.3 +0.2
baz=25,SNR=7.2
ISCO **Idaho Springs** 25.10 338 eP P 01 37 20.2 +0.2
comp=Z,18nm,0.7s,mb4.7
W14A **Seligman** 25.11 321 ⇓P P 01 37 19.7 -0.6
baz=25,SNR=30
JSRW **J. Sargeant Re** 25.14 31 epP pP 01 37 48.9 -0.1
X13A **Yucca** 25.17 319 ⇑P P 01 37 20.1 -0.7
baz=25,SNR=23
ACSO **Alum Creek Sta** 25.20 20 eP P 01 37 19.9 -1.1
ACSO epP pP 01 37 47.8 -1.7
S18A **Hurst Farm, Bl** 25.20 329 ⇑P P 01 37 20.8 -0.2
baz=25,SNR=53
PV04 **Paradox Valley** 25.24 331 ⇓iP P 01 37 21.8 +0.4
R19A **Curley Farm, L** 25.32 331 ⇓P P 01 37 21.7 -0.4
baz=25,SNR=25
V14A **Boquillas Ranc** 25.40 321 ⇑P P 01 37 23.0 +0.1
baz=26,SNR=22
Q20A **Ridgley Place,** 25.43 333 ⇓P P 01 37 24.2 +1.1
baz=26,SNR=22
U15A **North Rim** 25.48 324 ⇓P P 01 37 23.5 -0.1
baz=26,SNR=26
SWSC **Sam W. Stewart** 25.49 313 ⇓P P 01 37 22.6 -1.1
baz=26
W13A **Hualapai Mount** 25.53 319 P P 01 37 24.5 +0.5
baz=26,SNR=12
P21A **Newcastle** 25.55 335 ⇑P P 01 37 24.3 +0.2
baz=26
S17A **Black Ridge (B** 25.56 328 ⇑P P 01 37 24.7 +0.4
baz=26,SNR=14
BC3 **Big Chuckawall** 25.66 315 ⇑P P 01 37 24.9 -0.3
baz=26,SNR=42
R18A **Canyonlands Na** 25.70 330 ⇑P P 01 37 25.1 -0.4
baz=26,SNR=17
O22A **Kremmling** 25.75 337 ⇓P P 01 37 26.3 +0.3
baz=26
IRM **Iron Mountain** 25.75 316 ⇓P P 01 37 25.9 -0.2
baz=26,SNR=23
Q19A **Hogan Spring (** 25.86 332 ⇓P P 01 37 26.9 0.0
baz=26,SNR=34
MONP **Monument Peak** 25.90 312 ⇑P P 01 37 27.3 -0.1
baz=26,SNR=14
P20A **De Beque** 25.92 334 ⇑P P 01 37 28.0 +0.5
baz=26
T15A **Red Dirt Ranch** 25.95 325 ⇑P P 01 37 27.8 0.0
baz=26,SNR=21
BAR **Barrett** 25.97 312 eP P 01 37 27.5 -0.6
comp=Z,12nm,1.0s,mb4.5
U14A **Mt Trumbull** 25.98 323 P P 01 37 28.5 +0.4
baz=26,SNR=22
S16A **Weppner Ranch,** 26.04 327 ⇑P P 01 37 29.0 +0.3
baz=26,SNR=10
V13A **Grand Canyon W** 26.08 321 ⇑P P 01 37 28.3 -0.7
baz=26,SNR=13
R17A **Hanksville Air** 26.12 329 ⇓P P 01 37 28.8 -0.5
baz=26,SNR=38
JFWS **Jewell Farm** 26.22 6 eP P 01 37 29.8 -0.3
BELC **Belle Mtn. Jos** 26.23 315 ⇑P P 01 37 30.2 -0.2
baz=26,SNR=13
N22A **Wattenberg Ran** 26.28 338 ⇓P P 01 37 31.1 +0.3
baz=26,SNR=21
LDFC **Landfair** 26.29 318 eP P 01 37 32.0 +1.1
comp=Z,29nm,0.6s,mb5.1
PFO **Pinyon Flat Ob** 26.32 314 P P 01 37 31.9 +0.7
comp=Z,120nm,0.8s,mb5.6,SNR=11
PFO **Pinyon Flat Ob** 26.32 314 ⇓P P 01 37 30.9 -0.3
baz=26
PFO **Pinyon Flat Ob** 26.32 314 ⇓iP P 01 37 31.2 0.0
comp=Z,23nm,1.0s,mb4.8
T14A **Hurricane** 26.38 324 ⇑P P 01 37 31.9 +0.3
baz=26,SNR=23
Q18A **Rafter H Ranch** 26.38 331 ⇓P P 01 37 31.7 +0.1
baz=26,SNR=8.3
PHWY **Pilot Hill** 26.39 340 eP P 01 37 31.9 +0.2
O20A **White River Ci** 26.39 335 ⇓P P 01 37 32.1 +0.4
baz=26,SNR=13
R16A **Teasdale** 26.40 328 ⇑P P 01 37 31.7 -0.2
baz=26,SNR=33
S15A **Panguitch** 26.42 326 ⇓P P 01 37 32.4 +0.4
baz=26,SNR=9.2
U13A **Pakoon Wash** 26.44 322 ⇑P P 01 37 32.4 +0.1
baz=26,SNR=21
GMRC **Granite Mounta** 26.46 317 ⇓P P 01 37 32.2 -0.3
baz=26,SNR=33
SJG **San Juan** 26.47 83 P P 01 37 30.7 -2.1
comp=Z,11nm,0.5s,mb4.7,baz=271,slow=7.2,SNR=6.5
SJG LR LR 01 47 37.0
comp=Z,197nm,20.9s,baz=259,slow=35
SJG **San Juan** 26.47 83 P P 01 37 30.7 -2.1
SJG LR LR 01 47 37.0

V12A **Nelson** 26.53 319 ⇑P P 01 37 32.8 -0.2
baz=27,SNR=25
SRU **San Rafael** 26.57 330 ⇑P P 01 37 34.0 +0.6
baz=27,SNR=8.8
SRU **San Rafael** 26.57 330 eP P 01 37 34.0 +0.7
N21A **Black Mountain** 26.64 336 ⇑P P 01 37 34.9 +1.0
baz=27,SNR=14
Q16A **Castle Valley** 26.73 329 ⇓P P 01 37 35.3 +0.5
baz=27,SNR=23
R15A **Junction** 26.76 326 ⇓P P 01 37 35.6 +0.4
baz=27
U12A **Valley of Fire** 26.80 321 P P 01 37 35.9 +0.4
baz=27,SNR=16
T13A **Saint George** 26.82 323 P P 01 37 36.3 +0.6
baz=27,SNR=17
MURC **Murrieta** 26.84 313 P P 01 37 36.2 +0.4
baz=27,SNR=7.5
P18A **Preston Nutter** 26.85 331 ⇑P P 01 37 36.5 +0.7
baz=27,SNR=11
CCUT **Cedar City** 26.88 324 ⇓iP P 01 37 36.8 +0.7
comp=Z,20nm,0.9s,mb4.8
O19A **Miners Draw (B** 26.90 334 ⇑P P 01 37 36.0 -0.3
baz=27
S14A **Cedar City** 26.92 325 P P 01 37 37.4 +0.9
baz=27,SNR=23
MSU **Marysvale** 26.93 327 eP P 01 37 37.0 +0.4
comp=Z,15nm,0.8s,mb4.7
HEC **Hector,Ludlow** 26.94 316 P P 01 37 37.6 +0.9
baz=27,SNR=8.5
ECSD **EROS Data Cent** 26.95 356 eP P 01 37 35.5 -1.3
comp=Z,1.0nm,0.7s
P17A **Butcher Ranch,** 26.96 330 P P 01 37 37.2 +0.4
baz=27,SNR=8.5
V11A **Goodsprings** 26.97 319 P P 01 37 37.3 +0.4
baz=27,SNR=14
N20A **Spence Gulch,** 26.99 335 P P 01 37 37.5 +0.4
baz=27,SNR=37
TUQ **Turquoise Moun** 27.03 318 ⇑P P 01 37 37.7 +0.2
baz=27
MTP **Monte Pirata** 27.04 83 eP P 01 37 35.4 -2.4
comp=Z,31nm,0.6s,mb5.1
TMUT **Trail Mountain** 27.04 329 eP P 01 37 38.5 +0.8
ARUT **Antelope Range** 27.09 324 eP P 01 37 38.8 +0.8
comp=Z,40nm,0.8s,mb5.1
S13A **Holt Ranch, En** 27.18 324 ⇓P P 01 37 39.6 +0.7
baz=27
O18A **Roosevelt** 27.26 332 ⇑P P 01 37 40.5 +1.0
baz=27,SNR=12
M21A **Separation Pea** 27.32 338 ⇑P P 01 37 40.9 +0.9
baz=27,SNR=26
RWWY **Rawlins** 27.33 338 eP P 01 37 41.3 +1.2
L22A **Ellis Ranch, M** 27.36 339 ⇑P P 01 37 41.4 +1.0
baz=28
Q15A **Fillmore** 27.40 327 P P 01 37 41.3 +0.5
baz=28,SNR=13
N19A **John Jarvie Ra** 27.41 334 ⇓P P 01 37 41.2 +0.3
baz=28,SNR=22
BFSC **Mount Baldy Ra** 27.50 314 ⇑P P 01 37 41.7 0.0
baz=28,SNR=16
P16A **Fountain Green** 27.51 329 ⇓P P 01 37 42.0 +0.3
baz=28
M20A **Sweetwater, Wa** 27.52 336 P P 01 37 42.7 +0.9
baz=28,SNR=7.8
GSC **Goldstone** 27.53 316 ⇑P P 01 37 41.7 -0.3
baz=28,SNR=6.7
GSC **Goldstone** 27.53 316 eP P 01 37 42.1 +0.1
comp=Z,14nm,1.1s,mb4.6
O17A **Robinson Place** 27.53 331 ⇑P P 01 37 42.0 +0.1
baz=28,SNR=12
CIS **Catalina Islan** 27.59 311 ⇑P P 01 37 42.4 -0.1
baz=28
L21A **Rawlins** 27.63 338 ⇑P P 01 37 42.6 -0.2
baz=28,SNR=24
R13A **O'Grain Ranch,** 27.66 324 ⇓P P 01 37 44.5 +1.4
baz=28,SNR=21
N18A **Larsen Ranch,** 27.69 334 ⇓P P 01 37 43.7 +0.4
baz=28,SNR=14
T11A **Corn Creek, Al** 27.74 321 ⇓P P 01 37 44.0 +0.1
baz=28,SNR=12
S12A **Delamar Landin** 27.77 322 ⇑P P 01 37 44.8 +0.7
baz=28,SNR=7.7
MWC **Mount Wilson** 27.77 313 eP P 01 37 44.7 +0.5
comp=Z,24nm,0.8s,mb5.0
P15A **Lemington** 27.78 328 ⇓P P 01 37 44.6 +0.4
baz=28,SNR=6.1
MPU **Maple Canyon** 27.81 330 eP P 01 37 45.2 +0.8
PASC **Pasadena Art C** 27.83 313 eP P 01 37 44.5 -0.3
comp=Z,65nm,0.9s,mb5.4
Q14A **Sevier Lake (B** 27.86 326 ⇓P P 01 37 45.4 +0.5
baz=28,SNR=19
O16A **Springville** 27.90 330 ⇑P P 01 37 45.5 +0.3
baz=28,SNR=7.5
U10A **Ash Meadows, A** 27.90 319 ⇑P P 01 37 45.3 +0.1
baz=28,SNR=19
DAU **Daniels Canyon** 27.94 331 eP P 01 37 45.8 +0.2
NLU **North Lily Min** 27.98 329 eP P 01 37 46.0 +0.1
comp=Z,4.1nm,0.7s,mb4.3
L20A **Wamsutter** 28.03 337 ⇓P P 01 37 46.1 -0.2
baz=28,SNR=12
EDW2 **Edwards Air Fo** 28.08 314 ⇓P P 01 37 46.4 -0.5
baz=28,SNR=11
R12A **Pony Springs,** 28.12 324 ⇓P P 01 37 47.4 +0.2
baz=28,SNR=25
JLU **Jordanelle** 28.18 331 eP P 01 37 47.8 +0.1
comp=Z,5.6nm,0.8s,mb4.3
P14A **Drum Mountains** 28.20 327 ⇓P P 01 37 47.7 -0.2
baz=28,SNR=9.7
M18A **Lyman** 28.23 334 ⇓P P 01 37 47.3 -0.8
baz=28,SNR=8.5
Q13A **Wheeler Ranch,** 28.24 325 P P 01 37 49.0 +0.7
baz=28,SNR=26
FURC **Furnace Creek,** 28.27 318 ⇓P P 01 37 47.1 -1.5
baz=28,SNR=15
ATAH **Atahualpa** 28.28 146 P P 01 37 51.3 +2.5
comp=Z,24nm,0.8s,mb5.0,baz=345,slow=7.2,SNR=15
ATAH LR LR 01 47 27.6
comp=Z,106nm,19.9s,baz=175,slow=33
CTU **Camp Tracy** 28.39 331 eP P 01 37 50.0 +0.4
comp=Z,9.1nm,0.7s,mb4.6
MPMC **Manual Prospec** 28.43 317 ⇑P P 01 37 49.8 -0.2
baz=28,SNR=21
OSI **Osito Adit** 28.45 313 eP P 01 37 50.5 +0.3
L19A **Farson** 28.50 335 ⇑P P 01 37 50.6 +0.1
baz=29,SNR=8.1
DUG **Dugway** 28.52 329 ⇑P P 01 37 50.9 +0.2
baz=29,SNR=9.6
DUG **Dugway** 28.52 329 eP P 01 37 51.1 +0.3
comp=Z,7.1nm,0.8s,mb4.5
M17A **Scullys Gap (B** 28.53 333 P P 01 37 51.0 +0.2
baz=29,SNR=13
RSSD **Black Hills** 28.57 345 eP P 01 37 51.1 0.0
comp=Z,38nm,0.9s,mb5.1
K20A **Yellowstone Ra** 28.59 337 ⇑P P 01 37 50.8 -0.5
baz=29,SNR=7.3
P13A **Bates Ranch, G** 28.60 326 ⇑P P 01 37 51.0 -0.4
baz=29,SNR=11
L18A **Fontenelle, Gr** 28.63 334 ⇑P P 01 37 51.7 +0.1
baz=29,SNR=10
R11A **Troy Canyon, C** 28.70 323 ⇓P P 01 37 51.8 -0.5
baz=29,SNR=17
Q12A **Willow Creek R** 28.75 325 ⇑P P 01 37 53.3 +0.5
baz=29
ARVC **Arvin** 28.79 314 ⇓P P 01 37 52.6 -0.7
baz=29,SNR=11
ISA **Isabella** 28.85 315 ⇓P P 01 37 53.4 -0.3
baz=29,SNR=7.2
ISA **Isabella** 28.85 315 eP P 01 37 53.6 -0.1
comp=Z,17nm,1.1s,mb4.7
GRAC **Grapevine Rang** 28.91 319 ⇑P P 01 37 55.0 +0.7
baz=29,SNR=10
N15A **Stansbury Isla** 28.91 330 ⇑P P 01 37 52.0 -2.2
baz=29
K19A **Absolon Red Bu** 28.92 337 ⇓P P 01 37 53.0 -1.2
baz=29,SNR=11
S10A **Tonopah Range,** 29.02 321 ⇑P P 01 37 54.8 -0.3
baz=29,SNR=30
HWUT **Hardware Ranch** 29.03 332 eP P 01 37 55.6 +0.4
comp=Z,13nm,0.7s,mb4.8
Q11A **Duckwater** 29.07 323 ⇓P P 01 37 56.5 +0.8
baz=29
R10A **Warm Springs** 29.08 322 ⇑P P 01 37 56.5 +0.8
baz=29,SNR=9.1
P12A **McGill** 29.09 325 ⇓P P 01 37 56.6 +0.8
baz=29
L17A **Cokeville** 29.13 333 ⇑P P 01 37 56.0 -0.1
baz=29,SNR=7.0
BW06 **Boulder Array** 29.14 336 ⇓P P 01 37 55.7 -0.6
baz=29,SNR=13

BW06 **Boulder Array** 29.14 336 eP P 01 37 55.8 -0.4
comp=Z,6.9nm,0.8s,mb4.4
PDAR **Pinedale Array** 29.14 336 P P 01 37 56.1 -0.1
comp=Z,6.7nm,0.7s,mb4.5,baz=138,slow=9.1,SNR=39
PCRV **Puerto La Cruz** 29.16 99 P P 01 37 55.5 -1.2
comp=Z,25nm,0.6s,mb5.1,baz=198,slow=4.6,SNR=14
BGU **Big Grassy Mou** 29.19 329 eP P 01 37 56.8 +0.2
comp=Z,11nm,0.9s,mb4.6
SPUT **South Promonto** 29.20 331 eP P 01 37 57.6 +0.8
N14A **Grayback Hills** 29.21 329 ⇑P P 01 37 56.7 -0.1
baz=29,SNR=19
K18A **Toltan Ranch,** 29.23 335 ⇓P P 01 37 57.4 +0.4
baz=29,SNR=28
L16A **Fish Haven** 29.30 333 ⇓P P 01 37 57.4 -0.2
baz=29
M15A **Larsen Ranch,** 29.32 331 ⇓P P 01 37 57.8 0.0
baz=29,SNR=15
PKM **Peak Mountain** 29.36 313 ⇑P P 01 37 58.3 +0.1
baz=29,SNR=7.6
COWI **Conover** 29.49 7 eP P 01 37 57.5 -1.7
comp=Z,23nm,0.7s,mb5.0
Q10A **Clear Creek Ra** 29.49 323 ⇓P P 01 38 00.2 +0.8
baz=30,SNR=10
O12A **Currie** 29.57 326 ⇓P P 01 38 00.5 +0.5
baz=30,SNR=16
K17A **Gardner Place,** 29.68 334 ⇓P P 01 38 01.3 +0.3
baz=30,SNR=26
J18A **Kendall Valley** 29.70 336 ⇓P P 01 38 01.3 +0.2
baz=30,SNR=30
L15A **Malad City** 29.72 331 ⇑P P 01 38 01.1 -0.2
baz=30,SNR=18
N13A **Wendover, West** 29.72 328 ⇓P P 01 38 01.2 -0.2
baz=30,SNR=6.3
N13A **Wendover, West** 29.72 328 eP P 01 38 02.0 +0.7
comp=Z,42nm,0.8s,mb5.2
HVU **Hansel Valley** 29.73 331 ⇓iP P 01 38 01.6 +0.2
comp=Z,32nm,0.8s,mb5.1
RCTC **Rector, Farmer** 29.73 316 ⇓P P 01 38 01.4 -0.1
baz=30,SNR=16
AHID **Auburn Hatcher** 29.77 334 eP P 01 38 02.2 +0.4
comp=Z,18nm,0.7s,mb4.9
M14A **Sheep Mountain** 29.78 330 ⇑P P 01 38 02.2 +0.3
baz=30,SNR=23
O11A **Cowboy Ranch,** 29.96 325 ⇓P P 01 38 04.4 +0.9
baz=30,SNR=13
K16A **Soda Springs** 30.03 333 ⇓P P 01 38 04.1 0.0
baz=30,SNR=8.9
I18A **Diamond G Ranc** 30.04 337 ⇑P P 01 38 04.2 +0.1
baz=30,SNR=6.7
P10A **Eureka** 30.06 324 ⇓P P 01 38 05.0 +0.6
baz=30
M13A **Montello** 30.08 329 ⇓P P 01 38 04.9 +0.4
baz=30,SNR=30
M13A **Montello** 30.08 329 ⇓iP P 01 38 04.9 +0.4
comp=Z,36nm,0.9s,mb5.1
J17A **Brown Place, J** 30.10 335 ⇓P P 01 38 05.5 +0.8
baz=30,SNR=60
L14A **Malta** 30.14 331 ⇓P P 01 38 05.5 +0.4
baz=30,SNR=50
N12A **Clover Valley,** 30.15 327 ⇓P P 01 38 05.9 +0.8
baz=30,SNR=7.0
N12A **Clover Valley,** 30.15 327 eP P 01 38 05.9 +0.8
comp=Z,21nm,0.7s,mb5.0
REDW **Red Top Meadow** 30.16 335 ⇓iP P 01 38 05.3 +0.2
comp=Z,38nm,0.6s,mb5.3
ELK **Elko** 30.18 327 eP P 01 38 06.2 +0.8
comp=Z,25nm,0.8s,mb5.0
SNOW **Snow King Moun** 30.20 335 ⇓iP P 01 38 06.0 +0.4
comp=Z,108nm,0.7s,mb5.7
LOHW **Long Hollow** 30.27 335 ⇓iP P 01 38 06.3 +0.1
comp=Z,45nm,1.1s,mb5.1
TPAW **Teton Pass** 30.31 335 ⇓iP P 01 38 06.8 +0.4
comp=Z,46nm,1.0s,mb5.2
K15A **Arbon** 30.33 332 ⇑P P 01 38 07.2 +0.6
baz=30,SNR=24
RRI2 **Red Ridge** 30.34 334 eP P 01 38 07.0 +0.3
comp=Z,28nm,0.6s,mb5.2
NVAR **Mina Array Bea** 30.38 320 P P 01 38 08.3 +1.1
comp=Z,60nm,0.9s,mb5.3,baz=138,slow=8.9,SNR=94
NVAR **Mina Array Bea** 30.38 320 P P 01 38 08.3 +1.1
J16A **Bone** 30.40 334 ⇓P P 01 38 07.7 +0.4
baz=30,SNR=22
DCID1 **Drake Creek** 30.49 335 eP P 01 38 08.5 +0.5
comp=Z,46nm,0.6s,mb5.4
N11A **Elko Archery C** 30.49 326 ⇑P P 01 38 09.0 +0.9
baz=31,SNR=12
M12A **Wells** 30.50 328 P P 01 38 08.8 +0.6
baz=31,SNR=66
K14A **Jones Ranch, D** 30.51 331 P P 01 38 08.3 +0.1
baz=31,SNR=28
I17A **Pilgrim Ck.** 30.52 336 ⇓P P 01 38 09.3 +1.0
baz=31,SNR=6.0
L13A **Double Diamond** 30.52 330 ⇓P P 01 38 08.6 +0.2
baz=31,SNR=7.5
O10A **Cortez Mining,** 30.54 325 ⇑P P 01 38 09.2 +0.6
baz=31,SNR=9.5
IMW **Indian Meadow** 30.64 335 eP P 01 38 09.6 +0.2
comp=Z,21nm,0.6s,mb5.0
I16A **Newdale** 30.84 335 ⇓P P 01 38 11.7 +0.5
baz=31,SNR=11
J15A **Blackfoot** 30.85 333 ⇑P P 01 38 11.6 +0.3
baz=31,SNR=33
H17A **Grant Village** 30.92 336 ⇑P P 01 38 12.4 +0.5
baz=31,SNR=6.9
M11A **Holland Ranch,** 30.96 327 ⇓P P 01 38 12.2 -0.1
baz=31,SNR=11
K13A **Stover Farm, H** 31.01 330 ⇑P P 01 38 12.4 -0.4
baz=31,SNR=7.0
BMN **Battle Mountai** 31.04 324 ⇓iP P 01 38 13.3 +0.4
comp=Z,34nm,0.8s,mb5.1
RLMT **Red Lodge** 31.06 339 ⇓P P 01 38 13.2 +0.1
baz=31,SNR=16
RLMT **Red Lodge** 31.06 339 eP P 01 38 13.6 +0.5
comp=Z,16nm,0.5s,mb5.0
YFT **Old Faithful** 31.06 336 eP P 01 38 15.2 +2.0
comp=Z,19nm,0.9s,mb4.8
L12A **House Creek Ra** 31.09 329 ⇓P P 01 38 12.6 -0.7
baz=31,SNR=8.2
EYMN **Ely** 31.13 3 eP P 01 38 12.3 -1.3
comp=Z,7.9nm,0.4s,mb4.8
J14A **Carey** 31.27 332 ⇓P P 01 38 14.9 -0.1
baz=31,SNR=44
YMR **Madison River** 31.30 336 eP P 01 38 16.7 +1.5
comp=Z,40nm,1.0s,mb5.1
G18A **Lazy EL Ranch,** 31.33 338 ⇓P P 01 38 14.7 -0.8
baz=32,SNR=22
K12A **Draper Farm, C** 31.40 329 ⇓P P 01 38 16.1 +0.1
baz=32,SNR=14
M10A **I.L. Ranch, Tu** 31.42 326 ⇓P P 01 38 16.8 +0.5
baz=32,SNR=8.6
H16A **Russell Place,** 31.43 336 P P 01 38 17.3 +0.9
baz=32,SNR=12
CMB **Columbia Colle** 31.46 318 eP P 01 38 15.4 -1.3
comp=Z,22nm,1.0s,mb4.8
AGMN **Agassiz Nation** 31.46 357 eP P 01 38 15.3 -1.3
comp=Z,73nm,0.5s,mb5.7
SAO **San Andreas Ge** 31.46 315 eP P 01 38 16.9 +0.1
comp=Z,16nm,0.9s,mb4.8
L11A **Cat Creek Ranc** 31.47 328 P P 01 38 17.1 +0.4
baz=32,SNR=74
LAO **LASA Array** 31.52 344 eP P 01 38 16.9 -0.2
comp=Z,20nm,0.7s,mb5.0
QLMT **Earthquake Lak** 31.61 336 eP P 01 38 19.2 +1.2
comp=Z,8.3nm,0.7s,mb4.6
J13A **Cove Ranch, Pi** 31.63 331 ⇑P P 01 38 18.3 +0.2
baz=32,SNR=20
I14A **Mackay** 31.72 333 ⇓P P 01 38 19.5 +0.6
baz=32,SNR=50
G17A **Pierce Place,** 31.76 337 ⇓P P 01 38 20.4 +1.2
baz=32,SNR=16
GCMT **Greycliff** 31.78 339 eP P 01 38 19.1 -0.3
comp=Z,9.4nm,0.5s,mb4.8
WCN **Washoe City** 31.81 320 ⇓P P 01 38 20.2 +0.5
baz=32,SNR=5.3
HLID **Hailey** 31.87 331 ⇓P P 01 38 20.2 0.0
baz=32,SNR=80
HLID **Hailey** 31.87 331 ⇓iP P 01 38 20.4 +0.2
comp=Z,35nm,0.7s,mb5.2
F18A **Big Timber** 31.89 339 ⇓P P 01 38 20.4 0.0
baz=32,SNR=21
H15A **Lima** 31.93 334 ⇑P P 01 38 21.6 +0.9
baz=32,SNR=16
J12A **Stokes Ranch,** 31.95 330 ⇓P P 01 38 20.9 0.0
baz=32,SNR=14
I13A **Wildhorse Cree** 32.01 332 ⇓P P 01 38 22.0 +0.5
baz=32,SNR=15
K11A **Parker Ranch,** 32.06 328 ⇑P P 01 38 21.1 -0.7
baz=32

G16A **Moss Hill, Enn** 32.09 336 ⇓P P 01 38 22.7 +0.6
baz=32,SNR=24
MCMT **McKenzie Canyo** 32.18 334 eP P 01 38 24.3 +1.3
comp=Z,25nm,0.7s,mb5.0
F17A **Fitzpatrick Pl** 32.23 338 P P 01 38 24.1 +0.8
baz=32,SNR=89
H14A **Leadore** 32.23 333 ⇓P P 01 38 24.3 +0.9
baz=32,SNR=72
G15A **Dillon** 32.31 335 P P 01 38 25.1 +1.1
baz=32,SNR=54
BOZ **Bozeman (W)** 32.37 336 P P 01 38 24.4 -0.2
baz=32,SNR=26
BOZ **Bozeman (W)** 32.37 336 eP P 01 38 23.9 -0.7
comp=Z,8.3nm,0.6s,mb4.6
I12A **Atlanta** 32.38 331 ⇓P P 01 38 25.0 +0.3
baz=32,SNR=50
MFID **Camas Ranch** 32.43 329 ⇓P P 01 38 25.4 +0.3
baz=32,SNR=17
K10A **MacKenzie Ranc** 32.48 328 P P 01 38 25.8 +0.2
baz=33,SNR=22
F16A **Kennard Place,** 32.49 337 ⇑P P 01 38 25.5 0.0
baz=33
DLMT **Dillon** 32.52 335 ⇓iP P 01 38 26.6 +0.8
comp=Z,43nm,0.9s,mb5.2
BEKR **Beckworth** 32.52 320 ⇑P P 01 38 26.0 +0.1
baz=33,SNR=17
E18A **Harlowton** 32.54 339 ⇓P P 01 38 26.1 +0.1
baz=33,SNR=14
H13A **Challis** 32.58 332 ⇓P P 01 38 27.2 +0.9
baz=33
DGMT **Dagmar** 32.70 347 P P 01 38 27.6 +0.2
baz=33,SNR=8.2
DGMT **Dagmar** 32.70 347 ⇓iP P 01 38 26.9 -0.5
comp=Z,50nm,0.8s,mb5.3
G14A **Jackson** 32.77 334 P P 01 38 29.0 +0.9
baz=33,SNR=12
E17A **Martinsdale** 32.78 338 ⇓P P 01 38 27.6 -0.5
baz=33,SNR=22
H12A **Diamond D Ranc** 32.84 332 P P 01 38 29.3 +0.6
baz=33,SNR=64
LRM **Limekiln Ridge** 32.84 336 eP P 01 38 29.1 +0.4
comp=Z,235nm,0.7s
I11A **Placerville** 32.86 330 ⇑P P 01 38 29.7 +0.8
baz=33
F15A **Butte** 32.87 336 ⇑P P 01 38 29.1 +0.2
baz=33,SNR=59
J10A **Berg Farm, Mel** 32.90 329 ⇑P P 01 38 29.2 0.0
baz=33
G13A **Cobalt** 32.98 333 ⇓P P 01 38 30.0 +0.1
baz=33,SNR=33
D18A **Linhart Farms,** 33.05 340 ⇑P P 01 38 31.5 +1.0
baz=33,SNR=14
E16A **East Helena** 33.14 337 ⇑P P 01 38 31.2 0.0
baz=33,SNR=30
WVOR **Wild Horse Val** 33.18 325 eP P 01 38 31.7 +0.1
comp=Z,34nm,1.0s,mb5.0
F14A **Wisdom** 33.20 335 ⇓P P 01 38 32.3 +0.5
baz=33,SNR=13
D17A **Six Diamond Ra** 33.31 339 P P 01 38 32.9 +0.2
baz=33,SNR=61
HRY **Holter Researc** 33.34 337 eP P 01 38 33.3 +0.3
comp=Z,53nm,1.0s,mb5.2
J09A **Fry Pan Ranch,** 33.34 328 ⇑P P 01 38 33.6 +0.5
baz=33,SNR=18
I10A **Payette** 33.40 329 P P 01 38 34.2 +0.7
baz=34,SNR=14
E15A **Deer Lodge** 33.41 336 ⇑P P 01 38 33.9 +0.3
baz=34,SNR=29
ULM **Lac du Bonnet** 33.41 358 P P 01 38 31.4 -2.2
comp=Z,17nm,0.6s,mb4.9,baz=177,slow=9.9,SNR=15
ULM **Lac du Bonnet** 33.41 358 eP P 01 38 31.0 -2.5
comp=Z,26nm,1.0s,mb4.9
H11A **Donnelly** 33.48 331 P P 01 38 34.6 +0.3
baz=34,SNR=30
G12A **Big Creek, Yel** 33.49 332 ⇑P P 01 38 34.2 -0.1
baz=34
D16A **Dana Ranch, Ca** 33.51 338 ⇓P P 01 38 34.2 -0.2
baz=34,SNR=16
F13A **Darby** 33.58 334 ⇑P P 01 38 34.9 -0.2
baz=34,SNR=40
J08A **Circle Bar Ran** 33.73 327 P P 01 38 36.9 +0.5
baz=34,SNR=112
E14A **Clinton** 33.74 335 ⇓P P 01 38 36.8 +0.3
baz=34,SNR=7.9
H10A **Noah's Angus R** 33.75 330 P P 01 38 36.0 -0.5
baz=34,SNR=31
C17A **Wharram Farm,** 33.75 339 ⇑P P 01 38 36.4 -0.1
baz=34,SNR=24
MOD **Modoc** 33.76 323 ⇑iP P 01 38 36.1 -0.5
comp=Z,18nm,0.9s,mb4.8
EGMT **Eagleton** 33.77 341 ⇓P P 01 38 36.9 +0.2
baz=34,SNR=23
EGMT **Eagleton** 33.77 341 eP P 01 38 36.5 -0.1
comp=Z,35nm,0.6s,mb5.3
I09A **Lost Marbles R** 33.78 328 ⇓P P 01 38 36.8 -0.1
baz=34,SNR=101
D15A **Lincoln** 33.88 337 ⇑P P 01 38 37.4 -0.2
baz=34,SNR=16
F12A **Elk City** 33.95 333 ⇑P P 01 38 38.4 +0.1
baz=34,SNR=261
E13A **Victor** 34.04 335 ⇓P P 01 38 38.8 -0.2
baz=34,SNR=68
CHMT **Chamberlain Mo** 34.05 336 eP P 01 38 38.8 -0.4
comp=Z,22nm,0.7s,mb5.0
B18A **Beardsley Farm** 34.10 341 ⇓P P 01 38 39.9 +0.4
baz=34,SNR=14
G11A **Walters Elk Ra** 34.13 331 ⇑P P 01 38 39.4 -0.4
baz=34,SNR=97
BMO **Blue Mountains** 34.21 330 eP P 01 38 40.7 +0.2
comp=Z,13nm,0.9s,mb4.7
C16A **Fuhringer Ranc** 34.24 338 ⇑P P 01 38 40.6 -0.1
baz=34,SNR=56
H09A **Durkee** 34.25 329 ⇓P P 01 38 40.2 -0.7
baz=34,SNR=30
MSO **Missoula** 34.26 335 eP P 01 38 40.7 -0.2
comp=Z,19nm,0.8s,mb4.9
WDC **Whiskeytown Da** 34.29 320 eP P 01 38 39.0 -2.3
comp=Z,15nm,1.1s,mb4.6
D14A **Greenough** 34.29 336 ⇓P P 01 38 40.5 -0.7
baz=34,SNR=43
SLMT **Seeley Lake** 34.41 336 eP P 01 38 41.7 -0.6
comp=Z,24nm,0.6s,mb5.1
G10A **Bishop Farm, J** 34.45 330 P P 01 38 42.2 -0.4
baz=34,SNR=23
F11A **Grangeville** 34.45 332 ⇑P P 01 38 41.8 -0.8
baz=35,SNR=25
C15A **Salmond Ranch,** 34.52 338 P P 01 38 42.9 -0.3
baz=35,SNR=21
A18A **Metzger Ranch,** 34.59 341 ⇑P P 01 38 42.9 -0.8
baz=35,SNR=25
E12A **Beaver Dam Sad** 34.60 333 ⇑P P 01 38 43.0 -0.9
baz=35,SNR=64
H08A **Prairie City** 34.64 328 ⇑P P 01 38 44.0 -0.3
baz=35,SNR=22
D13A **Huson** 34.68 335 P P 01 38 44.3 -0.2
baz=35,SNR=72
B16A **M & M Farms, S** 34.75 339 ⇓P P 01 38 44.9 -0.2
baz=35,SNR=11
G09A **Cove** 34.75 330 ⇓P P 01 38 44.6 -0.6
baz=35,SNR=48
I07A **Izee** 34.77 327 ⇓P P 01 38 44.6 -0.7
baz=35,SNR=28
SWMT **Swartz Lake** 34.83 336 eP P 01 38 45.3 -0.5
comp=Z,16nm,0.8s,mb4.7
C14A **Swan Lake** 34.95 336 ⇑P P 01 38 46.8 0.0
baz=35
B15A **Bradely Ranch,** 34.96 338 ⇑P P 01 38 46.5 -0.5
baz=35,SNR=10
F10A **Beach Ranch, E** 35.01 331 ⇓P P 01 38 47.0 -0.3
baz=35,SNR=19
D12A **Red Ives Fores** 35.01 334 ⇓P P 01 38 46.9 -0.5
baz=35
YBH **Yreka Blue Hor** 35.07 321 eP P 01 38 45.9 -2.1
comp=Z,13nm,0.7s,mb4.7
BUOR **Burton Butte** 35.12 322 P P 01 38 48.2 -0.2
YBMT **Yellow Bay** 35.13 336 eP P 01 38 48.3 -0.1
comp=Z,16nm,0.6s,mb4.8
JTMT **Jette** 35.14 336 eP P 01 38 48.5 0.0
comp=Z,24nm,0.7s,mb4.9
C13A **Hot Springs** 35.20 336 ⇓P P 01 38 48.3 -0.7
baz=35,SNR=47
B14A **Marquette Ranc** 35.26 337 ⇓P P 01 38 48.8 -0.7
baz=35
G08A **Pilot Rock** 35.33 329 ⇓P P 01 38 49.4 -0.8
baz=35,SNR=18
BSMT **Bassoo Peak** 35.42 335 eP P 01 38 50.4 -0.5
comp=Z,17nm,0.8s,mb4.7
LNOR **Lincton Mounta** 35.42 330 eP P 01 38 49.8 -1.2
comp=Z,19nm,0.7s,mb4.8
C12B **Naegeli Ranch,** 35.58 335 ⇑P P 01 38 51.9 -0.4
baz=36,SNR=16
A15A **Johnson Ranch,** 35.59 339 ⇑P P 01 38 51.8 -0.5
baz=36,SNR=27
B13A **Whitefish** 35.72 336 ⇓P P 01 38 53.3 -0.2
baz=36,SNR=57
HUMO **Hull Mountain** 35.74 322 eP P 01 38 51.6 -2.0
comp=Z,4.2nm,0.6s,mb4.2
BBOR **Butler Butte** 35.74 323 P P 01 38 52.7 -1.0
A14A **Double T Ranch** 35.83 338 ⇓P P 01 38 54.3 -0.1
baz=36,SNR=35
E09A **Wood Farm, Sta** 35.83 331 ⇑P P 01 38 53.8 -0.7
baz=36,SNR=7.5
C11A **Tepee Creek (N** 36.01 334 P P 01 38 55.6 -0.3
baz=36,SNR=81
G06A **Carlson Farm,** 36.15 327 ⇑P P 01 38 56.4 -0.7
baz=36
A13A **Flathead Natio** 36.16 337 ⇑P P 01 38 56.1 -1.1
baz=36
B12A **Libby** 36.24 335 ⇓P P 01 38 57.9 +0.1
baz=36,SNR=21
HAWA **Hanford** 36.40 330 ⇓iP P 01 38 57.6 -1.6
comp=Z,13nm,0.7s,mb4.7
RSW **Rattlesnake Hi** 36.43 330 eP P 01 38 58.5 -1.0
comp=Z,8.4nm,0.4s,mb4.7
D08A **Wollman Farm,** 36.59 331 P P 01 39 00.2 -0.7
baz=37,SNR=12
H04A **Detroit Lake** 36.60 325 ⇓P P 01 39 00.7 -0.3
baz=37,SNR=20
VFP **Flag Point** 36.63 327 P P 01 39 01.6 +0.4
E07A **Sunnyside** 36.68 330 ⇓P P 01 39 00.8 -0.8
baz=37
NEW **Newport** 36.70 334 ⇓iP P 01 39 00.9 -0.9
comp=Z,33nm,0.6s,mb5.1
OD2 **Odessa Site #2** 36.74 332 eP P 01 39 02.5 +0.3
comp=Z,28nm,0.7s,mb5.1
RNO **Roman Nose** 36.98 323 P P 01 39 04.5 +0.3
G04A **Mulino** 37.10 326 ⇑P P 01 39 04.3 -0.8
baz=37,SNR=8.4
COR **Corvallis** 37.15 324 eP P 01 39 04.9 -0.8
comp=Z,38nm,0.8s,mb5.1
EBG **Ellensburg** 37.27 329 P P 01 39 07.0 +0.4
TBM **Table Mountain** 37.47 330 P P 01 39 08.7 +0.4
F04A **Amboy** 37.54 327 ⇓P P 01 39 08.4 -0.5
baz=38
LTY **Liberty** 37.57 330 P P 01 39 08.8 -0.3
ETW **Entiat** 37.65 330 P P 01 39 10.1 +0.3
B08A **Colville Reser** 37.74 332 P P 01 39 09.9 -0.6
baz=38,SNR=16
LON **Longmire** 37.78 328 P P 01 39 10.7 -0.2
D05A **Enumclaw** 38.16 329 ⇑P P 01 39 13.7 -0.4
baz=38,SNR=11
FFC **Flin Flon** 38.37 352 P P 01 39 15.4 -0.3
comp=Z,370nm,0.5s,SNR=33
FFC **Flin Flon** 38.37 352 eP P 01 39 14.6 -1.1
comp=Z,29nm,0.5s,mb5.2
RPW **Rockport** 38.81 330 eP P 01 39 18.4 -1.1
comp=Z,12nm,0.6s,mb4.7
JCW **Jim Creek** 38.83 330 eP P 01 39 18.2 -1.5
comp=Z,26nm,0.8s,mb4.9
B06A **Marblemount** 38.84 331 ⇓P P 01 39 19.0 -0.8
baz=39
NLWA **Neilton Lookou** 39.25 328 ⇓P P 01 39 23.2 0.0
baz=39,SNR=9.6
NLWA **Neilton Lookou** 39.25 328 ⇓iP P 01 39 22.9 -0.3
comp=Z,22nm,0.8s,mb4.8
A05A **Maple Falls** 39.47 331 ⇑P P 01 39 24.2 -0.8
baz=40,SNR=14
LPAZ **La Paz** 41.53 141 P P 01 39 42.4 +0.1
comp=Z,24nm,0.6s,mb5.0,baz=336,slow=6.7,SNR=59
LPAZ LR LR 01 56 12.2
comp=Z,104nm,20.9s,baz=327,slow=35
LPAZ **La Paz** 41.53 141 eP P 01 39 42.1 -0.2
comp=Z,24nm,0.7s,mb4.9
SCHQ **Schefferville** 43.30 23 P P 01 39 54.5 -1.6
comp=Z,1.7nm,0.6s,mb3.9,baz=208,slow=7.2,SNR=6.3
SCHQ LR LR 02 00 50.6
comp=Z,152nm,18.8s,baz=43,slow=40
YKA **Yellowknife Ar** 47.91 347 P P 01 40 31.3 -1.0
comp=Z,49nm,0.9s,mb5.1,baz=150,slow=7.5,SNR=200
YKA PP PP 01 42 26.3 +1.0
comp=Z,6.6nm,0.8s,baz=149,slow=9.2,SNR=6.8
LCO **Las Campanas** 50.74 154 eP P 01 40 54.3 +0.1
comp=Z,25nm,0.9s,mb4.8
PNL **Peninsula** 53.98 333 eP P 01 41 18.3 +0.6
comp=Z,57nm,0.9s,mb5.3
CPUP **Villa Florida** 55.67 140 P P 01 41 28.4 -1.9
comp=Z,9.9nm,0.7s,mb4.8,baz=308,slow=7.9,SNR=27
CPUP LR LR 02 07 24.7
comp=Z,59nm,20.2s,baz=148,slow=38
CPUP **Villa Florida** 55.67 140 eP P 01 41 28.1 -2.2
comp=Z,51nm,0.8s,mb5.4
BMRM **Bremner River** 56.88 333 eP P 01 41 39.1 +0.7
comp=Z,18nm,0.6s,mb5.1
DIV **Divide** 57.46 333 eP P 01 41 42.5 +0.1
comp=Z,12nm,0.7s,mb4.8
EGAK **Eagle** 57.46 338 eP P 01 41 41.6 -0.8
comp=Z,96nm,0.5s,mb5.9
MENT **Mentasta** 57.46 336 eP P 01 41 42.5 +0.1
PAX **Paxson** 58.18 335 ⇓iP P 01 41 47.1 -0.3
comp=Z,31nm,0.8s,mb5.2
SEW **Seward** 58.68 331 eP P 01 41 50.3 -0.7
comp=Z,19nm,0.7s,mb5.0
PMR **Palmer** 59.12 333 eP P 01 41 53.6 -0.4
comp=Z,20nm,1.0s,mb4.9
RC01 **Rabbit Creek A** 59.19 332 eP P 01 41 53.9 -0.6
comp=Z,25nm,0.8s,mb5.1
KDAK **Kodiak Island** 59.40 328 P P 01 41 55.4 -0.6
comp=Z,16nm,0.8s,mb4.9,baz=91,slow=4.2,SNR=14
KDAK **Kodiak Island** 59.40 328 eP P 01 41 55.4 -0.6
comp=Z,14nm,0.8s,mb4.8
MCK **McKinley** 59.92 335 ⇓iP P 01 41 59.0 -0.4
comp=Z,29nm,0.9s,mb5.1
COLA **College** 59.99 336 eP P 01 41 59.0 -0.9
comp=Z,27nm,0.8s,mb5.1
COLA epP pP 01 42 29.1 -2.9
RSO **Redoubt South** 60.35 331 eP P 01 42 01.8 -0.6
TRF **Thorofare Moun** 60.35 334 ⇓iP P 01 42 02.0 -0.4
comp=Z,83nm,0.9s,mb5.6
TRF epP pP 01 42 32.3 -2.3
SPB **Sao Paulo** 60.58 130 eP P 01 42 03.3 -1.2
comp=Z,45nm,0.8s,mb5.3
BPAW **Bear Paw Mtn.** 60.90 335 ⇓iP P 01 42 05.2 -0.8
comp=Z,45nm,0.9s,mb5.3
BPAW epP pP 01 42 35.1 -3.2
PPLA **Purkeypile** 60.94 334 eP P 01 42 05.8 -0.6
comp=Z,24nm,1.0s,mb5.0
PLCA **Paso Flores** 61.20 160 P P 01 42 07.7 -0.6
comp=Z,12nm,0.7s,mb4.8,baz=332,slow=7.5,SNR=42
PLCA LR LR 02 04 58.1
comp=Z,111nm,19.5s,baz=104,slow=32
PLCA **Paso Flores** 61.20 160 eP P 01 42 07.5 -0.9
comp=Z,24nm,1.2s,mb4.9
CHUM **Lake Minchumin** 61.35 335 eP P 01 42 07.9 -1.2
comp=Z,9.8nm,0.9s,mb4.6
RCBR **Riachuelo** 61.55 106 eP P 01 42 10.3 -1.1
comp=Z,12nm,0.8s,mb4.8
SVW2 **Sparrevohn** 61.86 331 eP P 01 42 11.2 -1.4
COLD **Coldfoot** 61.88 338 ⇑iP P 01 42 12.9 +0.2
comp=Z,18nm,0.8s,mb5.0
CHGN **Chignik** 62.10 325 eP P 01 42 13.8 -0.5
TRQA **Tornquist** 62.24 152 eP P 01 42 14.2 -1.3
comp=Z,22nm,1.1s,mb4.9
TTA **Tatalina** 62.60 333 eP P 01 42 16.1 -1.4
comp=Z,17nm,0.8s,mb4.9
CAM4 **Nova Friburgo** 63.53 126 ⇓iP P 01 42 23.7 -0.6
CAM4 i 01 42 25.9
CAM4 i 01 42 29.9
CAM4 i 01 42 37.8
CAM4 i pP 01 42 53.7 -3.0
SUMG **Summit** 64.05 16 eP P 01 42 26.5 -0.4
comp=Z,10nm,0.7s,mb4.8
SUMG **Summit** 64.05 16 iP P 01 42 26.0 -0.9
comp=Z,9.5nm,0.7s,mb4.7
PPT **Papeete** 64.61 241 LR LR 02 03 55.6
comp=Z,116nm,20.8s,baz=33,slow=30
SCO **Scoresbysund** 68.26 20 iP P 01 42 52.9 -0.9
comp=Z,4.5nm,0.7s,mb4.3
DAG **Danmarks Havn** 70.38 14 ⇑iP P 01 43 05.6 -1.2
comp=Z,4.1nm,0.7s,mb4.3
PCAB **Cabril** 75.98 50 eP P 01 43 44.2 +3.9
comp=Z,19nm,2.0s,mb4.4
MTE **Manteigas** 76.57 52 eP P 01 43 42.6 -1.1
PCBR **Castelo Branco** 76.73 52 eP P 01 43 43.8 -0.8
comp=Z,19nm,1.8s,mb4.4
ESK **Eskdalemuir** 76.75 36 eP P 01 43 44.1 -0.2
comp=Z,6.9nm,0.6s,mb4.5
MVO **Moncorvo** 76.82 51 eP P 01 43 43.8 -1.2
comp=Z,13nm,1.8s,mb4.3
PMRV **Marv??o** 76.87 53 eP P 01 43 43.6 -1.8
comp=Z,11nm,1.4s,mb4.3
BILL **Bilibino** 78.21 338 eP P 01 43 51.8 -0.4
comp=Z,6.3nm,0.6s,mb4.4
SGMF **Saint Gilles** 78.53 43 eP P 01 43 53.2 -1.2
FX1 **Attu Island--F** 78.56 322 P P 01 43 53.5 -0.9
comp=Z,9.8nm,0.6s,mb4.6,baz=122,slow=6.0,SNR=7.9
ESDC **Sonseca Array** 79.41 52 P P 01 43 57.9 -1.4
comp=Z,1.8nm,0.8s,mb3.8,baz=297,slow=5.5,SNR=16
ESDC **Sonseca Array** 79.41 52 P P 01 43 57.9 -1.5
GRR **Gorron** 79.60 43 eP P 01 43 59.2 -1.0
comp=Z,12nm,0.6s,mb4.4
GRR **Gorron** 79.60 43 eP P 01 43 59.2 -1.0
comp=Z,5.8nm,0.6s,mb4.4
FLN **La Foliniere** 79.76 42 eP P 01 44 00.1 -0.9
comp=Z,9.1nm,0.6s,mb4.3
FLN eMLR MLR
comp=Z,103nm,20.8s
FLN **La Foliniere** 79.76 42 eP P 01 44 00.1 -0.9
comp=Z,4.6nm,0.6s,mb4.3
FLN LR LR
comp=Z,100nm,20.8s
LDF **La Druitiere** 80.03 42 eP P 01 44 01.8 -0.7
MFF **Saint Martin d** 80.50 44 eP P 01 44 04.4 -0.7
SJPF **Ste Jean** 80.61 48 eP P 01 44 04.0 -1.7
comp=Z,6.7nm,0.7s,mb4.1
SJPF **Ste Jean** 80.61 48 eP P 01 44 04.0 -1.7
comp=Z,3.3nm,0.7s,mb4.1
ETSF **Etsaut** 81.14 48 eP P 01 44 07.0 -1.5
comp=Z,7.3nm,0.6s,mb4.2
ETSF **Etsaut** 81.14 48 eP P 01 44 07.0 -1.5
comp=Z,3.7nm,0.6s,mb4.2
LFF **La Frestale** 81.52 46 eP P 01 44 09.1 -1.4
comp=Z,23nm,0.7s,mb4.6
LFF **La Frestale** 81.52 46 eP P 01 44 09.1 -1.4
comp=Z,11nm,0.7s,mb4.6
EPF **Esparros** 81.74 48 eP P 01 44 10.5 -1.2
RJF **Les Rejaudoux** 81.96 45 eP P 01 44 11.4 -1.4
comp=Z,19nm,0.9s,mb4.4
RJF eMLR MLR
comp=Z,78nm,22.0s
RJF **Les Rejaudoux** 81.96 45 eP P 01 44 11.4 -1.4
comp=Z,9.6nm,0.9s,mb4.4
RJF LR LR
comp=Z,80nm,22.0s
TCF **Toulx Ste Croi** 82.16 44 eP P 01 44 12.9 -0.9
comp=Z,8.1nm,0.7s,mb4.1
TCF **Toulx Ste Croi** 82.16 44 eP P 01 44 12.9 -0.9
comp=Z,4.1nm,0.7s,mb4.2
HYF **Humbligny** 82.17 43 eP P 01 44 13.2 -0.7
SNF **Seneffe** 82.29 40 P P 01 44 14.6 +0.2
comp=Z,12nm,2.5s,mb4.1
BAIF **Baives** 82.37 40 eP P 01 44 13.5 -1.4
comp=Z,11nm,0.9s,mb4.2
BAIF **Baives** 82.37 40 eP P 01 44 13.5 -1.4
comp=Z,5.6nm,0.9s,mb4.2
CAF **Calviac** 82.43 45 eP P 01 44 14.6 -0.7
comp=Z,6.9nm,0.8s,mb4.0
CAF **Calviac** 82.43 45 eP P 01 44 14.6 -0.7
comp=Z,3.5nm,0.8s,mb4.0
NAO01 **NORSAR Array S** 82.48 29 eP P 01 44 15.4 +0.2
comp=Z,10nm,0.7s,mb4.6
BGF **Bois d'Agland** 82.50 44 eP P 01 44 13.8 -1.8
comp=Z,21nm,1.0s,mb4.5
BGF **Bois d'Agland** 82.50 44 eP P 01 44 13.8 -1.8
comp=Z,11nm,1.0s,mb4.5
NB2 **NORSAR Subarra** 82.56 28 P P 01 44 16.2 +0.6
comp=Z,2.4nm,0.7s,mb4.0,baz=297,slow=5.3
NOA **NORSAR Array B** 82.56 28 P P 01 44 16.2 +0.7
comp=Z,15nm,0.7s,mb4.9,baz=292,slow=5.1,SNR=79
NOA LR LR 02 19 29.4
comp=Z,32nm,19.3s,baz=270,slow=34
DOU **Dourbes** 82.60 40 P P 01 44 16.1 +0.1
GIVF **Givet** 82.74 40 eP P 01 44 16.3 -0.5
AVF **Avril sur Loir** 82.77 43 eP P 01 44 15.9 -1.1
comp=Z,19nm,1.0s,mb4.5
AVF **Avril sur Loir** 82.77 43 eP P 01 44 15.9 -1.1
comp=Z,9.3nm,1.0s,mb4.5
SSF **Saint Saulge** 82.79 43 eP P 01 44 16.9 -0.2
comp=Z,11nm,0.8s,mb4.3
SSF **Saint Saulge** 82.79 43 eP P 01 44 16.9 -0.2
comp=Z,5.3nm,0.8s,mb4.3
PYM **Petit Puy Mans** 82.84 44 eP P 01 44 19.3 +1.9
BCLA **Clavier** 82.94 40 P P 01 44 17.8 +0.1
LOR **Lormes** 82.97 43 eP P 01 44 17.2 -0.8
comp=Z,10nm,0.8s,mb4.3
LOR eMLR MLR
comp=Z,98nm,20.8s
LOR **Lormes** 82.97 43 eP P 01 44 17.2 -0.8
comp=Z,5.1nm,0.8s,mb4.3
LOR LR LR
comp=Z,100nm,20.8s
MTLF **Montolieu** 82.98 47 eP P 01 44 16.4 -1.8
comp=Z,9.7nm,0.8s,mb4.3
MTLF **Montolieu** 82.98 47 eP P 01 44 16.4 -1.8
comp=Z,4.8nm,0.8s,mb4.3
BEBN **Eben Emael** 83.05 39 P P 01 44 19.0 +0.7
SMF **Signal de Mont** 83.14 43 eP P 01 44 17.4 -1.5
comp=Z,14nm,1.0s,mb4.3
SMF **Signal de Mont** 83.14 43 eP P 01 44 17.4 -1.5
comp=Z,6.8nm,1.0s,mb4.3
HGN **Heimansgroeve** 83.21 39 ⇑eP P 01 44 18.7 -0.5
comp=Z,18nm,0.8s,mb4.8
MEM **Membach** 83.31 39 P P 01 44 20.1 +0.4
WTSB **Winterswijk** 83.35 38 eP P 01 44 20.0 +0.1
comp=Z,34nm,1.1s,mb5.0
MEZF **Maizieres J'vi** 83.36 41 eP P 01 44 19.7 -0.3
comp=Z,28nm,0.6s,mb4.9
MEZF **Maizieres J'vi** 83.36 41 eP P 01 44 19.7 -0.3
comp=Z,28nm,0.6s,mb5.2
WLF **Walferdange** 83.69 40 P P 01 44 21.8 +0.1
WLF **Walferdange** 83.69 40 eP P 01 44 21.8 +0.2
comp=Z,20nm,0.7s,mb5.0
WLF **Walferdange** 83.69 40 eP P 01 44 21.7 0.0
comp=Z,14nm,0.6s,mb4.9
BUG **Bochum--Univer** 83.80 38 eP P 01 44 23.3 +1.2
comp=Z,11nm,0.8s,mb4.6
IBBN **Ibbenburen** 83.80 37 eP P 01 44 22.0 -0.1
comp=Z,51nm,1.5s,mb5.0
LASF **Ste Croix** 83.91 46 eP P 01 44 21.7 -1.2
comp=Z,13nm,0.8s,mb4.4
ARCES **ARCESS Array B** 84.06 18 P P 01 44 23.3 +0.2
comp=Z,16nm,0.7s,mb4.8,baz=293,slow=4.8,SNR=40
ARE0 **ARCESS Array S** 84.06 18 eP P 01 44 23.2 +0.1
VIVF **Saint-Julien-l** 84.23 45 eP P 01 44 24.5 0.0
comp=Z,27nm,1.3s,mb4.5
VIVF **Saint-Julien-l** 84.23 45 eP P 01 44 24.5 0.0
comp=Z,13nm,1.3s,mb4.5
RUP **Ruppelstein** 84.24 40 eP P 01 44 26.1 +1.7
HAU **Haudompre** 84.34 42 eP P 01 44 23.6 -1.4
comp=Z,28nm,1.0s,mb4.6
HAU eMLR MLR
comp=Z,66nm,22.0s
HAU **Haudompre** 84.34 42 eP P 01 44 23.6 -1.4
comp=Z,14nm,1.0s,mb4.7
HAU LR LR
comp=Z,70nm,22.0s
ABH **Alteburg** 84.48 40 eP P 01 44 26.7 +1.1
CABF **La Chapelle** 84.62 43 eP P 01 44 25.9 -0.5
BSEG **Bad Segeberg** 84.68 35 eP P 01 44 26.8 +0.2
comp=Z,37nm,1.0s,mb5.1
HINF **Hinteralfeld** 84.72 42 eP P 01 44 26.4 -0.5
comp=Z,17nm,0.7s,mb4.6
HINF **Hinteralfeld** 84.72 42 eP P 01 44 26.4 -0.5
comp=Z,8.5nm,0.7s,mb4.6
ECH **Echery** 84.79 41 eP P 01 44 27.1 -0.1
ECH **Echery** 84.79 41 eP P 01 44 26.9 -0.3
comp=Z,21nm,1.1s,mb4.8
CDF **Champ du Feu** 84.80 41 eP P 01 44 27.0 -0.3
comp=Z,30nm,0.9s,mb4.7
CDF **Champ du Feu** 84.80 41 eP P 01 44 27.0 -0.3
comp=Z,15nm,0.9s,mb4.7
LOMF **Lomont** 84.86 42 eP P 01 44 28.6 +1.0
MOF **Molkenrain** 84.89 42 eP P 01 44 28.4 +0.7
TNS **Taunus Mts** 84.91 39 eP P 01 44 28.1 +0.3
comp=Z,42nm,0.6s,mb5.3
LANF **Langenberg** 84.94 40 eP P 01 44 29.1 +1.2
NRDL **Niedersach Rie** 85.08 37 eP P 01 44 29.1 +0.5
comp=Z,30nm,1.2s,mb4.9
OG01 **Vacheresse** 85.10 43 eP P 01 44 29.9 +1.1
SMRF **Simiane la Rot** 85.12 46 eP P 01 44 28.1 -0.9
comp=Z,15nm,1.0s,mb4.3
SMRF **Simiane la Rot** 85.12 46 eP P 01 44 28.1 -0.9
comp=Z,15nm,1.0s,mb4.7

BBS	Basel-Blauen	85.26	42	eP	P	01 44 29.9	+0.3
TOD	Tromm	85.34	40	eP	P	01 44 29.9	0.0
LPL	La Plagne	85.40	44	eP	P	01 44 30.8	+0.5
LPG	La Plagne	85.42	44	eP	P	01 44 31.1	+0.7
FELD	Feldberg im Sc	85.44	41	eP	P	01 44 30.8	+0.3
CLZ	Clausthal	85.47	37	eP	P	01 44 31.1	+0.6
	comp=Z,16nm,0.9s,mb4.8						
BFO	Black Forest	85.48	41	eP	P	01 44 30.1	-0.6
	comp=Z,13nm,1.1s,mb4.6						
UBBA	Unterbreizbach	85.63	38	eP	P	01 44 32.0	+0.7
	comp=Z,24nm,1.8s,mb4.6						
MBDF	Montbardon	85.69	45	eP	P	01 44 32.0	+0.2
	comp=Z,23nm,0.7s,mb4.7						
MBDF	Montbardon	85.69	45	eP	P	01 44 32.0	+0.2
	comp=Z,12nm,0.7s,mb4.7						
SPAK	Spaichingen-Ko	85.85	41	eP	P	01 44 32.3	-0.2
STU	Stuttgart	85.87	40	eP	P	01 44 32.4	-0.2
	comp=Z,35nm,0.8s,mb5.1						
STU	Stuttgart	85.87	40	eP	P	01 44 32.2	-0.4
	comp=Z,24nm,0.7s,mb5.0						
LMR	La Mourre	85.97	46	eP	P	01 44 32.8	-0.4
	comp=Z,43nm,0.8s,mb4.9						
LMR	La Mourre	85.97	46	eP	P	01 44 32.8	-0.4
	comp=Z,22nm,0.8s,mb4.9						
FRF	La Foret Royal	85.98	46	eP	P	01 44 32.9	-0.4
	comp=Z,33nm,1.0s,mb4.7						
FRF	La Foret Royal	85.98	46	eP	P	01 44 32.9	-0.4
	comp=Z,17nm,1.0s,mb4.7						
CALN	Calern	86.09	46	eP	P	01 44 34.9	+1.1
MVIF	Mont Vial	86.22	45	eP	P	01 44 34.5	+0.1
TOUF	Mont Tournerai	86.25	45	eP	P	01 44 35.3	+0.8
AUTN	L'Aution	86.37	45	eP	P	01 44 37.3	+2.1
REVF	Revere	86.42	45	eP	P	01 44 36.2	+0.8
SAOF	Saorge	86.46	45	eP	P	01 44 36.2	+0.6
MOX	Moxa	86.64	38	eP	P	01 44 37.2	+0.9
	comp=Z,20nm,1.6s,mb4.7						
MOX	Moxa	86.64	38	eP	P	01 44 36.8	+0.5
	comp=Z,7.0nm,0.8s,mb4.5						
GRA1	Grafenberg Arr	86.77	39	eP	P	01 44 37.5	+0.5
	comp=Z,46nm,1.7s,mb5.0						
GRF	Grafenberg Arr	86.77	39	eP	P	01 44 37.5	+0.5
	comp=Z,46nm,1.7s,mb5.0						
TUE	Stuetta	86.78	42	eP	P	01 44 37.5	+0.4
	comp=Z,7.3nm,0.6s,mb4.7						
DAVA	Damuels	86.83	41	⇑iP	P	01 44 37.6	+0.3
	comp=Z,18nm,0.8s,mb4.9						
TIC	Toumodi	87.02	84	eP	P	01 44 38.6	-0.3
	comp=Z,19nm,0.8s,mb5.0						
LIC	Lamto	87.13	84	eP	P	01 44 39.1	-0.3
	comp=Z,76nm,1.0s,mb5.5						
TIXI	Tiksi	87.16	348	eP	P	01 44 37.8	-0.7
	comp=Z,4.3nm,0.8s,mb4.3						
DBIC	Dimbokro	87.17	84	P	P	01 44 39.0	-0.6
	comp=Z,9.5nm,0.5s,mb4.9,baz=266,slow=4.8,SNR=24						
DBIC				LR	LR	02 18 40.2	
	comp=Z,60nm,19.6s,baz=231,slow=32						
DBIC	Dimbokro	87.17	84	eP	P	01 44 39.0	-0.6
	comp=Z,13nm,0.7s,mb4.9						
CLL	Collm	87.19	37	eP	P	01 44 39.3	+0.3
	comp=Z,5.0nm,0.9s,mb4.3						
CLL	Collm	87.19	37	iP	P	01 44 39.3	+0.3
	comp=Z,5.0nm,0.9s,mb4.3						
CLL				eS	S	01 55 16.0	+8.7
CLL	Collm	87.19	37	iP	P	01 44 39.3	+0.3
	comp=Z,5.0nm,0.9s,mb4.3						
CLL				e(pP)	pP	01 45 16.0	+2.7
CLL				eS	S	01 55 16.0	+8.7
CLL				ePS		01 56 22.0	
TANN	Tannenbergstha	87.23	38	eP	P	01 44 39.9	+0.7
	comp=Z,13nm,1.4s,mb4.6						
NKC	Novy Kostel	87.29	38	eP	P	01 44 40.2	+0.7
PETK	Petropavlovsk-	87.33	325	P	P	01 44 40.0	+0.4
	comp=Z,3.0nm,0.7s,mb4.2,baz=71,slow=11,SNR=6.4						
PETK	Petropavlovsk-	87.33	325	P	P	01 44 40.0	+0.4
KIC	Kosan Boka	87.36	84	eP	P	01 44 40.3	-0.2
	comp=Z,43nm,0.7s,mb5.4						
BRG	Berggiesshubel	87.91	37	eP	P	01 44 42.4	0.0
	comp=Z,9.0nm,0.8s,mb4.7						
BRG	Berggiesshubel	87.91	37	eP	P	01 44 43.0	+0.6
	comp=Z,9.0nm,0.8s,mb4.7						
PGF	Pioggiola	87.95	46	eP	P	01 44 42.1	-0.7
	comp=Z,26nm,0.9s,mb4.8						
PGF	Pioggiola	87.95	46	eP	P	01 44 42.1	-0.7
	comp=Z,13nm,0.9s,mb4.8						
WET	Wettzell	87.98	39	eP	P	01 44 42.9	+0.1
	comp=Z,11nm,0.8s,mb4.7						
KHC	Kasperske Hory	88.41	39	eP	P	01 44 45.2	+0.4
	comp=Z,5.6nm,0.9s,mb4.4						
KHC	Kasperske Hory	88.41	39	eP	P	01 44 45.2	+0.4
KHC				eS	S	01 55 24.1	+5.2
PVCC	Panska Ves	88.42	37	eP	P	01 44 45.0	+0.2
PVCC				eS	S	01 55 22.8	+3.8
RJOB	Jochberg	88.49	40	eP	P	01 44 45.1	-0.1
	comp=Z,7.0nm,1.0s,mb4.5						
GEC2	GERESS Array S	88.60	39	eP	P	01 44 45.5	-0.2
	comp=Z,8.0nm,1.0s,mb4.6						
PRU	Pruhonice	88.63	38	eP	P	01 44 46.3	+0.5
PRU				eS	S	01 55 26.9	+5.9
FINES	FINESS Array B	88.74	25	P	P	01 44 46.1	+0.1
	comp=Z,3.2nm,0.7s,mb4.4,baz=303,slow=3.5,SNR=16						
FINES				LR	LR	02 22 39.7	
	comp=Z,62nm,20.3s,baz=307,slow=34						
KBA	Koelnbreinsper	89.09	41	iP	P	01 44 48.1	0.0
	comp=Z,3.4nm,0.5s,mb4.5						
UPC	Upice	89.26	37	eP	P	01 44 49.6	+0.9
VSL	Villasalto	89.31	49	eP	P	01 44 48.6	-0.7
	comp=Z,19nm,0.7s,mb5.1						
MOA	Molln	89.35	40	iP	P	01 44 49.2	-0.1
	comp=Z,9.4nm,0.9s,mb4.7						
TREC	Trest	89.48	38	eP	P	01 44 50.0	+0.2
TREC				eS	S	01 55 33.6	+4.7
DPC	Dobruska-Polom	89.51	37	eP	P	01 44 50.3	+0.4
DPC				eS	S	01 55 32.3	+3.1
VOJS	Vojsko	89.86	42	iP	P	01 44 52.1	+0.4
OBKA	Obir	90.08	41	iP	P	01 44 52.3	-0.4
	comp=Z,8.6nm,0.8s,mb4.7						
VRAC	Vranov	90.12	38	iP	P	01 44 53.5	+0.7
CONA	Conrad Observa	90.29	39	iP	P	01 44 54.0	+0.4
	comp=Z,6.4nm,0.9s,mb4.6						
SOKA	Soboth	90.31	41	iP	P	01 44 53.2	-0.5
	comp=Z,3.8nm,0.6s,mb4.5						
ARSA	Arzberg	90.37	40	iP	P	01 44 53.8	-0.2
	comp=Z,4.5nm,0.7s,mb4.5						
MORC	Moravsky Berou	90.47	37	eP	P	01 44 54.8	+0.4
	comp=Z,12nm,1.4s,mb4.7						
MORC	Moravsky Berou	90.47	37	iP	P	01 44 55.0	+0.6
KEST	Kesra	90.65	52	P	P	01 44 55.5	0.0
	comp=Z,2.0nm,0.7s,mb4.3,baz=177,slow=5.1,SNR=20						
KEST				LR	LR	02 23 59.2	
	comp=Z,24nm,19.4s,baz=195,slow=34						
KEST	Kesra	90.65	52	eP	P	01 44 55.1	-0.4
OKC	Ostrava-Krasne	90.79	37	eP	P	01 44 55.9	0.0
OKC				eS	S	01 55 48.0	+7.1
ZST	Bratislava	90.92	39	eP	P	01 44 57.3	+0.8
	comp=Z,6.6nm,1.0s,mb4.6						
ZST	Bratislava	90.92	39	eP	P	01 44 57.3	+0.8
AQU	L'Aquila	91.04	45	eP	P	01 44 56.9	-0.3
	comp=Z,3.9nm,0.8s,mb4.5						
KOLL	Kolacno	91.52	38	eP	P	01 45 00.1	+0.8
KOLL	Kolacno	91.52	38	eP	P	01 45 00.1	+0.8
OJC	Ojcow	91.55	36	eP	P	01 44 57.5	-1.9
VYHS	Vyhne	91.81	38	eP	P	01 45 00.8	+0.1
	comp=Z,3.9nm,1.1s,mb4.3						
VYHS	Vyhne	91.81	38	eP	P	01 45 00.8	+0.1
TAM	Tamanrasset	91.93	66	eP	P	01 45 02.0	+0.2
	comp=Z,21nm,1.8s,mb4.9						
NIE	Niedzica	92.23	37	eP	P	01 45 03.2	+0.6
PSZ	Piszkesteto	92.71	38	eP	P	01 45 04.3	-0.5
	comp=Z,21nm,1.5s,mb5.0						
PKSM	Moragy	92.76	40	iP	P	01 45 05.0	-0.1
STHS	Stebnicka Huta	92.76	36	eP	P	01 45 06.1	+1.1
	comp=Z,4.7nm,1.3s,mb4.5						
STHS	Stebnicka Huta	92.76	36	eP	P	01 45 06.1	+1.1
KECS	Kecovo	92.78	37	eP	P	01 45 06.0	+0.9
	comp=Z,4.5nm,0.9s,mb4.6						
KECS	Kecovo	92.78	37	eP	P	01 45 06.0	+0.9
CRVS	Cervenica-Dubn	93.14	37	eP	P	01 45 07.1	+0.3
	comp=Z,5.1nm,1.0s,mb4.6						
CRVS	Cervenica-Dubn	93.14	37	eP	P	01 45 07.1	+0.3
TIP	Timpagrande	94.69	47	eP	P	01 45 13.2	-0.9
	comp=Z,2.4nm,0.7s,mb4.5						
DRGR		94.93	38	iP	P	01 45 15.1	+0.1
AKASG	Malin Array Be	96.38	32	P	P	01 45 20.1	-1.4
	comp=Z,0.2nm,0.3s,mb4.0,baz=300,slow=3.8,SNR=4.8						
AKASG				LR	LR	02 33 56.9	
	comp=Z,38nm,18.8s,baz=250,slow=38						
CN2	Changchun	109.78	331	ePdif	Pdif	01 46 18.6	-2.6
CN2				PP	PP	01 50 58.1	+1.9
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
MKAR	Makanchi Array	116.62	3	PKP	PKPdf	01 50 34.8	-1.4
	comp=Z,0.2nm,0.6s,baz=45,slow=0.4,SNR=2.8						
MKAR				pPKP	pPKPdf	01 51 06.8	-5.5
	comp=Z,0.3nm,0.7s,baz=0.0,slow=4.9,SNR=2.9						
BJI	Beijing	116.91	334	PKP	PKPdf	01 50 36.9	-0.1
BJI				sPKP		01 51 25.0	
BJI				PP	PP	01 51 46.4	-0.2
BJI				AMB	AMB		
	comp=Z,81nm,5.1s						
HHC	Hu-ho-hao-te	117.98	338	ePKP	PKPdf	01 50 37.8	-1.2
HHC				PP	PP	01 51 58.1	+4.2
HHC				PKS		01 54 12.8	
HHC				SKS	SKSdf	01 57 32.9	-5.8
HHC				SKKS	SKKSac	01 58 33.3	-9.0
HHC				SS	SS	02 07 52.9	-3.7
HHC				LR	LR		
	comp=N,100nm,17.8s						
HHC				LR	LR		
	comp=E,110nm,19.0s						
HHC				LR	LR		
	comp=Z,71nm,17.8s						
WMQ	Urumqi	119.67	359	ePKP	PKPdf	01 50 39.0	-3.2
BOSA	Boshof	123.15	113	PKP	PKPdf	01 50 48.5	-0.7
	comp=Z,8.5nm,0.7s,baz=288,slow=2.7,SNR=18						
BOSA				pPKP	pPKPdf	01 51 20.4	-4.8
	comp=Z,4.2nm,0.7s,baz=343,slow=0.5,SNR=3.5						
BOSA	Boshof	123.15	113	ePKPdf	PKPdf	01 50 48.2	-1.0
LBTB	Lobatse	123.25	109	ePKPdf	PKPdf	01 50 48.5	-1.0
LSZ	Lusaka	124.47	97	ePKPdf	PKPdf	01 50 51.2	-0.9
LZH	Lanzhou	124.80	343	ePKP	PKPdf	01 50 52.3	0.0
LZH				sPKP		01 51 33.8	
MAW	Mawson	127.05	169	PKP	PKPdf	01 50 53.0	-2.5
	comp=Z,1.2nm,0.5s,baz=253,slow=5.0,SNR=3.5						
MAW				pPKP	pPKPdf	01 51 26.2	-5.3
	comp=Z,1.6nm,0.6s,baz=277,slow=8.6,SNR=2.7						
STKA	Stephens Creek	127.80	242	PKP	PKPdf	01 50 55.4	-2.6
	comp=Z,2.8nm,0.8s,baz=139,slow=5.1,SNR=5.4						
STKA				pPKP	pPKPdf	01 51 28.7	-5.3
	comp=Z,2.3nm,0.7s,baz=170,slow=7.9,SNR=4.6						
STKA	Stephens Creek	127.80	242	ePKPdf	PKPdf	01 50 56.9	-1.1
CD2	Chengdu	129.63	340	ePKP	PKPdf	01 51 00.3	-1.3
CD2				sPKP		01 51 45.3	
CD2				PP	PP	01 53 15.3	+3.2
CD2				PKS		01 54 35.3	
CD2				SKS	SKSdf	01 57 54.0	-7.0
CD2				SKKS	SKKSac	01 59 48.6	-8.7
CD2				SS	SS	02 10 20.0	-3.6
CD2				AMB	AMB		
	comp=Z,120nm,10.2s						
CD2				LR	LR		
	comp=N,160nm,18.4s						
CD2				LR	LR		
	comp=Z,130nm,19.2s						
GYA	Guiyang	132.60	335	ePdif	Pdif	01 48 01.0	-1.6
GYA				PKP	PKPdf	01 51 05.8	-1.6
GYA				sPKP		01 51 57.3	
GYA				PP	PP	01 53 33.3	+1.9
GYA				PKS		01 54 40.5	
GYA				SKS	SKSdf	01 58 01.0	-5.5
GYA				SKKS	SKKSac	02 00 08.8	-6.9
GYA				SS	SS	02 10 58.3	-1.8
GYA				AMB	AMB		
	comp=Z,130nm,8.0s						
GYA				LR	LR		
	comp=N,270nm,20.5s						
GYA				LR	LR		
	comp=E,180nm,22.1s						
GYA				LR	LR		
	comp=Z,280nm,21.1s						
WRAB	Tennant Creek	134.24	258	ePKPdf	PKPdf	01 51 09.7	-0.8
WRA	Warramunga Arr	134.25	258	PKP	PKPdf	01 51 09.4	-1.1
	comp=Z,3.9nm,0.6s,baz=84,slow=2.5,SNR=25						
WRA				pPKP	pPKPdf	01 51 42.2	-4.3
	comp=Z,2.9nm,0.7s,baz=83,slow=2.3,SNR=4.7						
ASAR	Alice Springs	134.81	253	PKhKP	PKPpre	01 51 02.5	
	comp=Z,0.4nm,0.8s,baz=101,slow=3.3,SNR=4.1						
ASAR				PKP	PKPdf	01 51 10.4	-1.1
	comp=Z,1.5nm,0.7s,baz=89,slow=2.0,SNR=10						
KMI	Kunming	135.30	338	PKP	PKPdf	01 51 13.8	+1.3
CMAR	Chiang Mai Arr	142.77	340	PKP	PKPdf	01 51 25.6	-0.6
	comp=Z,1.5nm,0.3s,baz=330,slow=2.8,SNR=6.8						
HYB	Hyderabad	145.20	13	eP	PKPbc	01 51 29.0	-1.3
HYB	Hyderabad	145.20	13	iPKP	PKPdf	01 51 27.0	-3.5
MBWA	Marble Bar	147.96	257	ePKPbc	PKPbc	01 51 36.3	-1.9
KSM	Kuching	150.02	305	ePKPdf	PKPdf	01 51 38.3	-0.3
KSM				ePKPbc	PKPbc	01 51 42.3	-1.4

ATH ***22*** *01:56:33.0, 34°.39N×22°.84E, h46km, MD3.6/4*
NEIC ***22*** *01:56:33.0, 34°.39N×22°.84E, h46km, MD3.6(ATH), After ATH.*
CSEM ***22*** *01:56:33.0±1.8, 34°.49N×22°.86E, h10km, MD3.6, Error ellipse: s-maj=43.6km s-min=15.1km az=23.0*
ISC 22 01:56:31.0±3.3, 34°.3N±0°.2×22°.91E±0°.10, h13km±9km, n27, σ0s67/30, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	Gavdhos	1.11	61	ePn	Pg	01 56 52.7	+0.3
GVD	Gavdhos	1.11	61	ePn	Pg	01 56 52.7	+0.3
VAM	Vamos	1.53	44	eP	Pn	01 56 59.0	+1.0
VAM				eS	Sn	01 57 17.8	0.0
VAM	Vamos	1.53	44	eP	Pn	01 56 59.0	+1.0
VAM				eS	Sn	01 57 17.8	0.0
VAM	Vamos	1.53	44	eP	Pn	01 56 59.0	+1.0
VAM				eS	Sn	01 57 17.8	0.0
IDI	Anoyia	1.90	58	P	Pg	01 57 06.8	-0.7
IDI	Anoyia	1.90	58	P	Pg	01 57 06.8	-0.7
KYTH	Kithira	1.97	3	eP	Pn	01 57 04.2	+0.1
KYTH	Kithira	1.97	3	eP	Pn	01 57 04.2	+0.1
KYTH	Kithira	1.97	3	eP	Pn	01 57 04.2	+0.1
VLI	Veliai	2.41	1	eP	Pn	01 57 10.6	+0.5
VLI	Veliai	2.41	1	eP	Pn	01 57 10.6	+0.5
VLI	Veliai	2.41	1	eP	Pn	01 57 10.6	+0.5
PYL	PYLOS	2.75	340	eP	Pn	01 57 14.5	-0.4
PYL	PYLOS	2.75	340	eP	Pn	01 57 14.5	-0.4
ITM	Ithomi	2.98	345	P	Pg	01 57 28.4	+0.4
VLY	Voula,Athens	3.61	11	P	Pn	01 57 26.0	-0.7
VLY	Voula,Athens	3.61	11	P	Pn	01 57 26.0	-0.7
PTL	Penteli	3.81	11	P	Pn	01 57 28.4	-1.1
PTL	Penteli	3.81	11	P	Pn	01 57 28.4	-1.1
LKR	Lokris	4.33	1	P	Pn	01 57 36.4	-0.2
LKR	Lokris	4.33	1	P	Pn	01 57 36.4	-0.2
EVR	Evrytania	4.69	349	P	Pn	01 57 47.0	+5.6
PAIG	Paliouri	5.64	6	P	Pn	01 57 54.0	-0.6
PAIG	Paliouri	5.64	6	P	Pn	01 57 54.0	-0.6
SOH	Sokhos	6.51	3	P	Pn	01 58 07.9	+1.4
SOH	Sokhos	6.51	3	P	Pn	01 58 07.9	+1.4

IDC ***22*** *01:57:37.7±6.0, 32°.45N×131°.59E, h0km, mb3.6/2, mb1 3.9/4, mb1mx3.5/26, mbtmp3.8/4, ML4.1/2, Error ellipse: s-maj=111.4km s-min=40.1km az=175.0*
ISCJB ***22*** *01:57:50.9±0.6, 33°.54N±0°.05×131°.89E±0°.05, h76km±5km, mb3.5/2, Error ellipse: s-maj=8.4km s-min=5.9km az=158.1*
JMA ***22*** *01:57:51.6, 33°.55N×131°.88E, h73km±1km, M3.3 Broadband fault plane solution: P waves. NP1: φs28.00000°, δ45.00000°, λ26.00000°. NP2:φs279.00000°, δ72.00000°, λ132.00000°. Principal axes: T Plg46.0000°, Azm232.0000°; N Plg40.0000°, Azm83.0000°; P Plg16.0000°, Azm339.0000°;*
ISC 22 01:57:51.8±0.6, 33°.53N±0°.05×131°.89E±0°.04, h72km±5km, n15, σ0s46/25, mb3.5/2, 6C-2D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKI	Kunimi	0.28	291	⇑P	Pn	01 58 03.1	0.0
JKI				S	Sn	01 58 11.4	+0.1
OIT2	Oita 2	0.44	235	P	Pn	01 58 04.4	+0.1
OIT2				S	Sn	01 58 13.8	+0.4
JUS	Usuki	0.48	194	⇓P	Pn	01 58 04.8	+0.2
JUS				S	Sn	01 58 14.1	+0.1
JNA	Nagahama	0.49	87	⇑P	Pn	01 58 04.7	0.0
JNA				S	Sn	01 58 14.6	+0.3
JKD	Kudamatsu	0.52	359	⇑P	Pn	01 58 04.8	-0.2
JKD				iS	Sn	01 58 14.3	-0.4
UWA2	Uwa jima 2	0.69	117	⇓P	Pn	01 58 06.5	-0.3
UWA2				S	Sn	01 58 17.5	-0.3
JHM	Kurahashi	0.81	41	⇑P	Pn	01 58 07.9	-0.2
JHM				S	Sn	01 58 19.9	-0.2
JET	Tanbara	1.00	75	⇑P	Pn	01 58 10.1	-0.3
JET				S	Sn	01 58 23.8	-0.4
JKU	Kubokawa	1.01	102	⇑P	Pn	01 58 10.1	-0.4
JKU				S	Sn	01 58 24.4	0.0
JIU2	Izumi 2	1.33	223	P	Pn	01 58 14.9	+0.2
JIU2				S	Sn	01 58 31.5	-0.3
KSRS	Korea Array	5.08	322	Pn	Pn	01 59 05.8	+0.4
	2.7nm,0.3s,baz=140,slow=14,SNR=27						
MAT	Matsushiro	5.99	58	P	Pn	01 59 18.8	+1.0
MJAR	Matsushiro Arr	5.99	58	Pn	Pn	01 59 19.4	+1.5
	6.7nm,0.3s,baz=245,slow=14,SNR=71						
SONM	Songino Array	23.90	314	P	P	02 02 58.4	-0.3
	0.7nm,0.4s,mb3.3,baz=131,slow=10,SNR=5.7						
BVAR	Borovoye Array	47.24	314	P	P	02 06 16.7	-0.7
	0.8nm,0.5s,mb3.7,baz=225,slow=42,SNR=2.1						

ISCJB ***22*** *02:02:35.7±1.1, 35°.80N±0°.05×21°.70E±0°.07, h10km, Error ellipse: s-maj=10.1km s-min=4.9km az=138.4*
CSEM ***22*** *02:02:38.6±0.5, 35°.92N×21°.89E, h2km, MD3.7, Error ellipse: s-maj=10.6km s-min=5.0km az=50.0*
ATH ***22*** *02:02:40.6, 35°.95N×21°.93E, h3km, MD3.6/5*
NEIC ***22*** *02:02:40.8, 35°.97N×21°.97E, h5km, MD3.7(ATH), After ATH.*
THE ***22*** *02:02:41.5, 35°.95N×21°.52E, h35km±18km, ML4.1/1, Error ellipse: s-maj=18.9km s-min=0.8km az=39.0*
ISC 22 02:02:39.0±1.0, 35°.91N±0°.05×21°.82E±0°.06, h10km, n42, σ1s02/61, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.98	356	P	Pg	02 02 57.7	-0.2
PYL				S	Sg	02 03 11.1	+0.4
PYL	PYLOS	0.98	356	ePG	Pg	02 02 57.8	-0.1
PYL				eSG	Sb	02 03 12.1	+1.0
PYL	PYLOS	0.98	356	P	Pg	02 02 57.7	-0.2
PYL				S	Sg	02 03 11.1	+0.4
PYL				eSb	Sb	02 03 12.1	+1.0
KYTH	Kithira	1.05	69	ePn	Pg	02 02 59.1	0.0
KYTH	Kithira	1.05	69	ePG	Pg	02 02 59.1	0.0
KYTH	Kithira	1.05	69	ePn	Pg	02 02 59.1	0.0
VLI	Veliai	1.21	48	ePb	Pg	02 03 01.6	-0.6
VLI				eSb	Sg	02 03 16.4	-1.4
VLI	Veliai	1.21	48	ePB	Pg	02 03 01.6	-0.6
VLI				eSB	Sg	02 03 16.4	-1.4
VLI	Veliai	1.21	48	ePb	Pg	02 03 01.6	-0.6
VLI				eSb	Sg	02 03 16.4	-1.4
ITM	Ithomi	1.27	4	ePn	Pb	02 03 03.0	+0.1
ITM				eSb	Sb	02 03 20.2	+0.9
ITM	Ithomi	1.27	4	P	Pn	02 03 02.7	0.0
ITM				S	Sb	02 03 18.5	-0.8
ITM	Ithomi	1.27	4	ePB	Pb	02 03 03.0	+0.1
ITM				eSB	Sb	02 03 20.2	+0.9
ITM	Ithomi	1.27	4	P	Pn	02 03 02.7	0.0
ITM	Ithomi	1.27	4	ePn	Pb	02 03 03.0	+0.1
ITM				S	Sb	02 03 18.5	-0.8
ITM				eSb	Sb	02 03 20.2	+0.9
VLX	Vlachokerasia	1.52	17	P	Pn	02 03 07.0	+0.8
VLX				S	Sn	02 03 26.6	+0.5
VLX	Vlachokerasia	1.52	17	ePB	Pn	02 03 07.1	+0.9
VLX				eSB	Sb	02 03 28.2	+1.6
VLX	Vlachokerasia	1.52	17	P	Pn	02 03 07.0	+0.8
VLX				S	Sn	02 03 26.6	+0.5
VLX				eSb	Sb	02 03 28.2	+1.6
KARN	Karanos	1.78	106	P	Pg	02 03 13.3	+0.2
KARN				S	Sg	02 03 37.8	+1.6
KARN	Karanos	1.78	106	P	Pg	02 03 13.3	+0.2
VAM	Vamos	2.00	104	ePg	Pg	02 03 16.0	-1.3
VAM	Vamos	2.00	104	ePG	Pg	02 03 16.0	-1.3
VAM	Vamos	2.00	104	ePg	Pg	02 03 16.0	-1.3
GUR	Goura	2.06	11	P	Pn	02 03 14.3	+0.6
GUR	Goura	2.06	11	ePN	Pg	02 03 17.6	-0.9
GUR	Goura	2.06	11	P	Pn	02 03 14.3	+0.6
GUR	Goura	2.06	11	ePg	Pg	02 03 17.6	-0.9
RLS	Riolos of Patr	2.16	353	ePg	Pg	02 03 20.5	+0.1
RLS	Riolos of Patr	2.16	353	ePG	Pg	02 03 20.5	+0.1
RLS	Riolos of Patr	2.16	353	ePg	Pg	02 03 20.5	+0.1
LTK	Loutraki	2.30	23	P	Pn	02 03 19.1	+2.2
LTK	Loutraki	2.30	23	ePG	Pg	02 03 21.5	-1.5
LTK	Loutraki	2.30	23	P	Pn	02 03 19.1	+2.2
LTK	Loutraki	2.30	23	ePg	Pg	02 03 21.5	-1.5
VLS	Valsamata	2.47	337	ePn	Pn	02 03 19.8	+0.6
VLS	Valsamata	2.47	337	P	Pn	02 03 17.4	-1.8
VLS	Valsamata	2.47	337	P	Pn	02 03 17.4	-1.8
VLS	Valsamata	2.47	337	ePn	Pn	02 03 19.8	+0.6
EFP	Efpalio	2.51	1	ePG	Pg	02 03 25.4	-1.7
EFP	Efpalio	2.51	1	ePg	Pg	02 03 25.8	-1.3
EVR	Evrytania	3.00	360	ePg	Pg	02 03 35

ASAJ 02 10 38.6
ASAJ pmax pmax
comp=Z,4.0nm,0.3s
ASAJ smax
comp=N,2.0nm,0.3s
YUK Yuzh-Kuril'sk 6.32 35 i P **Pn 02 09 44.0 +0.5**
YUK i S **Sn 02 10 53.5 -2.2**
YUK pmax pmax
comp=Z,90nm,0.5s
YUK pmax pmax
comp=N,50nm,0.1s
YUK pmax pmax
comp=E,50nm,0.2s
YUK smax
comp=N,260nm,0.6s
YUK smax
comp=E,70nm,0.6s
YUK MLR MLR
comp=Z,200nm,17.0s
YSS Yuzh-Sakhalins 8.13 9 eP **Pn 02 10 09.4 +1.1**
KSRS Korea Array 10.31 266 Pn **Pn 02 10 42.1 +3.9**
comp=Z,1.5nm,0.3s,baz=75,slow=14,SNR=14
KSRS LR LR 02 14 14.8
comp=Z,48nm,19.2s,baz=75,slow=36
KSRS Korea Array 10.31 266 P **Pn 02 10 42.1 +3.9**
KSRS pmax pmax
comp=Z,2.0nm,0.3s
KSRS MLR MLR
comp=Z,48nm,19.2s
HABR Khabarovsk 10.42 338 P **Pn 02 10 44.8 +5.1**
HABR e 02 12 33.3
HABR pmax pmax
comp=Z,49nm,2.0s
HABR pmax pmax
comp=N,44nm,2.5s
HABR pmax pmax
comp=E,30nm,1.5s
HABR MLR MLR
comp=Z,46nm,7.0s
CBIJ Chichi jima 11.86 174 Pn **Pn 02 10 56.5 -3.0**
comp=Z,2.0nm,0.3s,baz=304,slow=18,SNR=3.2
YAK Yakutsk 24.12 347 eP **P 02 13 25.2 -0.8**
YAK pmax pmax
comp=Z,16nm,0.6s,mb4.6
YAK Yakutsk 24.12 347 eP **P 02 13 25.2 -0.7**
comp=Z,16nm,0.6s,mb4.6
SEY Seymchan 25.02 12 ceP **P 02 13 35.6 +1.5**
SONM Songino Array 26.41 301 P **P 02 13 44.9 -2.0**
comp=Z,0.4nm,0.5s,mb3.2,baz=97,slow=9.0,SNR=3.1
BILL Bilibino 32.33 18 eP **P 02 14 40.3 +1.0**
BILL pmax pmax
comp=Z,3.0nm,1.0s,mb4.1
BILL Bilibino 32.33 18 eP **P 02 14 38.8 -0.5**
comp=Z,2.3nm,0.6s,mb4.2
ZAA0 Zalesovo Array 40.34 311 eP **P 02 15 47.1 -0.6**
ZALV Zalesovo Beam 40.34 311 P **P 02 15 47.4 -0.3**
comp=Z,3.1nm,0.7s,mb4.2,baz=88,slow=8.2,SNR=15
ZALV Zalesovo Beam 40.34 311 P **P 02 15 47.4 -0.4**
ZALV pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
ZALV Zalesovo Beam 40.34 311 P **P 02 15 47.4 -0.3**
MK31 Makanchi Array 42.77 300 eP **P 02 16 07.6 -0.2**
MKAR Makanchi Array 42.77 300 P **P 02 16 07.5 -0.3**
comp=Z,1.3nm,0.7s,mb3.8,baz=78,slow=11,SNR=12
MKAR Makanchi Array 42.77 300 P **P 02 16 07.5 -0.3**
MKAR pmax pmax
comp=Z,1.0nm,0.7s
KURK Kurchatov 44.44 307 P **P 02 16 21.5 +0.2**
comp=Z,5.8nm,0.6s,mb4.5,baz=81,slow=8.4,SNR=28
KURK Kurchatov 44.44 307 eP **P 02 16 20.2 -1.0**
KURK pmax pmax
comp=Z,8.0nm,0.7s,mb4.6
KURK Kurchatov 44.44 307 eP **P 02 16 20.2 -1.0**
comp=Z,8.4nm,0.7s,mb4.6
KDAK Kodiak Island 45.98 43 P **P 02 16 33.2 -0.2**
comp=Z,2.9nm,0.5s,mb4.5,baz=227,slow=4.7,SNR=5.4
KDAK Kodiak Island 45.98 43 P **P 02 16 33.2 -0.2**
KDAK pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
TKM2 Tokmak 2 48.37 297 eP **P 02 16 53.2 +1.0**
TKM2 pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
TKM2 Tokmak 2 48.37 297 eP **P 02 16 53.2 +1.0**
comp=Z,2.7nm,0.8s,mb4.3
BVAR Borovoye Array 48.99 311 P **P 02 16 56.5 -0.4**
comp=Z,1.4nm,0.6s,mb4.2,baz=126,slow=7.5,SNR=8.4
BVAR Borovoye Array 48.99 311 P **P 02 16 56.5 -0.3**
BVAR pmax pmax
comp=Z,1.0nm,0.6s
BRVK Borovoye 49.05 311 ceP **P 02 16 59.4 +2.1**
BRVK pmax pmax
comp=Z,1.0nm,0.6s,mb4.0
ARU Arti 54.66 318 c iP **P 02 17 38.6 -0.5**
ARU 02 19 37.5
ARU S **S 02 25 16.7 -2.2**
ARU SS SS 02 28 57.8 -3.3
ARU pmax pmax
comp=Z,15nm,2.5s,mb4.6
ARU Arti 54.66 318 eP **P 02 17 37.8 -1.3**
comp=Z,3.2nm,0.6s,mb4.5
ABKAR Akbulak array 56.40 309 eP **P 02 17 51.1 -0.6**
comp=Z,3.8nm,0.6s,mb4.6
WRAB Tennant Creek 58.88 187 eP **P 02 18 09.2 -0.1**
WRAB pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
WRAB Tennant Creek 58.88 187 eP **P 02 18 09.2 -0.1**
comp=Z,2.8nm,0.6s,mb4.5
WRA Warramunga Arr 58.89 187 P **P 02 18 08.5 -0.9**
comp=Z,3.3nm,0.5s,mb4.6,baz=7.0,slow=7.2,SNR=14
WRA Warramunga Arr 58.89 187 P **P 02 18 08.5 -0.9**
WRA pmax pmax
comp=Z,3.0nm,0.5s
ARCES ARCESS Array B 62.07 339 P **P 02 18 30.1 -0.5**
comp=Z,3.0nm,0.8s,mb4.5,baz=56,slow=9.2,SNR=10
ARCES ARCESS Array B 62.07 339 P **P 02 18 30.1 -0.5**
ARCES pmax pmax
comp=Z,3.0nm,0.8s
ASAR Alice Springs 62.62 187 P **P 02 18 34.6 -0.1**
comp=Z,2.2nm,0.7s,mb4.4,baz=2.8,slow=4.2,SNR=24
ASAR Alice Springs 62.62 187 P **P 02 18 34.6 -0.1**
ASAR pmax pmax
comp=Z,2.0nm,0.7s
OBN Obninsk 66.32 323 eP **P 02 18 57.6 -1.2**
OBN e 02 21 24.0
OBN pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
FINES FINESS Array B 66.94 332 P **P 02 19 01.7 -0.9**
comp=Z,2.4nm,0.7s,mb4.3,baz=36,slow=7.5,SNR=13
FINES FINESS Array B 66.94 332 P **P 02 19 01.7 -0.9**
FINES pmax pmax
comp=Z,2.0nm,0.7s
FINES FINESS Array B 66.94 332 P **P 02 19 01.7 -0.9**
SUMG Summit 68.78 360 eP **P 02 19 14.6 +0.6**
comp=Z,2.3nm,0.7s,mb4.2
NEW Newport 69.06 44 eP **P 02 19 16.1 -0.1**
NEW pmax pmax
comp=Z,2.0nm,0.8s
NEW Newport 69.06 44 eP **P 02 19 16.1 -0.1**
comp=Z,1.7nm,0.8s,mb4.0
KIV Kislovodsk 69.35 310 eP **P 02 19 18.7 +0.7**
KIV pmax pmax
comp=Z,12nm,0.9s,mb4.8
KIV Kislovodsk 69.35 310 eP **P 02 19 19.0 +1.0**
comp=Z,12nm,0.8s,mb4.9
STKA Stephens Creek 70.46 179 P **P 02 19 24.7 0.0**
comp=Z,1.0nm,0.5s,mb4.0,baz=101,slow=11,SNR=2.9
WVOR Wild Horse Val 71.60 50 eP **P 02 19 32.3 +0.5**
WVOR pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
WVOR Wild Horse Val 71.60 50 eP **P 02 19 32.2 +0.5**
comp=Z,0.9nm,0.6s,mb3.9
SLMT Seeley Lake 71.64 44 eP **P 02 19 32.2 +0.3**
NB2 NORSAR Subarra 72.27 337 P **P 02 19 34.9 -0.6**
comp=Z,1.5nm,0.7s,mb4.0,baz=37,slow=6.2
NOA NORSAR Array B 72.27 337 P **P 02 19 35.0 -0.5**
comp=Z,1.7nm,0.7s,mb4.1,baz=38,slow=6.0,SNR=9.0
NOA NORSAR Array B 72.27 337 P **P 02 19 35.0 -0.5**
NOA pmax pmax
comp=Z,2.0nm,0.7s
NOA NORSAR Array B 72.27 337 P **P 02 19 35.0 -0.5**
FFC Flin Flon 72.33 33 ceP **P 02 19 36.9 +0.9**
FFC Flin Flon 72.33 33 eP **P 02 19 35.7 -0.3**
comp=Z,1.3nm,0.8s,mb3.9
AKASG Malin Array Be 72.54 322 P **P 02 19 36.5 -0.8**
comp=Z,1.9nm,0.6s,mb4.2,baz=48,slow=6.0,SNR=10
AKASG Malin Array Be 72.54 322 P **P 02 19 36.5 -0.8**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKASG Malin Array Be 72.54 322 P **P 02 19 36.5 -0.8**
AKBB Malin Array Si 72.54 322 eP **P 02 19 36.5 -0.8**
KIEV Kiev 72.55 322 eP **P 02 19 36.7 -0.6**
KIEV pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
KIEV Kiev 72.55 322 eP **P 02 19 36.7 -0.7**
comp=Z,3.3nm,0.8s,mb4.3
LRM Limekiln Ridge 73.08 44 eP **P 02 19 41.2 +0.6**
comp=Z,14nm,0.8s,mb5.0
DLMT Dillon 73.29 45 eP **P 02 19 42.3 +0.4**
comp=Z,2.0nm,0.8s,mb4.1
HLID Hailey 73.39 47 eP **P 02 19 43.5 +1.1**
comp=Z,1.6nm,1.2s,mb3.8
BOZ Bozeman (W) 73.64 44 eP **P 02 19 44.6 +0.7**
BOZ pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
BOZ Bozeman (W) 73.64 44 eP **P 02 19 44.6 +0.8**
comp=Z,1.5nm,0.6s,mb4.1
NVAR Mina Array Bea 74.19 53 P **P 02 19 48.5 +1.3**
comp=Z,0.7nm,0.4s,mb3.9,baz=293,slow=4.8,SNR=3.5
DUG Dugway 76.43 49 eP **P 02 20 00.4 +0.3**
DUG pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
DUG Dugway 76.43 49 eP **P 02 20 00.4 +0.3**
comp=Z,1.4nm,0.6s,mb4.1
BUR08 Bucovina Ar. S 76.55 321 eP **P 02 20 00.5 -0.1**
BW06 Boulder Array 76.63 45 eP **P 02 20 01.0 -0.2**
comp=Z,1.1nm,0.7s,mb3.9
PDAR Pinedale Array 76.64 45 P **P 02 20 01.6 +0.4**
comp=Z,1.0nm,0.7s,mb3.8,baz=297,slow=4.1,SNR=6.9
BR131 Keskin Array S 77.28 311 eP **P 02 20 04.6 -0.3**
SRU San Rafael 78.48 49 eP **P 02 20 11.7 +0.1**
SRU pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
SRU San Rafael 78.48 49 eP **P 02 20 11.7 +0.1**
comp=Z,2.5nm,0.7s,mb4.2
KHC Kasperske Hory 80.70 328 eP **P 02 20 23.2 -0.3**
KHC pmax pmax
comp=Z,1.0nm,0.8s,mb3.8
KHC Kasperske Hory 80.70 328 eP **P 02 20 23.2 -0.3**
comp=Z,1.4nm,0.8s,mb3.9
DBIC Dimbokro 124.61 317 PKP PKPdf 02 27 09.2 -1.3
comp=Z,3.3nm,1.0s,baz=317,slow=23,SNR=3.5
DBIC Dimbokro 124.61 317 PKIKP PKPdf 02 27 09.3 -1.3
DBIC pmax pmax
comp=Z,3.0nm,1.0s
LPAZ La Paz 146.04 56 PKPbc PKPbc 02 27 51.7 +0.8
comp=Z,2.9nm,0.6s,baz=355,slow=4.8,SNR=14
LPAZ La Paz 146.04 56 PKPbc PKPbc 02 27 51.7 +0.8

*DDA **22** 02:09:03.7, 40°.54N×34°.46E, h7km±1km, Md2.8*
*ISK **22** 02:09:03.4, 40°.58N×34°.47E, h6km, MD3.3*
*CSEM **22** 02:09:03.9±0.1, 40°.60N×34°.47E, h5km, MD2.8, Error ellipse: s-maj=2.0km s-min=1.7km az=54.0*
*ISCJB **22** 02:09:03.9±0.5, 40°.60N±0°.03×34°.46E±0°.03, h8km±5km, Error ellipse: s-maj=4.9km s-min=3.8km az=36.4*
ISC 22 02:09:04.4±0.5, **40°.59N**±0°.03×**34°.47E**±0°.03, **h8**km±4km, **n44**, σ0**°78/59, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CTKT	**Corum**	**0.25**	**82**	i P		**Pg**	**02 09 09.4**	**0.0**
CTKT				i S		**Sg**	**02 09 13.4**	**+0.8**
CTKT	**Corum**	**0.25**	**82**	i P		**Pg**	**02 09 09.4**	**+0.1**
CTKT				i S		**Sg**	**02 09 13.4**	**+0.7**
CORM	**Corum**	**0.43**	**163**	PG		**Pg**	**02 09 12.1**	**-0.7**
CORM				SG		**Sg**	**02 09 18.8**	**+0.5**
CORM	**Corum**	**0.43**	**163**	i Pg		**Pg**	**02 09 12.1**	**-0.6**
CORM				i Sg		**Sg**	**02 09 18.8**	**+0.5**
TOS	**Tosya**	**0.56**	**323**	PG		**Pg**	**02 09 14.8**	**-0.4**
TOS	**Tosya**	**0.56**	**323**	i Pg		**Pg**	**02 09 14.8**	**-0.5**
CANT	**Cankiri**	**0.65**	**272**	PG		**Pg**	**02 09 16.5**	**-0.4**
CANT				eSG		**Sg**	**02 09 25.6**	**+0.3**
ILGA	**Ilgaz**	**0.73**	**309**	i P		**Pg**	**02 09 18.6**	**0.0**
ILGA				i S		**Sg**	**02 09 29.5**	**+1.4**
ILGA	**Ilgaz**	**0.73**	**309**	i P		**Pg**	**02 09 18.6**	**0.0**
ILGA				i S		**Sg**	**02 09 29.5**	**+1.3**
ELDT	**Eldivan**	**0.80**	**263**	i P		**Pg**	**02 09 19.3**	**-0.5**
ELDT				i S		**Sg**	**02 09 30.5**	**+0.3**
ELDT	**Eldivan**	**0.80**	**263**	i P		**Pg**	**02 09 19.3**	**-0.5**
ELDT				i S		**Sg**	**02 09 30.5**	**+0.3**
BYBT	**Boyabat**	**0.91**	**14**	ePG		**Pg**	**02 09 21.2**	**-0.7**
BYBT	**Boyabat**	**0.91**	**14**	ePg		**Pg**	**02 09 21.2**	**-0.7**
CDAG	**Cicekdag**	**0.97**	**184**	i P		**Pg**	**02 09 21.5**	**-1.5**
CDAG				i S		**Sg**	**02 09 35.5**	**0.0**
CDAG	**Cicekdag**	**0.97**	**184**	i P		**Pg**	**02 09 21.5**	**-1.5**
CDAG				i S		**Sg**	**02 09 35.5**	**0.0**
YOZ	**Yozgat**	**1.15**	**145**	ePN		**Pn**	**02 09 25.0**	**-1.7**
YOZ				eSN		**Sn**	**02 09 41.7**	**-1.0**
YOZ	**Yozgat**	**1.15**	**145**	ePn		**Pn**	**02 09 25.0**	**-1.8**
DIKM	**Dikmen**	**1.22**	**29**	ePN		**Pn**	**02 09 27.4**	**-0.3**
BALT	**Daday**	**1.25**	**319**	i P		**Pn**	**02 09 27.8**	**-0.3**
BALT				i S		**Sb**	**02 09 40.4**	**-4.0**
BALT	**Daday**	**1.25**	**319**	i P		**Pn**	**02 09 27.8**	**-0.3**
KVT	**Kavak**	**1.29**	**67**	ePN		**Pn**	**02 09 28.4**	**-0.3**
KVT	**Kavak**	**1.29**	**67**	ePn		**Pn**	**02 09 28.4**	**-0.3**
BBAL	**Bala**	**1.47**	**225**	i P		**Pn**	**02 09 30.5**	**-0.6**
BBAL				i S		**Sn**	**02 09 50.9**	**+0.4**
BBAL	**Bala**	**1.47**	**225**	i P		**Pn**	**02 09 30.5**	**-0.6**
BBAL				i S		**Sn**	**02 09 50.9**	**+0.4**
LOD	**Lodumlu**	**1.48**	**242**	ePN		**Pn**	**02 09 31.0**	**-0.3**
LOD	**Lodumlu**	**1.48**	**242**	ePn		**Pn**	**02 09 31.0**	**-0.3**
SAFT	**Safranbolu**	**1.50**	**296**	ePN		**Pn**	**02 09 31.7**	**+0.1**
SAFT	**Safranbolu**	**1.50**	**296**	ePn		**Pn**	**02 09 31.7**	**+0.1**
SVSK	**Karacayir**	**2.05**	**108**	ePN		**Pn**	**02 09 39.5**	**+0.4**
SVSK	**Karacayir**	**2.05**	**108**	ePn		**Pn**	**02 09 39.6**	**+0.5**
MDU	**Mudurnu**	**2.48**	**268**	ePN		**Pn**	**02 09 45.0**	**-0.1**
MDU	**Mudurnu**	**2.48**	**268**	ePn		**Pn**	**02 09 45.0**	**-0.1**
SULT	**Sultanhani-AKS**	**2.50**	**198**	ePN		**Pn**	**02 09 46.3**	**+1.0**
SULT	**Sultanhani-AKS**	**2.50**	**198**	ePn		**Pn**	**02 09 46.3**	**+1.0**
SVRH	**Sivrihisar-ESK**	**2.53**	**244**	ePN		**Pn**	**02 09 45.5**	**-0.3**
SVRH	**Sivrihisar-ESK**	**2.53**	**244**	ePn		**Pn**	**02 09 45.5**	**-0.3**
SARI	**SarD1z-Kayseri**	**2.57**	**137**	ePN		**Pn**	**02 09 48.2**	**+2.0**
KIZT	**Kizilcal**	**2.63**	**230**	ePN		**Pn**	**02 09 46.6**	**-0.4**
KIZT	**Kizilcal**	**2.63**	**230**	ePn		**Pn**	**02 09 46.6**	**-0.5**
LADK	**Ladik-KONYA**	**2.89**	**215**	ePN		**Pn**	**02 09 51.2**	**+0.6**
LADK	**Ladik-KONYA**	**2.89**	**215**	ePn		**Pn**	**02 09 51.2**	**+0.5**
KOZT	**Kozan**	**3.28**	**161**	ePN		**Pn**	**02 09 56.9**	**+0.9**
KARA	**Karaisali**	**3.35**	**172**	ePN		**Pn**	**02 09 58.4**	**+1.3**
KARA	**Karaisali**	**3.35**	**172**	ePn		**Pn**	**02 09 58.4**	**+1.3**

IDC 22 02:28:32.5±53.0, **22°.40S×174°.43W, h0**km, **mb4.1**/3, **mb1 4.3**/3, **mb1mx3.8**/17, **mbtmp4.1**/3, **Error ellipse: s-maj=1008.0km s-min=171.6km az=87.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.03**	**247**	P		P	02 36 09.5	+0.1
	0.9nm,0.4s,baz=72,slow=6.4,SNR=2.5							
ASAR	**Alice Springs**	**47.35**	**258**	P		P	02 37 08.4	-0.1
	1.0nm,0.4s,baz=97,slow=7.3,SNR=15							
WRA	**Warramunga Arr**	**47.65**	**263**	P		P	02 37 10.7	-0.2
	1.8nm,0.4s,baz=102,slow=8.2,SNR=6.9							

*ISK **22** 02:54:07.9, 39°.23N×25°.54E, h10km, MD3.5*
*DDA **22** 02:54:07.3, 39°.18N×25°.42E, h30km±3km, Md3.3*
*ISCJB **22** 02:54:08.8±0.6, 39°.24N±0°.02×25°.55E±0°.02, h10km±4km, Error ellipse: s-maj=3.9km s-min=2.8km az=25.7*
*CSEM **22** 02:54:09.3±0.1, 39°.22N×25°.55E, h10km, ML3.7/5, Error ellipse: s-maj=3.2km s-min=2.4km az=17.0*
*THE **22** 02:54:09.1, 39°.20N×25°.51E, h2km±1km, ML3.7/5, Error ellipse: s-maj=2.0km s-min=0.6km az=131.0*
*NEIC **22** 02:54:11.0, 39°.41N×25°.69E, h25km, MD3.6(ATH), After ATH.*
*SOF **22** 02:54:11.2, 39°.44N×25°.55E, h14km, MD2.9*
*ATH **22** 02:54:11.0, 39°.41N×25°.69E, h25km±2km, MD3.6/4*
ISC 22 02:54:09.5±0.5, **39°.22N**±0°.02×**25°.55E**±0°.02, **h11**km±3km, **n150**, σ0**°90/184, 7C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.24**	**92**	P		**Pg**	**02 54 14.4**	**-0.1**
SIGR				S		**Sg**	**02 54 18.6**	**+0.8**
SIGR	**SIGRI**	**0.24**	**92**	P		**Pg**	**02 54 14.4**	**-0.1**
SIGR				S		**Sg**	**02 54 18.6**	**+0.8**
PRK	**Paraskevi**	**0.56**	**87**	ePb		**Pb**	**02 54 20.8**	**-0.6**
PRK				eSb		**Sb**	**02 54 28.5**	**-1.0**
PRK	**Paraskevi**	**0.56**	**87**	P		**Pg**	**02 54 20.5**	**0.0**
PRK				S		**Sg**	**02 54 29.0**	**+1.1**
PRK	**Paraskevi**	**0.56**	**87**	ePB		**Pb**	**02 54 20.8**	**-0.6**
PRK				eSB		**Sb**	**02 54 28.5**	**-1.0**
PRK	**Paraskevi**	**0.56**	**87**	P		**Pg**	**02 54 20.5**	**0.0**
PRK	**Paraskevi**	**0.56**	**87**	ePb		**Pb**	**02 54 20.8**	**-0.6**
PRK				eSb		**Sb**	**02 54 28.5**	**-1.0**
PRK				S		**Sg**	**02 54 29.0**	**+1.1**
LIA	**Limnos Island**	**0.73**	**338**	ePb		**Pb**	**02 54 23.1**	**-1.2**
LIA				eSn		**Sg**	**02 54 33.2**	**-0.1**
LIA	**Limnos Island**	**0.73**	**338**	P		**Pg**	**02 54 23.2**	**-0.5**
LIA				S		**Sg**	**02 54 34.2**	**+0.9**
LIA	**Limnos Island**	**0.73**	**338**	ePB		**Pb**	**02 54 23.1**	**-1.2**
LIA				eSN		**Sg**	**02 54 33.2**	**-0.1**
LIA	**Limnos Island**	**0.73**	**338**	ePb		**Pb**	**02 54 23.1**	**-1.2**
LIA				S		**Sg**	**02 54 34.2**	**+0.9**
BOZC	**Bozcaada**	**0.74**	**32**	i P		**Pg**	**02 54 23.0**	**-0.7**
BOZC				i S		**Sg**	**02 54 36.0**	**+2.7**
EZN	**Ezine**	**0.86**	**45**	PG		**Pg**	**02 54 24.9**	**-1.1**
EZN				eSG		**Sg**	**02 54 37.1**	**-0.1**
EZN	**Ezine**	**0.86**	**45**	i Pg		**Pg**	**02 54 24.9**	**-1.1**
EZN				eSg		**Sg**	**02 54 37.1**	**-0.1**
AYVA	**Ayvalik**	**0.89**	**84**	i P		**Pg**	**02 54 26.4**	**-0.3**
AYVA				i S		**Sg**	**02 54 40.0**	**+1.7**
AYVA	**Ayvalik**	**0.89**	**84**	i P		**Pg**	**02 54 26.5**	**-0.2**
AYVA				i S		**Sg**	**02 54 40.0**	**+1.6**
CHOS	**Chios island**	**0.92**	**154**	P		**Pg**	**02 54 26.8**	**-0.4**
CHOS				S		**Sg**	**02 54 39.3**	**+0.1**
CHOS	**Chios island**	**0.92**	**154**	P		**Pg**	**02 54 26.8**	**-0.4**
CHOS				S		**Sg**	**02 54 39.3**	**+0.1**
GADA	**Gvkgeada**	**1.01**	**16**	PG		**Pg**	**02 54 27.4**	**-1.6**
GADA				eSG		**Sg**	**02 54 42.0**	**0.0**
GADA	**Gvkgeada**	**1.01**	**16**	i Pg		**Pg**	**02 54 27.4**	**-1.5**
GADA				eSg		**Sg**	**02 54 42.0**	**-0.1**
AOS	**Alonnisos**	**1.29**	**268**	P		**Pn**	**02 54 32.5**	**-1.0**
AOS	**Alonnisos**	**1.29**	**268**	P		**Pn**	**02 54 32.2**	**-1.3**
AOS				S		**Sb**	**02 54 51.9**	**+1.4**
AOS	**Alonnisos**	**1.29**	**268**	P		**Pn**	**02 54 32.5**	**-1.0**
AOS				S		**Sb**	**02 54 51.9**	**+1.4**
BLCB	**Balcova**	**1.44**	**125**	ePN		**Pn**	**02 54 35.0**	**-0.5**
BLCB				eSN		**Sn**	**02 54 54.7**	**+0.3**
BLCB	**Balcova**	**1.44**	**125**	P		**Pn**	**02 54 35.3**	**-0.2**
BLCB	**Balcova**	**1.44**	**125**	ePn		**Pn**	**02 54 35.0**	**-0.5**
BLCB	**Balcova**	**1.44**	**125**	P		**Pn**	**02 54 35.3**	**-0.2**
BLCB				eSn		**Sn**	**02 54 54.7**	**+0.4**
LPK	**Lapseki**	**1.48**	**39**	ePN		**Pn**	**02 54 35.7**	**-0.5**
LPK	**Lapseki**	**1.48**	**39**	ePn		**Pn**	**02 54 35.7**	**-0.5**
IZM	**Izmir**	**1.57**	**121**	ePN		**Pn**	**02 54 36.8**	**-0.6**
IZM	**Izmir**	**1.57**	**121**	ePn		**Pn**	**02 54 36.8**	**-0.6**
ENEZ	**Enez**	**1.59**	**17**	ePN		**Pn**	**02 54 37.3**	**-0.2**
ENEZ	**Enez**	**1.59**	**17**	ePn		**Pn**	**02 54 37.3**	**-0.3**
PAIG	**Paliouri**	**1.61**	**297**	P		**Pn**	**02 54 36.7**	**-1.1**
PAIG	**Paliouri**	**1.61**	**297**	P		**Pn**	**02 54 36.4**	**-1.4**
PAIG	**Paliouri**	**1.61**	**297**	P		**Pn**	**02 54 36.7**	**-1.1**
OUR	**Ouranopolis**	**1.64**	**313**	P		**Pn**	**02 54 37.1**	**-1.2**
OUR	**Ouranopolis**	**1.64**	**313**	P		**Pn**	**02 54 37.1**	**-1.2**
BALY	**Balya**	**1.69**	**71**	i P		**Pn**	**02 54 38.2**	**-0.8**
BALY				i S		**Sn**	**02 55 04.0**	**+3.5**
BALY	**Balya**	**1.69**	**71**	i P		**Pn**	**02 54 38.2**	**-0.8**
BALY				i S		**Sn**	**02 55 04.0**	**+3.4**
ALN	**Alexandroupoli**	**1.72**	**13**	P		**Pn**	**02 54 38.3**	**-1.1**
ALN	**Alexandroupoli**	**1.72**	**13**	P		**Pn**	**02 54 38.6**	**-0.8**
ALN				S		**Sn**	**02 55 02.8**	**+1.4**
ALN	**Alexandroupoli**	**1.72**	**13**	P		**Pn**	**02 54 38.6**	**-0.8**
ALN				S		**Sn**	**02 55 02.8**	**+1.4**
PTL	**Penteli**	**1.76**	**229**	P		**Pn**	**02 54 40.3**	**+0.4**
PTL	**Penteli**	**1.76**	**229**	P		**Pn**	**02 54 40.3**	**+0.4**
AKS	**Akhisar**	**1.80**	**100**	ePN		**Pn**	**02 54 39.7**	**-0.8**
AKS	**Akhisar**	**1.80**	**100**	ePn		**Pn**	**02 54 39.7**	**-0.8**
AKHS	**Akhisar**	**1.80**	**100**	i P		**Pn**	**02 54 43.9**	**+3.4**
AKHS				i S		**Sn**	**02 55 07.9**	**+4.6**
AKHS	**Akhisar**	**1.80**	**100**	i P		**Pn**	**02 54 43.9**	**+3.4**
AKHS				i S		**Sn**	**02 55 07.9**	**+4.6**
XOR	**Xorichti**	**1.83**	**275**	P		**Pn**	**02 54 39.8**	**-1.1**
XOR				S		**Sn**	**02 55 05.1**	**+1.0**
XOR	**Xorichti**	**1.83**	**275**	P		**Pn**	**02 54 39.8**	**-1.1**
XOR				S		**Sn**	**02 55 05.1**	**+1.0**
BALB	**Balikesir**	**1.86**	**76**	ePN		**Pn**	**02 54 41.7**	**+0.4**
BALB	**Balikesir**	**1.86**	**76**	ePn		**Pn**	**02 54 41.7**	**+0.4**
RDO	**Rodhopi**	**1.93**	**360**	ePn		**Pn**	**02 54 41.6**	**-0.6**
RDO	**Rodhopi**	**1.93**	**360**	P		**Pn**	**02 54 41.7**	**-0.5**
RDO	**Rodhopi**	**1.93**	**360**	ePN		**Pn**	**02 54 41.6**	**-0.6**
RDO	**Rodhopi**	**1.93**	**360**	P		**Pn**	**02 54 41.7**	**-0.5**
RKY	**Sarkoy-Tekirda**	**1.93**	**40**	ePN		**Pn**	**02 54 41.8**	**-0.5**
RKY	**Sarkoy-Tekirda**	**1.93**	**40**	ePn		**Pn**	**02 54 41.8**	**-0.5**
VLY	**Voula,Athens**	**1.94**	**226**	P		**Pn**	**02 54 42.0**	**-0.4**
VLY	**Voula,Athens**	**1.94**	**226**	P		**Pn**	**02 54 42.0**	**-0.4**
KAVA	**Kavala**	**1.94**	**336**	P		**Pn**	**02 54 42.8**	**+0.3**
KAVA	**Kavala**	**1.94**	**336**	P		**Pn**	**02 54 42.8**	**+0.3**
PLG	**Polygyros**	**1.99**	**306**	ePb		**Pb**	**02 54 45.1**	**-0.6**
PLG	**Polygyros**	**1.99**	**306**	ePB		**Pb**	**02 54 45.1**	**-0.6**
PLG	**Polygyros**	**1.99**	**306**	ePb		**Pb**	**02 54 45.1**	**-0.6**
MFT	**Murefte**	**2.06**	**40**	ePN		**Pn**	**02 54 43.9**	**-0.1**
MFT	**Murefte**	**2.06**	**40**	ePn		**Pn**	**02 54 43.9**	**-0.1**
EDC	**Edincik**	**2.11**	**57**	ePN		**Pn**	**02 54 43.7**	**-1.1**
EDC	**Edincik**	**2.11**	**57**	ePn		**Pn**	**02 54 43.7**	**-1.1**
BNT	**Bandirma**	**2.15**	**57**	ePN		**Pn**	**02 54 44.9**	**-0.5**
DURS	**Dursunbey**	**2.30**	**80**	i P		**Pn**	**02 54 47.5**	**+0.1**
DURS				i S		**Sn**	**02 55 24.4**	**+8.7**
DURS	**Dursunbey**	**2.30**	**80**	i P		**Pn**	**02 54 47.5**	**+0.1**
TKR	**Tekirdag**	**2.34**	**40**	ePN		**Pn**	**02 54 47.0**	**-0.9**
TKR	**Tekirdag**	**2.34**	**40**	ePn		**Pn**	**02 54 47.0**	**-0.9**
KCT	**Karacabey**	**2.41**	**63**	ePN		**Pn**	**02 54 47.3**	**-1.6**
KCT	**Karacabey**	**2.41**	**63**	ePn		**Pn**	**02 54 47.3**	**-1.5**
SRS	**Serrai**	**2.42**	**322**	P		**Pn**	**02 54 48.5**	**-0.5**
SRS	**Serrai**	**2.42**	**322**	P		**Pn**	**02 54 48.5**	**-0.5**
KDZ	**Kurdzhali**	**2.43**	**358**	P		**Pn**	**02 54 48.6**	**-0.6**
KDZ	**Kurdzhali**	**2.43**	**358**	P		**Pn**	**02 54 48.6**	**-0.6**
NVR	**Nevrokopi**	**2.49**	**329**	P		**Pn**	**02 54 49.8**	**-0.2**
NVR	**Nevrokopi**	**2.49**	**329**	P		**Pn**	**02 54 49.8**	**-0.2**
AGG	**Agios Georgios**	**2.51**	**267**	P		**Pn**	**02 54 50.9**	**+0.7**
AGG	**Agios Georgios**	**2.51**	**267**	P		**Pn**	**02

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VTS	Vitosha	3.81	333	P	Pn	02 55 10.1	+2.0
GPA	Golpazari	3.83	72	*e*PN	Pn	02 55 09.3	+0.9
GPA	Golpazari	3.83	72	*e*Pn	Pn	02 55 09.3	+1.0
KRUS	Krusevo	3.92	305	*e*Pn	Pn	02 55 09.9	+0.2
GULT	Gulveren	4.01	71	*e*PN	Pn	02 55 11.9	+1.0
GULT	Gulveren	4.01	71	*e*Pn	Pn	02 55 12.0	+1.1
ESKT	Eskisehir	4.12	84	*e*PN	Pn	02 55 12.3	-0.2
ESKT	Eskisehir	4.12	84	*e*Pn	Pn	02 55 12.3	-0.1
MPEP	Malo Peshtene	4.35	342	*e*P	Pn	02 55 16.8	+1.2
MDU	Mudurnu	4.54	72	*e*PN	Pn	02 55 19.4	+1.3
MDU	Mudurnu	4.54	72	*e*Pn	Pn	02 55 19.4	+1.3
BARS	Barje	4.57	323	*e*Pn	Pn	02 55 19.1	+0.5
SVRH	Sivrihisar-ESK	4.64	85	*e*PN	Pn	02 55 19.8	+0.2
SVRH	Sivrihisar-ESK	4.64	85	*e*Pn	Pn	02 55 19.8	+0.2
MLR	Muntele Rosu	6.28	3	⇑*i*P	Pn	02 55 43.5	+1.5
MLR	Muntele Rosu	6.28	3	⇑*i*P	Pn	02 55 43.5	+1.5
GZR	Gura Zlata	6.50	343	⇑*i*P	Pn	02 55 45.1	0.0
GZR	Gura Zlata	6.50	343	⇑*i*P	Pn	02 55 45.1	0.0
PLOR	Plostina	6.68	7	⇑*i*P	Pn	02 55 50.3	+2.8
VRI	Vrincioaia	6.70	7	⇑*i*P	Pn	02 55 49.8	+2.0
VRI	Vrincioaia	6.70	7	⇑*i*P	Pn	02 55 49.8	+2.0

IDC ***22*** *03:08:22.7±1.7, 51°.50N×179°.27W, h0km, mb3.9/10, mb1 4.1/11, mb1mx3.9/26, mbtmp3.9/11, ML3.6/1, MS2.9/5, Ms1 2.9/5, ms1mx2.8/27, Error ellipse: s-maj=52.6km s-min=12.2km az=6.0*
NEIC ***22*** *03:08:24.7, 51°.04N×179°.77W, h7km, mb4.1/14, ML3.7(AEIC), After AEIC.*
ISC 22 03:08:25.3±1.9, 51°.1N±0°.2×179°.68W±0°.07, h23km±11km, n39, σ1°.11/38, mb4.0/22, MS3.0/3, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	Amchitka	0.69	292	P	Pb	03 08 37.9	-0.8
AMKA				S	Sb	03 08 47.3	-0.5
SMY	Shemya	4.17	295	P	Pn	03 09 30.0	+2.5
FX1	Attu Island--F	4.76	294	Pn	Pn	03 09 37.0	+1.5
	8.4nm,0.3s,baz=274,slow=22,SNR=28						
FX1				Sn	Sn	03 10 31.2	+1.3
	3.0nm,0.3s,baz=264,slow=19,SNR=2.5						
FX1				LR	LR	03 11 26.9	
	comp=Z,100nm,21.3s,baz=95,slow=38						
FX1	Attu Island--F	4.76	294	P	Pn	03 09 36.5	+1.0
SPIA	Saint Paul Isl	8.21	39	P	Pn	03 10 27.6	+4.8
PETK	Petropavlovsk-	14.03	287	LR	LR	03 16 46.1	
	comp=Z,32nm,20.0s,baz=271,slow=36						
KDAK	Kodiak Island	17.02	56	Pn	Pn	03 12 20.0	-1.6
	0.7nm,0.3s,baz=225,slow=5.7,SNR=5.3						
KDAK				Sn	Sn	03 15 10.3	-20
	0.3nm,0.3s,baz=265,slow=21,SNR=8.2						
KDAK	Kodiak Island	17.02	56	Pn	Pn	03 12 20.0	-1.6
KDAK				Sn	Sn	03 15 10.3	-20
PPLA	Purkeypile	18.87	41	*e*P	Pn	03 12 46.0	+1.9
	3.5nm,0.8s						
BPAW	Bear Paw Mtn.	19.89	38	*e*P	Pn	03 12 55.9	-0.5
	4.7nm,0.8s						
COLA	College	21.45	38	*e*P	P	03 13 13.5	+1.9
	3.5nm,1.0s,mb3.6						
EGAK	Eagle	24.10	41	*e*P	P	03 13 38.5	-0.2
	4.7nm,0.9s,mb3.9						
YKA	Yellowknife Ar	35.80	46	P	P	03 15 20.6	-1.7
	1.0nm,0.6s,mb3.9,baz=281,slow=7.4,SNR=7.4						
KSRS	Korea Array	39.09	270	LR	LR	03 32 08.7	
	comp=Z,13nm,20.5s,MS2.8,baz=249,slow=36						
NEW	Newport	39.49	69	*e*P	P	03 15 55.0	+1.4
HLID	Hailey	43.54	73	*e*P	P	03 16 28.0	+1.1
	1.0nm,0.8s,mb3.6						
MCMT	McKenzie Canyo	43.78	71	*e*P	P	03 16 29.6	+0.7
	1.0nm,0.7s,mb3.6						
BOZ	Bozeman (W)	44.06	69	*e*P	P	03 16 31.9	+0.8
	2.1nm,0.6s,mb4.0						
RLMT	Red Lodge	45.74	69	*e*P	P	03 16 45.7	+1.3
	5.5nm,0.9s,mb4.5						
ULN	Ulaanbaatar	45.88	296	*e*P	P	03 16 44.9	-0.6
	1.5nm,0.6s,mb4.1						
SONM	Songino Array	46.27	296	P	P	03 16 48.9	+0.4
	0.6nm,0.6s,mb3.7,baz=71,slow=7.4,SNR=4.6						
SONM				LR	LR	03 36 10.6	
	comp=Z,35nm,19.4s,MS3.3,baz=164,slow=36						
DUG	Dugway	46.46	76	*e*P	P	03 16 49.1	-1.1
	2.9nm,1.0s,mb4.2						
BW06	Boulder Array	46.91	71	*e*P	P	03 16 53.8	+0.2
	1.8nm,0.8s,mb4.0						
PDAR	Pinedale Array	46.91	71	P	P	03 16 53.7	+0.1
	1.2nm,0.5s,mb4.1,baz=323,slow=2.8,SNR=12						
ZALV	Zalesovo Beam	53.81	313	LR	LR	03 42 00.2	
	comp=Z,15nm,18.0s,MS3.1,baz=75,slow=38						
ARCES	ARCESS Array B	58.25	350	P	P	03 18 16.0	-1.1
	2.8nm,0.9s,mb4.3,baz=32,slow=8.6,SNR=3.0						
KURK	Kurchatov	58.80	313	*e*P	P	03 18 20.7	-0.5
	2.3nm,0.6s,mb4.4						
TXAR	Lajitas Array	59.24	80	P	P	03 18 24.2	-0.5
	0.2nm,0.5s,mb3.4,baz=310,slow=6.0,SNR=5.0						
TXAR	Lajitas Array	59.24	80	P	P	03 18 24.2	-0.5
MK31	Makanchi Array	59.76	308	*e*P	P	03 18 27.1	-0.9
MKAR	Makanchi Array	59.76	308	P	P	03 18 27.2	-0.8
	1.4nm,0.5s,mb4.3,baz=49,slow=7.9,SNR=12						
BVAR	Borovoye Array	60.73	319	P	P	03 18 33.6	-0.9
	0.7nm,0.4s,mb4.1,baz=54,slow=7.5,SNR=4.4						
BRVK	Borovoye	60.74	319	*e*P	P	03 18 36.0	+1.4
	1.5nm,0.8s,mb4.2						
TKM2	Tokmak 2	65.85	309	*e*P	P	03 19 08.7	+0.1
	0.8nm,0.5s,mb4.0						
FINES	FINESS Array B	65.91	347	P	P	03 19 06.9	-1.7
	2.6nm,0.9s,mb4.3,baz=0.0,slow=0.8,SNR=5.6						
NOA	NORSAR Array B	67.85	354	P	P	03 19 20.3	-0.7
	1.0nm,0.9s,mb3.9,baz=344,slow=5.0,SNR=5.0						
AKASG	Malin Array Be	75.62	342	P	P	03 20 06.6	-1.3
	0.3nm,0.3s,mb3.7,baz=22,slow=6.7,SNR=2.9						
BOSA	Boshof	150.73	311	PKPbc	PKPbc	03 28 14.8	-0.5
	1.1nm,0.6s,baz=266,slow=18,SNR=4.0						
BOSA	Boshof	150.73	311	PKPbc	PKPbc	03 28 14.8	-0.5

CASC 22 03:39:57.1±2.2, 8°.43N×83°.06W, h3km±7km, MD3.7, 3C-3D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	Cerro Adams	0.25	334	⇓*e*P	Pg	03 40 02.6	+0.7
ACR				*e*S	Sg	03 40 08.2	+3.0
BRU2	Volcan	0.51	45	⇓*i*P	Pg	03 40 08.2	+1.2
BRU2				*e*S	Sg	03 40 17.2	+3.5
CTCR	Cotoan	0.55	32	⇑*i*P	Pg	03 40 08.2	+0.5
BAR1		0.85	343	⇑*i*P	Pg	03 40 13.3	-0.1
BAR1				⇓*e*P		03 40 13.3	
CNI	Changuinola	1.12	28	⇑*i*P	Pg	03 40 18.5	-0.1
BUS	Buena Vista	1.32	328	*e*P	Pg	03 40 21.2	-1.2
QCR	Quepos	1.48	312	*e*P	Pn	03 40 23.8	-0.9
URSC	Urasca	1.57	333	*e*P	Pn	03 40 25.2	-0.7
URSC				*e*S	Sn	03 40 45.4	-1.4
LAJ	Bijagual	1.77	324	*e*P	Pn	03 40 31.3	+2.5
PRS1	Puriscal	1.98	321	*e*P	Pn	03 40 31.4	-0.2
CGA2	Cerro Gallo 2	2.10	319	*e*P	Pn	03 40 34.6	+1.3
JCR	Jicaral	2.47	305	*e*P	Pn	03 40 39.7	+1.3

CASC 22 03:43:26.6±1.4, 8°.42N×83°.08W, h7km±6km, MD3.6, 4C, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	Cerro Adams	0.24	339	⇑*i*P	Pg	03 43 32.1	+0.6
ACR				*e*S	Sg	03 43 36.2	+1.5
BRU2	Volcan	0.53	46	⇑*i*P	Pg	03 43 38.0	+1.1
BRU2				*e*S	Sg	03 43 46.2	+2.3
BAR1		0.84	344	⇑*i*P	Pg	03 43 42.7	-0.2
BAR1				*e*S	Sg	03 43 54.9	+1.1
BUS	Buena Vista	1.31	329	*e*P	Pn	03 43 50.8	-0.5
BUS				*e*S	Sb	03 44 08.5	0.0
URSC	Urasca	1.56	334	*e*P	Pn	03 43 54.8	0.0
URSC				⇑*e*P		03 43 54.9	
URSC				*e*S	Sn	03 44 15.6	+0.3
PRS1	Puriscal	1.97	322	*e*P	Pn	03 44 02.3	+1.9
PRS1				*e*S	Sn	03 44 25.2	-0.1

NIED ***22*** *03:48:00, 35°.70N×140°.10E, h83km, Mw4.3 Best double couple: M₀3.25000×10¹⁵ NP1:φ₀s45.00000°, δ73.00000°, λ103.00000°. NP2:φ₀s187.00000°, δ21.00000°, λ54.00000°.*
BJI ***22*** *03:48:29.7, 35°.55N×140°.61E, h70km, mB4.6/18, mb4.6/26, Ms4.2/12, Ms7 4.4/8*
MOS ***22*** *03:48:30.3±1.1, 35°.64N×140°.01E, h33km, mb4.7/32, Error ellipse: s-maj=11.1km s-min=6.0km az=100.5*
JMA ***22*** *03:48:34.7±0.2, 35°.65N×140°.09E, h71km±2km, M4.3 Broadband fault plane solution: P waves. NP1: φ₀s270.00000°, δ0.00000°, λ127.00000°. NP2:φ₀s53.00000°, δ90.00000°, λ90.00000°. Principal axes: T Plg45.0000°, Azm323.0000°; N Plg0.0000°, Azm53.0000°; P Plg45.0000°, Azm143.0000°;*
JMA Felt II J1.
ISCJB ***22*** *03:48:35.1±0.2, 35°.57N±0°.03×139°.99E±0°.03, h73km±2km, mb4.3/71 Error ellipse: s-maj=5.0km s-min=3.7km az=24.4*
NEIC ***22*** *03:48:36.0±1.0, 35°.59N×139°.97E, h71km±8km, mb4.4/37, Error ellipse: s-maj=9.4km s-min=5.7km az=177.0*
NEIC Recorded [2 JMA] in Chiba, Ibaraki, Kanagawa, Saitama, Tochigi and Tokyo; [1 JMA] in Gumma and Yamanashi.
IDC ***22*** *03:48:36.0±2.5, 35°.60N×139°.98E, h72km±21km, mb4.0/20, mb1 4.1/20, mb1mx4.0/27, mbtmp4.0/20, MS3.0/8, Ms1 3.0/8, ms1mx2.8/27, Error ellipse: s-maj=16.3km s-min=15.7km az=163.0*
ISC 22 03:48:35.9±0.2, 35°.57N±0°.03×139°.99E±0°.03, h68km±2km, h69km±2.5km: pP-P, n297, σ0°.76/314, mb4.3/71, 77C-65D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOK	Tokyo	0.22	301	P	Pn	03 48 46.6	+0.2
TOK				S	Sn	03 48 55.2	+1.1
JCN	Nagara	0.23	132	⇑P	Pn	03 48 46.3	-0.2
JCN				S	Sn	03 48 55.2	+1.1
JOD2	Odawara 2	0.80	248	⇓P	Pn	03 48 51.9	+0.1
JOD2				S	Sn	03 49 04.0	+0.4
BSO3	Boso 3	0.88	151	⇑P	Pn	03 48 51.7	-1.1
BSO3				*e*S	Sn	03 49 05.3	0.0
JAG	Ashikaga	0.96	333	⇓P	Pn	03 48 52.8	-1.0
JAG				*e*S	Sn	03 49 05.7	-1.3
JIM2	Oshima 3	0.97	208	P	Pn	03 48 53.3	-0.6
JIM2				*e*S	Sn	03 49 07.6	+0.4
JRY	Ryogami san	0.99	297	⇓P	Pn	03 48 54.5	+0.3
JRY				*e*S	Sn	03 49 09.4	+1.6
JYN	Shimob	1.18	267	⇓P	Pn	03 48 57.0	+0.4
JYN				*e*S	Sn	03 49 13.2	+1.1
BSO1	Boso 1	1.22	138	⇑P	Pn	03 48 55.3	-1.9
BSO1				S	Sn	03 49 11.4	-1.6
JIZS	Izushimoda	1.25	227	⇑P	Pn	03 48 57.8	+0.3
JIZS				S	Sn	03 49 14.4	+0.8
JKT	Katashina	1.34	333	⇓P	Pn	03 48 57.6	-1.0
JKT				*e*S	Sn	03 49 15.3	-0.4
MJAR	Matsushiro Arr	1.74	304	P	Pn	03 49 03.5	-0.5
	97nm,0.3s,baz=70,slow=30,SNR=777						
MJAR				S	Sn	03 49 28.7	+3.4
	62nm,0.3s,baz=115,slow=16,SNR=9.3						
MAJO	Matsushiro	1.74	304	*e*P	Pn	03 49 04.2	+0.2
MAT	Matsushiro	1.74	304	P	Pn	03 49 04.4	+0.4
MAT				S	Sn	03 49 28.6	+3.3
JHJ	Hachijo jima 2	2.45	184	P	Pn	03 49 08.6	-5.1
	29nm,0.3s,baz=290,slow=20,SNR=9.9						
JHJ				S	Sn	03 49 41.9	-0.7
	184nm,0.3s,baz=261,slow=22,SNR=9.7						
CBIJ	Chichi jima	8.65	167	P	Pn	03 50 34.7	-3.7
	32nm,0.3s,baz=332,slow=7.7,SNR=27						
CBIJ				S	Sn	03 52 06.2	-8.3
	8.1nm,0.3s,baz=293,slow=23,SNR=2.9						
ASAJ	Asahikawa	8.77	12	P	Pn	03 50 35.6	-4.2
	3.5nm,0.3s,baz=209,slow=11,SNR=31						
ASAJ				S	Sn	03 52 10.9	-6.1
	1.5nm,0.3s,baz=122,slow=33,SNR=4.1						
ASAJ	Asahikawa	8.77	12	P	Pn	03 50 35.6	-4.2
ASAJ				S	Sn	03 52 10.9	-6.1
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ASAJ				smax			
	comp=N,2.0nm,0.3s						
YUK	Yuzh-Kuril'sk	9.58	26	*e*P	Pn	03 50 46.2	-4.7
YUK				*e*S	Sn	03 52 27.0	-10
YUK				smax			
	comp=N,180nm,0.6s						
YUK				smax			
	comp=E,170nm,0.3s						
KSRS	Korea Array	9.89	284	P	Pn	03 50 59.1	+3.8
	comp=E,0.6nm,0.3s,baz=100,slow=14,SNR=12						
KSRS				LR	LR	03 54 39.8	
	comp=E,125nm,20.5s,baz=178,slow=37						
KSRS	Korea Array	9.89	284	P	Pn	03 50 59.1	+3.8
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,125nm,20.5s						
YSS	Yuzh-Sakhalins	11.56	9	*e*P	Pn	03 51 14.1	-3.8
MDJ	Mudanjiang	12.03	322	P	Pn	03 51 29.1	+4.7
MDJ				pmax	pmax		
	comp=Z,17nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,57nm,3.4s						
HABR	Khabarovsk	13.40	346	P	Pn	03 51 40.0	-2.9
HABR				*e*		03 54 05.8	
KLR	Kul'dur	14.93	339	*e*P	Pn	03 52 08.2	+5.3
BJI	Beijing	19.32	290	P	Pn	03 52 55.8	-1.4
BJI				S	S	03 56 27.4	-3.1
BJI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BJI				pmax	pmax		
	comp=Z,91nm,3.9s						
BJI				LR	LR		
	comp=N,50nm,4.0s						
BJI				LR	LR		
	comp=E,82nm,6.0s						
PETK	Petropavlovsk-	21.53	30	P	P	03 53 18.4	-0.7
	comp=E,4.6nm,0.8s,mb3.9,baz=212,slow=9.8,SNR=6.0						
PETK				LR	LR	04 02 07.4	
	comp=E,7.3nm,18.3s,baz=246,slow=38						
PETK	Petropavlovsk-	21.53	30	P	P	03 53 18.4	-0.7
PETK				LR	LR	04 02 07.4	
HHC	Hu-ho-hao-te	22.90	292	*e*P	P	03 53 32.8	-1.0
HHC				pP		03 53 49.8	
HHC				sP	sP	03 53 59.0	+2.1
HHC				PP		03 54 05.0	
HHC				PcP	PcP	03 57 23.8	+1.7
HHC				S	S	03 57 33.1	-5.2
HHC				sS	sS	03 58 00.8	-3.8
HHC				ScP	ScP	04 00 53.1	-0.8
HHC				PcS	PcS	04 01 01.4	+0.4
HHC				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.2						
HHC				pmax	pmax		
	comp=Z,86nm,5.4s						
HHC				LR	LR		
	comp=N,95nm,16.7s						
HHC				LR	LR		
	comp=E,130nm,17.8s						
ULN	Ulaanbaatar	27.27	307	*e*P	P	03 54 13.8	+0.2
ULN				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.8						
ULN	Ulaanbaatar	27.27	307	*e*P	P	03 54 13.8	+0.1
	comp=Z,1.7nm,0.7s,mb3.7						
YAK	Yakutsk	27.27	349	*e*P	P	03 54 10.5	-3.0
YAK				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.5						
YAK				pmax	pmax		
	comp=N,15nm,1.3s						
SONM	Songino Array	27.69	307	P	P	03 54 16.5	-0.9
	comp=N,0.8nm,0.5s,mb3.5,baz=100,slow=8.5,SNR=8.3						
SONM				LR	LR	04 05 43.2	
	comp=N,54nm,19.9s,baz=257,slow=37						
SEY	Seymchan	28.45	12	*c*e*P	P	03 54 24.5	+0.5
LZH	Lanzhou	29.21	282	*e*P	P	03 54 30.3	-0.7
LZH				pP	pP	03 54 44.0	-3.4
LZH				pmax	pmax		
	comp=Z,24nm,1.0s,mb4.8						
LZH				pmax	pmax		
	comp=Z,110nm,4.0s						
GYA	Guiyang	29.86	262	*e*P	P	03 54 36.3	-0.6
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
CD2	Chengdu	30.55	272	*e*P	P	03 54 43.9	+1.0
CD2				pP	pP	03 55 01.6	+2.3
CD2				sP	sP	03 55 10.8	+3.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
CD2				pmax	pmax		
	comp=Z,30nm,10.0s						
KMI	Kunming	33.62	262	P	P	03 55 09.8	-0.1
KMI				pP	pP	03 55 26.8	+0.4
KMI				sP	sP	03 55 35.1	+0.8
KMI				PP	PP	03 56 25.0	-2.0
KMI				S	S	04 00 26.8	-0.9
KMI				sS	sS	04 00 57.3	+1.5
KMI				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
KMI				pmax	pmax		
	comp=Z,75nm,6.1s						
KMI				LR	LR		
	comp=N,79nm,11.1s						
KMI				LR	LR		
	comp=E,61nm,11.9s						
KMI				LR	LR		
	comp=Z,59nm,14.1s						
BILL	Biiibino	35.75	17	*e*P	P	03 55 27.7	-0.1
BILL				pmax	pmax		
	comp=Z,5.0nm,1.6s,mb4.2						
BILL	Biiibino	35.75	17	*e*P	P	03 55 27.1	-0.6
	comp=Z,2.2nm,0.5s,mb4.3						
CMAR	Chiang Mai Arr	40.02	256	LR	LR	04 12 30.6	
	comp=Z,10nm,20.7s,baz=215,slow=36						
WMQ	Urumqi	40.49	298	*e*P	P	03 56 08.0	0.0
ZAA0	Zalesovo Array	42.07	314	*e*P	P	03 56 20.1	-0.7
ZALV	Zalesovo Beam	42.07	314	P	P	03 56 20.5	-0.2
	comp=Z,3.6nm,0.6s,mb4.3,baz=95,slow=6.6,SNR=19						
ZALV				PcP	PcP	03 58 13.6	-0.7
	comp=Z,2.5nm,0.6s,baz=88,slow=2.7,SNR=7.0						
ZALV				LR	LR	04 15 44.8	
	comp=Z,12nm,20.3s,baz=92,slow=39						
ZALV	Zalesovo Beam	42.07	314	P	P	03 56 20.5	-0.2
ZALV						03 58 13.6	
NVS	Novosibirsk	43.04	315	*e*P	P	03 56 28.1	-0.4
MK31	Makanchi Array	43.94	303	*e*P	P	03 56 36.1	+0.2
MKAR	Makanchi Array	43.94	303	P	P	03 56 36.0	0.0
	comp=Z,4.6nm,0.7s,mb4.3,baz=82,slow=11,SNR=47						
MKAR				LR	LR	04 16 04.1	
	comp=Z,19nm,18.0s,baz=355,slow=38						
KURK	Kurchatov	45.95	309	*e*P	P	03 56 51.1	-0.7
KURK				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.7						
KURK	Kurchatov	45.95	309	*e*P	P	03 56 51.1	-0.7
	comp=Z,13nm,0.8s,mb4.7						
SVW2	Sparrevohn	47.38	37	*e*P	P	03 57 02.8	-0.1
KDAK	Kodiak Island	48.95	41	P	P	03 57 13.4	-1.6
	comp=Z,8.6nm,0.6s,mb4.8,baz=275,slow=3.7,SNR=10						
KDAK	Kodiak Island	48.95	41	*c*e*P*	P	03 57 15.2	+0.2
TKM2	Tokmak 2	49.33	299	*e*P	P	03 57 19.2	+1.1
TKM2				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
TKM2	Tokmak 2	49.33	299	*e*P	P	03 57 19.1	+1.1
	comp=Z,14nm,1.1s,mb4.8						
KSH	Kashi	49.96	295	P	P	03 57 27.0	+4.0
KSH				pP	pP	03 57 45.8	+5.5
KSH				sP	sP	03 57 54.6	+6.5
KSH				PcP	PcP	03 58 44.6	+2.4
KSH				PP	PP	03 59 24.6	+6.4
KSH				ScP	ScP	04 02 32.4	+0.5
KSH				PcS	PcS	04 02 40.4	+1.2
KSH				S	S	04 04 32.0	+3.6
KSH				sS	sS	04 05 05.9	+8.1
KSH				ScS	ScS	04 07 07.5	-0.4
KSH				SS	SS	04 08 04.8	+3.0
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
KSH				pmax	pmax		
	comp=Z,56nm,4.6s						
KSH				LR	LR		
	comp=N,61nm,5.1s						
KSH				LR	LR		
	comp=E,65nm,5.2s						
KSH				LR	LR		
	comp=E,85nm,4.8s						
AAK	Ala-Archa	50.18	299	LR	LR	04 21 26.6	
	comp=Z,31nm,20.4s,baz=193,slow=39						
UCH	Uchtor	50.28	299	*e*P	P	03 57 26.4	+1.1
UCH				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
UCH	Uchtor	50.28	299	*e*P	P	03 57 26.4	+1.1
	comp=Z,2.0nm,0.8s,mb4.1						
MCK	McKinley	50.48	33	*e*P	P	03 57 26.3	-0.2
MCK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
MCK	McKinley	50.48	33	*e*P	P	03 57 26.3	-0.2
	comp=Z,2.4nm,0.5s,mb4.4						
EKS2	Erkin-Say	50.69	299	*e*P	P	03 57 28.1	-0.3
EKS2				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
EKS2	Erkin-Say	50.69	299	*e*P	P	03 57 28.1	-0.3
	comp=Z,1.9nm,0.7s,mb4.2						
BVAR	Borovoye Array	50.72	313	P	P	03 57 28.6	+0.1
	comp=Z,1.0nm,0.5s,mb4.1,baz=83,slow=6.0,SNR=7.8						
BVAR				PcP	PcP	03 58 44.2	-0.6
	comp=Z,1.7nm,0.7s,baz=72,slow=4.8,SNR=4.7						
BRVK	Borovoye	50.77	313	*c*e*P*	P	03 57 31.0	+2.1
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
BRVK	Borovoye	50.77	313	*e*P	P	03 57 31.2	+2.3
	comp=Z,3.7nm,1.0s,mb4.4						
AML	Almayashu	50.89	299	*e*P	P	03 57 31.2	+1.3
AML				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0						
AML	Almayashu	50.89	299	*e*P	P	03 57 31.2	+1.2
	comp=Z,15nm,0.9s,mb5.0						
COLA	College	50.92	32	*e*P	P	03 57 29.3	-0.5
COLA				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
COLA	College	50.92	32	*e*P	P	03 57 29.2	-0.6
	comp=Z,1.9nm,0.7s,mb4.2						
WRA	Warramunga Arr	55.47	186	P	P	03 58 02.7	-0.9
	comp=Z,3.1nm,0.5s,mb4.6,baz=1.4,slow=7.6,SNR=14						
SVE	Sverdlovsk	55.49	319	*e*P	P	03 57 56.7	-6.8
SVE				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.9						
ARU	Arti	56.70	319	*c i*P	P	03 58 11.5	-0.6
ARU				*PP	pP	03 58 29.0	-0.7
ARU				*e*		04 00 14.8	
ARU				S	S	04 05 59.8	+0.5
ARU				SS	SS	04 09 45.2	-2.1
ARU				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.9				

comp=Z,14nm,1.0s,mb4.8
NEW Newport 71.98 43 eP P 03 59 51.6 -0.5
NEW pmax pmax
comp=Z,2.0nm,0.9s
NEW Newport 71.98 43 eP P 03 59 51.6 -0.5
comp=Z,2.2nm,0.9s,mb4.0
SUMG Summit 72.14 360 eP P 03 59 53.5 +0.9
SUMG pmax pmax
comp=Z,7.0nm,0.8s
SUMG Summit 72.14 360 eP P 03 59 53.5 +0.9
comp=Z,7.0nm,0.8s,mb4.5
YBH Yreka Blue Hor 72.15 51 P P 03 59 54.1 +0.9
comp=Z,1.3nm,0.8s,mb3.8,baz=287,slow=4.7,SNR=3.5
C11A Tepee Creek (N 72.70 43 ⇓P P 03 59 56.1 -0.3
baz=72
K05A Summer Lake 72.76 50 ⇑P P 03 59 56.8 -0.1
baz=72
B13A Whitefish 73.38 42 ⇑P P 04 00 00.6 +0.2
baz=73
A14A Double T Ranch 73.61 41 ⇑P P 04 00 02.0 +0.3
baz=73
G10A Bishop Farm, J 73.63 46 ⇑P P 04 00 01.9 0.0
baz=73
ANN Anapa 73.71 314 eP P 04 00 02.7 +0.3
ANN e*PP pP 04 00 19.7 -1.0
ANN eS S 04 09 26.1 -1.7
ANN pmax pmax
comp=Z,35nm,1.0s,mb5.0
C13A Hot Springs 73.72 43 ⇓P P 04 00 02.3 -0.1
baz=74
BMO Blue Mountains 73.77 46 eP P 04 00 03.1 +0.4
comp=Z,2.7nm,1.1s,mb3.9
E12A Beaver Dam Sad 73.89 44 ⇓P P 04 00 03.2 -0.2
baz=74,SNR=8.3
A15A Johnson Ranch, 73.97 41 ⇑P P 04 00 03.5 -0.4
baz=74
I09A Lost Marbles R 74.00 47 ⇑P P 04 00 04.2 +0.1
baz=74
D13A Huson 74.12 43 ⇓P P 04 00 04.3 -0.4
baz=74
H10A Noah's Angus R 74.24 46 ⇑P P 04 00 05.3 -0.2
baz=74
J09A Fry Pan Ranch, 74.34 48 ⇑P P 04 00 06.2 +0.1
baz=74
F12A Elk City 74.45 45 ⇓P P 04 00 06.5 -0.1
baz=74,SNR=7.3
B15A Bradely Ranch, 74.45 41 ⇓P P 04 00 06.3 -0.4
baz=74,SNR=7.8
SLMT Seeley Lake 74.58 43 eP P 04 00 07.4 +0.1
D14A Greenough 74.66 43 ⇑P P 04 00 07.5 -0.4
baz=74,SNR=6.1
AKASG Malin Array Be 74.75 322 P P 04 00 07.1 -1.2
comp=Z,0.8nm,0.5s,mb3.7,baz=47,slow=6.1,SNR=4.1
AKBB Malin Array Si 74.75 322 eP P 04 00 07.2 -1.1
C15A Salmond Ranch, 74.75 42 ⇓P P 04 00 08.5 +0.1
baz=74,SNR=11
KIEV Kiev 74.76 322 eP P 04 00 06.5 -1.9
KIEV pmax pmax
comp=Z,7.0nm,0.9s,mb4.4
KIEV Kiev 74.76 322 eP P 04 00 06.5 -1.9
comp=Z,7.3nm,0.9s,mb4.4
F13A Darby 74.95 44 ⇓P P 04 00 08.7 -0.9
baz=75
NB2 NORSAR Subarra 75.08 337 P P 04 00 09.4 -0.6
comp=Z,2.1nm,0.6s,mb4.0,baz=41,slow=5.9
NOA NORSAR Array B 75.08 337 P P 04 00 09.5 -0.6
comp=Z,3.6nm,0.7s,mb4.2,baz=39,slow=5.8,SNR=12
NOA LR LR 04 33 05.5
comp=Z,14nm,20.6s,baz=350,slow=36
C16A Fuhringer Ranc 75.20 41 ⇑P P 04 00 10.1 -0.8
baz=75
K10A MacKenzie Ranc 75.20 48 ⇑P P 04 00 10.3 -0.7
baz=75
H12A Diamond D Ranc 75.37 46 ⇑P P 04 00 11.8 -0.2
baz=75
E15A Deer Lodge 75.53 43 ⇑P P 04 00 13.0 +0.1
baz=75
FFC Flin Flon 75.55 32ceP P 04 00 12.5 -0.3
FFC Flin Flon 75.55 32 eP P 04 00 12.3 -0.6
comp=Z,3.6nm,0.7s,mb4.2
H13A Challis 75.71 45 ⇑P P 04 00 14.1 +0.1
baz=76,SNR=6.7
D16A Dana Ranch, Ca 75.77 42 ⇓P P 04 00 14.6 +0.4
baz=76
FCC Fort Churchill 75.82 26 eP P 04 00 13.6 -0.7
comp=Z,0.1nm,0.7s
B18A Beardsley Farm 75.89 40 ⇓P P 04 00 14.6 -0.3
baz=76
F15A Butte 75.96 43 ⇓P P 04 00 15.3 0.0
baz=76,SNR=13
LRM Limekiln Ridge 76.00 43 eP P 04 00 16.4 +0.8
D17A Six Diamond Ra 76.16 42 ⇓P P 04 00 16.3 -0.2
baz=76
DLMT Dillon 76.19 44 eP P 04 00 17.4 +0.8
comp=Z,5.6nm,0.8s,mb4.3
HLID Hailey 76.21 46 ⇑P P 04 00 17.5 +0.7
baz=76
HLID Hailey 76.21 46 eP P 04 00 17.2 +0.4
comp=Z,2.3nm,0.9s,mb3.9
L11A Cat Creek Ranc 76.23 48 ⇑P P 04 00 14.9 -2.0
baz=76
G15A Dillon 76.37 44 ⇓P P 04 00 16.3 -1.4
baz=76,SNR=5.1
K12A Draper Farm, C 76.46 47 ⇓P P 04 00 18.6 +0.3
baz=76
E17A Martinsdale 76.49 42 ⇓P P 04 00 18.6 +0.3
baz=76
I14A Mackay 76.56 45 ⇓P P 04 00 19.2 +0.4
baz=76,SNR=12
BOZ Bozeman (W) 76.56 43 ⇑P P 04 00 18.8 +0.1
baz=76,SNR=5.5
BOZ Bozeman (W) 76.56 43 eP P 04 00 19.3 +0.5
BOZ pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
BOZ Bozeman (W) 76.56 43 eP P 04 00 19.3 +0.6
comp=Z,2.2nm,0.8s,mb3.9
NVAR Mina Array Bea 76.79 52 P P 04 00 20.9 +0.8
comp=Z,1.2nm,0.5s,mb3.9,baz=292,slow=6.3,SNR=7.9
J14A Carey 76.88 46 ⇑P P 04 00 20.5 -0.1
baz=77,SNR=5.5
F17A Fitzpatrick Pl 76.94 43 ⇓P P 04 00 21.3 +0.4
baz=77
M12A Wells 77.17 48 ⇓P P 04 00 22.9 +0.6
baz=77,SNR=5.9
ELK Elko 77.37 49 P P 04 00 24.1 +0.6
comp=Z,0.8nm,0.4s,mb3.8,baz=258,slow=3.5,SNR=5.0
F18A Big Timber 77.46 42 ⇑P P 04 00 23.8 0.0
baz=77
J15A Blackfoot 77.46 45 ⇓P P 04 00 24.6 +0.7
baz=77
I16A Newdale 77.72 45 ⇓P P 04 00 26.1 +0.8
baz=78,SNR=8.2
L14A Malta 77.81 47 ⇓P P 04 00 26.3 +0.5
baz=78
O12A Currie 77.96 49 P P 04 00 27.6 +0.9
baz=78,SNR=5.4
M14A Sheep Mountain 78.07 47 ⇑P P 04 00 27.5 +0.2
baz=78
TPAW Teton Pass 78.26 45 eP P 04 00 29.1 +0.8
comp=Z,2.6nm,0.6s,mb4.1
N14A Grayback Hills 78.56 48 ⇓P P 04 00 30.2 +0.2
baz=78,SNR=5.2
R11A Troy Canyon, C 78.57 51 ⇑P P 04 00 30.1 0.0
baz=78
M15A Larsen Ranch, 78.63 47 ⇓P P 04 00 30.4 0.0
baz=78,SNR=5.7
KWP Kalwaria Pacla 78.64 324 eP P 04 00 31.0 +0.7
KWP Kalwaria Pacla 78.64 324 eP P 04 00 30.4 +0.1
comp=Z,19nm,1.0s,mb4.9
BUR08 Bucovina Ar. S 78.73 321 eP P 04 00 30.6 -0.2
BR131 Keskin Array S 78.95 311 eP P 04 00 32.6 +0.4
HWUT Hardware Ranch 79.07 46 eP P 04 00 33.0 +0.3
comp=Z,4.4nm,1.0s,mb4.2
DUG Dugway 79.18 48 ⇑P P 04 00 33.4 0.0
baz=79
DUG Dugway 79.18 48 eP P 04 00 34.2 +0.8
DUG pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
DUG Dugway 79.18 48 eP P 04 00 34.2 +0.8
comp=Z,3.3nm,0.8s,mb4.2
Q13A Wheeler Ranch, 79.19 50 ⇑P P 04 00 34.0 +0.5
baz=79
K18A Toltan Ranch, 79.31 45 ⇑P P 04 00 33.8 -0.3
baz=79
P14A Drum Mountains 79.39 49 ⇓P P 04 00 35.1 +0.5
baz=79
T11A Corn Creek, Al 79.46 52 ⇓P P 04 00 35.3 +0.3
baz=79

STHS Stebnicka Huta 79.48 324 eP P 04 00 36.0 +1.1
STHS pmax pmax
comp=Z,4.0nm,1.0s,mb4.2
STHS Stebnicka Huta 79.48 324 eP P 04 00 36.0 +1.1
comp=Z,3.7nm,1.0s,mb4.2
BW06 Boulder Array 79.51 45 ⇓P P 04 00 34.6 -0.5
baz=79
BW06 Boulder Array 79.51 45 eP P 04 00 34.8 -0.4
comp=Z,1.4nm,0.6s,mb4.0
PDAR Pinedale Array 79.51 45 P P 04 00 35.1 -0.1
comp=Z,1.5nm,0.6s,mb4.0,baz=296,slow=1.8,SNR=13
OJC Ojcow 79.60 326 eP P 04 00 33.8 -1.7
Q14A Sevier Lake (B 79.63 49 ⇓P P 04 00 35.8 -0.1
baz=79,SNR=7.3
CRVS Cervenica-Dubn 79.73 324 eP P 04 00 36.0 -0.2
CRVS pmax pmax
comp=Z,3.0nm,1.0s,mb4.1
CRVS Cervenica-Dubn 79.73 324 eP P 04 00 36.0 -0.2
comp=Z,2.5nm,1.0s,mb4.0
NIE Niedzica 79.92 325 eP P 04 00 37.7 +0.5
L19A Farson 80.05 45 ⇑P P 04 00 38.6 +0.6
baz=80
S13A Holt Ranch, En 80.12 51 ⇓P P 04 00 39.3 +0.8
baz=80
V11A Goodsprings 80.16 53 ⇓P P 04 00 39.2 +0.4
baz=80
Q15A Fillmore 80.18 49 ⇑P P 04 00 39.6 +0.8
baz=80
T13A Saint George 80.43 51 ⇑P P 04 00 39.7 -0.6
baz=80
O17A Robinson Place 80.43 47 ⇓P P 04 00 40.2 +0.1
baz=80
CCUT Cedar City 80.45 51 eP P 04 00 42.0 +1.7
KECS Kecovo 80.49 324 eP P 04 00 35.7 -4.6
KECS pmax pmax
comp=Z,2.0nm,1.0s,mb3.9
KECS Kecovo 80.49 324 eP P 04 00 35.7 -4.6
comp=Z,1.7nm,1.0s,mb3.8
OKC Ostrava-Krasne 80.63 326 eP P 04 00 41.7 +0.7
OKC Ostrava-Krasne 80.63 326 eP P 04 00 41.7 +0.7
GMRC Granite Mounta 80.65 54 ⇓P P 04 00 41.6 +0.2
baz=80,SNR=6.0
U13A Pakoon Wash 80.76 52 ⇑P P 04 00 42.5 +0.5
baz=80,SNR=5.7
O18A Roosevelt 80.82 47 ⇓P P 04 00 42.6 +0.4
baz=81
P17A Butcher Ranch, 80.88 48 ⇓P P 04 00 43.1 +0.5
baz=81
MORC Moravsky Berou 80.95 326 eP P 04 00 42.1 -0.6
MORC pmax pmax
comp=Z,3.0nm,1.0s,mb4.1
MORC Moravsky Berou 80.95 326 eP P 04 00 42.1 -0.6
comp=Z,3.1nm,1.0s,mb4.1
DPC Dobruska-Polom 81.08 327 eP P 04 00 43.7 +0.3
DPC Dobruska-Polom 81.08 327 eP P 04 00 43.7 +0.3
P18A Preston Nutter 81.08 47 ⇑P P 04 00 44.1 +0.5
baz=81,SNR=5.1
V13A Grand Canyon W 81.09 52 ⇑P P 04 00 44.1 +0.3
baz=81
R16A Teasdale 81.17 49 ⇑P P 04 00 45.4 +1.3
baz=81,SNR=6.0
SRU San Rafael 81.24 48 ⇑P P 04 00 44.6 +0.1
baz=81,SNR=8.5
SRU San Rafael 81.24 48 eP P 04 00 44.7 +0.2
SRU pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
SRU San Rafael 81.24 48 eP P 04 00 44.7 +0.2
comp=Z,5.0nm,0.7s,mb4.5
U14A Mt Trumbull 81.26 51 ⇑P P 04 00 44.9 +0.2
baz=81
VYHS Vyhne 81.27 325 eP P 04 00 44.6 +0.1
VYHS pmax pmax
comp=Z,3.0nm,1.3s,mb4.0
VYHS Vyhne 81.27 325 eP P 04 00 44.6 +0.1
comp=Z,3.2nm,1.3s,mb4.0
MONP Monument Peak 81.27 56 ⇓P P 04 00 45.1 +0.3
baz=81
L21A Rawlins 81.27 44 ⇓P P 04 00 44.5 -0.1
baz=81
IRM Iron Mountain 81.35 54 ⇑P P 04 00 45.6 +0.4
baz=81
T15A Red Dirt Ranch 81.40 50 ⇓P P 04 00 45.4 +0.1
baz=81,SNR=5.4
S16A Weppner Ranch, 81.45 50 ⇓P P 04 00 45.7 0.0
baz=81
BC3 Big Chuckawall 81.46 55 ⇓P P 04 00 45.7 -0.1
baz=81
N20A Spence Gulch, 81.49 45 ⇓P P 04 00 45.9 +0.1
baz=81
R17A Hanksville Air 81.56 49 ⇓P P 04 00 46.5 +0.2
baz=81
W13A Hualapai Mount 81.61 53 ⇑P P 04 00 46.5 -0.1
baz=81
PVCC Panska Ves 81.71 328 eP P 04 00 46.7 0.0
PVCC Panska Ves 81.71 328 eP P 04 00 46.7 0.0
BRG Berggiesshubel 81.72 329 eP P 04 00 46.4 -0.3
comp=Z,3.3nm,0.8s,mb4.2
BRG Berggiesshubel 81.72 329 eP P 04 00 46.4 -0.4
BRG pmax pmax
comp=Z,2.0nm,0.8s,mb4.0
CLL Collm 81.78 330 i P P 04 00 46.4 -0.7
CLL e*PP pP 04 01 05.0 -0.7
CLL pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
CLL Collm 81.78 330 i P P 04 00 46.4 -0.7
comp=Z,7.0nm,0.9s,mb4.5
CLL i PcP PcP 04 00 50.4 -2.3
CLL ePP pP 04 01 05.0 -0.7
V14A Boquillas Ranc 81.79 52 ⇓P P 04 00 47.8 +0.3
baz=82,SNR=7.3
U15A North Rim 81.82 51 ⇑P P 04 00 48.4 +0.8
baz=82,SNR=7.1
O20A White River Ci 81.95 46 ⇑P P 04 00 48.5 +0.3
baz=82
X13A Yucca 81.96 53 ⇓P P 04 00 48.1 -0.3
baz=82,SNR=5.7
N21A Black Mountain 81.97 45 ⇓P P 04 00 48.2 -0.1
baz=82
S17A Black Ridge (B 82.00 49 ⇑P P 04 00 47.9 -0.7
baz=82,SNR=6.7
W14A Seligman 82.06 52 ⇑P P 04 00 49.4 +0.5
baz=82,SNR=5.0
R18A Canyonlands Na 82.08 48 ⇓P P 04 00 48.6 -0.4
baz=82
Q19A Hogan Spring (82.10 47 ⇑P P 04 00 48.9 -0.2
baz=82
PRU Pruhonice 82.12 328 eP P 04 00 50.0 +1.1
PRU Pruhonice 82.12 328 eP P 04 00 50.0 +1.1
GLA Glamis 82.24 55 eP P 04 00 48.6 -1.3
V15A Kaibab Nationa 82.27 51 ⇓P P 04 00 50.1 +0.1
baz=82,SNR=5.5
Y13A Salome 82.44 54 ⇓P P 04 00 50.5 -0.3
baz=82
S18A Hurst Farm, Bl 82.46 49 ⇑P P 04 00 50.5 -0.5
baz=82,SNR=5.9
R19A Curley Farm, L 82.52 48 ⇓P P 04 00 50.1 -1.2
baz=82
X14A Yava 82.65 53 ⇑P P 04 00 52.0 0.0
baz=82
PV04 Paradox Valley 82.67 48 eP P 04 00 53.5 +1.5
U16A Tuba City 82.73 51 ⇓P P 04 00 52.8 +0.4
baz=82
T18A Mexican Hat 82.89 49 ⇑P P 04 00 52.7 -0.4
baz=83,SNR=6.0
Y14A Wickenburg 82.90 53 ⇑P P 04 00 52.8 -0.5
baz=83
Z13A Yuma Proving G 82.92 54 ⇓P P 04 00 53.2 -0.2
baz=83
S19A Harvey Farm, M 82.95 48 ⇑P P 04 00 53.0 -0.5
baz=83
PV01 Paradox Valley 83.04 48 eP P 04 00 54.3 +0.3
comp=Z,900nm,1.6s
X15A Humboldt 83.06 52 ⇑P P 04 00 54.4 +0.3
baz=83,SNR=6.9
R20A Redvale 83.12 48 ⇑P P 04 00 54.4 0.0
baz=83
KHC Kasperske Hory 83.18 328 eP P 04 00 53.3 -1.1
comp=Z,0.9nm,1.0s,mb3.5
KHC Kasperske Hory 83.18 328 eP P 04 00 54.4 0.0
V17A Tonalea, Kykot 83.27 51 ⇑P P 04 00 55.7 +0.5
baz=83,SNR=16
Y15A Casa Rosa Ranc 83.33 53 ⇓P P 04 00 55.5 0.0
baz=83,SNR=6.1
U18A Rough Rock, Ch 83.34 50 ⇑P P 04 00 56.4 +0.8
baz=83,SNR=6.9
T19A Beclabito 83.60 49 ⇑P P 04 00 55.6 -1.3
baz=83,SNR=5.1

X16A Lo Mia Camp, P 83.61 52 ⇓P P 04 00 57.5 +0.6
baz=83
MVCO Mesa Verde 83.68 48 ⇑P P 04 00 57.7 +0.5
baz=83
V18A Ganado 83.75 50 ⇑P P 04 00 57.6 -0.1
baz=84
U19A Dine' College, 83.83 49 ⇓P P 04 00 57.9 -0.2
baz=84,SNR=7.6
R22A Saguache, Gunn 84.06 47 ⇓P P 04 00 59.3 +0.1
baz=84
X17A Forest Lakes 84.07 52 ⇓P P 04 00 59.8 +0.5
baz=84
S22A 4UR Ranch, Cre 84.34 47 ⇓P P 04 01 00.4 -0.2
baz=84
Y17A Roosevelt 84.45 52 ⇑P P 04 01 01.0 -0.3
baz=84
W19A Sanders 84.48 50 ⇑P P 04 01 01.6 +0.2
baz=84,SNR=6.6
116A Eloy 84.61 54 ⇓P P 04 01 01.9 -0.1
baz=84
U21A Nageezi 84.70 49 ⇑P P 04 01 03.1 +0.6
baz=84
T22A Edith 84.78 48 ⇑P P 04 01 03.2 +0.4
baz=84
Y18A Canyon Day Jun 84.92 52 ⇑P P 04 01 03.5 -0.1
baz=85
X19A St. Johns 84.98 51 ⇑P P 04 01 03.6 -0.3
baz=85
PPT Papeete 85.03 116 LR LR 04 38 31.0
comp=Z,116nm,18.0s,baz=330,slow=35
R24A Sanders Place, 85.03 46 ⇑P P 04 01 04.3 +0.2
baz=85
V21A Milan 85.12 49 ⇑P P 04 01 05.1 +0.6
baz=85
SDCO Great Sand Dun 85.13 46 eP P 04 01 05.5 +1.0
T23A Casias Ranch, 85.28 47 ⇑P P 04 01 05.9 +0.6
baz=85
X20A Quemado 85.41 50 ⇑P P 04 01 06.4 +0.4
baz=85
U23A El Rito 85.66 48 ⇑P P 04 01 08.2 +0.9
baz=85
Y20A Horse Springs, 85.89 51 ⇓P P 04 01 08.1 -0.3
baz=86
X21A Alamocita Cree 85.92 50 ⇓P P 04 01 08.9 +0.4
baz=86
218A Dragoon 86.06 53 ⇓P P 04 01 10.5 +1.2
baz=86
T25A Trinidad 86.18 46 ⇑P P 04 01 09.8 0.0
baz=86
Z20A Nine Sixteen R 86.27 52 ⇓P P 04 01 10.6 +0.3
baz=86
ANMO Albuquerque 86.41 49 P P 04 01 11.9 +1.0
comp=Z,0.4nm,0.3s,mb3.8,baz=316,slow=8.2,SNR=4.0
ANMO Albuquerque 86.41 49ceP P 04 01 11.1 +0.2
ANMO pmax pmax
comp=Z,2.0nm,1.2s
219A White Tail Can 86.56 53 ⇑P P 04 01 12.3 +0.6
baz=86
V24A Rampart Ranch, 86.61 48 ⇑P P 04 01 13.0 +1.1
baz=86
SCHQ Schefferville 87.05 15 P P 04 01 12.8 -0.9
comp=Z,2.5nm,0.7s,mb4.3,baz=348,slow=5.1,SNR=6.9
AQU L'Aquila 88.37 323 eP P 04 01 20.2 0.0
AQU pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
AQU L'Aquila 88.37 323 eP P 04 01 20.2 0.0
comp=Z,6.2nm,0.7s,mb4.8
TXAR Lajitas Array 91.93 52 P P 04 01 36.5 -0.6
comp=Z,0.5nm,0.6s,mb3.9,baz=304,slow=3.1,SNR=8.3
TXAR Lajitas Array 91.93 52 P P 04 01 36.5 -0.6
TORD Torodi Ar. Bea 117.52 313 PKP PKPdf 04 07 13.2 -1.3
comp=Z,0.4nm,0.5s,baz=43,slow=1.8,SNR=18
LPAZ La Paz 148.42 60 PKPbc PKPbc 04 08 15.8 +0.7
comp=Z,1.4nm,0.6s,baz=317,slow=4.0,SNR=8.4
LPAZ La Paz 148.42 60 PKPbc PKPbc 04 08 15.8 +0.7

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*IDC **22** 03:49:26.7±2.2, 50°.76N×179°.45W, h0km, mb3.6/4, mb1 4.0/6, mb1mx3.7/27, mbtmp3.8/6, ML3.7/2, Error ellipse: s-maj=65.9km s-min=12.1km az=12.0*
*NEIC **22** 03:49:31.1, 51°.03N×179°.76W, h7km, mb4.0/8, ML3.6(AEIC), After AEIC.*
ISC 22 03:49:28.1±2.9, 50°.8N±0°.2×179°.79W±0°.09, h9km±13km, n19, σ1s29/21, mb3.9/9, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	Amchitka	0.84	317	P	Pg	03 49 44.3	0.0
AMKA				S	Sg	03 49 54.4	-0.8
FX1	Attu Island--F	4.86	299	Pn	Pn	03 50 42.5	+1.2
	5.7nm,0.3s,baz=114,slow=18,SNR=24						
FX1				Sn	Sn	03 51 39.0	+1.3
	baz=267,slow=18,SNR=2.4						
FX1	Attu Island--F	4.86	299	P	Pn	03 50 43.1	+1.8
NIKO	Nikolski	7.12	68	P	Pn	03 51 14.7	+2.4
SPIA	Saint Paul Isl	8.53	37	P	Pn	03 51 33.0	+1.3
UNV	Unalaska Valle	8.71	64	ePn	Pn	03 51 36.0	+1.9
KDAK	Kodiak Island	17.28	56	Pn	Pn	03 53 26.3	-3.0
	0.7nm,0.3s,baz=240,slow=8.6,SNR=7.1						
PPLA	Purkeypile	19.19	40	eP	Pn	03 53 53.0	+0.3
	2.1nm,0.6s						
BPAW	Bear Paw Mtn.	20.22	38	eP	P	03 54 02.2	-0.8
	2.2nm,0.6s						
EGAK	Eagle	24.42	40	eP	P	03 54 44.9	-1.6
	3.7nm,1.0s,mb3.8						
YKA	Yellowknife Ar	36.11	46	P	P	03 56 27.6	-2.2
	0.3nm,0.4s,mb3.6,baz=281,slow=9.1,SNR=7.2						
BOZ	Bozeman (W)	44.25	69	eP	P	03 57 38.3	+0.8
	0.7nm,0.6s,mb3.6						
RLMT	Red Lodge	45.93	68	eP	P	03 57 52.5	+1.6
	2.6nm,0.9s,mb4.2						
BW06	Boulder Array	47.09	71	eP	P	03 57 59.0	-1.1
	3.4nm,1.2s,mb4.2						
PDAR	Pinedale Array	47.09	71	P	P	03 58 00.1	+0.1
	1.0nm,0.5s,mb4.0,baz=335,slow=3.8,SNR=9.9						
KURK	Kurchatov	59.00	313	eP	P	03 59 27.4	-0.2
	1.3nm,0.5s,mb4.2						
TXAR	Lajitas Array	59.37	80	P	P	03 59 29.2	-1.3
	0.2nm,0.9s,mb3.2,baz=320,slow=4.0,SNR=2.2						
MK31	Makanchi Array	59.93	308	eP	P	03 59 33.4	-0.8
MKAR	Makanchi Array	59.93	308	P	P	03 59 33.7	-0.5
	0.7nm,0.4s,mb4.0,baz=50,slow=8.5,SNR=6.6						

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*ISCJB **22** 03:50:17.4±1.2, 19°.29N±0°.06×145°.48E±0°.04, h173km±11km, mb4.4/83, Error ellipse: s-maj=9.3km s-min=6.2km az=16.0*
*BJI **22** 03:50:18.1, 19°.36N×145°.61E, h182km, mB4.6/12, mb4.5/16*
*NEIC **22** 03:50:19.5±0.9, 19°.24N×145°.46E, h186km±9km, mb4.5/57, Error ellipse: s-maj=6.1km s-min=5.6km az=83.0*
*IDC **22** 03:50:21.6±2.7, 19°.25N×145°.50E, h203km±25km, mb3.9/21, mb1 4.1/22, mb1mx4.0/27, mbtmp3.9/22, Error ellipse: s-maj=14.3km s-min=10.2km az=96.0*
ISC 22 03:50:19.2±1.1, 19°.23N±0°.05×145°.53E±0°.04, h179km±10km, h178km±1.8km: pP-P, n314, σ0s59/313, mb4.4/83, 97C-90D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	5.64	187	ePn	Pn	03 51 41.4	-0.2
MJAR	Matsushiro Arr	18.41	341	P	P	03 54 20.6	-0.2
	1.0nm,0.3s,baz=163,slow=9.8,SNR=4.0						
MAJO	Matsushiro	18.41	341	ePn	Pn	03 54 21.1	-2.0
	14nm,0.6s						
MAT	Matsushiro	18.41	341	P	P	03 54 21.0	+0.2
KSRS	Korea Array	23.80	323	P	P	03 55 15.6	0.0
	9.7nm,0.8s,mb4.4,baz=144,slow=9.3,SNR=24						
ASAJ	Asahikawa	24.94	355	P	P	03 55 26.5	+0.7
	7.1nm,0.6s,mb4.4,baz=221,slow=12,SNR=6.3						
NJ2	Nanjing	27.14	303	eP	P	03 55 46.4	+0.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.7						
CN2	Changchun	29.73	330	eP	P	03 56 10.5	+2.0
CN2				eS	S	04 00 52.8	+1.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.8						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
PETK	Petropavlovsk-	35.11	13	P	P	03 56 56.0	+0.8
	comp=Z,1.9nm,0.6s,mb3.9,baz=186,slow=7.4,SNR=3.8						
HHC	Hu-ho-hao-te	36.12	314	eP	P	03 57 05.1	+1.1
HHC				pP	pP	03 57 42.6	+0.7
HHC				sP	sP	03 58 02.6	+0.2
HHC				PP	PP	03 58 34.0	+4.0

HHC PcP PcP 03 59 27.5 +1.6
HHC S **S** **04 02 31.3 +1.2**
HHC ScP ScP 04 02 55.3 0.0
HHC PcS PcS 04 03 14.3 +0.7
HHC sS sS 04 03 37.3 +0.5
HHC SS SS 04 05 07.3 -8.3
HHC ScS ScS 04 07 00.3 -1.1
HHC pmax pmax
comp=Z,11nm,0.8s,mb4.5
HHC pmax pmax
comp=Z,58nm,4.3s
HHC LR LR
comp=N,88nm,14.6s
HHC LR LR
comp=E,270nm,17.0s
HHC LR LR
comp=Z,54nm,19.0s
GYA Guiyang 36.43 289 *eP* **P** **03 57 06.8 0.0**
GYA pP pP 03 57 44.9 +0.1
GYA sP sP 03 58 06.3 +1.0
GYA PP PP 03 58 36.4 +2.8
GYA PcP PcP 03 59 27.8 +0.7
GYA S **S** **04 02 33.8 -1.4**
GYA PcS PcS 04 03 15.0 -0.2
GYA sS sS 04 03 41.0 -1.0
GYA SS SS 04 05 12.6 -10
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
CD2 Chengdu 39.37 296 *eP* **P** **03 57 31.3 -0.1**
CD2 pP pP 03 58 09.0 -0.8
CD2 sP sP 03 58 29.0 -1.2
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.6
CD2 pmax pmax
comp=Z,30nm,5.2s
KMI Kunming 39.93 286 P **P** **03 57 36.9 +0.8**
KMI pP pP 03 58 14.5 -0.1
KMI sP sP 03 58 35.8 +0.8
KMI PP PP 03 59 14.9 +3.1
KMI S **S** **04 03 27.3 -0.6**
KMI sS sS 04 04 35.3 -0.2
KMI SS SS 04 06 24.8 -7.5
KMI pmax pmax
comp=Z,12nm,1.2s,mb4.4
KMI pmax pmax
comp=Z,57nm,4.3s
KMI LR LR
comp=N,100nm,14.6s
KMI LR LR
comp=E,60nm,20.0s
KMI LR LR
comp=Z,52nm,19.4s
LZH Lanzhou 40.22 303 *eP* **P** **03 57 39.8 +1.4**
LZH pP pP 03 58 19.4 +2.5
LZH sP sP 03 58 37.0 -0.3
LZH pmax pmax
comp=Z,16nm,1.0s,mb4.6
WRAB Tennant Creek 40.43 196 *eP* **P** **03 57 40.1 0.0**
comp=Z,6.2nm,0.6s,mb4.4
WRA Warramunga Arr 40.45 196 P **P** **03 57 40.2 -0.1**
comp=Z,4.6nm,0.7s,mb4.2,baz=16,slow=8.6,SNR=14
WRA Warramunga Arr 40.45 196 P **P** **03 57 40.2 -0.1**
FITZ Fitzroy Crossi 41.93 209 P **P** **03 57 53.0 +0.7**
comp=Z,5.3nm,0.8s,mb4.2,baz=69,slow=22,SNR=19
ULN Ulaanbaatar 42.26 321 *eP* **P** **03 57 55.3 +0.5**
comp=Z,2.7nm,0.6s,mb4.0
ULN Ulaanbaatar 42.26 321 *eP* **P** **03 57 55.8 +1.0**
comp=Z,2.8nm,0.6s,mb4.1
SONM Songino Array 42.63 321 P **P** **03 57 57.9 +0.2**
comp=Z,2.8nm,0.5s,mb4.2,baz=137,slow=9.0,SNR=22
SONM PcP PcP 03 59 46.3 -0.1
comp=Z,0.5nm,0.5s,baz=120,slow=4.2,SNR=2.9
SONM Songino Array 42.63 321 P **P** **03 57 57.9 +0.2**
SONM PcP PcP 03 59 46.3 -0.1
CMAR Chiang Mai Arr 43.99 277 P **P** **03 58 09.7 +0.6**
comp=Z,1.2nm,0.3s,mb4.0,baz=75,slow=7.2,SNR=4.2
ASAR Alice Springs 44.12 195 P **P** **03 58 09.5 -0.4**
comp=Z,1.1nm,0.8s,mb3.5,baz=16,slow=6.0,SNR=9.9
YAK Yakutsk 44.17 349 *eP* **P** **03 58 10.0 +0.2**
comp=Z,62nm,0.6s,mb5.4
BILL Bilibino 50.53 10 *eP* **P** **03 58 59.2 +0.4**
comp=Z,19nm,0.9s,mb4.7
TIXI Tiksi 53.33 353 *eP* **P** **03 59 19.0 -0.4**
comp=Z,12nm,0.3s,mb5.1
WMQ Urumqi 53.84 311 *eP* **P** **03 59 25.0 +1.4**
ZAA0 Zalesovo Array 57.50 322 *eP* **P** **03 59 48.7 -0.8**
ZALV Zalesovo Beam 57.50 322 P **P** **03 59 49.0 -0.5**
comp=Z,3.7nm,0.6s,mb4.4,baz=106,slow=8.2,SNR=12
MK31 Makanchi Array 57.98 314 *eP* **P** **03 59 52.7 -0.2**
MKAR Makanchi Array 57.98 314 P **P** **03 59 52.8 -0.2**
comp=Z,0.8nm,0.5s,mb3.8,baz=81,slow=9.8,SNR=5.6
MKAR ScP ScP 04 04 23.7 -2.4
comp=Z,0.3nm,0.8s,baz=90,slow=2.9,SNR=2.7
SVW2 Sparrevohn 58.44 29 *eP* **P** **03 59 56.5 +0.6**
OHAK Old Harbor 58.50 34 *eP* **P** **03 59 56.3 0.0**
comp=Z,10nm,0.9s,mb4.7
TTA Tatalina 58.85 27 *eP* **P** **03 59 57.9 -0.7**
KDAK Kodiak Island 59.01 33 P **P** **03 59 59.9 0.0**
comp=Z,3.2nm,0.4s,mb4.5,baz=238,slow=6.1,SNR=5.2
PPLA Purkeypile 60.51 28 *eP* **P** **04 00 10.4 +0.4**
comp=Z,13nm,1.1s,mb4.7
KURK Kurchatov 60.77 318 *eP* **P** **04 00 11.7 -0.3**
comp=Z,3.1nm,0.3s,mb4.6
RC01 Rabbit Creek A 61.18 30 *eP* **P** **04 00 13.9 -0.6**
comp=Z,17nm,0.8s,mb4.9
BPAW Bear Paw Mtn. 61.36 27 *eP* **P** **04 00 15.8 +0.1**
comp=Z,21nm,0.7s,mb5.1
TRF Thorofare Moun 61.49 27 *eP* **P** **04 00 16.1 -0.5**
comp=Z,18nm,0.9s,mb4.9
PMR Palmer 61.57 30 *eP* **P** **04 00 16.4 -0.7**
comp=Z,15nm,1.0s,mb4.8
MCK McKinley 62.14 27 *eP* **P** **04 00 20.0 -0.9**
comp=Z,9.6nm,1.1s,mb4.5
TKM2 Tokmak 2 62.59 309 *eP* **P** **04 00 23.9 -0.5**
COLA College 62.86 26 *eP* **P** **04 00 25.0 -0.7**
comp=Z,7.9nm,0.7s,mb4.7
UCH Uchtor 63.42 308 *eP* **P** **04 00 30.6 +0.8**
comp=Z,1.1nm,0.6s,mb3.9
PAX Paxson 63.52 28 *eP* **P** **04 00 30.1 0.0**
comp=Z,7.8nm,0.5s,mb4.8
EGAK Eagle 65.67 27 *eP* **P** **04 00 44.0 +0.1**
comp=Z,12nm,1.4s,mb4.5
BVAR Borovoye Array 65.97 320 P **P** **04 00 45.9 -0.2**
comp=Z,5.3nm,0.6s,mb4.6,baz=92,slow=7.6,SNR=25
BRVK Borovoye 66.03 320 *eP* **P** **04 00 46.2 -0.3**
comp=Z,4.5nm,0.7s,mb4.4
HYT Haines Junctio 67.06 31 *eP* **P** **04 00 54.0 +1.2**
SKAG Skagway 68.14 33 *eP* **P** **04 01 00.0 +0.4**
comp=Z,12nm,0.9s,mb4.6
KBL Kabul 68.47 300 *eP* **P** **04 01 01.9 -0.3**
comp=Z,6.1nm,1.0s,mb4.3
INK Inuvik 68.95 23 *eP* **P** **04 01 04.2 -0.3**
comp=Z,12nm,0.9s,mb4.6
DLBC Dease Lake 70.94 34 *eP* **P** **04 01 18.2 +1.4**
ARU Arti 72.55 324 *eP* **P** **04 01 25.9 -0.5**
comp=Z,4.4nm,0.9s,mb4.2
ABKAR Akbulak array 72.85 317 *eP* **P** **04 01 27.3 -1.0**
comp=Z,1.1nm,0.4s,mb3.9
JCW Jim Creek 77.57 43 *eP* **P** **04 01 56.1 +0.8**
YKA Yellowknife Ar 77.60 28 P **P** **04 01 54.7 -0.5**
comp=Z,3.4nm,0.6s,mb4.2,baz=289,slow=5.8,SNR=24
YKA Yellowknife Ar 77.60 28 P **P** **04 01 54.7 -0.5**
F04A Amboy 77.83 46 ⇑P **P** **04 01 57.7 +0.9**
baz=78
G04A Mulino 77.98 46 ⇓P **P** **04 01 58.1 +0.5**
baz=78
HUMO Hull Mountain 78.32 49 *eP* **P** **04 02 00.3 +0.7**
comp=Z,4.7nm,0.6s,mb4.3
YBH Yreka Blue Hor 78.73 50 P **P** **04 02 02.3 +0.5**
comp=Z,5.3nm,0.9s,mb4.2,baz=317,slow=3.7,SNR=14
YBH Yreka Blue Hor 78.73 50 *eP* **P** **04 02 02.7 +0.8**
comp=Z,5.3nm,1.0s,mb4.1
ETW Entiat 78.76 43 *eP* **P** **04 02 02.6 +0.7**
RES Resolute Bay 78.95 14 *eP* **P** **04 02 02.6 +0.2**
B08A Colville Reser 79.19 43 ⇓P **P** **04 02 03.6 -0.6**
baz=79,SNR=6.1
G06A Carlson Farm, 79.22 46 ⇓P **P** **04 02 03.6 -0.9**
baz=79
K05A Summer Lake 79.75 48 ⇓P **P** **04 02 06.5 -0.9**
baz=80
OD2 Odessa Site #2 79.88 43 *eP* **P** **04 02 07.8 -0.1**
I07A Izee 80.33 47 ⇑P **P** **04 02 10.2 -0.2**
baz=80
NEW Newport 80.63 42 *eP* **P** **04 02 12.4 +0.5**
J08A Circle Bar Ran 81.26 47 ⇑P **P** **04 02 15.4 0.0**
baz=81
C11A Tepee Creek (N 81.32 42 ⇓P **P** **04 02 15.4 -0.2**
baz=81,SNR=5.7
WVOR Wild Horse Val 81.43 48 *eP* **P** **04 02 16.6 +0.3**
comp=Z,5.8nm,1.0s,mb4.2
CMB Columbia Colle 81.50 53 *eP* **P** **04 02 16.5 -0.3**
comp=Z,6.8nm,0.7s,mb4.4
G10A Bishop Farm, J 81.57 45 ⇑P **P** **04 02 16.7 -0.3**
baz=82
BMO Blue Mountains 81.59 46 *eP* **P** **04 02 17.3 +0.2**
comp=Z,4.7nm,0.8s,mb4.2
WCN Washoe City 81.59 51 ⇓P **P** **04 02 17.1 -0.1**
baz=82
J09A Fry Pan Ranch, 81.76 47 ⇑P **P** **04 02 17.9 -0.1**
baz=82
ARCES ARCESS Array B 81.94 342 P **P** **04 02 18.1 -0.3**
comp=Z,4.3nm,0.5s,mb4.3,baz=73,slow=7.3,SNR=20
H10A Noah's Angus R 82.05 46 ⇑P **P** **04 02 19.3 -0.2**
baz=82
WAKR Walker 82.07 52 *eP* **P** **04 02 20.5 +0.8**
D12A Red Ives Fores 82.16 43 ⇑P **P** **04 02 20.0 0.0**
baz=82
E12A Beaver Dam Sad 82.23 44 ⇓P **P** **04 02 19.7 -0.6**
baz=82,SNR=5.3
B13A Whitefish 82.27 42 ⇓P **P** **04 02 20.1 -0.4**
baz=82
C13A Hot Springs 82.44 42 ⇓P **P** **04 02 21.2 -0.2**
baz=82
H11A Donnelly 82.51 45 ⇓P **P** **04 02 21.5 -0.3**
baz=82
K10A MacKenzie Ranc 82.56 47 ⇓P **P** **04 02 21.8 -0.3**
baz=82
A14A Double T Ranch 82.71 41 ⇑P **P** **04 02 22.6 -0.2**
baz=83
D13A Huson 82.72 43 ⇓P **P** **04 02 22.2 -0.6**
baz=83
G12A Big Creek, Yel 82.82 45 ⇑P **P** **04 02 22.5 -1.0**
baz=83
C14A Swan Lake 82.93 42 ⇓P **P** **04 02 23.6 -0.4**
baz=83
NVAR Mina Array Bea 82.94 52 P **P** **04 02 24.8 +0.5**
comp=Z,7.8nm,0.8s,mb4.5,baz=265,slow=6.0,SNR=40
B14A Marquette Ranc 83.02 41 ⇑P **P** **04 02 24.9 +0.5**
baz=83
MFID Camas Ranch 83.07 47 ⇓P **P** **04 02 24.4 -0.3**
baz=83
L10A Juper Basin 83.07 48 ⇓P **P** **04 02 25.2 +0.4**
baz=83
A15A Johnson Ranch, 83.13 41 P **P** **04 02 25.2 +0.2**
baz=83,SNR=7.4
K11A Parker Ranch, 83.14 47 ⇓P **P** **04 02 25.0 -0.1**
baz=83
F13A Darby 83.25 44 ⇓P **P** **04 02 24.5 -1.2**
baz=83
I12A Atlanta 83.41 46 ⇑P **P** **04 02 26.5 0.0**
baz=83,SNR=5.1
JOF Joensuu 83.47 335 *ep* **P** **04 02 24.4 -2.0**
comp=Z,15nm,0.5s,mb5.0
JOF Joensuu 83.47 335 *ep* **P** **04 02 24.4 -2.0**
comp=Z,15nm,0.5s,mb5.0
B15A Bradely Ranch, 83.48 41 ⇑P **P** **04 02 26.7 0.0**
baz=83,SNR=7.3
L11A Cat Creek Ranc 83.54 48 ⇓P **P** **04 02 27.4 +0.2**
baz=83
G13A Cobalt 83.56 45 P **P** **04 02 27.2 0.0**
baz=84,SNR=17
J12A Stokes Ranch, 83.62 47 ⇓P **P** **04 02 27.7 +0.1**
baz=84
ISA Isabella 83.70 55 *eP* **P** **04 02 27.9 -0.3**
H13A Challis 83.73 45 ⇑P **P** **04 02 27.7 -0.5**
baz=84,SNR=9.9
K12A Draper Farm, C 83.97 47 ⇑P **P** **04 02 29.6 +0.2**
baz=84
HLID Hailey 83.98 46 ⇓P **P** **04 02 28.8 -0.7**
baz=84,SNR=7.3
HLID Hailey 83.98 46 *eP* **P** **04 02 29.4 0.0**
comp=Z,1.9nm,0.6s,mb4.0
I13A Wildhorse Cree 84.06 46 ⇓P **P** **04 02 29.4 -0.4**
baz=84
L12A House Creek Ra 84.06 48 ⇓P **P** **04 02 30.3 +0.5**
baz=84
C16A Fuhringer Ranc 84.18 41 ⇑P **P** **04 02 28.9 -1.4**
baz=84,SNR=7.7
J13A Cove Ranch, Pi 84.20 46 ⇓P **P** **04 02 30.4 -0.1**
baz=84,SNR=5.6
H14A Leadore 84.31 45 ⇓P **P** **04 02 30.3 -0.8**
baz=84,SNR=14
MPMC Manual Prospec 84.33 54 ⇑P **P** **04 02 31.4 +0.1**
baz=84
S10A Tonopah Range, 84.38 52 ⇑P **P** **04 02 31.1 -0.5**
baz=84
M12A Wells 84.39 48 ⇑P **P** **04 02 31.7 +0.2**
baz=84,SNR=7.0
ELK Elko 84.39 49 P **P** **04 02 31.5 -0.1**
comp=Z,5.5nm,0.8s,mb4.4,baz=286,slow=5.4,SNR=16
ELK Elko 84.39 49 *eP* **P** **04 02 31.6 +0.1**
comp=Z,11nm,0.9s,mb4.6
F15A Butte 84.43 43 ⇓P **P** **04 02 31.4 -0.3**
baz=84,SNR=9.0
LRM Limekiln Ridge 84.47 43 *eP* **P** **04 02 31.7 -0.2**
N12A Clover Valley, 84.50 49 *eP* **P** **04 02 31.1 -1.0**
comp=Z,40nm,1.3s,mb5.0
I14A May 84.50 45 ⇓P **P** **04 02 32.4 +0.4**
baz=84,SNR=7.3
HRY Holter Researc 84.53 42 *eP* **P** **04 02 32.8 +0.6**
DLMT Dillon 84.54 44 *eP* **P** **04 02 31.5 -0.7**
comp=Z,3.6nm,0.7s,mb4.2
MCMT McKenzie Canyo 84.57 44 *eP* **P** **04 02 32.6 +0.2**
comp=Z,1.2nm,0.8s,mb3.7
B17A L&G Farms, Che 84.58 41 ⇓P **P** **04 02 32.2 -0.1**
baz=84,SNR=8.9
D16A Dana Ranch, Ca 84.59 42 ⇑P **P** **04 02 32.2 -0.3**
baz=84,SNR=9.6
FURC Furnace Creek, 84.67 53 ⇓P **P** **04 02 32.6 -0.5**
baz=85
J14A Carey 84.67 46 ⇑P **P** **04 02 33.6 +0.7**
baz=85,SNR=12
G15A Dillon 84.69 44 ⇑P **P** **04 02 32.4 -0.6**
baz=85,SNR=5.8
E16A East Helena 84.70 43 ⇑P **P** **04 02 33.1 +0.2**
baz=85
Q11A Duckwater 84.75 51 ⇓P **P** **04 02 33.9 +0.5**
baz=85
A18A Metzger Ranch, 84.91 40 ⇓P **P** **04 02 33.3 -0.7**
baz=85
M13A Montello 84.94 48 ⇑P **P** **04 02 34.3 0.0**
baz=85,SNR=9.8
M13A Montello 84.94 48 *eP* **P** **04 02 34.2 -0.1**
comp=Z,9.8nm,1.1s,mb4.5
R11A Troy Canyon, C 84.98 51 ⇓P **P** **04 02 33.3 -1.3**
baz=85
BOZ Bozeman (W) 85.07 43 ⇓P **P** **04 02 34.7 -0.2**
baz=85,SNR=12
BOZ Bozeman (W) 85.07 43 *eP* **P** **04 02 35.4 +0.6**
comp=Z,3.4nm,0.6s,mb4.2
P12A McGill 85.08 50 ⇑P **P** **04 02 34.9 -0.2**
baz=85
D17A Six Diamond Ra 85.09 42 ⇑P **P** **04 02 34.6 -0.3**
baz=85,SNR=11
U10A Ash Meadows, A 85.09 53 ⇑P **P** **04 02 35.5 +0.4**
baz=85
G16A Moss Hill, Enn 85.11 44 ⇑P **P** **04 02 35.3 +0.3**
baz=85,SNR=20
B18A Beardsley Farm 85.16 40 ⇑P **P** **04 02 35.3 0.0**
baz=85
K14A Jones Ranch, D 85.19 47 ⇓P **P** **04 02 35.6 0.0**
baz=85,SNR=8.8
E17A Martinsdale 85.25 42 ⇓P **P** **04 02 34.8 -0.9**
baz=85,SNR=7.0
L14A Malta 85.34 47 ⇑P **P** **04 02 36.6 +0.3**
baz=85,SNR=11
J15A Blackfoot 85.38 46 ⇑P **P** **04 02 36.2 -0.3**
baz=85,SNR=16
M14A Sheep Mountain 85.46 48 ⇓P **P** **04 02 36.3 -0.6**
baz=85,SNR=12
QLMT Earthquake Lak 85.51 44 *eP* **P** **04 02 37.7 +0.6**
F17A Fitzpatrick Pl 85.59 43 ⇓P **P** **04 02 37.8 +0.3**
baz=86
T11A Corn Creek, Al 85.64 52 ⇓P **P** **04 02 37.5 -0.4**
baz=86,SNR=6.4
H16A Russell Place, 85.68 44 ⇑P **P** **04 02 38.5 +0.7**
baz=86,SNR=9.6
R12A Pony Springs, 85.70 51 ⇓P **P** **04 02 37.8 -0.4**
baz=86
P13A Bates Ranch, G 85.73 50 ⇓P **P** **04 02 38.4 +0.1**
baz=86,SNR=8.7
E18A Harlowton 85.81 42 ⇓P **P** **04 02 38.8 +0.3**
baz=86
N14A Grayback Hills 85.81 48 ⇑P **P** **04 02 38.2 -0.4**
baz=86,SNR=9.6
I16A Newdale 85.84 45 ⇓P **P** **04 02 39.4 +0.8**
baz=86,SNR=5.8
KAF Kangasniemi 85.87 336 *ep* **P** **04 02 35.2 -3.2**
comp=Z,3.4nm,0.7s,mb4.2
KAF Kangasniemi 85.87 336 *ep* **P** **04 02 35.2 -3.2**
comp=Z,3.4nm,0.7s,mb4.2
YMR Madison River 85.88 44 *eP* **P** **04 02 40.0 +1.2**
comp=Z,12nm,0.8s,mb4.7
L15A Malad City 85.94 47 ⇑P **P** **04 02 38.9 -0.3**
baz=86,SNR=6.6
V11A Goodsprings 85.97 54 ⇓P **P** **04 02 38.9 -0.6**
baz=86
J16A Bone 85.98 46 ⇑P **P** **04 02 39.5 +0.1**
baz=86,SNR=9.5
M15A Larsen Ranch, 86.10 47 ⇑P **P** **04 02 40.1 +0.1**
baz=86,SNR=8.9
SPUT South Promonto 86.16 48 *eP* **P** **04 02 39.8 -0.5**
comp=Z,6.8nm,0.9s,mb4.4
K16A Soda Springs 86.17 46 ⇑P **P** **04 02 40.7 +0.3**
baz=86,SNR=5.6
GMRC Granite Mounta 86.17 55 ⇑P **P** **04 02 40.1 -0.4**
baz=86
IMW Indian Meadow 86.19 45 *eP* **P** **04 02 41.5 +1.1**
comp=Z,4.2nm,0.7s,mb4.3
F18A Big Timber 86.20 43 ⇓P **P** **04 02 39.9 -0.5**
baz=86,SNR=5.6
H17A Grant Village 86.24 44 ⇓P **P** **04 02 42.1 +1.5**
baz=86
N15A Stansbury Isla 86.27 48 ⇑P **P** **04 02 40.6 -0.3**
baz=86
DUG Dugway 86.32 49 ⇑P **P** **04 02 40.7 -0.4**
baz=86,SNR=11
DUG Dugway 86.32 49 *eP* **P** **04 02 41.3 +0.2**
comp=Z,5.4nm,0.6s,mb4.5
FINES FINESS Array B 86.34 335 P **P** **04 02 39.0 -1.8**
comp=Z,6.0nm,0.4s,mb4.7,baz=69,slow=4.6,SNR=90
TPAW Teton Pass 86.34 45 *eP* **P** **04 02 42.2 +1.0**
comp=Z,2.2nm,0.5s,mb4.1
P14A Drum Mountains 86.36 49 ⇓P **P** **04 02 41.5 +0.1**
baz=86,SNR=9.1
Q14A Sevier Lake (B 86.44 50 ⇑P **P** **04 02 41.7 0.0**
baz=86,SNR=12
V12A Nelson 86.45 53 ⇑P **P** **04 02 41.9 0.0**
baz=86,SNR=9.2
S13A Holt Ranch, En 86.53 51 ⇓P **P** **04 02 42.4 +0.2**
baz=86
LOHW Long Hollow 86.53 45 *eP* **P** **04 02 42.2 +0.1**
comp=Z,1.5nm,0.6s,mb4.0
L16A Fish Haven 86.59 47 ⇓P **P** **04 02 42.7 +0.3**
baz=86
HWUT Hardware Ranch 86.66 47 *eP* **P** **04 02 42.5 -0.3**
comp=Z,8.5nm,0.9s,mb4.6
T13A Saint George 86.70 52 ⇑P **P** **04 02 43.2 +0.1**
baz=87,SNR=6.2
FFC Flin Flon 86.73 32 *eP* **P** **04 02 42.2 -0.6**
comp=Z,7.9nm,0.8s,mb4.6
IRM Iron Mountain 86.78 55 ⇑P **P** **04 02 42.3 -1.2**
baz=87
U13A Pakoon Wash 86.87 53 ⇓P **P** **04 02 43.9 0.0**
baz=87,SNR=13
CCUT Cedar City 86.91 51 *eP* **P** **04 02 45.0 +1.0**
V13A Grand Canyon W 87.07 53 ⇑P **P** **04 02 45.0 +0.1**
baz=87,SNR=7.9
J18A Kendall Valley 87.08 45 ⇓P **P** **04 02 45.1 +0.3**
baz=87,SNR=6.2
JLU Jordanelle 87.13 48 *eP* **P** **04 02 45.6 +0.6**
comp=Z,6.8nm,0.7s,mb4.6
K18A Toltan Ranch, 87.30 46 ⇑P **P** **04 02 46.1 +0.3**
baz=87,SNR=5.2
M17A Scullys Gap (B 87.33 47 ⇑P **P** **04 02 45.6 -0.4**
baz=87
DAU Daniels Canyon 87.34 48 *eP* **P** **04 02 46.8 +0.7**
MSU Marysvale 87.41 50 *eP* **P** **04 02 47.0 +0.5**
W13A Hualapai Mount 87.42 54 ⇓P **P** **04 02 46.2 -0.3**
baz=87,SNR=6.7
U14A Mt Trumbull 87.46 52 ⇑P **P** **04 02 47.1 +0.4**
baz=87,SNR=7.1
PDMCI Parker Dam,Lak 87.51 55 ⇑P **P** **04 02 47.1 +0.1**
baz=87
BW06 Boulder Array 87.57 45 ⇓P **P** **04 02 46.6 -0.5**
baz=87
BW06 Boulder Array 87.57 45 *eP* **P** **04 02 46.8 -0.3**
comp=Z,1.6nm,0.4s,mb4.2
PDAR Pinedale Array 87.57 45 P **P** **04 02 46.4 -0.7**
comp=Z,1.5nm,0.5s,mb4.1,baz=126,slow=0.4,SNR=12
L18A Fontenelle, Gr 87.58 46 ⇑P **P** **04 02 47.2 0.0**
baz=88,SNR=5.8
X13A Yucca 87.64 54 ⇑P **P** **04 02 47.5 -0.1**
baz=88,SNR=7.0
M18A Lyman 87.76 47 ⇑P **P** **04 02 48.0 0.0**
baz=88
O17A Robinson Place 87.79 48 ⇑P **P** **04 02 48.2 0.0**
baz=88,SNR=7.4
V14A Boquillas Ranc 87.81 53 ⇑P **P** **04 02 48.5 +0.1**
baz=88,SNR=14
Y13A Salome 87.93 55 ⇑P **P** **04 02 48.0 -1.0**
baz=88
L19A Farson 87.97 46 ⇓P **P** **04 02 48.9 -0.1**
baz=88
Q16A Castle Valley 87.98 49 ⇑P **P** **04 02 49.2 +0.1**
baz=88,SNR=7.2
W14A Seligman 87.98 53 ⇓P **P** **04 02 49.3 +0.1**
baz=88,SNR=8.3
R16A Teasdale 88.00 50 ⇓P **P** **04 02 49.4 +0.2**
baz=88,SNR=8.3
K19A Absolon Red Bu 88.02 45 ⇓P **P** **04 02 48.4 -0.8**
baz=88,SNR=5.2
U15A North Rim 88.12 52 ⇓P **P** **04 02 50.0 +0.2**
baz=88,SNR=9.2
S16A Weppner Ranch, 88.14 51 ⇓P **P** **04 02 49.5 -0.4**
baz=88
N18A Larsen Ranch, 88.22 47 ⇓P **P** **04 02 49.8 -0.4**
baz=88
FCC Fort Churchill 88.26 27 *eP* **P** **04 02 49.2 -0.8**
O18A Roosevelt 88.27 48 ⇑P **P** **04 02 50.8 +0.3**
baz=88
Z13A Yuma Proving G 88.29 55 ⇑P **P** **04 02 51.2 +0.5**
baz=88
P18A Preston Nutter 88.36 48 ⇑P **P** **04 02 50.8 -0.1**
baz=88
SRU San Rafael 88.37 49 ⇓P **P** **04 02 50.9 0.0**
baz=88,SNR=7.1
SRU San Rafael 88.37 49 *eP* **P** **04 02 50.4 -0.6**
comp=Z,4.3nm,0.7s,mb4.4
SUMG Summit 88.39 1 *eP* **P** **04 02 50.8 +0.4**
comp=Z,1.4nm,0.4s,mb4.1
X14A Yava 88.41 54 ⇑P **P** **04 02 51.7 +0.4**
baz=88,SNR=8.9
K20A Yellowstone Ra 88.43 45 ⇑P **P** **04 02 50.6 -0.5**
baz=88,SNR=7.5
V15A Kaibab Nationa 88.44 53 ⇑P **P** **04 02 52.3 +0.9**
baz=88,SNR=7.7
R17A Hanksville Air 88.51 50 ⇓P **P** **04 02 51.4 -0.2**
baz=88,SNR=9.5
Y14A Wickenburg 88.52 55 ⇑P **P** **04 02 51.6 -0.2**
baz=88,SNR=12
L20A Wamsutter 88.70 46 ⇑P **P** **04 02 52.2 -0.2**
baz=89
X15A Humboldt 88.90 54 ⇓P **P** **04 02 53.4 -0.1**
baz=89,SNR=9.4
T17A Navajo Res., N 89.00 51 ⇑P **P** **04 02 53.3 -0.6**
baz=89
Y15A Casa Rosa Ranc 89.03 54 ⇑P **P** **04 02 54.1 -0.1**
baz=89,SNR=12
U16A Tuba City 89.10 52 ⇑P **P** **04 02 55.1 +0.7**
baz=89
R18A Canyonlands Na 89.11 50 ⇑P **P** **04 02 53.9 -0.5**
baz=89,SNR=5.9
WUAZ Wupatki 89.16 53 P **P** **04 02 55.6 +0.9**
baz=89,SNR=6.6
WUAZ Wupatki 89.16 53 *eP* **P** **04 02 55.6 +0.9**
comp=Z,8.0nm,0.9s,mb4.7
W16A Flagstaff 89.20 53 ⇓P **P** **04 02 55.3 +0.4**
baz=89
P19A Cripple Cowboy 89.25 48 ⇑P **P** **04 02 55.4 +0.4**
baz=89,SNR=5.3
N20A Spence Gulch, 89.25 47 ⇑P **P** **04 02 55.2 +0.2**
baz=89
S18A Hurst Farm, Bl 89.32 50 ⇑P **P** **04 02 55.1 -0.3**
baz=89
L21A Rawlins 89.38 45 ⇑P **P** **04 02 55.5 -0.1**
baz=89
214A Organ Pipe Nat 89.42 56 ⇓P **P** **04 02 56.3 +0.3**
baz=89,SNR=5.5
M21A Separation Pea 89.53 46 ⇓P **P** **04 02 55.4 -1.0**
baz=89
V17A Tonalea, Kykot 89.55 52 ⇑P **P** **04 02 57.0 +0.4**

baz=90,SNR=9.3
O20A White River Ci 89.56 47 ⇑P P 04 02 56.3 -0.1
baz=89
R19A Curley Farm, L 89.60 49 ⇓P P 04 02 56.5 -0.2
baz=90
T18A Mexican Hat 89.63 51 ⇓P P 04 02 56.7 -0.1
baz=90
Y16A Circle Bar Ran 89.72 54 ⇓P P 04 02 57.9 +0.5
baz=90,SNR=6.6
N21A Black Mountain 89.79 47 ⇑P P 04 02 57.9 +0.4
baz=90,SNR=12
U18A Rough Rock, Ch 89.92 51 ⇑P P 04 02 58.1 -0.1
baz=90
Z16A Peralta Trail, 89.97 55 ⇓P P 04 02 58.8 +0.3
baz=90
Q20A Ridgley Place, 90.01 48 ⇑P P 04 02 58.8 +0.2
baz=90,SNR=7.0
116A Eloy 90.06 55 ⇑P P 04 02 60.0 +1.0
baz=90
V18A Ganado 90.16 52 ⇓P P 04 02 58.8 -0.6
baz=90,SNR=5.1
PV01 Paradox Valley 90.16 49 *e*P P 04 02 59.1 -0.2
comp=Z,518nm,0.7s
R20A Redvale 90.28 49 ⇓P P 04 02 59.5 -0.4
baz=90
Y17A Roosevelt 90.28 54 ⇑P P 04 03 00.4 +0.4
baz=90
T19A Beclabito 90.37 51 ⇑P P 04 03 00.8 +0.5
baz=90,SNR=7.9
S20A Disappointment 90.44 50 ⇑P P 04 03 00.7 +0.1
baz=90
U19A Dine' College, 90.46 51 ⇑P P 04 03 01.0 +0.3
baz=90
216A Three Points, 90.47 56 ⇑P P 04 03 00.7 -0.2
baz=90
N22A Wattenberg Ran 90.50 46 ⇑P P 04 03 01.5 +0.7
baz=90
Q21A Lamborn Mesa, 90.58 48 ⇑P P 04 03 02.0 +0.8
baz=90,SNR=5.6
MVCO Mesa Verde 90.60 50 ⇑P P 04 03 01.8 +0.4
baz=90
RSSD Black Hills 90.60 42 *e*P P 04 03 00.9 -0.3
comp=Z,2.0nm,0.6s,mb4.3
O22A Kremmling 90.72 47 ⇑P P 04 03 01.9 0.0
baz=91
R21A Cimarron 90.79 49 ⇓P P 04 03 02.4 +0.1
baz=91,SNR=8.0
W19A Sanders 90.81 52 ⇑P P 04 03 02.8 +0.4
baz=91
SMCO Snowmass 90.85 48 *e*P P 04 03 03.0 +0.5
comp=Z,3.4nm,0.8s,mb4.4
Y18A Canyon Day Jun 90.86 54 ⇓P P 04 03 02.9 +0.2
baz=91
TUC Tucson 90.87 55 *e*P P 04 03 02.6 -0.2
comp=Z,3.4nm,1.0s,mb4.3
Q22A Crested Butte, 91.03 48 ⇓P P 04 03 03.7 +0.3
baz=91
X19A St. Johns 91.16 53 ⇓P P 04 03 03.9 -0.2
baz=91
V20A Brimhall 91.21 51 ⇑P P 04 03 04.5 +0.2
baz=91
118A Homack Ranch, 91.37 55 ⇓P P 04 03 05.1 +0.1
baz=91
Y19A Nutrioso 91.38 53 ⇑P P 04 03 05.9 +0.8
baz=91,SNR=5.0
R22A Saguache, Gunn 91.42 49 ⇓P P 04 03 05.7 +0.5
baz=91
W20A Ramah 91.47 52 ⇓P P 04 03 04.9 -0.6
baz=91
ISCO Idaho Springs 91.52 47 *e*P P 04 03 06.6 +0.9
comp=Z,2.4nm,0.7s,mb4.3
U21A Nageezi 91.54 51 ⇑P P 04 03 05.6 -0.2
baz=91,SNR=5.2
S22A 4UR Ranch, Cre 91.57 49 ⇓P P 04 03 05.8 -0.1
baz=92
218A Dragoon 91.58 55 ⇓P P 04 03 06.3 +0.3
baz=92,SNR=8.7
X20A Quemado 91.71 53 ⇓P P 04 03 07.1 +0.4
baz=92,SNR=5.7
119A Ashpeak Ranch, 91.83 54 ⇓P P 04 03 08.0 +0.8
baz=92,SNR=5.2
T22A Edith 91.84 50 ⇓P P 04 03 07.7 +0.5
baz=92
NOA NORSAR Array B 92.02 340 P P 04 03 05.2 -2.2
comp=Z,1.0nm,0.7s,mb3.9,baz=39,slow=5.0,SNR=3.6
Y20A Horse Springs, 92.07 53 ⇑P P 04 03 08.7 +0.4
baz=92
U22A Llaves 92.15 50 ⇑P P 04 03 08.4 -0.2
baz=92
219A White Tail Can 92.18 55 ⇓P P 04 03 09.1 +0.2
baz=92
Z20A Nine Sixteen R 92.23 54 ⇑P P 04 03 09.4 +0.3
baz=92,SNR=13
ULM Lac du Bonnet 92.25 34 *e*P P 04 03 07.2 -1.6
comp=Z,2.2nm,0.7s,mb4.3
120A U Bar Ranch, L 92.44 54 ⇓P P 04 03 10.7 +0.7
baz=92,SNR=5.1
U23A El Rito 92.65 50 ⇑P P 04 03 10.4 -0.5
baz=92
220A Playas Peak, P 92.78 55 ⇑P P 04 03 12.0 +0.4
baz=93
Z21A St. Cloud Mine 92.85 53 ⇓P P 04 03 12.4 +0.5
baz=93,SNR=5.7
ANMO Albuquerque 93.06 51 *e*P P 04 03 12.5 -0.3
comp=Z,0.6nm,1.1s,mb3.6
Z22A Elephant Butte 93.41 53 ⇓P P 04 03 15.0 +0.5
baz=93
V24A Rampart Ranch, 93.58 50 ⇓P P 04 03 15.8 +0.6
baz=94
W24A Lazy 6 Ranch, 93.72 51 ⇓P P 04 03 16.1 +0.3
baz=94
U25A Circle Dot Ran 93.90 49 ⇑P P 04 03 16.8 +0.2
baz=94
MNTX Cornudas Mount 95.29 54 *e*P P 04 03 22.7 -0.4
comp=Z,1.2nm,0.6s,mb4.3
Z26A Caprock 95.64 52 ⇑P P 04 03 24.3 -0.4
baz=96
425A Indio Mountain 96.00 55 ⇓P P 04 03 25.9 -0.4
baz=96
TXAR Lajitas Array 97.67 55 P P 04 03 33.7 -0.2
comp=Z,0.3nm,0.7s,mb3.9,baz=330,slow=3.1,SNR=3.6
TXAR Lajitas Array 97.67 55 P P 04 03 33.7 -0.2
628A Black Gap, Mar 98.20 55 ⇓P P 04 03 35.6 -0.7
baz=98
TORD Torodi Ar. Bea 132.00 309 PKP PKPdf 04 09 10.3 -2.0
comp=Z,0.3nm,0.5s,baz=74,slow=0.8,SNR=5.4
LCO Las Campanas 145.65 113 *e*PKPbc PKPbc 04 09 37.3 0.0
LPAZ La Paz 147.84 90 PKPbc PKPbc 04 09 44.0 +0.2
comp=Z,5.1nm,0.9s,baz=4.7,slow=2.2,SNR=8.7
LPAZ La Paz 147.84 90 *e*PKPbc PKPbc 04 09 44.4 +0.6
TRQA Tornquist 149.60 134 *e*PKPbc PKPbc 04 09 46.5 -1.2

ISCJB ***22*** *04:17:16.0±1.6, 28°.74N±0°.04×34°.7E±0°.1, h3km±8km, Error ellipse: s-maj=18.4km s-min=4.9km az=166.8*
SGS ***22*** *04:17:17.7, 28°.78N×34°.78E, h11km*
CSEM ***22*** *04:17:17.0±0.4, 28°.75N×34°.70E, h10km, ML3.1, Error ellipse: s-maj=9.4km s-min=3.0km az=87.0*
GII ***22*** *04:17:18.9±2.1, 28°.88N×34°.78E, h1km±6km, Md2.7/4*
ISC 22 04:17:17.0±1.8, 28°.74N±0°.04×34°.7E±0°.1, h6km±8km, n16, σ0°76/22, Egypt

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAQS	**Haql**	**0.37**	**35**	P	**Pg**	**04 17 24.0**	**-0.3**
HAQS	**Haql**	**0.37**	**35**	P	**Pg**	**04 17 24.0**	**-0.3**
HAQS				S	**Sg**	**04 17 28.8**	**-0.4**
BDAS	**Al Bad'**	**0.49**	**130**	P	**Pg**	**04 17 26.8**	**+0.3**
BDAS	**Al Bad'**	**0.49**	**130**	P	**Pg**	**04 17 26.8**	**+0.4**
BDAS				S	**Sg**	**04 17 33.5**	**+0.7**
AQBJ	**Aqaba**	**1.03**	**18**	Pg	**Pg**	**04 17 36.7**	**-0.2**
MBRI	**Mt Berech**	**1.07**	**11**	Pg	**Pg**	**04 17 37.1**	**-0.4**
MBRI				Sg	**Sg**	**04 17 52.3**	**+0.9**
KRMI	**Paran Flat**	**1.37**	**2**	Pg	**Pn**	**04 17 42.3**	**-0.3**
KRMI				Sg	**Sn**	**04 18 00.6**	**-0.5**
PRNI	**Paran**	**1.63**	**10**	Pn	**Pn**	**04 17 47.0**	**+0.8**
PRNI				Sn	**Sn**	**04 18 07.3**	**-0.2**
RMNI	**Mount Ramon**	**1.85**	**2**	Pn	**Pn**	**04 17 50.8**	**+1.6**
RMNI				Sn	**Sg**	**04 18 15.4**	**-1.0**
DBAS	**Duba**	**1.91**	**143**	P	**Pn**	**04 17 49.0**	**-1.0**
DBAS	**Duba**	**1.91**	**143**	P	**Pn**	**04 17 49.0**	**-1.0**
WJHS		**2.52**	**142**	P	**Pn**	**04 17 57.5**	**-0.9**
WJHS		**2.52**	**142**	P	**Pn**	**04 17 57.5**	**-0.9**
BIDS	**Bi'r al Bayda'**	**2.75**	**132**	P	**Pn**	**04 18 01.5**	**-0.2**
BIDS	**Bi'r al Bayda'**	**2.75**	**132**	P	**Pn**	**04 18 01.5**	**-0.2**
DSI	**Dead Sea**	**2.88**	**12**	Pn	**Pn**	**04 18 04.7**	**+1.3**

IDC ***22*** *04:18:31.1±3.0, 35°.92N×71°.44E, h0km, mb3.8/5, mb1 3.8/9, mb1mx3.6/27, mbtmp3.8/9, ML3.7/3, Error ellipse: s-maj=61.7km s-min=23.8km az=136.0*
ISCJB ***22*** *04:18:44.7±0.6, 36°.59N±0°.05×71°.48E±0°.09, h96km±11km, mb3.8/4, Error ellipse: s-maj=13.3km s-min=6.0km az=30.2*
NEIC ***22*** *04:18:46.8±1.2, 36°.64N×71°.27E, h113km±14km, mb3.9/3, Error ellipse: s-maj=26.7km s-min=10.8km az=127.0*
NNC ***22*** *04:18:48.5±14.0, 37°.28N×70°.23E, h0km, mb3.7, mpv3.7, Error ellipse: s-maj=108.2km s-min=102.4km az=164.0*
ISC 22 04:18:46.4±0.6, 36°.60N±0°.05×71°.37E±0°.10, h101km±9km, n30, σ1°.26/39, mb3.8/4, 2C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.80**	**223**	*e*Pn	**Pn**	**04 19 30.4**	**+1.0**
KBL				*e*Sn	**Sn**	**04 20 02.6**	**+0.1**
KSH	**Kashi**	**4.66**	**50**	Pn	**Pn**	**04 19 50.3**	**-4.0**
KSH				Sn	**Sn**	**04 20 37.0**	**-10**
KSH	comp=N,61nm,0.3s			smax			
KSH	comp=E,58nm,0.2s			smax			
THN	**Thein Dam**	**5.49**	**138**	*e*PKP	**Pn**	**04 20 03.2**	**-2.5**
THN				*e*S	**Sn**	**04 21 01.9**	**-5.6**
AML	**Almayashu** SNR=32	**5.81**	**17**	P	**Pn**	**04 20 10.9**	**+0.9**
AML	**Almayashu** comp=E,27nm,0.4s	**5.81**	**17**	*e*Pn	**Pn**	**04 20 10.8**	**+0.8**
AML				*e*Sn	**Sn**	**04 21 15.0**	**-0.2**
UCH	**Uchtor** SNR=7.0	**6.12**	**22**	P	**Pn**	**04 20 15.7**	**+1.5**
UCH	**Uchtor** comp=E,3.7nm,0.5s	**6.12**	**22**	*e*Pn	**Pn**	**04 20 15.6**	**+1.3**
UCH				*e*Sn	**Sn**	**04 21 22.1**	**-0.8**
EKS2	**Erkin-Say** SNR=10	**6.33**	**16**	P	**Pn**	**04 20 18.3**	**+1.2**
EKS2	**Erkin-Say** comp=E,7.6nm,0.5s	**6.33**	**16**	*e*Pn	**Pn**	**04 20 17.9**	**+0.8**
AAK	**Ala-Archa** SNR=11	**6.49**	**21**	P	**Pn**	**04 20 20.5**	**+1.3**
AAK	**Ala-Archa** comp=E,0.1nm,0.3s,baz=172,slow=5.2,SNR=17	**6.49**	**21**	Pn	**Pn**	**04 20 20.1**	**+0.9**
AAK				Sn	**Sn**	**04 21 31.1**	**-0.7**
KK31	**Karatay Array** comp=E,3.3nm,0.5s,baz=181,slow=14	**6.53**	**354**	⇓Pn	**Pn**	**04 20 19.6**	**-0.2**
KK31				⇓Sn	**Sn**	**04 21 30.9**	**-1.8**
CHMS	**Chumysh** SNR=6.1 comp=E,3.3nm,0.5s,baz=194,slow=32	**6.90**	**21**	P	**Pn**	**04 20 24.9**	**+0.1**
USP	**Ospenovka** SNR=5.5	**7.08**	**19**	P	**Pn**	**04 20 27.5**	**+0.3**
TKM2	**Tokmak 2** comp=E,2.8nm,0.5s	**7.10**	**26**	⇓Pn	**Pn**	**04 20 28.4**	**+0.9**
TKM2				⇑Sn	**Sn**	**04 21 47.6**	**+0.9**
TKM2	**Tokmak 2** SNR=6.7 comp=E,1.1nm,0.5s	**7.10**	**26**	P	**Pn**	**04 20 28.7**	**+1.2**
TKM2	**Tokmak 2** comp=E,4.3nm,0.6s	**7.10**	**26**	*e*Pn	**Pn**	**04 20 28.3**	**+0.8**
MKAR	**Makanchi Array** baz=216,slow=14,SNR=2.9	**13.04**	**35**	Pn	**Pn**	**04 21 46.6**	**-1.0**
AB31	**Akbulak array** comp=E,0.2nm,0.2s,baz=136,slow=13,SNR=20	**15.15**	**330**	Pn	**Pn**	**04 22 11.8**	**-2.9**
AB31	baz=78,slow=53,SNR=2.5			⇓Sn	**Sn**	**04 24 48.7**	**-13**
ABKAR	**Akbulak array** comp=E,1.0nm,0.3s	**15.15**	**330**	*e*P	**Pn**	**04 22 11.6**	**-3.1**
BVAR	**Borovoye Array** comp=E,0.2nm,0.3s,baz=166,slow=15,SNR=2.6	**16.44**	**358**	P	**Pn**	**04 22 29.9**	**-0.9**
AKTK	**Aktyubinsk**	**16.85**	**329**	P	**Pn**	**04 22 35.7**	**-0.1**
AKTO	**Aktyubinsk** comp=E,0.4nm,0.8s	**16.85**	**329**	⇑Pn	**Pn**	**04 22 35.7**	**-0.1**
AKTO	**Aktyubinsk** comp=E,0.6nm,0.3s,baz=136,slow=12,SNR=6.9	**16.85**	**329**	P	**Pn**	**04 22 35.7**	**-0.1**
ZALV	**Zalesovo Beam** comp=E,0.9nm,0.5s,baz=240,slow=10,SNR=4.8	**19.70**	**24**	P	**P**	**04 23 07.8**	**+0.4**
FINES	**FINESS Array B** comp=E,0.8nm,0.4s,mb3.9,baz=120,slow=8.6,SNR=12	**37.57**	**326**	P	**P**	**04 25 51.9**	**+1.4**
ARCES	**ARCESS Array B** comp=E,1.7nm,0.8s,mb4.0,baz=124,slow=11,SNR=5.1	**41.17**	**337**	P	**P**	**04 26 23.1**	**+2.8**
NB2	**NORSAR Subarra** comp=Z,1.5nm,0.4s,mb4.1,baz=96,slow=7.9	**44.48**	**323**	P	**P**	**04 26 49.6**	**+2.4**
NOA	**NORSAR Array B** comp=Z,1.7nm,0.5s,mb4.1,baz=97,slow=7.7,SNR=10	**44.48**	**323**	P	**P**	**04 26 48.0**	**+0.8**
TORD	**Torodi Ar. Bea** comp=Z,0.3nm,0.5s,mb3.4,baz=45,slow=6.6,SNR=12	**66.02**	**269**	P	**P**	**04 29 19.9**	**-2.6**

DJA 22 04:54:28, 2°.95S×128°.07E, h64km, MLv3.6/3, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.74**	**170**	P	Pn	04 54 44.1	+1.1
NLAI	**Namlea**	**1.01**	**253**	P	Pn	04 54 47.4	+1.1
LBMI	**Labuha**	**2.37**	**346**	P	Pn	04 55 04.7	+0.2
SWI	**Sorong**	**3.80**	**57**	P	Pn	04 55 24.5	+0.4
LUWI	**Luwuk**	**5.62**	**290**	P	Pn	04 55 49.2	+0.1

IDC ***22*** *04:56:01.1±1.1, 38°.18N×21°.71E, h0km, mb3.4/9, mb1 3.5/10, mb1mx3.5/28, mbtmp3.5/10, ML2.9/1, Error ellipse: s-maj=22.5km s-min=21.5km az=148.0*
ATH ***22*** *04:56:03.9, 38°.07N×21°.52E, h17km, ML3.2*
NEIC ***22*** *04:56:03.9, 38°.07N×21°.52E, h17km, ML3.2(ATH), After ATH.*
ISCJB ***22*** *04:56:03.5±0.4, 38°.05N±0°.02×21°.52E±0°.02, h5km±3km, mb3.5/8, Error ellipse: s-maj=2.7km s-min=2.4km az=30.2*
CSEM ***22*** *04:56:04.2±0.2, 38°.03N×21°.55E, h10km, ML3.2, Error ellipse: s-maj=4.5km s-min=3.7km az=59.0*
THE ***22*** *04:56:04.0, 38°.06N×21°.55E, h0km±2km, ML3.6/7, Error ellipse: s-maj=2.2km s-min=0.7km az=214.0*
ISC 22 04:56:04.0±0.3, 38°.05N±0°.02×21°.53E±0°.02, h6km±2km, n121, σ1°.20/199, mb3.5/8, 1C, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.05**	**284**	*e*Pb	**Pg**	**04 56 06.9**	**+1.5**
RLS				*e*Sb	**Sg**	**04 56 09.9**	**+3.5**
RLS	**Riolos of Patr**	**0.05**	**284**	*e*PB	**Pg**	**04 56 06.9**	**+1.5**
RLS				*e*SB	**Sg**	**04 56 09.9**	**+3.5**
RLS	**Riolos of Patr**	**0.05**	**284**	*e*Pb	**Pg**	**04 56 06.9**	**+1.5**
RLS				*e*Sb	**Sg**	**04 56 09.9**	**+3.5**
UPR	**University Cam**	**0.31**	**41**	P	**Pg**	**04 56 10.2**	**+0.1**
UPR				S	**Sg**	**04 56 15.0**	**+0.7**
UPR	**University Cam**	**0.31**	**41**	*e*PB	**Pg**	**04 56 10.1**	**0.0**
UPR				*e*SB	**Sg**	**04 56 15.3**	**+1.0**
UPR	**University Cam**	**0.31**	**41**	P	**Pg**	**04 56 10.2**	**+0.1**
UPR				S	**Sg**	**04 56 15.0**	**+0.7**
UPR				*e*Sb	**Sg**	**04 56 15.3**	**+1.0**
LAKA	**Lakka**	**0.41**	**61**	P	**Pg**	**04 56 11.5**	**-0.4**
LAKA				S	**Sg**	**04 56 17.7**	**+0.5**
LAKA	**Lakka**	**0.41**	**61**	P	**Pg**	**04 56 11.5**	**-0.4**
LAKA				S	**Sg**	**04 56 17.7**	**+0.5**
EFP	**Efpalio**	**0.48**	**38**	P	**Pg**	**04 56 12.4**	**-1.0**
EFP				S	**Sg**	**04 56 19.1**	**-0.6**
EFP	**Efpalio**	**0.48**	**38**	*e*PB	**Pg**	**04 56 12.6**	**-0.8**
EFP				*e*SB	**Sg**	**04 56 20.0**	**+0.3**
EFP	**Efpalio**	**0.48**	**38**	*e*Pb	**Pg**	**04 56 12.6**	**-0.8**
EFP				S	**Sg**	**04 56 19.1**	**-0.6**
EFP				*e*Sb	**Sg**	**04 56 20.0**	**+0.3**
KFL	**Anninata**	**0.59**	**276**	P	**Pg**	**04 56 15.5**	**+0.2**
KFL				S	**Sg**	**04 56 25.2**	**+2.2**
KALE	**Kalithea**	**0.59**	**54**	P	**Pg**	**04 56 14.5**	**-1.0**
KALE				S	**Sg**	**04 56 23.3**	**+0.1**
KALE	**Kalithea**	**0.59**	**54**	P	**Pg**	**04 56 14.5**	**-1.0**
KALE				S	**Sg**	**04 56 23.3**	**+0.1**
GUR	**Goura**	**0.65**	**99**	P	**Pg**	**04 56 15.8**	**-0.8**
GUR				S	**Sg**	**04 56 26.0**	**+0.9**
GUR	**Goura**	**0.65**	**99**	*e*PB	**Pg**	**04 56 15.8**	**-0.8**
GUR				*e*SN	**Sg**	**04 56 25.9**	**+0.8**
GUR	**Goura**	**0.65**	**99**	*e*Pb	**Pg**	**04 56 15.8**	**-0.8**
GUR				*e*Sn	**Sg**	**04 56 25.9**	**+0.8**
VLS	**Valsamata**	**0.75**	**280**	*e*Pb	**Pb**	**04 56 17.5**	**-2.0**
VLS				*e*Sn	**Sg**	**04 56 29.8**	**+1.6**
VLS	**Valsamata**	**0.75**	**280**	P	**Pg**	**04 56 17.6**	**-0.9**
VLS				S	**Sg**	**04 56 29.9**	**+1.7**
VLS	**Valsamata**	**0.75**	**280**	*e*PB	**Pb**	**04 56 17.5**	**-2.0**
VLS				*e*SN	**Sg**	**04 56 29.8**	**+1.6**
VLS	**Valsamata**	**0.75**	**280**	P	**Pg**	**04 56 17.6**	**-0.9**
VLS				*e*Sn	**Sg**	**04 56 29.8**	**+1.6**
DSF	**Desfina**	**0.87**	**65**	P	**Pg**	**04 56 19.3**	**-1.4**
DSF	**Desfina**	**0.87**	**65**	P	**Pg**	**04 56 19.3**	**-1.4**
EVR	**Evrytania**	**0.90**	**14**	P	**Pg**	**04 56 20.9**	**-0.4**
EVR	**Evrytania**	**0.90**	**14**	P	**Pg**	**04 56 20.9**	**-0.4**
ITM	**Ithomi**	**0.92**	**160**	*e*Pb	**Pg**	**04 56 21.3**	**-0.4**
ITM				*e*Sn	**Sn**	**04 56 35.6**	**-1.4**
ITM	**Ithomi**	**0.92**	**160**	P	**Pg**	**04 56 21.3**	**-0.4**
ITM				S	**Sg**	**04 56 35.7**	**+2.0**
ITM	**Ithomi**	**0.92**	**160**	*e*PB	**Pg**	**04 56 21.3**	**-0.4**
ITM				*e*SN	**Sn**	**04 56 35.6**	**-1.4**
ITM	**Ithomi**	**0.92**	**160**	*e*Pb	**Pg**	**04 56 21.3**	**-0.4**
ITM				*e*Sn	**Sn**	**04 56 35.6**	**-1.4**
VLX	**Vlachokerasia**	**0.95**	**135**	P	**Pg**	**04 56 20.9**	**-1.5**
VLX				S	**Sg**	**04 56 35.9**	**+1.2**
VLX	**Vlachokerasia**	**0.95**	**135**	*e*PN	**Pn**	**04 56 22.2**	**-1.8**
VLX				*e*SN	**Sn**	**04 56 36.9**	**-1.0**
VLX	**Vlachokerasia**	**0.95**	**135**	P	**Pg**	**04 56 20.9**	**-1.5**
VLX	**Vlachokerasia**	**0.95**	**135**	*e*Pn	**Pn**	**04 56 22.2**	**-1.8**
VLX				S	**Sg**	**04 56 35.9**	**+1.2**
VLX				*e*Sn	**Sn**	**04 56 36.9**	**-1.0**
LTK	**Loutraki**	**1.14**	**91**	P	**Pg**	**04 56 25.6**	**-0.3**
LTK	**Loutraki**	**1.14**	**91**	*e*PN	**Pg**	**04 56 25.6**	**-0.3**
LTK				*e*SN	**Sn**	**04 56 42.2**	**-0.2**
LTK	**Loutraki**	**1.14**	**91**	*e*Pn	**Pg**	**04 56 25.6**	**-0.3**
LTK				*e*Sn	**Sn**	**04 56 42.2**	**-0.2**
AGG	**Agios Georgios**	**1.16**	**33**	*e*Pn	**Pn**	**04 56 25.2**	**-1.6**
AGG				*e*Sn	**Sn**	**04 56 41.8**	**-1.2**
AGG	**Agios Georgios**	**1.16**	**33**	P	**Pg**	**04 56 24.7**	**-1.6**
AGG	**Agios Georgios**	**1.16**	**33**	*e*PN	**Pn**	**04 56 25.2**	**-1.6**
AGG				*e*SN	**Sn**	**04 56 41.8**	**-1.2**
AGG	**Agios Georgios**	**1.16**	**33**	P	**Pg**	**04 56 24.7**	**-1.6**
AGG	**Agios Georgios**	**1.16**	**33**	*e*Pn	**Pn**	**04 56 25.2**	**-1.6**
AGG				*e*Sn	**Sn**	**04 56 41.8**	**-1.2**
PYL	**PYLOS**	**1.16**	**171**	P	**Pg**	**04 56 25.7**	**-0.6**
PYL	**PYLOS**	**1.16**	**171**	*e*PN	**Pn**	**04 56 25.9**	**-0.9**
PYL				*e*SN	**Sn**	**04 56 43.0**	**0.0**
PYL	**PYLOS**	**1.16**	**171**	P	**Pg**	**04 56 25.7**	**-0.6**
PYL				*e*Sn	**Sn**	**04 56 43.0**	**0.0**
LKR	**Lokris**	**1.31**	**62**	*e*Pn	**Pn**	**04 56 28.3**	**-0.5**
LKR				*e*Sn	**Sn**	**04 56 47.2**	**+0.6**
LKR	**Lokris**	**1.31**	**62**	P	**Pn**	**04 56 27.9**	**-0.9**
LKR				S	**Sb**	**04 56 46.2**	**+0.2**
LKR	**Lokris**	**1.31**	**62**	*e*PN	**Pn**	**04 56 28.3**	**-0.5**
LKR				*e*SN	**Sn**	**04 56 47.2**	**+0.6**
LKR	**Lokris**	**1.31**	**62**	P	**Pn**	**04 56 27.9**	**-0.9**
LKR	**Lokris**	**1.31**	**62**	*e*Pn	**Pn**	**04 56 28.3**	**-0.5**
LKR				S	**Sb**	**04 56 46.2**	**+0.2**
LKR				*e*Sn	**Sn**	**04 56 47.2**	**+0.6**
ATAL	**Atalanti**	**1.34**	**61**	P	**Pn**	**04 56 27.9**	**-1.4**
ATAL	**Atalanti**	**1.34**	**61**	P	**Pn**	**04 56 27.9**	**-1.4**
THL	**Klokotos Trika**	**1.56**	**14**	P	**Pn**	**04 56 32.7**	**+0.3**
THL				S	**Sn**	**04 56 54.4**	**+1.5**
THL	**Klokotos Trika**	**1.56**	**14**	*e*PN	**Pn**	**04 56 32.3**	**-0.1**
THL				*e*SN	**Sn**	**04 56 53.9**	**+1.0**
THL	**Klokotos Trika**	**1.56**	**14**	*e*Pn	**Pn**	**04 56 32.3**	**-0.1**
THL	**Klokotos Trika**	**1.56**	**14**	P	**Pn**	**04 56 32.7**	**+0.3**
THL				*e*Sn	**Sn**	**04 56 53.9**	**+1.0**
THL				S	**Sn**	**04 56 54.4**	**+1.5**
NAIG	**Nisos Aigina**	**1.58**	**100**	*e*Pn	**Pn**	**04 56 33.3**	**+0.8**
NAIG	**Nisos Aigina**	**1.58**	**100**	*e*PN	**Pn**	**04 56 33.3**	**+0.8**
NAIG	**Nisos Aigina**	**1.58**	**100**	*e*Pn	**Pn**	**04 56 33.3**	**+0.8**
JAN	**Janina**	**1.69**	**342**	*e*Pn	**Pn**	**04 56 34.5**	**+0.4**
JAN				*e*Sn	**Sn**	**04 56 56.6**	**+0.5**
JAN	**Janina**	**1.69**	**342**	*e*PN	**Pn**	**04 56 34.5**	**+0.4**
JAN				*e*SN	**Sn**	**04 56 56.6**	**+0.5**
JAN	**Janina**	**1.69**	**342**	*e*Pn	**Pn**	**04 56 34.5**	**+0.4**
JAN				*e*Sn	**Sn**	**04 56 56.6**	**+0.5**
ATH	**Athens Observa**	**1.73**	**92**	*e*Pn	**Pn**	**04 56 35.4**	**+0.7**
ATH				*e*Sn	**Sn**	**04 56 58.3**	**+1.2**
ATH	**Athens Observa**	**1.73**	**92**	*e*PN	**Pn**	**04 56 35.4**	**+0.7**
ATH				*e*SN	**Sn**	**04 56 58.2**	**+1.1**
ATH	**Athens Observa**	**1.73**	**92**	*e*Pn	**Pn**	**04 56 35.4**	**+0.7**
ATH				*e*Sn	**Sn**	**04 56 58.3**	**+1.2**
VLI	**Veliai**	**1.74**	**139**	*e*Pn	**Pn**	**04 56 36.0**	**+1.3**
VLI				*e*Sn	**Sn**	**04 56 59.7**	**+2.5**
VLI	**Veliai**	**1.74**	**139**	*e*PN	**Pn**	**04 56 36.0**	**+1.3**
VLI				*e*SN	**Sn**	**04 56 59.7**	**+2.5**
VLI	**Veliai**	**1.74**	**139**	*e*Pn	**Pn**	**04 56 36.0**	**+1.3**
VLI				*e*Sn	**Sn**	**04 56 59.7**	**+2.5**
MEV	**Metsovon**	**1.75**	**352**	P	**Pn**	**04 56 36.1**	**+1.1**
MEV	**Metsovon**	**1.75**	**352**	P	**Pn**	**04 56 36.1**	**+1.1**
IGT	**Igoumenitsa**	**1.75**	**328**	P	**Pn**	**04 56 34.5**	**-0.5**
IGT	**Igoumenitsa**	**1.75**	**328**	P	**Pn**	**04 56 34.5**	**-0.5**
ATHU	**Athens Univers**	**1.79**	**92**	P	**Pn**	**04 56 35.7**	**+0.3**
ATHU				S	**Sn**	**04 56 59.0**	**+0.6**
ATHU	**Athens Univers**	**1.79**	**92**	P	**Pn**	**04 56 35.7**	**+0.3**
ATHU				S	**Sn**	**04 56 59.0**	**+0.6**
VLY	**Voula,Athens**	**1.80**	**95**	*e*Pb	**Pb**	**04 56 35.7**	**-1.7**
VLY				*e*Sn	**Sn**	**04 56 59.8**	**+1.0**
VLY	**Voula,Athens**	**1.80**	**95**	*e*PB	**Pb**	**04 56 35.7**	**-1.7**
VLY				*e*SN	**Sn**	**04 56 59.8**	**+1.0**
VLY	**Voula,Athens**	**1.80**	**95**	*e*Pb	**Pb**	**04 56 35.7**	**-1.7**
VLY				*e*Sn	**Sn**	**04 56 59.8**	**+1.0**
PTL	**Penteli**	**1.85**	**89**	*e*Pn	**Pn**	**04 56 36.2**	**0.0**
PTL				*e*Sn	**Sn**	**04 57 00.0**	**+0.1**
PTL	**Penteli**	**1.85**	**89**	*e*PN	**Pn**	**04 56 36.2**	**0.0**
PTL				*e*SN	**Sn**	**04 57 00.0**	**+0.1**
PTL	**Penteli**	**1.85**	**89**	*e*Pn	**Pn**	**04 56 36.2**	**0.0**
PTL				*e*Sn	**Sn**	**04 57 00.0**	**+0.1**
KYTH	**Kithira**	**2.13**	**145**	*e*Pn	**Pn**	**04 56 43.0**	**+2.8**
KYTH	**Kithira**	**2.13**	**145**	*e*PN	**Pn**	**04 56 43.0**	**+2.8**
KYTH	**Kithira**	**2.13**	**145**	*e*Pn	**Pn**	**04 56 43.0**	**+2.8**
KEK	**Kerkira**	**2.14**	**322**	*e*Pb	**Pn**	**04 56 40.1**	**-0.2**
KEK				*e*Sn	**Sn**	**04 57 08.2**	**+1.0**
KEK	**Kerkira**	**2.14**	**322**	P	**Pn**	**04 56 40.1**	**-0.2**
KEK	**Kerkira**	**2.14**	**322**	*e*PB	**Pn**	**04 56 40.1**	**-0.2**
KEK				*

TORD	**Torodi Ar. Bea**	**30.44**	**221**	P	**P**		**05 02 16.4**	**-1.0**
	comp=Z,0.5nm,0.9s,mb3.2,baz=31,slow=9.7,SNR=6.2							
TORD	**Torodi Ar. Bea**	**30.44**	**221**	P	**P**		**05 02 16.4**	**-1.0**
BVAR	**Borovoye Array**	**36.60**	**50**	P	**P**		**05 03 06.2**	**-4.4**
	comp=Z,0.2nm,0.3s,mb3.5,baz=256,slow=12,SNR=2.4							
MKAR	**Makanchi Array**	**44.70**	**58**	P	**P**		**05 04 14.4**	**-3.3**
	comp=Z,0.5nm,0.5s,mb3.6,baz=309,slow=5.8,SNR=5.3							
ZALV	**Zalesovo Beam**	**45.19**	**48**	P	**P**		**05 04 18.3**	**-3.2**
	comp=Z,0.8nm,0.5s,mb3.8,baz=275,slow=8.8,SNR=4.1							

IDC ***22*** *05:01:42.3±0.8, 48°.61N×155°.41E, h0km, mb4.1/19, mb1 4.2/20, mb1mx4.1/27, mbtmp4.1/20, ML3.9/1, MS3.6/7, Ms1 3.7/7, ms1mx3.4/24, Error ellipse: s-maj=22.5km s-min=12.7km az=169.0*

ISCJB ***22*** *05:01:43.2±1.6, 48°.49N±0°.05×155°.56E±0°.08, h14km±10km, mb4.4/75, MS3.8/13, Error ellipse: s-maj=11.6km s-min=4.6km az=136.0*

SKHL ***22*** *05:01:44.3±0.7, 48°.25N×156°.08E, h47km±14km, mb5.5/1, Ms3.8/2, msh5.3/2*

SZGRF ***22*** *05:01:47.3, 48°.07N×155°.17E, h33km, mb4.7, Kuril Islands, Russia*

MOS ***22*** *05:01:47.2±1.2, 48°.63N×155°.31E, h38km, mb4.6/31, Error ellipse: s-maj=10.2km s-min=6.2km az=93.1*

BJI ***22*** *05:01:48.8, 48°.83N×155°.39E, h55km, mB4.7/14, mb4.3/22, Ms4.3/9, Ms7.3.8/8*

NEIC ***22*** *05:01:48.7±0.9, 48°.63N×155°.51E, h46km±8km, mb4.4/11, Error ellipse: s-maj=14.8km s-min=6.8km az=144.0*

ISC 22 05:01:47.0±1.5, 48°.53N±0°.05×155°.53E±0°.08, h27km±10km, h54km±3.4km; pP-P, n196, σ0s89/204, mb4.4/75, MS3.8/13, 13C-11D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.19**	**10**	⇑*i*PN	**Pn**	**05 02 21.5**	**0.0**
SKR				*i* S	**Sn**	**05 02 48.9**	**+1.2**
SKR	comp=Z,300nm,0.5s			pmax	pmax		
SKR	comp=N,200nm,0.3s			pmax	pmax		
SKR	comp=E,170nm,0.3s			pmax	pmax		
SKR	comp=Z,1μm,2.0s			smax			
SKR	comp=N,850nm,0.5s			smax			
SKR	comp=E,890nm,0.5s			smax			
SKR	comp=N,2μm,2.0s			smax			
SKR	comp=E,2μm,2.0s			MLR	MLR		
SKR	comp=N,2μm,12.0s			MLR	MLR		
SKR	comp=E,2μm,12.0s			MLR	MLR		
SKR	comp=Z,2μm,12.0s						
SKR	**Severo-Kuril's**	**2.19**	**10**	⇑*i*P	**Pn**	**05 02 21.5**	**0.0**
SKR				AMB	AMB	05 02 26.9	
SKR	comp=Z,200nm,0.3s			AMB	AMB	05 02 26.9	
SKR	comp=Z,170nm,0.3s			AMB	AMB	05 02 26.9	
SKR	comp=Z,300nm,0.5s			AMB	AMB	05 02 29.0	
SKR	comp=Z,1μm,2.0s						
SKR				*i* S	**Sn**	**05 02 48.9**	**+1.2**
SKR				A		05 03 01.5	
SKR	comp=Z,850nm,0.5s			A		05 03 01.5	
SKR	comp=Z,890nm,0.5s			A		05 03 01.5	
SKR	comp=Z,270nm,0.5s			A		05 03 10.0	
SKR	comp=Z,2μm,2.0s			AMS	AMS	05 03 33.0	
SKR	comp=Z,2μm,12.0s			AMS	AMS	05 03 33.0	
SKR	comp=Z,2μm,12.0s						
PEA0B	**Petropavlovsk-**	**4.78**	**16**	*e*Pn	**Pn**	**05 02 58.3**	**+1.1**
PETK	**Petropavlovsk-**	**4.78**	**16**	Pn	**Pn**	**05 02 58.2**	**+1.1**
PETK	comp=Z,7.5nm,0.3s,baz=182,slow=12,SNR=165			LR	LR	05 05 07.9	
PETK	comp=Z,388nm,20.1s,baz=207,slow=43			PN	**Pn**	**05 02 58.3**	**+1.1**
PETK	**Petropavlovsk-**	**4.78**	**16**	pmax	pmax		
PETK	comp=Z,8.0nm,0.3s			MLR	MLR		
PETK	comp=Z,389nm,20.1s						
PET	**Petropavlovsk**	**4.91**	**23**	*e*PN	**Pn**	**05 02 59.0**	**0.0**
PET				pmax	pmax		
PET	comp=Z,29nm,0.5s			MLR	MLR		
PET	comp=Z,300nm,15.0s						
PET	**Petropavlovsk**	**4.91**	**23**	*e*Pn	**Pn**	**05 02 58.2**	**-0.8**
PET				*e*Sn	**Sn**	**05 03 55.2**	**+0.3**
KUR	**Kuril'sk**	**6.20**	**241**	⇓*i*PN	**Pn**	**05 03 17.0**	**+0.3**
KUR				pmax	pmax		
KUR	comp=Z,380nm,1.0s						
KUR	**Kuril'sk**	**6.20**	**241**	⇓*i*P	**Pn**	**05 03 17.0**	**+0.3**
KUR				AMB	AMB	05 03 21.5	
KUR	comp=Z,380nm,1.0s						
KUR				*e*S	**Sn**	**05 04 27.0**	**+0.3**
KUR				A		05 04 40.0	
KUR	comp=Z,2μm,3.0s			A		05 04 46.5	
KUR	comp=Z,380nm,1.0s			A		05 04 46.5	
KUR	comp=Z,230nm,1.0s						
YSS	**Yuzh-Sakhalins**	**8.75**	**264**	*e*PN	**Pn**	**05 03 54.1**	**+2.4**
YSS				*e*S	**Sn**	**05 05 34.5**	**+5.1**
YSS	comp=E,300nm,15.0s			MLR	MLR		
YSS	comp=Z,300nm,15.0s			MLR	MLR		
YSS	**Yuzh-Sakhalins**	**8.75**	**264**	*e*Pn	**Pn**	**05 03 54.1**	**+2.4**
YSS	comp=Z,15nm,0.6s **Yuzh-Sakhalins**	**8.75**	**264**	*e*P	**Pn**	**05 03 54.1**	**+2.4**
YSS				*e*S	**Sn**	**05 05 34.5**	**+5.1**
YSS				*e*LQ		05 06 06.0	
YSS				AMS	AMS	05 07 21.0	
YSS	comp=Z,300nm,15.0s			AMS	AMS	05 07 21.0	
ASAJ	comp=Z,300nm,15.0s **Asahikawa**	**9.97**	**249**	Pn	**Pn**	**05 04 10.2**	**+1.7**
ASAJ	comp=Z,1.3nm,0.3s,baz=70,slow=16,SNR=12 **Asahikawa**	**9.97**	**249**	PN	**Pn**	**05 04 10.2**	**+1.8**
ASAJ				pmax	pmax		
ERM	comp=Z,1.0nm,0.3s **Erimo**	**10.88**	**238**	Pn	**Pn**	**05 04 21.7**	**+0.9**
ERM				*e*Sn	**Sn**	**05 06 13.9**	**-7.7**
ERM	**Erimo**	**10.88**	**238**	*e*P	**Pn**	**05 04 22.4**	**+1.6**
FX1	**Attu Island--F**	**11.99**	**62**	Pn	**Pn**	**05 04 33.7**	**-2.3**
FX1	comp=Z,2.3nm,0.3s,baz=16,slow=5.9,SNR=12			Sn	**Sn**	**05 06 34.2**	**-14**
HABR	comp=Z,9.9nm,0.3s,baz=56,slow=22,SNR=12 **Khabarovsk**	**13.58**	**277**	*e*PN	**Pn**	**05 04 56.2**	**-1.5**
HABR				pmax	pmax		
HABR	comp=Z,29nm,2.4s			pmax	pmax		
HABR	comp=N,10.0nm,0.9s			pmax	pmax		
HABR	comp=E,17nm,0.9s			MLR	MLR		
HABR	comp=Z,217nm,17.0s						
SEY	**Seymchan**	**14.54**	**354**	*ce*P	**Pn**	**05 05 10.7**	**+0.1**
KLR	**Kul'dur**	**15.65**	**281**	*e*P	**Pn**	**05 05 24.8**	**-0.6**
KLR	comp=Z,900nm,14.0s			MLR	MLR		
MJAR	**Matsushiro Arr**	**17.46**	**233**	P	**Pn**	**05 05 44.4**	**-4.1**
MAJO	comp=Z,0.1nm,0.3s,baz=29,slow=12,SNR=9.3 **Matsushiro**	**17.46**	**233**	*e*P	**Pn**	**05 05 49.0**	**+0.5**
MAJO				pmax	pmax		
MAJO	comp=Z,5.0nm,0.8s **Matsushiro**	**17.46**	**233**	*e*Pn	**Pn**	**05 05 49.0**	**+0.5**
MAT	comp=Z,5.1nm,0.8s **Matsushiro**	**17.46**	**233**	P	**Pn**	**05 05 46.9**	**-1.6**
MAT				*e*S	**Sn**	**05 09 19.0**	**+17**
YAK	**Yakutsk**	**19.80**	**323**	*e*P	**Pn**	**05 06 12.0**	**-4.6**
YAK	comp=Z,9.0nm,0.9s			pmax	pmax		
YAK	comp=N,123nm,15.0s			MLR	MLR		
YAK	comp=Z,161nm,15.0s			MLR	MLR		
YAK	comp=E,118nm,14.0s			MLR	MLR		
BILL	**Bilibino**	**20.30**	**12**	*e*P	**P**	**05 06 19.8**	**-0.5**
BILL				*e*S	S	05 10 27.4	+21
BILL	comp=Z,7.0nm,1.2s			pmax	pmax		
BILL	comp=Z,200nm,18.0s,MS3.5			MLR	MLR		
BILL	**Bilibino**	**20.30**	**12**	*e*P	**P**	**05 06 19.2**	**-1.2**
CN2	comp=Z,5.0nm,0.7s **Changchun**	**21.29**	**268**	*e*P	**P**	**05 06 33.5**	**+2.3**
KSRS	**Korea Array**	**22.90**	**251**	P	**P**	**05 06 47.0**	**-1.5**
KSRS	comp=Z,4.4nm,0.7s,mb4.0,baz=48,slow=10,SNR=9.9 **Korea Array**	**22.90**	**251**	P	**P**	**05 06 47.0**	**-1.5**
KSRS	comp=Z,4.0nm,0.7s,mb4.0			pmax	pmax		
TIXI	**Tiksi**	**26.26**	**341**	*e*P	**P**	**05 07 17.2**	**-2.3**
TIXI				pmax	pmax		
TIXI	comp=Z,4.0nm,0.6s,mb4.1 **Tiksi**	**26.26**	**341**	*e*P	**P**	**05 07 17.1**	**-2.3**
HHC	comp=Z,4.2nm,0.6s,mb4.2 **Hu-ho-hao-te**	**31.82**	**273**	*e*P	**P**	**05 08 08.9**	**-0.3**
HHC				pP	pP	05 08 23.8	+6.7
HHC				sP	sP	05 08 31.0	+11
HHC				PP	PP	05 09 15.3	-5.8
HHC				PcP	PcP	05 10 59.9	+0.3
HHC				S	**S**	**05 13 11.9**	**-5.9**
HHC				sS	sS	05 13 37.3	+6.4
HHC				ScP	ScP	05 14 37.1	-3.8
HHC				PcS	PcS	05 14 42.9	-1.2
HHC				SS	SS	05 15 04.6	-30
HHC				ScS	ScS	05 18 33.3	-5.8
HHC	comp=Z,18nm,0.7s,mb5.0			pmax	pmax		
HHC	comp=Z,81nm,5.7s			pmax	pmax		
HHC	comp=N,190nm,18.6s,MS4.1			LR	LR		
HHC	comp=E,320nm,15.0s,MS4.1			LR	LR		
HHC	comp=Z,120nm,15.5s,MS3.7			LR	LR		
SONM	**Songino Array**	**32.32**	**288**	P	**P**	**05 08 11.5**	**-2.0**
SONM	comp=Z,0.7nm,0.6s,mb3.7,baz=80,slow=8.1,SNR=4.4			pmax	pmax		
SONM	comp=Z,1.0nm,0.6s **Songino Array**	**32.32**	**288**	P	**P**	**05 08 11.5**	**-2.0**
WHN	**Wuhan**	**35.96**	**255**	P	**P**	**05 08 44.5**	**-0.8**
GTA	**Gaotai**	**40.31**	**278**	*e*P	**P**	**05 09 21.3**	**-0.5**
GTA				pP	pP	05 09 37.0	+7.1
GTA				sP	sP	05 09 44.3	+11
GTA				pmax	pmax		
CD2	comp=Z,4.0nm,1.0s,mb4.1 **Chengdu**	**42.66**	**265**	*e*P	**P**	**05 09 41.9**	**+0.8**
CD2				pP	pP	05 09 57.3	+8.0
CD2				sP	sP	05 10 04.5	+12
CD2	comp=Z,10.0nm,0.8s,mb4.6			pmax	pmax		
CD2	comp=Z,40nm,5.2s			pmax	pmax		
ZALV	**Zalesovo Beam**	**42.91**	**305**	LR	LR	05 29 04.8	
GYA	comp=Z,50nm,18.6s,MS3.4,baz=62,slow=38 **Guiyang**	**43.69**	**258**	*e*P	**P**	**05 09 51.0**	**+1.5**
GYA				pmax	pmax		
WMQ	comp=Z,10.0nm,0.8s,mb4.6 **Urumqi**	**45.81**	**291**	*e*P	**P**	**05 10 07.0**	**+0.8**
KMI	**Kunming**	**47.17**	**260**	P	**P**	**05 10 17.8**	**+0.7**
KMI				pmax	pmax		
MK31	comp=Z,8.0nm,0.8s,mb4.7 **Makanchi Array**	**47.58**	**297**	*e*P	**P**	**05 10 18.9**	**-1.1**
MKAR	**Makanchi Array**	**47.58**	**297**	P	**P**	**05 10 18.8**	**-1.2**
MKAR	comp=Z,4.0nm,0.6s,mb4.6,baz=64,slow=9.6,SNR=39			LR	LR	05 31 54.2	
MKAR	comp=Z,102nm,18.5s,MS3.8,baz=356,slow=38 **Makanchi Array**	**47.58**	**297**	P	**P**	**05 10 18.8**	**-1.2**
MKAR				pmax	pmax		
MKAR	comp=Z,4.0nm,0.6s			MLR	MLR		
KURK	comp=Z,102nm,18.5s **Kurchatov**	**47.74**	**303**	P	**P**	**05 10 20.8**	**-0.4**
KURK	comp=Z,2.8nm,0.6s,mb4.5,baz=67,slow=8.1,SNR=10.0			LR	LR	05 31 47.2	
KURK	comp=Z,51nm,19.4s,MS3.5,baz=125,slow=38 **Kurchatov**	**47.74**	**303**	P	**P**	**05 10 20.8**	**-0.5**
KURK				pmax	pmax		
KURK	comp=Z,3.0nm,0.6s,mb4.5			MLR	MLR		
KURK	comp=Z,51nm,19.4s,MS3.5 **Kurchatov**	**47.74**	**303**	*e*P	**P**	**05 10 19.4**	**-1.9**
KURK	comp=Z,3.0nm,0.6s,mb4.5			*e*pP	pP	05 10 35.6	+6.2
YKA	**Yellowknife Ar**	**48.51**	**38**	P	**P**	**05 10 26.1**	**-0.9**
YKA	comp=Z,0.8nm,0.8s,mb3.8,baz=293,slow=8.5,SNR=4.5 **Yellowknife Ar**	**48.51**	**38**	P	**P**	**05 10 26.1**	**-0.9**
YKA				pmax	pmax		
YKA	comp=Z,1.0nm,0.8s **Yellowknife Ar**	**48.51**	**38**	P	**P**	**05 10 26.1**	**-0.9**
BVAR	**Borovoye Array**	**50.99**	**309**	P	**P**	**05 10 43.4**	**-2.6**
BVAR	comp=Z,1.0nm,0.4s,mb4.1,baz=58,slow=8.6,SNR=6.3 **Borovoye Array**	**50.99**	**309**	P	**P**	**05 10 43.4**	**-2.6**
BVAR				pmax	pmax		
RPW	comp=Z,1.0nm,0.4s **Rockport**	**52.29**	**57**	P	**P**	**05 10 57.1**	**+1.4**
TKM2	comp=Z,2.0nm,0.5s,mb4.3 **Tokmak 2**	**53.68**	**296**	*e*P	**P**	**05 11 05.4**	**-0.7**
TKM2				*e*PP	pP	05 11 21.0	+6.6
TKM2				pmax	pmax		
TKM2	comp=Z,2.0nm,0.8s,mb4.1 **Tokmak 2**	**53.68**	**296**	*e*P	**P**	**05 11 05.4**	**-0.7**
TKM2	comp=Z,2.0nm,0.8s,mb4.1			*e*pP	pP	05 11 21.0	+6.6
CHTO	**Chiang Mai**	**54.11**	**257**	*e*P	**P**	**05 11 09.5**	**0.0**
CHTO				*e*PP	pP	05 11 26.2	+8.4
CHTO				pmax	pmax		
CHTO	comp=Z,8.0nm,0.8s,mb4.7 **Chiang Mai**	**54.11**	**257**	*e*P	**P**	**05 11 09.5**	**0.0**
CHTO	comp=Z,7.6nm,0.8s,mb4.7			*e*pP	pP	05 11 26.1	+8.3
CMAR	**Chiang Mai Arr**	**54.37**	**257**	P	**P**	**05 11 11.6**	**+0.2**
CMAR	comp=Z,2.2nm,0.6s,mb4.2,baz=33,slow=7.1,SNR=11 **Chiang Mai Arr**	**54.37**	**257**	P	**P**	**05 11 11.6**	**+0.2**
CMAR				pmax	pmax		
ARU	comp=Z,2.0nm,0.6s **Arti**	**54.80**	**318**	*c i*P	**P**	**05 11 12.8**	**-1.2**
ARU						05 13 15.4	
ARU				S	**S**	**05 18 52.4**	**-0.4**
ARU				pmax	pmax		
ARU	comp=Z,6.0nm,1.0s,mb4.6 **Arti**	**54.80**	**318**	*e*P	**P**	**05 11 12.8**	**-1.2**
ARCES	comp=Z,4.8nm,0.8s,mb4.6 **ARCESS Array B**	**56.70**	**341**	P	**P**	**05 11 25.1**	**-2.4**
ARCES	comp=Z,2.1nm,0.7s,mb4.3,baz=40,slow=7.9,SNR=18			LR	LR	05 41 58.9	
ABKAR	comp=Z,79nm,18.2s,MS3.9,baz=271,slow=43 **Akbulak array**	**58.53**	**310**	*e*P	**P**	**05 11 39.2**	**-1.5**
AKTK	comp=Z,1.5nm,0.6s,mb4.2 **Aktyubinsk**	**58.75**	**312**	P	**P**	**05 11 41.8**	**-0.3**
AKTO	**Aktyubinsk**	**58.75**	**312**	P	**P**	**05 11 41.8**	**-0.3**
SUMG	comp=Z,0.4nm,0.3s,mb3.9,baz=190,slow=1.6,SNR=3.8 **Summit**	**58.80**	**5**	*i* P	**P**	**05 11 41.8**	**-0.4**
NVAR	comp=Z,6.4nm,0.9s,mb4.7 **Mina Array Bea**	**60.18**	**65**	P	**P**	**05 11 51.8**	**-0.4**
JOF	comp=Z,0.5nm,0.6s,mb3.7,baz=302,slow=6.9,SNR=4.7 **Joensuu**	**60.45**	**334**	*e*P	**P**	**05 11 52.0**	**-1.7**
JOF				pmax	pmax		
JOF	comp=Z,2.0nm,0.4s,mb4.5 **Joensuu**	**60.45**	**334**	*e*p	**P**	**05 11 52.0**	**-1.7**
JOF	comp=Z,2.2nm,0.4s,mb4.5 **Joensuu**	**60.45**	**334**	*e*p	**P**	**05 11 52.0**	**-1.7**
PDAR	comp=Z,2.2nm,0.4s,mb4.5 **Pinedale Array**	**62.38**	**56**	P	**P**	**05 12 07.2**	**+0.1**
FINES	comp=Z,0.6nm,0.8s,mb3.8,baz=320,slow=4.4,SNR=5.3 **FINESS Array B**	**63.11**	**335**	P	**P**	**05 12 09.9**	**-1.7**
FINES	comp=Z,1.2nm,0.5s,mb4.3,baz=32,slow=6.4,SNR=15			LR	LR	05 42 21.1	
FINES	comp=Z,97nm,19.4s,MS4.0,baz=47,slow=39 **FINESS Array B**	**63.11**	**335**	P	**P**	**05 12 09.9**	**-1.7**
FINES				pmax	pmax		
FINES	comp=Z,1.0nm,0.5s			MLR	MLR		
NB2	comp=Z,97nm,19.4s **NORSAR Subarra**	**67.05**	**342**	P	**P**	**05 12 35.8**	**-1.4**
NOA	comp=Z,0.7nm,0.6s,mb3.9,baz=24,slow=6.5 **NORSAR Array B**	**67.05**	**342**	P	**P**	**05 12 36.1**	**-1.0**
NOA	comp=Z,1.0nm,0.6s,mb4.0,baz=24,slow=6.4,SNR=6.8			LR	LR	05 46 15.0	
NOA	comp=Z,47nm,20.0s,MS3.7,baz=20,slow=40 **NORSAR Array B**	**67.05**	**342**	P	**P**	**05 12 36.2**	**-1.0**
NOA				pmax	pmax		
NOA	comp=Z,1.0nm,0.6s			MLR	MLR		
HFS	comp=Z,47nm,20.0s **Hagfors**	**67.34**	**340**	P	**P**	**05 12 37.9**	**-1.1**
HFS	comp=Z,1.0nm,0.3s,mb4.3,baz=29,slow=3.4,SNR=15 **Hagfors**	**67.34**	**340**	P	**P**	**05 12 37.9**	**-1.1**
HFS				pmax	pmax		
HYB	comp=Z,1.0nm,0.3s **Hyderabad**	**68.58**	**272**	*e*P	**P**	**05 12 42.5**	**-4.9**
HYB	**Hyderabad**	**68.58**	**272**	*i* P	**P**	**05 12 46.0**	**-1.4**
AKASG	**Malin Array Be**	**70.95**	**327**	P	**P**	**05 13 00.1**	**-1.5**
AKASG	comp=Z,3.4nm,0.6s,mb4.5,baz=32,slow=6.1,SNR=15 **Malin Array Be**	**70.95**	**327**	P	**P**	**05 13 00.1**	**-1.5**
AKASG				pmax	pmax		
ASAR	comp=Z,3.0nm,0.6s **Alice Springs**	**74.44**	**201**	P	**P**	**05 13 21.6**	**-0.9**
ASAR	comp=Z,1.0nm,0.9s,mb3.7,baz=16,slow=5.1,SNR=5.8 **Alice Springs**	**74.44**	**201**	P	**P**	**05 13 21.6**	**-0.8**
ASAR				pmax	pmax		
OJC	comp=Z,1.0nm,0.9s **Ojcow**	**74.52**	**332**	*e*P	**P**	**05 13 21.4**	**-1.4**
STHS	**Stebnicka Huta**	**74.77**	**331**	*e*P	**P**	**05 13 25.3**	**+1.1**
STHS				pmax	pmax		
STHS	comp=Z,4.0nm,0.9s,mb4.3 **Stebnicka Huta**	**74.77**	**331**	*e*P	**P**	**05 13 25.3**	**+1.1**
BUR08	**Bucovina Ar. S**	**74.96**	**328**	*e*P	**P**	**05 13 25.2**	**-0.1**
EKA	**Eskdalemuir Ar**	**74.97**	**348**	P	**P**	**05 13 25.3**	**0.0**
EKA	comp=Z,1.6nm,0.4s,mb4.3,baz=17,slow=5.0,SNR=14 **Eskdalemuir Ar**	**74.97**	**348**	P	**P**	**05 13 25.3**	**0.0**
EKA				pmax	pmax		
BURAR	comp=Z,2.0nm,0.4s **Bucovina Array**	**74.98**	**328**	⇑P	**P**	**05 13 25.1**	**-0.3**
BURAR	**Bucovina Array**	**74.98**	**328**	⇑*i*P	**P**	**05 13 25.1**	**-0.3**
NIE	**Niedzica**	**75.06**	**332**	*e*P	**P**	**05 13 26.3**	**+0.4**
NRDL	**Niedersach Rie**	**75.13**	**339**	*e*P	**P**	**05 13 25.8**	**-0.5**
CRVS	comp=Z,4.0nm,1.0s,mb4.3 **Cervenica-Dubn**	**75.15**	**331**	*e*P	**P**	**05 13 26.2**	**-0.2**
CRVS				pmax	pmax		
CRVS	comp=Z,5.0nm,1.3s,mb4.3 **Cervenica-Dubn**	**75.15**	**331**	*e*P	**P**	**05 13 26.2**	**-0.2**
TXAR	**Lajitas Array**	**75.21**	**63**	P	**P**	**05 13 26.4**	**-0.7**
TXAR	comp=Z,1.4nm,0.7s,mb4.0,baz=299,slow=4.3,SNR=26 **Lajitas Array**	**75.21**	**63**	P	**P**	**05 13 26.4**	**-0.7**
TXAR				pmax	pmax		
OKC	comp=Z,1.0nm,0.7s **Ostrava-Krasne**	**75.36**	**333**	*e*P	**P**	**05 13 29.0**	**+1.4**
OKC				MLR	MLR		
OKC	comp=Z,200nm,5.1s **Ostrava-Krasne**	**75.36**	**333**	*e*P	**P**	**05 13 29.0**	**+1.4**
OKC				AMS	AMS	05 53 10.0	
DPC	comp=Z,200nm,5.1s **Dobruska-Polom**	**75.45**	**334**	*e*P	**P**	**05 13 28.6**	**+0.5**
DPC				MLR	MLR		
DPC	comp=Z,100nm,14.0s,MS4.3 **Dobruska-Polom**	**75.45**	**334**	*e*P	**P**	**05 13 28.6**	**+0.5**
DPC				AMS	AMS	05 52 20.0	
CLL	comp=Z,100nm,14.0s **Collm**	**75.49**	**337**	*e*P	**P**	**05 13 27.8**	**-0.6**
CLL	comp=Z,10.0nm,1.1s,mb4.7 **Collm**	**75.49**	**337**	*i* P	**P**	**05 13 27.8**	**-0.6**
CLL				*e*	pP	05 13 37.0	+0.1
CLL				*e**PP	pP	05 13 41.0	+4.1
CLL				pmax	pmax		
CLL	comp=Z,10.0nm,1.1s,mb4.7 **Collm**	**75.49**	**337**	*i* P	**P**	**05 13 27.8**	**-0.6**
CLL	comp=Z,10.0nm,1.1s,mb4.7			*e*(PcP)	PcP	05 13 37.0	-4.3
CLL				*e*pP	pP	05 13 41.0	+4.1
MORC	**Moravsky Berou**	**75.60**	**333**	⇓P	**P**	**05 13 29.3**	**+0.3**
MORC	**Moravsky Berou**	**75.60**	**333**	⇓*i*P	**P**	**05 13 29.3**	**+0.3**
BRG	**Berggiesshubel**	**75.64**	**336**	*e*P	**P**	**05 13 29.0**	**-0.2**
BRG	comp=Z,3.0nm,0.9s,mb4.2 **Berggiesshubel**	**75.64**	**336**	*e*(P)	**P**	**05 13 29.6**	**+0.4**
BRG	comp=Z,6.7nm,1.3s,mb4.4 **Berggiesshubel**	**75.64**	**336**	*e*P	**P**	**05 13 29.6**	**+0.4**
BRG				pmax	pmax		
CLZ	comp=Z,4.0nm,1.3s,mb4.2 **Clausthal**	**75.67**	**339**	*e*P	**P**	**05 13 29.7**	**+0.3**
CLZ	comp=Z,15nm,1.2s,mb4.8 **Clausthal**	**75.67**	**339**	*e*P	**P**	**05 13 29.7**	**+0.3**
CLZ				pmax	pmax		
PVCC	comp=Z,15nm,1.2s,mb4.8 **Panska Ves**	**75.78**	**335**	*e*P	**P**	**05 13 30.2**	**+0.2**
PVCC				MLR	MLR		
PVCC	comp=Z,100nm,11.0s,MS4.4 **Panska Ves**	**75.78**	**335**	*e*P	**P**	**05 13 30.2**	**+0.2**
PVCC				AMS	AMS	05 50 10.0	
KECS	comp=Z,100nm,11.0s **Kecovo**	**75.83**	**331**	*e*P	**P**	**05 13 30.7**	**+0.4**
KECS				pmax	pmax		
KECS	comp=Z,3.0nm,1.2s,mb4.1 **Kecovo**	**75.83**	**331**	*e*P	**P**	**05 13 30.7**	**+0.4**
PRU	**Pruhonice**	**76.27**	**335**	*e*P	**P**	**05 13 33.6**	**+0.8**
PRU				MLR	MLR		
PRU	comp=Z,100nm,21.8s,MS4.1 **Pruhonice**	**76.27**	**335**	*e*P	**P**	**05 13 33.6**	**+0.8**
PRU				AMS	AMS	05 50 20.0	
VRAC	comp=Z,100nm,21.8s **Vranov**	**76.30**	**334**	⇑P	**P**	**05 13 33.3**	**+0.3**
VRAC	**Vranov**	**76.30**	**334**	⇑*i*P	**P**	**05 13 33.3**	**+0.3**
VYHS	**Vyhne**	**76.34**	**332**	*e*P	**P**	**05 13 33.6**	**+0.4**
VYHS				pmax	pmax		
VYHS	comp=Z,3.0nm,1.2s,mb4.1 **Vyhne**	**76.34**	**332**	*e*P	**P**	**05 13 33.6**	**+0.4**
KOLL	**Kolacno**	**76.40**	**332**	*e*P	**P**	**05 13 34.5**	**+0.9**
KOLL	**Kolacno**	**76.40**	**332**	*e*P	**P**	**05 13 34.5**	**+0.9**
TANN	**Tannenbergstha**	**76.45**	**337**	*e*P	**P**	**05 13 32.2**	**-1.6**
MOX	comp=Z,2.0nm,1.0s,mb4.0 **Moxa**	**76.46**	**337**	*e*P	**P**	**05 13 33.6**	**-0.3**
MLR	comp=Z,8.0nm,1.3s,mb4.5 **Muntele Rosu**	**76.52**	**326**	⇑P	**P**	**05 13 35.4**	**+1.1**
MLR	**Muntele Rosu**	**76.52**	**326**	⇑*i*P	**P**	**05 13 35.4**	**+1.1**
DRGR		**76.56**	**329**	⇑P	**P**	**05 13 34.8**	**+0.3**
DRGR		**76.56**	**329**	⇑*i*P	**P**	**05 13 34.8**	**+0.3**
NKC	**Novy Kostel**	**76.62**	**337**	*e*P	**P**	**05 13 35.0**	**+0.2**
NKC	**Novy Kostel**	**76.62**	**337**	*e*P	**P**	**05 13 35.0**	**+0.2**
TREC	**Trest**	**76.63**	**334**	AMS	AMS	05 51 10.0	
BUG	comp=Z,100nm,21.1s **Bochum--Univer**	**76.77**	**340**	*e*P	**P**	**05 13 34.7**	**-0.9**
ZST	comp=Z,5.0nm,0.7s,mb4.5 **Bratislava**	**77.14**	**333**	*e*P	**P**	**05 13 38.7**	**+0.9**
ZST				pmax	pmax		
ZST	comp=Z,4.0nm,1.0s,mb4.3 **Bratislava**	**77.14**	**333**	*e*P	**P**	**05 13 38.7**	**+0.9**
KHC	**Kasperske Hory**	**77.32**	**335**	*e*P	**P**	**05 13 39.0**	**+0.3**
KHC				pmax	pmax		
KHC	comp=Z,9.0nm,1.0s,mb4.7 **Kasperske Hory**	**77.32**	**335**	*e*P	**P**	**05 13 39.0**	**+0.3**
KHC	comp=Z,8.7nm,1.0s,mb4.6 **Kasperske Hory**	**77.32**	**335**	*e*P	**P**	**05 13 39.3**	**+0.6**
KHC				AMS	AMS	05 51 20.0	
GRF	comp=Z,100nm,13.1s **Grafenberg Arr**	**77.44**	**337**	*e*P	**P**	**05 13 39.6**	**+0.2**
GRF	comp=Z,20nm,1.0s,mb5.0 **Grafenberg Arr**	**77.44**	**337**	*e*P	**P**	**05 13 39.6**	**+0.2**
GRF				pmax	pmax		
WET	comp=Z,20nm,1.0s,mb5.0 **Wettzell**	**77.50**	**336**	*e*P	**P**	**05 13 39.5**	**-0.2**
WET	comp=Z,8.0nm,1.0s,mb4.6 **Wettzell**	**77.50**	**336**	*e*P	**P**	**05 13 39.5**	**-0.2**
WET				pmax	pmax		
GEC2	comp=Z,8.0nm,1.0s,mb4.

comp=Z,8.0nm,0.6s,mb4.8
RJOB Jochberg 78.80 335 *e*P P 05 13 47.0 0.0
comp=Z,4.0nm,0.9s,mb4.3
FUR Furstenfeldbru 78.82 337 *e*P P 05 13 47.4 +0.3
comp=Z,11nm,1.1s,mb4.7
FUR Furstenfeldbru 78.82 337 *e*P P 05 13 47.4 +0.3
FUR pmax pmax
comp=Z,11nm,1.1s,mb4.7
MIB Mutribah 79.10 303 *e*P P 05 13 48.6 -0.4
MIB AMb AMB 05 13 49.5
comp=Z,36nm,0.9s,mb5.3
SOKA Soboth 79.12 334 ⇓*i*P P 05 13 49.4 +0.6
comp=Z,8.3nm,1.1s,mb4.6
KBA Koelnbreinsper 79.25 335 ⇓*i*P P 05 13 50.5 +1.1
comp=Z,18nm,0.9s,mb5.0
BFO Black Forest 79.42 338 *e*P P 05 13 49.8 -0.6
comp=Z,10.0nm,1.4s,mb4.5
BFO Black Forest 79.42 338 *e*P P 05 13 49.8 -0.6
BFO pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
WATA Walderalm 79.50 336 ⇓*i*P P 05 13 51.6 +0.8
comp=Z,6.1nm,0.9s,mb4.5
WTTA Wattenberg 79.55 336 ⇑*i*P P 05 13 52.0 +0.8
comp=Z,15nm,1.0s,mb4.9
NAY Al-Naaiem 79.58 302 *e*P P 05 13 51.0 -0.6
NAY AMb AMB 05 13 52.7
comp=Z,15nm,1.0s,mb4.9
CDF Champ du Feu 79.60 339 *e*P P 05 13 51.5 +0.2
comp=Z,13nm,1.1s,mb4.5
MOTA Moosalm 79.62 336 ⇓*i*P P 05 13 52.2 +0.7
comp=Z,13nm,1.1s,mb4.8
RDF Al-Radifah 79.65 302 *e*P P 05 13 51.9 -0.1
RDF AMb AMB 05 13 53.5
comp=Z,46nm,1.2s,mb5.3
HINF Hinteralfeld 80.26 339 *e*P P 05 13 55.1 +0.2
LDF La Druitiere 80.98 344 *e*P P 05 13 59.0 +0.2
GRR Gorron 81.32 344 *e*P P 05 14 01.1 +0.5
comp=Z,21nm,1.0s,mb4.7
LOR Lormes 81.45 341 *e*P P 05 14 01.6 +0.3
LOR *e*MLR MLR
comp=Z,60nm,20.8s,MS3.6
CABF La Chapelle 81.57 339 *e*P P 05 14 02.5 +0.6
comp=Z,26nm,1.3s,mb4.7
SSF Saint Saulge 81.72 341 *e*P P 05 14 03.0 +0.3
comp=Z,12nm,1.1s,mb4.5
SGMF Saint Gilles 81.74 345 *e*P P 05 14 03.5 +0.7
ROSF Rostrenen 81.78 346 *e*P P 05 14 03.4 +0.4
AVF Avril sur Loir 82.02 341 *e*P P 05 14 04.8 +0.5
comp=Z,7.8nm,0.8s,mb4.4
SMF Signal de Mont 82.05 341 *e*P P 05 14 04.9 +0.5
comp=Z,34nm,1.4s,mb4.8
QUIF Quistinic 82.17 346 *e*P P 05 14 05.7 +0.6
BGF Bois d'Agland 82.34 341 *e*P P 05 14 05.9 -0.1
LPL La Plagne 82.44 338 *e*P P 05 14 07.9 +1.4
comp=Z,4.0nm,0.5s,mb4.3
LPG La Plagne 82.45 338 *e*P P 05 14 08.1 +1.5
comp=Z,4.6nm,0.5s,mb4.3
TCF Toulx Ste Croi 82.73 342 *e*P P 05 14 08.0 0.0
MMAI Mount Meron Ar 82.83 313 P P 05 14 09.3 +0.5
comp=Z,3.3nm,0.5s,mb4.7,baz=46,slow=7.3,SNR=5.4
MFF Saint Martin d 82.90 343 *e*P P 05 14 08.8 -0.1
ORIF Oris-en-Rattie 83.21 339 *e*P P 05 14 10.8 +0.3
comp=Z,3.9nm,0.6s,mb4.3
ORIF *e*MLR MLR
comp=Z,48nm,21.8s,MS3.5
VIVF Saint-Julien-l 83.55 340 *e*P P 05 14 12.7 +0.4
SBF Sospel 83.81 337 *e*P P 05 14 13.3 -0.4
comp=Z,13nm,0.9s,mb4.8
CAF Calviac 84.07 341 *e*P P 05 14 15.1 +0.2
SMRF Simiane la Rot 84.17 339 *e*P P 05 14 15.9 +0.4
FRF La Foret Royal 84.30 338 *e*P P 05 14 15.8 -0.3
LFF La Frestale 84.33 342 *e*P P 05 14 16.8 +0.6
LMR La Mourre 84.54 338 *e*P P 05 14 18.0 +0.6
comp=Z,5.9nm,0.8s,mb4.5
PGF Pioggiola 84.63 336 *e*P P 05 14 17.4 -0.4
KEST Kesra 90.86 333 P P 05 14 49.3 +1.4
comp=Z,0.6nm,0.6s,mb4.1,baz=27,slow=7.1,SNR=5.1
PLCA Paso Flores 146.72 94 PKPbc PKPbc 05 21 25.1 -0.6
comp=Z,1.2nm,0.7s,baz=320,slow=6.6,SNR=4.5

MEX 22 05:15:14.6±1.2, 16°.83N×93°.97W, h157km±13km, MD4.0, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**0.82**	**93**	*i* P	Pn	05 15 37.2	-1.4
TGIG				*i* S	Sn	05 15 54.4	-2.5
CMIG	**Matias Romero**	**0.91**	**287**	*i* P	Pn	05 15 38.3	-1.0
CMIG				*e*S	Sn	05 15 56.2	-1.9
TUIG	**Tuzandepetl**	**1.27**	**340**	*i* P	Pn	05 15 41.3	-1.1
TUIG				*i* S	Sn	05 16 01.0	-2.8
PCIG		**1.33**	**147**	*i* P	Pn	05 15 42.5	-0.5
PCIG				*i* S	Sn	05 16 03.1	-1.6
HUIG	**Huatulco**	**2.31**	**243**	*i* P	Pn	05 15 51.0	-2.7
HUIG				*e*S	Sn	05 16 22.6	-1.3
VHO	**Vista Hermosa**	**2.65**	**276**	*i* P	Pn	05 15 58.3	+0.4
VHO				*e*S	Sn	05 16 31.1	-0.2
PNIG	**Pinotepa**	**4.01**	**264**	*i* P	Pn	05 16 13.1	-2.0
PNIG				*i* S	Sn	05 17 00.0	-2.1

ATH ***22*** *05:41:56.6, 36°.06N×21°.80E, h5km, MD3.4/10*
NEIC ***22*** *05:41:56.6, 36°.06N×21°.80E, h5km, MD3.4(ATH), After ATH.*
ISCJB ***22*** *05:41:56.3±1.6, 36°.10N±0°.07×21°.9E±0°.1, h10km, Error ellipse: s-maj=15.4km s-min=4.7km az=146.0*
CSEM ***22*** *05:41:58.0±0.9, 36°.18N×21°.99E, h2km, ML3.7/1, Error ellipse: s-maj=26.2km s-min=6.7km az=59.0*
THE ***22*** *05:41:59.3, 36°.20N×21°.70E, h20km±4km, ML3.7/1, Error ellipse: s-maj=10.1km s-min=1.9km az=251.0*
ISC 22 05:41:57.3±1.6, 36°.12N±0°.06×21°.9E±0°.1, h5km±7km, n31, σ0°.92/41, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.78**	**354**	P	**Pg**	**05 42 12.0**	**-0.2**
PYL				S	**Sg**	**05 42 22.7**	**+0.4**
PYL	**PYLOS**	**0.78**	**354**	*e*PG	**Pg**	**05 42 11.9**	**-0.3**
PYL	**PYLOS**	**0.78**	**354**	P	**Pg**	**05 42 12.0**	**-0.2**
PYL				S	**Sg**	**05 42 22.7**	**+0.4**
KYTH	**Kithira**	**0.98**	**80**	*e*Pn	**Pg**	**05 42 17.1**	**+1.1**
KYTH	**Kithira**	**0.98**	**80**	*e*PN	**Pg**	**05 42 17.1**	**+1.1**
KYTH	**Kithira**	**0.98**	**80**	*e*Pn	**Pg**	**05 42 17.1**	**+1.1**
ITM	**Ithomi**	**1.06**	**4**	*e*Pn	**Pg**	**05 42 17.6**	**0.0**
ITM				*e*Sb	**Sb**	**05 42 33.8**	**+1.7**
ITM	**Ithomi**	**1.06**	**4**	P	**Pg**	**05 42 17.4**	**-0.2**
ITM				S	**Sg**	**05 42 31.4**	**+0.1**
ITM	**Ithomi**	**1.06**	**4**	*e*PN	**Pg**	**05 42 17.6**	**0.0**
ITM				*e*SB	**Sb**	**05 42 33.8**	**+1.7**
ITM	**Ithomi**	**1.06**	**4**	P	**Pg**	**05 42 17.4**	**-0.2**
ITM				S	**Sg**	**05 42 31.4**	**+0.1**
ITM				*e*Sb	**Sb**	**05 42 33.8**	**+1.7**
VLI	**Veliai**	**1.06**	**56**	*e*Pn	**Pg**	**05 42 18.0**	**+0.3**
VLI	**Veliai**	**1.06**	**56**	*e*PN	**Pg**	**05 42 18.0**	**+0.3**
VLI	**Veliai**	**1.06**	**56**	*e*PN	**Pg**	**05 42 18.0**	**+0.3**
VLI	**Veliai**	**1.06**	**56**	*e*Pn	**Pg**	**05 42 18.0**	**+0.3**
VLX	**Vlachokerasia**	**1.32**	**19**	P	**Pn**	**05 42 20.6**	**-1.7**
VLX				S	**Sb**	**05 42 38.1**	**-1.5**
VLX	**Vlachokerasia**	**1.32**	**19**	P	**Pn**	**05 42 20.6**	**-1.7**
VLX				S	**Sb**	**05 42 38.1**	**-1.5**
KARN	**Karanos**	**1.83**	**112**	P	**Pn**	**05 42 30.5**	**+1.2**
KARN				S	**Sg**	**05 42 56.2**	**+0.1**
KARN	**Karanos**	**1.83**	**112**	*e*PG	**Pg**	**05 42 31.0**	**-1.4**
KARN	**Karanos**	**1.83**	**112**	P	**Pn**	**05 42 30.5**	**+1.2**
KARN	**Karanos**	**1.83**	**112**	*e*Pg	**Pg**	**05 42 31.0**	**-1.4**
GUR	**Goura**	**1.85**	**12**	P	**Pn**	**05 42 28.8**	**-0.8**
GUR	**Goura**	**1.85**	**12**	*e*PN	**Pg**	**05 42 32.6**	**-0.2**
GUR	**Goura**	**1.85**	**12**	P	**Pn**	**05 42 28.8**	**-0.8**
RLS	**Riolos of Patr**	**1.96**	**351**	*e*Pn	**Pg**	**05 42 35.0**	**+0.2**
RLS	**Riolos of Patr**	**1.96**	**351**	*e*PN	**Pg**	**05 42 35.0**	**+0.2**
RLS	**Riolos of Patr**	**1.96**	**351**	*e*Pn	**Pg**	**05 42 35.0**	**+0.2**
LTK	**Loutraki**	**2.10**	**25**	P	**Pn**	**05 42 34.4**	**+1.4**
LTK	**Loutraki**	**2.10**	**25**	*e*PG	**Pg**	**05 42 37.0**	**-0.5**
LTK	**Loutraki**	**2.10**	**25**	P	**Pn**	**05 42 34.4**	**+1.4**
EFP	**Efpalio**	**2.30**	**1**	*e*PN	**Pb**	**05 42 39.2**	**0.0**
EFP	**Efpalio**	**2.30**	**1**	*e*Pn	**Pb**	**05 42 39.2**	**0.0**

NEIC ***22*** *05:44:01.6±13.0, 42°.92N×71°.92E, h10km, Error ellipse: s-maj=152.0km s-min=26.0km az=88.0*
NNC ***22*** *05:44:02.9±0.9, 43°.32N×72°.15E, h0km, mb3.3, mpv3.2, Error ellipse: s-maj=16.2km s-min=5.4km az=167.0*
ISCJB ***22*** *05:44:05.8±0.4, 43°.27N±0°.03×72°.21E±0°.04, h33km, Error ellipse: s-maj=5.4km s-min=3.3km az=139.3*
ISC 22 05:44:07.1±0.5, 43°.13N±0°.03×72°.17E±0°.05, h35km, n26, σ1°.26/42, 15C-11D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**1.21**	**269**	⇑P	**Pn**	**05 44 26.3**	**-1.3**
KK31	11nm,0.3s			⇓S	**Sn**	**05 44 42.1**	**-0.7**
	62nm,0.4s,baz=101,slow=24,SNR=5.6						
EKS2	**Erkin-Say**	**1.27**	**111**	P	**Pn**	**05 44 26.1**	**-2.3**
	SNR=197						
EKS2	**Erkin-Say**	**1.27**	**111**	*e*Pn	**Pn**	**05 44 26.0**	**-2.3**
EKS2				*e*Sn	**Sn**	**05 44 42.4**	**-1.8**
AML	**Almayashu**	**1.51**	**131**	P	**Pn**	**05 44 31.8**	**+0.2**
	SNR=20						
AML	**Almayashu**	**1.51**	**131**	*e*Pn	**Pn**	**05 44 29.1**	**-2.5**
AML				*e*Sn	**Sn**	**05 44 47.3**	**-2.7**
USP	**Ospenovka**	**1.71**	**85**	P	**Pn**	**05 44 34.3**	**-0.1**
	SNR=102						
AAK	**Ala-Archa**	**1.78**	**106**	P	**Pn**	**05 44 35.3**	**-0.1**
	SNR=99						
CHMS	**Chumysh**	**1.90**	**93**	P	**Pn**	**05 44 36.9**	**-0.1**
	SNR=51						
UCH	**Uchtor**	**1.95**	**117**	P	**Pn**	**05 44 37.4**	**-0.3**
	SNR=130						
UCH	**Uchtor**	**1.95**	**117**	*e*Pn	**Pn**	**05 44 37.6**	**-0.2**
UCH				*e*Sn	**Sn**	**05 45 01.2**	**+0.3**
KBK	**Karagaybulak**	**2.10**	**102**	P	**Pn**	**05 44 40.4**	**+0.7**
	SNR=6.0						
KZA	**Kyzart**	**2.51**	**114**	P	**Pn**	**05 44 47.4**	**+2.0**
	SNR=82						
TKM2	**Tokmak 2**	**2.52**	**94**	⇑Pn	**Pn**	**05 44 45.8**	**+0.3**
	7.1nm,0.5s						
TKM2				⇑Sn	**Sn**	**05 45 20.5**	**+5.5**
	87nm,0.4s						
TKM2	**Tokmak 2**	**2.52**	**94**	P	**Pn**	**05 44 46.2**	**+0.6**
	SNR=11						
TKM2	**Tokmak 2**	**2.52**	**94**	*e*Pn	**Pn**	**05 44 45.6**	**+0.1**
TKM2				*e*Sn	**Sn**	**05 45 20.4**	**+5.3**
ULHL	**Ulahol**	**3.13**	**105**	P	**Pn**	**05 44 55.1**	**+1.1**
	SNR=18						
KSH	**Kashi**	**4.61**	**140**	*e*Pn	**Pn**	**05 45 16.1**	**+1.8**
KSH				Sn	**Sn**	**05 46 11.6**	**+5.0**
KSH				smax			
	comp=N,9.0nm,0.6s						
KSH				smax			
	comp=E,10.0nm,0.7s						
MK31	**Makanchi Array**	**8.05**	**60**	⇑Pn	**Pn**	**05 46 02.1**	**+0.6**
	comp=E,0.8nm,0.6s,baz=315,slow=58,SNR=57						
MK31				⇓Sn	**Sn**	**05 47 32.6**	**+1.3**
	comp=E,6.5nm,0.7s						
MK31				⇑Lg		05 48 18.7	
	comp=E,19nm,0.8s						
MK31	**Makanchi Array**	**8.05**	**60**	*e*Pn	**Pn**	**05 46 02.3**	**+0.7**
MK31				*e*Sn	**Sn**	**05 47 37.2**	**+5.9**
KURBB	**Kurchatov Arra**	**8.66**	**28**	⇑Pn	**Pn**	**05 46 10.3**	**+0.5**
	comp=E,0.1nm,0.4s						
KURBB				⇓Sn	**Sn**	**05 47 46.7**	**+0.5**
	comp=E,0.2nm,0.3s						
KURBB				⇓Lg		05 48 36.5	
	comp=E,3.5nm,0.8s						
KURK	**Kurchatov**	**8.77**	**28**	⇑Pn	**Pn**	**05 46 06.0**	**-5.3**
	comp=E,2.2nm,0.9s						
KURK				⇑Sn	**Sn**	**05 47 48.4**	**-0.5**
	comp=E,1.6nm,0.5s						
KURK				⇓Lg		05 48 39.3	
	comp=E,8.6nm,0.6s						
VOSK	**Vostochnaya**	**9.63**	**356**	⇑Pn	**Pn**	**05 46 22.9**	**-0.2**
	comp=E,0.4nm,0.6s						
VOSK				⇓Sn	**Sn**	**05 48 08.9**	**-1.0**
	comp=E,1.2nm,0.5s						
VOSK				⇓Lg		05 49 06.3	
	comp=E,9.4nm,0.8s						
BVA0	**Borovoye Array**	**9.97**	**354**	⇑Pn	**Pn**	**05 46 27.5**	**-0.2**
	baz=152,slow=12,SNR=4.9						
BVA0				⇑Sn	**Sn**	**05 48 17.5**	**-0.8**
	comp=E,0.2nm,0.5s,baz=169,slow=26,SNR=4.3						
BVA0				⇑Lg		05 49 12.6	
	comp=E,1.0nm,1.1s,baz=158,slow=26,SNR=3.6						
ZRNK	**Zerenda**	**10.05**	**349**	⇑Pn	**Pn**	**05 46 26.2**	**-2.6**
	comp=E,1.1nm,0.7s						
ZRNK				⇓Sn	**Sn**	**05 48 20.1**	**-0.1**
	comp=E,1.7nm,0.4s						
ZRNK				⇓Lg		05 49 17.9	
	comp=E,12nm,1.0s						
AB31	**Akbulak array**	**10.45**	**310**	⇑Pn	**Pn**	**05 46 37.3**	**+3.0**
	comp=E,449nm,0.1s						
AB31				⇓Sn	**Sn**	**05 48 33.5**	**+3.5**
	comp=E,0.5nm,0.3s						
AKTO	**Aktyubinsk**	**12.13**	**312**	⇑Pn	**Pn**	**05 46 59.8**	**+2.5**
	comp=E,0.1nm,0.5s						
AKTO				⇓Sn	**Sn**	**05 49 16.5**	**+5.4**
	comp=E,0.1nm,0.5s						

IDC ***22*** *05:59:18.5±1.9, 33°.23N×92°.07E, h0km, mb3.2/3, mb1 3.4/5, mb1mx3.2/25, mbtmp3.3/5, ML3.2/2, Error ellipse: s-maj=70.7km s-min=26.3km az=66.0*
NEIC ***22*** *05:59:20.6±0.8, 33°.38N×92°.02E, h10km, Error ellipse: s-maj=25.6km s-min=12.0km az=86.0*
ISCJB ***22*** *05:59:23.0±2.3, 33°.4N±0°.1×91°.9E±0°.3, h52km±33km, mb3.3/2, Error ellipse: s-maj=38.6km s-min=18.1km az=170.1*
ISC 22 05:59:24.4±2.1, 33°.4N±0°.1×91°.9E±0°.3, h48km±33km, n6, σ0°.88/6, mb3.3/2, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.72**	**190**	*e*Pn	**Pn**	**06 00 19.6**	**+0.2**
MKAR	**Makanchi Array**	**15.25**	**334**	Pn	**Pn**	**06 02 55.7**	**-0.7**
	0.2nm,0.3s,baz=161,slow=9.2,SNR=2.7						
SONM	**Songino Array**	**18.12**	**33**	P	**Pn**	**06 03 32.4**	**0.0**
	0.0nm,0.3s,baz=212,slow=14,SNR=2.8						
KURK	**Kurchatov**	**19.86**	**335**	P	**Pn**	**06 03 53.1**	**-0.1**
	0.4nm,0.6s,baz=142,slow=11,SNR=3.8						
ZALV	**Zalesovo Beam**	**21.16**	**348**	P	**P**	**06 04 06.2**	**+1.0**
	0.4nm,0.5s,mb3.0,baz=162,slow=15,SNR=3.7						
ASAR	**Alice Springs**	**69.44**	**139**	P	**P**	**06 10 27.3**	**-0.3**
	0.7nm,1.1s,mb3.5,baz=324,slow=6.1,SNR=5.2						

GII ***22*** *06:20:19.8±0.5, 33°.30N×35°.42E, h1km±1km, Md2.2/5*
ISCJB ***22*** *06:20:20.4±0.5, 33°.33N±0°.02×35°.39E±0°.04, h5km±6km, Error ellipse: s-maj=6.2km s-min=3.3km az=21.1*
GRAL ***22*** *06:20:21.4±0.3, 33°.31N×35°.42E, h4km±2km, MD3.2*
CSEM ***22*** *06:20:21.4, 33°.31N×35°.42E, h3km, ML3.2, After GRAL*
ISC 22 06:20:20.8±0.5, 33°.34N±0°.02×35°.39E±0°.04, h4km±8km, n22, σ0°.71/35, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.16**	**341**	*e*P	**Pg**	**06 20 25.0**	**+1.0**
MATL	**Matarih**	**0.16**	**341**	*e*P	**Pg**	**06 20 25.0**	**+1.0**
KSDI	**Kefar Szold**	**0.27**	**122**	Pg	**Pg**	**06 20 25.5**	**-0.4**
KSDI				Sg	**Sg**	**06 20 29.4**	**0.0**
HRI	**Mount Hermon**	**0.29**	**103**	Pg	**Pg**	**06 20 26.1**	**-0.4**
HNTI	**Hanita**	**0.31**	**216**	Pg	**Pg**	**06 20 26.6**	**-0.2**
HNTI				Sg	**Sg**	**06 20 32.4**	**+1.5**
MMC7	**Mount Meron ar**	**0.31**	**180**	Pg	**Pg**	**06 20 26.4**	**-0.4**
MMB3	**Mount Meron ar**	**0.31**	**179**	Pg	**Pg**	**06 20 26.3**	**-0.6**
MMA4	**Mount Meron ar**	**0.32**	**179**	Pg	**Pg**	**06 20 26.4**	**-0.6**
MMA3	**Mount Meron ar**	**0.32**	**179**	Pg	**Pg**	**06 20 26.4**	**-0.6**
MMB2	**Mount Meron ar**	**0.32**	**180**	Pg	**Pg**	**06 20 26.5**	**-0.6**
MMB2				Sg	**Sg**	**06 20 31.9**	**+0.6**
RCY	**Rachaya**	**0.39**	**67**	*e*P	**Pg**	**06 20 28.5**	**+0.2**
RCY				*e*S	**Sg**	**06 20 33.8**	**+0.5**
RCY	**Rachaya**	**0.39**	**67**	*e*P	**Pg**	**06 20 28.5**	**+0.2**
RCY				*e*S	**Sg**	**06 20 33.8**	**+0.5**
KSHT	**Keshet**	**0.50**	**135**	Pg	**Pg**	**06 20 30.1**	**-0.3**
KSHT				Sg	**Sg**	**06 20 37.8**	**+1.0**
BHL	**Bhannes**	**0.61**	**21**	*e*P	**Pg**	**06 20 32.4**	**-0.1**
BHL				*e*S	**Sg**	**06 20 40.9**	**+0.4**
BHL	**Bhannes**	**0.61**	**21**	*e*P	**Pg**	**06 20 32.4**	**-0.1**
BHL				*e*S	**Sg**	**06 20 40.8**	**+0.4**
BLGI	**Bet Lehem HaGe**	**0.62**	**196**	Pg	**Pg**	**06 20 32.8**	**0.0**
OFRI	**'Ofer**	**0.79**	**206**	Pg	**Pg**	**06 20 35.7**	**-0.3**
MMLI	**Mount Malkishu**	**0.90**	**178**	Pg	**Pg**	**06 20 37.0**	**-1.0**
MMLI				Sg	**Sg**	**06 20 51.7**	**+2.1**
HWQ	**Hawqa**	**1.05**	**26**	*e*P	**Pg**	**06 20 41.0**	**0.0**
HWQ				*e*S	**Sg**	**06 20 54.5**	**-0.1**
HMDT	**Nahal Hemdat**	**1.08**	**174**	Pg	**Pg**	**06 20 40.6**	**-1.0**
HMDT				Sg	**Sg**	**06 20 55.9**	**+0.2**
SLTI	**Sal'it**	**1.13**	**195**	Pg	**Pg**	**06 20 41.4**	**-1.1**
SLTI				Sg	**Sg**	**06 20 57.4**	**+0.2**
DSI	**Dead Sea**	**1.76**	**180**	Pn	**Pn**	**06 20 51.4**	**-0.6**
DSI				Sn	**Sn**	**06 21 15.6**	**+0.8**

BJI ***22*** *06:27:13.7, 3°.46N×123°.30E, h550km, mB4.5/13, mb4.6/24*
ISCJB ***22*** *06:27:15.0±0.2, 3°.71N±0°.03×123°.16E±0°.05, h548km±4km, mb4.5/67, Error ellipse: s-maj=8.0km s-min=4.9km az=169.4*
DJA ***22*** *06:27:15, 3°.76N×123°.16E, h542km, Mw5.1/9*
MOS ***22*** *06:27:15.7±0.9, 3°.74N×123°.18E, h563km, mb5.0/13, Error ellipse: s-maj=16.5km s-min=7.3km az=121.1*
NEIC ***22*** *06:27:16.4±0.8, 3°.72N×123°.12E, h551km±11km, mb4.8/24, Error ellipse: s-maj=10.7km s-min=5.8km az=67.0*
IDC ***22*** *06:27:16.7±1.1, 3°.73N×123°.20E, h553km±13km, mb3.7/26, mb1 3.8/26, mb1mx3.7/29, mbtmp3.7/26, Error ellipse: s-maj=11.5km s-min=6.1km az=75.0*
ISC 22 06:27:15.9±0.2, 3°.71N±0°.03×123°.16E±0°.05, h543km±3km, n156, σ0°.97/156, mb4.5/67, 7C-2D, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**2.36**	**90**	P	**P**	**06 28 25.6**	**-1.1**
MNI	**Manado**	**2.80**	**143**	P	**P**	**06 28 29.0**	**-0.2**
KMSI	**Cibinong**	**3.21**	**165**	P	**P**	**06 28 31.5**	**-0.3**
MRSI	**Marisa**	**3.43**	**201**	P	**P**	**06 28 33.1**	**-0.2**
MATI	**Mati**	**4.46**	**44**	*e*P	**P**	**06 28 40.5**	**-0.3**
BUKP	**Musuan**	**4.56**	**24**	*e*P	**P**	**06 28 42.3**	**+0.6**
LUWI	**Luwuk**	**4.73**	**185**	P	**P**	**06 28 42.1**	**-1.1**
APSI	**Ampana**	**4.83**	**198**	P	**P**	**06 28 43.5**	**-0.5**
MYLDM	**Lahad Datu**	**4.88**	**288**	P	**P**	**06 28 45.3**	**+1.0**
TNTI	**Ternate**	**5.11**	**125**	P	**P**	**06 28 45.9**	**-0.5**
	2.7nm8μm650nm,0.7s						
PCI	**Palu**	**5.66**	**216**	P	**P**	**06 28 50.4**	**-0.8**
	0.0nm160nm8.7nm,0.4s						
LBMI	**Labuha**	**6.12**	**135**	P	**P**	**06 28 55.3**	**0.0**
	3.6nm7μm249nm,0.6s						
GUIM	**Jordan**	**6.90**	**355**	*e*P	**P**	**06 29 01.7**	**-1.0**
KKM	**Kota Kinabalu**	**7.30**	**289**	P	**P**	**06 29 05.6**	**-1.0**
	0.2nm32nm,1.0s						
TTSI	**Tana Toraja**	**7.49**	**207**	P	**P**	**06 29 08.3**	**-0.2**
	2.1nm6μm520nm,0.9s						
KDI	**Kendari**	**7.63**	**184**	P	**P**	**06 29 10.6**	**+0.7**
	0.5nm142nm,0.9s						
NLAI	**Namlea**	**7.94**	**150**	P	**P**	**06 29 14.8**	**+1.9**
	0.8nm3μm190nm,0.6s						
SPSI	**Sidrap Palu**	**8.34**	**204**	P	**P**	**06 29 17.7**	**+0.8**
	513nm,0.8s						
BNSI	**Bone**	**8.61**	**201**	P	**P**	**06 29 20.5**	**+0.8**
	4μm444nm,0.8s						
OTRP	**Odiongan**	**8.68**	**353**	*e*P	**P**	**06 29 19.2**	**-1.0**
BKSI	**Bulukumba**	**9.47**	**199**	P	**P**	**06 29 29.0**	**+0.6**
	741nm96nm,0.7s						
KBKI	**Kotabaru**	**9.86**	**225**	P	**P**	**06 29 32.7**	**+0.3**
	56nm,0.7s						
PVCP	**Virac**	**9.88**	**6**	*e*P	**P**	**06 29 32.3**	**-0.2**
TGY	**Tagaytay City**	**10.56**	**348**	P	**P**	**06 29 39.4**	**-0.1**
	46nm,0.3s,baz=245,slow=4.8,SNR=5.3						
KAKA	**Kakadu**	**18.73**	**151**	⇑*i*P	**P**	**06 31 01.1**	**+0.2**
	56nm,0.6s						
KAKA	**Kakadu**	**18.73**	**151**	*e*P	**P**	**06 31 01.0**	**+0.1**
	150nm,0.5s						
KAKA	**Kakadu**	**18.73**	**151**	P	**P**	**06 31 01.5**	**+0.6**
	1μm133nm,0.6s						
TWG	**Pinlang**	**19.11**	**354**	*e*P	**P**	**06 31 04.0**	**-0.2**
	30nm,0.6s						
TPUB	**Ta-pu**	**19.63**	**353**	*e*P	**P**	**06 31 09.0**	**0.0**
	67nm,0.6s						
YULB	**Yu-li**	**19.66**	**355**	*e*P	**P**	**06 31 08.8**	**-0.4**
	22nm,0.6s						
SSLB	**Suanglung**	**20.08**	**354**	*e*P	**P**	**06 31 13.6**	**+0.6**
	41nm,0.6s						
KNA	**Kununurra**	**20.11**	**164**	⇑*i*P	**P**	**06 31 13.9**	**+0.5**
	15nm,0.2s						
KNA	**Kununurra**	**20.11**	**164**	P	**P**	**06 31 14.1**	**+0.7**
	2μm125nm,0.7s						
FITZ	**Fitzroy Crossi**	**21.80**	**174**	*e*P	**P**	**06 31 28.6**	**-0.1**
	24nm,0.7s,mb4.9						
FITZ	**Fitzroy Crossi**	**21.80**	**174**	P	**P**	**06 31 28.8**	**+0.1**
	12nm,0.6s,mb4.7,baz=6.4,slow=6.4,SNR=39						
FITZ	**Fitzroy Crossi**	**21.80**	**174**	*e*P	**P**	**06 31 28.5**	**-0.2**
	12nm,0.7s,mb4.6						
FITZ	**Fitzroy Crossi**	**21.80**	**174**	P	**P**	**06 31 28.7**	**0.0**
PSI	**Prapat**	**24.22**	**269**	P	**P**	**06 31 49.6**	**-0.7**
	2.0nm,0.3s,mb4.2,baz=244,slow=2.6,SNR=4.3						
WRAB	**Tennant Creek**	**25.93**	**155**	*e*P	**P**	**06 32 05.1**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,15nm,0.3s,mb5.1						
WRAB	**Tennant Creek**	**25.93**	**155**	*e*P	**P**	**06 32 05.1**	**-0.3**
	comp=Z,15nm,0.3s,mb5.1						
WRA	**Warramunga Arr**	**25.94**	**155**	P	**P**	**06 32 05.2**	**-0.2**
	comp=Z,16nm,0.3s,mb5.1,baz=336,slow=9.7,SNR=60						
WRA				S	**S**	**06 35 54.8**	**-3.0**
	comp=Z,2.4nm,0.7s,baz=337,slow=16,SNR=6.2						
WRA				ScP	ScP	06 38 04.1	-0.3
	comp=Z,2.2nm,0.7s,baz=341,slow=3.1,SNR=8.2						
WRA	**Warramunga Arr**	**25.94**	**155**	P	**P**	**06 32 05.2**	**-0.2**
WRA				S	**S**	**06 35 54.8**	**-3.0**
WRA	**Warramunga Arr**	**25.94**	**155**	P

MJAR	Matsushiro Arr	35.49	21	P	P	06 33 26.6	-0.5
	comp=Z,3.2nm,0.8s,mb3.9,baz=193,slow=9.3,SNR=8.3						
LZH	Lanzhou	36.83	333	*eP*	P	06 33 39.8	+1.6
LZH				pP		06 35 13.5	
LZH				sP	sP	06 36 14.0	0.0
LZH				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.5						
LZH				pmax	pmax		
	comp=Z,70nm,5.7s						
NWAO	Narrogin (SRO)	36.86	188	P	P	06 33 39.0	+0.5
	comp=Z,10nm,0.4s,mb4.7,baz=29,slow=9.5,SNR=7.4						
BBOO	Buckleboo	38.32	162	*eP*	P	06 33 51.1	+0.7
	comp=Z,4.8nm,0.3s,mb4.5						
HHC	Hu-ho-hao-te	38.43	346	*eP*	P	06 33 53.6	+2.5
HHC				pP		06 35 30.3	
HHC				PP	PP	06 35 38.8	+2.3
HHC				PcP	PcP	06 35 53.6	+3.2
HHC				sP	sP	06 36 29.8	+2.1
HHC				ScP	ScP	06 38 49.8	+2.8
HHC				S	S	06 39 12.8	+5.4
HHC				PcS	PcS	06 39 41.9	+1.4
HHC				sS	sS	06 42 03.9	+2.7
HHC				SS	SS	06 42 23.9	-3.8
HHC				ScS	ScS	06 43 01.0	+1.9
HHC				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.5						
HHC				pmax	pmax		
	comp=Z,49nm,4.3s						
STKA	Stephens Creek	39.49	155	⇑*iP*	P	06 34 01.2	+1.3
	comp=Z,3.4nm,0.3s,mb4.3						
STKA	Stephens Creek	39.49	155	P	P	06 34 01.3	+1.4
	comp=Z,5.2nm,0.3s,mb4.5,baz=334,slow=8.3,SNR=17						
STKA				PP	PP	06 35 44.2	-3.5
	comp=Z,3.0nm,0.7s,baz=324,slow=9.4,SNR=3.3						
STKA	Stephens Creek	39.49	155	P	P	06 34 01.3	+1.4
STKA				PP	PP	06 35 44.2	-3.5
LSA	Lhasa	39.84	314	*eP*	P	06 34 04.6	+1.9
LSA				pmax	pmax		
	comp=Z,27nm,0.7s,mb4.9						
LSA	Lhasa	39.84	314	*eP*	P	06 34 04.6	+1.9
	comp=Z,27nm,0.7s,mb4.9						
CN2	Changchun	39.98	3	*eP*	P	06 34 04.4	+0.8
CN2				pmax	pmax		
	comp=Z,20nm,0.6s,mb4.8						
TAPN	Taplejung	41.20	308	*eP*	P	06 34 12.6	-1.1
	comp=Z,36nm,0.6s,mb5.0						
RAMN	Ramite	41.89	307	*eP*	P	06 34 18.6	-0.5
	comp=Z,58nm,0.7s,mb5.2						
JIRN	Jiri	42.54	308	*eP*	P	06 34 23.6	-0.6
	comp=Z,27nm,0.2s,mb5.3						
GUN	Gumba	42.90	308	*eP*	P	06 34 26.4	-0.6
	comp=Z,113nm,0.6s,mb5.6						
PKI	Pulchoki	43.12	307	*eP*	P	06 34 27.9	-0.8
	comp=Z,20nm,0.4s,mb5.0						
KKN	Kakani	43.32	308	*eP*	P	06 34 29.5	-0.8
	comp=Z,36nm,0.5s,mb5.1						
KKN	Kakani	43.32	308	*eP*	P	06 34 29.5	-0.8
KKN				pmax	pmax		
	comp=Z,36nm,0.5s,mb5.2						
DMN	Daman	43.37	307	*eP*	P	06 34 30.1	-0.6
	comp=Z,48nm,0.9s,mb5.0						
ASAJ	Asahikawa	43.75	20	P	P	06 34 34.4	+1.0
	comp=Z,2.2nm,0.3s,mb4.2,baz=178,slow=18,SNR=6.0						
HYB	Hyderabad	45.78	291	*eP*	P	06 34 49.0	-0.4
HYB	Hyderabad	45.78	291	*iP*	P	06 34 49.0	-0.4
SONM	Songino Array	46.27	344	P	P	06 34 53.1	+0.5
	comp=Z,3.3nm,0.5s,mb4.1,baz=158,slow=8.9,SNR=29						
SONM				PcP	PcP	06 36 16.9	0.0
	comp=Z,1.3nm,0.6s,baz=165,slow=2.9,SNR=5.2						
ZAK	Zakamensk	49.45	343	*eP*	P	06 35 16.4	+0.1
WMQ	Urumqi	50.76	327	*eP*	P	06 35 28.0	+2.0
KSH	Kashi	55.58	317	*eP*	P	06 36 03.6	+3.2
KSH				PcP	PcP	06 36 54.8	+2.7
KSH				pP	pP	06 37 49.3	+3.9
KSH				PP	PP	06 38 18.4	+5.8
KSH				sP	sP	06 38 46.5	+2.3
KSH				ScP	ScP	06 40 01.8	+2.7
KSH				PcS	PcS	06 40 54.3	+1.2
KSH				S	S	06 43 05.9	+0.8
KSH				ScS	ScS	06 44 54.6	+1.1
KSH				sS	sS	06 46 16.1	+2.3
KSH				SS	SS	06 47 07.9	+6.5
KSH				pmax	pmax		
	comp=Z,8.0nm,0.4s,mb4.3						
KSH				pmax	pmax		
	comp=Z,82nm,4.7s						
MK31	Makanchi Array	55.59	327	*eP*	P	06 36 00.6	+0.3
MK31				*e*		06 36 51.6	
MKAR	Makanchi Array	55.59	327	P	P	06 36 00.6	+0.3
	comp=Z,13nm,0.3s,mb4.6,baz=111,slow=8.3,SNR=169						
MKAR				PcP	PcP	06 36 51.6	-0.3
	comp=Z,4.5nm,0.6s,baz=105,slow=5.3,SNR=13						
ULHL	Ulahol	56.70	320	P	P	06 36 08.6	+0.6
	SNR=5.4						
PETK	Petropavlovsk-	56.85	24	P	P	06 36 08.8	-0.1
	comp=Z,1.4nm,0.4s,mb3.5,baz=207,slow=4.4,SNR=3.6						
KZA	Kyzart	57.26	319	P	P	06 36 13.6	+1.7
	SNR=13						
TKM2	Tokmak 2	57.44	320	P	P	06 36 13.8	+0.7
	SNR=12						
TKM2	Tokmak 2	57.44	320	*eP*	P	06 36 13.9	+0.8
TKM2				pmax	pmax		
	comp=Z,70nm,0.7s,mb5.0						
TKM2	Tokmak 2	57.44	320	*eP*	P	06 36 13.9	+0.8
	comp=Z,7.3nm,0.7s,mb4.0						
UCH	Uchtor	57.81	319	P	P	06 36 17.3	+1.6
	SNR=17						
UCH	Uchtor	57.81	319	*eP*	P	06 36 17.2	+1.6
UCH				*e*		06 37 01.8	
UCH				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2						
UCH	Uchtor	57.81	319	*eP*	P	06 36 17.2	+1.5
	comp=Z,10.0nm,0.7s,mb4.2						
UCH				*e*PcP	PcP	06 37 01.8	+1.0
AAK	Ala-Archa	58.02	319	P	P	06 36 17.8	+0.8
	comp=Z,2.0nm,0.4s,mb3.7,baz=146,slow=3.2,SNR=7.8						
AAK				PcP	PcP	06 37 02.2	+0.6
	comp=Z,2.9nm,0.4s,baz=123,slow=4.1,SNR=5.1						
AML	Almayashu	58.31	318	P	P	06 36 20.4	+1.4
	SNR=9.7						
USP	Ospenovka	58.31	320	P	P	06 36 19.5	+0.5
	SNR=9.9						
EKS2	Erkin-Say	58.50	319	P	P	06 36 21.3	+1.1
	SNR=10						
EKS2	Erkin-Say	58.50	319	*eP*	P	06 36 21.1	+0.8
EKS2				*e*		06 37 04.1	
EKS2				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.1						
EKS2	Erkin-Say	58.50	319	*eP*	P	06 36 21.1	+0.8
	comp=Z,6.9nm,0.6s,mb4.1						
EKS2				*e*PcP	PcP	06 37 04.1	+0.5
KBL	Kabul	58.73	309	*eP*	P	06 36 22.1	+0.1
KBL				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.2						
KBL	Kabul	58.73	309	*eP*	P	06 36 22.1	+0.1
	comp=Z,14nm,0.8s,mb4.2						
ZAA0	Zalesovo Array	59.04	335	*eP*	P	06 36 22.8	-0.8
ZALV	Zalesovo Beam	59.04	335	P	P	06 36 22.8	-0.9
	comp=Z,3.4nm,0.4s,mb3.9,baz=126,slow=5.3,SNR=20						
ZALV	Zalesovo Beam	59.04	335	P	P	06 36 22.8	-0.9
KURK	Kurchatov	59.89	329	P	P	06 36 29.2	-0.1
	comp=Z,7.0nm,0.4s,mb4.3,baz=110,slow=30,SNR=58						
KURK	Kurchatov	59.89	329	*eP*	P	06 36 29.3	-0.1
KURK				pmax	pmax		
	comp=Z,35nm,0.6s,mb4.9						
KURK	Kurchatov	59.89	329	*eP*	P	06 36 29.3	0.0
	comp=Z,35nm,0.6s,mb4.9						
SEY	Seymchan	62.90	15	⇑*iP*	P	06 36 49.4	+0.6
FX1	Attu Island--F	63.91	31	P	P	06 36 56.0	+0.5
	comp=Z,7.1nm,0.8s,mb4.2,baz=307,slow=23,SNR=6.0						
FX1	Attu Island--F	63.91	31	P	P	06 36 56.0	+0.5
BVAR	Borovoye Array	65.43	328	P	P	06 37 04.8	-0.3
	comp=Z,2.5nm,0.4s,mb4.0,baz=133,slow=8.3,SNR=21						
BRVK	Borovoye	65.50	328	⇓*iP*	P	06 37 04.9	-0.6
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.3						
ABKAR	Akbulak array	69.94	321	*eP*	P	06 37 32.5	-0.2
	comp=Z,4.5nm,0.6s,mb4.2						
AKTK	Aktyubinsk	71.48	322	P	P	06 37 41.5	-0.3
AKTO	Aktyubinsk	71.48	322	P	P	06 37 41.5	-0.3
	comp=Z,7.4nm,0.4s,mb4.5,baz=107,slow=7.5,SNR=38						
SVE	Sverdlovsk	72.14	329	*eP*	P	06 37 44.9	-0.5
SVE				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.4						
ARU	Arti	73.07	328	*dP*	P	06 37 49.7	-1.1
ARU				*e*		06 40 38.1	
ARU				S	S	06 46 33.0	-1.5
ARU				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.2						
ARU	Arti	73.07	328	*eP*	P	06 37 50.1	-0.8
	comp=Z,9.5nm,0.9s,mb4.2						
QRN	Al-Qurain	75.29	299	*eP*	P	06 38 02.6	-1.4
QRN				AMb	AMB	06 38 03.6	
	comp=Z,22nm,0.4s,mb4.9						
RDF	Al-Radifah	75.63	299	*eP*	P	06 38 04.3	-1.5
RDF				AMb	AMB	06 38 06.2	
	comp=Z,18nm,0.6s,mb4.7						
MIB	Mutribah	75.87	300	*eP*	P	06 38 05.8	-1.4
MIB				AMb	AMB	06 38 06.7	
	comp=Z,29nm,0.6s,mb4.9						
NAY	Al-Naaiem	75.92	299	*eP*	P	06 38 06.0	-1.4
NAY				AMb	AMB	06 38 07.3	
	comp=Z,11nm,0.8s,mb4.3						
ZEI	Tsey	79.61	313	*eP*	P	06 38 26.4	-0.7
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.2						
VORD	Divnogorie	83.28	321	*eP*	P	06 38 44.4	-1.2
VORD				pmax	pmax		
	comp=N,9.0nm,0.8s						
VORD				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.4						
VORD				pmax	pmax		
	comp=E,3.0nm,0.4s						
VSR	Storozhevoye	83.36	321	*eP*	P	06 38 44.6	-1.5
VSR				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.6						
VSR				pmax	pmax		
	comp=N,9.0nm,1.0s						
VSR				pmax	pmax		
	comp=E,5.0nm,0.3s						
OBN	Obninsk	85.03	325	*eP*	P	06 38 54.1	-0.1
OBN				pmax	pmax		
	comp=Z,32nm,2.5s,mb4.4						
COLD	Coldfoot	85.30	23	*eP*	P	06 38 56.5	+1.3
	comp=Z,2.1nm,0.8s,mb3.7						
RC01	Rabbit Creek A	85.38	29	*eP*	P	06 38 55.2	-0.5
	comp=Z,2.7nm,0.4s,mb4.1						
KMBO	Kilima Mbogo	85.99	269	P	P	06 39 00.3	+0.6
	comp=Z,1.8nm,0.8s,mb3.8,baz=358,slow=24,SNR=4.9						
KMBO	Kilima Mbogo	85.99	269	P	P	06 39 00.3	+0.6
MMAI	Mount Meron Ar	86.12	303	P	P	06 38 59.0	-1.0
	comp=Z,1.0nm,0.3s,mb3.9,baz=96,slow=2.9,SNR=2.9						
JOF	Joensuu	87.58	333	*ep*	P	06 39 02.8	-3.3
	comp=Z,6.4nm,0.5s,mb4.6						
JOF	Joensuu	87.58	333	*ep*	P	06 39 02.8	-3.3
	comp=Z,6.4nm,0.5s,mb4.6						
ARCES	ARCESS Array B	89.24	340	P	P	06 39 12.5	-1.2
	comp=Z,3.8nm,0.8s,mb4.3,baz=84,slow=5.6,SNR=11						
AKASG	Malin Array Be	89.66	321	P	P	06 39 14.3	-1.7
	comp=Z,1.6nm,0.6s,mb4.0,baz=70,slow=4.6,SNR=7.4						
KAF	Kangasniemi	89.96	332	*eP*	P	06 39 14.0	-3.2
KAF				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.6						
KAF	Kangasniemi	89.96	332	*ep*	P	06 39 14.0	-3.2
	comp=Z,4.7nm,0.5s,mb4.6						
KAF	Kangasniemi	89.96	332	*ep*	P	06 39 14.0	-3.2
	comp=Z,4.7nm,0.5s,mb4.6						
FINES	FINESS Array B	90.16	332	P	P	06 39 16.8	-1.4
	comp=Z,3.2nm,0.6s,mb4.4,baz=43,slow=6.3,SNR=22						
BUR08	Bucovina Ar. S	92.65	318	*eP*	P	06 39 29.8	-0.2
NB2	NORSAR Subarra	97.21	333	P	P	06 39 48.1	-2.1
	comp=Z,1.2nm,0.7s,mb4.2,baz=71,slow=4.4						
NOA	NORSAR Array B	97.21	333	P	P	06 39 48.6	-1.6
	comp=Z,1.2nm,0.7s,mb4.2,baz=70,slow=4.5,SNR=4.9						
GCMT	Greycliff	112.09	37	*e*PKPdf	PKiKP	06 44 43.2	-6.7
TORD	Torodi Ar. Bea	119.54	287	PKP	PKPdf	06 45 04.5	-0.6
	comp=Z,1.1nm,0.3s,baz=82,slow=1.6,SNR=48						
ANMO	Albuquerque	119.63	46	*c iP*KIKP	PKPdf	06 45 07.2	+2.4
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.7s						
ECSD	EROS Data Cent	120.78	33	*e*PKPdf	PKPdf	06 45 06.8	0.0
SCHQ	Schefferville	121.08	7	PKP	PKPdf	06 45 07.3	+0.3
	comp=Z,2.0nm,0.4s,baz=349,slow=1.9,SNR=13						
SCHQ	Schefferville	121.08	7	*e*PKPdf	PKPdf	06 45 06.8	-0.2
TXAR	Lajitas Array	124.39	51	PKP	PKPdf	06 45 15.2	+1.1
	comp=Z,0.4nm,0.5s,baz=228,slow=0.9,SNR=11						
DBIC	Dimbokro	127.10	281	PKP	PKPdf	06 45 18.1	-1.6
	comp=Z,5.1nm,1.0s,baz=166,slow=12,SNR=4.5						
MCWV	Mont Chateau	131.94	24	*e*PKPdf	PKPdf	06 45 28.8	+0.6
TKL	Tuckaleechee C	133.41	31	*e*PKIKP	PKPdf	06 45 31.9	+0.8
CFAA	Coronel Fontan	150.25	160	PKP	PKPdf	06 46 01.3	+0.6
	comp=Z,0.9nm,0.6s,baz=206,slow=4.5,SNR=3.9						
CFAA				PKPbc	PKPbc	06 46 06.7	+0.2
	comp=Z,0.9nm,0.6s,baz=214,slow=3.7,SNR=26						

ISK ***22*** *06:52:00.7, 37°.35N×31°.90E, h5km, MD3.2*
DDA ***22*** *06:52:01.8, 37°.36N×31°.94E, h7km±3km, Md3.3*
CSEM ***22*** *06:52:01.2±0.1, 37°.37N×31°.90E, h2km, MD3.2, Error ellipse: s-maj=1.8km s-min=1.4km az=10.0*
ISCJB ***22*** *06:52:01.7±0.4, 37°.36N±0°.03×31°.88E±0°.04, h10km, Error ellipse: s-maj=5.4km s-min=3.9km az=35.1*
ISC 22 06:52:01.7±0.6, 37°.36N±0°.03×31°.88E±0°.04, h5km±6km, n35, σ0°.90/45, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HDMB	Hadim	0.62	129	*e*PG	Pg	06 52 12.4	-1.3
HDMB				*e*SG	Sg	06 52 22.3	+0.5
HDMB	Hadim	0.62	129	*e*Pg	Pg	06 52 12.4	-1.3
HDMB				*e*Sg	Sg	06 52 22.3	+0.5
KONT	Konya--Tatoy	0.70	33	*e*PG	Pg	06 52 14.3	-0.8
KONT	Konya--Tatoy	0.70	33	*e*Pg	Pg	06 52 14.3	-0.8
SUTC	Sutluce-Ispart	0.71	280	*e*PG	Pg	06 52 15.3	-0.1
SUTC				*e*SG	Sg	06 52 25.6	+0.9
SUTC	Sutluce-Ispart	0.71	280	*e*Pg	Pg	06 52 15.3	-0.1
SUTC				*e*Sg	Sg	06 52 25.6	+0.9
LADK	Ladik-KONYA	0.92	24	*e*PG	Pg	06 52 18.9	-0.5
LADK	Ladik-KONYA	0.92	24	*e*Pg	Pg	06 52 18.9	-0.5
BCK	Bucak	1.04	276	*e*PG	Pg	06 52 21.4	-0.1
BCK	Bucak	1.04	276	*e*Pg	Pg	06 52 21.5	-0.1
ANTB	Antalya	1.08	245	*e*PN	Pn	06 52 22.0	-1.5
ANTB	Antalya	1.08	245	*e*Pn	Pn	06 52 22.0	-1.6
KDHN	Kadinhani	1.17	9	*i* P	Pg	06 52 23.4	-0.8
KDHN				*i* S	Sg	06 52 41.3	+1.8
KDHN	Kadinhani	1.17	9	*i* P	Pg	06 52 23.4	-0.8
KDHN				*i* S	Sg	06 52 41.3	+1.8
GAZI	Gazipasa	1.18	163	*i* P	Pg	06 52 23.5	-0.8
GAZI				*i* S	Sg	06 52 40.7	+1.2
GAZI	Gazipasa	1.18	163	*i* P	Pg	06 52 23.5	-0.8
GAZI				*i* S	Sg	06 52 40.7	+1.2
ISP	Isparta	1.19	294	*e*PN	Pn	06 52 24.8	-0.2
KIZT	Kizilcal	1.52	360	*e*PN	Pn	06 52 29.6	+0.1
KIZT	Kizilcal	1.52	360	*e*Pn	Pn	06 52 29.6	+0.1
SULT	Sultanhani-AKS	1.54	57	*e*PN	Pn	06 52 29.5	-0.3
SULT	Sultanhani-AKS	1.54	57	*e*Pn	Pn	06 52 29.5	-0.3
SHUT	Suhut-Afyon	1.59	319	*e*PN	Pn	06 52 30.5	0.0
SHUT	Suhut-Afyon	1.59	319	*e*Pn	Pn	06 52 30.5	0.0
IKL	Isikli	1.83	127	*e*PN	Pn	06 52 33.6	-0.2
IKL	Isikli	1.83	127	*e*Pn	Pn	06 52 33.6	-0.2
KHL	Karahalli	2.10	298	*e*PN	Pn	06 52 37.6	+0.1
KHL	Karahalli	2.10	298	*e*Pn	Pn	06 52 37.6	+0.1
AKAS	Kas	2.15	239	*i* P	Pn	06 52 42.0	+3.9
AKAS				*i* S	Sn	06 53 14.1	+8.9
AKAS	Kas	2.15	239	*i* P	Pn	06 52 42.0	+3.8
MERS	Mersin	2.17	102	*e*PN	Pn	06 52 38.4	0.0
MERS	Mersin	2.17	102	*e*Pn	Pn	06 52 38.4	0.0
GULE	Gulek	2.31	91	*i* P	Pn	06 52 43.3	+2.9
GULE				*i* S	Sn	06 53 18.8	+10
GULE	Gulek	2.31	91	*i* P	Pn	06 52 43.3	+2.9
KARA	Karaisali	2.53	91	*e*PN	Pn	06 52 43.5	+0.1
KARA	Karaisali	2.53	91	*e*Pn	Pn	06 52 43.5	+0.1

IDC ***22*** *07:22:04.7±0.4, 8°.84S×157°.78E, h0km, mb5.0/25, mb1 5.0/26, mb1mx5.0/26, mbtmp4.9/26, ML5.0/1, MS5.2/14, Ms1 5.2/14, ms1mx5.0/18, Error ellipse: s-maj=16.3km s-min=12.1km az=120.0*
BJI ***22*** *07:22:04.3, 8°.63S×158°.18E, h10km, mB5.8/50, mb5.2/47, Ms5.5/59, Ms7 5.2/51*
NEIC ***22*** *07:22:06.7±0.1, 8°.87S×157°.80E, h11km, mb5.5/96, ME5.5, MS5.5/206, MW5.8, MW5.7, Error ellipse: s-maj=4.7km s-min=3.8km az=150.0 Broadband fault plane solution: P waves. NP1:φs150.00000°, δ65.00000°, λ90.00000°. NP2:φs330.00000°, δ25.00000°, λ90.00000°. Principal axes: T Plg70.0000°, Azm60.0000°; N Plg0.0000°, Azm0.0000°; P Plg20.0000°, Azm240.0000°; Moment Tensor Solution. s72 Moment tensor: Scale 10^17 Nm; Mrr2.75; Mθθ-2.39; Mφφ-0.36; Mrθ2.39; Mφθ1.44; Mφr-6.27; Best double couple: M0:7.30000×10^17 NP1:φs278.00000°, δ17.00000°, λ35.00000°. NP2:φs154.00000°, δ80.00000°, λ104.00000°. Principal axes: T 7.7600, Plg52.0000°, Azm80.0000°; N -0.9300, Plg13.0000°, Azm331.0000°; P -6.8200, Plg33.0000°, Azm231.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
ISCJB ***22*** *07:22:06.3±0.1, 8°.82S±0°.03×157°.76E±0°.02, h17km, mb5.3/133, MS5.4/244 Error ellipse: s-maj=4.0km s-min=3.2km az=164.7*
MOS ***22*** *07:22:07.3±1.1, 8°.85S×157°.83E, h33km, mb5.5/55, MS5.3/59, Error ellipse: s-maj=9.7km s-min=9.1km az=81.0*
GCMT ***22*** *07:22:10.8±0.1, 9°.03S×157°.86E, h14km, MW5.8, Moment Tensor Solution. s104,c206; s57,c61; Moment tensor: Scale 10^17Nm; Mrr3.93±.05; Mθθ-2.32±.04; Mφφ-1.60±.05; Mrθ1.13±.10; Mφφ3.29±.04; Mφr-2.80±.12; Best double couple: M0:5.60000×10^17 NP1:φs291.00000°, δ33.00000°, λ57.00000°. NP2:φs149.00000°, δ63.00000°, λ110.00000°. Principal axes: T 5.1100, Plg66.0000°, Azm95.0000°; N 0.9300, Plg17.0000°, Azm320.0000°; P -6.0300, Plg16.0000°, Azm225.0000°; Data Used: II IU IC G CN. Surface waves: sta=113, comp=231, per= 50.*
DJA ***22*** *07:22:12, 9.22S×158°.13E, h30km, Mw6.2/43*
ISC 22 07:22:07.0±1.0, 8°.85S±0°.03×157°.80E±0°.02, h12km±5km, h18km±2.8km:pP-P, n822, σ0°.89/573, mb5.3/133, MS5.4/244, 115C-125D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	2.20	105	*e*Pn	Pn	07 22 40.1	-3.2
HNR				*e*Sn	Sn	07 23 15.4	+5.0
COEN	Coen	15.21	249	*e*P	Pn	07 25 45.5	+3.8
	1μm,1.0s						
COEN				*e*Sn	Sn	07 28 30.9	+0.7
NOUC	Port Laguerre	15.51	149	*e*P	Pn	07 25 42.6	-3.0
DZM	Mont Dzumac	15.55	149	*e*P	Pn	07 25 46.0	-0.2
	475nm,1.6s						
DZM				*e*S	Sn	07 28 43.0	+4.4
	33μm,29.3s						
DZM				*e*LR	LR	07 29 24.9	
	10μm,21.1s						
DZM	Mont Dzumac	15.55	149	*e*P	Pn	07 25 43.5	-2.7
DZM	Mont Dzumac	15.55	149	*e*Pn	Pn	07 25 45.9	-0.3
	234nm,1.4s						
CTA	Charters Tower	15.79	224	*e*P	Pn	07 25 47.9	-1.4
	73nm,0.6s						
CTA				*e*S	Sn	07 28 55.5	+11
CTA	Charters Tower	15.79	224	Pn	Pn	07 25 47.7	-1.6
	4.3nm,0.3s,baz=48,slow=14,SNR=26						
CTA				Sn	Sn	07 28 60.0	+16
	0.7nm,0.3s,baz=241,slow=13,SNR=2.7						
CTAO	Charters Tower	15.79	224	*e*P	Pn	07 25 48.1	-1.2
CTAO				pmax	pmax		
	comp=Z,1μm,2.0s						
CTAO	Charters Tower	15.79	224	*e*Pn	Pn	07 25 48.1	-1.3
	comp=Z,1μm,2.0s						
CTAO				*e*S	Sn	07 29 06.5	+22
EIDS	Eidsvold	17.63	200	*e*Pn	Pn	07 26 12.6	+0.1
	comp=Z,1μm,2.0s						
EIDS				*e*Sn	Sn	07 29 28.8	-0.2
KWAJ	Kwajalein Atol	20.07	29	*e*P	P	07 26 41.3	+0.8
	comp=Z,216nm,0.8s						
FUNA	Funafuti	21.15	91	PFAKE		07 27 00.0	+7.8
FUNA				LR	LR		
	comp=Z,5μm,20.0s,MS4.9						
MSVF	Nonsavu	21.57	116	P	P	07 26 57.0	+0.3
	comp=Z,2μm,1.3s,mb6.3,SNR=32						
MSVF	Nonsavu	21.57	116	*e*P	P	07 26 56.8	0.0
	comp=Z,572nm,1.4s,mb5.8						
MSVF				LR	LR		
	comp=Z,4μm,19.0s,MS4.9						
ARMA	Armidale	22.22	194	*e*P	P	07 27 03.6	+0.1
ARMA				*e*S	S	07 31 08.9	+0.8
ARMA	Armidale	22.22	194	*e*P	P	07 27 04.8	+1.4
	comp=Z,339nm,1.7s,mb5.5						
ARMA				*e*S	S	07 31 09.7	+1.6
KAKA	Kakadu	25.20	259	*e*P	P	07 27 32.8	0.0
	comp=Z,73nm,0.6s,mb5.4						
KAKA	Kakadu	25.20	259	*e*P	P	07 27 32.9	+0.1
	comp=Z,248nm,0.7s,mb5.8						
WRAB	Tennant Creek	25.21	242	*e*P	P	07 27 32.7	-0.1
WRAB				*e*S	S	07 31 54.4	-3.7
WRAB				pmax	pmax		
	comp=Z,99nm,0.8s,mb5.4						
WRAB				MLR	MLR		
	comp=Z,16μm,21.0s,MS5.5						
WRAB	Tennant Creek	25.21	242	*e*P	P	07 27 32.7	-0.1
	comp=Z,61nm,0.8s,mb5.2						
WRAB				*e*S	S	07 31 54.4	-3.7
WRAB				LR	LR		
	comp=Z,38μm,21.0s,MS5.9						
WRA	Warramunga Arr	25.22	242	P	P	07 27 31.4	-1.5
	comp=Z,67nm,0.7s,mb5.3,baz=65,slow=9.2,SNR=74						
WRA				PcP	PcP	07 31 05.7	-0.9
	comp=Z,5.1nm,0.8s,baz=69,slow=2.6,SNR=3.6						
WRA				S	S	07 31 55.9	-2.5
	comp=Z,1.5nm,0.8s,baz=23,slow=13,SNR=2.2						
WRA	Warramunga Arr	25.22	242

RAO LR LR
comp=Z,4μm,19.0s,MS5.1
TOO Toolangi 30.68 199 *e*P **P 07 28 22.6 +1.0**
TOO *e*S **S 07 33 27.3 +3.2**
ADE Adelaide 31.33 211 *e*P **P 07 28 27.3 0.0**
FITZ Fitzroy Crossi 32.55 250 *e*P **P 07 28 37.8 -0.5**
comp=Z,31nm,0.6s,mb5.4
FITZ *e*S **S 07 33 44.3 -9.4**
FITZ Fitzroy Crossi 32.55 250 P **P 07 28 37.7 -0.5**
comp=Z,11nm,0.6s,mb5.0,baz=95,slow=7.6,SNR=16
FITZ Fitzroy Crossi 32.55 250 *e*P **P 07 28 37.9 -0.4**
comp=Z,18nm,0.7s,mb5.1
FITZ *e*S **S 07 33 53.5 -0.2**
TAU Tasmania Unive 35.15 193 PFAKE 07 29 10.0 +9.5
TAU LR LR
comp=Z,4μm,19.0s,MS5.2
FORT Forrest 35.28 228⇓ *i*P **P 07 29 01.1 -0.8**
comp=Z,63nm,0.8s,mb5.6
FORT *e*S **S 07 34 35.0 -0.7**
FORT Forrest 35.28 228 *e*P **P 07 29 01.3 -0.6**
comp=Z,97nm,0.9s,mb5.7
SNZO South Karori 35.63 158 PFAKE 07 29 10.0 +5.3
SNZO LR LR
comp=Z,6μm,22.0s,MS5.3
DAV Davao City (W) 35.80 295 PFAKE 07 29 20.0 +13
DAV LR LR
comp=Z,4μm,22.0s,MS5.2
DAV Davao City (W) 35.80 295⇑ *i*P **P 07 29 10.0 +3.5**
RPZ Rata Peaks 36.61 164 P **P 07 29 12.4 -0.6**
comp=Z,23nm,0.8s,mb5.1,baz=59,slow=7.5,SNR=5.4
MBWA Marble Bar 38.64 247 *e*P **P 07 29 29.7 -0.9**
comp=Z,50nm,1.0s,mb5.2
MBWA LR LR
comp=Z,5μm,22.0s,MS5.3
CBIJ Chichi jima 38.81 337 LR LR 07 43 30.8
comp=Z,3μm,19.9s,MS5.1,baz=127,slow=33
JOHN Johnston Islan 41.12 52 PFAKE 07 30 00.0 +8.8
JOHN LR LR
comp=Z,6μm,19.0s,MS5.5
RAR Rarotonga 42.64 112 PFAKE 07 30 10.0 +6.3
RAR LR LR
comp=Z,4μm,20.0s,MS5.3
MIDW Midway 43.98 32 PFAKE 07 30 20.0 +5.7
MIDW LR LR
comp=Z,6μm,19.0s,MS5.5
KKM Kota Kinabalu 44.02 288 *e*P **P 07 30 16.4 +1.6**
comp=Z,821nm,2.4s,mb6.0
NWAO Narrogin (SRO) 44.43 231 P **P 07 30 17.6 -0.3**
comp=Z,18nm,0.7s,mb4.9,baz=68,slow=9.6,SNR=7.1
NWAO Narrogin (SRO) 44.43 231 *e*P **P 07 30 17.3 -0.7**
NWAO pmax pmax
comp=Z,243nm,2.0s
NWAO MLR MLR
comp=Z,5μm,19.0s
NWAO Narrogin (SRO) 44.43 231 *e*P **P 07 30 17.3 -0.7**
comp=Z,243nm,2.0s,mb5.6
NWAO LR LR
comp=Z,5μm,19.0s,MS5.5
JHJ Hachijo jima 2 45.12 339 LR LR 07 47 31.7
comp=Z,2μm,19.1s,MS5.0,baz=76,slow=34
XMAS Kiritimati 45.90 78 PFAKE 07 30 40.0 +10
XMAS LR LR
comp=Z,1μm,20.0s,MS4.8
TWG Pinlang 47.79 312 *e*P **P 07 30 46.9 +2.4**
YULB Yu-li 47.97 313 *e*P **P 07 30 47.3 +1.4**
comp=Z,31nm,0.9s,mb5.3
YULB *e*PP PP 07 32 40.5 +2.5
NACB Ninganchiao 48.23 314 *e*P **P 07 30 46.6 -1.4**
comp=Z,47nm,0.8s,mb5.6
TPUB Ta-pu 48.40 312 P **P 07 30 49.0 -0.2**
comp=Z,60nm,0.9s,mb5.6
KSM Kuching 48.42 280 *e*P **P 07 30 52.4 +2.8**
comp=Z,132nm,1.3s,mb5.8
KSM *e*PP PP 07 32 43.9 +1.5
KSM LR LR
comp=Z,1μm,19.0s,MS5.0
SSLB Suanglung 48.46 313 *e*P **P 07 30 49.6 0.0**
comp=Z,72nm,1.1s,mb5.6
YHNB Yeheng 48.70 314 *e*P **P 07 30 51.6 +0.1**
comp=Z,64nm,0.8s,mb5.7
YHNB LR LR
comp=Z,5μm,20.0s,MS5.5
MJAR Matsushiro Arr 48.76 339 P **P 07 30 50.6 -1.1**
comp=Z,2.6nm,0.6s,mb4.4,baz=168,slow=8.9,SNR=12
MJAR LR LR 07 49 21.4
comp=Z,3μm,18.6s,MS5.3,baz=170,slow=34
MAJO Matsushiro 48.76 339 *e*P **P 07 30 51.7 -0.1**
MAJO pmax pmax
comp=Z,18nm,0.9s,mb5.1
MAJO MLR MLR
comp=Z,2μm,20.0s,MS5.2
MAJO Matsushiro 48.76 339 *e*P **P 07 30 51.7 -0.1**
comp=Z,18nm,0.9s,mb5.1
MAJO LR LR
comp=Z,2μm,20.0s,MS5.2
TATO Taipei 48.81 314 PFAKE 07 31 00.0 +7.6
TATO LR LR
comp=Z,5μm,21.0s,MS5.5
QZH Quanzhou 50.87 312⇑ *i*P **P 07 31 09.5 +1.4**
QZH S **S 07 38 26.0 +1.6**
QZH pmax pmax
comp=Z,2μm,3.3s
QZH LR LR
comp=N,3μm,21.5s,MS5.5
QZH LR LR
comp=E,4μm,18.0s,MS5.5
QZH LR LR
comp=Z,4μm,20.6s,MS5.4
PAE Paea 51.82 105 *e*P **P 07 31 15.3 0.0**
comp=Z,32nm,1.3s,mb5.1
PAE Paea 51.82 105 *e*P **P 07 31 15.3 0.0**
PAE pmax pmax
comp=Z,32nm,1.3s,mb5.1
PPT Papeete 51.82 105 *e*P **P 07 31 15.7 +0.4**
comp=Z,88nm,1.4s,mb5.5
PPT *e*S **S 07 38 37.1 -0.7**
comp=Z,2μm,26.2s
PPT *e*LQ 07 43 58.7
comp=Z,7μm,28.5s
PPT *e*LR LR 07 46 10.1
comp=Z,7μm,23.0s,baz=270
PPT Papeete 51.82 105 P **P 07 31 15.8 +0.5**
comp=Z,40nm,0.8s,mb5.4,baz=106,slow=3.9,SNR=4.6
PPT LR LR 07 48 05.8
comp=Z,3μm,21.8s,MS5.3,baz=274,slow=30
PPT Papeete 51.82 105 *e*P **P 07 31 15.7 +0.4**
PPT *e*S **S 07 38 37.1 -0.7**
PPT pmax pmax
comp=Z,88nm,1.4s
PPT Papeete 51.82 105 *e*P **P 07 31 15.7 +0.4**
comp=Z,88nm,1.4s,mb5.5
PPT *e*S **S 07 38 37.1 -0.7**
PPT *e*LQ 07 43 58.7
TIAR Tiarei 52.04 105 *e*P **P 07 31 17.4 +0.4**
comp=Z,195nm,1.4s,mb5.8
ERM Erimo 52.37 346 PFAKE 07 31 30.0 +11
ERM LR LR
comp=Z,2μm,20.0s,MS5.2
KIP Kipapa 52.79 55 PFAKE 07 31 30.0 +7.6
KIP LR LR
comp=Z,4μm,19.0s,MS5.5
SSE Sheshan 52.99 320 *e*P **P 07 31 23.1 -0.7**
SSE pP pP 07 31 32.6 +5.0
SSE S **S 07 38 50.1 -3.3**
SSE sS sS 07 39 05.5 +5.9
SSE pmax pmax
comp=Z,26nm,0.7s,mb5.3
SSE pmax pmax
comp=Z,470nm,6.5s
SSE LR LR
comp=N,100nm,17.8s,MS4.7
SSE LR LR
comp=E,610nm,17.8s,MS4.7
SSE LR LR
comp=Z,1μm,19.0s,MS5.0
MEH Mehetia 53.27 106 *e*P **P 07 31 26.4 +0.3**
comp=Z,170nm,1.2s,mb5.8
PMOR Pomariorio Ree 53.38 102 *e*P **P 07 31 27.5 +0.6**
comp=Z,442nm,1.3s,mb6.2
KHU Kahuku 53.73 58 *e*P **P 07 31 29.8 +0.4**
YUK Yuzh-Kuril'sk 53.74 349⇑ *i*P **P 07 31 28.4 -0.6**
YUK *i*S **S 07 39 04.3 +1.3**
YUK pmax pmax
comp=Z,400nm,12.0s
YUK pmax pmax
comp=N,180nm,6.0s

YUK pmax pmax
comp=E,60nm,3.0s
GZH Guangzhou 53.84 307 P **P 07 31 31.0 +0.8**
GZH S **S 07 39 03.4 -1.8**
GZH LR LR
comp=N,770nm,24.5s,MS5.3
GZH LR LR
comp=E,3μm,19.8s,MS5.3
GZH LR LR
comp=Z,5μm,20.9s,MS5.5
KSRS Korea Array 53.89 331 P **P 07 31 30.8 +0.5**
comp=Z,5.4nm,0.8s,mb4.6,baz=138,slow=8.1,SNR=12
KSRS LR LR 07 52 07.0
comp=Z,2μm,18.1s,MS5.2,baz=131,slow=34
POHA Pohakuloa 54.03 58 PFAKE 07 31 40.0 +8.4
POHA LR LR
comp=Z,5μm,21.0s,MS5.6
ASAJ Asahikawa 54.49 347 P **P 07 31 34.4 -0.1**
comp=Z,4.2nm,0.8s,mb4.4,baz=227,slow=18,SNR=3.3
ASAJ Asahikawa 54.49 347 P **P 07 31 34.4 -0.1**
ASAJ pmax pmax
comp=Z,4.0nm,0.8s
INCN Inchon 54.54 330 PFAKE 07 31 40.0 +5.0
INCN LR LR
comp=Z,2μm,21.0s,MS5.2
QIZ Qiongzhong 54.79 301 P **P 07 31 37.8 +0.7**
QIZ sP sP 07 31 43.4 +1.0
QIZ S **S 07 39 18.4 +0.3**
QIZ sS sS 07 39 26.9 +2.5
QIZ pmax pmax
comp=Z,15nm,1.2s,mb4.9
QIZ pmax pmax
comp=Z,850nm,7.1s
QIZ LR LR
comp=N,1μm,19.3s
QIZ LR LR
comp=Z,3μm,22.8s,MS5.3
QIZ Qiongzhong 54.79 301 *e*P **P 07 31 37.4 +0.3**
comp=Z,48nm,1.2s,mb5.4
QIZ LR LR
comp=Z,3μm,21.0s,MS5.4
VLA Vladivostok 56.85 338 P **P 07 31 49.0 -2.5**
VLA *e*S **S 07 39 43.5 -1.3**
VLA MLR MLR
comp=Z,1μm,17.0s,MS5.1
YSS Yuzh-Sakhalins 57.15 348 *αe*P **P 07 31 52.4 -1.1**
YSS *e* 07 32 04.9
YSS *e* 07 32 43.1
YSS *e*S **S 07 39 48.0 -0.6**
YSS *e*PS 07 39 53.0
YSS *e*SSS 07 45 54.0
YSS MLR MLR
comp=N,1μm,15.0s,MS5.2
YSS MLR MLR
comp=E,600nm,15.0s,MS5.2
YSS MLR MLR
comp=Z,900nm,15.0s,MS5.0
YSS Yuzh-Sakhalins 57.15 348 *e*P **P 07 31 54.0 +0.5**
comp=Z,20nm,0.7s,mb5.3
YSS LR LR
comp=Z,686nm,20.0s,MS4.8
WHN Wuhan 57.20 315 P **P 07 31 55.8 +1.6**
WHN S **S 07 39 50.9 +1.0**
WHN LR LR
comp=N,3μm,18.4s,MS5.6
WHN LR LR
comp=E,2μm,15.3s,MS5.6
WHN LR LR
comp=Z,5μm,20.4s
DL2 Dalian 58.21 327⇑ P **P 07 32 01.3 +0.2**
DL2 S **S 07 40 04.4 +1.6**
DL2 pmax pmax
comp=Z,30nm,1.0s,mb5.3
DL2 pmax pmax
comp=Z,340nm,7.1s
DL2 LR LR
comp=N,1μm,14.6s,MS5.2
DL2 LR LR
comp=E,530nm,13.5s,MS5.2
DL2 LR LR
comp=Z,780nm,17.7s,MS4.9
KULM Kulim 58.68 282 P **P 07 32 04.2 -0.7**
comp=Z,85nm,1.4s,mb5.6
KULM LR LR
comp=Z,1μm,21.0s,MS5.1
MDJ Mudanjiang 59.00 337 P **P 07 32 06.4 -0.1**
MDJ pP pP 07 32 09.5 -0.9
MDJ sP sP 07 32 11.5 -0.3
MDJ PcP PcP 07 32 56.0 +0.5
MDJ ScP ScP 07 36 54.9 -1.3
MDJ PcS PcS 07 36 56.4 -0.7
MDJ S **S 07 40 13.3 +0.4**
MDJ ScS ScS 07 41 55.5 -1.0
MDJ pmax pmax
comp=Z,18nm,1.1s,mb5.0
MDJ pmax pmax
comp=Z,540nm,7.3s
MDJ LR LR
comp=N,3μm,17.1s,MS5.5
MDJ LR LR
comp=E,2μm,18.2s,MS5.5
MDJ LR LR
comp=Z,1μm,15.9s,MS5.2
MDJ Mudanjiang 59.00 337 *e*P **P 07 32 07.0 +0.5**
comp=Z,79nm,1.6s,mb5.5
MDJ LR LR
comp=Z,1μm,19.0s,MS5.0
SKR Severo-Kuril's 59.30 359 *e*P **P 07 32 08.0 -0.5**
SKR *e* 07 32 14.5
SKR *e* 07 34 20.0
SKR S **S 07 40 16.0 -0.5**
SKR *e*SSS 07 46 42.0
SKR pmax pmax
comp=N,110nm,1.0s
SKR pmax pmax
comp=Z,110nm,1.0s,mb5.8
SKR pmax pmax
comp=Z,1μm,6.0s
SKR smax
comp=E,6μm,16.0s
SKR smax
comp=N,2μm,20.0s
SKR MLR MLR
comp=N,2μm,18.0s,MS5.4
SKR MLR MLR
comp=Z,2μm,18.0s,MS5.3
SKR MLR MLR
comp=E,2μm,20.0s,MS5.4
PSI Prapat 59.81 278 P **P 07 32 11.7 -1.1**
comp=E,8.5nm,0.9s,mb4.8,baz=59,slow=5.9,SNR=4.1
PSI Prapat 59.81 278 P **P 07 32 11.7 -1.1**
PSI pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
COCO West Island 59.93 261 PFAKE 07 32 20.0 +6.4
COCO LR LR
comp=Z,3μm,21.0s,MS5.4
CN2 Changchun 60.06 333 *e*P **P 07 32 14.3 +0.4**
CN2 *e*pP pP 07 32 18.8 +1.1
CN2 *e*sP sP 07 32 21.3 +2.1
CN2 *e*S **S 07 40 25.8 -0.8**
CN2 pmax pmax
comp=Z,20nm,1.3s,mb5.0
CN2 pmax pmax
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,1μm,17.0s,MS5.2
CN2 LR LR
comp=E,1μm,17.0s,MS5.2
CN2 LR LR
comp=Z,700nm,22.0s,MS4.8
HABR Khabarovsk 60.50 343 *ce*P **P 07 32 14.9 -1.9**
HABR *e**PP pP 07 32 24.7 +4.1
HABR *e**SP sP 07 32 28.8 +6.7
HABR *e* 07 32 58.7
HABR *e* 07 34 24.7
HABR *e*S **S 07 40 28.3 -3.8**
HABR *e* 07 40 40.6
HABR *e**SS sS 07 40 45.3 +6.9
HABR *e* 07 42 02.7
HABR *e*SS SS 07 44 27.7 -2.8
HABR pmax pmax
comp=Z,59nm,1.8s,mb5.4
HABR pmax pmax
comp=E,33nm,1.3s
HABR pmax pmax
comp=N,42nm,1.9s

HABR MLR MLR
comp=Z,1μm,19.0s,MS5.0
ENH Enshi 60.53 312 *e*P **P 07 32 16.9 -0.5**
comp=Z,71nm,1.1s,mb5.7
ENH LR LR
comp=Z,2μm,20.0s,MS5.2
GYA Guiyang 60.78 307 P **P 07 32 21.5 +2.3**
GYA PP PP 07 34 39.4 +6.1
GYA ScP ScP 07 37 04.3 -0.2
GYA S **S 07 40 38.1 +1.6**
GYA ScS ScS 07 42 08.9 -1.6
GYA SS SS 07 44 41.4 +5.7
GYA pmax pmax
comp=Z,50nm,1.0s,mb5.6
GYA pmax pmax
comp=Z,660nm,6.7s
GYA LR LR
comp=N,1μm,23.6s,MS5.4
GYA LR LR
comp=E,2μm,20.8s,MS5.4
GYA LR LR
comp=Z,3μm,22.5s,MS5.4
TAOE Nuku Hiva Isla 61.24 95 *e*S **S 07 40 42.6 -0.2**
comp=Z,920nm,29.6s
TAOE *e*SS SS 07 44 48.3 +5.0
comp=Z,822nm,30.5s
TAOE *e*LR LR 07 50 32.1
comp=Z,5μm,22.7s,baz=266
PET Petropavlovsk 61.63 1*c i*P **P 07 32 23.1 -1.3**
PET *e*S **S 07 40 41.3 -5.0**
PET *e*SS SS 07 44 45.9 -2.2
PET pmax pmax
comp=Z,800nm,9.2s
PET pmax pmax
comp=Z,115nm,1.0s,mb6.0
PET pmax pmax
comp=Z,600nm,10.4s
PET MLR MLR
comp=Z,1μm,14.0s,MS5.3
PET MLR MLR
comp=Z,1μm,17.0s
PET Petropavlovsk 61.63 1⇑ *e*P **P 07 32 24.3 -0.1**
PET LR LR
comp=Z,1μm,19.0s,MS5.1
PEA0B Petropavlovsk- 61.71 360 *e*P **P 07 32 24.7 -0.2**
PETK Petropavlovsk- 61.71 360 P **P 07 32 24.7 -0.2**
comp=Z,97nm,1.0s,mb5.9,baz=141,slow=5.6,SNR=66
PETK LR LR 07 58 11.4
comp=Z,2μm,18.5s,MS5.2,baz=172,slow=35
BJT Baijiatuau 62.01 325 *e*P **P 07 32 28.8 +1.6**
BJT MLR MLR
comp=Z,2μm,19.0s
BJI Beijing 62.02 325 P **P 07 32 28.0 +0.8**
BJI pP pP 07 32 31.5 +0.4
BJI sP sP 07 32 32.9 +0.3
BJI S **S 07 40 51.3 -0.4**
BJI sS sS 07 41 00.0 +1.9
BJI SS SS 07 44 59.3 +4.7
BJI pmax pmax
comp=Z,9.0nm,0.7s,mb5.0
BJI pmax pmax
comp=Z,800nm,5.8s
BJI LR LR
comp=N,1μm,13.9s,MS5.3
BJI LR LR
comp=E,890nm,13.9s,MS5.3
BJI LR LR
comp=Z,1μm,21.4s
KLR Kul'dur 62.19 341 *e*P **P 07 32 24.2 -4.0**
KLR *e*S **S 07 40 50.0 -3.5**
KLR smax
comp=N,1μm,12.0s
KLR smax
comp=E,2μm,12.0s
TIY Taiyuan 62.77 321 *e*P **P 07 32 35.3 +3.0**
TIY S **S 07 41 01.8 +0.5**
TIY pmax pmax
comp=Z,720nm,5.5s
TIY LR LR
comp=N,2μm,15.5s,MS5.4
TIY LR LR
comp=E,760nm,13.0s,MS5.4
TIY LR LR
comp=Z,1μm,18.1s
FX1 Attu Island--F 62.87 10 P **P 07 32 31.9 -0.8**
comp=Z,67nm,0.9s,mb5.8,baz=187,slow=3.5,SNR=22
FX1 LR LR 07 56 52.3
comp=Z,3μm,19.8s,MS5.5,baz=210,slow=33
FX1 Attu Island--F 62.87 10 P **P 07 32 31.9 -0.8**
FX1 LR LR 07 56 52.3
SMY Shemya 62.90 11 P **P 07 32 33.0 +0.1**
XAN Xi'an 62.97 315 P **P 07 32 30.8 -2.9**
XAN pP pP 07 32 45.8 +8.2
XAN PP PP 07 34 50.3 -2.1
XAN PcS PcS 07 37 17.8 +2.6
XAN S **S 07 41 01.9 -2.0**
XAN pmax pmax
comp=Z,190nm,8.7s
XAN LR LR
comp=N,780nm,20.7s,MS4.9
XAN LR LR
comp=E,560nm,21.8s,MS4.9
XAN LR LR
comp=Z,800nm,20.7s,MS4.9
KMI Kunming 63.35 304 P **P 07 32 38.5 +2.0**
KMI pP pP 07 32 42.3 +2.0
KMI sP sP 07 32 43.8 +2.0
KMI PcP PcP 07 33 14.6 +1.1
KMI PP PP 07 35 00.4 +4.4
KMI ScP ScP 07 37 15.6 -0.4
KMI PcS PcS 07 37 17.0 -0.3
KMI S **S 07 41 10.3 +1.3**
KMI SKS 07 42 27.9
KMI SS SS 07 45 19.3 +3.3
KMI pmax pmax
comp=Z,46nm,1.8s,mb5.3
KMI pmax pmax
comp=Z,1μm,6.4s
KMI LR LR
comp=N,1μm,17.8s,MS5.4
KMI LR LR
comp=E,2μm,18.6s,MS5.4
KMI LR LR
comp=Z,3μm,19.4s,MS5.4
CM31 Chiang Mai Arr 64.09 295 PFAKE 07 32 50.0 +8.6
CM31 LR LR
comp=Z,925nm,19.0s,MS5.0
CMAR Chiang Mai Arr 64.09 295 P **P 07 32 41.7 +0.3**
comp=Z,11nm,0.7s,mb5.0,baz=119,slow=4.9,SNR=16
CMAR PKPPKP 08 01 29.7
comp=Z,0.8nm,0.4s,baz=290,slow=5.3,SNR=5.3
CHTO Chiang Mai 64.21 296 *e*P **P 07 32 43.9 +1.7**
CHTO *e* 07 35 01.8
CHTO pmax pmax
comp=Z,96nm,1.4s,mb5.6
CHTO MLR MLR
comp=Z,1μm,22.0s,MS5.0
CHTO Chiang Mai 64.21 296 *e*P **P 07 32 43.9 +1.6**
comp=Z,96nm,1.4s,mb5.6
CHTO *e*PP PP 07 35 01.8 -1.8
CHTO LR LR
comp=Z,1μm,22.0s,MS5.0
CD2 Chengdu 65.13 310 *e*P **P 07 32 48.3 +0.3**
CD2 pP pP 07 32 52.9 +1.0
CD2 sP sP 07 32 56.0 +2.7
CD2 PP PP 07 35 14.0 +2.5
CD2 PcS 07 37 23.3
CD2 S S 07 41 29.3 -1.5
CD2 ScS ScS 07 42 39.1 -4.2
CD2 pmax pmax
comp=Z,30nm,1.0s,mb5.3
CD2 pmax pmax
comp=Z,160nm,5.2s
CD2 LR LR
comp=N,2μm,23.8s,MS5.4
CD2 LR LR
comp=E,2μm,23.8s,MS5.4
CD2 LR LR
comp=Z,2μm,20.2s,MS5.4
HHC Hu-ho-hao-te 65.23 323 *e*P **P 07 32 50.0 +1.5**
HHC S S 07 41 30.8 -0.9
HHC pmax pmax
comp=Z,21nm,0.8s,mb5.2
HHC pmax pmax
comp=Z,760nm,5.8s

RKT Rikitea 65.68 111 *e*P **P 07 32 51.5 -0.3**
comp=Z,254nm,1.3s,mb6.1
RKT *e*S S 07 41 38.0 +0.1
comp=Z,1μm,30.2s
RKT *e*LQ 07 49 44.7
comp=Z,3μm,33.0s
RKT *e*LR LR 07 52 35.1
comp=Z,4μm,28.0s,baz=282
RKT Rikitea 65.68 111 *e*P **P 07 32 51.5 -0.3**
RKT *e*S S 07 41 38.0 +0.1
RKT Rikitea 65.68 111 *e*P **P 07 32 51.5 -0.3**
comp=Z,254nm,1.3s,mb6.1
RKT *e*S S 07 41 38.0 +0.1
RKT *e*LQ 07 49 44.7
CASY Casey 65.73 199 *e*P **P 07 32 48.4 -2.9**
CASY *e*S S 07 41 32.4 -4.6
CASY Casey 65.73 199 *e*P **P 07 32 49.9 -1.4**
comp=Z,22nm,0.9s,mb5.2
CASY LR LR
comp=Z,6μm,21.0s,MS5.8
BTO Baotou 66.01 322 *e*P **P 07 32 51.9 -1.6**
HIA Hailar 66.78 334 *e*P **P 07 32 58.1 -0.1**
HIA pmax pmax
comp=Z,14nm,0.6s
HIA MLR MLR
comp=Z,2μm,19.0s
HIA Hailar 66.78 334 *e*P **P 07 32 58.1 -0.1**
comp=Z,14nm,0.6s,mb5.2
HIA LR LR
comp=Z,2μm,19.0s,MS5.2
LZH Lanzhou 67.58 315 ⇑P **P 07 33 05.1 +1.5**
LZH pP pP 07 33 08.5 +1.0
LZH sP sP 07 33 09.8 +0.8
LZH PP PP 07 35 36.0 +3.2
LZH S S 07 42 02.8 +2.4
LZH sS sS 07 42 09.0 +2.1
LZH SS SS 07 46 23.6 +2.1
LZH pmax pmax
comp=Z,39nm,1.2s,mb5.3
LZH pmax pmax
comp=Z,120nm,4.3s
LZH LR LR
comp=N,1μm,16.2s
LZH LR LR
comp=Z,2μm,17.4s,MS5.3
NIKO Nikolski 67.82 21 *e*P **P 07 33 03.4 -1.3**
comp=Z,132nm,1.0s,mb5.9
SBA Scott Base 69.14 178 *e*P **P 07 33 12.8 +0.1**
SBA pmax pmax
comp=Z,66nm,1.5s,mb5.3
SBA MLR MLR
comp=Z,2μm,19.0s,MS5.3
SBA Scott Base 69.14 178 *e*P **P 07 33 12.8 +0.1**
comp=Z,66nm,1.5s,mb5.3
SBA LR LR
comp=Z,2μm,19.0s,MS5.3
UNV Unalaska Valle 69.36 22 P **P 07 33 14.2 -0.1**
CLNS Chul'man 70.83 342 *e*P **P 07 33 23.0 -0.3**
CLNS *e**PP pP 07 33 30.6 +3.4
CLNS *e* 07 33 49.9
CLNS *e* 07 43 10.9
CLNS pmax pmax
comp=Z,34nm,1.2s,mb5.2
CLNS pmax pmax
comp=N,19nm,1.2s
CLNS pmax pmax
comp=E,8.0nm,0.9s
CIT Chita 71.50 333 *e*P **P 07 33 34.2 +6.7**
SEY Seymchan 71.69 357 ⇓*i*P **P 07 33 26.5 -1.9**
GTA Gaotai 71.99 316 P **P 07 33 32.0 +1.3**
GTA pP pP 07 33 35.8 +1.2
GTA sP sP 07 33 38.3 +2.2
GTA PP PP 07 36 14.8 +4.0
GTA S S 07 42 54.8 +2.7
GTA sS sS 07 43 06.8 +8.2
GTA SKS 07 43 30.3
GTA pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
GTA pmax pmax
comp=Z,830nm,6.5s
GTA LR LR
comp=N,860nm,20.2s,MS5.2
GTA LR LR
comp=E,1μm,20.8s,MS5.2
GTA LR LR
comp=Z,1μm,21.4s,MS5.2
MIR Mirnyy 72.03 202 ⇓*i*P **P 07 33 30.8 +0.3**
MIR *i* 07 33 51.0
MIR *e*S S 07 42 54.0 +2.3
MIR *e*SS SS 07 47 26.0 -2.4
MIR pmax pmax
comp=Z,68nm,1.6s,mb5.3
MIR pmax pmax
comp=Z,700nm,5.0s
MIR smax
comp=E,500nm,5.0s
MIR smax
comp=N,1μm,13.0s
ULN Ulaanbaatar 72.06 327 ⇑*i*P **P 07 33 32.1 +1.2**
ULN Ulaanbaatar 72.06 327 *e*P **P 07 33 31.9 +1.0**
comp=N,22nm,1.1s,mb5.0
ULN LR LR
comp=Z,1μm,19.0s,MS5.2
SONM Songino Array 72.40 326 P **P 07 33 33.3 +0.3**
comp=Z,10nm,0.9s,mb4.8,baz=134,slow=4.2,SNR=22
SONM PKPPKP 08 01 13.8
comp=Z,0.4nm,0.6s,baz=243,slow=0.3,SNR=5.6
SHL Shillong 72.62 300 *e*PKP **P 07 33 35.0 +0.2**
SHL *ex* x 07 43 04.0
SHL *ex* x 07 43 40.0
YAK Yakutsk 73.97 347 *e*P **P 07 33 40.5 -1.4**
YAK *e**PP pP 07 33 50.6 +4.7
YAK *e* 07 33 54.1
YAK *e* 07 36 22.5
YAK *e*S S 07 43 06.2 -7.6
YAK pmax pmax
comp=Z,55nm,0.9s,mb5.5
YAK pmax pmax
comp=N,20nm,1.3s
YAK pmax pmax
comp=E,15nm,1.4s
YAK pmax pmax
comp=Z,5.0nm,0.4s,mb4.8
YAK smax
comp=E,180nm,3.5s
YAK smax
comp=N,272nm,3.9s
YAK Yakutsk 73.97 347 *e*P **P 07 33 40.5 -1.4**
YAK *e**PP pP 07 33 50.6 +4.7
YAK *e* 07 43 21.1
YAK pmax pmax
comp=Z,55nm,0.9s,mb5.5
YAK pmax pmax
comp=N,20nm,1.3s
YAK pmax pmax
comp=E,15nm,1.4s
YAK Yakutsk 73.97 347 *e*P **P 07 33 41.6 -0.4**
comp=E,46nm,0.7s,mb5.5
YAK LR LR
comp=Z,1μm,22.0s,MS5.2
CHGN Chignik 74.29 24 *e*P **P 07 33 43.7 -0.3**
LSA Lhasa 74.61 304 *e*P **P 07 33 52.0 +5.6**
LSA pmax pmax
comp=Z,43nm,1.4s,mb5.2
LSA MLR MLR
comp=Z,2μm,22.0s,MS5.3
LSA Lhasa 74.61 304 *e*P **P 07 33 52.0 +5.6**
comp=Z,43nm,1.4s,mb5.2
LSA LR LR
comp=Z,2μm,22.0s,MS5.3
CAL Calcutta 74.80 296 *e*PKP **P 07 33 56.8 +9.1**
CAL *e*S S 07 43 34.3 +10
TLY Talaya 76.07 329 *c i*P **P 07 33 54.2 -0.1**
TLY *e*S S 07 43 35.5 -2.1
TLY *e*PS 07 43 59.4
TLY *e*SS SS 07 48 27.7 -3.3
TLY pmax pmax
comp=Z,36nm,3.3s
TLY MLR MLR
comp=Z,1μm,17.0s,MS5.2
TLY Talaya 76.07 329 PFAKE 07 34 00.0 +5.7
TLY LR LR
comp=Z,1μm,19.0s,MS5.2
IRK Irkutsk 76.07 329 *e*P **P 07 33 54.2 -0.1**
IRK pmax pmax
comp=Z,66nm,2.1s,mb5.2
TAPN Taplejung 76.73 301 *e*P **P 07 34 02.1 +3.5**
comp=Z,91nm,1.3s,mb5.6
ODAN Odare 76.86 300 *e*P **P 07 34 00.1 +0.7**
comp=Z,115nm,1.1s,mb5.7
BILL Bilibino 76.94 3 *c i*P **P 07 33 58.6 -0.3**
BILL *i* 07 34 04.6
BILL *i* 07 36 58.9
BILL *i* S S 07 43 56.5 +10
BILL pmax pmax
comp=Z,99nm,0.9s,mb5.7
BILL MLR MLR
comp=Z,2μm,19.0s,MS5.4
BILL Bilibino 76.94 3 *e*P **P 07 33 58.7 -0.2**
comp=Z,95nm,1.0s,mb5.7
BILL LR LR
comp=Z,2μm,20.0s,MS5.4
OHAK Old Harbor 76.99 25 *e*P **P 07 33 58.6 -0.8**
comp=Z,22nm,0.8s,mb5.1
MOY Mondy 77.44 328 *e*P **P 07 34 01.9 -0.2**
MOY pmax pmax
comp=Z,132nm,3.4s
RAMN Ramite 77.56 300 *e*P **P 07 34 03.6 +0.3**
comp=Z,30nm,0.9s,mb5.2
KDAK Kodiak Island 77.65 25 P **P 07 34 02.4 -0.6**
comp=Z,14nm,0.8s,mb4.9,baz=187,slow=3.9,SNR=16
KDAK Kodiak Island 77.65 25 *e*P **P 07 34 02.4 -0.7**
comp=Z,17nm,0.9s,mb5.0
KDAK LR LR
comp=Z,2μm,22.0s,MS5.4
VIS Vishakhapatnam 78.12 290 *e*PKP **P 07 34 05.7 -0.9**
VIS AMb AMB 07 34 14.9
comp=Z,51nm,1.5s,mb5.2
GUN Gumba 78.45 301 *e*P **P 07 34 12.9 +4.7**
comp=Z,91nm,0.9s,mb5.7
SVW2 Sparrevohn 78.69 21 *e*P **P 07 34 08.7 -0.1**
PKI Pulchoki 78.75 300 *e*P **P 07 34 12.1 +2.2**
comp=Z,50nm,0.8s,mb5.5
PKI Pulchoki 78.75 300 *e*P **P 07 34 12.1 +2.2**
PKI pmax pmax
comp=Z,50nm,0.8s,mb5.5
KKN Kakani 78.92 301 *e*P **P 07 34 14.3 +3.5**
comp=Z,44nm,0.8s,mb5.4
KKN Kakani 78.92 301 *e*P **P 07 34 14.3 +3.5**
KKN pmax pmax
comp=Z,44nm,0.8s,mb5.4
DMN Daman 79.02 300 *e*P **P 07 34 13.4 +2.0**
comp=Z,87nm,0.9s,mb5.7
RSO Redoubt South 79.30 23 *e*P **P 07 34 11.3 -0.8**
TTA Tatalina 79.80 20 *e*P **P 07 34 14.4 -0.4**
SEW Seward 80.36 24 *e*P **P 07 34 17.1 -0.8**
comp=Z,43nm,1.1s,mb5.3
FIB Fire Island 80.73 23 *e*P **P 07 34 20.4 +0.6**
RC01 Rabbit Creek A 80.85 23 *e*P **P 07 34 19.6 -0.9**
comp=Z,135nm,1.6s,mb5.6
PPLA Purkeypile 81.08 21 *e*P **P 07 34 20.8 -0.9**
comp=Z,136nm,1.7s,mb5.6
QSPA South Pole Qui 81.14 180 *e*P **P 07 34 19.9 -2.0**
comp=Z,61nm,1.3s,mb5.4
QSPA LR LR
comp=Z,1μm,20.0s,MS5.3
PMR Palmer 81.39 23 *e*P **P 07 34 22.4 -1.0**
PMR pmax pmax
comp=Z,65nm,1.3s,mb5.4
PMR MLR MLR
comp=Z,1μm,18.0s,MS5.3
PMR Palmer 81.39 23 *e*P **P 07 34 22.4 -1.0**
comp=Z,65nm,1.3s,mb5.4
PMR LR LR
comp=Z,1μm,18.0s,MS5.3
CHUM Lake Minchumin 81.67 20 *e*P **P 07 34 24.1 -0.7**
comp=Z,85nm,1.1s,mb5.6
WMQ Urumqi 82.07 317 P **P 07 34 27.0 -0.4**
WMQ sP sP 07 34 34.0 +1.2
WMQ PP PP 07 37 37.0 +1.5
WMQ S S 07 44 39.0 -2.8
WMQ SS SS 07 50 02.0 +0.6
WMQ pmax pmax
comp=Z,41nm,1.2s,mb5.2
WMQ pmax pmax
comp=Z,99nm,8.0s
WMQ LR LR
comp=N,1μm,18.0s,MS5.5
WMQ LR LR
comp=E,1μm,18.0s,MS5.5
WMQ LR LR
comp=Z,1μm,18.0s,MS5.4
TRF Thorofare Moun 82.10 21 *e*P **P 07 34 25.6 -1.5**
comp=Z,31nm,0.8s,mb5.3
BPAW Bear Paw Mtn. 82.27 20 *e*P **P 07 34 26.4 -1.5**
comp=Z,66nm,1.5s,mb5.3
HYB Hyderabad 82.50 289 *i* P **P 07 34 36.0 +5.8**
TIXI Tiksi 82.59 351 *e*P **P 07 34 29.0 -0.5**
TIXI MLR MLR
comp=Z,1μm,20.0s,MS5.3
MCK McKinley 82.75 21 *e*P **P 07 34 29.3 -1.2**
comp=Z,148nm,1.0s,mb6.0
NGP Nagpur 82.81 293 *e*PKP **P 07 34 31.1 -0.6**
NGP AMb AMB 07 34 38.5
comp=Z,64nm,1.3s,mb5.5
BMRM Bremner River 82.83 25 *e*P **P 07 34 30.3 -0.6**
comp=Z,31nm,1.2s,mb5.2
PAX Paxson 83.58 23 *e*P **P 07 34 34.2 -0.6**
PAX pmax pmax
comp=Z,11nm,0.8s,mb5.0
PAX Paxson 83.58 23 *e*P **P 07 34 34.2 -0.6**
comp=Z,11nm,0.8s,mb5.0
MAW Mawson 83.76 203 P **P 07 34 35.6 -0.1**
comp=Z,14nm,1.0s,mb5.1,baz=98,slow=7.8,SNR=17
MAW LR LR 08 09 10.6
comp=Z,2μm,18.8s,MS5.6,baz=88,slow=34
MAW Mawson 83.76 203 *e*P **P 07 34 35.3 -0.4**
MAW LR LR
comp=Z,3μm,19.0s,MS5.7
COLA College 83.82 20 *e*P **P 07 34 34.3 -1.6**
COLA pmax pmax
comp=Z,74nm,1.0s,mb5.8
COLA MLR MLR
comp=Z,2μm,19.0s,MS5.4
COLA College 83.82 20 *e*P **P 07 34 34.3 -1.7**
comp=Z,74nm,1.0s,mb5.8
COLA LR LR
comp=Z,2μm,19.0s,MS5.4
MENT Mentasta 84.24 23 *e*P **P 07 34 38.1 0.0**
COLD Coldfoot 84.49 18 *e*P **P 07 34 38.4 -0.9**
comp=Z,22nm,1.0s,mb5.2
AKL Akola 84.58 292 *e*PKP **P 07 34 39.7 -1.1**
BHPL Bhopal 84.72 294 *e*PKP **P 07 34 40.3 -1.2**
HYT Haines Junctio 85.77 26 *e*P **P 07 34 46.3 +0.4**
EGAK Eagle 86.16 22 *e*P **P 07 34 47.7 0.0**
EGAK LR LR
comp=Z,2μm,20.0s,MS5.5
SKAG Skagway 86.17 28 *e*P **P 07 34 48.0 +0.1**
comp=Z,93nm,1.3s,mb5.9
SKAG LR LR
comp=Z,3μm,20.0s,MS5.7
KAD Karad 86.57 288 *ex* **P 07 34 48.1 -2.8**
KAD AMb AMB 07 34 58.0
comp=Z,44nm,1.0s,mb5.6
GOA Goa 86.59 286 *ex* **P 07 34 45.5 -5.4**
MK31 Makanchi Array 86.63 318 *e*P **P 07 34 49.8 -0.6**
MKAR Makanchi Array 86.63 318 P **P 07 34 49.6 -0.8**
comp=Z,2.9nm,0.7s,mb4.6,baz=86,slow=7.8,SNR=17
MKAR S SKSac 07 45 08.7 -8.4
comp=Z,0.4nm,1.0s,baz=126,slow=2.5,SNR=2.9
MKAR PKPPKP 08 00 51.6
comp=Z,0.6nm,1.0s,baz=54,slow=4.9,SNR=3.5
MKAR LR LR 08 14 30.5
comp=Z,648nm,20.1s,MS5.0,baz=267,slow=36
MKAR Makanchi Array 86.63 318 P **P 07 34 49.6 -0.8**
MKAR S SKSac 07 45 08.7 -8.4
MKAR P'P' 08 00 51.6
MKAR LR LR 08 14 30.5
POO Poona 87.10 289 *e*PKP **P 07 34 53.2 -0.1**
MCCM Marconi Confer 87.11 51 PFAKE 07 35 00.0 +7.0
MCCM LR LR
comp=Z,2μm,19.0s,MS5.5
KHMM Horse Mountain 87.12 48 *e*P **P 07 34 54.7 +1.7**
HOPS Hopland 87.16 50 *e*P **P 07 34 53.4 +0.1**
comp=Z,40nm,1.1s,mb5.6
HOPS LR LR
comp=Z,1μm,20.0s,MS5.4
ZAA0 Zalesovo Array 87.27 326 *e*P **P 07 34 51.9 -1.5**
ZALV Zalesovo Beam 87.27 326 P **P 07 34 51.4 -1.9**
comp=Z,2.0nm,0.5s,mb4.6,baz=118,slow=6.9,SNR=6.5
ZALV S S 07 45 27.1 -6.1
comp=Z,0.3nm,0.3s,baz=24,slow=26,SNR=2.5
ZALV LR LR 08 13 18.8
comp=Z,627nm,19.5s,MS5.0,baz=99,slow=35
ZALV Zalesovo Beam 87.27 326 P **P 07 34 51.4 -2.0**
ZALV S S 07 45 27.1 -6.1
ZALV pmax pmax
comp=Z,2.0nm,0.5s,mb4.6
ZALV MLR MLR
comp=Z,627nm,19.5s,MS5.0
ZALV Zalesovo Beam 87.27 326 P **P 07 34 51.4 -2.0**
ZALV S S 07 45 27.1 -6.1
ZALV LR LR 08 13 18.9
AJM Ajmer 87.84 297 *e*PKP **P 07 34 56.5 -0.3**
SAO San Andreas Ge 87.91 52 *e*P **P 07 34 57.1 +0.2**
SAO pmax pmax
comp=Z,15nm,1.0s,mb5.2
SAO MLR MLR
comp=Z,2μm,20.0s,MS5.6
SAO San Andreas Ge 87.91 52 *e*P **P 07 34 57.1 +0.2**
comp=Z,15nm,1.0s,mb5.2
SAO LR LR
comp=Z,2μm,20.0s,MS5.6
WDC Whiskeytown Da 87.93 49 *e*P **P 07 34 57.8 +0.9**
WDC MLR MLR
comp=Z,1μm,22.0s,MS5.3
YBH Yreka Blue Hor 88.08 47 P **P 07 34 57.2 -0.4**
comp=Z,7.9nm,0.9s,mb4.9,baz=56,slow=2.1,SNR=20
YBH Yreka Blue Hor 88.08 47 P **P 07 34 57.2 -0.4**
YBH pmax pmax
comp=Z,8.0nm,0.9s
YBH Yreka Blue Hor 88.08 47 *e*P **P 07 34 58.6 +1.0**
YBH LR LR
comp=Z,2μm,19.0s,MS5.5
THN Thein Dam 88.08 303 *ex* x 07 35 00.8
HUMO Hull Mountain 88.10 47 *e*P **P 07 34 58.0 +0.3**
comp=Z,12nm,1.0s,mb5.1
HUMO LR LR
comp=Z,2μm,20.0s,MS5.5
DLBC Dease Lake 88.33 30 *e*P **P 07 34 58.6 +0.2**
COR Corvallis 88.33 45 PFAKE 07 35 10.0 +11
COR LR LR
comp=Z,3μm,20.0s,MS5.7
NVS Novosibirsk 88.43 326 *i* P **P 07 34 58.0 -0.9**
NVS pmax pmax
comp=Z,65nm,2.2s,mb5.5
NVS pmax pmax
comp=N,24nm,2.5s
NVS pmax pmax
comp=E,38nm,2.5s
OHCM Honcut 88.44 50 *e*P **P 07 34 59.3 -0.1**
NLWA Neilton Lookou 88.64 42 PFAKE 07 35 10.0 +10
NLWA LR LR
comp=Z,3μm,20.0s,MS5.7
PKM Peak Mountain 88.82 55 ⇓P **P 07 35 01.8 +0.5**
baz=89,SNR=17
LBCM Butte Creek Ri 88.87 49 P **P 07 35 02.0 +0.6**
CMB Columbia Colle 89.01 51 *e*P **P 07 35 02.2 +0.2**
CMB MLR MLR
comp=Z,1μm,19.0s,MS5.4
KSH Kashi 89.32 310 ⇑*i*P **P 07 35 05.3 +1.8**
KSH pP pP 07 35 10.1 +2.6
KSH sP sP 07 35 12.3 +3.4
KSH PP PP 07 38 39.4 +4.9
KSH SKS 07 45 33.1
KSH S S 07 45 52.9 -0.5
KSH sS sS 07 46 01.8 +1.8
KSH pmax pmax
comp=Z,13nm,1.2s,mb5.1
KSH pmax pmax
comp=Z,230nm,5.7s
KSH LR LR
comp=N,380nm,10.2s
KSH LR LR
comp=E,430nm,9.1s
KSH LR LR
comp=Z,190nm,8.5s
BEKR Beckworth 89.41 50 ⇓P **P 07 35 03.6 -0.3**
baz=90,SNR=23
AAA Alma-Ata 89.41 314 *i* P **P 07 35 05.6 +1.8**
AAA *i* S S 07 45 57.4 +3.4
AAA smax
comp=N,2μm,10.0s
AAA MLR MLR
comp=Z,2μm,20.0s,MS5.4
RCTC Rector, Farmer 89.56 53 ⇑P **P 07 35 04.2 -0.5**
baz=90,SNR=6.7
K05A Summer Lake 89.61 47 ⇑P **P 07 35 04.9 +0.1**
baz=90,SNR=9.8
OSI Osito Adit 89.65 55 ⇑P **P 07 35 05.2 0.0**
baz=90,SNR=6.9
OSI Osito Adit 89.65 55 *e*P **P 07 35 05.9 +0.8**
comp=Z,76nm,1.4s,mb5.8
ARVC Arvin 89.66 55 ⇓P **P 07 35 04.3 -0.9**
baz=90,SNR=13
CIS Catalina Islan 89.68 56 ⇑P **P 07 35 04.7 -0.6**
baz=90,SNR=7.5
WCN Washoe City 89.75 50 ⇓P **P 07 35 05.6 +0.1**
baz=90,SNR=15
WAKR Walker 89.83 51 *e*P **P 07 35 06.7 +0.8**
D05A Enumclaw 89.84 42 ⇓P **P 07 35 05.6 -0.1**
baz=90
MOD Modoc 89.87 48 *e*P **P 07 35 06.2 +0.3**
comp=Z,20nm,1.4s,mb5.3
MOD LR LR
comp=Z,775nm,19.0s,MS5.2
PASC Pasadena Art C 90.00 56 *e*P **P 07 35 07.5 +0.8**
KURK Kurchatov 90.00 321 P **P 07 35 04.9 -1.5**
comp=Z,1.1nm,0.8s,mb4.2,baz=102,slow=3.7,SNR=6.3
KURK PP PP 07 38 43.7 +4.1
comp=Z,1.6nm,1.0s,baz=113,slow=8.6,SNR=4.3
KURK LR LR 08 16 47.0
comp=Z,748nm,18.1s,MS5.2,baz=95,slow=36
KURK Kurchatov 90.00 321 P **P 07 35 04.9 -1.5**
KURK 07 38 43.7
KURK pmax pmax
comp=Z,1.0nm,0.8s,mb4.2
KURK pmax pmax
comp=Z,2.0nm,1.0s,mb4.4
KURK MLR MLR
comp=Z,749nm,18.2s,MS5.2
KURK Kurchatov 90.00 321 *e*P **P 07 35 05.5 -0.9**
KURK LR LR
comp=Z,978nm,19.0s,MS5.3
ISA Isabella 90.04 54 ⇓P **P 07 35 06.6 -0.4**
baz=90,SNR=20
ISA Isabella 90.04 54 *e*P **P 07 35 07.3 +0.3**
PAHR Pah Rah Range 90.11 50 *e*P **P 07 35 08.2 +1.0**
MWC Mount Wilson 90.11 56 *e*P **P 07 35 07.9 +0.6**
comp=Z,142nm,1.2s,mb6.2
MLAC Mammoth Lakes 90.13 52 ⇑P **P 07 35 06.5 -0.8**
baz=90
EDW2 Edwards Air Fo 90.29 55 ⇓P **P 07 35 08.0 -0.1**
baz=90,SNR=28
MTUM Tungsten Hills 90.29 52 *e*P **P 07 35 08.9 +0.8**
TKM2 Tokmak 2 90.30 313 *e*P **P 07 35 08.0 0.0**
TKM2 pmax pmax
comp=Z,3.0nm,0.7s,mb4.7
TKM2 MLR MLR
comp=Z,1μm,19.0s,MS5.3
TKM2 Tokmak 2 90.30 313 *e*P **P 07 35 08.0 0.0**
comp=Z,3.1nm,0.7s,mb4.8
TKM2 LR LR
comp=Z,1μm,19.0s,MS5.3
NIL Nilore 90.34 304 PFAKE 07 35 20.0 +12
NIL LR LR
comp=Z,114nm,22.0s,MS4.3
BFSC Mount Baldy Ra 90.44 56 ⇑P **P 07 35 08.3 -0.6**
baz=90,SNR=28
INK Inuvik 90.47 20 *e*P **P 07 35 07.6 -0.6**
TIN Tinemaha 90.50 53 ⇓P **P 07 35 10.1 +1.1**
baz=91,SNR=9.4
LRMC Laurel Mountai 90.64 54 ⇓P **P 07 35 09.8 +0.1**
baz=91,SNR=24
109C Camp Elliot, M 90.66 57 ⇓P **P 07 35 10.3 +0.4**
baz=91,SNR=6.3
NVAR Mina Array Bea 90.69 51 P **P 07 35 10.5 +0.6**
comp=Z,31nm,0.9s,mb5.7,baz=240,slow=6.6,SNR=149
NVAR Mina Array Bea 90.69 51 P **P 07 35 10.5 +0.6**
MURC Murrieta 90.70 56 ⇑P **P 07 35 10.4 +0.3**
baz=91,SNR=7.4
EBG Ellensburg 90.72 43 P **P 07 35 09.9 0.0**
DAC Darwin (Calif) 90.86 54 PFAKE 07 35 20.0 +9.3
DAC LR LR
comp=Z,3μm,21.0s,MS5.8
I07A Izee 90.88 46 ⇑P **P 07 35 10.3 -0.4**
baz=91

MPMC **Manual Prospec** 90.90 54 ⇓P P 07 35 11.2 +0.3
baz=91,SNR=38
UCH **Uchtor** 90.95 312 eP P 07 35 11.6 +0.6
comp=Z,33nm,1.5s,mb5.5
UCH LR LR
comp=Z,1µm,19.0s,MS5.3
BAR **Barrett** 90.98 57 eP P 07 35 11.5 +0.1
ETW **Entiat** 91.03 42 P P 07 35 11.4 +0.2
AAK **Ala-Archa** 91.04 313 P P 07 35 11.3 -0.1
comp=Z,1.3nm,0.3s,mb4.7,baz=190,slow=7.5,SNR=3.9
AAK LR LR 08 16 03.6
comp=Z,946nm,18.6s,MS5.3,baz=255,slow=36
AAK **Ala-Archa** 91.04 313 P P 07 35 11.3 -0.1
AAK pmax pmax
comp=Z,1.0nm,0.3s,mb4.6
AAK MLR MLR
comp=Z,946nm,18.6s,MS5.3
GRAC **Grapevine Rang** 91.16 53 ⇓P P 07 35 12.2 +0.1
baz=91,SNR=8.5
WVOR **Wild Horse Val** 91.19 47 eP P 07 35 12.3 +0.2
WVOR pmax pmax
comp=Z,30nm,1.1s,mb5.5
WVOR MLR MLR
comp=Z,2µm,19.0s,MS5.5
WVOR **Wild Horse Val** 91.19 47 eP P 07 35 12.3 +0.1
comp=Z,30nm,1.1s,mb5.5
WVOR LR LR
comp=Z,2µm,19.0s,MS5.5
MONP **Monument Peak** 91.23 57 ⇓P P 07 35 13.1 +0.6
baz=91,SNR=16
RSW **Rattlesnake Hi** 91.28 43 eP P 07 35 12.6 +0.2
WTV **Waterville** 91.30 42 P P 07 35 12.2 -0.3
GSC **Goldstone** 91.32 55 ⇑P P 07 35 13.4 +0.5
baz=91,SNR=15
GSC **Goldstone** 91.32 55 eP P 07 35 13.7 +0.8
HAWA **Hanford** 91.32 43 eP P 07 35 13.1 +0.5
HAWA LR LR
comp=Z,3µm,19.0s,MS5.7
PFO **Pinyon Flat Ob** 91.32 56 ⇓P P 07 35 12.7 -0.3
baz=91,SNR=6.8
PFO **Pinyon Flat Ob** 91.32 56 eP P 07 35 13.2 +0.3
PFO MLR MLR
comp=Z,4µm,21.0s,MS5.9
PFO **Pinyon Flat Ob** 91.32 56 eP P 07 35 13.2 +0.3
PFO LR LR
comp=Z,4µm,21.0s,MS5.8
TPH **Tonopah** 91.47 52 PFAKE 07 35 20.0 +6.5
TPH LR LR
comp=Z,1µm,22.0s,MS5.3
FURC **Furnace Creek,** 91.47 53 ⇓P P 07 35 13.7 +0.1
baz=92,SNR=48
J08A **Circle Bar Ran** 91.48 46 ⇓P P 07 35 13.4 -0.1
baz=92
G08A **Pilot Rock** 91.50 45 ⇑P P 07 35 13.3 -0.2
baz=92,SNR=9.5
AML **Almayashu** 91.53 312 PFAKE 07 35 20.0 +6.3
AML LR LR
comp=Z,1µm,22.0s,MS5.4
H08A **Prairie City** 91.55 45 P P 07 35 13.7 -0.1
baz=92,SNR=12
EKS2 **Erkin-Say** 91.56 313 eP P 07 35 14.1 +0.2
comp=Z,29nm,1.8s,mb5.3
EKS2 LR LR
comp=Z,1µm,19.0s,MS5.3
HEC **Hector,Ludlow** 91.62 55 ⇓P P 07 35 14.2 -0.1
baz=92,SNR=5.6
E08A **Dider Farm, El** 91.66 43 ⇓P P 07 35 14.1 -0.1
baz=92
SWSC **Sam W. Stewart** 91.75 57 ⇓P P 07 35 14.1 -0.9
baz=92
BELC **Belle Mtn. Jos** 91.76 56 ⇑P P 07 35 15.7 +0.7
baz=92,SNR=18
B08A **Colville Reser** 91.83 41 P P 07 35 13.7 -1.2
baz=92,SNR=6.6
SHOC **Shoshone** 91.84 54 ⇑P P 07 35 15.6 +0.3
baz=92,SNR=15
D08A **Wollman Farm,** 91.86 43 ⇓P P 07 35 14.7 -0.4
baz=92
BMN **Battle Mountai** 91.87 50 eP P 07 35 16.6 +1.2
BMN MLR MLR
comp=Z,1µm,21.0s,MS5.3
U10A **Ash Meadows, A** 91.89 54 ⇓P P 07 35 15.4 -0.1
baz=92,SNR=29
S10A **Tonopah Range,** 91.93 52 ⇓P P 07 35 16.0 +0.3
baz=92,SNR=98
J09A **Fry Pan Ranch,** 91.99 47 P P 07 35 16.0 +0.2
baz=92,SNR=46
TUQ **Turquoise Moun** 92.05 55 ⇓P P 07 35 16.6 +0.3
baz=92,SNR=7.6
I09A **Lost Marbles R** 92.11 46 ⇓P P 07 35 15.9 -0.5
baz=92,SNR=22
BC3 **Big Chuckawall** 92.15 56 ⇓P P 07 35 17.0 +0.2
baz=92,SNR=14
GMRC **Granite Mounta** 92.16 55 ⇑P P 07 35 16.7 -0.1
baz=92,SNR=24
R10A **Warm Springs** 92.22 52 ⇓P P 07 35 17.1 +0.1
baz=92,SNR=24
Q10A **Clear Creek Ra** 92.23 51 ⇑P P 07 35 17.3 +0.2
baz=92,SNR=34
E09A **Wood Farm, Sta** 92.28 43 ⇓P P 07 35 16.9 -0.2
baz=92
P10A **Eureka** 92.31 50 ⇑P P 07 35 18.0 +0.6
baz=92,SNR=10
G09A **Cove** 92.31 45 ⇑P P 07 35 16.6 -0.7
baz=92,SNR=12
O10A **Cortez Mining,** 92.39 50 ⇓P P 07 35 18.0 +0.3
baz=92,SNR=11
IRM **Iron Mountain** 92.48 56 ⇑P P 07 35 19.7 +1.4
baz=92,SNR=5.7
V11A **Goodsprings** 92.51 54 ⇓P P 07 35 18.3 -0.1
baz=93,SNR=33
K10A **MacKenzie Ranc** 92.53 47 ⇑P P 07 35 18.4 +0.1
baz=93,SNR=35
S11A **Rachel** 92.55 52 ⇓P P 07 35 18.9 +0.4
baz=93,SNR=11
M10A **I.L. Ranch, Tu** 92.57 49 ⇓P P 07 35 18.7 +0.2
baz=93
BMO **Blue Mountains** 92.57 45 eP P 07 35 17.9 -0.6
BMO pmax pmax
comp=Z,32nm,1.4s,mb5.6
BMO **Blue Mountains** 92.57 45 eP P 07 35 17.9 -0.6
comp=Z,32nm,1.4s,mb5.6
GLA **Glamis** 92.57 57 ⇓P P 07 35 18.8 0.0
baz=93
GLA **Glamis** 92.57 57 eP P 07 35 20.3 +1.5
U11A **Corn Creek** 92.64 54 ⇑P P 07 35 19.1 +0.1
baz=93
LDFC **Landfair** 92.65 55 eP P 07 35 20.4 +1.3
comp=Z,32nm,0.7s,mb5.9
112A **Yuma** 92.70 58 ⇑P P 07 35 19.3 -0.1
baz=93
L10A **Juniper Basin** 92.71 48 ⇓P P 07 35 19.3 +0.1
baz=93,SNR=35
J10A **Berg Farm, Mel** 92.71 47 ⇑P P 07 35 19.3 +0.1
baz=93,SNR=9.8
G10A **Bishop Farm, J** 92.78 45 P P 07 35 18.9 -0.5
baz=93,SNR=17
R11A **Troy Canyon, C** 92.78 52 P P 07 35 20.1 +0.5
baz=93,SNR=84
I10A **Payette** 92.80 46 ⇑P P 07 35 19.9 +0.4
baz=93,SNR=10
Q11A **Duckwater** 92.81 51 P P 07 35 20.5 +0.8
baz=93,SNR=117
P11A **Circle Ranch,** 92.84 51 ⇑P P 07 35 19.5 -0.3
baz=93,SNR=7.6
W12A **Cal Nev Ari** 92.88 55 ⇑P P 07 35 20.3 +0.2
baz=93
T11A **Corn Creek, Al** 92.90 53 ⇓P P 07 35 20.5 +0.4
baz=93
H10A **Noah's Angus R** 92.92 45 P P 07 35 19.6 -0.5
baz=93,SNR=33
Y12C **Blythe** 92.93 56 ⇓P P 07 35 19.5 -0.9
baz=93,SNR=5.5
V12A **Nelson** 92.96 54 ⇓P P 07 35 20.7 +0.2
baz=93,SNR=9.6
O11A **Cowboy Ranch,** 93.00 50 ⇓P P 07 35 20.8 +0.2
baz=93
N11A **Elko Archery C** 93.05 49 ⇑P P 07 35 21.0 +0.3
baz=93
M11A **Holland Ranch,** 93.11 49 ⇑P P 07 35 21.4 +0.4
baz=93,SNR=27
K11A **Parker Ranch,** 93.14 47 ⇑P P 07 35 21.3 +0.2
baz=93,SNR=45
T12A **Moapa** 93.22 54 ⇓P P 07 35 22.7 +1.0
baz=93,SNR=7.1
S12A **Delamar Landin** 93.24 53 ⇓P P 07 35 22.4 +0.6
baz=93,SNR=36
L11A **Cat Creek Ranc** 93.25 48 P P 07 35 22.5 +0.9
baz=93,SNR=48
NEW **Newport** 93.27 42 eP P 07 35 20.2 -1.4
NEW pmax pmax
comp=Z,8.0nm,0.9s
NEW MLR MLR
comp=Z,3µm,20.0s
NEW **Newport** 93.27 42 eP P 07 35 20.2 -1.4
comp=Z,7.8nm,0.9s,mb5.1
NEW LR LR
comp=Z,3µm,20.0s,MS5.7
U12A **Valley of Fire** 93.32 54 ⇑P P 07 35 22.7 +0.6
baz=93,SNR=18
I11A **Placerville** 93.37 46 ⇓P P 07 35 22.1 -0.1
baz=94
G11A **Walters Elk Ra** 93.39 45 ⇓P P 07 35 21.3 -1.0
baz=94,SNR=9.3
MFID **Camas Ranch** 93.39 47 ⇓P P 07 35 22.5 +0.2
baz=94,SNR=7.9
ELK **Elko** 93.41 49 eP P 07 35 23.1 +0.6
ELK pmax pmax
comp=Z,22nm,1.2s
ELK MLR MLR
comp=Z,1µm,21.0s
ELK **Elko** 93.41 49 eP P 07 35 23.1 +0.6
H11A **Donnelly** 93.46 45 ⇓P P 07 35 21.7 -0.9
baz=94,SNR=18
Q12A **Willow Creek R** 93.47 51 ⇑P P 07 35 22.6 -0.2
baz=94,SNR=48
P12A **McGill** 93.48 51 ⇓P P 07 35 23.3 +0.5
baz=94,SNR=29
R12A **Pony Springs,** 93.54 52 ⇑P P 07 35 23.1 0.0
baz=94,SNR=54
F11A **Grangeville** 93.54 44 ⇓P P 07 35 21.4 -1.5
baz=94,SNR=5.3
Z13A **Yuma Proving G** 93.57 57 ⇑P P 07 35 22.2 -1.1
baz=94,SNR=9.7
N12A **Clover Valley,** 93.58 49 ⇓P P 07 35 23.9 +0.7
baz=94,SNR=23
N12A **Clover Valley,** 93.58 49 eP P 07 35 23.9 +0.7
comp=Z,47nm,1.1s,mb5.8
X13A **Yucca** 93.62 56 ⇓P P 07 35 22.9 -0.6
baz=94,SNR=5.8
W13A **Hualapai Mount** 93.65 55 ⇑P P 07 35 23.7 +0.1
baz=94,SNR=11
V13A **Grand Canyon W** 93.68 54 ⇑P P 07 35 23.5 -0.3
baz=94,SNR=21
O12A **Currie** 93.72 50 ⇑P P 07 35 24.0 +0.1
baz=94,SNR=51
M12A **Wells** 93.76 49 ⇓P P 07 35 24.0 0.0
baz=94,SNR=16
U13A **Pakoon Wash** 93.77 54 ⇓P P 07 35 25.1 +0.9
baz=94,SNR=14
C11A **Tepee Creek (N** 93.78 42 ⇑P P 07 35 23.9 0.0
baz=94
L12A **House Creek Ra** 93.79 48 ⇑P P 07 35 24.0 -0.2
baz=94,SNR=12
J12A **Stokes Ranch,** 93.89 47 ⇑P P 07 35 24.9 +0.3
baz=94,SNR=52
T13A **Saint George** 93.90 53 ⇑P P 07 35 24.8 0.0
baz=94,SNR=29
K12A **Draper Farm, C** 93.94 48 ⇑P P 07 35 25.1 +0.3
baz=94,SNR=28
I12A **Atlanta** 93.94 46 ⇑P P 07 35 25.3 +0.4
baz=94,SNR=16
G12A **Big Creek, Yel** 94.00 45 ⇓P P 07 35 24.4 -0.7
baz=94
R13A **O'Grain Ranch,** 94.02 52 ⇓P P 07 35 26.2 +0.9
baz=94,SNR=29
S13A **Holt Ranch, En** 94.02 53 ⇓P P 07 35 25.8 +0.5
baz=94,SNR=32
Q13A **Wheeler Ranch,** 94.08 51 ⇓P P 07 35 25.7 +0.2
baz=94,SNR=58
214A **Organ Pipe Nat** 94.10 58 ⇓P P 07 35 26.3 +0.5
baz=94
F12A **Elk City** 94.14 45 ⇓P P 07 35 23.7 -2.0
baz=94,SNR=8.4
P13A **Bates Ranch, G** 94.16 51 ⇓P P 07 35 26.4 +0.5
baz=94,SNR=37
N13A **Wendover, West** 94.21 49 ⇓P P 07 35 25.3 -0.8
baz=94
N13A **Wendover, West** 94.21 49 eP P 07 35 26.6 +0.5
comp=Z,18nm,1.0s,mb5.5
H12A **Diamond D Ranc** 94.25 46 ⇓P P 07 35 25.9 -0.3
baz=94
D12A **Red Ives Fores** 94.26 43 ⇑P P 07 35 25.3 -0.9
baz=94
O13A **Hicks Ranch, I** 94.28 50 ⇓P P 07 35 26.9 +0.4
baz=94,SNR=10
M13A **Montello** 94.31 49 ⇑P P 07 35 26.2 -0.3
baz=94,SNR=11
M13A **Montello** 94.31 49 eP P 07 35 27.1 +0.6
W14A **Seligman** 94.32 55 ⇓P P 07 35 27.5 +0.7
baz=94,SNR=11
V14A **Boquillas Ranc** 94.35 55 ⇑P P 07 35 27.0 0.0
baz=94,SNR=12
X14A **Yava** 94.37 56 ⇑P P 07 35 26.9 -0.1
baz=94,SNR=6.2
ARUT **Antelope Range** 94.38 53 eP P 07 35 27.8 +0.8
ARUT pmax pmax
comp=Z,20nm,1.2s,mb5.4
ARUT **Antelope Range** 94.38 53 eP P 07 35 27.8 +0.8
comp=Z,20nm,1.2s,mb5.4
U14A **Mt Trumbull** 94.40 54 ⇑P P 07 35 27.2 +0.1
baz=94,SNR=19
CCUT **Cedar City** 94.41 53 eP P 07 35 27.9 +0.8
HLID **Hailey** 94.43 47 ⇓P P 07 35 27.2 +0.2
baz=94,SNR=23
HLID **Hailey** 94.43 47 eP P 07 35 27.3 +0.2
comp=Z,22nm,1.2s,mb5.5
HLID ePP PP 07 39 15.5 +0.9
HLID LR LR
comp=Z,2µm,22.0s,MS5.5
K13A **Stover Farm, H** 94.54 48 ⇓P P 07 35 27.6 0.0
baz=95,SNR=13
T14A **Hurricane** 94.56 53 ⇓P P 07 35 28.4 +0.5
baz=95,SNR=6.6
L13A **Double Diamond** 94.57 48 ⇑P P 07 35 27.6 -0.1
baz=95
J13A **Cove Ranch, Pi** 94.58 47 ⇓P P 07 35 27.6 -0.2
baz=95,SNR=8.3
S14A **Cedar City** 94.59 53 ⇓P P 07 35 27.7 -0.2
baz=95,SNR=9.7
Q14A **Sevier Lake (B** 94.66 51 ⇓P P 07 35 28.5 +0.2
baz=95,SNR=33
H13A **Challis** 94.68 46 ⇑P P 07 35 27.1 -1.0
baz=95,SNR=18
I13A **Wildhorse Cree** 94.69 46 ⇑P P 07 35 27.6 -0.6
baz=95,SNR=27
115A **Sonoran Desert** 94.69 58 ⇑P P 07 35 28.0 -0.5
baz=95
G13A **Cobalt** 94.76 45 ⇑P P 07 35 27.8 -0.8
baz=95
Y15A **Casa Rosa Ranc** 94.76 57 ⇓P P 07 35 29.3 +0.4
baz=95
R14A **James Farms, M** 94.77 52 ⇓P P 07 35 29.2 +0.4
baz=95,SNR=6.5
F13A **Darby** 94.79 45 ⇓P P 07 35 27.4 -1.2
baz=95,SNR=10
P14A **Drum Mountains** 94.90 51 ⇑P P 07 35 29.5 +0.1
baz=95,SNR=17
X15A **Humboldt** 94.91 56 ⇑P P 07 35 30.2 +0.7
baz=95
M14A **Sheep Mountain** 94.94 49 ⇑P P 07 35 29.9 +0.4
baz=95,SNR=7.3
N14A **Grayback Hills** 94.97 50 ⇓P P 07 35 29.8 +0.2
baz=95,SNR=8.5
B13A **Whitefish** 95.04 42 P P 07 35 29.4 -0.4
baz=95,SNR=5.7
L14A **Malta** 95.08 48 ⇓P P 07 35 29.9 -0.2
baz=95,SNR=9.4
BGU **Big Grassy Mou** 95.10 50 eP P 07 35 30.1 -0.1
comp=Z,14nm,1.1s,mb5.3
U15A **North Rim** 95.11 54 ⇓P P 07 35 31.3 +0.9
baz=95,SNR=13
T15A **Red Dirt Ranch** 95.11 53 ⇓P P 07 35 29.8 -0.5
baz=95,SNR=11
V15A **Kaibab Nationa** 95.13 55 ⇓P P 07 35 31.2 +0.7
baz=95,SNR=6.6
I14A **Mackay** 95.17 46 ⇓P P 07 35 30.2 -0.2
baz=95
DUG **Dugway** 95.17 50 ⇑P P 07 35 30.1 -0.4
baz=95,SNR=8.5
DUG **Dugway** 95.17 50 eP P 07 35 30.7 +0.1
DUG pmax pmax
comp=Z,8.0nm,1.0s,mb5.1
DUG MLR MLR
comp=Z,860nm,19.0s,MS5.2
DUG **Dugway** 95.17 50 eP P 07 35 30.7 +0.1
comp=Z,8.3nm,1.0s,mb5.1
DUG LR LR
comp=Z,860nm,19.0s,MS5.2
MSO **Missoula** 95.19 44 eP P 07 35 32.6 +2.2
comp=Z,4.2nm,1.3s,mb4.7
MSO LR LR
comp=Z,1µm,19.0s,MS5.5
K14A **Jones Ranch, D** 95.19 48 ⇑P P 07 35 29.9 -0.7
baz=95,SNR=14
S15A **Panguitch** 95.21 53 ⇑P P 07 35 30.3 -0.5
baz=95,SNR=5.6
H14A **Leadore** 95.31 46 ⇑P P 07 35 30.0 -1.1
baz=95,SNR=6.2
G14A **Jackson** 95.33 45 ⇑P P 07 35 31.4 +0.3
baz=95
R15A **Junction** 95.34 52 ⇑P P 07 35 29.8 -1.6
baz=95,SNR=6.0
MVU **Marysvale** 95.43 52 PFAKE 07 35 40.0 +8.2
MVU LR LR
comp=Z,2µm,22.0s,MS5.5
C14A **Swan Lake** 95.44 43 ⇑P P 07 35 31.1 -0.5
baz=96
BVAR **Borovoye Array** 95.44 323 P P 07 35 29.6 -1.9
comp=Z,3.1nm,0.9s,mb4.7,baz=128,slow=4.3,SNR=11
BVAR PP PP 07 39 33.3 +11
comp=Z,1.8nm,0.9s,baz=93,slow=7.2,SNR=3.6
O15A **The Old Anders** 95.44 50 ⇓P P 07 35 31.8 0.0
baz=96
E14A **Clinton** 95.45 44 ⇓P P 07 35 31.4 -0.2
baz=96
MSU **Marysvale** 95.46 52 eP P 07 35 33.1 +1.2
WALA **Waterton Lakes** 95.49 41 eP P 07 35 31.6 -0.2
P15A **Leamington** 95.50 51 ⇑P P 07 35 32.2 +0.1
baz=96,SNR=11
BRVK **Borovoye** 95.51 323 ⇓iP P 07 35 30.7 -1.1
BRVK LR LR
comp=Z,891nm,20.0s,MS5.2
X16A **Lo Mia Camp, P** 95.56 56 ⇑P P 07 35 29.0 -3.4
baz=96
CHMT **Chamberlain Mo** 95.67 44 eP P 07 35 31.9 -0.7
MCMT **McKenzie Canyo** 95.70 46 eP P 07 35 33.4 +0.5
comp=Z,3.0nm,1.0s,mb4.7
NLU **North Lily Min** 95.70 51 eP P 07 35 34.8 +1.8
WUAZ **Wupatki** 95.74 55 eP P 07 35 34.2 +0.9
comp=Z,3.6nm,0.8s,mb4.8
WUAZ LR LR
comp=Z,2µm,21.0s,MS5.6
A14A **Double T Ranch** 95.80 41 ⇑P P 07 35 29.1 -4.1
baz=96,SNR=9.2
S16A **Weppner Ranch,** 95.82 53 ⇑P P 07 35 33.4 -0.2
baz=96,SNR=9.0
H15A **Lima** 95.83 46 ⇓P P 07 35 33.0 -0.4
baz=96,SNR=14
B14A **Marquette Ranc** 95.83 42 ⇑P P 07 35 30.0 -3.3
baz=96
J15A **Blackfoot** 95.84 47 ⇓P P 07 35 30.9 -2.6
baz=96,SNR=8.5
TUC **Tucson** 95.85 58 eP P 07 35 34.0 +0.2
TUC e 07 39 23.9
TUC pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
TUC MLR MLR
comp=Z,3µm,20.0s,MS5.7
TUC **Tucson** 95.85 58 eP P 07 35 34.0 +0.1
comp=Z,4.0nm,0.9s,mb4.8
TUC ePP PP 07 39 23.9 -2.1
TUC LR LR
comp=Z,3µm,20.0s,MS5.7
I15A **Monteview** 95.87 47 ⇓P P 07 35 34.3 +0.7
baz=96
117A **Oracle** 95.92 58 ⇓P P 07 35 31.8 -2.4
baz=96
DLMT **Dillon** 95.94 45 eP P 07 35 33.6 -0.4
Y17A **Roosevelt** 95.96 57 ⇓P P 07 35 33.1 -1.2
baz=96
R16A **Teasdale** 95.97 52 ⇓P P 07 35 35.8 +1.5
baz=96,SNR=28
P16A **Fountain Green** 95.98 51 ⇓P P 07 35 34.5 +0.2
baz=96,SNR=6.6
G15A **Dillon** 96.00 45 ⇑P P 07 35 33.3 -0.9
baz=96,SNR=10
E15A **Deer Lodge** 96.03 44 ⇓P P 07 35 32.5 -1.8
baz=96,SNR=8.4
CTU **Camp Tracy** 96.04 50 eP P 07 35 35.3 +0.8
MPU **Maple Canyon** 96.05 51 eP P 07 35 35.8 +1.2
LRM **Limekiln Ridge** 96.10 45 eP P 07 35 34.5 -0.1
O16A **Springville** 96.17 50 ⇓P P 07 35 34.8 -0.3
baz=96,SNR=20
M16A **Huntsville** 96.19 49 ⇑P P 07 35 34.3 -0.9
baz=96
C15A **Salmond Ranch,** 96.20 43 ⇑P P 07 35 33.8 -1.2
baz=96
V17A **Tonalea, Kykot** 96.22 55 ⇑P P 07 35 36.3 +0.9
baz=96,SNR=8.4
A15A **Johnson Ranch,** 96.25 42 ⇓P P 07 35 27.1 -8.2
baz=96
JLU **Jordanelle** 96.25 50 eP P 07 35 36.4 +1.0
HWUT **Hardware Ranch** 96.28 49 eP P 07 35 35.8 +0.2
HWUT LR LR
comp=Z,968nm,19.0s,MS5.3
Q16A **Castle Valley** 96.28 52 ⇑P P 07 35 36.5 +0.8
baz=96,SNR=12
B15A **Bradely Ranch,** 96.29 42 ⇓P P 07 35 29.0 -6.5
baz=96
N16A **Rees Ranch, Co** 96.29 50 ⇑P P 07 35 36.2 +0.6
baz=96,SNR=6.0
TMUT **Trail Mountain** 96.30 51 eP P 07 35 37.9 +2.2
EDM **Edmonton** 96.33 37 eP P 07 35 34.7 -0.8
T17A **Navajo Res., N** 96.36 54 ⇑P P 07 35 36.4 +0.3
baz=96,SNR=8.5
DAU **Daniels Canyon** 96.38 50 eP P 07 35 37.5 +1.4
K16A **Soda Springs** 96.39 48 ⇑P P 07 35 37.0 +1.0
baz=96
L16A **Fish Haven** 96.42 49 ⇓P P 07 35 35.5 -0.6
baz=96
J16A **Bone** 96.42 47 ⇑P P 07 35 36.2 +0.1
baz=96,SNR=5.6
318A **Bisbee** 96.42 59 ⇑P P 07 35 37.1 +0.6
baz=96
S17A **Black Ridge (B** 96.44 53 ⇓P P 07 35 36.4 0.0
baz=96,SNR=5.6
218A **Dragoon** 96.44 59 ⇑P P 07 35 36.6 +0.1
baz=96
G16A **Moss Hill, Enn** 96.49 45 ⇑P P 07 35 36.4 0.0
baz=97,SNR=7.3
I16A **Newdale** 96.57 47 ⇑P P 07 35 37.1 +0.3
baz=97,SNR=8.6
118A **Homack Ranch,** 96.57 58 ⇑P P 07 35 38.0 +0.9
baz=97,SNR=7.4
R17A **Hanksville Air** 96.59 52 ⇓P P 07 35 37.6 +0.6
baz=97,SNR=14
RRI2 **Red Ridge** 96.64 47 eP P 07 35 38.1 +1.0
BOZ **Bozeman (W)** 96.65 45 ⇑P P 07 35 36.5 -0.7
baz=97,SNR=12
BOZ **Bozeman (W)** 96.65 45 eP P 07 35 36.7 -0.5
comp=Z,3.8nm,0.9s,mb4.8
BOZ LR LR
comp=Z,2µm,20.0s,MS5.6
F16A **Kennard Place,** 96.67 45 P P 07 35 37.0 -0.2
baz=97,SNR=6.8
YKA **Yellowknife Ar** 96.67 28 P P 07 35 35.6 -1.2
comp=Z,8.0nm,1.0s,mb5.1,baz=259,slow=4.8,SNR=33
P17A **Butcher Ranch,** 96.68 51 ⇑P P 07 35 37.9 +0.5
baz=97,SNR=7.0
AHID **Auburn Hatcher** 96.74 48 PFAKE 07 35 50.0 +12
AHID LR LR
comp=Z,1µm,19.0s,MS5.4
O17A **Robinson Place** 96.75 50 ⇓P P 07 35 38.0 +0.3
baz=97,SNR=37
SRU **San Rafael** 96.81 52 ⇓P P 07 35 38.6 +0.6
baz=97
SRU **San Rafael** 96.81 52 eP P 07 35 38.9 +0.9
H16A **Russell Place,** 96.83 46 ⇑P P 07 35 38.1 +0.1
baz=97,SNR=13
D16A **Dana Ranch, Ca** 96.84 44 P P 07 35 33.6 -4.4
baz=97,SNR=5.8
TPAW **Teton Pass** 96.92 47 eP P 07 35 39.2 +0.8
M17A **Scullys Gap (B** 96.93 49 ⇓P P 07 35 37.6 -0.9
baz=97,SNR=9.8
IMW **Indian Meadow** 96.97 47 eP P 07 35 40.1 +1.5
REDW **Red Top Meadow** 96.98 47 eP P 07 35 39.3 +0.6
SNOW **Snow King Moun** 97.06 47 eP P 07 35 39.9 +0.8
P18A **Preston Nutter** 97.07 51 ⇑P P 07 35 38.9 -0.3
baz=97,SNR=13
YFT **Old Faithful** 97.09 46 eP P 07 35 42.0 +2.8
219A **White Tail Can** 97.10 59 ⇑P P 07 35 39.1 -0.4
baz=97,SNR=8.6

Q18A Rafter H Ranch 97.11 52 ⇑P **P 07 35 39.1 -0.3**
baz=97,SNR=6.0
LOHW Long Hollow 97.18 47 *e*P **P 07 35 40.4 +0.8**
R18A Canyonlands Na 97.22 52 ⇓P **P 07 35 40.4 +0.4**
baz=97
H17A Grant Village 97.28 46 ⇑P **P 07 35 41.4 +1.4**
baz=97,SNR=6.5
Y19A Nutrioso 97.31 57 ⇓P **P 07 35 40.9 +0.5**
baz=97,SNR=7.2
O18A Roosevelt 97.31 50 ⇑P **P 07 35 40.1 -0.2**
baz=97,SNR=14
F17A Fitzpatrick Pl 97.35 45 ⇓P **P 07 35 36.7 -3.6**
baz=97,SNR=14
LKWY Lake 97.42 46 PFAKE 07 35 50.0 +9.4
LKWY LR LR
comp=Z,3μm,20.0s,MS5.8
K18A Toltan Ranch, 97.50 48 ⇑P **P 07 35 38.9 -2.1**
baz=98,SNR=5.9
U19A Dine' College, 97.57 54 ⇓P **P 07 35 43.0 +1.5**
baz=98,SNR=7.9
J18A Kendall Valley 97.57 47 ⇓P **P 07 35 41.3 -0.1**
baz=98
N18A Larsen Ranch, 97.63 50 ⇑P **P 07 35 41.4 -0.3**
baz=98,SNR=11
R19A Curley Farm, L 97.71 52 ⇑P **P 07 35 41.9 -0.3**
baz=98
220A Playas Peak, P 97.71 59 ⇓P **P 07 35 42.3 0.0**
baz=98
I18A Diamond G Ranc 97.76 47 ⇑P **P 07 35 43.1 +0.9**
baz=98
S19A Harvey Farm, M 97.76 53 ⇓P **P 07 35 42.9 +0.5**
baz=98,SNR=13
T19A Beclabito 97.77 54 ⇓P **P 07 35 41.7 -0.8**
baz=98,SNR=8.6
Q19A Hogan Spring (97.77 52 ⇓P **P 07 35 41.6 -0.8**
baz=98,SNR=5.5
Z20A Nine Sixteen R 97.78 58 ⇓P **P 07 35 43.5 +0.9**
baz=98
BW06 Boulder Array 97.87 48 ⇑P **P 07 35 41.9 -0.8**
baz=98,SNR=9.1
BW06 Boulder Array 97.87 48 *e*P **P 07 35 42.6 -0.1**
BW06 LR LR
comp=Z,1μm,19.0s,MS5.5
PDAR Pinedale Array 97.87 48 P **P 07 35 42.0 -0.7**
comp=Z,4.7nm,0.9s,mb5.0,baz=248,slow=1.6,SNR=34
PDAR PKKP PKKPbc 07 52 24.0 +5.4
comp=Z,0.8nm,1.0s,baz=270,slow=1.0,SNR=4.2
L19A Farson 97.96 49 ⇓P **P 07 35 42.4 -0.7**
baz=98
O19A Miners Draw (B 97.99 50 ⇑P **P 07 35 43.6 +0.2**
baz=98,SNR=13
PV04 Paradox Valley 98.00 52 *e*P **P 07 35 45.3 +1.9**
GCMT Greycliff 98.03 45 *e*P **P 07 35 43.2 -0.2**
comp=Z,3.5nm,0.9s,mb4.9
EGMT Eagleton 98.14 43 PFAKE 07 35 50.0 +6.2
EGMT LR LR
comp=Z,2μm,19.0s,MS5.6
MVCO Mesa Verde 98.22 54 PFAKE 07 35 50.0 +5.6
MVCO LR LR
comp=Z,1μm,19.0s,MS5.4
PV01 Paradox Valley 98.24 53 *e*P **P 07 35 44.6 +0.1**
comp=Z,513nm,1.3s
RLMT Red Lodge 98.26 46 PFAKE 07 35 50.0 +5.6
RLMT LR LR
comp=Z,2μm,20.0s,MS5.6
K19A Absolon Red Bu 98.40 48 ⇑P **P 07 35 43.1 -2.0**
baz=98
P20A De Beque 98.49 51 ⇓P **P 07 35 45.4 -0.2**
baz=98,SNR=5.8
Q20A Ridgley Place, 98.52 52 ⇓P **P 07 35 45.6 -0.2**
baz=99,SNR=7.3
Z21A St. Cloud Mine 98.56 58 ⇑P **P 07 35 45.5 -0.6**
baz=99
O20A White River Ci 98.65 51 ⇓P **P 07 35 45.9 -0.4**
baz=99,SNR=5.4
N20A Spence Gulch, 98.69 50 ⇑P **P 07 35 46.2 -0.3**
baz=99
L20A Wamsutter 98.71 49 ⇓P **P 07 35 45.8 -0.7**
baz=99,SNR=6.7
K20A Yellowstone Ra 98.76 48 ⇓P **P 07 35 42.9 -3.8**
baz=99
M20A Sweetwater, Wa 98.79 49 ⇑P **P 07 35 47.5 +0.6**
baz=99,SNR=6.6
U21A Nageezi 98.83 54 ⇑P **P 07 35 48.8 +1.6**
baz=99,SNR=5.5
Q21A Lamborn Mesa, 99.07 52 ⇓P **P 07 35 48.5 +0.3**
baz=99,SNR=6.1
LAZ Ladron 99.09 57 *e*P **P 07 35 48.4 0.0**
comp=Z,1.1nm,0.9s,mb4.4
Z22A Elephant Butte 99.15 58 ⇓P **P 07 35 48.6 -0.1**
baz=99
Y22A Socorro 99.20 57 ⇓P **P 07 35 49.0 +0.1**
baz=99
N21A Black Mountain 99.25 50 ⇑P **P 07 35 47.3 -1.6**
baz=99,SNR=7.3
M21A Separation Pea 99.42 49 ⇓P **P 07 35 45.1 -4.6**
baz=100
BNM Barren Site 99.50 57 *e*P **P 07 35 51.2 +0.9**
comp=Z,4.5nm,1.0s,mb5.0
Q22A Crested Butte, 99.59 52 ⇓P **P 07 35 51.2 +0.6**
baz=100,SNR=8.7
ANMO Albuquerque 99.69 56⇓*e*P Pdif 07 35 50.0 -0.6
ANMO pmax pmax
comp=Z,8.0nm,2.8s
ANMO Albuquerque 99.69 56 PFAKE 07 36 00.0 +9.4
ANMO LR LR
comp=Z,3μm,22.0s,MS5.7
O22A Kremmling 99.95 51 ⇓P Pdif 07 35 50.0 -1.8
baz=100
224A Cornudas Mount 100.27 59 ⇑P Pdif 07 35 53.7 +0.4
baz=100
MNTX Cornudas Mount 100.36 59 PFAKE 07 36 00.0 +6.4
MNTX LR LR
comp=Z,2μm,19.0s,MS5.7
LAO LASA Array 100.47 44 PFAKE 07 36 00.0 +5.9
LAO LR LR
comp=Z,3μm,20.0s,MS5.7
SDCO Great Sand Dun 100.64 53 PFAKE 07 36 10.0 +15
SDCO LR LR
comp=Z,1μm,19.0s,MS5.4
425A Indio Mountain 100.64 60 ⇓P Pdif 07 35 56.5 +1.6
baz=101
ISCO Idaho Springs 100.65 51 PFAKE 07 36 10.0 +15
ISCO LR LR
comp=Z,2μm,22.0s,MS5.5
325A Bean Ranch, Si 100.69 60 ⇓P Pdif 07 35 56.1 +1.0
baz=101
Y25A Mesa, Roswell 101.08 57 ⇑P Pdif 07 35 56.6 -0.3
baz=101
GDL2 Guadalupe Moun 101.26 59 *e*Pdif Pdif 07 35 59.1 +1.5
comp=Z,2.8nm,1.0s
MSEY Mahe Island 101.41 263 PFAKE 07 36 10.0 +12
MSEY LR LR
comp=Z,2μm,19.0s,MS5.5
U25A Circle Dot Ran 101.44 55 ⇓P Pdif 07 35 57.4 -1.1
baz=102
TXAR Lajitas Array 101.69 62 P Pdif 07 36 00.7 +1.2
comp=Z,0.9nm,0.8s,baz=234,slow=4.3,SNR=12
TXAR PP PP 07 40 08.3 -2.4
comp=Z,2.1nm,1.0s,baz=260,slow=7.1,SNR=10
TXAR PKKPbc PKKPbc 07 52 08.6 +1.3
comp=Z,0.4nm,0.8s,baz=90,slow=3.8,SNR=4.6
TXAR Lajitas Array 101.69 62 P Pdif 07 36 00.7 +1.2
TXAR 07 40 08.3
TXAR pmax pmax
comp=Z,1.0nm,0.8s
TXAR pmax pmax
comp=Z,2.0nm,1.0s
DGMT Dagmar 101.87 42 PFAKE 07 36 10.0 +10
DGMT LR LR
comp=Z,1μm,21.0s,MS5.4
RSSD Black Hills 101.95 47 *e*P Pdif 07 36 01.0 +0.3
RSSD pmax pmax
comp=Z,23nm,1.9s
RSSD MLR MLR
comp=Z,2μm,20.0s,MS5.6
RSSD Black Hills 101.95 47 *e*Pdif Pdif 07 36 01.0 +0.3
comp=Z,23nm,1.9s
RSSD LR LR
comp=Z,2μm,20.0s,MS5.6
U26A Atchley Ranch, 101.98 55 ⇓P Pdif 07 35 55.1 -5.7
baz=102
ARU Arti 102.43 326 PFAKE 07 36 10.0 +7.2
ARU LR LR
comp=Z,961nm,20.0s,MS5.3
FFC Flin Flon 103.08 36 PFAKE 07 36 20.0 +14
FFC LR LR
comp=Z,2μm,19.0s,MS5.6
OGNE Ogallala 103.41 50 PFAKE 07 36 20.0 +13
OGNE LR LR
comp=Z,1μm,20.0s,MS5.5
AMTX Amarillo 103.61 56 PFAKE 07 36 20.0 +12
AMTX LR LR
comp=Z,410nm,20.0s,MS5.0
JCT Junction City 105.09 61 PFAKE 07 40 40.0 +10
JCT LR LR
comp=Z,2μm,20.0s,MS5.7
CBKS Cedar Bluff 105.19 52 PFAKE 07 40 40.0 +10
CBKS LR LR
comp=Z,1μm,20.0s,MS5.4
WMOK Wichita Mounta 106.00 56 PFAKE 07 40 40.0 +8.6
WMOK LR LR
comp=Z,3μm,20.0s,MS5.8
ABPO Ambohimpanom 106.20 247 PFAKE 07 40 40.0 +7.7
ABPO LR LR
comp=Z,1μm,20.0s,MS5.4
KVTX Kingsville 106.69 64 PFAKE 07 40 40.0 +7.1
KVTX LR LR
comp=Z,2μm,19.0s,MS5.6
ULM Lac du Bonnet 107.19 40 PFAKE 07 40 40.0 +6.9
ULM LR LR
comp=Z,2μm,19.0s,MS5.7
ECSD EROS Data Cent 107.32 47 PFAKE 07 40 40.0 +6.4
ECSD LR LR
comp=Z,2μm,20.0s,MS5.6
AGMN Agassiz Nation 107.42 42 PFAKE 07 40 40.0 +6.4
AGMN LR LR
comp=Z,1μm,20.0s,MS5.5
KSU1 Kansas State U 107.62 52 PFAKE 07 40 40.0 +5.7
KSU1 LR LR
comp=Z,885nm,19.0s,MS5.3
KBS Kingsbay 107.94 353 PFAKE 07 40 40.0 +6.1
KBS LR LR
comp=Z,812nm,19.0s,MS5.3
HKT Hockley 108.52 61 PFAKE 07 40 50.0 +14
HKT LR LR
comp=Z,1μm,19.0s,MS5.5
NATX Nacogdoches 109.50 60 PFAKE 07 40 50.0 +12
NATX LR LR
comp=Z,3μm,20.0s,MS5.9
SCIA State Center 109.98 49 PFAKE 07 40 50.0 +11
SCIA LR LR
comp=Z,2μm,20.0s,MS5.7
LVZ Lovozero 110.24 340 PFAKE 07 40 50.0 +12
LVZ LR LR
comp=Z,779nm,20.0s,MS5.3
MIAR Mount Ida 110.29 57 PFAKE 07 40 50.0 +11
MIAR LR LR
comp=Z,3μm,22.0s,MS5.8
EYMN Ely 110.37 42 PFAKE 07 40 50.0 +11
EYMN LR LR
comp=Z,1μm,20.0s,MS5.5
PAYG Puerto Ayora 111.53 94 PFAKE 07 40 50.0 +7.6
PAYG LR LR
comp=Z,949nm,21.0s,MS5.3
KEV Kevo 111.59 344 PFAKE 07 40 50.0 +9.1
KEV LR LR
comp=Z,1μm,22.0s,MS5.4
CCM Cathedral Cave 111.89 53 PFAKE 07 40 50.0 +7.6
CCM LR LR
comp=Z,2μm,22.0s,MS5.6
JFWS Jewell Farm 112.03 47 PFAKE 07 40 50.0 +7.5
JFWS LR LR
comp=Z,2μm,20.0s,MS5.7
COWI Conover 112.28 44 PFAKE 07 40 50.0 +7.1
COWI LR LR
comp=Z,1μm,20.0s,MS5.6
VBMS Vicksburg 112.99 59 PFAKE 07 40 50.0 +5.3
VBMS LR LR
comp=Z,2μm,20.0s,MS5.8
HDIL Hopedale 113.08 50 PFAKE 07 40 50.0 +5.4
HDIL LR LR
comp=Z,2μm,21.0s,MS5.7
GNI Garni 113.26 310 PFAKE 07 41 00.0 +15
GNI LR LR
comp=Z,482nm,20.0s,MS5.1
PLCA Paso Flores 113.56 142 PFAKE 07 41 00.0 +14
PLCA LR LR
comp=Z,1μm,20.0s,MS5.5
OXF Oxford 113.72 56 PFAKE 07 41 00.0 +14
OXF LR LR
comp=Z,2μm,20.0s,MS5.8
MOS Moscow 114.02 328 *e*PKIKP PKiKP 07 40 59.9 +14
MOS MLR MLR
comp=Z,1μm,19.0s,MS5.4
KIV Kislovodsk 114.12 314 *i* PKIKP PKiKP 07 40 41.4 -5.1
KIV *e* 07 47 24.6
KIV *e*PS PS 07 51 14.7 -4.2
KIV *e*SS SS 07 57 31.2 -0.4
KIV pmax pmax
comp=Z,4.0nm,0.8s
KIV MLR MLR
comp=Z,556nm,20.0s,MS5.2
KIV Kislovodsk 114.12 314 PFAKE 07 41 00.0 +14
KIV LR LR
comp=Z,625nm,21.0s,MS5.2
OBN Obninsk 114.80 327 PFAKE 07 41 00.0 +13
OBN LR LR
comp=Z,1μm,19.0s,MS5.5
WVT Waverly 114.82 54 PFAKE 07 41 00.0 +12
WVT LR LR
comp=Z,2μm,20.0s,MS5.7
TEIG Tepich 115.39 72 PFAKE 07 41 00.0 +10
TEIG LR LR
comp=Z,1μm,22.0s,MS5.5
WCI Wyandotte Cave 115.74 52 PFAKE 07 41 00.0 +10
WCI LR LR
comp=Z,1μm,20.0s,MS5.6
LRAL Lakeview Retre 115.88 58 PFAKE 07 41 00.0 +10
LRAL LR LR
comp=Z,2μm,20.0s,MS5.7
BRAL Brewton 116.03 60 PFAKE 07 41 00.0 +9.5
BRAL LR LR
comp=Z,2μm,20.0s,MS5.6
TGUH Tegucigalpa,Un 116.17 79 PFAKE 07 41 00.0 +8.8
TGUH LR LR
comp=Z,793nm,21.0s,MS5.3
FINES FINESS Array B 116.75 336 PKP PKPdf 07 40 50.8 -0.2
comp=Z,2.7nm,0.7s,baz=84,slow=5.9,SNR=7.1
FINES FINESS Array B 116.75 336 PKIKP PKPdf 07 40 50.8 -0.2
FINES pmax pmax
comp=Z,3.0nm,0.7s
AAM Ann Arbor 116.92 47 PFAKE 07 41 00.0 +8.1
AAM LR LR
comp=Z,3μm,19.0s,MS5.9
ACSO Alum Creek Sta 117.88 49 PFAKE 07 41 00.0 +6.2
ACSO LR LR
comp=Z,2μm,20.0s,MS5.7
GOGA Godfrey 118.76 57 PFAKE 07 41 10.0 +14
GOGA LR LR
comp=Z,2μm,21.0s,MS5.8
SFJD Kangerlussuaq 118.83 12 PFAKE 07 41 00.0 +5.2
SFJD LR LR
comp=Z,935nm,21.0s,MS5.4
ERPA Erie 119.61 46 PFAKE 07 41 10.0 +13
ERPA LR LR
comp=Z,1μm,19.0s,MS5.6
KMBO Kilima Mbogo 119.95 264 PKP PKPdf 07 41 00.7 +2.1
comp=Z,2.4nm,0.9s,baz=180,slow=23,SNR=4.1
KMBO Kilima Mbogo 119.95 264 PKP PKPdf 07 41 00.7 +2.1
KMBO LR LR
comp=Z,831nm,21.0s,MS5.3
LCO Las Campanas 119.99 131 PFAKE 07 41 10.0 +12
LCO LR LR
comp=Z,590nm,19.0s,MS5.2
MCWV Mont Chateau 120.36 49 PFAKE 07 41 10.0 +11
MCWV LR LR
comp=Z,2μm,19.0s,MS5.7
TRQA Tornquist 120.38 144 PFAKE 07 41 10.0 +11
TRQA LR LR
comp=Z,846nm,19.0s,MS5.4
BLA Blacksburg 120.50 52 PFAKE 07 41 10.0 +11
BLA LR LR
comp=Z,3μm,22.0s,MS5.9
AKASG Malin Array Be 120.65 325 PKP PKPdf 07 40 57.0 -1.8
comp=Z,1.1nm,0.5s,baz=69,slow=1.6,SNR=12
AKASG Malin Array Be 120.65 325 PKIKP PKPdf 07 40 57.0 -1.8
AKASG pmax pmax
comp=Z,1.0nm,0.5s
KIEV Kiev 120.67 325 PFAKE 07 41 10.0 +11
KIEV LR LR
comp=Z,879nm,20.0s,MS5.4
BOSA Boshof 120.98 229 PKP PKPdf 07 40 59.4 -0.8
comp=Z,2.0nm,0.6s,baz=186,slow=5.3,SNR=5.3
BOSA Boshof 120.98 229 PKP PKPdf 07 40 59.4 -0.8
BOSA LR LR
comp=Z,1μm,20.0s,MS5.5
DWPF Disney 121.21 63 PFAKE 07 41 10.0 +9.4
DWPF LR LR
comp=Z,1μm,19.0s,MS5.5
NHSC New Hope 121.53 57 PFAKE 07 41 10.0 +8.9
NHSC LR LR
comp=Z,3μm,20.0s,MS6.0
SSPA Standing Stone 121.54 48 *e*PKPdf PKPdf 07 40 58.9 -2.0
SSPA LR LR
comp=Z,1μm,20.0s,MS5.6
BR131 Keskin Array S 121.69 311 PFAKE 07 41 10.0 +8.8
BR131 LR LR
comp=Z,570nm,22.0s,MS5.2
NNA Nana 121.87 110 PFAKE 07 41 10.0 +7.8
NNA LR LR
comp=Z,561nm,19.0s,MS5.2
SUR Sutherland 122.00 223 PFAKE 07 41 10.0 +8.0
SUR LR LR
comp=Z,1μm,21.0s,MS5.6
SCHQ Schefferville 122.11 29 PFAKE 07 41 10.0 +8.5
SCHQ LR LR
comp=Z,2μm,20.0s,MS5.8
NB2 NORSAR Subarra122.34 342 PKPdf PKPdf 07 41 00.9 -0.8
comp=Z,2.9nm,1.0s,baz=39,slow=1.9
NOA NORSAR Array B122.34 342 PKP PKPdf 07 41 01.0 -0.8
comp=Z,3.6nm,0.8s,baz=37,slow=1.9,SNR=12
NOA PKKPbc PKKPbc 07 50 57.7 -1.5
comp=Z,0.9nm,0.8s,baz=216,slow=4.0,SNR=3.3
BINY Binghamton 122.42 45 PFAKE 07 41 10.0 +7.5
BINY LR LR
comp=Z,2μm,19.0s,MS5.9
LONY Lake Ozonia 122.53 42 PFAKE 07 41 10.0 +7.4
LONY LR LR
comp=Z,1μm,20.0s,MS5.5
LBTB Lobatse 122.55 233 PFAKE 07 41 10.0 +6.7
LBTB LR LR
comp=Z,2μm,20.0s,MS5.7
CBN Corbin 122.60 50 PFAKE 07 41 10.0 +7.0
CBN LR LR
comp=Z,2μm,20.0s,MS5.8
CNNC Cliffs of the 122.94 54 PFAKE 07 41 10.0 +6.3
CNNC LR LR
comp=Z,3μm,20.0s,MS5.9
NCB Newcomb 123.01 43 PFAKE 07 41 10.0 +6.4
NCB LR LR
comp=Z,2μm,21.0s,MS5.7
BCIP Isla Barro Col 123.13 85 PFAKE 07 41 10.0 +5.4
BCIP LR LR
comp=Z,1μm,20.0s,MS5.6
CSS Prodhromos 123.13 306 PFAKE 07 41 10.0 +5.9
CSS LR LR
comp=Z,694nm,21.0s,MS5.3
OTAV Otavalo 123.34 96 PFAKE 07 41 20.0 +15
OTAV LR LR
comp=Z,1μm,20.0s,MS5.6
KONO Kongsberg 123.93 341 PFAKE 07 41 10.0 +5.2
KONO LR LR
comp=Z,835nm,20.0s,MS5.4
BORG Borgarnes 124.19 360 PFAKE 07 41 20.0 +15
BORG LR LR
comp=Z,763nm,22.0s,MS5.3
BUR08 Bucovina Ar. S 124.40 323 *e*PKPdf PKPdf 07 41 07.5 +1.4
LBNH Lisbon 124.43 42 PFAKE 07 41 20.0 +14
LBNH LR LR
comp=Z,2μm,22.0s,MS5.7
ISP Isparta 124.56 310 PFAKE 07 41 20.0 +13
ISP LR LR
comp=Z,426nm,20.0s,MS5.1
LSZ Lusaka 124.62 245 PKP PKPdf 07 41 08.0 +0.5
comp=Z,2.8nm,0.8s,baz=142,slow=5.8,SNR=5.0
LSZ Lusaka 124.62 245 PKP PKPdf 07 41 08.0 +0.5
LSZ LR LR
comp=Z,2μm,20.0s,MS5.7
KWP Kalwaria Pacla 124.84 326 PFAKE 07 41 20.0 +13
KWP LR LR
comp=Z,965nm,21.0s,MS5.4
MTDJ Mount Denham 125.57 74 PFAKE 07 41 20.0 +11
MTDJ LR LR
comp=Z,752nm,21.0s,MS5.3
UZH Uzhgorod 125.59 325 *i* PKIKP PKPdf 07 41 06.0 -2.4
UZH *e* 07 41 16.0
UZH *i* 07 42 55.0
UZH *e* 07 48 13.0
UZH MLR MLR
comp=N,700nm,19.0s,MS5.5
UZH MLR MLR
comp=E,600nm,19.0s,MS5.5
UZH MLR MLR
comp=Z,300nm,19.0s,MS5.0
STHS Stebnicka Huta 125.76 326 *e*PKIKP PKPdf 07 41 09.4 +0.8
STHS Stebnicka Huta 125.76 326 *e* PKPdf 07 41 09.4 +0.8
CRVS Cervenica-Dubn 125.92 326 *e*PKIKP PKPdf 07 41 09.6 +0.6
CRVS Cervenica-Dubn 125.92 326 *e* PKPdf 07 41 09.6 +0.6
OJC Ojcow 126.08 328 *e*PKP PKPdf 07 41 07.4 -1.8
NIE Niedzica 126.26 327 *e*PKP PKPdf 07 41 10.2 +0.6
KECS Kecovo 126.69 326 *e*PKIKP PKPdf 07 41 16.4 +5.9
KECS Kecovo 126.69 326 *e* PKPdf 07 41 16.4 +5.9
OKC Ostrava-Krasne 127.17 328 *e*PKIKP PKPdf 07 41 11.2 -0.1
OKC *e* 07 43 12.2
OKC *e*SS SS 08 00 31.9 +14
OKC MLR MLR
comp=Z,700nm,19.4s,MS5.3
OKC Ostrava-Krasne 127.17 328 *e*PKPdf PKPdf 07 41 11.2 -0.1
OKC *e*PP PP 07 43 12.2 +2.4
OKC *e*x x 08 00 31.9
OKC *e*SKSSKS 08 03 05.5
OKC AMS AMS 08 40 40.0
comp=Z,700nm,19.4s
PSZ Piszkesteto 127.33 325 PFAKE 07 41 20.0 +8.3
PSZ LR LR
comp=Z,720nm,20.0s,MS5.3
KSP Ksiaz 127.49 330 *e*PKIKP PKPdf 07 41 11.5 -0.4
KSP *e*SS SS 08 00 14.0 -7.8
MORC Moravsky Berou 127.52 328 *e*PKIKP PKPdf 07 41 11.6 -0.4
VYHS Vyhne 127.59 327 *e*PKIKP PKPdf 07 41 11.4 -0.8
VYHS Vyhne 127.59 327 *e* PKPdf 07 41 11.4 -0.8
GTBY Guantanamo Bay 127.77 72 PFAKE 07 41 20.0 +6.6
GTBY LR LR
comp=Z,1μm,21.0s,MS5.5
DPC Dobruska-Polom 127.78 330 *e*PKIKP PKPdf 07 41 12.8 +0.3
DPC *e* 07 43 16.2
DPC MLR MLR
comp=Z,800nm,19.2s,MS5.4
DPC Dobruska-Polom 127.78 330 *e*PKPdf PKPdf 07 41 12.8 +0.3
DPC *e*PP PP 07 43 16.2 +2.4
DPC *e*SS SS 08 00 32.8 +7.3
DPC *e*SKSSKS 08 03 02.5
DPC AMS AMS 08 39 50.0
comp=Z,800nm,19.2s
UPC Upice 127.84 330 *e*PKIKP PKPdf 07 41 12.6 0.0
UPC Upice 127.84 330 *e*PKPdf PKPdf 07 41 12.6 0.0
BSEG Bad Segeberg 128.03 336 *e*PKPdf PKPdf 07 41 12.8 0.0
ROSC El Rosal 128.12 91 PKP PKPdf 07 41 13.9 -0.4
comp=Z,5.5nm,0.6s,baz=102,slow=14,SNR=3.9
LPAZ La Paz 128.13 119 PKP PKPdf 07 41 14.2 +0.1
comp=Z,7.2nm,0.9s,baz=310,slow=1.0,SNR=24
LPAZ La Paz 128.13 119 PKIKP PKPdf 07 41 14.3 +0.1
LPAZ pmax pmax
comp=Z,7.0nm,0.9s
LPAZ La Paz 128.13 119 *e*PKPdf PKPdf 07 41 14.2 0.0
LPAZ LR LR
comp=Z,796nm,21.0s,MS5.4
PVCC Panska Ves 128.53 331 *e*PKIKP PKPdf 07 41 13.9 0.0
PVCC *e* 07 43 19.8
PVCC MLR MLR
comp=Z,1μm,19.6s,MS5.6
PVCC Panska Ves 128.53 331 *e*PKPdf PKPdf 07 41 13.9 0.0
PVCC *e*PP PP 07 43 19.8 +1.1
PVCC AMS AMS 08 41 20.0
comp=Z,1μm,19.6s
BRG Berggiesshubel 128.60 331 *e*PKPdf PKPdf 07 41 13.2 -0.8
BRG Berggiesshubel 128.60 331 *e*PKP PKPdf 07 41 13.7 -0.4
comp=Z,23nm,1.4s
BRG Berggiesshubel 128.60 331 *e*PKIKP PKPdf 07 41 13.7 -0.3
BRG pmax pmax
comp=Z,14nm,1.4s
ZST Bratislava 128.70 327 *e*PKIKP PKPdf 07 41 14.6 +0.3
CLL Collm 128.75 332 *e*PKPdf PKPdf 07 41 13.1 -1.2
CLL Collm 128.75 332 *i* PKIKP PKPdf 07 41 13.4 -0.9
CLL *i* 07 41 19.3

CLL pmax pmax
comp=Z,20nm,1.3s
CLL MLR MLR
comp=Z,1μm,19.5s,MS5.6
CLL Collm 128.75 332 *i* PKP PKPdf 07 41 13.4 -0.9
CLL *i* 07 41 17.0
CLL *i* 07 41 19.3
CLL LR LR
comp=Z,1μm,19.5s,MS5.6
TREC Trest 128.87 329 *e*PP PP 07 43 22.1 +1.1
TREC AMS AMS 08 42 20.0
comp=Z,900nm,17.6s
PRA Prague 128.90 330 PKPdf PKPdf 07 41 15.0 +0.4
PRU Pruhonice 128.90 330 *e*PKIKP PKPdf 07 41 15.0 +0.4
PRU *e* 07 43 23.6
PRU *e*SS SS 08 00 41.6 +2.3
PRU MLR MLR
comp=Z,1μm,21.4s,MS5.5
PRU Pruhonice 128.90 330 *e*PKPdf PKPdf 07 41 15.0 +0.4
PRU *e*PP PP 07 43 23.6 +2.5
PRU *e*x x 07 44 37.2
PRU *e*SS SS 08 00 41.6 +2.3
PRU *e*SKSSKS 08 03 20.3
PRU AMS AMS 08 41 30.0
comp=Z,1μm,21.4s
NRDL Niedersach Rie 129.17 335 *e*PKPdf PKPdf 07 41 14.8 -0.3
CLZ Clausthal 129.54 334 *e*PKPdf PKPdf 07 41 15.5 -0.3
TANN Tannenbergstha 129.61 332 *e*PKPdf PKPdf 07 41 15.6 -0.4
NKC Novy Kostel 129.74 332 *e*PKIKP PKPdf 07 41 16.9 +0.7
NKC *e* 07 43 28.1
NKC MLR MLR
comp=Z,1μm,18.5s,MS5.6
NKC Novy Kostel 129.74 332 *e*PKPdf PKPdf 07 41 16.9 +0.7
NKC *e*PP PP 07 43 28.1 +1.6
NKC *e*PKS 07 44 45.5
NKC *e*SS SS 08 00 56.9 +7.3
NKC AMS AMS 08 38 40.0
comp=Z,1μm,18.5s
MOX Moxa 129.84 333 *e*PKP PKPdf 07 41 15.9 -0.5
comp=Z,15nm,1.6s
MOX Moxa 129.84 333 *e*PKPdf PKPdf 07 41 14.9 -1.5
MOX Moxa 129.84 333 *e*PKIKP PKPdf 07 41 15.9 -0.5
MOX *e*SS SS 08 00 52.0 +1.2
MOX pmax pmax
comp=Z,15nm,1.6s
MOX MLR MLR
comp=Z,800nm,23.0s,MS5.3
MOX Moxa 129.84 333 *e*PKP PKPdf 07 41 15.9 -0.5
MOX *e*SS SS 08 00 52.0 +1.2
MOX LR LR
comp=Z,800nm,23.0s,MS5.3
KHC Kasperske Hory 129.93 330 *e*PKIKP PKPdf 07 41 16.6 0.0
KHC *e* 07 43 27.3
KHC *e*SS SS 08 00 56.5 +4.4
KHC MLR MLR
comp=Z,1μm,19.5s,MS5.6
KHC Kasperske Hory 129.93 330 *e*PKPdf PKPdf 07 41 15.8 -0.9
KHC Kasperske Hory 129.93 330 *e*PKPdf PKPdf 07 41 16.6 0.0
KHC *e*PP PP 07 43 27.3 -0.6
KHC *e*PKS 07 44 37.8
KHC *e*SS SS 08 00 56.5 +4.4
KHC *e*SKSSKS 08 03 24.9
KHC AMS AMS 08 42 20.0
comp=Z,1μm,19.5s
GEC2 GERESS Array S 130.06 330 *e*PKPdf PKPdf 07 41 16.2 -0.7
IBBN Ibbenburen 130.27 336 *e*PKPdf PKPdf 07 41 17.3 +0.1
WET Wettzell 130.27 330 *e*PKPdf PKPdf 07 41 16.7 -0.6
UBBA Unterbreizbach 130.44 334 *e*PKPdf PKPdf 07 41 16.5 -1.0
GRA1 Grafenberg Arr 130.69 332 *e*PKPdf PKPdf 07 41 17.6 -0.4
GRA1 *e*PP PP 07 43 35.4 +2.7
GRA1 *e*SS SS 08 01 02.7 +1.5
GRA1 LR LR
comp=Z,1μm,20.8s,MS5.5
GRF Grafenberg Arr 130.69 332 *e*PKPdf PKPdf 07 41 17.6 -0.4
GRF *e*PP PP 07 43 35.4 +2.7
GRF *e*SS SS 08 01 02.7 +1.5
GRF *e*L 08 39 27.8
comp=Z,1μm,20.8s
TIR Tirane 130.77 318 PFAKE 07 41 30.0 +12
TIR LR LR
comp=Z,785nm,20.0s,MS5.4
BUG Bochum--Univer 131.13 336 *e*PKPdf PKPdf 07 41 19.0 +0.2
CPUP Villa Florida 131.14 137 PKP PKPdf 07 41 19.2 -0.5
comp=Z,3.7nm,1.0s,baz=301,slow=5.9,SNR=4.5
CPUP Villa Florida 131.14 137 PKP PKPdf 07 41 19.2 -0.5
CPUP LR LR
comp=Z,119nm,19.0s,MS4.6
RJOB Jochberg 131.24 329 *e*PKPdf PKPdf 07 41 17.9 -1.3
ESK Eskdalemuir 131.27 346 PFAKE 07 41 30.0 +11
ESK LR LR
comp=Z,723nm,19.0s,MS5.4
GRTK Grand Turk 131.32 69 PFAKE 07 41 30.0 +10
GRTK LR LR
comp=Z,1μm,20.0s,MS5.6
SDDR Presa de Saban 131.44 73 PFAKE 07 41 30.0 +10
SDDR LR LR
comp=Z,1μm,20.0s,MS5.5
TNS Taunus Mts 131.55 334 *e*PKPdf PKPdf 07 41 20.1 +0.4
FUR Furstenfeldbru 131.71 330 *e*PKPdf PKPdf 07 41 20.5 +0.5
TSUM Tsumeb 131.89 234 PFAKE 07 41 30.0 +8.8
TSUM LR LR
comp=Z,1μm,22.0s,MS5.6
TRI Trieste 132.03 326 PFAKE 07 41 30.0 +9.3
TRI LR LR
comp=Z,648nm,20.0s,MS5.3
STU Stuttgart 132.28 332 *e*PKPdf PKPdf 07 41 21.2 +0.1
WLF Walferdange 132.95 335 *e*PKPdf PKPdf 07 41 21.6 -0.7
WLF Walferdange 132.95 335 PFAKE 07 41 30.0 +7.7
WLF LR LR
comp=Z,1μm,21.0s,MS5.5
BFO Black Forest 132.99 332 *e*PKPdf PKPdf 07 41 18.8 -3.6
ECH Echery 133.61 333 PFAKE 07 41 30.0 +6.4
ECH LR LR
comp=Z,610nm,19.0s,MS5.3
TUE Stuetta 133.83 330 *e*PKPdf PKPdf 07 41 23.1 -1.0
TUE *e*PP PP 07 43 55.6 +2.6
TUE LR LR
comp=Z,1μm,20.0s,MS5.6
TIP Timpagrande 133.91 317 PFAKE 07 41 30.0 +5.5
TIP LR LR
comp=Z,536nm,20.0s,MS5.3
BBSR BB Station 134.27 53 PFAKE 07 41 40.0 +15
BBSR LR LR
comp=Z,1μm,21.0s,MS5.5
AQU L'Aquila 134.28 323 PFAKE 07 41 40.0 +15
AQU LR LR
comp=Z,732nm,21.0s,MS5.4
VLC Villacollemand 134.86 327 PFAKE 07 41 40.0 +14
VLC LR LR
comp=Z,728nm,20.0s,MS5.4
CEL Celeste 134.95 317 PFAKE 07 41 40.0 +14
CEL LR LR
comp=Z,799nm,22.0s,MS5.4
LPL La Plagne 135.79 331 *e*PKP1 PKPdf 07 41 23.6 -4.2
LPG La Plagne 135.80 331 *e*PKP1 PKPdf 07 41 23.6 -4.2
BNI Bardonecchia 136.16 330 *e*PKIKP PKPdf 07 41 28.5 0.0
BNI MLR MLR
comp=Z,848nm,19.0s,MS5.5
SJG San Juan 136.38 73 PFAKE 07 41 40.0 +10
SJG LR LR
comp=Z,701nm,20.0s,MS5.4
PGF Pioggiola 136.69 326 *e*PKP1 PKPdf 07 41 24.9 -4.6
comp=Z,56nm,1.3s
SSB Saint Sauveur 137.00 332 PFAKE 07 41 40.0 +10
SSB LR LR
comp=Z,606nm,20.0s,MS5.3
WDD Wield Dalam 137.10 314 PFAKE 07 41 40.0 +9.5
WDD LR LR
comp=Z,503nm,22.0s,MS5.2
TCF Toulx Ste Croi 137.24 335 *e*PKP1 PKPdf 07 41 26.0 -4.4
comp=Z,41nm,1.3s
FRF La Foret Royal 137.24 329 *e*PKP1 PKPdf 07 41 25.9 -4.6
comp=Z,38nm,1.3s
VIVF Saint-Julien-l 137.26 332 *e*PKP1 PKPdf 07 41 26.1 -4.4
comp=Z,36nm,1.4s
LMR La Mourre 137.47 329 *e*PKP1 PKPdf 07 41 26.3 -4.7
comp=Z,43nm,1.3s
SMRF Simiane la Rot 137.48 330 *e*PKP1 PKPdf 07 41 26.9 -4.1
comp=Z,78nm,1.5s
LASF Ste Croix 138.23 332 *e*PKP1 PKPdf 07 41 28.0 -4.3
VSL Villasalto 138.44 322 PFAKE 07 41 40.0 +7.1
VSL LR LR
comp=Z,362nm,19.0s,MS5.1
SPB Sao Paulo 139.40 143 PFAKE 07 41 40.0 +4.9
SPB LR LR
comp=Z,752nm,19.0s,MS5.5
MTLF Montolieu 139.56 332 *e*PKP1 PKPdf 07 41 30.6 -4.2
comp=Z,32nm,1.4s
ANWB Willy Bob 140.56 73 PFAKE 07 41 50.0 +13
ANWB LR LR
comp=Z,558nm,19.0s,MS5.3
GRGR Grenville 141.09 82 PFAKE 07 41 50.0 +12
GRGR LR LR
comp=Z,918nm,21.0s,MS5.5
FDF Fort de France 141.47 78 PFAKE 07 41 50.0 +11
FDF LR LR
comp=Z,735nm,19.0s,MS5.5
PCAB Cabril 144.96 341 *e*PKP PKPdf 07 41 44.0 -0.5
MVO Moncorvo 145.12 340 *e*PKP PKPdf 07 41 43.7 -1.1
MVO Moncorvo 145.12 340 *e*SS SS 08 03 57.4 +5.7
MVO Moncorvo 145.12 340 *e*LR LR 08 39 02.8
comp=Z,834nm,20.0s
ESDC Sonseca Array 145.25 335 PKPbc PKPbc 07 41 43.9 -0.8
comp=Z,6.4nm,1.1s,baz=20,slow=3.4,SNR=29
ESDC PP PP 07 44 58.0 -5.1
comp=Z,0.7nm,0.7s,baz=23,slow=6.3,SNR=4.3
ESLA Sonseca Array 145.25 335 *e*PKPbc PKPbc 07 41 44.5 -0.2
ESLA LR LR
comp=Z,4μm,19.0s,MS6.2
PVRL Vila Real 145.25 341 *e*PKP PKPdf 07 41 44.8 -0.2
PAB San Pablo 145.51 335 *e*PKP2 PKPab 07 41 45.5 -0.2
PAB MLR MLR
comp=Z,750nm,19.0s,MS5.5
PTO Porto 145.66 342 *e*PKP PKPdf 07 41 46.5 +0.8
PVIS Viseu 145.81 340 *e*PKP PKPdf 07 41 46.2 +0.2
MTE Manteigas 145.98 340 *e*PKPbc PKPbc 07 41 47.3 +0.3
MTE LR LR
comp=Z,1μm,19.0s,MS5.6
MTE Manteigas 145.98 340 *e*PKP PKPdf 07 41 47.0 +0.7
MTE Manteigas 145.98 340 *e*SS SS 08 04 07.4 +5.9
MTE Manteigas 145.98 340 *e*LR LR 08 38 13.9
comp=Z,870nm,18.0s
PCBR Castelo Branco 146.46 339 *e*PKP PKPdf 07 41 47.9 +0.8
PMRV Marv??o 146.79 339 *e*PKP PKPdf 07 41 49.2 +1.5
PMRV Marv??o 146.79 339 *e*SS SS 08 04 16.7 +5.9
PMRV Marv??o 146.79 339 *e*LR LR 08 37 35.2
comp=Z,565nm,20.0s
PTOM Tomar 146.97 340 *e*PKP PKPdf 07 41 49.3 +1.3
PESTR Estremoz 147.36 339 *e*PKP PKPdf 07 41 50.3 +1.7
PESTR Estremoz 147.36 339 *e*SS SS 08 04 19.1 +1.9
PESTR Estremoz 147.36 339 *e*LR LR 08 40 01.1
comp=Z,804nm,20.0s
PBAR Barrancos 147.76 337 *e*PKP PKPdf 07 41 49.9 +0.6
PBAR Barrancos 147.76 337 *e*SS SS 08 04 19.0 -2.9
PBAR Barrancos 147.76 337 *e*LR LR 08 38 07.9
comp=Z,751nm,22.0s
EVO Evora 147.81 339 *e*PKP PKPdf 07 41 50.2 +0.8
PMAFR Mafra 147.86 341 *e*PKP PKPbc 07 41 51.7 -0.7
PMAFR Mafra 147.86 341 *e*LR LR 08 40 29.5
comp=Z,878nm,20.0s
PBEJ Beja 148.20 338 *e*PKP PKPbc 07 41 52.2 -1.1
PCVE Castro Verde 148.62 338 *e*PKP PKPdf 07 41 51.1 +0.4
PCVE Castro Verde 148.62 338 *e*SS SS 08 04 37.1 +5.7
PCVE Castro Verde 148.62 338 *e*LR LR 08 38 52.5
comp=Z,1μm,18.0s
PVAQ Vaqueiros 148.70 337 *e*PKP PKPbc 07 41 55.0 +0.4
PVAQ Vaqueiros 148.70 337 *e*SS SS 08 04 28.8 -3.6
PVAQ Vaqueiros 148.70 337 *e*LR LR 08 40 18.5
comp=Z,733nm,20.0s
SFS San Fernando 148.90 335 PFAKE 07 42 00.0 +8.8
SFS LR LR
comp=Z,2μm,20.0s,MS5.9
PBDV Barranco-do-Ve 148.92 338 *e*LR LR 08 39 09.4
comp=Z,960nm,20.0s
PTEO Sao Teotonio 148.94 339 *e*PKP PKPbc 07 41 53.9 -1.3
MORF Marmelete 149.13 339 *e*PKP PKPdf 07 41 52.7 +1.1
MORF Marmelete 149.13 339 *e*SS SS 08 04 41.2 +4.1
MORF Marmelete 149.13 339 *e*LR LR 08 38 46.5
comp=Z,774nm,18.0s
PFVI Vila Bisbo 149.34 339 *e*LR LR 08 42 17.2
comp=Z,898nm,20.0s
TAM Tamanrasset 150.02 301 *e*PKIKP PKPdf 07 41 53.7 +0.3
TAM *e* 07 41 59.5
TAM *e* 07 42 05.7
TAM MLR MLR
comp=Z,782nm,20.0s,MS5.5
SHEL Horse Pasture 150.45 214 PFAKE 07 42 00.0 +5.7
SHEL LR LR
comp=Z,1μm,19.0s,MS5.7
CMLA Cha da Macela 151.06 5 PFAKE 07 42 00.0 +5.4
CMLA LR LR
comp=Z,701nm,19.0s,MS5.5
MDT Midelt 151.13 328 PKP PKPdf 07 41 55.8 +1.0
comp=Z,18nm,1.2s,baz=34,slow=5.4,SNR=4.9
MDT PKPbc PKPbc 07 42 00.8 +0.1
comp=Z,16nm,1.0s,baz=59,slow=2.5,SNR=18
TOA0 Torodi Ar. Sit 156.17 282 *e*PKPdf PKPdf 07 42 01.3 -1.2
TOA0 *e*PKPab PKPab 07 42 33.2 +3.0
TORD Torodi Ar. Bea 156.17 282 PKP PKPdf 07 42 01.2 -1.3
comp=Z,1.8nm,1.0s,baz=345,slow=1.6,SNR=7.5
TORD PKPab PKPab 07 42 30.4 +0.2
comp=Z,3.2nm,0.7s,baz=71,slow=2.4,SNR=6.8
RCBR Riachuelo 160.02 136 PFAKE 07 42 20.0 +13
RCBR LR LR
comp=Z,1μm,19.0s
ASCN Ascension 161.59 205 PFAKE 07 42 20.0 +11
ASCN LR LR
comp=Z,15μm,21.0s
DBIC Dimbokro 162.68 264 PKPab PKPab 07 42 59.3 +0.7
comp=Z,10nm,1.0s,baz=93,slow=5.2,SNR=4.9
DBIC Dimbokro 162.68 264 PKP2 PKPab 07 42 59.3 +0.7
DBIC pmax pmax
comp=Z,10.0nm,1.0s
DBIC Dimbokro 162.68 264 PFAKE 07 42 20.0 +10
DBIC LR LR
comp=Z,1μm,20.0s

SZGRF ***22*** *07:22:41.2, 35°.55N×21°.46E, h10km, mb4.0, Central Mediterranean Sea*
BJI ***22*** *07:22:42.5, 36°.80N×21°.48E, h7km, mB5.2/13, mb4.8/24, Ms5.2/11, Ms7 4.9/9*
ISCJB ***22*** *07:22:44.2±0.1, 36°.10N±0°.01×21°.88E±0°.01, h10km, mb4.7/88, MS4.1/20, Error ellipse: s-maj=1.9km s-min=1.5km az=19.1*
HLW ***22*** *07:22:44.0, 36°.46N×22°.06E, h23km±20km, Md4.4, Ml4.5*
MOS ***22*** *07:22:45.5±1.3, 36°.09N×21°.92E, h24km, mb4.9/40, Error ellipse: s-maj=4.0km s-min=2.1km az=104.8*
ATH ***22*** *07:22:46.4, 36°.19N×21°.93E, h16km, MD4.4/16, ML4.5*
THE ***22*** *07:22:46.7, 36°.17N×21°.86E, h0km±1km, ML5.2/8, Error ellipse: s-maj=2.3km s-min=1.0km az=231.0*
PDG ***22*** *07:22:46.3±0.2, 36°.10N×20°.82E, h11km±11km, ML4.7/10, Error ellipse: s-maj=217.7km s-min=50.6km az=90.0*
NEIC ***22*** *07:22:46.4, 36°.19N×21°.93E, h16km, mb4.5/66, ML4.5(ATH), After ATH.*
IDC ***22*** *07:22:47.6±0.6, 36°.20N×22°.01E, h22km±3km, mb4.2/22, mb1 4.2/33, mb1mx4.2/43, mbtmp4.1/33, ML3.8/10, MS3.9/7, Ms1 4.0/7, ms1mx3.5/34, Error ellipse: s-maj=12.2km s-min=9.4km az=176.0*
PRU ***22*** *07:22:47.8, 36°.38N×21°.20E, h0km, M4.5*
CSEM ***22*** *07:22:48.1±0.1, 36°.16N×21°.87E, h20km, mb4.6/29, Ms4.0, Error ellipse: s-maj=3.1km s-min=2.5km az=9.0*

ISC 22 07:22:46.0±0.1, 36°.11N±0°.01×21°.93E±0°.01, h10km, (h26km±.4km:pP-P), n923, σ1.934/1075, mb4.7/89, MS4.1/20, 35C-33D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.80**	**349**	P	**Pg**	**07 23 00.0**	**-1.5**
PYL				S	**Sg**	**07 23 11.8**	**-0.2**
PYL	**PYLOS**	**0.80**	**349**	*e*PN	**Pg**	**07 23 00.0**	**-1.5**
PYL				*e*SN	**Sg**	**07 23 10.9**	**-1.1**
PYL	**PYLOS**	**0.80**	**349**	P	**Pg**	**07 23 00.0**	**-1.5**
PYL				S	**Sg**	**07 23 11.8**	**-0.2**
KYTH	**Kithira**	**0.91**	**79**	*e*Pn	**Pg**	**07 23 04.3**	**+0.7**
KYTH	**Kithira**	**0.91**	**79**	*e*PN	**Pg**	**07 23 04.2**	**+0.6**
VLI	**Veliai**	**1.02**	**53**	P	**Pg**	**07 23 05.4**	**-0.2**
VLI	**Veliai**	**1.02**	**53**	P	**Pg**	**07 23 05.4**	**-0.2**
ITM	**Ithomi**	**1.07**	**360**	P	**Pg**	**07 23 05.1**	**-1.5**
ITM				S	**Sg**	**07 23 20.2**	**-0.4**
ITM	**Ithomi**	**1.07**	**360**	P	**Pg**	**07 23 05.1**	**-1.5**
ITM				S	**Sg**	**07 23 20.2**	**-0.4**
ITM	**Ithomi**	**1.07**	**360**	*e*PN	**Pg**	**07 23 04.8**	**-1.8**
ITM				*e*SN	**Sg**	**07 23 18.7**	**-1.9**
ITM	**Ithomi**	**1.07**	**360**	P	**Pg**	**07 23 05.1**	**-1.5**
ITM				S	**Sg**	**07 23 20.2**	**-0.4**
VLX	**Vlachokerasia**	**1.31**	**16**	P	**Pn**	**07 23 09.8**	**-0.6**
VLX				S	**Sb**	**07 23 29.1**	**+1.4**
VLX	**Vlachokerasia**	**1.31**	**16**	*e*PN	**Pg**	**07 23 09.6**	**-1.6**
VLX				*e*SN	**Sn**	**07 23 26.0**	**-2.0**
VLX	**Vlachokerasia**	**1.31**	**16**	P	**Pn**	**07 23 09.8**	**-0.6**
VLX				*e*Sn	**Sn**	**07 23 26.0**	**-2.0**
VLX				S	**Sb**	**07 23 29.1**	**+1.4**
KARN	**Karanos**	**1.76**	**113**	P	**Pb**	**07 23 19.1**	**+0.6**
KARN				S	**Sb**	**07 23 44.0**	**+3.4**
KARN	**Karanos**	**1.76**	**113**	*e*PN	**Pb**	**07 23 19.1**	**+0.6**
KARN				*e*SN	**Sb**	**07 23 42.3**	**+1.7**
KARN	**Karanos**	**1.76**	**113**	P	**Pb**	**07 23 19.1**	**+0.6**
KARN				*e*Sn	**Sb**	**07 23 42.3**	**+1.7**
KARN				S	**Sb**	**07 23 44.0**	**+3.4**
GUR	**Goura**	**1.86**	**10**	P	**Pb**	**07 23 18.9**	**-1.1**
GUR	**Goura**	**1.86**	**10**	*e*PN	**Pb**	**07 23 19.1**	**-0.9**
GUR				*e*SN	**Sb**	**07 23 42.2**	**-1.1**
GUR	**Goura**	**1.86**	**10**	P	**Pb**	**07 23 18.9**	**-1.1**
GUR				*e*Sn	**Sb**	**07 23 42.2**	**-1.1**
VAM	**Vamos**	**1.97**	**110**	*e*Pn	**Pb**	**07 23 21.8**	**-0.3**
VAM				*e*Sn	**Sb**	**07 23 48.5**	**+1.8**
VAM	**Vamos**	**1.97**	**110**	*e*PN	**Pb**	**07 23 21.8**	**-0.3**
VAM				*e*SN	**Sb**	**07 23 48.5**	**+1.8**
VAM	**Vamos**	**1.97**	**110**	*e*Pn	**Pb**	**07 23 21.8**	**-0.3**
VAM				*e*Sn	**Sb**	**07 23 48.5**	**+1.8**
RLS	**Riolos of Patr**	**1.98**	**349**	*e*Pn	**Pb**	**07 23 21.0**	**-1.2**
RLS				*e*Sn	**Sb**	**07 23 45.1**	**-1.9**
RLS	**Riolos of Patr**	**1.98**	**349**	*e*PN	**Pb**	**07 23 21.0**	**-1.2**
RLS				*e*SN	**Sb**	**07 23 45.1**	**-1.9**
RLS	**Riolos of Patr**	**1.98**	**349**	*e*Pn	**Pb**	**07 23 21.0**	**-1.2**
RLS				*e*Sn	**Sb**	**07 23 45.1**	**-1.9**
NAIG	**Nisos Aigina**	**2.07**	**37**	*e*Pn	**Pb**	**07 23 21.9**	**-1.8**
NAIG	**Nisos Aigina**	**2.07**	**37**	*e*PN	**Pb**	**07 23 21.9**	**-1.8**
NAIG	**Nisos Aigina**	**2.07**	**37**	*e*Pn	**Pb**	**07 23 21.9**	**-1.8**
LTK	**Loutraki**	**2.08**	**23**	P	**Pb**	**07 23 22.3**	**-1.7**
LTK	**Loutraki**	**2.08**	**23**	*e*PN	**Pb**	**07 23 22.1**	**-1.9**
LTK				*e*SN	**Sb**	**07 23 48.2**	**-1.7**
LTK	**Loutraki**	**2.08**	**23**	*e*Pn	**Pb**	**07 23 22.1**	**-1.9**
LTK				*e*Sn	**Sb**	**07 23 48.2**	**-1.7**
LAKA	**Lakka**	**2.13**	**1**	P	**Pb**	**07 23 23.1**	**-1.6**
LAKA	**Lakka**	**2.13**	**1**	P	**Pb**	**07 23 23.1**	**-1.6**
GVD	**Gavdhos**	**2.17**	**125**	*e*Pn	**Pn**	**07 23 25.5**	**+3.3**
GVD	**Gavdhos**	**2.17**	**125**	*e*PN	**Pn**	**07 23 25.5**	**+3.3**
GVD	**Gavdhos**	**2.17**	**125**	*e*Pn	**Pn**	**07 23 25.5**	**+3.3**
KFL	**Anninata**	**2.20**	**336**	P	**Pb**	**07 23 23.3**	**-2.6**
KALE	**Kalithea**	**2.29**	**4**	P	**Pn**	**07 23 23.5**	**-0.3**
KALE				S	**Sn**	**07 23 54.1**	**+2.1**
KALE	**Kalithea**	**2.29**	**4**	P	**Pn**	**07 23 23.5**	**-0.3**
KALE				S	**Sn**	**07 23 54.1**	**+2.1**
VLY	**Voula,Athens**	**2.29**	**40**	P	**Pn**	**07 23 25.0**	**+1.1**
VLY	**Voula,Athens**	**2.29**	**40**	P	**Pn**	**07 23 25.0**	**+1.1**
VLS	**Valsamata**	**2.33**	**333**	P	**Pn**	**07 23 24.6**	**+0.2**
VLS				S	**Sn**	**07 23 54.3**	**+1.3**
VLS	**Valsamata**	**2.33**	**333**	P	**Pn**	**07 23 24.6**	**+0.2**
VLS				S	**Sn**	**07 23 54.3**	**+1.3**
VLS	**Valsamata**	**2.33**	**333**	*e*PB	**Pn**	**07 23 24.9**	**+0.5**
VLS				*e*SN	**Sn**	**07 23 54.5**	**+1.5**
VLS	**Valsamata**	**2.33**	**333**	P	**Pn**	**07 23 24.6**	**+0.2**
VLS				S	**Sn**	**07 23 54.3**	**+1.3**
ATH	**Athens Observa**	**2.35**	**37**	P	**Pn**	**07 23 26.1**	**+1.4**
ATH				S	**Sn**	**07 23 56.4**	**+2.9**
ATH	**Athens Observa**	**2.35**	**37**	*e*PN	**Pn**	**07 23 26.5**	**+1.8**
ATH				*e*SN	**Sn**	**07 23 54.3**	**+0.8**
ATH	**Athens Observa**	**2.35**	**37**	*e*Pn	**Pn**	**07 23 26.5**	**+1.8**
ATH				*e*Sn	**Sn**	**07 23 54.3**	**+0.8**
DSF	**Desfina**	**2.35**	**12**	P	**Pn**	**07 23 25.7**	**+1.0**
DSF				S	**Sn**	**07 23 55.5**	**+1.9**
DSF	**Desfina**	**2.35**	**12**	P	**Pn**	**07 23 25.7**	**+1.0**
DSF				S	**Sn**	**07 23 55.5**	**+1.9**
ATHU	**Athens Univers**	**2.38**	**38**	P	**Pn**	**07 23 26.1**	**+1.0**
ATHU				S	**Sn**	**07 23 56.4**	**+2.1**
ATHU	**Athens Univers**	**2.38**	**38**	P	**Pn**	**07 23 26.1**	**+1.0**
ATHU				S	**Sn**	**07 23 56.4**	**+2.1**
PTL	**Penteli**	**2.48**	**38**	P	**Pn**	**07 23 27.6**	**+1.1**
PTL	**Penteli**	**2.48**	**38**	P	**Pn**	**07 23 27.6**	**+1.1**
IDI	**Anoyia**	**2.54**	**108**	Pn	**Pn**	**07 23 28.4**	**+1.0**
	9.8nm,0.3s,baz=290,slow=16,SNR=38						
IDI				Pg	**Pg**	**07 23 35.1**	**+0.3**
	18nm,0.3s,baz=285,slow=16,SNR=30						
IDI				LR	LR	07 24 21.2	
	comp=Z,246nm,18.4s,baz=262,slow=37						
IDI	**Anoyia**	**2.54**	**108**	*e*Pn	**Pn**	**07 23 29.3**	**+1.9**
IDI	**Anoyia**	**2.54**	**108**	*e*PN	**Pn**	**07 23 29.3**	**+1.9**
IDI	**Anoyia**	**2.54**	**108**	*e*Pn	**Pn**	**07 23 29.3**	**+1.9**
SIVA	**Sivas**	**2.59**	**114**	*e*Pn	**Pn**	**07 23 30.5**	**+2.5**
SIVA	**Sivas**	**2.59**	**114**	*e*PN	**Pn**	**07 23 30.5**	**+2.5**
SIVA	**Sivas**	**2.59**	**114**	*e*Pn	**Pn**	**07 23 30.5**	**+2.5**
LKR	**Lokris**	**2.68**	**18**	P	**Pn**	**07 23 30.0**	**+0.8**
LKR				S	**Sn**	**07 24 03.0**	**+1.3**
LKR	**Lokris**	**2.68**	**18**	P	**Pn**	**07 23 30.0**	**+0.8**
LKR				S	**Sn**	**07 24 03.0**	**+1.3**
LKR	**Lokris**	**2.68**	**18**	*e*PN	**Pn**	**07 23 29.8**	**+0.6**
LKR				*e*SN	**Sn**	**07 24 01.7**	**0.0**
LKR	**Lokris**	**2.68**	**18**	P	**Pn**	**07 23 30.0**	**+0.8**
LKR				*e*Sn	**Sn**	**07 24 01.7**	**0.0**
LKR				S	**Sn**	**07 24 03.0**	**+1.3**
ATAL	**Atalanti**	**2.72**	**18**	P	**Pn**	**07 23 30.5**	**+0.7**
ATAL				S	**Sn**	**07 24 05.1**	**+2.3**
ATAL	**Atalanti**	**2.72**	**18**	P	**Pn**	**07 23 30.5**	**+0.7**
ATAL				S	**Sn**	**07 24 05.1**	**+2.3**
EVR	**Evrytania**	**2.81**	**358**	*e*Pb	**Pb**	**07 23 36.2**	**-0.1**
EVR	**Evrytania**	**2.81**	**358**	*e*PB	**Pb**	**07 23 36.2**	**-0.1**
AGG	**Agios Georgios**	**2.93**	**6**	P	**Pn**	**07 23 33.4**	**+0.8**
AGG	**Agios Georgios**	**2.93**	**6**	P	**Pn**	**07 23 33.4**	**+0.8**
AGG	**Agios Georgios**	**2.93**	**6**	P	**Pn**	**07 23 33.4**	**+0.8**
LAST	**Lasithi**	**3.04**	**107**	P	**Pn**	**07 23 35.9**	**+1.7**
LAST	**Lasithi**	**3.04**	**107**	P	**Pn**	**07 23 35.9**	**+1.7**
LAST	**Lasithi**	**3.04**	**107**	*e*PN	**Pn**	**07 23 36.4**	**+2.2**
LAST	**Lasithi**	**3.04**	**107**	P	**Pn**	**07 23 35.9**	**+1.7**
LAST	**Lasithi**	**3.04**	**107**	*e*Pn	**Pn**	**07 23 36.4**	**+2.2**
APE	**Apeiranthos**	**3.05**	**71**	*e*Pn	**Pn**	**07 23 36.1**	**+1.7**
APE				*e*Sn	**Sn**	**07 24 12.3**	**+1.4**
APE	**Apeiranthos**	**3.05**	**71**	*e*PN	**Pn**	**07 23 36.1**	**+1.7**
APE				*e*SN	**Sn**	**07 24 12.3**	**+1.4**
APE	**Apeiranthos**	**3.05**	**71**	*e*Pn	**Pn**	**07 23 36.1**	**+1.7**
APE				*e*Sn	**Sn**	**07 24 12.3**	**+1.4**
NPS	**Neapolis**	**3.11**	**105**	*e*Pn	**Pn**	**07 23 37.5**	**+2.3**
NPS				*e*Sn	**Sn**	**07 24 15.0**	**+2.5**
NPS	**Neapolis**	**3.11**	**105**	*e*PN	**Pn**	**07 23 37.5**	**+2.3**
NPS				*e*SN	**Sn**	**07 24 15.0**	**+2.5**
NPS	**Neapolis**	**3.11**	**105**	*e*Pn	**Pn**	**07 23 37.5**	**+2.3**
NPS				*e*Sn	**Sn**	**07 24 15.0**	**+2.5**
XOR	**Xorichti**	**3.40**	**17**	P	**Pn**	**07 23 39.7**	**+0.5**
XOR	**Xorichti**	**3.40**	**17**	P	**Pn**	**07 23 39.7**	**+0.5**
XOR	**Xorichti**	**3.40**	**17**	P	**Pn**	**07 23 39.7**	**+0.5**
AOS	**Alonnisos**	**3.43**	**26**	P	**Pn**	**07 23 40.0**	**+0.5**
AOS	**Alonnisos**	**3.43**	**26**	P	**Pn**	**07 23 40.0**	**+0.5**
AOS	**Alonnisos**	**3.43**	**26**	P	**Pn**	**07 23 40.0**	**+0.5**
THL	**Klokotos Trika**	**3.45**	**1**	P	**Pn**	**07 23 40.5**	**+0.7**
THL	**Klokotos Trika**	**3.45**	**1**	*e*PN	**Pn**	**07 23 41.1**	**+1.3**
THL				*e*SN	**Sn**	**07 24 21.0**	**+0.2**
THL	**Klokotos Trika**	**3.45**	**1**	P	**Pn**	**07 23 40.5**	**+0.7**
THL	**Klokotos Trika**	**3.45**	**1**	*e*Pn	**Pn**	**07 23 41.1**	**+1.3**
THL				*e*Sn	**Sn**	**07 24 21.0**	**+0.2**
ZKR	**Zakros**	**3.63**	**105**	*e*Pn	**Pn**	**07 23 44.7**	**+2.4**
ZKR				*e*Sn	**Sn**	**07 24 28.0**	**+2.8**
ZKR	**Zakros**	**3.63**	**105**	*e*PN	**Pn**	**07 23 44.7**	**+2.4**
ZKR				*e*SN	**Sn**	**07 24 28.0**	**+2.8**
ZKR	**Zakros**	**3.63**	**105**	*e*Pn	**Pn**	**07 23 44.7**	**+2.4**
ZKR				*e*Sn	**Sn**	**07 24 28.0**	**+2.8**
**JA

KEK Kerkira 3.98 336 P Pn 07 23 47.0 0.0
KEK Kerkira 3.98 336 *e*Pn Pn 07 23 47.5 +0.5
KEK S Sn 07 24 33.6 -0.1
PAIG Paliouri 4.06 19 P Pn 07 23 48.5 +0.4
SRN Sarande 4.06 339 *e*PN Pg 07 24 12.9 +9.0
SRN *i* SN Sn 07 24 35.3 -0.5
KZN Kozani 4.20 358 P Pn 07 23 52.0 +2.0
KZN Kozani 4.20 358 *e*PN Pn 07 23 51.8 +1.8
KZN *e*SN Sn 07 24 39.7 +0.6
KZN Kozani 4.20 358 *e*Pn Pn 07 23 51.8 +1.8
KZN *e*Sn Sn 07 24 39.7 +0.6
SMG Samos 4.25 66 *e*Pn Pn 07 23 52.3 +1.6
SMG *e*Sn Sn 07 24 41.5 +1.1
SMG Samos 4.25 66 *e*PN Pn 07 23 52.3 +1.6
SMG *e*SN Sn 07 24 41.5 +1.1
SMG Samos 4.25 66 *e*Pn Pn 07 23 52.3 +1.6
SMG *e*Sn Sn 07 24 41.5 +1.1
KARP Karpathos 4.29 96 *e*Pn Pn 07 23 53.5 +2.2
KARP *e*Sn Sn 07 24 43.1 +1.7
KARP Karpathos 4.29 96 *e*PN Pn 07 23 53.5 +2.2
KARP *e*SN Sn 07 24 43.1 +1.7
KARP Karpathos 4.29 96 *e*Pn Pn 07 23 53.5 +2.2
KARP *e*Sn Sn 07 24 43.1 +1.7
LTBQ Tobruq 4.37 157 *e*P Pn 07 23 55.0 +2.6
SNR=76
LTBQ *e*S Sn 07 24 44.1 +0.8
SNR=76
PLG Polygyros 4.42 15 *e*Pn Pn 07 23 55.2 +2.0
PLG *e*Sn Sn 07 24 44.5 -0.2
PLG Polygyros 4.42 15 *e*PN Pn 07 23 55.2 +2.0
PLG *e*SN Sn 07 24 44.5 -0.2
PLG Polygyros 4.42 15 *e*Pn Pn 07 23 55.2 +2.0
PLG *e*Sn Sn 07 24 44.5 -0.2
LIA Limnos Island 4.58 33 *e*Pn Pn 07 23 57.8 +2.5
LIA Limnos Island 4.58 33 *e*PN Pn 07 23 57.8 +2.5
LIA Limnos Island 4.58 33 *e*Pn Pn 07 23 57.8 +2.5
HORT Hortiatis 4.58 11 P Pn 07 23 55.8 +0.5
HORT Hortiatis 4.58 11 P Pn 07 23 55.8 +0.5
HORT Hortiatis 4.58 11 P Pn 07 23 55.8 +0.5
THE Thessaloniki 4.59 10 P Pn 07 23 56.2 +0.7
KBN Korca 4.60 349 *e*PN Pg 07 24 13.9 -0.2
KBN *i* PN Sn 07 24 52.2 +3.2
PRK Paraskevi 4.66 46 *e*P Pn 07 23 58.1 +1.7
PRK Paraskevi 4.66 46 *e*PN Pn 07 23 58.1 +1.7
PRK Paraskevi 4.66 46 *e*Pn Pn 07 23 58.1 +1.7
FNA Florina 4.69 355 P Pn 07 23 58.0 +1.2
FNA Florina 4.69 355 P Pn 07 23 58.0 +1.2
FNA Florina 4.69 355 P Pn 07 23 58.0 +1.2
SOH Sokhos 4.84 13 P Pn 07 24 01.5 +2.6
SOH Sokhos 4.84 13 P Pn 07 24 01.5 +2.6
BIA Bitola 4.93 355 P Pn 07 23 58.8 -1.3
BIA Bitola 4.93 355 *e*Pn Pn 07 23 57.3 -2.9
BIA Bitola 4.93 355 P Pn 07 23 58.8 -1.3
ARG Arkhangelos 5.01 87 *e*P Pn 07 24 03.9 +2.6
ARG Arkhangelos 5.01 87 *e*PN Pn 07 24 03.9 +2.6
ARG Arkhangelos 5.01 87 *e*Pn Pn 07 24 03.9 +2.6
OHR Ohrid 5.08 350 ⇑*i*Pn Pn 07 24 03.2 +1.1
OHR Ohrid 5.08 350 P Pn 07 24 02.7 +0.6
SOI Samo 5.09 294 P Pn 07 24 02.2 -0.1
TIP Timpagrande 5.12 308 *e*Pn Pn 07 24 02.3 -0.5
TIP *e*Sn Sn 07 24 56.2 -5.7
TIP Timpagrande 5.12 308 *e*Pn Pn 07 24 02.3 -0.5
TIP *e*Sn Sn 07 24 56.2 -5.8
SRS Serrai 5.17 14 P Pn 07 24 04.8 +1.4
VAY Valandovo 5.23 5 ⇑*i*Pn Pn 07 24 05.1 +0.8
VAY Valandovo 5.23 5 P Pn 07 24 04.6 +0.3
CEL Celeste 5.28 296 *e*Pn Pn 07 24 04.6 -0.3
122nm,0.8s
CEL *e*Sn Sn 07 25 02.6 -3.1
CEL Celeste 5.28 296 *e*Pn Pn 07 24 04.6 -0.3
122nm,0.8s
CEL *e*Sn Sn 07 25 02.6 -3.1
KRUS Krusevo 5.28 354 ⇑*i*Pn Pn 07 24 05.0 +0.1
MTTG Motta San Giov 5.33 293 P Pn 07 24 06.2 +0.5
MTTG Motta San Giov 5.33 293 P Pn 07 24 06.2 +0.5
SLUM 5.35 148 P Pn 07 24 04.4 -1.6
baz=151
SLUM S Sn 07 25 05.5 -2.2
baz=151
SLUM 5.35 148 P Pn 07 24 04.4 -1.6
SLUM S Sn 07 25 05.5 -2.2
LJBD Adjabya 5.38 196 *e*P Pn 07 24 09.4 +3.1
SNR=70
SCLL Scilla 5.41 295 P Pn 07 24 08.8 +2.1
SCLL Scilla 5.41 295 P Pn 07 24 08.8 +2.1
NVR Nevrokopi 5.45 16 *e*Pn Pn 07 24 09.0 +1.7
NVR Nevrokopi 5.45 16 *e*PN Pn 07 24 09.0 +1.7
NVR Nevrokopi 5.45 16 *e*Pn Pn 07 24 09.0 +1.7
TIR Tirane 5.48 343 *e*P Pn 07 24 08.9 +1.3
TIR Tirane 5.48 343 *e*PN Pn 07 24 08.9 +1.3
TIR Tirane 5.48 343 *e*Pn Pn 07 24 08.9 +1.3
HAVL Avola 5.54 281 P Pn 07 24 09.0 +0.4
HAVL Avola 5.54 281 P Pn 07 24 09.0 +0.4
MMB Musomiste 5.65 14 *e*P Pn 07 24 11.2 +1.1
MMB Musomiste 5.65 14 *e*P Pn 07 24 11.2 +1.1
ALN Alexandroupoli 5.77 33 P Pn 07 24 14.4 +2.7
RDO Rodhopi 5.77 28 *e*Pn Pn 07 24 13.7 +2.0
RDO Rodhopi 5.77 28 *e*PN Pn 07 24 13.7 +2.0
RDO Rodhopi 5.77 28 *e*Pn Pn 07 24 13.7 +2.0
KKB Krupnik 5.82 9 *e*P Pn 07 24 13.6 +1.2
KKB Krupnik 5.82 9 *e*P Pn 07 24 13.6 +1.2
ORI Oriolo Calabro 5.86 314 P Pn 07 24 13.5 +0.7
SKO Skopje 5.87 356 *e*Pn Pn 07 24 13.7 +0.6
SKO Skopje 5.87 356 P Pn 07 24 15.0 +2.0
HVZN Vizzini 5.90 283 P Pn 07 24 15.0 +1.5
HVZN Vizzini 5.90 283 P Pn 07 24 15.0 +1.5
RZN Rozhen 5.98 20 *e*P Pn 07 24 16.9 +2.3
RZN Rozhen 5.98 20 *e*P Pn 07 24 16.9 +2.3
WDD Wield Dalam 6.01 270 *e*Pn Pn 07 24 16.5 +1.5
84nm,0.5s
WDD *e*Sn Sn 07 25 23.1 -0.8
WDD Wield Dalam 6.01 270 *e*Pn Pn 07 24 16.5 +1.5
83nm,0.5s
WDD *e*Sn Sn 07 25 23.0 -0.8
LTRZ Laterza 6.02 320 P Pn 07 24 15.9 +0.8
LTRZ Laterza 6.02 320 P Pn 07 24 15.9 +0.8
PUK Puka 6.13 346 *e*PN Pn 07 24 16.7 0.0
PUK *i* PN Pg 07 24 43.6 +0.1
PUK Puka 6.13 346 *e*Pn Pn 07 24 16.7 0.0
SLNA Salina 6.16 296 P Pn 07 24 18.0 +0.9
SLNA Salina 6.16 296 P Pn 07 24 18.0 +0.9
KDZ Kurdzhali 6.17 25 *e*P Pn 07 24 18.3 +1.2
KDZ Kurdzhali 6.17 25 *e*P Pn 07 24 18.3 +1.2
VAE Valguarnera 6.19 285 Pn Pn 07 24 20.8 +3.4
1.3nm,0.3s,baz=254,slow=3.1,SNR=12
VAE Sn Sn 07 25 25.9 -2.2
9.1nm,0.3s,baz=80,slow=18,SNR=3.4
VAE Valguarnera 6.19 285 Pn Pn 07 24 20.8 +3.4
VAE Sn Sn 07 25 25.9 -2.2
VAE Valguarnera 6.19 285 Sn Sn 07 25 25.9 -2.3
KSL Kastellorizon 6.20 87 *e*Pn Pn 07 24 20.0 +2.5
KSL Kastellorizon 6.20 87 *e*PN Pn 07 24 20.0 +2.5
KSL Kastellorizon 6.20 87 *e*Pn Pn 07 24 20.0 +2.5
ULC Ulcinj 6.21 341 ⇓*i*Pn Pn 07 24 16.9 -0.8
ULC *e*Sn Sn 07 25 24.4 -4.3
ULC Ulcinj 6.21 341 ⇓*i*Pn Pn 07 24 16.9 -0.8
SG1 Sgolgore (BA) 6.27 321 *e*Pn Pn 07 24 17.7 -0.8
PLD Plovdiv 6.37 19 P Pn 07 24 21.6 +1.7
BAI Bari 6.37 323 *e*Pn Pn 07 24 18.8 -1.1
PTRP Pietrapertosa 6.38 315 P Pn 07 24 21.3 +1.2
PTRP Pietrapertosa 6.38 315 P Pn 07 24 21.3 +1.2
BCI Bajram Curri 6.42 348 *e*PN Pn 07 24 20.2 -0.3
BCI Bajram Curri 6.42 348 *e*Pn Pn 07 24 20.2 -0.3
VTS Vitosha 6.55 8 *e*P Pn 07 24 24.6 +2.2
VTS Vitosha 6.55 8 P Pn 07 24 24.1 +1.7
GIB Gibilmanna 6.59 289 P Pn 07 24 24.6 +1.6
BUM Brajici-Budva 6.62 340 ⇓*i*Pn Pn 07 24 22.2 -1.1
BUM *e*Sn Sn 07 25 33.8 -5.0
BUM Brajici-Budva 6.62 340 ⇓*i*Pn Pn 07 24 22.2 -1.1
ACER Acerenza 6.62 317 P Pn 07 24 24.1 +0.7
ACER Acerenza 6.62 317 P Pn 07 24 24.1 +0.7
PDG Podgorica 6.64 343 ⇓*i*Pn Pn 07 24 22.7 -1.0
TTG Podgorica 6.64 343 ⇓*i*Pn Pn 07 24 22.7 -1.0
TTG *e*Sn Sn 07 25 35.1 -4.3
TTG Podgorica 6.64 343 *i* P Pn 07 24 22.7 -1.0
PVY Plav 6.65 347 ⇑*i*Pn Pn 07 24 23.9 +0.1
PVY *e*Sn Sn 07 25 37.1 -2.6
PVY Plav 6.65 347 ⇑*i*Pn Pn 07 24 23.9 +0.1
PVY *e*Sn Sn 07 25 37.1 -2.6
BARS Barje 6.70 359 P Pn 07 24 25.3 +0.8
BARS Barje 6.70 359 ⇑*i*Pn Pn 07 24 24.7 +0.2
BARS Barje 6.70 359 P Pn 07 24 25.3 +0.8
SGO Sicignano 6.84 313 P Pn 07 24 26.7 +0.3
MRLC Muro Lucano 6.86 315 P Pn 07 24 26.9 +0.2
MRLC Muro Lucano 6.86 315 P Pn 07 24 26.9 +0.2
HCY Herceg Novi 6.87 338 ⇓*i*Pn Pn 07 24 24.9 -1.8
HCY *e*Sn Sn 07 25 38.9 -6.0
HCY Herceg Novi 6.87 338 ⇓*i*Pn Pn 07 24 24.9 -1.8
BEY Berane 6.94 348 ⇓*i*Pn Pn 07 24 27.9 +0.2
BEY *e*Sn Sn 07 25 43.5 -3.1
IVA Berane 6.94 348 ⇓*i*Pn Pn 07 24 27.9 +0.2
IVA *e*Sn Sn 07 25 43.5 -3.1
IVA Berane 6.94 348 ⇓*i*Pn Pn 07 24 27.9 +0.2
IVA *e*Sn Sn 07 25 43.5 -3.1
NKY Niksic 7.07 342 ⇑*i*Pn Pn 07 24 28.2 -1.3
NKY *e*Sn Sn 07 25 45.5 -4.4
NKY Niksic 7.07 342 ⇑*i*Pn Pn 07 24 28.2 -1.3
CSSN Cassano Irpino 7.20 313 P Pn 07 24 31.5 +0.2
CSSN Cassano Irpino 7.20 313 P Pn 07 24 31.5 +0.2
BRY Bratogost 7.27 340 ⇓*i*Pn Pn 07 24 30.5 -1.8
BRY *e*Sn Sn 07 25 48.8 -6.1
BRY Bratogost 7.27 340 ⇓*i*Pn Pn 07 24 30.5 -1.8
MS1 Monte Sant'Ang 7.28 322 *e*Pn Pn 07 24 31.7 -0.7
MSAG Monte S. Angel 7.30 322 P Pn 07 24 32.0 -0.7
MSAG Monte S. Angel 7.30 322 P Pn 07 24 32.0 -0.7
FG5 Orsara di Pugl 7.34 317 P Pn 07 24 33.6 +0.4
FG5 Orsara di Pugl 7.34 317 P Pn 07 24 33.6 +0.4
MRB1 Monte Rocchett 7.40 315 P Pn 07 24 35.0 +0.9
MRB1 Monte Rocchett 7.40 315 P Pn 07 24 35.0 +0.9
SGRT San Giovanni R 7.42 321 P Pn 07 24 33.4 -0.9
SGRT San Giovanni R 7.42 321 P Pn 07 24 33.4 -0.9
USI Ustica 7.43 293 P Pn 07 24 34.2 -0.3
USI Ustica 7.43 293 P Pn 07 24 34.2 -0.3
RGNG Rignano Grg 7.44 320 P Pn 07 24 33.6 -1.0
RGNG Rignano Grg 7.44 320 P Pn 07 24 33.6 -1.0
UPM Unac-Piva 7.46 343 ⇓*i*Pn Pn 07 24 34.4 -0.5
UPM *e*Sn Sn 07 25 54.9 -4.6
UPM Unac-Piva 7.46 343 ⇓*i*Pn Pn 07 24 34.4 -0.5
SWA2 7.46 156 P Pn 07 24 34.2 -0.7
baz=157
SWA2 S Sn 07 25 56.8 -2.8
baz=157
SWA2 AMP 07 26 00.0
comp=N,230μm,0.8s,logA/T=5.4,baz=157
SWA2 7.46 156 P Pn 07 24 34.2 -0.7
SWA2 S Sn 07 25 56.8 -2.8
PLE Pljevlja 7.47 346 ⇑*i*Pn Pn 07 24 34.3 -0.8
PLE *e*Sn Sn 07 25 56.0 -3.8
PLE Pljevlja 7.47 346 ⇑*i*Pn Pn 07 24 34.3 -0.8
STON Ston 7.50 335 *i* Pn Pn 07 24 33.1 -2.4
STON Sn Sn 07 25 53.3 -7.3
PSB1 Pescosannita 7.55 315 P Pn 07 24 36.5 +0.3
PSB1 Pescosannita 7.55 315 P Pn 07 24 36.5 +0.3
ERC Erice 7.71 287 P Pn 07 24 42.5 +4.1
FG2 Serracapriola 7.75 319 P Pn 07 24 39.9 +1.0
FG2 Serracapriola 7.75 319 P Pn 07 24 39.9 +1.0
GRUS Gruza 7.83 354 P Pn 07 24 38.7 -1.2
GRUS Gruza 7.83 354 P Pn 07 24 38.7 -1.2
SGG Gregorio Mates 7.91 314 P Pn 07 24 40.7 -0.4
SGG Gregorio Mates 7.91 314 P Pn 07 24 40.7 -0.4
BBLS Lazići 7.99 347 P Pn 07 24 41.5 -0.6
BBLS Lazići 7.99 347 ⇓*i*Pn Pn 07 24 40.8 -1.3
BBLS Lazići 7.99 347 P Pn 07 24 41.5 -0.6
RFI Roccamonfina 8.09 312 P Pn 07 24 43.7 +0.2
RFI Roccamonfina 8.09 312 P Pn 07 24 43.7 +0.2
DIVS Divibare 8.12 350 ⇓*i*Pn Pn 07 24 42.6 -1.3
MIDA Miranda 8.14 315 P Pn 07 24 45.3 +1.0
MIDA Miranda 8.14 315 P Pn 07 24 45.3 +1.0
TRUS Trudelj 8.19 352 ⇓*i*Pn Pn 07 24 44.7 -0.2
SDI San Donato 8.44 314 P Pn 07 24 47.8 -0.6
INTR Introdacqua 8.58 316 P Pn 07 24 51.0 +0.7
INTR Introdacqua 8.58 316 P Pn 07 24 51.0 +0.7
VVLD Villa Vallelon 8.65 314 P Pn 07 24 51.6 +0.3
VVLD Villa Vallelon 8.65 314 P Pn 07 24 51.6 +0.3
LJFR Jufra 8.68 218 *e*P Pn 07 24 52.9 +1.2
SNR=70
GUAR Guarcino 8.79 313 P Pn 07 24 53.4 +0.3
GUAR Guarcino 8.79 313 P Pn 07 24 53.4 +0.3
LSHF Shwairf 8.88 229 *e*P Pn 07 24 55.6 +1.3
SNR=70
CERT Cerreto 9.08 313 P Pn 07 25 00.6 +3.5
AQU L'Aquila 9.09 316 *e*P Pn 07 24 58.6 +1.4
AQU L'Aquila 9.09 316 ⇓*i*P Pn 07 24 58.7 +1.5
AQU L'Aquila 9.09 316 *e*P Pn 07 24 58.6 +1.4
TERO Teramo 9.16 318 P Pn 07 24 59.0 +0.9
TERO Teramo 9.16 318 P Pn 07 24 59.0 +0.9
FIAM Fiamignano 9.20 315 P Pn 07 24 59.5 +0.8
FIAM Fiamignano 9.20 315 P Pn 07 24 59.5 +0.8
GZR Gura Zlata 9.30 4 ⇑P Pn 07 25 00.8 +0.7
GZR Gura Zlata 9.30 4 ⇑*i*P Pn 07 25 00.8 +0.7
GZR Gura Zlata 9.30 4 ⇑P Pn 07 25 00.8 +0.7
OFFI Offida 9.33 319 P Pn 07 25 03.6 +3.1
BLY Banja Luka 9.36 339 P Pn 07 25 00.8 -0.1
BLY Banja Luka 9.36 339 P Pn 07 25 00.8 -0.1
BZS Buzias 9.50 359 P Pn 07 25 04.1 +1.2
BZS Buzias 9.50 359 ⇑P Pn 07 25 03.0 +0.1
BZS Buzias 9.50 359 ⇑*i*P Pn 07 25 03.0 +0.1
BZS Buzias 9.50 359 ⇑P Pn 07 25 03.0 +0.1
MNS Montasola 9.52 314 P Pn 07 25 03.6 +0.4
NRCA Norcia 9.56 317 P Pn 07 25 04.1 +0.4
NRCA Norcia 9.56 317 P Pn 07 25 04.1 +0.4
AWBH 9.75 141 P Pn 07 25 04.0 -2.3
baz=142
AWBH 9.75 141 P Pn 07 25 04.0 -2.4
AOI Ancona 9.81 322 P Pn 07 25 08.7 +1.6
AOI Ancona 9.81 322 P Pn 07 25 08.7 +1.6
MLR Muntele Rosu 9.86 17 Pn Pn 07 25 08.4 +0.7
comp=N,0.1nm,0.3s,baz=256,slow=7.1,SNR=6.8
MLR Muntele Rosu 9.86 17 ⇓P Pn 07 25 10.9 +3.2
MLR Muntele Rosu 9.86 17 ⇓*i*P Pn 07 25 10.9 +3.2
MLR Muntele Rosu 9.86 17 P Pn 07 25 08.4 +0.7
CING Cingoli 9.89 320 P Pn 07 25 08.0 -0.2
CING Cingoli 9.89 320 P Pn 07 25 08.0 -0.2
BR131 Keskin Array S 9.93 65 *e*Pn Pn 07 25 12.1 +3.3
BR131 Keskin Array S 9.93 65 *e*Pn Pn 07 25 12.1 +3.3
NVLJ Novalja 10.01 330 *e*Pn Pn 07 25 08.9 -1.0
NVLJ Sn Sn 07 26 53.2 -9.1
NVLJ Novalja 10.01 330 *e*Pn Pn 07 25 08.9 -1.0
RHK3 Tenkes 10.16 345 *e*P Pn 07 25 10.2 -1.6
MGAB Montegabbione 10.18 315 P Pn 07 25 14.7 +2.5
MGAB Montegabbione 10.18 315 P Pn 07 25 14.7 +2.5
KEST Kesra 10.21 272 Pn Pn 07 25 15.7 +3.0
comp=N,0.1nm,0.3s,baz=350,slow=6.1,SNR=3.1
KEST Sn Sn 07 27 04.5 -2.7
comp=N,0.1nm,0.3s,baz=58,slow=13,SNR=2.5
KEST Kesra 10.21 272 *e*Pn Pn 07 25 13.1 +0.5
KEST Kesra 10.21 272 *e*Pn Pn 07 25 13.1 +0.4
PIEI Pieia 10.35 319 P Pn 07 25 15.0 +0.5
PIEI Pieia 10.35 319 P Pn 07 25 15.0 +0.5
PKSM Moragy 10.39 347 ⇓P Pn 07 25 13.8 -1.3
PKSM Moragy 10.39 347 ⇓*i*P Pn 07 25 13.8 -1.3
PKSM Moragy 10.39 347 P Pn 07 25 13.8 -1.3
VRI Vrincioaia 10.40 19 ⇑P Pn 07 25 18.4 +3.2
VRI Vrincioaia 10.40 19 ⇑*i*P Pn 07 25 18.4 +3.2
VRI Vrincioaia 10.40 19 P Pn 07 25 18.4 +3.2
HFRF Wahat Farafira 10.45 147 P Pn 07 25 14.2 -1.8
baz=148
HFRF Wahat Farafira 10.45 147 P Pn 07 25 14.2 -1.8
TLCR 10.46 28 ⇑P Pn 07 25 20.5 +4.4
TLCR 10.46 28 ⇑*i*P Pn 07 25 20.5 +4.4
GLL Jalalah 10.49 126 P Pn 07 25 13.3 -3.1
baz=127
GLL Jalalah 10.49 126 P Pn 07 25 13.3 -3.1
BADI Badiali 10.49 318 P Pn 07 25 18.4 +2.0
BADI Badiali 10.49 318 P Pn 07 25 18.4 +2.0
VSL Villasalto 10.49 293 *e*Pn Pn 07 25 22.3 +5.8
BOJS Bojanci 10.66 334 *i* Pn Pn 07 25 17.1 -1.6
BOJS *i* Sn Sn 07 27 09.8 -8.3
BOJS Bojanci 10.66 334 *i* Pn Pn 07 25 17.1 -1.6
DRGR 10.69 3 P Pn 07 25 20.2 +1.0
DRGR 10.69 3 ⇑*i*P Pn 07 25 19.3 +0.1
DRGR 10.69 3 P Pn 07 25 20.2 +1.0
AMAG Maghara 10.89 117 P Pn 07 25 18.6 -3.3
baz=118
AMAG Maghara 10.89 117 P Pn 07 25 18.6 -3.3
VISS Visnje 11.06 333 *i* Pn Pn 07 25 23.2 -1.0
VISS *e*Sn Sn 07 27 19.0 -9.0
VISS Visnje 11.06 333 *i* Pn Pn 07 25 23.2 -1.1
SUZ 11.08 121 P Pn 07 25 21.7 -2.9
baz=123
SUZ 11.08 121 P Pn 07 25 21.7 -2.9
CEY Cerknica 11.16 332 P Pn 07 25 25.0 -0.6
CEY Cerknica 11.16 332 P Pn 07 25 25.0 -0.6
SKDS Skadanscina 11.17 330 *i* Pn Pn 07 25 23.9 -1.8
VMG Vicchio 11.17 318 P Pn 07 25 28.0 +2.3
VMG Vicchio 11.17 318 P Pn 07 25 28.0 +2.3
KOGS Kog 11.18 339 P Pn 07 25 25.2 -0.6
KOGS Kog 11.18 339 P Pn 07 25 25.2 -0.6
PDKS Podkum 11.23 334 *i* Pn Pn 07 25 24.6 -1.9
LJU Ljubljana 11.38 333 *e*Pn Pn 07 25 27.2 -1.4
LJU *e*Sn Sn 07 27 29.5 -6.3
LJU Ljubljana 11.38 333 P Pn 07 25 28.6 0.0
LJU Ljubljana 11.38 333 P Pn 07 25 28.6 0.0
TRI Trieste 11.40 330 *e*P Pn 07 25 25.4 -3.5
TRI *e* 07 27 29.5
TRI pmax pmax
comp=Z,25nm,1.0s
TRI Trieste 11.40 330 *e*Pn Pn 07 25 25.4 -3.5
comp=Z,25nm,1.0s
TRI *e*Sn Sn 07 27 29.5 -6.8
JAVS Javornik 11.43 331 *i* Pn Pn 07 25 28.2 -1.1
JAVS *i* Sn Sn 07 27 28.1 -8.9
JAVS Javornik 11.43 331 *i* Pn Pn 07 25 28.2 -1.1
MMAI Mount Meron Ar 11.53 102 Pn Pn 07 25 29.8 -0.9
comp=Z,1.4nm,0.3s,baz=265,slow=10.0,SNR=3.6
MMAI Sn Sn 07 27 32.4 -7.1
comp=Z,1.5nm,0.3s,baz=294,slow=25,SNR=2.7
VOY Vojsko 11.62 331 *e*Pn Pn 07 25 31.1 -0.7
VOY *e*Sn Sn 07 27 31.7 -10
VOY Vojsko 11.62 331 *e*Pn Pn 07 25 31.1 -0.7
BMR Baia Mare 11.62 5 ⇑P Pn 07 25 33.7 +1.9
BMR Baia Mare 11.62 5 ⇑*i*P Pn 07 25 33.7 +1.9
BMR Baia Mare 11.62 5 P Pn 07 25 33.7 +1.9
PERS Pernice 11.69 336 *i* Pn Pn 07 25 30.0 -2.8
PERS *i* Sn Sn 07 27 33.2 -10
BURAR Bucovina Array 11.76 11 ⇓*i*P Pn 07 25 37.6 +3.9
OBKA Obir 11.77 334 ⇓*i*Pn Pn 07 25 32.1 -1.8
OBKA ⇓*i*Sn Sn 07 27 36.5 -8.9
OBKA Obir 11.77 334 Pn Pn 07 25 32.1 -1.9
BUR08 Bucovina Ar. S 11.78 11 *e*Pn Pn 07 25 33.8 -0.3
BUR08 Bucovina Ar. S 11.78 11 *e*Pn Pn 07 25 33.8 -0.3
HNKL Nakhl 11.84 118 P Pn 07 25 32.2 -2.8
baz=119
HNKL Nakhl 11.84 118 P Pn 07 25 32.2 -2.7
PGF Pioggiola 11.89 307 *e*P Pn 07 25 36.4 +0.8
comp=Z,83nm,1.4s
PGF Pioggiola 11.89 307 *e*P Pn 07 25 36.4 +0.8
PGF pmax pmax
comp=Z,41nm,1.4s
PGF Pioggiola 11.89 307 *e*P Pn 07 25 36.4 +0.8
comp=Z,41nm,1.4s
PGF Pioggiola 11.89 307 *e*P Pn 07 25 36.4 +0.8
comp=Z,41nm,1.4s
PSZ Piszkesteto 11.90 353 ⇑P Pn 07 25 36.4 +0.7
PSZ Piszkesteto 11.90 353 *e*Pn Pn 07 25 34.7 -1.0
PSZ Piszkesteto 11.90 353 ⇓*e*P Pn 07 25 35.1 -0.6
PSZ Piszkesteto 11.90 353 ⇑*i*P Pn 07 25 36.4 +0.7
PSZ Piszkesteto 11.90 353 *e*Pn Pn 07 25 34.7 -1.0
PSZ Piszkesteto 11.90 353 P Pn 07 25 36.4 +0.7
KIS Kishinev 12.04 23 *e*P Pn 07 25 40.0 +2.5
KIS *e*S Sn 07 27 56.0 +4.2
KIS LRM 07 31 00.0
comp=Z,600nm,7.0s
KIS Kishinev 12.04 23 *e*P Pn 07 25 40.0 +2.5
KIS *e*S Sn 07 27 56.0 +4.2
KIS MLR MLR
comp=N,1μm,8.0s
KIS MLR MLR
comp=Z,1μm,8.0s
KIS MLR MLR
comp=E,600nm,7.0s
KIS MLR MLR
comp=Z,1μm,10.0s
KIS Kishinev 12.04 23 *e*P Pn 07 25 40.0 +2.5
GMNA Gemona 12.08 330 P Pn 07 25 38.5 +0.4
GMNA Gemona 12.08 330 P Pn 07 25 38.5 +0.4
ARSA Arzberg 12.11 339 P Pn 07 25 37.3 -1.3
ARSA Arzberg 12.11 339 P Pn 07 25 37.3 -1.3
PTCC Patocco-Chiusa 12.14 331 P Pn 07 25 37.7 -1.2
PTCC Patocco-Chiusa 12.14 331 P Pn 07 25 37.7 -1.2
HDK1 Dakhla 12.33 147 P Pn 07 25 40.0 -1.6
baz=148
HDK1 Dakhla 12.33 147 P Pn 07 25 40.0 -1.6
KECS Kecovo 12.41 356 *e*Pn Pn 07 25 43.3 +0.6
KECS *e*Sn Sn 07 27 49.3 -12
KECS Kecovo 12.41 356 *e*PN Pn 07 25 43.3 +0.6
KECS Kecovo 12.41 356 *e*SN Sn 07 27 49.3 -12
UZH Uzhgorod 12.52 1 *e*P Pn 07 25 44.7 +0.6
UZH *e*S Sn 07 28 02.0 -1.6
UZH MLR MLR
comp=N,700nm,10.0s
UZH MLR MLR
comp=E,800nm,10.0s
UZH MLR MLR
comp=Z,600nm,10.0s
UZH Uzhgorod 12.52 1 *e*P Pn 07 25 44.7 +0.6
UZH *e*S Sn 07 28 02.0 -1.6
FVI Forni Avoltri 12.52 330 P Pn 07 25 44.3 +0.1
VYHS Vyhne 12.59 351 *e*P Pn 07 25 44.1 -1.0
VYHS MLR MLR
comp=Z,400nm,18.7s
VYHS Vyhne 12.59 351 *e*Pn Pn 07 25 44.1 -1.0
VYHS *e*Sn Sn 07 27 55.4 -10
VYHS Vyhne 12.59 351 *e*PN Pn 07 25 44.1 -1.0
VYHS *e* 07 25 50.5
VYHS Vyhne 12.59 351 *e*SN Sn 07 27 55.4 -10
VYHS Vyhne 12.59 351 *e*P Pn 07 25 44.1 -1.0
comp=Z,400nm,18.7s
CTI Castel Tesino 12.59 325 P Pn 07 25 46.9 +1.8
EIL Elat 12.68 117 Pn Pn 07 25 45.7 -0.8
comp=Z,0.9nm,0.3s,baz=169,slow=10,SNR=3.9
EIL Sn Sn 07 27 54.5 -13
comp=Z,0.4nm,0.3s,baz=287,slow=18,SNR=2.2
HKAT Jabal Katrina 12.69 123 P Pn 07 25 43.8 -2.8
baz=125
HKAT Jabal Katrina 12.69 123 P Pn 07 25 43.8 -2.8
KOLL Kolacno 12.73 349 *e*Pn Pn 07 25 46.4 -0.6
KOLL *e*Sn Sn 07 28 02.7 -6.1
KOLL Kolacno 12.73 349 *e*PN Pn 07 25 46.4 -0.6
KOLL Kolacno 12.73 349 *e*SN Sn 07 28 02.7 -6.1
KOLL Kolacno 12.73 349 *e*P Pn 07 25 46.4 -0.6
CRVS Cervenica-Dubn 12.79 359 *e*P Pn 07 25 48.8 +0.9
CRVS MLR MLR
comp=Z,200nm,23.0s
CRVS Cervenica-Dubn 12.79 359 *e*Pn Pn 07 25 48.8 +0.9
CRVS Cervenica-Dubn 12.79 359 *e*PN Pn 07 25 48.8 +0.9
CRVS *e* 07 25 58.1
CRVS Cervenica-Dubn 12.79 359 *e*P Pn 07 25 48.8 +0.9
comp=Z,200nm,23.0s
SIM Simferopol' 12.79 43 P Pn 07 25 51.6 +3.7
SIM *e*S Sn 07 28 17.5 +7.2
SIM pmax pmax
comp=Z,42nm,0.3s
SIM MLR MLR
comp=Z,250nm,15.0s
SIM Simferopol' 12.79 43 P Pn 07 25 51.6 +3.7
comp=Z,42nm,0.3s
SMOL Smolenice 12.84 346 *e*Pn Pn 07 25 54.9 +6.5
SMOL *e*Sn Sn 07 28 03.2 -8.1
SMOL Smolenice 12.84 346 *e*PN Pn 07 25 54.9 +6.5
SMOL Smolenice 12.84 346 *e*SN Sn 07 28 03.2 -8.1
MAGA Magasa 12.88 322 P Pn 07 25 49.0 -0.1
MAGA Magasa 12.88 322 P Pn 07 25 49.0 -0.1
ASF Jabal al Asfar 13.00 103 Pn Pn 07 25 50.5 -0.4
comp=Z,0.3nm,0.3s,baz=55,slow=3.8,SNR=2.4
MOA Molln 13.04 337 ⇓*i*Pn Pn 07 25 49.2 -2.0
MOA ⇓*i*Sn Sn 07 28 08.4 -7.8
MOA Molln 13.04 337 Pn Pn 07 25 49.2 -2.0
JAVC Velka Javorina 13.12 348 P Pn 07 25 52.0 -0.4
MABI Malga Bissina 13.13 323 P Pn 07 25 52.4 -0.2
MABI Malga Bissina 13.13 323 P Pn 07 25 52.4 -0.2
STHS Stebnicka Huta 13.31 358 *e*Pn Pn 07 25 57.3 +2.3
STHS *e* 07 26 07.7
STHS Stebnicka Huta 13.31 358 *e*PN Pn 07 25 57.3 +2.3
STHS *e* 07 26 07.7
STHS Stebnicka Huta 13.31 358 *e*P Pn 07 25 57.3 +2.3
NIE Niedzica 13.36 355 *e*P Pn 07 25 57.6 +2.0
NIE *e*PP 07 26 05.5
NIE *e*S Sn 07 28 04.2 -20
NIE Niedzica 13.36 355 *e*P Pn 07 25 57.6 +2.0
RJOB Jochberg 13.45 333 *e*Pn Pn 07 25 56.4 -0.5
RJOB *e*Sn Sn 07 28 16.7 -10
SAOF Saorge 13.52 310 *e*P Pn 07 25 59.3 +1.5

SAOF	Saorge	13.52	310	eP	Pn	07 25 59.3 +1.5
WTTA	Wattenberg	13.53	329⇑	iSn	Sn	07 28 19.2 -9.1
KWP	Kalwaria Pacla	13.53	2	eP	Pn	07 25 58.5 +0.6
KWP				pmax	pmax	
	comp=Z,30nm,1.0s					
KWP	Kalwaria Pacla	13.53	2	ePn	Pn	07 25 58.5 +0.6
	comp=Z,30nm,1.0s					
KWP	Kalwaria Pacla	13.53	2	eP	Pn	07 25 58.5 +0.6
	comp=Z,30nm,1.0s					
SBF	Sospel	13.53	309	eP	Pn	07 25 57.1 -0.9
	comp=Z,116nm,1.3s					
SBF	Sospel	13.53	309	eP	Pn	07 25 57.1 -0.9
SBF				pmax	pmax	
	comp=Z,58nm,1.3s					
SBF	Sospel	13.53	309	eP	Pn	07 25 57.1 -0.9
	comp=Z,58nm,1.3s					
SBF	Sospel	13.53	309	eP	Pn	07 25 57.1 -0.9
	comp=Z,58nm,1.3s					
AUTN	L'Aution	13.61	310	eP	Pn	07 26 02.1 +3.1
WATA	Walderalm	13.61	329⇑	iPn	Pn	07 25 57.3 -1.7
	SNR=10					
WATA			⇑	iSn	Sn	07 28 23.7 -6.5
WATA	Walderalm	13.61	329	Pn	Pn	07 25 57.3 -1.7
	SNR=10					
TOUF	Mont Tournerai	13.73	310	eP	Pn	07 26 01.8 +1.2
TOUF	Mont Tournerai	13.73	310	eP	Pn	07 26 01.8 +1.2
MVIF	Mont Vial	13.73	309	eP	Pn	07 26 01.8 +1.1
MVIF	Mont Vial	13.73	309	eP	Pn	07 26 01.8 +1.1
VRAC	Vranov	13.76	345	Pn	Pn	07 25 59.0 -2.1
	comp=Z,0.4nm,0.3s,baz=159,slow=8.5,SNR=4.8					
VRAC	Vranov	13.76	345	⇓P	Pn	07 26 01.0 -0.1
VRAC	Vranov	13.76	345	P	Pn	07 26 01.0 -0.1
LVV	L'vov	13.79	6	eP	Pn	07 26 03.3 +1.8
LVV				eS	Sn	07 28 35.5 +0.9
LVV				MLR	MLR	
	comp=N,300nm,10.0s					
LVV				MLR	MLR	
	comp=Z,300nm,10.0s					
LVV				MLR	MLR	
	comp=E,300nm,11.0s					
LVV	L'vov	13.79	6	eP	Pn	07 26 03.3 +1.8
FRF	La Foret Royal	13.89	307	eP	Pn	07 26 06.4 +3.5
	comp=E,32nm,1.3s					
FRF	La Foret Royal	13.89	307	eP	Pn	07 26 06.4 +3.5
FRF				pmax	pmax	
	comp=Z,16nm,1.3s					
FRF	La Foret Royal	13.89	307	eP	Pn	07 26 06.4 +3.5
	comp=Z,16nm,1.3s					
FRF	La Foret Royal	13.89	307	eP	Pn	07 26 06.4 +3.5
	comp=Z,16nm,1.3s					
DAVOX	Davos/Dischmat	13.96	324	Pn	Pn	07 26 05.4 +1.6
	comp=Z,0.4nm,0.3s,baz=167,slow=17,SNR=3.8					
DAVOX				Sn	Sn	07 28 26.1 -13
	comp=Z,0.4nm,0.3s,baz=193,slow=19,SNR=2.6					
DAVOX	Davos/Dischmat	13.96	324	Pn	Pn	07 26 05.4 +1.6
OKC	Ostrava-Krasne	14.00	350	eP	Px	07 26 15.3
OKC				MLR	MLR	
	comp=Z,800nm,8.7s					
OKC	Ostrava-Krasne	14.00	350	ex	Px	07 26 15.3
OKC				AMS	AMS	07 33 10.0
	comp=Z,800nm,8.7s					
TREC	Trest	14.00	342	eP	Pn	07 26 11.5 +7.2
TREC				MLR	MLR	
	comp=Z,2μm,10.6s					
TREC				MLR	MLR	
	comp=Z,900nm,17.6s					
TREC	Trest	14.00	342	ex	Pn	07 26 11.5 +7.2
TREC				AMS	AMS	07 32 20.0
	comp=Z,2μm,10.6s					
TREC	Trest	14.00	342	eP	Pn	07 26 11.5 +7.2
	comp=Z,900nm,17.6s					
TUE	Stuetta	14.01	322	ePn	Pn	07 26 04.8 +0.4
	comp=Z,24nm,1.0s					
TUE	Stuetta	14.01	322	ePn	Pn	07 26 04.8 +0.4
	comp=Z,24nm,1.0s					
MORC	Moravsky Berou	14.03	348	eP	Pn	07 26 04.6 -0.2
MORC	Moravsky Berou	14.03	348⇑	iP	Pn	07 26 12.8 +8.0
MORC	Moravsky Berou	14.03	348	ePn	Pn	07 26 04.6 -0.2
MORC	Moravsky Berou	14.03	348⇑	iP	Pn	07 26 12.8 +8.0
GEC2	GERESS Array S	14.09	337	ePn	Pn	07 26 06.0 +0.4
GEC2				eSn	Sn	07 28 34.3 -7.6
GEC2	GERESS Array S	14.09	337	ePn	Pn	07 26 06.0 +0.4
OJC	Ojcow	14.19	354	eP	Pn	07 26 08.6 +1.7
OJC				eS	Sn	07 28 49.6 +5.2
KHC	Kasperske Hory	14.38	337	P	Pn	07 26 09.5 0.0
KHC				pmax	pmax	
	comp=Z,19nm,1.2s					
KHC	Kasperske Hory	14.38	337	Pn	Pn	07 26 09.5 0.0
	comp=Z,19nm,1.2s					
KHC				eSn	Sn	07 28 39.6 -9.4
KHC	Kasperske Hory	14.38	337	eP	Pn	07 26 08.8 -0.7
KHC				eS	Sn	07 28 41.2 -7.8
KHC				AMS	AMS	07 32 40.0
	comp=Z,2μm,11.2s					
KHC	Kasperske Hory	14.38	337	Pn	Pn	07 26 09.5 0.0
	comp=Z,19nm,1.2s					
MBDF	Montbardon	14.39	311	eP	Pn	07 26 11.4 +1.8
	comp=Z,72nm,1.2s					
MBDF	Montbardon	14.39	311	eP	Pn	07 26 11.4 +1.8
MBDF				pmax	pmax	
	comp=Z,36nm,1.2s					
MBDF	Montbardon	14.39	311	eP	Pn	07 26 11.4 +1.8
	comp=Z,36nm,1.2s					
BNI	Bardonecchia	14.61	312	eP	Pn	07 26 18.0 +5.3
BNI	Bardonecchia	14.61	312	eP	Pn	07 26 18.0 +5.3
WET	Wettzell	14.62	336	ePn	Pn	07 26 10.5 -2.3
WET				eSn	Sn	07 28 46.6 -8.2
ANN	Anapa	14.63	49	eP	Pn	07 26 17.4 +4.4
ANN				eS	Sn	07 29 04.8 +10
ANN				pmax	pmax	
	comp=Z,71nm,1.2s					
SMRF	Simiane la Rot	14.77	307	eP	Pn	07 26 19.5 +4.6
SMRF	Simiane la Rot	14.77	307	eP	Pn	07 26 19.5 +4.6
DPC	Dobruska-Polom	14.80	346	eP	Pn	07 26 21.3 +6.0
DPC				MLR	MLR	
	comp=Z,1μm,12.1s					
DPC	Dobruska-Polom	14.80	346	eP	Pn	07 26 21.3 +6.0
DPC				AMS	AMS	07 33 00.0
	comp=Z,1μm,12.1s					
DPC	Dobruska-Polom	14.80	346	eP	Pn	07 26 21.3 +6.0
	comp=Z,1μm,12.1s					
LPG	La Plagne	14.81	314	eP	Pn	07 26 17.6 +2.1
	comp=Z,19nm,0.9s					
LPG	La Plagne	14.81	314	eP	Pn	07 26 17.6 +2.1
LPG				pmax	pmax	
	comp=Z,9.0nm,0.9s					
LPG	La Plagne	14.81	314	eP	Pn	07 26 17.6 +2.1
	comp=Z,9.4nm,0.9s					
LPL	La Plagne	14.84	314	eP	Pn	07 26 17.2 +1.4
	comp=Z,13nm,0.9s					
LPL	La Plagne	14.84	314	eP	Pn	07 26 17.2 +1.4
LPL				pmax	pmax	
	comp=Z,7.0nm,0.9s					
LPL	La Plagne	14.84	314	eP	Pn	07 26 17.2 +1.4
	comp=Z,6.6nm,0.9s					
PRU	Pruhonice	14.88	341	eP	Pn	07 26 20.6 +4.3
PRU				MLR	MLR	
	comp=Z,1μm,10.6s					
PRU	Pruhonice	14.88	341	eP	Pn	07 26 20.6 +4.3
PRU				AMS	AMS	07 32 50.0
	comp=Z,1μm,10.6s					
PRU	Pruhonice	14.88	341	eP	Pn	07 26 20.6 +4.3
	comp=Z,1μm,10.6s					
PRA	Prague	14.98	341	P	Pn	07 26 16.0 -1.7
UPC	Upice	15.02	345	eP	Pn	07 26 24.1 +5.9
UPC	Upice	15.02	345	eP	Pn	07 26 24.1 +5.9
UPC	Upice	15.02	345	eP	Pn	07 26 24.1 +5.9
ORIF	Oris-en-Rattie	15.03	311	eP	Pn	07 26 19.2 +0.8
	comp=Z,24nm,1.1s					
ORIF				eMLR	MLR	
	comp=Z,560nm,21.8s					
ORIF	Oris-en-Rattie	15.03	311	eP	Pn	07 26 19.2 +0.8
ORIF				pmax	pmax	
	comp=Z,12nm,1.1s					
ORIF	Oris-en-Rattie	15.03	311	eP	Pn	07 26 19.2 +0.8
	comp=Z,12nm,1.1s					
KSP	Ksiaz	15.28	346	eP	Pn	07 26 26.9 +5.2
KSP				eS	Sn	07 29 15.0 +4.1
KSP	Ksiaz	15.28	346	eP	Pn	07 26 26.9 +5.2
PVCC	Panska Ves	15.37	342	eP	Pn	07 26 26.8 +4.0
PVCC				MLR	MLR	
	comp=Z,1μm,10.2s					
PVCC	Panska Ves	15.37	342	eP	Pn	07 26 26.8 +4.0
PVCC				AMS	AMS	07 33 10.0
	comp=Z,1μm,10.2s					
PVCC	Panska Ves	15.37	342	eP	Pn	07 26 26.8 +4.0
	comp=Z,1μm,10.2s					
SPAK	Spaichingen-Ko	15.43	325	eP	Pn	07 26 24.6 +1.0
KIEV	Kiev	15.50	18	eP	Pn	07 26 21.4 -3.1
KIEV				pmax	pmax	
	comp=Z,8.0nm,0.6s					
KIEV	Kiev	15.50	18	ePn	Pn	07 26 21.4 -3.1
	comp=Z,7.5nm,0.6s					
AKASG	Malin Array Be	15.51	18	Pn	Pn	07 26 22.0 -2.7
	comp=Z,0.7nm,0.3s,baz=206,slow=12,SNR=4.5					
AKASG	Malin Array Be	15.51	18	P	Pn	07 26 22.0 -2.7
AKASG				pmax	pmax	
	comp=Z,1.0nm,0.3s					
AKBB	Malin Array Si	15.51	18	eP	Pn	07 26 21.6 -3.1
SOC	Sochi	15.55	56	eP	Pn	07 26 26.8 +1.5
SOC				e		07 29 23.7
SOC				pmax	pmax	
	comp=Z,14nm,0.8s					
SOC				MLR	MLR	
	comp=Z,316nm,17.0s					
BBS	Basel-Blauen	15.61	321	eP	Pn	07 26 26.6 +0.7
FELD	Feldberg im Sc	15.64	323	eP	Pn	07 26 22.7 -3.7
GRF	Grafenberg Arr	15.66	333	eSn	Sn	07 29 21.6 +1.5
GRF				eL		07 33 38.3
	comp=Z,1μm,20.5s					
NKC	Novy Kostel	15.70	337	eP	Pn	07 26 33.4 +6.2
NKC				MLR	MLR	
	comp=Z,1μm,11.0s					
NKC	Novy Kostel	15.70	337	eP	Pn	07 26 33.4 +6.2
NKC				AMS	AMS	07 33 30.0
	comp=Z,1μm,11.0s					
NKC	Novy Kostel	15.70	337	eP	Pn	07 26 33.4 +6.2
	comp=Z,1μm,11.0s					
VIVF	Saint-Julien-l	15.75	309	eP	Pn	07 26 30.1 +2.3
	comp=Z,21nm,1.2s					
VIVF	Saint-Julien-l	15.75	309	eP	Pn	07 26 30.1 +2.3
VIVF				pmax	pmax	
	comp=Z,10.0nm,1.2s					
VIVF	Saint-Julien-l	15.75	309	eP	Pn	07 26 30.1 +2.3
	comp=Z,10nm,1.2s					
VIVF	Saint-Julien-l	15.75	309	eP	Pn	07 26 30.1 +2.3
	comp=Z,10nm,1.2s					
BFO	Black Forest	15.80	325	ePn	Pn	07 26 26.2 -2.3
CABF	La Chapelle	15.83	316	eP	Pn	07 26 27.3 -1.6
	comp=Z,48nm,1.4s					
CABF	La Chapelle	15.83	316	eP	Pn	07 26 27.3 -1.6
CABF				pmax	pmax	
	comp=Z,24nm,1.4s					
CABF	La Chapelle	15.83	316	eP	Pn	07 26 27.3 -1.6
	comp=Z,24nm,1.4s					
BRG	Berggiesshubel	15.84	341	ePn	Pn	07 26 29.3 +0.3
BRG	Berggiesshubel	15.84	341	eP	Pn	07 26 29.9 +0.9
	comp=Z,3.3nm,0.9s					
BRG				e		07 26 35.5
	comp=Z,6.0nm,1.0s					
BRG				S	Sn	07 29 33.0 +8.5
BRG						
	comp=N,706nm,19.3s					
BRG						
	comp=E,713nm,12.2s					
BRG						
	comp=Z,1μm,23.8s					
BRG	Berggiesshubel	15.84	341	eP	Pn	07 26 29.9 +0.9
BRG				S	Sn	07 29 33.0 +8.5
BRG				pmax	pmax	
	comp=Z,2.0nm,0.9s					
BRG				MLR	MLR	
	comp=N,423nm,19.3s					
BRG				MLR	MLR	
	comp=E,427nm,12.2s					
BRG				MLR	MLR	
	comp=Z,710nm,23.8s					
TANN	Tannenbergstha	15.86	337	ePn	Pn	07 26 29.2 0.0
LOMF	Lomont	15.88	320	eP	Pn	07 26 27.2 -2.4
LASF	Ste Croix	15.94	305	eP	Pn	07 26 31.5 +1.2
MOF	Molkenrain	16.05	322	eP	Pn	07 26 37.6 +5.9
MOF	Molkenrain	16.05	322	eP	Pn	07 26 37.6 +5.9
HINF	Hinteralfeld	16.17	321	eP	Pn	07 26 33.5 +0.2
	comp=Z,64nm,1.3s					
HINF	Hinteralfeld	16.17	321	eP	Pn	07 26 33.5 +0.2
HINF				pmax	pmax	
	comp=Z,32nm,1.3s					
HINF	Hinteralfeld	16.17	321	eP	Pn	07 26 33.5 +0.2
	comp=Z,32nm,1.3s					
ECH	Echery	16.28	323	eP	Pn	07 26 35.0 +0.3
ECH	Echery	16.28	323	eP	Pn	07 26 34.4 -0.3
ECH				pmax	pmax	
	comp=Z,17nm,0.9s					
ECH	Echery	16.28	323	ePn	Pn	07 26 34.4 -0.3
	comp=Z,17nm,0.9s					
ECH				eSn	Sn	07 29 20.9 -14
ECH	Echery	16.28	323	ePn	Pn	07 26 34.4 -0.3
	comp=Z,17nm,0.9s					
MOX	Moxa	16.33	336	eP	Pn	07 26 25.8 -9.4
	comp=Z,15nm,1.6s					
MOX						
	comp=Z,800nm,16.0s					
MOX	Moxa	16.33	336	ePn	Pn	07 26 35.1 -0.1
MOX	Moxa	16.33	336	eP	Pn	07 26 25.8 -9.4
MOX				pmax	pmax	
	comp=Z,15nm,1.6s					
MOX				MLR	MLR	
	comp=Z,800nm,16.0s					
CDF	Champ du Feu	16.36	323	eP	Pn	07 26 35.4 -0.3
	comp=Z,36nm,0.9s					
CDF	Champ du Feu	16.36	323	eP	Pn	07 26 35.4 -0.3
CDF				pmax	pmax	
	comp=Z,18nm,0.9s					
CDF	Champ du Feu	16.36	323	eP	Pn	07 26 35.4 -0.3
	comp=Z,18nm,0.9s					
CLL	Collm	16.49	340	ePn	Pn	07 26 37.8 +0.5
CLL	Collm	16.49	340	i P	Pn	07 26 40.1 +2.8
CLL				eS	Sn	07 29 44.0 +3.8
CLL				MLR	MLR	
	comp=Z,900nm,15.3s					
CLL	Collm	16.49	340	P	Pn	07 26 40.1 +2.8
CLL				i		07 26 45.4
CLL				i		07 26 52.6
CLL				eS	Sn	07 29 44.0 +3.8
CLL	Collm	16.49	340	i P	Pn	07 26 40.1 +2.8
	comp=Z,900nm,15.3s					
LANF	Langenberg	16.51	326	eP	Pn	07 26 41.5 +3.9
LANF	Langenberg	16.51	326	eP	Pn	07 26 41.5 +3.9
HAU	Haudompre	16.55	321	eP	Pn	07 26 37.6 -0.5
	comp=Z,55nm,1.0s					
HAU				eMLR	MLR	
	comp=Z,386nm,20.2s					
HAU	Haudompre	16.55	321	eP	Pn	07 26 37.6 -0.5
HAU				pmax	pmax	
	comp=Z,28nm,1.0s					
HAU	Haudompre	16.55	321	eP	Pn	07 26 37.6 -0.5
	comp=Z,28nm,1.0s					
MTLF	Montolieu	16.78	302	eP	Pn	07 26 40.8 -0.2
LBL	Lubilhac	16.82	309	eP	Pn	07 26 43.6 +2.1
LBL	Lubilhac	16.82	309	eP	Pn	07 26 43.6 +2.1
UBBA	Unterbreizbach	17.03	333	ePn	Pn	07 26 45.6 +1.5
SMF	Signal de Mont	17.14	313	eP	Pn	07 26 44.1 -1.4
TNS	Taunus Mts	17.16	329	ePn	Pn	07 26 46.7 +1.0
TNS	Taunus Mts	17.16	329	eP	Pn	07 26 46.7 +1.0
CSOR	Sort	17.26	298	P	Pn	07 26 47.5 +0.4
	comp=Z,44nm,1.4s					
CSOR	Sort	17.26	298	P	Pn	07 26 47.5 +0.4
	comp=Z,44nm,1.4s					
AGO	Saint Agoulin	17.27	311	eP	Pn	07 26 47.7 +0.5
AGO	Saint Agoulin	17.27	311	eP	Pn	07 26 47.7 +0.5
RUE	Ruedersdorf	17.36	343	ePn	Pn	07 26 49.4 +1.2
RUE	Ruedersdorf	17.36	343	ePn	Pn	07 26 49.4 +1.2
CAF	Calviac	17.45	306	eP	Pn	07 26 49.6 +0.2
	comp=Z,37nm,1.2s					
CAF	Calviac	17.45	306	eP	Pn	07 26 49.6 +0.2
CAF				pmax	pmax	
	comp=Z,19nm,1.2s					
CAF	Calviac	17.45	306	eP	Pn	07 26 49.6 +0.2
	comp=Z,19nm,1.2s					
CAF	Calviac	17.45	306	eP	Pn	07 26 49.6 +0.2
	comp=Z,19nm,1.2s					
LOR	Lormes	17.46	315	eP	Pn	07 26 46.3 -3.3
	comp=Z,36nm,1.2s					
LOR				eMLR	MLR	
	comp=Z,239nm,22.5s					
LOR	Lormes	17.46	315	eP	Pn	07 26 46.3 -3.3
LOR				pmax	pmax	
	comp=Z,18nm,1.2s					
LOR	Lormes	17.46	315	eP	Pn	07 26 46.3 -3.3
	comp=Z,18nm,1.2s					
AVF	Avril sur Loir	17.50	313	eP	Pn	07 26 49.2 -0.9
	comp=Z,35nm,1.3s					
AVF	Avril sur Loir	17.50	313	eP	Pn	07 26 49.2 -0.9
AVF				pmax	pmax	
	comp=Z,18nm,1.3s					
AVF	Avril sur Loir	17.50	313	eP	Pn	07 26 49.2 -0.9
	comp=Z,18nm,1.3s					
AVF	Avril sur Loir	17.50	313	eP	Pn	07 26 49.2 -0.9
	comp=Z,18nm,1.3s					
MEZF	Maizieres J'vi	17.54	320	eP	Pn	07 26 51.2 +0.7
	comp=Z,92nm,1.2s					
MEZF	Maizieres J'vi	17.54	320	eP	Pn	07 26 51.2 +0.7
	comp=Z,92nm,1.2s					
MEZF	Maizieres J'vi	17.54	320	eP	Pn	07 26 51.2 +0.7
	comp=Z,46nm,1.2s					
SSF	Saint Saulge	17.55	314	eP	Pn	07 26 49.3 -1.4
	comp=Z,24nm,1.3s					
SSF	Saint Saulge	17.55	314	eP	Pn	07 26 49.3 -1.4
SSF				pmax	pmax	
	comp=Z,12nm,1.3s					
SSF	Saint Saulge	17.55	314	eP	Pn	07 26 49.3 -1.4
	comp=Z,12nm,1.3s					
BGF	Bois d'Agland	17.69	312	eP	Pn	07 26 52.0 -0.4
	comp=Z,61nm,1.2s					
BGF	Bois d'Agland	17.69	312	eP	Pn	07 26 52.0 -0.4
BGF				pmax	pmax	
	comp=Z,31nm,1.2s					
BGF	Bois d'Agland	17.69	312	eP	Pn	07 26 52.0 -0.4
	comp=Z,31nm,1.2s					
BGF	Bois d'Agland	17.69	312	eP	Pn	07 26 52.0 -0.4
	comp=Z,31nm,1.2s					
KIV	Kislovodsk	17.69	57	eP	Pn	07 26 52.9 +0.4
KIV				eS	Sn	07 30 09.4 -0.2
KIV				pmax	pmax	
	comp=Z,40nm,1.1s					
KIV				MLR	MLR	
	comp=Z,112nm,13.0s					
KIV	Kislovodsk	17.69	57	ePn	Pn	07 26 52.6 +0.2
	comp=Z,26nm,0.8s					
KIV	Kislovodsk	17.69	57	ePn	Pn	07 26 52.6 +0.1
	comp=Z,26nm,0.8s					
KIV	Kislovodsk	17.69	57	eP	Pn	07 26 52.9 +0.4
	comp=Z,40nm,1.1s					
WLF	Walferdange	17.76	325	P	Pn	07 26 56.0 +2.7
	comp=Z,17nm,1.2s					
WLF	Walferdange	17.76	325	ePn	Pn	07 26 53.7 +0.5
WLF	Walferdange	17.76	325	eP	Pn	07 26 55.9 +2.7
WLF				pmax	pmax	
	comp=Z,28nm,1.1s					
WLF	Walferdange	17.76	325	eP	Pn	07 26 55.9 +2.7
	comp=Z,28nm,1.1s					
WLF	Walferdange	17.76	325	eP	Pn	07 26 55.9 +2.7
	comp=Z,28nm,1.1s					
ONI	Oni	17.84	62	P	Pn	07 26 53.7 -0.5
SUW	Suwalki	17.93	2	eP	Pn	07 26 54.9 -0.3
SUW				e		07 26 58.3
SUW				e		07 27 01.7
SUW	Suwalki	17.93	2	eP	Pn	07 26 55.0 -0.2
SUW				pmax	pmax	
	comp=Z,153nm,1.0s					
SUW	Suwalki	17.93	2	ePn	Pn	07 26 55.0 -0.3
	comp=Z,153nm,1.0s					
SUW	Suwalki	17.93	2	eP	Pn	07 26 55.0 -0.2
	comp=Z,153nm,1.0s					
TCF	Toulx Ste Croi	17.95	311	eP	Pn	07 26 52.8 -2.8
	comp=Z,53nm,1.4s					
TCF	Toulx Ste Croi	17.95	311	eP	Pn	07 26 52.8 -2.8
TCF				pmax	pmax	
	comp=Z,26nm,1.4s					
TCF	Toulx Ste Croi	17.95	311	eP	Pn	07 26 52.8 -2.8
	comp=Z,26nm,1.4s					
RJF	Les Rejaudoux	17.96	307	eP	Pn	07 26 52.0 -3.7
	comp=Z,43nm,1.2s					
RJF				eMLR	MLR	
	comp=Z,177nm,20.2s					
RJF	Les Rejaudoux	17.96	307	eP	Pn	07 26 52.0 -3.7
RJF				pmax	pmax	
	comp=Z,21nm,1.2s					
RJF	Les Rejaudoux	17.96	307	eP	Pn	07 26 52.0 -3.7
	comp=Z,21nm,1.2s					
EPF	Esparros	18.00	299	eP	Pn	07 27 00.1 +3.9
EBIE	Bielsa	18.05	298	P	Pn	07 26 56.4 -0.5
	comp=Z,185nm,3.7s					
EBIE	Bielsa	18.05	298	P	Pn	07 26 56.3 -0.6
	comp=Z,185nm,3.7s					
KEH	Kehvi	18.12	63	P	Pn	07 26 54.4 -3.3
ZEI	Tsey	18.20	62	eP	Pn	07 26 58.0 -0.7
ZEI				eS	Sn	07 30 24.1 +2.2
ZEI				pmax	pmax	
	comp=Z,23nm,1.2s					
LFF	La Frestale	18.33	305	eP	Pn	07 26 59.9 -0.3
LFF	La Frestale	18.33	305	eP	Pn	07 26 59.9 -0.3
GNI	Garni	18.38	70	P	Pn	07 26 59.2 -1.8
	comp=Z,1.0nm,0.3s,baz=157,slow=12,SNR=11					
GNI	Garni	18.38	70	c iP	Pn	07 27 00.7 -0.3
GNI				pmax	pmax	
	comp=Z,60nm,1.7s					
GNI	Garni	18.38	70	ePn	Pn	07 27 00.9 0.0
	comp=Z,19nm,0.8s					
GNI	Garni	18.38	70	ePn	Pn	07 27 00.9 -0.1
	comp=Z,19nm,0.8s					
NRDL	Niedersach Rie	18.40	337	ePn	Pn	07 27 01.8 +0.8
MEM	Membach	18.49	327	P	Pn	07 27 04.2 +2.0
MEM	Membach	18.49	327	P	Pn	07 27 04.1 +1.9
BUG	Bochum--Univer	18.57	330	ePn	Pn	07 27 04.1 +0.9
BUG	Bochum--Univer	18.57	330	eP	Pn	07 27 04.1 +0.9
TBLG	Delisi	18.59	66	eP	Pn	07 27 05.7 +2.2
TBLG	Delisi	18.59	66	P	Pn	07 27 05.7 +2.2
TBLG	Delisi	18.59	66	eP	Pn	07 27 05.7 +2.2
ETSF	Etsaut	18.60	298	eP	Pn	07 27 04.2 +0.6
	comp=Z,16nm,0.9s					
ETSF	Etsaut	18.60	298	eP	Pn	07 27 04.2 +0.6
ETSF				pmax	pmax	
	comp=Z,8.0nm,0.9s					
ETSF	Etsaut	18.60	298	eP	Pn	07 27 04.2 +0.6
	comp=Z,7.8nm,0.9s					
ETSF	Etsaut	18.60	298	eP	Pn	07 27 04.2 +0.6
	comp=Z,7.8nm,0.9s					
MTA	Mtatsminda	18.63	66	P	Pn	07 27 04.8 +0.8
HGN	Heimansgroeve	18.64	327	eP	Pn	07 27 05.4 +1.4
	comp=Z,26nm,2.1s					
HGN	Heimansgroeve	18.64	327	eP	Pn	07 27 05.4 +1.4
	comp=Z,26nm,2.1s					
BHD	Baghdad	18.67	92	eP	Pn	07 27 03.0 -1.6
BHD				eS	Sn	07 30 30.0 -3.4
BCLA	Clavier	18.68	325	P	Pn	07 27 06.7 +2.2
	comp=Z,27nm,1.8s					
BCLA	Clavier	18.68	325	P	Pn	07 27 06.6 +2.1
	comp=Z,27nm,1.8s					
GIVF	Givet	18.69	324	eP	Pn	07 27 05.8 +1.2
	comp=Z,127nm,1.1s					
GIVF	Givet	18.69	324	eP	Pn	07 27 05.8 +1.2
GIVF				pmax	pmax	
	comp=Z,64nm,1.1s					
GIVF	Givet	18.69	324	eP	Pn	07 27 05.8 +1.2
	comp=Z,64nm,1.1s					
GIVF	Givet	18.69	324	eP	Pn	07 27 05.8 +1.2
	comp=Z,64nm,1.1s					
DOU	Dourbes	18.79	323	P	Pn	07 27 07.2 +1.3
DOU	Dourbes	18.79	323	P	Pn	07 27 07.1 +1.2
MNK	Minsk	18.84	11	eP	Pn	07 27 00.0 -6.4
MICGM	Minsk	18.85	11	eP	Pn	07 27 00.0 -6.5
BAIF	Baives	18.96	323	eP	Pn	07 27 08.3 +0.4
	comp=Z,45nm,1.1s					
BAIF	Baives	18.96	323	eP	Pn	07 27 08.3 +0.4
BAIF				pmax	pmax	
	comp=Z,23nm,1.1s					
BAIF	Baives	18

comp=Z,39nm,1.4s
WTSB Winterswijk 19.16 331 *e*P **Pn 07 27 12.1 +1.8**
comp=Z,39nm,1.4s
SNF Seneffe 19.22 324 P **Pn 07 27 13.7 +2.7**
comp=Z,31nm,1.9s
ETOR Torete 19.34 291 P **Pn 07 27 12.2 -0.4**
ETOR pmax pmax
comp=Z,7.0nm,1.2s
ETOR Torete 19.34 291 P **Pn 07 27 12.2 -0.3**
comp=Z,7.2nm,1.2s
ETOR Torete 19.34 291 P **Pn 07 27 12.2 -0.4**
comp=Z,7.2nm,1.2s
ELIZ Elizondo 19.36 299 P **Pn 07 27 12.1 -0.6**
ELIZ pmax pmax
comp=Z,17nm,1.0s
ELIZ Elizondo 19.36 299 P **Pn 07 27 12.1 -0.6**
comp=Z,17nm,1.0s
ELIZ Elizondo 19.36 299 P **Pn 07 27 12.1 -0.6**
comp=Z,17nm,1.0s
VSR Storozhevoye 19.51 34 *e*P **Pn 07 27 12.5 -2.0**
VSR pmax pmax
comp=N,8.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,0.6s
VSR pmax pmax
comp=Z,20nm,0.6s
VSR MLR MLR
comp=N,200nm,16.0s
VSR MLR MLR
comp=E,440nm,16.0s
VSR MLR MLR
comp=Z,530nm,16.0s
VSR Storozhevoye 19.51 34 *e*P **Pn 07 27 12.5 -2.0**
MFF Saint Martin d 19.55 309 *e*P **Pn 07 27 14.2 -0.8**
comp=Z,20nm,0.9s
MFF Saint Martin d 19.55 309 *e*P **Pn 07 27 14.2 -0.8**
MFF pmax pmax
comp=Z,10.0nm,0.9s
MFF Saint Martin d 19.55 309 *e*P **Pn 07 27 14.2 -0.8**
comp=Z,9.8nm,0.9s
MFF Saint Martin d 19.55 309 *e*P **Pn 07 27 14.2 -0.8**
comp=Z,9.8nm,0.9s
BSD Bornholm Skovb 19.61 348 *i* P **Pn 07 27 12.9 -2.8**
BSD pmax pmax
comp=Z,29nm,0.9s
BSD MLR MLR
comp=Z,340nm,20.0s
BSD Bornholm Skovb 19.61 348 *i* P **Pn 07 27 12.9 -2.8**
comp=Z,29nm,0.9s
BSD
comp=Z,330nm,20.0s
BSD Bornholm Skovb 19.61 348 *i* P **Pn 07 27 12.9 -2.8**
comp=Z,340nm,20.0s
VOR Voronezh 19.89 33 *e*P **Pn 07 27 16.0 -3.0**
VOR *e*S **Sn 07 30 55.0 -7.4**
VOR pmax pmax
comp=Z,200nm,1.6s
VOR Voronezh 19.89 33 *e*P **Pn 07 27 16.0 -3.0**
comp=Z,200nm,1.6s
LDF La Druitiere 20.44 314 *e*P **P 07 27 23.0 -0.4**
comp=Z,42nm,1.0s
LDF La Druitiere 20.44 314 *e*P **P 07 27 23.0 -0.4**
LDF pmax pmax
comp=Z,21nm,1.0s
LDF La Druitiere 20.44 314 *e*P **P 07 27 23.0 -0.4**
comp=Z,21nm,1.0s
LDF La Druitiere 20.44 314 *e*P **P 07 27 23.0 -0.4**
comp=Z,21nm,1.0s
EGUA Guajares 20.50 280 P **P 07 27 26.3 +2.1**
EGUA pmax pmax
comp=Z,66nm,0.8s
EGUA Guajares 20.50 280 P **P 07 27 26.2 +2.1**
comp=Z,66nm,0.8s
EGUA Guajares 20.50 280 P **P 07 27 26.2 +2.0**
comp=Z,66nm,0.8s
VRHR Novokhopersk 20.59 37 *e*P **P 07 27 25.8 +0.8**
VRHR pmax pmax
comp=N,90nm,1.1s
VRHR pmax pmax
comp=E,50nm,1.1s
VRHR pmax pmax
comp=Z,50nm,1.1s
VRHR Novokhopersk 20.59 37 *e*P **P 07 27 25.8 +0.8**
COP Copenhagen 20.63 345 *e*P **P 07 27 15.5 -10**
COP MLR MLR
comp=Z,200nm,18.0s,MS3.5
COP Copenhagen 20.63 345 *i* P **P 07 27 15.5 -10**
COP
comp=Z,190nm,18.0s
ESDC Sonseca Array 20.72 288 P **P 07 27 26.1 -0.5**
comp=Z,4.3nm,0.6s,baz=86,slow=10,SNR=16
ESDC Sonseca Array 20.72 288 P **P 07 27 26.0 -0.5**
ESLA Sonseca Array 20.72 288 *e*P **P 07 27 28.1 +1.5**
ESLA Sonseca Array 20.72 288 *e*P **P 07 27 28.0 +1.5**
FLN La Foliniere 20.73 315 *e*P **P 07 27 25.9 -0.6**
comp=Z,58nm,1.0s
FLN *e*MLR MLR
comp=Z,225nm,20.8s,MS3.2
FLN La Foliniere 20.73 315 *e*P **P 07 27 25.9 -0.6**
FLN pmax pmax
comp=Z,29nm,1.0s
FLN MLR MLR
comp=Z,230nm,20.8s,MS3.5
FLN La Foliniere 20.73 315 *e*P **P 07 27 25.9 -0.6**
comp=Z,29nm,1.0s
FLN LR LR
comp=Z,230nm,20.8s,MS3.5
FLN La Foliniere 20.73 315 *e*P **P 07 27 25.9 -0.6**
comp=Z,29nm,1.0s
ELAN Lanestosa 20.73 298 P **P 07 27 25.6 -1.0**
comp=Z,200nm,2.8s
ELAN Lanestosa 20.73 298 P **P 07 27 25.6 -1.0**
comp=Z,200nm,2.8s
GRR Gorron 20.77 313 *e*P **P 07 27 26.7 -0.3**
comp=Z,24nm,0.9s
GRR Gorron 20.77 313 *e*P **P 07 27 26.7 -0.3**
GRR pmax pmax
comp=Z,12nm,0.9s
GRR Gorron 20.77 313 *e*P **P 07 27 26.7 -0.3**
comp=Z,12nm,0.9s
GRR Gorron 20.77 313 *e*P **P 07 27 26.7 -0.3**
comp=Z,12nm,0.9s
MAK Makhachkala 20.83 63 *e*P **P 07 27 26.9 -0.8**
MAK *e* 07 27 45.9
MAK *e*S **S 07 31 22.7 +2.7**
MAK *e*SS 07 31 38.9
MAK *e*SSS 07 31 55.5
MAK pmax pmax
comp=Z,223nm,1.5s
MAK MLR MLR
comp=Z,448nm,18.0s,MS3.9
MAK Makhachkala 20.83 63 *e*P **P 07 27 26.9 -0.8**
comp=Z,223nm,1.5s
GUD Guadarrama 20.91 290 P **P 07 27 28.2 -0.4**
GUD pmax pmax
comp=Z,368nm,2.8s
GUD Guadarrama 20.91 290 P **P 07 27 28.2 -0.4**
comp=Z,368nm,2.8s
GUD Guadarrama 20.91 290 P **P 07 27 28.2 -0.4**
comp=Z,368nm,2.8s
PAB San Pablo 21.01 287 P **P 07 27 30.1 +0.4**
PAB pmax pmax
comp=Z,16nm,1.1s,mb4.3
PAB San Pablo 21.01 287 P **P 07 27 30.1 +0.4**
comp=Z,16nm,1.1s,mb4.3
PAB San Pablo 21.01 287 P **P 07 27 30.1 +0.4**
comp=Z,16nm,1.1s,mb4.3
EADA Adamuz 21.21 284 P **P 07 27 32.2 +0.4**
comp=Z,104nm,2.4s,mb4.7
EADA Adamuz 21.21 284 P **P 07 27 32.2 +0.4**
comp=Z,104nm,2.4s,mb4.7
TZK Tazeka 21.44 272 *i* P **P 07 27 35.0 +0.6**
EMIJ Mijas 21.50 279 P **P 07 27 35.9 +0.9**
comp=Z,46nm,2.4s,mb4.4
EMIJ Mijas 21.50 279 P **P 07 27 35.8 +0.9**
comp=Z,46nm,2.4s,mb4.4
OBN Obninsk 21.51 23 *e*P **P 07 27 33.4 -1.5**
OBN *i* 07 27 59.9
OBN *i* S **S 07 31 33.0 -0.1**
OBN pmax pmax
comp=Z,66nm,1.2s,mb4.9
OBN MLR MLR
comp=Z,200nm,17.0s,MS3.6
OBN Obninsk 21.51 23 *e*P **P 07 27 32.8 -2.1**
comp=Z,32nm,0.6s,mb4.9
OBN Obninsk 21.51 23 *e*P **P 07 27 33.4 -1.5**
comp=Z,66nm,1.2s,mb4.9

SGMF Saint Gilles 21.73 312 *e*P **P 07 27 35.6 -1.7**
comp=Z,78nm,1.3s,mb4.7
SGMF Saint Gilles 21.73 312 *e*P **P 07 27 35.6 -1.7**
SGMF pmax pmax
comp=Z,39nm,1.3s,mb4.7
SGMF Saint Gilles 21.73 312 *e*P **P 07 27 35.6 -1.7**
comp=Z,39nm,1.3s,mb4.7
SGMF Saint Gilles 21.73 312 *e*P **P 07 27 35.6 -1.7**
comp=Z,39nm,1.3s,mb4.7
QUIF Quistinic 21.96 310 *e*P **P 07 27 40.4 +0.6**
comp=Z,207nm,1.8s,mb5.0
QUIF Quistinic 21.96 310 *e*P **P 07 27 40.4 +0.6**
QUIF pmax pmax
comp=Z,103nm,1.8s,mb5.0
QUIF Quistinic 21.96 310 *e*P **P 07 27 40.4 +0.6**
comp=Z,103nm,1.8s,mb5.0
QUIF Quistinic 21.96 310 *e*P **P 07 27 40.4 +0.6**
comp=Z,103nm,1.8s,mb5.0
MDT Midelt 22.11 269 P **P 07 27 40.9 -0.6**
comp=Z,4.6nm,0.8s,mb3.9,baz=90,slow=12,SNR=12
MDT Midelt 22.11 269 P **P 07 27 40.9 -0.6**
ZFT Errachidia 22.12 267 *i* P **P 07 27 44.0 +2.3**
MIB Mutribah 22.20 99 *e*P **P 07 27 41.3 -1.2**
MIB AMb AMB 07 27 42.9
comp=Z,122nm,0.9s,mb5.3
MIB Mutribah 22.20 99 *e*P **P 07 27 41.3 -1.2**
comp=Z,122nm,0.9s,mb5.3
ROSF Rostrenen 22.20 311 *e*P **P 07 27 39.3 -3.0**
comp=Z,74nm,1.2s,mb4.7
ROSF Rostrenen 22.20 311 *e*P **P 07 27 39.3 -3.0**
ROSF pmax pmax
comp=Z,37nm,1.2s,mb4.7
ROSF Rostrenen 22.20 311 *e*P **P 07 27 39.3 -3.0**
comp=Z,37nm,1.2s,mb4.7
NAY Al-Naaiem 22.34 101 *e*P **P 07 27 43.0 -1.0**
NAY AMb AMB 07 27 45.2
comp=Z,56nm,1.1s,mb4.9
NAY Al-Naaiem 22.34 101 *e*P **P 07 27 43.0 -1.0**
comp=Z,56nm,1.1s,mb4.9
MOS Moscow 22.37 24 *e*P **P 07 27 42.1 -1.9**
MOS *e* 07 31 36.3
MOS *e*S **S 07 31 48.0 -1.8**
MOS pmax pmax
comp=Z,200nm,1.3s,mb5.4
MOS pmax pmax
comp=Z,98nm,1.1s,mb5.2
VSU Vasula 22.59 7⇑ *i*P **P 07 27 44.2 -2.2**
VSU pmax pmax
comp=Z,52nm,1.9s,mb4.6
UMR Umm Al-Rimmam 22.60 99 *e*P **P 07 27 45.5 -1.3**
UMR Umm Al-Rimmam 22.60 99 *e*P **P 07 27 45.5 -1.2**
RSA Sarsar 22.61 275 *e*P **P 07 27 47.0 +0.2**
RDF Al-Radifah 22.72 101 *e*P **P 07 27 47.2 -0.9**
RDF AMb AMB 07 27 49.9
comp=Z,45nm,1.5s,mb4.7
RDF Al-Radifah 22.72 101 *e*P **P 07 27 47.2 -0.9**
comp=Z,45nm,1.5s,mb4.7
EMIN Mina Concepcio 22.89 283 P **P 07 27 49.3 -0.5**
comp=Z,107nm,2.4s,mb4.8
EMIN Mina Concepcio 22.89 283 P **P 07 27 49.3 -0.5**
comp=Z,107nm,2.4s,mb4.8
MVO Moncorvo 23.12 291 P **P 07 27 51.2 -1.0**
MVO Moncorvo 23.12 291 *e*P **P 07 27 51.2 -1.0**
comp=Z,26nm,1.3s,mb4.5
MVO Moncorvo 23.12 291 *e*P **P 07 27 51.2 -1.0**
comp=Z,26nm,1.3s,mb4.5
PBAR Barrancos 23.15 284 *e*P **P 07 27 52.8 +0.3**
comp=Z,27nm,1.5s,mb4.5
PBAR Barrancos 23.15 284 *e*P **P 07 27 52.8 +0.3**
comp=Z,27nm,1.5s,mb4.5
PMRV Marv??o 23.37 287 *e*P **P 07 27 54.5 -0.3**
comp=Z,22nm,1.3s,mb4.4
PMRV Marv??o 23.37 287 *e*P **P 07 27 54.5 -0.3**
comp=Z,22nm,1.3s,mb4.4
PCBR Castelo Branco 23.43 288 *e*P **P 07 27 54.1 -1.4**
comp=Z,20nm,1.3s,mb4.4
PCBR Castelo Branco 23.43 288 *e*P **P 07 27 54.1 -1.4**
comp=Z,20nm,1.3s,mb4.4
MTE Manteigas 23.48 289 *e*P **P 07 27 57.9 +1.9**
comp=Z,23nm,1.4s,mb4.4
MTE Manteigas 23.48 289 *e*P **P 07 27 57.9 +1.9**
comp=Z,23nm,1.4s,mb4.4
PESTR Estremoz 23.54 286 *e*P **P 07 27 56.3 -0.3**
comp=Z,19nm,1.2s,mb4.4
PESTR Estremoz 23.54 286 *e*P **P 07 27 56.3 -0.3**
comp=Z,19nm,1.2s,mb4.4
PVAQ Vaqueiros 23.75 282 *e*P **P 07 27 59.1 +0.6**
comp=Z,34nm,1.3s,mb4.6
PVAQ Vaqueiros 23.75 282 *e*P **P 07 27 59.1 +0.6**
comp=Z,34nm,1.3s,mb4.6
PVIS Viseu 23.76 290 *e*P **P 07 27 57.3 -1.3**
comp=Z,16nm,1.5s,mb4.2
PVIS Viseu 23.76 290 *e*P **P 07 27 57.3 -1.3**
comp=Z,16nm,1.5s,mb4.2
PBEJ Beja 23.81 284 *e*P **P 07 28 00.8 +1.7**
comp=Z,28nm,1.5s,mb4.5
PBEJ Beja 23.81 284 *e*P **P 07 28 00.8 +1.7**
comp=Z,28nm,1.5s,mb4.5
EVO Evora 23.89 285 *e*P **P 07 28 00.4 +0.6**
comp=Z,11nm,0.9s,mb4.0
EVO *e*MLR MLR
comp=Z,678nm,21.8s,MS3.8
EVO Evora 23.89 285 *e*P **P 07 27 59.5 -0.3**
comp=Z,20nm,1.5s,mb4.3
EVO Evora 23.89 285 *e*P **P 07 27 59.5 -0.3**
comp=Z,20nm,1.5s,mb4.3
PCAB Cabril 23.90 293 *e*P **P 07 28 02.0 +2.1**
comp=Z,18nm,1.6s,mb4.2
PCAB Cabril 23.90 293 *e*P **P 07 28 02.0 +2.1**
comp=Z,18nm,1.6s,mb4.2
PBDV Barranco-do-Ve 23.93 282 *e*P **P 07 28 01.3 +1.1**
comp=Z,59nm,1.7s,mb4.7
PBDV Barranco-do-Ve 23.93 282 *e*P **P 07 28 01.3 +1.1**
comp=Z,59nm,1.7s,mb4.7
EVOP Sao Brissos 23.98 285 *e*P **P 07 28 00.4 -0.2**
comp=Z,5.5nm,0.9s,mb4.0
PCVE Castro Verde 23.98 283 *e*P **P 07 28 02.9 +2.2**
comp=Z,28nm,1.8s,mb4.4
PCVE Castro Verde 23.98 283 *e*P **P 07 28 02.9 +2.2**
comp=Z,28nm,1.8s,mb4.4
HFS Hagfors 24.62 350 P **P 07 28 04.7 -1.6**
comp=Z,4.1nm,0.5s,mb4.2,baz=163,slow=11,SNR=19
HFS LR LR 07 38 46.9
comp=Z,286nm,19.9s,MS3.8,baz=168,slow=39
HFS Hagfors 24.62 350 P **P 07 28 04.7 -1.6**
HFS pmax pmax
comp=Z,4.0nm,0.5s
HFS MLR MLR
comp=Z,286nm,19.9s
HFS Hagfors 24.62 350 P **P 07 28 04.7 -1.6**
comp=Z,286nm,19.9s
KONO Kongsberg 24.88 345 *e*S **S 07 32 32.2 +0.7**
KONO Kongsberg 24.88 345⇑ *i*P **P 07 28 06.5 -2.1**
FINES FINESS Array B 25.49 5 P **P 07 28 13.0 -1.2**
comp=Z,30nm,0.8s,mb4.9,baz=160,slow=11,SNR=15
FINES pP pP 07 28 19.8 +2.5
comp=Z,30nm,0.8s,baz=158,slow=11,SNR=28
FINES LR LR 07 39 25.1
comp=Z,578nm,19.9s,MS4.1,baz=360,slow=39
FINES FINESS Array B 25.49 5 P **P 07 28 13.0 -1.2**
FINES *PP pP 07 28 19.8 +2.6
FINES pmax pmax
comp=Z,30nm,0.8s
FINES MLR MLR
comp=Z,578nm,19.9s
FINES FINESS Array B 25.49 5 P **P 07 28 13.0 -1.2**
comp=Z,30nm,0.8s,mb4.9
NAO01 NORSAR Array S 25.74 348 *e*P **P 07 28 15.2 -1.2**
comp=Z,7.9nm,0.6s,mb4.4
NAO01 NORSAR Array S 25.74 348 *e*P **P 07 28 15.2 -1.2**
comp=Z,7.9nm,0.6s,mb4.4
EKA Eskdalemuir Ar 25.77 326 P **P 07 28 15.8 -1.0**
comp=Z,4.6nm,0.9s,mb4.0,baz=125,slow=7.9,SNR=9.6
EKA pP pP 07 28 23.6 +3.8
comp=Z,13nm,0.9s,baz=122,slow=8.1,SNR=11
EKA Eskdalemuir Ar 25.77 326 P **P 07 28 15.8 -0.9**
EKA *PP pP 07 28 23.6 +3.8
EKA pmax pmax
comp=Z,5.0nm,0.9s
EKA Eskdalemuir Ar 25.77 326 P **P 07 28 15.8 -0.9**
comp=Z,5.0nm,0.9s,mb4.0
NB2 NORSAR Subarra 25.87 348 P **P 07 28 16.0 -1.6**
comp=Z,0.8nm,0.7s,mb3.4,baz=155,slow=11
NB2 NORSAR Subarra 25.87 348 P **P 07 28 16.0 -1.6**
NOA NORSAR Array B 25.87 348 P **P 07 28 16.6 -1.0**
comp=Z,3.8nm,0.9s,mb3.9,baz=159,slow=9.7,SNR=11
NOA pP pP 07 28 24.6 +3.9

comp=Z,14nm,0.9s,baz=159,slow=9.8,SNR=21
NOA LR LR 07 39 55.3
comp=Z,180nm,18.5s,MS3.6,baz=170,slow=40
NOA NORSAR Array B 25.87 348 P **P 07 28 16.6 -1.0**
NOA *PP pP 07 28 24.6 +4.0
NOA pmax pmax
comp=Z,4.0nm,0.9s
NOA MLR MLR
comp=Z,180nm,18.5s
NOA NORSAR Array B 25.87 348 P **P 07 28 16.6 -1.0**
comp=Z,4.0nm,0.9s,mb4.0
KAF Kangasniemi 26.17 5 *e*P **P 07 28 18.0 -2.3**
KAF pmax pmax
comp=Z,45nm,1.0s,mb5.0
KAF Kangasniemi 26.17 5 *e*p **P 07 28 18.0 -2.3**
comp=Z,44nm,1.0s,mb5.0
KAF Kangasniemi 26.17 5 *e*p **P 07 28 18.0 -2.3**
comp=Z,44nm,1.0s,mb5.0
BER Bergen 26.53 341 *e*S **S 07 32 56.7 -0.9**
JOF Joensuu 27.46 9 *e*P **P 07 28 30.3 -1.6**
JOF pmax pmax
comp=Z,10.0nm,0.8s,mb4.4
JOF Joensuu 27.46 9 *e*p **P 07 28 30.3 -1.6**
comp=Z,10nm,0.8s,mb4.4
JOF Joensuu 27.46 9 *e*p **P 07 28 30.3 -1.6**
comp=Z,10nm,0.8s,mb4.4
JOF Joensuu 27.46 9 *e*P **P 07 28 30.3 -1.6**
comp=Z,10nm,0.8s,mb4.4
TORD Torodi Ar. Bea 29.22 224 P **P 07 28 48.8 +0.8**
comp=Z,4.2nm,0.8s,mb4.2,baz=36,slow=8.2,SNR=27
TORD pP pP 07 28 54.6 +3.6
comp=Z,4.0nm,0.6s,baz=37,slow=9.7,SNR=12
TORD LR LR 07 42 45.9
comp=Z,323nm,18.4s,MS4.0,baz=25,slow=41
AKTK Aktyubinsk 29.59 50 P **P 07 28 48.7 -2.3**
AKTK pP pP 07 28 55.6 +1.5
AKTK LR LR 07 43 32.4
AKTO Aktyubinsk 29.59 50 P **P 07 28 48.7 -2.3**
comp=Z,2.9nm,0.8s,mb4.1,baz=269,slow=9.1,SNR=8.3
AKTO pP pP 07 28 55.6 +1.5
comp=Z,3.8nm,0.7s,baz=260,slow=12,SNR=6.4
AKTO LR LR 07 43 32.3
comp=Z,210nm,20.9s,MS3.7,baz=87,slow=42
AKTO Aktyubinsk 29.59 50 P **P 07 28 48.7 -2.3**
AKTO *PP pP 07 28 55.7 +1.6
AKTO pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
AKTO MLR MLR
comp=Z,210nm,20.9s,MS3.7
ABKAR Akbulak array 30.54 53 *e*P **P 07 28 57.8 -1.6**
comp=Z,2.6nm,0.5s,mb4.3
ATD Arta Tunnel 30.92 137 LR LR 07 42 24.0
comp=Z,122nm,19.2s,MS3.6,baz=335,slow=38
ARU Arti 31.91 39*d* *i*P **P 07 29 10.0 -1.4**
ARU *e* 07 30 12.9
ARU S **S 07 34 20.3 -1.9**
ARU SS SS 07 36 08.4 -30
ARU pmax pmax
comp=Z,31nm,1.7s,mb4.9
ARU Arti 31.91 39 *e*P **P 07 29 09.5 -1.9**
comp=Z,21nm,1.1s,mb4.9
SOKR Solikamsk 32.52 33*c* *i*P **P 07 29 16.1 -0.6**
SOKR pmax pmax
comp=Z,40nm,1.0s,mb5.3
SVE Sverdlovsk 33.12 39⇑ *e*P **P 07 29 21.2 -0.8**
SVE *e*S **S 07 34 31.7 -9.3**
SVE pmax pmax
comp=Z,27nm,1.1s,mb5.1
SVE MLR MLR
comp=Z,257nm,13.0s,MS4.1
ARCES ARCESS Array B 33.54 2 P **P 07 29 24.8 -0.8**
comp=Z,3.7nm,0.6s,mb4.5,baz=186,slow=8.9,SNR=35
ARCES LR LR 07 44 04.8
comp=Z,273nm,18.4s,MS4.0,baz=55,slow=38
ARCES ARCESS Array B 33.54 2 P **P 07 29 24.8 -0.7**
ARCES pmax pmax
comp=Z,4.0nm,0.6s
ARCES MLR MLR
comp=Z,273nm,18.4s
ARE0 ARCESS Array S 33.54 2 *e*P **P 07 29 24.0 -1.5**
TRO Tromso 33.62 358 *e*S **S 07 34 45.9 -2.6**
BRVK Borovoye 37.57 48⇓ *i*P **P 07 29 58.9 -1.5**
BRVK pmax pmax
comp=Z,15nm,1.4s,mb4.5
BRVK Borovoye 37.57 48 *e*P **P 07 29 59.5 -0.9**
comp=Z,11nm,0.8s,mb4.6
BRVK *e*pP pP 07 30 06.9 +3.4
BVAR Borovoye Array 37.63 48 P **P 07 29 59.5 -1.4**
comp=Z,2.4nm,0.6s,mb4.1,baz=266,slow=5.9,SNR=18
BVAR pP pP 07 30 06.6 +2.6
comp=Z,4.9nm,0.7s,baz=261,slow=6.1,SNR=18
BVAR PP PP 07 31 20.2 -6.4
comp=Z,1.2nm,0.8s,baz=225,slow=12,SNR=2.0
DBIC Dimbokro 38.21 226 P **P 07 30 06.3 +0.2**
comp=Z,8.8nm,0.9s,mb4.5,baz=34,slow=6.1,SNR=4.8
DBIC Dimbokro 38.21 226 P **P 07 30 06.3 +0.2**
DBIC pmax pmax
comp=Z,9.0nm,1.0s
DBIC Dimbokro 38.21 226 P **P 07 30 06.3 +0.2**
TIC Toumodi 38.32 227 *e*P **P 07 30 07.3 +0.2**
comp=Z,58nm,1.4s,mb5.1
TIC Toumodi 38.32 227 *e*P **P 07 30 07.3 +0.2**
TIC pmax pmax
comp=Z,58nm,1.4s,mb5.1
KIC Kosan Boka 38.39 226 *e*P **P 07 30 08.0 +0.4**
comp=Z,23nm,0.8s,mb5.0
LIC Lamto 38.66 226 *e*P **P 07 30 10.3 +0.3**
comp=Z,88nm,1.4s,mb5.3
EKS2 Erkin-Say 40.08 64 P **P 07 30 21.3 -0.2**
SNR=12
EKS2 Erkin-Say 40.08 64 *e*P **P 07 30 21.2 -0.3**
comp=Z,18nm,0.8s,mb4.9
EKS2 *e*pP pP 07 30 28.6 +3.9
AAK Ala-Archa 40.61 64 P **P 07 30 26.3 +0.4**
SNR=6.3
AAK Ala-Archa 40.61 64 P **P 07 30 26.0 +0.1**
comp=Z,2.0nm,0.3s,mb4.2,baz=212,slow=4.4,SNR=15
AAK Ala-Archa 40.61 64 P **P 07 30 26.0 +0.1**
AAK pmax pmax
comp=Z,2.0nm,0.3s,mb4.2
FRU Bishkek 40.67 64 *i* P **P 07 30 24.0 -2.4**
FRU pmax pmax
comp=Z,100nm,1.6s,mb5.2
UCH Uchtor 40.69 65 P **P 07 30 25.3 -1.3**
SNR=7.2
UCH Uchtor 40.69 65 *e*P **P 07 30 26.6 +0.1**
comp=Z,8.3nm,1.0s,mb4.3
UCH *e*pP pP 07 30 34.9 +5.3
CHMS Chumysh 40.74 64 P **P 07 30 27.4 +0.4**
SNR=5.1
KZA Kyzart 41.25 65 P **P 07 30 31.2 0.0**
SNR=15
TKM2 Tokmak 2 41.36 64 *e*P **P 07 30 31.6 -0.5**
TKM2 *e**PP pP 07 30 38.6 +3.4
TKM2 pmax pmax
comp=Z,7.0nm,0.8s,mb4.3
TKM2 Tokmak 2 41.36 64 *e*P **P 07 30 31.6 -0.5**
comp=Z,7.4nm,0.8s,mb4.4
TKM2 *e*pP pP 07 30 38.6 +3.4
SCO Scoresbysund 41.52 339 *i* P **P 07 30 32.9 -0.1**
SCO pmax pmax
comp=Z,8.0nm,1.0s,mb4.3
SCO MLR MLR
comp=Z,96nm,18.0s,MS3.7
ULHL Ulahol 41.95 64 P **P 07 30 37.1 +0.2**
SNR=12
KSH Kashi 42.30 68⇓ *i*P **P 07 30 38.5 -1.3**
KSH pP pP 07 30 45.8 +2.8
KSH sP sP 07 30 49.3 +5.1
KSH PP PP 07 32 18.8 +1.1
KSH PcP PcP 07 32 34.9 +1.5
KSH ScP ScP 07 36 22.3 -1.8
KSH PcS PcS 07 36 25.3 +0.1
KSH S **S 07 36 53.9 -6.7**
KSH sS sS 07 37 06.5 +0.8
KSH SS SS 07 39 55.4 -13
KSH ScS ScS 07 40 37.6 -4.4
KSH pmax pmax
comp=Z,9.0nm,1.1s,mb4.3
KSH pmax pmax
comp=Z,86nm,4.9s
KSH LR LR
comp=N,140nm,12.7s
KSH LR LR
comp=E,140nm,7.0s
KSH LR LR

comp=Z,110nm,4.9s
KURK Kurchatov 42.64 52 P **P 07 30 40.3 -2.2**
comp=Z,2.3nm,0.6s,mb4.1,baz=277,slow=8.5,SNR=15
KURK pP pP 07 30 47.4 +1.8
comp=Z,6.6nm,0.7s,baz=274,slow=8.5,SNR=18
KURK Kurchatov 42.64 52 *e*P **P 07 30 40.6 -1.9**
KURK *e**PP pP 07 30 47.7 +2.1
KURK pmax pmax
comp=Z,11nm,1.1s,mb4.5
KURK Kurchatov 42.64 52 *e*P **P 07 30 40.6 -1.9**
comp=Z,11nm,1.1s,mb4.5
KURK *e*pP pP 07 30 47.7 +2.2
KBS Kingsbay 43.13 357 AMS AMS 08 24 57.4
comp=Z,717nm,19.8s,MS4.6
NVS Novosibirsk 45.29 46 *i* P **P 07 31 02.4 -1.3**
NVS *e* 07 32 51.3
NVS *i* S **S 07 37 42.8 -1.1**
NVS pmax pmax
comp=Z,32nm,2.2s,mb4.8
NVS pmax pmax
comp=N,6.0nm,2.5s
NVS pmax pmax
comp=E,14nm,2.5s
NVS smax
comp=N,34nm,2.0s
NVS smax
comp=E,16nm,2.0s
MK31 Makanchi Array 45.46 57 *e*P **P 07 31 03.7 -1.4**
MK31 *e**PP pP 07 31 11.1 +2.9
MKAR Makanchi Array 45.46 57 P **P 07 31 03.6 -1.5**
comp=E,3.3nm,0.3s,mb4.6,baz=277,slow=7.0,SNR=79
MKAR pP pP 07 31 10.5 +2.3
comp=E,8.4nm,0.5s,baz=280,slow=6.6,SNR=24
MKAR Makanchi Array 45.46 57 P **P 07 31 03.6 -1.5**
MKAR *PP pP 07 31 10.5 +2.3
MKAR pmax pmax
comp=Z,3.0nm,0.4s
ZAA0 Zalesovo Array 46.26 47 *e*P **P 07 31 09.5 -1.9**
ZAA0 *e*pP pP 07 31 16.7 +2.2
ZALV Zalesovo Beam 46.26 47 P **P 07 31 09.6 -1.7**
comp=Z,2.9nm,0.4s,mb4.5,baz=266,slow=8.9,SNR=16
ZALV pP pP 07 31 16.6 +2.2
comp=Z,8.9nm,0.6s,baz=273,slow=8.4,SNR=17
ZALV Zalesovo Beam 46.26 47 P **P 07 31 09.6 -1.7**
ZALV *PP pP 07 31 16.7 +2.2
ZALV pmax pmax
comp=Z,3.0nm,0.4s,mb4.6
SUMG Summit 47.16 339 *e*P **P 07 31 18.7 +0.6**
comp=Z,15nm,1.1s,mb4.8
WMQ Urumqi 49.80 60 P **P 07 31 39.0 +0.1**
WMQ pP pP 07 31 47.0 +4.9
WMQ sP sP 07 31 50.0 +6.7
WMQ PP PP 07 33 34.0 +0.6
WMQ S **S 07 38 45.0 -3.3**
WMQ ScS ScS 07 41 26.0 -4.5
WMQ SS SS 07 42 13.0 -7.5
WMQ pmax pmax
comp=Z,19nm,1.0s,mb5.1
WMQ pmax pmax
comp=Z,86nm,5.0s
WMQ LR LR
comp=N,260nm,16.0s,MS4.5
WMQ LR LR
comp=E,270nm,16.0s,MS4.5
WMQ LR LR
comp=Z,170nm,16.0s,MS4.1
DMN Daman 53.51 80 *e*P **P 07 32 06.0 -0.8**
comp=Z,50nm,0.8s,mb5.5
KKN Kakani 53.57 80 *e*P **P 07 32 05.8 -1.5**
comp=Z,21nm,0.6s,mb5.2
PKI Pulchoki 53.77 80 *e*P **P 07 32 07.7 -1.0**
comp=Z,96nm,1.3s,mb5.5
GUN Gumba 53.99 79 *e*P **P 07 32 08.6 -1.8**
comp=Z,38nm,0.9s,mb5.3
RAMN Ramite 54.99 80 *e*P **P 07 32 16.2 -1.4**
comp=Z,72nm,1.2s,mb5.6
ODAN Odare 55.66 80 *e*P **P 07 32 20.6 -1.9**
comp=Z,17nm,0.7s,mb5.2
TAPN Taplejung 55.70 79 *e*P **P 07 32 20.3 -2.4**
comp=Z,104nm,1.6s,mb5.6
LSA Lhasa 57.37 75 *e*P **P 07 32 33.5 -1.1**
LSA pmax pmax
comp=Z,16nm,0.8s,mb5.1
LSA Lhasa 57.37 75 *e*P **P 07 32 33.5 -1.2**
comp=Z,16nm,0.8s,mb5.1
ZAK Zakamensk 58.09 48 *e*P **P 07 32 37.4 -1.9**
ZAK pmax pmax
comp=Z,3.0nm,1.3s,mb4.2
GTA Gaotai 59.83 61 P **P 07 32 51.0 -0.6**
GTA pP pP 07 32 58.6 +3.8
GTA sP sP 07 33 01.8 +5.8
GTA S **S 07 40 58.1 -4.9**
GTA sS sS 07 41 10.4 +2.1
GTA SS SS 07 44 56.9 -1.8
GTA pmax pmax
comp=Z,6.0nm,1.4s,mb4.4
GTA LR LR
comp=N,710nm,25.0s
GTA LR LR
comp=E,810nm,16.7s
GTA LR LR
comp=Z,1μm,27.4s,MS4.9
SCHQ Schefferville 60.75 318 P **P 07 32 57.3 -0.3**
comp=Z,4.1nm,0.6s,mb4.7,baz=73,slow=3.8,SNR=11
SCHQ Schefferville 60.75 318 *e*P **P 07 32 57.5 -0.1**
comp=Z,4.0nm,0.6s,mb4.7
SONM Songino Array 60.91 50 P **P 07 32 57.8 -1.0**
comp=Z,1.2nm,0.6s,mb4.2,baz=289,slow=8.7,SNR=11
SONM Songino Array 60.91 50 P **P 07 32 57.8 -1.1**
SONM pmax pmax
comp=Z,1.0nm,0.6s
TIXI Tiksi 61.20 20 *e*P **P 07 32 59.3 -1.2**
TIXI *e**PP pP 07 33 06.4 +2.7
TIXI pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
TIXI Tiksi 61.20 20 *e*P **P 07 32 59.3 -1.2**
comp=Z,7.9nm,0.8s,mb4.9
TIXI *e*pP pP 07 33 06.4 +2.7
ULN Ulaanbaatar 61.31 50 *e*P **P 07 33 00.4 -1.2**
ULN pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
ULN Ulaanbaatar 61.31 50 *e*P **P 07 33 00.4 -1.1**
comp=Z,3.6nm,0.9s,mb4.5
CD2 Chengdu 66.50 68 *e*P **P 07 33 35.5 -0.5**
CD2 pP pP 07 33 43.3 +4.0
CD2 sP sP 07 33 46.8 +6.3
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
CD2 pmax pmax
comp=Z,30nm,4.8s
HHC Hu-ho-hao-te 67.28 55 *e*P **P 07 33 40.8 -0.1**
HHC pP pP 07 33 48.8 +4.7
HHC sP sP 07 33 51.9 +6.6
HHC PcP PcP 07 34 09.3 +0.7
HHC PP PP 07 36 10.0 +1.2
HHC ScP 07 38 10.0
HHC PcS 07 38 13.6
HHC S S 07 42 31.4 -4.5
HHC sS sS 07 42 44.8 +3.5
HHC ScS ScS 07 43 32.8 -6.1
HHC SS SS 07 46 52.3 -2.6
HHC pmax pmax
comp=Z,20nm,1.0s,mb5.1
HHC pmax pmax
comp=Z,320nm,7.0s
HHC LR LR
comp=N,820nm,15.9s,MS5.2
HHC LR LR
comp=E,1μm,17.8s,MS5.2
HHC LR LR
comp=Z,2μm,16.1s,MS5.3
KMI Kunming 68.60 74 P **P 07 33 50.8 +1.4**
KMI pP pP 07 33 57.8 +5.2
KMI sP sP 07 34 01.4 +7.6
KMI pmax pmax
comp=Z,15nm,1.5s,mb4.7
KMI pmax pmax
comp=Z,370nm,5.7s
GYA Guiyang 70.94 71 P **P 07 34 03.8 0.0**
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
CN2 Changchun 74.48 47 *e*P **P 07 34 23.8 -0.7**
CN2 *e*pP pP 07 34 31.3 +3.5
CN2 *e*sP sP 07 34 34.9 +5.9
CN2 *e*S S 07 43 52.8 -6.7
CN2 pmax pmax
comp=Z,20nm,1.0s,mb5.0
CN2 pmax pmax
comp=Z,200nm,8.0s
CN2 LR LR
comp=N,500nm,16.0s,MS5.0
CN2 LR LR
comp=E,500nm,16.0s,MS5.0
CN2 LR LR
comp=Z,800nm,17.0s,MS5.1
YKA Yellowknife Ar 75.72 341 P **P 07 34 30.7 -0.6**
comp=Z,1.3nm,0.8s,mb3.9,baz=38,slow=5.7,SNR=8.3
NJ2 Nanjing 76.88 60 *e*P **P 07 34 38.3 -0.2**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
FFC Flin Flon 77.54 330 P **P 07 34 41.2 -0.6**
FFC pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
FFC Flin Flon 77.54 330 P **P 07 34 41.2 -0.6**
comp=Z,4.6nm,1.0s,mb4.4
ULM Lac du Bonnet 78.03 325 P **P 07 34 45.0 +0.3**
comp=Z,3.0nm,0.6s,mb4.4,baz=45,slow=1.4,SNR=2.9
ULM Lac du Bonnet 78.03 325 P **P 07 34 45.0 +0.3**
KSRS Korea Array 79.76 51 P **P 07 34 53.8 -0.6**
comp=Z,4.1nm,0.8s,mb4.4,baz=316,slow=4.5,SNR=6.0
KSRS Korea Array 79.76 51 P **P 07 34 53.8 -0.6**
KSRS pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
YSS Yuzh-Sakhalins 81.77 36 *e*P **P 07 35 04.3 -0.6**
YSS *e* 07 46 06.0
YSS MLR MLR
comp=Z,700nm,18.0s,MS5.1
YSS MLR MLR
comp=N,900nm,17.0s,MS5.4
YSS MLR MLR
comp=E,900nm,15.0s,MS5.4
ECSD EROS Data Cent 82.90 320 *e*P **P 07 35 10.5 -0.4**
comp=E,5.5nm,1.3s,mb4.4
ASAJ Asahikawa 83.71 39 P **P 07 35 14.2 -0.9**
comp=E,2.9nm,0.6s,mb4.6,baz=162,slow=20,SNR=4.5
ASAJ Asahikawa 83.71 39 P **P 07 35 14.2 -0.9**
ASAJ pmax pmax
comp=Z,3.0nm,0.6s
LAO LASA Array 85.34 327 P **P 07 35 23.8 +0.5**
MJAR Matsushiro Arr 86.61 46 P **P 07 35 28.7 -1.1**
comp=Z,2.6nm,0.9s,mb4.5,baz=323,slow=5.9,SNR=5.9
MJAR Matsushiro Arr 86.61 46 P **P 07 35 28.7 -1.1**
MJAR pmax pmax
comp=Z,3.0nm,0.9s
WMOK Wichita Mounta 90.45 315 P **P 07 35 47.4 -0.6**
WMOK pmax pmax
comp=Z,3.0nm,1.0s,mb4.6
WMOK Wichita Mounta 90.45 315 P **P 07 35 47.4 -0.7**
comp=Z,2.9nm,1.0s,mb4.6
SMCO Snowmass 91.50 323 *e*P **P 07 35 52.6 -0.2**
WRA Warramunga Arr 119.30 94 PKP PKPdf 07 41 35.2 -0.7
comp=Z,0.9nm,0.6s,baz=318,slow=1.8,SNR=4.6
WRA Warramunga Arr 119.30 94 PKIKP PKPdf 07 41 35.2 -0.7
WRA pmax pmax
comp=Z,1.0nm,0.6s
ASAR Alice Springs 120.80 98 PKP PKPdf 07 41 38.0 -0.6
comp=Z,1.0nm,0.7s,baz=314,slow=1.7,SNR=12
ASAR Alice Springs 120.80 98 PKIKP PKPdf 07 41 38.1 -0.6
ASAR pmax pmax
comp=Z,1.0nm,0.7s

*MOS **22** 07:41:48.6±0.8, 48°.89N×155°.45E, h53km, mb3.9/1, Error ellipse: s-maj=36.8km s-min=13.1km az=71.6*
*ISCJB **22** 07:41:48.2±1.7, 48°.9N±0°.1×155°.5E±0°.2, h48km±17km, mb3.5/5, Error ellipse: s-maj=30.0km s-min=11.8km az=35.9*
*IDC **22** 07:41:52.9±5.1, 49°.01N×155°.55E, h73km±45km, mb3.1/5, mb1 3.4/6, mb1mx3.1/25, mbtmp3.2/6, ML3.6/1, Error ellipse: s-maj=38.0km s-min=25.7km az=166.0*
ISC 22 07:41:49.7±1.6, **48°.9N**±0°.1×**155°.5E**±0°.2, **h44**km±16km, **n14**, σ0°.**74**/15, **mb3.5/5, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.84**	**13**	*e*PN	**Pn**	**07 42 18.9**	**+0.1**
SKR				*e*S	**Sn**	**07 42 40.0**	**-0.9**
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				smax			
	comp=N,200nm,0.3s						
SKR				smax			
	comp=E,310nm,0.3s						
PETK	**Petropavlovsk-**	**4.45**	**17**	P	**Pn**	**07 42 56.1**	**+1.5**
	comp=E,3.0nm,0.3s,baz=167,slow=13,SNR=144						
PETK	**Petropavlovsk-**	**4.45**	**17**	*e*PN	**Pn**	**07 42 56.0**	**+1.4**
PETK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
PET	**Petropavlovsk**	**4.60**	**25**	*i* PN	**Pn**	**07 42 56.6**	**0.0**
MAJO	**Matsushiro**	**17.65**	**232**	*i* P	**Pn**	**07 45 52.0**	**-0.1**
MJAR	**Matsushiro Arr**	**17.65**	**232**	*e*P	**Pn**	**07 45 51.1**	**-1.0**
MKAR	**Makanchi Array**	**47.39**	**297**	P	**P**	**07 50 19.6**	**+0.4**
	comp=Z,0.3nm,0.6s,mb3.4,baz=68,slow=7.7,SNR=3.4						
KURK	**Kurchatov**	**47.53**	**303**	P	**P**	**07 50 20.5**	**+0.3**
	comp=Z,0.5nm,0.5s,mb3.8,baz=67,slow=8.2,SNR=5.5						
KURK	**Kurchatov**	**47.53**	**303**	P	**P**	**07 50 20.5**	**+0.3**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
YKA	**Yellowknife Ar**	**48.26**	**38**	P	**P**	**07 50 25.1**	**-0.5**
	comp=Z,0.3nm,0.7s,mb3.5,baz=290,slow=7.1,SNR=2.3						
ASAR	**Alice Springs**	**74.76**	**200**	P	**P**	**07 53 25.8**	**+1.0**
	comp=Z,0.4nm,0.6s,mb3.5,baz=10,slow=5.9,SNR=5.5						
ASAR	**Alice Springs**	**74.76**	**200**	*e*P	**P**	**07 53 25.8**	**+1.0**
TXAR	**Lajitas Array**	**75.07**	**63**	P	**P**	**07 53 26.1**	**-0.7**
	comp=Z,0.3nm,0.6s,mb3.4,baz=291,slow=3.2,SNR=3.5						
TXAR	**Lajitas Array**	**75.07**	**63**	*e*P	**P**	**07 53 26.1**	**-0.7**

IDC 22 07:56:49.3±1.4, **8°.88S**×**157°.74E**, **h0**km, **mb4.0**/6, **mb1 4.2**/7, **mb1mx4.0**/17, **mbtmp4.0**/7, **ML4.2**/1, **Error ellipse: s-maj=50.7km s-min=23.2km az=122.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**15.73**	**224**	Pn	Pn	08 00 32.4	0.0
	0.6nm,0.3s,baz=43,slow=15,SNR=6.1						
WRA	**Warramunga Arr**	**25.15**	**242**	P	P	08 02 15.8	-0.6
	2.5nm,0.7s,baz=67,slow=9.6,SNR=7.5						
ASAR	**Alice Springs**	**27.13**	**234**	P	P	08 02 33.0	-1.3
	1.2nm,0.9s,baz=65,slow=8.6,SNR=7.9						
STKA	**Stephens Creek**	**27.36**	**211**	P	P	08 02 38.0	+1.7
	6.7nm,0.7s,baz=28,slow=10,SNR=16						
SONM	**Songino Array**	**72.38**	**326**	P	P	08 08 18.8	+1.6
	0.4nm,0.6s,baz=131,slow=4.4,SNR=3.2						
MKAR	**Makanchi Array**	**86.60**	**318**	P	P	08 09 33.8	-0.8
	0.4nm,0.5s,baz=87,slow=7.8,SNR=4.5						
NVAR	**Mina Array Bea**	**90.76**	**51**	P	P	08 09 54.1	-0.4
	1.2nm,0.8s,baz=246,slow=6.6,SNR=10						

*KNET **22** 08:12:52.3±0.5, 41°.69N×73°.96E, h9km±2km, ml2.6, Error ellipse: s-maj=3.2km s-min=2.0km az=26.0*
*ISCJB **22** 08:12:52.5±1.1, 41°.64N±0°.06×73°.85E±0°.06, h10km, Error ellipse: s-maj=8.6km s-min=6.3km az=18.0*
*NNC **22** 08:12:55.9±2.2, 41°.87N×73°.82E, h0km, mb3.4, mpv3.2, Error ellipse: s-maj=33.0km s-min=9.6km az=170.0*
ISC 22 08:12:52.7±1.1, **41°.65N**±0°.06×**73°.88E**±0°.06, **h10**km, **n15**, σ0°.**87**/22, **9C-17D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**0.50**	**344**	⇓P	**Pg**	**08 13 01.9**	**-0.5**
	191nm,0.1s,SNR=89						
AML				⇓S	**Sg**	**08 13 09.0**	**0.0**
	762nm,0.4s						
UCH	**Uchtor**	**0.75**	**39**	⇓P	**Pg**	**08 13 06.2**	**-0.9**
	55nm,0.2s,SNR=187						
UCH				⇓S	**Sg**	**08 13 17.1**	**+0.2**
	310nm,0.3s						
EKS2	**Erkin-Say**	**1.01**	**356**	⇓P	**Pg**	**08 13 11.2**	**-1.0**
	16nm,0.1s,SNR=48						
EKS2				⇓S	**Sg**	**08 13 25.4**	**0.0**
	28nm,0.1s						
AAK	**Ala-Archa**	**1.08**	**25**	⇓P	**Pb**	**08 13 12.5**	**-1.0**
	30nm,0.2s,SNR=17						
AAK				⇑S	**Sg**	**08 13 27.5**	**-0.1**
	49nm,0.2s						
KZA	**Kyzart**	**1.11**	**67**	P	**Pb**	**08 13 12.3**	**-1.7**
	21nm,0.1s,SNR=180						
KZA				⇑S	**Sg**	**08 13 27.8**	**-0.7**
	127nm,0.2s						
KBK	**Karagaybulak**	**1.28**	**38**	⇓P	**Pn**	**08 13 16.0**	**-0.6**
	58nm,0.1s,SNR=60						
KBK				⇓S	**Sb**	**08 13 33.6**	**+0.1**
	203nm,0.2s						
CHMS	**Chumysh**	**1.50**	**25**	⇓P	**Pn**	**08 13 19.8**	**+0.3**
	15nm,0.1s,SNR=24						
CHMS				⇑S	**Sn**	**08 13 40.1**	**+1.0**
	37nm,0.3s						
USP	**Ospenovka**	**1.68**	**16**	⇑P	**Pn**	**08 13 23.1**	**+1.0**
	20nm,0.1s,SNR=64						
TKM2	**Tokmak 2**	**1.80**	**45**	⇑Pn	**Pn**	**08 13 25.4**	**+1.7**
	9.4nm,0.3s						
TKM2				⇓Lg		08 13 48.9	
	85nm,0.8s						
ULHL	**Ulahol**	**1.86**	**71**	P	**Pn**	**08 13 25.3**	**+0.7**
	29nm,0.3s,SNR=99						
KNDC	**Almaty**	**2.77**	**55**	⇓Pn	**Pb**	**08 13 42.5**	**+0.2**
	14nm,0.3s						
KNDC				⇑Lg		08 14 20.7	
	107nm,0.8s						
KK31	**Karatay Array**	**2.89**	**301**	⇑Pn	**Pb**	**08 13 43.8**	**-0.5**
	2.5nm,0.3s,baz=118,slow=14,SNR=148						
KK31				⇓Lg		08 14 22.2	
	14nm,0.3s,baz=124,slow=29,SNR=21						
MK31	**Makanchi Array**	**7.93**	**47**	⇓Pn	**Pn**	**08 14 53.5**	**+5.6**
	0.2nm,0.5s,baz=226,slow=12,SNR=4.6						
MK31				⇓Lg		08 17 01.1	
	0.8nm,0.7s,baz=226,slow=25,SNR=4.5						
KURBB	**Kurchatov Arra**	**9.54**	**18**	⇑Pn	**Pn**	**08 15 11.7**	**+1.8**
	0.2nm,0.7s						
KURBB				⇓Lg		08 17 56.8	
	0.9nm,0.7s						
KURK	**Kurchatov**	**9.64**	**18**	⇑Pn	**Pn**	**08 15 15.8**	**+4.4**
	0.8nm,1.1s						
KURK				⇓Lg		08 17 53.3	
	1.7nm,0.8s						

*NNC **22** 08:41:53.5±3.2, 37°.92N×71°.02E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=25.7km s-min=23.2km az=40.0*
ISC 22 08:41:54.6±2.7, **37°.7N**±0°.2×**70°.9E**±0°.1, **h35**km, **n11**, σ0°.**88**/14, **3C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.92**	**25**	P	**Pn**	**08 43 07.1**	**+1.1**
	SNR=8.2						
UCH	**Uchtor**	**5.31**	**31**	P	**Pn**	**08 43 11.7**	**+0.3**
	SNR=9.7						
KK31	**Karatay Array**	**5.40**	**357**	Pn	**Pn**	**08 43 15.8**	**+3.3**
	4.2nm,0.5s,baz=182,slow=12,SNR=83						
KK31				⇑Sn	**Sn**	**08 44 19.8**	**+6.5**
	1.4nm,0.4s,baz=180,slow=24,SNR=4.3						
EKS2	**Erkin-Say**	**5.43**	**23**	P	**Pn**	**08 43 14.0**	**+1.1**
	SNR=8.2						
KZA	**Kyzart**	**5.52**	**36**	P	**Pn**	**08 43 13.1**	**-1.1**
	SNR=5.9						
AAK	**Ala-Archa**	**5.65**	**28**	P	**Pn**	**08 43 16.5**	**+0.5**
	SNR=7.2						
CHMS	**Chumysh**	**6.06**	**28**	P	**Pn**	**08 43 21.6**	**0.0**
	SNR=6.5						
USP	**Ospenovka**	**6.21**	**25**	P	**Pn**	**08 43 22.9**	**-0.7**
	SNR=5.8						
TKM2	**Tokmak 2**	**6.34**	**33**	⇑Pn	**Pn**	**08 43 24.2**	**-1.3**
	3.6nm,0.7s						
TKM2				⇓Sn	**Sn**	**08 44 36.4**	**-0.2**
	1.9nm,0.8s						
TKM2	**Tokmak 2**	**6.34**	**33**	P	**Pn**	**08 43 24.5**	**-0.9**
	SNR=6.4						
AB31	**Akbulak array**	**13.98**	**329**	Pn	**Pn**	**08 45 09.6**	**-0.4**
	1.6nm,0.7s,baz=147,slow=14,SNR=9.6						
AB31				⇑Sn	**Sn**	**08 47 43.6**	**-0.3**
	0.4nm,0.3s,baz=155,slow=22,SNR=5.4						

*CSEM **22** 08:49:17.7, 12°.14N×44°.36E, h9km, ML3.7, After DHMR*
DHMR 22 08:49:17.7±1.0, **12°.14N**×**44°.36E**, **h9**km±113km, **ML3.7, 4C, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UDYN	**Al 'Udayn**	**1.86**	**348**	⇑*i*P	Pn	08 49 50.7	+1.0
UDYN				*i* S	Sn	08 50 16.1	+2.8
UDYN				AML	AML	08 50 25.4	
	comp=E,639nm,0.5s						
UDYN	**Al 'Udayn**	**1.86**	**348**	⇑*i*P	Pn	08 49 50.7	+1.0
UDYN				*i* S	Sn	08 50 16.1	+2.8
	comp=E,320nm,0.5s						
LBOS		**1.93**	**27**	*i* P	Pn	08 49 51.5	+0.8
LBOS				*i* S	Sn	08 50 18.6	+3.5
BDHA	**Al Bayda'**	**2.17**	**33**	⇑*i*P	Pn	08 49 55.9	+1.8
BDHA				*i* S	Sn	08 50 26.1	+5.0
BDHA				AML	AML	08 50 32.8	
	comp=E,890nm,0.6s						
BDHA	**Al Bayda'**	**2.17**	**33**	⇑*i*P	Pn	08 49 55.9	+1.8
BDHA				*i* S	Sn	08 50 26.1	+5.0
	comp=E,445nm,0.6s						
DHBB	**Dhamar BB**	**2.42**	**1**	*i* P	Pn	08 50 00.3	+2.9
DHBB				*i* S	Sn	08 50 32.9	+5.7

*TRN **22** 08:55:16.0, 19°.29N×64°.42W, h3km*
*NEIC **22** 08:55:17.7, 19°.23N×64°.06W, h96km, MD3.5(RSPR), After RSPR.*
RSPR 22 08:55:17.7, 19°.23N×64°.06W, h96km±13km, **6C-4D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.96**	**213**	⇓*e*P	Pn	08 55 37.6	+0.1
TBVI	**Tortola**	**0.96**	**213**	⇓*e*P	Pn	08 55 37.6	+0.1
STVI	**Saint Thomas**	**1.21**	**224**	⇓*e*P	Pn	08 55 40.1	-0.2
STVI				*e*S	Sn	08 55 56.9	-0.5
STVI	**Saint Thomas**	**1.21**	**224**	⇓*e*P	Pn	08 55 40.1	-0.2
STVI				*e*S	Sn	08 55 56.9	-0.5
CBYP	**Canovanas**	**1.95**	**241**	⇑*e*P	Pn	08 55 48.7	-0.8
CBYP				*e*S	Sn	08 56 13.8	+0.1
CBYP	**Canovanas**	**1.95**	**241**	⇑*e*P	Pn	08 55 48.7	-0.8
CBYP				*e*S	Sn	08 56 13.8	+0.1
HUMP	**Col San Antoni**	**2.01**	**238**	⇑*e*P	Pn	08 55 49.6	-0.7
HUMP	**Col San Antoni**	**2.01**	**238**	⇑*e*P	Pn	08 55 49.6	-0.7
CPD	**Cerro la Pandu**	**2.12**	**236**	⇑*e*P	Pn	08 55 51.7	0.0
CPD				*e*S	Sn	08 56 17.2	-0.5
CPD	**Cerro la Pandu**	**2.12**	**236**	⇑*e*P	Pn	08 55 51.7	0.0
CPD				*e*S	Sn	08 56 17.2	-0.5

IDC 22 09:07:46.8±2.3, **5°.17S**×**153°.50E**, **h0**km, **mb4.0**/4, **mb1 4.2**/4, **mb1mx3.8**/17, **mbtmp4.0**/4, **Error ellipse: s-maj=82.9km s-min=32.4km az=117.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.73**	**230**	P	P	09 13 01.0	+0.1
	0.8nm,0.5s,baz=53,slow=9.5,SNR=5.3						
ASAR	**Alice Springs**	**26.36**	**224**	P	P	09 13 24.4	-0.3
	0.8nm,0.4s,baz=58,slow=9.3,SNR=21						
ASAR				PcP	PcP	09 16 50.9	-0.1
	0.8nm,0.9s,baz=55,slow=2.9,SNR=5.3						
FITZ	**Fitzroy Crossi**	**30.10**	**242**	P	P	09 13 58.6	+0.2
	6.5nm,1.1s,baz=47,slow=9.4,SNR=7.2						
MKAR	**Makanchi Array**	**81.06**	**319**	P	P	09 20 04.2	+0.4
	0.4nm,0.4s,baz=98,slow=6.0,SNR=6.6						
TORD	**Torodi Ar. Bea**	**151.08**	**288**	PKPbc	PKPbc	09 27 42.5	-0.5
	0.5nm,0.5s,baz=64,slow=1.4,SNR=6.3						

*NEIC **22** 09:22:19.0, 37°.95N×21°.47E, h24km, ML2.8(ATH), After ATH.*
*ATH **22** 09:22:19.0, 37°.95N×21°.47E, h24km, MD3.3/3, ML2.8*
*THE **22** 09:22:19.6, 37°.92N×21°.50E, h8km±1km, ML3.5/6, Error ellipse: s-maj=1.2km s-min=0.7km az=207.0*
*ISCJB **22** 09:22:19.4±0.5, 37°.92N±0°.02×21°.43E±0°.03, h18km±4km, Error ellipse: s-maj=4.0km s-min=3.9km az=148.4*
*CSEM **22** 09:22:20.0±0.2, 37°.94N×21°.46E, h19km, ML2.8, Error ellipse: s-maj=4.4km s-min=3.9km az=65.0*
ISC 22 09:22:19.2±0.5, **37°.91N**±0°.02×**21°.45E**±0°.03, **h13**km±3km, **n77**, σ0°.**95**/131, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.14**	**7**	*e*Pb	**Pg**	**09 22 23.8**	**+0.9**

RLS				*e*Sb	Sg	09 22 27.4	+1.9
RLS	**Riolos of Patr**	0.14	7	*e*PB	Pg	09 22 23.8	+0.9
RLS				*e*SB	Sg	09 22 27.4	+1.9
RLS	**Riolos of Patr**	0.14	7	*e*Pb	Pg	09 22 23.8	+0.9
RLS				*e*Sb	Sg	09 22 27.4	+1.9
UPR	**University Cam**	0.46	36	*e*PB	Pg	09 22 28.1	-0.2
UPR				*e*SB	Sg	09 22 34.8	+0.3
UPR	**University Cam**	0.46	36	*e*Pb	Pg	09 22 28.1	-0.2
UPR				*e*Sb	Sg	09 22 34.8	+0.3
LAKA	**Lakka**	0.53	52	P	Pg	09 22 29.0	-0.7
LAKA				S	Sg	09 22 36.9	+0.1
LAKA	**Lakka**	0.53	52	P	Pg	09 22 29.0	-0.7
LAKA				S	Sg	09 22 36.9	+0.1
EFP	**Efpalio**	0.63	35	P	Pg	09 22 30.6	-0.9
EFP				S	Sg	09 22 40.1	+0.3
EFP	**Efpalio**	0.63	35	*e*PN	Pg	09 22 30.6	-0.9
EFP				*e*SN	Sg	09 22 39.3	-0.5
EFP	**Efpalio**	0.63	35	P	Pg	09 22 30.6	-0.9
EFP				S	Sg	09 22 40.1	+0.3
GUR	**Goura**	0.71	88	P	Pg	09 22 32.0	-1.0
GUR	**Goura**	0.71	88	*e*PB	Pb	09 22 31.9	-1.5
GUR				*e*SN	Sg	09 22 42.6	+0.2
GUR	**Goura**	0.71	88	P	Pg	09 22 32.0	-1.0
GUR				*e*Sn	Sg	09 22 42.6	+0.2
VLS	**Valsamata**	0.72	292	*e*Pn	Pn	09 22 33.0	-2.1
VLS				*e*Sn	Sg	09 22 44.7	+1.8
VLS	**Valsamata**	0.72	292	P	Pg	09 22 33.1	-0.2
VLS				S	Sg	09 22 45.5	+2.6
VLS	**Valsamata**	0.72	292	*e*PN	Pn	09 22 33.0	-2.1
VLS				*e*SN	Sg	09 22 44.7	+1.8
VLS	**Valsamata**	0.72	292	P	Pg	09 22 33.1	-0.2
VLS				*e*Sn	Sg	09 22 44.7	+1.8
VLS				S	Sg	09 22 45.5	+2.6
KALE	**Kalithea**	0.73	49	P	Pg	09 22 32.2	-1.2
KALE				S	Sg	09 22 42.6	-0.3
KALE	**Kalithea**	0.73	49	P	Pg	09 22 32.2	-1.2
KALE				S	Sg	09 22 42.6	-0.3
ITM	**Ithomi**	0.83	152	*e*Pn	Pn	09 22 35.2	-1.3
ITM				*e*Sn	Sn	09 22 47.4	-1.1
ITM	**Ithomi**	0.83	152	P	Pg	09 22 35.0	-0.2
ITM	**Ithomi**	0.83	152	*e*PN	Pn	09 22 35.2	-1.3
ITM				*e*SN	Sn	09 22 47.4	-1.1
ITM	**Ithomi**	0.83	152	P	Pg	09 22 35.0	-0.2
ITM				*e*Sn	Sn	09 22 47.4	-1.1
VLX	**Vlachokerasia**	0.92	126	*e*PN	Pn	09 22 37.0	-0.8
VLX				*e*SN	Sn	09 22 49.5	-1.3
VLX	**Vlachokerasia**	0.92	126	*e*Pn	Pn	09 22 37.0	-0.8
VLX				*e*Sn	Sn	09 22 49.5	-1.3
DSF	**Desfina**	0.99	59	P	Pb	09 22 36.5	-1.7
DSF				S	Sb	09 22 51.0	-0.1
DSF	**Desfina**	0.99	59	P	Pb	09 22 36.5	-1.7
DSF				S	Sb	09 22 51.0	-0.1
EVR	**Evrytania**	1.04	16	P	Pb	09 22 39.3	+0.2
EVR	**Evrytania**	1.04	16	P	Pb	09 22 39.3	+0.2
PYL	**PYLOS**	1.04	167	P	Pb	09 22 39.6	+0.5
PYL	**PYLOS**	1.04	167	*e*PN	Pn	09 22 40.2	+0.7
PYL				*e*SN	Sn	09 22 54.1	+0.2
PYL	**PYLOS**	1.04	167	P	Pb	09 22 39.6	+0.5
PYL	**PYLOS**	1.04	167	*e*Pn	Pn	09 22 40.2	+0.7
PYL				*e*Sn	Sn	09 22 54.1	+0.2
LTK	**Loutraki**	1.21	84	P	Pn	09 22 40.7	-1.1
LTK	**Loutraki**	1.21	84	*e*PN	Pn	09 22 40.8	-1.0
LTK				*e*SN	Sn	09 22 58.3	+0.3
LTK	**Loutraki**	1.21	84	*e*Pn	Pn	09 22 40.8	-1.0
LTK				*e*Sn	Sn	09 22 58.3	+0.3
AGG	**Agios Georgios**	1.31	32	*e*Pn	Pn	09 23 42.3	+0.1
AGG				*e*Sn	Sn	09 23 00.6	+0.2
AGG	**Agios Georgios**	1.31	32	P	Pn	09 22 42.1	-1.0
AGG				S	Sb	09 23 00.4	+0.1
AGG	**Agios Georgios**	1.31	32	*e*PN	Pn	09 22 43.2	+0.1
AGG				*e*SN	Sn	09 23 00.6	+0.2
AGG	**Agios Georgios**	1.31	32	P	Pn	09 22 42.1	-1.0
AGG	**Agios Georgios**	1.31	32	*e*Pn	Pn	09 22 43.2	+0.1
AGG				*e*Sn	Sn	09 23 00.6	+0.2
LKR	**Lokris**	1.43	58	*e*Pn	Pn	09 22 44.8	0.0
LKR				*e*Sn	Sn	09 23 03.8	+0.4
LKR	**Lokris**	1.43	58	P	Pn	09 22 44.0	-0.8
LKR				S	Sn	09 23 03.9	+0.5
LKR	**Lokris**	1.43	58	*e*PN	Pn	09 22 44.8	0.0
LKR				*e*SN	Sn	09 23 03.8	+0.4
LKR	**Lokris**	1.43	58	P	Pn	09 22 44.0	-0.8
LKR	**Lokris**	1.43	58	*e*Pn	Pn	09 22 44.8	0.0
LKR				*e*Sn	Sn	09 23 03.8	+0.4
ATAL	**Atalanti**	1.46	57	P	Pn	09 22 45.1	-0.2
ATAL				S	Sn	09 23 04.7	+0.4
ATAL	**Atalanti**	1.46	57	P	Pn	09 22 45.1	-0.2
ATAL				S	Sn	09 23 04.7	+0.4
NAIG	**Nisos Aigina**	1.63	95	*e*Pn	Pn	09 22 48.4	+0.9
NAIG	**Nisos Aigina**	1.63	95	*e*PN	Pn	09 22 48.4	+0.9
NAIG	**Nisos Aigina**	1.63	95	*e*Pn	Pn	09 22 48.4	+0.9
VLI	**Veliai**	1.69	135	*e*Pn	Pn	09 22 50.1	+1.8
VLI				*e*Sn	Sn	09 23 12.1	+2.4
VLI	**Veliai**	1.69	135	*e*PN	Pn	09 22 50.1	+1.8
VLI				*e*SN	Sn	09 23 12.1	+2.4
VLI	**Veliai**	1.69	135	*e*Pn	Pn	09 22 50.1	+1.8
VLI				*e*Sn	Sn	09 23 12.1	+2.4
THL	**Klokotos Trika**	1.71	15	*e*PN	Pn	09 22 48.7	+0.1
THL	**Klokotos Trika**	1.71	15	*e*Pn	Pn	09 22 48.7	+0.1
ATH	**Athens Observa**	1.80	87	*e*Pn	Pn	09 22 51.0	+1.1
ATH				*e*Sn	Sn	09 23 13.8	+1.3
ATH	**Athens Observa**	1.80	87	*e*PN	Pn	09 22 51.0	+1.1
ATH				*e*SN	Sn	09 23 13.8	+1.3
ATH	**Athens Observa**	1.80	87	*e*Pn	Pn	09 22 51.0	+1.1
ATH				*e*Sn	Sn	09 23 13.8	+1.3
JAN	**Janina**	1.80	345	*e*Pb	Pb	09 22 49.6	-2.4
JAN				*e*Sn	Sn	09 23 12.5	-0.1
JAN	**Janina**	1.80	345	*e*PB	Pb	09 22 49.6	-2.4
JAN				*e*SN	Sn	09 23 12.5	-0.1
IGT	**Igoumenitsa**	1.84	332	P	Pn	09 22 51.1	+0.7
IGT	**Igoumenitsa**	1.84	332	P	Pn	09 22 51.1	+0.7
VLY	**Voula,Athens**	1.86	91	*e*Pn	Pn	09 22 51.3	+0.6
VLY				*e*Sn	Sn	09 23 14.8	+0.8
VLY	**Voula,Athens**	1.86	91	*e*PN	Pn	09 22 51.3	+0.6
VLY				*e*SN	Sn	09 23 14.8	+0.8
VLY	**Voula,Athens**	1.86	91	*e*Pn	Pn	09 22 51.3	+0.6
VLY				*e*Sn	Sn	09 23 14.8	+0.8
PTL	**Penteli**	1.92	85	*e*Pn	Pn	09 22 51.8	+0.3
PTL				*e*Sn	Sn	09 23 16.1	+0.7
PTL	**Penteli**	1.92	85	*e*PN	Pn	09 22 51.8	+0.3
PTL				*e*SN	Sn	09 23 16.1	+0.7
PTL	**Penteli**	1.92	85	*e*Pn	Pn	09 22 51.8	+0.3
PTL				*e*Sn	Sn	09 23 16.1	+0.7
KEK	**Kerkira**	2.21	325	*e*Pn	Pn	09 22 55.6	+0.1
KEK	**Kerkira**	2.21	325	*e*PN	Pn	09 22 55.6	+0.1
KEK	**Kerkira**	2.21	325	*e*Pn	Pn	09 22 55.6	+0.1
AOS	**Alonnisos**	2.29	56	P	Pn	09 22 56.7	+0.1
AOS	**Alonnisos**	2.29	56	P	Pn	09 22 56.7	+0.1
PLG	**Polygyros**	2.91	32	*e*Pn	Pn	09 23 04.9	-0.2
PLG	**Polygyros**	2.91	32	*e*PN	Pn	09 23 04.9	-0.2
PLG	**Polygyros**	2.91	32	*e*Pn	Pn	09 23 04.9	-0.2

ISK ***22*** *09:23:46.4,38.°17N×27.°05E, h7km, MD3.3*
DDA ***22*** *09:23:47.8,38.°24N×27.°15E, h10km±2km, Md3.3*
NEIC ***22*** *09:23:47.0,38.°21N×27.°10E, h4km, MD3.2(ISK), MD3.2(ATH), After ISK.*
ISCJB ***22*** *09:23:47.8±0.4,38.°20N±0.°02×27.°14E±0.°03, h8km±3km, Error ellipse: s-maj=4.2km s-min=3.0km az=166.5*
CSEM ***22*** *09:23:47.8±0.1,38.°21N×27.°14E, h5km, ML3.8/2, Error ellipse: s-maj=3.0km s-min=2.1km az=76.0*
ATH ***22*** *09:23:47.4,38.°22N×27.°18E, h24km, MD3.2/4*
THE ***22*** *09:23:48.1,38.°26N×27.°16E, h0km±5km, ML3.8/2, Error ellipse: s-maj=9.3km s-min=1.3km az=124.0*

ISC 22 09:23:48.3±0.3,38.°22N±0.°02×27.°16E±0.°03, h8km±3km, n85, σ=0.87/119, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLCB	**Balcova**	0.19	332	PG	Pg	09 23 51.4	-0.9
BLCB				*e*SG	Sg	09 23 54.4	-0.4
BLCB	**Balcova**	0.19	332	P	Pg	09 23 52.0	-0.2
BLCB				S	Sg	09 23 54.5	-0.4
BLCB	**Balcova**	0.19	332	*i* Pg	Pg	09 23 51.4	-0.8
BLCB	**Balcova**	0.19	332	P	Pg	09 23 52.0	-0.2
BLCB				*e*Sg	Sg	09 23 54.4	-0.5
IZM	**Izmir**	0.20	25	PG	Pg	09 23 53.2	+0.8
IZM				*e*SG	Sg	09 23 57.2	+2.1
IZM	**Izmir**	0.20	25	*i* Pg	Pg	09 23 53.2	+0.8
IZM				*e*Sg	Sg	09 23 57.2	+2.1
KDAG	**Bornova**	0.20	25	*i* P	Pg	09 23 52.4	-0.1
KDAG				*i* S	Sg	09 23 54.7	-0.6
KDAG	**Bornova**	0.20	25	*i* P	Pg	09 23 52.4	-0.1
KDAG				*i* S	Sg	09 23 54.7	-0.6
GCAM	**G?zelcaml?**	0.52	173	*i* P	Pg	09 23 58.4	0.0
GCAM				*i* S	Sg	09 24 06.5	+1.3
GCAM	**G?zelcaml?**	0.52	173	*i* P	Pg	09 23 58.4	0.0
GCAM				*i* S	Sg	09 24 06.5	+1.3
SMG	**Samos**	0.57	206	*e*Pn	Pg	09 23 59.1	-0.2
SMG				*e*Sn	Sg	09 24 07.6	+0.9
SMG	**Samos**	0.57	206	*e*PN	Pg	09 23 59.1	-0.2
SMG				*e*SN	Sg	09 24 07.6	+0.9
SMG	**Samos**	0.57	206	*e*Pn	Pg	09 23 59.1	-0.2
AYDN	**Tasoluk**	0.80	134	*i* P	Pg	09 24 04.0	+0.3
AYDN				*i* S	Sg	09 24 14.5	+0.5
AYDN	**Tasoluk**	0.80	134	*i* P	Pg	09 24 04.0	+0.3
AYDN				*i* S	Sg	09 24 14.5	+0.5
AKHS	**Akhisar**	0.84	38	*e*P	Pg	09 24 04.0	-0.4
AKHS				*i* S	Sg	09 24 15.7	+0.3
AKHS	**Akhisar**	0.84	38	*e*P	Pg	09 24 04.1	-0.4
AKHS				*i* S	Sg	09 24 15.6	+0.2
AKS	**Akhisar**	0.84	38	*e*PG	Pg	09 24 03.8	-0.7
AKS	**Akhisar**	0.84	38	*e*Pg	Pg	09 24 03.8	-0.7
CHOS	**Chios island**	0.88	281	P	Pg	09 24 04.9	-0.4
CHOS				S	Sg	09 24 19.2	+2.4
CHOS	**Chios island**	0.88	281	P	Pg	09 24 04.9	-0.4
MLSB	**Milas**	1.04	152	*e*PG	Pg	09 24 07.2	-1.2
MLSB				*e*SG	Sg	09 24 21.2	-0.8
MLSB	**Milas**	1.04	152	*e*Pg	Pg	09 24 07.2	-1.2
MLSB				*e*Sg	Sg	09 24 21.2	-0.7
MANT	**Manisa**	1.14	76	*e*P	Pg	09 24 09.9	-0.3
MANT				*i* S	Sg	09 24 23.8	-1.1
MANT	**Manisa**	1.14	76	*e*P	Pg	09 24 09.9	-0.2
MANT				*i* S	Sg	09 24 23.8	-1.1
AYVA	**Ayvalik**	1.15	342	*i* P	Pg	09 24 10.2	-0.2
AYVA				*i* S	Sg	09 24 25.3	0.0
AYVA	**Ayvalik**	1.15	342	*i* P	Pg	09 24 10.2	-0.2
AYVA				*i* S	Sg	09 24 25.3	0.0
BDRM	**Kayabasi**	1.17	169	*i* P	Pg	09 24 09.9	-0.9
BDRM	**Kayabasi**	1.17	169	*i* P	Pg	09 24 09.9	-0.9
KULA	**Kula-Manisa**	1.22	75	*e*PN	Pn	09 24 11.4	-0.3
KULA	**Kula-Manisa**	1.22	75	*e*Pn	Pn	09 24 11.4	-0.3
PRK	**Paraskevi**	1.24	326	*e*Pn	Pn	09 24 11.2	-0.8
PRK	**Paraskevi**	1.24	326	P	Pb	09 24 11.1	-0.9
PRK				S	Sb	09 24 28.7	+0.6
PRK	**Paraskevi**	1.24	326	*e*PN	Pn	09 24 11.2	-0.8
PRK	**Paraskevi**	1.24	326	P	Pb	09 24 11.1	-0.9
PRK				S	Sb	09 24 28.7	+0.6
YER	**Yerkesik**	1.40	140	*e*PN	Pn	09 24 13.4	-0.8
YER	**Yerkesik**	1.40	140	*e*Pn	Pn	09 24 13.5	-0.7
DEMI	**Demirci**	1.47	56	*i* P	Pn	09 24 15.9	+0.7
DEMI				*i* S	Sn	09 24 33.5	-1.2
DEMI	**Demirci**	1.47	56	*i* P	Pn	09 24 15.9	+0.7
DEMI				*i* S	Sn	09 24 33.5	-1.2
DAT	**Datca**	1.52	167	*e*PN	Pn	09 24 14.6	-1.3
DAT	**Datca**	1.52	167	*e*Pn	Pn	09 24 14.6	-1.3
BALB	**Balikesir**	1.53	21	*e*PN	Pn	09 24 15.8	-0.2
BALB	**Balikesir**	1.53	21	*e*Pn	Pn	09 24 15.8	-0.2
DENT	**Denizli**	1.55	107	*e*PN	Pn	09 24 16.2	-0.1
DENT	**Denizli**	1.55	107	*e*Pn	Pn	09 24 16.2	-0.1
BALY	**Balya**	1.56	13	*i* P	Pn	09 24 15.4	-1.0
BALY				*i* S	Sn	09 24 37.9	+1.0
BALY	**Balya**	1.56	13	*i* P	Pn	09 24 15.4	-1.0
BALY				*i* S	Sn	09 24 37.9	+1.0
DNZL	**Cakiroluk**	1.58	109	*i* P	Pn	09 24 18.3	+1.6
DNZL				*i* S	Sn	09 24 40.8	+3.4
DNZL	**Cakiroluk**	1.58	109	*i* P	Pn	09 24 18.3	+1.6
DNZL				*i* S	Sn	09 24 40.8	+3.4
DURS	**Dursunbey**	1.72	36	*i* P	Pn	09 24 17.4	-1.3
DURS				*i* S	Sn	09 24 41.0	+0.2
DURS	**Dursunbey**	1.72	36	*i* P	Pn	09 24 17.4	-1.2
DURS				*i* S	Sn	09 24 41.0	+0.2
APE	**Apeiranthos**	1.73	229	*e*Pn	Pn	09 24 18.5	-0.2
APE	**Apeiranthos**	1.73	229	*e*PN	Pn	09 24 18.5	-0.2
APE	**Apeiranthos**	1.73	229	*e*Pn	Pn	09 24 18.5	-0.2
KHL	**Karahalli**	1.87	86	*e*PN	Pn	09 24 21.1	+0.5
KHL	**Karahalli**	1.87	86	*e*Pn	Pn	09 24 21.1	+0.5
GDZ	**Gediz**	2.02	64	*e*P	Pn	09 24 25.7	+3.0
GDZ				*i* S	Sn	09 24 52.9	+4.8
GDZ	**Gediz**	2.02	64	*e*P	Pn	09 24 25.7	+3.0
GDZ				*i* S	Sn	09 24 52.9	+4.8
LPK	**Lapseki**	2.17	352	*e*PN	Pn	09 24 24.2	-0.6
LPK	**Lapseki**	2.17	352	*e*Pn	Pn	09 24 24.2	-0.6
GADA	**Gvkgeada**	2.20	334	*e*PN	Pn	09 24 24.0	-1.2
GADA	**Gvkgeada**	2.20	334	*e*Pn	Pn	09 24 24.0	-1.2
BNT	**Bandirma**	2.22	15	*e*PN	Pn	09 24 25.8	+0.4
BNT	**Bandirma**	2.22	15	*e*Pn	Pn	09 24 25.8	+0.4
KCT	**Karacabey**	2.25	24	*e*PN	Pn	09 24 25.8	-0.1
KCT	**Karacabey**	2.25	24	*e*Pn	Pn	09 24 25.8	0.0
LIA	**Limnos Island**	2.27	318	*e*Pn	Pn	09 24 25.9	-0.3
LIA	**Limnos Island**	2.27	318	*e*PN	Pn	09 24 25.9	-0.3
LIA	**Limnos Island**	2.27	318	*e*Pn	Pn	09 24 25.9	-0.3
ALT	**Altintas**	2.46	69	*e*PN	Pn	09 24 29.4	+0.7
ALT	**Altintas**	2.46	69	*e*Pn	Pn	09 24 29.4	+0.6
RKY	**Sarkoy-Tekirda**	2.47	0	*e*PN	Pn	09 24 29.1	+0.3
RKY	**Sarkoy-Tekirda**	2.47	0	*e*Pn	Pn	09 24 29.1	+0.2
MFT	**Murefte**	2.57	2	*e*PN	Pn	09 24 30.9	+0.7
MFT	**Murefte**	2.57	2	*e*Pn	Pn	09 24 31.0	+0.8
ENEZ	**Enez**	2.63	343	*e*PN	Pn	09 24 30.5	-0.6
ENEZ	**Enez**	2.63	343	*e*Pn	Pn	09 24 30.5	-0.6
ARMT	**Armutlu**	2.69	29	*e*PN	Pn	09 24 32.5	+0.6
ARMT	**Armutlu**	2.69	29	*e*Pn	Pn	09 24 32.6	+0.7
YLV	**Yalova**	2.91	36	*e*PN	Pn	09 24 35.9	+1.0
YLV	**Yalova**	2.91	36	*e*Pn	Pn	09 24 35.9	+1.0
GULT	**Gulveren**	3.42	49	*e*PN	Pn	09 24 42.3	+0.4
GULT	**Gulveren**	3.42	49	*e*Pn	Pn	09 24 42.3	+0.4
EDRB	**Edirne**	3.64	355	*e*PN	Pn	09 24 45.0	+0.1
EDRB	**Edirne**	3.64	355	*e*Pn	Pn	09 24 45.0	0.0

ATH ***22*** *09:25:20.4,37.°97N×21.°47E, h27km±1km, MD3.0/9, ML2.8*
NEIC ***22*** *09:25:20.4,37.°97N×21.°47E, h27km, ML2.8(ATH), After ATH.*
ISCJB ***22*** *09:25:20.1±0.6,37.°90N±0.°02×21.°47E±0.°03, h8km±4km, Error ellipse: s-maj=3.7km s-min=3.4km az=164.7*
THE ***22*** *09:25:21.1,37.°92N×21.°52E, h4km±1km, ML3.6/9, Error ellipse: s-maj=1.5km s-min=0.8km az=170.0*
CSEM ***22*** *09:25:21.0±0.2,37.°93N×21.°47E, h20km, ML2.8, Error ellipse: s-maj=4.6km s-min=3.7km az=85.0*

ISC 22 09:25:20.8±0.4,37.°90N±0.°02×21.°47E±0.°03, h13km±2km, n74, σ=0.04/118, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	0.16	358	*e*Pb	Pg	09 25 25.2	+0.6
RLS				*e*Sb	Sg	09 25 28.6	+1.3
RLS	**Riolos of Patr**	0.16	358	*e*PB	Pg	09 25 25.2	+0.6
RLS				*e*SB	Sg	09 25 28.6	+1.3
RLS	**Riolos of Patr**	0.16	358	*e*Pb	Pg	09 25 25.2	+0.6
RLS				*e*Sb	Sg	09 25 28.6	+1.3
UPR	**University Cam**	0.46	33	*e*PB	Pg	09 25 29.6	-0.3
UPR				*e*SB	Sg	09 25 36.1	+0.1
UPR	**University Cam**	0.46	33	*e*Pb	Pg	09 25 29.6	-0.3
UPR				*e*Sb	Sg	09 25 36.1	+0.1
LAKA	**Lakka**	0.53	49	P	Pg	09 25 30.5	-0.6
LAKA				S	Sg	09 25 38.1	0.0
LAKA	**Lakka**	0.53	49	P	Pg	09 25 30.5	-0.6
LAKA				S	Sg	09 25 38.1	0.0
EFP	**Efpalio**	0.63	33	P	Pg	09 25 32.1	-1.0
EFP				S	Sg	09 25 41.8	+0.4
EFP	**Efpalio**	0.63	33	*e*PN	Pg	09 25 32.1	-1.0
EFP				*e*SN	Sg	09 25 41.0	-0.4
EFP	**Efpalio**	0.63	33	P	Pg	09 25 32.1	-1.0
EFP				S	Sg	09 25 41.8	+0.4
GUR	**Goura**	0.69	86	P	Pg	09 25 33.4	-0.8
GUR	**Goura**	0.69	86	*e*PB	Pg	09 25 33.4	-0.8
GUR				*e*SN	Sg	09 25 44.7	+1.4
GUR	**Goura**	0.69	86	P	Pg	09 25 33.4	-0.8
GUR				*e*Sn	Sg	09 25 44.7	+1.4
KALE	**Kalithea**	0.72	47	P	Pg	09 25 33.7	-1.1
KALE				S	Sg	09 25 44.0	-0.3
KALE	**Kalithea**	0.72	47	P	Pg	09 25 33.7	-1.1
KALE				S	Sg	09 25 44.0	-0.3
VLS	**Valsamata**	0.75	292	*e*Pn	Pn	09 25 34.3	-2.7
VLS				*e*Sn	Sn	09 25 46.5	-1.7
VLS	**Valsamata**	0.75	292	P	Pg	09 25 34.5	-0.9
VLS				S	Sg	09 25 46.9	+1.7
VLS	**Valsamata**	0.75	292	*e*PN	Pn	09 25 34.3	-2.7
VLS				*e*SN	Sn	09 25 46.5	-1.7
VLS	**Valsamata**	0.75	292	P	Pg	09 25 34.5	-0.9
VLS				*e*Sn	Sn	09 25 46.5	-1.7
VLS				S	Sg	09 25 46.9	+1.7
ITM	**Ithomi**	0.80	153	*e*Pn	Pn	09 25 36.8	-0.9
ITM				*e*Sn	Sn	09 25 50.0	+0.5
ITM	**Ithomi**	0.80	153	P	Pg	09 25 36.4	+0.1
ITM				S	Sg	09 25 48.0	+1.2
ITM	**Ithomi**	0.80	153	*e*PN	Pn	09 25 36.8	-0.9
ITM				*e*SN	Sn	09 25 50.0	+0.5
ITM	**Ithomi**	0.80	153	P	Pg	09 25 36.4	+0.1
ITM	**Ithomi**	0.80	153	*e*Pn	Pn	09 25 36.8	-0.9
ITM				S	Sg	09 25 48.0	+1.2
ITM				*e*Sn	Sn	09 25 50.0	+0.5
VLX	**Vlachokerasia**	0.89	126	P	Pg	09 25 37.2	-0.8
VLX				S	Sg	09 25 50.7	+1.0
VLX	**Vlachokerasia**	0.89	126	*e*PN	Pn	09 25 38.0	-1.0
VLX				*e*SN	Sn	09 25 51.9	+0.2
VLX	**Vlachokerasia**	0.89	126	P	Pg	09 25 37.2	-0.8
VLX	**Vlachokerasia**	0.89	126	*e*Pn	Pn	09 25 38.0	-1.0
VLX				S	Sg	09 25 50.7	+1.0
VLX				*e*Sn	Sn	09 25 51.9	+0.2
DSF	**Desfina**	0.98	58	P	Pb	09 25 38.1	-1.4
DSF				S	Sg	09 25 52.1	-0.3
DSF	**Desfina**	0.98	58	P	Pb	09 25 38.1	-1.4
DSF				S	Sg	09 25 52.1	-0.3
PYL	**PYLOS**	1.02	168	P	Pb	09 25 40.9	+0.6
PYL	**PYLOS**	1.02	168	*e*PN	Pn	09 25 41.7	+0.9
PYL	**PYLOS**	1.02	168	P	Pb	09 25 40.9	+0.6
PYL	**PYLOS**	1.02	168	*e*Pn	Pn	09 25 41.7	+0.9
EVR	**Evrytania**	1.05	14	*e*Pn	Pn	09 25 39.5	-1.7
EVR	**Evrytania**	1.05	14	*e*PN	Pn	09 25 39.5	-1.7
EVR	**Evrytania**	1.05	14	*e*Pn	Pn	09 25 39.5	-1.7
LTK	**Loutraki**	1.19	83	P	Pn	09 25 42.2	-0.8
LTK				S	Sb	09 25 58.5	+0.1
LTK	**Loutraki**	1.19	83	*e*PN	Pn	09 25 42.3	-0.7
LTK	**Loutraki**	1.19	83	*e*Pn	Pn	09 25 42.3	-0.7
LTK				S	Sb	09 25 58.5	+0.1
AGG	**Agios Georgios**	1.31	31	P	Pn	09 25 43.8	-0.9
AGG				S	Sb	09 26 01.9	0.0
AGG	**Agios Georgios**	1.31	31	P	Pn	09 25 43.8	-0.9
AGG				S	Sb	09 26 01.9	0.0
LKR	**Lokris**	1.42	57	*e*Pn	Pn	09 25 46.0	-0.2
LKR	**Lokris**	1.42	57	P	Pn	09 25 45.8	-0.4
LKR				S	Sn	09 26 06.3	+1.6
LKR	**Lokris**	1.42	57	*e*PN	Pn	09 25 46.0	-0.2
LKR	**Lokris**	1.42	57	P	Pn	09 25 45.8	-0.4
LKR				S	Sn	09 26 06.3	+1.6

ISC 22 09:55:08.2±0.3, 23°.17N±0°.02×121°.55E±0°.02, h20km±3km, n107, σ0$94/161, mb3.9/14, 28C-2D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWF1	**Yuli**	**0.29**	**308**	⇑*i*P	**Pb**	**09 55 15.3**	**+0.6**
TWF1	baz=309			*e*S	**Sb**	**09 55 20.3**	**+1.1**
YULB	**Yu-li**	**0.32**	**314**	*e*Pg	**Pb**	**09 55 15.3**	**+0.1**
EHY	**Hungye**	**0.39**	**328**	⇑*i*P	**Pb**	**09 55 16.5**	**+0.1**
ELDTW	baz=323 **Lidau**	**0.49**	**272**	⇑P	**Pb**	**09 55 17.6**	**-0.5**
ELDTW	baz=259			*e*S	**Sb**	**09 55 23.1**	**-1.7**
TEGC	**Jichi Village**	**0.53**	**359**	*e*P	**Pb**	**09 55 19.4**	**+0.5**
TEGC	baz=10.0			*e*S	**Sb**	**09 55 27.8**	**+1.6**
TTN	**Taitung**	**0.56**	**221**	P	**Pb**	**09 55 20.7**	**+1.5**
TWG	baz=223 **Pinlang**	**0.56**	**231**	*e*Pg	**Pb**	**09 55 19.2**	**-0.1**
TWG				*e*Sg	**Sb**	**09 55 28.8**	**+1.9**
TWG	**Pinlang**	**0.56**	**231**	⇑P	**Pb**	**09 55 19.2**	**-0.1**
TWG	baz=233			*e*S	**Sb**	**09 55 26.4**	**-0.5**
YUS	**Yu-Shan**	**0.63**	**300**	⇑*i*P	**Pb**	**09 55 20.4**	**-0.1**
YUS	baz=304			*e*S	**Sb**	**09 55 28.0**	**-0.8**
ESL	**Shilin**	**0.65**	**351**	⇑P	**Pb**	**09 55 20.2**	**-0.6**
STYT	baz=345 **Tauyuan**	**0.73**	**269**	⇑P	**Pb**	**09 55 21.7**	**-0.4**
STYT	baz=263			*i* S	**Sb**	**09 55 30.8**	**-0.9**
ALS	**Alishan**	**0.76**	**296**	⇑*i*P	**Pb**	**09 55 22.7**	**0.0**
ECL	baz=291 **Taimali**	**0.79**	**224**	*e*P	**Pb**	**09 55 22.3**	**-1.0**
ECL	baz=225			*e*S	**Sb**	**09 55 32.4**	**-1.1**
HWA	**Hwalien**	**0.80**	**4**	*e*P	**Pb**	**09 55 23.3**	**-0.1**
SSLB	baz=355 **Suanglung**	**0.82**	**319**	*e*Pg	**Pb**	**09 55 22.5**	**-1.2**
SSLB				*e*Sg	**Sb**	**09 55 34.9**	**+0.5**
TPUB	**Ta-pu**	**0.85**	**279**	*e*Pg	**Pb**	**09 55 24.0**	**-0.3**
TPUB				*e*Sg	**Sb**	**09 55 35.2**	**0.0**
WTP	**Ta-pu**	**0.86**	**275**	⇑*i*P	**Pb**	**09 55 24.5**	**+0.1**
WTP	baz=266			S	**Sb**	**09 55 35.8**	**+0.3**
SGST	**Jiashian**	**0.89**	**264**	⇑P	**Pb**	**09 55 25.1**	**+0.2**
SGST	baz=261			S	**Sb**	**09 55 36.2**	**-0.2**
CHN4	**Tsaushan**	**0.89**	**282**	⇑*i*P	**Pb**	**09 55 25.1**	**+0.2**
CHN4	baz=279			*e*S	**Sb**	**09 55 36.9**	**+0.4**
CHN5	**Tsauling**	**0.90**	**298**	⇑P	**Pb**	**09 55 25.1**	**0.0**
TWD	baz=297 **Chiawan**	**0.90**	**3**	⇑P	**Pb**	**09 55 24.4**	**-0.8**
TWD	baz=354			*e*S	**Sb**	**09 55 37.0**	**+0.2**
SMLT	**Sun Moon Lake**	**0.92**	**320**	⇑*i*P	**Pb**	**09 55 25.0**	**-0.5**
SMLT	baz=327			*e*S	**Sb**	**09 55 36.8**	**-0.5**
CHN1	**Nanshi**	**0.94**	**271**	⇑*i*P	**Pb**	**09 55 26.0**	**+0.3**
CHN1	baz=268			*e*S	**Sb**	**09 55 38.2**	**+0.5**
SSD	**Sandimen**	**0.94**	**243**	*e*P	**Pb**	**09 55 25.2**	**-0.6**
TYC	baz=236 **Yuchr**	**0.96**	**319**	⇑*i*P	**Pb**	**09 55 25.7**	**-0.5**
TYC	baz=321			*e*S	**Sb**	**09 55 38.1**	**-0.4**
TWK	**Hsinying**	**0.98**	**276**	⇑*i*P	**Pb**	**09 55 26.5**	**+0.1**
TWK	baz=274			S	**Sb**	**09 55 38.9**	**0.0**
NACB	**Ninganchiao**	**1.00**	**3**	*e*Pg	**Pb**	**09 55 25.1**	**-1.6**
NACB				*e*Sn	**Sn**	**09 55 41.4**	**+0.9**
WHF	**Hehuan Shan**	**1.00**	**345**	⇑*i*P	**Pb**	**09 55 25.9**	**-1.0**
WHF	baz=348			*e*S	**Sb**	**09 55 38.1**	**-1.4**
TAW	**Tawu**	**1.01**	**217**	⇑*e*P	**Pb**	**09 55 26.1**	**-0.8**
EAST	baz=220 **Anshou**	**1.02**	**219**	P	**Pb**	**09 55 26.2**	**-0.9**
WGK	baz=216 **Gukeng**	**1.04**	**300**	P	**Pb**	**09 55 27.6**	**+0.2**
WGK	baz=300			*e*S	**Sb**	**09 55 41.6**	**+1.0**
WNT	**Mingjian**	**1.06**	**312**	⇑*i*P	**Pb**	**09 55 27.9**	**+0.1**
WNT	baz=313			S	**Sb**	**09 55 41.4**	**+0.2**
CHY	**Chiayi**	**1.08**	**288**	⇑*i*P	**Pn**	**09 55 28.2**	**+0.1**
CHY	baz=287			S	**Sb**	**09 55 42.3**	**+0.5**
CHN3	**Shinhua**	**1.09**	**265**	⇑*i*P	**Pn**	**09 55 30.1**	**+1.8**
TWM1	baz=263 **Shoushan**	**1.09**	**252**	P	**Pn**	**09 55 29.9**	**+1.6**
TWT	baz=249 **Tachien**	**1.13**	**343**	⇑P	**Pn**	**09 55 28.3**	**-0.5**
LAY	baz=333 **Lan-yu**	**1.13**	**180**	P	**Pn**	**09 55 27.9**	**-0.9**
LAY	baz=166			S	**Sb**	**09 55 43.7**	**+0.4**
SCZT	**Fangliau**	**1.17**	**227**	⇑*i*P	**Pn**	**09 55 29.3**	**0.0**
CHN8	baz=214 **Yiju**	**1.24**	**278**	*e*P	**Pn**	**09 55 30.4**	**+0.1**
CHN8	baz=278			*e*S	**Sn**	**09 55 46.8**	**+0.4**
SCLT	**Jiali**	**1.24**	**270**	*e*P	**Pn**	**09 55 30.7**	**+0.4**
TCU	baz=269 **Taichung**	**1.26**	**321**	⇑P	**Pn**	**09 55 31.1**	**+0.6**
TCU	baz=309			*e*S	**Sn**	**09 55 47.1**	**+0.3**
ENA	**Nanau**	**1.26**	**8**	*e*P	**Pn**	**09 55 29.6**	**-1.1**
NNS	baz=358 **Nan Shan**	**1.27**	**353**	*e*P	**Pn**	**09 55 30.1**	**-0.7**
KAU	baz=355 **Kaohsiung**	**1.29**	**242**	*e*P	**Pn**	**09 55 32.9**	**+1.9**
WTCT	baz=241 **Ta-ch'eng**	**1.35**	**301**	*e*P	**Pn**	**09 55 31.2**	**-0.6**
WTCT	baz=302			*e*S	**Sn**	**09 55 48.8**	**-0.3**
TWP	baz=302 **Hsiaoliuchiu**	**1.37**	**233**	*e*P	**Pn**	**09 55 34.8**	**+2.7**
TWQ1	baz=233 **Liyutan**	**1.37**	**329**	⇑P	**Pn**	**09 55 33.0**	**+0.9**
TWQ1	baz=343			*e*S	**Sn**	**09 55 50.1**	**+0.5**
HEN	**Hengchun**	**1.38**	**213**	*e*P	**Pn**	**09 55 33.2**	**+1.0**
TSEB	baz=194 **Hengchuen, Pin**	**1.40**	**205**	*e*P	**Pn**	**09 55 32.7**	**+0.1**
TWK1	baz=192 **Hengchun**	**1.40**	**209**	*e*P	**Pn**	**09 55 32.5**	**0.0**
TWK1	baz=191			*e*S	**Sn**	**09 55 51.0**	**+0.5**
NSY	**Sanyi**	**1.43**	**330**	P	**Pn**	**09 55 34.1**	**+1.1**
NSY	baz=331			S	**Sn**	**09 55 52.6**	**+1.4**
TWC	**Suao**	**1.46**	**11**	*e*P	**Pn**	**09 55 33.3**	**0.0**
ENTT	baz=13 **Nioudou**	**1.46**	**1**	*e*P	**Pn**	**09 55 32.0**	**-1.4**
YHNB	baz=2.0 **Yeheng**	**1.50**	**354**	*e*Pn	**Pn**	**09 55 33.3**	**-0.6**
YHNB				*e*Sn	**Sn**	**09 55 51.4**	**-1.4**
NSK	**Sanguang**	**1.51**	**354**	⇑*e*P	**Pn**	**09 55 33.8**	**-0.2**
NSK	baz=8.0			*e*S	**Sn**	**09 55 51.3**	**-1.8**
	baz=8.0						
NSTT	**Nanjuang**	**1.53**	**341**	⇑*i*P	**Pn**	**09 55 35.2**	**+0.8**
NSTT	baz=343			*e*S	**Sn**	**09 55 54.0**	**+0.2**
TWE	**Neicheng**	**1.54**	**4**	*e*P	**Pn**	**09 55 34.7**	**+0.2**
ILA	baz=5.0 **Ilan**	**1.60**	**7**	*e*P	**Pn**	**09 55 36.3**	**+1.0**
HSN	baz=358 **Hsinchu**	**1.71**	**342**	*e*P	**Pn**	**09 55 37.1**	**+0.3**
TATO	baz=342 **Taipei**	**1.79**	**358**	*e*Pn	**Pn**	**09 55 37.5**	**-0.5**
TATO				*e*Sn	**Sn**	**09 55 59.9**	**-0.3**
TWA	**Mucha**	**1.80**	**1**	*e*P	**Pn**	**09 55 37.5**	**-0.5**
NCU	baz=12 **National Centr**	**1.82**	**350**	*e*P	**Pn**	**09 55 39.4**	**+1.1**
YOJ	baz=348 **Yonaguni jima**	**1.86**	**46**	P	**Pn**	**09 55 39.5**	**+0.7**
YOJ				S	**Sn**	**09 56 02.1**	**+0.4**
YOJ	**Yonaguni jima**	**1.86**	**46**	*e*P	**Pn**	**09 55 39.8**	**+1.0**
YOJ	baz=49			*e*S	**Sn**	**09 56 01.8**	**+0.1**
TAP1	**Taipei**	**1.86**	**359**	*e*P	**Pn**	**09 55 41.6**	**+2.8**
TAP1	baz=1.0			*e*S	**Sn**	**09 56 00.6**	**-1.1**
PNG	baz=1.0 **Penghu**	**1.87**	**282**	*e*P	**Pn**	**09 55 38.5**	**-0.5**
PNG	baz=269			*e*S	**Sn**	**09 55 59.8**	**-2.2**
NWF	**Wu-fen Shan**	**1.90**	**6**	⇓P	**Pn**	**09 55 39.9**	**+0.5**
NWF	baz=8.0			*e*S	**Sn**	**09 56 04.2**	**+1.5**
TWS1	**Kuangyinshan**	**1.92**	**357**	*e*P	**Pn**	**09 55 39.7**	**-0.1**
TWY	baz=10.0 **Chenhua**	**2.09**	**1**	*e*P	**Pn**	**09 55 40.7**	**-1.3**
HATJ	baz=360 **Hateruma jima**	**2.25**	**67**	P	**Pn**	**09 55 44.3**	**+0.1**
HATJ				S	**Sn**	**09 56 11.5**	**+0.1**
IRIF	**Iriomote-Funau**	**2.31**	**60**	P	**Pn**	**09 55 46.0**	**+0.9**
IRIF				S	**Sn**	**09 56 13.6**	**+0.7**
JKRS	**Kuro-shima**	**2.50**	**64**	P	**Pn**	**09 55 48.5**	**+0.9**
JKRS				S	**Sn**	**09 56 18.1**	**+0.7**
JIJ	**Ishigaki jima**	**2.66**	**63**	P	**Pn**	**09 55 50.1**	**+0.3**
JIJ				S	**Sn**	**09 56 20.6**	**-0.9**
KNM	**Kinmen**	**3.11**	**294**	*e*P	**Pn**	**09 55 56.8**	**+0.7**
QZH	baz=292 **Quanzhou**	**3.22**	**304**	⇓*i*Pn	**Pn**	**09 55 56.5**	**-1.1**
QZH				Sn	**Sn**	**09 56 31.1**	**-4.3**
QZH				smax			
	comp=N,630nm,0.3s						
QZH				smax			
	comp=E,650nm,0.4s						
JTJ	**Tarama**	**3.24**	**63**	P	**Pn**	**09 55 58.0**	**+0.2**
JTJ				S	**Sn**	**09 56 35.9**	**+0.1**
JMJ	**Miyako jima 2**	**3.80**	**64**	P	**Pn**	**09 56 06.4**	**+0.9**
JMJ				S	**Sn**	**09 56 49.9**	**+0.3**
JOGS	**Gusukube**	**3.87**	**65**	P	**Pn**	**09 56 07.7**	**+1.2**
JOGS				S	**Sn**	**09 56 51.8**	**+0.4**
JKE	**Kume jima 2**	**5.71**	**56**	P	**Pn**	**09 56 31.5**	**-0.2**
JKE				*e*S	**Sn**	**09 57 34.6**	**-2.0**
JAGN	**Aguni-jima**	**6.19**	**56**	P	**Pn**	**09 56 39.4**	**+1.0**
JAGN				*e*S	**Sn**	**09 57 49.4**	**+0.8**
JOW	**Kunigami**	**7.11**	**58**	P	**Pn**	**09 56 50.0**	**-1.0**
JOW	**Kunigami**	**7.11**	**58**	*e*P	**Pn**	**09 56 49.9**	**-1.1**
GZH	baz=61 **Guangzhou**	**7.55**	**271**	Pg	**Pn**	**09 56 53.4**	**-3.7**
GZH				Sg	**Sn**	**09 58 07.6**	**-14**
GZH				smax			
	comp=N,67nm,0.8s						
GZH				smax			
	comp=E,59nm,1.2s						
NJ2	**Nanjing**	**9.16**	**345**	*e*P	**Pn**	**09 57 20.9**	**+1.7**
NJ2				pP		09 57 23.3	
NJ2				sP		09 57 25.8	
NJ2				S	**Sn**	**09 59 02.5**	**+0.8**
NJ2				sS		09 59 09.5	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,60nm,4.2s						
NJ2				LR	LR		
	comp=N,110nm,13.0s						
NJ2				LR	LR		
	comp=E,130nm,8.6s						
NJ2				LR	LR		
	comp=Z,120nm,7.0s						
QIZ	**Qiongzhong**	**11.67**	**252**	P	**Pn**	**09 57 54.0**	**+0.4**
QIZ				S	**Sn**	**10 00 08.1**	**+4.7**
QIZ				pmax	pmax		
	comp=Z,12nm,1.6s						
QIZ				LR	LR		
	comp=N,180nm,17.1s						
QIZ				LR	LR		
	comp=Z,180nm,16.9s						
KSRS	**Korea Array**	**15.25**	**20**	P	**Pn**	**09 58 44.3**	**+2.0**
	comp=Z,0.3nm,0.3s,baz=194,slow=11,SNR=9.5						
KMI	**Kunming**	**17.27**	**280**	P	**Pn**	**09 59 09.5**	**+1.3**
KMI				pP	pP	09 59 11.9	-3.4
KMI				sP	sP	09 59 13.3	-4.7
KMI				PP		09 59 24.0	
KMI				S	**Sn**	**10 02 21.4**	**+1.5**
KMI				sS	sS	10 02 25.3	-12
KMI				SS		10 02 42.9	
KMI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,76nm,3.3s						
KMI				LR	LR		
	comp=N,78nm,12.8s						
KMI				LR	LR		
	comp=E,230nm,14.5s						
KMI				LR	LR		
	comp=Z,220nm,13.9s						
HHC	**Hu-ho-hao-te**	**19.52**	**337**	*e*P	**Pn**	**09 59 44.8**	**+9.2**
HHC				pP	pP	09 59 48.8	+8.8
HHC				sP	sP	09 59 51.9	+9.2
HHC				PP		10 00 03.1	
HHC				S	**Sn**	**10 03 19.8**	**+5.7**
HHC				sS	sS	10 03 22.9	-0.2
HHC				SS		10 03 44.0	
HHC				PcP	PcP	10 04 06.0	+12
HHC				ScS	ScS	10 11 21.1	+10
HHC				pmax	pmax		
	comp=Z,23nm,0.7s						
HHC				pmax	pmax		
	comp=Z,58nm,6.3s						
HHC				LR	LR		
	comp=N,130nm,15.5s						
HHC				LR	LR		
	comp=E,170nm,16.5s						
HHC				LR	LR		
	comp=Z,220nm,17.2s						
MAJO	**Matsushiro**	**19.62**	**43**	*e*P	**Pn**	**09 59 36.1**	**-0.6**
	comp=Z,30nm,1.5s						
MJAR	**Matsushiro Arr**	**19.62**	**43**	P	**Pn**	**09 59 33.0**	**-3.7**
	comp=Z,0.0nm,0.3s,baz=253,slow=20,SNR=2.7						
SONM	**Songino Array**	**27.42**	**338**	P	**P**	**10 00 51.5**	**-0.9**
	comp=Z,0.6nm,0.8s,mb3.2,baz=174,slow=4.3,SNR=3.0						
MK31	**Makanchi Array**	**39.29**	**317**	*e*P	**P**	**10 02 35.1**	**-0.4**
MKAR	**Makanchi Array**	**39.29**	**317**	P	**P**	**10 02 37.1**	**+1.6**
	comp=Z,1.0nm,0.5s,mb3.8,baz=96,slow=11,SNR=15						
ZAA0	**Zalesovo Array**	**41.27**	**328**	*e*P	**P**	**10 02 50.4**	**-1.4**
ZALV	**Zalesovo Beam**	**41.27**	**328**	P	**P**	**10 02 50.5**	**-1.3**
	comp=Z,1.8nm,0.5s,mb3.9,baz=111,slow=8.0,SNR=8.4						
KURK	**Kurchatov**	**43.08**	**321**	P	**P**	**10 03 07.0**	**+0.4**
	comp=Z,0.6nm,0.3s,mb3.8,baz=120,slow=7.7,SNR=6.0						
KURK	**Kurchatov**	**43.08**	**321**	*e*P	**P**	**10 03 06.2**	**-0.4**
	comp=Z,1.6nm,0.4s,mb4.1						
WRA	**Warramunga Arr**	**44.63**	**163**	P	**P**	**10 03 17.7**	**-1.6**
	comp=Z,0.8nm,0.5s,mb3.8,baz=345,slow=8.9,SNR=10						
ASAR	**Alice Springs**	**48.08**	**165**	P	**P**	**10 03 45.7**	**-0.7**
	comp=Z,0.3nm,0.3s,mb3.8,baz=338,slow=6.9,SNR=16						
BVAR	**Borovoye Array**	**48.66**	**321**	P	**P**	**10 03 50.7**	**+0.1**
	comp=Z,1.0nm,0.5s,mb4.1,baz=110,slow=8.2,SNR=7.3						
ABKAR	**Akbulak array**	**54.38**	**315**	*e*P	**P**	**10 04 34.0**	**+0.5**
	comp=Z,1.4nm,0.5s,mb4.2						
STKA	**Stephens Creek**	**58.00**	**160**	P	**P**	**10 04 58.8**	**-0.7**
	comp=Z,1.6nm,0.6s,mb4.2,baz=10.0,slow=7.6,SNR=8.7						
KDAK	**Kodiak Island**	**68.54**	**35**	P	**P**	**10 06 08.4**	**-0.6**
	comp=Z,1.7nm,0.4s,mb4.3,baz=239,slow=5.2,SNR=4.8						
ARCES	**ARCESS Array B**	**70.60**	**338**	P	**P**	**10 06 20.8**	**-0.7**
	comp=Z,2.4nm,0.9s,mb4.1,baz=82,slow=7.4,SNR=2.8						
FINES	**FINESS Array B**	**72.48**	**330**	P	**P**	**10 06 31.2**	**-1.8**
	comp=Z,1.1nm,0.6s,mb4.0,baz=35,slow=7.0,SNR=7.6						
NOA	**NORSAR Array B**	**79.27**	**332**	P	**P**	**10 07 09.1**	**-2.7**
	comp=Z,0.6nm,0.8s,mb3.5,baz=63,slow=7.0,SNR=3.1						
YKA	**Yellowknife Ar**	**83.77**	**23**	P	**P**	**10 07 33.3**	**-2.3**
	comp=Z,0.3nm,0.5s,mb3.6,baz=303,slow=4.8,SNR=3.0						

*ISCJB **22** 10:09:32.2±0.8, 67°.69N±0°.04×34°.0E±0°.1, h0km, mb3.2/2, Error ellipse: s-maj=7.1km s-min=5.8km az=147.8*
*CSEM **22** 10:09:34.2±0.8, 67°.71N×33°.84E, h1km, ML2.5, Error ellipse: s-maj=17.4km s-min=9.7km az=89.0, Mining explosion.*
*IDC **22** 10:09:35.7±1.0, 67°.72N×34°.06E, h0km, mb3.2/3, mb1 3.5/9, mb1mx3.3/29, mbtmp3.4/9, ML3.1/6, Error ellipse: s-maj=13.1km s-min=9.1km az=74.0*
*HEL **22** 10:09:36.6±0.3, 67°.72N×33°.66E, h0km, ML2.4, ML2.5(NAO), Explosion*
*NAO **22** 10:09:36.9±1.1, 67°.65N×33°.64E, ML2.5*

ISC 22 10:09:34.7±0.7, 67°.66N±0°.04×33°.8E±0°.1, h0km, n37, σ1$24/59, mb3.2/3, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA0	**Apatity Array**	**0.31**	**260**	Pg	**Pg**	**10 09 41.5**	**+0.9**
APA0	baz=78,slow=16			Lg		10 09 45.7	
APA0	baz=82,slow=56			Rg		10 09 46.8	
APA0	**Apatity Array**	**0.31**	**260**	*i* P	**Pg**	**10 09 41.5**	**+0.9**
APA0				*i* S	**Sg**	**10 09 45.7**	**+1.0**
APA0				*e*RG		10 09 46.8	
APA0	**Apatity Array**	**0.31**	**260**	P	**Pg**	**10 09 41.5**	**+0.8**
APA0				S	**Sg**	**10 09 45.6**	**+0.9**
APA0	baz=82,slow=40			Lg		10 09 45.7	
VRF	**Varrio**	**1.60**	**275**	*e*PG	**Pg**	**10 10 04.4**	**-0.9**
VRF	baz=90			*e*SN	**Sn**	**10 10 25.2**	**-0.2**
VRF	comp=Z,16nm,0.2s			MSG		10 10 25.2	
VRF	**Varrio**	**1.60**	**275**	Pg	**Pg**	**10 10 04.4**	**-0.9**
KU6	**Riekki**	**2.26**	**225**	*e*P	**Pn**	**10 10 15.0**	**+1.8**
KU6				*e*SB	**Sb**	**10 10 45.1**	**+0.5**
KU6	comp=Z,13nm,0.4s			MSG		10 10 45.1	
KU6	**Riekki**	**2.26**	**225**	P	**Pn**	**10 10 14.9**	**+1.7**
KU6				Sb	**Sb**	**10 10 45.1**	**+0.5**
KEV	comp=Z,13nm,0.4s **Kevo**	**3.25**	**313**	*e*P	**Pn**	**10 10 28.5**	**+1.7**
KEV				*e*SB	**Sb**	**10 11 14.1**	**+1.0**
KEV	comp=Z,13nm,0.4s			MSG		10 11 14.1	
KEV				*e*SG	**Sb**	**10 11 14.1**	**+1.0**
KEV	comp=Z,13nm,0.4s			MSG		10 11 14.1	
KEV	**Kevo**	**3.25**	**313**	P	**Pn**	**10 10 28.5**	**+1.7**
KEV	comp=Z,13nm,0.4s			Sb	**Sb**	**10 11 14.1**	**+1.0**
ARA0	**ARCESS Array S**	**3.57**	**306**	Pn	**Pn**	**10 10 32.4**	**+1.1**
ARA0	baz=122,slow=16			Pg	**Pg**	**10 10 40.4**	**-2.7**
ARA0	baz=123,slow=16			Sn	**Sn**	**10 11 13.2**	**-0.9**
ARA0	baz=121,slow=28			Lg		10 11 25.0	
ARA0	baz=125,slow=28 **ARCESS Array S**	**3.57**	**306**	*e*P	**Pn**	**10 10 31.8**	**+0.5**
ARA0	baz=122			*e*SB	**Sb**	**10 11 23.6**	**+1.1**
ARA0	comp=Z,23nm,0.5s			MSG		10 11 23.6	
ARA0				*e*SG	**Sb**	**10 11 23.6**	**+1.1**
ARA0	comp=Z,23nm,0.5s			MSG		10 11 23.6	
ARA0	**ARCESS Array S**	**3.57**	**306**	P	**Pn**	**10 10 31.8**	**+0.5**
ARA0	**ARCESS Array S**	**3.57**	**306**	Pn	**Pn**	**10 10 32.3**	**+1.0**
	baz=122,slow=14,SNR=50						
ARA0	**ARCESS Array S**	**3.57**	**306**	Pg	**Pg**	**10 10 40.3**	**-2.8**
	baz=123,slow=15,SNR=1.9						
ARA0				Sb	**Sb**	**10 11 23.6**	**+1.1**
	comp=Z,23nm,0.5s						
ARA0				Lg		10 11 25.0	
	baz=125,slow=23,SNR=70						
ARCES	**ARCESS Array B**	**3.57**	**306**	Pn	**Pn**	**10 10 32.3**	**+1.0**
	comp=Z,2.4nm,0.3s,baz=122,slow=15,SNR=271						
ARCES				Pg	**Pg**	**10 10 40.7**	**-2.4**
	comp=Z,2.8nm,0.3s,baz=118,slow=15,SNR=17						
ARCES				Sn	**Sn**	**10 11 13.6**	**-0.5**
	comp=Z,2.8nm,0.3s,baz=118,slow=25,SNR=26						
ARCES				Lg		10 11 25.4	
	comp=Z,8.4nm,0.3s,baz=112,slow=30,SNR=13						
HEF	**Hetta**	**3.88**	**286**	*e*P	**Pn**	**10 10 36.5**	**+1.0**
	baz=89						
HEF	**Hetta**	**3.88**	**286**	P	**Pn**	**10 10 36.4**	**+0.9**
FIA0	**FINESS Array S**	**7.07**	**212**	Pn	**Pn**	**10 11 20.1**	**+0.9**
	baz=29,slow=14						
FIA0				Sn	**Sn**	**10 12 37.9**	**-2.2**
	baz=23,slow=18						
FIA0				Lg		10 13 09.1	
	baz=23,slow=28						
FIA0	**FINESS Array S**	**7.07**	**212**	*e*P	**Pn**	**10 11 20.1**	**+0.9**
FIA0				*e*S	**Sn**	**10 12 37.9**	**-2.2**
FIA0				*e*		10 13 09.1	
FIA0	**FINESS Array S**	**7.07**	**212**	P	**Pn**	**10 11 20.1**	**+0.9**
FIA0				S	**Sn**	**10 12 37.9**	**-2.3**
FINES	**FINESS Array B**	**7.07**	**212**	Pn	**Pn**	**10 11 19.6**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=26,slow=15,SNR=6.5						
FINES				Sn	**Sn**	**10 12 39.6**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=19,slow=24,SNR=8.5						
FINES				Lg		10 13 13.1	
	comp=Z,1.8nm,0.3s,baz=28,slow=27,SNR=12						
HFS	**Hagfors**	**11.58**	**239**	Pn	**Pn**	**10 12 19.0**	**-2.0**
HFS				Sn	**Sn**	**10 14 22.4**	**-8.4**
	baz=38,slow=22						
HFS				Lg		10 15 31.2	
	baz=36,slow=28						
HFS	**Hagfors**	**11.58**	**239**	Pn	**Pn**	**10 12 19.3**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=50,slow=16,SNR=3.7						
HFS				Sn	**Sn**	**10 14 25.9**	**-4.9**
	comp=Z,0.2nm,0.3s,baz=46,slow=24,SNR=5.2						
HFS				Lg		10 15 31.8	
	comp=Z,0.3nm,0.3s,baz=45,slow=31,SNR=4.0						
HFS	**Hagfors**	**11.58**	**239**	*e*P	**Pn**	**10 12 19.0**	**-2.0**
HFS				*e*S	**Sn**	**10 14 22.4**	**-8.4**
HFS				*e*SG	Sn	10 15 31.2	+60
HFS	**Hagfors**	**11.58**	**239**	Pn	**Pn**	**10 12 19.0**	**-2.0**
SPA0	**Spitsbergen Ar**	**11.65**	**342**	Pn	**Pn**	**10 12 20.4**	**-1.4**
	baz=130,slow=16						
SPA0	**Spitsbergen Ar**	**11.65**	**342**	*e*P	**Pn**	**10 12 20.4**	**-1.4**
SPA0	**Spitsbergen Ar**	**11.65**	**342**	P	**Pn**	**10 12 20.4**	**-1.4**
SPITS	**Spitsbergen Ar**	**11.65**	**342**	Pn	**Pn**	**10 12 20.0**	**-1.8**
	baz=106,slow=14,SNR=2.7						
NB2	**NORSAR Subarra**	**11.76**	**246**	Pn	**Pn**	**10 12 22.4**	**-1.0**
	baz=51,slow=12						
NB2	**NORSAR Subarra**	**11.76**	**246**	*e*P	**Pn**	**10 12 22.4**	**-1.0**
NB2	**NORSAR Subarra**	**11.76**	**246**	P	**Pn**	**10 12 22.4**	**-1.0**
NOA	**NORSAR Array B**	**11.76**	**246**	Pn	**Pn**	**10 12 22.1**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=54,slow=9.8,SNR=6.8						
NOA				Lg		10 15 39.4	
	comp=Z,0.3nm,0.3s,baz=45,slow=25,SNR=4.8						
AKASG	**Malin Array Be**	**17.17**	**190**	Pn	**Pn**	**10 13 29.6**	**-6.0**
	comp=Z,0.3nm,0.3s,baz=8.0,slow=13,SNR=2.1						
AKTO	**Aktyubinsk**	**21.04**	**133**	P	**P**	**10 14 19.1**	**-0.6**
	comp=Z,0.8nm,0.6s,mb3.2,baz=346,slow=13,SNR=3.7						
MKAR	**Makanchi Array**	**32.28**	**106**	P	**P**	**10 16 06.0**	**+1.4**
	comp=Z,0.1nm,0.5s,mb3.0,baz=343,slow=7.8,SNR=3.2						
TORD	**Torodi Ar. Bea**	**58.38**	**217**	P	**P**	**10 19 31.5**	**0.0**
	comp=Z,0.2nm,0.6s,mb3.3,baz=18,slow=6.3,SNR=3.4						

*ISCJB **22** 10:27:53.0±1.8, 17°.4S±0°.4×179°.0W±0°.4, h538km±50km, mb4.1/9, Error ellipse: s-maj=78.0km s-min=28.5km az=43.3*
*IDC **22** 10:27:53.9±1.9, 17°.23S×179°.10W, h524km±27km, mb3.5/5, mb1 3.7/6, mb1mx3.3/17, mbtmp3.5/6, Error ellipse: s-maj=54.3km s-min=23.3km az=136.0*

**ISC 22 10:27:53.8±1.7, 17°.3S±0°.4×179.0W±0°.4, h527km±47km, n11

4.6nm,0.3s,baz=281,slow=5.2,SNR=7.3
CTA Charters Tower 32.97 260 *e*P **P 10 33 45.4 +0.3**
6.7nm,1.0s,mb4.1
STKA Stephens Creek 38.40 240 *e*P **P 10 34 31.1 +1.1**
3.4nm,1.0s,mb3.8
STKA Stephens Creek 38.40 240 P **P 10 34 30.3 +0.3**
3.4nm,0.8s,mb3.9,baz=74,slow=9.0,SNR=5.6
WRA Warramunga Arr 44.16 259 P **P 10 35 15.2 -0.6**
2.3nm,0.5s,mb4.0,baz=94,slow=7.9,SNR=44
ASAR Alice Springs 44.39 254 P **P 10 35 17.7 +0.1**
21nm,0.6s,mb4.8,baz=87,slow=8.2,SNR=414
ASAR ScP ScP 10 39 51.2 -0.8
0.4nm,0.7s,baz=95,slow=4.5,SNR=6.1
KAKA Kakadu 47.01 269 *e*P **P 10 35 37.9 +0.2**
6.7nm,0.6s,mb4.3
FORT Forrest 49.73 244 *e*P **P 10 35 57.3 -0.4**
6.2nm,0.6s,mb4.2
KLBR Kellerberrin 58.56 243 *e*P **P 10 36 59.2 -0.8**
31nm,1.6s,mb4.3
MJAR Matsushiro Arr 67.09 324 P **P 10 37 54.1 -0.6**
0.8nm,0.5s,mb3.5,baz=148,slow=7.0,SNR=4.0
CMAR Chiang Mai Arr 88.14 290 P **P 10 39 50.0 +1.1**
0.5nm,0.3s,mb3.6,baz=111,slow=4.0,SNR=4.4

IDC ***22*** *10:37:31.7±0.5, 32°.23N×104°.54E, h0km, mb4.5/21, mb1 4.5/24, mb1mx4.5/29, mbtmp4.4/24, ML4.0/3, MS3.6/7, Ms1 3.6/7, ms1mx3.2/26, Error ellipse: s-maj=17.0km s-min=11.8km az=55.0*
ISCJB ***22*** *10:37:31.1±0.7, 32°.25N±0°.02×104°.47E±0°.03, h5km±4km, mb4.6/86, MS3.8/13, Error ellipse: s-maj=4.1km s-min=3.3km az=21.8*
NEIC ***22*** *10:37:33.6±0.2, 32°.24N×104°.44E, h10km, mb4.7/58, Error ellipse: s-maj=4.6km s-min=4.2km az=114.0*
BJI ***22*** *10:37:34.0, 32°.22N×104°.53E, h16km, mB4.6/16, mb4.5/25, ML4.3/20, Ms4.2/26, Ms7 4.0/22*
MOS ***22*** *10:37:34.9±0.9, 32°.20N×104°.51E, h33km, mb4.9/51, Error ellipse: s-maj=8.6km s-min=5.0km az=114.0*
SZGRF ***22*** *10:37:39.0, 32°.19N×104°.20E, h33km, mb4.9, Sichuan, China*
ISC 22 10:37:34.6±0.7, 32°.26N±0°.02×104°.41E±0°.03, h14km±4km, n259, σ0.96/271, mb4.6/86, MS3.8/13, 33C-4D, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**1.45**	**203**	Pg	**Pg**	**10 38 01.6**	**-1.0**
CD2				Sg	**Sg**	**10 38 21.5**	**+0.1**
CD2				smax			
	comp=N,51μm,0.7s						
CD2				smax			
	comp=E,25μm,0.6s						
LZH	**Lanzhou**	**3.85**	**353**	⇑Pn	**Pn**	**10 38 36.5**	**+3.1**
LZH				Pg	**Pg**	**10 38 47.8**	**-0.5**
LZH				Sn	**Sn**	**10 39 22.4**	**+4.0**
LZH				Sg	**Sg**	**10 39 37.8**	**-0.4**
LZH				smax			
	comp=N,1μm,0.6s						
LZH				smax			
	comp=E,2μm,0.7s						
LZH				LR	LR		
	comp=E,3μm,4.8s						
LZH				LR	LR		
	comp=Z,3μm,6.2s						
XAN	**Xi'an**	**4.18**	**64**	Pn	**Pn**	**10 38 37.9**	**-0.1**
XAN				Pg	**Pg**	**10 38 50.4**	**-4.4**
XAN				Sn	**Sn**	**10 39 33.1**	**+6.4**
XAN				Sg	**Sg**	**10 39 48.6**	**-0.4**
XAN				smax			
	comp=N,900nm,0.9s						
XAN				smax			
	comp=E,400nm,1.0s						
ENH	**Enshi**	**4.78**	**113**	*e*Pn	**Pn**	**10 38 47.9**	**+1.7**
ENH				*e*Pg	**Pg**	**10 39 00.2**	**-6.0**
KMI	**Kunming**	**7.26**	**192**	Pn	**Pn**	**10 39 22.6**	**+2.3**
KMI				Sn	**Sn**	**10 40 44.5**	**+2.0**
KMI				Sg	**Sn**	**10 41 28.0**	**+45**
KMI				smax			
	comp=N,69nm,0.8s						
KMI				smax			
	comp=E,66nm,0.7s						
GTA	**Gaotai**	**8.05**	**334**	P	**Pn**	**10 39 32.9**	**+1.8**
GTA				pP		10 39 36.5	
GTA				sP		10 39 39.1	
GTA				S	**Sn**	**10 41 07.4**	**+5.4**
GTA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,62nm,3.9s						
GTA				LR	LR		
	comp=N,640nm,9.2s						
GTA				LR	LR		
	comp=E,310nm,11.6s						
GTA				LR	LR		
	comp=Z,640nm,10.7s						
WHN	**Wuhan**	**8.67**	**99**	P	**Pn**	**10 39 36.4**	**-3.3**
WHN				S	**Sn**	**10 41 08.9**	**-8.3**
WHN				LR	LR		
	comp=N,3μm,3.3s						
WHN				LR	LR		
	comp=E,2μm,3.5s						
WHN				LR	LR		
	comp=Z,2μm,3.4s						
BTO	**Baotou**	**9.48**	**27**	*e*P	**Pn**	**10 39 50.1**	**-0.6**
BTO				S	**Sn**	**10 41 42.5**	**+5.5**
BTO				LR	LR		
	comp=N,420nm,11.2s						
HHC	**Hu-ho-hao-te**	**10.32**	**32**	*e*P	**Pn**	**10 40 04.4**	**+2.1**
HHC				pP		10 40 07.6	
HHC				sP		10 40 10.4	
HHC				PP		10 40 12.8	
HHC				S	**Sn**	**10 42 01.5**	**+3.7**
HHC				sS		10 42 07.9	
HHC				SS		10 42 15.4	
HHC				PcS	PcS	10 49 41.6	-0.8
HHC				ScS	ScS	10 53 11.3	-4.4
HHC				pmax	pmax		
	comp=Z,17nm,0.6s						
HHC				pmax	pmax		
	comp=Z,70nm,4.8s						
HHC				LR	LR		
	comp=N,430nm,5.8s						
HHC				LR	LR		
	comp=E,490nm,5.5s						
HHC				LR	LR		
	comp=Z,470nm,8.7s						
NJ2	**Nanjing**	**12.25**	**87**	*e*P	**Pn**	**10 40 30.6**	**+1.9**
NJ2				pP		10 40 32.8	
NJ2				sP		10 40 35.9	
NJ2				PP		10 40 38.3	
NJ2				S	**Sn**	**10 42 48.0**	**+3.0**
NJ2				sS		10 42 56.0	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,80nm,6.5s						
NJ2				LR	LR		
	comp=N,610nm,13.2s						
NJ2				LR	LR		
	comp=E,590nm,9.8s						
NJ2				LR	LR		
	comp=Z,580nm,13.6s						
BJI	**Beijing**	**12.27**	**47**	P	**Pn**	**10 40 27.9**	**-1.0**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BJI				pmax	pmax		
	comp=Z,89nm,3.7s						
BJI				LR	LR		
	comp=N,720nm,5.6s						
BJI				LR	LR		
	comp=E,650nm,7.1s						
SHL	**Shillong**	**12.83**	**242**	*e*PKP	**Pn**	**10 40 36.0**	**-0.7**
SHL				*ex*	x	10 44 35.0	
QIZ	**Qiongzhong**	**14.05**	**158**	P	**Pn**	**10 40 53.8**	**+0.5**
QIZ				S	**Sn**	**10 43 30.5**	**+1.3**
QIZ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
QIZ				LR	LR		
	comp=N,510nm,11.8s						
QIZ				LR	LR		
	comp=Z,600nm,11.8s						
CHTO	**Chiang Mai**	**14.26**	**201**	*e*P	**Pn**	**10 40 57.0**	**+0.8**
CM31	**Chiang Mai Arr**	**14.60**	**201**	*e*Pn	**Pn**	**10 41 01.9**	**+1.1**
CMAR	**Chiang Mai Arr**	**14.60**	**201**	Pn	**Pn**	**10 41 01.3**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=11,slow=11,SNR=21						
CMAR	**Chiang Mai Arr**	**14.60**	**201**	P	**Pn**	**10 41 01.3**	**+0.5**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TAPN	**Taplejung**	**15.29**	**256**	*e*P	**Pn**	**10 41 10.2**	**+0.1**
	comp=Z,41nm,0.9s						
SONM	**Songino Array**	**15.63**	**5**	Pn	**Pn**	**10 41 14.2**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=185,slow=10,SNR=16						
SONM				Lg		10 45 49.6	
	comp=Z,0.1nm,0.3s,baz=190,slow=23,SNR=3.2						
SONM				LR	LR	10 47 56.6	
	comp=Z,307nm,19.1s,baz=247,slow=40						
ULN	**Ulaanbaatar**	**15.72**	**7**	*e*P	**Pn**	**10 41 20.5**	**+5.0**
ULN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ULN	**Ulaanbaatar**	**15.72**	**7**	*e*P	**Pn**	**10 41 20.5**	**+5.0**
	comp=Z,9.0nm,0.9s						
ODAN	**Odare**	**15.75**	**254**	*e*P	**Pn**	**10 41 15.2**	**-0.9**
	comp=Z,52nm,0.8s						
RAMN	**Ramite**	**16.36**	**256**	*e*P	**Pn**	**10 41 22.7**	**-1.2**
	comp=Z,28nm,0.6s						
GUN	**Gumba**	**16.61**	**260**	*e*P	**Pn**	**10 41 27.3**	**+0.2**
	comp=Z,31nm,0.5s						
YHNB	**Yeheng**	**16.71**	**113**	*e*P	**Pn**	**10 41 30.6**	**+2.1**
	comp=Z,15nm,0.8s						
SSLB	**Suanglung**	**16.86**	**116**	*e*P	**Pn**	**10 41 33.4**	**+3.1**
	comp=Z,14nm,0.7s						
PKI	**Pulchoki**	**17.12**	**259**	*e*P	**Pn**	**10 41 32.5**	**-1.0**
	comp=Z,22nm,0.5s						
PKI	**Pulchoki**	**17.12**	**259**	*e*P	**Pn**	**10 41 32.5**	**-1.0**
PKI				pmax	pmax		
	comp=Z,22nm,0.5s						
KKN	**Kakani**	**17.15**	**260**	*e*P	**Pn**	**10 41 33.1**	**-0.8**
	comp=Z,20nm,0.5s						
KKN	**Kakani**	**17.15**	**260**	*e*P	**Pn**	**10 41 33.1**	**-0.8**
KKN				pmax	pmax		
	comp=Z,20nm,0.5s						
DMN	**Daman**	**17.36**	**260**	*e*P	**Pn**	**10 41 35.6**	**-0.9**
	comp=Z,31nm,0.7s						
WMQ	**Urumqi**	**17.47**	**316**	*e*P	**Pn**	**10 41 37.0**	**-0.8**
WMQ				PP		10 41 52.0	
WMQ				S	**Sn**	**10 44 51.0**	**-1.1**
WMQ				SS		10 45 12.0	
WMQ				pmax	pmax		
	comp=Z,24nm,0.6s						
WMQ				LR	LR		
	comp=N,150nm,5.0s						
WMQ				LR	LR		
	comp=E,170nm,5.0s						
WMQ				LR	LR		
	comp=Z,180nm,5.0s						
ZAK	**Zakamensk**	**18.13**	**358**	*e*P	**Pn**	**10 41 46.1**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.5s						
TLY	**Talaya**	**19.42**	**359**	*e*P	**Pn**	**10 42 02.5**	**+1.0**
TLY				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MOY	**Mondy**	**19.56**	**354**	*e*P	**Pn**	**10 42 04.3**	**+1.2**
MOY				pmax	pmax		
	comp=Z,23nm,1.8s						
KSRS	**Korea Array**	**19.96**	**68**	P	**Pn**	**10 42 05.8**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=253,slow=10,SNR=10						
IRK	**Irkutsk**	**19.97**	**360**	*e*P	**Pn**	**10 42 08.7**	**+0.6**
IRK				pmax	pmax		
	comp=Z,99nm,0.8s						
HIA	**Hailar**	**20.52**	**30**	*e*P	**P**	**10 42 12.8**	**+0.5**
HIA				pmax	pmax		
	comp=Z,12nm,0.8s						
HIA	**Hailar**	**20.52**	**30**	*e*P	**P**	**10 42 12.8**	**+0.6**
	comp=Z,12nm,0.8s						
JOSI	**Joshimath**	**21.27**	**272**	*e*PKP	**P**	**10 42 21.0**	**+0.4**
KLP	**Kalpa**	**22.21**	**275**	*e*PKP	**P**	**10 42 30.8**	**+0.1**
MK31	**Makanchi Array**	**22.30**	**317**	*e*P	**P**	**10 42 32.5**	**+1.1**
MKAR	**Makanchi Array**	**22.30**	**317**	P	**P**	**10 42 32.5**	**+1.0**
	comp=Z,5.2nm,0.7s,mb4.1,baz=104,slow=13,SNR=33						
MKAR				LR	LR	10 52 03.4	
	comp=Z,301nm,18.1s,MS3.8,baz=163,slow=39						
MKAR	**Makanchi Array**	**22.30**	**317**	P	**P**	**10 42 32.5**	**+1.1**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MKAR				MLR	MLR		
	comp=Z,301nm,18.2s						
MDJ	**Mudanjiang**	**23.17**	**51**	P	**P**	**10 42 42.1**	**+1.4**
MDJ				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.2						
MDJ				pmax	pmax		
	comp=Z,88nm,4.4s						
AGRA	**Agra**	**23.49**	**265**	*e*PKP	**P**	**10 42 44.2**	**-0.1**
SONA	**Sohna**	**23.91**	**268**	*e*PKP	**P**	**10 42 48.6**	**+0.5**
SONA				AMb	AMB	10 42 50.7	
	comp=Z,10nm,0.2s,mb4.8						
KSH	**Kashi**	**24.08**	**295**	P	**P**	**10 42 54.1**	**+4.5**
KSH				pP		10 42 58.3	
KSH				sP	sP	10 43 01.3	+5.8
KSH				PP		10 43 30.3	
KSH				PcP	PcP	10 46 33.1	+2.3
KSH				S	**S**	**10 47 10.9**	**+4.2**
KSH				sS	sS	10 47 18.8	+5.3
KSH				SS		10 48 07.6	
KSH				ScP	ScP	10 50 09.9	+1.0
KSH				PcS	PcS	10 50 11.6	+1.2
KSH				ScS	ScS	10 53 56.4	+0.4
KSH				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.2						
KSH				pmax	pmax		
	comp=Z,81nm,3.9s						
KSH				LR	LR		
	comp=N,540nm,17.1s						
KSH				LR	LR		
	comp=E,150nm,11.6s						
KSH				LR	LR		
	comp=Z,120nm,6.9s						
KHET	**Khetri**	**25.04**	**268**	*e*PKP	**P**	**10 42 59.2**	**+0.7**
KHET				AMb	AMB	10 42 59.7	
	comp=Z,18nm,0.6s,mb4.8						
TKM2	**Tokmak 2**	**25.07**	**303**	*e*P	**P**	**10 43 00.3**	**+1.7**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.9						
TKM2	**Tokmak 2**	**25.07**	**303**	*e*P	**P**	**10 43 00.3**	**+1.7**
	comp=Z,2.8nm,0.8s,mb3.8						
NGP	**Nagpur**	**25.15**	**250**	*e*PKP	**P**	**10 42 58.1**	**-1.4**
BHPL	**Bhopal**	**25.46**	**256**	*e*PKP	**P**	**10 43 01.8**	**-0.5**
UCH	**Uchtor**	**25.68**	**301**	*e*P	**P**	**10 43 06.2**	**+2.1**
	comp=Z,9.7nm,1.0s,mb4.3						
AAK	**Ala-Archa**	**25.79**	**302**	LR	LR	10 54 04.0	
	comp=Z,176nm,18.4s,MS3.6,baz=171,slow=38						
ZAA0	**Zalesovo Array**	**25.81**	**333**	*e*P	**P**	**10 43 05.5**	**+0.4**
ZALV	**Zalesovo Beam**	**25.81**	**333**	P	**P**	**10 43 05.6**	**+0.5**
	comp=Z,17nm,0.7s,mb4.7,baz=131,slow=9.8,SNR=88						
ZALV				PcP	PcP	10 46 33.5	-0.9
	comp=Z,0.8nm,0.6s,baz=144,slow=5.4,SNR=2.7						
ZALV				LR	LR	10 53 55.1	
	comp=Z,38nm,19.1s,MS2.9,baz=152,slow=38						
ZALV	**Zalesovo Beam**	**25.81**	**333**	P	**P**	**10 43 05.6**	**+0.5**
ZALV				PcP	PcP	10 46 33.5	-0.9
ZALV				LR	LR	10 53 55.1	
KURK	**Kurchatov**	**26.49**	**322**	P	**P**	**10 43 12.0**	**+0.6**
	comp=Z,3.4nm,0.6s,mb4.0,baz=124,slow=12,SNR=16						
KURK				PcP	PcP	10 46 35.5	-0.5
	comp=Z,1.3nm,0.2s,baz=125,slow=2.2,SNR=5.6						
KURK				LR	LR	10 54 48.6	
	comp=Z,125nm,18.2s,MS3.5,baz=120,slow=39						
KURK	**Kurchatov**	**26.49**	**322**	*e*P	**P**	**10 43 12.2**	**+0.8**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.1						
KURK	**Kurchatov**	**26.49**	**322**	*e*P	**P**	**10 43 12.2**	**+0.8**
	comp=Z,3.7nm,0.7s,mb4.0						
KLR	**Kul'dur**	**26.56**	**42**	*e*P	**P**	**10 43 08.2**	**-3.8**
KLR				MLR	MLR		
	comp=Z,1μm,12.0s,MS4.6						
NVS	**Novosibirsk**	**27.09**	**333**	*e*P	**P**	**10 43 16.5**	**-0.2**
NVS				*e*SS		10 49 08.8	
NVS				pmax	pmax		
	comp=N,4.0nm,1.1s						
NVS				pmax	pmax		
	comp=E,4.0nm,1.1s						
NVS				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.0						
MJAR	**Matsushiro Arr**	**28.13**	**72**	P	**P**	**10 43 24.8**	**-1.5**
	comp=Z,0.9nm,0.6s,mb3.6,baz=278,slow=10,SNR=6.4						
MJAR	**Matsushiro Arr**	**28.13**	**72**	P	**P**	**10 43 24.8**	**-1.4**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HABR	**Khabarovsk**	**28.17**	**46**	*e*P	**P**	**10 43 33.4**	**+7.0**
HABR				PPP		10 44 20.6	
HABR				S	**S**	**10 48 08.4**	**-2.9**
HABR				*e*SS	sS	10 48 23.8	+5.5
HABR				*e*SS		10 49 26.2	
HABR						10 54 08.3	
HABR				MLR	MLR		
	comp=Z,196nm,12.0s,MS3.9						
PSI	**Prapat**	**29.75**	**191**	P	**P**	**10 43 40.6**	**-0.1**
	comp=Z,15nm,0.8s,mb4.8,baz=349,slow=8.2,SNR=13						
PSI				PcP	PcP	10 46 44.4	-0.2
	comp=Z,3.8nm,0.6s,baz=0.0,slow=10,SNR=3.6						
PSI				LR	LR	10 58 22.4	
	comp=Z,108nm,19.2s,MS3.5,baz=221,slow=42						
PSI	**Prapat**	**29.75**	**191**	P	**P**	**10 43 40.7**	**-0.1**
PSI						10 46 44.4	
PSI				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.8						
PSI				MLR	MLR		
	comp=Z,108nm,19.2s,MS3.5						
PSI	**Prapat**	**29.75**	**191**	P	**P**	**10 43 40.6**	**-0.1**
PSI				PcP	PcP	10 46 44.4	-0.2
PSI				LR	LR	10 58 22.4	
ASAJ	**Asahikawa**	**31.99**	**57**	P	**P**	**10 43 57.8**	**-2.5**
	comp=Z,5.2nm,0.8s,mb4.4,baz=279,slow=13,SNR=5.4						
ASAJ	**Asahikawa**	**31.99**	**57**	P	**P**	**10 43 57.8**	**-2.5**
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BVAR	**Borovoye Array**	**32.06**	**320**	P	**P**	**10 44 01.5**	**+0.8**
	comp=Z,1.1nm,0.5s,mb3.9,baz=112,slow=11,SNR=7.2						
BVAR				PcP	PcP	10 46 49.3	-0.8
	comp=Z,1.4nm,0.7s,baz=151,slow=3.4,SNR=5.6						
BVAR	**Borovoye Array**	**32.06**	**320**	P	**P**	**10 44 01.5**	**+0.7**
BVAR						10 46 49.3	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ABKAR	**Akbulak array**	**37.11**	**310**	*e*P	**P**	**10 44 45.3**	**+0.8**
	comp=Z,7.8nm,0.8s,mb4.6						
SVE	**Sverdlovsk**	**38.73**	**323**	*e*P	**P**	**10 44 59.3**	**+1.2**
SVE				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.5						
ARU	**Arti**	**39.69**	**321**	*c i*P	**P**	**10 45 06.8**	**+0.7**
ARU				*e*		10 46 38.2	
ARU				PPP		10 47 02.9	
ARU				S	**S**	**10 51 11.7**	**+2.7**
ARU				pmax	pmax		
	comp=Z,24nm,1.2s,mb4.8						
ARU	**Arti**	**39.69**	**321**	*e*P	**P**	**10 45 06.8**	**+0.7**
	comp=Z,16nm,0.9s,mb4.8						
TIXI	**Tiksi**	**41.57**	**11**	*e*P	**P**	**10 45 20.5**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.4						
TIXI	**Tiksi**	**41.57**	**11**	*e*P	**P**	**10 45 20.5**	**-1.0**
	comp=Z,13nm,1.2s,mb4.4						
SOKR	**Solikamsk**	**41.59**	**325**	*d i*P	**P**	**10 45 23.0**	**+1.2**
SOKR				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.8						
PETK	**Petropavlovsk-**	**43.19**	**45**	P	**P**	**10 45 34.5**	**-0.4**
	comp=Z,5.5nm,1.0s,mb4.3,baz=244,slow=6.4,SNR=4.4						
PETK	**Petropavlovsk-**	**43.19**	**45**	P	**P**	**10 45 34.5**	**-0.4**
PETK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.3						
MIB	**Mutribah**	**48.47**	**283**	*e*P	**P**	**10 46 16.7**	**-0.2**
MIB				AMb	AMB	10 46 18.8	
	comp=Z,20nm,1.0s,mb5.1						
RDF	**Al-Radifah**	**48.57**	**282**	*e*P	**P**	**10 46 18.1**	**+0.4**
RDF				AMb	AMB	10 46 19.7	
	comp=Z,22nm,0.8s,mb5.2						
NAY	**Al-Naaiem**	**48.72**	**282**	*e*P	**P**	**10 46 18.7**	**-0.2**
NAY				AMb	AMB	10 46 20.6	
	comp=Z,14nm,0.7s,mb5.1						
KIV	**Kislovodsk**	**48.91**	**302**	*e*P	**P**	**10 46 21.0**	**+0.9**
KIV				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
KIV				MLR	MLR		
	comp=Z,65nm,17.0s,MS3.7						
KIV	**Kislovodsk**	**48.91**	**302**	*e*P	**P**	**10 46 21.4**	**+1.3**
	comp=Z,7.4nm,0.5s,mb5.0						
VRHR	**Novokhopersk**	**48.96**	**312**	*e*P	**P**	**10 46 19.9**	**-0.5**
VRHR				pmax	pmax		
	comp=E,10.0nm,0.9s						
VRHR				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
VRHR				pmax	pmax		
	comp=N,3.0nm,0.4s						
BILL	**Bilibino**	**50.03**	**26**	*c i*P	**P**	**10 46 27.3**	**-1.0**
BILL				pmax	pmax		
	comp=Z,17nm,2.3s,mb4.7						
BILL	**Bilibino**	**50.03**	**26**	*e*P	**P**	**10 46 27.4**	**-0.8**
	comp=Z,2.8nm,0.5s,mb4.5						
VSR	**Storozhevoye**	**50.50**	**312**	*e*P	**P**	**10 46 31.9**	**-0.2**
VSR				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
VSR				pmax	pmax		
	comp=N,5.0nm,0.4s						
VSR				pmax	pmax		
	comp=E,5.0nm,0.4s						
OBN	**Obninsk**	**51.80**	**317**	*e*P	**P**	**10 46 41.6**	**-0.2**
OBN				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
FITZ	**Fitzroy Crossi**	**54.05**	**155**	*e*P	**P**	**10 46 57.2**	**-1.5**
	comp=Z,16nm,1.2s,mb4.8						
JOF	**Joensuu**	**54.20**	**327**	*e*P	**P**	**10 46 58.7**	**-0.6**
JOF				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.8						
JOF	**Joensuu**	**54.20**	**327**	*ep*	**P**	**10 46 58.7**	**-0.6**
	comp=Z,7.1nm,0.5s,mb4.8						
JOF	**Joensuu**	**54.20**	**327**	*ep*	**P**	**10 46 58.7**	**-0.6**
	comp=Z,7.1nm,0.5s,mb4.8						
ARCES	**ARCESS Array B**	**56.32**	**335**	P	**P**	**10 47 14.2**	**-0.3**
	comp=Z,5.6nm,0.5s,mb4.8,baz=78,slow=8.1,SNR=50						
ARCES	**ARCESS Array B**	**56.32**	**335**	P	**P**	**10 47 14.2**	**-0.3**
ARCES				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ARE0	**ARCESS Array S**	**56.32**	**335**	*e*P	**P**	**10 47 14.4**	**-0.2**
BR131	**Keskin Array S**	**56.40**	**299**	*e*P	**P**	**10 47 15.6**	**0.0**
	comp=Z,0.9nm,0.6s,mb4.0						
KAF	**Kangasniemi**	**56.57**	**327**	*e*P	**P**	**10 47 15.7**	**-0.7**
KAF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
KAF	**Kangasniemi**	**56.57**	**327**	*ep*	**P**	**10 47 15.7**	**-0.7**
	comp=Z,6.2nm,0.6s,mb4.8						
KAF	**Kangasniemi**	**56.57**	**327**	*ep*	**P**	**10 47 15.7**	**-0.7**
	comp=Z,6.2nm,0.6s,mb4.8						
FINES	**FINESS Array B**	**56.76**	**326**	P	**P**	**10 47 17.8**	**0.0**
	comp=Z,8.3nm,0.6s,mb5.0,baz=83,slow=7.0,SNR=82						
FINES	**FINESS Array B**	**56.76**	**326**	P	**P**	**10 47 17.8**	**0.0**
FINES				pmax	pmax		
	comp=Z,8.0nm,0.6s						
AKASG	**Malin Array Be**	**56.79**	**313**	P	**P**	**10 47 17.8**	**-0.4**
	comp=Z,4.1nm,0.4s,mb4.8,baz=68,slow=7.5,SNR=17						
AKASG	**Malin Array Be**	**56.79**	**313**	P	**P**	**10 47 17.8**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.4s						
AKASG	**Malin Array Be**	**56.79**	**313**	P	**P**	**10 47 17.8**	**-0.4**
KIEV	**Kiev**	**56.80**	**313**	*e*P	**P**	**10 47 17.3**	**-1.0**
KIEV				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.7						
KIEV	**Kiev**	**56.80**	**313**	*e*P	**P**	**10 47 17.3**	**-1.0**
	comp=Z,3.2nm,0.4s,mb4.7						
TLCR		**58.36**	**306**	⇑P	**P**	**10 47 27.6**	**-1.7**
TLCR		**58.36**	**306**	⇑*i*P	**P**	**10 47 29.0**	**-0.3**
WRAB	**Tennant Creek**	**59.29**	**147**	*e*P	**P**	**10 47 34.8**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,13nm,0.7s,mb5.1						
WRAB	**Tennant Creek**	**59.29**	**147**	*e*P	**P**	**10 47 34.8**	**-1.2**
	comp=Z,13nm,0.7s,mb5.1						
WRA	**Warramunga Arr**	**59.29**	**147**	P	**P**	**10 47 34.9**	**-1.1**
	comp=Z,13nm,0.

DRGR		**61.97**	**310**	⇑P	**P**	**10 47 54.6 +0.6**
DRGR		**61.97**	**310**	⇑*i*P	**P**	**10 47 54.6 +0.6**
STHS	**Stebnicka Huta**	**62.09**	**313**	*e*P	**P**	**10 47 55.6 +0.8**
STHS				pmax	pmax	
	comp=Z,3.0nm,0.9s,mb4.4					
STHS	**Stebnicka Huta**	**62.09**	**313**	*e*P	**P**	**10 47 55.6 +0.8**
	comp=Z,2.9nm,0.9s,mb4.4					
STHS	**Stebnicka Huta**	**62.09**	**313**	*e*P	**P**	**10 47 55.6 +0.8**
CRVS	**Cervenica-Dubn**	**62.11**	**312**	*e*P	**P**	**10 47 55.1 +0.1**
CRVS				pmax	pmax	
	comp=Z,6.0nm,1.6s,mb4.5					
CRVS	**Cervenica-Dubn**	**62.11**	**312**	*e*P	**P**	**10 47 55.1 +0.1**
	comp=Z,5.8nm,1.6s,mb4.5					
CRVS	**Cervenica-Dubn**	**62.11**	**312**	*e*P	**P**	**10 47 55.1 +0.1**
ASAR	**Alice Springs**	**62.34**	**149**	P	**P**	**10 47 55.8 -1.0**
	comp=Z,3.2nm,0.7s,mb4.5,baz=333,slow=6.7,SNR=38					
ASAR	**Alice Springs**	**62.34**	**149**	P	**P**	**10 47 55.8 -0.9**
ASAR				pmax	pmax	
	comp=Z,3.0nm,0.7s					
BZS	**Buzias**	**63.06**	**309**	⇑P	**P**	**10 48 00.2 -1.2**
BZS	**Buzias**	**63.06**	**309**	⇓*i*P	**P**	**10 48 01.6 +0.2**
NB2	**NORSAR Subarra**	**63.83**	**327**	P	**P**	**10 48 05.0 -1.2**
	comp=Z,5.3nm,0.6s,mb4.8,baz=72,slow=6.9					
NOA	**NORSAR Array B**	**63.83**	**327**	P	**P**	**10 48 05.3 -0.8**
	comp=Z,4.3nm,0.5s,mb4.7,baz=72,slow=6.7,SNR=25					
NOA				LR	LR	11 17 21.0
	comp=Z,42nm,19.9s,MS3.6,baz=5.0,slow=37					
NOA	**NORSAR Array B**	**63.83**	**327**	P	**P**	**10 48 05.4 -0.8**
NOA				pmax	pmax	
	comp=Z,4.0nm,0.5s					
NOA				MLR	MLR	
	comp=Z,42nm,19.9s					
OKC	**Ostrava-Krasne**	**63.86**	**314**	*e*P	**P**	**10 48 04.6 -2.0**
OKC				MLR	MLR	
	comp=Z,200nm,15.1s,MS4.4					
OKC	**Ostrava-Krasne**	**63.86**	**314**	*e*P	**P**	**10 48 04.6 -2.0**
OKC				AMS	AMS	11 17 50.0
	comp=Z,200nm,15.1s					
VYHS	**Vyhne**	**63.89**	**312**	*e*P	**P**	**10 48 07.5 +0.7**
VYHS				pmax	pmax	
	comp=Z,5.0nm,1.3s,mb4.4					
VYHS	**Vyhne**	**63.89**	**312**	*e*P	**P**	**10 48 07.5 +0.7**
	comp=Z,4.5nm,1.3s,mb4.3					
VYHS	**Vyhne**	**63.89**	**312**	*e*P	**P**	**10 48 07.5 +0.7**
NAO01	**NORSAR Array S**	**64.05**	**327**	*e*P	**P**	**10 48 06.2 -1.4**
	comp=Z,2.1nm,0.4s,mb4.5					
MORC	**Moravsky Berou**	**64.25**	**314**	*e*P	**P**	**10 48 09.3 +0.1**
	comp=Z,5.0nm,1.0s,mb4.5					
MORC	**Moravsky Berou**	**64.25**	**314**	⇑*i*P	**P**	**10 48 09.3 +0.2**
KLBR	**Kellerberrin**	**64.75**	**167**	*e*P	**P**	**10 48 11.7 -0.7**
	comp=Z,17nm,1.1s,mb5.0					
DPC	**Dobruska-Polom**	**64.79**	**315**	*e*P	**P**	**10 48 13.4 +0.7**
DPC				MLR	MLR	
	comp=Z,100nm,6.2s					
DPC	**Dobruska-Polom**	**64.79**	**315**	*e*P	**P**	**10 48 13.4 +0.7**
DPC				AMS	AMS	11 17 50.0
	comp=Z,100nm,6.2s					
PKSM	**Moragy**	**64.81**	**310**	⇑P	**P**	**10 48 13.0 +0.1**
PKSM	**Moragy**	**64.81**	**310**	⇑*i*P	**P**	**10 48 13.0 +0.1**
UPC	**Upice**	**64.92**	**315**	*e*P	**P**	**10 48 14.7 +1.2**
UPC	**Upice**	**64.92**	**315**	*e*P	**P**	**10 48 14.7 +1.2**
VRAC	**Vranov**	**64.99**	**314**	⇑P	**P**	**10 48 12.5 -1.5**
CTA	**Charters Tower**	**65.68**	**137**	*e*P	**P**	**10 48 17.8 -0.9**
	comp=Z,2.6nm,0.6s,mb4.4					
PVCC	**Panska Ves**	**65.77**	**316**	AMS	AMS	11 18 10.0
	comp=Z,100nm,19.2s					
NWAO	**Narrogin (SRO)**	**65.95**	**168**	*e*P	**P**	**10 48 19.9 -0.4**
NWAO				pmax	pmax	
	comp=Z,12nm,0.9s					
NWAO	**Narrogin (SRO)**	**65.95**	**168**	*e*P	**P**	**10 48 19.9 -0.4**
	comp=Z,12nm,0.9s,mb4.9					
PRU	**Pruhonice**	**65.98**	**315**	*e*P	**P**	**10 48 21.3 +0.9**
PRU				MLR	MLR	
	comp=Z,100nm,16.7s,MS4.1					
PRU	**Pruhonice**	**65.98**	**315**	*e*P	**P**	**10 48 21.3 +0.9**
PRU				AMS	AMS	11 18 20.0
	comp=Z,100nm,16.7s					
BRG	**Berggiesshubel**	**66.01**	**316**	*e*P	**P**	**10 48 20.4 -0.2**
	comp=Z,4.0nm,0.7s,mb4.6					
BRG	**Berggiesshubel**	**66.01**	**316**	*e*P	**P**	**10 48 20.6 0.0**
	comp=Z,4.2nm,0.7s,mb4.6					
BRG	**Berggiesshubel**	**66.01**	**316**	*e*P	**P**	**10 48 20.6 0.0**
BRG				pmax	pmax	
	comp=Z,3.0nm,0.7s,mb4.4					
COLD	**Coldfoot**	**66.31**	**24**	*e*P	**P**	**10 48 21.8 -0.4**
	comp=Z,5.1nm,1.0s,mb4.5					
CLL	**Collm**	**66.39**	**317**	*e*P	**P**	**10 48 22.0 -1.0**
	comp=Z,6.0nm,1.1s,mb4.5					
CLL	**Collm**	**66.39**	**317**	⇑*i*P	**P**	**10 48 22.7 -0.3**
CLL				pmax	pmax	
	comp=Z,6.0nm,1.1s,mb4.5					
CLL	**Collm**	**66.39**	**317**	⇑*i*P	**P**	**10 48 22.7 -0.3**
	comp=Z,6.0nm,1.1s,mb4.5					
CLL	**Collm**	**66.39**	**317**	⇑*i*P	**P**	**10 48 22.7 -0.3**
	comp=Z,6.0nm,1.1s,mb4.5					
CLL				*e*PP	PP	10 50 53.0 +4.2
FORT	**Forrest**	**66.58**	**158**	*e*P	**P**	**10 48 23.7 -0.6**
	comp=Z,9.2nm,1.1s,mb4.7					
SVW2	**Sparrevohn**	**66.88**	**31**	*e*P	**P**	**10 48 25.9 0.0**
BSEG	**Bad Segeberg**	**66.88**	**320**	*e*P	**P**	**10 48 26.5 +0.4**
	comp=Z,10.0nm,0.9s,mb4.8					
BSEG	**Bad Segeberg**	**66.88**	**320**	*e*P	**P**	**10 48 26.5 +0.4**
BSEG				pmax	pmax	
	comp=Z,10.0nm,0.9s,mb4.8					
KHC	**Kasperske Hory**	**66.89**	**314**	*e*P	**P**	**10 48 26.7 +0.5**
KHC				MLR	MLR	
	comp=Z,100nm,17.5s,MS4.1					
KHC	**Kasperske Hory**	**66.89**	**314**	*e*P	**P**	**10 48 26.7 +0.5**
KHC				AMS	AMS	11 19 00.0
	comp=Z,100nm,17.5s					
GEC2	**GERESS Array S**	**66.93**	**314**	*e*P	**P**	**10 48 26.5 0.0**
	comp=Z,6.0nm,1.3s,mb4.5					
GEC2	**GERESS Array S**	**66.93**	**314**	*e*P	**P**	**10 48 26.5 0.0**
GEC2				pmax	pmax	
	comp=Z,6.0nm,1.3s,mb4.5					
NKC	**Novy Kostel**	**67.14**	**316**	*e*P	**P**	**10 48 28.2 +0.4**
NKC				MLR	MLR	
	comp=Z,100nm,18.9s,MS4.1					
NKC	**Novy Kostel**	**67.14**	**316**	*e*P	**P**	**10 48 28.2 +0.4**
NKC				AMS	AMS	11 19 10.0
	comp=Z,100nm,18.9s					
GUNZ	**Gunzen**	**67.15**	**316**	*e*P	**P**	**10 48 27.7 -0.2**
	comp=Z,4.0nm,0.8s,mb4.5					
WET	**Wettzell**	**67.31**	**315**	*e*P	**P**	**10 48 28.9 0.0**
	comp=Z,2.0nm,0.9s,mb4.2					
WET	**Wettzell**	**67.31**	**315**	*e*P	**P**	**10 48 28.9 0.0**
WET				pmax	pmax	
	comp=Z,2.0nm,0.9s,mb4.2					
BPAW	**Bear Paw Mtn.**	**67.46**	**27**	*e*P	**P**	**10 48 28.6 -1.0**
	comp=Z,7.9nm,1.2s,mb4.6					
NRDL	**Niedersach Rie**	**67.58**	**319**	*e*P	**P**	**10 48 30.7 +0.2**
	comp=Z,12nm,1.5s,mb4.7					
CLZ	**Clausthal**	**67.69**	**318**	*e*P	**P**	**10 48 31.4 +0.1**
	comp=Z,8.0nm,0.7s,mb4.9					
CLZ	**Clausthal**	**67.69**	**318**	*e*P	**P**	**10 48 31.4 +0.1**
CLZ				pmax	pmax	
	comp=Z,8.0nm,0.7s,mb4.9					
GRA1	**Grafenberg Arr**	**68.08**	**316**	*e*P	**P**	**10 48 34.1 +0.4**
	comp=Z,11nm,1.1s,mb4.8					
GRF	**Grafenberg Arr**	**68.08**	**316**	*e*P	**P**	**10 48 34.1 +0.4**
	comp=Z,11nm,1.1s,mb4.8					
GRF	**Grafenberg Arr**	**68.08**	**316**	*e*P	**P**	**10 48 34.1 +0.4**
GRF				pmax	pmax	
	comp=Z,11nm,1.1s,mb4.8					
GRF	**Grafenberg Arr**	**68.08**	**316**	*e*P	**P**	**10 48 34.1 +0.4**
GRF				pmax	pmax	
	comp=Z,11nm,1.1s,mb4.8					
COLA	**College**	**68.28**	**26**	*e*P	**P**	**10 48 34.1 -0.6**
COLA				pmax	pmax	
	comp=Z,6.0nm,1.1s,mb4.5					
COLA	**College**	**68.28**	**26**	*e*P	**P**	**10 48 34.1 -0.6**
	comp=Z,6.0nm,1.1s,mb4.5					
FUR	**Furstenfeldbru**	**68.68**	**314**	*e*P	**P**	**10 48 38.3 +0.8**
	comp=Z,12nm,0.6s,mb5.0					
FUR	**Furstenfeldbru**	**68.68**	**314**	*e*P	**P**	**10 48 38.3 +0.8**
FUR				pmax	pmax	
	comp=Z,12nm,0.6s,mb5.0					
TIP	**Timpagrande**	**68.83**	**304**	*e*P	**P**	**10 48 38.1 -0.5**
	comp=Z,4.1nm,0.7s,mb4.5					
TNS	**Taunus Mts**	**69.48**	**317**	*e*P	**P**	**10 48 42.0 -0.4**
	comp=Z,22nm,1.4s,mb4.9					
TNS	**Taunus Mts**	**69.48**	**317**	*e*P	**P**	**10 48 42.0 -0.4**
TNS				pmax	pmax	
	comp=Z,22nm,1.4s,mb4.9					
KDAK	**Kodiak Island**	**69.74**	**34**	*i*P	**P**	**10 48 43.0 -0.9**
AQU	**L'Aquila**	**69.79**	**308**	⇓P	**P**	**10 48 45.4 +0.9**
AQU	**L'Aquila**	**69.79**	**308**	⇓*i*P	**P**	**10 48 45.3 +0.8**
	comp=Z,8.9nm,0.7s,mb4.8					
AQU	**L'Aquila**	**69.79**	**308**	⇓*i*P	**P**	**10 48 45.6 +1.1**
TUE	**Stuetta**	**70.60**	**313**	*e*P	**P**	**10 48 48.8 -0.6**
	comp=Z,5.8nm,0.8s,mb4.6					
CDF	**Champ du Feu**	**70.97**	**316**	⇑*i*P	**P**	**10 48 51.5 -0.1**
	comp=Z,3.6nm,0.6s,mb4.2					
CDF	**Champ du Feu**	**70.97**	**316**	⇑*i*P	**P**	**10 48 51.5 -0.1**
CDF				pmax	pmax	
	comp=Z,2.0nm,0.6s,mb4.2					
CDF	**Champ du Feu**	**70.97**	**316**	⇑*i*P	**P**	**10 48 51.5 -0.1**
	comp=Z,1.8nm,0.6s,mb4.2					
INK	**Inuvik**	**70.99**	**19**	*e*P	**P**	**10 48 50.9 -0.5**
INK				pmax	pmax	
	comp=Z,9.0nm,1.1s					
INK	**Inuvik**	**70.99**	**19**	*e*P	**P**	**10 48 50.9 -0.5**
	comp=Z,8.6nm,1.1s,mb4.6					
WLF	**Walferdange**	**71.05**	**317**	P	**P**	**10 48 52.9 +0.8**
	comp=Z,14nm,1.5s,mb4.7					
WLF	**Walferdange**	**71.05**	**317**	*e*P	**P**	**10 48 52.3 +0.2**
	comp=Z,20nm,1.1s,mb5.0					
WLF	**Walferdange**	**71.05**	**317**	*e*P	**P**	**10 48 52.5 +0.4**
WLF				pmax	pmax	
	comp=Z,15nm,1.3s,mb4.8					
WLF	**Walferdange**	**71.05**	**317**	*e*P	**P**	**10 48 52.5 +0.4**
	comp=Z,15nm,1.3s,mb4.8					
BCLA	**Clavier**	**71.19**	**318**	P	**P**	**10 48 52.8 -0.1**
KMBO	**Kilima Mbogo**	**71.43**	**256**	P	**P**	**10 48 55.6 +0.7**
	comp=Z,2.6nm,0.9s,mb4.2,baz=20,slow=17,SNR=7.0					
KMBO	**Kilima Mbogo**	**71.43**	**256**	*e*P	**P**	**10 48 54.9 0.0**
KMBO				pmax	pmax	
	comp=Z,3.0nm,0.8s					
KMBO	**Kilima Mbogo**	**71.43**	**256**	*e*P	**P**	**10 48 54.9 0.0**
	comp=Z,3.1nm,0.8s,mb4.3					
SNF	**Seneffe**	**71.72**	**319**	P	**P**	**10 48 55.6 -0.5**
SUMG	**Summit**	**72.36**	**349**	*e*P	**P**	**10 48 59.5 -0.1**
	comp=Z,3.6nm,0.8s,mb4.3					
LPG	**La Plagne**	**72.65**	**313**	⇑*i*P	**P**	**10 49 02.5 +0.7**
	comp=Z,38nm,0.7s,mb5.1					
LPG	**La Plagne**	**72.65**	**313**	⇑*i*P	**P**	**10 49 02.5 +0.7**
LPG				pmax	pmax	
	comp=Z,19nm,0.7s,mb5.1					
LPG	**La Plagne**	**72.65**	**313**	⇑*i*P	**P**	**10 49 02.5 +0.7**
	comp=Z,19nm,0.7s,mb5.1					
LPL	**La Plagne**	**72.65**	**313**	⇑*i*P	**P**	**10 49 02.4 +0.6**
	comp=Z,32nm,0.6s,mb5.1					
LPL	**La Plagne**	**72.65**	**313**	⇑*i*P	**P**	**10 49 02.4 +0.6**
LPL				pmax	pmax	
	comp=Z,16nm,0.6s,mb5.1					
LPL	**La Plagne**	**72.65**	**313**	⇑*i*P	**P**	**10 49 02.4 +0.6**
	comp=Z,16nm,0.6s,mb5.1					
STKA	**Stephens Creek**	**72.83**	**147**	*e*P	**P**	**10 49 01.6 -1.3**
	comp=Z,2.0nm,0.5s,mb4.3					
STKA	**Stephens Creek**	**72.83**	**147**	P	**P**	**10 49 01.6 -1.3**
	comp=Z,2.8nm,0.5s,mb4.4,baz=152,slow=18,SNR=8.4					
STKA	**Stephens Creek**	**72.83**	**147**	*e*P	**P**	**10 49 01.6 -1.3**
	comp=Z,0.8nm,0.8s,mb3.7					
BNI	**Bardonecchia**	**72.91**	**313**	*e*P	**P**	**10 49 03.1 -0.2**
BNI				pmax	pmax	
	comp=Z,5.0nm,0.8s,mb4.5					
BNI	**Bardonecchia**	**72.91**	**313**	*e*P	**P**	**10 49 03.1 -0.2**
	comp=Z,4.6nm,0.8s,mb4.5					
ORIF	**Oris-en-Rattie**	**73.47**	**313**	*e*P	**P**	**10 49 06.7 +0.1**
	comp=Z,18nm,0.7s,mb4.8					
ORIF	**Oris-en-Rattie**	**73.47**	**313**	*e*P	**P**	**10 49 06.7 +0.1**
ORIF				pmax	pmax	
	comp=Z,9.0nm,0.7s,mb4.8					
ORIF	**Oris-en-Rattie**	**73.47**	**313**	*e*P	**P**	**10 49 06.7 +0.1**
	comp=Z,9.2nm,0.7s,mb4.8					
SMF	**Signal de Mont**	**73.86**	**315**	*e*P	**P**	**10 49 08.4 -0.5**
	comp=Z,17nm,0.8s,mb4.7					
SMF	**Signal de Mont**	**73.86**	**315**	*e*P	**P**	**10 49 08.4 -0.5**
SMF				pmax	pmax	
	comp=Z,9.0nm,0.8s,mb4.8					
SMF	**Signal de Mont**	**73.86**	**315**	*e*P	**P**	**10 49 08.4 -0.5**
	comp=Z,8.6nm,0.8s,mb4.7					
TCF	**Toulx Ste Croi**	**75.02**	**315**	*e*P	**P**	**10 49 15.5 -0.1**
	comp=Z,6.9nm,0.8s,mb4.3					
TCF	**Toulx Ste Croi**	**75.02**	**315**	*e*P	**P**	**10 49 15.5 -0.1**
TCF				pmax	pmax	
	comp=Z,3.0nm,0.8s,mb4.3					
TCF	**Toulx Ste Croi**	**75.02**	**315**	*e*P	**P**	**10 49 15.5 -0.1**
	comp=Z,3.5nm,0.8s,mb4.3					
KEST	**Kesra**	**75.64**	**303**	P	**P**	**10 49 19.6 +0.2**
	comp=Z,0.8nm,0.6s,mb3.8,baz=255,slow=1.6,SNR=7.2					
KEST	**Kesra**	**75.64**	**303**	*e*P	**P**	**10 49 19.7 +0.3**
YKA	**Yellowknife Ar**	**80.52**	**17**	P	**P**	**10 49 45.0 -0.9**
	comp=Z,3.4nm,0.7s,mb4.4,baz=329,slow=5.2,SNR=15					
YKA				PKKPbc	PKKPbc	11 08 23.7 -3.5
	comp=Z,1.0nm,0.6s,baz=156,slow=2.1,SNR=5.3					
YKA	**Yellowknife Ar**	**80.52**	**17**	P	**P**	**10 49 45.0 -1.0**
YKA						11 08 23.7
YKA				pmax	pmax	
	comp=Z,3.0nm,0.7s					
YKA	**Yellowknife Ar**	**80.52**	**17**	P	**P**	**10 49 45.0 -0.9**
YKA				PKKPbc	PKKPbc	11 08 23.7 -3.5
ESDC	**Sonseca Array**	**82.43**	**312**	P	**P**	**10 49 55.9 -0.7**
	comp=Z,1.2nm,0.7s,mb4.0,baz=42,slow=5.4,SNR=12					
LSZ	**Lusaka**	**86.81**	**250**	*e*P	**P**	**10 50 18.4 -0.5**
LSZ				pmax	pmax	
	comp=Z,12nm,1.4s,mb4.9					
LSZ	**Lusaka**	**86.81**	**250**	*e*P	**P**	**10 50 18.4 -0.5**
	comp=Z,12nm,1.4s,mb4.9					
FFC	**Flin Flon**	**90.44**	**15**	*e*P	**P**	**10 50 34.7 -0.9**
FFC				pmax	pmax	
	comp=Z,2.0nm,1.1s,mb4.4					
FFC	**Flin Flon**	**90.44**	**15**	*e*P	**P**	**10 50 34.7 -0.9**
	comp=Z,2.3nm,1.1s,mb4.4					
SCHQ	**Schefferville**	**92.94**	**355**	P	**P**	**10 50 45.4 -1.8**
	comp=Z,1.9nm,1.0s,mb4.5,baz=329,slow=5.9,SNR=3.6					
TORD	**Torodi Ar. Bea**	**93.53**	**288**	P	**P**	**10 50 50.1 -0.5**
	comp=Z,0.5nm,0.7s,mb4.1,baz=61,slow=3.2,SNR=3.1					
TXAR	**Lajitas Array**	**113.20**	**27**	PKiKP	PKiKP	10 56 11.2 -0.9
	comp=Z,0.1nm,0.7s,baz=29,slow=4.2,SNR=2.8					
TXAR	**Lajitas Array**	**113.20**	**27**	*i* PKIKP	PKiKP	10 56 11.2 -0.9
OTAV	**Otavalo**	**147.57**	**5**	*e*PKPbc	PKPbc	10 57 19.7 +0.5
SIV	**San Ignacio**	**159.11**	**317**	PKP	PKPdf	10 57 31.3 -1.7
	comp=Z,0.9nm,0.8s,baz=207,slow=6.8,SNR=4.2					
SIV				PKPab	PKPab	10 58 09.2 -0.4
	comp=Z,2.0nm,0.9s,baz=79,slow=7.5,SNR=8.9					
LPAZ	**La Paz**	**162.72**	**335**	PKP	PKPdf	10 57 36.6 -0.2
	comp=Z,0.3nm,0.4s,baz=20,slow=5.9,SNR=5.0					
LPAZ	**La Paz**	**162.72**	**335**	*e*PKPdf	PKPdf	10 57 37.0 +0.1

CASC 22 10:49:15.8±1.2, 12°90N×88°90W, h44km±27km, MD3.6, ML3.1, 1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFRS	**El Faro**	**0.73**	**347**	*e*P	Pn	10 49 29.8	-0.1
LFRS				*e*S	Sn	10 49 40.5	+0.6
VSM	**San Miguel**	**0.80**	**49**	*e*P	Pn	10 49 31.1	+0.4
BLLM	**Bellamira**	**0.84**	**50**	⇓*i*P	Pn	10 49 31.2	0.0
BLLM				*e*S	Sn	10 49 43.9	+1.5
LBRS	**Las Brisas**	**0.84**	**350**	*e*P	Pn	10 49 31.8	+0.5
SNET	**Serv Nac Est T**	**0.84**	**337**	*e*P	Pn	10 49 31.1	-0.2
SNET				*e*S	Sn	10 49 42.8	+0.2
LFU	**La Fuente**	**0.87**	**346**	*e*P	Pn	10 49 31.9	+0.3
BOQS	**Boqueron**	**0.91**	**336**	*e*P	Pn	10 49 32.3	+0.1
BOQS				*e*S	Sn	10 49 45.6	+1.5
CAHU	**Cacacuatique**	**1.09**	**38**	*e*P	Pn	10 49 34.8	+0.2
CAHU				*e*S	Sn	10 49 49.9	+1.3
CNCH	**Conchagua**	**1.10**	**70**	*e*P	Pn	10 49 34.6	-0.2
CNCH				*e*S	Sn	10 49 49.9	+1.1
SBLS	**San Blas**	**1.17**	**323**	*e*P	Pn	10 49 36.9	+1.1
RTR	**El Retiro**	**1.23**	**324**	*e*P	Pn	10 49 37.1	+0.6
MTO2	**Montecristo 2**	**1.56**	**343**	*e*P	Pn	10 49 41.5	+0.5
CRIN	**San Cristobal**	**1.81**	**96**	*e*P	Pn	10 49 44.3	-0.2
CRIN				AML	AML	10 50 11.9	
	comp=N,377nm,0.9s						
TGUH	**Tegucigalpa,Un**	**1.95**	**54**	*e*P	Pn	10 49 46.5	0.0
TGUH				*e*P		10 49 46.6	
TGUH				*e*S	Sn	10 50 10.2	+0.4
LEON	**Leon**	**2.02**	**104**	*e*P	Pn	10 49 46.3	-1.0
CNGN	**Cerro Negro**	**2.18**	**100**	*e*P	Pn	10 49 49.4	-0.2
CNGN				AML	AML	10 50 20.1	
	comp=N,91nm,0.4s						
COPN	**Copaltepe**	**2.36**	**107**	*e*P	Pn	10 49 52.7	+0.6
COPN				*e*P		10 49 52.9	

MAN 22 10:54:19, 18°23N×120°37E, h31km, mb4.4, ML3.2, MS3.1, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**0.25**	**67**	⇑*i*P	Pb	10 54 27.6	+1.7
PIP				*e*S	Sb	10 54 33.8	+3.1
ABRA	**Dolores**	**0.66**	**151**	*e*P	Pb	10 54 33.4	+1.3
ABRA				*e*S	Sb	10 54 42.6	+1.6
APYP	**Conner**	**0.90**	**114**	*e*P	Pn	10 54 36.3	+0.7
APYP				*e*S	Sn	10 54 48.4	+0.8
CAUP	**Cauayan**	**1.88**	**132**	*e*P	Pn	10 54 52.6	+3.6
BOLP	**Bolinao**	**1.89**	**194**	*e*P	Pn	10 54 48.0	-1.1
BBP	**Basco**	**2.67**	**34**	*e*P	Pn	10 55 01.7	+1.9
BALP	**Baler**	**2.73**	**155**	*e*P	Pn	10 55 05.0	+4.3

ATH ***22*** *10:57:07.4, 39°46N×20°81E, h35km±7km, MD3.2/6*
THE ***22*** *10:57:07.8, 39°35N×20°80E, h6km±2km, ML2.8/3, Error ellipse: s-maj=2.1km s-min=0.9km az=269.0*
NEIC ***22*** *10:57:07.4, 39°46N×20°81E, h35km, MD3.2(ATH), After ATH.*
CSEM ***22*** *10:57:08.1±0.3, 39°39N×20°77E, h20km, MD3.2, Error ellipse: s-maj=6.5km s-min=5.7km az=19.0*
ISCJB ***22*** *10:57:08.6±0.5, 39°40N±0°04×20°78E±0°04, h20km±14km, Error ellipse: s-maj=7.6km s-min=5.3km az=166.1*

ISC 22 10:57:08.1±0.6,**39°35N**±0°05×**20°79E**±0°04,**h10**km±9km, **n28**,σ0°**89**/44,**Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.31**	**9**	*e*Pb	**Pg**	**10 57 13.9**	**-0.4**
JAN				*e*Sb	**Sg**	**10 57 19.4**	**+1.0**
JAN	**Janina**	**0.31**	**9**	*e*PB	**Pg**	**10 57 13.9**	**-0.4**
JAN				*e*SB	**Sg**	**10 57 19.4**	**+1.0**
JAN	**Janina**	**0.31**	**9**	*e*Pb	**Pg**	**10 57 13.9**	**-0.4**
JAN				*e*Sb	**Sg**	**10 57 19.4**	**+1.0**
IGT	**Igoumenitsa**	**0.40**	**297**	P	**Pg**	**10 57 15.3**	**-0.7**
IGT				S	**Sg**	**10 57 21.9**	**+0.6**
IGT	**Igoumenitsa**	**0.40**	**297**	P	**Pg**	**10 57 15.3**	**-0.7**
IGT				S	**Sg**	**10 57 21.9**	**+0.6**
MEV	**Metsovon**	**0.55**	**38**	P	**Pg**	**10 57 18.4**	**-0.4**
MEV				S	**Sg**	**10 57 27.1**	**+1.1**
MEV	**Metsovon**	**0.55**	**38**	P	**Pg**	**10 57 18.4**	**-0.4**
MEV				S	**Sg**	**10 57 27.1**	**+1.1**
KEK	**Kerkira**	**0.85**	**295**	*e*Pn	**Pg**	**10 57 23.2**	**-1.3**
KEK				*e*Sn	**Sg**	**10 57 35.6**	**+0.1**
KEK	**Kerkira**	**0.85**	**295**	P	**Pg**	**10 57 23.1**	**-1.4**
KEK				S	**Sg**	**10 57 36.5**	**+1.0**
KEK	**Kerkira**	**0.85**	**295**	*e*PN	**Pg**	**10 57 23.2**	**-1.3**
KEK				*e*SN	**Sg**	**10 57 35.6**	**+0.1**
KEK	**Kerkira**	**0.85**	**295**	P	**Pg**	**10 57 23.1**	**-1.4**
KEK				*e*Sn	**Sg**	**10 57 35.6**	**+0.1**
KEK				S	**Sg**	**10 57 36.5**	**+1.0**
EVR	**Evrytania**	**0.90**	**118**	*e*Pn	**Pg**	**10 57 25.7**	**+0.2**
EVR	**Evrytania**	**0.90**	**118**	*e*PN	**Pg**	**10 57 25.7**	**+0.2**
EVR	**Evrytania**	**0.90**	**118**	*e*Pn	**Pg**	**10 57 25.7**	**+0.2**
THL	**Klokotos Trika**	**0.97**	**77**	P	**Pg**	**10 57 25.1**	**-1.7**
THL				S	**Sg**	**10 57 39.6**	**+0.2**
THL	**Klokotos Trika**	**0.97**	**77**	*e*PN	**Pg**	**10 57 25.3**	**-1.5**
THL	**Klokotos Trika**	**0.97**	**77**	P	**Pg**	**10 57 25.1**	**-1.7**
THL				S	**Sg**	**10 57 39.6**	**+0.2**
VLS	**Valsamata**	**1.18**	**188**	*e*Pb	**Pb**	**10 57 29.9**	**-0.7**
VLS	**Valsamata**	**1.18**	**188**	P	**Pn**	**10 57 29.8**	**-0.9**
VLS				S	**Sb**	**10 57 47.9**	**+1.9**
VLS	**Valsamata**	**1.18**	**188**	*e*PB	**Pb**	**10 57 29.9**	**-0.7**
VLS	**Valsamata**	**1.18**	**188**	*e*Pb	**Pb**	**10 57 29.9**	**-0.7**
VLS				S	**Sb**	**10 57 47.9**	**+1.9**
KZN	**Kozani**	**1.22**	**38**	P	**Pn**	**10 57 30.9**	**-0.2**
KZN	**Kozani**	**1.22**	**38**	P	**Pn**	**10 57 30.9**	**-0.2**
EFP	**Efpalio**	**1.27**	**136**	*e*PN	**Pn**	**10 57 31.7**	**-0.1**
EFP	**Efpalio**	**1.27**	**136**	*e*Pn	**Pn**	**10 57 31.7**	**-0.1**
RLS	**Riolos of Patr**	**1.40**	**158**	*e*Pn	**Pn**	**10 57 34.5**	**+0.9**
RLS	**Riolos of Patr**	**1.40**	**158**	*e*PN

0.6nm2μm126nm,0.7s
MRSI Marisa 7.03 250 P **Pn 11 24 42.4 +0.8**
31nm,0.7s
APSI Ampana 7.87 241 P **Pn 11 24 52.0 -0.4**
0.5nm7μm118nm,0.9s
KDI Kendari 9.03 221 P **Pn 11 25 07.5 +0.3**
22nm,1.4s
TTSI Tana Toraja 10.54 236 P **Pn 11 25 27.0 +0.6**
2μm29nm,0.5s
SPSI Sidrap Palu 11.11 232 P **Pn 11 25 36.8 +3.1**
BNSI Bone 11.12 229 P **Pn 11 25 37.8 +3.9**
20nm,1.0s
BKSI Bulukumba 11.73 226 P **Pn 11 25 47.0 +5.5**
KAKA Kakadu 15.98 166 *e*P **Pn 11 26 32.1 -1.4**
FITZ Fitzroy Crossi 21.06 188 P **P 11 27 26.5 -0.9**
2.4nm,0.5s,mb4.0,baz=11,slow=7.9,SNR=14
FITZ Fitzroy Crossi 21.06 188 *e*P **P 11 27 27.3 -0.1**
22nm,1.3s,mb4.5
WRAB Tennant Creek 23.39 166 *e*P **P 11 27 48.7 -0.4**
8.2nm,1.1s,mb4.2
WRA Warramunga Arr 23.40 166 P **P 11 27 48.8 -0.4**
2.1nm,0.3s,mb4.1,baz=343,slow=10.0,SNR=49
ASAR Alice Springs 26.91 169 P **P 11 28 20.4 -0.3**
1.6nm,0.5s,mb3.9,baz=353,slow=8.1,SNR=94
PSI Prapat 29.59 271 LR LR 11 40 54.5
comp=Z,91nm,19.3s,baz=13,slow=36
FORT Forrest 33.49 181 *e*P **P 11 29 18.1 -0.4**
11nm,0.6s,mb4.5
KSRS Korea Array 34.40 359 P **P 11 29 26.6 +0.4**
0.9nm,0.4s,mb3.6,baz=178,slow=9.8,SNR=7.4
MJAR Matsushiro Arr 34.65 14 P **P 11 29 26.9 -1.5**
0.6nm,0.3s,mb3.6,baz=184,slow=9.4,SNR=7.6
STKA Stephens Creek 36.73 161 P **P 11 29 46.3 +0.1**
2.4nm,0.3s,mb4.2,baz=341,slow=8.9,SNR=5.1
STKA Stephens Creek 36.73 161 *e*P **P 11 29 46.1 -0.1**
0.5nm,0.4s,mb3.4
HHC Hu-ho-hao-te 40.77 340 *e*P **P 11 30 19.8 +0.3**
HHC pP pP 11 31 07.1 -0.5
HHC sP sP 11 31 32.1 -1.6
HHC PP PP 11 32 00.9 +2.1
HHC PcP PcP 11 32 16.3 +0.3
HHC ScP ScP 11 35 42.9 -0.8
HHC PcS PcS 11 36 05.9 -1.2
HHC S **S 11 36 13.8 +1.1**
HHC sS sS 11 37 38.0 +0.1
HHC SS SS 11 39 21.5 -2.2
HHC ScS ScS 11 39 57.9 -1.2
HHC pmax pmax
comp=Z,8.0nm,0.7s,mb4.3
HHC pmax pmax
comp=Z,51nm,5.4s
HHC LR LR
comp=N,87nm,14.3s
HHC LR LR
comp=E,79nm,13.1s
HHC LR LR
comp=Z,49nm,14.3s
ASAJ Asahikawa 42.89 15 P **P 11 30 37.2 +0.6**
comp=Z,5.3nm,0.9s,mb4.0,baz=211,slow=5.9,SNR=5.8
MKAR Makanchi Array 59.28 325 P **P 11 32 38.4 +0.2**
comp=Z,0.4nm,0.5s,mb3.4,baz=101,slow=9.6,SNR=3.0
KURK Kurchatov 63.42 327 P **P 11 33 05.7 -0.1**
comp=Z,0.7nm,0.5s,mb3.5,baz=126,slow=6.0,SNR=5.5
KURK pP pP 11 33 53.8 -4.5
comp=Z,0.3nm,0.5s,baz=129,slow=5.9,SNR=2.9
KURK Kurchatov 63.42 327 *e*P **P 11 33 05.5 -0.4**
comp=Z,1.1nm,0.6s,mb3.7
KURK pP pP 11 33 53.8 -4.5
BVAR Borovoye Array 69.01 327 P **P 11 33 41.1 -0.1**
comp=Z,0.3nm,0.4s,mb3.2,baz=101,slow=7.8,SNR=3.3

CASC 22 11:40:53.4±2.2, 9°.17N×83°.51W, h29km±4km, MD3.5, 4C, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAR1		**0.21**	**70⇑**	*e*P	Pb	11 41 00.5	+0.8
BAR1				*e*S	Sb	11 41 04.3	+0.4
BUS	**Buena Vista**	**0.45**	**328**	*e*P	Pb	11 41 03.9	+0.8
BUS			⇑	*i*P		11 41 03.9	
ACR	**Cerro Adams**	**0.62**	**146⇑**	*e*P	Pb	11 41 04.7	-1.0
ACR				*e*S	Sb	11 41 13.0	-1.1
URSC	**Urasca**	**0.71**	**339**	*e*P	Pb	11 41 18.6	+11
CTCR	**Cotoan**	**0.79**	**110⇑**	*i*P	Pn	11 41 08.3	-0.4
CTCR				*e*S	Sb	11 41 19.3	+0.3
BRU2	**Volcan**	**0.89**	**115**	*e*P	Pn	11 41 09.9	-0.1
BRU2				*e*S	Sb	11 41 22.1	+0.2
LAJ	**Bijagual**	**0.91**	**319**	*e*P	Pn	11 41 14.6	+4.3
LAJ				*e*S	Sn	11 41 30.1	+7.5
CNI	**Changuinola**	**1.01**	**76**	*e*P	Pn	11 41 12.1	+0.4
CNI				*e*S	Sn	11 41 26.2	+1.3
PRS1	**Puriscal**	**1.13**	**316**	*e*P	Pn	11 41 12.9	-0.3
PRS1				*e*S	Sn	11 41 27.3	-0.5
CGA2	**Cerro Gallo 2**	**1.26**	**312**	*e*P	Pn	11 41 15.9	+0.8
CGA2				*e*S	Sn	11 41 31.3	+0.2

ATH ***22*** *11:47:59.0, 36°.00N×21°.61E, h5km±3km, MD3.4/12, ML3.8*
NEIC ***22*** *11:47:59.0, 36°.00N×21°.61E, h5km, ML3.8(ATH), After ATH.*
ISCJB ***22*** *11:48:00.7±0.6, 36°.03N±0°.03×21°.65E±0°.04, h16km±4km, mb4.0/16, MS3.2/2, Error ellipse: s-maj=6.2km s-min=3.5km az=140.3*
IDC ***22*** *11:48:00.2±0.8, 36°.23N×21°.88E, h0km, mb3.9/12, mb1 3.8/16, mb1mx3.8/30, mbtmp3.8/16, ML3.7/4, MS3.2/2, Ms1 3.3/2, ms1mx2.4/35, Error ellipse: s-maj=18.6km s-min=16.5km az=137.0*
CSEM ***22*** *11:48:01.8±0.4, 36°.09N×21°.57E, h2km, ML4.5/4, Error ellipse: s-maj=10.4km s-min=6.4km az=40.0*
THE ***22*** *11:48:03.4, 36°.15N×21°.81E, h5km±2km, ML4.5/4, Error ellipse: s-maj=4.2km s-min=2.5km az=276.0*
PDG ***22*** *11:48:04.9±0.1, 36°.34N×20°.74E, h0km±11km, ML4.3/10, Error ellipse: s-maj=126.8km s-min=29.0km az=90.0*
ISC 22 11:48:01.6±0.8, 36°.09N±0°.03×21°.77E±0°.04, h7km±4km, n175, σ1§44/210, mb4.0/16, MS3.2/2, 11C-15D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.80**	**358**	P	**Pg**	**11 48 16.4**	**-0.6**
PYL				S	**Sg**	**11 48 28.5**	**+1.1**
PYL	**PYLOS**	**0.80**	**358**	*e*PB	**Pg**	**11 48 16.7**	**-0.2**
PYL				*e*SB	**Sb**	**11 48 28.8**	**0.0**
PYL	**PYLOS**	**0.80**	**358**	P	**Pg**	**11 48 16.4**	**-0.6**
PYL	**PYLOS**	**0.80**	**358**	*e*Pb	**Pg**	**11 48 16.7**	**-0.2**
PYL				S	**Sg**	**11 48 28.5**	**+1.1**
PYL				*e*Sb	**Sb**	**11 48 28.8**	**0.0**
KYTH	**Kithira**	**1.04**	**79**	*e*Pn	**Pg**	**11 48 21.1**	**-0.4**
KYTH	**Kithira**	**1.04**	**79**	*e*PN	**Pg**	**11 48 21.1**	**-0.4**
KYTH	**Kithira**	**1.04**	**79**	*e*Pn	**Pg**	**11 48 21.1**	**-0.4**
ITM	**Ithomi**	**1.09**	**6**	*e*Pb	**Pg**	**11 48 22.1**	**-0.4**
ITM				*e*Sg	**Sg**	**11 48 38.7**	**+2.0**
ITM	**Ithomi**	**1.09**	**6**	P	**Pg**	**11 48 21.8**	**-0.7**
ITM				S	**Sg**	**11 48 38.6**	**+1.9**
ITM	**Ithomi**	**1.09**	**6**	*e*PB	**Pg**	**11 48 22.1**	**-0.4**
ITM				*e*SG	**Sg**	**11 48 38.7**	**+2.0**
ITM	**Ithomi**	**1.09**	**6**	P	**Pg**	**11 48 21.8**	**-0.7**
ITM	**Ithomi**	**1.09**	**6**	*e*Pb	**Pg**	**11 48 22.1**	**-0.4**
ITM				S	**Sg**	**11 48 38.6**	**+1.9**
VLI	**Veliai**	**1.13**	**56**	*e*Pg	**Pg**	**11 48 23.2**	**0.0**
VLI				*e*Sg	**Sg**	**11 48 42.3**	**+4.5**
VLI	**Veliai**	**1.13**	**56**	*e*PG	**Pg**	**11 48 23.2**	**0.0**
VLI				*e*SG	**Sg**	**11 48 42.3**	**+4.5**
VLI	**Veliai**	**1.13**	**56**	*e*Pg	**Pg**	**11 48 23.2**	**0.0**
VLI				*e*Sg	**Sg**	**11 48 42.3**	**+4.5**
VLX	**Vlachokerasia**	**1.36**	**21**	P	**Pn**	**11 48 26.3**	**-0.7**
VLX				S	**Sb**	**11 48 45.7**	**+0.7**
VLX	**Vlachokerasia**	**1.36**	**21**	*e*PB	**Pb**	**11 48 27.4**	**0.0**
VLX	**Vlachokerasia**	**1.36**	**21**	*e*Pb	**Pb**	**11 48 27.4**	**0.0**
VLX				S	**Sb**	**11 48 45.7**	**+0.7**
GUR	**Goura**	**1.89**	**14**	P	**Pn**	**11 48 34.9**	**+0.6**
GUR				S	**Sn**	**11 49 00.0**	**+1.6**
GUR	**Goura**	**1.89**	**14**	*e*PG	**Pb**	**11 48 36.5**	**+0.1**
GUR	**Goura**	**1.89**	**14**	P	**Pn**	**11 48 34.9**	**+0.6**
GUR	**Goura**	**1.89**	**14**	*e*Pg	**Pb**	**11 48 36.5**	**+0.1**
RLS	**Riolos of Patr**	**1.98**	**353**	*e*Pn	**Pb**	**11 48 36.9**	**-0.9**
RLS	**Riolos of Patr**	**1.98**	**353**	*e*PN	**Pb**	**11 48 36.9**	**-0.9**
RLS	**Riolos of Patr**	**1.98**	**353**	*e*Pn	**Pb**	**11 48 36.9**	**-0.9**
VAM	**Vamos**	**2.09**	**108**	*e*Pn	**Pb**	**11 48 38.5**	**-1.3**
VAM	**Vamos**	**2.09**	**108**	*e*PN	**Pb**	**11 48 38.5**	**-1.3**
VAM	**Vamos**	**2.09**	**108**	*e*Pn	**Pb**	**11 48 38.5**	**-1.3**
LAKA	**Lakka**	**2.15**	**4**	P	**Pb**	**11 48 39.8**	**-1.0**
LAKA				S	**Sn**	**11 49 04.9**	**+0.2**
LAKA	**Lakka**	**2.15**	**4**	P	**Pb**	**11 48 39.8**	**-1.0**
LAKA				S	**Sn**	**11 49 04.9**	**+0.2**
LTK	**Loutraki**	**2.15**	**26**	P	**Pb**	**11 48 39.1**	**-1.7**
LTK	**Loutraki**	**2.15**	**26**	*e*PN	**Pb**	**11 48 40.7**	**-0.1**
LTK	**Loutraki**	**2.15**	**26**	P	**Pb**	**11 48 39.1**	**-1.7**
LTK	**Loutraki**	**2.15**	**26**	*e*Pn	**Pb**	**11 48 40.7**	**-0.1**
KFL	**Anninata**	**2.16**	**339**	P	**Pb**	**11 48 39.5**	**-1.5**
UPR	**University Cam**	**2.19**	**0**	*e*PN	**Pb**	**11 48 40.3**	**-1.1**
UPR	**University Cam**	**2.19**	**0**	*e*Pn	**Pb**	**11 48 40.3**	**-1.1**
GVD	**Gavdhos**	**2.27**	**123**	*e*Pg	**Pb**	**11 48 41.9**	**-0.9**
GVD	**Gavdhos**	**2.27**	**123**	*e*PG	**Pb**	**11 48 41.9**	**-0.9**
VLS	**Valsamata**	**2.28**	**336**	*e*Pn	**Pb**	**11 48 40.9**	**-2.2**
VLS	**Valsamata**	**2.28**	**336**	P	**Pb**	**11 48 40.9**	**-2.2**
VLS				S	**Sb**	**11 49 09.2**	**-2.3**
VLS	**Valsamata**	**2.28**	**336**	*e*PN	**Pb**	**11 48 40.9**	**-2.2**
VLS	**Valsamata**	**2.28**	**336**	P	**Pb**	**11 48 40.9**	**-2.2**
VLS				S	**Sb**	**11 49 09.2**	**-2.3**
EFP	**Efpalio**	**2.33**	**3**	*e*PN	**Pb**	**11 48 42.8**	**-1.1**
EFP	**Efpalio**	**2.33**	**3**	*e*Pn	**Pb**	**11 48 42.8**	**-1.1**
VLY	**Voula,Athens**	**2.39**	**42**	P	**Pb**	**11 48 44.2**	**-0.6**
VLY	**Voula,Athens**	**2.39**	**42**	P	**Pb**	**11 48 44.2**	**-0.6**
DSF	**Desfina**	**2.39**	**14**	P	**Pn**	**11 48 41.6**	**+0.5**
DSF				S	**Sn**	**11 49 11.5**	**+0.9**
DSF	**Desfina**	**2.39**	**14**	P	**Pn**	**11 48 41.6**	**+0.5**
DSF				S	**Sn**	**11 49 11.5**	**+0.9**
ATH	**Athens Observa**	**2.44**	**39**	*e*Pn	**Pb**	**11 48 44.8**	**-0.9**
ATH	**Athens Observa**	**2.44**	**39**	*e*PN	**Pb**	**11 48 44.8**	**-0.9**
ATH	**Athens Observa**	**2.44**	**39**	*e*Pn	**Pb**	**11 48 44.8**	**-0.9**
PTL	**Penteli**	**2.57**	**40**	P	**Pb**	**11 48 48.1**	**+0.1**
PTL	**Penteli**	**2.57**	**40**	P	**Pb**	**11 48 48.1**	**+0.1**
IDI	**Anoyia**	**2.66**	**107**	Pn	**Pn**	**11 48 45.8**	**+1.0**
IDI	6.1nm,0.3s,baz=285,slow=15,SNR=24			Sn	**Sb**	**11 49 21.9**	**-0.5**
IDI	14nm,0.3s,baz=286,slow=18,SNR=7.0						
IDI	**Anoyia**	**2.66**	**107**	Pn	**Pn**	**11 48 45.8**	**+1.0**
SIVA	**Sivas**	**2.70**	**113**	*e*Pn	**Pb**	**11 48 47.9**	**-2.3**
SIVA	**Sivas**	**2.70**	**113**	*e*PN	**Pb**	**11 48 47.9**	**-2.3**
SIVA	**Sivas**	**2.70**	**113**	*e*Pn	**Pb**	**11 48 47.9**	**-2.3**
LKR	**Lokris**	**2.73**	**21**	P	**Pn**	**11 48 47.1**	**+1.3**
LKR	**Lokris**	**2.73**	**21**	P	**Pn**	**11 48 47.1**	**+1.3**
AGG	**Agios Georgios**	**2.96**	**8**	P	**Pb**	**11 48 53.2**	**-1.4**
AGG	**Agios Georgios**	**2.96**	**8**	P	**Pb**	**11 48 53.2**	**-1.4**
LAST	**Lasithi**	**3.16**	**106**	*e*Pb	**Pn**	**11 48 53.9**	**+2.2**
LAST	**Lasithi**	**3.16**	**106**	*e*PB	**Pn**	**11 48 53.9**	**+2.2**
NPS	**Neapolis**	**3.23**	**104**	*e*Pb	**Pn**	**11 48 55.3**	**+2.6**
NPS	**Neapolis**	**3.23**	**104**	*e*PB	**Pn**	**11 48 55.3**	**+2.6**
AOS	**Alonnisos**	**3.50**	**28**	P	**Pb**	**11 49 00.7**	**-3.1**
AOS	**Alonnisos**	**3.50**	**28**	P	**Pb**	**11 49 00.7**	**-3.1**
JAN	**Janina**	**3.63**	**349**	P	**Pn**	**11 49 00.1**	**+1.9**
JAN	**Janina**	**3.63**	**349**	P	**Pn**	**11 49 00.1**	**+1.9**
ZKR	**Zakros**	**3.75**	**104**	*e*Pn	**Pn**	**11 49 02.3**	**+2.5**
ZKR	**Zakros**	**3.75**	**104**	*e*PN	**Pn**	**11 49 02.3**	**+2.5**
ZKR	**Zakros**	**3.75**	**104**	*e*Pn	**Pn**	**11 49 02.3**	**+2.5**
KEK	**Kerkira**	**3.94**	**337**	P	**Pn**	**11 49 04.0**	**+1.6**
KEK	**Kerkira**	**3.94**	**337**	P	**Pn**	**11 49 04.0**	**+1.6**
PAIG	**Paliouri**	**4.11**	**21**	P	**Pn**	**11 49 07.5**	**+2.7**
PAIG	**Paliouri**	**4.11**	**21**	P	**Pn**	**11 49 07.5**	**+2.7**
KZN	**Kozani**	**4.21**	**360**	P	**Pn**	**11 49 09.2**	**+3.1**
KZN	**Kozani**	**4.21**	**360**	P	**Pn**	**11 49 09.2**	**+3.1**
KARP	**Karpathos**	**4.41**	**96**	P	**Pn**	**11 49 12.5**	**+3.6**
KARP	**Karpathos**	**4.41**	**96**	P	**Pn**	**11 49 12.5**	**+3.6**
PLG	**Polygyros**	**4.47**	**17**	P	**Pn**	**11 49 13.1**	**+3.4**
PLG	**Polygyros**	**4.47**	**17**	P	**Pn**	**11 49 13.1**	**+3.4**
THE	**Thessaloniki**	**4.63**	**11**	P	**Pn**	**11 49 15.9**	**+4.0**
THE	**Thessaloniki**	**4.63**	**11**	P	**Pn**	**11 49 15.9**	**+4.0**
FNA	**Florina**	**4.69**	**356**	P	**Pn**	**11 49 15.1**	**+2.3**
FNA	**Florina**	**4.69**	**356**	P	**Pn**	**11 49 15.1**	**+2.3**
SOH	**Sokhos**	**4.88**	**14**	P	**Pn**	**11 49 18.7**	**+3.4**
SOH	**Sokhos**	**4.88**	**14**	P	**Pn**	**11 49 18.7**	**+3.4**
BIA	**Bitola**	**4.93**	**356**	*e*Pn	**Pn**	**11 49 17.5**	**+1.5**
TIP	**Timpagrande**	**5.03**	**309**	P	**Pn**	**11 49 19.2**	**+1.8**
TIP	**Timpagrande**	**5.03**	**309**	P	**Pn**	**11 49 19.2**	**+1.8**
OHR	**Ohrid**	**5.07**	**352**	*e*Pn	**Pn**	**11 49 19.1**	**+1.2**
ARG	**Arkhangelos**	**5.14**	**87**	P	**Pn**	**11 49 23.3**	**+4.4**
ARG	**Arkhangelos**	**5.14**	**87**	P	**Pn**	**11 49 23.3**	**+4.4**
CEL	**Celeste**	**5.17**	**296**	P	**Pn**	**11 49 20.5**	**+1.2**
CEL	**Celeste**	**5.17**	**296**	P	**Pn**	**11 49 20.5**	**+1.2**
VAY	**Valandovo**	**5.26**	**7**	*e*Pn	**Pn**	**11 49 22.3**	**+1.8**
KRUS	**Krusevo**	**5.28**	**356**	*i*Pn	**Pn**	**11 49 20.7**	**-0.1**
TIR	**Tirane**	**5.45**	**345**	*e*Pn	**Pn**	**11 49 24.3**	**+1.1**
TIR	39nm,0.5s			*e*Sn	**Sn**	**11 50 27.8**	**+1.6**
TIR	**Tirane**	**5.45**	**345**	*e*Pn	**Pn**	**11 49 24.3**	**+1.1**
TIR	39nm,0.5s			*e*Sn	**Sn**	**11 50 27.8**	**+1.6**
MMB	**Musomiste**	**5.70**	**15**	P	**Pn**	**11 49 23.3**	**-3.2**
KKB	**Krupnik**	**5.85**	**10**	P	**Pn**	**11 49 33.0**	**+4.3**
RZN	**Rozhen**	**6.04**	**21**	P	**Pn**	**11 49 34.0**	**+2.8**
RZN	**Rozhen**	**6.04**	**21**	P	**Pn**	**11 49 34.0**	**+2.8**
VAE	**Valguarnera**	**6.07**	**285**	Pn	**Pb**	**11 49 40.5**	**-7.1**
VAE	baz=157,slow=10,SNR=3.0			Sn	**Sn**	**11 50 41.3**	**-0.1**
VAE	1.7nm,0.3s,baz=292,slow=19,SNR=2.4						
ULC	**Ulcinj**	**6.18**	**342⇑**	*i*Pn	**Pn**	**11 49 33.1**	**-0.1**
ULC				*e*Sn	**Sn**	**11 50 39.1**	**-5.0**
ULC	**Ulcinj**	**6.18**	**342⇑**	*i*Pn	**Pn**	**11 49 33.1**	**-0.1**
KDZ	**Kurdzhali**	**6.23**	**26**	P	**Pn**	**11 49 36.5**	**+2.6**
KDZ	**Kurdzhali**	**6.23**	**26**	P	**Pn**	**11 49 36.5**	**+2.6**
VTS	**Vitosha**	**6.58**	**9**	P	**Pn**	**11 49 42.3**	**+3.6**
VTS	**Vitosha**	**6.58**	**9**	P	**Pn**	**11 49 42.3**	**+3.6**
BUM	**Brajici-Budva**	**6.59**	**341⇓**	*i*Pn	**Pn**	**11 49 38.4**	**-0.4**
BUM				*e*Sn	**Sn**	**11 50 48.4**	**-5.7**
BUM	**Brajici-Budva**	**6.59**	**341⇓**	*i*Pn	**Pn**	**11 49 38.4**	**-0.4**
PDG	**Podgorica**	**6.62**	**344⇓**	*i*Pn	**Pn**	**11 49 39.1**	**-0.1**
TTG	**Podgorica**	**6.62**	**344⇓**	*i*Pn	**Pn**	**11 49 39.1**	**-0.1**
TTG				*e*Sn	**Sn**	**11 50 50.3**	**-4.6**
TTG	**Podgorica**	**6.62**	**344⇓**	*i*Pn	**Pn**	**11 49 39.1**	**-0.1**
PVY	**Plav**	**6.64**	**348⇑**	*i*Pn	**Pn**	**11 49 40.5**	**+1.0**
PVY				*e*Sn	**Sn**	**11 50 52.3**	**-3.1**
PVY	**Plav**	**6.64**	**348⇑**	*i*Pn	**Pn**	**11 49 40.5**	**+1.0**
BARS	**Barje**	**6.71**	**0**	*e*Pn	**Pn**	**11 49 40.7**	**+0.2**
HCY	**Herceg Novi**	**6.83**	**339⇓**	*i*Pn	**Pn**	**11 49 41.2**	**-1.0**
HCY				*e*Sn	**Sn**	**11 50 54.0**	**-6.2**
HCY	**Herceg Novi**	**6.83**	**339⇓**	*i*Pn	**Pn**	**11 49 41.2**	**-1.0**
BEY	**Berane**	**6.92**	**348⇓**	*i*Pn	**Pn**	**11 49 44.2**	**+0.8**
IVA	**Berane**	**6.92**	**348⇓**	*i*Pn	**Pn**	**11 49 44.2**	**+0.8**
IVA				*e*Sn	**Sn**	**11 50 58.8**	**-3.5**
IVA	**Berane**	**6.92**	**348⇓**	*i*Pn	**Pn**	**11 49 44.2**	**+0.8**
NKY	**Niksic**	**7.04**	**343⇑**	*i*Pn	**Pn**	**11 49 44.4**	**-0.7**
NKY				*e*Sn	**Sn**	**11 51 00.2**	**-5.2**
NKY	**Niksic**	**7.04**	**343⇑**	*i*Pn	**Pn**	**11 49 44.4**	**-0.7**
BRY	**Bratogost**	**7.24**	**341⇓**	*i*Pn	**Pn**	**11 49 46.8**	**-0.9**
BRY				*e*Sn	**Sn**	**11 51 04.2**	**-6.0**
BRY	**Bratogost**	**7.24**	**341⇓**	*i*Pn	**Pn**	**11 49 46.8**	**-0.9**
UPM	**Unac-Piva**	**7.43**	**344**	*e*Pn	**Pn**	**11 49 50.1**	**-0.3**
UPM				*e*Sn	**Sn**	**11 51 09.7**	**-5.3**
UPM	**Unac-Piva**	**7.43**	**344**	*e*Pn	**Pn**	**11 49 50.1**	**-0.3**
PLE	**Pljevlja**	**7.46**	**346⇑**	*i*Pn	**Pn**	**11 49 51.0**	**+0.3**
PLE				*e*Sn	**Sn**	**11 51 10.8**	**-4.7**
PLE	**Pljevlja**	**7.46**	**346⇑**	*i*Pn	**Pn**	**11 49 51.0**	**+0.3**
STON	**Ston**	**7.46**	**336**	*e*Pn	**Pn**	**11 49 48.7**	**-2.1**
STON				Sn	**Sn**	**11 51 07.9**	**-7.8**
STON	**Ston**	**7.46**	**336**	*e*Pn	**Pn**	**11 49 48.7**	**-2.1**
GRUS	**Gruza**	**7.83**	**354⇑**	*i*Pn	**Pn**	**11 49 55.8**	**0.0**
BBLS	**Lazići**	**7.97**	**348**	*e*Pn	**Pn**	**11 49 56.5**	**-1.3**
DIVS	**Divibare**	**8.11**	**351⇑**	*i*Pn	**Pn**	**11 49 58.5**	**-1.2**
TRUS	**Trudelj**	**8.19**	**353**	*e*Pn	**Pn**	**11 49 59.8**	**-0.9**
GZR	**Gura Zlata**	**9.32**	**4⇑**	*i*P	**Pn**	**11 50 21.3**	**+5.0**
BZS	**Buzias**	**9.51**	**359⇓**	*i*P	**Pn**	**11 50 22.5**	**+3.6**
MLR	**Muntele Rosu**	**9.90**	**17**	Pn	**Pn**	**11 50 32.0**	**+7.8**
MLR	**Muntele Rosu**	**9.90**	**17**	*i*P	**Pn**	**11 50 32.4**	**+8.2**
NVLJ	**Novalja**	**9.96**	**330**	*e*Pn	**Pn**	**11 50 25.1**	**0.0**
NVLJ				Sn	**Sn**	**11 52 10.3**	**-6.7**
NVLJ	**Novalja**	**9.96**	**330**	*e*Pn	**Pn**	**11 50 25.0**	**-0.1**
DRGR		**10.71**	**3**	*i*P	**Pn**	**11 50 38.9**	**+3.6**
MMAI	**Mount Meron Ar**	**11.65**	**101**	Pn	**Pn**	**11 50 48.0**	**-0.2**
	0.9nm,0.3s,baz=285,slow=12,SNR=2.7						
EIL	**Elat**	**12.79**	**116**	Pn	**Pn**	**11 51 05.0**	**+1.2**
	0.5nm,0.3s,baz=331,slow=19,SNR=2.7						
EIL				Sn	**Sn**	**11 53 18.2**	**-8.2**
	0.4nm,0.3s,baz=78,slow=14,SNR=3.3						
ASF	**Jabal al Asfar**	**13.12**	**103**	Pn	**Pn**	**11 51 10.9**	**+2.5**
	0.2nm,0.3s,baz=228,slow=7.5,SNR=4.0						
AKASG	**Malin Array Be**	**15.56**	**18**	Pn	**Pn**	**11 51 38.7**	**-2.5**
	0.5nm,0.3s,baz=213,slow=10.0,SNR=2.7						
ESDC	**Sonseca Array**	**20.60**	**288**	P	**P**	**11 52 43.5**	**+2.3**
	0.4nm,0.5s,baz=82,slow=9.5,SNR=5.0						
MIB	**Mutribah**	**22.32**	**99**	*e*P	**P**	**11 52 57.8**	**-1.9**
MIB				AMb	AMB	11 52 59.0	
	comp=Z,42nm,0.7s,mb5.0						
MIB	**Mutribah**	**22.32**	**99**	*e*P	**P**	**11 52 57.8**	**-1.9**
	comp=Z,42nm,0.7s,mb5.0						
NAY	**Al-Naaiem**	**22.46**	**100**	*e*P	**P**	**11 52 59.5**	**-1.8**
NAY				AMb	AMB	11 53 00.1	
	comp=Z,20nm,0.5s,mb4.8						
NAY	**Al-Naaiem**	**22.46**	**100**	*e*P	**P**	**11 52 59.5**	**-1.8**
	comp=Z,20nm,0.5s,mb4.8						
RDF	**Al-Radifah**	**22.84**	**101**	*e*P	**P**	**11 53 03.0**	**-2.3**
RDF				AMb	AMB	11 53 05.4	
	comp=Z,17nm,1.5s,mb4.3						
RDF	**Al-Radifah**	**22.84**	**101**	*e*P	**P**	**11 53 03.0**	**-2.3**
	comp=Z,17nm,1.5s,mb4.2						
HFS	**Hagfors**	**24.61**	**350**	P	**P**	**11 53 21.3**	**-0.9**
	comp=Z,2.3nm,0.6s,mb3.9,baz=151,slow=10,SNR=9.8						
FINES	**FINESS Array B**	**25.52**	**5**	P	**P**	**11 53 29.7**	**-0.7**
	comp=Z,0.5nm,0.4s,mb3.4,baz=166,slow=10,SNR=7.4						
EKA	**Eskdalemuir Ar**	**25.71**	**326**	P	**P**	**11 53 34.2**	**+2.0**
	comp=Z,0.7nm,0.6s,mb3.4,baz=128,slow=9.1,SNR=4.2						
NB2	**NORSAR Subarra**	**25.86**	**348**	P	**P**	**11 53 33.4**	**0.0**
	comp=Z,1.0nm,0.8s,mb3.4,baz=160,slow=9.3						
NB2	**NORSAR Subarra**	**25.86**	**348**	P	**P**	**11 53 33.4**	**0.0**
	comp=Z,1.0nm,0.8s,mb3.4,baz=160,slow=9.0,SNR=3.6						
NOA	**NORSAR Array B**	**25.86**	**348**	P	**P**	**11 53 32.1**	**-1.3**
	comp=Z,0.5nm,0.5s,mb3.3,baz=159,slow=10,SNR=3.0						
TORD	**Torodi Ar. Bea**	**29.12**	**223**	P	**P**	**11 54 04.1**	**+1.0**
	comp=Z,0.8nm,0.6s,mb3.6,baz=40,slow=6.4,SNR=6.5						
AKTO	**Aktyubinsk**	**29.70**	**50**	LR	LR	12 08 18.6	
	comp=Z,16nm,20.5s,MS2.6,baz=5.8,slow=41						
ARCES	**ARCESS Array B**	**33.56**	**2**	P	**P**	**11 54 40.8**	**-0.9**
	comp=Z,2.6nm,0.8s,mb4.2,baz=189,slow=11,SNR=5.7						
BVAR	**Borovoye Array**	**37.73**	**48**	P	**P**	**11 55 15.6**	**-2.1**
	comp=Z,0.5nm,0.5s,mb3.5,baz=253,slow=4.4,SNR=3.0						
DBIC	**Dimbokro**	**38.11**	**226**	P	**P**	**11 55 22.0**	**+0.8**
	comp=Z,3.3nm,0.9s,mb4.1,baz=0.0,slow=8.1,SNR=3.2						
KURK	**Kurchatov**	**42.75**	**52**	P	**P**	**11 55 56.1**	**-3.2**
	comp=Z,0.6nm,0.3s,mb3.8,baz=275,slow=8.4,SNR=4.9						
MKAR	**Makanchi Array**	**45.57**	**57**	P	**P**	**11 56 19.6**	**-2.4**
	comp=Z,1.0nm,0.3s,mb4.2,baz=274,slow=7.2,SNR=13						
ZALV	**Zalesovo Beam**	**46.36**	**47**	P	**P**	**11 56 25.8**	**-2.4**
	comp=Z,0.7nm,0.3s,mb4.0,baz=272,slow=9.1,SNR=4.8						
SCHQ	**Schefferville**	**60.67**	**318**	P	**P**	**11 58 12.8**	**-0.4**
	comp=Z,1.0nm,0.7s,mb4.0,baz=135,slow=1.4,SNR=3.2						
KSRS	**Korea Array**	**79.87**	**51**	P	**P**	**12 00 09.6**	**-1.3**
	comp=Z,0.6nm,0.6s,mb3.7,baz=308,slow=4.0,SNR=3.4						
TXAR	**Lajitas Array**	**97.14**	**314**	LR	LR	12 45 09.4	
	comp=Z,29nm

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.21**	**132**	P	P	12 13 38.1	0.0
	0.3nm,0.3s,baz=303,slow=12,SNR=9.4						
WRA				S	S	12 16 56.2	+0.6
	0.1nm,0.3s,baz=306,slow=22,SNR=3.2						
ASAR	**Alice Springs**	**20.44**	**141**	P	P	12 14 01.9	-0.1
	0.7nm,0.4s,baz=315,slow=9.8,SNR=14						
STKA	**Stephens Creek**	**31.05**	**143**	P	P	12 15 39.7	+0.7
	0.7nm,0.4s,baz=325,slow=12,SNR=2.7						
MKAR	**Makanchi Array**	**64.09**	**332**	P	P	12 19 52.4	+0.2
	0.2nm,0.6s,baz=134,slow=7.6,SNR=3.5						
ZALV	**Zalesovo Beam**	**68.53**	**339**	P	P	12 20 20.0	-0.2
	0.4nm,0.3s,baz=144,slow=5.2,SNR=3.5						

*ISCJB **22** 12:12:29.7±0.7,36°.07N±0°.03×21°.77E±0°.04,h5km±4km, mb3.7/11, Error ellipse: s-maj=6.1km s-min=3.9km az=144.5*
*IDC **22** 12:12:30.8±1.0,36°.21N×21°.91E,h0km,mb3.7/12, mb1 3.7/14,mb1mx3.7/30,mbtmp3.7/14,ML3.5/2,Error ellipse: s-maj=21.6km s-min=18.4km az=15.0*
*ATH **22** 12:12:31.0,36°.10N×21°.76E,h5km±3km,MD3.6/6,ML3.7*
*NEIC **22** 12:12:31.0,36°.10N×21°.76E,h5km,ML3.7(ATH),After ATH.*
*CSEM **22** 12:12:32.5±0.5,36°.16N×21°.80E,h2km,ML4.3/4,Error ellipse: s-maj=10.7km s-min=7.2km az=36.0*
*THE **22** 12:12:33.7,36°.19N×21°.79E,h4km±3km,ML4.3/4,Error ellipse: s-maj=4.2km s-min=2.0km az=242.0*
ISC 22 12:12:31.8±0.8,36°.13N±0°.03×21°.82E±0°.04,h7km±4km, n120,σ1°13/151,mb3.7/11,3C,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.77**	**355**	P	**Pg**	**12 12 46.4**	**-0.1**
PYL				S	**Sg**	12 12 57.9	+1.4
PYL	**PYLOS**	**0.77**	**355**	*e*PB	**Pg**	**12 12 46.5**	**0.0**
PYL	**PYLOS**	**0.77**	**355**	P	**Pg**	**12 12 46.4**	**-0.1**
PYL				S	**Sg**	12 12 57.9	+1.4
KYTH	**Kithira**	**0.99**	**81**	*e*Pn	**Pg**	**12 12 51.5**	**+0.6**
KYTH	**Kithira**	**0.99**	**81**	*e*PN	**Pg**	**12 12 51.5**	**+0.6**
KYTH	**Kithira**	**0.99**	**81**	*e*Pn	**Pg**	**12 12 51.5**	**+0.6**
ITM	**Ithomi**	**1.05**	**5**	*e*Pb	**Pg**	**12 12 52.2**	**+0.2**
ITM	**Ithomi**	**1.05**	**5**	P	**Pg**	**12 12 51.9**	**-0.1**
ITM				S	**Sg**	12 13 06.6	+1.0
ITM	**Ithomi**	**1.05**	**5**	*e*PB	**Pg**	**12 12 52.2**	**+0.2**
ITM	**Ithomi**	**1.05**	**5**	P	**Pg**	**12 12 51.9**	**-0.1**
ITM	**Ithomi**	**1.05**	**5**	*e*Pb	**Pg**	**12 12 52.2**	**+0.2**
ITM				S	**Sg**	12 13 06.6	+1.0
VLI	**Veliai**	**1.07**	**57**	*e*Pg	**Pg**	**12 12 52.2**	**-0.2**
VLI				*e*Sb	**Sg**	12 13 08.6	+2.3
VLI	**Veliai**	**1.07**	**57**	*e*PG	**Pg**	**12 12 52.2**	**-0.2**
VLI				*e*SB	**Sg**	12 13 08.6	+2.3
VLI	**Veliai**	**1.07**	**57**	*e*Pg	**Pg**	**12 12 52.2**	**-0.2**
VLI				*e*Sb	**Sg**	12 13 08.6	+2.3
VLX	**Vlachokerasia**	**1.31**	**20**	P	**Pn**	**12 12 56.5**	**-0.1**
VLX				S	**Sb**	12 13 14.2	+0.3
VLX	**Vlachokerasia**	**1.31**	**20**	*e*PG	**Pn**	**12 12 56.5**	**-0.1**
VLX	**Vlachokerasia**	**1.31**	**20**	P	**Pn**	**12 12 56.5**	**-0.1**
VLX				S	**Sb**	12 13 14.2	+0.3
GUR	**Goura**	**1.85**	**13**	P	**Pn**	**12 13 04.6**	**+0.6**
GUR	**Goura**	**1.85**	**13**	*e*PN	**Pg**	**12 13 06.6**	**-0.6**
GUR	**Goura**	**1.85**	**13**	P	**Pn**	**12 13 04.6**	**+0.6**
GUR	**Goura**	**1.85**	**13**	*e*Pn	**Pg**	**12 13 06.6**	**-0.6**
KARN	**Karanos**	**1.85**	**113**	P	**Pg**	**12 13 05.6**	**-1.7**
KARN				S	**Sg**	12 13 32.0	+0.6
KARN	**Karanos**	**1.85**	**113**	P	**Pg**	**12 13 05.6**	**-1.7**
KARN				S	**Sg**	12 13 32.0	+0.6
RLS	**Riolos of Patr**	**1.94**	**352**	*e*Pn	**Pg**	**12 13 08.1**	**-1.0**
RLS	**Riolos of Patr**	**1.94**	**352**	*e*PN	**Pg**	**12 13 08.1**	**-1.0**
RLS	**Riolos of Patr**	**1.94**	**352**	*e*Pn	**Pg**	**12 13 08.1**	**-1.0**
VAM	**Vamos**	**2.06**	**110**	*e*Pn	**Pb**	**12 13 09.2**	**-0.4**
VAM				*e*Sn	**Sg**	12 13 38.5	+0.3
VAM	**Vamos**	**2.06**	**110**	*e*PN	**Pb**	**12 13 09.2**	**-0.4**
VAM				*e*SN	**Sg**	12 13 38.5	+0.3
VAM	**Vamos**	**2.06**	**110**	*e*Pn	**Pb**	**12 13 09.2**	**-0.4**
VAM				*e*Sn	**Sg**	12 13 38.5	+0.3
LTK	**Loutraki**	**2.10**	**26**	P	**Pb**	**12 13 09.4**	**-0.8**
LTK				S	**Sb**	12 13 36.9	+0.4
LTK	**Loutraki**	**2.10**	**26**	*e*PG	**Pg**	**12 13 10.7**	**-1.3**
LTK	**Loutraki**	**2.10**	**26**	P	**Pb**	**12 13 09.4**	**-0.8**
LTK	**Loutraki**	**2.10**	**26**	*e*Pg	**Pg**	**12 13 10.7**	**-1.3**
LTK				S	**Sb**	12 13 36.9	+0.4
NAIG	**Nisos Aigina**	**2.10**	**39**	*e*Pn	**Pb**	**12 13 10.6**	**+0.3**
NAIG	**Nisos Aigina**	**2.10**	**39**	*e*PN	**Pb**	**12 13 10.6**	**+0.3**
NAIG	**Nisos Aigina**	**2.10**	**39**	*e*Pn	**Pb**	**12 13 10.6**	**+0.3**
LAKA	**Lakka**	**2.11**	**3**	P	**Pb**	**12 13 09.7**	**-0.7**
LAKA				S	**Sb**	12 13 36.2	-0.5
LAKA	**Lakka**	**2.11**	**3**	P	**Pb**	**12 13 09.7**	**-0.7**
LAKA				S	**Sb**	12 13 36.2	-0.5
UPR	**University Cam**	**2.15**	**359**	*e*PN	**Pb**	**12 13 10.8**	**-0.2**
UPR	**University Cam**	**2.15**	**359**	*e*Pn	**Pb**	**12 13 10.8**	**-0.2**
VLS	**Valsamata**	**2.27**	**335**	*e*Pn	**Pb**	**12 13 11.9**	**-1.2**
VLS	**Valsamata**	**2.27**	**335**	P	**Pn**	**12 13 10.0**	**+0.3**
VLS				S	**Sn**	12 13 38.9	+1.0
VLS	**Valsamata**	**2.27**	**335**	*e*PN	**Pb**	**12 13 11.9**	**-1.2**
VLS	**Valsamata**	**2.27**	**335**	P	**Pn**	**12 13 10.0**	**+0.3**
VLS	**Valsamata**	**2.27**	**335**	*e*Pn	**Pb**	**12 13 11.9**	**-1.2**
VLS				S	**Sn**	12 13 38.9	+1.0
KALE	**Kalithea**	**2.27**	**6**	P	**Pb**	**12 13 12.3**	**-0.8**
KALE	**Kalithea**	**2.27**	**6**	P	**Pb**	**12 13 12.3**	**-0.8**
EFP	**Efpalio**	**2.29**	**2**	*e*PN	**Pb**	**12 13 13.1**	**-0.4**
EFP	**Efpalio**	**2.29**	**2**	*e*Pn	**Pb**	**12 13 13.1**	**-0.4**
VLY	**Voula,Athens**	**2.33**	**42**	*e*Pn	**Pn**	**12 13 12.9**	**+2.3**
VLY	**Voula,Athens**	**2.33**	**42**	*e*PN	**Pn**	**12 13 12.9**	**+2.3**
VLY	**Voula,Athens**	**2.33**	**42**	*e*Pn	**Pn**	**12 13 12.9**	**+2.3**
DSF	**Desfina**	**2.34**	**14**	P	**Pn**	**12 13 10.9**	**+0.1**
DSF	**Desfina**	**2.34**	**14**	P	**Pn**	**12 13 10.9**	**+0.1**
ATH	**Athens Observa**	**2.38**	**39**	*e*Pn	**Pb**	**12 13 14.8**	**-0.2**
ATH	**Athens Observa**	**2.38**	**39**	*e*PN	**Pb**	**12 13 14.8**	**-0.2**
ATH	**Athens Observa**	**2.38**	**39**	*e*Pn	**Pb**	**12 13 14.8**	**-0.2**
PTL	**Penteli**	**2.52**	**40**	*e*Pn	**Pn**	**12 13 16.1**	**+3.0**
PTL	**Penteli**	**2.52**	**40**	*e*PN	**Pn**	**12 13 16.1**	**+3.0**
PTL	**Penteli**	**2.52**	**40**	*e*Pn	**Pn**	**12 13 16.1**	**+3.0**
IDI	**Anoyia**	**2.63**	**108**	Pn	**Pn**	**12 13 16.2**	**+1.4**
	1.3nm,0.3s,baz=282,slow=14,SNR=8.6						
IDI	**Anoyia**	**2.63**	**108**	Pn	**Pn**	**12 13 16.2**	**+1.4**
LKR	**Lokris**	**2.68**	**20**	P	**Pb**	**12 13 19.1**	**-1.1**
LKR	**Lokris**	**2.68**	**20**	P	**Pn**	**12 13 15.3**	**-0.1**
LKR	**Lokris**	**2.68**	**20**	P	**Pn**	**12 13 15.3**	**-0.1**
ATAL	**Atalanti**	**2.73**	**20**	P	**Pn**	**12 13 16.5**	**+0.4**
ATAL				S	**Sn**	12 13 49.3	0.0
ATAL	**Atalanti**	**2.73**	**20**	P	**Pn**	**12 13 16.5**	**+0.4**
ATAL				S	**Sn**	12 13 49.3	0.0
AGG	**Agios Georgios**	**2.91**	**8**	P	**Pb**	**12 13 23.9**	**-0.2**
AGG	**Agios Georgios**	**2.91**	**8**	P	**Pb**	**12 13 23.9**	**-0.2**
THL	**Klokotos Trika**	**3.43**	**2**	P	**Pn**	**12 13 26.2**	**+0.5**
THL	**Klokotos Trika**	**3.43**	**2**	P	**Pn**	**12 13 26.2**	**+0.5**
AOS	**Alonnisos**	**3.44**	**28**	P	**Pb**	**12 13 31.0**	**-2.1**
AOS	**Alonnisos**	**3.44**	**28**	P	**Pb**	**12 13 31.0**	**-2.1**
IGT	**Igoumenitsa**	**3.59**	**341**	P	**Pn**	**12 13 29.3**	**+1.4**
IGT				S	**Sn**	12 14 11.4	+0.8
IGT	**Igoumenitsa**	**3.59**	**341**	P	**Pn**	**12 13 29.3**	**+1.4**
IGT				S	**Sn**	12 14 11.4	+0.8
JAN	**Janina**	**3.60**	**348**	P	**Pn**	**12 13 30.5**	**+2.5**
KEK	**Kerkira**	**3.92**	**337**	P	**Pb**	**12 13 36.6**	**-4.6**
KEK	**Kerkira**	**3.92**	**337**	P	**Pb**	**12 13 36.6**	**-4.6**
KZN	**Kozani**	**4.17**	**359**	P	**Pb**	**12 13 40.8**	**-4.7**
KZN	**Kozani**	**4.17**	**359**	P	**Pb**	**12 13 40.8**	**-4.7**
FNA	**Florina**	**4.66**	**356**	P	**Pn**	**12 13 45.4**	**+2.8**
FNA	**Florina**	**4.66**	**356**	P	**Pn**	**12 13 45.4**	**+2.8**
SOH	**Sokhos**	**4.83**	**14**	P	**Pn**	**12 13 50.6**	**+5.6**
OHR	**Ohrid**	**5.04**	**351**	*e*Pn	**Pn**	**12 13 52.9**	**+5.2**
TIP	**Timpagrande**	**5.04**	**309**	P	**Pn**	**12 13 49.5**	**+1.7**
TIP	**Timpagrande**	**5.04**	**309**	P	**Pn**	**12 13 49.5**	**+1.7**
CEL	**Celeste**	**5.19**	**296**	P	**Pn**	**12 13 52.4**	**+2.6**
CEL	**Celeste**	**5.19**	**296**	P	**Pn**	**12 13 52.4**	**+2.6**
KRUS	**Krusevo**	**5.25**	**355**	*e*Pn	**Pn**	**12 13 51.5**	**+0.8**
KKB	**Krupnik**	**5.81**	**9**	P	**Pn**	**12 13 58.1**	**-0.3**
VAE	**Valguarnera**	**6.09**	**285**	Pn	**Pn**	**12 14 08.3**	**+6.0**
	baz=137,slow=18,SNR=3.5						
VAE				Sn	**Sn**	12 15 17.8	+5.5
	3.8nm,0.3s,baz=94,slow=15,SNR=3.4						
VAE	**Valguarnera**	**6.09**	**285**	Pn	**Pn**	**12 14 08.3**	**+6.0**
VAE				Sn	**Sn**	12 15 17.8	+5.5
BARS	**Barje**	**6.68**	**360**	⇑*i*Pn	**Pn**	**12 14 10.8**	**+0.5**
STON	**Ston**	**7.45**	**336**	*e*Pn	**Pn**	**12 14 19.2**	**-1.6**
STON				Sn	**Sn**	12 15 37.8	-7.8
STON	**Ston**	**7.45**	**336**	*e*Pn	**Pn**	**12 14 19.2**	**-1.6**
GRUS	**Gruza**	**7.79**	**354**	⇑*i*Pn	**Pn**	**12 14 23.7**	**-1.9**
BBLS	**Lazići**	**7.94**	**347**	*e*Pn	**Pn**	**12 14 26.9**	**-0.8**
DIVS	**Divibare**	**8.08**	**351**	⇑*i*Pn	**Pn**	**12 14 28.7**	**-0.8**
MLR	**Muntele Rosu**	**9.86**	**17**	Pn	**Pn**	**12 14 57.9**	**+4.0**
	0.1nm,0.3s,baz=148,slow=13,SNR=1.6						
NVLJ	**Novalja**	**9.95**	**330**	*e*Pn	**Pn**	**12 14 55.5**	**+0.3**
NVLJ				Sn	**Sn**	12 16 40.2	-6.8
NVLJ	**Novalja**	**9.95**	**330**	*e*Pn	**Pn**	**12 14 55.5**	**+0.4**
BOJS	**Bojanci**	**10.60**	**334**	*i* Pn	**Pn**	**12 15 03.3**	**-0.8**
BOJS				*i* Sn	**Sn**	12 16 57.9	-5.1
BOJS	**Bojanci**	**10.60**	**334**	*i* Pn	**Pn**	**12 15 03.3**	**-0.7**
CRES	**Cresnjev**	**10.81**	**336**	*i* Pn	**Pn**	**12 15 06.5**	**-0.5**
CRES				*i* Sn	**Sn**	12 17 01.5	-6.6
CRES	**Cresnjev**	**10.81**	**336**	*i* Pn	**Pn**	**12 15 06.5**	**-0.4**
JAVS	**Javornik**	**11.37**	**331**	*i* Pn	**Pn**	**12 15 19.8**	**+5.2**
JAVS				*i* Sn	**Sn**	12 17 15.3	-6.5
MMAI	**Mount Meron Ar**	**11.62**	**102**	Pn	**Pn**	**12 15 20.1**	**+2.0**
	1.1nm,0.3s,baz=293,slow=12,SNR=2.7						
AKASG	**Malin Array Be**	**15.51**	**18**	Pn	**Pn**	**12 16 09.3**	**-1.5**
	1.3nm,0.3s,baz=209,slow=11,SNR=4.3						
ESDC	**Sonseca Array**	**20.63**	**288**	P	**P**	**12 17 13.9**	**+2.1**
	0.2nm,0.5s,baz=92,slow=11,SNR=2.7						
HFS	**Hagfors**	**24.59**	**350**	P	**P**	**12 17 52.3**	**+0.1**
	3.5nm,0.9s,mb3.9,baz=176,slow=5.8,SNR=3.5						
FINES	**FINESS Array B**	**25.48**	**5**	P	**P**	**12 17 59.7**	**-0.6**
	0.9nm,0.6s,mb3.5,baz=153,slow=12,SNR=3.2						
EKA	**Eskdalemuir Ar**	**25.70**	**326**	P	**P**	**12 18 01.5**	**-0.9**
	3.0nm,0.9s,mb3.8,baz=185,slow=23,SNR=2.5						
NOA	**NORSAR Array B**	**25.83**	**348**	P	**P**	**12 18 02.1**	**-1.4**
	0.6nm,0.8s,mb3.2,baz=161,slow=10,SNR=2.8						
TORD	**Torodi Ar. Bea**	**29.18**	**223**	P	**P**	**12 18 34.4**	**+0.5**
	1.0nm,0.8s,mb3.6,baz=33,slow=8.6,SNR=6.7						
ARCES	**ARCESS Array B**	**33.52**	**2**	P	**P**	**12 19 11.4**	**-0.2**
	3.8nm,1.0s,mb4.3,baz=184,slow=8.9,SNR=4.1						
KURK	**Kurchatov**	**42.70**	**52**	P	**P**	**12 20 27.7**	**-1.4**
	0.5nm,0.6s,mb3.4,baz=280,slow=8.8,SNR=5.5						
MKAR	**Makanchi Array**	**45.52**	**57**	P	**P**	**12 20 50.0**	**-1.8**
	0.5nm,0.5s,mb3.8,baz=277,slow=6.8,SNR=7.8						
ZALV	**Zalesovo Beam**	**46.31**	**47**	P	**P**	**12 20 56.2**	**-1.8**
	0.8nm,0.5s,mb4.0,baz=276,slow=7.7,SNR=5.4						
CMAR	**Chiang Mai Arr**	**69.14**	**82**	P	**P**	**12 23 38.1**	**-1.0**
	0.4nm,0.5s,mb3.6,baz=310,slow=8.9,SNR=2.9						
KSRS	**Korea Array**	**79.82**	**51**	P	**P**	**12 24 41.7**	**+0.7**
	1.1nm,0.8s,mb3.8,baz=346,slow=6.6,SNR=2.5						

*ISCJB **22** 12:12:46.3±0.7,23°.91S±0°.03×66°.63W±0°.05,h189km±6km, mb4.6/91,Error ellipse: s-maj=7.2km s-min=5.3km az=161.5*
*NEIC **22** 12:12:50.5±0.2,23°.80S×66°.52W,mb4.6/81,Error ellipse: s-maj=9.1km s-min=5.4km az=222.0*
*IDC **22** 12:12:50.2±0.6,23°.84S×66°.59W,h210km±5km,mb4.1/14, mb1 4.2/19,mb1mx4.2/21,mbtmp4.1/19,Error ellipse: s-maj=14.6km s-min=9.9km az=59.0*
*BJI **22** 12:12:52.5,23°.80S×66°.50W,h214km,mB4.9/5*
ISC 22 12:12:46.9±0.6,23°.90S±0°.03×66°.57W±0°.05,h179km±6km, h204km±6.8km;pP-P,n472,σ9°69/452,mb4.6/91, 151C-157D,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**6.30**	**215**	*e*Pn	**Pn**	**12 14 16.7**	**-1.1**
LCO				*e*Sn	**Sn**	12 15 17.1	-12
LPAZ	**La Paz**	**7.71**	**349**	P	**Pn**	**12 14 38.2**	**+1.8**
	5.4nm,0.3s,baz=176,slow=8.3,SNR=170						
LPAZ				S	**Sn**	12 16 03.0	-0.1
	0.8nm,0.3s,baz=204,slow=20,SNR=3.5						
LPAZ	**La Paz**	**7.71**	**349**	*e*Pn	**Pn**	**12 14 38.5**	**+2.1**
CFAA	**Coronel Fontan**	**7.82**	**191**	P	**Pn**	**12 14 37.7**	**0.0**
	0.7nm,0.3s,baz=20,slow=8.2,SNR=19						
CFAA				S	**Sn**	12 16 01.4	-4.1
	3.5nm,0.3s,baz=213,slow=12,SNR=20						
CPUP	**Villa Florida**	**8.72**	**108**	P	**Pn**	**12 14 52.4**	**+2.8**
	3.1nm,0.3s,baz=271,slow=11,SNR=89						
CPUP	**Villa Florida**	**8.72**	**108**	*e*Pn	**Pn**	**12 14 52.1**	**+2.5**
SIV	**San Ignacio**	**9.41**	**34**	P	**Pn**	**12 14 59.7**	**+1.0**
	7.2nm,0.3s,baz=221,slow=13,SNR=180						
SIV				S	**Sn**	12 16 42.5	-1.2
	0.2nm,0.3s,baz=196,slow=12,SNR=3.5						
SIV				ScP	ScP	12 24 12.7	-2.4
	baz=229,slow=5.1,SNR=3.7						
FCH	**Farellones**	**9.95**	**198**	*e*P	**Pn**	**12 14 59.5**	**-6.1**
TRQA	**Tornquist**	**14.65**	**166**	*e*Pn	**Pn**	**12 16 04.9**	**-0.7**
NNA	**Nana**	**15.34**	**319**	P	**Pn**	**12 16 15.3**	**+0.9**
	0.6nm,0.3s,baz=182,slow=14,SNR=7.6						
NNA	**Nana**	**15.34**	**319**	*e*P	**Pn**	**12 16 14.8**	**+0.5**
	33nm,1.3s						
PLCA	**Paso Flores**	**17.12**	**190**	P	**Pn**	**12 16 34.9**	**-0.6**
	0.5nm,0.3s,baz=9.5,slow=13,SNR=23						
PLCA				PcP	PcP	12 21 09.7	+0.7
	0.1nm,0.3s,baz=330,slow=3.5,SNR=4.0						
PLCA				ScP	ScP	12 24 25.3	-1.8
	0.0nm,0.3s,baz=342,slow=6.4,SNR=4.3						
PLCA	**Paso Flores**	**17.12**	**190**	*e*P	**Pn**	**12 16 34.6**	**-0.9**
	23nm,0.7s						
SPB	**Sao Paulo**	**17.53**	**93**	*e*P	**Pn**	**12 16 41.2**	**+0.7**
	68nm,0.8s						
ILCA	**Isla Las Cabra**	**18.79**	**194**	*e*P	**P**	**12 16 52.2**	**-0.3**
ATAH	**Atahualpa**	**20.16**	**324**	P	**P**	**12 17 09.5**	**+1.9**
	11nm,0.8s,baz=175,slow=5.5,SNR=6.9						
CAM4	**Nova Friburgo**	**22.12**	**91**	⇓*i*P	**P**	**12 17 28.5**	**+0.4**
CAM4				*i*		12 17 31.9	
CAM4				*i*		12 17 37.2	
CAM4				*i*		12 17 39.7	
CAM4				*i*		12 17 49.1	
CAM4				*i*		12 17 56.7	
CAM4				*i*		12 18 07.9	
OTAV	**Otavalo**	**26.62**	**333**	*e*P	**P**	**12 18 10.5**	**+1.6**
	5.6nm,0.9s,mb4.2						
OTAV				*e*PcP	PcP	12 21 29.4	+1.0
USHA	**Ushuaia**	**30.93**	**182**	P	**P**	**12 18 46.8**	**+0.2**
	6.4nm,0.7s,mb4.5,baz=350,slow=4.7,SNR=10						
RCBR	**Riachuelo**	**34.52**	**64**	*e*P	**P**	**12 19 18.3**	**-0.1**
	20nm,0.9s,mb4.8						
BCIP	**Isla Barro Col**	**35.32**	**337**	*e*P	**P**	**12 19 25.7**	**+0.5**
	33nm,0.7s,mb5.1						
TGUH	**Tegucigalpa,Un**	**42.80**	**330**	*e*P	**P**	**12 20 27.5**	**+0.3**
	30nm,0.7s,mb5.0						
VNA1	**Neumayer--Stat**	**57.31**	**160**	*e*P	**P**	**12 22 16.3**	**+0.7**
GOGA	**Godfrey**	**59.22**	**344**	*e*P	**P**	**12 22 27.8**	**-1.4**
	7.1nm,0.6s,mb4.7						
LRAL	**Lakeview Retre**	**59.87**	**340**	*e*P	**P**	**12 22 31.8**	**-1.9**
	14nm,0.9s,mb4.8						
CPCT	**Cooper Cave**	**61.42**	**343**	*e*P	**P**	**12 22 42.7**	**-1.5**
SWET	**Sewanee**	**61.59**	**342**	*e*P	**P**	**12 22 43.9**	**-1.3**
OXF	**Oxford**	**62.00**	**339**	*e*P	**P**	**12 22 46.0**	**-2.1**
	37nm,0.9s,mb5.2						
JCT	**Junction City**	**62.76**	**328**	*e*P	**P**	**12 22 52.2**	**-1.0**
	23nm,0.7s,mb5.1						
JCT				*e*PcP	PcP	12 23 29.9	-0.1
JCT				*e*		12 23 41.8	
WVT	**Waverly**	**62.99**	**341**	*e*P	**P**	**12 22 52.6**	**-2.0**
	25nm,0.6s,mb5.2						
WVT				*e*		12 23 48.1	
MIAR	**Mount Ida**	**63.52**	**335**	*e*P	**P**	**12 22 56.5**	**-1.6**
	12nm,0.9s,mb4.7						
628A	**Black Gap, Mar**	**63.53**	**325**	⇓P	**P**	**12 22 58.0**	**-0.2**
	baz=64,SNR=21						
627A	**Terlingua Ranc**	**63.77**	**324**	⇑P	**P**	**12 22 59.3**	**-0.5**
	baz=64,SNR=17						
TXAR	**Lajitas Array**	**63.82**	**324**	P	**P**	**12 22 59.5**	**-0.6**
	3.4nm,0.7s,mb4.3,baz=152,slow=8.8,SNR=54						
528A	**Cox Ranch, San**	**64.01**	**325**	⇑P	**P**	**12 23 00.6**	**-0.8**
	baz=64,SNR=12						
PARMO	**Parma**	**64.08**	**339**	*e*P	**P**	**12 23 01.1**	**-0.6**
626A	**Big Bend Ranch**	**64.25**	**324**	⇓P	**P**	**12 23 03.0**	**+0.1**
	baz=64,SNR=51						
428A	**Kincaid Ranch,**	**64.41**	**326**	⇑P	**P**	**12 23 03.4**	**-0.5**
	baz=65,SNR=7.6						
527A	**Woodward Ranch**	**64.43**	**325**	⇓P	**P**	**12 23 03.5**	**-0.7**
	baz=65,SNR=21						
WCI	**Wyandotte Cave**	**64.51**	**343**	*e*P	**P**	**12 23 02.2**	**-2.2**
	10nm,0.6s,mb4.8						
526A	**Mary Lane Ranc**	**64.62**	**324**	⇑P	**P**	**12 23 05.1**	**-0.3**
	baz=65,SNR=26						
427A	**Hayter Ranch,**	**64.88**	**325**	⇓P	**P**	**12 23 05.9**	**-1.1**
	baz=65,SNR=11						
SIUC	**Southern Illin**	**64.88**	**340**	*e*P	**P**	**12 23 05.3**	**-1.5**
	8.1nm,0.6s,mb4.7						
328A	**Wristen Ranch,**	**65.00**	**326**	P	**P**	**12 23 07.2**	**-0.5**
	baz=65,SNR=19						
426A	**McDonald Obser**	**65.06**	**325**	⇑P	**P**	**12 23 07.8**	**-0.4**
	baz=65,SNR=21						
BLO	**Bloomington**	**65.45**	**343**	*e*P	**P**	**12 23 08.5**	**-2.0**
	6.0nm,0.5s,mb4.7						
FVM	**French Village**	**65.50**	**339**	*e*P	**P**	**12 23 09.3**	**-1.6**
	33nm,0.9s,mb5.2						
326A	**Caldwell Ranch**	**65.55**	**325**	⇓P	**P**	**12 23 10.8**	**-0.5**
	baz=66						
425A	**Indio Mountain**	**65.67**	**324**	⇑P	**P**	**12 23 11.6**	**-0.5**
	baz=66,SNR=32						
227A	**Bennet, Jal**	**65.75**	**326**	⇑P	**P**	**12 23 12.3**	**-0.2**
	baz=66,SNR=7.5						
CCM	**Cathedral Cave**	**65.84**	**339**	*e*P	**P**	**12 23 11.4**	**-1.5**
	30nm,0.6s,mb5.3						
CCM				*e*PcP	PcP	12 23 41.7	-0.9
WMOK	**Wichita Mounta**	**65.84**	**331**	*e*P	**P**	**12 23 10.7**	**-2.4**
	3.3nm,0.9s,mb4.2						
WMOK				*e*PcP	PcP	12 23 42.5	-0.1
325A	**Bean Ranch, Si**	**66.11**	**324**	⇓P	**P**	**12 23 14.3**	**-0.6**
	baz=66,SNR=51						
226A	**Malaga, Loving**	**66.20**	**326**	⇑P	**P**	**12 23 15.0**	**-0.5**
	baz=66						
CLNB	**Carlsbad**	**66.25**	**326**	*e*P	**P**	**12 23 15.6**	**-0.2**
	1.8nm,0.6s,mb4.1						
127A	**Arkansas Junct**	**66.31**	**327**	⇑P	**P**	**12 23 15.2**	**-0.9**
	baz=67,SNR=5.6						
BINY	**Binghamton**	**66.33**	**352**	*e*P	**P**	**12 23 15.6**	**-0.5**
	15nm,1.0s,mb4.8						
324A	**Moseley Ranch,**	**66.44**	**324**	⇑P	**P**	**12 23 14.7**	**-2.3**
	baz=67,SNR=16						
GDL2	**Guadalupe Moun**	**66.45**	**325**	*e*P	**P**	**12 23 16.6**	**-0.4**
	5.1nm,0.6s,mb4.5						
MNTX	**Cornudas Mount**	**66.59**	**324**	*e*P	**P**	**12 23 16.3**	**-1.6**
	7.1nm,0.9s,mb4.5						
225A	**Deer Hill, Car**	**66.61**	**325**	⇑P	**P**	**12 23 17.3**	**-0.8**
	baz=67,SNR=15						
126A	**Clayton Basin,**	**66.62**	**326**	⇓P	**P**	**12 23 17.4**	**-0.7**
	baz=67,SNR=9.9						
Z27A	**Tatum**	**66.75**	**327**	P	**P**	**12 23 17.9**	**-0.9**
	baz=67,SNR=15						
224A	**Cornudas Mount**	**66.96**	**325**	⇑P	**P**	**12 23 19.1**	**-1.1**
	baz=67,SNR=38						
125A	**Gardner Draw,**	**66.96**	**326**	⇓P	**P**	**12 23 19.1**	**-1.2**
	baz=67,SNR=13						
LIC	**Lamto**	**67.03**	**72**	*e*P	**P**	**12 23 19.3**	**-1.8**
	97nm,1.9s,mb5.3						
MSTX	**Muleshoe**	**67.06**	**328**	⇑P	**P**	**12 23 20.0**	**-0.9**
	baz=67,SNR=20						
Z26A	**Caprock**	**67.10**	**326**	⇑P	**P**

baz=71
214A **Organ Pipe Nat** 70.98 320 ⇑P P 12 23 45.0 0.0
baz=71,SNR=6.0
Y17A **Roosevelt** 71.10 322 P P 12 23 46.5 +0.8
baz=71,SNR=20
T23A **Casias Ranch,** 71.10 327 ⇓P P 12 23 46.3 +0.6
baz=71
Z16A **Peralta Trail,** 71.17 321 ⇓P P 12 23 46.8 +0.6
baz=71
S24A **Houchin Ranch,** 71.18 328 ⇑P P 12 23 46.7 +0.6
baz=71
X18A **Snowflake** 71.22 323 ⇑P P 12 23 46.7 +0.2
baz=72,SNR=5.2
V20A **Brimhall** 71.38 325 ⇓P P 12 23 47.8 +0.4
baz=72
SDCO **Great Sand Dun** 71.40 328 *e*P P 12 23 47.3 -0.1
20nm,1.3s,mb4.7
SDCO *e* 12 24 37.9
U21A **Nageezi** 71.44 326 ⇑P P 12 23 48.1 +0.4
baz=72,SNR=9.3
T22A **Edith** 71.52 327 ⇑P P 12 23 48.7 +0.6
baz=72,SNR=5.7
X17A **Forest Lakes** 71.55 323 ⇑P P 12 23 49.3 +0.9
baz=72,SNR=7.9
Z15A **Gila River Ind** 71.55 321 ⇑P P 12 23 48.7 +0.3
baz=72
114A **Black Gap (USA** 71.59 320 ⇓P P 12 23 48.7 0.0
baz=72,SNR=8.2
Y16A **Circle Bar Ran** 71.59 322 ⇑P P 12 23 49.0 +0.4
baz=72,SNR=7.5
R24A **Sanders Place,** 71.60 329 ⇓P P 12 23 49.2 +0.5
baz=72
V19A **Window Rock** 71.62 325 ⇓P P 12 23 49.1 +0.3
baz=72,SNR=9.5
Q25A **Bedland, Calha** 71.75 330 ⇓P P 12 23 49.6 +0.1
baz=72
T21A **Navajo Lake** 71.82 326 ⇑P P 12 23 50.1 +0.2
baz=72
U20A **Newcomb** 71.85 325 ⇑P P 12 23 50.5 +0.4
baz=72
X16A **Lo Mia Camp, P** 71.96 322 P P 12 23 51.7 +0.8
baz=72,SNR=12
W17A **Winslow** 72.05 323 ⇑P P 12 23 51.7 +0.4
baz=72
S22A **4UR Ranch, Cre** 72.05 327 ⇓P P 12 23 51.1 -0.3
baz=72
V18A **Ganado** 72.09 324 ⇓P P 12 23 52.1 +0.5
baz=72
113A **Mohawk Valley,** 72.12 319 ⇑P P 12 23 51.9 0.0
baz=72
Y15A **Casa Rosa Ranc** 72.13 321 ⇓P P 12 23 51.9 0.0
baz=72,SNR=9.1
U19A **Dine' College,** 72.14 325 ⇓P P 12 23 51.4 -0.5
baz=72
P25A **Willow Gulch B** 72.20 330 ⇑P P 12 23 52.4 +0.3
baz=72
Z13A **Yuma Proving G** 72.36 320 ⇓P P 12 23 53.9 +0.7
baz=73
R22A **Saguache, Gunn** 72.39 328 ⇓P P 12 23 54.0 +0.7
baz=73
T19A **Beclabito** 72.46 325 ⇓P P 12 23 53.7 -0.1
baz=73,SNR=16
X15A **Humboldt** 72.46 322 ⇓P P 12 23 54.2 +0.4
baz=73,SNR=11
S21A **Coal Bank Pass** 72.46 327 ⇑P P 12 23 54.6 +0.8
baz=73
MVCO **Mesa Verde** 72.47 326 ⇓P P 12 23 54.1 +0.2
baz=73,SNR=9.0
MVCO **Mesa Verde** 72.47 326 *e*P P 12 23 54.0 +0.2
7.6nm,0.7s,mb4.5
MVCO *e* 12 24 46.3
V17A **Tonalea, Kykot** 72.49 323 P P 12 23 54.9 +0.9
baz=73,SNR=12
Y14A **Wickenburg** 72.51 321 ⇓P P 12 23 53.9 -0.2
baz=73,SNR=8.0
W16A **Flagstaff** 72.51 323 ⇓P P 12 23 55.0 +0.9
baz=73,SNR=15
P24A **Kohler Place,** 72.54 330 ⇑P P 12 23 54.8 +0.7
baz=73
U18A **Rough Rock, Ch** 72.59 325 ⇑P P 12 23 55.1 +0.5
baz=73,SNR=7.3
ECSD **EROS Data Cent** 72.73 338 *e*P P 12 23 53.9 -1.3
21nm,1.0s,mb4.8
WUAZ **Wupatki** 72.73 323 ⇓P P 12 23 56.0 +0.6
baz=73,SNR=9.9
X14A **Yava** 72.82 321 ⇓P P 12 23 56.4 +0.5
baz=73
S20A **Disappointment** 72.88 326 ⇓P P 12 23 57.2 +1.0
baz=73
R21A **Cimarron** 72.89 327 ⇑P P 12 23 56.9 +0.6
baz=73
Y13A **Salome** 72.90 320 ⇓P P 12 23 56.8 +0.4
baz=73,SNR=12
Q22A **Crested Butte,** 72.96 328 ⇓P P 12 23 57.4 +0.7
baz=73
U16A **Tuba City** 73.06 324 ⇑P P 12 23 57.3 0.0
baz=73,SNR=8.9
ISCO **Idaho Springs** 73.09 330 *e*P P 12 23 57.9 +0.5
27nm,1.6s,mb4.7
T18A **Mexican Hat** 73.13 325 ⇓P P 12 23 57.4 -0.3
baz=73,SNR=15
U17A **Shonto** 73.15 324 ⇑P P 12 23 58.1 +0.3
baz=73,SNR=6.5
R20A **Redvale** 73.17 327 ⇑P P 12 23 58.5 +0.6
baz=73,SNR=16
S19A **Harvey Farm, M** 73.21 326 ⇑P P 12 23 58.2 0.0
baz=74,SNR=6.4
PV01 **Paradox Valley** 73.22 327 *e*P P 12 23 58.8 +0.6
202nm,0.5s
SMCO **Snowmass** 73.24 328 *e*P P 12 23 59.0 +0.6
6.2nm,0.6s,mb4.5
Y12C **Blythe** 73.26 320 ⇑P P 12 23 58.6 +0.1
baz=74
Q21A **Lamborn Mesa,** 73.27 328 ⇓P P 12 23 58.8 +0.4
baz=74
V15A **Kaibab Nationa** 73.39 323 ⇑P P 12 23 59.6 +0.3
baz=74,SNR=11
PDMCI **Parker Dam,Lak** 73.42 320 ⇓P P 12 23 59.9 +0.5
baz=74
X13A **Yucca** 73.45 321 ⇑P P 12 23 59.9 +0.3
baz=74,SNR=10
W14A **Seligman** 73.47 322 ⇑P P 12 24 00.4 +0.7
baz=74,SNR=6.1
SYO **Syowa Base** 73.51 159⇓*e*P P 12 23 59.2 -0.3
SYO **Syowa Base** 73.51 159⇓*e*X 12 24 08.9
T17A **Navajo Res., N** 73.52 324 ⇑P P 12 24 00.6 +0.6
baz=74,SNR=11
S18A **Hurst Farm, Bl** 73.61 325 ⇓P P 12 24 00.8 +0.3
baz=74,SNR=22
PV10 **Paradox Valley** 73.64 326 *e*P P 12 23 59.8 -0.9
95nm,0.8s,mb5.6
R19A **Curley Farm, L** 73.69 326 ⇓P P 12 24 00.8 -0.1
baz=74,SNR=6.3
Q20A **Ridgley Place,** 73.71 327 ⇑P P 12 24 01.1 0.0
baz=74
P21A **Newcastle** 73.74 328 ⇑P P 12 24 01.9 +0.7
baz=74
BC3 **Big Chuckawall** 73.75 319 ⇑P P 12 24 02.0 +0.6
baz=74
V14A **Boquillas Ranc** 73.78 322 ⇓P P 12 24 02.3 +0.7
baz=74,SNR=12
MONP **Monument Peak** 73.81 318 ⇓P P 12 24 02.5 +0.7
baz=74,SNR=5.8
O22A **Kremmling** 73.81 329 ⇑P P 12 24 01.5 -0.2
baz=74
BAR **Barrett** 73.82 318 *e*P P 12 24 02.0 +0.1
7.8nm,0.9s,mb4.4
BAR *e* 12 24 54.2
W13A **Hualapai Mount** 73.84 321 ⇓P P 12 24 02.4 +0.5
baz=74,SNR=7.1
U15A **North Rim** 73.91 323 P P 12 24 03.5 +1.3
baz=74,SNR=13
IRM **Iron Mountain** 73.92 320 ⇓P P 12 24 02.0 -0.4
baz=74
S17A **Black Ridge (B** 73.99 325 ⇑P P 12 24 03.0 +0.3
baz=74,SNR=5.9
R18A **Canyonlands Na** 74.08 326 ⇓P P 12 24 03.6 +0.4
baz=74
PHWY **Pilot Hill** 74.22 331 *e*P P 12 24 03.9 0.0
8.6nm,1.0s,mb4.4
PHWY *e* 12 24 55.4
N22A **Wattenberg Ran** 74.28 330 ⇓P P 12 24 04.9 +0.6
baz=74,SNR=9.0
BELC **Belle Mtn. Jos** 74.31 319 ⇓P P 12 24 04.1 -0.6
baz=74
PFO **Pinyon Flat Ob** 74.32 318 ⇑P P 12 24 04.7 0.0
baz=74
PFO **Pinyon Flat Ob** 74.32 318 *e*P P 12 24 04.3 -0.4
5.5nm,0.9s,mb4.3
T15A **Red Dirt Ranch** 74.39 323 ⇓P P 12 24 05.7 +0.7
baz=75,SNR=8.1
U14A **Mt Trumbull** 74.39 323 ⇑P P 12 24 05.9 +0.8
baz=75,SNR=14
V13A **Grand Canyon W** 74.44 322 ⇓P P 12 24 05.7 +0.4
baz=75,SNR=12
S16A **Wepner Ranch,** 74.48 324 ⇓P P 12 24 05.8 +0.2
baz=75
R17A **Hanksville Air** 74.53 325 ⇑P P 12 24 06.0 +0.2
baz=75,SNR=21
W12A **Cal Nev Ari** 74.55 321 ⇑P P 12 24 06.0 -0.1
baz=75
P19A **Cripple Cowboy** 74.58 327 ⇓P P 12 24 06.5 +0.5
baz=75,SNR=6.5
O20A **White River Ci** 74.60 328 ⇓P P 12 24 06.8 +0.6
baz=75,SNR=7.0
GMRC **Grandi Mounta** 74.65 320 ⇓P P 12 24 06.9 +0.3
baz=75,SNR=16
Q18A **Rafter H Ranch** 74.75 326 ⇓P P 12 24 06.7 -0.4
baz=75
MURC **Murrieta** 74.77 318 ⇓P P 12 24 07.0 -0.3
baz=75
T14A **Hurricane** 74.80 323 ⇓P P 12 24 08.3 +0.8
baz=75,SNR=6.4
U13A **Pakoon Wash** 74.83 322 ⇑P P 12 24 08.0 +0.5
baz=75,SNR=5.8
R16A **Teasdale** 74.83 325 ⇓P P 12 24 07.9 +0.3
baz=75
V12A **Nelson** 74.84 321 ⇑P P 12 24 07.7 0.0
baz=75,SNR=11
S15A **Panguitch** 74.86 324 ⇑P P 12 24 08.7 +1.0
baz=75
SRU **San Rafael** 74.95 326 ⇓P P 12 24 08.4 +0.2
baz=75,SNR=14
SRU **San Rafael** 74.95 326 *e*P P 12 24 08.4 +0.1
6.7nm,0.7s,mb4.4
HEC **Hector,Ludlow** 75.08 319 ⇓P P 12 24 09.3 +0.2
baz=75,SNR=7.6
Q16A **Castle Valley** 75.14 325 ⇑P P 12 24 09.7 +0.4
baz=75,SNR=7.8
N20A **Spence Gulch,** 75.15 329 ⇑P P 12 24 09.5 +0.1
baz=75,SNR=7.1
O19A **Miners Draw (B** 75.16 328 ⇑P P 12 24 09.5 +0.1
baz=75,SNR=6.1
U12A **Valley of Fire** 75.16 322 ⇑P P 12 24 09.9 +0.4
baz=75,SNR=16
R15A **Junction** 75.20 324 ⇓P P 12 24 10.2 +0.5
baz=75
P18A **Preston Nutter** 75.20 327 ⇓P P 12 24 10.4 +0.8
baz=75,SNR=16
T13A **Saint George** 75.23 323 ⇑P P 12 24 10.4 +0.5
baz=76,SNR=8.0
TUQ **Turquoise Moun** 75.26 320 ⇓P P 12 24 10.2 +0.1
baz=76,SNR=7.8
CCUT **Cedar City** 75.31 323 *e*P P 12 24 11.6 +1.3
14nm,0.9s,mb4.6
CCUT *e* 12 25 02.3
RWWY **Rawlins** 75.33 330 *e*P P 12 24 10.7 +0.4
14nm,0.9s,mb4.6
M21A **Separation Pea** 75.33 330 ⇑P P 12 24 10.8 +0.4
baz=76,SNR=6.4
P17A **Butcher Ranch,** 75.34 326 ⇑P P 12 24 10.4 -0.1
baz=76,SNR=6.5
MSU **Marysvale** 75.37 325 *e*P P 12 24 11.2 +0.6
8.6nm,0.9s,mb4.4
MSU *e*PcP PcP 12 24 23.5 +0.6
MSU *e* 12 25 01.8
BFSC **Mount Baldy Ra** 75.48 318 ⇓P P 12 24 11.8 +0.5
baz=76
RRX **Edison Barstow** 75.52 319 ⇓P P 12 24 11.7 +0.1
baz=76
O18A **Roosevelt** 75.57 327 ⇓P P 12 24 11.7 0.0
baz=76
S13A **Holt Ranch, En** 75.60 323 ⇓P P 12 24 12.6 +0.6
baz=76,SNR=7.3
L21A **Rawlins** 75.62 330 ⇑P P 12 24 11.4 -0.5
baz=76,SNR=11
M20A **Sweetwater, Wa** 75.63 329 ⇑P P 12 24 11.6 -0.4
baz=76
N19A **John Jarvie Ra** 75.64 328 ⇑P P 12 24 12.1 0.0
baz=76,SNR=10
GSC **Goldstone** 75.69 320 ⇑P P 12 24 12.3 -0.2
baz=76,SNR=6.6
GSC **Goldstone** 75.69 320 *e*P P 12 24 12.9 +0.3
4.7nm,1.0s,mb4.1
O17A **Robinson Place** 75.88 327 ⇑P P 12 24 13.6 +0.1
baz=76,SNR=23
RSSD **Black Hills** 75.89 333 *e*P P 12 24 13.6 +0.1
7.5nm,0.8s,mb4.4
RSSD *e* 12 25 06.8
N18A **Larsen Ranch,** 75.94 328 ⇓P P 12 24 13.5 -0.3
baz=76
R13A **O'Grain Ranch,** 76.09 323 ⇑P P 12 24 14.7 0.0
baz=76
L20A **Wamsutter** 76.10 329 ⇓P P 12 24 14.6 0.0
baz=76,SNR=8.9
EDW2 **Edwards Air Fo** 76.11 319 ⇓P P 12 24 14.0 -0.9
baz=76
T11A **Corn Creek, Al** 76.12 322 ⇓P P 12 24 15.5 +0.6
baz=76,SNR=19
TORD **Torodi Ar. Bea** 76.16 69 P P 12 24 15.1 -0.6
15nm,0.7s,mb4.8,baz=256,slow=5.4,SNR=71
TORD pP pP 12 25 06.2 +7.2
3.3nm,0.8s,baz=257,slow=4.9,SNR=2.7
TORD **Torodi Ar. Bea** 76.16 69 P P 12 24 15.1 -0.6
TORD pP pP 12 25 06.2 +7.2
S12A **Delamar Landin** 76.17 322 ⇑P P 12 24 15.8 +0.6
baz=76
U10A **Ash Meadows, A** 76.18 321 ⇑P P 12 24 15.1 -0.2
baz=76,SNR=5.8
O16A **Springville** 76.28 326 ⇑P P 12 24 15.9 +0.2
baz=76
Q14A **Sevier Lake (B** 76.30 324 ⇓P P 12 24 16.4 +0.4
baz=76
M18A **Lyman** 76.48 328 ⇑P P 12 24 15.7 -1.2
baz=77,SNR=8.1
N17A **Moffit Pass** 76.49 327 ⇓P P 12 24 18.0 +1.0
baz=77
AGMN **Agassiz Nation** 76.51 340 *e*P P 12 24 15.4 -1.4
13nm,0.8s,mb4.6
AGMN *e* 12 25 10.6
FURC **Furnace Creek,** 76.53 320 ⇑P P 12 24 17.1 -0.1
baz=77,SNR=11
R12A **Pony Springs,** 76.55 323 ⇑P P 12 24 18.4 +1.1
baz=77,SNR=8.7
MPMC **Manual Prospec** 76.61 320 ⇓P P 12 24 17.7 0.0
baz=77,SNR=6.2
P14A **Drum Mountains** 76.63 325 ⇑P P 12 24 18.5 +0.8
baz=77,SNR=12
L19A **Faon** 76.65 329 ⇓P P 12 24 18.1 +0.3
baz=77,SNR=9.5
Q13A **Wheeler Ranch,** 76.68 324 ⇑P P 12 24 18.4 +0.3
baz=77,SNR=6.6
M17A **Scullys Gap (B** 76.81 328 ⇓P P 12 24 17.2 -1.5
baz=77,SNR=6.9
L18A **Fontenelle, Gr** 76.84 328 P P 12 24 19.2 +0.4
baz=77,SNR=19
ISA **Isabella** 76.93 319 ⇑P P 12 24 19.6 +0.1
baz=77,SNR=7.6
ISA **Isabella** 76.93 319 *e*P P 12 24 20.0 +0.4
15nm,1.3s,mb4.5
DUG **Dugway** 76.94 325 ⇓P P 12 24 19.8 +0.4
baz=77,SNR=6.7
DUG **Dugway** 76.94 325 *e*P P 12 24 19.6 +0.2
8.4nm,1.2s,mb4.2
K19A **Absolon Red Bu** 76.97 329 ⇓P P 12 24 19.3 -0.3
baz=77,SNR=6.2
P13A **Bates Ranch, G** 77.04 324 ⇓P P 12 24 19.7 -0.3
baz=77,SNR=12
R11A **Troy Canyon, C** 77.11 322 ⇓P P 12 24 20.3 -0.1
baz=77,SNR=15
M16A **Huntsville** 77.17 327 ⇑P P 12 24 20.6 0.0
baz=77
PKM **Peak Mountain** 77.25 318 ⇑P P 12 24 21.5 +0.2
baz=77,SNR=7.0
BW06 **Boulder Array** 77.26 329 ⇓P P 12 24 20.7 -0.5
baz=78,SNR=5.4
PDAR **Pinedale Array** 77.26 329 P P 12 24 21.0 -0.2
2.0nm,0.6s,mb4.0,baz=132,slow=7.5,SNR=18
TSUM **Tsumeb** 77.30 105 *e*P P 12 24 21.9 -0.1
9.4nm,0.9s,mb4.4
HWUT **Hardware Ranch** 77.35 327 *e*P P 12 24 21.4 -0.3
5.7nm,0.6s,mb4.4
S10A **Tonopah Range,** 77.38 322 ⇓P P 12 24 22.3 +0.4
baz=78,SNR=10
L17A **Cokeville** 77.38 328 P P 12 24 21.9 0.0
baz=78,SNR=6.3
K18A **Toltan Ranch,** 77.39 329 ⇓P P 12 24 22.5 +0.6
baz=78,SNR=12
R10A **Warm Springs** 77.47 322 ⇑P P 12 24 23.5 +1.1
baz=78,SNR=12
Q11A **Duckwater** 77.50 323 ⇑P P 12 24 22.6 0.0
baz=78,SNR=12
P12A **McGill** 77.53 324 ⇓P P 12 24 23.4 +0.6
baz=78
L16A **Fish Haven** 77.59 327 P P 12 24 23.1 0.0
baz=78,SNR=6.5
N14A **Grayback Hills** 77.61 326 ⇓P P 12 24 23.1 -0.1
baz=78,SNR=7.8
SMMC **Simmler** 77.63 318 ⇓P P 12 24 23.6 +0.2
baz=78
J18A **Kendall Valley** 77.82 329 P P 12 24 24.6 +0.3
baz=78,SNR=22
K17A **Gardner Place,** 77.90 328 ⇓P P 12 24 24.9 +0.2
baz=78,SNR=13
O12A **Currie** 78.01 324 ⇑P P 12 24 25.6 +0.2
baz=78,SNR=11
L15A **Malad City** 78.06 327 ⇓P P 12 24 25.4 -0.2
baz=78,SNR=14
I18A **Diamond G Ranc** 78.10 329 P P 12 24 26.6 +0.8
baz=78,SNR=11
M14A **Sheep Mountain** 78.17 326 ⇓P P 12 24 26.4 +0.1
baz=78,SNR=8.9
ULM **Lac du Bonnet** 78.25 341 P P 12 24 25.4 -1.0
9.5nm,0.6s,mb4.6,baz=154,slow=5.9,SNR=10
ULM **Lac du Bonnet** 78.25 341 *e*P P 12 24 25.4 -1.1
6.2nm,0.5s,mb4.5
J17A **Brown Place, J** 78.26 329 ⇑P P 12 24 27.3 +0.6
baz=78,SNR=8.6
K16A **Soda Springs** 78.28 328 ⇓P P 12 24 27.7 +0.9
baz=78,SNR=17
REDW **Red Top Meadow** 78.33 329 *e*P P 12 24 27.1 +0.1
6.1nm,0.9s,mb4.2
REDW *e*PcP PcP 12 24 34.6 -1.1
SNOW **Snow King Moun** 78.36 329 *e*P P 12 24 27.2 0.0
8.3nm,0.8s,mb4.4
LOHW **Long Hollow** 78.40 329 *e*P P 12 24 27.7 +0.2
4.2nm,0.6s,mb4.2
SCHQ **Schefferville** 78.40 360 P P 12 24 26.6 -0.6
5.6nm,0.8s,mb4.2,baz=162,slow=4.3,SNR=18
SCHQ **Schefferville** 78.40 360 *e*P P 12 24 26.2 -1.0
10nm,1.2s,mb4.3
O11A **Cowboy Ranch,** 78.40 324 ⇓P P 12 24 28.4 +0.8
baz=79
TPAW **Teton Pass** 78.47 329 *e*P P 12 24 27.9 +0.1
15nm,1.2s,mb4.5
P10A **Eureka** 78.49 323 ⇑P P 12 24 28.1 +0.1
baz=79
M13A **Montello** 78.49 325 ⇑P P 12 24 28.2 +0.1
baz=79
L14A **Malta** 78.51 326 ⇓P P 12 24 28.3 +0.3
baz=79,SNR=6.7
RRI2 **Red Ridge** 78.54 328 *e*P P 12 24 28.6 +0.4
26nm,1.4s,mb4.7
RRI2 *e* 12 25 21.2
N12A **Clover Valley,** 78.59 325 ⇓P P 12 24 28.7 +0.2
baz=79
I17A **Pilgrim Ck.** 78.62 329 ⇑P P 12 24 28.7 +0.1
baz=79
J16A **Bone** 78.62 328 ⇓P P 12 24 28.8 +0.1
baz=79
K15A **Arbon** 78.63 327 ⇓P P 12 24 28.6 -0.2
baz=79
NVAR **Mina Array Bea** 78.70 321 P P 12 24 29.4 +0.1
1.3nm,0.7s,mb3.7,baz=160,slow=7.5,SNR=16
NVAR pP pP 12 25 18.8 +6.0
0.1nm,0.4s,baz=281,slow=24,SNR=0.9
IMW **Indian Meadow** 78.77 329 *e*P P 12 24 30.2 +0.8
11nm,1.0s,mb4.5
IMW *e* 12 25 20.9
K14A **Jones Ranch, D** 78.85 327 ⇑P P 12 24 29.7 -0.3
baz=79
L13A **Double Diamond** 78.91 326 ⇓P P 12 24 30.5 +0.2
baz=79,SNR=7.7
M12A **Wells** 78.92 325 ⇓P P 12 24 30.2 -0.2
baz=79
RLMT **Red Lodge** 78.94 331 ⇓P P 12 24 29.9 -0.5
baz=79,SNR=9.7
RLMT **Red Lodge** 78.94 331 *e*P P 12 24 30.6 +0.2
3.6nm,0.4s,mb4.3
H17A **Grant Village** 78.98 330 ⇑P P 12 24 30.3 -0.3
baz=79
I16A **Newdale** 79.02 329 ⇓P P 12 24 30.8 0.0
baz=79,SNR=9.1
J15A **Blackfoot** 79.12 328 ⇑P P 12 24 31.9 +0.6
baz=79,SNR=14
G18A **Lazy EL Ranch,** 79.23 331 ⇓P P 12 24 30.8 -1.1
baz=80,SNR=9.7
YMR **Madison River** 79.37 329 *e*P P 12 24 34.0 +1.3
30nm,1.3s,mb4.8
K13A **Stover Farm, H** 79.39 326 ⇑P P 12 24 32.9 0.0
baz=80,SNR=6.4
M11A **Holland Ranch,** 79.40 325 ⇑P P 12 24 33.3 +0.4
baz=80,SNR=6.4
L12A **House Creek Ra** 79.50 326 ⇑P P 12 24 33.9 +0.4
baz=80,SNR=12
DGMT **Dagmar** 79.52 336 ⇑P P 12 24 33.7 +0.3
baz=80,SNR=9.1
DGMT **Dagmar** 79.52 336 *e*P P 12 24 33.8 +0.4
74nm,1.3s,mb5.2
H16A **Russell Place,** 79.53 329 ⇑P P 12 24 34.3 +0.8
baz=80,SNR=7.6
I15A **Monteview** 79.59 328 ⇑P P 12 24 34.7 +0.8
baz=80,SNR=7.3
J14A **Carey** 79.59 327 ⇑P P 12 24 33.8 -0.1
baz=80,SNR=8.5
F18A **Big Timber** 79.75 331 ⇓P P 12 24 34.4 -0.3
baz=80,SNR=27
K12A **Draper Farm, C** 79.79 326 ⇑P P 12 24 35.7 +0.6
baz=80,SNR=15
L11A **Cat Creek Ranc** 79.90 325 P P 12 24 36.2 +0.6
baz=80,SNR=11
J13A **Cove Ranch, Pi** 79.97 327 ⇓P P 12 24 36.6 +0.6
baz=80,SNR=6.6
I14A **Mackay** 80.00 328 ⇓P P 12 24 36.7 +0.6
baz=80,SNR=15
F17A **Fitzpatrick Pl** 80.17 330 ⇓P P 12 24 37.3 +0.3
baz=80,SNR=18
G16A **Moss Hill, Enn** 80.18 329 ⇑P P 12 24 37.6 +0.5
baz=80,SNR=5.0
L10A **Juniper Basin** 80.21 325 ⇑P P 12 24 37.6 +0.4
baz=80,SNR=13
HLID **Hailey** 80.21 327 ⇓P P 12 24 38.1 +0.8
baz=80,SNR=35
HLID **Hailey** 80.21 327 *e*P P 12 24 38.2 +0.9
16nm,0.9s,mb4.7
HLID *e* 12 25 29.4
I13A **Wildhorse Cree** 80.32 327 ⇑P P 12 24 38.5 +0.7
baz=81,SNR=14
J12A **Stokes Ranch,** 80.33 326 ⇑P P 12 24 38.3 +0.4
baz=81,SNR=17
E18A **Harlowton** 80.34 331 ⇑P P 12 24 37.6 -0.3
baz=81,SNR=9.6
MCMT **McKenzie Canyo** 80.38 329 *e*P P 12 24 38.9 +0.8
7.5nm,0.8s,mb4.4
BOZ **Bozeman (W)** 80.42 330 ⇓P P 12 24 38.2 -0.1
baz=81,SNR=6.4
BOZ **Bozeman (W)** 80.42 330 *e*P P 12 24 38.1 -0.2
6.8nm,1.3s,mb4.1
BOSA **Boshof** 80.43 117 P P 12 24 39.0 0.0
3.9nm,0.8s,mb4.1,baz=295,slow=4.7,SNR=8.9
G15A **Dillon** 80.46 329 ⇓P P 12 24 38.9 +0.4
baz=81,SNR=8.3
H14A **Leadore** 80.47 328 ⇑P P 12 24 39.3 +0.7
baz=81,SNR=14
K11A **Parker Ranch,** 80.47 325 ⇓P P 12 24 38.5 -0.1
baz=81,SNR=14
DLMT **Dillon** 80.65 329 *e*P P 12 24 40.0 +0.4
19nm,1.4s,mb4.5
E17A **Martinsdale** 80.68 331 ⇑P P 12 24 39.6 -0.1
baz=81,SNR=12
I12A **Atlanta** 80.74 327 ⇓P P 12 24 40.6 +0.6
baz=81,SNR=10
D18A **Linhart Farms,** 80.78 332 ⇑P P 12 24 39.7 -0.5
baz=81,SNR=8.9
MFID **Camas Ranch** 80.82 326 ⇑P P 12 24 40.5 0.0
baz=81,SNR=5.5
BEKR **Beckworth** 80.85 321 ⇓P P 12 24 40.5 -0.2
baz=81,SNR=8.3
H13A **Challis** 80.86 328 ⇑P P 12 24 41.1 +0.4
baz=81,SNR=31
K10A **MacKenzie Ranc** 80.92 325 ⇓P P 12 24 41.4 +0.4
baz=81,SNR=5.9
LRM **Limekiln Ridge** 80.93 329 *e*P P 12 24 41.0 0.0
60nm,1.0s,mb5.2

F15A	Butte	80.96	329	⇓P		P	12 24 41.5 +0.3
	baz=81,SNR=12						
D17A	Six Diamond Ra	81.14	331	⇓P		P	12 24 42.0 -0.1
	baz=81,SNR=19						
H12A	Diamond D Ranc	81.15	327	⇓P		P	12 24 41.9 -0.3
	baz=81,SNR=11						
G13A	Cobalt	81.24	328	⇑P		P	12 24 43.4 +0.7
	baz=82,SNR=44						
HRY	Holter Researc	81.31	330	eP		P	12 24 43.6 +0.6
	5.3nm,0.6s,mb4.3						
F14A	Wisdom	81.35	329	⇓P		P	12 24 43.9 +0.7
	baz=82,SNR=5.9						
EGMT	Eagleton	81.40	332	⇓P		P	12 24 42.5 -0.9
	baz=82,SNR=6.5						
EGMT	Eagleton	81.40	332	eP		P	12 24 42.7 -0.8
	31nm,1.3s,mb4.8						
MAW	Mawson	81.42	163	P		P	12 24 44.2 +0.8
	9.4nm,0.9s,mb4.4,baz=219,slow=5.6,SNR=16						
MAW	Mawson	81.42	163	eP		P	12 24 43.9 +0.4
	2.1nm,0.9s,mb3.8						
D16A	Dana Ranch, Ca	81.43	331	⇑P		P	12 24 43.6 0.0
	baz=82,SNR=27						
C17A	Wharram Farm,	81.54	332	⇓P		P	12 24 43.6 -0.5
	baz=82,SNR=9.8						
B18A	Beardsley Farm	81.70	333	P		P	12 24 44.8 -0.2
	baz=82,SNR=17						
F13A	Darby	81.79	328	⇑P		P	12 24 45.5 0.0
	baz=82,SNR=25						
G12A	Big Creek, Yel	81.80	327	⇓P		P	12 24 45.1 -0.5
	baz=82						
H11A	Donnelly	81.83	327	⇑P		P	12 24 45.5 -0.3
	baz=82,SNR=9.8						
E14A	Clinton	81.86	329	⇑P		P	12 24 46.4 +0.5
	baz=82						
D15A	Lincoln	81.87	330	P		P	12 24 46.5 +0.6
	baz=82,SNR=6.1						
B17A	L&G Farms, Che	82.06	332	⇓P		P	12 24 46.3 -0.5
	baz=82						
LBTB	Lobatse	82.07	114	eP		P	12 24 46.9 -0.7
	9.9nm,1.1s,mb4.3						
C16A	Fuhringer Ranc	82.10	331	⇓P		P	12 24 46.8 -0.2
	baz=82,SNR=12						
H10A	Noah's Angus R	82.12	326	⇓P		P	12 24 46.6 -0.7
	baz=82,SNR=13						
A18A	Metzger Ranch,	82.14	333	⇑P		P	12 24 46.4 -0.9
	baz=82,SNR=5.8						
J08A	Circle Bar Ran	82.16	325	⇓P		P	12 24 47.2 -0.3
	baz=82,SNR=13						
MOD	Modoc	82.17	323	eP		P	12 24 47.6 -0.1
	11nm,1.1s,mb4.4						
E13A	Victor	82.20	329	⇑P		P	12 24 47.9 +0.3
	baz=82,SNR=20						
I09A	Lost Marbles R	82.20	325	⇑P		P	12 24 47.7 0.0
	baz=82,SNR=11						
F12A	Elk City	82.21	328	⇓P		P	12 24 47.7 -0.1
	baz=82,SNR=7.2						
D14A	Greenough	82.35	330	⇑P		P	12 24 48.4 0.0
	baz=83						
MSO	Missoula	82.37	329	eP		P	12 24 48.7 +0.2
	2.0nm,0.7s,mb3.9						
G11A	Walters Elk Ra	82.46	327	⇑P		P	12 24 49.1 +0.1
	baz=83,SNR=11						
C15A	Salmond Ranch,	82.46	331	⇓P		P	12 24 49.1 +0.1
	baz=83,SNR=18						
SLMT	Seeley Lake	82.47	330	eP		P	12 24 48.7 -0.3
	12nm,1.0s,mb4.5						
BMO	Blue Mountains	82.59	326	eP		P	12 24 49.4 -0.4
	15nm,1.6s,mb4.5						
BMO				e			12 25 42.0
F11A	Grangeville	82.75	328	⇑P		P	12 24 49.9 -0.6
	baz=83,SNR=12						
D13A	Huson	82.80	329	⇓P		P	12 24 50.4 -0.3
	baz=83,SNR=12						
G10A	Bishop Farm, J	82.81	327	P		P	12 24 51.3 +0.5
	baz=83,SNR=11						
E12A	Beaver Dam Sad	82.84	328	⇓P		P	12 24 49.5 -1.5
	baz=83						
B15A	Bradely Ranch,	82.84	331	⇑P		P	12 24 49.8 -1.1
	baz=83,SNR=5.6						
A16A	West Butte Ran	82.90	332	⇑P		P	12 24 50.3 -0.9
	baz=83						
C14A	Swan Lake	82.97	330	⇑P		P	12 24 51.2 -0.4
	baz=83						
K05A	Summer Lake	83.05	323	⇑P		P	12 24 52.5 +0.4
	baz=83,SNR=8.8						
H08A	Prairie City	83.06	325	⇑P		P	12 24 52.5 +0.3
	baz=83,SNR=5.4						
G09A	Cove	83.13	326	⇑P		P	12 24 52.3 -0.2
	baz=83,SNR=15						
HOG	Hogback Mounta	83.18	322	P		P	12 24 53.0 +0.2
D12A	Red Ives Fores	83.19	329	⇓P		P	12 24 52.4 -0.4
	baz=83						
I07A	Izee	83.20	325	⇓P		P	12 24 52.7 -0.2
	baz=83						
C13A	Hot Springs	83.28	330	⇓P		P	12 24 53.0 -0.3
	baz=84						
PESTR	Estremoz	83.31	42	eP		P	12 24 56.5 +2.9
	20nm,1.8s,mb4.5						
F10A	Beach Ranch, E	83.34	327	⇑P		P	12 24 53.0 -0.5
	baz=84,SNR=7.7						
A14A	Double T Ranch	83.71	331	⇑P		P	12 24 54.6 -0.8
	baz=84						
G08A	Pilot Rock	83.74	326	⇑P		P	12 24 54.5 -1.1
	baz=84						
B13A	Whitefish	83.74	330	⇑P		P	12 24 54.5 -1.0
	baz=84						
FFC	Flin Flon	83.99	340	eP		P	12 24 56.0 -0.7
	12nm,1.5s,mb4.4						
A13A	Flathead Natio	84.13	331	⇓P		P	12 24 57.5 0.0
	baz=84						
C11A	Tepee Creek (N	84.19	329	⇓P		P	12 24 57.2 -0.6
	baz=84						
A12A	Yaak River Ran	84.69	330	⇑P		P	12 25 00.1 -0.2
	baz=85						
PVRL	Vila Real	84.71	40	eP		P	12 25 02.6 +2.0
	22nm,1.5s,mb4.7						
NEW	Newport	84.90	329	eP		P	12 24 59.8 -1.6
	3.9nm,0.8s,mb4.2						
D08A	Wollman Farm,	84.93	327	⇑P		P	12 25 00.9 -0.6
	baz=85						
H04A	Detroit Lake	85.04	324	⇓P		P	12 25 01.2 -0.9
	baz=85						
MVO	Moncorvo	85.05	41	eP		P	12 25 02.9 +0.6
	17nm,1.6s,mb4.5						
G04A	Mulino	85.54	324	⇓P		P	12 25 03.6 -1.0
	baz=86						
EBG	Ellensburg	85.66	326	P		P	12 25 05.7 +0.5
MPOR	Mary's Peak	85.67	323	P		P	12 25 05.8 +0.5
PAB	San Pablo	85.73	43	eP		P	12 25 06.4 +0.7
	6.3nm,1.1s,mb4.3						
F04A	Amboy	85.98	325	⇑P		P	12 25 06.3 -0.5
	baz=86						
ETW	Entiat	86.01	327	eP		P	12 25 06.9 0.0
	28nm,1.0s,mb5.0						
B08A	Colville Reser	86.03	328	⇑P		P	12 25 05.9 -1.1
	baz=86						
ESDC	Sonseca Array	86.05	43	P		P	12 25 08.5 +1.2
	2.0nm,0.8s,mb3.9,baz=245,slow=4.4,SNR=13						
ESDC				pP		pP	12 25 58.1 +6.5
	1.2nm,0.9s,baz=242,slow=4.3,SNR=2.4						
ESLA	Sonseca Array	86.05	43	eP		P	12 25 08.0 +0.7
	0.5nm,0.8s						
B06A	Marblemount	87.19	327	⇓P		P	12 25 11.4 -1.2
	baz=87						
JCW	Jim Creek	87.20	327	P		P	12 25 11.6 -1.1
LSZ	Lusaka	88.16	106	eP		P	12 25 20.0 +2.0
	35nm,1.6s,mb4.9						
CASY	Casey	90.08	179	eP		P	12 25 26.7 +0.6
KEST	Kesra	93.03	52	P		P	12 25 41.5 +1.3
	1.0nm,0.8s,mb4.0,baz=226,slow=8.3,SNR=2.8						
YKA	Yellowknife Ar	94.16	340	P		P	12 25 43.9 -0.8
	3.7nm,0.6s,mb4.7,baz=136,slow=4.4,SNR=26						
FX1	Attu Island--F	126.87	319	PKP	PKPdf		12 31 27.8 -1.2
	3.3nm,0.6s,baz=180,slow=3.0,SNR=4.2						
ASAR	Alice Springs	128.72	204	PKP	PKPdf		12 31 32.7 -0.8
	4.8nm,0.7s,baz=137,slow=1.7,SNR=4.2						
ASAR				SKPbc			12 34 33.0
	0.6nm,0.8s,baz=152,slow=3.3,SNR=6.6						
AKTO	Aktyubinsk	129.93	43	SKPab			12 34 39.3
	2.3nm,0.5s,baz=280,slow=5.5,SNR=8.3						
WRA	Warramunga Arr	131.90	207	PKP	PKPdf		12 31 38.9 -0.7
	2.6nm,0.5s,baz=160,slow=1.7,SNR=45						
WRA				SKPbc	SKPbc		12 34 44.8 -4.2
	4.3nm,0.7s,baz=157,slow=3.7,SNR=21						
PETK	Petropavlovsk-	135.77	323	PKP	PKPdf		12 31 45.0 -0.8
	3.2nm,0.7s,baz=86,slow=3.0,SNR=11						
BVAR	Borovoye Array	136.47	37	PKP	PKPdf		12 31 47.3 +0.3
	0.9nm,0.5s,baz=270,slow=5.9,SNR=6.9						
KURK	Kurchatov	142.06	36	PKhKP			12 31 53.4
	1.4nm,0.6s,baz=306,slow=2.6,SNR=3.5						
KURK				PKP	PKPdf		12 31 57.7 +0.3
	1.4nm,0.6s,baz=301,slow=2.6,SNR=9.4						
KURK				SKP			12 35 10.2
	0.3nm,0.2s,baz=225,slow=1.0,SNR=3.9						
ZAA0	Zalesovo Array	143.12	28	ePKPdf	PKPdf		12 31 55.8 -3.3
ZALV	Zalesovo Beam	143.12	28	PKP	PKPdf		12 31 56.2 -2.9
	6.1nm,0.7s,baz=296,slow=4.4,SNR=30						
KSH	Kashi	144.81	55	PKP	PKPdf		12 32 02.3 -0.2
KSH				sPKP			12 33 23.1
KSH				PKS			12 35 37.4
KSH				SKS	SKSdf		12 38 50.0 -4.9
KSH				AMB	AMB		
	comp=Z,62nm,4.7s						
KSH				LR	LR		
	comp=E,29nm,4.0s						
KSH				LR	LR		
	comp=Z,52nm,4.7s						
MK31	Makanchi Array	146.19	40	ePKPbc	PKPbc		12 32 04.7 -1.4
MKAR	Makanchi Array	146.19	40	PKPbc	PKPbc		12 32 04.8 -1.2
	comp=Z,6.6nm,0.6s,baz=349,slow=3.0,SNR=65						
MKAR				pPKPbc	pPKPbc		12 33 00.5 +8.4
	comp=Z,3.7nm,1.0s,baz=336,slow=2.7,SNR=3.5						
YSS	Yuzh-Sakhalins	147.15	322	ePKPbc	PKPbc		12 32 07.0 -1.7
WMQ	Urumqi	151.01	40	ePKPbc	PKPdf		12 32 10.0 -2.5
MJAR	Matsushiro Arr	155.24	306	PKPbc	PKPdf		12 32 26.7 +7.8
	comp=Z,1.4nm,0.5s,baz=121,slow=1.3,SNR=8.0						
MJAR				PKPab	PKPab		12 32 44.1 -0.7
	comp=Z,1.0nm,0.5s,baz=3.7,slow=0.3,SNR=5.8						
CN2	Changchun	157.82	336	ePKP	PKPdf		12 32 19.3 -2.7
HHC	Hu-ho-hao-te	163.02	5	ePKP	PKPdf		12 32 25.0 -2.8
HHC				pPKP	pPKPdf		12 33 23.1 +8.3
HHC				sPKP			12 33 46.0
HHC				PKS			12 35 57.5
HHC				PP	PP		12 37 04.0 +1.3
HHC				SKS	SKSdf		12 39 06.4 -9.2
HHC				SKKS	SKKSac		12 43 29.0 -5.0
HHC				SS	SS		12 57 09.5 -1.9
HHC				AMB	AMB		
	comp=Z,49nm,5.3s						
HHC				LR	LR		
	comp=N,250nm,20.7s						
HHC				LR	LR		
	comp=E,250nm,26.2s						
HHC				LR	LR		
	comp=Z,150nm,25.0s						
CMAR	Chiang Mai Arr	165.45	109	PKP	PKPdf		12 32 29.1 -1.5
	comp=Z,0.4nm,0.4s,baz=267,slow=2.9,SNR=4.7						
CMAR				PKPab	PKPab		12 33 30.2 +0.4
	comp=Z,2.9nm,0.7s,baz=254,slow=5.3,SNR=16						
CD2	Chengdu	168.93	49	ePKP	PKPdf		12 32 29.4 -3.4
KMI	Kunming	170.19	81	PKP	PKPdf		12 32 32.0 -1.7
NJ2	Nanjing	170.57	331	ePKP	PKPdf		12 32 30.3 -3.4
WHN	Wuhan	173.33	353	PKP	PKPdf		12 32 35.3 +0.2
GYA	Guiyang	173.36	66	PKP	PKPdf		12 32 32.1 -3.1
GYA				pPKP	pPKPdf		12 33 29.0 +6.7
GYA				sPKP			12 33 50.4
GYA				PKPab	PKPab		12 34 02.9 -1.8
GYA				PKS			12 36 02.8
GYA				PP	PP		12 37 57.0 0.0
GYA				AMB	AMB		
	comp=Z,80nm,8.0s						

DJA 22 12:18:15.9±83S×114.°09E, h20km, MLv3.7/11, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGBI	Denpasar	1.45	46	P	Pn	12 18 38.4	-1.7
NBBI	Negara	1.54	20	P	Pn	12 18 41.7	+0.3
DNP	Denpasar	1.59	44	P	Pn	12 18 41.5	-0.6
DNP				S	Sn	12 19 00.8	-1.2
BYJI	Banyuwangi	1.63	9	P	Pn	12 18 42.8	+0.3
BYJI				S	Sn	12 19 04.1	+1.2
GMJI	Gumukmas	1.67	338	P	Pn	12 18 42.2	-1.0
SRBI	Singaraja	2.06	33	P	Pn	12 18 48.1	-0.4
KHKI	Kahang-Kahang	2.09	46	P	Pn	12 18 49.7	+0.8
KRKI	Karangkates	2.32	316	S	Sn	12 19 22.7	+2.7
KMMI	Kalianget	2.77	357	P	Pn	12 18 59.7	+1.5
PWJI	Pagerwojo	2.89	308	P	Pn	12 19 00.2	+0.3
PWJI				S	Sn	12 19 32.2	-1.8
SJI	Sawahan	3.10	312	P	Pn	12 19 03.5	+0.7
PCJI	Pacitan	3.30	299	P	Pn	12 19 05.5	-0.1
PCJI				S	Sn	12 19 41.7	-2.6
GRJI	Gresik	3.31	331	S	Sn	12 19 47.0	+2.6
UGM	Wanagama	4.01	298	P	Pn	12 19 16.3	+1.0

*IDC **22** 12:36:31.5±3.5, 37.°19N×72.°25E, h193km±31km, mb3.4/8, mb1 3.6/14, mb1mx3.4/28, mbtmp3.5/14, Error ellipse: s-maj=26.2km s-min=19.5km az=18.0*
*ISCJB **22** 12:36:32.8±0.3, 37.°32N±0.°03×72.°35E±0.°06, h217km±6km, mb3.5/8, Error ellipse: s-maj=7.7km s-min=4.5km az=175.6*
*NEIC **22** 12:36:33.9±0.8, 37.°29N×72.°31E, h213km±7km, mb3.8/3, Error ellipse: s-maj=14.0km s-min=7.7km az=128.0*
*NNC **22** 12:36:42.6±4.2, 38.°10N×72.°31E, h228km±33km, mb2.9, mpv4.5, Error ellipse: s-maj=41.9km s-min=20.4km az=13.0*

ISC 22 12:36:33.8±0.3, 37.°36N±0.°03×72.°25E±0.°07, h209km±5km, n51, σ1°03/66, mb3.5/8, 10C-3D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	3.54	185	⇑P	Pn	12 37 31.3	+0.9
CEP				S	Sn	12 38 15.0	+0.1
KSH	Kashi	3.63	53	⇓iPn	Pn	12 37 27.3	-4.0
KSH				Sn	Sn	12 38 06.0	-11
KSH				smax			
	comp=N,220nm,0.4s						
KSH				smax			
	comp=E,260nm,0.6s						
CHCP	Chirah Chowk	3.79	167	⇑P	Pn	12 37 35.2	+1.8
KBL	Kabul	3.83	224	ePn	Pn	12 37 34.5	+0.5
KBL				eSn	Sn	12 38 20.1	-1.0
AML	Almayashu	4.89	13	P	Pn	12 37 47.5	+0.5
	SNR=975						
UCH	Uchtor	5.16	19	P	Pn	12 37 50.9	+0.5
	SNR=89						
KZA	Kyzart	5.24	25	P	Pn	12 37 51.4	-0.1
	SNR=30						
EKS2	Erkin-Say	5.42	12	P	Pn	12 37 54.1	+0.5
	SNR=53						
AAK	Ala-Archa	5.54	17	P	Pn	12 37 56.0	+0.8
	SNR=21						
AAK	Ala-Archa	5.54	17	P	Pn	12 37 56.0	+0.8
	comp=E,0.3nm,0.3s,baz=173,slow=6.4,SNR=138						
AAK				S	Sn	12 38 57.7	-2.0
	comp=E,0.1nm,0.3s,baz=348,slow=22,SNR=9.1						
THN	Thein Dam	5.68	149	ePKP	Pn	12 37 57.0	-0.2
THN				ex	Sn	12 39 02.0	-1.2
ULHL	Ulahol	5.76	31	P	Pn	12 37 58.2	+0.1
	SNR=9.0						
KK31	Karatay Array	5.88	347	⇑P	Pn	12 37 59.4	-0.2
	comp=E,25nm,0.5s						
KK31				⇑S	Sn	12 39 02.7	-5.0
	comp=E,18nm,0.3s						
CHMS	Chumysh	5.94	18	P	Pn	12 38 00.6	+0.2
	SNR=28						
TKM2	Tokmak 2	6.11	24	⇑P	Pn	12 38 03.1	+0.6
	comp=E,47nm,0.6s						
TKM2				S	Sn	12 39 06.9	-6.1
TKM2	Tokmak 2	6.11	24	P	Pn	12 38 03.2	+0.7
	SNR=92						
USP	Ospenovka	6.14	16	P	Pn	12 38 03.2	+0.3
	SNR=16						
SDNR	Sundarnagar	7.03	145	ePKP	Pn	12 38 13.1	-1.4
SDNR				ex	Sn	12 39 38.1	+3.5
SMLA	Simla	7.43	145	iP	Pn	12 38 18.6	-1.1
SMLA				iS	Sn	12 39 38.8	-5.3
SMLA				E		12 39 40.3	
	comp=N,1μm,0.4s						
SMLA				E		12 39 40.9	
	comp=E,1μm,0.3s						
KLP	Kalpa	7.64	138	eS	Sn	12 39 42.7	-6.3
KLP				AML	AML	12 39 50.9	
	comp=E,154nm,0.5s						
KLP				AML	AML	12 39 51.5	
	comp=N,211nm,0.6s						
JOSI	Joshimath	9.10	136	eS	Sn	12 40 16.3	-7.4
JOSI				AML	AML	12 40 22.9	
	comp=N,76nm,0.2s						
JOSI				AML	AML	12 40 24.2	
	comp=E,91nm,0.4s						
KHET	Khetri	9.73	161	eS	Sn	12 40 29.6	-9.0
KHET				AML	AML	12 40 31.7	
	comp=N,6.6nm,0.3s						
KHET				AML	AML	12 40 33.0	
	comp=E,12nm,0.4s						
SONA	Sohna	9.95	155	eS	Sn	12 40 34.9	-9.0
SONA				AML	AML	12 40 40.7	
	comp=E,20nm,0.3s						
SONA				AML	AML	12 40 41.5	
	comp=N,14nm,0.2s						
MK31	Makanchi Array	12.01	35	P	Pn	12 39 18.1	-0.2
	comp=N,1.7nm,0.7s,baz=211,slow=11,SNR=12						
MK31	Makanchi Array	12.01	35	ePn	Pn	12 39 18.1	-0.2
MKAR	Makanchi Array	12.01	35	P	Pn	12 39 18.2	-0.1
	comp=N,0.2nm,0.3s,baz=216,slow=9.8,SNR=13						
MKAR				S	S	12 41 32.3	+0.1
	comp=N,0.1nm,0.3s,baz=198,slow=23,SNR=4.3						
KURBB	Kurchatov Arra	14.00	17	⇓P	Pn	12 39 44.9	+1.8
	comp=N,0.8nm,0.9s						
KURK	Kurchatov	14.10	17	⇑P	Pn	12 39 45.4	+0.9
	comp=N,5.2nm,1.1s						
KURK	Kurchatov	14.10	17	P	Pn	12 39 42.0	-2.5
	comp=N,0.1nm,0.3s,baz=206,slow=11,SNR=7.8						
KURK	Kurchatov	14.10	17	ePn	Pn	12 39 46.3	+1.9
	comp=N,2.6nm,0.9s						
AB31	Akbulak array	14.86	327	⇑P	Pn	12 39 53.9	+0.2
	comp=N,1.2nm,0.5s,baz=132,slow=11,SNR=33						
AB31				⇑S	S	12 42 30.1	-8.4
	comp=N,1.2nm,0.6s,baz=154,slow=22,SNR=5.0						
VOSK	Vostochnaya	15.38	357	⇑P	Pn	12 39 58.5	-1.6
	comp=N,4.5nm,1.1s						
BVA0	Borovoye Array	15.71	356	⇓P	Pn	12 40 02.6	-1.4
	comp=N,0.3nm,0.8s,baz=164,slow=14,SNR=12						
BVAR	Borovoye Array	15.71	356	P	Pn	12 40 03.4	-0.6
	comp=N,0.7nm,0.3s,baz=168,slow=11,SNR=13						
BVAR				S	S	12 42 55.7	-2.1
	comp=N,0.1nm,0.3s,baz=172,slow=24,SNR=3.3						
BVAR	Borovoye Array	15.71	356	P	Pn	12 40 03.4	-0.6
BVAR				S	S	12 42 55.7	-2.1
ZRNK	Zerenda	15.75	353	⇑P	Pn	12 40 05.4	+1.0
	comp=N,2.1nm,0.4s						
BRVK	Borovoye	15.76	356	eP	Pn	12 40 05.1	+0.6
	comp=N,2.1nm,0.6s						
AKTK	Aktyubinsk	16.57	327	P	P	12 40 14.1	+0.9
AKTK				S	S	12 43 12.7	-2.8
AKTO	Aktyubinsk	16.57	327	P	P	12 40 14.1	+0.9
	comp=N,0.6nm,0.3s,baz=126,slow=6.8,SNR=4.4						
AKTO				S	S	12 43 12.7	-2.8
	comp=N,0.2nm,0.3s,baz=156,slow=20,SNR=5.1						
ZAA0	Zalesovo Array	18.72	24	eP	P	12 40 37.0	+0.5
ZALV	Zalesovo Beam	18.72	24	P	P	12 40 37.0	+0.5
	comp=N,2.1nm,0.3s,baz=221,slow=9.9,SNR=35						
FINES	FINESS Array B	37.34	325	P	P	12 43 26.2	+0.4
	comp=N,1.8nm,0.7s,mb3.7,baz=124,slow=9.1,SNR=9.1						
ARCES	ARCESS Array B	40.74	337	P	P	12 43 54.5	+0.8
	comp=N,1.4nm,0.5s,mb3.7,baz=111,slow=8.6,SNR=14						
NB2	NORSAR Subarra	44.30	322	P	P	12 44 22.8	+0.3
	comp=Z,1.2nm,0.5s,mb3.5,baz=93,slow=7.9						
NOA	NORSAR Array B	44.30	322	P	P	12 44 22.9	+0.3
	comp=Z,1.4nm,0.5s,mb3.5,baz=94,slow=7.6,SNR=6.8						
ESDC	Sonseca Array	57.94	298	P	P	12 46 04.6	+0.4
	comp=Z,0.4nm,0.5s,mb3.3,baz=46,slow=6.8,SNR=5.1						
TORD	Torodi Ar. Bea	66.74	269	P	P	12 47 01.7	-1.1
	comp=Z,1.4nm,0.4s,mb4.0,baz=48,slow=5.7,SNR=45						
YKA	Yellowknife Ar	80.33	3	P	P	12 48 21.4	+0.2
	comp=Z,0.7nm,0.5s,mb3.5,baz=351,slow=5.5,SNR=6.2						
WRA	Warramunga Arr	81.60	123	P	P	12 48 27.8	-0.7
	comp=Z,0.2nm,0.6s,mb2.9,baz=331,slow=5.3,SNR=2.8						
SCHQ	Schefferville	81.69	337	P	P	12 48 29.2	+0.7
	comp=Z,1.3nm,0.7s,mb3.7,baz=75,slow=12,SNR=3.6						
SCHQ	Schefferville	81.69	337	eP	P	12 48 29.8	+1.3
	comp=Z,1.6nm,0.8s,mb3.7						

*BJI **22** 13:07:43.7, 6.°70N×72.°90W, h164km, mB5.0/4*
*NEIC **22** 13:07:44.8±0.2, 6.°68N×72.°93W, mb4.5/67, Error ellipse: s-maj=5.7km s-min=3.9km az=74.0*
*IDC **22** 13:07:44.9±0.8, 6.°73N×72.°94W, h164km±7km, mb4.0/12, mb1 4.2/17, mb1mx4.0/23, mbtmp4.0/17, MS3.1/2, Ms1 3.1/2, ms1mx2.4/21, Error ellipse: s-maj=14.4km s-min=9.6km az=67.0*
*ISCJB **22** 13:07:44.6±0.4, 6.°75N±0.°04×72.°89W±0.°04, h177km±4km, mb4.4/74, Error ellipse: s-maj=6.1km s-min=5.7km az=0.5*
*FUNV **22** 13:07:45.0, 6.°74N×73.°11W, h170km, MW4.4*

ISC 22 13:07:45.4±0.4, 6.°73N±0.°04×72.°89W±0.°04, h168km±4km, h167km±2.2km; pP-P, n433, σ0°58/434, mb4.4/74, 154C-146D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	Capacho	1.26	27	⇑iP	Pn	13 08 14.4	+0.3
CAPV				eS	Sn	13 08 35.6	-0.7
ROSC	El Rosal	2.35	218	P	Pn	13 08 25.9	+0.1
	136nm,0.3s,baz=29,slow=2.4,SNR=332						
ROSC				S	Sn	13 08 53.0	-3.9
	253nm,0.3s,baz=104,slow=18,SNR=13						
ROSC	El Rosal	2.35	218	⇓ePn	Pn	13 08 25.7	0.0
ROSC				eSn	Sn	13 08 52.0	-4.8
SOCV	Socops	2.54	53	⇓iP	Pn	13 08 29.1	+1.1
SOCV				eS	Sn	13 09 00.8	0.0
VIGV	El Vigia	2.58	36	⇑iP	Pn	13 08 28.9	+0.4
VIGV				eS	Sn	13 09 01.4	-0.4
ELOV	Elorza	3.40	85	⇓eP	Pn	13 08 40.3	+1.8
VIRV	Villa del Rosa	3.78	7	⇑iP	Pn	13 08 41.2	-2.1
VIRV				eS	Sn	13 09 23.9	-4.6
QARV	Quebrada Arrib	4.17	34	eP	Pn	13 08 48.9	+0.5
SANV	Sanarito	4.31	50	eP	Pn	13 08 50.5	+0.3
CURV	Curarigua	4.36	41	⇑eP	Pn	13 08 51.0	+0.2
DABV	Dabajuro	4.72	28	eP	Pn	13 08 55.6	+0.1
TEPV	Terepaima	4.87	49	⇓eP	Pn	13 08 57.8	+0.3
SIQV	Siquisique	4.94	38	eP	P

SIV **San Ignacio** 25.43 153 P P 13 12 57.6 -0.1
5.9nm,0.8s,mb4.1,baz=336,slow=9.5,SNR=30
SIV pP pP 13 13 31.8 -0.5
4.8nm,0.9s,baz=334,slow=12,SNR=4.0
GOGA **Godfrey** 28.30 341 eP P 13 13 24.1 +0.9
4.1nm,0.6s,mb4.3
VBMS **Vicksburg** 30.21 329 eP P 13 13 40.7 +0.5
55nm,1.0s,mb5.2
WVT **Waverly** 32.30 337 eP P 13 13 58.5 +0.1
351nm,2.0s
HBAR **Harrisburg** 33.00 333 eP P 13 14 04.9 +0.3
MCWV **Mont Chateau** 33.37 350 eP P 13 14 08.6 +0.9
4.4nm,0.4s,mb4.5
MIAR **Mount Ida** 33.62 328 eP P 13 14 09.2 -0.8
5.1nm,0.8s,mb4.3
WCI **Wyandotte Cave** 33.62 341 eP P 13 14 10.5 +0.6
12nm,0.6s,mb4.8
USIN **University of** 33.86 339 eP P 13 14 12.3 +0.4
27nm,0.9s,mb5.0
BLO **Bloomington** 34.56 341 eP P 13 14 18.9 +1.0
24nm,0.6s,mb5.0
OLIL **Olney** 34.70 339 eP P 13 14 19.3 +0.1
28nm,0.8s,mb5.0
FVM **French Village** 34.94 335 eP P 13 14 21.3 0.0
42nm,1.0s,mb5.0
CCM **Cathedral Cave** 35.35 335 eP P 13 14 24.5 -0.2
35nm,0.6s,mb5.2
CPUP **Villa Florida** 36.17 156 P P 13 14 29.3 -2.5
1.5nm,0.7s,mb3.7,baz=306,slow=8.7,SNR=3.3
628A **Black Gap, Mar** 36.20 312 ⇓P P 13 14 30.7 -1.4
baz=36,SNR=8.6
528A **Cox Ranch, San** 36.49 313 ⇓P P 13 14 33.6 -1.0
baz=37
627A **Terlingua Ranc** 36.55 312 ⇓P P 13 14 34.3 -0.7
baz=37,SNR=27
WMOK **Wichita Mounta** 36.69 323 eP P 13 14 34.8 -1.3
6.4nm,0.6s,mb4.4
TXAR **Lajitas Array** 36.69 312 P P 13 14 35.9 -0.4
5.6nm,0.6s,mb4.3,baz=127,slow=9.2,SNR=86
TXAR pP pP 13 15 11.4 -0.8
0.8nm,0.8s,baz=140,slow=9.9,SNR=1.8
TXAR PcP PcP 13 16 56.9 +1.5
0.5nm,0.6s,baz=136,slow=5.2,SNR=3.5
TXAR **Lajitas Array** 36.69 312 P P 13 14 35.9 -0.4
TXAR pP pP 13 15 11.4 -0.8
TXAR PcP PcP 13 16 56.9 +1.5
428A **Kincaid Ranch,** 36.73 314 ⇓P P 13 14 36.5 -0.1
baz=37,SNR=16
527A **Woodward Ranch** 37.08 313 ⇑P P 13 14 39.0 -0.6
baz=37,SNR=18
626A **Big Bend Ranch** 37.15 312 ⇑P P 13 14 39.6 -0.6
baz=37,SNR=12
328A **Wristen Ranch,** 37.19 315 P P 13 14 39.9 -0.6
baz=37,SNR=10
427A **Hayter Ranch,** 37.31 314 ⇑P P 13 14 40.6 -0.9
baz=37,SNR=21
526A **Mary Lane Ranc** 37.38 312 ⇓P P 13 14 41.5 -0.6
baz=38,SNR=12
426A **McDonald Obser** 37.67 313 ⇑P P 13 14 44.0 -0.4
baz=38,SNR=30
425A **Indio Mountain** 38.42 313 ⇓P P 13 14 50.3 -0.5
baz=38,SNR=18
226A **Malaga, Loving** 38.48 315 ⇓P P 13 14 50.8 -0.5
baz=39,SNR=5.5
AMTX **Amarillo** 38.56 321 P P 13 14 51.8 -0.1
22nm,0.8s,mb4.8
Z27A **Tatum** 38.60 317 ⇓P P 13 14 51.4 -0.8
baz=39,SNR=29
MSTX **Muleshoe** 38.70 319 ⇓P P 13 14 52.3 -0.7
baz=39,SNR=5.2
325A **Bean Ranch, Si** 38.72 313 ⇑P P 13 14 52.4 -0.9
baz=39,SNR=10
GDL2 **Guadalupe Moun** 38.75 315 eP P 13 14 53.4 -0.1
3.2nm,0.8s,mb4.0
126A **Clayton Basin,** 38.76 316 ⇓P P 13 14 52.6 -1.0
baz=39
CPRX **Cap Rock** 38.87 316 eP P 13 14 54.6 +0.1
4.9nm,0.5s,mb4.4
Y27A **Causey** 38.90 318 ⇓P P 13 14 54.2 -0.6
baz=39,SNR=8.2
225A **Deer Hill, Car** 39.02 315 ⇓P P 13 14 55.6 -0.1
baz=39,SNR=12
Z26A **Caprock** 39.09 317 ⇑P P 13 14 55.7 -0.7
baz=39,SNR=26
324A **Moseley Ranch,** 39.13 313 ⇓P P 13 14 56.1 -0.6
baz=39,SNR=28
JFWS **Jewell Farm** 39.15 340 eP P 13 14 55.8 -0.9
26nm,0.6s,mb5.0
MNTX **Cornudas Mount** 39.20 314 eP P 13 14 56.7 -0.6
10nm,0.8s,mb4.5
125A **Gardner Draw,** 39.21 315 ⇓P P 13 14 56.8 -0.5
baz=39,SNR=20
Y26A **Elida** 39.37 318 ⇑P P 13 14 58.4 -0.2
baz=40,SNR=5.1
SCIA **State Center** 39.40 336 eP P 13 14 58.3 -0.4
14nm,0.6s,mb4.8
224A **Cornudas Mount** 39.50 314 P P 13 14 59.8 +0.1
baz=40,SNR=47
W27A **Bowe Ranch, En** 39.56 320 ⇑P P 13 15 00.1 -0.1
baz=40,SNR=16
Z25A **Roswell** 39.60 316 ⇓P P 13 15 00.7 +0.1
baz=40,SNR=21
X26A **CR and CF Fran** 39.73 318 ⇓P P 13 15 01.3 -0.4
baz=40,SNR=7.5
124A **Stringfield Ra** 39.79 315 ⇑P P 13 15 01.9 -0.3
baz=40,SNR=13
Y25A **Mesa, Roswell** 39.95 317 ⇓P P 13 15 03.1 -0.3
baz=40,SNR=12
Z24A **Sheppen Canyo** 40.08 316 ⇑P P 13 15 03.4 -1.1
baz=40,SNR=9.6
X25A **Clemmons Ranch** 40.28 318 ⇓P P 13 15 05.8 -0.4
baz=40
Y24A **Capitan** 40.46 316 ⇑P P 13 15 07.7 +0.1
baz=40,SNR=33
V26A **Tequesquite Ra** 40.48 320 ⇑P P 13 15 07.0 -0.7
baz=41,SNR=7.0
W25A **X Bar L Ranch,** 40.56 319 ⇑P P 13 15 07.5 -0.9
baz=41,SNR=19
Z23A **Rita Site, Whi** 40.64 315 ⇑P P 13 15 09.9 +0.8
baz=41,SNR=5.7
222A **Williams Famil** 40.65 313 ⇑P P 13 15 09.4 +0.2
baz=41,SNR=9.0
U26A **Atchley Ranch,** 40.82 321 ⇑P P 13 15 10.1 -0.5
baz=41
Y23A **Lovelace Mesa,** 40.89 316 ⇓P P 13 15 11.6 +0.5
baz=41,SNR=8.5
V25A **Rancho No Teng** 41.03 319 ⇓P P 13 15 12.2 -0.1
baz=41,SNR=13
221A **Mesquite Ranch** 41.10 312 ⇑P P 13 15 12.4 -0.5
baz=41,SNR=5.2
Z22A **Elephant Butte** 41.16 314 ⇑P P 13 15 13.2 -0.1
baz=41,SNR=11
W24A **Lazy 6 Ranch,** 41.18 318 ⇓P P 13 15 13.1 -0.4
baz=41
U25A **Circle Dot Ran** 41.24 320 ⇑P P 13 15 14.0 0.0
baz=41,SNR=6.8
320A **Kipp Ranch, An** 41.33 311 ⇑P P 13 15 14.7 -0.1
baz=41,SNR=6.4
121A **Cookes Peak, D** 41.37 313 ⇓P P 13 15 14.9 -0.2
baz=41,SNR=6.9
V24A **Rampart Ranch,** 41.39 319 ⇑P P 13 15 15.3 +0.1
baz=42
Y22A **Socorro** 41.52 315 ⇑P P 13 15 16.3 -0.1
baz=42
220A **Playas Peak, P** 41.60 312 ⇑P P 13 15 16.9 -0.1
baz=42,SNR=14
COWI **Conover** 41.66 343 eP P 13 15 16.8 -0.4
17nm,1.1s,mb4.6
Z21A **St. Cloud Mine** 41.69 314 ⇑P P 13 15 17.5 -0.1
baz=42,SNR=6.5
T25A **Trinidad** 41.70 321 ⇓P P 13 15 18.2 +0.5
baz=42
ANMO **Albuquerque** 41.74 317 eP P 13 15 18.0 0.0
1.3nm,1.1s,mb3.5
X22A **Bernardo** 41.87 316 ⇑P P 13 15 19.7 +0.6
baz=42,SNR=5.6
LAZ **Ladron** 41.90 316 eP P 13 15 20.1 +0.7
7.1nm,1.1s,mb4.2
319A **Douglas** 41.91 311 ⇓P P 13 15 19.4 -0.1
baz=42,SNR=8.3
120A **U Bar Ranch, L** 41.99 312 ⇓P P 13 15 20.6 +0.5
baz=42,SNR=11
V23A **Ortiz Mt. (NFS** 42.01 318 ⇓P P 13 15 21.1 +0.9
baz=42,SNR=8.9
S25A **Robets Cordova** 42.04 322 ⇑P P 13 15 20.8 +0.4
baz=42
Y21A **Point of Rocks** 42.06 315 ⇑P P 13 15 21.3 +0.7
baz=42

219A **White Tail Can** 42.19 311 ⇑P P 13 15 21.9 +0.1
baz=42,SNR=9.7
Z20A **Nine Sixteen R** 42.25 313 ⇓P P 13 15 22.4 +0.2
baz=42
ECSD **EROS Data Cent** 42.32 334 eP P 13 15 21.2 -1.5
9.4nm,0.8s,mb4.5
U23A **El Rito** 42.35 319 ⇑P P 13 15 23.8 +0.8
baz=42,SNR=11
X21A **Alamocita Cree** 42.37 315 ⇓P P 13 15 23.4 +0.2
baz=42,SNR=18
318A **Bisbee** 42.48 310 ⇓P P 13 15 23.7 -0.4
baz=42
Y20A **Horse Springs,** 42.50 314 ⇓P P 13 15 24.6 +0.3
baz=43,SNR=18
S24A **Houchin Ranch,** 42.51 321 ⇑P P 13 15 25.3 +1.0
baz=43
V22A **San Miguel Ran** 42.58 318 ⇓P P 13 15 24.8 -0.1
baz=43,SNR=7.0
119A **Ashpeak Ranch,** 42.59 312 ⇓P P 13 15 25.8 +0.8
baz=43,SNR=6.5
T23A **Casias Ranch,** 42.67 320 ⇓P P 13 15 25.7 +0.1
baz=43
Q25A **Bedland, Calha** 42.73 323 ⇓P P 13 15 26.0 0.0
baz=43
SDCO **Great Sand Dun** 42.76 321 eP P 13 15 26.7 +0.4
6.5nm,0.7s,mb4.4
218A **Dragoon** 42.77 311 ⇓P P 13 15 26.5 0.0
baz=43,SNR=9.2
R24A **Sanders Place,** 42.82 322 ⇑P P 13 15 27.6 +0.9
baz=43
X20A **Quemado** 42.92 315 ⇑P P 13 15 28.4 +0.8
baz=43,SNR=6.3
V21A **Milan** 43.01 317 ⇓P P 13 15 28.8 +0.5
baz=43
118A **Homack Ranch,** 43.02 312 ⇑P P 13 15 28.6 +0.1
baz=43,SNR=20
S23A **Nye Farm, Mont** 43.05 321 ⇑P P 13 15 29.0 +0.5
baz=43
P25A **Willow Gulch B** 43.07 324 ⇑P P 13 15 29.5 +0.7
baz=43
Y19A **Nutrioso** 43.15 314 ⇓P P 13 15 29.9 +0.4
baz=43,SNR=17
T22A **Edith** 43.21 319 ⇓P P 13 15 30.5 +0.5
baz=43,SNR=6.2
W20A **Ramah** 43.23 316 ⇑P P 13 15 30.9 +0.8
baz=43
Z18A **Geronimo** 43.29 312 ⇑P P 13 15 31.1 +0.5
baz=43
U21A **Nageezi** 43.37 318 ⇓P P 13 15 32.0 +0.8
baz=44,SNR=5.5
X19A **St. Johns** 43.42 314 ⇑P P 13 15 32.6 +1.0
baz=44,SNR=9.6
TUC **Tucson** 43.48 311 eP P 13 15 31.1 -1.0
4.9nm,0.8s,mb4.2
117A **Oracle** 43.56 311 ⇑P P 13 15 33.0 +0.2
baz=44,SNR=13
S22A **4UR Ranch, Cre** 43.60 320 ⇑P P 13 15 33.5 +0.5
baz=44
Y18A **Canyon Day Jun** 43.62 313 ⇑P P 13 15 33.6 +0.3
baz=44,SNR=8.8
Z17A **San Carlos Hig** 43.71 312 ⇑P P 13 15 34.0 +0.1
baz=44,SNR=6.6
R22A **Saguache, Gunn** 43.84 321 ⇓P P 13 15 36.0 +1.0
baz=44
W19A **Sanders** 43.84 315 ⇓P P 13 15 35.3 +0.3
baz=44
X18A **Snowflake** 43.94 314 ⇓P P 13 15 36.2 +0.5
baz=44,SNR=6.7
EYMN **Ely** 44.02 342 eP P 13 15 35.6 -0.6
21nm,0.6s,mb4.9
ISCO **Idaho Springs** 44.11 323 eP P 13 15 37.5 +0.5
8.0nm,0.9s,mb4.3
S21A **Coal Bank Pass** 44.17 319 ⇓P P 13 15 37.6 +0.1
baz=44,SNR=5.4
Q22A **Crested Butte,** 44.32 321 ⇓P P 13 15 39.2 +0.5
baz=44,SNR=8.2
U19A **Dine' College,** 44.34 317 ⇓P P 13 15 38.1 -0.8
baz=44
MVCO **Mesa Verde** 44.37 318 ⇓P P 13 15 39.0 -0.1
baz=44,SNR=6.9
MVCO **Mesa Verde** 44.37 318 eP P 13 15 39.1 -0.1
3.2nm,0.5s,mb4.2
X17A **Forest Lakes** 44.46 313 ⇑P P 13 15 40.2 +0.3
baz=44,SNR=14
T19A **Beclabito** 44.51 318 ⇓P P 13 15 40.0 -0.3
baz=45,SNR=6.1
SMCO **Snowmass** 44.55 322 eP P 13 15 41.2 +0.7
2.0nm,0.5s,mb4.0
S20A **Disappointment** 44.63 319 ⇓P P 13 15 41.9 +0.7
baz=45
Q21A **Lamborn Mesa,** 44.72 321 ⇑P P 13 15 42.7 +0.8
baz=45
Y16A **Circle Bar Ran** 44.72 312 ⇓P P 13 15 42.5 +0.5
baz=45,SNR=12
115A **Sonoran Desert** 44.74 311 ⇓P P 13 15 42.2 +0.1
baz=45
W17A **Winslow** 44.76 314 ⇓P P 13 15 42.8 +0.5
baz=45
R20A **Redvale** 44.85 320 ⇑P P 13 15 43.2 +0.3
baz=45,SNR=16
214A **Organ Pipe Nat** 44.86 309 ⇓P P 13 15 43.4 +0.3
baz=45,SNR=5.1
U18A **Rough Rock, Ch** 44.86 317 ⇑P P 13 15 42.9 -0.1
baz=45,SNR=7.1
O22A **Kremmling** 44.90 323 ⇑P P 13 15 43.7 +0.4
baz=45
PV01 **Paradox Valley** 44.94 319 eP P 13 15 44.5 +0.9
837nm,1.0s
X16A **Lo Mia Camp, P** 44.95 313 ⇓P P 13 15 44.2 +0.4
baz=45,SNR=11
PHWY **Pilot Hill** 44.99 325 eP P 13 15 44.2 +0.2
3.4nm,0.6s,mb4.2
V17A **Tonalea, Kykot** 45.09 315 P P 13 15 45.5 +0.7
baz=45,SNR=18
S19A **Harvey Farm, M** 45.09 319 ⇑P P 13 15 45.4 +0.6
baz=45
Q20A **Ridgley Place,** 45.24 320 P P 13 15 46.7 +0.7
baz=45,SNR=19
N22A **Wattenberg Ran** 45.24 324 ⇑P P 13 15 47.3 +1.3
baz=45
T18A **Mexican Hat** 45.25 317 P P 13 15 46.3 +0.2
baz=45,SNR=7.6
114A **Black Gap (USA** 45.26 310 ⇑P P 13 15 46.7 +0.4
baz=45,SNR=11
PV04 **Paradox Valley** 45.31 319 eP P 13 15 46.7 +0.2
W16A **Flagstaff** 45.35 314 ⇓P P 13 15 47.9 +1.0
baz=45,SNR=8.1
Y15A **Casa Rosa Ranc** 45.39 312 ⇑P P 13 15 47.5 +0.3
baz=45,SNR=17
WUAZ **Wupatki** 45.44 315 P P 13 15 48.6 +0.9
baz=46,SNR=20
WUAZ **Wupatki** 45.44 315 eP P 13 15 48.3 +0.6
23nm,0.9s,mb4.8
R19A **Curley Farm, L** 45.48 319 ⇓P P 13 15 48.0 +0.1
baz=46
O21A **Pagoda** 45.48 322 ⇓P P 13 15 49.0 +1.1
baz=46,SNR=6.7
U17A **Shonto** 45.50 316 ⇑P P 13 15 48.0 -0.1
baz=46
X15A **Humboldt** 45.56 313 ⇑P P 13 15 48.7 +0.1
baz=46,SNR=12
Z14A **Wintersburg** 45.57 311 ⇓P P 13 15 48.8 +0.1
baz=46,SNR=5.9
U16A **Tuba City** 45.59 315 ⇑P P 13 15 49.3 +0.5
baz=46,SNR=12
P20A **De Beque** 45.62 321 ⇑P P 13 15 49.5 +0.5
baz=46
S18A **Hurst Farm, Bl** 45.63 318 ⇑P P 13 15 49.5 +0.5
baz=46,SNR=7.2
AGMN **Agassiz Nation** 45.79 339 eP P 13 15 49.5 -0.7
7.2nm,0.6s,mb4.5
T17A **Navajo Res., N** 45.80 317 ⇓P P 13 15 50.8 +0.3
baz=46
N21A **Black Mountain** 45.85 323 ⇑P P 13 15 51.1 +0.3
baz=46,SNR=6.0
Q19A **Hogan Spring (** 45.86 320 ⇓P P 13 15 50.8 -0.1
baz=46,SNR=16
Y14A **Wickenburg** 45.88 312 ⇑P P 13 15 51.1 0.0
baz=46,SNR=18
R18A **Canyonlands Na** 45.94 319 ⇑P P 13 15 51.4 -0.2
baz=46
L22A **Ellis Ranch, M** 46.02 325 ⇓P P 13 15 53.3 +1.2
baz=46
X14A **Yava** 46.03 312 ⇓P P 13 15 52.1 -0.3
baz=46
Z13A **Yuma Proving G** 46.04 310 ⇓P P 13 15 52.5 +0.1
baz=46,SNR=9.6
RSSD **Black Hills** 46.13 329 eP P 13 15 53.1 +0.3
1.7nm,0.6s,mb3.9

S17A **Black Ridge (B** 46.14 317 ⇓P P 13 15 53.3 +0.2
baz=46,SNR=11
V15A **Kaibab Nationa** 46.16 314 ⇑P P 13 15 54.0 +0.7
baz=46,SNR=32
RWWY **Rawlins** 46.25 324 eP P 13 15 54.2 +0.3
6.4nm,1.2s,mb4.1
T16A **Glen Canyon Da** 46.28 316 ⇓P P 13 15 55.0 +0.8
baz=46
M21A **Separation Pea** 46.28 324 ⇓P P 13 15 54.9 +0.8
baz=46,SNR=6.0
N20A **Spence Gulch,** 46.34 323 ⇑P P 13 15 54.9 +0.3
baz=46,SNR=8.1
Y13A **Salome** 46.43 311 ⇓P P 13 15 55.6 +0.1
baz=46,SNR=6.8
Q18A **Rafter H Ranch** 46.50 320 ⇓P P 13 15 55.9 0.0
baz=47,SNR=5.7
R17A **Hanksville Air** 46.50 318 ⇓P P 13 15 55.7 -0.1
baz=47,SNR=14
L21A **Rawlins** 46.51 324 ⇓P P 13 15 55.5 -0.4
baz=47
W14A **Seligman** 46.52 313 ⇑P P 13 15 56.0 -0.1
baz=47,SNR=6.0
U15A **North Rim** 46.54 315 ⇓P P 13 15 56.9 +0.7
baz=47,SNR=19
O19A **Miners Draw (B** 46.55 321 ⇑P P 13 15 56.2 0.0
baz=47
M20A **Sweetwater, Wa** 46.70 323 ⇑P P 13 15 57.4 +0.1
baz=47
S16A **Weppner Ranch,** 46.72 317 ⇓P P 13 15 57.7 +0.1
baz=47,SNR=5.9
V14A **Boquillas Ranc** 46.73 314 ⇓P P 13 15 57.5 -0.3
baz=47,SNR=11
SRU **San Rafael** 46.76 319 ⇑P P 13 15 58.0 +0.1
baz=47,SNR=7.9
SRU **San Rafael** 46.76 319 eP P 13 15 58.1 +0.3
21nm,1.3s,mb4.6
X13A **Yucca** 46.78 312 ⇑P P 13 15 57.4 -0.8
baz=47
GLA **Glamis** 46.86 310 ⇑P P 13 15 58.1 -0.7
baz=47,SNR=8.4
GLA **Glamis** 46.86 310 eP P 13 15 58.7 -0.1
8.7nm,0.7s,mb4.5
P18A **Preston Nutter** 46.87 320 ⇑P P 13 15 59.1 +0.4
baz=47,SNR=7.1
Y12C **Blythe** 46.93 311 ⇑P P 13 15 59.8 +0.5
baz=47
N19A **John Jarvie Ra** 46.93 322 ⇑P P 13 15 59.0 -0.1
baz=47,SNR=7.0
R16A **Teasdale** 46.94 318 ⇓P P 13 15 59.7 +0.4
baz=47,SNR=16
Q16A **Castle Valley** 47.07 319 ⇑P P 13 15 59.3 -1.0
baz=47
P17A **Butcher Ranch,** 47.09 320 ⇑P P 13 16 00.3 -0.2
baz=47,SNR=6.6
L20A **Wamsutter** 47.10 324 ⇓P P 13 16 01.1 +0.6
baz=47
U14A **Mt Trumbull** 47.16 315 ⇓P P 13 16 01.2 +0.2
baz=47,SNR=15
PLCA **Paso Flores** 47.28 178 P P 13 16 00.5 -1.3
1.5nm,0.7s,mb3.8,baz=7.6,slow=14,SNR=3.8
PLCA ScP ScP 13 21 08.0 -0.4
1.3nm,0.7s,baz=343,slow=11,SNR=3.3
PLCA **Paso Flores** 47.28 178 P P 13 16 00.5 -1.3
PLCA ScP ScP 13 21 08.0 -0.4
N18A **Larsen Ranch,** 47.28 322 ⇓P P 13 16 02.0 +0.1
baz=47
M19A **Rock Springs** 47.28 323 ⇑P P 13 16 02.3 +0.4
baz=47
T14A **Hurricane** 47.41 315 ⇑P P 13 16 03.3 +0.4
baz=48,SNR=10
ULM **Lac du Bonnet** 47.44 340 P P 13 16 02.2 -0.8
11nm,0.4s,mb4.8,baz=144,slow=7.3,SNR=11
ULM **Lac du Bonnet** 47.44 340 P P 13 16 02.2 -0.8
V13A **Grand Canyon W** 47.47 314 ⇓P P 13 16 03.3 -0.2
baz=48,SNR=8.6
O17A **Robinson Place** 47.50 320 ⇑P P 13 16 03.8 +0.2
baz=48,SNR=19
K20A **Yellowstone Ra** 47.51 325 ⇑P P 13 16 03.2 -0.4
baz=48,SNR=13
MSU **Marysvale** 47.52 318 eP P 13 16 04.5 +0.8
9.8nm,0.8s,mb4.5
U13A **Pakoon Wash** 47.72 314 ⇓P P 13 16 05.7 +0.4
baz=48,SNR=10
L19A **Farson** 47.76 323 ⇑P P 13 16 05.7 +0.1
baz=48,SNR=7.3
M18A **Lyman** 47.79 322 ⇑P P 13 16 05.6 -0.1
baz=48
CCUT **Cedar City** 47.84 316 eP P 13 16 06.8 +0.5
2.7nm,1.0s,mb3.8
W12A **Cal Nev Ari** 47.86 312 ⇑P P 13 16 06.9 +0.5
baz=48
K19A **Absolon Red Bu** 47.90 324 ⇓P P 13 16 06.6 0.0
baz=48
LDFC **Landfair** 47.94 312 eP P 13 16 07.9 +0.9
12nm,1.1s,mb4.4
DAU **Daniels Canyon** 47.95 320 eP P 13 16 07.7 +0.7
24nm,1.2s,mb4.7
T13A **Saint George** 47.96 315 ⇓P P 13 16 07.1 -0.1
baz=48,SNR=11
N17A **Moffit Pass** 47.98 321 ⇓P P 13 16 07.7 +0.5
baz=48
O16A **Springville** 47.99 320 ⇓P P 13 16 07.4 +0.1
baz=48
ARUT **Antelope Range** 48.01 316 eP P 13 16 08.2 +0.6
2.2nm,0.6s,mb4.0
V12A **Nelson** 48.04 313 ⇑P P 13 16 07.8 0.0
baz=48,SNR=16
L18A **Fontenelle, Gr** 48.06 323 ⇑P P 13 16 08.0 +0.1
baz=48,SNR=18
U12A **Valley of Fire** 48.13 314 ⇑P P 13 16 08.9 +0.3
baz=48
BELC **Belle Mtn. Jos** 48.15 310 ⇑P P 13 16 08.3 -0.4
baz=48
M17A **Scullys Gap (B** 48.18 322 ⇑P P 13 16 08.0 -0.7
baz=48,SNR=12
S13A **Holt Ranch, En** 48.20 316 ⇑P P 13 16 08.8 -0.2
baz=48
SCHQ **Schefferville** 48.21 5 P P 13 16 09.3 +0.6
6.4nm,0.7s,mb4.3,baz=196,slow=6.7,SNR=16
SCHQ ScP ScP 13 21 13.1 +1.0
2.7nm,0.9s,baz=179,slow=4.9,SNR=4.4
SCHQ **Schefferville** 48.21 5 eP P 13 16 09.4 +0.7
6.8nm,0.8s,mb4.3
GMRC **Granite Mounta** 48.22 311 ⇑P P 13 16 09.1 -0.2
baz=48
BW06 **Boulder Array** 48.28 324 ⇓P P 13 16 09.1 -0.5
baz=48,SNR=8.5
PDAR **Pinedale Array** 48.28 324 P P 13 16 09.3 -0.2
3.5nm,0.6s,mb4.1,baz=124,slow=7.9,SNR=27
PDAR PcP PcP 13 17 34.1 +0.2
0.4nm,0.5s,baz=116,slow=4.1,SNR=2.8
N16A **Rees Ranch, Co** 48.33 321 ⇑P P 13 16 10.0 +0.1
baz=48
T12A **Moapa** 48.40 314 ⇓P P 13 16 11.3 +0.8
baz=48
K18A **Toltan Ranch,** 48.49 323 ⇓P P 13 16 11.3 +0.2
baz=49,SNR=5.7
Q14A **Sevier Lake (B** 48.50 318 ⇑P P 13 16 11.8 +0.5
baz=49,SNR=13
V11A **Goodsprings** 48.51 313 ⇑P P 13 16 10.5 -0.9
baz=49,SNR=5.9
R13A **O'Grain Ranch,** 48.57 316 ⇑P P 13 16 12.2 +0.4
baz=49
L17A **Cokeville** 48.67 322 ⇑P P 13 16 12.3 -0.2
baz=49
P14A **Drum Mountains** 48.68 318 ⇑P P 13 16 13.0 +0.4
baz=49,SNR=5.2
M16A **Huntsville** 48.69 321 ⇑P P 13 16 12.6 -0.1
baz=49
TUQ **Turquoise Moun** 48.69 312 ⇓P P 13 16 12.5 -0.3
baz=49,SNR=10.0
HEC **Hector,Ludlow** 48.74 311 ⇑P P 13 16 13.5 +0.3
baz=49
HWUT **Hardware Ranch** 48.81 321 eP P 13 16 13.1 -0.5
5.9nm,0.7s,mb4.3
J18A **Kendall Valley** 48.82 324 ⇑P P 13 16 13.5 -0.2
baz=49,SNR=11
DUG **Dugway** 48.83 319 ⇑P P 13 16 13.6 -0.1
baz=49,SNR=8.5
L16A **Fish Haven** 48.96 322 ⇑P P 13 16 14.3 -0.4
baz=49,SNR=15
Q13A **Wheeler Ranch,** 48.99 317 ⇓P P 13 16 15.5 +0.5
baz=49,SNR=11
T11A **Corn Creek, Al** 48.99 315 ⇑P P 13 16 15.0 0.0
baz=49,SNR=5.0
I18A **Diamond G Ranc** 49.00 325 ⇓P P 13 16 14.5 -0.5
baz=49

P13A	Bates Ranch, G baz=49,SNR=9.8	49.23 318	⇓P	P	13 16 16.9	0.0
GSC	Goldstone baz=49,SNR=8.0	49.29 312	⇓P	P	13 16 17.4	0.0
J17A	Brown Place, J baz=49,SNR=12	49.32 324	⇑P	P	13 16 17.7	+0.3
DGMT	Dagmar baz=50,SNR=14	49.33 333	⇓P	P	13 16 17.6	+0.2
BGU	Big Grassy Mou 12nm,0.6s,mb4.7	49.36 320	*e*P	P	13 16 17.5	-0.2
REDW	Red Top Meadow 22nm,1.1s,mb4.7	49.40 324	*e*P	P	13 16 17.9	-0.1
SNOW	Snow King Moun 5.2nm,0.5s,mb4.4	49.40 324	*e*P	P	13 16 18.3	+0.3
LOHW	Long Hollow 6.5nm,0.6s,mb4.4	49.40 324	*e*P	P	13 16 18.5	+0.5
N14A	Grayback Hills baz=50,SNR=15	49.42 320	⇓P	P	13 16 18.0	-0.2
TPAW	Teton Pass 8.5nm,0.8s,mb4.4	49.53 324	*e*P	P	13 16 19.1	0.0
L15A	Malad City baz=50,SNR=10	49.54 321	⇓P	P	13 16 18.1	-1.0
Q12A	Willow Creek R baz=50,SNR=7.1	49.58 317	⇓P	P	13 16 19.2	-0.2
HVU	Hansel Valley 5.3nm,0.9s,mb4.2	49.66 321	*e*P	P	13 16 19.5	-0.5
RRI2	Red Ridge 15nm,0.6s,mb4.8	49.66 324	*e*P	P	13 16 20.4	+0.4
R11A	Troy Canyon, C baz=50,SNR=10	49.76 316	⇑P	P	13 16 20.9	0.0
IMW	Indian Meadow 5.1nm,0.6s,mb4.3	49.77 324	*e*P	P	13 16 21.0	+0.2
J16A	Bone baz=50,SNR=6.6	49.80 323	⇑P	P	13 16 21.3	+0.3
FURC	Furnace Creek, baz=50,SNR=5.8	49.82 313	⇓P	P	13 16 21.5	+0.1
P12A	McGill baz=50,SNR=6.9	49.84 317	⇑P	P	13 16 22.0	+0.5
G18A	Lazy EL Ranch, baz=50	49.86 327	⇓P	P	13 16 21.4	-0.2
M14A	Sheep Mountain baz=50,SNR=12	49.87 320	⇓P	P	13 16 21.4	-0.2
EDW2	Edwards Air Fo baz=50	50.01 311	⇓P	P	13 16 22.3	-0.5
K15A	Arbon baz=50	50.01 322	⇓P	P	13 16 22.5	-0.2
LRMC	Laurel Mountai baz=50	50.02 311	⇑P	P	13 16 23.0	+0.1
Q11A	Duckwater baz=50,SNR=5.8	50.05 316	⇑P	P	13 16 23.0	-0.1
I16A	Newdale baz=50,SNR=7.8	50.07 324	⇑P	P	13 16 23.6	+0.5
N13A	Wendover, West baz=50	50.08 319	⇓P	P	13 16 23.7	+0.5
L14A	Malta baz=50,SNR=7.3	50.09 321	⇑P	P	13 16 22.8	-0.5
MPMC	Manual Prospec baz=50	50.11 312	⇑P	P	13 16 23.1	-0.5
O12A	Currie baz=50,SNR=9.3	50.13 318	⇓P	P	13 16 23.9	+0.3
R10A	Warm Springs baz=50	50.23 315	⇑P	P	13 16 24.7	+0.3
S10A	Tonopah Range, baz=50,SNR=9.2	50.27 315	⇑P	P	13 16 24.9	+0.1
M13A	Montello baz=50,SNR=14	50.31 320	⇑P	P	13 16 24.7	-0.3
M13A	Montello 7.8nm,0.6s,mb4.5	50.31 320	*e*P	P	13 16 25.1	+0.1
F18A	Big Timber baz=50,SNR=10.0	50.32 327	⇓P	P	13 16 24.9	0.0
K14A	Jones Ranch, D baz=50	50.33 322	⇓P	P	13 16 24.9	-0.1
J15A	Blackfoot baz=50,SNR=5.4	50.36 323	⇓P	P	13 16 25.3	0.0
H16A	Russell Place, baz=50	50.43 325	⇓P	P	13 16 26.4	+0.7
G17A	Pierce Place, baz=51	50.52 326	⇑P	P	13 16 26.2	-0.3
L13A	Double Diamond baz=51	50.56 321	⇓P	P	13 16 26.7	-0.1
QLMT	Earthquake Lak 3.5nm,0.6s,mb4.2	50.61 325	*e*P	P	13 16 28.4	+1.3
N12A	Clover Valley, baz=51	50.62 319	⇑P	P	13 16 26.7	-0.5
M12A	Wells baz=51,SNR=9.7	50.83 319	⇓P	P	13 16 28.2	-0.6
F17A	Fitzpatrick Pl baz=51,SNR=7.0	50.83 327	⇑P	P	13 16 28.9	+0.1
E18A	Harlowton baz=51,SNR=9.7	50.84 328	⇑P	P	13 16 28.7	-0.2
J14A	Carey baz=51,SNR=16	50.97 322	⇓P	P	13 16 29.3	-0.5
H15A	Lima baz=51	51.18 324	⇑P	P	13 16 31.5	+0.1
BOZ	Bozeman (W) baz=51,SNR=9.5	51.21 326	⇓P	P	13 16 31.6	0.0
BOZ	Bozeman (W) 4.2nm,1.0s,mb4.0	51.21 326	*e*P	P	13 16 31.7	+0.1
I14A	Mackay baz=51	51.27 323	⇑P	P	13 16 31.7	-0.4
L12A	House Creek Ra baz=51	51.27 320	⇓P	P	13 16 31.5	-0.6
E17A	Martinsdale baz=51,SNR=12	51.29 327	⇑P	P	13 16 32.1	0.0
O10A	Cortez Mining, baz=51	51.31 317	⇓P	P	13 16 32.1	-0.4
J13A	Cove Ranch, Pi baz=52,SNR=6.9	51.41 322	⇑P	P	13 16 32.9	-0.2
G15A	Dillon baz=52	51.41 325	⇓P	P	13 16 33.7	+0.6
MCMT	McKenzie Canyo 3.0nm,0.6s,mb4.1	51.42 324	*e*P	P	13 16 34.3	+1.1
K12A	Draper Farm, C baz=52	51.45 321	⇑P	P	13 16 33.1	-0.4
DLMT	Dillon 5.1nm,1.3s,mb4.0	51.59 325	*e*P	P	13 16 34.9	+0.4
H14A	Leadore baz=52,SNR=6.2	51.60 324	⇓P	P	13 16 35.1	+0.6
D17A	Six Diamond Ra baz=52	51.63 328	⇓P	P	13 16 34.7	0.0
HLID	Hailey baz=52,SNR=11	51.65 322	P	P	13 16 35.3	+0.4
HLID	Hailey 4.6nm,0.8s,mb4.2	51.65 322	*e*P	P	13 16 35.1	+0.3
I13A	Wildhorse Cree baz=52,SNR=11	51.66 323	⇓P	P	13 16 35.2	+0.2
SMMC	Simmler baz=52	51.69 310	⇑P	P	13 16 34.9	-0.5
NVAR	Mina Array Bea 2.3nm,0.7s,mb3.9,baz=126,slow=7.3,SNR=23	51.71 315	P	P	13 16 35.8	+0.3
L11A	Cat Creek Ranc baz=52,SNR=16	51.75 320	⇑P	P	13 16 35.6	0.0
E16A	East Helena baz=52	51.77 327	⇑P	P	13 16 36.2	+0.4
LRM	Limekiln Ridge 17nm,0.6s,mb4.8	51.78 325	*e*P	P	13 16 36.1	+0.3
F15A	Butte baz=52,SNR=11	51.81 325	⇑P	P	13 16 36.3	+0.2
J12A	Stokes Ranch, baz=52,SNR=5.9	51.90 321	⇑P	P	13 16 36.4	-0.3
B18A	Beardsley Farm baz=52,SNR=16	51.95 329	⇑P	P	13 16 37.4	+0.4
C17A	Wharram Farm, baz=52	51.97 328	⇓P	P	13 16 37.3	+0.1
D16A	Dana Ranch, Ca baz=52,SNR=7.5	52.01 327	⇑P	P	13 16 37.6	0.0
H13A	Challis baz=52,SNR=5.1	52.10 323	⇓P	P	13 16 38.3	+0.1
L10A	Juniper Basin baz=52,SNR=14	52.16 319	⇓P	P	13 16 38.8	+0.1
I12A	Atlanta baz=52,SNR=12	52.21 322	⇑P	P	13 16 38.8	-0.2
K11A	Parker Ranch, baz=52,SNR=8.8	52.23 320	⇓P	P	13 16 38.5	-0.7
E15A	Deer Lodge baz=52,SNR=8.6	52.24 326	⇑P	P	13 16 39.2	0.0
F14A	Wisdom baz=52	52.29 325	⇑P	P	13 16 39.7	0.0
G13A	Cobalt baz=52,SNR=7.9	52.38 324	⇑P	P	13 16 39.8	-0.5
B17A	L&G Farms, Che baz=52	52.41 329	⇓P	P	13 16 40.5	+0.1
MFID	Camas Ranch baz=52,SNR=6.2	52.44 321	⇑P	P	13 16 40.7	-0.1
H12A	Diamond D Ranc baz=52,SNR=9.8	52.45 323	⇑P	P	13 16 40.6	-0.2
D15A	Lincoln baz=53	52.55 327	⇓P	P	13 16 41.3	-0.1
C16A	Fuhringer Ranc baz=53,SNR=5.2	52.59 328	⇓P	P	13 16 40.0	-1.8
K10A	MacKenzie Ranc baz=53,SNR=8.1	52.77 320	⇑P	P	13 16 43.2	0.0
I11A	Placerville baz=53,SNR=7.9	52.78 322	⇓P	P	13 16 42.4	-0.8
F13A	Darby baz=53,SNR=7.3	52.83 324	⇑P	P	13 16 43.0	-0.6
B16A	M & M Farms, S baz=53	52.95 328	⇑P	P	13 16 44.4	-0.1
C15A	Salmond Ranch, baz=53	53.04 327	⇑P	P	13 16 44.6	-0.4
G12A	Big Creek, Yel baz=53	53.05 323	⇑P	P	13 16 44.2	-0.9
D14A	Greenough baz=53	53.11 326	⇑P	P	13 16 44.8	-0.8
E13A	Victor baz=53	53.12 325	⇓P	P	13 16 44.7	-0.9
SLMT	Seeley Lake 2.7nm,0.6s,mb4.2	53.20 326	*e*P	P	13 16 46.0	-0.2
H11A	Donnelly baz=53,SNR=6.4	53.23 323	⇓P	P	13 16 45.7	-0.8
A16A	West Butte Ran baz=53	53.23 329	⇓P	P	13 16 46.0	-0.4
FFC	Flin Flon 1.8nm,0.4s,mb4.2	53.25 339	*e*P	P	13 16 45.5	-0.9
B15A	Bradely Ranch, baz=53	53.34 328	⇓P	P	13 16 47.0	-0.3
F12A	Elk City baz=53,SNR=9.6	53.35 324	⇑P	P	13 16 46.9	-0.5
J09A	Fry Pan Ranch, baz=54,SNR=12	53.61 320	⇑P	P	13 16 49.0	-0.4
H10A	Noah's Angus R baz=54	53.62 322	⇑P	P	13 16 48.5	-0.8
C14A	Swan Lake baz=54	53.65 327	⇑P	P	13 16 49.6	+0.1
D13A	Huson baz=54,SNR=5.9	53.65 326	P	P	13 16 49.6	+0.1
WVOR	Wild Horse Val 8.2nm,0.9s,mb4.5	53.74 319	*e*P	P	13 16 49.7	-0.6
G11A	Walters Elk Ra baz=54,SNR=6.3	53.75 323	⇓P	P	13 16 49.3	-1.0
BEKR	Beckworth baz=54,SNR=6.1	53.76 315	⇓P	P	13 16 50.3	-0.2
A15A	Johnson Ranch, baz=54	53.84 328	⇓P	P	13 16 50.5	-0.3
E12A	Beaver Dam Sad baz=54	53.90 325	⇓P	P	13 16 50.7	-0.6
I09A	Lost Marbles R baz=54	53.92 321	⇓P	P	13 16 50.6	-0.9
F11A	Grangeville baz=54,SNR=5.6	53.95 324	⇑P	P	13 16 51.0	-0.7
C13A	Hot Springs baz=54	54.05 326	⇑P	P	13 16 52.4	0.0
D12A	Red Ives Fores baz=54	54.13 325	⇓P	P	13 16 52.9	-0.1
A14A	Double T Ranch baz=54	54.20 328	⇑P	P	13 16 53.1	-0.3
G10A	Bishop Farm, J baz=54,SNR=8.8	54.21 323	⇑P	P	13 16 53.1	-0.5
C12B	Naegeli Ranch, baz=55,SNR=5.6	54.56 326	⇓P	P	13 16 56.2	+0.1
G09A	Cove baz=55,SNR=5.8	54.60 322	⇓P	P	13 16 56.3	-0.2
MOD	Modoc 2.3nm,0.6s,mb4.1	54.60 318	*e*P	P	13 16 56.2	-0.3
F10A	Beach Ranch, E baz=55,SNR=7.3	54.63 323	P	P	13 16 56.5	-0.1
H08A	Prairie City baz=55,SNR=8.1	54.77 321	⇑P	P	13 16 57.2	-0.5
C11A	Tepee Creek (N baz=55	55.07 326	⇓P	P	13 16 59.9	+0.1
I07A	Izee baz=55,SNR=8.0	55.08 320	⇑P	P	13 16 59.3	-0.6
G08A	Pilot Rock baz=55,SNR=11	55.33 322	⇑P	P	13 17 01.6	0.0
K05A	Summer Lake baz=55	55.36 318	⇓P	P	13 17 01.8	-0.1
A12A	Yaak River Ran baz=56	55.36 327	⇑P	P	13 17 02.7	+0.9
B08A	Colville Reser baz=57	57.09 325	⇓P	P	13 17 14.1	0.0
A05A	Maple Falls baz=59	58.99 324	⇑P	P	13 17 26.6	-0.7
YKA	Yellowknife Ar 8.0nm,0.6s,mb4.8,baz=133,slow=6.6,SNR=61	63.42 340	P	P	13 17 56.6	-0.2
YKA	1.5nm,0.7s,baz=128,slow=7.0,SNR=2.5		pP	pP	13 18 35.0	-1.4
YKA	Yellowknife Ar	63.42 340	P	P	13 17 56.6	-0.2
YKA			pP	pP	13 18 35.0	-1.4
DBIC	Dimbokro 3.7nm,0.5s,mb4.3,baz=356,slow=2.0,SNR=6.5	67.52 86	P	P	13 18 24.4	+0.3
SUMG	Summit 5.6nm,0.7s,mb4.4	69.03 11	*i* P	P	13 18 33.0	+0.6
TORD	Torodi Ar. Bea 0.3nm,0.4s,mb3.3,baz=285,slow=6.1,SNR=8.3	73.53 78	P	P	13 19 00.2	-0.3
TORD	Torodi Ar. Bea	73.53 78	P	P	13 19 00.2	-0.3
RSO	Redoubt South	79.18 330	*e*P	P	13 19 31.6	+0.3
KEST	Kesra comp=Z,15nm,18.3s,baz=302,slow=32	79.81 55	LR	LR	13 50 14.4	
SVW2	Sparrevohn	80.61 331	*e*P	P	13 19 37.9	-1.1
ARCES	ARCESS Array B 3.6nm,0.8s,mb4.2,baz=304,slow=5.3,SNR=5.8	86.67 20	P	P	13 20 10.6	+0.8
ARCES	ARCESS Array B	86.67 20	P	P	13 20 10.6	+0.8
VNA1	Neumayer--Stat	88.16 162	*e*P	P	13 20 16.1	-0.6
ZALV	Zalesovo Beam 0.7nm,0.4s,baz=342,slow=3.8,SNR=3.1	116.70 15	PKP	PKPdf	13 26 09.1	-0.5
MKAR	Makanchi Array 0.3nm,0.4s,baz=340,slow=2.3,SNR=5.2	122.33 20	PKP	PKPdf	13 26 20.6	0.0
WMQ	Urumqi	126.70 17	*e*PKP	PKPdf	13 26 31.0	+1.9
CN2	Changchun	127.03 343	*e*PKP	PKPdf	13 26 30.6	+0.8
HHC	Hu-ho-hao-te	132.48 355	*e*PKP	PKPdf	13 26 39.4	-0.8
HHC			sPKP		13 27 38.6	
HHC			PP	PP	13 29 08.4	+4.3
HHC			PKS		13 30 14.8	
HHC			SKS	SKSdf	13 33 32.8	-3.1
HHC			SKKS	SKKSac	13 35 41.8	-3.0
HHC			SS	SS	13 46 31.6	+2.6
HHC	comp=Z,49nm,4.9s		AMB	AMB		
HHC	comp=N,77nm,19.0s		LR	LR		
HHC	comp=E,140nm,19.0s		LR	LR		
HHC	comp=Z,110nm,17.8s		LR	LR		
CD2	Chengdu	142.43 5	*e*PKP	PKPdf	13 26 58.9	+0.1
ASAR	Alice Springs comp=Z,2.9nm,0.5s,baz=116,slow=3.7,SNR=5.0	149.24 234	PKP	PKPdf	13 27 10.3	-0.2
ASAR	comp=Z,2.9nm,0.5s,baz=114,slow=3.8,SNR=26		PKPbc	PKPbc	13 27 14.5	-0.5
WRA	Warramunga Arr comp=Z,2.0nm,0.4s,baz=107,slow=2.6,SNR=3.9	150.49 241	PKP	PKPdf	13 27 12.8	+0.2
WRA	comp=Z,3.1nm,0.4s,baz=107,slow=2.8,SNR=28		PKPbc	PKPbc	13 27 17.6	-0.5

BJI ***22*** *13:15:29.4, 9.°06S×158.°51E, h10km, mB5.1/34, mb5.0/42, Ms5.0/39, Ms7 4.6/36*

DJA ***22*** *13:15:30, 8.°78S×158.°66E, h21km, mb5.3/12*

ISCJB ***22*** *13:15:31.8±1.1, 8.°82S±0.°04×157.°85E±0.°03, h0km±6km, mb5.1/103, MS4.6/43, Error ellipse: s-maj=6.3km s-min=4.9km az=155.8*

IDC ***22*** *13:15:33.2±0.5, 8.°82S×157.°82E, h0km, mb4.7/18, mb1 4.8/19, mb1mx4.8/20, mbtmp4.7/19, ML4.6/1, MS4.5/14, Ms1 4.5/14, ms1mx4.5/15, Error ellipse: s-maj=17.3km s-min=14.1km az=87.0*

NEIC ***22*** *13:15:34.8±0.2, 8.°81S×157.°88E, h10km, mb5.2/63, MS4.8/5, Error ellipse: s-maj=6.7km s-min=5.4km az=150.0*

GCMT ***22*** *13:15:37.7±0.1, 9.°06S×157.°91E, h18km, MW5.3, Moment Tensor Solution. s80,c120; s98,c159; Moment tensor: Scale 10^17^Nm; Mrr0.00; Mθθ0.00; Mφφ0.00; Mrθ0.00; Mrφ0.00; Mθφ0.00; Best double couple: M0=1.20000×10^17^ NP1:φs=281.00000°, δ31.00000°, λ.44.00000°. NP2: φs=151.00000°, δ69.00000°, λ.114.00000°. Principal axes: T 1.1700, Plg60.0000°, Azm95.0000°; N 0.0900, Plg22.0000°, Azm322.0000°; P -1.2600, Plg20.0000°, Azm224.0000°; Data Used: II IU IC G CN.*

MOS ***22*** *13:15:37.7±1.2, 8.°65S×157.°62E, h33km, mb5.4/28, MS4.6/13 Error ellipse: s-maj=12.6km s-min=8.8km az=70.7*

ISC 22 13:15:36.5±1.2, **8.°84S**±0.°04×**157.°88E**±0.°03, **h20**km±7km,

h18km±2.7km**:pP-P,n334,**σ0**98**/287**, mb5.0**/103**, MS4.6**/43,
56C-53D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	2.12	106	⇑*e*P	Pn	13 16 07.7	-3.2
COEN	Coen 396nm,1.0s	15.29	249	P	Pn	13 19 11.7	+0.4
DZM	Mont Dzumac 142nm,1.8s	15.52	149	*e*P	Pn	13 19 14.0	-0.3
DZM	2μm,23.9s			*e*LR	LR	13 22 52.4	
CTA	Charters Tower 22nm,0.7s	15.86	224	*e*P	Pn	13 19 16.3	-2.4
CTA	Charters Tower 1.4nm,0.3s,baz=53,slow=14,SNR=8.7	15.86	224	Pn	Pn	13 19 16.8	-1.9
CTAO	Charters Tower	15.86	224	*e*P	Pn	13 19 15.5	-3.2
CTAO	comp=Z,130nm,1.4s			pmax	pmax		
CTAO	Charters Tower comp=Z,130nm,1.4s	15.86	224	*e*P	Pn	13 19 15.5	-3.1
EIDS	Eidsvold comp=Z,56nm,1.0s	17.67	201	*e*P	Pn	13 19 39.2	-2.3
FUNA	Funafuti comp=Z,104nm,1.0s,mb5.1	21.07	91	P	P	13 20 18.4	-1.3
MSVF	Nonsavu comp=Z,571nm,1.4s,mb5.8,SNR=12	21.51	116	P	P	13 20 24.7	+0.3
MSVF	Nonsavu comp=Z,217nm,1.4s,mb5.4	21.51	116	*e*P	P	13 20 24.4	0.0
MSVF	Nonsavu comp=Z,168nm,1.8s,mb5.2,SNR=12	21.51	116	P	P	13 20 24.7	+0.3
ARMA	Armidale	22.25	194	*e*P	P	13 20 32.5	+0.3
ARMA				*e*S	S	13 24 38.5	+2.1
ARMA	Armidale comp=Z,25nm,0.8s,mb4.7	22.25	194	*e*P	P	13 20 33.9	+1.7
CMSA	Cobar Meteorol	25.27	205	*e*P	P	13 21 00.8	-0.8
CMSA				*e*S	S	13 25 24.8	-1.6
KAKA	Kakadu comp=Z,49nm,0.7s,mb5.1	25.28	259	*e*P	P	13 21 02.1	+0.3
KAKA	Kakadu comp=Z,129nm,0.7s,mb5.6	25.28	259	*e*P	P	13 21 01.9	+0.1
WRAB	Tennant Creek comp=Z,300nm,0.8s,mb5.9,SNR=10.0	25.28	242	P	P	13 21 01.5	-0.3
WRAB	Tennant Creek	25.28	242	*e*P	P	13 21 01.3	-0.5
WRAB	comp=Z,104nm,1.3s,mb5.2			pmax	pmax		
WRAB	Tennant Creek comp=Z,104nm,1.3s,mb5.2	25.28	242	*e*P	P	13 21 01.2	-0.5
WRA	Warramunga Arr comp=Z,24nm,0.8s,mb4.8,baz=66,slow=9.6,SNR=89	25.30	242	P	P	13 21 00.9	-1.0
WRA	comp=Z,2.2nm,0.9s,baz=51,slow=1.5,SNR=5.0			PcP	PcP	13 24 36.0	+1.1
WRA	comp=Z,2μm,21.7s,MS4.7,baz=70,slow=35			LR	LR	13 30 17.6	
WRA	Warramunga Arr	25.30	242	P	P	13 21 01.0	-0.9
WRA						13 24 36.0	
ASAR	Alice Springs comp=Z,8.3nm,0.8s,mb4.3,baz=67,slow=8.6,SNR=75	27.27	234	P	P	13 21 18.1	-1.6
STKA	Stephens Creek comp=Z,38nm,0.6s,mb5.1	27.46	211	*e*P	P	13 21 19.9	-1.5
STKA				*e*S	S	13 26 02.8	+1.7
STKA	Stephens Creek comp=Z,46nm,0.7s,mb5.1,baz=24,slow=9.8,SNR=47	27.46	211	P	P	13 21 21.2	-0.2
STKA	comp=Z,2μm,20.0s,MS4.7,baz=35,slow=35			LR	LR	13 31 34.5	
STKA	Stephens Creek comp=Z,10.0nm,0.8s,mb4.4	27.46	211	*e*P	P	13 21 22.7	+1.3
CNB	Canberra Magne	27.48	195	*e*P	P	13 21 25.8	+4.4
CNB				*e*S	S	13 26 04.9	+3.7
KNA	Kununurra comp=Z,98nm,1.7s,mb5.3	29.24	254	*e*P	P	13 21 37.7	+0.3
AFI	Afiamalu comp=Z,27nm,1.0s,mb5.0,baz=288,slow=19,SNR=3.2	30.15	102	P	P	13 21 45.2	-0.3
AFI				LR	LR	13 31 36.7	
RAO	comp=Z,2μm,20.6s,MS4.7,baz=292,slow=32 Raoul Island comp=Z,614nm,19.6s,MS4.3,baz=350,slow=31	30.46	135	LR	LR	13 31 31.2	
TOO	Toolangi	30.72	199	*e*P	P	13 21 50.9	+0.7
BBOO	Buckleboo comp=Z,27nm,1.1s,mb5.0	31.25	217	*e*P	P	13 21 54.4	-0.5
BBOO				*e*S	S	13 26 57.9	-2.6
FITZ	Fitzroy Crossi comp=Z,20nm,1.0s,mb5.0	32.63	250	*e*P	P	13 22 06.8	-0.5
FITZ				*e*S	S	13 26 54.8	-28
URZ	Urewera comp=Z,15nm,0.8s,mb5.0,baz=294,slow=12,SNR=4.9	34.03	152	P	P	13 22 20.4	+1.2
URZ	Urewera	34.03	152	*e*P	P	13 22 20.8	+1.6
FORT	Forrest comp=Z,29nm,0.9s,mb5.2	35.35	228	*e*P	P	13 22 29.6	-1.1
FORT	Forrest comp=Z,46nm,1.0s,mb5.4	35.35	228	*e*P	P	13 22 29.6	-1.2
RPZ	Rata Peaks comp=Z,24nm,1.0s,mb5.0,baz=355,slow=6.2,SNR=5.2	36.59	164	P	P	13 22 41.6	+0.4
MBWA	Marble Bar	38.72	247	P	P	13 22 58.8	-0.8
MEEK	Meekatharra	41.16	239	*e*P	P	13 23 19.5	-0.3
NWAO	Narrogin (SRO) comp=Z,87nm,0.8s,mb5.6	44.50	231	*e*P	P	13 23 46.1	-0.7
YULB	Yu-li comp=Z,21nm,1.0s,mb5.1	48.02	313	*e*P	P	13 24 14.3	-0.3
YHNB	Yeheng comp=Z,46nm,1.1s,mb5.4	48.75	314	*e*P	P	13 24 21.6	+1.4
MJAR	Matsushiro Arr comp=Z,1.3nm,0.5s,mb4.2,baz=170,slow=8.6,SNR=9.5	48.78	339	P	P	13 24 19.0	-1.2
MJAR	comp=Z,552nm,18.9s,MS4.6,baz=145,slow=34			LR	LR	13 42 49.9	
QZH	Quanzhou	50.92	312	P	P	13 24 38.1	+1.4
QZH				S	S	13 31 51.0	-1.6
QZH	comp=Z,1μm,27.3s,MS4.7			LR	LR		
PPT	Papeete comp=Z,340nm,27.8s	51.74	105	*e*S	S	13 32 00.6	-3.6
PPT				*e*LQ		13 37 26.1	
PPT	comp=Z,1μm,25.5s			*e*LR	LR	13 39 37.0	
PPT	comp=Z,2μm,23.0s,baz=269						
PPT	Papeete comp=Z,865nm,19.0s,MS4.8,baz=275,slow=30	51.74	105	LR	LR	13 41 53.7	
SSE	Sheshan	53.04	320	*e*P	P	13 24 50.6	-1.8
SSE				pP	pP	13 24 59.8	+1.1
SSE				sP	sP	13 25 03.9	+2.8
SSE				S	S	13 32 20.9	-0.5
SSE				sS	sS	13 32 36.4	+4.6
SSE				pmax	pmax		
SSE	comp=Z,21nm,0.7s,mb5.2			pmax	pmax		
SSE	comp=Z,25nm,3.5s			LR	LR		
SSE	comp=N,170nm,23.8s,MS4.0			LR	LR		
SSE	comp=E,40nm,23.6s,MS4.0			LR	LR		
SSE	comp=Z,210nm,22.5s,MS4.1						
PMOR	Pomariorio Ree comp=Z,178nm,1.3s,mb5.8	53.30	102	*e*P	P	13 24 55.2	+0.6
KSRS	Korea Array comp=Z,1.6nm,0.6s,mb4.2,baz=146,slow=7.3,SNR=10	53.92	331	P	P	13 24 58.8	+0.1
KSRS				LR	LR	13 45 35.3	
QIZ	comp=Z,405nm,18.0s,MS4.5,baz=132,slow=33 Qiongzhong	54.85	301	P	P	13 25 06.3	+0.4
QIZ				S	S	13 32 47.0	+0.6
QIZ				pmax	pmax		
QIZ	comp=Z,10.0nm,2.1s,mb4.5			pmax	pmax		
QIZ	comp=Z,170nm,8.4s			LR	LR		
QIZ	comp=N,210nm,19.1s			LR	LR		
QIZ	comp=Z,600nm,22.4s,MS4.6						
NJ2	Nanjing	55.16	319	*e*P	P	13 25 08.3	+0.5
NJ2				pP	pP	13 25 12.9	-1.3
NJ2				sP	sP	13 25 15.6	-1.0
NJ2				PP	PP	13 27 12.8	+1.3
NJ2				S	S	13 32 49.0	-1.1
NJ2				pmax	pmax		
NJ2	comp=Z,20nm,0.5s,mb5.4			pmax	pmax		
NJ2	comp=Z,170nm,6.5s			LR	LR		
NJ2	comp=N,360nm,19.3s,MS4.5			LR	LR		
NJ2	comp=E,210nm,21.4s,MS4.5			LR	LR		
NJ2	comp=Z,470nm,22.2s,MS4.5						
YSS	Yuzh-Sakhalins	57.16	348	*i* P	P	13 25 20.0	-1.8
YSS				*e*		13 33 19.0	
WHN	Wuhan	57.25	315	P	P	13 25 26.4	+3.6
WHN				S	S	13 33 22.5	+4.5

WHN LR LR
comp=N,630nm,17.3s,MS5.0
WHN LR LR
comp=E,950nm,19.7s,MS5.0
WHN LR LR
comp=Z,1μm,24.2s,MS4.9
MDJ Mudanjiang 59.03 337 P **P** **13 25 36.1 +1.1**
MDJ pP pP 13 25 39.6 -1.7
MDJ sP sP 13 25 41.3 -2.5
MDJ PcP PcP 13 26 24.3 +0.5
MDJ PP PP 13 27 46.0 +0.3
MDJ S **S** **13 33 44.6 +4.0**
MDJ ScS ScS 13 35 24.0 +0.1
MDJ pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
MDJ pmax pmax
comp=Z,140nm,4.9s
MDJ LR LR
comp=N,530nm,16.0s,MS4.8
MDJ LR LR
comp=E,400nm,17.7s,MS4.8
MDJ LR LR
comp=Z,300nm,10.3s
MDJ Mudanjiang 59.03 337 P **P** **13 25 35.8 +0.9**
comp=Z,6.9nm,0.4s,mb5.0
CN2 Changchun 60.09 333 *e*P **P** **13 25 44.9 +2.6**
CN2 *es*P sP 13 25 51.9 +0.8
CN2 *e*S **S** **13 33 56.8 +2.4**
CN2 pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,300nm,17.0s,MS4.7
CN2 LR LR
comp=E,300nm,17.0s,MS4.7
CN2 LR LR
comp=Z,200nm,14.0s,MS4.4
HABR Khabarovsk 60.52 343 *ce*P **P** **13 25 43.4 -1.7**
HABR *e**SP sP 13 25 57.9 +4.0
HABR 13 26 28.1
HABR *e*PPP 13 29 20.6
HABR *e*S **S** **13 33 57.5 -2.2**
HABR *e* 13 34 10.0
HABR *e**SS sS 13 34 14.5 +4.3
HABR *e* 13 35 31.5
HABR *e*SS SS 13 37 57.1 -1.2
HABR pmax pmax
comp=N,19nm,1.7s
HABR pmax pmax
comp=Z,55nm,1.9s,mb5.4
HABR pmax pmax
comp=E,43nm,2.2s
HABR MLR MLR
comp=Z,173nm,11.0s,MS4.5
ENH Enshi 60.59 312 *e*P **P** **13 25 45.0 -1.0**
comp=Z,24nm,1.1s,mb5.2
GYA Guiyang 60.84 307⇑ *i*P **P** **13 25 50.0 +2.2**
GYA PcP PcP 13 26 32.1 +0.6
GYA PP PP 13 28 05.8 +3.7
GYA ScP ScP 13 30 32.0 0.0
GYA S **S** **13 34 05.3 +0.6**
GYA SS SS 13 38 07.5 +3.3
GYA pmax pmax
comp=Z,30nm,1.0s,mb5.4
GYA pmax pmax
comp=Z,130nm,5.0s
GYA LR LR
comp=N,770nm,18.6s,MS5.0
GYA LR LR
comp=E,560nm,19.8s,MS5.0
GYA LR LR
comp=Z,840nm,19.5s,MS4.9
TAOE Nuku Hiva Isla 61.16 95 *e*S **S** **13 34 08.3 -1.0**
comp=Z,161nm,31.8s
TAOE *e*LR LR 13 43 57.5
comp=Z,1μm,22.1s,baz=270
PET Petropavlovsk 61.62 1 *e*P **P** **13 25 51.6 -0.9**
PET *e*S **S** **13 34 11.7 -1.9**
PET *e*SS SS 13 38 15.7 +0.2
PET pmax pmax
comp=Z,29nm,0.7s,mb5.5
PET pmax pmax
comp=Z,200nm,12.3s
PET MLR MLR
comp=Z,400nm,20.0s,MS4.6
PET MLR MLR
comp=Z,300nm,18.0s
PEA0B Petropavlovsk- 61.70 360 *e*P **P** **13 25 52.9 -0.1**
PETK Petropavlovsk- 61.70 360 P **P** **13 25 53.0 -0.1**
comp=Z,12nm,0.8s,mb5.1,baz=152,slow=6.2,SNR=18
PETK LR LR 13 51 39.9
comp=Z,275nm,18.6s,MS4.4,baz=171,slow=35
PETK Petropavlovsk- 61.70 360 P **P** **13 25 53.0 -0.1**
PETK LR LR 13 51 39.9
BJI Beijing 62.06 325 P **P** **13 25 56.4 +0.6**
BJI PP PP 13 28 13.4 +0.8
BJI S **S** **13 34 20.9 +1.3**
BJI SS SS 13 38 23.5 +0.7
BJI pmax pmax
comp=Z,6.0nm,0.6s,mb4.9
BJI pmax pmax
comp=Z,170nm,3.8s
BJI LR LR
comp=N,400nm,17.1s,MS4.7
BJI LR LR
comp=E,330nm,18.3s,MS4.7
BJI LR LR
comp=Z,300nm,19.7s,MS4.5
KLR Kul'dur 62.20 341 *e*P **P** **13 25 52.0 -4.5**
KLR *e*S **S** **13 34 19.5 -1.6**
XAN Xi'an 63.02 315 P **P** **13 26 05.5 +3.2**
XAN pP pP 13 26 12.8 +4.1
XAN S **S** **13 34 30.8 -1.1**
XAN pmax pmax
comp=Z,3.0nm,0.7s,mb4.5
XAN pmax pmax
comp=Z,29nm,9.8s
XAN LR LR
comp=N,220nm,22.1s,MS4.3
XAN LR LR
comp=E,120nm,21.1s,MS4.3
XAN LR LR
comp=Z,160nm,17.8s,MS4.2
KMI Kunming 63.41 304 P **P** **13 26 07.5 +2.4**
KMI pP pP 13 26 11.3 -0.2
KMI sP sP 13 26 12.6 -1.3
KMI PP PP 13 28 29.6 +4.8
KMI ScP ScP 13 30 44.4 +0.9
KMI PcS PcS 13 30 45.8 +0.1
KMI S **S** **13 34 40.1 +2.9**
KMI SKS 13 35 57.0
KMI SS SS 13 38 49.4 +4.9
KMI pmax pmax
comp=Z,23nm,1.1s,mb5.2
KMI pmax pmax
comp=Z,120nm,8.0s
KMI LR LR
comp=N,230nm,19.2s,MS4.6
KMI LR LR
comp=E,350nm,18.3s,MS4.6
KMI LR LR
comp=Z,470nm,20.2s,MS4.7
CM31 Chiang Mai Arr 64.15 295 *e*P **P** **13 26 12.9 +2.8**
comp=Z,19nm,1.1s,mb5.0
CMAR Chiang Mai Arr 64.15 295 P **P** **13 26 11.1 +0.9**
comp=Z,5.7nm,0.8s,mb4.6,baz=124,slow=4.9,SNR=15
CMAR LR LR 13 51 28.5
comp=Z,207nm,21.1s,MS4.3,baz=125,slow=34
CMAR PKP2ab 13 55 10.1
comp=Z,0.6nm,0.8s,baz=297,slow=4.0,SNR=4.2
CD2 Chengdu 65.18 310 *e*P **P** **13 26 18.1 +1.5**
CD2 pP pP 13 26 22.8 -0.2
CD2 sP sP 13 26 25.1 -0.3
CD2 S S 13 34 59.3 +0.4
CD2 SS SS 13 39 13.5 +1.6
CD2 pmax pmax
comp=Z,40nm,0.6s,mb5.6
CD2 pmax pmax
comp=Z,130nm,5.2s
CD2 LR LR
comp=N,340nm,17.8s,MS4.9
CD2 LR LR
comp=E,540nm,17.8s,MS4.9
CD2 LR LR
comp=Z,400nm,25.0s
HHC Hu-ho-hao-te 65.27 323 *e*P **P** **13 26 18.9 +1.9**
HHC pP pP 13 26 23.6 +0.2
HHC sP sP 13 26 25.9 +0.1
HHC PcP PcP 13 26 50.8 +1.6
HHC PP PP 13 28 45.0 +4.1
HHC ScP 13 30 52.1
HHC PcS 13 30 53.9
HHC S S 13 35 01.3 +1.7
HHC sS sS 13 35 09.4 -0.8
HHC ScS ScS 13 36 10.0 -1.3
HHC SS SS 13 39 16.0 +3.0
HHC pmax pmax
comp=Z,11nm,0.8s,mb4.9
HHC pmax pmax
comp=Z,100nm,5.1s
HHC LR LR
comp=N,400nm,17.7s,MS5.2
HHC LR LR
comp=E,1μm,18.2s,MS5.2
HHC LR LR
comp=Z,290nm,22.8s,MS4.4
RKT Rikitea 65.61 111 *e*S S 13 35 02.7 -1.8
comp=Z,267nm,26.0s
RKT *e*LR LR 13 46 01.8
comp=Z,923nm,26.5s,baz=275
LZH Lanzhou 67.63 315 *e*P **P** **13 26 38.3 +6.1**
LZH pP pP 13 26 42.0 +3.3
LZH sP sP 13 26 45.8 +4.8
LZH PP PP 13 29 09.0 +7.4
LZH S S 13 35 32.3 +3.9
LZH SS SS 13 39 55.4 +5.6
LZH pmax pmax
comp=Z,37nm,1.2s,mb5.3
LZH pmax pmax
comp=Z,200nm,7.9s
LZH LR LR
comp=E,680nm,16.2s
LZH LR LR
comp=Z,860nm,17.4s,MS5.0
NIKO Nikolski 67.78 21 *e*P **P** **13 26 32.0 -0.7**
comp=Z,36nm,1.0s,mb5.4
SBA Scott Base 69.14 178 *e*P **P** **13 26 42.8 +1.8**
SBA pmax pmax
comp=Z,61nm,1.9s,mb5.2
SBA Scott Base 69.14 178 *e*P **P** **13 26 42.8 +1.9**
comp=Z,61nm,1.9s,mb5.2
CLNS Chul'man 70.85 342 *e*P **P** **13 26 51.9 +0.2**
CLNS *e**PP pP 13 27 02.1 +3.9
CLNS *e* 13 27 10.9
CLNS *e*PPP 13 31 08.3
CLNS *e*S S 13 35 59.8 -5.8
CLNS *e* 13 36 46.7
CLNS pmax pmax
comp=E,3.0nm,0.8s
CLNS pmax pmax
comp=N,6.0nm,0.9s
CLNS pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
CLNS smax
comp=N,85nm,12.8s
CLNS smax
comp=E,262nm,13.2s
CLNS MLR MLR
comp=N,166nm,17.0s,MS4.5
CLNS MLR MLR
comp=E,153nm,18.0s,MS4.5
CLNS MLR MLR
comp=Z,119nm,18.0s,MS4.2
SEY Seymchan 71.68 357⇑ *i*P **P** **13 26 56.1 -0.5**
GTA Gaotai 72.04 316 *e*P **P** **13 26 59.8 +0.6**
GTA pP pP 13 27 03.0 -2.7
GTA sP sP 13 27 06.0 -2.1
GTA PP PP 13 29 43.6 +4.1
GTA S S 13 36 22.3 +2.2
GTA SKS 13 36 59.4
GTA SS SS 13 41 04.3 +6.8
GTA pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
GTA pmax pmax
comp=Z,160nm,6.5s
GTA LR LR
comp=N,170nm,16.9s,MS4.6
GTA LR LR
comp=E,220nm,19.3s,MS4.6
GTA LR LR
comp=Z,320nm,20.5s,MS4.6
MIR Mirnyy 72.07 202⇑ *i*P **P** **13 27 03.0 +4.0**
MIR pmax pmax
comp=Z,52nm,1.2s,mb5.3
ULN Ulaanbaatar 72.09 327 P **P** **13 27 01.5 +2.1**
ULN pmax pmax
comp=Z,25nm,1.1s,mb5.1
ULN Ulaanbaatar 72.09 327 P **P** **13 27 01.5 +2.1**
comp=Z,25nm,1.1s,mb5.0
SONM Songino Array 72.43 326 P **P** **13 27 02.6 +1.2**
comp=Z,6.9nm,0.8s,mb4.6,baz=131,slow=4.5,SNR=6.7
SONM LR LR 13 58 02.9
comp=Z,288nm,18.6s,MS4.6,baz=68,slow=35
SHL Shillong 72.69 300 *e*PKP **P** **13 27 04.5 +1.1**
YAK Yakutsk 73.98 347 *c i*P **P** **13 27 09.6 -0.6**
YAK *e**PP pP 13 27 19.5 +2.7
YAK *e* 13 27 26.1
YAK *i*S S 13 36 42.4 +1.2
YAK *e* 13 37 16.3
YAK pmax pmax
comp=Z,19nm,0.8s,mb5.1
YAK pmax pmax
comp=E,4.0nm,1.3s
YAK pmax pmax
comp=N,4.0nm,0.9s
YAK smax
comp=N,128nm,3.8s
YAK smax
comp=E,116nm,3.3s
YAK Yakutsk 73.98 347 *e*P **P** **13 27 09.5 -0.7**
comp=E,27nm,0.7s,mb5.3
ZAK Zakamensk 75.57 327 *e*P **P** **13 27 18.8 -0.9**
ZAK pmax pmax
comp=Z,6.0nm,1.6s,mb4.3
TLY Talaya 76.11 329 *e*S S 13 36 52.8 -13
TLY *e*SS SS 13 41 54.6 -4.4
TLY pmax pmax
comp=Z,12nm,1.8s,mb4.5
TLY MLR MLR
comp=Z,173nm,16.0s,MS4.5
BILL Bilibino 76.92 3 *c i*P **P** **13 27 26.4 -0.6**
BILL *i* 13 27 35.3
BILL *e* 13 30 20.5
BILL pmax pmax
comp=Z,48nm,1.8s,mb5.1
BILL MLR MLR
comp=Z,400nm,19.0s,MS4.8
BILL Bilibino 76.92 3 *e*P **P** **13 27 26.5 -0.5**
comp=Z,22nm,0.9s,mb5.1
OHAK Old Harbor 76.95 25 *e*P **P** **13 27 27.0 -0.4**
comp=Z,12nm,1.0s,mb4.8
MOY Mondy 77.48 328 *e*P Px 13 27 45.0
GUN Gumba 78.51 301 *e*P **P** **13 27 40.3 +3.5**
comp=Z,40nm,1.0s,mb5.3
SVW2 Sparrevohn 78.65 21 *e*P **P** **13 27 36.8 0.0**
PKI Pulchoki 78.82 300 *e*P **P** **13 27 43.3 +4.8**
PKI Pulchoki 78.82 300 *e*P **P** **13 27 43.4 +4.9**
PKI pmax pmax
comp=Z,20nm,0.8s,mb5.1
PKI Pulchoki 78.82 300 *e*P **P** **13 27 43.4 +4.9**
comp=Z,20nm,0.8s,mb5.1
PKIN Phulchoki 78.83 300 *e*P **P** **13 27 43.4 +4.9**
comp=Z,20nm,0.8s,mb5.1
KKN Kakani 78.99 301 *e*P **P** **13 27 42.3 +2.9**
comp=Z,11nm,0.5s,mb5.0
KKN Kakani 78.99 301 *e*P **P** **13 27 42.3 +2.9**
KKN pmax pmax
comp=Z,11nm,0.5s,mb5.0
DMN Daman 79.09 300 *e*P **P** **13 27 43.3 +3.3**
comp=Z,67nm,1.2s,mb5.5
TTA Tatalina 79.76 20 *e*P **P** **13 27 43.1 +0.3**
RC01 Rabbit Creek A 80.81 23 *e*P **P** **13 27 47.4 -1.1**
comp=Z,14nm,1.0s,mb4.8
PPLA Purkeypile 81.05 21 *e*P **P** **13 27 49.4 -0.3**
comp=Z,64nm,1.8s,mb5.2
PMR Palmer 81.35 23 *e*P **P** **13 27 51.0 -0.4**
PMR pmax pmax
comp=Z,40nm,1.6s,mb5.1
PMR MLR MLR
comp=Z,300nm,18.0s,MS4.7
PMR Palmer 81.35 23 *e*P **P** **13 27 51.0 -0.4**
comp=Z,40nm,1.6s,mb5.1
PMR LR LR
comp=Z,300nm,18.0s,MS4.7
CHUM Lake Minchumin 81.64 20 *e*P **P** **13 27 52.9 +0.1**
comp=Z,40nm,1.3s,mb5.2
TRF Thorofare Moun 82.06 21 *e*P **P** **13 27 53.5 -1.6**
comp=Z,11nm,0.9s,mb4.8
WMQ Urumqi 82.12 317 P **P** **13 27 55.0 -0.8**
WMQ sP sP 13 28 02.0 -2.8
WMQ PP PP 13 31 05.0 +0.8
WMQ S S 13 38 07.0 -2.7
WMQ pmax pmax
comp=Z,31nm,1.2s,mb5.1
WMQ pmax pmax
comp=Z,87nm,8.0s
WMQ LR LR
comp=N,200nm,18.0s,MS4.8
WMQ LR LR
comp=E,290nm,18.0s,MS4.8
WMQ LR LR
comp=Z,310nm,18.0s,MS4.7
BPAW Bear Paw Mtn. 82.23 20 *e*P **P** **13 27 54.4 -1.5**
comp=Z,43nm,1.8s,mb5.1
TIXI Tiksi 82.59 351 *e*P **P** **13 27 56.3 -1.4**
TIXI pmax pmax
comp=Z,40nm,1.6s,mb5.2
TIXI Tiksi 82.59 351 *e*P **P** **13 27 56.2 -1.5**
comp=Z,40nm,1.6s,mb5.2
MCK McKinley 82.72 21 *e*P **P** **13 27 57.2 -1.3**
comp=Z,116nm,1.6s,mb5.7
COLA College 83.78 20 *e*P **P** **13 28 02.5 -1.5**
COLA pmax pmax
comp=Z,11nm,0.7s,mb5.1
COLA College 83.78 20 *e*P **P** **13 28 02.5 -1.5**
comp=Z,11nm,0.7s,mb5.1
MAW Mawson 83.80 203 *e*P **P** **13 28 03.6 -0.6**
comp=Z,10nm,1.3s,mb4.8
MAW Mawson 83.80 203 P **P** **13 28 03.2 -1.0**
comp=Z,11nm,1.0s,mb4.9,baz=83,slow=7.9,SNR=7.3
MAW LR LR 14 02 38.2
comp=Z,393nm,19.1s,MS4.8,baz=87,slow=34
MAW Mawson 83.80 203 *e*P **P** **13 28 03.0 -1.2**
MAW pmax pmax
comp=Z,6.0nm,1.3s
MAW Mawson 83.80 203 *e*P **P** **13 28 03.0 -1.1**
comp=Z,5.9nm,1.3s,mb4.6
MENT Mentasta 84.20 23 *e*P **P** **13 28 06.0 -0.2**
COLD Coldfoot 84.45 18 *e*P **P** **13 28 07.2 -0.1**
comp=Z,22nm,1.6s,mb5.0
SKAG Skagway 86.12 28 *e*P **P** **13 28 15.3 -0.5**
comp=Z,62nm,1.6s,mb5.6
SKAG LR LR
comp=Z,700nm,19.0s,MS5.1
EGAK Eagle 86.12 22 *e*P **P** **13 28 15.7 0.0**
comp=Z,46nm,1.5s,mb5.5
MK31 Makanchi Array 86.67 318 *e*P **P** **13 28 18.4 -0.5**
MKAR Makanchi Array 86.67 318 P **P** **13 28 18.6 -0.3**
comp=Z,2.3nm,0.5s,mb4.7,baz=85,slow=7.4,SNR=29
MKAR LR LR 14 07 58.9
comp=Z,146nm,19.3s,MS4.4,baz=268,slow=36
ZAA0 Zalesovo Array 87.30 326 *e*P **P** **13 28 20.3 -1.4**
ZALV Zalesovo Beam 87.30 326 P **P** **13 28 20.2 -1.6**
comp=Z,1.4nm,0.4s,mb4.5,baz=112,slow=5.7,SNR=8.9
ZALV LR LR 14 05 58.5
comp=Z,106nm,18.2s,MS4.3,baz=251,slow=35
HUMO Hull Mountain 88.04 47 *e*P **P** **13 28 26.5 +0.9**
NVS Novosibirsk 88.46 326 *e*S S 13 39 11.8 -0.1
NVS pmax pmax
comp=E,12nm,1.7s
NVS pmax pmax
comp=Z,18nm,1.7s,mb5.0
NVS pmax pmax
comp=N,6.0nm,1.4s
NVS smax
comp=N,8.0nm,1.9s
NVS smax
comp=E,4.0nm,1.9s
CMB Columbia Colle 88.94 51 *e*P **P** **13 28 29.4 -0.5**
CMB pmax pmax
comp=Z,9.0nm,1.3s,mb4.9
CMB Columbia Colle 88.94 51 *e*P **P** **13 28 29.4 -0.5**
comp=Z,8.7nm,1.3s,mb4.9
BEKR Beckworth 89.34 50 ⇓P **P** **13 28 32.4 +0.7**
baz=89
KSH Kashi 89.38 310 *e*P **P** **13 28 29.0 -3.0**
KSH SKS 13 38 55.8
KSH pmax pmax
comp=Z,3.0nm,0.3s,mb5.1
KSH pmax pmax
comp=Z,76nm,5.0s
KSH LR LR
comp=N,210nm,8.7s
KSH LR LR
comp=E,140nm,5.9s
KSH LR LR
comp=Z,62nm,4.5s
K05A Summer Lake 89.55 47 ⇑P **P** **13 28 33.1 +0.4**
baz=90
CIS Catalina Islan 89.61 56 ⇑P **P** **13 28 33.2 +0.1**
baz=90
WCN Washoe City 89.68 50 ⇓P **P** **13 28 33.5 +0.1**
baz=90
MOD Modoc 89.80 48 *e*P **P** **13 28 34.8 +0.9**
comp=Z,8.7nm,1.4s,mb4.9
ISA Isabella 89.97 54 ⇓P **P** **13 28 33.9 -1.0**
baz=90
ISA Isabella 89.97 54 *e*P **P** **13 28 35.2 +0.4**
ISA pmax pmax
comp=Z,33nm,1.6s,mb5.4
ISA Isabella 89.97 54 *e*P **P** **13 28 35.2 +0.3**
comp=Z,33nm,1.6s,mb5.4
MWC Mount Wilson 90.04 56 *e*P **P** **13 28 35.9 +0.7**
MWC pmax pmax
comp=Z,75nm,1.4s,mb5.8
MWC Mount Wilson 90.04 56 *e*P **P** **13 28 35.9 +0.7**
comp=Z,74nm,1.4s,mb5.8
EDW2 Edwards Air Fo 90.22 55 ⇓P **P** **13 28 33.5 -2.5**
baz=90,SNR=10
TKM2 Tokmak 2 90.35 313 *e*P **P** **13 28 35.4 -1.0**
TKM2 pmax pmax
comp=Z,6.0nm,1.1s,mb4.8
TKM2 Tokmak 2 90.35 313 *e*P **P** **13 28 35.4 -1.0**
comp=Z,5.8nm,1.1s,mb4.8
BFSC Mount Baldy Ra 90.37 56 ⇓P **P** **13 28 36.2 -0.5**
baz=90,SNR=6.1
CWC Cottonwood Cre 90.43 53 ⇑P **P** **13 28 37.5 +0.6**
baz=90
LRMC Laurel Mountai 90.57 54 ⇓P **P** **13 28 38.0 +0.4**
baz=91,SNR=10
109C Camp Elliot, M 90.59 57 ⇓P **P** **13 28 37.5 -0.2**
baz=91
NVAR Mina Array Bea 90.62 51 P **P** **13 28 38.6 +0.9**
comp=Z,7.1nm,0.8s,mb5.0,baz=246,slow=6.3,SNR=44
I07A Izee 90.82 46 ⇑P **P** **13 28 38.3 -0.3**
baz=91
MPMC Manual Prospec 90.83 54 ⇓P **P** **13 28 39.3 +0.5**
baz=91,SNR=12
BAR Barrett 90.91 57 P **P** **13 28 38.3 -1.0**
comp=Z,8.1nm,1.2s,mb4.9
WVOR Wild Horse Val 91.12 47 *e*P **P** **13 28 39.9 -0.1**
WVOR pmax pmax
comp=Z,57nm,1.9s,mb5.6
WVOR Wild Horse Val 91.12 47 *e*P **P** **13 28 39.9 -0.1**
comp=Z,57nm,1.9s,mb5.6
MONP Monument Peak 91.15 57 ⇑P **P** **13 28 39.1 -1.3**
baz=91,SNR=9.5
PFO Pinyon Flat Ob 91.25 56 ⇓P **P** **13 28 40.2 -0.7**
baz=91
PFO Pinyon Flat Ob 91.25 56 *e*P **P** **13 28 41.3 +0.5**
PFO pmax pmax
comp=Z,3.0nm,1.0s,mb4.6
PFO Pinyon Flat Ob 91.25 56 *e*P **P** **13 28 41.3 +0.5**
comp=Z,3.3nm,1.0s,mb4.6
GSC Goldstone 91.25 55 ⇓P **P** **13 28 40.7 -0.1**
baz=91,SNR=5.1
GSC Goldstone 91.25 55 *e*P **P** **13 28 40.7 -0.1**
GSC pmax pmax
comp=Z,33nm,1.8s,mb5.4
GSC Goldstone 91.25 55 *e*P **P** **13 28 40.7 0.0**
comp=Z,33nm,1.8s,mb5.4
FURC Furnace Creek, 91.40 53 ⇑P **P** **13 28 42.0 +0.6**
baz=92,SNR=14
J08A Circle Bar Ran 91.41 46 ⇓P **P** **13 28 40.9 -0.5**
baz=92,SNR=7.9
SYO Syowa Base 91.51 199⇑ *e*P **P** **13 28 42.0 +0.7**

AML	Almayashu	91.58	312	eP	P	13 28 42.7	+0.5
	comp=Z,9.3nm,1.1s,mb5.0						
BELC	Belle Mtn. Jos	91.69	56	⇑P	P	13 28 42.4	-0.4
	baz=92,SNR=15						
SHOC	Shoshone	91.77	54	⇓P	P	13 28 43.7	-0.5
	baz=92,SNR=8.7						
BMN	Battle Mountai	91.81	50	eP	P	13 28 44.6	+1.4
BMN				pmax	pmax		
	comp=Z,17nm,1.2s,mb5.2						
BMN	Battle Mountai	91.81	50	eP	P	13 28 44.6	+1.4
	comp=Z,17nm,1.2s,mb5.2						
U10A	Ash Meadows, A	91.82	54	⇑P	P	13 28 44.1	+0.7
	baz=92,SNR=8.2						
S10A	Tonopah Range,	91.86	52	⇑P	P	13 28 43.7	+0.2
	baz=92,SNR=31						
J09A	Fry Pan Ranch,	91.93	47	⇑P	P	13 28 43.8	0.0
	baz=92,SNR=7.1						
TUQ	Turquoise Moun	91.98	55	⇓P	P	13 28 43.8	-0.4
	baz=92,SNR=11						
I09A	Lost Marbles R	92.05	46	⇓P	P	13 28 43.7	-0.6
	baz=92						
BC3	Big Chuckawall	92.08	56	⇓P	P	13 28 43.5	-1.2
	baz=92						
GMRC	Granite Mounta	92.09	55	⇓P	P	13 28 44.4	-0.3
	baz=92,SNR=12						
G09A	Cove	92.25	45	⇑P	P	13 28 45.4	+0.2
	baz=92,SNR=6.7						
IRM	Iron Mountain	92.41	56	⇑P	P	13 28 47.5	+1.3
	baz=92						
V11A	Goodsprings	92.44	54	⇓P	P	13 28 46.6	+0.3
	baz=92,SNR=11						
K10A	MacKenzie Ranc	92.47	47	⇓P	P	13 28 46.0	-0.2
	baz=92,SNR=11						
S11A	Rachel	92.48	52	⇓P	P	13 28 45.0	-1.4
	baz=92,SNR=5.6						
GLA	Glamis	92.50	57	eP	P	13 28 47.7	+1.1
GLA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.8						
GLA	Glamis	92.50	57	eP	P	13 28 47.7	+1.0
	comp=Z,3.4nm,0.8s,mb4.8						
BMO	Blue Mountains	92.51	45	eP	P	13 28 46.4	0.0
BMO				pmax	pmax		
	comp=Z,18nm,1.5s,mb5.3						
BMO	Blue Mountains	92.51	45	eP	P	13 28 46.4	0.0
	comp=Z,18nm,1.5s,mb5.3						
LDFC	Landfair	92.58	55	eP	P	13 28 47.6	+0.6
	comp=Z,28nm,1.1s,mb5.6						
L10A	Juniper Basin	92.64	48	⇑P	P	13 28 47.5	+0.4
	baz=93,SNR=9.7						
G10A	Bishop Farm, J	92.71	45	⇑P	P	13 28 46.5	-0.9
	baz=93,SNR=7.0						
R11A	Troy Canyon, C	92.71	52	⇑P	P	13 28 47.5	0.0
	baz=93,SNR=26						
Q11A	Duckwater	92.74	51	⇑P	P	13 28 47.1	-0.5
	baz=93,SNR=27						
F10A	Beach Ranch, E	92.75	44	⇑P	P	13 28 47.1	-0.4
	baz=93						
P11A	Circle Ranch,	92.77	51	⇓P	P	13 28 48.3	+0.5
	baz=93						
T11A	Corn Creek, Al	92.83	53	⇑P	P	13 28 47.2	-0.9
	baz=93,SNR=15						
H10A	Noah's Angus R	92.86	45	⇓P	P	13 28 47.4	-0.6
	baz=93,SNR=10.0						
V12A	Nelson	92.89	54	⇓P	P	13 28 48.8	+0.4
	baz=93,SNR=7.6						
O11A	Cowboy Ranch,	92.94	50	⇓P	P	13 28 49.1	+0.6
	baz=93,SNR=12						
M11A	Holland Ranch,	93.04	49	⇓P	P	13 28 49.0	+0.1
	baz=93						
K11A	Parker Ranch,	93.07	47	⇓P	P	13 28 48.6	-0.4
	baz=93,SNR=13						
S12A	Delamar Landin	93.17	53	⇑P	P	13 28 50.2	+0.6
	baz=93						
L11A	Cat Creek Ranc	93.18	48	⇓P	P	13 28 50.5	+0.9
	baz=93,SNR=18						
U12A	Valley of Fire	93.25	54	⇓P	P	13 28 50.4	+0.4
	baz=93,SNR=8.0						
I11A	Placerville	93.31	46	⇓P	P	13 28 50.0	-0.1
	baz=93,SNR=7.1						
G11A	Walters Elk Ra	93.32	45	⇓P	P	13 28 49.6	-0.6
	baz=93						
MFID	Camas Ranch	93.32	47	⇑P	P	13 28 49.3	-0.8
	baz=93,SNR=6.4						
H11A	Donnelly	93.39	45	⇓P	P	13 28 50.1	-0.4
	baz=93,SNR=6.8						
Q12A	Willow Creek R	93.40	51	⇑P	P	13 28 51.1	+0.5
	baz=94,SNR=15						
P12A	McGill	93.41	51	⇓P	P	13 28 50.4	-0.2
	baz=94,SNR=20						
N12A	Clover Valley,	93.51	49	⇓P	P	13 28 51.8	+0.6
	baz=94,SNR=6.9						
N12A	Clover Valley,	93.51	49	eP	P	13 28 51.7	+0.6
	comp=Z,13nm,1.0s,mb5.3						
W13A	Hualapai Mount	93.58	55	⇑P	P	13 28 51.8	+0.3
	baz=94,SNR=5.1						
V13A	Grand Canyon W	93.61	54	⇑P	P	13 28 52.2	+0.5
	baz=94,SNR=7.9						
O12A	Currie	93.65	50	⇑P	P	13 28 52.2	+0.4
	baz=94,SNR=9.0						
M12A	Wells	93.69	49	⇑P	P	13 28 52.4	+0.4
	baz=94,SNR=6.6						
U13A	Pakoon Wash	93.70	54	⇓P	P	13 28 52.6	+0.5
	baz=94,SNR=8.4						
L12A	House Creek Ra	93.72	48	⇓P	P	13 28 52.9	+0.9
	baz=94,SNR=12						
J12A	Stokes Ranch,	93.82	47	⇓P	P	13 28 52.0	-0.4
	baz=94,SNR=17						
T13A	Saint George	93.83	53	⇑P	P	13 28 52.8	+0.1
	baz=94,SNR=12						
K12A	Draper Farm, C	93.88	48	⇓P	P	13 28 52.4	-0.4
	baz=94,SNR=9.1						
I12A	Atlanta	93.88	46	⇑P	P	13 28 52.1	-0.6
	baz=94						
G12A	Big Creek, Yel	93.94	45	⇑P	P	13 28 53.0	0.0
	baz=94						
R13A	O'Grain Ranch,	93.95	52	⇑P	P	13 28 53.7	+0.5
	baz=94,SNR=8.9						
S13A	Holt Ranch, En	93.95	53	⇓P	P	13 28 53.7	+0.5
	baz=94,SNR=6.7						
Q13A	Wheeler Ranch,	94.02	51	⇓P	P	13 28 53.4	-0.1
	baz=94,SNR=11						
F12A	Elk City	94.08	44	⇑P	P	13 28 53.5	-0.1
	baz=94						
P13A	Bates Ranch, G	94.09	51	⇑P	P	13 28 54.7	+0.9
	baz=94,SNR=17						
D12A	Red Ives Fores	94.20	43	⇓P	P	13 28 53.3	-0.9
	baz=94						
M13A	Montello	94.24	49	⇑P	P	13 28 54.9	+0.4
	baz=94,SNR=5.1						
M13A	Montello	94.24	49	eP	P	13 28 54.9	+0.4
	comp=Z,30nm,1.5s,mb5.5						
ARUT	Antelope Range	94.31	53	eP	P	13 28 56.2	+1.4
ARUT				pmax	pmax		
	comp=Z,12nm,1.3s,mb5.2						
ARUT	Antelope Range	94.31	53	eP	P	13 28 56.2	+1.3
	comp=Z,12nm,1.3s,mb5.2						
U14A	Mt Trumbull	94.33	54	⇓P	P	13 28 56.1	+1.1
	baz=94,SNR=6.1						
CCUT	Cedar City	94.33	53	eP	P	13 28 55.8	+0.8
	comp=Z,8.4nm,1.2s,mb5.0						
HLID	Hailey	94.36	47	⇑P	P	13 28 55.3	+0.4
	baz=94,SNR=11						
HLID	Hailey	94.36	47	eP	P	13 28 55.3	+0.4
	comp=Z,16nm,1.5s,mb5.2						
J13A	Cove Ranch, Pi	94.51	47	⇑P	P	13 28 56.6	+1.0
	baz=95						
Q14A	Sevier Lake (B	94.59	51	⇓P	P	13 28 56.4	+0.2
	baz=95,SNR=15						
H13A	Challis	94.61	46	⇑P	P	13 28 55.1	-1.0
	baz=95,SNR=9.1						
I13A	Wildhorse Cree	94.62	46	⇓P	P	13 28 55.7	-0.5
	baz=95,SNR=8.5						
Y15A	Casa Rosa Ranc	94.69	57	⇓P	P	13 28 57.0	+0.3
	baz=95						
G13A	Cobalt	94.70	45	⇓P	P	13 28 57.1	+0.6
	baz=95						
F13A	Darby	94.72	45	⇓P	P	13 28 56.3	-0.3
	baz=95						
P14A	Drum Mountains	94.83	51	⇓P	P	13 28 58.1	+0.9
	baz=95,SNR=8.2						
X15A	Humboldt	94.84	56	⇑P	P	13 28 57.4	0.0
	baz=95						
M14A	Sheep Mountain	94.87	49	⇓P	P	13 28 58.3	+1.0
	baz=95,SNR=9.1						
N14A	Grayback Hills	94.91	50	⇑P	P	13 28 56.9	-0.7
	baz=95						
L14A	Malta	95.02	48	⇑P	P	13 28 57.4	-0.6
	baz=95						
U15A	North Rim	95.04	54	⇑P	P	13 28 59.0	+0.8
	baz=95						
I14A	Mackay	95.10	46	⇓P	P	13 28 59.3	+1.0
	baz=95						
K14A	Jones Ranch, D	95.13	48	⇑P	P	13 28 59.9	+1.4
	baz=95,SNR=6.1						
H14A	Leadore	95.25	46	⇑P	P	13 29 00.6	+1.6
	baz=95						
HVU	Hansel Valley	95.33	49	eP	P	13 28 59.9	+0.5
HVU				pmax	pmax		
	comp=Z,38nm,1.7s,mb5.5						
HVU	Hansel Valley	95.33	49	eP	P	13 28 59.9	+0.5
	comp=Z,38nm,1.7s,mb5.5						
MSU	Marysvale	95.39	52	eP	P	13 29 01.1	+1.3
MSU				pmax	pmax		
	comp=Z,20nm,1.6s,mb5.3						
MSU	Marysvale	95.39	52	eP	P	13 29 01.1	+1.3
	comp=Z,20nm,1.6s,mb5.3						
BVAR	Borovoye Array	95.48	323	P	P	13 28 57.8	-2.1
	comp=Z,2.1nm,0.8s,mb4.6,baz=82,slow=3.3,SNR=8.5						
BRVK	Borovoye	95.55	323	⇑P	P	13 28 59.3	-0.9
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.5s,mb4.7						
MCMT	McKenzie Canyo	95.64	46	eP	P	13 29 02.2	+1.4
	comp=Z,1.3nm,1.0s,mb4.3						
S16A	Weppner Ranch,	95.75	53	⇑P	P	13 29 01.3	-0.2
	baz=96						
DLMT	Dillon	95.88	45	P	P	13 29 01.3	-0.6
	comp=Z,13nm,1.7s,mb5.1						
R16A	Teasdale	95.90	52	⇓P	P	13 29 01.6	-0.6
	baz=96,SNR=5.8						
JLU	Jordanelle	96.19	50	eP	P	13 29 04.5	+1.1
	comp=Z,3.5nm,0.8s,mb4.8						
N16A	Rees Ranch, Co	96.23	50	⇑P	P	13 29 02.8	-0.7
	baz=96						
R17A	Hanksville Air	96.52	52	⇑P	P	13 29 05.3	+0.3
	baz=97						
BOZ	Bozeman (W)	96.59	45	⇓P	P	13 29 04.6	-0.5
	baz=97						
YKA	Yellowknife Ar	96.62	28	P	P	13 29 04.2	-0.6
	comp=Z,0.8nm,0.6s,mb4.4,baz=264,slow=4.7,SNR=5.8						
O17A	Robinson Place	96.68	50	⇓P	P	13 29 05.6	0.0
	baz=97						
M17A	Scullys Gap (B	96.87	49	⇑P	P	13 29 06.6	+0.2
	baz=97						
P18A	Preston Nutter	97.00	51	⇓P	P	13 29 07.5	+0.4
	baz=97						
O18A	Roosevelt	97.25	50	⇓P	P	13 29 07.8	-0.4
	baz=97						
F17A	Fitzpatrick Pl	97.29	45	⇑P	P	13 29 06.9	-1.4
	baz=97						
PDAR	Pinedale Array	97.81	48	P	P	13 29 10.4	-0.2
	comp=Z,0.8nm,0.7s,mb4.4,baz=276,slow=2.6,SNR=7.1						
PDAR				LR	LR	14 09 00.8	
	comp=Z,252nm,19.8s,MS4.7,baz=273,slow=33						
TXAR	Lajitas Array	101.61	62	P	Pdif	13 29 28.6	+1.2
	comp=Z,0.5nm,0.7s,baz=230,slow=5.1,SNR=7.5						
TXAR				PP	PP	13 33 36.6	-1.8
	comp=Z,1.1nm,1.1s,baz=226,slow=6.5,SNR=6.0						
TXAR				PKKP	PKKPbc	13 45 41.5	+5.8
	comp=Z,0.4nm,0.9s,baz=123,slow=4.4,SNR=3.9						
TXAR	Lajitas Array	101.61	62	P	Pdif	13 29 28.6	+1.2
TXAR						13 33 36.6	
FFC	Flin Flon	103.02	36	iP	Pdif	13 29 34.2	+0.6
APA	Apatity	110.83	340	⇑iPKIKP	PKiKP	13 34 08.0	+0.3
APA				MLR	MLR		
	comp=Z,300nm,17.0s,MS4.9						
ARCES	ARCESS Array B	112.16	344	PKiKP	PKiKP	13 34 09.3	-0.8
	comp=Z,2.7nm,1.0s,baz=64,slow=2.5,SNR=4.6						
ARCES	ARCESS Array B	112.16	344	PKPdf	PKiKP	13 34 09.3	-0.8
FINES	FINESS Array B	116.77	336	PKP	PKPdf	13 34 18.4	-0.8
	comp=Z,1.4nm,0.7s,baz=48,slow=2.8,SNR=8.8						
FINES	FINESS Array B	116.77	336	PKP	PKPdf	13 34 18.4	-0.8
AKASG	Malin Array Be	120.69	325	PKP	PKPdf	13 34 26.1	-1.0
	comp=Z,0.9nm,0.5s,baz=48,slow=2.9,SNR=5.6						
BOSA	Boshof	121.04	229	PKP	PKPdf	13 34 28.0	-0.5
	comp=Z,1.4nm,0.6s,baz=90,slow=8.6,SNR=4.9						
NB2	NORSAR Subarra	122.36	342	PKPdf	PKPdf	13 34 28.6	-1.3
	comp=Z,2.0nm,1.0s,baz=39,slow=1.9						
NOA	NORSAR Array B	122.36	342	PKP	PKPdf	13 34 28.8	-1.1
	comp=Z,1.1nm,0.7s,baz=39,slow=1.9,SNR=4.8						
STHS	Stebnicka Huta	125.79	326	ePKIKP	PKPdf	13 34 39.2	+2.3
CRVS	Cervenica-Dubn	125.95	326	ePKP	PKPdf	13 34 36.9	-0.3
NIE	Niedzica	126.30	327	ePKP	PKPdf	13 34 38.8	+1.0
OKC	Ostrava-Krasne	127.20	328	ex	x	13 54 08.4	
OKC				AMS	AMS	14 30 10.0	
	comp=Z,200nm,20.7s						
VYHS	Vyhne	127.62	327	ePKIKP	PKPdf	13 34 43.2	+2.8
DPC	Dobruska-Polom	127.82	330	ePKIKP	PKPdf	13 34 41.6	+0.9
DPC				eSS	SS	13 54 13.6	+20
DPC				MLR	MLR		
	comp=Z,200nm,18.1s,MS4.8						
DPC	Dobruska-Polom	127.82	330	ePKPdf	PKPdf	13 34 41.6	+0.9
DPC				ex	x	13 54 13.6	
DPC				AMS	AMS	14 33 20.0	
	comp=Z,200nm,18.1s						
BSEG	Bad Segeberg	128.05	336	ePKPdf	PKPdf	13 34 42.0	+0.9
LPAZ	La Paz	128.07	119	PKP	PKPdf	13 34 43.1	+1.0
	comp=Z,2.2nm,0.7s,baz=336,slow=4.2,SNR=5.4						
LPAZ	La Paz	128.07	119	ePKPdf	PKPdf	13 34 42.8	+0.6
PVCC	Panska Ves	128.56	331	ePKIKP	PKPdf	13 34 45.4	+3.3
PVCC				MLR	MLR		
	comp=Z,200nm,17.5s,MS4.9						
PVCC	Panska Ves	128.56	331	ePKPdf	PKPdf	13 34 45.4	+3.3
PVCC				AMS	AMS	14 35 00.0	
	comp=Z,200nm,17.5s						
BRG	Berggiesshubel	128.63	331	ePKPdf	PKPdf	13 34 42.9	+0.6
BRG	Berggiesshubel	128.63	331	ePKP	PKPdf	13 34 42.4	+0.1
	comp=Z,21nm,2.0s						
BRG							
	comp=N,235nm,20.1s						
BRG							
	comp=E,107nm,17.7s						
BRG							
	comp=Z,194nm,22.6s						
BRG	Berggiesshubel	128.63	331	ePKIKP	PKPdf	13 34 42.3	0.0
BRG				pmax	pmax		
	comp=Z,13nm,2.0s						
BRG				MLR	MLR		
	comp=N,141nm,20.1s,MS4.7						
BRG				MLR	MLR		
	comp=E,64nm,17.7s,MS4.7						
BRG				MLR	MLR		
	comp=Z,116nm,22.6s,MS4.5						
CLL	Collm	128.77	332	ePKP	PKPdf	13 34 43.0	+0.5
CLL				e		13 34 46.0	
CLL				LR	LR		
	comp=Z,200nm,19.0s,MS4.8						
TREC	Trest	128.90	329	AMS	AMS	14 31 20.0	
	comp=Z,200nm,23.4s						
PRU	Pruhonice	128.93	330	eSS	SS	13 54 07.4	+0.3
PRU				AMS	AMS	14 35 10.0	
	comp=Z,200nm,20.0s						
NRDL	Niedersach Rie	129.20	335	ePKPdf	PKPdf	13 34 43.8	+0.5
CLZ	Clausthal	129.56	334	ePKPdf	PKPdf	13 34 44.5	+0.5
TANN	Tannenbergstha	129.64	332	ePKPdf	PKPdf	13 34 43.2	-1.0
NKC	Novy Kostel	129.77	332	AMS	AMS	14 32 10.0	
	comp=Z,300nm,18.4s						
KHC	Kasperske Hory	129.96	330	ePKPdf	PKPdf	13 34 44.2	-0.7
KHC	Kasperske Hory	129.96	330	ePKPdf	PKPdf	13 34 45.6	+0.8
KHC				ex	x	13 54 36.9	
KHC				AMS	AMS	14 35 50.0	
	comp=Z,300nm,20.6s						
WET	Wettzell	130.30	330	ePKPdf	PKPdf	13 34 45.4	-0.1
GRA1	Grafenberg Arr	130.71	332	ePKPdf	PKPdf	13 34 45.9	-0.4
GRA1				LR	LR		
	comp=Z,200nm,20.1s,MS4.8						
GRF	Grafenberg Arr	130.71	332	ePKPdf	PKPdf	13 34 45.9	-0.4
GRF				eL		14 32 56.7	
	comp=Z,215nm,20.1s						
CPUP	Villa Florida	131.09	137	PKP	PKPdf	13 34 48.7	+1.0
	comp=Z,0.3nm,0.3s,baz=239,slow=5.9,SNR=2.6						
WLF	Walferdange	132.97	335	ePKPdf	PKPdf	13 34 48.9	-1.6
SIV	San Ignacio	134.22	122	PKP	PKPdf	13 34 53.8	0.0
	comp=Z,0.7nm,0.6s,baz=215,slow=4.3,SNR=4.8						
PGF	Pioggiola	136.73	326	ePKP1	PKPdf	13 34 52.9	-4.9
	comp=Z,17nm,1.1s						
FRF	La Foret Royal	137.28	329	ePKP1	PKPdf	13 34 53.9	-4.9
LMR	La Mourre	137.51	329	ePKP1	PKPdf	13 34 54.4	-4.8
	comp=Z,21nm,1.1s						
PBRG	Braganca	144.47	340	ePKP	PKPdf	13 35 05.6	-6.2
MVO	Moncorvo	145.14	340	ePKP	PKPdf	13 35 12.3	-0.7
PVRL	Vila Real	145.27	341	ePKP	PKPdf	13 35 12.6	-0.6
ESDC	Sonseca Array	145.27	335	PKPbc	PKPbc	13 35 13.2	+0.3
	comp=Z,1.3nm,0.7s,baz=12,slow=3.4,SNR=8.9						
PAB	San Pablo	145.54	335	ePKIKP	PKPdf	13 35 13.5	-0.2
PVIS	Viseu	145.83	341	ePKP	PKPdf	13 35 14.9	+0.7
MTE	Manteigas	146.00	340	ePKPbc	PKPbc	13 35 15.3	+0.1
MTE	Manteigas	146.00	340	ePKP	PKPdf	13 35 15.6	+1.1
PCBR	Castelo Branco	146.47	339	ePKP	PKPab	13 35 18.0	+0.5
PMRV	Marv??o	146.81	339	ePKP	PKPab	13 35 18.1	-0.7
PTOM	Tomar	146.99	340	ePKP	PKPab	13 35 18.6	-0.9
PESTR	Estremoz	147.38	339	ePKP	PKPdf	13 35 17.6	+0.8
PBAR	Barrancos	147.78	337	ePKP	PKPbc	13 35 20.6	+0.2
TAM	Tamanrasset	150.08	301	ePKP2	PKPbc	13 35 27.6	+0.9
TORD	Torodi Ar. Bea	156.24	283	PKP	PKPdf	13 35 30.8	0.0
	comp=Z,0.6nm,0.6s,baz=84,slow=1.4,SNR=4.7						
TORD				PKPab	PKPab	13 35 59.0	+0.3
	comp=Z,1.4nm,0.7s,baz=92,slow=3.8,SNR=4.9						

CSEM ***22*** *13:32:32.7±1.0, 39°.04N×41°.58E, h5km, MD2.8, Error ellipse: s-maj=20.5km s-min=10.4km az=54.0*
ISK ***22*** *13:32:34.2, 38°.96N×41°.45E, h11km, MD2.8*
DDA ***22*** *13:32:36.7, 38°.96N×41°.28E, h7km±1km, Md2.9*
ISC 22 13:32:34.3±2.2, 39°.07N±0°.08×41°.44E±0°.10, h8km±7km, n13, σ0.975/20, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNGL	BINGOL	0.26	242	iP	Pg	13 32 39.0	-0.4
BNGL				iS	Sg	13 32 41.5	-1.2
BINT	Bingol	0.77	255	ePG	Pg	13 32 49.8	+0.8
BINT				eSG	Sg	13 32 50.0	+1.0
BINT	Bingol	0.77	255	ePg	Pg	13 32 49.8	+0.8
BINT				eSg	Sg	13 33 00.0	+1.1
BTMT	Batman	0.88	177	ePG	Pg	13 32 50.3	-0.9
BTMT				eSG	Sg	13 33 04.0	+1.3
BEST	Besiri	1.19	186	iP	Pb	13 32 57.2	+0.2
BEST				iS	Sg	13 33 12.1	-0.4
DIY	Diyarbakir	1.51	219	ePN	Pn	13 33 01.4	-0.3
DIY	Diyarbakir	1.51	219	ePn	Pn	13 33 01.4	-0.3
DIYA	Diyarbakir	1.54	222	iP	Pn	13 33 02.8	+0.6
DIYA				iS	Sn	13 33 22.2	-0.1
DIYA	Diyarbakir	1.54	222	iP	Pn	13 33 02.8	+0.7
DIYA				iS	Sn	13 33 22.2	-0.1
PTK	Pertek	1.60	264	ePN	Pn	13 33 03.0	0.0
PTK	Pertek	1.60	264	ePn	Pn	13 33 03.0	+0.1
URFA	Urfa	2.63	232	ePN	Pn	13 33 16.2	-0.8
URFA	Urfa	2.63	232	ePn	Pn	13 33 16.2	-0.8

CSEM ***22*** *13:35:43.8±0.2, 44°.50N×21°.61E, h2km, ML2.8, Error ellipse: s-maj=4.2km s-min=2.9km az=134.0*
ISCJB ***22*** *13:35:43.1±0.5, 44°.49N±0°.02×21°.60E±0°.03, h4km±4km, Error ellipse: s-maj=3.5km s-min=3.1km az=161.6*
BEO ***22*** *13:35:44.5±0.3, 44°.50N×21°.63E, h3km±5km, ML2.8/10*
NEIC ***22*** *13:35:45.6, 44°.60N×21°.59E, h5km, ML3.4(BUC), After BUC.*
ISC 22 13:35:43.7±0.4, 44°.51N±0°.02×21°.61E±0°.03, h1km±4km, n63, σ1.900/95, 26C-13D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVIS	Svilajnac	0.38	229	⇑iPg	Pg	13 35 50.9	-0.1
SVIS				iSg	Sg	13 35 56.6	+0.7
DJES	Djerdap	0.67	77	ePg	Pg	13 35 55.7	-0.8
DJES				iSg	Sg	13 36 05.3	+0.2
DJES	Djerdap	0.67	77	ePg	Pg	13 35 55.7	-0.8
DJES				iSg	Sg	13 36 05.3	+0.2
BEO	Beograd	0.87	290	iSg	Sg	13 36 12.2	+0.6
GRUS	Gruza	0.90	226	⇓iPg	Pg	13 36 00.6	-0.4
GRUS				iSg	Sg	13 36 13.3	+0.7
GRUS	Gruza	0.90	226	⇓iPg	Pg	13 36 00.6	-0.4
GRUS				iSg	Sg	13 36 13.3	+0.7
TRUS	Trudelj	0.91	252	⇑iPg	Pg	13 36 00.6	-0.6
TRUS				iSg	Sg	13 36 14.1	+1.0
TRUS	Trudelj	0.91	252	⇑iPg	Pg	13 36 00.6	-0.6
TRUS				iSg	Sg	13 36 14.1	+1.0
BZS	Buzias	1.10	0	⇓P	Pg	13 36 05.6	+0.7
BZS				S	Sg	13 36 19.4	+0.2
BZS	Buzias	1.10	0	⇓iP	Pg	13 36 05.6	+0.7
BZS	Buzias	1.10	0	S	Sg	13 36 19.4	+0.2
BZS	Buzias	1.10	0	⇓iP	Pg	13 36 05.6	+0.7
BZS				S	Sg	13 36 19.4	+0.2
NISS		1.14	168	⇑iPg	Pg	13 36 05.0	-0.5
NISS				iSg	Sg	13 36 20.4	+0.2
NISS		1.14	168	⇑iPg	Pg	13 36 05.0	-0.5
NISS				iSg	Sg	13 36 20.4	+0.2
GZR	Gura Zlata	1.21	43	⇑P	Pg	13 36 06.8	0.0
GZR				S	Sg	13 36 23.1	+0.6
GZR	Gura Zlata	1.21	43	⇑iP	Pg	13 36 06.8	-0.1
GZR	Gura Zlata	1.21	43	S	Sg	13 36 23.1	+0.6
GZR	Gura Zlata	1.21	43	⇑P	Pg	13 36 06.8	-0.1
GZR				S	Sg	13 36 23.1	+0.6
DIVS	Divibare	1.24	251	⇑iPg	Pg	13 36 07.0	-0.4
DIVS				iSg	Sg	13 36 23.2	-0.2
DIVS	Divibare	1.24	251	⇑iPg	Pg	13 36 07.0	-0.4
DIVS				iSg	Sg	13 36 23.2	-0.2
TIM	Timisoara	1.25	347	⇑iP	Pn	13 36 06.0	-2.4
TIM	Timisoara	1.25	347	S	Sg	13 36 24.1	+0.1
TIM	Timisoara	1.25	347	⇑iP	Pn	13 36 06.0	-2.4
FRGS	Fruska Gora	1.44	297	⇓iPg	Pg	13 36 11.5	+0.3
FRGS				iSg	Sg	13 36 30.8	+1.0
ZAPS	Zavoj	1

*ISK **22** 13:44:20.0, 37°.88N×31°.47E, h6km, MD2.7*
*CSEM **22** 13:44:20.5±0.1, 37°.90N×31°.48E, h2km, MD2.7, Error ellipse: s-maj=1.7km s-min=1.1km az=156.0*
*DDA **22** 13:44:21.1, 37°.92N×31°.48E, h7km±2km, Md2.8*

ISC 22 13:44:20.7±0.5, 37°.90N±0°.03×31°.46E±0°.04, h10km, n22, σ0°45/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUTC	**Sutluce-Ispart**	**0.56**	**221**	*e*PG	**Pg**	**13 44 31.0**	**-0.5**
SUTC				*e*SG	**Sg**	**13 44 39.1**	**+0.3**
SUTC	**Sutluce-Ispart**	**0.56**	**221**	*e*Pg	**Pg**	**13 44 31.0**	**-0.5**
SUTC				*e*Sg	**Sg**	**13 44 39.1**	**+0.3**
KONT	**Konya--Tatoy**	**0.71**	**86**	*e*PG	**Pg**	**13 44 34.0**	**-0.5**
KONT				*e*SG	**Sg**	**13 44 44.3**	**+0.5**
KONT	**Konya--Tatoy**	**0.71**	**86**	*e*Pg	**Pg**	**13 44 34.0**	**-0.5**
KONT				*e*Sg	**Sg**	**13 44 44.3**	**+0.5**
ISP	**Isparta**	**0.75**	**265**	*e*PG	**Pg**	**13 44 35.4**	**+0.2**
ISP	**Isparta**	**0.75**	**265**	*e*Pg	**Pg**	**13 44 35.4**	**+0.3**
LADK	**Ladik-KONYA**	**0.78**	**67**	*e*PG	**Pg**	**13 44 35.4**	**-0.3**
LADK	**Ladik-KONYA**	**0.78**	**67**	*e*Pg	**Pg**	**13 44 35.4**	**-0.3**
KDHN	**Kadinhani**	**0.81**	**39**	*i* P	**Pg**	**13 44 35.7**	**-0.7**
KDHN				*i* S	**Sg**	**13 44 47.9**	**+1.0**
KDHN	**Kadinhani**	**0.81**	**39**	*i* P	**Pg**	**13 44 35.7**	**-0.6**
KDHN				*i* S	**Sg**	**13 44 47.9**	**+1.0**
BCK	**Bucak**	**0.82**	**238**	*e*PG	**Pg**	**13 44 36.3**	**-0.2**
BCK	**Bucak**	**0.82**	**238**	*e*Pg	**Pg**	**13 44 36.3**	**-0.2**
BOLV	**Bolvadin**	**0.91**	**334**	*e*P	**Pg**	**13 44 38.3**	**0.0**
BOLV				*i* S	**Sg**	**13 44 50.2**	**-0.1**
BOLV	**Bolvadin**	**0.91**	**334**	*e*P	**Pg**	**13 44 38.3**	**0.0**
BOLV				*i* S	**Sg**	**13 44 50.2**	**0.0**
SHUT	**Suhut-Afyon**	**0.97**	**313**	*e*PG	**Pg**	**13 44 39.4**	**0.0**
SHUT	**Suhut-Afyon**	**0.97**	**313**	*e*Pg	**Pg**	**13 44 39.4**	**0.0**
KIZT	**Kizilcal**	**1.04**	**18**	*e*PG	**Pg**	**13 44 40.2**	**-0.4**
KIZT	**Kizilcal**	**1.04**	**18**	*e*Pg	**Pg**	**13 44 40.3**	**-0.3**
KORT	**Korkueli**	**1.26**	**225**	*i* P	**Pg**	**13 44 45.6**	**+0.7**
KORT	**Korkueli**	**1.26**	**225**	*i* P	**Pg**	**13 44 45.6**	**+0.7**
GAZI	**Gazipasa**	**1.79**	**157**	*e*P	**Pg**	**13 44 54.9**	**-0.2**
GAZI	**Gazipasa**	**1.79**	**157**	*e*P	**Pg**	**13 44 54.9**	**-0.2**

IDC 22 14:00:29.9±1.8, 17°.63S×177°.61W, h0km, mb4.1/4, mb1 4.3/4, mb1mx3.9/16, mbtmp4.1/4, Error ellipse: s-maj=161.5km s-min=30.5km az=156.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.43**	**241**	P	P	14 08 02.6	+0.8
	2.5nm,0.7s,baz=81,slow=9.6,SNR=5.2						
WRA	**Warramunga Arr**	**45.43**	**259**	P	P	14 08 50.4	-0.5
	1.2nm,0.4s,baz=97,slow=7.0,SNR=14						
ASAR	**Alice Springs**	**45.59**	**254**	P	P	14 08 51.8	-0.4
	3.8nm,0.6s,baz=90,slow=8.4,SNR=100						
TXAR	**Lajitas Array**	**85.21**	**57**	P	P	14 13 08.8	+0.2
	0.4nm,0.7s,baz=218,slow=7.8,SNR=5.3						

*CSEM **22** 14:19:13.6±0.2, 38°.14N×21°.62E, h29km±1km, MD2.7, Error ellipse: s-maj=7.3km s-min=4.5km az=174.0*
*ATH **22** 14:19:13.5, 38°.13N×21°.63E, h26km±3km, MD2.7/4*
*ISCJB **22** 14:19:14.0±0.8, 38°.14N±0°.08×21°.63E±0°.04, h29km±8km, Error ellipse: s-maj=13.5km s-min=5.8km az=178.6*
*THE **22** 14:19:14.1, 38°.13N×21°.64E, h26km±1km, ML2.3/2, Error ellipse: s-maj=1.8km s-min=0.8km az=20.0*

ISC 22 14:19:14.0±0.7, 38°.15N±0°.08×21°.64E±0°.05, h30km±7km, n18, σ0°68/36, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.18**	**40**	*e*PB	**Pb**	**14 19 19.5**	**-0.5**
UPR				*e*SB	**Sb**	**14 19 23.4**	**-0.7**
UPR	**University Cam**	**0.18**	**40**	*e*Pb	**Pb**	**14 19 19.5**	**-0.5**
UPR				*e*Sb	**Sb**	**14 19 23.4**	**-0.7**
LAKA	**Lakka**	**0.29**	**70**	P	**Pb**	**14 19 20.7**	**-0.6**
LAKA				S	**Sb**	**14 19 25.8**	**-0.4**
LAKA	**Lakka**	**0.29**	**70**	P	**Pb**	**14 19 20.7**	**-0.6**
LAKA				S	**Sb**	**14 19 25.8**	**-0.4**
EFP	**Efpalio**	**0.35**	**37**	P	**Pb**	**14 19 21.9**	**-0.3**
EFP				S	**Sb**	**14 19 28.4**	**+0.6**
EFP	**Efpalio**	**0.35**	**37**	*e*PB	**Pb**	**14 19 22.0**	**-0.2**
EFP				*e*SB	**Sb**	**14 19 27.9**	**+0.1**
EFP	**Efpalio**	**0.35**	**37**	*e*Pb	**Pb**	**14 19 22.0**	**-0.2**
EFP				*e*Sb	**Sb**	**14 19 27.9**	**+0.1**
EFP				S	**Sb**	**14 19 28.4**	**+0.6**
KALE	**Kalithea**	**0.47**	**58**	P	**Pb**	**14 19 23.6**	**-0.3**
KALE				S	**Sb**	**14 19 31.8**	**+1.1**
KALE	**Kalithea**	**0.47**	**58**	P	**Pb**	**14 19 23.6**	**-0.3**
KALE				S	**Sb**	**14 19 31.8**	**+1.1**
GUR	**Goura**	**0.59**	**110**	P	**Pb**	**14 19 25.6**	**-0.4**
GUR				S	**Sb**	**14 19 35.0**	**+0.9**
GUR	**Goura**	**0.59**	**110**	*e*PN	**Pb**	**14 19 25.6**	**-0.4**
GUR				*e*SN	**Sn**	**14 19 34.5**	**-0.6**
GUR	**Goura**	**0.59**	**110**	P	**Pb**	**14 19 25.6**	**-0.4**
GUR				*e*Sn	**Sn**	**14 19 34.5**	**-0.6**
GUR				S	**Sb**	**14 19 35.0**	**+0.9**
DSF	**Desfina**	**0.75**	**69**	P	**Pb**	**14 19 28.1**	**-0.5**
DSF				S	**Sb**	**14 19 39.0**	**+0.5**
DSF	**Desfina**	**0.75**	**69**	P	**Pb**	**14 19 28.1**	**-0.5**
DSF				S	**Sb**	**14 19 39.0**	**+0.5**
VLS	**Valsamata**	**0.83**	**273**	P	**Pn**	**14 19 28.7**	**-0.9**
VLS				S	**Sb**	**14 19 41.8**	**+1.2**
VLS	**Valsamata**	**0.83**	**273**	P	**Pn**	**14 19 28.7**	**-0.9**
VLS				S	**Sb**	**14 19 41.8**	**+1.2**
LTK	**Loutraki**	**1.06**	**96**	*e*PN	**Pn**	**14 19 33.5**	**+0.7**
LTK	**Loutraki**	**1.06**	**96**	*e*Pn	**Pn**	**14 19 33.5**	**+0.7**

*IDC **22** 14:37:08.9±3.6, 62°.94N×151°.06W, h86km±39km, mb3.5/9, mb1 3.6/11, mb1mx3.4/25, mbtmp3.4/11, Error ellipse: s-maj=25.7km s-min=15.4km az=28.0*
*ISCJB **22** 14:37:09.2±0.3, 62°.96N±0°.03×150°.62W±0°.07, h106km±3km, mb3.7/9, Error ellipse: s-maj=5.5km s-min=4.9km az=14.8*
*NEIC **22** 14:37:10.7, 62°.96N×150°.52W, h96km, MG3.4(AEIC), After AEIC.*

ISC 22 14:37:10.4±0.3, 62°.95N±0°.03×150°.60W±0°.07, h98km±4km, n48, σ0°91/54, mb3.7/9, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRF	**Thorofare Moun**	**0.53**	**16**	P	**Pn**	**14 37 26.4**	**+0.2**
TRF				S	**Sn**	**14 37 38.4**	**+0.5**
PPLA	**Purkeypile**	**0.73**	**267**	P	**Pn**	**14 37 28.8**	**+0.9**
PPLA				S	**Sn**	**14 37 41.7**	**+0.8**
RND	**Reindeer**	**0.92**	**59**	P	**Pn**	**14 37 29.7**	**0.0**
RND				S	**Sn**	**14 37 43.6**	**-0.7**
SKT	**Skwentna**	**1.06**	**204**	P	**Pn**	**14 37 31.4**	**+0.1**
MCK	**McKinley**	**1.09**	**43**	*e*Pn	**Pn**	**14 37 31.2**	**-0.4**
BPAW	**Bear Paw Mtn.**	**1.17**	**352**	P	**Pn**	**14 37 32.6**	**0.0**
BPAW				S	**Sn**	**14 37 48.8**	**-0.5**
CHUM	**Lake Minchumin**	**1.22**	**322**	P	**Pn**	**14 37 33.5**	**+0.4**
CHUM				S	**Sn**	**14 37 50.6**	**+0.4**
PMR	**Palmer**	**1.52**	**152**	P	**Pn**	**14 37 36.5**	**-0.3**
SML	**Sawmill**	**1.56**	**136**	P	**Pn**	**14 37 37.3**	**+0.1**
FIB	**Fire Island**	**1.80**	**173**	P	**Pn**	**14 37 42.2**	**+1.9**
RC01	**Rabbit Creek A**	**1.91**	**167**	*e*Pn	**Pn**	**14 37 41.9**	**+0.2**
COLA	**College**	**2.29**	**31**	P	**Pn**	**14 37 46.2**	**-0.3**
PAX	**Paxson**	**2.35**	**87**	P	**Pn**	**14 37 48.0**	**+0.6**
SLKM	**Skilak Lake**	**2.45**	**176**	P	**Pn**	**14 37 49.9**	**+1.1**
IL1	**Eielson Array**	**2.46**	**40**	P	**Pn**	**14 37 48.3**	**-0.6**
TTA	**Tatalina**	**2.47**	**272**	*e*Pn	**Pn**	**14 37 48.0**	**-1.1**
TT01	**Tatalina**	**2.48**	**272**	P	**Pn**	**14 37 49.0**	**0.0**
RSO	**Redoubt South**	**2.69**	**203**	*e*Pn	**Pn**	**14 37 52.6**	**+0.7**
SEW	**Seward**	**2.90**	**169**	P	**Pn**	**14 37 54.6**	**-0.1**
DIV	**Divide**	**2.92**	**127**	P	**Pn**	**14 37 53.5**	**-1.4**
SVW2	**Sparrevohn**	**2.99**	**234**	P	**Pn**	**14 37 56.0**	**+0.2**
DOT	**Dot Lake**	**3.04**	**74**	P	**Pn**	**14 37 56.2**	**-0.3**
MENT	**Mentasta**	**3.15**	**87**	*e*P	**Pn**	**14 37 57.9**	**-0.1**
EYAK	**Cordova Ski Ar**	**3.33**	**134**	P	**Pn**	**14 37 59.8**	**-0.7**
IM3	**Indian Mountai**	**3.34**	**337**	P	**Pn**	**14 38 00.8**	**+0.2**
BMRM	**Bremner River**	**3.46**	**122**	P	**Pn**	**14 38 01.1**	**-1.1**
AUL	**Augustine Lava**	**3.83**	**202**	P	**Pn**	**14 38 09.0**	**+1.8**
BCA3	**Beaver Creek A**	**4.02**	**84**	P	**Pn**	**14 38 09.1**	**-0.7**
COLD	**Coldfoot**	**4.30**	**2**	P	**Pn**	**14 38 14.0**	**+0.4**
EGAK	**Eagle**	**4.56**	**62**	*e*Pn	**Pn**	**14 38 16.5**	**-0.6**
BM3	**Burnt Mountain**	**5.15**	**27**	P	**Pn**	**14 38 25.0**	**0.0**
KDAK	**Kodiak Island**	**5.27**	**192**	P	**Pn**	**14 38 25.4**	**-1.3**
	5.0nm,0.3s,baz=37,slow=9.0,SNR=38						
KDAK				S	**Sn**	**14 39 23.6**	**-2.4**
	13nm,0.3s,baz=356,slow=19,SNR=25						
KDAK	**Kodiak Island**	**5.27**	**192**	P	**Pn**	**14 38 25.6**	**-1.1**
OHAK	**Old Harbor**	**5.90**	**194**	P	**Pn**	**14 38 33.4**	**-1.7**
PNL	**Peninsula**	**6.32**	**116**	*e*Pn	**Pn**	**14 38 41.4**	**+0.5**
CHGN	**Chignik**	**7.75**	**214**	*e*P	**Pn**	**14 39 00.0**	**-0.3**
YKA	**Yellowknife Ar**	**16.38**	**75**	P	**Pn**	**14 40 55.2**	**+1.2**
	0.2nm,0.3s,baz=287,slow=9.7,SNR=5.4						
YKA	**Yellowknife Ar**	**16.38**	**75**	P	**Pn**	**14 40 55.2**	**+1.2**
FX1	**Attu Island--F**	**21.42**	**259**	P	**P**	**14 41 46.7**	**-3.4**
	3.1nm,0.5s,mb3.9,baz=75,slow=20,SNR=6.3						
PDAR	**Pinedale Array**	**31.17**	**111**	P	**P**	**14 43 21.8**	**+2.1**
	0.2nm,0.3s,mb3.3,baz=321,slow=3.8,SNR=4.1						
NVAR	**Mina Array Bea**	**31.34**	**126**	P	**P**	**14 43 23.1**	**+1.8**
	0.4nm,0.6s,mb3.3,baz=318,slow=8.0,SNR=5.4						
SCHQ	**Schefferville**	**41.06**	**61**	P	**P**	**14 44 43.8**	**+0.2**
	0.9nm,0.4s,mb4.0,baz=289,slow=8.0,SNR=3.8						
TXAR	**Lajitas Array**	**45.08**	**116**	P	**P**	**14 45 17.6**	**+1.2**
	0.6nm,0.6s,mb3.5,baz=327,slow=5.9,SNR=12						
TXAR				PcP	PcP	14 46 55.6	+0.3
	0.2nm,0.6s,baz=268,slow=3.8,SNR=3.6						
ZALV	**Zalesovo Beam**	**55.67**	**324**	P	**P**	**14 46 35.0**	**-0.8**
	0.8nm,0.6s,mb4.0,baz=28,slow=6.7,SNR=4.2						
ZALV	**Zalesovo Beam**	**55.67**	**324**	P	**P**	**14 46 35.0**	**-0.8**
FINES	**FINESS Array B**	**55.91**	**2**	P	**P**	**14 46 37.5**	**+0.2**
	0.9nm,0.8s,mb3.9,baz=352,slow=7.0,SNR=3.4						
BVAR	**Borovoye Array**	**59.98**	**333**	P	**P**	**14 47 05.3**	**-0.6**
	0.4nm,0.4s,mb3.8,baz=38,slow=8.8,SNR=3.7						
MKAR	**Makanchi Array**	**62.83**	**322**	P	**P**	**14 47 23.9**	**-1.3**
	0.3nm,0.2s,mb3.8,baz=43,slow=6.5,SNR=3.5						

NEIC 22 14:40:20.8, 51°.87N×177°.58W, h7km, ML3.5(AEIC), After AEIC., Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**0.96**	**76**	*e*Pg	Pg	14 40 39.3	+0.1
AMKA	**Amchitka**	**2.01**	**257**	P	Pn	14 40 54.8	-0.2
AMKA				S	Sn	14 41 20.5	+0.1
FX1	**Attu Island--F**	**5.76**	**284**	P	Pn	14 41 48.1	+1.5
SPIA	**Saint Paul Isl**	**6.81**	**36**	P	Pn	14 42 00.7	-0.3
UNV	**Unalaska Valle**	**6.99**	**69**	P	Pn	14 42 04.5	+1.0

*NEIC **22** 15:03:39.2, 36°.58S×177°.95E, h161km, mb4.4/1, After WEL.*
*IDC **22** 15:03:40.4±2.1, 36°.90S×177°.96E, h180km±15km, mb4.1/4, mb1 4.3/5, mb1mx3.9/14, mbtmp4.1/5, MS2.8/2, Ms1 2.8/2, ms1mx2.5/17, Error ellipse: s-maj=35.9km s-min=28.3km az=32.0*
*ISCJB **22** 15:03:40.4±0.7, 36°.95S±0°.06×177°.7E±0°.1, h179km±5km, mb4.3/7, Error ellipse: s-maj=13.9km s-min=9.9km az=9.8*

ISC 22 15:03:41.1±0.7, 36°.92S±0°.06×177°.7E±0°.1, h173km±5km, n51, σ1°06/44, mb4.3/7, 4C-1D, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	**White Island**	**0.72**	**212**	P	**Pn**	**15 04 06.6**	**+0.5**
MXZ	**Matakaoa Point**	**0.82**	**142**	P	**Pn**	**15 04 05.2**	**-1.6**
MXZ				S	**Sn**	**15 04 24.7**	**-1.9**
PUZ	**Puketiti**	**1.24**	**158**	⇑P	**Pn**	**15 04 09.6**	**-0.4**
PUZ				S	**Sn**	**15 04 33.1**	**+0.6**
URZ	**Urewera**	**1.41**	**198**	P	**Pn**	**15 04 12.6**	**+1.1**
	92nm,0.3s,baz=65,slow=12,SNR=550						
URZ				S	**Sn**	**15 04 37.5**	**+2.3**
	171nm,0.3s,baz=9.5,slow=18,SNR=33						
URZ	**Urewera**	**1.41**	**198**	⇑P	**Pn**	**15 04 12.6**	**+1.1**
MWZ	**Matawai**	**1.42**	**184**	⇑P	**Pn**	**15 04 12.4**	**+0.8**
KUZ	**Kuaotunu**	**1.57**	**276**	⇓P	**Pn**	**15 04 12.8**	**-0.4**
KNZ	**Kokohu**	**2.10**	**180**	P	**Pn**	**15 04 19.5**	**+0.8**
BKZ	**Black Stump Fm**	**2.43**	**202**	P	**Pn**	**15 04 23.8**	**+1.3**
HIZ	**Hauiti**	**2.74**	**234**	P	**Pn**	**15 04 29.5**	**+3.3**
FWVZ	**Far West T-bar**	**2.87**	**215**	P	**Pn**	**15 04 29.9**	**+2.2**
MOVZ	**Moawhango**	**2.91**	**211**	P	**Pn**	**15 04 29.3**	**+1.1**
TSZ	**Takapari Road**	**3.41**	**203**	P	**Pn**	**15 04 34.6**	**+0.2**
WAZ	**Wanganui**	**3.53**	**216**	P	**Pn**	**15 04 37.9**	**+2.0**
DVHZ	**Dannevirke**	**3.57**	**199**	P	**Pn**	**15 04 36.9**	**+0.4**
OUZ	**Omahuta**	**3.71**	**296**	*e*Pn	**Pn**	**15 04 37.3**	**-1.0**
BFZ	**Birch Farm**	**3.92**	**196**	P	**Pn**	**15 04 40.8**	**0.0**
MRZ	**Mangatainoka R**	**4.08**	**203**	P	**Pn**	**15 04 42.4**	**-0.4**
MTW	**Mount Morrison**	**4.55**	**201**	P	**Pn**	**15 04 48.2**	**-0.8**
PAWZ	**Paruwai Farm**	**4.78**	**201**	P	**Pn**	**15 04 51.4**	**-0.6**
MSWZ	**Moikau Station**	**4.87**	**202**	P	**Pn**	**15 04 52.4**	**-0.6**
WEL	**Wellington**	**4.91**	**206**	P	**Pn**	**15 04 53.2**	**-0.4**
SNZO	**South Karori**	**4.95**	**207**	P	**Pn**	**15 04 53.3**	**-0.8**
TCW	**Tory Channel**	**5.03**	**211**	P	**Pn**	**15 04 54.5**	**-0.7**
NNZ	**Nelson**	**5.43**	**217**	P	**Pn**	**15 05 00.1**	**-0.4**
QRZ	**Quartz Range**	**5.59**	**224**	P	**Pn**	**15 05 02.1**	**-0.4**
THZ	**Tophouse**	**6.08**	**216**	P	**Pn**	**15 05 08.7**	**-0.3**
KHZ	**Kahutara**	**6.34**	**209**	P	**Pn**	**15 05 11.9**	**-0.5**
LTZ	**Lake Taylor**	**7.17**	**214**	P	**Pn**	**15 05 21.4**	**-2.0**
RPZ	**Rata Peaks**	**8.46**	**215**	P	**Pn**	**15 05 39.8**	**-0.5**
	0.8nm,0.3s,baz=54,slow=5.8,SNR=7.3						
RPZ				S	**Sn**	**15 07 11.3**	**-3.3**
	1.7nm,0.3s,baz=22,slow=18,SNR=9.2						
ODZ	**Otahua Downs**	**9.69**	**211**	P	**Pn**	**15 05 55.3**	**-1.2**
CTA	**Charters Tower**	**32.11**	**293**	LR	LR	15 21 07.6	
	comp=Z,59nm,21.5s,baz=53,slow=32						
ASAR	**Alice Springs**	**39.70**	**277**	P	**P**	**15 10 57.2**	**+0.8**
	6.0nm,0.6s,mb4.4,baz=119,slow=7.9,SNR=145						
ASAR				PcP	PcP	15 12 57.5	-2.1
	0.5nm,0.5s,baz=119,slow=4.0,SNR=4.8						
ASAR				ScP	ScP	15 16 29.1	-2.9
	0.2nm,0.7s,baz=125,slow=3.9,SNR=4.6						
WRAB	**Tennant Creek**	**41.30**	**282**	*e*P	**P**	**15 11 09.8**	**+0.1**
	5.5nm,0.5s,mb4.4						
WRA	**Warramunga Arr**	**41.30**	**282**	P	**P**	**15 11 10.1**	**+0.5**
	6.6nm,0.6s,mb4.4,baz=120,slow=7.8,SNR=19						
WRA				PcP	PcP	15 13 03.9	-1.0
	1.8nm,0.6s,baz=122,slow=3.2,SNR=6.9						
QSPA	**South Pole Qui**	**53.20**	**180**	P	**P**	**15 12 45.6**	**+4.9**
	12nm,1.2s,mb4.5,baz=316,slow=1.2,SNR=20						
MAW	**Mawson**	**64.93**	**203**	P	**P**	**15 14 03.7**	**+2.2**
	3.1nm,0.8s,mb4.2,baz=83,slow=4.7,SNR=4.8						
SYO	**Syowa Base**	**69.93**	**195**	⇑*e*P	**P**	**15 14 33.0**	**+0.1**
TGY	**Tagaytay City**	**73.64**	**302**	LR	LR	15 46 31.2	
	comp=Z,2.0nm,19.6s,baz=120,slow=35						
KSRS	**Korea Array**	**87.14**	**323**	P	**P**	**15 16 07.0**	**-0.1**
	3.2nm,0.7s,mb4.3,baz=141,slow=5.7,SNR=17						
CMAR	**Chiang Mai Arr**	**92.26**	**291**	P	**P**	**15 16 31.9**	**+0.4**
	1.9nm,0.8s,mb4.2,baz=142,slow=3.3,SNR=13						
HHC	**Hu-ho-hao-te**	**98.25**	**316**	*e*P	**P**	**15 16 57.5**	**-0.8**
HHC				pP	pP	15 17 33.5	-8.3
HHC				sP	sP	15 17 48.6	-11
HHC				PP	PP	15 21 02.6	+1.9
HHC				SKS		15 27 21.0	
HHC				S	S	15 28 10.0	-0.5
HHC				sS	sS	15 29 13.5	-13
HHC				SS	SS	15 35 00.8	+1.8
HHC				pmax	pmax		
	comp=Z,13nm,0.9s						
HHC				pmax	pmax		
	comp=Z,64nm,5.8s						
HHC				LR	LR		
	comp=N,66nm,19.0s						
HHC				LR	LR		
	comp=E,70nm,20.2s						
HHC				LR	LR		
	comp=Z,66nm,17.8s						
MKAR	**Makanchi Array**	**119.09**	**308**	PKP	PKPdf	15 22 05.5	-3.2
	comp=Z,0.2nm,0.2s,baz=106,slow=2.0,SNR=2.2						
ARCES	**ARCESS Array B**	**144.01**	**344**	PKP	PKPdf	15 22 52.8	-1.9
	comp=Z,2.7nm,0.8s,baz=47,slow=2.5,SNR=8.5						
JOF	**Joensuu**	**146.84**	**332**	*ep*	PKPdf	15 22 57.7	-2.0
	comp=Z,3.8nm,0.5s						
JOF	**Joensuu**	**146.84**	**332**	*ep*	PKPdf	15 22 57.7	-2.0
	comp=Z,3.8nm,0.5s						
MMAI	**Mount Meron Ar**	**148.97**	**274**	PKPbc	PKPbc	15 23 08.0	-0.4
	comp=Z,3.1nm,0.5s,baz=90,slow=5.8,SNR=6.9						
KAF	**Kangasniemi**	**149.16**	**334**	*ep*	PKPdf	15 23 03.8	+0.3
	comp=Z,4.2nm,0.6s						
KAF	**Kangasniemi**	**149.16**	**334**	*ep*	PKPdf	15 23 03.8	+0.3
	comp=Z,4.2nm,0.6s						
FINES	**FINESS Array B**	**149.68**	**333**	PKPbc	PKPbc	15 23 06.7	-2.5
	comp=Z,3.0nm,0.6s,baz=26,slow=4.4,SNR=36						
TORD	**Torodi Ar. Bea**	**156.05**	**190**	PKPab	PKPab	15 23 43.4	+0.3
	comp=Z,0.5nm,0.5s,baz=165,slow=2.3,SNR=6.5						

*ISCJB **22** 15:05:44.2±0.2, 47°.96N±0°.01×14°.21E±0°.02, h1km±2km, Error ellipse: s-maj=2.2km s-min=1.7km az=31.2*
*VIE **22** 15:05:45.4±0.1, 47°.89N×14°.23E, h3km±1km, mb2.5/16, ML3.2/19, Error ellipse: s-maj=0.9km s-min=0.7km az=2.0*
10 km NE of Klaus felt 4 ems98 at Molln / UPPER AUSTRIA
*CSEM **22** 15:05:45.6±0.1, 47°.92N×14°.22E, h2km, ML3.5/23, Error ellipse: s-maj=2.1km s-min=1.7km az=132.0*
*NEIC **22** 15:05:45.9±0.9, 47°.86N×14°.19E, h1km±7km, ML3.2(SZGRF), ML3.1(LDG), Error ellipse: s-maj=5.0km s-min=3.3km az=155.0*
*IPEC **22** 15:05:46.2±0.1, 47°.87N×14°.32E, h2km±1km, ML2.5/3, Error ellipse: s-maj=1.3km s-min=1.2km az=107.0*
*PRU **22** 15:05:46.9, 47°.90N×14°.29E, h0km*
*ROM **22** 15:05:46.1±0.4, 48°.02N×14°.44E, h10km, Md2.9/4, Ml2.4/3, Error ellipse: s-maj=9.4km s-min=4.6km az=112.0*
*LDG **22** 15:05:47.6±0.1, 47°.96N×14°.30E, h10km, Ml3.1/24, Error ellipse: s-maj=2.4km s-min=1.9km az=167.0*
*BGR **22** 15:05:48.2±0.7, 47°.96N×14°.28E, h10km, ML3.2, Error ellipse: s-maj=7.8km s-min=5.6km az=120.0*

ISC 22 15:05:46.0±0.2, 47°.93N±0°.01×14°.23E±0°.02, h4km±2km, n180, σ1°16/335, 22C-19D, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOA	**Molln**	**0.09**	**164**	*e*Pg	**Pg**	**15 05 47.2**	**-0.6**
	2μm,0.1s,SNR=4765						
MOA				⇑*e*Sg	**Sg**	**15 05 47.8**	**-1.1**
	5μm,0.1s						
MOA	**Molln**	**0.09**	**164**	*e*Pg	**Pg**	**15 05 47.1**	**-0.6**
	baz=67						
MOA				Sg	**Sg**	**15 05 47.8**	**-1.1**
	5μm,0.1s						
BGLD	**Berchtesgaden**	**0.87**	**252**	⇑*i*Pg	**Pg**	**15 06 03.1**	**+0.5**
BGLD				⇑*i*Sg	**Sg**	**15 06 16.1**	**+2.3**
BGLD	**Berchtesgaden**	**0.87**	**252**	Pg	**Pg**	**15 06 03.1**	**+0.5**
BGLD				Sg	**Sg**	**15 06 16.1**	**+2.3**
GEC2	**GERESS Array S**	**0.98**	**339**	*e*Pg	**Pg**	**15 06 05.7**	**+1.0**
GEC2				*e*Sg	**Sg**	**15 06 19.3**	**+1.9**
GEC2	**GERESS Array S**	**0.98**	**339**	*e*Pg	**Pg**	**15 06 05.7**	**+1.0**
GEC2				*e*Sg	**Sg**	**15 06 19.3**	**+1.9**
GEC2	**GERESS Array S**	**0.98**	**339**	Pg	**Pg**	**15 06 05.7**	**+1.0**
GEC2				Sg	**Sg**	**15 06 19.3**	**+1.9**
RJOB	**Jochberg**	**0.98**	**259**	*e*Pg	**Pg**	**15 06 06.1**	**+1.2**
RJOB				*e*Sg	**Sg**	**15 06 21.2**	**+3.6**
RJOB	**Jochberg**	**0.98**	**259**	Pg	**Pg**	**15 06 06.1**	**+1.2**
RJOB				Sg	**Sg**	**15 06 21.2**	**+3.6**
KBA	**Koelnbreinsper**	**1.04**	**215**	⇑*i*Pg	**Pg**	**15 06 04.9**	**-1.1**
	5.2nm,0.1s						
KBA				⇓*i*Sg	**Sg**	**15 06 19.0**	**-0.5**
	46nm,0.3s						
KBA	**Koelnbreinsper**	**1.04**	**215**	Pg	**Pg**	**15 06 04.9**	**-1.1**
	5.2nm,0.1s						
KBA				Sg	**Sg**	**15 06 19.0**	**-0.5**
	46nm,0.3s						
CONA	**Conrad Observa**	**1.10**	**90**	⇓*e*Pg	**Pg**	**15 06 06.2**	**-0.8**
	12nm,0.1s,SNR=96						
CONA				⇑*i*Sg	**Sg**	**15 06 21.9**	**+0.7**
	50nm,0.1s						
CONA	**Conrad Observa**	**1.10**	**90**	Pg	**Pg**	**15 06 06.2**	**-0.8**
	12nm,0.1s,SNR=96						
CONA				Sg	**Sg**	**15 06 21.9**	**+0.7**
	50nm,0.1s						
ARSA	**Arzberg**	**1.11**	**127**	⇓*e*Pg	**Pg**	**15 06 06.5**	**-0.8**
	12nm,0.3s,SNR=37						
ARSA				⇑*i*Sg	**Sg**	**15 06 21.1**	**-0.6**
	26nm,0.2s						
ARSA	**Arzberg**	**1.11**	**127**	*e*Pg	**Pg**	**15 06 06.6**	**-0.6**
	baz=308						
ARS

WATA Walderalm 1.89 253 *e*Pg **Pg 15 06 21.5 -0.7**
comp=Z,35nm,0.2s,SNR=24
WATA ⇓*i*Sn **Sn 15 06 43.7 +0.4**
WATA ⇑*i*Sg **Sg 15 06 47.7 +1.1**
comp=Z,69nm,0.2s
WATA Walderalm 1.89 253 Pg **Pg 15 06 21.5 -0.7**
comp=Z,35nm,0.2s,SNR=24
WATA Sn **Sn 15 06 43.7 +0.4**
WATA Sg **Sg 15 06 47.7 +1.0**
comp=Z,69nm,0.2s
SCE Schlegeis 1.93 243 ⇑*i*Pn **Pn 15 06 22.3 +2.8**
SCE Schlegeis 1.93 243 Pn **Pn 15 06 22.3 +2.8**
ZST Bratislava 1.94 81 *e*Pn **Pn 15 06 20.8 +1.0**
ZST *e*Sn **Sn 15 06 46.3 +1.7**
ZST Bratislava 1.94 81 *e*PN **Pn 15 06 20.8 +1.0**
ZST *e*SN **Sn 15 06 46.3 +1.7**
ZST Bratislava 1.94 81 *e*Pn **Pn 15 06 20.8 +1.0**
ZST *e*Sn **Sn 15 06 46.3 +1.7**
FUR Furstenfeldbru 2.00 278 *e*Pg **Pg 15 06 24.3 +0.1**
FUR *e*Sg **Sg 15 06 52.0 +2.0**
FUR Furstenfeldbru 2.00 278 *e*Pg **Pg 15 06 24.3 +0.1**
FUR *e*Sg **Sg 15 06 52.0 +2.0**
FUR Furstenfeldbru 2.00 278 Pg **Pg 15 06 24.3 +0.1**
FUR Sg **Sg 15 06 52.0 +2.0**
SABO M.te Sabotino 2.00 193⇓*e*Pn **Pn 15 06 21.4 +0.8**
SABO M.te Sabotino 2.00 193 *e*Pn **Pn 15 06 21.4 +0.9**
CIMO Cimolais 2.03 218 *e*Pn **Pn 15 06 23.5 +2.5**
CIMO Cimolais 2.03 218 *e*Pn **Pn 15 06 23.5 +2.5**
PRU Pruhonice 2.07 6 *e*PG **Pg 15 06 24.9 -0.7**
PRU *e*SG **Sg 15 06 52.3 -0.1**
comp=Z,44nm,0.4s
PRU Pruhonice 2.07 6 *e*Pn **Pn 15 06 23.0 +1.5**
baz=184
PRU Pruhonice 2.07 6 Pg **Pg 15 06 24.9 -0.7**
PRU Sg **Sg 15 06 52.3 -0.1**
comp=Z,44nm,0.4s
VRAC Vranov 2.09 48 *e*Pn **Pn 15 06 22.0 +0.3**
baz=227
VRAC *e*Sg **Sg 15 06 48.5 -4.5**
MOTA Moosalm 2.19 256⇓*e*Pn **Pn 15 06 23.0 -0.2**
SNR=8.0
MOTA ⇑*i*Pg **Pg 15 06 26.9 -1.1**
comp=Z,7.6nm,0.2s
MOTA ⇓*i*Sn **Sn 15 06 51.2 +0.4**
MOTA ⇓*i*Sg **Sg 15 06 57.5 +1.1**
comp=Z,57nm,0.2s
MOTA Moosalm 2.19 256 Pn **Pn 15 06 23.0 -0.2**
SNR=8.0
SMOL Smolenice 2.22 74 *e*Pn **Pn 15 06 24.5 +1.0**
SMOL *e*Sg **Sg 15 06 56.6 -0.6**
SMOL Smolenice 2.22 74 *e*PN **Pn 15 06 24.5 +1.0**
SMOL *e*SG **Sg 15 06 56.6 -0.6**
SMOL Smolenice 2.22 74 *e*Pn **Pn 15 06 24.5 +1.0**
SMOL *e*Sg **Sg 15 06 56.6 -0.6**
RETA Reutte 2.38 260⇑*e*Pg **Pg 15 06 30.7 -0.9**
comp=Z,5.1nm,0.2s,SNR=6.7
RETA ⇓*i*Sn **Sn 15 06 56.3 +0.9**
RETA ⇓*i*Sg **Sg 15 07 03.7 +1.2**
comp=Z,29nm,0.2s
RETA Reutte 2.38 260 Pg **Pg 15 06 30.7 -0.9**
comp=Z,5.1nm,0.2s,SNR=6.7
RETA Sn **Sn 15 06 56.3 +0.8**
RETA Sg **Sg 15 07 03.7 +1.2**
comp=Z,29nm,0.2s
FETA Feichten 2.54 250⇓*i*Pn **Pn 15 06 27.5 -0.5**
FETA ⇑*e*Pg **Pg 15 06 33.8 -0.9**
comp=Z,2.6nm,0.2s,SNR=9.3
FETA ⇓*i*Sn **Sn 15 06 59.5 +0.1**
FETA Feichten 2.54 250 Pn **Pn 15 06 27.5 -0.5**
CTI Castel Tesino 2.58 224 Pg **Pn 15 06 30.5 +2.0**
comp=Z,580nm,7.2s
CTI Castel Tesino 2.58 224 Pg **Pn 15 06 30.5 +2.0**
comp=Z,580nm,7.2s
NKC Novy Kostel 2.58 334 *e*PN **Pn 15 06 28.9 +0.4**
NKC *e*PG **Pg 15 06 34.4 -1.0**
NKC *e*SG **Sg 15 07 10.0 +1.1**
comp=Z,38nm,0.4s
NKC Novy Kostel 2.58 334 Pn **Pn 15 06 28.9 +0.4**
PVCC Panska Ves 2.61 5 *e*PG **Pg 15 06 35.8 -0.1**
PVCC *e*SG **Sg 15 07 09.4 -0.3**
comp=Z,91nm,0.3s
PVCC Panska Ves 2.61 5 Pg **Pg 15 06 35.8 -0.1**
GRA1 Grafenberg Arr 2.66 313 *e*Pn **Pn 15 06 31.2 +1.7**
GRA1 *e*Sg **Sg 15 07 12.2 +1.0**
GRA1 Grafenberg Arr 2.66 313 Pn **Pn 15 06 31.2 +1.7**
GRA1 Sg **Sg 15 07 12.2 +1.0**
GRF Grafenberg Arr 2.66 313 *e*Pn **Pn 15 06 31.2 +1.6**
GRF *e*Sg **Sg 15 07 12.2 +1.0**
GRF Grafenberg Arr 2.66 313 *e*Pn **Pn 15 06 31.2 +1.7**
GRF *e*Sg **Sg 15 07 12.2 +1.0**
GRF Grafenberg Arr 2.66 313 *e*Pn **Pn 15 06 31.2 +1.7**
GRF *e*Sg **Sg 15 07 12.2 +1.0**
TANN Tannenbergstha 2.74 336 *e*Pn **Pn 15 06 32.2 +1.5**
TANN Tannenbergstha 2.74 336 Pn **Pn 15 06 32.2 +1.5**
DPC Dobruska-Polom 2.78 29 *e*PN **Pn 15 06 31.8 +0.5**
DPC *e*PG **Pg 15 06 38.7 -0.6**
DPC *e*SG **Sg 15 07 16.1 +0.8**
comp=Z,44nm,0.5s
DPC Dobruska-Polom 2.78 29 *e*Pn **Pn 15 06 31.7 +0.4**
baz=209
UPC Upice 2.83 24 *e*PG **Pg 15 06 39.1 -1.1**
UPC *e*SG **Sg 15 07 16.5 -0.3**
UPC Upice 2.83 24 Pg **Pg 15 06 39.1 -1.1**
UPC Sg **Sg 15 07 16.5 -0.3**
MORC Moravsky Berou 2.86 49 Pn **Pn 15 06 32.3 -0.1**
MORC Moravsky Berou 2.86 49 *e*Pn **Pn 15 06 32.5 +0.1**
baz=229
BRG Berggiesshubel 2.95 356 PG **Pg 15 06 42.6 +0.1**
BRG SN **Sn 15 07 09.0 -0.4**
BRG SG **Sg 15 07 18.3 -2.3**
comp=Z,31nm,0.6s
BRG Berggiesshubel 2.95 356 Sg **Sg 15 07 19.0 -1.6**
DAVA Damuels 3.01 259⇑*i*Pn **Pn 15 06 34.1 -0.3**
DAVA ⇑*i*Pg **Pg 15 06 42.5 -1.1**
comp=Z,7.1nm,0.2s
DAVA ⇑*i*Sn **Sn 15 07 11.8 +0.8**
DAVA ⇑*i*Sg **Sg 15 07 24.2 +1.5**
comp=Z,25nm,0.2s
DAVA Damuels 3.01 259 Pn **Pn 15 06 34.1 -0.3**
VYHS Vyhne 3.13 78 *e*Pn **Pn 15 06 36.9 +0.8**
VYHS *e*Sn **Sn 15 07 13.5 -0.4**
VYHS Vyhne 3.13 78 *e*PN **Pn 15 06 36.9 +0.8**
VYHS *e*SN **Sn 15 07 13.5 -0.4**
VYHS Vyhne 3.13 78 *e*Pn **Pn 15 06 36.9 +0.8**
VYHS *e*Sn **Sn 15 07 13.5 -0.4**
MOX Moxa 3.21 329 *e*PN **Pn 15 06 38.2 +1.1**
MOX *e*SG **Sg 15 07 28.5 -0.5**
MOX Moxa 3.21 329 *e*Pn **Pn 15 06 38.1 +1.0**
MOX *e*Sg **Sg 15 07 28.5 -0.5**
MOX Moxa 3.21 329 Pn **Pn 15 06 38.1 +1.0**
KSP Ksiaz 3.21 24 *e*Pn **Pg 15 06 46.4 -1.0**
KSP *e*Sn **Sg 15 07 29.3 +0.3**
KSP Ksiaz 3.21 24 *e*Pg **Pg 15 06 47.0 -0.4**
KSP *e*Sg **Sg 15 07 28.5 -0.5**
KSP Ksiaz 3.21 24 *e*Pg **Pg 15 06 47.0 -0.4**
KSP *e*Sg **Sg 15 07 28.5 -0.5**
OKC Ostrava-Krasne 3.21 52 *e*SG **Sg 15 07 27.7 -1.4**
comp=Z,14nm,0.6s
OKC Ostrava-Krasne 3.21 52 Sg **Sg 15 07 27.7 -1.4**
comp=Z,14nm,0.6s
NVLJ Novalja 3.40 172 *e*Pn **Pn 15 06 39.9 +0.1**
NVLJ Sn **Sn 15 07 20.5 -0.1**
NVLJ Novalja 3.40 172 *e*Pn **Pn 15 06 39.9 +0.1**
NVLJ Sn **Sn 15 07 20.4 -0.1**
CLL Collm 3.47 347 *e*Pn **Pn 15 06 41.3 +0.5**
CLL *e*Sn **Sn 15 07 23.0 +0.7**
CLL *i*Sg **Sg 15 07 37.8 +0.4**
CLL Collm 3.47 347 *e*Pn **Pn 15 06 42.0 +1.3**
CLL *e*Sn **Sn 15 07 23.0 +0.7**
CLL *i*Sg **Sg 15 07 37.8 +0.4**
CLL Collm 3.47 347 *e*Pn **Pn 15 06 42.0 +1.3**
CLL *e*Sn **Sn 15 07 23.0 +0.7**
CLL *i* 15 07 35.4
CLL *i*Sg **Sg 15 07 37.8 +0.4**
comp=Z,34nm,0.6s
CLL Collm 3.47 347 Pn **Pn 15 06 41.3 +0.6**
CLL Sn **Sn 15 07 23.0 +0.7**
CLL Sg **Sg 15 07 37.8 +0.4**
BFO Black Forest 3.97 278 *e*Pn **Pn 15 06 48.4 +0.7**
BFO *e*Sn **Sn 15 07 32.6 -2.0**
BFO Black Forest 3.97 278 Pn **Pn 15 06 48.4 +0.8**
BFO Sn **Sn 15 07 32.6 -2.0**

TNS Taunus Mts 4.44 303 *e*Pn **Pn 15 06 55.6 +1.6**
TNS *e*Sg **Sg 15 08 10.2 +1.8**
TNS Taunus Mts 4.44 303 *e*Pn **Pn 15 06 55.6 +1.6**
TNS *e*Sg **Sg 15 08 10.2 +1.8**
TNS Taunus Mts 4.44 303 Pn **Pn 15 06 55.6 +1.6**
TNS Sg **Sg 15 08 10.2 +1.8**
CLZ Clausthal 4.64 329 *e*Sg **Sg 15 08 14.3 -0.6**
CLZ Clausthal 4.64 329 Sg **Sg 15 08 14.3 -0.6**
CDF Champ du Feu 4.68 278 *e*Pg **Pg 15 07 14.0 -1.5**
CDF *e*Sn **Sn 15 07 49.4 -2.6**
CDF *e*Sg **Sg 15 08 14.9 -1.2**
comp=Z,10.0nm,0.3s
CDF Champ du Feu 4.68 278 *e*Pn **Pn 15 06 58.1 +0.8**
CDF *e*Pg **Pg 15 07 14.0 -1.5**
CDF *e*Sn **Sn 15 07 49.4 -2.6**
CDF *e*Sg **Sg 15 08 14.9 -1.2**
CDF Champ du Feu 4.68 278 *e*Pn **Pn 15 06 58.1 +0.8**
CDF Champ du Feu 4.68 278 *e*Pg **Pg 15 07 14.0 -1.5**
CDF *e*Sn **Sn 15 07 49.4 -2.6**
CDF *e*Sg **Sg 15 08 14.9 -1.2**
comp=Z,5.0nm,0.3s
HINF Hinteralfeld 4.96 271 *e*Pg **Pg 15 07 19.5 -1.6**
HINF *e*Sn **Sn 15 07 55.9 -3.2**
HINF *e*Sg **Sg 15 08 24.0 -1.4**
comp=Z,9.2nm,0.5s
HINF Hinteralfeld 4.96 271 *e*Pn **Pn 15 07 00.7 -0.6**
HINF *e*Pg **Pg 15 07 19.5 -1.6**
HINF *e*Sn **Sn 15 07 55.9 -3.2**
HINF *e*Sg **Sg 15 08 24.0 -1.4**
HINF Hinteralfeld 4.96 271 *e*Pn **Pn 15 07 00.7 -0.6**
HINF Hinteralfeld 4.96 271 *e*Pg **Pg 15 07 19.5 -1.6**
HINF *e*Sn **Sn 15 07 55.9 -3.2**
HINF *e*Sg **Sg 15 08 24.0 -1.4**
comp=Z,4.6nm,0.5s
HAU Haudompre 5.29 274 *e*Pg **Pg 15 07 25.4 -2.0**
HAU *e*Sn **Sn 15 08 04.1 -3.1**
HAU *e*Sg **Sg 15 08 33.9 -2.0**
comp=Z,10nm,0.3s
HAU Haudompre 5.29 274 *e*Pn **Pn 15 07 04.9 -0.9**
HAU *e*Pg **Pg 15 07 25.4 -2.0**
HAU *e*Sn **Sn 15 08 04.1 -3.1**
HAU *e*Sg **Sg 15 08 33.9 -2.0**
HAU Haudompre 5.29 274 *e*Pn **Pn 15 07 04.9 -0.9**
HAU Haudompre 5.29 274 *e*Pg **Pg 15 07 25.4 -2.0**
HAU *e*Sn **Sn 15 08 04.1 -3.1**
HAU *e*Sg **Sg 15 08 33.9 -2.0**
comp=Z,5.1nm,0.3s
WLF Walferdange 5.61 291 *e*Pn **Pn 15 07 12.2 +2.1**
WLF Walferdange 5.61 291 Pn **Pn 15 07 12.2 +2.1**
LPG La Plagne 5.69 247 *e*Pn **Pn 15 07 11.1 -0.1**
LPG *e*Sn **Sn 15 08 14.0 -3.0**
comp=Z,2.8nm,0.4s
LPG La Plagne 5.69 247 *e*Pn **Pn 15 07 11.1 -0.1**
LPL La Plagne 5.69 248 *e*Pn **Pn 15 07 11.1 -0.2**
LPL *e*Sn **Sn 15 08 13.9 -3.1**
comp=Z,1.3nm,0.2s
LPL La Plagne 5.69 248 *e*Pn **Pn 15 07 11.1 -0.2**
CABF La Chapelle 5.70 260 *e*Pn **Pn 15 07 11.2 -0.1**
CABF *e*Sn **Sn 15 08 12.0 -5.1**
comp=Z,2.9nm,0.3s
CABF La Chapelle 5.70 260 *e*Pn **Pn 15 07 11.2 -0.1**
MBDF Montbardon 6.08 241 *e*Pn **Pn 15 07 16.3 -0.3**
MBDF *e*Sn **Sn 15 08 22.9 -3.6**
comp=Z,3.5nm,0.4s
MBDF Montbardon 6.08 241 *e*Pn **Pn 15 07 16.3 -0.3**
MEZF Maizieres J'vi 6.16 279 *e*Pn **Pn 15 07 17.1 -0.6**
baz=102
MEZF *e*Sn **Sn 15 08 24.6 -3.9**
MEZF *e*Sg **Sg 15 09 01.0 -2.7**
comp=Z,3.2nm,0.3s
MEZF Maizieres J'vi 6.16 279 *e*Pn **Pn 15 07 17.1 -0.6**
baz=102
SFTF Sexfontaines 6.17 276 *e*Pg **Pg 15 07 41.5 -2.5**
baz=103
SFTF *e*Sn **Sn 15 08 24.1 -4.6**
SFTF *e*Sg **Sg 15 09 01.4 -2.5**
comp=Z,3.7nm,0.4s
SFTF Sexfontaines 6.17 276 *e*Pn **Pn 15 07 16.7 -1.1**
SFTF *e*Pg **Pg 15 07 41.5 -2.5**
SFTF *e*Sn **Sn 15 08 24.1 -4.6**
SFTF *e*Sg **Sg 15 09 01.4 -2.5**
SFTF Sexfontaines 6.17 276 *e*Pn **Pn 15 07 16.7 -1.1**
SFTF Sexfontaines 6.17 276 *e*Pg **Pg 15 07 41.5 -2.5**
baz=103
SFTF *e*Sg **Sg 15 09 01.4 -2.5**
comp=Z,1.9nm,0.4s
ORIF Oris-en-Rattie 6.51 245 *e*Pn **Pn 15 07 22.2 -0.3**
ORIF *e*Sn **Sn 15 08 33.2 -4.0**
comp=Z,4.8nm,0.4s
ORIF Oris-en-Rattie 6.51 245 *e*Pn **Pn 15 07 22.2 -0.3**
GIVF Givet 6.56 293 *e*Pn **Pn 15 07 24.4 +1.3**
GIVF *e*Sn **Sn 15 08 33.0 -5.3**
comp=Z,3.6nm,0.3s
GIVF Givet 6.56 293 *e*Pn **Pn 15 07 24.4 +1.3**
FRF La Foret Royal 6.87 233 *e*Pn **Pn 15 07 26.9 -0.6**
FRF *e*Sn **Sn 15 08 41.6 -4.5**
comp=Z,1.4nm,0.3s
FRF La Foret Royal 6.87 233 *e*Pn **Pn 15 07 26.9 -0.6**
BAIF Baives 6.93 292 *e*Pn **Pn 15 07 29.6 +1.4**
BAIF *e*Sn **Sn 15 08 42.6 -4.8**
comp=Z,1.3nm,0.3s
BAIF Baives 6.93 292 *e*Pn **Pn 15 07 29.6 +1.4**
LOR Lormes 7.04 268 *e*Pn **Pn 15 07 29.3 -0.5**
baz=90
LOR *e*Sn **Sn 15 08 46.0 -4.3**
comp=Z,1.1nm,0.2s
LOR Lormes 7.04 268 *e*Pn **Pn 15 07 29.3 -0.5**
baz=90
SMF Signal de Mont 7.18 264 *e*Pn **Pn 15 07 31.2 -0.5**
SMF *e*Sn **Sn 15 08 48.0 -5.7**
comp=Z,3.6nm,0.4s
SMF Signal de Mont 7.18 264 *e*Pn **Pn 15 07 31.2 -0.5**
SMRF Simiane la Rot 7.21 240 *e*Pn **Pn 15 07 31.6 -0.5**
SMRF *e*Sn **Sn 15 08 49.9 -4.6**
comp=Z,0.6nm,0.3s
SMRF Simiane la Rot 7.21 240 *e*Pn **Pn 15 07 31.6 -0.5**
VIVF Saint-Julien-l 7.29 249 *e*Pn **Pn 15 07 32.6 -0.6**
VIVF *e*Sn **Sn 15 08 51.6 -4.7**
comp=Z,2.2nm,0.3s
VIVF Saint-Julien-l 7.29 249 *e*Pn **Pn 15 07 32.6 -0.6**
SSF Saint Saulge 7.32 267 *e*Pn **Pn 15 07 32.7 -0.9**
SSF *e*Sn **Sn 15 08 52.2 -4.8**
comp=Z,0.9nm,0.3s
SSF Saint Saulge 7.32 267 *e*Pn **Pn 15 07 32.7 -0.9**
AVF Avril sur Loir 7.48 265 *e*Pn **Pn 15 07 34.9 -0.8**
AVF *e*Sn **Sn 15 08 56.0 -4.9**
comp=Z,1.5nm,0.4s
AVF Avril sur Loir 7.48 265 *e*Pn **Pn 15 07 34.9 -0.8**
HYF Humbligny 7.86 269 *e*Pn **Pn 15 07 40.3 -0.8**
HYF *e*Sn **Sn 15 09 05.3 -5.2**
HYF Humbligny 7.86 269 *e*Pn **Pn 15 07 40.3 -0.8**
BGF Bois d'Agland 7.87 264 *e*Pn **Pn 15 07 40.4 -0.7**
BGF *e*Sn **Sn 15 09 05.5 -5.1**
comp=Z,3.9nm,0.3s
BGF Bois d'Agland 7.87 264 *e*Pn **Pn 15 07 40.4 -0.7**
LASF Ste Croix 8.19 246 *e*Pn **Pn 15 07 44.7 -0.8**
LASF *e*Sn **Sn 15 09 13.1 -5.3**
comp=Z,8.9nm,0.7s
LASF Ste Croix 8.19 246 *e*Pn **Pn 15 07 44.7 -0.8**
TCF Toulx Ste Croi 8.36 263 *e*Pn **Pn 15 07 47.5 -0.4**
TCF *e*Sn **Sn 15 09 17.3 -5.5**
comp=Z,1.8nm,0.2s
TCF Toulx Ste Croi 8.36 263 *e*Pn **Pn 15 07 47.5 -0.4**

IDC ***22*** *15:21:57.2±1.1, 7°.89S×128°.84E, h0km, mb4.0/3, mb1 4.1/6, mb1mx3.8/17, mbtmp4.0/6, ML3.8/3, Error ellipse: s-maj=70.5km s-min=21.0km az=71.0*
ISCJB ***22*** *15:22:03.4±3.3, 8°.2S±0°.1×128°.7E±0°.1, h69km±36km, mb3.7/3, Error ellipse: s-maj=25.7km s-min=16.7km az=37.4*
NEIC ***22*** *15:22:04.4±2.8, 8°.02S×128°.63E, h51km±29km, Error ellipse: s-maj=25.1km s-min=18.0km az=180.0*
ISC 22 15:22:03.2±2.7, 8°.1S±0°.1×128°.7E±0°.1, h44km±30km**, n15, σ1§18/16, mb3.9/3, Timor Sea**
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KAKA Kakadu 5.88 142 *e*P **Pn 15 23 28.9 +1.0**
114nm,0.5s
FITZ Fitzroy Crossi 10.43 197 Pn **Pn 15 24 31.4 +1.2**
1.2nm,0.3s,baz=28,slow=7.7,SNR=57
FITZ Sn **Sn 15 26 25.1 -0.7**
2.0nm,0.3s,baz=18,slow=13,SNR=7.4
FITZ Fitzroy Crossi 10.43 197 *e*P **Pn 15 24 32.6 +2.4**
FITZ Sn **Sn 15 26 25.1 -0.7**
WRAB Tennant Creek 12.99 156 *e*P **Pn 15 25 03.4 -1.9**
WRA Warramunga Arr 13.00 156 Pn **Pn 15 25 03.6 -1.8**
0.5nm,0.3s,baz=337,slow=13,SNR=6.9
WRA Sn Sx 15 27 21.2
1.9nm,0.3s,baz=332,slow=22,SNR=7.4
WRA Warramunga Arr 13.00 156 Pn **Pn 15 25 03.6 -1.7**
WRA Sn Sx 15 27 21.2
COEN Coen 15.33 114 *e*P **Pn 15 25 40.6 +4.0**
MBWA Marble Bar 15.66 213 P **Pn 15 25 41.8 +0.9**
ASAR Alice Springs 16.29 163 Pn **Pn 15 25 48.5 -0.4**
0.2nm,0.3s,baz=335,slow=8.2,SNR=26
ASAR Sn Sx 15 28 40.6
0.4nm,0.3s,baz=348,slow=26,SNR=4.7
STKA Stephens Creek 26.55 155 P **P 15 27 37.8 +0.8**
1.6nm,0.7s,mb3.7,baz=302,slow=9.2,SNR=4.1
STKA Stephens Creek 26.55 155 P **P 15 27 39.1 +2.1**
MK31 Makanchi Array 68.43 328 *e*P **P 15 32 60.0 -0.6**
MKAR Makanchi Array 68.43 328 P **P 15 33 00.6 0.0**
1.3nm,0.6s,mb4.2,baz=115,slow=8.3,SNR=10
ZALV Zalesovo Beam 71.98 334 P **P 15 33 21.5 -0.6**
0.6nm,0.5s,mb3.8,baz=123,slow=7.1,SNR=3.3
TXAR Lajitas Array 126.53 59 PKP PKPdf 15 41 03.3 +1.1
0.1nm,0.4s,baz=224,slow=3.4,SNR=3.7

IDC 22 16:10:22.2±2.3, 17°.04S×176°.74W, h0km, mb4.2/3, mb1 4.4/4, mb1mx3.9/17, mbtmp4.2/4, ML2.5/1, Error ellipse: s-maj=171.3km s-min=30.7km az=152.0, Fiji Islands region
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AFI Afiamalu 5.71 58 Pn Pn 16 11 48.5 +0.1
7.9nm,0.3s,baz=233,slow=15,SNR=14
STKA Stephens Creek 40.44 241 P P 16 18 03.0 +0.4
0.9nm,0.3s,baz=93,slow=11,SNR=5.2
WRA Warramunga Arr 46.36 258 P P 16 18 50.3 -0.3
0.4nm,0.3s,baz=96,slow=7.1,SNR=5.6
ASAR Alice Springs 46.56 253 P P 16 18 51.9 -0.3
9.9nm,0.5s,baz=88,slow=8.5,SNR=390

MEX 22 16:31:03.2±1.1, 17°.15N×94°.46W, h146km±21km**, MD4.0, Chiapas**
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
TGIG 1.33 106 *e*P Pn 16 31 29.1 -1.6
TGIG *i*S Sn 16 31 49.4 -2.3
PCIG 1.87 140 *i*P Pn 16 31 36.0 -0.6
PCIG *i*S Sn 16 32 01.0 -1.0
HUIG Huatulco 2.09 229 *i*P Pn 16 31 36.6 -2.5
HUIG *i*S Sn 16 32 04.9 -1.8
VHO Vista Hermosa 2.17 268 *i*P Pn 16 31 39.9 -0.2
VHO *i*S Sn 16 32 07.8 -0.6
TPIG Tehuac#an 3.04 295 *i*P Pn 16 31 50.1 -0.7
TPIG *i*S Sn 16 32 27.7 0.0
UTMO Huajuapan 3.26 283 *i*P Pn 16 31 53.2 -0.5
UTMO *i*S Sn 16 32 30.2 -2.5
PNIG Pinotepa 3.59 258 *i*P Pn 16 31 57.1 -0.8
PNIG *i*S Sn 16 32 37.6 -2.9
PPM Popocatepetl 4.40 296 *i*P Pn 16 32 08.0 -0.5
PPM *i*S Sn 16 32 58.8 -0.6

ISCJB ***22*** *16:47:47.4±0.4, 34°.41N±0°.03×24°.20E±0°.04, h47km±5km, mb3.8/10, MS3.4/5, Error ellipse: s-maj=6.3km s-min=4.3km az=138.8*
CSEM ***22*** *16:47:49.2±0.2, 34°.48N×24°.16E, h40km, MD3.7, Error ellipse: s-maj=8.0km s-min=5.4km az=40.0*
IDC ***22*** *16:47:50.9±1.5, 34°.57N×24°.28E, h47km±15km, mb3.7/10, mb1 3.8/17, mb1mx3.7/34, mbtmp3.8/17, ML3.9/7, MS3.2/8, Ms1 3.2/8, ms1mx2.9/37, Error ellipse: s-maj=19.5km s-min=15.6km az=171.0*
NEIC ***22*** *16:47:51.5, 34°.70N×24°.25E, h31km, mb3.5/5, MD3.7(ATH), After ATH.*
ATH ***22*** *16:47:51.5, 34°.70N×24°.25E, h31km±2km, MD3.7/13*
HLW ***22*** *16:47:53.1, 34°.35N×24°.55E, h26km±18km, Md3.8, Ml3.7*
ISC 22 16:47:48.6±0.6, 34°.47N±0°.03×24°.18E±0°.04, h30km±5km**, n144, σ1§26/155, mb3.8/10, MS3.4/5, Crete**
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GVD Gavdhos 0.38 349 *e*Pb **Pb 16 47 57.5 +0.4**
GVD *e*Sb **Sb 16 48 02.2 -0.8**
GVD Gavdhos 0.38 349 *e*PB **Pb 16 47 57.5 +0.4**
GVD *e*SB **Sb 16 48 02.2 -0.8**
GVD Gavdhos 0.38 349 *e*Pb **Pb 16 47 57.5 +0.4**
GVD *e*Sb **Sb 16 48 02.2 -0.8**
SIVA Sivas 0.76 43 *e*Pn **Pn 16 48 04.0 +0.8**
SIVA Sivas 0.76 43 *e*PN **Pn 16 48 04.0 +0.8**
SIVA Sivas 0.76 43 *e*Pn **Pn 16 48 04.0 +0.8**
VAM Vamos 0.94 1 *e*Pn **Pn 16 48 06.6 +0.9**
VAM *e*Sn **Sn 16 48 16.3 -1.8**
VAM Vamos 0.94 1 *e*PN **Pn 16 48 06.6 +0.9**
VAM *e*SN **Sn 16 48 16.3 -1.8**
VAM Vamos 0.94 1 *e*Pn **Pn 16 48 06.6 +0.9**
VAM *e*Sn **Sn 16 48 16.3 -1.8**
KARN Karanos 0.96 347 *e*PN **Pn 16 48 06.8 +0.8**
KARN *e*SN **Sn 16 48 16.8 -1.8**
KARN Karanos 0.96 347 *e*Pn **Pn 16 48 06.8 +0.8**
KARN *e*Sn **Sn 16 48 16.8 -1.8**
IDI Anoyia 1.01 35 P **Pn 16 48 07.6 +1.0**
55nm,0.3s,baz=206,slow=16,SNR=133
IDI Anoyia 1.01 35 P **Pn 16 48 07.6 +1.0**
LAST Lasithi 1.27 57 *e*Pn **Pn 16 48 12.6 +2.3**
LAST Lasithi 1.27 57 *e*PN **Pn 16 48 12.6 +2.3**
LAST Lasithi 1.27 57 *e*Pn **Pn 16 48 12.6 +2.3**
NPS Neapolis 1.42 56 *e*Pn **Pn 16 48 14.8 +2.4**
NPS Neapolis 1.42 56 *e*PN **Pn 16 48 14.8 +2.4**
NPS Neapolis 1.42 56 *e*Pn **Pn 16 48 14.8 +2.4**
ZKR Zakros 1.80 68 *e*Pb **Pb 16 48 20.1 -0.8**
ZKR Zakros 1.80 68 *e*PB **Pb 16 48 20.1 -0.8**
ZKR Zakros 1.80 68 *e*Pb **Pb 16 48 20.1 -0.8**
KYTH Kithira 2.04 333 *e*Pb **Pb 16 48 24.6 -0.3**
KYTH Kithira 2.04 333 *e*PB **Pb 16 48 24.6 -0.3**
KYTH Kithira 2.04 333 *e*Pb **Pb 16 48 24.6 -0.3**
VLI Veliai 2.46 336 *e*Pb **Pb 16 48 29.9 -2.3**
VLI Veliai 2.46 336 *e*PB **Pb 16 48 29.9 -2.3**
VLI Veliai 2.46 336 *e*Pb **Pb 16 48 29.9 -2.3**
KARP Karpathos 2.68 65 *e*Pn **Pn 16 48 32.5 +2.9**
KARP Karpathos 2.68 65 *e*PN **Pn 16 48 32.5 +2.9**
KARP Karpathos 2.68 65 *e*Pn **Pn 16 48 32.5 +2.9**
APE Apeiranthos 2.82 23 *e*Pn **Pn 16 48 32.2 +0.6**
APE Apeiranthos 2.82 23 *e*PN **Pn 16 48 32.2 +0.6**
APE Apeiranthos 2.82 23 *e*Pn **Pn 16 48 32.2 +0.6**
SLUM 3.09 163 P **Pn 16 48 36.2 +0.8**
baz=168
SLUM AMP 16 49 00.0
comp=E,150μm,0.4s,logA/T=5.6,baz=168
SLUM 3.09 163 P **Pn 16 48 36.2 +0.9**
ITM Ithomi 3.27 327 *e*Pn **Pn 16 48 40.7 +3.0**
ITM Ithomi 3.27 327 *e*PN **Pn 16 48 40.7 +3.0**
ITM Ithomi 3.27 327 *e*Pn **Pn 16 48 40.7 +3.0**
VLY Voula,Athens 3.39 355 P **Pn 16 48 41.5 +2.1**
VLY Voula,Athens 3.39 355 P **Pn 16 48 41.5 +2.1**
ARG Arkhangelos 3.67 60 *e*Pn **Pn 16 48 45.2 +1.9**
ARG Arkhangelos 3.67 60 *e*PN **Pn 16 48 45.2 +1.9**
ARG Arkhangelos 3.67 60 *e*Pn **Pn 16 48 45.2 +1.9**
TURN Turunc 4.33 55 *i*P **Pn 16 48 47.9 -4.5**
TURN Turunc 4.33 55 *i*P **Pn 16 48 47.9 -4.4**
AKAS Kas 4.77 67 *i*P **Pn 16 48 58.1 -0.3**
AKAS Kas 4.77 67 *i*P **Pn 16 48 58.1 -0.3**
AKAS *i*S **Sn 16 49 51.8 -0.9**
DNZL Cakiroluk 5.09 49 *i*P **Pn 16 49 03.3 +0.5**
DNZL Cakiroluk 5.09 49 *i*P **Pn 16 49 03.3 +0.6**
DNZL *i*S **Sn 16 50 00.6 +0.1**
SWA2 5.32 168 P **Pn 16 49 06.8 +0.8**
baz=171
SWA2 AMP 16 50 00.0
comp=E,140μm,0.4s,logA/T=5.6,baz=171
SWA2 S **Sn 16 50 02.8 -3.5**
baz=171
SWA2 5.32 168 P **Pn 16 49 06.8 +0.8**
SWA2 S **Sn 16 50 02.8 -3.5**
GAZI Gazipasa 6.88 73 *i*P **Pn 16 49 23.8 -3.6**
AWBH 7.34 145 P **Pn 16 49 33.5 -0.2**
baz=147

AWBH		7.34 145	P	Pn	16 49 33.5	-0.2
TIP	Timpagrande	7.58 310	ePn	Pn	16 49 37.0	+0.1
	comp=E,7.7nm,0.5s					
TIP	Timpagrande	7.58 310	ePn	Pn	16 49 37.0	0.0
	comp=E,7.7nm,0.5s					
CEL	Celeste	7.68 302	ePn	Pn	16 49 39.2	+0.9
	comp=E,13nm,0.5s					
CEL	Celeste	7.68 302	ePn	Pn	16 49 39.2	+0.9
	comp=E,13nm,0.5s					
KOT	Kottamia	7.91 123	S	Sn	16 51 02.5	-7.4
	baz=123					
HSAF	As Saff	7.91 126	P	Pn	16 49 40.5	-1.0
	baz=126					
HSAF	As Saff	7.91 126	P	Pn	16 49 40.5	-1.0
GLL	Jalalah	8.04 125	P	Pn	16 49 42.4	-0.9
	baz=126					
GLL	Jalalah	8.04 125	P	Pn	16 49 42.4	-0.9
HHAG	Hagoal	8.08 122	S	Sn	16 51 06.2	-8.0
	baz=122					
VAE	Valguarnera	8.47 294	P	Pn	16 49 51.9	+2.8
	comp=E,2.1nm,0.3s,baz=117,slow=6.8,SNR=2.7					
VAE			LR	LR	16 53 09.1	
	comp=E,91nm,21.0s,baz=278,slow=37					
VAE	Valguarnera	8.47 294	P	Pn	16 49 51.9	+2.8
AMAG	Maghara	8.52 114	P	Pn	16 49 48.7	-1.2
	baz=114					
AMAG	Maghara	8.52 114	P	Pn	16 49 48.7	-1.2
BR131	Keskin Array S	9.20 52	Pn	Pn	16 50 01.9	+2.7
	comp=E,2.1nm,0.6s					
BR131	Keskin Array S	9.20 52	Pn	Pn	16 50 01.9	+2.7
	comp=E,2.1nm,0.6s					
MMAI	Mount Meron Ar	9.46 96	P	Sn	16 50 00.8	-2.0
	comp=E,4.2nm,0.3s,baz=288,slow=11,SNR=11					
MMAI			S	Sn	16 51 41.8	-6.3
	comp=E,3.4nm,0.3s,baz=295,slow=22,SNR=4.7					
HDK1	Dakhla	9.98 152	P	Pn	16 50 10.3	+0.4
	baz=153					
HDK1	Dakhla	9.98 152	P	Pn	16 50 10.3	+0.4
EIL	Elat	10.31 115	P	Pn	16 50 13.8	-0.7
	comp=E,2.1nm,0.3s,baz=321,slow=12,SNR=13					
EIL			S	Sn	16 52 00.8	-8.2
	comp=E,1.0nm,0.3s,baz=9.5,slow=18,SNR=3.6					
EIL	Elat	10.31 115	P	Pn	16 50 13.8	-0.7
ASF	Jabal al Asfar	10.89 99	P	Pn	16 50 21.5	-0.8
	comp=E,1.2nm,0.3s,baz=297,slow=2.3,SNR=7.8					
ASF			S	Sn	16 52 17.7	-5.4
	comp=E,0.1nm,0.3s,baz=246,slow=20,SNR=3.6					
MLR	Muntele Rosu	11.09 6	P	Pn	16 50 26.2	+1.2
	comp=E,0.0nm,0.3s,baz=180,slow=20,SNR=1.8					
MLR	Muntele Rosu	11.09 6	P	Pn	16 50 26.2	+1.1
KEST	Kesra	12.21 280	LR	LR	16 57 09.7	
	comp=E,22nm,18.5s,baz=207,slow=46					
NVLJ	Novalja	12.37 327	ePn	Pn	16 50 42.5	0.0
NVLJ			Sn	Sn	16 52 51.2	-8.0
NVLJ	Novalja	12.37 327	ePn	Pn	16 50 42.5	0.0
VRAC	Vranov	15.85 342	P	Pn	16 51 30.0	+0.5
	comp=E,0.3nm,0.3s,baz=130,slow=7.9,SNR=2.1					
VRAC	Vranov	15.85 342	P	Pn	16 51 30.0	+0.6
DAVOX	Davos/Dischmat	16.37 323	P	Pn	16 51 36.4	+0.3
	comp=E,0.2nm,0.3s,baz=180,slow=19,SNR=1.9					
DAVOX	Davos/Dischmat	16.37 323	P	Pn	16 51 36.4	+0.4
KIEV	Kiev	16.63 11	ePn	Pn	16 51 41.0	+1.7
	comp=E,5.5nm,0.6s					
KIEV	Kiev	16.63 11	ePn	Pn	16 51 41.0	+1.7
	comp=E,5.5nm,0.6s					
AKASG	Malin Array Be	16.64 11	P	Pn	16 51 40.0	+0.6
	comp=E,1.6nm,0.3s,baz=204,slow=10,SNR=9.9					
AKASG	Malin Array Be	16.64 11	P	Pn	16 51 40.0	+0.6
AKBB	Malin Array Si	16.64 11	P	Pn	16 51 40.0	+0.6
AKBB	Malin Array Si	16.64 11	P	Pn	16 51 40.0	+0.6
MBDF	Montbardon	16.85 313	eP	Pn	16 51 38.2	-3.9
GNI	Garni	17.30 65	LR	LR	16 59 52.1	
	comp=E,78nm,20.9s,baz=272,slow=42					
GRA1	Grafenberg Arr	17.95 332	eP	Pn	16 52 01.7	+5.9
	comp=E,3.0nm,1.0s					
GRF	Grafenberg Arr	17.95 332	eP	Pn	16 52 01.7	+5.9
	comp=Z,3.0nm,1.0s					
CABF	La Chapelle	18.28 317	eP	Pn	16 51 57.7	-2.1
	comp=Z,29nm,1.3s					
CABF	La Chapelle	18.28 317	eP	Pn	16 51 57.7	-2.1
	comp=Z,15nm,1.3s					
CABF	La Chapelle	18.28 317	eP	Pn	16 51 57.7	-2.1
	comp=Z,15nm,1.3s					
HINF	Hinteralfeld	18.60 321	eP	Pn	16 52 01.7	-2.0
	comp=Z,4.3nm,0.7s					
HINF	Hinteralfeld	18.60 321	eP	Pn	16 52 01.7	-2.0
	comp=Z,2.2nm,0.7s					
HINF	Hinteralfeld	18.60 321	eP	Pn	16 52 01.7	-2.0
	comp=Z,2.2nm,0.7s					
CDF	Champ du Feu	18.77 323	eP	Pn	16 52 04.2	-1.6
CDF	Champ du Feu	18.77 323	eP	Pn	16 52 04.2	-1.6
HAU	Haudompre	18.98 321	eP	Pn	16 52 06.9	-1.4
HAU	Haudompre	18.98 321	eP	Pn	16 52 06.9	-1.4
SMF	Signal de Mont	19.60 314	eP	Pn	16 52 14.0	-1.7
SMF	Signal de Mont	19.60 314	eP	Pn	16 52 14.0	-1.7
SSF	Saint Saulge	20.01 315	eP	P	16 52 18.5	-0.2
SSF	Saint Saulge	20.01 315	eP	P	16 52 18.5	-0.2
MIB	Mutribah	20.14 97	eP	P	16 52 19.7	-0.6
MIB			AMb	AMB	16 52 20.2	
	comp=Z,10nm,1.3s					
MIB	Mutribah	20.14 97	eP	P	16 52 19.7	-0.6
	comp=Z,10.0nm,1.3s					
NAY	Al-Naaiem	20.25 99	eP	P	16 52 21.8	+0.3
NAY			AMb	AMB	16 52 25.1	
	comp=Z,15nm,1.2s					
NAY	Al-Naaiem	20.25 99	eP	P	16 52 21.8	+0.3
	comp=Z,15nm,1.2s					
UMR	Umm Al-Rimmam	20.54 97	eP	P	16 52 24.3	-0.3
UMR			AMb	AMB	16 52 25.2	
	comp=Z,27nm,1.1s					
UMR	Umm Al-Rimmam	20.54 97	eP	P	16 52 24.3	-0.3
	comp=Z,27nm,1.1s					
ETSF	Etsaut	21.01 301	eP	P	16 52 34.2	+4.6
ESDC	Sonseca Array	23.00 291	P	P	16 52 52.8	+1.9
	comp=Z,0.9nm,0.6s,mb3.4,baz=79,slow=9.6,SNR=6.8					
ESDC	Sonseca Array	23.00 291	P	P	16 52 52.8	+2.0
MDT	Midelt	24.00 274	LR	LR	17 04 32.0	
	comp=Z,61nm,19.0s,MS3.1,baz=148,slow=42					
HFS	Hagfors	26.58 348	P	P	16 53 23.1	-0.6
	comp=Z,1.8nm,0.4s,mb3.9,baz=167,slow=14,SNR=8.9					
HFS	Hagfors	26.58 348	P	P	16 53 23.1	-0.6
FINES	FINESS Array B	27.02 2	P	P	16 53 26.0	-1.7
	comp=Z,2.8nm,1.0s,mb3.8,baz=165,slow=9.2,SNR=6.5					
FINES			LR	LR	17 04 53.8	
	comp=Z,70nm,21.8s,MS3.2,baz=326,slow=38					
FINES	FINESS Array B	27.02 2	P	P	16 53 26.0	-1.7
NB2	NORSAR Subarra	27.87 346	P	P	16 53 34.8	-0.5
	comp=Z,1.7nm,0.7s,mb3.8,baz=150,slow=11					
NOA	NORSAR Array B	27.87 346	P	P	16 53 34.9	-0.5
	comp=Z,0.7nm,0.4s,mb3.6,baz=152,slow=8.6,SNR=7.0					
NOA	NORSAR Array B	27.87 346	P	P	16 53 34.8	-0.5
AKTK	Aktyubinsk	29.31 47	P	P	16 53 47.7	-0.5
AKTK	Aktyubinsk	29.31 47	P	P	16 53 47.7	-0.6
AKTO	Aktyubinsk	29.31 47	P	P	16 53 47.7	-0.5
	comp=Z,0.9nm,0.5s,mb3.8,baz=242,slow=10,SNR=4.5					
TORD	Torodi Ar. Bea	29.43 229	P	P	16 53 51.5	+2.0
	comp=Z,1.0nm,0.5s,mb3.8,baz=34,slow=9.0,SNR=21					
ARCES	ARCESS Array B	35.13 1	P	P	16 54 37.7	-1.2
	comp=Z,2.1nm,0.9s,mb4.0,baz=170,slow=8.1,SNR=4.0					
ARCES			LR	LR	17 09 20.7	
	comp=Z,53nm,21.0s,MS3.3,baz=13,slow=37					
ARCES	ARCESS Array B	35.13 1	P	P	16 54 37.7	-1.2
EKS2	Erkin-Say	39.16 63	eP	P	16 55 14.8	+1.2
EKS2	Erkin-Say	39.16 63	eP	P	16 55 14.8	+1.3
KURK	Kurchatov	42.24 50	P	P	16 55 38.1	-0.8
	comp=Z,0.8nm,0.4s,mb3.7,baz=275,slow=8.7,SNR=4.3					
KURK	Kurchatov	42.24 50	P	P	16 55 38.1	-0.7
MK31	Makanchi Array	44.83 56	eP	P	16 55 59.9	+0.2
MK31	Makanchi Array	44.83 56	eP	P	16 55 59.9	+0.2
MKAR	Makanchi Array	44.83 56	P	P	16 56 00.1	+0.4
	comp=Z,2.0nm,0.4s,mb4.3,baz=277,slow=7.4,SNR=28					
ZALV	Zalesovo Beam	46.07 46	P	P	16 56 08.9	-0.5
	comp=Z,0.7nm,0.3s,mb4.0,baz=268,slow=8.6,SNR=4.5					
ZALV	Zalesovo Beam	46.07 46	P	P	16 56 08.9	-0.5
BOSA	Boshof	62.75 179	LR	LR	17 26 59.3	
	comp=Z,72nm,18.6s,MS3.9,baz=147,slow=37					
KSRS	Korea Array	79.34 52	LR	LR	17 40 40.8	
	comp=Z,27nm,19.2s,MS3.6,baz=166,slow=40					

DJA 22 16:50:42, 6°32S×104°08E, h30km, MLv3.1/8, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	Kota Agung	0.89	28	P	Pn	16 50 58.1	-0.4
KASI				S	Sn	16 51 10.8	+0.3
LWLI	Liwa	1.29	359	P	Pn	16 51 04.3	+0.2
BLSI	Bandar Lampung	1.50	51	P	Pn	16 51 08.5	+1.7
BLSI				S	Sn	16 51 28.1	+2.7
CGJI	Cibinong	1.63	100	P	Pn	16 51 07.3	-1.4
CGJI				S	Sn	16 51 31.7	+3.1
RBSI	Rajabasa	1.72	74	P	Pn	16 51 08.6	-1.3
KLSI		1.74	22	P	Pn	16 51 11.3	+1.1
MDSI	Maura Dua	1.82	3	P	Pn	16 51 12.4	+1.0
SBJI	Serang	2.05	85	P	Pn	16 51 17.1	+2.7
MNAI	Manna	2.25	330	P	Pn	16 51 19.2	+2.1
COCO	West Island	9.23	230	P	Pn	16 52 53.9	+0.8

DJA 22 17:19:01, 1°65S×99°49E, h23km, MLv3.2/8, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	Saibi	0.51	309	P	Pb	17 19 12.8	+1.4
PDSI	Padang	1.22	53	P	Pn	17 19 21.0	-1.6
PDSI				S	Sn	17 19 40.4	+2.0
PPSI	Pulau Pagai	1.22	155	P	Pn	17 19 22.5	-0.2
PPI	Padang Panjang	1.49	37	P	Pn	17 19 27.6	+1.2
SDSI	Sungai Dareh	2.06	70	P	Pn	17 19 34.4	+0.1
MNSI	Mandailing Nat	2.43	2	P	Pn	17 19 40.1	+0.8
BKNI	Bangkinang	2.50	38	P	Pn	17 19 40.7	+0.4
GSI	Gunungsitoli	3.50	327	P	Pn	17 19 54.8	+0.7
KSI	Kapahiang	3.68	123	P	Pn	17 19 57.2	+0.6
MDSI	Maura Dua	5.46	121	P	Pn	17 20 22.2	+1.1
	0.1nm7.3nm,1.3s						
KLI	Kotabumi	6.24	121	P	Pn	17 20 32.4	+0.7
	92nm,0.4s						
COCO	West Island	10.80	194	P	Pn	17 21 35.2	+0.9

*NEIC **22** 17:45:09.4, 32°83N×136°30E, h440km, MG3.2(JMA), After JMA.*
*JMA **22** 17:45:09.4±0.3, 32°83N×136°30E, h440km±3km, M3.2*
*ISCJB **22** 17:45:09.6±0.6, 32°9N±0°1×136°27E±0°08, h441km±6km, mb3.0/4, Error ellipse: s-maj=16.9km s-min=9.5km az=156.1*
*IDC **22** 17:45:10.8±1.4, 32°90N×136°10E, h424km±36km, mb2.7/4, mb1 2.9/6, mb1mx2.7/26, mbtmp2.7/6, Error ellipse: s-maj=46.3km s-min=20.2km az=43.0*
ISC 22 17:45:10.7±0.6, 33°0N±0°1×136°27E±0°09, h435km±6km, n21, σ0°71/28, mb3.0/4, Southeast of Shikoku

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWZ	Kozaga	0.74	322	P	P	17 46 04.4	-0.2
JWY	Kouya	1.39	336	P	P	17 46 07.0	+0.3
JIE	Ise	1.49	14	P	P	17 46 07.6	+0.5
JIE				eS	S	17 46 52.6	-0.4
JAI	Aioi	1.74	300	P	P	17 46 08.4	0.0
JMN	Monobe	2.15	292	P	P	17 46 10.9	+0.3
JMN				eS	S	17 46 58.9	-0.4
JTO	Tosashimizu	2.92	269	P	P	17 46 15.8	-0.1
JHS	Saijyo	3.32	309	P	P	17 46 18.8	-0.2
JRY	Ryogami san	3.76	35	P	P	17 46 23.7	+1.1
JRY				eS	S	17 47 21.4	+0.2
MAJO	Matsushiro	3.93	23	eP	P	17 46 24.1	0.0
MAT	Matsushiro	3.93	23	P	P	17 46 24.9	+0.8
MAT				S	S	17 47 23.2	-0.7
MAT	Matsushiro	3.93	23	P	P	17 46 25.0	+0.9
MAT				eS	S	17 47 23.6	-0.3
MJAR	Matsushiro Arr	3.93	23	P	P	17 46 24.9	+0.7
	1.2nm,0.3s,baz=183,slow=9.1,SNR=18						
MJAR				S	S	17 47 24.7	+0.8
	0.6nm,0.3s,baz=233,slow=20,SNR=6.7						
BSO1	Boso 1	4.28	65	P	P	17 46 26.7	-0.6
BSO1				eS	S	17 47 27.1	-2.6
JSJ	Shimokoshiki	5.69	259	P	P	17 46 41.4	+0.1
KSRS	Korea Array	8.18	306	P	P	17 47 08.0	+0.2
	0.6nm,0.3s,baz=124,slow=9.6,SNR=23						
CMAR	Chiang Mai Arr	36.39	256	P	P	17 51 35.8	-0.9
	0.5nm,0.6s,mb3.0,baz=49,slow=7.3,SNR=5.4						
MK31	Makanchi Array	42.86	305	eP	P	17 52 27.3	-1.5
MKAR	Makanchi Array	42.86	305	P	P	17 52 29.0	+0.2
	0.5nm,0.8s,mb2.9,baz=92,slow=9.7,SNR=5.7						
WRA	Warramunga Arr	52.62	182	P	P	17 53 43.2	+0.5
	0.5nm,0.4s,mb3.1,baz=359,slow=7.6,SNR=4.2						
ASAR	Alice Springs	56.34	183	P	P	17 54 09.6	+0.7
	0.3nm,0.6s,mb2.8,baz=13,slow=12,SNR=9.9						
ASAR	Alice Springs	56.34	183	P	P	17 54 09.6	+0.7

IDC 22 17:49:38.1±0.8, 34°89S×106°91W, h0km, mb3.9/5, mb1 4.2/5, mb1mx4.0/15, mbtmp3.9/5, MS3.7/9, Ms1 3.7/9, ms1mx3.6/13, Error ellipse: s-maj=38.5km s-min=26.3km az=95.0, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	Paso Flores	29.17	112	LR	LR	18 03 27.2	
	comp=Z,73nm,18.1s,baz=283,slow=28						
USHA	Ushuaia	33.20	139	LR	LR	18 06 25.6	
	comp=Z,487nm,18.6s,baz=309,slow=30						
ATAH	Atahualpa	38.08	50	LR	LR	18 07 32.2	
	comp=Z,30nm,18.8s,baz=59,slow=28						
LPAZ	La Paz	39.27	72	P	P	17 57 09.1	+0.5
	0.3nm,0.4s,baz=198,slow=3.2,SNR=2.1						
LPAZ				LR	LR	18 10 14.2	
	comp=Z,41nm,18.5s,baz=137,slow=32						
CPUP	Villa Florida	43.15	93	LR	LR	18 13 22.2	
	comp=Z,69nm,19.3s,baz=19,slow=33						
ROSC	El Rosal	50.03	44	LR	LR	18 15 52.4	
	comp=Z,93nm,20.5s,baz=214,slow=32						
QSPA	South Pole Qui	55.32	180	P	P	17 59 13.9	+1.0
	3.8nm,1.1s,baz=107,slow=3.1,SNR=6.4						
TXAR	Lajitas Array	63.95	3	P	P	18 00 14.6	+1.7
	0.5nm,0.9s,baz=188,slow=8.2,SNR=5.0						
NVAR	Mina Array Bea	73.71	351	P	P	18 01 15.2	+1.7
	1.0nm,0.8s,baz=179,slow=8.9,SNR=5.9						
PDAR	Pinedale Array	77.32	358	P	P	18 01 32.6	-1.5
	2.0nm,0.6s,baz=144,slow=16,SNR=13						
STKA	Stephens Creek	87.54	232	LR	LR	18 33 52.8	
	comp=Z,122nm,18.4s,baz=26,slow=30						
CTA	Charters Tower	91.69	244	LR	LR	18 39 07.0	
	comp=Z,89nm,20.9s,baz=53,slow=32						
SCHQ	Schefferville	95.76	22	LR	LR	18 43 37.6	
	comp=Z,35nm,18.8s,baz=278,slow=34						
AKASG	Malin Array Be	144.72	50	PKP	PKPdf	18 09 16.3	0.0
	0.3nm,0.3s,baz=269,slow=4.0,SNR=6.7						
CMAR	Chiang Mai Arr	151.81	241	PKPbc	PKPbc	18 09 34.8	-0.5
	2.2nm,1.0s,baz=174,slow=2.4,SNR=11						
SONM	Songino Array	152.09	308	PKPbc	PKPbc	18 09 34.1	-0.9
	2.0nm,0.4s,baz=98,slow=2.2,SNR=3.4						
ZALV	Zalesovo Beam	159.23	340	PKP	PKPdf	18 09 36.7	-1.0
	0.2nm,0.3s,baz=318,slow=2.0,SNR=4.2						
MKAR	Makanchi Array	166.23	333	PKPab	PKPab	18 10 46.8	+1.0
	1.0nm,1.1s,baz=60,slow=3.5,SNR=3.5						

DJA 22 17:58:46, 6°30S×131°92E, h116km, mb4.4/7, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	Tual	1.05	51	P	Pn	17 59 08.4	+0.2
TLE				S	Sn	17 59 26.6	+1.7
NLAI	Namlea	5.69	302	P	Pn	18 00 10.0	+1.8
	0.2nm23nm,0.9s						
KAKA	Kakadu	6.39	175	P	Pn	18 00 17.4	-0.3
	0.3nm1μm22nm,0.7s						
MMPI	Merauke	8.66	105	P	Pn	18 00 46.0	-2.6
	622nm,0.9s						
KNA	Kununurra	9.89	198	P	Pn	18 01 04.9	-0.2
	44nm,1.1s						
FITZ	Fitzroy Crossi	13.23	207	P	Pn	18 01 46.6	-2.9
	30nm,3.4s						
COEN	Coen	13.44	125	P	Pn	18 01 53.0	+0.9
	114nm,2.4s						
WRAB	Tennant Creek	13.76	170	P	Pn	18 01 56.5	+0.3

*IDC **22** 18:14:39.5±1.2, 28°15N×85°40E, h0km, mb3.6/7, mb1 3.7/8, mb1mx3.5/24, mbtmp3.6/8, ML3.7/1, MS3.3/1, Ms1 3.3/1, ms1mx2.3/28, Error ellipse: s-maj=45.2km s-min=22.5km az=62.0*
*NDI **22** 18:14:45.9±2.8, 28°56N×85°68E, h66km, ML3.7, mb3.7(NEIC)*
*ISCJB **22** 18:14:47.5±0.5, 28°50N±0°06×85°74E±0°04, h69km±7km, mb3.6/9, Error ellipse: s-maj=9.5km s-min=5.9km az=9.1*
*NEIC **22** 18:14:48.8±0.5, 28°43N×85°68E, h66km±8km, mb3.7/2, Error ellipse: s-maj=10.6km s-min=7.8km az=217.0*
*DMN **22** 18:14:48.7±0.2, 28°50N×85°77E, h40km, Ml4.8/4, Error ellipse: s-maj=4.9km s-min=2.4km az=162.0*
ISC 22 18:14:48.5±0.4, 28°49N±0°05×85°71E±0°04, h63km±7km, n38, σ0°99/54, mb3.7/9, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUN	Gumba	0.59	166	ePg	Pn	18 15 01.5	-0.2
GUN				eSg	Sn	18 15 10.7	-0.6
GUN				eSg	Sn	18 15 10.9	-0.4
	6μm,0.2s						
KKN	Kakani	0.79	209	ePg	Pn	18 15 04.3	+0.3
KKN				eSg	Sn	18 15 15.5	+0.1
	444nm,0.2s						
JIRN	Jiri	0.92	153	ePg	Pn	18 15 05.7	0.0
JIRN				eSg	Sn	18 15 18.1	-0.3
	7μm,0.2s						
PKIN	Phulchoki	0.95	197	ePg	Pn	18 15 06.8	+0.8
PKIN				eSg	Sn	18 15 19.2	+0.3
PKIN				eSg	Sn	18 15 19.4	+0.5
	10μm,0.4s						
PKI	Pulchoki	0.95	196	ePg	Pn	18 15 06.4	+0.4
PKI				eSg	Sn	18 15 19.6	+0.6
PKI	Pulchoki	0.95	196	ePg	Pn	18 15 06.4	+0.4
PKI				eSg	Sn	18 15 19.2	+0.2
DMN	Daman	1.02	212	ePg	Pn	18 15 07.7	+0.7
DMN				eSg	Sn	18 15 20.8	+0.1
	696nm,0.3s						
DMN				eSg	Sn	18 15 21.8	+1.1
	2μm,0.4s						
RAMN	Ramite	1.72	153	ePg	Pn	18 15 15.7	-0.5
TAPN	Taplejung	2.10	122	ePg	Pn	18 15 21.2	-0.1
ODAN	Odare	2.20	137	ePg	Pn	18 15 22.5	-0.2
GTK	Gangtok	2.81	113	ePKP	Pn	18 15 30.0	-1.1
GTK				eS	Sn	18 15 59.5	-4.4
LSA	Lhasa	4.91	74	ePn	Pn	18 16 00.2	+0.5
LSA				eSn	Sn	18 16 55.2	0.0
JOSI	Joshimath	5.75	293	ex	Sn	18 17 16.9	+1.1
JOSI				AML	AML	18 17 23.7	
	comp=N,152nm,0.6s						
JOSI				AML	AML	18 17 24.2	
	comp=E,140nm,0.7s						
SHL	Shillong	6.22	116	ePKP	Pn	18 16 15.5	-2.3
SHL				eS	Sn	18 17 21.5	-6.0
KLP	Kalpa	7.15	297	ePKP	Pn	18 16 25.6	-4.8
KLP				eS	Sn	18 17 40.1	-10
KLP				AML	AML	18 17 51.3	
	comp=E,68nm,0.6s						
KLP				AML	AML	18 17 53.2	
	comp=N,31nm,0.6s						
NDI	New Delhi	7.47	274	ex	Sn	18 17 51.0	-7.2
SONA	Sohna	7.61	270	ePKP	Pn	18 16 34.1	-2.5
SONA				eS	Sn	18 17 52.9	-8.6
KHET	Khetri	8.74	270	ePKP	Pn	18 16 47.4	-4.9
KHET				eS	Sn	18 18 18.7	-11
BHPL	Bhopal	9.11	237	ex	Pn	18 16 51.7	-5.5
BHPL				eS	Sn	18 18 26.7	-12
BHPL				AML	AML	18 18 31.4	
	comp=E,41nm,0.3s						
BHPL				AML	AML	18 18 32.1	
	comp=N,26nm,0.4s						
AJM	Ajmer	10.03	261	ePKP	Pn	18 17 06.2	-3.6
AJM				ex	x	18 18 46.6	
AJM				AML	AML	18 19 03.9	
	comp=N,18nm,0.1s						
AJM				AML	AML	18 19 04.1	
	comp=E,27nm,0.1s						
CHCP	Chirah Chowk	11.85	299	P	Pn	18 17 35.7	+1.1
CEP	Cherat	12.96	298	P	Pn	18 17 46.9	-2.9
CM31	Chiang Mai Arr	15.70	127	ePn	Pn	18 18 27.5	+1.6
	comp=E,0.8nm,0.5s						
CMAR	Chiang Mai Arr	15.70	127	Pn	Pn	18 18 27.6	+1.8
	comp=E,0.1nm,0.3s,baz=305,slow=10,SNR=9.4						
MK31	Makanchi Array	18.47	353	eP	Pn	18 19 00.2	+0.3
MKAR	Makanchi Array	18.47	353	P	Pn	18 19 00.6	+0.7
	comp=E,0.3nm,0.3s,baz=164,slow=9.2,SNR=15						
KURK	Kurchatov	22.84	348	P	P	18 19 46.0	-0.1
	comp=E,0.4nm,0.4s,mb3.2,baz=171,slow=10.0,SNR=6.4						
ZALV	Zalesovo Beam	25.45	359	P	P	18 20 11.3	+1.0
	comp=E,0.4nm,0.3s,mb3.4,baz=180,slow=10,SNR=5.6						
BVAR	Borovoye Array	27.01	339	P	P	18 20 24.8	+0.5
	comp=E,0.3nm,0.4s,mb3.2,baz=158,slow=12,SNR=4.1						
AKASG	Malin Array Be	47.53	314	P	P	18 23 17.3	0.0
	comp=E,0.9nm,0.5s,mb4.0,baz=82,slow=7.3,SNR=5.0						
FINES	FINESS Array B	50.96	328	P	P	18 23 43.8	+0.5
	comp=E,3.9nm,1.1s,mb4.3,baz=96,slow=9.9,SNR=5.7						
ARCES	ARCESS Array B	53.27	338	P	P	18 24 01.3	+0.8
	comp=E,0.8nm,0.5s,mb3.9,baz=107,slow=8.1,SNR=8.5						
ARCES	ARCESS Array B	53.27	338	P	P	18 24 01.3	+0.8
PETK	Petropavlovsk-	57.13	43	LR	LR	18 49 58.0	
	comp=E,28nm,19.9s,baz=294,slow=37						
WRA	Warramunga Arr	67.26	130	P	P	18 25 36.4	-0.3
	comp=E,0.2nm,0.3s,mb3.6,baz=326,slow=6.6,SNR=2.9						
WRA	Warramunga Arr	67.26	130	P	P	18 25 36.4	-0.3
WRAB	Tennant Creek	67.26	130	P	P	18 25 35.9	-0.8
	comp=E,3.3nm,0.9s,mb4.4						
TORD	Torodi Ar. Bea	78.66	279	P	P	18 26 42.0	-2.2
	comp=E,0.3nm,0.9s,mb3.2,baz=343,slow=4.6,SNR=3.6						

*MOS **22** 18:23:50.6±0.7, 42°81N×142°49E, h104km, mb4.0/2, Error ellipse: s-maj=21.3km s-min=10.3km az=73.1*
*ISCJB **22** 18:23:50.7±0.3, 42°82N±0°03×142°64E±0°04, h101km±3km, mb3.5/7, Error ellipse: s-maj=5.5km s

JSK	Shakotan	1.68	289	⇑P	Pn	18 24 19.3	-0.6
JSK				eS	Sn	18 24 41.0	-0.3
YUK	Yuzh-Kuril'sk	2.64	62	⇑iPN	Pn	18 24 33.8	+1.3
YUK				i S	Sn	18 25 05.7	+1.9
YUK				pmax	pmax		
	comp=Z,190nm,0.2s						
YUK				pmax	pmax		
	comp=N,70nm,0.1s						
YUK				pmax	pmax		
	comp=E,70nm,0.1s						
YUK				pmax	pmax		
	comp=Z,240nm,2.0s						
YUK				smax			
	comp=N,600nm,0.6s						
YUK				smax			
	comp=E,800nm,0.6s						
YSS	Yuzh-Sakhalins	4.13	1	⇓ePN	Pn	18 24 53.0	+0.5
YSS				pmax	pmax		
	comp=N,30nm,1.0s						
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS	Yuzh-Sakhalins	4.13	1	ePn	Pn	18 24 53.5	+1.0
KUR	Kuril'sk	4.47	56	PN	Pn	18 24 58.0	+0.9
KUR				pmax	pmax		
	comp=Z,40nm,0.8s						
MAJO	Matsushiro	7.15	210	ePn	Pn	18 25 32.6	-0.9
MAJO				eSn	Sn	18 26 56.0	+2.8
MAT	Matsushiro	7.15	210	P	Pn	18 25 33.3	-0.3
MJAR	Matsushiro Arr	7.15	210	P	Pn	18 25 33.7	+0.1
	comp=Z,1.6nm,0.3s,baz=26,slow=12,SNR=24						
MJAR	Matsushiro Arr	7.15	210	PN	Pn	18 25 33.7	+0.1
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PETK	Petropavlovsk-	14.37	39	P	Pn	18 27 11.4	+1.0
	comp=Z,0.1nm,0.3s,baz=172,slow=13,SNR=4.0						
MKAR	Makanchi Array	42.09	297	P	P	18 31 33.8	-0.2
	comp=Z,0.3nm,0.4s,mb3.4,baz=75,slow=12,SNR=13						
MKAR				PcP	PcP	18 33 26.3	-0.6
	comp=Z,0.2nm,0.6s,baz=51,slow=4.4,SNR=2.7						
MKAR	Makanchi Array	42.09	297	P	P	18 31 33.8	-0.2
MKAR						18 33 26.3	
KURK	Kurchatov	43.31	304	P	P	18 31 42.5	-1.4
	comp=Z,0.4nm,0.3s,mb3.6,baz=78,slow=9.4,SNR=7.1						
KURK	Kurchatov	43.31	304	P	P	18 31 42.5	-1.4
BVAR	Borovoye Array	47.53	309	P	P	18 32 16.7	-0.4
	comp=Z,0.4nm,0.3s,mb3.7,baz=81,slow=10.0,SNR=8.3						
WRA	Warramunga Arr	62.92	189	P	P	18 34 07.2	-0.7
	comp=Z,0.3nm,0.5s,mb3.5,baz=8.1,slow=6.9,SNR=3.2						
FINES	FINESS Array B	64.16	331	P	P	18 34 14.9	-0.7
	comp=Z,1.4nm,0.9s,mb3.8,baz=46,slow=12,SNR=3.1						
FINES	FINESS Array B	64.16	331	P	P	18 34 14.9	-0.7
FINES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ASAR	Alice Springs	66.65	189	P	P	18 34 31.9	-0.1
	comp=Z,0.6nm,1.0s,mb3.4,baz=6.7,slow=7.3,SNR=6.8						
ASAR	Alice Springs	66.65	189	P	P	18 34 32.0	0.0
ASAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
TXAR	Lajitas Array	85.87	53	P	P	18 36 21.6	+0.6
	comp=Z,0.1nm,0.5s,mb3.0,baz=280,slow=5.4,SNR=2.6						

MEX 22 18:29:00.6±0.8, 17°.64N×100°.49W, h26km±999km, MD3.5, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.62	160	i P	Pb	18 29 11.2	-1.8
CAIG				i S	Sb	18 29 18.3	-3.0
ZIIG	Zihuatanejo	0.93	268	i P	Pn	18 29 15.5	-2.5
ZIIG				i S	Sb	18 29 26.0	-4.1
ACX	Acapulco	0.94	144	eP	Pn	18 29 16.0	-2.1
ACX				i S	Sb	18 29 27.0	-3.4
UTMO	Huajuapan	2.57	85	i P	Pn	18 29 37.7	-2.8
UTMO				i S	Sn	18 30 08.6	-2.2
PNIG	Pinotepa	2.58	118	eP	Pn	18 29 38.0	-2.7
PNIG				i S	Sn	18 30 07.9	-3.2

CASC 22 18:29:52.9±0.9, 12°.68N×88°.16W, h65km±12km, MD3.8, ML4.0, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	Conchagua	0.67	29	eP	Pn	18 30 07.3	+0.1
CNCH				eS	Sn	18 30 18.6	+0.9
VSM	San Miguel	0.75	352	eP	Pn	18 30 08.5	+0.4
BLLM	Bellamira	0.76	355	eP	Pn	18 30 08.4	+0.2
CAHU	Cacacuatique	1.08	358	eP	Pn	18 30 12.5	+0.3
CRIN	San Cristobal	1.09	89	eP	Pn	18 30 12.7	+0.4
CRIN				eS	Sn	18 30 28.1	+1.4
CRIN				AML	AML	18 30 28.7	
	comp=E,3μm,0.4s						
LFRS	El Faro	1.28	317	eP	Pn	18 30 15.2	+0.3
LFRS				eS	Sn	18 30 32.1	+0.9
BOQS	Boqueron	1.51	314	eP	Pn	18 30 18.8	+0.9
BOQS				eS	Sn	18 30 37.7	+1.1
MOMN	Momotombo	1.61	100	eP	Pn	18 30 19.5	+0.3
COPN	Copaltepe	1.61	108	eP	Pn	18 30 18.8	-0.5
TGUH	Tegucigalpa,Un	1.62	32	eP	Pn	18 30 19.8	+0.5
CSAN		1.77	106	eP	Pn	18 30 21.8	+0.4
APYN	Apoyeque	1.83	104	eP	Pn	18 30 22.2	+0.1
SBLS	San Blas	1.83	309	eP	Pn	18 30 23.2	+1.1
BOAB	BOACO BROADBAN	2.45	95	eP	Pn	18 30 29.9	-0.7

*IDC **22** 18:31:32.7±1.4, 2°.42N×127°.05E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.7/20, mbtmp3.8/6, Error ellipse: s-maj=102.5km s-min=17.8km az=68.0*
*ISCJB **22** 18:31:34.8±0.9, 2°.5N±0°.1×127°.2E±0°.2, h33km, mb3.8/7, Error ellipse: s-maj=38.1km s-min=15.1km az=155.3*
*NEIC **22** 18:31:36.8±0.8, 2°.55N×127°.36E, h35km, mb4.0/4, Error ellipse: s-maj=30.4km s-min=12.6km az=65.0*
ISC 22 18:31:37.0±0.9, 2°.5N±0°.1×127°.4E±0°.2, h35km, n11, σ0§62/11, mb3.8/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.57	185	P	P	18 36 12.3	-0.6
	8.1nm,1.3s,baz=90,slow=20,SNR=4.2						
PMG	Port Moresby	23.00	121	eP	P	18 36 38.7	-0.4
	7.1nm,0.7s,mb4.2						
WRAB	Tennant Creek	23.34	163	eP	P	18 36 42.0	-0.5
	2.0nm,0.5s,mb3.8						
WRA	Warramunga Arr	23.35	163	P	P	18 36 42.7	+0.1
	2.0nm,0.6s,mb3.7,baz=341,slow=11,SNR=6.4						
WRA	Warramunga Arr	23.35	163	P	P	18 36 42.7	+0.1
ASAR	Alice Springs	26.80	167	P	P	18 37 14.4	+0.5
	0.4nm,0.6s,mb3.1,baz=350,slow=7.4,SNR=15						
STKA	Stephens Creek	36.78	160	P	P	18 38 42.3	+0.8
	2.0nm,0.6s,mb4.2,baz=336,slow=11,SNR=9.5						
STKA	Stephens Creek	36.78	160	eP	P	18 38 42.8	+1.3
	0.4nm,0.6s,mb3.4						
MKAR	Makanchi Array	58.91	325	P	P	18 41 32.9	+0.3
	0.3nm,0.4s,mb3.7,baz=105,slow=7.3,SNR=8.7						
KURK	Kurchatov	63.10	328	P	P	18 42 01.4	+0.4
	0.7nm,0.5s,mb4.0,baz=124,slow=7.0,SNR=7.7						
KURK	Kurchatov	63.10	328	eP	P	18 41 59.7	-1.3
	1.0nm,0.6s,mb4.1						

IDC 22 18:37:40.0±5.1, 6°.94S×102°.75E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.5/20, mbtmp3.6/4, MS2.8/1, Ms1 2.8/1, ms1mx2.3/18, Error ellipse: s-maj=234.7km s-min=26.7km az=54.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	10.40	338	LR	LR	18 44 57.3	
	comp=Z,51nm,19.5s,baz=335,slow=42						
CMAR	Chiang Mai Arr	25.52	352	P	P	18 43 10.8	+0.3
	0.8nm,0.6s,baz=187,slow=9.9,SNR=5.7						
ASAR	Alice Springs	34.22	122	P	P	18 44 27.7	0.0
	0.4nm,1.0s,baz=304,slow=7.5,SNR=2.9						
MKAR	Makanchi Array	56.51	343	P	P	18 47 23.8	-0.2
	0.3nm,0.7s,baz=140,slow=7.5,SNR=3.1						
ZALV	Zalesovo Beam	62.52	348	P	P	18 48 05.3	0.0
	0.4nm,0.3s,baz=134,slow=6.2,SNR=3.4						

*ATH **22** 18:43:52.3, 41°.87N×22°.69E, h4km±2km, MD3.6/7*
*ISCJB **22** 18:43:52.9±0.4, 41°.96N±0°.02×22°.92E±0°.02, h2km±3km, Error ellipse: s-maj=2.8km s-min=2.5km az=154.8*
*SKO **22** 18:43:53.3, 41°.94N×22°.91E, h15km, M2.5, ML2.8*
*SOF **22** 18:43:53.0, 41°.95N×22°.99E, h20km, MD3.4*
*CSEM **22** 18:43:53.8±0.1, 41°.94N×22°.94E, h2km, MD3.4, Error ellipse: s-maj=3.6km s-min=2.7km az=57.0*
*NEIC **22** 18:43:54.3, 41°.93N×22°.92E, h7km, ML4.0(THE), ML2.6(SKO), After THE.*
*THE **22** 18:43:54.3, 41°.93N×22°.92E, h7km±1km, ML4.0/6, Error ellipse: s-maj=2.0km s-min=0.8km az=290.0*
*BEO **22** 18:43:56.3±0.7, 42°.04N×22°.94E, h17km±4km, ML2.7/6*
ISC 22 18:43:54.0±0.3, 41°.94N±0°.01×22°.93E±0°.02, h4km±3km, n125, σ1§00/171, 22C-6D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKB	Krupnik	0.14	124	i Pg	Pg	18 43 57.9	+1.2
KKB				eSg	Sg	18 44 00.4	+1.9
KKB	Krupnik	0.14	124	Pg	Pg	18 43 57.8	+1.1
KKB	Krupnik	0.14	124	Pg	Pg	18 43 57.8	+1.1
KKB				eSg	Sg	18 44 00.4	+1.9
VAY	Valandovo	0.68	204	i Pg	Pg	18 44 06.9	0.0
VAY				i Sg	Sg	18 44 16.3	+0.6
VAY				eLg		18 44 16.3	
	comp=N,336nm,0.4s						
VAY				eLg		18 44 16.5	
	comp=E,348nm,0.3s						
VAY	Valandovo	0.68	204	P	Pg	18 44 06.7	-0.2
VAY				S	Sg	18 44 15.8	+0.1
VAY	Valandovo	0.68	204	P	Pg	18 44 06.7	-0.2
VAY				S	Sg	18 44 15.8	+0.1
VTS	Vitosha	0.68	18	⇑iPg	Pg	18 44 07.4	+0.4
VTS				i Sg	Sg	18 44 16.0	+0.1
VTS	Vitosha	0.68	18	P	Pg	18 44 07.0	0.0
VTS	Vitosha	0.68	18	P	Pg	18 44 07.0	0.0
VTS				S	Sg	18 44 16.8	+0.9
VTS	Vitosha	0.68	18	Pg	Pg	18 44 07.5	+0.5
VTS	Vitosha	0.68	18	P	Pg	18 44 07.0	0.0
VTS	Vitosha	0.68	18	⇑iPg	Pg	18 44 07.4	+0.4
VTS				i Sg	Sg	18 44 16.0	+0.1
VTS				S	Sg	18 44 16.8	+0.9
MMB	Musomiste	0.69	120	Pg	Pg	18 44 07.7	+0.5
MMB	Musomiste	0.69	120	Pg	Pg	18 44 07.7	+0.5
NVR	Nevrokopi	0.92	130	ePB	Pb	18 44 11.4	-1.0
NVR	Nevrokopi	0.92	130	ePb	Pb	18 44 11.4	-1.0
SKO	Skopje	1.11	272	⇓iPg	Pg	18 44 17.4	+2.1
SKO				eSg	Sg	18 44 31.0	+1.3
SKO	Skopje	1.11	272	ePg	Pg	18 44 15.8	+0.5
SKO	Skopje	1.11	272	⇓iPg	Pg	18 44 17.4	+2.1
SKO				eSg	Sg	18 44 31.0	+1.3
SOH	Sokhos	1.17	164	P	Pg	18 44 15.5	-0.8
SOH	Sokhos	1.17	164	P	Pg	18 44 15.8	-0.5
SOH				S	Sg	18 44 33.0	+1.6
SOH	Sokhos	1.17	164	P	Pg	18 44 15.8	-0.5
SOH				S	Sg	18 44 33.0	+1.6
BARS	Barje	1.20	317	⇑iPg	Pg	18 44 16.9	-0.1
BARS				i Sg	Sg	18 44 33.0	+0.4
BARS	Barje	1.20	317	⇑iPg	Pg	18 44 16.9	-0.1
BARS				i Sg	Sg	18 44 33.0	+0.4
THE	Thessaloniki	1.31	179	P	Pn	18 44 18.2	-0.8
THE	Thessaloniki	1.31	179	P	Pn	18 44 18.4	-0.6
THE				S	Sg	18 44 35.6	-0.4
THE	Thessaloniki	1.31	179	P	Pn	18 44 18.2	-0.8
THE				S	Sg	18 44 35.6	-0.4
PLD	Plovdiv	1.33	82	P	Pn	18 44 19.1	-0.2
PLD				S	Sg	18 44 37.0	+0.3
PLD	Plovdiv	1.33	82	Pg	Pg	18 44 19.8	+0.3
PLD	Plovdiv	1.33	82	P	Pn	18 44 19.1	-0.2
PLD	Plovdiv	1.33	82	Pg	Pg	18 44 19.8	+0.3
PLD				S	Sg	18 44 37.0	+0.3
ZAPS	Zavoj	1.35	351	ePg	Pg	18 44 19.8	0.0
ZAPS				eSg	Sg	18 44 36.7	-0.6
HORT	Hortiatis	1.35	174	P	Pn	18 44 19.1	-0.4
HORT				S	Sg	18 44 37.0	-0.3
HORT	Hortiatis	1.35	174	P	Pn	18 44 19.1	-0.4
HORT				S	Sg	18 44 37.0	-0.3
RZN	Rozhen	1.36	100	Pg	Pg	18 44 18.5	-1.5
RZN	Rozhen	1.36	100	Pg	Pg	18 44 18.5	-1.5
KRUS	Krusevo	1.38	246	⇑iPg	Pg	18 44 19.7	-0.8
KRUS				i Sg	Sg	18 44 38.3	-0.1
KRUS				eLg		18 44 38.4	
	comp=E,14nm,0.3s						
KRUS				eLg		18 44 38.5	
	comp=N,13nm,0.3s						
BIA	Bitola	1.52	233	i Pg	Pg	18 44 21.6	-1.4
BIA				i Sg	Sg	18 44 42.6	-0.1
BIA				eLg		18 44 43.2	
	comp=N,29nm,0.3s						
BIA				eLg		18 44 43.5	
	comp=E,30nm,0.3s						
KAVA	Kavala	1.52	128	P	Pn	18 44 21.7	-0.2
KAVA				S	Sn	18 44 42.5	+0.5
KAVA	Kavala	1.52	128	P	Pn	18 44 21.7	-0.2
KAVA				S	Sn	18 44 42.5	+0.5
PLG	Polygyros	1.61	166	P	Pn	18 44 22.8	-0.4
PLG	Polygyros	1.61	166	P	Pn	18 44 23.0	-0.2
PLG				S	Sn	18 44 43.4	-1.0
PLG	Polygyros	1.61	166	ePG	Pn	18 44 22.8	-0.4
PLG				eSB	Sn	18 44 43.4	-1.0
PLG	Polygyros	1.61	166	P	Pn	18 44 23.0	-0.2
PLG				S	Sn	18 44 43.4	-1.0
NISS		1.63	334	⇑iPg	Pn	18 44 23.4	0.0
NISS				i Sg	Sg	18 44 44.9	-1.4
NISS		1.63	334	⇑iPg	Pn	18 44 23.4	0.0
NISS				i Sg	Sg	18 44 44.9	-1.4
FNA	Florina	1.65	226	P	Pn	18 44 23.7	+0.1
FNA	Florina	1.65	226	P	Pn	18 44 23.7	+0.1
OUR	Ouranopolis	1.79	153	P	Pn	18 44 24.8	-0.8
OUR	Ouranopolis	1.79	153	P	Pn	18 44 24.8	-0.8
OHR	Ohrid	1.80	243	ePn	Pn	18 44 27.8	+2.1
KZN	Kozani	1.85	209	ePB	Pn	18 44 24.4	-2.0
KZN	Kozani	1.85	209	ePb	Pn	18 44 24.4	-2.0
KDZ	Kurdzhali	1.88	98	P	Pn	18 44 25.8	-1.0
KDZ				Pg	Pg	18 44 28.0	-2.0
KDZ	Kurdzhali	1.88	98	P	Pn	18 44 25.8	-1.0
DIM	Dimitrovgrad	1.94	86	Pg	Pg	18 44 31.1	-0.1
DIM	Dimitrovgrad	1.94	86	Pg	Pg	18 44 31.1	-0.1
BOLS	Boljevac	2.02	339	ePn	Pn	18 44 27.9	-0.8
BOLS				eSg	Sg	18 44 57.2	-1.5
BOLS	Boljevac	2.02	339	ePn	Pn	18 44 27.9	-0.8
BOLS				eSg	Sg	18 44 57.2	-1.5
PAIG	Paliouri	2.09	164	P	Pn	18 44 28.9	-0.8
PAIG	Paliouri	2.09	164	P	Pn	18 44 29.2	-0.5
PAIG	Paliouri	2.09	164	P	Pn	18 44 29.2	-0.5
RDO	Rodhopi	2.11	111	P	Pn	18 44 32.0	+2.0
RDO	Rodhopi	2.11	111	P	Pn	18 44 30.2	+0.2
RDO				S	Sn	18 44 56.9	+0.2
RDO	Rodhopi	2.11	111	ePN	Pn	18 44 32.5	+2.5
RDO				eSN	Sg	18 45 02.2	+0.4
RDO	Rodhopi	2.11	111	P	Pn	18 44 30.2	+0.2
RDO	Rodhopi	2.11	111	ePn	Pn	18 44 32.5	+2.5
RDO				S	Sn	18 44 56.9	+0.2
PVL	Pavlikeni	2.18	54	Pg	Pn	18 44 32.4	+1.4
ZIMR		2.48	45	⇓P	Pg	18 44 42.5	+1.0
ZIMR		2.48	45	⇓iP	Pg	18 44 42.5	+1.0
GRUS	Gruza	2.54	321	ePn	Pn	18 44 35.6	-0.2
GRUS	Gruza	2.54	321	ePn	Pn	18 44 35.6	-0.2
ALN	Alexandroupoli	2.57	113	P	Pn	18 44 39.6	+3.4
ALN	Alexandroupoli	2.57	113	P	Pn	18 44 36.2	0.0
ALN				S	Sn	18 45 07.8	0.0
ALN	Alexandroupoli	2.57	113	ePN	Pn	18 44 39.0	+2.8
ALN	Alexandroupoli	2.57	113	P	Pn	18 44 36.2	0.0
ALN	Alexandroupoli	2.57	113	ePn	Pn	18 44 39.0	+2.8
ALN				S	Sn	18 45 07.8	0.0
XOR	Xorichti	2.58	175	P	Pn	18 44 36.0	-0.5
XOR	Xorichti	2.58	175	P	Pn	18 44 36.0	-0.5
LIA	Limnos Island	2.66	139	P	Pn	18 44 40.8	+3.2
LIA	Limnos Island	2.66	139	P	Pn	18 44 36.9	-0.7
LIA				S	Sn	18 45 10.0	-0.2
LIA	Limnos Island	2.66	139	ePN	Pn	18 44 38.8	+1.2
LIA	Limnos Island	2.66	139	P	Pn	18 44 36.9	-0.7
LIA	Limnos Island	2.66	139	ePn	Pn	18 44 38.8	+1.2
LIA				S	Sn	18 45 10.0	-0.2
JMB	Yambol	2.76	78	P	Pn	18 44 38.7	-0.3
JMB	Yambol	2.76	78	P	Pn	18 44 38.7	-0.3
AOS	Alonnisos	2.86	165	P	Pn	18 44 39.8	-0.5
AOS	Alonnisos	2.86	165	P	Pn	18 44 39.2	-1.1
AOS	Alonnisos	2.86	165	P	Pn	18 44 39.8	-0.5
AGG	Agios Georgios	2.95	189	P	Pn	18 44 41.6	0.0
AGG	Agios Georgios	2.95	189	ePN	Pn	18 44 41.1	-0.5
AGG	Agios Georgios	2.95	189	ePn	Pn	18 44 41.1	-0.5
AGG	Agios Georgios	2.95	189	P	Pn	18 44 41.6	0.0
DIVS	Divibare	3.05	316	⇑iPn	Pn	18 44 42.8	0.0
DIVS	Divibare	3.05	316	P	Pn	18 44 42.7	-0.1
DIVS	Divibare	3.05	316	⇑iPn	Pn	18 44 42.8	0.0
BBLS	Lazići	3.23	308	ePn	Pn	18 44 45.8	+0.5
BBLS	Lazići	3.23	308	ePn	Pn	18 44 45.8	+0.5
GZR	Gura Zlata	3.45	358	⇑P	Pn	18 44 50.5	+2.1
GZR	Gura Zlata	3.45	358	⇑iP	Pn	18 44 50.5	+2.1
GZR	Gura Zlata	3.45	358	⇑P	Pn	18 44 50.5	+2.1
SULR		3.66	40	S	Sg	18 45 51.2	-0.1
BZS	Buzias	3.79	346	⇓iPn	Pn	18 44 52.6	-0.5
BZS	Buzias	3.79	346	⇑P	Pn	18 44 52.5	-0.6
BZS	Buzias	3.79	346	⇑iP	Pn	18 44 52.5	-0.6
BZS	Buzias	3.79	346	⇓iPn	Pn	18 44 52.6	-0.5
DEV	Deva	3.94	360	S	Sg	18 45 59.0	-1.4
STON	Ston	3.98	285	ePn	Pn	18 44 57.2	+1.5
STON				Sn	Sn	18 45 43.6	+0.9
STON	Ston	3.98	285	ePn	Pn	18 44 57.1	+1.4
STON				Sn	Sn	18 45 43.6	+0.8
MLR	Muntele Rosu	4.17	31	⇑P	Pn	18 45 02.5	+4.3
MLR	Muntele Rosu	4.17	31	⇑iP	Pn	18 45 02.5	+4.3
MLR	Muntele Rosu	4.17	31	S	Sn	18 45 53.9	+6.6
MLR	Muntele Rosu	4.17	31	⇑iP	Pn	18 45 02.5	+4.3
TIRR	Tirgusor	4.73	56	ePn	Pn	18 45 04.3	-1.7
TIRR				eS	Sb	18 46 14.4	-0.2
TIRR	Tirgusor	4.73	56	ePn	Pn	18 45 04.3	-1.7
VRI	Vrincioaia	4.79	34	⇑iP	Pn	18 45 09.0	+2.3
VRI	Vrincioaia	4.79	34	S	Sg	18 46 23.6	-4.0
VRI	Vrincioaia	4.79	34	⇑iP	Pn	18 45 09.0	+2.3
DRGR		4.85	358	⇑P	Pn	18 45 08.9	+1.3
DRGR		4.85	358	⇑iP	Pn	18 45 08.9	+1.3
DRGR		4.85	358	S	Sb	18 46 14.1	-4.0
DRGR		4.85	358	⇑P	Pn	18 45 08.9	+1.3
VYHS	Vyhne	7.16	338	ePn	Pn	18 45 40.1	+0.8
VYHS				eSn	Sn	18 46 55.5	-5.5
VYHS	Vyhne	7.16	338	ePN	Pn	18 45 40.1	+0.8
VYHS				eSN	Sn	18 46 55.5	-5.5
VYHS	Vyhne	7.16	338	ePn	Pn	18 45 40.1	+0.8

IDC 22 18:47:10.3±3.1, 6°.16N×126°.68E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/20, mbtmp3.6/4, Error ellipse: s-maj=291.5km s-min=26.4km az=65.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	27.01	164	P	P	18 52 54.7	+0.5
	0.4nm,0.4s,baz=347,slow=8.7,SNR=3.5						
ASAR	Alice Springs	30.47	167	P	P	18 53 23.9	-1.0
	0.2nm,0.3s,baz=334,slow=8.2,SNR=11						
STKA	Stephens Creek	40.41	160	P	P	18 54 51.2	+0.9
	1.9nm,0.7s,baz=342,slow=6.4,SNR=2.9						
MKAR	Makanchi Array	55.55	324	P	P	18 56 47.5	0.0
	0.1nm,0.3s,baz=108,slow=9.4,SNR=4.4						

*GEN **22** 18:48:26.8, 41°.67N×2°.35E, h2km, ML4.1*
*ISCJB **22** 18:48:27.8±0.3, 41°.93N±0°.02×2°.65E±0°.02, h6km±2km, Error ellipse: s-maj=2.8km s-min=1.8km az=152.1*
*CSEM **22** 18:48:29.1±0.1, 41°.88N×2°.62E, h5km, ML3.6/29, Error ellipse: s-maj=2.5km s-min=1.6km az=148.0*
*LDG **22** 18:48:30.7±0.1, 41°.87N×2°.62E, h4km, Md3.5/3, Ml3.4/42, Error ellipse: s-maj=1.2km s-min=0.8km az=142.0*
*MDD **22** 18:48:30.7±0.2, 41°.86N×2°.60E, h5km±2km, mbLg3.1/43, Error ellipse: s-maj=2.2km s-min=1.5km az=125.0, PRXIMO*
MDD EMS: III INTENSIDAD MAXIMA.
*NEIC **22** 18:48:30.5, 41°.83N×2°.64E, h3km, ML3.6(STR), ML3.4(LDG), MN3.2(MDD), After MDD.*
*MRB **22** 18:48:30.6, 41°.86N×2°.59E, h4km±10km, ML3.0/13, Error ellipse: s-maj=0.4km s-min=0.2km az=168.0*
*INMG **22** 18:48:31.0±1.3, 41°.86N×2°.58E, h0km, ML2.9, Error ellipse: s-maj=4.1km s-min=2.3km az=110.0*
*STR **22** 18:48:31.5±0.4, 41°.93N×2°.54E, h5km, Ml3.6, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 22 18:48:29.7±0.3, 41°.92N±0°.01×2°.63E±0°.01, h10km±1km, n323, σ1§25/586, 12C, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCAS	Cassa de la Se	0.21	101	Pg	Pg	18 48 35.1	+1.1
CCAS				Lg		18 48 38.5	
	3μm,0.2s						
CCAS	Cassa de la Se	0.21	101	P	Pg	18 48 35.1	+1.1
CCAS				S	Sg	18 48 38.6	+1.7
	3μm,0.2s						
CFON	Fontmartina	0.22	222	⇑Pg	Pg	18 48 33.8	-0.4
CFON				Lg		18 48 36.0	
CFON	Fontmartina	0.22	222	⇑Pg	Pg	18 48 33.8	-0.4
	1μm,0.1s,SNR=18						
CFON				Lg		18 48 36.1	
	9μm,0.1s,SNR=7.9						
CFON	Fontmartina	0.22	222	P	Pg	18 48 33.6	-0.6
CFON				Lg		18 48 36.0	
CFON				S	Sg	18 48 36.0	-1.2
	19μm,0.1s						
CBEU	Beuda	0.34	6	Pg	Pg	18 48 38.1	+1.8
CBEU				Lg		18 48 43.7	
	900nm,0.2s						
CBEU	Beuda	0.34	6	P	Pg	18 48 38.2	+1.9
CORI	Orista	0.44	277	Pg	Pg	18 48 38.5	+0.3
CORI				Lg		18 48 44.3	
	1μm,0.2s						
CORI	Orista	0.44	277	P	Pg	18 48 38.5	+0.3
CORI				S	Sg	18 48 44.3	+0.3
	1μm,0.2s						
CBRU

LRDF			Sg	Sg	18 49 05.2	+2.7
LRDF	**Laroque-de-Fa**	**1.02 356**	Pg	Pg	18 48 50.6	+1.4
LRDF			Lg		18 49 04.8	
LRDF	**Laroque-de-Fa**	**1.02 356**	Pg	Pg	18 48 50.7	+1.5
LRDF			Sg	Sg	18 49 05.2	+2.7
CORG	**Organya**	**1.02 288**	Pg	Pg	18 48 49.3	-0.1
CORG			Lg		18 49 03.3	
	131nm,0.1s					
CORG	**Organya**	**1.02 288**	P	Pg	18 48 49.4	0.0
CORG			S	Sg	18 49 03.3	+0.6
	262nm,0.1s					
LPEF	**Le Peyrat**	**1.16 333**	Pg	Pg	18 48 53.2	+1.3
LPEF			Lg		18 49 09.3	
CSOR	**Sort**	**1.20 293**	⇑Pg	Pg	18 48 52.9	+0.1
CSOR			Lg		18 49 09.0	
CSOR	**Sort**	**1.20 293**	⇑Pg	Pg	18 48 52.9	+0.1
	38nm,0.1s,SNR=18					
CSOR			Lg		18 49 09.0	
	134nm,0.1s,SNR=7.9					
CSOR	**Sort**	**1.20 293**	P	Pb	18 48 52.8	+0.2
CSOR			S	Sb	18 49 09.0	+0.9
	358nm,0.3s					
CSOR			Lg		18 49 09.0	
	134nm,0.1s,SNR=7.9					
GRBF	**Gourbit**	**1.23 319**	Pg	Pg	18 48 53.8	+0.6
GRBF			Lg		18 49 09.2	
CEST	**Esterri de Car**	**1.23 304**	Pg	Pg	18 48 53.3	+0.1
CEST			Lg		18 49 10.0	
	269nm,0.2s					
CEST	**Esterri de Car**	**1.23 304**	P	Pn	18 48 53.4	+0.5
CEST			S	Sb	18 49 10.0	+1.2
	269nm,0.2s					
CGAR	**Garraf**	**1.29 241**	Pg	Pg	18 48 44.9	-10
CGAR			Lg		18 48 55.5	
	335nm,0.2s					
EPOB	**Poblet**	**1.30 244**	⇑Pg	Pg	18 48 53.5	-1.0
EPOB			Lg		18 49 09.6	
EPOB	**Poblet**	**1.30 244**	⇑Pg	Pg	18 48 53.5	-1.0
	172nm,0.1s,SNR=18					
EPOB			Lg		18 49 09.6	
	209nm,0.2s,SNR=7.9					
EPOB	**Poblet**	**1.30 244**	Pg	Pg	18 48 53.5	-1.1
	172nm,0.1s,SNR=18					
EPOB			Lg		18 49 09.6	
	209nm,0.2s,SNR=7.9					
SALF	**Salau**	**1.36 308**	Pg	Pg	18 48 56.1	+0.3
SALF			Lg		18 49 14.2	
CAVN	**Les Avellanes**	**1.40 269**	Pg	Pn	18 48 55.5	+0.2
CAVN			Lg		18 49 14.0	
	471nm,0.2s					
CAVN	**Les Avellanes**	**1.40 269**	P	Pn	18 48 55.5	+0.2
CAVN			S	Sn	18 49 14.0	+0.1
	943nm,0.2s					
CTRE	**Tremp**	**1.44 287**	Pg	Pg	18 48 56.7	-0.6
CTRE			Lg		18 49 15.9	
	325nm,0.3s					
CTRE	**Tremp**	**1.44 287**	P	Pn	18 48 56.8	+1.0
CTRE			S	Sn	18 49 16.0	+1.2
	325nm,0.3s					
MTLF	**Montolieu**	**1.45 348**	*e*Pg	Pg	18 48 58.6	+1.1
MTLF			*e*Sn	Sn	18 49 15.9	+0.9
	SNR=1.0					
MTLF			*e*Sg	Sg	18 49 18.0	+1.7
	322nm,0.4s					
MTLF	**Montolieu**	**1.45 348**	*e*Pn	Pn	18 48 56.8	+0.8
MTLF			*e*Pg	Pg	18 48 58.6	+1.1
MTLF			*e*Sn	Sn	18 49 15.9	+0.9
MTLF			*e*Sg	Sg	18 49 18.0	+1.7
MTLF	**Montolieu**	**1.45 348**	Pn	Pn	18 48 56.8	+0.8
MTLF			Pg	Pg	18 48 58.6	+1.1
MTLF			Sn	Sn	18 49 15.9	+0.9
MTLF			Lg		18 49 18.0	
	161nm,0.4s					
MTLF	**Montolieu**	**1.45 348**	*e*Pn	Pn	18 48 56.8	+0.8
	SNR=1.0					
MTLF	**Montolieu**	**1.45 348**	*e*Pg	Pg	18 48 58.6	+1.1
MTLF			*e*Sn	Sn	18 49 15.9	+0.9
	SNR=1.0					
MTLF			*e*Sg	Sg	18 49 18.0	+1.7
	161nm,0.4s					
MLS	**Moulis**	**1.54 313**	Pg	Pg	18 48 59.3	+0.1
MLS			Sg	Sg	18 49 19.9	+0.8
MLS	**Moulis**	**1.54 313**	Pg	Pg	18 48 59.2	0.0
MLS			Lg		18 49 20.2	
MLS	**Moulis**	**1.54 313**	Pg	Pg	18 48 59.3	+0.1
MLS			Sg	Sg	18 49 19.9	+0.8
MELF	**Melles**	**1.68 305**	Pg	Pg	18 49 01.7	-0.2
MELF			Sg	Sg	18 49 23.2	-0.5
MELF	**Melles**	**1.68 305**	Pg	Pg	18 49 01.6	-0.4
MELF			Lg		18 49 23.0	
MELF	**Melles**	**1.68 305**	Pg	Pg	18 49 01.7	-0.2
MELF			Sg	Sg	18 49 23.2	-0.5
RESF	**Ens**	**1.92 298**	Pg	Pg	18 49 05.6	-0.8
RESF	**Ens**	**1.92 298**	Pg	Pg	18 49 04.5	-2.0
RESF			Lg		18 49 29.3	
RESF	**Ens**	**1.92 298**	Pg	Pg	18 49 05.6	-0.8
ERTA	**Horta de San J**	**1.98 242**	Pn	Pn	18 49 03.2	0.0
ERTA			Pg	Pg	18 49 05.8	-1.9
ERTA			Lg		18 49 31.6	
ERTA	**Horta de San J**	**1.98 242**	Pn	Pn	18 49 03.2	0.0
	3.2nm,0.1s,SNR=118					
ERTA			Pg	Pg	18 49 05.8	-1.9
	124nm,0.2s,SNR=7.9					
ERTA			Lg		18 49 31.6	
	69nm,0.1s,SNR=7.9					
ERTA	**Horta de San J**	**1.98 242**	Pn	Pn	18 49 03.2	0.0
	3.2nm,0.1s,SNR=118					
EBIE	**Bielsa**	**2.00 293**	Pn	Pn	18 49 05.3	+1.8
EBIE			Pg	Pg	18 49 07.3	-0.7
EBIE			Lg		18 49 32.9	
EBIE	**Bielsa**	**2.00 293**	Pn	Pn	18 49 05.3	+1.8
	1.4nm,0.1s,SNR=68					
EBIE			Pg	Pg	18 49 07.3	-0.7
	22nm,0.2s,SNR=7.9					
EBIE			Lg		18 49 32.9	
	183nm,0.2s,SNR=7.9					
EBIE	**Bielsa**	**2.00 293**	P	Pn	18 49 04.9	+1.4
EBIE	**Bielsa**	**2.00 293**	Pn	Pn	18 49 05.3	+1.8
	1.4nm,0.1s,SNR=68					
EBIE	**Bielsa**	**2.00 293**	Pg	Pg	18 49 07.3	-0.7
	22nm,0.2s,SNR=7.9					
EBIE			S	Sn	18 49 30.4	+1.9
EBIE			Lg		18 49 32.9	
	183nm,0.2s,SNR=7.9					
EPF	**Esparros**	**2.02 304**	*e*Pg	Pg	18 49 08.4	-0.1
EPF			*e*Sn	Sn	18 49 29.1	-0.1
EPF			*e*Sg	Sg	18 49 35.0	+0.2
	320nm,0.4s					
EPF	**Esparros**	**2.02 304**	*e*Pn	Pn	18 49 04.5	+0.6
EPF			*e*Pg	Pg	18 49 08.4	-0.1
EPF			*e*Sn	Sn	18 49 29.1	-0.1
EPF			*e*Sg	Sg	18 49 35.0	+0.2
EPF	**Esparros**	**2.02 304**	Pn	Pn	18 49 04.5	+0.6
EPF			Pg	Pg	18 49 08.4	-0.1
EPF			Sn	Sn	18 49 29.1	-0.1
EPF			Lg		18 49 35.0	
	160nm,0.4s					
EPF	**Esparros**	**2.02 304**	*e*Pn	Pn	18 49 04.5	+0.6
EPF	**Esparros**	**2.02 304**	*e*Pg	Pg	18 49 08.4	-0.1
EPF			*e*Sn	Sn	18 49 29.1	-0.1
EPF			*e*Sg	Sg	18 49 35.0	+0.2
	160nm,0.4s					
VIEF	**Viey**	**2.16 297**	Pn	Pn	18 49 07.6	+1.9
VIEF			Sg	Sg	18 49 37.8	-1.2
VIEF	**Viey**	**2.16 297**	Pn	Pn	18 49 07.6	+1.9
VIEF			Lg		18 49 37.7	
VIEF	**Viey**	**2.16 297**	Pn	Pn	18 49 07.6	+1.9
VIEF			Sg	Sg	18 49 37.8	-1.2
ETOS	**Mallorca**	**2.16 176**	⇑Pn	Pn	18 49 04.0	-1.7
ETOS			Sn	Sn	18 49 27.8	-4.7
ETOS	**Mallorca**	**2.16 176**	⇑Pn	Pn	18 49 04.0	-1.7
	4.2nm,0.1s,SNR=18					
ETOS			Sn	Sn	18 49 27.8	-4.7
	17nm,0.1s,SNR=7.9					
ETOS	**Mallorca**	**2.16 176**	Pn	Pn	18 49 04.0	-1.7
	4.2nm,0.1s,SNR=18					
ETOS			Sn	Sn	18 49 27.8	-4.7
	17nm,0.1s,SNR=7.9					
LABF	**Labassere**	**2.20 302**	Pn	Pn	18 49 08.9	+2.6
LABF			Lg		18 49 37.7	
ESAC	**San Caprasio**	**2.33 266**	Pn	Pn	18 49 08.5	+0.5
ESAC			Pg	Pg	18 49 12.1	-2.2
ESAC			Sn	Sn	18 49 36.7	0.0
ESAC			Lg		18 49 44.0	
ESAC	**San Caprasio**	**2.33 266**	Pn	Pn	18 49 08.5	+0.5
	5.6nm,0.1s,SNR=51					
ESAC			Pg	Pg	18 49 12.1	-2.2
	106nm,0.2s,SNR=7.9					
ESAC			Sn	Sn	18 49 36.7	0.0
	107nm,0.2s,SNR=7.9					
ESAC			Lg		18 49 44.0	
	512nm,0.2s,SNR=7.9					
ESAC	**San Caprasio**	**2.33 266**	Pn	Pn	18 49 08.5	+0.5
	5.6nm,0.1s,SNR=51					
LASF	**Ste Croix**	**2.33 22**	*e*Pg	Pg	18 49 15.0	+0.6
LASF			*e*Sn	Sn	18 49 37.0	+0.2
	SNR=1.0					
LASF			*e*Sg	Sg	18 49 45.1	+0.5
	48nm,0.2s,SNR=1.0					
LASF	**Ste Croix**	**2.33 22**	*e*Pn	Pn	18 49 08.5	+0.4
LASF			*e*Pg	Pg	18 49 15.0	+0.6
LASF			*e*Sn	Sn	18 49 37.0	+0.2
LASF			*e*Sg	Sg	18 49 45.1	+0.5
LASF	**Ste Croix**	**2.33 22**	Pn	Pn	18 49 08.5	+0.4
LASF			Pg	Pg	18 49 15.0	+0.6
LASF			Sn	Sn	18 49 37.0	+0.2
LASF			Lg		18 49 45.1	
	24nm,0.2s					
LASF	**Ste Croix**	**2.33 22**	*e*Pn	Pn	18 49 08.5	+0.4
LASF	**Ste Croix**	**2.33 22**	*e*Pg	Pg	18 49 15.0	+0.6
LASF			*e*Sn	Sn	18 49 37.0	+0.2
	SNR=1.0					
LASF			*e*Sg	Sg	18 49 45.1	+0.5
	24nm,0.2s,SNR=1.0					
REYF	**Montagne du Re**	**2.51 298**	Pn	Pn	18 49 12.8	+2.2
REYF			Pg	Pg	18 49 17.4	-0.5
REYF	**Montagne du Re**	**2.51 298**	Pn	Pn	18 49 12.9	+2.3
REYF			Lg		18 49 48.5	
REYF	**Montagne du Re**	**2.51 298**	Pn	Pn	18 49 12.8	+2.2
FDAF	**Les Forges d'A**	**2.53 292**	Pn	Pn	18 49 12.8	+1.9
FDAF			Lg		18 49 46.0	
ETSF	**Etsaut**	**2.56 293**	*e*Pn	Pn	18 49 12.7	+1.5
	SNR=1.0					
ETSF			*e*Sn	Sn	18 49 41.6	-0.7
ETSF			*e*Sg	Sg	18 49 51.4	-0.4
	207nm,0.3s,SNR=1.0					
ETSF	**Etsaut**	**2.56 293**	Pn	Pn	18 49 12.7	+1.5
ETSF			Sn	Sn	18 49 41.6	-0.7
ETSF			Lg		18 49 51.4	
	104nm,0.3s					
ETSF	**Etsaut**	**2.56 293**	*e*Pn	Pn	18 49 12.7	+1.5
	SNR=1.0					
ETSF			*e*Sn	Sn	18 49 41.6	-0.7
ETSF			*e*Sg	Sg	18 49 51.4	-0.4
	104nm,0.3s,SNR=1.0					
EMOS	**Mosqueruela**	**2.81 237**	Pn	Pn	18 49 15.0	+0.2
EMOS			Pg	Pg	18 49 21.9	-1.7
EMOS			Lg		18 49 58.7	
EMOS	**Mosqueruela**	**2.81 237**	Pn	Pn	18 49 15.0	+0.2
	2.5nm,0.1s,SNR=21					
EMOS			Pg	Pg	18 49 21.9	-1.7
	19nm,0.3s,SNR=7.9					
EMOS			Lg		18 49 58.7	
	19nm,0.2s,SNR=7.7					
EMOS	**Mosqueruela**	**2.81 237**	P	Pn	18 49 15.0	+0.3
EMOS	**Mosqueruela**	**2.81 237**	Pg	Pg	18 49 21.9	-1.7
	19nm,0.3s,SNR=7.9					
EMOS			S	Sn	18 49 48.3	-0.4
EMOS			Lg		18 49 58.7	
	19nm,0.2s,SNR=7.7					
ORDF	**Ordiarp**	**2.93 297**	Pn	Pn	18 49 18.0	+1.6
ORDF			Pg	Pg	18 49 24.9	-1.0
ORDF	**Ordiarp**	**2.93 297**	Pn	Pn	18 49 18.1	+1.7
ORDF			Lg		18 49 58.0	
ORDF	**Ordiarp**	**2.93 297**	Pn	Pn	18 49 18.0	+1.6
SMRF	**Simiane la Rot**	**2.98 45**	*e*Pg	Pg	18 49 28.2	+1.4
SMRF			*e*Sg	Sg	18 50 05.9	+0.5
	37nm,0.3s,SNR=1.0					
SMRF	**Simiane la Rot**	**2.98 45**	*e*Pn	Pn	18 49 18.5	+1.5
SMRF			*e*Pg	Pg	18 49 28.2	+1.4
SMRF			*e*Sg	Sg	18 50 05.9	+0.5
SMRF	**Simiane la Rot**	**2.98 45**	Pn	Pn	18 49 18.5	+1.5
SMRF			Pg	Pg	18 49 28.2	+1.4
SMRF			Lg		18 50 05.9	
	37nm,0.3s					
SMRF	**Simiane la Rot**	**2.98 45**	*e*Pn	Pn	18 49 18.5	+1.5
	SNR=1.0					
SMRF	**Simiane la Rot**	**2.98 45**	*e*Pg	Pg	18 49 28.2	+1.4
SMRF			*e*Sg	Sg	18 50 05.9	+0.5
	18nm,0.3s,SNR=1.0					
CAF	**Calviac**	**3.03 352**	*e*Pg	Pg	18 49 27.8	+0.1
CAF			*e*Sn	Sn	18 49 53.8	-0.2
CAF			*e*Sg	Sg	18 50 07.4	+0.4
	85nm,0.3s,SNR=1.0					
CAF	**Calviac**	**3.03 352**	*e*Pn	Pn	18 49 18.4	+0.7
CAF			*e*Pg	Pg	18 49 27.8	+0.1
CAF			*e*Sn	Sn	18 49 53.8	-0.2
CAF			*e*Sg	Sg	18 50 07.4	+0.4
CAF	**Calviac**	**3.03 352**	Pn	Pn	18 49 18.4	+0.7
CAF			Pg	Pg	18 49 27.8	+0.1
CAF			Sn	Sn	18 49 53.8	-0.2
CAF			Lg		18 50 07.4	
	42nm,0.3s					
CAF	**Calviac**	**3.03 352**	*e*Pn	Pn	18 49 18.4	+0.7
	SNR=1.0					
CAF	**Calviac**	**3.03 352**	*e*Pg	Pg	18 49 27.8	+0.1
CAF			*e*Sn	Sn	18 49 53.8	-0.2
CAF			*e*Sg	Sg	18 50 07.4	+0.4
	42nm,0.3s,SNR=1.0					
EIBI	**Ibiza**	**3.06 199**	Pn	Pn	18 49 16.3	-1.8
EIBI			Sn	Sn	18 49 50.0	-4.6
EIBI	**Ibiza**	**3.06 199**	Pn	Pn	18 49 16.3	-1.8
	4.9nm,0.1s,SNR=36					
EIBI			Sn	Sn	18 49 50.0	-4.6
	16nm,0.2s,SNR=7.9					
EIBI	**Ibiza**	**3.06 199**	Pn	Pn	18 49 16.3	-1.7
	4.9nm,0.1s,SNR=36					
EIBI			Sn	Sn	18 49 50.0	-4.7
	16nm,0.2s,SNR=7.9					
EORO	**Oroz-Betelu**	**3.08 290**	Pn	Pn	18 49 19.9	+1.5
	1.4nm,0.1s,SNR=7.9					
EORO			Pg	Pg	18 49 27.3	-1.3
	SNR=7.9					
EORO			Sn	Sn	18 49 58.3	+3.2
	SNR=7.9					
EORO			Lg		18 50 08.7	
	81nm,0.2s,SNR=7.9					
EORO	**Oroz-Betelu**	**3.08 290**	Pn	Pn	18 49 19.9	+1.6
	1.4nm,0.1s,SNR=7.9					
IPRE	**Itoiz**	**3.08 288**	Pg	Pg	18 49 29.1	+0.3
	4.3nm,0.2s,SNR=7.9					
IPRE	**Itoiz**	**3.08 288**	Pg	Pg	18 49 29.1	+0.3
	4.3nm,0.2s,SNR=7.9					
SJPF	**Ste Jean**	**3.09 294**	*e*Pn	Pn	18 49 19.5	+1.0
	SNR=1.0					
SJPF			*e*Sn	Sn	18 49 54.1	-1.4
	SNR=1.0					
SJPF			*e*Sg	Sg	18 50 08.1	-0.8
	78nm,0.4s,SNR=1.0					
SJPF	**Ste Jean**	**3.09 294**	Pn	Pn	18 49 19.5	+1.0
SJPF			Sn	Sn	18 49 54.1	-1.4
SJPF			Lg		18 50 08.1	
	39nm,0.4s					
SJPF	**Ste Jean**	**3.09 294**	*e*Pn	Pn	18 49 19.5	+1.0
	SNR=1.0					
SJPF			*e*Sn	Sn	18 49 54.1	-1.4
SJPF			*e*Sg	Sg	18 50 08.1	-0.8
	39nm,0.4s,SNR=1.0					
OSSF	**Osses**	**3.17 296**	Pn	Pn	18 49 20.9	+1.3
OSSF	**Osses**	**3.17 296**	Pn	Pn	18 49 20.9	+1.3
OSSF	**Osses**	**3.17 296**	Pn	Pn	18 49 20.9	+1.3
IZUN	**Zunzarren**	**3.17 289**	Pn	Pn	18 49 21.1	+1.5
	0.9nm,0.1s,SNR=7.9					
IZUN			Pg	Pg	18 49 29.4	-1.1
	9.0nm,0.2s,SNR=7.9					
IZUN			Lg		18 50 10.9	
	14nm,0.3s,SNR=7.9					
IZUN	**Zunzarren**	**3.17 289**	Pn	Pn	18 49 21.1	+1.5
	0.9nm,0.1s,SNR=7.9					
IUNC	**Unciti**	**3.17 287**	Pn	Pn	18 49 21.4	+1.7
	3.0nm,0.2s,SNR=9.7					
IUNC			Pg	Pg	18 49 29.5	-1.0
	7.6nm,0.2s,SNR=7.9					
IUNC			Lg		18 50 11.4	
	10nm,0.2s,SNR=7.9					
IUNC	**Unciti**	**3.17 287**	Pn	Pn	18 49 21.4	+1.7
	3.0nm,0.2s,SNR=9.7					
LMR	**La Mourre**	**3.19 62**	*e*Pn	Pn	18 49 20.1	+0.2
	SNR=1.0					
LMR			*e*Sn	Sn	18 49 56.6	-1.3
	16nm,0.2s					
LMR	**La Mourre**	**3.19 62**	Pn	Pn	18 49 20.1	+0.2
LMR			Sn	Sn	18 49 56.6	-1.3
	8.2nm,0.2s					
LMR	**La Mourre**	**3.19 62**	*e*Pn	Pn	18 49 20.1	+0.2
	SNR=1.0					
LMR			*e*Sn	Sn	18 49 56.6	-1.3
	8.2nm,0.2s					
EARA	**Aranguren**	**3.23 287**	Pn	Pn	18 49 21.8	+1.3
	1.4nm,0.1s,SNR=6.8					
EARA			Pg	Pg	18 49 30.6	-1.1
	9.6nm,0.2s,SNR=7.9					
EARA			Lg		18 50 13.4	
	22nm,0.3s,SNR=9.1					
EARA	**Aranguren**	**3.23 287**	Pn	Pn	18 49 21.8	+1.3
	1.4nm,0.1s,SNR=6.8					
IUSE	**Utxeti**	**3.26 290**	Pn	Pn	18 49 22.9	+2.1
	0.6nm,0.1s,SNR=7.9					
IUSE			Sn	Sn	18 50 02.2	+2.6
	6.5nm,0.2s,SNR=7.9					
IUSE			Lg		18 50 14.2	
	SNR=7.9					
IUSE	**Utxeti**	**3.26 290**	Pn	Pn	18 49 22.9	+2.1
	0.6nm,0.1s,SNR=7.9					
IUSE			Sn	Sn	18 50 02.2	+2.6
	6.5nm,0.2s,SNR=7.9					
IUSE			Lg		18 50 14.2	
	SNR=7.9					
VIVF	**Saint-Julien-l**	**3.29 26**	*e*Pg	Pg	18 49 32.2	-0.5
VIVF			*e*Sn	Sn	18 49 59.9	-0.4
	SNR=1.0					
VIVF			*e*Sg	Sg	18 50 15.4	+0.2
	22nm,0.2s,SNR=1.0					
VIVF	**Saint-Julien-l**	**3.29 26**	*e*Pn	Pn	18 49 22.0	+0.8
VIVF			*e*Pg	Pg	18 49 32.2	-0.5
VIVF			*e*Sn	Sn	18 49 59.9	-0.4
VIVF			*e*Sg	Sg	18 50 15.4	+0.2
VIVF	**Saint-Julien-l**	**3.29 26**	Pn	Pn	18 49 22.0	+0.8
VIVF			Pg	Pg	18 49 32.2	-0.5
VIVF			Sn	Sn	18 49 59.9	-0.4
VIVF			Lg		18 50 15.4	
	11nm,0.2s					
VIVF	**Saint-Julien-l**	**3.29 26**	*e*Pn	Pn	18 49 22.0	+0.8
	SNR=1.0					
VIVF	**Saint-Julien-l**	**3.29 26**	*e*Pg	Pg	18 49 32.2	-0.5
VIVF			*e*Sn	Sn	18 49 59.9	-0.4
	SNR=1.0					
VIVF			*e*Sg	Sg	18 50 15.4	+0.2
	11nm,0.2s,SNR=1.0					
ELIZ	**Elizondo**	**3.31 293**	Pn	Pn	18 49 23.4	+1.8
ELIZ			Sn	Sn	18 50 03.8	+2.7
ELIZ			Lg		18 50 17.1	
ELIZ	**Elizondo**	**3.31 293**	Pn	Pn	18 49 23.4	+1.8
	32nm,0.3s,SNR=75					
ELIZ			Sn	Sn	18 50 03.8	+2.7
	15nm,0.3s,SNR=7.9					
ELIZ			Lg		18 50 17.1	
	SNR=7.9					
ELIZ	**Elizondo**	**3.31 293**	Pn	Pn	18 49 23.4	+1.8
	32nm,0.3s,SNR=75					
ELIZ			Sn	Sn	18 50 03.8	+2.8
	15nm,0.3s,SNR=7.9					
ELIZ			Lg		18 50 17.1	
	SNR=7.9					
LFF	**La Frestale**	**3.31 336**	*e*Pg	Pg	18 49 32.8	-0.4
LFF			*e*Sn	Sn	18 50 00.3	-0.7
LFF			*e*Sg	Sg	18 50 16.0	-0.1
	114nm,0.4s,SNR=1.0					
LFF	**La Frestale**	**3.31 336**	*e*Pn	Pn	18 49 22.1	+0.5
LFF			*e*Pg	Pg	18 49 32.8	-0.4
LFF			*e*Sn	Sn	18 50 00.3	-0.7
LFF			*e*Sg	Sg	18 50 16.0	-0.1
LFF	**La Frestale**	**3.31 336**	Pn	Pn	18 49 22.1	+0.5
LFF			Pg	Pg	18 49 32.8	-0.4
LFF			Sn	Sn	18 50 00.3	-0.7
LFF			Lg		18 50 16.0	
	57nm,0.4s					
LFF	**La Frestale**	**3.31 336**	*e*Pn	Pn	18 49 22.1	+0.5
	SNR=1.0					
LFF	**La Frestale**	**3.31 336**	*e*Pg	Pg	18 49 32.8	-0.4
LFF			*e*Sn	Sn	18 50 00.3	-0.7
LFF			*e*Sg	Sg	18 50 16.0	-0.1
	57nm,0.4s,SNR=1.0					
EALK	**Alkurruntz**	**3.32 294**	Pn	Pn	18 49 23.4	+1.7
EALK			Sn	Sn	18 50 01.9	+0.7
EALK			Lg		18 50 13.7	
EALK	**Alkurruntz**	**3.32 294**	Pn	Pn	18 49 23.4	+1.7
	4.0nm,0.1s,SNR=28					
EALK			Sn	Sn	18 50 01.9	+0.7
	16nm,0.3s,SNR=7.9					
EALK			Lg		18 50 13.7	
	SNR=7.9					
EALK	**Alkurruntz**	**3.32 294**	Pn	Pn	18 49 23.4	+1.7
	4.0nm,0.1s,SNR=28					
EALK			Sn	Sn	18 50 01.9	+0.7
	16nm,0.3s,SNR=7.9					
EALK			Lg		18 50 13.7	
	SNR=7.9					
LBL	**Lubilhac**	**3.34 7**	Pn	Pn	18 49 22.6	+0.7
LBL	**Lubilhac**	**3.34 7**	Pn	Pn	18 49 22.6	+0.7
FRF	**La Foret Royal**	**3.38 60**	*e*Pn	Pn	18 49 22.7	+0.2
	SNR=1.0					
FRF			*e*Sn	Sn	18 50 01.7	-0.9
FRF			*e*Sg	Sg	18 50 17.4	-0.8
	25nm,0.4s					
FRF	**La Foret Royal**	**3.38 60**	Pn	Pn	18 49 22.7	+0.2
FRF			Sn	Sn	18 50 01.7	-0.9
FRF			Lg		18 50 17.4	
	13nm,0.4s					
FRF	**La Foret Royal**	**3.38 60**	*e*Pn	Pn	18 49 22.7	+0.2
	SNR=1.0					
FRF			*e*Sn	Sn	18 50 01.7	-0.9
FRF			*e*Sg	Sg	18 50 17.4	-0.8
	13nm,0.4s					
RJF	**Les Rejaudoux**	**3.48 347**	*e*Pg	Pg	18 49 35.7	-0.6
RJF			*e*Sn	Sn	18 50 04.3	-0.7
RJF			*e*Sg	Sg	18 50 21.0	-0.3
	53nm,0.5s					
RJF	**Les Rejaudoux**	**3.48 347**	*e*Pn	Pn	18 49 24.1	+0.3
RJF			*e*Pg	Pg	18 49 35.7	-0.6
RJF			*e*Sn	Sn	18 50 04.3	-0.7
RJF			*e*Sg	Sg	18 50 21.0	-0.3
RJF	**Les Rejaudoux**	**3.48 347**	Pn	Pn	18 49 24.1	+0.3
RJF			Pg	Pg	18 49 35.7	-0.6
RJF			Sn	Sn	18 50 04.3	-0.7
RJF			Lg		18 50 21.0	
	26nm,0.5s					
RJF	**Les Rejaudoux**	**3.48 347**	*e*Pn	Pn	18 49 24.1	+0.3
	SNR=1.0					
RJF	**Les Rejaudoux**	**3.48 347**	*e*Pg	Pg	18 49 35.7	-0.6
RJF			*e*Sn	Sn	18 50 04.3	-0.7
RJF			*e*Sg	Sg	18 50 21.0	-0.3
	26nm,0.5s					
ECHE	**Chera**	**3.59 231**	Pn	Pn	18 49 25.1	-0.3

ORIF				*e*Sg	**Sg**	**18 50 31.4**	**-0.8**
	6.4nm,0.4s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**3.81**	**37**	Pn	**Pn**	**18 49 29.8**	**+1.3**
ORIF				Sn	**Sn**	**18 50 12.5**	**-0.9**
ORIF				Lg		18 50 31.4	
	3.2nm,0.4s						
ORIF	**Oris-en-Rattie**	**3.81**	**37**	*e*Pn	**Pn**	**18 49 29.8**	**+1.3**
	SNR=1.0						
ORIF				*e*Sn	**Sn**	**18 50 12.5**	**-0.9**
ORIF				*e*Sg	**Sg**	**18 50 31.4**	**-0.8**
	3.2nm,0.4s,SNR=1.0						
PYM	**Petit Puy Mans**	**3.83**	**4**	Pn	**Pn**	**18 49 30.2**	**+1.4**
PYM	**Petit Puy Mans**	**3.83**	**4**	Pn	**Pn**	**18 49 30.2**	**+1.4**
EBEN	**Beniarda**	**3.89**	**215**	Pn	**Pn**	**18 49 28.9**	**-0.5**
EBEN				Sn	**Sn**	**18 50 12.1**	**-3.0**
EBEN	**Beniarda**	**3.89**	**215**	Pn	**Pn**	**18 49 28.9**	**-0.5**
	1.2nm,0.2s,SNR=20						
EBEN				Sn	**Sn**	**18 50 12.1**	**-3.0**
	0.3nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**3.89**	**215**	Pn	**Pn**	**18 49 28.9**	**-0.6**
	1.2nm,0.2s,SNR=20						
EBEN				Sn	**Sn**	**18 50 12.1**	**-3.1**
	0.3nm,0.2s,SNR=7.9						
TOUF	**Mont Tournerai**	**3.98**	**57**	Pn	**Pn**	**18 49 30.9**	**+0.2**
TOUF	**Mont Tournerai**	**3.98**	**57**	Pn	**Pn**	**18 49 30.9**	**+0.2**
LUCF	**Luceram**	**3.98**	**59**	Pn	**Pn**	**18 49 31.1**	**+0.3**
LUCF	**Luceram**	**3.98**	**59**	Pn	**Pn**	**18 49 31.1**	**+0.3**
SBF	**Sospel**	**4.03**	**60**	*e*Pn	**Pn**	**18 49 31.9**	**+0.5**
	SNR=1.0						
SBF				*e*Sn	**Sn**	**18 50 16.6**	**-2.0**
	30nm,0.4s,SNR=1.0						
SBF	**Sospel**	**4.03**	**60**	Pn	**Pn**	**18 49 31.9**	**+0.5**
SBF				Sn	**Sn**	**18 50 16.6**	**-2.0**
	15nm,0.4s						
SBF	**Sospel**	**4.03**	**60**	*e*Pn	**Pn**	**18 49 31.9**	**+0.5**
	SNR=1.0						
SBF				*e*Sn	**Sn**	**18 50 16.6**	**-2.0**
	15nm,0.4s,SNR=1.0						
AUTN	**L'Aution**	**4.08**	**58**	Pn	**Pn**	**18 49 33.4**	**+1.2**
AUTN	**L'Aution**	**4.08**	**58**	Pn	**Pn**	**18 49 33.4**	**+1.2**
PLDF	**La Plantade**	**4.11**	**10**	Pn	**Pn**	**18 49 32.3**	**-0.2**
PLDF	**La Plantade**	**4.11**	**10**	Pn	**Pn**	**18 49 32.3**	**-0.2**
MBDF	**Montbardon**	**4.12**	**46**	*e*Pn	**Pn**	**18 49 33.3**	**+0.6**
	SNR=1.0						
MBDF				*e*Sn	**Sn**	**18 50 19.8**	**-1.1**
	17nm,0.6s						
MBDF	**Montbardon**	**4.12**	**46**	Pn	**Pn**	**18 49 33.3**	**+0.6**
MBDF				Sn	**Sn**	**18 50 19.8**	**-1.1**
	8.3nm,0.6s						
MBDF	**Montbardon**	**4.12**	**46**	*e*Pn	**Pn**	**18 49 33.3**	**+0.6**
	SNR=1.0						
MBDF				*e*Sn	**Sn**	**18 50 19.8**	**-1.1**
	8.3nm,0.6s						
AGO	**Saint Agoulin**	**4.14**	**5**	Pn	**Pn**	**18 49 34.4**	**+1.4**
AGO	**Saint Agoulin**	**4.14**	**5**	Pn	**Pn**	**18 49 34.4**	**+1.4**
STV	**Sant Anna di V**	**4.15**	**54**	P	**Pn**	**18 49 34.5**	**+1.5**
SAOF	**Saorge**	**4.16**	**59**	Pn	**Pn**	**18 49 34.7**	**+1.5**
SAOF	**Saorge**	**4.16**	**59**	Pn	**Pn**	**18 49 34.7**	**+1.5**
PZZ	**Stroppo**	**4.17**	**50**	P	**Pn**	**18 49 35.6**	**+2.2**
IMI	**Imperia**	**4.34**	**61**	P	**Pn**	**18 49 35.8**	**+0.1**
TCF	**Toulx Ste Croi**	**4.37**	**356**	*e*Pg	**Pg**	**18 49 52.6**	**-0.9**
TCF				*e*Sn	**Sn**	**18 50 25.4**	**-1.7**
	SNR=1.0						
TCF				*e*Sg	**Sg**	**18 50 49.4**	**-0.7**
	59nm,0.7s,SNR=1.0						
TCF	**Toulx Ste Croi**	**4.37**	**356**	*e*Pn	**Pn**	**18 49 36.4**	**+0.2**
TCF				*e*Pg	**Pg**	**18 49 52.6**	**-0.9**
TCF				*e*Sn	**Sn**	**18 50 25.4**	**-1.7**
TCF				*e*Sg	**Sg**	**18 50 49.4**	**-0.7**
TCF	**Toulx Ste Croi**	**4.37**	**356**	Pn	**Pn**	**18 49 36.4**	**+0.2**
TCF				Pg	**Pg**	**18 49 52.6**	**-0.9**
TCF				Sn	**Sn**	**18 50 25.4**	**-1.7**
TCF				Lg		18 50 49.4	
	30nm,0.7s						
TCF	**Toulx Ste Croi**	**4.37**	**356**	*e*Sn	**Sn**	**18 50 25.4**	**-1.7**
	SNR=1.0						
TCF	**Toulx Ste Croi**	**4.37**	**356**	*e*Pn	**Pn**	**18 49 36.4**	**+0.2**
TCF	**Toulx Ste Croi**	**4.37**	**356**	*e*Pg	**Pg**	**18 49 52.6**	**-0.9**
TCF				*e*Sg	**Sg**	**18 50 49.4**	**-0.7**
	30nm,0.7s,SNR=1.0						
ETOB	**Tobarra**	**4.58**	**226**	Pn	**Pn**	**18 49 38.3**	**-0.7**
ETOB				Sn	**Sn**	**18 50 29.4**	**-2.7**
ETOB	**Tobarra**	**4.58**	**226**	Pn	**Pn**	**18 49 38.3**	**-0.7**
	3.6nm,0.2s,SNR=20						
ETOB				Sn	**Sn**	**18 50 29.4**	**-2.7**
	SNR=7.9						
ETOB	**Tobarra**	**4.58**	**226**	Pn	**Pn**	**18 49 38.3**	**-0.6**
	3.6nm,0.2s,SNR=20						
ETOB				Sn	**Sn**	**18 50 29.4**	**-2.8**
	SNR=7.9						
BGF	**Bois d'Agland**	**4.64**	**2**	*e*Pg	**Pg**	**18 49 57.6**	**-0.9**
BGF				*e*Sg	**Sg**	**18 50 57.8**	**-0.7**
	46nm,0.3s,SNR=1.0						
BGF	**Bois d'Agland**	**4.64**	**2**	*e*Pn	**Pn**	**18 49 39.8**	**+0.1**
BGF				*e*Pg	**Pg**	**18 49 57.6**	**-0.9**
BGF				*e*Sg	**Sg**	**18 50 57.8**	**-0.7**
BGF	**Bois d'Agland**	**4.64**	**2**	Pn	**Pn**	**18 49 39.8**	**+0.1**
BGF				Pg	**Pg**	**18 49 57.6**	**-0.9**
BGF				Lg		18 50 57.8	
	23nm,0.3s						
BGF	**Bois d'Agland**	**4.64**	**2**	*e*Pn	**Pn**	**18 49 39.8**	**+0.1**
	SNR=1.0						
BGF	**Bois d'Agland**	**4.64**	**2**	*e*Pg	**Pg**	**18 49 57.6**	**-0.9**
BGF				*e*Sg	**Sg**	**18 50 57.8**	**-0.7**
	23nm,0.3s,SNR=1.0						
LPG	**La Plagne**	**4.66**	**38**	*e*Pn	**Pn**	**18 49 40.9**	**+0.9**
	SNR=1.0						
LPG				*e*Sn	**Sn**	**18 50 32.3**	**-1.8**
	3.9nm,0.4s						
LPG	**La Plagne**	**4.66**	**38**	*e*Pn	**Pn**	**18 49 40.9**	**+0.9**
	SNR=1.0						
LPG				*e*Sn	**Sn**	**18 50 32.3**	**-1.8**
	2.0nm,0.4s						
LPL	**La Plagne**	**4.66**	**38**	*e*Pn	**Pn**	**18 49 41.4**	**+1.3**
	SNR=1.0						
LPL				*e*Sn	**Sn**	**18 50 32.8**	**-1.4**
	6.7nm,0.5s						
LPL	**La Plagne**	**4.66**	**38**	*e*Pn	**Pn**	**18 49 41.4**	**+1.3**
	SNR=1.0						
LPL				*e*Sn	**Sn**	**18 50 32.8**	**-1.4**
	3.3nm,0.5s						
RSP	**Reno Superiore**	**4.66**	**45**	P	**Pn**	**18 49 42.8**	**+2.7**
ELAN	**Lanestosa**	**4.67**	**288**	Pn	**Pn**	**18 49 41.2**	**+1.1**
ELAN				Sn	**Sn**	**18 50 33.9**	**-0.4**
ELAN				Lg		18 50 56.1	
ELAN	**Lanestosa**	**4.67**	**288**	Pn	**Pn**	**18 49 41.2**	**+1.1**
	2.4nm,0.2s,SNR=14						
ELAN				Sn	**Sn**	**18 50 33.9**	**-0.4**
	SNR=7.9						
ELAN				Lg		18 50 56.1	
	3.4nm,0.3s,SNR=5.6						
ELAN	**Lanestosa**	**4.67**	**288**	Pn	**Pn**	**18 49 41.2**	**+1.0**
	2.4nm,0.2s,SNR=14						
ELAN				Sn	**Sn**	**18 50 33.9**	**-0.5**
	SNR=7.9						
ELAN				Lg		18 50 56.1	
	3.4nm,0.3s,SNR=5.6						
PGF	**Pioggiola**	**4.77**	**80**	*e*Pn	**Pn**	**18 49 40.4**	**-1.2**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**18 50 32.9**	**-4.0**
	15nm,0.2s						
PGF	**Pioggiola**	**4.77**	**80**	*e*Pn	**Pn**	**18 49 40.4**	**-1.2**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**18 50 32.9**	**-4.0**
	7.6nm,0.2s						
SMF	**Signal de Mont**	**4.80**	**10**	*e*Pg	**Pg**	**18 50 00.9**	**-0.7**
SMF				*e*Sn	**Sn**	**18 50 36.1**	**-1.5**
SMF				*e*Sg	**Sg**	**18 51 02.5**	**-1.2**
	13nm,0.4s						
SMF	**Signal de Mont**	**4.80**	**10**	*e*Pn	**Pn**	**18 49 42.5**	**+0.5**
SMF				*e*Pg	**Pg**	**18 50 00.9**	**-0.7**
SMF				*e*Sn	**Sn**	**18 50 36.1**	**-1.5**
SMF				*e*Sg	**Sg**	**18 51 02.5**	**-1.2**
SMF	**Signal de Mont**	**4.80**	**10**	Pn	**Pn**	**18 49 42.5**	**+0.5**
SMF				Pg	**Pg**	**18 50 00.9**	**-0.7**
SMF				Sn	**Sn**	**18 50 36.1**	**-1.5**
SMF				Lg		18 51 02.5	
	6.7nm,0.4s						
SMF	**Signal de Mont**	**4.80**	**10**	*e*Pn	**Pn**	**18 49 42.5**	**+0.5**
	SNR=1.0						
SMF	**Signal de Mont**	**4.80**	**10**	*e*Pg	**Pg**	**18 50 00.9**	**-0.7**
SMF				*e*Sn	**Sn**	**18 50 36.1**	**-1.5**
SMF				*e*Sg	**Sg**	**18 51 02.5**	**-1.2**
	6.7nm,0.4s						
AVF	**Avril sur Loir**	**4.89**	**6**	*e*Pg	**Pg**	**18 50 02.1**	**-1.3**
AVF				*e*Sn	**Sn**	**18 50 38.1**	**-1.8**
AVF				*e*Sg	**Sg**	**18 51 05.3**	**-1.4**
	12nm,0.5s,SNR=1.0						
AVF	**Avril sur Loir**	**4.89**	**6**	*e*Pn	**Pn**	**18 49 43.9**	**+0.6**
AVF				*e*Pg	**Pg**	**18 50 02.1**	**-1.3**
AVF				*e*Sn	**Sn**	**18 50 38.1**	**-1.8**
AVF				*e*Sg	**Sg**	**18 51 05.3**	**-1.4**
AVF	**Avril sur Loir**	**4.89**	**6**	Pn	**Pn**	**18 49 43.9**	**+0.6**
AVF				Pg	**Pg**	**18 50 02.1**	**-1.3**
AVF				Sn	**Sn**	**18 50 38.1**	**-1.8**
AVF				Lg		18 51 05.3	
	6.1nm,0.5s						
AVF	**Avril sur Loir**	**4.89**	**6**	*e*Pn	**Pn**	**18 49 43.9**	**+0.6**
AVF	**Avril sur Loir**	**4.89**	**6**	*e*Pg	**Pg**	**18 50 02.1**	**-1.3**
AVF				*e*Sn	**Sn**	**18 50 38.1**	**-1.8**
AVF				*e*Sg	**Sg**	**18 51 05.3**	**-1.4**
	6.1nm,0.5s,SNR=1.0						
PCP	**Piancastagn**	**5.05**	**57**	P	**Pn**	**18 49 46.7**	**+1.3**
MFF	**Saint Martin d**	**5.08**	**338**	*e*Pg	**Pg**	**18 50 05.3**	**-1.8**
MFF				*e*Sn	**Sn**	**18 50 42.5**	**-2.2**
	SNR=1.0						
MFF				*e*Sg	**Sg**	**18 51 11.4**	**-1.5**
	12nm,0.3s,SNR=1.0						
MFF	**Saint Martin d**	**5.08**	**338**	*e*Pn	**Pn**	**18 49 46.0**	**+0.1**
MFF				*e*Pg	**Pg**	**18 50 05.3**	**-1.8**
MFF				*e*Sn	**Sn**	**18 50 42.5**	**-2.2**
MFF				*e*Sg	**Sg**	**18 51 11.4**	**-1.5**
MFF	**Saint Martin d**	**5.08**	**338**	Pn	**Pn**	**18 49 46.0**	**+0.1**
MFF				Pg	**Pg**	**18 50 05.3**	**-1.8**
MFF				Sn	**Sn**	**18 50 42.5**	**-2.2**
MFF				Lg		18 51 11.4	
	5.9nm,0.3s						
MFF	**Saint Martin d**	**5.08**	**338**	*e*Pn	**Pn**	**18 49 46.0**	**+0.1**
	SNR=1.0						
MFF	**Saint Martin d**	**5.08**	**338**	*e*Pg	**Pg**	**18 50 05.3**	**-1.8**
MFF				*e*Sn	**Sn**	**18 50 42.5**	**-2.2**
	SNR=1.0						
MFF				*e*Sg	**Sg**	**18 51 11.4**	**-1.5**
	5.9nm,0.3s,SNR=1.0						
TRAV	**Traversella**	**5.16**	**44**	P	**Pn**	**18 49 49.4**	**+2.5**
SSF	**Saint Saulge**	**5.17**	**7**	*e*Pg	**Pg**	**18 50 07.3**	**-1.5**
SSF				*e*Sn	**Sn**	**18 50 45.1**	**-1.8**
SSF				*e*Sg	**Sg**	**18 51 14.5**	**-1.3**
	10nm,0.5s,SNR=1.0						
SSF	**Saint Saulge**	**5.17**	**7**	*e*Pn	**Pn**	**18 49 47.1**	**-0.1**
SSF				*e*Pg	**Pg**	**18 50 07.3**	**-1.5**
SSF				*e*Sn	**Sn**	**18 50 45.1**	**-1.8**
SSF				*e*Sg	**Sg**	**18 51 14.5**	**-1.3**
SSF	**Saint Saulge**	**5.17**	**7**	Pn	**Pn**	**18 49 47.1**	**-0.1**
SSF				Pg	**Pg**	**18 50 07.3**	**-1.5**
SSF				Sn	**Sn**	**18 50 45.1**	**-1.8**
SSF				Lg		18 51 14.5	
	5.2nm,0.5s						
SSF	**Saint Saulge**	**5.17**	**7**	*e*Pn	**Pn**	**18 49 47.1**	**-0.1**
SSF	**Saint Saulge**	**5.17**	**7**	*e*Pg	**Pg**	**18 50 07.3**	**-1.5**
SSF				*e*Sn	**Sn**	**18 50 45.1**	**-1.8**
SSF				*e*Sg	**Sg**	**18 51 14.5**	**-1.3**
	5.2nm,0.5s,SNR=1.0						
GUD	**Guadarrama**	**5.27**	**258**	Pn	**Pn**	**18 49 48.5**	**0.0**
GUD				Sn	**Sn**	**18 50 47.0**	**-2.3**
GUD	**Guadarrama**	**5.27**	**258**	Pn	**Pn**	**18 49 48.5**	**0.0**
	3.0nm,0.2s,SNR=7.9						
GUD				Sn	**Sn**	**18 50 47.0**	**-2.3**
	SNR=7.9						
GUD	**Guadarrama**	**5.27**	**258**	Pn	**Pn**	**18 49 48.5**	**0.0**
	3.0nm,0.2s,SNR=7.9						
GUD				Sn	**Sn**	**18 50 47.0**	**-2.3**
	SNR=7.9						
CABF	**La Chapelle**	**5.30**	**27**	*e*Pn	**Pn**	**18 49 49.5**	**+0.6**
	SNR=1.0						
CABF				*e*Sg	**Sg**	**18 51 18.0**	**-1.9**
	21nm,0.7s						
CABF	**La Chapelle**	**5.30**	**27**	*e*Pn	**Pn**	**18 49 49.5**	**+0.6**
	SNR=1.0						
CABF				*e*Sg	**Sg**	**18 51 18.0**	**-1.9**
	10nm,0.7s						
HYF	**Humbligny**	**5.34**	**0**	*e*Sg	**Sg**	**18 51 19.6**	**-1.6**
HYF	**Humbligny**	**5.34**	**0**	*e*Sg	**Sg**	**18 51 19.6**	**-1.6**
LOR	**Lormes**	**5.42**	**9**	*e*Pg	**Pg**	**18 50 11.7**	**-1.7**
	baz=192						
LOR				*e*Sn	**Sn**	**18 50 50.3**	**-2.5**
	SNR=1.0						
LOR				*e*Sg	**Sg**	**18 51 22.1**	**-1.4**
	11nm,0.5s						
LOR	**Lormes**	**5.42**	**9**	*e*Pn	**Pn**	**18 49 50.7**	**+0.3**
LOR				*e*Pg	**Pg**	**18 50 11.7**	**-1.7**
LOR				*e*Sn	**Sn**	**18 50 50.3**	**-2.5**
LOR				*e*Sg	**Sg**	**18 51 22.1**	**-1.4**
LOR	**Lormes**	**5.42**	**9**	Pn	**Pn**	**18 49 50.7**	**+0.3**
LOR				Pg	**Pg**	**18 50 11.7**	**-1.7**
LOR				Sn	**Sn**	**18 50 50.3**	**-2.5**
LOR				Lg		18 51 22.1	
	5.6nm,0.5s						
LOR	**Lormes**	**5.42**	**9**	*e*Pn	**Pn**	**18 49 50.7**	**+0.3**
LOR	**Lormes**	**5.42**	**9**	*e*Pg	**Pg**	**18 50 11.7**	**-1.7**
	baz=192						
LOR				*e*Sg	**Sg**	**18 51 22.1**	**-1.4**
	5.6nm,0.5s						
ESDC	**Sonseca Array**	**5.49**	**248**	Pn	**Pn**	**18 49 50.4**	**-1.1**
ESDC	**Sonseca Array**	**5.49**	**248**	Pn	**Pn**	**18 49 50.4**	**-1.1**
	5.4nm,0.1s,baz=66,slow=14,SNR=28						
ESDC	**Sonseca Array**	**5.49**	**248**	Pn	**Pn**	**18 49 50.4**	**-1.0**
	5.4nm,0.1s,baz=66,SNR=28						
PAB	**San Pablo**	**5.81**	**248**	*e*Pn	**Pn**	**18 49 54.7**	**-1.2**
	2.7nm,0.4s						
PAB	**San Pablo**	**5.81**	**248**	*e*Pn	**Pn**	**18 49 54.7**	**-1.2**
	2.7nm,0.4s						
EARI	**Arriondas**	**5.95**	**286**	Pn	**Pn**	**18 49 58.5**	**+0.7**
EARI				Sn	**Sn**	**18 51 03.6**	**-2.4**
EARI	**Arriondas**	**5.95**	**286**	Pn	**Pn**	**18 49 58.5**	**+0.7**
	0.6nm,0.1s,SNR=16						
EARI				Sn	**Sn**	**18 51 03.6**	**-2.4**
	SNR=7.9						
EARI	**Arriondas**	**5.95**	**286**	Pn	**Pn**	**18 49 58.5**	**+0.7**
	0.6nm,0.1s,SNR=16						
EARI				Sn	**Sn**	**18 51 03.6**	**-2.3**
	SNR=7.9						
SFTF	**Sexfontaines**	**6.51**	**14**	*e*Sg	**Sg**	**18 51 56.1**	**-2.4**
	9.4nm,0.6s						
HINF	**Hinteralfeld**	**6.61**	**26**	*e*Pn	**Pn**	**18 50 07.4**	**+0.5**
	SNR=1.0						
HINF				*e*Sn	**Sn**	**18 51 19.5**	**-2.7**
HINF				*e*Sg	**Sg**	**18 51 59.3**	**-2.5**
	6.1nm,0.6s						
HINF	**Hinteralfeld**	**6.61**	**26**	*e*Pn	**Pn**	**18 50 07.4**	**+0.5**
	SNR=1.0						
HAU	**Haudompre**	**6.63**	**22**	*e*Pn	**Pn**	**18 50 07.4**	**+0.3**
HAU				*e*Sg	**Sg**	**18 51 59.8**	**-2.5**
HAU	**Haudompre**	**6.63**	**22**	*e*Pn	**Pn**	**18 50 07.4**	**+0.3**
EADA	**Adamuz**	**6.68**	**238**	Pn	**Pn**	**18 50 06.2**	**-1.7**
EADA	**Adamuz**	**6.68**	**238**	Pn	**Pn**	**18 50 06.2**	**-1.7**
	0.2nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**6.68**	**238**	Pn	**Pn**	**18 50 06.2**	**-1.7**
	0.2nm,0.1s,SNR=7.9						
MEZF	**Maizieres J'vi**	**6.80**	**14**	*e*Pn	**Pn**	**18 50 09.5**	**+0.1**
MEZF				*e*Sg	**Sg**	**18 52 05.0**	**-2.7**
	8.5nm,0.4s						
MEZF	**Maizieres J'vi**	**6.80**	**14**	*e*Pn	**Pn**	**18 50 09.5**	**+0.1**
EPLA	**Plasencia**	**6.85**	**257**	Pn	**Pn**	**18 50 09.7**	**-0.4**
EPLA	**Plasencia**	**6.85**	**257**	Pn	**Pn**	**18 50 09.7**	**-0.4**
	0.8nm,0.0s,SNR=7.9						
EPLA	**Plasencia**	**6.85**	**257**	Pn	**Pn**	**18 50 09.7**	**-0.4**
	0.8nm,0.0s,SNR=7.9						
GRR	**Gorron**	**6.92**	**340**	*e*Pn	**Pn**	**18 50 11.6**	**+0.5**
GRR				*e*Sn	**Sn**	**18 51 26.3**	**-3.5**
GRR				*e*Sg	**Sg**	**18 52 08.7**	**-2.9**
	5.5nm,0.4s						
GRR	**Gorron**	**6.92**	**340**	*e*Sn	**Sn**	**18 51 26.3**	**-3.5**
GRR	**Gorron**	**6.92**	**340**	*e*Pn	**Pn**	**18 50 11.6**	**+0.5**
LDF	**La Druitiere**	**6.95**	**345**	*e*Pn	**Pn**	**18 50 11.7**	**+0.2**
LDF				*e*Sg	**Sg**	**18 52 09.4**	**-3.1**
	19nm,0.8s						
LDF	**La Druitiere**	**6.95**	**345**	*e*Pn	**Pn**	**18 50 11.7**	**+0.2**
ECAL	**Calabor**	**6.99**	**273**	Pn	**Pn**	**18 50 11.5**	**-0.6**
ECAL	**Calabor**	**6.99**	**273**	Pn	**Pn**	**18 50 11.5**	**-0.6**
	1.1nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**6.99**	**273**	Pn	**Pn**	**18 50 11.5**	**-0.6**
	1.1nm,0.2s,SNR=7.9						
FLN	**La Foliniere**	**7.18**	**343**	*e*Pn	**Pn**	**18 50 14.9**	**+0.2**
	baz=165,SNR=1.0						
FLN				*e*Sg	**Sg**	**18 52 17.2**	**-2.9**
	4.9nm,0.4s						
FLN	**La Foliniere**	**7.18**	**343**	*e*Pn	**Pn**	**18 50 14.9**	**+0.2**
	baz=165,SNR=1.0						
QUIF	**Quistinic**	**7.27**	**328**	*e*Pn	**Pn**	**18 50 16.1**	**+0.2**
	SNR=1.0						
QUIF				*e*Sg	**Sg**	**18 52 19.4**	**-3.4**
	1.4nm,0.3s						
QUIF	**Quistinic**	**7.27**	**328**	*e*Pn	**Pn**	**18 50 16.1**	**+0.2**
	SNR=1.0						
CDF	**Champ du Feu**	**7.27**	**25**	*e*Pn	**Pn**	**18 50 16.2**	**+0.3**
CDF				*e*Sg	**Sg**	**18 52 19.9**	**-3.0**
	2.5nm,0.6s						
CDF	**Champ du Feu**	**7.27**	**25**	*e*Pn	**Pn**	**18 50 16.2**	**+0.3**
MVO	**Moncorvo**	**7.29**	**267**	Pn	**Pn**	**18 50 15.7**	**-0.5**
MVO				Sn	**Sn**	**18 51 34.6**	**-4.3**
MVO	**Moncorvo**	**7.29**	**267**	Pn	**Pn**	**18 50 15.7**	**-0.5**
	1.9nm,0.1s,SNR=8.2						
MVO				Sn	**Sn**	**18 51 34.6**	**-4.3**
	5.3nm,0.5s,SNR=7.9						
MVO	**Moncorvo**	**7.29**	**267**	*e*Pn	**Pn**	**18 50 15.7**	**-0.5**
MVO				*e*Sg	**Sg**	**18 52 20.5**	**-3.0**
MVO				A		18 52 32.0	
	10nm,0.3s						
MVO	**Moncorvo**	**7.29**	**267**	Pn	**Pn**	**18 50 15.7**	**-0.5**
	1.9nm,0.1s,SNR=8.2						
MVO				*e*Sg	**Sg**	**18 52 20.5**	**-3.0**
	10nm,0.3s						
SGMF	**Saint Gilles**	**7.32**	**332**	*e*Pn	**Pn**	**18 50 16.3**	**-0.2**
SGMF				*e*Sg	**Sg**	**18 52 20.9**	**-3.5**
	2.8nm,0.3s						
SGMF	**Saint Gilles**	**7.32**	**332**	*e*Pn	**Pn**	**18 50 16.3**	**-0.2**
EPON	**Pontenova**	**7.35**	**284**	Pn	**Pn**	**18 50 17.1**	**+0.1**
EPON				Sn	**Sn**	**18 51 36.3**	**-4.1**
EPON	**Pontenova**	**7.35**	**284**	Pn	**Pn**	**18 50 17.1**	**+0.1**
	1.0nm,0.2s,SNR=7.9						
EPON				Sn	**Sn**	**18 51 36.3**	**-4.1**
	3.5nm,0.4s,SNR=7.9						
EPON	**Pontenova**	**7.35**	**284**	Pn	**Pn**	**18 50 17.1**	**+0.1**
	1.0nm,0.2s,SNR=7.9						
ROSF	**Rostrenen**	**7.65**	**329**	*e*Pn	**Pn**	**18 50 20.9**	**-0.2**
	SNR=1.0						
ROSF				*e*Sg	**Sg**	**18 52 31.1**	**-4.0**
	8.1nm,0.7s						
ROSF	**Rostrenen**	**7.65**	**329**	*e*Pn	**Pn**	**18 50 20.9**	**-0.2**
	SNR=1.0						
PCBR	**Castelo Branco**	**7.94**	**258**	*e*Pn	**Pn**	**18 50 23.8**	**-1.3**
PCBR				*e*Sg	Sn	18 52 40.7	+46
PCBR				A		18 52 52.9	
	5.2nm,0.2s						
PCBR	**Castelo Branco**	**7.94**	**258**	*e*Pn	**Pn**	**18 50 23.8**	**-1.3**
PCBR				*e*Sg	Sn	18 52 40.7	+46
	5.2nm,0.2s						
PMRV	**Marv??o**	**8.02**	**255**	*e*Pn	**Pn**	**18 50 25.4**	**-0.8**
PMRV				*e*Sn	**Sn**	**18 51 51.3**	**-5.5**
PMRV				*e*Sg	Sn	18 52 45.8	+49
PMRV				A		18 52 54.9	
	3.8nm,0.2s						
PMRV	**Marv??o**	**8.02**	**255**	*e*Pn	**Pn**	**18 50 25.4**	**-0.8**
PMRV				*e*Sg	Sn	18 52 45.8	+49
	3.8nm,0.2s						
EBAD	**Badajoz**	**8.02**	**250**	Pn	**Pn**	**18 50 25.0**	**-1.2**
EBAD				Sn	**Sn**	**18 51 50.9**	**-6.0**
EBAD	**Badajoz**	**8.02**	**250**	Pn	**Pn**	**18 50 25.0**	**-1.2**
	SNR=7.9						
EBAD				Sn	**Sn**	**18 51 50.9**	**-6.0**
	0.8nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**8.02**	**250**	Pn	**Pn**	**18 50 25.0**	**-1.2**
	SNR=7.9						
BAIF	**Baives**	**8.21**	**7**	*e*Pn	**Pn**	**18 50 28.8**	**0.0**
BAIF				*e*Sg	Sn	18 52 49.2	+48
	0.8nm,0.3s						
BAIF	**Baives**	**8.21**	**7**	*e*Pn	**Pn**	**18 50 28.8**	**0.0**
GIVF	**Givet**	**8.32**	**10**	*e*Pn	**Pn**	**18 50 30.8**	**+0.5**
GIVF				*e*Sg	Sn	18 52 52.7	+48
	2.8nm,0.3s						
GIVF	**Givet**	**8.32**	**10**	*e*Pn	**Pn**	**18 50 30.8**	**+0.5**
PESTR	**Estremoz**	**8.38**	**252**	*e*Pn	**Pn**	**18 50 29.7**	**-1.4**
PESTR				*e*Sg	Sn	18 52 55.1	+49
PESTR				A		18 53 01.0	
	2.0nm,1.0s						
PESTR	**Estremoz**	**8.38**	**252**	*e*Pn	**Pn**	**18 50 29.7**	**-1.4**
PESTR				*e*Sg	S

TGUH	Tegucigalpa,Un	1.69	34	eP	Pn	18 52 05.1	+0.2
SBLS	San Blas	1.80	311	eP	Pn	18 52 06.8	+0.3
SBLS				eP		18 52 07.1	
SBLS				eS	Sn	18 52 29.7	+1.5
CSAN		1.83	104	eP	Pn	18 52 06.5	-0.3
APYN	Apoyeque	1.88	102	eP	Pn	18 52 07.6	0.0
APYN				eS	Sn	18 52 30.7	+0.5
XAVN	Gruta Xavier	1.93	105	eP	Pn	18 52 07.9	-0.3
RBDL	Robledal	2.03	316	eP	Pn	18 52 10.4	+0.7
SSN	San Juan del S	2.68	120	eP	Pn	18 52 21.7	+3.1

*IDC **22** 19:28:20.0±0.8, 30°.12N×142°.40E, h0km, mb3.8/7, mb1 4.0/9, mb1mx3.7/23, mbtmp3.7/9, ML3.5/2, Error ellipse: s-maj=31.8km s-min=19.0km az=92.0*
*JMA **22** 19:28:21.6±0.1, 30°.09N×141°.95E, h26km, M4.3*
*ISCJB **22** 19:28:22.0±1.9, 30°.17N±0°.04×142°.1E±0°.1, h28km±15km, mb4.1/13, Error ellipse: s-maj=17.9km s-min=4.8km az=163.5*
*NEIC **22** 19:28:25.0±0.5, 30°.11N×142°.37E, h35km, mb4.7/7, Error ellipse: s-maj=16.7km s-min=8.6km az=78.0*

ISC 22 19:28:24.5±2.0, 30°.16N±0°.04×142°.2E±0°.1, h31km±15km, n33, σ1°09/39, mb4.1/13, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.05	180	P	Pn	19 29 09.0	-1.6
CBIJ				S	Sn	19 29 43.8	-2.3
CBIJ	Chichi jima	3.05	180	Pn	Pn	19 29 09.0	-1.6
	5.2nm,0.3s,baz=292,slow=11,SNR=7.6						
CBIJ				Sn	Sn	19 29 42.1	-4.0
	24nm,0.3s,baz=308,slow=22,SNR=11						
JHJ2	Mitsune	3.57	326	S	Sn	19 29 58.0	-0.9
JHJ	Hachijo jima 2	3.59	326	Sn	Sn	19 29 57.3	-2.1
	16nm,0.3s,baz=71,slow=23,SNR=5.8						
BSO1	Boso 1	4.60	347	P	Pn	19 29 32.1	+0.3
BSO1				S	Sn	19 30 21.6	-2.6
JKO	Kozu shima	4.78	328	eS	Sn	19 30 29.1	+0.5
BSO3	Boso 3	4.84	343	S	Sn	19 30 30.3	+0.1
BSO4	Boso 4	5.06	343	P	Pn	19 29 39.1	+0.8
BSO4				S	Sn	19 30 35.0	-0.7
JHU	Hanno	6.18	338	P	Pn	19 29 53.8	+0.2
JHU				S	Sx	19 31 02.0	
JYT	Yasato	6.28	345	P	Pn	19 29 55.4	+0.5
JYT				S	Sx	19 31 03.2	
JRY	Ryogami san	6.46	336	P	Pn	19 29 58.0	+0.6
JRY				S	Sx	19 31 10.4	
JHO	Hitachi	6.57	349	P	Pn	19 29 57.4	-1.6
JHO				S	Sx	19 31 08.0	
JAG	Ashikaga	6.65	341	P	Pn	19 30 00.1	0.0
JAG				S	Sx	19 31 12.3	
MJAR	Matsushiro Arr	7.18	333	Pn	Pn	19 30 08.3	+0.9
	1.7nm,0.3s,baz=163,slow=12,SNR=19						
MJAR				Sn	Sn	19 31 27.2	-0.6
	0.8nm,0.3s,baz=125,slow=44,SNR=4.6						
MJAR	Matsushiro Arr	7.18	333	Pn	Pn	19 30 08.3	+0.9
MJAR				Sn	Sn	19 31 27.2	-0.6
MAJO	Matsushiro	7.18	333	ePn	Pn	19 30 07.9	+0.6
	5.1nm,0.4s						
MAT	Matsushiro	7.18	333	P	Pn	19 30 08.3	+0.9
MAT				S	Sn	19 31 27.4	-0.5
GUMO	Guam	16.68	171	eP	Pn	19 32 12.9	-3.1
	363nm,1.8s						
QIZ	Qiongzhong	31.32	257	eP	P	19 34 44.2	+2.0
	4.1nm,0.2s,mb4.9						
MKAR	Makanchi Array	48.57	308	P	P	19 37 06.6	+1.7
	0.2nm,0.3s,mb3.6,baz=96,slow=7.7,SNR=3.3						
WRAB	Tennant Creek	50.37	190	P	P	19 37 19.1	+0.3
	12nm,1.3s,mb4.8						
WRA	Warramunga Arr	50.38	190	P	P	19 37 18.1	-0.7
	0.3nm,0.3s,mb3.8,baz=5.8,slow=8.2,SNR=3.1						
ASAR	Alice Springs	54.10	189	P	P	19 37 47.5	+1.0
	0.2nm,0.5s,mb3.3,baz=2.1,slow=5.1,SNR=6.0						
UCH	Uchtor	54.61	303	eP	P	19 37 46.2	-3.9
	1.4nm,0.5s,mb4.2						
EKS2	Erkin-Say	55.07	303	P	P	19 37 55.0	+1.6
	2.9nm,1.3s,mb4.2						
MBWA	Marble Bar	55.41	206	eP	P	19 37 56.1	+0.2
	33nm,1.3s,mb5.2						
STKA	Stephens Creek	61.70	181	eP	P	19 38 39.4	-0.2
	1.0nm,1.1s,mb3.9						
YKA	Yellowknife Ar	69.46	29	P	P	19 39 29.1	-0.3
	0.8nm,0.5s,mb3.9,baz=297,slow=6.3,SNR=4.1						
FINES	FINESS Array B	75.21	333	P	P	19 40 04.2	+0.4
	4.5nm,1.1s,mb4.3,baz=68,slow=9.2,SNR=4.8						
NVAR	Mina Array Bea	78.64	52	P	P	19 40 23.7	+0.2
	0.4nm,0.6s,mb3.5,baz=301,slow=7.3,SNR=3.0						
TXAR	Lajitas Array	93.77	53	P	P	19 41 39.7	+1.0
	0.6nm,0.8s,mb4.1,baz=283,slow=3.6,SNR=8.0						
TXAR	Lajitas Array	93.77	53	P	P	19 41 39.7	+1.0
LPAZ	La Paz	149.02	70	PKPbc	PKPbc	19 48 09.8	-0.3
	0.4nm,0.5s,baz=292,slow=5.4,SNR=4.0						

*IDC **22** 19:42:48.6±2.4, 39°.09N×141°.43E, h0km, mb3.6/2, mb1 3.6/4, mb1mx3.3/25, mbtmp3.4/4, ML3.0/2, Error ellipse: s-maj=44.9km s-min=34.7km az=78.0*
*ISCJB **22** 19:42:52.0±0.6, 38°.98N±0°.03×140°.93E±0°.06, h16km±9km, mb3.5/2, Error ellipse: s-maj=7.9km s-min=5.6km az=173.4*
*JMA **22** 19:42:52.0, 38°.98N×140°.89E, h8km±1km, M3.2*
JMA Felt I J1.

ISC 22 19:42:52.2±0.6, 38°.98N±0°.03×140°.91E±0°.05, h8km±7km, n10, σ0°54/16, mb3.5/2, 5D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	Ichinoseki	0.24	96	⇓P	Pg	19 42 57.1	0.0
JMK				S	Sg	19 43 00.8	+0.4
JYK	Kaneyama	0.43	262	⇓P	Pg	19 43 00.4	-0.2
JRG	Rokugo	0.47	333	⇓P	Pg	19 43 01.1	-0.2
JRG				S	Sg	19 43 07.7	+0.2
JOM	Ohasama	0.58	31	P	Pg	19 43 03.2	-0.2
JOM				S	Sg	19 43 11.0	0.0
JIO	Ouri	0.62	146	⇓P	Pg	19 43 03.9	-0.4
JIO				S	Sg	19 43 12.5	+0.1
JOU	Okura	0.64	197	⇓P	Pg	19 43 04.3	-0.2
JOU				S	Sg	19 43 12.8	0.0
MJAR	Matsushiro Arr	3.24	222	Pn	Pn	19 43 44.7	+1.4
	0.6nm,0.3s,baz=93,slow=14,SNR=7.4						
MJAR				Sn	Sn	19 44 30.8	+8.7
	0.4nm,0.3s,baz=76,slow=34,SNR=4.4						
KSRS	Korea Array	10.33	266	Pn	Pn	19 45 24.8	+4.1
	0.2nm,0.3s,baz=78,slow=14,SNR=5.6						
KURK	Kurchatov	44.44	307	P	P	19 51 03.5	0.0
	0.6nm,0.7s,mb3.5,baz=81,slow=8.3,SNR=3.5						
WRA	Warramunga Arr	58.93	187	P	P	19 52 50.8	-1.1
	0.2nm,0.3s,mb3.6,baz=4.5,slow=7.2,SNR=3.5						

*ISCJB **22** 19:45:27.2±0.6, 77°.07N±0°.10×131°.2E±0°.4, h10km, mb4.2/10, MS2.8/2, Error ellipse: s-maj=15.6km s-min=10.6km az=140.6*
*NEIC **22** 19:45:29.0±0.6, 77°.10N×131°.09E, h10km, mb4.3/6, Error ellipse: s-maj=15.1km s-min=10.3km az=140.0*
*IDC **22** 19:45:28.3±1.6, 77°.60N×129°.64E, h0km, mb3.9/4, mb1 4.2/4, mb1mx3.5/27, mbtmp3.9/4, MS2.9/2, Ms1 2.9/2, ms1mx2.3/27, Error ellipse: s-maj=287.1km s-min=22.3km az=149.0*

ISC 22 19:45:29.3±0.6, 77°.06N±0°.10×131°.1E±0°.4, h10km, n16, σ0°93/15, mb4.2/10, MS2.8/2, Laptev Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIXI	Tiksi	5.48	187	ePn	Pn	19 46 50.8	0.0
	37nm,0.8s						
TIXI				eSn	Sn	19 47 43.9	-10
BILL	Bilibino	13.59	113	ePn	Pn	19 48 42.1	+0.4
	14nm,1.1s						
YAK	Yakutsk	15.12	183	ePn	Pn	19 49 02.3	-0.1
	9.0nm,0.4s						
TNA	Tin City	21.34	89	Pn	P	19 50 15.7	-0.3
	18nm,0.9s,mb4.4						
KEV	Kevo	26.58	311	eP	P	19 51 01.3	-5.6
	684nm,2.6s,mb5.7						
ARCES	ARCESS Array B	27.03	312	LR	LR	20 03 36.2	
	comp=Z,17nm,19.1s,MS2.6,baz=310,slow=41						
KURK	Kurchatov	32.93	248	P	P	19 52 04.7	+1.4
	1.2nm,0.8s,mb3.9,baz=21,slow=9.3,SNR=5.4						
FINES	FINESS Array B	34.27	304	LR	LR	20 08 22.4	
	comp=Z,28nm,18.6s,MS3.0,baz=135,slow=41						
MKAR	Makanchi Array	35.91	242	P	P	19 52 28.9	-0.2
	0.3nm,0.2s,mb3.8,baz=25,slow=8.2,SNR=4.1						
ABKAR	Akbulak array	38.40	267	eP	P	19 52 50.1	0.0
	2.1nm,1.2s,mb3.7						
ENH	Enshi	47.94	205	eP	P	19 54 06.3	-1.1
	2.3nm,0.4s,mb4.6						
MCMT	McKenzie Canyo	52.12	54	eP	P	19 54 39.9	+0.9
	0.5nm,0.7s,mb3.5						
NVAR	Mina Array Bea	57.27	61	P	P	19 55 17.7	+1.4
	1.0nm,0.6s,mb4.0,baz=346,slow=5.4,SNR=7.7						
PARMO	Parma	63.76	36	eP	P	19 55 57.7	-3.0
WMOK	Wichita Mounta	64.34	44	eP	P	19 56 03.7	-0.9
	1.0nm,0.6s,mb4.0						
TXAR	Lajitas Array	68.82	50	P	P	19 56 33.0	-0.2
	1.4nm,0.9s,mb3.9,baz=349,slow=3.4,SNR=14						

*CSEM **22** 19:57:12.4±0.4, 41°.90N×19°.95E, h2km, ML2.3/10, Error ellipse: s-maj=5.6km s-min=4.9km az=136.0*
*BEO **22** 19:57:13.7±0.3, 41°.98N×19°.97E, h5km±5km, ML2.5/6*
*PDG **22** 19:57:13.5±0.3, 41°.93N×19°.89E, h11km, ML2.3/10, Error ellipse: s-maj=1.1km s-min=1.2km az=0.0*
*ISCJB **22** 19:57:13.4±0.5, 41°.93N±0°.03×19°.90E±0°.04, h14km±4km, Error ellipse: s-maj=4.8km s-min=4.2km az=165.7*

ISC 22 19:57:13.5±0.6, 41°.93N±0°.03×19°.96E±0°.04, h14km±4km, n40, σ1°26/78, 20C-6D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUK	Puka	0.12	337	PG	Pg	19 57 17.2	+0.3
PUK				SG	Sg	19 57 21.1	+1.7
PUK	Puka	0.12	337	ePg	Pg	19 57 17.2	+0.3
PUK				*i* Sg	Sg	19 57 21.1	+1.7
BCI	Bajram Curri	0.45	11	PG	Pg	19 57 22.0	-0.4
BCI				SG	Sg	19 57 30.1	+1.7
BCI	Bajram Curri	0.45	11	ePg	Pg	19 57 22.0	-0.4
BCI				*i* Sg	Sg	19 57 30.1	+1.7
ULC	Ulcinj	0.53	274	ePg	Pg	19 57 22.2	-1.7
ULC				eSg	Sg	19 57 29.8	-1.1
ULC	Ulcinj	0.53	274	ePg	Pg	19 57 22.2	-1.7
ULC				eSg	Sg	19 57 29.8	-1.1
TIR	Tirane	0.58	187	ePg	Pg	19 57 24.4	-0.5
TIR				*i* Sg	Sg	19 57 35.1	+2.5
TIR	Tirane	0.58	187	ePg	Pg	19 57 24.4	-0.5
TIR				*i* Sg	Sg	19 57 35.1	+2.5
PVY	Plav	0.67	1	⇓iPg	Pg	19 57 25.8	-0.7
PVY				eSg	Sg	19 57 36.5	+1.2
PVY	Plav	0.67	1	⇓iPg	Pg	19 57 25.8	-0.7
PVY				eSg	Sg	19 57 36.5	+1.2
PDG	Podgorica	0.72	314	⇑iPg	Pg	19 57 25.8	-1.7
PDG				eSg	Sg	19 57 37.7	+0.7
TTG	Podgorica	0.72	314	⇑iPg	Pg	19 57 25.8	-1.7
TTG				eSg	Sg	19 57 37.7	+0.7
BUM	Brajici-Budva	0.87	296	⇑iPg	Pg	19 57 29.0	-1.4
BUM				eSg	Sg	19 57 42.2	+0.4
BUM	Brajici-Budva	0.87	296	⇑iPg	Pg	19 57 29.0	-1.4
BUM				eSg	Sg	19 57 42.2	+0.4
BEY	Berane	0.94	357	⇑iPg	Pg	19 57 30.8	-1.0
BEY				eSg	Sg	19 57 46.0	+1.9
IVA	Berane	0.94	357	⇑iPg	Pg	19 57 30.8	-1.0
IVA				eSg	Sg	19 57 46.0	+1.9
OHR	Ohrid	1.03	142	ePn	Pn	19 57 35.6	+2.1
KRUS	Krusevo	1.12	120	ePn	Pn	19 57 34.8	+0.2
NKY	Niksic	1.14	322	⇑iPg	Pn	19 57 34.0	-0.9
NKY				eSg	Sg	19 57 51.6	+1.4
NKY	Niksic	1.14	322	⇑iPg	Pn	19 57 34.0	-0.9
NKY				eSg	Sg	19 57 51.6	+1.4
HCY	Herceg Novi	1.20	296	⇓iPg	Pn	19 57 35.4	-0.4
HCY				eSg	Sg	19 57 52.7	+0.4
HCY	Herceg Novi	1.20	296	⇓iPg	Pn	19 57 35.4	-0.4
HCY				eSg	Sg	19 57 52.7	+0.4
SJES	Sjenica	1.33	1	ePg	Pn	19 57 37.6	0.0
SJES				*i* Sg	Sg	19 57 54.2	-2.3
SJES	Sjenica	1.33	1	ePg	Pn	19 57 37.6	0.0
SJES				*i* Sg	Sg	19 57 54.2	-2.3
BRY	Bratogost	1.43	313	⇑iPg	Pn	19 57 39.1	+0.1
BRY				eSg	Sg	19 58 01.2	+1.7
BRY	Bratogost	1.43	313	⇑iPg	Pn	19 57 39.1	+0.1
BRY				eSg	Sg	19 58 01.2	+1.7
TREB	Trebinje	1.43	304	⇑iPg	Pn	19 57 38.7	-0.3
TREB				*i* Sg	Sg	19 57 58.1	-1.4
TREB	Trebinje	1.43	304	⇑iPg	Pn	19 57 38.7	-0.3
TREB				*i* Sg	Sg	19 57 58.1	-1.4
PLE	Pljevlja	1.46	344	⇑iPg	Pg	19 57 40.7	-0.9
PLE				eSg	Sg	19 58 02.1	+1.5
PLE	Pljevlja	1.46	344	⇑iPg	Pg	19 57 40.7	-0.9
PLE				eSg	Sg	19 58 02.1	+1.5
UPM	Unac-Piva	1.49	329	⇑iPg	Pg	19 57 41.2	-0.9
UPM				eSg	Sg	19 58 03.0	+1.5
UPM	Unac-Piva	1.49	329	⇑iPg	Pg	19 57 41.2	-0.9
UPM				eSg	Sg	19 58 03.0	+1.5
BARS	Barje	1.64	57	⇑iPn	Pn	19 57 42.8	+1.0
BARS				eSg	Sg	19 58 04.2	-2.0
BARS	Barje	1.64	57	⇑iPn	Pn	19 57 42.8	+1.0
BARS				eSg	Sg	19 58 04.2	-2.0
STON	Ston	1.92	300	ePn	Pn	19 57 46.1	+0.4
STON				Sn	Sn	19 58 14.0	+4.4
STON	Ston	1.92	300	ePn	Pn	19 57 46.1	+0.4
STON				Sn	Sn	19 58 13.9	+4.3
BBLS	Lazići	1.98	348	⇑iPn	Pn	19 57 47.5	+1.0
BBLS				*i* Sg	Sg	19 58 15.1	-2.0
BBLS	Lazići	1.98	348	⇑iPn	Pn	19 57 47.5	+1.0
BBLS				*i* Sg	Sg	19 58 15.1	-2.0
DIVS	Divibare	2.17	1	⇓iPn	Pn	19 57 49.6	+0.5
DIVS				eSg	Sg	19 58 21.5	-1.7
DIVS	Divibare	2.17	1	⇓iPn	Pn	19 57 49.6	+0.5
DIVS				eSg	Sg	19 58 21.5	-1.7

*CSEM **22** 20:08:04.7±0.6, 36°.07N×21°.79E, h2km, ML3.8/3, Error ellipse: s-maj=13.6km s-min=6.2km az=54.0*
*NEIC **22** 20:08:05.6, 36°.10N×21°.82E, h5km, MD3.7(ATH), After ATH.*
*ATH **22** 20:08:05.6, 36°.10N×21°.82E, h5km±3km, MD3.7/13*
*ISCJB **22** 20:08:05.9±1.0, 36°.11N±0°.05×21°.81E±0°.08, h10km, Error ellipse: s-maj=10.6km s-min=4.2km az=146.2*
*THE **22** 20:08:09.2, 36°.26N×21°.86E, h2km±2km, ML3.8/3, Error ellipse: s-maj=3.6km s-min=1.4km az=63.0*

ISC 22 20:08:06.2±0.9, 36°.12N±0°.04×21°.76E±0°.07, h10km, n60, σ1°10/80, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.78	359	P	Pg	20 08 20.7	-0.6
PYL				S	Sg	20 08 30.7	-0.7
PYL	PYLOS	0.78	359	ePG	Pg	20 08 20.6	-0.7
PYL				eSB	Sb	20 08 32.4	-0.1
PYL	PYLOS	0.78	359	ePg	Pg	20 08 20.6	-0.7
PYL				S	Sg	20 08 30.7	-0.7
PYL				eSb	Sb	20 08 32.4	-0.1
KYTH	Kithira	1.04	81	ePb	Pg	20 08 24.9	-1.4
KYTH	Kithira	1.04	81	ePB	Pg	20 08 24.9	-1.4
KYTH	Kithira	1.04	81	ePb	Pg	20 08 24.9	-1.4
ITM	Ithomi	1.07	7	ePn	Pg	20 08 26.3	-0.5
ITM				eSb	Sb	20 08 41.8	+0.9
ITM	Ithomi	1.07	7	P	Pg	20 08 26.0	-0.8
ITM				S	Sg	20 08 40.5	-0.2
ITM	Ithomi	1.07	7	ePN	Pg	20 08 26.3	-0.5
ITM				eSB	Sb	20 08 41.8	+0.9
ITM	Ithomi	1.07	7	P	Pg	20 08 26.0	-0.8
ITM	Ithomi	1.07	7	ePn	Pg	20 08 26.3	-0.5
ITM				S	Sg	20 08 40.5	-0.2
ITM				eSb	Sb	20 08 41.8	+0.9
VLI	Veliai	1.12	57	ePn	Pg	20 08 26.5	-1.3
VLI	Veliai	1.12	57	ePN	Pg	20 08 26.5	-1.3
VLX	Vlachokerasia	1.35	21	P	Pn	20 08 30.5	-0.6
VLX				S	Sb	20 08 48.8	0.0
VLX	Vlachokerasia	1.35	21	ePG	Pn	20 08 30.6	-0.5
VLX				eSB	Sb	20 08 49.8	+1.0
VLX	Vlachokerasia	1.35	21	P	Pn	20 08 30.5	-0.6
VLX				S	Sb	20 08 48.8	0.0
VLX				eSb	Sb	20 08 49.8	+1.0
GUR	Goura	1.88	14	P	Pn	20 08 39.7	+1.4
GUR	Goura	1.88	14	ePN	Pg	20 08 41.2	-1.0
GUR	Goura	1.88	14	P	Pn	20 08 39.7	+1.4
GUR	Goura	1.88	14	ePn	Pg	20 08 41.2	-1.0
KARN	Karanos	1.89	111	P	Pg	20 08 41.2	-1.3
KARN				S	Sg	20 09 07.7	+0.7
KARN	Karanos	1.89	111	ePG	Pn	20 08 39.9	+1.4
KARN	Karanos	1.89	111	ePg	Pn	20 08 39.9	+1.4
RLS	Riolos of Patr	1.95	353	ePg	Pb	20 08 42.2	+0.3
RLS	Riolos of Patr	1.95	353	ePG	Pb	20 08 42.2	+0.3
RLS	Riolos of Patr	1.95	353	ePg	Pb	20 08 42.2	+0.3
VAM	Vamos	2.10	109	ePg	Pb	20 08 44.0	-0.4
VAM	Vamos	2.10	109	ePG	Pb	20 08 44.0	-0.4
VAM	Vamos	2.10	109	ePg	Pb	20 08 44.0	-0.4
LAKA	Lakka	2.13	5	P	Pn	20 08 42.2	+0.4
LAKA				S	Sn	20 09 09.3	+1.0
LAKA	Lakka	2.13	5	P	Pn	20 08 42.2	+0.4
LAKA				S	Sn	20 09 09.3	+1.0
LTK	Loutraki	2.13	26	P	Pn	20 08 43.0	+1.1
LTK	Loutraki	2.13	26	ePG	Pb	20 08 45.1	+0.1
LTK	Loutraki	2.13	26	P	Pn	20 08 43.0	+1.1
LTK	Loutraki	2.13	26	ePg	Pb	20 08 45.1	+0.1
VLS	Valsamata	2.26	336	ePb	Pb	20 08 45.7	-1.4
VLS	Valsamata	2.26	336	P	Pb	20 08 45.7	-1.4
VLS	Valsamata	2.26	336	ePB	Pb	20 08 45.7	-1.4
VLS	Valsamata	2.26	336	ePb	Pb	20 08 45.7	-1.4
KALE	Kalithea	2.29	7	P	Pn	20 08 46.2	+2.1
KALE				S	Sn	20 09 12.2	-0.1
KALE	Kalithea	2.29	7	P	Pn	20 08 46.2	+2.1
KALE				S	Sn	20 09 12.2	-0.1
DSF	Desfina	2.37	15	P	Pn	20 08 45.4	+0.2
DSF	Desfina	2.37	15	P	Pn	20 08 45.4	+0.2
LKR	Lokris	2.72	21	P	Pn	20 08 50.3	+0.4
LKR	Lokris	2.72	21	P	Pn	20 08 50.3	+0.4
EVR	Evrytania	2.80	1	ePn	Pb	20 08 55.0	-1.3
EVR	Evrytania	2.80	1	ePN	Pb	20 08 55.0	-1.3
EVR	Evrytania	2.80	1	ePn	Pb	20 08 55.0	-1.3
AGG	Agios Georgios	2.94	9	ePn	Pb	20 08 57.0	-1.6
AGG	Agios Georgios	2.94	9	P	Pn	20 08 55.0	+2.1
AGG	Agios Georgios	2.94	9	ePN	Pb	20 08 57.0	-1.6
AGG	Agios Georgios	2.94	9	P	Pn	20 08 55.0	+2.1
AGG	Agios Georgios	2.94	9	ePn	Pb	20 08 57.0	-1.6
THL	Klokotos Trika	3.45	3	P	Pn	20 09 01.5	+1.5
THL	Klokotos Trika	3.45	3	P	Pn	20 09 01.5	+1.5
MEV	Metsovon	3.69	354	P	Pn	20 09 06.3	+3.1
STON	Ston	7.44	336	ePn	Pn	20 09 53.0	-1.8
STON				Sn	Sn	20 11 13.1	-6.2
STON	Ston	7.44	336	ePn	Pn	20 09 53.0	-1.8
NVLJ	Novalja	9.94	330	ePn	Pn	20 10 28.8	-0.3
NVLJ				Sn	Sn	20 12 15.0	-5.6
NVLJ	Novalja	9.94	330	ePn	Pn	20 10 28.8	-0.2

*IDC **22** 20:08:18.9±28.0, 20°.21S×174°.31W, h0km, mb4.4/4, mb1 4.5/4, mb1mx4.0/18, mbtmp4.4/4, Error ellipse: s-maj=508.2km s-min=143.8km az=75.0*
*ISCJB **22** 20:08:20.0±2.5, 20°.2S±0°.3×174°.0W±0°.5, h33km, mb4.6/7, Error ellipse: s-maj=76.2km s-min=15.6km az=36.0*
*NEIC **22** 20:08:21.7±1.8, 20°.34S×173°.95W, h35km, mb4.6/3, Error ellipse: s-maj=54.4km s-min=12.3km az=126.0*

ISC 22 20:08:22.2±2.5, 20°.3S±0°.3×174°.0W±0°.5, h35km, n11, σ0°44/11, mb4.6/7, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	6.70	19	ePn	Pn	20 09 58.1	0.0
	145nm,1.9s						
CTA	Charters Tower	37.21	263	P	P	20 15 31.4	+1.1
	3.5nm,0.4s,mb4.6,baz=110,slow=14,SNR=6.4						
CTAO	Charters Tower	37.21	263	eP	P	20 15 31.3	+0.9
	3.9nm,0.5s,mb4.5						
TAU	Tasmania Unive	39.42	226	eP	P	20 15 49.0	+0.3
	282nm,1.8s,mb5.7						
STKA	Stephens Creek	41.23	245	P	P	20 16 03.9	0.0
	2.2nm,0.5s,mb4.1,baz=112,slow=9.6,SNR=14						
STKA	Stephens Creek	41.23	245	eP	P	20 16 03.4	-0.5
	0.4nm,0.5s,mb3.3						
ASAR	Alice Springs	48.18	256	P	P	20 16 59.1	-0.3
	4.1nm,0.8s,mb4.5,baz=98,slow=8.0,SNR=42						
WRAB	Tennant Creek	48.30	261	eP	P	20 16 59.9	-0.5
	1.8nm,0.3s,mb4.6						
WRA	Warramunga Arr	48.31	261	P	P	20 17 00.2	-0.3
	1.5nm,0.3s,mb4.5,baz=94,slow=8.0,SNR=9.5						
WRA	Warramunga Arr	48.31	261	P	P	20 17 00.2	-0.3
MBWA	Marble Bar	61.52	256	eP	P	20 18 36.0	-0.1
	3.8nm,0.6s,mb4.7						

*IDC **22** 20:18:36.1±1.5, 12°.64S×166°.72E, h0km, mb4.3/7, mb1 4.3/7, mb1mx4.1/16, mbtmp4.2/7, MS3.6/8, Ms1 3.6/8, ms1mx3.2/21, Error ellipse: s-maj=48.0km s-min=27.6km az=123.0*
*BJI **22** 20:18:39.2, 12°.70S×166°.70E, h25km, mB4.8/1, mb4.7/6*
*NEIC **22** 20:18:41.2±0.6, 12°.69S×166°.70E, h35km, mb5.2/8, Error ellipse: s-maj=17.5km s-min=16.7km az=215.0*
*ISCJB **22** 20:18:43.1±2.6, 12°.55S±0°.08×166°.4E±0°.1, h48km±19km, mb4.6/19, MS3.5/8, Error ellipse: s-maj=23.9km s-min=11.0km az=157.0*

ISC 22 20:18:45.6±2.1, 12°.55S±0°.08×166°.4E±0°.1, h57km±15km, h28km±5.1km: pP-P, n46, σ0°95/33, mb4.6/19, MS3.5/8, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	7.06	295	ePn	Pn	20 20 27.2	+0.8
	226nm,0.8s						
HNR				eSn	Sn	20 21 44.6	-0.8
DZM	Mont Dzumac	9.47	180	eP	Pn	20 20 58.7	-0.6
DZM				eS

DMN	Daman	88.20	299	*e*P	P	20 31 29.7	-1.2
	comp=Z,23nm,0.7s,mb5.5						
ANMO	Albuquerque	94.76	55	LR	LR	21 08 19.8	
	comp=Z,40nm,18.4s,MS3.9,baz=323,slow=32						
MK31	Makanchi Array	95.06	317	*e*P	P	20 32 01.9	-0.3
MK31				*e*pP	pP	20 32 12.0	-6.6
MKAR	Makanchi Array	95.06	317	P	P	20 32 02.5	+0.2
	comp=Z,3.1nm,0.8s,mb4.8,baz=89,slow=7.6,SNR=19						
ZALV	Zalesovo Beam	95.15	324	P	P	20 32 01.5	-1.0
	comp=Z,0.8nm,0.7s,mb4.3,baz=90,slow=3.0,SNR=4.6						
TXAR	Lajitas Array	95.97	61	LR	LR	21 10 19.7	
	comp=Z,43nm,18.1s,MS4.0,baz=345,slow=32						
ARCES	ARCESS Array B	117.95	345	PKP	PKPdf	20 37 23.6	-1.6
	comp=Z,4.3nm,1.1s,baz=30,slow=1.5,SNR=7.2						
CPUP	Villa Florida	122.54	133	PKP	PKPdf	20 37 33.1	-2.3
	comp=Z,0.4nm,0.3s,baz=254,slow=2.3,SNR=2.8						
PGF	Pioggiola	144.26	331	*e*PKP1	PKPdf	20 38 13.1	-2.3
	comp=Z,14nm,1.1s						
FRF	La Foret Royal	144.52	334	*e*PKP1	PKPdf	20 38 13.8	-2.0
	comp=Z,6.1nm,0.9s						
LMR	La Mourre	144.76	334	*e*PKP1	PKPdf	20 38 14.7	-1.5
	comp=Z,5.9nm,0.7s						
LASF	Ste Croix	145.19	338	*e*PKP1	PKPbc	20 38 17.4	+0.8
MTLF	Montolieu	146.42	339	*e*PKP1	PKPbc	20 38 20.2	-0.2
KEST	Kesra	149.00	322	PKPbc	PKPbc	20 38 27.5	-0.2
	comp=Z,2.0nm,0.8s,baz=15,slow=1.3,SNR=6.3						

*ATH **22** 20:27:58.6, 37.°56N×27.°01E, h17km, MD3.6/8*
*ISK **22** 20:28:00.6, 37.°58N×26.°79E, h5km, MD3.5*
*NEIC **22** 20:28:00.0, 37.°56N×26.°73E, h5km, MD3.6(ATH), MD3.5(ISK), After ISK.*
*ISCJB **22** 20:28:01.1±0.5, 37.°58N±0.°02×26.°75E±0.°02, h2km±4km, Error ellipse: s-maj=3.4km s-min=3.0km az=18.2*
*DDA **22** 20:28:01.2, 37.°61N×26.°79E, h7km±2km, Md3.3*
*CSEM **22** 20:28:01.6±0.1, 37.°58N×26.°74E, h2km, MD3.6, Error ellipse: s-maj=3.6km s-min=3.3km az=10.0*
*THE **22** 20:28:01.8, 37.°64N×26.°79E, h1km±2km, ML3.9/2, Error ellipse: s-maj=3.2km s-min=0.8km az=118.0*

ISC 22 20:28:01.8±0.5, 37.°57N±0.°02×26.°76E±0.°03, h2km±4km, n121, σ1°03/157, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	Samos	0.15	24	*e*Pb	Pg	20 28 03.8	-1.0
SMG	Samos	0.15	24	*e*PB	Pg	20 28 03.8	-1.0
SMG	Samos	0.15	24	*e*Pb	Pg	20 28 03.8	-1.0
GCAM	G?zelcaml?	0.40	71	*i* P	Pg	20 28 08.8	-0.7
GCAM				*i* S	Sg	20 28 14.6	-0.1
GCAM	G?zelcaml?	0.40	71	*i* P	Pg	20 28 08.8	-0.7
GCAM				*i* S	Sg	20 28 14.6	-0.1
BDRM	Kayabasi	0.74	132	*i* P	Pg	20 28 15.7	-0.4
BDRM				*i* S	Sg	20 28 27.2	+1.5
BDRM	Kayabasi	0.74	132	*i* P	Pg	20 28 15.7	-0.4
BDRM				*i* S	Sg	20 28 27.2	+1.5
BLCB	Balcova	0.84	15	PG	Pg	20 28 17.0	-1.0
BLCB	Balcova	0.84	15	P	Pg	20 28 16.9	-1.1
BLCB				S	Sg	20 28 27.9	-1.1
BLCB	Balcova	0.84	15	*i* Pg	Pg	20 28 17.1	-1.0
BLCB				S	Sg	20 28 27.9	-1.1
MLSB	Milas	0.86	108	*e*PG	Pg	20 28 17.2	-1.0
MLSB				*e*SG	Sg	20 28 30.8	+1.4
MLSB	Milas	0.86	108	*e*Pg	Pg	20 28 17.3	-0.9
MLSB				*e*Sg	Sg	20 28 30.8	+1.5
AYDN	Tasoluk	0.90	84	*i* P	Pg	20 28 17.9	-1.0
AYDN				*i* S	Sg	20 28 30.0	-0.6
AYDN	Tasoluk	0.90	84	*i* P	Pg	20 28 17.9	-1.1
AYDN				*i* S	Sg	20 28 30.0	-0.6
IZM	Izmir	0.92	26	*e*PG	Pg	20 28 19.4	-0.1
IZM				*e*SG	Sg	20 28 32.5	+1.2
IZM	Izmir	0.92	26	*e*Pg	Pg	20 28 19.4	0.0
IZM				*e*Sg	Sg	20 28 32.5	+1.2
CHOS	Chios island	0.99	326	P	Pg	20 28 19.9	-0.8
CHOS				S	Sg	20 28 34.2	+0.7
CHOS	Chios island	0.99	326	*e*PN	Pg	20 28 20.1	-0.6
CHOS				*e*SN	Sg	20 28 35.0	+1.5
CHOS	Chios island	0.99	326	P	Pg	20 28 19.9	-0.8
CHOS				S	Sg	20 28 34.2	+0.7
CHOS				*e*Sn	Sg	20 28 35.0	+1.5
DAT	Datca	1.06	142	*e*PG	Pg	20 28 22.1	-0.1
DAT	Datca	1.06	142	*e*Pg	Pg	20 28 22.1	-0.1
APE	Apeiranthos	1.10	243	*e*Pn	Pg	20 28 23.0	+0.1
APE				*e*Sn	Sn	20 28 40.2	+0.2
APE	Apeiranthos	1.10	243	P	Pg	20 28 23.0	+0.1
APE				S	Sg	20 28 39.4	+2.3
APE	Apeiranthos	1.10	243	*e*PN	Pg	20 28 23.0	+0.1
APE				*e*SN	Sn	20 28 40.2	+0.2
APE	Apeiranthos	1.10	243	P	Pg	20 28 23.0	+0.1
APE				S	Sg	20 28 39.4	+2.3
APE				*e*Sn	Sn	20 28 40.2	+0.2
YER	Yerkesik	1.29	109	*e*PN	Pn	20 28 25.6	-1.3
YER	Yerkesik	1.29	109	*e*Pn	Pn	20 28 25.6	-1.3
THR2	Thira Island,	1.54	224	P	Pn	20 28 29.5	-0.8
THR2	Thira Island,	1.54	224	P	Pn	20 28 29.5	-0.8
AKHS	Akhisar	1.55	32	*i* P	Pn	20 28 29.7	-0.7
AKHS				*i* S	Sg	20 28 51.9	+0.3
AKHS	Akhisar	1.55	32	*i* P	Pn	20 28 29.7	-0.7
AKHS				*i* S	Sg	20 28 51.9	+0.3
AKS	Akhisar	1.55	32	*e*PN	Pn	20 28 29.6	-0.8
AKS	Akhisar	1.55	32	*e*Pn	Pn	20 28 29.6	-0.8
THR3	Thira Island,	1.59	224	P	Pn	20 28 31.2	+0.2
THR3	Thira Island,	1.59	224	P	Pn	20 28 31.2	+0.2
THR5	Thira Island,	1.61	225	P	Pn	20 28 31.3	0.0
THR5	Thira Island,	1.61	225	P	Pn	20 28 31.3	0.0
PRK	Paraskevi	1.72	347	*e*Pn	Pn	20 28 30.8	-1.9
PRK				*e*Sn	Sn	20 28 54.3	-0.9
PRK	Paraskevi	1.72	347	P	Pn	20 28 31.1	-1.6
PRK				S	Sn	20 28 53.3	-1.9
PRK	Paraskevi	1.72	347	*e*PN	Pn	20 28 30.8	-1.9
PRK				*e*SN	Sn	20 28 54.3	-0.9
PRK	Paraskevi	1.72	347	*e*Pn	Pn	20 28 30.8	-1.9
PRK	Paraskevi	1.72	347	P	Pn	20 28 31.1	-1.6
PRK				S	Sn	20 28 53.3	-1.9
PRK				*e*Sn	Sn	20 28 54.3	-0.9
ARG	Arkhangelos	1.74	141	*e*Pn	Pn	20 28 28.3	-4.7
ARG	Arkhangelos	1.74	141	*e*PN	Pn	20 28 28.3	-4.7
KULA	Kula-Manisa	1.77	57	*e*PN	Pn	20 28 33.9	+0.4
KULA	Kula-Manisa	1.77	57	*e*Pn	Pn	20 28 33.9	+0.4
SIGR	SIGRI	1.79	337	P	Pn	20 28 31.3	-2.4
SIGR	SIGRI	1.79	337	P	Pn	20 28 31.3	-2.4
DENT	Denizli	1.81	84	*e*PN	Pn	20 28 34.0	-0.1
DENT	Denizli	1.81	84	*e*Pn	Pn	20 28 34.0	-0.1
KARP	Karpathos	2.04	171	*e*Pn	Pn	20 28 34.0	-3.2
KARP				*e*Sn	Sn	20 29 00.1	-3.2
KARP	Karpathos	2.04	171	*e*PN	Pn	20 28 34.0	-3.2
KARP				*e*SN	Sn	20 29 00.1	-3.2
BALB	Balikesir	2.25	23	*e*PN	Pn	20 28 40.4	+0.3
BALB	Balikesir	2.25	23	*e*Pn	Pn	20 28 40.4	+0.4
EZN	Ezine	2.28	352	*e*PN	Pn	20 28 40.6	+0.2
EZN	Ezine	2.28	352	*e*Pn	Pn	20 28 40.6	+0.2
KHL	Karahalli	2.31	70	*e*PN	Pn	20 28 41.4	+0.5
KHL	Karahalli	2.31	70	*e*Pn	Pn	20 28 41.4	+0.5
PTL	Penteli	2.34	283	*e*Pn	Pn	20 28 41.0	-0.3
PTL	Penteli	2.34	283	*e*PN	Pn	20 28 41.0	-0.3
PTL	Penteli	2.34	283	*e*Pn	Pn	20 28 41.0	-0.3
VLY	Voula,Athens	2.37	278	*e*Pn	Pn	20 28 41.1	-0.6
VLY				*e*Sn	Sn	20 29 13.7	+2.4
VLY	Voula,Athens	2.37	278	*e*PN	Pn	20 28 41.1	-0.6
VLY				*e*SN	Sn	20 29 13.7	+2.4
VLY	Voula,Athens	2.37	278	*e*Pn	Pn	20 28 41.1	-0.6
NPS	Neapolis	2.48	202	*e*Pb	Pn	20 28 42.2	-1.0
NPS				*e*Sn	Sn	20 29 12.2	-1.9
NPS	Neapolis	2.48	202	*e*PB	Pn	20 28 42.2	-1.0
NPS				*e*SN	Sn	20 29 12.2	-1.9
LIA	Limnos Island	2.63	333	*e*Pn	Pn	20 28 44.1	-1.2
LIA	Limnos Island	2.63	333	P	Pn	20 28 43.9	-1.4
LIA	Limnos Island	2.63	333	*e*PN	Pn	20 28 44.1	-1.2
LIA	Limnos Island	2.63	333	*e*Pn	Pn	20 28 44.1	-1.2
GADA	Gvkgeada	2.70	346	*e*PN	Pn	20 28 46.8	+0.5
GADA	Gvkgeada	2.70	346	*e*Pn	Pn	20 28 46.8	+0.5
LPK	Lapseki	2.80	0	*e*PN	Pn	20 28 48.1	+0.5
LPK	Lapseki	2.80	0	*e*Pn	Pn	20 28 48.1	+0.5
VAM	Vamos	2.98	224	*e*Pb	Pn	20 28 50.6	+0.4
VAM				*e*Sn	Sn	20 29 27.0	+0.5
VAM	Vamos	2.98	224	*e*PB	Pn	20 28 50.6	+0.4
VAM				*e*SN	Sn	20 29 27.0	+0.5
ALT	Altintas	3.02	60	*e*PN	Pn	20 28 51.2	+0.5
ALT	Altintas	3.02	60	*e*Pn	Pn	20 28 51.2	+0.5
BCK	Bucak	3.05	91	*e*PN	Pn	20 28 52.0	+1.0
BCK	Bucak	3.05	91	*e*Pn	Pn	20 28 52.0	+1.0
RKY	Sarkoy-Tekirda	3.13	6	*e*PN	Pn	20 28 53.0	+0.8
RKY	Sarkoy-Tekirda	3.13	6	*e*Pn	Pn	20 28 53.0	+0.8
SHUT	Suhut-Afyon	3.15	71	*e*PN	Pn	20 28 53.3	+0.8
SHUT	Suhut-Afyon	3.15	71	*e*Pn	Pn	20 28 53.3	+0.9
LKR	Lokris	3.15	291	*e*Pn	Pn	20 28 53.2	+0.7
LKR	Lokris	3.15	291	*e*PN	Pn	20 28 53.2	+0.7
LKR	Lokris	3.15	291	*e*Pn	Pn	20 28 53.2	+0.7
VLI	Veliai	3.17	256	*e*Pn	Pn	20 28 52.6	-0.1
VLI	Veliai	3.17	256	*e*PN	Pn	20 28 52.6	-0.1
VLI	Veliai	3.17	256	*e*Pn	Pn	20 28 52.6	-0.1
ENEZ	Enez	3.20	352	*e*PN	Pn	20 28 53.9	+0.8
ENEZ	Enez	3.20	352	*e*Pn	Pn	20 28 53.9	+0.8
ALN	Alexandroupoli	3.37	351	*e*Pn	Pn	20 28 53.8	-1.6
ALN	Alexandroupoli	3.37	351	P	Pn	20 28 53.2	-2.2
ALN	Alexandroupoli	3.37	351	*e*PN	Pn	20 28 53.8	-1.6
ALN	Alexandroupoli	3.37	351	P	Pn	20 28 53.2	-2.2
ALN	Alexandroupoli	3.37	351	*e*Pn	Pn	20 28 53.8	-1.6
SUTC	Sutluce-Ispart	3.37	90	*e*PN	Pn	20 28 56.4	+0.9
SUTC	Sutluce-Ispart	3.37	90	*e*Pn	Pn	20 28 56.4	+0.9
ARMT	Armutlu	3.41	28	*e*PN	Pn	20 28 56.9	+0.9
ARMT	Armutlu	3.41	28	*e*Pn	Pn	20 28 56.9	+0.9
GEMT	Gemlik	3.43	33	*e*PN	Pn	20 28 57.0	+0.7
GEMT	Gemlik	3.43	33	*e*Pn	Pn	20 28 57.0	+0.7
CRLT	Corlu	3.63	12	*e*PN	Pn	20 29 00.0	+0.9
CRLT	Corlu	3.63	12	*e*Pn	Pn	20 29 00.0	+0.9
ADVT	Abdulvahap	3.68	38	*e*PN	Pn	20 29 00.8	+1.1
ADVT	Abdulvahap	3.68	38	*e*Pn	Pn	20 29 00.8	+1.0
RDO	Rodhopi	3.69	346	*e*Pn	Pn	20 28 58.3	-1.6
RDO	Rodhopi	3.69	346	*e*PN	Pn	20 28 58.2	-1.7
RDO	Rodhopi	3.69	346	*e*Pn	Pn	20 28 58.3	-1.6
CTKS	Kestanelik-??a	3.90	20	*e*PN	Pn	20 29 04.1	+1.3
CTKS	Kestanelik-??a	3.90	20	*e*Pn	Pn	20 29 04.1	+1.3
GULT	Gulveren	4.09	45	*e*PN	Pn	20 29 06.7	+1.3
GULT	Gulveren	4.09	45	*e*Pn	Pn	20 29 06.7	+1.3
THL	Klokotos Trika	4.22	300	*e*PN	Pn	20 29 07.4	+0.3
THL	Klokotos Trika	4.22	300	*e*Pn	Pn	20 29 07.4	+0.3
EDRB	Edirne	4.27	360	*e*PN	Pn	20 29 09.0	+1.1
EDRB	Edirne	4.27	360	*e*Pn	Pn	20 29 09.0	+1.2
NVR	Nevrokopi	4.39	330	*e*Pn	Pn	20 29 09.2	-0.3
NVR	Nevrokopi	4.39	330	*e*PN	Pn	20 29 09.2	-0.3
NVR	Nevrokopi	4.39	330	*e*Pn	Pn	20 29 09.2	-0.3

*IDC **22** 20:30:37.0±5.2, 33.°29S×179.°97W, h279km±55km, mb3.4/2, mb1 3.7/4, mb1mx3.4/17, mbtmp3.6/4, Error ellipse: s-maj=61.2km s-min=43.0km az=169.0*
*NEIC **22** 20:30:38.8±2.3, 33.°65S×179.°98W, h310km±23km, mb3.8/2, Error ellipse: s-maj=37.1km s-min=29.7km az=103.0*

ISC 22 20:30:38.6±4.1, 33.°7S±0.°2×179.°8W±0.°8, h320km±30km, n32, σ1°04/30, mb3.5/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	Puketiti	4.64	199	*e*P	Pn	20 31 52.8	+0.1
PUZ				S	Sx	20 32 55.5	
MWZ	Matawai	5.11	204	*e*P	Pn	20 31 59.4	+1.4
MWZ				S	Sx	20 33 04.9	
URZ	Urewera	5.20	208	P	Pn	20 32 00.3	+1.4
	11nm,0.3s,baz=277,slow=1.9,SNR=25						
URZ				S	Sx	20 33 06.1	
	22nm,0.3s,baz=277,slow=2.3,SNR=18						
URZ	Urewera	5.20	208	*e*P	Pn	20 31 56.6	-2.4
KNZ	Kokohu	5.69	200	*e*P	Pn	20 32 07.0	+2.3
BKZ	Black Stump Fm	6.22	207	*e*P	Pn	20 32 10.8	-0.1
MOVZ	Moawhango	6.73	211	*e*P	Pn	20 32 17.1	+0.2
BFZ	Birch Farm	7.65	203	*e*P	Pn	20 32 27.5	-0.5
MRZ	Mangatainoka R	7.87	206	*e*P	Pn	20 32 27.8	-2.8
MTW	Mount Morrison	8.33	205	*e*P	Pn	20 32 35.2	-1.0
CAW	Cannon Point	8.45	207	*e*P	Pn	20 32 37.4	-0.2
PAWZ	Paruwai Farm	8.55	205	*e*P	Pn	20 32 38.4	-0.5
MSWZ	Moikau Station	8.65	205	*e*P	Pn	20 32 38.6	-1.4
SNZO	South Karori	8.76	208	*e*P	Pn	20 32 41.4	0.0
TCW	Tory Channel	8.85	210	*e*P	Pn	20 32 41.4	-1.1
NNZ	Nelson	9.25	214	P	Pn	20 32 47.2	-0.2
QRZ	Quartz Range	9.37	218	*e*P	Pn	20 32 48.7	-0.1
BSWZ	Blackbirch Sta	9.44	210	*e*P	Pn	20 32 49.5	-0.1
THZ	Tophouse	9.90	213	*e*P	Pn	20 32 55.8	+0.6
KHZ	Kahutara	10.16	209	*e*P	Pn	20 32 57.2	-1.1
LTZ	Lake Taylor	11.00	212	*e*P	Pn	20 33 09.1	+0.6
MQZ	McQueen's Vall	11.60	208	*e*P	Pn	20 33 16.2	+0.5
WVZ	Waitaha Valley	11.94	216	*e*P	Pn	20 33 20.5	+0.7
RPZ	Rata Peaks	12.28	213	P	Pn	20 33 25.4	+1.5
	2.0nm,0.3s,baz=130,slow=2.3,SNR=11						
RPZ				S	Sx	20 35 44.8	
	1.3nm,0.3s,baz=58,slow=21,SNR=5.6						
ODZ	Otahua Downs	13.52	210	*e*P	Pn	20 33 42.1	+3.5
CTAO	Charters Tower	32.99	286	*e*P	P	20 36 43.8	-0.6
	3.0nm,0.6s,mb3.7						
ASAR	Alice Springs	41.52	271	P	P	20 37 56.9	+1.4
	1.4nm,0.8s,mb3.1,baz=110,slow=7.7,SNR=17						
WRAB	Tennant Creek	42.80	277	*e*P	P	20 38 04.6	-1.2
	3.6nm,0.7s,mb3.6						
WRAB				*e*	pP	20 39 12.0	+1.7
WRA	Warramunga Arr	42.81	277	P	P	20 38 06.2	+0.4
	1.9nm,0.4s,mb3.6,baz=114,slow=7.9,SNR=7.5						
WRA	Warramunga Arr	42.81	277	P	P	20 38 06.2	+0.3
FINES	FINESS Array B	147.63	337	PKPbc	PKPbc	20 49 45.7	+1.1
	1.4nm,0.9s,baz=29,slow=4.4,SNR=5.8						
FINES	FINESS Array B	147.63	337	PKPbc	PKPbc	20 49 45.7	+1.1

*IDC **22** 20:44:52.4±1.4, 6.°75S×130.°71E, h0km, mb3.9/1, mb1 4.3/4, mb1mx3.8/16, mbtmp4.1/4, ML4.2/3, Error ellipse: s-maj=67.6km s-min=26.9km az=76.0*
*NEIC **22** 20:44:57.6±1.2, 6.°93S×130.°48E, h35km, mb3.5/1, Error ellipse: s-maj=26.5km s-min=15.7km az=77.0*
*ISCJB **22** 20:44:58.6±2.1, 7.°3S±0.°1×130.°3E±0.°1, h33km, Error ellipse: s-maj=19.3km s-min=15.5km az=41.1*

ISC 22 20:44:58.2±1.3, 7.°04S±0.°09×130.°3E±0.°1, h35km, n9, σ0°75/14, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	6.03	159	*e*Pn	Pn	20 46 28.7	+3.8
	76nm,0.4s						
KAKA				*e*Sn	Sn	20 47 32.6	-0.1
FITZ	Fitzroy Crossi	11.88	202	Pn	Pn	20 47 48.8	+3.7
	0.7nm,0.3s,baz=275,slow=19,SNR=40						
FITZ				Sn	Sn	20 49 55.9	-0.6
	1.5nm,0.3s,baz=254,slow=11,SNR=10						
WRAB	Tennant Creek	13.41	163	*e*Pn	Pn	20 48 05.8	-0.3
	7.2nm,0.5s						
WRAB				*e*Sn	Sn	20 50 26.9	-7.2
WRA	Warramunga Arr	13.42	163	Pn	Pn	20 48 06.1	-0.2
	1.6nm,0.3s,baz=350,slow=13,SNR=16						
WRA				Sn	Sn	20 50 28.1	-6.1
	1.7nm,0.3s,baz=341,slow=21,SNR=5.1						
WRA	Warramunga Arr	13.42	163	Pn	Pn	20 48 06.1	-0.2
WRA				Sn	Sn	20 50 28.1	-6.1
ASAR	Alice Springs	16.89	168	Pn	Pn	20 48 52.4	+0.3
	1.3nm,0.3s,baz=342,slow=10.0,SNR=87						
ASAR				Sn	Sn	20 51 53.7	-5.0
	0.5nm,0.3s,baz=356,slow=26,SNR=6.0						
MBWA	Marble Bar	17.34	215	*e*P	Pn	20 48 58.3	+0.7
	2.5nm,0.6s						
MKAR	Makanchi Array	68.40	327	P	P	20 55 55.9	-0.5
	0.7nm,0.5s,baz=116,slow=8.5,SNR=15						
LPAZ	La Paz	150.53	142	PKPbc	PKPbc	21 04 48.0	+0.7
	0.6nm,0.4s,baz=150,slow=7.0,SNR=5.0						

NNC 22 21:09:43.5±4.4, 36.°96N×69.°10E, h0km, mb3.5, mpv3.3, 4C-1D, Error ellipse: s-maj=59.8km s-min=34.2km az=95.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.23	10	⇑Pn	Pn	21 11 19.7	+3.1
	1.1nm,0.6s,baz=189,slow=12,SNR=5.0						
KK31				⇑Sn	Sn	21 12 35.2	+6.7
	2.5nm,0.8s,baz=198,slow=27,SNR=5.6						
TKM2	Tokmak 2	7.76	38	⇓Pn	Pn	21 11 36.1	-1.6
	1.5nm,0.6s						
AB31	Akbulak array	13.97	334	⇑Pn	Pn	21 13 04.2	+1.5
	0.2nm,0.5s,baz=147,slow=14,SNR=4.1						
AB31				⇑Sn	Sn	21 15 35.5	-2.9
	0.4nm,0.7s						

IDC 22 21:32:09.2±2.2, 3.°63S×129.°39E, h0km, mb3.8/3, mb1 3.8/4, mb1mx3.6/19, mbtmp3.7/4, ML3.4/1, Error ellipse: s-maj=181.9km s-min=26.0km az=70.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.92	164	Pn	Pn	21 36 05.5	-2.1
	0.1nm,0.3s,baz=346,slow=12,SNR=3.7						
ASAR	Alice Springs	20.39	168	P	P	21 36 48.9	+1.0
	4.3nm,0.8s,baz=347,slow=12,SNR=23						
MKAR	Makanchi Array	65.09	326	P	P	21 42 51.8	+0.1
	0.3nm,0.2s,baz=110,slow=6.9,SNR=5.1						
KURK	Kurchatov	69.34	328	P	P	21 43 18.6	0.0
	0.3nm,0.6s,baz=133,slow=5.9,SNR=4.5						

*IDC **22** 21:38:29.0±0.7, 32.°33N×105.°16E, h0km, mb4.1/14, mb1 4.2/17, mb1mx4.1/28, mbtmp4.0/17, ML3.6/3, MS3.3/10, Ms1 3.4/10, ms1mx3.1/27, Error ellipse: s-maj=29.2km s-min=13.7km az=54.0*
*NEIC **22** 21:38:30.1±0.3, 32.°33N×105.°19E, h10km, mb4.1/14, Error ellipse: s-maj=8.1km s-min=5.0km az=89.0*
*BJI **22** 21:38:31.5, 32.°32N×105.°18E, h16km, mB4.5/8, mb4.3/14, ML4.2/21, Ms4.0/21, Ms7 4.0/14*

ISC 22 21:38:30.3±0.9, 32.°34N±0.°03×105.°19E±0.°04, h8km±6km, n57, σ1°12/69, mb4.0/26, MS3.3/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.87	221	Pn	Pn	21 39 04.0	+1.4
CD2				Pg	Pg	21 39 06.9	+0.6
CD2				Sn	Sn	21 39 29.4	+3.0
CD2				Sg	Sg	21 39 31.8	+1.2
CD2				smax			
	comp=N,13μm,0.7s						
CD2				smax			
	comp=E,12μm,0.7s						
XAN	Xi'an	3.56	61	Pn	Pn	21 39 27.5	+1.7
XAN				Sn	Sn	21 40 11.9	+3.8
XAN				Sg	Sg	21 40 29.4	+4.7
XAN				smax			
	comp=N,810nm,0.8s						
XAN				smax			
	comp=E,380nm,0.8s						
XAN				LR	LR		
	comp=N,620nm,7.0s						
XAN				LR	LR		
	comp=E,330nm,10.3s						
LZH	Lanzhou	3.90	344	*e*Pn	Pn	21 39 32.6	+2.1
LZH				Pg	Pg	21 39 44.0	-1.1
LZH				Sn	Sn	21 40 19.4	+2.9
LZH				Sg	Sg	21 40 32.3	-3.4
LZH				smax			
	comp=N,1μm,0.8s						
LZH				smax			
	comp=E,2μm,0.7s						
LZH				LR	LR		
	comp=E,4μm,6.0s						
LZH				LR	LR		
	comp=Z,4μm,7.5s						
ENH	Enshi	4.22	118	*e*Pn	Pn	21 39 40.1	+5.3
ENH				*e*Pg	Pg	21 39 49.8	-1.3
ENH				*e*Sg	Sg	21 40 43.1	-2.6
KMI	Kunming	7.50	197	Pn	Pn	21 40 16.1	-3.9
KMI				Sn	Sn	21 41 48.6	+3.4
KMI				smax			
	comp=N,50nm,1.1s						
KMI				smax			
	comp=E,43nm,0.8s						
KMI				LR	LR		
	comp=N,320nm,6.5s						
KMI				LR	LR		
	comp=E,560nm,10.3s						
KMI				LR	LR		
	comp=Z,430nm,13.7s						
WHN	Wuhan	8.03	100	P	Pn	21 40 30.3	+3.1
WHN				S	Sn	21 41 54.8	-3.4
WHN				LR	LR		
	comp=N,2μm,4.4s						
WHN				LR	LR		
	comp=E,2μm,5.0s						
GTA	Gaotai	8.29	330	*e*P	Pn	21 40 31.1	+0.3
GTA				pP		21 40 34.8	
GTA				S	Sn	21 42 04.1	-0.6
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,77nm,3.9s						
GTA				LR	LR		
	comp=N,730nm,10.4s						
GTA				LR	LR		
	comp=E,390nm,11.0s						
GTA				LR	LR		
	comp=Z,870nm,10.1s						
BTO	Baotou	9.12	24	*e*P	Pn	21 40 46.4	+4.2
BTO				S	Sn	21 42 30.8	+5.8
BTO				LR

comp=Z,49nm,19.4s,MS3.3,baz=311,slow=38
ARU Arti 40.04 321 *eP* **P 21 46 04.7 -0.8**
comp=Z,3.3nm,0.8s,mb4.1
PETK Petropavlovsk- 42.67 45 LR LR 22 05 51.8
comp=Z,34nm,19.9s,MS3.2,baz=42,slow=38
GNI Garni 48.55 297 P **P 21 47 13.3 -0.6**
KIV Kislovodsk 49.42 302 *eP* **P 21 47 20.2 -0.4**
comp=Z,3.5nm,0.6s,mb4.6
MBWA Marble Bar 54.98 163 P **P 21 48 01.4 -0.6**
ARCES ARCESS Array B 56.52 335 P **P 21 48 12.4 -0.1**
comp=Z,0.8nm,0.5s,mb4.0,baz=108,slow=7.7,SNR=2.5
ASF Jabal al Asfar 56.80 290 P **P 21 48 15.6 +0.5**
comp=Z,1.6nm,0.7s,mb4.1,baz=228,slow=1.7,SNR=4.8
BR131 Keskin Array S 56.94 299 *eP* **P 21 48 15.6 -0.5**
comp=Z,1.6nm,0.8s,mb4.1
FINES FINESS Array B 57.06 326 P **P 21 48 16.2 -0.3**
comp=Z,1.9nm,0.7s,mb4.2,baz=126,slow=15,SNR=4.6
AKASG Malin Array Be 57.22 313 P **P 21 48 17.0 -0.8**
comp=Z,0.4nm,0.3s,mb3.9,baz=75,slow=6.2,SNR=3.8
WRA Warramunga Arr 59.00 148 P **P 21 48 30.9 +0.3**
comp=Z,4.5nm,0.8s,mb4.6,baz=340,slow=7.2,SNR=15
KWP Kalwaria Pacla 61.55 313 *eP* **P 21 48 47.5 -0.2**
comp=Z,12nm,1.0s,mb5.0
ASAR Alice Springs 62.08 150 P **P 21 48 52.2 +0.7**
comp=Z,2.2nm,0.8s,mb4.3,baz=322,slow=6.3,SNR=14
HFS Hagfors 63.27 326 P **P 21 49 03.2 +4.2**
comp=Z,1.9nm,0.6s,mb4.4,baz=64,slow=9.8,SNR=5.5
NB2 NORSAR Subarra 64.12 327 P **P 21 49 03.2 -1.5**
comp=Z,2.9nm,0.8s,mb4.4,baz=72,slow=6.9
NOA NORSAR Array B 64.12 327 P **P 21 49 03.4 -1.3**
comp=Z,0.5nm,0.7s,mb3.6,baz=50,slow=7.0,SNR=3.7
NOA LR LR 22 18 53.4
comp=Z,25nm,19.2s,MS3.4,baz=270,slow=38
NOA NORSAR Array B 64.12 327 P **P 21 49 03.4 -1.3**
NOA LR LR 22 18 53.5
STKA Stephens Creek 72.55 148 P **P 21 49 56.5 -1.3**
comp=Z,0.9nm,0.5s,mb4.0,baz=181,slow=7.7,SNR=3.0
STKA Stephens Creek 72.55 148 *eP* **P 21 49 57.7 -0.1**
comp=Z,0.4nm,0.7s,mb3.5
YKA Yellowknife Ar 80.24 18 *eP* **P 21 50 40.9 -0.1**
comp=Z,1.5nm,0.6s,mb4.1,baz=328,slow=5.0,SNR=8.6
YKA Yellowknife Ar 80.24 18 P **P 21 50 40.9 -0.1**
LBTB Lobatse 94.88 244 P **P 21 51 52.0 -1.1**
PDAR Pinedale Array 98.75 25 LR LR 22 40 01.4
comp=Z,23nm,20.5s,MS3.7,baz=256,slow=37

*ATH **22** 21:43:06.1,36.07N×21.78E,h5km±4km,MD3.7/7,ML3.3*
*NEIC **22** 21:43:06.1,36.07N×21.78E,h5km,ML3.9(THE), ML3.3(ATH),After ATH.*
*ISCJB **22** 21:43:07.6±0.6,36.12N±0.03×21.87E±0.05,h10km,Error ellipse: s-maj=6.3km s-min=3.5km az=141.8*
*THE **22** 21:43:09.5,36.23N×21.95E,h1km±4km,ML3.9/2,Error ellipse: s-maj=7.2km s-min=2.2km az=246.0*
*CSEM **22** 21:43:09.4±0.4,36.22N×21.95E,h2km,ML3.9/2,Error ellipse: s-maj=9.8km s-min=5.1km az=52.0*
ISC 22 21:43:08.5±0.6,36.15N±0.04×21.94E±0.05,h10km,n107, σ1§32/126,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.76**	**348**	P	**Pg**	**21 43 20.7**	**-2.4**
PYL				S	**Sg**	**21 43 33.1**	**+0.1**
PYL	**PYLOS**	**0.76**	**348**	*e*PB	**Pg**	**21 43 22.4**	**-0.7**
PYL				*e*SB	**Sg**	**21 43 33.4**	**+0.4**
PYL	**PYLOS**	**0.76**	**348**	*e*Pb	**Pg**	**21 43 22.4**	**-0.7**
PYL				S	**Sg**	**21 43 33.1**	**+0.1**
PYL				*e*Sb	**Sg**	**21 43 33.4**	**+0.4**
KYTH	**Kithira**	**0.89**	**82**	*e*Pg	**Pg**	**21 43 25.5**	**-0.2**
KYTH	**Kithira**	**0.89**	**82**	*e*PG	**Pg**	**21 43 25.5**	**-0.2**
KYTH	**Kithira**	**0.89**	**82**	*e*Pg	**Pg**	**21 43 25.5**	**-0.2**
VLI	**Veliai**	**0.98**	**55**	*e*Pn	**Pg**	**21 43 27.5**	**+0.2**
VLI				*e*Sb	**Sg**	**21 43 44.3**	**+4.2**
VLI	**Veliai**	**0.98**	**55**	*e*PN	**Pg**	**21 43 27.5**	**+0.2**
VLI				*e*SB	**Sg**	**21 43 44.2**	**+4.1**
VLI	**Veliai**	**0.98**	**55**	*e*Pn	**Pg**	**21 43 27.5**	**+0.2**
VLI				*e*Sb	**Sg**	**21 43 44.3**	**+4.2**
ITM	**Ithomi**	**1.02**	**359**	*e*Pb	**Pg**	**21 43 27.3**	**-0.9**
ITM				*e*Sb	**Sb**	**21 43 42.0**	**+0.2**
ITM	**Ithomi**	**1.02**	**359**	P	**Pg**	**21 43 26.0**	**-2.2**
ITM				S	**Sg**	**21 43 40.8**	**-0.7**
ITM	**Ithomi**	**1.02**	**359**	*e*PB	**Pg**	**21 43 27.3**	**-0.9**
ITM				*e*SB	**Sb**	**21 43 42.0**	**+0.2**
ITM	**Ithomi**	**1.02**	**359**	P	**Pg**	**21 43 26.0**	**-2.2**
ITM	**Ithomi**	**1.02**	**359**	*e*Pb	**Pg**	**21 43 27.3**	**-0.9**
ITM				S	**Sg**	**21 43 40.8**	**-0.7**
ITM				*e*Sb	**Sb**	**21 43 42.0**	**+0.2**
VLX	**Vlachokerasia**	**1.26**	**16**	P	**Pn**	**21 43 30.1**	**-2.1**
VLX				S	**Sb**	**21 43 48.5**	**-0.2**
VLX	**Vlachokerasia**	**1.26**	**16**	*e*PB	**Pb**	**21 43 32.2**	**-0.2**
VLX	**Vlachokerasia**	**1.26**	**16**	*e*Pb	**Pb**	**21 43 32.2**	**-0.2**
VLX				S	**Sb**	**21 43 48.5**	**-0.2**
KARN	**Karanos**	**1.77**	**114**	P	**Pb**	**21 43 40.2**	**-0.9**
KARN				S	**Sb**	**21 44 04.9**	**+1.6**
KARN	**Karanos**	**1.77**	**114**	*e*PN	**Pg**	**21 43 41.9**	**-0.6**
KARN	**Karanos**	**1.77**	**114**	P	**Pb**	**21 43 40.2**	**-0.9**
KARN	**Karanos**	**1.77**	**114**	*e*Pn	**Pg**	**21 43 41.9**	**-0.6**
KARN				S	**Sb**	**21 44 04.9**	**+1.6**
GUR	**Goura**	**1.81**	**10**	P	**Pn**	**21 43 40.0**	**+0.3**
GUR	**Goura**	**1.81**	**10**	*e*PG	**Pb**	**21 43 41.5**	**-0.2**
GUR	**Goura**	**1.81**	**10**	P	**Pn**	**21 43 40.0**	**+0.3**
GUR	**Goura**	**1.81**	**10**	*e*Pg	**Pb**	**21 43 41.5**	**-0.2**
RLS	**Riolos of Patr**	**1.94**	**349**	*e*Pn	**Pg**	**21 43 43.7**	**-1.9**
RLS	**Riolos of Patr**	**1.94**	**349**	*e*PN	**Pg**	**21 43 43.7**	**-1.9**
RLS	**Riolos of Patr**	**1.94**	**349**	*e*Pn	**Pg**	**21 43 43.7**	**-1.9**
VAM	**Vamos**	**1.98**	**111**	*e*Pn	**Pb**	**21 43 44.0**	**-0.6**
VAM	**Vamos**	**1.98**	**111**	*e*PN	**Pb**	**21 43 44.0**	**-0.6**
VAM	**Vamos**	**1.98**	**111**	*e*Pn	**Pb**	**21 43 44.0**	**-0.6**
NAIG	**Nisos Aigina**	**2.02**	**37**	*e*Pg	**Pb**	**21 43 46.2**	**+0.8**
NAIG	**Nisos Aigina**	**2.02**	**37**	*e*PG	**Pb**	**21 43 46.2**	**+0.8**
NAIG	**Nisos Aigina**	**2.02**	**37**	*e*Pg	**Pb**	**21 43 46.2**	**+0.8**
LTK	**Loutraki**	**2.04**	**23**	P	**Pn**	**21 43 44.5**	**+1.7**
LTK	**Loutraki**	**2.04**	**23**	*e*PN	**Pb**	**21 43 45.2**	**-0.4**
LTK	**Loutraki**	**2.04**	**23**	P	**Pn**	**21 43 44.5**	**+1.7**
LTK	**Loutraki**	**2.04**	**23**	*e*Pn	**Pb**	**21 43 45.3**	**-0.3**
LAKA	**Lakka**	**2.08**	**1**	P	**Pb**	**21 43 45.2**	**-1.1**
LAKA	**Lakka**	**2.08**	**1**	P	**Pb**	**21 43 45.2**	**-1.1**
GVD	**Gavdhos**	**2.19**	**126**	*e*Pn	**Pb**	**21 43 46.5**	**-1.6**
GVD	**Gavdhos**	**2.19**	**126**	*e*PN	**Pb**	**21 43 46.5**	**-1.6**
GVD	**Gavdhos**	**2.19**	**126**	*e*Pn	**Pb**	**21 43 46.5**	**-1.6**
KALE	**Kalithea**	**2.24**	**4**	P	**Pn**	**21 43 47.1**	**+1.5**
KALE				S	**Sn**	**21 44 12.9**	**-0.4**
KALE	**Kalithea**	**2.24**	**4**	P	**Pn**	**21 43 47.1**	**+1.5**
KALE				S	**Sn**	**21 44 12.9**	**-0.4**
VLY	**Voula,Athens**	**2.25**	**41**	*e*Pn	**Pb**	**21 43 49.1**	**-0.1**
VLY	**Voula,Athens**	**2.25**	**41**	*e*PN	**Pb**	**21 43 49.1**	**-0.1**
VLY	**Voula,Athens**	**2.25**	**41**	*e*Pn	**Pb**	**21 43 49.1**	**-0.1**
EFP	**Efpalio**	**2.27**	**359**	P	**Pn**	**21 43 47.7**	**+1.7**
EFP	**Efpalio**	**2.27**	**359**	*e*PN	**Pb**	**21 43 48.9**	**-0.6**
EFP	**Efpalio**	**2.27**	**359**	P	**Pn**	**21 43 47.7**	**+1.7**
EFP	**Efpalio**	**2.27**	**359**	*e*Pn	**Pb**	**21 43 48.9**	**-0.6**
VLS	**Valsamata**	**2.29**	**332**	*e*Pn	**Pb**	**21 43 47.5**	**-2.4**
VLS	**Valsamata**	**2.29**	**332**	P	**Pn**	**21 43 46.4**	**+0.1**
VLS	**Valsamata**	**2.29**	**332**	*e*PN	**Pb**	**21 43 47.5**	**-2.4**
VLS	**Valsamata**	**2.29**	**332**	P	**Pn**	**21 43 46.4**	**+0.1**
VLS	**Valsamata**	**2.29**	**332**	*e*Pn	**Pb**	**21 43 47.5**	**-2.4**
DSF	**Desfina**	**2.30**	**12**	P	**Pn**	**21 43 46.0**	**-0.4**
DSF	**Desfina**	**2.30**	**12**	P	**Pn**	**21 43 46.0**	**-0.4**
ATH	**Athens Observa**	**2.30**	**38**	*e*Pn	**Pb**	**21 43 49.3**	**-0.8**
ATH	**Athens Observa**	**2.30**	**38**	*e*PN	**Pb**	**21 43 49.3**	**-0.8**
ATH	**Athens Observa**	**2.30**	**38**	*e*Pn	**Pb**	**21 43 49.3**	**-0.8**
PTL	**Penteli**	**2.44**	**39**	*e*Pn	**Pn**	**21 43 50.3**	**+2.0**
PTL	**Penteli**	**2.44**	**39**	*e*PN	**Pn**	**21 43 50.3**	**+2.0**
PTL	**Penteli**	**2.44**	**39**	*e*Pn	**Pn**	**21 43 50.3**	**+2.0**
IDI	**Anoyia**	**2.55**	**109**	*e*Pn	**Pb**	**21 43 52.5**	**-1.8**
IDI	**Anoyia**	**2.55**	**109**	*e*PN	**Pb**	**21 43 52.5**	**-1.8**
IDI	**Anoyia**	**2.55**	**109**	*e*Pn	**Pb**	**21 43 52.5**	**-1.8**
LKR	**Lokris**	**2.63**	**18**	P	**Pn**	**21 43 53.3**	**+2.3**
LKR	**Lokris**	**2.63**	**18**	P	**Pn**	**21 43 52.4**	**+1.4**
LKR	**Lokris**	**2.63**	**18**	P	**Pn**	**21 43 52.4**	**+1.4**
ATAL	**Atalanti**	**2.68**	**18**	P	**Pn**	**21 43 52.6**	**+1.0**
ATAL	**Atalanti**	**2.68**	**18**	P	**Pn**	**21 43 52.6**	**+1.0**
AGG	**Agios Georgios**	**2.88**	**6**	*e*Pn	**Pb**	**21 43 57.8**	**-2.1**
AGG	**Agios Georgios**	**2.88**	**6**	P	**Pn**	**21 43 55.1**	**+0.7**
AGG	**Agios Georgios**	**2.88**	**6**	*e*PN	**Pb**	**21 43 57.8**	**-2.1**
AGG	**Agios Georgios**	**2.88**	**6**	P	**Pn**	**21 43 55.1**	**+0.7**
AGG	**Agios Georgios**	**2.88**	**6**	*e*Pn	**Pb**	**21 43 57.8**	**-2.1**
LAST	**Lasithi**	**3.05**	**108**	*e*Pn	**Pb**	**21 43 59.9**	**-2.9**
LAST	**Lasithi**	**3.05**	**108**	*e*PN	**Pb**	**21 43 59.9**	**-2.9**
LAST	**Lasithi**	**3.05**	**108**	*e*Pn	**Pb**	**21 43 59.9**	**-2.9**
NPS	**Neapolis**	**3.12**	**106**	*e*Pn	**Pn**	**21 43 59.5**	**+1.8**
NPS	**Neapolis**	**3.12**	**106**	*e*PN	**Pn**	**21 43 59.5**	**+1.8**
NPS	**Neapolis**	**3.12**	**106**	*e*Pn	**Pn**	**21 43 59.5**	**+1.8**
XOR	**Xorichti**	**3.36**	**17**	P	**Pn**	**21 44 02.4**	**+1.5**
XOR	**Xorichti**	**3.36**	**17**	P	**Pn**	**21 44 02.4**	**+1.5**
XOR	**Xorichti**	**3.36**	**17**	P	**Pn**	**21 44 02.4**	**+1.5**
AOS	**Alonnisos**	**3.38**	**26**	P	**Pn**	**21 44 02.5**	**+1.2**
AOS	**Alonnisos**	**3.38**	**26**	P	**Pn**	**21 44 02.5**	**+1.2**
AOS	**Alonnisos**	**3.38**	**26**	P	**Pn**	**21 44 02.5**	**+1.2**
THL	**Klokotos Trika**	**3.41**	**1**	*e*PN	**Pn**	**21 44 03.5**	**+1.9**
THL	**Klokotos Trika**	**3.41**	**1**	*e*Pn	**Pn**	**21 44 03.5**	**+1.9**
JAN	**Janina**	**3.60**	**346**	*e*Pb	**Pn**	**21 44 07.0**	**+2.7**
JAN	**Janina**	**3.60**	**346**	*e*PB	**Pn**	**21 44 07.0**	**+2.7**
IGT	**Igoumenitsa**	**3.60**	**340**	P	**Pn**	**21 44 03.8**	**-0.6**
IGT	**Igoumenitsa**	**3.60**	**340**	P	**Pn**	**21 44 03.8**	**-0.6**
IGT	**Igoumenitsa**	**3.60**	**340**	P	**Pn**	**21 44 03.8**	**-0.6**
KEK	**Kerkira**	**3.94**	**335**	P	**Pn**	**21 44 11.7**	**+2.8**
KEK	**Kerkira**	**3.94**	**335**	P	**Pn**	**21 44 11.7**	**+2.8**
PAIG	**Paliouri**	**4.01**	**19**	P	**Pn**	**21 44 14.3**	**+4.4**
PAIG	**Paliouri**	**4.01**	**19**	P	**Pn**	**21 44 14.3**	**+4.4**
TIP	**Timpagrande**	**5.10**	**308**	P	**Pn**	**21 44 25.3**	**+0.4**
TIP	**Timpagrande**	**5.10**	**308**	P	**Pn**	**21 44 25.3**	**+0.4**
CEL	**Celeste**	**5.26**	**295**	P	**Pn**	**21 44 29.2**	**+2.0**
CEL	**Celeste**	**5.26**	**295**	P	**Pn**	**21 44 29.2**	**+2.0**
STON	**Ston**	**7.47**	**335**	*e*Pn	**Pn**	**21 44 55.4**	**-2.0**
STON				Sn	**Sn**	**21 46 17.4**	**-4.7**
NVLJ	**Novalja**	**9.98**	**329**	Sn	**Sn**	**21 47 16.7**	**-7.1**

*SKO **22** 21:57:27.5,40.97N×22.06E,h15km,M1.5,ML2.0*
*ISCJB **22** 21:57:27.9±0.4,40.99N±0.03×22.04E±0.02,h10km,Error ellipse: s-maj=3.7km s-min=2.5km az=13.4*
*THE **22** 21:57:28.0,40.97N×22.06E,h2km±1km,ML2.6/6,Error ellipse: s-maj=1.8km s-min=0.6km az=186.0*
*CSEM **22** 21:57:28.0,40.97N×22.06E,h2km,ML2.6/6,After THE*
ISC 22 21:57:28.2±0.4,40.98N±0.03×22.06E±0.03,h2km±8km, n29,σ0§60/54,1C,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.52**	**48**	*i*Pg	**Pg**	**21 57 37.8**	**-0.3**
VAY				*i* Sg	**Sg**	**21 57 45.0**	**+0.1**
VAY				*e*Lg		21 57 45.6	
	comp=N,35nm,0.4s						
VAY				*e*Lg		21 57 47.0	
	comp=E,35nm,0.2s						
VAY	**Valandovo**	**0.52**	**48**	P	**Pg**	**21 57 37.8**	**-0.3**
VAY				S	**Sg**	**21 57 44.8**	**-0.1**
VAY	**Valandovo**	**0.52**	**48**	P	**Pg**	**21 57 37.8**	**-0.3**
VAY				S	**Sg**	**21 57 44.8**	**-0.1**
FNA	**Florina**	**0.55**	**250**	P	**Pg**	**21 57 38.7**	**0.0**
FNA				S	**Sg**	**21 57 46.6**	**+0.8**
FNA	**Florina**	**0.55**	**250**	P	**Pg**	**21 57 38.7**	**0.0**
FNA				S	**Sg**	**21 57 46.6**	**+0.8**
BIA	**Bitola**	**0.56**	**275**	*i* Pg	**Pg**	**21 57 39.3**	**+0.5**
BIA				*i* Sg	**Sg**	**21 57 46.3**	**+0.3**
BIA				*e*Lg		21 57 46.5	
	comp=N,51nm,0.2s						
BIA				*e*Lg		21 57 46.6	
	comp=E,96nm,0.3s						
BIA	**Bitola**	**0.56**	**275**	P	**Pg**	**21 57 38.7**	**-0.1**
BIA				S	**Sg**	**21 57 46.5**	**+0.5**
BIA	**Bitola**	**0.56**	**275**	P	**Pg**	**21 57 38.7**	**-0.1**
BIA				S	**Sg**	**21 57 46.5**	**+0.5**
KZN	**Kozani**	**0.70**	**198**	P	**Pg**	**21 57 40.9**	**-0.7**
KZN				S	**Sg**	**21 57 50.4**	**-0.4**
KZN	**Kozani**	**0.70**	**198**	P	**Pg**	**21 57 40.9**	**-0.7**
KZN				S	**Sg**	**21 57 50.4**	**-0.4**
KRUS	**Krusevo**	**0.72**	**303**	*i* Pg	**Pg**	**21 57 41.7**	**-0.3**
KRUS				*i* Sg	**Sg**	**21 57 51.2**	**-0.3**
KRUS				*e*Lg		21 57 51.4	
	comp=E,29nm,0.3s						
KRUS				*e*Lg		21 57 51.6	
	comp=N,35nm,0.2s						
THE	**Thessaloniki**	**0.77**	**116**	P	**Pg**	**21 57 42.0**	**-1.0**
THE				S	**Sg**	**21 57 53.7**	**+0.7**
THE	**Thessaloniki**	**0.77**	**116**	P	**Pg**	**21 57 42.0**	**-1.0**
THE				S	**Sg**	**21 57 53.7**	**+0.7**
HORT	**Hortiatis**	**0.88**	**115**	P	**Pg**	**21 57 44.6**	**-0.4**
HORT				S	**Sg**	**21 57 57.9**	**+1.5**
HORT	**Hortiatis**	**0.88**	**115**	P	**Pg**	**21 57 44.6**	**-0.4**
HORT				S	**Sg**	**21 57 57.9**	**+1.5**
OHR	**Ohrid**	**0.96**	**278**	*e*Pg	**Pg**	**21 57 45.7**	**-0.8**
OHR				*i* Sg	**Sg**	**21 57 59.2**	**+0.2**
OHR				*e*Lg		21 57 59.5	
	comp=N,52nm,0.7s						
OHR				*e*Lg		21 58 00.0	
	comp=E,36nm,0.4s						
OHR	**Ohrid**	**0.96**	**278**	P	**Pg**	**21 57 45.7**	**-0.8**
OHR				S	**Sg**	**21 57 59.5**	**+0.5**
OHR	**Ohrid**	**0.96**	**278**	P	**Pg**	**21 57 45.7**	**-0.8**
OHR				S	**Sg**	**21 57 59.5**	**+0.5**
SOH	**Sokhos**	**1.00**	**99**	P	**Pg**	**21 57 46.6**	**-0.7**
SOH				S	**Sg**	**21 58 00.4**	**+0.2**
SOH	**Sokhos**	**1.00**	**99**	P	**Pg**	**21 57 46.6**	**-0.7**
SOH				S	**Sg**	**21 58 00.4**	**+0.2**
SKO	**Skopje**	**1.10**	**335**	*i* Pg	**Pg**	**21 57 49.6**	**+0.4**
SKO				*i* Sg	**Sg**	**21 58 03.8**	**+0.4**
PLG	**Polygyros**	**1.22**	**119**	P	**Pg**	**21 57 50.7**	**-0.8**
PLG				S	**Sg**	**21 58 07.5**	**+0.2**
PLG	**Polygyros**	**1.22**	**119**	P	**Pg**	**21 57 50.7**	**-0.8**
PLG				S	**Sg**	**21 58 07.5**	**+0.2**
THL	**Klokotos Trika**	**1.41**	**181**	P	**Pn**	**21 57 54.5**	**-0.3**
THL				S	**Sg**	**21 58 14.2**	**+0.7**
THL	**Klokotos Trika**	**1.41**	**181**	P	**Pn**	**21 57 54.5**	**-0.3**
THL				S	**Sg**	**21 58 14.2**	**+0.7**
VTS	**Vitosha**	**1.83**	**28**	S	**Sn**	**21 58 24.9**	**+0.6**
VTS	**Vitosha**	**1.83**	**28**	P	**Pn**	**21 58 00.0**	**-0.6**
VTS	**Vitosha**	**1.83**	**28**	S	**Sn**	**21 58 24.9**	**+0.6**
VTS	**Vitosha**	**1.83**	**28**	P	**Pn**	**21 58 00.0**	**-0.6**

*ISK **22** 22:00:52.8,40.43N×27.95E,h5km,MD2.8*
*DDA **22** 22:00:52.1,40.42N×27.94E,h7km±5km,Md2.9*
*ISCJB **22** 22:00:52.9±0.4,40.41N±0.03×27.97E±0.04,h9km±4km, Error ellipse: s-maj=5.1km s-min=4.4km az=11.9*
*CSEM **22** 22:00:53.2±0.1,40.42N×27.98E,h10km,MD2.8,Error ellipse: s-maj=3.1km s-min=2.8km az=153.0*
ISC 22 22:00:53.2±0.4,40.41N±0.03×27.97E±0.04,h10km±4km, n43,σ0§69/52,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNT	**Bandirma**	**0.07**	**214**	PG	**Pg**	**22 00 55.2**	**-0.1**
BNT				*e*SG	**Sg**	**22 00 57.0**	**+0.2**
KCT	**Karacabey**	**0.33**	**116**	*e*PG	**Pg**	**22 00 60.0**	**+0.2**
KCT				*e*SG	**Sg**	**22 01 05.2**	**+1.0**
KCT	**Karacabey**	**0.33**	**116**	*e*Pg	**Pg**	**22 01 00.0**	**+0.3**
KCT				*e*Sg	**Sg**	**22 01 05.2**	**+1.0**
MFT	**Murefte**	**0.64**	**306**	*e*PG	**Pg**	**22 01 06.2**	**+0.5**
MFT	**Murefte**	**0.64**	**306**	*e*Pg	**Pg**	**22 01 06.2**	**+0.5**
RKY	**Sarkoy-Tekirda**	**0.66**	**295**	*e*PG	**Pg**	**22 01 05.7**	**-0.3**
RKY	**Sarkoy-Tekirda**	**0.66**	**295**	*e*Pg	**Pg**	**22 01 05.7**	**-0.3**
ARMT	**Armutlu**	**0.70**	**77**	*e*PG	**Pg**	**22 01 07.0**	**+0.3**
ARMT	**Armutlu**	**0.70**	**77**	*e*Pg	**Pg**	**22 01 07.1**	**+0.4**
BALY	**Balya**	**0.72**	**202**	*i* P	**Pg**	**22 01 05.1**	**-2.0**
BALY				*i* S	**Sg**	**22 01 17.3**	**+0.8**
BALY	**Balya**	**0.72**	**202**	*i* P	**Pg**	**22 01 05.1**	**-2.0**
BALY				*i* S	**Sg**	**22 01 17.3**	**+0.8**
CRLT	**Corlu**	**0.74**	**346**	*e*PG	**Pg**	**22 01 07.9**	**+0.4**
CRLT	**Corlu**	**0.74**	**346**	*e*Pg	**Pg**	**22 01 07.9**	**+0.4**
BALB	**Balikesir**	**0.77**	**185**	*e*PG	**Pg**	**22 01 08.3**	**+0.2**
BALB	**Balikesir**	**0.77**	**185**	*e*Pg	**Pg**	**22 01 08.3**	**+0.2**
ELBA	**Catalca**	**0.81**	**25**	*i* P	**Pg**	**22 01 08.0**	**-0.9**
ELBA				*i* S	**Sg**	**22 01 20.5**	**+0.9**
ELBA	**Catalca**	**0.81**	**25**	*i* P	**Pg**	**22 01 08.0**	**-0.9**
ELBA				*i* S	**Sg**	**22 01 20.5**	**+0.9**
SLVT	**Silivri**	**0.84**	**13**	*e*PG	**Pg**	**22 01 08.7**	**-0.7**
SLVT	**Silivri**	**0.84**	**13**	*e*Pg	**Pg**	**22 01 08.7**	**-0.7**
DURS	**Dursunbey**	**0.90**	**154**	*i* P	**Pg**	**22 01 09.8**	**-0.7**
DURS				*i* S	**Sg**	**22 01 22.0**	**-0.2**
DURS	**Dursunbey**	**0.90**	**154**	*i* P	**Pg**	**22 01 09.8**	**-0.7**
DURS				*i* S	**Sg**	**22 01 22.0**	**-0.1**
CTKS	**Kestanelik-??a**	**0.92**	**26**	*e*PG	**Pg**	**22 01 10.5**	**-0.4**
CTKS	**Kestanelik-??a**	**0.92**	**26**	*e*Pg	**Pg**	**22 01 10.5**	**-0.4**
LPK	**Lapseki**	**0.92**	**268**	*e*PG	**Pg**	**22 01 10.4**	**-0.6**
LPK	**Lapseki**	**0.92**	**268**	*e*Pg	**Pg**	**22 01 10.4**	**-0.6**
GEMT	**Gemlik**	**0.93**	**88**	*e*PG	**Pg**	**22 01 11.5**	**+0.3**
GEMT	**Gemlik**	**0.93**	**88**	*e*Pg	**Pg**	**22 01 11.5**	**+0.4**
BGKT	**Bogazkoy**	**0.98**	**38**	*e*PG	**Pg**	**22 01 11.9**	**-0.2**
BGKT	**Bogazkoy**	**0.98**	**38**	*e*Pg	**Pg**	**22 01 12.0**	**-0.1**
ISK	**Istanbul-Kandi**	**1.06**	**51**	*e*PN	**Pn**	**22 01 14.1**	**0.0**
ISK	**Istanbul-Kandi**	**1.06**	**51**	*e*Pn	**Pn**	**22 01 14.1**	**0.0**
YLV	**Yalova**	**1.08**	**81**	*e*PN	**Pn**	**22 01 13.7**	**-0.8**
YLV	**Yalova**	**1.08**	**81**	*e*Pn	**Pn**	**22 01 13.7**	**-0.7**
CTYL	**Yal??k??y-??at**	**1.09**	**13**	*e*PN	**Pn**	**22 01 13.8**	**-0.8**
CTYL	**Yal??k??y-??at**	**1.09**	**13**	*e*Pn	**Pn**	**22 01 13.8**	**-0.8**
KLYT	**Kilyos**	**1.17**	**44**	*e*PN	**Pn**	**22 01 15.4**	**-0.2**
KLYT	**Kilyos**	**1.17**	**44**	*e*Pn	**Pn**	**22 01 15.4**	**-0.3**
ENEZ	**Enez**	**1.42**	**284**	*e*PN	**Pn**	**22 01 19.8**	**+0.7**
ENEZ	**Enez**	**1.42**	**284**	*e*Pn	**Pn**	**22 01 19.8**	**+0.7**
GADA	**Gvkgeada**	**1.60**	**263**	*e*PN	**Pn**	**22 01 22.5**	**+1.0**
GADA	**Gvkgeada**	**1.60**	**263**	*e*Pn	**Pn**	**22 01 22.5**	**+1.0**
EDRB	**Edirne**	**1.71**	**328**	*e*PN	**Pn**	**22 01 23.9**	**+0.9**
EDRB	**Edirne**	**1.71**	**328**	*e*Pn	**Pn**	**22 01 23.9**	**+0.9**

*IDC **22** 22:38:50.3±1.8,3.39S×100.63E,h0km,mb4.2/9, mb1 4.3/9,mb1mx4.0/20,mbtmp4.2/9,MS2.9/1,Ms1 2.9/1, ms1mx2.2/23,Error ellipse: s-maj=80.0km s-min=18.3km az=54.0*
*NEIC **22** 22:38:54.7±0.3,3.48S×100.58E,h35km,mb4.2/6,Error ellipse: s-maj=10.0km s-min=5.6km az=59.0*
*ISCJB **22** 22:38:54.8±0.9,3.42S±0.06×100.66E±0.07,h53km±7km, mb4.2/15,Error ellipse: s-maj=14.3km s-min=5.4km az=136.7*
*DJA **22** 22:38:55,3.40S×100.68E,h87km,MLv4.2/8*
ISC 22 22:38:55.4±1.0,3.47S±0.07×100.60E±0.07,h40km±8km, n43,σ0§58/45,mb4.2/15,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.92**	**320**	P	**Pn**	**22 39 13.0**	**+1.2**
PPSI				S	**Sn**	**22 39 30.2**	**+6.4**
KSI	**Kapahiang**	**2.00**	**95**	P	**Pn**	**22 39 25.9**	**-0.8**
KSI				S	**Sn**	**22 39 51.5**	**+1.0**
MNAI	**Manna**	**2.51**	**111**	P	**Pn**	**22 39 32.8**	**-0.9**
PDSI	**Padang**	**2.55**	**357**	P	**Pn**	**22 39 33.3**	**-0.9**
PDSI				S	**Sn**	**22 40 04.3**	**+0.3**
SISI	**Saibi**	**2.61**	**325**	P	**Pn**	**22 39 35.5**	**+0.4**
SDSI	**Sungai Dareh**	**2.66**	**18**	P	**Pn**	**22 39 35.1**	**-0.6**
PPI	**Padang Panjang**	**3.00**	**356**	P	**Pn**	**22 39 40.6**	**+0.1**
MDSI	**Maura Dua**	**3.71**	**106**	P	**Pn**	**22 39 50.2**	**0.0**
MDSI				S	**Sn**	**22 40 33.4**	**+0.7**
LWLI	**Liwa**	**3.78**	**114**	P	**Pn**	**22 39 51.5**	**+0.4**
BKNI	**Bangkinang**	**3.80**	**7**	P	**Pn**	**22 39 51.6**	**+0.1**
KLSI		**4.29**	**107**	P	**Pn**	**22 39 58.4**	**+0.1**
PSI	**Prapat**	**6.45**	**345**	LR

*ISCJB **22** 22:58:44.4±0.5, 39.°13N±0.°04×141.°03E±0.°07, h20km±5km, mb4.0/10, MS3.1/2, Error ellipse: s-maj=9.0km s-min=6.0km az=4.1*
*NEIC **22** 22:58:47.5±1.3, 39.°15N×141.°17E, h35km, mb4.2/3, Error ellipse: s-maj=30.2km s-min=10.6km az=96.0*
*IDC **22** 22:58:51.1±2.9, 39.°09N×141.°03E, h65km±23km, mb3.5/7, mb1 3.5/10, mb1mx3.4/26, mbtmp3.5/10, MS2.9/2, Ms1 3.0/2, ms1mx2.5/21, Error ellipse: s-maj=36.0km s-min=20.4km az=89.0*
ISC 22 22:58:44.7±0.6, 39.°12N±0.°03×140.°98E±0.°06, h9km±5km, n30, σ0.°61/36, mb4.0/10, MS3.1/2, 3C-3D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.25**	**132**	⇓P	**Pg**	**22 58 49.5**	**-0.2**
JMK				eS	**Sg**	**22 58 53.4**	**+0.4**
JRG	**Rokugo**	**0.39**	**316**	⇑P	**Pg**	**22 58 52.1**	**-0.2**
JOM	**Ohasama**	**0.43**	**34**	⇓P	**Pg**	**22 58 52.8**	**-0.2**
JOM				eS	**Sg**	**22 58 59.1**	**+0.5**
JYK	**Kaneyama**	**0.53**	**248**	⇑P	**Pg**	**22 58 54.5**	**-0.4**
OFUJ	**Ofunato**	**0.53**	**94**	⇓P	**Pg**	**22 58 55.0**	**0.0**
JIO	**Ouri**	**0.72**	**157**	P	**Pg**	**22 58 58.3**	**-0.3**
JIO				S	**Sg**	**22 59 07.8**	**-0.2**
JOU	**Okura**	**0.79**	**199**	⇑P	**Pg**	**22 58 59.7**	**-0.2**
MJAR	**Matsushiro Arr**	**3.38**	**221**	P	**Pn**	**22 59 41.6**	**+4.0**
	0.6nm,0.3s,baz=26,slow=15,SNR=6.1						
MAJO	**Matsushiro**	**3.38**	**221**	ePn	**Pn**	**22 59 37.9**	**+0.3**
MAJO				Sn	**Sn**	**23 00 25.2**	**+7.3**
MAT	**Matsushiro**	**3.38**	**221**	P	**Pn**	**22 59 39.2**	**+1.6**
MAT				eS	**Sn**	**23 00 25.8**	**+7.9**
ASAJ	**Asahikawa**	**5.14**	**13**	P	**Pn**	**23 00 05.5**	**+3.8**
	1.1nm,0.3s,baz=245,slow=14,SNR=3.9						
ASAJ				S	**Sn**	**23 01 10.6**	**+9.5**
	1.0nm,0.3s,baz=218,slow=19,SNR=3.7						
KSRS	**Korea Array**	**10.40**	**265**	P	**Pn**	**23 01 18.3**	**+4.3**
	0.6nm,0.3s,baz=76,slow=14,SNR=12						
KSRS				LR	LR	23 04 59.7	
	comp=Z,71nm,18.7s,baz=75,slow=35						
HHC	**Hu-ho-hao-te**	**22.57**	**284**	eP	**P**	**23 03 45.8**	**+0.8**
HHC				pP		23 03 55.0	
HHC				sP	sP	23 03 59.1	+10
HHC				PP		23 04 14.4	
HHC				PcP	PcP	23 07 39.8	+1.5
HHC				S	**S**	**23 07 46.8**	**-6.0**
HHC				sS	sS	23 08 01.8	+4.9
HHC				SS		23 08 29.5	
HHC				ScP	ScP	23 11 12.9	-3.1
HHC				PcS	PcS	23 11 16.9	-0.2
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.4						
HHC				pmax	pmax		
	comp=Z,57nm,5.9s						
HHC				LR	LR		
	comp=N,84nm,9.1s						
HHC				LR	LR		
	comp=E,100nm,11.6s						
HHC				LR	LR		
	comp=Z,86nm,12.5s,MS3.4						
KKM	**Kota Kinabalu**	**39.81**	**221**	P	**P**	**23 06 18.3**	**0.0**
ZALV	**Zalesovo Beam**	**40.28**	**311**	P	**P**	**23 06 21.9**	**+0.2**
	comp=Z,1.4nm,0.8s,mb3.8,baz=96,slow=7.7,SNR=3.7						
CMAR	**Chiang Mai Arr**	**41.74**	**253**	LR	LR	23 23 19.5	
	comp=Z,11nm,19.1s,MS2.8,baz=180,slow=35						
MK31	**Makanchi Array**	**42.75**	**300**	eP	**P**	**23 06 41.9**	**-0.3**
MKAR	**Makanchi Array**	**42.75**	**300**	P	**P**	**23 06 42.4**	**+0.2**
	comp=Z,0.8nm,0.7s,mb3.6,baz=84,slow=11,SNR=6.9						
KURK	**Kurchatov**	**44.40**	**306**	P	**P**	**23 06 55.9**	**+0.5**
	comp=Z,2.5nm,0.9s,mb4.0,baz=83,slow=8.4,SNR=8.7						
KURK	**Kurchatov**	**44.40**	**306**	eP	**P**	**23 06 55.3**	**-0.1**
	comp=Z,3.0nm,0.9s,mb4.0						
TKM2	**Tokmak 2**	**48.37**	**297**	eP	**P**	**23 07 26.2**	**-0.5**
	comp=Z,6.8nm,1.1s,mb4.6						
BVAR	**Borovoye Array**	**48.94**	**311**	P	**P**	**23 07 30.6**	**-0.2**
	comp=Z,0.6nm,0.7s,mb3.8,baz=82,slow=10,SNR=4.2						
ARU	**Arti**	**54.59**	**317**	P	**P**	**23 08 12.2**	**-0.8**
ABKAR	**Akbulak array**	**56.35**	**309**	eP	**P**	**23 08 25.9**	**0.0**
	comp=Z,1.3nm,0.7s,mb4.1						
KBL	**Kabul**	**56.38**	**290**	P	**P**	**23 08 26.7**	**+0.4**
WRA	**Warramunga Arr**	**59.08**	**187**	P	**P**	**23 08 44.5**	**-0.7**
	comp=Z,0.6nm,0.8s,mb3.7,baz=3.5,slow=7.4,SNR=3.6						
FINES	**FINESS Array B**	**66.82**	**332**	P	**P**	**23 09 36.6**	**+0.3**
	comp=Z,1.0nm,0.7s,mb4.0,baz=27,slow=9.4,SNR=3.3						
FINES	**FINESS Array B**	**66.82**	**332**	P	**P**	**23 09 36.6**	**+0.3**
AKASG	**Malin Array Be**	**72.45**	**322**	P	**P**	**23 10 09.8**	**-1.4**
	comp=Z,0.3nm,0.3s,mb3.7,baz=41,slow=5.4,SNR=3.5						
AKASG	**Malin Array Be**	**72.45**	**322**	P	**P**	**23 10 09.8**	**-1.4**

*ISCJB **22** 23:08:16.5±0.5, 31.°25S±0.°04×68.°80W±0.°06, h118km±6km, mb3.9/2, Error ellipse: s-maj=9.4km s-min=5.7km az=22.6*
*GUC **22** 23:08:17.5±0.7, 31.°19S×69.°13W, h132km±21km, MD3.8, ML3.6*
*NEIC **22** 23:08:17.5, 31.°19S×69.°13W, h132km, MD3.8(GUC), After GUC.*
*IDC **22** 23:08:18.4±1.6, 31.°41S×68.°58W, h112km±8km, mb3.9/2, mb1 3.4/6, mb1mx3.4/17, mbtmp3.3/6, Error ellipse: s-maj=47.9km s-min=20.9km az=105.0*
ISC 22 23:08:17.4±0.5, 31.°26S±0.°04×68.°76W±0.°06, h114km±6km, n27, σ0.°96/36, mb3.9/2, 7C-1D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**0.56**	**128**	P	**Pn**	**23 08 35.4**	**+0.3**
	baz=294,slow=10						
CFAA				S	**Sn**	**23 08 48.8**	**+0.3**
	59nm,0.3s,baz=144,slow=19,SNR=157						
FCH	**Farellones**	**2.44**	**212**	⇓iP	**Pn**	**23 08 56.7**	**+0.6**
FCH				i S	**Sn**	**23 09 26.9**	**+1.1**
FCH				AML	AML	23 09 33.1	
	comp=E,184nm,0.5s						
PEL	**Peldehue**	**2.49**	**220**	⇑iP	**Pn**	**23 08 56.6**	**-0.1**
PEL				i S	**Sn**	**23 09 26.0**	**-1.0**
PEL				AML	AML	23 10 03.6	
	comp=E,309nm,0.6s						
ANTU	**Antumapu**	**2.79**	**214**	i S	**Sn**	**23 09 34.1**	**-0.1**
ANTU				AML	AML	23 09 37.4	
	comp=N,250nm,0.5s						
LCO	**Las Campanas**	**2.80**	**323**	ePn	**Pn**	**23 09 00.4**	**-0.4**
LCO				eSn	**Sn**	**23 09 32.9**	**-1.4**
LMEL	**Las Melosas**	**2.85**	**205**	i P	**Pn**	**23 09 02.7**	**+1.2**
LMEL				i S	**Sn**	**23 09 36.4**	**+0.9**
LMEL	**Las Melosas**	**2.85**	**205**	i P	**Pn**	**23 09 02.7**	**+1.2**
LMEL				i S	**Sn**	**23 09 36.4**	**+0.9**
LMEL				AML	AML	23 09 45.2	
	comp=N,170nm,0.2s						
CHCH	**Chadas Angostu**	**3.11**	**210**	⇑iP	**Pn**	**23 09 05.1**	**+0.2**
CHCH				i S	**Sn**	**23 09 41.5**	**0.0**
CHCH	**Chadas Angostu**	**3.11**	**210**	⇑iP	**Pn**	**23 09 05.1**	**+0.2**
CHCH				i S	**Sn**	**23 09 41.5**	**0.0**
CACH	**El Canelo**	**3.24**	**208**	⇑iP	**Pn**	**23 09 07.5**	**+0.9**
CACH				i S	**Sn**	**23 09 45.6**	**+0.9**
CACH	**El Canelo**	**3.24**	**208**	⇑iP	**Pn**	**23 09 07.5**	**+0.9**
CACH				i S	**Sn**	**23 09 45.6**	**+0.9**
LNV	**Longovilo**	**3.50**	**219**	⇑iP	**Pn**	**23 09 09.4**	**-0.7**
LNV				i S	**Sn**	**23 09 48.6**	**-2.1**
LNV	**Longovilo**	**3.50**	**219**	⇑iP	**Pn**	**23 09 09.4**	**-0.7**
LNV				i S	**Sn**	**23 09 48.6**	**-2.1**
TRQA	**Tornquist**	**8.78**	**142**	ePn	**Pn**	**23 10 20.9**	**-0.4**
	comp=N,9.3nm,0.4s						
TRQA				eSn	**Sn**	**23 11 56.1**	**-2.4**
PLCA	**Paso Flores**	**9.56**	**188**	P	**Pn**	**23 10 30.5**	**-1.4**
	comp=N,0.1nm,0.3s,baz=0.0,slow=13,SNR=3.5						
PLCA	**Paso Flores**	**9.56**	**188**	ePn	**Pn**	**23 10 32.3**	**+0.3**
CPUP	**Villa Florida**	**11.16**	**67**	P	**Pn**	**23 10 52.9**	**-0.7**
	comp=N,0.4nm,0.3s,baz=252,slow=9.6,SNR=2.9						
LPAZ	**La Paz**	**14.91**	**2**	P	**Pn**	**23 11 44.5**	**+2.2**
	comp=N,0.4nm,0.3s,baz=173,slow=5.5,SNR=16						
LPAZ	**La Paz**	**14.91**	**2**	ePn	**Pn**	**23 11 42.6**	**+0.2**
	comp=N,2.7nm,0.7s						
SIV	**San Ignacio**	**16.74**	**27**	P	**Pn**	**23 12 06.5**	**+1.5**
	comp=N,0.1nm,0.3s,baz=49,slow=9.3,SNR=3.9						
USHA	**Ushuaia**	**23.56**	**180**	P	**P**	**23 13 17.1**	**0.0**
	comp=N,4.8nm,0.7s,mb3.9,baz=330,slow=7.7,SNR=5.1						
BOSA	**Boshof**	**78.86**	**117**	P	**P**	**23 20 08.1**	**0.0**
	comp=N,1.0nm,0.7s,mb3.8,baz=207,slow=9.0,SNR=3.7						
BOSA	**Boshof**	**78.86**	**117**	P	**P**	**23 20 08.1**	**0.0**
ZALV	**Zalesovo Beam**	**150.44**	**32**	PKPbc	PKPbc	23 27 56.5	+1.6
	comp=N,1.5nm,0.4s,baz=319,slow=3.0,SNR=9.0						
ZALV				pPKPbc	pPKPbc	23 28 25.9	+0.2
	comp=N,1.2nm,0.6s,baz=317,slow=1.9,SNR=3.4						
ZALV	**Zalesovo Beam**	**150.44**	**32**	PKPbc	PKPbc	23 27 56.5	+1.6
ZALV				pPKPbc	pPKPbc	23 28 25.9	+0.2
MKAR	**Makanchi Array**	**152.88**	**47**	PKPbc	PKPbc	23 28 01.9	+1.2
	comp=N,0.4nm,0.7s,baz=24,slow=2.5,SNR=4.4						
MKAR				PKPab	PKPab	23 28 13.9	+1.7
	comp=N,0.4nm,0.6s,baz=316,slow=2.1,SNR=5.1						
MKAR				pPKPbc	pPKPbc	23 28 32.0	+0.4
	comp=N,0.4nm,0.7s,baz=72,slow=0.5,SNR=3.5						
MKAR	**Makanchi Array**	**152.88**	**47**	PKPbc	PKPbc	23 28 01.9	+1.2
MKAR				PKPab	PKPab	23 28 13.9	+1.7
MKAR				pPKPbc	pPKPbc	23 28 32.0	+0.4

*NEIC **22** 23:36:15.4±4.8, 3.°97S×153.°57E, h431km±46km, mb4.1/3, Error ellipse: s-maj=52.9km s-min=25.5km az=74.0*
IDC 22 23:36:07.6±23.0, 3.°42S×152.°68E, h301km±280km, mb3.0/3, mb1 3.3/4, mb1mx3.1/17, mbtmp3.1/4, ML4.4/1, Error ellipse: s-maj=209.2km s-min=71.5km az=122.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**17.72**	**200**	P	P	23 39 54.3	+0.1
	0.8nm,0.3s,baz=33,slow=9.5,SNR=5.3						
CTAO	**Charters Tower**	**17.72**	**200**	eP	P	23 39 53.8	-0.4
	11nm,0.9s						
WRA	**Warramunga Arr**	**24.29**	**226**	P	P	23 40 59.1	+0.7
	0.3nm,0.4s,baz=49,slow=8.9,SNR=2.7						
ASAR	**Alice Springs**	**27.10**	**220**	P	P	23 41 23.3	-0.2
	0.8nm,0.4s,baz=54,slow=8.8,SNR=14						
ASAR				pP	pP	23 42 00.6	-20
	0.5nm,0.5s,baz=54,slow=8.5,SNR=2.6						
YHNB	**Yeheng**	**41.29**	**314**	eP	P	23 43 24.4	-0.1
MK31	**Makanchi Array**	**79.21**	**319**	P	P	23 47 39.2	-0.5
MKAR	**Makanchi Array**	**79.21**	**319**	P	P	23 47 39.8	+0.2
	0.3nm,0.7s,baz=100,slow=5.5,SNR=3.8						
TKM2	**Tokmak 2**	**82.89**	**314**	eP	P	23 47 59.3	+0.3
	1.0nm,0.3s						
EKS2	**Erkin-Say**	**84.16**	**313**	eP	P	23 48 04.8	-0.7
QSPA	**South Pole Qui**	**86.53**	**180**	eP	P	23 48 08.6	-7.8
	3.2nm,0.8s						
KBL	**Kabul**	**86.68**	**305**	P	P	23 48 18.8	+0.8

*IDC **22** 23:55:55.9±7.8, 35.°65N×81.°57E, h0km, mb4.0/1, mb1 3.7/5, mb1mx3.5/25, mbtmp3.7/5, ML3.4/3, Error ellipse: s-maj=143.1km s-min=50.3km az=120.0*
*BJI **22** 23:55:58.2, 35.°80N×81.°60E, h10km, ML3.7/6*
*ISCJB **22** 23:55:58.6±1.2, 35.°96N±0.°09×81.°5E±0.°1, h10km, Error ellipse: s-maj=13.7km s-min=12.0km az=35.2*
*NEIC **22** 23:55:59.3±1.6, 35.°79N×81.°61E, h10km, mb3.5/1, Error ellipse: s-maj=21.7km s-min=14.1km az=151.0*
ISC 22 23:55:59.7±1.2, 35.°85N±0.°09×81.°6E±0.°1, h10km, n16, σ1.°24/18, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**5.80**	**311**	ePn	**Pn**	**23 57 21.1**	**-4.6**
KSH				eSn	**Sn**	**23 58 34.4**	**+2.2**
KSH				smax			
	comp=N,62nm,0.7s						
KSH				smax			
	comp=E,120nm,1.1s						
UCH	**Uchtor**	**8.44**	**321**	ePn	**Pn**	**23 58 02.3**	**+0.3**
	comp=E,3.8nm,0.6s						
TKM2	**Tokmak 2**	**8.47**	**328**	ePn	**Pn**	**23 58 04.3**	**+2.0**
TKM2				eSn	**Sn**	**23 59 36.2**	**-1.8**
AAK	**Ala-Archa**	**8.75**	**323**	Lg		00 00 32.1	
	comp=E,0.0nm,0.3s,baz=204,slow=20,SNR=3.2						
AML	**Almayashu**	**8.81**	**318**	ePn	**Pn**	**23 58 08.3**	**+1.3**
	comp=E,3.5nm,0.3s						
KBL	**Kabul**	**10.39**	**266**	ePn	**Pn**	**23 58 27.8**	**-0.9**
MK31	**Makanchi Array**	**10.95**	**2**	ePn	**Pn**	**23 58 37.0**	**+0.7**
MKAR	**Makanchi Array**	**10.95**	**2**	Pn	**Pn**	**23 58 37.4**	**+1.1**
	comp=E,0.5nm,0.3s,baz=172,slow=11,SNR=34						
MKAR				Sn	**Sn**	**00 00 38.3**	**-0.5**
	comp=E,0.1nm,0.3s,baz=182,slow=23,SNR=2.6						
KURK	**Kurchatov**	**15.02**	**353**	Pn	**Pn**	**23 59 28.9**	**-3.0**
	comp=E,0.0nm,0.3s,baz=174,slow=12,SNR=7.1						
KURK	**Kurchatov**	**15.02**	**353**	ePn	**Pn**	**23 59 30.0**	**-1.9**
	comp=E,1.8nm,0.8s						
ZALV	**Zalesovo Beam**	**18.23**	**6**	P	**Pn**	**00 00 12.6**	**-0.1**
	comp=E,0.1nm,0.3s,baz=189,slow=12,SNR=6.8						
BVAR	**Borovoye Array**	**18.92**	**339**	P	**Pn**	**00 00 20.5**	**-0.5**
	comp=E,0.2nm,0.3s,baz=133,slow=10,SNR=4.2						
ARU	**Arti**	**25.84**	**330**	P	**P**	**00 01 30.4**	**-0.6**
FINES	**FINESS Array B**	**42.94**	**324**	P	**P**	**00 03 56.7**	**-1.6**
	comp=E,1.4nm,0.6s,baz=101,slow=5.8,SNR=6.7						
FINES	**FINESS Array B**	**42.94**	**324**	P	**P**	**00 03 56.7**	**-1.6**
YSS	**Yuzh-Sakhalins**	**46.08**	**56**	P	**P**	**00 04 24.5**	**+0.8**

*BGS **22** 23:56:10.8±1.4, 65.°63N×145.°47E, h10km, mb5.9, MS5.5*
*BJI **22** 23:56:26.4, 67.°62N×141.°69E, h12km, mB6.1/43, mb5.7/55, Ms6.7/60, Ms7 6.5/50*
*MOS **22** 23:56:27.5±0.8, 67.°70N×141.°34E, h13km, mb6.2/167, MS5.7/113, Error ellipse: s-maj=11.7km s-min=4.8km az=94.5 Broadband fault plane solution: P waves. $M_0$2.80000×10^18 NP1:ϕ_s103.00000°, δ57.00000°, λ41.00000°. NP2:ϕ_s347.00000°, δ57.00000°, λ139.00000°. Principal axes: T Plg51.0000°, Azm315.0000°; N Plg39.0000°, Azm135.0000°; P Plg0.0000°, Azm45.0000°;*
*ISCJB **22** 23:56:28.7±0.1, 67.°72N±0.°01×141.°18E±0.°02, h21km, mb6.0/512, MS5.7/288 Error ellipse: s-maj=1.9km s-min=1.2km az=173.3*
*NEIC **22** 23:56:30.0±0.1, 67.°70N×141.°28E, h18km, mb6.1/294, ME6.5, MS5.6/200, MW6.1, MW5.9, Error ellipse: s-maj=2.5km s-min=1.7km az=186.0 Broadband fault plane solution: P waves. NP1:ϕ_s350.00000°, δ65.00000°, λ150.00000°. NP2:ϕ_s94.00000°, δ63.00000°, λ28.00000°. Principal axes: T Plg38.0000°, Azm311.0000°; N Plg0.0000°, Azm0.0000°; P Plg1.0000°, Azm42.0000°; Moment Tensor Solution. s120 Moment tensor: Scale 10^17 Nm; M_{rr}9.27; $M_{\theta\theta}$-3.84; $M_{\phi\phi}$-5.43; $M_{r\theta}$3.57; $M_{\phi\phi}$2.43; $M_{\theta r}$3.95; Best double couple: $M_0$9.30000×10^17 NP1: ϕ_s348.00000°, δ54.00000°, λ116.00000°. NP2: ϕ_s128.00000°, δ43.00000°, λ59.00000°. Principal axes: T 11.4000, Plg68.0000°, Azm315.0000°; N -4.1000, Plg20.0000°, Azm151.0000°; P -7.3000, Plg5.0000°, Azm59.0000°; Two events about 9 seconds apart. Depth from synthetics of broadband displacement seismograms based on first event. Energy computed from BB mechanism.*
*SZGRF **22** 23:56:31.1, 67.°57N×141.°36E, h30km, mb6.2, MS5.9, Eastern Siberia, Russia*
*IDC **22** 23:56:31.2±0.4, 67.°68N×141.°56E, h30km±2km, mb5.2/31, mb1 5.3/32, mb1mx5.3/33, mbtmp5.2/32, ML4.6/1, MS5.5/29, Ms1 5.5/29, ms1mx5.5/29, Error ellipse: s-maj=9.5km s-min=7.4km az=153.0*
*GCMT **22** 23:56:39.0±0.1, 67.°71N×141.°43E, h22km, MW6.1, Moment Tensor Solution. s109,c258; s89,c132; Moment tensor: Scale 10^18Nm; M_{rr}1.15±.01; $M_{\theta\theta}$-0.71±.01; $M_{\phi\phi}$-0.44±.01; $M_{r\theta}$0.60±.02; $M_{\theta\phi}$1.43±.01; $M_{\theta r}$0.61±.02; Best double couple: $M_0$1.90000×10^18 NP1:ϕ_s345.00000°, δ57.00000°, λ141.00000°. NP2: ϕ_s99.00000°, δ58.00000°, λ40.00000°. Principal axes: T 1.8700, Plg50.0000°, Azm313.0000°; N 0.1400, Plg40.0000°, Azm131.0000°; P -2.0100, Plg1.0000°, Azm222.0000°; Data Used: II IU IC G CN. Surface waves: sta=118, comp=292, per= 50.*
*DJA **22** 23:56:58, 67.°47N×140.°31E, h257km, Mw6.0/36*
ISC 22 23:56:31.0±0.1, 67.°70N±0.°01×141.°18E±0.°02, h22km, h22km±4km:pP-P, n2063, σ0.°93/2253, mb6.0/512, MS5.7/288, 686C-259D, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIXI	**Tiksi**	**5.83**	**318**	⇑iPn	**Pn**	**23 57 56.6**	**+0.6**
TIXI				eSn	**Sn**	**23 59 09.2**	**+7.1**
SEY	**Seymchan**	**6.69**	**130**	c iP	**Pn**	**23 58 07.2**	**-0.6**
YAK	**Yakutsk**	**7.50**	**226**	eP	**Pn**	**23 58 19.6**	**+0.8**
YAK				e		23 59 39.7	
YAK				pmax	pmax		
	comp=Z,123nm,0.3s						
YAK				pmax	pmax		
	comp=N,52nm,0.4s						
YAK				pmax	pmax		
	comp=E,60nm,0.5s						
YAK				smax			
	comp=N,2μm,0.9s						
YAK				smax			
	comp=E,5μm,0.9s						
YAK	**Yakutsk**	**7.50**	**226**	⇓ePn	**Pn**	**23 58 18.2**	**-0.6**
YAK				eSn	**Sn**	**23 59 46.6**	**+3.6**
BILL	**Bilibino**	**9.45**	**76**	d iP	**Pn**	**23 58 45.3**	**-0.2**
BILL				i S	**Sn**	**00 00 29.7**	**-1.1**
BILL				pmax	pmax		
	comp=Z,404nm,1.6s						
BILL				MLR	MLR		
	comp=Z,97μm,15.0s						
BILL	**Bilibino**	**9.45**	**76**	⇓iPn	**Pn**	**23 58 45.0**	**-0.5**
	comp=Z,405nm,0.7s						
BILL				eSn	**Sn**	**00 00 32.4**	**+1.5**
CLNS	**Chul'man**	**13.21**	**222**	eP	**Pn**	**23 59 35.0**	**-2.0**
CLNS				eS	**Sn**	**00 01 56.5**	**-6.5**
CLNS				pmax	pmax		
	comp=Z,618nm,1.5s						
CLNS				pmax	pmax		
	comp=N,449nm,1.5s						
CLNS				pmax	pmax		
	comp=E,557nm,1.4s						
CLNS				smax			
	comp=E,388nm,8.8s						
CLNS				smax			
	comp=N,707nm,11.7s						
CLNS				MLR	MLR		
	comp=E,61μm,12.0s						
CLNS				MLR	MLR		
	comp=Z,71μm,11.0s						
CLNS				MLR	MLR		
	comp=N,58μm,11.0s						
PEA0B	**Petropavlovsk-**	**16.66**	**143**	⇑ePn	**Pn**	**00 00 22.8**	**0.0**
PEA0B				Sn	**Sn**	**00 03 42.3**	**+15**
PETK	**Petropavlovsk-**	**16.66**	**143**	Pn	**Pn**	**00 00 21.3**	**-1.4**
	comp=N,2.0nm,0.3s,baz=79,slow=16,SNR=16						
PETK				Sn	**Sn**	**00 03 37.2**	**+10**
	comp=N,0.2nm,0.3s,baz=4.1,slow=7.7,SNR=1.8						
PETK				LR	LR	00 06 42.0	
	comp=N,9μm,19.2s,baz=154,slow=37						
PETK	**Petropavlovsk-**	**16.66**	**143**	PN	**Pn**	**00 00 21.3**	**-1.4**
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PET	**Petropavlovsk**	**16.96**	**142**	d iP	**Pn**	**00 00 29.2**	**+2.7**
PET				eS	**Sn**	**00 03 35.5**	**+1.4**
PET				pmax	pmax		
	comp=Z,14μm,8.4s						
PET				pmax	pmax		
	comp=Z,11μm,10.6s						
PET				pmax	pmax		
	comp=Z,1μm,1.0s						
PET				smax			
	comp=E,16μm,8.0s						
PET				smax			
	comp=N,15μm,11.4s						
PET				MLR	MLR		
	comp=Z,87μm,14.0s						
PET				MLR	MLR		
	comp=Z,101μm,14.0s						
PET	**Petropavlovsk**	**16.96**	**142**	ePn	**Pn**	**00 00 26.4**	**-0.1**
	comp=Z,969nm,0.9s						
PET				eS	**Sn**	**00 03 47.0**	**+13**
SKR	**Severo-Kuril's**	**18.61**	**149**	eP	**Pn**	**00 00 46.0**	**-0.8**
SKR				pmax	pmax		
	comp=E,250nm,1.0s						
SKR				pmax	pmax		
	comp=Z,670nm,1.0s						
SKR				pmax	pmax		
	comp=N,1μm,1.5s						
SKR				pmax	pmax		
	comp=N,10μm,8.0s						
SKR				pmax	pmax		
	comp=E,10μm,8.0s						
SKR				pmax	pmax		
	comp=Z,16μm,8.0s						
SKR				MLR	MLR		
	comp=N,100μm,14.0s						
SKR				MLR	MLR		
	comp=E,69μm,14.0s						
SKR				MLR	MLR		
	comp=Z,106μm,14.0s						
UGL	**Uglegorsk**	**18.68**	**178**	eP	**Pn**	**00 00 47.0**	**-0.8**
UGL				i S	**Sn**	**00 04 20.0**	**+4.2**
UGL				pmax	pmax		
	comp=Z,470nm,1.0s						
UGL				smax			
	comp=N,16μm,13.0s						
UGL				smax			
	comp=E,39μm,10.0s						
UGL				MLR	MLR		
	comp=N,52μm,9.0s						
UGL				MLR	MLR		
	comp=E,61μm,9.0s						
KLR	**Kul'dur**	**19.13**	**199**	⇓iP	**Pn**	**00 00 49.3**	**-3.8**
KLR				eS	**Sn**	**00 04 21.0**	**-5.5**
KLR				pmax	pmax		
	comp=Z,2μm,3.0s						
KLR				pmax	pmax		
	comp=Z,22μm,9.0s						
KLR				smax			
	comp=N,21μm,10.0s						
KLR				smax			
	comp=E,14μm,10.0s						
GAMB	**Gambell**	**19.36**	**79**	⇓eP	**Pn**	**00 00 54.6**	**-1.2**
	comp=E,3μm,1.6s						
HABR	**Khabarovsk**	**19.54**	**192**	d iP	**Pn**	**00 00 57.0**	**-1.0**
HABR				eS	**Sn**	**00 04 36.9**	**+0.6**
HABR				pmax	pmax		
	comp=Z,499nm,2.4s						
HABR				pmax	pmax		
	comp=N,332nm,2.3s						
HABR				pmax	pmax		
	comp=E,110nm,1.7s						
HABR				MLR	MLR		
	comp=E,38μm,9.0s						
HABR				MLR	MLR		
	comp=N,81μm,12.0s						
HABR				MLR	MLR		
	comp=Z,99μm,11.0s						
CIT	**Chita**	**20.67**	**234**	eP	**P**	**00 01 10.8**	**+1.9**
YSS	**Yuzh-Sakhalins**	**20.82**	**177**	deP	**P**	**00 01 11.0**	**+0.4**
YSS				i *SP	sP	00 01 19.0	-0.7
YSS				eS	**S**	**00 04 59.0**	**-2.5**
YSS				e		00 05 08.0	
YSS				pmax	pmax		
	comp=Z,2μm,4.0s						
YSS				pmax	pmax		
	comp=Z,380nm,1.0s						
YSS				smax			
	comp=N,2μm,5.0s						
YSS				smax			
	comp=E,2μm,4.0s						
YSS				MLR	MLR		
	comp=E,20μm,14.0s						
YSS				MLR	MLR		
	comp=Z,51μm,14.0s,MS6.0						
YSS	**Yuzh-Sakhalins**	**20.82**	**177**	eP	**P**	**00 01 10.8**	**+0.2**
	comp=Z,790nm,1.1s						
FX1	**Attu Island--F**	**21.34**	**118**	P	**P**	**00 01 12.8**	**-3.4**
	comp=Z,

YUK	**Yuzh-Kuril'sk**	**23.85**	**172**⇓	*iP*	**P**	**00 01 41.0**	**-1.3**
YUK				*i* S	**S**	**00 05 53.1**	**-3.6**
YUK				pmax	pmax		
	comp=Z,2μm,1.1s,mb6.4						
YUK				pmax	pmax		
	comp=N,220nm,1.1s						
YUK				pmax	pmax		
	comp=E,570nm,1.1s						
YUK				pmax	pmax		
	comp=Z,1μm,1.1s,mb6.3						
YUK				smax			
	comp=N,4μm,3.0s						
YUK				smax			
	comp=E,1μm,3.0s						
YUK				MLR	MLR		
	comp=N,12μm,12.0s,MS5.7						
YUK				MLR	MLR		
	comp=E,6μm,12.0s,MS5.7						
YUK				MLR	MLR		
	comp=Z,15μm,12.0s,MS5.7						
MDJ	**Mudanjiang**	**23.94**	**201**	P	**P**	**00 01 43.4**	**+0.3**
MDJ				pP		00 01 45.9	
MDJ				sP	sP	00 01 47.5	-5.0
MDJ				PcP	PcP	00 05 22.3	-2.5
MDJ				S	**S**	**00 05 59.8**	**+1.7**
MDJ				ScP	ScP	00 09 01.8	+0.5
MDJ				PcS	PcS	00 09 03.5	-0.7
MDJ				ScS	ScS	00 12 50.8	+2.7
MDJ				pmax	pmax		
	comp=Z,420nm,1.3s,mb5.7						
MDJ				pmax	pmax		
	comp=Z,4μm,7.5s						
MDJ				LR	LR		
	comp=N,99μm,9.5s						
MDJ				LR	LR		
	comp=E,29μm,8.4s						
MDJ				LR	LR		
	comp=Z,119μm,8.7s						
TLY	**Talaya**	**24.26**	**247**	P	**P**	**00 01 46.9**	**+1.0**
	comp=Z,2μm,1.6s,mb6.2						
TLY	**Talaya**	**24.26**	**247***c*	*iP*	**P**	**00 01 46.5**	**+0.6**
TLY				*e*		00 01 54.7	
TLY				*e*PPP		00 02 22.8	
TLY				*e*S	**S**	**00 06 05.4**	**+2.3**
TLY				pmax	pmax		
	comp=Z,1μm,2.4s,mb6.0						
TLY				MLR	MLR		
	comp=Z,43μm,11.0s,MS6.2						
TLY	**Talaya**	**24.26**	**247**⇑	*iP*	**P**	**00 01 46.3**	**+0.4**
	comp=Z,2μm,1.7s,mb6.2						
TLY				*e*S	**S**	**00 06 06.6**	**+3.5**
TLY				LR	LR		
	comp=Z,16μm,22.0s,MS5.5						
TLY	**Talaya**	**24.26**	**247**	P	**P**	**00 01 47.1**	**+1.1**
	SNR=221						
TLY				P		00 01 47.1	
	SNR=221						
TLY	**Talaya**	**24.26**	**247**	P	**P**	**00 01 47.1**	**+1.1**
	SNR=221						
TLY				P		00 01 47.1	
	SNR=221						
COLD	**Coldfoot**	**25.10**	**59**	*e*P	**P**	**00 01 53.1**	**-0.4**
	comp=Z,1μm,1.0s,mb6.4						
VLA	**Vladivostok**	**25.14**	**196**	*e*P	**P**	**00 01 52.0**	**-2.0**
VLA				*e**PP	pP	00 01 59.5	-1.2
VLA				*e*S	**S**	**00 06 15.0**	**-2.3**
VLA				*e**SS	sS	00 06 24.3	-4.0
VLA				pmax	pmax		
	comp=Z,469nm,1.2s,mb5.9						
VLA				MLR	MLR		
	comp=Z,65μm,10.0s,MS6.4						
MOY	**Mondy**	**25.21**	**251**	*e*P	**P**	**00 01 56.4**	**+1.8**
CN2	**Changchun**	**25.38**	**207**	*e*P	**P**	**00 01 55.4**	**-0.8**
CN2				*e*pP	pP	00 01 59.6	-3.2
CN2				*e*sP	sP	00 02 02.4	-3.2
CN2				*e*S	**S**	**00 06 19.0**	**-2.1**
ZAK	**Zakamensk**	**25.46**	**246**⇑	*iP*	**P**	**00 01 58.3**	**+1.4**
ZAK				*e*		00 07 46.3	
ZAK				pmax	pmax		
	comp=Z,376nm,1.6s,mb5.7						
TTA	**Tatalina**	**25.62**	**70**	*e*P	**P**	**00 01 56.7**	**-1.5**
CHUM	**Lake Minchumin**	**26.34**	**66**	*e*P	**P**	**00 02 04.7**	**0.0**
ULN	**Ulaanbaatar**	**26.35**	**238**⇑	*iP*	**P**	**00 02 06.2**	**+1.2**
	comp=Z,408nm,1.2s,mb5.8						
ULN				*e*S	S	00 06 56.5	+20
ULN				LR	LR		
	comp=Z,1μm,22.0s						
ULN	**Ulaanbaatar**	**26.35**	**238**	P	**P**	**00 02 06.8**	**+1.8**
	SNR=200						
ULN				P		00 02 06.8	
	SNR=200

WMQ LR LR
comp=N,18μm,16.0s,MS6.2
WMQ LR LR
comp=E,26μm,16.0s,MS6.2
WMQ LR LR
comp=Z,14μm,15.0s,MS5.9
KTK1 Kautokeino 37.08 328 *e*P **P 00 03 38.8 0.0**
SIT Sitka 37.08 64 *e*P **P 00 03 38.9 0.0**
SIT pmax pmax
comp=Z,453nm,1.6s,mb6.0
SIT Sitka 37.08 64 *e*P **P 00 03 38.9 -0.1**
comp=Z,453nm,1.6s,mb6.0
ARU Arti 37.27 295 P **P 00 03 41.2 +0.7**
comp=Z,1μm,1.2s,mb6.7,SNR=58
ARU Arti 37.27 295*c i*P **P 00 03 41.1 +0.6**
ARU *e* 00 05 07.7
ARU *e*PPP 00 05 24.3
ARU *e* 00 05 57.9
ARU S **S 00 09 29.0 +2.9**
ARU SSS 00 12 26.3
ARU 00 13 47.5
ARU pmax pmax
comp=Z,507nm,1.7s,mb6.1
ARU MLR MLR
comp=Z,18μm,20.0s,MS5.9
ARU Arti 37.27 295⇑*i*P **P 00 03 41.1 +0.5**
comp=Z,826nm,1.5s,mb6.3
ARU *e* 00 03 50.3
ARU *e*PP PP 00 05 07.8 +2.4
ARU *e*S **S 00 09 24.8 -1.4**
ARU LR LR
comp=Z,19μm,21.0s,MS5.9
TRO Tromso 37.39 331⇑*i*P **P 00 03 41.4 0.0**
TRO AMb AMB 00 03 52.9
comp=Z,414nm,2.6s,mb5.8
TRO *e*PP PP 00 05 07.2 +0.7
TRO *e*S **S 00 09 29.5 +1.8**
TRO AMS AMS 00 17 50.3
comp=Z,7μm,28.5s,MS5.3
TRO Tromso 37.39 331⇑*i*P **P 00 03 41.4 0.0**
comp=Z,414nm,2.6s,mb5.8
TRO LR LR
comp=Z,7μm,28.5s,MS5.3
DLBC Dease Lake 37.78 59⇑*i*P **P 00 03 45.7 +0.9**
NJ2 Nanjing 38.01 212 *e*P **P 00 03 46.8 -0.2**
NJ2 pP pP 00 03 56.4 +2.6
NJ2 sP sP 00 04 00.1 +3.6
NJ2 PP PP 00 05 15.0 +1.1
NJ2 S **S 00 09 34.5 -3.3**
NJ2 sS sS 00 09 48.0 -0.9
NJ2 pmax pmax
comp=Z,40nm,0.7s,mb5.3
NJ2 pmax pmax
comp=Z,1μm,5.6s
NJ2 LR LR
comp=N,40μm,20.4s,MS6.3
NJ2 LR LR
comp=E,27μm,19.8s,MS6.3
NJ2 LR LR
comp=Z,46μm,19.6s,MS6.3
LZH Lanzhou 38.02 233 P **P 00 03 48.6 +1.5**
LZH pP pP 00 03 52.0 -1.9
LZH sP sP 00 03 55.5 -1.1
LZH PP PP 00 05 19.0 +5.1
LZH S **S 00 09 40.0 +2.2**
LZH sS sS 00 09 48.0 -1.0
LZH SS SS 00 12 13.5 -11
LZH pmax pmax
comp=Z,460nm,1.4s,mb6.0
LZH pmax pmax
comp=Z,2μm,4.0s
LZH LR LR
comp=N,44μm,14.6s
LZH LR LR
comp=Z,50μm,15.3s,MS6.4
XAN Xi'an 38.47 225 P **P 00 03 51.3 +0.4**
XAN pP pP 00 03 59.6 +2.0
XAN sP sP 00 04 03.8 +3.4
XAN PP PP 00 05 21.3 +2.4
XAN PcP PcP 00 06 07.8 +4.3
XAN S **S 00 09 39.8 -4.8**
XAN ScP ScP 00 09 51.5 +1.9
XAN PcS PcS 00 09 55.4 +2.7
XAN ScS ScS 00 13 58.5 -1.3
XAN pmax pmax
comp=Z,580nm,11.3s
XAN LR LR
comp=N,51μm,10.2s,MS6.7
XAN LR LR
comp=E,15μm,10.2s,MS6.7
XAN LR LR
comp=Z,22μm,10.6s,MS6.2
SSE Sheshan 38.49 208 ⇑P **P 00 03 51.1 0.0**
SSE pP pP 00 03 59.9 +2.0
SSE sP sP 00 04 04.6 +4.0
SSE S **S 00 09 42.4 -2.7**
SSE sS sS 00 09 57.5 +1.2
SSE pmax pmax
comp=Z,71nm,1.1s,mb5.3
SSE pmax pmax
comp=Z,450nm,4.9s
SSE LR LR
comp=N,53μm,11.9s,MS6.6
SSE LR LR
comp=E,28μm,11.9s,MS6.6
SSE LR LR
comp=Z,62μm,12.1s,MS6.6
CRAG Craig 39.09 64⇑*e*P **P 00 03 56.9 +1.0**
comp=Z,171nm,1.0s,mb5.7
YKA Yellowknife Ar 39.18 45 P **P 00 03 56.1 -0.4**
comp=Z,9.2nm,0.6s,baz=327,slow=8.2,SNR=67
YKA S **S 00 09 51.7 -3.2**
comp=Z,2.0nm,1.0s,baz=105,slow=24,SNR=2.3
YKA PKP2ab 00 37 49.8
comp=Z,1.2nm,1.0s,baz=119,slow=3.4,SNR=4.7
YKA Yellowknife Ar 39.18 45 P **P 00 03 56.1 -0.4**
YKA S **S 00 09 51.7 -3.2**
STEI Steigen 39.55 331 *e*P **P 00 03 60.0 +0.5**
STEI AMb AMB 00 04 10.2
comp=Z,244nm,1.6s,mb5.7
SUMG Summit 39.97 360⇑*i*P **P 00 04 03.6 +0.6**
comp=Z,241nm,0.9s,mb5.9
SUMG Summit 39.97 360⇑*i*P **P 00 04 03.8 +0.8**
comp=Z,158nm,0.8s,mb5.8
SUMG *i*S **S 00 10 09.0 +2.5**
JNW Jan Mayen West 40.02 345 *e*P **P 00 04 06.0 +2.5**
JMIC Jan Mayen 40.07 345 *e*P **P 00 04 05.8 +1.9**
JMIC Jan Mayen 40.07 345 P **P 00 04 04.8 +1.0**
comp=Z,172nm,0.8s,mb5.8,baz=336,slow=13,SNR=6.2
JMIC pP pP 00 04 14.0 +3.4
comp=Z,277nm,1.0s,baz=111,slow=10,SNR=5.6
JOF Joensuu 40.32 318 *e*P **P 00 04 04.8 -1.2**
JOF pmax pmax
comp=Z,125nm,0.6s,mb5.8
JOF Joensuu 40.32 318 *e*p **P 00 04 04.8 -1.2**
comp=Z,125nm,0.6s,mb5.8
JOF Joensuu 40.32 318 *e*p **P 00 04 04.8 -1.2**
comp=Z,125nm,0.6s,mb5.8
WHN Wuhan 40.43 217 ⇑P **P 00 04 07.0 -0.3**
WHN sP sP 00 04 14.6 -2.2
WHN S **S 00 10 06.3 -7.9**
WHN SS SS 00 13 11.8 -1.6
WHN LR LR
comp=N,81μm,13.6s
WHN LR LR
comp=E,13μm,9.0s
WHN LR LR
comp=Z,80μm,11.1s,MS6.8
KONS Konsvik 41.20 331⇓*i*P **P 00 04 13.5 +0.3**
MOR8 Moi Rana 41.25 330 *e*P **P 00 04 12.1 -1.6**
MOR8 *es*P sP 00 04 20.9 -2.3
MOR8 AMb AMB 00 04 22.9
comp=Z,269nm,1.8s,mb5.6
MOR8 Moi Rana 41.25 330 *e*P **P 00 04 12.1 -1.6**
comp=Z,269nm,1.8s,mb5.6
FLOS Flostrand 41.30 331 *e*P **P 00 04 14.4 +0.4**
STOK Stokkvaagen 41.37 331 *e*P **P 00 04 15.6 +1.0**
SCO Scoresbysund 41.60 352⇑*i*P **P 00 04 16.8 +0.3**
SCO *i*S **S 00 10 34.3 +3.5**
SCO pmax pmax
comp=Z,72nm,1.0s,mb5.3
SCO MLR MLR
comp=Z,5μm,23.0s,MS5.3
SCO Scoresbysund 41.60 352⇑*i*P **P 00 04 16.8 +0.3**
comp=Z,72nm,1.0s,mb5.3
SCO *i*S **S 00 10 34.3 +3.5**
SCO
comp=Z,5μm,23.0s
ENH Enshi 41.88 223⇑*i*P **P 00 04 18.9 -0.3**
comp=Z,125nm,0.8s,mb5.6
ENH *e*PP PP 00 05 57.3 +1.2
ENH *e*S **S 00 10 34.1 -1.6**
ENH LR LR
comp=Z,32μm,21.0s,MS6.2
TKM2 Tokmak 2 42.01 268 P **P 00 04 21.2 +1.1**
SNR=221
TKM2 Tokmak 2 42.01 268⇑*i*P **P 00 04 20.5 +0.4**
TKM2 *e* 00 05 57.9
TKM2 pmax pmax
comp=Z,469nm,1.3s,mb6.0
TKM2 MLR MLR
comp=Z,18μm,19.0s,MS6.0
TKM2 Tokmak 2 42.01 268⇑*i*P **P 00 04 20.5 +0.4**
comp=Z,469nm,1.3s,mb6.0
TKM2 *e*PP PP 00 05 57.9 +0.7
TKM2 LR LR
comp=Z,18μm,19.0s,MS6.0
USP Ospenovka 42.13 269 P **P 00 04 22.4 +1.3**
SNR=266
KAF Kangasniemi 42.24 321 *e*P **P 00 04 20.4 -1.4**
KAF pmax pmax
comp=Z,133nm,0.9s,mb5.6
KAF Kangasniemi 42.24 321 *e*p **P 00 04 20.4 -1.4**
comp=Z,133nm,0.9s,mb5.6
KAF Kangasniemi 42.24 321 *e*p **P 00 04 20.4 -1.4**
comp=Z,133nm,0.9s,mb5.6
CHMS Chumysh 42.26 269 P **P 00 04 23.6 +1.4**
SNR=197
ULHL Ulahol 42.34 267 P **P 00 04 24.1 +1.3**
SNR=151
FRU Bishkek 42.46 269⇑*i*P **P 00 04 24.0 +0.2**
FRU pmax pmax
comp=Z,2μm,2.0s,mb6.3
FRU MLR MLR
comp=Z,48μm,9.0s
KBK Karagaybulak 42.48 269 P **P 00 04 25.5 +1.6**
SNR=174
ABKAR Abkulak array 42.58 287⇑*i*P **P 00 04 24.9 +0.2**
comp=Z,68nm,1.6s,mb5.1
ABKAR *e*PP PP 00 06 03.5 +0.3
ABKAR S **S 00 10 42.9 -2.8**
AAK Ala-Archa 42.67 269 P **P 00 04 27.0 +1.5**
comp=Z,4μm,0.6s,SNR=72
AAK Ala-Archa 42.67 269 P **P 00 04 27.1 +1.6**
comp=Z,257nm,0.6s,mb6.2,baz=102,slow=3.5,SNR=371
AAK PP PP 00 06 08.8 +4.4
comp=Z,29nm,0.7s,baz=63,slow=11,SNR=3.0
AAK S **S 00 10 49.4 +2.2**
comp=Z,15nm,0.8s,baz=342,slow=16,SNR=1.9
AAK Ala-Archa 42.67 269 P **P 00 04 27.1 +1.6**
AAK 00 06 08.8
AAK S **S 00 10 49.4 +2.2**
AAK pmax pmax
comp=Z,257nm,0.6s,mb6.1
AAK smax
comp=N,15nm,0.8s
KZA Kyzart 42.86 268 P **P 00 04 28.9 +1.8**
SNR=348
CD2 Chengdu 42.87 230⇑*i*P **P 00 04 28.1 +0.9**
CD2 pP pP 00 04 32.6 -1.4
CD2 sP sP 00 04 35.8 -1.0
CD2 PP PP 00 06 10.4 +3.7
CD2 PcS PcS 00 10 10.0 -0.1
CD2 S **S 00 10 52.8 +2.6**
CD2 sS sS 00 11 00.3 -1.2
CD2 SS SS 00 13 58.3 -3.2
CD2 ScS ScS 00 14 25.1 -1.1
CD2 pmax pmax
comp=Z,250nm,1.4s,mb5.8
CD2 pmax pmax
comp=Z,2μm,9.5s
CD2 LR LR
comp=N,31μm,10.8s
CD2 LR LR
comp=E,30μm,8.2s
CD2 LR LR
comp=Z,32μm,10.7s,MS6.5
FINES FINESS Array B 42.88 320 P **P 00 04 26.5 -0.5**
comp=Z,68nm,0.6s,mb5.5,baz=31,slow=8.9,SNR=100
FINES pP pP 00 04 35.3 +1.5
comp=Z,122nm,1.0s,baz=31,slow=8.9,SNR=13
FINES LR LR 00 25 20.3
comp=Z,10μm,19.9s,MS5.7,baz=25,slow=40
FINES FINESS Array B 42.88 320 P **P 00 04 26.5 -0.5**
FINES *PP pP 00 04 35.3 +1.5
FINES pmax pmax
comp=Z,68nm,0.6s
FINES MLR MLR
comp=Z,10μm,20.0s
EKS2 Erkin-Say 42.92 270 P **P 00 04 29.0 +1.4**
SNR=109
EKS2 Erkin-Say 42.92 270⇑*i*P **P 00 04 29.0 +1.4**
comp=Z,462nm,1.4s,mb6.0
EKS2 *e*PP PP 00 06 08.6 +1.6
EKS2 LR LR
comp=Z,44μm,21.0s,MS6.3
UCH Uchtor 43.02 269 P **P 00 04 30.1 +1.8**
SNR=145
UCH Uchtor 43.02 269⇑*i*P **P 00 04 30.2 +1.9**
comp=Z,578nm,1.4s,mb6.1
UCH *e*PP PP 00 06 08.8 +0.8
UCH *e*S **S 00 10 52.9 +0.7**
UCH LR LR
comp=Z,19μm,19.0s,MS6.0
NSS Namsos 43.19 331⇑*i*P **P 00 04 28.2 -1.2**
NSS *e*PP PP 00 06 10.7 +1.2
NSS *e*S **S 00 10 56.2 +1.9**
NSS *e*SS SS 00 14 09.8 +3.1
NSS AMS AMS 00 26 53.9
comp=Z,8μm,21.1s,MS5.6
PUL Pulkovo 43.24 316*c i*P **P 00 04 31.1 +1.2**
PUL pmax pmax
comp=Z,193nm,0.7s,mb5.9
PUL MLR MLR
comp=Z,15μm,16.0s,MS6.0
AML Almayashu 43.41 269 P **P 00 04 33.5 +2.0**
SNR=298
AML Almayashu 43.41 269⇑*i*P **P 00 04 33.2 +1.7**
comp=Z,219nm,0.7s,mb6.0
AML *e*pP pP 00 04 38.5 +0.2
AML *e*PcP PcP 00 06 21.7 +2.2
AML *e*S **S 00 10 58.5 +0.5**
AML LR LR
comp=Z,12μm,20.0s,MS5.8
TATO Taipei 44.42 206⇑*e*P **P 00 04 40.0 +0.2**
comp=Z,663nm,1.4s,mb6.2
TATO *e*pP pP 00 04 45.2 -1.4
TATO *e*S **S 00 11 12.1 -1.0**
TATO LR LR
comp=Z,7μm,20.0s,MS5.6
MOS Moscow 44.63 308 *e*P **P 00 04 36.9 -4.2**
MOS *e* 00 06 21.4
MOS *e*S **S 00 11 08.9 -6.5**
MOS *e*SS SS 00 14 27.8 -7.2
MOS pmax pmax
comp=Z,595nm,1.9s,mb6.1
MOS pmax pmax
comp=Z,3μm,2.7s,mb6.6
MOS MLR MLR
comp=Z,15μm,19.0s,MS5.9
YHNB Yeheng 44.74 206⇑*e*P **P 00 04 42.0 -0.3**
comp=Z,164nm,1.0s,mb5.8
YHNB *e*pP pP 00 04 47.9 -1.3
YHNB *e*S **S 00 11 16.8 -0.8**
YHNB LR LR
comp=Z,4μm,20.0s,MS5.3
KSH Kashi 44.80 265⇑*i*P **P 00 04 48.1 +5.4**
KSH pP pP 00 04 52.6 +3.1
KSH sP sP 00 04 55.3 +3.1
KSH PcP PcP 00 06 28.5 +4.3
KSH PP PP 00 06 34.6 +7.4
KSH ScP ScP 00 10 19.4 +4.7
KSH PcS PcS 00 10 21.3 +3.5
KSH S **S 00 11 26.6 +8.3**
KSH sS sS 00 11 34.4 +4.8
KSH SS SS 00 14 40.8 +1.9
KSH ScS ScS 00 14 42.1 +3.9
KSH pmax pmax
comp=Z,160nm,1.1s,mb5.8
KSH pmax pmax
comp=Z,1μm,3.1s
KSH LR LR
comp=N,7μm,6.0s
KSH LR LR
comp=E,7μm,5.2s
KSH LR LR
comp=Z,13μm,5.7s
QZH Quanzhou 44.97 210⇑*i*P **P 00 04 43.3 -0.8**
QZH pP pP 00 04 52.0 +1.0
QZH PP PP 00 06 33.5 +4.3
QZH S **S 00 11 19.4 -1.5**
QZH SS SS 00 14 32.9 -10
QZH pmax pmax
comp=Z,280nm,0.8s,mb6.1
QZH pmax pmax
comp=Z,1μm,10.8s
NACB Ninganchiao 45.19 206 *e*P **P 00 04 43.8 -2.0**
comp=Z,1μm,2.2s,mb6.4
NACB *e*PcP PcP 00 06 25.0 -0.8
NACB *e*S **S 00 11 23.3 -0.9**
VSU Vasula 45.31 318*c i*P **P 00 04 47.1 +0.7**
VSU pmax pmax
comp=Z,573nm,2.7s,mb5.9
VSU MLR MLR
comp=Z,15μm,21.0s,MS5.9
SFJD Kangerlussuaq 45.32 6⇑*i*P **P 00 04 45.7 -0.8**
SFJD *e**PP pP 00 04 51.8 -1.6
SFJD *e**SP sP 00 04 54.6 -1.5
SFJD *e* 00 06 32.2
SFJD *e*S **S 00 11 22.3 -2.9**
SFJD pmax pmax
comp=Z,243nm,1.2s,mb5.9
SFJD MLR MLR
comp=Z,6μm,19.0s,MS5.6
SFJD Kangerlussuaq 45.32 6⇑*i*P **P 00 04 45.7 -0.8**
comp=Z,243nm,1.2s,mb5.9
SFJD *e*pP pP 00 04 51.8 -1.6
SFJD *es*P sP 00 04 54.6 -1.5
SFJD *e*PP PP 00 06 32.2 0.0
SFJD *e*S **S 00 11 22.3 -2.9**
SFJD LR LR
comp=Z,6μm,19.0s,MS5.6
SFJD Kangerlussuaq 45.32 6⇑*i*P **P 00 04 45.3 -1.2**
comp=Z,76nm,0.9s,mb5.5
SFJD *i*S **S 00 11 24.0 -1.2**
SFJD
comp=Z,6μm,18.0s
OBN Obninsk 45.48 309 P **P 00 04 48.2 +0.4**
comp=Z,2μm,1.0s,mb6.8,SNR=18
OBN Obninsk 45.48 309α*i*P **P 00 04 48.1 +0.3**
OBN *i* pP 00 04 53.2 -1.5
OBN *i* pP 00 04 55.4 +0.7
OBN *e* 00 06 26.5
OBN *i* 00 06 40.9
OBN *i*S **S 00 11 36.2 +8.5**
OBN pmax pmax
comp=Z,200nm,2.2s,mb5.6
OBN pmax pmax
comp=Z,537nm,1.7s,mb6.1
OBN MLR MLR
comp=Z,14μm,20.0s,MS5.9
OBN Obninsk 45.48 309 *e*P **P 00 04 47.3 -0.5**
OBN *e*PP PP 00 06 34.2 +0.1
OBN *e*S **S 00 11 26.0 -1.7**
OBN LR LR
comp=Z,14μm,21.0s,MS5.9
SSLB Suanglung 45.67 206⇑*e*P **P 00 04 49.0 -0.8**
comp=Z,176nm,1.1s,mb5.9
SSLB *e*pP pP 00 04 55.0 -1.6
SSLB *es*P sP 00 04 57.8 -1.6
SSLB PcP PcP 00 06 29.5 +2.0
SSLB PP PP 00 06 38.9 +2.2
SSLB *e*S **S 00 11 31.3 +0.1**
MOL Molde 45.79 332 *e*P **P 00 04 49.8 -0.4**
MOL AMb AMB 00 05 02.2
comp=Z,242nm,1.4s,mb5.9
MOL *e*PP PP 00 06 38.2 +0.9
MOL *e*S **S 00 11 34.9 +2.8**
MOL *e*SS SS 00 15 01.4 +5.5
MOL Molde 45.79 332 *e*P **P 00 04 49.8 -0.4**
comp=Z,242nm,1.4s,mb5.9
YULB Yu-li 46.00 206⇓*e*P **P 00 04 52.8 +0.5**
comp=Z,133nm,1.4s,mb5.7
YULB *e*PP PP 00 06 40.3 0.0
YULB *e*S **S 00 11 35.0 -0.9**
TPUB Ta-pu 46.20 207⇑*e*P **P 00 04 53.5 -0.4**
comp=Z,191nm,1.2s,mb5.9
TPUB *e*PcP PcP 00 06 29.0 -0.4
TPUB *e*S **S 00 11 39.3 +0.5**
GYA Guiyang 46.25 225⇑*i*P **P 00 04 54.5 +0.2**
GYA pP pP 00 05 01.0 -0.2
GYA PcP PcP 00 06 31.6 +2.1
GYA PP PP 00 06 46.9 +4.1
GYA ScP ScP 00 10 22.4 +1.5
GYA S **S 00 11 41.6 +2.2**
GYA SS SS 00 14 58.0 -6.6
GYA pmax pmax
comp=Z,100nm,0.8s,mb5.8
GYA pmax pmax
comp=Z,2μm,9.3s
GYA LR LR
comp=N,31μm,13.0s,MS6.5
GYA LR LR
comp=E,16μm,11.1s,MS6.5
GYA LR LR
comp=Z,42μm,13.0s,MS6.6
NB2 NORSAR Subarra 46.52 329 P **P 00 04 55.7 -0.3**
comp=Z,589nm,1.4s,mb6.3,baz=24,slow=7.9
NOA NORSAR Array B 46.52 329 P **P 00 04 55.3 -0.6**
comp=Z,96nm,0.8s,mb5.8,baz=24,slow=7.8,SNR=218
NOA pP pP 00 05 04.8 +1.9
comp=Z,127nm,0.9s,baz=24,slow=7.8,SNR=16
NOA LR LR 00 28 53.8
comp=Z,7μm,19.7s,MS5.6,baz=20,slow=42
NOA NORSAR Array B 46.52 329 P **P 00 04 55.3 -0.7**
NOA *PP pP 00 05 04.8 +2.0
NOA pmax pmax
comp=Z,96nm,0.8s
NOA MLR MLR
comp=Z,7μm,19.7s
NOA NORSAR Array B 46.52 329 P **P 00 04 55.3 -0.6**
NOA pP pP 00 05 04.8 +1.9
NOA LR LR 00 28 53.9
MIDW Midway 46.59 126 *e*P **P 00 04 56.7 -0.2**
MIDW *e*PP PP 00 06 47.0 +0.6
MIDW *e*ScP ScP 00 10 25.1 +2.8
MIDW *e*S **S 00 11 43.6 -0.7**
MIDW LR LR
comp=Z,3μm,20.0s,MS5.2
TWG Pinlang 46.60 206⇓*e*P **P 00 04 57.5 +0.5**
TWG *e*pP pP 00 05 02.2 -1.7
TWG *es*P sP 00 05 05.2 -1.4
TWG *e*PP PP 00 06 44.6 -1.9
TWG *e*S **S 00 11 42.4 -2.0**
NAO01 NORSAR Array S 46.76 329⇑*e*P **P 00 04 57.4 -0.5**
NAO01 *e* 00 05 06.7
NAO01 *e*PcP PcP 00 06 30.6 -0.2
NAO01 *e*PP PP 00 06 48.4 +0.9
NAO01 *e*S **S 00 11 44.2 -1.8**
FOO Floro 47.14 333 *e*P **P 00 05 00.5 -0.3**
FOO *e*PP PP 00 06 51.2 -0.1
FOO *e*S **S 00 11 53.0 +1.7**
BORG Borgarnes 47.25 350 P **P 00 05 03.5 +1.9**
comp=Z,603nm,1.5s,mb6.3,SNR=11
BORG Borgarnes 47.25 350⇑*e*P **P 00 05 03.2 +1.6**
BORG *e* 00 06 32.0
BORG *e*S **S 00 11 50.0 -2.9**
BORG pmax pmax
comp=Z,439nm,1.7s
BORG MLR MLR
comp=Z,2μm,21.0s
BORG Borgarnes 47.25 350⇑*e*P **P 00 05 03.2 +1.6**
comp=Z,439nm,1.7s,mb6.1
BORG *e*PcP PcP 00 06 32.0 -0.4
BORG *e*S **S 00 11 50.0 -2.9**
BORG LR LR
comp=Z,2μm,21.0s,MS5.1
HYA Hoyanger 47.34 332 *e*P **P 00 05 03.5 +1.1**
HYA AMb AMB 00 05 13.5
comp=Z,304nm,1.9s,mb5.9
HYA Hoyanger 47.34 332 *e*P **P 00 05 03.5 +1.1**
comp=Z,304nm,1.9s,mb5.9
VRHR Novokhopersk 47.36 302 *e*P **P 00 05 01.1 -1.5**
VRHR *e* 00 05 01.2

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VRHR                          e*PP    pP     00 05 10.2 +0.7
VRHR                          e       ------ 00 06 54.7
VRHR                          pmax    pmax
     comp=N,200nm,1.1s
VRHR                          pmax    pmax
     comp=E,100nm,1.1s
VRHR                          pmax    pmax
     comp=Z,310nm,1.1s,mb6.2
VRHR                          pmax    pmax
     comp=Z,1µm,3.6s
VRHR                          pmax    pmax
     comp=N,360nm,1.8s
VRHR                          pmax    pmax
     comp=E,210nm,0.7s
VRHR                          MLR     MLR
     comp=N,9µm,21.0s
VRHR                          MLR     MLR
     comp=Z,8µm,21.0s,MS5.7
VRHR                          MLR     MLR
     comp=E,3µm,10.0s
EDM  Edmonton        47.36 52⇑iP     P      00 05 02.3 -0.4
EDM                          e*PP    pP     00 05 08.0 -1.6
EDM                          e*SP    sP     00 05 09.7 -2.6
EDM                          e       ------ 00 06 33.7
FCC  Fort Churchill  47.50 36⇑iP     P      00 05 02.5 -1.2
FCC                          e*PP    pP     00 05 09.0 -1.6
FCC                          e       ------ 00 06 32.1
FCC                          pmax    pmax
     comp=Z,140nm,1.1s,mb5.9
FCC  Fort Churchill  47.50 36⇑iP     P      00 05 02.5 -1.1
     comp=Z,14nm,1.1s,mb4.9
FCC                          epP     pP     00 05 09.0 -1.5
FCC                          ePcP    PcP    00 06 32.1 -1.3
VOR  Voronezh        47.58 305⇑iP    P      00 05 04.0 -0.4
VOR                          pmax    pmax
     comp=Z,800nm,2.0s,mb6.4
OSL  Oslo            47.63 329 eP    P      00 05 04.8 +0.1
OSL                          esP     sP     00 05 13.1 -1.1
OSL                          AMb     AMB    00 05 14.7
     comp=Z,218nm,1.6s,mb5.9
OSL  Oslo            47.63 329 eP    P      00 05 04.8 +0.1
     comp=Z,218nm,1.6s,mb5.9
GZH  Guangzhou       47.84 215 P     P      00 05 00.6 -6.1
GZH                          S       S      00 11 49.0 -13
GZH                          LR      LR
     comp=N,41µm,12.7s,MS6.6
GZH                          LR      LR
     comp=E,16µm,13.8s,MS6.6
GZH                          LR      LR
     comp=Z,61µm,13.2s,MS6.8
LSA  Lhasa           48.02 244 P     P      00 05 09.5 +1.5
LSA                          pP      pP     00 05 18.1 +3.2
LSA                          sP      sP     00 05 24.0 +6.4
LSA                          S       S      00 12 11.0 +6.5
LSA                          pmax    pmax
     comp=Z,120nm,1.2s,mb5.8
LSA                          pmax    pmax
     comp=Z,2µm,12.0s
LSA                          LR      LR
     comp=N,6µm,12.0s,MS6.3
LSA                          LR      LR
     comp=E,16µm,11.0s,MS6.3
LSA                          LR      LR
     comp=Z,23µm,12.0s,MS6.4
LSA  Lhasa           48.02 244 PFAKE ------ 00 05 20.0 +12
LSA                          LR      LR
     comp=Z,22µm,19.0s,MS6.1
VSR  Storozhevoye    48.04 304ceP    P      00 05 07.9  0.0
VSR                          e*PP    pP     00 05 16.9 +2.1
VSR                          e       ------ 00 07 01.2
VSR                          eS      S      00 12 02.1 -2.3
VSR                          pmax    pmax
     comp=N,750nm,1.4s
VSR                          pmax    pmax
     comp=E,420nm,1.4s
VSR                          pmax    pmax
     comp=Z,1µm,1.4s,mb6.7
VSR                          pmax    pmax
     comp=N,130nm,0.6s
VSR                          pmax    pmax
     comp=E,60nm,0.6s
VSR                          pmax    pmax
     comp=Z,220nm,0.6s,mb6.4
VSR                          pmax    pmax
     comp=Z,630nm,1.8s,mb6.3
VSR                          pmax    pmax
     comp=N,500nm,0.9s
VSR                          pmax    pmax
     comp=E,320nm,0.9s
VSR                          smax
     comp=N,400nm,2.7s
VSR                          smax
     comp=E,480nm,2.7s
VSR                          smax
     comp=Z,310nm,2.7s
VSR                          MLR     MLR
     comp=N,10µm,24.0s,MS5.9
VSR                          MLR     MLR
     comp=E,13µm,24.0s,MS5.9
VSR                          MLR     MLR
     comp=Z,19µm,24.0s,MS6.0
PGC  Sidney          48.08 63 eP     P      00 05 08.2 -0.1
     comp=Z,25nm,1.6s,mb5.0
PGC                          epP     pP     00 05 13.5 -1.7
KONO Kongsberg       48.12 329 eP    P      00 05 08.3 -0.1
KONO                         ePP     PP     00 07 01.5 +1.2
KONO                         eS      S      00 12 07.9 +2.6
KONO                         AMS     AMS    00 30 24.1
     comp=Z,8µm,11.1s,MS6.0
KONO Kongsberg       48.12 329 eP    P      00 05 08.4  0.0
KONO                         e*PP    pP     00 05 13.6 -1.7
KONO                         *SP     sP     00 05 16.7 -1.3
KONO                         ------ ------  00 06 35.7
KONO                         e       ------ 00 06 59.5
KONO                         pmax    pmax
     comp=Z,359nm,1.4s,mb6.2
KONO                         MLR     MLR
     comp=Z,9µm,20.0s,MS5.8
KONO Kongsberg       48.12 329 eP    P      00 05 08.4  0.0
     comp=Z,359nm,1.4s,mb6.2
KONO                         epP     pP     00 05 13.6 -1.7
KONO                         sP      sP     00 05 16.7 -1.4
KONO                         PcP     PcP    00 06 35.7 +0.1
KONO                         ePP     PP     00 06 59.5 -0.7
KONO                         LR      LR
     comp=Z,9µm,20.0s,MS5.8
ASK  Askoy           48.16 332⇓iP    P      00 05 08.3 -0.4
RUND Rundenannen     48.19 332 eP    P      00 05 08.5 -0.4
BER  Bergen          48.22 332 eP    P      00 05 10.6 +1.3
BER                          ePP     PP     00 07 01.9 +0.7
BER                          eS      S      00 12 09.9 +3.1
BER                          AMS     AMS    00 32 43.4
     comp=Z,5µm,11.5s,MS5.8
A05A Maple Falls     48.24 61 ⇑P     P      00 05 08.9 -0.6
     baz=48,SNR=7.0
EGD  Espegrend       48.35 332 eP    P      00 05 09.9 -0.3
HKC  Hong Kong Obse  48.42 214 P     P      00 05 12.0 +0.8
ODD1 Odda            48.43 331 eP    P      00 05 11.5 +0.7
ODD1                         esP     sP     00 05 19.3 -1.2
NACGM Naroch         48.44 315 eP    P      00 05 09.0 -1.9
MBW  Mount Baker     48.48 61 P      P      00 05 11.1 -0.3
SOFL Sornfelli, Far  48.49 341 eP    P      00 05 11.6 +0.4
SOFL                         AMb     AMB    00 05 21.7
     comp=Z,400nm,1.5s,mb6.2
SOFL Sornfelli, Far  48.49 341 P     P      00 05 11.6 +0.4
SOFL                         AMb     AMB    00 05 21.7
     comp=Z,400nm,1.5s,mb6.2
MNK  Minsk           48.50 314ceP    P      00 05 10.0 -1.5
MNK                          e       ------ 00 07 06.0
MNK                          ePS     ------ 00 12 14.0
MNK                          eSS     SS     00 15 34.0 -6.1
MNK                          pmax    pmax
     comp=Z,5µm,3.0s
MNK                          pmax    pmax
     comp=N,1µm,2.0s
MNK                          pmax    pmax
     comp=E,540nm,2.0s
MNK                          pmax    pmax
     comp=Z,910nm,1.8s,mb6.5
MNK                          pmax    pmax
     comp=Z,7µm,4.0s
MNK                          MLR     MLR
     comp=Z,36µm,15.0s,MS6.5
MNK                          MLR     MLR
     comp=E,23µm,12.0s
MNK                          MLR     MLR
     comp=N,32µm,20.0s
KMI  Kunming         48.61 229 ⇑P    P      00 05 13.0 +0.4
KMI                          pP      pP     00 05 16.9 -2.6
KMI                          sP      sP     00 05 18.3 -3.9
KMI                          PcP     PcP    00 06 39.3 +1.4
KMI                          PP      PP     00 07 05.9 +0.5
KMI                          ScP     ScP    00 10 31.9 +1.1
KMI                          PcS     PcS    00 10 33.8 -0.3
KMI                          S       S      00 12 13.3 +0.4
KMI                          ScS     ScS    00 15 02.8 -0.6
KMI                          SS      SS     00 15 38.3 -4.5
KMI                          pmax    pmax
     comp=Z,280nm,2.0s,mb6.0
KMI                          pmax    pmax
     comp=Z,3µm,3.4s
KMI                          LR      LR
     comp=N,43µm,10.2s,MS6.8
KMI                          LR      LR
     comp=E,27µm,11.2s,MS6.8
KMI                          LR      LR
     comp=Z,52µm,10.5s,MS6.8
B06A Marblemount     48.85 61 ⇑P     P      00 05 13.7 -0.5
     baz=49
B06A                         ⇑S      S      00 12 16.1 +0.2
     baz=49
RPW  Rockport        48.90 61 eP     P      00 05 13.9 -0.7
     comp=Z,42nm,0.9s,mb5.5
RPW                          epP     pP     00 05 19.6 -1.9
RPW                          esP     sP     00 05 22.7 -1.6
RPW                          ePcP    PcP    00 06 38.0 -0.6
BLS5 Blasjo          48.92 331 eP    P      00 05 15.4 +0.8
BLS5                         AMb     AMB    00 05 25.3
     comp=Z,99nm,1.7s,mb5.6
BLS5 Blasjo          48.92 331 eP    P      00 05 15.4 +0.8
     comp=Z,99nm,1.7s,mb5.6
JCW  Jim Creek       48.98 62 P      P      00 05 15.1 -0.2
NLWA Neilton Lookou  49.02 64 ⇑P     P      00 05 15.9 +0.4
     baz=49,SNR=11
NLWA                         ⇓S      S      00 12 21.2 +2.9
     baz=49
NLWA Neilton Lookou  49.02 64⇑eP     P      00 05 15.2 -0.3
     comp=Z,224nm,1.4s,mb6.0
NLWA                         epP     pP     00 05 20.8 -1.6
NLWA                         PcP     PcP    00 06 40.6 +1.5
NLWA                         eS      S      00 12 16.8 -1.5
NLWA                         LR      LR
     comp=Z,6µm,21.0s,MS5.6
GNW  Green Mountain  49.23 63 eP     P      00 05 16.8 -0.3
     comp=Z,198nm,1.7s,mb5.9
GNW                          epP     pP     00 05 21.7 -2.4
GNW                          esP     sP     00 05 24.5 -2.2
GNW                          ePP     PP     00 07 10.4 -0.2
FFC  Flin Flon       49.24 43 P      P      00 05 16.8 -0.3
     comp=Z,2µm,1.0s,mb7.1,SNR=63
FFC  Flin Flon       49.24 43⇑iP     P      00 05 16.5 -0.6
FFC                          e*PP    pP     00 05 22.1 -1.9
FFC                          e*SP    sP     00 05 25.1 -1.6
FFC                          e       ------ 00 07 10.1
FFC                          eS      S      00 12 18.6 -2.6
FFC                          pmax    pmax
     comp=Z,466nm,1.1s,mb6.4
FFC                          MLR     MLR
     comp=Z,4µm,19.0s,MS5.4
FFC  Flin Flon       49.24 43⇑iP     P      00 05 16.4 -0.6
     comp=Z,466nm,1.1s,mb6.4
FFC                          epP     pP     00 05 22.1 -1.9
FFC                          esP     sP     00 05 25.1 -1.6
FFC                          ePP     PP     00 07 10.1 -0.4
FFC                          eS      S      00 12 18.6 -2.6
FFC                          LR      LR
     comp=Z,4µm,19.0s,MS5.4
KMY  Karmoy          49.34 332 eP    P      00 05 18.5 +0.7
LRW  Lerwick         49.53 336 eP    P      00 05 19.8 +0.5
LRW                          AMb     AMB    00 05 20.5
     comp=Z,302nm,2.1s,mb6.0
LRW                          AMS     AMS    00 24 13.9
     comp=Z,2µm,11.0s,MS5.4
LRW  Lerwick         49.53 336 P     P      00 05 19.8 +0.5
LRW                          AMb     AMB    00 05 20.5
     comp=Z,302nm,2.1s,mb6.0
LRW                          AMS     AMS    00 24 13.9
     comp=Z,2µm,11.0s
B08A Colville Reser  49.70 60 ⇓P     P      00 05 20.6 -0.2
     baz=49,SNR=34
B08A                         ⇓S      S      00 12 27.7 -0.2
     baz=49
SNART Snartemo       49.80 330 eP    P      00 05 22.0 +0.7
D05A Enumclaw        49.84 62 ⇑P     P      00 05 22.6 +0.9
     baz=50,SNR=13
D05A                         ⇑S      S      00 12 32.3 +2.5
     baz=50
ETW  Entiat          50.03 61 eP     P      00 05 23.4 +0.2
     comp=Z,313nm,1.1s,mb6.2
ETW                          epP     pP     00 05 28.6 -1.6
ETW                          esP     sP     00 05 31.3 -1.5
ETW                          PP      PcP    00 06 42.2 -0.5
WTV  Waterville      50.07 60 P      P      00 05 23.4 -0.2
SUW  Suwalki         50.18 317 iP    P      00 05 24.1 -0.2
     comp=Z,2µm,3.2s
SUW                          epP     pP     00 05 32.8 +1.6
SUW                          eS      S      00 12 37.6 +3.3
SUW                          LMZ     ------ 00 28 36.1
     comp=Z,15µm,22.6s
SUW  Suwalki         50.18 317⇑iP    P      00 05 24.0 -0.2
SUW                          e*PP    pP     00 05 32.8 +1.6
SUW                          eS      S      00 12 37.6 +3.3
SUW                          MLR     MLR
     comp=Z,15µm,22.6s,MS5.9
SUW  Suwalki         50.18 317⇑iP    P      00 05 23.7 -0.5
     comp=Z,222nm,0.7s,mb6.3
SUW                          epP     pP     00 05 29.3 -1.9
SUW                          esP     sP     00 05 32.6 -1.2
SUW                          esP     sP     00 05 39.0 +5.2
SUW                          ePcP    PcP    00 06 42.8 -0.4
RCS  Mount Rainier-  50.20 62 P      P      00 05 25.2 +0.7
LTY  Liberty         50.22 61 P      P      00 05 24.3 -0.4
LON  Longmire        50.28 63⇑eP     P      00 05 25.5 +0.4
LON                          e*PP    pP     00 05 30.0 -2.0
LON                          e*SP    sP     00 05 32.6 -2.1
LON                          pmax    pmax
     comp=Z,126nm,1.1s,mb5.9
LON  Longmire        50.28 63⇑eP     P      00 05 25.5 +0.4
     comp=Z,126nm,1.1s,mb5.9
LON                          epP     pP     00 05 30.0 -2.0
LON                          esP     sP     00 05 32.6 -2.2
LON                          e       ------ 00 05 39.2
A12A Yaak River Ran  50.39 56 ⇑P     P      00 05 25.7 -0.3
     baz=50
A12A                         ⇑S      S      00 12 37.7 +0.3
     baz=50
F03A Seaside         50.39 64 ⇓P     P      00 05 26.6 +0.6
     baz=50
WPW  White Pass      50.41 62 P      P      00 05 26.7 +0.6
NEW  Newport         50.51 58⇑eP     P      00 05 26.5 -0.3
NEW                          e*PP    pP     00 05 31.6 -2.2
NEW                          e*SP    sP     00 05 35.1 -1.4
NEW                          eS      S      00 12 36.8 -2.3
NEW                          pmax    pmax
     comp=Z,256nm,1.6s
NEW                          MLR     MLR
     comp=Z,4µm,20.0s
NEW  Newport         50.51 58⇑eP     P      00 05 26.5 -0.3
     comp=Z,256nm,1.6s,mb5.9
NEW                          epP     pP     00 05 31.6 -2.1
NEW                          esP     sP     00 05 35.1 -1.4
NEW                          e       ------ 00 05 40.8
NEW                          eS      S      00 12 36.8 -2.3
NEW                          LR      LR
     comp=Z,4µm,20.0s,MS5.4
EBG  Ellensburg      50.56 61 P      P      00 05 27.1 -0.1
OD2  Odessa Site #2  50.75 60 P      P      00 05 28.1 -0.6
MTMW Mount Mitchell  50.77 63 P      P      00 05 29.5 +0.6
F04A Amboy           50.78 64 ⇑P     P      00 05 29.0 +0.1
     baz=50,SNR=8.1
A13A Flathead Natio  50.78 56 ⇑P     P      00 05 28.7 -0.2
     baz=50
B12A Libby           50.82 57 ⇑P     P      00 05 28.9 -0.2
     baz=50,SNR=12
WALA Waterton Lakes  50.83 55⇑eP     P      00 05 29.0 -0.2
     comp=Z,15nm,1.5s
WALA                         epP     pP     00 05 34.5 -1.7
WALA                         esP     sP     00 05 37.1 -1.8
WALA                         e       ------ 00 05 43.4
HEBO Mount Hebo      50.95 65 eP     P      00 05 30.7 +0.5
     comp=Z,411nm,1.4s,mb6.2
HEBO                         epP     pP     00 05 35.1 -2.0
HEBO                         esP     sP     00 05 37.9 -1.9
HEBO                         e       ------ 00 05 44.8
DLH  Dalhousie       50.95 261 ex    P      00 05 34.0 +3.6
DLH                          ex      x      00 06 33.0
D08A Wollman Farm,   50.98 60 ⇑P     P      00 05 29.9 -0.5
     baz=51,SNR=10
WAKE Wake Island     51.03 148 eP    P      00 05 30.9 -0.2
WAKE                         eS      S      00 12 45.4 -1.5
WAKE                         LR      LR
     comp=Z,4µm,20.0s,MS5.4
A14A Double T Ranch  51.06 55 ⇑P     P      00 05 30.6 -0.3
     baz=51,SNR=42
E07A Sunnyside       51.10 61 ⇓P     P      00 05 31.2 -0.2
     baz=51
THN  Thein Dam       51.14 261 ePKP  P      00 05 31.3 -0.5
C11A Tepee Creek (N  51.16 58 ⇑P     P      00 05 31.7 -0.1
     baz=51
MUD  Monsted U'grnd  51.17 328 iP    P      00 05 31.6 -0.1
MUD                          i       ------ 00 07 34.7
MUD                          eS      S      00 12 53.1 +5.0
MUD                          pmax    pmax
     comp=Z,62nm,1.0s,mb5.5
MUD                          MLR     MLR
     comp=Z,8µm,19.0s,MS5.8
MUD  Monsted U'grnd  51.17 328 iP    P      00 05 31.6 -0.1
     comp=Z,62nm,1.0s,mb5.5
MUD                          i       ------ 00 07 34.7
MUD                          eS      S      00 12 53.1 +5.0
MUD
     comp=Z,8µm,19.0s
BSD  Bornholm Skovb  51.18 324⇓iP    P      00 05 30.6 -1.2
BSD                          iS      S      00 12 48.5 +0.3
BSD                          pmax    pmax
     comp=Z,120nm,0.9s,mb5.8
BSD                          MLR     MLR
     comp=Z,13µm,21.0s,MS5.9
BSD  Bornholm Skovb  51.18 324⇓iP    P      00 05 30.6 -1.2
     comp=Z,119nm,0.9s,mb5.8
BSD                          i       ------ 00 07 45.9
BSD                          iS      S      00 12 48.5 +0.3
BSD
     comp=Z,13µm,21.0s
COP  Copenhagen      51.21 325⇑iP    P      00 05 31.9 -0.1
COP                          iS      S      00 12 51.2 +2.7
COP                          pmax    pmax
     comp=Z,47nm,0.9s,mb5.4
COP                          MLR     MLR
     comp=Z,3µm,20.0s,MS5.3
COP  Copenhagen      51.21 325⇑iP    P      00 05 31.9 -0.1
     comp=Z,47nm,0.9s,mb5.4
COP                          iS      S      00 12 51.2 +2.7
COP
     comp=Z,3µm,20.0s
B13A Whitefish       51.26 56 ⇓P     P      00 05 32.3 -0.2
     baz=51,SNR=39
A15A Johnson Ranch,  51.27 54 ⇑P     P      00 05 31.9 -0.7
     baz=51,SNR=35
RSW  Rattlesnake Hi  51.33 61 eP     P      00 05 32.8 -0.3
     comp=Z,644nm,2.0s,mb6.2
RSW                          epP     pP     00 05 38.3 -1.7
RSW                          esP     sP     00 05 40.5 -2.2
RSW                          e       ------ 00 05 47.5
RSW                          ePcP    PcP    00 06 46.9 -0.6
RSW                          ePP     PP     00 07 29.2 -0.5
HAWA Hanford         51.35 61⇑eP     P      00 05 32.8 -0.4
     comp=Z,434nm,2.0s,mb6.0
HAWA                         epP     pP     00 05 38.3 -1.9
HAWA                         esP     sP     00 05 40.7 -2.2
HAWA                         e       ------ 00 05 46.7
HAWA                         ePcP    PcP    00 06 47.1 -0.5
HAWA                         eS      S      00 12 50.8 -0.1
HAWA                         LR      LR
     comp=Z,2µm,19.0s,MS5.2
TAPN Taplejung       51.36 246 eP    P      00 05 33.4 -0.1
     comp=Z,441nm,0.7s,mb6.5
TAPN Taplejung       51.36 246 eP    P      00 05 33.4 -0.1
     comp=Z,441nm,0.7s,mb6.5
G04A Mulino          51.40 64 ⇓P     P      00 05 34.0 +0.5
     baz=51,SNR=12
E08A Dider Farm, El  51.43 61 ⇓P     P      00 05 33.5 -0.2
     baz=51,SNR=12
GUN  Gumba           51.49 248 eP    P      00 05 35.1 +0.7
     comp=Z,608nm,0.7s,mb6.7
GUN  Gumba           51.49 248 eP    P      00 05 35.1 +0.7
     comp=Z,608nm,0.7s,mb6.6
AKASG Malin Array Be 51.49 311 P     P      00 05 33.3 -0.9
     comp=Z,65nm,0.6s,mb5.7,baz=27,slow=7.9,SNR=141
AKASG                        pP      pP     00 05 42.6 +1.5
     comp=Z,40nm,0.6s,baz=28,slow=8.3,SNR=11
AKASG                        LR      LR     00 30 31.5
     comp=Z,9µm,19.2s,MS5.8,baz=25,slow=40
AKASG                        PKPPKP         00 36 17.6
     comp=Z,0.2nm,0.3s,baz=203,slow=4.9,SNR=5.5
AKBB Malin Array Si  51.49 311⇑iP    P      00 05 33.5 -0.7
AKBB                         e*PP    pP     00 05 39.5 -1.6
AKBB                         e*SP    sP     00 05 41.7 -2.1
AKBB                         e       ------ 00 06 47.6
KIEV Kiev            51.50 311⇑iP    P      00 05 33.8 -0.5
KIEV                         e*PP    pP     00 05 39.5 -1.7
KIEV                         e*SP    sP     00 05 41.8 -2.1
KIEV                         e       ------ 00 06 47.7
KIEV                         e       ------ 00 07 30.7
KIEV                         pmax    pmax
     comp=Z,392nm,1.5s,mb6.1
KIEV                         MLR     MLR
     comp=Z,8µm,20.0s,MS5.7
KIEV Kiev            51.50 311⇑iP    P      00 05 33.8 -0.5
     comp=Z,392nm,1.5s,mb6.1
KIEV                         epP     pP     00 05 39.5 -1.7
KIEV                         esP     sP     00 05 41.8 -2.1
KIEV                         e       ------ 00 05 43.3
KIEV                         ePcP    PcP    00 06 47.7 -0.4
KIEV                         ePP     PP     00 07 30.7 -0.5
KIEV                         LR      LR
     comp=Z,8µm,20.0s,MS5.7
SDNR Sundarnagar     51.51 259 ePKP  P      00 05 34.1 -0.4
C12B Naegeli Ranch,  51.52 57 ⇓P     P      00 05 34.2 -0.2
     baz=51
SHL  Shillong        51.57 241 iP    P      00 05 39.0 +3.9
SHL                          eS      S      00 13 00.0 +5.7
     comp=E,8.0nm,0.8s
JIRN Jiri            51.61 248 eP    P      00 05 36.4 +1.1
     comp=E,1µm,0.7s,mb7.0
JIRN Jiri            51.61 248 eP    P      00 05 36.4 +1.1
     comp=E,1µm,0.7s,mb7.0
BSMT Bassoo Peak     51.62 56 eP     P      00 05 35.1 -0.1
     comp=E,3µm,1.8s,mb7.0
BSMT                         epP     pP     00 05 40.6 -1.6
BSMT                         e       ------ 00 05 50.0
BSMT                         ePcP    PcP    00 06 48.0 -0.6
VFP  Flag Point      51.64 63 P      P      00 05 35.6 +0.2
B14A Marquette Ranc  51.65 55 ⇑P     P      00 05 35.2 -0.1
     baz=51,SNR=19
COR  Corvallis       51.65 65 eP     P      00 05 36.4 +0.9
COR                          e*PP    pP     00 05 40.0 -2.4
COR                          e*SP    sP     00 05 42.3 -2.8
COR                          eS      S      00 12 52.7 -2.3
COR                          pmax    pmax
     comp=Z,833nm,1.5s,mb6.4
COR  Corvallis       51.65 65 eP     P      00 05 36.4 +0.9
     comp=Z,833nm,1.5s,mb6.4
COR                          epP     pP     00 05 40.0 -2.4
COR                          esP     sP     00 05 42.3 -2.9
COR                          e       ------ 00 05 51.1
COR                          eS      S      00 12 52.7 -2.3
COR                          LR      LR
     comp=Z,662nm,22.0s
F07A Phinny Hill Vi  51.66 62 ⇓P     P      00 05 35.7 +0.2
     baz=51,SNR=6.4
E09A Wood Farm, Sta  51.71 60 ⇑P     P      00 05 35.5 -0.3
     baz=51,SNR=19
SMLA Simla           51.77 259 iP    P      00 05 35.7 -0.8
SMLA                         iS      S      00 12 58.5 +1.7
BHK  Bhakra          51.79 260 ex    x      00 05 33.5
KBL  Kabul           51.81 269⇑iP    P      00 05 37.0 +0.3
KBL                          e*SP    sP     00 05 45.1 -1.3
KBL                          pmax    pmax
     comp=Z,129nm,0.7s,mb6.0
KBL  Kabul           51.81 269⇑iP    P      00 05 37.0 +0.2
     comp=Z,129nm,0.7s,mb6.0
KBL                          esP     sP     00 05 45.1 -1.3
KKN  Kakani          51.81 249 eP    P      00 05 37.0 +0.1
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comp=Z,1μm,0.7s,mb7.0
KKN Kakani 51.81 249 eP P 00 05 37.0 +0.1
KKN Kakani 51.81 249 eP P 00 05 37.0 +0.1
comp=Z,1μm,0.7s,mb7.0
C13A Hot Springs 51.84 56 ⇓P P 00 05 36.8 -0.1
baz=52,SNR=19
YBMT Yellow Bay 51.85 56 eP P 00 05 36.8 -0.1
comp=Z,57nm,0.8s,mb5.5
YBMT epP pP 00 05 42.3 -1.6
YBMT esP sP 00 05 44.5 -2.1
YBMT e 00 05 51.2
YBMT ePcP PcP 00 06 48.5 -1.0
JTMT Jette 51.87 56 eP P 00 05 37.3 +0.3
comp=Z,70nm,0.9s,mb5.6
JTMT epP pP 00 05 42.3 -1.7
JTMT e 00 05 51.9
JTMT ePcP PcP 00 06 48.4 -1.1
JTMT PP PP 00 07 34.8 +0.2
B15A Bradely Ranch, 51.91 55 ⇓P P 00 05 36.6 -0.8
baz=52,SNR=11
ODAN Odare 51.92 246 eP P 00 05 37.7 0.0
comp=Z,530nm,0.9s,mb6.5
ODAN Odare 51.92 246 eP P 00 05 37.7 0.0
comp=Z,530nm,0.9s,mb6.5
H04A Detroit Lake 51.95 64 ⇑P P 00 05 37.5 -0.2
baz=52,SNR=20
PKIN Phulchoki 51.97 249 eP P 00 05 39.1 +1.1
comp=Z,451nm,0.6s,mb6.5
PKI Pulchoki 51.97 249 eP P 00 05 37.9 -0.1
comp=Z,696nm,0.9s,mb6.6
PKI Pulchoki 51.97 249 eP P 00 05 39.1 +1.1
PKI pmax pmax
comp=Z,451nm,0.6s,mb6.6
PKI Pulchoki 51.97 249 eP P 00 05 39.1 +1.1
comp=Z,451nm,0.6s,mb6.6
G06A Carlson Farm, 52.00 63 ⇓P P 00 05 38.2 +0.1
baz=52,SNR=16
C14A Swan Lake 52.02 56 ⇓P P 00 05 38.0 -0.1
baz=52
DMN Daman 52.04 249 eP P 00 05 39.2 +0.6
comp=Z,793nm,0.7s,mb6.8
DMN Daman 52.04 249 eP P 00 05 39.2 +0.6
comp=Z,793nm,0.7s,mb6.8
PTH Pithoragarh 52.05 255 ePKP P 00 05 38.8 +0.2
PTH ex x 00 13 21.0
RGN Rugen 52.06 324 eP P 00 05 39.3 +0.9
comp=Z,830nm,1.3s,mb6.5
RGN epP pP 00 05 43.7 -1.7
RGN esP sP 00 05 45.9 -2.2
RGN e 00 05 48.5
B16A M & M Farms, S 52.09 54 ⇓P P 00 05 38.3 -0.3
baz=52,SNR=10
MVH1 Achvaich 52.11 337 eP P 00 05 38.6 0.0
MVH1 Achvaich 52.11 337 P P 00 05 38.6 0.0
RAMN Ramite 52.11 247 eP P 00 05 39.1 0.0
comp=Z,990nm,0.9s,mb6.7
RAMN Ramite 52.11 247 eP P 00 05 39.1 0.0
comp=Z,990nm,0.9s,mb6.7
D12A Red Ives Fores 52.14 57 ⇓P P 00 05 38.5 -0.6
baz=52
DDI Dehra Dun 52.16 258⇑iP P 00 05 38.1 -1.3
DDI ex x 00 09 53.4
SWMT Swartz Lake 52.17 56 eP P 00 05 38.1 -1.2
comp=Z,52nm,1.0s,mb5.4
SWMT epP pP 00 05 44.5 -1.7
SWMT esP sP 00 05 47.0 -2.0
SWMT e 00 05 53.6
A18A Metzger Ranch, 52.20 52 ⇓P P 00 05 39.2 -0.3
baz=52,SNR=15
LNOR Lincton Mounta 52.23 60 eP P 00 05 39.4 -0.3
LNOR e*PP pP 00 05 44.9 -1.8
LNOR e*SP sP 00 05 47.2 -2.2
LNOR pmax pmax
comp=Z,544nm,2.0s,mb6.1
LNOR Lincton Mounta 52.23 60 eP P 00 05 39.4 -0.4
comp=Z,544nm,2.0s,mb6.1
LNOR epP pP 00 05 44.9 -1.8
LNOR esP sP 00 05 47.2 -2.2
LNOR e 00 05 53.5
MCD Coleburn Disti 52.30 337 eP P 00 05 40.9 +0.8
MCD Coleburn Disti 52.30 337 P P 00 05 40.9 +0.8
GKP Gorka Klasztor 52.34 321 iP P 00 05 41.0 +0.5
comp=Z,2μm,2.9s,mb6.5
GKP epP pP 00 05 49.7 +2.3
GKP LMZ 00 31 10.4
comp=Z,17μm,20.3s
GKP Gorka Klasztor 52.34 321⇑iP P 00 05 41.0 +0.6
GKP e*PP pP 00 05 49.7 +2.3
GKP pmax pmax
comp=Z,2μm,2.9s,mb6.5
GKP MLR MLR
comp=Z,17μm,20.3s,MS6.1
WAR Warsaw 52.34 318 iP P 00 05 41.2 +0.7
comp=Z,2μm,2.0s,mb6.7
WAR epP pP 00 05 48.0 +0.6
WAR ePcP PcP 00 06 52.1 +0.9
WAR ePP PP 00 07 41.8 +3.1
WAR eS S 00 13 00.9 -3.3
WAR LMZ 00 29 53.6
comp=Z,11μm,23.3s
WAR Warsaw 52.34 318⇑iP P 00 05 41.2 +0.8
WAR e*PP pP 00 05 48.0 +0.6
WAR e 00 06 52.2
WAR e 00 07 41.8
WAR eS S 00 13 00.9 -3.3
WAR pmax pmax
comp=Z,2μm,2.0s,mb6.7
WAR MLR MLR
comp=Z,11μm,23.3s,MS5.8
C15A Salmond Ranch, 52.37 55 ⇓P P 00 05 40.6 -0.1
baz=52,SNR=23
D13A Huson 52.39 57 ⇑P P 00 05 40.7 -0.2
baz=52,SNR=21
MAK Makhachkala 52.43 292c iP P 00 05 42.8 +1.5
MAK e 00 07 38.4
MAK ePPP 00 08 45.8
MAK iS S 00 13 09.6 +3.9
MAK eSS SS 00 16 43.2 +0.1
MAK pmax pmax
comp=Z,4μm,3.4s
MAK pmax pmax
comp=E,2μm,3.5s
MAK pmax pmax
comp=N,2μm,2.5s
MAK pmax pmax
comp=E,140nm,0.6s
MAK pmax pmax
comp=N,566nm,1.0s
MAK pmax pmax
comp=Z,1μm,1.8s,mb6.5
MAK MLR MLR
comp=Z,39μm,20.0s,MS6.4
MAK MLR MLR
comp=E,17μm,15.0s,MS6.6
MAK MLR MLR
comp=N,37μm,15.0s,MS6.6
B17A L&G Farms, Che 52.47 53 ⇓P P 00 05 41.3 -0.2
baz=52,SNR=11
MME1 Meikle Cairn 52.51 336 eP P 00 05 42.2 +0.5
MME1 Meikle Cairn 52.51 336 P P 00 05 42.2 +0.5
G08A Pilot Rock 52.51 61 ⇓P P 00 05 42.1 +0.2
baz=52,SNR=19
QIZ Qiongzhong 52.56 218 P P 00 05 43.6 +1.1
QIZ S S 00 13 10.3 +2.4
QIZ sS sS 00 13 16.8 -2.5
QIZ pmax pmax
comp=Z,83nm,1.6s,mb5.4
QIZ LR LR
comp=N,16μm,12.8s,MS6.3
QIZ LR LR
comp=E,5μm,10.7s,MS6.3
QIZ LR LR
comp=Z,22μm,12.0s,MS6.4
QIZ Qiongzhong 52.56 218⇑eP P 00 05 42.9 +0.4
comp=Z,539nm,1.8s,mb6.2
QIZ epP pP 00 05 48.2 -1.3
QIZ esP sP 00 05 50.4 -1.8
QIZ e 00 05 53.1
QIZ eS S 00 13 13.6 +5.7
QIZ LR LR
comp=Z,8μm,21.0s,MS5.7
SLMT Seeley Lake 52.57 56 eP P 00 05 42.1 -0.2
comp=Z,90nm,0.8s,mb5.8
SLMT epP pP 00 05 47.6 -1.6
SLMT e 00 05 55.2

MDO Dochfour 52.60 337 eP P 00 05 42.1 -0.2
MDO Dochfour 52.60 337 P P 00 05 42.1 -0.2
C16A Fuhringer Ranc 52.62 54 ⇑P P 00 05 42.3 -0.3
baz=52,SNR=23
E12A Beaver Dam Sad 52.64 58 ⇓P P 00 05 42.5 -0.2
baz=52
KAC Achnashellach 52.68 338⇑eP P 00 05 42.9 0.0
KAC Achnashellach 52.68 338 P P 00 05 42.9 0.0
B18A Beardsley Farm 52.69 52 ⇑P P 00 05 43.2 0.0
baz=52,SNR=23
D14A Greenough 52.71 56 ⇑P P 00 05 43.3 0.0
baz=52,SNR=28
MSO Missoula 52.79 56⇑eP P 00 05 43.7 -0.2
comp=Z,138nm,1.5s,mb5.7
MSO epP pP 00 05 49.5 -1.4
MSO esP sP 00 05 51.4 -2.1
MSO e 00 05 57.6
MSO ePcP PcP 00 06 53.5 +0.5
MSO ePP PP 00 07 42.9 -0.1
MSO eS S 00 13 09.4 -1.1
MSO LR LR
comp=Z,2μm,20.0s,MS5.3
KPL Plockton 52.89 338 eP P 00 05 43.6 -0.9
KPL AMb AMB 00 05 54.3
comp=Z,368nm,3.0s
KPL AMS AMS 00 22 23.9
comp=Z,3μm,30.9s,MS5.1
KPL Plockton 52.89 338 P P 00 05 43.6 -0.9
KPL AMb AMB 00 05 54.3
comp=Z,368nm,3.0s
KPL AMS AMS 00 22 23.9
comp=Z,3μm,30.9s
KSK Scoval 52.91 339⇑eP P 00 05 45.0 +0.3
KSK Scoval 52.91 339 P P 00 05 45.0 +0.3
F11A Grangeville 52.91 59 ⇓P P 00 05 44.4 -0.4
baz=53,SNR=21
G09A Cove 52.92 60 ⇑P P 00 05 44.7 -0.1
baz=53,SNR=21
CHMT Chamberlain Mo 52.94 56 eP P 00 05 44.9 -0.1
comp=Z,2μm,1.3s,mb6.8
CHMT epP pP 00 05 50.3 -1.6
CHMT esP sP 00 05 52.8 -1.8
CHMT e 00 05 59.0
VAN Vannovskaya 52.96 281⇑iP P 00 05 46.8 +1.6
VAN eS S 00 13 20.7 +7.7
ABKT Ailbek 52.97 280 P P 00 05 46.4 +1.1
comp=Z,2μm,1.2s,mb6.9
KSB Sheil Bridge 52.98 338⇑eP P 00 05 45.1 0.0
KSB Sheil Bridge 52.98 338 P P 00 05 45.1 0.0
EGMT Eagleton 53.03 53 ⇑P P 00 05 45.6 0.0
baz=53,SNR=18
EGMT Eagleton 53.03 53⇑eP P 00 05 45.4 -0.3
comp=Z,70nm,0.8s,mb5.6
EGMT epP pP 00 05 50.9 -1.7
EGMT esP sP 00 05 53.0 -2.3
EGMT e 00 05 60.0
EGMT ePcP PcP 00 06 51.8 -2.1
EGMT eS S 00 13 10.9 -2.9
EGMT LR LR
comp=Z,3μm,19.0s,MS5.3
D15A Lincoln 53.05 55 ⇑P P 00 05 45.9 0.0
baz=53,SNR=31
E13A Victor 53.06 57 ⇑P P 00 05 45.8 0.0
baz=53,SNR=14
C17A Wharram Farm, 53.07 54 ⇑P P 00 05 45.8 -0.1
baz=53,SNR=40
G10A Bishop Farm, J 53.12 60 ⇓P P 00 05 46.3 0.0
baz=53,SNR=17
KIV Kislovodsk 53.23 297 P P 00 05 48.2 +1.0
comp=Z,3μm,1.2s,mb7.1,SNR=90
KIV Kislovodsk 53.23 297c iP P 00 05 48.6 +1.4
KIV e 00 07 52.2
KIV eS S 00 13 19.4 +2.8
KIV eSS SS 00 16 56.0 +0.4
KIV pmax pmax
comp=Z,837nm,4.6s
KIV pmax pmax
comp=Z,482nm,0.9s,mb6.4
KIV MLR MLR
comp=Z,6μm,17.0s,MS5.7
KIV Kislovodsk 53.23 297⇑iP P 00 05 48.0 +0.8
comp=Z,737nm,1.1s,mb6.5
KIV epP pP 00 05 52.8 -1.4
KIV esP sP 00 05 54.6 -2.2
KIV e 00 05 58.3
KIV ePP PP 00 07 47.0 +0.1
KIV eS S 00 13 14.8 -1.8
KIV LR LR
comp=Z,7μm,21.0s,MS5.7
KIV Kislovodsk 53.23 297 P P 00 05 49.0 +1.8
SNR=128
KIV P 00 05 49.0
SNR=128
BSEG Bad Segeberg 53.29 326 eP P 00 05 48.1 +0.6
comp=Z,868nm,1.8s,mb6.4
BSEG eS S 00 13 19.3 +2.2
BSEG Bad Segeberg 53.29 326 eP P 00 05 48.1 +0.6
BSEG eS S 00 13 19.3 +2.2
BSEG pmax pmax
comp=Z,868nm,1.8s,mb6.4
BSEG Bad Segeberg 53.29 326 eP P 00 05 48.1 +0.6
BSEG eS S 00 13 19.3 +2.2
H08A Prairie City 53.29 61 ⇓P P 00 05 48.3 +0.7
baz=53,SNR=38
E14A Clinton 53.30 56 ⇑P P 00 05 48.0 +0.3
baz=53,SNR=15
G11A Walters Elk Ra 53.31 59 ⇑P P 00 05 47.8 0.0
baz=53,SNR=50
KAR1 Arisaig 53.32 338 eP P 00 05 48.0 +0.3
KAR1 Arisaig 53.32 338 P P 00 05 48.0 +0.3
F12A Elk City 53.32 58 ⇑P P 00 05 47.9 +0.1
baz=53,SNR=36
AGT Agartala 53.34 241 iP P 00 05 47.0 -1.2
AGT i x x 00 06 56.0
D16A Dana Ranch, Ca 53.37 54 ⇓P P 00 05 47.5 -0.6
baz=53,SNR=16
BMO Blue Mountains 53.45 60⇑eP P 00 05 48.8 0.0
comp=Z,457nm,1.9s,mb6.1
BMO epP pP 00 05 54.1 -1.7
BMO e 00 06 02.9
H09A Durkee 53.50 61 ⇓P P 00 05 49.7 +0.6
baz=53,SNR=24
HUMO Hull Mountain 53.51 66⇑eP P 00 05 49.6 +0.3
comp=Z,691nm,1.9s,mb6.3
HUMO epP pP 00 05 54.9 -1.4
HUMO esP sP 00 05 56.7 -2.2
HUMO e 00 06 03.9
HUMO ePcP PcP 00 06 55.6 -0.2
HUMO eS S 00 13 18.6 -1.9
HUMO LR LR
comp=Z,3μm,19.0s,MS5.4
D17A Six Diamond Ra 53.52 54 ⇓P P 00 05 49.1 -0.1
baz=53,SNR=37
HRY Holter Researc 53.56 55 eP P 00 05 50.5 +0.9
comp=Z,64nm,0.8s,mb5.6
HRY epP pP 00 05 54.9 -1.6
HRY esP sP 00 05 57.1 -2.1
E15A Deer Lodge 53.56 56 ⇓P P 00 05 49.8 +0.2
baz=53,SNR=36
F13A Darby 53.59 57 ⇑P P 00 05 49.3 -0.5
baz=53,SNR=18
EBH Black Hill 53.62 336 eP P 00 05 50.0 +0.2
EBH Black Hill 53.62 336 P P 00 05 50.0 +0.2
LVV L'vov 53.74 314d iP P 00 05 51.3 +0.5
LVV eS S 00 13 30.0 +6.6
LVV MLR MLR
comp=Z,12μm,17.0s,MS6.0
D18A Linhart Farms, 53.76 53 ⇑P P 00 05 51.7 +0.7
baz=54,SNR=105
E16A East Helena 53.77 55 ⇑P P 00 05 51.4 +0.3
baz=54,SNR=10
ESY Stoneypath 53.80 336 eP P 00 05 51.0 -0.2
ESY Stoneypath 53.80 336 P P 00 05 51.0 -0.2
EAB Aberfoyle 53.81 337 eP P 00 05 51.3 +0.1
EAB Aberfoyle 53.81 337 P P 00 05 51.3 +0.1
G12A Big Creek, Yel 53.86 58 ⇓P P 00 05 51.5 -0.2
baz=54
ZEI Tsey 53.86 295 eP P 00 05 51.4 -0.4
ZEI e 00 07 55.1
ZEI eS S 00 13 28.8 +3.7
ZEI pmax pmax
comp=Z,405nm,1.7s,mb6.1
ZEI pmax pmax
comp=N,126nm,1.1s
ZEI pmax pmax

comp=E,99nm,0.7s
H10A Noah's Angus R 53.87 60 ⇑P P 00 05 52.0 +0.1
baz=54,SNR=54
F14A Wisdom 53.88 57 ⇓P P 00 05 52.4 +0.5
baz=54
RUE Ruedersdorf 53.88 323 eP P 00 05 52.1 +0.3
RUE pP pP 00 05 57.6 -1.2
RUE e 00 06 01.1
NDI New Delhi 53.95 258 ePKP P 00 05 51.0 -1.6
NDI ex x 00 13 25.0
EAU Auchinoon 54.00 336 eP P 00 05 53.3 +0.6
EAU Auchinoon 54.00 336 P P 00 05 53.3 +0.6
H11A Donnelly 54.01 59 ⇑P P 00 05 52.8 0.0
baz=54,SNR=32
EBL Broad Law 54.01 336 eP P 00 05 53.1 +0.4
EBL Broad Law 54.01 336 P P 00 05 53.1 +0.4
I09A Lost Marbles R 54.09 61 ⇓P P 00 05 54.1 +0.7
baz=54,SNR=39
E17A Martinsdale 54.09 54 ⇑P P 00 05 53.9 +0.5
baz=54,SNR=32
GUMO Guam 54.12 176 P P 00 05 53.5 -0.4
GUMO pmax pmax
comp=Z,84nm,1.0s,mb5.6
GUMO Guam 54.12 176 P P 00 05 53.5 -0.5
comp=Z,84nm,1.0s,mb5.6
K05A Summer Lake 54.12 64 ⇓P P 00 05 54.9 +1.2
baz=54,SNR=19
F15A Butte 54.13 56 ⇑P P 00 05 54.3 +0.6
baz=54,SNR=47
LRM Limekiln Ridge 54.16 56 eP P 00 05 54.4 +0.5
comp=Z,5μm,2.0s,mb7.1
LRM epP pP 00 05 59.4 -1.6
LRM e 00 06 09.3
ONI Oni 54.17 296 P P 00 05 55.7 +1.6
PGBU Glenifferbraes 54.19 337 eP P 00 05 54.1 +0.1
PGBU AMb AMB 00 06 04.9
comp=Z,844nm,2.4s,mb6.2
PGBU AMS AMS 00 38 13.6
comp=Z,4μm,12.3s,MS5.7
PGBU Glenifferbraes 54.19 337 P P 00 05 54.1 +0.1
PGBU AMb AMB 00 06 04.9
comp=Z,844nm,2.4s,mb6.2
PGBU AMS AMS 00 38 13.6
comp=Z,4μm,12.3s
ANN Anapa 54.23 302 eP P 00 05 53.7 -0.8
ANN e 00 07 57.3
ANN eS S 00 13 30.9 +0.8
ANN pmax pmax
comp=Z,474nm,2.1s,mb6.0
ANN MLR MLR
comp=N,6μm,14.0s,MS5.8
ANN MLR MLR
comp=E,3μm,14.0s,MS5.8
ANN MLR MLR
comp=Z,6μm,14.0s,MS5.8
G13A Cobalt 54.24 58 ⇑P P 00 05 54.2 -0.4
baz=54,SNR=15
KEH Kehvi 54.26 295 P P 00 05 54.4 -0.3
DGMT Dagmar 54.26 48 ⇓P P 00 05 54.2 -0.5
baz=54,SNR=14
DGMT Dagmar 54.26 48⇑eP P 00 05 54.2 -0.4
comp=Z,495nm,1.3s,mb6.3
DGMT epP pP 00 05 59.8 -1.9
DGMT esP sP 00 06 02.2 -2.2
DGMT e 00 06 08.6
DGMT eS S 00 13 28.7 -1.8
DGMT LR LR
comp=Z,3μm,21.0s,MS5.3
PCA1 Carrot 54.27 337 eP P 00 05 54.7 +0.1
PCA1 Carrot 54.27 337 P P 00 05 54.7 +0.1
KWP Kalwaria Pacla 54.27 315 iP P 00 05 55.4 +0.7
comp=Z,2μm,2.0s,mb6.7
KWP epP pP 00 06 02.5 +0.8
KWP eS S 00 13 28.2 -2.3
KWP LMZ 00 32 06.8
comp=Z,15μm,17.5s
KWP Kalwaria Pacla 54.27 315⇑iP P 00 05 55.0 +0.3
KWP e 00 06 04.5
KWP e 00 06 58.4
KWP eS S 00 13 29.6 -0.9
KWP pmax pmax
comp=Z,388nm,1.0s,mb6.3
KWP MLR MLR
comp=Z,11μm,19.0s,MS6.0
KWP Kalwaria Pacla 54.27 315⇑iP P 00 05 55.0 +0.3
comp=Z,388nm,1.0s,mb6.3
KWP e 00 06 04.5
KWP ePcP PcP 00 06 58.4 -0.2
KWP eS S 00 13 29.6 -0.9
KWP LR LR
comp=Z,11μm,19.0s,MS6.0
KWP Kalwaria Pacla 54.27 315⇓iP P 00 05 56.0 +1.3
E18A Harlowton 54.28 54 ⇑P P 00 05 55.7 +0.8
baz=54,SNR=79
I10A Payette 54.30 60 ⇓P P 00 05 55.2 +0.2
baz=54,SNR=12
G14A Jackson 54.36 57 ⇓P P 00 05 55.7 +0.3
baz=54,SNR=11
YBH Yreka Blue Hor 54.37 66 P P 00 05 54.2 -1.3
comp=Z,3.8nm,0.6s,mb4.5,baz=32,slow=5.8,SNR=7.7
YBH pP pP 00 06 02.7 +0.2
comp=Z,20nm,0.9s,baz=47,slow=5.9,SNR=14
YBH S S 00 13 35.8 +3.7
comp=Z,2.2nm,0.9s,baz=205,slow=17,SNR=1.6
YBH Yreka Blue Hor 54.37 66 P P 00 05 54.2 -1.3
YBH *PP pP 00 06 02.7 +0.2
YBH S S 00 13 35.8 +3.8
YBH smax
comp=N,2.0nm,0.9s
YBH Yreka Blue Hor 54.37 66⇑eP P 00 05 55.3 -0.2
comp=N,226nm,1.6s,mb5.8
YBH epP pP 00 06 01.8 -0.7
YBH esP sP 00 06 03.1 -2.1
YBH e 00 06 10.3
YBH eS S 00 13 30.5 -1.5
YBH LR LR
comp=Z,2μm,20.0s,MS5.1
J08A Circle Bar Ran 54.38 62 ⇓P P 00 05 56.3 +0.7
baz=54,SNR=19
F16A Kennard Place, 54.45 55 ⇓P P 00 05 56.5 +0.4
baz=54,SNR=21
ESK Eskdalemuir 54.48 336 P P 00 05 57.9 +1.8
comp=Z,872nm,0.8s,mb6.7,SNR=12
ESK Eskdalemuir 54.48 336 eP P 00 05 55.9 -0.2
ESK AMb AMB 00 06 06.0
comp=Z,267nm,1.6s,mb5.9
ESK AMS AMS 00 37 48.5
comp=Z,3μm,13.4s,MS5.5
ESK Eskdalemuir 54.48 336 P P 00 05 55.9 -0.2
ESK AMb AMB 00 06 06.0
comp=Z,267nm,1.6s,mb5.9
ESK AMS AMS 00 37 48.5
comp=Z,3μm,13.4s
ESK Eskdalemuir 54.48 336 eP P 00 05 56.8 +0.7
ESK *PP pP 00 06 00.5 -2.6
ESK e*SP sP 00 06 03.0 -2.8
ESK pmax pmax
comp=Z,74nm,0.7s,mb5.7
ESK Eskdalemuir 54.48 336 eP P 00 05 56.8 +0.7
comp=Z,74nm,0.7s,mb5.7
ESK pP pP 00 06 00.5 -2.5
ESK esP sP 00 06 03.0 -2.8
ESK e 00 06 13.7
GOR Gori 54.48 295 P P 00 05 57.6 +1.3
TBLG Delisi 54.49 294 P P 00 05 56.9 +0.5
OJC Ojcow 54.50 318 eP P 00 05 55.2 -1.2
OJC eS S 00 13 35.2 +1.6
OJC L 00 31 15.6
comp=Z,13nm,22.5s
MTA Mtatsminda 54.50 294 P P 00 05 57.5 +1.0
DGRG David-gareji 54.51 293 P P 00 05 57.9 +1.3
H12A Diamond D Ranc 54.52 58 ⇓P P 00 05 56.0 -0.6
baz=54,SNR=11
DLMT Dillon 54.52 56⇑eP P 00 05 57.1 +0.5
comp=Z,880nm,2.0s,mb6.4
DLMT epP pP 00 06 01.9 -1.7
DLMT esP sP 00 06 04.1 -2.2
DLMT e 00 06 11.3
SOC Sochi 54.56 299c iP P 00 05 57.7 +0.8
SOC e*PP pP 00 06 06.4 +2.5
SOC e 00 06 58.3
SOC e 00 07 59.7
SOC eS S 00 13 36.3 +1.8
SOC e*SS sS 00 13 48.8 +2.8
SOC pmax pmax

comp=Z,465nm,1.2s,mb6.4
SOC pmax pmax
comp=Z,2μm,2.0s,mb6.8
SOC MLR MLR
comp=Z,19μm,17.0s,MS6.2
BOZ Bozeman (W) 54.58 55 ⇓P P 00 05 57.8 +0.8
baz=54,SNR=58
BOZ Bozeman (W) 54.58 55⇑eP P 00 05 57.5 +0.5
BOZ e*PP pP 00 06 03.0 -1.0
BOZ eS **S 00 13 32.9 -1.8**
BOZ pmax pmax
comp=Z,517nm,1.8s,mb6.3
BOZ MLR MLR
comp=Z,4μm,19.0s,MS5.5
BOZ Bozeman (W) 54.58 55⇑eP P 00 05 57.5 +0.5
comp=Z,517nm,1.8s,mb6.3
BOZ epP pP 00 06 03.0 -1.0
BOZ e 00 06 11.7
BOZ eS **S 00 13 32.9 -1.8**
BOZ LR LR
comp=Z,4μm,19.0s,MS5.5
ECK Cauldkaine Hil 54.59 336 eP P 00 05 57.2 +0.2
ECK Cauldkaine Hil 54.59 336 P P 00 05 57.2 +0.2
J09A Fry Pan Ranch, 54.64 61 ⇑P P 00 05 58.1 +0.7
baz=54,SNR=40
F17A Fitzpatrick Pl 54.65 54 ⇓P P 00 05 57.9 +0.4
baz=54,SNR=40
NRDL Niedersach Rie 54.68 326 eP P 00 05 57.9 +0.3
comp=Z,352nm,1.5s,mb6.2
NRDL eS **S 00 13 36.4 +0.4**
H13A Challis 54.71 58 ⇓P P 00 05 57.2 -0.7
baz=54,SNR=13
I11A Placerville 54.73 60 ⇑P P 00 05 57.8 -0.3
baz=54
G15A Dillon 54.73 56 ⇓P P 00 05 58.8 +0.7
baz=54,SNR=71
XAL Allendale 54.76 335⇑eP P 00 05 58.1 0.0
XAL Allendale 54.76 335 P P 00 05 58.1 0.0
KSP Ksiaz 54.80 320 i P P 00 05 58.9 +0.3
comp=Z,1μm,2.0s,mb6.6
KSP epP pP 00 06 07.8 +2.3
KSP eS **S 00 13 41.5 +3.9**
KSP LMZ 00 32 46.5
comp=Z,29μm,20.5s
KSP Ksiaz 54.80 320⇑iP P 00 05 58.7 +0.2
KSP e*PP pP 00 06 07.5 +2.0
KSP e 00 07 00.3
KSP eS **S 00 13 40.0 +2.4**
KSP MLR MLR
comp=Z,34μm,20.4s,MS6.4
STHS Stebnicka Huta 54.86 316 eP P 00 05 59.9 +0.9
STHS pmax pmax
comp=Z,186nm,1.7s,mb5.8
STHS Stebnicka Huta 54.86 316 eP P 00 05 59.9 +0.9
comp=Z,186nm,1.7s,mb5.8
ULM Lac du Bonnet 54.87 41 P P 00 05 56.8 -2.2
comp=Z,20nm,0.8s,mb5.2,baz=333,slow=7.8,SNR=26
ULM S **S 00 13 36.0 -2.5**
comp=Z,2.9nm,0.5s,baz=252,slow=16,SNR=2.0
ULM LR LR 00 32 18.8
comp=Z,5μm,19.3s,MS5.6,baz=356,slow=39
ULM PKPPKP 00 36 09.5
comp=Z,6.2nm,1.0s,baz=194,slow=3.4,SNR=4.7
ULM Lac du Bonnet 54.87 41⇑iP P 00 05 57.1 -1.9
comp=Z,204nm,1.4s,mb6.0
ULM epP pP 00 06 04.2 -1.8
ULM esP sP 00 06 06.5 -2.2
ULM e 00 06 11.3
ULM ePcP PcP 00 07 00.4 -0.5
ULM eS **S 00 13 42.3 +3.8**
ULM LR LR
comp=Z,8μm,20.0s,MS5.8
J10A Berg Farm, Mel 54.89 61 ⇓P P 00 05 59.0 -0.3
baz=55
G16A Moss Hill, Enn 54.90 56 ⇑P P 00 05 59.7 +0.4
baz=55,SNR=42
MCMT McKenzie Canyo 54.92 57 eP P 00 06 00.4 +0.9
comp=Z,23μm,2.7s
KIS Kishinev 54.94 309⇑iP P 00 05 57.0 -2.6
comp=Z,2μm,2.0s,mb6.8
KIS Kishinev 54.94 309 ePcP PcP 00 06 52.0 -9.2
KIS Kishinev 54.94 309 ePP PP 00 07 58.0 -4.2
KIS Kishinev 54.94 309 ePPP 00 09 16.0
KIS eScP ScP 00 10 45.0 -13
KIS eS **S 00 13 40.0 +0.5**
KIS Kishinev 54.94 309 ePS 00 14 08.0
KIS eSS SS 00 18 00.0 +38
KIS LRM 00 34 56.0
comp=Z,4μm,13.0s
KIS Kishinev 54.94 309α iP **P 00 05 57.0 -2.6**
KIS e 00 07 58.0
KIS ePPP 00 09 16.0
KIS eS **S 00 13 40.0 +0.5**
KIS pmax pmax
comp=N,1μm,2.0s
KIS pmax pmax
comp=E,1μm,2.0s
KIS pmax pmax
comp=Z,2μm,2.0s,mb6.8
KIS pmax pmax
comp=N,700nm,2.0s
KIS pmax pmax
comp=E,400nm,2.0s
KIS pmax pmax
comp=Z,1μm,2.0s,mb6.5
KIS Kishinev 54.94 309⇓iP P 00 06 00.0 +0.4
F18A Big Timber 54.94 54 ⇑P P 00 06 00.2 +0.6
baz=55,SNR=52
H14A Leadore 54.95 57 ⇑P P 00 05 59.9 +0.2
baz=55,SNR=27
RAC Raciborz 55.03 319 eP P 00 06 01.0 +0.8
RAC e*PP pP 00 06 10.0 +2.8
RAC eS **S 00 13 42.1 +1.4**
RAC MLR MLR
comp=Z,8μm,20.0s,MS5.8
RAC MLR MLR
comp=E,5μm,12.0s
RAC MLR MLR
comp=N,8μm,13.0s
RAC Raciborz 55.03 319 eP P 00 06 01.0 +0.8
RAC ePP pP 00 06 10.0 +2.8
RAC eS **S 00 13 42.1 +1.4**
RAC LR LR
comp=Z,8μm,20.0s,MS5.8
MOD Modoc 55.05 64⇓eP P 00 06 00.8 +0.3
comp=Z,468nm,1.6s,mb6.3
MOD epP pP 00 06 05.9 -1.6
MOD esP sP 00 06 08.3 -1.9
MOD e 00 06 14.7
MOD eS **S 00 13 38.9 -2.4**
MOD LR LR
comp=Z,3μm,21.0s,MS5.3
NIE Niedzica 55.10 317 eP P 00 06 01.6 +0.9
NIE epP pP 00 06 11.1 +3.4
I12A Atlanta 55.11 59 ⇓P P 00 06 01.1 +0.3
baz=55,SNR=72
IAS Iasi 55.13 310 ⇓P P 00 06 01.4 +0.5
IAS Iasi 55.13 310⇓iP P 00 06 01.4 +0.5
GAL1 Galloway 55.14 337 eP P 00 06 01.0 +0.1
GAL1 AMb AMB 00 06 10.6
comp=Z,417nm,2.4s,mb6.0
GAL1 AMS AMS 00 38 36.9
comp=Z,3μm,13.9s,MS5.6
GAL1 Galloway 55.14 337 P P 00 06 01.0 +0.1
GAL1 AMb AMB 00 06 10.6
comp=Z,417nm,2.4s,mb6.0
GAL1 AMS AMS 00 38 36.9
comp=Z,3μm,13.9s
G17A Pierce Place, 55.15 55 ⇑P P 00 06 02.0 +0.9
baz=55,SNR=20
CLL Collm 55.15 323 eP P 00 06 00.6 -0.4
comp=Z,374nm,1.4s,mb6.2
CLL eS **S 00 13 43.0 +0.8**
CLL Collm 55.15 323⇑iP P 00 06 00.9 -0.1
CLL i *PP pP 00 06 09.6 +1.6
CLL eS **S 00 13 43.0 +0.8**
CLL pmax pmax
comp=Z,906nm,2.1s,mb6.4
CLL MLR MLR
comp=Z,11μm,25.8s,MS5.8
CLL Collm 55.15 323⇑iP P 00 06 00.9 -0.1
comp=Z,906nm,2.1s,mb6.4
CLL i sP sP 00 06 09.6 -1.1
comp=Z,372nm,1.4s
CLL i 00 06 19.1
CLL ePcP PcP 00 07 04.0 +2.1
CLL ePP PP 00 08 08.0 +4.1
CLL eS **S 00 13 43.0 +0.8**
CLL eSS SS 00 17 30.0 +4.6
WVOR Wild Horse Val 55.15 63⇑eP P 00 06 01.6 +0.5
comp=Z,644nm,1.9s,mb6.3
WVOR epP pP 00 06 06.6 -1.5
WVOR esP sP 00 06 08.8 -2.1
WVOR e 00 06 15.7
WVOR eS **S 00 13 40.6 -1.9**
WVOR LR LR
comp=Z,4μm,19.0s,MS5.5
SIM Simferopol' 55.16 304c iP **P 00 06 02.9 +1.7**
SIM e 00 08 05.0
SIM eS **S 00 13 46.4 +3.8**
SIM pmax pmax
comp=Z,416nm,2.2s,mb6.1
SIM pmax pmax
comp=Z,380nm,8.7s
TGY Tagaytay City 55.17 204 LR LR 00 32 18.4
comp=Z,30nm,18.7s,baz=277,slow=39
H15A Lima 55.18 57 ⇓P P 00 06 02.0 +0.7
baz=55,SNR=19
UPC Upice 55.18 321 eP P 00 06 02.0 +0.7
UPC e*PP pP 00 06 10.2 +1.9
UPC Upice 55.18 321 eP P 00 06 02.0 +0.7
UPC epP pP 00 06 10.2 +1.9
MFID Camas Ranch 55.22 60 ⇑P P 00 06 01.7 +0.1
baz=55,SNR=25
CLZ Clausthal 55.24 325 eP P 00 06 02.3 +0.6
comp=Z,864nm,1.9s,mb6.5
CLZ eS **S 00 13 45.3 +1.9**
CLZ Clausthal 55.24 325 eP P 00 06 02.3 +0.6
CLZ eS **S 00 13 45.3 +1.9**
CLZ pmax pmax
comp=Z,864nm,1.9s,mb6.5
CLZ Clausthal 55.24 325 eP P 00 06 02.3 +0.6
comp=Z,864nm,1.9s,mb6.5
CLZ eS **S 00 13 45.3 +1.9**
DPC Dobruska-Polom 55.25 320 eP P 00 06 02.4 +0.6
DPC e*PP pP 00 06 11.3 +2.5
DPC e 00 08 07.7
DPC e 00 09 15.3
DPC eS S 00 14 07.1 +23
DPC MLR MLR
comp=Z,13μm,18.5s,MS6.0
DPC Dobruska-Polom 55.25 320 eP P 00 06 02.4 +0.6
DPC epP pP 00 06 11.3 +2.5
DPC ex x 00 06 19.3
DPC ePP PP 00 08 07.7 +2.8
DPC ex x 00 09 15.3
DPC eS S 00 14 07.1 +23
DPC AMS AMS 00 32 40.0
comp=Z,13μm,18.5s
CRVS Cervenica-Dubn 55.27 316 eP P 00 06 02.1 +0.1
CRVS eS **S 00 13 45.0 +1.0**
CRVS pmax pmax
comp=Z,254nm,1.9s,mb5.9
CRVS MLR MLR
comp=Z,6μm,18.9s,MS5.7
CRVS Cervenica-Dubn 55.27 316 eP P 00 06 02.1 +0.1
comp=Z,254nm,1.9s,mb5.9
CRVS eS **S 00 13 45.0 +1.0**
CRVS LR LR
comp=Z,6μm,18.9s,MS5.7
OKC Ostrava-Krasne 55.27 319 eP P 00 06 02.8 +0.9
OKC e*PP pP 00 06 11.5 +2.6
OKC e 00 08 08.4
OKC e 00 09 16.6
OKC eS **S 00 13 49.4 +5.5**
OKC MLR MLR
comp=Z,10μm,13.7s,MS6.1
OKC Ostrava-Krasne 55.27 319 eP P 00 06 02.8 +0.9
OKC epP pP 00 06 11.5 +2.6
OKC ex x 00 06 19.2
OKC ePP PP 00 08 08.4 +3.3
OKC ex x 00 09 16.6
OKC eS **S 00 13 49.4 +5.5**
OKC AMS AMS 00 32 50.0
comp=Z,10μm,13.7s
LAO LASA Array 55.29 51⇑iP P 00 06 02.0 -0.1
comp=Z,1μm,2.1s,mb6.6
LAO epP pP 00 06 07.1 -2.0
LAO esP sP 00 06 09.2 -2.5
LAO e 00 06 15.4
LAO ePcP PcP 00 07 02.8 +0.2
LAO eS **S 00 13 42.1 -2.1**
LAO LR LR
comp=Z,15μm,19.0s,MS6.1
UZH Uzhgorod 55.30 315⇓iP P 00 06 01.6 -0.5
UZH i pP 00 06 09.8 +0.7
UZH e 00 07 02.0
UZH e 00 08 01.7
UZH ePPP 00 09 19.6
UZH eS **S 00 13 41.0 -3.3**
UZH ePS 00 13 50.6
UZH e 00 15 41.9
UZH eSS SS 00 17 28.2 +0.3
UZH MLR MLR
comp=N,10μm,16.0s,MS6.1
UZH MLR MLR
comp=E,9μm,16.0s,MS6.1
UZH MLR MLR
comp=Z,9μm,16.0s,MS6.0
I13A Wildhorse Cree 55.33 58 ⇑P P 00 06 02.2 -0.3
baz=55,SNR=26
BRG Berggiesshubel 55.33 322 eP P 00 06 02.4 0.0
comp=Z,319nm,1.7s,mb6.1
BRG Berggiesshubel 55.33 322 i P P 00 06 02.2 -0.1
comp=Z,135nm,1.5s,mb5.8
BRG i 00 06 11.1
comp=Z,319nm,1.7s
BRG i PP PP 00 08 01.8 -3.9
comp=Z,46nm,1.0s
BRG S **S 00 13 42.0 -2.7**
BRG ePKPPKP 00 35 46.2
comp=Z,194nm,2.4s
BRG
comp=N,9μm,22.8s
BRG
comp=E,10μm,23.1s
BRG
comp=Z,12μm,27.7s
IBBN Ibbenburen 55.35 327 eP P 00 06 02.8 +0.3
comp=Z,510nm,1.8s,mb6.2
IBBN eS **S 00 13 49.3 +4.3**
QLMT Earthquake Lak 55.37 56 eP P 00 06 03.5 +0.8
comp=Z,460nm,1.9s,mb6.2
BUR08 Bucovina Ar. S 55.40 312⇑iP P 00 06 02.6 -0.2
BUR08 e 00 06 13.6
BURAR Bucovina Array 55.42 312 ⇑P P 00 06 03.3 +0.3
BURAR Bucovina Array 55.42 312⇑iP P 00 06 03.3 +0.3
K10A MacKenzie Ranc 55.44 61 ⇑P P 00 06 03.8 +0.5
baz=55,SNR=37
WDC Whiskeytown Da 55.45 67⇑eP P 00 06 03.6 +0.3
WDC e*PP pP 00 06 08.4 -1.9
WDC e*SP sP 00 06 10.6 -2.4
WDC e 00 07 02.7
WDC eS **S 00 13 45.3 -1.2**
WDC pmax pmax
comp=Z,181nm,1.2s,mb6.0
WDC MLR MLR
comp=Z,3μm,19.0s,MS5.4
WDC Whiskeytown Da 55.45 67⇑eP P 00 06 03.6 +0.2
comp=Z,181nm,1.2s,mb6.0
WDC epP pP 00 06 08.4 -2.0
WDC esP sP 00 06 10.6 -2.4
WDC e 00 06 17.7
WDC ePcP PcP 00 07 02.7 -0.5
WDC eS **S 00 13 45.3 -1.3**
WDC LR LR
comp=Z,3μm,19.0s,MS5.4
MORC Moravsky Berou 55.48 319⇑iP P 00 06 03.3 -0.1
MORC e*PP pP 00 06 08.9 -1.5
MORC e*SP sP 00 06 11.2 -1.9
MORC eS **S 00 13 50.8 +4.1**
MORC Moravsky Berou 55.48 319⇑iP P 00 06 03.8 +0.4
MORC epP pP 00 06 08.8 -1.6
MORC esP sP 00 06 11.2 -1.9
MORC e 00 06 13.0
MORC eS **S 00 13 50.8 +4.1**
MORC Moravsky Berou 55.48 319⇑iP P 00 06 03.8 +0.4
PVCC Panska Ves 55.51 322 eP P 00 06 03.9 +0.3
PVCC eS **S 00 13 57.5 +10**
PVCC MLR MLR
comp=Z,13μm,20.2s,MS6.0
PVCC Panska Ves 55.51 322 eP P 00 06 03.9 +0.3
PVCC epP pP 00 06 13.3 +2.7
PVCC ex x 00 09 15.8
PVCC eS **S 00 13 57.5 +10**
PVCC AMS AMS 00 30 30.0
comp=Z,13μm,26.2s
G18A Lazy EL Ranch, 55.52 54 ⇓P P 00 06 03.9 +0.2
baz=55,SNR=16
I14A Mackay 55.53 58 ⇓P P 00 06 03.6 -0.3
baz=55,SNR=18
H16A Russell Place, 55.54 56 ⇓P P 00 06 05.0 +1.0
baz=55,SNR=12
HLID Hailey 55.55 59 ⇑P P 00 06 04.0 0.0
baz=55,SNR=32
HLID Hailey 55.55 59⇑iP P 00 06 03.9 -0.1
comp=Z,454nm,2.0s,mb6.2
HLID epP pP 00 06 09.4 -1.6
HLID esP sP 00 06 11.8 -1.9
HLID e 00 06 18.1
HLID ePcP PcP 00 07 03.4 -0.2
HLID eS **S 00 13 46.4 -1.4**
HLID LR LR
comp=Z,5μm,19.0s,MS5.7
J12A Stokes Ranch, 55.60 59 ⇑P P 00 06 05.1 +0.7
baz=55,SNR=60
YMR Madison River 55.66 55 eP P 00 06 05.8 +1.0
comp=Z,424nm,1.2s,mb6.3
YMR epP pP 00 06 10.7 -1.1
YMR esP sP 00 06 12.8 -1.7
YMR e 00 06 20.2
CHTO Chiang Mai 55.67 230⇑iP P 00 06 04.7 -0.5
CHTO e*PP pP 00 06 11.0 -1.2
CHTO pmax pmax
comp=Z,305nm,1.5s,mb6.1
CHTO MLR MLR
comp=Z,10μm,20.0s,MS5.9
CHTO Chiang Mai 55.67 230⇑iP P 00 06 04.7 -0.5
comp=Z,305nm,1.5s,mb6.1
CHTO epP pP 00 06 11.0 -1.1
CHTO esP sP 00 06 13.1 -1.7
CHTO e 00 06 18.7
CHTO LR LR
comp=Z,10μm,20.0s,MS5.9
CHTO Chiang Mai 55.67 230 P **P 00 06 05.3 +0.1**
SNR=40
CHTO P 00 06 05.3
SNR=40
CHTO Chiang Mai 55.67 230 P **P 00 06 05.3 +0.1**
SNR=40
CHTO P 00 06 05.3
SNR=40
CHTO Chiang Mai 55.67 230 P **P 00 06 05.3 +0.1**
SNR=40
CHTO P 00 06 05.3
SNR=40
CHTO Chiang Mai 55.67 230 P **P 00 06 05.3 +0.1**
SNR=40
CHTO P 00 06 05.3
SNR=40
CHTO Chiang Mai 55.67 230 P **P 00 06 05.3 +0.1**
SNR=40
CHTO P 00 06 05.3
SNR=40
CHTO Chiang Mai 55.67 230 P **P 00 06 05.3 +0.1**
SNR=40
CHTO P 00 06 05.3
SNR=40
CHTO Chiang Mai 55.67 230 P **P 00 06 05.3 +0.1**
SNR=40
CHTO P 00 06 05.3
SNR=40
YNR Norris Junctio 55.71 55 eP P 00 06 05.0 -0.2
comp=Z,647nm,1.6s,mb6.4
K11A Parker Ranch, 55.72 60 ⇑P P 00 06 06.1 +0.8
baz=56,SNR=103
LIKS Likavka 55.75 318 eP P 00 06 07.0 +1.6
LIKS pmax pmax
comp=Z,132nm,1.7s,mb5.7
LIKS Likavka 55.75 318 eP P 00 06 07.0 +1.6
comp=Z,132nm,1.7s,mb5.7
J13A Cove Ranch, Pi 55.77 59 ⇑P P 00 06 05.9 +0.3
baz=56,SNR=25
I15A Monteview 55.78 57 ⇑P P 00 06 06.4 +0.7
baz=56,SNR=10.0
RLMT Red Lodge 55.78 54 ⇓P P 00 06 06.8 +1.1
baz=56,SNR=140
RLMT Red Lodge 55.78 54⇑iP P 00 06 06.9 +1.2
comp=Z,712nm,1.1s,mb6.6
RLMT epP pP 00 06 10.7 -1.9
RLMT esP sP 00 06 13.0 -2.3
RLMT e 00 06 20.7
RLMT ePcP PcP 00 07 02.0 -2.5
RLMT eS **S 00 13 48.8 -2.0**
RLMT LR LR
comp=Z,7μm,19.0s,MS5.8
BMR Baia Mare 55.84 314 ⇓P P 00 06 07.0 +0.9
BMR Baia Mare 55.84 314⇓iP P 00 06 07.0 +0.9
GNI Garni 55.89 293 LR LR 00 34 42.3
comp=Z,21μm,19.3s,MS6.2,baz=302,slow=41
GNI Garni 55.89 293⇑iP P 00 06 08.4 +1.9
GNI e*PP pP 00 06 12.2 -1.3
GNI e*SP sP 00 06 14.5 -1.7
GNI pmax pmax
comp=Z,237nm,0.9s
GNI MLR MLR
comp=Z,21μm,19.0s
GNI Garni 55.89 293⇑iP P 00 06 08.4 +1.9
comp=Z,237nm,0.9s,mb6.2
GNI epP pP 00 06 12.2 -1.3
GNI esP sP 00 06 14.5 -1.7
GNI e 00 06 17.6
GNI LR LR
comp=Z,21μm,19.0s,MS6.2
GNI Garni 55.89 293 P **P 00 06 09.0 +2.5**
SNR=68
GNI P 00 06 09.0
SNR=68
GNI Garni 55.89 293 P **P 00 06 09.0 +2.5**
SNR=68
GNI P 00 06 09.0
SNR=68
GNI Garni 55.89 293 P **P 00 06 09.0 +2.5**
SNR=68
GNI P 00 06 09.0
SNR=68
GNI Garni 55.89 293 P **P 00 06 09.0 +2.5**
SNR=68
GNI P 00 06 09.0
SNR=68
GNI Garni 55.89 293 P **P 00 06 09.0 +2.5**
SNR=68
GNI P 00 06 09.0
SNR=68
GNI Garni 55.89 293 P **P 00 06 09.0 +2.5**
SNR=68
GNI P 00 06 09.0
SNR=68
GNI Garni 55.89 293 P **P 00 06 09.0 +2.5**
SNR=68
GNI P 00 06 09.0
SNR=68
YFT Old Faithful 55.90 55⇑eP P 00 06 07.7 +1.2
comp=Z,370nm,0.9s,mb6.4
YFT epP pP 00 06 12.1 -1.4
YFT esP sP 00 06 14.3 -1.8
YFT e 00 06 18.6
KECS Kecovo 55.91 316 eP P 00 06 06.9 +0.3
KECS pmax pmax
comp=Z,89nm,1.9s,mb5.5
KECS Kecovo 55.91 316 eP P 00 06 06.9 +0.3
comp=Z,89nm,1.9s,mb5.5
LKWY Lake 55.93 55⇑iP P 00 06 09.0 +2.3
LKWY e*PP pP 00 06 12.3 -1.5
LKWY e*SP sP 00 06 14.8 -1.6
LKWY e 00 07 05.0
LKWY eS **S 00 13 51.1 -1.8**
LKWY pmax pmax
comp=Z,365nm,1.0s,mb6.4
LKWY MLR MLR
comp=Z,8μm,21.0s,MS5.8
LKWY Lake 55.93 55⇑iP P 00 06 09.0 +2.3
comp=Z,365nm,1.0s,mb6.4
LKWY epP pP 00 06 12.3 -1.5

LKWY esP sP 00 06 14.8 -1.7
LKWY e 00 06 19.1
LKWY ePcP PcP 00 07 05.0 -0.1
LKWY eS **S** **00 13 51.1 -1.8**
LKWY LR LR
comp=Z,8µm,21.0s,MS5.8
GMM Mts of Mourne 55.93 337⇑ eP **P** **00 06 05.8 -0.9**
GMM Mts of Mourne 55.93 337 P **P** **00 06 05.8 -0.9**
ARTV Artvin 55.94 296 i P **P** **00 06 05.2 -1.6**
LHO Holmfirth 55.97 334 eP **P** **00 06 06.7 -0.1**
LHO Holmfirth 55.97 334 P **P** **00 06 06.7 -0.1**
PRA Prague 55.97 321 ⇑P **P** **00 06 07.0 +0.1**
PRA S **S** **00 14 04.0 +11**
PRA AMS AMS 00 30 45.0
CM31 Chiang Mai Arr 56.01 230 eP **P** **00 06 08.0 +0.4**
comp=Z,33nm,0.6s,mb5.5
CM31 e pP 00 06 16.0 +1.4
CM31 LR LR
comp=Z,925nm,19.0s,MS4.9
CMAR Chiang Mai Arr 56.01 230 P **P** **00 06 07.0 -0.5**
comp=Z,21nm,0.6s,mb5.3,baz=4.0,slow=7.9,SNR=83
CMAR pP pP 00 06 15.9 +1.3
comp=Z,24nm,0.8s,baz=4.0,slow=7.2,SNR=9.1
CMAR PcP PcP 00 07 05.8 +0.1
comp=Z,18nm,0.7s,baz=356,slow=4.3,SNR=5.5
CMAR LR LR 00 34 16.3
comp=Z,1µm,18.5s,MS5.0,baz=28,slow=40
CMAR PKPPKP 00 36 10.1
comp=Z,0.9nm,0.3s,baz=224,slow=2.5,SNR=5.8
SCHQ Schefferville 56.02 19 P **P** **00 06 05.2 -2.0**
comp=Z,120nm,0.7s,mb6.0,baz=359,slow=7.4,SNR=252
SCHQ S **S** **00 13 50.6 -3.1**
comp=Z,6.0nm,1.0s,baz=75,slow=16,SNR=2.2
SCHQ LR LR 00 31 51.7
comp=Z,5µm,18.5s,MS5.6,baz=352,slow=38
SCHQ PKPPKP 00 36 13.2
comp=Z,9.2nm,1.1s,baz=72,slow=3.4,SNR=5.9
SCHQ Schefferville 56.02 19⇑ i P **P** **00 06 05.7 -1.5**
comp=Z,161nm,0.8s,mb6.1
SCHQ epP pP 00 06 12.5 -1.7
SCHQ esP sP 00 06 14.7 -2.2
SCHQ e 00 06 20.0
SCHQ eS **S** **00 13 52.0 -1.7**
SCHQ LR LR
comp=Z,6µm,19.0s,MS5.7
PRU Pruhonice 56.02 321 eP **P** **00 06 08.6 +1.3**
PRU e*PP pP 00 06 17.6 +3.3
PRU e 00 09 23.3
PRU eS **S** **00 13 59.5 +5.7**
PRU MLR MLR
comp=Z,12µm,14.1s,MS6.1
PRU Pruhonice 56.02 321 eP **P** **00 06 08.6 +1.3**
PRU epP pP 00 06 17.6 +3.3
PRU ex x 00 06 26.4
PRU ePP PP 00 08 22.2 +10
PRU ex x 00 09 23.3
PRU eS **S** **00 13 59.5 +5.7**
PRU AMS AMS 00 33 50.0
comp=Z,12µm,14.1s
H17A Grant Village 56.03 55 ⇑P **P** **00 06 09.8 +2.3**
baz=56
J14A Carey 56.05 58 ⇓P **P** **00 06 08.1 +0.4**
baz=56,SNR=45
MOX Moxa 56.08 324 eP **P** **00 06 08.0 +0.3**
comp=Z,531nm,2.0s,mb6.2
MOX e 00 06 17.1
comp=Z,477nm,1.8s
MOX eS **S** **00 13 49.0 -5.7**
MOX
comp=Z,7µm,22.0s
MOX Moxa 56.08 324 eP **P** **00 06 08.0 +0.3**
comp=Z,352nm,1.4s,mb6.2
MOX epP pP 00 06 16.1 +1.4
MOX eS **S** **00 13 55.7 +1.0**
MOX Moxa 56.08 324 eP **P** **00 06 08.0 +0.3**
MOX e 00 06 17.1
MOX eS **S** **00 13 49.0 -5.7**
MOX pmax pmax
comp=Z,531nm,2.0s,mb6.2
MOX MLR MLR
comp=Z,7µm,22.0s,MS5.7
TANN Tannenbergstha 56.10 323 eP **P** **00 06 08.3 +0.4**
comp=Z,573nm,1.8s,mb6.3
TANN epP pP 00 06 16.6 +1.7
TANN eS **S** **00 13 57.3 +2.3**
VRAC Vranov 56.15 320 P **P** **00 06 08.7 +0.5**
VRAC Vranov 56.15 320⇑ i P **P** **00 06 08.8 +0.6**
DBAD Bademkaya 56.17 296 i P **P** **00 06 07.4 -1.1**
L10A Juniper Basin 56.20 61 ⇓P **P** **00 06 09.5 +0.8**
baz=56,SNR=27
I16A Newdale 56.21 56 ⇑P **P** **00 06 10.1 +1.4**
baz=56,SNR=78
K12A Draper Farm, C 56.22 60 ⇑P **P** **00 06 09.5 +0.7**
baz=56,SNR=22
DDEM Demirkent 56.27 296 i P **P** **00 06 08.5 -0.7**
BUG Bochum--Univer 56.27 327 eP **P** **00 06 09.3 +0.2**
comp=Z,418nm,1.5s,mb6.2
BUG epP pP 00 06 17.3 +1.2
NKC Novy Kostel 56.28 323 eP **P** **00 06 09.6 +0.5**
NKC e*PP pP 00 06 18.7 +2.5
NKC e 00 08 18.4
NKC eS **S** **00 13 59.4 +2.1**
NKC MLR MLR
comp=Z,10µm,22.6s,MS5.9
NKC Novy Kostel 56.28 323 eP **P** **00 06 09.6 +0.5**
NKC epP pP 00 06 18.7 +2.5
NKC ePP PP 00 08 18.4 +4.3
NKC ex x 00 09 23.0
NKC eS **S** **00 13 59.4 +2.1**
NKC AMS AMS 00 32 40.0
comp=Z,10µm,22.6s
UBBA Unterbreizbach 56.28 325 eP **P** **00 06 09.2 +0.1**
comp=Z,296nm,1.8s,mb6.0
UBBA eS **S** **00 13 58.3 +1.0**
J15A Blackfoot 56.33 57 ⇓P **P** **00 06 10.4 +0.7**
baz=56,SNR=18
VYHS Vyhne 56.34 318 eP **P** **00 06 10.2 +0.6**
VYHS eS **S** **00 14 02.2 +4.1**
VYHS pmax pmax
comp=Z,244nm,1.9s,mb5.9
VYHS MLR MLR
comp=Z,7µm,22.2s,MS5.7
VYHS Vyhne 56.34 318 eP **P** **00 06 10.2 +0.6**
comp=Z,244nm,1.9s,mb5.9
VYHS eS **S** **00 14 02.2 +4.1**
VYHS LR LR
comp=Z,7µm,22.2s,MS5.7
L11A Cat Creek Ranc 56.35 60 ⇓P **P** **00 06 10.4 +0.6**
baz=56,SNR=42
IMW Indian Meadow 56.36 56⇑ eP **P** **00 06 11.2 +1.4**
comp=Z,254nm,1.3s,mb6.1
IMW epP pP 00 06 15.2 -1.7
IMW esP sP 00 06 17.9 -1.7
IMW e 00 06 25.3
KOLL Kolacno 56.37 318 eP **P** **00 06 10.4 +0.6**
TREC Trest 56.43 320 eP **P** **00 06 10.7 +0.4**
TREC e 00 08 18.7
TREC eS **S** **00 14 09.3 +10**
TREC MLR MLR
comp=Z,16µm,20.0s,MS6.1
TREC Trest 56.43 320 eP **P** **00 06 10.7 +0.4**
TREC epP pP 00 06 20.2 +2.9
TREC ex x 00 06 28.2
TREC ePP PP 00 08 18.7 +3.2
TREC eS **S** **00 14 09.3 +10**
TREC AMS AMS 00 33 30.0
comp=Z,16µm,20.0s
I17A Pilgrim Ck. 56.46 55 ⇓P **P** **00 06 12.4 +1.9**
baz=56,SNR=7.2
K13A Stover Farm, H 56.47 59 ⇑P **P** **00 06 11.9 +1.2**
baz=56,SNR=64
DCID1 Drake Creek 56.56 56⇑ eP **P** **00 06 12.6 +1.3**
comp=Z,239nm,0.9s,mb6.2
DCID1 epP pP 00 06 16.6 -1.7
DCID1 esP sP 00 06 19.1 -1.9
DCID1 e 00 06 26.8
DCID1 eS **S** **00 14 11.7 +11**
PETR 56.56 310⇑ i P **P** **00 06 12.3 +1.1**
VRI Vrincioaia 56.58 310 P **P** **00 06 11.9 +0.6**
VRI Vrincioaia 56.58 310⇑ i P **P** **00 06 11.8 +0.5**
TLCR 56.58 308 ⇑P **P** **00 06 12.1 +0.8**
TLCR 56.58 308⇑ i P **P** **00 06 12.1 +0.8**
PSZ Piszkesteto 56.59 316⇑ i P **P** **00 06 12.4 +1.0**
comp=Z,155nm,0.9s,mb6.0
PSZ epP pP 00 06 17.1 -1.3
PSZ esP sP 00 06 19.2 -1.9
PSZ e 00 06 21.8
PSZ eS **S** **00 14 00.7 -0.8**
PSZ LR LR
comp=Z,11µm,19.0s,MS6.0
PSZ Piszkesteto 56.59 316⇑ eP **P** **00 06 12.9 +1.5**
PSZ Piszkesteto 56.59 316⇑ i P **P** **00 06 12.4 +1.0**
PLOR Plostina 56.61 310 ⇓P **P** **00 06 12.3 +0.7**
PLOR Plostina 56.61 310 ⇓i P **P** **00 06 12.3 +0.7**
L12A House Creek Ra 56.62 60 ⇓P **P** **00 06 12.5 +0.8**
baz=56,SNR=18
CWF Charnwood Fore 56.65 334 eP **P** **00 06 11.4 -0.4**
CWF AMb AMB 00 06 21.4
comp=Z,272nm,2.5s,mb5.8
CWF e 00 23 48.8
CWF AMS AMS 00 25 31.9
comp=Z,4µm,29.0s,MS5.3
CWF Charnwood Fore 56.65 334 P **P** **00 06 11.4 -0.4**
CWF AMb AMB 00 06 21.4
comp=Z,272nm,2.5s,mb5.8
CWF 00 23 48.8
CWF AMS AMS 00 25 31.9
comp=Z,4µm,29.0s
HOPS Hopland 56.67 68 P **P** **00 06 12.0 -0.1**
comp=Z,261nm,1.5s,mb6.0
HOPS LR LR
comp=Z,3µm,20.0s,MS5.3
M10A I.L. Ranch, Tu 56.67 61 ⇑P **P** **00 06 13.1 +1.1**
baz=56,SNR=18
AGMN Agassiz Nation 56.67 42⇑ i P **P** **00 06 10.0 -2.0**
comp=Z,250nm,1.4s,mb6.0
AGMN epP pP 00 06 17.2 -1.8
AGMN esP sP 00 06 19.5 -2.2
AGMN e 00 06 24.3
AGMN eS **S** **00 14 00.9 -1.7**
AGMN LR LR
comp=Z,5µm,20.0s,MS5.6
SMOL Smolenice 56.68 319 eP **P** **00 06 13.0 +1.0**
J16A Bone 56.71 57 ⇑P **P** **00 06 13.6 +1.3**
baz=56,SNR=55
LOHW Long Hollow 56.73 56⇑ eP **P** **00 06 13.0 +0.6**
comp=Z,586nm,1.6s,mb6.4
LOHW epP pP 00 06 18.0 -1.5
LOHW esP sP 00 06 20.3 -1.9
LOHW e 00 06 28.0
TPAW Teton Pass 56.73 56⇑ eP **P** **00 06 14.0 +1.6**
comp=Z,156nm,1.1s,mb6.0
TPAW epP pP 00 06 19.0 -0.4
TPAW esP sP 00 06 20.8 -1.4
TPAW e 00 06 28.1
RRI2 Red Ridge 56.74 56⇑ i P **P** **00 06 13.3 +0.8**
comp=Z,682nm,1.6s,mb6.4
RRI2 epP pP 00 06 19.1 -0.4
RRI2 esP sP 00 06 20.7 -1.5
RRI2 e 00 06 27.8
RRI2 ePP PP 00 08 18.3 0.0
RRI2 eS **S** **00 14 03.2 -0.3**
ROTZ Rotzenmuhle 56.77 323 eP **P** **00 06 13.2 +0.6**
comp=Z,269nm,1.5s,mb6.0
ROTZ epP pP 00 06 21.3 +1.6
CFR Carcaliu 56.79 309 ⇑P **P** **00 06 13.4 +0.6**
CFR Carcaliu 56.79 309⇑ i P **P** **00 06 13.4 +0.6**
DYDN Diyadin 56.80 294 i P **P** **00 06 11.8 -1.2**
SNOW Snow King Moun 56.81 56⇑ i P **P** **00 06 14.4 +1.4**
comp=Z,2µm,2.0s,mb6.7
SNOW epP pP 00 06 19.5 -0.6
SNOW esP sP 00 06 21.5 -1.2
SNOW e 00 06 28.5
SNOW eS **S** **00 14 03.2 -1.4**
BEKR Beckworth 56.84 65 ⇓P **P** **00 06 13.7 +0.4**
baz=57,SNR=21
K14A Jones Ranch, D 56.86 58 ⇑P **P** **00 06 14.3 +0.9**
baz=57,SNR=51
DRGR 56.87 314 ⇑P **P** **00 06 13.7 +0.3**
DRGR 56.87 314⇑ i P **P** **00 06 13.7 +0.3**
REDW Red Top Meadow 56.87 56⇑ i P **P** **00 06 14.4 +0.9**
comp=Z,841nm,1.6s,mb6.5
REDW epP pP 00 06 20.0 -0.5
REDW esP sP 00 06 21.6 -1.6
REDW e 00 06 28.6
REDW eS **S** **00 14 04.7 -0.7**
I18A Diamond G Ranc 56.89 55 ⇓P **P** **00 06 14.7 +1.1**
baz=57,SNR=11
MACK Trabzon 56.90 298 i P **P** **00 06 09.6 -4.0**
AJM Ajmer 56.90 259 ePKP **P** **00 06 12.9 -1.0**
AJM AMb AMB 00 06 24.4
comp=Z,270nm,1.2s,mb6.2
J17A Brown Place, J 56.91 56 ⇑P **P** **00 06 15.1 +1.3**
baz=57,SNR=52
K15A Arbon 56.95 58 ⇑P **P** **00 06 14.9 +0.9**
baz=57,SNR=19
DSB Dublin 56.96 337 eP **P** **00 06 14.5 +0.6**
comp=Z,700nm,1.9s,mb6.4
DSB pP pP 00 06 19.3 -1.7
DSB esP sP 00 06 21.5 -2.1
DSB e 00 06 23.3
M11A Holland Ranch, 57.00 61 ⇓P **P** **00 06 15.7 +1.2**
baz=57,SNR=22
L13A Double Diamond 57.02 59 ⇑P **P** **00 06 16.0 +1.5**
baz=57,SNR=43
KHC Kasperske Hory 57.04 322 eP **P** **00 06 15.1 +0.5**
KHC e*PP pP 00 06 24.1 +2.5
KHC e 00 08 25.2
KHC eS **S** **00 14 03.3 -4.2**
KHC MLR MLR
comp=Z,11µm,25.2s,MS5.9
KHC Kasperske Hory 57.04 322⇑ i P **P** **00 06 14.9 +0.3**
comp=Z,305nm,1.6s,mb6.1
KHC epP pP 00 06 20.1 -1.5
KHC esP sP 00 06 22.4 -2.0
KHC e 00 06 24.3
KHC ePcP PcP 00 07 08.8 -0.5
KHC Kasperske Hory 57.04 322 eP **P** **00 06 15.1 +0.5**
KHC epP pP 00 06 24.1 +2.5
KHC ex x 00 06 30.5
KHC ePP PP 00 08 25.2 +4.3
KHC eS **S** **00 14 03.3 -4.2**
KHC AMS AMS 00 30 40.0
comp=Z,11µm,25.2s
ZST Bratislava 57.05 319 eP **P** **00 06 15.4 +0.7**
ZST eS **S** **00 14 09.2 +1.6**
ZST pmax pmax
comp=Z,32nm,1.0s,mb5.3
ZST MLR MLR
comp=Z,12µm,15.2s,MS6.1
ZST Bratislava 57.05 319 eP **P** **00 06 15.4 +0.7**
comp=Z,32nm,1.0s,mb5.3
ZST eS **S** **00 14 09.2 +1.6**
ZST LR LR
comp=Z,12µm,15.2s,MS6.1
GRA1 Grafenberg Arr 57.06 324 eP **P** **00 06 15.3 +0.6**
comp=Z,574nm,1.6s,mb6.3
GRA1 epP pP 00 06 23.5 +1.7
GRA1 eS **S** **00 14 11.3 +3.6**
GRA1 LR LR
comp=Z,11µm,21.6s,MS5.9
GRF Grafenberg Arr 57.06 324 eP **P** **00 06 15.3 +0.6**
comp=Z,574nm,1.6s,mb6.3
GRF epP pP 00 06 23.5 +1.7
GRF eS **S** **00 14 11.3 +3.6**
GRF eL 00 34 16.1
comp=Z,11µm,21.6s
GRF Grafenberg Arr 57.06 324 eP **P** **00 06 15.3 +0.6**
GRF e*PP pP 00 06 23.5 +1.7
GRF eS **S** **00 14 11.3 +3.6**
GRF pmax pmax
comp=Z,574nm,1.6s,mb6.3
GRF MLR MLR
comp=Z,11µm,21.6s,MS5.9
GRF Grafenberg Arr 57.06 324 eP **P** **00 06 15.3 +0.6**
GRF e*PP pP 00 06 23.5 +1.7
GRF eS **S** **00 14 11.3 +3.6**
GRF pmax pmax
comp=Z,574nm,1.6s,mb6.3
GRF MLR MLR
comp=Z,11µm,21.6s,MS5.9
GRF Grafenberg Arr 57.06 324 eP **P** **00 06 15.3 +0.6**
comp=Z,574nm,1.6s,mb6.3
GRF epP pP 00 06 23.5 +1.7
GRF eS **S** **00 14 11.3 +3.6**
GRF LR LR
comp=Z,11µm,21.6s,MS5.9
K16A Soda Springs 57.12 57 ⇓P **P** **00 06 16.6 +1.4**
baz=57,SNR=72
HLM1 Long Mynd 57.12 335 eP **P** **00 06 15.1 -0.1**
HLM1 Long Mynd 57.12 335 P **P** **00 06 15.1 -0.1**
MLR Muntele Rosu 57.14 311 LR LR 00 34 02.0
comp=Z,8µm,19.7s,MS5.8,baz=237,slow=39
MLR PKPPKP 00 36 06.0
comp=Z,1.5nm,1.0s,baz=164,slow=7.4,SNR=3.8
MLR Muntele Rosu 57.14 311 P **P** **00 06 16.5 +1.1**
MLR Muntele Rosu 57.14 311⇑ i P **P** **00 06 16.7 +1.3**
TNS Taunus Mts 57.18 326 eP **P** **00 06 15.9 +0.4**
comp=Z,527nm,1.6s,mb6.3
TNS eS **S** **00 14 10.6 +1.4**
TNS Taunus Mts 57.18 326 eP **P** **00 06 15.9 +0.4**
TNS eS **S** **00 14 10.6 +1.4**
TNS pmax pmax
comp=Z,527nm,1.6s,mb6.3
TNS Taunus Mts 57.18 326 eP **P** **00 06 15.9 +0.4**
comp=Z,527nm,1.6s,mb6.3
TNS eS **S** **00 14 10.6 +1.4**
WET Wettzell 57.20 322 eP **P** **00 06 16.3 +0.6**
comp=Z,264nm,1.6s,mb6.0
WET epP pP 00 06 24.3 +1.6
WET eS **S** **00 14 11.2 +1.7**
WET Wettzell 57.20 322 eP **P** **00 06 16.3 +0.6**
WET e*PP pP 00 06 24.3 +1.6
WET eS **S** **00 14 11.2 +1.7**
WET pmax pmax
comp=Z,264nm,1.6s,mb6.0
WET Wettzell 57.20 322 eP **P** **00 06 16.3 +0.6**
comp=Z,264nm,1.6s,mb6.0
WET epP pP 00 06 24.3 +1.6
WET eS **S** **00 14 11.2 +1.7**
BEBN Eben Emael 57.21 328 P **P** **00 06 15.8 +0.1**
comp=Z,84nm,2.4s,mb5.3
BEBN AP pP 00 06 22.6 -0.1
BEBN XP sP 00 06 24.8 -0.7
J18A Kendall Valley 57.27 55 ⇓P **P** **00 06 17.3 +1.0**
baz=57,SNR=65
GEC2 GERESS Array S 57.28 321 eP **P** **00 06 16.5 +0.2**
comp=Z,230nm,1.4s,mb6.0
GEC2 GERESS Array S 57.28 321 eP **P** **00 06 16.5 +0.2**
GEC2 pmax pmax
comp=Z,230nm,1.4s,mb6.0
GEC2 GERESS Array S 57.28 321 eP **P** **00 06 16.5 +0.2**
comp=Z,230nm,1.4s,mb6.0
L14A Malta 57.30 59 ⇓P **P** **00 06 17.6 +1.1**
baz=57,SNR=47
M12A Wells 57.31 60 ⇑P **P** **00 06 17.6 +1.1**
baz=57,SNR=41
MEM Membach 57.32 328 P **P** **00 06 16.9 +0.3**
comp=Z,158nm,1.6s,mb5.8
MEM XP sP 00 06 25.8 -0.4
AHID Auburn Hatcher 57.33 56⇑ i P **P** **00 06 17.4 +0.6**
comp=Z,802nm,1.7s,mb6.5
AHID epP pP 00 06 22.1 -1.6
AHID esP sP 00 06 24.2 -2.2
AHID e 00 06 31.1
AHID S **S** **00 14 09.1 -2.3**
AHID LR LR
comp=Z,2µm,21.0s,MS5.1
N10A Dunphy 57.40 62 ⇑P **P** **00 06 18.3 +1.1**
baz=57
K17A Gardner Place, 57.40 56 ⇑P **P** **00 06 17.7 +0.5**
baz=57,SNR=16
BMN Battle Mountai 57.41 63⇑ eP **P** **00 06 17.9 +0.5**
BMN e*PP pP 00 06 22.9 -1.5
BMN e*SP sP 00 06 25.0 -2.1
BMN eS **S** **00 14 10.9 -1.7**
BMN pmax pmax
comp=Z,75nm,1.0s,mb5.7
BMN MLR MLR
comp=Z,5µm,19.0s,MS5.6
BMN Battle Mountai 57.41 63⇑ eP **P** **00 06 17.9 +0.6**
comp=Z,75nm,1.0s,mb5.7
BMN epP pP 00 06 22.9 -1.5
BMN esP sP 00 06 25.0 -2.0
BMN e 00 06 31.7
BMN eS **S** **00 14 10.9 -1.7**
BMN LR LR
comp=Z,5µm,19.0s,MS5.6
UCC Uccle 57.47 329 P **P** **00 06 16.7 -0.9**
KOPT Kop Dagi 57.48 296 i P **P** **00 06 16.2 -1.6**
MCCM Marconi Confer 57.49 68 P **P** **00 06 17.0 -1.0**
comp=Z,306nm,1.7s,mb6.1
MCCM LR LR
comp=Z,3µm,19.0s,MS5.4
AMRR Amara 57.54 309⇑ i P **P** **00 06 19.3 +1.1**
WCN Washoe City 57.56 65 ⇓P **P** **00 06 19.0 +0.7**
baz=57,SNR=23
N11A Elko Archery C 57.57 61 ⇓P **P** **00 06 19.5 +1.1**
baz=57
CVD Cernavoda 57.60 309 ⇓P **P** **00 06 19.4 +0.8**
CVD Cernavoda 57.60 309⇓ i P **P** **00 06 19.4 +0.8**
M13A Montello 57.60 60 ⇓P **P** **00 06 19.5 +0.8**
baz=57,SNR=15
M13A Montello 57.60 60⇑ eP **P** **00 06 19.6 +0.9**
comp=Z,237nm,1.8s,mb5.9
M13A epP pP 00 06 24.0 -1.7
M13A esP sP 00 06 25.9 -2.4
M13A e 00 06 34.1
M13A ePcP PcP 00 07 12.3 +0.6
M13A eS **S** **00 14 13.1 -1.9**
L15A Malad City 57.60 58 ⇓P **P** **00 06 19.5 +0.8**
baz=57,SNR=73
HTR Trewern Hill 57.61 335⇑ eP **P** **00 06 18.1 -0.4**
HTR Trewern Hill 57.61 335 P **P** **00 06 18.1 -0.4**
CONA Conrad Observa 57.61 319 i P **P** **00 06 19.5 +0.9**
comp=Z,140nm,1.7s,mb5.7,SNR=59
BCLA Clavier 57.64 328 P **P** **00 06 19.1 +0.3**
comp=Z,197nm,1.7s,mb5.9
DEV Deva 57.65 313 ⇑P **P** **00 06 19.8 +0.9**
DEV Deva 57.65 313⇑ i P **P** **00 06 19.8 +0.9**
HVU Hansel Valley 57.68 58⇑ i P **P** **00 06 20.2 +1.0**
HVU e*PP pP 00 06 24.7 -1.5
HVU e*SP sP 00 06 26.9 -2.0
HVU eS **S** **00 14 18.5 +2.5**
HVU Hansel Valley 57.68 58⇑ i P **P** **00 06 20.2 +1.0**
HVU epP pP 00 06 24.7 -1.5
HVU esP sP 00 06 26.9 -2.0
HVU e 00 06 34.4
HVU eS **S** **00 14 18.5 +2.5**
TOD Tromm 57.68 325 eP **P** **00 06 19.4 +0.3**
ABH Alteburg 57.69 326 eP **P** **00 06 19.4 +0.3**
M14A Sheep Mountain 57.74 59 ⇓P **P** **00 06 20.9 +1.3**
baz=58,SNR=109
SNF Seneffe 57.76 329 P **P** **00 06 19.7 +0.1**
comp=Z,173nm,2.4s,mb5.7
SNF XP sP 00 06 28.8 -0.6
N12A Clover Valley, 57.77 61 ⇓P **P** **00 06 21.1 +1.3**
baz=58,SNR=24
N12A Clover Valley, 57.77 61⇑ i P **P** **00 06 20.8 +0.9**
comp=Z,371nm,1.4s,mb6.2
N12A epP pP 00 06 25.3 -1.6
N12A esP sP 00 06 27.7 -1.9
N12A e 00 06 35.3
N12A ePcP PcP 00 07 10.6 -1.7
TFO1 Folkestone 57.78 331 AMS AMS 00 26 58.6
comp=Z,5µm,29.1s,MS5.5
K18A Toltan Ranch, 57.78 56 ⇓P **P** **00 06 21.0 +1.1**
baz=58,SNR=73
O10A Cortez Mining, 57.78 62 ⇓P **P** **00 06 21.1 +1.2**
baz=58
SULR 57.80 310⇑ i P **P** **00 06 20.6 +0.6**
TVAN Van 57.80 293 i P **P** **00 06 20.6 +0.5**
ELK Elko 57.80 61⇑ eP **P** **00 06 21.1 +1.0**
ELK e*PP pP 00 06 25.6 -1.5
ELK e*SP sP 00 06 28.0 -1.8
ELK eS **S** **00 14 16.4 -1.2**
ELK pmax pmax
comp=Z,640nm,1.8s
ELK MLR MLR
comp=Z,3µm,20.0s
ELK Elko 57.80 61⇑ eP **P** **00 06 21.1 +1.0**
comp=Z,640nm,1.8s,mb6.3
ELK epP pP 00 06 25.6 -1.5
ELK esP sP 00 06 28.0 -1.8
ELK e 00 06 34.8
ELK eS **S** **00 14 16.4 -1.2**
ELK LR LR
comp=Z,3µm,20.0s,MS5.3
BW06 Boulder Array 57.82 55 ⇑P **P** **00 06 20.4 +0.2**
baz=58,SNR=41
BW06 Boulder Array 57.82 55⇑ eP **P** **00 06 20.2 +0.1**
comp=Z,191nm,1.3s,mb6.0

BW06 *e*pP pP 00 06 25.6 -1.6
BW06 *e*sP sP 00 06 28.0 -1.8
BW06 *e* 00 06 34.2
BW06 PP PP 00 08 24.8 -3.1
BW06 *e*S **S** **00 14 24.8 +7.0**
BW06 LR LR
comp=Z,3µm,20.0s,MS5.5
PDAR Pinedale Array 57.82 55 P **P 00 06 19.8 -0.4**
comp=Z,18nm,0.5s,mb5.3,baz=8.5,slow=3.0,SNR=89
PDAR LR LR 00 33 44.6
comp=Z,2µm,18.9s,MS5.2,baz=159,slow=39
PDAR PKPPKP 00 35 47.3
comp=Z,1.0nm,0.9s,baz=204,slow=2.0,SNR=5.3
L16A Fish Haven 57.90 57 ⇓P **P 00 06 21.7 +0.9**
baz=58,SNR=38
JBP Jabalpur 57.94 252⇑*e*PKP **P 00 06 21.7 +0.5**
JBP *e*x x 00 06 32.5
comp=Z,465nm,1.6s
JBP *e*S **S** **00 14 20.0 +0.2**
HGH Gray Hill 57.96 334⇑*e*P **P 00 06 20.4 -0.6**
HGH Gray Hill 57.96 334 P **P 00 06 20.4 -0.6**
RUP Ruppelstein 57.96 327 *e*P **P 00 06 21.1 0.0**
K19A Absolon Red Bu 57.99 55 ⇓P **P 00 06 20.9 -0.4**
baz=58,SNR=30
L17A Cokeville 58.00 57 ⇓P **P 00 06 22.0 +0.6**
baz=58,SNR=23
GIVF Givet 58.04 328⇑*i*P **P 00 06 21.6 0.0**
comp=Z,624nm,1.6s,mb6.1
GIVF Givet 58.04 328⇑*i*P **P 00 06 21.6 0.0**
GIVF pmax pmax
comp=Z,312nm,1.6s,mb6.1
GIVF Givet 58.04 328⇑*i*P **P 00 06 21.6 0.0**
comp=Z,312nm,1.6s,mb6.1
N13A Wendover, West 58.04 60 ⇓P **P 00 06 22.6 +0.8**
baz=58,SNR=16
N13A Wendover, West 58.04 60⇑*i*P **P 00 06 22.5 +0.7**
comp=Z,225nm,1.1s,mb6.1
N13A *e*pP pP 00 06 27.2 -1.6
N13A *e*sP sP 00 06 29.6 -1.9
N13A *e* 00 06 36.4
N13A *e*S **S** **00 14 18.7 -2.1**
M15A Larsen Ranch, 58.07 58⇑P **P 00 06 22.7 +0.7**
baz=58,SNR=99
MOA Molln 58.08 321⇑*i*P **P 00 06 22.1 +0.2**
comp=Z,149nm,1.9s,mb5.7,SNR=57
EYMN Ely 58.08 39⇑*i*P **P 00 06 19.9 -2.0**
comp=Z,786nm,2.2s,mb6.3
EYMN *e*pP pP 00 06 27.1 -1.9
EYMN *e*sP sP 00 06 29.3 -2.3
EYMN *e* 00 06 34.0
EYMN *e*S **S** **00 14 17.9 -3.2**
EYMN LR LR
comp=Z,5µm,21.0s,MS5.6
DOU Dourbes 58.09 329 P **P 00 06 21.9 0.0**
comp=Z,92nm,2.5s,mb5.4
KTD Kalmit 58.11 326 *e*P **P 00 06 22.4 +0.3**
PSN Preselentsi 58.13 308 P **P 00 06 22.8 +0.5**
GZR Gura Zlata 58.13 313⇑P **P 00 06 23.0 +0.7**
GZR Gura Zlata 58.13 313⇑*i*P **P 00 06 23.0 +0.7**
ERBA Erbaa 58.14 300 *i* P **P 00 06 19.5 -3.0**
BUC1 Bucharest 58.16 310 ⇓P **P 00 06 23.2 +0.7**
BUC1 Bucharest 58.16 310⇓*i*P **P 00 06 23.2 +0.7**
WLF Walferdange 58.19 327 P **P 00 06 22.8 +0.2**
comp=Z,87nm,2.4s,mb5.4
WLF Walferdange 58.19 327 *e*P **P 00 06 23.1 +0.5**
comp=Z,295nm,2.0s,mb6.0
WLF Walferdange 58.19 327⇑*e*P **P 00 06 23.1 +0.5**
WLF *e**PP pP 00 06 28.0 -1.7
WLF *e**SP sP 00 06 30.2 -2.1
WLF pmax pmax
comp=Z,69nm,1.2s,mb5.6
WLF MLR MLR
comp=Z,5µm,22.0s,MS5.6
WLF Walferdange 58.19 327⇑*e*P **P 00 06 23.1 +0.5**
comp=Z,69nm,1.2s,mb5.6
WLF *e*pP pP 00 06 28.0 -1.6
WLF *e*sP sP 00 06 30.2 -2.1
WLF *e* 00 06 33.2
WLF LR LR
comp=Z,5µm,22.0s,MS5.6
BAIF Baives 58.20 329⇑*i*P **P 00 06 22.8 +0.1**
comp=Z,661nm,1.6s,mb6.1
BAIF Baives 58.20 329⇑*i*P **P 00 06 22.8 +0.1**
BAIF pmax pmax
comp=Z,331nm,1.6s,mb6.1
BAIF Baives 58.20 329⇑*i*P **P 00 06 22.8 +0.1**
comp=Z,331nm,1.6s,mb6.1
BNGL BINGOL 58.20 295 *i* P **P 00 06 20.6 -2.4**
SPUT South Promonto 58.21 58⇑*i*P **P 00 06 23.5 +0.6**
comp=Z,746nm,1.8s,mb6.4
SPUT *e*pP pP 00 06 29.0 -0.9
SPUT *e*sP sP 00 06 30.8 -1.9
SPUT *e* 00 06 37.8
O11A Cowboy Ranch, 58.21 61 ⇓P **P 00 06 24.1 +1.2**
baz=58,SNR=27
HWUT Hardware Ranch 58.23 57⇑*i*P **P 00 06 23.7 +0.7**
comp=Z,1000nm,1.7s,mb6.6
HWUT *e*pP pP 00 06 29.1 -1.0
HWUT *e*sP sP 00 06 31.0 -1.7
HWUT *e* 00 06 38.1
HWUT *e*PcP PcP 00 07 13.7 -0.5
HWUT *e*S **S** **00 14 24.1 +0.9**
HWUT LR LR
comp=Z,3µm,19.0s,MS5.4
TIM Timisoara 58.25 314⇑P **P 00 06 24.0 +0.9**
TIM Timisoara 58.25 314⇑*i*P **P 00 06 24.0 +0.9**
BZS Buzias 58.25 314 P **P 00 06 23.6 +0.5**
BZS Buzias 58.25 314⇑*i*P **P 00 06 23.4 +0.3**
RSSD Black Hills 58.26 50⇑*i*P **P 00 06 22.5 -0.7**
RSSD *e**PP pP 00 06 28.8 -1.5
RSSD *e*S **S** **00 14 20.7 -2.9**
RSSD pmax pmax
comp=Z,207nm,1.5s,mb5.9
RSSD MLR MLR
comp=Z,703nm,22.0s,MS4.7
RSSD Black Hills 58.26 50⇑*i*P **P 00 06 22.4 -0.8**
comp=Z,208nm,1.5s,mb5.9
RSSD *e*pP pP 00 06 28.8 -1.5
RSSD *e*sP sP 00 06 31.2 -1.7
RSSD *e* 00 06 36.6
RSSD *e*S **S** **00 14 20.7 -2.9**
RSSD LR LR
comp=Z,703nm,22.0s,MS4.7
K20A Yellowstone Ra 58.29 54 ⇓P **P 00 06 23.1 -0.4**
baz=58,SNR=20
ARSA Arzberg 58.33 319 *i* P **P 00 06 24.5 +0.9**
comp=Z,116nm,2.1s,mb5.5,SNR=44
BGU Big Grassy Mou 58.37 59⇑*i*P **P 00 06 23.9 -0.2**
comp=Z,696nm,2.0s,mb6.3
BGU pP pP 00 06 29.8 -1.2
BGU *e*sP sP 00 06 32.0 -1.7
BGU *e* 00 06 39.2
N14A Grayback Hills 58.38 59⇑P **P 00 06 25.1 +0.9**
baz=58,SNR=98
STU Stuttgart 58.38 325 *e*P **P 00 06 24.1 +0.1**
comp=Z,258nm,1.3s,mb6.1
STU *e*P 00 14 27.0
STU Stuttgart 58.38 325⇑*e*P **P 00 06 24.4 +0.4**
STU *e**PP pP 00 06 29.9 -1.1
STU *e**SP sP 00 06 31.6 -2.1
STU pmax pmax
comp=Z,194nm,1.3s,mb6.0
STU Stuttgart 58.38 325⇑*e*P **P 00 06 24.4 +0.3**
comp=Z,194nm,1.3s,mb6.0
STU *e*pP pP 00 06 29.9 -1.1
STU *e*sP sP 00 06 31.6 -2.2
STU *e* 00 06 33.2
O12A Currie 58.39 61 ⇓P **P 00 06 25.0 +0.8**
baz=58,SNR=45
P10A Eureka 58.40 62⇑P **P 00 06 25.7 +1.5**
baz=58,SNR=18
L18A Fontenelle, Gr 58.43 56 ⇓P **P 00 06 24.6 +0.1**
baz=58,SNR=9.9
BALT Daday 58.47 303 *i* P **P 00 06 24.9 +0.2**
M16A Huntsville 58.47 58⇑P **P 00 06 25.5 +0.8**
baz=58
CMB Columbia Colle 58.47 66⇑*e*P **P 00 06 24.8 0.0**
CMB *e**SP sP 00 06 32.3 -2.2
CMB *e*S **S** **00 14 24.0 -2.5**
CMB pmax pmax
comp=Z,530nm,2.0s,mb6.2
CMB MLR MLR
comp=Z,3µm,20.0s,MS5.4
CMB Columbia Colle 58.47 66⇑*e*P **P 00 06 24.8 0.0**
comp=Z,530nm,2.0s,mb6.2
CMB *e*sP sP 00 06 32.3 -2.2
CMB *e* 00 06 39.6
CMB *e*S **S** **00 14 24.0 -2.5**
CMB LR LR
comp=Z,3µm,20.0s,MS5.4
L19A Farson 58.48 55 ⇓P **P 00 06 24.6 -0.2**
baz=58,SNR=24
FUR Furstenfeldbru 58.49 323 *e*P **P 00 06 25.0 +0.3**
comp=Z,423nm,1.5s,mb6.2
FUR *e*pP pP 00 06 33.2 +1.4
FUR Furstenfeldbru 58.49 323 *e*P **P 00 06 25.0 +0.3**
FUR *e**PP pP 00 06 33.2 +1.4
FUR pmax pmax
comp=Z,423nm,1.5s,mb6.2
FUR Furstenfeldbru 58.49 323 *e*P **P 00 06 25.0 +0.3**
comp=Z,423nm,1.5s,mb6.2
FUR *e*pP pP 00 06 33.2 +1.4
LANF Langenberg 58.49 326 *e*P **P 00 06 24.8 +0.1**
LANF Langenberg 58.49 326 *e*P **P 00 06 24.8 +0.1**
PKSM Moragy 58.50 317 P **P 00 06 25.2 +0.4**
PKSM Moragy 58.50 317⇓*i*P **P 00 06 25.0 +0.2**
RJOB Jochberg 58.53 322 *e*P **P 00 06 25.6 +0.5**
comp=Z,260nm,1.4s,mb6.1
TOKA Tokat 58.55 300 *i* P **P 00 06 22.8 -2.6**
HAKT HAKKARI 58.56 293 *i* P **P 00 06 22.8 -2.7**
N15A Stansbury Isla 58.56 59 ⇓P **P 00 06 25.9 +0.5**
baz=58,SNR=19
M17A Scullys Gap (B 58.64 57 ⇓P **P 00 06 26.0 +0.1**
baz=58,SNR=42
HEX Exmoor 58.68 335⇑*e*P **P 00 06 25.1 -0.9**
HEX Exmoor 58.68 335 P **P 00 06 25.1 -0.9**
P11A Circle Ranch, 58.70 62 ⇓P **P 00 06 27.6 +1.3**
baz=58,SNR=12
O13A Hicks Ranch, I 58.77 60⇑P **P 00 06 28.0 +1.2**
baz=58,SNR=13
VAL Valentia 58.77 340 *e*P **P 00 06 21.6 -5.1**
PRD Provadia 58.81 309 P **P 00 06 27.4 +0.4**
BHPL Bhopal 58.81 255 *e*PKP **P 00 06 25.7 -1.6**
BHPL AMb AMB 00 06 38.0
comp=Z,928nm,1.2s,mb6.7
CRAR CRAIOVA 58.83 312⇑P **P 00 06 27.9 +0.7**
CRAR CRAIOVA 58.83 312⇑*i*P **P 00 06 27.9 +0.7**
CTKT Corum 58.84 301 *i* P **P 00 06 27.1 -0.2**
NVAR Mina Array Bea 58.84 64 P **P 00 06 27.3 0.0**
comp=Z,14nm,0.8s,mb5.0,baz=316,slow=5.1,SNR=92
NVAR PKPPKP 00 35 56.5
comp=Z,0.1nm,0.3s,baz=194,slow=3.3,SNR=3.1
HTL Hartland 58.86 335 *e*P **P 00 06 26.6 -0.7**
HTL AMb AMB 00 06 37.3
comp=Z,229nm,2.4s,mb5.8
HTL AMS AMS 00 25 52.8
comp=Z,3µm,36.8s,MS5.1
HTL Hartland 58.86 335 P **P 00 06 26.6 -0.7**
HTL AMb AMB 00 06 37.3
comp=Z,229nm,2.4s,mb5.8
HTL AMS AMS 00 25 52.8
comp=Z,3µm,36.8s
M18A Lyman 58.87 56⇑P **P 00 06 27.5 0.0**
baz=59,SNR=14
L20A Wamsutter 58.88 55⇑P **P 00 06 27.4 -0.2**
baz=59,SNR=17
KOGS Kog 58.89 319 *i* P **P 00 06 27.1 -0.5**
KOGS *e*S **S** **00 14 38.5 +6.8**
NOQ North Oquirrh 58.91 58⇑*e*P **P 00 06 28.3 +0.5**
comp=Z,464nm,1.3s,mb6.3
NOQ *e*pP pP 00 06 33.8 -1.0
NOQ *e*sP sP 00 06 35.4 -2.1
NOQ *e* 00 06 42.5
N16A Rees Ranch, Co 58.92 58 ⇓P **P 00 06 28.7 +0.9**
baz=59
SOKA Soboth 58.98 320⇑*i*P **P 00 06 28.8 +0.6**
comp=Z,51nm,1.5s,mb5.3
ZIMR 58.99 310 ⇓P **P 00 06 28.6 +0.3**
ZIMR 58.99 310⇓*i*P **P 00 06 28.6 +0.3**
BFO Black Forest 58.99 325 P **P 00 06 28.9 +0.7**
comp=Z,485nm,0.9s,mb6.5,SNR=23
BFO Black Forest 58.99 325 *e*P **P 00 06 28.2 0.0**
comp=Z,236nm,1.5s,mb6.0
BFO *e*pP pP 00 06 36.4 +1.1
BFO *e*S **S** **00 14 33.7 +0.8**
BFO Black Forest 58.99 325 *e*P **P 00 06 28.2 0.0**
BFO *e**PP pP 00 06 36.4 +1.1
BFO *e*S **S** **00 14 33.7 +0.8**
BFO pmax pmax
comp=Z,236nm,1.5s,mb6.0
BFO Black Forest 58.99 325 *e*P **P 00 06 28.2 0.0**
comp=Z,236nm,1.5s,mb6.0
BFO *e*pP pP 00 06 36.4 +1.1
BFO *e*S **S** **00 14 33.7 +0.8**
CTU Camp Tracy 58.99 58⇑*e*P **P 00 06 28.7 +0.3**
comp=Z,386nm,1.4s,mb6.2
CTU pP pP 00 06 34.4 -1.1
CTU *e*sP sP 00 06 36.2 -1.9
CTU *e* 00 06 42.6
PERS Pernice 59.00 319 *i* P **P 00 06 28.9 +0.6**
PERS *e*S **S** **00 14 39.0 +5.9**
KBA Koelnbreinsper 59.02 321 *i* P **P 00 06 29.9 +1.5**
comp=Z,229nm,1.6s,mb6.0,SNR=64
P12A McGill 59.05 61⇑P **P 00 06 29.5 +0.7**
baz=59,SNR=21
N17A Moffit Pass 59.06 57 ⇓P **P 00 06 28.9 +0.1**
baz=59,SNR=8.1
M19A Rock Springs 59.09 56⇑P **P 00 06 28.5 -0.5**
baz=59,SNR=7.6
DUG Dugway 59.10 59⇑P **P 00 06 30.1 +1.0**
baz=59,SNR=100
DUG Dugway 59.10 59⇑*e*P **P 00 06 29.9 +0.8**
DUG *e**PP pP 00 06 34.6 -1.5
DUG *e**SP sP 00 06 36.9 -1.9
DUG *e* 00 07 18.7
DUG *e*S **S** **00 14 33.6 -0.9**
DUG pmax pmax
comp=Z,76nm,0.9s,mb5.7
DUG MLR MLR
comp=Z,2µm,20.0s,MS5.2
DUG Dugway 59.10 59⇑*e*P **P 00 06 29.9 +0.8**
comp=Z,76nm,0.9s,mb5.7
DUG *e*pP pP 00 06 34.6 -1.6
DUG *e*sP sP 00 06 36.9 -2.0
DUG *e* 00 06 44.0
DUG *e*PcP PcP 00 07 18.7 +1.1
DUG *e*S **S** **00 14 33.6 -1.0**
DUG LR LR
comp=Z,2µm,20.0s,MS5.2
SPAK Spaichingen-Ko 59.11 325 *e*P **P 00 06 29.4 +0.4**
O15A The Old Anders 59.13 59⇑P **P 00 06 30.5 +1.1**
baz=59,SNR=13
Q10A Clear Creek Ra 59.14 63⇑P **P 00 06 30.3 +0.9**
baz=59,SNR=20
CDF Champ du Feu 59.14 326⇑*i*P **P 00 06 29.5 +0.2**
comp=Z,707nm,1.6s,mb6.2
CDF Champ du Feu 59.14 326⇑*i*P **P 00 06 29.5 +0.2**
CDF pmax pmax
comp=Z,353nm,1.6s,mb6.1
CDF Champ du Feu 59.14 326⇑*i*P **P 00 06 29.5 +0.2**
comp=Z,353nm,1.6s,mb6.1
JLU Jordanelle 59.17 58⇑*i*P **P 00 06 30.5 +0.9**
comp=Z,551nm,1.4s,mb6.4
JLU pP pP 00 06 35.5 -1.2
JLU *e*sP sP 00 06 37.6 -1.8
JLU *e* 00 06 44.4
WATA Walderalm 59.20 322⇓*i*P **P 00 06 30.1 +0.5**
comp=Z,71nm,1.0s,mb5.7,SNR=36
L21A Rawlins 59.23 54⇑P **P 00 06 30.1 +0.2**
baz=59,SNR=157
SAO San Andreas Ge 59.24 68⇑*e*P **P 00 06 30.4 +0.3**
SAO *e**SP sP 00 06 37.5 -2.3
SAO *e*S **S** **00 14 34.4 -2.0**
SAO pmax pmax
comp=Z,146nm,1.2s,mb5.9
SAO MLR MLR
comp=Z,3µm,22.0s,MS5.3
SAO San Andreas Ge 59.24 68⇑*e*P **P 00 06 30.4 +0.3**
comp=Z,146nm,1.2s,mb5.9
SAO *e*sP sP 00 06 37.5 -2.3
SAO *e* 00 06 44.7
SAO *e*S **S** **00 14 34.4 -2.0**
SAO LR LR
comp=Z,3µm,22.0s,MS5.3
RETA Reutte 59.24 323⇓*i*P **P 00 06 29.8 -0.2**
comp=Z,30nm,1.0s,mb5.3,SNR=19
WTTA Wattenberg 59.25 322 *i* P **P 00 06 30.9 +0.8**
comp=Z,240nm,1.9s,mb5.9,SNR=56
OBKA Obir 59.26 320 *i* P **P 00 06 31.1 +1.0**
comp=Z,150nm,1.1s,mb6.0,SNR=84
MOTA Moosalm 59.30 323 *i* P **P 00 06 30.7 +0.3**
comp=Z,31nm,0.9s,mb5.3,SNR=25
DYA Yadsworthy 59.31 335 *e*P **P 00 06 29.9 -0.5**
DYA AMb AMB 00 06 39.9
comp=Z,298nm,1.7s,mb6.0
DYA *e* 00 24 09.9
DYA AMS AMS 00 40 35.8
comp=Z,3µm,13.6s,MS5.7
DYA Yadsworthy 59.31 335 P **P 00 06 29.9 -0.5**
DYA AMb AMB 00 06 39.9
comp=Z,298nm,1.7s,mb6.0
DYA 00 24 09.9
DYA AMS AMS 00 40 35.8
comp=Z,3µm,13.6s
LIBD Limburg 59.32 326 *e*P **P 00 06 30.7 +0.2**
ECH Echery 59.35 326 *e*P **P 00 06 30.9 +0.2**
ECH Echery 59.35 326⇑*i*P **P 00 06 30.2 -0.5**
ECH *e**PP pP 00 06 36.3 -1.5
ECH pmax pmax
comp=Z,164nm,1.2s,mb5.9
ECH MLR MLR
comp=Z,5µm,20.0s,MS5.6
ECH Echery 59.35 326⇑*i*P **P 00 06 30.2 -0.6**
comp=Z,164nm,1.2s,mb5.9
ECH *e*pP pP 00 06 36.3 -1.5
ECH *e*sP sP 00 06 38.5 -2.0
ECH *e* 00 06 44.6
ECH LR LR
comp=Z,5µm,20.0s,MS5.6
ELZG Elazig 59.35 297 *i* P **P 00 06 31.5 +0.6**
MYKA Terra Mystica 59.37 321⇑*i*P **P 00 06 31.4 +0.5**
comp=Z,86nm,1.8s,mb5.5
P13A Bates Ranch, G 59.37 60 ⇓P **P 00 06 31.8 +0.8**
baz=59,SNR=89
Q11A Duckwater 59.37 62⇑P **P 00 06 31.9 +0.9**
baz=59,SNR=16
MLAC Mammoth Lakes 59.37 65⇑P **P 00 06 33.1 +2.0**
baz=59,SNR=12
KIP Kipapa 59.40 109 *e*P **P 00 06 31.5 +0.1**
KIP *e**PP pP 00 06 36.5 -1.9
KIP *e**SP sP 00 06 38.9 -2.2
KIP pmax pmax
comp=Z,422nm,1.4s,mb6.3
KIP MLR MLR
comp=Z,2µm,21.0s,MS5.2
KIP Kipapa 59.40 109 *e*P **P 00 06 31.5 +0.2**
comp=Z,422nm,1.4s,mb6.3
KIP *e*pP pP 00 06 36.5 -1.9
KIP *e*sP sP 00 06 38.9 -2.3
KIP *e* 00 06 45.8
KIP LR LR
comp=Z,2µm,21.0s,MS5.2
ELDT Eldivan 59.40 302 *i* P **P 00 06 29.3 -1.9**
PVL Pavlikeni 59.40 310 P **P 00 06 31.5 +0.3**
M20A Sweetwater, Wa 59.40 55 ⇓P **P 00 06 31.5 +0.3**
baz=59,SNR=26
N18A Larsen Ranch, 59.40 56 ⇓P **P 00 06 31.0 -0.2**
baz=59
DAU Daniels Canyon 59.41 58 *e*P **P 00 06 32.3 +1.1**
DAU *e**SP sP 00 06 36.8 -4.2
DAU *e**SP sP 00 06 39.3 -1.7
DAU pmax pmax
comp=Z,803nm,1.6s,mb6.5
DAU Daniels Canyon 59.41 58 *e*P **P 00 06 32.3 +1.0**
comp=Z,803nm,1.6s,mb6.5
DAU *e*sP sP 00 06 36.8 -4.2
DAU *e*sP sP 00 06 39.3 -1.6
DAU *e* 00 06 46.5
L22A Ellis Ranch, M 59.45 53⇑P **P 00 06 32.1 +0.6**
baz=59,SNR=102
Q12A Willow Creek R 59.47 61⇑P **P 00 06 32.9 +1.2**
baz=59,SNR=26
DIYA Diyarbakir 59.48 296 *i* P **P 00 06 31.5 -0.3**
MOZS Mozjanca 59.49 320 *i* P **P 00 06 32.2 +0.5**
FELD Feldberg im Sc 59.49 325 *e*P **P 00 06 31.5 -0.2**
HON Honolulu 59.49 109 *e*P **P 00 06 31.9 -0.1**
O16A Springville 59.51 58 ⇓P **P 00 06 33.1 +1.1**
baz=59
MEZF Maizieres J'vi 59.52 328⇑*i*P **P 00 06 32.3 +0.4**
comp=Z,1µm,1.5s,mb6.3
MEZF Maizieres J'vi 59.52 328⇑*i*P **P 00 06 32.3 +0.4**
comp=Z,1µm,1.5s,mb6.6
RWWY Rawlins 59.52 54⇑*e*P **P 00 06 32.0 0.0**
comp=Z,645nm,1.4s,mb6.5
RWWY *e*S **S** **00 14 39.3 -0.7**
ABTA Abfaltersbach 59.53 321⇑*i*P **P 00 06 32.0 0.0**
comp=Z,126nm,2.3s,mb5.5,SNR=45
TPH Tonopah 59.53 64 PFAKE 00 06 40.0 +7.9
TPH LR LR
comp=Z,3µm,19.0s,MS5.4
M21A Separation Pea 59.55 54⇑P **P 00 06 32.0 -0.3**
baz=59,SNR=60
NLU North Lily Min 59.55 59⇑*e*P **P 00 06 33.2 +0.9**
comp=Z,496nm,1.4s,mb6.3
NLU pP pP 00 06 37.6 -1.7
NLU *e*sP sP 00 06 40.1 -1.9
NLU *e*sP sP 00 06 47.5 +5.6
P14A Drum Mountains 59.56 60⇑P **P 00 06 33.4 +1.1**
baz=59,SNR=94
DAVA Damuels 59.63 324⇑*i*P **P 00 06 32.9 +0.3**
comp=Z,85nm,2.3s,mb5.4,SNR=17
N19A John Jarvie Ra 59.63 56⇑P **P 00 06 32.7 -0.1**
baz=59,SNR=14
MPU Maple Canyon 59.64 58⇑*e*P **P 00 06 33.6 +0.7**
comp=Z,365nm,1.5s,mb6.2
MPU *e*pP pP 00 06 38.4 -1.6
MPU *e*sP sP 00 06 40.8 -1.8
MPU *e* 00 06 47.7
R10A Warm Springs 59.65 63⇑P **P 00 06 33.4 +0.5**
baz=59,SNR=14
FETA Feichten 59.69 323 *i* P **P 00 06 33.8 +0.7**
comp=Z,53nm,1.2s,mb5.5,SNR=26
LJU Ljubljana 59.70 320 *e*P **P 00 06 33.4 +0.2**
LJU *e* 00 06 42.6
LJU *e* 00 08 48.5
LJU Ljubljana 59.70 320 *e*P **P 00 06 33.4 +0.2**
LJU *e* 00 06 42.6
LJU *e* 00 08 48.5
LJU *e* 00 09 59.2
MOF Molkenrain 59.70 326 *e*P **P 00 06 33.5 +0.3**
MOF Molkenrain 59.70 326 *e*P **P 00 06 33.5 +0.3**
JMB Yambol 59.72 309 P **P 00 06 33.7 +0.3**
JMB Yambol 59.72 309 P **P 00 06 33.7 +0.3**
JMB Yambol 59.72 309 P **P 00 06 30.7 -2.7**
CADS Cadrg 59.72 320 *i* P **P 00 06 33.1 -0.2**
HAU Haudompre 59.72 327⇑*i*P **P 00 06 33.2 -0.1**
comp=Z,454nm,1.5s,mb6.0
HAU *e*MLR MLR
comp=Z,5µm,21.2s,MS5.3
HAU Haudompre 59.72 327⇑*i*P **P 00 06 33.2 -0.1**
HAU pmax pmax
comp=Z,227nm,1.5s,mb6.0
HAU MLR MLR
comp=Z,5µm,21.3s,MS5.6
HAU Haudompre 59.72 327⇑*i*P **P 00 06 33.2 -0.1**
comp=Z,227nm,1.5s,mb6.0
HAU LR LR
comp=Z,5µm,21.3s,MS5.6
CCA1 Carnmenellis 59.76 336 *e*P **P 00 06 32.4 -1.1**
CCA1 AMb AMB 00 06 34.2
comp=Z,224nm,1.2s,mb6.1
CCA1 *e* 00 25 04.1
CCA1 AMS AMS 00 38 29.1
comp=Z,2µm,20.0s,MS5.3
CCA1 Carnmenellis 59.76 336 P **P 00 06 32.4 -1.1**
CCA1 AMb AMB 00 06 34.2
comp=Z,224nm,1.2s,mb6.1
CCA1 00 25 04.1
CCA1 AMS AMS 00 38 29.1
comp=Z,2µm,20.0s
SGKT Sivrigoynuk 59.76 304 *i* P **P 00 06 32.6 -1.1**
O17A Robinson Place 59.77 57⇑P **P 00 06 35.3 +1.6**
baz=60,SNR=108
SISC Sisak 59.77 318 P **P 00 06 34.2 +0.5**
SISC Sisak 59.77 318 *i* P **P 00 06 34.2 +0.5**
HINF Hinteralfeld 59.80 326⇑*i*P **P 00 06 33.6 -0.2**
comp=Z,526nm,1.5s,mb6.0
HINF Hinteralfeld 59.80 326⇑*i*P **P 00 06 33.6 -0.2**
HINF pmax pmax
comp=Z,263nm,1.5s,mb6.0
HINF Hinteralfeld 59.80 326⇑*i*P **P 00 06 33.6 -0.2**
comp=Z,263nm,1.5s,mb6.0
JOHN Johnston Islan 59.80 123 *e*P **P 00 06 33.5 -0.7**
comp=Z,848nm,1.6s,mb6.5
JOHN *e*pP pP 00 06 39.5 -1.7

JOHN LR LR
comp=Z,3µm,22.0s,MS5.3
MARD Mardin 59.80 295 *i* P **P 00 06 32.6 -1.4**
Q13A Wheeler Ranch, 59.82 61 ⇊P **P 00 06 35.2 +1.1**
baz=60,SNR=49
P15A Leamington 59.84 59 ⇊P **P 00 06 35.0 +0.8**
baz=60,SNR=48
R11A Troy Canyon, C 59.84 62 ⇑P **P 00 06 34.9 +0.6**
baz=60,SNR=82
VOY Vojsko 59.87 320⇑*e*P **P 00 06 34.1 -0.2**
VOY *e* 00 06 42.9
VOY *e* 00 07 11.0
VOY *e* 00 07 34.7
CDAG Cicekdag 59.88 301 *i* P **P 00 06 32.6 -1.9**
S10A Tonopah Range, 59.88 63 ⇑P **P 00 06 35.2 +0.6**
baz=60,SNR=63
O18A Roosevelt 59.94 57 ⇊P **P 00 06 35.7 +0.8**
baz=60,SNR=25
M22A Cedar Creek Ra 59.97 54 ⇑P **P 00 06 34.8 -0.3**
baz=60,SNR=13
N20A Spence Gulch, 59.98 55 ⇑P **P 00 06 35.9 +0.7**
baz=60,SNR=78
BBS Basel-Blauen 59.99 325 *e*P **P 00 06 35.0 -0.1**
P16A Fountain Green 60.00 58 ⇊P **P 00 06 36.3 +1.0**
baz=60,SNR=18
BR131 Keskin Array S 60.02 302⇑*i*P **P 00 06 36.2 +0.8**
comp=Z,24nm,0.5s,mb5.5
BR131 *e*PcP PcP 00 07 21.2 -0.1
BR131 *e*PP PP 00 08 46.6 -0.8
BR131 LR LR
comp=Z,3µm,20.0s,MS5.4
BOJS Bojanci 60.02 319 *i* P **P 00 06 35.2 -0.2**
BOJS *e* 00 06 44.7
Q14A Sevier Lake (B 60.03 60 ⇊P **P 00 06 36.4 +0.8**
baz=60,SNR=64
DIVS Divibare 60.09 315 P **P 00 06 34.7 -1.2**
TIN Tinemaha 60.10 65 ⇑P **P 00 06 37.4 +1.4**
baz=60
NGP Nagpur 60.13 252 *e*PKP **P 00 06 35.2 -1.3**
NGP *ex* x 00 06 46.0
comp=Z,501nm,1.5s
NGP *ex* x 00 14 46.5
R12A Pony Springs, 60.19 61 ⇊P **P 00 06 37.1 +0.5**
baz=60,SNR=13
O19A Miners Draw (B 60.19 56 ⇊P **P 00 06 36.7 0.0**
baz=60,SNR=17
TRI Trieste 60.20 320⇑*i*P **P 00 06 35.7 -0.9**
TRI *PP pP 00 06 41.9 -1.8
TRI pmax pmax
comp=Z,75nm,1.1s,mb5.6
TRI MLR MLR
comp=Z,7µm,19.0s,MS5.8
TRI Trieste 60.20 320⇑*i*P **P 00 06 35.7 -0.9**
comp=Z,75nm,1.1s,mb5.6
TRI pP pP 00 06 41.9 -1.7
TRI *es*P sP 00 06 44.2 -2.1
TRI *e* 00 06 50.9
TRI LR LR
comp=Z,7µm,19.0s,MS5.8
KNDS Knezji Dol 60.22 320 *i* P **P 00 06 36.4 -0.3**
KNDS *e* 00 06 45.7
JSA Saint Aubin 60.22 333 *e*P **P 00 06 35.5 -1.2**
JSA AMb AMB 00 06 46.0
comp=Z,231nm,1.6s,mb6.0
JSA *e* 00 25 18.2
JSA AMS AMS 00 40 34.7
comp=Z,3µm,12.7s,MS5.7
JSA Saint Aubin 60.22 333 P **P 00 06 35.5 -1.2**
JSA AMb AMB 00 06 46.0
comp=Z,231nm,1.6s,mb6.0
JSA 00 25 18.2
JSA AMS AMS 00 40 34.7
comp=Z,3µm,12.7s
LOMF Lomont 60.24 326 *e*P **P 00 06 36.9 0.0**
LOMF Lomont 60.24 326 *e*P **P 00 06 36.9 0.0**
N21A Black Mountain 60.27 55 ⇑P **P 00 06 37.3 +0.1**
baz=60,SNR=42
Q15A Fillmore 60.32 59 ⇊P **P 00 06 38.5 +1.0**
baz=60,SNR=35
FLN La Foliniere 60.33 332⇑*i*P **P 00 06 37.0 -0.5**
comp=Z,506nm,1.4s,mb6.1,baz=14
FLN *e*MLR MLR
comp=Z,6µm,22.2s,MS5.4
FLN La Foliniere 60.33 332⇑*i*P **P 00 06 37.0 -0.5**
FLN pmax pmax
comp=Z,253nm,1.4s,mb6.1
FLN MLR MLR
comp=Z,6µm,22.3s,MS5.7
FLN La Foliniere 60.33 332⇑*i*P **P 00 06 37.0 -0.5**
comp=Z,253nm,1.4s,mb6.1
FLN LR LR
comp=Z,6µm,22.3s,MS5.7
PGB Panagyurishte 60.35 311 P **P 00 06 37.9 +0.2**
BBAL Bala 60.35 302 *i* P **P 00 06 37.0 -0.8**
ELBA Catalca 60.37 307 *i* P **P 00 06 35.9 -2.0**
COWI Conover 60.38 38⇑*e*P **P 00 06 35.3 -2.5**
comp=Z,786nm,2.2s,mb6.3
COWI *ep*P pP 00 06 42.2 -2.7
COWI *es*P sP 00 06 45.2 -2.3
COWI *e* 00 06 50.9
COWI *e*S **S 00 14 46.5 -4.3**
COWI LR LR
comp=Z,4µm,21.0s,MS5.5
DIM Dimitrovgrad 60.41 309 P **P 00 06 38.7 +0.6**
PHWY Pilot Hill 60.41 53⇑*i*P **P 00 06 37.6 -0.5**
comp=Z,379nm,1.7s,mb6.2
PHWY *ep*P pP 00 06 43.7 -1.5
PHWY *es*P sP 00 06 46.7 -1.2
PHWY *e* 00 06 53.0
RCTC Rector, Farmer 60.42 66 ⇑P **P 00 06 38.4 +0.1**
baz=60,SNR=9.6
S11A Rachel 60.42 63 ⇑P **P 00 06 39.2 +1.0**
baz=60
P17A Butcher Ranch, 60.42 58 ⇑P **P 00 06 39.0 +0.7**
baz=60,SNR=34
LDF La Druitiere 60.43 331⇑*i*P **P 00 06 37.7 -0.4**
comp=Z,486nm,1.4s,mb6.0
LDF La Druitiere 60.43 331⇑*i*P **P 00 06 37.7 -0.4**
LDF pmax pmax
comp=Z,243nm,1.4s,mb6.0
LDF La Druitiere 60.43 331⇑*i*P **P 00 06 37.7 -0.4**
comp=Z,243nm,1.4s,mb6.0
TMUT Trail Mountain 60.43 58⇑*e*P **P 00 06 38.7 +0.4**
comp=Z,142nm,1.2s,mb5.9
TMUT *es*P sP 00 06 46.5 -1.6
TMUT *e* 00 06 53.8
TMUT *e*PcP PcP 00 07 22.4 -0.6
P18A Preston Nutter 60.44 57 ⇑P **P 00 06 39.6 +1.2**
baz=60,SNR=104
GRAC Grapevine Rang 60.45 64 ⇑P **P 00 06 39.8 +1.4**
baz=60,SNR=57
ATAB Bozova 60.52 297 *i* P **P 00 06 38.1 -0.8**
TUE Stuetta 60.52 324⇑*i*P **P 00 06 39.5 +0.7**
comp=Z,416nm,1.6s,mb6.3
TUE *es*P sP 00 06 46.9 -1.7
TUE *e* 00 06 53.5
TUE *e*S **S 00 14 50.0 -2.7**
TUE LR LR
comp=Z,12µm,22.0s,MS6.0
R13A O'Grain Ranch, 60.53 61 ⇊P **P 00 06 39.8 +0.8**
baz=60,SNR=35
N22A Wattenberg Ran 60.57 54 ⇑P **P 00 06 39.0 -0.2**
baz=60,SNR=13
VTS Vitosha 60.59 312 P **P 00 06 38.9 -0.4**
VTS Vitosha 60.59 312 P **P 00 06 38.9 -0.4**
VTS Vitosha 60.59 312 P **P 00 06 39.1 -0.2**
PLD Plovdiv 60.60 310 P **P 00 06 39.1 -0.3**
PLD Plovdiv 60.60 310 P **P 00 06 39.1 -0.3**
PLD Plovdiv 60.60 310 P **P 00 06 39.2 -0.2**
O20A White River Ci 60.62 55 ⇊P **P 00 06 39.8 +0.2**
baz=60,SNR=28
ECSD EROS Data Cent 60.71 45⇑*e*P **P 00 06 38.4 -1.7**
comp=Z,130nm,0.9s,mb6.1
ECSD *ep*P pP 00 06 45.4 -1.7
ECSD *es*P sP 00 06 47.6 -2.2
ECSD *e* 00 06 52.6
ECSD *e*S **S 00 14 53.5 -1.6**
ECSD LR LR
comp=Z,3µm,19.0s,MS5.5
CWC Cottonwood Cre 60.71 65 ⇑P **P 00 06 41.1 +0.9**
baz=60,SNR=11
R14A James Farms, M 60.74 60 ⇑P **P 00 06 41.4 +1.0**
baz=60
S12A Delamar Landin 60.76 62 ⇑P **P 00 06 41.5 +0.9**
baz=60,SNR=31
GRR Gorron 60.76 332⇑*i*P **P 00 06 40.0 -0.4**
comp=Z,696nm,1.5s,mb6.3
GRR Gorron 60.76 332⇑*i*P **P 00 06 40.0 -0.4**
GRR pmax pmax
comp=Z,348nm,1.5s,mb6.3
GRR Gorron 60.76 332⇑*i*P **P 00 06 40.0 -0.4**
comp=Z,348nm,1.5s,mb6.3
O21A Pagoda 60.79 55 ⇊P **P 00 06 40.6 -0.1**
baz=60,SNR=12
Q16A Castle Valley 60.79 58 ⇊P **P 00 06 41.7 +1.0**
baz=60,SNR=91
SRU San Rafael 60.82 58 ⇊P **P 00 06 41.3 +0.3**
baz=60,SNR=44
SRU San Rafael 60.82 58⇑*e*P **P 00 06 41.6 +0.6**
SRU *e*PP pP 00 06 46.4 -1.6
SRU *e*SP sP 00 06 48.8 -1.9
SRU pmax pmax
comp=Z,351nm,1.2s,mb6.4
SRU San Rafael 60.82 58⇑*e*P **P 00 06 41.6 +0.6**
comp=Z,351nm,1.2s,mb6.4
SRU *ep*P pP 00 06 46.4 -1.6
SRU *es*P sP 00 06 48.8 -1.9
SRU *e* 00 06 55.7
MVU Marysvale 60.82 59 PFAKE 00 06 50.0 +9.0
MVU LR LR
comp=Z,2µm,20.0s,MS5.2
MSU Marysvale 60.83 59⇑*e*P **P 00 06 42.1 +1.1**
MSU *e* 00 08 56.4
MSU pmax pmax
comp=Z,495nm,1.5s,mb6.4
MSU Marysvale 60.83 59⇑*e*P **P 00 06 42.1 +1.1**
comp=Z,495nm,1.5s,mb6.4
MSU *e* 00 06 57.4
MSU *e*PP PP 00 08 56.4 +1.8
P19A Cripple Cowboy 60.84 56 ⇑P **P 00 06 41.4 +0.3**
baz=61,SNR=30
GZT Gaziantep 60.87 298 *i* P **P 00 06 40.2 -1.0**
BORA Eskisehir 60.90 305 *i* P **P 00 06 39.1 -2.3**
LOR Lormes 60.94 328⇑*i*P **P 00 06 41.1 -0.5**
comp=Z,729nm,1.5s,mb6.3,baz=24
LOR *e*MLR MLR
comp=Z,6µm,21.8s,MS5.4
LOR Lormes 60.94 328⇑*i*P **P 00 06 41.1 -0.5**
LOR pmax pmax
comp=Z,364nm,1.5s,mb6.3
LOR MLR MLR
comp=Z,6µm,21.8s,MS5.7
LOR Lormes 60.94 328⇑*i*P **P 00 06 41.1 -0.5**
comp=Z,364nm,1.5s,mb6.3
LOR LR LR
comp=Z,6µm,21.8s,MS5.7
Q18A Rafter H Ranch 60.96 57 ⇑P **P 00 06 42.1 +0.2**
baz=61,SNR=28
T11A Corn Creek, Al 60.96 63 ⇊P **P 00 06 42.7 +0.8**
baz=61,SNR=56
PLE Pljevlja 60.97 315 *e*P **P 00 06 42.7 +0.8**
PLE Pljevlja 60.97 315 *e*P **P 00 06 42.7 +0.8**
PLE Pljevlja 60.97 315 *e*P **P 00 06 42.7 +0.8**
RZN Rozhen 60.98 310 P **P 00 06 42.3 +0.3**
NVLJ Novalja 61.00 319 P **P 00 06 41.1 -1.0**
NVLJ Novalja 61.00 319 *i* P **P 00 06 41.1 -1.0**
DAC Darwin (Calif) 61.02 65 PFAKE 00 06 50.0 +7.6
DAC LR LR
comp=Z,3µm,19.0s,MS5.5
SMMC Simmler 61.05 67 ⇊P **P 00 06 42.9 +0.3**
baz=61
ARUT Antelope Range 61.07 61 *e*P **P 00 06 43.4 +0.8**
ARUT pmax pmax
comp=Z,170nm,1.2s,mb6.0
ARUT Antelope Range 61.07 61 *e*P **P 00 06 43.4 +0.8**
comp=Z,170nm,1.2s,mb6.0
R15A Junction 61.07 60 ⇊P **P 00 06 44.0 +1.4**
baz=61,SNR=24
ESKT Eskisehir 61.10 304 *i* P **P 00 06 40.2 -2.6**
FURC Furnace Creek, 61.10 64 ⇑P **P 00 06 43.7 +0.8**
baz=61,SNR=40
CABF La Chapelle 61.10 326⇑*i*P **P 00 06 42.8 0.0**
comp=Z,521nm,1.3s,mb6.2
CABF La Chapelle 61.10 326⇑*i*P **P 00 06 42.8 0.0**
CABF pmax pmax
comp=Z,261nm,1.3s,mb6.2
CABF La Chapelle 61.10 326⇑*i*P **P 00 06 42.8 0.0**
comp=Z,261nm,1.3s,mb6.2
S13A Holt Ranch, En 61.11 61 ⇑P **P 00 06 43.8 +0.8**
baz=61,SNR=24
P20A De Beque 61.15 56 ⇑P **P 00 06 43.1 -0.1**
baz=61,SNR=24
HYF Humbligny 61.18 329 *e*P **P 00 06 43.1 -0.2**
S14A Cedar City 61.18 61 ⇊P **P 00 06 44.2 +0.8**
baz=61,SNR=17
SGMF Saint Gilles 61.19 333⇑*i*P **P 00 06 43.1 -0.2**
comp=Z,534nm,1.4s,mb6.2
SGMF Saint Gilles 61.19 333⇑*i*P **P 00 06 43.1 -0.2**
SGMF pmax pmax
comp=Z,267nm,1.4s,mb6.2
SGMF Saint Gilles 61.19 333⇑*i*P **P 00 06 43.1 -0.2**
comp=Z,267nm,1.4s,mb6.2
SSF Saint Saulge 61.21 328⇑*i*P **P 00 06 43.0 -0.4**
comp=Z,593nm,1.6s,mb6.2
SSF Saint Saulge 61.21 328⇑*i*P **P 00 06 43.0 -0.4**
SSF pmax pmax
comp=Z,297nm,1.6s,mb6.2
SSF Saint Saulge 61.21 328⇑*i*P **P 00 06 43.0 -0.4**
comp=Z,297nm,1.6s,mb6.2
UPM Unac-Piva 61.22 315⇑*i*P **P 00 06 43.7 +0.1**
UPM Unac-Piva 61.22 315⇑*i*P **P 00 06 43.7 +0.1**
ROSF Rostrenen 61.23 334⇑*i*P **P 00 06 43.4 -0.2**
comp=Z,220nm,0.9s,mb6.0
ROSF Rostrenen 61.23 334⇑*i*P **P 00 06 43.4 -0.2**
ROSF pmax pmax
comp=Z,110nm,0.9s,mb6.0
ROSF Rostrenen 61.23 334⇑*i*P **P 00 06 43.4 -0.2**
comp=Z,110nm,0.9s,mb6.0
RDO Rodhopi 61.24 309 P **P 00 06 44.1 +0.3**
RDO Rodhopi 61.24 309 P **P 00 06 44.1 +0.3**
RDO Rodhopi 61.24 309 *e*P **P 00 06 43.9 +0.1**
MPMC Manual Prospec 61.25 65 ⇊P **P 00 06 44.9 +1.0**
baz=61,SNR=35
IVA Berane 61.26 314⇑*i*P **P 00 06 44.2 +0.4**
IVA Berane 61.26 314⇑*i*P **P 00 06 44.3 +0.4**
R16A Teasdale 61.26 59 ⇊P **P 00 06 45.1 +1.1**
baz=61,SNR=59
ISA Isabella 61.27 66 ⇑P **P 00 06 44.0 -0.1**
baz=61,SNR=13
ISA Isabella 61.27 66⇑*e*P **P 00 06 44.1 +0.1**
ISA *e*PP pP 00 06 49.4 -1.7
ISA *e*SP sP 00 06 51.7 -2.1
ISA pmax pmax
comp=Z,353nm,1.9s,mb6.2
ISA Isabella 61.27 66⇑*e*P **P 00 06 44.1 0.0**
comp=Z,353nm,1.9s,mb6.2
ISA *ep*P pP 00 06 49.4 -1.8
ISA *es*P sP 00 06 51.6 -2.1
ISA *e* 00 06 58.5
AKL Akola 61.28 254⇑*i*P **P 00 06 43.5 -0.7**
AKL *ex* x 00 06 47.4
comp=Z,448nm,1.5s
AKL *i* x x 00 14 58.2
KKB Krupnik 61.29 311 P **P 00 06 43.9 -0.2**
CCUT Cedar City 61.31 61⇑*e*P **P 00 06 44.9 +0.7**
comp=Z,584nm,1.9s,mb6.4
CCUT *es*P sP 00 06 52.3 -1.7
CCUT *e* 00 06 59.6
ALN Alexandroupoli 61.32 309 P **P 00 06 43.8 -0.5**
ALN Alexandroupoli 61.32 309 P **P 00 06 43.8 -0.5**
ALN Alexandroupoli 61.32 309 *e*P **P 00 06 44.4 +0.1**
U10A Ash Meadows, A 61.33 64 ⇊P **P 00 06 45.6 +1.2**
baz=61,SNR=36
MMB Musomiste 61.36 311 P **P 00 06 44.0 -0.6**
Q19A Hogan Spring (61.37 57 ⇑P **P 00 06 44.4 -0.3**
baz=61,SNR=60
R17A Hanksville Air 61.39 58 ⇊P **P 00 06 44.8 0.0**
baz=61,SNR=48
BST Brest 61.40 334 *e*P **P 00 06 45.1 +0.4**
BST Brest 61.40 334 *e*P **P 00 06 45.1 +0.4**
P21A Newcastle 61.42 55 ⇊P **P 00 06 45.8 +0.7**
baz=61
KWAJ Kwajalein Atol 61.43 150 *e*P **P 00 06 44.7 -0.6**
KWAJ *ep*P pP 00 06 51.1 -1.3
DAV Davao City (W) 61.46 198 *e*P **P 00 06 45.3 -0.2**
DAV *e*PcP PcP 00 07 24.0 -3.3
DAV *e*S **S 00 15 03.8 -1.4**
DAV LR LR
comp=Z,4µm,19.0s,MS5.6
PKM Peak Mountain 61.49 68 ⇑P **P 00 06 46.8 +1.2**
baz=61,SNR=9.2
PVY Plav 61.49 314⇑*i*P **P 00 06 45.1 -0.3**
PVY Plav 61.49 314⇑*i*P **P 00 06 45.1 -0.3**
AVF Avril sur Loir 61.50 328⇑*i*P **P 00 06 45.0 -0.4**
comp=Z,498nm,1.6s,mb6.1
AVF Avril sur Loir 61.50 328⇑*i*P **P 00 06 45.0 -0.4**
AVF pmax pmax
comp=Z,249nm,1.6s,mb6.1
AVF Avril sur Loir 61.50 328⇑*i*P **P 00 06 45.0 -0.4**
comp=Z,249nm,1.6s,mb6.1
S15A Panguitch 61.53 60 ⇊P **P 00 06 47.4 +1.6**
baz=61,SNR=15
SMF Signal de Mont 61.54 328⇑*i*P **P 00 06 45.0 -0.7**
comp=Z,350nm,1.4s,mb6.0
SMF Signal de Mont 61.54 328⇑*i*P **P 00 06 45.0 -0.7**
SMF pmax pmax
comp=Z,175nm,1.4s,mb6.0
SMF Signal de Mont 61.54 328⇑*i*P **P 00 06 45.0 -0.7**
comp=Z,175nm,1.4s,mb6.0
NVR Nevrokopi 61.55 310 *e*P **P 00 06 46.2 +0.4**
NKY Niksic 61.55 315⇑*i*P **P 00 06 45.0 -0.9**
NKY Niksic 61.55 315⇑*i*P **P 00 06 45.0 -0.9**
NKY Niksic 61.55 315⇑*i*P **P 00 06 45.0 -0.9**
KUZU Kuzuini 61.56 298 *i* P **P 00 06 43.5 -2.5**
BRY Bratogost 61.60 315⇑*i*P **P 00 06 45.1 -1.0**
BRY Bratogost 61.60 315⇑*i*P **P 00 06 45.2 -0.9**
BRY Bratogost 61.60 315⇑*i*P **P 00 06 45.2 -1.0**
T12A Moapa 61.60 62 ⇊P **P 00 06 47.3 +1.0**
baz=61,SNR=12
T13A Saint George 61.61 62 ⇊P **P 00 06 47.2 +0.9**
baz=61,SNR=28
KDHN Kadinhani 61.61 303 *i* P **P 00 06 42.4 -3.9**
QUIF Quistinic 61.62 334⇑*i*P **P 00 06 46.2 0.0**
comp=Z,375nm,1.0s,mb6.2
QUIF Quistinic 61.62 334⇑*i*P **P 00 06 46.2 0.0**
QUIF pmax pmax
comp=Z,187nm,1.0s,mb6.2
QUIF Quistinic 61.62 334⇑*i*P **P 00 06 46.2 0.0**
comp=Z,187nm,1.0s,mb6.2
ARVC Arvin 61.63 67 ⇑P **P 00 06 46.0 -0.4**
baz=61
U11A Corn Creek 61.65 63 ⇑P **P 00 06 47.5 +1.0**
baz=61
SKO Skopje 61.66 313 P **P 00 06 46.6 0.0**
SKO Skopje 61.66 313 *i* P **P 00 06 46.7 +0.1**
SKO Skopje 61.66 313 P **P 00 06 46.6 0.0**
BCI Bajram Curri 61.68 314 PN **P 00 06 46.8 +0.1**
Q20A Ridgley Place, 61.68 56 ⇑P **P 00 06 46.4 -0.4**
baz=61,SNR=33
KAVA Kavala 61.68 310 P **P 00 06 46.8 +0.1**
R18A Canyonlands Na 61.69 58 ⇑P **P 00 06 46.7 -0.1**
baz=61,SNR=42
BHJ Bhuj 61.70 262 *e*PKP **P 00 06 46.5 -0.6**
BHJ AMb AMB 00 06 51.4
comp=Z,353nm,1.4s,mb6.3
LRMC Laurel Mountai 61.71 65 ⇊P **P 00 06 47.8 +0.8**
baz=62,SNR=12
S16A Weppner Ranch, 61.74 59 ⇑P **P 00 06 48.3 +1.1**
baz=62,SNR=82
ISCO Idaho Springs 61.74 54⇑*i*P **P 00 06 47.2 0.0**
ISCO *e*PP pP 00 06 52.8 -1.4
ISCO *e*SP sP 00 06 55.2 -1.7
ISCO *e*S **S 00 15 07.7 -0.7**
ISCO pmax pmax
comp=Z,300nm,1.4s,mb6.2
ISCO MLR MLR
comp=Z,3µm,19.0s,MS5.5
ISCO Idaho Springs 61.74 54⇑*i*P **P 00 06 47.2 0.0**
comp=Z,300nm,1.4s,mb6.2
ISCO *ep*P pP 00 06 52.8 -1.4
ISCO *es*P sP 00 06 55.2 -1.7
ISCO *e* 00 07 01.8
ISCO *e*S **S 00 15 07.7 -0.7**
ISCO LR LR
comp=Z,3µm,19.0s,MS5.5
ALT Altintas 61.76 304 *i* P **P 00 06 35.9 -11**
OGNE Ogallala 61.76 50⇑*e*P **P 00 06 46.4 -0.9**
comp=Z,1µm,1.7s,mb6.8
OGNE *ep*P pP 00 06 52.4 -1.9
OGNE *es*P sP 00 06 55.4 -1.6
OGNE *e* 00 07 01.4
OGNE LR LR
comp=Z,8µm,19.0s,MS5.9
DURS Dursunbey 61.77 306 *i* P **P 00 06 44.6 -2.7**
BOLV Bolvadin 61.80 304 *i* P **P 00 06 45.7 -1.9**
SHOC Shoshone 61.81 64 ⇊P **P 00 06 48.8 +1.1**
baz=62,SNR=9.8
BGF Bois d'Agland 61.82 329⇑*i*P **P 00 06 47.2 -0.4**
comp=Z,556nm,1.5s,mb6.2
BGF Bois d'Agland 61.82 329⇑*i*P **P 00 06 47.2 -0.4**
BGF pmax pmax
comp=Z,278nm,1.5s,mb6.2
BGF Bois d'Agland 61.82 329⇑*i*P **P 00 06 47.2 -0.4**
comp=Z,278nm,1.5s,mb6.2
POHA Pohakuloa 61.83 107 *e*P **P 00 06 47.5 -0.4**
comp=Z,426nm,1.3s,mb6.4
POHA *ep*P pP 00 06 53.1 -1.9
POHA *e* 00 07 02.1
POHA LR LR
comp=Z,2µm,20.0s,MS5.3
SRS Serrai 61.84 311 P **P 00 06 48.5 +0.7**
SRS Serrai 61.84 311 P **P 00 06 48.5 +0.7**
TTG Podgorica 61.84 315⇑*i*P **P 00 06 46.7 -1.1**
TTG Podgorica 61.84 315⇑*i*P **P 00 06 46.7 -1.1**
TTG Podgorica 61.84 315⇑*i*P **P 00 06 46.7 -1.1**
T14A Hurricane 61.84 61 ⇊P **P 00 06 48.7 +0.8**
baz=62,SNR=34
STON Ston 61.85 316 P **P 00 06 46.9 -0.9**
STON Ston 61.85 316 *i* P **P 00 06 46.9 -0.9**
GULE Gulek 61.86 300 *i* P **P 00 06 46.8 -1.2**
SMCO Snowmass 61.89 55⇑*e*P **P 00 06 48.5 +0.3**
comp=Z,287nm,1.1s,mb6.3
SMCO *ep*P pP 00 06 54.1 -1.1
SMCO *es*P sP 00 06 56.4 -1.5
SMCO *e* 00 07 02.5
SMCO PcP PcP 00 07 28.7 -0.1
BALY Balya 61.91 307 *i* P **P 00 06 46.8 -1.5**
GDZ Gediz 61.93 305 *i* P **P 00 06 45.7 -2.7**
U12A Valley of Fire 61.93 62 ⇑P **P 00 06 49.4 +1.0**
baz=62,SNR=14
SBC Santa Barbara 61.94 68 ⇑P **P 00 06 49.5 +0.9**
baz=62
VAY Valandovo 61.94 311 P **P 00 06 47.7 -0.8**
VAY Valandovo 61.94 311⇑*i*P **P 00 06 48.2 -0.3**
VAY Valandovo 61.94 311 P **P 00 06 47.7 -0.8**
R19A Curley Farm, L 61.98 57 ⇊P **P 00 06 49.2 +0.4**
baz=62,SNR=49
YURE YUREGIR 61.99 299 *i* P **P 00 06 43.5 -5.4**
PV04 Paradox Valley 62.00 57⇑*e*P **P 00 06 49.3 +0.4**
PV04 *ep*P pP 00 06 54.3 -1.6
PV04 *es*P sP 00 06 56.7 -1.9
PV04 *e* 00 07 03.6
LPL La Plagne 62.01 325⇑*i*P **P 00 06 49.5 +0.6**
comp=Z,639nm,1.5s,mb6.2
LPL La Plagne 62.01 325⇑*i*P **P 00 06 49.5 +0.6**
LPL pmax pmax
comp=Z,319nm,1.5s,mb6.2
LPL La Plagne 62.01 325⇑*i*P **P 00 06 49.5 +0.6**
comp=Z,320nm,1.5s,mb6.2
Q21A Lamborn Mesa, 62.02 56 ⇑P **P 00 06 49.3 +0.2**
baz=62,SNR=38
LPG La Plagne 62.02 325⇑*i*P **P 00 06 49.8 +0.8**
comp=Z,647nm,1.3s,mb6.3
LPG La Plagne 62.02 325⇑*i*P **P 00 06 49.8 +0.8**
LPG pmax pmax
comp=Z,323nm,1.3s,mb6.3
LPG La Plagne 62.02 325⇑*i*P **P 00 06 49.8 +0.8**
comp=Z,323nm,1.3s,mb6.3
PUK Puka 62.03 314 PN **P 00 06 48.7 -0.4**
HCY Herceg Novi 62.03 315⇑*i*P **P 00 06 48.5 -0.6**
HCY Herceg Novi 62.03 315⇑*i*P **P 00 06 48.5 -0.6**
HCY Herceg Novi 62.03 315⇑*i*P **P 00 06 48.5 -0.5**
BUM Brajici-Budva 62.06 315⇑*i*P **P 00 06 49.0 -0.3**
BUM Brajici-Budva 62.06 315⇑*i*P **P 00 06 49.1 -0.2**
COBT Iskenderun 62.06 298 *i* P **P 00 06 47.9 -1.5**
S17A Black Ridge (B 62.08 59 ⇑P **P 00 06 50.0 +0.6**
baz=62,SNR=24
T15A Red Dirt Ranch 62.12 60 ⇑P **P 00 06 50.5 +0.8**
baz=62,SNR=22
OSI Osito Adit 62.13 67 ⇊P **P 00 06 50.7 +0.8**
baz=62
OSI Osito Adit 62.13 67⇑*e*P **P 00 06 50.5 +0.7**
comp=Z,395nm,1.5s,mb6.3
OSI *es*P sP 00 06 57.4 -2.2

OSI e 00 07 04.6
BHV Bhavnagar 62.13 259 *e*PKP **P 00 06 49.2 -0.7**
U13A Pakoon Wash 62.13 62 ⇓P **P 00 06 50.7 +0.8**
baz=62,SNR=28
EDW2 Edwards Air Fo 62.15 66 ⇓P **P 00 06 50.6 +0.6**
baz=62,SNR=58
V11A Goodsprings 62.16 63 ⇓P **P 00 06 51.1 +1.1**
baz=62,SNR=22
BHD Baghdad 62.17 290 *i* P **P 00 06 47.8 -2.4**
BHD *i* PP PP 00 09 11.0 +4.4
BHD *i* PPP 00 10 29.0
BHD *i* S **S 00 15 12.9 -1.1**
GSC Goldstone 62.17 65 ⇑P **P 00 06 50.9 +0.7**
baz=62,SNR=22
GSC Goldstone 62.17 65 ⇓*e*P **P 00 06 51.1 +1.0**
GSC *e**PP pP 00 06 55.5 -1.7
GSC *e**SP sP 00 06 57.8 -2.1
GSC *e* 00 09 06.1
GSC *e*S **S 00 15 17.0 +3.0**
GSC pmax pmax
comp=Z,259nm,1.5s,mb6.1
GSC Goldstone 62.17 65 ⇓*e*P **P 00 06 51.1 +1.0**
comp=Z,259nm,1.5s,mb6.1
GSC *e*pP pP 00 06 55.5 -1.7
GSC *e*sP sP 00 06 57.8 -2.1
GSC *e* 00 07 04.7
GSC *e*PP PP 00 09 06.1 -0.4
GSC *e*S **S 00 15 16.9 +3.0**
SOH Sokhos 62.18 311 P **P 00 06 50.0 -0.1**
SOH Sokhos 62.18 311 P **P 00 06 50.0 -0.1**
SOH Sokhos 62.18 311 *e*P **P 00 06 50.0 -0.1**
Q22A Crested Butte, 62.20 55 ⇓P **P 00 06 50.9 +0.7**
baz=62,SNR=52
TCF Toulx Ste Croi 62.20 329 ⇑*i*P **P 00 06 49.9 -0.3**
comp=Z,471nm,1.5s,mb6.1
TCF Toulx Ste Croi 62.20 329 ⇑*i*P **P 00 06 49.9 -0.3**
TCF pmax pmax
comp=Z,236nm,1.5s,mb6.1
TCF Toulx Ste Croi 62.20 329 ⇑*i*P **P 00 06 49.9 -0.3**
comp=Z,236nm,1.5s,mb6.1
DEMI Demirci 62.21 306 *i* P **P 00 06 43.5 -6.8**
PLDF La Plantade 62.23 328 *e*P **P 00 06 51.3 +1.0**
PLDF La Plantade 62.23 328 *e*P **P 00 06 51.3 +1.0**
AGO Saint Agoulin 62.25 328 *e*P **P 00 06 51.5 +1.0**
AGO Saint Agoulin 62.25 328 *e*P **P 00 06 51.5 +1.0**
KHU Kahuku 62.26 108 P **P 00 06 50.5 -0.4**
KRUS Krusevo 62.27 313 *i* P **P 00 06 50.1 -0.6**
ULC Ulcinj 62.28 314 ⇑*i*P **P 00 06 50.2 -0.5**
ULC Ulcinj 62.28 314 ⇑*i*P **P 00 06 50.3 -0.4**
ULC Ulcinj 62.28 314 ⇑*i*P **P 00 06 50.3 -0.5**
S18A Hurst Farm, Bl 62.29 58 ⇑P **P 00 06 51.0 +0.2**
baz=62,SNR=76
PV01 Paradox Valley 62.34 57 *e*P **P 00 06 51.5 +0.3**
comp=Z,769nm,0.9s,mb6.8
PV01 *e*sP sP 00 06 59.2 -1.8
PV01 *e* 00 07 06.7
R20A Redvale 62.35 56 ⇓P **P 00 06 52.1 +0.8**
baz=62,SNR=106
MFF Saint Martin d 62.35 331 ⇑*i*P **P 00 06 51.2 0.0**
comp=Z,701nm,1.5s,mb6.3
MFF Saint Martin d 62.35 331 ⇑*i*P **P 00 06 51.2 0.0**
MFF pmax pmax
comp=Z,351nm,1.5s,mb6.3
MFF Saint Martin d 62.35 331 ⇑*i*P **P 00 06 51.2 0.0**
comp=Z,350nm,1.5s,mb6.3
TUQ Turquoise Moun 62.36 64 ⇓P **P 00 06 52.5 +1.2**
baz=62
BSC Santa Cruz Isl 62.37 68 ⇑P **P 00 06 52.2 +0.8**
baz=62
U14A Mt Trumbull 62.40 61 ⇑P **P 00 06 52.6 +1.0**
baz=62,SNR=22
T16A Glen Canyon Da 62.44 60 ⇓P **P 00 06 51.8 -0.1**
baz=62,SNR=7.7
GDM Grand'Maison 62.44 326 *e*P **P 00 06 52.2 +0.4**
GDM Grand'Maison 62.44 326 *e*P **P 00 06 52.2 +0.4**
OUR Ouranopolis 62.45 310 P **P 00 06 51.6 -0.3**
OUR Ouranopolis 62.45 310 P **P 00 06 51.6 -0.3**
R21A Cimarron 62.45 56 ⇑P **P 00 06 52.3 +0.3**
baz=62,SNR=42
BNI Bardonecchia 62.46 325 ⇑*i*P **P 00 06 52.2 +0.3**
BNI *e**PP pP 00 06 58.0 -1.0
BNI *e**SP sP 00 06 59.9 -1.8
BNI pmax pmax
comp=Z,162nm,1.3s,mb6.0
BNI MLR MLR
comp=Z,8μm,20.0s,MS5.9
BNI Bardonecchia 62.46 325 ⇑*i*P **P 00 06 52.2 +0.3**
comp=Z,162nm,1.3s,mb6.0
BNI *e*pP pP 00 06 58.0 -1.0
BNI *e*sP sP 00 06 59.9 -1.7
BNI *e* 00 07 07.6
BNI LR LR
comp=Z,8μm,20.0s,MS5.9
HORT Hortiatis 62.46 311 P **P 00 06 51.6 -0.4**
HORT Hortiatis 62.46 311 P **P 00 06 51.6 -0.4**
V12A Nelson 62.46 63 ⇑P **P 00 06 53.2 +1.2**
baz=62,SNR=23
BLG Laguna Peak 62.47 67 ⇓P **P 00 06 52.4 +0.3**
baz=62
THE Thessaloniki 62.47 311 P **P 00 06 51.6 -0.4**
THE Thessaloniki 62.47 311 P **P 00 06 51.6 -0.4**
VLC Villacollemand 62.47 322 ⇑*i*P **P 00 06 51.9 -0.1**
comp=Z,2μm,2.3s,mb6.8
VLC *e*sP sP 00 06 59.7 -2.0
VLC LR LR
comp=Z,7μm,21.0s,MS5.8
RRX Edison Barstow 62.49 65 ⇓P **P 00 06 53.1 +0.9**
baz=62
LIA Limnos Island 62.49 309 P **P 00 06 52.5 +0.3**
LIA Limnos Island 62.49 309 P **P 00 06 52.5 +0.3**
LIA Limnos Island 62.49 309 *e*P **P 00 06 52.4 +0.2**
S19A Harvey Farm, M 62.51 57 ⇓P **P 00 06 52.5 +0.1**
baz=62,SNR=67
YAYL Yayladag 62.55 298 *i* P **P 00 06 51.2 -1.5**
PYM Petit Puy Mans 62.56 328 *e*P **P 00 06 54.0 +1.4**
PYM Petit Puy Mans 62.56 328 *e*P **P 00 06 54.0 +1.4**
PLG Polygyros 62.57 310 P **P 00 06 52.3 -0.4**
PLG Polygyros 62.57 310 P **P 00 06 52.3 -0.4**
PLG Polygyros 62.57 310 *e*P **P 00 06 52.2 -0.5**
BIA Bitola 62.58 312 P **P 00 06 51.5 -1.3**
BIA Bitola 62.58 312 *i* P **P 00 06 52.6 -0.1**
BIA Bitola 62.58 312 P **P 00 06 51.5 -1.3**
KHAL Karahalli 62.58 305 *i* P **P 00 06 50.1 -2.7**
DECC Green Verdugo 62.60 67 ⇓P **P 00 06 53.4 +0.4**
baz=62
AKHS Akhisar 62.63 306 *i* P **P 00 06 50.1 -3.1**
OHR Ohrid 62.64 313 P **P 00 06 51.9 -1.3**
OHR Ohrid 62.64 313 *i* P **P 00 06 52.3 -0.9**
OHR Ohrid 62.64 313 P **P 00 06 51.9 -1.3**
T17A Navajo Res., N 62.66 59 ⇑P **P 00 06 53.4 +0.1**
baz=62,SNR=40
TIR Tirane 62.68 314 P **P 00 06 52.9 -0.5**
TIR Tirane 62.68 314 P **P 00 06 52.9 -0.5**
U15A North Rim 62.68 60 ⇑P **P 00 06 53.9 +0.4**
baz=62,SNR=26
SSB Saint Sauveur 62.70 327 ⇑*e*P **P 00 06 52.9 -0.6**
SSB *e**SP sP 00 07 01.2 -2.0
SSB *e* 00 09 08.4
SSB pmax pmax
comp=Z,130nm,1.4s,mb5.9
SSB MLR MLR
comp=Z,4μm,21.0s,MS5.5
SSB Saint Sauveur 62.70 327 ⇑*e*P **P 00 06 52.9 -0.6**
comp=Z,130nm,1.4s,mb5.9
SSB *e*sP sP 00 07 01.2 -2.0
SSB *e* 00 07 07.7
SSB *e*PP PP 00 09 08.4 -2.5
SSB LR LR
comp=Z,4μm,21.0s,MS5.5
MWC Mount Wilson 62.72 66 ⇑*e*P **P 00 06 54.1 +0.3**
MWC *e**PP pP 00 06 59.3 -1.5
MWC pmax pmax
comp=Z,374nm,1.5s,mb6.3
MWC Mount Wilson 62.72 66 ⇑*e*P **P 00 06 54.0 +0.3**
comp=Z,374nm,1.5s,mb6.3
MWC *e*pP pP 00 06 59.3 -1.5
MWC *e* 00 07 08.4
PASC Pasadena Art C 62.72 66 *e*P **P 00 06 53.3 -0.5**
comp=Z,925nm,1.4s,mb6.7
PASC *e*pP pP 00 06 59.0 -1.9
PASC *e* 00 07 08.1
MBDF Montbardon 62.75 325 *e*P **P 00 06 53.9 +0.1**
ISP Isparta 62.76 304 P **P 00 06 54.6 +0.6**
ISP Isparta 62.76 304 P **P 00 06 54.0 0.0**
ISP Isparta 62.76 304 P **P 00 06 54.0 0.0**
ISP Isparta 62.76 304 ⇑*i*P **P 00 06 54.3 +0.3**
ORIF Oris-en-Rattie 62.76 326 ⇑*i*P **P 00 06 54.3 +0.4**
comp=Z,513nm,1.3s,mb6.2
ORIF *e*MLR MLR
comp=Z,8μm,21.8s,MS5.5
ORIF Oris-en-Rattie 62.76 326 ⇑*i*P **P 00 06 54.3 +0.4**
ORIF pmax pmax
comp=Z,256nm,1.3s,mb6.2
ORIF Oris-en-Rattie 62.76 326 ⇑*i*P **P 00 06 54.3 +0.4**
comp=Z,256nm,1.3s,mb6.2
HEC Hector,Ludlow 62.77 65 ⇓P **P 00 06 54.9 +0.8**
baz=62,SNR=39
PRK Paraskevi 62.77 308 P **P 00 06 53.9 -0.2**
PRK Paraskevi 62.77 308 P **P 00 06 53.9 -0.2**
PRK Paraskevi 62.77 308 *e*P **P 00 06 53.8 -0.3**
R22A Saguache, Gunn 62.83 55 ⇓P **P 00 06 55.3 +0.9**
baz=62
T18A Mexican Hat 62.83 58 ⇑P **P 00 06 54.3 -0.2**
baz=63,SNR=40
W12A Cal Nev Ari 62.84 63 ⇑P **P 00 06 55.3 +0.7**
baz=63
BFSC Mount Baldy Ra 62.84 66 ⇓P **P 00 06 55.5 +0.9**
baz=63,SNR=52
KDM Kudat 62.89 207 P **P 00 06 55.8 +0.7**
PAIG Paliouri 62.91 310 P **P 00 06 54.5 -0.5**
PAIG Paliouri 62.91 310 P **P 00 06 54.5 -0.5**
SIGR SIGRI 62.93 308 P **P 00 06 55.0 -0.1**
SIGR SIGRI 62.93 308 P **P 00 06 55.0 -0.1**
LDFC Landfair 62.96 63 *e*P **P 00 06 55.7 +0.4**
comp=Z,172nm,1.0s,mb6.1
LDFC *e*PcP PcP 00 07 33.5 +0.2
SURF Saint Ours 62.98 325 *e*P **P 00 06 55.8 +0.5**
SURF Saint Ours 62.98 325 *e*P **P 00 06 55.8 +0.5**
LBL Lubilhac 63.01 328 *e*P **P 00 06 56.3 +0.7**
LBL Lubilhac 63.01 328 *e*P **P 00 06 56.3 +0.7**
S21A Coal Bank Pass 63.02 56 ⇓P **P 00 06 56.4 +0.7**
baz=63,SNR=44
GMRC Granite Mounta 63.04 64 ⇓P **P 00 06 56.7 +0.7**
baz=63,SNR=31
U17A Shonto 63.06 59 ⇓P **P 00 06 56.5 +0.5**
baz=63,SNR=41
BBRC Big Bear Solar 63.08 65 ⇑P **P 00 06 57.3 +1.1**
baz=63
VIVF Saint-Julien-l 63.08 327 ⇑*i*P **P 00 06 55.8 -0.2**
comp=Z,301nm,1.5s,mb5.9
VIVF Saint-Julien-l 63.08 327 ⇑*i*P **P 00 06 55.8 -0.2**
VIVF pmax pmax
comp=Z,151nm,1.5s,mb5.9
VIVF Saint-Julien-l 63.08 327 ⇑*i*P **P 00 06 55.8 -0.2**
comp=Z,151nm,1.5s,mb5.9
SNCC San Nicolas Is 63.08 68 ⇓P **P 00 06 56.9 +0.7**
baz=63
SNCC San Nicolas Is 63.08 68 *e*P **P 00 06 56.1 -0.1**
FMP Fort Macarthur 63.09 67 ⇓P **P 00 06 56.4 +0.1**
baz=63
JFWS Jewell Farm 63.11 40 ⇑*i*P **P 00 06 53.4 -2.9**
JFWS *e*S **S 00 15 20.5 -5.0**
JFWS pmax pmax
comp=Z,751nm,1.8s,mb6.5
JFWS MLR MLR
comp=Z,5μm,20.0s,MS5.7
JFWS Jewell Farm 63.11 40 ⇑*i*P **P 00 06 53.4 -2.8**
comp=Z,751nm,1.8s,mb6.5
JFWS *e*S **S 00 15 20.5 -5.0**
JFWS LR LR
comp=Z,5μm,20.0s,MS5.7
KZN Kozani 63.11 312 P **P 00 06 55.6 -0.7**
KZN Kozani 63.11 312 P **P 00 06 55.6 -0.7**
KZN Kozani 63.11 312 *e*P **P 00 06 56.0 -0.3**
V14A Boquillas Ranc 63.13 62 ⇓P **P 00 06 57.4 +0.8**
baz=63,SNR=41
MVCO Mesa Verde 63.21 57 ⇑P **P 00 06 57.1 +0.1**
baz=63,SNR=38
MVCO Mesa Verde 63.21 57 ⇑*e*P **P 00 06 57.0 0.0**
comp=Z,528nm,1.9s,mb6.3
MVCO *e*pP pP 00 07 02.6 -1.4
MVCO sP sP 00 07 05.0 -1.7
MVCO *e* 00 07 10.8
MVCO *e*S **S 00 15 25.8 -1.1**
MVCO LR LR
comp=Z,7μm,19.0s,MS5.9
V15A Kaibab Nationa 63.28 61 ⇓P **P 00 06 58.3 +0.8**
baz=63,SNR=45
SAOF Saorge 63.28 324 *e*P **P 00 06 56.4 -1.0**
SAOF Saorge 63.28 324 *e*P **P 00 06 56.4 -1.0**
RJF Les Rejaudoux 63.28 329 ⇑*i*P **P 00 06 57.4 0.0**
comp=Z,711nm,1.7s,mb6.2
RJF *e*MLR MLR
comp=Z,9μm,21.2s,MS5.6
RJF Les Rejaudoux 63.28 329 ⇑*i*P **P 00 06 57.4 0.0**
RJF pmax pmax
comp=Z,356nm,1.7s,mb6.2
RJF MLR MLR
comp=Z,9μm,21.3s,MS5.9
RJF Les Rejaudoux 63.28 329 ⇑*i*P **P 00 06 57.4 0.0**
comp=Z,356nm,1.7s,mb6.2
RJF LR LR
comp=Z,9μm,21.3s,MS5.9
AUTN L'Aution 63.30 324 *e*P **P 00 06 56.7 -0.8**
AUTN L'Aution 63.30 324 *e*P **P 00 06 56.7 -0.8**
SCIA State Center 63.31 43 ⇑*e*P **P 00 06 55.8 -1.8**
comp=Z,122nm,0.7s,mb6.1
SCIA *e*pP pP 00 07 02.9 -1.8
SCIA sP sP 00 07 05.1 -2.2
SCIA *e* 00 07 10.9
SCIA PcP PcP 00 07 33.4 -1.2
SCIA *e*S **S 00 15 25.7 -2.3**
SCIA LR LR
comp=Z,4μm,19.0s,MS5.7
TOUF Mont Tournerai 63.32 324 *e*P **P 00 06 57.4 -0.3**
TOUF Mont Tournerai 63.32 324 *e*P **P 00 06 57.4 -0.3**
BLCB Balcova 63.33 307 P **P 00 06 57.0 -0.8**
BLCB Balcova 63.33 307 P **P 00 06 57.0 -0.8**
U16A Tuba City 63.33 60 ⇓P **P 00 06 58.3 +0.5**
baz=63,SNR=52
CIS Catalina Islan 63.33 67 ⇓P **P 00 06 58.2 +0.4**
baz=63
DNZL Cakiroluk 63.34 305 *i* P **P 00 06 55.5 -2.3**
W13A Hualapai Mount 63.36 62 ⇓P **P 00 06 58.9 +0.8**
baz=63,SNR=27
T19A Beclabito 63.39 58 ⇓P **P 00 06 58.5 +0.3**
baz=63,SNR=54
NEE2 Needles Airpor 63.41 63 ⇑P **P 00 06 58.8 +0.4**
baz=63
LUCF Luceram 63.42 324 *e*P **P 00 06 58.2 -0.1**
SBF Sospel 63.42 324 ⇑*i*P **P 00 06 57.7 -0.6**
comp=Z,254nm,1.1s,mb6.0
SBF Sospel 63.42 324 ⇑*i*P **P 00 06 57.7 -0.6**
SBF pmax pmax
comp=Z,127nm,1.1s,mb6.0
SBF Sospel 63.42 324 ⇑*i*P **P 00 06 57.7 -0.6**
comp=Z,127nm,1.1s,mb6.0
AQU L'Aquila 63.44 319 ⇑*i*P **P 00 06 58.7 +0.2**
AQU *e**PP pP 00 07 04.1 -1.5
AQU *e**SP sP 00 07 06.3 -1.9
AQU MLR MLR
comp=Z,12μm,21.0s,MS6.0
AQU L'Aquila 63.44 319 ⇓*i*P **P 00 06 59.1 +0.6**
MVIF Mont Vial 63.46 324 *e*P **P 00 06 58.0 -0.5**
MVIF Mont Vial 63.46 324 *e*P **P 00 06 58.0 -0.5**
U18A Rough Rock, Ch 63.49 58 ⇑P **P 00 06 59.1 +0.2**
baz=63,SNR=29
W14A Seligman 63.52 62 ⇑P **P 00 07 00.0 +0.9**
baz=63,SNR=55
CAF Calviac 63.54 329 ⇑*i*P **P 00 06 59.5 +0.4**
comp=Z,534nm,1.4s,mb6.1
CAF Calviac 63.54 329 ⇑*i*P **P 00 06 59.5 +0.4**
CAF pmax pmax
comp=Z,267nm,1.4s,mb6.1
CAF Calviac 63.54 329 ⇑*i*P **P 00 06 59.5 +0.4**
comp=Z,267nm,1.4s,mb6.1
AOS Alonnisos 63.55 310 P **P 00 06 58.2 -1.0**
AOS Alonnisos 63.55 310 P **P 00 06 58.2 -1.0**
REVF Revere 63.56 324 *e*P **P 00 06 58.7 -0.5**
REVF Revere 63.56 324 *e*P **P 00 06 58.7 -0.5**
XOR Xorichti 63.57 310 P **P 00 06 58.0 -1.4**
XOR Xorichti 63.57 310 P **P 00 06 58.0 -1.4**
MURC Murrieta 63.58 66 ⇓P **P 00 06 59.6 +0.1**
baz=63,SNR=9.9
GOLH Golhisar 63.60 304 *i* P **P 00 06 55.5 -4.0**
CHOS Chios island 63.62 307 P **P 00 06 59.0 -0.7**
CHOS Chios island 63.62 307 *e*P **P 00 06 59.2 -0.5**
GAZI Gazipasa 63.63 301 *i* P **P 00 06 55.5 -4.2**
BELC Belle Mtn. Jos 63.63 65 ⇑P **P 00 07 00.3 +0.4**
baz=63
CALN Calern 63.65 325 *e*P **P 00 06 59.7 -0.1**
CALN Calern 63.65 325 *e*P **P 00 06 59.7 -0.1**
SDCO Great Sand Dun 63.66 54 ⇑*i*P **P 00 06 59.9 0.0**
comp=Z,581nm,1.7s,mb6.3
SDCO *e*pP pP 00 07 05.7 -1.4
SDCO *e* 00 07 13.5
SDCO *e*S **S 00 15 31.2 -1.3**
SDCO LR LR
comp=Z,5μm,19.0s,MS5.8
SCI San Clemente I 63.67 67 ⇑P **P 00 07 00.5 +0.4**
baz=63,SNR=5.5
T21A Navajo Lake 63.72 56 ⇓P **P 00 07 00.7 +0.4**
baz=63,SNR=14
SMRF Simiane la Rot 63.73 326 ⇑*i*P **P 00 07 00.7 +0.4**
comp=Z,409nm,1.5s,mb5.9
SMRF Simiane la Rot 63.73 326 ⇑*i*P **P 00 07 00.7 +0.4**
comp=Z,409nm,1.5s,mb6.2
THL Klokotos Trika 63.73 311 P **P 00 06 58.6 -1.8**
THL Klokotos Trika 63.73 311 *e*P **P 00 06 58.3 -2.1**
AYDN Tasoluk 63.73 306 *i* P **P 00 06 54.5 -6.0**
HYB Hyderabad 63.74 251 *e*P **P 00 07 00.5 -0.2**
HYB *e*S **S 00 15 36.0 +2.1**
HYB pmax pmax
comp=Z,260nm,1.0s,mb6.2
HYB Hyderabad 63.74 251 *e*P **P 00 07 00.5 -0.2**
comp=Z,260nm,1.0s,mb6.2
HYB *e*S **S 00 15 36.0 +2.1**
HYB Hyderabad 63.74 251 ⇑*i*P **P 00 07 00.5 -0.2**
comp=Z,130nm,1.0s,mb5.9
HYB *e*S **S 00 15 35.0 +1.1**
HYB LR LR 00 37 24.0
comp=Z,10nm,16.0s
MEV Metsovon 63.75 312 P **P 00 07 00.9 +0.4**
MEV Metsovon 63.75 312 P **P 00 07 00.9 +0.4**
IRM Iron Mountain 63.78 64 ⇑P **P 00 07 01.7 +0.9**
baz=64,SNR=56
LFF La Frestale 63.79 330 ⇑*i*P **P 00 07 01.0 +0.3**
comp=Z,700nm,1.5s,mb6.2
LFF La Frestale 63.79 330 ⇑*i*P **P 00 07 01.0 +0.3**
LFF pmax pmax
comp=Z,350nm,1.5s,mb6.2
LFF La Frestale 63.79 330 ⇑*i*P **P 00 07 01.0 +0.3**
comp=Z,350nm,1.5s,mb6.2
WUAZ Wupatki 63.82 60 ⇓P **P 00 07 01.8 +0.8**
baz=64,SNR=18
WUAZ Wupatki 63.82 60 ⇑*i*P **P 00 07 00.8 -0.2**
comp=Z,329nm,1.6s,mb6.1
WUAZ *e*pP pP 00 07 06.7 -1.5
WUAZ *e* 00 07 15.4
WUAZ *e*S **S 00 15 33.0 -1.5**
WUAZ LR LR
comp=Z,4μm,19.0s,MS5.6
U19A Dine' College, 63.82 58 ⇑P **P 00 07 01.2 +0.1**
baz=64,SNR=36
W15A Williams 63.83 61 ⇓P **P 00 07 02.6 +1.4**
baz=64,SNR=26
PFO Pinyon Flat Ob 63.83 65 P **P 00 07 01.5 +0.3**
comp=Z,407nm,1.5s,mb6.2,SNR=16
PFO Pinyon Flat Ob 63.83 65 ⇑P **P 00 07 01.5 +0.3**
baz=64,SNR=11
PFO Pinyon Flat Ob 63.83 65 ⇑*e*P **P 00 07 01.5 +0.3**
PFO *e**PP pP 00 07 06.5 -1.8
PFO 00 07 36.4
PFO *e*S **S 00 15 33.3 -1.4**
PFO pmax pmax
comp=Z,215nm,1.5s,mb6.0
PFO MLR MLR
comp=Z,4μm,19.0s,MS5.6
PFO Pinyon Flat Ob 63.83 65 ⇑*e*P **P 00 07 01.5 +0.3**
comp=Z,215nm,1.5s,mb6.0
PFO *e*pP pP 00 07 06.5 -1.7
PFO *e* 00 07 15.6
PFO PcP PcP 00 07 36.4 -0.4
PFO *e*S **S 00 15 33.3 -1.4**
PFO LR LR
comp=Z,4μm,19.0s,MS5.6
X13A Yucca 63.84 63 ⇓P **P 00 07 02.0 +0.9**
baz=64,SNR=49
KKM Kota Kinabalu 63.85 208 P **P 00 07 02.0 +0.5**
KKM Kota Kinabalu 63.85 208 ⇑*e*P **P 00 07 01.3 -0.2**
comp=Z,192nm,1.0s,mb6.1
KKM *e* 00 07 09.9
KKM *e*PcP PcP 00 07 36.7 -0.4
KKM LR LR
comp=Z,5μm,20.0s,MS5.7
FRF La Foret Royal 63.89 325 ⇑*i*P **P 00 07 00.8 -0.6**
comp=Z,384nm,1.4s,mb5.9
FRF La Foret Royal 63.89 325 ⇑*i*P **P 00 07 00.8 -0.6**
FRF pmax pmax
comp=Z,192nm,1.4s,mb5.9
FRF La Foret Royal 63.89 325 ⇑*i*P **P 00 07 00.8 -0.6**
comp=Z,192nm,1.4s,mb5.9
T22A Edith 63.89 56 ⇑P **P 00 07 02.0 +0.5**
baz=64,SNR=57
GCAM G?zelcaml? 63.90 306 *i* P **P 00 07 01.0 -0.5**
V17A Tonalea, Kykot 63.91 60 ⇓P **P 00 07 02.5 +0.8**
baz=64
U20A Newcomb 63.96 57 ⇑P **P 00 07 02.3 +0.3**
baz=64,SNR=12
JAN Janina 63.98 312 *e*P **P 00 07 02.6 +0.6**
LASF Ste Croix 63.99 327 ⇑*i*P **P 00 07 02.8 +0.7**
comp=Z,793nm,1.5s,mb6.2
PDMCI Parker Dam,Lak 64.00 63 ⇓P **P 00 07 02.7 +0.4**
baz=64,SNR=12
SMG Samos 64.01 306 *e*P **P 00 07 01.5 -0.8**
SDKM Sandakan 64.07 207 P **P 00 07 03.4 +0.5**
FKH Fakeheh 64.09 297 *e*P **P 00 07 03.8 +1.0**
V18A Ganado 64.11 59 ⇑P **P 00 07 03.4 +0.4**
baz=64,SNR=37
BC3 Big Chuckawall 64.13 64 ⇑P **P 00 07 03.8 +0.6**
baz=64,SNR=42
LMR La Mourre 64.13 325 ⇑*i*P **P 00 07 02.5 -0.5**
comp=Z,614nm,1.8s,mb6.0
LMR La Mourre 64.13 325 ⇑*i*P **P 00 07 02.5 -0.5**
LMR pmax pmax
comp=Z,307nm,1.8s,mb6.0
LMR La Mourre 64.13 325 ⇑*i*P **P 00 07 02.5 -0.5**
comp=Z,307nm,1.8s,mb6.0
AGG Agios Georgios 64.14 311 P **P 00 07 00.5 -2.6**
AGG Agios Georgios 64.14 311 P **P 00 07 00.5 -2.6**
AGG Agios Georgios 64.14 311 *e*P **P 00 07 01.9 -1.2**
W16A Flagstaff 64.15 60 ⇑P **P 00 07 04.1 +0.9**
baz=64,SNR=7.4
PHNC Paralimni 64.19 299 P **P 00 07 04.8 +1.3**
U21A Nageezi 64.19 57 ⇑P **P 00 07 03.6 +0.1**
baz=64,SNR=31
HWQ Hawqa 64.20 297 *e*P **P 00 07 04.0 +0.4**
KEK Kerkira 64.22 313 P **P 00 07 03.3 -0.3**
KEK Kerkira 64.22 313 P **P 00 07 03.3 -0.3**
KEK Kerkira 64.22 313 *e*P **P 00 07 02.9 -0.7**
MIB Mutribah 64.22 286 *e*P **P 00 07 03.9 +0.1**
MIB AMb AMB 00 07 14.5
comp=Z,856nm,1.4s,mb6.6
TURN Turunc 64.23 305 *i* P **P 00 07 04.3 +0.5**
IGT Igoumenitsa 64.24 313 P **P 00 07 03.0 -0.8**
IGT Igoumenitsa 64.24 313 P **P 00 07 03.0 -0.8**
ATAL Atalanti 64.25 310 P **P 00 07 02.7 -1.1**
109C Camp Elliot, M 64.26 66 ⇑P **P 00 07 04.4 +0.4**
baz=64
X14A Yava 64.27 62 ⇓P **P 00 07 05.0 +1.0**
baz=64,SNR=37
LKR Lokris 64.29 310 P **P 00 07 02.9 -1.2**
LKR Lokris 64.29 310 P **P 00 07 02.9 -1.2**
LKR Lokris 64.29 310 *e*P **P 00 07 03.1 -1.0**
MAMC Mammari 64.30 300 P **P 00 07 04.1 -0.1**
UMR Umm Al-Rimmam 64.31 285 *e*P **P 00 07 04.0 -0.4**
UMR AMb AMB 00 07 15.1
comp=Z,859nm,1.2s,mb6.7
PGF Pioggiola 64.32 323 ⇑*i*P **P 00 07 04.1 -0.1**
comp=Z,483nm,1.8s,mb5.9
PGF Pioggiola 64.32 323 ⇑*i*P **P 00 07 04.1 -0.1**
PGF pmax pmax
comp=Z,241nm,1.8s,mb5.9
PGF Pioggiola 64.32 323 ⇑*i*P **P 00 07 04.1 -0.1**
comp=Z,241nm,1.8s,mb5.9
Y12C Blythe 64.37 64 ⇓P **P 00 07 05.2 +0.5**
baz=64,SNR=26
BANOM Banah 64.37 276 P **P 00 07 06.0 +1.2**
SNR=14
BANOM Banah 64.37 276 P **P 00 07 06.0 +1.2**
SNR=14
BANOM Banah 64.37 276 P **P 00 07 06.0 +1.2**
SNR=14
BANOM Banah 64.37 276 P **P 00 07 06.0 +1.2**

SNR=14
BANOM **Banah** 64.37 276 P P 00 07 06.0 +1.2
SNR=14
BANOM **Banah** 64.37 276 P P 00 07 06.0 +1.2
SNR=14
BANOM **Banah** 64.37 276 P P 00 07 06.0 +1.2
SNR=14
EVR **Evrytania** 64.39 311 *e*P P 00 07 04.1 -0.7
V19A **Window Rock** 64.40 58 ⇓P P 00 07 04.6 -0.3
baz=64
CBKS **Cedar Bluff** 64.40 49⇑*e*P P 00 07 03.1 -1.7
CBKS *e**PP pP 00 07 09.0 -2.9
CBKS *e*S S 00 15 38.4 -3.3
CBKS MLR MLR
comp=Z,5μm,19.0s,MS5.7
CBKS **Cedar Bluff** 64.40 49⇑*e*P P 00 07 03.1 -1.7
CBKS *e*pP pP 00 07 09.0 -2.9
CBKS *e* 00 07 15.8
CBKS *e*S S 00 15 38.4 -3.3
CBKS LR LR
comp=Z,5μm,19.0s,MS5.7
BDRM **Kayabasi** 64.42 306 *i*P P 00 07 03.2 -1.7
W17A **Winslow** 64.44 60 ⇑P P 00 07 05.6 +0.5
baz=64
POO **Poona** 64.44 256 *e*PKP P 00 07 04.5 -0.8
POO AMb AMB 00 07 16.1
comp=Z,349nm,1.6s,mb6.1
CSS **Prodhromos** 64.46 300 ⇑P P 00 07 05.1 -0.2
comp=Z,2.5nm,1.2s
CSS **Prodhromos** 64.46 300 P P 00 07 04.4 -0.9
CSS **Prodhromos** 64.46 300 P P 00 07 04.4 -0.9
X15A **Humboldt** 64.47 61 ⇑P P 00 07 06.2 +0.9
baz=64,SNR=58
U22A **Llaves** 64.49 56 ⇓P P 00 07 06.1 +0.7
baz=64,SNR=66
MONP **Monument Peak** 64.50 66 ⇑P P 00 07 06.3 +0.8
baz=64,SNR=29
AKAS **Kas** 64.50 304 *i*P P 00 06 59.9 -5.6
V20A **Brimhall** 64.51 58 ⇑P P 00 07 05.3 -0.3
baz=64,SNR=17
ALFC **Alevga** 64.52 301 P P 00 07 04.4 -1.3
comp=Z,2.9nm,1.3s
Y13A **Salome** 64.55 63 ⇑P P 00 07 06.6 +0.7
baz=64,SNR=32
T25A **Trinidad** 64.56 54 ⇓P P 00 07 04.7 -1.2
baz=64,SNR=21
PTL **Penteli** 64.59 309 *e*P P 00 07 04.4 -1.7
BAR **Barrett** 64.60 66⇑*e*P P 00 07 05.7 -0.5
comp=Z,170nm,1.4s,mb5.9
BAR *e*pP pP 00 07 11.4 -1.9
BAR *e* 00 07 20.3
BAR *e*PP PP 00 09 27.1 -0.8
BAR *e*S S 00 15 41.5 -2.8
BHL **Bhannes** 64.64 298 *e*P P 00 07 06.8 +0.2
DSF **Desfina** 64.65 310 P P 00 07 04.3 -2.2
KBD **Kabd** 64.66 285 *e*P P 00 07 06.9 +0.2
KBD AMb AMB 00 07 17.5
comp=Z,363nm,1.3s,mb6.2
SWSC **Sam W. Stewart** 64.67 65 ⇓P P 00 07 07.1 +0.5
baz=64,SNR=16
ATHU **Athens Univers** 64.69 309 P P 00 07 06.2 -0.6
ATH **Athens Observa** 64.71 309 P P 00 07 06.2 -0.7
ATH **Athens Observa** 64.71 309 *e*P P 00 07 06.2 -0.7
Y14A **Wickenburg** 64.71 62 ⇓P P 00 07 07.3 +0.4
baz=64,SNR=18
W18A **Petrified Fore** 64.72 59 ⇑P P 00 07 07.6 +0.6
baz=64
U23A **El Rito** 64.75 56 ⇑P P 00 07 07.3 +0.1
baz=64,SNR=48
NAY **Al-Naaiem** 64.76 285 *e*P P 00 07 07.2 -0.1
NAY AMb AMB 00 07 17.9
comp=Z,405nm,1.3s,mb6.3
V21A **Milan** 64.77 57 ⇓P P 00 07 07.3 0.0
baz=64,SNR=8.9
KALE **Kalithea** 64.78 311 P P 00 07 05.8 -1.5
LONY **Lake Ozonia** 64.80 27⇑*i*P P 00 07 05.9 -1.4
comp=Z,282nm,1.0s,mb6.2
LONY *e*pP pP 00 07 12.6 -1.8
LONY *e*sP sP 00 07 14.9 -2.2
LONY *e* 00 07 20.0
LONY *e*S S 00 15 43.8 -2.6
LONY LR LR
comp=Z,4μm,20.0s,MS5.6
VLY **Voula,Athens** 64.80 309 *e*P P 00 07 07.0 -0.4
X16A **Lo Mia Camp, P** 64.80 61 ⇓P P 00 07 08.5 +1.0
baz=64,SNR=47
DVTC **Desert V Tower** 64.81 65 ⇓P P 00 07 08.3 +0.7
baz=65,SNR=8.7
EFP **Efpalio** 64.82 311 P P 00 07 05.9 -1.6
EFP **Efpalio** 64.82 311 *e*P P 00 07 06.8 -0.8
W19A **Sanders** 64.84 59 ⇑P P 00 07 08.3 +0.5
baz=65,SNR=44
PPCY **Paphos** 64.85 301 P P 00 07 07.1 -0.7
LTK **Loutraki** 64.88 310 P P 00 07 06.5 -1.5
LTK **Loutraki** 64.88 310 *e*P P 00 07 06.5 -1.5
GLA **Glamis** 64.90 64 ⇑P P 00 07 09.0 +0.8
baz=65,SNR=14
GLA **Glamis** 64.90 64⇑*e*P P 00 07 09.0 +0.8
GLA *e**SP sP 00 07 15.6 -2.3
GLA pmax pmax
comp=Z,368nm,1.4s,mb6.2
GLA **Glamis** 64.90 64⇑*e*P P 00 07 08.9 +0.8
comp=Z,368nm,1.4s,mb6.2
GLA *e*sP sP 00 07 15.6 -2.3
GLA *e* 00 07 22.7
V22A **San Miguel Ran** 64.90 56 ⇓P P 00 07 08.1 0.0
baz=65,SNR=28
Y15A **Casa Rosa Ranc** 64.92 62 ⇑P P 00 07 09.1 +0.8
baz=65,SNR=14
RDF **Al-Radifah** 64.94 285 *e*P P 00 07 08.9 +0.4
RDF AMb AMB 00 07 21.8
comp=Z,575nm,2.0s,mb6.3
U24A **Moreno Valley** 64.96 55 ⇓P P 00 07 08.6 +0.1
baz=65,SNR=17
QRN **Al-Qurain** 64.97 285 *e*P P 00 07 08.8 +0.1
QRN AMb AMB 00 07 13.4
comp=Z,672nm,1.9s,mb6.3
LAKA **Lakka** 64.97 311 P P 00 07 07.5 -1.0
RCY **Rachaya** 64.97 297 *e*P P 00 07 09.2 +0.6
NAIG **Nisos Aigina** 64.97 309 *e*P P 00 07 07.0 -1.6
UPR **University Cam** 64.98 311 P P 00 07 08.2 -0.4
UPR **University Cam** 64.98 311 *e*P P 00 07 08.6 0.0
ARG **Arkhangelos** 64.98 305 P P 00 07 08.3 -0.4
ARG **Arkhangelos** 64.98 305 P P 00 07 08.3 -0.4
ARG **Arkhangelos** 64.98 305 *e*P P 00 07 08.4 -0.3
APE **Apeiranthos** 65.00 307 P P 00 07 07.8 -1.0
APE **Apeiranthos** 65.00 307 P P 00 07 07.8 -1.0
KSU1 **Kansas State U** 65.02 47 *e*P P 00 07 07.6 -1.2
comp=Z,340nm,0.9s,mb6.4
KSU1 *e*S S 00 15 48.0 -1.3
KSU1 LR LR
comp=Z,6μm,20.0s,MS5.8
MTLF **Montolieu** 65.03 328⇑*i*P P 00 07 09.4 +0.5
comp=Z,496nm,1.4s,mb6.0
MTLF **Montolieu** 65.03 328⇑*i*P P 00 07 09.4 +0.5
MTLF pmax pmax
comp=Z,248nm,1.4s,mb6.0
MTLF **Montolieu** 65.03 328⇑*i*P P 00 07 09.4 +0.5
comp=Z,248nm,1.4s,mb6.0
PKME **Peaks-Kenny Pk** 65.03 23⇑*i*P P 00 07 08.0 -0.8
X17A **Forest Lakes** 65.08 60 ⇓P P 00 07 10.6 +1.2
baz=65,SNR=27
W20A **Ramah** 65.11 58 ⇑P P 00 07 09.3 -0.3
baz=65,SNR=27
GUR **Goura** 65.14 310 P P 00 07 08.4 -1.3
GUR **Goura** 65.14 310 *e*P P 00 07 08.7 -1.0
Z13A **Yuma Proving G** 65.16 63 ⇑P P 00 07 10.5 +0.6
baz=65,SNR=49
X18A **Snowflake** 65.19 59 ⇑P P 00 07 10.6 +0.5
baz=65,SNR=28
AAM **Ann Arbor** 65.23 35⇑*e*P P 00 07 08.2 -2.0
AAM *e**PP pP 00 07 14.9 -2.4
AAM pmax pmax
comp=Z,161nm,1.2s,mb5.9
AAM MLR MLR
comp=Z,5μm,20.0s,MS5.7
AAM **Ann Arbor** 65.23 35⇑*e*P P 00 07 08.2 -1.9
comp=Z,161nm,1.2s,mb5.9
AAM *e*pP pP 00 07 14.9 -2.4
AAM *e*sP sP 00 07 17.6 -2.4
AAM *e*sP sP 00 07 22.6 +2.7
AAM LR LR
comp=Z,5μm,20.0s,MS5.7
U25A **Circle Dot Ran** 65.24 54 ⇑P P 00 07 09.9 -0.4
baz=65,SNR=89
Z14A **Wintersburg** 65.26 62 ⇓P P 00 07 10.9 +0.4
baz=65,SNR=9.7
Y16A **Circle Bar Ran** 65.28 61 ⇓P P 00 07 11.4 +0.8
baz=65,SNR=11
RLS **Riolos of Patr** 65.29 311 *e*P P 00 07 08.8 -1.8
V23A **Ortiz Mt. (NFS** 65.29 56 ⇑P P 00 07 11.2 +0.6
baz=65,SNR=12
LRDF **Laroque-de-Fa** 65.35 328 *e*P P 00 07 11.6 +0.6
LRDF **Laroque-de-Fa** 65.35 328 *e*P P 00 07 11.6 +0.6
W21A **San Fidel** 65.40 57 ⇓P P 00 07 11.0 -0.3
baz=65,SNR=7.9
VLS **Valsamata** 65.43 312 P P 00 07 10.9 -0.6
VLS **Valsamata** 65.43 312 P P 00 07 10.9 -0.6
VLS **Valsamata** 65.43 312 *e*P P 00 07 10.5 -1.0
HATD **Hatta, Dubai** 65.43 275 P P 00 07 12.1 +0.4
SNR=67
HATD **Hatta, Dubai** 65.43 275 P P 00 07 12.1 +0.4
SNR=67
HATD **Hatta, Dubai** 65.43 275 P P 00 07 12.1 +0.4
SNR=67
HATD **Hatta, Dubai** 65.43 275 P P 00 07 12.1 +0.4
SNR=67
HATD **Hatta, Dubai** 65.43 275 P P 00 07 12.1 +0.4
SNR=67
HATD **Hatta, Dubai** 65.43 275 P P 00 07 12.1 +0.4
SNR=67
HATD **Hatta, Dubai** 65.43 275 P P 00 07 12.1 +0.4
SNR=67
KFL **Anninata** 65.43 312 P P 00 07 11.3 -0.3
KAD **Karad** 65.43 255 *e*PKP P 00 07 10.7 -1.1
KAD AMb AMB 00 07 15.1
comp=Z,466nm,1.7s,mb6.2
U26A **Atchley Ranch,** 65.45 53 ⇓P P 00 07 10.7 -1.0
baz=65,SNR=24
112A **Yuma** 65.45 64 ⇓P P 00 07 12.3 +0.6
baz=65,SNR=7.4
NAZ **Nazwa, Dubai** 65.46 276 P P 00 07 12.3 +0.4
SNR=40
NAZ **Nazwa, Dubai** 65.46 276 P P 00 07 12.3 +0.4
SNR=40
NAZ **Nazwa, Dubai** 65.46 276 P P 00 07 12.3 +0.4
SNR=40
NAZ **Nazwa, Dubai** 65.46 276 P P 00 07 12.3 +0.4
SNR=40
NAZ **Nazwa, Dubai** 65.46 276 P P 00 07 12.3 +0.4
SNR=40
NAZ **Nazwa, Dubai** 65.46 276 P P 00 07 12.3 +0.4
SNR=40
NAZ **Nazwa, Dubai** 65.46 276 P P 00 07 12.3 +0.4
SNR=40
NCB **Newcomb** 65.49 27⇑*i*P P 00 07 10.9 -0.9
comp=Z,316nm,1.2s,mb6.2
NCB *e*pP pP 00 07 17.2 -1.8
NCB *e*sP sP 00 07 19.9 -1.7
NCB *e* 00 07 24.6
NCB LR LR
comp=Z,4μm,21.0s,MS5.6
X19A **St. Johns** 65.50 59 ⇓P P 00 07 12.1 +0.1
baz=65,SNR=22
113A **Mohawk Valley,** 65.52 63 ⇑P P 00 07 12.2 +0.1
baz=65,SNR=9.8
MMAI **Mount Meron Ar** 65.54 297 P P 00 07 12.5 +0.2
comp=Z,53nm,0.6s,mb5.7,baz=30,slow=7.0,SNR=118
MMAI pP pP 00 07 21.9 +2.5
comp=Z,74nm,0.8s,baz=20,slow=5.7,SNR=17
MMAI LR LR 00 41 51.0
comp=Z,5μm,18.5s,MS5.7,baz=65,slow=41
TIP **Timpagrande** 65.55 315⇑*i*P P 00 07 12.3 0.0
comp=Z,363nm,1.2s,mb6.3
TIP *e*pP pP 00 07 17.7 -1.8
TIP *e*sP sP 00 07 20.4 -1.6
TIP LR LR
comp=Z,8μm,20.0s,MS5.9
HDIL **Hopedale** 65.57 40⇑*i*P P 00 07 09.8 -2.6
comp=Z,411nm,1.5s,mb6.2
HDIL *e* pP 00 07 16.7 -2.8
HDIL *e* 00 07 23.8
HDIL *e*S S 00 15 51.1 -4.9
HDIL LR LR
comp=Z,4μm,21.0s,MS5.6
ASHO **Ashiyiah** 65.58 275 P P 00 07 13.0 +0.3
SNR=59
ASHO **Ashiyiah** 65.58 275 P P 00 07 13.0 +0.3
SNR=59
ASHO **Ashiyiah** 65.58 275 P P 00 07 13.0 +0.3
SNR=59
ASHO **Ashiyiah** 65.58 275 P P 00 07 13.0 +0.3
SNR=59
ASHO **Ashiyiah** 65.58 275 P P 00 07 13.0 +0.3
SNR=59
Z15A **Gila River Ind** 65.59 62 ⇑P P 00 07 12.9 +0.3
baz=65,SNR=7.0
LBNH **Lisbon** 65.62 26⇑*e*P P 00 07 12.1 -0.5
LBNH *e**PP pP 00 07 18.0 -1.8
LBNH *e* 00 09 36.2
LBNH MLR MLR
comp=Z,4μm,22.0s,MS5.6
LBNH **Lisbon** 65.62 26⇑*e*P P 00 07 12.1 -0.5
LBNH *e*pP pP 00 07 18.0 -1.7
LBNH *e*sP sP 00 07 20.3 -2.1
LBNH *e* 00 07 26.0
LBNH *e*PP PP 00 09 36.2 -0.3
LBNH LR LR
comp=Z,4μm,22.0s,MS5.6
MLS **Moulis** 65.62 329 *e*P P 00 07 13.3 +0.6
MLS **Moulis** 65.62 329 *e*P P 00 07 13.3 +0.6
X20A **Quemado** 65.65 58 ⇓P P 00 07 13.0 -0.1
baz=65,SNR=45
CARF **Carcanieres** 65.66 328 *e*P P 00 07 13.2 +0.3
CARF **Carcanieres** 65.66 328 *e*P P 00 07 13.2 +0.3
Y17A **Roosevelt** 65.66 61 ⇑P P 00 07 13.7 +0.6
baz=65,SNR=30
VLX **Vlachokerasia** 65.66 310 P P 00 07 11.1 -1.9
VLX **Vlachokerasia** 65.66 310 *e*P P 00 07 12.3 -0.7
W22A **Albuquerque** 65.69 57 ⇑P P 00 07 13.4 +0.2
baz=65
V25A **Rancho No Teng** 65.69 54 ⇓P P 00 07 12.5 -0.8
baz=65,SNR=61
EPF **Esparros** 65.70 329⇑*i*P P 00 07 13.0 -0.2
comp=Z,192nm,0.9s,mb5.8
EPF **Esparros** 65.70 329⇑*i*P P 00 07 13.0 -0.2
EPF pmax pmax
comp=Z,96nm,0.9s,mb5.8
EPF **Esparros** 65.70 329⇑*i*P P 00 07 13.0 -0.2
comp=Z,96nm,0.9s,mb5.8
FILF **Fillols** 65.71 328 *e*P P 00 07 13.7 +0.4
FILF **Fillols** 65.71 328 *e*P P 00 07 13.7 +0.4
SJAF **Saint Jean de** 65.72 327 *e*P P 00 07 13.8 +0.5
SJAF **Saint Jean de** 65.72 327 *e*P P 00 07 13.8 +0.5
EJON **La Jonquera** 65.75 327 P P 00 07 13.9 +0.3
comp=Z,206nm,1.7s,mb5.9
ORDF **Ordiarp** 65.77 331 *e*P P 00 07 13.3 -0.3
ORDF **Ordiarp** 65.77 331 *e*P P 00 07 13.3 -0.3
MELF **Melles** 65.77 329 *e*P P 00 07 13.7 0.0
MELF **Melles** 65.77 329 *e*P P 00 07 13.7 0.0
Z16A **Peralta Trail,** 65.79 61 ⇓P P 00 07 14.3 +0.4
baz=66,SNR=16
OSSF **Osses** 65.79 331 *e*P P 00 07 13.4 -0.4
OSSF **Osses** 65.79 331 *e*P P 00 07 13.4 -0.4
ASF **Jabal al Asfar** 65.80 296 PKPPKP 00 35 46.4
comp=Z,0.7nm,0.3s,baz=21,slow=5.3,SNR=3.7
ASF LR LR 00 40 59.7
comp=Z,3μm,21.5s,MS5.5,baz=94,slow=40
REYF **Montagne du Re** 65.81 330 *e*P P 00 07 13.5 -0.4
REYF **Montagne du Re** 65.81 330 *e*P P 00 07 13.5 -0.4
114A **Black Gap (USA** 65.83 63 ⇑P P 00 07 15.2 +1.0
baz=66,SNR=67
W23A **Werner Place,** 65.83 56 ⇓P P 00 07 14.2 0.0
baz=66,SNR=15
Y18A **Canyon Day Jun** 65.85 60 ⇑P P 00 07 15.2 +0.9
baz=66,SNR=47
EALK **Alkurruntz** 65.87 331 P P 00 07 14.3 0.0
comp=Z,1μm,3.0s
KARP **Karpathos** 65.90 305 *e*P P 00 07 13.2 -1.4
VIEF **Viey** 65.91 330 *e*P P 00 07 15.5 +1.0
VIEF **Viey** 65.91 330 *e*P P 00 07 15.5 +1.0
CLLI **Livia** 65.91 328 P P 00 07 15.4 +0.8
ASUD **Al Ashush, Dub** 65.91 276 P P 00 07 15.5 +0.7
SNR=16
ASUD **Al Ashush, Dub** 65.91 276 P P 00 07 15.5 +0.7
SNR=16
ASUD **Al Ashush, Dub** 65.91 276 P P 00 07 15.5 +0.7
SNR=16
ASUD **Al Ashush, Dub** 65.91 276 P P 00 07 15.5 +0.7
SNR=16
ASUD **Al Ashush, Dub** 65.91 276 P P 00 07 15.5 +0.7
SNR=16
ASUD **Al Ashush, Dub** 65.91 276 P P 00 07 15.5 +0.7
SNR=16
RESF **Ens** 65.92 329 *e*P P 00 07 15.9 +1.3
RESF **Ens** 65.92 329 *e*P P 00 07 15.9 +1.3
SJPF **Ste Jean** 65.92 331⇑*i*P P 00 07 14.3 -0.3
comp=Z,166nm,1.1s,mb5.7
SJPF **Ste Jean** 65.92 331⇑*i*P P 00 07 14.3 -0.3
SJPF pmax pmax
comp=Z,83nm,1.1s,mb5.7
SJPF **Ste Jean** 65.92 331⇑*i*P P 00 07 14.3 -0.3
comp=Z,83nm,1.1s,mb5.7
ELIZ **Elizondo** 65.93 331 P P 00 07 15.3 +0.6
ELIZ pmax pmax
comp=Z,42nm,0.7s,mb5.6
ELIZ **Elizondo** 65.93 331 P P 00 07 15.3 +0.7
comp=Z,42nm,0.7s,mb5.6
ANMO **Albuquerque** 65.93 56*c i*P P 00 07 14.6 -0.2
ANMO pmax pmax
comp=Z,65nm,2.0s
ANMO **Albuquerque** 65.93 56⇑*e*P P 00 07 14.6 -0.2
comp=Z,159nm,2.3s,mb5.6
ANMO *e*pP pP 00 07 20.7 -1.2
ANMO *e* 00 07 29.1
ANMO *e*S S 00 16 02.8 +2.3
ANMO LR LR
comp=Z,2μm,21.0s,MS5.4
Y19A **Nutrioso** 65.94 59 ⇓P P 00 07 16.0 +1.1
baz=66,SNR=57
ITM **Ithomi** 65.97 310 P P 00 07 13.8 -1.2
ITM **Ithomi** 65.97 310 P P 00 07 13.8 -1.2
ITM **Ithomi** 65.97 310 *e*P P 00 07 13.9 -1.1
X21A **Alamocita Cree** 65.97 58 ⇑P P 00 07 15.5 +0.5
baz=66,SNR=46
VALF **Valcebollere** 65.97 328 *e*P P 00 07 15.8 +0.8
VALF **Valcebollere** 65.97 328 *e*P P 00 07 15.8 +0.8
V26A **Tequesquite Ra** 65.99 54 ⇓P P 00 07 14.0 -1.1
baz=66,SNR=67
ETSF **Etsaut** 66.00 330⇑*i*P P 00 07 15.7 +0.5
comp=Z,951nm,1.9s,mb6.2
ETSF **Etsaut** 66.00 330⇑*i*P P 00 07 15.7 +0.5
ETSF pmax pmax
comp=Z,476nm,1.9s,mb6.2
ETSF **Etsaut** 66.00 330⇑*i*P P 00 07 15.7 +0.5
comp=Z,476nm,1.9s,mb6.2
W24A **Lazy 6 Ranch,** 66.02 55 ⇓P P 00 07 15.0 -0.4
baz=66,SNR=13
EBIE **Bielsa** 66.07 330 P P 00 07 16.8 +1.2
comp=Z,2μm,3.5s
VLI **Veliai** 66.10 309 *e*P P 00 07 13.1 -2.8
115A **Sonoran Desert** 66.10 62 ⇓P P 00 07 16.7 +0.8
baz=66,SNR=25
HOQ **Hoqain** 66.10 274 P P 00 07 16.2 +0.1
SNR=53
HOQ **Hoqain** 66.10 274 P P 00 07 16.2 +0.1
SNR=53
HOQ **Hoqain** 66.10 274 P P 00 07 16.2 +0.1
SNR=53
HOQ **Hoqain** 66.10 274 P P 00 07 16.2 +0.1
SNR=53
HOQ **Hoqain** 66.10 274 P P 00 07 16.2 +0.1
SNR=53
Z17A **San Carlos Hig** 66.14 60 ⇑P P 00 07 17.1 +0.9
baz=66,SNR=6.6
X22A **Bernardo** 66.16 57 ⇓P P 00 07 16.9 +0.5
baz=66,SNR=9.2
CSOR **Sort** 66.18 329 P P 00 07 17.1 +0.8
comp=Z,81nm,0.9s,mb5.8
ERPA **Erie** 66.18 32⇑*e*P P 00 07 14.2 -2.1
comp=Z,215nm,1.0s,mb6.1
ERPA *e*pP pP 00 07 21.8 -1.6
ERPA *e* 00 07 28.8
ERPA *e*S S 00 16 01.0 -2.4
ERPA LR LR
comp=Z,4μm,19.0s,MS5.6
ELAN **Lanestosa** 66.21 332 P P 00 07 16.5 +0.1
comp=Z,1μm,3.0s
LAZ **Ladron** 66.22 57 *e*P P 00 07 16.7 0.0
comp=Z,180nm,1.9s,mb5.8
Y20A **Horse Springs,** 66.27 58 ⇓P P 00 07 17.8 +0.8
baz=66,SNR=36
PYL **PYLOS** 66.29 310 P P 00 07 15.4 -1.7
PYL **PYLOS** 66.29 310 *e*P P 00 07 15.6 -1.5
SMDO **Samad** 66.30 273 P P 00 07 18.2 +0.9
SNR=16
SMDO **Samad** 66.30 273 P P 00 07 18.2 +0.9
SNR=16
SMDO **Samad** 66.30 273 P P 00 07 18.2 +0.9
SNR=16
SMDO **Samad** 66.30 273 P P 00 07 18.2 +0.9
SNR=16
SMDO **Samad** 66.30 273 P P 00 07 18.2 +0.9
SNR=16
SMDO **Samad** 66.30 273 P P 00 07 18.2 +0.9
SNR=16
W25A **X Bar L Ranch,** 66.31 55 ⇑P P 00 07 15.8 -1.4
baz=66,SNR=47
WBK **Wadi Bani Khal** 66.35 272 P P 00 07 19.2 +1.5
SNR=17
WBK **Wadi Bani Khal** 66.35 272 P P 00 07 19.2 +1.5
SNR=17
WBK **Wadi Bani Khal** 66.35 272 P P 00 07 19.2 +1.5
SNR=17
WBK **Wadi Bani Khal** 66.35 272 P P 00 07 19.2 +1.5
SNR=17
WBK **Wadi Bani Khal** 66.35 272 P P 00 07 19.2 +1.5
SNR=17
X23A **Hourglass Bar** 66.36 56 ⇑P P 00 07 17.7 +0.1
baz=66
116A **Eloy** 66.41 62 ⇓P P 00 07 18.5 +0.6
baz=66,SNR=18
Y21A **Point of Rocks** 66.41 58 ⇓P P 00 07 18.7 +0.8
baz=66,SNR=18
EARI **Arriondas** 66.45 334 P P 00 07 17.9 -0.1
comp=Z,91nm,0.8s,mb5.9
Z18A **Geronimo** 66.48 60 ⇓P P 00 07 19.0 +0.6
baz=66
LENM **Lemitar** 66.49 57 *e*P P 00 07 18.3 -0.1
comp=Z,289nm,1.9s,mb6.0
CFON **Fontmartina** 66.50 327 P P 00 07 19.0 +0.6
comp=Z,94nm,0.8s,mb5.9
Z19A **T-Link Ranch,** 66.55 59 ⇑P P 00 07 19.8 +1.0
baz=66,SNR=9.2
214A **Organ Pipe Nat** 66.59 63 ⇓P P 00 07 19.3 +0.3
baz=66,SNR=37
Y22D **IRIS PASSCAL I** 66.59 57 ⇓P P 00 07 19.4 +0.4
baz=66
ZKR **Zakros** 66.59 306 P P 00 07 17.7 -1.4
ZKR **Zakros** 66.59 306 P P 00 07 17.7 -1.4
ZKR **Zakros** 66.59 306 *e*P P 00 07 18.3 -0.8
X24A **Lazy VL Ranch,** 66.61 56 ⇑P P 00 07 19.2 0.0
baz=66,SNR=6.1
BNM **Barren Site** 66.61 57 *e*P P 00 07 19.1 -0.1
comp=Z,173nm,1.6s,mb5.8
BNM *e*pP pP 00 07 25.1 -1.2
BNM *e* 00 07 34.5
ARQ **Araqi** 66.63 274 P P 00 07 19.6 +0.2
SNR=43
ARQ **Araqi** 66.63 274 P P 00 07 19.6 +0.2
SNR=43
ARQ **Araqi** 66.63 274 P P 00 07 19.6 +0.2
SNR=43
ARQ **Araqi** 66.63 274 P P 00 07 19.6 +0.2
SNR=43
ARQ **Araqi** 66.63 274 P P 00 07 19.6 +0.2
SNR=43
NPS **Neapolis** 66.64 306 *e*P P 00 07 16.9 -2.5
CEL **Celeste** 66.64 316⇑*e*P P 00 07 17.3 -2.1
comp=Z,63nm,1.0s,mb5.6
CEL *e*PP PP 00 09 45.5 -0.1
CEL LR LR
comp=Z,8μm,20.0s,MS5.9
ECRI **Cripan** 66.64 332 P P 00 07 19.8 +0.5
ECRI pmax pmax
comp=Z,68nm,0.8s,mb5.7
ECRI **Cripan** 66.64 332 P P 00 07 19.8 +0.5
comp=Z,68nm,0.8s,mb5.7
W26A **Owens Ranch, T** 66.65 54 ⇓P P 00 07 18.6 -0.8
baz=66,SNR=23
Y22A **Socorro** 66.70 57 ⇑P P 00 07 19.9 +0.1
baz=66,SNR=24
117A **Oracle** 66.72 61 ⇑P P 00 07 20.6 +0.7
baz=66,SNR=48

EPON	**Pontenova**	**66.74**	**335**	P		**P**	**00 07 19.1**	**-0.7**
	comp=Z,722nm,1.8s,mb6.4							
LAST	**Lasithi**	**66.78**	**307**	P		**P**	**00 07 18.7**	**-1.5**
LAST	**Lasithi**	**66.78**	**307**	P		**P**	**00 07 18.7**	**-1.5**
LAST	**Lasithi**	**66.78**	**307**	*e*P		**P**	**00 07 16.8**	**-3.4**
BINY	**Binghamton**	**66.88**	**29**	⇑*i*P		**P**	**00 07 19.0**	**-1.8**
	comp=Z,328nm,1.1s,mb6.3							
BINY				*e*pP		pP	00 07 26.2	-1.7
BINY				*e*			00 07 33.4	
BINY				*e*S		S	00 16 08.1	-3.8
BINY				LR		LR		
	comp=Z,4μm,20.0s,MS5.6							
W27A	**Bowe Ranch, En**	**66.89**	**53**	⇓P		**P**	**00 07 19.3**	**-1.6**
	baz=67,SNR=9.4							
X25A	**Clemmons Ranch**	**66.89**	**55**	⇑P		**P**	**00 07 20.3**	**-0.7**
	baz=67							
JMDO	**Jabal Madar**	**66.90**	**273**	P		**P**	**00 07 21.6**	**+0.5**
	SNR=29

PMRV eS S 00 16 56.5 +0.7
PMRV eLQ 00 26 06.2
PMRV eLR LR 00 30 03.8
comp=Z,3µm,18.0s
MYKOM **Kota Tinggi** 70.61 220 P **P** **00 07 45.0 +0.7**
ABSA **Djebel Ababsia** 70.65 322 P **P** **00 07 44.0 -0.3**
426A **McDonald Obser** 70.66 56 ⇓P **P** **00 07 43.8 -0.7**
baz=70,SNR=115
427A **Hayter Ranch,** 70.69 55 ⇓P **P** **00 07 44.0 -0.6**
baz=70,SNR=101
CKFL **Kef-Lekhel** 70.70 322 P **P** **00 07 45.0 +0.3**
KEST **Kesra** 70.71 320 P **P** **00 07 44.2 -0.5**
comp=Z,8.3nm,0.6s,baz=328,slow=0.7,SNR=58
KEST LR LR 00 44 36.5
comp=Z,2µm,18.8s,MS5.4,baz=317,slow=41
KEST **Kesra** 70.71 320⇑ iP **P** **00 07 44.7 0.0**
KEST epP pP 00 07 50.6 -1.3
KEST esP sP 00 07 52.8 -1.7
KEST e 00 07 58.6
KEST eS S 00 16 55.7 -1.8
ELN **Prospectdale** 70.72 34 eP **P** **00 07 42.5 -2.2**
TZTN **Tazewell** 70.75 37⇑ iP **P** **00 07 42.7 -2.3**
comp=Z,102nm,0.9s,mb5.8
TZTN epP pP 00 07 50.2 -1.9
TZTN e 00 07 57.7
TZTN ePP PP 00 10 20.0 -1.2
TZTN eS S 00 16 57.4 -0.5
DFRA **Djebel Bou Aff** 70.76 323 P **P** **00 07 46.0 +1.0**
BLA **Blacksburg** 70.81 34⇑ eP **P** **00 07 43.3 -2.0**
BLA e*PP pP 00 07 50.7 -1.7
BLA e 00 10 20.2
BLA pmax pmax
comp=Z,192nm,1.0s,mb6.0
BLA MLR MLR
comp=Z,4µm,21.0s,MS5.6
BLA **Blacksburg** 70.81 34⇑ eP **P** **00 07 43.3 -2.0**
comp=Z,192nm,1.0s,mb6.0
BLA epP pP 00 07 50.7 -1.8
BLA e 00 07 57.3
BLA ePP PP 00 10 20.2 -1.4
BLA LR LR
comp=Z,4µm,21.0s,MS5.6
CASM **Ain Smara** 70.89 323 P **P** **00 07 45.8 0.0**
AKF **Akfadou** 70.97 324 P **P** **00 07 48.1 +1.8**
428A **Kincaid Ranch,** 71.03 55 ⇓P **P** **00 07 46.4 -0.3**
baz=71,SNR=124
ALMR **Almeirim** 71.04 336 eP **P** **00 07 46.5 -0.2**
CTEI **Djebel Teioual** 71.10 323 P **P** **00 07 46.7 -0.4**
ABA **Alger-Bouzarea** 71.15 326 P **P** **00 07 47.9 +0.6**
PESTR **Estremoz** 71.16 335 i P **P** **00 07 46.7 -0.7**
comp=Z,218nm,1.7s,mb5.8
PESTR i pP pP 00 07 55.5 +0.9
PESTR eS S 00 17 02.9 +0.3
PESTR eLQ 00 26 30.8
PESTR eLR LR 00 30 13.9
comp=Z,3µm,18.0s
EBAD **Badajoz** 71.18 334 P **P** **00 07 46.9 -0.6**
comp=Z,65nm,0.7s,mb5.7
EBAN **Banos Encina** 71.19 331 P **P** **00 07 48.1 +0.5**
EBAN pmax pmax
comp=Z,27nm,0.7s,mb5.3
EBAN **Banos Encina** 71.19 331 P **P** **00 07 48.1 +0.5**
comp=Z,27nm,0.7s,mb5.3
SET **Setif** 71.20 323 P **P** **00 07 49.0 +1.3**
526A **Mary Lane Ranc** 71.20 56 ⇑P **P** **00 07 47.6 -0.2**
baz=71,SNR=96
CART **Cartagena** 71.22 329⇑ iP **P** **00 07 47.7 -0.1**
comp=Z,136nm,0.8s,mb5.9
CART e 00 07 56.8
CART ePP PP 00 10 24.8 -0.3
OXF **Oxford** 71.26 42⇑ eP **P** **00 07 45.8 -2.3**
OXF e*PP pP 00 07 53.4 -1.9
OXF pmax pmax
comp=Z,467nm,1.1s,mb6.3
OXF MLR MLR
comp=Z,4µm,19.0s,MS5.7
OXF **Oxford** 71.26 42⇑ eP **P** **00 07 45.8 -2.3**
comp=Z,467nm,1.1s,mb6.3
OXF epP pP 00 07 53.4 -1.9
OXF e 00 08 00.5
OXF ePP PP 00 10 06.2 -19
OXF LR LR
comp=Z,4µm,19.0s,MS5.7
527A **Woodward Ranch** 71.27 56 ⇓P **P** **00 07 47.8 -0.4**
baz=71,SNR=44
EHUE **Huescar** 71.31 330 P **P** **00 07 48.7 +0.4**
EHUE pmax pmax
comp=Z,315nm,1.2s,mb6.1
EHUE **Huescar** 71.31 330 P **P** **00 07 48.7 +0.4**
comp=Z,315nm,1.2s,mb6.1
EADA **Adamuz** 71.33 332 P **P** **00 07 48.8 +0.4**
comp=Z,61nm,0.7s,mb5.6
PMAFR **Mafra** 71.34 336 eP **P** **00 07 48.0 -0.5**
comp=Z,409nm,1.3s,mb6.2
PMAFR i pP pP 00 07 56.5 +0.8
PMAFR **Mafra** 71.34 336 eLQ 00 26 31.7
PMAFR eLR LR 00 31 19.0
comp=Z,3µm,20.0s
CKHR **Kef el Ahmar** 71.35 323 P **P** **00 07 49.0 +0.4**
EQES **Quesada** 71.41 331 P **P** **00 07 49.6 +0.7**
comp=Z,57nm,0.9s,mb5.5
SWET **Sewanee** 71.46 39⇑ eP **P** **00 07 47.5 -1.8**
SWET epP pP 00 07 54.6 -1.9
528A **Cox Ranch, San** 71.52 55 ⇓P **P** **00 07 49.2 -0.5**
baz=71,SNR=223
TKL **Tuckaleechee C** 71.55 37⇑ eP **P** **00 07 47.5 -2.3**
TKL e*PP pP 00 07 54.8 -2.2
TKL e 00 08 02.7
TKL e 00 10 27.2
EVO **Evora** 71.56 335⇑ iP **P** **00 07 49.4 -0.4**
comp=Z,473nm,1.2s,mb6.0
EVO eMLR MLR
comp=Z,4µm,19.5s,MS5.4
EVO **Evora** 71.56 335 i P **P** **00 07 49.3 -0.5**
comp=Z,425nm,1.8s,mb6.1
EVO i pP pP 00 07 58.1 +1.1
LIS **Lisbon** 71.56 336 eP **P** **00 07 49.5 -0.3**
LIS eS S 00 17 08.7 +1.5
LIS AMS AMS 00 45 48.4
comp=N,3µm,20.6s
ECAB **El Cabril** 71.57 333 P **P** **00 07 49.6 -0.3**
comp=N,39nm,1.9s,mb5.0
CPCT **Cooper Cave** 71.57 38⇑ iP **P** **00 07 47.8 -2.2**
CPCT ePP PP 00 10 27.6 -0.6
EVOP **Sao Brissos** 71.58 335 eP **P** **00 07 49.6 -0.4**
EVOP eS S 00 17 08.3 +0.9
EVOP AMS AMS 00 47 08.7
comp=Z,3µm,22.2s,MS5.6
626A **Big Bend Ranch** 71.66 57 ⇑P **P** **00 07 50.1 -0.4**
baz=71,SNR=118
ADJB **Djebel Djouab** 71.68 325 P **P** **00 07 51.8 +1.2**
AKET **Djebel Ketaf** 71.69 325 P **P** **00 07 48.3 -2.3**
EMHD **Djebel Mahouad** 71.74 325 P **P** **00 07 51.8 +0.9**
PBAR **Barrancos** 71.75 334 i P **P** **00 07 50.3 -0.7**
comp=Z,252nm,1.3s,mb6.0
PBAR i pP pP 00 07 59.3 +1.2
PBAR eS S 00 17 10.3 +1.0
PBAR eLQ 00 26 49.9
PBAR eLR LR 00 30 44.2
comp=Z,3µm,20.0s
ATAF **Djebel Tarf** 71.77 324 P **P** **00 07 51.8 +0.7**
ELUQ **Luque** 71.86 332 P **P** **00 07 51.7 0.0**
ELUQ pmax pmax
comp=Z,46nm,1.5s,mb5.2
ELUQ **Luque** 71.86 332 P **P** **00 07 51.7 0.0**
comp=Z,46nm,1.5s,mb5.2
EBNR **Beni Rached** 71.96 327 P **P** **00 07 54.0 +1.7**
627A **Terlingua Ranc** 71.99 56 ⇑P **P** **00 07 52.3 -0.2**
baz=72,SNR=338
TXAR **Lajitas Array** 72.01 56 P **P** **00 07 51.2 -1.4**
comp=Z,20nm,0.8s,mb5.1,baz=357,slow=4.3,SNR=169
TXAR pP pP 00 07 59.0 -0.8
comp=Z,20nm,0.6s,baz=316,slow=2.5,SNR=20
TXAR PKKP PKKPbc 00 27 18.8 -17
comp=Z,0.3nm,0.8s,baz=137,slow=4.5,SNR=3.7
TXAR PKPPKP 00 35 38.6
comp=Z,0.8nm,1.1s,baz=125,slow=4.5,SNR=5.9
TXAR LR LR 00 42 19.7
comp=Z,3µm,19.2s,MS5.5,baz=340,slow=38
TXAR **Lajitas Array** 72.01 56 P **P** **00 07 51.2 -1.5**
TXAR *PP pP 00 07 59.0 -0.8
TXAR pmax pmax
comp=Z,20nm,0.8s
ECOG **Cogollos-Vega** 72.01 331 P **P** **00 07 53.0 +0.5**

ECOG pmax pmax
comp=Z,105nm,0.7s,mb5.9
ECOG **Cogollos-Vega** 72.01 331 P **P** **00 07 53.0 +0.4**
comp=Z,105nm,0.7s,mb5.9
PBEJ **Beja** 72.03 335 i P **P** **00 07 52.1 -0.5**
comp=Z,188nm,1.4s,mb5.8
PBEJ i pP pP 00 08 00.8 +1.0
ENIJ **Nijar** 72.05 330 P **P** **00 07 53.0 +0.2**
ENIJ pmax pmax
comp=Z,36nm,0.7s,mb5.4
ENIJ **Nijar** 72.05 330 P **P** **00 07 53.0 +0.2**
comp=Z,36nm,0.7s,mb5.4
EMIN **Mina Concepcio** 72.08 334 P **P** **00 07 52.7 -0.3**
comp=Z,90nm,0.7s,mb5.8
628A **Black Gap, Mar** 72.11 55 ⇑P **P** **00 07 52.5 -0.7**
baz=72,SNR=259
ECHA **Ech Chlef** 72.13 327 P **P** **00 07 54.5 +1.2**
JCT **Junction City** 72.14 52⇑ eP **P** **00 07 51.9 -1.5**
JCT e*PP pP 00 07 58.9 -1.7
JCT e 00 08 07.3
JCT pmax pmax
comp=Z,289nm,0.9s,mb6.2
JCT MLR MLR
comp=Z,9µm,19.0s,MS6.0
JCT **Junction City** 72.14 52⇑ eP **P** **00 07 51.9 -1.5**
comp=Z,289nm,0.9s,mb6.2
JCT epP pP 00 07 58.9 -1.7
JCT e 00 08 07.1
JCT e 00 08 07.3
JCT LR LR
comp=Z,9µm,19.0s,MS6.0
ELOJ **Sierra Loja** 72.24 331 P **P** **00 07 55.1 +1.2**
ELOJ pmax pmax
comp=Z,97nm,1.1s,mb5.7
ELOJ **Sierra Loja** 72.24 331 P **P** **00 07 55.1 +1.2**
comp=Z,97nm,1.1s,mb5.6
EBER **Berja** 72.25 330 P **P** **00 07 54.1 +0.1**
comp=Z,31nm,0.8s,mb5.3
ERON **Agron** 72.31 331 P **P** **00 07 54.7 +0.4**
comp=Z,52nm,0.8s,mb5.5
PALK **Pallekele** 72.38 245 P **P** **00 07 55.6 +0.6**
comp=Z,725nm,1.2s,mb6.5,SNR=5.2
EANR `Ain N'Sour 72.38 327 P **P** **00 07 55.8 +1.0**
EGUA **Guajares** 72.44 331 P **P** **00 07 54.6 -0.5**
EGUA pmax pmax
comp=Z,452nm,0.8s,mb6.5
EGUA **Guajares** 72.44 331 P **P** **00 07 54.6 -0.5**
comp=Z,452nm,0.8s,mb6.5
PCVE **Castro Verde** 72.44 335 eP **P** **00 07 55.5 +0.4**
comp=Z,272nm,1.7s,mb5.9
PCVE i pP pP 00 08 04.3 +2.0
PCVE eS S 00 17 19.3 +2.0
PCVE eLQ 00 27 03.0
PCVE eLR LR 00 30 47.1
comp=Z,3µm,18.0s
NATX **Nacogdoches** 72.44 48⇑ eP **P** **00 07 54.0 -1.3**
comp=Z,129nm,0.7s,mb6.0
NATX epP pP 00 08 00.3 -2.1
NATX e 00 08 08.7
NATX LR LR
comp=Z,3µm,19.0s,MS5.6
EGRO **El Granado** 72.45 334 P **P** **00 07 54.5 -0.6**
comp=Z,73nm,0.8s,mb5.7
TRD **Trivandrum** 72.54 249⇓ ex pP 00 08 05.0 +1.9
WHFO **Wadi Hawf** 72.60 275 P **P** **00 07 56.1 -0.1**
SNR=16
WHFO **Wadi Hawf** 72.60 275 P **P** **00 07 56.1 -0.1**
SNR=16
WHFO **Wadi Hawf** 72.60 275 P **P** **00 07 56.1 -0.1**
SNR=16
WHFO **Wadi Hawf** 72.60 275 P **P** **00 07 56.1 -0.1**
SNR=16
PVAQ **Vaqueiros** 72.61 334 i P **P** **00 07 54.9 -1.2**
comp=Z,272nm,0.7s,mb6.3
PVAQ i pP pP 00 08 05.0 +1.7
PVAQ eS S 00 17 20.7 +1.4
PVAQ eLQ 00 27 03.2
PVAQ eLR LR 00 31 09.3
comp=Z,3µm,20.0s
PTEO **Sao Teotonio** 72.64 335 eP **P** **00 07 54.5 -1.8**
comp=Z,166nm,1.4s,mb5.8
PBDV **Barranco-do-Ve** 72.80 335 i P **P** **00 07 57.2 -0.1**
comp=Z,191nm,0.7s,mb6.1
PBDV i pP pP 00 08 06.2 +1.7
PBDV **Barranco-do-Ve** 72.80 335 eLQ 00 27 36.5
PBDV eLR LR 00 31 08.0
comp=Z,4µm,20.0s
ESPR **Espera** 72.82 333 P **P** **00 07 56.7 -0.7**
comp=Z,57nm,1.0s,mb5.5
MORF **Marmelete** 72.86 335 i P **P** **00 07 57.0 -0.6**
comp=Z,389nm,1.3s,mb6.2
MORF **Marmelete** 72.86 335 eLQ 00 28 34.8
MORF eLR LR 00 32 22.9
comp=Z,2µm,18.0s
ETRT **Tiaret** 72.88 327 P **P** **00 07 56.5 -1.2**
EMIJ **Mijas** 72.92 332 P **P** **00 07 57.9 -0.1**
comp=Z,70nm,0.7s,mb5.7
PFVI **Vila Bisbo** 73.06 335 eP **P** **00 07 58.5 -0.3**
comp=Z,327nm,1.3s,mb6.1
PFVI **Vila Bisbo** 73.06 335 eLQ 00 27 29.8
PFVI eLR LR 00 32 01.6
comp=Z,3µm,16.0s
VBMS **Vicksburg** 73.15 44 eP **P** **00 07 57.4 -2.0**
comp=Z,86nm,0.9s,mb5.7
VBMS LR LR
comp=Z,9µm,21.0s,MS6.0
EJIF **Jimena Fronter** 73.16 332 P **P** **00 07 59.7 +0.3**
EJIF pmax pmax
comp=Z,190nm,1.0s,mb6.0
EJIF **Jimena Fronter** 73.16 332 P **P** **00 07 59.7 +0.3**
comp=Z,190nm,1.0s,mb6.0
CNNC **Cliffs of the** 73.24 33 eP **P** **00 07 58.3 -1.5**
comp=Z,35nm,0.8s,mb5.3
CNNC LR LR
comp=Z,4µm,22.0s,MS5.6
SFS **San Fernando** 73.27 333 eP **P** **00 07 59.1 -1.0**
SFS MLR MLR
comp=Z,10µm,19.0s,MS6.1
LRAL **Lakeview Retre** 73.28 41⇑ iP **P** **00 07 57.0 -3.1**
comp=Z,38nm,0.7s,mb5.4
LRAL epP pP 00 08 03.7 -3.7
LRAL e 00 08 12.3
LRAL ePP PP 00 10 43.5 +0.6
LRAL eS S 00 17 21.4 -5.6
LRAL LR LR
comp=Z,4µm,21.0s,MS5.7
JSC **Jenkinsville** 73.44 36 eP **P** **00 07 59.8 -1.3**
ADH **Angra Heroismo** 73.61 351 eP **P** **00 08 08.7 +6.7**
comp=Z,79nm,1.1s,mb5.5
PMAN **Manadas** 73.68 351 eP **P** **00 08 05.8 +3.4**
comp=Z,259nm,1.5s,mb5.9
PCED **Cedros** 73.72 352 eP **P** **00 08 09.2 +6.6**
comp=Z,75nm,1.0s,mb5.6
CALA **Caldeira** 73.76 352 eP **P** **00 08 08.0 +5.1**
GOGA **Godfrey** 73.77 38⇑ eP **P** **00 08 01.0 -2.0**
GOGA e*PP pP 00 08 07.8 -2.4
GOGA e 00 08 15.1
GOGA e 00 10 46.3
GOGA MLR MLR
comp=Z,2µm,22.0s,MS5.4
HKT **Hockley** 73.81 49⇑ eP **P** **00 08 02.5 -0.8**
HKT e*PP pP 00 08 08.5 -2.0
HKT e 00 08 17.7
HKT pmax pmax
comp=Z,359nm,1.8s,mb6.0
HKT MLR MLR
comp=Z,3µm,19.0s,MS5.6
HKT **Hockley** 73.81 49⇑ eP **P** **00 08 02.5 -0.9**
comp=Z,359nm,1.8s,mb6.0
HKT epP pP 00 08 08.4 -2.1
HKT e 00 08 17.7
HKT LR LR
comp=Z,3µm,19.0s,MS5.6
PICO **Pico** 73.83 352 eP **P** **00 08 08.3 +5.0**
PCAN **Candelaria** 73.87 352 eP **P** **00 08 09.2 +5.7**
comp=Z,582nm,1.8s,mb6.2
CMLA **Cha da Macela** 74.38 349 eP **P** **00 08 07.1 +0.6**
comp=Z,71nm,1.1s,mb5.5
CMLA eS S 00 17 39.9 +0.7
CMLA eLQ 00 28 19.0
CMLA eLR LR 00 31 00.1
CMLA **Cha da Macela** 74.38 349 eP **P** **00 08 07.0 +0.5**
CMLA pmax pmax
comp=Z,827nm,1.8s,mb6.4
CMLA MLR MLR
comp=Z,1µm,20.0s,MS5.3

CMLA **Cha da Macela** 74.38 349 eP **P** **00 08 07.0 +0.5**
comp=Z,828nm,1.8s,mb6.4
CMLA LR LR
comp=Z,1µm,20.0s,MS5.3
COW **Cow Castle Cre** 74.43 35 eP **P** **00 08 05.5 -1.4**
NHSC **New Hope** 74.81 35 eP **P** **00 08 08.3 -0.8**
comp=Z,234nm,1.1s,mb6.0
NHSC LR LR
comp=Z,3µm,20.0s,MS5.6
PSMA **Santa Maria** 75.11 349 eP **P** **00 08 08.4 -2.4**
comp=Z,177nm,1.4s,mb5.8
BRAL **Brewton** 75.19 41 eP **P** **00 08 07.9 -3.4**
comp=Z,250nm,1.1s,mb6.1
BRAL ePP PP 00 10 59.2 +0.1
BRAL LR LR
comp=Z,6µm,21.0s,MS5.9
KVTX **Kingsville** 75.46 52⇑ eP **P** **00 08 13.0 +0.1**
comp=Z,641nm,1.6s,mb6.3
KVTX LR LR
comp=Z,2µm,21.0s,MS5.4
MUKL **Al Mukalla** 77.54 278⇓ eP **P** **00 08 23.9 -0.9**
XMAS **Kiritimati** 77.56 116 eP **P** **00 08 23.6 -1.3**
comp=Z,269nm,1.3s,mb6.0
XMAS ePP PP 00 11 19.0 -0.8
XMAS LR LR
comp=Z,2µm,22.0s,MS5.3
HNR **Honiara** 78.11 161 PFAKE 00 08 40.0 +12
HNR LR LR
comp=Z,2µm,21.0s,MS5.5
BBSR **BB Station** 78.35 22⇑ eP **P** **00 08 27.7 -1.5**
BBSR PcP PcP 00 08 36.7 -1.7
BBSR ePP PP 00 11 22.9 -2.6
BBSR LR LR
comp=Z,2µm,20.0s,MS5.4
DHBB **Dhamar BB** 79.20 282⇑ eP **P** **00 08 35.8 +1.8**
DWPF **Disney** 79.33 37⇑ eP **P** **00 08 33.1 -1.5**
comp=Z,51nm,0.7s,mb5.6
DWPF ePP PP 00 11 33.3 -0.6
DWPF LR LR
comp=Z,1µm,21.0s,MS5.1
KAKA **Kakadu** 80.44 189 eP **P** **00 08 39.9 -0.6**
KAKA ePcP PcP 00 08 46.7 -0.8
COEN **Coen** 81.44 178 eP **P** **00 08 45.0 -0.9**
COEN **Coen** 81.44 178 eP **P** **00 08 45.0 -0.8**
comp=Z,2µm,1.4s,mb6.8
COEN e pP 00 08 50.9 -2.2
CFTV **Fuerteventura** 82.40 338 P **P** **00 08 48.7 -2.3**
comp=Z,56nm,1.2s,mb5.4
EBAJ **Bajamar** 82.58 340 P **P** **00 08 48.0 -3.9**
comp=Z,17nm,1.0s,mb5.0
CCAN **Las Canadas** 82.93 340 P **P** **00 08 54.2 +0.5**
comp=Z,40nm,0.8s,mb5.5
EOSO **Osorio** 82.94 339 P **P** **00 08 53.4 -0.4**
comp=Z,884nm,2.1s,mb6.4
CHIE **El Hierro** 83.59 341 P **P** **00 08 56.7 -0.4**
comp=Z,80nm,1.1s,mb5.8
KNA **Kununurra** 83.71 192 eP **P** **00 08 56.6 -1.0**
comp=Z,229nm,0.7s,mb6.4
TAM **Tamanrasset** 84.02 320⇑ eP **P** **00 08 59.5 +0.1**
TAM e*SP sP 00 09 07.6 -1.7
TAM pmax pmax
comp=Z,143nm,1.4s,mb5.9
TAM MLR MLR
comp=Z,4µm,20.0s,MS5.8
TAM **Tamanrasset** 84.02 320⇑ eP **P** **00 08 59.5 +0.1**
comp=Z,143nm,1.4s,mb5.9
TAM esP sP 00 09 07.6 -1.7
TAM LR LR
comp=Z,4µm,20.0s,MS5.8
SOR **Soroa** 84.06 40 eP **P** **00 08 58.9 -0.7**
TEIG **Tepich** 85.14 46⇑ eP **P** **00 09 04.0 -1.0**
comp=Z,155nm,1.0s,mb6.1
TEIG epP pP 00 09 10.4 -1.9
TEIG esP sP 00 09 12.7 -2.3
TEIG LR LR
comp=Z,2µm,20.0s,MS5.5
COCO **West Island** 85.82 223 PFAKE 00 09 20.0 +12
COCO LR LR
comp=Z,2µm,19.0s,MS5.5
COCO **West Island** 85.82 223 P **P** **00 09 09.3 +0.9**
SNR=7.4
COCO P 00 09 09.3
SNR=7.4
COCO **West Island** 85.82 223 P **P** **00 09 09.3 +0.9**
SNR=7.4
COCO P 00 09 09.3
SNR=7.4
FITZ **Fitzroy Crossi** 86.32 195 eP **P** **00 09 09.7 -1.0**
comp=Z,166nm,1.0s,mb6.2
FITZ eS S 00 19 40.8 -3.6
FITZ **Fitzroy Crossi** 86.32 195⇑ eP **P** **00 09 09.8 -0.8**
comp=Z,355nm,1.4s,mb6.4
CCCC **Cccc** 86.83 36 eP **P** **00 09 12.3 -1.1**
WRAB **Tennant Creek** 87.52 186 P **P** **00 09 15.8 -0.7**
comp=Z,279nm,1.5s,mb6.3,SNR=7.7
WRAB **Tennant Creek** 87.52 186 eP **P** **00 09 15.8 -0.7**
WRAB pmax pmax
comp=Z,289nm,1.9s,mb6.2
WRAB **Tennant Creek** 87.52 186 eP **P** **00 09 15.8 -0.7**
comp=Z,289nm,1.9s,mb6.2
WRA **Warramunga Arr** 87.53 186 P **P** **00 09 14.4 -2.1**
comp=Z,18nm,1.0s,mb5.3,baz=3.9,slow=5.8,SNR=32
WRA PKKPbc PKKPbc 00 27 03.9 +0.8
comp=Z,2.1nm,0.8s,baz=194,slow=2.4,SNR=7.3
WRA LR LR 00 50 09.0
comp=Z,839nm,18.7s,MS5.2,baz=50,slow=37
CTA **Charters Tower** 87.61 175 eP **P** **00 09 15.5 -1.4**
comp=Z,49nm,1.6s,mb5.5
CTA eS S 00 19 44.0 -13
CTAO **Charters Tower** 87.61 175 eP **P** **00 09 15.6 -1.3**
CTAO pmax pmax
comp=Z,537nm,1.9s,mb6.5
CTAO MLR MLR
comp=Z,2µm,21.0s,MS5.4
CTAO **Charters Tower** 87.61 175 eP **P** **00 09 15.6 -1.3**
comp=Z,537nm,1.9s,mb6.5
CTAO LR LR
comp=Z,2µm,21.0s,MS5.4
GRTK **Grand Turk** 87.90 30 P **P** **00 09 18.3 -0.3**
GRTK LR LR
comp=Z,2µm,20.0s,MS5.5
LMGC **Las Mercedes** 88.09 36 eP **P** **00 09 19.1 -0.4**
AFI **Afiamalu** 88.18 135 PFAKE 00 09 30.0 +10
AFI LR LR
comp=Z,2µm,22.0s,MS5.4
RCC **Rio Carpintero** 88.45 34 eP **P** **00 09 20.1 -1.1**
GTBY **Guantanamo Bay** 88.64 34 eP **P** **00 09 21.4 -0.7**
GTBY LR LR
comp=Z,3µm,21.0s,MS5.6
DGAR **Diego Garcia** 88.92 248 PFAKE 00 09 30.0 +6.6
DGAR LR LR
comp=Z,5µm,22.0s,MS5.9
MSVF **Nonsavu** 89.36 145 P **P** **00 09 26.6 +1.4**
comp=Z,641nm,1.3s,mb6.8,SNR=5.1
MSVF **Nonsavu** 89.36 145 eP **P** **00 09 25.9 +0.7**
comp=Z,237nm,1.4s,mb6.3
MSVF esP sP 00 09 32.7 -2.5
MSVF e 00 09 40.0
MSVF LR LR
comp=Z,1µm,20.0s,MS5.4
MSVF **Nonsavu** 89.36 145 P **P** **00 09 27.0 +1.8**
comp=Z,2µm,1.3s,mb7.2,SNR=5.1
MTDJ **Mount Denham** 89.75 36 eP **P** **00 09 26.8 -0.6**
comp=Z,183nm,1.4s,mb6.2
MTDJ LR LR
comp=Z,3µm,21.0s,MS5.7
MBWA **Marble Bar** 90.01 200 eP **P** **00 09 28.0 -0.2**
MBWA eS S 00 20 05.4 -14
MBWA **Marble Bar** 90.01 200⇑ eP **P** **00 09 27.1 -1.1**
SDDR **Presa de Saban** 90.33 31 eP **P** **00 09 30.0 -0.1**
comp=Z,129nm,1.3s,mb6.1
SDDR LR LR
comp=Z,3µm,21.0s,MS5.7
ASAR **Alice Springs** 91.25 187 P **P** **00 09 32.0 -2.0**
comp=Z,5.8nm,0.8s,mb4.9,baz=5.9,slow=4.5,SNR=32
ASAR PKKP PKKPbc 00 26 44.3 -10
comp=Z,0.5nm,0.6s,baz=185,slow=2.2,SNR=4.5
ASAR PKKPbc PKKPbc 00 26 53.6 -0.2
comp=Z,2.3nm,0.7s,baz=172,slow=2.0,SNR=13
ASAR PKPPKP 00 34 59.2
comp=Z,0.6nm,0.8s,baz=126,slow=2.2,SNR=4.2
ASAR **Alice Springs** 91.25 187 P **P** **00 09 32.0 -1.9**
ASAR 00 26 44.3
ASAR pmax pmax
comp=Z,60nm,0.8s
TGUH **Tegucigalpa,Un** 91.29 47 eP **P** **00 09 34.5 0.0**

TGUH e 00 09 46.0
TGUH ePP PP 00 13 10.4 -0.9
TGUH LR LR
comp=Z,2μm,19.0s,MS5.5
DZM Mont Dzumac 91.44 157 *e*P **P 00 09 36.3 +1.4**
comp=Z,381nm,1.3s,mb6.6
DZM *e*LR LR 00 39 05.8
comp=Z,3μm,25.8s
DZM Mont Dzumac 91.44 157 *e*P **P 00 09 35.0 +0.2**
comp=Z,242nm,1.3s,mb6.4
DZM *e*sP sP 00 09 42.6 -2.2
DZM *e* 00 09 51.0
NOUC Port Laguerre 91.45 157 *e*P **P 00 09 35.2 +0.3**
CBYP Canovanas 92.00 26 P **P 00 09 38.1 +0.3**
SJG San Juan 92.11 26 PFAKE 00 09 50.0 +12
SJG LR LR
comp=Z,2μm,22.0s,MS5.5
MTP Monte Pirata 92.22 25 *e*P **P 00 09 38.7 -0.1**
MSEY Mahe Island 92.65 264 *e*P **P 00 09 40.9 +0.1**
MSEY pmax pmax
comp=Z,296nm,1.9s,mb6.4
MSEY MLR MLR
comp=Z,3μm,20.0s,MS5.7
MSEY Mahe Island 92.65 264 *e*P **P 00 09 40.9 +0.1**
comp=Z,296nm,1.9s,mb6.4
MSEY LR LR
comp=Z,3μm,20.0s,MS5.7
EIDS Eidsvold 93.08 171 *e*P **P 00 09 41.6 -0.7**
comp=Z,104nm,1.4s,mb6.1
ANWB Willy Bob 93.22 22 PFAKE 00 09 50.0 +6.6
ANWB LR LR
comp=Z,2μm,20.0s,MS5.6
TAOE Nuku Hiva Isla 93.86 104 *e*PS PS 00 22 07.9 -3.0
comp=Z,868nm,27.6s
TAOE *e*LQ 00 35 56.9
comp=Z,3μm,31.6s
TAOE *e*LR LR 00 40 13.8
comp=Z,2μm,25.6s,baz=342
FDF Fort de France 96.20 22 PFAKE 00 10 10.0 +13
FDF LR LR
comp=Z,2μm,21.0s,MS5.6
KMBO Kilima Mbogo 96.31 282 P **P 00 09 55.5 -2.1**
comp=Z,1.3nm,0.8s,baz=1.1,slow=24,SNR=6.9
KMBO LR LR 00 59 54.9
comp=Z,3μm,18.3s,MS5.8,baz=37,slow=39
KMBO Kilima Mbogo 96.31 282 *e*P **P 00 09 57.9 +0.3**
KMBO pmax pmax
comp=Z,81nm,2.2s
KMBO MLR MLR
comp=Z,4μm,22.0s
KMBO Kilima Mbogo 96.31 282 *e*P **P 00 09 57.9 +0.3**
comp=Z,81nm,2.2s,mb5.8
KMBO LR LR
comp=Z,4μm,22.0s,MS5.8
PMOR Pomariorio Ree 96.73 113 *e*P **P 00 09 59.7 +0.4**
comp=Z,57nm,1.2s,mb5.9
BCIP Isla Barro Col 97.93 41 PFAKE 00 10 20.0 +15
BCIP LR LR
comp=Z,2μm,20.0s,MS5.6
BBGH Gun Hill 97.98 20 *e*P **P 00 10 06.1 +1.0**
comp=Z,2μm,1.7s
BBGH LR LR
comp=Z,4μm,19.0s,MS5.9
PPT Papeete 98.53 116 *e*PP PP 00 14 03.7 -4.5
comp=Z,125nm,27.0s
PPT *e*SKSac SKSac 00 20 39.8 -3.8
comp=Z,2μm,29.8s
PPT *e*SP SP 00 22 58.0 -1.6
comp=Z,932nm,28.2s
PPT *e*SS SS 00 28 19.5 -0.4
comp=Z,306nm,26.0s
PPT *e*LR LR 00 42 11.6
comp=Z,5μm,27.8s,baz=341
PPT Papeete 98.53 116 LR LR 00 49 29.7
comp=Z,1μm,18.4s,MS5.5,baz=340,slow=32
FORT Forrest 98.67 191 *e*P **P 00 10 07.1 -0.6**
comp=Z,21nm,0.7s,mb5.8
FORT Forrest 98.67 191 *e*P **P 00 10 06.9 -0.8**
comp=Z,26nm,0.7s,mb5.9
GRGR Grenville 98.68 23 PFAKE 00 10 20.0 +12
GRGR LR LR
comp=Z,2μm,21.0s,MS5.6
STKA Stephens Creek 99.27 180 *e*P **P 00 10 08.7 -1.6**
comp=Z,3.9nm,0.8s,mb5.0
STKA Stephens Creek 99.27 180 P **P 00 10 08.1 -2.3**
comp=Z,3.5nm,0.7s,mb5.0,baz=328,slow=5.8,SNR=7.4
STKA LR LR 00 51 20.5
comp=Z,1μm,20.8s,MS5.3,baz=114,slow=33
STKA Stephens Creek 99.27 180 *e*P **P 00 10 08.8 -1.5**
comp=Z,4.7nm,1.5s
RAO Raoul Island 101.38 144 PFAKE 00 10 30.0 +9.5
RAO LR LR
comp=Z,1μm,19.0s,MS5.4
NWAO Narrogin (SRO) 101.93 200 PFAKE 00 10 30.0 +7.0
NWAO LR LR
comp=Z,981nm,20.0s,MS5.3
DBIC Dimbokro 101.99 325 P Pdif 00 10 22.1 -1.2
comp=Z,10nm,1.1s,baz=359,slow=5.1,SNR=4.1
DBIC PP PP 00 14 33.9 0.0
comp=Z,8.4nm,1.0s,baz=13,slow=14,SNR=3.6
DBIC Dimbokro 101.99 325 Pdif Pdif 00 10 22.0 -1.2
DBIC LR LR
comp=Z,3μm,21.0s,MS5.8
CAN Canberra 102.87 173 PFAKE 00 10 40.0 +13
CAN LR LR
comp=Z,1μm,21.0s,MS5.4
ROSC El Rosal 103.40 37 Pdiff Pdif 00 10 29.4 -0.1
comp=Z,3.5nm,0.5s,baz=323,slow=5.1,SNR=3.3
ROSC PP PP 00 14 39.8 -4.6
comp=Z,9.0nm,0.6s,baz=73,slow=19,SNR=6.3
ROSC El Rosal 103.40 37 *e*Pdif Pdif 00 10 28.8 -0.7
PAYG Puerto Ayora 104.39 54 PFAKE 00 10 40.0 +6.1
PAYG LR LR
comp=Z,1μm,20.0s,MS5.5
OTAV Otavalo 106.86 42 *e*Pdif Pdif 00 10 45.1 +0.2
OTAV LR LR
comp=Z,1μm,22.0s,MS5.5
RER Riviere de l'E 107.66 258 PFAKE 00 15 10.0 +14
RER LR LR
comp=Z,2μm,19.0s,MS5.7
RKT Rikitea 108.86 105 *e*LQ 00 42 16.3
comp=Z,2μm,36.8s
RKT *e*LR LR 00 46 44.1
comp=Z,2μm,31.5s,baz=328
ABPO Ambohimpanom 108.92 266 PFAKE 00 15 10.0 +12
ABPO LR LR
comp=Z,2μm,20.0s,MS5.7
SNZO South Karori 111.60 153 PFAKE 00 15 10.0 +7.6
SNZO LR LR
comp=Z,2μm,20.0s,MS5.7
LSZ Lusaka 112.70 286 PKIKP PKiKP 00 15 06.1 +0.8
LSZ *e* 00 15 52.8
LSZ MLR MLR
comp=Z,3μm,20.0s,MS5.9
ATAH Atahualpa 113.95 44 PP PP 00 15 59.2 -2.2
comp=Z,3.3nm,0.6s,baz=36,slow=3.2,SNR=3.7
ASCN Ascension 118.09 332 PFAKE 00 15 30.0 +14
ASCN LR LR
comp=Z,3μm,19.0s,MS6.0
RCBR Riachuelo 118.19 357 PFAKE 00 15 30.0 +14
RCBR LR LR
comp=Z,1μm,22.0s,MS5.5
NNA Nana 119.01 44 PKP PKPdf 00 15 16.2 -1.2
comp=Z,5.5nm,0.7s,baz=281,slow=5.2,SNR=5.4
NNA Nana 119.01 44 *e*PKPdf PKPdf 00 15 16.2 -1.2
NNA LR LR
comp=Z,1μm,21.0s,MS5.4
TSUM Tsumeb 120.12 294 *e*PKPdf PKPdf 00 15 19.3 -0.1
TSUM *e*PP PP 00 16 44.3 -0.3
LBTB Lobatse 122.56 284 *e*PKPdf PKPdf 00 15 23.6 -0.4
LBTB *ep*PKPdf pPKPdf 00 15 34.2 +2.8
LBTB *e*PP PP 00 17 00.7 -0.6
LBTB LR LR
comp=Z,3μm,22.0s,MS5.9
SHEL Horse Pasture 124.07 321 PFAKE 00 15 40.0 +13
SHEL LR LR
comp=Z,2μm,19.0s,MS5.8
LPAZ La Paz 125.25 35 PKP PKPdf 00 15 28.3 -1.0
comp=Z,10.0nm,0.7s,baz=317,slow=1.6,SNR=47
LPAZ PP PP 00 17 17.2 -1.9
comp=Z,7.0nm,1.0s,baz=192,slow=17,SNR=4.0
LPAZ La Paz 125.25 35 PKIKP PKPdf 00 15 28.3 -1.1
LPAZ 00 17 17.2
LPAZ pmax pmax
comp=Z,10.0nm,0.7s
LPAZ pmax pmax
comp=Z,7.0nm,1.0s
LPAZ La Paz 125.25 35 *e*PKPdf PKPdf 00 15 29.1 -0.2
LPAZ *ep*PKPdf pPKPdf 00 15 39.0 +2.1
LPAZ *e*PP PP 00 17 18.1 -0.9
LPAZ LR LR
comp=Z,1μm,22.0s,MS5.5
BOSA Boshof 125.95 282 PKP PKPdf 00 15 30.3 0.0
comp=Z,8.4nm,0.9s,baz=42,slow=2.3,SNR=12
BOSA pPKP pPKPdf 00 15 39.6 +1.7
comp=Z,19nm,1.1s,baz=33,slow=2.3,SNR=9.5
BOSA PP PP 00 17 23.6 -0.5
comp=Z,7.6nm,1.0s,baz=23,slow=11,SNR=1.6
BOSA Boshof 125.95 282 PKIKP PKPdf 00 15 30.3 -0.1
BOSA 00 17 23.6
BOSA pmax pmax
comp=Z,19nm,1.1s
BOSA pmax pmax
comp=Z,8.0nm,1.0s
BOSA Boshof 125.95 282 *e*PKPdf PKPdf 00 15 30.5 +0.2
BOSA *ep*PKPdf pPKPdf 00 15 39.0 +1.1
BOSA *e*PP PP 00 17 24.5 +0.4
BOSA LR LR
comp=Z,2μm,20.0s,MS5.8
SIV San Ignacio 126.35 27 PKP PKPdf 00 15 29.9 -1.5
comp=Z,18nm,0.8s,baz=26,slow=1.4,SNR=51
SIV PP PP 00 17 22.5 -3.9
comp=Z,6.9nm,0.9s,baz=348,slow=5.5,SNR=4.4
PAF Port-aux-Franc 128.16 232 *e*PKIKP PKPdf 00 15 33.7 -0.2
PAF MLR MLR
comp=Z,4μm,20.0s,MS6.1
SUR Sutherland 130.99 285 *e*PKPdf PKPdf 00 15 39.5 -0.3
SUR *e*PP PP 00 17 56.0 -1.0
SUR LR LR
comp=Z,2μm,19.0s,MS5.9
DRV Dumont d'Urvil 134.09 181 PP PP 00 17 46.0 -31
DRV SS SS 00 35 05.0 -59
CASY Casey 135.44 197 *e*PKPdf PKPdf 00 15 42.9 -4.2
CASY LR LR
comp=Z,1μm,19.0s,MS5.7
SPB Sao Paulo 135.56 11 *e*PKPdf PKPdf 00 15 49.0 +0.3
SPB LR LR
comp=Z,2μm,22.0s,MS5.8
LCO Las Campanas 136.87 43 *e*PKPpre PKPpre 00 15 41.0
LCO *e*PKPdf PKPdf 00 15 50.8 -0.2
LCO LR LR
comp=Z,1μm,20.0s,MS5.6
CPUP Villa Florida 137.10 25 PKhKP PKPpre 00 15 40.7
comp=Z,4.0nm,0.6s,baz=349,slow=2.5,SNR=5.0
CPUP PKP PKPdf 00 15 50.4 -1.1
comp=Z,15nm,0.6s,baz=334,slow=1.9,SNR=28
CPUP Villa Florida 137.10 25 PKP PKPpre 00 15 40.7
CPUP Villa Florida 137.10 25 *e*PKPdf PKPdf 00 15 51.5 0.0
CPUP LR LR
comp=Z,191nm,22.0s,MS4.8
MIR Mirnyy 138.18 207 *e*PKIKP PKPdf 00 15 49.0 -3.2
MIR *i* 00 18 39.0
MIR pmax pmax
comp=Z,48nm,1.4s
FCH Farellones 141.07 44 *e*P PKPdf 00 15 54.9 -3.7
CCHI Chillan 143.66 48 *e*P PKPdf 00 15 58.6 -4.4
CCHI Chillan 143.66 48 *e*P PKPdf 00 15 58.6 -4.4
LPA La Plata 145.38 28 *ce*PKP PKPdf 00 16 04.0 -2.1
LPA PKIKP PKPdf 00 16 07.0 +0.9
MAW Mawson 145.50 221 *e*PKP PKPdf 00 16 04.4 -0.8
comp=Z,161nm,0.9s
MAW Mawson 145.50 221 PKPbc PKPbc 00 16 05.1 -0.3
comp=Z,82nm,0.7s,baz=82,slow=5.3,SNR=130
MAW pPKPbc pPKPbc 00 16 15.0 +2.2
comp=Z,145nm,0.8s,baz=20,slow=3.3,SNR=24
MAW Mawson 145.50 221 *e*PKPdf PKPdf 00 16 04.7 -0.5
MAW *ep*PKPdf pPKPdf 00 16 14.9 +2.2
MAW LR LR
comp=Z,2μm,21.0s,MS5.9
SBA Scott Base 146.14 171 *e*PKP2 PKPab 00 16 06.1 -1.8
SBA MLR MLR
comp=Z,1μm,21.0s,MS5.7
TRQA Tornquist 147.61 35 *e*PKPdf PKPdf 00 16 09.9 +0.2
TRQA *e*PKPbc PKPbc 00 16 12.1 -0.3
TRQA LR LR
comp=Z,2μm,21.0s,MS5.9
PLCA Paso Flores 147.94 49 PKPbc PKPbc 00 16 13.4 +0.2
comp=Z,144nm,0.7s,baz=333,slow=3.7,SNR=114
PLCA Paso Flores 147.94 49 *e*PKPdf PKPdf 00 16 09.7 -0.4
PLCA *e*PKPbc PKPbc 00 16 13.3 0.0
PLCA PKPbc PKPbc 00 16 13.4 +0.2
PLCA LR LR
comp=Z,2μm,19.0s,MS5.8
ILCA Isla Las Cabra 148.57 52 *e*P PKPdf 00 16 09.8 -1.4
QSPA South Pole Qui 157.49 180 PKP PKPdf 00 16 20.7 -2.3
comp=Z,3.7nm,1.1s,baz=224,slow=1.8,SNR=8.9
QSPA South Pole Qui 157.49 180 *e*PKPdf PKPdf 00 16 21.1 -1.8
QSPA LR LR
comp=Z,1μm,22.0s,MS5.8
MAIT Maitri 162.26 237 *e*PKPdif PKPab 00 17 16.5 +0.4
PMSA Palmer Station 169.45 86 PKP PKPdf 00 16 32.1 -2.4
comp=Z,25nm,0.8s,baz=340,slow=18,SNR=9.1
PMSA Palmer Station 169.45 86 PKP PKPdf 00 16 32.1 -2.4
PMSA LR LR
comp=Z,1μm,19.0s

*KRSC **22** 23:59:27.8±0.9, 55°.29N×161°.71E, h66km±65km, ML4.3*
*MOS **22** 23:59:28.7±2.0, 55°.27N×161°.74E, h55km, mb4.3/1, Error ellipse: s-maj=34.9km s-min=11.0km az=72.3*
*ISCJB **22** 23:59:28.0±0.6, 55°.27N±0°.03×161°.75E±0°.06, h76km±10km, Error ellipse: s-maj=5.9km s-min=4.3km az=12.5*
ISC 22 23:59:28.9±0.7,**55°.28N**±0°.03×**161°.76E**±0°.06,**h72**km±12km,
n24, σ0**°57/42,Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.72**	**181**	*e*P	**Pn**	**23 59 43.7**	**-0.4**
MKZ				*i* S	**Sn**	**23 59 55.7**	**+0.4**
ZLN	**Zelenaya**	**0.92**	**324**	*e*P	**Pn**	**23 59 46.1**	**-0.3**
ZLN				*i* S	**Sn**	**23 59 59.6**	**+0.2**
BZMR	**Bezymyannaya**	**0.98**	**313**	*e*P	**Pn**	**23 59 46.5**	**-0.6**
BZMR				*i* S	**Sn**	**00 00 00.6**	**-0.1**
KMNR	**Kamenistaya**	**0.99**	**300**	*e*P	**Pn**	**23 59 46.7**	**-0.6**
KMNR				*i* S	**Sn**	**00 00 01.0**	**0.0**
CIRR	**Tsirk**	**1.02**	**326**	*e*P	**Pn**	**23 59 47.4**	**-0.2**
CIRR				*i* S	**Sn**	**00 00 01.9**	**+0.3**
KBTR	**Krutoberegovo**	**1.11**	**32**	*e*P	**Pn**	**23 59 48.9**	**+0.1**
KBTR				*i* S	**Sn**	**00 00 04.6**	**+0.9**
KPT	**Kopyto**	**1.11**	**309**	*e*P	**Pn**	**23 59 48.0**	**-0.8**
KPT				*i* S	**Sn**	**00 00 03.4**	**-0.3**
KRSR	**Krestovskiy**	**1.16**	**325**	*e*P	**Pn**	**23 59 48.7**	**-0.7**
KRSR				*i* S	**Sn**	**00 00 04.1**	**-0.7**
KOZR	**Kozyr**	**1.32**	**308**	PN	**Pn**	**23 59 51.3**	**-0.2**
KOZR				S	**Sn**	**00 00 08.8**	**+0.4**
SMKR	**Semkarok**	**1.32**	**353**	*e*P	**Pn**	**23 59 51.5**	**0.0**
SMKR				*i* S	**Sn**	**00 00 08.8**	**+0.4**
KOZ	**Kozyrevsk**	**1.32**	**307**	*e*P	**Pn**	**23 59 51.3**	**-0.2**
KOZ				*i* S	**Sn**	**00 00 08.8**	**+0.2**
BDR	**Baidarnaya**	**1.33**	**347**	*e*P	**Pn**	**23 59 51.7**	**+0.1**
BDR				*i* S	**Sn**	**00 00 09.5**	**+0.8**
SRKR	**Sorokina**	**1.42**	**347**	*e*P	**Pn**	**23 59 52.8**	**0.0**
SRKR				*i* S	**Sn**	**00 00 11.0**	**+0.2**
SRDR	**Sredinnyy**	**1.56**	**313**	*e*P	**Pn**	**23 59 54.0**	**-0.6**
KII	**Karymskiy**	**1.83**	**228**	*e*P	**Pn**	**23 59 58.8**	**+0.6**
KII				*i* S	**Sn**	**00 00 21.0**	**+0.5**
SPN	**Mys Shipunski**	**2.41**	**206**	*e*P	**Pn**	**00 00 05.6**	**-0.4**
SPN				*i* S	**Sn**	**00 00 33.6**	**-0.9**
BKI	**Bering**	**2.41**	**90**	*e*P	**Pn**	**00 00 06.1**	**0.0**
BKI				*i* S	**Sn**	**00 00 33.8**	**-0.8**
NLC	**Nalytchevo**	**2.54**	**215**	*e*P	**Pn**	**00 00 07.9**	**+0.1**
NLC				*i* S	**Sn**	**00 00 37.8**	**+0.1**
AVH	**Avacha**	**2.68**	**223**	*e*P	**Pn**	**00 00 10.8**	**+1.1**
GNL	**Ganaly**	**2.73**	**236**	*e*P	**Pn**	**00 00 11.1**	**+0.7**
PET	**Petropavlovsk**	**2.90**	**220**	PN	**Pn**	**00 00 13.4**	**+0.7**
PET				pmax	pmax		
	comp=Z,2.0nm,0.6s						
PET	**Petropavlovsk**	**2.90**	**220**	*e*P	**Pn**	**00 00 12.5**	**-0.2**
PET				*i* S	**Sn**	**00 00 45.5**	**-1.0**
MIPR	**Malaya Ipel'ka**	**4.22**	**227**	*e*P	**Pn**	**00 00 32.4**	**+1.7**
SKR	**Severo-Kuril's**	**5.72**	**219**	*e*PN	**Pn**	**00 00 57.4**	**+6.2**

*ISCJB **23** 00:16:17.0±1.4, 9°.12S±0°.06×128°.19E±0°.09, h170km±20km, Error ellipse: s-maj=14.0km s-min=9.9km az=10.9*
*NEIC **23** 00:16:18.1±1.3, 9°.21S×128°.05E, h160km±19km, Error ellipse: s-maj=14.2km s-min=10.4km az=95.0*
*IDC **23** 00:16:19.1±9.0, 9°.25S×128°.06E, h170km±99km, mb3.0/1, mb1 3.3/4, mb1mx3.1/17, mbtmp3.2/4, Error ellipse: s-maj=69.7km s-min=40.2km az=18.0*
ISC 23 00:16:17.8±1.2,**9°.18S**±0°.06×**128°.12E**±0°.07,**h158**km±17km,
n12, σ0**°92/17,Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**5.50**	**130**	*e*Pn	**Pn**	**00 17 37.9**	**-0.1**
KAKA				*e*Sn	**Sn**	**00 18 40.3**	**-0.4**
FITZ	**Fitzroy Crossi**	**9.19**	**195**	P	**Pn**	**00 18 27.0**	**+0.1**
	0.7nm,0.3s,baz=32,slow=8.9,SNR=20						
FITZ				S	**Sn**	**00 20 10.8**	**+1.7**
	2.3nm,0.3s,baz=337,slow=6.4,SNR=12						
WRAB	**Tennant Creek**	**12.27**	**151**	*e*Pn	**Pn**	**00 19 07.4**	**+0.1**
WRA	**Warramunga Arr**	**12.27**	**151**	P	**Pn**	**00 19 06.9**	**-0.5**
	1.0nm,0.3s,baz=324,slow=13,SNR=6.3						
WRA				S	**Sn**	**00 21 21.1**	**-2.2**
	1.5nm,0.3s,baz=323,slow=26,SNR=7.7						
MBWA	**Marble Bar**	**14.39**	**213**	*e*Pn	**Pn**	**00 19 33.8**	**-0.6**
MBWA				*e*Sn	**Sn**	**00 22 13.7**	**-0.6**
ASAR	**Alice Springs**	**15.43**	**160**	P	**Pn**	**00 19 48.7**	**+1.6**
	0.3nm,0.3s,baz=334,slow=10.0,SNR=10						
ASAR				S	**S**	**00 22 40.5**	**+1.4**
	0.5nm,0.3s,baz=330,slow=18,SNR=5.7						
DAV	**Davao City (W)**	**16.34**	**351**	P	**Pn**	**00 19 59.4**	**+1.0**
KKM	**Kota Kinabalu**	**19.23**	**321**	P	**P**	**00 20 29.8**	**-0.1**
COCO	**West Island**	**30.88**	**262**	P	**P**	**00 22 18.6**	**-1.0**
NACB	**Ninganchiao**	**33.76**	**349**	*e*P	**P**	**00 22 44.8**	**+0.3**
	94nm,1.7s						
DGAR	**Diego Garcia**	**55.07**	**267**	P	**P**	**00 25 33.0**	**-0.8**
BVAR	**Borovoye Array**	**78.93**	**329**	P	**P**	**00 28 03.7**	**+0.1**
	0.2nm,0.5s,baz=130,slow=6.4,SNR=3.2						

*NNC **23** 00:27:35.6±14.0, 39°.61N×62°.84E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=170.4km s-min=48.2km az=22.0*
*CSEM **23** 00:27:41.7±0.5, 40°.06N×63°.33E, h2km, mb4.3/1, Error ellipse: s-maj=16.6km s-min=7.6km az=177.0*
*ISCJB **23** 00:27:41.8±1.0, 40°.2N±0°.1×63°.42E±0°.06, h10km, mb3.9/2, Error ellipse: s-maj=15.5km s-min=6.1km az=1.4*
*NEIC **23** 00:27:46.1±0.9, 40°.07N×63°.33E, h35km, mb4.3/1, Error ellipse: s-maj=16.0km s-min=7.8km az=177.0*
*IDC **23** 00:27:47.5±3.1, 40°.47N×63°.30E, h0km, mb4.0/1, mb1 3.6/5, mb1mx3.4/25, mbtmp3.6/5, ML3.1/3, Error ellipse: s-maj=42.4km s-min=15.8km az=24.0*
ISC 23 00:27:43.6±1.0,**40°.1N**±0°.1×**63°.35E**±0°.05,**h10**km,**n34,**
σ1**°09/42,mb3.9/2,4C-1D,Northwestern Uzbekistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.13**	**59**	⇑Pn	**Pn**	**00 29 16.2**	**+2.0**
	0.4nm,0.2s,baz=240,slow=16,SNR=18						
KK31				⇓Pg	**Pg**	**00 29 38.7**	**-2.3**
	2.1nm,0.5s,baz=248,slow=19,SNR=7.4						
KK31				⇑Lg		00 30 53.9	
	14nm,0.7s						
KK31	**Karatay Array**	**6.13**	**59**	Pn	**Pn**	**00 29 16.2**	**+2.1**
	0.4nm,0.2s,baz=240,SNR=18						
KK31	**Karatay Array**	**6.13**	**59**	Pg	**Pg**	**00 29 38.7**	**-2.2**
	2.1nm,0.5s,SNR=7.4						
KK31				Lg		00 30 53.9	
	14nm,0.7s						
AML	**Almayashu**	**8.06**	**72**	*e*Pn	**Pn**	**00 29 41.5**	**+0.9**
AML				*e*Sn	**Sn**	**00 31 09.6**	**-2.1**
AML	**Almayashu**	**8.06**	**72**	*e*Pn	**Pn**	**00 29 41.5**	**+0.9**
UCH	**Uchtor**	**8.67**	**72**	*e*Pn	**Pn**	**00 29 49.6**	**+0.5**
UCH				*e*Sn	**Sn**	**00 31 26.9**	**0.0**
UCH	**Uchtor**	**8.67**	**72**	*e*Pn	**Pn**	**00 29 49.6**	**+0.6**
UCH				*e*Sn	**Sn**	**00 31 26.9**	**0.0**
AAK	**Ala-Archa**	**8.74**	**70**	Pn	**Pn**	**00 29 52.5**	**+2.5**
	0.0nm,0.3s,baz=231,slow=9.1,SNR=3.8						
AAK				Lg		00 32 24.4	
	baz=323,slow=20,SNR=2.3						
AB31	**Akbulak array**	**9.43**	**346**	⇑Pn	**Pn**	**00 29 58.7**	**-0.7**
	2.9nm,1.1s,baz=156,slow=14,SNR=11						
AB31	**Akbulak array**	**9.43**	**346**	Pn	**Pn**	**00 29 58.7**	**-0.7**
	2.9nm,1.1s,baz=156,SNR=11						
TKM2	**Tokmak 2**	**9.60**	**69**	*e*Pn	**Pn**	**00 30 01.9**	**+0.3**
TKM2				Sn	**Sn**	**00 31 49.2**	**-0.3**
TKM2	**Tokmak 2**	**9.60**	**69**	*e*Pn	**Pn**	**00 30 02.0**	**+0.3**
TKM2				Sn	**Sn**	**00 31 49.2**	**-0.3**
AKTK	**Aktyubinsk**	**10.96**	**342**	Pn	**Pn**	**00 30 20.5**	**+0.2**
AKTK				Sn	**Sn**	**00 32 17.6**	**-5.2**
AKTK	**Aktyubinsk**	**10.96**	**342**	Pn	**Pn**	**00 30 20.5**	**+0.2**
AKTO	**Aktyubinsk**	**10.96**	**342**	Pn	**Pn**	**00 30 20.5**	**+0.2**
	0.3nm,0.3s,baz=156,slow=12,SNR=5.6						
AKTO				Sn	**Sn**	**00 32 17.6**	**-5.2**
	0.2nm,0.3s,baz=174,slow=19,SNR=3.0						
BVA0	**Borovoye Array**	**13.76**	**18**	⇑Pn	**Pn**	**00 30 59.0**	**+0.5**
	1.1nm,1.9s,baz=222,slow=12,SNR=6.7						
BVAR	**Borovoye Array**	**13.76**	**18**	Pn	**Pn**	**00 30 59.2**	**+0.7**
	0.2nm,0.3s,baz=186,slow=13,SNR=5.9						
BVAR	**Borovoye Array**	**13.76**	**18**	Pn	**Pn**	**00 30 59.0**	**+0.5**
	1.1nm,1.9s,SNR=6.7						
BRVK	**Borovoye**	**13.76**	**18**	*e*Pn	**Pn**	**00 30 59.6**	**+1.0**
BRVK	**Borovoye**	**13.76**	**18**	*e*Pn	**Pn**	**00 30 59.6**	**+1.0**
MK31	**Makanchi Array**	**15.26**	**58**	*e*Pn	**Pn**	**00 31 18.5**	**-0.4**
MK31	**Makanchi Array**	**15.26**	**58**	*e*Pn	**Pn**	**00 31 18.5**	**-0.4**
MKAR	**Makanchi Array**	**15.26**	**58**	Pn	**Pn**	**00 31 18.4**	**-0.5**
	0.1nm,0.3s,baz=252,slow=9.9,SNR=5.9						
MKAR	**Makanchi Array**	**15.26**	**58**	Pn	**Pn**	**00 31 18.4**	**-0.5**
ZALV	**Zalesovo Beam**	**20.01**	**39**	P	**Pn**	**00 32 17.7**	**-0.2**
	0.2nm,0.3s,baz=238,slow=13,SNR=3.3						
OBN	**Obninsk**	**23.26**	**319**	*e*P	**P**	**00 32 51.4**	**+0.4**
	5.2nm,0.5s,mb4.2						
OBN	**Obninsk**	**23.26**	**319**	*e*P	**P**	**00 32 51.4**	**+0.4**
	5.2nm,0.5s,mb4.2						
CSS	**Prodhromos**	**24.29**	**267**	*e*P	**P**	**00 32 59.9**	**-1.1**
CSS	**Prodhromos**	**24.29**	**267**	*e*P	**P**	**00 32 59.9**	**-1.1**
ISP	**Isparta**	**25.55**	**275**	P	**P**	**00 33 11.3**	**-1.1**
ISP	**Isparta**	**25.55**	**275**	P	**P**	**00 33 11.3**	**-1.1**
TLY	**Talaya**	**29.94**	**54**	P	**P**	**00 33 50.7**	**-0.9**
TLY	**Talaya**	**29.94**	**54**	P	**P**	**00 33 50.7**	**-0.9**
FINES	**FINESS Array B**	**31.10**	**326**	P	**P**	**00 34 05.0**	**+3.3**
	0.4nm,0.4s,mb3.6,baz=120,slow=8.3,SNR=7.5						

*BJI **23** 01:02:42.5, 67°.58N×141°.12E, h7km, mB4.8/1, mb4.3/5, Ms4.8/1, Ms7 4.7/1*
*IDC **23** 01:02:42.5±0.7, 67°.84N×141°.10E, h0km, mb4.1/18, mb1 4.3/19, mb1mx4.2/28, mbtmp4.1/19, ML2.9/1, Error ellipse: s-maj=19.3km s-min=13.9km az=171.0*
*MOS **23** 01:02:42.9±1.1, 67°.83N×141°.10E, h14km, mb4.2/19, Error ellipse: s-maj=19.1km s-min=8.7km az=90.6*
*ISCJB **23** 01:02:42.4±0.3, 67°.83N±0°.05×141°.2E±0°.1, h10km, mb4.1/38, Error ellipse: s-maj=7.2km s-min=6.0km az=178.1*
*NEIC **23** 01:02:44.1±0.3, 67°.81N×141°.16E, h10km, mb4.3/13, Error ellipse: s-maj=8.5km s-min=5.9km az=172.0*
ISC 23 01:02:44.4±0.3,**67°.82N**±0°.05×**141°.1E**±0°.1,**h10**km,**n79,**
σ1**°02/78,mb4.1/38,4C,Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIXI	**Tiksi**	**5.72**	**318**	*e*P	**Pn**	**01 04 11.5**	**+2.3**
TIXI				pmax	pmax		
	comp=Z,43nm,0.5s						
TIXI	**Tiksi**	**5.72**	**318**	*e*Pn	**Pn**	**01 04 11.5**	**+2.3**
	comp=Z,42nm,0.5s						
SEY	**Seymchan**	**6.80**	**131**	*ce*P	**Pn**	**01 04 24.7**	**+0.7**
YAK	**Yakutsk**	**7.55**	**225**	*e*P	**Pn**	**01 04 38.1**	**+3.7**
YAK				*e*		01 06 03.2	
YAK				pmax	pmax		
	comp=Z,19nm,0.4s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.4s						
YAK				pmax	pmax		
	comp=N,14nm,0.6s						
YAK				smax			
	comp=E,65nm,0.6s						
YAK				smax			
	comp=N,65nm,0.6s						
YAK	**Yakutsk**	**7.55**	**225**	*e*Pn	**Pn**	**01 04 39.0**	**+4.6**
	comp=N,51nm,0.6s						
YAK				*e*S	**Sn**	**01 05 49.2**	**-11**
BILL	**Bilibino**	**9.45**	**77**	⇑*e*P	**Pn**	**01 05 00.7**	**+0.4**
BILL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,1μm,16.0s						
BILL	**Bilibino**	**9.45**	**77**	*e*Pn	**Pn**	**01 04 59.0**	**-1.4**

comp=Z,17nm,0.7s
PETK Petropavlovsk- 16.77 143 Pn **Pn 01 06 39.0 0.0**
comp=Z,0.1nm,0.3s,baz=311,slow=9.4,SNR=3.3
PETK Petropavlovsk- 16.77 143 Pn **Pn 01 06 39.0 0.0**
KLR Kul'dur 19.23 199 *eP* **P 01 07 07.2 -2.0**
YSS Yuzh-Sakhalins 20.94 177 *eP* **P 01 07 28.5 +1.6**
FX1 Attu Island--F 21.43 118 P **P 01 07 33.5 +1.3**
comp=Z,4.6nm,0.5s,mb4.1,baz=197,slow=11,SNR=8.5
FX1 Attu Island--F 21.43 118 P **P 01 07 33.5 +1.3**
FX1 pmax pmax
comp=Z,5.0nm,0.5s
HIA Hailar 21.46 221 *eP* **P 01 07 31.7 -0.8**
HIA pmax pmax
comp=Z,13nm,1.1s
HIA Hailar 21.46 221 *eP* **P 01 07 31.7 -0.8**
comp=Z,13nm,1.1s,mb4.2
TLY Talaya 24.27 247 *eP* Px 01 08 11.5
TLY pmax pmax
comp=Z,5.0nm,1.7s,mb3.7
COLD Coldfoot 25.07 59 *eP* **P 01 08 08.7 +0.4**
comp=Z,13nm,0.9s,mb4.5
MOY Mondy 25.22 250 *eP* **P 01 08 11.0 +1.1**
MOY pmax pmax
comp=Z,23nm,2.1s,mb4.3
VLA Vladivostok 25.24 196 *ceP* **P 01 08 10.5 +0.4**
ZAK Zakamensk 25.48 246 *eP* **P 01 08 10.4 -1.9**
ZAK *e* 01 13 59.0
ZAK pmax pmax
comp=Z,3.0nm,1.1s,mb3.7
TTA Tatalina 25.61 70 P **P 01 08 14.6 +1.3**
TTA pmax pmax
comp=Z,3.0nm,0.8s,mb3.9
TTA Tatalina 25.61 70 P **P 01 08 14.6 +1.3**
comp=Z,3.3nm,0.8s,mb3.9
ULN Ulaanbaatar 26.39 238 *eP* **P 01 08 21.2 +0.7**
ULN pmax pmax
comp=Z,2.0nm,0.8s,mb3.7
ULN Ulaanbaatar 26.39 238 *eP* **P 01 08 21.2 +0.8**
comp=Z,1.7nm,0.8s,mb3.6
SONM Songino Array 26.63 239 P **P 01 08 23.3 +0.7**
comp=Z,2.4nm,0.6s,mb3.9,baz=36,slow=8.1,SNR=3.9
SONM Songino Array 26.63 239 P **P 01 08 23.3 +0.7**
SONM pmax pmax
comp=Z,2.0nm,0.6s
ZALV Zalesovo Beam 29.45 270 P **P 01 08 47.5 -0.3**
comp=Z,0.5nm,0.4s,mb3.6,baz=46,slow=6.2,SNR=6.0
ZALV Zalesovo Beam 29.45 270 P **P 01 08 47.5 -0.3**
ZALV pmax pmax
comp=Z,1.0nm,0.4s,mb3.9
SPITS Spitsbergen Ar 30.61 341 P **P 01 08 59.1 +1.2**
comp=Z,5.8nm,0.7s,mb4.5,baz=50,slow=6.1,SNR=4.1
SPITS Spitsbergen Ar 30.61 341 P **P 01 08 59.1 +1.2**
SPITS pmax pmax
comp=Z,6.0nm,0.7s
KURK Kurchatov 34.34 272 *eP* **P 01 09 30.5 -0.2**
KURK pmax pmax
comp=Z,8.0nm,1.3s,mb4.5
KURK Kurchatov 34.34 272 *eP* **P 01 09 30.5 -0.3**
comp=Z,8.2nm,1.3s,mb4.5
BVAR Borovoye Array 35.60 282 P **P 01 09 41.6 0.0**
comp=Z,1.0nm,0.6s,mb3.9,baz=57,slow=5.3,SNR=5.4
BVAR PcP PcP 01 12 08.2 -1.7
comp=Z,1.3nm,0.6s,baz=2.9,slow=5.8,SNR=4.1
BVAR Borovoye Array 35.60 282 P **P 01 09 41.6 0.0**
BVAR 01 12 08.2
BVAR pmax pmax
comp=Z,1.0nm,0.6s
ARCES ARCESS Array B 36.07 327 P **P 01 09 45.4 0.0**
comp=Z,2.3nm,0.9s,mb4.1,baz=30,slow=9.3,SNR=4.3
ARCES ARCESS Array B 36.07 327 P **P 01 09 45.4 0.0**
ARCES pmax pmax
comp=Z,2.0nm,0.9s
ARCES ARCESS Array B 36.07 327 P **P 01 09 45.4 0.0**
MK31 Makanchi Array 36.17 265 *eP* **P 01 09 45.6 -0.9**
MKAR Makanchi Array 36.17 265 P **P 01 09 45.7 -0.8**
comp=Z,7.3nm,0.7s,mb4.7,baz=49,slow=9.0,SNR=46
MKAR Makanchi Array 36.17 265 P **P 01 09 45.7 -0.8**
MKAR pmax pmax
comp=Z,7.0nm,0.7s
ARU Arti 37.19 294 *c iP* **P 01 09 55.3 +0.2**
ARU *e* 01 11 18.2
ARU S **S 01 15 41.8 +0.5**
ARU pmax pmax
comp=Z,3.0nm,1.2s,mb4.0
YKA Yellowknife Ar 39.12 45 P **P 01 10 11.3 0.0**
comp=Z,1.0nm,0.7s,mb3.6,baz=323,slow=7.6,SNR=3.6
YKA Yellowknife Ar 39.12 45 P **P 01 10 11.3 0.0**
YKA pmax pmax
comp=Z,1.0nm,0.7s
SUMG Summit 39.85 360 *eP* **P 01 10 16.6 -0.7**
comp=Z,2.9nm,0.6s,mb4.2
JOF Joensuu 40.21 318 *eP* **P 01 10 20.1 -0.2**
JOF pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
JOF Joensuu 40.21 318 *ep* **P 01 10 20.1 -0.2**
comp=Z,2.0nm,0.5s,mb4.1
TKM2 Tokmak 2 41.98 268 *eP* **P 01 10 35.7 +0.6**
TKM2 pmax pmax
comp=Z,5.0nm,1.0s,mb4.1
TKM2 Tokmak 2 41.98 268 *eP* **P 01 10 35.7 +0.6**
comp=Z,4.7nm,1.0s,mb4.1
ABKAR Akbulak array 42.51 287 *eP* **P 01 10 39.2 -0.2**
comp=Z,1.5nm,0.6s,mb3.9
FINES FINESS Array B 42.76 320 P **P 01 10 41.1 -0.2**
comp=Z,2.2nm,0.9s,mb3.9,baz=32,slow=5.6,SNR=7.0
FINES FINESS Array B 42.76 320 P **P 01 10 41.1 -0.2**
FINES pmax pmax
comp=Z,2.0nm,0.9s
EKS2 Erkin-Say 42.89 269 *eP* **P 01 10 43.4 +0.8**
comp=Z,2.9nm,0.9s,mb4.0
UCH Uchtor 42.98 268 *eP* **P 01 10 44.7 +1.4**
comp=Z,3.8nm,1.0s,mb4.1
AML Almayashu 43.38 269 *eP* **P 01 10 47.9 +1.5**
comp=Z,8.1nm,1.0s,mb4.4
OBN Obninsk 45.38 309 P **P 01 11 07.0 +4.7**
NB2 NORSAR Subarra 46.40 329 P **P 01 11 10.1 -0.2**
comp=Z,1.0nm,0.6s,mb3.9,baz=24,slow=7.9
NOA NORSAR Array B 46.40 329 P **P 01 11 10.1 -0.2**
comp=Z,2.1nm,0.8s,mb4.1,baz=24,slow=7.7,SNR=4.1
NOA NORSAR Array B 46.40 329 P **P 01 11 10.1 -0.2**
NOA pmax pmax
comp=Z,2.0nm,0.8s
FFC Flin Flon 49.17 43 *i P* **P 01 11 31.1 -0.7**
FFC Flin Flon 49.17 43 *eP* **P 01 11 30.0 -1.8**
comp=Z,4.0nm,1.0s,mb4.4
AKASG Malin Array Be 51.39 311 P **P 01 11 47.9 -0.8**
comp=Z,0.9nm,0.4s,mb4.0,baz=29,slow=8.1,SNR=3.7
AKASG Malin Array Be 51.39 311 P **P 01 11 47.9 -0.8**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
KIV Kislovodsk 53.15 297 *eP* **P 01 12 01.3 -0.5**
KIV pmax pmax
comp=Z,18nm,1.1s,mb4.9
KIV Kislovodsk 53.15 297 *eP* **P 01 12 02.4 +0.6**
comp=Z,14nm,0.9s,mb4.9
RLMT Red Lodge 55.74 54 *eP* **P 01 12 20.7 0.0**
comp=Z,4.1nm,0.9s,mb4.5
SCHQ Schefferville 55.91 19 P **P 01 12 19.3 -2.5**
comp=Z,2.2nm,0.6s,mb4.3,baz=353,slow=11,SNR=8.9
SCHQ Schefferville 55.91 19 *eP* **P 01 12 19.6 -2.1**
comp=Z,2.4nm,0.7s,mb4.3
CMAR Chiang Mai Arr 56.06 230 P **P 01 12 22.1 -1.1**
comp=Z,0.7nm,0.3s,mb4.1,baz=5.7,slow=10,SNR=5.6
CMAR Chiang Mai Arr 56.06 230 P **P 01 12 22.1 -1.1**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
PDAR Pinedale Array 57.78 55 P **P 01 12 34.8 -0.3**
comp=Z,0.9nm,0.6s,mb4.0,baz=0.0,slow=5.8,SNR=6.0
NVAR Mina Array Bea 58.82 64 P **P 01 12 43.6 +1.1**
comp=Z,0.7nm,0.7s,mb3.8,baz=288,slow=7.2,SNR=4.1
MMAI Mount Meron Ar 65.46 297 P **P 01 13 27.1 0.0**
comp=Z,1.0nm,0.5s,mb4.1,baz=33,slow=8.6,SNR=3.8
ESDC Sonseca Array 69.63 332 P **P 01 13 52.9 -0.5**
comp=Z,1.4nm,0.7s,mb4.0,baz=4.8,slow=6.4,SNR=11
PSI Prapat 70.97 225 P **P 01 13 59.3 -2.5**
comp=Z,7.7nm,0.6s,mb4.8,baz=144,slow=11,SNR=7.0
PSI Prapat 70.97 225 P **P 01 13 59.3 -2.5**
PSI pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
PSI Prapat 70.97 225 P **P 01 13 59.3 -2.5**
TXAR Lajitas Array 71.97 56 P **P 01 14 06.3 -1.5**
comp=Z,0.4nm,0.5s,mb3.6,baz=354,slow=4.5,SNR=5.2
MAW Mawson 145.57 222 PKPbc PKPbc 01 22 19.5 -1.5
comp=Z,2.2nm,0.7s,baz=105,slow=4.3,SNR=4.4
PLCA Paso Flores 147.88 49 PKPbc PKPbc 01 22 27.6 -0.9
comp=Z,3.2nm,0.6s,baz=113,slow=1.7,SNR=14

*IDC **23** 01:08:24.3±4.6, 6°.11S×146°.81E, h59km±41km, mb4.0/8, mb1 4.2/9, mb1mx3.9/17, mbtmp4.1/9, ML4.3/1, Error ellipse: s-maj=35.0km s-min=11.4km az=117.0*
*ISCJB **23** 01:08:24.4±2.9, 6°.06S±0°.10×146°.9E±0°.1, h81km±28km, mb4.2/9, Error ellipse: s-maj=18.8km s-min=16.0km az=17.0*
*NEIC **23** 01:08:27.5±2.8, 6°.07S×146°.66E, h85km±27km, mb4.5/3, Error ellipse: s-maj=22.1km s-min=18.5km az=116.0*
ISC 23 01:08:24.8±2.2, 6°.13S±0°.08×146°.75E±0°.09, h62km±21km, n27, σ1.933/32, mb4.3/9, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**8.54**	**204**	*eP*	**Pn**	**01 10 29.3**	**+3.4**
COEN				*eS*	**Sn**	**01 11 59.7**	**-1.1**
COEN	**Coen**	**8.54**	**204**	*ePn*	**Pn**	**01 10 29.1**	**+3.2**
COEN	377nm,0.6s			*eSn*	**Sn**	**01 12 00.7**	**-0.1**
CTA	**Charters Tower**	**13.89**	**182**	*eP*	**Pn**	**01 11 42.4**	**+3.7**
CTA	4.3nm,0.5s **Charters Tower**	**13.89**	**182**	P	**Pn**	**01 11 42.5**	**+3.8**
CTAO	1.0nm,0.3s,baz=354,slow=15,SNR=6.1 **Charters Tower**	**13.89**	**182**	Pn	**Pn**	**01 11 41.1**	**+2.4**
KAKA	**Kakadu**	**15.56**	**244**	*eP*	**Pn**	**01 12 03.7**	**+3.2**
KAKA	16nm,0.5s **Kakadu**	**15.56**	**244**	Pn	**Pn**	**01 11 59.7**	**-0.8**
KAKA	48nm,0.6s			*eSn*	**Sn**	**01 14 50.0**	**-2.0**
WRAB	**Tennant Creek**	**18.27**	**220**	*eP*	**Pn**	**01 12 31.8**	**-2.2**
WRA	8.2nm,0.6s **Warramunga Arr**	**18.28**	**220**	P	**Pn**	**01 12 35.2**	**+0.9**
WRA	0.9nm,0.3s,baz=44,slow=12,SNR=27			S	**S**	**01 15 58.0**	**-0.8**
WRA	0.3nm,0.3s,baz=48,slow=22,SNR=5.3 **Warramunga Arr**	**18.28**	**220**	P	**Pn**	**01 12 35.2**	**+0.9**
WRA				S	**S**	**01 15 58.0**	**-0.8**
EIDS	**Eidsvold**	**19.58**	**168**	*eP*	**Pn**	**01 12 48.0**	**-1.7**
ASAR	**Alice Springs**	**21.38**	**214**	P	**P**	**01 13 08.5**	**+1.2**
ASAR	5.5nm,0.5s,mb4.2,baz=51,slow=8.9,SNR=47			S	**S**	**01 17 03.5**	**+2.3**
FITZ	1.8nm,0.8s,baz=34,slow=20,SNR=4.5 **Fitzroy Crossi**	**23.79**	**238**	*eP*	**P**	**01 13 33.6**	**+1.5**
FITZ	42nm,0.8s,mb4.9 **Fitzroy Crossi**	**23.79**	**238**	P	**P**	**01 13 33.9**	**+1.8**
FITZ	23nm,0.8s,mb4.7,baz=80,slow=8.2,SNR=24 **Fitzroy Crossi**	**23.79**	**238**	*eP*	**P**	**01 13 33.7**	**+1.6**
ARMA	21nm,0.8s,mb4.6 **Armidale**	**24.59**	**170**	*eP*	**P**	**01 13 38.8**	**-0.5**
STKA	**Stephens Creek**	**26.07**	**190**	*eP*	**P**	**01 13 52.1**	**-0.5**
STKA	3.1nm,0.4s,mb4.2 **Stephens Creek**	**26.07**	**190**	P	**P**	**01 13 51.9**	**-0.7**
MBWA	4.2nm,0.5s,mb4.2,baz=358,slow=7.8,SNR=15 **Marble Bar**	**30.13**	**238**	*eP*	**P**	**01 14 30.2**	**+1.1**
KULM	**Kulim**	**47.40**	**283**	P	**P**	**01 16 54.1**	**+0.6**
CMAR	5.8nm,0.5s,mb4.8 **Chiang Mai Arr**	**53.09**	**298**	P	**P**	**01 17 37.3**	**+0.9**
PETK	0.9nm,0.4s,mb4.1,baz=106,slow=5.1,SNR=3.4 **Petropavlovsk-**	**59.73**	**8**	P	**P**	**01 18 22.8**	**-0.2**
PETK	2.2nm,0.7s,mb4.3,baz=176,slow=8.4,SNR=5.3 **Petropavlovsk-**	**59.73**	**8**	P	**P**	**01 18 22.8**	**-0.2**
FX1	**Attu Island--F**	**62.91**	**18**	P	**P**	**01 18 44.5**	**+0.1**
MKAR	8.1nm,0.6s,mb5.0,baz=281,slow=5.2,SNR=11 **Makanchi Array**	**77.44**	**321**	P	**P**	**01 20 12.6**	**-0.9**
ZALV	0.4nm,0.4s,mb3.7,baz=101,slow=7.8,SNR=3.5 **Zalesovo Beam**	**78.99**	**328**	P	**P**	**01 20 20.1**	**-1.8**
DBIC	0.8nm,0.5s,mb4.0,baz=107,slow=5.9,SNR=4.3 **Dimbokro**	**151.78**	**273**	PKPbc	PKPbc	01 28 13.2	-0.5
DBIC	5.6nm,1.0s,baz=90,slow=4.0,SNR=2.7			PKPab	PKPab	01 28 23.3	+0.5
	4.3nm,0.7s,baz=89,slow=5.4,SNR=5.8						

*IDC **23** 01:21:01.5±0.8, 46°.01S×166°.23E, h0km, mb4.4/6, mb1 4.6/8, mb1mx4.4/16, mbtmp4.5/8, ML4.6/2, MS4.1/2, Ms1 4.1/2, ms1mx3.7/17, Error ellipse: s-maj=26.1km s-min=19.9km az=7.0*
*NEIC **23** 01:21:04.8, 45°.95S×166°.25E, h5km, mb4.7/3, ML5.2(WEL), After WEL.*
ISC 23 01:21:03.2±1.5, 46°.09S±0°.07×166°.20E±0°.06, h7km±9km, n59, σ0.999/46, mb4.3/9, 2D, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.90**	**48**	P	**Pg**	**01 21 20.1**	**-0.4**
DCZ				S	**Sg**	**01 21 32.2**	**0.0**
APZ	**The Paps**	**1.44**	**122**	P	**Pn**	**01 21 28.8**	**-0.9**
MLZ	**Mavora Lakes**	**1.56**	**63**	P	**Pn**	**01 21 31.3**	**-0.1**
SYZ	**Scrubby Hill**	**2.08**	**104**	P	**Pn**	**01 21 38.9**	**+0.3**
EAZ	**Earnscleugh**	**2.34**	**70**	P	**Pn**	**01 21 43.4**	**+1.4**
WKZ	**Wanaka**	**2.35**	**59**	P	**Pn**	**01 21 44.0**	**+1.9**
TUZ	**Tuapeka**	**2.39**	**88**	P	**Pn**	**01 21 43.2**	**+0.4**
JCZ	**Jackson Bay**	**2.71**	**43**	P	**Pn**	**01 21 48.8**	**+1.7**
LBZ	**Lake Benmore**	**3.29**	**60**	P	**Pn**	**01 21 55.0**	**-0.1**
ODZ	**Otahua Downs**	**3.29**	**73**	P	**Pn**	**01 21 54.6**	**-0.5**
FOZ	**Fox Glacier**	**3.54**	**46**	P	**Pn**	**01 22 00.2**	**+1.7**
RPZ	**Rata Peaks**	**4.18**	**57**	Pn	**Pn**	**01 22 07.0**	**-0.4**
RPZ	66nm,0.3s,baz=202,slow=14,SNR=267			Sn	**Sn**	**01 22 55.6**	**-0.8**
RPZ	121nm,0.3s,baz=102,slow=19,SNR=13			LR	LR	01 23 32.0	
WVZ	comp=Z,1μm,20.7s,baz=233,slow=36 **Waitaha Valley**	**4.42**	**49**	P	**Pn**	**01 22 10.9**	**+0.3**
MQZ	**McQueen's Vall**	**5.16**	**65**	P	**Pn**	**01 22 20.2**	**-0.6**
LTZ	**Lake Taylor**	**5.46**	**55**	P	**Pn**	**01 22 23.7**	**-1.2**
DSZ	**Denniston Nort**	**5.93**	**45**	P	**Pn**	**01 22 30.9**	**-0.5**
KHZ	**Kahutara**	**6.42**	**58**	*ePn*	**Pn**	**01 22 38.0**	**-0.1**
KHZ	206nm,1.2s			*eS*	**Sn**	**01 23 51.1**	**-0.5**
THZ	**Tophouse**	**6.49**	**51**	P	**Pn**	**01 22 37.7**	**-1.3**
SNZO	**South Karori**	**7.79**	**55**	*ePn*	**Pn**	**01 22 57.5**	**+0.6**
SNZO				*eS*	**Sn**	**01 24 19.9**	**-5.5**
URZ	**Urewera**	**11.24**	**50**	Pn	**Pn**	**01 23 43.0**	**-1.2**
URZ	2.1nm,0.3s,baz=229,slow=7.0,SNR=8.4			Sn	**Sn**	**01 25 39.7**	**-10**
URZ	1.1nm,0.3s,baz=131,slow=15,SNR=2.5 **Urewera**	**11.24**	**50**	*ePn*	**Pn**	**01 23 43.6**	**-0.7**
URZ				*eS*	**Sn**	**01 25 43.5**	**-6.6**
OUZ	**Omahuta**	**12.21**	**30**	*ePn*	**Pn**	**01 23 57.6**	**+0.1**
TAU	**Tasmania Unive**	**13.85**	**276**	*ePn*	**Pn**	**01 24 15.8**	**-4.0**
CNB	**Canberra Magne**	**16.66**	**304**	*eP*	**Pn**	**01 25 02.5**	**+5.4**
CAN	**Canberra**	**16.87**	**304**	*ePn*	**Pn**	**01 24 58.5**	**-1.3**
TOO	**Toolangi**	**17.59**	**292**	*eP*	**Pn**	**01 25 08.4**	**-0.3**
CMSA	**Cobar Meteorol**	**21.51**	**305**	*eP*	**P**	**01 25 55.9**	**+3.3**
STKA	**Stephens Creek**	**23.69**	**298**	*eP*	**P**	**01 26 17.6**	**+2.0**
STKA	5.4nm,1.0s,mb3.9 **Stephens Creek**	**23.69**	**298**	P	**P**	**01 26 16.2**	**+0.6**
STKA	11nm,1.2s,mb4.2,baz=131,slow=13,SNR=7.3			LR	LR	01 34 53.0	
STKA	comp=Z,728nm,19.5s,baz=112,slow=35 **Stephens Creek**	**23.69**	**298**	*eP*	**P**	**01 26 16.0**	**+0.4**
STKA	1.5nm,1.0s,mb3.4			LR	LR	01 34 53.0	
DZM	**Mont Dzumac**	**23.96**	**1**	*eP*	**P**	**01 26 19.8**	**+1.7**
EIDS	41nm,1.4s,mb4.7 **Eidsvold**	**23.96**	**324**	*eP*	**P**	**01 26 19.0**	**+0.9**
EIDS	**Eidsvold**	**23.96**	**324**	*eP*	**P**	**01 26 19.5**	**+1.4**
BBOO	13nm,0.8s,mb4.4 **Buckleboo**	**26.61**	**289**	*eP*	**P**	**01 26 46.4**	**+4.3**
ASAR	6.9nm,0.8s,mb4.2 **Alice Springs**	**34.31**	**300**	P	**P**	**01 27 49.5**	**-0.8**
WRA	3.5nm,0.8s,mb4.3,baz=132,slow=7.9,SNR=22 **Warramunga Arr**	**36.91**	**304**	P	**P**	**01 28 11.2**	**-1.4**
FITZ	4.3nm,0.8s,mb4.3,baz=140,slow=8.2,SNR=13 **Fitzroy Crossi**	**43.56**	**296**	P	**P**	**01 29 06.7**	**-1.0**
QSPA	4.3nm,0.8s,mb4.2,baz=139,slow=11,SNR=4.9 **South Pole Qui**	**44.04**	**180**	P	**P**	**01 29 11.7**	**+0.8**
QSPA	11nm,1.1s,mb4.5,baz=27,slow=4.9,SNR=16 **South Pole Qui**	**44.04**	**180**	*eP*	**P**	**01 29 11.6**	**+0.7**
CMAR	16nm,1.2s,mb4.6 **Chiang Mai Arr**	**88.31**	**299**	P	**P**	**01 33 55.4**	**-0.2**
MKAR	1.9nm,0.7s,mb4.4,baz=134,slow=3.9,SNR=9.5 **Makanchi Array**	**118.10**	**309**	PKP	PKPdf	01 39 47.7	-2.4
ECSD	0.5nm,0.6s,baz=127,slow=0.9,SNR=5.0 **EROS Data Cent**	**123.90**	**60**	*ePKPdf*	PKPdf	01 40 00.0	-1.3
YKA	**Yellowknife Ar**	**125.12**	**34**	PKP	PKPdf	01 40 01.1	-2.0
JFWS	0.8nm,0.7s,baz=225,slow=1.7,SNR=3.3 **Jewell Farm**	**127.37**	**64**	*ePKPdf*	PKPdf	01 40 06.7	-1.3
BVAR	**Borovoye Array**	**127.94**	**310**	PKP	PKPdf	01 40 08.5	-0.2
BR131	1.0nm,0.7s,baz=153,slow=1.6,SNR=6.3 **Keskin Array S**	**145.10**	**277**	*ePKPdf*	PKPdf	01 40 40.1	-0.7
SCHQ	**Schefferville**	**145.87**	**55**	PKPbc	PKPbc	01 40 40.8	-1.5
	11nm,0.7s,baz=251,slow=3.4,SNR=34						

KEV Kevo 148.93 334 *ep* PKPdf 01 40 49.1 +2.8
7.8nm,0.7s
KEV Kevo 148.93 334 *ep* PKPdf 01 40 49.1 +2.8
7.8nm,0.7s
ARCES ARCESS Array B 149.50 334 PKPbc PKPbc 01 40 51.1 -0.6
9.3nm,0.6s,baz=74,slow=3.3,SNR=52
JOF Joensuu 149.68 320 *ep* PKPdf 01 40 51.4 +3.7
4.4nm,0.6s
JOF Joensuu 149.68 320 *ep* PKPdf 01 40 51.4 +3.7
4.4nm,0.6s
AKASG Malin Array Be 151.37 295 PKPbc PKPbc 01 40 55.6 -1.1
4.9nm,0.6s,baz=81,slow=2.5,SNR=31
TAM Tamanrasset 151.97 221 *ePKPbc* PKPbc 01 40 59.5 +0.5
VRI Vrincioaia 152.05 284 ⇓*iP* PKPbc 01 40 58.0 -0.5
KAF Kangasniemi 152.13 320 *ep* PKPbc 01 40 56.7 -1.5
6.7nm,0.6s
KAF Kangasniemi 152.13 320 *ep* PKPbc 01 40 56.7 -1.5
6.7nm,0.6s
FINES FINESS Array B 152.42 318 PKPbc PKPbc 01 40 58.0 -0.8
4.9nm,0.6s,baz=90,slow=3.2,SNR=32
MLR Muntele Rosu 152.48 283 ⇓*iP* PKPbc 01 40 59.3 -0.2

*KISR **23** 01:21:54.1±0.9, 26°.97N×57°.83E, h2km±999km, ML4.0*
*OMAN **23** 01:21:55.4±99.0, 26°.85N×58°.51E, h36km±398km, Error ellipse: s-maj=160.0km s-min=15.2km az=10.0*
*TEH **23** 01:21:55.3, 26°.13N×58°.27E, h2km*
*ISCJB **23** 01:22:00.6±0.7, 26°.59N±0°.03×57°.90E±0°.06, h10km, Error ellipse: s-maj=7.8km s-min=4.5km az=7.3*
*CSEM **23** 01:22:03.6±0.6, 26°.54N×57°.70E, h15km, ML3.6/2, Error ellipse: s-maj=13.8km s-min=9.7km az=88.0*
ISC 23 01:22:01.8±0.6, 26°.49N±0°.03×57°.82E±0°.05, h10km, n31, σ1.958/50, 3C-18D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BANOM	**Banah**	**1.48**	**248**	⇓*P*	**Pn**	**01 22 29.2**	**+0.8**
BANOM	SNR=42			⇓*P*		01 22 29.2	
BANOM	SNR=42			⇓*P*		01 22 29.2	
BANOM	SNR=42			⇓*P*		01 22 29.2	
BANOM	SNR=42			⇓*P*		01 22 29.2	
BANOM	SNR=42			⇓*P*		01 22 29.2	
BANOM	SNR=42			⇓*S*	**Sn**	**01 22 55.6**	**+7.8**
BANOM				⇓*S*	**Sn**	**01 22 55.6**	**+7.8**
BANOM				⇓*S*	**Sn**	**01 22 55.6**	**+7.8**
BANOM				⇓*S*	**Sn**	**01 22 55.6**	**+7.8**
BANOM				⇓*S*	**Sn**	**01 22 55.6**	**+7.8**
BANOM				⇓*S*	**Sn**	**01 22 55.6**	**+7.8**
BANOM	**Banah**	**1.48**	**248**	Pn	**Pn**	**01 22 28.6**	**+0.1**
BANOM	SNR=15 **Banah**	**1.48**	**248**	P	**Pn**	**01 22 29.2**	**+0.7**
BANOM	SNR=42			Sn	**Sn**	**01 22 50.3**	**+2.4**
BANOM				S	**Sn**	**01 22 55.6**	**+7.7**
IBND	**Bandar-abas**	**1.49**	**310**	*ePn*	**Pn**	**01 22 31.4**	**+2.7**
IBND	comp=Z,10μm,0.1s			*e*		01 22 34.8	
BNDS	**Bandar-Abbas**	**1.73**	**302**	*ePg*	**Pg**	**01 22 33.8**	**-1.3**
BNDS				*eSg*	**Sg**	**01 22 58.4**	**+0.9**
HATD	**Hatta, Dubai**	**2.25**	**223**	⇓*P*	**Pn**	**01 22 39.3**	**+0.2**
HATD				⇓*P*		01 22 39.3	
HATD				⇓*P*		01 22 39.3	
HATD				⇓*P*		01 22 39.3	
HATD				⇓*P*		01 22 39.3	
HATD				⇓*P*		01 22 39.3	
HATD	**Hatta, Dubai**	**2.25**	**223**	P	**Pn**	**01 22 39.3**	**+0.2**
ASHO	**Ashiyiah**	**2.40**	**222**	Pn	**Pn**	**01 22 42.8**	**+1.6**
FAQ	SNR=12 **Al Faqa, Dubai**	**2.66**	**230**	Pn	**Pn**	**01 22 46.9**	**+2.2**
ASUD	SNR=8.9 **Al Ashush, Dub**	**2.92**	**231**	⇑*P*	**Pn**	**01 22 50.0**	**+1.8**
ASUD	SNR=8.7			⇑*P*		01 22 50.0	
ASUD	SNR=8.7			⇑*P*		01 22 50.0	
ASUD	SNR=8.7 **Al Ashush, Dub**	**2.92**	**231**	Pn	**Pn**	**01 22 50.2**	**+1.9**
ARQ	SNR=8.7 **Araqi**	**3.35**	**201**	P	**Pn**	**01 22 53.7**	**-0.6**
ARQ	SNR=6.8			P		01 22 53.7	
ARQ	SNR=6.8			P		01 22 53.7	
ARQ	SNR=6.8			P		01 22 53.7	
ARQ	SNR=6.8			P		01 22 53.7	
ARQ	SNR=6.8			P		01 22 53.7	
ARQ	**Araqi**	**3.35**	**201**	P	**Pn**	**01 22 53.7**	**-0.6**
KRBR	SNR=6.8 **Kerman**	**3.61**	**345**	*ePn*	**Pn**	**01 23 00.0**	**+2.2**
KRBR				*eSg*	**Sg**	**01 23 57.8**	**+0.1**
BSY	**Bisya**	**3.77**	**189**	P	**Pn**	**01 22 57.9**	**-2.2**
BSY	SNR=11			P		01 22 57.9	
BSY	SNR=11			P		01 22 57.9	
BSY	SNR=11			P		01 22 57.9	
BSY	SNR=11			P		01 22 57.9	
BSY	SNR=11			P		01 22 57.9	
BSYO	**Bisya**	**3.78**	**188**	P	**Pn**	**01 22 57.9**	**-2.2**
ZHSF	SNR=11 **Zahedan**	**4.06**	**39**	*ePn*	**Pn**	**01 23 05.7**	**+1.6**
GHIR	**Ghir-Karzin**	**4.66**	**294**	*ePn*	**Pn**	**01 23 13.4**	**+1.2**
IMOK	**Mouk**	**5.19**	**301**	*ePn*	**Pn**	**01 23 20.6**	**+1.0**
IMOK	comp=Z,165nm,0.1s			*e*		01 23 25.0	
IPAR	**Pars**	**5.38**	**310**	*ePn*	**Pn**	**01 23 22.5**	**+0.4**
IPAR	comp=Z,130nm,0.5s			*e*		01 25 33.8	
IBAF	**Bafgh**	**5.46**	**339**	*ePn*	**Pn**	**01 23 23.2**	**0.0**
IMEH	**Mehriz**	**5.64**	**331**	*ePn*	**Pn**	**01 23 25.7**	**0.0**
IMEH				*eSg*	**Sg**	**01 25 06.7**	**+3.9**
IMEH				*e*		01 25 18.1	
IKOO	comp=Z,98nm,0.4s **Kooshah**	**6.01**	**10**	*ePn*	**Pn**	**01 23 28.5**	**-2.3**
IKOO	comp=Z,172nm,0.2s			*e*		01 23 44.4	
IKOO				*eSn*	**Sn**	**01 24 37.6**	**-2.0**
ISAD	**Sadrabad**	**6.50**	**327**	*ePn*	**Pn**	**01 23 38.7**	**+1.1**
ISAD	comp=Z,123nm,0.6s			*e*		01 25 54.7	
IPIR	**Pirpir**	**8.63**	**317**	*e*	**Pn**	**01 24 13.5**	**+6.7**
IPIR	comp=Z,48nm,0.1s			*ePn*	**Pn**	**01 24 07.9**	**+1.1**
RDF	**Al-Radifah**	**9.42**	**287**	*eP*	**Pn**	**01 24 15.4**	**-2.2**
RDF				*eS*	**Sn**	**01 26 02.1**	**-1.6**
RDF				AML	AML	01 26 03.8	
RDF	comp=Z,5.1nm,0.5s **Al-Radifah**	**9.42**	**287**	*eP*	**Pn**	**01 24 15.4**	**-2.3**
RDF				*eS*	**Sn**	**01 26 02.1**	**-1.6**
NAY	comp=Z,5.0nm,0.5s **Al-Naaiem**	**9.76**	**289**	*eP*	**Pn**	**01 24 20.2**	**-2.0**
NAY				*eS*	**Sn**	**01 26 10.2**	**-1.7**
NAY				AML	AML	01 26 13.5	
NAY	comp=Z,4.1nm,0.6s **Al-Naaiem**	**9.76**	**289**	*eP*	**Pn**	**01 24 20.2**	**-2.1**
NAY				*eS*	**Sn**	**01 26 10.2**	**-1.7

ellipse: s-maj=6.9km s-min=5.2km az=141.3
*CSEM **23** 01:28:53.0±0.5, 36°.12N×21°.82E, h2km, ML3.5/6, Error ellipse: s-maj=10.7km s-min=6.9km az=44.0*
*THE **23** 01:28:56.2, 36°.25N×21°.64E, h8km±2km, ML3.5/6, Error ellipse: s-maj=3.3km s-min=2.2km az=258.0*
ISC 23 01:28:52.8±0.8, 36°.09N±0°.04×21°.84E±0°.05, h10km±11km, n76, σ1§24/104, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.81	355	P	Pg	01 29 07.5	-0.9
PYL				S	Sg	01 29 18.7	-0.3
PYL	PYLOS	0.81	355	*e*PG	Pg	01 29 07.8	-0.6
PYL				*e*SG	Sg	01 29 18.8	-0.2
PYL	PYLOS	0.81	355	P	Pg	01 29 07.5	-0.9
PYL	PYLOS	0.81	355	*e*Pg	Pg	01 29 07.8	-0.6
PYL				S	Sg	01 29 18.7	-0.3
KYTH	Kithira	0.99	78	*e*Pg	Pg	01 29 10.3	-1.5
KYTH	Kithira	0.99	78	*e*PG	Pg	01 29 10.3	-1.5
KYTH	Kithira	0.99	78	*e*Pg	Pg	01 29 10.3	-1.5
VLI	Veliai	1.09	54	*e*Pb	Pg	01 29 13.2	-0.5
VLI				*e*Sb	Sg	01 29 27.9	0.0
VLI	Veliai	1.09	54	*e*PB	Pg	01 29 13.2	-0.5
VLI				*e*SB	Sg	01 29 27.9	0.0
VLI	Veliai	1.09	54	*e*Pb	Pg	01 29 13.2	-0.5
VLI				*e*Sb	Sg	01 29 27.9	0.0
ITM	Ithomi	1.09	4	*e*Pb	Pg	01 29 13.2	-0.6
ITM				*e*Sb	Sg	01 29 28.2	+0.2
ITM	Ithomi	1.09	4	P	Pg	01 29 12.9	-0.9
ITM				S	Sg	01 29 28.9	+0.9
ITM	Ithomi	1.09	4	*e*PB	Pg	01 29 13.2	-0.6
ITM				*e*SB	Sg	01 29 28.2	+0.2
ITM	Ithomi	1.09	4	P	Pg	01 29 12.9	-0.9
ITM	Ithomi	1.09	4	*e*Pb	Pg	01 29 13.2	-0.6
ITM				*e*Sb	Sg	01 29 28.2	+0.2
ITM				S	Sg	01 29 28.9	+0.9
VLX	Vlachokerasia	1.35	19	P	Pn	01 29 17.5	-0.2
VLX				S	Sb	01 29 36.4	+0.8
VLX	Vlachokerasia	1.35	19	*e*PB	Pb	01 29 17.7	-0.5
VLX				*e*SB	Sb	01 29 36.4	+0.8
VLX	Vlachokerasia	1.35	19	P	Pn	01 29 17.5	-0.2
VLX				S	Sb	01 29 36.4	+0.8
GUR	Goura	1.89	12	P	Pn	01 29 26.5	+1.4
GUR				S	Sn	01 29 50.3	+1.3
GUR	Goura	1.89	12	*e*PG	Pb	01 29 27.5	+0.1
GUR	Goura	1.89	12	P	Pn	01 29 26.5	+1.4
GUR	Goura	1.89	12	*e*Pg	Pb	01 29 27.5	+0.1
GUR				S	Sn	01 29 50.3	+1.3
RLS	Riolos of Patr	1.99	352	*e*Pg	Pb	01 29 29.6	+0.5
RLS	Riolos of Patr	1.99	352	*e*PG	Pb	01 29 29.6	+0.5
RLS	Riolos of Patr	1.99	352	*e*Pg	Pb	01 29 29.6	+0.5
VAM	Vamos	2.04	109	*e*Pn	Pn	01 29 27.9	+0.8
VAM	Vamos	2.04	109	*e*PN	Pn	01 29 27.9	+0.8
VAM	Vamos	2.04	109	*e*Pn	Pn	01 29 27.9	+0.8
LTK	Loutraki	2.13	25	P	Pb	01 29 30.7	-0.8
LTK				S	Sb	01 29 58.0	0.0
LTK	Loutraki	2.13	25	*e*PN	Pb	01 29 31.2	-0.3
LTK	Loutraki	2.13	25	P	Pb	01 29 30.7	-0.8
LTK	Loutraki	2.13	25	*e*Pn	Pb	01 29 31.2	-0.3
LTK				S	Sb	01 29 58.0	0.0
VLS	Valsamata	2.31	335	*e*Pb	Pb	01 29 32.7	-1.9
VLS	Valsamata	2.31	335	*e*PB	Pb	01 29 32.7	-1.9
VLS	Valsamata	2.31	335	*e*Pb	Pb	01 29 32.7	-1.9
KALE	Kalithea	2.31	6	P	Pb	01 29 33.5	-1.1
KALE	Kalithea	2.31	6	P	Pb	01 29 33.5	-1.1
EFP	Efpalio	2.34	1	P	Pg	01 29 35.6	-2.0
EFP	Efpalio	2.34	1	*e*PG	Pg	01 29 35.5	-2.1
EFP	Efpalio	2.34	1	*e*Pg	Pg	01 29 35.5	-2.1
VLY	Voula,Athens	2.36	41	*e*Pn	Pb	01 29 34.4	-1.0
VLY	Voula,Athens	2.36	41	*e*PN	Pb	01 29 34.4	-1.0
VLY	Voula,Athens	2.36	41	*e*Pn	Pb	01 29 34.4	-1.0
DSF	Desfina	2.38	13	P	Pg	01 29 36.5	-2.0
ATHU	Athens Univers	2.44	39	P	Pg	01 29 36.7	-2.8
SIVA	Sivas	2.65	113	P	Pg	01 29 41.9	-1.7
LKR	Lokris	2.72	20	*e*Pn	Pn	01 29 38.2	+1.7
LKR	Lokris	2.72	20	*e*PN	Pn	01 29 38.2	+1.7
LKR	Lokris	2.72	20	*e*Pn	Pn	01 29 38.2	+1.7
ATAL	Atalanti	2.77	20	P	Pn	01 29 38.4	+1.2
ATAL				S	Sn	01 30 11.8	+1.2
ATAL	Atalanti	2.77	20	P	Pn	01 29 38.4	+1.2
ATAL				S	Sn	01 30 11.8	+1.2
AGG	Agios Georgios	2.96	7	*e*Pb	Pb	01 29 43.6	-1.9
AGG	Agios Georgios	2.96	7	P	Pn	01 29 42.4	+2.6
AGG				S	Sn	01 30 15.8	+0.5
AGG	Agios Georgios	2.96	7	*e*PB	Pb	01 29 43.6	-1.9
AGG	Agios Georgios	2.96	7	P	Pn	01 29 42.4	+2.6
AGG	Agios Georgios	2.96	7	*e*Pb	Pb	01 29 43.6	-1.9
AGG				S	Sn	01 30 15.8	+0.5
LAST	Lasithi	3.11	106	P	Pn	01 29 43.4	+1.5
LAST	Lasithi	3.11	106	P	Pn	01 29 43.4	+1.5
XOR	Xorichti	3.44	18	P	Pn	01 29 48.0	+1.5
XOR	Xorichti	3.44	18	P	Pn	01 29 48.0	+1.5
THL	Klokotos Trika	3.47	2	*e*PN	Pn	01 29 50.4	+3.5
THL	Klokotos Trika	3.47	2	*e*Pn	Pn	01 29 50.4	+3.5
IGT	Igoumenitsa	3.64	341	P	Pn	01 29 50.2	+1.0
IGT				S	Sn	01 30 31.9	-0.2
IGT	Igoumenitsa	3.64	341	P	Pn	01 29 50.2	+1.0
IGT				S	Sn	01 30 31.9	-0.2
KEK	Kerkira	3.96	337	P	Pn	01 29 54.5	+0.9
KEK				S	Sn	01 30 39.0	-1.1
KEK	Kerkira	3.96	337	P	Pn	01 29 54.5	+0.9
KEK				S	Sn	01 30 39.0	-1.1
FNA	Florina	4.70	356	P	Pn	01 30 04.9	+1.1
FNA	Florina	4.70	356	P	Pn	01 30 04.9	+1.1
SOH	Sokhos	4.87	14	P	Pn	01 30 08.9	+2.8
SOH	Sokhos	4.87	14	P	Pn	01 30 08.9	+2.8
SRS	Serrai	5.21	15	P	Pn	01 30 11.0	+0.3
SRS	Serrai	5.21	15	P	Pn	01 30 11.0	+0.3
STON	Ston	7.49	336	*e*Pn	Pn	01 30 40.4	-1.7
STON				Sn	Sn	01 32 00.4	-6.6
STON	Ston	7.49	336	*e*Pn	Pn	01 30 40.4	-1.6
NVLJ	Novalja	9.99	330	*e*Pn	Pn	01 31 16.2	-0.1
NVLJ				Sn	Sn	01 33 00.1	-8.4
NVLJ	Novalja	9.99	330	*e*Pn	Pn	01 31 16.2	-0.1

*CSEM **23** 01:28:55.7±0.4, 37°.38N×11°.64E, h10km, MD3.4, Error ellipse: s-maj=10.1km s-min=6.6km az=174.0*
*LDG **23** 01:28:56.5±0.7, 36°.98N×10°.95E, h2km, Ml3.2/5, Error ellipse: s-maj=18.4km s-min=4.7km az=33.0*
*ROM **23** 01:28:57.1±0.3, 37°.32N×11°.13E, h10km, Md3.4/16, Ml3.3/17, Error ellipse: s-maj=6.0km s-min=3.0km az=49.0*
*NEIC **23** 01:28:57.9±0.9, 37°.27N×11°.22E, h10km, MG3.2(ROM), Error ellipse: s-maj=13.4km s-min=10.1km az=215.0*
*ISCJB **23** 01:28:58.6±1.6, 37°.42N±0°.04×11°.17E±0°.03, h20km±18km, Error ellipse: s-maj=6.4km s-min=4.3km az=4.4*
*TUN **23** 01:28:59.7, 36°.86N×10°.58E, h1km, MD3.4*
ISC 23 01:28:58.5±1.3, 37°.39N±0°.04×11°.18E±0°.03, h10km±11km, n84, σ1§06/100, Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBZ	Menzel Bouzelf	0.81	210	*i* P	Pg	01 29 07.0	-7.2
PTS	Pantelleria 404nm,0.2s	0.87	131	Pg	Pg	01 29 13.1	-2.2
PTS	Pantelleria 404nm,0.2s	0.87	131	Pg	Pg	01 29 13.1	-2.2
KCHT	Kechabta	1.03	255	*i* P	Pn	01 29 18.0	-1.0
ERC	Erice	1.29	59	Pg	Pn	01 29 21.6	-1.0
ERC	Erice	1.29	59	Pg	Pn	01 29 21.6	-1.0
CORL	Corleone 742nm,0.8s	1.76	73	Pg	Pn	01 29 28.4	-0.7
CORL	Corleone 742nm,0.8s	1.76	73	Pg	Pn	01 29 28.4	-0.7
BLIT	Baltah	1.90	250	*i* P	Pn	01 29 32.0	+1.0
KRIT	Krib	1.98	239	*i* P	Pn	01 29 34.0	+1.8
FAVR	Favara 457nm,1.0s	1.99	93	Pg	Pn	01 29 32.3	+0.1
FAVR	Favara 457nm,1.0s	1.99	93	Pg	Pn	01 29 32.3	+0.1
USI	Ustica 89nm,0.5s	2.06	49	Pg	Pn	01 29 32.8	-0.4
USI	Ustica 89nm,0.5s	2.06	49	Pg	Pn	01 29 32.8	-0.4
KEST	Kesra	2.21	222	*e*Pn	Pn	01 29 35.3	0.0
KEST				*e*Sg	Sg	01 30 09.1	-0.6
KEST	Kesra	2.21	222	*e*Pn	Pn	01 29 35.3	0.0
TROT	Trozza	2.22	215	*i* P	Pn	01 29 37.0	+1.6
RESU	Resuttano 360nm,1.1s	2.30	83	Pg	Pn	01 29 37.6	+1.1
RESU	Resuttano 360nm,1.1s	2.30	83	Pg	Pn	01 29 37.6	+1.1
GIB	Gibilmanna	2.34	74	Pg	Pn	01 29 36.8	-0.2
GIB				Sg	Sn	01 30 06.7	+0.9
GIB	Gibilmanna 436nm,0.7s	2.34	74	Pg	Pn	01 29 36.8	-0.2
GIB				Sg	Sn	01 30 06.7	+0.9
GIB	Gibilmanna 436nm,0.7s	2.34	74	Pg	Pn	01 29 36.8	-0.2
GIB				Sg	Sn	01 30 06.7	+0.9
GHAT	Ghardimaou	2.47	250	*i* P	Pn	01 29 37.6	-1.2
VSL	Villasalto	2.54	327	Pg	Pn	01 29 40.1	+0.3
VSL				Sg	Sn	01 30 09.5	-1.2
VSL	Villasalto	2.54	327	*e*Pn	Pn	01 29 40.0	+0.3
VSL				*e*Sn	Sn	01 30 09.5	-1.2
VSL	Villasalto	2.54	327	*e*Pn	Pn	01 29 40.0	+0.2
VSL				Sg	Sn	01 30 09.5	-1.2
RAFF	Raffo Rosso 154nm,0.9s	2.54	93	Pg	Pn	01 29 38.8	-1.0
RAFF	Raffo Rosso 154nm,0.9s	2.54	93	Pg	Pn	01 29 38.8	-1.0
GALF	Gagliano Caste	2.71	82	Pg	Pn	01 29 43.6	+1.5
GALF	Gagliano Caste	2.71	82	Pg	Pn	01 29 43.6	+1.5
ACL	Alicudi 80nm,0.7s	2.76	64	Pg	Pn	01 29 42.4	-0.4
IACL	Alicudi 80nm,0.7s	2.76	64	Pg	Pn	01 29 42.4	-0.4
ECNV	Catenanuova	2.82	85	Pg	Pn	01 29 44.5	+0.9
ECNV	Catenanuova	2.82	85	Pg	Pn	01 29 44.5	+0.9
HVZN	Vizzini 241nm,0.6s	2.83	93	Pg	Pn	01 29 43.3	-0.4
HVZN	Vizzini 241nm,0.6s	2.83	93	Pg	Pn	01 29 43.3	-0.4
HMDC	Modica	2.91	97	Pg	Pn	01 29 44.2	-0.7
HMDC	Modica	2.91	97	Pg	Pn	01 29 44.2	-0.7
IFIL	Filicudi I Eol 82nm,0.6s	2.92	65	Pg	Pn	01 29 44.2	-0.9
IFIL	Filicudi I Eol 82nm,0.6s	2.92	65	Pg	Pn	01 29 44.2	-0.9
WDD	Wield Dalam	3.09	118	*e*Pn	Pn	01 29 43.9	-3.4
SSY	Sortino 183nm,0.7s	3.11	93	Pg	Pn	01 29 46.7	-1.0
SSY	Sortino 183nm,0.7s	3.11	93	Pg	Pn	01 29 46.7	-1.0
SLNA	Salina 51nm,0.4s	3.12	67	Pg	Pn	01 29 47.4	-0.3
SLNA	Salina 51nm,0.4s	3.12	67	Pg	Pn	01 29 47.4	-0.3
LLI	Lipari 242nm,0.7s	3.16	69	Pg	Pn	01 29 48.3	0.0
LLI	Lipari 242nm,0.7s	3.16	69	Pg	Pn	01 29 48.3	0.0
VPL	Vulcano Piano 78nm,0.7s	3.17	71	Pg	Pn	01 29 47.9	-0.5
VPL	Vulcano Piano 78nm,0.7s	3.17	71	Pg	Pn	01 29 47.9	-0.5
DGI	Dorgali Grotta	3.18	338	Pg	Pn	01 29 49.5	+1.0
DGI				Sg	Sn	01 30 25.4	-1.0
DGI	Dorgali Grotta	3.18	338	Pg	Pn	01 29 49.5	+1.0
DGI				Sg	Sn	01 30 25.4	-1.0
HAVL	Avola 150nm,0.8s	3.18	96	Pg	Pn	01 29 47.3	-1.3
HAVL	Avola 150nm,0.8s	3.18	96	Pg	Pn	01 29 47.3	-1.3
MMME	Mongiuffi-Meli	3.28	79	Pg	Pn	01 29 50.7	+0.7
MMME	Mongiuffi-Meli	3.28	79	Pg	Pn	01 29 50.7	+0.7
MSRU	Castanea 43nm,0.8s	3.54	74	Pg	Pn	01 29 52.9	-0.6
MSRU	Castanea 43nm,0.8s	3.54	74	Pg	Pn	01 29 52.9	-0.6
CEL	Celeste 54nm,1.6s	3.83	75	Pg	Pn	01 29 57.0	-0.6
CEL	Celeste 54nm,1.6s	3.83	75	*e*Pn	Pn	01 29 56.9	-0.6
CEL	Celeste 54nm,1.6s	3.83	75	Pg	Pn	01 29 57.0	-0.6
MPAZ	Palizzi 19nm,0.7s	3.87	80	Pg	Pn	01 29 58.4	+0.3
MPAZ	Palizzi 19nm,0.7s	3.87	80	Pg	Pn	01 29 58.4	+0.3
SOI	Samo 2μm,9.4s	3.93	78	Pg	Pn	01 29 59.2	+0.4
SOI	Samo 2μm,9.4s	3.93	78	Pg	Pn	01 29 59.2	+0.4
SGO	Sicignano 9.0nm,0.7s	4.52	44	Pg	Pn	01 30 08.0	+1.0
SGO	Sicignano 9.0nm,0.7s	4.52	44	Pg	Pn	01 30 08.0	+1.0
OSPF	L'Ospedale	4.54	341	P	Pn	01 30 09.4	+2.1
OSPF	L'Ospedale	4.54	341	P	Pn	01 30 09.4	+2.1
ALAS	Alassa 70nm,0.5s,SNR=113	4.55	175	*e*P	Pn	01 30 08.8	+1.4
SIRI	Monte Sirino - 8.0nm,0.8s	4.61	51	Pg	Pn	01 30 09.8	+1.6
SIRI	Monte Sirino - 8.0nm,0.8s	4.61	51	Pg	Pn	01 30 09.8	+1.6
TIP	Timpagrande 13nm,0.7s	4.74	66	Pg	Pn	01 30 10.7	+0.7
TIP	Timpagrande 13nm,0.7s	4.74	66	*e*Pn	Pn	01 30 10.6	+0.6
TIP	Timpagrande	4.74	66	*e*Pn	Pn	01 30 10.6	+0.6
AQU	L'Aquila 2.4nm,0.7s	5.25	18	Pn	Pn	01 30 19.5	+2.5
PGF	Pioggiola 10.0nm,0.6s	5.42	343	*e*Pn	Pn	01 30 21.5	+2.1
PGF				*e*Sn	Sn	01 31 21.8	0.0
GHAR	Gharyan 23nm,0.5s,SNR=109	5.48	163	*e*S	Sn	01 31 17.0	-6.3
LMR	La Mourre 1.8nm,0.3s	6.93	330	*e*Pn	Pn	01 30 40.4	+0.3
LMR				*e*Sn	Sn	01 31 57.4	-1.5
LMR	La Mourre 0.9nm,0.3s	6.93	330	*e*Pn	Pn	01 30 40.4	+0.3
LMR				*e*Sn	Sn	01 31 57.4	-1.5
FRF	La Foret Royal 1.1nm,0.4s	7.07	332	*e*Pn	Pn	01 30 41.4	-0.6
FRF				*e*Sn	Sn	01 32 01.1	-1.3
FRF	La Foret Royal 0.6nm,0.4s	7.07	332	*e*Pn	Pn	01 30 41.4	-0.6
FRF				*e*Sn	Sn	01 32 01.1	-1.3
SBF	Sospel 4.5nm,0.7s	7.07	337	*e*Pn	Pn	01 30 42.7	+0.7
SBF				*e*Sn	Sn	01 32 01.7	-0.7
SBF	Sospel 2.2nm,0.7s	7.07	337	*e*Pn	Pn	01 30 42.7	+0.7
SBF				*e*Sn	Sn	01 32 01.7	-0.7
LGHD	Ghdames 4.7nm,1.3s,SNR=103	7.49	192	*e*P	Pn	01 30 47.0	-0.8
TUE	Stuetta	9.18	352	*e*Pn	Pn	01 31 14.6	+3.6

*DDA **23** 01:37:34.4, 36°.28N×28°.82E, h7km±3km, Md2.9*
*ISCJB **23** 01:37:34.5±1.4, 36°.23N±0°.07×28°.88E±0°.06, h4km±9km, Error ellipse: s-maj=13.5km s-min=6.9km az=26.9*
*CSEM **23** 01:37:35.1±0.3, 36°.28N×28°.97E, h8km, MD2.9, Error ellipse: s-maj=8.3km s-min=3.3km az=22.0*
*ISK **23** 01:37:36.0, 36°.35N×28°.94E, h16km, MD2.9*
ISC 23 01:37:35.1±1.4, 36°.23N±0°.09×28°.90E±0°.07, h8km±7km, n14, σ0§87/23, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKAS	Kas	0.57	90	*i* P	Pg	01 37 45.2	-1.0
AKAS				*i* S	Sg	01 37 56.2	+2.6
AKAS	Kas	0.57	90	*i* P	Pg	01 37 45.2	-0.9
YER	Yerkesik	1.03	331	*e*PG	Pg	01 37 54.7	-0.2
YER				*e*SG	Sg	01 38 08.4	+0.1
YER	Yerkesik	1.03	331	*e*Pg	Pg	01 37 54.7	-0.2
YER				*e*Sg	Sg	01 38 08.4	+0.2
DAT	Datca	1.18	295	*e*PN	Pn	01 37 58.7	+0.9
DAT				*e*SN	Sn	01 38 14.1	+0.1
DAT	Datca	1.18	295	*e*Pn	Pn	01 37 58.7	+0.9
DAT				*e*Sn	Sn	01 38 14.1	+0.1
DNZL	Cakiroluk	1.46	5	*i* P	Pn	01 38 00.9	-0.8
DNZL				*i* S	Sn	01 38 21.6	+0.6
DNZL	Cakiroluk	1.46	5	*i* P	Pn	01 38 00.9	-0.8
DNZL				*i* S	Sn	01 38 21.6	+0.6
DENT	Denizli	1.52	4	*e*PN	Pn	01 38 01.4	-1.2
DENT	Denizli	1.52	4	*e*Pn	Pn	01 38 01.4	-1.2
AYDN	Tasoluk	1.64	330	*i* P	Pn	01 38 04.5	+0.2
AYDN				*i* S	Sn	01 38 25.9	+0.3
AYDN	Tasoluk	1.64	330	*i* P	Pn	01 38 04.5	+0.2
AYDN				*i* S	Sn	01 38 25.9	+0.3
SUTC	Sutluce-Ispart	2.09	53	*e*PN	Pn	01 38 10.1	-0.4
SUTC	Sutluce-Ispart	2.09	53	*e*Pn	Pn	01 38 10.1	-0.3

CASC 23 01:49:57.1±0.9, 12°.89N×90°.42W, h4km±7km, MD3.8, 1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	Ixpaco	1.28	358	‖ *e*P	Pg	01 50 20.6	-1.0
BOQS	Boqueron	1.39	53	*e*P	Pn	01 50 22.4	-0.9
LFRS	El Faro	1.51	61	*e*P	Pn	01 50 24.2	-0.7
LFRS				*e*S	Sn	01 50 45.8	+0.8
FUG	Fuego 3	1.60	345	*e*P	Pn	01 50 25.6	-0.5
NBG	Las Nubes	1.69	2	*e*P	Pn	01 50 28.2	+0.8
FG6		1.72	345	*e*P	Pn	01 50 20.8	-7.0
MTO2	Montecristo 2	1.82	34	*e*P	Pn	01 50 28.8	-0.4
JAT	Jato	1.85	320	*e*P	Pn	01 50 29.6	0.0
TP2	Tecpan 2	1.97	343	*e*P	Pn	01 50 31.2	-0.1
TP2				*e*S	Sn	01 50 58.2	+1.8
MRL	Marmol	2.27	18	*e*P	Pn	01 50 38.3	+2.9

TRN 23 01:52:28.5, 15°.61N×61°.15W, h32km, MD3.3, M3.6(FDF), 15C-1D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DWS	Wesley	0.17	255	⇑ *i* P	Pb	01 52 35.5	+0.9
DWS				*e*S	Sb	01 52 39.6	+0.8
DLPL	La Plaine	0.29	199	⇑ *i* P	Pb	01 52 37.0	+0.9
DLPL				*e*S	Sb	01 52 42.3	+1.1
MGG	Marie-Galante	0.35	332	⇑ *i* P	Pb	01 52 37.6	+0.8
MDN	Morne-Daniel	0.38	219	⇑ *e*P	Pb	01 52 40.4	+3.3
MDN				*e*S	Sb	01 52 46.5	+3.4
DSTT	Stowe	0.39	203	⇑ *i* P	Pb	01 52 41.5	+4.0
DSTT				*e*S	Sb	01 52 46.9	+3.4
DPMT	Pointe Michel	0.41	213	*e*P	Pb	01 52 40.4	+2.7
DPMT				*e*S	Sb	01 52 47.0	+3.0
DFBT	Forest Bistro	0.42	209	⇑ *i* P	Pb	01 52 40.7	+2.9
DFBT				*e*S	Sb	01 52 46.2	+2.0
DSHT	Scott's Head	0.45	209	*e*P	Pb	01 52 41.7	+3.4
DSHT				*e*S	Sb	01 52 47.7	+2.6
TBG	Guadaloupe-3	0.54	297	⇑ *i* P	Pb	01 52 40.9	+1.3
PHG	Guadaloupe-2	0.62	310	*e*P	Pb	01 52 42.5	+1.5
SFG	Saint Francois	0.64	356	*e*P	Pn	01 52 41.4	+0.1
HMG	Houelmont	0.65	305	⇑ *i* P	Pn	01 52 42.9	+1.5
HMG				⇑ *e*S	Sb	01 52 52.8	+2.5
BCG	Bois Riant Cap	0.66	316	⇑ *i* P	Pn	01 52 42.8	+1.3
SCG	Saint Claude	0.66	309	⇑ *i* P	Pn	01 52 43.0	+1.4
LZG	Guadaloupe-1	0.80	311	⇑ *e*P	Pn	01 52 45.0	+1.5
SEG	Port Louis	0.86	336	⇑ *i* P	Pn	01 52 45.8	+1.5
FDF	Fort de France	0.87	180	⇑ *i* P	Pn	01 52 45.0	+0.5
FDF				⇑ *e*S	Sn	01 52 56.5	+0.4
MVM	Montagne Vaucl	1.08	167	‖ *e*P	Pn	01 52 48.4	+1.0
BIM	Bigot	1.09	176	*e*P	Pn	01 52 48.7	+1.3
BIM				*e*S	Sn	01 53 02.8	+1.3
BPA	Boggy Peak	1.58	335	*e*P	Pn	01 52 57.0	+2.8
BPA				*e*S	Sn	01 53 16.4	+2.8
MCLT	Moule a Chique	1.90	174	*e*P	Pn	01 53 00.9	+2.2
MCLT				*e*S	Sn	01 53 23.7	+2.3
SKI	Saint Kitts	2.29	318	*e*P	Pn	01 53 06.5	+2.5
SKI				*e*S	Sn	01 53 32.6	+1.4
SVB	Belmont	2.33	183	*e*P	Pn	01 53 05.2	+0.7
SVB				*e*S	Sn	01 53 34.3	+2.3

*GII **23** 02:12:03.5±0.9, 33°.31N×35°.45E, h1km±2km, Md2.7/8*
*ISCJB **23** 02:12:03.9±0.4, 33°.33N±0°.02×35°.43E±0°.05, h10km, Error ellipse: s-maj=5.9km s-min=2.7km az=19.1*
*GRAL **23** 02:12:04.7±0.4, 33°.32N×35°.46E, h0km±3km, MD3.4*
*CSEM **23** 02:12:04.6±0.3, 33°.34N×35°.46E, h2km, ML3.4, Error ellipse: s-maj=9.4km s-min=3.9km az=96.0*
ISC 23 02:12:04.3±0.4, 33°.34N±0°.02×35°.44E±0°.05, h10km, n26, σ0§73/37, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	Matarih	0.17	328	*e*P	Pg	02 12 08.4	+0.3
MATL	Matarih	0.17	328	*e*P	Pg	02 12 08.4	+0.3
KSDI	Kefar Szold	0.24	129	Pg	Pg	02 12 08.4	-0.7
KSDI				Sg	Sg	02 12 12.3	-0.1
HRI	Mount Hermon	0.26	107	Pg	Pg	02 12 08.9	-0.6
MMC1	Mount Meron ar	0.31	186	Pg	Pg	02 12 09.8	-0.7
MMB3	Mount Meron ar	0.32	186	Pg	Pg	02 12 10.1	-0.6
MMA0B	Mount Meron ar	0.33	186	Pg	Pg	02 12 10.2	-0.6
MMA0B				Sg	Sg	02 12 15.5	+0.4
HNTI	Hanita	0.34	221	Pg	Pg	02 12 10.9	-0.1
RCY	Rachaya	0.35	65	*e*P	Pg	02 12 11.3	+0.1
RCY				*e*S	Sg	02 12 16.2	+0.3
RCY	Rachaya	0.35	65	*e*P	Pg	02 12 11.3	+0.1
RCY				*e*S	Sg	02 12 16.2	+0.4
KSHT	Keshet	0.47	139	Pg	Pg	02 12 13.5	0.0
BEYL	Beirut	0.53	5	*e*P	Pg	02 12 14.8	+0.1
BEYL	Beirut	0.53	5	*e*P	Pg	02 12 14.8	+0.1
BHL	Bhannes	0.59	17	*e*P	Pg	02 12 15.4	-0.3
BHL				*e*S	Sg	02 12 23.7	+0.2
BHL	Bhannes	0.59	17	*e*P	Pg	02 12 15.4	-0.3
BHL				*e*S	Sg	02 12 23.7	+0.2
BLGI	Bet Lehem HaGe	0.64	199	Pg	Pg	02 12 16.2	-0.5
OFRI	'Ofer	0.81	208	Pg	Pg	02 12 19.6	-0.4
MMLI	Mount Malkishu	0.90	181	Pg	Pg	02 12 20.6	-1.0
HWQ	Hawqa	1.02	24	*e*P	Pg	02 12 24.2	+0.1
HWQ				*e*S	Sg	02 12 37.3	-0.1
HMDT	Nahal Hemdat	1.09	176	Pg	Pg	02 12 23.9	-1.3
HMDT				Sg	Sg	02 12

NSK			S		Sn	02 14 40.5	-0.2
	baz=266						
HATJ	**Hateruma jima**	**1.20 117**	*e*S		**Sn**	**02 14 42.4**	**+1.2**
TWS1	**Kuangyinshan**	**1.21 294**	*i* P		**Pn**	**02 14 24.1**	**-0.3**
	baz=292						
TWS1			*e*S		**Sn**	**02 14 40.7**	**-0.9**
	baz=292						
JKRS	**Kuro-shima**	**1.30 106**	P		**Pn**	**02 14 25.8**	**+0.3**
JKRS			S		**Sn**	**02 14 43.6**	**+0.2**
WHF	**Hehuan Shan**	**1.34 250⇓**	*i* P		**Pn**	**02 14 26.1**	**+0.2**
	baz=247						
WHF			*i* S		**Sn**	**02 14 44.6**	**+0.4**
	baz=247						
ESL	**Shilin**	**1.36 235**	*e*P		**Pn**	**02 14 25.5**	**-0.7**
	baz=228						
ESL			*e*S		**Sn**	**02 14 43.6**	**-1.0**
	baz=228						
TWT	**Tachien**	**1.38 255**	*i* P		**Pn**	**02 14 27.1**	**+0.7**
	baz=253						
TWT			S		**Sn**	**02 14 45.7**	**+0.6**
	baz=253						
JIJ	**Ishigaki jima**	**1.39 100**	P		**Pn**	**02 14 26.3**	**-0.2**
JIJ			S		**Sn**	**02 14 44.8**	**-0.5**
NSTT	**Nanjuang**	**1.49 271**	P		**Pn**	**02 14 27.6**	**-0.2**
	baz=269						
NSTT			*e*S		**Sn**	**02 14 47.4**	**-0.2**
	baz=269						
EHY	**Hungye**	**1.63 228**	*e*P		**Pn**	**02 14 28.7**	**-0.9**
	baz=226						
EHY			*e*S		**Sn**	**02 14 49.3**	**-1.4**
	baz=226						
TWQ1	**Liyutan**	**1.72 262**	*e*P		**Pn**	**02 14 30.4**	**-0.2**
	baz=260						
TWQ1			*e*S		**Sn**	**02 14 51.9**	**-0.7**
	baz=260						
SMLT	**Sun Moon Lake**	**1.75 246**	*e*P		**Pn**	**02 14 31.6**	**+0.6**
	baz=239						
SMLT			*e*S		**Sn**	**02 14 53.7**	**+0.5**
	baz=239						
TWF1	**Yuli**	**1.76 225**	*e*P		**Pn**	**02 14 30.4**	**-0.7**
	baz=229						
TWF1			*e*S		**Sn**	**02 14 51.8**	**-1.7**
	baz=229						
TYC	**Yuchr**	**1.77 247**	P		**Pn**	**02 14 32.2**	**+0.8**
	baz=241						
TYC			S		**Sn**	**02 14 54.4**	**+0.5**
	baz=241						
JTJ	**Tarama**	**1.88 89**	P		**Pn**	**02 14 32.5**	**-0.1**
JTJ			S		**Sn**	**02 14 55.3**	**-0.9**
YUS	**Yu-Shan**	**1.91 234**	P		**Pn**	**02 14 33.6**	**+0.6**
	baz=229						
YUS			S		**Sn**	**02 14 57.3**	**+0.5**
	baz=229						
ALS	**Alishan**	**2.00 237**	*e*P		**Pn**	**02 14 35.2**	**+0.9**
	baz=230						
ALS			*e*S		**Sn**	**02 14 59.9**	**+0.7**
	baz=230						
ELDTW	**Lidau**	**2.05 227**	*e*P		**Pn**	**02 14 34.4**	**-0.5**
	baz=224						
ELDTW			*e*S		**Sn**	**02 14 59.7**	**-0.6**
	baz=224						
CHN5	**Tsauling**	**2.06 241**	P		**Pn**	**02 14 35.8**	**+0.8**
	baz=232						
CHN5			*e*S		**Sn**	**02 15 01.7**	**+1.3**
	baz=232						
CHN4	**Tsaushan**	**2.25 237**	*e*P		**Pn**	**02 14 38.9**	**+1.4**
	baz=235						
CHN4			*e*S		**Sn**	**02 15 06.2**	**+1.2**
	baz=235						
TWG	**Pinlang**	**2.29 219**	*e*P		**Pn**	**02 14 37.0**	**-1.1**
	baz=218						
TWG			*e*S		**Sn**	**02 15 04.4**	**-1.4**
	baz=218						
WTP	**Ta-pu**	**2.30 234**	*e*P		**Pn**	**02 14 38.9**	**+0.8**
	baz=233						
WTP			*e*S		**Sn**	**02 15 06.9**	**+0.9**
	baz=233						
TWK	**Hsinying**	**2.38 236**	*e*P		**Pn**	**02 14 39.1**	**-0.1**
	baz=235						
TWK			*e*S		**Sn**	**02 15 08.9**	**+0.9**
	baz=235						
CHN1	**Nanshi**	**2.40 234**	*e*P		**Pn**	**02 14 40.1**	**+0.7**
	baz=233						
CHN1			*e*S		**Sn**	**02 15 08.8**	**+0.5**
	baz=233						
SGST	**Jiashian**	**2.42 231**	*e*P		**Pn**	**02 14 40.6**	**+0.9**
	baz=230						
SGST			*e*S		**Sn**	**02 15 09.4**	**+0.5**
	baz=230						
SSD	**Sandimen**	**2.62 225**	*e*P		**Pn**	**02 14 43.0**	**+0.7**
	baz=230						
LAY	**Lan-yu**	**2.75 202**	*e*P		**Pn**	**02 14 42.8**	**-1.3**
	baz=194						
LAY			*e*S		**Sn**	**02 15 13.9**	**-2.8**
	baz=194						
EAST	**Anshuo**	**2.76 217**	*e*P		**Pn**	**02 14 42.7**	**-1.6**
	baz=213						

*CSEM **23** 02:16:40.4, 35.°18N×23.°01E, h5km, MD3.5, After ATH*
*NEIC **23** 02:16:40.4, 35.°18N×23.°01E, h5km, MD3.5(ATH), After ATH.*

ATH 23 02:16:40.4, 35.°18N×23.°01E, h5km, MD3.5/8, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARN	**Karanos**	**0.78**	**73**	*e*PB	Pb	02 16 55.8	-0.6
KARN				*e*SB	Sb	02 17 06.8	-0.4
KARN	**Karanos**	**0.78**	**73**	*e*Pb	Pb	02 16 55.8	-0.6
KARN				*e*Sb	Sb	02 17 06.8	-0.4
GVD	**Gavdhos**	**0.95**	**111**	*e*Pg	Pg	02 17 03.8	+5.2
GVD	**Gavdhos**	**0.95**	**111**	*e*PG	Pg	02 16 58.0	-0.6
GVD	**Gavdhos**	**0.95**	**111**	*e*Pg	Pg	02 16 58.0	-0.6
VAM	**Vamos**	**1.00**	**77**	*e*Pg	Pg	02 16 58.9	-0.7
VAM	**Vamos**	**1.00**	**77**	*e*PG	Pg	02 16 58.9	-0.7
VAM	**Vamos**	**1.00**	**77**	*e*Pg	Pg	02 16 58.9	-0.7
KYTH	**Kithira**	**1.10**	**1**	*e*Pb	Pb	02 17 01.5	-0.4
KYTH	**Kithira**	**1.10**	**1**	*e*PB	Pb	02 17 01.5	-0.4
KYTH	**Kithira**	**1.10**	**1**	*e*Pb	Pb	02 17 01.5	-0.4
SIVA	**Sivas**	**1.48**	**96**	*e*Pb	Pb	02 17 09.9	+1.4
SIVA	**Sivas**	**1.48**	**96**	*e*PB	Pb	02 17 09.9	+1.4
SIVA	**Sivas**	**1.48**	**96**	*e*Pb	Pb	02 17 09.9	+1.4
VLI	**Veliai**	**1.54**	**358**	*e*Pg	Pg	02 17 08.9	-1.0
VLI	**Veliai**	**1.54**	**358**	*e*PG	Pg	02 17 08.9	-1.0
VLI	**Veliai**	**1.54**	**358**	*e*Pg	Pg	02 17 08.9	-1.0
IDI	**Anoyia**	**1.54**	**85**	*e*Pn	Pn	02 17 07.1	-1.5
LAST	**Lasithi**	**2.02**	**90**	*e*Pg	Pg	02 17 18.1	-1.1
LAST	**Lasithi**	**2.02**	**90**	*e*PG	Pg	02 17 18.1	-1.1
LAST	**Lasithi**	**2.02**	**90**	*e*Pg	Pg	02 17 18.1	-1.1
ITM	**Ithomi**	**2.18**	**337**	*e*Pg	Pg	02 17 20.9	-1.3
ITM	**Ithomi**	**2.18**	**337**	*e*PG	Pg	02 17 20.9	-1.3
ITM	**Ithomi**	**2.18**	**337**	*e*Pg	Pg	02 17 20.9	-1.3
TIP	**Timpagrande**	**6.39**	**310**	*e*Pn	Pn	02 18 18.5	+3.4

MOS 23 02:31:54.1±1.4, 67.°51N×141.°41E, h16km, mb3.9/1, Error ellipse: s-maj=42.4km s-min=21.1km az=93.3, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIXI	**Tiksi**	**6.03**	**319**	*i* P	Pn	02 33 23.2	+0.7
SEY	**Seymchan**	**6.51**	**130**	*i* P	Pn	02 33 32.4	+3.4
YAK	**Yakutsk**	**7.43**	**228**	*e*P	Pn	02 33 43.6	+1.9
YAK				*e*		02 35 05.5	
YAK				pmax	pmax		
	comp=Z,17nm,0.4s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.4s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.6s						
YAK				smax			
	comp=N,10.0nm,0.6s						
YAK				smax			
	comp=E,11nm,0.4s						
BILL	**Bilibino**	**9.41**	**75**	P	Pn	02 34 12.0	+3.3
KURK	**Kurchatov**	**34.48**	**273**	*e*P	P	02 38 42.6	+1.9
FINES	**FINESS Array B**	**43.08**	**321**	*e*P	P	02 39 58.8	+6.2
FFC	**Flin Flon**	**49.32**	**43**	*i* P	P	02 40 42.3	+0.6
TXAR	**Lajitas Array**	**72.04**	**56**	*e*P	P	02 43 17.6	+0.7
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						

*NEIC **23** 02:44:56.4, 37.°89N×21.°48E, h15km, MD3.3(ATH), After ATH.*
*ATH **23** 02:44:56.4, 37.°89N×21.°48E, h15km±2km, MD3.3/15*
*CSEM **23** 02:44:56.0±0.2, 37.°84N×21.°50E, h8km, MD3.3, Error ellipse: s-maj=4.2km s-min=3.5km az=84.0*
*ISCJB **23** 02:44:56.5±0.5, 37.°91N±0.°02×21.°48E±0.°03, h2km±4km, Error ellipse: s-maj=3.9km s-min=3.5km az=161.8*
*THE **23** 02:44:57.1, 37.°93N×21.°49E, h2km±1km, ML2.9/11, Error ellipse: s-maj=1.6km s-min=0.7km az=148.0*

ISC 23 02:44:57.1±0.5, 37.°91N±0.°02×21.°48E±0.°03, h5km±4km, n64, σ1§02/104, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.15**	**356**	*e*Pb	Pg	02 45 00.3	+0.2
RLS				*e*Sb	Sg	02 45 03.2	+1.1
RLS	**Riolos of Patr**	**0.15**	**356**	*e*PB	Pg	02 45 00.3	+0.2
RLS				*e*SB	Sg	02 45 03.2	+1.1
RLS	**Riolos of Patr**	**0.15**	**356**	*e*Pb	Pg	02 45 00.3	+0.2
RLS				*e*Sb	Sg	02 45 03.2	+1.1
UPR	**University Cam**	**0.45**	**33**	P	Pg	02 45 05.5	-0.2
UPR				S	Sg	02 45 12.6	+1.1
UPR	**University Cam**	**0.45**	**33**	*e*PB	Pg	02 45 06.1	+0.4
UPR				*e*SB	Sg	02 45 12.8	+1.3
UPR	**University Cam**	**0.45**	**33**	P	Pg	02 45 05.5	-0.2
UPR	**University Cam**	**0.45**	**33**	*e*Pb	Pg	02 45 06.1	+0.4
UPR				S	Sg	02 45 12.6	+1.1
LAKA	**Lakka**	**0.51**	**50**	P	Pg	02 45 06.0	-1.0
LAKA				S	Sg	02 45 13.7	0.0
LAKA	**Lakka**	**0.51**	**50**	P	Pg	02 45 06.0	-1.0
LAKA				S	Sg	02 45 13.7	0.0
KFL	**Anninata**	**0.58**	**290**	P	Pg	02 45 08.1	-0.2
EFP	**Efpalio**	**0.62**	**33**	P	Pg	02 45 08.5	-0.5
EFP				S	Sg	02 45 17.7	+0.7
EFP	**Efpalio**	**0.62**	**33**	*e*PB	Pg	02 45 08.5	-0.5
EFP				*e*SN	Sg	02 45 17.9	+0.9
EFP	**Efpalio**	**0.62**	**33**	P	Pg	02 45 08.5	-0.5
EFP				S	Sg	02 45 17.7	+0.7
GUR	**Goura**	**0.68**	**87**	P	Pg	02 45 08.8	-1.4
GUR				S	Sg	02 45 19.3	+0.2
GUR	**Goura**	**0.68**	**87**	*e*PB	Pg	02 45 08.8	-1.4
GUR				*e*SN	Sg	02 45 19.2	+0.1
GUR	**Goura**	**0.68**	**87**	P	Pg	02 45 08.8	-1.4
GUR				S	Sg	02 45 19.3	+0.2
KALE	**Kalithea**	**0.71**	**47**	P	Pg	02 45 09.7	-1.0
KALE				S	Sg	02 45 19.9	0.0
KALE	**Kalithea**	**0.71**	**47**	P	Pg	02 45 09.7	-1.0
KALE				S	Sg	02 45 19.9	0.0
VLS	**Valsamata**	**0.75**	**291**	*e*Pn	Pg	02 45 10.7	-0.8
VLS				*e*Sn	Sg	02 45 22.3	+1.0
VLS	**Valsamata**	**0.75**	**291**	P	Pg	02 45 10.6	-0.9
VLS				S	Sg	02 45 22.1	+0.8
VLS	**Valsamata**	**0.75**	**291**	*e*PN	Pg	02 45 10.7	-0.8
VLS				*e*SN	Sg	02 45 22.3	+1.0
VLS	**Valsamata**	**0.75**	**291**	P	Pg	02 45 10.6	-0.9
VLS				S	Sg	02 45 22.1	+0.8
ITM	**Ithomi**	**0.81**	**154**	*e*Pn	Pg	02 45 12.2	-0.4
ITM	**Ithomi**	**0.81**	**154**	P	Pg	02 45 12.4	-0.2
ITM				S	Sg	02 45 25.1	+1.9
ITM	**Ithomi**	**0.81**	**154**	*e*PN	Pg	02 45 12.2	-0.4
ITM	**Ithomi**	**0.81**	**154**	*e*Pn	Pg	02 45 12.2	-0.4
VLX	**Vlachokerasia**	**0.89**	**127**	P	Pg	02 45 13.9	-0.4
VLX				S	Sg	02 45 27.5	+1.7
VLX	**Vlachokerasia**	**0.89**	**127**	*e*PN	Pg	02 45 13.2	-1.1
VLX	**Vlachokerasia**	**0.89**	**127**	*e*Pn	Pg	02 45 13.2	-1.1
VLX	**Vlachokerasia**	**0.89**	**127**	P	Pg	02 45 13.9	-0.4
DSF	**Desfina**	**0.97**	**58**	P	Pg	02 45 14.1	-1.5
DSF				S	Sg	02 45 28.5	+0.3
DSF	**Desfina**	**0.97**	**58**	P	Pg	02 45 14.1	-1.5
DSF				S	Sg	02 45 28.5	+0.3
PYL	**PYLOS**	**1.03**	**168**	P	Pg	02 45 16.1	-0.8
PYL				S	Sg	02 45 32.8	+2.5
PYL	**PYLOS**	**1.03**	**168**	*e*PN	Pg	02 45 15.6	-1.3
PYL	**PYLOS**	**1.03**	**168**	*e*Pn	Pg	02 45 15.6	-1.3
PYL	**PYLOS**	**1.03**	**168**	P	Pg	02 45 16.1	-0.8
EVR	**Evrytania**	**1.04**	**14**	*e*Pn	Pg	02 45 16.7	-0.3
EVR	**Evrytania**	**1.04**	**14**	*e*PN	Pg	02 45 16.7	-0.3
EVR	**Evrytania**	**1.04**	**14**	*e*Pn	Pg	02 45 16.7	-0.3
LTK	**Loutraki**	**1.18**	**84**	P	Pg	02 45 18.1	-1.7
LTK				S	Sg	02 45 37.0	+1.9
LTK	**Loutraki**	**1.18**	**84**	*e*PN	Pg	02 45 18.1	-1.7
LTK	**Loutraki**	**1.18**	**84**	P	Pg	02 45 18.1	-1.7
LTK				S	Sg	02 45 37.0	+1.9
AGG	**Agios Georgios**	**1.30**	**31**	*e*Pn	Pn	02 45 21.4	-0.4
AGG				*e*Sb	Sb	02 45 39.7	+0.8
AGG	**Agios Georgios**	**1.30**	**31**	P	Pn	02 45 21.4	-0.4
AGG				S	Sg	02 45 38.9	+0.1
AGG	**Agios Georgios**	**1.30**	**31**	*e*PN	Pn	02 45 21.4	-0.4
AGG				*e*SB	Sb	02 45 39.7	+0.8
AGG	**Agios Georgios**	**1.30**	**31**	P	Pn	02 45 21.4	-0.4
AGG				S	Sg	02 45 38.9	+0.1
AGG				*e*Sb	Sb	02 45 39.7	+0.8
LKR	**Lokris**	**1.41**	**58**	*e*Pn	Pn	02 45 22.3	-1.0
LKR	**Lokris**	**1.41**	**58**	P	Pn	02 45 21.9	-1.4
LKR				S	Sb	02 45 42.2	+0.2
LKR	**Lokris**	**1.41**	**58**	*e*PN	Pn	02 45 22.3	-1.0
LKR	**Lokris**	**1.41**	**58**	P	Pn	02 45 21.9	-1.4
LKR	**Lokris**	**1.41**	**58**	*e*Pn	Pn	02 45 22.3	-1.0
LKR				S	Sb	02 45 42.2	+0.2
VLI	**Veliai**	**1.66**	**135**	*e*Pn	Pn	02 45 27.5	+0.7
VLI	**Veliai**	**1.66**	**135**	*e*PN	Pn	02 45 27.5	+0.7
THL	**Klokotos Trika**	**1.71**	**14**	P	Pn	02 45 26.6	-0.8
THL				S	Sn	02 45 50.7	+1.1
THL	**Klokotos Trika**	**1.71**	**14**	*e*PN	Pn	02 45 28.1	+0.7
THL	**Klokotos Trika**	**1.71**	**14**	P	Pn	02 45 26.6	-0.8
THL	**Klokotos Trika**	**1.71**	**14**	*e*Pn	Pn	02 45 28.1	+0.7
THL				S	Sn	02 45 50.7	+1.1
VLY	**Voula,Athens**	**1.83**	**91**	*e*Pb	Pb	02 45 28.7	-2.4
VLY	**Voula,Athens**	**1.83**	**91**	*e*PB	Pb	02 45 28.7	-2.4
VLY	**Voula,Athens**	**1.83**	**91**	*e*Pb	Pb	02 45 28.7	-2.4
IGT	**Igoumenitsa**	**1.85**	**331**	P	Pn	02 45 29.0	-0.5
IGT				S	Sn	02 45 54.3	+1.1
IGT	**Igoumenitsa**	**1.85**	**331**	P	Pn	02 45 29.0	-0.5
IGT				S	Sn	02 45 54.3	+1.1
XOR	**Xorichti**	**1.98**	**42**	P	Pn	02 45 31.2	0.0
XOR				S	Sn	02 45 56.1	-0.2
XOR	**Xorichti**	**1.98**	**42**	P	Pn	02 45 31.2	0.0
XOR				S	Sn	02 45 56.1	-0.2

*DDA **23** 03:09:22.6, 38.°16N×38.°53E, h10km±1km, Md3.6*
*ISK **23** 03:09:22.1, 38.°13N×38.°56E, h2km, MD3.6*
*CSEM **23** 03:09:23.0±0.1, 38.°14N×38.°56E, h0km±1km, MD3.6, Error ellipse: s-maj=1.7km s-min=1.3km az=129.0*
*ISCJB **23** 03:09:23.2±0.3, 38.°14N±0.°02×38.°57E±0.°03, h10km, Error ellipse: s-maj=3.9km s-min=2.9km az=141.1*

ISC 23 03:09:23.4±0.5, 38.°15N±0.°02×38.°55E±0.°03, h1km±5km, n62, σ0§74/75, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MYA	**Malataya**	**0.20**	**331**	PG	Pg	03 09 27.4	+0.1
MYA	**Malataya**	**0.20**	**331**	*i* Pg	Pg	03 09 27.5	+0.2
ELZG	**Elazig**	**0.49**	**44**	*i* P	Pg	03 09 32.3	-0.4
ELZG				*i* S	Sg	03 09 39.1	0.0
ELZG	**Elazig**	**0.49**	**44**	*i* P	Pg	03 09 32.3	-0.5
ELZG				*i* S	Sg	03 09 39.1	0.0
AKCD	**Akcadag**	**0.52**	**287**	*i* P	Pg	03 09 32.7	-0.6
AKCD				*i* S	Sg	03 09 39.8	-0.1
AKCD	**Akcadag**	**0.52**	**287**	*i* P	Pg	03 09 32.7	-0.6
AKCD				*i* S	Sg	03 09 39.8	-0.2
SVRC	**Sivrice-ELAZID**	**0.64**	**68**	*e*PG	Pg	03 09 35.4	-0.3
SVRC				*e*SG	Sg	03 09 44.6	+0.7
SVRC	**Sivrice-ELAZID**	**0.64**	**68**	*e*Pg	Pg	03 09 35.4	-0.2
SVRC				*e*Sg	Sg	03 09 44.6	+0.7
ATAB	**Bozova**	**0.70**	**197**	*i* P	Pg	03 09 36.3	-0.6
ATAB				*i* S	Sg	03 09 45.6	-0.4
ATAB	**Bozova**	**0.70**	**197**	*i* P	Pg	03 09 36.3	-0.6
ATAB				*i* S	Sg	03 09 45.6	-0.4
URFA	**Urfa**	**0.74**	**163**	*e*PG	Pg	03 09 37.0	-0.4
URFA				*e*SG	Sg	03 09 47.8	+0.8
URFA	**Urfa**	**0.74**	**163**	*e*Pg	Pg	03 09 37.1	-0.4
URFA				*e*Sg	Sg	03 09 47.8	+0.8
PTK	**Pertek**	**0.99**	**41**	*e*PG	Pg	03 09 41.4	-1.1
PTK	**Pertek**	**0.99**	**41**	*e*Pg	Pg	03 09 41.4	-1.1
GZT	**Gaziantep**	**1.11**	**225**	*i* P	Pg	03 09 44.3	-0.3
GZT				*i* S	Sg	03 10 00.5	+1.5
DIYA	**Diyarbakir**	**1.26**	**100**	*i* P	Pg	03 09 47.0	-0.5
DIYA				*i* S	Sg	03 10 06.2	+2.3
DIYA	**Diyarbakir**	**1.26**	**100**	*i* P	Pg	03 09 47.0	-0.5
DIYA				*i* S	Sg	03 10 06.2	+2.4
DIY	**Diyarbakir**	**1.35**	**100**	*e*PN	Pn	03 09 48.6	-0.7
DIY	**Diyarbakir**	**1.35**	**100**	*e*Pn	Pn	03 09 48.6	-0.7
GAZ	**Gaziantep**	**1.44**	**228**	*e*PN	Pn	03 09 49.6	-0.9
GAZ	**Gaziantep**	**1.44**	**228**	*e*Pn	Pn	03 09 49.6	-0.9
KMRS	**Kahramanmaras**	**1.46**	**244**	*e*PN	Pn	03 09 49.9	-0.8
KMRS	**Kahramanmaras**	**1.46**	**244**	*e*Pn	Pn	03 09 49.9	-0.8
SARI	**SarD1z-Kayseri**	**1.55**	**291**	*e*PN	Pn	03 09 54.2	+2.1
BINT	**Bingol**	**1.69**	**64**	*e*PN	Pn	03 09 53.9	0.0
BINT	**Bingol**	**1.69**	**64**	*e*Pn	Pn	03 09 53.9	0.0
EZC	**Erzincan**	**1.72**	**21**	*e*PN	Pn	03 09 54.2	-0.3
SVSK	**Karacayir**	**2.14**	**326**	*e*PN	Pn	03 10 00.7	+0.5
SVSK	**Karacayir**	**2.14**	**326**	*e*Pn	Pn	03 10 00.7	+0.5
KOZT	**Kozan**	**2.26**	**254**	*e*PN	Pn	03 10 01.4	-0.4
BTMT	**Batman**	**2.32**	**88**	*e*PN	Pn	03 10 00.9	-1.7
GUMT	**Gumushane**	**2.42**	**17**	*e*PN	Pn	03 10 04.1	+0.1
GUMT	**Gumushane**	**2.42**	**17**	*e*Pn	Pn	03 10 04.1	+0.1
CEYT	**Ceyhan**	**2.50**	**244**	*e*PN	Pn	03 10 05.0	-0.1
CEYT	**Ceyhan**	**2.50**	**244**	*e*Pn	Pn	03 10 05.0	-0.1
TOKT	**Tokat**	**2.67**	**325**	*e*PN	Pn	03 10 07.3	-0.1
TOKT	**Tokat**	**2.67**	**325**	*e*Pn	Pn	03 10 07.3	-0.2
ESPY	**Espiye-Giresun**	**2.77**	**3**	*e*PN	Pn	03 10 09.7	+0.8
ESPY	**Espiye-Giresun**	**2.77**	**3**	*e*Pn	Pn	03 10 09.7	+0.9
HTY	**Hatay**	**2.79**	**224**	*e*PN	Pn	03 10 09.3	+0.1
HTY	**Hatay**	**2.79**	**224**	*e*Pn	Pn	03 10 09.3	+0.2
EZM	**Erzurum**	**2.81**	**50**	*e*PN	Pn	03 10 09.2	-0.1
KARA	**Karaisali**	**2.91**	**253**	*e*PN	Pn	03 10 10.0	-0.8
KARA	**Karaisali**	**2.91**	**253**	*e*Pn	Pn	03 10 10.0	-0.8
YOZ	**Yozgat**	**2.93**	**302**	*e*PN	Pn	03 10 11.5	+0.5
YOZ	**Yozgat**	**2.93**	**302**	*e*Pn	Pn	03 10 11.5	+0.5
MERS	**Mersin**	**3.45**	**250**	*e*PN	Pn	03 10 18.5	+0.3
MERS	**Mersin**	**3.45**	**250**	*e*Pn	Pn	03 10 18.5	+0.3
CORM	**Corum**	**3.66**	**305**	*e*PN	Pn	03 10 21.2	+0.1
CORM	**Corum**	**3.66**	**305**	*e*Pn	Pn	03 10 21.2	+0.1
SULT	**Sultanhani-AKS**	**3.97**	**272**	*e*PN	Pn	03 10 26.1	+0.8
SULT	**Sultanhani-AKS**	**3.97**	**272**	*e*Pn	Pn	03 10 26.1	+0.8
BCA	**Borcka**	**4.06**	**35**	*e*PN	Pn	03 10 27.1	+0.6
BCA	**Borcka**	**4.06**	**35**	*e*Pn	Pn	03 10 27.1	+0.6
CUKT	**Cukurca**	**4.11**	**101**	*e*PN	Pn	03 10 27.2	0.0
CUKT	**Cukurca**	**4.11**	**101**	*e*Pn	Pn	03 10 27.2	-0.1
FKH	**Fakeheh**	**4.27**	**205**	*e*PN	Pn	03 10 29.2	-0.3
FKH	**Fakeheh**	**4.27**	**205**	*e*Pn	Pn	03 10 29.2	-0.3
HWQ	**Hawqa**	**4.40**	**209**	*e*PN	Pn	03 10 31.0	-0.2
HWQ	**Hawqa**	**4.40**	**209**	*e*Pn	Pn	03 10 31.0	-0.2
BHL	**Bhannes**	**4.84**	**210**	*e*PN	Pn	03 10 37.9	+0.6
BHL	**Bhannes**	**4.84**	**210**	*e*Pn	Pn	03 10 37.9	+0.6

*NEIC **23** 03:15:22.0, 51.°37N×170.°59W, h42km, mb4.3/16, After AEIC.*
*MOS **23** 03:15:21.3±1.2, 51.°19N×170.°77W, h33km, mb4.4/21, Error ellipse: s-maj=19.1km s-min=9.6km az=103.7*
*IDC **23** 03:15:23.6±0.9, 51.°18N×170.°62W, h44km±6km, mb3.9/14, mb1 4.1/15, mb1mx3.9/28, mbtmp3.9/15, ML3.1/1, Error ellipse: s-maj=26.5km s-min=14.9km az=9.0*
*ISCJB **23** 03:15:23.3±0.6, 51.°4N±0.°1×170.°55W±0.°10, h45km, mb4.2/29, Error ellipse: s-maj=15.9km s-min=8.5km az=172.5*

ISC 23 03:15:25.7±0.6, 51.°46N±0.°10×170.°42W±0.°10, h47km, h47km±1.7km: pP-P, n84, σ1§01/84, mb4.2/29, 4C, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKFG	**Magazine Ridge**	**2.48**	**37**	P	Pn	03 16 02.5	-1.1
UNV	**Unalaska Valle**	**3.38**	**43**	*e*Pn	Pn	03 16 14.7	-1.1
UNV				*e*S	Sn	03 16 54.3	-0.3
ADK	**Adak**	**3.92**	**279**	*e*P	Pn	03 16 18.5	-4.8
ADK				*e*S	Sn	03 17 00.3	-7.8
AMKA	**Amchitka**	**6.43**	**273**	*e*P	Pn	03 16 52.7	-5.0
FX1	**Attu Island--F**	**10.19**	**284**	P	Pn	03 17 44.5	-4.6
	0.5nm,0.3s,baz=86,slow=18,SNR=6.8						
FX1	**Attu Island--F**	**10.19**	**284**	P	**Pn**	**03 17 44.5**	**-4.6**
FX1				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KDAK	**Kodiak Island**	**12.10**	**52**	P	**Pn**	**03 18 12.0**	**-3.2**
	comp=Z,1.6nm,0.3s,baz=213,slow=11,SNR=7.1						
KDAK	**Kodiak Island**	**12.10**	**52**	P	**Pn**	**03 18 12.0**	**-3.2**
KDAK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BPAW	**Bear Paw Mtn.**	**16.27**	**31**	*e*Pn	**Pn**	**03 19 10.1**	**-0.5**
	comp=Z,19nm,0.8s						
COLD	**Coldfoot**	**18.71**	**25**	*e*Pn	**Pn**	**03 19 35.9**	**-4.7**
	comp=Z,5.1nm,1.1s						
BILL	**Bilibino**	**20.12**	**

BRVK pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
BRVK Borovoye 64.08 324 *eP* **P 03 25 54.2 -0.1**
comp=Z,2.4nm,0.8s,mb4.3
FINES FINESS Array B 66.68 351 P **P 03 26 10.5 -0.5**
comp=Z,1.8nm,0.8s,mb4.1,baz=32,slow=8.2,SNR=3.3
FINES FINESS Array B 66.68 351 P **P 03 26 10.5 -0.4**
FINES pmax pmax
comp=Z,2.0nm,0.8s
ABKAR Akbulak array 70.86 328 *eP* **P 03 26 37.1 -0.1**
comp=Z,3.1nm,0.9s,mb4.2
VRHR Novokhopersk 74.27 340 *eP* **P 03 26 56.2 -1.2**
VRHR pmax pmax
comp=E,6.0nm,0.5s
VRHR pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
VRHR pmax pmax
comp=N,10.0nm,0.9s
VSR Storozhevoye 74.67 341 *eP* **P 03 27 00.0 +0.3**
VSR pmax pmax
comp=E,6.0nm,0.6s
VSR pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
VSR pmax pmax
comp=N,2.0nm,0.3s
AKASG Malin Array Be 76.86 347 P **P 03 27 11.9 -0.3**
comp=N,2.2nm,0.7s,mb4.2,baz=15,slow=5.8,SNR=8.4
AKASG Malin Array Be 76.86 347 P **P 03 27 11.9 -0.3**
AKASG pmax pmax
comp=Z,2.0nm,0.7s
BRG Berggiesshubel 77.98 357 *eP* **P 03 27 19.4 +1.0**
comp=Z,6.5nm,0.9s,mb4.5
MORC Moravsky Berou 78.92 355 *eP* **P 03 27 23.2 -0.5**
MORC pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
MORC Moravsky Berou 78.92 355 *eP* **P 03 27 23.2 -0.5**
comp=Z,3.1nm,0.9s,mb4.2
CRVS Cervenica-Dubn 79.50 352 *eP* pP 03 27 36.7 -3.9
CRVS Cervenica-Dubn 79.50 352 *e*PCP pP 03 27 36.7 -3.9
LDF La Druitiere 79.98 7 *eP* **P 03 27 29.6 +0.1**
VYHS Vyhne 80.11 354 *eP* **P 03 27 31.4 +1.2**
VYHS *e* pP 03 27 45.8 +1.9
VYHS Vyhne 80.11 354 *eP* **P 03 27 31.4 +1.2**
VYHS *ep*P pP 03 27 45.8 +1.9
HAU Haudompre 80.88 2 *eP* **P 03 27 35.5 +1.2**
LOR Lormes 81.53 4 *eP* **P 03 27 37.3 -0.5**
comp=Z,2.6nm,0.6s,mb4.0
LOR Lormes 81.53 4 *eP* **P 03 27 37.3 -0.5**
LOR pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
LOR Lormes 81.53 4 *eP* **P 03 27 37.3 -0.5**
comp=Z,1.3nm,0.6s,mb4.0
SSF Saint Saulge 81.72 4 *eP* **P 03 27 40.0 +1.2**
comp=Z,3.9nm,0.7s,mb4.2
SSF Saint Saulge 81.72 4 *eP* **P 03 27 40.0 +1.2**
SSF pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
SSF Saint Saulge 81.72 4 *eP* **P 03 27 40.0 +1.2**
comp=Z,2.0nm,0.7s,mb4.2
MFF Saint Martin d 81.96 7 *eP* **P 03 27 40.8 +0.7**
AVF Avril sur Loir 81.98 4 *eP* **P 03 27 40.7 +0.5**
comp=Z,5.9nm,0.8s,mb4.3
AVF Avril sur Loir 81.98 4 *eP* **P 03 27 40.7 +0.5**
AVF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
AVF Avril sur Loir 81.98 4 *eP* **P 03 27 40.7 +0.5**
comp=Z,3.0nm,0.8s,mb4.3
SMF Signal de Mont 82.15 4 *eP* **P 03 27 41.5 +0.4**
CABF La Chapelle 82.26 2 *eP* **P 03 27 42.8 +1.2**
RJF Les Rejaudoux 83.37 6 *eP* **P 03 27 48.9 +1.5**
LFF La Frestale 83.68 6 *eP* **P 03 27 50.1 +1.1**
CAF Calviac 83.78 5 *eP* **P 03 27 51.1 +1.6**
SMRF Simiane la Rot 84.88 3 *eP* **P 03 27 57.2 +2.1**
comp=Z,2.9nm,0.6s,mb4.3
SMRF Simiane la Rot 84.88 3 *eP* **P 03 27 57.2 +2.1**
comp=Z,2.9nm,0.6s,mb4.6
SBF Sospel 85.04 2 *eP* **P 03 27 57.3 +1.4**
comp=Z,6.0nm,0.5s,mb4.7
SBF Sospel 85.04 2 *eP* **P 03 27 57.3 +1.4**
SBF pmax pmax
comp=Z,3.0nm,0.5s,mb4.7
SBF Sospel 85.04 2 *eP* **P 03 27 57.3 +1.4**
comp=Z,3.0nm,0.5s,mb4.7
FRF La Foret Royal 85.33 2 *eP* **P 03 27 58.6 +1.3**
comp=Z,2.3nm,0.5s,mb4.3
FRF La Foret Royal 85.33 2 *eP* **P 03 27 58.6 +1.3**
FRF pmax pmax
comp=Z,1.0nm,0.5s,mb4.2
FRF La Foret Royal 85.33 2 *eP* **P 03 27 58.6 +1.3**
comp=Z,1.1nm,0.5s,mb4.2
PGF Pioggiola 86.37 0 *eP* **P 03 28 03.8 +1.3**
comp=Z,4.8nm,0.8s,mb4.5
PGF Pioggiola 86.37 0 *eP* **P 03 28 03.8 +1.3**
PGF pmax pmax
comp=Z,2.0nm,0.8s,mb4.4
PGF Pioggiola 86.37 0 *eP* **P 03 28 03.8 +1.3**
comp=Z,2.4nm,0.8s,mb4.5
ESDC Sonseca Array 88.47 10 P **P 03 28 12.2 -0.5**
comp=Z,0.3nm,0.6s,mb3.7,baz=329,slow=2.6,SNR=4.4
ASAR Alice Springs 89.31 229 P **P 03 28 13.8 -2.8**
comp=Z,1.0nm,0.8s,mb4.2,baz=39,slow=5.1,SNR=8.0
ASAR pP pP 03 28 26.3 -4.3
comp=Z,1.7nm,0.7s,baz=38,slow=4.6,SNR=8.1
ASAR Alice Springs 89.31 229 P **P 03 28 13.8 -2.8**
ASAR *PP pP 03 28 26.3 -4.3
ASAR pmax pmax
comp=Z,1.0nm,0.8s

*ISCJB **23** 03:26:00.1±0.9, 51°.4N±0°.1×170°.65W±0°.09, h33km, mb3.8/10, Error ellipse: s-maj=17.5km s-min=5.9km az=161.3*
*NEIC **23** 03:26:01.4, 51°.44N×170°.64W, h42km, mb3.8/2, ML3.1(AEIC), After AEIC.*
*IDC **23** 03:26:02.4±4.6, 51°.16N×170°.63W, h43km±47km, mb3.7/10, mb1 3.8/11, mb1mx3.6/28, mbtmp3.7/11, ML3.0/1, Error ellipse: s-maj=60.1km s-min=19.4km az=15.0*

ISC 23 03:26:02.5±0.9, 51.4N±0.1×170.62W±0.09, h35km, n18, σ0.79/22, mb3.8/10, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKFG	**Magazine Ridge**	**2.58**	**39**	P	**Pn**	03 26 41.4	**-0.3**
OKFG				S	**Sn**	03 27 12.0	**+0.2**
UNV	**Unalaska Valle**	**3.48**	**45**	*e*Pn	**Pn**	03 26 53.7	**-0.4**
UNV				*e*S	**Sn**	03 27 33.0	**-1.0**
UNV				S	**Sn**	03 27 33.6	**-0.3**
ADK	**Adak**	**3.80**	**279**	*e*Pn	**Pn**	03 26 57.8	**-0.7**
ADK				*e*S	**Sn**	03 27 40.5	**-1.4**
FX1	**Attu Island--F**	**10.07**	**285**	P	**Pn**	03 28 25.0	**+0.5**
0.4nm,0.3s,baz=83,slow=1.0,SNR=3.6							
KDAK	**Kodiak Island**	**12.21**	**52**	P	**Pn**	03 28 50.5	**-3.2**
0.5nm,0.3s,baz=236,slow=11,SNR=3.0							
BPAW	**Bear Paw Mtn.**	**16.35**	**32**	*e*P	**Pn**	03 29 49.4	**+0.4**
5.7nm,0.7s							
BPAW				*e*		03 30 03.8	
EGAK	**Eagle**	**20.25**	**38**	*e*P	**P**	03 30 33.9	**-0.4**
2.6nm,0.6s							
YKA	**Yellowknife Ar**	**31.44**	**48**	P	**P**	03 32 21.1	**+1.0**
0.4nm,0.7s,mb3.4,baz=272,slow=9.6,SNR=3.4							
PDAR	**Pinedale Array**	**41.35**	**77**	P	**P**	03 33 44.5	**-0.2**
1.0nm,0.8s,mb3.5,baz=327,slow=5.0,SNR=6.2							
SPITS	**Spitsbergen Ar**	**50.58**	**358**	P	**P**	03 34 57.4	**+0.5**
2.9nm,0.8s,mb4.3,baz=54,slow=9.9,SNR=3.5							
TXAR	**Lajitas Array**	**53.55**	**87**	P	**P**	03 35 18.6	**-1.0**
0.7nm,0.6s,mb3.8,baz=295,slow=5.0,SNR=15							
TXAR				pP	pP	03 35 30.8	+0.5
0.4nm,0.8s,baz=298,slow=5.3,SNR=3.6							
SCHQ	**Schefferville**	**56.65**	**42**	P	**P**	03 35 42.4	**+0.8**
2.2nm,0.9s,mb4.2,baz=304,slow=7.3,SNR=3.8							
SCHQ	**Schefferville**	**56.65**	**42**	P	**P**	03 35 42.4	**+0.8**
ARCES	**ARCESS Array B**	**58.76**	**353**	P	**P**	03 35 56.7	**+0.5**
1.3nm,0.7s,mb4.0,baz=20,slow=8.6,SNR=3.4							
KURK	**Kurchatov**	**62.55**	**318**	P	**P**	03 36 22.9	**+0.6**
0.3nm,0.5s,mb3.7,baz=41,slow=6.9,SNR=2.8							
MKAR	**Makanchi Array**	**63.88**	**313**	P	**P**	03 36 31.4	**+0.2**
0.2nm,0.5s,mb3.4,baz=46,slow=6.6,SNR=2.7							
BVAR	**Borovoye Array**	**64.00**	**324**	P	**P**	03 36 33.0	**+1.1**
1.1nm,0.6s,mb4.1,baz=46,slow=6.4,SNR=7.5							
AKASG	**Malin Array Be**	**76.85**	**347**	P	**P**	03 37 50.6	**+0.3**
0.2nm,0.4s,mb3.4,baz=18,slow=6.8,SNR=5.1							

IDC 23 03:51:37.5±4.2, 38°.21S×93°.61W, h0km, mb3.7/4, mb1 4.1/5, mb1mx3.9/15, mbtmp3.7/5, ML3.6/1, MS3.7/6, Ms1 3.7/6, ms1mx3.3/21, Error ellipse: s-maj=108.6km s-min=31.1km az=22.0, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**17.98**	**105**	P	Pn	03 55 49.5	+0.7
0.1nm,0.3s,baz=266,slow=13,SNR=3.7							
CFAA	**Coronel Fontan**	**21.79**	**80**	P	P	03 56 30.8	-0.3
0.8nm,0.8s,baz=239,slow=10,SNR=18							
CFAA				LR	LR	04 02 52.5	
comp=Z,26nm,19.3s,baz=256,slow=31							
USHA	**Ushuaia**	**23.81**	**142**	LR	LR	04 03 57.0	
comp=Z,333nm,21.8s,baz=258,slow=31							
LPAZ	**La Paz**	**31.28**	**53**	P	P	03 58 00.1	+0.9
2.2nm,0.8s,baz=210,slow=7.6,SNR=8.6							
LPAZ				LR	LR	04 07 41.0	
comp=Z,143nm,21.9s,baz=177,slow=31							
CPUP	**Villa Florida**	**32.69**	**80**	LR	LR	04 10 20.1	
comp=Z,87nm,19.0s,baz=63,slow=34							
TXAR	**Lajitas Array**	**67.85**	**351**	P	P	04 02 37.7	+0.3
0.5nm,1.0s,baz=171,slow=8.9,SNR=4.6							
PDAR	**Pinedale Array**	**81.89**	**348**	P	P	04 03 58.7	+0.3
1.1nm,0.9s,baz=149,slow=6.1,SNR=5.1							
STKA	**Stephens Creek**	**93.36**	**224**	LR	LR	04 38 26.8	
comp=Z,84nm,18.2s,baz=206,slow=30							
LBTB	**Lobatse**	**95.15**	**127**	LR	LR	04 43 32.3	
comp=Z,44nm,19.0s,baz=85,slow=33							

MEX 23 04:17:42.8±0.9, 16°.41N×98°.28W, h28km±6km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.15**	**98**	*i* P	Pb	04 17 46.7	-1.5
PNIG				*i* S	Sb	04 17 51.0	-0.9
UTMO	**Huajuapan**	**1.48**	**18**	*i* P	Pn	04 18 05.1	-2.5
UTMO				*i* S	Sn	04 18 23.5	-2.5
VHO	**Vista Hermosa**	**1.62**	**66**	*i* P	Pn	04 18 08.1	-1.3
VHO				*i* S	Sn	04 18 26.7	-2.7
OXX	**Oaxaca**	**1.63**	**66**	*e*P	Pn	04 18 07.3	-2.4
OXX				*i* S	Sn	04 18 27.4	-2.4
ACX	**Acapulco**	**1.63**	**286**	*i* P	Pn	04 18 06.8	-2.9
ACX				*i* S	Sn	04 18 27.2	-2.6
CAIG	**El Cayaco**	**2.01**	**289**	*i* P	Pn	04 18 13.8	-1.0
CAIG				*i* S	Sn	04 18 37.0	-2.0
TPIG	**Tehuac#an**	**2.18**	**24**	*i* P	Pn	04 18 15.0	-2.2
TPIG				*i* S	Sn	04 18 41.7	-1.6
HUIG	**Huatulco**	**2.18**	**107**	*e*P	Pn	04 18 15.0	-2.2
HUIG				*i* S	Sn	04 18 39.6	-3.7
PLIG	**Platanillo**	**2.29**	**329**	*e*P	Pn	04 18 16.1	-2.6
PLIG				*i* S	Sn	04 18 44.2	-1.8
YAIG	**Yautepec**	**2.55**	**343**	*e*P	Pn	04 18 20.6	-1.7
YAIG				*i* S	Sn	04 18 48.4	-4.0
PPM	**Popocatepetl**	**2.66**	**353**	*e*P	Pn	04 18 22.4	-1.5
PPM				*e*P		04 18 23.5	
PPM				*i* S	Sn	04 18 55.9	+0.7
PPM				*i* S	Sn	04 18 56.6	+1.4
MZVM		**2.91**	**342**	*e*P	Pn	04 18 26.6	-0.6
MZVM				*i* S	Sn	04 19 02.4	+1.2
IIO	**Organos**	**3.19**	**352**	*i* P	Pn	04 18 29.9	-1.2
IIO				*i* S	Sn	04 19 09.7	+1.5
PTVM	**Pico Tres Padr**	**3.26**	**346**	*e*P	Pn	04 18 30.8	-1.3
PTVM				*i* S	Sn	04 19 10.3	+0.3
ZIIG	**Zihuatanejo**	**3.27**	**292**	*i* P	Pn	04 18 30.5	-1.7
ZIIG				*i* S	Sn	04 19 11.6	+1.3
CMIG	**Matias Romero**	**3.32**	**78**	*i* P	Pn	04 18 30.7	-2.2
CMIG				*i* S	Sn	04 19 08.8	-2.6
LVIG	**Laguna Verde**	**3.74**	**28**	*e*P	Pn	04 18 36.7	-2.0
LVIG				*i* S	Sn	04 19 18.8	-3.0
MOIG	**Morelia**	**4.27**	**320**	*e*P	Pn	04 18 55.3	+9.3
MOIG				*i* S	Sn	04 19 33.5	-1.3

NEIC 23 04:30:15.6, 45°.92S×166°.48E, h5km, ML3.9(WEL), After WEL., Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.65**	**47**	P	Pg	04 30 28.1	+0.1
DCZ				S	Sg	04 30 36.5	+0.1
DCZ				S	Sg	04 30 40.2	+3.8
WHZ	**Wether Hill Ro**	**1.02**	**89**	P	Pg	04 30 34.2	-1.0
WHZ				S	Sg	04 30 50.7	+2.2
MLZ	**Mavora Lakes**	**1.32**	**65**	P	Pn	04 30 39.5	-1.1
APZ	**The Paps**	**1.39**	**132**	P	Pn	04 30 36.8	-4.8
MSZ	**Milford Sound**	**1.61**	**40**	P	Pn	04 30 42.8	-1.9
SYZ	**Scrubby Hill**	**1.95**	**109**	P	Pn	04 30 46.9	-2.4
WKZ	**Wanaka**	**2.10**	**60**	P	Pn	04 30 52.2	+0.9
EAZ	**Earnscleugh**	**2.10**	**72**	P	Pn	04 30 51.5	+0.1
TUZ	**Tuapeka**	**2.20**	**92**	P	Pn	04 30 51.2	-1.5
JCZ	**Jackson Bay**	**2.45**	**42**	P	Pn	04 30 56.6	+0.4
LBZ	**Lake Benmore**	**3.04**	**61**	P	Pn	04 31 03.0	-1.2
ODZ	**Otahua Downs**	**3.06**	**75**	P	Pn	04 31 02.6	-1.9
FOZ	**Fox Glacier**	**3.28**	**45**	P	Pn	04 31 09.6	+2.0
RPZ	**Rata Peaks**	**3.93**	**58**	P	Pn	04 31 14.4	-2.1
LTZ	**Lake Taylor**	**5.20**	**55**	P	Pn	04 31 31.6	-2.4

*BJI **23** 04:34:43.0, 13°.10N×90°.20W, h56km, mB5.1/3, Ms4.9/2, Ms7 4.6/2*
*ISCJB **23** 04:34:44.3±0.6, 13°.06N±0°.05×90°.14W±0°.04, h74km±5km, mb4.5/59, Error ellipse: s-maj=9.4km s-min=4.6km az=42.7*
*NEIC **23** 04:34:45.0±1.2, 13°.11N×90°.24W, h57km±10km, mb4.6/53, Error ellipse: s-maj=11.9km s-min=7.3km az=218.0*
*IDC **23** 04:34:45.0±2.9, 13°.23N×89°.90W, h52km±25km, mb4.2/11, mb1 4.4/11, mb1mx4.1/21, mbtmp4.2/11, MS3.5/8, Ms1 3.5/8, ms1mx3.2/24, Error ellipse: s-maj=34.3km s-min=15.8km az=59.0*

ISC 23 04:34:46.0±0.5, 13.12N±0.04×90.10W±0.04, h70km±5km, n413, σ0.67/405, mb4.5/59, 155C-141D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.85**	**33**	*e*P	**Pn**	04 35 02.6	**-0.1**
SNJE	**San Jose**	**0.88**	**33**	*e*P	**Pn**	04 35 03.1	**+0.1**
BOQS	**Boqueron**	**1.00**	**52**	*e*P	**Pn**	04 35 04.9	**+0.4**
SNET	**Serv Nac Est T**	**1.01**	**56**	*e*P	**Pn**	04 35 05.0	**+0.3**
RBDL	**Robledal**	**1.06**	**22**	*e*P	**Pn**	04 35 05.5	**+0.1**
LFRS	**El Faro**	**1.12**	**64**	*e*P	**Pn**	04 35 06.2	**+0.1**
MTO2	**Montecristo 2**	**1.46**	**29**	*e*P	**Pn**	04 35 11.5	**+1.1**
VSM	**San Miguel**	**1.80**	**80**	*e*P	**Pn**	04 35 16.4	**+1.5**
BLLM	**Bellamira**	**1.84**	**80**	*e*P	**Pn**	04 35 16.0	**+0.6**
APG	**El Apazote**	**1.91**	**349**	P	**Pn**	04 35 15.4	**-1.0**
100nm,0.3s,baz=186,slow=14,SNR=372							
CAHU	**Cacacuatique**	**1.94**	**70**	*e*P	**Pn**	04 35 17.7	**+0.8**
CNCH	**Conchagua**	**2.21**	**86**	*e*P	**Pn**	04 35 20.2	**-0.3**
TGUH	**Tegucigalpa,Un**	**2.90**	**71**	*e*Pn	**Pn**	04 35 30.9	**+1.1**
TGUH	**Tegucigalpa,Un**	**2.90**	**71**	*e*P	**Pn**	04 35 30.8	**+0.9**
CRIN	**San Cristobal**	**3.00**	**98**	*e*P	**Pn**	04 35 31.5	**+0.3**
LEON	**Leon**	**3.20**	**102**	*e*P	**Pn**	04 35 33.3	**-0.7**
MOMN	**Momotombo**	**3.54**	**101**	*e*P	**Pn**	04 35 37.7	**-0.9**
COPN	**Copaltepe**	**3.55**	**105**	*e*P	**Pn**	04 35 36.7	**-2.0**
CSAN		**3.71**	**104**	*e*P	**Pn**	04 35 39.6	**-1.2**
MGAN	**Managua**	**3.88**	**104**	*e*P	**Pn**	04 35 42.6	**-0.6**
BOAB	**BOACO BROADBAN**	**4.37**	**98**	*e*P	**Pn**	04 35 48.3	**-1.7**
SSN	**San Juan del S**	**4.53**	**113**	*e*P	**Pn**	04 35 51.0	**-1.0**
JCR	**Jicaral**	**5.87**	**123**	*e*P	**Pn**	04 36 07.0	**-3.4**
CMIG	**Matias Romero**	**6.08**	**311**	P	**Pn**	04 36 07.8	**-5.6**
1.1nm,0.3s,baz=128,slow=10,SNR=11							
CMIG				S	**Sn**	04 37 21.6	**+0.1**
1.7nm,0.3s,baz=84,slow=15,SNR=2.1							
CMIG				LR	LR	04 38 55.0	
comp=Z,497nm,18.5s,baz=140,slow=41							
CGA2	**Cerro Gallo 2**	**6.32**	**119**	*e*P	**Pn**	04 36 17.1	**+0.5**
PRS1	**Puriscal**	**6.47**	**118**	*e*P	**Pn**	04 36 18.2	**-0.5**
URSC	**Urasca**	**7.00**	**117**	*e*P	**Pn**	04 36 27.2	**+1.3**
BUS	**Buena Vista**	**7.15**	**119**	*e*P	**Pn**	04 36 29.2	**+1.2**
TEIG	**Tepich**	**7.28**	**14**	*e*Pn	**Pn**	04 36 31.3	**+1.6**
BAR1		**7.69**	**119**	*e*P	**Pn**	04 36 35.1	**-0.3**
ACR	**Cerro Adams**	**8.12**	**122**	*e*P	**Pn**	04 36 41.7	**+0.4**
OTAV	**Otavalo**	**17.23**	**137**	*e*Pn	**Pn**	04 38 42.0	**-0.3**
4.5nm,1.1s							
ROSC	**El Rosal**	**17.59**	**116**	P	**Pn**	04 38 50.0	**+3.4**
0.2nm,0.3s,baz=306,slow=12,SNR=8.2							
ROSC	**El Rosal**	**17.59**	**116**	*e*Pn	**Pn**	04 38 51.2	**+4.5**
JCT	**Junction City**	**19.46**	**334**	*e*P	**Pn**	04 39 05.5	**-3.5**
8.4nm,0.9s							
LRAL	**Lakeview Retre**	**20.02**	**8**	*e*P	**P**	04 39 15.2	**+2.0**
16nm,0.9s							
628A	**Black Gap, Mar**	**20.15**	**326**	⇑P	**P**	04 39 14.8	**+0.1**
baz=20,SNR=16							
627A	**Terlingua Ranc**	**20.40**	**325**	⇑P	**P**	04 39 17.6	**+0.2**
baz=20,SNR=25							
TXAR	**Lajitas Array**	**20.47**	**324**	P	**P**	04 39 18.3	**+0.2**
11nm,0.8s,baz=150,slow=11,SNR=117							
TXAR				LR	LR	04 49 37.2	
comp=Z,88nm,18.2s,baz=180,slow=44							
528A	**Cox Ranch, San**	**20.62**	**327**	⇓P	**P**	04 39 19.4	**-0.4**
baz=21,SNR=15							
626A	**Big Bend Ranch**	**20.90**	**324**	⇓P	**P**	04 39 22.7	**0.0**
baz=21,SNR=26							
428A	**Kincaid Ranch,**	**21.02**	**328**	⇓P	**P**	04 39 23.6	**-0.5**
baz=21,SNR=12							
527A	**Woodward Ranch**	**21.06**	**326**	⇓P	**P**	04 39 24.2	**-0.2**
baz=21,SNR=32							
GOGA	**Godfrey**	**21.08**	**16**	*e*P	**P**	04 39 25.4	**+0.7**
6.5nm,0.8s,mb4.0							
526A	**Mary Lane Ranc**	**21.26**	**325**	⇑P	**P**	04 39 26.5	**0.0**
baz=21,SNR=85							
OXF	**Oxford**	**21.30**	**2**	*e*P	**P**	04 39 28.9	**+1.9**
54nm,1.1s,mb4.8							
427A	**Hayter Ranch,**	**21.49**	**327**	⇑P	**P**	04 39 28.5	**-0.6**
baz=22,SNR=15							
MIAR	**Mount Ida**	**21.56**	**352**	*e*P	**P**	04 39 29.1	**-0.6**
14nm,0.9s,mb4.3							
328A	**Wristen Ranch,**	**21.61**	**329**	⇑P	**P**	04 39 29.4	**-1.0**
baz=22,SNR=48							
UALR	**University of**	**21.65**	**355**	*e*P	**P**	04 39 31.9	**+1.2**
19nm,0.8s,mb4.5							
426A	**McDonald Obser**	**21.69**	**326**	⇑P	**P**	04 39 30.7	**-0.4**
baz=22,SNR=55							
326A	**Caldwell Ranch**	**22.16**	**327**	⇑P	**P**	04 39 35.5	**-0.7**
baz=22,SNR=61							
425A	**Indio Mountain**	**22.31**	**324**	⇑P	**P**	04 39 36.5	**-1.2**
baz=22,SNR=61							
SWET	**Sewanee**	**22.32**	**9**	*e*P	**P**	04 39 38.9	**+1.1**
227A	**Bennet, Jal**	**22.36**	**329**	⇓P	**P**	04 39 37.5	**-0.8**
baz=22,SNR=6.7							
325A	**Bean Ranch, Si**	**22.74**	**325**	⇓P	**P**	04 39 40.7	**-1.7**
baz=23,SNR=11							
CPCT	**Cooper Cave**	**22.79**	**12**	*e*P	**P**	04 39 43.4	**+0.6**
226A	**Malaga, Loving**	**22.81**	**328**	⇑P	**P**	04 39 41.9	**-1.1**
baz=23,SNR=7.6							
WMOK	**Wichita Mounta**	**22.91**	**341**	*e*P	**P**	04 39 41.7	**-2.4**
127A	**Arkansas Junct**	**22.94**	**330**	⇓P	**P**	04 39 42.4	**-1.9**
baz=23							
WVT	**Waverly**	**23.00**	**5**	*e*P	**P**	04 39 45.1	**+0.2**
16nm,1.0s,mb4.3							
GDL2	**Guadalupe Moun**	**23.06**	**328**	*e*P	**P**	04 39 45.2	**-0.4**
324A	**Moseley Ranch,**	**23.08**	**325**	⇑P	**P**	04 39 43.9	**-1.9**
baz=23,SNR=27							
TKL	**Tuckaleechee C**	**23.15**	**13**	P	**P**	04 39 46.9	**+0.4**
9.2nm,0.8s,mb4.2,baz=180,slow=9.5,SNR=9.5							
TKL				LR	LR	04 50 06.7	
comp=Z,218nm,18.2s,baz=235,slow=40							
TKL	**Tuckaleechee C**	**23.15**	**13**	*e*P	**P**	04 39 47.1	**+0.6**
MNTX	**Cornudas Mount**	**23.22**	**325**	*e*P	**P**	04 39 45.5	**-1.6**
14nm,1.0s,mb4.3							
225A	**Deer Hill, Car**	**23.23**	**327**	⇓P	**P**	04 39 46.0	**-1.2**
baz=23,SNR=14							
126A	**Clayton Basin,**	**23.24**	**329**	⇓P	**P**	04 39 45.7	**-1.6**
baz=23							
ATAH	**Atahualpa**	**23.24**	**149**	P	**P**	04 39 48.2	**+0.8**
3.1nm,0.5s,mb3.9,baz=300,slow=11,SNR=3.6							
Z27A	**Tatum**	**23.39**	**331**	⇑P	**P**	04 39 45.9	**-2.8**
baz=23,SNR=12							
125A	**Gardner Draw,**	**23.57**	**328**	⇑P	**P**	04 39 49.1	**-1.3**
baz=24,SNR=22							
224A	**Cornudas Mount**	**23.58**	**326**	⇓P	**P**	04 39 48.7	**-1.7**
baz=24,SNR=26							
Z26A	**Caprock**	**23.72**	**330**	⇓P	**P**	04 39 50.1	**-1.6**
baz=24							
MSTX	**Muleshoe**	**23.74**	**333**	⇓P	**P**	04 39 49.9	**-1.9**
baz=24,SNR=8.2							
Y27A	**Causey**	**23.84**	**332**	⇓P	**P**	04 39 51.2	**-1.6**
baz=24,SNR=17							
124A	**Stringfield Ra**	**24.02**	**327**	⇑P	**P**	04 39 53.8	**-0.7**
baz=24,SNR=16							
TZTN	**Tazewell**	**24.05**	**13**	*e*P	**P**	04 39 55.1	**+0.4**
13nm,0.9s,mb4.3							
AMTX	**Amarillo**	**24.07**	**336**	*e*P	**P**	04 39 53.7	**-1.2**
18nm,0.9s,mb4.4							
Z25A	**Roswell**	**24.09**	**329**	⇓P	**P**	04 39 54.4	**-0.7**
baz=24,SNR=7.8							
Y26A	**Elida**	**24.18**	**331**	⇓P	**P**	04 39 54.5	**-1.4**
baz=24,SNR=13							
Z24A	**Sheeppen Canyo**	**24.47**	**328**	⇑P	**P**	04 39 58.0	**-0.4**
baz=24,SNR=9.9							
SIUC	**Southern Illin**	**24.50**	**2**	*e*P	**P**	04 39 59.2	**+0.4**
47nm,1.0s,mb4.9							
Y25A	**Mesa, Roswell**	**24.60**	**330**	⇑P	**P**	04 39 59.0	**-0.7**
baz=25,SNR=11							
W27A	**Bowe Ranch, En**	**24.80**	**334**	⇑P	**P**	04 40 00.7	**-0.8**
baz=25							
320A	**Kipp Ranch, An**	**24.83**	**320**	⇓P	**P**	04 40 01.9	**+0.1**
baz=25,SNR=8.5							
221A	**Mesquite Ranch**	**24.83**	**322**	⇓P	**P**	04 40 02.6	**+0.8**
baz=25,SNR=9.6							
USIN	**University of**	**24.84**	**5**	*e*P	**P**	04 40 02.3	**+0.5**
24nm,0.6s,mb4.8							
CCM	**Cathedral Cave**	**24.85**	**358**	*e*P	**P**	04 40 01.1	**-0.8**
15nm,0.7s,mb4.5							
Z23A	**Rita Site, Whi**	**24.87**	**326**	⇑P	**P**

118A Homack Ranch, 26.61 320 ⇑P P 04 40 18.2 +0.3
baz=27
X21A Alamocita Cree 26.61 326 ⇓P P 04 40 18.2 +0.3
baz=27,SNR=9.6
Z19A T-Link Ranch, 26.62 322 ⇓P P 04 40 18.9 +0.8
baz=27
TUC Tucson 26.91 319 eP P 04 40 21.6 +1.0
1.6nm,0.9s,mb3.5
Z18A Geronimo 26.95 321 ⇑P P 04 40 21.6 +0.7
baz=27
117A Oracle 27.05 319 ⇑P P 04 40 22.0 +0.1
baz=27
X20A Quemado 27.08 325 ⇓P P 04 40 23.0 +0.9
baz=27
Y19A Nutrioso 27.08 323 ⇓P P 04 40 22.7 +0.5
baz=27,SNR=11
T25A Trinidad 27.13 334 ⇓P P 04 40 23.0 +0.4
baz=27
216A Three Points, 27.15 317 ⇑P P 04 40 23.5 +0.7
baz=27
U23A El Rito 27.26 331 ⇓P P 04 40 23.3 -0.5
baz=27,SNR=12
HDIL Hopedale 27.34 1 eP P 04 40 24.2 -0.1
Z17A San Carlos Hig 27.36 321 ⇑P P 04 40 24.9 +0.3
baz=27
Y18A Canyon Day Jun 27.42 322 ⇓P P 04 40 26.2 +1.0
baz=27,SNR=11
X19A St. Johns 27.44 324 ⇑P P 04 40 25.6 +0.3
baz=27
W20A Ramah 27.51 326 ⇑P P 04 40 27.0 +1.0
baz=28
V21A Milan 27.57 328 ⇓P P 04 40 27.2 +0.8
baz=28
S25A Robets Cordova 27.59 335 ⇓P P 04 40 26.7 +0.1
baz=28
U22A Llaves 27.62 330 ⇓P P 04 40 27.0 +0.1
baz=28
116A Eloy 27.66 318 ⇑P P 04 40 27.6 +0.2
baz=28
ACSO Alum Creek Sta 27.72 12 eP P 04 40 28.2 +0.5
13nm,0.8s,mb4.5
T23A Casias Ranch, 27.76 332 ⇓P P 04 40 28.3 +0.1
baz=28
S24A Houchin Ranch, 27.90 334 ⇑P P 04 40 29.2 -0.2
baz=28
X18A Snowflake 27.90 323 ⇑P P 04 40 29.4 0.0
baz=28
214A Organ Pipe Nat 28.03 316 ⇑P P 04 40 31.1 +0.5
baz=28
U21A Nageezi 28.06 329 ⇑P P 04 40 31.4 +0.5
baz=28
115A Sonoran Desert 28.09 318 ⇑P P 04 40 31.7 +0.5
baz=28
T22A Edith 28.15 331 ⇑P P 04 40 31.5 -0.2
baz=28
X17A Forest Lakes 28.27 322 ⇓P P 04 40 33.2 +0.5
baz=28
Y16A Circle Bar Ran 28.37 320 ⇑P P 04 40 33.8 +0.2
baz=28
U20A Newcomb 28.46 328 ⇓P P 04 40 34.7 +0.2
baz=28
114A Black Gap (USA 28.56 317 ⇓P P 04 40 35.4 +0.1
baz=28,SNR=6.0
Q25A Bedland, Calha 28.59 337 ⇓P P 04 40 36.1 +0.6
baz=29
S22A 4UR Ranch, Cre 28.71 332 ⇓P P 04 40 36.8 +0.2
baz=29
X16A Lo Mia Camp, P 28.71 321 ⇓P P 04 40 37.4 +0.8
baz=29,SNR=14
W17A Winslow 28.73 323 ⇓P P 04 40 37.1 +0.2
baz=29
V18A Ganado 28.73 325 ⇑P P 04 40 36.8 -0.1
baz=29
U19A Dine' College, 28.76 327 ⇑P P 04 40 36.7 -0.4
baz=29
SCIA State Center 28.81 355 eP P 04 40 36.8 -0.6
11nm,0.8s,mb4.5
Y15A Casa Rosa Ranc 28.96 319 ⇑P P 04 40 38.4 -0.5
baz=29
Z14A Wintersburg 28.98 318 ⇓P P 04 40 38.9 -0.2
baz=29
T19A Beclabito 29.07 328 ⇓P P 04 40 39.8 0.0
baz=29
MVCO Mesa Verde 29.09 329 ⇓P P 04 40 39.6 -0.4
baz=29
V17A Tonalea, Kykot 29.16 324 ⇓P P 04 40 40.8 +0.2
baz=29,SNR=7.6
113A Mohawk Valley, 29.16 316 ⇑P P 04 40 40.6 -0.1
baz=29
U18A Rough Rock, Ch 29.21 326 ⇓P P 04 40 41.1 0.0
baz=29
W16A Flagstaff 29.22 322 ⇑P P 04 40 41.7 +0.5
baz=29
X15A Humboldt 29.25 320 ⇑P P 04 40 41.5 0.0
baz=29
Z13A Yuma Proving G 29.35 317 ⇑P P 04 40 42.1 -0.2
baz=29
WUAZ Wupatki 29.42 323 ⇑P P 04 40 43.1 +0.1
baz=29,SNR=7.7
WUAZ Wupatki 29.42 323 eP P 04 40 44.5 +1.6
9.1nm,0.9s,mb4.4
112A Yuma 29.58 315 ⇑P P 04 40 44.3 -0.1
baz=30
X14A Yava 29.64 320 ⇓P P 04 40 45.2 +0.3
baz=30
JFWS Jewell Farm 29.69 360 eP P 04 40 44.6 -0.6
6.1nm,0.8s,mb4.3
U16A Tuba City 29.72 324 ⇑P P 04 40 46.1 +0.5
baz=30
W15A Williams 29.72 321 ⇓P P 04 40 46.0 +0.3
baz=30
T18A Mexican Hat 29.75 327 ⇓P P 04 40 45.9 0.0
baz=30
U17A Shonto 29.78 325 ⇑P P 04 40 46.3 +0.2
baz=30
R20A Redvale 29.80 330 ⇑P P 04 40 46.8 +0.5
baz=30
S19A Harvey Farm, M 29.83 329 ⇑P P 04 40 46.7 +0.2
baz=30,SNR=6.3
Y13A Salome 29.83 318 ⇑P P 04 40 47.0 +0.3
baz=30
Q21A Lamborn Mesa, 29.93 332 ⇑P P 04 40 47.6 +0.1
baz=30
SMCO Snowmass 29.94 333 eP P 04 40 47.8 +0.3
GLA Glamis 30.05 315 ⇑P P 04 40 48.8 +0.3
baz=30
V15A Kaibab Nationa 30.10 322 ⇓P P 04 40 49.6 +0.6
baz=30,SNR=6.3
T17A Navajo Res., N 30.15 326 ⇑P P 04 40 49.8 +0.4
baz=30,SNR=5.3
PV04 Paradox Valley 30.21 330 eP P 04 40 49.9 0.0
S18A Hurst Farm, Bl 30.23 328 ⇑P P 04 40 50.5 +0.5
baz=30
W14A Seligman 30.25 321 ⇑P P 04 40 50.9 +0.7
baz=30,SNR=7.0
R19A Curley Farm, L 30.31 329 ⇓P P 04 40 50.7 -0.1
baz=30
PDMCI Parker Dam,Lak 30.34 318 ⇓P P 04 40 51.2 +0.1
baz=30
Q20A Ridgley Place, 30.36 331 ⇓P P 04 40 51.7 +0.5
baz=30
T16A Glen Canyon Da 30.53 325 ⇑P P 04 40 53.4 +0.7
baz=30
V14A Boquillas Ranc 30.54 321 ⇓P P 04 40 53.4 +0.6
baz=30,SNR=12
U15A North Rim 30.59 323 ⇑P P 04 40 54.3 +1.0
baz=31,SNR=8.1
S17A Black Ridge (B 30.61 327 ⇑P P 04 40 54.0 +0.5
baz=31
W13A Hualapai Mount 30.67 320 ⇓P P 04 40 54.7 +0.6
baz=31
BC3 Big Chuckawall 30.82 316 ⇑P P 04 40 55.8 +0.4
baz=31
Q19A Hogan Spring (30.82 330 ⇓P P 04 40 55.1 -0.2
baz=31
ECSD ERCS Data Cent 31.02 351 eP P 04 40 56.3 -0.6
18nm,0.9s,mb4.8
T15A Red Dirt Ranch 31.05 324 ⇑P P 04 40 58.2 +0.8
baz=31
N22A Wattenberg Ran 31.08 336 ⇑P P 04 40 58.3 +0.8
baz=31
U14A Mt Trumbull 31.10 322 ⇑P P 04 40 58.5 +0.7
baz=31,SNR=11
S16A Weppner Ranch, 31.11 326 ⇓P P 04 40 58.3 +0.5
baz=31,SNR=6.4
R17A Hanksville Air 31.14 328 ⇑P P 04 40 58.0 -0.2
baz=31,SNR=5.9
V13A Grand Canyon W 31.22 321 ⇑P P 04 40 59.5 +0.7
baz=31
O20A White River Ci 31.29 333 ⇑P P 04 40 59.6 +0.3
baz=31,SNR=6.4
Q18A Rafter H Ranch 31.37 329 ⇓P P 04 40 59.9 -0.2
baz=31
R16A Teasdale 31.45 327 ⇓P P 04 41 01.2 +0.4
baz=32,SNR=12
PFO Pinyon Flat Ob 31.48 315 ⇑P P 04 41 01.2 0.0
baz=32
S15A Panguitch 31.50 325 ⇓P P 04 41 02.5 +1.3
baz=32,SNR=5.4
SRU San Rafael 31.57 329 ⇑P P 04 41 01.9 0.0
baz=32,SNR=6.5
SRU San Rafael 31.57 329 eP P 04 41 03.0 +1.2
U13A Pakoon Wash 31.57 321 ⇓P P 04 41 02.7 +0.8
baz=32,SNR=11
GMRC Granite Mounta 31.62 317 ⇑P P 04 41 02.5 +0.1
baz=32
V12A Nelson 31.68 320 ⇑P P 04 41 03.5 +0.6
baz=32,SNR=7.6
Q16A Castle Valley 31.76 328 ⇑P P 04 41 04.0 +0.4
baz=32
O19A Miners Draw (B 31.82 332 ⇓P P 04 41 04.1 +0.1
baz=32
P18A Preston Nutter 31.83 330 ⇑P P 04 41 04.4 +0.3
baz=32
N20A Spence Gulch, 31.86 333 ⇑P P 04 41 04.3 -0.1
baz=32,SNR=8.6
T13A Saint George 31.94 322 ⇓P P 04 41 05.1 -0.1
baz=32,SNR=8.3
P17A Butcher Ranch, 31.95 329 ⇓P P 04 41 05.3 0.0
baz=32,SNR=9.2
CCUT Cedar City 31.98 324 eP P 04 41 07.6 +2.1
MSU Marysvale 31.99 326 eP P 04 41 06.9 +1.3
S14A Cedar City 32.01 324 ⇑P P 04 41 05.9 +0.1
baz=32,SNR=5.5
V11A Goodsprings 32.12 319 ⇑P P 04 41 07.1 +0.3
baz=32
M21A Separation Pea 32.12 335 ⇑P P 04 41 06.5 -0.2
baz=32
O18A Roosevelt 32.21 331 ⇓P P 04 41 07.7 +0.3
baz=32,SNR=8.2
S13A Holt Ranch, En 32.29 323 ⇓P P 04 41 08.8 +0.6
baz=32,SNR=14
N19A John Jarvie Ra 32.32 332 ⇑P P 04 41 07.8 -0.7
baz=32,SNR=5.5
M20A Sweetwater, Wa 32.37 334 ⇑P P 04 41 08.4 -0.5
baz=32
L21A Rawlins 32.43 336 ⇓P P 04 41 08.9 -0.4
baz=32,SNR=5.8
O17A Robinson Place 32.50 330 ⇓P P 04 41 09.7 -0.4
baz=32,SNR=10
N18A Larsen Ranch, 32.61 332 ⇑P P 04 41 10.6 -0.4
baz=33,SNR=5.8
R13A O'Grain Ranch, 32.76 324 ⇓P P 04 41 12.5 +0.2
baz=33,SNR=8.0
P15A Leamington 32.82 327 ⇑P P 04 41 13.1 +0.3
baz=33,SNR=17
L20A Wamsutter 32.86 335 ⇓P P 04 41 13.1 -0.1
baz=33
O16A Springville 32.89 329 ⇑P P 04 41 13.3 -0.2
baz=33,SNR=12
DAU Daniels Canyon 32.93 330 eP P 04 41 14.9 +1.1
Q14A Sevier Lake (B 32.93 326 ⇓P P 04 41 14.4 +0.5
baz=33,SNR=7.1
U10A Ash Meadows, A 33.05 319 ⇓P P 04 41 14.9 +0.1
baz=33
R12A Pony Springs, 33.23 323 ⇓P P 04 41 16.9 +0.4
baz=33,SNR=10.0
Q13A Wheeler Ranch, 33.32 325 ⇓P P 04 41 17.2 0.0
baz=33,SNR=8.9
L19A Farson 33.37 333 ⇓P P 04 41 17.8 +0.2
baz=33
N16A Rees Ranch, Co 33.38 330 ⇓P P 04 41 17.9 +0.3
baz=33
K20A Yellowstone Ra 33.40 335 ⇑P P 04 41 17.4 -0.5
baz=33
O15A The Old Anders 33.44 328 ⇓P P 04 41 17.9 -0.3
baz=33
M17A Scullys Gap (B 33.46 331 ⇓P P 04 41 18.3 -0.1
baz=34,SNR=10.0
L18A Fontenelle, Gr 33.53 333 ⇑P P 04 41 18.9 0.0
baz=34
DUG Dugway 33.55 328 ⇓P P 04 41 19.3 +0.1
baz=34
DUG Dugway 33.55 328 eP P 04 41 20.2 +1.0
3.5nm,1.0s,mb4.1
MPMC Manual Prospec 33.58 318 ⇓P P 04 41 19.2 -0.4
baz=34,SNR=9.3
P13A Bates Ranch, G 33.67 326 ⇓P P 04 41 20.2 0.0
baz=34,SNR=11
M16A Huntsville 33.80 330 ⇓P P 04 41 21.4 +0.1
baz=34
R11A Troy Canyon, C 33.82 323 ⇑P P 04 41 21.3 -0.2
baz=34,SNR=10
Q12A Willow Creek R 33.84 324 ⇓P P 04 41 21.8 +0.1
baz=34
ARVC Arvin 33.96 315 ⇓P P 04 41 22.6 -0.2
baz=34
HWUT Hardware Ranch 33.99 331 eP P 04 41 22.4 -0.5
9.0nm,0.9s,mb4.6
BW06 Boulder Array 34.00 334 ⇑P P 04 41 23.2 +0.1
baz=34
PDAR Pinedale Array 34.00 334 P P 04 41 22.7 -0.3
1.2nm,0.8s,mb3.8,baz=128,slow=9.6,SNR=7.5
PDAR PcP PcP 04 44 01.3 +1.6
0.1nm,0.3s,baz=146,slow=4.0,SNR=2.1
ISA Isabella 34.01 316 ⇓P P 04 41 23.7 +0.5
baz=34
L17A Cokeville 34.05 332 ⇑P P 04 41 23.0 -0.4
baz=34,SNR=7.3
GRAC Grapevine Rang 34.06 319 ⇓P P 04 41 23.6 -0.1
baz=34
K18A Toltan Ranch, 34.10 333 ⇓P P 04 41 24.0 +0.1
baz=34
S10A Tonopah Range, 34.15 321 ⇑P P 04 41 24.9 +0.5
baz=34,SNR=7.7
Q11A Duckwater 34.18 323 ⇓P P 04 41 25.7 +1.0
baz=34
BGU Big Grassy Mou 34.20 328 eP P 04 41 25.7 +0.9
4.0nm,0.8s,mb4.3
R10A Warm Springs 34.20 322 ⇓P P 04 41 26.2 +1.3
baz=34,SNR=8.2
N14A Grayback Hills 34.23 328 ⇓P P 04 41 25.2 +0.2
baz=34,SNR=8.3
L16A Fish Haven 34.24 331 ⇑P P 04 41 25.3 +0.2
baz=34,SNR=8.9
M15A Larsen Ranch, 34.31 330 ⇓P P 04 41 25.7 0.0
baz=34
J18A Kendall Valley 34.56 334 ⇓P P 04 41 27.6 -0.3
baz=35,SNR=6.3
K17A Gardner Place, 34.58 333 ⇓P P 04 41 27.9 -0.2
baz=35
O12A Currie 34.64 326 ⇑P P 04 41 28.7 +0.1
baz=35
L15A Malad City 34.69 330 ⇑P P 04 41 28.6 -0.4
baz=35,SNR=13
EYMN Ely 34.74 358 eP P 04 41 27.9 -1.5
7.7nm,0.8s,mb4.6
N13A Wendover, West 34.76 327 ⇓P P 04 41 29.8 +0.1
baz=35
N13A Wendover, West 34.76 327 eP P 04 41 31.1 +1.5
14nm,0.9s,mb4.8
M14A Sheep Mountain 34.79 329 ⇑P P 04 41 29.9 0.0
baz=35,SNR=29
I18A Diamond G Ranc 34.87 335 ⇓P P 04 41 30.8 +0.2
baz=35
RCTC Rector, Farmer 34.89 317 ⇑P P 04 41 30.9 +0.1
baz=35
J17A Brown Place, J 34.98 333 ⇑P P 04 41 31.0 -0.5
baz=35,SNR=12
REDW Red Top Meadow 35.04 333 eP P 04 41 31.8 -0.2
21nm,0.9s,mb5.0
SNOW Snow King Moun 35.08 333 eP P 04 41 32.4 0.0
26nm,0.9s,mb5.1
M13A Montello 35.10 328 ⇑P P 04 41 33.3 +0.7
baz=35
L14A Malta 35.13 329 ⇑P P 04 41 32.7 -0.2
baz=35,SNR=16
P10A Eureka 35.17 323 ⇓P P 04 41 33.3 +0.2
baz=35
TPAW Teton Pass 35.19 333 eP P 04 41 33.1 -0.1
9.6nm,1.0s,mb4.6
N12A Clover Valley, 35.21 326 ⇑P P 04 41 33.6 +0.1
baz=35
N12A Clover Valley, 35.21 326 eP P 04 41 34.1 +0.6
4.6nm,0.8s,mb4.4
K15A Arbon 35.28 331 ⇑P P 04 41 33.8 -0.3
baz=35,SNR=6.2
J16A Bone 35.31 332 ⇓P P 04 41 34.0 -0.3
baz=35,SNR=6.3
AGMN Agassiz Nation 35.40 353 eP P 04 41 33.9 -1.1
29nm,0.8s,mb5.2
K14A Jones Ranch, D 35.48 330 ⇑P P 04 41 35.3 -0.5
baz=36,SNR=26
NVAR Mina Array Bea 35.52 320 P P 04 41 38.0 +1.8
7.5nm,0.8s,mb4.7,baz=139,slow=8.2,SNR=23
NVAR PcP PcP 04 44 07.6 +3.4
0.4nm,0.5s,baz=145,slow=3.3,SNR=2.7
L13A Double Diamond 35.52 329 ⇓P P 04 41 36.3 +0.1
baz=36
M12A Wells 35.54 327 ⇑P P 04 41 37.0 +0.7
baz=36
N11A Elko Archery C 35.56 326 ⇑P P 04 41 37.1 +0.6
baz=36
O10A Cortez Mining, 35.63 324 ⇓P P 04 41 37.8 +0.7
baz=36
I16A Newdale 35.73 333 ⇑P P 04 41 38.2 +0.3
baz=36
J15A Blackfoot 35.78 332 ⇑P P 04 41 38.3 -0.1
baz=36,SNR=6.6
RLMT Red Lodge 35.83 337 ⇑P P 04 41 38.7 -0.1
baz=36
K13A Stover Farm, H 36.01 329 ⇑P P 04 41 40.3 0.0
baz=36
M11A Holland Ranch, 36.02 326 ⇑P P 04 41 40.5 +0.1
baz=36,SNR=9.8
G18A Lazy EL Ranch, 36.10 336 ⇓P P 04 41 40.6 -0.5
baz=36
L12A House Creek Ra 36.11 328 ⇓P P 04 41 41.7 +0.4
baz=36
J14A Carey 36.23 331 ⇑P P 04 41 42.0 -0.3
baz=36,SNR=14
H16A Russell Place, 36.29 334 ⇓P P 04 41 43.0 +0.3
baz=36
LPAZ La Paz 36.41 143 LR LR 04 56 58.1
comp=Z,44nm,18.8s,baz=318,slow=37
K12A Draper Farm, C 36.41 329 ⇑P P 04 41 44.1 +0.4
baz=36,SNR=7.1
M10A I.L. Ranch, Tu 36.49 326 ⇑P P 04 41 44.6 +0.2
baz=36
L11A Cat Creek Ranc 36.51 327 ⇓P P 04 41 45.0 +0.3
baz=36,SNR=8.2
J13A Cove Ranch, Pi 36.60 330 ⇓P P 04 41 45.9 +0.5
baz=37
CMB Columbia Colle 36.61 318 eP P 04 41 45.6 0.0
4.3nm,0.9s,mb4.4
F18A Big Timber 36.66 337 ⇑P P 04 41 45.2 -0.6
baz=37,SNR=5.3
I14A Mackay 36.66 331 ⇑P P 04 41 46.1 +0.2
baz=37,SNR=8.9
L10A Juniper Basin 36.83 327 ⇑P P 04 41 47.5 +0.1
baz=37
HLID Hailey 36.84 330 ⇓P P 04 41 47.5 +0.1
baz=37,SNR=6.7
HLID Hailey 36.84 330 eP P 04 41 48.0 +0.5
2.9nm,0.9s,mb4.2
G16A Moss Hill, Enn 36.94 334 ⇑P P 04 41 48.7 +0.4
baz=37,SNR=6.6
J12A Stokes Ranch, 36.95 329 ⇑P P 04 41 48.4 +0.1
baz=37,SNR=7.6
I13A Wildhorse Cree 36.96 331 ⇑P P 04 41 49.1 +0.6
baz=37,SNR=13
F17A Fitzpatrick Pl 37.02 336 ⇓P P 04 41 49.0 +0.1
baz=37,SNR=7.1
MCMT McKenzie Canyo 37.08 333 eP P 04 41 51.3 +1.9
9.4nm,0.9s,mb4.7
K11A Parker Ranch, 37.09 328 ⇑P P 04 41 49.4 -0.1
baz=37
DGMT Dagmar 37.14 344 ⇓P P 04 41 49.5 -0.4
baz=37
DGMT Dagmar 37.14 344 eP P 04 41 49.8 0.0
22nm,0.8s,mb5.2
H14A Leadore 37.15 332 ⇓P P 04 41 50.2 +0.2
baz=37,SNR=12
G15A Dillon 37.19 334 ⇓P P 04 41 50.8 +0.4
baz=37,SNR=10.0
BOZ Bozeman (W) 37.21 335 ⇑P P 04 41 50.3 -0.1
baz=37
E18A Harlowton 37.28 337 ⇑P P 04 41 51.3 +0.2
baz=37,SNR=5.2
ULM Lac du Bonnet 37.33 354 P P 04 41 49.8 -1.6
16nm,0.9s,mb5.0,baz=176,slow=9.2,SNR=11
ULM LR LR 04 57 41.2
comp=Z,48nm,21.0s,baz=135,slow=37
ULM Lac du Bonnet 37.33 354 eP P 04 41 49.9 -1.6
17nm,1.0s,mb4.9
I12A Atlanta 37.37 330 ⇑P P 04 41 51.9 0.0
baz=37,SNR=12
DLMT Dillon 37.39 334 eP P 04 41 52.2 +0.2
9.4nm,1.1s,mb4.6
MFID Camas Ranch 37.44 329 ⇓P P 04 41 52.3 -0.2
baz=37
H13A Challis 37.52 331 ⇑P P 04 41 53.2 +0.1
baz=38,SNR=24
K10A MacKenzie Ranc 37.53 327 ⇓P P 04 41 53.1 -0.1
baz=38
E17A Martinsdale 37.56 336 ⇓P P 04 41 53.1 -0.3
baz=38
BEKR Beckworth 37.66 321 ⇑P P 04 41 54.9 +0.5
baz=38,SNR=5.7
LRM Limekiln Ridge 37.69 334 eP P 04 41 55.0 +0.4
57nm,1.0s,mb5.4
F15A Butte 37.72 334 ⇓P P 04 41 54.6 -0.3
baz=38,SNR=13
D18A Linhart Farms, 37.77 338 ⇑P P 04 41 55.0 -0.2
baz=38
H12A Diamond D Ranc 37.79 331 ⇓P P 04 41 55.4 0.0
baz=38,SNR=9.8
G13A Cobalt 37.91 332 ⇑P P 04 41 56.1 -0.3
baz=38,SNR=6.6
J10A Berg Farm, Mel 37.93 328 ⇓P P 04 41 56.5 -0.1
baz=38
E16A East Helena 37.94 336 ⇑P P 04 41 56.1 -0.6
baz=38,SNR=10
D17A Six Diamond Ra 38.07 337 ⇓P P 04 41 57.1 -0.6
baz=38,SNR=8.2
F14A Wisdom 38.08 333 ⇑P P 04 41 57.9 0.0
baz=38
E15A Deer Lodge 38.25 335 ⇑P P 04 41 58.9 -0.4
baz=38
WVOR Wild Horse Val 38.26 325 eP P 04 41 59.9 +0.5
9.4nm,0.9s,mb4.6
D16A Dana Ranch, Ca 38.30 336 ⇑P P 04 41 59.3 -0.4
baz=38,SNR=6.2
J09A Fry Pan Ranch, 38.39 327 ⇓P P 04 42 00.9 +0.4
baz=38,SNR=12
I10A Payette 38.41 329 ⇓P P 04 42 00.9 +0.3
baz=38
G12A Big Creek, Yel 38.45 331 ⇓P P 04 42 00.5 -0.4
baz=38
EGMT Eagleton 38.46 339 ⇑P P 04 42 00.7 -0.2
baz=38
EGMT Eagleton 38.46 339 eP P 04 42 00.9 -0.1
5.9nm,0.8s,mb4.5
H11A Donnelly 38.46 330 ⇑P P 04 42 00.9 -0.1
baz=38,SNR=17
F13A Darby 38.49 333 ⇑P P 04 42 01.0 -0.3
baz=38,SNR=6.9
C17A Wharram Farm, 38.49 337 ⇓P P 04 42 01.0 -0.3
baz=38
E14A Clinton 38.60 334 ⇓P P 04 42 01.9 -0.3
baz=39
D15A Lincoln 38.70 335 ⇑P P 04 42 02.5 -0.5
baz=39,SNR=7.3
H10A Noah's Angus R 38.74 329 ⇓P P 04 42 03.7 +0.2
baz=39
B18A Beardsley Farm 38.78 339 ⇑P P 04 42 03.6 -0.1
baz=39
J08A Circle Bar Ran 38.78 326 ⇑P P 04 42 04.3 +0.5
baz=39,SNR=16
F12A Elk City 38.88 332 ⇓P P 04 42 04.6 0.0
baz=39,SNR=33
CHMT Chamberlain Mo 38.90 335 eP P 04 42 04.5 -0.2
3.5nm,0.9s,mb4.2
E13A Victor 38.93 333 ⇑P P 04 42 04.7 -0.2
baz=39,SNR=9.5
C16A Fuhringer Ranc 39.01 337 ⇑P P 04 42 05.4 -0.2
baz=39,SNR=7.0
B17A L&G Farms, Che 39.06 338 ⇓P P 04 42 05.9 -0.1
baz=39
G11A Walters Elk Ra 39.09 330 ⇓P P 04 42 06.2 -0.2
baz=39,SNR=14
MSO Missoula 39.12 334 eP P 04 42 06.3 -0.2
7.2nm,1.2s,mb4.4
D14A Greenough 39.13 335 ⇑P P 04 42 06.5 -0.2
baz=39,SNR=6.6

BMO	Blue Mountains	39.21 329	eP	P		04 42 05.8	-1.5
	2.9nm,0.9s,mb4.1						
A18A	Metzger Ranch,	39.25 339	⇑P	P		04 42 07.1	-0.5
	baz=39						
SLMT	Seeley Lake	39.26 335	eP	P		04 42 07.4	-0.3
	2.6nm,0.9s,mb4.1						
C15A	Salmond Ranch,	39.32 336	⇑P	P		04 42 08.1	-0.1
	baz=39,SNR=7.8						
F11A	Grangeville	39.40 331	⇓P	P		04 42 08.0	-0.9
	baz=39						
G10A	Bishop Farm, J	39.43 330	⇓P	P		04 42 08.3	-0.8
	baz=39,SNR=7.0						
B16A	M & M Farms, S	39.50 337	⇑P	P		04 42 08.6	-1.0
	baz=40						
E12A	Beaver Dam Sad	39.52 332	⇑P	P		04 42 09.0	-0.9
	baz=40,SNR=7.9						
D13A	Huson	39.55 334	⇑P	P		04 42 09.6	-0.5
	baz=40,SNR=8.9						
SWMT	Swartz Lake	39.68 335	eP	P		04 42 10.1	-1.1
	2.8nm,1.0s,mb4.0						
B15A	Bradely Ranch,	39.74 336	⇑P	P		04 42 10.9	-0.8
	baz=40,SNR=5.3						
G09A	Cove	39.75 329	⇑P	P		04 42 11.1	-0.7
	baz=40,SNR=6.3						
C14A	Swan Lake	39.78 335	⇓P	P		04 42 11.6	-0.4
	baz=40						
D12A	Red Ives Fores	39.91 333	⇑P	P		04 42 12.5	-0.6
	baz=40,SNR=8.2						
F10A	Beach Ranch, E	39.97 330	⇓P	P		04 42 13.3	-0.3
	baz=40						
C13A	Hot Springs	40.05 334	⇓P	P		04 42 14.1	-0.2
	baz=40						
A15A	Johnson Ranch,	40.35 337	⇓P	P		04 42 16.2	-0.5
	baz=40,SNR=6.2						
B13A	Whitefish	40.55 335	⇑P	P		04 42 18.2	-0.2
	baz=41						
A14A	Double T Ranch	40.61 336	⇓P	P		04 42 18.5	-0.3
	baz=41,SNR=12						
SIV	San Ignacio	40.75 134	P	P		04 42 20.1	-0.3
	5.5nm,0.9s,mb4.4,baz=314,slow=9.6,SNR=30						
C11A	Tepee Creek (N	40.91 333	⇑P	P		04 42 21.3	0.0
	baz=41						
H04A	Detroit Lake	41.68 325	⇑P	P		04 42 27.8	+0.1
	baz=42						
OD2	Odessa Site #2	41.70 331	eP	P		04 42 28.3	+0.4
	12nm,1.0s,mb4.6						
FFC	Flin Flon	42.54 350	eP	P		04 42 34.2	-0.3
	4.7nm,0.8s,mb4.3						
SCHQ	Schefferville	45.43 19	P	P		04 42 57.1	-0.5
	16nm,0.7s,mb4.8,baz=214,slow=6.9,SNR=32						
SCHQ			LR	LR		05 03 40.1	
	comp=Z,106nm,18.5s,baz=51,slow=38						
SCHQ	Schefferville	45.43 19	eP	P		04 42 57.1	-0.5
	29nm,1.1s,mb4.9						
YKA	Yellowknife Ar	52.31 346	P	P		04 43 49.5	-0.7
	2.8nm,0.8s,mb4.3,baz=147,slow=7.7,SNR=14						
YKA	Yellowknife Ar	52.31 346	P	P		04 43 49.5	-0.7
BPAW	Bear Paw Mtn.	65.74 335	eP	P		04 45 22.9	-0.3
	4.6nm,0.5s,mb4.6						
SUMG	Summit	66.59 15	eP	P		04 45 28.7	+0.2
	5.2nm,0.8s,mb4.4						
ESDC	Sonseca Array	78.81 52	P	P		04 46 41.4	-0.1
	0.5nm,0.6s,mb3.6,baz=277,slow=4.1,SNR=3.8						
BILL	Bilibino	82.96 338	eP	P		04 47 03.7	+0.6
	7.7nm,1.1s,mb4.5						
NOA	NORSAR Array B	84.03 29	LR	LR		05 22 31.6	
	comp=Z,21nm,21.1s,baz=270,slow=34						
ARCES	ARCESS Array B	86.38 19	P	P		04 47 22.2	+2.0
	1.9nm,0.8s,mb4.1,baz=284,slow=3.6,SNR=3.2						
CN2	Changchun	114.73 332	ePKP	PKiKP		04 53 15.5	-3.2
HHC	Hu-ho-hao-te	122.68 341	ePKP	PKPdf		04 53 31.3	-2.8
HHC			PP	PP		04 55 13.3	+2.2
HHC			PKS			04 57 06.5	
HHC			SKS	SKSdf		05 00 31.8	-8.4
HHC			SKKS	SKKSac		05 01 55.3	-10
HHC			AMB	AMB			
	comp=Z,74nm,5.0s						
HHC			LR	LR			
	comp=N,130nm,21.6s						
HHC			LR	LR			
	comp=E,110nm,21.6s						
HHC			LR	LR			
	comp=Z,72nm,22.8s						
CD2	Chengdu	134.24 343	ePKP	PKPdf		04 53 56.8	+0.4
GYA	Guiyang	137.42 338	ePdif	Pdif		04 51 07.6	-2.1
GYA			PKP	PKPdf		04 54 00.3	-2.1
GYA			PP	PP		04 56 50.0	+3.1
GYA			AMB	AMB			
	comp=Z,70nm,7.8s						
CM31	Chiang Mai Arr	147.38 344	ePKPbc	PKPbc		04 54 24.5	+1.8
CMAR	Chiang Mai Arr	147.38 344	PKPbc	PKPbc		04 54 23.1	+0.4
	comp=Z,3.3nm,0.8s,baz=342,slow=3.5,SNR=15						

NEIC 23 05:18:44.8,37.98S×179.73E,h12km,ML3.7(WEL),After WEL.,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	Puketiti	1.17	265	P	Pb	05 19 05.8	-1.1
PUZ				S	Sb	05 19 22.1	+0.1
MWZ	Matawai	1.77	258	P	Pn	05 19 14.2	-1.0
URZ	Urewera	2.08	261	P	Pn	05 19 19.2	-0.4
BKZ	Black Stump Fm	2.80	244	P	Pn	05 19 28.9	-0.5
TSZ	Takapari Road	3.60	234	P	Pn	05 19 38.6	-1.7
BFZ	Birch Farm	3.82	224	P	Pn	05 19 40.8	-2.6
MRZ	Mangatainoka R	4.19	229	P	Pn	05 19 46.3	-2.1

IDC 23 05:22:04.7±4.1,6.14S×151.79E,h0km,mb3.9/6, mb1 4.1/6,mb1mx3.9/17,mbtmp3.9/6,Error ellipse: s-maj=128.9km s-min=26.4km az=112.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.81	229	P	P	05 26 58.8	+0.2
	1.9nm,0.7s,baz=55,slow=11,SNR=8.9						
ASAR	Alice Springs	24.48	223	P	P	05 27 25.9	+0.2
	1.4nm,0.6s,baz=56,slow=8.7,SNR=12						
FITZ	Fitzroy Crossi	28.14	243	P	P	05 27 58.7	-0.2
	5.8nm,0.6s,baz=67,slow=11,SNR=16						
MKAR	Makanchi Array	80.67	319	P	P	05 34 20.4	+0.8
	0.1nm,0.3s,baz=104,slow=6.1,SNR=3.1						
KURK	Kurchatov	84.20	322	P	P	05 34 37.7	-0.2
	0.4nm,0.3s,baz=113,slow=4.3,SNR=2.7						
BVAR	Borovoye Array	89.71	323	P	P	05 35 04.5	-0.2
	0.4nm,0.5s,baz=116,slow=5.6,SNR=3.6						

NEIC 23 06:19:03.6,31.60S×69.99W,h167km,MD3.6(GUC),After GUC.

GUC 23 06:19:03.6±0.5,31.60S×69.99W,h167km±4km,MD3.6, ML3.8,7C-9D,San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACH	Jahuel	1.19	205	⇑iP	Pn	06 19 32.2	+0.7
JACH				i S	Sn	06 19 53.7	+0.6
JACH	Jahuel	1.19	205	⇑iP	Pn	06 19 32.2	+0.7
JACH				i S	Sn	06 19 53.7	+0.6
PEL	Peldehue	1.65	201	⇓iP	Pn	06 19 36.5	+0.6
PEL				i S	Sn	06 20 01.1	+0.2
PEL				AML	AML	06 20 02.5	
	comp=E,2μm,0.5s						
FCH	Farellones	1.74	188	⇑iP	Pn	06 19 35.1	-1.8
FCH				i S	Sn	06 20 01.5	-1.2
FCH				AML	AML	06 20 05.9	
	comp=E,381nm,0.2s						
CLCH	Cerro Calan	1.85	194	⇓iP	Pn	06 19 39.5	+1.4
CLCH				i S	Sn	06 20 06.2	+1.5
CLCH	Cerro Calan	1.85	194	⇓iP	Pn	06 19 39.5	+1.4
CLCH				i S	Sn	06 20 06.2	+1.5
CLCH				AML	AML	06 20 08.3	
	comp=E,980nm,0.5s						
ANTU	Antumapu	2.04	195	⇑iP	Pn	06 19 40.7	+0.6
ANTU				i S	Sn	06 20 09.2	+0.7
ANTU	Antumapu	2.04	195	⇑iP	Pn	06 19 40.7	+0.6
ANTU				i S	Sn	06 20 09.2	+0.7
ANTU				AML	AML	06 20 12.2	
	comp=N,462nm,0.3s						
PCH	Pirque	2.06	192	i P	Pn	06 19 41.3	+0.8
PCH				eS	Sn	06 20 09.8	+0.8
PCH	Pirque	2.06	192	i P	Pn	06 19 41.3	+0.8
PCH				eS	Sn	06 20 09.8	+0.8
TACH	Talagante	2.20	201	⇓iP	Pn	06 19 42.6	+0.6
TACH				i S	Sn	06 20 12.2	+0.5
TACH	Talagante	2.20	201	⇓iP	Pn	06 19 42.6	+0.6
TACH				i S	Sn	06 20 12.2	+0.5
CHCH	Chadas Angostu	2.39	193	⇑iP	Pn	06 19 45.2	+1.0
CHCH				i S	Sn	06 20 16.2	+0.5
CHCH	Chadas Angostu	2.39	193	⇑iP	Pn	06 19 45.2	+1.0
CHCH				i S	Sn	06 20 16.2	+0.5
CACH	El Canelo	2.56	191	⇓iP	Pn	06 19 47.5	+1.3
CACH				i S	Sn	06 20 20.8	+1.4
CACH	El Canelo	2.56	191	⇓iP	Pn	06 19 47.5	+1.3
CACH				i S	Sn	06 20 20.8	+1.4
LNV	Longovilo	2.63	207	⇓iP	Pn	06 19 47.7	+0.5
LNV				i S	Sn	06 20 21.3	+0.4
LNV	Longovilo	2.63	207	⇓iP	Pn	06 19 47.7	+0.5
LNV				i S	Sn	06 20 21.3	+0.4
LCO	Las Campanas	2.65	346	ePn	Pn	06 19 47.2	-0.3
LCO				eSn	Sn	06 20 19.1	-2.3

IDC 23 06:33:31.0±1.0,26.77N×142.38E,h0km,mb3.8/5, mb1 4.1/5,mb1mx3.7/21,mbtmp3.8/5,Error ellipse: s-maj=39.4km s-min=12.0km az=69.0,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	0.37	332	Pn	Pg	06 33 43.7	+5.6
	144nm,0.3s,baz=270,slow=20,SNR=56						
CBIJ				Sn	Sg	06 33 51.8	+8.9
	279nm,0.3s,baz=128,slow=20,SNR=32						
WRA	Warramunga Arr	47.08	190	P	P	06 42 04.0	-0.7
	4.0nm,0.5s,baz=11,slow=8.5,SNR=11						
ASAR	Alice Springs	50.80	190	P	P	06 42 33.3	+0.1
	0.2nm,0.5s,baz=12,slow=14,SNR=3.6						
BVAR	Borovoye Array	58.40	318	P	P	06 43 29.0	+0.9
	0.4nm,0.4s,baz=62,slow=9.9,SNR=3.1						
FINES	FINESS Array B	78.31	334	P	P	06 45 33.4	+0.6
	2.1nm,0.9s,baz=70,slow=8.0,SNR=2.7						
NVAR	Mina Array Bea	80.58	52	P	P	06 45 45.6	0.0
	0.3nm,0.7s,baz=253,slow=6.3,SNR=2.9						

CSEM 23 06:37:52.6,58.13N×3.07W,h6km,ML2.1,After BGS

BGS 23 06:37:52.6±1.1,58.13N×3.07W,h6km±13km,ML2.1,1C, United Kingdom

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCD	Coleburn Disti	0.56	190	P	Pg	06 38 03.1	-0.2
MCD				S	Sg	06 38 10.5	0.0
MCD				AML	AML	06 38 14.8	
	100nm,0.4s						
MCD				AML	AML	06 38 14.8	
	94nm,0.5s						
MCD	Coleburn Disti	0.56	190	eP	Pg	06 38 03.1	-0.2
MCD				eS	Sg	06 38 10.5	0.0
	94nm,0.5s						
ORE	Reay	0.56	319	P	Pg	06 38 03.3	0.0
ORE				S	Sg	06 38 10.5	-0.1
ORE				AML	AML	06 38 10.8	
	135nm,0.3s						
ORE				AML	AML	06 38 12.6	
	53nm,0.3s						
ORE	Reay	0.56	319	⇑iP	Pg	06 38 03.3	0.0
ORE				eS	Sg	06 38 10.5	0.0
	53nm,0.3s						
MVH1	Achvaich	0.63	251	P	Pg	06 38 04.2	-0.5
MVH1	Achvaich	0.63	251	eP	Pg	06 38 04.2	-0.5
MVH1	Achvaich	0.63	251	eP	Pg	06 38 04.2	-0.4
MME1	Meikle Cairn	0.82	176	P	Pg	06 38 07.7	-0.5
MME1	Meikle Cairn	0.82	176	eP	Pg	06 38 07.7	-0.5
MME1	Meikle Cairn	0.82	176	eP	Pg	06 38 07.7	-0.6
MDO	Dochfour	0.98	226	P	Pg	06 38 10.6	-0.7
MDO	Dochfour	0.98	226	eP	Pg	06 38 10.6	-0.7
MDO	Dochfour	0.98	226	eP	Pg	06 38 10.6	-0.7
RSC	Scourie	1.13	282	P	Pg	06 38 12.9	-1.4
RSC	Scourie	1.13	282	eP	Pg	06 38 12.9	-1.4
RSC	Scourie	1.13	282	eP	Pg	06 38 12.9	-1.4
KAC	Achnashellach	1.35	243	P	Pn	06 38 17.3	-0.6
KAC	Achnashellach	1.35	243	eP	Pn	06 38 17.3	-0.6
KAC	Achnashellach	1.35	243	eP	Pn	06 38 17.3	-0.6
RRR	Rubha Reidh	1.48	261	S	Sn	06 38 37.1	-2.2
RRR				AML	AML	06 38 42.3	
	51nm,0.4s						
RRR				AML	AML	06 38 46.8	
	26nm,0.4s						
RRR	Rubha Reidh	1.48	261	eS	Sn	06 38 37.1	-2.2
	26nm,0.4s						
KPL	Plockton	1.59	241	P	Pn	06 38 21.1	-0.2
KPL				S	Sn	06 38 41.0	-1.1
KPL				AML	AML	06 38 46.7	
	17nm,0.6s						
KPL				AML	AML	06 38 48.0	
	12nm,0.4s						
KPL	Plockton	1.59	241	eP	Pn	06 38 21.1	-0.2
KPL				eS	Sn	06 38 41.0	-1.1
	12nm,0.4s						
EAB	Aberfoyle	2.06	200	P	Pn	06 38 26.5	-1.2
EAB	Aberfoyle	2.06	200	eP	Pn	06 38 26.5	-1.2
EAB	Aberfoyle	2.06	200	eP	Pn	06 38 26.5	-1.2
	19nm,0.6s						
EDI	Edinburgh	2.21	182	AML	AML	06 39 10.6	
	comp=E,18nm,0.7s						
EDI				AML	AML	06 39 12.5	
	comp=N,13nm,0.6s						
PGBU	Glenifferbraes	2.45	199	AML	AML	06 39 14.7	
	comp=E,22nm,0.6s						
PGBU				AML	AML	06 39 21.9	
	comp=N,19nm,0.6s						

IDC 23 07:14:47.7±1.0,28.98N×58.38E,h0km,mb4.1/15, mb1 4.2/17,mb1mx4.0/30,mbtmp4.1/17,ML2.8/2,MS2.9/9, Ms1 3.0/9,ms1mx2.7/36,Error ellipse: s-maj=22.7km s-min=17.3km az=177.0

ISCJB 23 07:14:50.2±0.4,29.23N±0.04×58.36E±0.05,h10km, mb4.0/15,MS2.9/7,Error ellipse: s-maj=7.2km s-min=4.6km az=137.7

CSEM 23 07:14:51.8±0.3,29.18N×58.45E,h10km,ML4.4,Error ellipse: s-maj=11.4km s-min=6.4km az=130.0

SGS 23 07:14:51.9,29.15N×58.49E,h21km

THR 23 07:14:52.3±0.7,29.24N×58.24E,h15km±14km,ML4.0

NEIC 23 07:14:54.1,29.27N×58.35E,h10km,MN4.4(TEH),After TEH.

TEH 23 07:14:54.1,29.27N×58.35E,h10km

OMAN 23 07:15:34.9±99.0,26.38N×57.05E,h10km,Error ellipse: s-maj=134.0km s-min=13.4km az=8.0

ISC 23 07:14:52.0±0.4,29.23N±0.04×58.39E±0.04,h10km,n89, σ1.27/86,mb4.0/15,MS2.9/7,8C-3D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRBR	Kerman	1.61	298	ePg	Pn	07 15 19.8	-0.6
KRBR				AML	AML	07 15 42.8	
	comp=N,5μm,0.5s						
KRBR	Kerman	1.61	298	ePg	Pn	07 15 19.7	-0.7
ZHSF	Zahedan	2.11	79	ePn	Pb	07 15 31.0	+0.7
ZHSF				AML	AML	07 16 04.2	
	comp=N,771nm,0.5s						
ZHSF				AML	AML	07 16 05.3	
	comp=E,952nm,0.4s						
ZHSF	Zahedan	2.11	79	ePn	Pb	07 15 31.0	+0.7
IBND	Bandar-abas	2.41	223	⇓ePn	Pn	07 15 32.9	+1.4
IBND				e		07 16 24.7	
	comp=Z,33μm,0.5s						
BNDS	Bandar-Abbas	2.68	228	ePn	Pn	07 15 35.5	+0.4
BNDS				AML	AML	07 16 29.4	
	comp=N,554nm,0.6s						
BNDS	Bandar-Abbas	2.68	228	ePn	Pn	07 15 35.5	+0.4
IBAF	Bafgh	3.39	315	Pn	Pn	07 15 46.2	+1.2
IBAF	Bafgh	3.39	315	ePn	Pn	07 15 46.3	+1.4
IBAF				e		07 16 44.4	
	comp=Z,5μm,0.2s						
IBAF	Bafgh	3.39	315	ePn	Pn	07 15 46.3	+1.4
ITEG	Tejag	3.67	5	⇑ePn	Pn	07 15 49.9	+1.1
ITEG				e		07 16 58.7	
	comp=Z,13μm,0.4s						
ITEG	Tejag	3.67	5	⇑ePn	Pn	07 15 49.9	+1.1
IDAH	Dahanechah	3.72	20	⇑ePn	Pn	07 15 51.1	+1.6
IDAH				e		07 16 59.5	
	comp=Z,7μm,0.4s						
IDAH	Dahanechah	3.72	20	⇑ePn	Pn	07 15 51.1	+1.6
BANOM	Banah	3.78	210	⇓P	Pn	07 15 50.4	+0.1
	SNR=51						
BANOM				⇓P		07 15 50.4	
	SNR=51						
BANOM	Banah	3.78	210	P	Pn	07 15 50.4	+0.1
	SNR=51						
IMEH	Mehriz	3.92	304	Pn	Pn	07 15 54.0	+1.8
IMEH	Mehriz	3.92	304	ePn	Pn	07 15 54.0	+1.8
IMEH				e		07 17 03.0	
	comp=Z,3μm,0.2s						
IMEH	Mehriz	3.92	304	ePn	Pn	07 15 54.0	+1.8
ICHK	Chekchek	4.56	312	eSg	Sg	07 17 15.2	-3.3
ISRV	Sarvestan	4.62	273	Pn	Pn	07 16 03.1	+1.3
ISRV	Sarvestan	4.62	273	ePn	Pn	07 16 03.1	+1.3
ISRV	Sarvestan	4.62	273	ePn	Pn	07 16 03.1	+1.3
GHIR	Ghir-Karzin	4.84	260	ePn	Pn	07 16 05.4	+0.5
GHIR				AML	AML	07 17 19.0	
	comp=N,111nm,0.7s						
GHIR				AML	AML	07 17 28.3	
	comp=E,108nm,0.7s						
GHIR	Ghir-Karzin	4.84	260	ePn	Pn	07 16 04.9	0.0
ISAD	Sadrabad	4.86	305	Pn	Pn	07 16 08.6	+3.4
ISAD	Sadrabad	4.86	305	ePn	Pn	07 16 08.7	+3.5
ISAD	Sadrabad	4.86	305	ePn	Pn	07 16 08.7	+3.5
ISAD				e		07 17 30.6	
	comp=Z,2μm,0.3s						
IMOK	Mouk	4.97	269	Pn	Pn	07 16 07.9	+1.2
IMOK	Mouk	4.97	269	ePn	Pn	07 16 08.0	+1.3
IMOK				e		07 17 37.7	
	comp=Z,1μm,0.4s						
IMOK	Mouk	4.97	269	ePn	Pn	07 16 08.0	+1.3
ASHO	Ashiyiah	4.98	205	P	Pn	07 16 08.1	+1.3
	SNR=24						
ASHO	Ashiyiah	4.98	205	P	Pn	07 16 08.1	+1.3
	SNR=24						
ASUD	Al Ashush, Dub	5.34	212	⇑P	Pn	07 16 13.0	+1.3
	SNR=11						
ASUD				⇑P		07 16 13.0	
	SNR=11						
ASUD	Al Ashush, Dub	5.34	212	P	Pn	07 16 13.0	+1.3
	SNR=11						
ARQ	Araqi	6.10	196	⇑P	Pn	07 16 22.2	0.0
	SNR=7.1						
ARQ				⇑P		07 16 22.2	
	SNR=7.1						
IAKL	Akhelmad	7.36	2	e	Pn	07 16 44.9	+5.4
	comp=Z,432nm,0.1s						
BTHS		8.50	234	P	Pn	07 16 53.2	-1.9
BTHS				S	Sn	07 18 24.2	-6.9
MRVT	Maraveh tapeh	8.63	348	ePn	Pn	07 16 58.3	+1.5
MRVT	Maraveh tapeh	8.63	348	ePn	Pn	07 16 58.3	+1.5
QRN	Al-Qurain	9.19	270	eP	Pn	07 17 03.5	-1.1
QRN				AML	AML	07 18 46.2	
	comp=Z,30nm,0.4s						
KBD	Kabd	9.35	272	eP	Pn	07 17 06.5	-0.3
KBD	Kabd	9.35	272	eP	Pn	07 17 06.5	-0.3
RDF	Al-Radifah	9.49	271	eP	Pn	07 17 08.3	-0.5
RDF				AML	AML	07 18 53.2	
	comp=Z,17nm,0.5s						
RDF	Al-Radifah	9.49	271	eP	Pn	07 17 08.3	-0.5
MIB	Mutribah	9.65	276	eP	Pn	07 17 10.9	+0.1
MIB				AML	AML	07 18 58.3	
	comp=Z,14nm,0.6s						
MIB	Mutribah	9.65	276	eP	Pn	07 17 10.9	0.0
NAY	Al-Naaiem	9.74	273	eP	Pn	07 17 11.8	-0.4
NAY				AML	AML	07 19 00.2	
	comp=Z,6.2nm,0.7s						
GNI	Garni	15.63	318	Pn	Pn	07 18 34.1	+1.9
	comp=Z,1.3nm,0.3s,baz=324,slow=8.7,SNR=2.4						
GNI				LR	LR	07 24 32.7	
	comp=Z,18nm,20.5s,baz=161,slow=37						
GNI	Garni	15.63	318	Pn	Pn	07 18 34.2	+2.0
AML	Almayashu	17.86	40	eP	Pn	07 19 01.1	+0.6
	comp=Z,5.3nm,0.9s						
AML	Almayashu	17.86	40	eP	Pn	07 19 01.1	+0.6
	comp=Z,5.3nm,0.9s						
EKS2	Erkin-Say	18.26	39	eP	Pn	07 19 08.3	+2.9
	comp=Z,2.8nm,0.8s						
UCH	Uchtor	18.39	41	eP	Pn	07 19 12.1	+5.2
	comp=Z,1.6nm,0.8s						
AAK	Ala-Archa	18.64	40	LR	LR	07 27 19.3	
	comp=Z,48nm,19.0s,baz=317,slow=40						
ASF	Jabal al Asfar	18.72	284	P	Pn	07 19 09.8	-1.3
	comp=Z,0.2nm,0.3s,baz=353,slow=8.1,SNR=3.6						
MMAI	Mount Meron Ar	20.03	287	P	P	07 19 26.5	+1.4
	comp=Z,0.6nm,0.3s,baz=120,slow=14,SNR=3.4						
MMAI				LR	LR	07 26 51.7	
	comp=Z,26nm,18.6s,MS2.6,baz=205,slow=36						
ABKAR	Akbulak array	20.04	3	eP	P	07 19 25.3	+0.4
	comp=Z,2.1nm,0.5s						
ABKAR	Akbulak array	20.04	3	eP	P	07 19 25.3	+0.4
	comp=Z,2.1nm,0.5s						
EIL	Elat	20.42	277	P	P	07 19 27.8	-1.5
	comp=Z,3.2nm,0.7s,baz=84,slow=10,SNR=2.9						
AKTK	Aktyubinsk	21.18	359	P	P	07 19 37.5	+0.1
AKTK				LR	LR	07 28 28.2	
AKTK	Aktyubinsk	21.18	359	P	P	07 19 37.5	+0.1
AKTO	Aktyubinsk	21.18	359	P	P	07 19 37.5	+0.1
	comp=Z,4.6nm,0.6s,mb4.0,baz=194,slow=10,SNR=15						
AKTO				LR	LR	07 28 28.3	
	comp=Z,38nm,19.2s,MS2.8,baz=166,slow=38						
ATD	Arta Tunnel	22.81	223	LR	LR	07 29 53.9	
	comp=Z,24nm,20.5s,MS2.6,baz=320,slow=40						
BVAR	Borovoye Array	25.36	17	P	P	07 20 18.7	-0.4
	comp=Z,6.5nm,0.5s,mb4.4,baz=196,slow=8.9,SNR=34						
BVAR	Borovoye Array	25.36	17	P	P	07 20 18.7	-0.3
BRVK	Borovoye	25.37	17	eP	P	07 20 19.5	+0.4
	comp=Z,5.7nm,0.7s,mb4.2						
BRVK	Borovoye	25.37	17	eP	P	07 20 19.5	+0.4
	comp=Z,5.7nm,0.7s,mb4.2						
MK31	Makanchi Array	25.57	40	eP	P	07 20 21.3	+0.3
MK31	Makanchi Array	25.57	40	eP	P	07 20 21.3	+0.3
MKAR	Makanchi Array	25.57	40	P	P	07 20 20.6	-0.4
	comp=Z,0.5nm,0.5s,mb3.3,baz=227,slow=5.8,SNR=6.1						
MKAR	Makanchi Array	25.57	40	P	P	07 20 20.6	-0.4
KURK	Kurchatov	26.31	30	P	P	07 20 25.9	-1.8
	comp=Z,0.4nm,0.3s,mb3.4,baz=225,slow=9.0,SNR=2.0						
KURK	Kurchatov	26.31	30	P	P	07 20 25.9	-1.8
ARASG	Malin Array Be	30.66	323	P	P	07 21 05.2	-1.2
	comp=Z,1.2nm,0.5s,mb4.0,baz=131,slow=8.2,SNR=8.0						
ARASG	Malin Array Be	30.66	323	P	P	07 21 05.2	-1.2
ZALV	Zalesovo Beam	31.29	30	P	P	07 21 11.0	-1.0
	comp=Z,1.1nm,0.3s,mb4.2,baz=243,slow=9.5,SNR=4.1						
ZALV				LR	LR	07 35 45.0	
	comp=Z,16nm,19.9s,MS2.7,baz=64,slow=40						
CMAR	Chiang Mai Arr	38.44	97	LR	LR	07 41 02.6	
	comp=Z,27nm,18.9s,MS3.1,baz=290,slow=41						
FINES	FINESS Array B	38.65	336	P	P	07 22 14.5	-0.8
	comp=Z,3.0nm,0.7s,mb4.

MKAR Makanchi Array 59.01 326 P P 07 30 33.4 +0.1
2.0nm,0.4s,baz=106,slow=8.5,SNR=5.4

IDC 23 07:23:24.4±1.4, 13°.54N×144°.30E, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.8/21, mbtmp3.8/4, Error ellipse: s-maj=50.0km s-min=31.3km az=87.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**34.69**	**197**	P	P	07 30 15.9	-0.1
	2.2nm,1.3s,baz=6.9,slow=9.0,SNR=3.1						
ASAR	**Alice Springs**	**38.35**	**195**	PcP	PcP	07 32 58.6	-2.6
	0.3nm,0.6s,baz=28,slow=2.6,SNR=4.2						
MKAR	**Makanchi Array**	**61.14**	**316**	P	P	07 33 41.0	+0.4
	0.2nm,0.3s,baz=88,slow=8.7,SNR=6.1						
BVAR	**Borovoye Array**	**69.62**	**322**	P	P	07 34 35.6	+0.1
	0.7nm,0.5s,baz=101,slow=7.7,SNR=4.3						
NVAR	**Mina Array Bea**	**87.39**	**51**	P	P	07 36 13.8	0.0
	0.8nm,0.8s,baz=280,slow=5.4,SNR=6.7						

IDC 23 07:30:54.7±10.0, 47°.88N×130°.28W, h0km, mb3.1/2, mb1 3.6/4, mb1mx3.4/24, mbtmp3.2/4, ML3.5/2, MS3.0/2, Ms1 2.9/2, ms1mx2.6/8, Error ellipse: s-maj=135.6km s-min=97.1km az=119.0
PGC 23 07:31:00.6±4.7, 47°.38N×129°.00W, h10km, ML2.7/11, Mw3.3, 301km Wsw of Tofino, Bc Off Coast Of Washington
ISCJB 23 07:31:03.3±1.1, 47°.70N±0°.07×128°.8W±0°.1, h10km, Error ellipse: s-maj=10.8km s-min=9.9km az=3.6
ISC 23 07:31:04.4±1.2, 47°.73N±0°.08×128°.8W±0°.1, h10km, n20, σ0°.83/22, 10D, Off coast of Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETB	**Estevan Point**	**2.22**	**41**	⇓Pn	**Pn**	**07 31 41.4**	**+0.1**
EDB	**Eliza Dome**	**2.41**	**26**	⇑Pn	**Pn**	**07 31 43.6**	**-0.3**
OZB	**Mount Ozzard**	**2.51**	**59**	⇓Pn	**Pn**	**07 31 44.4**	**-0.9**
OZB				⇑Sn	**Sn**	**07 32 16.1**	**+0.2**
BPBC	**Brooks Peninsu**	**2.52**	**15**	⇓Pn	**Pn**	**07 31 45.6**	**+0.2**
BMSB	**Bamfield Mari**	**2.67**	**64**	⇑Pn	**Pn**	**07 31 46.3**	**-1.1**
GDR	**Gold River**	**2.74**	**40**	⇓Pn	**Pn**	**07 31 48.5**	**+0.1**
BTB	**Buttle Lake**	**2.78**	**50**	⇑Pn	**Pn**	**07 31 48.8**	**-0.1**
BTB				⇑Sn	**Sn**	**07 32 23.9**	**+1.5**
WOSB	**Woss**	**2.84**	**30**	⇑Pn	**Pn**	**07 31 50.0**	**+0.3**
MAYB	**Maynard**	**2.88**	**21**	⇓Pn	**Pn**	**07 31 50.0**	**-0.2**
HOLB	**Holberg**	**2.95**	**8**	⇓Pn	**Pn**	**07 31 51.6**	**+0.4**
MGB	**Mount Grey**	**3.01**	**63**	⇑Pn	**Pn**	**07 31 51.1**	**-1.0**
MGB				⇓Sn	**Sn**	**07 32 29.0**	**+0.9**
PFB	**Port Renfrew**	**3.02**	**72**	⇑Pn	**Pn**	**07 31 50.7**	**-1.6**
PFB				⇓Sn	**Sn**	**07 32 28.1**	**-0.5**
ALB	**Alberni**	**3.05**	**58**	⇓Pn	**Pn**	**07 31 52.0**	**-0.6**
PHC	**Port Hardy**	**3.11**	**16**	⇓Pn	**Pn**	**07 31 53.6**	**+0.2**
YBH	**Yreka Blue Hor**	**7.39**	**142**	LR	LR	07 35 32.1	
	comp=Z,83nm,20.4s,baz=331,slow=34						
NVAR	**Mina Array Bea**	**12.03**	**137**	Pn	**Pn**	**07 34 01.4**	**+5.5**
	0.1nm,0.3s,baz=321,slow=12,SNR=5.8						
PDAR	**Pinedale Array**	**14.41**	**103**	Pn	**Pn**	**07 34 37.4**	**+9.1**
	0.1nm,0.3s,baz=302,slow=8.5,SNR=5.2						
ANMO	**Albuquerque**	**20.98**	**119**	P	**P**	**07 35 49.9**	**+2.3**
	0.7nm,0.7s,baz=311,slow=9.2,SNR=3.7						
ULM	**Lac du Bonnet**	**21.64**	**71**	LR	LR	07 44 31.8	
	comp=Z,42nm,19.0s,baz=245,slow=36						
TXAR	**Lajitas Array**	**26.70**	**124**	P	**P**	**07 36 44.0**	**+0.3**
	0.0nm,0.3s,baz=307,slow=8.9,SNR=3.1						

ISCJB 23 07:31:37.4±0.6, 24°.79N±0°.03×122°.06E±0°.03, h2km±5km, Error ellipse: s-maj=5.0km s-min=3.6km az=44.3
JMA 23 07:31:38.8±0.2, 24°.90N×122°.00E, h38km
TAP 23 07:31:38.6, 24°.79N×122°.00E, h8km±1km, ML3.2, D
ISC 23 07:31:38.1±0.5, 24°.80N±0°.02×122°.04E±0°.03, h7km±4km, n33, σ0°.73/47, 1C-2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.26**	**223**	*i* P	**Pg**	**07 31 42.9**	**-0.3**
	baz=214						
TWC				S	**Sg**	**07 31 47.0**	**+0.4**
	baz=214						
TWE	**Neicheng**	**0.35**	**258**	*i* P	**Pg**	**07 31 44.2**	**-0.7**
	baz=255						
TWE				*i* S	**Sg**	**07 31 48.5**	**-1.0**
	baz=255						
NWF	**Wu-fen Shan**	**0.36**	**319**	⇓*i* P	**Pg**	**07 31 45.2**	**+0.1**
	baz=325						
NWF				*i* S	**Sg**	**07 31 50.4**	**+0.4**
	baz=325						
TWA	**Mucha**	**0.46**	**294**	P	**Pg**	**07 31 46.4**	**-0.5**
	baz=297						
TWA				*i* S	**Sg**	**07 31 52.3**	**-0.6**
	baz=297						
ENA	**Nanau**	**0.46**	**217**	*e*P	**Pg**	**07 31 46.9**	**-0.1**
	baz=211						
ENA				*e*S	**Sg**	**07 31 52.7**	**-0.2**
	baz=211						
ENTT	**Nioudou**	**0.46**	**250**	*e*P	**Pg**	**07 31 46.4**	**-0.7**
	baz=248						
ENTT				*e*S	**Sg**	**07 31 53.5**	**+0.4**
	baz=248						
TAP1	**Taipei**	**0.53**	**297**	*e*P	**Pg**	**07 31 48.6**	**+0.2**
	baz=299						
TWY	**Chenhua**	**0.62**	**320**	⇓*i* P	**Pg**	**07 31 50.4**	**+0.2**
	baz=323						
NSK	**Sanguang**	**0.64**	**259**	⇑*i* P	**Pg**	**07 31 49.2**	**-1.1**
	baz=258						
NSK				*e*S	**Sg**	**07 31 58.6**	**0.0**
	baz=258						
NNS	**Nan Shan**	**0.71**	**240**	*e*P	**Pg**	**07 31 51.4**	**-0.3**
	baz=237						
NNS				*e*S	**Sg**	**07 32 01.4**	**+0.6**
	baz=237						
TWD	**Chiawan**	**0.82**	**210**	P	**Pg**	**07 31 53.5**	**-0.4**
	baz=206						
TWD				*e*S	**Sg**	**07 32 04.4**	**-0.2**
	baz=206						
PCYT	**Pengchaiyu**	**0.83**	**2**	*e*P	**Pg**	**07 31 54.6**	**+0.5**
	baz=5.0						
PCYT				S	**Sg**	**07 32 05.3**	**+0.4**
	baz=5.0						
YOJ	**Yonaguni jima**	**0.94**	**111**	P	**Pg**	**07 31 56.9**	**+0.7**
YOJ				S	**Sg**	**07 32 09.9**	**+1.5**
TWT	**Tachien**	**0.96**	**236**	*e*P	**Pg**	**07 31 56.5**	**0.0**
	baz=234						
WHF	**Hehuan Shan**	**0.96**	**228**	*e*P	**Pg**	**07 31 56.3**	**-0.3**
	baz=225						
WHF				*e*S	**Sg**	**07 32 09.5**	**+0.5**
	baz=225						
NSTT	**Nanjuang**	**0.96**	**260**	*e*P	**Pg**	**07 31 56.8**	**+0.2**
	baz=259						
ESL	**Shilin**	**1.13**	**210**	*e*P	**Pg**	**07 31 58.9**	**-0.8**
	baz=207						
NSY	**Sanyi**	**1.23**	**252**	*e*P	**Pb**	**07 32 00.6**	**-1.1**
	baz=251						
TWQ1	**Liyutan**	**1.24**	**249**	*e*P	**Pb**	**07 32 01.1**	**-0.7**
	baz=248						
SMLT	**Sun Moon Lake**	**1.38**	**229**	*e*P	**Pn**	**07 32 03.6**	**-0.3**
	baz=227						
TYC	**Yuchr**	**1.40**	**231**	*e*P	**Pn**	**07 32 03.5**	**-0.6**
	baz=229						
EHY	**Hungye**	**1.44**	**207**	*e*P	**Pn**	**07 32 04.4**	**-0.3**
	baz=205						
IRIF	**Iriomote-Funau**	**1.60**	**106**	*e*S	**Sn**	**07 32 26.9**	**-1.0**
YUS	**Yu-Shan**	**1.64**	**218**	*e*P	**Pn**	**07 32 08.1**	**+0.7**
	baz=216						
ALS	**Alishan**	**1.71**	**222**	*e*P	**Pn**	**07 32 09.8**	**+1.4**
	baz=220						
CHN5	**Tsauling**	**1.73**	**227**	*e*P	**Pn**	**07 32 09.2**	**+0.7**
	baz=225						
HATJ	**Hateruma jima**	**1.77**	**114**	*e*S	**Sn**	**07 32 31.6**	**-0.3**
JKRS	**Kuro-shima**	**1.88**	**107**	P	**Pn**	**07 32 10.1**	**-0.5**
JKRS				*e*S	**Sn**	**07 32 34.0**	**-0.6**
CHN4	**Tsaushan**	**1.96**	**223**	*e*P	**Pn**	**07 32 13.6**	**+1.9**
	baz=221						
JIJ	**Ishigaki jima**	**1.96**	**102**	P	**Pn**	**07 32 11.7**	**-0.1**
JIJ				*e*S	**Sn**	**07 32 35.1**	**-1.6**
TWK	**Hsinying**	**2.08**	**223**	*e*P	**Pn**	**07 32 15.0**	**+1.5**
	baz=221						
CHN1	**Nanshi**	**2.12**	**221**	*e*P	**Pn**	**07 32 14.7**	**+0.7**
	baz=219						
SGST	**Jiashian**	**2.17**	**218**	*e*P	**Pn**	**07 32 15.9**	**+1.3**
	baz=217						

IDC 23 07:48:40.4±0.9, 22°.09N×121°.24E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.7/23, mbtmp3.7/7, Error ellipse: s-maj=43.3km s-min=17.2km az=68.0
ISCJB 23 07:48:40.9±0.6, 22°.32N±0°.03×121°.54E±0°.02, h7km±4km, mb3.6/6, Error ellipse: s-maj=4.6km s-min=3.6km az=174.2
NEIC 23 07:48:41.0±0.8, 22°.33N×121°.52E, h10km, MG3.1(JMA), Error ellipse: s-maj=22.3km s-min=8.3km az=71.0
TAP 23 07:48:43.9, 22°.40N×121°.38E, h23km, ML4.0, B
JMA 23 07:48:47.4±0.4, 22°.37N×121°.82E, h93km, M3.1
ISC 23 07:48:41.3±0.6, 22°.35N±0°.02×121°.54E±0°.03, h2km±3km, n67, σ1°.09/99, mb3.6/6, 12C-1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.31**	**178**	⇑*i* P	**Pg**	**07 48 51.6**	**+4.3**
	baz=149						
TTN	**Taitung**	**0.54**	**318**	P	**Pg**	**07 48 53.2**	**+1.5**
	baz=335						
TTN				*e*S	**Sg**	**07 49 00.7**	**+2.0**
	baz=335						
ECL	**Taimali**	**0.59**	**294**	⇑*i* P	**Pg**	**07 48 52.9**	**+0.2**
	baz=297						
TAW	**Tawu**	**0.59**	**271**	⇑*i* P	**Pg**	**07 48 53.0**	**+0.2**
	baz=263						
TAW				S	**Sg**	**07 48 59.4**	**-1.1**
	baz=263						
TWG	**Pinlang**	**0.64**	**317**	*e*Pg	**Pg**	**07 48 54.0**	**+0.5**
TWG				*e*Sg	**Sg**	**07 48 57.6**	**-4.2**
TWG	**Pinlang**	**0.64**	**317**	⇑*i* P	**Pg**	**07 48 54.2**	**+0.6**
	baz=314						
EAST	**Anshuo**	**0.64**	**273**	⇑*i* P	**Pg**	**07 48 53.8**	**+0.1**
	baz=273						
EAST				*e*S	**Sg**	**07 49 00.4**	**-1.5**
	baz=273						
TSEB	**Hengchuen, Pin**	**0.74**	**233**	*e*P	**Pg**	**07 48 56.7**	**+1.1**
	baz=234						
TSEB				*e*S	**Sg**	**07 49 06.4**	**+1.1**
	baz=234						
TWK1	**Hengchun**	**0.79**	**239**	*e*P	**Pg**	**07 48 56.5**	**-0.1**
	baz=228						
TWK1				S	**Sg**	**07 49 05.9**	**-1.0**
	baz=228						
HEN	**Hengchun**	**0.82**	**245**	*e*P	**Pg**	**07 48 57.7**	**+0.7**
	baz=227						
HEN				*e*S	**Sg**	**07 49 06.7**	**-0.9**
	baz=227						
SCZT	**Fangliau**	**0.85**	**272**	⇑*i* P	**Pg**	**07 48 57.2**	**-0.5**
	baz=274						
SSD	**Sandimen**	**0.93**	**295**	⇑*i* P	**Pg**	**07 48 58.1**	**-1.0**
	baz=303						
ELDTW	**Lidau**	**0.96**	**330**	*e*P	**Pg**	**07 48 59.0**	**-0.8**
	baz=337						
TWF1	**Yuli**	**1.02**	**347**	*e*P	**Pg**	**07 49 01.0**	**+0.1**
	baz=344						
YULB	**Yu-li**	**1.06**	**348**	*e*Pg	**Pg**	**07 49 00.5**	**-1.2**
YULB				*e*Sg	**Sg**	**07 49 07.7**	**-7.7**
STYT	**Tauyuan**	**1.08**	**318**	⇑*i* P	**Pg**	**07 49 01.3**	**-0.8**
	baz=331						
TWP	**Hsiaoliuchiu**	**1.09**	**270**	*e*P	**Pg**	**07 49 03.8**	**+1.6**
	baz=264						
TWP				*e*S	**Sg**	**07 49 17.4**	**+1.0**
	baz=264						
TWM1	**Shoushan**	**1.13**	**295**	*e*P	**Pg**	**07 49 03.3**	**+0.2**
	baz=295						
SGST	**Jiashian**	**1.14**	**310**	⇑P	**Pg**	**07 49 03.3**	**0.0**
	baz=314						
SGST				*e*S	**Sg**	**07 49 18.3**	**+0.2**
	baz=314						
KAU	**Kaohsiung**	**1.16**	**281**	*e*P	**Pg**	**07 49 03.8**	**+0.2**
	baz=278						
EHY	**Hungye**	**1.17**	**350**	*e*P	**Pg**	**07 49 02.6**	**-1.1**
	baz=346						
WTP	**Ta-pu**	**1.23**	**316**	P	**Pg**	**07 49 04.7**	**-0.3**
	baz=320						
WTP				*e*S	**Sg**	**07 49 20.8**	**-0.2**
	baz=320						
CHN1	**Nanshi**	**1.25**	**312**	⇑P	**Pg**	**07 49 05.2**	**-0.1**
	baz=313						
CHN1				*e*S	**Sg**	**07 49 21.6**	**+0.1**
	baz=313						
YUS	**Yu-Shan**	**1.25**	**335**	*e*P	**Pg**	**07 49 04.5**	**-0.9**
	baz=340						
TPUB	**Ta-pu**	**1.26**	**319**	*e*Pg	**Pg**	**07 49 04.7**	**-0.9**
TPUB				*e*Sg	**Sg**	**07 49 14.8**	**-7.1**
CHN3	**Shinhua**	**1.30**	**304**	*e*P	**Pg**	**07 49 07.2**	**+0.9**
	baz=303						
CHN3				*e*S	**Sg**	**07 49 24.1**	**+0.9**
	baz=303						
CHN4	**Tsaushan**	**1.32**	**319**	P	**Pg**	**07 49 06.2**	**-0.5**
	baz=322						
CHN4				*e*S	**Sg**	**07 49 23.4**	**-0.5**
	baz=322						
TWK	**Hsinying**	**1.33**	**313**	⇑P	**Pg**	**07 49 06.4**	**-0.5**
	baz=315						
TWK				*e*S	**Sg**	**07 49 23.1**	**-1.1**
	baz=315						
ALS	**Alishan**	**1.34**	**330**	⇑P	**Pg**	**07 49 06.0**	**-1.0**
	baz=335						
ESL	**Shilin**	**1.46**	**356**	*e*P	**Pn**	**07 49 08.3**	**-0.3**
	baz=352						
CHN5	**Tsauling**	**1.47**	**328**	P	**Pn**	**07 49 08.5**	**-0.3**
	baz=332						
CHN5				*e*S	**Sb**	**07 49 28.6**	**+0.1**
	baz=332						
SSLB	**Suanglung**	**1.53**	**339**	*e*Pg	**Pg**	**07 49 08.7**	**-1.9**
CHY	**Chiayi**	**1.54**	**318**	*e*P	**Pn**	**07 49 09.8**	**+0.1**
	baz=320						
CHY				*e*S	**Sn**	**07 49 28.6**	**-1.6**
	baz=320						
WGK	**Gukeng**	**1.60**	**326**	*e*P	**Pn**	**07 49 11.1**	**+0.4**
	baz=329						
SMLT	**Sun Moon Lake**	**1.63**	**339**	⇓*e*P	**Pn**	**07 49 11.4**	**+0.4**
	baz=356						
SMLT				*e*S	**Sn**	**07 49 33.2**	**+0.6**
	baz=356						
TYC	**Yuchr**	**1.67**	**338**	P	**Pn**	**07 49 12.4**	**+0.8**
	baz=343						
TYC				*e*S	**Sn**	**07 49 32.7**	**-0.8**
	baz=343						
WNT	**Mingjian**	**1.71**	**333**	*e*P	**Pn**	**07 49 12.8**	**+0.6**
	baz=337						
WNT				*e*S	**Sn**	**07 49 34.5**	**-0.1**
	baz=337						
TWD	**Chiawan**	**1.72**	**2**	*e*P	**Pn**	**07 49 11.6**	**-0.7**
	baz=356						
NACB	**Ninganchiao**	**1.81**	**2**	*e*Pn	**Pn**	**07 49 12.8**	**-0.8**
NACB				*e*Sn	**Sn**	**07 49 33.6**	**-3.5**
TWT	**Tachien**	**1.92**	**350**	*e*P	**Pn**	**07 49 16.8**	**+1.8**
	baz=355						
TCU	**Taichung**	**1.96**	**336**	*e*P	**Pn**	**07 49 16.7**	**+1.2**
	baz=339						
ENA	**Nanau**	**2.08**	**5**	*e*P	**Pn**	**07 49 17.6**	**+0.5**
	baz=359						
NNS	**Nan Shan**	**2.08**	**356**	*e*P	**Pn**	**07 49 19.7**	**+2.4**
	baz=15						
TWQ1	**Liyutan**	**2.11**	**341**	*e*P	**Pn**	**07 49 19.0**	**+1.4**
	baz=345						
TWQ1				*e*S	**Sn**	**07 49 44.8**	**+0.4**
	baz=345						
NSY	**Sanyi**	**2.17**	**341**	*e*P	**Pn**	**07 49 19.2**	**+0.7**
	baz=346						
NSY				*e*S	**Sn**	**07 49 47.2**	**+1.2**
	baz=346						
PNG	**Penghu**	**2.19**	**304**	*e*P	**Pn**	**07 49 16.5**	**-2.3**
	baz=303						
ENTT	**Nioudou**	**2.28**	**1**	*e*P	**Pn**	**07 49 21.4**	**+1.5**
	baz=6.0						
YHNB	**Yeheng**	**2.31**	**356**	*e*Pn	**Pn**	**07 49 21.7**	**+1.3**
YHNB				*e*Sn	**Sn**	**07 49 45.4**	**-4.0**
NSK	**Sanguang**	**2.32**	**356**	*e*P	**Pn**	**07 49 21.5**	**+1.0**
	baz=15						
NSK				*e*S	**Sn**	**07 49 50.0**	**+0.5**
	baz=15						
TWE	**Neicheng**	**2.36**	**3**	*e*P	**Pn**	**07 49 23.5**	**+2.4**
	baz=8.0						
YOJ	**Yonaguni jima**	**2.50**	**32**	P	**Pn**	**07 49 25.3**	**+2.4**
YOJ				*e*S	**Sn**	**07 49 52.8**	**-1.2**
TATO	**Taipei**	**2.61**	**359**	Pn	**Pn**	**07 49 23.9**	**-0.6**
HATJ	**Hateruma jima**	**2.69**	**50**	P	**Pn**	**07 49 26.6**	**+1.0**
HATJ				*e*S	**Sn**	**07 49 57.1**	**-1.6**
NWF	**Wu-fen Shan**	**2.71**	**5**	*e*P	**Pn**	**07 49 27.1**	**+1.2**
	baz=10.0						
JKRS	**Kuro-shima**	**2.95**	**50**	P	**Pn**	**07 49 30.5**	**+1.4**
JKRS				*e*S	**Sn**	**07 50 03.5**	**-1.5**
JIJ	**Ishigaki jima**	**3.12**	**50**	P	**Pn**	**07 49 32.8**	**+1.3**
JIJ				*e*S	**Sn**	**07 50 06.5**	**-2.8**
KNM	**Kinmen**	**3.52**	**306**	*e*P	**Pn**	**07 49 36.4**	**-0.6**
	baz=302						
JTJ	**Tarama**	**3.69**	**51**	P	**Pn**	**07 49 40.5**	**+1.1**
JTJ				*e*S	**Sn**	**07 50 21.9**	**-1.5**
QZH	**Quanzhou**	**3.73**	**314**	*e*Pn	**Pn**	**07 49 44.1**	**+4.1**
QZH				Sn	**Sn**	**07 50 14.8**	**-10**
QZH				smax			
	comp=N,90nm,0.9s						
QZH				smax			
	comp=E,110nm,0.9s						
MJAR	**Matsushiro Arr**	**20.22**	**42**	P	**P**	**07 53 21.8**	**+4.2**
	comp=E,0.6nm,0.4s,baz=228,slow=11,SNR=4.6						
MKAR	**Makanchi Array**	**39.89**	**317**	P	**P**	**07 56 16.4**	**-0.1**
	comp=E,0.4nm,0.5s,mb3.4,baz=106,slow=9.0,SNR=5.5						
FITZ	**Fitzroy Crossi**	**40.40**	**174**	P	**P**	**07 56 19.0**	**-1.9**
	comp=E,3.0nm,0.8s,mb4.1,baz=343,slow=17,SNR=3.0						
ZALV	**Zalesovo Beam**	**41.96**	**328**	P	**P**	**07 56 32.8**	**-0.7**
	comp=E,0.6nm,0.5s,mb3.5,baz=122,slow=7.6,SNR=3.2						
KURK	**Kurchatov**	**43.71**	**321**	P	**P**	**07 56 47.3**	**-0.4**
	comp=E,0.7nm,0.8s,mb3.5,baz=105,slow=9.5,SNR=3.3						
WRA	**Warramunga Arr**	**43.86**	**162**	P	**P**	**07 56 46.0**	**-3.1**
	comp=E,0.4nm,0.5s,mb3.4,baz=345,slow=9.2,SNR=3.2						
WRA	**Warramunga Arr**	**43.86**	**162**	P	**P**	**07 56 46.0**	**-3.2**
ASAR	**Alice Springs**	**47.30**	**165**	P	**P**	**07 57 14.8**	**-1.5**
	comp=E,0.3nm,0.3s,mb3.7,baz=343,slow=7.6,SNR=11						

IDC 23 07:51:47.6±6.5, 4°.41S×101°.47E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.5/20, mbtmp3.5/4, Error ellipse: s-maj=313.4km s-min=24.3km az=52.0
DJA 23 07:52:11.5±05.5×102°.51E, h11km, MLv3.0/5
ISC 23 07:51:53.5±1.3, 4°.4S±0°.1×101°.2E±0°.1, h35km, n11, σ1°.70/10, mb3.5/4, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.59**	**61**	P	**Sn**	**07 52 35.6**	**-3.0**
MNAI	**Manna**	**1.75**	**87**	P	**Pn**	**07 52 25.1**	**+3.7**
MDSI	**Maura Dua**	**2.96**	**91**	P	**Pn**	**07 52 41.1**	**+3.0**
KASI	**Kota Agung**	**3.45**	**108**	P	**Pn**	**07 52 45.6**	**+0.8**
KLSI		**3.52**	**94**	P	**Pn**	**07 52 49.1**	**+3.3**
PDSI	**Padang**	**3.58**	**348**	P	**Sn**	**07 53 28.8**	**+1.0**
WRA	**Warramunga Arr**	**35.75**	**118**	P	**P**	**07 58 45.0**	**-4.4**
	0.4nm,0.7s,mb3.5,baz=298,slow=8.8,SNR=2.6						
ASAR	**Alice Springs**	**36.87**	**124**	P	**P**	**07 58 57.0**	**-1.9**
	0.3nm,0.4s,mb3.5,baz=297,slow=7.7,SNR=7.9						
MKAR	**Makanchi Array**	**53.69**	**344**	P	**P**	**08 01 11.2**	**-0.6**
	0.2nm,0.7s,mb3.2,baz=148,slow=6.2,SNR=4.0						
ZALV	**Zalesovo Beam**	**59.78**	**349**	P	**P**	**08 01 54.2**	**-0.7**
	0.5nm,0.5s,mb3.8,baz=152,slow=6.5,SNR=2.9						
TXAR	**Lajitas Array**	**145.83**	**41**	PKPbc	PKPbc	08 11 30.0	+0.2
	0.1nm,0.4s,baz=318,slow=5.6,SNR=2.4						

IDC 23 07:52:42.8±0.6, 27°.14N×141°.49E, h0km, mb4.1/12, mb1 4.4/12, mb1mx4.1/23, mbtmp4.1/12, MS2.3/1, Ms1 2.3/1, ms1mx2.2/21, Error ellipse: s-maj=16.3km s-min=13.7km az=5.0
NEIC 23 07:52:48.1±0.4, 27°.09N×141°.62E, h35km, MG4.4(JMA), Error ellipse: s-maj=24.0km s-min=12.0km az=106.0
JMA 23 07:52:51.3±0.1, 27°.09N×141°.84E, h38km±4km, M4.4
ISC 23 07:52:49.5±0.9, 27°.06N±0°.06×141°.7E±0°.1, h48km±8km, n25, σ0°.87/26, mb4.1/13, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**0.43**	**85**	P	**Pn**	**07 52 59.2**	**-0.6**
CBIJ				*e*S	**Sn**	**07 53 05.1**	**-2.0**
CBIJ	**Chichi jima**	**0.43**	**85**	Pn	**Pn**	**07 52 59.5**	**-0.3**
	474nm,0.3s,baz=287,slow=3.0,SNR=122						
CBIJ				Sn	**Sn**	**07 53 10.1**	**+3.0**
	1μm,0.3s,baz=114,slow=20,SNR=24						
JHHJ	**Haha-jima-NKT**	**0.60**	**135**	P	**Pn**	**07 53 02.5**	**+0.6**
JHHJ				S	**Sn**	**07 53 10.1**	**-0.6**
BSO1	**Boso 1**	**7.60**	**355**	P	**Pn**	**07 54 37.6**	**0.0**
BSO4	**Boso 4**	**8.00**	**352**	P	**Pn**	**07 54 44.2**	**+1.2**
BSO4				*e*S	**Sn**	**07 56 16.0**	**+3.9**
JHU	**Hanno**	**9.01**	**347**	P	**Pn**	**07 54 58.0**	**+1.1**
JHU				*e*S	**Sn**	**07 56 35.4**	**-1.5**
KSRS	**Korea Array**	**15.58**	**315**	LR	LR	08 00 48.7	
	comp=Z,13nm,20.4s,baz=130,slow=32						
WRA	**Warramunga Arr**	**47.26**	**189**	P	**P**	**08 01 18.4**	**+0.3**
	10nm,0.6s,mb5.0,baz=11,slow=9.2,SNR=38						
FITZ	**Fitzroy Crossi**	**47.52**	**201**	P	**P**	**08 01 20.9**	**+0.8**
	3.9nm,0.8s,mb4.5,baz=3.4,slow=19,SNR=2.9						
ASAR	**Alice Springs**	**50.98**	**189**	P	**P**	**08 01 46.0**	**-0.5**
	0.7nm,0.6s,mb3.8,baz=13,slow=14,SNR=13						
KURK	**Kurchatov**	**52.71**	**315**	P	**P**	**08 01 58.7**	**-0.4**
	0.3nm,0.4s,mb3.5,baz=92,slow=6.4,SNR=2.5						
STKA	**Stephens Creek**	**58.60**	**180**	P	**P**	**08 02 41.1**	**-0.4**
	1.2nm,0.4s,mb4.2,baz=330,slow=9.3,SNR=5.2						
YKA	**Yellowknife Ar**	**72.38**	**28**	P	**P**	**08 04 10.3**	**+0.2**
	0.6nm,0.5s,mb3.8,baz=295,slow=6.4,SNR=3.8						
ARCES	**ARCESS Array B**	**73.44**	**341**	P	**P**	**08 04 15.2**	**-1.2**
	2.3nm,0.8s,mb4.2,baz=60,slow=7.4,SNR=5.8						
JOF	**Joensuu**	**74.93**	**334**	*e*p	**P**	**08 04 24.6**	**-0.5**
	1.9nm,0.4s,mb4.4						
JOF	**Joensuu**	**74.93**	**334**	*e*p	**P**	**08 04 24.6**	**-0.5**
	1.9nm,0.4s,mb4.4						
FINES	**FINESS Array B**	**77.79**	**334**	P	**P**	**08 04 41.0**	**-0.3**
	1.3nm,0.3s,mb4.3,baz=73,slow=4.2,SNR=13						
NVAR	**Mina Array Bea**	**80.88**	**52**	P	**P**	**08 05 00.1**	**+1.5**
	0.1nm,0.3s,mb3.2,baz=305,slow=6.5,SNR=3.5						
NOA	**NORSAR Array B**	**83.49**	**338**	P	**P**	**

	baz=292						
HEN	**Hengchun**	**1.39 300**	*i* P		**Pn**	**08 58 07.2**	**+0.3**
	baz=297						
HEN			S		**Sn**	**08 58 29.5**	**-0.5**
	baz=297						
TAW	**Tawu**	**1.48 315**	P		**Pn**	**08 58 07.4**	**-0.5**
	baz=310						
TAW			*e*S		**Sn**	**08 58 30.6**	**-1.0**
	baz=310						
EAST	**Anshuo**	**1.53 315**	⇑P		**Pn**	**08 58 08.2**	**-0.1**
	baz=314						
EAST			*e*S		**Sn**	**08 58 31.9**	**-0.6**
	baz=314						
ECL	**Taimali**	**1.63 322**	P		**Pn**	**08 58 08.7**	**-0.6**
	baz=313						
ECL			*e*S		**Sn**	**08 58 32.6**	**-1.7**
	baz=313						
TTN	**Taitung**	**1.66 331**	*e*P		**Pn**	**08 58 10.0**	**+0.4**
	baz=319						
TTN			*e*S		**Sn**	**08 58 35.1**	**+0.2**
	baz=319						
SCZT	**Fangliau**	**1.68 309**	⇑P		**Pn**	**08 58 09.9**	**0.0**
	baz=306						
SCZT			*e*S		**Sn**	**08 58 34.2**	**-1.0**
	baz=306						
TWG	**Pinlang**	**1.75 330**	*e*Pn		**Pn**	**08 58 09.9**	**-0.6**
TWG			*e*Sn		**Sn**	**08 58 35.8**	**-0.8**
TWG	**Pinlang**	**1.75 330**	P		**Pn**	**08 58 10.2**	**-0.4**
	baz=318						
TWG			*e*S		**Sn**	**08 58 35.5**	**-1.0**
	baz=318						
TWP	**Hsiaoliuchiu**	**1.86 304**	⇑*i*P		**Pn**	**08 58 13.2**	**+1.4**
	baz=297						
TWP			*e*S		**Sn**	**08 58 40.7**	**+2.1**
	baz=297						
SSD	**Sandimen**	**1.93 318**	⇑*i*P		**Pn**	**08 58 12.8**	**+0.2**
	baz=309						
SSD			*e*S		**Sn**	**08 58 39.6**	**-0.5**
	baz=309						
KAU	**Kaohsiung**	**2.03 309**	P		**Pn**	**08 58 14.9**	**+1.2**
	baz=297						
KAU			S		**Sn**	**08 58 43.6**	**+1.7**
	baz=297						
ELDTW	**Lidau**	**2.10 334**	*e*P		**Pn**	**08 58 14.5**	**+0.1**
	baz=328						
ELDTW			*e*S		**Sn**	**08 58 42.5**	**-0.8**
	baz=328						
TWM1	**Shoushan**	**2.12 316**	*e*P		**Pn**	**08 58 15.9**	**+1.2**
	baz=320						
TWM1			S		**Sn**	**08 58 45.9**	**+2.1**
	baz=320						
TWF1	**Yuli**	**2.15 342**	*e*P		**Pn**	**08 58 15.1**	**+0.1**
	baz=340						
TWF1			*e*S		**Sn**	**08 58 44.1**	**-0.3**
	baz=340						
YULB	**Yu-li**	**2.18 342**	*e*Pn		**Pn**	**08 58 15.5**	**+0.1**
YULB			*e*Sn		**Sn**	**08 58 46.7**	**+1.5**
STYT	**Tauyuan**	**2.19 328**	P		**Pn**	**08 58 15.8**	**+0.3**
	baz=327						
STYT			*e*S		**Sn**	**08 58 45.1**	**-0.2**
	baz=327						
SGST	**Jiashian**	**2.22 323**	⇑P		**Pn**	**08 58 16.2**	**+0.4**
	baz=312						
SGST			*e*S		**Sn**	**08 58 45.2**	**-0.6**
	baz=312						
EHY	**Hungye**	**2.29 344**	*e*P		**Pn**	**08 58 16.7**	**+0.1**
	baz=340						
EHY			*e*S		**Sn**	**08 58 47.1**	**-0.2**
	baz=340						
CHN1	**Nanshi**	**2.33 324**	P		**Pn**	**08 58 17.3**	**+0.2**
	baz=314						
CHN1			*e*S		**Sn**	**08 58 47.8**	**-0.3**
	baz=314						
WTP	**Ta-pu**	**2.33 326**	*e*P		**Pn**	**08 58 17.1**	**0.0**
	baz=315						
WTP			*e*S		**Sn**	**08 58 47.8**	**-0.4**
	baz=315						
TPUB	**Ta-pu**	**2.37 327**	*e*Pn		**Pn**	**08 58 17.4**	**-0.1**
TPUB			*e*Sn		**Sn**	**08 58 49.1**	**+0.1**
YUS	**Yu-Shan**	**2.39 336**	⇑P		**Pn**	**08 58 19.1**	**+1.3**
	baz=333						
YUS			*e*S		**Sn**	**08 58 50.0**	**+0.6**
	baz=333						
TAI1	**Yung-k'ang**	**2.40 316**	*e*P		**Pn**	**08 58 17.6**	**-0.3**
	baz=320						
TAI1			*e*S		**Sn**	**08 58 49.6**	**0.0**
	baz=320						
TWK	**Hsinying**	**2.42 324**	*e*P		**Pn**	**08 58 18.3**	**+0.2**
	baz=314						
TWK			*e*S		**Sn**	**08 58 49.3**	**-0.7**
	baz=314						
CHN4	**Tsaushan**	**2.43 327**	⇑*i*P		**Pn**	**08 58 18.5**	**+0.2**
	baz=316						
CHN4			S		**Sn**	**08 58 49.8**	**-0.5**
	baz=316						
ALS	**Alishan**	**2.47 333**	⇑P		**Pn**	**08 58 19.3**	**+0.6**
	baz=322						
ALS			*e*S		**Sn**	**08 58 51.8**	**+0.7**
	baz=322						
SCLT	**Jiali**	**2.52 318**	*e*P		**Pn**	**08 58 19.5**	**+0.2**
	baz=315						
SCLT			*e*S		**Sn**	**08 58 52.5**	**+0.4**
	baz=315						
ESL	**Shilin**	**2.56 348**	*e*P		**Pn**	**08 58 19.5**	**-0.3**
	baz=348						
ESL			*e*S		**Sn**	**08 58 52.1**	**-0.8**
	baz=348						
CHN5	**Tsauling**	**2.60 332**	P		**Pn**	**08 58 20.5**	**+0.2**
	baz=328						
CHN5			*e*S		**Sn**	**08 58 53.7**	**-0.1**
	baz=328						
CHN8	**Yiju**	**2.64 321**	*e*P		**Pn**	**08 58 21.4**	**+0.7**
	baz=318						
CHN8			*e*S		**Sn**	**08 58 54.6**	**0.0**
	baz=318						
CHY	**Chiayi**	**2.64 326**	*e*P		**Pn**	**08 58 20.4**	**-0.4**
	baz=331						
CHY			*e*S		**Sn**	**08 58 53.7**	**-1.0**
	baz=331						
SSLB	**Suanglung**	**2.66 338**	*e*Pn		**Pn**	**08 58 21.3**	**+0.2**
SSLB			*e*Sn		**Sn**	**08 58 55.7**	**+0.5**
SMLT	**Sun Moon Lake**	**2.77 338**	*e*P		**Pn**	**08 58 22.8**	**+0.4**
	baz=328						
SMLT			*e*S		**Sn**	**08 58 58.4**	**+0.8**
	baz=328						
TYC	**Yuchr**	**2.80 338**	*e*P		**Pn**	**08 58 23.0**	**+0.3**
	baz=326						
TYC			*e*S		**Sn**	**08 58 57.0**	**-1.3**
	baz=326						
WNT	**Mingjian**	**2.85 334**	*e*P		**Pn**	**08 58 23.3**	**0.0**
	baz=331						
WNT			*e*S		**Sn**	**08 58 57.8**	**-1.4**
	baz=331						
WTCT	**Ta-ch'eng**	**3.02 328**	*e*P		**Pn**	**08 58 25.3**	**-0.1**
	baz=330						
WTCT			*e*S		**Sn**	**08 59 02.3**	**-0.6**
	baz=330						
TWT	**Tachien**	**3.04 345**	*e*P		**Pn**	**08 58 24.6**	**-1.0**
	baz=347						
TCU	**Taichung**	**3.09 336**	*e*P		**Pn**	**08 58 25.8**	**-0.5**
	baz=327						
TCU			*e*S		**Sn**	**08 59 03.9**	**-0.7**
	baz=327						
PNG	**Penghu**	**3.21 315**	⇑P		**Pn**	**08 58 27.2**	**-0.5**
	baz=313						
PNG			*e*S		**Sn**	**08 59 05.3**	**-1.9**
	baz=313						
TWQ1	**Liyutan**	**3.24 339**	*e*P		**Pn**	**08 58 27.9**	**-0.3**
	baz=336						
TWQ1			*e*S		**Sn**	**08 59 07.9**	**0.0**
	baz=336						
NSY	**Sanyi**	**3.31 340**	*e*P		**Pn**	**08 58 29.8**	**+0.8**
	baz=337						
NSY			*e*S		**Sn**	**08 59 09.3**	**-0.1**
	baz=337						
YHNB	**Yeheng**	**3.40 350**	*e*Pn		**Pn**	**08 58 31.9**	**+1.7**
YHNB			*e*Sn		**Sn**	**08 59 15.2**	**+3.6**
NSK	**Sanguang**	**3.41 350**	*e*P		**Pn**	**08 58 31.4**	**+1.1**
	baz=352						
TWE	**Neicheng**	**3.42 355**	*e*P		**Pn**	**08 58 29.4**	**-1.0**
	baz=352						
NWF	**Wu-fen Shan**	**3.75 357**	*e*P		**Pn**	**08 58 36.9**	**+2.2**
	baz=1.0						
KNM	**Kinmen**	**4.54 314**	*e*P		**Pn**	**08 58 45.0**	**+0.3**
	baz=311						
KNM			*e*S		**Sn**	**08 59 37.9**	**+0.3**
	baz=311						
QZH	**Quanzhou**	**4.81 320**	*e*Pn		**Pn**	**08 58 53.6**	**+5.4**
QZH			Sn		**Sn**	**08 59 36.0**	**-8.0**
QZH			smax				
	comp=N,250nm,0.2s						
QZH			smax				
	comp=E,260nm,0.6s						
KSRS	**Korea Array**	**16.89 16**	P		**Pn**	**09 01 23.4**	**-0.1**
	comp=E,0.2nm,0.3s,baz=195,slow=14,SNR=5.9						
MJAR	**Matsushiro Arr**	**20.72 39**	P		**P**	**09 02 06.2**	**+1.9**
	comp=E,1.2nm,0.8s,baz=223,slow=6.8,SNR=4.3						
CHTO	**Chiang Mai**	**21.82 268**	*e*P		**P**	**09 02 16.3**	**+0.3**
	comp=E,6.7nm,0.8s,mb4.1						
CMAR	**Chiang Mai Arr**	**21.89 267**	P		**P**	**09 02 16.4**	**-0.3**
	comp=E,7.4nm,0.8s,mb4.2,baz=75,slow=8.2,SNR=22						
MK31	**Makanchi Array**	**40.96 318**	*e*P		**P**	**09 05 03.8**	**+0.7**
MKAR	**Makanchi Array**	**40.96 318**	P		**P**	**09 05 03.6**	**+0.6**
	comp=E,1.3nm,0.6s,mb3.8,baz=103,slow=10,SNR=18						
WRAB	**Tennant Creek**	**42.72 163**	P		**P**	**09 05 15.1**	**-2.5**
	comp=E,9.6nm,1.3s,mb4.3						
WRA	**Warramunga Arr**	**42.73 163**	P		**P**	**09 05 12.7**	**-4.9**
	comp=E,1.0nm,0.4s,mb3.8,baz=332,slow=11,SNR=16						
ZALV	**Zalesovo Beam**	**43.08 328**	P		**P**	**09 05 20.6**	**+0.4**
	comp=E,2.3nm,0.5s,mb4.1,baz=124,slow=8.4,SNR=10.0						
KURK	**Kurchatov**	**44.81 322**	P		**P**	**09 05 32.5**	**-1.4**
	comp=E,0.5nm,0.2s,mb3.7,baz=120,slow=8.7,SNR=4.5						
KURK	**Kurchatov**	**44.81 322**	*e*P		**P**	**09 05 35.1**	**+1.2**
	comp=E,1.5nm,0.5s,mb3.9						
ASAR	**Alice Springs**	**46.17 165**	P		**P**	**09 05 41.1**	**-3.8**
	comp=E,0.6nm,0.5s,mb3.5,baz=343,slow=8.1,SNR=18						
FX1	**Attu Island--F**	**50.07 38**	P		**P**	**09 06 14.2**	**-0.3**
	comp=E,3.1nm,0.6s,mb4.1,baz=310,slow=7.9,SNR=4.3						
STKA	**Stephens Creek**	**56.10 160**	P		**P**	**09 06 55.1**	**-3.7**
	comp=E,1.8nm,0.6s,mb4.1,baz=358,slow=8.1,SNR=11						
KDAK	**Kodiak Island**	**69.81 35**	P		**P**	**09 08 28.0**	**-0.9**
	comp=E,5.8nm,0.7s,mb4.4,baz=143,slow=20,SNR=3.2						
KDAK	**Kodiak Island**	**69.81 35**	P		**P**	**09 08 28.0**	**-0.9**
ARCES	**ARCESS Array B**	**72.49 339**	P		**P**	**09 08 44.5**	**-0.4**
	comp=E,1.7nm,0.9s,mb3.8,baz=60,slow=5.8,SNR=4.7						
EGAK	**Eagle**	**73.80 26**	*e*P		**P**	**09 08 52.4**	**-0.2**
	comp=E,2.1nm,0.8s,mb3.9						
YKA	**Yellowknife Ar**	**85.31 23**	P		**P**	**09 09 53.3**	**-1.3**
	comp=E,1.7nm,0.6s,mb4.0,baz=305,slow=5.0,SNR=6.2						

*NEIC **23** 09:18:00.7, 39.°29N×23.°68E, h23km, ML3.6(ATH), After ATH.*
*ATH **23** 09:18:00.7, 39.°29N×23.°68E, h23km±1km, MD3.7/12, ML3.5*
*ISCJB **23** 09:18:00.9±0.5, 39.°29N±0.°02×23.°67E±0.°03, h9km±3km, Error ellipse: s-maj=3.5km s-min=2.7km az=31.6*
*CSEM **23** 09:18:01.3±0.1, 39.°27N×23.°67E, h10km, ML3.6, Error ellipse: s-maj=2.1km s-min=1.5km az=111.0*
*THE **23** 09:18:01.8, 39.°28N×23.°65E, h10km±1km, ML4.1/10, Error ellipse: s-maj=1.4km s-min=0.7km az=230.0*
*SOF **23** 09:18:07.4, 39.°92N×23.°90E, h2km, MD3.2*

ISC 23 09:18:01.5±0.4, 39.°27N±0.°02×23.°66E±0.°03, h10km±3km, n155, σ0§79/186, 4C-5D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOS	**Alonnisos**	**0.20**	**121**	P	**Pg**	**09 18 05.4**	**-0.3**
AOS	**Alonnisos**	**0.20**	**121**	P	**Pg**	**09 18 06.0**	**+0.3**
AOS	**Alonnisos**	**0.20**	**121**	P	**Pg**	**09 18 06.0**	**+0.3**
NEO	**Neokhori**	**0.34**	**276**	*e*Pb	**Pg**	**09 18 08.5**	**+0.2**
NEO				*e*Sb	**Sg**	**09 18 13.3**	**+0.4**
NEO	**Neokhori**	**0.34**	**276**	*e*PB	**Pg**	**09 18 08.5**	**+0.2**
NEO				*e*SB	**Sg**	**09 18 13.3**	**+0.4**
NEO	**Neokhori**	**0.34**	**276**	*e*Pb	**Pg**	**09 18 08.5**	**+0.2**
NEO				*e*Sb	**Sg**	**09 18 13.3**	**+0.4**
XOR	**Xorichti**	**0.38**	**284**	P	**Pg**	**09 18 09.0**	**0.0**
XOR				S	**Sg**	**09 18 14.6**	**+0.6**
XOR	**Xorichti**	**0.38**	**284**	P	**Pg**	**09 18 09.0**	**0.0**
XOR				S	**Sg**	**09 18 14.6**	**+0.6**
PAIG	**Paliouri**	**0.65**	**1**	P	**Pg**	**09 18 14.9**	**+0.7**
PAIG	**Paliouri**	**0.65**	**1**	P	**Pg**	**09 18 15.1**	**+0.9**
PAIG	**Paliouri**	**0.65**	**1**	P	**Pg**	**09 18 14.9**	**+0.7**
ATAL	**Atalanti**	**0.77**	**221**	P	**Pg**	**09 18 16.0**	**-0.3**
ATAL	**Atalanti**	**0.77**	**221**	P	**Pg**	**09 18 16.0**	**-0.3**
LKR	**Lokris**	**0.81**	**220**	*e*Pn	**Pg**	**09 18 16.8**	**-0.3**
LKR				*e*Sn	**Sg**	**09 18 28.0**	**+0.3**
LKR	**Lokris**	**0.81**	**220**	P	**Pg**	**09 18 16.7**	**-0.4**
LKR				S	**Sg**	**09 18 27.9**	**+0.2**
LKR	**Lokris**	**0.81**	**220**	*e*PN	**Pg**	**09 18 16.8**	**-0.3**
LKR				*e*SN	**Sg**	**09 18 28.0**	**+0.3**
LKR	**Lokris**	**0.81**	**220**	P	**Pg**	**09 18 16.7**	**-0.4**
LKR				S	**Sg**	**09 18 27.9**	**+0.2**
AGG	**Agios Georgios**	**1.07**	**257**	*e*Pn	**Pg**	**09 18 21.2**	**-0.8**
AGG				*e*Sn	**Sg**	**09 18 36.9**	**+1.0**
AGG	**Agios Georgios**	**1.07**	**257**	P	**Pg**	**09 18 21.2**	**-0.8**
AGG				S	**Sg**	**09 18 36.8**	**+0.9**
AGG	**Agios Georgios**	**1.07**	**257**	*e*PN	**Pg**	**09 18 21.2**	**-0.8**
AGG				*e*SN	**Sg**	**09 18 36.9**	**+1.0**
AGG	**Agios Georgios**	**1.07**	**257**	P	**Pg**	**09 18 21.2**	**-0.8**
AGG				*e*Sn	**Sg**	**09 18 36.9**	**+1.0**
OUR	**Ouranopolis**	**1.09**	**13**	P	**Pg**	**09 18 21.8**	**-0.7**
OUR				S	**Sg**	**09 18 36.8**	**+0.2**
OUR	**Ouranopolis**	**1.09**	**13**	P	**Pg**	**09 18 21.8**	**-0.7**
OUR				S	**Sg**	**09 18 36.8**	**+0.2**
PLG	**Polygyros**	**1.11**	**351**	*e*Pn	**Pg**	**09 18 22.2**	**-0.7**
PLG	**Polygyros**	**1.11**	**351**	P	**Pg**	**09 18 22.2**	**-0.7**
PLG				S	**Sg**	**09 18 37.1**	**-0.3**
PLG	**Polygyros**	**1.11**	**351**	*e*PN	**Pg**	**09 18 22.2**	**-0.7**
PLG	**Polygyros**	**1.11**	**351**	P	**Pg**	**09 18 22.2**	**-0.7**
PLG				S	**Sg**	**09 18 37.1**	**-0.3**
PTL	**Penteli**	**1.23**	**173**	*e*Pn	**Pn**	**09 18 24.7**	**-0.1**
PTL	**Penteli**	**1.23**	**173**	*e*PN	**Pn**	**09 18 24.7**	**-0.1**
PTL	**Penteli**	**1.23**	**173**	*e*Pn	**Pn**	**09 18 24.7**	**-0.1**
DSF	**Desfina**	**1.24**	**226**	P	**Pn**	**09 18 24.0**	**-0.8**
DSF	**Desfina**	**1.24**	**226**	P	**Pn**	**09 18 24.0**	**-0.8**
ATH	**Athens Observa**	**1.30**	**178**	*e*Pn	**Pn**	**09 18 25.6**	**-0.1**
ATH	**Athens Observa**	**1.30**	**178**	*e*PN	**Pn**	**09 18 25.6**	**-0.1**
ATH	**Athens Observa**	**1.30**	**178**	*e*Pn	**Pn**	**09 18 25.6**	**-0.1**
ATHU	**Athens Univers**	**1.31**	**176**	P	**Pn**	**09 18 25.4**	**-0.4**
ATHU	**Athens Univers**	**1.31**	**176**	P	**Pn**	**09 18 25.4**	**-0.4**
THL	**Klokotos Trika**	**1.31**	**283**	P	**Pn**	**09 18 25.9**	**0.0**
THL				S	**Sb**	**09 18 42.2**	**-0.9**
THL	**Klokotos Trika**	**1.31**	**283**	*e*PN	**Pn**	**09 18 25.5**	**-0.4**
THL	**Klokotos Trika**	**1.31**	**283**	*e*Pn	**Pn**	**09 18 25.5**	**-0.4**
THL	**Klokotos Trika**	**1.31**	**283**	P	**Pn**	**09 18 25.9**	**0.0**
THL				S	**Sb**	**09 18 42.2**	**-0.9**
LIA	**Limnos Island**	**1.33**	**62**	*e*Pn	**Pn**	**09 18 25.4**	**-0.7**
LIA	**Limnos Island**	**1.33**	**62**	P	**Pn**	**09 18 25.1**	**-1.0**
LIA				S	**Sb**	**09 18 45.6**	**+2.0**
LIA	**Limnos Island**	**1.33**	**62**	*e*PN	**Pn**	**09 18 25.4**	**-0.7**
LIA	**Limnos Island**	**1.33**	**62**	P	**Pn**	**09 18 25.1**	**-1.0**
LIA	**Limnos Island**	**1.33**	**62**	*e*Pn	**Pn**	**09 18 25.4**	**-0.7**
LIA				S	**Sb**	**09 18 45.6**	**+2.0**
LTK	**Loutraki**	**1.36**	**204**	P	**Pn**	**09 18 26.2**	**-0.4**
LTK				S	**Sb**	**09 18 44.5**	**-0.1**
LTK	**Loutraki**	**1.36**	**204**	*e*PN	**Pn**	**09 18 26.3**	**-0.3**
LTK	**Loutraki**	**1.36**	**204**	*e*Pn	**Pn**	**09 18 26.3**	**-0.3**
LTK				S	**Sb**	**09 18 44.5**	**-0.1**
HORT	**Hortiatis**	**1.39**	**342**	P	**Pn**	**09 18 26.5**	**-0.5**
HORT	**Hortiatis**	**1.39**	**342**	P	**Pn**	**09 18 26.5**	**-0.5**
VLY	**Voula,Athens**	**1.42**	**176**	*e*Pn	**Pn**	**09 18 27.2**	**-0.2**
VLY	**Voula,Athens**	**1.42**	**176**	*e*PN	**Pn**	**09 18 27.2**	**-0.2**
VLY	**Voula,Athens**	**1.42**	**176**	*e*Pn	**Pn**	**09 18 27.2**	**-0.2**
THE	**Thessaloniki**	**1.46**	**339**	P	**Pn**	**09 18 27.4**	**-0.5**
THE	**Thessaloniki**	**1.46**	**339**	P	**Pn**	**09 18 27.2**	**-0.7**
THE	**Thessaloniki**	**1.46**	**339**	P	**Pn**	**09 18 27.4**	**-0.5**
KALE	**Kalithea**	**1.48**	**234**	P	**Pn**	**09 18 27.9**	**-0.3**
KALE				S	**Sn**	**09 18 47.7**	**+0.1**
KALE	**Kalithea**	**1.48**	**234**	P	**Pn**	**09 18 27.9**	**-0.3**
KALE				S	**Sn**	**09 18 47.7**	**+0.1**
EVR	**Evrytania**	**1.49**	**257**	*e*Pn	**Pn**	**09 18 28.7**	**+0.4**
EVR	**Evrytania**	**1.49**	**257**	*e*PN	**Pn**	**09 18 28.7**	**+0.4**
EVR	**Evrytania**	**1.49**	**257**	*e*Pn	**Pn**	**09 18 28.7**	**+0.4**
NAIG	**Nisos Aigina**	**1.52**	**185**	*e*Pn	**Pn**	**09 18 28.5**	**-0.2**
NAIG	**Nisos Aigina**	**1.52**	**185**	*e*PN	**Pn**	**09 18 28.5**	**-0.2**
NAIG	**Nisos Aigina**	**1.52**	**185**	*e*Pn	**Pn**	**09 18 28.5**	**-0.2**
SOH	**Sokhos**	**1.56**	**351**	*e*Pn	**Pn**	**09 18 29.2**	**-0.2**
SOH	**Sokhos**	**1.56**	**351**	P	**Pn**	**09 18 29.1**	**-0.3**
SOH	**Sokhos**	**1.56**	**351**	*e*PN	**Pn**	**09 18 29.2**	**-0.2**
SOH	**Sokhos**	**1.56**	**351**	P	**Pn**	**09 18 29.1**	**-0.3**
EFP	**Efpalio**	**1.61**	**239**	P	**Pn**	**09 18 30.0**	**0.0**
EFP	**Efpalio**	**1.61**	**239**	*e*PN	**Pn**	**09 18 30.4**	**+0.4**
EFP	**Efpalio**	**1.61**	**239**	P	**Pn**	**09 18 30.0**	**0.0**
EFP	**Efpalio**	**1.61**	**239**	*e*Pn	**Pn**	**09 18 30.4**	**+0.4**
LAKA	**Lakka**	**1.67**	**232**	P	**Pn**	**09 18 31.1**	**+0.2**
LAKA				S	**Sn**	**09 18 52.4**	**+0.1**
LAKA	**Lakka**	**1.67**	**232**	P	**Pn**	**09 18 31.1**	**+0.2**
LAKA				S	**Sn**	**09 18 52.4**	**+0.1**
GUR	**Goura**	**1.69**	**218**	P	**Pn**	**09 18 31.1**	**0.0**
GUR	**Goura**	**1.69**	**218**	*e*PN	**Pn**	**09 18 31.4**	**+0.3**
GUR	**Goura**	**1.69**	**218**	P	**Pn**	**09 18 31.1**	**0.0**
GUR	**Goura**	**1.69**	**218**	*e*Pn	**Pn**	**09 18 31.4**	**+0.3**
SIGR	**SIGRI**	**1.70**	**91**	P	**Pn**	**09 18 31.4**	**+0.1**
SIGR				S	**Sn**	**09 18 53.6**	**+0.5**
SIGR	**SIGRI**	**1.70**	**91**	P	**Pn**	**09 18 31.4**	**+0.1**
SIGR				S	**Sn**	**09 18 53.6**	**+0.5**
KZN	**Kozani**	**1.79**	**306**	*e*Pn	**Pn**	**09 18 32.1**	**-0.3**
KZN	**Kozani**	**1.79**	**306**	P	**Pn**	**09 18 31.8**	**-0.6**
KZN				S	**Sn**	**09 18 54.9**	**-0.3**
KZN	**Kozani**	**1.79**	**306**	*e*PN	**Pn**	**09 18 32.1**	**-0.3**
KZN	**Kozani**	**1.79**	**306**	P	**Pn**	**09 18 31.8**	**-0.6**
KZN	**Kozani**	**1.79**	**306**	*e*Pn	**Pn**	**09 18 32.1**	**-0.3**
KZN				S	**Sn**	**09 18 54.9**	**-0.3**
KAVA	**Kavala**	**1.84**	**20**	P	**Pn**	**09 18 32.2**	**-1.0**
KAVA	**Kavala**	**1.84**	**20**	P	**Pn**	**09 18 32.2**	**-1.0**
SRS	**Serrai**	**1.84**	**358**	P	**Pn**	**09 18 32.6**	**-0.6**
SRS	**Serrai**	**1.84**	**358**	P	**Pn**	**09 18 32.6**	**-0.6**
PRK	**Paraskevi**	**2.02**	**90**	*e*Pn	**Pn**	**09 18 35.7**	**0.0**
PRK				P		09 18 39.5	
PRK	**Paraskevi**	**2.02**	**90**	P	**Pn**	**09 18 35.6**	**-0.1**
PRK	**Paraskevi**	**2.02**	**90**	*e*PN	**Pn**	**09 18 35.7**	**0.0**
PRK	**Paraskevi**	**2.02**	**90**	P	**Pn**	**09 18 35.6**	**-0.1**
CHOS	**Chios island**	**2.07**	**115**	P	**Pn**	**09 18 36.6**	**+0.3**
CHOS	**Chios island**	**2.07**	**115**	*e*PN	**Pn**	**09 18 36.6**	**+0.3**
CHOS	**Chios island**	**2.07**	**115**	P	**Pn**	**09 18 36.6**	**+0.3**
NVR	**Nevrokopi**	**2.08**	**4**	*e*Pb	**Pn**	**09 18 35.5**	**-1.0**
NVR	**Nevrokopi**	**2.08**	**4**	*e*PB	**Pn**	**09 18 35.5**	**-1.0**
NVR	**Nevrokopi**	**2.08**	**4**	*e*Pb	**Pn**	**09 18 35.5**	**-1.0**
VLX	**Vlachokerasia**	**2.15**	**208**	P	**Pn**	**09 18 36.1**	**-1.3**
VLX	**Vlachokerasia**	**2.15**	**208**	*e*PN	**Pn**	**09 18 37.7**	**+0.3**
VLX	**Vlachokerasia**	**2.15**	**208**	P	**Pn**	**09 18 36.1**	**-1.3**
VLX	**Vlachokerasia**	**2.15**	**208**	*e*Pn	**Pn**	**09 18 37.7**	**+0.3**
VAY	**Valandovo**	**2.21**	**338**	⇓*i*Pn	**Pn**	**09 18 38.4**	**+0.2**
VAY	**Valandovo**	**2.21**	**338**	P	**Pn**	**09 18 37.7**	**-0.5**
VAY	**Valandovo**	**2.21**	**338**	P	**Pn**	**09 18 37.7**	**-0.5**
MMB	**Musomiste**	**2.31**	**1**	*i* P	**Pn**	**09 18 39.0**	**-0.7**
MMB	**Musomiste**	**2.31**	**1**	*i* P	**Pn**	**09 18 39.0**	**-0.7**
RDO	**Rodhopi**	**2.36**	**37**	*e*Pn	**Pn**	**09 18 39.3**	**-1.0**
RDO				P		09 18 42.6	
RDO	**Rodhopi**	**2.36**	**37**	*e*PN	**Pn**	**09 18 39.3**	**-1.0**
RDO	**Rodhopi**	**2.36**	**37**	*e*Pn	**Pn**	**09 18 39.3**	**-1.0**
ALN	**Alexandroupoli**	**2.44**	**48**	*e*Pn	**Pn**	**09 18 40.5**	**-0.9**
ALN	**Alexandroupoli**	**2.44**	**48**	*e*PN	**Pn**	**09 18 40.5**	**-0.9**
ALN	**Alexandroupoli**	**2.44**	**48**	*e*Pn	**Pn**	**09 18 40.5**	**-0.9**
ITM	**Ithomi**	**2.50**	**214**	*e*Pb	**Pb**	**09 18 43.6**	**-2.9**
ITM	**Ithomi**	**2.50**	**214**	*e*PB	**Pb**	**09 18 43.6**	**-2.9**
ITM	**Ithomi**	**2.50**	**214**	*e*Pb	**Pb**	**09 18 43.6**	**-2.9**
RZN	**Rozhen**	**2.54**	**18**	*i* P	**Pn**	**09 18 42.8**	**0.0**
RZN	**Rozhen**	**2.54**	**18**	*i* P	**Pn**	**09 18 42.8**	**0.0**
VLI	**Veliai**	**2.62**	**193**	*e*Pn	**Pn**	**09 18 43.4**	**-0.4**
VLI	**Veliai**	**2.62**	**193**	*e*PN	**Pn**	**09 18 43.4**	**-0.4**
VLI	**Veliai**	**2.62**	**193**	*e*Pn	**Pn**	**09 18 43.4**	**-0.4**
KKB	**Krupnik**	**2.63**	**351**	*i* P	**Pn**	**09 18 43.8**	**-0.2**
KKB	**Krupnik**	**2.63**	**351**	*i* P	**Pn**	**09 18 43.8**	**-0.2**
APE	**Apeiranthos**	**2.65**	**146**	*e*Pn	**Pn**	**09 18 44.2**	**-0.1**
APE				P		09 18 47.4	
APE	**Apeiranthos**	**2.65**	**146**	*e*PN	**Pn**	**09 18 44.2**	**-0.1**
APE	**Apeiranthos**	**2.65**	**146**	*e*Pn	**Pn**	**09 18 44.2**	**-0.1**
KDZ	**Kurdzhali**	**2.73**	**29**	*i* P	**Pn**	**09 18 43.9**	**-1.4**
KDZ	**Kurdzhali**	**2.73**	**29**	*i* P	**Pn**	**09 18 43.9**	**-1.4**
KRUS	**Krusevo**	**2.79**	**319**	*i* Pn	**Pn**	**09 18 46.4**	**+0.2**
PYL	**PY

	baz=183						
NACB	Ninganchiao	0.90	111	*e*Pg	Pg	09 26 26.2	-0.6
NACB				*e*Sg	Sg	09 26 37.9	-0.7
TWE	Neicheng	0.93	76	P	Pb	09 26 26.9	-0.4
	baz=84						
TWE				*e*S	Sb	09 26 40.3	+0.7
	baz=84						
TWD	Chiawan	0.93	116	*e*P	Pb	09 26 26.9	-0.5
	baz=117						
TWA	Mucha	0.96	59	*e*P	Pb	09 26 26.7	-1.1
	baz=60						
TWA				S	Sb	09 26 41.0	+0.7
	baz=60						
ESL	Shilin	0.97	134	P	Pb	09 26 27.4	-0.6
	baz=137						
ESL				*e*S	Sb	09 26 41.4	+0.8
	baz=137						
ENA	Nanau	0.97	94	*e*P	Pb	09 26 27.3	-0.8
	baz=95						
ENA				*e*S	Sb	09 26 41.3	+0.6
	baz=95						
ALS	Alishan	0.98	173	P	Pb	09 26 28.0	-0.3
	baz=176						
ALS				*e*S	Sb	09 26 41.8	+0.7
	baz=176						
CHY	Chiayi	1.02	193	*e*P	Pb	09 26 28.0	-0.8
	baz=195						
CHY				*e*S	Sb	09 26 43.0	+1.0
	baz=195						
YUS	Yu-Shan	1.03	166	⇓P	Pb	09 26 28.9	-0.1
	baz=169						
TWC	Suao	1.07	84	*e*P	Pb	09 26 27.7	-2.1
	baz=83						
CHN4	Tsaushan	1.14	184	*e*P	Pb	09 26 30.3	-0.6
	baz=195						
CHN4				S	Sb	09 26 46.2	+0.7
	baz=195						
EHY	Hungye	1.15	149	⇓P	Pb	09 26 30.7	-0.3
	baz=143						
EHY				S	Sb	09 26 45.5	-0.2
	baz=143						
TWY	Chenhua	1.15	47	*e*P	Pb	09 26 30.3	-0.8
	baz=65						
TWY				*e*S	Sb	09 26 46.7	+1.0
	baz=65						
NWF	Wu-fen Shan	1.16	60	*e*P	Pn	09 26 30.2	-1.0
	baz=61						
NWF				*e*S	Sb	09 26 47.0	+0.9
	baz=61						
TPUB	Ta-pu	1.19	182	*e*Pg	Pg	09 26 30.4	-2.0
TWK	Hsinying	1.23	188	*e*P	Pn	09 26 30.8	-1.5
	baz=190						
TWK				*e*S	Sb	09 26 48.7	+0.4
	baz=190						
YULB	Yu-li	1.23	152	*e*Sn	Sn	09 26 47.9	-0.8
TWF1	Yuli	1.27	153	⇓P	Pn	09 26 32.6	-0.1
	baz=156						
TWF1				S	Sb	09 26 49.9	+0.6
	baz=156						
CHN1	Nanshi	1.31	186	*e*P	Pn	09 26 32.5	-0.7
	baz=188						
CHN1				*e*S	Sb	09 26 51.2	+0.8
	baz=188						
STYT	Tauyuan	1.32	177	*e*P	Pn	09 26 32.9	-0.6
	baz=190						
STYT				*e*S	Sb	09 26 52.6	+1.6
	baz=190						
ELDTW	Lidau	1.33	166	P	Pn	09 26 33.5	-0.2
	baz=169						
ELDTW				*e*S	Sn	09 26 51.0	-0.2
	baz=169						
PNG	Penghu	1.38	228	*e*P	Pn	09 26 32.3	-1.9
	baz=229						
SGST	Jiashian	1.41	184	*e*P	Pn	09 26 34.8	+0.2
	baz=186						
SGST				*e*S	Sn	09 26 54.5	+1.6
	baz=186						
TWG	Pinlang	1.70	168	*e*Pn	Pn	09 26 37.9	-0.9
TWG				*e*Sg	Sg	09 27 01.5	-2.8
TWG	Pinlang	1.70	168	*e*P	Pn	09 26 38.5	-0.2
	baz=184						
SSD	Sandimen	1.74	181	*e*P	Pn	09 26 40.3	+1.1
	baz=182						
EAST	Anshuo	2.10	176	*e*P	Pn	09 26 45.4	+1.1
	baz=190						

PGC 23 10:16:43.0±9.9, 47°.35N×128°.92W, h10km, ML2.9/11, Mw3.5, 12D, 300km Wsw of Tofino, Bc Off Coast Of Washington, Off coast of Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETB	Estevan Point	2.58	37	⇓Pn	Pn	10 17 23.4	-1.3
EDB	Eliza Dome	2.80	25	⇓Pn	Pn	10 17 25.6	-2.1
OZB	Mount Ozzard	2.81	54	Pn	Pn	10 17 26.2	-1.7
OZB				⇓Sn	Sn	10 17 58.2	-3.5
BPBC	Brooks Peninsu	2.92	15	⇑Pn	Pn	10 17 27.1	-2.2
BMSB	Bamfield Mari	2.94	58	⇓Pn	Pn	10 17 28.0	-1.7
BMSB				⇓Sn	Sn	10 18 01.3	-3.8
GDR	Gold River	3.10	37	Pn	Pn	10 17 30.7	-1.2
WOSB	Woss	3.22	28	Pn	Pn	10 17 32.2	-1.3
PFB	Port Renfrew	3.25	66	Pn	Pn	10 17 32.6	-1.3
PFB				⇑Sn	Sn	10 18 09.7	-3.0
MAYB	Maynard	3.27	20	⇑Pn	Pn	10 17 32.2	-2.0
MGB	Mount Grey	3.28	58	⇑Pn	Pn	10 17 33.2	-1.1
HOLB	Holberg	3.34	9	⇑Pn	Pn	10 17 34.3	-0.9
ALB	Alberni	3.34	53	⇓Pn	Pn	10 17 33.9	-1.3
ALB				⇑Sn	Sn	10 18 11.0	-3.9
PHC	Port Hardy	3.50	16	Pn	Pn	10 17 36.7	-0.7

ISCJB ***23*** *11:18:53.0±1.0, 27°.16N±0°.08×143°.34E±0°.10, h33km, mb3.9/6, Error ellipse: s-maj=14.1km s-min=9.2km az=36.1*
JMA ***23*** *11:18:53.8±0.2, 27°.13N×143°.19E, h81km, M3.1*
IDC ***23*** *11:18:59.8±1.2, 26°.92N×142°.47E, h52km±7km, mb3.6/6, mb1 3.7/8, mb1mx3.5/23, mbtmp3.6/8, Error ellipse: s-maj=37.9km s-min=11.5km az=60.0*
ISC 23 11:18:55.6±1.0, 27°.10N±0°.08×143°.2E±0°.1, h35km, (h55km±2.5km: pP-P), n12, σ1s02/15, mb3.9/6, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	0.93	270	P	Pn	11 19 11.9	-0.2
CBIJ				*e*S	Sn	11 19 25.3	+1.0
CBIJ	Chichi jima	0.93	270	P	Pn	11 19 10.6	-1.5
	77nm,0.3s,baz=317,slow=3.4,SNR=26						
CBIJ				S	Sn	11 19 18.5	-5.8
	289nm,0.3s,baz=287,slow=19,SNR=30						
JHHJ	Haha-jima-NKT	1.05	244	P	Pn	11 19 13.5	-0.3
JHHJ				*e*S	Sn	11 19 27.5	+0.3
JHU	Hanno	9.35	340	P	Pn	11 21 07.0	-0.8
MJAR	Matsushiro Arr	10.33	337	P	Pn	11 21 22.3	+1.1
	0.4nm,0.3s,baz=158,slow=11,SNR=4.5						
KSRS	Korea Array	16.53	312	P	Pn	11 22 42.3	-2.4
	0.2nm,0.3s,baz=120,slow=16,SNR=3.1						
WRA	Warramunga Arr	47.55	191	P	P	11 27 27.4	-0.3
	0.9nm,0.6s,mb4.0,baz=12,slow=8.7,SNR=11						
WRA				pP	pP	11 27 41.7	+3.6
	2.4nm,0.5s,baz=12,slow=8.7,SNR=10						
ZALV	Zalesovo Beam	50.09	319	P	P	11 27 46.0	-0.9
	0.7nm,0.4s,mb4.1,baz=97,slow=6.1,SNR=5.2						
ZALV				pP	pP	11 28 01.6	+4.2
	1.2nm,0.7s,baz=98,slow=5.1,SNR=2.2						
MKAR	Makanchi Array	51.19	310	P	P	11 27 56.4	+1.2
	0.3nm,0.4s,mb3.6,baz=80,slow=9.5,SNR=2.7						
ASAR	Alice Springs	51.27	191	P	P	11 27 55.8	-0.2
	0.4nm,0.9s,mb3.3,baz=10,slow=5.7,SNR=4.1						
ASAR				pP	pP	11 28 10.2	+3.7
	0.4nm,0.7s,baz=0.1,slow=5.5,SNR=2.8						
BVAR	Borovoye Array	58.67	317	P	P	11 28 50.8	+1.6
	1.7nm,0.5s,mb4.3,baz=83,slow=8.5,SNR=8.4						
BVAR				pP	pP	11 29 03.8	+3.9
	2.0nm,0.6s,baz=84,slow=7.9,SNR=6.1						
FINES	FINESS Array B	78.35	334	P	P	11 30 52.5	+0.5
	1.5nm,0.5s,mb4.2,baz=46,slow=5.5,SNR=5.4						

ISCJB ***23*** *11:28:51.2±6.8, 4°.9S±0°.2×100°.7E±0°.2, h24km±48km, mb3.4/3, MS3.2/2, Error ellipse: s-maj=49.3km s-min=10.5km az=38.4*
DJA ***23*** *11:28:54, 4°.72S×100°.75E, h60km, MLv4.0/7*

IDC ***23*** *11:28:54.5±5.0, 3°.96S×101°.91E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/20, mbtmp3.5/3, MS3.2/2, Ms1 3.3/2, ms1mx2.6/19, Error ellipse: s-maj=248.5km s-min=26.3km az=52.0*
ISC 23 11:28:50.8±10.0, 4°.8S±0°.2×100°.7E±0°.2, h7km±65km, n15, σ0s46/12, mb3.4/3, MS3.2/2, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	Pulau Pagai	2.16	341	P	Pn	11 29 27.2	-0.1
KSI	Kapahiang	2.22	58	P	Pn	11 29 28.0	-0.1
MNAI	Manna	2.30	78	P	Pn	11 29 28.8	-0.3
LWLI	Liwa	3.35	93	P	Pn	11 29 44.7	+1.0
MDSI	Maura Dua	3.49	85	P	Pn	11 29 45.1	-0.4
SISI	Saibi	3.83	335	P	Pn	11 29 50.3	+0.1
KASI	Kota Agung	3.85	101	P	Pn	11 29 50.5	0.0
PDSI	Padang	3.90	357	P	Pn	11 29 50.7	-0.4
KLSI		4.02	88	P	Pn	11 29 53.2	+0.3
CMAR	Chiang Mai Arr	23.20	356	LR	LR	11 43 35.8	
	comp=Z,43nm,18.9s,MS2.9,baz=185,slow=39						
WRA	Warramunga Arr	36.02	118	P	P	11 35 52.4	-0.6
	0.2nm,0.3s,mb3.5,baz=294,slow=10,SNR=5.6						
ASAR	Alice Springs	37.08	124	P	P	11 36 01.7	-0.3
	0.3nm,0.4s,mb3.5,baz=298,slow=7.7,SNR=18						
MKAR	Makanchi Array	53.92	344	P	P	11 38 15.7	+0.7
	0.2nm,0.4s,mb3.4,baz=154,slow=7.3,SNR=2.5						
MMAI	Mount Meron Ar	72.27	307	LR	LR	12 15 24.7	
	comp=Z,26nm,20.5s,MS3.5,baz=190,slow=38						
TXAR	Lajitas Array	146.45	41	PKPbc	PKPbc	11 48 34.3	+0.8
	0.2nm,0.7s,baz=336,slow=2.7,SNR=4.8						

CASC ***23*** *12:04:09.6±1.2, 11°.94N×89°.57W, h35km, MD4.0, mb4.2(NEIC)*
IDC ***23*** *12:04:11.8±3.1, 12°.53N×88°.94W, h0km, mb3.8/4, mb1 4.0/6, mb1mx3.8/22, mbtmp3.8/6, ML3.0/2, MS3.0/2, Ms1 3.0/2, ms1mx2.3/28, Error ellipse: s-maj=61.3km s-min=32.9km az=16.0*
NEIC ***23*** *12:04:15.3±5.0, 12°.15N×89°.20W, h57km±18km, mb4.2/4, Error ellipse: s-maj=65.2km s-min=17.4km az=177.0*
ISC 23 12:04:14.4±2.3, 12°.2N±0°.2×89°.31W±0°.09, h40km±13km, n25, σ1s22/26, mb4.0/8, MS2.9/2, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFRS	El Faro	1.44	10	*e*P	Pn	12 04 36.8	-1.2
BOQS	Boqueron	1.53	1	*e*P	Pn	12 04 38.0	-1.2
LBRS	Las Brisas	1.55	9	*e*P	Pn	12 04 38.6	-1.0
BLLM	Bellamira	1.62	40	*e*P	Pn	12 04 41.3	+0.8
SBLS	San Blas	1.66	349	*e*P	Pn	12 04 39.6	-1.5
SNJE	San Jose	1.69	350	*e*P	Pn	12 04 39.9	-1.5
SNJE				*e*S	Sn	12 05 04.5	+2.7
RTR	El Retiro	1.72	349	*e*P	Pn	12 04 41.4	-0.5
CNCH	Conchagua	1.79	53	*e*P	Pn	12 04 43.9	+1.1
CAHU	Cacacuatique	1.89	34	*e*P	Pn	12 04 44.9	+0.7
RBDL	Robledal	1.94	349	*e*P	Pn	12 04 44.0	-0.9
TGUH	Tegucigalpa,Un	2.71	47	*e*Pn	Pn	12 04 56.0	+0.5
APG	El Apazote	3.01	338	Pn	Pn	12 04 59.5	-0.1
	2.2nm,0.3s,baz=154,slow=9.8,SNR=21						
CMIG	Matias Romero	7.27	313	Pn	Pn	12 05 59.4	+1.3
	0.3nm,0.3s,baz=110,slow=5.9,SNR=8.2						
CMIG				Sn	Sn	12 07 27.7	+8.3
	0.4nm,0.3s,baz=270,slow=20,SNR=2.6						
CMIG	Matias Romero	7.27	313	Pn	Pn	12 05 59.4	+1.3
CMIG				Sn	Sn	12 07 27.7	+8.3
TEIG	Tepich	8.04	7	*e*Pn	Pn	12 06 11.1	+2.3
TXAR	Lajitas Array	21.66	324	P	P	12 09 03.7	+2.1
	1.5nm,0.7s,mb3.6,baz=143,slow=9.7,SNR=23						
MIAR	Mount Ida	22.58	351	*e*P	P	12 09 11.1	-0.3
	6.1nm,0.9s,mb4.0						
TKL	Tuckaleechee C	23.89	11	P	P	12 09 24.2	-0.2
	4.3nm,0.9s,mb3.9,baz=170,slow=10,SNR=4.2						
TKL				LR	LR	12 19 22.4	
	comp=Z,26nm,20.2s,MS2.7,baz=12,slow=39						
WMOK	Wichita Mounta	24.04	341	*e*P	P	12 09 24.5	-1.3
	3.1nm,0.8s,mb3.8						
CCM	Cathedral Cave	25.81	356	*e*P	P	12 09 41.6	-0.2
	7.0nm,0.6s,mb4.4						
AGMN	Agassiz Nation	36.40	353	*e*P	P	12 11 14.1	-0.9
	2.7nm,0.6s,mb4.3						
NVAR	Mina Array Bea	36.72	320	P	P	12 11 20.0	+2.3
	0.6nm,0.8s,mb3.5,baz=141,slow=10,SNR=4.5						
ULM	Lac du Bonnet	38.33	353	LR	LR	12 29 28.4	
	comp=Z,30nm,18.6s,MS3.1,baz=204,slow=40						
SCHQ	Schefferville	46.06	18	P	P	12 12 33.1	-1.0
	5.0nm,1.0s,mb4.4,baz=206,slow=6.9,SNR=7.2						
CMAR	Chiang Mai Arr	148.47	345	PKPbc	PKPbc	12 24 01.1	+3.4
	0.9nm,0.7s,baz=332,slow=3.2,SNR=4.7						

IDC 23 12:21:34.2±56.0, 19°.20S×174°.34W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/17, mbtmp3.9/3, Error ellipse: s-maj=1057.0km s-min=183.4km az=83.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	41.45	243	P	P	12 29 22.3	-0.6
	2.3nm,0.7s,baz=98,slow=6.7,SNR=4.3						
ASAR	Alice Springs	48.18	255	P	P	12 30 17.1	+0.4
	1.7nm,1.0s,baz=88,slow=8.6,SNR=11						
WRA	Warramunga Arr	48.21	260	P	P	12 30 16.9	-0.1
	0.9nm,0.8s,baz=97,slow=7.0,SNR=32						

IDC 23 12:28:51.8±6.8, 4°.87N×76°.59W, h116km±74km, mb2.9/2, mb1 3.5/3, mb1mx3.1/19, mbtmp3.1/3, Error ellipse: s-maj=99.9km s-min=31.2km az=49.0, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	El Rosal	2.25	90	P	Pn	12 29 28.1	-0.2
	68nm,0.3s,baz=93,slow=22,SNR=155						
ROSC				S	Sn	12 29 57.7	+1.5
	70nm,0.3s,baz=98,slow=17,SNR=15						
TXAR	Lajitas Array	35.33	317	P	P	12 35 37.7	+1.6
	0.3nm,0.6s,baz=125,slow=10,SNR=4.3						
NVAR	Mina Array Bea	50.48	317	P	P	12 37 37.2	-0.8
	0.3nm,0.7s,baz=146,slow=10,SNR=3.1						
ASAR	Alice Springs	145.18	235	PKPbc	PKPbc	12 48 15.4	-1.0
	0.5nm,0.8s,baz=113,slow=3.2,SNR=2.7						
WRA	Warramunga Arr	146.38	241	PKPbc	PKPbc	12 48 19.8	-0.4
	0.7nm,1.0s,baz=104,slow=3.0,SNR=6.0						

NIED ***23*** *12:32:00, 46°.60N×153°.60E, h14km, Mw5.5 Best double couple: M0 1.71000×10^17 NP1:φs226.00000°, δ76.00000°, λ157.00000°. NP2:φs322.00000°, δ68.00000°, λ15.00000°.*
ISCJB ***23*** *12:32:09.1±0.6, 46°.37N±0°.02×153°.34E±0°.02, h1km±3km, mb5.7/447, MS5.3/280, Error ellipse: s-maj=3.7km s-min=1.6km az=166.2*
IDC ***23*** *12:32:10.1±0.4, 46°.44N×153°.23E, h0km, mb5.5/24, mb1 5.6/27, mb1mx5.5/28, mbtmp5.5/27, ML4.4/3, MS5.3/27, Ms1 5.3/27, ms1mx5.2/38, Error ellipse: s-maj=14.3km s-min=11.7km az=137.0*
BJI ***23*** *12:32:10.1, 46°.51N×153°.20E, h6km, mB5.9/52, mb5.7/60, Ms5.6/72, Ms7 5.4/61*
JMA ***23*** *12:32:11.2±1.0, 46°.58N×153°.55E, h30km, M5.9*
NEIC ***23*** *12:32:12.5±0.1, 46°.48N×153°.27E, h10km, mb5.6/286, MS5.2/206, MW5.6, Error ellipse: s-maj=3.4km s-min=1.9km az=169.0, Moment Tensor Solution. s94 Moment tensor: Scale 10^17Nm; Mrr 1.78; Mθθ -1.50; Mφφ -0.28; Mrθ 0.70; Mrφ -1.21; Mθφ 1.82; Best double couple: M0 2.80000×10^17 NP1:φs34.00000°, δ68.00000°, λ67.00000°. NP2:φs263.00000°, δ31.00000°, λ135.00000°. Principal axes: T 2.8400, Plg59.0000°, Azm269.0000°; N -0.0200, Plg21.0000°, Azm42.0000°; P -2.8200, Plg20.0000°, Azm140.0000°;*
BGS ***23*** *12:32:13.8±1.5, 46°.72N×153°.31E, h10km±999km, mb5.6, MS5.2*
SKHL ***23*** *12:32:13.0±2.3, 46°.11N×153°.76E, h86km±11km, mb6.5/7, mbh6.5/4, Ms5.8/6*
MOS ***23*** *12:32:14.6±0.9, 46°.62N×153°.14E, h37km, mb5.8/144, MS5.4/96, Error ellipse: s-maj=7.5km s-min=6.7km az=80.8*
SZGRF ***23*** *12:32:16.6, 46°.15N×153°.06E, h33km, mb6.0, MS5.5, Kuril Islands, Russia*
GCMT ***23*** *12:32:17.8±0.1, 46°.41N×153°.51E, h14km, MW5.6, Moment Tensor Solution. s91,c178; s54,c60; Moment tensor: Scale 10^17Nm; Mrr 2.31±.03; Mθθ -0.50±.02; Mφφ -1.81±.03; Mrθ 0.76±.06; Mrφ -1.31±.02; Mθφ 1.26±.07; Best double couple: M0 2.90000×10^17 NP1:φs212.00000°, δ30.00000°, λ91.00000°. NP2:φs31.00000°, δ60.00000°, λ90.00000°. Principal axes: T 2.7200, Plg75.0000°, Azm300.0000°; N 0.3100, Plg0.0000°, Azm32.0000°; P -3.0200, Plg15.0000°, Azm122.0000°; Data Used: II IU IC G CN. Surface waves: sta=107, comp=239, per= 50.*
DJA ***23*** *12:32:47, 46°.08N×151°.96E, h270km, mb5.2/38*
ISC 23 12:32:12.7±0.7, 46°.47N±0°.02×153°.27E±0°.01, h10km±4km, h14km±1.5km: pP-P, n1880, σ0s80/1827, mb5.6/447, MS5.3/280, 371C-216D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.97	254	⇑*i*PN	Pn	12 33 14.5	+0.9
KUR				*e*S	Sn	12 34 01.5	+1.4
KUR				pmax	pmax		
	comp=N,2μm,0.5s						
KUR				pmax	pmax		
	comp=E,2μm,0.5s						
KUR				pmax	pmax		
	comp=Z,7μm,0.5s						
KUR				smax			
	comp=N,124μm,13.0s						
KUR				smax			
	comp=E,67μm,13.0s						
KUR	Kuril'sk	3.97	254	⇑*i*P	Pn	12 33 14.5	+0.9
KUR				AMB	AMB	12 33 18.5	
KUR				AMB	AMB	12 33 18.5	
	comp=E,2μm,0.5s						
KUR				AMB	AMB	12 33 18.5	
	comp=E,7μm,0.5s						
KUR				AMB	AMB	12 33 20.0	
	comp=E,37μm,6.4s						
KUR				AMB	AMB	12 33 20.0	
	comp=E,13μm,6.4s						
KUR				AMB	AMB	12 33 20.0	
	comp=E,34μm,6.4s						
KUR				*e*S	Sn	12 34 01.5	+1.4
KUR				A		12 34 34.0	
	comp=E,107μm,13.0s						
KUR				A		12 34 34.0	
	comp=E,53μm,13.0s						
KUR				A		12 34 34.0	
	comp=E,124μm,13.0s						
KUR				A		12 34 34.0	
	comp=E,67μm,13.0s						
KUR				AMS	AMS	12 35 16.0	
	comp=E,31μm,10.0s						
KUR				AMS	AMS	12 35 16.0	
	comp=E,39μm,10.0s						
KUR				AMS	AMS	12 35 16.0	
	comp=E,26μm,10.0s						
KUR				AMS	AMS	12 35 16.0	
	comp=E,39μm,10.0s						
KUR				AMS	AMS	12 35 16.0	
	comp=E,47μm,10.0s						
KUR				AMS	AMS	12 35 16.0	
	comp=E,39μm,10.0s						
SKR	Severo-Kuril's	4.62	23	*e*PN	Pn	12 33 23.3	+0.8
SKR				*i* S	Sn	12 34 14.0	-2.1
SKR				pmax	pmax		
	comp=N,300nm,0.5s						
SKR				pmax	pmax		
	comp=E,160nm,0.5s						
SKR				pmax	pmax		
	comp=Z,890nm,0.5s						
SKR				pmax	pmax		
	comp=N,6μm,4.0s						
SKR				pmax	pmax		
	comp=E,4μm,4.0s						
SKR				smax			
	comp=N,14μm,2.0s						
SKR				smax			
	comp=E,50μm,6.0s						
SKR				smax			
	comp=N,3μm,0.6s						
SKR				smax			
	comp=E,2μm,0.6s						
SKR				MLR	MLR		
	comp=E,62μm,14.0s						
SKR				MLR	MLR		
	comp=Z,30μm,14.0s						
SKR				MLR	MLR		
	comp=N,16μm,12.0s						
SKR	Severo-Kuril's	4.62	23	*e*P	Pn	12 33 23.3	+0.8
SKR				AMB	AMB	12 33 26.4	
	comp=N,300nm,0.5s						
SKR				AMB	AMB	12 33 26.4	
	comp=N,160nm,0.5s						
SKR				AMB	AMB	12 33 26.4	
	comp=N,890nm,0.5s						
SKR				AMB	AMB	12 33 27.0	
	comp=N,5μm,4.0s						
SKR				AMB	AMB	12 33 27.0	
	comp=N,6μm,4.0s						
SKR				AMB	AMB	12 33 27.0	
	comp=N,4μm,4.0s						
SKR				AMB	AMB	12 33 27.0	
	comp=N,5μm,4.0s						
SKR				AMB	AMB	12 33 27.0	
	comp=N,6μm,4.0s						
SKR				AMB	AMB	12 33 27.0	
	comp=N,4μm,4.0s						
SKR				*i* S	Sn	12 34 14.0	-2.1
SKR				A		12 34 22.0	
	comp=N,14μm,2.0s						
SKR				A		12 34 22.0	
	comp=N,50μm,6.0s						
SKR				A		12 34 22.0	
	comp=N,18μm,6.0s						
SKR				A		12 34 22.0	
	comp=N,50μm,6.0s						
SKR				A		12 34 22.0	
	comp=N,18μm,6.0s						
SKR				A		12 34 47.5	
	comp=N,3μm,0.6s						
SKR				A		12 34 47.5	
	comp=N,2μm,0.6s						
SKR				A		12 34 47.5	
	comp=N,1μm,0.6s						
SKR				AMS	AMS	12 35 22.0	
	comp=N,16μm,12.0s						
SKR				AMS	AMS	12 35 22.0	
	comp=N,62μm,14.0s						
SKR				AMS	AMS	12 35 22.0	
	comp=N,30μm,14.0s						
SKR				AMS	AMS	12 35 22.0	
	comp=N,61μm,14.0s						
SKR				AMS	AMS	12 35 22.0	
	comp=N,31μm,14.0s						
SKR				AMS	AMS	12 35 22.0	
	comp=N,14μm,12.0s						
YUK	Yuzh-Kuril'sk	5.77	248	⇑*i*PN	Pn	12 33 38.8	+0.6
YUK				pmax	pmax		
	comp=N,2μm,0.9s						
YUK				pmax	pmax		
	comp=E,1μm,0.9s						
YUK				pmax	pmax		
	comp=Z,2μm,0.9s						
YUK				pmax	pmax		
	comp=Z,9μm,1.2s						
YUK				MLR	MLR		
	comp=N,39μm,17.0s						
YUK				MLR	MLR		
	comp=E,10μm,17.0s						
YUK				MLR	MLR		
	comp=Z,23μm,17.0s						
YUK	Yuzh-Kuril'sk	5.77	248	*e*P	Pn	12 33 38.7	+0.5
YUK	Yuzh-Kuril'sk	5.77	248	⇑*i*P	Pn	12 33 38.8	+0.6
YUK				AMB	AMB	12 33 39.7	
	comp=Z,140nm,0.5s						
YUK				AMB	AMB	12 33 39.7	
	comp=Z,270nm,0.7s						
YUK				AMB	AMB	12 33 39.7	
	comp=Z,460nm,0.5s						
YUK				AMB	AMB	12 33 41.0	
	comp=Z,2μm,1.0s						
YUK				AMB	AMB	12 33 41.0	
	comp=Z,12μm,1.0s						
YUK				AMB	AMB	12 33 41.0	
	comp=Z,10μm,4.0s						
YUK				*i* S	Sn	12 34 44.3	-0.1

YUK			A		12 34 57.7
	comp=Z,25μm,2.0s				
YUK			A		12 34 57.7
	comp=Z,8μm,2.0s				
YUK			A		12 35 10.7
	comp=Z,15μm,0.8s				
YUK			A		12 35 10.7
	comp=Z,5μm,0.8s				
YUK			AMS	AMS	12 36 11.0
	comp=Z,37μm,13.0s				
YUK			AMS	AMS	12 36 11.0
	comp=Z,27μm,13.0s				
YUK			AMS	AMS	12 36 11.0
	comp=Z,32μm,20.0s				
NEM2	**Nemuro 2**	**6.18 243**	P	**Pn**	**12 33 42.0 -1.9**
NEM2			*e*S	**Sn**	**12 34 50.7 -3.8**
JRA	**Rausu**	**6.29 249**	P	**Pn**	**12 33 46.5 +1.1**
JNK	**Nakash**	**6.71 248**	P	**Pn**	**12 33 51.4 +0.2**
JAK	**Akkeshi**	**7.02 243**	P	**Pn**	**12 33 53.7 -1.8**
JTKR	**Abashiri--Toko**	**7.07 253**	⇑P	**Pn**	**12 33 57.2 +1.1**
PEA0B	**Petropavlovsk-**	**7.24 22**	*e*Pn	**Pn**	**12 33 59.1 +0.7**
PEA0B			*e*Sg	Sg	12 35 58.6 -6.2
PETK	**Petropavlovsk-**	**7.24 22**	Pn	**Pn**	**12 33 59.0 +0.7**
	comp=Z,12nm,0.3s,baz=179,slow=13,SNR=184				
PETK			LR	LR	12 36 32.2
	comp=Z,2μm,21.7s,baz=195,slow=36				
YSS	**Yuzh-Sakhalins**	**7.25 278**	*ce*PN	**Pn**	**12 34 02.0 +3.5**
YSS			*e*S	**Sn**	**12 35 24.0 +3.2**
YSS			pmax	pmax	
	comp=Z,110nm,1.0s				
YSS			smax		
	comp=N,410nm,0.6s				
YSS			MLR	MLR	
	comp=E,31μm,16.0s				
YSS			MLR	MLR	
	comp=Z,34μm,16.0s				
YSS			MLR	MLR	
	comp=N,10μm,14.0s				
YSS	**Yuzh-Sakhalins**	**7.25 278**	*e*Pn	**Pn**	**12 34 02.2 +3.7**
YSS	**Yuzh-Sakhalins**	**7.25 278**	⇑*i*P	**Pn**	**12 34 03.4 +4.9**
YSS			⇑*i*P		12 34 03.4
YSS			AMB	AMB	12 34 04.1
	comp=N,110nm,1.0s				
YSS			AMB	AMB	12 34 10.0
	comp=N,5μm,8.0s				
YSS			AMB	AMB	12 34 10.0
	comp=N,4μm,8.0s				
YSS			*e*S	**Sn**	**12 35 21.0 +0.2**
YSS			A		12 35 32.0
	comp=N,410nm,0.6s				
YSS			*e*LQ		12 35 45.0
YSS			*e*LR	LR	12 36 12.0
YSS			AMS	AMS	12 36 42.0
	comp=N,34μm,16.0s				
YSS			AMS	AMS	12 36 42.0
	comp=N,11μm,15.0s				
YSS			AMS	AMS	12 36 42.0
	comp=N,28μm,15.0s				
YSS			AMS	AMS	12 36 42.0
	comp=N,41μm,16.0s				
YSS			AMS	AMS	12 36 42.0
	comp=N,10μm,15.0s				
YSS			AMS	AMS	12 36 42.0
	comp=N,31μm,15.0s				
JMP	**Maruseppu**	**7.42 254**	P	**Pn**	**12 34 02.4 +1.5**
PET	**Petropavlovsk**	**7.43 26**	*c i*PN	**Pn**	**12 34 00.1 -0.9**
PET			pmax	pmax	
	comp=Z,600nm,5.0s				
PET			pmax	pmax	
	comp=Z,600nm,8.4s				
PET			pmax	pmax	
	comp=Z,656nm,1.3s				
PET			MLR	MLR	
	comp=Z,11μm,19.0s				
PET			MLR	MLR	
	comp=Z,13μm,13.0s				
PET	**Petropavlovsk**	**7.43 26**	*e*Pn	**Pn**	**12 34 00.2 -0.8**
PET			*e*Sn	**Sn**	**12 35 21.8 -3.4**
JAR	**Ashorobuto**	**7.46 248**	P	**Pn**	**12 34 01.6 +0.2**
JAR			*e*S	**Sn**	**12 35 26.7 +0.8**
JOB	**Onbets**	**7.61 245**	P	**Pn**	**12 34 03.5 0.0**
JSE	**Soyaes**	**7.63 262**	P	**Pn**	**12 34 07.8 +4.0**
JKK2	**Kamakawa 2**	**7.88 255**	P	**Pn**	**12 34 09.3 +2.1**
ASAJ	**Asahikawa**	**7.88 257**	P	**Pn**	**12 34 10.3 +3.0**
ASAJ	**Asahikawa**	**7.88 257**	Pn	**Pn**	**12 34 09.8 +2.5**
	comp=Z,18nm,0.3s,baz=92,slow=16,SNR=207				
ASAJ			LR	LR	12 36 53.7
	comp=Z,13μm,21.1s,baz=72,slow=36				
ASAJ	**Asahikawa**	**7.88 257**	PN	**Pn**	**12 34 09.8 +2.5**
ASAJ			pmax	pmax	
	comp=Z,18nm,0.3s				
ASAJ			MLR	MLR	
	comp=Z,13μm,21.1s				
ASAJ	**Asahikawa**	**7.88 257**	P	**Pn**	**12 34 09.9 +2.6**
UGL	**Uglegorsk**	**7.99 293**	*e*PN	**Pn**	**12 34 13.5 +4.8**
UGL			*e*S	**Sn**	**12 35 48.0 +9.0**
UGL			pmax	pmax	
	comp=E,494nm,1.0s				
UGL			pmax	pmax	
	comp=Z,1μm,1.0s				
UGL			pmax	pmax	
	comp=N,72nm,0.8s				
UGL			pmax	pmax	
	comp=N,4μm,5.0s				
UGL			pmax	pmax	
	comp=E,9μm,5.0s				
UGL			smax		
	comp=N,627nm,0.8s				
UGL			smax		
	comp=E,675nm,0.8s				
UGL			smax		
	comp=N,4μm,7.0s				
UGL			smax		
	comp=E,8μm,7.0s				
UGL			MLR	MLR	
	comp=N,12μm,12.0s				
UGL			MLR	MLR	
	comp=E,43μm,15.0s				
UGL	**Uglegorsk**	**7.99 293**	*e*P	**Pn**	**12 34 13.5 +4.8**
UGL			AMB	AMB	12 34 16.2
	comp=E,494nm,1.0s				
UGL			AMB	AMB	12 34 16.2
	comp=E,1μm,1.0s				
UGL			AMB	AMB	12 34 16.2
	comp=E,72nm,0.8s				
UGL			AMB	AMB	12 34 20.0
	comp=E,4μm,5.0s				
UGL			AMB	AMB	12 34 20.0
	comp=E,9μm,5.0s				
UGL			*e*S	**Sn**	**12 35 48.0 +9.0**
UGL			A		12 35 55.0
	comp=E,627nm,0.8s				
UGL			A		12 35 55.0
	comp=E,675nm,0.8s				
UGL			A		12 36 00.0
	comp=E,4μm,7.0s				
UGL			A		12 36 00.0
	comp=E,8μm,7.0s				
UGL			AMS	AMS	12 37 27.0
	comp=E,42μm,15.0s				
UGL			AMS	AMS	12 37 27.0
	comp=E,12μm,12.0s				
JWK2	**Keihoku**	**8.02 266**	P	**Pn**	**12 34 14.6 +5.5**
JCH	**Churui**	**8.06 245**	P	**Pn**	**12 34 09.3 -0.3**
JCH			*e*S	**Sn**	**12 35 36.5 -4.2**
JFR	**Furan**	**8.28 250**	P	**Pn**	**12 34 13.8 +1.1**
TYV	**Tymovskoe**	**8.29 306**	*e*P	**Pn**	**12 34 16.0 +3.2**
TYV			AMB	AMB	12 34 28.0
	comp=E,484nm,0.8s				
TYV			AMB	AMB	12 34 28.0
	comp=E,398nm,0.8s				
TYV			AMB	AMB	12 34 28.0
	comp=E,825nm,0.8s				
TYV			*e*S	**Sn**	**12 35 48.0 +1.7**
TYV			A		12 36 02.8
	comp=E,121nm,0.8s				
TYV			A		12 36 02.8
	comp=E,132nm,0.8s				
JAB	**Ashibetsu**	**8.37 253**	P	**Pn**	**12 34 16.3 +2.3**
JEM	**Erimo**	**8.51 242**	P	**Pn**	**12 34 16.3 +0.4**
JEM			*e*S	**Sn**	**12 35 50.6 -1.3**
ERM	**Erimo**	**8.51 242**	Pn	**Pn**	**12 34 17.2 +1.3**
	comp=E,6μm,0.7s,SNR=28				
ERM	**Erimo**	**8.51 242**	*e*Pn	**Pn**	**12 34 16.5 +0.5**
ERM			*e*Sn	**Sn**	**12 35 52.1 +0.2**
JBT2	**Biratori 2**	**8.61 249**	P	**Pn**	**12 34 17.4 +0.2**
JHR	**Hokuryu**	**8.61 256**	P	**Pn**	**12 34 20.2 +3.0**
JNBK	**Urakawa-nobuka**	**8.62 245**	P	**Pn**	**12 34 15.2 -2.1**
JEW	**Eniwo**	**9.17 251**	P	**Pn**	**12 34 26.4 +1.5**
JSK	**Shakotan**	**9.60 256**	P	**Pn**	**12 34 32.5 +1.7**
JNB	**Noboribetsu**	**9.61 250**	P	**Pn**	**12 34 30.7 -0.3**
JNB			*e*S	**Sn**	**12 36 15.3 -3.7**
OKH	**Okha**	**9.71 321**	*e*P	**Pn**	**12 34 37.1 +4.8**
OKH			⇑*i*P		12 34 37.2
OKH			AMB	AMB	12 34 39.3
	comp=E,300nm,1.0s				
OKH			AMB	AMB	12 34 41.6
	comp=E,13μm,4.4s				
OKH			AMB	AMB	12 34 41.6
	comp=E,10μm,4.4s				
OKH			AMB	AMB	12 34 41.6
	comp=E,8μm,5.6s				
OKH			*e*S	**Sn**	**12 36 30.4 +9.0**
OKH			*e*S	**Sn**	**12 36 30.5 +9.1**
OKH			A		12 36 35.6
	comp=E,4μm,6.0s				
OKH			*e*LQ		12 36 46.2
OKH			AMS	AMS	12 39 20.0
	comp=E,31μm,15.0s				
OKH			AMS	AMS	12 39 20.0
	comp=E,39μm,14.0s				
OKH			AMS	AMS	12 39 20.0
	comp=E,37μm,14.0s				
JKB	**Kayabe**	**9.91 247**	P	**Pn**	**12 34 32.9 -2.1**
JKB			*e*S	**Sn**	**12 36 18.7 -7.5**
JSH	**Shimam**	**10.18 253**	P	**Pn**	**12 34 39.5 +0.7**
JYM2	**Yakumo 2**	**10.22 249**	P	**Pn**	**12 34 38.3 -1.0**
JSR	**Shiriuchi**	**10.49 247**	P	**Pn**	**12 34 41.6 -1.4**
JSR			*e*S	**Sn**	**12 36 31.9 -8.6**
JANG	**Nango**	**10.49 239**	P	**Pn**	**12 34 39.6 -3.4**
JANG			*e*S	**Sn**	**12 36 29.6 -11**
JTM	**Tenmabayashi**	**10.51 242**	P	**Pn**	**12 34 40.7 -2.5**
JTM			*e*S	**Sn**	**12 36 32.0 -8.9**
NKL	**Nikolayevsk**	**10.52 314**	*i* P	**Pn**	**12 34 42.0 -1.4**
NKL			AMB	AMB	12 34 48.0
	comp=E,4μm,5.0s				
NKL			AMB	AMB	12 34 48.0
	comp=E,7μm,5.0s				
NKL			AMB	AMB	12 34 48.0
	comp=E,8μm,5.0s				
NKL			AMB	AMB	12 34 56.0
	comp=E,220nm,1.0s				
NKL			AMB	AMB	12 34 56.0
	comp=E,430nm,1.0s				
NKL			*e*L		12 37 29.0
NKL			AMS	AMS	12 39 54.0
	comp=E,47μm,15.0s				
NKL			AMS	AMS	12 39 54.0
	comp=E,16μm,15.0s				
NKL			AMS	AMS	12 39 54.0
	comp=E,50μm,15.0s				
JTH	**Tanohata**	**10.57 236**	P	**Pn**	**12 34 39.9 -4.2**
JTH			*e*S	**Sn**	**12 36 30.6 -12**
JOSM	**Okushiri--Mats**	**10.82 251**	P	**Pn**	**12 34 46.7 -0.8**
OFUJ	**Ofunato**	**11.27 233**	P	**Pn**	**12 34 50.0 -3.7**
OFUJ			*e*S	**Sn**	**12 36 47.9 -12**
JRG	**Rokugo**	**11.64 237**	P	**Pn**	**12 34 56.1 -2.7**
JRG			*e*S	**Sn**	**12 37 01.0 -7.7**
TEY	**Ternei**	**11.73 269**	*e*P	**Pn**	**12 35 03.3 +3.3**
TEY			AMB	AMB	12 35 05.0
	comp=E,86nm,1.0s				
TEY			AMB	AMB	12 35 05.0
	comp=E,65nm,1.0s				
TEY			AMB	AMB	12 35 05.0
	comp=E,8μm,6.0s				
TEY			AMB	AMB	12 35 05.0
	comp=E,7μm,6.0s				
TEY			AMB	AMB	12 35 05.0
	comp=E,1μm,5.0s				
TEY			AMB	AMB	12 35 05.0
	comp=E,17nm,1.0s				
JIO	**Ouri**	**11.89 232**	P	**Pn**	**12 34 57.9 -4.3**
HABR	**Khabarovsk**	**12.49 286**	*c i*PN	**Pn**	**12 35 14.1 +3.8**
HABR			*e*		12 37 34.0
HABR			pmax	pmax	
	comp=E,147nm,1.6s				
HABR			pmax	pmax	
	comp=Z,104nm,1.0s				
HABR			pmax	pmax	
	comp=N,7.0nm,0.8s				
HABR			MLR	MLR	
	comp=N,11μm,16.0s				
HABR			MLR	MLR	
	comp=Z,26μm,15.0s				
HABR			MLR	MLR	
	comp=E,23μm,14.0s				
JYA	**Atsumi**	**12.71 237**	P	**Pn**	**12 35 11.6 -1.8**
JFK	**Kawauchi**	**12.94 230**	*e*S	**Sn**	**12 37 27.1 -13**
JAW	**Awa shima**	**13.07 237**	P	**Pn**	**12 35 15.6 -2.7**
JFY	**Yanaizu**	**13.54 233**	P	**Pn**	**12 35 21.9 -2.9**
JFY			*e*S	**Sn**	**12 37 48.9 -6.3**
JSD	**Sado**	**13.93 238**	P	**Pn**	**12 35 26.7 -3.3**
JHK	**Hiroka**	**14.04 234**	P	**Pn**	**12 35 28.6 -2.9**
FX1	**Attu Island--F**	**14.37 56**	Pn	**Pn**	**12 35 31.6 -4.2**
	comp=E,12nm,0.3s,baz=249,slow=4.0,SNR=57				
FX1			Sn	**Sn**	**12 37 58.7 -16**
	comp=E,14nm,0.3s,baz=70,slow=20,SNR=8.8				
FX1			LR	LR	12 39 39.7
	comp=E,4μm,20.9s,baz=268,slow=31				
FX1			T		12 49 22.8
	comp=E,2.1nm,0.3s,baz=3.6,slow=18,SNR=2.7				
FX1	**Attu Island--F**	**14.37 56**	Pn	**Pn**	**12 35 31.6 -4.2**
FX1			Sn	**Sn**	**12 37 58.7 -16**
FX1			LR	LR	12 39 39.7
JAG	**Ashikaga**	**14.40 231**	P	**Pn**	**12 35 33.3 -3.2**
JJN	**Nakama**	**14.63 236**	P	**Pn**	**12 35 36.9 -2.6**
KLR	**Kul'dur**	**14.70 289**	*e*P	**Pn**	**12 35 39.8 -0.7**
KLR			pmax	pmax	
	comp=E,550nm,1.4s				
KLR			pmax	pmax	
	comp=Z,330nm,1.4s				
KLR			pmax	pmax	
	comp=E,5μm,9.0s				
KLR			pmax	pmax	
	comp=Z,8μm,9.0s				
KLR			MLR	MLR	
	comp=E,17μm,14.5s				
KLR			MLR	MLR	
	comp=Z,29μm,14.5s				
SMY	**Shemya**	**14.86 57**	*e*P	**Pn**	**12 35 39.3 -3.3**
SMY			pmax	pmax	
	comp=Z,85nm,0.5s				
SMY	**Shemya**	**14.86 57**	*e*P	**Pn**	**12 35 39.3 -3.3**
	comp=Z,85nm,0.5s				
MAJO	**Matsushiro**	**15.00 234**	*e*P	**Pn**	**12 35 41.2 -3.4**
MAJO			pmax	pmax	
	comp=Z,232nm,0.9s				
MAJO	**Matsushiro**	**15.00 234**	*e*Pn	**Pn**	**12 35 41.2 -3.4**
	comp=Z,232nm,0.9s				
MAT	**Matsushiro**	**15.00 234**	P	**Pn**	**12 35 41.2 -3.4**
MAT			S	**Sn**	**12 38 32.3 +1.6**
MJAR	**Matsushiro Arr**	**15.00 234**	Pn	**Pn**	**12 35 41.4 -3.2**
	comp=Z,1.1nm,0.3s,baz=31,slow=11,SNR=44				
JNG	**Nsakai**	**15.16 234**	P	**Pn**	**12 35 43.7 -3.0**
VLA	**Vladivostok**	**15.53 265**	*e*P	**Pn**	**12 35 49.8 -1.8**
VLA			*e*		12 38 40.6
VLA			pmax	pmax	
	comp=Z,64nm,0.9s				
VLA			MLR	MLR	
	comp=Z,12μm,19.0s				
VLA	**Vladivostok**	**15.53 265**	*e*P	**Pn**	**12 35 50.7 -0.9**
JGN	**Niukaw**	**15.73 235**	P	**Pn**	**12 35 52.0 -2.2**
JNY	**Yasuok**	**16.06 232**	P	**Pn**	**12 35 57.4 -1.0**
JYZW	**Yoshizawa**	**16.40 231**	P	**Pn**	**12 36 06.6 +3.8**
JSG	**Sagara**	**16.40 229**	P	**Pn**	**12 36 08.1 +5.3**
JAO	**Obara**	**16.45 233**	P	**Pn**	**12 36 01.8 -1.7**
HMMJ	**Hamamatsu 2**	**16.51 231**	P	**Pn**	**12 36 08.1 +3.9**
SEY	**Seymchan**	**16.51 359**	*c i*P	**Pn**	**12 36 02.8 -1.2**
SEY	**Seymchan**	**16.51 359**	⇑*i*P	**Pn**	**12 36 02.9 -1.1**
MDJ	**Mudanjiang**	**16.68 272**	P	**Pn**	**12 36 05.3 -1.0**
MDJ			pP	pP	12 36 10.8 -0.8
MDJ			sP	sP	12 36 12.1 -0.9
MDJ			S	**Sn**	**12 39 09.5 -1.9**
MDJ			PcP	PcP	12 40 55.4 0.0
MDJ			ScP	ScP	12 44 30.6 +0.8
MDJ			PcS	PcS	12 44 32.0 +0.9
MDJ			ScS	ScS	12 48 10.3 +1.3
MDJ			pmax	pmax	
	comp=Z,270nm,0.9s				
MDJ			pmax	pmax	
	comp=Z,2μm,12.6s				
MDJ			LR	LR	
	comp=N,8μm,14.5s				
MDJ			LR	LR	
	comp=E,3μm,22.3s				
MDJ			LR	LR	
	comp=Z,14μm,14.5s				
MDJ	**Mudanjiang**	**16.68 272**	*e*Pn	**Pn**	**12 36 06.4 +0.1**
	comp=Z,431nm,1.0s				
JHJ	**Hachijo jima 2**	**16.85 222**	Pn	**Pn**	**12 36 08.9 +0.3**
	comp=Z,4.8nm,0.3s,baz=264,slow=5.9,SNR=6.5				
JHJ			Sn	**Sn**	**12 38 59.4 -16**
	comp=Z,6.6nm,0.3s,baz=284,slow=19,SNR=3.5				
AMKA	**Amchitka**	**17.75 64**	*e*P	**Pn**	**12 36 20.2 +0.5**
	comp=Z,33nm,0.8s				
ZEA	**Zeya**	**18.14 303**	⇑*e*P	**Pn**	**12 36 22.4 -2.0**
ZEA			⇑*e*P		12 36 22.4
ZEA			AMB	AMB	12 36 29.6
	comp=Z,73nm,0.8s				
ZEA			AMB	AMB	12 36 29.6
	comp=Z,120nm,0.8s				
ZEA			AMB	AMB	12 36 29.6
	comp=Z,190nm,0.9s				
ZEA			AMB	AMB	12 36 30.0
	comp=Z,6μm,6.0s				
ZEA			AMB	AMB	12 36 30.0
	comp=Z,2μm,6.0s				
ZEA			AMB	AMB	12 36 30.0
	comp=Z,5μm,6.0s				
CN2	**Changchun**	**19.77 272**	*e*P	**Pn**	**12 36 40.5 -3.7**
CN2			*es*P	sP	12 36 48.8 +1.8
CN2			*e*S	**Sn**	**12 40 16.8 -9.3**
CN2			LR	LR	
	comp=N,9μm,17.0s				
CN2			LR	LR	
	comp=E,10μm,17.0s				
CN2			LR	LR	
	comp=Z,11μm,17.0s				
CLNS	**Chul'man**	**20.29 311**	*e*P	**P**	**12 36 47.4 -0.8**
CLNS			*e*		12 37 05.8
CLNS			*e*S	**S**	**12 40 35.9 +0.5**
CLNS			*e*		12 40 59.7
CLNS			*e*SS		12 41 15.1
CLNS			pmax	pmax	
	comp=Z,91nm,0.8s				
CLNS			pmax	pmax	
	comp=E,62nm,1.2s				
CLNS			pmax	pmax	
	comp=N,87nm,1.1s				
CLNS			pmax	pmax	
	comp=Z,70nm,1.3s				
CLNS			pmax	pmax	
	comp=E,104nm,1.2s				
CLNS			pmax	pmax	
	comp=N,101nm,1.1s				
CLNS			smax		
	comp=E,521nm,13.3s				
CLNS			smax		
	comp=N,432nm,13.3s				
CLNS			MLR	MLR	
	comp=N,15μm,17.0s,MS5.6				
CLNS			MLR	MLR	
	comp=Z,22μm,17.0s,MS5.6				
CLNS			MLR	MLR	
	comp=E,17μm,17.0s,MS5.6				
YAK	**Yakutsk**	**20.62 328**	*e*P	**P**	**12 36 51.9 +0.2**
YAK			*e*		12 37 11.3
YAK			*e*S	**S**	**12 40 41.3 -0.6**
YAK			*e*		12 41 02.9
YAK			*e*SS		12 41 05.2
YAK			*e*SSS		12 41 16.5
YAK			*e*		12 48 17.1
YAK			pmax	pmax	
	comp=Z,221nm,1.0s				
YAK			pmax	pmax	
	comp=E,69nm,1.0s				
YAK			pmax	pmax	
	comp=N,61nm,1.0s				
YAK			pmax	pmax	
	comp=Z,324nm,1.3s				
YAK			pmax	pmax	
	comp=N,199nm,1.3s				
YAK			pmax	pmax	
	comp=E,215nm,1.3s				
YAK			smax		
	comp=E,2μm,2.8s				
YAK			smax		
	comp=N,1μm,2.3s				
YAK			MLR	MLR	
	comp=Z,7μm,13.0s,MS5.2				
YAK			MLR	MLR	
	comp=E,5μm,13.0s,MS5.2				
YAK			MLR	MLR	
	comp=N,6μm,14.0s,MS5.2				
YAK	**Yakutsk**	**20.62 328**	*e*Pn	**P**	**12 36 51.6 -0.2**
	comp=N,251nm,0.8s				
YAK			LR	LR	
	comp=Z,6μm,19.0s,MS5.0				
KSRS	**Korea Array**	**20.82 253**	P	**P**	**12 36 54.7 +0.6**
	comp=Z,136nm,0.9s,baz=59,slow=10,SNR=170				
KSRS			PcP	PcP	12 41 01.4 -1.2
	comp=Z,7.6nm,0.9s,baz=316,slow=1.0,SNR=5.8				
KSRS			LR	LR	12 43 44.2
	comp=Z,5μm,21.6s,MS4.8,baz=64,slow=33				
KSRS	**Korea Array**	**20.82 253**	P	**P**	**12 36 54.7 +0.6**
KSRS					12 41 01.4
KSRS			pmax	pmax	
	comp=Z,136nm,0.9s				
KSRS			MLR	MLR	
	comp=Z,5μm,21.6s,MS4.8				
CBIJ	**Chichi jima**	**21.24 208**	P	**P**	**12 36 57.0 -1.7**
	comp=Z,149nm,0.9s,mb5.3,baz=240,slow=23,SNR=4.9				
INCN	**Inchon**	**21.66 255**	*e*P	**P**	**12 37 04.5 +1.3**
	comp=Z,444nm,0.9s,mb5.9				
INCN			LR	LR	
	comp=Z,4μm,19.0s,MS4.8				
INCN	**Inchon**	**21.66 255**	P	**P**	**12 37 04.9 +1.7**
	SNR=24				
INCN			P		12 37 04.9
	SNR=24				
JNU	**Nakatsue**	**21.67 240**	P	**P**	**12 37 04.6 +1.3**
SNY	**Shenyang**	**21.74 268**	⇑P	**P**	**12 37 03.6 -0.4**
SNY			S	**S**	**12 41 01.0 -3.2**
SNY			pmax	pmax	
	comp=Z,250nm,0.9s,mb5.6				
SNY			pmax	pmax	
	comp=Z,3μm,8.2s				
SNY			LR	LR	
	comp=E,8μm,16.5s				
SNY			LR	LR	
	comp=Z,8μm,17.6s,MS5.2				
HIA	**Hailar**	**22.56 289**	*e*P	**P**	**12 37 10.2 -2.5**
HIA			pmax	pmax	
	comp=Z,95nm,1.0s				
HIA			MLR	MLR	
	comp=Z,10μm,19.0s				
HIA	**Hailar**	**22.56 289**	*e*P	**P**	**12 37 10.2 -2.5**
	comp=Z,95nm,1.0s,mb5.2				
HIA			LR	LR	
	comp=Z,10μm,19.0s,MS5.3				
BILL	**Bilibino**	**22.64 13**	*c i*P	**P**	**12 37 11.4 -2.0**
BILL			*i*		12 37 17.1
BILL			*i*		12 37 28.5
BILL			*e*SS		12 41 58.3
BILL			MLR	MLR	
	comp=Z,7μm,14.0s,MS5.2				
BILL	**Bilibino**	**22.64 13**	*e*P	**P**	**12 37 11.8 -1.6**
	comp=Z,132nm,0.7s,mb5.5				
BILL			LR	LR	
	comp=Z,7μm,20.0s,MS5.1				
DL2	**Dalian**	**24.34 263**	P	**P**	**12 37 28.3 -2.1**
DL2			S	**S**	**12 41 45.9 -3.6**
DL2			pmax	pmax	
	comp=Z,190nm,1.0s,mb5.5				
DL2			pmax	pmax	
	comp=Z,2μm,6.5s				
DL2			LR	LR	
	comp=N,2μm,15.1s,MS4.8				
DL2			LR	LR	
	comp=E,1μm,17.8s,MS4.8				
DL2			LR	LR	
	comp=Z,2μm,15.5s,MS4.7				
SPIA	**Saint Paul Isl**	**24.67 51**	*e*P	**P**	**12 37 34.4 +1.2**
	comp=Z,263nm,1.0s,mb5.7				
GAMB	**Gambell**	**25.99 36**	*e*P	**P**	**12 37 46.9 +1.7**
	comp=Z,90nm,1.2s,mb5.2				
CIT	**Chita**	**26.27 297**	*e*P	**P**	**12 37 48.0 +0.2**

CIT e 12 37 55.8
CIT pmax pmax
comp=Z,160nm,3.2s
BJI Beijing 27.58 270 P **P** **12 38 00.3 +0.5**
BJI pP pP 12 38 02.8 -0.2
BJI sP sP 12 38 04.1 -0.2
BJI S **S** **12 42 41.4 +0.4**
BJI pmax pmax
comp=Z,34nm,0.8s,mb5.0
BJI pmax pmax
comp=Z,3μm,8.0s
BJI LR LR
comp=N,3μm,16.7s,MS5.5
BJI LR LR
comp=E,10μm,16.7s,MS5.5
BJI LR LR
comp=Z,6μm,17.8s,MS5.2
BJT Baijiatuau 27.60 270 *e*P **P** **12 38 00.4 +0.5**
BJT pmax pmax
comp=Z,264nm,0.8s
BJT MLR MLR
comp=Z,6μm,20.0s
BJT Baijiatuau 27.60 270 *e*P **P** **12 38 00.4 +0.5**
comp=Z,264nm,0.8s,mb5.9
BJT LR LR
comp=Z,6μm,20.0s,MS5.2
TIXI Tiksi 27.77 344*c i*P **P** **12 37 58.4 -2.7**
TIXI *e*S **S** **12 42 45.6 +2.3**
TIXI *e* 12 48 44.6
TIXI pmax pmax
comp=Z,36nm,0.7s,mb5.1
TIXI MLR MLR
comp=Z,9μm,14.0s,MS5.5
TIXI Tiksi 27.77 344 *e*P **P** **12 37 59.5 -1.7**
comp=Z,36nm,0.6s,mb5.2
TIXI *e*PcP PcP 12 41 17.1 0.0
TIXI LR LR
comp=Z,5μm,19.0s,MS5.1
JOW Kunigami 27.84 234 P **P** **12 38 02.4 +0.2**
TNA Tin City 28.21 33 *e*P **P** **12 38 08.6 +3.5**
comp=Z,83nm,0.8s,mb5.4
TIA Tai'an 28.78 262 *e*P **P** **12 38 11.0 +0.5**
TIA S **S** **12 43 00.3 +0.4**
TIA pmax pmax
comp=Z,73nm,0.8s,mb5.5
TIA LR LR
comp=N,1μm,13.0s,MS4.9
TIA LR LR
comp=E,2μm,17.0s,MS4.9
SSE Sheshan 29.10 250 *e*P **P** **12 38 10.5 -2.9**
SSE pP pP 12 38 13.6 -3.0
SSE S **S** **12 43 00.8 -4.2**
SSE ScS ScS 12 48 51.5 -5.0
SSE pmax pmax
comp=Z,21nm,0.7s,mb5.0
SSE pmax pmax
comp=Z,100nm,3.5s
SSE LR LR
comp=N,3μm,16.5s,MS5.0
SSE LR LR
comp=E,930nm,16.5s,MS5.0
SSE LR LR
comp=Z,3μm,18.6s,MS4.9
MIDW Midway 29.36 118 PFAKE 12 38 30.0 +14
MIDW LR LR
comp=Z,4μm,21.0s,MS5.0
NJ2 Nanjing 30.02 254 *e*P **P** **12 38 22.4 +0.9**
NJ2 pP pP 12 38 26.8 +2.1
NJ2 sP sP 12 38 29.1 +3.1
NJ2 PP PP 12 39 19.8 -9.4
NJ2 S **S** **12 43 11.0 -8.4**
NJ2 sS sS 12 43 24.5 -0.2
NJ2 SS SS 12 44 56.5 -30
NJ2 pmax pmax
comp=Z,70nm,0.9s,mb5.4
NJ2 pmax pmax
comp=Z,1μm,7.2s
NJ2 LR LR
comp=N,5μm,24.1s,MS5.3
NJ2 LR LR
comp=E,7μm,25.6s,MS5.3
NJ2 LR LR
comp=Z,7μm,26.3s,MS5.2
HHC Hu-ho-hao-te 30.42 275 *e*P **P** **12 38 25.3 +0.3**
HHC pP pP 12 38 29.8 +1.6
HHC sP sP 12 38 32.3 +2.8
HHC PP PP 12 39 24.8 -8.7
HHC PcP PcP 12 41 25.8 +1.5
HHC S **S** **12 43 24.3 -1.3**
HHC sS sS 12 43 32.3 +1.4
HHC ScP ScP 12 45 05.3 -1.3
HHC PcS PcS 12 45 07.4 -0.5
HHC ScS ScS 12 48 59.5 -3.0
HHC pmax pmax
comp=Z,200nm,0.7s,mb6.0
HHC pmax pmax
comp=Z,1μm,4.6s
HHC LR LR
comp=N,8μm,16.0s,MS5.6
HHC LR LR
comp=E,7μm,16.6s,MS5.6
HHC LR LR
comp=Z,9μm,16.1s,MS5.5
ULN Ulaanbaatar 31.09 290⇑ *i*P **P** **12 38 29.7 -1.1**
ULN Ulaanbaatar 31.09 290 *e*P **P** **12 38 30.1 -0.8**
ULN *e*PcP PcP 12 41 26.1 +0.1
ULN LR LR
comp=Z,8μm,19.0s,MS5.4
ULN Ulaanbaatar 31.09 290 P **P** **12 38 30.9 0.0**
SNR=47
ULN P 12 38 30.9
SNR=47
TIY Taiyuan 31.25 269 *e*P **P** **12 38 33.8 +1.5**
TIY PP PP 12 39 35.8 -6.9
TIY S **S** **12 43 38.9 +0.3**
TIY pmax pmax
comp=Z,1μm,5.2s
TIY LR LR
comp=N,1μm,12.0s,MS5.2
TIY LR LR
comp=E,4μm,17.0s,MS5.2
TIY LR LR
comp=Z,4μm,16.9s,MS5.2
SONM Songino Array 31.53 290 P **P** **12 38 33.9 -0.8**
comp=Z,27nm,0.8s,mb5.1,baz=69,slow=8.6,SNR=61
SONM PcP PcP 12 41 27.0 -0.2
comp=Z,17nm,0.8s,baz=131,slow=1.6,SNR=7.2
SONM LR LR 12 52 19.9
comp=Z,11μm,18.2s,MS5.6,baz=71,slow=38
SONM Songino Array 31.53 290 P **P** **12 38 33.9 -0.8**
SONM 12 41 27.0
SONM pmax pmax
comp=Z,27nm,0.8s
SONM MLR MLR
comp=Z,11μm,18.2s
BTO Baotou 31.59 275 *e*P **P** **12 38 35.3 0.0**
IRK Irkutsk 31.93 299 *e*P **P** **12 38 36.2 -1.9**
IRK *e* 12 39 54.1
IRK pmax pmax
comp=Z,62nm,0.9s,mb5.4
TLY Talaya 32.41 298 P **P** **12 38 41.0 -1.3**
comp=Z,473nm,0.8s,mb6.4,SNR=38
TLY Talaya 32.41 298*c i*P **P** **12 38 41.6 -0.7**
TLY *e* 12 39 44.5
TLY pmax pmax
comp=Z,74nm,0.9s,mb5.5
TLY MLR MLR
comp=Z,15μm,15.0s,MS5.8
TLY Talaya 32.41 298 *e*P **P** **12 38 41.6 -0.7**
TLY *e*PcP PcP 12 41 29.7 +0.3
TLY LR LR
comp=Z,10μm,19.0s,MS5.5
TLY Talaya 32.41 298 P **P** **12 38 42.0 -0.3**
SNR=32
TLY P 12 38 42.0
SNR=32
TTA Tatalina 32.56 41 *e*P **P** **12 38 44.5 +0.9**
SVW2 Sparrevohn 32.62 45 *e*P **P** **12 38 45.0 +0.9**
ZAK Zakamensk 32.90 295⇑ *i*P **P** **12 38 46.2 -0.4**
ZAK *e* 12 40 08.2
ZAK *e* 12 41 30.2
ZAK pmax pmax
comp=Z,38nm,1.1s,mb5.2
TATO Taipei 33.21 241 PFAKE 12 39 00.0 +10
TATO LR LR
comp=Z,3μm,20.0s,MS5.0
YHNB Yeheng 33.50 241 *e*P **P** **12 38 53.1 +1.0**
comp=Z,23nm,0.8s,mb5.2
YHNB LR LR
comp=Z,3μm,19.0s,MS5.1
GUMO Guam 33.53 195 PFAKE 12 39 00.0 +7.6
GUMO LR LR
comp=Z,2μm,21.0s,MS4.7
OHAK Old Harbor 33.87 52 *e*P **P** **12 38 55.2 +0.2**
comp=Z,111nm,1.6s,mb5.5
WHN Wuhan 33.97 256⇑ P **P** **12 38 56.5 +0.3**
WHN pP pP 12 39 06.0 +6.6
WHN S **S** **12 44 13.8 -7.2**
WHN pmax pmax
comp=Z,240nm,0.9s,mb6.1
WHN pmax pmax
comp=Z,2μm,4.7s
WHN LR LR
comp=N,3μm,15.8s,MS5.6
WHN LR LR
comp=E,8μm,14.4s,MS5.6
WHN LR LR
comp=Z,9μm,15.2s,MS5.6
RSO Redoubt South 33.99 46 *e*P **P** **12 38 57.7 +1.7**
MOY Mondy 34.03 298 *e*P **P** **12 38 55.2 -1.3**
MOY pmax pmax
comp=Z,68nm,2.1s,mb5.2
KDAK Kodiak Island 34.20 51 LR LR 12 52 55.2
comp=Z,3μm,21.6s,MS5.0,baz=255,slow=36
KDAK Kodiak Island 34.20 51 *i* P **P** **12 38 57.4 -0.5**
KDAK Kodiak Island 34.20 51 *e*P **P** **12 38 56.8 -1.1**
comp=Z,47nm,0.7s,mb5.5
KDAK LR LR
comp=Z,3μm,21.0s,MS5.1
CHUM Lake Minchumin 34.30 40 *e*P **P** **12 38 59.8 +1.0**
comp=Z,39nm,0.9s,mb5.3
PPLA Purkeypile 34.30 41 *e*P **P** **12 38 59.6 +0.9**
comp=Z,235nm,1.4s,mb5.9
SSLB Suanglung 34.42 240 *e*P **P** **12 38 60.0 -0.2**
comp=Z,32nm,0.8s,mb5.3
YULB Yu-li 34.51 239 *e*P **P** **12 39 00.3 -0.7**
comp=Z,44nm,0.8s,mb5.4
BPAW Bear Paw Mtn. 34.91 39 *e*P **P** **12 39 04.1 +0.2**
comp=Z,46nm,0.9s,mb5.4
TPUB Ta-pu 34.98 240 *e*P **P** **12 39 04.8 -0.2**
comp=Z,158nm,1.0s,mb5.9
QZH Quanzhou 35.01 244⇑ *i*P **P** **12 39 06.4 +1.2**
QZH PP PP 12 40 26.1 +1.6
QZH S **S** **12 44 40.5 +3.4**
QZH pmax pmax
comp=Z,170nm,1.0s,mb5.9
QZH pmax pmax
comp=Z,3μm,7.0s
QZH LR LR
comp=N,6μm,20.4s,MS5.5
QZH LR LR
comp=E,6μm,19.3s,MS5.5
QZH LR LR
comp=Z,4μm,19.7s,MS5.2
TWG Pinlang 35.08 239 *e*P **P** **12 39 06.9 +1.0**
comp=Z,168nm,1.0s,mb5.9
TRF Thorofare Moun 35.19 41 *e*P **P** **12 39 06.9 +0.5**
comp=Z,37nm,0.9s,mb5.3
RC01 Rabbit Creek A 35.45 45 *e*P **P** **12 39 08.2 -0.4**
comp=Z,28nm,0.8s,mb5.2
RC01 *e*PcP PcP 12 41 37.8 -0.2
COLD Coldfoot 35.51 34 *e*P **P** **12 39 09.6 +0.5**
comp=Z,38nm,0.7s,mb5.4
XAN Xi'an 35.60 266 P **P** **12 39 10.6 +0.3**
XAN pP pP 12 39 17.3 +3.8
XAN sP sP 12 39 20.9 +6.1
XAN PP PP 12 40 30.3 -0.7
XAN PcP PcP 12 41 39.8 +0.9
XAN S **S** **12 44 40.8 -5.3**
XAN ScS ScS 12 49 27.8 -1.6
XAN pmax pmax
comp=Z,380nm,8.4s
XAN LR LR
comp=N,2μm,15.8s,MS5.1
XAN LR LR
comp=E,1μm,15.5s,MS5.1
XAN LR LR
comp=Z,1μm,16.0s,MS4.8
SEW Seward 35.65 46 *e*P **P** **12 39 09.8 -0.5**
comp=Z,61nm,1.0s,mb5.5
PMR Palmer 35.73 44 *e*P **P** **12 39 11.3 +0.3**
PMR pmax pmax
comp=Z,30nm,1.0s,mb5.2
PMR Palmer 35.73 44 *e*P **P** **12 39 11.3 +0.3**
comp=Z,30nm,1.0s,mb5.2
MCK McKinley 35.80 40 *e*P **P** **12 39 11.5 -0.1**
MCK pmax pmax
comp=Z,65nm,1.0s,mb5.5
MCK McKinley 35.80 40 *e*P **P** **12 39 11.5 -0.1**
comp=Z,64nm,1.0s,mb5.5
COLA College 36.29 38 *e*P **P** **12 39 16.1 +0.3**
COLA pmax pmax
comp=Z,82nm,0.9s,mb5.7
COLA MLR MLR
comp=Z,2μm,19.0s,MS4.9
COLA College 36.29 38 *e*P **P** **12 39 16.1 +0.2**
comp=Z,82nm,0.9s,mb5.7
COLA LR LR
comp=Z,2μm,19.0s,MS4.9
DIV Divide 37.37 44 *e*P **P** **12 39 24.9 -0.2**
comp=Z,76nm,0.9s,mb5.5
PAX Paxson 37.38 41 *e*P **P** **12 39 25.0 -0.1**
PAX pmax pmax
comp=Z,38nm,1.1s,mb5.1
PAX Paxson 37.38 41 *e*P **P** **12 39 25.0 -0.1**
comp=Z,38nm,1.1s,mb5.1
ENH Enshi 37.42 260 *e*P **P** **12 39 25.8 0.0**
comp=Z,80nm,0.8s,mb5.6
ENH LR LR
comp=Z,2μm,20.0s,MS4.9
BMRM Bremner River 37.96 45 *e*P **P** **12 39 30.2 +0.2**
comp=Z,116nm,1.1s,mb5.5
LZH Lanzhou 38.01 272⇑ P **P** **12 39 32.4 +1.7**
LZH pP pP 12 39 36.0 +2.0
LZH sP sP 12 39 37.6 +2.4
LZH PP PP 12 40 56.0 -1.4
LZH S **S** **12 45 12.3 -10**
LZH pmax pmax
comp=Z,530nm,1.1s,mb6.2
LZH pmax pmax
comp=Z,2μm,4.0s
LZH LR LR
comp=N,6μm,14.3s
LZH LR LR
comp=Z,7μm,17.7s,MS5.5
MENT Mentasta 38.18 41 *e*P **P** **12 39 32.5 +0.7**
GTA Gaotai 39.12 279⇑ P **P** **12 39 41.1 +1.0**
GTA pP pP 12 39 45.3 +2.0
GTA sP sP 12 39 47.6 +3.0
GTA PP PP 12 41 14.3 +4.7
GTA PcP PcP 12 41 51.0 +1.5
GTA S **S** **12 45 38.9 -0.6**
GTA sS sS 12 45 45.8 +0.9
GTA SS SS 12 48 19.9 -12
GTA ScS ScS 12 49 49.9 +0.8
GTA pmax pmax
comp=Z,170nm,1.0s,mb5.7
GTA pmax pmax
comp=Z,2μm,6.3s
GTA LR LR
comp=N,4μm,15.2s,MS5.5
GTA LR LR
comp=E,4μm,14.1s,MS5.5
GTA LR LR
comp=Z,5μm,13.8s,MS5.5
EGAK Eagle 39.16 38 *e*P **P** **12 39 39.5 -0.5**
comp=Z,76nm,0.9s,mb5.4
EGAK *e*ScP ScP 12 45 38.0 +0.6
EGAK LR LR
comp=Z,1μm,20.0s,MS4.8
GZH Guangzhou 39.66 248 P **P** **12 39 34.4 -10**
GZH S S 12 45 25.6 -22
GZH LR LR
comp=N,4μm,17.1s,MS5.4
GZH LR LR
comp=E,3μm,17.6s,MS5.4
GZH LR LR
comp=Z,5μm,17.5s,MS5.4
HKC Hong Kong Obse 39.70 246 P **P** **12 39 44.0 -1.0**
PNL Peninsula 40.72 46 *e*P **P** **12 39 53.0 -0.1**
comp=Z,43nm,1.0s,mb5.0
CD2 Chengdu 40.97 266⇑ *i*P **P** **12 39 55.9 +0.5**
CD2 pP pP 12 40 00.3 +1.6
CD2 sP sP 12 40 02.9 +2.9
CD2 PP PP 12 41 33.4 +3.6
CD2 PcP PcP 12 41 57.3 +1.7
CD2 PcS PcS 12 45 47.0 +0.4
CD2 S **S** **12 46 06.1 -1.2**
CD2 sS sS 12 46 13.5 +0.9
CD2 SS SS 12 49 02.1 -6.8
CD2 ScS ScS 12 49 58.5 -1.8
CD2 pmax pmax
comp=Z,250nm,0.9s,mb5.8
CD2 pmax pmax
comp=Z,3μm,6.8s
CD2 LR LR
comp=N,3μm,16.6s,MS5.3
CD2 LR LR
comp=E,2μm,16.6s,MS5.3
CD2 LR LR
comp=Z,4μm,16.7s,MS5.3
GYA Guiyang 41.76 258⇑ *i*P **P** **12 40 02.5 +0.5**
GYA PP PP 12 41 42.1 +3.6
GYA PcP PcP 12 42 01.0 +2.8
GYA ScP ScP 12 45 49.8 +1.5
GYA S **S** **12 46 18.5 -0.7**
GYA SS SS 12 49 18.0 -6.8
GYA pmax pmax
comp=Z,50nm,0.9s,mb5.1
GYA pmax pmax
comp=Z,210nm,5.8s
GYA LR LR
comp=N,4μm,18.0s,MS5.4
GYA LR LR
comp=E,3μm,16.1s,MS5.4
GYA LR LR
comp=Z,4μm,18.0s,MS5.4
JOHN Johnston Islan 42.75 121 PFAKE 12 40 20.0 +10
JOHN LR LR
comp=Z,3μm,22.0s,MS5.2
SKAG Skagway 42.78 45 *e*P **P** **12 40 11.0 +1.0**
comp=Z,32nm,0.8s,mb5.1
ZAA0 Zalesovo Array 42.87 306 *e*P **P** **12 40 09.0 -1.7**
ZAA0 *e*PcP PcP 12 42 01.5 +0.1
ZALV Zalesovo Beam 42.87 306 P **P** **12 40 08.1 -2.6**
comp=Z,42nm,0.8s,mb5.2,baz=61,slow=7.5,SNR=142
ZALV PcP PcP 12 42 01.6 +0.2
comp=Z,57nm,0.9s,baz=78,slow=2.1,SNR=16
ZALV ScP ScP 12 45 52.6 +0.3
comp=Z,3.2nm,0.9s,baz=46,slow=4.2,SNR=2.9
ZALV LR LR 12 59 12.1
comp=Z,9μm,19.0s,MS5.7,baz=75,slow=38
NVS Novosibirsk 43.45 308 *i* P **P** **12 40 13.5 -1.9**
NVS *i* 12 42 01.1
NVS pmax pmax
comp=N,96nm,2.0s
NVS pmax pmax
comp=Z,166nm,2.0s,mb5.4
NVS pmax pmax
comp=E,91nm,1.5s
SIT Sitka 43.47 49 *e*P **P** **12 40 14.9 -0.7**
SIT pmax pmax
comp=Z,47nm,1.0s,mb5.2
SIT Sitka 43.47 49 *e*P **P** **12 40 14.9 -0.7**
comp=Z,47nm,1.0s,mb5.2
QIZ Qiongzhong 44.84 247 P **P** **12 40 27.3 +0.4**
QIZ pP pP 12 40 31.1 +0.9
QIZ S **S** **12 47 06.3 +1.9**
QIZ sS sS 12 47 12.9 +3.2
QIZ pmax pmax
comp=Z,30nm,1.1s,mb5.0
QIZ pmax pmax
comp=Z,910nm,8.3s
QIZ LR LR
comp=N,3μm,18.2s,MS5.2
QIZ LR LR
comp=E,960nm,18.6s,MS5.2
QIZ LR LR
comp=Z,2μm,19.1s,MS5.1
QIZ Qiongzhong 44.84 247 *e*P **P** **12 40 28.2 +1.3**
comp=Z,34nm,1.0s,mb5.1
QIZ LR LR
comp=Z,2μm,19.0s,MS5.1
WMQ Urumqi 45.13 292 P **P** **12 40 29.0 0.0**
WMQ sP sP 12 40 36.0 +2.4
WMQ PP PP 12 42 15.0 +0.7
WMQ S **S** **12 47 07.0 -1.1**
WMQ SS SS 12 50 20.0 -10
WMQ pmax pmax
comp=Z,100nm,1.0s,mb5.6
WMQ pmax pmax
comp=Z,4μm,5.0s
WMQ LR LR
comp=N,5μm,15.0s,MS5.7
WMQ LR LR
comp=E,4μm,15.0s,MS5.7
WMQ LR LR
comp=Z,5μm,15.0s,MS5.6
KMI Kunming 45.30 260⇑ P **P** **12 40 31.3 +0.7**
KMI pP pP 12 40 34.5 +0.7
KMI sP sP 12 40 35.8 +0.7
KMI PcP PcP 12 42 11.8 +1.6
KMI PP PP 12 42 17.8 +1.4
KMI ScP ScP 12 46 03.0 +0.3
KMI PcS PcS 12 46 04.3 0.0
KMI S **S** **12 47 10.6 -0.3**
KMI sS sS 12 47 15.9 -0.4
KMI SS SS 12 50 24.3 -10
KMI ScS ScS 12 50 25.6 -1.8
KMI pmax pmax
comp=Z,190nm,0.9s,mb5.9
KMI pmax pmax
comp=Z,1μm,6.9s
KMI LR LR
comp=N,3μm,16.2s,MS5.4
KMI LR LR
comp=E,2μm,15.7s,MS5.4
KMI LR LR
comp=Z,3μm,18.1s,MS5.3
DAV Davao City (W) 45.91 220 PFAKE 12 40 50.0 +15
DAV LR LR
comp=Z,1μm,20.0s,MS4.9
KIP Kipapa 46.58 105 *e*P **P** **12 40 41.9 +1.2**
KIP Kipapa 46.58 105 PFAKE 12 40 50.0 +9.3
KIP LR LR
comp=Z,2μm,21.0s,MS5.1
MK31 Makanchi Array 47.17 298 *e*P **P** **12 40 44.0 -1.0**
MK31 *e* 12 42 16.3
MKAR Makanchi Array 47.17 298 P **P** **12 40 43.9 -1.1**
comp=Z,168nm,0.8s,mb6.0,baz=66,slow=7.8,SNR=593
MKAR PcP PcP 12 42 15.7 -0.7
comp=Z,26nm,0.8s,baz=60,slow=7.2,SNR=3.9
MKAR ScP ScP 12 46 10.3 +0.2
comp=Z,2.9nm,0.9s,baz=65,slow=8.1,SNR=3.9
MKAR LR LR 13 01 44.8
comp=Z,14μm,18.0s,MS6.0,baz=72,slow=38
MKAR P4KPbc 13 18 25.2
comp=Z,0.3nm,0.7s,baz=63,slow=3.0,SNR=3.7
MKAR Makanchi Array 47.17 298 P **P** **12 40 43.9 -1.1**
MKAR 12 42 15.7
MKAR pmax pmax
comp=Z,169nm,0.8s
MKAR MLR MLR
comp=Z,14μm,18.0s
MKAR Makanchi Array 47.17 298 P **P** **12 40 43.9 -1.1**
MKAR PcP PcP 12 42 15.7 -0.7
MKAR ScP ScP 12 46 10.3 +0.2
MKAR LR LR 13 01 44.8
KURK Kurchatov 47.61 304 LR LR 13 02 06.3
comp=Z,8μm,18.1s,MS5.7,baz=65,slow=38
KURK PKPPKP 13 11 51.7
comp=Z,0.3nm,0.8s,baz=322,slow=4.6,SNR=3.9
KURK P4KPbc 13 18 28.7
comp=Z,0.4nm,0.5s,baz=70,slow=3.6,SNR=3.7
KURK Kurchatov 47.61 304 *e*P **P** **12 40 46.9 -1.5**
KURK pmax pmax
comp=Z,214nm,0.8s,mb6.2
KURK MLR MLR
comp=Z,9μm,19.0s,MS5.8
KURK Kurchatov 47.61 304 *e*P **P** **12 40 46.9 -1.5**
comp=Z,214nm,0.8s,mb6.2
KURK LR LR
comp=Z,9μm,19.0s,MS5.8
KURK Kurchatov 47.61 304 P **P** **12 40 47.5 -0.9**
SNR=74
KURK P 12 40 47.5

SNR=74
POHA Pohakuloa 49.40 105 *e*P **P 12 41 01.9 -0.6**
comp=Z,181nm,0.8s,mb6.2
POHA LR LR
comp=Z,2μm,21.0s,MS5.2
KHU Kahuku 49.70 105 *e*P **P 12 41 04.2 -0.6**
ALE Alert 50.01 6 P **P 12 41 06.0 -0.5**
comp=Z,508nm,1.4s,mb6.4,SNR=13
LSA Lhasa 50.40 273 P **P 12 41 12.5 +2.5**
LSA PP PP 12 43 04.8 -0.7
LSA S **S 12 48 21.3 -1.9**
LSA ScS ScS 12 50 58.3 -2.9
LSA pmax pmax
comp=Z,40nm,0.9s,mb5.5
LSA pmax pmax
comp=Z,1μm,8.0s
LSA LR LR
comp=N,1μm,17.1s,MS5.3
LSA LR LR
comp=E,2μm,18.6s,MS5.3
LSA LR LR
comp=Z,3μm,18.6s,MS5.3
MYLDM Lahad Datu 50.93 227 P **P 12 41 13.9 -0.2**
YKA Yellowknife Ar 51.09 37 P **P 12 41 14.0 -0.8**
comp=Z,42nm,0.7s,mb5.5,baz=296,slow=7.1,SNR=6.6
YKA Yellowknife Ar 51.09 37 P **P 12 41 14.0 -0.8**
YKA pmax pmax
comp=Z,42nm,0.7s
YKA Yellowknife Ar 51.09 37 P **P 12 41 14.0 -0.8**
BVAR Borovoye Array 51.12 310 P **P 12 41 13.4 -1.8**
comp=Z,69nm,0.8s,mb5.7,baz=54,slow=7.7,SNR=17
BVAR PcP PcP 12 42 30.9 +0.2
comp=Z,30nm,0.8s,baz=120,slow=2.3,SNR=7.9
BVAR P4KPbc 13 18 48.8
comp=Z,1.0nm,0.7s,baz=88,slow=7.6,SNR=4.5
BVAR Borovoye Array 51.12 310 P **P 12 41 13.4 -1.8**
BVAR PcP PcP 12 42 30.9 +0.2
BRVK Borovoye 51.16 310 P **P 12 41 14.7 -0.8**
comp=Z,954nm,0.7s,SNR=33
BRVK Borovoye 51.16 310 *c i*P **P 12 41 14.5 -1.0**
BRVK pmax pmax
comp=Z,141nm,0.8s,mb6.0
BRVK MLR MLR
comp=Z,9μm,20.0s,MS5.8
BRVK Borovoye 51.16 310 *e*P **P 12 41 14.4 -1.1**
comp=Z,124nm,0.8s,mb5.9
BRVK *e*PcP PcP 12 42 30.9 +0.1
BRVK LR LR
comp=Z,6μm,19.0s,MS5.7
BRVK Borovoye 51.16 310 P **P 12 41 14.9 -0.5**
SNR=55
BRVK P 12 41 14.9
SNR=55
SDKM Sandakan 51.20 229 P **P 12 41 15.7 -0.5**
KKM Kota Kinabalu 51.38 230 P **P 12 41 18.0 +0.5**
KKM Kota Kinabalu 51.38 230 PFAKE 12 41 30.0 +12
KKM LR LR
comp=Z,1μm,20.0s,MS4.9
TSM Tawau 52.00 227 P **P 12 41 22.2 0.0**
CHTO Chiang Mai 52.16 257 *e*P **P 12 41 24.1 +0.7**
CHTO MLR MLR
comp=Z,2μm,19.0s,MS5.2
CHTO Chiang Mai 52.16 257 P **P 12 41 24.9 +1.6**
SNR=46
CHTO P 12 41 24.9
SNR=46
AAA Alma-Ata 52.20 296 *i* P **P 12 41 23.2 -0.2**
AAA *e*S **S 12 48 46.3 -1.4**
AAA pmax pmax
comp=Z,1μm,10.1s
AAA smax
comp=E,500nm,10.0s
AAA MLR MLR
comp=Z,11μm,15.0s,MS6.0
CM31 Chiang Mai Arr 52.41 257 *e*P **P 12 41 26.3 +1.1**
comp=Z,80nm,0.8s,mb5.7
CM31 LR LR
comp=Z,2μm,19.0s,MS5.2
CMAR Chiang Mai Arr 52.41 257 P **P 12 41 25.6 +0.3**
comp=Z,75nm,0.8s,mb5.7,baz=35,slow=7.6,SNR=166
CMAR Chiang Mai Arr 52.41 257 P **P 12 41 25.6 +0.4**
CMAR pmax pmax
comp=Z,75nm,0.8s
SHL Shillong 52.47 269 *i* P **P 12 41 26.5 +0.9**
SHL *ex* x 12 48 48.5
KBS Kingsbay 52.79 351 ⇑*i*P **P 12 41 26.6 -0.7**
KBS *e*S **S 12 48 55.9 +0.9**
KBS AMS AMS 13 10 27.4
comp=Z,2μm,13.9s,MS5.2
KBS Kingsbay 52.79 351 *c i*P **P 12 41 26.6 -0.7**
KBS pmax pmax
comp=Z,80nm,1.0s,mb5.6
KBS Kingsbay 52.79 351 *e*P **P 12 41 27.1 -0.3**
comp=Z,86nm,1.1s,mb5.6
KBS LR LR
comp=Z,2μm,19.0s,MS5.1
ULHL Ulahol 53.18 295 P **P 12 41 31.5 +0.8**
SNR=14
TKM2 Tokmak 2 53.22 296 P **P 12 41 31.3 +0.4**
SNR=88
TKM2 Tokmak 2 53.22 296 *e*P **P 12 41 31.2 +0.3**
TKM2 pmax pmax
comp=Z,87nm,0.9s,mb5.7
TKM2 MLR MLR
comp=Z,6μm,22.0s,MS5.6
TKM2 Tokmak 2 53.22 296 *e*P **P 12 41 31.2 +0.3**
comp=Z,87nm,0.9s,mb5.7
TKM2 LR LR
comp=Z,6μm,22.0s,MS5.6
CHMS Chumysh 53.70 297 P **P 12 41 34.9 +0.4**
SNR=27
USP Ospenovka 53.71 297 P **P 12 41 34.9 +0.3**
SNR=107
KBK Karagaybulak 53.77 296 P **P 12 41 35.8 +0.8**
SNR=64
FRU Bishkek 53.87 297 ⇑*i*P **P 12 41 35.0 -0.7**
FRU pmax pmax
comp=Z,160nm,1.6s,mb5.7
KZA Kyzart 53.89 296 P **P 12 41 37.2 +1.3**
SNR=164
NLWA Neilton Lookou 53.94 57 ⇓P **P 12 41 36.3 +0.2**
baz=54,SNR=9.1
NLWA ⇑S **S 12 49 12.0 +0.6**
baz=54
NLWA Neilton Lookou 53.94 57 *e*P **P 12 41 36.6 +0.4**
comp=Z,36nm,1.0s,mb5.3
NLWA LR LR
comp=Z,769nm,20.0s,MS4.8
AAK Ala-Archa 54.06 297 P **P 12 41 37.8 +0.7**
comp=Z,1μm,0.9s,SNR=64
AAK Ala-Archa 54.06 297 P **P 12 41 37.4 +0.3**
SNR=103
A05A Maple Falls 54.11 54 ⇑P **P 12 41 36.6 -0.8**
baz=54
A05A ⇑S **S 12 49 12.5 -1.1**
baz=54
SVE Sverdlovsk 54.11 317 ⇓*e*P **P 12 41 36.5 -0.8**
SVE *e* 12 42 47.2
SVE *e*S **S 12 49 12.3 -1.1**
SVE *e* 12 51 19.4
SVE pmax pmax
comp=Z,122nm,0.9s,mb5.8
SVE MLR MLR
comp=Z,5μm,14.0s,MS5.7
TAPN Taplejung 54.22 274 *e*P **P 12 41 39.6 +1.1**
comp=Z,444nm,0.8s,mb6.4
UCH Uchtor 54.27 296 P **P 12 41 39.8 +1.2**
SNR=26
UCH Uchtor 54.27 296 *e*P **P 12 41 39.4 +0.7**
comp=Z,26nm,0.9s,mb5.2
UCH LR LR
comp=Z,5μm,21.0s,MS5.5
SOKR Solikamsk 54.38 322 *c i*P **P 12 41 38.5 -0.7**
SOKR S **S 12 49 30.5 +13**
SOKR pmax pmax
comp=Z,80nm,1.1s,mb5.6
SOKR MLR MLR
comp=Z,5μm,19.0s,MS5.6
GNW Green Mountain 54.45 56 P **P 12 41 41.0 +1.1**
comp=Z,3.7nm,0.8s
EKS2 Erkin-Say 54.48 297 P **P 12 41 40.3 +0.1**
SNR=133
EKS2 Erkin-Say 54.48 297 *e*P **P 12 41 40.1 0.0**
comp=Z,166nm,0.8s,mb6.0
EKS2 LR LR
comp=Z,8μm,19.0s,MS5.8
JCW Jim Creek 54.62 55 P **P 12 41 41.4 +0.3**

B06A Marblemount 54.70 54 ⇑P **P 12 41 41.6 0.0**
baz=54
B06A ⇓S **S 12 49 20.3 -1.3**
baz=54
RPW Rockport 54.72 54 *e*P **P 12 41 41.2 -0.6**
comp=Z,2.9nm,0.7s
ODAN Odare 54.75 273 *e*P **P 12 41 43.4 +1.0**
comp=Z,252nm,0.9s,mb6.2
AML Almayashu 54.83 296 P **P 12 41 43.7 +1.0**
SNR=108
AML Almayashu 54.83 296 *e*P **P 12 41 43.4 +0.7**
comp=Z,106nm,0.9s,mb5.9
AML LR LR
comp=Z,7μm,19.0s,MS5.8
KSH Kashi 54.86 293 ⇑*i*P **P 12 41 47.1 +4.1**
KSH pP pP 12 41 51.6 +5.3
KSH sP sP 12 41 54.0 +6.4
KSH PcP PcP 12 42 47.9 +2.8
KSH PP PP 12 43 52.0 +6.5
KSH ScP ScP 12 46 44.6 +1.2
KSH PcS PcS 12 46 46.4 +1.6
KSH S **S 12 49 27.3 +3.3**
KSH sS sS 12 49 35.8 +6.3
KSH ScS ScS 12 51 32.3 +0.2
KSH SS SS 12 53 12.1 +5.3
KSH pmax pmax
comp=Z,86nm,0.8s,mb5.8
KSH pmax pmax
comp=Z,890nm,3.7s
KSH LR LR
comp=N,2μm,13.4s,MS5.5
KSH LR LR
comp=E,1μm,10.8s,MS5.5
KSH LR LR
comp=Z,2μm,15.0s,MS5.3
F03A Seaside 54.91 58 ⇑P **P 12 41 43.7 +0.5**
baz=55
JIRN Jiri 55.08 275 *e*P **P 12 41 45.9 +1.2**
comp=Z,594nm,0.8s,mb6.7
D05A Enumclaw 55.13 56 ⇓P **P 12 41 45.4 +0.6**
baz=55
D05A ⇑S **S 12 49 27.6 +0.2**
baz=55
GUN Gumba 55.13 275 *e*P **P 12 41 46.0 +0.9**
comp=Z,546nm,1.0s,mb6.5
RAMN Ramite 55.24 274 *e*P **P 12 41 46.6 +0.7**
comp=Z,1μm,0.8s
ARU Arti 55.29 318 P **P 12 41 44.5 -1.3**
comp=Z,966nm,0.7s,SNR=34
ARU Arti 55.29 318 *c i*P **P 12 41 44.5 -1.3**
ARU *e* 12 42 47.1
ARU *e* 12 43 45.6
ARU *e*PPP 12 44 58.3
ARU S **S 12 49 28.7 -0.6**
ARU 12 51 30.5
ARU SS SS 12 53 10.7 -2.2
ARU pmax pmax
comp=Z,114nm,0.7s,mb6.0
ARU MLR MLR
comp=Z,4μm,16.0s,MS5.6
ARU Arti 55.29 318 *e*P **P 12 41 44.4 -1.5**
comp=Z,115nm,0.8s,mb6.0
ARU LR LR
comp=Z,4μm,19.0s,MS5.6
PNT Penticton 55.30 53 P **P 12 41 45.8 -0.2**
BTM Bintulu 55.44 231 P **P 12 41 47.8 +0.4**
BJO Bjornoya 55.47 346 AMS AMS 13 10 51.1
comp=Z,3μm,10.4s,MS5.7
LON Longmire 55.47 56 *e*P **P 12 41 49.9 +2.6**
LON pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
LON Longmire 55.47 56 *e*P **P 12 41 49.9 +2.6**
comp=Z,6.9nm,0.8s,mb4.7
F04A Amboy 55.57 57 ⇓P **P 12 41 48.1 +0.1**
baz=55
F04A ⇑S **S 12 49 33.3 0.0**
baz=55
KKN Kakani 55.62 276 *e*P **P 12 41 49.6 +1.0**
comp=Z,487nm,0.8s,mb6.6
KKN Kakani 55.62 276 *e*P **P 12 41 49.6 +1.0**
KKN pmax pmax
comp=Z,487nm,0.8s,mb6.6
PKI Pulchoki 55.67 275 *e*P **P 12 41 49.8 +0.8**
comp=Z,263nm,0.9s,mb6.3
PKI Pulchoki 55.67 275 *e*P **P 12 41 50.3 +1.3**
PKI pmax pmax
comp=Z,405nm,0.7s,mb6.6
PKI Pulchoki 55.67 275 *e*P **P 12 41 50.3 +1.3**
comp=Z,405nm,0.7s,mb6.6
PKIN Phulchoki 55.68 275 *e*P **P 12 41 50.3 +1.3**
comp=Z,405nm,0.7s,mb6.6
COR Corvallis 55.80 59 *e*P **P 12 41 51.0 +1.3**
COR pmax pmax
comp=Z,43nm,0.9s,mb5.5
COR MLR MLR
comp=Z,1μm,21.0s,MS5.0
COR Corvallis 55.80 59 *e*P **P 12 41 51.0 +1.3**
comp=Z,42nm,0.9s,mb5.5
COR LR LR
comp=Z,1μm,21.0s,MS5.0
ETW Entiat 55.84 55 P **P 12 41 50.7 +0.7**
DMN Daman 55.85 276 *e*P **P 12 41 51.5 +1.2**
comp=Z,647nm,0.8s,mb6.7
TBM Table Mountain 55.94 55 P **P 12 41 51.2 +0.6**
G04A Mulino 55.94 58 ⇓P **P 12 41 50.7 +0.1**
baz=56
G04A ⇑S **S 12 49 38.6 +0.3**
baz=56
HNR Honiara 55.96 172 PFAKE 12 42 00.0 +9.0
HNR LR LR
comp=Z,1μm,19.0s,MS5.1
B08A Colville Reser 55.99 53 ⇓P **P 12 41 50.4 -0.6**
baz=56,SNR=12
WTV Waterville 56.01 54 P **P 12 41 51.8 +0.8**
H04A Detroit Lake 56.41 58 ⇓P **P 12 41 54.3 +0.3**
baz=56
SBUM Sibu 56.53 232 P **P 12 41 55.7 +0.5**
E07A Sunnyside 56.70 56 ⇓P **P 12 41 56.0 0.0**
baz=56
IRO Indian Ridge 56.75 59 P **P 12 41 57.5 +1.0**
DAG Danmarks Havn 56.93 358 ⇓*i*P **P 12 41 56.8 -0.5**
DAG pmax pmax
comp=Z,150nm,1.0s,mb6.0
DAG Danmarks Havn 56.93 358 ⇓*i*P **P 12 41 56.8 -0.5**
comp=Z,154nm,1.0s,mb6.0
CROR Criterion Ridg 56.94 58 P **P 12 41 58.5 +0.8**
RSW Rattlesnake Hi 56.94 56 *e*P **P 12 41 58.7 +0.9**
comp=Z,36nm,0.9s,mb5.4
D08A Wollman Farm, 56.95 55 ⇓P **P 12 41 57.8 0.0**
baz=57
HAWA Hanford 56.98 56 *e*P **P 12 41 58.2 +0.2**
comp=Z,13nm,0.8s,mb5.0
HAWA LR LR
comp=Z,755nm,19.0s,MS4.8
G06A Carlson Farm, 57.00 57 ⇑P **P 12 41 58.5 +0.3**
baz=57
F07A Phinny Hill Vi 57.03 56 ⇑P **P 12 41 58.3 -0.1**
baz=57
LVZ Lovozero 57.07 337 P **P 12 41 57.3 -1.0**
comp=Z,367nm,0.8s,mb6.5,SNR=12
LVZ Lovozero 57.07 337 *c i*P **P 12 41 57.9 -0.4**
LVZ pmax pmax
comp=Z,58nm,0.8s,mb5.7
LVZ MLR MLR
comp=Z,4μm,17.0s,MS5.6
HUMO Hull Mountain 57.13 61 *e*P **P 12 42 00.8 +1.7**
comp=Z,28nm,1.3s,mb5.1
HUMO LR LR
comp=Z,1μm,19.0s,MS5.0
E08A Dider Farm, El 57.19 55 ⇓P **P 12 41 59.4 -0.1**
baz=57
NEW Newport 57.26 53 *e*P **P 12 41 59.9 -0.1**
NEW pmax pmax
comp=Z,25nm,1.0s
NEW MLR MLR
comp=Z,1μm,21.0s
NEW Newport 57.26 53 *e*P **P 12 41 59.9 -0.1**
comp=Z,24nm,1.0s,mb5.2
NEW LR LR
comp=Z,1μm,21.0s,MS5.0
APA Apatity 57.64 337 ⇑*i*P **P 12 42 02.4 0.0**
APA *i* 12 42 50.0
APA *i* 12 44 06.0
APA *i* S **S 12 49 58.0 -2.1**
APA *i* PS 12 50 16.0
APA pmax pmax
comp=Z,49nm,1.0s,mb5.5
APA MLR MLR
comp=Z,4μm,17.0s,MS5.5
KEV Kevo 57.65 341 *e*P **P 12 42 01.4 -1.0**
comp=Z,36nm,0.7s,mb5.5
KEV LR LR
comp=Z,3μm,19.0s,MS5.4
KEV Kevo 57.65 341 *ep* **P 12 42 01.4 -1.0**
comp=Z,36nm,0.7s,mb5.5
KEV Kevo 57.65 341 *ep* **P 12 42 01.4 -1.0**
comp=Z,36nm,0.7s,mb5.5
A12A Yaak River Ran 57.68 51 ⇓P **P 12 42 02.8 -0.1**
baz=57
E09A Wood Farm, Sta 57.69 55 ⇓P **P 12 42 03.2 +0.1**
baz=58
YBH Yreka Blue Hor 57.78 62 LR LR 13 02 44.6
comp=Z,935nm,21.7s,MS4.9,baz=306,slow=32
YBH Yreka Blue Hor 57.78 62 *e*P **P 12 42 04.5 +0.7**
YBH pmax pmax
comp=Z,14nm,0.8s
YBH MLR MLR
comp=Z,812nm,21.0s
YBH Yreka Blue Hor 57.78 62 *e*P **P 12 42 04.5 +0.7**
comp=Z,14nm,0.8s,mb5.0
YBH LR LR
comp=Z,812nm,21.0s,MS4.8
JOSI Joshimath 57.81 282 *e*PKP **P 12 42 04.4 +0.3**
G08A Pilot Rock 57.94 56 ⇓P **P 12 42 05.1 +0.3**
baz=58,SNR=11
C11A Tepee Creek (N 57.98 53 ⇓P **P 12 42 04.7 -0.3**
baz=58
PTH Pithoragarh 57.98 281 *e*PKP **P 12 42 06.0 +0.6**
PTH *ex* x 12 45 45.2
LNOR Lincton Mounta 57.99 55 *e*P **P 12 42 06.3 +1.2**
LNOR pmax pmax
comp=Z,19nm,1.0s,mb5.1
LNOR Lincton Mounta 57.99 55 *e*P **P 12 42 06.3 +1.2**
comp=Z,19nm,1.0s,mb5.1
KLP Kalpa 58.09 284 *e*PKP **P 12 42 07.3 +1.3**
ARCES ARCESS Array B 58.16 341 P **P 12 42 05.4 -0.6**
comp=Z,47nm,0.8s,mb5.6,baz=35,slow=7.4,SNR=95
ARCES LR LR 13 12 54.0
comp=Z,3μm,18.1s,MS5.5,baz=15,slow=42
ARE0 ARCESS Array S 58.16 341 *e*P **P 12 42 06.3 +0.3**
K05A Summer Lake 58.30 60 ⇑P **P 12 42 07.8 +0.4**
baz=58,SNR=18
KSM Kuching 58.39 233 P **P 12 42 09.3 +1.0**
KSM Kuching 58.39 233 *e*P **P 12 42 08.9 +0.6**
comp=Z,41nm,0.8s,mb5.5
KSM LR LR
comp=Z,537nm,21.0s,MS4.6
H08A Prairie City 58.55 57 ⇑P **P 12 42 09.3 +0.2**
baz=58,SNR=23
WDC Whiskeytown Da 58.56 63 *e*P **P 12 42 09.6 +0.3**
WDC pmax pmax
comp=Z,11nm,0.7s,mb5.0
WDC MLR MLR
comp=Z,639nm,20.0s,MS4.7
WDC Whiskeytown Da 58.56 63 *e*P **P 12 42 09.6 +0.4**
comp=Z,10nm,0.7s,mb5.0
WDC LR LR
comp=Z,639nm,20.0s,MS4.7
G09A Cove 58.62 56 ⇓P **P 12 42 09.5 -0.1**
baz=58,SNR=9.7
B13A Whitefish 58.64 51 ⇑P **P 12 42 09.8 +0.1**
baz=58,SNR=42
ABKAR Akbulak array 58.69 310 *e*P **P 12 42 08.9 -1.1**
comp=Z,80nm,0.7s,mb5.9
BSMT Bassoo Peak 58.78 52 *e*P **P 12 42 11.4 +0.8**
comp=Z,27nm,1.0s,mb5.2
A14A Double T Ranch 58.85 50 ⇓P **P 12 42 11.1 0.0**
baz=59,SNR=23
D12A Red Ives Fores 58.94 53 ⇓P **P 12 42 11.6 -0.2**
baz=59
SDNR Sundarnagar 58.96 284 *e*PKP **P 12 42 13.0 +0.8**
DDI Dehra Dun 58.97 283 *e*PKP **P 12 42 12.0 -0.2**
G10A Bishop Farm, J 58.99 55 ⇑P **P 12 42 12.5 +0.4**
baz=59,SNR=34
C13A Hot Springs 58.99 52 ⇑P **P 12 42 12.5 +0.4**
baz=59,SNR=15
AKTO Aktyubinsk 59.00 312 LR LR 13 10 08.0
comp=Z,12μm,18.1s,MS6.1,baz=229,slow=39
H09A Durkee 59.05 56 ⇓P **P 12 42 13.3 +0.8**
baz=59
SMLA Simla 59.06 284 *i* P **P 12 42 13.4 +0.5**
KTK1 Kautokeino 59.07 341 *e*P **P 12 42 12.8 +0.4**
JTMT Jette 59.11 52 *e*P **P 12 42 13.3 +0.3**
comp=Z,16nm,0.9s,mb5.0
MOD Modoc 59.14 60 *e*P **P 12 42 13.5 +0.2**
comp=Z,22nm,0.8s,mb5.2
MOD LR LR
comp=Z,1μm,19.0s,MS5.0
BMO Blue Mountains 59.14 56 *e*P **P 12 42 13.6 +0.4**
comp=Z,18nm,0.9s,mb5.1
HOPS Hopland 59.18 64 PFAKE 12 42 30.0 +16
HOPS LR LR
comp=Z,1μm,19.0s,MS5.1
F11A Grangeville 59.18 54 ⇓P **P 12 42 13.1 -0.4**
baz=59,SNR=17
YBMT Yellow Bay 59.19 52 *e*P **P 12 42 14.5 +1.0**
comp=Z,14nm,0.9s,mb5.0
A15A Johnson Ranch, 59.21 50 ⇑P **P 12 42 13.1 -0.5**
baz=59,SNR=24
THN Thein Dam 59.22 286 *ex* x 12 42 11.7
B14A Marquette Ranc 59.29 51 ⇓P **P 12 42 14.2 0.0**
baz=59,SNR=20
J08A Circle Bar Ran 59.35 58 ⇓P **P 12 42 14.8 +0.1**
baz=59,SNR=14
BHK Bhakra 59.39 285 *ex* x 12 42 13.0
D13A Huson 59.41 52 ⇑P **P 12 42 15.0 0.0**
baz=59,SNR=22
G11A Walters Elk Ra 59.41 55 ⇓P **P 12 42 15.2 +0.1**
baz=59,SNR=27
SWMT Swartz Lake 59.41 52 *e*P **P 12 42 15.4 +0.4**
comp=Z,28nm,1.2s,mb5.2
I09A Lost Marbles R 59.42 57 ⇓P **P 12 42 15.4 +0.3**
baz=59,SNR=10
FUNA Funafuti 59.44 150 PFAKE 12 42 30.0 +14
FUNA LR LR
comp=Z,7μm,20.0s,MS5.8
TRO Tromso 59.48 343 *e*P **P 12 42 14.9 -0.3**
TRO AMb AMB 12 42 16.8
comp=Z,144nm,1.7s,mb5.7
TRO *e*S **S 12 50 25.5 +1.5**
TRO AMS AMS 13 12 13.6
comp=Z,2μm,19.2s,MS5.3
TRO Tromso 59.48 343 *e*P **P 12 42 14.9 -0.3**
TRO pmax pmax
comp=Z,144nm,1.7s,mb5.7
TRO MLR MLR
comp=Z,2μm,19.2s,MS5.3
TRO Tromso 59.48 343 *e*P **P 12 42 14.9 -0.3**
comp=Z,144nm,1.7s,mb5.7
TRO LR LR
comp=Z,2μm,19.2s,MS5.3
H10A Noah's Angus R 59.62 56 ⇑P **P 12 42 16.5 0.0**
baz=59,SNR=22
B15A Bradely Ranch, 59.70 50 ⇓P **P 12 42 16.6 -0.4**
baz=60,SNR=7.1
F12A Elk City 59.77 54 ⇑P **P 12 42 17.8 +0.3**
baz=60,SNR=47
J09A Fry Pan Ranch, 59.78 58 ⇑P **P 12 42 18.1 +0.4**
baz=60,SNR=16
MCCM Marconi Confer 59.81 65 PFAKE 12 42 30.0 +12
MCCM LR LR
comp=Z,1μm,20.0s,MS5.0
WVOR Wild Horse Val 59.81 59 *e*P **P 12 42 18.1 +0.2**
WVOR pmax pmax
comp=Z,22nm,0.9s,mb5.2
WVOR MLR MLR
comp=Z,1μm,21.0s,MS4.9
WVOR Wild Horse Val 59.81 59 *e*P **P 12 42 18.1 +0.2**
comp=Z,22nm,0.9s,mb5.2
WVOR LR LR
comp=Z,1μm,21.0s,MS4.9
SLMT Seeley Lake 59.84 52 *e*P **P 12 42 17.7 -0.3**
comp=Z,36nm,0.8s,mb5.5
MSO Missoula 59.85 52 *e*P **P 12 42 18.2 +0.2**
comp=Z,30nm,1.0s,mb5.3
MSO LR LR
comp=Z,547nm,22.0s,MS4.7
I10A Payette 59.89 56 ⇓P **P 12 42 18.8 +0.4**
baz=60
D14A Greenough 59.93 52 ⇓P **P 12 42 18.8 +0.2**
baz=60,SNR=48
E13A Victor 59.95 53 ⇓P **P 12 42 18.5 -0.2**
baz=60,SNR=9.7

H11A Donnelly 59.97 55 ⇑P P 12 42 18.9 0.0
baz=60,SNR=43
C15A Salmond Ranch, 60.00 51 ⇓P P 12 42 19.5 +0.4
baz=60,SNR=54
KKR Kurukshetra 60.02 283 *e*PKP **P 12 42 19.7 +0.1**
B16A M & M Farms, S 60.09 50 ⇓P P 12 42 19.4 -0.3
baz=60,SNR=11
CHMT Chamberlain Mo 60.17 52 *e*P **P 12 42 20.2 -0.1**
comp=Z,13nm,0.8s,mb5.0
F13A Darby 60.26 54 ⇑P P 12 42 20.5 -0.4
baz=60,SNR=21
J10A Berg Farm, Mel 60.31 57 ⇓P P 12 42 20.9 -0.3
baz=60
BEKR Beckworth 60.33 62 ⇓P P 12 42 21.9 +0.5
baz=60,SNR=20
E14A Clinton 60.34 53 ⇓P P 12 42 21.5 +0.1
baz=60,SNR=15
C16A Fuhringer Ranc 60.45 51 ⇑P P 12 42 22.2 +0.1
baz=60,SNR=13
I11A Placerville 60.48 56 ⇓P P 12 42 22.3 -0.1
baz=60
BISR Bishrakh 60.49 281 *e*PKP **P 12 42 23.6 +0.9**
D15A Lincoln 60.49 52 ⇓P P 12 42 22.6 +0.1
baz=60,SNR=12
NDI New Delhi 60.56 282 *e*PKP **P 12 42 21.0 -2.2**
NDI *ex* x 12 50 35.0
K10A MacKenzie Ranc 60.64 58 ⇓P P 12 42 24.0 +0.5
baz=60,SNR=23
B17A L&G Farms, Che 60.65 50 ⇓P P 12 42 23.2 -0.3
baz=60,SNR=24
H12A Diamond D Ranc 60.72 55 ⇓P P 12 42 23.9 -0.1
baz=60,SNR=17
G13A Cobalt 60.74 54 ⇑P P 12 42 24.0 -0.2
baz=60,SNR=51
AYAN Aya Nagar 60.75 282 *e*PKP **P 12 42 24.9 +0.4**
A18A Metzger Ranch, 60.76 49 ⇑P P 12 42 23.9 -0.3
baz=60,SNR=9.5
F14A Wisdom 60.78 53 ⇓P P 12 42 24.5 +0.1
baz=60
E15A Deer Lodge 60.81 52 ⇓P P 12 42 24.5 -0.1
baz=61,SNR=31
COEN Coen 60.83 191 *e*P **P 12 42 25.5 +0.5**
COEN Coen 60.83 191 *e*P **P 12 42 25.6 +0.6**
comp=Z,170nm,1.0s,mb6.1
MFID Camas Ranch 60.86 57 ⇓P P 12 42 25.2 +0.2
baz=61,SNR=6.8
FFC Flin Flon 60.89 40 P **P 12 42 25.2 +0.2**
comp=Z,440nm,0.9s,mb6.6,SNR=40
FFC Flin Flon 60.89 40 *i P* **P 12 42 25.5 +0.5**
FFC Flin Flon 60.89 40 *e*P **P 12 42 25.3 +0.3**
comp=Z,67nm,0.9s,mb5.8
FFC LR LR
comp=Z,1μm,19.0s,MS5.1
SONA Sohna 60.93 281 *e*PKP **P 12 42 26.3 +0.6**
SUMG Summit 60.98 4 *e*P **P 12 42 26.1 +0.7**
comp=Z,26nm,1.9s,mb5.0
SUMG Summit 60.98 4⇑ *i P* **P 12 42 26.0 +0.6**
comp=Z,436nm,0.9s,mb6.6
SUMG *i* S **S 12 50 41.5 -1.6**
D16A Dana Ranch, Ca 61.02 51 ⇑P P 12 42 26.0 -0.1
baz=61,SNR=43
I12A Atlanta 61.02 56 ⇑P P 12 42 26.2 0.0
baz=61,SNR=32
WCN Washoe City 61.04 62 ⇓P P 12 42 26.6 +0.2
baz=61,SNR=17
KULM Kulim 61.05 245 P **P 12 42 28.1 +1.5**
KULM Kulim 61.05 245 *e*P **P 12 42 26.9 +0.3**
comp=Z,35nm,0.9s,mb5.5
KULM LR LR
comp=Z,1μm,19.0s,MS5.1
H13A Challis 61.05 55 ⇓P P 12 42 26.3 0.0
baz=61,SNR=48
HRY Holter Researc 61.07 52 *e*P **P 12 42 27.2 +0.8**
comp=Z,22nm,0.7s,mb5.4
G14A Jackson 61.08 54 ⇓P P 12 42 26.4 0.0
baz=61
B18A Beardsley Farm 61.12 49 ⇑P P 12 42 26.3 -0.4
baz=61,SNR=30
K11A Parker Ranch, 61.13 57 ⇑P P 12 42 26.8 -0.1
baz=61,SNR=21
F15A Butte 61.25 53 ⇓P P 12 42 27.5 -0.1
baz=61,SNR=46
E16A East Helena 61.26 52 ⇓P P 12 42 27.9 +0.1
baz=61,SNR=19
LRM Limekiln Ridge 61.28 53 *e*P **P 12 42 28.6 +0.7**
comp=Z,320nm,1.0s,mb6.4
L10A Juniper Basin 61.30 58 ⇑P P 12 42 28.2 +0.1
baz=61,SNR=14
EGMT Eagleton 61.36 49 ⇑P P 12 42 27.8 -0.5
baz=61,SNR=28
EGMT Eagleton 61.36 49 *e*P **P 12 42 28.6 +0.2**
comp=Z,30nm,0.8s,mb5.5
EGMT LR LR
comp=Z,1μm,22.0s,MS5.0
J12A Stokes Ranch, 61.38 56 ⇓P P 12 42 28.8 +0.3
baz=61,SNR=29
D17A Six Diamond Ra 61.41 51 ⇓P P 12 42 28.6 -0.1
baz=61,SNR=35
CMB Columbia Colle 61.43 64 *e*P **P 12 42 28.8 -0.2**
CMB pmax pmax
comp=Z,13nm,0.8s,mb5.1
CMB MLR MLR
comp=Z,847nm,19.0s,MS4.9
CMB Columbia Colle 61.43 64 *e*P **P 12 42 28.8 -0.2**
comp=Z,13nm,0.8s,mb5.1
CMB LR LR
comp=Z,847nm,19.0s,MS4.9
IPM Ipoh 61.45 244 P **P 12 42 30.5 +1.2**
DLMT Dillon 61.49 53 *e*P **P 12 42 29.6 +0.3**
comp=Z,82nm,1.5s,mb5.6
H14A Leadore 61.52 54 ⇓P P 12 42 28.8 -0.6
baz=61,SNR=22
I13A Wildhorse Cree 61.53 55 ⇑P P 12 42 29.8 +0.3
baz=61,SNR=41
SAO San Andreas Ge 61.56 66 PFAKE 12 42 40.0 +10
SAO LR LR
comp=Z,684nm,19.0s,MS4.8
XMAS Kiritimati 61.56 121 PFAKE 12 42 40.0 +10
XMAS LR LR
comp=Z,2μm,21.0s,MS5.3
HLID Hailey 61.58 56 ⇑P P 12 42 29.5 -0.3
baz=61,SNR=32
HLID Hailey 61.58 56 *e*P **P 12 42 30.2 +0.3**
comp=Z,20nm,0.9s,mb5.2
HLID LR LR
comp=Z,789nm,20.0s,MS4.9
M10A I.L. Ranch, Tu 61.61 59 ⇓P P 12 42 30.5 +0.4
baz=61,SNR=30
JOF Joensuu 61.64 334 *e*P **P 12 42 28.4 -1.6**
JOF pmax pmax
comp=Z,32nm,0.6s,mb5.6
JOF Joensuu 61.64 334 *e*p **P 12 42 28.4 -1.6**
comp=Z,32nm,0.6s,mb5.6
JOF Joensuu 61.64 334 *e*p **P 12 42 28.4 -1.6**
comp=Z,32nm,0.6s,mb5.6
STEI Steigen 61.65 343 *e*P **P 12 42 29.4 -0.6**
G15A Dillon 61.67 53 ⇓P P 12 42 30.2 -0.3
baz=61,SNR=15
L11A Cat Creek Ranc 61.67 58 ⇓P P 12 42 30.5 0.0
baz=61,SNR=40
MCMT McKenzie Canyo 61.68 54 *e*P **P 12 42 30.8 +0.2**
comp=Z,8.6nm,0.9s,mb4.9
E17A Martinsdale 61.75 51 ⇓P P 12 42 31.1 +0.1
baz=62,SNR=43
F16A Kennard Place, 61.76 52 ⇓P P 12 42 31.0 -0.1
baz=62,SNR=12
J13A Cove Ranch, Pi 61.82 56 ⇓P P 12 42 31.5 0.0
baz=62,SNR=25
BOZ Bozeman (W) 61.84 52 ⇑P P 12 42 32.0 +0.4
baz=62,SNR=48
BOZ Bozeman (W) 61.84 52 *e*P **P 12 42 32.3 +0.7**
BOZ pmax pmax
comp=Z,61nm,1.3s,mb5.6
BOZ MLR MLR
comp=Z,584nm,20.0s,MS4.7
BOZ Bozeman (W) 61.84 52 *e*P **P 12 42 32.3 +0.6**
comp=Z,61nm,1.3s,mb5.6
BOZ LR LR
comp=Z,584nm,20.0s,MS4.7
MYKOM Kota Tinggi 61.85 239 P **P 12 42 33.5 +1.5**
D18A Linhart Farms, 61.86 50 ⇓P P 12 42 32.1 +0.4
baz=62,SNR=10
K12A Draper Farm, C 61.87 57 ⇓P P 12 42 32.1 +0.2
baz=62,SNR=15
BMN Battle Mountai 61.88 60 *e*P **P 12 42 31.8 -0.2**
BMN pmax pmax
comp=Z,29nm,0.7s,mb5.5
BMN MLR MLR
comp=Z,782nm,20.0s,MS4.9
BMN Battle Mountai 61.88 60 *e*P **P 12 42 31.8 -0.1**
comp=Z,29nm,0.7s,mb5.5
BMN LR LR
comp=Z,782nm,20.0s,MS4.9
I14A Mackay 61.90 55 ⇑P P 12 42 32.3 +0.2
baz=62,SNR=49
KHET Khetri 61.91 282 *e*PKP **P 12 42 32.7 +0.3**
H15A Lima 61.92 54 ⇑P P 12 42 32.3 +0.1
baz=62
KGM Kluang 61.98 240 P **P 12 42 34.7 +1.7**
G16A Moss Hill, Enn 62.01 53 ⇑P P 12 42 32.7 -0.1
baz=62,SNR=59
FRIM Kepong 62.05 242 P **P 12 42 35.0 +1.6**
M11A Holland Ranch, 62.10 58 ⇑P P 12 42 34.1 +0.6
baz=62,SNR=20
L12A House Creek Ra 62.11 57 ⇑P P 12 42 33.5 0.0
baz=62,SNR=38
N10A Dunphy 62.12 59 ⇓P P 12 42 33.9 +0.3
baz=62
E18A Harlowton 62.19 51 ⇑P P 12 42 33.7 -0.2
baz=62,SNR=19
F17A Fitzpatrick Pl 62.21 52 ⇑P P 12 42 34.1 0.0
baz=62,SNR=25
J14A Carey 62.24 55 ⇑P P 12 42 34.7 +0.4
baz=62,SNR=44
JBP Jabalpur 62.25 275⇑ *e*PKP **P 12 42 34.6 -0.1**
JBP *e*S **S 12 51 02.5 +1.9**
KBL Kabul 62.27 292 *e*P **P 12 42 34.2 -0.5**
KBL pmax pmax
comp=Z,240nm,0.8s,mb6.4
KBL Kabul 62.27 292 *e*P **P 12 42 34.2 -0.5**
comp=Z,240nm,0.8s,mb6.4
K13A Stover Farm, H 62.34 56 ⇑P P 12 42 35.5 +0.5
baz=62
O10A Cortez Mining, 62.40 60 ⇑P P 12 42 36.0 +0.5
baz=62
I15A Monteview 62.40 54 ⇑P P 12 42 35.9 +0.5
baz=62
QLMT Earthquake Lak 62.46 53 *e*P **P 12 42 36.8 +0.9**
comp=Z,22nm,0.8s,mb5.3
NVAR Mina Array Bea 62.47 62 P **P 12 42 36.2 +0.2**
comp=Z,14nm,0.8s,mb5.1,baz=282,slow=6.6,SNR=83
NVAR PKP2bc 13 11 48.5
comp=Z,0.5nm,0.7s,baz=160,slow=4.7,SNR=3.9
NVAR Mina Array Bea 62.47 62 P **P 12 42 36.2 +0.2**
NVAR ⇑*e* 13 11 48.5
N11A Elko Archery C 62.52 59 ⇓P P 12 42 37.0 +0.8
baz=62
G17A Pierce Place, 62.53 52 ⇑P P 12 42 36.8 +0.5
baz=62,SNR=9.4
M12A Wells 62.63 58 ⇑P P 12 42 38.1 +1.1
baz=62,SNR=28
MLAC Mammoth Lakes 62.64 63 ⇓P P 12 42 38.4 +1.3
baz=62
H16A Russell Place, 62.64 53 ⇑P P 12 42 37.3 +0.3
baz=62,SNR=36
F18A Big Timber 62.72 51 ⇑P P 12 42 37.6 +0.1
baz=62,SNR=24
L13A Double Diamond 62.77 57 ⇓P P 12 42 38.6 +0.7
baz=62,SNR=12
J15A Blackfoot 62.80 55 ⇑P P 12 42 38.7 +0.6
baz=63,SNR=15
GCMT Greycliff 62.82 51 *e*P **P 12 42 39.0 +0.8**
comp=Z,18nm,0.8s,mb5.2
YMR Madison River 62.82 53 *e*P **P 12 42 39.1 +0.9**
comp=Z,47nm,0.9s,mb5.6
ELK Elko 62.86 59 *e*P **P 12 42 39.5 +1.0**
ELK pmax pmax
comp=Z,14nm,1.0s
ELK MLR MLR
comp=Z,879nm,20.0s
ELK Elko 62.86 59 *e*P **P 12 42 39.5 +1.0**
comp=Z,14nm,1.0s,mb5.0
ELK LR LR
comp=Z,879nm,20.0s,MS4.9
N12A Clover Valley, 62.91 58 ⇑P P 12 42 39.2 +0.4
baz=63,SNR=11
N12A Clover Valley, 62.91 58 *e*P **P 12 42 39.4 +0.5**
comp=Z,24nm,1.0s,mb5.3
K14A Jones Ranch, D 62.92 56 ⇓P P 12 42 39.5 +0.5
baz=63,SNR=15
O11A Cowboy Ranch, 63.00 59 ⇑P P 12 42 40.0 +0.5
baz=63,SNR=6.3
YFT Old Faithful 63.03 53 *e*P **P 12 42 41.1 +1.5**
comp=Z,27nm,0.8s,mb5.4
I16A Newdale 63.04 54 ⇓P P 12 42 40.2 +0.6
baz=63
M13A Montello 63.10 57 ⇓P P 12 42 40.5 +0.3
baz=63,SNR=20
M13A Montello 63.10 57 *e*P **P 12 42 40.7 +0.6**
comp=Z,30nm,0.9s,mb5.4
G18A Lazy EL Ranch, 63.18 52 ⇓P P 12 42 40.6 0.0
baz=63
LKWY Lake 63.20 53 *e*P **P 12 42 41.8 +1.1**
LKWY pmax pmax
comp=Z,31nm,1.0s,mb5.4
LKWY MLR MLR
comp=Z,2μm,19.0s,MS5.2
LKWY Lake 63.20 53 *e*P **P 12 42 41.8 +1.0**
comp=Z,31nm,1.0s,mb5.4
LKWY LR LR
comp=Z,2μm,19.0s,MS5.2
K15A Arbon 63.20 55 ⇓P P 12 42 41.5 +0.8
baz=63
L14A Malta 63.21 56 ⇓P P 12 42 41.5 +0.7
baz=63,SNR=21
H17A Grant Village 63.21 53 ⇓P P 12 42 41.5 +0.7
baz=63,SNR=23
RCTC Rector, Farmer 63.22 65 ⇑P P 12 42 41.6 +0.6
baz=63
P11A Circle Ranch, 63.31 60 ⇓P P 12 42 42.2 +0.7
baz=63,SNR=10
KONS Konsvik 63.31 343 *e*P **P 12 42 40.3 -0.8**
SCO Scoresbysund 63.31 358⇑ *i P* **P 12 42 41.3 +0.2**
SCO *i* S **S 12 51 13.1 +0.5**
SCO pmax pmax
comp=Z,120nm,0.9s,mb6.0
SCO Scoresbysund 63.31 358⇑ *i P* **P 12 42 41.3 +0.2**
comp=Z,116nm,0.9s,mb6.0
SCO *i* S **S 12 51 13.1 +0.5**
MOR8 Moi Rana 63.32 343 *e*P **P 12 42 39.5 -1.7**
MOR8 AMb AMB 12 42 41.4
comp=Z,217nm,1.0s,mb6.2
MOR8 Moi Rana 63.32 343 *e*P **P 12 42 39.5 -1.7**
comp=Z,217nm,1.0s,mb6.2
IMW Indian Meadow 63.33 54 *e*P **P 12 42 43.2 +1.6**
comp=Z,46nm,1.1s,mb5.5
J16A Bone 63.35 54 ⇓P P 12 42 42.1 +0.4
baz=63
TPH Tonopah 63.35 62 PFAKE 12 42 50.0 +8.2
TPH LR LR
comp=Z,554nm,21.0s,MS4.7
Q10A Clear Creek Ra 63.38 61 ⇑P P 12 42 42.3 +0.3
baz=63,SNR=7.9
SMMC Simmler 63.38 66 ⇓P P 12 42 42.7 +0.6
baz=63
TIN Tinemaha 63.38 63 ⇑P P 12 42 42.7 +0.7
baz=63
DCID1 Drake Creek 63.38 54 *e*P **P 12 42 44.0 +2.1**
comp=Z,51nm,1.0s,mb5.6
N13A Wendover, West 63.40 58 ⇑P P 12 42 42.5 +0.4
baz=63,SNR=7.6
N13A Wendover, West 63.40 58 *e*P **P 12 42 43.1 +1.0**
comp=Z,45nm,0.8s,mb5.7
FLOS Flostrand 63.40 343 *e*P **P 12 42 42.2 +0.5**
O12A Currie 63.45 59 ⇑P P 12 42 42.6 +0.1
baz=63,SNR=53
RLMT Red Lodge 63.46 52 ⇓P P 12 42 42.6 +0.2
baz=63,SNR=17
RLMT Red Lodge 63.46 52 *e*P **P 12 42 43.1 +0.7**
comp=Z,31nm,0.9s,mb5.4
RLMT LR LR
comp=Z,798nm,21.0s,MS4.9
RRI2 Red Ridge 63.47 54 *e*P **P 12 42 43.6 +1.1**
comp=Z,60nm,0.8s,mb5.8
M14A Sheep Mountain 63.48 57 ⇓P P 12 42 43.0 +0.3
baz=63,SNR=19
I17A Pilgrim Ck. 63.51 53 ⇑P P 12 42 43.3 +0.5
baz=63,SNR=5.8
TPAW Teton Pass 63.58 54 *e*P **P 12 42 44.6 +1.3**
comp=Z,64nm,1.1s,mb5.6
VIS Vishakhapatnam 63.60 268 *e*PKP **P 12 42 44.0 +0.2**
VIS AMb AMB 12 42 48.3
comp=Z,150nm,1.3s,mb5.9
VES Vestal, Richgr 63.62 65 ⇑P P 12 42 44.5 +0.9
baz=63
HVU Hansel Valley 63.64 56 *e*P **P 12 42 44.1 +0.4**
HVU pmax pmax
comp=Z,16nm,0.9s,mb5.0
HVU Hansel Valley 63.64 56 *e*P **P 12 42 44.1 +0.4**
comp=Z,16nm,0.9s,mb5.1
K16A Soda Springs 63.64 55 ⇓P P 12 42 44.2 +0.5
baz=63,SNR=26
LOHW Long Hollow 63.70 54 *e*P **P 12 42 45.2 +1.2**
comp=Z,61nm,1.4s,mb5.4
SNOW Snow King Moun 63.71 54 *e*P **P 12 42 45.7 +1.6**
comp=Z,64nm,1.2s,mb5.5
REDW Red Top Meadow 63.72 54 *e*P **P 12 42 45.1 +1.0**
comp=Z,0.2nm,0.3s
L15A Malad City 63.72 56 ⇓P P 12 42 44.2 0.0
baz=64,SNR=11
AJM Ajmer 63.73 282 *e*PKP **P 12 42 45.0 +0.5**
KAF Kangasniemi 63.74 335 *e*P **P 12 42 42.5 -1.5**
KAF pmax pmax
comp=Z,132nm,0.8s,mb6.0
KAF Kangasniemi 63.74 335 *e*p **P 12 42 42.5 -1.5**
comp=Z,132nm,0.8s,mb6.0
KAF Kangasniemi 63.74 335 *e*p **P 12 42 42.5 -1.5**
comp=Z,132nm,0.8s,mb6.0
R10A Warm Springs 63.78 61 ⇓P P 12 42 45.1 +0.5
baz=64,SNR=9.3
J17A Brown Place, J 63.80 54 ⇑P P 12 42 45.3 +0.6
baz=64,SNR=26
Q11A Duckwater 63.81 60 ⇓P P 12 42 45.7 +0.8
baz=64
S10A Tonopah Range, 63.83 62 ⇑P P 12 42 45.1 +0.1
baz=64,SNR=36
P12A McGill 63.86 60 ⇑P P 12 42 45.3 +0.2
baz=64,SNR=17
CWC Cottonwood Cre 63.86 64 ⇓P P 12 42 46.2 +0.9
baz=64
DGMT Dagmar 63.92 46 ⇑P P 12 42 45.2 -0.2
baz=64,SNR=9.7
DGMT Dagmar 63.92 46 *e*P **P 12 42 45.6 +0.2**
comp=Z,46nm,0.8s,mb5.6
DGMT LR LR
comp=Z,2μm,20.0s,MS5.3
GRAC Grapevine Rang 63.95 63 ⇓P P 12 42 46.2 +0.4
baz=64,SNR=26
BHPL Bhopal 63.96 277 *e*PKP **P 12 42 46.6 +0.5**
AHID Auburn Hatcher 63.96 55 *e*P **P 12 42 47.1 +1.3**
comp=Z,43nm,1.2s,mb5.3
AHID LR LR
comp=Z,780nm,19.0s,MS4.9
O13A Hicks Ranch, I 63.99 58 ⇓P P 12 42 46.3 +0.3
baz=64
N14A Grayback Hills 63.99 57 ⇑P P 12 42 46.1 +0.1
baz=64,SNR=18
M15A Larsen Ranch, 64.03 56 ⇑P P 12 42 46.7 +0.4
baz=64,SNR=37
BGU Big Grassy Mou 64.04 57 *e*P **P 12 42 47.0 +0.7**
comp=Z,12nm,1.0s,mb4.9
LAO LASA Array 64.06 49 *e*P **P 12 42 46.8 +0.4**
comp=Z,54nm,0.9s,mb5.6
LAO LR LR
comp=Z,2μm,20.0s,MS5.2
K17A Gardner Place, 64.07 55 ⇑P P 12 42 46.4 -0.1
baz=64
I18A Diamond G Ranc 64.08 53 ⇑P P 12 42 47.0 +0.5
baz=64,SNR=9.5
ISA Isabella 64.11 65 ⇓P P 12 42 46.9 0.0
baz=64,SNR=5.4
ISA Isabella 64.11 65 *e*P **P 12 42 45.8 -1.1**
ISA pmax pmax
comp=Z,12nm,0.8s,mb5.0
ISA Isabella 64.11 65 *e*P **P 12 42 45.8 -1.1**
comp=Z,12nm,0.8s,mb5.0
SPUT South Promonto 64.13 57 *e*P **P 12 42 47.4 +0.5**
comp=Z,33nm,1.0s,mb5.3
R11A Troy Canyon, C 64.17 61 ⇑P P 12 42 47.3 +0.1
baz=64,SNR=40
Q12A Willow Creek R 64.18 60 ⇓P P 12 42 47.5 +0.2
baz=64,SNR=12
ARVC Arvin 64.23 65 ⇑P P 12 42 48.2 +0.5
baz=64
L16A Fish Haven 64.26 55 ⇓P P 12 42 47.7 -0.1
baz=64,SNR=12
DAC Darwin (Calif) 64.27 64 PFAKE 12 43 00.0 +12
DAC LR LR
comp=Z,767nm,21.0s,MS4.9
J18A Kendall Valley 64.28 54 ⇓P P 12 42 47.8 0.0
baz=64,SNR=8.9
PUL Pulkovo 64.34 332⇑ *e*P **P 12 42 47.5 -0.5**
PUL pmax pmax
comp=Z,111nm,0.5s,mb6.2
PUL MLR MLR
comp=Z,2μm,16.0s,MS5.5
FINES FINESS Array B 64.34 335 P **P 12 42 47.0 -1.0**
comp=Z,208nm,0.8s,mb6.2,baz=36,slow=7.1,SNR=243
FINES LR LR 13 13 41.6
comp=Z,4μm,19.0s,MS5.7,baz=37,slow=39
FINES FINESS Array B 64.34 335 P **P 12 42 47.0 -1.0**
FINES pmax pmax
comp=Z,208nm,0.8s
FINES MLR MLR
comp=Z,4μm,19.0s
FINES FINESS Array B 64.34 335 P **P 12 42 47.0 -1.0**
FINES LR LR 13 13 41.6
N15A Stansbury Isla 64.36 57 ⇑P P 12 42 48.9 +0.5
baz=64
P13A Bates Ranch, G 64.40 59 ⇑P P 12 42 49.0 +0.3
baz=64,SNR=8.5
HWUT Hardware Ranch 64.44 56 *e*P **P 12 42 49.0 0.0**
comp=Z,29nm,1.0s,mb5.3
HWUT LR LR
comp=Z,690nm,20.0s,MS4.8
BSC Santa Cruz Isl 64.45 67 ⇑P P 12 42 49.8 +0.7
baz=64
MPMC Manual Prospec 64.47 64 ⇑P P 12 42 49.3 +0.1
baz=64,SNR=31
L17A Cokeville 64.52 55 ⇓P P 12 42 49.2 -0.2
baz=64,SNR=15
S11A Rachel 64.53 62 ⇑P P 12 42 50.1 +0.5
baz=64,SNR=24
FURC Furnace Creek, 64.60 63 ⇑P P 12 42 50.0 -0.1
baz=64,SNR=33
OSI Osito Adit 64.63 66 ⇓P P 12 42 50.9 +0.6
baz=64
DUG Dugway 64.63 58 ⇓P P 12 42 50.1 -0.1
baz=64,SNR=26
DUG Dugway 64.63 58 *e*P **P 12 42 50.6 +0.4**
DUG pmax pmax
comp=Z,41nm,1.1s,mb5.4
DUG MLR MLR
comp=Z,890nm,20.0s,MS5.0
DUG Dugway 64.63 58 *e*P **P 12 42 50.6 +0.3**
comp=Z,41nm,1.1s,mb5.4
DUG LR LR
comp=Z,890nm,20.0s,MS5.0
K18A Toltan Ranch, 64.64 54 ⇑P P 12 42 50.4 +0.1
baz=64,SNR=22
Q13A Wheeler Ranch, 64.72 59 ⇑P P 12 42 51.2 +0.4
baz=64,SNR=20
LRMC Laurel Mountai 64.72 64 ⇑P P 12 42 51.1 +0.2
baz=64,SNR=6.6
MOS Moscow 64.74 326 *e*P **P 12 42 47.8 -2.8**
MOS *e* 12 42 55.5
MOS *e* 12 45 11.0
MOS pmax pmax
comp=Z,101nm,0.7s,mb6.0
MOS MLR MLR
comp=Z,5μm,17.0s,MS5.8
MOS Moscow 64.74 326 *e*P **P 12 42 48.9 -1.7**
BLG Laguna Peak 64.74 66 ⇓P P 12 42 50.6 -0.5
baz=65
NOQ North Oquirrh 64.74 57 *e*P **P 12 42 51.7 +0.7**
comp=Z,70nm,1.0s,mb5.7
R12A Pony Springs, 64.78 60 ⇑P P 12 42 51.4 +0.2
baz=65,SNR=5.8
O15A The Old Anders 64.78 57 ⇓P P 12 42 51.0 -0.1
baz=65,SNR=9.6
BW06 Boulder Array 64.83 54 ⇓P P 12 42 51.4 0.0
baz=65,SNR=41
BW06 Boulder Array 64.83 54 PFAKE 12 43 00.0 +8.6
BW06 LR LR
comp=Z,659nm,20.0s,MS4.8
PDAR Pinedale Array 64.83 54 P **P 12 42 50.5 -0.9**
comp=Z,21nm,0.9s,mb5.2,baz=292,slow=1.8,SNR=99
PDAR PKP2bc 13 11 41.6
comp=Z,0.8nm,0.9s,baz=158,slow=0.8,SNR=4.9
PDAR Pinedale Array 64.83 54 P **P 12 42 50.5 -0.9**
PDAR ⇑*e* 13 11 41.6

P14A	Drum Mountains	64.88	58	⇑P	P	12 42 52.1	+0.3
	baz=65,SNR=38						
EDW2	Edwards Air Fo	64.92	65	⇑P	P	12 42 52.3	+0.1
	baz=65,SNR=19						
CTU	Camp Tracy	64.93	57	eP	P	12 42 52.0	-0.1
	comp=Z,12nm,0.8s,mb5.0						
U10A	Ash Meadows, A	64.96	63	⇑P	P	12 42 52.8	+0.4
	baz=65						
N16A	Rees Ranch, Co	64.98	56	⇓P	P	12 42 52.5	-0.1
	baz=65,SNR=7.8						
M17A	Scullys Gap (B	65.05	56	⇓P	P	12 42 53.2	+0.3
	baz=65,SNR=16						
S12A	Delamar Landin	65.09	61	⇓P	P	12 42 53.6	+0.4
	baz=65,SNR=33						
T11A	Corn Creek, Al	65.11	62	⇑P	P	12 42 53.5	+0.1
	baz=65,SNR=57						
L18A	Fontenelle, Gr	65.11	55	⇑P	P	12 42 53.1	-0.2
	baz=65,SNR=11						
DECC	Green Verdugo	65.11	66	⇓P	P	12 42 53.8	+0.4
	baz=65						
Q14A	Sevier Lake (B	65.14	59	⇓P	P	12 42 53.7	+0.2
	baz=65						
JLU	Jordanelle	65.16	57	eP	P	12 42 54.5	+0.8
	comp=Z,25nm,1.0s,mb5.2						
K19A	Absolon Red Bu	65.18	53	⇓P	P	12 42 53.4	-0.4
	baz=65,SNR=15						
NLU	North Lily Min	65.22	58	eP	P	12 42 54.4	+0.3
	comp=Z,36nm,0.9s,mb5.4						
R13A	O'Grain Ranch,	65.25	60	⇑P	P	12 42 54.4	+0.1
	baz=65,SNR=9.3						
PASC	Pasadena Art C	65.25	66	eP	P	12 42 54.7	+0.3
	comp=Z,62nm,1.0s,mb5.6						
NSS	Namsos	65.27	343	eP	P	12 42 52.6	-1.4
NSS				eS	S	12 51 38.4	+1.4
N17A	Moffit Pass	65.30	56	⇓P	P	12 42 54.5	-0.1
	baz=65,SNR=6.0						
MWC	Mount Wilson	65.30	66	eP	P	12 42 54.6	-0.1
MWC				pmax	pmax		
	comp=Z,52nm,1.3s,mb5.4						
MWC	Mount Wilson	65.30	66	eP	P	12 42 54.6	-0.1
	comp=Z,52nm,1.3s,mb5.4						
SHOC	Shoshone	65.33	63	⇑P	P	12 42 55.0	+0.2
	baz=65						
P15A	Leamington	65.35	58	⇓P	P	12 42 55.0	+0.1
	baz=65,SNR=10						
L19A	Farson	65.37	54	⇑P	P	12 42 54.9	-0.1
	baz=65,SNR=6.7						
GSC	Goldstone	65.39	64	⇑P	P	12 42 54.8	-0.4
	baz=65,SNR=13						
GSC	Goldstone	65.39	64	eP	P	12 42 54.8	-0.4
GSC				pmax	pmax		
	comp=Z,19nm,0.7s,mb5.2						
GSC	Goldstone	65.39	64	eP	P	12 42 54.8	-0.4
	comp=Z,19nm,0.7s,mb5.2						
O16A	Springville	65.39	57	⇓P	P	12 42 55.6	+0.5
	baz=65,SNR=20						
DAU	Daniels Canyon	65.40	57	eP	P	12 42 55.6	+0.4
DAU				pmax	pmax		
	comp=Z,49nm,1.2s,mb5.4						
DAU	Daniels Canyon	65.40	57	eP	P	12 42 55.6	+0.4
	comp=Z,49nm,1.2s,mb5.4						
SFJD	Kangerlussuaq	65.41	10	⇑iP	P	12 42 54.2	-0.6
SFJD				iS	S	12 51 34.9	-3.7
SFJD				pmax	pmax		
	comp=Z,39nm,0.8s,mb5.5						
SFJD				MLR	MLR		
	comp=Z,2μm,17.0s,MS5.4						
SFJD	Kangerlussuaq	65.41	10	eP	P	12 42 54.2	-0.6
	comp=Z,50nm,0.9s,mb5.5						
SFJD				LR	LR		
	comp=Z,2μm,20.0s,MS5.2						
SFJD	Kangerlussuaq	65.41	10	⇑iP	P	12 42 54.2	-0.6
	comp=Z,39nm,0.8s,mb5.5						
SFJD				iS	S	12 51 34.9	-3.7
SFJD							
	comp=Z,2μm,17.0s						
M18A	Lyman	65.42	55	⇑P	P	12 42 55.3	0.0
	baz=65,SNR=6.7						
MPU	Maple Canyon	65.44	57	eP	P	12 42 55.6	+0.2
	comp=Z,47nm,1.1s,mb5.4						
FMP	Fort Macarthur	65.48	66	⇓P	P	12 42 55.9	+0.1
	baz=65						
U11A	Corn Creek	65.54	62	⇓P	P	12 42 56.4	+0.3
	baz=65,SNR=6.5						
RRX	Edison Barstow	65.54	65	⇑P	P	12 42 56.4	+0.1
	baz=65						
BFSC	Mount Baldy Ra	65.54	66	⇓P	P	12 42 56.6	+0.4
	baz=65,SNR=5.9						
K20A	Yellowstone Ra	65.57	53	⇓P	P	12 42 56.2	-0.1
	baz=65,SNR=15						
OBN	Obninsk	65.60	326	αeP	P	12 42 55.5	-0.8
OBN				e		12 43 26.3	
OBN						12 45 21.0	
OBN				PPP		12 47 02.0	
OBN				iS	S	12 51 40.3	-1.0
OBN				e		12 52 51.4	
OBN				SSS		12 58 42.0	
OBN				pmax	pmax		
	comp=Z,96nm,0.7s,mb5.9						
OBN				MLR	MLR		
	comp=Z,4μm,15.0s,MS5.8						
OBN	Obninsk	65.60	326	eP	P	12 42 55.3	-1.0
	comp=Z,103nm,0.7s,mb6.0						
OBN				LR	LR		
	comp=Z,3μm,19.0s,MS5.5						
Q15A	Fillmore	65.67	59	⇑P	P	12 42 57.2	+0.3
	baz=65						
P16A	Fountain Green	65.69	58	⇑P	P	12 42 58.2	+1.1
	baz=66						
S13A	Holt Ranch, En	65.71	61	⇑P	P	12 42 57.7	+0.5
	baz=66,SNR=21						
R14A	James Farms, M	65.74	59	⇓P	P	12 42 57.8	+0.3
	baz=66						
T12A	Moapa	65.75	62	⇓P	P	12 42 57.9	+0.4
	baz=66						
ARUT	Antelope Range	65.83	60	eP	P	12 42 58.1	+0.1
ARUT				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.3						
ARUT	Antelope Range	65.83	60	eP	P	12 42 58.1	+0.1
	comp=Z,30nm,1.0s,mb5.3						
O17A	Robinson Place	65.84	57	⇓P	P	12 42 57.9	-0.2
	baz=66,SNR=23						
TUQ	Turquoise Moun	65.85	63	⇑P	P	12 42 57.6	-0.5
	baz=66,SNR=11						
M19A	Rock Springs	65.88	55	⇑P	P	12 42 58.2	-0.1
	baz=66						
V11A	Goodsprings	65.89	63	⇑P	P	12 42 58.1	-0.3
	baz=66,SNR=11						
N18A	Larsen Ranch,	65.94	55	⇓P	P	12 42 58.0	-0.7
	baz=66,SNR=12						
JASL	Jaisalmer	65.95	284	ePKP	P	12 42 59.6	+0.6
HEC	Hector,Ludlow	65.99	64	⇑P	P	12 42 59.2	+0.1
	baz=66						
BBRC	Big Bear Solar	65.99	65	⇓P	P	12 42 59.3	+0.1
	baz=66						
L20A	Wamsutter	66.00	54	⇑P	P	12 42 58.6	-0.5
	baz=66,SNR=14						
S14A	Cedar City	66.01	60	⇑P	P	12 42 59.4	+0.2
	baz=66						
CCUT	Cedar City	66.03	60	eP	P	12 42 59.4	+0.1
	comp=Z,22nm,1.0s,mb5.2						
T13A	Saint George	66.05	61	⇓P	P	12 42 59.3	-0.1
	baz=66,SNR=8.5						
U12A	Valley of Fire	66.05	62	⇑P	P	12 42 59.2	-0.2
	baz=66,SNR=6.1						
MVU	Marysvale	66.09	59	PFAKE		12 43 10.0	+10
MVU				LR	LR		
	comp=Z,828nm,20.0s,MS4.9						
MSU	Marysvale	66.10	59	eP	P	12 43 00.2	+0.4
MSU				pmax	pmax		
	comp=Z,44nm,1.4s,mb5.3						
MSU	Marysvale	66.10	59	eP	P	12 43 00.2	+0.4
	comp=Z,44nm,1.4s,mb5.3						
TMUT	Trail Mountain	66.16	58	eP	P	12 43 00.1	0.0
	comp=Z,33nm,1.0s,mb5.3						
O18A	Roosevelt	66.21	56	⇑P	P	12 43 00.7	+0.2
	baz=66,SNR=15						
R15A	Junction	66.24	59	⇓P	P	12 43 00.8	+0.2
	baz=66						
MURC	Murrieta	66.25	66	⇓P	P	12 43 00.3	-0.4
	baz=66,SNR=7.0						
N19A	John Jarvie Ra	66.27	55	⇓P	P	12 43 00.5	-0.3
	baz=66						
P17A	Butcher Ranch,	66.31	57	⇑P	P	12 43 00.5	-0.6
	baz=66,SNR=18						
V12A	Nelson	66.32	63	⇑P	P	12 43 01.1	-0.1
	baz=66,SNR=12						
U13A	Pakoon Wash	66.41	62	⇑P	P	12 43 01.7	-0.1
	baz=66,SNR=42						
VRHR	Novokhopersk	66.42	320	eP	P	12 42 59.8	-1.8
VRHR				e		12 43 09.5	
VRHR				pmax	pmax		
	comp=Z,240nm,0.9s,mb6.2						
VRHR				MLR	MLR		
	comp=N,3μm,19.0s,MS5.6						
VRHR				MLR	MLR		
	comp=E,2μm,19.0s,MS5.6						
VRHR				MLR	MLR		
	comp=Z,3μm,19.0s,MS5.6						
Q16A	Castle Valley	66.43	58	⇓P	P	12 43 01.7	-0.1
	baz=66,SNR=10						
M20A	Sweetwater, Wa	66.43	54	⇓P	P	12 43 01.5	-0.4
	baz=66,SNR=14						
GMRC	Granite Mounta	66.44	64	⇑P	P	12 43 01.7	-0.3
	baz=66,SNR=17						
P18A	Preston Nutter	66.50	57	⇑P	P	12 43 02.4	+0.1
	baz=66,SNR=22						
T14A	Hurricane	66.52	61	⇓P	P	12 43 02.3	-0.2
	baz=66,SNR=12						
VSU	Vasula	66.52	333	ciP	P	12 43 01.3	-0.8
VSU				pmax	pmax		
	comp=Z,158nm,0.8s,mb6.1						
VSU				MLR	MLR		
	comp=Z,3μm,18.0s,MS5.6						
VSU	Vasula	66.52	333	⇑iP	P	12 43 01.4	-0.7
CTAO	Charters Tower	66.54	187	PFAKE		12 43 10.0	+7.4
CTAO				LR	LR		
	comp=Z,1μm,19.0s,MS5.1						
S15A	Panguitch	66.54	60	⇑P	P	12 43 02.6	-0.1
	baz=66						
L21A	Rawlins	66.57	53	⇓P	P	12 43 02.2	-0.5
	baz=66,SNR=22						
LDFC	Landfair	66.58	63	eP	P	12 43 02.9	0.0
W12A	Cal Nev Ari	66.59	63	⇑P	P	12 43 02.9	-0.1
	baz=66,SNR=10						
R16A	Teasdale	66.66	59	⇑P	P	12 43 03.7	+0.3
	baz=66,SNR=47						
ULM	Lac du Bonnet	66.67	41	P	P	12 43 02.5	-0.6
	comp=Z,24nm,0.8s,mb5.3,baz=312,slow=7.6,SNR=22						
ULM				LR	LR	13 15 56.2	
	comp=Z,1μm,18.7s,MS5.1,baz=153,slow=39						
SRU	San Rafael	66.68	57	⇓P	P	12 43 03.3	-0.1
	baz=66,SNR=41						
SRU	San Rafael	66.68	57	eP	P	12 43 03.6	+0.1
SRU				pmax	pmax		
	comp=Z,60nm,0.9s,mb5.6						
SRU	San Rafael	66.68	57	eP	P	12 43 03.6	+0.1
	comp=Z,60nm,0.9s,mb5.6						
O19A	Miners Draw (B	66.70	56	⇓P	P	12 43 03.4	-0.2
	baz=66,SNR=18						
PFO	Pinyon Flat Ob	66.71	65	⇓P	P	12 43 03.2	-0.5
	baz=66						
PFO	Pinyon Flat Ob	66.71	65	eP	P	12 43 02.7	-1.1
PFO				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8						
PFO				MLR	MLR		
	comp=Z,1μm,22.0s,MS5.0						
PFO	Pinyon Flat Ob	66.71	65	eP	P	12 43 02.7	-1.0
	comp=Z,11nm,1.0s,mb4.8						
PFO				LR	LR		
	comp=Z,1μm,22.0s,MS5.0						
BELC	Belle Mtn. Jos	66.74	65	⇑P	P	12 43 02.9	-1.0
	baz=66,SNR=9.1						
109C	Camp Elliot, M	66.77	66	⇑P	P	12 43 03.7	-0.4
	baz=67						
M21A	Separation Pea	66.82	54	⇓P	P	12 43 04.2	-0.1
	baz=67,SNR=22						
N20A	Spence Gulch,	66.83	55	⇑P	P	12 43 04.3	-0.1
	baz=67,SNR=43						
ABKT	Ailbek	66.84	301	P	P	12 43 05.4	+0.9
	comp=Z,580nm,0.7s,mb6.7,SNR=20						
RWWY	Rawlins	66.85	53	eP	P	12 43 04.2	-0.3
	comp=Z,38nm,1.0s,mb5.4						
U14A	Mt Trumbull	66.88	61	⇑P	P	12 43 04.7	-0.1
	baz=67,SNR=33						
Q18A	Rafter H Ranch	66.91	57	⇓P	P	12 43 04.2	-0.8
	baz=67,SNR=12						
RSSD	Black Hills	66.92	50	eP	P	12 43 04.4	-0.5
RSSD				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.3						
RSSD				MLR	MLR		
	comp=Z,1μm,22.0s,MS5.0						
RSSD	Black Hills	66.92	50	eP	P	12 43 04.4	-0.5
	comp=Z,26nm,0.8s,mb5.3						
RSSD				LR	LR		
	comp=Z,1μm,22.0s,MS5.0						
T15A	Red Dirt Ranch	66.97	60	⇑P	P	12 43 05.0	-0.3
	baz=67,SNR=25						
S16A	Weppner Ranch,	66.97	59	⇓P	P	12 43 04.6	-0.7
	baz=67,SNR=32						
VOR	Voronezh	67.01	322	eP	P	12 43 04.0	-1.3
VOR				pmax	pmax		
	comp=Z,240nm,2.0s,mb5.9						
R17A	Hanksville Air	67.03	58	⇓P	P	12 43 05.5	-0.2
	baz=67,SNR=42						
L22A	Ellis Ranch, M	67.05	53	⇑P	P	12 43 05.3	-0.4
	baz=67,SNR=31						
NEE2	Needles Airpor	67.09	63	⇓P	P	12 43 05.7	-0.4
	baz=67						
HYB	Hyderabad	67.11	271	eP	P	12 43 06.5	0.0
HYB				eS	S	12 52 02.0	+1.4
HYB				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.6						
HYB	Hyderabad	67.11	271	eP	P	12 43 06.5	0.0
	comp=Z,60nm,1.0s,mb5.6						
HYB				eS	S	12 52 02.0	+1.4
HYB	Hyderabad	67.11	271	⇑iP	P	12 43 06.5	0.0
	comp=Z,30nm,1.0s,mb5.3						
HYB				eS	S	12 52 00.0	-0.6
IRM	Iron Mountain	67.16	64	⇑P	P	12 43 06.3	-0.4
	baz=67,SNR=19						
BAR	Barrett	67.19	66	eP	P	12 43 06.3	-0.5
	comp=Z,10nm,0.8s,mb4.9						
P19A	Cripple Cowboy	67.22	56	⇓P	P	12 43 06.1	-0.8
	baz=67,SNR=28						
N21A	Black Mountain	67.30	54	⇑P	P	12 43 06.9	-0.5
	baz=67,SNR=20						
BC3	Big Chuckawall	67.31	65	⇑P	P	12 43 07.3	-0.2
	baz=67,SNR=14						
O20A	White River Ci	67.31	55	⇓P	P	12 43 06.8	-0.7
	baz=67,SNR=14						
W13A	Hualapai Mount	67.32	63	⇓P	P	12 43 07.6	-0.1
	baz=67,SNR=11						
M22A	Cedar Creek Ra	67.38	53	⇓P	P	12 43 06.9	-1.0
	baz=67,SNR=9.5						
VSR	Storozhevoye	67.40	322	eP	P	12 43 06.9	-0.9
VSR				pmax	pmax		
	comp=N,70nm,0.9s						
VSR				pmax	pmax		
	comp=E,60nm,0.9s						
VSR				pmax	pmax		
	comp=Z,140nm,0.9s,mb6.0						
VSR				MLR	MLR		
	comp=N,4μm,22.0s,MS5.8						
VSR				MLR	MLR		
	comp=E,4μm,22.0s,MS5.8						
VSR				MLR	MLR		
	comp=Z,7μm,22.0s,MS5.8						
U15A	North Rim	67.41	61	⇓P	P	12 43 08.0	-0.1
	baz=67,SNR=36						
V14A	Boquillas Ranc	67.45	62	⇑P	P	12 43 08.2	-0.2
	baz=67,SNR=52						
S17A	Black Ridge (B	67.50	59	⇓P	P	12 43 08.5	-0.2
	baz=67,SNR=65						
T16A	Glen Canyon Da	67.51	60	⇓P	P	12 43 08.0	-0.8
	baz=67,SNR=8.1						
Q19A	Hogan Spring (	67.51	57	⇓P	P	12 43 08.1	-0.6
	baz=67						
R18A	Canyonlands Na	67.53	58	⇓P	P	12 43 08.4	-0.5
	baz=67,SNR=43						
SWSC	Sam W. Stewart	67.57	65	⇓P	P	12 43 09.0	-0.2
	baz=67						
P20A	De Beque	67.65	56	⇓P	P	12 43 09.1	-0.6
	baz=67,SNR=7.0						
O21A	Pagoda	67.69	55	⇓P	P	12 43 09.2	-0.7
	baz=68,SNR=12						
PDMCI	Parker Dam,Lak	67.70	63	⇓P	P	12 43 09.6	-0.4
	baz=68,SNR=7.4						
MSVF	Nonsavu	67.71	154	eP	P	12 43 10.5	+0.5
	comp=Z,21nm,1.0s,mb5.1						
MSVF				LR	LR		
	comp=Z,2μm,19.0s,MS5.4						
W14A	Seligman	67.74	62	⇓P	P	12 43 09.8	-0.5
	baz=68,SNR=31						
AFI	Afiamalu	67.82	143	PFAKE		12 43 20.0	+9.2
AFI				LR	LR		
	comp=Z,2μm,21.0s,MS5.3						
Y12C	Blythe	67.82	64	⇓P	P	12 43 10.4	-0.4
	baz=68,SNR=9.8						
N22A	Wattenberg Ran	67.86	54	⇑P	P	12 43 10.8	-0.1
	baz=68,SNR=26						
V15A	Kaibab Nationa	67.89	61	⇓P	P	12 43 10.9	-0.2
	baz=68,SNR=26						
MOL	Molde	67.92	344	eP	P	12 43 11.4	+0.5
T17A	Navajo Res., N	67.92	59	⇑P	P	12 43 11.3	-0.1
	baz=68						
S18A	Hurst Farm, Bl	67.94	58	⇑P	P	12 43 11.2	-0.2
	baz=68,SNR=39						
R19A	Curley Farm, L	67.96	57	⇓P	P	12 43 11.3	-0.3
	baz=68,SNR=9.1						
AGMN	Agassiz Nation	68.07	42	eP	P	12 43 11.1	-0.9
	comp=Z,67nm,1.3s,mb5.5						
AGMN				LR	LR		
	comp=Z,1μm,19.0s,MS5.1						
Q20A	Ridgley Place,	68.07	56	⇑P	P	12 43 11.9	-0.4
	baz=68,SNR=13						
PHWY	Pilot Hill	68.08	53	eP	P	12 43 12.2	-0.1
	comp=Z,8.0nm,0.9s,mb4.8						
PV04	Paradox Valley	68.10	57	eP	P	12 43 12.5	+0.1
GLA	Glamis	68.10	65	⇓P	P	12 43 12.3	-0.2
	baz=68,SNR=6.0						
GLA	Glamis	68.10	65	eP	P	12 43 12.2	-0.4
GLA				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.2						
GLA	Glamis	68.10	65	eP	P	12 43 12.2	-0.4
	comp=Z,18nm,0.8s,mb5.1						
Y13A	Salome	68.21	64	⇑P	P	12 43 12.7	-0.5
	baz=68,SNR=6.3						
W15A	Williams	68.26	62	⇓P	P	12 43 13.8	+0.3
	baz=68,SNR=11						
WRAB	Tennant Creek	68.27	199	P	P	12 43 12.3	-1.2
	comp=Z,243nm,0.8s,mb6.3,SNR=7.6						
WRAB	Tennant Creek	68.27	199	eP	P	12 43 12.0	-1.5
WRAB				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.4						
WRAB				MLR	MLR		
	comp=Z,1μm,19.0s,MS5.1						
WRAB	Tennant Creek	68.27	199	eP	P	12 43 12.0	-1.5
	comp=Z,29nm,0.8s,mb5.4						
WRAB				LR	LR		
	comp=Z,1μm,19.0s,MS5.1						
U17A	Shonto	68.27	59	⇑P	P	12 43 14.0	+0.4
	baz=68,SNR=7.0						
WRA	Warramunga Arr	68.28	199	P	P	12 43 12.1	-1.5
	comp=Z,33nm,1.0s,mb5.3,baz=16,slow=6.4,SNR=60						
WRA				LR	LR	13 12 26.0	
	comp=Z,481nm,18.7s,MS4.8,baz=40,slow=35						
U16A	Tuba City	68.30	60	⇓P	P	12 43 13.9	+0.1
	baz=68,SNR=32						
X14A	Yava	68.35	62	⇑P	P	12 43 14.6	+0.4
	baz=68,SNR=18						
T18A	Mexican Hat	68.38	59	⇑P	P	12 43 13.8	-0.5
	baz=68,SNR=32						
S19A	Harvey Farm, M	68.40	58	⇓P	P	12 43 14.3	-0.1
	baz=68,SNR=35						
PV01	Paradox Valley	68.47	57	eP	P	12 43 14.9	+0.1
	comp=Z,2μm,0.8s						
NB2	NORSAR Subarra	68.53	341	P	P	12 43 14.8	0.0
	comp=Z,168nm,0.8s,mb6.0,baz=28,slow=6.5						
NB2	NORSAR Subarra	68.53	341	P	P	12 43 14.0	-0.8
NOA	NORSAR Array B	68.53	341	P	P	12 43 14.5	-0.3
	comp=Z,146nm,0.7s,mb6.0,baz=27,slow=6.3,SNR=275						
NOA				LR	LR	13 17 53.5	
	comp=Z,2μm,18.1s,MS5.5,baz=35,slow=40						
NOA	NORSAR Array B	68.53	341	P	P	12 43 14.5	-0.3
NOA				pmax	pmax		
	comp=Z,146nm,0.7s						
NOA				MLR	MLR		
	comp=Z,2μm,18.1s						
R20A	Redvale	68.54	57	⇓P	P	12 43 15.4	+0.1
	baz=68,SNR=13						
Q21A	Lamborn Mesa,	68.57	56	⇓P	P	12 43 15.3	0.0
	baz=68,SNR=13						
BHV	Bhavnagar	68.57	279	ePKP	P	12 43 16.0	+0.4
BHV				ex	x	12 43 20.8	
WUAZ	Wupatki	68.57	61	⇑P	P	12 43 15.8	+0.4
	baz=68,SNR=14						
WUAZ	Wupatki	68.57	61	eP	P	12 43 16.2	+0.7
	comp=Z,23nm,1.0s,mb5.1						
WUAZ				LR	LR		
	comp=Z,840nm,20.0s,MS5.0						
112A	Yuma	68.60	65	⇓P	P	12 43 16.0	+0.3
	baz=68						
Y14A	Wickenburg	68.64	63	⇓P	P	12 43 15.7	-0.2
	baz=68,SNR=24						
SMCO	Snowmass	68.68	55	eP	P	12 43 16.6	+0.6
	comp=Z,27nm,0.8s,mb5.2						
Z13A	Yuma Proving G	68.73	64	⇓P	P	12 43 16.6	+0.1
	baz=68,SNR=25						
X15A	Humboldt	68.74	62	⇑P	P	12 43 16.6	0.0
	baz=68,SNR=45						
HFA0	Hagfors New Ar	68.75	340	P	P	12 43 15.0	-1.2
W16A	Flagstaff	68.76	61	⇑P	P	12 43 16.5	-0.1
	baz=68,SNR=9.4						
NAO01	NORSAR Array S	68.78	341	eP	P	12 43 15.9	-0.4
	comp=Z,90nm,0.8s,mb5.8						
V17A	Tonalea, Kykot	68.85	60	⇑P	P	12 43 17.4	+0.2
	baz=69						
U18A	Rough Rock, Ch	68.86	59	⇓P	P	12 43 17.2	-0.1
	baz=69,SNR=19						
R21A	Cimarron	68.90	56	⇑P	P	12 43 17.3	-0.2
	baz=69,SNR=22						
Q22A	Crested Butte,	68.93	56	⇓P	P	12 43 17.2	-0.4
	baz=69,SNR=19						
FITZ	Fitzroy Crossi	68.94	208	⇓iP	P	12 43 17.2	-0.6
	comp=Z,52nm,0.9s,mb5.5						
FITZ	Fitzroy Crossi	68.94	208	eP	P	12 43 16.8	-1.0
	comp=Z,61nm,1.2s,mb5.4						
113A	Mohawk Valley,	68.95	64	⇑P	P	12 43 17.9	0.0
	baz=69						
ISCO	Idaho Springs	69.02	54	eP	P	12 43 18.7	+0.5
ISCO				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
ISCO				MLR	MLR		
	comp=Z,1μm,19.0s,MS5.1						
ISCO	Idaho Springs	69.02	54	eP	P	12 43 18.7	+0.5
	comp=Z,20nm,0.8s,mb5.1						
ISCO				LR	LR		
	comp=Z,1μm,19.0s,MS5.1						
Y15A	Casa Rosa Ranc	69.04	63	⇓P	P	12 43 18.0	-0.4
	baz=69,SNR=28						
BORG	Borgarnes	69.05	358	eP	P	12 43 19.3	+1.4
BORG				pmax	pmax		
	comp=Z,180nm,0.8s						
BORG				MLR	MLR		
	comp=Z,908nm,21.0s						
BORG	Borgarnes	69.05	358	eP	P	12 43 19.3	+1.4
	comp=Z,180nm,0.8s,mb6.0						
BORG				LR	LR		
	comp=Z,908nm,21.0s,MS5.0						
Z14A	Wintersburg	69.06	63	⇑P	P	12 43 18.7	+0.1
	baz=69						
T19A	Beclabito	69.09	58	⇓P	P	12 43 18.2	-0.5
	baz=69,SNR=14						
MVCO	Mesa Verde	69.14	58	⇓P	P	12 43 18.7	-0.2
	baz=69,SNR=26						
MVCO

MAK ePPP 12 47 31.6
MAK eS S 12 52 24.8 -1.8
MAK eSS SS 12 56 49.8 -2.8
MAK pmax pmax
comp=Z,191nm,0.9s,mb6.0
MAK MLR MLR
comp=Z,10µm,17.0s,MS6.1
MAK Makhachkala 69.34 311 eP **P 12 43 18.4 -1.7**
U19A Dine' College, 69.34 59 ⇑P **P 12 43 20.1 -0.2**
baz=69,SNR=19
NACGM Naroch 69.36 330 eP **P 12 43 17.0 -3.0**
R22A Saguache, Gunn 69.45 56 ⇓P **P 12 43 20.7 -0.2**
baz=69,SNR=53
114A Black Gap (USA 69.51 64 ⇓P **P 12 43 20.9 -0.5**
baz=69,SNR=23
POO Poona 69.59 276 ePKP **P 12 43 23.0 +1.0**
Z15A Gila River Ind 69.60 63 ⇓P **P 12 43 21.6 -0.3**
baz=69
Y16A Circle Bar Ran 69.61 62 ⇓P **P 12 43 22.3 +0.3**
baz=69,SNR=12
U20A Newcomb 69.69 58 ⇓P **P 12 43 22.1 -0.3**
baz=70
X17A Forest Lakes 69.71 61 ⇓P **P 12 43 22.6 0.0**
baz=70,SNR=22
V19A Window Rock 69.83 59 ⇓P **P 12 43 23.4 +0.1**
baz=70,SNR=7.7
T21A Navajo Lake 69.85 57 ⇓P **P 12 43 23.2 -0.1**
baz=70,SNR=6.8
Z16A Peralta Trail, 70.01 62 ⇓P **P 12 43 24.5 +0.1**
baz=70
W19A Sanders 70.04 60 ⇑P **P 12 43 24.9 +0.4**
baz=70,SNR=18
214A Organ Pipe Nat 70.09 64 ⇑P **P 12 43 24.7 -0.2**
baz=70
X18A Snowflake 70.10 61 ⇑P **P 12 43 24.8 -0.1**
baz=70,SNR=11
GOF Gofitskoye 70.10 315⇑ *i*P **P 12 43 08.1 -17**
GOF pmax pmax
comp=Z,190nm,0.9s,mb6.0
V20A Brimhall 70.12 59 ⇓P **P 12 43 24.7 -0.3**
baz=70,SNR=11
Y17A Roosevelt 70.13 62 ⇑P **P 12 43 24.9 -0.2**
baz=70,SNR=28
KONO Kongsberg 70.14 341 eP **P 12 43 25.9 +1.2**
KONO eS S 12 52 35.3 -0.1
KONO Kongsberg 70.14 341*c i*P **P 12 43 25.2 +0.5**
KONO Kongsberg 70.14 341 eP **P 12 43 24.7 -0.1**
comp=Z,178nm,0.8s,mb6.0
KONO LR LR
comp=Z,3µm,20.0s,MS5.5
U21A Nageezi 70.16 58 ⇑P **P 12 43 25.2 -0.1**
baz=70,SNR=16
OGNE Ogallala 70.19 51 eP **P 12 43 25.2 -0.2**
comp=Z,93nm,0.8s,mb5.8
OGNE LR LR
comp=Z,831nm,19.0s,MS5.0
T22A Edith 70.20 57 ⇑P **P 12 43 25.5 0.0**
baz=70,SNR=27
KAD Karad 70.20 274 ePKP **P 12 43 25.9 +0.1**
KAD AMb AMB 12 43 28.2
comp=Z,118nm,1.4s,mb5.6
EYMN Ely 70.31 40 eP **P 12 43 25.1 -1.0**
comp=Z,48nm,1.0s,mb5.4
EYMN LR LR
comp=Z,931nm,20.0s,MS5.0
BER Bergen 70.35 344 eP **P 12 43 26.6 +0.6**
BER eS S 12 52 38.1 +0.2
116A Eloy 70.37 63 ⇑P **P 12 43 26.6 0.0**
baz=70,SNR=5.2
SDCO Great Sand Dun 70.50 56 eP **P 12 43 27.5 +0.1**
comp=Z,12nm,0.9s,mb4.8
SDCO LR LR
comp=Z,565nm,20.0s,MS4.8
ODD1 Odda 70.53 343 eP **P 12 43 27.6 +0.5**
W20A Ramah 70.56 59 ⇑P **P 12 43 28.0 +0.2**
baz=70
Y18A Canyon Day Jun 70.56 61 ⇑P **P 12 43 27.9 +0.2**
baz=70,SNR=31
X19A St. Johns 70.57 60 ⇑P **P 12 43 28.2 +0.4**
baz=70,SNR=45
V21A Milan 70.60 58 ⇓P **P 12 43 27.9 -0.1**
baz=70,SNR=6.8
Z17A San Carlos Hig 70.62 62 ⇓P **P 12 43 28.2 +0.1**
baz=70
U22A Llaves 70.67 57 ⇑P **P 12 43 28.0 -0.3**
baz=70,SNR=16
216A Three Points, 70.90 64 ⇑P **P 12 43 29.8 -0.1**
baz=71,SNR=10
Y19A Nutrioso 70.91 61 ⇑P **P 12 43 30.2 +0.3**
baz=71,SNR=23
V22A San Miguel Ran 70.95 58 ⇓P **P 12 43 30.1 -0.1**
baz=71,SNR=20
117A Oracle 70.96 63 ⇓P **P 12 43 30.2 0.0**
baz=71,SNR=19
X20A Quemado 70.96 60 ⇓P **P 12 43 30.6 +0.4**
baz=71,SNR=44
ECSD EROS Data Cent 71.00 46 eP **P 12 43 29.1 -1.2**
comp=Z,27nm,0.8s,mb5.2
ECSD LR LR
comp=Z,1µm,20.0s,MS5.2
BLS5 Blasjo 71.01 343 eP **P 12 43 30.7 +0.7**
BLS5 AMb AMB 12 43 37.2
comp=Z,137nm,0.7s,mb6.0
BLS5 Blasjo 71.01 343 eP **P 12 43 30.7 +0.7**
comp=Z,137nm,0.7s,mb6.0
Z18A Geronimo 71.04 62 ⇑P **P 12 43 30.9 +0.2**
baz=71
W21A San Fidel 71.07 59 ⇓P **P 12 43 30.9 +0.1**
baz=71
KIV Kislovodsk 71.08 314 P **P 12 43 32.1 +1.4**
comp=Z,522nm,0.9s,mb6.5,SNR=24
KIV Kislovodsk 71.08 314 eP **P 12 43 30.8 +0.1**
KIV *e* 12 43 50.9
KIV *e* 12 46 02.4
KIV ePPP 12 47 50.9
KIV eS S 12 52 47.6 +0.7
KIV pmax pmax
comp=Z,90nm,1.0s,mb5.7
KIV pmax pmax
comp=Z,473nm,4.2s
KIV MLR MLR
comp=Z,9µm,19.0s,MS6.0
KIV Kislovodsk 71.08 314 eP **P 12 43 31.3 +0.6**
comp=Z,57nm,0.8s,mb5.6
KIV LR LR
comp=Z,5µm,19.0s,MS5.8
KIV Kislovodsk 71.08 314 P **P 12 43 32.4 +1.7**
SNR=21
KIV P 12 43 32.4
SNR=21
U23A El Rito 71.08 57 ⇓P **P 12 43 30.9 0.0**
baz=71,SNR=78
TUC Tucson 71.11 63 eP **P 12 43 30.4 -0.7**
TUC pmax pmax
comp=Z,13nm,1.0s,mb4.8
TUC MLR MLR
comp=Z,579nm,19.0s,MS4.9
TUC Tucson 71.11 63 eP **P 12 43 30.4 -0.8**
comp=Z,13nm,1.0s,mb4.8
TUC LR LR
comp=Z,579nm,19.0s,MS4.9
SUW Suwalki 71.30 332 eP **P 12 43 31.5 -0.4**
SUW epP pP 12 43 32.4 -2.9
SUW LMZ 13 18 22.3
comp=Z,3µm,19.0s
SUW Suwalki 71.30 332 eP **P 12 43 31.2 -0.7**
comp=Z,459nm,1.0s,mb6.4
ZEI Tsey 71.33 313 eP **P 12 43 32.1 -0.2**
ZEI pmax pmax
comp=Z,54nm,0.9s,mb5.5
Z19A T-Link Ranch, 71.36 61 ⇑P **P 12 43 33.1 +0.4**
baz=71,SNR=11
KMY Karmoy 71.45 343 eP **P 12 43 33.6 +0.9**
KMY AMb AMB 12 43 35.5
comp=Z,196nm,0.8s,mb6.1
KMY Karmoy 71.45 343 eP **P 12 43 33.6 +0.9**
comp=Z,196nm,0.8s,mb6.1
X21A Alamocita Cree 71.45 59 ⇑P **P 12 43 33.3 +0.1**
baz=71,SNR=44
Y20A Horse Springs, 71.47 60 ⇓P **P 12 43 33.7 +0.4**
baz=71,SNR=30
V23A Ortiz Mt. (NFS 71.50 57 ⇓P **P 12 43 34.0 +0.5**
baz=71,SNR=6.4
EIDS Eidsvold 71.52 182 eP **P 12 43 33.7 +0.3**
EIDS Eidsvold 71.52 182 eP **P 12 43 33.5 +0.1**
comp=Z,24nm,1.0s,mb5.1
DGRG David-gareji 71.53 311 P **P 12 43 33.8 +0.3**

T25A Trinidad 71.54 55 ⇓P **P 12 43 33.4 -0.3**
baz=71,SNR=11
U24A Moreno Valley 71.56 56 ⇑P **P 12 43 34.3 +0.5**
baz=71,SNR=13
W22A Albuquerque 71.56 58 ⇑P **P 12 43 34.3 +0.4**
baz=71
STAV Stavanger 71.62 343 eP **P 12 43 34.5 +0.8**
STAV AMb AMB 12 43 41.2
comp=Z,222nm,3.2s
STAV Stavanger 71.62 343 eP **P 12 43 34.5 +0.8**
comp=Z,222nm,3.2s
MTA Mtatsminda 71.65 312 P **P 12 43 34.9 +0.7**
TBLG Delisi 71.65 312 P **P 12 43 35.7 +1.4**
ONI Oni 71.69 313 P **P 12 43 34.9 +0.4**
119A Ashpeak Ranch, 71.70 62 ⇑P **P 12 43 34.9 +0.2**
baz=72,SNR=10.0
LRW Lerwick 71.73 347 eP **P 12 43 33.3 -1.1**
LRW AMb AMB 12 43 36.9
comp=Z,205nm,4.4s
LRW Lerwick 71.73 347 P **P 12 43 33.3 -1.1**
LRW AMb AMB 12 43 36.9
comp=Z,205nm,4.4s
GOR Gori 71.79 312 P **P 12 43 37.0 +1.9**
218A Dragoon 71.79 63 ⇓P **P 12 43 35.4 +0.1**
baz=72,SNR=26
Y21A Point of Rocks 71.82 60 ⇑P **P 12 43 35.8 +0.4**
baz=72,SNR=28
AKASG Malin Array Be 71.84 326 P **P 12 43 34.1 -1.1**
comp=Z,308nm,0.7s,mb6.3,baz=34,slow=6.3,SNR=402
AKASG LR LR 13 17 58.1
comp=Z,3µm,18.2s,MS5.6,baz=30,slow=38
AKASG Malin Array Be 71.84 326 P **P 12 43 34.2 -1.0**
AKASG pmax pmax
comp=Z,309nm,0.7s
AKASG MLR MLR
comp=Z,3µm,18.2s
AKASG Malin Array Be 71.84 326 P **P 12 43 34.1 -1.1**
AKASG LR LR 13 17 58.1
AKBB Malin Array Si 71.84 326 eP **P 12 43 34.2 -1.0**
SNART Snartemo 71.85 342 eP **P 12 43 35.7 +0.6**
SNART AMb AMB 12 43 37.8
comp=Z,205nm,0.7s,mb6.2
KIEV Kiev 71.85 326 eP **P 12 43 34.4 -0.9**
KIEV pmax pmax
comp=Z,299nm,0.8s,mb6.3
KIEV MLR MLR
comp=Z,3µm,19.0s,MS5.6
KIEV Kiev 71.85 326 eP **P 12 43 34.4 -0.9**
comp=Z,299nm,0.8s,mb6.3
KIEV LR LR
comp=Z,3µm,19.0s,MS5.6
LAZ Ladron 71.87 59 eP **P 12 43 36.2 +0.5**
comp=Z,12nm,1.0s,mb4.8
X22A Bernardo 71.87 59 ⇓P **P 12 43 35.9 +0.2**
baz=72,SNR=9.9
ANMO Albuquerque 71.89 58⇑ *i*P **P 12 43 36.0 +0.2**
ANMO pmax pmax
comp=Z,21nm,1.2s
ANMO MLR MLR
comp=Z,638nm,18.0s
ANMO Albuquerque 71.89 58 eP **P 12 43 35.9 +0.1**
comp=Z,2.9nm,0.8s
ANMO LR LR
comp=Z,722nm,19.0s,MS5.0
Z20A Nine Sixteen R 71.89 61 ⇑P **P 12 43 35.8 -0.1**
baz=72,SNR=15
W23A Werner Place, 71.92 58 ⇑P **P 12 43 35.7 -0.3**
baz=72,SNR=9.8
ASAR Alice Springs 71.97 199 P **P 12 43 35.5 -0.7**
comp=Z,32nm,0.9s,mb5.2,baz=12,slow=5.4,SNR=88
ASAR PKPPKP 13 11 26.6
comp=Z,0.9nm,0.8s,baz=200,slow=2.3,SNR=4.3
U25A Circle Dot Ran 72.06 56 ⇓P **P 12 43 36.3 -0.5**
baz=72,SNR=39
318A Bisbee 72.20 63 ⇑P **P 12 43 37.6 -0.1**
baz=72,SNR=35
Y22D IRIS PASSCAL I 72.23 59 ⇑P **P 12 43 37.9 +0.1**
baz=72
219A White Tail Can 72.26 62 ⇑P **P 12 43 37.6 -0.4**
baz=72,SNR=44
120A U Bar Ranch, L 72.26 61 ⇑P **P 12 43 38.0 -0.1**
baz=72,SNR=27
Y22A Socorro 72.30 59 ⇑P **P 12 43 38.1 -0.1**
baz=72,SNR=10
X23A Hourglass Bar 72.31 58 ⇑P **P 12 43 38.5 +0.2**
baz=72
Z21A St. Cloud Mine 72.31 60 ⇑P **P 12 43 38.6 +0.3**
baz=72,SNR=34
W24A Lazy 6 Ranch, 72.32 57 ⇑P **P 12 43 38.3 -0.1**
baz=72,SNR=64
V25A Rancho No Teng 72.34 56 ⇑P **P 12 43 38.2 -0.2**
baz=72,SNR=15
BNM Barren Site 72.35 59 eP **P 12 43 38.4 -0.1**
comp=Z,10.0nm,0.9s,mb4.8
U26A Atchley Ranch, 72.45 56 ⇓P **P 12 43 38.2 -0.9**
baz=72
319A Douglas 72.68 63 ⇓P **P 12 43 40.8 +0.2**
baz=72,SNR=32
X24A Lazy VL Ranch, 72.76 58 ⇑P **P 12 43 40.8 -0.2**
baz=72
PALK Pallekele 72.76 262 P **P 12 43 42.5 +1.2**
comp=Z,726nm,0.9s,mb6.6,SNR=7.7
COWI Conover 72.77 40 eP **P 12 43 39.8 -1.1**
comp=Z,30nm,0.9s,mb5.2
COWI LR LR
comp=Z,1µm,19.0s,MS5.1
220A Playas Peak, P 72.77 62 ⇑P **P 12 43 40.9 -0.2**
baz=73,SNR=39
Z22A Elephant Butte 72.77 60 ⇑P **P 12 43 41.2 +0.1**
baz=73,SNR=17
121A Cookes Peak, D 72.78 61 ⇑P **P 12 43 41.1 -0.1**
baz=73,SNR=27
GNI Garni 72.80 310 LR LR 13 21 27.6
comp=Z,3µm,18.3s,MS5.6,baz=21,slow=41
GNI Garni 72.80 310*c i*P **P 12 43 42.8 +1.7**
GNI pmax pmax
comp=Z,259nm,1.7s
GNI MLR MLR
comp=Z,5µm,17.0s
GNI Garni 72.80 310 eP **P 12 43 43.0 +1.9**
comp=Z,173nm,0.8s,mb6.0
GNI LR LR
comp=Z,2µm,19.0s,MS5.5
GNI Garni 72.80 310 P **P 12 43 43.5 +2.4**
SNR=28
GNI P 12 43 43.5
SNR=28
SOC Sochi 72.80 316 eP **P 12 43 40.3 -0.8**
SOC *e* 12 46 16.3
SOC *e* 12 53 45.2
SOC pmax pmax
comp=Z,161nm,0.8s,mb6.0
SOC pmax pmax
comp=Z,888nm,2.2s,mb6.3
SOC MLR MLR
comp=Z,6µm,18.0s,MS5.9
SOC Sochi 72.80 316 *i* P **P 12 43 41.5 +0.4**
Y23A Lovelace Mesa, 72.84 59 ⇓P **P 12 43 41.0 -0.5**
baz=73,SNR=28
V26A Tequesquite Ra 72.85 56 ⇓P **P 12 43 40.9 -0.6**
baz=73,SNR=12
BSD Bornholm Skovb 72.86 336 *i* P **P 12 43 41.3 +0.1**
BSD pmax pmax
comp=Z,140nm,0.8s,mb5.9
BSD Bornholm Skovb 72.86 336 *i* P **P 12 43 41.3 +0.1**
comp=Z,142nm,0.8s,mb6.0
W25A X Bar L Ranch, 72.87 57 ⇑P **P 12 43 41.5 -0.1**
baz=73,SNR=46
CBKS Cedar Bluff 72.94 51 eP **P 12 43 41.3 -0.7**
CBKS pmax pmax
comp=Z,28nm,0.8s,mb5.2
CBKS MLR MLR
comp=Z,1µm,21.0s,MS5.1
CBKS Cedar Bluff 72.94 51 eP **P 12 43 41.3 -0.7**
comp=Z,28nm,0.8s,mb5.2
CBKS LR LR
comp=Z,1µm,21.0s,MS5.1
ANN Anapa 72.96 318 eP **P 12 43 41.7 -0.3**
ANN eS S 12 53 09.2 +0.7
ANN pmax pmax
comp=Z,129nm,1.0s,mb5.8
ANN Anapa 72.96 318 eP **P 12 43 41.8 -0.2**
COP Copenhagen 73.02 338⇑ *i*P **P 12 43 42.8 +0.6**
COP pmax pmax
comp=Z,110nm,0.8s,mb5.8
COP MLR MLR
comp=Z,710nm,20.0s,MS4.9

COP Copenhagen 73.02 338⇑ *i*P **P 12 43 42.8 +0.6**
comp=Z,111nm,0.8s,mb5.8
COP
comp=Z,700nm,20.0s
MUD Monsted U'grnd 73.13 340 *i* P **P 12 43 43.5 +0.7**
MUD pmax pmax
comp=Z,120nm,0.8s,mb5.9
MUD MLR MLR
comp=Z,2µm,18.0s,MS5.5
MUD Monsted U'grnd 73.13 340 *i* P **P 12 43 43.5 +0.7**
comp=Z,119nm,0.8s,mb5.9
MUD
comp=Z,2µm,18.0s
122A Conniff Cattle 73.14 60 ⇓P **P 12 43 43.6 +0.3**
baz=73,SNR=8.6
320A Kipp Ranch, An 73.17 62 ⇑P **P 12 43 43.7 +0.2**
baz=73,SNR=15
Z23A Rita Site, Whi 73.20 59 ⇓P **P 12 43 43.9 +0.2**
baz=73,SNR=9.1
Y24A Capitan 73.21 58 ⇑P **P 12 43 43.8 +0.1**
baz=73,SNR=32
X25A Clemmons Ranch 73.24 57 ⇑P **P 12 43 43.6 -0.2**
baz=73,SNR=9.9
W26A Owens Ranch, T 73.36 57 ⇓P **P 12 43 44.7 +0.1**
baz=73,SNR=11
ARTV Artvin 73.49 313 *i* P **P 12 43 46.4 +1.1**
WAR Warsaw 73.49 332 eP **P 12 43 46.8 +1.8**
WAR LMZ 13 19 48.3
comp=Z,3µm,20.8s
SCHQ Schefferville 73.53 23 P **P 12 43 45.0 -0.2**
comp=Z,15nm,0.8s,mb5.0,baz=340,slow=6.3,SNR=24
SCHQ LR LR 13 20 14.3
comp=Z,1µm,19.0s,MS5.2,baz=245,slow=39
SCHQ Schefferville 73.53 23 eP **P 12 43 44.6 -0.6**
comp=Z,24nm,0.8s,mb5.2
SCHQ LR LR
comp=Z,1µm,19.0s,MS5.3
123A Bell Site, Whi 73.63 60 ⇑P **P 12 43 45.6 -0.6**
baz=73
ORE Reay 73.64 348 eP **P 12 43 45.7 -0.1**
ORE Reay 73.64 348 P **P 12 43 45.7 -0.1**
Y25A Mesa, Roswell 73.65 58 ⇑P **P 12 43 46.1 -0.2**
baz=73
X26A CR and CF Fran 73.72 57 ⇓P **P 12 43 46.6 -0.1**
baz=74,SNR=9.2
W27A Bowe Ranch, En 73.78 56 ⇑P **P 12 43 47.0 0.0**
baz=74,SNR=6.9
DYDN Diyadin 73.79 311 *i* P **P 12 43 49.1 +2.1**
GKP Gorka Klasztor 73.80 334 eP **P 12 43 46.8 -0.1**
GKP LMZ 13 20 43.0
comp=Z,6µm,19.0s
MBWA Marble Bar 73.83 212 eP **P 12 43 46.2 -1.1**
comp=Z,29nm,1.2s,mb5.1
MBWA LR LR
comp=Z,298nm,20.0s,MS4.6
223A Chaparral, Ant 73.97 60 ⇓P **P 12 43 47.7 -0.5**
baz=74
RSC Scourie 74.03 348 eP **P 12 43 47.4 -0.7**
RSC Scourie 74.03 348 P **P 12 43 47.4 -0.7**
SCIA State Center 74.04 45 eP **P 12 43 47.9 -0.5**
comp=Z,85nm,0.8s,mb5.7
SCIA LR LR
comp=Z,2µm,22.0s,MS5.3
X27A F and S Farms, 74.06 56 ⇑P **P 12 43 48.7 0.0**
baz=74,SNR=7.9
124A Stringfield Ra 74.06 59 ⇑P **P 12 43 48.6 -0.1**
baz=74,SNR=22
Z25A Roswell 74.09 58 ⇑P **P 12 43 48.8 0.0**
baz=74,SNR=14
Y26A Elida 74.15 57 ⇓P **P 12 43 49.2 -0.1**
baz=74,SNR=8.9
MVH1 Achvaich 74.30 348⇑ eP **P 12 43 48.2 -1.4**
MVH1 Achvaich 74.30 348 P **P 12 43 48.2 -1.4**
HOMI Horasan 74.35 312 *i* P **P 12 43 51.9 +1.7**
SIM Simferopol' 74.35 320*c i*P **P 12 43 52.0 +1.8**
SIM pmax pmax
comp=Z,185nm,0.7s,mb6.1
SIM MLR MLR
comp=Z,4µm,18.2s,MS5.8
KSU1 Kansas State U 74.40 49 eP **P 12 43 49.1 -1.5**
KSU1 LR LR
comp=Z,2µm,20.0s,MS5.3
TRD Trivandrum 74.45 266⇑ *e*x x 12 43 51.0
224A Cornudas Mount 74.46 60 ⇑P **P 12 43 50.8 -0.2**
baz=74,SNR=21
LVV L'vov 74.49 329 eP **P 12 43 50.5 -0.4**
LVV MLR MLR
comp=N,2µm,16.0s,MS5.7
LVV MLR MLR
comp=E,2µm,16.0s,MS5.7
LVV MLR MLR
comp=Z,3µm,16.0s,MS5.6
MCD Coleburn Disti 74.49 347 eP **P 12 43 50.4 -0.4**
MCD Coleburn Disti 74.49 347 P **P 12 43 50.4 -0.4**
Z26A Caprock 74.53 58 ⇓P **P 12 43 51.0 -0.4**
baz=74,SNR=66
125A Gardner Draw, 74.56 59 ⇓P **P 12 43 51.1 -0.5**
baz=74,SNR=31
Y27A Causey 74.57 57 ⇓P **P 12 43 51.2 -0.5**
baz=74,SNR=28
RRR Rubha Reidh 74.60 349⇑ eP **P 12 43 51.2 -0.2**
RRR Rubha Reidh 74.60 349 P **P 12 43 51.2 -0.2**
RRH Rhenigidale 74.66 349⇑ eP **P 12 43 51.9 +0.2**
RRH Rhenigidale 74.66 349 P **P 12 43 51.9 +0.2**
TVAN Van 74.69 310 *i* P **P 12 43 54.2 +2.0**
AMTX Amarillo 74.70 55 eP **P 12 43 52.3 -0.1**
comp=Z,38nm,0.8s,mb5.4
AMTX LR LR
comp=Z,691nm,21.0s,MS4.9
JFWS Jewell Farm 74.70 43 eP **P 12 43 50.9 -1.4**
JFWS pmax pmax
comp=Z,19nm,0.7s,mb5.1
JFWS MLR MLR
comp=Z,1µm,21.0s,MS5.2
JFWS Jewell Farm 74.70 43 eP **P 12 43 50.9 -1.4**
comp=Z,19nm,0.7s,mb5.1
JFWS LR LR
comp=Z,1µm,21.0s,MS5.2
MME1 Meikle Cairn 74.70 347 eP **P 12 43 51.3 -0.7**
MME1 Meikle Cairn 74.70 347 P **P 12 43 51.3 -0.7**
ERZM Erzurum 74.73 312 *i* P **P 12 43 54.5 +2.0**
MSTX Muleshoe 74.73 57 ⇓P **P 12 43 51.9 -0.7**
baz=74,SNR=16
CPRX Cap Rock 74.77 58 eP **P 12 43 52.6 -0.2**
comp=Z,49nm,1.0s,mb5.4
MDO Dochfour 74.80 348⇑ eP **P 12 43 52.1 -0.4**
MDO Dochfour 74.80 348 P **P 12 43 52.1 -0.4**
MNTX Cornudas Mount 74.81 60 eP **P 12 43 52.8 -0.3**
comp=Z,17nm,1.0s,mb4.9
MNTX LR LR
comp=Z,474nm,19.0s,MS4.8
225A Deer Hill, Car 74.86 59 ⇓P **P 12 43 52.7 -0.6**
baz=75,SNR=15
KAC Achnashellach 74.88 348⇑ *i*P **P 12 43 52.5 -0.5**
KAC Achnashellach 74.88 348 P **P 12 43 52.5 -0.5**
324A Moseley Ranch, 74.94 60 ⇓P **P 12 43 53.4 -0.5**
baz=75,SNR=9.5
Z27A Tatum 74.94 57 ⇑P **P 12 43 53.0 -0.8**
baz=75,SNR=61
126A Clayton Basin, 74.95 58 ⇓P **P 12 43 53.6 -0.3**
baz=75,SNR=8.3
KIS Kishinev 74.98 324⇓ *i*P **P 12 43 52.0 -1.8**
comp=Z,900nm,1.0s,mb6.7
KIS Kishinev 74.98 324 ePcP PcP 12 44 02.0 -5.6
KIS Kishinev 74.98 324 ePP PP 12 46 38.0 -2.9
KIS Kishinev 74.98 324 ePPP 12 48 26.0
KIS eS S 12 53 26.0 -5.1
KIS Kishinev 74.98 324κ *i*P **P 12 43 52.0 -1.8**
KIS *e* 12 44 02.0
KIS *e* 12 46 38.0
KIS ePPP 12 48 26.0
KIS eS S 12 53 26.0 -5.1
KIS ePS 12 54 00.0
KIS pmax pmax
comp=Z,1µm,6.0s
KIS MLR MLR
comp=N,4µm,16.0s,MS5.9
KIS MLR MLR
comp=Z,5µm,16.0s,MS5.9
KIS MLR MLR
comp=E,2µm,15.0s,MS5.9
KIS MLR MLR
comp=Z,6µm,16.0s
KIS Kishinev 74.98 324 P **P 12 43 54.0 +0.3**
GDL2 Guadalupe Moun 75.06 59 eP **P 12 43 54.7 +0.1**
comp=Z,36nm,0.8s,mb5.3

KPL Plockton 75.08 348⇑ eP P 12 43 53.6 -0.5
KPL AMb AMB 12 43 57.1
comp=Z,103nm,1.0s,mb5.7
KPL Plockton 75.08 348 P **P 12 43 53.6 -0.5**
KPL AMb AMB 12 43 57.1
comp=Z,103nm,1.0s,mb5.7
KOPT Kop Dagi 75.08 313 *i* P **P 12 43 56.5 +2.0**
KWP Kalwaria Pacla 75.12 329 *e*P **P 12 43 55.1 +0.6**
KWP *e*pP pP 12 43 56.5 -1.5
KWP LMZ 13 20 13.6
comp=Z,5µm,18.2s
KWP Kalwaria Pacla 75.12 329 *e*P **P 12 43 54.8 +0.2**
KWP pmax pmax
comp=Z,425nm,1.1s,mb6.3
KWP MLR MLR
comp=Z,5µm,20.0s,MS5.8
KWP Kalwaria Pacla 75.12 329 *e*P **P 12 43 54.8 +0.3**
KWP LR LR
comp=Z,5µm,20.0s,MS5.8
KWP Kalwaria Pacla 75.12 329⇑ *i*P **P 12 43 55.1 +0.5**
BSEG Bad Segeberg 75.13 338 *e*P **P 12 43 54.7 +0.2**
comp=Z,135nm,0.9s,mb5.9
BSEG Bad Segeberg 75.13 338 *e*P **P 12 43 54.7 +0.2**
BSEG pmax pmax
comp=Z,135nm,0.9s,mb5.9
KSB Sheil Bridge 75.17 348⇑ *i*P **P 12 43 54.3 -0.4**
KSB Sheil Bridge 75.17 348 P **P 12 43 54.3 -0.4**
HAKT HAKKARI 75.24 309 *i* P **P 12 43 54.7 -0.8**
325A Bean Ranch, Si 75.29 60 ⇓P **P 12 43 55.3 -0.6**
baz=75,SNR=17
TATV Tatvan 75.30 311 *i* P **P 12 43 57.5 +1.7**
CLNB Carlsbad 75.31 59 *e*P **P 12 43 55.9 0.0**
comp=Z,7.3nm,1.3s
127A Arkansas Junct 75.32 58 ⇓P **P 12 43 55.1 -0.9**
baz=75
226A Malaga, Loving 75.32 59 ⇓P **P 12 43 55.9 -0.1**
baz=75
RUE Ruedersdorf 75.50 336 *e*P **P 12 43 57.1 +0.4**
comp=Z,138nm,0.8s,mb5.9
GRSN GIRESUNGRSN 75.51 315 *i* P **P 12 43 56.5 -0.5**
KAR1 Arisaig 75.51 348⇑ *i*P **P 12 43 56.3 -0.3**
KAR1 Arisaig 75.51 348 P **P 12 43 56.3 -0.3**
BNGL BINGÖL 75.55 312 *i* P **P 12 43 59.0 +1.8**
OJC Ojcow 75.62 331 *i* P **P 12 43 55.8 -1.6**
OJC *e*S S 12 53 33.3 -4.8
OJC *e*SS SS 12 58 22.6 -5.4
OJC L 13 20 33.9
comp=Z,2.0nm,21.0s
425A Indio Mountain 75.70 60 ⇓P **P 12 43 58.0 -0.2**
baz=76,SNR=37
STHS Stebnicka Huta 75.81 330 *i* P **P 12 43 59.3 +0.8**
STHS pmax pmax
comp=Z,106nm,1.4s,mb5.6
STHS Stebnicka Huta 75.81 330 *i* P **P 12 43 59.3 +0.8**
comp=Z,106nm,1.4s,mb5.6
STHS Stebnicka Huta 75.81 330 *i* P **P 12 43 59.3 +0.8**
EBH Black Hill 75.82 347⇑ *e*P **P 12 43 58.1 -0.4**
EBH Black Hill 75.82 347 P **P 12 43 58.1 -0.4**
227A Bennet, Jal 75.83 58 ⇑P **P 12 43 58.4 -0.5**
baz=76
BUR08 Bucovina Ar. S 75.87 327 *e*P **P 12 43 58.8 0.0**
BUR01 Bucovina Ar. S 75.89 327 P **P 12 43 59.1 +0.1**
326A Caldwell Ranch 75.92 59 ⇑P **P 12 43 58.8 -0.7**
baz=76,SNR=54
ESY Stoneypath 75.99 346⇑ *e*P **P 12 43 59.7 +0.3**
ESY Stoneypath 75.99 346 P **P 12 43 59.7 +0.3**
EAB Aberfoyle 76.00 347⇑ *i*P **P 12 43 58.9 -0.6**
EAB Aberfoyle 76.00 347 P **P 12 43 58.9 -0.6**
EDI Edinburgh 76.08 347 AMS AMS 13 23 16.6
comp=Z,1µm,20.4s,MS5.2
UZH Uzhgorod 76.11 329 *e*P **P 12 44 01.0 +0.8**
UZH *e* 12 44 15.0
UZH *e* 12 46 51.0
UZH *e*S S 12 53 45.0 +1.4
UZH *e*PS 12 54 40.0
UZH MLR MLR
comp=N,2µm,18.0s,MS5.6
UZH MLR MLR
comp=E,2µm,18.0s,MS5.6
UZH MLR MLR
comp=Z,2µm,18.0s,MS5.3
NIE Niedzica 76.13 331 *e*P **P 12 44 00.7 +0.3**
NIE e 12 44 06.2
NIE Niedzica 76.13 331 P **P 12 44 00.9 +0.5**
327A Balmorhea Ranc 76.18 59 ⇓P **P 12 44 00.2 -0.7**
baz=76
CRVS Cervenica-Dubn 76.18 330 *e*P **P 12 44 00.7 +0.1**
comp=Z,69nm,0.9s,mb5.6
CRVS *e*S S 12 53 43.6 -0.7
CRVS *e*SS SS 12 59 10.6 +34
CRVS LR LR
comp=Z,3µm,18.7s,MS5.6
CRVS Cervenica-Dubn 76.18 330 *e*P **P 12 44 00.7 +0.1**
CRVS *e*S S 12 53 43.6 -0.7
CRVS *e*SS SS 12 59 10.6 +34
BANOM Banah 76.19 293 ⇑P **P 12 44 01.5 +0.4**
SNR=29
EAU Auchinoon 76.19 347⇑ *e*P **P 12 44 00.2 -0.3**
EAU Auchinoon 76.19 347 P **P 12 44 00.2 -0.3**
KSP Ksiaz 76.20 334 *e*P **P 12 44 00.9 +0.1**
KSP *e*pP pP 12 44 01.7 -2.4
KSP LMZ 13 21 16.1
comp=Z,8µm,18.1s
KSP Ksiaz 76.20 334 P **P 12 44 01.2 +0.5**
426A McDonald Obser 76.36 60 ⇑P **P 12 44 01.3 -0.7**
baz=76,SNR=33
PGBU Glenifferbraes 76.39 347 *e*P **P 12 44 01.0 -0.7**
PGBU AMb AMB 12 44 05.4
comp=Z,158nm,2.1s,mb5.6
PGBU Glenifferbraes 76.39 347 P **P 12 44 01.0 -0.7**
PGBU AMb AMB 12 44 05.4
comp=Z,158nm,2.1s,mb5.6
ERBA Erbaa 76.43 316 *i* P **P 12 44 03.3 +1.1**
WMOK Wichita Mounta 76.44 54 *e*P **P 12 44 01.8 -0.6**
WMOK pmax pmax
comp=Z,20nm,0.8s,mb5.1
WMOK MLR MLR
comp=Z,682nm,19.0s,MS5.0
WMOK Wichita Mounta 76.44 54 *e*P **P 12 44 01.8 -0.6**
comp=Z,20nm,0.8s,mb5.1
WMOK LR LR
comp=Z,682nm,19.0s,MS5.0
BMR Baia Mare 76.48 328 P **P 12 44 03.4 +1.0**
NRDL Niedersach Rie 76.49 338 *e*P **P 12 44 02.2 -0.1**
comp=Z,122nm,0.9s,mb5.8
NRDL *e*S S 12 53 47.6 0.0
OKC Ostrava-Krasne 76.49 332 *e*P **P 12 44 02.9 +0.5**
OKC *e* 12 44 08.5
OKC *e* 12 46 58.2
OKC *e*S S 12 53 49.8 +2.0
OKC MLR MLR
comp=Z,3µm,15.3s,MS5.7
OKC Ostrava-Krasne 76.49 332 P **P 12 44 03.0 +0.6**
OKC Ostrava-Krasne 76.49 332 *e*P **P 12 44 02.9 +0.5**
OKC *e*pP pP 12 44 08.5 +2.7
OKC *e*PP PP 12 46 58.2 +4.7
OKC *e*S S 12 53 49.8 +2.0
OKC AMS AMS 13 23 20.0
comp=Z,3µm,15.3s
ARMA Armidale 76.54 181 *e*P **P 12 44 03.0 +0.3**
ARMA Armidale 76.54 181 *e*P **P 12 44 03.0 +0.3**
comp=Z,32nm,1.0s,mb5.2
328A Wristen Ranch, 76.57 59 ⇓P **P 12 44 02.4 -0.7**
baz=76,SNR=46
UPC Upice 76.58 334 P **P 12 44 03.2 +0.3**
UPC Upice 76.58 334 *e*P **P 12 44 03.4 +0.5**
427A Hayter Ranch, 76.60 59 ⇑P **P 12 44 02.8 -0.6**
baz=76,SNR=14
DPC Dobruska-Polom 76.63 333 P **P 12 44 03.6 +0.5**
DPC Dobruska-Polom 76.63 333 *e*P **P 12 44 03.7 +0.6**
DPC *e*PP PP 12 46 54.8 +0.2
DPC *e*S S 12 53 49.6 +0.4
DPC *e*x x 12 59 13.3
DPC AMS AMS 13 22 00.0
comp=Z,4µm,17.3s
KEMA Kemaliye 76.66 314 *i* P **P 12 44 04.2 +0.7**
ESK Eskdalemuir 76.66 346 *e*P **P 12 44 02.6 -0.6**
ESK AMb AMB 12 44 07.9
comp=Z,95nm,3.6s
ESK AMS AMS 13 23 41.6
comp=Z,1µm,18.1s,MS5.3
ESK Eskdalemuir 76.66 346 P **P 12 44 02.6 -0.6**
ESK AMb AMB 12 44 07.9
comp=Z,95nm,3.6s
ESK AMS AMS 13 23 41.6
comp=Z,1µm,18.1s
ESK Eskdalemuir 76.66 346 *i* P **P 12 44 04.2 +0.9**
ESK Eskdalemuir 76.66 346 *e*P **P 12 44 03.1 -0.1**
comp=Z,23nm,0.8s,mb5.2
ESK LR LR
comp=Z,2µm,19.0s,MS5.4
CFR Carcaliu 76.73 324 P **P 12 44 04.3 +0.4**
VRI Vrincioaia 76.74 325⇑ *i*P **P 12 44 04.2 +0.4**
VRI Vrincioaia 76.74 325⇑ *i*P **P 12 44 04.2 +0.3**
MORC Moravsky Berou 76.74 332⇑ P **P 12 44 04.0 +0.3**
MORC Moravsky Berou 76.74 332⇑ *i*P **P 12 44 04.1 +0.3**
BOYT Boyabat 76.74 317 *i* P **P 12 44 05.4 +1.4**
526A Mary Lane Ranc 76.76 60 ⇑P **P 12 44 03.6 -0.7**
baz=76,SNR=34
CLL Collm 76.77 336 *e*P **P 12 44 03.4 -0.5**
comp=Z,251nm,0.7s,mb6.2
CLL *e*S S 12 53 49.5 -1.2
CLL Collm 76.77 336⇑ *i*P **P 12 44 03.6 -0.3**
CLL *e* 12 44 15.0
CLL *e*S S 12 53 52.0 +1.3
CLL pmax pmax
comp=Z,252nm,0.7s,mb6.3
CLL MLR MLR
comp=Z,3µm,17.8s,MS5.6
CLL Collm 76.77 336⇑ *i*P **P 12 44 03.6 -0.3**
comp=Z,252nm,0.7s,mb6.3
CLL *e*PcP PcP 12 44 15.0 -0.2
CLL *e*S S 12 53 52.0 +1.3
CLL *e*SS SS 12 59 12.0 +27
CLL *e*SSS 13 02 33.0
CLL LmH 13 22 00.0
comp=N,900nm,18.5s
CLL LmH 13 22 00.0
comp=E,2µm,19.1s
ECK Cauldkaine Hil 76.78 346⇑ *e*P **P 12 44 03.3 -0.6**
ECK Cauldkaine Hil 76.78 346 P **P 12 44 03.3 -0.6**
PLOR Plostina 76.78 325 P **P 12 44 05.0 +0.9**
WBK Wadi Bani Khal 76.80 289 ⇓P **P 12 44 07.1 +2.5**
SNR=14
TOKA Tokat 76.84 316 *i* P **P 12 44 05.7 +1.2**
DIYA Diyarbakir 76.86 312 *i* P **P 12 44 05.8 +1.2**
LIKS Likavka 76.86 331 *e*P **P 12 44 05.7 +1.2**
LIKS pmax pmax
comp=Z,109nm,0.9s,mb5.8
LIKS Likavka 76.86 331 *e*P **P 12 44 05.7 +1.2**
comp=Z,109nm,0.9s,mb5.8
LIKS Likavka 76.86 331 *e*P **P 12 44 05.7 +1.2**
KECS Kecovo 76.87 330 *e*P **P 12 44 04.6 0.0**
KECS pmax pmax
comp=Z,50nm,0.8s,mb5.5
KECS Kecovo 76.87 330 *e*P **P 12 44 04.6 0.0**
comp=Z,50nm,0.8s,mb5.5
KECS Kecovo 76.87 330 *e*P **P 12 44 04.6 0.0**
BRG Berggiesshubel 76.88 335 *e*P **P 12 44 04.3 -0.3**
comp=Z,48nm,1.0s,mb5.4
BRG *e*S S 12 53 50.8 -1.2
BRG Berggiesshubel 76.88 335 *i* P **P 12 44 04.2 -0.4**
comp=Z,47nm,0.9s,mb5.4
BRG *i* 12 44 15.2
comp=Z,60nm,1.0s
BRG *e* 12 46 47.6
comp=Z,9.7nm,0.9s
BRG *e* 12 47 01.2
comp=Z,11nm,0.9s
BRG S S 12 53 52.0 0.0
BRG
comp=N,1µm,15.6s
BRG
comp=E,1µm,20.7s
BRG
comp=Z,3µm,16.8s
BRG Berggiesshubel 76.88 335 P **P 12 44 04.7 +0.1**
XAL Allendale 76.94 346⇑ *e*P **P 12 44 04.2 -0.5**
XAL Allendale 76.94 346 P **P 12 44 04.2 -0.5**
HDIL Hopedale 76.97 44 *e*P **P 12 44 04.5 -0.8**
comp=Z,89nm,0.7s,mb5.8
HDIL LR LR
comp=Z,1µm,21.0s,MS5.2
527A Woodward Ranch 76.98 60 ⇑P **P 12 44 05.0 -0.6**
baz=77,SNR=52
ELZG Elazig 77.00 313 *i* P **P 12 44 07.0 +1.6**
ELZG *i* P 12 44 07.5
PVCC Panska Ves 77.00 334 *e*P **P 12 44 05.8 +0.5**
PVCC *e* 12 44 11.7
PVCC MLR MLR
comp=Z,3µm,17.0s,MS5.7
PVCC Panska Ves 77.00 334 *e*P **P 12 44 05.8 +0.5**
PVCC *e*pP pP 12 44 11.7 +3.0
PVCC AMS AMS 13 21 10.0
comp=Z,3µm,17.0s
CLZ Clausthal 77.01 337 *e*P **P 12 44 05.8 +0.5**
comp=Z,2µm,2.5s,mb6.5
CLZ *e*S S 12 53 53.2 -0.2
CLZ Clausthal 77.01 337 *e*P **P 12 44 05.8 +0.5**
CLZ *e*S S 12 53 53.2 -0.2
CLZ pmax pmax
comp=Z,2µm,2.5s,mb6.5
HATD Hatta, Dubai 77.07 292 ⇓P **P 12 44 06.6 +0.5**
SNR=28
SMDO Samad 77.08 290 P **P 12 44 07.5 +1.3**
SNR=15
626A Big Bend Ranch 77.10 61 ⇓P **P 12 44 05.6 -0.5**
baz=77,SNR=76
428A Kincaid Ranch, 77.12 59 ⇑P **P 12 44 06.2 -0.1**
baz=77,SNR=34
HOQ Hoqain 77.19 291 ⇑P **P 12 44 07.5 +0.7**
SNR=35
TIRR Tirgusor 77.20 323 *e*P **P 12 44 06.3 -0.2**
TIRR pmax pmax
comp=Z,102nm,0.9s,mb5.8
TIRR Tirgusor 77.20 323 *e*P **P 12 44 06.3 -0.2**
comp=Z,102nm,0.9s,mb5.8
GCD Castle Douglas 77.22 347⇑ *e*P **P 12 44 05.7 -0.7**
GCD Castle Douglas 77.22 347 P **P 12 44 05.7 -0.7**
ASHO Ashiyiah 77.22 292 ⇑P **P 12 44 07.2 +0.3**
SNR=18
IBBN Ibbenburen 77.26 339 *e*P **P 12 44 06.8 +0.1**
comp=Z,172nm,0.8s,mb6.0
NAZ Nazwa, Dubai 77.26 293 P **P 12 44 08.1 +0.9**
SNR=19
GAL1 Galloway 77.33 347 *e*P **P 12 44 06.5 -0.5**
GAL1 AMb AMB 12 44 10.7
comp=Z,60nm,1.5s,mb5.3
GAL1 AMS AMS 13 22 34.0
comp=Z,1µm,19.1s,MS5.2
GAL1 Galloway 77.33 347 P **P 12 44 06.5 -0.5**
GAL1 AMb AMB 12 44 10.7
comp=Z,60nm,1.5s,mb5.3
GAL1 AMS AMS 13 22 34.0
comp=Z,1µm,19.1s
MLR Muntele Rosu 77.36 325 P **P 12 44 07.8 +0.4**
MLR Muntele Rosu 77.36 325⇑ P **P 12 44 07.6 +0.2**
MLR Muntele Rosu 77.36 325⇑ *i*P **P 12 44 07.6 +0.2**
BALT Daday 77.36 318 *i* P **P 12 44 08.4 +0.9**
CTKT Corum 77.42 317 *i* P **P 12 44 09.3 +1.5**
VYHS Vyhne 77.43 331 *e*P **P 12 44 08.0 +0.3**
comp=Z,49nm,0.8s,mb5.5
VYHS *e*S S 12 53 59.1 +1.1
VYHS *e*SS SS 12 59 29.9 +35
VYHS LR LR
comp=Z,2µm,19.1s,MS5.4
VYHS Vyhne 77.43 331 *e*P **P 12 44 08.0 +0.3**
VYHS *e*S S 12 53 59.1 +1.1
VYHS *e*SS SS 12 59 29.9 +35
PRA Prague 77.45 334⇑ P **P 12 44 08.0 +0.2**
VRAC Vranov 77.45 333 P **P 12 44 08.5 +0.7**
VRAC Vranov 77.45 333⇑ P **P 12 44 08.3 +0.5**
VRAC Vranov 77.45 333⇑ *i*P **P 12 44 08.3 +0.5**
528A Cox Ranch, San 77.47 59 ⇓P **P 12 44 07.5 -0.7**
baz=77,SNR=30
PRU Pruhonice 77.49 334 *e*P **P 12 44 08.7 +0.7**
PRU *e* 12 44 14.1
PRU *e* 12 47 02.8
PRU *e*S S 12 53 58.9 +0.3
PRU MLR MLR
comp=Z,4µm,16.6s,MS5.8
PRU Pruhonice 77.49 334 P **P 12 44 08.8 +0.8**
PRU Pruhonice 77.49 334 P **P 12 44 08.8 +0.8**
PRU Pruhonice 77.49 334 *e*P **P 12 44 08.7 +0.7**
PRU *e*pP pP 12 44 14.1 +2.7
PRU *e*PP PP 12 47 02.8 +0.9
PRU *e*S S 12 53 58.9 +0.3
PRU *e*SS SS 12 59 04.1 +7.9
PRU AMS AMS 13 22 00.0
comp=Z,4µm,16.6s
KOLL Kolacno 77.50 331 *e*P **P 12 44 08.7 +0.6**
KOLL Kolacno 77.50 331 *e*P **P 12 44 08.7 +0.6**
DRGR 77.51 328 P **P 12 44 08.5 +0.3**
DRGR 77.51 328⇑P **P 12 44 08.3 +0.1**
DRGR 77.51 328⇑ *i*P **P 12 44 08.3 +0.1**
JMDO Jabal Madar 77.53 289 P **P 12 44 09.7 +1.0**
SNR=21
TXAR Lajitas Array 77.54 61 P **P 12 44 08.4 -0.2**
comp=Z,38nm,0.7s,mb5.4,baz=298,slow=4.0,SNR=344
TXAR PKKPbc PKKPbc 13 03 13.6 +3.5
comp=Z,0.5nm,0.9s,baz=140,slow=6.0,SNR=4.5
TXAR LR LR 13 20 17.8
comp=Z,482nm,18.6s,MS4.8,baz=0.0,slow=37
PSZ Piszkesteto 77.56 330 *e*P **P 12 44 08.9 +0.4**
comp=Z,110nm,0.9s,mb5.8
PSZ LR LR
comp=Z,4µm,19.0s,MS5.8
PSZ Piszkesteto 77.56 330⇑ *e*P **P 12 44 09.1 +0.7**
PSZ Piszkesteto 77.56 330⇑ *i*P **P 12 44 09.1 +0.7**
ILGA Ilgaz 77.59 318 *i* P **P 12 44 10.6 +1.9**
627A Terlingua Ranc 77.62 60 ⇓P **P 12 44 08.3 -0.8**
baz=77,SNR=44
AKCD Akcadag 77.69 313 *i* P **P 12 44 11.0 +1.7**
HPK Haverah Park 77.70 345⇑ *e*P **P 12 44 08.7 -0.4**
HPK AMb AMB 12 44 12.4
comp=Z,199nm,0.8s,mb6.1
HPK AMS AMS 13 26 33.4
comp=Z,1µm,15.0s,MS5.3
HPK Haverah Park 77.70 345 P **P 12 44 08.7 -0.4**
HPK AMb AMB 12 44 12.4
comp=Z,199nm,0.8s,mb6.1
HPK AMS AMS 13 26 33.4
comp=Z,1µm,15.0s
TANN Tannenbergstha 77.72 336 *e*P **P 12 44 09.4 +0.1**
comp=Z,38nm,0.9s,mb5.3
TANN *e*S S 12 53 59.8 -1.3
TANN Tannenbergstha 77.72 336 P **P 12 44 09.5 +0.2**
ASUD Al Ashush, Dub 77.73 293 ⇑P **P 12 44 10.4 +0.7**
SNR=22
MOX Moxa 77.75 336 *e*P **P 12 44 09.1 -0.4**
comp=Z,123nm,1.0s,mb5.8
MOX *e*S S 12 54 05.0 +3.6
MOX
comp=Z,2µm,20.0s
MOX Moxa 77.75 336 *e*P **P 12 44 09.5 0.0**
comp=Z,116nm,0.9s,mb5.8
MOX *e*S S 12 54 01.5 +0.1
MOX Moxa 77.75 336 *e*P **P 12 44 09.1 -0.4**
MOX pmax pmax
comp=Z,123nm,1.0s,mb5.8
MOX MLR MLR
comp=Z,2µm,20.0s,MS5.4
MOX Moxa 77.75 336 *e*P **P 12 44 09.1 -0.4**
comp=Z,123nm,1.0s,mb5.8
MOX *e*S S 12 54 05.0 +3.6
MOX LR LR
comp=Z,2µm,20.0s,MS5.4
TREC Trest 77.81 333 *e*P **P 12 44 10.5 +0.7**
TREC MLR MLR
comp=Z,4µm,17.0s,MS5.8
TREC Trest 77.81 333 *e*P **P 12 44 10.5 +0.7**
TREC AMS AMS 13 22 50.0
comp=Z,4µm,17.0s
GIM North Isle of 77.85 347 *e*P **P 12 44 09.3 -0.7**
GIM North Isle of 77.85 347 P **P 12 44 09.3 -0.7**
BSY Bisya 77.86 290 ⇑P **P 12 44 11.5 +1.0**
SNR=28
SMOL Smolenice 77.88 332 *e*P **P 12 44 11.6 +1.4**
SMOL Smolenice 77.88 332 *e*P **P 12 44 11.6 +1.4**
ARQ Araqi 77.88 291 ⇓P **P 12 44 11.1 +0.5**
SNR=26
NKC Novy Kostel 77.89 335 P **P 12 44 10.8 +0.6**
NKC Novy Kostel 77.89 335 *e*P **P 12 44 10.5 +0.3**
NKC AMS AMS 13 24 50.0
comp=Z,2µm,16.9s
628A Black Gap, Mar 77.89 60 ⇑P **P 12 44 09.9 -0.7**
baz=78,SNR=28
PSN Preselentsi 77.93 323 *e*P **P 12 44 10.4 -0.2**
CCM Cathedral Cave 77.95 47 *e*P **P 12 44 09.7 -1.1**
CCM pmax pmax
comp=Z,31nm,0.9s,mb5.2
CCM MLR MLR
comp=Z,948nm,20.0s,MS5.1
CCM Cathedral Cave 77.95 47 *e*P **P 12 44 09.7 -1.1**
comp=Z,31nm,0.9s,mb5.2
CCM LR LR
comp=Z,948nm,20.0s,MS5.1
SLM Saint Louis 78.00 46 *e*P **P 12 44 10.4 -0.7**
SLM pmax pmax
comp=Z,29nm,0.6s,mb5.4
SLM Saint Louis 78.00 46 *e*P **P 12 44 10.4 -0.7**
comp=Z,29nm,0.6s,mb5.4
UBBA Unterbreizbach 78.04 337 *e*P **P 12 44 11.0 0.0**
comp=Z,52nm,0.8s,mb5.5
UBBA *e*S S 12 54 04.6 +0.1
BHD Baghdad 78.05 306 *e*P **P 12 44 06.0 -5.4**
BHD *e*S S 12 53 58.0 -7.2
GMM Mts of Mourne 78.13 348⇑ *e*P **P 12 44 10.2 -1.2**
GMM Mts of Mourne 78.13 348 P **P 12 44 10.2 -1.2**
LHO Holmfirth 78.13 345⇑ *e*P **P 12 44 11.1 -0.4**
LHO Holmfirth 78.13 345 P **P 12 44 11.1 -0.4**
ATAB Bozova 78.14 313 *i* P **P 12 44 13.7 +1.9**
PINB Pinarbasi 78.16 314 *i* P **P 12 44 12.9 +1.0**
BUG Bochum--Univer 78.17 339 *e*P **P 12 44 11.8 0.0**
comp=Z,162nm,0.9s,mb6.0
BUG *e*S S 12 54 07.2 +1.3
AAM Ann Arbor 78.19 39 P **P 12 44 11.8 -0.2**
AAM MLR MLR
comp=Z,1µm,20.0s,MS5.2
ZST Bratislava 78.26 332 *e*P **P 12 44 13.5 +1.2**
comp=Z,110nm,0.8s,mb5.8
ZST *e*S S 12 54 12.5 +5.5
ZST LR LR
comp=Z,2µm,19.3s,MS5.6
ZST Bratislava 78.26 332 *e*P **P 12 44 13.5 +1.2**
ZST *e*S S 12 54 12.5 +5.5
KBI1 Birley Grange 78.35 345⇑ *e*P **P 12 44 12.5 -0.2**
KBI1 Birley Grange 78.35 345 P **P 12 44 12.5 -0.2**
ROTZ Rotzenmuhle 78.38 335 *e*P **P 12 44 13.5 +0.6**
comp=Z,929nm,2.6s,mb6.2
ROTZ *e*S S 12 54 08.2 0.0
CDAG Cicekdag 78.40 316 *i* P **P 12 44 13.8 +0.6**
FVM French Village 78.41 46 *e*P **P 12 44 12.4 -1.0**
FVM pmax pmax
comp=Z,34nm,0.8s,mb5.3
FVM French Village 78.41 46 *e*P **P 12 44 12.4 -1.0**
comp=Z,34nm,0.8s,mb5.3
KHC Kasperske Hory 78.54 334 *e*P **P 12 44 14.4 +0.5**
KHC *e* 12 44 19.6
KHC *e*S S 12 54 08.6 -1.4
KHC *e*SS SS 12 59 12.6 +0.6
KHC MLR MLR
comp=Z,4µm,17.4s,MS5.8
KHC Kasperske Hory 78.54 334 *e*P **P 12 44 14.2 +0.3**
comp=Z,134nm,0.8s,mb5.9
KHC Kasperske Hory 78.54 334 *e*P **P 12 44 14.4 +0.5**
KHC *e*pP pP 12 44 19.6 +2.3
KHC *e*S S 12 54 08.6 -1.4
KHC *e*SS SS 12 59 12.6 +0.6
KHC AMS AMS 13 22 30.0
comp=Z,4µm,17.4s
DMUB Kingscourt 78.60 348⇑ *i*P **P 12 44 16.9 +2.8**
GZT Gaziantep 78.60 313 *i* P **P 12 44 15.8 +1.4**
PRD Provadia 78.65 323 *e*P **P 12 44 14.8 +0.2**
GZR Gura Zlata 78.67 327 P **P 12 44 14.8 +0.2**
GZR Gura Zlata 78.67 327⇑ P **P 12 44 14.6 -0.1**
GZR Gura Zlata 78.67 327⇑ *i*P **P 12 44 14.6 0.0**
BR131 Keskin Array S 78.67 317 *e*P **P 12 44 15.3 +0.6**
comp=Z,54nm,0.9s,mb5.5
BR131 LR LR
comp=Z,1µm,19.0s,MS5.3
STKA Stephens Creek 78.69 190 *e*P **P 12 44 13.5 -1.1**
comp=Z,7.9nm,0.9s,mb4.6
STKA Stephens Creek 78.69 190 P **P 12 44 12.4 -2.3**
comp=Z,13nm,1.0s,mb4.8,baz=347,slow=6.3,SNR=12
STKA LR LR 13 19 36.1
comp=Z,835nm,19.9s,MS5.1,baz=13,slow=36
STKA Stephens Creek 78.69 190 *e*P **P 12 44 13.5 -1.1**
comp=Z,2.6nm,0.9s,mb4.2
GRA1 Grafenberg Arr 78.72 336 *e*P **P 12 44 15.4 +0.6**
comp=Z,285nm,0.8s,mb6.2
GRA1 *e*S S 12 54 14.6 +2.7
GRA1 LR LR

comp=Z,2µm,18.8s,MS5.5
GRF Grafenberg Arr 78.72 336 *e*P **P 12 44 15.4 +0.6**
comp=Z,285nm,0.8s,mb6.2
GRF *e*S S 12 54 14.6 +2.7
GRF *e*L 13 21 31.1
comp=Z,2µm,18.8s
GRF Grafenberg Arr 78.72 336 *e*P **P 12 44 15.4 +0.6**
GRF *e*S S 12 54 14.6 +2.7
GRF pmax pmax
comp=Z,285nm,0.8s,mb6.2
GRF MLR MLR
comp=Z,2µm,18.8s,MS5.5
GRF Grafenberg Arr 78.72 336 *e*P **P 12 44 15.4 +0.6**
GRF *e*S S 12 54 14.6 +2.7
GRF pmax pmax
comp=Z,285nm,0.8s,mb6.2
GRF MLR MLR
comp=Z,2µm,18.8s,MS5.5
SGKT Sivrigoynuk 78.73 318 *i*P **P 12 44 16.1 +1.1**
WET Wettzell 78.74 335 *e*P **P 12 44 15.5 +0.6**
comp=Z,132nm,0.9s,mb5.9
WET Wettzell 78.74 335 *e*P **P 12 44 15.5 +0.6**
WET pmax pmax
comp=Z,132nm,0.9s,mb5.9
GEC2 GERESS Array S 78.76 334 *e*P **P 12 44 15.1 0.0**
comp=Z,57nm,0.9s,mb5.5
GEC2 *e*S S 12 54 13.4 +1.1
GEC2 GERESS Array S 78.76 334 *e*P **P 12 44 15.1 0.0**
GEC2 *e*S S 12 54 13.4 +1.1
GEC2 pmax pmax
comp=Z,57nm,0.9s,mb5.5
CWF Charnwood Fore 78.81 345⇑*e*P **P 12 44 14.8 -0.5**
CWF AMb AMB 12 44 17.3
comp=Z,82nm,2.1s,mb5.3
CWF Charnwood Fore 78.81 345 P **P 12 44 14.8 -0.5**
CWF AMb AMB 12 44 17.3
comp=Z,82nm,2.1s,mb5.3
UMR Umm Al-Rimmam 78.87 301 *e*P **P 12 44 16.2 +0.2**
UMR AMb AMB 12 44 19.1
comp=Z,696nm,0.8s,mb6.7
CONA Conrad Observa 78.90 332⇑*i*P **P 12 44 16.6 +0.8**
comp=Z,144nm,0.9s,mb5.9,SNR=94
CSNA Conrad Observa 78.90 332⇑*i*P **P 12 44 16.6 +0.8**
comp=Z,142nm,0.9s,mb5.9
MIB Mutribah 78.90 302 *e*P **P 12 44 16.8 +0.6**
MIB AMb AMB 12 44 19.3
comp=Z,950nm,0.8s
BZS Buzias 78.91 328 ⇑P **P 12 44 16.2 +0.2**
BZS Buzias 78.91 328 P **P 12 44 15.9 0.0**
BZS ⇑P 12 44 16.2
BZS Buzias 78.91 328⇑*i*P **P 12 44 16.2 +0.2**
OLIL Olney 78.97 44 *e*P **P 12 44 15.9 -0.5**
comp=Z,49nm,0.9s,mb5.4
JCT Junction City 78.99 57 *e*P **P 12 44 16.0 -0.7**
JCT pmax pmax
comp=Z,42nm,1.0s,mb5.3
JCT MLR MLR
comp=Z,779nm,20.0s,MS5.0
JCT Junction City 78.99 57 *e*P **P 12 44 16.0 -0.6**
comp=Z,42nm,1.0s,mb5.3
JCT LR LR
comp=Z,779nm,20.0s,MS5.0
TNS Taunus Mts 78.99 338 *e*P **P 12 44 16.6 +0.3**
comp=Z,226nm,0.8s,mb6.2
TNS Taunus Mts 78.99 338 *e*P **P 12 44 16.6 +0.3**
TNS pmax pmax
comp=Z,226nm,0.8s,mb6.2
ZIMR 79.11 324 ⇑P **P 12 44 17.0 -0.1**
ZIMR 79.11 324⇑*i*P **P 12 44 17.0 -0.1**
KBD Kabd 79.16 301 *e*P **P 12 44 17.6 0.0**
KBD AMb AMB 12 44 20.8
comp=Z,348nm,0.8s,mb6.3
BEBN Eben Emael 79.16 340 P **P 12 44 16.8 -0.4**
comp=Z,68nm,1.2s,mb5.5
DSB Dublin 79.16 348 *e*P **P 12 44 16.9 -0.2**
comp=Z,57nm,0.8s,mb5.5
CRAR CRAIOVA 79.17 326 P **P 12 44 18.8 +1.4**
SZH Strazhica 79.20 324 *e*P **P 12 44 16.8 -0.8**
SIUC Southern Illin 79.22 46 *e*P **P 12 44 17.1 -0.8**
comp=Z,56nm,0.9s,mb5.5
MEM Membach 79.25 339 P **P 12 44 17.6 -0.1**
comp=Z,150nm,1.0s,mb5.9
KUZU Kuzuini 79.29 313 *i*P **P 12 44 19.3 +1.1**
HLM1 Long Mynd 79.30 345 *e*P **P 12 44 17.5 -0.4**
HLM1 Long Mynd 79.30 345 P **P 12 44 17.5 -0.4**
QRN Al-Qurain 79.34 300 *e*P **P 12 44 18.9 +0.3**
QRN AMb AMB 12 44 21.0
comp=Z,540nm,0.8s,mb6.5
NAY Al-Naaiem 79.37 301 *e*P **P 12 44 19.0 +0.3**
NAY AMb AMB 12 44 21.1
comp=Z,269nm,0.8s,mb6.2
BLO Bloomington 79.38 43 *e*P **P 12 44 18.1 -0.6**
BLO pmax pmax
comp=Z,18nm,0.4s,mb5.3
BLO Bloomington 79.38 43 *e*P **P 12 44 18.1 -0.6**
comp=Z,18nm,0.4s,mb5.3
RDF Al-Radifah 79.42 301 *e*P **P 12 44 19.9 +0.8**
RDF AMb AMB 12 44 22.2
comp=Z,597nm,0.8s,mb6.6
MIAR Mount Ida 79.42 51 *e*P **P 12 44 18.2 -0.8**
MIAR pmax pmax
comp=Z,29nm,0.8s,mb5.3
MIAR MLR MLR
comp=Z,1µm,21.0s,MS5.2
MIAR Mount Ida 79.42 51 *e*P **P 12 44 18.1 -0.8**
comp=Z,29nm,0.8s,mb5.3
MIAR LR LR
comp=Z,1µm,21.0s,MS5.2
TOD Tromm 79.46 337 *e*P **P 12 44 19.1 +0.2**
UCC Uccle 79.46 341 P **P 12 44 18.5 -0.4**
PKSM Moragy 79.47 330 ⇑P **P 12 44 18.9 -0.1**
PKSM Moragy 79.47 330⇑*i*P **P 12 44 18.9 -0.1**
MOA Molln 79.47 333 P **P 12 44 19.2 +0.2**
MOA Molln 79.47 333⇑*i*P **P 12 44 19.3 +0.3**
comp=Z,96nm,0.8s,mb5.8,SNR=43
PVL Pavlikeni 79.49 324 *e*P **P 12 44 18.5 -0.7**
ABH Alteburg 79.54 338 *e*P **P 12 44 19.5 +0.2**
BCLA Clavier 79.59 340 P **P 12 44 19.6 0.0**
comp=Z,99nm,1.1s,mb5.7
JMB Yambol 79.60 323 P **P 12 44 20.9 +1.1**
JMB Yambol 79.60 323 *e*P **P 12 44 20.3 +0.5**
ARSA Arzberg 79.60 332 P **P 12 44 20.1 +0.4**
ARSA Arzberg 79.60 332⇑*i*P **P 12 44 20.1 +0.4**
comp=Z,71nm,0.9s,mb5.6,SNR=30
RAR Rarotonga 79.62 136 PFAKE 12 44 30.0 +10
RAR LR LR
comp=Z,2µm,19.0s,MS5.5
SNF Seneffe 79.75 340 P **P 12 44 20.4 0.0**
comp=Z,45nm,0.9s,mb5.4
PARMO Parma 79.78 47 *e*P **P 12 44 20.6 -0.3**
USIN University of 79.79 45 *e*P **P 12 44 20.5 -0.4**
comp=Z,56nm,0.8s,mb5.5
ELBA Catalca 79.89 321 *i*P **P 12 44 21.4 0.0**
UALR University of 79.90 50 *e*P **P 12 44 20.8 -0.8**
comp=Z,19nm,1.1s,mb4.9
COBT Iskenderun 79.91 313 *i*P **P 12 44 22.6 +1.0**
ERPA Erie 79.91 37 *e*P **P 12 44 20.7 -0.8**
comp=Z,79nm,1.0s,mb5.6
ERPA LR LR
comp=Z,918nm,21.0s,MS5.1
LONY Lake Ozonia 79.94 33 *e*P **P 12 44 20.0 -1.6**
comp=Z,9.6nm,0.9s,mb4.7
LONY LR LR
comp=Z,668nm,19.0s,MS5.0
YURE YUREGIR 79.98 314 *i*P **P 12 44 23.1 +1.1**
GIVF Givet 80.00 340⇑*i*P **P 12 44 21.6 -0.2**
comp=Z,88nm,0.9s,mb5.4
GIVF Givet 80.00 340⇑*i*P **P 12 44 21.6 -0.2**
GIVF pmax pmax
comp=Z,44nm,0.9s,mb5.4
GIVF Givet 80.00 340⇑*i*P **P 12 44 21.6 -0.2**
comp=Z,44nm,0.9s,mb5.4
RJOB Jochberg 80.02 334 *e*P **P 12 44 22.6 +0.6**
comp=Z,136nm,0.9s,mb5.9
BORA Eskisehir 80.02 319 *i*P **P 12 44 22.2 +0.1**
GULE Gulek 80.04 315 *i*P **P 12 44 23.4 +1.1**
DOU Dourbes 80.06 340 P **P 12 44 22.4 +0.2**
comp=Z,24nm,1.1s,mb5.0
KOGS Kog 80.07 331 *e*P **P 12 44 21.9 -0.4**
FUR Furstenfeldbru 80.08 335 *e*P **P 12 44 22.8 +0.5**
comp=Z,182nm,0.9s,mb6.0
FUR Furstenfeldbru 80.08 335 *e*P **P 12 44 22.8 +0.5**
FUR pmax pmax
comp=Z,182nm,0.9s,mb6.0
WLF Walferdange 80.09 339 P **P 12 44 22.6 +0.4**
WLF Walferdange 80.09 339 *e*P **P 12 44 22.7 +0.4**
comp=Z,43nm,0.9s,mb5.4
WLF *e*S S 12 54 27.3 +0.9
WLF Walferdange 80.09 339 *e*P **P 12 44 21.5 -0.8**
WLF pmax pmax
comp=Z,48nm,1.0s,mb5.4
WLF MLR MLR
comp=Z,2µm,20.0s,MS5.5
WLF Walferdange 80.09 339 *e*P **P 12 44 21.4 -0.8**
comp=Z,48nm,1.0s,mb5.4
WLF LR LR
comp=Z,2µm,20.0s,MS5.5
STU Stuttgart 80.12 337 *e*P **P 12 44 22.7 +0.2**
comp=Z,124nm,1.0s,mb5.8
STU *e*S S 12 54 28.9 +2.2
STU Stuttgart 80.12 337 P **P 12 44 22.4 -0.1**
comp=Z,149nm,0.1s
HGH Gray Hill 80.13 345⇑*i*P **P 12 44 22.1 -0.3**
HGH Gray Hill 80.13 345 P **P 12 44 22.1 -0.3**
ESKT Eskisehir 80.13 318 *i*P **P 12 44 22.9 +0.2**
ACSO Alum Creek Sta 80.16 40 *e*P **P 12 44 21.9 -0.9**
comp=Z,32nm,0.7s,mb5.3
ACSO LR LR
comp=Z,1µm,19.0s,MS5.2
HBAR Harrisburg 80.18 48 *e*P **P 12 44 23.1 +0.1**
BAIF Baives 80.19 340⇑*i*P **P 12 44 22.8 0.0**
comp=Z,162nm,1.2s,mb5.5
BAIF Baives 80.19 340⇑*i*P **P 12 44 22.8 0.0**
BAIF pmax pmax
comp=Z,81nm,1.2s,mb5.5
BAIF Baives 80.19 340⇑*i*P **P 12 44 22.8 0.0**
comp=Z,81nm,1.2s,mb5.5
FORT Forrest 80.20 202 *e*P **P 12 44 22.2 -0.7**
comp=Z,54nm,0.7s,mb5.6
FORT Forrest 80.20 202 *e*P **P 12 44 22.6 -0.3**
comp=Z,68nm,0.8s,mb5.6
SVIS Svilajnac 80.21 327 P **P 12 44 23.7 +0.6**
WCI Wyandotte Cave 80.24 44 *e*P **P 12 44 22.7 -0.6**
WCI pmax pmax
comp=Z,48nm,0.8s,mb5.5
WCI MLR MLR
comp=Z,936nm,19.0s,MS5.2
WCI Wyandotte Cave 80.24 44 *e*P **P 12 44 22.7 -0.6**
comp=Z,48nm,0.8s,mb5.5
WCI LR LR
comp=Z,936nm,19.0s,MS5.2
SOKA Soboth 80.27 332⇑*i*P **P 12 44 23.6 +0.3**
comp=Z,145nm,0.8s,mb6.0
PERS Pernice 80.28 332 *i*P **P 12 44 23.5 +0.1**
LANF Langenberg 80.30 338 *e*P **P 12 44 23.7 +0.3**
GLAT Glass 80.32 47 *e*P **P 12 44 23.6 -0.2**
KDHN Kadinhani 80.34 317 *i*P **P 12 44 24.0 +0.1**
YAYL Yayladag 80.36 313 *i*P **P 12 44 24.5 +0.5**
ULDT Uludag 80.40 320 *i*P **P 12 44 24.7 +0.5**
KBA Koelnbreinsper 80.44 334⇑*i*P **P 12 44 24.9 +0.7**
comp=Z,342nm,0.8s,mb6.3,SNR=196
UTMT University of 80.47 46 *e*P **P 12 44 23.9 -0.7**
ZAVS Zavodnje 80.48 332 P **P 12 44 21.3 -3.2**
OBKA Obir 80.57 332 P **P 12 44 25.0 +0.1**
OBKA Obir 80.57 332⇑*i*P **P 12 44 24.9 0.0**
comp=Z,46nm,0.8s,mb5.4,SNR=22
NCB Newcomb 80.63 33 *e*P **P 12 44 24.0 -1.4**
comp=Z,19nm,0.9s,mb5.0
NCB LR LR
comp=Z,885nm,20.0s,MS5.1
PLD Plovdiv 80.67 324 P **P 12 44 27.9 +2.3**
PLD Plovdiv 80.67 324 P **P 12 44 27.9 +2.3**
PLD Plovdiv 80.67 324 *e*P **P 12 44 25.2 -0.4**
GRUS Gruza 80.72 327 P **P 12 44 25.6 -0.2**
BOLV Bolvadin 80.73 318 *i*P **P 12 44 26.4 +0.4**
TAOE Nuku Hiva Isla 80.74 113 *e*S S 12 54 34.1 0.0
comp=Z,1µm,33.1s
TAOE *e*LR LR 13 09 24.7
comp=Z,3µm,29.7s,baz=325
WATA Walderalm 80.75 335⇑*i*P **P 12 44 26.3 +0.5**
comp=Z,160nm,0.9s,mb6.0,SNR=32
MYKA Terra Mystica 80.75 333⇑*i*P **P 12 44 25.6 -0.3**
comp=Z,58nm,0.9s,mb5.5
BFO Black Forest 80.76 337 P **P 12 44 26.5 +0.6**
comp=Z,658nm,1.0s,mb6.5,SNR=41
BFO Black Forest 80.76 337 *e*P **P 12 44 26.1 +0.2**
comp=Z,125nm,1.0s,mb5.8
BFO *e*S S 12 54 34.8 +1.4
BFO Black Forest 80.76 337 *e*P **P 12 44 26.1 +0.2**
comp=Z,125nm,1.0s,mb5.8
BFO *e*S S 12 54 34.8 +1.4
BFO LR LR
comp=Z,1µm,19.0s,MS5.3
GCIS Gornji Cirnik 80.79 332 *e*P **P 12 44 25.8 -0.3**
WTTA Wattenberg 80.79 335⇑*i*P **P 12 44 26.9 +0.7**
comp=Z,316nm,0.9s,mb6.2,SNR=93
DIVS Divibare 80.81 328 P **P 12 44 26.3 0.0**
SART Tekirdag 80.81 322 *i*P **P 12 44 26.8 +0.4**
SPAK Spaichingen-Ko 80.84 337 *e*P **P 12 44 26.7 +0.3**
RETA Reutte 80.85 335⇑*i*P **P 12 44 26.8 +0.4**
comp=Z,92nm,0.9s,mb5.7,SNR=32
VTS Vitosha 80.86 325 P **P 12 44 27.2 +0.6**
VTS Vitosha 80.86 325 P **P 12 44 27.2 +0.6**
VTS Vitosha 80.86 325⇑*i*P **P 12 44 26.8 +0.2**
VTS Vitosha 80.86 325 *e*P **P 12 44 26.4 -0.2**
MOTA Moosalm 80.88 335⇑*i*P **P 12 44 27.0 +0.4**
comp=Z,269nm,1.0s,mb6.1,SNR=82
CRES Cresnjev 80.88 332 P **P 12 44 26.6 0.0**
NATX Nacogdoches 80.95 53 *e*P **P 12 44 27.3 0.0**
comp=Z,91nm,0.8s,mb5.8
NATX LR LR
comp=Z,889nm,21.0s,MS5.1
CDF Champ du Feu 80.96 338⇑*i*P **P 12 44 27.1 +0.1**
comp=Z,276nm,1.0s,mb5.8
CDF Champ du Feu 80.96 338⇑*i*P **P 12 44 27.1 +0.1**
CDF pmax pmax
comp=Z,138nm,1.0s,mb5.8
CDF Champ du Feu 80.96 338⇑*i*P **P 12 44 27.1 +0.1**
comp=Z,138nm,1.0s,mb5.8
LJU Ljubljana 80.99 332 *e*P **P 12 44 26.6 -0.6**
ABTA Abfaltersbach 80.99 334⇑*i*P **P 12 44 27.7 +0.5**
comp=Z,66nm,0.9s,mb5.6,SNR=24
RZN Rozhen 81.02 324 *e*P **P 12 44 27.5 +0.1**
HTL Hartland 81.04 346⇑*e*P **P 12 44 27.4 +0.1**
HTL AMb AMB 12 44 28.8
comp=Z,112nm,0.9s,mb5.8
HTL AMS AMS 13 26 47.2
comp=Z,1µm,19.8s,MS5.2
HTL Hartland 81.04 346 P **P 12 44 27.4 +0.1**
HTL AMb AMB 12 44 28.8
comp=Z,112nm,0.9s,mb5.8
HTL AMS AMS 13 26 47.2
comp=Z,1µm,19.8s
GDZ Gediz 81.10 319 *i*P **P 12 44 28.0 0.0**
ALN Alexandroupoli 81.12 322 P **P 12 44 28.3 +0.3**
ALN Alexandroupoli 81.12 322 P **P 12 44 28.3 +0.3**
ALN Alexandroupoli 81.12 322 *e*P **P 12 44 28.0 0.0**
RDO Rodhopi 81.13 323 *e*P **P 12 44 28.1 +0.1**
DURS Dursunbey 81.14 320 *i*P **P 12 44 28.3 +0.1**
WVT Waverly 81.15 46 *e*P **P 12 44 27.3 -1.0**
WVT pmax pmax
comp=Z,30nm,0.8s,mb5.3
WVT MLR MLR
comp=Z,922nm,19.0s,MS5.2
WVT Waverly 81.15 46 *e*P **P 12 44 27.3 -1.0**
comp=Z,30nm,0.8s,mb5.3
WVT LR LR
comp=Z,922nm,19.0s,MS5.2
ECH Echery 81.17 338 *e*P **P 12 44 28.1 0.0**
ECH Echery 81.17 338 *e*P **P 12 44 27.8 -0.3**
ECH pmax pmax
comp=Z,111nm,0.9s,mb5.8
ECH MLR MLR
comp=Z,2µm,19.0s,MS5.5
ECH Echery 81.17 338 *e*P **P 12 44 27.8 -0.3**
comp=Z,111nm,0.9s,mb5.8
ECH LR LR
comp=Z,2µm,19.0s,MS5.5
VOY Vojsko 81.20 333 *e*P **P 12 44 27.3 -1.0**
VOY *e* 12 44 33.7
VOY *e* 12 44 57.5
BOJS Bojanci 81.23 332 *i*P **P 12 44 27.9 -0.6**
LBNH Lisbon 81.24 31 *e*P **P 12 44 28.4 -0.2**
LBNH pmax pmax
comp=Z,16nm,1.0s,mb4.9
LBNH MLR MLR
comp=Z,1µm,19.0s,MS5.2
LBNH Lisbon 81.24 31 *e*P **P 12 44 28.4 -0.1**
comp=Z,16nm,1.0s,mb4.9
LBNH LR LR
comp=Z,1µm,19.0s,MS5.2
BLY Banja Luka 81.25 330 P **P 12 44 29.0 +0.4**
PKME Peaks-Kenny Pk 81.25 29 *e*P **P 12 44 27.6 -1.0**
comp=Z,22nm,1.0s,mb5.0
PKME LR LR
comp=Z,1µm,19.0s,MS5.3
FELD Feldberg im Sc 81.26 337 *e*P **P 12 44 28.6 0.0**
FETA Feichten 81.28 335⇑*i*P **P 12 44 29.2 +0.5**
comp=Z,79nm,0.9s,mb5.6,SNR=48
DAVA Damuels 81.28 336 P **P 12 44 29.1 +0.4**
DAVA Damuels 81.28 336⇑*i*P **P 12 44 29.2 +0.4**
comp=Z,98nm,0.8s,mb5.8,SNR=30
BALY Balya 81.40 321 *i*P **P 12 44 29.6 +0.1**
MEZF Maizieres J'vi 81.44 339⇑*i*P **P 12 44 29.8 +0.3**
comp=Z,288nm,0.9s,mb5.9
MEZF Maizieres J'vi 81.44 339⇑*i*P **P 12 44 29.8 +0.3**
comp=Z,288nm,0.9s,mb6.2
BINY Binghamton 81.47 35 *e*P **P 12 44 29.2 -0.6**
comp=Z,15nm,0.9s,mb4.9
BINY LR LR
comp=Z,912nm,19.0s,MS5.2
DYA Yadsworthy 81.48 345⇑*e*P **P 12 44 29.5 -0.3**
DYA AMb AMB 12 44 31.0
comp=Z,128nm,0.9s,mb5.8
DYA AMS AMS 13 26 51.0
comp=Z,933nm,17.1s,MS5.2
DYA Yadsworthy 81.48 345 P **P 12 44 29.5 -0.3**
DYA AMb AMB 12 44 31.0
comp=Z,128nm,0.9s,mb5.8
DYA AMS AMS 13 26 51.0
comp=Z,933nm,17.1s
DEMI Demirci 81.49 320 *i*P **P 12 44 30.0 0.0**
KNDS Knezji Dol 81.50 332 *i*P **P 12 44 29.3 -0.6**
MMB Musomiste 81.50 324 *e*P **P 12 44 29.6 -0.4**
CAN Canberra 81.50 184 PFAKE 12 44 40.0 +10
CAN LR LR
comp=Z,1µm,19.0s,MS5.2
MOF Molkenrain 81.51 338 *e*P **P 12 44 29.6 -0.3**
KKB Krupnik 81.53 325 *e*P **P 12 44 30.2 +0.1**
TRI Trieste 81.53 333 *e*P **P 12 44 28.8 -1.3**
TRI pmax pmax
comp=Z,55nm,0.9s,mb5.5
TRI MLR MLR
comp=Z,2µm,19.0s,MS5.5
TRI Trieste 81.53 333 *e*P **P 12 44 28.8 -1.3**
comp=Z,55nm,0.9s,mb5.5
TRI LR LR
comp=Z,2µm,19.0s,MS5.5
HAU Haudompre 81.58 338⇑*i*P **P 12 44 30.1 -0.2**
comp=Z,203nm,1.0s,mb5.7
HAU *e*MLR MLR
comp=Z,3µm,17.8s,MS5.5
HAU Haudompre 81.58 338⇑*i*P **P 12 44 30.1 -0.2**
HAU pmax pmax
comp=Z,101nm,1.0s,mb5.7
HAU MLR MLR
comp=Z,3µm,17.8s,MS5.8
HAU Haudompre 81.58 338⇑*i*P **P 12 44 30.1 -0.2**
comp=Z,101nm,1.0s,mb5.7
HAU LR LR
comp=Z,3µm,17.8s,MS5.8
HINF Hinteralfeld 81.62 338⇑*i*P **P 12 44 30.2 -0.3**
comp=Z,150nm,1.0s,mb5.6
HINF Hinteralfeld 81.62 338⇑*i*P **P 12 44 30.2 -0.3**
HINF pmax pmax
comp=Z,75nm,1.0s,mb5.6
HINF Hinteralfeld 81.62 338⇑*i*P **P 12 44 30.2 -0.3**
comp=Z,75nm,1.0s,mb5.6
OXF Oxford 81.63 48 *e*P **P 12 44 30.1 -0.7**
OXF pmax pmax
comp=Z,98nm,1.0s,mb5.7
OXF MLR MLR
comp=Z,1µm,22.0s,MS5.2
OXF Oxford 81.63 48 *e*P **P 12 44 30.1 -0.7**
comp=Z,98nm,1.0s,mb5.7
OXF LR LR
comp=Z,1µm,22.0s,MS5.2
NVR Nevrokopi 81.65 324 *e*P **P 12 44 30.7 -0.1**
ISP Isparta 81.65 318 P **P 12 44 31.2 +0.3**
ISP LR LR
comp=Z,2µm,19.0s,MS5.5
ISP Isparta 81.65 318 P **P 12 44 31.2 +0.3**
HKT Hockley 81.66 55 *e*P **P 12 44 31.9 +0.8**
HKT pmax pmax
comp=Z,15nm,1.3s,mb4.8
HKT MLR MLR
comp=Z,788nm,20.0s,MS5.1
HKT Hockley 81.66 55 *e*P **P 12 44 31.9 +0.8**
comp=Z,15nm,1.3s,mb4.8
HKT LR LR
comp=Z,788nm,20.0s,MS5.1
KAVA Kavala 81.68 323 P **P 12 44 32.3 +1.3**
KHAL Karahalli 81.68 319 *i*P **P 12 44 30.5 -0.6**
PLE Pljevlja 81.69 328⇑*i*P **P 12 44 31.2 +0.2**
PLE Pljevlja 81.69 328 P **P 12 44 31.0 0.0**
BBS Basel-Blauen 81.77 337 *e*P **P 12 44 29.6 -1.7**
IVA Berane 81.90 327⇑*i*P **P 12 44 32.0 -0.1**
PPT Papeete 81.90 126 *e*S S 12 54 43.9 -2.0
comp=Z,2µm,33.8s
PPT *e*LR LR 13 10 03.9
comp=Z,4µm,24.8s,baz=327
PPT Papeete 81.90 126 LR LR 13 12 02.9
comp=Z,2µm,20.6s,MS5.4,baz=286,slow=29
CCA1 Carnmenellis 81.94 346⇑*e*P **P 12 44 31.8 -0.4**
CCA1 AMb AMB 12 44 38.6
comp=Z,70nm,2.3s,mb5.2
CCA1 Carnmenellis 81.94 346 P **P 12 44 31.8 -0.4**
CCA1 AMb AMB 12 44 38.6
comp=Z,70nm,2.3s,mb5.2
SRS Serrai 81.95 324 P **P 12 44 33.6 +1.2**
SRS Serrai 81.95 324 P **P 12 44 33.6 +1.2**
UPM Unac-Piva 81.98 328⇑*i*P **P 12 44 31.3 -1.2**
UPM Unac-Piva 81.98 328 P **P 12 44 32.0 -0.5**
MCWV Mont Chateau 82.00 39 *e*P **P 12 44 32.3 -0.4**
comp=Z,62nm,1.2s,mb5.4
MCWV LR LR
comp=Z,1µm,21.0s,MS5.3
MANT Manisa 82.01 319 *i*P **P 12 44 33.0 +0.2**
SSPA Standing Stone 82.02 37 *e*P **P 12 44 31.7 -1.0**
comp=Z,23nm,0.9s,mb5.1
SSPA LR LR
comp=Z,841nm,20.0s,MS5.1
AKHS Akhisar 82.02 320 *i*P **P 12 44 32.8 0.0**
LOMF Lomont 82.06 338 *e*P **P 12 44 33.0 +0.2**
GAZI Gazipasa 82.08 316 *i*P **P 12 44 31.5 -1.7**
SKO Skopje 82.08 326 *e*P **P 12 44 33.5 +0.4**
PVY Plav 82.11 327⇑*i*P **P 12 44 32.4 -0.8**
PVY Plav 82.11 327 P **P 12 44 34.0 +0.8**
AYVA Ayvalik 82.16 321 *i*P **P 12 44 33.8 +0.3**
TUE Stuetta 82.17 336 *e*P **P 12 44 33.6 +0.1**
comp=Z,102nm,0.8s,mb5.8
TUE LR LR
comp=Z,2µm,19.0s,MS5.5
VAY Valandovo 82.19 325 P **P 12 44 33.4 -0.3**
VAY Valandovo 82.19 325 *i*P **P 12 44 33.1 -0.5**
VAY Valandovo 82.19 325 P **P 12 44 33.4 -0.3**
MABI Malga Bissina 82.22 335 P **P 12 44 33.4 -0.3**
BCI Bajram Curri 82.27 327 PN **P 12 44 33.8 -0.2**
NKY Niksic 82.28 328⇑*i*P **P 12 44 32.9 -1.2**
NKY Niksic 82.28 328⇑*i*P **P 12 44 33.0 -1.1**
KVTX Kingsville 82.28 58 PFAKE 12 44 50.0 +16
KVTX LR LR
comp=Z,706nm,19.0s,MS5.0
SOH Sokhos 82.30 324 P **P 12 44 33.6 -0.6**
SOH Sokhos 82.30 324 P **P 12 44 33.6 -0.6**
SOH Sokhos 82.30 324 *e*P **P 12 44 33.4 -0.8**
LIA Limnos Island 82.32 322 P **P 12 44 34.6 +0.3**
LIA Limnos Island 82.32 322 P **P 12 44 34.6 +0.3**
LIA Limnos Island 82.32 322 *e*P **P 12 44 33.5 -0.8**
JSA Saint Aubin 82.36 344 *e*P **P 12 44 34.2 -0.2**
JSA AMb AMB 12 44 35.7
comp=Z,92nm,1.0s,mb5.7
JSA Saint Aubin 82.36 344 P **P 12 44 34.2 -0.2**
JSA AMb AMB 12 44 35.7
comp=Z,92nm,1.0s,mb5.7
BRY Bratogost 82.37 328⇑*i*P **P 12 44 32.9 -1.7**
BRY Bratogost 82.37 328 P **P 12 44 34.0 -0.6**
PRK Paraskevi 82.39 321 P **P 12 44 35.2 +0.5**
PRK Paraskevi 82.39 321 P **P 12 44 35.2 +0.5**
PRK Paraskevi 82.39 321 *e*P **P 12 44 33.8 -0.9**
KORT Korkueli 82.40 317 *i*P **P 12 44 34.3 -0.5**
FLN La Foliniere 82.44 343 *e*P **P 12 44 34.5 -0.3**
comp=Z,197nm,0.9s,mb5.7
FLN *e*MLR MLR
comp=Z,3µm,18.2s,MS5.3

FLN La Foliniere 82.44 343 *e*P **P 12 44 34.5 -0.3**
FLN pmax pmax
comp=Z,99nm,0.9s,mb5.7
FLN MLR MLR
comp=Z,3µm,18.3s,MS5.6
FLN La Foliniere 82.44 343 *e*P **P 12 44 34.5 -0.3**
comp=Z,99nm,0.9s,mb5.7
FLN LR LR
comp=Z,3µm,18.3s,MS5.6
DNZL Cakiroluk 82.44 319 *i* P **P 12 44 35.5 +0.5**
OUR Ouranopolis 82.45 323 P **P 12 44 34.1 -0.9**
OUR Ouranopolis 82.45 323 P **P 12 44 34.1 -0.9**
TTG Podgorica 82.52 328⇑*i*P **P 12 44 34.2 -1.1**
TTG Podgorica 82.52 328⇑*i*P **P 12 44 34.3 -1.0**
LDF La Druitiere 82.52 343 *e*P **P 12 44 35.0 -0.2**
comp=Z,144nm,1.0s,mb5.7
LDF La Druitiere 82.52 343 *e*P **P 12 44 35.0 -0.2**
LDF pmax pmax
comp=Z,72nm,1.0s,mb5.7
LDF La Druitiere 82.52 343 *e*P **P 12 44 35.0 -0.2**
comp=Z,72nm,1.0s,mb5.7
GOLH Golhisar 82.57 318 *i* P **P 12 44 35.6 -0.1**
HORT Hortiatis 82.59 324 P **P 12 44 35.5 -0.3**
HORT Hortiatis 82.59 324 P **P 12 44 35.5 -0.3**
CSS Prodhromos 82.59 314 P **P 12 44 36.3 +0.4**
comp=Z,1.3nm,0.8s
CSS Prodhromos 82.59 314 P **P 12 44 36.3 +0.4**
CSS LR LR
comp=Z,2µm,19.0s,MS5.5
SIGR SIGRI 82.60 322 P **P 12 44 36.5 +0.7**
SIGR SIGRI 82.60 322 P **P 12 44 36.5 +0.7**
PUK Puka 82.61 327 PN **P 12 44 35.4 -0.4**
PLG Polygyros 82.64 324 P **P 12 44 35.4 -0.6**
PLG Polygyros 82.64 324 P **P 12 44 35.4 -0.6**
PLG Polygyros 82.64 324 *e*P **P 12 44 35.5 -0.5**
KDAG Bornova 82.66 320 *i* P **P 12 44 35.4 -0.7**
KRUS Krusevo 82.67 326 *i* P **P 12 44 35.4 -0.8**
BUM Brajici-Budva 82.76 328⇑*i*P **P 12 44 35.9 -0.7**
BUM Brajici-Budva 82.76 328 P **P 12 44 37.0 +0.4**
HCY Herceg Novi 82.78 328⇑*i*P **P 12 44 35.6 -1.1**
ALFC Alevga 82.80 315 P **P 12 44 38.2 +1.3**
comp=Z,3.6nm,0.9s
SWET Sewanee 82.81 45 *e*P **P 12 44 35.9 -1.1**
VBMS Vicksburg 82.84 50 *e*P **P 12 44 36.9 -0.3**
comp=Z,61nm,0.8s,mb5.7
VBMS LR LR
comp=Z,1µm,21.0s,MS5.3
GRR Gorron 82.87 343 *e*P **P 12 44 37.0 0.0**
comp=Z,348nm,1.0s,mb6.1
GRR Gorron 82.87 343 *e*P **P 12 44 37.0 0.0**
GRR pmax pmax
comp=Z,174nm,1.0s,mb6.0
GRR Gorron 82.87 343 *e*P **P 12 44 37.0 0.0**
comp=Z,174nm,1.0s,mb6.0
LOR Lormes 82.88 340⇑*i*P **P 12 44 37.0 -0.1**
comp=Z,170nm,0.9s,mb5.8
LOR *e*MLR MLR
comp=Z,2µm,19.0s,MS5.3
LOR Lormes 82.88 340⇑*i*P **P 12 44 37.0 -0.1**
LOR pmax pmax
comp=Z,85nm,0.9s,mb5.8
LOR MLR MLR
comp=Z,2µm,19.0s,MS5.6
LOR Lormes 82.88 340⇑*i*P **P 12 44 37.0 -0.1**
comp=Z,85nm,0.9s,mb5.8
LOR LR LR
comp=Z,2µm,19.0s,MS5.6
TZTN Tazewell 82.89 43 *e*P **P 12 44 36.7 -0.7**
comp=Z,22nm,0.8s,mb5.2
PAIG Paliouri 82.92 323 P **P 12 44 37.0 -0.5**
PAIG Paliouri 82.92 323 P **P 12 44 37.0 -0.5**
ULC Ulcinj 82.92 327⇑*i*P **P 12 44 36.8 -0.7**
ULC Ulcinj 82.92 327 P **P 12 44 37.0 -0.5**
CABF La Chapelle 82.93 338⇑*i*P **P 12 44 37.7 +0.3**
comp=Z,86nm,0.8s,mb5.5
CABF La Chapelle 82.93 338⇑*i*P **P 12 44 37.7 +0.3**
CABF pmax pmax
comp=Z,43nm,0.8s,mb5.5
CABF La Chapelle 82.93 338⇑*i*P **P 12 44 37.7 +0.3**
comp=Z,43nm,0.8s,mb5.5
BIA Bitola 82.94 325 *e*P **P 12 44 36.8 -0.8**
ASF Jabal al Asfar 82.96 310 LR LR 13 26 06.9
comp=Z,2µm,19.4s,MS5.4,baz=260,slow=39
AYDN Tasoluk 82.99 319 *i* P **P 12 44 38.4 +0.5**
OHR Ohrid 83.07 326 P **P 12 44 37.1 -1.1**
OHR Ohrid 83.07 326 *i* P **P 12 44 37.1 -1.1**
OHR Ohrid 83.07 326 P **P 12 44 37.1 -1.1**
MMAI Mount Meron Ar 83.08 312 P **P 12 44 37.3 -1.1**
comp=Z,150nm,0.8s,mb6.0,baz=35,slow=7.4,SNR=88
MMAI LR LR 13 27 07.1
comp=Z,6µm,18.3s,MS6.0,baz=25,slow=40
PPCY Paphos 83.14 315 P **P 12 44 38.0 -0.7**
SSF Saint Saulge 83.16 340⇑*i*P **P 12 44 38.5 -0.1**
comp=Z,137nm,0.9s,mb5.7
SSF Saint Saulge 83.16 340⇑*i*P **P 12 44 38.5 -0.1**
SSF pmax pmax
comp=Z,69nm,0.9s,mb5.7
SSF Saint Saulge 83.16 340⇑*i*P **P 12 44 38.5 -0.1**
comp=Z,69nm,0.9s,mb5.7
HYF Humbligny 83.17 340 *e*P **P 12 44 39.0 +0.4**
TIR Tirane 83.22 327 *e*P **P 12 44 39.0 0.0**
TIR pmax pmax
comp=Z,225nm,0.8s,mb6.2
TIR MLR MLR
comp=Z,3µm,19.0s,MS5.7
TIR Tirane 83.22 327 *e*P **P 12 44 39.0 -0.1**
comp=Z,225nm,0.8s,mb6.2
TIR LR LR
comp=Z,3µm,19.0s,MS5.7
TURN Turunc 83.31 318 *i* P **P 12 44 41.0 +1.4**
CPCT Cooper Cave 83.31 44 *e*P **P 12 44 38.8 -0.7**
SGMF Saint Gilles 83.33 344 *e*P **P 12 44 39.4 0.0**
comp=Z,210nm,0.8s,mb5.9
SGMF Saint Gilles 83.33 344 *e*P **P 12 44 39.4 0.0**
SGMF pmax pmax
comp=Z,105nm,0.8s,mb5.9
SGMF Saint Gilles 83.33 344 *e*P **P 12 44 39.4 0.0**
comp=Z,105nm,0.8s,mb5.9
AKAS Kas 83.37 317 *i* P **P 12 44 39.9 +0.1**
KZN Kozani 83.37 325 P **P 12 44 40.0 +0.2**
KZN Kozani 83.37 325 P **P 12 44 40.0 +0.2**
KZN Kozani 83.37 325 *e*P **P 12 44 38.7 -1.1**
ROSF Rostrenen 83.39 344 *e*P **P 12 44 39.8 +0.1**
comp=Z,331nm,0.9s,mb6.0
ROSF Rostrenen 83.39 344 *e*P **P 12 44 39.8 +0.1**
ROSF pmax pmax
comp=Z,166nm,0.9s,mb6.1
ROSF Rostrenen 83.39 344 *e*P **P 12 44 39.8 +0.1**
comp=Z,166nm,0.9s,mb6.1
SMG Samos 83.42 320 *e*P **P 12 44 35.2 -4.9**
AVF Avril sur Loir 83.45 340⇑*i*P **P 12 44 40.2 +0.1**
comp=Z,327nm,0.9s,mb6.0
AVF Avril sur Loir 83.45 340⇑*i*P **P 12 44 40.2 +0.1**
AVF pmax pmax
comp=Z,163nm,0.9s,mb6.1
AVF Avril sur Loir 83.45 340⇑*i*P **P 12 44 40.2 +0.1**
comp=Z,163nm,0.9s,mb6.1
SMF Signal de Mont 83.47 339⇑*i*P **P 12 44 40.3 +0.1**
comp=Z,594nm,1.0s,mb6.3
SMF Signal de Mont 83.47 339⇑*i*P **P 12 44 40.3 +0.1**
SMF pmax pmax
comp=Z,297nm,1.0s,mb6.3
SMF Signal de Mont 83.47 339⇑*i*P **P 12 44 40.3 +0.1**
comp=Z,297nm,1.0s,mb6.3
AOS Alonnisos 83.48 323 P **P 12 44 39.1 -1.3**
AOS Alonnisos 83.48 323 P **P 12 44 39.1 -1.3**
KBN Korca 83.49 326 PN **P 12 44 40.2 -0.2**
TKL Tuckaleechee C 83.50 43 *e*P **P 12 44 39.7 -0.8**
AOI Ancona 83.51 332 P **P 12 44 40.2 -0.2**
WHFO Wadi Hawf 83.55 289 P **P 12 44 41.5 +0.5**
SNR=10
BST Brest 83.56 345 *e*P **P 12 44 42.1 +1.5**
ELN Prospectdale 83.61 41 *e*P **P 12 44 39.9 -1.2**
NEO Neokhori 83.63 323 *e*P **P 12 44 39.8 -1.4**
BDRM Kayabasi 83.68 319 *i* P **P 12 44 41.0 -0.4**
FNVD Fontana Vidola 83.74 334 P **P 12 44 42.8 +1.2**
QUIF Quistinic 83.77 344 *e*P **P 12 44 41.5 -0.2**
comp=Z,150nm,1.2s,mb5.7
QUIF Quistinic 83.77 344 *e*P **P 12 44 41.5 -0.2**
QUIF pmax pmax
comp=Z,75nm,1.2s,mb5.7
QUIF Quistinic 83.77 344 *e*P **P 12 44 41.5 -0.2**
comp=Z,75nm,1.2s,mb5.7
SEI Scarperia 83.77 333 P **P 12 44 43.0 +1.2**
LPL La Plagne 83.78 337 *e*P **P 12 44 42.7 +0.9**
comp=Z,127nm,0.9s,mb5.8
LPL La Plagne 83.78 337 *e*P **P 12 44 42.7 +0.9**
LPL pmax pmax
comp=Z,64nm,0.9s,mb5.8
LPL La Plagne 83.78 337 *e*P **P 12 44 42.7 +0.9**
comp=Z,64nm,0.9s,mb5.8
BLA Blacksburg 83.78 40 *e*P **P 12 44 40.9 -1.0**
BLA pmax pmax
comp=Z,48nm,1.0s,mb5.6
BLA MLR MLR
comp=Z,982nm,20.0s,MS5.2
BLA Blacksburg 83.78 40 *e*P **P 12 44 40.9 -1.0**
comp=Z,48nm,1.0s,mb5.6
BLA LR LR
comp=Z,982nm,20.0s,MS5.2
LPG La Plagne 83.79 337 *e*P **P 12 44 42.9 +1.1**
comp=Z,149nm,0.9s,mb5.8
LPG La Plagne 83.79 337 *e*P **P 12 44 42.9 +1.1**
LPG pmax pmax
comp=Z,75nm,0.9s,mb5.8
LPG La Plagne 83.79 337 *e*P **P 12 44 42.9 +1.1**
comp=Z,75nm,0.9s,mb5.8
BGF Bois d'Agland 83.79 340 *e*P **P 12 44 41.8 0.0**
CING Cingoli 83.80 332 P **P 12 44 42.0 +0.1**
THL Klokotos Trika 83.91 324 *e*P **P 12 44 39.5 -3.1**
VLC Villacollemand 83.97 334 *e*P **P 12 44 43.0 +0.2**
comp=Z,87nm,0.8s,mb5.9
VLC LR LR
comp=Z,3µm,19.0s,MS5.6
SNTG Esanatoglia 83.99 332 P **P 12 44 43.1 +0.2**
LRAL Lakeview Retre 84.02 47 *e*P **P 12 44 42.1 -1.1**
comp=Z,9.8nm,0.8s,mb5.0
LRAL LR LR
comp=Z,706nm,21.0s,MS5.0
OFFI Offida 84.03 331 P **P 12 44 44.2 +1.1**
KLBR Kellerberrin 84.06 210 *e*P **P 12 44 42.3 -0.9**
comp=Z,35nm,0.9s,mb5.5
ARG Arkhangelos 84.07 318 P **P 12 44 44.5 +1.1**
ARG Arkhangelos 84.07 318 P **P 12 44 44.5 +1.1**
ARG Arkhangelos 84.07 318 *e*P **P 12 44 44.2 +0.8**
MURB Monte Urbino 84.12 332 P **P 12 44 44.1 +0.5**
PLDF La Plantade 84.15 339 *e*P **P 12 44 45.3 +1.6**
TCF Toulx Ste Croi 84.19 340⇑*i*P **P 12 44 44.2 +0.3**
comp=Z,155nm,0.9s,mb5.8
AGO Saint Agoulin 84.19 340 *e*P **P 12 44 45.7 +1.8**
BNI Bardonecchia 84.22 337 *e*P **P 12 44 44.8 +0.8**
BNI pmax pmax
comp=Z,34nm,0.8s,mb5.5
BNI MLR MLR
comp=Z,3µm,19.0s,MS5.6
BNI Bardonecchia 84.22 337 *e*P **P 12 44 44.8 +0.7**
comp=Z,34nm,0.8s,mb5.5
BNI LR LR
comp=Z,3µm,19.0s,MS5.6
GDM Grand'Maison 84.23 337 *e*P **P 12 44 45.1 +1.0**
ATAL Atalanti 84.24 323 P **P 12 44 43.0 -1.3**
AGG Agios Georgios 84.24 324 P **P 12 44 43.0 -1.3**
AGG Agios Georgios 84.24 324 P **P 12 44 43.0 -1.3**
CBN Corbin 84.28 38 *e*P **P 12 44 43.9 -0.5**
CBN LR LR
comp=Z,1µm,22.0s,MS5.2
LKR Lokris 84.28 323 P **P 12 44 44.0 -0.5**
LKR Lokris 84.28 323 P **P 12 44 44.0 -0.5**
LKR Lokris 84.28 323 *e*P **P 12 44 42.4 -2.1**
JAN Janina 84.30 325 *e*P **P 12 44 45.2 +0.7**
NRCA Norcia 84.31 332 P **P 12 44 45.0 +0.5**
TERO Teramo 84.34 331 P **P 12 44 44.8 +0.1**
MSAG Monte S. Angel 84.36 329 P **P 12 44 44.2 -0.6**
SGRT San Giovanni R 84.38 329 P **P 12 44 44.0 -0.9**
MFF Saint Martin d 84.42 342 *e*P **P 12 44 45.2 +0.2**
comp=Z,142nm,1.2s,mb5.7
MFF Saint Martin d 84.42 342 *e*P **P 12 44 45.2 +0.2**
MFF pmax pmax
comp=Z,71nm,1.2s,mb5.7
MFF Saint Martin d 84.42 342 *e*P **P 12 44 45.2 +0.2**
comp=Z,71nm,1.2s,mb5.7
QLNO Quiliano 84.42 336 P **P 12 44 44.6 -0.5**
SRN Sarande 84.44 326 PN **P 12 44 44.4 -0.8**
MBDF Montbardon 84.49 337 *e*P **P 12 44 45.6 +0.2**
comp=Z,83nm,0.9s,mb5.6
MBDF Montbardon 84.49 337 *e*P **P 12 44 45.6 +0.2**
MBDF pmax pmax
comp=Z,41nm,0.9s,mb5.6
MBDF Montbardon 84.49 337 *e*P **P 12 44 45.6 +0.2**
comp=Z,41nm,0.9s,mb5.6
RGNG Rignano Grg 84.50 330 P **P 12 44 45.8 +0.2**
PYM Petit Puy Mans 84.51 340 *e*P **P 12 44 47.3 +1.8**
ATHU Athens Univers 84.53 322 P **P 12 44 45.3 -0.5**
EVR Evrytania 84.54 324 *e*P **P 12 44 53.4 +7.6**
ATH Athens Observa 84.55 322 P **P 12 44 45.3 -0.6**
ORIF Oris-en-Rattie 84.56 337 *e*P **P 12 44 46.5 +0.7**
comp=Z,217nm,0.9s,mb6.0
ORIF *e*MLR MLR
comp=Z,2µm,18.0s,MS5.3
ORIF Oris-en-Rattie 84.56 337 *e*P **P 12 44 46.5 +0.7**
ORIF pmax pmax
comp=Z,109nm,0.9s,mb6.0
ORIF Oris-en-Rattie 84.56 337 *e*P **P 12 44 46.5 +0.7**
comp=Z,109nm,0.9s,mb6.0
MGAB Montegabbione 84.56 332 P **P 12 44 45.5 -0.3**
SSB Saint Sauveur 84.57 338 *e*P **P 12 44 46.3 +0.5**
SSB Saint Sauveur 84.57 338 *e*P **P 12 44 46.1 +0.3**
SSB pmax pmax
comp=Z,104nm,0.9s,mb6.0
SSB MLR MLR
comp=Z,2µm,19.0s,MS5.5
SSB Saint Sauveur 84.57 338 *e*P **P 12 44 46.1 +0.3**
comp=Z,104nm,0.9s,mb6.0
SSB LR LR
comp=Z,2µm,19.0s,MS5.5
AQU L'Aquila 84.64 331 *e*P **P 12 44 46.9 +0.7**
comp=Z,118nm,0.8s,mb6.1
AQU LR LR
comp=Z,2µm,19.0s,MS5.6
AQU L'Aquila 84.64 331⇑*i*P **P 12 44 47.5 +1.2**
KEK Kerkira 84.66 326 P **P 12 44 45.4 -1.0**
KEK Kerkira 84.66 326 P **P 12 44 45.4 -1.0**
KEK Kerkira 84.66 326 *e*P **P 12 44 44.8 -1.6**
DSF Desfina 84.68 323 P **P 12 44 45.3 -1.2**
SURF Saint Ours 84.71 337 *e*P **P 12 44 47.3 +0.8**
INTR Introdacqua 84.78 331 P **P 12 44 46.6 -0.4**
FIAM Fiamignano 84.81 331 P **P 12 44 47.4 +0.3**
LTK Loutraki 84.83 323 P **P 12 44 45.2 -2.1**
KALE Kalithea 84.86 324 P **P 12 44 46.3 -1.1**
EFP Efpalio 84.92 324 P **P 12 44 48.2 +0.5**
EFP Efpalio 84.92 324 *e*P **P 12 44 46.8 -0.9**
VIVF Saint-Julien-l 84.93 338 *e*P **P 12 44 48.3 +0.7**
comp=Z,216nm,1.0s,mb5.9
LATE Laterza 84.93 333 P **P 12 44 47.4 -0.3**
IMI Imperia 84.93 336 P **P 12 44 47.5 -0.2**
LBL Lubilhac 84.94 339 *e*P **P 12 44 45.6 -2.1**
SAOF Saorge 84.96 336 *e*P **P 12 44 47.2 -0.6**
FG5 Orsara di Pugl 84.96 330 P **P 12 44 48.2 +0.3**
RNI2 Rionero Sannit 84.97 331 P **P 12 44 48.8 +0.9**
AUTN L'Aution 84.99 336 *e*P **P 12 44 47.8 -0.1**
MIDA Miranda 84.99 330 P **P 12 44 48.3 +0.3**
VVLD Villa Vallelon 85.00 331 P **P 12 44 49.1 +1.0**
TOUF Mont Tournerai 85.02 336 *e*P **P 12 44 48.2 +0.1**
LAKA Lakka 85.05 324 P **P 12 44 48.0 -0.4**
KARP Karpathos 85.06 319 *e*P **P 12 44 46.4 -2.1**
LUCF Luceram 85.10 336 *e*P **P 12 44 48.4 -0.1**
SBF Sospel 85.11 336 *e*P **P 12 44 48.3 -0.2**
comp=Z,193nm,0.9s,mb6.0
SBF Sospel 85.11 336 *e*P **P 12 44 48.3 -0.2**
SBF pmax pmax
comp=Z,96nm,0.9s,mb5.9
SBF Sospel 85.11 336 *e*P **P 12 44 48.3 -0.2**
comp=Z,96nm,0.9s,mb5.9
CERT Cerreto 85.15 331 P **P 12 44 48.6 -0.2**
MVIF Mont Vial 85.15 336 *e*P **P 12 44 48.8 0.0**
GUR Goura 85.16 323 P **P 12 44 49.2 +0.3**
GUR Goura 85.16 323 *e*P **P 12 44 47.0 -1.9**
ACER Acerenza 85.16 329 P **P 12 44 48.9 0.0**
PSB1 Pescosannita 85.17 330 P **P 12 44 48.8 -0.1**
SGG Gregorio Mates 85.18 330 P **P 12 44 48.8 -0.1**
MRB1 Monte Rocchett 85.20 330 P **P 12 44 49.3 +0.2**
RJF Les Rejaudoux 85.28 340 *e*P **P 12 44 49.7 +0.3**
comp=Z,144nm,1.1s,mb5.7
RJF *e*MLR MLR
comp=Z,2µm,21.8s,MS5.2
RJF Les Rejaudoux 85.28 340 *e*P **P 12 44 49.7 +0.3**
RJF pmax pmax
comp=Z,72nm,1.1s,mb5.7
RJF MLR MLR
comp=Z,2µm,21.8s,MS5.5
RJF Les Rejaudoux 85.28 340 *e*P **P 12 44 49.7 +0.3**
comp=Z,72nm,1.1s,mb5.7
RJF LR LR
comp=Z,2µm,21.8s,MS5.5
MRLC Muro Lucano 85.35 329 P **P 12 44 50.5 +0.7**
CALN Calern 85.36 336 *e*P **P 12 44 50.1 +0.3**
TOLF Tolfa 85.36 332 P **P 12 44 49.7 -0.2**
RFI Roccamonfina 85.39 330 P **P 12 44 51.0 +1.0**
RLS Riolos of Patr 85.42 324 *e*P **P 12 44 49.8 -0.4**
CSSN Cassano Irpino 85.42 330 P **P 12 44 49.9 -0.3**
NWAO Narrogin (SRO) 85.46 210 *e*P **P 12 44 49.9 -0.3**
NWAO pmax pmax
comp=Z,81nm,1.1s
NWAO MLR MLR
comp=Z,718nm,20.0s
NWAO Narrogin (SRO) 85.46 210 *e*P **P 12 44 49.9 -0.3**
comp=Z,81nm,1.1s,mb5.8
NWAO LR LR
comp=Z,718nm,20.0s,MS5.1
GOGA Godfrey 85.47 45 *e*P **P 12 44 49.9 -0.7**
GOGA pmax pmax
comp=Z,16nm,0.9s,mb5.2
GOGA MLR MLR
comp=Z,924nm,20.0s,MS5.2
GOGA Godfrey 85.47 45 *e*P **P 12 44 49.9 -0.7**
comp=Z,16nm,0.9s,mb5.1
GOGA LR LR
comp=Z,924nm,20.0s,MS5.2
CAF Calviac 85.51 340 *e*P **P 12 44 50.5 0.0**
comp=Z,120nm,0.9s,mb5.8
CAF Calviac 85.51 340 *e*P **P 12 44 50.5 0.0**
CAF pmax pmax
comp=Z,60nm,0.9s,mb5.8
CAF Calviac 85.51 340 *e*P **P 12 44 50.5 0.0**
comp=Z,60nm,0.9s,mb5.8
BRAL Brewton 85.60 48 PFAKE 12 45 00.0 +8.7
BRAL LR LR
comp=Z,779nm,19.0s,MS5.1
FRF La Foret Royal 85.61 336 *e*P **P 12 44 51.0 0.0**
comp=Z,208nm,1.4s,mb5.9
FRF La Foret Royal 85.61 336 *e*P **P 12 44 51.0 0.0**
FRF pmax pmax
comp=Z,104nm,1.4s,mb5.9
FRF La Foret Royal 85.61 336 *e*P **P 12 44 51.0 0.0**
comp=Z,104nm,1.4s,mb5.9
KFL Anninata 85.65 324 P **P 12 44 50.4 -1.0**
VLS Valsamata 85.67 324 P **P 12 44 51.1 -0.4**
VLS Valsamata 85.67 324 P **P 12 44 51.1 -0.4**
VLS Valsamata 85.67 324 *e*P **P 12 44 50.2 -1.3**
LFF La Frestale 85.80 341 *e*P **P 12 44 51.6 -0.4**
comp=Z,89nm,0.8s,mb5.7
LFF La Frestale 85.80 341 *e*P **P 12 44 51.6 -0.4**
LFF pmax pmax
comp=Z,44nm,0.8s,mb5.7
LFF La Frestale 85.80 341 *e*P **P 12 44 51.6 -0.4**
comp=Z,44nm,0.8s,mb5.7
JSC Jenkinsville 85.81 43 *e*P **P 12 44 51.7 -0.5**
ZKR Zakros 85.85 319 P **P 12 44 53.6 +1.2**
ZKR Zakros 85.85 319 P **P 12 44 53.6 +1.2**
LMR La Mourre 85.85 336 *e*P **P 12 44 52.5 +0.2**
comp=Z,297nm,1.0s,mb6.2
LMR La Mourre 85.85 336 *e*P **P 12 44 52.5 +0.2**
LMR pmax pmax
comp=Z,148nm,1.0s,mb6.2
LMR La Mourre 85.85 336 *e*P **P 12 44 52.5 +0.2**
comp=Z,148nm,1.0s,mb6.2
PGF Pioggiola 85.86 334 *e*P **P 12 44 52.1 -0.2**
comp=Z,78nm,0.9s,mb5.6
PGF Pioggiola 85.86 334 *e*P **P 12 44 52.1 -0.2**
PGF pmax pmax
comp=Z,39nm,0.9s,mb5.6
PGF Pioggiola 85.86 334 *e*P **P 12 44 52.1 -0.2**
comp=Z,39nm,0.9s,mb5.6
LASF Ste Croix 85.87 338 *e*P **P 12 44 52.4 +0.1**
comp=Z,70nm,1.1s,mb5.5
EIL Elat 85.96 310 LR LR 13 28 10.8
comp=Z,2µm,18.6s,MS5.5,baz=202,slow=39
ITM Ithomi 85.98 323 P **P 12 44 52.2 -0.8**
ITM Ithomi 85.98 323 P **P 12 44 52.2 -0.8**
ITM Ithomi 85.98 323 *e*P **P 12 44 50.9 -2.1**
VENT Ventotene 86.03 331 P **P 12 44 53.5 +0.3**
LAST Lasithi 86.14 320 P **P 12 44 54.0 +0.1**
LAST Lasithi 86.14 320 P **P 12 44 54.0 +0.1**
TIP Timpagrande 86.28 328 *e*P **P 12 44 54.3 -0.2**
comp=Z,69nm,1.0s,mb5.8
TIP LR LR
comp=Z,3µm,21.0s,MS5.6
XRY Khrisi 86.29 319 *e*P **P 12 44 55.1 +0.5**
PYL PYLOS 86.30 323 P **P 12 44 54.3 -0.3**
PYL PYLOS 86.30 323 *e*P **P 12 44 52.1 -2.5**
VAM Vamos 86.51 321 *e*P **P 12 44 55.7 0.0**
CNNC Cliffs of the 86.55 40 PFAKE 12 45 10.0 +14
CNNC LR LR
comp=Z,885nm,22.0s,MS5.1
SIVA Sivas 86.56 320 P **P 12 44 57.0 +1.1**
SIVA Sivas 86.56 320 P **P 12 44 57.0 +1.1**
OSPF L'Ospedale 86.61 334 *e*P **P 12 44 56.0 0.0**
KARN Karanos 86.63 321 P **P 12 44 57.0 +0.7**
TBI Tubuai 86.64 129 *e*S S 12 55 29.5 -3.6
comp=Z,1µm,27.5s
TBI *e*LR LR 13 11 43.9
comp=Z,2µm,34.8s,baz=327
COW Cow Castle Cre 86.81 43 *e*P **P 12 44 57.3 +0.1**
MTLF Montolieu 86.97 339 *e*P **P 12 44 57.4 -0.3**
comp=Z,64nm,1.0s,mb5.5
MTLF Montolieu 86.97 339 *e*P **P 12 44 57.4 -0.3**
MTLF pmax pmax
comp=Z,32nm,1.0s,mb5.5
MTLF Montolieu 86.97 339 *e*P **P 12 44 57.4 -0.3**
comp=Z,32nm,1.0s,mb5.5
GVD Gavdhos 87.03 320 P **P 12 44 58.8 +0.6**
GVD Gavdhos 87.03 320 P **P 12 44 58.8 +0.6**
LRDF Laroque-de-Fa 87.27 339 *e*P **P 12 44 59.0 -0.2**
NHSC New Hope 87.29 42 PFAKE 12 45 10.0 +10
NHSC LR LR
comp=Z,1µm,21.0s,MS5.3
CEL Celeste 87.41 328 *e*P **P 12 44 59.5 -0.5**
comp=Z,56nm,0.8s,mb5.8
CEL LR LR
comp=Z,2µm,19.0s,MS5.5
SCLL Scilla 87.48 328 P **P 12 44 59.5 -0.8**
SLNA Salina 87.53 329 P **P 12 45 01.3 +0.7**
CARF Carcanieres 87.58 339 *e*P **P 12 45 00.3 -0.4**
MLS Moulis 87.60 340 *e*P **P 12 45 00.2 -0.6**
SJAF Saint Jean de 87.61 339 *e*P **P 12 45 00.2 -0.7**
FILF Fillols 87.62 339 *e*P **P 12 45 00.9 0.0**
EJON La Jonquera 87.64 339 P **P 12 45 01.8 +0.8**
comp=Z,68nm,1.0s,mb5.8
EPF Esparros 87.70 340 *e*P **P 12 45 00.9 -0.4**
comp=Z,25nm,0.7s,mb5.3
EPF Esparros 87.70 340 *e*P **P 12 45 00.9 -0.4**
EPF pmax pmax
comp=Z,12nm,0.7s,mb5.2
EPF Esparros 87.70 340 *e*P **P 12 45 00.9 -0.4**
comp=Z,12nm,0.7s,mb5.2
DGI Dorgali Grotta 87.71 333 P **P 12 45 01.5 +0.1**
MTTG Motta San Giov 87.71 328 P **P 12 45 01.5 +0.1**
CLLI Llivia 87.84 339 P **P 12 45 02.6 +0.6**
VALF Valcebollere 87.90 339 *e*P **P 12 45 01.8 -0.5**
RESF Ens 87.92 340 *e*P **P 12 45 02.4 +0.1**
EALK Alkurruntz 87.94 342 P **P 12 45 02.3 -0.1**
comp=Z,37nm,1.0s,mb5.6
SJPF Ste Jean 87.98 342 *e*P **P 12 45 02.2 -0.4**
USI Ustica 87.98 330 P **P 12 45 02.5 -0.2**
ELIZ Elizondo 88.00 342 P **P 12 45 02.0 -0.7**
ELIZ pmax pmax
comp=Z,22nm,0.8s,mb5.4
ELIZ Elizondo 88.00 342 P **P 12 45 02.0 -0.7**
comp=Z,22nm,0.8s,mb5.4
ETSF Etsaut 88.04 341 *e*P **P 12 45 02.3 -0.6**
comp=Z,38nm,0.8s,mb5.4
ETSF Etsaut 88.04 341 *e*P **P 12 45 02.3 -0.6**
ETSF pmax pmax
comp=Z,19nm,0.8s,mb5.4
ETSF Etsaut 88.04 341 *e*P **P 12 45 02.3 -0.6**
comp=Z,19nm,0.8s,mb5.4
EBIE Bielsa 88.08 341 P **P 12 45 03.3 +0.2**
comp=Z,25nm,0.9s,mb5.4
CSOR Sort 88.14 340 P **P 12 45 03.8 +0.3**
comp=Z,55nm,1.2s,mb5.7
ELAN Lanestosa 88.33 343 P **P 12 45 03.3 -1.0**
comp=Z,43nm,1.1s,mb5.6
CFON Fontmartina 88.40 339 P **P 12 45 04.9 +0.2**
comp=Z,55nm,1.1s,mb5.7

VSL Villasalto 88.53 333 *e*P **P 12 45 05.6 +0.3**
comp=Z,50nm,0.9s,mb5.8
VSL LR LR
comp=Z,1μm,19.0s,MS5.3
AGST Augusta-Monte 88.54 328 P **P 12 45 05.6 +0.2**
SSY Sortino 88.69 328 P **P 12 45 05.4 -0.7**
HAVL Avola 88.84 328 P **P 12 45 06.5 -0.3**
EPON Pontenova 88.92 346 P **P 12 45 05.0 -2.1**
comp=Z,107nm,1.0s,mb6.1
HMDC Modica 88.97 328 P **P 12 45 07.1 -0.3**
EPOB Poblet 89.12 339 P **P 12 45 08.0 -0.1**
comp=Z,36nm,1.0s,mb5.7
ESAC San Caprasio 89.14 341 P **P 12 45 08.2 +0.1**
comp=Z,63nm,0.9s,mb5.9
STS Santiago 89.58 347 P **P 12 45 08.5 -1.7**
STS pmax pmax
comp=Z,47nm,0.9s,mb5.8
STS Santiago 89.58 347 P **P 12 45 08.5 -1.7**
comp=Z,47nm,0.9s,mb5.8
ERUA La Rua 89.83 346 P **P 12 45 09.8 -1.5**
ERUA pmax pmax
comp=Z,40nm,0.9s,mb5.8
ERUA La Rua 89.83 346 P **P 12 45 09.8 -1.6**
comp=Z,40nm,0.9s,mb5.8
WDD Wield Dalam 90.03 328 PFAKE 12 45 20.0 +7.6
WDD LR LR
comp=Z,961nm,20.0s,MS5.2
ETOS Mallorca 90.17 338 P **P 12 45 13.3 +0.3**
comp=Z,71nm,0.9s,mb6.0
EZAM Zamans 90.32 347 P **P 12 45 12.1 -1.6**
EZAM pmax pmax
comp=Z,64nm,0.7s,mb6.1
EZAM Zamans 90.32 347 P **P 12 45 12.1 -1.6**
comp=Z,64nm,0.7s,mb6.1
ETOR Torete 90.35 342 P **P 12 45 13.2 -0.6**
ETOR pmax pmax
comp=Z,23nm,0.9s,mb5.5
ETOR Torete 90.35 342 P **P 12 45 13.2 -0.7**
comp=Z,22nm,0.9s,mb5.5
EMOS Mosqueruela 90.43 340 P **P 12 45 14.0 -0.2**
comp=Z,18nm,1.0s,mb5.4
ELOB Lobios 90.49 346 P **P 12 45 12.4 -2.0**
comp=Z,30nm,1.0s,mb5.6
DWPF Disney 90.81 46 PFAKE 12 45 30.0 +14
DWPF LR LR
comp=Z,766nm,20.0s,MS5.1
GUD Guadarrama 90.96 343 P **P 12 45 15.7 -1.0**
GUD pmax pmax
comp=Z,15nm,0.9s,mb5.3
GUD Guadarrama 90.96 343 P **P 12 45 15.7 -1.0**
comp=Z,15nm,0.9s,mb5.3
MVO Moncorvo 91.00 345 P **P 12 45 14.7 -2.1**
MVO Moncorvo 91.00 345 *e*P **P 12 45 16.2 -0.6**
comp=Z,56nm,1.4s,mb5.7
MVO Moncorvo 91.00 345 *e*S SKSac 12 55 52.8 +4.1
MVO Moncorvo 91.00 345 *e*LR LR 13 16 38.0
comp=Z,1μm,20.0s
PVRL Vila Real 91.01 346 *e*P **P 12 45 16.6 -0.3**
comp=Z,65nm,1.0s,mb5.9
PVIS Viseu 91.59 346 *e*P **P 12 45 19.0 -0.6**
comp=Z,50nm,1.6s,mb5.6
CMAH Djebel Manchou 91.77 333 P **P 12 45 21.1 +0.6**
MTE Manteigas 91.83 345 *e*P **P 12 45 19.2 -1.5**
comp=Z,26nm,0.8s,mb5.6
MTE LR LR
comp=Z,1μm,20.0s,MS5.3
MTE Manteigas 91.83 345 *e*P **P 12 45 20.1 -0.6**
comp=Z,45nm,0.9s,mb5.8
MTE Manteigas 91.83 345 *e*S SKSac 12 55 35.2 -18
MTE Manteigas 91.83 345 *e*LR LR 13 17 18.2
comp=Z,1μm,20.0s
ESDC Sonseca Array 91.86 343 P **P 12 45 19.4 -1.4**
comp=Z,13nm,0.9s,mb5.3,baz=9.9,slow=3.9,SNR=35
ESDC LR LR 13 34 33.1
comp=Z,2μm,18.3s,MS5.6,baz=25,slow=41
ESDC Sonseca Array 91.86 343 P **P 12 45 19.5 -1.3**
comp=Z,8.2nm,1.0s,mb5.0
ESLA Sonseca Array 91.86 343 *e*P **P 12 45 20.1 -0.7**
comp=Z,4.7nm,1.0s,mb4.8
ESLA LR LR
comp=Z,7μm,21.0s,MS6.1
EPLA Plasencia 91.90 344 P **P 12 45 19.5 -1.5**
EPLA pmax pmax
comp=Z,41nm,0.9s,mb5.8
EPLA Plasencia 91.90 344 P **P 12 45 19.5 -1.5**
comp=Z,41nm,0.9s,mb5.8
KEST Kesra 91.97 331 P **P 12 45 19.9 -1.6**
comp=Z,21nm,0.8s,mb5.5,baz=316,slow=2.3,SNR=39
KEST LR LR 13 31 13.4
comp=Z,863nm,18.3s,MS5.2,baz=169,slow=38
KEST Kesra 91.97 331 *e*P **P 12 45 21.4 -0.1**
CMIG Matias Romero 92.00 63 P **P 12 45 20.1 -1.7**
comp=Z,11nm,1.0s,mb5.2,baz=340,slow=1.8,SNR=8.2
PAB San Pablo 92.06 343 *e*P **P 12 45 20.6 -1.2**
PAB pmax pmax
comp=Z,15nm,0.9s,mb5.3
PAB MLR MLR
comp=Z,1μm,19.0s,MS5.4
PAB San Pablo 92.06 343 *e*P **P 12 45 20.6 -1.2**
comp=Z,15nm,0.9s,mb5.3
PAB LR LR
comp=Z,1μm,19.0s,MS5.4
ABSA Djebel Ababsia 92.08 333 P **P 12 45 22.3 +0.4**
CKFL Kef-Lekhel 92.20 334 P **P 12 45 23.2 +0.7**
DFRA Djebel Bou Aff 92.32 334 P **P 12 45 25.6 +2.6**
PCBR Castelo Branco 92.37 345 *e*P **P 12 45 22.7 -0.5**
comp=Z,35nm,1.6s,mb5.4
CASM Ain Smara 92.40 334 P **P 12 45 23.6 +0.2**
EVIA Vianos 92.54 341 P **P 12 45 23.2 -0.8**
EVIA pmax pmax
comp=Z,32nm,1.0s,mb5.7
EVIA Vianos 92.54 341 P **P 12 45 23.1 -0.8**
comp=Z,32nm,1.0s,mb5.7
AKF Akfadou 92.62 335 P **P 12 45 24.8 +0.4**
PTOM Tomar 92.74 346 *e*P **P 12 45 24.7 -0.2**
comp=Z,29nm,1.5s,mb5.5
PMRV Marv??o 92.75 345 *e*P **P 12 45 23.6 -1.4**
comp=Z,34nm,1.5s,mb5.5
PMRV Marv??o 92.75 345 *e*S SKSac 12 56 01.2 +2.5
PMRV Marv??o 92.75 345 *e*LR LR 13 18 10.0
comp=Z,2μm,18.0s
SET Setif 92.78 334 P **P 12 45 26.0 +0.8**
CKHR Kef el Ahmar 92.92 334 P **P 12 45 26.8 +1.0**
EBAN Banos Encina 93.27 342 P **P 12 45 26.8 -0.6**
EBAN pmax pmax
comp=Z,23nm,1.2s,mb5.5
EBAN Banos Encina 93.27 342 P **P 12 45 26.8 -0.6**
comp=Z,23nm,1.2s,mb5.5
PESTR Estremoz 93.33 345 *e*P **P 12 45 26.6 -1.1**
comp=Z,36nm,1.7s,mb5.5
PESTR Estremoz 93.33 345 *e*LR LR 13 18 11.9
comp=Z,2μm,18.0s
EBAD Badajoz 93.34 345 P **P 12 45 25.8 -1.9**
comp=Z,27nm,1.2s,mb5.5
AKET Djebel Ketaf 93.37 336 P **P 12 45 29.1 +1.2**
ADJB Djebel Djouab 93.39 336 P **P 12 45 30.5 +2.5**
ATAF Djebel Tarf 93.41 335 P **P 12 45 28.5 +0.4**
EADA Adamuz 93.43 343 P **P 12 45 26.5 -1.6**
comp=Z,18nm,1.0s,mb5.4
EQES Quesada 93.46 341 P **P 12 45 27.9 -0.4**
comp=Z,6.6nm,0.9s,mb5.1
TEIG Tepich 93.49 56 PFAKE 12 45 40.0 +11
TEIG LR LR
comp=Z,610nm,20.0s,MS5.1
PMAFR Mafra 93.53 346 *e*S SKSac 12 56 08.3 +5.3
PMAFR Mafra 93.53 346 *e*LR LR 13 18 10.6
comp=Z,723nm,20.0s
ECAB El Cabril 93.69 343 P **P 12 45 27.9 -1.4**
comp=Z,12nm,0.9s,mb5.3
EVO Evora 93.73 345 *e*P **P 12 45 27.7 -1.8**
comp=Z,29nm,1.1s,mb5.3
EVO *e*MLR MLR
comp=Z,2μm,19.8s,MS5.2
EVO Evora 93.73 345 *e*P **P 12 45 28.0 -1.5**
comp=Z,22nm,1.2s,mb5.5
EVOP Sao Brissos 93.76 345 *e*P **P 12 45 30.1 +0.5**
EVOP *e*S SKSac 12 56 04.8 +0.6
EVOP AMS AMS 13 35 22.2
comp=Z,1μm,19.5s,MS5.4
EVOP Sao Brissos 93.76 345 *e*P **P 12 45 30.1 +0.5**
EVOP *e*S SKSac 12 56 04.8 +0.6
PBAR Barrancos 93.91 345 *e*P **P 12 45 29.7 -0.6**
comp=Z,30nm,1.8s,mb5.4
PBAR Barrancos 93.91 345 *e*S SKSac 12 56 08.4 +3.3
PBAR Barrancos 93.91 345 *e*LR LR 13 18 28.3
comp=Z,1μm,18.0s

ECOG Cogollos-Vega 94.08 342 P **P 12 45 30.5 -0.6**
ECOG pmax pmax
comp=Z,7.0nm,0.7s,mb5.2
ECOG Cogollos-Vega 94.08 342 P **P 12 45 30.5 -0.6**
comp=Z,6.7nm,0.7s,mb5.2
PBEJ Beja 94.20 345 *e*P **P 12 45 31.4 -0.3**
comp=Z,32nm,1.6s,mb5.5
EMIN Mina Concepcio 94.23 344 P **P 12 45 30.6 -1.3**
comp=Z,22nm,1.0s,mb5.5
ELOJ Sierra Loja 94.33 342 P **P 12 45 31.6 -0.7**
ELOJ pmax pmax
comp=Z,21nm,1.2s,mb5.4
ELOJ Sierra Loja 94.33 342 P **P 12 45 31.6 -0.6**
comp=Z,21nm,1.2s,mb5.4
BBSR BB Station 94.36 31 PFAKE 12 45 40.0 +7.5
BBSR LR LR
comp=Z,568nm,20.0s,MS5.0
ERON Agron 94.38 342 P **P 12 45 31.5 -1.0**
comp=Z,6.6nm,1.1s,mb5.0
EGUA Guajares 94.50 342 P **P 12 45 31.7 -1.4**
EGUA pmax pmax
comp=Z,113nm,0.9s,mb6.3
EGUA Guajares 94.50 342 P **P 12 45 31.7 -1.3**
comp=Z,113nm,0.9s,mb6.3
PCVE Castro Verde 94.61 345 *e*P **P 12 45 34.2 +0.6**
comp=Z,33nm,2.3s,mb5.3
PCVE Castro Verde 94.61 345 *e*S SKSac 12 56 13.3 +4.4
PCVE Castro Verde 94.61 345 *e*LR LR 13 18 47.1
comp=Z,1μm,16.0s
RKT Riikiea 94.76 119 *e*SP SP 12 58 01.4 -2.5
RKT comp=Z,616nm,29.5s *e*SS SS 13 03 06.2 -6.1
RKT comp=Z,457nm,26.5s *e*LR LR 13 15 41.1
comp=Z,3μm,33.0s,baz=321
PVAQ Vaqueiros 94.78 345 *e*P **P 12 45 33.9 -0.4**
comp=Z,30nm,2.0s,mb5.4
PVAQ Vaqueiros 94.78 345 *e*S SKSac 12 56 12.3 +2.5
PVAQ Vaqueiros 94.78 345 *e*LR LR 13 18 46.9
comp=Z,1μm,18.0s
PTEO Sao Teotonio 94.82 346 *e*P **P 12 45 34.7 +0.2**
comp=Z,62nm,1.4s,mb5.8
PBDV Barranco-de-Ve 94.97 345 *e*S SKSac 12 56 15.8 +4.9
PBDV Barranco-de-Ve 94.97 345 *e*LR LR 13 19 07.9
comp=Z,975nm,18.0s
MORF Marmelete 95.04 346 *e*P **P 12 45 34.8 -0.7**
comp=Z,76nm,1.9s,mb5.8
MORF Marmelete 95.04 346 *e*LR LR 13 23 45.9
comp=Z,2μm,18.0s
PFVI Vila Bisbo 95.24 346 *e*P **P 12 45 36.3 -0.1**
comp=Z,109nm,1.8s,mb6.0
PFVI Vila Bisbo 95.24 346 *e*LR LR 13 18 58.1
comp=Z,2μm,16.0s
EJIF Jimena Fronter 95.27 343 P **P 12 45 35.5 -1.1**
EJIF pmax pmax
comp=Z,36nm,1.0s,mb5.8
EJIF Jimena Fronter 95.27 343 P **P 12 45 35.5 -1.1**
comp=Z,36nm,1.0s,mb5.8
ATD Arta Tunnel 95.33 293 LR LR 13 33 57.2
comp=Z,2μm,18.4s,MS5.7,baz=213,slow=39
SFS San Fernando 95.41 344 PFAKE 12 45 50.0 +13
SFS LR LR
comp=Z,4μm,19.0s,MS5.9
CMLA Cha da Macela 96.14 359 PFAKE 12 45 50.0 +9.5
CMLA LR LR
comp=Z,1μm,22.0s,MS5.3
MSEY Mahe Island 98.74 272 PFAKE 12 46 00.0 +7.4
MSEY LR LR
comp=Z,894nm,20.0s,MS5.3
TGUH Tegucigalpa,Un 98.94 59 PFAKE 12 46 00.0 +6.5
TGUH LR LR
comp=Z,619nm,22.0s,MS5.1
GTBY Guantanamo Bay 100.78 46 PFAKE 12 46 10.0 +8.5
GTBY LR LR
comp=Z,1μm,22.0s,MS5.4
MTDJ Mount Denham 100.98 49 PFAKE 12 46 10.0 +7.6
MTDJ LR LR
comp=Z,765nm,20.0s,MS5.2
GRTK Grand Turk 101.33 42 PFAKE 12 46 20.0 +16
GRTK LR LR
comp=Z,673nm,20.0s,MS5.2
SDDR Presa de Saban 103.44 43 PFAKE 12 46 20.0 +6.7
SDDR LR LR
comp=Z,682nm,20.0s,MS5.2
TAM Tamanrasset 105.14 329 PFAKE 12 50 50.0 +15
TAM LR LR
comp=Z,970nm,22.0s,MS5.3
SJG San Juan 106.53 39 PFAKE 12 50 50.0 +12
SJG LR LR
comp=Z,648nm,19.0s,MS5.2
BCIP Isla Barro Col 107.18 56 PFAKE 12 50 50.0 +11
BCIP LR LR
comp=Z,407nm,20.0s,MS5.0
PAYG Puerto Ayora 108.44 71 PFAKE 12 50 50.0 +8.3
PAYG LR LR
comp=Z,665nm,20.0s,MS5.2
KMBO Kilima Mbogo 108.50 289 PFAKE 12 50 50.0 +8.2
KMBO LR LR
comp=Z,2μm,19.0s,MS5.6
ANWB Willy Bob 108.75 35 PFAKE 12 50 50.0 +7.8
ANWB LR LR
comp=Z,635nm,20.0s,MS5.2
FDF Fort de France 111.66 36 PFAKE 12 51 00.0 +12
FDF LR LR
comp=Z,752nm,19.0s,MS5.3
GRGR Grenville 113.79 38 PFAKE 12 51 00.0 +8.2
GRGR LR LR
comp=Z,702nm,20.0s,MS5.3
ABPO Ambohimpanom 114.51 268 PFAKE 12 51 00.0 +7.1
ABPO LR LR
comp=Z,661nm,20.0s,MS5.2
OTAV Otavalo 115.16 60 PFAKE 12 51 10.0 +16
OTAV LR LR
comp=Z,261nm,19.0s,MS4.9
TORD Torodi Ar. Bea 115.39 329 PKP PKPdf 12 50 53.3 -1.6
comp=Z,9.3nm,1.0s,baz=354,slow=3.3,SNR=27
TORD PP PP 12 51 51.9 -3.1
comp=Z,9.3nm,0.9s,baz=15,slow=6.9,SNR=7.4
TORD PKKPbc PKKPbc 13 01 31.1 +4.1
comp=Z,1.5nm,1.0s,baz=203,slow=5.2,SNR=4.0
CASY Casey 117.10 198 PFAKE 12 51 10.0 +14
CASY LR LR
comp=Z,468nm,21.0s,MS5.1
DBIC Dimbokro 123.63 334 PKP PKPdf 12 51 09.4 -1.3
comp=Z,44nm,0.8s,baz=346,slow=1.8,SNR=27
DBIC PP PP 12 52 48.4 -3.3
comp=Z,11nm,0.8s,baz=4.4,slow=5.0,SNR=4.8
DBIC Dimbokro 123.63 334 *e*PKPdf PKPdf 12 51 09.7 -1.0
DBIC LR LR
comp=Z,707nm,20.0s,MS5.3
TIC Toumodi 123.70 334 *e*PKP1 PKPdf 12 51 09.7 -1.2
comp=Z,97nm,0.9s
KIC Kosan Boka 123.88 333 *e*PKP1 PKPdf 12 51 10.0 -1.2
comp=Z,80nm,0.9s
LIC Lamto 124.10 334 ⇑*i*PKIKP PKPdf 12 51 11.1 -0.6
comp=Z,93nm,1.0s
LIC *e*MLR MLR
comp=Z,906nm,21.8s,MS5.1
LIC Lamto 124.10 334 *e*PKP1 PKPdf 12 51 10.6 -1.1
comp=Z,118nm,1.0s
LIC Lamto 124.10 334 ⇑*i*PKPdf PKPdf 12 51 11.1 -0.6
LIC LR LR
comp=Z,450nm,21.8s,MS5.1
SBA Scott Base 124.33 177 PFAKE 12 51 20.0 +10
SBA LR LR
comp=Z,650nm,19.0s,MS5.3
LSZ Lusaka 124.93 286 *e*PKIKP PKPdf 12 51 13.2 +0.1
LSZ MLR MLR
comp=Z,2μm,19.0s,MS5.7
NNA Nana 125.65 68 PFAKE 12 51 30.0 +16
NNA LR LR
comp=Z,477nm,19.0s,MS5.2
MAW Mawson 132.02 211 PKP PKPdf 12 51 24.3 -0.6
comp=Z,4.3nm,0.8s,baz=287,slow=3.6,SNR=11
MAW SKPbc SKPbc 12 54 49.0 -1.8
comp=Z,6.8nm,1.1s,baz=29,slow=6.7,SNR=4.1
MAW Mawson 132.02 211 *e*PKPdf PKPdf 12 51 24.1 -0.9
LBTB Lobatse 133.41 279 *e*PKIKP PKPdf 12 51 29.0 +0.1
LBTB MLR MLR
comp=Z,1μm,20.0s,MS5.6
LPAZ La Paz 134.38 63 PKP PKPdf 12 51 31.7 +0.7
comp=Z,5.9nm,0.8s,baz=7.2,slow=4.0,SNR=18
LPAZ La Paz 134.38 63 PKIKP PKPdf 12 51 31.7 +0.7
LPAZ pmax pmax
comp=Z,6.0nm,0.8s
LPAZ La Paz 134.38 63 *e*PKPdf PKPdf 12 51 31.5 +0.5
LPAZ LR LR
comp=Z,507nm,20.0s,MS5.2
TSUM Tsumeb 134.72 292 *e*PKPdf PKPdf 12 51 32.0 +0.4
TSUM LR LR
comp=Z,945nm,19.0s,MS5.5
BOSA Boshof 135.94 275 PKhKP PKPpre 12 51 23.4
comp=Z,2.3nm,0.9s,baz=220,slow=2.2,SNR=2.9
BOSA PP PP 12 54 05.2 -7.8
comp=Z,6.1nm,0.8s,baz=1.6,slow=3.0,SNR=5.4
BOSA PKKPbc 13 00 10.2
comp=Z,3.0nm,1.0s,baz=219,slow=8.0,SNR=3.2
BOSA Boshof 135.94 275 *e*PKPdf PKPdf 12 51 31.3 -2.2
BOSA LR LR
comp=Z,852nm,20.0s,MS5.5
QSPA South Pole Qui 136.20 180 PFAKE 12 51 40.0 +7.5
QSPA LR LR
comp=Z,598nm,19.0s,MS5.3
SIV San Ignacio 138.31 55 PKhKP PKPpre 12 51 28.5
comp=Z,2.0nm,0.8s,baz=1.2,slow=3.2,SNR=10
SIV PKP PKPdf 12 51 38.4 +0.1
comp=Z,9.0nm,0.8s,baz=327,slow=1.7,SNR=17
SIV San Ignacio 138.31 55 PKP PKPdf 12 51 38.4 +0.1
RCBR Riachuelo 138.74 14 PFAKE 12 51 50.0 +11
RCBR LR LR
comp=Z,467nm,20.0s,MS5.2
SUR Sutherland 141.26 274 PFAKE 12 52 00.0 +17
SUR LR LR
comp=Z,1μm,19.0s,MS5.6
LCO Las Campanas 141.66 79 PKPdf PKPdf 12 51 42.2 -1.8
LCO LR LR
comp=Z,986nm,19.0s,MS5.6
SHEL Horse Pasture 144.91 323 *e*PKIKP PKPdf 12 51 50.1 0.0
PLCA Paso Flores 148.07 96 PKP PKPdf 12 51 53.6 -1.1
comp=Z,45nm,0.8s,baz=264,slow=3.3,SNR=31
PLCA PKPbc PKPbc 12 51 57.9 -0.1
comp=Z,45nm,0.8s,baz=275,slow=3.8,SNR=41
PLCA Paso Flores 148.07 96 PKIKP PKPdf 12 51 53.7 -1.0
PLCA 12 51 57.9
PLCA pmax pmax
comp=Z,45nm,0.8s
PLCA pmax pmax
comp=Z,45nm,0.8s
PLCA Paso Flores 148.07 96 *e*PKPdf PKPdf 12 51 53.6 -1.1
PLCA *e*PKPbc PKPbc 12 51 57.8 -0.2
PLCA LR LR
comp=Z,833nm,19.0s,MS5.5
CPUP Villa Florida 148.51 61 PKP PKPdf 12 51 53.8 -2.1
comp=Z,16nm,0.9s,baz=27,slow=0.9,SNR=7.4
CPUP PKPbc PKPbc 12 51 58.5 -0.9
comp=Z,42nm,0.8s,baz=298,slow=2.8,SNR=64
CPUP Villa Florida 148.51 61 PKIKP PKPdf 12 51 53.8 -2.1
CPUP 12 51 58.6
CPUP pmax pmax
comp=Z,16nm,1.0s
CPUP pmax pmax
comp=Z,42nm,0.8s
CPUP Villa Florida 148.51 61 PKP PKPdf 12 51 53.8 -2.1
CPUP PKPbc PKPbc 12 51 58.5 -0.9
CPUP LR LR
comp=Z,98nm,21.0s,MS4.6
NVL N'lazarevskaya 149.42 204 *e*PKIKP PKPdf 12 51 53.8 -2.2
MAIT Maitri 149.44 204 *e*PKPdif PKPdf 12 52 00.2 +4.2
SPB Sao Paulo 151.73 43 *e*PKPbc PKPbc 12 52 06.5 -0.9
SPB LR LR
comp=Z,671nm,20.0s,MS5.5
TRQA Tornquist 152.78 85 *e*PKPdf PKPdf 12 52 02.5 +0.4
TRQA *e*PKPbc PKPbc 12 52 08.2 -1.1
TRQA LR LR
comp=Z,1μm,20.0s,MS5.7

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*IDC **23** 12:44:55.8±2.0, 46°.56N×153°.23E, h0km, mb3.9/9, mb1 4.1/10, mb1mx3.8/25, mbtmp3.9/10, Error ellipse: s-maj=49.3km s-min=26.3km az=160.0*
*ISCJB **23** 12:44:59.9±2.2, 46°.7N±0°.2×153°.2E±0°.2, h37km±15km, mb3.9/8, Error ellipse: s-maj=42.4km s-min=13.8km az=143.1*
*MOS **23** 12:45:00.2±0.8, 46°.69N×153°.16E, h40km, mb4.0/4, Error ellipse: s-maj=22.2km s-min=15.1km az=79.7*
ISC 23 12:45:02.6±2.0, 46°.7N±0°.2×153°.2E±0°.2, h44km±13km, n19, s0655/19, mb3.9/8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**4.43**	**25**	*e*PN	**Pn**	**12 46 06.5**	**-0.6**
PETK	**Petropavlovsk-** 0.6nm,0.3s,baz=174,slow=12,SNR=15	**7.04**	**23**	Pn	**Pn**	**12 46 43.4**	**+0.4**
PETK	**Petropavlovsk-** comp=Z,1.0nm,0.3s	**7.04**	**23**	PN pmax	**Pn** pmax	**12 46 43.4**	**+0.5**
ASAJ	**Asahikawa** comp=Z,0.9nm,0.3s,baz=76,slow=15,SNR=6.4	**7.91**	**255**	Pn	**Pn**	**12 46 55.1**	**+0.3**
ASAJ	**Asahikawa** comp=Z,1.0nm,0.3s	**7.91**	**255**	PN pmax	**Pn** pmax	**12 46 55.2**	**+0.3**
KSRS	**Korea Array** comp=Z,0.8nm,0.5s,baz=65,slow=8.9,SNR=4.0	**20.85**	**253**	P	**P**	**12 49 40.5**	**0.0**
ZALV	**Zalesovo Beam** comp=Z,0.5nm,0.3s,mb3.6,baz=63,slow=6.6,SNR=2.5	**42.70**	**306**	P	**P**	**12 52 53.8**	**-1.0**
ZALV	**Zalesovo Beam** comp=Z,1.0nm,0.4s,mb3.9	**42.70**	**306**	P pmax	**P** pmax	**12 52 53.8**	**-1.0**
MKAR	**Makanchi Array** comp=Z,0.6nm,0.7s,mb3.7,baz=60,slow=7.6,SNR=5.0	**47.03**	**297**	P	**P**	**12 53 28.5**	**-0.9**
MKAR	**Makanchi Array** comp=Z,1.0nm,0.7s	**47.03**	**297**	P pmax	**P** pmax	**12 53 28.5**	**-0.9**
KURK	**Kurchatov** comp=Z,1.1nm,0.6s,mb4.0,baz=70,slow=8.7,SNR=7.7	**47.45**	**304**	P	**P**	**12 53 33.0**	**+0.4**
KURK	**Kurchatov** comp=Z,1.0nm,0.6s,mb3.9	**47.45**	**304**	P pmax	**P** pmax	**12 53 33.0**	**+0.4**
BVAR	**Borovoye Array** comp=Z,0.7nm,0.3s,mb4.0,baz=44,slow=6.8,SNR=4.2	**50.95**	**309**	P	**P**	**12 53 59.4**	**+0.1**
BVAR	**Borovoye Array** comp=Z,1.0nm,0.4s	**50.95**	**309**	P pmax	**P** pmax	**12 53 59.4**	**+0.1**
ARCES	**ARCESS Array B** comp=Z,0.9nm,0.7s,mb3.9,baz=347,slow=3.7,SNR=4.3	**57.93**	**341**	P	**P**	**12 54 50.5**	**+0.8**
ARCES	**ARCESS Array B** comp=Z,1.0nm,0.7s	**57.93**	**341**	P pmax	**P** pmax	**12 54 50.5**	**+0.8**
FINES	**FINESS Array B** comp=Z,2.1nm,0.4s,mb4.5,baz=34,slow=8.3,SNR=13	**64.12**	**335**	P	**P**	**12 55 32.3**	**+0.5**
AKASG	**Malin Array Be** comp=Z,2.3nm,0.5s,mb4.4,baz=32,slow=5.7,SNR=6.9	**71.63**	**326**	P	**P**	**12 56 19.2**	**+0.1**
TXAR	**Lajitas Array** comp=Z,0.1nm,0.4s,mb3.1,baz=288,slow=6.2,SNR=4.6	**77.46**	**61**	P	**P**	**12 56 53.1**	**-0.2**

MEX 23 12:59:48.3±0.9, 15°.44N×94°.77W, h24km±20km, MD4.1, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.33**	**284**	*i* P	Pn	13 00 08.8	-2.5
HUIG				*i* S	Sn	13 00 24.2	-3.9
PCIG		**1.52**	**80**	*i* P	Pn	13 00 11.1	-2.9
PCIG				*i* S	Sn	13 00 28.6	-4.4
CMIG	**Matias Romero**	**1.64**	**356**	*i* P	Pn	13 00 13.5	-2.2
CMIG				*i* S	Sn	13 00 32.0	-4.0
TGIG		**2.07**	**50**	*i* P	Pn	13 00 20.2	-1.3
TGIG				*i* S	Sn	13 00 44.0	-2.5
SCX	**San Cristobal**	**2.42**	**58**	*i* P	Pn	13 00 25.0	-1.4
SCX				*i* S	Sn	13 00 52.7	-2.6
VHO	**Vista Hermosa**	**2.48**	**311**	*i* P	Pn	13 00 24.5	-2.7
VHO				*e*P		13 00 25.9	
VHO				*i* S	Sn	13 00 51.9	-4.9
PNIG	**Pinotepa**	**3.36**	**287**	*e*P	Pn	13 00 38.4	-0.9
PNIG				*i* S	Sn	13 01 12.3	-6.1
UTMO	**Huajuapan**	**3.75**	**310**	*e*P	Pn	13 00 43.0	-1.7
UTMO				*i* S	Sn	13 01 26.1	-1.9
PPM	**Popocatepetl**	**5.15**	**315**	*e*P	Pn	13 01 02.4	-1.6
PPM				*i* S	Sn	13 02 01.1	-1.5

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*IDC **23** 13:05:56.4±1.7, 38°.75N×141°.14E, h0km, mb3.4/2, mb1 3.5/4, mb1mx3.3/24, mbtmp3.4/4, ML3.0/3, MS4.2/1, Ms1 4.2/1, ms1mx3.0/19, Error ellipse: s-maj=40.5km s-min=20.5km az=133.0*
*JMA **23** 13:05:57.2, 38°.95N×140°.90E, h8km±1km, M3.2*
JMA Felt I J1.
*ISCJB **23** 13:05:57.1±0.8, 38°.95N±0°.03×140°.93E±0°.05, h15km±7km,*

mb3.5/2, Error ellipse: s-maj=6.2km s-min=4.9km az=19.4
ISC 23 13:05:57.1±0.5, 38°94N±0°03×140°90E±0°03, h7km±6km, n14, σ0°63/22, mb3.5/2, 1C-6D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.25**	**87**	⇑P	**Pg**	**13 06 02.2**	**+0.1**
JMK				S	**Sg**	**13 06 05.8**	**+0.3**
JYK	**Kaneyama**	**0.42**	**267**	P	**Pg**	**13 06 05.6**	**+0.3**
JYK				S	**Sg**	**13 06 11.0**	**+0.2**
JRG	**Rokugo**	**0.50**	**336**	⇓P	**Pg**	**13 06 06.7**	**-0.1**
JRG				S	**Sg**	**13 06 13.7**	**+0.3**
JIO	**Ouri**	**0.60**	**144**	⇓P	**Pg**	**13 06 08.6**	**-0.1**
JIO				S	**Sg**	**13 06 16.6**	**+0.1**
JOU	**Okura**	**0.60**	**198**	⇓P	**Pg**	**13 06 08.9**	**+0.2**
JOU				S	**Sg**	**13 06 17.1**	**+0.6**
JOM	**Ohasama**	**0.62**	**30**	⇓P	**Pg**	**13 06 08.5**	**-0.5**
JOM				S	**Sg**	**13 06 16.7**	**-0.4**
JYS	**Shirataka**	**0.97**	**222**	⇓P	**Pg**	**13 06 15.5**	**-0.2**
JYS				S	**Sg**	**13 06 28.6**	**+0.3**
JYA	**Atsumi**	**0.99**	**250**	⇓P	**Pg**	**13 06 15.7**	**-0.4**
JYA				S	**Sg**	**13 06 28.5**	**-0.4**
MJAR	**Matsushiro Arr**	**3.20**	**222**	Pn	**Pn**	**13 06 48.6**	**+0.8**
	0.4nm,0.3s,baz=17,slow=17,SNR=3.1						
MJAR				Pg	**Pg**	**13 06 55.4**	**-3.1**
	0.8nm,0.3s,baz=25,slow=16,SNR=7.4						
MJAR				Lg		13 07 36.0	
	0.7nm,0.3s,baz=245,slow=22,SNR=3.0						
ASAJ	**Asahikawa**	**5.33**	**13**	Pn	**Pn**	**13 07 18.1**	**+1.1**
	0.6nm,0.3s,baz=195,slow=9.2,SNR=6.5						
KSRS	**Korea Array**	**10.32**	**266**	Pn	**Pn**	**13 08 29.6**	**+4.2**
	0.2nm,0.3s,baz=77,slow=14,SNR=3.2						
SONM	**Songino Array**	**26.42**	**301**	LR	LR	13 22 18.0	
	comp=Z,472nm,18.7s,baz=64,slow=37						
WRA	**Warramunga Arr**	**58.89**	**187**	P	**P**	**13 15 55.9**	**-0.8**
	0.3nm,0.5s,mb3.6,baz=4.7,slow=7.3,SNR=5.9						
ASAR	**Alice Springs**	**62.62**	**187**	P	**P**	**13 16 21.5**	**-0.4**
	0.3nm,0.8s,mb3.5,baz=357,slow=5.5,SNR=4.6						

*IDC **23** 13:07:13.4±0.7, 29°59N×68°62E, h0km, mb4.1/18, mb1 4.3/19, mb1mx4.1/30, mbtmp4.1/19, ML3.4/1, Error ellipse: s-maj=17.0km s-min=16.5km az=176.0*
*ISCJB **23** 13:07:13.0±3.6, 29°62N±0°08×68°65E±0°08, h15km±25km, mb4.0/20, Error ellipse: s-maj=15.7km s-min=8.9km az=37.0*
*MOS **23** 13:07:16.8±1.2, 29°61N×68°71E, h33km, mb4.2/14, Error ellipse: s-maj=15.4km s-min=9.2km az=79.8*
*NEIC **23** 13:07:18.5±3.9, 29°68N×68°58E, h31km±28km, mb4.6/6, Error ellipse: s-maj=15.5km s-min=8.2km az=224.0*
*BJI **23** 13:07:18.1, 29°74N×68°82E, h16km, mb4.3/6, Ms4.8/1*
ISC 23 13:07:18.1±3.0, 29°67N±0°07×68°67E±0°07, h28km±21km, n56, σ1°19/57, mb4.0/20, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**4.87**	**4**	*e*P	**Pn**	**13 08 32.8**	**+3.4**
NDI	**New Delhi**	**7.54**	**95**	*e*PKP	**Pn**	**13 09 06.0**	**-0.2**
NDI				*e*S	**Sn**	**13 10 29.0**	**-1.8**
KSH	**Kashi**	**11.51**	**30**	P	**Pn**	**13 09 57.4**	**-3.2**
AML	**Almayashu**	**13.08**	**17**	*e*P	**Pn**	**13 10 21.4**	**-0.6**
	17nm,0.5s						
UCH	**Uchtor**	**13.39**	**19**	*e*P	**Pn**	**13 10 25.2**	**-1.0**
	9.3nm,0.6s						
AAK	**Ala-Archa**	**13.76**	**18**	Pn	**Pn**	**13 10 31.3**	**+0.1**
	0.0nm,0.3s,baz=176,slow=6.1,SNR=11						
AAK				Sn	**Sn**	**13 12 59.7**	**-3.3**
	0.0nm,0.3s,baz=351,slow=19,SNR=3.4						
AAK	**Ala-Archa**	**13.76**	**18**	P	**Pn**	**13 10 31.3**	**+0.1**
AAK						13 12 59.7	
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
DMN	**Daman**	**14.58**	**94**	*e*P	**Pn**	**13 10 43.0**	**+0.4**
	comp=Z,14nm,0.7s						
KKN	**Kakani**	**14.70**	**93**	*e*P	**Pn**	**13 10 42.1**	**-2.1**
	comp=Z,14nm,0.7s						
KKN	**Kakani**	**14.70**	**93**	*e*P	**Pn**	**13 10 42.1**	**-2.1**
KKN				pmax	pmax		
	comp=Z,14nm,0.7s						
GUN	**Gumba**	**15.20**	**92**	*e*P	**Pn**	**13 10 50.1**	**-0.7**
	comp=Z,99nm,0.8s						
RAMN	**Ramite**	**16.03**	**95**	*e*P	**Pn**	**13 11 04.0**	**+2.4**
	comp=Z,36nm,0.6s						
ODAN	**Odare**	**16.73**	**95**	*e*P	**Pn**	**13 11 14.1**	**+3.5**
	comp=Z,19nm,0.6s						
TAPN	**Taplejung**	**16.90**	**93**	*e*P	**Pn**	**13 11 15.4**	**+2.7**
	comp=Z,22nm,0.6s						
MK31	**Makanchi Array**	**20.12**	**28**	*e*P	**P**	**13 11 50.2**	**+0.6**
MKAR	**Makanchi Array**	**20.12**	**28**	P	**P**	**13 11 50.8**	**+1.1**
	comp=Z,2.6nm,0.6s,baz=210,slow=8.2,SNR=25						
MKAR	**Makanchi Array**	**20.12**	**28**	P	**P**	**13 11 50.8**	**+1.2**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ABKAR	**Akbulak array**	**20.66**	**344**	*e*P	**P**	**13 11 55.5**	**0.0**
	comp=Z,3.5nm,0.6s						
WMQ	**Urumqi**	**20.71**	**42**	*e*P	**P**	**13 12 00.0**	**+3.8**
WMQ				pmax	pmax		
	comp=Z,21nm,1.0s						
GNI	**Garni**	**22.17**	**305**	P	**P**	**13 12 11.4**	**-0.4**
	comp=Z,2.8nm,0.3s,mb4.1,baz=16,slow=19,SNR=1.9						
GNI	**Garni**	**22.17**	**305**	P	**P**	**13 12 11.4**	**-0.4**
GNI				pmax	pmax		
	comp=Z,3.0nm,0.3s						
AKTK	**Aktyubinsk**	**22.24**	**342**	P	**P**	**13 12 12.9**	**+0.4**
AKTO	**Aktyubinsk**	**22.24**	**342**	P	**P**	**13 12 12.9**	**+0.4**
	comp=Z,1.6nm,0.8s,mb3.5,baz=139,slow=11,SNR=3.1						
AKTO	**Aktyubinsk**	**22.24**	**342**	P	**P**	**13 12 12.9**	**+0.5**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.6						
KURK	**Kurchatov**	**22.31**	**17**	P	**P**	**13 12 11.8**	**-1.4**
	comp=Z,4.7nm,0.7s,mb4.0,baz=210,slow=8.7,SNR=20						
KURK	**Kurchatov**	**22.31**	**17**	*e*P	**P**	**13 12 12.1**	**-1.1**
BVAR	**Borovoye Array**	**23.37**	**3**	P	**P**	**13 12 24.3**	**-0.1**
	comp=Z,4.8nm,0.7s,mb4.0,baz=170,slow=9.8,SNR=15						
BVAR	**Borovoye Array**	**23.37**	**3**	P	**P**	**13 12 24.3**	**0.0**
BVAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ZAA0	**Zalesovo Array**	**26.95**	**21**	*e*P	**P**	**13 12 56.9**	**-0.1**
ZALV	**Zalesovo Beam**	**26.95**	**21**	P	**P**	**13 12 56.6**	**-0.4**
	comp=Z,2.6nm,0.7s,mb3.9,baz=225,slow=9.6,SNR=10						
ZALV	**Zalesovo Beam**	**26.95**	**21**	P	**P**	**13 12 56.6**	**-0.4**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.9						
GTA	**Gaotai**	**27.32**	**61**	*e*P	**P**	**13 13 03.6**	**+3.1**
GTA				pP	pP	13 13 07.3	-1.4
GTA				sP	sP	13 13 09.4	-2.7
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
ZAK	**Zakamensk**	**33.19**	**42**	*e*P	**P**	**13 13 53.5**	**+1.3**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.7						
SONM	**Songino Array**	**34.13**	**47**	P	**P**	**13 14 01.5**	**+1.0**
	comp=Z,1.0nm,0.7s,mb3.9,baz=230,slow=11,SNR=3.4						
SONM	**Songino Array**	**34.13**	**47**	P	**P**	**13 14 01.5**	**+1.0**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**36.15**	**317**	P	**P**	**13 14 16.6**	**-1.2**
	comp=Z,3.1nm,0.7s,mb4.3,baz=94,slow=7.6,SNR=5.6						
AKASG	**Malin Array Be**	**36.15**	**317**	P	**P**	**13 14 16.6**	**-1.2**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ARCES	**ARCESS Array B**	**46.82**	**341**	P	**P**	**13 15 44.2**	**-0.8**
	comp=Z,2.5nm,0.8s,mb4.2,baz=134,slow=8.7,SNR=10						
ARCES	**ARCESS Array B**	**46.82**	**341**	P	**P**	**13 15 44.2**	**-0.8**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NOA	**NORSAR Array B**	**48.84**	**327**	P	**P**	**13 16 02.0**	**+1.3**
	comp=Z,0.7nm,0.7s,mb3.8,baz=108,slow=7.6,SNR=3.3						
NOA	**NORSAR Array B**	**48.84**	**327**	P	**P**	**13 16 02.0**	**+1.3**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KSRS	**Korea Array**	**49.29**	**64**	P	**P**	**13 16 03.7**	**-0.8**
	comp=Z,2.4nm,0.9s,mb4.2,baz=257,slow=5.2,SNR=6.9						
KSRS	**Korea Array**	**49.29**	**64**	P	**P**	**13 16 03.7**	**-0.8**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2						
MJAR	**Matsushiro Arr**	**57.52**	**63**	P	**P**	**13 17 05.2**	**+0.1**
	comp=Z,1.7nm,1.0s,mb4.0,baz=278,slow=9.7,SNR=4.0						
MJAR	**Matsushiro Arr**	**57.52**	**63**	P	**P**	**13 17 05.2**	**+0.1**
MJAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ESDC	**Sonseca Array**	**59.09**	**301**	P	**P**	**13 17 15.2**	**-0.7**
	comp=Z,0.3nm,0.2s,mb3.9,baz=66,slow=9.1,SNR=5.8						
TORD	**Torodi Ar. Bea**	**63.71**	**271**	P	**P**	**13 17 46.5**	**-1.0**
	comp=Z,3.3nm,0.8s,mb4.4,baz=58,slow=5.6,SNR=15						

SUMG	**Summit**	**66.89**	**342**	*e*P	**P**	**13 18 08.9**	**+1.6**
	comp=Z,5.2nm,0.8s,mb4.6						
BOSA	**Boshof**	**71.26**	**220**	P	**P**	**13 18 34.4**	**-0.5**
	comp=Z,2.6nm,1.0s,mb4.1,baz=14,slow=7.8,SNR=3.5						
BOSA	**Boshof**	**71.26**	**220**	P	**P**	**13 18 34.4**	**-0.5**
BOSA				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
WRA	**Warramunga Arr**	**80.19**	**120**	P	**P**	**13 19 26.4**	**+0.2**
	comp=Z,1.6nm,0.6s,mb4.1,baz=324,slow=5.0,SNR=10						
WRA	**Warramunga Arr**	**80.19**	**120**	P	**P**	**13 19 26.4**	**+0.2**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ASAR	**Alice Springs**	**82.09**	**123**	P	**P**	**13 19 35.2**	**-1.0**
	comp=Z,0.4nm,0.3s,mb3.9,baz=302,slow=5.6,SNR=31						
YKA	**Yellowknife Ar**	**88.12**	**2**	P	**P**	**13 20 06.7**	**+0.8**
	comp=Z,2.3nm,0.9s,mb4.4,baz=353,slow=5.3,SNR=5.2						
YKA	**Yellowknife Ar**	**88.12**	**2**	P	**P**	**13 20 06.7**	**+0.8**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
PLCA	**Paso Flores**	**145.18**	**240**	PKPbc	PKPbc	13 26 53.3	+0.7
	comp=Z,2.0nm,0.9s,baz=63,slow=2.3,SNR=4.0						

*BJI **23** 14:14:52.6, 34°00N×117°20W, h5km, mB5.6/3, mb5.3/5, Ms4.7/3, Ms7 4.4/3*
*ISCJB **23** 14:14:55.7±0.3, 34°02N±0°01×117°23W±0°01, h10km±2km, Error ellipse: s-maj=2.4km s-min=1.9km az=16.9*
*NEIC **23** 14:14:57.6, 34°05N×117°25W, h14km, MW3.6(PAS), After PAS.*
NEIC Felt [IV] at Fontana and [III] at Anaheim, Apple Valley, Beaumont, Big Bear City, Bloomington, Calimesa, Chino, Claremont, Corona, Costa Mesa, Diamond Bar, Grand Terrace, Hemet, Highland, Lake Arrowhead, Loma Linda, Los Angeles, March Air Reserve Base, Mentone, Mira Loma, Moreno Valley, Murrieta, Norco, Ontario, Perris, Phelan, Pomona, Rancho Cucamonga, Redlands, Riverside, San Bernardino, San Jacinto, Sun City, Temecula, Wildomar, Winchester and Yucaipa. Felt widely in Los Angeles, Orange, Riverside, San Bernardino and San Diego Counties.
ISC 23 14:14:56.5±0.3, 34°01N±0°01×117°26W±0°01, h11km±2km, n100, σ1°00/158, 52C-65D, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBRC	**Big Bear Solar**	**0.38**	**48**	P	**Pg**	**14 15 04.3**	**+0.4**
	baz=0.3,SNR=538						
BBRC				⇓S	**Sg**	**14 15 09.3**	**+0.3**
	baz=0.3						
BFSC	**Mount Baldy Ra**	**0.40**	**305**	⇑P	**Pg**	**14 15 04.8**	**+0.4**
	baz=0.4						
BFSC				⇑S	**Sg**	**14 15 10.3**	**+0.5**
	baz=0.4						
MURC	**Murrieta**	**0.41**	**173**	⇓P	**Pg**	**14 15 06.0**	**+1.4**
	baz=0.5,SNR=1000						
MURC				⇑S	**Sg**	**14 15 12.3**	**+2.2**
	baz=0.5						
MWC	**Mount Wilson**	**0.70**	**288**	⇑*i*Pg	**Pg**	**14 15 10.1**	**+0.1**
MWC				*e*Sg	**Sg**	**14 15 19.5**	**+0.4**
PFO	**Pinyon Flat Ob**	**0.78**	**121**	⇓P	**Pg**	**14 15 11.9**	**+0.3**
	baz=0.8,SNR=1000						
PFO				⇑S	**Sg**	**14 15 22.3**	**+0.6**
	baz=0.8						
PFO	**Pinyon Flat Ob**	**0.78**	**121**	*e*Pg	**Pg**	**14 15 11.4**	**-0.1**
PFO				*e*Sg	**Sg**	**14 15 21.8**	**+0.1**
PASC	**Pasadena Art C**	**0.79**	**282**	*e*Pg	**Pg**	**14 15 11.4**	**-0.2**
PASC				*e*Sg	**Sg**	**14 15 22.1**	**+0.2**
RRX	**Edison Barstow**	**0.90**	**14**	⇓P	**Pg**	**14 15 13.3**	**-0.5**
	baz=0.9,SNR=420						
RRX				⇓S	**Sg**	**14 15 25.1**	**-0.3**
	baz=0.9						
FMP	**Fort Macarthur**	**0.91**	**251**	⇑P	**Pg**	**14 15 14.3**	**+0.3**
	baz=0.9,SNR=35						
FMP				⇑S	**Sg**	**14 15 26.6**	**+0.7**
	baz=0.9						
DECC	**Green Verdugo**	**0.92**	**285**	⇑P	**Pg**	**14 15 14.1**	**-0.2**
	baz=0.9,SNR=112						
DECC				⇑S	**Sg**	**14 15 26.6**	**+0.4**
	baz=0.9						
BELC	**Belle Mtn. Jos**	**1.05**	**90**	P	**Pb**	**14 15 16.4**	**-0.2**
	baz=1.0,SNR=1000						
BELC				⇑S	**Sg**	**14 15 30.4**	**+0.1**
	baz=1.0						
EDW2	**Edwards Air Fo**	**1.06**	**325**	P	**Pb**	**14 15 16.2**	**-0.6**
	baz=1.0,SNR=1000						
EDW2				⇑S	**Sg**	**14 15 30.0**	**-0.6**
	baz=1.0						
HEC	**Hector,Ludlow**	**1.12**	**43**	⇑P	**Pb**	**14 15 17.3**	**-0.6**
	baz=1.1,SNR=118						
HEC				⇓S	**Sb**	**14 15 31.7**	**-0.8**
	baz=1.1						
109C	**Camp Elliot, M**	**1.12**	**173**	⇓P	**Pb**	**14 15 17.5**	**-0.5**
	baz=1.2,SNR=161						
109C				⇓S	**Sb**	**14 15 32.6**	**+0.1**
	baz=1.2						
CIS	**Catalina Islan**	**1.13**	**238**	⇓S	**Sb**	**14 15 33.6**	**+1.0**
	baz=1.2						
MONP	**Monument Peak**	**1.32**	**148**	⇓P	**Pn**	**14 15 21.1**	**+0.3**
	baz=1.3,SNR=400						
MONP				⇓S	**Sb**	**14 15 38.5**	**+0.4**
	baz=1.3						
GSC	**Goldstone**	**1.34**	**16**	⇑P	**Pn**	**14 15 20.7**	**-0.4**
	baz=1.3,SNR=420						
GSC				⇑S	**Sb**	**14 15 37.8**	**-1.0**
	baz=1.3						
GSC	**Goldstone**	**1.34**	**16**	*e*Pg	**Pg**	**14 15 20.8**	**-1.5**
OSI	**Osito Adit**	**1.35**	**297**	⇓P	**Pn**	**14 15 21.0**	**-0.3**
	baz=1.3,SNR=37						
OSI				⇓S	**Sb**	**14 15 39.1**	**-0.1**
	baz=1.3						
OSI	**Osito Adit**	**1.35**	**297**	*e*Pn	**Pn**	**14 15 20.8**	**-0.5**
OSI				*e*S	**Sb**	**14 15 39.7**	**+0.5**
BAR	**Barrett**	**1.41**	**160**	*e*Pn	**Pn**	**14 15 22.2**	**+0.1**
BAR				*e*S	**Sn**	**14 15 40.4**	**-0.3**
SCI	**San Clemente I**	**1.49**	**227**	⇓P	**Pn**	**14 15 22.7**	**-0.4**
	baz=1.5						
SCI				⇑S	**Sn**	**14 15 42.5**	**-0.1**
	baz=1.5						
BLG	**Laguna Peak**	**1.50**	**274**	⇓P	**Pn**	**14 15 22.4**	**-0.9**
	baz=1.5,SNR=64						
BLG				⇑S	**Sn**	**14 15 41.7**	**-1.2**
	baz=1.5						
LRMC	**Laurel Mountai**	**1.51**	**347**	⇓P	**Pn**	**14 15 22.9**	**-0.5**
	baz=1.5,SNR=411						
LRMC				⇓S	**Sn**	**14 15 41.9**	**-1.1**
	baz=1.5						
GMRC	**Granite Mounta**	**1.53**	**59**	⇑P	**Pn**	**14 15 23.0**	**-0.7**
	baz=1.5,SNR=241						
GMRC				⇓Sb	**Sb**	**14 15 44.6**	**+0.4**
	baz=1.5						
BC3	**Big Chuckawall**	**1.54**	**103**	⇓P	**Pn**	**14 15 23.3**	**-0.6**
	baz=1.5,SNR=736						
BC3				⇑S	**Sn**	**14 15 43.4**	**-0.6**
	baz=1.5						
SWSC	**Sam W. Stewart**	**1.62**	**131**	⇑P	**Pn**	**14 15 24.4**	**-0.5**
	baz=1.6,SNR=139						
SWSC				⇑Sb	**Sb**	**14 15 48.4**	**+1.5**
	baz=1.6						
DVTC	**Desert V Tower**	**1.66**	**144**	⇓Pb	**Pb**	**14 15 27.4**	**+0.4**
	baz=1.7						
DVTC				⇑Sb	**Sb**	**14 15 49.6**	**+1.7**
	baz=1.7						
ARVC	**Arvin**	**1.71**	**311**	⇑P	**Pn**	**14 15 25.9**	**-0.3**
	baz=1.7,SNR=95						
ARVC				⇓S	**Sn**	**14 15 47.1**	**-1.0**
	baz=1.7						
IRM	**Iron Mountain**	**1.76**	**84**	P	**Pn**	**14 15 26.1**	**-0.8**
	baz=1.7,SNR=114						
IRM				⇑S	**Sn**	**14 15 46.9**	**-2.3**
	baz=1.7						
TUQ	**Turquoise Moun**	**1.80**	**37**	⇓P	**Pn**	**14 15 26.8**	**-0.6**
	baz=1.8						
TUQ				⇑Sb	**Sb**	**14 15 52.3**	**+0.4**
	baz=1.8						
ISA	**Isabella**	**1.93**	**329**	⇓P	**Pn**	**14 15 28.7**	**-0.5**
	baz=1.9,SNR=296						
ISA				⇓S	**Sn**	**14 15 53.0**	**-0.5**
	baz=1.9						
ISA	**Isabella**	**1.93**	**329**	⇑*e*Pn	**Pn**	**14 15 28.6**	**-0.6**
ISA				*e*Pg	**Pg**	**14 15 31.9**	**-1.5**
ISA				*e*Sg	**Sg**	**14 15 56.4**	**-2.2**
BSC	**Santa Cruz Isl**	**1.97**	**270**	⇑S	**Sn**	**14 15 54.0**	**-0.5**
	baz=2.0						
SNCC	**San Nicolas Is**	**2.04**	**249**	⇑S	**Sn**	**14 15 55.8**	**-0.3**
	baz=2.1						

SHOC	**Shoshone**	**2.05**	**23**	⇑P	**Pn**	**14 15 30.3**	**-0.6**
	baz=2.0,SNR=354						
SHOC				⇓Sb	**Sb**	**14 16 00.6**	**+1.4**
	baz=2.0						
MPMC	**Manual Prospec**	**2.06**	**355**	⇑P	**Pn**	**14 15 30.5**	**-0.4**
	baz=2.0,SNR=24						
MPMC				⇑Sb	**Sb**	**14 16 00.1**	**+0.7**
	baz=2.0						
LDFC	**Landfair**	**2.07**	**58**	*e*Pn	**Pn**	**14 15 30.3**	**-0.9**
LDFC				*e*Pg	**Pg**	**14 15 34.3**	**-1.9**
LDFC				*e*Sg	**Sg**	**14 16 00.7**	**-2.3**
SBC	**Santa Barbara**	**2.08**	**283**	⇓S	**Sn**	**14 15 57.5**	**+0.3**
	baz=2.1						
GLA	**Glamis**	**2.24**	**114**	⇑P	**Pn**	**14 15 32.8**	**-0.8**
	baz=2.2,SNR=15						
GLA				⇓Sb	**Sb**	**14 16 07.3**	**+2.6**
	baz=2.2						
GLA	**Glamis**	**2.24**	**114**	*e*Pn	**Pn**	**14 15 32.6**	**-0.9**
GLA				*e*Pg	**Pg**	**14 15 38.5**	**-1.0**
GLA				*e*Sg	**Sg**	**14 16 08.0**	**-0.6**
Y12C	**Blythe**	**2.29**	**96**	⇓P	**Pn**	**14 15 33.2**	**-1.0**
	baz=2.3,SNR=13						
Y12C				⇓S	**Sn**	**14 16 00.8**	**-1.5**
	baz=2.3						
PKM	**Peak Mountain**	**2.29**	**293**	⇓P	**Pn**	**14 15 33.5**	**-0.7**
	baz=2.3,SNR=31						
NEE2	**Needles Airpor**	**2.31**	**70**	⇓P	**Pn**	**14 15 34.0**	**-0.5**
	baz=2.3,SNR=5.7						
NEE2				⇓S	**Sn**	**14 16 01.7**	**-1.1**
	baz=2.3						
W12A	**Cal Nev Ari**	**2.35**	**56**	⇓P	**Pn**	**14 15 34.6**	**-0.5**
	baz=2.3						
W12A				⇓Sb	**Sb**	**14 16 09.8**	**+1.9**
	baz=2.3						
V11A	**Goodsprings**	**2.36**	**39**	⇓P	**Pn**	**14 15 34.9**	**-0.3**
	baz=2.3,SNR=15						
V11A				⇓Sb	**Sb**	**14 16 10.5**	**+2.2**
	baz=2.3						
FURC	**Furnace Creek,**	**2.48**	**7**	⇓Pb	**Pb**	**14 15 41.5**	**+0.5**
	baz=2.4						
FURC				⇓Sb	**Sb**	**14 16 14.1**	**+2.6**
	baz=2.4						
CWC	**Cottonwood Cre**	**2.52**	**345**	⇑Sb	**Sb**	**14 16 14.7**	**+2.0**
	baz=2.5						
U10A	**Ash Meadows, A**	**2.52**	**17**	⇑P	**Pn**	**14 15 37.2**	**-0.2**
	baz=2.5,SNR=16						
PDMCI	**Parker Dam,Lak**	**2.60**	**83**	⇑P	**Pn**	**14 15 38.3**	**-0.2**
	baz=2.6						
PDMCI				⇑S	**Sn**	**14 16 08.4**	**-1.6**
	baz=2.6						
SMMC	**Simmler**	**2.61**	**301**	⇑P	**Pn**	**14 15 38.2**	**-0.3**
	baz=2.6						
V12A	**Nelson**	**2.62**	**48**	⇓P	**Pn**	**14 15 38.2**	**-0.5**
	baz=2.6,SNR=8.4						
V12A				⇓Sb	**Sb**	**14 16 18.0**	**+2.5**
	baz=2.6						
U11A	**Corn Creek**	**2.86**	**32**	⇑P	**Pn**	**14 15 41.7**	**-0.2**
	baz=2.8,SNR=5.4						
U11A				⇓Sb	**Sb**	**14 16 25.2**	**+2.8**
	baz=2.8						
Y13A	**Salome**	**2.86**	**93**	⇓P	**Pn**	**14 15 41.7**	**-0.3**
	baz=2.8,SNR=11						
Y13A				⇓S	**Sn**	**14 16 15.4**	**-1.0**
	baz=2.8						
GRAC	**Grapevine Rang**	**2.99**	**358**	⇓P	**Pn**	**14 15 44.3**	**+0.5**
	baz=3.0,SNR=35						
GRAC				⇑Sb	**Sb**	**14 16 29.1**	**+3.0**
	baz=3.0						
W13A	**Hualapai Mount**	**2.99**	**68**	⇑P	**Pn**	**14 15 43.6**	**-0.1**
	baz=3.0,SNR=130						
W13A				⇓Sb	**Sb**	**14 16 29.1**	**+2.9**
	baz=3.0						
Z13A	**Yuma Proving G**	**3.11**	**104**	⇓P	**Pn**	**14 15 44.5**	**-1.0**
	baz=3.1,SNR=65						
Z13A				⇑Sb	**Sb**	**14 16 33.6**	**+3.9**
	baz=3.1						
TIN	**Tinemaha**	**3.14**	**346**	⇓Sb	**Sb**	**14 16 33.8**	**+3.2**
	baz=3.1						
113A	**Mohawk Valley,**	**3.17**	**112**	⇑P	**Pn**	**14 15 45.7**	**-0.6**
	baz=3.2,SNR=7.5						
113A				⇑Sb	**Sb**	**14 16 35.8**	**+4.3**
	baz=3.2						
U12A	**Valley of Fire**	**3.29**	**42**	⇓P	**Pn**	**14 15 47.6**	**-0.3**
	baz=3.3,SNR=15						
T12A	**Moapa**	**3.42**	**37**	⇓Sb	**Sb**	**14 16 41.9**	**+3.4**
	baz=3.4						
Y14A	**Wickenburg**	**3.54**	**90**	⇓P	**Pn**	**14 15 51.1**	**-0.2**
	baz=3.5,SNR=20						
U13A	**Pakoon Wash**	**3.61**	**47**	⇑P	**Pn**	**14 15 52.3**	**0.0**
	baz=3.6,SNR=53						
T11A	**Corn Creek, Al**	**3.63**	**27**	⇓P	**Pn**	**14 15 53.1**	**+0.5**
	baz=3.6						
W14A	**Seligman**	**3.65**	**70**	⇓P	**Pn**	**14 15 53.0**	**+0.1**
	baz=3.6,SNR=9.7						
X14A	**Yava**	**3.65**	**82**	⇑P	**Pn**	**14 15 52.7**	**-0.1**
	baz=3.6,SNR=123						
Z14A	**Wintersburg**	**3.65**	**99**	⇑P	**Pn**	**14 15 52.1**	**-0.8**
	baz=3.6,SNR=26						
V14A	**Boquillas Ranc**

HHC					pmax	pmax		
	comp=Z,12nm,0.8s							
HHC					pmax	pmax		
	comp=Z,110nm,5.1s							
HHC					LR	LR		
	comp=N,80nm,20.2s							
HHC					LR	LR		
	comp=E,150nm,19.0s							
HHC					LR	LR		
	comp=Z,70nm,17.8s							
NJ2	**Nanjing**	**95.70**	**315**	*e*P	**P**	**14 28 24.1**	**+1.5**	
NJ2					pmax	pmax		
	comp=Z,10.0nm,0.5s							
WMQ	**Urumqi**	**99.27**	**342**	*e*P	**P**	**14 28 39.0**	**+0.6**	

*DJA **23** 14:14:59, 0.′10N×96.′87E, h95km, MLv4.5/11*
*ISCJB **23** 14:15:00.8±0.5, 0.′05N±0.′05×97.′10E±0.′05, h36km, mb4.1/14, MS3.6/3, Error ellipse: s-maj=8.6km s-min=5.3km az=139.8*
*NEIC **23** 14:15:02.7±0.4, 0.′05N×97.′14E, mb4.1/4, Error ellipse: s-maj=11.3km s-min=8.6km az=74.0*
*IDC **23** 14:15:02.6±0.7, 0.′02N×97.′05E, h35km±4km, mb3.9/12, mb1 4.0/14, mb1mx3.9/23, mbtmp3.9/14, ML3.9/2, MS3.4/4, Ms1 3.4/4, ms1mx3.0/29, Error ellipse: s-maj=21.0km s-min=12.4km az=79.0*

ISC 23 14:15:03.0±0.5, 0.′07N±0.′05×97.′12E±0.′05, h38km, h38km±.6km; pP-P, n62, σ1§19/57, mb4.1/14, MS3.6/3, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.31**	**20**	P	**Pn**	**14 15 23.5**	**-1.3**
SISI	**Saibi**	**2.41**	**125**	P	**Pn**	**14 15 38.4**	**-1.6**
MNSI	**Mandailing Nat**	**2.56**	**74**	P	**Pn**	**14 15 41.1**	**-1.0**
TPTI		**3.17**	**1**	P	**Pn**	**14 15 46.7**	**-3.7**
PSI	**Prapat**	**3.26**	**34**	Pn	**Pn**	**14 15 49.1**	**-2.5**
	6.9nm,0.3s,baz=219,slow=7.4,SNR=18						
PSI				LR	LR	14 16 36.3	
	comp=Z,180nm,21.0s,baz=217,slow=29						
PPI	**Padang Panjang**	**3.32**	**99**	P	**Pn**	**14 15 51.6**	**-0.9**
PDSI	**Padang**	**3.48**	**106**	P	**Pn**	**14 15 53.3**	**-1.4**
BKNI	**Bangkinang**	**3.93**	**86**	P	**Pn**	**14 16 03.7**	**+2.9**
PPSI	**Pulau Pagai**	**4.03**	**134**	P	**Pn**	**14 16 01.0**	**-1.3**
SDSI	**Sungai Dareh**	**4.42**	**103**	P	**Pn**	**14 16 07.8**	**+0.2**
IPM	**Ipoh**	**5.87**	**42**	P	**Pn**	**14 16 27.2**	**-0.3**
IPM	**Ipoh**	**5.87**	**42**	P	**Pn**	**14 16 27.3**	**-0.2**
	0.3nm62nm,0.8s						
KULM	**Kulim**	**6.27**	**34**	P	**Pn**	**14 16 31.9**	**-1.2**
KULM	**Kulim**	**6.27**	**34**	*e*P	**Pn**	**14 16 31.5**	**-1.5**
	47nm,0.6s						
KULM	**Kulim**	**6.27**	**34**	P	**Pn**	**14 16 32.1**	**-1.0**
	0.2nm77nm,0.8s						
KGM	**Kluang**	**6.49**	**73**	P	**Pn**	**14 16 37.9**	**+1.8**
KSI	**Kapahiang**	**6.60**	**124**	P	**Pn**	**14 16 38.8**	**+1.2**
	0.7nm3µm103nm,0.8s						
MYKOM	**Kota Tinggi**	**6.94**	**76**	P	**Pn**	**14 16 44.4**	**+2.1**
MNAI	**Manna**	**7.30**	**127**	P	**Pn**	**14 16 47.1**	**-0.2**
	1.1nm229nm,1.4s						
KTGM	**Kuala Trenggan**	**7.96**	**49**	P	**Pn**	**14 16 56.7**	**+0.4**
MDSI	**Maura Dua**	**8.38**	**123**	P	**Pn**	**14 17 02.0**	**0.0**
	25nm,0.8s						
KLSI		**8.95**	**122**	P	**Pn**	**14 17 08.4**	**-1.5**
	34nm,0.7s						
SBUM	**Sibu**	**15.28**	**81**	P	**Pn**	**14 18 38.1**	**+2.0**
SBUM	**Sibu**	**15.28**	**81**	P	**Pn**	**14 18 29.0**	**-7.1**
BTM	**Bintulu**	**16.25**	**79**	P	**Pn**	**14 18 50.2**	**+1.5**
CM31	**Chiang Mai Arr**	**18.36**	**5**	*e*P	**Pn**	**14 19 15.9**	**+1.1**
	6.8nm,0.8s						
CMAR	**Chiang Mai Arr**	**18.36**	**5**	P	**Pn**	**14 19 14.1**	**-0.7**
	0.2nm,0.3s,baz=199,slow=12,SNR=26						
CMAR				S	**S**	**14 22 40.4**	**-2.1**
	0.2nm,0.3s,baz=205,slow=25,SNR=3.1						
CHTO	**Chiang Mai**	**18.71**	**5**	*e*P	**Pn**	**14 19 17.2**	**-1.9**
	5.5nm,0.9s						
KKM	**Kota Kinabalu**	**19.96**	**72**	P	**Pn**	**14 19 32.9**	**-1.2**
KKM	**Kota Kinabalu**	**19.96**	**72**	*e*P	**Pn**	**14 19 32.5**	**-1.6**
SDKM	**Sandakan**	**20.79**	**74**	P	**P**	**14 19 41.8**	**+0.7**
KDM	**Kudat**	**20.81**	**71**	P	**P**	**14 19 42.3**	**+1.0**
TSM	**Tawau**	**21.15**	**78**	P	**P**	**14 19 46.1**	**+1.0**
KAPI	**Kappang**	**23.16**	**103**	LR	LR	14 31 34.9	
	comp=Z,132nm,19.0s,MS3.4,baz=245,slow=43						
SHL	**Shillong**	**25.85**	**349**	*e*PKP	**P**	**14 20 34.5**	**+3.4**
ENH	**Enshi**	**32.26**	**20**	P	**P**	**14 21 30.1**	**+2.0**
WRA	**Warramunga Arr**	**41.52**	**121**	P	**P**	**14 22 47.0**	**0.0**
	0.8nm,0.4s,mb3.7,baz=303,slow=9.0,SNR=7.5						
WRA	**Warramunga Arr**	**41.52**	**121**	P	**P**	**14 22 47.0**	**0.0**
WRAB	**Tennant Creek**	**41.52**	**121**	*e*P	**P**	**14 22 46.2**	**-0.8**
ASAR	**Alice Springs**	**42.79**	**126**	P	**P**	**14 22 57.6**	**+0.4**
	0.8nm,0.7s,mb3.5,baz=304,slow=7.6,SNR=15						
KSRS	**Korea Array**	**46.82**	**34**	P	**P**	**14 23 29.3**	**+0.1**
	1.6nm,0.5s,mb4.2,baz=217,slow=8.4,SNR=12						
KSRS				LR	LR	14 46 04.2	
	comp=Z,40nm,18.2s,MS3.4,baz=240,slow=40						
AML	**Almayashu**	**46.89**	**336**	P	**P**	**14 23 31.2**	**+1.6**
	7.6nm,1.3s,mb4.5						
SONM	**Songino Array**	**48.25**	**8**	P	**P**	**14 23 40.9**	**+0.8**
	0.7nm,0.5s,mb4.0,baz=192,slow=8.6,SNR=3.2						
SONM				pP	pP	14 23 51.7	+0.5
	4.0nm,0.9s,baz=187,slow=9.7,SNR=9.6						
MK31	**Makanchi Array**	**48.31**	**346**	*e*P	**P**	**14 23 40.6**	**+0.1**
MK31				*e*	pP	14 23 51.8	+0.1
MKAR	**Makanchi Array**	**48.31**	**346**	P	**P**	**14 23 41.7**	**+1.1**
	1.0nm,0.6s,mb4.1,baz=146,slow=8.0,SNR=14						
MKAR				pP	pP	14 23 52.0	+0.4
	3.3nm,0.5s,baz=146,slow=6.4,SNR=22						
MKAR	**Makanchi Array**	**48.31**	**346**	P	**P**	**14 23 41.7**	**+1.1**
MKAR				pP	pP	14 23 52.0	+0.4
STKA	**Stephens Creek**	**52.67**	**131**	P	**P**	**14 24 13.7**	**-0.1**
	3.6nm,0.8s,mb4.4,baz=314,slow=6.9,SNR=6.6						
ZAA0	**Zalesovo Array**	**54.65**	**351**	*e*P	**P**	**14 24 28.4**	**+0.5**
ZAA0				*e*	pP	14 24 39.0	-0.1
ZALV	**Zalesovo Beam**	**54.65**	**351**	P	**P**	**14 24 28.7**	**+0.8**
	3.2nm,0.4s,mb4.7,baz=173,slow=6.9,SNR=12						
ZALV				pP	pP	14 24 39.1	-0.1
	8.4nm,0.5s,baz=183,slow=6.7,SNR=15						
ZALV	**Zalesovo Beam**	**54.65**	**351**	P	**P**	**14 24 28.7**	**+0.8**
ZALV				pP	pP	14 24 39.1	-0.1
BVAR	**Borovoye Array**	**57.28**	**341**	P	**P**	**14 24 46.5**	**-0.2**
	0.7nm,0.6s,mb3.9,baz=139,slow=5.7,SNR=5.0						
BVAR				pP	pP	14 24 57.0	-1.1
	1.6nm,0.8s,baz=151,slow=6.8,SNR=4.8						
ABKAR	**Akbulak array**	**58.47**	**332**	*e*P	**P**	**14 24 54.6**	**-0.5**
	1.5nm,0.6s,mb4.2						
ABKAR				*e*	pP	14 25 05.5	-1.0
BOSA	**Boshof**	**74.15**	**240**	P	**P**	**14 26 35.1**	**-1.0**
	1.8nm,0.7s,mb4.1,baz=78,slow=9.3,SNR=3.8						
BOSA	**Boshof**	**74.15**	**240**	*e*P	**P**	**14 26 35.8**	**-0.3**
AKASG	**Malin Array Be**	**76.10**	**323**	P	**P**	**14 26 45.5**	**-1.3**
	1.2nm,0.5s,mb4.1,baz=96,slow=4.3,SNR=5.8						
AKASG				pP	pP	14 26 56.8	-1.6
	0.8nm,0.4s,baz=84,slow=5.8,SNR=3.7						
ARCES	**ARCESS Array B**	**83.57**	**340**	P	**P**	**14 27 27.5**	**+0.7**
	0.7nm,0.5s,mb4.0,baz=90,slow=2.4,SNR=9.7						
ARCES				LR	LR	15 07 31.8	
	comp=Z,54nm,19.5s,MS3.9,baz=156,slow=38						
TORD	**Torodi Ar. Bea**	**95.27**	**283**	P	**P**	**14 28 24.1**	**+0.4**
	0.2nm,0.5s,mb3.9,baz=108,slow=3.2,SNR=3.2						
TAOE	**Nuku Hiva Isla**	**122.31**	**100**	*e*PKPdf	PKPdf	14 33 55.6	+0.5
TAOE				*e*		14 34 03.9	
CPUP	**Villa Florida**	**144.12**	**221**	PKP	PKPdf	14 34 33.4	-2.1
	1.0nm,0.4s,baz=162,slow=2.1,SNR=6.7						
CPUP	**Villa Florida**	**144.12**	**221**	PKP	PKPdf	14 34 33.4	-2.1
TXAR	**Lajitas Array**	**144.66**	**32**	PKP	PKPdf	14 34 36.2	-0.1
	0.8nm,0.7s,baz=232,slow=0.2,SNR=15						
TXAR				pPKP	pPKPdf	14 34 46.9	-1.8
	1.1nm,0.7s,baz=313,slow=1.9,SNR=7.8						
JCT	**Junction City**	**145.62**	**26**	*e*PKP	PKPdf	14 34 38.6	+0.6

MAN 23 14:21:15, 6.′15N×125.′91E, h41km, mb4.7, ML3.5, MS3.5, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.86**	**24**	*e*P	Pn	14 21 31.5	+0.8
MATI				*e*S	Sn	14 21 39.4	-2.7
GSPH	**General Santos**	**0.95**	**266**	⇑*i*P	Pn	14 21 29.4	-2.5
GSPH				*i* S	Sn	14 21 46.9	+2.6
DMPH	**Davao City--Mi**	**1.01**	**337**	⇓*e*P	Pn	14 21 33.5	+0.9
DMPH				*e*S	Sn	14 21 53.4	+7.8
BUKP	**Musuan**	**1.91**	**334**	*e*P	Pn	14 21 45.7	+0.6
BUKP				*e*S	Sn	14 22 00.6	-7.3

*IDC **23** 14:40:21.8±0.9, 18.′64S×173.′41W, h0km, mb4.2/10, mb1 4.4/11, mb1mx4.3/19, mbtmp4.2/11, ML2.3/1, MS3.7/4, Ms1 3.8/4, ms1mx3.4/17, Error ellipse: s-maj=36.6km s-min=17.2km az=143.0*
*ISCJB **23** 14:40:25.5±0.5, 18.′85S±0.′1×173.′4W±0.′1, h33km, mb4.3/17, MS3.9/5, Error ellipse: s-maj=19.6km s-min=12.3km az=136.4*
*NEIC **23** 14:40:27.1±0.5, 18.′63S×173.′43W, h35km, mb4.4/6, Error ellipse: s-maj=18.0km s-min=9.5km az=131.0*

IDC 23 14:40:27.6±0.5, 18.′8S±0.′1×173.′4W±0.′1, h35km, n32, σ0§72/25, mb4.3/17, MS3.9/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.08**	**18**	Pn	**Pn**	**14 41 35.7**	**-5.7**
	6.8nm,0.3s,baz=278,slow=5.0,SNR=12						
AFI				Sn	**Sn**	**14 42 32.5**	**-6.4**
	26nm,0.3s,baz=54,slow=21,SNR=6.5						
AFI				T		14 46 57.5	
	8.2nm,0.3s,baz=100,slow=22,SNR=5.3						
AFI	**Afiamalu**	**5.08**	**18**	*e*Pn	**Pn**	**14 41 36.3**	**-5.0**
AFI				Sn	**Sn**	**14 42 32.5**	**-6.4**
DZM	**Mont Dzumac**	**19.15**	**257**	*e*LR	LR	14 49 36.0	
	166nm,21.2s						
URZ	**Urewera**	**21.10**	**201**	P	**P**	**14 45 08.6**	**-0.4**
	26nm,1.1s,mb4.5,baz=349,slow=9.1,SNR=7.4						
URZ	**Urewera**	**21.10**	**201**	*e*P	**P**	**14 45 08.7**	**-0.3**
PPT	**Papeete**	**22.69**	**91**	*e*LQ		14 49 33.9	
	550nm,26.5s						
PPT				*e*LR	LR	14 50 30.4	
	326nm,26.2s						
PPT	**Papeete**	**22.69**	**91**	LR	LR	14 52 06.7	
	comp=Z,203nm,19.2s,MS3.6,baz=273,slow=31						
TBI	**Tubuai**	**22.82**	**106**	*e*LR	LR	14 50 23.7	
	293nm,29.8s						
CTA	**Charters Tower**	**37.98**	**261**	P	**P**	**14 47 42.6**	**+0.2**
	8.9nm,0.7s,mb4.6,baz=88,slow=8.1,SNR=9.1						
CTAO	**Charters Tower**	**37.98**	**261**	*e*P	**P**	**14 47 42.8**	**+0.4**
	8.8nm,0.7s,mb4.6						
STKA	**Stephens Creek**	**42.41**	**243**	P	**P**	**14 48 18.5**	**-0.5**
	2.3nm,0.7s,mb3.9,baz=80,slow=11,SNR=3.5						
ASAR	**Alice Springs**	**49.12**	**255**	P	**P**	**14 49 12.1**	**0.0**
	4.8nm,0.7s,mb4.7,baz=95,slow=7.7,SNR=59						
WRAB	**Tennant Creek**	**49.12**	**260**	*e*P	**P**	**14 49 12.2**	**+0.1**
	3.1nm,0.7s,mb4.5						
WRA	**Warramunga Arr**	**49.13**	**260**	P	**P**	**14 49 11.5**	**-0.7**
	1.6nm,0.6s,mb4.3,baz=96,slow=7.6,SNR=23						
WRA	**Warramunga Arr**	**49.13**	**260**	P	**P**	**14 49 11.5**	**-0.7**
SBA	**Scott Base**	**59.91**	**185**	*e*P	**P**	**14 50 30.3**	**+0.8**
	2.2nm,0.7s,mb4.3						
QSPA	**South Pole Qui**	**71.29**	**180**	*e*P	**P**	**14 51 42.3**	**-0.6**
MJAR	**Matsushiro Arr**	**71.50**	**321**	P	**P**	**14 51 43.5**	**-1.3**
	0.8nm,0.5s,mb3.9,baz=121,slow=6.9,SNR=3.0						
MJAR				LR	LR	15 17 41.1	
	comp=Z,49nm,18.9s,MS3.8,baz=65,slow=31						
NVAR	**Mina Array Bea**	**76.85**	**41**	P	**P**	**14 52 15.4**	**-0.6**
	1.4nm,0.9s,mb3.9,baz=229,slow=9.5,SNR=8.2						
KSRS	**Korea Array**	**78.54**	**316**	P	**P**	**14 52 25.6**	**+0.2**
	3.2nm,1.0s,mb4.2,baz=121,slow=6.7,SNR=7.9						
KSRS				LR	LR	15 23 44.4	
	comp=Z,32nm,18.2s,MS3.7,baz=275,slow=33						
MSU	**Marysvale**	**80.84**	**44**	*e*P	**P**	**14 52 38.5**	**+0.6**
	3.0nm,1.0s,mb4.2						
TXAR	**Lajitas Array**	**82.51**	**56**	P	**P**	**14 52 46.9**	**-0.1**
	1.2nm,0.9s,mb3.9,baz=207,slow=5.3,SNR=9.5						
MCMT	**McKenzie Canyo**	**83.89**	**39**	*e*P	**P**	**14 52 53.8**	**+0.1**
	1.1nm,0.9s,mb4.0						
PDAR	**Pinedale Array**	**84.78**	**42**	P	**P**	**14 52 58.1**	**-0.1**
	0.8nm,0.6s,mb4.0,baz=249,slow=4.1,SNR=5.5						
COLA	**College**	**85.66**	**11**	*e*P	**P**	**14 53 02.1**	**0.0**
	6.0nm,0.9s,mb4.8						
HHC	**Hu-ho-hao-te**	**91.29**	**313**	*e*P	**P**	**14 53 30.3**	**+0.8**
HHC				pP	pP	14 53 40.9	+0.3
HHC				sP	sP	14 53 44.9	+0.3
HHC				PP	PP	14 57 10.4	+3.1
HHC				SKS		15 03 58.8	
HHC				S	S	15 04 24.5	-1.3
HHC				SS	SS	15 10 34.5	+2.7
HHC				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.4						
HHC				pmax	pmax		
	comp=Z,100nm,5.4s						
HHC				LR	LR		
	comp=N,97nm,19.0s,MS4.4						
HHC				LR	LR		
	comp=E,110nm,20.2s,MS4.4						
HHC				LR	LR		
	comp=Z,140nm,21.4s,MS4.4						
CMAR	**Chiang Mai Arr**	**93.64**	**288**	P	**P**	**14 53 43.4**	**+2.5**
	comp=Z,0.2nm,0.4s,mb3.9,baz=164,slow=4.4,SNR=3.7						
LPAZ	**La Paz**	**98.68**	**110**	LR	LR	15 29 36.3	
	comp=Z,52nm,18.7s,MS4.1,baz=352,slow=30						
BVAR	**Borovoye Array**	**120.49**	**321**	PKP	PKPdf	14 59 14.8	-0.3
	comp=Z,0.6nm,0.5s,baz=21,slow=5.4,SNR=5.2						
AKASG	**Malin Array Be**	**143.41**	**336**	PKP	PKPdf	14 59 57.9	-0.3
	comp=Z,0.2nm,0.3s,baz=37,slow=1.9,SNR=3.1						
AKASG	**Malin Array Be**	**143.41**	**336**	PKP	PKPdf	14 59 57.9	-0.3
CLL	**Collm**	**147.14**	**353**	*e*PKPbc	PKPbc	15 00 08.0	+1.3
CLL				*ep*PKPdf	pPKPdf	15 00 14.0	-2.0
CLL				*ep*PKPbc	pPKPbc	15 00 16.0	-2.1
CLL				*ep*PKiKP		15 00 19.0	

IDC 23 15:24:25.0±1.8, 17.′95S×178.′57W, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.8/16, mbtmp3.9/4, Error ellipse: s-maj=166.1km s-min=30.3km az=156.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.48**	**241**	P	P	15 31 49.5	+0.6
	1.4nm,0.8s,baz=82,slow=7.1,SNR=3.8						
WRA	**Warramunga Arr**	**44.48**	**260**	P	P	15 32 37.9	-0.5
	0.3nm,0.3s,baz=96,slow=7.9,SNR=5.2						
ASAR	**Alice Springs**	**44.63**	**254**	P	P	15 32 39.5	-0.1
	2.2nm,0.5s,baz=90,slow=8.6,SNR=107						
TXAR	**Lajitas Array**	**86.14**	**58**	P	P	15 37 08.6	+0.2
	0.4nm,0.7s,baz=220,slow=5.2,SNR=6.4						

IDC 23 15:32:21.0±22.0, 21.′30S×179.′84W, h0km, mb3.7/3, mb1 4.0/4, mb1mx3.7/16, mbtmp3.9/4, ML4.0/1, Error ellipse: s-maj=415.8km s-min=57.4km az=62.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**17.11**	**188**	P	Pn	15 36 21.6	0.0
	0.6nm,0.3s,baz=27,slow=6.8,SNR=2.8						
STKA	**Stephens Creek**	**35.90**	**245**	P	P	15 39 21.5	-1.5
	2.0nm,1.0s,baz=107,slow=11,SNR=2.8						
ASAR	**Alice Springs**	**42.67**	**258**	P	P	15 40 19.8	+0.1
	0.4nm,0.4s,baz=93,slow=7.5,SNR=14						
WRA	**Warramunga Arr**	**42.80**	**263**	P	P	15 40 21.4	+0.7
	0.2nm,0.3s,baz=94,slow=8.4,SNR=8.9						

*ISCJB **23** 15:42:23.6±0.5, 35.′60N±0.′03×139.′50E±0.′06, h81km±4km, mb3.5/5, Error ellipse: s-maj=8.7km s-min=4.9km az=157.9*
*JMA **23** 15:42:24.7±0.1, 35.′63N×139.′49E, h71km±2km, M3.3 Broadband fault plane solution: P waves. NP1: φs=245.00000°, δ21.00000°, λ72.00000°. NP2: φs=84.00000°, δ70.00000°, λ97.00000°. Principal axes: T Plg64.0000°, Azm5.0000°; N Plg6.0000°, Azm262.0000°; P Plg25.0000°, Azm169.0000°;*
JMA Felt I J1.
*IDC **23** 15:42:26.3±1.6, 35.′43N×139.′12E, h82km±7km, mb3.2/5, mb1 3.4/6, mb1mx3.2/25, mbtmp3.4/6 Error ellipse: s-maj=57.8km s-min=5.6km az=67.0*

ISC 23 15:42:24.5±0.5, 35.′61N±0.′03×139.′51E±0.′06, h75km±4km, n18, σ0§46/30, mb3.5/5, 2C-5D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOK	**Tokyo**	**0.22**	**69**	P	**Pn**	**15 42 36.2**	**+0.4**
TOK				*e*S	**Sn**	**15 42 44.8**	**+0.7**
JHU	**Hanno**	**0.30**	**323**	⇓P	**Pn**	**15 42 36.3**	**0.0**
JHU				S	**Sn**	**15 42 44.3**	**-0.6**
JOD2	**Odawara 2**	**0.48**	**225**	⇑P	**Pn**	**15 42 37.1**	**-0.6**
JOD2				*e*S	**Sn**	**15 42 46.5**	**-0.8**
JRY	**Ryogami san**	**0.64**	**310**	⇓P	**Pn**	**15 42 39.4**	**+0.3**
JRY				*e*S	**Sn**	**15 42 50.4**	**+0.5**
JYN	**Shimob**	**0.79**	**262**	⇑P	**Pn**	**15 42 40.6**	**-0.2**
JYN				*e*S	**Sn**	**15 42 53.1**	**+0.2**
JAG	**Ashikaga**	**0.82**	**357**	⇓P	**Pn**	**15 42 40.8**	**-0.3**
JIM2	**Oshima 3**	**0.89**	**184**	P	**Pn**	**15 42 41.6**	**-0.4**
JIM2				*e*S	**Sn**	**15 42 54.2**	**-0.7**
JIZS	**Izushimoda**	**1.03**	**210**	P	**Pn**	**15 42 43.9**	**+0.3**
JIZS				*e*S	**Sn**	**15 42 58.4**	**+0.6**
BSO3	**Boso 3**	**1.15**	**134**	⇓P	**Pn**	**15 42 45.0**	**-0.2**
BSO3				*e*S	**Sn**	**15 43 00.9**	**+0.3**
JKT	**Katashina**	**1.18**	**350**	⇓P	**Pn**	**15 42 45.3**	**-0.2**
JKT				*e*S	**Sn**	**15 43 00.3**	**-0.8**
MJAR	**Matsushiro Arr**	**1.40**	**312**	P	**Pn**	**15 42 48.5**	**+0.1**
	24nm,0.3s,baz=146,slow=13,SNR=172						
MJAR				S	**Sn**	**15 43 06.5**	**+0.1**
	33nm,0.3s,baz=184,slow=32,SNR=20						
MAT	**Matsushiro**	**1.41**	**312**	P	**Pn**	**15 42 48.8**	**+0.4**
MAT				S	**Sn**	**15 43 06.9**	**+0.5**
JHJ	**Hachijo jima 2**	**2.49**	**175**	P	**Pn**	**15 43 04.0**	**+1.1**
	146nm,0.3s,baz=37,slow=0.7,SNR=47						
JHJ				S	**Sn**	**15 43 32.3**	**-0.1**
	169nm,0.3s,baz=297,slow=23,SNR=18						
ZALV	**Zalesovo Beam**	**41.76**	**314**	P	**P**	**15 50 06.1**	**0.0**
	0.3nm,0.4s,mb3.3,baz=81,slow=9.3,SNR=2.5						
MKAR	**Makanchi Array**	**43.59**	**303**	P	**P**	**15 50 20.8**	**-0.2**
	0.2nm,0.6s,mb3.0,baz=79,slow=12,SNR=3.7						
KURK	**Kurchatov**	**45.61**	**309**	P	**P**	**15 50 37.5**	**+0.4**
	1.2nm,0.6s,mb3.8,baz=83,slow=7.3,SNR=4.2						
WRA	**Warramunga Arr**	**55.46**	**186**	P	**P**	**15 51 51.0**	**-0.5**
	0.4nm,0.3s,mb3.9,baz=0.2,slow=7.7,SNR=7.2						
ASAR	**Alice Springs**	**59.19**	**186**	P	**P**	**15 52 17.4**	**-0.2**
	0.3nm,0.8s,mb3.4,baz=23,slow=10,SNR=7.3						

*IDC **23** 15:45:28.1±1.5, 26.′77N×66.′30E, h0km, mb3.8/10, mb1 3.8/11, mb1mx3.7/28, mbtmp3.8/11, ML3.1/1, MS3.2/6, Ms1 3.2/6, ms1mx3.0/29, Error ellipse: s-maj=34.2km s-min=21.0km az=43.0*
*MOS **23** 15:45:31.8±1.0, 26.′91N×66.′60E, h33km, mb4.0/9, Error ellipse: s-maj=19.9km s-min=10.7km az=79.3*
*ISCJB **23** 15:45:32.2±0.7, 26.′94N±0.′07×66.′68E±0.′06, h33km, mb3.8/13, MS3.2/7, Error ellipse: s-maj=10.4km s-min=7.1km az=20.3*
*NEIC **23** 15:45:33.6±0.9, 26.′88N×66.′67E, h35km, mb4.1/10, Error ellipse: s-maj=16.2km s-min=9.8km az=214.0*
*BJI **23** 15:45:33.6, 27.′45N×65.′84E, h44km, mB4.8/4, mb4.1/4, Ms4.1/2, Ms7 3.7/1*

ISC 23 15:45:33.8±0.7, 26.′89N±0.′07×66.′59E±0.′06, h35km, n54, σ1§24/56, mb3.8/13, MS3.2/7, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AJM	**Ajmer**	**7.21**	**91**	*e*PKP	**Pn**	**15 47 17.0**	**+0.3**
KBL	**Kabul**	**7.92**	**15**	P	**Pn**	**15 47 25.5**	**-0.8**
KBL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KBL	**Kabul**	**7.92**	**15**	P	**Pn**	**15 47 25.5**	**-0.9**
	comp=Z,8.1nm,0.8s						
CEP	**Cherat**	**8.30**	**32**	P	**Pn**	**15 47 32.0**	**+0.4**
CEP				S	**Sn**	**15 49 03.0**	**-1.1**
CHCP	**Chirah Chowk**	**8.88**	**39**	P	**Pn**	**15 47 40.9**	**+1.4**
NDI	**New Delhi**	**9.58**	**77**	*e*PKP	**Pn**	**15 47 52.0**	**+2.8**
NDI				*e*S	**Sn**	**15 49 36.0**	**+0.4**
KSH	**Kashi**	**14.83**	**30**	P	**Pn**	**15 48 54.4**	**-6.5**
AML	**Almayashu**	**16.28**	**19**	*e*P	**Pn**	**15 49 17.8**	**-1.9**
	comp=Z,9.0nm,0.7s						
DMN	**Daman**	**16.48**	**83**	*e*P	**Pn**	**15 49 21.0**	**-1.4**
DMN	**Daman**	**16.48**	**83**	*e*P	**Pn**	**15 49 21.0**	**-1.4**
UCH	**Uchtor**	**16.62**	**21**	*e*P	**Pn**	**15 49 24.0**	**0.0**
	comp=Z,6.6nm,0.8s						
PKI	**Pulchoki**	**16.75**	**83**	*e*P	**Pn**	**15 49 23.4**	**-2.4**
	comp=Z,11nm,0.5s						
PKI	**Pulchoki**	**16.75**	**83**	*e*P	**Pn**	**15 49 23.4**	**-2.4**
PKI				pmax	pmax		
	comp=Z,11nm,0.5s						
PKI	**Pulchoki**	**16.75**	**83**	*e*P	**Pn**	**15 49 23.4**	**-2.4**
	comp=Z,11nm,0.5s						
EKS2	**Erkin-Say**	**16.80**	**19**	*e*P	**Pn**	**15 49 27.3**	**+1.1**
	comp=Z,2.7nm,0.7s						
AAK	**Ala-Archa**	**16.98**	**20**	P	**Pn**	**15 49 29.0**	**+0.5**
	comp=Z,0.0nm,0.3s,baz=186,slow=9.2,SNR=2.7						
JIRN	**Jiri**	**17.44**	**83**	*e*P	**Pn**	**15 49 33.0**	**-1.4**
	comp=Z,22nm,0.6s						
JIRN	**Jiri**	**17.44**	**83**	*e*P	**Pn**	**15 49 33.0**	**-1.4**
	comp=Z,22nm,0.6s						
TKM2	**Tok

HHC			PcP	PcP	15 55 11.5	+3.5
HHC			ScP	ScP	15 58 57.0	+3.0
HHC			PcS	PcS	15 59 00.6	+2.8
HHC			S	**S**	**15 59 02.5**	**+2.7**
HHC			SS	SS	16 01 50.8	-3.9
HHC			ScS	ScS	16 03 07.5	+1.5
HHC			pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5					
HHC			pmax	pmax		
	comp=Z,100nm,6.5s					
HHC			LR	LR		
	comp=N,75nm,15.6s,MS3.8					
HHC			LR	LR		
	comp=E,86nm,16.8s,MS3.8					
HHC			LR	LR		
	comp=Z,85nm,16.8s,MS3.6					
HFS	**Hagfors**	**48.77 328**	P	**P**	**15 54 14.1**	**-0.9**
	comp=Z,1.7nm,0.6s,mb4.2,baz=130,slow=15,SNR=3.4					
HFS	**Hagfors**	**48.77 328**	P	**P**	**15 54 14.1**	**-0.8**
HFS			pmax	pmax		
	comp=Z,2.0nm,0.6s					
ARCES	**ARCESS Array B**	**48.87 342**	P	**P**	**15 54 15.3**	**-0.2**
	comp=Z,1.2nm,0.7s,mb4.0,baz=123,slow=9.8,SNR=4.8					
ARCES			LR	LR	16 17 44.5	
	comp=Z,37nm,18.3s,MS3.4,baz=312,slow=40					
ARCES	**ARCESS Array B**	**48.87 342**	P	**P**	**15 54 15.4**	**-0.1**
ARCES			pmax	pmax		
	comp=Z,1.0nm,0.7s					
ARCES			MLR	MLR		
	comp=Z,37nm,18.3s					
ASAR	**Alice Springs**	**82.17 121**	P	**P**	**15 57 51.7**	**+0.4**
	comp=Z,0.5nm,0.8s,mb3.5,baz=309,slow=5.2,SNR=6.9					
ASAR	**Alice Springs**	**82.17 121**	P	**P**	**15 57 51.7**	**+0.4**
ASAR			pmax	pmax		
	comp=Z,1.0nm,0.8s					

*GII **23** 15:45:46.5±0.7, 33°.29N×35°.43E, h1^{km}±2^{km}, Md3.0/8, Mm2.5/10*
*NEIC **23** 15:45:46.5, 33°.29N×35°.43E, h1^{km}, MD3.0(GII), After GII.*
*CSEM **23** 15:45:46.6±0.2, 33°.35N×35°.39E, h2^{km}, ML3.4, Error ellipse: s-maj=3.8km s-min=2.1km az=112.0*
*ISCJB **23** 15:45:46.2±0.5, 33°.35N±0°.02×35°.40E±0°.05, h3^{km}±4^{km}, Error ellipse: s-maj=7.0km s-min=3.2km az=21.4*
*GRAL **23** 15:45:47.3±0.3, 33°.33N×35°.43E, h4^{km}±2^{km}, MD3.4*

ISC 23 15:45:46.8±0.5,**33°.35N**±0°.02×**35°.40E**±0°.05,**h2**^{km}±5^{km}, **n52**,σ0^{s}**.55**/77,**12C-6D**,**Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSDI	**Kefar Szold**	**0.26**	**126**	∥Pg	**Pg**	**15 45 51.3**	**-0.6**
KSDI	**Kefar Szold**	**0.26**	**126**	∥Pg	**Pg**	**15 45 51.3**	**-0.6**
KSDI	**Kefar Szold**	**0.26**	**126**	Pg	**Pg**	**15 45 51.3**	**-0.6**
KSDI				Sg	**Sg**	**15 45 56.0**	**+0.7**
HRI	**Mount Hermon**	**0.29**	**106**	∥Pg	**Pg**	**15 45 51.9**	**-0.4**
HRI	**Mount Hermon**	**0.29**	**106**	∥Pg	**Pg**	**15 45 51.9**	**-0.4**
HRI	**Mount Hermon**	**0.29**	**106**	Pg	**Pg**	**15 45 51.9**	**-0.4**
HNTI	**Hanita**	**0.33**	**216**	⇑Pg	**Pg**	**15 45 53.1**	**0.0**
HNTI				Sg	**Sg**	**15 45 58.9**	**+1.6**
HNTI	**Hanita**	**0.33**	**216**	⇑Pg	**Pg**	**15 45 53.1**	**0.0**
HNTI				Sg	**Sg**	**15 45 58.9**	**+1.6**
HNTI	**Hanita**	**0.33**	**216**	Pg	**Pg**	**15 45 53.1**	**0.0**
HNTI				Sg	**Sg**	**15 45 58.9**	**+1.6**
MMA0B	**Mount Meron ar**	**0.33**	**180**	Pg	**Pg**	**15 45 52.8**	**-0.4**
MMA0B				Sg	**Sg**	**15 45 57.8**	**+0.3**
RCY	**Rachaya**	**0.37**	**68**	*e*P	**Pg**	**15 45 54.2**	**+0.3**
RCY				*e*S	**Sg**	**15 45 59.3**	**+0.5**
RCY	**Rachaya**	**0.37**	**68**	*e*P	**Pg**	**15 45 54.2**	**+0.3**
RCY				*e*S	**Sg**	**15 45 59.3**	**+0.5**
KSHT	**Keshet**	**0.50**	**137**	∥Pg	**Pg**	**15 45 56.1**	**-0.3**
KSHT	**Keshet**	**0.50**	**137**	∥Pg	**Pg**	**15 45 56.1**	**-0.3**
KSHT	**Keshet**	**0.50**	**137**	Pg	**Pg**	**15 45 56.1**	**-0.3**
BEYL	**Beirut**	**0.53**	**8**	*e*P	**Pg**	**15 45 57.1**	**+0.2**
BEYL	**Beirut**	**0.53**	**8**	*e*P	**Pg**	**15 45 57.1**	**+0.2**
BHL	**Bhannes**	**0.59**	**20**	*e*P	**Pg**	**15 45 58.2**	**+0.1**
BHL				*e*S	**Sg**	**15 46 06.3**	**+0.4**
BHL	**Bhannes**	**0.59**	**20**	*e*P	**Pg**	**15 45 58.2**	**+0.1**
BHL				*e*S	**Sg**	**15 46 06.3**	**+0.5**
BLGI	**Bet Lehem HaGe**	**0.64**	**196**	Pg	**Pg**	**15 45 58.8**	**-0.2**
OFRI	**'Ofer**	**0.81**	**206**	⇑Pg	**Pg**	**15 46 02.1**	**-0.1**
OFRI	**'Ofer**	**0.81**	**206**	⇑Pg	**Pg**	**15 46 02.1**	**-0.1**
OFRI	**'Ofer**	**0.81**	**206**	Pg	**Pg**	**15 46 02.1**	**-0.1**
MMLI	**Mount Malkishu**	**0.91**	**179**	⇑Pg	**Pg**	**15 46 03.5**	**-0.7**
MMLI				Sg	**Sg**	**15 46 15.9**	**-0.1**
MMLI	**Mount Malkishu**	**0.91**	**179**	⇑Pg	**Pg**	**15 46 03.5**	**-0.7**
MMLI				Sg	**Sg**	**15 46 15.9**	**-0.1**
MMLI	**Mount Malkishu**	**0.91**	**179**	Pg	**Pg**	**15 46 03.5**	**-0.7**
MMLI				Sg	**Sg**	**15 46 15.9**	**-0.1**
HWQ	**Hawqa**	**1.03**	**26**	*e*P	**Pg**	**15 46 06.6**	**0.0**
HWQ				*e*S	**Sg**	**15 46 19.8**	**-0.1**
HMDT	**Nahal Hemdat**	**1.10**	**175**	⇑Pg	**Pg**	**15 46 06.8**	**-1.0**
HMDT				Sg	**Sg**	**15 46 22.7**	**+0.7**
HMDT	**Nahal Hemdat**	**1.10**	**175**	⇑Pg	**Pg**	**15 46 06.8**	**-1.0**
HMDT				Sg	**Sg**	**15 46 22.7**	**+0.7**
HMDT	**Nahal Hemdat**	**1.10**	**175**	Pg	**Pg**	**15 46 06.8**	**-1.0**
HMDT				Sg	**Sg**	**15 46 22.7**	**+0.7**
SLTI	**Sal'it**	**1.15**	**196**	⇑Pg	**Pg**	**15 46 07.8**	**-1.0**
SLTI				Sg	**Sg**	**15 46 23.9**	**+0.3**
SLTI	**Sal'it**	**1.15**	**196**	⇑Pg	**Pg**	**15 46 07.8**	**-1.0**
SLTI				Sg	**Sg**	**15 46 23.9**	**+0.3**
SLTI	**Sal'it**	**1.15**	**196**	Pg	**Pg**	**15 46 07.8**	**-1.0**
SLTI				Sg	**Sg**	**15 46 23.9**	**+0.3**
DSI	**Dead Sea**	**1.77**	**181**	Pn	**Pn**	**15 46 17.2**	**-1.2**
DSI				S	**Sn**	**15 46 41.9**	**+0.4**
DSI	**Dead Sea**	**1.77**	**181**	Pn	**Pn**	**15 46 17.2**	**-1.2**
DSI				S	**Sn**	**15 46 41.9**	**+0.4**
DSI	**Dead Sea**	**1.77**	**181**	Pn	**Pn**	**15 46 17.2**	**-1.2**
DSI				Sn	**Sn**	**15 46 41.9**	**+0.4**
YTIR	**Yattir**	**2.00**	**187**	Pn	**Pn**	**15 46 21.9**	**+0.5**
YTIR	**Yattir**	**2.00**	**187**	Pn	**Pn**	**15 46 21.9**	**+0.5**
YTIR	**Yattir**	**2.00**	**187**	Pn	**Pn**	**15 46 21.9**	**+0.5**
MZDA	**Masada**	**2.03**	**181**	⇑Pn	**Pn**	**15 46 22.1**	**+0.1**
MZDA				S	**Sn**	**15 46 48.4**	**+0.5**
MZDA	**Masada**	**2.03**	**181**	⇑Pn	**Pn**	**15 46 22.1**	**+0.1**
MZDA				S	**Sn**	**15 46 48.4**	**+0.5**
MZDA	**Masada**	**2.03**	**181**	Pn	**Pn**	**15 46 22.1**	**+0.1**
MZDA				Sn	**Sn**	**15 46 48.4**	**+0.5**
RTMI	**Retamim**	**2.37**	**195**	Pn	**Pn**	**15 46 26.3**	**-0.3**
RTMI	**Retamim**	**2.37**	**195**	Pn	**Pn**	**15 46 26.3**	**-0.3**
RTMI	**Retamim**	**2.37**	**195**	Pn	**Pn**	**15 46 26.3**	**-0.3**
PRNI	**Paran**	**3.01**	**187**	Pn	**Pn**	**15 46 35.4**	**0.0**
PRNI	**Paran**	**3.01**	**187**	Pn	**Pn**	**15 46 35.4**	**0.0**
PRNI	**Paran**	**3.01**	**187**	Pn	**Pn**	**15 46 35.4**	**0.0**
HRFI	**Mount Harif**	**3.32**	**186**	Pn	**Pn**	**15 46 39.1**	**-0.5**
HRFI	**Mount Harif**	**3.32**	**186**	Pn	**Pn**	**15 46 39.1**	**-0.5**
HRFI	**Mount Harif**	**3.32**	**186**	Pn	**Pn**	**15 46 39.1**	**-0.5**
MBRI	**Mt Berech**	**3.57**	**187**	Pn	**Pn**	**15 46 43.4**	**+0.3**

*IDC **23** 15:49:35.4±2.8, 34°.67N×23°.98E, h0^{km}, mb3.7/3, mb1 3.6/4, mb1mx3.4/24, mbtmp3.6/4, ML3.7/1, Error ellipse: s-maj=37.1km s-min=33.6km az=54.0*
*NEIC **23** 15:49:36.6, 34°.48N×23°.90E, h16^{km}, MD3.7(ATH), After ATH.*
*ATH **23** 15:49:36.6, 34°.48N×23°.90E, h16^{km}±4^{km}, MD3.7/12*
*HLW **23** 15:49:38.0, 34°.81N×24°.33E, h33^{km}±26^{km}, Md2.9, Ml3.1*
*ISCJB **23** 15:49:37.8±0.7, 34°.51N±0°.03×24°.15E±0°.07, h24^{km}±6^{km}, mb3.7/3, Error ellipse: s-maj=9.6km s-min=5.0km az=164.9*
*CSEM **23** 15:49:39.2±0.2, 34°.60N×24°.20E, h20^{km}, MD3.7, Error ellipse: s-maj=9.7km s-min=3.9km az=66.0*

ISC 23 15:49:39.1±0.7,**34°.57N**±0°.03×**24°.10E**±0°.06,**h21**^{km}±6^{km}, **n59**,σ1^{s}**.02**/72,**mb3.7**/3,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.27**	**357**	*e*Pb	**Pb**	**15 49 45.2**	**-0.1**
GVD				*e*Sb	**Sb**	**15 49 50.2**	**+0.6**
GVD	**Gavdhos**	**0.27**	**357**	*e*PB	**Pb**	**15 49 45.2**	**-0.1**
GVD				*e*SB	**Sb**	**15 49 50.2**	**+0.6**
GVD	**Gavdhos**	**0.27**	**357**	*e*Pb	**Pb**	**15 49 45.2**	**-0.1**
GVD				*e*Sb	**Sb**	**15 49 50.2**	**+0.6**
SIVA	**Sivas**	**0.73**	**52**	*e*Pn	**Pn**	**15 49 54.6**	**+0.3**
SIVA				*e*Sn	**Sn**	**15 50 06.6**	**+1.8**
SIVA	**Sivas**	**0.73**	**52**	*e*PN	**Pn**	**15 49 54.6**	**+0.3**
SIVA				*e*SN	**Sn**	**15 50 06.6**	**+1.8**
SIVA	**Sivas**	**0.73**	**52**	*e*Pn	**Pn**	**15 49 54.6**	**+0.3**
VAM	**Vamos**	**0.84**	**5**	*e*Pb	**Pb**	**15 49 53.8**	**-1.2**
VAM	**Vamos**	**0.84**	**5**	*e*PB	**Pb**	**15 49 53.8**	**-1.2**
VAM	**Vamos**	**0.84**	**5**	*e*Pb	**Pb**	**15 49 53.8**	**-1.2**
VAM	**Vamos**	**0.84**	**5**	*e*PB	**Pb**	**15 49 53.8**	**-1.2**
KARN	**Karanos**	**0.84**	**350**	*e*PB	**Pb**	**15 49 53.5**	**-1.6**
KARN				*e*SN	**Sn**	**15 50 07.4**	**-0.2**
KARN	**Karanos**	**0.84**	**350**	*e*Pb	**Pb**	**15 49 53.5**	**-1.6**
KARN				*e*Sn	**Sn**	**15 50 07.4**	**-0.2**
IDI	**Anoyia**	**0.96**	**42**	Pn	**Pn**	**15 49 57.6**	**+0.1**
	38nm,0.3s,baz=232,slow=16,SNR=105					
IDI				Sn	**Sn**	**15 50 10.5**	**-0.1**
	74nm,0.3s,baz=291,slow=18,SNR=15					
IDI	**Anoyia**	**0.96**	**42**	*e*Pb	**Pb**	**15 49 57.3**	**+0.2**
IDI	**Anoyia**	**0.96**	**42**	*e*PB	**Pb**	**15 49 57.3**	**+0.2**
IDI	**Anoyia**	**0.96**	**42**	*e*Pb	**Pb**	**15 49 57.3**	**+0.2**
LAST	**Lasithi**	**1.28**	**62**	*e*Pn	**Pb**	**15 50 04.2**	**+1.8**
LAST	**Lasithi**	**1.28**	**62**	*e*PN	**Pb**	**15 50 04.2**	**+1.8**
NPS	**Neapolis**	**1.42**	**60**	*e*Pn	**Pb**	**15 50 07.0**	**+2.1**
NPS	**Neapolis**	**1.42**	**60**	*e*PN	**Pb**	**15 50 07.0**	**+2.1**
KYTH	**Kithira**	**1.92**	**333**	*e*Pn	**Pn**	**15 50 10.8**	**+0.3**
KYTH	**Kithira**	**1.92**	**333**	*e*PN	**Pn**	**15 50 10.8**	**+0.3**
KYTH	**Kithira**	**1.92**	**333**	*e*Pn	**Pn**	**15 50 10.8**	**+0.3**
VLI	**Veliai**	**2.34**	**336**	*e*Pn	**Pn**	**15 50 17.5**	**+1.1**
VLI	**Veliai**	**2.34**	**336**	*e*PN	**Pn**	**15 50 17.5**	**+1.1**
VLI	**Veliai**	**2.34**	**336**	*e*Pn	**Pn**	**15 50 17.5**	**+1.1**
KARP	**Karpathos**	**2.69**	**68**	*e*Pn	**Pb**	**15 50 24.2**	**-2.4**
KARP	**Karpathos**	**2.69**	**68**	*e*PN	**Pb**	**15 50 24.2**	**-2.4**
ITM	**Ithomi**	**3.15**	**326**	*e*Pn	**Pn**	**15 50 27.8**	**+0.3**
ITM	**Ithomi**	**3.15**	**326**	*e*PN	**Pn**	**15 50 27.8**	**+0.3**
ITM	**Ithomi**	**3.15**	**326**	*e*Pn	**Pn**	**15 50 27.8**	**+0.3**
SLUM		**3.21**	**163**	P	**Pn**	**15 50 28.7**	**+0.4**
	baz=167					
SLUM				AMP		15 51 00.0
	comp=N,50μm,0.6s,logA/T=4.9,baz=167					
SLUM				S	**Sn**	**15 51 07.0**	**+1.1**
	baz=167					
SLUM		**3.21**	**163**	P	**Pn**	**15 50 28.7**	**+0.4**
SLUM				S	**Sn**	**15 51 07.0**	**+1.1**
NAIG	**Nisos Aigina**	**3.22**	**351**	*e*Pn	**Pn**	**15 50 28.8**	**+0.3**
NAIG	**Nisos Aigina**	**3.22**	**351**	*e*PN	**Pn**	**15 50 28.8**	**+0.3**
NAIG	**Nisos Aigina**	**3.22**	**351**	*e*Pn	**Pn**	**15 50 28.8**	**+0.3**
SWA2		**5.43**	**167**	P	**Pn**	**15 50 59.6**	**+0.7**
	baz=169					
SWA2				S	**Sn**	**15 52 00.8**	**-0.1**
	baz=169					
SWA2		**5.43**	**167**	P	**Pn**	**15 50 59.6**	**+0.7**
SWA2				S	**Sn**	**15 52 00.8**	**0.0**
AWBH		**7.46**	**145**	P	**Pn**	**15 51 27.2**	**+0.5**
	baz=147					
AWBH		**7.46**	**145**	P	**Pn**	**15 51 27.2**	**+0.5**
HSAF	**As Saff**	**8.02**	**126**	P	**Pn**	**15 51 32.9**	**-1.5**
	baz=128					
HSAF	**As Saff**	**8.02**	**126**	P	**Pn**	**15 51 32.9**	**-1.5**
AMAG	**Maghara**	**8.62**	**114**	P	**Pn**	**15 51 40.8**	**-1.8**
	baz=116					
AMAG	**Maghara**	**8.62**	**114**	P	**Pn**	**15 51 40.8**	**-1.8**
SUZ		**8.77**	**120**	P	**Pn**	**15 51 43.2**	**-1.5**
	baz=122					
SUZ		**8.77**	**120**	P	**Pn**	**15 51 43.2**	**-1.5**
MMAI	**Mount Meron Ar**	**9.53**	**96**	Pn	**Pn**	**15 51 55.0**	**-0.2**
	comp=N,0.8nm,0.3s,baz=289,slow=14,SNR=3.4					
MMAI				Sn	**Sn**	**15 53 35.0**	**-6.6**
	comp=N,0.7nm,0.3s,baz=248,slow=42,SNR=2.8					
HDK1	**Dakhla**	**10.10**	**152**	P	**Pn**	**15 52 03.8**	**+0.9**
	baz=153					
HDK1	**Dakhla**	**10.10**	**152**	P	**Pn**	**15 52 03.8**	**+0.9**
HHRG	**Al Ghardaqah**	**10.94**	**129**	P	**Pn**	**15 52 14.3**	**-0.1**
	baz=131					
HHRG	**Al Ghardaqah**	**10.94**	**129**	P	**Pn**	**15 52 14.3**	**-0.1**
MK31	**Makanchi Array**	**44.83**	**56**	*e*P	**P**	**15 57 51.1**	**-0.4**
MK31	**Makanchi Array**	**44.83**	**56**	*e*P	**P**	**15 57 51.1**	**-0.4**
MKAR	**Makanchi Array**	**44.83**	**56**	P	**P**	**15 57 51.1**	**-0.4**
	comp=N,0.4nm,0.5s,mb3.5,baz=275,slow=7.2,SNR=7.7					
MKAR	**Makanchi Array**	**44.83**	**56**	P	**P**	**15 57 51.1**	**-0.4**
ZALV	**Zalesovo Beam**	**46.04**	**46**	P	**P**	**15 57 59.5**	**-1.5**
	comp=N,1.0nm,0.4s,mb4.1,baz=278,slow=9.2,SNR=3.8					
ZALV	**Zalesovo Beam**	**46.04**	**46**	P	**P**	**15 57 59.5**	**-1.5**
ZALV	**Zalesovo Beam**	**46.04**	**46**	P	**P**	**15 57 59.5**	**-1.5**
SONM	**Songino Array**	**60.53**	**50**	P	**P**	**15 59 47.9**	**+0.2**
	comp=N,0.2nm,0.4s,mb3.6,baz=283,slow=6.9,SNR=3.1					
SONM	**Songino Array**	**60.53**	**50**	P	**P**	**15 59 47.9**	**+0.2**

*ISCJB **23** 15:58:06.5±1.2, 7°.3S±0°.2×123°.8E±0°.2, h589^{km}±18^{km}, mb3.4/2, Error ellipse: s-maj=45.4km s-min=13.4km az=144.4*
*NEIC **23** 15:58:07.6±1.0, 7°.41S×123°.79E, h586^{km}±14^{km}, Error ellipse: s-maj=36.0km s-min=11.8km az=61.0*
*IDC **23** 15:58:08.3±1.7, 7°.97S×122°.91E, h599^{km}±25^{km}, mb2.7/2, mb1 2.6/5, mb1mx2.4/18, mbtmp2.5/5, Error ellipse: s-maj=161.8km s-min=18.1km az=55.0*

ISC 23 15:58:07.2±1.4,**7°.4S**±0°.2×**123°.9E**±0°.3,**h581**^{km}±19^{km},**n9**, σ0^{s}**.53**/10,**mb3.4**/2,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**4.72**	**300**	P	**P**	**15 59 36.3**	**-0.4**
KAPI	**Kappang**	**4.72**	**300**	*e*P	**P**	**15 59 37.2**	**+0.4**
MBWA	**Marble Bar**	**14.27**	**196**	*e*P	**P**	**16 01 08.4**	**-0.5**
WRA	**Warramunga Arr**	**16.09**	**142**	P	**P**	**16 01 26.3**	**+0.1**
	0.2nm,0.3s,baz=317,slow=10,SNR=4.9					
WRA				S	**S**	**16 04 07.8**	**-0.8**
	0.1nm,0.3s,baz=307,slow=16,SNR=4.9					
ASAR	**Alice Springs**	**18.84**	**150**	P	**P**	**16 01 51.5**	**+0.2**
	0.1nm,0.3s,baz=323,slow=8.8,SNR=13					
ASAR				PcP	PcP	16 05 48.2	-0.3
	0.1nm,0.3s,baz=348,slow=1.3,SNR=7.7					
STKA	**Stephens Creek**	**29.45**	**148**	P	**P**	**16 03 26.0**	**+0.8**
	2.2nm,0.9s,mb3.8,baz=306,slow=10,SNR=4.4					
MK31	**Makanchi Array**	**65.35**	**330**	*e*P	**P**	**16 07 52.9**	**0.0**
MKAR	**Makanchi Array**	**65.35**	**330**	P	**P**	**16 07 52.4**	**-0.5**
	0.4nm,0.6s,mb3.0,baz=125,slow=7.6,SNR=5.3					
QSPA	**South Pole Qui**	**82.60**	**180**	*e*P	**P**	**16 09 30.3**	**+0.7**

*DJA **23** 16:29:08, 7°.87S×118°.28E, h230^{km}, MLv3.9/6*
*IDC **23** 16:29:13.1±2.8, 7°.90S×118°.68E, h0^{km}, mb3.5/2, mb1 3.6/3, mb1mx3.4/19, mbtmp3.4/3, ML3.5/1, Error ellipse: s-maj=252.9km s-min=27.0km az=52.0*
*ISCJB **23** 16:29:13.8±0.7, 7°.74S±0°.06×118°.58E±0°.06, h33^{km}, mb3.6/2, Error ellipse: s-maj=9.1km s-min=8.6km az=2.5*

ISC 23 16:29:15.4±0.7,**7°.74S**±0°.06×**118°.59E**±0°.06,**h35**^{km},**n11**, σ1^{s}**.01**/15,**mb3.6**/2,**Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**2.56**	**139**	P	**Pn**	**16 29 52.9**	**-1.4**
WSI				S	**Sn**	**16 30 38.8**	**+15**
BKSI	**Bulukumba**	**2.85**	**33**	P	**Pn**	**16 29 59.1**	**+0.8**
BKSI				S	**Sn**	**16 30 38.7**	**+7.3**
KHKI	**Kahang-Kahang**	**3.02**	**258**	P	**Pn**	**16 29 55.4**	**-5.2**
KHKI				S	**Sn**	**16 30 35.9**	**+0.3**
BNSI	**Bone**	**3.65**	**25**	P	**Pn**	**16 30 08.4**	**-0.9**
BNSI				S	**Sn**	**16 31 00.9**	**+10**
MMRI	**Maumere**	**3.72**	**104**	P	**Pn**	**16 30 12.4**	**+2.0**
SPSI	**Sidrap Palu**	**3.93**	**17**	P	**Pn**	**16 30 12.9**	**-0.3**
TTSI	**Tana Toraja**	**4.82**	**15**	P	**Pn**	**16 30 25.6**	**+0.1**
KBKI	**Kotabaru**	**5.03**	**331**	P	**Pn**	**16 30 28.1**	**-0.2**
WRA	**Warramunga Arr**	**19.50**	**130**	P	**Pn**	**16 33 39.6**	**-1.4**
	0.2nm,0.3s,baz=300,slow=12,SNR=3.7					
ASAR	**Alice Springs**	**21.60**	**139**	P	**P**	**16 34 03.2**	**+0.9**
	1.3nm,0.5s,mb3.6,baz=316,slow=10,SNR=31					
MKAR	**Makanchi Array**	**63.16**	**333**	P	**P**	**16 39 44.0**	**+4.4**
	0.4nm,0.7s,mb3.7,baz=134,slow=7.2,SNR=5.0					

*ATH **23** 16:37:57.7, 36°.15N×21°.86E, h5^{km}±3^{km}, MD3.6/7*
*NEIC **23** 16:37:57.7, 36°.15N×21°.86E, h5^{km}, MD3.6(ATH), After ATH.*
*THE **23** 16:37:58.4, 36°.15N×21°.81E, h0^{km}±5^{km}, ML3.7/1, Error ellipse: s-maj=6.6km s-min=1.5km az=242.0*
*CSEM **23** 16:38:00.0±0.8, 36°.29N×21°.97E, h2^{km}, MD3.6, Error ellipse: s-maj=24.9km s-min=7.6km az=63.0*

ISC 23 16:37:56.4±1.8,**36°.05N**±0°.06×**21°.8E**±0°.1,**h6**^{km}±12^{km},**n31**, σ0^{s}**.51**/39,**Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.84**	**356**	P	**Pg**	**16 38 12.2**	**-0.4**
PYL				S	**Sg**	**16 38 24.1**	**+0.6**
PYL	**PYLOS**	**0.84**	**356**	*e*PB	**Pg**	**16 38 12.4**	**-0.2**
PYL	**PYLOS**	**0.84**	**356**	P	**Pg**	**16 38 12.2**	**-0.4**
PYL				S	**Sg**	**16 38 24.1**	**+0.6**
KYTH	**Kithira**	**1.02**	**77**	*e*Pg	**Pg**	**16 38 15.8**	**-0.2**
KYTH	**Kithira**	**1.02**	**77**	*e*PG	**Pg**	**16 38 15.8**	**-0.2**
ITM	**Ithomi**	**1.13**	**5**	*e*Pb	**Pg**	**16 38 17.5**	**-0.5**
ITM	**Ithomi**	**1.13**	**5**	P	**Pg**	**16 38 17.5**	**-0.5**
ITM				S	**Sg**	**16 38 32.8**	**+0.1**
ITM	**Ithomi**	**1.13**	**5**	*e*PB	**Pg**	**16 38 17.5**	**-0.5**
ITM	**Ithomi**	**1.13**	**5**	P	**Pg**	**16 38 17.5**	**-0.5**
ITM				S	**Sg**	**16 38 32.8**	**+0.1**
VLI	**Veliai**	**1.13**	**54**	*e*Pn	**Pg**	**16 38 17.8**	**-0.2**
VLI				*e*Sb	**Sg**	**16 38 32.5**	**-0.2**
VLI	**Veliai**	**1.13**	**54**	*e*PN	**Pg**	**16 38 17.8**	**-0.2**
VLI				*e*SB	**Sg**	**16 38 32.5**	**-0.2**
VLX	**Vlachokerasia**	**1.39**	**19**	P	**Pn**	**16 38 21.9**	**-0.4**
VLX				S	**Sg**	**16 38 41.7**	**+0.5**
VLX	**Vlachokerasia**	**1.39**	**19**	*e*PG	**Pn**	**16 38 21.9**	**-0.4**
VLX	**Vlachokerasia**	**1.39**	**19**	P	**Pn**	**16 38 21.9**	**-0.4**
VLX				S	**Sg**	**16 38 41.7**	**+0.5**
KARN	**Karanos**	**1.84**	**110**	P	**Pb**	**16 38 31.1**	**+0.8**
KARN	**Karanos**	**1.84**	**110**	P	**Pb**	**16 38 31.1**	**+0.8**
GUR	**Goura**	**1.93**	**13**	P	**Pb**	**16 38 31.2**	**-0.7**
GUR	**Goura**	**1.93**	**13**	*e*PG	**Pb**	**16 38 31.6**	**-0.3**
GUR	**Goura**	**1.93**	**13**	P	**Pb**	**16 38 31.2**	**-0.7**
GUR	**Goura**	**1.93**	**13**	*e*Pg	**Pb**	**16 38 31.6**	**-0.3**
VAM	**Vamos**	**2.05**	**108**	*e*Pn	**Pg**	**16 38 35.8**	**+0.1**
VAM	**Vamos**	**2.05**	**108**	*e*PN	**Pg**	**16 38 35.8**	**+0.1**
VAM	**Vamos**	**2.05**	**108**	*e*Pn	**Pg**	**16 38 35.8**	**+0.1**
LTK	**Loutraki**	**2.17**	**25**	P	**Pb**	**16 38 34.4**	**-1.7**
LTK	**Loutraki**	**2.17**	**25**	*e*PG	**Pb**	**16 38 36.2**	**+0.1**
LTK	**Loutraki**	**2.17**	**25**	P	**Pb**	**16 38 34.4**	**-1.7**
LTK	**Loutraki**	**2.17**	**25**	*e*Pg	**Pb**	**16 38 36.2**	**+0.1**
LAKA	**Lakka**	**2.19**	**4**	P	**Pn**	**16 38 33.8**	**+0.6**
LAKA	**Lakka**	**2.19**	**4**	P	**Pn**	**16 38 33.8**	**+0.6**
EFP	**Efpalio**	**2.37**	**2**	*e*PG	**Pb**	**16 38 39.8**	**+0.3**
EFP	**Efpalio**	**2.37**	**2**	*e*Pg	**Pb**	**16 38 39.8**	**+0.3**

*NEIC **23** 17:16:58.9±0.7, 26°.18S×179°.72E, h494^{km}±8^{km}, mb4.6/2, Error ellipse: s-maj=11.7km s-min=11.5km az=81.0*
*IDC **23** 17:16:59.0±1.6, 26°.21S×179°.66E, h493^{km}±20^{km}, mb3.4/10, mb1 3.7/12, mb1mx3.6/16, mbtmp3.5/12, Error ellipse: s-maj=23.4km s-min=14.0km az=160.0*
*ISCJB **23** 17:16:58.1±0.8, 26°.09S±0°.07×179°.65E±0°.08, h491^{km}±10^{km}, mb4.1/15, Error ellipse: s-maj=12.7km s-min=9.0km az=32.3*

ISC 23 17:16:58.5±0.7,**26°.10S**±0°.06×**179°.77E**±0°.09,**h491**^{km}±9^{km}, **n39**,σ1^{s}**11**/38,**mb4.1**/15,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.75**	**147**	P	**P**	**17 18 14.6**	**+0.5**
	265nm,0.3s,baz=100,slow=23,SNR=13						
MSVF	**Nonsavu**	**8.48**	**349**	*e*P	**P**	**17 18 59.8**	**0.0**
	26nm,0.8s						
OUZ	**Omahuta**	**10.53**	**209**	*e*P	**P**	**17 19 22.7**	**+1.5**
URZ	**Urewera**	**12.33**	**190**	P	**P**	**17 19 37.8**	**-2.5**
	8.7nm,0.3s,baz=296,slow=2.2,SNR=23			

JRG	Rokugo	0.51	335	⇓P	Pg	17 19 05.4	-0.3
JRG				S	Sg	17 19 12.5	+0.2
JIO	Ouri	0.59	144	⇓P	Pg	17 19 07.1	-0.1
JIO				S	Sg	17 19 15.2	+0.4
JOU	Okura	0.60	199	⇓P	Pg	17 19 07.5	+0.2
JOU				S	Sg	17 19 15.6	+0.5
OFUJ	Ofunato	0.61	76	⇑P	Pg	17 19 07.5	-0.1
JOM	Ohasama	0.62	29	⇓P	Pg	17 19 07.3	-0.4
JYS	Shiratake	0.97	223	⇑P	Pg	17 19 14.2	-0.3
JYS				S	Sg	17 19 27.3	+0.2
JYA	Atsumi	0.99	250	⇑P	Pg	17 19 14.3	-0.6
JYA				S	Sg	17 19 27.4	-0.4
MAT	Matsushiro	3.21	223	P	Pn	17 19 47.3	+0.3
MAT				eS	Sn	17 20 25.4	-0.3
MJAR	Matsushiro Arr	3.21	223	Pn	Pn	17 19 48.2	+1.1
	0.6nm,0.3s,baz=9.8,slow=31,SNR=4.3						
MJAR				Pg	Pg	17 19 53.7	-3.6
	1.1nm,0.3s,baz=20,slow=16,SNR=7.5						
MJAR				Lg		17 20 34.8	
	0.8nm,0.3s,baz=4.0,slow=23,SNR=5.0						
ASAJ	Asahikawa	5.33	13	Pn	Pn	17 20 16.8	+0.6
	0.4nm,0.3s,baz=212,slow=13,SNR=5.2						
KSRS	Korea Array	10.33	266	Pn	Pn	17 21 27.8	+3.0
	0.3nm,0.3s,baz=76,slow=15,SNR=3.8						
PETK	Petropavlovsk-	18.29	34	LR	LR	17 31 50.8	
	comp=Z,8.6nm,18.2s,baz=354,slow=42						
MKAR	Makanchi Array	42.80	300	P	P	17 26 55.6	+1.1
	0.1nm,0.6s,mb2.8,baz=65,slow=8.1,SNR=2.4						
WRA	Warramunga Arr	58.89	187	P	P	17 28 54.4	-1.5
	0.6nm,0.5s,mb3.9,baz=5.4,slow=7.5,SNR=3.3						
ASAR	Alice Springs	62.61	187	P	P	17 29 19.6	-1.7
	0.4nm,0.7s,mb3.7,baz=2.8,slow=6.9,SNR=5.4						

*ISCJB **23** 17:21:01.4±0.5, 33°.85N±0°.03×6°.04W±0°.05, h10km, Error ellipse: s-maj=6.3km s-min=3.4km az=164.8*
*CSEM **23** 17:21:03.1±0.2, 33°.77N×5°.95W, h10km, MD3.2, Error ellipse: s-maj=6.8km s-min=4.4km az=62.0*
*NEIC **23** 17:21:04.0, 33°.88N×6°.00W, h0km, MG3.5(MDD), After MDD.*
*MDD **23** 17:21:05.2±0.6, 33°.76N×5°.96W, h20km±6km, mb3.5/5, Error ellipse: s-maj=6.0km s-min=4.0km az=47.0, PRXIMO SIN SOLUCIN*
*CNRM **23** 17:21:05.0, 33°.73N×5°.95W, h7km, MD3.2*
ISC 23 17:21:02.8±0.4, 33°.81N±0°.02×5°.96W±0°.04, h10km, n31, σ1§36/61, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIF	Mishlifen	0.72	123	P	Pg	17 21 18.0	+1.2
MIF				S	Sg	17 21 28.0	+1.7
MIF	Mishlifen	0.72	123	*i* P	Pg	17 21 18.0	+1.2
MIF				*i* S	Sg	17 21 28.0	+1.7
RTC	Rabat Centre	0.77	284	P	Pg	17 21 20.0	+2.3
RTC				S	Sg	17 21 30.0	+2.3
RTC	Rabat Centre	0.77	284	*e*P	Pg	17 21 20.0	+2.3
RTC				*i* S	Sg	17 21 30.0	+2.3
RSA	Sarsar	1.07	6	P	Pg	17 21 25.0	+1.5
RSA				S	Sg	17 21 41.0	+3.6
RSA	Sarsar	1.07	6	*i* P	Pg	17 21 25.0	+1.5
CZD	Col de Zad	1.09	135	P	Pb	17 21 23.0	-0.7
CZD				S	Sg	17 21 37.0	-0.8
CZD	Col de Zad	1.09	135	*i* P	Pb	17 21 23.0	-0.7
CZD				*i* S	Sg	17 21 37.0	-0.8
KIB	El Ksiba	1.23	183	P	Pn	17 21 25.0	-1.0
KIB				S	Sb	17 21 40.0	-2.0
KIB	El Ksiba	1.23	183	*i* P	Pn	17 21 25.0	-1.0
KIB				*i* S	Sb	17 21 40.0	-2.0
TZK	Tazeka	1.50	79	P	Pn	17 21 31.0	+1.2
TZK				S	Sn	17 21 50.0	+0.6
TZK	Tazeka	1.50	79	*i* P	Pn	17 21 31.0	+1.2
TZK				*i* S	Sn	17 21 50.0	+0.6
TZC	Tazercounte	1.71	195	P	Pn	17 21 33.0	+0.3
TZC				S	Sn	17 21 54.0	-0.7
TZC	Tazercounte	1.71	195	*i* P	Pn	17 21 33.0	+0.3
TZC				*i* S	Sn	17 21 54.0	-0.7
ZFT	Errachidia	2.22	142	P	Pn	17 21 40.0	+0.3
ZFT				S	Sn	17 22 07.0	-0.3
ZFT	Errachidia	2.22	142	*i* P	Pn	17 21 40.0	+0.3
ZFT				*i* S	Sn	17 22 07.0	-0.3
EGRO	El Granado	3.92	342	P	Pn	17 22 03.7	+0.7
EGRO				S	Sn	17 22 47.6	-1.5
EGRO	El Granado	3.92	342	P	Pn	17 22 03.7	+0.7
	0.8nm,0.1s,SNR=7.9						
EGRO				S	Sn	17 22 47.6	-1.5
	0.3nm,0.1s,SNR=7.9						
EGRO	El Granado	3.92	342	P	Pn	17 22 03.7	+0.6
	0.8nm,0.1s,SNR=7.9						
EGRO				S	Sn	17 22 47.7	-1.4
EMIN	Mina Concepcio	4.00	352	P	Pn	17 22 03.2	-0.8
EMIN				S	Sn	17 22 48.6	-2.4
EMIN	Mina Concepcio	4.00	352	P	Pn	17 22 03.2	-0.8
	0.3nm,0.1s,SNR=7.9						
EMIN				S	Sn	17 22 48.6	-2.4
	0.1nm,0.0s,SNR=7.9						
EMIN	Mina Concepcio	4.00	352	P	Pn	17 22 03.2	-0.9
	0.3nm,0.1s,SNR=7.9						
EMIN				S	Sn	17 22 48.6	-2.3
	0.1nm,0.0s,SNR=7.9						
ECAB	El Cabril	4.28	6	P	Pn	17 22 08.5	+0.5
ECAB				S	Sn	17 22 55.8	-2.2
ECAB	El Cabril	4.28	6	P	Pn	17 22 08.5	+0.5
	0.4nm,0.1s,SNR=7.9						
ECAB				S	Sn	17 22 55.8	-2.2
	0.4nm,0.1s,SNR=7.9						
ECAB	El Cabril	4.28	6	P	Pn	17 22 08.5	+0.5
	0.4nm,0.1s,SNR=7.9						
ECAB				S	Sn	17 22 55.8	-2.2
	0.4nm,0.1s,SNR=7.9						
EADA	Adamuz	4.49	14	P	Pn	17 22 11.9	+1.0
EADA				S	Sn	17 23 00.9	-2.3
EADA	Adamuz	4.49	14	P	Pn	17 22 11.9	+1.0
	0.2nm,0.1s,SNR=7.9						
EADA				S	Sn	17 23 01.0	-2.3
	0.4nm,0.1s,SNR=7.9						
EADA	Adamuz	4.49	14	P	Pn	17 22 11.9	+1.0
	0.2nm,0.1s,SNR=7.9						
EADA				S	Sn	17 23 01.0	-2.2
	0.4nm,0.1s,SNR=7.9						
EBAD	Badajoz	5.01	351	P	Pn	17 22 18.3	+0.3
EBAD				S	Sn	17 23 12.2	-3.8
EBAD	Badajoz	5.01	351	P	Pn	17 22 18.3	+0.3
	0.8nm,0.1s,SNR=7.9						
EBAD				S	Sn	17 23 12.2	-3.8
	0.4nm,0.1s,SNR=7.9						
EBAD	Badajoz	5.01	351	P	Pn	17 22 18.3	+0.2
	0.8nm,0.1s,SNR=7.9						
EBAD				S	Sn	17 23 12.2	-3.8
	0.4nm,0.1s,SNR=7.9						

*IDC **23** 18:03:51.0±1.4, 35°.26N×80°.88E, h0km, mb3.3/3, mb1 3.4/7, mb1mx3.3/26, mbtmp3.4/7, ML3.2/3, MS2.8/2, Ms1 2.8/2, ms1mx2.1/24, Error ellipse: s-maj=29.7km s-min=22.9km az=80.0*
*BJI **23** 18:03:52.8, 35°.17N×81°.40E, h25km, ML3.7/6*
*ISCJB **23** 18:03:52.0±4.3, 35°.41N±0°.08×80°.9E±0°.2, h15km±35km, mb3.1/3, Error ellipse: s-maj=22.5km s-min=13.9km az=173.2*
*NEIC **23** 18:03:56.8±1.1, 35°.28N×81°.08E, h35km, mb3.2/1, Error ellipse: s-maj=22.9km s-min=16.4km az=62.0*
ISC 23 18:03:53.0±4.4, 35°.31N±0°.08×80°.9E±0°.2, h11km±31km, n14, σ0§95/15, mb3.1/3, Kashmir-Xizang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	5.76	318	*e*Pn	Pn	18 05 23.8	+5.5
KSH				smax			
	comp=N,55nm,1.2s						
KSH				smax			
	comp=E,58nm,1.2s						
UCH	Uchtor	8.53	326	*e*P	Pn	18 05 56.7	+0.3
	comp=E,6.4nm,0.8s						
AAK	Ala-Archa	8.86	328	Pg	Px	18 06 41.6	
	comp=E,0.0nm,0.3s,baz=191,slow=13,SNR=6.8						
AAK				Lg		18 08 36.0	
	comp=E,0.0nm,0.3s,baz=52,slow=20,SNR=3.4						
AAK				LR	LR	18 09 47.5	
	comp=E,51nm,18.6s,baz=151,slow=40						
MK31	Makanchi Array	11.52	5	*e*P	Pn	18 06 38.4	+1.1
MKAR	Makanchi Array	11.52	5	Pn	Pn	18 06 36.2	-1.1
	comp=E,0.2nm,0.3s,baz=166,slow=11,SNR=13						
MKAR				Sn	Sn	18 08 46.0	+0.1
	comp=E,0.1nm,0.3s,baz=187,slow=22,SNR=2.8						
MKAR	Makanchi Array	11.52	5	Pn	Pn	18 06 36.2	-1.1
MKAR				Sn	Sn	18 08 46.0	+0.1
KURK	Kurchatov	15.49	354	Pn	Pn	18 07 29.2	-2.0
	comp=E,0.0nm,0.3s,baz=176,slow=12,SNR=6.2						
KURK				LR	LR	18 14 07.9	
	comp=E,34nm,19.3s,baz=150,slow=40						
ZAA0	Zalesovo Array	18.83	7	*e*P	Pn	18 08 14.1	+1.0
ZALV	Zalesovo Beam	18.83	7	P	Pn	18 08 12.4	-0.7
	comp=E,0.1nm,0.3s,baz=198,slow=14,SNR=5.6						
BVAR	Borovoye Array	19.22	340	P	Pn	18 08 18.7	+0.9
	baz=150,slow=12,SNR=4.2						
ABKAR	Abkulak array	20.77	319	P	P	18 08 37.6	+3.9
	comp=E,0.4nm,0.4s						
SONM	Songino Array	22.68	49	P	P	18 08 54.1	-0.1
	comp=E,0.3nm,0.7s,mb2.8,baz=255,slow=8.8,SNR=3.0						
CMAR	Chiang Mai Arr	23.17	132	P	P	18 09 00.0	+0.4
	comp=E,0.6nm,0.7s,mb3.1,baz=321,slow=13,SNR=6.4						
TORD	Torodi Ar. Bea	73.81	275	P	P	18 15 27.0	-0.8
	comp=E,0.5nm,0.9s,mb3.4,baz=49,slow=4.4,SNR=2.5						

DJA 23 18:05:53, 1°.18N×97°.85E, h32km, MLv3.6/9, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.30	294	P	Pb	18 06 02.1	+1.4
GSI				S	Sb	18 06 09.4	+3.5
MNSI	Mandailing Nat	1.77	102	P	Pn	18 06 22.2	+0.8
MNSI				S	Sn	18 06 43.6	+0.7
TPTI		2.17	342	P	Pn	18 06 27.1	+0.1
SISI	Saibi	2.78	154	P	Pn	18 06 35.5	+0.2
BKNI	Bangkinang	3.30	105	P	Pn	18 06 44.7	+2.2
PDSI	Padang	3.34	128	P	Pn	18 06 44.1	+1.1
IPM	Ipoh	4.56	44	P	Pn	18 07 01.2	+1.4
KSI	Kapahiang	6.75	135	P	Pn	18 07 30.4	+0.5
	0.4nm45nm,0.5s						
MNAI	Manna	7.50	137	P	Pn	18 07 42.1	+1.8

*IDC **23** 18:18:37.0±0.8, 30°.85N×103°.58E, h0km, mb3.8/9, mb1 4.0/11, mb1mx3.8/26, mbtmp3.9/11, ML3.2/2, MS3.2/6, Ms1 3.2/6, ms1mx2.9/24, Error ellipse: s-maj=31.2km s-min=15.6km az=55.0*
*MOS **23** 18:18:39.6±1.2, 30°.86N×103°.59E, h33km, mb4.2/9, Error ellipse: s-maj=36.3km s-min=15.2km az=98.1*
*BJI **23** 18:18:39.7, 30°.98N×103°.56E, h17km, mB4.7/4, mb4.1/10, ML3.9/20, Ms3.9/9, Ms7 3.7/7*
*NEIC **23** 18:18:40.8±3.0, 30°.93N×103°.62E, h24km±23km, mb4.2/3, Error ellipse: s-maj=11.9km s-min=7.6km az=66.0*
ISC 23 18:18:39.7±0.8, 31°.06N±0°.04×103°.52E±0°.05, h9km±6km, n38, σ1§22/44, mb3.9/12, MS3.1/6, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.25	126	*i* Pg	Pg	18 18 44.8	+0.1
CD2				Sg	Sg	18 18 50.0	+1.9
CD2				smax			
	comp=N,52μm,0.7s						
CD2				smax			
	comp=E,33μm,0.7s						
LZH	Lanzhou	5.03	3	*e*Pg	Pg	18 20 14.1	-1.9
LZH				Sg	Sg	18 21 19.5	-1.6
LZH				smax			
	comp=N,120nm,1.3s						
LZH				smax			
	comp=E,96nm,1.1s						
LZH				LR	LR		
	comp=E,2μm,6.6s						
LZH				LR	LR		
	comp=Z,2μm,7.0s						
ENH	Enshi	5.20	97	Pn	Pn	18 19 56.5	-1.1
	comp=Z,85nm,0.8s						
XAN	Xi'an	5.44	55	Pn	Pn	18 20 00.3	-0.7
XAN				Pg	Pg	18 20 20.4	-3.6
XAN				Sn	Sn	18 21 05.8	+2.0
XAN				Sg	Sg	18 21 34.3	-0.2
XAN				smax			
	comp=N,220nm,1.1s						
XAN				smax			
	comp=E,89nm,1.0s						
KMI	Kunming	5.95	187	Pn	Pn	18 20 08.3	+0.3
KMI				Sn	Sn	18 21 21.6	+5.3
KMI				smax			
	comp=N,59nm,1.6s						
KMI				smax			
	comp=E,62nm,1.2s						
KMI				LR	LR		
	comp=N,350nm,4.8s						
KMI				LR	LR		
	comp=E,620nm,6.1s						
KMI				LR	LR		
	comp=Z,410nm,7.0s						
GTA	Gaotai	8.87	341	*e*P	Pn	18 20 51.3	+3.3
GTA				pP		18 20 55.8	
GTA				sP		18 20 58.8	
GTA				S	Sn	18 22 24.1	-4.0
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GTA				LR	LR		
	comp=N,310nm,10.8s						
GTA				LR	LR		
	comp=E,520nm,10.5s						
GTA				LR	LR		
	comp=Z,230nm,9.6s						
SHL	Shillong	11.62	245	*e*PKP	Pn	18 21 26.0	+0.2
CMAR	Chiang Mai Arr	13.21	199	Pn	Pn	18 21 44.9	-2.7
	comp=Z,0.1nm,0.3s,baz=9.8,slow=12,SNR=14						
SONM	Songino Array	16.90	7	P	Pn	18 22 37.0	+0.6
	comp=Z,0.1nm,0.3s,baz=189,slow=11,SNR=13						
ULN	Ulaanbaatar	17.00	8	*e*P	Pn	18 22 37.7	0.0
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ULN	Ulaanbaatar	17.00	8	*e*P	Pn	18 22 37.7	+0.1
	comp=Z,5.1nm,1.0s						
ZAK	Zakamensk	19.31	360	*e*P	Pn	18 23 07.3	+1.4
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KSRS	Korea Array	21.12	66	P	P	18 23 24.8	0.0
	comp=Z,3.1nm,0.6s,mb3.8,baz=254,slow=9.5,SNR=14						
KSRS				LR	LR	18 31 14.7	
	comp=Z,42nm,20.2s,MS2.8,baz=330,slow=36						
CN2	Changchun	21.49	48	*e*P	P	18 23 29.3	+0.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.2						
CIT	Chita	22.21	17	*e*P	P	18 23 37.6	+1.3
MK31	Makanchi Array	22.69	320	*e*P	P	18 23 42.8	+1.4
MKAR	Makanchi Array	22.69	320	P	P	18 23 42.8	+1.4
	comp=Z,1.5nm,0.8s,mb3.5,baz=116,slow=14,SNR=8.8						
MKAR				LR	LR	18 33 52.7	
	comp=Z,68nm,18.4s,MS3.1,baz=157,slow=40						
MKAR	Makanchi Array	22.69	320	P	P	18 23 42.8	+1.4
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR				MLR	MLR		
	comp=Z,68nm,18.5s						
AAK	Ala-Archa	25.82	305	P	P	18 24 12.7	+1.5
	comp=Z,0.9nm,0.3s,mb3.8,baz=107,slow=3.8,SNR=3.3						
AAK				LR	LR	18 35 47.6	
	comp=Z,99nm,20.8s,MS3.3,baz=12,slow=40						
AAK	Ala-Archa	25.82	305	P	P	18 24 12.7	+1.5
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.8						
AAK				MLR	MLR		
	comp=Z,99nm,20.8s,MS3.3						
ZAA0	Zalesovo Array	26.55	335	*e*P	P	18 24 17.4	-0.3
ZALV	Zalesovo Beam	26.55	335	P	P	18 24 17.5	-0.2
	comp=Z,3.2nm,0.8s,mb3.9,baz=131,slow=8.8,SNR=15						
ZALV				LR	LR	18 35 50.0	
	comp=Z,28nm,18.4s,MS2.8,baz=61,slow=39						
KURK	Kurchatov	26.99	324	P	P	18 24 21.3	-0.4
	comp=Z,2.0nm,0.9s,mb3.6,baz=129,slow=9.5,SNR=11						
KURK				LR	LR	18 35 30.8	
	comp=Z,62nm,19.1s,MS3.2,baz=140,slow=37						
KURK	Kurchatov	26.99	324	P	P	18 24 21.3	-0.4
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.6						
KURK				MLR	MLR		
	comp=Z,63nm,19.1s,MS3.2						
BVAR	Borovoye Array	32.52	322	P	P	18 25 11.4	+0.7
	comp=Z,0.4nm,0.6s,mb3.5,baz=127,slow=9.3,SNR=2.6						
BVAR				PcP	PcP	18 27 56.0	-1.2
	comp=Z,0.7nm,0.8s,baz=116,slow=3.4,SNR=5.2						
TIXI	Tiksi	42.90	11	*e*P	P	18 26 37.1	-1.0
WRAB	Tennant Creek	58.71	146	*e*P	P	18 28 36.5	-1.4
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
WRAB	Tennant Creek	58.71	146	*e*P	P	18 28 36.5	-1.3
	comp=Z,3.1nm,0.6s,mb4.5						
WRA	Warramunga Arr	58.71	146	P	P	18 28 36.2	-1.6
	comp=Z,1.9nm,0.7s,mb4.2,baz=338,slow=7.6,SNR=9.7						
WRA	Warramunga Arr	58.71	146	P	P	18 28 36.2	-1.7
WRA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
WRA	Warramunga Arr	58.71	146	P	P	18 28 36.2	-1.7
ASAR	Alice Springs	61.71	148	P	P	18 28 54.5	-3.9
	comp=Z,0.6nm,0.7s,mb3.8,baz=332,slow=6.7,SNR=9.5						
ASAR	Alice Springs	61.71	148	P	P	18 28 54.5	-3.9
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	NORSAR Array B	64.43	327	P	P	18 29 15.4	-0.6
	comp=Z,2.6nm,1.0s,mb4.2,baz=74,slow=6.5,SNR=3.4						
NOA	NORSAR Array B	64.43	327	P	P	18 29 15.4	-0.6
NOA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
INK	Inuvik	72.37	19	*e*P	P	18 30 04.8	-0.8
INK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
INK	Inuvik	72.37	19	*e*P	P	18 30 04.8	-0.8
	comp=Z,2.7nm,0.8s,mb4.2						
KEST	Kesra	75.67	303	LR	LR	19 08 42.9	
	comp=Z,16nm,19.6s,MS3.3,baz=244,slow=40						

MAN 23 18:25:32, 10°.21N×122°.42E, h69km, mb4.4, ML3.3, MS3.2, 1C, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	Jordan	0.44	22	*e*P	Pn	18 25 46.8	+2.6
GUIM				*e*S	Sn	18 25 57.4	+4.3
SNPH	Sibulan	1.18	137	*e*P	Pn	18 25 53.6	+0.9
SNPH				*i* S	Sn	18 26 10.6	+2.4
PAGZ	Pagadian	2.53	158	*e*P	Pn	18 26 13.1	+2.2

*ISK **23** 18:49:49.4, 38°.74N×31°.18E, h11km, MD2.8*
*CSEM **23** 18:49:49.8±0.1, 38°.73N×31°.17E, h10km, MD2.5, Error ellipse: s-maj=1.9km s-min=1.3km az=17.0*
*ISCJB **23** 18:49:49.8±0.5, 38°.73N±0°.04×31°.19E±0°.04, h9km±6km, Error ellipse: s-maj=7.1km s-min=4.8km az=9.7*
*DDA **23** 18:49:50.1, 38°.74N×31°.19E, h7km±1km, Md2.5*
ISC 23 18:49:50.2±0.5, 38°.73N±0°.04×31°.18E±0°.04, h14km±5km, n24, σ0§37/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLV	Bolvadin	0.18	267	*i* P	Pg	18 49 54.5	+0.1
BOLV				*i* S	Sg	18 49 57.3	0.0
BOLV	Bolvadin	0.18	267	*i* P	Pg	18 49 54.5	+0.1
BOLV				*i* S	Sg	18 49 57.3	0.0
SHUT	Suhut-Afyon	0.52	251	*e*PG	Pg	18 50 00.1	-0.3
SHUT				*e*SG	Sg	18 50 07.8	+0.4
SHUT	Suhut-Afyon	0.52	251	*e*Pg	Pg	18 50 00.1	-0.3
SHUT				*e*Sg	Sg	18 50 07.8	+0.4
KIZT	Kizilcal	0.57	74	*e*PG	Pg	18 50 01.1	-0.4
KIZT				*e*SG	Sg	18 50 09.1	+0.1
KIZT	Kizilcal	0.57	74	*e*Pg	Pg	18 50 01.1	-0.3
KIZT				*e*Sg	Sg	18 50 09.1	+0.1
KDHN	Kadinhani	0.77	105	*i* P	Pg	18 50 04.9	-0.2
KDHN				*i* S	Sg	18 50 15.6	+0.5
KDHN	Kadinhani	0.77	105	*i* P	Pg	18 50 04.9	-0.2
KDHN				*i* S	Sg	18 50 15.6	+0.5
ESKT	Eskisehir	0.83	342	*e*PG	Pg	18 50 05.9	-0.5
ESKT	Eskisehir	0.83	342	*i* P	Pg	18 50 06.1	-0.3
ESKT				*i* S	Sg	18 50 17.9	+0.6
ESKT	Eskisehir	0.83	342	*e*Pg	Pg	18 50 05.9	-0.4
SEYT	Eskypehyr	0.83	342	*i* P	Pg	18 50 06.1	-0.2
SEYT				*i* S	Sg	18 50 17.9	+0.7
ALT	Altintas	0.89	292	*e*PG	Pg	18 50 06.9	-0.6
ALT	Altintas	0.89	292	*e*Pg	Pg	18 50 06.9	-0.6
LADK	Ladik-KONYA	1.07	119	*e*PG	Pg	18 50 10.6	-0.3
LADK	Ladik-KONYA	1.07	119	*e*Pg	Pg	18 50 10.6	-0.3
KONT	Konya--Tatoy	1.22	130	*e*PN	Pn	18 50 13.1	+0.3
KONT	Konya--Tatoy	1.22	130	*e*Pn	Pn	18 50 13.1	+0.3
SUTC	Sutluce-Ispart	1.26	186	*e*PN	Pn	18 50 13.4	+0.1
SUTC	Sutluce-Ispart	1.26	186	*e*Pn	Pn	18 50 13.4	+0.1
MDU	Mudurnu	1.73	1	*e*PN	Pn	18 50 19.4	-0.5
MDU	Mudurnu	1.73	1	*e*Pn	Pn	18 50 19.4	-0.5
GULT	Gulveren	1.78	344	*e*PN	Pn	18 50 20.9	+0.4
GULT	Gulveren	1.78	344	*e*Pn	Pn	18 50 20.9	+0.4

*IDC **23** 18:57:10.6±0.9, 32°.72N×105°.64E, h0km, mb3.6/7, mb1 3.7/8, mb1mx3.6/24, mbtmp3.6/8, ML2.8/1, Error ellipse: s-maj=91.1km s-min=17.2km az=58.0*
*BJI **23** 18:57:11.9, 32°.73N×105°.49E, h11km, mb3.6/2, ML3.3/12, Ms3.7/2, Ms7 3.6/3*
*ISCJB **23** 18:57:11.2±0.5, 32°.80N±0°.04×105°.46E±0°.06, h10km, mb3.6/7, Error ellipse: s-maj=7.4km s-min=6.2km az=25.6*
*NEIC **23** 18:57:12.8±0.7, 32°.79N×105°.55E, h10km, Error ellipse: s-maj=32.1km s-min=11.3km az=52.0*
ISC 23 18:57:12.8±0.5, 32°.76N±0°.04×105°.47E±0°.06, h10km, n15, σ1§27/23, mb3.6/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	2.35	219	Pn	Pn	18 57 51.3	-0.1
CD2				Pg	Pg	18 57 55.3	-2.5
CD2				Sn	Sn	18 58 21.5	+1.3
CD2				Sg	Sg	18 58 25.8	-2.4
CD2				smax			
	comp=N,2μm,0.5s						
CD2				smax			
	comp=E,1μm,0.6s						
XAN	Xi'an	3.16	65	Pn	Pn	18 58 03.0	+0.4
XAN				Pg	Pg	18 58 08.8	-4.5
XAN				Sn	Sn	18 58 39.9	-0.4
XAN				Sg	Sg	18 58 47.8	-6.5
XAN				smax			
	comp=N,130nm,0.9s						
XAN				smax			
	comp=E,69nm,0.8s						
LZH	Lanzhou	3.58	338	Pn	Pn	18 58 10.8	+2.4
LZH				Pg	Pg	18 58 20.8	-0.6
LZH				Sg	Sg	18 59 06.3	-1.6
LZH				smax			
	comp=N,200nm,0.5s						
LZH				smax			
	comp=E,240nm,0.7s						
LZH				LR	LR		
	comp=E,520nm,6.5s						
LZH				LR	LR		
	comp=Z,730nm,7.9s						
ENH	Enshi	4.23	125	*e*Pn	Pn	18 58 18.8	+1.5
GTA	Gaotai	8.06	327	*e*P	Pn	18 59 10.8	+0.9
GTA				pP		18 59 14.4

*THE **23** 19:01:47.9, 41°.87N×22°.98E, h3km±1km, ML4.0/7, Error ellipse: s-maj=1.2km s-min=0.6km az=282.0*
*SKO **23** 19:01:47.4, 41°.86N×23°.02E, h18km, M2.9, ML3.3*
*SOF **23** 19:01:47.8, 41°.89N×23°.05E, h12km, MD3.0*
*NEIC **23** 19:01:48.5, 41°.82N×23°.01E, h28km, MD3.7(ATH), ML3.0(BUC), After ATH.*
*ATH **23** 19:01:48.5, 41°.82N×23°.01E, h28km±3km, MD3.7/9*
*BEO **23** 19:01:49.0±0.7, 41°.94N×22°.98E, h19km±5km, ML3.6/7*

ISC 23 19:01:47.5±0.3, 41°.89N±0°.01×22°.95E±0°.03, h5km±3km, n139, σ0°91/178, 21C-11D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKB	**Krupnik**	**0.10**	**102**	*i* Pg	**Pg**	**19 01 51.2**	**+1.6**
KKB	**Krupnik**	**0.10**	**102**	*i* Pg	**Pg**	**19 01 51.2**	**+1.6**
VAY	**Valandovo**	**0.64**	**207**	⇑*i*Pg	**Pg**	**19 01 59.8**	**+0.1**
VAY				*i* Sg	**Sg**	**19 02 08.4**	**+0.5**
VAY				*e*Lg		19 02 08.9	
	comp=E,1μm,0.4s						
VAY				*e*Lg		19 02 10.1	
	comp=N,938nm,0.5s						
VAY	**Valandovo**	**0.64**	**207**	P	**Pg**	**19 01 59.9**	**+0.2**
VAY				S	**Sg**	**19 02 08.9**	**+1.0**
VAY	**Valandovo**	**0.64**	**207**	P	**Pg**	**19 01 59.9**	**+0.2**
VAY				S	**Sg**	**19 02 08.9**	**+1.0**
MMB	**Musomiste**	**0.65**	**117**	*i* Pg	**Pg**	**19 02 00.8**	**+0.7**
MMB	**Musomiste**	**0.65**	**117**	*i* Pg	**Pg**	**19 02 00.8**	**+0.7**
VTS	**Vitosha**	**0.73**	**15**	⇑*i*Pg	**Pg**	**19 02 01.9**	**+0.4**
VTS				*i* Sg	**Sg**	**19 02 11.8**	**+0.8**
VTS	**Vitosha**	**0.73**	**15**	⇑P	**Pg**	**19 02 01.9**	**+0.4**
VTS				S	**Sg**	**19 02 11.9**	**+0.9**
VTS	**Vitosha**	**0.73**	**15**	P	**Pg**	**19 02 01.9**	**+0.4**
VTS				S	**Sg**	**19 02 11.9**	**+0.9**
VTS	**Vitosha**	**0.73**	**15**	⇑*i*P	**Pg**	**19 02 01.9**	**+0.4**
VTS				S	**Sg**	**19 02 11.9**	**+0.9**
VTS	**Vitosha**	**0.73**	**15**	*i* Pg	**Pg**	**19 02 01.9**	**+0.4**
VTS	**Vitosha**	**0.73**	**15**	P	**Pg**	**19 02 01.9**	**+0.4**
VTS				*i* Sg	**Sg**	**19 02 11.8**	**+0.8**
NVR	**Nevrokopi**	**0.87**	**128**	*e*Pn	**Pn**	**19 02 04.1**	**-2.3**
NVR				*e*Sn	**Sn**	**19 02 15.5**	**-4.0**
NVR	**Nevrokopi**	**0.87**	**128**	*e*PN	**Pn**	**19 02 04.1**	**-2.3**
NVR				*e*SN	**Sn**	**19 02 15.5**	**-4.0**
NVR	**Nevrokopi**	**0.87**	**128**	*e*Pn	**Pn**	**19 02 04.1**	**-2.3**
NVR				*e*Sn	**Sn**	**19 02 15.5**	**-4.0**
SRS	**Serrai**	**0.91**	**148**	P	**Pg**	**19 02 04.7**	**-0.2**
SRS				S	**Sg**	**19 02 17.7**	**+1.0**
SRS	**Serrai**	**0.91**	**148**	P	**Pg**	**19 02 04.7**	**-0.2**
SRS				S	**Sg**	**19 02 17.7**	**+1.0**
SOH	**Sokhos**	**1.11**	**164**	*e*Pn	**Pn**	**19 02 08.6**	**-1.1**
SOH	**Sokhos**	**1.11**	**164**	P	**Pg**	**19 02 08.5**	**-0.3**
SOH				S	**Sg**	**19 02 23.7**	**+0.6**
SOH	**Sokhos**	**1.11**	**164**	*e*PN	**Pn**	**19 02 08.6**	**-1.1**
SOH	**Sokhos**	**1.11**	**164**	P	**Pg**	**19 02 08.5**	**-0.3**
SOH				S	**Sg**	**19 02 23.7**	**+0.6**
PGB	**Panagyurishte**	**1.12**	**53**	*i* Pg	**Pg**	**19 02 10.1**	**+1.1**
PGB				*i* P		19 02 08.6	
PGB	**Panagyurishte**	**1.12**	**53**	*i* Pg	**Pg**	**19 02 10.1**	**+1.1**
SKO	**Skopje**	**1.13**	**275**	*e*Pg	**Pg**	**19 02 09.6**	**+0.4**
SKO	**Skopje**	**1.13**	**275**	*e*Pg	**Pg**	**19 02 12.0**	**+2.8**
SKO	**Skopje**	**1.13**	**275**	P	**Pg**	**19 02 08.1**	**-1.1**
SKO	**Skopje**	**1.13**	**275**	P	**Pg**	**19 02 08.1**	**-1.1**
SKO	**Skopje**	**1.13**	**275**	*e*Pg	**Pg**	**19 02 09.6**	**+0.4**
BARS	**Barje**	**1.25**	**318**	⇑*i*Pg	**Pg**	**19 02 11.5**	**0.0**
BARS	**Barje**	**1.25**	**318**	⇑*i*Pg	**Pg**	**19 02 11.5**	**0.0**
THE	**Thessaloniki**	**1.25**	**180**	P	**Pg**	**19 02 10.9**	**-0.7**
THE	**Thessaloniki**	**1.25**	**180**	P	**Pg**	**19 02 11.3**	**-0.3**
THE				S	**Sg**	**19 02 28.3**	**+0.5**
THE	**Thessaloniki**	**1.25**	**180**	P	**Pg**	**19 02 11.3**	**-0.3**
THE				S	**Sg**	**19 02 28.3**	**+0.5**
HORT	**Hortiatis**	**1.29**	**175**	P	**Pn**	**19 02 11.9**	**-0.4**
HORT	**Hortiatis**	**1.29**	**175**	P	**Pn**	**19 02 11.9**	**-0.4**
PLD	**Plovdiv**	**1.32**	**80**	P	**Pn**	**19 02 12.8**	**+0.1**
PLD	**Plovdiv**	**1.32**	**80**	*i* Pg	**Pg**	**19 02 13.1**	**+0.2**
PLD	**Plovdiv**	**1.32**	**80**	P	**Pn**	**19 02 12.8**	**+0.1**
PLD	**Plovdiv**	**1.32**	**80**	*i* Pg	**Pg**	**19 02 13.1**	**+0.2**
RZN	**Rozhen**	**1.33**	**98**	*i* Pg	**Pg**	**19 02 12.7**	**-0.4**
RZN	**Rozhen**	**1.33**	**98**	*i* Pg	**Pg**	**19 02 12.7**	**-0.4**
KRUS	**Krusevo**	**1.38**	**248**	*e*Pg	**Pg**	**19 02 13.1**	**-0.8**
KRUS				*i* Sg	**Sg**	**19 02 31.8**	**0.0**
KRUS				*e*Lg		19 02 32.1	
	comp=N,0.0nm,0.3s						
KRUS				*e*Lg		19 02 32.4	
	comp=E,0.0nm,0.2s						
ZAPS	**Zavoj**	**1.40**	**350**	⇑*i*Pg	**Pg**	**19 02 14.2**	**-0.3**
ZAPS				*i* Sg	**Sg**	**19 02 32.6**	**-0.1**
KAVA	**Kavala**	**1.47**	**127**	P	**Pn**	**19 02 14.6**	**-0.2**
KAVA				S	**Sn**	**19 02 34.4**	**0.0**
KAVA	**Kavala**	**1.47**	**127**	P	**Pn**	**19 02 14.6**	**-0.2**
KAVA				S	**Sn**	**19 02 34.4**	**0.0**
BIA	**Bitola**	**1.50**	**235**	*i* Pn	**Pn**	**19 02 15.2**	**+0.1**
BIA	**Bitola**	**1.50**	**235**	P	**Pn**	**19 02 15.2**	**+0.1**
BIA	**Bitola**	**1.50**	**235**	P	**Pn**	**19 02 15.2**	**+0.1**
PLG	**Polygyros**	**1.56**	**166**	*e*Pn	**Pn**	**19 02 15.6**	**-0.3**
PLG	**Polygyros**	**1.56**	**166**	P	**Pn**	**19 02 15.8**	**-0.1**
PLG	**Polygyros**	**1.56**	**166**	*e*PN	**Pn**	**19 02 15.6**	**-0.3**
PLG	**Polygyros**	**1.56**	**166**	P	**Pn**	**19 02 15.8**	**-0.1**
MPEP	**Malo Peshtene**	**1.58**	**21**	*i* P	**Pn**	**19 02 17.7**	**+1.5**
FNA	**Florina**	**1.62**	**228**	P	**Pn**	**19 02 17.1**	**+0.3**
FNA	**Florina**	**1.62**	**228**	P	**Pn**	**19 02 17.3**	**+0.5**
FNA				S	**Sn**	**19 02 38.7**	**+0.7**
FNA	**Florina**	**1.62**	**228**	P	**Pn**	**19 02 17.1**	**+0.3**
FNA				S	**Sn**	**19 02 38.7**	**+0.7**
NISS		**1.69**	**334**	⇑*i*Pg	**Pg**	**19 02 17.8**	**-2.0**
NISS				*i* Sg	**Sg**	**19 02 40.7**	**-1.0**
NISS		**1.69**	**334**	⇑*i*Pg	**Pg**	**19 02 17.8**	**-2.0**
NISS				*i* Sg	**Sg**	**19 02 40.7**	**-1.0**
OUR	**Ouranopolis**	**1.74**	**153**	P	**Pn**	**19 02 17.6**	**-0.8**
OUR				S	**Sn**	**19 02 41.1**	**+0.2**
OUR	**Ouranopolis**	**1.74**	**153**	P	**Pn**	**19 02 17.6**	**-0.8**
OUR				S	**Sn**	**19 02 41.1**	**+0.2**
OHR	**Ohrid**	**1.79**	**245**	*e*Pn	**Pn**	**19 02 18.4**	**-0.8**
KZN	**Kozani**	**1.81**	**210**	P	**Pn**	**19 02 19.9**	**+0.5**
KZN	**Kozani**	**1.81**	**210**	P	**Pn**	**19 02 19.9**	**+0.5**
DIM	**Dimitrovgrad**	**1.93**	**84**	*i* Pg	**Pg**	**19 02 24.4**	**-0.2**
DIM	**Dimitrovgrad**	**1.93**	**84**	*i* Pg	**Pg**	**19 02 24.4**	**-0.2**
PAIG	**Paliouri**	**2.04**	**164**	P	**Pn**	**19 02 21.6**	**-0.9**
PAIG	**Paliouri**	**2.04**	**164**	P	**Pn**	**19 02 22.0**	**-0.5**
PAIG				S	**Sn**	**19 02 47.7**	**-0.6**
PAIG	**Paliouri**	**2.04**	**164**	P	**Pn**	**19 02 22.0**	**-0.5**
PAIG				S	**Sn**	**19 02 47.7**	**-0.6**
RDO	**Rodhopi**	**2.08**	**110**	*e*Pn	**Pn**	**19 02 22.9**	**-0.2**
RDO	**Rodhopi**	**2.08**	**110**	P	**Pn**	**19 02 23.1**	**0.0**
RDO	**Rodhopi**	**2.08**	**110**	*e*PN	**Pn**	**19 02 22.9**	**-0.2**
RDO	**Rodhopi**	**2.08**	**110**	*e*Pn	**Pn**	**19 02 22.9**	**-0.2**
PVL	**Pavlikeni**	**2.20**	**52**	*i* Pg	**Pg**	**19 02 26.6**	**-3.2**
THL	**Klokotos Trika**	**2.43**	**197**	P	**Pn**	**19 02 27.9**	**0.0**
THL	**Klokotos Trika**	**2.43**	**197**	*e*PN	**Pn**	**19 02 27.9**	**0.0**
THL	**Klokotos Trika**	**2.43**	**197**	P	**Pn**	**19 02 27.9**	**0.0**
XOR	**Xorichti**	**2.53**	**176**	P	**Pn**	**19 02 28.8**	**-0.4**
XOR	**Xorichti**	**2.53**	**176**	P	**Pn**	**19 02 28.8**	**-0.4**
ALN	**Alexandroupoli**	**2.53**	**112**	*e*Pn	**Pn**	**19 02 29.1**	**-0.2**
ALN	**Alexandroupoli**	**2.53**	**112**	P	**Pn**	**19 02 29.2**	**-0.1**
ALN	**Alexandroupoli**	**2.53**	**112**	*e*PN	**Pn**	**19 02 29.1**	**-0.2**
ALN	**Alexandroupoli**	**2.53**	**112**	*e*Pn	**Pn**	**19 02 29.1**	**-0.2**
NEO	**Neokhori**	**2.59**	**175**	*e*Pn	**Pn**	**19 02 29.3**	**-0.8**
NEO	**Neokhori**	**2.59**	**175**	*e*PN	**Pn**	**19 02 29.3**	**-0.8**
NEO	**Neokhori**	**2.59**	**175**	*e*Pn	**Pn**	**19 02 29.3**	**-0.8**
GRUS	**Gruza**	**2.59**	**321**	*e*Pn	**Pn**	**19 02 29.3**	**-0.8**
GRUS				*i* Sg	**Sg**	**19 03 10.6**	**0.0**
GRUS	**Gruza**	**2.59**	**321**	*e*Pn	**Pn**	**19 02 29.3**	**-0.8**
GRUS				*i* Sg	**Sg**	**19 03 10.6**	**0.0**
SZH	**Strazhica**	**2.60**	**57**	*i* Pg	**Pg**	**19 02 36.7**	**-0.6**
SZH	**Strazhica**	**2.60**	**57**	*i* Pg	**Pg**	**19 02 36.7**	**-0.6**
LIA	**Limnos Island**	**2.61**	**139**	*e*Pn	**Pn**	**19 02 29.6**	**-0.8**
LIA	**Limnos Island**	**2.61**	**139**	P	**Pn**	**19 02 29.8**	**-0.6**
LIA	**Limnos Island**	**2.61**	**139**	*e*PN	**Pn**	**19 02 29.6**	**-0.8**
LIA	**Limnos Island**	**2.61**	**139**	P	**Pn**	**19 02 29.8**	**-0.6**
SVIS	**Svilajnac**	**2.69**	**332**	*e*Pn	**Pn**	**19 02 30.6**	**-0.9**
SVIS				*e*Sg	**Sg**	**19 03 13.5**	**-0.6**
JMB	**Yambol**	**2.76**	**77**	P	**Pn**	**19 02 32.4**	**-0.1**
JMB	**Yambol**	**2.76**	**77**	P	**Pn**	**19 02 32.4**	**-0.1**
DJES	**Djerdap**	**2.79**	**354**	*e*Sg	**Sg**	**19 03 15.7**	**-1.6**
AOS	**Alonnisos**	**2.81**	**165**	P	**Pn**	**19 02 31.9**	**-1.2**
AOS	**Alonnisos**	**2.81**	**165**	P	**Pn**	**19 02 32.2**	**-0.9**
AOS	**Alonnisos**	**2.81**	**165**	P	**Pn**	**19 02 32.2**	**-0.9**
AGG	**Agios Georgios**	**2.90**	**190**	*e*Pn	**Pn**	**19 02 34.4**	**0.0**
AGG	**Agios Georgios**	**2.90**	**190**	P	**Pn**	**19 02 34.5**	**+0.1**
AGG	**Agios Georgios**	**2.90**	**190**	*e*PN	**Pn**	**19 02 34.4**	**0.0**
AGG	**Agios Georgios**	**2.90**	**190**	*e*Pn	**Pn**	**19 02 34.4**	**0.0**
TRUS	**Trudelj**	**2.99**	**322**	*e*Pn	**Pn**	**19 02 35.7**	**+0.1**
TRUS				*i* Sg	**Sg**	**19 03 23.1**	**-0.4**
TRUS	**Trudelj**	**2.99**	**322**	*e*Pn	**Pn**	**19 02 35.7**	**+0.1**
TRUS				*i* Sg	**Sg**	**19 03 23.1**	**-0.4**
DIVS	**Divibare**	**3.10**	**316**	⇑*i*Pn	**Pn**	**19 02 36.9**	**-0.2**
DIVS				*e*Sg	**Sg**	**19 03 27.6**	**+0.6**
DIVS	**Divibare**	**3.10**	**316**	P	**Pn**	**19 02 37.1**	**0.0**
DIVS	**Divibare**	**3.10**	**316**	P	**Pn**	**19 02 37.1**	**0.0**
DIVS				*e*Sg	**Sg**	**19 03 27.6**	**+0.6**
BBLS	**Lazići**	**3.27**	**308**	⇑*i*Pn	**Pn**	**19 02 40.2**	**+0.7**
BBLS	**Lazići**	**3.27**	**308**	⇑*i*Pn	**Pn**	**19 02 40.2**	**+0.7**
GZR	**Gura Zlata**	**3.51**	**358**	⇓*i*P	**Pn**	**19 02 43.2**	**+0.5**
GZR	**Gura Zlata**	**3.51**	**358**	⇓*i*P	**Pn**	**19 02 43.2**	**+0.5**
GZR	**Gura Zlata**	**3.51**	**358**	⇓P	**Pn**	**19 02 43.2**	**+0.5**
SULR		**3.69**	**40**	⇑*i*P	**Pg**	**19 03 02.2**	**+4.0**
BZS	**Buzias**	**3.85**	**346**	⇑*i*P	**Pg**	**19 03 01.4**	**+0.1**
STON	**Ston**	**4.01**	**286**	*e*Pn	**Pn**	**19 02 51.6**	**+2.0**
STON				Sn	**Sn**	**19 03 39.1**	**+2.1**
STON	**Ston**	**4.01**	**286**	*e*Pn	**Pn**	**19 02 51.6**	**+1.9**
STON				Sn	**Sn**	**19 03 39.1**	**+2.1**
MLR	**Muntele Rosu**	**4.21**	**30**	⇓*i*P	**Pn**	**19 02 56.5**	**+4.2**
MLR	**Muntele Rosu**	**4.21**	**30**	⇓*i*P	**Pn**	**19 02 56.5**	**+4.2**
PSN	**Preselentsi**	**4.25**	**63**	*i* P	**Pn**	**19 02 49.9**	**-3.0**
PLOR	**Plostina**	**4.78**	**33**	⇑*i*P	**Pn**	**19 03 02.6**	**+2.4**
PLOR	**Plostina**	**4.78**	**33**	⇑*i*P	**Pn**	**19 03 02.6**	**+2.4**
VRI	**Vrincioaia**	**4.82**	**33**	⇑P	**Pn**	**19 03 02.5**	**+1.8**
VRI	**Vrincioaia**	**4.82**	**33**	⇑*i*P	**Pn**	**19 03 02.5**	**+1.7**
VRI	**Vrincioaia**	**4.82**	**33**	⇑P	**Pn**	**19 03 02.5**	**+1.7**
PKSM	**Moragy**	**5.32**	**326**	⇑P	**Pn**	**19 03 07.9**	**+0.2**
PKSM	**Moragy**	**5.32**	**326**	⇑*i*P	**Pn**	**19 03 07.9**	**+0.3**
PKSM	**Moragy**	**5.32**	**326**	*e*P	**Pn**	**19 03 07.9**	**+0.3**
TLCR		**5.39**	**50**	⇓P	**Pn**	**19 03 09.4**	**+0.8**
TLCR		**5.39**	**50**	⇓*i*P	**Pn**	**19 03 09.4**	**+0.9**
TLCR		**5.39**	**50**	⇓P	**Pn**	**19 03 09.4**	**+0.9**
BURAR	**Bucovina Array**	**5.95**	**15**	⇓P	**Pn**	**19 03 17.5**	**+1.2**
BURAR	**Bucovina Array**	**5.95**	**15**	⇓*i*P	**Pn**	**19 03 17.5**	**+1.3**
BURAR	**Bucovina Array**	**5.95**	**15**	⇓P	**Pn**	**19 03 17.5**	**+1.3**
NVLJ	**Novalja**	**6.48**	**297**	*e*Pn	**Pn**	**19 03 23.9**	**+0.4**
NVLJ	**Novalja**	**6.48**	**297**	*e*Pn	**Pn**	**19 03 23.9**	**+0.4**
VYHS	**Vyhne**	**7.21**	**338**	*e*PN	**Pn**	**19 03 42.0**	**+8.4**
VYHS				*e*SN	**Sn**	**19 04 55.1**	**-0.8**

*ISCJB **23** 19:17:33.4±0.6, 41°.90N±0°.02×22°.88E±0°.05, h8km±7km, Error ellipse: s-maj=6.5km s-min=3.4km az=10.9*
*CSEM **23** 19:17:33.8±0.2, 41°.89N×22°.94E, h8km, ML3.1/4, Error ellipse: s-maj=4.9km s-min=2.8km az=72.0*
*SKO **23** 19:17:33.5, 41°.89N×22°.93E, h15km, M2.0, ML2.4*
*THE **23** 19:17:34.4, 41°.87N×22°.97E, h2km±1km, ML3.1/4, Error ellipse: s-maj=2.4km s-min=0.9km az=277.0*
*NEIC **23** 19:17:36.1, 41°.88N×23°.27E, h45km, MD3.5(ATH), After ATH.*
*ATH **23** 19:17:36.1, 41°.88N×23°.27E, h45km, MD3.5/4*
*BEO **23** 19:17:36.1±1.4, 41°.93N×22°.93E, h0km, ML2.6/3*

ISC 23 19:17:33.9±0.4, 41°.88N±0°.02×22°.94E±0°.04, h4km±5km, n39, σ0°57/68, 1C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.63**	**206**	*i* Pg	**Pg**	**19 17 46.5**	**+0.6**
VAY				*i* Sg	**Sg**	**19 17 55.2**	**+1.1**
VAY				*e*Lg		19 17 55.4	
	comp=E,143nm,0.3s						
VAY				*e*Lg		19 17 56.1	
	comp=N,118nm,0.4s						
VAY	**Valandovo**	**0.63**	**206**	P	**Pg**	**19 17 46.6**	**+0.7**
VAY				S	**Sg**	**19 17 54.7**	**+0.6**
VAY	**Valandovo**	**0.63**	**206**	P	**Pg**	**19 17 46.6**	**+0.7**
VAY				S	**Sg**	**19 17 54.7**	**+0.6**
VTS	**Vitosha**	**0.73**	**16**	*e*Pg	**Pg**	**19 17 48.3**	**+0.2**
VTS				*e*Sg	**Sg**	**19 17 58.0**	**+0.4**
VTS	**Vitosha**	**0.73**	**16**	P	**Pg**	**19 17 48.4**	**+0.3**
VTS				S	**Sg**	**19 17 58.3**	**+0.7**
VTS	**Vitosha**	**0.73**	**16**	*e*Pg	**Pg**	**19 17 48.3**	**+0.2**
VTS				*e*Sg	**Sg**	**19 17 58.0**	**+0.4**
VTS				S	**Sg**	**19 17 58.3**	**+0.7**
NVR	**Nevrokopi**	**0.87**	**127**	*e*P	**Pg**	**19 17 50.4**	**-0.3**
NVR				*e*S	**Sg**	**19 18 00.7**	**-1.3**
NVR	**Nevrokopi**	**0.87**	**127**	*e*P	**Pg**	**19 17 50.4**	**-0.3**
NVR				*e*S	**Sg**	**19 18 00.7**	**-1.3**
NVR	**Nevrokopi**	**0.87**	**127**	*e*P	**Pg**	**19 17 50.4**	**-0.3**
NVR				*e*S	**Sg**	**19 18 00.7**	**-1.3**
SRS	**Serrai**	**0.91**	**147**	P	**Pg**	**19 17 51.1**	**-0.3**
SRS				S	**Sg**	**19 18 03.3**	**+0.2**
SRS	**Serrai**	**0.91**	**147**	P	**Pg**	**19 17 51.1**	**-0.3**
SRS				S	**Sg**	**19 18 03.3**	**+0.2**
SOH	**Sokhos**	**1.11**	**163**	*e*P	**Pg**	**19 17 54.9**	**-0.2**
SOH	**Sokhos**	**1.11**	**163**	P	**Pg**	**19 17 55.0**	**-0.1**
SOH				S	**Sg**	**19 18 09.9**	**+0.5**
SOH	**Sokhos**	**1.11**	**163**	*e*P	**Pg**	**19 17 54.9**	**-0.2**
SOH	**Sokhos**	**1.11**	**163**	P	**Pg**	**19 17 55.0**	**-0.1**
SOH				S	**Sg**	**19 18 09.9**	**+0.5**
THE	**Thessaloniki**	**1.25**	**179**	P	**Pg**	**19 17 57.6**	**-0.3**
THE				S	**Sg**	**19 18 14.4**	**+0.3**
THE	**Thessaloniki**	**1.25**	**179**	P	**Pg**	**19 17 57.6**	**-0.3**
THE				S	**Sg**	**19 18 14.4**	**+0.3**
BARS	**Barje**	**1.25**	**319**	*e*Pg	**Pg**	**19 17 57.9**	**0.0**
BARS				*e*Sg	**Sg**	**19 18 13.9**	**-0.2**
BARS	**Barje**	**1.25**	**319**	*e*Pg	**Pg**	**19 17 57.9**	**0.0**
BARS				*e*Sg	**Sg**	**19 18 13.9**	**-0.2**
HORT	**Hortiatis**	**1.29**	**175**	P	**Pg**	**19 17 58.3**	**-0.4**
HORT	**Hortiatis**	**1.29**	**175**	P	**Pg**	**19 17 58.3**	**-0.4**
PLD	**Plovdiv**	**1.33**	**80**	P	**Pn**	**19 17 59.7**	**+0.4**
PLD				S	**Sg**	**19 18 17.3**	**+0.5**
PLD	**Plovdiv**	**1.33**	**80**	P	**Pn**	**19 17 59.7**	**+0.4**
PLD				S	**Sg**	**19 18 17.3**	**+0.5**
KRUS	**Krusevo**	**1.37**	**248**	⇑*i*Pg	**Pg**	**19 17 59.5**	**-0.6**
KRUS				*i* Sg	**Sg**	**19 18 18.3**	**+0.4**
KRUS				*e*Lg		19 18 18.7	
	comp=N,4.1nm,0.2s						
ZAPS	**Zavoj**	**1.41**	**351**	*e*Pg	**Pg**	**19 18 01.3**	**+0.4**
KAVA	**Kavala**	**1.48**	**126**	P	**Pn**	**19 18 01.1**	**-0.2**
KAVA				S	**Sb**	**19 18 22.1**	**+1.0**
KAVA	**Kavala**	**1.48**	**126**	P	**Pn**	**19 18 01.1**	**-0.2**
KAVA				S	**Sb**	**19 18 22.1**	**+1.0**
PLG	**Polygyros**	**1.56**	**166**	*e*P	**Pn**	**19 18 02.0**	**-0.4**
PLG	**Polygyros**	**1.56**	**166**	P	**Pn**	**19 18 02.1**	**-0.3**
PLG	**Polygyros**	**1.56**	**166**	*e*P	**Pn**	**19 18 02.0**	**-0.4**
PLG	**Polygyros**	**1.56**	**166**	*e*P	**Pn**	**19 18 02.0**	**-0.4**
NISS		**1.69**	**335**	*e*Pg	**Pg**	**19 18 05.0**	**-1.3**
NISS				*e*Sg	**Sg**	**19 18 28.2**	**+0.1**
NISS		**1.69**	**335**	*e*Pg	**Pg**	**19 18 05.0**	**-1.3**
NISS				*e*Sg	**Sg**	**19 18 28.2**	**+0.1**
OUR	**Ouranopolis**	**1.74**	**153**	P	**Pn**	**19 18 03.9**	**-1.0**
OUR				S	**Sn**	**19 18 28.2**	**+0.8**
OUR	**Ouranopolis**	**1.74**	**153**	P	**Pn**	**19 18 03.9**	**-1.0**
OUR				S	**Sn**	**19 18 28.2**	**+0.8**
PAIG	**Paliouri**	**2.03**	**164**	P	**Pn**	**19 18 08.3**	**-0.6**
PAIG				S	**Sn**	**19 18 34.5**	**-0.3**
PAIG	**Paliouri**	**2.03**	**164**	P	**Pn**	**19 18 08.3**	**-0.6**
PAIG				S	**Sn**	**19 18 34.5**	**-0.3**
GRUS	**Gruza**	**2.59**	**322**	*e*Sg	**Sg**	**19 18 57.4**	**+0.4**
GRUS	**Gruza**	**2.59**	**322**	*e*Sg	**Sg**	**19 18 57.4**	**+0.4**

*THE **23** 19:17:50.8, 40°.30N×25°.46E, h14km, ML3.4/3, Error ellipse: s-maj=1.6km s-min=0.5km az=285.0*
*ATH **23** 19:17:50.5, 40°.28N×25°.48E, h16km±6km, MD3.2/3*
*ISK **23** 19:17:50.7, 40°.30N×25°.54E, h6km, MD3.0*
*ISCJB **23** 19:17:50.1±0.6, 40°.29N±0°.02×25°.46E±0°.05, h3km±5km, Error ellipse: s-maj=6.3km s-min=3.7km az=22.8*
*CSEM **23** 19:17:51.1±0.3, 40°.28N×25°.48E, h10km, MD3.0, Error ellipse: s-maj=7.1km s-min=3.9km az=102.0*
*DDA **23** 19:17:51.9, 40°.25N×25°.62E, h6km±3km, Md3.1*

ISC 23 19:17:50.7±0.6, 40°.28N±0°.02×25°.49E±0°.05, h1km±5km, n50, σ0°75/73, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.33**	**106**	PG	**Pg**	**19 17 57.2**	**+0.3**
GADA				SG	**Sg**	**19 18 02.1**	**+0.9**
GADA	**Gvkgeada**	**0.33**	**106**	*i* Pg	**Pg**	**19 17 57.2**	**+0.2**
GADA				*i* Sg	**Sg**	**19 18 02.1**	**+0.9**
LIA	**Limnos Island**	**0.45**	**212**	P	**Pg**	**19 17 59.8**	**+0.5**
LIA				S	**Sg**	**19 18 06.2**	**+1.0**
LIA	**Limnos Island**	**0.45**	**212**	*e*PB	**Pg**	**19 17 59.7**	**+0.4**
LIA				*e*SB	**Sg**	**19 18 05.6**	**+0.4**
LIA	**Limnos Island**	**0.45**	**212**	*e*Pb	**Pg**	**19 17 59.7**	**+0.4**
LIA				*e*Sb	**Sg**	**19 18 05.6**	**+0.4**
LIA				S	**Sg**	**19 18 06.2**	**+1.0**
ENEZ	**Enez**	**0.68**	**48**	*e*PG	**Pg**	**19 18 03.6**	**-0.1**
ENEZ				*e*SG	**Sg**	**19 18 12.4**	**-0.2**
ENEZ	**Enez**	**0.68**	**48**	*e*Pg	**Pg**	**19 18 03.6**	**-0.2**
ENEZ				*e*Sg	**Sg**	**19 18 12.4**	**-0.2**
ALN	**Alexandroupoli**	**0.75**	**34**	P	**Pg**	**19 18 05.0**	**-0.1**
ALN				S	**Sg**	**19 18 15.5**	**+0.8**
ALN	**Alexandroupoli**	**0.75**	**34**	*e*PN	**Pg**	**19 18 05.0**	**-0.1**
ALN				*e*SN	**Sg**	**19 18 15.1**	**+0.4**
ALN	**Alexandroupoli**	**0.75**	**34**	P	**Pg**	**19 18 05.0**	**-0.1**
ALN				*e*Sn	**Sg**	**19 18 15.1**	**+0.4**
ALN				S	**Sg**	**19 18 15.5**	**+0.8**
EZN	**Ezine**	**0.79**	**125**	*e*PG	**Pg**	**19 18 05.4**	**-0.4**
EZN	**Ezine**	**0.79**	**125**	*e*Pg	**Pg**	**19 18 05.4**	**-0.4**
RDO	**Rodhopi**	**0.86**	**2**	*e*P	**Pg**	**19 18 06.7**	**-0.6**
RDO	**Rodhopi**	**0.86**	**2**	P	**Pg**	**19 18 06.6**	**-0.7**
RDO				S	**Sg**	**19 18 19.2**	**+0.7**
RDO	**Rodhopi**	**0.86**	**2**	*e*P	**Pg**	**19 18 06.7**	**-0.6**
RDO	**Rodhopi**	**0.86**	**2**	*e*P	**Pg**	**19 18 06.7**	**-0.6**
RDO	**Rodhopi**	**0.86**	**2**	P	**Pg**	**19 18 06.6**	**-0.7**
RDO				S	**Sg**	**19 18 19.2**	**+0.7**
SIGR	**SIGRI**	**1.10**	**165**	P	**Pg**	**19 18 11.6**	**-0.3**
SIGR				S	**Sg**	**19 18 26.9**	**+0.7**
SIGR	**SIGRI**	**1.10**	**165**	P	**Pg**	**19 18 11.6**	**-0.3**
SIGR				S	**Sg**	**19 18 26.9**	**+0.7**
PRK	**Paraskevi**	**1.20**	**150**	P	**Pg**	**19 18 13.0**	**-0.7**
PRK				S	**Sg**	**19 18 29.2**	**0.0**
PRK	**Paraskevi**	**1.20**	**150**	*e*PN	**Pn**	**19 18 12.9**	**-1.7**
PRK	**Paraskevi**	**1.20**	**150**	P	**Pg**	**19 18 13.0**	**-0.7**
PRK				S	**Sg**	**19 18 29.2**	**0.0**
AYVA	**Ayvalik**	**1.34**	**136**	*i* P	**Pg**	**19 18 15.3**

```
      0.3nm,0.5s,mb3.3,baz=140,slow=12,SNR=2.9
STKA  Stephens Creek   50.36 185  P        P        20 07 01.0 +1.8
      0.7nm,0.5s,mb3.9,baz=32,slow=8.9,SNR=3.6
NWAO  Narrogin (SRO)   58.36 209  LR       LR       20 30 08.3
      comp=Z,3.1nm,20.4s,baz=155,slow=33
ZALV  Zalesovo Beam    58.63 322  P        P        20 07 59.3 +0.4
      0.4nm,0.4s,mb3.8,baz=89,slow=9.1,SNR=2.5
MKAR  Makanchi Array   59.16 314  P        P        20 08 04.3 +1.6
      0.3nm,0.6s,mb3.5,baz=79,slow=9.8,SNR=4.0
KURK  Kurchatov        61.93 318  P        P        20 08 21.6 +0.1
      0.4nm,0.3s,mb3.9,baz=92,slow=7.6,SNR=4.7
BVAR  Borovoye Array   67.11 320  P        P        20 08 55.6 +0.4
      0.9nm,0.4s,mb3.9,baz=96,slow=7.0,SNR=13
ABKAR Akbulak array    74.01 317  eP       P        20 09 36.1 -1.1
ARCES ARCESS Array B   82.88 342  P        P        20 10 26.5 +0.8
      1.0nm,0.5s,mb3.9,baz=59,slow=7.2,SNR=12
JOF   Joensuu          84.50 335  ep       P        20 10 33.1 -1.0
      1.6nm,0.4s,mb4.2
JOF   Joensuu          84.50 335  ep       P        20 10 33.1 -1.0
      1.6nm,0.4s,mb4.2
FINES FINESS Array B   87.36 336  P        P        20 10 47.1 -1.2
      0.5nm,0.3s,mb3.9,baz=62,slow=3.8,SNR=11
```

*SKO **23** 19:59:58.9, 41°.88N×22°.97E, h15km, M1.4, ML1.7*
*ISCJB **23** 19:59:58.5±0.7, 41°.92N±0°.03×22°.90E±0°.08, h8km±13km, Error ellipse: s-maj=10.6km s-min=4.9km az=6.7*
*THE **23** 19:59:59.2, 41°.88N×22°.95E, h7km±2km, ML2.7/3, Error ellipse: s-maj=2.5km s-min=0.9km az=275.0*
*CSEM **23** 19:59:59.0±0.1, 41°.90N×22°.92E, h12km, ML2.7/3, Error ellipse: s-maj=4.5km s-min=2.4km az=77.0*
*BEO **23** 20:00:01.6±1.4, 41°.97N×22°.93E, h0km±16km, ML1.8/2*

ISC 23 19:59:59.2±0.5, 41°.90N±0°.03×22°.92E±0°.07, h12km±8km, n19, σ0°.53/35, 4C, Northwestern Balkan Peninsula

```
Code  Station Name     Δ°   AZ°  Phase ID                Time      Res
                                Op       ISC             h m s     ISC
VAY   Valandovo        0.64 204  i Pg     Pg              20 00 11.7 +0.2
VAY                              i Sg     Sg              20 00 19.7 -0.1
VAY                              eLg                      20 00 20.2
      comp=E,37nm,0.4s
VAY                              eLg                      20 00 21.2
      comp=N,25nm,0.4s
VAY   Valandovo        0.64 204  P        Pg              20 00 11.5  0.0
VAY                              S        Sg              20 00 19.7 -0.2
VAY   Valandovo        0.64 204  P        Pg              20 00 11.5  0.0
VAY                              S        Sg              20 00 19.7 -0.2
VTS   Vitosha          0.72  17⇑ i Pg     Pg              20 00 13.2  0.0
VTS                              i Sg     Sg              20 00 22.5 -0.2
VTS   Vitosha          0.72  17  P        Pg              20 00 13.4 +0.2
VTS                              S        Sg              20 00 23.3 +0.6
VTS   Vitosha          0.72  17  P        Pg              20 00 13.4 +0.2
VTS                              i Sg     Sg              20 00 22.5 -0.2
VTS                              S        Sg              20 00 23.3 +0.6
SRS   Serrai           0.93 147  P        Pg              20 00 16.2 -1.0
SRS                              S        Sg              20 00 30.1 +0.8
SRS   Serrai           0.93 147  P        Pg              20 00 16.2 -1.0
SRS                              S        Sg              20 00 30.1 +0.8
SOH   Sokhos           1.13 163  P        Pb              20 00 19.5 -1.1
SOH                              S        Sb              20 00 36.1 +0.9
SOH   Sokhos           1.13 163  P        Pb              20 00 19.5 -1.1
SOH                              S        Sb              20 00 36.1 +0.9
BARS  Barje            1.23 319⇑ i Pg     Pg              20 00 22.5 -0.3
BARS                             i Sg     Sg              20 00 39.2 +0.5
BARS  Barje            1.23 319⇑ i Pg     Pg              20 00 22.5 -0.3
BARS                             i Sg     Sg              20 00 39.2 +0.5
HORT  Hortiatis        1.31 174  P        Pn              20 00 23.4 +0.2
HORT  Hortiatis        1.31 174  P        Pn              20 00 23.4 +0.2
ZAPS  Zavoj            1.39 351⇑ i Pg     Pg              20 00 26.0 +0.2
ZAPS                             i Sg     Sg              20 00 43.4 -0.5
KAVA  Kavala           1.50 126  P        Pn              20 00 26.0 +0.1
KAVA                             S        Sn              20 00 45.1 -0.3
KAVA  Kavala           1.50 126  P        Pn              20 00 26.0 +0.1
KAVA                             S        Sn              20 00 45.1 -0.3
NISS                   1.66 335  i Sg     Sg              20 00 52.8 +0.1
NISS                   1.66 335  i Sg     Sg              20 00 52.8 +0.1
```

*MOS **23** 20:06:05.9±1.2, 67°.62N×141°.76E, h12km, mb4.1/6, Error ellipse: s-maj=30.3km s-min=19.0km az=87.3*
*ISCJB **23** 20:06:07.3±0.7, 67°.6N±0°.1×141°.8E±0°.2, h10km, mb3.8/7, MS3.2/4, Error ellipse: s-maj=14.7km s-min=12.6km az=176.5*
*IDC **23** 20:06:08.0±2.9, 67°.60N×141°.64E, h0km, mb3.9/7, mb1 3.9/7, mb1mx3.6/27, mbtmp3.9/7, MS3.0/5, Ms1 3.1/5, ms1mx2.7/32, Error ellipse: s-maj=57.4km s-min=30.0km az=70.0*
*NEIC **23** 20:06:10.2±4.1, 67°.53N×141°.36E, h10km, Error ellipse: s-maj=71.8km s-min=15.2km az=96.0*

ISC 23 20:06:09.4±0.7, 67°.54N±0°.09×141°.7E±0°.2, h10km, n28, σ0°.87/23, mb3.8/7, MS3.2/4, Eastern Siberia

```
Code  Station Name     Δ°   AZ°  Phase ID                Time      Res
                                Op       ISC             h m s     ISC
TIXI  Tiksi            6.08 318  eP       Pn              20 07 39.3 +0.1
TIXI                             eS       Sn              20 08 42.8 -6.0
TIXI                             pmax     pmax
      comp=Z,6.0nm,0.7s
TIXI                             MLR      MLR
      comp=Z,95nm,10.0s
TIXI  Tiksi            6.08 318  ePn      Pn              20 07 38.9 -0.3
      comp=Z,12nm,0.5s
SEY   Seymchan         6.44 131  eP       Pn              20 07 53.6 +9.5
YAK   Yakutsk          7.53 228  eP       Px              20 08 10.9
YAK                              e                        20 09 31.8
YAK                              pmax     pmax
      comp=N,3.0nm,0.6s
YAK                              pmax     pmax
      comp=Z,12nm,0.6s
YAK                              pmax     pmax
      comp=E,3.0nm,0.5s
YAK                              smax
      comp=N,11nm,0.4s
YAK                              smax
      comp=E,13nm,0.4s
YAK   Yakutsk          7.53 228  Pn       Pn              20 07 57.6 -1.4
      comp=E,21nm,0.6s
BILL  Bilibino         9.30  76  P        Pn              20 08 23.0 -0.2
PETK  Petropavlovsk-  16.41 144  LR       LR              20 17 36.1
      comp=E,13nm,19.6s,baz=70,slow=42
HIA   Hailar          21.41 222  eP       P               20 10 56.7 -0.2
ASAJ  Asahikawa       23.48 178  P        P               20 11 19.4 +0.4
      comp=E,8.2nm,1.1s,mb4.1,baz=22,slow=11,SNR=4.3
ASAJ  Asahikawa       23.48 178  P        P               20 11 19.5 +0.4
ASAJ                             pmax     pmax
      comp=Z,8.0nm,1.1s
MOY   Mondy           25.34 252  eP       P               20 11 37.8 +1.8
ZAK   Zakamensk       25.58 247  eP       P               20 11 34.4 -3.8
ZAK                              e        pP              20 11 38.9 -2.3
SONM  Songino Array   26.68 240  P        P               20 11 48.8 +0.7
      comp=Z,0.7nm,0.7s,mb3.3,baz=24,slow=8.9,SNR=7.8
SONM  Songino Array   26.68 240  P        P               20 11 48.8 +0.6
SONM                             pmax     pmax
      comp=Z,1.0nm,0.7s
ZALV  Zalesovo Beam   29.68 271  P        P               20 12 14.5 -0.3
      comp=Z,0.4nm,0.4s,mb3.5,baz=50,slow=8.2,SNR=2.8
KSRS  Korea Array     31.12 201  LR       LR              20 25 33.4
      comp=Z,48nm,19.5s,MS3.2,baz=15,slow=37
KURK  Kurchatov       34.59 273  P        P               20 12 58.0 +0.2
      comp=Z,0.5nm,0.5s,mb3.7,baz=44,slow=8.6,SNR=4.4
KURK  Kurchatov       34.59 273  P        P               20 12 58.1 +0.2
KURK                             pmax     pmax
      comp=Z,1.0nm,0.5s,mb4.0
MK31  Makanchi Array  36.37 266  eP       P               20 13 12.6 -0.6
MKAR  Makanchi Array  36.37 266  P        P               20 13 12.7 -0.6
      comp=Z,2.8nm,0.6s,mb4.4,baz=45,slow=9.2,SNR=31
MKAR  Makanchi Array  36.37 266  P        P               20 13 12.7 -0.5
MKAR                             pmax     pmax
      comp=Z,3.0nm,0.6s
ARCES ARCESS Array B  36.43 328  LR       LR              20 31 59.1
      comp=Z,31nm,19.1s,MS3.1,baz=310,slow=43
AAK   Ala-Archa       42.87 270  P        P               20 14 08.8 +1.4
      comp=Z,2.6nm,0.6s,mb4.2,baz=71,slow=2.5,SNR=6.9
AAK   Ala-Archa       42.87 270  P        P               20 14 08.8 +1.4
AAK                              pmax     pmax
      comp=Z,3.0nm,0.6s,mb4.2
FINES FINESS Array B  43.13 321  P        P               20 14 08.8 -0.4
      comp=Z,0.5nm,0.6s,mb3.5,baz=28,slow=6.3,SNR=3.0
FINES FINESS Array B  43.13 321  P        P               20 14 08.8 -0.4
FINES                            pmax     pmax
      comp=Z,1.0nm,0.6s
NOA   NORSAR Array B  46.76 329  LR       LR              20 36 54.1
      comp=Z,10nm,20.1s,MS2.8,baz=135,slow=40
ANMO  Albuquerque     65.86  57  LR       LR              20 47 56.6
      comp=Z,36nm,18.1s,MS3.6,baz=348,slow=38
```

*IDC **23** 20:09:35.0±1.1, 6°.97S×127°.26E, h0km, mb3.9/5, mb1 4.0/7, mb1mx3.8/16, mbtmp3.9/7, ML4.0/2, MS2.9/2, Ms1 2.9/2, ms1mx2.3/27, Error ellipse: s-maj=94.5km s-min=20.0km az=71.0*
*NEIC **23** 20:09:36.7±0.4, 7°.00S×127°.21E, h10km, mb4.4/1, Error ellipse: s-maj=18.5km s-min=7.3km az=60.0*
*ISCJB **23** 20:09:40.5±2.0, 7°.29S±0°.06×127°.22E±0°.10, h65km±21km, mb3.9/7, Error ellipse: s-maj=16.4km s-min=10.4km az=168.3*

ISC 23 20:09:41.6±2.3, 7°.2S±0°.1×127°.23E±0°.10, h53km±27km, n21, σ1°.06/29, mb4.0/7, MS3.5/2, Banda Sea

```
Code  Station Name     Δ°   AZ°  Phase ID                Time      Res
                                Op       ISC             h m s     ISC
KAKA  Kakadu           7.49 137  eP       Pn              20 11 28.5 +0.3
      12nm,0.6s
KAKA                             eS       Sn              20 12 51.1 -0.7
KAKA  Kakadu           7.49 137  ePn      Pn              20 11 28.3  0.0
KNA   Kununurra        8.61 170  eP       Pn              20 11 44.8 +1.2
      8.2nm,0.6s
KNA                              eS       Sn              20 13 18.6 -0.7
FITZ  Fitzroy Crossi  10.92 188  eP       Pn              20 12 16.3 +1.0
      5.3nm,0.4s
FITZ                             eS       Sn              20 14 14.1 -2.0
FITZ  Fitzroy Crossi  10.92 188  Pn       Pn              20 12 15.3  0.0
      1.0nm,0.3s,baz=15,slow=9.5,SNR=22
FITZ                             Sn       Sn              20 14 16.5 +0.5
      1.2nm,0.3s,baz=81,slow=20,SNR=7.6
FITZ                             LR       LR              20 16 18.0
      comp=Z,61nm,18.3s,baz=177,slow=36
FITZ  Fitzroy Crossi  10.92 188  ePn      Pn              20 12 16.4 +1.1
FITZ                             Sn       Sn              20 14 16.5 +0.5
FITZ                             LR       LR              20 16 18.0
WRAB  Tennant Creek   14.40 152  ePn      Pn              20 13 03.2 +0.6
WRA   Warramunga Arr  14.40 152  Pn       Pn              20 13 00.4 -2.2
      0.3nm,0.3s,baz=323,slow=14,SNR=8.0
WRA                              Sn       Sn              20 15 34.5 -6.4
      0.5nm,0.3s,baz=332,slow=22,SNR=5.8
COEN  Coen            17.03 114  eP       Pn              20 13 36.7 +0.5
ASAR  Alice Springs   17.56 159  P        Pn              20 13 43.2 +0.5
      0.4nm,0.3s,baz=335,slow=11,SNR=15
ASAR                             S        S               20 16 52.4  -10
      0.3nm,0.3s,baz=323,slow=21,SNR=9.1
STKA  Stephens Creek  27.95 153  P        P               20 15 29.9 +2.8
      1.3nm,0.6s,mb3.8,baz=323,slow=8.7,SNR=5.3
CHTO  Chiang Mai      38.04 313  eP       P               20 16 53.8 -1.3
HHC   Hu-ho-hao-te    49.96 344  eP       P               20 18 30.8 +0.6
HHC                              pP       pP              20 18 35.3 -9.2
HHC                              sP       sP              20 18 37.8  -13
HHC                              PcP      PcP             20 19 40.8 -9.0
HHC                              PP       PP              20 20 26.8 +1.1
HHC                              ScP      ScP             20 23 44.9 +3.8
HHC                              PcS      PcS             20 23 46.9 +0.3
HHC                              S        S               20 25 39.8 +2.9
HHC                              sS       sS              20 25 47.8  -13
HHC                              ScS      ScS             20 28 18.9 +2.0
HHC                              SS       SS              20 29 09.9 -0.8
HHC                              pmax     pmax
      comp=Z,9.0nm,0.7s,mb4.9
HHC                              pmax     pmax
      comp=Z,75nm,4.4s
HHC                              LR       LR
      comp=N,130nm,15.5s,MS4.2
HHC                              LR       LR
      comp=E,130nm,15.5s,MS4.2
HHC                              LR       LR
      comp=Z,97nm,16.6s,MS3.9
SONM  Songino Array   57.83 344  P        P               20 19 25.9 -1.6
      comp=Z,0.5nm,0.8s,mb3.6,baz=164,slow=7.5,SNR=4.5
MK31  Makanchi Array  66.94 328  eP       P               20 20 28.9 +0.5
MKAR  Makanchi Array  66.94 328  P        P               20 20 28.7 +0.2
      comp=Z,1.1nm,0.5s,mb4.1,baz=112,slow=8.7,SNR=17
MKAR  Makanchi Array  66.94 328  P        P               20 20 28.7 +0.2
ZALV  Zalesovo Beam   70.59 335  P        P               20 20 50.5 -0.6
      comp=Z,0.7nm,0.5s,mb3.9,baz=121,slow=6.8,SNR=3.8
ZALV                             LR       LR              20 55 36.0
      comp=Z,8.5nm,19.1s,MS3.0,baz=92,slow=39
ZALV  Zalesovo Beam   70.59 335  P        P               20 20 50.5 -0.6
ZALV                             LR       LR              20 55 36.0
KURK  Kurchatov       71.30 330  eP       P               20 20 55.6 +0.2
      comp=Z,2.9nm,1.0s,mb4.2
BVAR  Borovoye Array  76.81 329  P        P               20 21 27.8 +0.3
      comp=Z,0.5nm,0.5s,mb3.7,baz=125,slow=9.5,SNR=6.5
```

*DDA **23** 20:10:23.8, 39°.80N×30°.56E, h7km±4km, Md2.8*
*ISK **23** 20:10:23.4, 39°.80N×30°.57E, h7km, MD2.9*
*CSEM **23** 20:10:23.7±0.1, 39°.81N×30°.57E, h2km, MD2.8, Error ellipse: s-maj=1.7km s-min=1.1km az=42.0*
*ISCJB **23** 20:10:23.6±0.5, 39°.79N±0°.03×30°.56E±0°.04, h2km±5km, Error ellipse: s-maj=5.7km s-min=3.7km az=38.7*

ISC 23 20:10:24.1±0.5, 39°.79N±0°.03×30°.55E±0°.04, h5km±4km, n42, σ0°.63/58, Turkey

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Code  Station Name     Δ°   AZ°  Phase ID                Time      Res
                                Op       ISC             h m s     ISC
BORA  Eskisehir       0.12 319  i P      Pg              20 10 26.3 -0.1
BORA                             i S      Sg              20 10 28.1 +0.1
BORA  Eskisehir       0.12 319  i P      Pg              20 10 26.3 -0.1
BORA                             i S      Sg              20 10 28.1 +0.1
ESKT  Eskisehir       0.36 140  PG       Pg              20 10 30.8 -0.1
ESKT                             eSG      Sg              20 10 36.3 +0.7
ESKT  Eskisehir       0.36 140  i P      Pg              20 10 31.0  0.0
ESKT                             i S      Sg              20 10 36.8 +1.2
ESKT  Eskisehir       0.36 140  i Pg     Pg              20 10 30.8 -0.1
ESKT                             eSg      Sg              20 10 36.3 +0.7
SEYT  Eskypehyr       0.36 140  i P      Pg              20 10 31.0 +0.1
SEYT                             i S      Sg              20 10 36.8 +1.2
GPA   Golpazari       0.53 340  ePG      Pg              20 10 33.6 -0.7
GPA   Golpazari       0.53 340  ePg      Pg              20 10 33.6 -0.6
GULT  Gulveren        0.64 358  ePG      Pg              20 10 35.7 -0.7
GULT                             eSG      Sg              20 10 45.6 +0.9
GULT  Gulveren        0.64 358  ePg      Pg              20 10 35.7 -0.7
GULT                             eSg      Sg              20 10 45.6 +0.9
ALT   Altintas        0.81 205  ePG      Pg              20 10 39.6  0.0
ALT   Altintas        0.81 205  ePg      Pg              20 10 39.6  0.0
SVRH  Sivrihisar-ESK  0.83 114  ePG      Pg              20 10 39.3 -0.6
SVRH                             eSG      Sg              20 10 50.6  0.0
SVRH  Sivrihisar-ESK  0.83 114  ePg      Pg              20 10 39.3 -0.6
SVRH                             eSg      Sg              20 10 50.6  0.0
MDU   Mudurnu         0.84  37  ePG      Pg              20 10 40.6 +0.4
MDU   Mudurnu         0.84  37  ePg      Pg              20 10 40.6 +0.4
ADVT  Abdulvahap      0.89 316  ePG      Pg              20 10 41.5 +0.3
ADVT  Abdulvahap      0.89 316  ePg      Pg              20 10 41.5 +0.3
ULDT  Uludag          1.14 288  i P      Pg              20 10 46.2 +0.2
ULDT                             i S      Sg              20 11 00.5 -0.3
ULDT  Uludag          1.14 288  i P      Pg              20 10 46.2 +0.2
ULDT                             i S      Sg              20 11 00.5 -0.3
YLV   Yalova          1.19 311  ePN      Pn              20 10 46.6 -0.8
YLV   Yalova          1.19 311  ePn      Pn              20 10 46.6 -0.7
GEMT  Gemlik          1.23 302  ePN      Pn              20 10 47.3 -0.5
GEMT  Gemlik          1.23 302  ePn      Pn              20 10 47.3 -0.5
SHUT  Suhut-Afyon     1.24 180  ePN      Pn              20 10 47.3 -0.7
SHUT  Suhut-Afyon     1.24 180  ePn      Pn              20 10 47.3 -0.7
KIZT  Kizilcal        1.38 131  ePN      Pn              20 10 49.7 -0.2
KIZT  Kizilcal        1.38 131  ePn      Pn              20 10 49.7 -0.2
SGKT  Sivrigoynuk     1.39  55  i P      Pn              20 10 49.7 -0.5
SGKT                             i S      Sb              20 11 09.2 +0.6
SGKT  Sivrigoynuk     1.39  55  i P      Pn              20 10 49.7 -0.4
SGKT                             i S      Sb              20 11 09.2 +0.6
ARMT  Armutlu         1.51 301  ePN      Pn              20 10 51.0 -0.7
ARMT  Armutlu         1.51 301  ePn      Pn              20 10 51.0 -0.7
SILT  Sile            1.53 333  ePN      Pn              20 10 51.9 -0.1
SILT  Sile            1.53 333  ePn      Pn              20 10 51.9 -0.1
DURS  Dursunbey       1.61 264  i P      Pn              20 10 53.6 +0.4
DURS                             i S      Sn              20 11 17.2 +2.9
DURS  Dursunbey       1.61 264  i P      Pn              20 10 53.6 +0.4
DURS                             i S      Sn              20 11 17.2 +2.9
LOD   Lodumlu         1.71  86  ePN      Pn              20 10 54.2 -0.2
LOD   Lodumlu         1.71  86  ePn      Pn              20 10 54.2 -0.2
ISK   Istanbul-Kandi  1.71 319  ePN      Pn              20 10 55.1 +0.7
ISK   Istanbul-Kandi  1.71 319  ePn      Pn              20 10 55.1 +0.7
KLYT  Kilyos          1.86 322  ePN      Pn              20 10 56.6 +0.1
KLYT  Kilyos          1.86 322  ePn      Pn              20 10 56.6 +0.1
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*BJI **23** 20:16:07.1, 0°.47S×96°.57E, h30km, mB5.1/7, mb4.7/12, Ms4.6/4, Ms7 4.1/3*
*ISCJB **23** 20:16:11.3±0.3, 0°.17N±0°.04×96°.69E±0°.03, h29km, mb4.5/47, MS3.8/13, Error ellipse: s-maj=6.1km s-min=4.1km az=23.9*
*IDC **23** 20:16:12.9±0.6, 0°.08N×96°.47E, h27km±3km, mb4.1/17, mb1 4.1/18, mb1mx4.0/23, mbtmp4.0/18, ML4.1/1, MS3.6/12, Ms1 3.6/12, ms1mx3.3/33, Error ellipse: s-maj=20.9km s-min=12.6km az=62.0*
*MOS **23** 20:16:12.2±1.0, 0°.24N×96°.66E, h33km, mb4.9/16, Error ellipse: s-maj=15.1km s-min=7.6km az=107.4*
*NEIC **23** 20:16:13.3±0.3, 0°.18N×96°.67E, mb4.7/17, Error ellipse: s-maj=8.4km s-min=6.3km az=67.0*
*DJA **23** 20:16:15, 0°.26N×96°.82E, h52km, MLv4.6/11*

ISC 23 20:16:13.5±0.3, 0°.18N±0°.04×96°.69E±0°.03, h31km, h31km±.6km: pP-P, n135, σ0°.94/126, mb4.5/47, MS3.8/13, 4C-3D, Off west coast of northern Sumatera

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Code  Station Name     Δ°   AZ°  Phase ID                Time      Res
                                Op       ISC             h m s     ISC
GSI   Gunungsitoli    1.42  38  P        Pn              20 16 35.8 -1.5
GSI                              S        Sn              20 16 54.9 -0.1
SISI  Saibi           2.83 122  P        Pn              20 16 56.2 -0.4
MNSI  Mandailing Nat  2.95  78  P        Pn              20 16 57.1 -1.2
PSI   Prapat          3.43  41  Pn       Pn              20 17 03.1 -1.8
      3.4nm,0.3s,baz=205,slow=9.7,SNR=20
PSI                              LR       LR              20 18 35.0
      comp=Z,887nm,21.3s,baz=225,slow=40
PPI   Padang Panjang  3.76 100  P        Pn              20 17 08.9 -0.5
PPI                              S        Sn              20 17 52.2 -0.4
PDSI  Padang          3.92 106  P        Pn              20 17 11.4 -0.3
BKNI  Bangkinang      4.35  88  P        Pn              20 17 17.4 -0.2
SDSI  Sungai Dareh    4.86 103  P        Pn              20 17 25.0 +0.4
FRIM  Kepong          5.79  58  P        Pn              20 17 37.2 -0.2
IPM   Ipoh            6.08  45  P        Pn              20 17 40.8 -0.5
IPM   Ipoh            6.08  45  P        Pn              20 17 40.7 -0.7
      0.3nm83nm,0.7s
KULM  Kulim           6.43  38  P        Pn              20 17 45.6 -0.6
KULM  Kulim           6.43  38  eP       Pn              20 17 44.6 -1.6
      54nm,0.9s
KULM  Kulim           6.43  38  P        Pn              20 17 44.2 -2.0
      0.2nm62nm,0.9s
KGM   Kluang          6.87  75  P        Pn              20 17 52.5 +0.2
KSI   Kapahiang       7.02 123  P        Pn              20 17 55.6 +1.3
      1.0nm3μm127nm,0.9s
MYKOM Kota Tinggi     7.33  77  P        Pn              20 17 58.9 +0.4
MYKOM Kota Tinggi     7.33  77  P        Pn              20 17 58.0 -0.6
      0.2nm24nm,2.2s
KTGM  Kuala Trenggan  8.22  51  P        Pn              20 18 10.4 -0.3
MDSI  Maura Dua       8.80 122  P        Pn              20 18 18.8 +0.1
      38nm,0.8s
KLSI                  9.38 121  P        Pn              20 18 26.7 +0.1
CM31  Chiang Mai Arr 18.30   7  eP       Pn              20 20 26.2 +1.1
      2.7nm,0.6s
CMAR  Chiang Mai Arr 18.30   7  P        Pn              20 20 25.4 +0.3
      0.3nm,0.3s,baz=198,slow=11,SNR=12
CMAR                             LR       LR              20 28 07.8
      comp=Z,111nm,19.6s,baz=151,slow=39
CHTO  Chiang Mai     18.65   7  P        Pn              20 20 27.1 -2.3
CHTO                             pmax     pmax
      comp=Z,11nm,1.2s
CHTO  Chiang Mai     18.65   7  P        Pn              20 20 27.1 -2.3
      comp=Z,11nm,1.2s
SDKM  Sandakan       21.18  75  P        P               20 20 57.7 +1.1
KAPI  Kappang        23.60 103  LR       LR              20 31 06.2
      comp=Z,129nm,19.8s,MS3.4,baz=84,slow=38
KMI   Kunming        25.48  13  P        P               20 21 41.6 +2.6
KMI                              pP       pP              20 21 49.5 +1.4
KMI                              S        S               20 26 05.3 +0.9
KMI                              pmax     pmax
      comp=Z,12nm,1.0s,mb4.4
KMI                              LR       LR
      comp=N,260nm,11.1s,MS4.1
KMI                              LR       LR
      comp=E,210nm,12.1s,MS4.1
KMI                              LR       LR
      comp=Z,330nm,13.0s,MS4.0
SHL   Shillong       25.66 350  ePKP      P               20 21 41.6 +0.9
SHL                              eS       S               20 26 24.0  +17
ODAN  Odare          28.00 342  eP       P               20 22 02.5 +0.8
      comp=Z,20nm,0.7s,mb4.8
RAMN  Ramite         28.33 341  eP       P               20 22 06.0 +1.3
      comp=Z,24nm,0.6s,mb5.0
TAPN  Taplejung      28.36 343  eP       P               20 22 00.8 -4.1
      comp=Z,24nm,0.7s,mb4.9
JIRN  Jiri           29.12 341  eP       P               20 22 11.7  0.0
      comp=Z,28nm,0.6s,mb5.2
DMN   Daman          29.45 339  eP       P               20 22 17.9 +3.2
      comp=Z,19nm,1.0s,mb4.8
KKN   Kakani         29.55 339  eP       P               20 22 16.1 +0.5
LSA   Lhasa          29.83 350  eP       P               20 22 10.3 -7.7
ENH   Enshi          32.31  21  eP       P               20 22 41.1 +1.3
ENH                              e        pP              20 22 49.1 +0.2
FITZ  Fitzroy Crossi 33.77 124  P        P               20 22 53.3 +0.6
      comp=Z,3.0nm,0.9s,mb4.2,baz=343,slow=11,SNR=5.2
FITZ  Fitzroy Crossi 33.77 124  eP       P               20 22 53.3 +0.6
GTA   Gaotai         39.15   4  eP       P               20 23 40.4 +2.0
GTA                              pP       pP              20 23 47.9 +0.3
GTA                              sP       sP              20 23 51.3 -0.1
GTA                              pmax     pmax
      comp=Z,4.0nm,1.3s,mb4.0
WRA   Warramunga Arr 41.94 121  P        P               20 24 02.0 +0.2
      comp=Z,1.6nm,0.6s,mb3.8,baz=302,slow=8.9,SNR=9.9
WRAB  Tennant Creek  41.95 121  P        P               20 24 02.4 +0.6
WRAB                             pmax     pmax
      comp=Z,8.0nm,1.0s,mb4.3
WRAB  Tennant Creek  41.95 121  P        P               20 24 02.4 +0.5
      comp=Z,8.0nm,1.0s,mb4.3
HHC   Hu-ho-hao-te   42.67  17  eP       P               20 24 07.1 -0.3
HHC                              pP       pP              20 24 17.1 +0.4
HHC                              sP       sP              20 24 21.0 +0.5
HHC                              PP       PP              20 25 50.1 +3.3
HHC                              PcP      PcP             20 25 58.5 -0.5
HHC                              ScP      ScP             20 29 46.0 -1.8
HHC                              PcS      PcS             20 29 49.3 -1.7
HHC                              S        S               20 30 29.9 +1.2
HHC                              sS       sS              20 30 46.6 +2.6
HHC                              SS       SS              20 33 36.6 -3.4
HHC                              ScS      ScS             20 34 03.8 -2.7
HHC                              pmax     pmax
      comp=Z,13nm,0.7s,mb4.8
HHC                              pmax     pmax
      comp=Z,68nm,5.3s
HHC                              LR       LR
      comp=N,140nm,14.8s,MS4.1
HHC                              LR       LR
      comp=E,110nm,13.5s,MS4.1
HHC                              LR       LR
      comp=Z,120nm,12.8s,MS4.0
ASAR  Alice Springs  43.20 126  P        P               20 24 12.5 +0.5
      comp=Z,0.7nm,0.6s,mb3.5,baz=299,slow=8.0,SNR=12
ASAR                             PcP      PcP             20 26 01.6 +0.5
      comp=Z,1.2nm,0.9s,baz=316,slow=4.3,SNR=4.3
ASAR                             pPcP                     20 26 11.2
      comp=Z,0.6nm,1.0s,baz=203,slow=20,SNR=2.3
ASAR  Alice Springs  43.20 126  P        P               20 24 12.5 +0.5
ASAR                             pP       pP              20 26 01.7
AAK   Ala-Archa      46.73 337  P        P               20 24 41.7 +1.9
      comp=Z,1.2nm,0.4s,mb4.2,baz=176,slow=8.3,SNR=4.3
AAK   Ala-Archa      46.73 337  P        P               20 24 41.6 +1.9
KSRS  Korea Array    46.97  34  P        P               20 24 44.0 +2.3
      comp=Z,1.3nm,0.6s,mb4.0,baz=219,slow=9.1,SNR=6.0
KSRS                             LR       LR              20 45 50.4
      comp=Z,51nm,19.8s,MS3.5,baz=211,slow=38
EKS2  Erkin-Say      47.04 337  eP       P               20 24 43.0 +0.9
MK31  Makanchi Array 48.11 347  eP       P               20 24 50.4  0.0
MK31                             e        pP              20 24 59.7 -0.1
MKAR  Makanchi Array 48.11 347  P        P               20 24 50.3  0.0
      comp=Z,4.1nm,0.7s,mb4.6,baz=145,slow=7.4,SNR=32
MKAR                             pP       pP              20 24 59.8 +0.1
      comp=Z,5.6nm,0.7s,baz=141,slow=7.5,SNR=20
SONM  Songino Array  48.21   9  P        P               20 24 51.8 +0.7
      comp=Z,1.6nm,0.7s,mb4.1,baz=190,slow=8.2,SNR=12
SONM                             pP       pP              20 25 01.1 +0.5
      comp=Z,2.8nm,0.8s,baz=190,slow=9.4,SNR=11
SONM                             pPcP                     20 26 27.9
      comp=Z,1.8nm,0.7s,baz=179,slow=4.2,SNR=4.7
SONM                             LR       LR              20 49 33.1
      comp=Z,31nm,18.3s,MS3.3,baz=207,slow=41
SONM  Songino Array  48.21   9  P        P               20 24 51.8 +0.7
SONM                             *PP      pP              20 25 01.1 +0.6
SONM  Songino Array  48.21   9  P        P               20 24 51.8 +0.7
SONM                             pP       pP              20 25 01.1 +0.5
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SONM pPcP 20 26 27.9
SONM LR LR 20 49 33.1
ZAK Zakamensk 50.33 5 *eP* **P 20 25 08.8 +1.5**
ZAK pmax pmax
comp=Z,2.0nm,1.4s,mb4.0
OPO Ambohidratompo 52.05 246 P **P 20 25 19.9 -0.8**
comp=Z,2.8nm,0.8s,mb4.2,baz=76,slow=9.7,SNR=3.9
KURK Kurchatov 52.64 346 *eP* **P 20 25 24.2 -0.4**
KURK *e* pP 20 25 33.7 -0.4
KURK pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
KURK Kurchatov 52.64 346 *eP* **P 20 25 24.2 -0.4**
comp=Z,5.5nm,1.0s,mb4.4
KURK *e* pP 20 25 33.7 -0.4
MJAR Matsushiro Arr 52.78 42 LR LR 20 48 19.9
comp=Z,45nm,20.9s,MS3.5,baz=60,slow=36
STKA Stephens Creek 53.06 131 P **P 20 25 28.5 +0.4**
comp=Z,3.2nm,0.8s,mb4.3,baz=311,slow=3.9,SNR=4.9
ZAA0 Zalesovo Array 54.48 351 *eP* **P 20 25 37.9 -0.1**
ZAA0 *e* pP 20 25 47.2 -0.4
ZALV Zalesovo Beam 54.48 351 P **P 20 25 37.9 -0.1**
comp=Z,5.7nm,0.5s,mb4.8,baz=176,slow=5.9,SNR=34
ZALV pP pP 20 25 47.3 -0.2
comp=Z,19nm,0.7s,baz=181,slow=6.5,SNR=21
ZALV Zalesovo Beam 54.48 351 P **P 20 25 37.9 -0.1**
ZALV pP pP 20 25 47.3 -0.2
RDF Al-Radifah 54.90 306 *eP* **P 20 25 41.8 +0.2**
RDF AMb AMB 20 25 42.6
comp=Z,20nm,0.9s,mb5.2
NAY Al-Naaiem 55.27 306 *eP* **P 20 25 43.9 -0.4**
NAY AMb AMB 20 25 45.0
comp=Z,9.0nm,0.9s,mb4.8
MIB Mutribah 55.41 307 *eP* **P 20 25 44.9 -0.3**
MIB AMb AMB 20 25 46.3
comp=Z,32nm,0.8s,mb5.4
NVS Novosibirsk 55.59 351 *eP* **P 20 25 41.7 -4.3**
BVAR Borovoye Array 57.04 341 P **P 20 25 55.3 -1.1**
comp=Z,1.3nm,0.6s,mb4.1,baz=149,slow=9.2,SNR=13
BVAR pP pP 20 26 04.6 -1.4
comp=Z,1.8nm,0.6s,baz=145,slow=9.2,SNR=10
BRVK Borovoye 57.11 341 *c iP* **P 20 25 56.1 -0.8**
BRVK pmax pmax
comp=Z,4.0nm,1.7s,mb4.2
BRVK Borovoye 57.11 341 *eP* **P 20 25 55.2 -1.7**
comp=Z,1.1nm,0.6s,mb4.1
BRVK *e* pP 20 26 04.2 -2.3
ZEI Tsey 63.42 319 *eP* **P 20 26 39.8 -0.5**
ZEI pmax pmax
comp=Z,4.0nm,0.4s,mb4.9
SVE Sverdlovsk 63.45 339↓ *eP* **P 20 26 39.7 -0.5**
SVE pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
ARU Arti 63.92 338 *d iP* **P 20 26 42.4 -0.9**
ARU *e* 20 27 18.6
ARU S **S 20 35 12.6 -4.3**
ARU pmax pmax
comp=Z,9.0nm,1.7s,mb4.5
MMAI Mount Meron Ar 66.09 306 P **P 20 26 58.2 +0.3**
comp=Z,1.3nm,0.7s,mb4.1,baz=109,slow=7.8,SNR=3.2
YAK Yakutsk 66.53 16 *eP* **P 20 27 07.1 +6.9**
YAK pmax pmax
comp=Z,15nm,0.9s,mb5.0
LSZ Lusaka 69.34 254 LR LR 20 52 17.2
comp=Z,104nm,19.6s,MS4.1,baz=113,slow=31
BR131 Keskin Array S 69.42 313 *eP* **P 20 27 17.6 -1.2**
comp=Z,1.1nm,0.6s,mb4.0
MAW Mawson 71.61 193 P **P 20 27 31.1 -0.4**
comp=Z,1.9nm,0.9s,mb4.0,baz=354,slow=9.2,SNR=4.0
PETK Petropavlovsk- 72.86 33 LR LR 21 03 05.1
comp=Z,22nm,18.0s,MS3.5,baz=80,slow=38
LBTB Lobatse 72.98 244 LR LR 20 53 01.5
comp=Z,77nm,20.8s,MS4.0,baz=259,slow=30
OBN Obninsk 73.22 329 P **P 20 27 40.0 -1.4**
OBN *e* pP 20 27 48.1 -3.1
OBN pmax pmax
comp=Z,14nm,1.4s,mb4.7
TIXI Tiksi 74.27 10 *eP* **P 20 27 55.2 +7.9**
TIXI pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
TIXI MLR MLR
comp=Z,64nm,14.0s,MS4.1
SEY Seymchan 74.89 23↑ *iP* **P 20 28 00.2 +9.2**
AKASG Malin Array Be 75.75 323 P **P 20 27 54.8 -1.4**
comp=Z,3.9nm,0.7s,mb4.5,baz=93,slow=4.8,SNR=12
AKASG pP pP 20 28 04.2 -1.9
comp=Z,3.9nm,0.5s,baz=91,slow=5.2,SNR=7.9
AKASG Malin Array Be 75.75 323 P **P 20 27 54.8 -1.4**
AKASG pP pP 20 28 04.2 -1.9
MLR Muntele Rosu 76.46 317↓ *iP* **P 20 28 00.4 0.0**
BURAR Bucovina Array 77.45 319↑ *iP* **P 20 28 06.7 +0.8**
BUR08 Bucovina Ar. S 77.47 319 *eP* **P 20 28 05.9 -0.1**
SUR Sutherland 78.18 237 LR LR 20 56 49.8
comp=Z,90nm,19.0s,MS4.1,baz=212,slow=31
TSUM Tsumeb 79.77 251 LR LR 21 02 45.4
comp=Z,42nm,18.1s,MS3.8,baz=133,slow=35
CRVS Cervenica-Dubn 80.18 320 *eP* **P 20 28 20.0 -0.9**
CRVS pmax pmax
comp=Z,48nm,3.1s
CRVS Cervenica-Dubn 80.18 320 *eP* **P 20 28 20.0 -0.9**
comp=Z,48nm,3.1s
CRVS Cervenica-Dubn 80.18 320 *eP* **P 20 28 20.0 -0.9**
FINES FINESS Array B 80.66 333 P **P 20 28 22.4 -0.8**
comp=Z,2.0nm,0.6s,mb4.2,baz=104,slow=4.4,SNR=11
FINES pP pP 20 28 32.0 -1.1
comp=Z,4.6nm,0.6s,baz=104,slow=5.8,SNR=4.6
VYHS Vyhne 81.82 319 *eP* **P 20 28 29.6 0.0**
VYHS pmax pmax
comp=Z,6.0nm,1.7s,mb4.2
VYHS Vyhne 81.82 319 *eP* **P 20 28 29.6 0.0**
comp=Z,6.0nm,1.7s,mb4.2
VYHS Vyhne 81.82 319 *eP* **P 20 28 29.6 0.0**
ARCES ARCESS Array B 83.32 340 P **P 20 28 37.0 0.0**
comp=Z,1.9nm,0.9s,mb4.1,baz=74,slow=3.9,SNR=17
ARCES pP pP 20 28 46.2 -0.7
comp=Z,1.7nm,0.4s,baz=104,slow=4.6,SNR=4.9
SOKA Soboth 84.14 317↑ *iP* **P 20 28 40.1 -1.5**
comp=Z,4.6nm,1.1s,mb4.5
CLL Collm 85.90 321 *eP* **P 20 28 48.0 -2.4**
CLL Collm 85.90 321 *eP* **P 20 28 48.0 -2.4**
NB2 NORSAR Subarra 87.64 331 P **P 20 28 58.1 -0.6**
comp=Z,3.8nm,0.8s,mb4.7,baz=98,slow=4.4
NB2 NORSAR Subarra 87.64 331 P **P 20 28 58.1 -0.6**
NB2 NORSAR Subarra 87.64 331 P **P 20 28 58.1 -0.6**
NOA NORSAR Array B 87.64 331 P **P 20 28 57.9 -0.8**
comp=Z,1.6nm,0.8s,mb4.3,baz=95,slow=4.5,SNR=4.6
NOA pP pP 20 29 07.4 -1.3
comp=Z,1.8nm,0.8s,baz=96,slow=4.9,SNR=3.7
NOA LR LR 21 12 27.7
comp=Z,15nm,18.7s,MS3.4,baz=125,slow=38
NOA NORSAR Array B 87.64 331 P **P 20 28 57.9 -0.8**
NOA *PP pP 20 29 07.4 -1.3
NOA NORSAR Array B 87.64 331 P **P 20 28 57.9 -0.8**
NOA pP pP 20 29 07.4 -1.3
NOA LR LR 21 12 27.7
LPG La Plagne 89.83 315 *eP* **P 20 29 09.7 +0.3**
comp=Z,4.0nm,0.6s,mb4.6
LPG La Plagne 89.83 315 *eP* **P 20 29 09.7 +0.3**
LPG pmax pmax
comp=Z,2.0nm,0.6s,mb4.6
LPG La Plagne 89.83 315 *eP* **P 20 29 09.7 +0.3**
comp=Z,2.0nm,0.6s,mb4.6
LPL La Plagne 89.84 315 *eP* **P 20 29 09.8 +0.4**
comp=Z,3.9nm,0.5s,mb4.7
LPL La Plagne 89.84 315 *eP* **P 20 29 09.8 +0.4**
LPL pmax pmax
comp=Z,2.0nm,0.5s,mb4.7
LPL La Plagne 89.84 315 *eP* **P 20 29 09.8 +0.4**
comp=Z,2.0nm,0.5s,mb4.7
FRF La Foret Royal 89.91 313 *eP* **P 20 29 09.9 +0.1**
ORIF Oris-en-Rattie 90.45 315 *eP* **P 20 29 12.8 +0.5**
comp=Z,4.3nm,0.7s,mb4.6
ORIF Oris-en-Rattie 90.45 315 *eP* **P 20 29 12.8 +0.5**
ORIF pmax pmax
comp=Z,2.0nm,0.7s,mb4.6
ORIF Oris-en-Rattie 90.45 315 *eP* **P 20 29 12.8 +0.5**
comp=Z,2.2nm,0.7s,mb4.6
BAIF Baives 91.46 320 *eP* **P 20 29 17.5 +0.6**
comp=Z,8.7nm,0.8s,mb4.8
BAIF Baives 91.46 320 *eP* **P 20 29 17.5 +0.6**
BAIF pmax pmax
comp=Z,4.0nm,0.8s,mb4.8
BAIF Baives 91.46 320 *eP* **P 20 29 17.5 +0.6**
comp=Z,4.3nm,0.8s,mb4.8
LOR Lormes 91.80 317 *eP* **P 20 29 18.8 +0.3**
comp=Z,3.7nm,0.7s,mb4.5
LOR Lormes 91.80 317 *eP* **P 20 29 18.8 +0.3**
LOR pmax pmax
comp=Z,2.0nm,0.7s,mb4.6
LOR Lormes 91.80 317 *eP* **P 20 29 18.8 +0.3**
comp=Z,1.9nm,0.7s,mb4.5
SMF Signal de Mont 91.83 316 *eP* **P 20 29 18.6 -0.1**
comp=Z,8.2nm,0.9s,mb4.8
SMF Signal de Mont 91.83 316 *eP* **P 20 29 18.6 -0.1**
SMF pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
SMF Signal de Mont 91.83 316 *eP* **P 20 29 18.6 -0.1**
comp=Z,4.1nm,0.9s,mb4.8
NVAR Mina Array Bea 129.90 36 PKP PKPdf 20 35 20.6 +0.1
comp=Z,0.5nm,0.8s,baz=224,slow=6.2,SNR=2.8
CPUP Villa Florida 143.91 222 PKP PKPdf 20 35 44.5 -2.1
comp=Z,3.0nm,0.6s,baz=97,slow=3.5,SNR=13
CPUP pPKP pPKPdf 20 35 53.7 -3.2
comp=Z,2.4nm,0.6s,baz=112,slow=4.6,SNR=4.2
CPUP Villa Florida 143.91 222 PKP PKPdf 20 35 44.5 -2.1
CPUP pPKP pPKPdf 20 35 53.7 -3.2
TXAR Lajitas Array 144.80 32 PKPbc PKPdf 20 35 47.7 -0.4
comp=Z,0.9nm,0.8s,baz=325,slow=2.0,SNR=9.5
TXAR Lajitas Array 144.80 32 PKPbc PKPdf 20 35 47.7 -0.4
JCT Junction City 145.71 26 *e*PKPdf PKPdf 20 35 50.0 +0.4
JCT *e*pPKPdf pPKPdf 20 35 59.2 -0.7
LPAZ La Paz 158.08 222 PKP PKPdf 20 36 07.9 -0.6
comp=Z,1.1nm,0.7s,baz=45,slow=9.1,SNR=4.5
LPAZ PKPab PKPab 20 36 42.2 +0.3
comp=Z,0.9nm,0.7s,baz=135,slow=2.9,SNR=3.3
LPAZ La Paz 158.08 222 PKP PKPdf 20 36 07.9 -0.6
LPAZ PKPab PKPab 20 36 42.2 +0.3

IDC 23 20:34:17.4±2.0, 18°.38S×177°.48W, h0km, mb4.0/4, mb1 4.3/4, mb1mx3.9/16, mbtmp4.0/4, Error ellipse: s-maj=168.5km s-min=33.1km az=157.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.18**	**242**	P	P	20 41 48.0	+0.8
	1.3nm,0.6s,baz=82,slow=11,SNR=1.9						
WRA	**Warramunga Arr**	**45.41**	**260**	P	P	20 42 37.9	-0.4
	1.5nm,0.4s,baz=97,slow=6.0,SNR=19						
ASAR	**Alice Springs**	**45.51**	**255**	P	P	20 42 38.5	-0.4
	4.0nm,0.6s,baz=89,slow=8.3,SNR=63						
TXAR	**Lajitas Array**	**85.51**	**57**	P	P	20 46 58.0	+0.4
	0.1nm,0.3s,baz=196,slow=6.4,SNR=3.4						

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*NEIC **23** 20:58:40.6±0.3, 16°.51S×173°.82W, h10km, mb4.7/5, Error ellipse: s-maj=17.0km s-min=6.8km az=132.0*
*IDC **23** 20:58:46.2±3.0, 16°.32S×173°.92W, h50km±28km, mb4.3/10, mb1 4.6/11, mb1mx4.2/21, mbtmp4.4/11, ML3.2/1, MS3.8/6, Ms1 3.8/6, ms1mx3.5/15, Error ellipse: s-maj=37.6km s-min=14.1km az=143.0*
*ISCJB **23** 20:58:49.9±0.4, 16°.6S±0°.1×173°.9W±0°.1, h100km, mb4.5/18, Error ellipse: s-maj=21.9km s-min=9.4km az=43.5*
*SZGRF **23** 20:58:51.5, 16°.85S×174°.88W, h82km, Tonga Islands*
ISC 23 20:58:51.4±0.4, 16°.7S±0°.1×173°.9W±0°.1, h100km, n82, σ0 90/32, mb4.5/18, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.41**	**37**	P	**Pn**	**20 59 33.6**	**-9.1**
	147nm,0.3s,baz=185,slow=1.2,SNR=92						
AFI				S	Sx	21 00 07.0	
	294nm,0.3s,baz=234,slow=23,SNR=16						
AFI	**Afiamalu**	**3.41**	**37**	*e*Pn	**Pn**	**20 59 33.3**	**-9.3**
AFI				*e*Sn	Sx	21 00 07.0	
RAR	**Rarotonga**	**14.08**	**111**	*eP*	**Pn**	**21 01 54.2**	**-12**
DZM	**Mont Dzumac**	**19.33**	**251**	*eP*	**P**	**21 03 14.9**	**+6.1**
	77nm,1.5s						
DZM				*e*LR	LR	21 08 11.3	
	434nm,28.4s						
DZM	**Mont Dzumac**	**19.33**	**251**	*eP*	**P**	**21 03 08.2**	**-0.6**
OUZ	**Omahuta**	**21.60**	**209**	*eP*	**P**	**21 03 32.1**	**-1.0**
URZ	**Urewera**	**22.92**	**198**	P	**P**	**21 03 44.6**	**-2.2**
	30nm,0.4s,mb5.0,baz=59,slow=2.5,SNR=34						
URZ	**Urewera**	**22.92**	**198**	*eP*	**P**	**21 03 44.4**	**-2.4**
PPT	**Papeete**	**23.23**	**96**	*e*LR	LR	21 08 57.1	
	321nm,32.8s						
TBI	**Tubuai**	**23.86**	**110**	*e*LR	LR	21 09 22.9	
	253nm,30.2s						
PMOR	**Pomariorio Ree**	**25.04**	**90**	*eP*	**P**	**21 04 01.7**	**-4.8**
	38nm,1.0s,mb4.8						
RPZ	**Rata Peaks**	**29.84**	**202**	P	**P**	**21 04 52.4**	**+3.3**
	18nm,0.4s,mb5.0,baz=100,slow=8.3,SNR=13						
RPZ	**Rata Peaks**	**29.84**	**202**	*eP*	**P**	**21 04 52.1**	**+3.1**
TAOE	**Nuku Hiva Isla**	**33.75**	**81**	*e*LR	LR	21 13 48.5	
	270nm,27.7s						
STKA	**Stephens Creek**	**43.02**	**241**	P	**P**	**21 06 41.8**	**+0.6**
	6.7nm,0.7s,mb4.5,baz=71,slow=8.7,SNR=23						
STKA				LR	LR	21 21 04.3	
	comp=Z,103nm,20.4s,baz=204,slow=31						
STKA	**Stephens Creek**	**43.02**	**241**	*eP*	**P**	**21 06 41.7**	**+0.6**
STKA				LR	LR	21 21 04.3	
WRA	**Warramunga Arr**	**49.12**	**258**	P	**P**	**21 07 29.4**	**+0.1**
	1.1nm,0.4s,mb4.1,baz=97,slow=7.1,SNR=24						
ASAR	**Alice Springs**	**49.30**	**253**	P	**P**	**21 07 30.5**	**0.0**
	20nm,0.6s,mb5.2,baz=88,slow=8.5,SNR=323						
SBA	**Scott Base**	**61.95**	**185**	P	**P**	**21 09 02.5**	**+2.3**
	4.5nm,0.7s,mb4.6						
YBH	**Yreka Blue Hor**	**74.88**	**37**	P	**P**	**21 10 21.6**	**+0.4**
	4.1nm,0.3s,mb4.2,baz=166,slow=7.2,SNR=5.4						
NVAR	**Mina Array Bea**	**75.57**	**42**	P	**P**	**21 10 25.1**	**-0.1**
	5.5nm,1.0s,mb4.2,baz=224,slow=9.7,SNR=24						
MOD	**Modoc**	**76.40**	**38**	*eP*	**P**	**21 10 29.4**	**-0.4**
N12A	**Clover Valley,**	**79.02**	**41**	*eP*	**P**	**21 10 44.5**	**+0.1**
MSU	**Marysvale**	**79.64**	**45**	*eP*	**P**	**21 10 48.6**	**+0.7**
	9.9nm,1.0s,mb4.6						
HLID	**Hailey**	**80.89**	**39**	*eP*	**P**	**21 10 54.6**	**+0.1**
BNM	**Barren Site**	**81.48**	**51**	*eP*	**P**	**21 10 57.8**	**0.0**
TXAR	**Lajitas Array**	**81.69**	**56**	P	**P**	**21 10 58.8**	**-0.3**
	2.8nm,1.0s,mb4.0,baz=232,slow=6.1,SNR=19						
TXAR				LR	LR	21 38 48.2	
	comp=Z,44nm,19.7s,baz=185,slow=30						
TPAW	**Teton Pass**	**82.99**	**41**	*eP*	**P**	**21 11 05.2**	**-0.3**
	9.0nm,1.1s,mb4.5						
BSMT	**Bassoo Peak**	**83.05**	**36**	*eP*	**P**	**21 11 05.0**	**-0.6**
	2.1nm,0.8s,mb4.0						
CHMT	**Chamberlain Mo**	**83.41**	**37**	*eP*	**P**	**21 11 06.8**	**-0.7**
PDAR	**Pinedale Array**	**83.51**	**42**	P	**P**	**21 11 07.2**	**-0.9**
	4.5nm,0.8s,mb4.3,baz=222,slow=2.0,SNR=26						
SDCO	**Great Sand Dun**	**83.90**	**48**	*eP*	**P**	**21 11 10.2**	**-0.1**
	1.1nm,0.3s,mb4.2						
CMIG	**Matias Romero**	**84.73**	**71**	P	**P**	**21 11 14.9**	**0.0**
	2.8nm,0.8s,mb4.3,baz=273,slow=6.0,SNR=4.5						
PLCA	**Paso Flores**	**89.00**	**132**	P	**P**	**21 11 36.5**	**+1.3**
	1.6nm,0.9s,mb4.0,baz=191,slow=6.1,SNR=3.6						
PLCA				LR	LR	21 43 40.6	
	comp=Z,104nm,19.5s,baz=264,slow=30						
HHC	**Hu-ho-hao-te**	**89.56**	**313**	*eP*	**P**	**21 11 38.6**	**+0.9**
HHC				pP	pP	21 11 43.4	-21
HHC				sP	sP	21 11 45.6	-29
HHC				PP	PP	21 15 13.6	+2.7
HHC				SKS		21 22 06.8	
HHC				S	S	21 22 27.6	+7.3
HHC				sS	sS	21 22 36.3	-29
HHC				SS	SS	21 28 28.8	+10
HHC				pmax	pmax		
	comp=Z,11nm,0.8s,mb5.0						
HHC				pmax	pmax		
	comp=Z,68nm,6.5s						
HHC				LR	LR		
	comp=N,120nm,17.8s						
HHC				LR	LR		
	comp=E,120nm,16.7s						
HHC				LR	LR		
	comp=Z,73nm,16.6s						
CMAR	**Chiang Mai Arr**	**92.58**	**288**	LR	LR	21 51 05.3	
	comp=Z,27nm,18.4s,baz=175,slow=34						
ULM	**Lac du Bonnet**	**95.20**	**39**	LR	LR	21 48 11.6	
	comp=Z,34nm,19.2s,baz=56,slow=31						
TKL	**Tuckaleechee C**	**99.60**	**56**	LR	LR	21 54 23.5	
	comp=Z,25nm,20.0s,baz=51,slow=34						
MKAR	**Makanchi Array**	**111.39**	**314**	PKiKP	PKiKP	21 17 15.0	+1.3
	comp=Z,0.4nm,0.6s,baz=172,slow=2.2,SNR=4.1						
BVAR	**Borovoye Array**	**118.60**	**322**	PKP	PKPdf	21 17 27.0	-0.4
	comp=Z,0.4nm,0.7s,baz=147,slow=2.9,SNR=3.8						
ARCES	**ARCESS Array B**	**125.80**	**352**	PKP	PKPdf	21 17 41.7	+1.0
	comp=Z,1.3nm,0.8s,baz=42,slow=5.7,SNR=3.9						
ARCES	**ARCESS Array B**	**125.80**	**352**	PKP	PKPdf	21 17 41.7	+1.0
FINES	**FINESS Array B**	**133.08**	**347**	PKhKP		21 17 50.7	
	comp=Z,3.0nm,0.9s,baz=147,slow=25,SNR=2.2						
FINES				PKP	PKPdf	21 17 55.7	+1.0
	comp=Z,4.5nm,1.1s,baz=307,slow=19,SNR=2.9						
CLZ	**Clausthal**	**144.75**	**355**	*e*PKPbc	PKPdf	21 18 16.7	+0.4
CLL	**Collm**	**145.01**	**352**	*e*PKPbc	PKPbc	21 18 16.1	-0.2
CLL	**Collm**	**145.01**	**352**	*e*PKPdf	PKPdf	21 18 18.0	+1.2
BUG	**Bochum--Univer**	**145.30**	**359**	*ep*PKPbc	pPKPbc	21 18 41.3	-3.0
BRG	**Berggiesshubel**	**145.31**	**351**	*eP*	PKPdf	21 18 18.4	+1.1
	comp=Z,2.5nm,0.7s						
UPC	**Upice**	**145.32**	**349**	*e*PKP	PKPdf	21 18 19.0	+1.6
UPC				*ex*	x	21 18 41.5	
NIE	**Niedzica**	**145.37**	**344**	*eP*	PKPdf	21 18 19.5	+2.0
DPC	**Dobruska-Polom**	**145.42**	**348**	*e*PKP	PKPdf	21 18 19.5	+2.0
DPC				*ex*	x	21 18 41.7	
CRVS	**Cervenica-Dubn**	**145.51**	**342**	*e*	pPKPdf	21 18 37.7	-7.6
CRVS				*e*		21 18 42.8	
OKC	**Ostrava-Krasne**	**145.52**	**346**	*ex*	pPKPdf	21 18 40.1	-5.2
PVCC	**Panska Ves**	**145.55**	**350**	*e*PKP	PKPdf	21 18 19.7	+1.9
PVCC				*ex*	x	21 18 42.1	
MOX	**Moxa**	**145.83**	**354**	*eP*	PKPdf	21 18 20.0	+1.8
	comp=Z,13nm,1.3s						
MOX				*e*		21 18 41.3	
MOX	**Moxa**	**145.83**	**354**	*e*PKPbc	PKPbc	21 18 20.0	+1.1
MOX				*ep*PKPbc	pPKPab	21 18 42.1	-4.2
TANN	**Tannenbergstha**	**145.96**	**353**	*e*PKPbc	PKPbc	21 18 20.4	+1.1
TANN				*ep*PKPbc	pPKPab	21 18 42.9	-3.9
PRU	**Pruhonice**	**146.08**	**350**	*e*PKP	PKPdf	21 18 21.6	+2.9
PRU				*ex*	x	21 18 43.9	
NKC	**Novy Kostel**	**146.14**	**353**	*ex*	pPKPdf	21 18 44.0	-2.3
TNS	**Taunus Mts**	**146.48**	**357**	*e*PKPbc	PKPbc	21 18 21.4	+0.5
TNS				*ep*PKPbc	pPKPab	21 18 45.7	-3.1
VYHS	**Vyhne**	**146.60**	**345**	*e*	pPKPab	21 18 46.1	-3.2
BAIF	**Baives**	**146.66**	**2**	*e*PKP1	PKPbc	21 18 22.3	+0.9
	comp=Z,12nm,0.8s						
GRA1	**Grafenberg Arr**	**146.81**	**354**	*e*PKPbc	PKPbc	21 18 23.2	+1.4
GRA1				*ep*PKPbc	pPKPab	21 18 46.1	-3.9
GRF	**Grafenberg Arr**	**146.81**	**354**	*e*PKPbc	PKPbc	21 18 23.2	+1.4
GRF				*ep*PKPbc	pPKPab	21 18 46.1	-3.9
KHC	**Kasperske Hory**	**147.06**	**351**	*e*PKP	PKPdf	21 18 24.5	+4.1
KHC				*ex*	x	21 18 47.3	
WLF	**Walferdange**	**147.09**	**360**	*e*PKPbc	PKPbc	21 18 23.8	+1.2
WLF				*ep*PKPbc	pPKPab	21 18 46.4	-4.7
GEC2	**GERESS Array S**	**147.32**	**351**	*e*PKPbc	PKPbc	21 18 23.9	+0.6
GEC2				*ep*PKPbc	pPKPab	21 18 46.9	-5.2
FLN	**La Foliniere**	**147.54**	**8**	*e*PKP1	PKPbc	21 18 24.1	+0.2
LDF	**La Druitiere**	**147.76**	**8**	*e*PKP1	PKPbc	21 18 24.6	+0.1
	comp=Z,11nm,0.9s						
GRR	**Gorron**	**147.86**	**9**	*e*PKP1	PKPbc	21 18 25.1	+0.4
CDF	**Champ du Feu**	**148.33**	**359**	*e*PKP1	PKPbc	21 18 26.8	+0.8
	comp=Z,7.3nm,0.8s						
BFO	**Black Forest**	**148.38**	**357**	*e*PKPbc	PKPbc	21 18 27.3	+1.2
RJOB	**Jochberg**	**148.54**	**351**	*e*PKPbc	PKPbc	21 18 27.1	+0.5
HINF	**Hinteralfeld**	**148.94**	**359**	*e*PKP1	PKPbc	21 18 29.5	+1.9
LOR	**Lormes**	**149.43**	**3**	*e*PKP1	PKPbc	21 18 29.7	+0.9
	comp=Z,7.4nm,0.8s						
SSF	**Saint Saulge**	**149.62**	**4**	*e*PKP1	PKPbc	21 18 30.2	+0.9
	comp=Z,29nm,1.3s						
AVF	**Avril sur Loir**	**149.88**	**4**	*e*PKP1	PKPbc	21 18 30.4	+0.5
SMF	**Signal de Mont**	**150.06**	**3**	*e*PKP1	PKPbc	21 18 30.7	+0.3
BGF	**Bois d'Agland**	**150.08**	**5**	*e*PKP1	PKPbc	21 18 31.1	+0.7
CABF	**La Chapelle**	**150.15**	**0**	*e*PKP1	PKPbc	21 18 32.0	+1.4
	comp=Z,34nm,1.2s						
TCF	**Toulx Ste Croi**	**150.29**	**5**	*e*PKP1	PKPbc	21 18 31.4	+0.5
	comp=Z,4.3nm,0.8s						
EVO	**Evora**	**154.94**	**27**	*e*PKIKP	PKPdf	21 18 30.3	-2.5
	comp=Z,29nm,1.2s						

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*SGS **23** 22:16:11.8, 27°.17N×57°.00E, h14km*
*ISCJB **23** 22:16:14.0±0.4, 27°.54N±0°.04×56°.33E±0°.04, h10km, Error ellipse: s-maj=5.7km s-min=4.8km az=148.9*
*TEH **23** 22:16:15.9, 27°.46N×56°.48E, h13km*
*CSEM **23** 22:16:15.7±0.4, 27°.52N×56°.36E, h10km, ML3.7/6, Error ellipse: s-maj=11.6km s-min=6.6km az=89.0*
ISC 23 22:16:15.3±0.4, 27°.51N±0°.04×56°.39E±0°.04, h10km, n37, σ1 04/40, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBND	**Bandar-abas**	**0.14**	**114**	*e*Pg	**Pg**	**22 16 17.6**	**-1.0**
IBND				*e*Sg	**Sg**	**22 16 20.5**	**-0.3**
IBND				*e*		22 16 21.3	
	comp=Z,96μm,0.1s						
BANOM	**Banah**	**1.58**	**183**	Pn	**Pn**	**22 16 43.4**	**0.0**
	SNR=29						
KRBR	**Kerman**	**2.49**	**7**	*e*Pn	**Pn**	**22 16 56.0**	**+0.1**
NAZ	**Nazwa, Dubai**	**2.59**	**195**	Pn	**Pn**	**22 16 59.1**	**+1.8**
	SNR=6.3						
HATD	**Hatta, Dubai**	**2.68**	**185**	Pn	**Pn**	**22 16 59.5**	**+1.0**
	SNR=12						
FAQ	**Al Faqa, Dubai**	**2.84**	**195**	Pn	**Pn**	**22 17 01.3**	**+0.5**
	SNR=18						
GHIR	**Ghir-Karzin**	**3.11**	**285**	*e*Pn	**Pn**	**22 17 06.1**	**+1.6**
ISRV	**Sarvestan**	**3.44**	**304**	*e*Pn	**Pn**	**22 17 10.6**	**+1.6**
ISRV				*e*		22 18 30.7	
	comp=Z,671nm,0.5s						
ISRV	**Sarvestan**	**3.44**	**304**	*e*Pn	**Pn**	**22 17 10.6**	**+1.6**
IMOK	**Mouk**	**3.59**	**296**	*e*Pn	**Pn**	**22 17 12.4**	**+1.4**
IMOK				*e*		22 18 41.0	
	comp=Z,537nm,0.3s						
IMOK	**Mouk**	**3.59**	**296**	*e*Pn	**Pn**	**22 17 12.4**	**+1.4**
IBAF	**Bafgh**	**4.13**	**350**	*e*Pn	**Pn**	**22 17 18.3**	**-0.2**
IBAF				*e*		22 17 31.0	
	comp=Z,244nm,0.2s						
IBAF	**Bafgh**	**4.13**	**350**	*e*Pn	**Pn**	**22 17 18.3**	**-0.2**
IMEH	**Mehriz**	**4.17**	**339**	*e*Pn	**Pn**	**22 17 19.6**	**+0.6**
IMEH				*e*		22 17 21.4	
	comp=Z,256nm,0.1s						
IMEH	**Mehriz**	**4.17**	**339**	*e*Pn	**Pn**	**22 17 19.6**	**+0.6**
ISAD	**Sadrabad**	**4.98**	**332**	*e*Pn	**Pn**	**22 17 31.6**	**+1.4**
ISAD				*e*Sn	**Sn**	**22 18 26.9**	**-0.9**
ISAD				*e*		22 19 09.0	
	comp=Z,213nm,0.3s						
ISAD	**Sadrabad**	**4.98**	**332**	*e*Pn	**Pn**	**22 17 31.6**	**+1.4**
ISAD				*e*Sn	**Sn**	**22 18 26.9**	**-0.9**
IKOO	**Kooshah**	**5.40**	**24**	*e*Pn	**Pn**	**22 17 36.2**	**+0.3**
IKOO				*e*		22 19 19.9	
	comp=Z,324nm,0.0s						
**IKO

LMEL	Las Melosas	1.94	111	*i* P	Pn	22 18 27.2	+2.0
LMEL				*i* S	Sn	22 18 51.6	+3.2
LMEL				AML	AML	22 19 00.4	
	comp=N,59nm,0.2s						

CSEM ***23*** *22:33:45.4±0.9, 36°.13N×21°.83E, h5km, MD3.5, Error ellipse: s-maj=19.3km s-min=6.7km az=61.0*
ATH ***23*** *22:33:46.1, 36°.15N×21°.86E, h5km±4km, MD3.5/8*
THE ***23*** *22:33:46.0, 36°.11N×21°.58E, h14km, ML3.5/2, Error ellipse: s-maj=2.5km s-min=0.6km az=252.0*
ISC 23 22:33:44.0±2.0, 36°.06N±0°.07×21°.7E±0°.1, h2km±8km, n23, σ0s85/37, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.83	1	P	Pg	22 34 01.1	+1.2
PYL				S	Sg	22 34 12.6	+1.9
PYL	PYLOS	0.83	1	*e*PB	Pg	22 34 01.0	+1.1
PYL				*e*SB	Sg	22 34 11.0	+0.3
PYL	PYLOS	0.83	1	*e*Pb	Pg	22 34 01.0	+1.1
PYL				*e*Sb	Sg	22 34 11.0	+0.3
PYL				S	Sg	22 34 12.6	+1.9
KYTH	Kithira	1.08	78	*e*PB	Pg	22 34 04.5	-0.2
KYTH	Kithira	1.08	78	*e*Pb	Pg	22 34 04.5	-0.2
ITM	Ithomi	1.13	8	P	Pg	22 34 06.1	+0.5
ITM				S	Sg	22 34 21.5	+1.3
ITM	Ithomi	1.13	8	*e*PN	Pg	22 34 06.1	+0.5
ITM				*e*SB	Sg	22 34 20.6	+0.4
ITM	Ithomi	1.13	8	P	Pg	22 34 06.1	+0.5
ITM				*e*Sb	Sg	22 34 20.6	+0.4
ITM				S	Sg	22 34 21.5	+1.3
VLI	Veliai	1.17	56	*e*PB	Pg	22 34 06.2	-0.3
VLI	Veliai	1.17	56	*e*Pb	Pg	22 34 06.2	-0.3
VLX	Vlachokerasia	1.41	22	P	Pn	22 34 10.1	-0.6
VLX				S	Sg	22 34 29.5	+0.3
VLX	Vlachokerasia	1.41	22	*e*PB	Pb	22 34 10.6	-0.4
VLX	Vlachokerasia	1.41	22	P	Pn	22 34 10.1	-0.6
VLX	Vlachokerasia	1.41	22	*e*Pb	Pb	22 34 10.6	-0.4
VLX				S	Sg	22 34 29.5	+0.3
KARN	Karanos	1.90	110	P	Pn	22 34 19.0	+1.6
KARN				S	Sg	22 34 45.1	+0.1
KARN	Karanos	1.90	110	P	Pn	22 34 19.0	+1.6
KARN				S	Sg	22 34 45.1	+0.1
GUR	Goura	1.93	15	P	Pn	22 34 17.9	0.0
GUR				S	Sn	22 34 42.5	-0.3
GUR	Goura	1.93	15	*e*PG	Pg	22 34 20.3	-0.8
GUR	Goura	1.93	15	P	Pn	22 34 17.9	0.0
GUR	Goura	1.93	15	*e*Pg	Pg	22 34 20.3	-0.8
GUR				S	Sn	22 34 42.5	-0.3
LTK	Loutraki	2.19	26	*e*PG	Pg	22 34 24.8	-1.2
LTK	Loutraki	2.19	26	*e*Pg	Pg	22 34 24.8	-1.2
EFP	Efpalio	2.36	3	*e*PN	Pg	22 34 27.7	-1.6

ISCJB ***23*** *22:40:32.3±0.7, 36°.20N±0°.05×69°.84E±0°.09, h74km±11km, Error ellipse: s-maj=13.8km s-min=5.9km az=31.5*
NEIC ***23*** *22:40:33.4±0.8, 36°.04N×69°.88E, h83km±10km, mb3.4/3, Error ellipse: s-maj=14.8km s-min=7.9km az=131.0*
NNC ***23*** *22:40:34.7±7.1, 36°.56N×69°.80E, h0km, mb4.1, mpv3.7, Error ellipse: s-maj=58.5km s-min=46.6km az=164.0*
IDC ***23*** *22:40:37.5±9.4, 36°.34N×69°.91E, h100km±70km, mb3.6/1, mb1 3.3/6, mb1mx3. 1/27, mbtmp3.3/6, ML3.3/5, MS2.6/1, Ms1 2.6/1, ms1mx2. 1/26, Error ellipse: s-maj=85.9km s-min=51.2km az=165.0*
ISC 23 22:40:33.7±0.6, 36°.16N±0°.05×69°.79E±0°.09, h74km±10km, n33, σ1s31/43, 1C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	1.73	201	*e*Pn	Pn	22 41 00.4	-1.4
KBL				*e*Sn	Sn	22 41 22.6	-0.5
KSH	Kashi	5.93	54	Pn	Pn	22 41 56.5	-2.3
KSH				Sn	Sn	22 42 56.8	-8.4
KSH				smax			
	comp=N,50nm,0.8s						
KSH				smax			
	comp=E,34nm,0.5s						
AML	Almayashu	6.69	26	P	Pn	22 42 12.9	+3.8
	SNR=10.0						
AML	Almayashu	6.69	26	*e*Pn	Pn	22 42 09.8	+0.7
	comp=E,17nm,0.4s						
AML				*e*Sn	Sn	22 43 22.5	-1.2
KK31	Karatay Array	6.95	4	P	Pn	22 42 13.6	+0.8
	comp=E,3.4nm,0.7s,baz=182,slow=12,SNR=28						
KK31				⇓S	Sn	22 43 29.1	-1.2
	comp=E,14nm,0.7s,baz=182,slow=22						
UCH	Uchtor	7.08	30	P	Pn	22 42 17.6	+3.1
	SNR=8.3						
UCH	Uchtor	7.08	30	*e*Pn	Pn	22 42 15.9	+1.4
	comp=E,7.8nm,0.4s						
UCH				*e*Sn	Sn	22 43 33.1	-0.3
EKS2	Erkin-Say	7.18	24	P	Pn	22 42 19.4	+3.5
	SNR=9.6						
EKS2	Erkin-Say	7.18	24	*e*Pn	Pn	22 42 18.3	+2.4
EKS2				*e*Sn	Sn	22 43 34.3	-1.6
KZA	Kyzart	7.27	34	P	Pn	22 42 18.9	+1.7
	SNR=9.4						
AAK	Ala-Archa	7.42	28	P	Pn	22 42 20.5	+1.4
	SNR=5.3						
AAK	Ala-Archa	7.42	28	P	Pn	22 42 20.6	+1.6
	comp=E,0.0nm,0.3s,baz=202,slow=9.3,SNR=4.4						
AAK				S	Sn	22 43 41.6	0.0
	comp=E,0.0nm,0.3s,baz=158,slow=21,SNR=6.7						
CHMS	Chumysh	7.83	28	P	Pn	22 42 28.4	+3.7
	SNR=6.2						
USP	Ospenovka	7.97	26	P	Pn	22 42 29.4	+2.8
	SNR=7.4						
TKM2	Tokmak 2	8.10	32	⇓P	Pn	22 42 29.9	+1.5
	comp=E,2.7nm,0.5s						
TKM2				⇓S	Sn	22 43 58.8	+0.4
	comp=E,2.8nm,0.6s						
TKM2	Tokmak 2	8.10	32	P	Pn	22 42 29.4	+1.0
	SNR=6.6						
TKM2	Tokmak 2	8.10	32	*e*Pn	Pn	22 42 29.3	+0.9
	comp=E,4.7nm,0.4s						
TKM2				*e*Sn	Sn	22 43 55.8	-2.6
MK31	Makanchi Array	14.14	37	*e*Pn	Pn	22 43 50.6	+0.4
MKAR	Makanchi Array	14.14	37	P	Pn	22 43 50.5	+0.2
	comp=E,0.1nm,0.3s,baz=233,slow=15,SNR=3.9						
AB31	Akbulak array	14.94	334	⇑P	Pn	22 43 58.2	-2.3
	comp=E,1.1nm,0.3s,baz=155,slow=13,SNR=103						
ABKAR	Akbulak array	14.94	334	*e*Pn	Pn	22 43 58.7	-1.8
	comp=E,3.8nm,0.4s						
ABKAR				*e*Sn	Sn	22 46 35.7	-9.1
KURK	Kurchatov	15.88	21	P	Pn	22 44 09.7	-2.7
	comp=E,0.0nm,0.3s,baz=211,slow=10.0,SNR=4.5						
KURK				LR	LR	22 51 37.1	
	comp=E,21nm,19.0s,baz=185,slow=42						
KURK	Kurchatov	15.88	21	*e*Pn	Pn	22 44 12.0	-0.5
	comp=E,1.1nm,0.8s						
KURK				LR	LR	22 51 37.1	
AKTK	Aktyubinsk	16.61	333	P	Pn	22 44 22.3	+0.7
AKTO	Aktyubinsk	16.61	333	P	Pn	22 44 22.3	+0.7
	comp=E,0.6nm,0.3s,baz=129,slow=14,SNR=8.9						
BVAR	Borovoye Array	16.86	1	P	Pn	22 44 26.4	+1.7
	comp=E,0.2nm,0.3s,baz=162,slow=8.4,SNR=6.7						
BRVK	Borovoye	16.90	1	*e*Pn	Pn	22 44 24.7	-0.4
	comp=E,0.9nm,0.5s						
ZAA0	Zalesovo Array	20.63	26	*e*P	P	22 45 06.1	-0.8
ZALV	Zalesovo Beam	20.63	26	P	P	22 45 06.7	-0.2
	comp=E,2.0nm,0.3s,baz=222,slow=11,SNR=12						
ARU	Arti	21.65	343	P	P	22 45 17.2	-0.6
KIV	Kislovodsk	22.09	299	*e*P	P	22 45 24.3	+1.7
WLF	Walferdange	47.15	307	P	P	22 48 58.5	+0.1
YSS	Yuzh-Sakhalins	53.81	54	*e*P	P	22 49 48.2	-0.4

IDC ***23*** *22:44:45.7±1.7, 2°.44N×127°.96E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.7/19, mbtmp3.8/7, Error ellipse: s-maj=202.2km s-min=17.4km az=68.0*
ISCJB ***23*** *22:44:48.4±0.5, 2°.47N±0°.08×128°.1E±0°.1, h33km, mb3.8/11, Error ellipse: s-maj=18.4km s-min=9.4km az=158.2*
NEIC ***23*** *22:44:50.5±0.3, 2°.42N×128°.00E, h35km, mb3.9/6, Error ellipse: s-maj=12.8km s-min=6.4km az=68.0*
ISC 23 22:44:50.5±0.5, 2°.45N±0°.07×128°.1E±0°.1, h35km, n20, σ0s54/20, mb3.8/11, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	19.94	55	P	Pn	22 49 21.2	-0.3
WRAB	Tennant Creek	23.07	165	*e*P	P	22 49 53.6	+0.4
	1.5nm,0.5s,mb3.7						
WRA	Warramunga Arr	23.08	165	P	P	22 49 53.5	+0.3
	1.5nm,0.5s,mb3.7,baz=344,slow=10,SNR=5.1						
MBWA	Marble Bar	24.85	199	*e*P	P	22 50 09.8	0.0
	2.7nm,0.8s,mb3.8						
ASAR	Alice Springs	26.57	168	P	P	22 50 25.8	+0.5
	0.4nm,0.6s,mb3.1,baz=356,slow=8.9,SNR=5.8						
CTAO	Charters Tower	28.62	142	P	P	22 50 43.5	-0.4
HNR	Honiara	33.86	111	P	P	22 51 30.3	+0.2
STKA	Stephens Creek	36.47	160	P	P	22 51 52.7	+0.4
	0.8nm,0.4s,mb4.0,baz=333,slow=14,SNR=3.6						
STKA	Stephens Creek	36.47	160	*e*P	P	22 51 51.9	-0.4
	0.2nm,0.4s,mb3.4						
LSA	Lhasa	44.30	312	*e*P	P	22 52 57.8	+0.6
	0.9nm,0.3s,mb4.0						
ULN	Ulaanbaatar	48.76	341	*e*P	P	22 53 32.5	+0.7
	0.8nm,0.6s,mb3.9						
SONM	Songino Array	48.94	341	P	P	22 53 33.6	+0.4
	1.1nm,0.8s,mb4.0,baz=159,slow=8.6,SNR=5.6						
MK31	Makanchi Array	59.38	325	*e*P	P	22 54 48.9	-0.4
MKAR	Makanchi Array	59.38	325	P	P	22 54 49.7	+0.3
	0.4nm,0.4s,mb3.8,baz=98,slow=9.3,SNR=15						
MKAR	Makanchi Array	59.38	325	P	P	22 54 49.7	+0.3
KURK	Kurchatov	63.55	327	P	P	22 55 17.5	+0.1
	0.8nm,0.6s,mb4.0,baz=127,slow=6.0,SNR=7.2						
KURK	Kurchatov	63.55	327	*e*P	P	22 55 16.0	-1.4
	1.4nm,0.7s,mb4.1						
BVAR	Borovoye Array	69.13	327	P	P	22 55 53.0	-0.1
	0.4nm,0.5s,mb3.6,baz=134,slow=8.5,SNR=5.4						
BRVK	Borovoye	69.20	327	P	P	22 55 53.1	-0.5
MAW	Mawson	83.03	201	P	P	22 57 10.7	-1.3

ISK ***23*** *22:49:09.7, 40°.53N×36°.61E, h5km, MD3.3*
DDA ***23*** *22:49:09.5, 40°.52N×36°.66E, h13km, Md3.2*
CSEM ***23*** *22:49:10.2±0.2, 40°.55N×36°.63E, h0km±1km, MD3.2, Error ellipse: s-maj=3.2km s-min=2.9km az=57.0*
ISCJB ***23*** *22:49:10.5±0.4, 40°.54N±0°.02×36°.64E±0°.03, h10km, Error ellipse: s-maj=3.9km s-min=3.2km az=147.4*
ISC 23 22:49:10.5±0.5, 40°.56N±0°.02×36°.63E±0°.03, h1km±5km, n42, σ0s66/59, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERBA	Erbaa	0.16	38	*i* P	Pg	22 49 13.8	+0.3
ERBA				*i* S	Sg	22 49 14.4	-1.2
ERBA	Erbaa	0.16	38	*i* P	Pg	22 49 13.8	+0.3
ERBA				*i* S	Sg	22 49 14.4	-1.1
TOKT	Tokat	0.25	195	PG	Pg	22 49 14.7	-0.4
TOKT				*e*SG	Sg	22 49 18.4	+0.1
TOKT	Tokat	0.25	195	*i* Pg	Pg	22 49 14.7	-0.5
TOKT				*e*Sg	Sg	22 49 18.4	+0.1
TOKA	Tokat	0.26	206	*i* P	Pg	22 49 14.9	-0.6
TOKA				*i* S	Sg	22 49 19.0	+0.2
TOKA	Tokat	0.26	206	*i* P	Pg	22 49 14.9	-0.6
TOKA				*i* S	Sg	22 49 19.0	+0.2
KVT	Kavak	0.68	320	*e*PG	Pg	22 49 23.5	-0.1
KVT				*e*SG	Sg	22 49 33.2	+0.8
KVT	Kavak	0.68	320	*e*Pg	Pg	22 49 23.5	-0.1
KVT				*e*Sg	Sg	22 49 33.2	+0.8
SVSK	Karacayir	0.70	156	PG	Pg	22 49 22.8	-1.1
SVSK				*e*SG	Sg	22 49 33.2	+0.3
SVSK	Karacayir	0.70	156	*i* Pg	Pg	22 49 22.8	-1.1
SVSK				*e*Sg	Sg	22 49 33.2	+0.2
YOZ	Yozgat	1.36	228	*e*PN	Pn	22 49 35.7	-0.8
YOZ				*e*SN	Sn	22 49 53.7	-1.4
YOZ	Yozgat	1.36	228	*e*Pn	Pn	22 49 35.7	-0.8
YOZ				*e*Sn	Sn	22 49 53.7	-1.4
DIKM	Dikmen	1.50	317	*e*PN	Pn	22 49 38.1	-0.4
DIKM				*e*SN	Sn	22 49 59.2	+0.5
DIKM	Dikmen	1.50	317	*e*Pn	Pn	22 49 38.1	-0.4
DIKM				*e*Sn	Sn	22 49 59.2	+0.5
CORM	Corum	1.57	257	*e*PN	Pn	22 49 39.0	-0.4
CORM	Corum	1.57	257	*e*Pn	Pn	22 49 39.0	-0.5
ESPY	Espiye-Giresun	1.64	77	*e*PN	Pn	22 49 39.6	-0.8
ESPY	Espiye-Giresun	1.64	77	*e*Pn	Pn	22 49 39.6	-0.7
BYBT	Boyabat	1.68	303	*e*PN	Pn	22 49 40.0	-0.9
BYBT	Boyabat	1.68	303	*e*Pn	Pn	22 49 40.0	-0.9
DARE	Darende-Malaty	1.84	150	*e*PN	Pg	22 49 46.9	+1.1
DARE	Darende-Malaty	1.84	150	*e*Pn	Pg	22 49 46.9	+1.1
SARI	SarD1z-Kayseri	1.88	178	*e*PN	Pg	22 49 46.9	+0.4
KEMA	Kemaliye	1.93	131	*i* P	Pn	22 49 44.3	0.0
KEMA				*i* S	Sg	22 50 12.5	+0.1
KEMA	Kemaliye	1.93	131	*i* P	Pn	22 49 44.3	-0.4
CDAG	Cicekdag	1.96	242	*i* P	Pn	22 49 45.4	+0.5
CDAG				*i* S	Sg	22 50 13.5	-0.1
CDAG	Cicekdag	1.96	242	*i* P	Pn	22 49 45.4	+0.5
TOS	Tosya	2.03	284	*e*PN	Pn	22 49 45.9	+0.1
TOS	Tosya	2.03	284	*e*Pn	Pn	22 49 45.9	+0.1
GUMT	Gumushane	2.18	92	*e*PN	Pn	22 49 48.3	+0.5
GUMT	Gumushane	2.18	92	*e*Pn	Pn	22 49 48.3	+0.5
EZC	Erzincan	2.24	110	*e*PN	Pn	22 49 48.8	+0.2
MYA	Malataya	2.63	147	*e*PN	Pn	22 49 54.7	+0.8
MYA	Malataya	2.63	147	*e*Pn	Pn	22 49 54.7	+0.7
BALT	Daday	2.64	293	*i* P	Pn	22 49 55.4	+1.3
BALT				*i* S	Sg	22 50 30.6	-4.6
BALT	Daday	2.64	293	*i* P	Pn	22 49 55.4	+1.3
PTK	Pertek	2.71	127	*e*PN	Pn	22 49 55.2	+0.2
PTK	Pertek	2.71	127	*e*Pn	Pn	22 49 55.2	+0.2
SVRC	Sivrice-ELAZID	3.01	136	*e*PN	Pn	22 49 59.3	+0.1
SVRC	Sivrice-ELAZID	3.01	136	*e*Pn	Pn	22 49 59.3	+0.1
SULT	Sultanhani-AKS	3.37	227	*e*PN	Pn	22 50 05.1	+0.9
SULT	Sultanhani-AKS	3.37	227	*e*Pn	Pn	22 50 05.1	+0.9

ISCJB ***23*** *23:01:48.6±3.8, 11°.3S±0°.1×163°.2E±0°.2, h50km±29km, mb4.0/9, MS3.4/2, Error ellipse: s-maj=30.3km s-min=18.0km az=11.3*
IDC ***23*** *23:01:50.4±6.5, 11°.31S×163°.27E, h52km±52km, mb3.7/6, mb1 3.9/7, mb1mx3.7/17, mbtmp3.8/7, ML4.7/1, MS3.3/3, Ms1 3.3/3, ms1mx3.1/17, Error ellipse: s-maj=42.4km s-min=26.2km az=108.0*
NEIC ***23*** *23:01:53.2±2.7, 11°.12S×163°.01E, h69km±21km, mb4.3/4, Error ellipse: s-maj=25.4km s-min=12.6km az=111.0*
ISC 23 23:01:50.8±3.7, 11°.3S±0°.1×163°.2E±0°.2, h53km±28km, n16, σ0s86/15, mb4.0/9, MS3.4/2, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	3.70	299	P	Pn	23 02 44.7	-0.7
	58nm,0.3s,baz=164,slow=4.3,SNR=13						
HNR				S	Sn	23 03 30.2	+2.4
	72nm,0.3s,baz=155,slow=19,SNR=4.1						
CTA	Charters Tower	18.52	240	LR	LR	23 10 44.6	
	comp=Z,85nm,20.6s,baz=228,slow=29						
CTAO	Charters Tower	18.52	240	*e*P	Pn	23 06 03.0	-0.6
	4.0nm,0.9s						
STKA	Stephens Creek	28.61	221	P	P	23 07 42.8	+0.7
	2.4nm,0.7s,mb4.0,baz=54,slow=10,SNR=3.2						
STKA				LR	LR	23 17 27.9	
	comp=Z,121nm,20.6s,MS3.5,baz=201,slow=33						
WRA	Warramunga Arr	29.08	249	P	P	23 07 47.1	+0.6
	1.0nm,0.8s,mb3.6,baz=80,slow=9.0,SNR=4.2						
ASAR	Alice Springs	30.48	242	P	P	23 07 58.0	-0.9
	1.1nm,0.5s,mb3.8,baz=64,slow=10.0,SNR=14						
FITZ	Fitzroy Crossi	36.93	255	*e*P	P	23 08 54.2	-0.7
	5.7nm,0.8s,mb4.5						
PETK	Petropavlovsk-	64.30	356	LR	LR	23 42 37.9	
	comp=Z,15nm,18.1s,MS3.2,baz=242,slow=38						
SONM	Songino Array	77.40	325	P	P	23 13 40.3	+0.2
	0.4nm,0.7s,mb3.5,baz=116,slow=3.4,SNR=3.8						
QSPA	South Pole Qui	78.73	180	P	P	23 13 50.5	+3.5
	1.8nm,0.8s,mb4.0						
BILL	Bilibino	79.13	1	P	P	23 13 48.7	-0.6
MAW	Mawson	83.58	202	P	P	23 14 13.2	+0.2
NVAR	Mina Array Bea	88.07	50	P	P	23 14 36.2	+0.5
	0.6nm,0.5s,mb4.1,baz=223,slow=6.1,SNR=4.8						
MK31	Makanchi Array	92.00	317	*e*P	P	23 14 53.9	+0.1
MKAR	Makanchi Array	92.00	317	P	P	23 14 53.5	-0.3
	0.6nm,0.7s,mb4.1,baz=104,slow=6.1,SNR=6.7						
EKS2	Erkin-Say	97.13	312	*e*P	P	23 15 16.8	-0.6
	1.3nm,0.8s,mb4.4						

NIED ***23*** *23:44:00, 39°.00N×140°.90E, h5km, Mw3.5 Best double couple: M=2.3300×10^14 NP1:φs=98.00000°, δ47.00000°, λ105.00000°. NP2:φs=257.00000°, δ45.00000°, λ74.00000°.*
IDC ***23*** *23:44:09.5±1.0, 39°.10N×140°.96E, h0km, mb3.7/8, mb1 3.9/8, mb1mx3.7/22, mbtmp3.7/8, ML2.8/1, Error ellipse: s-maj=28.0km s-min=17.8km az=111.0*
ISCJB ***23*** *23:44:10.8±0.4, 39°.06N±0°.03×140°.91E±0°.04, h21km±4km, mb3.8/10, Error ellipse: s-maj=5.7km s-min=4.7km az=19.9*
JMA ***23*** *23:44:11.0, 39°.03N×140°.87E, h10km±1km, M3.7 Broadband fault plane solution: P waves. NP1: φs=92.00000°, δ28.00000°, λ115.00000°. NP2: φs=245.00000°, δ65.00000°, λ77.00000°. Principal axes: T Plg68.0000°, Azm130.0000°; N Plg11.0000°, Azm250.0000°; P Plg19.0000°, Azm344.0000°;*
JMA Felt II J1.
NEIC ***23*** *23:44:15.6±1.7, 39°.03N×140°.76E, h43km±14km, mb4.1/2 Error ellipse: s-maj=14.9km s-min=9.8km az=70.0*
ISC 23 23:44:11.1±0.4, 39°.04N±0°.03×140°.89E±0°.04, h10km±3km, n28, σ0s59/34, mb3.8/10, 1C-6D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	Ichinoseki	0.27	109	P	Pg	23 44 16.6	0.0
JMK				S	Sg	23 44 20.6	+0.3
JRG	Rokugo	0.41	331	⇓P	Pg	23 44 19.1	+0.1
JRG				S	Sg	23 44 24.9	+0.4
JYK	Kaneyama	0.43	254	⇓P	Pg	23 44 19.4	-0.1
JYK				S	Sg	23 44 25.1	-0.1
JOM	Ohasama	0.53	36	⇓P	Pg	23 44 21.5	+0.1
JOM				S	Sg	23 44 28.9	+0.4
JIO	Ouri	0.69	148	⇓P	Pg	23 44 23.9	-0.4
JIO				S	Sg	23 44 33.2	-0.1
JOU	Okura	0.70	195	⇓P	Pg	23 44 24.2	-0.3
JOU				S	Sg	23 44 33.4	-0.2
JYA	Atsumi	1.02	244	⇑P	Pg	23 44 30.1	-0.6
JYS	Shirataka	1.04	218	⇓P	Pg	23 44 30.5	-0.6
JYS				S	Sg	23 44 45.2	+0.6
MAJO	Matsushiro	3.27	221	*e*Pn	Pn	23 45 02.7	+0.3
MAJO				Sn	Sn	23 45 44.5	+3.1
MJAR	Matsushiro Arr	3.27	221	Pn	Pn	23 45 04.2	+1.8
	0.9nm,0.3s,baz=28,slow=14,SNR=5.7						
MJAR				Lg		23 45 57.4	
	0.7nm,0.3s,baz=17,slow=28,SNR=8.2						
KSRS	Korea Array	10.32	265	Pn	Pn	23 46 44.2	+5.1
	0.3nm,0.3s,baz=259,slow=26,SNR=3.3						
TATO	Taipei	21.55	235	P	P	23 49 00.4	-0.2
ZALV	Zalesovo Beam	40.28	311	P	P	23 51 47.5	-0.4
	0.4nm,0.5s,mb3.4,baz=65,slow=6.8,SNR=3.4						
LSA	Lhasa	41.66	273	P	P	23 51 59.6	-0.1
MK31	Makanchi Array	42.73	300	*e*P	P	23 52 08.0	-0.2
MKAR	Makanchi Array	42.73	300	P	P	23 52 08.0	-0.2
	0.6nm,0.8s,mb3.4,baz=88,slow=10,SNR=5.0						
KSM	Kuching	46.66	224	*e*P	P	23 52 39.6	-0.3
TKM2	Tokmak 2	48.34	297	*e*P	P	23 52 52.5	-0.1
	3.4nm,1.1s,mb4.3						
BVAR	Borovoye Array	48.93	311	P	P	23 52 57.3	+0.2
	0.4nm,0.5s,mb3.7,baz=51,slow=11,SNR=3.5						
BRVK	Borovoye	48.99	311	*e*P	P	23 52 56.1	-1.3
	0.7nm,0.6s,mb3.9						
WRA	Warramunga Arr	58.99	187	P	P	23 54 10.3	-0.5
	0.7nm,0.5s,mb4.0,baz=4.7,slow=7.1,SNR=3.0						
ASAR	Alice Springs	62.72	187	P	P	23 54 36.1	0.0
	0.6nm,0.9s,mb3.7,baz=8.9,slow=7.8,SNR=2.0						
FINES	FINESS Array B	66.85	332	P	P	23 55 02.6	-0.1
	2.5nm,1.0s,mb4.2,baz=35,slow=5.6,SNR=3.3						
NOA	NORSAR Array B	72.18	337	P	P	23 55 35.6	0.0
	1.0nm,0.7s,mb3.9,baz=22,slow=5.8,SNR=2.6						
NOA	NORSAR Array B	72.18	337	P	P	23 55 35.6	0.0
PDAR	Pinedale Array	76.56	46	P	P	23 56 02.0	+0.6
	0.3nm,0.6s,mb3.4,baz=339,slow=2.2,SNR=3.0						
LPAZ	La Paz	145.98	56	PKPbc	PKPbc	00 03 52.2	+0.9
	0.8nm,0.6s,baz=236,slow=3.6,SNR=4.6						
LPAZ	La Paz	145.98	56	PKPbc	PKPbc	00 03 52.2	+0.9

CSEM ***23*** *23:55:45.3±0.4, 41°.32N×19°.17E, h10km, ML2.4, Error ellipse: s-maj=9.5km s-min=6.2km az=149.0*
SKO ***23*** *23:55:46.9, 41°.72N×19°.60E, h10km*
ISCJB ***23*** *23:55:48.9±0.4, 41°.54N±0°.02×19°.59E±0°.03, h21km±4km, Error ellipse: s-maj=3.5km s-min=3.1km az=37.9*
BEO ***23*** *23:55:49.0±0.3, 41°.71N×19°.79E, h0km, ML2.4/5*
NEIC ***23*** *23:55:50.5, 41°.69N×19°.69E, h12km, ML2.5(PDG), After PDG.*
PDG ***23*** *23:55:50.5±0.1, 41°.69N×19°.69E, h12km, ML2.5/9, Error ellipse: s-maj=0.4km s-min=0.4km az=90.0*
ROM ***23*** *23:55:51.2±0.4, 41°.64N×19°.28E, h10km, Ml2.4/3, Error ellipse: s-maj=6.0km s-min=3.6km az=64.0*
ISC 23 23:55:48.9±0.3, 41°.59N±0°.02×19°.64E±0°.03, h16km±3km, n81, σ1s13/118, 16C-6D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.30	145	⇑*i*Pg	Pg	23 55 55.2	+0.1
TIR				*i* Sg	Sg	23 56 00.9	+1.5
TIR	Tirane	0.30	145	⇑*i*Pg	Pg	23 55 55.2	+0.1
TIR				*i* Sg	Sg	23 56 00.9	+1.5
ULC	Ulcinj	0.47	322	⇑*i*Pg	Pg	23 55 58.6	+0.3
ULC				*e*Sg	Sg	23 56 05.4	+0.7
ULC	Ul

BBLS	**Lazići**	**2.28 356**	*e*Pn	**Pn**	**23 56 26.6 +0.7**
LTRZ	**Laterza**	**2.35 246**	Pg	**Pn**	**23 56 26.4 -0.4**
LTRZ			Sg	**Sn**	**23 56 53.2 -2.1**
LTRZ	**Laterza**	**2.35 246**	Pg	**Pn**	**23 56 26.4 -0.4**
LTRZ			Sg	**Sn**	**23 56 53.2 -2.1**
SG1	**Sgolgore (BA)**	**2.36 252**	*e*Sn	**Sn**	**23 56 54.5 -1.0**
AMUR	**Altamura**	**2.39 254**	Pg	**Pn**	**23 56 26.9 -0.5**
AMUR			Sg	**Sn**	**23 56 54.1 -2.2**
AMUR	**Altamura**	**2.39 254**	Pg	**Pn**	**23 56 26.9 -0.5**
AMUR			Sg	**Sn**	**23 56 54.1 -2.2**
DIVS	**Divibare**	**2.52 6**	*e*Pn	**Pn**	**23 56 28.6 -0.6**
DIVS	**Divibare**	**2.52 6**	*e*Pn	**Pn**	**23 56 28.6 -0.6**
MRVN	**Minervino Murg**	**2.65 260**	Pg	**Pn**	**23 56 30.7 -0.2**
MRVN			Sg	**Sn**	**23 57 00.3 -2.4**
	6.0nm,0.6s				
MRVN	**Minervino Murg**	**2.65 260**	Pg	**Pn**	**23 56 30.7 -0.2**
MRVN			Sg	**Sn**	**23 57 00.3 -2.4**
	6.0nm,0.6s				
MSAG	**Monte S. Angel**	**2.80 274**	Pg	**Pn**	**23 56 32.7 -0.3**
	36nm,0.2s				
MSAG	**Monte S. Angel**	**2.80 274**	Pg	**Pn**	**23 56 32.7 -0.3**
	36nm,0.2s				
VTS	**Vitosha**	**2.84 68**	*e*Pn	**Pn**	**23 56 34.3 +0.8**
PALZ	**Palazzo San Ge**	**2.85 258**	Pg	**Pn**	**23 56 34.3 +0.6**
PALZ	**Palazzo San Ge**	**2.85 258**	Pg	**Pn**	**23 56 34.3 +0.6**
ACER	**Acerenza**	**2.90 255**	Pg	**Pn**	**23 56 34.7 +0.3**
ACER	**Acerenza**	**2.90 255**	Pg	**Pn**	**23 56 34.7 +0.3**
SGRT	**San Giovanni R**	**2.92 274**	Pg	**Pn**	**23 56 34.3 -0.4**
SGRT			Sg	**Sn**	**23 57 06.6 -2.9**
SGRT	**San Giovanni R**	**2.92 274**	Pg	**Pn**	**23 56 34.3 -0.4**
SGRT			Sg	**Sn**	**23 57 06.6 -2.9**
MRLC	**Muro Lucano**	**3.24 256**	Pg	**Pn**	**23 56 39.4 +0.3**
MRLC	**Muro Lucano**	**3.24 256**	Pg	**Pn**	**23 56 39.4 +0.3**
SGO	**Sicignano**	**3.43 254**	Pg	**Pn**	**23 56 41.8 +0.1**
	3.0nm,0.2s				
SGO	**Sicignano**	**3.43 254**	Pg	**Pn**	**23 56 41.8 +0.1**
	3.0nm,0.2s				
CDRU	**Civita di Ruta**	**3.46 253**	Pg	**Pn**	**23 56 41.9 -0.2**
	7.0nm,0.2s				
CDRU	**Civita di Ruta**	**3.46 253**	Pg	**Pn**	**23 56 41.9 -0.2**
	7.0nm,0.2s				
MCRV	**Calabrutti - M**	**3.47 258**	Pg	**Pn**	**23 56 41.9 -0.3**
MCRV	**Calabrutti - M**	**3.47 258**	Pg	**Pn**	**23 56 41.9 -0.3**
CSSN	**Cassano Irpino**	**3.56 260**	Pg	**Pn**	**23 56 44.3 +0.9**
	3.0nm,0.3s				
CSSN	**Cassano Irpino**	**3.56 260**	Pg	**Pn**	**23 56 44.3 +0.9**
	3.0nm,0.3s				
SGG	**Gregorio Mates**	**3.96 269**	Pg	**Pn**	**23 56 50.5 +1.6**
SGG	**Gregorio Mates**	**3.96 269**	Pg	**Pn**	**23 56 50.5 +1.6**
VAGA	**Valle Agricola**	**4.06 269**	Pg	**Pn**	**23 56 51.5 +1.1**
VAGA	**Valle Agricola**	**4.06 269**	Pg	**Pn**	**23 56 51.5 +1.1**
NVLJ	**Novalja**	**4.58 312**	*e*Pn	**Pn**	**23 56 57.3 -0.3**
NVLJ			Sn	**Sn**	**23 57 48.4 -2.0**
TERO	**Teramo**	**4.61 285**	Pg	**Pn**	**23 56 58.5 +0.7**
TERO	**Teramo**	**4.61 285**	Pg	**Pn**	**23 56 58.5 +0.7**
NRCA	**Norcia**	**5.00 287**	Pg	**Pn**	**23 57 04.0 +0.7**
	4.0nm,0.6s				
NRCA	**Norcia**	**5.00 287**	Pg	**Pn**	**23 57 04.0 +0.7**
	4.0nm,0.6s				

PLV 24 00:04:17.3±1.1, 20°.40N×107°.57E, h10km±6km, MD3.7, Gulf of Tongking

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLV	**Phu-Lien**	**0.97**	**295**	*e*Pn	Pn	00 04 35.5	-1.4
PLV				*e*Pg	Pg	00 04 36.3	+0.3
PLV				*e*Sg	Sg	00 04 48.9	+0.3
DSV	**Doi Son**	**1.51**	**277**	*e*Pn	Pn	00 04 44.5	+0.2
DSV				*e*Pg	Pg	00 04 46.5	+0.2
DSV				*e*Sg	Sg	00 05 06.1	+0.3
BGV	**Bac-Giang**	**1.54**	**306**	*e*Pn	Pn	00 04 45.1	+0.3
BGV				*e*Pg	Pg	00 04 47.1	+0.3
BGV				*e*Sg	Sg	00 05 06.9	+0.1
MTZV	**Met**	**1.62**	**315**	*e*Pn	Pn	00 04 45.4	-0.5
MTZV				*e*Pg	Pg	00 04 47.9	-0.5
MTZV				*e*Sg	Sg	00 05 09.5	+0.1
HNV	**Hanoi**	**1.78**	**292**	*e*Pn	Pn	00 04 48.7	+0.6
HNV				*e*Pg	Pg	00 04 52.2	+0.7
HNV				*e*Sg	Sg	00 05 16.3	+1.7

*BEO **24** 00:04:31.9±0.3, 41°.72N×19°.98E, h0km, ML2.5/5*
*CSEM **24** 00:04:32.0±0.3, 41°.62N×19°.70E, h15km, ML2.5, Error ellipse: s-maj=7.5km s-min=4.9km az=51.0*
*ISCJB **24** 00:04:32.8±0.5, 41°.58N±0°.03×19°.68E±0°.04, h22km±4km, Error ellipse: s-maj=5.9km s-min=3.2km az=44.3*
*PDG **24** 00:04:33.6±0.2, 41°.69N×19°.71E, h11km, ML2.3/8, Error ellipse: s-maj=0.7km s-min=0.6km az=90.0*
ISC 24 00:04:32.7±0.4, 41°.61N±0°.02×19°.71E±0°.03, h19km±3km, n45, σ1s00/83, 18C-8D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.29**	**156**	⇑*i*Pg	**Pg**	**00 04 38.4**	**-0.7**
TIR				*i* Sg	**Sg**	**00 04 44.3**	**+0.9**
TIR	**Tirane**	**0.29**	**156**	⇑*i*Pg	**Pg**	**00 04 38.4**	**-0.7**
TIR				*i* Sg	**Sg**	**00 04 44.3**	**+0.9**
PUK	**Puka**	**0.45**	**18**	PG	**Pg**	**00 04 41.1**	**-0.9**
PUK				SG	**Sg**	**00 04 49.3**	**+1.1**
PUK	**Puka**	**0.45**	**18**	*i* Pg	**Pg**	**00 04 41.1**	**-0.9**
PUK				*i* Sg	**Sg**	**00 04 49.3**	**+1.1**
ULC	**Ulcinj**	**0.49**	**316**	⇓*i*Pg	**Pg**	**00 04 42.0**	**-0.6**
ULC				*e*Sg	**Sg**	**00 04 49.1**	**-0.2**
ULC	**Ulcinj**	**0.49**	**316**	⇓*i*Pg	**Pg**	**00 04 42.0**	**-0.6**
ULC				*e*Sg	**Sg**	**00 04 49.1**	**-0.2**
BCI	**Bajram Curri**	**0.80**	**19**	PG	**Pg**	**00 04 46.9**	**-1.5**
BCI				SG	**Sg**	**00 04 59.6**	**+0.5**
BCI	**Bajram Curri**	**0.80**	**19**	*e*Pg	**Pg**	**00 04 46.9**	**-1.5**
BCI				*i* Sg	**Sg**	**00 04 59.6**	**+0.5**
PDG	**Podgorica**	**0.88**	**338**	⇓*i*Pg	**Pg**	**00 04 48.9**	**-1.0**
PDG				*e*Sg	**Sg**	**00 05 01.8**	**+0.2**
TTG	**Podgorica**	**0.88**	**338**	⇓*i*Pg	**Pg**	**00 04 48.9**	**-1.0**
TTG				*e*Sg	**Sg**	**00 05 01.8**	**+0.2**
BUM	**Brajici-Budva**	**0.92**	**319**	⇑*i*Pg	**Pg**	**00 04 49.9**	**-0.6**
BUM				*e*Sg	**Sg**	**00 05 03.3**	**+0.6**
BUM	**Brajici-Budva**	**0.92**	**319**	⇑*i*Pg	**Pg**	**00 04 49.9**	**-0.6**
BUM				*e*Sg	**Sg**	**00 05 03.3**	**+0.6**
OHR	**Ohrid**	**0.96**	**121**	*e*Pg	**Pg**	**00 04 51.5**	**+0.1**
OHR				*i* Sg	**Sg**	**00 05 04.4**	**+0.3**
PVY	**Plav**	**1.00**	**11**	⇓*i*Pg	**Pg**	**00 04 50.8**	**-1.4**
PVY				*e*Sg	**Sg**	**00 05 05.5**	**+0.1**
PVY	**Plav**	**1.00**	**11**	⇓*i*Pg	**Pg**	**00 04 50.8**	**-1.4**
PVY				*e*Sg	**Sg**	**00 05 05.5**	**+0.1**
KRUS	**Krusevo**	**1.18**	**101**	*i* Pg	**Pn**	**00 04 52.8**	**-1.3**
KRUS				*i* Sg	**Sg**	**00 05 11.2**	**+0.1**
HCY	**Herceg Novi**	**1.23**	**313**	⇑*i*Pg	**Pn**	**00 04 54.8**	**0.0**
HCY				*e*Sg	**Sg**	**00 05 13.6**	**+1.0**
HCY	**Herceg Novi**	**1.23**	**313**	⇑*i*Pg	**Pn**	**00 04 54.8**	**0.0**
HCY				*e*Sg	**Sg**	**00 05 13.6**	**+1.0**
BEY	**Berane**	**1.27**	**6**	⇓*i*Pg	**Pn**	**00 04 55.6**	**+0.3**
BEY				*e*Sg	**Sg**	**00 05 14.5**	**+0.7**
IVA	**Berane**	**1.27**	**6**	⇓*i*Pg	**Pn**	**00 04 55.6**	**+0.3**
IVA				*e*Sg	**Sg**	**00 05 14.5**	**+0.7**
KBN	**Korca**	**1.28**	**140**	PN	**Pn**	**00 04 56.6**	**+1.1**
KBN	**Korca**	**1.28**	**140**	*e*Pn	**Pn**	**00 04 56.6**	**+1.1**
NKY	**Niksic**	**1.31**	**337**	⇑*i*Pg	**Pn**	**00 04 56.6**	**+0.7**
NKY				*e*Sg	**Sg**	**00 05 16.2**	**+1.0**
NKY	**Niksic**	**1.31**	**337**	⇑*i*Pg	**Pn**	**00 04 56.6**	**+0.7**
NKY				*e*Sg	**Sg**	**00 05 16.2**	**+1.0**
BIA	**Bitola**	**1.35**	**115**	*i* Pg	**Pn**	**00 04 56.6**	**+0.1**
BIA				*i* Sg	**Sg**	**00 05 16.4**	**0.0**
TREB	**Trebinje**	**1.50**	**318**	⇑*i*Pg	**Pn**	**00 04 58.6**	**+0.1**
TREB				*i* Sg	**Sg**	**00 05 21.5**	**+0.4**
TREB	**Trebinje**	**1.50**	**318**	⇑*i*Pg	**Pn**	**00 04 58.6**	**+0.1**
TREB				*i* Sg	**Sg**	**00 05 21.5**	**+0.4**
BRY	**Bratogost**	**1.55**	**327**	⇑*i*Pg	**Pn**	**00 05 00.6**	**+1.4**
BRY				*e*Sg	**Sg**	**00 05 23.4**	**+0.6**
BRY	**Bratogost**	**1.55**	**327**	⇑*i*Pg	**Pn**	**00 05 00.6**	**+1.4**
BRY				*e*Sg	**Sg**	**00 05 23.4**	**+0.6**
UPM	**Unac-Piva**	**1.70**	**340**	⇑*i*Pn	**Pn**	**00 05 02.8**	**+1.6**
UPM				*e*Sn	**Sg**	**00 05 26.8**	**-0.7**
UPM	**Unac-Piva**	**1.70**	**340**	⇑*i*Pn	**Pn**	**00 05 02.8**	**+1.6**
UPM				*e*Sn	**Sg**	**00 05 26.8**	**-0.7**
PLE	**Pljevlja**	**1.73**	**352**	⇑*i*Pn	**Pn**	**00 05 03.8**	**+2.1**
PLE				*e*Sn	**Sg**	**00 05 27.6**	**-1.0**
PLE	**Pljevlja**	**1.73**	**352**	⇑*i*Pn	**Pn**	**00 05 03.8**	**+2.1**
PLE				*e*Sn	**Sg**	**00 05 27.6**	**-1.0**
STON	**Ston**	**1.95**	**311**	*e*Pn	**Pn**	**00 05 04.4**	**-0.3**
STON					**Sn**	**00 05 28.3**	**-0.4**

BARS	**Barje**	**1.98 52**	*e*Pn	**Pn**	**00 05 03.5 -1.6**
BARS			*i* Sg	**Sn**	**00 05 28.0 -1.3**
VAY	**Valandovo**	**2.17 97**	*e*Pn	**Pn**	**00 05 07.3 -0.5**
BBLS	**Lazići**	**2.27 354**	⇑*i*Pn	**Pn**	**00 05 10.0 +1.0**
BBLS			*i* Sg	**Sg**	**00 05 41.8 -3.8**
BBLS	**Lazići**	**2.27 354**	⇑*i*Pn	**Pn**	**00 05 10.0 +1.0**
DIVS	**Divibare**	**2.50 5**	*e*Pn	**Pn**	**00 05 11.9 -0.3**
DIVS	**Divibare**	**2.50 5**	*e*Pn	**Pn**	**00 05 11.9 -0.3**
ZAPS	**Zavoj**	**2.73 52**	*e*Pn	**Pn**	**00 05 14.4 -1.0**
ZAPS			*i* Sg	**Sn**	**00 05 51.1 +3.2**
VTS	**Vitosha**	**2.78 68**	*e*Pn	**Pn**	**00 05 15.9 -0.3**
VTS			*i* Sg	**Sn**	**00 05 51.7 +2.5**
VTS	**Vitosha**	**2.78 68**	*e*Pn	**Pn**	**00 05 15.9 -0.3**
NVLJ	**Novalja**	**4.61 311**	*e*Pn	**Pn**	**00 05 40.4 -0.9**
NVLJ			Sn	**Sn**	**00 06 31.5 -2.7**
NVLJ	**Novalja**	**4.61 311**	*e*Pn	**Pn**	**00 05 40.3 -0.9**
NVLJ			Sn	**Sn**	**00 06 31.5 -2.7**

*ISCJB **24** 00:19:10.8±0.6, 41°.91N±0°.02×22°.87E±0°.07, h10km±9km, Error ellipse: s-maj=9.3km s-min=4.0km az=2.7*
*SKO **24** 00:19:11.1, 41°.89N×22°.91E, h15km, M1.4, ML1.7*
*CSEM **24** 00:19:11.0±0.3, 41°.89N×22°.87E, h5km, ML2.6/3, Error ellipse: s-maj=8.2km s-min=4.3km az=67.0*
*BEO **24** 00:19:12.5±1.3, 41°.89N×22°.88E, h0km, ML1.9/3*
*THE **24** 00:19:13.7, 41°.77N×23°.00E, h9km±1km, ML2.6/3, Error ellipse: s-maj=1.6km s-min=0.5km az=206.0*
ISC 24 00:19:11.3±0.5, 41°.89N±0°.02×22°.91E±0°.07, h7km±8km, n23, σ0s79/38, 1C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.62**	**205**	*i* Pg	**Pg**	**00 19 24.0**	**+0.8**
VAY				*i* Sg	**Sg**	**00 19 32.3**	**+1.1**
VAY				*e*Lg		00 19 32.7	
	comp=E,32nm,0.3s						
VAY				*e*Lg		00 19 33.0	
	comp=N,26nm,0.4s						
VAY	**Valandovo**	**0.62**	**205**	P	**Pg**	**00 19 24.1**	**+0.9**
VAY				S	**Sg**	**00 19 32.2**	**+0.9**
VAY	**Valandovo**	**0.62**	**205**	P	**Pg**	**00 19 24.1**	**+0.9**
VTS	**Vitosha**	**0.74**	**17**	⇑*i*Pg	**Pg**	**00 19 25.9**	**+0.4**
VTS				*e*Sg	**Sg**	**00 19 35.5**	**+0.4**
VTS	**Vitosha**	**0.74**	**17**	P	**Pg**	**00 19 25.9**	**+0.4**
VTS				S	**Sg**	**00 19 35.7**	**+0.6**
VTS	**Vitosha**	**0.74**	**17**	P	**Pg**	**00 19 25.9**	**+0.4**
VTS				*e*Sg	**Sg**	**00 19 35.5**	**+0.4**
SRS	**Serrai**	**0.92**	**146**	P	**Pg**	**00 19 28.5**	**-0.4**
SRS				S	**Sg**	**00 19 40.3**	**-0.6**
SRS	**Serrai**	**0.92**	**146**	P	**Pg**	**00 19 28.5**	**-0.4**
SOH	**Sokhos**	**1.11**	**163**	P	**Pg**	**00 19 32.4**	**-0.2**
SOH				S	**Sg**	**00 19 46.8**	**-0.2**
SOH	**Sokhos**	**1.11**	**163**	P	**Pg**	**00 19 32.4**	**-0.2**
SOH				S	**Sg**	**00 19 46.8**	**-0.2**
BARS	**Barje**	**1.24**	**319**	*e*Pg	**Pg**	**00 19 34.0**	**-1.0**
BARS				*e*Sg	**Sg**	**00 19 51.2**	**+0.2**
BARS	**Barje**	**1.24**	**319**	*e*Pg	**Pg**	**00 19 34.0**	**-1.0**
BARS				*e*Sg	**Sg**	**00 19 51.2**	**+0.2**
PLD	**Plovdiv**	**1.35**	**80**	P	**Pn**	**00 19 37.4**	**+0.8**
PLD	**Plovdiv**	**1.35**	**80**	P	**Pn**	**00 19 37.4**	**+0.8**
ZAPS	**Zavoj**	**1.40**	**352**	*e*Pg	**Pg**	**00 19 38.1**	**-0.1**
ZAPS				*e*Sg	**Sg**	**00 19 57.1**	**+0.7**
KAVA	**Kavala**	**1.50**	**126**	P	**Pn**	**00 19 38.4**	**-0.1**
KAVA				S	**Sn**	**00 19 57.3**	**-1.0**
KAVA	**Kavala**	**1.50**	**126**	P	**Pn**	**00 19 38.4**	**-0.1**
KAVA				S	**Sn**	**00 19 57.3**	**-1.0**
NISS		**1.68**	**335**	*e*Pg	**Pg**	**00 19 41.7**	**-1.7**
NISS				*e*Sg	**Sg**	**00 20 04.7**	**-0.4**
NISS		**1.68**	**335**	*e*Pg	**Pg**	**00 19 41.7**	**-1.7**
NISS				*e*Sg	**Sg**	**00 20 04.7**	**-0.4**
OUR	**Ouranopolis**	**1.75**	**152**	P	**Pn**	**00 19 41.5**	**-0.5**
OUR	**Ouranopolis**	**1.75**	**152**	P	**Pn**	**00 19 41.5**	**-0.5**
RDO	**Rodhopi**	**2.10**	**110**	P	**Pn**	**00 19 48.6**	**+1.7**
RDO	**Rodhopi**	**2.10**	**110**	P	**Pn**	**00 19 48.6**	**+1.7**

*IDC **24** 00:21:13.3±1.1, 0°.69N×97°.23E, h0km, mb4.1/8, mb1 4.2/10, mb1mx3.9/22, mbtmp4.0/10, ML4.1/2, Error ellipse: s-maj=23.4km s-min=19.4km az=89.0*
*NEIC **24** 00:21:18.3±2.3, 0°.81N×97°.38E, h32km±17km, mb4.0/3, Error ellipse: s-maj=9.5km s-min=5.6km az=74.0*
*ISCJB **24** 00:21:18.3±1.0, 0°.83N±0°.06×97°.36E±0°.08, h49km±8km, mb4.0/11, Error ellipse: s-maj=15.4km s-min=6.9km az=151.1*
*DJA **24** 00:21:21, 1°.01N×97°.43E, h38km, MLv4.3/11*
ISC 24 00:21:19.1±1.0, 0°.82N±0°.05×97°.33E±0°.08, h37km±9km, n41, σ0s78/42, mb4.0/11, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.54**	**27**	P	**Pn**	**00 21 29.7**	**-0.6**
GSI				S	**Sn**	**00 21 39.1**	**+0.9**
MNSI	**Mandailing Nat**	**2.25**	**91**	P	**Pn**	**00 21 53.2**	**-0.6**
TPTI		**2.43**	**356**	P	**Pn**	**00 21 55.3**	**-1.1**
PSI	**Prapat**	**2.53**	**39**	Pn	**Pn**	**00 21 56.6**	**-1.1**
	5.9nm,0.3s,baz=264,slow=8.2,SNR=20						
PSI				Lg		00 22 37.7	
	11nm,0.3s,baz=141,slow=18,SNR=8.2						
SISI	**Saibi**	**2.76**	**140**	P	**Pn**	**00 22 07.0**	**+6.1**
PPI	**Padang Panjang**	**3.31**	**112**	P	**Pn**	**00 22 09.1**	**+0.6**
PDSI	**Padang**	**3.57**	**119**	P	**Pn**	**00 22 15.9**	**+3.9**
BKNI	**Bangkinang**	**3.74**	**97**	P	**Pn**	**00 22 16.0**	**+1.7**
SDSI	**Sungai Dareh**	**4.45**	**113**	P	**Pn**	**00 22 25.0**	**+0.9**
IPM	**Ipoh**	**5.18**	**45**	P	**Pn**	**00 22 34.4**	**+0.2**
KULM	**Kulim**	**5.54**	**37**	*e*Pn	**Pn**	**00 22 38.3**	**-0.8**
	14nm,0.6s						
KULM	**Kulim**	**5.54**	**37**	P	**Pn**	**00 22 38.7**	**-0.4**
	0.2nm41nm,2.1s						
MYKOM	**Kota Tinggi**	**6.59**	**82**	P	**Pn**	**00 22 54.0**	**+0.5**
	0.2nm26nm,2.0s						
MNAI	**Manna**	**7.62**	**133**	P	**Pn**	**00 23 11.3**	**+3.6**
	1.0nm197nm,1.1s						
MDSI	**Maura Dua**	**8.63**	**128**	P	**Pn**	**00 23 20.9**	**-0.7**
COCO	**West Island**	**12.93**	**182**	*e*Pn	**Pn**	**00 24 20.2**	**-0.3**
CMAR	**Chiang Mai Arr**	**17.60**	**5**	P	**Pn**	**00 25 20.1**	**-1.5**
	0.7nm,0.3s,baz=196,slow=11,SNR=7.4						
LSA	**Lhasa**	**29.32**	**349**	*e*P	**P**	**00 27 19.1**	**+0.8**
	3.3nm,0.6s,mb4.2						
FITZ	**Fitzroy Crossi**	**33.60**	**125**	P	**P**	**00 27 54.9**	**-1.3**
WRA	**Warramunga Arr**	**41.72**	**122**	P	**P**	**00 29 04.2**	**-0.6**
	0.7nm,0.5s,mb3.6,baz=303,slow=8.8,SNR=1.8						
WRAB	**Tennant Creek**	**41.73**	**122**	*e*P	**P**	**00 29 04.0**	**-0.9**
	1.6nm,0.7s,mb3.8						
KBL	**Kabul**	**42.71**	**325**	*e*P	**P**	**00 29 13.1**	**+0.4**
ASAR	**Alice Springs**	**43.06**	**127**	P	**P**	**00 29 15.6**	**-0.1**
	0.8nm,0.6s,mb3.6,baz=299,slow=7.7,SNR=8.9						
UCH	**Uchtor**	**46.05**	**336**	*e*P	**P**	**00 29 40.6**	**+1.3**
	1.2nm,0.6s,mb4.0						
KSRS	**Korea Array**	**46.09**	**34**	P	**P**	**00 29 39.5**	**-0.1**
	1.7nm,0.7s,mb4.1,baz=213,slow=8.9,SNR=6.7						
TKM2	**Tokmak 2**	**46.22**	**338**	*e*P	**P**	**00 29 39.9**	**-0.7**
EKS2	**Erkin-Say**	**46.71**	**336**	P	**P**	**00 29 44.1**	**-0.4**
SONM	**Songino Array**	**47.49**	**8**	P	**P**	**00 29 51.0**	**+0.6**
	0.7nm,0.5s,mb3.9,baz=186,slow=9.0,SNR=5.3						
MK31	**Makanchi Array**	**47.64**	**346**	*e*P	**P**	**00 29 52.0**	**+0.3**
MKAR	**Makanchi Array**	**47.64**	**346**	P	**P**	**00 29 52.8**	**+1.1**
	1.7nm,0.5s,mb4.4,baz=145,slow=8.0,SNR=19						
GUMO	**Guam**	**48.72**	**73**	P	**P**	**00 29 59.9**	**-0.7**
KURK	**Kurchatov**	**52.19**	**345**	*e*P	**P**	**00 30 26.1**	**0.0**
ZAA0	**Zalesovo Array**	**53.95**	**351**	*e*P	**P**	**00 30 39.3**	**+0.3**
ZALV	**Zalesovo Beam**	**53.95**	**351**	P	**P**	**00 30 39.5**	**+0.5**
	2.4nm,0.4s,mb4.5,baz=182,slow=5.8,SNR=14						
BVAR	**Borovoye Array**	**56.65**	**341**	P	**P**	**00 30 58.6**	**+0.1**
	0.5nm,0.5s,mb3.8,baz=94,slow=5.9,SNR=4.0						
BRVK	**Borovoye**	**56.72**	**341**	P	**P**	**00 30 58.7**	**-0.3**
ABKAR	**Akbulak array**	**57.91**	**332**	*e*P	**P**	**00 31 07.4**	**0.0**
GNI	**Garni**	**61.66**	**316**	*e*P	**P**	**00 31 33.3**	**-0.2**
LBTB	**Lobatse**	**73.84**	**244**	P	**P**	**00 32 50.7**	**+0.1**
ARCES	**ARCESS Array B**	**82.94**	**340**	P	**P**	**00 33 40.5**	**+0.6**
	1.7nm,0.9s,mb4.1,baz=149,slow=2.6,SNR=4.3						
ARCES	**ARCESS Array B**	**82.94**	**340**	P	**P**	**00 33 40.5**	**+0.6**

*IDC **24** 00:24:04.0±5.3, 44°.07N×129°.15W, h0km, mb3.1/2, mb1 3.6/5, mb1mx3.4/25, mbtmp3.2/5, ML3.4/2, Error ellipse: s-maj=88.3km s-min=30.7km az=65.0*
*NEIC **24** 00:24:08.8±3.5, 44°.65N×129°.00W, h10km, mb3.6/2, Error ellipse: s-maj=42.2km s-min=10.3km az=85.0*
ISC 24 00:23:59.3±1.8, 44°.39N±0°.07×130°.0W±0°.2, h10km, n27, σ1s48/32, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RNO	**Roman Nose**	**4.52**	**94**	P	**Pn**	**00 25 04.9**	**-2.8**
COR	**Corvallis**	**4.78**	**85**	*e*Pn	**Pn**	**00 25 09.1**	**-2.2**
HSO	**Harness Mounta**	**5.05**	**97**	P	**Pn**	**00 25 11.3**	**-3.7**
NLWA	**Neilton Lookou**	**5.21**	**53**	*e*Pn	**Pn**	**00 25 17.0**	**-0.2**
NLWA				Sn	**Sn**	**00 26 15.8**	**-1.5**
HUMO	**Hull Mountain**	**5.41**	**107**	*e*Pn	**Pn**	**00 25 14.9**	**-5.1**
HUMO				*e*Sn	**Sn**	**00 26 08.0**	**-14**
HDW	**Hoodsport**	**5.82**	**54**	P	**Pn**	**00 25 25.8**	**+0.3**
GNW	**Green Mountain**	**5.91**	**55**	*e*Pn	**Pn**	**00 25 26.1**	**-0.7**
	3.1nm,0.5s						
GNW				Sn	**Sn**	**00 26 38.7**	**+4.2**
YBH	**Yreka Blue Hor**	**5.95**	**114**	Pn	**Pn**	**00 25 26.3**	**-1.1**
	0.1nm,0.3s,baz=309,slow=13,SNR=6.2						
LON	**Longmire**	**6.20**	**65**	*e*Pn	**Pn**	**00 25 29.6**	**-1.2**
	5.2nm,0.8s						
LON				Sn	**Sn**	**00 26 42.8**	**+1.1**
JCW	**Jim Creek**	**6.75**	**53**	*e*Pn	**Pn**	**00 25 39.0**	**+0.8**
JCW				Sn	**Sn**	**00 26 58.1**	**+3.0**
RPW	**Rockport**	**7.12**	**52**	*e*Pn	**Pn**	**00 25 43.3**	**0.0**
	7.4nm,0.3s						
WVOR	**Wild Horse Val**	**8.49**	**99**	*e*Pn	**Pn**	**00 26 03.4**	**+1.2**
BMO	**Blue Mountains**	**9.05**	**83**	Pn	**Pn**	**00 26 07.7**	**-2.2**
BMN	**Battle Mountai**	**10.23**	**108**	Pn	**Pn**	**00 26 29.1**	**+3.0**
NVAR	**Mina Array Bea**	**10.60**	**120**	Pn	**Pn**	**00 26 29.4**	**-1.8**
	baz=275,slow=14,SNR=5.6						
BSMT	**Bassoo Peak**	**11.10**	**67**	*e*Pn	**Pn**	**00 26 38.6**	**+0.7**
HLID	**Hailey**	**11.25**	**89**	*e*Pn	**Pn**	**00 26 41.2**	**+1.1**
	4.1nm,1.1s						
MSO	**Missoula**	**11.50**	**72**	Pn	**Pn**	**00 26 42.0**	**-1.3**
SLMT	**Seeley Lake**	**11.85**	**70**	*e*Pn	**Pn**	**00 26 49.3**	**+1.0**
	6.7nm,0.9s						
MSU	**Marysvale**	**14.58**	**108**	Pn	**Pn**	**00 27 26.6**	**+1.1**
PDAR	**Pinedale Array**	**14.89**	**89**	Pn	**Pn**	**00 27 31.7**	**+2.0**
	0.0nm,0.3s,baz=32,slow=45,SNR=2.0						
PFO	**Pinyon Flat Ob**	**15.03**	**131**	Pn	**Pn**	**00 27 36.2**	**+4.6**
SRU	**San Rafael**	**15.44**	**103**	*e*Pn	**Pn**	**00 27 39.4**	**+2.4**
	6.3nm,0.9s						
WUAZ	**Wupatki**	**16.77**	**116**	*e*Pn	**Pn**	**00 27 57.8**	**+3.6**
	1.6nm,0.4s						
YKA	**Yellowknife Ar**	**20.21**	**21**	P	**P**	**00 28 41.5**	**+7.6**
	1.0nm,0.9s,baz=215,slow=11,SNR=3.8						
FFC	**Flin Flon**	**20.76**	**50**	*e*P	**P**	**00 28 41.2**	**+1.2**
	4.7nm,1.0s						
TXAR	**Lajitas Array**	**25.72**	**117**	P	**P**	**00 29 29.3**	**-0.4**
	0.1nm,0.3s,baz=298,slow=5.8,SNR=2.9						

*IDC **24** 00:25:14.0±0.7, 12°.59N×142°.57E, h104km±6km, mb4.0/15, mb1 4.1/15, mb1mx4.0/24, mbtmp4.0/15, Error ellipse: s-maj=23.7km s-min=12.3km az=84.0*
*BJI **24** 00:25:14.8, 12°.61N×142°.70E, h131km, mB4.9/6, mb4.8/16*
*ISCJB **24** 00:25:14.5±1.0,

comp=Z,0.5nm,0.5s,mb3.8,baz=250,slow=4.5,SNR=5.1
NVAR pP pP 00 38 27.4 -2.7
comp=Z,0.3nm,0.5s,baz=266,slow=2.4,SNR=2.0
KAF Kangasniemi 90.72 335 *ep* **P 00 38 01.4 -3.0**
comp=Z,2.7nm,0.7s,mb4.5
KAF Kangasniemi 90.72 335 *ep* **P 00 38 01.4 -3.0**
comp=Z,2.7nm,0.7s,mb4.5
FINES FINESS Array B 91.14 335 P **P 00 38 05.1 -1.3**
comp=Z,2.7nm,0.5s,mb4.6,baz=74,slow=3.8,SNR=15
LPAZ La Paz 150.07 101 PKPbc PKPbc 00 44 55.1 +2.2
comp=Z,2.9nm,0.5s,baz=291,slow=2.1,SNR=18
LPAZ pPKPbc pPKPbc 00 45 21.6 -4.1
comp=Z,1.0nm,0.6s,baz=18,slow=5.0,SNR=2.6

*ATH **24** 00:38:31.6, 38°.87N×27°.24E, h37km±10km, MD3.1/3*
*DDA **24** 00:38:31.6, 38°.91N×27°.25E, h7km±2km, Md3.0*
*ISK **24** 00:38:31.3, 38°.92N×27°.23E, h4km, MD3.1*
*ISCJB **24** 00:38:31.8±0.4, 38°.90N±0°.02×27°.22E±0°.02, h7km±4km, Error ellipse: s-maj=4.1km s-min=3.0km az=14.2*
*CSEM **24** 00:38:32.1±0.1, 38°.89N×27°.20E, h10km, MD3.0, Error ellipse: s-maj=3.1km s-min=3.0km az=174.0*
*THE **24** 00:38:32.2, 38°.87N×27°.21E, h5km±1km, ML3.1/4, Error ellipse: s-maj=1.2km s-min=0.3km az=230.0*
ISC 24 00:38:32.4±0.4, 38°.90N±0°.02×27°.23E±0°.02, h9km±4km, n77, ∠0°82/105, 1C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKS	**Akhisar**	**0.46**	**92**	PG	**Pg**	**00 38 40.9**	**-0.4**
AKS				*e*SG	**Sg**	**00 38 47.4**	**+0.1**
AKS	**Akhisar**	**0.46**	**92**	*i* Pg	**Pg**	**00 38 40.9**	**-0.4**
AKS				*e*Sg	**Sg**	**00 38 47.4**	**+0.1**
AKHS	**Akhisar**	**0.46**	**92**	*i* P	**Pg**	**00 38 40.9**	**-0.4**
AKHS				*i* S	**Sg**	**00 38 47.4**	**+0.1**
AKHS	**Akhisar**	**0.46**	**92**	*i* P	**Pg**	**00 38 40.9**	**-0.4**
AKHS				*i* S	**Sg**	**00 38 47.4**	**+0.1**
IZM	**Izmir**	**0.50**	**177**	PG	**Pg**	**00 38 42.5**	**+0.4**
IZM				*e*SG	**Sg**	**00 38 50.4**	**+1.7**
IZM	**Izmir**	**0.50**	**177**	*i* Pg	**Pg**	**00 38 42.5**	**+0.4**
IZM				*e*Sg	**Sg**	**00 38 50.4**	**+1.7**
BLCB	**Balcova**	**0.53**	**196**	PG	**Pg**	**00 38 42.0**	**-0.6**
BLCB				*e*SG	**Sg**	**00 38 50.5**	**+0.8**
BLCB	**Balcova**	**0.53**	**196**	P	**Pg**	**00 38 42.0**	**-0.7**
BLCB				S	**Sg**	**00 38 49.7**	**0.0**
BLCB	**Balcova**	**0.53**	**196**	*i* Pg	**Pg**	**00 38 42.1**	**-0.6**
BLCB				S	**Sg**	**00 38 49.7**	**0.0**
BLCB				*e*Sg	**Sg**	**00 38 50.5**	**+0.8**
AYVA	**Ayvalik**	**0.58**	**315**	*i* P	**Pg**	**00 38 43.5**	**-0.1**
AYVA				*i* S	**Sg**	**00 38 51.7**	**+0.4**
AYVA	**Ayvalik**	**0.58**	**315**	*i* P	**Pg**	**00 38 43.5**	**-0.2**
AYVA				*i* S	**Sg**	**00 38 51.7**	**+0.4**
PRK	**Paraskevi**	**0.82**	**295**	P	**Pg**	**00 38 47.9**	**-0.2**
PRK				S	**Sg**	**00 39 00.2**	**+1.4**
PRK	**Paraskevi**	**0.82**	**295**	*e*PN	**Pg**	**00 38 48.4**	**+0.3**
PRK				*e*SN	**Sg**	**00 38 59.8**	**+1.0**
PRK	**Paraskevi**	**0.82**	**295**	P	**Pg**	**00 38 47.9**	**-0.2**
PRK	**Paraskevi**	**0.82**	**295**	*e*Pn	**Pg**	**00 38 48.4**	**+0.3**
PRK				*e*Sn	**Sg**	**00 38 59.8**	**+1.0**
PRK				S	**Sg**	**00 39 00.2**	**+1.4**
BALY	**Balya**	**0.89**	**20**	⇓*i* P	**Pg**	**00 38 49.0**	**-0.5**
BALY				*i* S	**Sg**	**00 39 01.5**	**+0.3**
BALY	**Balya**	**0.89**	**20**	*i* P	**Pg**	**00 38 49.0**	**-0.5**
BALY				*i* S	**Sg**	**00 39 01.5**	**+0.3**
BALB	**Balikesir**	**0.90**	**34**	*e*PG	**Pg**	**00 38 49.1**	**-0.5**
BALB	**Balikesir**	**0.90**	**34**	*e*Pg	**Pg**	**00 38 49.1**	**-0.5**
CHOS	**Chios island**	**1.05**	**241**	P	**Pg**	**00 38 51.4**	**-1.1**
CHOS				S	**Sg**	**00 39 06.4**	**+0.2**
CHOS	**Chios island**	**1.05**	**241**	*e*PN	**Pg**	**00 38 51.7**	**-0.8**
CHOS	**Chios island**	**1.05**	**241**	P	**Pg**	**00 38 51.4**	**-1.1**
CHOS	**Chios island**	**1.05**	**241**	*e*Pn	**Pg**	**00 38 51.7**	**-0.8**
CHOS				S	**Sg**	**00 39 06.4**	**+0.2**
SIGR	**SIGRI**	**1.11**	**287**	P	**Pg**	**00 38 52.7**	**-1.0**
SIGR				S	**Sg**	**00 39 08.1**	**-0.1**
SIGR	**SIGRI**	**1.11**	**287**	P	**Pg**	**00 38 52.7**	**-1.0**
SIGR				S	**Sg**	**00 39 08.1**	**-0.1**
EZN	**Ezine**	**1.16**	**323**	*e*PN	**Pn**	**00 38 53.7**	**-1.0**
EZN	**Ezine**	**1.16**	**323**	*e*Pn	**Pn**	**00 38 53.7**	**-1.0**
DEMI	**Demirci**	**1.17**	**83**	*e*P	**Pb**	**00 38 53.7**	**-1.0**
DEMI				*e*S	**Sb**	**00 38 08.9**	**-1.0**
DEMI	**Demirci**	**1.17**	**83**	*e*P	**Pb**	**00 38 53.7**	**-1.0**
DEMI				*e*S	**Sb**	**00 38 08.9**	**-1.0**
KULA	**Kula-Manisa**	**1.19**	**108**	*e*PN	**Pn**	**00 38 53.9**	**-1.2**
KULA	**Kula-Manisa**	**1.19**	**108**	*e*Pn	**Pn**	**00 38 53.9**	**-1.2**
DURS	**Dursunbey**	**1.20**	**54**	⇑*i* P	**Pb**	**00 38 53.9**	**-1.2**
DURS				*i* S	**Sb**	**00 39 10.5**	**-0.2**
DURS	**Dursunbey**	**1.20**	**54**	*i* P	**Pb**	**00 38 53.9**	**-1.2**
DURS				*i* S	**Sb**	**00 39 10.5**	**-0.2**
SMG	**Samos**	**1.23**	**195**	*e*PN	**Pn**	**00 38 53.2**	**-2.4**
SMG	**Samos**	**1.23**	**195**	*e*Pn	**Pn**	**00 38 53.3**	**-2.3**
LPK	**Lapseki**	**1.52**	**346**	*e*PN	**Pn**	**00 38 59.5**	**-0.1**
LPK	**Lapseki**	**1.52**	**346**	*e*Pn	**Pn**	**00 38 59.5**	**-0.1**
BNT	**Bandirma**	**1.55**	**20**	*e*PN	**Pn**	**00 38 59.8**	**-0.2**
BNT	**Bandirma**	**1.55**	**20**	*e*Pn	**Pn**	**00 38 59.8**	**-0.3**
KCT	**Karacabey**	**1.62**	**32**	*e*PN	**Pn**	**00 39 00.5**	**-0.6**
KCT	**Karacabey**	**1.62**	**32**	*e*Pn	**Pn**	**00 39 00.5**	**-0.5**
GADA	**Gvkgeada**	**1.65**	**322**	*e*PN	**Pn**	**00 39 01.2**	**-0.2**
GADA	**Gvkgeada**	**1.65**	**322**	*e*Pn	**Pn**	**00 39 01.2**	**-0.2**
MLSB	**Milas**	**1.66**	**165**	*e*PN	**Pn**	**00 39 02.1**	**+0.6**
MLSB	**Milas**	**1.66**	**165**	*e*Pn	**Pn**	**00 39 02.1**	**+0.5**
RKY	**Sarkoy-Tekirda**	**1.79**	**359**	*e*PN	**Pn**	**00 39 02.9**	**-0.4**
RKY	**Sarkoy-Tekirda**	**1.79**	**359**	*e*Pn	**Pn**	**00 39 02.9**	**-0.4**
LIA	**Limnos Island**	**1.87**	**303**	*e*PN	**Pn**	**00 39 03.3**	**-1.2**
LIA	**Limnos Island**	**1.87**	**303**	*e*Pn	**Pn**	**00 39 03.3**	**-1.2**
MFT	**Murefte**	**1.89**	**1**	*e*PN	**Pn**	**00 39 05.5**	**+0.8**
MFT	**Murefte**	**1.89**	**1**	*e*Pn	**Pn**	**00 39 05.5**	**+0.8**
ENEZ	**Enez**	**2.01**	**336**	*e*PN	**Pn**	**00 39 06.3**	**-0.1**
ENEZ	**Enez**	**2.01**	**336**	*e*Pn	**Pn**	**00 39 06.3**	**-0.1**
ARMT	**Armutlu**	**2.09**	**37**	*e*PN	**Pn**	**00 39 08.6**	**+1.1**
ARMT	**Armutlu**	**2.09**	**37**	*e*Pn	**Pn**	**00 39 08.6**	**+1.1**
DAT	**Datca**	**2.19**	**173**	*e*PN	**Pn**	**00 39 09.1**	**+0.3**
DAT	**Datca**	**2.19**	**173**	*e*Pn	**Pn**	**00 39 09.1**	**+0.3**
ALN	**Alexandroupoli**	**2.19**	**336**	P	**Pn**	**00 39 08.4**	**-0.5**
ALN				S	**Sn**	**00 39 36.4**	**+0.3**
ALN	**Alexandroupoli**	**2.19**	**336**	P	**Pn**	**00 39 08.4**	**-0.5**
ALN				S	**Sn**	**00 39 36.4**	**+0.3**
ALT	**Altintas**	**2.25**	**85**	*e*PN	**Pn**	**00 39 10.4**	**+0.7**
ALT	**Altintas**	**2.25**	**85**	*e*Pn	**Pn**	**00 39 10.4**	**+0.7**
YLV	**Yalova**	**2.35**	**44**	*e*PN	**Pn**	**00 39 12.2**	**+1.1**
YLV	**Yalova**	**2.35**	**44**	*e*Pn	**Pn**	**00 39 12.2**	**+1.2**
SLVT	**Silivri**	**2.45**	**18**	*e*PN	**Pn**	**00 39 13.2**	**+0.8**
SLVT	**Silivri**	**2.45**	**18**	*e*Pn	**Pn**	**00 39 13.2**	**+0.8**
CTKS	**Kestanelik-??a**	**2.53**	**22**	*e*PN	**Pn**	**00 39 14.1**	**+0.5**
CTKS	**Kestanelik-??a**	**2.53**	**22**	*e*Pn	**Pn**	**00 39 14.1**	**+0.5**
RDO	**Rodhopi**	**2.59**	**331**	P	**Pn**	**00 39 14.1**	**-0.3**
RDO	**Rodhopi**	**2.59**	**331**	P	**Pn**	**00 39 14.1**	**-0.3**
KLYT	**Kilyos**	**2.73**	**30**	*e*PN	**Pn**	**00 39 17.4**	**+1.0**
KLYT	**Kilyos**	**2.73**	**30**	*e*Pn	**Pn**	**00 39 17.4**	**+1.1**
ESKT	**Eskisehir**	**2.88**	**76**	*e*PN	**Pn**	**00 39 19.7**	**+1.3**
ESKT	**Eskisehir**	**2.88**	**76**	*e*Pn	**Pn**	**00 39 19.7**	**+1.3**
GULT	**Gulveren**	**2.96**	**58**	*e*PN	**Pn**	**00 39 21.0**	**+1.5**
GULT	**Gulveren**	**2.96**	**58**	*e*Pn	**Pn**	**00 39 21.0**	**+1.5**
EDRB	**Edirne**	**2.97**	**353**	*e*PN	**Pn**	**00 39 20.6**	**+1.0**
EDRB	**Edirne**	**2.97**	**353**	*e*Pn	**Pn**	**00 39 20.6**	**+1.0**

*IDC **24** 00:41:04.3±3.0, 1°.85N×96°.37E, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.6/21, mbtmp3.7/5, Error ellipse: s-maj=122.3km s-min=26.5km az=56.0*
*DJA **24** 00:41:10, 2°.01N×96°.64E, h58km, MLv3.6/3*
ISC 24 00:41:09.3±4.0, 1°.97N±0°.08×96°.54E±0°.10, h29km±31km, n8, ∠0°60/11, mb3.7/4, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.23**	**122**	P	**Pn**	**00 41 30.8**	**+0.3**
GSI				S	**Sn**	**00 41 46.4**	**+0.2**
TPTI		**1.43**	**27**	P	**Pn**	**00 41 31.9**	**-1.4**
TPTI				S	**Sn**	**00 41 51.8**	**+0.6**
MNSI	**Mandailing Nat**	**3.26**	**111**	P	**Pn**	**00 41 59.1**	**+0.7**
MNSI				S	**Sn**	**00 42 35.6**	**-0.7**
CMAR	**Chiang Mai Arr**	**16.55**	**8**	Pn	**Pn**	**00 45 00.1**	**+0.6**
	0.2nm,0.3s,baz=197,slow=12,SNR=5.0						
WRA	**Warramunga Arr**	**43.00**	**122**	P	**P**	**00 49 06.4**	**0.0**
	0.5nm,0.8s,mb3.3,baz=301,slow=9.4,SNR=2.7						
MKAR	**Makanchi Array**	**46.34**	**346**	P	**P**	**00 49 32.7**	**+0.1**
	0.6nm,0.4s,mb3.9,baz=144,slow=8.3,SNR=8.1						
ZALV	**Zalesovo Beam**	**52.70**	**351**	P	**P**	**00 50 21.1**	**+0.1**
	1.6nm,0.5s,mb4.2,baz=174,slow=7.2,SNR=10.0						

BVAR Borovoye Array 55.31 341 P **P 00 50 39.6 -0.5**
0.2nm,0.4s,mb3.5,baz=148,slow=9.5,SNR=1.7

IDC 24 01:00:39.2±11.0, 19°.50S×177°.90W, h445km±139km, mb2.9/4, mb1 3.3/4, mb1mx3.1/16, mbtmp2.9/4, Error ellipse: s-maj=211.0km s-min=35.8km az=161.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.84**	**261**	P	P	01 08 12.5	+0.1
	0.4nm,0.3s,baz=96,slow=7.6,SNR=2.3						
ASAR	**Alice Springs**	**44.85**	**256**	P	P	01 08 12.2	-0.1
	0.3nm,0.8s,baz=84,slow=8.5,SNR=5.8						
NVAR	**Mina Array Bea**	**80.24**	**43**	P	P	01 12 03.5	+1.2
	0.4nm,0.6s,baz=229,slow=9.5,SNR=3.0						
TXAR	**Lajitas Array**	**86.44**	**57**	P	P	01 12 33.1	-0.5
	0.6nm,0.8s,baz=224,slow=6.5,SNR=7.0						
AKASG	**Malin Array Be**	**142.19**	**332**	PKhKP		01 19 14.2	
	0.4nm,0.4s,baz=43,slow=3.6,SNR=8.0						
MMAI	**Mount Meron Ar**	**147.39**	**301**	PKPbc	PKPbc	01 19 31.7	-0.6
	0.9nm,0.5s,baz=64,slow=5.7,SNR=4.2						

MEX 24 01:05:58.7±0.8, 16°.15N×94°.19W, h86km±14km, MD4.1, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.03**	**115**	*i* P	Pn	01 06 17.2	-1.3
PCIG				*i* S	Sn	01 06 32.0	-1.2
CMIG	**Matias Romero**	**1.15**	**325**	*i* P	Pn	01 06 19.7	-0.2
CMIG				*i* S	Sn	01 06 34.1	-1.7
TGIG		**1.20**	**58**	*i* P	Pn	01 06 19.0	-1.4
TGIG				*i* S	Sn	01 06 34.0	-2.8
SCX	**San Cristobal**	**1.60**	**68**	*e*P	Pn	01 06 24.4	-1.1
SCX				*i* S	Sn	01 06 44.3	-1.6
HUIG	**Huatulco**	**1.89**	**259**	*i* P	Pn	01 06 27.3	-2.0
HUIG				*i* S	Sn	01 06 50.5	-2.1
THIG		**2.22**	**123**	*e*P	Pn	01 06 32.6	-1.1
THIG				*i* S	Sn	01 06 59.8	-0.7
OXX	**Oaxaca**	**2.60**	**291**	*i* P	Pn	01 06 38.1	-0.7
OXX				*i* S	Sn	01 07 08.2	-1.4
VHO	**Vista Hermosa**	**2.61**	**291**	*i* P	Pn	01 06 38.5	-0.4
VHO				*i* S	Sn	01 07 07.9	-1.9
TPIG	**Tehuac#an**	**3.78**	**307**	*e*P	Pn	01 06 57.8	+3.0
TPIG				*i* S	Sn	01 07 38.0	-0.2
PNIG	**Pinotepa**	**3.79**	**274**	*i* P	Pn	01 06 54.6	-0.2
PNIG				*i* S	Sn	01 07 35.5	-2.9
UTMO	**Huajuapan**	**3.84**	**296**	*i* P	Pn	01 06 55.6	0.0
UTMO				*i* S	Sn	01 07 39.5	-0.2
PPM	**Popocatepetl**	**5.13**	**305**	*e*P	Pn	01 07 13.5	+0.4
PPM				*i* S	Sn	01 08 14.7	+3.6

*UPA **24** 01:11:18.0, 9°.32N×82°.73W, h5km, MW3.9*
*UCR **24** 01:11:20.3, 9°.35N×82°.80W, h7km, MD3.5*
CASC 24 01:11:18.8±2.1, 9°.34N×82°.75W, h7km, MD3.6, 2C-5D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNI	**Changuinola**	**0.24**	**72**	⇓*i* P	Pg	01 11 24.7	+1.1
CNI				*e*S	Sg	01 11 27.4	+0.6
CTCR	**Cotoan**	**0.44**	**181**	⇓*i* P	Pg	01 11 27.9	+0.5
BRU2	**Volcan**	**0.55**	**174**	⇓*i* P	Pg	01 11 29.7	+0.4
BRU2				*e*S	Sg	01 11 38.0	+1.5
BAR1		**0.56**	**260**	*e*P	Pg	01 11 29.9	+0.2
BAR1				*e*S	Sg	01 11 37.1	0.0
ACR	**Cerro Adams**	**0.80**	**211**	⇓*e*P	Pg	01 11 34.4	+0.2
ACR				*e*S	Sg	01 11 47.1	+2.6
BUS	**Buena Vista**	**1.02**	**282**	⇑*e*P	Pg	01 11 38.2	-0.2
BUS				*e*S	Sg	01 11 51.8	+0.2
URSC	**Urasca**	**1.13**	**296**	⇓*e*P	Pg	01 11 39.6	-0.9
URSC				*e*S	Sg	01 11 54.4	-0.7
QCR	**Quepos**	**1.40**	**274**	⇑*i* P	Pn	01 11 44.4	-0.4
QCR				*e*S	Sb	01 12 03.8	+0.4
LAJ	**Bijagual**	**1.45**	**291**	*e*P	Pn	01 11 51.3	+5.8
LAJ				*e*S	Sn	01 12 15.6	+11
PRS1	**Puriscal**	**1.67**	**293**	*e*P	Pn	01 11 48.9	+0.4
PRS1				*e*S	Sn	01 12 11.4	+1.2
CGA2	**Cerro Gallo 2**	**1.82**	**292**	*e*P	Pn	01 11 51.6	+1.1
CGA2				*e*S	Sn	01 12 15.7	+1.8

*CSEM **24** 01:17:17.4, 40°.52N×23°.55E, h10km, ML2.7/6, After THE*
THE 24 01:17:17.4, 40°.52N×23°.55E, h10km±1km, ML2.7/6, Error ellipse: s-maj=1.6km s-min=0.4km az=235.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLG	**Polygyros**	**0.17**	**208**	P	Pg	01 17 21.7	+0.6
PLG	**Polygyros**	**0.17**	**208**	P	Pg	01 17 21.4	+0.3
PLG				S	Sg	01 17 24.1	+0.5
PLG	**Polygyros**	**0.17**	**208**	P	Pg	01 17 21.4	+0.3
PLG				S	Sg	01 17 24.1	+0.5
SOH	**Sokhos**	**0.33**	**333**	P	Pg	01 17 24.3	+0.1
SOH	**Sokhos**	**0.33**	**333**	P	Pg	01 17 24.1	+0.1
SOH				S	Sg	01 17 29.1	+0.6
SOH	**Sokhos**	**0.33**	**333**	P	Pg	01 17 24.1	+0.1
SOH				S	Sg	01 17 29.1	+0.6
HORT	**Hortiatis**	**0.35**	**282**	P	Pg	01 17 25.0	+0.6
HORT	**Hortiatis**	**0.35**	**282**	P	Pg	01 17 24.5	+0.1
HORT				S	Sg	01 17 29.6	+0.5
HORT	**Hortiatis**	**0.35**	**282**	P	Pg	01 17 24.5	+0.1
HORT				S	Sg	01 17 29.6	+0.5
OUR	**Ouranopolis**	**0.38**	**120**	P	Pg	01 17 25.1	+0.2
OUR	**Ouranopolis**	**0.38**	**120**	P	Pg	01 17 24.5	-0.4
OUR				S	Sg	01 17 30.2	+0.3
OUR	**Ouranopolis**	**0.38**	**120**	P	Pg	01 17 24.5	-0.4
OUR				S	Sg	01 17 30.2	+0.3
THE	**Thessaloniki**	**0.46**	**284**	P	Pg	01 17 26.2	-0.2
THE				S	Sg	01 17 32.6	+0.1
THE	**Thessaloniki**	**0.46**	**284**	P	Pg	01 17 26.2	-0.2
THE				S	Sg	01 17 32.6	+0.1
SRS	**Serrai**	**0.59**	**3**	P	Pg	01 17 28.8	-0.1
SRS	**Serrai**	**0.59**	**3**	P	Pg	01 17 28.6	-0.3
SRS	**Serrai**	**0.59**	**3**	P	Pg	01 17 28.6	-0.3
PAIG	**Paliouri**	**0.60**	**171**	P	Pg	01 17 29.4	+0.3
PAIG	**Paliouri**	**0.60**	**171**	P	Pg	01 17 28.8	-0.3
PAIG	**Paliouri**	**0.60**	**171**	P	Pg	01 17 28.8	-0.3
KAVA	**Kavala**	**0.87**	**57**	P	Pg	01 17 35.1	+0.9
KAVA	**Kavala**	**0.87**	**57**	P	Pg	01 17 34.5	+0.3
KAVA				S	Sg	01 17 45.0	-0.5
KAVA	**Kavala**	**0.87**	**57**	P	Pg	01 17 34.5	+0.3
KAVA				S	Sg	01 17 45.0	-0.5
XOR	**Xorichti**	**1.19**	**194**	P	Pb	01 17 39.5	-0.5
XOR	**Xorichti**	**1.19**	**194**	P	Pb	01 17 39.5	-0.5
LIA	**Limnos Island**	**1.40**	**116**	P	Pn	01 17 42.1	-0.8
LIA	**Limnos Island**	**1.40**	**116**	P	Pn	01 17 42.1	-0.8
TRIZ	**Trizonia**	**2.44**	**208**	P	Pg	01 18 11.0	+6.8

MEX 24 01:22:53.8±0.9, 17°.08N×100°.09W, h37km±8km, MD3.9, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.18**	**258**	*i* P	Pn	01 22 58.9	-1.7
CAIG				*i* S	Sn	01 23 03.4	-1.8
ACX	**Acapulco**	**0.27**	**143**	*i* P	Pn	01 22 59.9	-1.6
ACX				*i* S	Sn	01 23 05.5	-1.3
MEIG	**Mezcala**	**0.95**	**28**	*i* P	Pn	01 23 08.7	-2.0
MEIG				*i* S	Sn	01 23 20.1	-2.8
PLIG	**Platanillo**	**1.42**	**23**	*i* P	Pn	01 23 16.2	-0.9
PLIG				*i* S	Sn	01 23 32.6	-1.8
ZIIG	**Zihuatanejo**	**1.42**	**292**	*i* P	Pn	01 23 15.6	-1.4
ZIIG				*i* S	Sn	01 23 32.2	-2.3
PNIG	**Pinotepa**	**2.00**	**110**	*e*P	Pn	01 23 22.9	-2.2
PNIG				*i* S	Sn	01 23 47.0	-1.8
MZVM		**2.25**	**21**	*i* P	Pn	01 23 27.3	-1.2
MZVM				*i* S	Sn	01 23 51.2	-3.8
UTMO	**Huajuapan**	**2.30**	**71**	*i* P	Pn	01 23 28.1	-1.2
UTMO				*i* S	Sn	01 23 54.8	-1.5
PPM	**Popocatepetl**	**2.41**	**35**	*i* P	Pn	01 23 27.4	-3.4
PPM				*i* S	Sn	01 24 04.0	+4.9
PTVM	**Pico Tres Padr**	**2.66**	**20**	*i* P	Pn	01 23 32.8	-1.4
PTVM				*i* S	Sn	01 24 03.6	-1.7
IIO	**Organos**	**2.81**	**27**	*i* P	Pn	01 23 35.0	-1.3
IIO				*i* S	Sn	01 24 07.3	-1.6
VHO	**Vista Hermosa**	**3.21**	**90**	*e*P	Pn	01 23 41.2	-0.4
VHO				*i* S	Sn	01 24 17.1	-1.6

*ISCJB **24** 01:42:07.2±0.4, 41°.71N±0°.02×23°.78E±0°.03, h5km±4km, Error ellipse: s-maj=4.4km s-min=3.0km az=177.8*
*CSEM **24** 01:42:07.9±0.1, 41°.69N×23°.78E, h8km, MD2.8, Error ellipse: s-maj=2.4km s-min=1.8km az=87.0*
*SOF **24** 01:42:07.5, 41°.69N×23°.81E, h15km, MD2.8*
*NEIC **24** 01:42:08.2, 41°.65N×23°.84E, h21km, MD3.2(ATH), After ATH.*
*ATH **24** 01:42:08.2, 41°.65N×23°.84E, h21km±2km, MD3.2/4*
*BEO **24** 01:42:08.6±2.4, 41°.62N×23°.64E, h1km±3km, ML2.7/2*
*THE **24** 01:42:09.9, 41°.59N×23°.80E, h10km, ML2.8/1, Error ellipse: s-maj=0.9km s-min=0.4km az=332.0*
ISC 24 01:42:08.1±0.4, 41°.69N±0°.02×23°.78E±0°.03, h8km±4km, n73, ∠0°70/107, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMB	**Musomiste**	**0.11**	**202**	*i* Pg	**Pg**	**01 42 11.5**	**+0.9**
MMB	**Musomiste**	**0.11**	**202**	*i* Pg	**Pg**	**01 42 11.5**	**+0.9**
NVR	**Nevrokopi**	**0.34**	**170**	*e*Pb	**Pg**	**01 42 14.6**	**-0.2**
NVR				*e*Sb	**Sg**	**01 42 19.9**	**+0.5**
NVR	**Nevrokopi**	**0.34**	**170**	*e*PB	**Pg**	**01 42 14.6**	**-0.2**
NVR				*e*SB	**Sg**	**01 42 19.9**	**+0.5**
NVR	**Nevrokopi**	**0.34**	**170**	*e*Pb	**Pg**	**01 42 14.6**	**-0.2**
NVR				*e*Sb	**Sg**	**01 42 19.9**	**+0.5**
KKB	**Krupnik**	**0.55**	**289**	*i* Pg	**Pg**	**01 42 18.6**	**-0.2**
KKB	**Krupnik**	**0.55**	**289**	*i* Pg	**Pg**	**01 42 18.6**	**-0.2**
SRS	**Serrai**	**0.59**	**194**	P	**Pg**	**01 42 19.5**	**+0.1**
SRS				S	**Sg**	**01 42 27.1**	**0.0**
SRS	**Serrai**	**0.59**	**194**	P	**Pg**	**01 42 19.5**	**+0.1**
SRS				S	**Sg**	**01 42 27.1**	**0.0**
PLD	**Plovdiv**	**0.80**	**59**	P	**Pg**	**01 42 24.1**	**+0.6**
PLD	**Plovdiv**	**0.80**	**59**	*i* Pg	**Pg**	**01 42 24.2**	**+0.7**
PLD	**Plovdiv**	**0.80**	**59**	*i* Pg	**Pg**	**01 42 24.2**	**+0.7**
KAVA	**Kavala**	**0.88**	**141**	P	**Pg**	**01 42 24.7**	**-0.4**
KAVA	**Kavala**	**0.88**	**141**	P	**Pg**	**01 42 24.7**	**-0.4**
PGB	**Panagyurishte**	**0.91**	**18**	*i* Pg	**Pg**	**01 42 24.9**	**-0.6**
PGB	**Panagyurishte**	**0.91**	**18**	*i* Pg	**Pg**	**01 42 24.9**	**-0.6**
SOH	**Sokhos**	**0.93**	**201**	*e*Pn	**Pg**	**01 42 25.4**	**-0.4**
SOH				*e*Sn	**Sg**	**01 42 38.1**	**+0.3**
SOH	**Sokhos**	**0.93**	**201**	P	**Pg**	**01 42 25.3**	**-0.5**
SOH				S	**Sg**	**01 42 38.0**	**+0.2**
SOH	**Sokhos**	**0.93**	**201**	*e*PN	**Pg**	**01 42 25.4**	**-0.4**
SOH				*e*SN	**Sg**	**01 42 38.1**	**+0.3**
SOH	**Sokhos**	**0.93**	**201**	P	**Pg**	**01 42 25.3**	**-0.5**
SOH				S	**Sg**	**01 42 38.0**	**+0.2**
VAY	**Valandovo**	**0.98**	**248**	*i* Pg	**Pg**	**01 42 27.8**	**+0.9**
VAY				*e*Sg	**Sg**	**01 42 41.9**	**+2.2**
VAY	**Valandovo**	**0.98**	**248**	P	**Pg**	**01 42 28.1**	**+1.2**
VAY	**Valandovo**	**0.98**	**248**	P	**Pg**	**01 42 28.1**	**+1.2**
VTS	**Vitosha**	**1.00**	**335**	*e*Pg	**Pg**	**01 42 26.8**	**-0.4**
VTS				*e*Sg	**Sg**	**01 42 40.9**	**+0.7**
VTS	**Vitosha**	**1.00**	**335**	P	**Pg**	**01 42 27.2**	**0.0**
VTS	**Vitosha**	**1.00**	**335**	P	**Pg**	**01 42 27.1**	**-0.1**
VTS	**Vitosha**	**1.00**	**335**	*i* P	**Pg**	**01 42 27.3**	**+0.1**
VTS	**Vitosha**	**1.00**	**335**	*e*Pg	**Pg**	**01 42 26.8**	**-0.4**
VTS	**Vitosha**	**1.00**	**335**	P	**Pg**	**01 42 27.2**	**0.0**
VTS				*e*Sg	**Sg**	**01 42 40.9**	**+0.7**
HORT	**Hortiatis**	**1.21**	**206**	P	**Pb**	**01 42

mb4.3/22, MS3.1/4, Error ellipse: s-maj=13.8km s-min=4.7km az=42.3
NEIC ***24*** *02:06:53.5±1.9, 12°.61N×89°.22W, h68km±13km, mb4.4/17, Error ellipse: s-maj=21.4km s-min=14.4km az=204.0*
ISC 24 02:06:51.9±0.8, 12°.60N±0°.06×89°.25W±0°.06, h51km±6km, n56, σ1s10/62, mb4.3/22, MS3.1/4, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFRS	**El Faro**	**1.03**	**10**	*eP*	**Pn**	**02 07 09.6**	**-0.5**
LFRS				*eS*	**Sn**	**02 07 17.9**	**-5.7**
SNET	**Serv Nac Est T**	**1.08**	**1**	*eP*	**Pn**	**02 07 09.1**	**-1.7**
BOQS	**Boqueron**	**1.13**	**358**	*eP*	**Pn**	**02 07 11.1**	**-0.3**
BOQS				*eS*	**Sn**	**02 07 24.2**	**-1.6**
LBRS	**Las Brisas**	**1.15**	**10**	*eP*	**Pn**	**02 07 12.2**	**+0.5**
VSM	**San Miguel**	**1.26**	**49**	*eP*	**Pn**	**02 07 14.9**	**+1.8**
BLLM	**Bellamira**	**1.29**	**49**	*eP*	**Pn**	**02 07 13.8**	**+0.2**
SNJE	**San Jose**	**1.31**	**345**	*eP*	**Pn**	**02 07 13.4**	**-0.5**
RTR	**El Retiro**	**1.35**	**343**	*eP*	**Pn**	**02 07 15.0**	**+0.7**
CNCH	**Conchagua**	**1.53**	**64**	*eP*	**Pn**	**02 07 16.9**	**+0.1**
CAHU	**Cacacuatique**	**1.54**	**41**	*eP*	**Pn**	**02 07 17.8**	**+0.8**
RBDL	**Robledal**	**1.56**	**344**	*eP*	**Pn**	**02 07 18.4**	**+1.1**
MTO2	**Montecristo 2**	**1.79**	**356**	*eP*	**Pn**	**02 07 21.3**	**+0.8**
CRIN	**San Cristobal**	**2.15**	**87**	*eS*	**Sn**	**02 07 54.3**	**+3.6**
CRIN				AML	AML	02 08 17.9	
	comp=E,532nm,0.7s						
LEON	**Leon**	**2.31**	**94**	*eP*	**Pn**	**02 07 25.7**	**-1.8**
TGUH	**Tegucigalpa,Un**	**2.41**	**53**	*ePn*	**Pn**	**02 07 29.4**	**+0.6**
TGUH	**Tegucigalpa,Un**	**2.41**	**53**	*eP*	**Pn**	**02 07 29.9**	**+1.1**
CNGN	**Cerro Negro**	**2.49**	**92**	*eP*	**Pn**	**02 07 28.6**	**-1.4**
CNGN				*eS*	**Sn**	**02 08 01.5**	**+2.3**
CNGN				AML	AML	02 08 16.7	
	comp=E,176nm,0.6s						
COPN	**Copaltepe**	**2.63**	**99**	*eP*	**Pn**	**02 07 30.7**	**-1.1**
MOMN	**Momotombo**	**2.65**	**94**	*eP*	**Pn**	**02 07 31.6**	**-0.6**
APG	**El Apazote**	**2.67**	**334**	Pn	**Pn**	**02 07 32.2**	**-0.1**
	comp=E,2.4nm,0.3s,baz=151,slow=8.8,SNR=27						
CSAN		**2.79**	**98**	*eP*	**Pn**	**02 07 33.7**	**-0.4**
BOAB	**BOACO BROADBAN**	**3.50**	**92**	*eP*	**Pn**	**02 07 42.4**	**-1.4**
BOAB				*eS*	**Sn**	**02 08 25.2**	**+1.2**
JCR	**Jicaral**	**4.89**	**124**	*eP*	**Pn**	**02 08 02.6**	**-0.3**
JCR				*eS*	**Sn**	**02 08 54.2**	**-4.0**
PRS1	**Puriscal**	**5.50**	**118**	*eP*	**Pn**	**02 08 11.9**	**+0.7**
PRS1				*eS*	**Sn**	**02 09 12.9**	**-0.3**
BUS	**Buena Vista**	**6.18**	**119**	*eP*	**Pn**	**02 08 22.3**	**+1.7**
BUS				*eS*	**Sn**	**02 09 26.9**	**-3.1**
BAR1		**6.72**	**119**	*eP*	**Pn**	**02 08 28.8**	**+0.9**
BAR1				*eS*	**Sn**	**02 09 38.6**	**-4.6**
CMIG	**Matias Romero**	**7.04**	**310**	Pn	**Pn**	**02 08 32.0**	**-0.5**
	comp=E,0.4nm,0.3s,baz=38,slow=22,SNR=7.5						
TEIG	**Tepich**	**7.64**	**7**	*ePn*	**Pn**	**02 08 44.6**	**+4.0**
JCT	**Junction City**	**20.30**	**333**	*eP*	**P**	**02 11 23.8**	**+0.3**
	comp=E,9.4nm,0.7s						
LRAL	**Lakeview Retre**	**20.45**	**5**	*eP*	**P**	**02 11 26.8**	**+1.7**
	comp=E,5.9nm,0.8s						
TXAR	**Lajitas Array**	**21.38**	**323**	P	**P**	**02 11 36.9**	**+1.7**
	comp=E,3.5nm,0.7s,mb3.8,baz=141,slow=10,SNR=49						
OXF	**Oxford**	**21.82**	**360**	*eP*	**P**	**02 11 40.9**	**+1.1**
	comp=E,60nm,0.9s,mb5.0						
MIAR	**Mount Ida**	**22.20**	**351**	*eP*	**P**	**02 11 44.1**	**+0.2**
	comp=E,19nm,0.9s,mb4.5						
ATAH	**Atahualpa**	**22.38**	**151**	LR	LR	02 18 35.2	
	comp=E,39nm,20.8s,MS2.8,baz=185,slow=32						
TKL	**Tuckaleechee C**	**23.48**	**11**	P	**P**	**02 11 56.2**	**-0.9**
	comp=E,6.3nm,0.7s,mb4.2,baz=180,slow=11,SNR=9.6						
TKL				LR	LR	02 21 35.5	
	comp=E,43nm,21.2s,MS2.9,baz=328,slow=38						
TKL	**Tuckaleechee C**	**23.48**	**11**	P	**P**	**02 11 56.2**	**-0.9**
TKL				LR	LR	02 21 35.5	
WMOK	**Wichita Mounta**	**23.68**	**340**	*eP*	**P**	**02 11 57.5**	**-1.4**
	comp=E,7.5nm,0.9s,mb4.1						
PARMO	**Parma**	**23.97**	**359**	*eP*	**P**	**02 12 02.0**	**+0.5**
FVM	**French Village**	**25.30**	**358**	P	**P**	**02 12 13.5**	**-0.2**
	comp=E,6.9nm,0.7s,mb4.3						
CCM	**Cathedral Cave**	**25.41**	**356**	*eP*	**P**	**02 12 14.2**	**-0.4**
	comp=E,16nm,0.6s,mb4.7						
WCI	**Wyandotte Cave**	**25.66**	**5**	*eP*	**P**	**02 12 16.3**	**-0.6**
	comp=E,11nm,0.8s,mb4.4						
TUC	**Tucson**	**27.84**	**318**	*eP*	**P**	**02 12 42.5**	**+5.8**
	comp=E,2.7nm,0.9s,mb3.9						
JFWS	**Jewell Farm**	**30.22**	**359**	*eP*	**P**	**02 12 57.0**	**-0.6**
	comp=E,8.0nm,0.7s,mb4.6						
ECSD	**EROS Data Cent**	**31.67**	**350**	*eP*	**P**	**02 13 09.6**	**-0.7**
	comp=E,1.6nm,0.8s,mb3.9						
COWI	**Conover**	**33.39**	**0**	*eP*	**P**	**02 13 24.7**	**-0.7**
	comp=E,17nm,0.7s,mb5.1						
RSSD	**Black Hills**	**33.88**	**341**	*eP*	**P**	**02 13 30.3**	**+0.6**
	comp=E,1.8nm,0.6s,mb4.2						
EYMN	**Ely**	**35.29**	**357**	*eP*	**P**	**02 13 40.5**	**-1.3**
	comp=E,5.3nm,0.6s,mb4.7						
REDW	**Red Top Meadow**	**35.88**	**333**	*eP*	**P**	**02 13 47.8**	**+0.9**
	comp=E,4.2nm,0.8s,mb4.4						
AGMN	**Agassiz Nation**	**36.01**	**352**	*eP*	**P**	**02 13 47.2**	**-0.7**
	comp=E,7.1nm,0.7s,mb4.7						
NVAR	**Mina Array Bea**	**36.45**	**320**	P	**P**	**02 13 54.9**	**+3.0**
	comp=E,1.8nm,0.9s,mb4.0,baz=131,slow=7.5,SNR=6.1						
MCMT	**McKenzie Canyo**	**37.92**	**332**	*eP*	**P**	**02 14 05.9**	**+1.6**
	comp=E,1.7nm,0.8s,mb3.8						
ULM	**Lac du Bonnet**	**37.93**	**353**	P	**P**	**02 14 04.2**	**0.0**
	comp=E,1.9nm,0.4s,mb4.2,baz=169,slow=13,SNR=3.4						
ULM				LR	LR	02 32 13.2	
	comp=E,51nm,20.4s,MS3.3,baz=218,slow=40						
SIV	**San Ignacio**	**39.80**	**135**	P	**P**	**02 14 21.1**	**+0.8**
	comp=E,1.7nm,0.6s,mb3.9,baz=327,slow=13,SNR=7.2						
SCHQ	**Schefferville**	**45.66**	**18**	P	**P**	**02 15 05.8**	**-1.5**
	comp=E,5.8nm,0.8s,mb4.6,baz=208,slow=6.1,SNR=8.8						
SCHQ				LR	LR	02 36 18.9	
	comp=E,57nm,18.5s,MS3.5,baz=212,slow=39						
YKA	**Yellowknife Ar**	**53.02**	**346**	P	**P**	**02 16 02.1**	**-1.2**
	comp=E,1.8nm,0.7s,mb4.1,baz=142,slow=7.7,SNR=13						
CMAR	**Chiang Mai Arr**	**148.10**	**345**	PKPbc	PKPbc	02 26 33.6	+0.8
	comp=E,2.1nm,0.3s,baz=341,slow=2.9,SNR=8.6						

TIF ***24*** *02:12:23.3, 42°.36N×44°.88E, h14km±2km*
MOS ***24*** *02:12:23.8±0.9, 42°.32N×44°.75E, h15km, mb3.9/1, Error ellipse: s-maj=27.1km s-min=6.3km az=102.6*
CSEM ***24*** *02:12:24.0±0.2, 42°.36N×44°.86E, h10km, mb3.9, Error ellipse: s-maj=5.8km s-min=2.8km az=84.0*
ISCJB ***24*** *02:12:24.1±0.5, 42°.37N±0°.02×44°.86E±0°.04, h1km±5km, Error ellipse: s-maj=5.5km s-min=2.7km az=171.1*
ISC 24 02:12:24.8±0.5, 42°.35N±0°.02×44°.85E±0°.05, h11km±5km, n45, σ1s03/88, 4C-4D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LACR	**Lac**	**0.62**	**319**	⇓*i*PG	**Pg**	**02 12 35.3**	**-1.6**
LACR				*i* S	**Sg**	**02 12 45.0**	**-0.2**
LACR	**Lac**	**0.62**	**319**	*i* Pg	**Pg**	**02 12 35.3**	**-1.6**
LACR				*i* Sg	**Sg**	**02 12 45.0**	**-0.2**
TBLG	**Delisi**	**0.63**	**188**	PG	**Pg**	**02 12 35.9**	**-1.1**
TBLG				*i* S	**Sg**	**02 12 46.4**	**+1.2**
TBLG	**Delisi**	**0.63**	**188**	P	**Pg**	**02 12 36.0**	**-1.0**
TBLG				S	**Sg**	**02 12 46.4**	**+1.2**
TBLG	**Delisi**	**0.63**	**188**	P	**Pg**	**02 12 36.0**	**-1.0**
TBLG				S	**Sg**	**02 12 46.4**	**+1.2**
TBLG	**Delisi**	**0.63**	**188**	P	**Pg**	**02 12 36.0**	**-1.0**
TBLG				S	**Sg**	**02 12 46.4**	**+1.2**
MTA	**Mtatsminda**	**0.66**	**184**	P	**Pg**	**02 12 36.4**	**-1.2**
MTA				S	**Sg**	**02 12 46.9**	**+0.6**
MTA	**Mtatsminda**	**0.66**	**184**	P	**Pg**	**02 12 36.4**	**-1.2**
MTA				S	**Sg**	**02 12 46.9**	**+0.6**
MTA	**Mtatsminda**	**0.66**	**184**	P	**Pg**	**02 12 36.4**	**-1.2**
MTA				S	**Sg**	**02 12 46.9**	**+0.6**
GOR	**Gori**	**0.66**	**237**	P	**Pg**	**02 12 37.3**	**-0.3**
GOR				S	**Sg**	**02 12 48.0**	**+1.6**
GOR	**Gori**	**0.66**	**237**	P	**Pg**	**02 12 37.3**	**-0.3**
GOR				S	**Sg**	**02 12 48.0**	**+1.7**
GOR	**Gori**	**0.66**	**237**	P	**Pg**	**02 12 37.3**	**-0.3**
GOR				S	**Sg**	**02 12 48.0**	**+1.7**
KEH	**Kehvi**	**0.68**	**267**	P	**Pg**	**02 12 36.0**	**-2.0**
KEH				S	**Sg**	**02 12 46.6**	**-0.3**
KEH	**Kehvi**	**0.68**	**267**	P	**Pg**	**02 12 36.0**	**-2.0**
KEH				S	**Sg**	**02 12 46.6**	**-0.3**
KEH	**Kehvi**	**0.68**	**267**	P	**Pg**	**02 12 36.0**	**-2.0**
KEH				S	**Sg**	**02 12 46.6**	**-0.3**
VLKR	**Vladikavkaz**	**0.70**	**350**	⇑*i*PG	**Pg**	**02 12 37.6**	**-0.9**
VLKR				*i* S	**Sg**	**02 12 48.6**	**+0.9**
VLKR	**Vladikavkaz**	**0.70**	**350**	*i* Pg	**Pg**	**02 12 37.6**	**-0.9**
VLKR				*i* Sg	**Sg**	**02 12 48.6**	**+0.9**
SNJR	**Sundja**	**0.71**	**358**	⇓*i*PG	**Pg**	**02 12 37.7**	**-1.0**
SNJR				*i* S	**Sg**	**02 12 49.2**	**+1.2**
SNJR	**Sundja**	**0.71**	**358**	*i* Pg	**Pg**	**02 12 37.7**	**-1.0**
SNJR				*i* Sg	**Sg**	**02 12 49.2**	**+1.2**
ZEI	**Tsey**	**0.82**	**301**	⇓*i*PG	**Pg**	**02 12 39.4**	**-1.2**
ZEI				*i* S	**Sg**	**02 12 51.4**	**+0.1**
ZEI	**Tsey**	**0.82**	**301**	*i* Pg	**Pg**	**02 12 39.4**	**-1.2**
ZEI				*i* Sg	**Sg**	**02 12 51.4**	**+0.1**
KORR	**Kora**	**0.93**	**322**	⇑*i*PG	**Pg**	**02 12 41.8**	**-1.0**
KORR				*i* S	**Sg**	**02 12 55.1**	**+0.2**
KORR	**Kora**	**0.93**	**322**	*i* Pg	**Pg**	**02 12 41.8**	**-1.0**
KORR				*i* Sg	**Sg**	**02 12 55.1**	**+0.2**
ARNR	**Ardon**	**0.94**	**333**	⇑*i*PG	**Pg**	**02 12 41.8**	**-1.0**
ARNR				*i* S	**Sg**	**02 12 55.9**	**+0.9**
ARNR	**Ardon**	**0.94**	**333**	*i* Pg	**Pg**	**02 12 41.8**	**-1.0**
ARNR				*i* Sg	**Sg**	**02 12 55.9**	**+0.9**
DGRG	**David-gareji**	**0.98**	**156**	P	**Pg**	**02 12 42.8**	**-1.0**
DGRG				S	**Sg**	**02 12 58.6**	**+2.1**
DGRG	**David-gareji**	**0.98**	**156**	P	**Pg**	**02 12 42.8**	**-0.9**
DGRG				S	**Sg**	**02 12 58.6**	**+2.1**
DGRG	**David-gareji**	**0.98**	**156**	P	**Pg**	**02 12 42.8**	**-0.9**
DGRG				S	**Sg**	**02 12 58.6**	**+2.1**
BTKR	**Batakoyurt**	**1.04**	**348**	*i* PG	**Pg**	**02 12 44.3**	**-0.6**
BTKR				*i* S	**Sg**	**02 12 59.6**	**+1.1**
BTKR	**Batakoyurt**	**1.04**	**348**	*i* Pg	**Pg**	**02 12 44.3**	**-0.6**
BTKR				*i* Sg	**Sg**	**02 12 59.6**	**+1.1**
ONI	**Oni**	**1.06**	**283**	P	**Pb**	**02 12 44.6**	**-0.6**
ONI				S	**Sg**	**02 13 00.8**	**+1.8**
ONI	**Oni**	**1.06**	**283**	P	**Pb**	**02 12 44.6**	**-0.5**
ONI				S	**Sg**	**02 13 00.8**	**+1.8**
ONI	**Oni**	**1.06**	**283**	P	**Pb**	**02 12 44.6**	**-0.5**
ONI				S	**Sg**	**02 13 00.8**	**+1.8**
KMSR	**Komsomolskaya**	**1.10**	**338**	*e*PG	**Pg**	**02 12 44.8**	**-1.1**
KMSR				*e*S	**Sg**	**02 13 00.7**	**+0.5**
KMSR	**Komsomolskaya**	**1.10**	**338**	*e*Pg	**Pg**	**02 12 44.8**	**-1.1**
KMSR				*e*Sg	**Sg**	**02 13 00.7**	**+0.5**
LSNR	**Lesken**	**1.19**	**321**	⇑*i*PG	**Pg**	**02 12 46.7**	**-0.7**
LSNR				*i* S	**Sg**	**02 13 03.5**	**+0.2**
LSNR	**Lesken**	**1.19**	**321**	*i* Pg	**Pn**	**02 12 46.7**	**-0.7**
LSNR				*i* Sg	**Sg**	**02 13 03.5**	**+0.2**
TRKR	**Terskaya**	**1.37**	**356**	*e*PG	**Pn**	**02 12 50.0**	**+0.2**
TRKR				*i* S	**Sg**	**02 13 10.0**	**+1.0**
TRKR	**Terskaya**	**1.37**	**356**	*e*Pg	**Pn**	**02 12 50.0**	**+0.2**
TRKR				*i* Sg	**Sg**	**02 13 10.0**	**+1.0**
PRTR	**Priterechnaya**	**1.46**	**344**	*e*PG	**Pn**	**02 12 51.4**	**+0.4**
PRTR				*i* S	**Sg**	**02 13 12.5**	**+0.8**
PRTR	**Priterechnaya**	**1.46**	**344**	*e*Pg	**Pn**	**02 12 51.4**	**+0.4**
PRTR				*i* Sg	**Sg**	**02 13 12.5**	**+0.8**
PYA	**Pyatigorsk**	**2.13**	**323**	*i* PN	**Pn**	**02 12 58.9**	**-1.4**
PYA				*e*S	**Sn**	**02 13 27.7**	**+1.0**
PYA	**Pyatigorsk**	**2.13**	**323**	*i* Pn	**Pn**	**02 12 58.9**	**-1.4**
GNI	**Garni**	**2.20**	**182**	*d* iPN	**Pn**	**02 13 02.5**	**+1.2**
GNI				*i* S	**Sn**	**02 13 33.1**	**+4.6**
GNI	**Garni**	**2.20**	**182**	*i* Pn	**Pn**	**02 13 02.5**	**+1.2**

CASC 24 02:16:29.9±2.4, 8°.36N×82°.95W, h8km±8km, MD3.5, 1C-1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.36**	**324**	*eP*	Pg	02 16 36.7	-0.3
ACR				*e*S	Sg	02 16 43.0	+1.2
BRU2	**Volcan**	**0.50**	**31**	⇓*i*P	Pg	02 16 40.2	+0.5
BRU2				*e*S	Sg	02 16 49.8	+3.6
CTCR	**Cotoan**	**0.57**	**20**	*i* P	Pg	02 16 41.0	+0.2
CTCR				*e*S	Sg	02 16 51.6	+3.3
BAR1		**0.95**	**338**	⇑*i*P	Pg	02 16 47.3	-0.8
BAR1				*e*S	Sg	02 17 00.6	+0.2
BUS	**Buena Vista**	**1.43**	**326**	*eP*	Pn	02 16 56.8	+0.7
BUS				*e*S	Sn	02 17 15.2	0.0
URSC	**Urasca**	**1.68**	**331**	*eP*	Pn	02 16 59.4	-0.1
URSC				*e*S	Sn	02 17 21.5	+0.2
PRS1	**Puriscal**	**2.10**	**320**	*eP*	Pn	02 17 06.4	+1.0

NEIC 24 02:47:21.9, 38°.33S×175°.61E, h161km, MG3.8(WEL), After WEL., North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FWVZ	**Far West T-bar**	**0.93**	**183**	P	Pn	02 47 48.1	+1.0
MOVZ	**Moawhango**	**1.08**	**174**	P	Pn	02 47 48.4	+0.1
BKZ	**Black Stump Fm**	**1.08**	**141**	P	Pn	02 47 48.5	+0.1
BKZ				S	Sn	02 48 08.7	0.0
URZ	**Urewera**	**1.18**	**87**	*e*Pn	Pn	02 47 49.4	+0.2
URZ				*e*S	Sn	02 48 10.4	+0.3
WAZ	**Wanganui**	**1.50**	**199**	P	Pn	02 47 52.4	+0.1
MWZ	**Matawai**	**1.51**	**91**	P	Pn	02 47 52.3	0.0
TSZ	**Takapari Road**	**1.75**	**171**	P	Pn	02 47 54.1	-0.8
KNZ	**Kokohu**	**1.76**	**114**	P	Pn	02 47 54.7	-0.2
DVHZ	**Dannevirke**	**2.02**	**168**	P	Pn	02 47 56.5	-1.3
MRZ	**Mangatainoka R**	**2.33**	**181**	P	Pn	02 47 59.6	-1.8
KIW	**Kapiti Island**	**2.59**	**192**	P	Pn	02 48 02.0	-2.5
CAW	**Cannon Point**	**2.81**	**188**	P	Pn	02 48 04.5	-2.7
MTW	**Mount Morrison**	**2.83**	**182**	P	Pn	02 48 04.5	-3.0
SNZO	**South Karori**	**3.06**	**193**	*e*Pn	Pn	02 48 07.3	-3.0
SNZO				*e*S	Sn	02 48 42.0	-5.9
TCW	**Tory Channel**	**3.06**	**199**	P	Pn	02 48 07.3	-3.0
MSWZ	**Moikau Station**	**3.09**	**185**	P	Pn	02 48 07.5	-3.3
THZ	**Tophouse**	**4.01**	**210**	P	Pn	02 48 19.2	-3.3
KHZ	**Kahutara**	**4.38**	**201**	P	Pn	02 48 23.2	-4.0
LTZ	**Lake Taylor**	**5.12**	**209**	P	Pn	02 48 32.4	-4.6

IDC ***24*** *03:13:25.4±3.1, 12°.75N×88°.81W, h0km, mb3.8/5, mb1 4.1/7, mb1mx3.8/21, mbtmp3.8/7, ML3.0/1, MS2.8/1, Ms1 2.8/1, ms1mx2.3/26, Error ellipse: s-maj=60.6km s-min=35.4km az=9.0*
ISCJB ***24*** *03:13:26.9±1.1, 12°.28N±0°.08×89°.43W±0°.06, h56km±8km, mb4.1/10, Error ellipse: s-maj=15.2km s-min=5.9km az=37.8*
CASC ***24*** *03:13:27.2±1.8, 12°.30N×89°.48W, h37km±10km, MD4.5, ML3.3, mb4.3(NEIC)*
NEIC ***24*** *03:13:32.3±1.7, 12°.71N×89°.13W, h55km±14km, mb4.3/5, Error ellipse: s-maj=19.9km s-min=13.3km az=210.0*
ISC 24 03:13:28.3±1.1, 12°.32N±0°.07×89°.41W±0°.07, h50km±9km, n36, σ0s97/41, mb4.1/10, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFRS	**El Faro**	**1.34**	**15**	*eP*	**Pn**	**03 13 49.1**	**-1.6**
LFRS				*e*S	**Sn**	**03 14 07.3**	**-0.1**
SNET	**Serv Nac Est T**	**1.37**	**7**	*eP*	**Pn**	**03 13 49.7**	**-1.4**
SNET				*e*S	**Sn**	**03 14 09.4**	**+1.3**
BOQS	**Boqueron**	**1.42**	**5**	*eP*	**Pn**	**03 13 50.7**	**-1.0**
BOQS				*e*S	**Sn**	**03 14 09.7**	**+0.5**
LBRS	**Las Brisas**	**1.46**	**14**	*eP*	**Pn**	**03 13 51.2**	**-1.0**
SBLS	**San Blas**	**1.53**	**352**	*eP*	**Pn**	**03 13 52.2**	**-1.0**
SBLS				*e*S	**Sn**	**03 14 12.8**	**+0.8**
SNJE	**San Jose**	**1.55**	**353**	*eP*	**Pn**	**03 13 52.6**	**-1.0**
VSM	**San Miguel**	**1.56**	**45**	*eP*	**Pn**	**03 13 55.2**	**+1.5**
BLLM	**Bellamira**	**1.60**	**45**	*eP*	**Pn**	**03 13 54.6**	**+0.4**
RBDL	**Robledal**	**1.81**	**351**	*eP*	**Pn**	**03 13 56.8**	**-0.3**
CNCH	**Conchagua**	**1.81**	**58**	*eP*	**Pn**	**03 13 57.4**	**+0.3**
CAHU	**Cacacuatique**	**1.86**	**39**	*eP*	**Pn**	**03 13 57.7**	**-0.1**
CRIN	**San Cristobal**	**2.33**	**80**	*eP*	**Pn**	**03 14 03.9**	**-0.4**
CRIN				*e*S	**Sn**	**03 14 33.3**	**+1.6**
CRIN				AML	AML	03 14 48.5	
	comp=N,426nm,0.6s						
LEON	**Leon**	**2.46**	**87**	*eP*	**Pn**	**03 14 05.9**	**-0.1**
CNGN	**Cerro Negro**	**2.65**	**86**	*eP*	**Pn**	**03 14 08.2**	**-0.5**
CNGN				*e*S	**Sn**	**03 14 39.9**	**+0.2**
CNGN				AML	AML	03 14 55.2	
	comp=E,80nm,0.8s						
TGUH	**Tegucigalpa,Un**	**2.71**	**50**	*e*Pn	**Pn**	**03 14 08.2**	**-1.1**
COPN	**Copaltepe**	**2.76**	**93**	*eP*	**Pn**	**03 14 10.3**	**+0.2**
MOMN	**Momotombo**	**2.80**	**88**	*eP*	**Pn**	**03 14 11.1**	**+0.4**
APG	**El Apazote**	**2.86**	**339**	Pn	**Pn**	**03 14 11.8**	**+0.3**
	comp=E,2.4nm,0.3s,baz=137,slow=8.3,SNR=33						
CSAN		**2.92**	**92**	*eP*	**Pn**	**03 14 12.9**	**+0.5**
BOAB	**BOACO BROADBAN**	**3.66**	**88**	*eP*	**Pn**	**03 14 21.8**	**-0.6**
CMIG	**Matias Romero**	**7.11**	**313**	Pn	**Pn**	**03 15 11.8**	**+2.0**
	comp=E,0.2nm,0.3s,baz=182,slow=17,SNR=5.8						
JCT	**Junction City**	**20.48**	**334**	P	**P**	**03 18 03.5**	**+1.5**
	comp=E,4.4nm,0.6s						
TXAR	**Lajitas Array**	**21.51**	**324**	P	**P**	**03 18 16.4**	**+3.3**
	comp=E,1.4nm,0.5s,mb3.7,baz=143,slow=11,SNR=36						
TXAR	**Lajitas Array**	**21.51**	**324**	P	**P**	**03 18 16.4**	**+3.3**
OXF	**Oxford**	**22.09**	**360**	*eP*	**P**	**03 18 18.1**	**-1.2**
	comp=E,14nm,0.9s,mb4.4						
MIAR	**Mount Ida**	**22.45**	**351**	*eP*	**P**	**03 18 23.9**	**+0.8**
	comp=E,7.3nm,0.9s,mb4.1						
TKL	**Tuckaleechee C**	**23.79**	**11**	P	**P**	**03 18 34.8**	**-1.7**
	comp=E,3.3nm,0.7s,mb3.9,baz=189,slow=14,SNR=5.6						
TKL				LR	LR	03 27 41.4	
	comp=E,27nm,20.8s,baz=258,slow=37						
CCM	**Cathedral Cave**	**25.68**	**357**	*eP*	**P**	**03 18 53.9**	**+0.2**
	comp=E,7.4nm,0.6s,mb4.4						
COWI	**Conover**	**33.67**	**0**	*eP*	**P**	**03 20 03.9**	**-0.5**
	comp=E,6.5nm,0.6s,mb4.7						
LPAZ	**La Paz**	**35.36**	**143**	P	**P**	**03 20 24.4**	**+5.0**
AGMN	**Agassiz Nation**	**36.27**	**353**	*eP*	**P**	**03 20 26.7**	**-0.1**
	comp=E,1.7nm,0.5s,mb4.2						
NVAR	**Mina Array Bea**	**36.56**	**320**	P	**P**	**03 20 34.3**	**+4.9**
	comp=E,0.3nm,0.6s,mb3.3,baz=131,slow=9.7,SNR=2.3						
SCHQ	**Schefferville**	**45.98**	**18**	P	**P**	**03 21 45.6**	**-0.7**
	comp=E,2.3nm,0.5s,mb4.4,baz=225,slow=8.8,SNR=12						
YKA	**Yellowknife Ar**	**53.25**	**346**	P	**P**	**03 22 42.5**	**+0.9**
	comp=E,1.2nm,0.7s,mb3.9,baz=144,slow=7.7,SNR=7.6						
YKA	**Yellowknife Ar**	**53.25**	**346**	P	**P**	**03 22 42.5**	**+0.9**
CMAR	**Chiang Mai Arr**	**148.33**	**345**	PKPbc	PKPbc	03 33 13.3	+3.3
	comp=E,0.7nm,0.3s,baz=326,slow=3.4,SNR=6.4						

GEN ***24*** *03:36:13.2, 44°.80N×6°.61E, h7km, ML1.1*
ROM ***24*** *03:36:13.6±0.3, 44°.83N×6°.81E, h4km±5km, Md1.9/4, Ml1.2/3, Error ellipse: s-maj=13.4km s-min=2.0km az=67.0*
ISCJB ***24*** *03:36:13.4±0.3, 44°.79N±0°.02×6°.69E±0°.03, h11km±4km, Error ellipse: s-maj=3.6km s-min=2.7km az=176.9*
LDG ***24*** *03:36:14.3±0.1, 44°.81N×6°.73E, h2km, Md2.3/2, Ml2.0/5, Error ellipse: s-maj=1.6km s-min=1.0km az=77.0*
CSEM ***24*** *03:36:14.0±0.1, 44°.81N×6°.74E, h5km, ML1.8/11, Error ellipse: s-maj=2.5km s-min=2.0km az=95.0*
ISC 24 03:36:14.1±0.3, 44°.80N±0°.02×6°.73E±0°.03, h10km±4km, n41, σ0s73/78, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBDF	**Montbardon**	**0.08**	**157**	*e*Pg	**Pg**	**03 36 16.1**	**-0.3**
MBDF				*e*Sg	**Sg**	**03 36 17.2**	**-0.9**
	148nm,0.6s						
MBDF	**Montbardon**	**0.08**	**157**	*e*Pg	**Pg**	**03 36 16.1**	**-0.3**
MBDF				*e*Sg	**Sg**	**03 36 17.2**	**-0.9**
	74nm,0.6s						
BNI	**Bardonecchia**	**0.25**	**352**	Pg	**Pg**	**03 36 19.2**	**-0.1**
BNI				Sg	**Sg**	**03 36 22.7**	**-0.1**
BNI	**Bardonecchia**	**0.25**	**352**	Pg	**Pg**	**03 36 19.2**	**-0.1**
BNI				Sg	**Sg**	**03 36 22.7**	**-0.1**
PZZ	**Stroppo**	**0.40**	**136**	Pg	**Pg**	**03 36 22.3**	**+0.3**
PZZ				Sg	**Sg**	**03 36 28.6**	**+1.2**
	22nm,0.3s						
PZZ	**Stroppo**	**0.40**	**136**	P	**Pg**	**03 36 22.3**	**+0.3**
PZZ				S	**Sg**	**03 36 28.4**	**+1.0**
PZZ	**Stroppo**	**0.40**	**136**	P	**Pg**	**03 36 22.3**	**+0.3**
PZZ				S	**Sg

BOJS			*i* Sg	Sg	03 43 38.5	-0.2
BOJS						
	comp=Z,1μm,0.1s					
BOJS	**Bojanci**	**0.20 176**	⇓*i*Pg	Pg	03 43 35.2	-0.8
BOJS			*i* Sg	Sg	03 43 38.5	-0.2
BOJS	**Bojanci**	**0.20 176**	⇓*i*Pg	Pg	03 43 35.2	-0.8
BOJS			*i* Sg	Sg	03 43 38.5	-0.1
	comp=Z,1μm,0.1s					
CRES	**Cresnjev**	**0.20 52**	*i* Pg	Pg	03 43 35.5	-0.5
CRES			*i* Sg	Sg	03 43 38.6	-0.1
CRES						
	comp=Z,398nm,0.3s					
CRES	**Cresnjev**	**0.20 52**	*i* Pg	Pg	03 43 35.5	-0.5
CRES			*i* Sg	Sg	03 43 38.6	-0.1
CRES	**Cresnjev**	**0.20 52**	*i* Pg	Pg	03 43 35.5	-0.5
CRES			*i* Sg	Sg	03 43 38.6	-0.1
	comp=Z,398nm,0.3s					
LEGS	**Legarje**	**0.25 13**	⇓*i*Pg	Pg	03 43 36.3	-0.7
LEGS			*i* Sg	Sg	03 43 41.2	+0.8
LEGS	**Legarje**	**0.25 13**	⇓*i*Pg	Pg	03 43 36.3	-0.7
LEGS			*i* Sg	Sg	03 43 41.2	+0.8
VISS	**Visnje**	**0.29 290**	*i* Pg	Pg	03 43 37.0	-0.7
VISS			*i* Sg	Sg	03 43 41.4	-0.3
VISS						
	comp=Z,255nm,0.1s					
VISS	**Visnje**	**0.29 290**	*i* Pg	Pg	03 43 37.0	-0.7
VISS			*i* Sg	Sg	03 43 41.4	-0.3
VISS	**Visnje**	**0.29 290**	*i* Pg	Pg	03 43 37.0	-0.8
VISS			*i* Sg	Sg	03 43 41.4	-0.3
	comp=Z,255nm,0.1s					
CESS	**Cesta pri Krsk**	**0.32 30**	*i* Pg	Pg	03 43 38.0	-0.1
CESS			*i* Sg	Sg	03 43 43.0	+0.7
CESS	**Cesta pri Krsk**	**0.32 30**	*i* Pg	Pg	03 43 38.0	-0.2
CESS			*i* Sg	Sg	03 43 43.0	+0.7
GCIS	**Gornji Cirnik**	**0.32 59**	*i* Pg	Pg	03 43 37.9	-0.3
GCIS			*i* Sg	Sg	03 43 43.5	+1.0
PDKS	**Podkum**	**0.40 335**	⇓*i*Pg	Pg	03 43 39.3	-0.4
PDKS			*i* Sg	Sg	03 43 45.3	+0.4
PDKS						
	comp=Z,232nm,0.2s					
PDKS	**Podkum**	**0.40 335**	⇓*i*Pg	Pg	03 43 39.3	-0.4
PDKS			*i* Sg	Sg	03 43 45.3	+0.4
GOLS	**Golise**	**0.41 41**	⇓*i*Pg	Pg	03 43 40.2	+0.2
GOLS			*e*Sg	Sg	03 43 46.2	+0.8
GOLS						
	comp=Z,379nm,0.6s					
GOLS	**Golise**	**0.41 41**	⇓*i*Pg	Pg	03 43 40.2	+0.2
GOLS			*e*Sg	Sg	03 43 46.2	+0.8
GOLS	**Golise**	**0.41 41**	⇓*i*Pg	Pg	03 43 40.2	+0.2
GOLS			*e*Sg	Sg	03 43 46.2	+0.8
	comp=Z,379nm,0.6s					
DOBS	**Dobrina**	**0.48 20**	*i* Pg	Pg	03 43 41.0	-0.3
DOBS						
	comp=Z,64nm,0.2s					
DOBS	**Dobrina**	**0.48 20**	*i* Pg	Pg	03 43 41.0	-0.2
	comp=Z,64nm,0.2s					
VNDS	**Vrh nad Dolski**	**0.55 317**	*i* Pg	Pg	03 43 41.9	-0.6
CEY	**Cerknica**	**0.57 274**	*i* Pg	Pg	03 43 42.6	-0.4
CEY			*i* Sg	Sg	03 43 50.2	-0.1
CEY						
	comp=Z,85nm,0.2s					
CEY	**Cerknica**	**0.57 274**	*i* Pg	Pg	03 43 42.6	-0.4
CEY			*i* Sg	Sg	03 43 50.2	-0.1
CEY	**Cerknica**	**0.57 274**	*i* Pg	Pg	03 43 42.6	-0.3
CEY			*i* Sg	Sg	03 43 50.2	-0.1
	comp=Z,85nm,0.2s					
LJU	**Ljubljana**	**0.60 305**	*i* Pg	Pg	03 43 43.0	-0.6
LJU			*e*Sg	Sg	03 43 50.8	-0.6
LJU						
	comp=Z,151nm,0.4s					
LJU	**Ljubljana**	**0.60 305**	*i* Pg	Pg	03 43 43.0	-0.6
LJU			*e*Sg	Sg	03 43 50.8	-0.6
LJU	**Ljubljana**	**0.60 305**	*i* Pg	Pg	03 43 43.0	-0.6
LJU			*e*Sg	Sg	03 43 50.8	-0.6
	comp=Z,151nm,0.4s					
KNDS	**Knezji Dol**	**0.62 254**	⇑*i*Pg	Pg	03 43 43.5	-0.5
KNDS						
	comp=Z,40nm,0.1s					
KNDS	**Knezji Dol**	**0.62 254**	⇑*i*Pg	Pg	03 43 43.5	-0.5
	comp=Z,40nm,0.1s					
ZAVS	**Zavodnje**	**0.75 349**	⇓*i*Pg	Pg	03 43 46.0	-0.4
CRNS	**Crni Vrh**	**0.78 299**	⇓*i*Pg	Pg	03 43 46.4	-0.5
CRNS			*i* Sg	Sg	03 43 56.9	-0.2
CRNS						
	comp=Z,147nm,0.3s					
GROS	**Grobnik**	**0.78 14**	*i* Pg	Pg	03 43 46.7	-0.3
GROS						
	comp=Z,63nm,0.3s					
GROS	**Grobnik**	**0.78 14**	*i* Pg	Pg	03 43 46.7	-0.3
	comp=Z,63nm,0.3s					
MOZS	**Mozjanca**	**0.81 317**	*i* Pg	Pg	03 43 47.1	-0.5
SISC	**Sisak**	**0.83 106**	*e*Pg	Pg	03 43 49.7	+1.7
SISC			Sg	Sg	03 44 00.3	+1.5
SISC	**Sisak**	**0.83 106**	*e*Pg	Pg	03 43 49.7	+1.7
SISC			Sg	Sg	03 44 00.3	+1.5
JAVS	**Javornik**	**0.84 284**	*i* Pg	Pg	03 43 47.3	-0.9
JAVS			*i* Sg	Sg	03 43 59.0	0.0
JAVS						
	comp=Z,20nm,0.1s					
JAVS	**Javornik**	**0.84 284**	*i* Pg	Pg	03 43 47.3	-0.9
JAVS			*i* Sg	Sg	03 43 59.0	0.0
JAVS	**Javornik**	**0.84 284**	*i* Pg	Pg	03 43 47.3	-0.8
JAVS			*i* Sg	Sg	03 43 59.0	0.0
	comp=Z,20nm,0.1s					
SKDS	**Skadanscina**	**0.87 260**	*i* Pg	Pg	03 43 47.8	-0.9
SKDS						
	comp=Z,52nm,0.2s					
OBKA	**Obir**	**0.94 330**	⇑*e*Pg	Pg	03 43 49.4	-0.6
	SNR=42					
OBKA			⇓*i*Sg	Sg	03 44 01.1	-1.1
	comp=Z,60nm,0.2s					
OBKA	**Obir**	**0.94 330**	Pg	Pg	03 43 49.4	-0.6
	SNR=42					
OBKA			Sg	Sg	03 44 01.1	-1.1
	comp=Z,60nm,0.2s					
PERS	**Pernice**	**0.94 355**	*i* Pg	Pg	03 43 49.5	-0.5
PERS						
	comp=Z,58nm,0.2s					
PERS	**Pernice**	**0.94 355**	*i* Pg	Pg	03 43 49.5	-0.5
	comp=Z,58nm,0.2s					
BISS	**Bistriski jare**	**0.95 356**	*i* Pg	Pg	03 43 49.9	-0.4
BISS	**Bistriski jare**	**0.95 356**	*i* Pg	Pg	03 43 49.9	-0.3
SOKA	**Soboth**	**0.99 352**	⇓*i*Pg	Pg	03 43 50.2	-0.7
SOKA			⇑*i*Sg	Sg	03 44 04.0	+0.2
	comp=Z,18nm,0.3s					
SOKA	**Soboth**	**0.99 352**	Pg	Pg	03 43 50.2	-0.7
SOKA			Sg	Sg	03 44 04.0	+0.3
	comp=Z,18nm,0.3s					
VOJS	**Vojsko**	**1.00 290**	*e*Pg	Pg	03 43 50.3	-0.9
VOJS			*i* Sg	Sg	03 44 04.2	0.0
VOJS						
	comp=Z,48nm,0.3s					
VOJS	**Vojsko**	**1.00 290**	*e*Pg	Pg	03 43 50.3	-0.9
VOJS			*i* Sg	Sg	03 44 04.2	0.0
VOJS	**Vojsko**	**1.00 290**	*e*Pg	Pg	03 43 50.3	-0.9
VOJS			*i* Sg	Sg	03 44 04.2	+0.1
	comp=Z,48nm,0.3s					
KOGS	**Kog**	**1.03 43**	*e*Sg	Sg	03 44 06.5	+1.5
KOGS						
	comp=Z,49nm,0.2s					
KOGS	**Kog**	**1.03 43**	*e*Sg	Sg	03 44 06.6	+1.5
	comp=Z,49nm,0.2s					
TRI	**Trieste**	**1.03 271**	Pn	Pn	03 43 51.4	-1.5
TRI			Sn	Sn	03 44 05.5	-2.0
	comp=Z,87nm,0.8s					
TRI	**Trieste**	**1.03 271**	*e*Pg	Pg	03 43 51.2	-0.5
TRI			*e*S	Sg	03 44 05.1	0.0
TRI	**Trieste**	**1.03 271**	*e*Pg	Pg	03 43 51.2	-0.6
TRI	**Trieste**	**1.03 271**	Pn	Pn	03 43 51.4	-1.5
TRI			*e*S	Sg	03 44 05.1	0.0
TRI			Sn	Sn	03 44 05.5	-2.0
	comp=Z,87nm,0.8s					
GORS	**Gorjuse**	**1.06 306**	*i* Pg	Pg	03 43 51.4	-0.9
GORS						
	comp=Z,116nm,0.2s					
GORS	**Gorjuse**	**1.06 306**	*i* Pg	Pg	03 43 51.4	-0.9
NVLJ	**Novalja**	**1.17 193**	*i* Pg	Pn	03 43 52.8	-2.0
NVLJ			Sg	Sg	03 44 11.0	+1.5
NVLJ	**Novalja**	**1.17 193**	*i* Pg	Pn	03 43 52.8	-1.9
NVLJ			Sg	Sg	03 44 11.0	+1.5
CADS	**Cadrg**	**1.17 297**	*i* Pg	Pn	03 43 52.9	-1.8
CADS			*i* Sg	Sg	03 44 09.3	-0.3
CADS						
	comp=Z,136nm,0.3s					
CADS	**Cadrg**	**1.17 297**	*i* Pg	Pn	03 43 52.9	-1.8
CADS			*i* Sg	Sg	03 44 09.3	-0.3
CADS	**Cadrg**	**1.17 297**	*i* Pg	Pn	03 43 52.9	-1.9
CADS			*i* Sg	Sg	03 44 09.3	-0.3
DRE	**Drenchia**	**1.21 294**	⇑*i*Pg	Pn	03 43 53.6	-1.7
DRE			*i* Sg	Sg	03 44 11.8	+1.0
DRE	**Drenchia**	**1.21 294**	*i* Pg	Pn	03 43 53.6	-1.7
DRE			*i* Sg	Sg	03 44 11.8	+1.0
ROBS	**Robic**	**1.32 295**	*i* Pg	Pn	03 43 55.6	-1.3
ROBS						
	comp=Z,26nm,0.3s					
ROBS	**Robic**	**1.32 295**	*i* Pg	Pn	03 43 55.6	-1.2
	comp=Z,26nm,0.3s					
LSR	**Lussari**	**1.42 304**	*e*Pg	Pn	03 43 58.0	-0.2
LSR			*e*Sg	Sg	03 44 19.0	+1.4
LSR	**Lussari**	**1.42 304**	*e*Pg	Pn	03 43 58.0	-0.2
LSR			*e*Sg	Sg	03 44 19.0	+1.5
MYKA	**Terra Mystica**	**1.44 311**	⇑*i*Pg	Pn	03 43 58.7	+0.1
MYKA			⇑*i*Sg	Sg	03 44 18.4	0.0
	comp=Z,24nm,0.3s					
MYKA	**Terra Mystica**	**1.44 311**	Pg	Pn	03 43 58.7	+0.1
MYKA			Sg	Sg	03 44 18.4	0.0
	comp=Z,24nm,0.3s					
PTCC	**Patocco-Chiusa**	**1.49 299**	Pn	Pn	03 43 59.3	+0.2
PTCC			Sn	Sn	03 44 21.0	+2.2
	comp=Z,35nm,0.3s					
PTCC	**Patocco-Chiusa**	**1.49 299**	Pn	Pn	03 43 59.3	+0.2
PTCC			Sn	Sn	03 44 21.0	+2.2
	comp=Z,35nm,0.3s					
BAD	**Bernadia**	**1.49 292**	⇑*i*Pg	Pb	03 43 59.5	-0.5
BAD			*i* Sg	Sg	03 44 20.4	+0.6
BAD	**Bernadia**	**1.49 292**	*i* Pg	Pb	03 43 59.5	-0.5
BAD			*i* Sg	Sg	03 44 20.4	+0.6
TLI	**Talmassons**	**1.51 279**	⇑*i*Pg	Pg	03 44 00.7	-0.2
TLI			*i* Sg	Sg	03 44 22.0	+1.6
TLI	**Talmassons**	**1.51 279**	*i* Pg	Pg	03 44 00.7	-0.2
TLI			*i* Sg	Sg	03 44 22.0	+1.6
BUA	**Buia**	**1.56 290**	*e*Pg	Pg	03 44 02.3	+0.4
BUA			*e*Sg	Sg	03 44 23.2	+1.0
BUA	**Buia**	**1.56 290**	*e*Pg	Pg	03 44 02.3	+0.4
BUA			*e*Sg	Sg	03 44 23.2	+1.1
ARSA	**Arzberg**	**1.56 7**	⇓*i*Pn	Pn	03 43 59.3	-0.9
ARSA			⇓*i*Pg	Pg	03 44 01.1	-0.8
ARSA			⇑*i*Sg	Sg	03 44 22.5	+0.3
	comp=Z,14nm,0.4s					
ARSA	**Arzberg**	**1.56 7**	Pn	Pn	03 43 59.3	-0.9
MPRI	**Monte Prat**	**1.66 290**	⇓*i*Pg	Pb	03 44 02.8	0.0
MPRI			*i* Sg	Sg	03 44 26.1	+0.9
MPRI	**Monte Prat**	**1.66 290**	*i* Pg	Pb	03 44 02.8	0.0
MPRI			*i* Sg	Sg	03 44 26.1	+0.9
PLRO	**Paularo**	**1.68 301**	⇓*e*Pg	Pg	03 44 03.8	-0.4
PLRO			*e*Sg	Sg	03 44 27.1	+1.2
PLRO	**Paularo**	**1.68 301**	*e*Pg	Pg	03 44 03.8	-0.4
PLRO			*e*Sg	Sg	03 44 27.1	+1.1
ZOU	**Zoufplan**	**1.79 299**	⇓*e*Pg	Pb	03 44 05.1	0.0
ZOU			*e*Sg	Sg	03 44 29.4	-0.1
ZOU	**Zoufplan**	**1.79 299**	*e*Pg	Pb	03 44 05.1	0.0
ZOU			*e*Sg	Sg	03 44 29.4	-0.1
MLNI	**Malnisio**	**1.89 285**	⇓*e*Pn	Pn	03 44 06.5	+1.9
MLNI			*e*Sn	Sn	03 44 32.3	+3.6
MLNI	**Malnisio**	**1.89 285**	*e*Pn	Pn	03 44 06.6	+2.0
MLNI			*e*Sn	Sn	03 44 32.3	+3.7
KBA	**Koelnbreinsper**	**1.90 317**	⇓*i*Pn	Pn	03 44 03.8	-1.0
KBA			⇓*i*Pg	Pg	03 44 07.6	-0.8
KBA			⇑*i*Sn	Sn	03 44 28.5	-0.5
KBA			⇑*i*Sg	Sg	03 44 33.5	+0.5
	comp=Z,13nm,0.3s					
KBA	**Koelnbreinsper**	**1.90 317**	Pn	Pn	03 44 03.8	-1.0
FVI	**Forni Avoltri**	**1.93 299**	Pn	Pn	03 44 06.9	+1.7
	comp=Z,37nm,0.4s					
FVI	**Forni Avoltri**	**1.93 299**	Pn	Pn	03 44 06.9	+1.7
	comp=Z,37nm,0.4s					
CAE	**Caneva**	**1.98 280**	⇓*e*Pn	Pn	03 44 06.9	+1.0
CAE			*e*Sn	Sn	03 44 33.0	+2.0
CAE	**Caneva**	**1.98 280**	*e*Pn	Pn	03 44 06.9	+1.0
CAE			*e*Sn	Sn	03 44 33.0	+2.1
ABTA	**Abfaltersbach**	**2.16 300**	⇓*i*Pn	Pn	03 44 07.6	-0.8
ABTA			⇑*i*Pg	Pg	03 44 12.2	-1.1
ABTA	**Abfaltersbach**	**2.16 300**	Pn	Pn	03 44 07.6	-0.8
VARN	**Col Varnada, M**	**2.21 279**	⇓*i*Pn	Pn	03 44 09.6	+0.6
VARN			*i* Sn	Sn	03 44 38.5	+2.0
VARN	**Col Varnada, M**	**2.21 279**	*i* Pn	Pn	03 44 09.6	+0.6
VARN			*i* Sn	Sn	03 44 38.5	+1.9
PKSM	**Moragy**	**2.43 77**	*e*Sn	Sn	03 44 40.0	-2.1
CTI	**Castel Tesino**	**2.53 279**	Pn	Pn	03 44 14.0	+0.6
CTI	**Castel Tesino**	**2.53 279**	Pn	Pn	03 44 14.0	+0.6
PIEI	**Pieia**	**2.90 223**	Pn	Pn	03 44 19.6	+1.0
	comp=Z,10.0nm,0.5s					
PIEI	**Pieia**	**2.90 223**	Pn	Pn	03 44 19.6	+1.0
	comp=Z,10.0nm,0.5s					
MAGA	**Magasa**	**3.23 273**	Pn	Pn	03 44 24.8	+1.8
	comp=Z,73nm,0.5s					
MAGA	**Magasa**	**3.23 273**	Pn	Pn	03 44 24.8	+1.8
KHC	**Kasperske Hory**	**3.61 342**	*e*PN	Pn	03 44 28.9	+0.6
KHC			*e*PG	Pg	03 44 43.5	+2.4
KHC			*e*SN	Sn	03 45 10.5	-0.7
KHC	**Kasperske Hory**	**3.61 342**	Pn	Pn	03 44 28.9	+0.6
KHC			Sn	Sn	03 45 10.5	-0.7

*ISCJB **24** 03:46:43.7±1.1, 51°.50N±0°.05×16°.16E±0°.05, h0km, Error ellipse: s-maj=8.0km s-min=4.0km az=18.3*
*CSEM **24** 03:46:44.0±0.8, 51°.54N×16°.23E, h2km, ML3.1/4, Error ellipse: s-maj=15.1km s-min=6.8km az=177.0*
*PRU **24** 03:46:46.8, 51°.42N×16°.22E, h0km*
*WAR **24** 03:46:47.3, 51°.47N×16°.14E, ML2.3, Mining Induced*

ISC 24 03:46:45.2±1.0, 51°.47N±0°.05×16°.22E±0°.04, h0km, n22, σ1§01/41, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.63**	**176**	*e*Pg	**Pg**	03 46 58.8	+1.5
KSP				*e*Sg	**Sg**	03 47 07.3	+1.8
KSP	**Ksiaz**	**0.63**	**176**	*e*Pg	**Pg**	03 46 58.8	+1.5
KSP				*e*Sg	**Sg**	03 47 07.1	+1.6
UPC	**Upice**	**0.97**	**188**	*e*PG	**Pg**	03 47 05.0	+1.1
UPC	**Upice**	**0.97**	**188**	Pg	**Pg**	03 47 05.0	+1.1
DPC	**Dobruska-Polom**	**1.12**	**177**	*e*PG	**Pg**	03 47 07.6	+0.8
DPC				*e*SG	**Sg**	03 47 21.6	+0.3
	comp=Z,9.1nm,0.3s						
DPC	**Dobruska-Polom**	**1.12**	**177**	Pg	**Pg**	03 47 07.6	+0.8
DPC				Sg	**Sg**	03 47 21.6	+0.3
	comp=Z,9.1nm,0.3s						
PVCC	**Panska Ves**	**1.41**	**228**	*e*PG	**Pg**	03 47 12.6	+0.5
PVCC				*e*SG	**Sg**	03 47 30.8	+0.5
	comp=Z,39nm,0.2s						
PVCC	**Panska Ves**	**1.41**	**228**	Pg	**Pg**	03 47 12.6	+0.5
PVCC				Sg	**Sg**	03 47 30.8	+0.5
	comp=Z,39nm,0.2s						
BRG	**Berggiesshubel**	**1.55**	**248**	PG	**Pg**	03 47 15.0	+0.1
BRG				SG	**Sg**	03 47 35.2	+0.2
	comp=Z,14nm,0.5s						
PRU	**Pruhonice**	**1.83**	**216**	*e*PG	**Pg**	03 47 20.5	+0.3
PRU				*e*SG	**Sg**	03 47 43.5	-0.4
	comp=Z,13nm,0.4s						
PRU	**Pruhonice**	**1.83**	**216**	Pg	**Pg**	03 47 20.5	+0.3
PRU				Sg	**Sg**	03 47 43.5	-0.4
	comp=Z,13nm,0.4s						
MORC	**Moravsky Berou**	**1.90**	**153**	*e*Pn	**Pn**	03 47 19.9	+1.1
MORC				*e*Sg	**Sg**	03 47 43.4	-2.7
CLL	**Collm**	**2.02**	**267**	*e*Pg	**Pg**	03 47 24.0	+0.1
CLL				*e*Sg	**Sg**	03 47 50.0	-0.1
	comp=Z,6.0nm,0.6s						
TREC	**Trest**	**2.23**	**192**	*e*PG	**Pg**	03 47 27.9	0.0
TREC	**Trest**	**2.23**	**192**	Pg	**Pg**	03 47 27.9	0.0
OJC	**Ojcow**	**2.59**	**118**	*e*Pg	**Pg**	03 47 32.7	-2.2
OJC				*e*Sg	**Sg**	03 48 08.4	-0.1
OJC	**Ojcow**	**2.59**	**118**	*e*Pg	**Pg**	03 47 32.7	-2.2
OJC				*e*Sg	**Sg**	03 48 08.4	-0.1
NKC	**Novy Kostel**	**2.69**	**244**	*e*PG	**Pg**	03 47 36.7	-0.1
NKC				*e*SG	**Sg**	03 48 11.0	-0.6
	comp=Z,9.1nm,0.3s						
NKC	**Novy Kostel**	**2.69**	**244**	Pg	**Pg**	03 47 36.7	-0.1
NKC				Sg	**Sg**	03 48 11.0	-0.6
	comp=Z,9.1nm,0.3s						
KHC	**Kasperske Hory**	**2.89**	**217**	*e*PG	**Pg**	03 47 39.1	-1.5
KHC				*e*SN	**Sn**	03 48 07.0	-0.9
KHC				*e*SG	**Sg**	03 48 15.8	-2.2
	comp=Z,3.1nm,0.3s						
KHC	**Kasperske Hory**	**2.89**	**217**	Pg	**Pg**	03 47 39.1	-1.5
KHC				Sn	**Sn**	03 48 07.0	-0.9
MOX	**Moxa**	**3.02**	**256**	*e*PG	**Pg**	03 47 43.3	+0.2
MOX				*e*SG	**Sg**	03 48 22.7	+0.5

CASC 24 03:48:11.3±2.3, 8°.45N×83°.02W, h1km±6km, MD3.6, 2D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.25**	**325**	*e*P	Pg	03 48 17.2	+1.1
ACR				*e*S	Sg	03 48 20.4	+1.0
BRU2	**Volcan**	**0.47**	**43**	⇓*i*P	Pg	03 48 21.8	+1.3
BRU2				*e*S	Sg	03 48 31.8	+5.2
CTCR	**Cotoan**	**0.52**	**30**	⇓*i*P	Pg	03 48 22.4	+1.2
BAR1		**0.84**	**340**	*e*P	Pg	03 48 27.9	+0.5
BAR1				*e*S	Sg	03 48 41.0	+2.6
CNI	**Changuinola**	**1.09**	**27**	*e*P	Pg	03 48 32.1	0.0
BUS	**Buena Vista**	**1.32**	**327**	*e*P	Pg	03 48 36.2	-0.5
BUS				*e*S	Sg	03 48 54.7	+0.9
URSC	**Urasca**	**1.57**	**332**	*e*P	Pn	03 48 39.7	-0.6
URSC				*e*S	Sn	03 48 59.1	-2.2
PRS1	**Puriscal**	**1.99**	**320**	*e*P	Pn	03 48 46.7	+0.6
CGA2	**Cerro Gallo 2**	**2.11**	**318**	*e*P	Pn	03 48 49.4	+1.6
CGA2				*e*S	Sn	03 49 16.8	+2.0

*NOU **24** 03:49:30.9±0.6, 18°.96S×168°.14E, h30km, MD2.9, ML2.6*
*IDC **24** 03:49:32.5±1.3, 19°.36S×168°.08E, h0km, mb4.0/7, mb1 4.2/7, mb1mx4.1/15, mbtmp4.1/7, MS3.2/2, Ms1 3.2/2, ms1mx2.9/17, Error ellipse: s-maj=34.0km s-min=28.3km az=132.0*
*ISCJB **24** 03:49:35.4±0.9, 19°.39S±0°.06×168°.1E±0°.1, h33km, mb4.0/6, MS3.0/2, Error ellipse: s-maj=18.7km s-min=7.5km az=17.6*

ISC 24 03:49:37.6±0.9, 19°.42S±0°.06×168°.1E±0°.1, h35km, n14, σ1§05/15, mb4.0/6, MS3.0/2, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.96**	**203**	*e*P	**Pn**	03 50 20.5	-1.6
BAYA				*e*S	**Sn**	03 50 57.6	+1.2
DZM	**Mont Dzumac**	**3.08**	**211**	*e*P	**Pn**	03 50 21.6	-2.0
DZM				AMP		03 50 59.5	
	comp=Z,733nm,8.0s						
PLUM	**Mont Dore**	**3.17**	**206**	*e*S	**Sn**	03 51 01.8	+0.4
NOUC	**Port Laguerre**	**3.17**	**212**	*e*P	**Pn**	03 50 23.8	-1.1
NOUC				*e*S	**Sn**	03 51 02.1	+0.6
NOUC				AMP		03 51 22.2	
	comp=Z,40nm,0.6s						
AFI	**Afiamalu**	**20.01**	**77**	LR	LR	04 00 17.1	
	comp=Z,79nm,18.3s,MS3.1,baz=243,slow=32						
URZ	**Urewera**	**20.34**	**159**	P	**P**	03 54 11.7	+1.0
	comp=Z,16nm,1.0s,baz=348,slow=23,SNR=2.2						
CTA	**Charters Tower**	**20.60**	**264**	P	**P**	03 54 15.9	+2.1
	comp=Z,3.6nm,0.6s,baz=66,slow=7.0,SNR=2.4						
CTA				LR	LR	04 01 19.1	
	comp=Z,60nm,19.8s,MS3.0,baz=227,slow=34						
STKA	**Stephens Creek**	**26.87**	**237**	P	**P**	03 55 14.8	-0.3
	comp=Z,0.8nm,0.4s,mb3.6,baz=54,slow=13,SNR=4.8						
WRA	**Warramunga Arr**	**31.79**	**263**	P	**P**	03 55 58.0	-0.9
	comp=Z,0.6nm,0.6s,mb3.6,baz=88,slow=8.5,SNR=2.2						
ASAR	**Alice Springs**	**32.07**	**256**	P	**P**	03 56 01.2	-0.1
	comp=Z,2.7nm,0.5s,mb4.3,baz=82,slow=8.2,SNR=34						
MJAR	**Matsushiro Arr**	**62.42**	**333**	P	**P**	03 59 57.2	+0.1
	comp=Z,0.9nm,0.5s,mb4.1,baz=163,slow=8.9,SNR=4.1						
SONM	**Songino Array**	**86.73**	**324**	P	**P**	04 02 18.4	+0.6
	comp=Z,1.5nm,0.8s,mb4.3,baz=171,slow=2.2,SNR=6.7						
NVAR	**Mina Array Bea**	**89.70**	**49**	P	**P**	04 02 32.3	+0.1
	comp=Z,0.5nm,0.7s,mb4.0,baz=238,slow=5.5,SNR=4.2						
NVAR	**Mina Array Bea**	**89.70**	**49**	P	**P**	04 02 32.3	+0.1

*ISCJB **24** 03:52:32.5±0.5, 67°.87N±0°.07×141°.8E±0°.1, h10km, mb3.8/8, Error ellipse: s-maj=10.8km s-min=7.2km az=175.9*
*MOS **24** 03:52:34.4±2.6, 67°.89N×141°.72E, h14km, mb4.3/4, Error ellipse: s-maj=29.0km s-min=14.1km az=84.5*
*IDC **24** 03:52:34.2±0.9, 68°.45N×141°.13E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.6/24, mbtmp3.7/6, MS2.9/3, Ms1 2.9/3, ms1mx2.6/22, Error ellipse: s-maj=43.5km s-min=20.7km az=137.0*
*NEIC **24** 03:52:36.3±0.6, 68°.17N×142°.25E, h10km, Error ellipse: s-maj=18.2km s-min=12.3km az=167.0*

ISC 24 03:52:34.5±0.6, 67°.91N±0°.08×142°.1E±0°.2, h10km, n30, σ1§27/26, mb3.8/8, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIXI	**Tiksi**	**5.90**	**315**	*e*P	**Pn**	03 54 02.8	+1.0
TIXI				*e*S	**Sn**	03 55 05.0	-4.4
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
TIXI				MLR	MLR		
	comp=Z,201nm,13.0s						
TIXI	**Tiksi**	**5.90**	**315**	*e*Pn

ellipse: s-maj=14.9km s-min=7.8km az=25.5
*CSEM **24** 04:23:30.0, 42°.84N×45°.64E, h24km, mb4.2, After OBN*
*ISCJB **24** 04:23:31.1±0.4, 42°.86N±0°.04×45°.62E±0°.03, h23km±5km, Error ellipse: s-maj=6.3km s-min=2.9km az=15.6*

ISC 24 04:23:30.4±0.4, 42°.87N±0°.03×45°.63E±0°.03, h16km±4km, n40, σ0°90/78, 4C-4D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNJR	**Sundja**	**0.63**	**289**	*e*PG	**Pg**	**04 23 43.2**	**+0.4**
SNJR				*e*S	**Sg**	**04 23 52.5**	**+1.3**
SNJR	**Sundja**	**0.63**	**289**	*e*Pg	**Pg**	**04 23 43.2**	**+0.4**
SNJR				*e*Sg	**Sg**	**04 23 52.5**	**+1.3**
VLKR	**Vladikavkaz**	**0.72**	**285**	*e*PG	**Pg**	**04 23 44.5**	**0.0**
VLKR				*e*S	**Sg**	**04 23 54.6**	**+0.6**
VLKR	**Vladikavkaz**	**0.72**	**285**	*e*Pg	**Pg**	**04 23 44.5**	**0.0**
VLKR				*e*Sg	**Sg**	**04 23 54.6**	**+0.6**
DLMR	**Dylym**	**0.76**	**74**	*e*PG	**Pg**	**04 23 45.0**	**-0.3**
DLMR				*e*S	**Sg**	**04 23 57.0**	**+1.6**
DLMR				pmax	pmax		
	comp=Z,173nm,0.2s						
DLMR	**Dylym**	**0.76**	**74**	*e*Pg	**Pg**	**04 23 45.0**	**-0.3**
	comp=Z,173nm,0.2s						
DLMR				*e*Sg	**Sg**	**04 23 57.0**	**+1.6**
UNCR	**Uncukul**	**0.87**	**100**	⇑*i*PG	**Pg**	**04 23 47.0**	**-0.4**
UNCR				*e*S	**Sg**	**04 24 00.0**	**+1.1**
UNCR	**Uncukul**	**0.87**	**100**	*i* Pg	**Pg**	**04 23 47.0**	**-0.4**
UNCR				*e*Sg	**Sg**	**04 24 00.0**	**+1.1**
DBC	**Dubki**	**0.90**	**80**	*e*PG	**Pg**	**04 23 47.4**	**-0.4**
DBC	**Dubki**	**0.90**	**80**	*e*Pg	**Pg**	**04 23 47.4**	**-0.4**
BTKR	**Batakoyurt**	**0.94**	**303**	⇑*i*PG	**Pg**	**04 23 48.6**	**-0.1**
BTKR				*e*S	**Sg**	**04 24 02.1**	**+1.1**
BTKR	**Batakoyurt**	**0.94**	**303**	*i* Pg	**Pg**	**04 23 48.6**	**-0.1**
BTKR				*e*Sg	**Sg**	**04 24 02.1**	**+1.1**
LACR	**Lac**	**0.98**	**268**	⇓*i*PG	**Pg**	**04 23 48.0**	**-1.4**
LACR				*i* S	**Sb**	**04 24 00.9**	**-0.8**
LACR	**Lac**	**0.98**	**268**	*i* Pg	**Pg**	**04 23 48.0**	**-1.4**
LACR				*i* Sg	**Sb**	**04 24 00.9**	**-0.8**
ARNR	**Ardon**	**1.04**	**289**	*e*PG	**Pg**	**04 23 49.5**	**-1.0**
ARNR				*e*S	**Sb**	**04 24 03.6**	**+0.2**
ARNR	**Ardon**	**1.04**	**289**	*e*Pg	**Pg**	**04 23 49.5**	**-1.0**
ARNR				*e*Sg	**Sb**	**04 24 03.6**	**+0.2**
ARKR	**Arakani**	**1.04**	**104**	*i* PG	**Pg**	**04 23 49.0**	**-1.6**
ARKR				*i* S	**Sg**	**04 24 04.5**	**+0.3**
ARKR				pmax	pmax		
	comp=Z,229nm,0.2s						
ARKR	**Arakani**	**1.04**	**104**	*i* Pg	**Pg**	**04 23 49.0**	**-1.6**
	comp=Z,229nm,0.2s						
ARKR				*i* Sg	**Sg**	**04 24 04.5**	**+0.3**
TRKR	**Terskaya**	**1.08**	**323**	*e*PG	**Pg**	**04 23 51.2**	**0.0**
TRKR				*i* S	**Sg**	**04 24 06.6**	**+1.3**
TRKR	**Terskaya**	**1.08**	**323**	*e*Pg	**Pg**	**04 23 51.2**	**0.0**
TRKR				*i* Sg	**Sg**	**04 24 06.6**	**+1.3**
KMSR	**Komsomolskaya**	**1.10**	**298**	⇑*i*PG	**Pg**	**04 23 50.7**	**-1.0**
KMSR				*i* S	**Sg**	**04 24 06.1**	**+0.1**
KMSR	**Komsomolskaya**	**1.10**	**298**	*i* Pg	**Pg**	**04 23 50.7**	**-1.0**
KMSR				*i* Sg	**Sg**	**04 24 06.1**	**+0.1**
KORR	**Kora**	**1.16**	**281**	⇓*i*PG	**Pn**	**04 23 51.5**	**-0.6**
KORR				*i* S	**Sb**	**04 24 06.8**	**-0.2**
KORR	**Kora**	**1.16**	**281**	*i* Pg	**Pn**	**04 23 51.5**	**-0.6**
KORR				*i* Sg	**Sb**	**04 24 06.8**	**-0.2**
ZEI	**Tsey**	**1.27**	**266**	⇑*i*PG	**Pn**	**04 23 52.5**	**-1.1**
ZEI				*i* S	**Sb**	**04 24 08.8**	**-1.4**
ZEI	**Tsey**	**1.27**	**266**	*i* Pg	**Pn**	**04 23 52.5**	**-1.1**
ZEI				*i* Sg	**Sb**	**04 24 08.8**	**-1.4**
TBLG	**Delisi**	**1.31**	**210**	*i* PG	**Pn**	**04 23 54.1**	**0.0**
TBLG				S	**Sg**	**04 24 12.5**	**-0.3**
TBLG	**Delisi**	**1.31**	**210**	P	**Pn**	**04 23 54.1**	**0.0**
TBLG				S	**Sn**	**04 24 12.5**	**+1.2**
TBLG	**Delisi**	**1.31**	**210**	*i* Pg	**Pn**	**04 23 54.1**	**0.0**
TBLG				Sg	**Sg**	**04 24 12.5**	**-0.3**
KMKR	**Kumukh**	**1.31**	**124**	*e*PG	**Pn**	**04 23 53.0**	**-1.1**
KMKR				*i* S	**Sn**	**04 24 11.0**	**-0.3**
KMKR				pmax	pmax		
	comp=Z,49nm,0.2s						
KMKR	**Kumukh**	**1.31**	**124**	*e*Pg	**Pn**	**04 23 53.0**	**-1.1**
	comp=Z,49nm,0.2s						
KMKR				*i* Sg	**Sn**	**04 24 11.0**	**-0.3**
PRTR	**Priterechnaya**	**1.32**	**312**	⇓*i*PG	**Pn**	**04 23 54.6**	**+0.4**
PRTR				*i* S	**Sg**	**04 24 12.6**	**-0.5**
PRTR	**Priterechnaya**	**1.32**	**312**	*i* Pg	**Pn**	**04 23 54.6**	**+0.4**
PRTR				*i* Sg	**Sg**	**04 24 12.6**	**-0.5**
MTA	**Mtatsminda**	**1.33**	**208**	P	**Pn**	**04 23 54.3**	**0.0**
MTA				S	**Sn**	**04 24 12.6**	**+0.9**
KEH	**Kehvi**	**1.37**	**246**	P	**Pn**	**04 23 53.0**	**-1.9**
KEH				S	**Sn**	**04 24 12.1**	**-0.6**
LSNR	**Lesken**	**1.39**	**288**	⇓*i*PG	**Pn**	**04 23 54.7**	**-0.4**
LSNR				*e*S	**Sn**	**04 24 13.1**	**-0.1**
LSNR	**Lesken**	**1.39**	**288**	*i* Pg	**Pn**	**04 23 54.7**	**-0.4**
LSNR				*e*Sg	**Sn**	**04 24 13.1**	**-0.1**
DGRG	**David-gareji**	**1.43**	**188**	P	**Pn**	**04 23 56.9**	**+1.2**
DGRG				S	**Sn**	**04 24 18.7**	**+4.5**
GOR	**Gori**	**1.43**	**232**	P	**Pn**	**04 23 56.2**	**+0.5**
GOR				S	**Sn**	**04 24 15.8**	**+1.7**
ONI	**Oni**	**1.62**	**261**	P	**Pn**	**04 23 58.3**	**-0.1**
ONI				S	**Sn**	**04 24 20.8**	**+1.8**

*LDG **24** 04:24:53.4±0.6, 42°.79N×1°.16W, h2km, Md1.8/2, Ml1.8/1, Error ellipse: s-maj=12.3km s-min=3.4km az=32.0*
*CSEM **24** 04:24:54.3±0.2, 42°.87N×1°.11W, h5km, ML1.8/1, Error ellipse: s-maj=4.9km s-min=2.9km az=14.0*

MDD 24 04:24:55.4±0.4, 42°.89N×1°.10W, h0km, mbLg1.2/9, Error ellipse: s-maj=4.0km s-min=2.7km az=20.0, PRXIMO, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJPF	**Ste Jean**	**0.24**	**337**	*e*Pg	Pg	04 24 59.9	-0.1
SJPF				*e*Sg	Sg	04 25 03.6	+0.5
	10nm,0.3s						
SJPF	**Ste Jean**	**0.24**	**337**	Pg	Pg	04 24 59.9	-0.1
SJPF				Lg		04 25 03.6	
	5.1nm,0.3s						
SJPF	**Ste Jean**	**0.24**	**337**	*e*Pg	Pg	04 24 59.9	-0.1
SJPF				*e*Sg	Sg	04 25 03.6	+0.5
	5.1nm,0.3s						
EARA	**Aranguren**	**0.37**	**251**	Pg	Pg	04 25 01.9	-0.6
	4.1nm,0.2s,SNR=7.9						
EARA				Lg		04 25 07.8	
	8.5nm,0.1s,SNR=7.9

*BJI **24** 04:55:42.8, 32°.24N×104°.57E, h16km, mB4.6/3, mb4.1/3, ML3.7/15, Ms3.9/4, Ms7 3.9/3*

ISC 24 04:55:40.6±0.9, 32°.13N±0°.03×104°.56E±0°.05, h8km±6km, n31, σ1s09/38, mb4.0/15, 4C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.40**	**209**	⇓*i*Pg	**Pg**	**04 56 07.3**	**-0.1**
CD2				Sg	**Sg**	**04 56 26.3**	**+0.8**
CD2				smax			
	comp=N,6μm,0.7s						
CD2				smax			
	comp=E,3μm,0.6s						
LZH	**Lanzhou**	**3.99**	**352**	Pn	**Pn**	**04 56 45.3**	**+3.4**
LZH				Pg	**Pg**	**04 56 50.9**	**-6.1**
LZH				Sn	**Sn**	**04 57 31.0**	**+2.2**
LZH				Sg	**Sg**	**04 57 47.3**	**-1.3**
LZH				smax			
	comp=N,380nm,0.5s						
LZH				smax			
	comp=E,400nm,0.7s						
LZH				LR	LR		
	comp=E,1μm,6.8s						
LZH				LR	LR		
	comp=Z,2μm,7.6s						
XAN	**Xi'an**	**4.13**	**61**	Pn	**Pn**	**04 56 46.6**	**+2.7**
XAN				Pg	**Pg**	**04 56 55.9**	**-3.8**
XAN				Sn	**Sn**	**04 57 36.0**	**+3.7**
XAN				Sg	**Sg**	**04 57 54.1**	**+1.0**
XAN				smax			
	comp=N,240nm,0.7s						
XAN				smax			
	comp=E,140nm,0.7s						
ENH	**Enshi**	**4.61**	**112**	*e*Pn	**Pn**	**04 56 51.3**	**+0.7**
ENH				*e*S	**Sb**	**04 57 56.4**	**-1.1**
KMI	**Kunming**	**7.17**	**193**	P	**Pg**	**04 57 57.3**	**-0.5**
KMI				pmax	pmax		
	comp=Z,14nm,0.7s						
CMAR	**Chiang Mai Arr**	**14.53**	**202**	Pn	**Pn**	**04 59 09.1**	**+2.6**
	comp=Z,0.4nm,0.3s,baz=9,9,slow=11,SNR=3.0						
SONM	**Songino Array**	**15.74**	**5**	Pn	**Pn**	**04 59 21.4**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=190,slow=13,SNR=4.6						
KSRS	**Korea Array**	**19.89**	**68**	P	**Pn**	**05 00 09.9**	**-4.1**
	comp=Z,0.1nm,0.3s,baz=258,slow=11,SNR=2.8						
MK31	**Makanchi Array**	**22.47**	**317**	*e*Pn	**P**	**05 00 40.1**	**0.0**
MKAR	**Makanchi Array**	**22.47**	**317**	P	**P**	**05 00 41.1**	**+1.0**
	comp=Z,0.9nm,0.7s,mb3.3,baz=100,slow=14,SNR=6.7						
AAK	**Ala-Archa**	**25.96**	**302**	LR	LR	05 13 37.4	
	comp=Z,30nm,19.8s,baz=59,slow=41						
ZAA0	**Zalesovo Array**	**25.97**	**333**	*e*P	**P**	**05 01 13.5**	**+0.1**
ZALV	**Zalesovo Beam**	**25.97**	**333**	P	**P**	**05 01 13.5**	**+0.1**
	comp=Z,6.1nm,0.5s,mb4.4,baz=128,slow=10,SNR=22						
KURK	**Kurchatov**	**26.67**	**322**	P	**P**	**05 01 19.9**	**+0.1**
	comp=Z,1.1nm,0.7s,mb3.5,baz=130,slow=8.9,SNR=7.4						
BVAR	**Borovoye Array**	**32.23**	**321**	P	**P**	**05 02 09.7**	**+0.6**
	comp=Z,0.5nm,0.6s,mb3.6,baz=64,slow=6.6,SNR=3.1						
BVAR	**Borovoye Array**	**32.23**	**321**	P	**P**	**05 02 09.7**	**+0.6**
ABKAR	**Akbulak array**	**37.29**	**311**	*e*P	**P**	**05 02 53.4**	**+0.5**
	comp=Z,2.1nm,0.8s,mb4.0						
AKTK	**Aktyubinsk**	**38.73**	**312**	P	**P**	**05 03 04.2**	**-0.7**
AKTO	**Aktyubinsk**	**38.73**	**312**	P	**P**	**05 03 04.2**	**-0.7**
	comp=Z,1.2nm,0.6s,mb3.8,baz=103,slow=13,SNR=5.6						
ARCES	**ARCESS Array B**	**56.48**	**336**	P	**P**	**05 05 22.2**	**-0.3**
	comp=Z,1.4nm,0.4s,mb4.3,baz=86,slow=7.7,SNR=23						
FINES	**FINESS Array B**	**56.93**	**326**	P	**P**	**05 05 25.3**	**-0.6**
	comp=Z,1.4nm,0.5s,mb4.2,baz=74,slow=6.8,SNR=4.7						
AKASG	**Malin Array Be**	**56.97**	**313**	P	**P**	**05 05 25.5**	**-0.8**
	comp=Z,1.0nm,0.4s,mb4.2,baz=67,slow=7.9,SNR=3.3						
WRA	**Warramunga Arr**	**59.12**	**147**	P	**P**	**05 05 40.5**	**-1.1**
	comp=Z,1.8nm,0.9s,mb4.1,baz=341,slow=7.7,SNR=7.8						
ASAR	**Alice Springs**	**62.17**	**149**	P	**P**	**05 06 01.7**	**-0.7**
	comp=Z,0.3nm,0.6s,mb3.6,baz=340,slow=7.9,SNR=4.2						
NOA	**NORSAR Array B**	**64.00**	**327**	P	**P**	**05 06 13.4**	**-0.8**
	comp=Z,0.8nm,0.8s,mb3.8,baz=71,slow=8.8,SNR=2.9						
LPG	**La Plagne**	**72.83**	**313**	⇑*i*P	**P**	**05 07 10.1**	**+0.4**
	comp=Z,10nm,0.5s,mb4.7						
LPG	**La Plagne**	**72.83**	**313**	⇑*i*P	**P**	**05 07 10.1**	**+0.4**
	comp=Z,5.3nm,0.5s,mb4.7						
LPL	**La Plagne**	**72.83**	**313**	⇑*i*P	**P**	**05 07 10.1**	**+0.4**
	comp=Z,10nm,0.5s,mb4.8						
LPL	**La Plagne**	**72.83**	**313**	⇑*i*P	**P**	**05 07 10.1**	**+0.4**
	comp=Z,5.2nm,0.5s,mb4.7						
YKA	**Yellowknife Ar**	**80.60**	**17**	P	**P**	**05 07 51.5**	**-1.8**
	comp=Z,0.6nm,0.7s,mb3.7,baz=329,slow=4.9,SNR=7.6						
YKA	**Yellowknife Ar**	**80.60**	**17**	P	**P**	**05 07 51.5**	**-1.8**

*IDC **24** 04:56:17.6±2.3, 8°.57S×112°.36E, h0km, mb3.8/7, mb1 4.0/8, mb1mx3.8/21, mbtmp3.9/8, ML3.9/1, Error ellipse: s-maj=131.5km s-min=16.4km az=53.0*
*NEIC **24** 04:56:22.1±0.9, 8°.77S×112°.20E, h35km, mb3.9/1, Error ellipse: s-maj=49.0km s-min=9.1km az=56.0*
*ISCJB **24** 04:56:27.6±0.6, 8°.67S±0°.08×112°.50E±0°.03, h95km±5km, mb3.8/7, Error ellipse: s-maj=13.7km s-min=4.7km az=12.4*
*DJA **24** 04:56:29, 8°.73S×112°.51E, h53km, MLv4.1/14*

ISC 24 04:56:28.5±0.6, 8°.69S±0°.08×112°.49E±0°.03, h87km±5km, n28, σ1s10/37, mb3.8/7, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRKI	**Karangkates**	**0.53**	**356**	P	**Pn**	**04 56 42.2**	**-1.0**
KRKI				S	**Sn**	**04 56 53.5**	**-0.6**
PWJI	**Pagerwojo**	**0.95**	**315**	P	**Pn**	**04 56 46.4**	**-1.0**
PWJI				S	**Sn**	**04 57 00.8**	**-0.8**
GMJI	**Gumukmas**	**1.03**	**66**	P	**Pn**	**04 56 47.7**	**-0.7**
GMJI				S	**Sn**	**04 57 01.9**	**-1.4**
SJI	**Sawahan**	**1.19**	**323**	P	**Pn**	**04 56 50.1**	**-0.2**
PCJI	**Pacitan**	**1.39**	**291**	P	**Pn**	**04 56 51.8**	**-0.9**
NGJI	**Ngawi**	**1.67**	**322**	P	**Pn**	**04 56 58.5**	**+2.2**
GRJI	**Gresik**	**1.77**	**360**	S	**Sn**	**04 57 20.6**	**+0.9**
BYJI	**Banyuwangi**	**1.91**	**76**	P	**Pn**	**04 57 01.0**	**+1.6**
ABJI	**Asem Bagus**	**1.94**	**63**	P	**Pn**	**04 57 00.9**	**+1.0**
UGM	**Wanagama**	**2.10**	**292**	P	**Pn**	**04 57 01.9**	**0.0**
UGM				S	**Sn**	**04 57 27.2**	**-0.1**
NBBI	**Negara**	**2.13**	**81**	P	**Pn**	**04 57 04.1**	**+1.7**
KMMI	**Kalianget**	**2.19**	**42**	P	**Pn**	**04 57 03.9**	**+0.7**
YOGI	**Yogyakarta**	**2.34**	**292**	P	**Pn**	**04 57 07.0**	**+1.9**
SMRI	**Semarang**	**2.61**	**309**	P	**Pn**	**04 57 09.7**	**+1.0**
IGBI	**Denpasar**	**2.63**	**93**	P	**Pn**	**04 57 09.5**	**+0.5**
IGBI				S	**Sn**	**04 57 40.8**	**+0.7**
SRBI	**Singaraja**	**2.76**	**78**	P	**Pn**	**04 57 12.3**	**+1.5**
SRBI				S	**Sn**	**04 57 42.6**	**-0.7**
KHKI	**Kahang-Kahang**	**3.10**	**84**	P	**Pn**	**04 57 14.9**	**-0.5**
KHKI				S	**Sn**	**04 57 50.0**	**-1.5**
MBWA	**Marble Bar**	**14.22**	**151**	*e*Pn	**Pn**	**04 59 41.6**	**-4.3**
FITZ	**Fitzroy Crossi**	**15.84**	**128**	Pn	**Pn**	**05 00 03.7**	**-2.8**
	0.4nm,0.3s,baz=298,slow=8.5,SNR=9.4						
FITZ				Sn	**Sn**	**05 02 47.8**	**-14**
	0.1nm,0.3s,baz=313,slow=20,SNR=1.3						
FITZ	**Fitzroy Crossi**	**15.84**	**128**	*e*Pn	**Pn**	**05 00 04.1**	**-2.4**
FITZ				*e*S	**Sn**	**05 02 44.9**	**-17**
WRA	**Warramunga Arr**	**23.91**	**120**	P	**P**	**05 01 34.7**	**+0.2**
	3.9nm,0.5s,mb4.0,baz=298,slow=11,SNR=15						
ASAR	**Alice Springs**	**25.33**	**129**	P	**P**	**05 01 47.7**	**+0.3**
	1.1nm,0.5s,mb3.6,baz=305,slow=8.9,SNR=10.0						
STKA	**Stephens Creek**	**35.53**	**135**	P	**P**	**05 03 18.6**	**+1.3**
	7.0nm,0.6s,mb4.8,baz=315,slow=8.3,SNR=15						
STKA	**Stephens Creek**	**35.53**	**135**	*e*P	**P**	**05 03 18.4**	**+1.2**
	0.9nm,0.6s,mb3.9						
SONM	**Songino Array**	**56.54**	**355**	P	**P**	**05 06 01.6**	**-0.2**
	0.2nm,0.4s,mb3.5,baz=180,slow=8.4,SNR=2.4						
MKAR	**Makanchi Array**	**61.45**	**337**	P	**P**	**05 06 35.1**	**-0.7**
	0.5nm,0.5s,mb3.8,baz=126,slow=6.3,SNR=3.7						
KURK	**Kurchatov**	**66.05**	**337**	P	**P**	**05 07 04.8**	**-1.2**
	0.3nm,0.5s,mb3.4,baz=155,slow=5.2,SNR=2.8						
ZALV	**Zalesovo Beam**	**66.64**	**343**	P	**P**	**05 07 08.3**	**-1.3**
	0.6nm,0.5s,mb3.7,baz=191,slow=6.9,SNR=2.8						

TRN 24 05:13:13.2, 16°.29N×61°.73W, h17km, MD3.4, M3.6(FDF), 6C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZG	**Guadaloupe-1**	**0.16**	**196**	⇑*i*P	Pg	05 13 18.4	+1.0
BCG	**Bois Riant Cap**	**0.23**	**153**	⇑*i*P	Pg	05 13 20.2	+1.7
SEG	**Port Louis**	**0.24**	**63**	⇑*i*P	Pg	05 13 20.6	+1.9
SCG	**Saint Claude**	**0.27**	**170**	⇑*i*P	Pg	05 13 20.5	+1.5
PHG	**Guadaloupe-2**	**0.29**	**163**	*e*P	Pg	05 13 21.1	+1.7
HMG	**Houelmont**	**0.31**	**174**	*e*P	Pg	05 13 21.3	+1.5
TBG	**Guadaloupe-3**	**0.45**	**169**	⇑*i*P	Pg	05 13 23.7	+1.5
SFG	**Saint Francois**	**0.52**	**94**	*e*P	Pg	05 13 24.9	+1.5
MGG	**Marie-Galante**	**0.55**	**133**	⇑*i*P	Pg	05 13 25.5	+1.5
BPA	**Boggy Peak**	**0.76**	**351**	*e*P	Pb	05 13 30.0	+2.0
BPA				*e*S	Sb	05 13 40.2	+2.2
DWS	**Wesley**	**0.83**	**151**	*e*P	Pb	05 13 32.1	+3.0
DWS	**Wesley**	**0.83**	**151**	*e*	Sb	05 13 42.6	+2.7
DWS				*e*S	Sb	05 13 43.4	+3.5
DPMT	**Pointe Michel**	**1.08**	**162**	*e*P	Pb	05 13 36.3	+2.8
DPMT				*e*S	Sb	05 13 50.9	+3.6
SKI	**Saint Kitts**	**1.42**	**317**	*e*P	Pn	05 13 40.3	+2.1
SKI				*e*S	Sn	05 13 59.3	+2.9
FDF	**Fort de France**	**1.65**	**160**	*e*P	Pn	05 13 44.1	+2.7
FDF				*e*S	Sn	05 14 04.4	+2.2
MVM	**Montagne Vaucl**	**1.91**	**155**	*e*P	Pn	05 13 46.6	+1.7
MVM				*e*S	Sn	05 14 12.2	+3.6

*NEIC **24** 05:34:47.0, 44°.78N×111°.44W, h6km, ML2.9(BUT), After BUT.*
*ISCJB **24** 05:34:48.2±0.2, 44°.796N±0°.009×111°.43W±0°.02, h10km, Error ellipse: s-maj=1.6km s-min=1.3km az=166.6*

ISC 24 05:34:47.6±0.3, 44°.790N±0°.009×111°.45W±0°.02, h1km±2km, n92, σ0s82/154, 47C-49D, Hebgen Lake region, Montana

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QLMT	**Earthquake Lak**	**0.04**	**18**	*e*Pg	**Pg**	**05 34 49.1**	**+0.6**
H16A	**Russell Place,**	**0.17**	**121**	⇑P	**Pg**	**05 34 50.9**	**+0.1**
	baz=0.2,SNR=1000						
H16A				⇓S	**Sg**	**05 34 53.4**	**+0.4**
	baz=0.2						
YMR	**Madison River**	**0.36**	**109**	*e*Pg	**Pg**	**05 34 54.9**	**+0.3**
YMR				*e*Sg	**Sg**	**05 35 00.6**	**+1.3**
G16A	**Moss Hill, Enn**	**0.51**	**330**	P	**Pg**	**05 34 57.6**	**+0.3**
	baz=0.5,SNR=428						
YFT	**Old Faithful**	**0.55**	**128**	*e*Pg	**Pg**	**05 34 58.1**	**-0.1**
YNR	**Norris Junctio**	**0.55**	**97**	*e*Pg	**Pg**	**05 34 58.4**	**+0.2**
YNR				*e*Sg	**Sg**	**05 35 05.8**	**+0.4**
G17A	**Pierce Place,**	**0.73**	**43**	⇑P	**Pg**	**05 35 01.6**	**0.0**
	baz=0.7,SNR=45						
G17A				⇑S	**Sg**	**05 35 12.0**	**+0.9**
	baz=0.7						
H17A	**Grant Village**	**0.74**	**122**	⇑P	**Pg**	**05 35 02.1**	**+0.4**
	baz=0.7,SNR=12						
LKWY	**Lake**	**0.78**	**106**	*e*Pn	**Pn**	**05 35 03.5**	**-2.2**
LKWY				*e*Sg	**Sg**	**05 35 13.1**	**+0.4**
G15A	**Dillon**	**0.83**	**297**	⇓P	**Pg**	**05 35 03.4**	**-0.1**
	baz=0.8,SNR=155						
G15A				⇓S	**Sg**	**05 35 14.3**	**+0.1**
	baz=0.8						
BOZ	**Bozeman (W)**	**0.87**	**352**	⇑P	**Pg**	**05 35 03.1**	**-1.1**
	baz=0.9						
BOZ	**Bozeman (W)**	**0.87**	**352**	*e*Pg	**Pg**	**05 35 02.9**	**-1.3**
BOZ				*e*Sg	**Sg**	**05 35 16.4**	**+0.9**
H15A	**Lima**	**0.87**	**259**	⇑P	**Pg**	**05 35 04.3**	**0.0**
	baz=0.9,SNR=20						
H15A				⇑S	**Sg**	**05 35 16.2**	**+0.6**
	baz=0.9						
I16A	**Newdale**	**0.92**	**182**	⇑P	**Pg**	**05 35 04.6**	**-0.5**
	baz=0.9,SNR=23						
I16A				⇓S	**Sg**	**05 35 17.1**	**+0.2**
	baz=0.9						
IMW	**Indian Meadow**	**0.96**	**158**	*e*Pg	**Pg**	**05 35 05.3**	**-0.8**
IMW				*e*Sg	**Sg**	**05 35 17.7**	**-0.8**
MCMT	**McKenzie Canyo**	**1.00**	**273**	*e*Pn	**Pn**	**05 35 07.0**	**-1.8**
MCMT				*e*Sg	**Sg**	**05 35 21.4**	**+1.7**
F16A	**Kennard Place,**	**1.00**	**353**	⇑P	**Pg**	**05 35 06.5**	**-0.3**
	baz=1.0,SNR=136						
I17A	**Pilgrim Ck.**	**1.07**	**144**	⇓P	**Pg**	**05 35 07.8**	**-0.4**
	baz=1.1,SNR=12						
I15A	**Monteview**	**1.08**	**224**	⇑P	**Pg**	**05 35 07.9**	**-0.5**
	baz=1.1,SNR=55						
I15A				⇑S	**Sg**	**05 35 22.9**	**+0.4**
	baz=1.1						
DCID1	**Drake Creek**	**1.21**	**171**	*e*Pn	**Pn**	**05 35 09.7**	**-2.0**
DCID1				*e*Sn	**Sn**	**05 35 27.6**	**-1.0**
F17A	**Fitzpatrick Pl**	**1.25**	**26**	P	**Pg**	**05 35 11.1**	**-0.5**
	baz=1.2,SNR=146						
F17A				⇓S	**Sg**	**05 35 28.1**	**+0.4**
	baz=1.2						
LRM	**Limekiln Ridge**	**1.25**	**326**	*e*Pn	**Pn**	**05 35 11.0**	**-1.2**
LRM				*e*Sg	**Sg**	**05 35 28.2**	**+0.4**
F15A	**Butte**	**1.28**	**325**	⇑P	**Pg**	**05 35 11.7**	**-0.5**
	baz=1.3,SNR=180						
F15A				⇓S	**Sg**	**05 35 29.4**	**+0.6**
	baz=1.3						
LOHW	**Long Hollow**	**1.32**	**152**	*e*Pn	**Pn**	**05 35 11.5**	**-1.8**
LOHW				*e*Sg	**Sg**	**05 35 28.8**	**-1.4**
TPAW	**Teton Pass**	**1.35**	**164**	*e*Pn	**Pn**	**05 35 11.9**	**-1.6**
TPAW				*e*Sg	**Sg**	**05 35 30.8**	**-0.1**
H14A	**Leadore**	**1.38**	**263**	⇓P	**Pn**	**05 35 13.6**	**-0.4**
	baz=1.4,SNR=38						
H14A				⇑S	**Sg**	**05 35 31.9**	**0.0**
	baz=1.4						
SNOW	**Snow King Moun**	**1.42**	**159**	*e*Pn	**Pn**	**05 35 13.4**	**-1.1**
SNOW				*e*Sn	**Sn**	**05 35 32.6**	**-1.2**
G18A	**Lazy EL Ranch,**	**1.44**	**68**	⇓P	**Pn**	**05 35 14.3**	**-0.4**
	baz=1.4,SNR=90						
G18A				⇑S	**Sg**	**05 35 33.3**	**-0.5**
	baz=1.4						
RRI2	**Red Ridge**	**1.45**	**176**	*e*Pn	**Pn**	**05 35 13.3**	**-1.6**
RRI2				*e*Sn	**Sn**	**05 35 32.6**	**-1.9**
REDW	**Red Top Meadow**	**1.49**	**163**	*e*Pn	**Pn**	**05 35 14.7**	**-0.8**
REDW				*e*Sn	**Sn**	**05 35 36.3**	**+0.7**
G14A	**Jackson**	**1.50**	**288**	⇑S	**Sb**	**05 35 35.0**	**-0.7**
	baz=1.5						
J16A	**Bone**	**1.52**	**185**	⇑P	**Pn**	**05 35 15.0**	**-0.9**
	baz=1.5,SNR=6.3						
J16A				⇓S	**Sn**	**05 35 35.1**	**-1.2**
	baz=1.5						
J17A	**Brown Place, J**	**1.52**	**159**	⇑P	**Pn**	**05 35 15.5**	**-0.5**
	baz=1.5,SNR=42						
J17A				⇓S	**Sn**	**05 35 35.8**	**-0.6**
	baz=1.5						
J15A	**Blackfoot**	**1.56**	**207**	⇓P	**Pn**	**05 35 15.5**	**-1.0**
	baz=1.6,SNR=128						
J15A				⇓S	**Sn**	**05 35 36.7**	**-0.7**
	baz=1.6						
RLMT	**Red Lodge**	**1.58**	**77**	⇓P	**Pn**	**05 35 16.8**	**0.0**
	baz=1.6						
RLMT				⇑S	**Sn**	**05 35 37.3**	**-0.6**
	baz=1.6						
RLMT	**Red Lodge**	**1.58**	**77**	*e*Pn	**Pn**	**05 35 16.9**	**+0.1**
RLMT				*e*Sn	**Sn**	**05 35 39.8**	**+1.8**
I18A	**Diamond G Ranc**	**1.60**	**132**	⇓P	**Pn**	**05 35 17.1**	**0.0**
	baz=1.6						
I18A				⇑S	**Sn**	**05 35 38.3**	**0.0**
	baz=1.6						
GCMT	**Greycliff**	**1.61**	**51**	*e*Pn	**Pn**	**05 35 17.4**	**+0.3**
GCMT				*e*Sn	**Sn**	**05 35 37.6**	**-0.8**
F18A	**Big Timber**	**1.65**	**47**	⇑P	**Pn**	**05 35 18.1**	**+0.3**
	baz=1.7,SNR=79						
F18A				⇑Sb	**Sb**	**05 35 40.6**	**+0.4**
	baz=1.7						
I14A	**Mackay**	**1.68**	**240**	⇓P	**Pn**	**05 35 18.1**	**+0.1**
	baz=1.7,SNR=60						
I14A				⇑S	**Sn**	**05 35 39.6**	**-0.6**
	baz=1.7						
F14A	**Wisdom**	**1.70**	**308**	⇑Sb	**Sb**	**05 35 41.9**	**+0.4**
	baz=1.7						
E17A	**Martinsdale**	**1.72**	**14**	⇑P	**Pn**	**05 35 18.9**	**+0.2**
	baz=1.7,SNR=106						
E17A				⇓S	**Sn**	**05 35 41.2**	**-0.1**
	baz=1.7						
E16A	**East Helena**	**1.75**	**355**	P	**Pn**	**05 35 19.3**	**+0.2**
	baz=1.8,SNR=147						
E16A				⇑S	**Sn**	**05 35 41.5**	**-0.6**
	baz=1.8						
E15A	**Deer Lodge**	**1.84**	**333**	⇑P	**Pn**	**05 35 20.3**	**0.0**
	baz=1.8,SNR=76						
E15A				⇓Sb	**Sb**	**05 35 45.1**	**-0.4**
	baz=1.8						
J18A	**Kendall Valley**	**1.89**	**146**	⇑P	**Pn**	**05 35 21.1**	**+0.2**
	baz=1.9,SNR=28						
J18A				⇓S	**Sn**	**05 35 45.6**	**+0.2**
	baz=1.9						
HRY	**Holter Researc**	**1.94**	**352**	*e*Pn	**Pn**	**05 35 21.5**	**-0.2**
HRY				*e*Pg	**Pg**	**05 35 24.2**	**-0.6**
HRY				*e*Sg	**Sg**	**05 35 48.7**	**-1.2**
K16A	**Soda Springs**	**1.96**	**183**	⇑P	**Pn**	**05 35 22.2**	**+0.2**
	baz=2.0,SNR=29						
K16A				⇑Sb	**Sb**	**05 35 49.2**	**+0.2**
	baz=2.0						
G13A	**Cobalt**	**2.00**	**280**	⇓Sb	**Sb**	**05 35 50.1**	**-0.1**
	baz=2.0						
H13A	**Challis**	**2.02**	**265**	⇓Sb	**Sb**	**05 35 50.3**	**-0.3**
	baz=2.0						
AHID	**Auburn Hatcher**	**2.04**	**173**	*e*Pn	**Pn**	**05 35 23.6**	**+0.6**
E18A	**Harlowton**	**2.08**	**31**	⇓P	**Pn**	**05 35 24.6**	**+1.0**
	baz=2.1,SNR=291						
E18A				⇓Sb	**Sb**	**05 35 52.3**	**0.0**
	baz=2.1						
J14A	**Carey**	**2.09**	**226**	⇑P	**Pn**	**05 35 24.3**	**+0.5**
	baz=2.1,SNR=28						
J14A				⇓S	**Sn**	**05 35 51.0**	**+0.6**
	baz=2.1						
I13A	**Wildhorse Cree**	**2.10**	**246**	⇓P	**Pn**	**05 35 24.7**	**+0.7**
	baz=2.1						
I13A				⇓Sb	**Sb**	**05 35 53.0**	**-0.2**
	baz=2.1						
E14A	**Clinton**	**2.17**	**319**	⇑P	**Pn**	**05 35 25.3**	**+0.5**
	baz=2.2,SNR=13						
E14A				⇓Sb	**Sb**	**05 35 56.0**	**+1.0**
	baz=2.2						
D16A	**Dana Ranch, Ca**	**2.24**	**358**	⇓P	**Pn**	**05 35 26.1**	**+0.2**
	baz=2.2,SNR=39						
D16A				⇑S	**Sn**	**05 35 53.9**	**-0.2**
	baz=2.2						
K15A	**Arbon**	**2.25**	**201**	⇓P	**Pn**	**05 35 26.8**	**+0.9**
	baz=2.2						
K15A				⇑Sb	**Sb**	**05 35 57.6**	**+0.4**
	baz=2.2						
F13A	**Darby**	**2.27**	**297**	⇑P	**Pn**	**05 35 26.9**	**+0.7**
	baz=2.3						
D15A	**Lincoln**	**2.37**	**342**	⇓P	**Pn**	**05 35 27.9**	**+0.3**
	baz=2.4,SNR=26						
D15A				⇓S	**Sn**	**05 35 56.7**	**-0.7**
	baz=2.4						
K18A	**Toltan Ranch,**	**2.38**	**154**	⇓Sb	**Sb**	**05 36 02.3**	**+1.2**
	baz=2.4						
J13A	**Cove Ranch, Pi**	**2.41**	**236**	⇑P	**Pn**	**05 35 28.4**	**+0.3**
	baz=2.4,SNR=10						
J13A				⇓Sb	**Sb**	**05 36 01.9**	**0.0**
	baz=2.4						
D17A	**Six Diamond Ra**	**2.42**	**12**	⇑P	**Pn**	**05 35 28.6**	**+0.3**
	baz=2.4,SNR=33						
D17A				⇑S	**Sn**	**05 35 58.4**	**-0.2**
	baz=2.4						
BW06	**Boulder Array**	**2.44**	**145**	⇓Sb	**Sb**	**05 36 04.0**	**+1.1**
	baz=2.4						
HLID	**Hailey**	**2.46**	**241**	⇓Sb	**Sb**	**05 36 03.2**	**-0.3**
	baz=2.5						
HLID	**Hailey**	**2.46**	**241**	*e*Pn	**Pn**	**05 35 29.6**	**+0.8**
HLID				*e*Sg	**Sg**	**05 36 01.2**	**-5.5**
CHMT	**Chamberlain Mo**	**2.47**	**330**	*e*Pn	**Pn**	**05 35 29.5**	**+0.5**
CHMT				*e*Pg	**Pg**	**05 35 33.7**	**-1.2**
CHMT				*e*Sn	**Sn**	**05 36 00.3**	**+0.5**
CHMT				*e*Sg	**Sg**	**05 36 06.8**	**-0.1**
E13A	**Victor**	**2.54**	**312**	⇓Sb	**Sb**	**05 36 06.9**	**+1.3**
	baz=2.5						
K14A	**Jones Ranch, D**	**2.57**	**210**	⇓P	**Pn**	**05 35 31.6**	**+1.2**
	baz=2.6						
K14A				⇑Sb	**Sb**	**05 36 05.9**	**-0.7**
	baz=2.6						
D18A	**Linhart Farms,**	**2.67**	**25**	⇓Sb	**Sb**	**05 36 10.4**	**+1.1**
	baz=2.7						
MSO	**Missoula**	**2.68**	**320**	*e*Pn	**Pn**	**05 35 32.1**	**+0.2**
MSO				*e*Sg	**Sg**	**05 36 12.1**	**-1.7**
D14A	**Greenough**	**2.71**	**329**	⇑P	**Pn**	**05 35 32.2**	**0.0**
	baz=2.7,SNR=14						
D14A				⇓S	**Sn**	**05 36 05.0**	**-0.5**
	baz=2.7						
K19A	**Absolon Red Bu**	**2.72**	**135**	⇓Sb	**Sb**	**05 36 11.9**	**+1.0**
	baz=2.7						
L17A	**Cokeville**	**2.72**	**171**	⇓Sb	**Sb**	**05 36 13.0**	**+2.1**
	baz=2.7						
L16A	**Fish Haven**	**2.77**	**180**	⇓P	**Pn**	**05 35 34.7**	**+1.5**
	baz=2.8						
I12A	**Atlanta**	**2.83**	**251**	⇑Sb	**Sb**	**05 36 14.5**	**+0.6**
	baz=2.8						
SLMT	**Seeley Lake**	**2.84**	**331**	*e*Pn	**Pn**	**05 35 34.2**	**+0.1**
SLMT				*e*Pg	**Pg**	**05 35 40.4**	**-1.6**
SLMT				*e*Sg	**Sg**	**05 36 16.8**	**-1.9**
F12A	**Elk City**	**2.86**	**291**	⇑Sb	**Sb**	**05 36 16.2**	**+1.4**
	baz=2.9						
L15A	**Malad City**	**2.87**	**194**	⇓Sb	**Sb**	**05 36 16.5**	**+1.4**
	baz=2.9						
C17A	**Wharram Farm,**	**2.88**	**9**	⇑P	**

ENH	**Enshi**	**4.62**	**108**	*e*Pn	**Pn**	**05 42 08.0**	**+2.5**
ENH				*e*Sn	**Sn**	**05 43 00.8**	**+1.6**
ENH				*e*Sg	**Sg**	**05 43 23.0**	**-1.0**
SONM	**Songino Array**	**16.07**	**5**	Pn	**Pn**	**05 44 43.4**	**+1.7**
	comp=E,0.1nm,0.3s,baz=165,slow=17,SNR=2.4						
KSRS	**Korea Array**	**20.13**	**67**	P	**P**	**05 45 30.9**	**+1.2**
	comp=E,1.5nm,0.6s,baz=257,slow=11,SNR=6.1						
MKAR	**Makanchi Array**	**22.62**	**318**	P	**P**	**05 45 55.2**	**-1.3**
	comp=E,0.4nm,0.8s,mb2.9,baz=105,slow=9.1,SNR=3.4						
ZALV	**Zalesovo Beam**	**26.20**	**333**	P	**P**	**05 46 30.7**	**+0.4**
	comp=E,0.4nm,0.3s,mb3.4,baz=137,slow=11,SNR=2.7						
KURK	**Kurchatov**	**26.84**	**322**	P	**P**	**05 46 35.8**	**-0.3**
	comp=E,0.5nm,0.8s,mb3.1,baz=131,slow=8.0,SNR=3.6						
FINES	**FINESS Array B**	**57.13**	**326**	P	**P**	**05 50 42.2**	**+0.2**
	comp=E,1.0nm,0.6s,mb4.0,baz=64,slow=6.3,SNR=3.1						
WRAB	**Tennant Creek**	**58.91**	**147**	*e*P	**P**	**05 50 54.8**	**-0.2**
	comp=E,0.8nm,0.7s,mb3.9						
WRA	**Warramunga Arr**	**58.92**	**147**	P	**P**	**05 50 55.0**	**-0.1**
	comp=E,1.8nm,0.6s,mb4.3,baz=340,slow=7.5,SNR=9.2						
ASAR	**Alice Springs**	**61.96**	**149**	P	**P**	**05 51 16.0**	**+0.2**
	comp=E,0.6nm,0.5s,mb4.0,baz=336,slow=6.8,SNR=9.2						
YKA	**Yellowknife Ar**	**80.94**	**17**	P	**P**	**05 53 10.0**	**+0.2**
	comp=E,0.2nm,0.6s,mb3.2,baz=330,slow=6.2,SNR=3.5						

*DJA **24** 05:44:05,0°.18N×96°.39E,h30km,MLv4.3/9*
*ISCJB **24** 05:44:07.1±0.6,0°.22N±0°.07×96°.66E±0°.07,h31km, mb4.0/10,Error ellipse: s-maj=11.8km s-min=6.5km az=136.7*
*IDC **24** 05:44:08.3±1.6,0°.05N×96°.50E,h31km±4km,mb3.9/8, mb1 3.9/10,mb1mx3.7/23,mbtmp3.8/10,ML3.9/2,Error ellipse: s-maj=39.4km s-min=33.2km az=117.0*
*NEIC **24** 05:44:09.2±0.6,0°.19N×96°.63E,h35km,mb4.2/2,Error ellipse: s-maj=14.4km s-min=11.2km az=80.0*

ISC 24 05:44:09.3±0.6,0°.22N±0°.07×96°.67E±0°.07,h33km, h33km±.5km:pP-P,n33,σ0°85/31,mb4.0/10,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**2.87**	**122**	P	**Pn**	**05 44 52.3**	**-0.5**
MNSI	**Mandailing Nat**	**2.97**	**79**	P	**Pn**	**05 44 53.7**	**-0.4**
TPTI		**3.06**	**10**	P	**Pn**	**05 44 53.3**	**-2.1**
PSI	**Prapat**	**3.41**	**41**	Pn	**Pn**	**05 44 59.7**	**-0.6**
	3.1nm,0.3s,baz=239,slow=8.5,SNR=10						
PSI	**Prapat**	**3.41**	**41**	Pn	**Pn**	**05 44 59.7**	**-0.6**
PPI	**Padang Panjang**	**3.79**	**100**	P	**Pn**	**05 45 05.2**	**-0.3**
BKNI	**Bangkinang**	**4.37**	**89**	P	**Pn**	**05 45 14.3**	**+0.8**
PPSI	**Pulau Pagai**	**4.47**	**132**	P	**Pn**	**05 45 13.7**	**-1.1**
SDSI	**Sungai Dareh**	**4.90**	**104**	P	**Pn**	**05 45 21.5**	**+0.8**
	0.2nm2μm14nm,0.7s						
IPM	**Ipoh**	**6.07**	**46**	P	**Pn**	**05 45 37.4**	**+0.6**
	0.2nm34nm,1.8s						
KULM	**Kulim**	**6.41**	**38**	*e*Pn	**Pn**	**05 45 40.5**	**-1.0**
KULM	**Kulim**	**6.41**	**38**	P	**Pn**	**05 45 40.9**	**-0.7**
	0.2nm31nm,1.6s						
JMBI	**JAMBI**	**7.21**	**105**	P	**Pn**	**05 45 53.0**	**+0.5**
MDSI	**Maura Dua**	**8.84**	**122**	P	**Pn**	**05 46 15.0**	**+0.1**
CMAR	**Chiang Mai Arr**	**18.26**	**7**	Pn	**Pn**	**05 48 20.0**	**-0.3**
	0.3nm,0.3s,baz=187,slow=12,SNR=4.5						
SHL	**Shillong**	**25.61**	**350**	*e*PKP	**P**	**05 49 37.5**	**+1.6**
WRAB	**Tennant Creek**	**41.99**	**121**	*e*P	**P**	**05 51 59.1**	**+1.3**
	1.9nm,0.8s,mb3.8						
MK31	**Makanchi Array**	**48.06**	**347**	*e*P	**P**	**05 52 46.2**	**+0.7**
MK31				*e*	pP	05 52 55.8	+0.4
MKAR	**Makanchi Array**	**48.06**	**347**	P	**P**	**05 52 46.1**	**+0.6**
	0.9nm,0.6s,mb4.0,baz=145,slow=8.7,SNR=10.0						
MKAR				pP	pP	05 52 55.8	+0.4
	2.0nm,0.7s,baz=142,slow=7.4,SNR=12						
SONM	**Songino Array**	**48.17**	**9**	P	**P**	**05 52 47.4**	**+1.0**
	0.3nm,0.7s,mb3.5,baz=165,slow=7.4,SNR=3.7						
SONM				pP	pP	05 52 56.9	+0.7
	0.6nm,0.5s,baz=192,slow=10,SNR=4.2						
CTAO	**Charters Tower**	**52.55**	**116**	*e*P	**P**	**05 53 20.1**	**+0.1**
	80nm,0.9s						
KURK	**Kurchatov**	**52.60**	**346**	P	**P**	**05 53 19.9**	**0.0**
	0.5nm,0.5s,mb3.8,baz=179,slow=6.0,SNR=4.3						
KURK				pP	pP	05 53 28.9	-0.8
	1.0nm,0.7s,baz=163,slow=6.8,SNR=6.2						
ZAA0	**Zalesovo Array**	**54.44**	**351**	*e*P	**P**	**05 53 33.8**	**+0.6**
ZAA0				*e*	pP	05 53 42.8	-0.4
ZALV	**Zalesovo Beam**	**54.44**	**351**	P	**P**	**05 53 33.7**	**+0.4**
	2.1nm,0.3s,mb4.5,baz=171,slow=7.3,SNR=15						
ZALV				pP	pP	05 53 43.2	+0.1
	4.2nm,0.4s,baz=177,slow=6.2,SNR=10						
BVAR	**Borovoye Array**	**57.00**	**341**	P	**P**	**05 53 50.5**	**-1.1**
	0.4nm,0.4s,mb3.8,baz=121,slow=6.9,SNR=3.2						
BVAR				pP	pP	05 54 00.9	-0.8
	0.5nm,0.4s,baz=148,slow=8.5,SNR=2.2						
AKASG	**Malin Array Be**	**75.70**	**323**	P	**P**	**05 55 50.6**	**-0.9**
	1.1nm,0.5s,mb4.1,baz=100,slow=4.7,SNR=5.6						
AKASG				pP	pP	05 56 00.3	-1.5
	1.7nm,0.5s,baz=88,slow=5.3,SNR=4.0						
AKASG	**Malin Array Be**	**75.70**	**323**	P	**P**	**05 55 50.6**	**-0.9**
AKASG				pP	pP	05 56 00.3	-1.5
FINES	**FINESS Array B**	**80.61**	**333**	P	**P**	**05 56 18.2**	**-0.3**
	2.1nm,0.8s,mb4.1,baz=108,slow=6.2,SNR=4.2						
FINES				pP	pP	05 56 27.9	-1.0
	1.1nm,0.6s,baz=82,slow=10,SNR=1.8						
ARCES	**ARCESS Array B**	**83.27**	**340**	P	**P**	**05 56 32.7**	**+0.4**
	0.8nm,0.6s,mb3.9,baz=102,slow=5.6,SNR=9.9						
ARCES				pP	pP	05 56 42.2	-0.5
	0.7nm,0.4s,baz=117,slow=3.8,SNR=2.1						
ARCES	**ARCESS Array B**	**83.27**	**340**	P	**P**	**05 56 32.7**	**+0.4**
ARCES				pP	pP	05 56 42.2	-0.5
SBA	**Scott Base**	**86.08**	**168**	*e*P	**P**	**05 56 45.0**	**-1.4**
	3.6nm,1.0s,mb4.6						
CPUP	**Villa Florida**	**143.93**	**222**	PKP	PKPdf	06 03 40.3	-1.9
	0.5nm,0.4s,baz=97,slow=12,SNR=3.5						
CPUP				pPKP	pPKPdf	06 03 49.5	-3.5
	0.6nm,0.5s,baz=113,slow=2.0,SNR=2.3						
TXAR	**Lajitas Array**	**144.77**	**32**	PKPbc	PKPdf	06 03 42.4	-1.2
	0.2nm,0.5s,baz=300,slow=2.5,SNR=3.8						
TXAR				pPKPbc		06 03 52.9	
	0.5nm,0.6s,baz=253,slow=1.6,SNR=5.0						

*IDC **24** 05:46:18.8±8.0,12°.52S×167°.34E,h127km±72km, mb3.8/12,mb1 3.9/12,mb1mx3.8/20,mbtmp3.8/12,Error ellipse: s-maj=27.4km s-min=26.5km az=169.0*
*ISCJB **24** 05:46:19.7±0.7,12°.6S±0°.1×167°.4E±0°.1,h150km, mb4.1/15,Error ellipse: s-maj=20.0km s-min=13.3km az=137.7*
*NEIC **24** 05:46:21.5±5.4,12°.56S×167°.33E,h152km±50km,mb4.7/3, Error ellipse: s-maj=19.5km s-min=16.4km az=206.0*

ISC 24 05:46:21.3±0.7,12°.6S±0°.1×167°.3E±0°.1,h150km,n32, σ0°77/20,mb4.1/15,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EIDS	**Eidsvold**	**19.93**	**228**	*e*P	**P**	**05 50 46.3**	**+4.7**
	7.3nm,0.4s						
CTA	**Charters Tower**	**21.55**	**247**	P	**P**	**05 50 59.2**	**+0.2**
	11nm,0.9s,mb4.3,baz=71,slow=11,SNR=6.7						
CTA	**Charters Tower**	**21.55**	**247**	P	**P**	**05 50 59.2**	**+0.2**
COEN	**Coen**	**23.56**	**264**	*e*P	**P**	**05 51 19.4**	**+1.1**
	61nm,0.7s,mb5.2						
URZ	**Urewera**	**27.02**	**163**	P	**P**	**05 51 49.1**	**-0.3**
	5.3nm,0.5s,mb4.4,baz=163,slow=21,SNR=1.9						
WRAB	**Tennant Creek**	**32.46**	**253**	*e*P	**P**	**05 52 37.5**	**-0.2**
	20nm,1.5s,mb4.6						
WRA	**Warramunga Arr**	**32.47**	**253**	P	**P**	**05 52 36.5**	**-1.2**
	0.7nm,0.6s,mb3.6,baz=83,slow=9.0,SNR=5.1						
ASAR	**Alice Springs**	**33.55**	**246**	P	**P**	**05 52 47.1**	**0.0**
	1.0nm,0.4s,mb3.9,baz=71,slow=9.8,SNR=14						
FITZ	**Fitzroy Crossi**	**40.52**	**257**	P	**P**	**05 53 46.5**	**+0.5**
	0.6nm,0.3s,mb3.6,baz=76,slow=8.3,SNR=6.3						
MJAR	**Matsushiro Arr**	**56.04**	**332**	P	**P**	**05 55 43.0**	**-1.6**
	0.3nm,0.3s,mb3.6,baz=171,slow=8.5,SNR=4.3						
PETK	**Petropavlovsk-**	**65.94**	**354**	P	**P**	**05 56 51.2**	**+0.2**
	2.8nm,0.8s,mb4.1,baz=158,slow=4.8,SNR=3.5						
PETK	**Petropavlovsk-**	**65.94**	**354**	P	**P**	**05 56 51.2**	**+0.2**
HHC	**Hu-ho-hao-te**	**74.00**	**319**	*e*P	**P**	**05 57 41.1**	**+0.6**
HHC				PcP	PcP	05 57 55.5	+0.5
HHC				pP	pP	05 58 20.3	+3.1
HHC				sP	sP	05 58 37.6	+4.3
HHC				PP	PP	06 00 32.0	+4.1
HHC				S	S	06 06 59.1	-1.6
HHC				SKS		06 07 28.3	
HHC				ScS	ScS	06 07 33.1	-3.6
HHC				sS	sS	06 08 08.3	+4.1
HHC				SS	SS	06 11 49.3	+0.3
HHC				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.8						
HHC				pmax	pmax		
	comp=Z,140nm,4.6s						
HHC				LR	LR		
	comp=N,110nm,19.0s						
HHC				LR	LR		
	comp=E,150nm,20.2s						
HHC				LR	LR		
	comp=Z,110nm,20.2s						
KDAK	**Kodiak Island**	**77.44**	**21**	P	**P**	**05 57 59.9**	**+0.3**
	comp=Z,5.7nm,0.8s,mb4.2,baz=305,slow=1.9,SNR=3.8						
SONM	**Songino Array**	**80.82**	**323**	P	**P**	**05 58 19.1**	**+0.8**
	comp=Z,0.2nm,0.4s,mb3.1,baz=103,slow=5.1,SNR=4.5						
NVAR	**Mina Array Bea**	**85.82**	**49**	P	**P**	**05 58 45.1**	**+1.0**
	comp=Z,0.3nm,0.6s,mb3.2,baz=213,slow=8.1,SNR=3.7						
NVAR	**Mina Array Bea**	**85.82**	**49**	P	**P**	**05 58 45.1**	**+1.0**
YKA	**Yellowknife Ar**	**95.61**	**27**	P	**P**	**05 59 28.6**	**-0.7**
	comp=Z,0.5nm,0.6s,mb4.0,baz=257,slow=4.7,SNR=8.7						
MKAR	**Makanchi Array**	**95.70**	**317**	P	**P**	**05 59 29.2**	**-0.9**
	comp=Z,0.5nm,0.5s,mb4.1,baz=69,slow=9.9,SNR=7.0						
MKAR	**Makanchi Array**	**95.70**	**317**	P	**P**	**05 59 29.2**	**-0.9**
ARCES	**ARCESS Array B**	**118.20**	**346**	PKP	PKPdf	06 04 49.8	-0.2
	comp=Z,2.4nm,0.5s,baz=77,slow=1.5,SNR=22						
FINES	**FINESS Array B**	**123.76**	**339**	PKP	PKPdf	06 05 00.9	0.0
	comp=Z,1.8nm,0.6s,baz=119,slow=4.9,SNR=2.8						
CABF	**La Chapelle**	**142.57**	**339**	*e*PKP1	PKPdf	06 05 34.2	-2.3
LOR	**Lormes**	**142.74**	**341**	*e*PKP1	PKPdf	06 05 33.8	-3.0
	comp=Z,1.6nm,0.4s						
LPG	**La Plagne**	**143.27**	**337**	*e*PKP1	PKPdf	06 05 35.7	-2.1
	comp=Z,2.1nm,0.4s						
AVF	**Avril sur Loir**	**143.32**	**341**	*e*PKP1	PKPdf	06 05 35.7	-2.2
	comp=Z,1.6nm,0.5s						
ROSF	**Rostrenen**	**143.50**	**349**	*e*PKP1	PKPdf	06 05 36.9	-1.2
MFF	**Saint Martin d**	**144.48**	**345**	*e*PKP1	PKPdf	06 05 39.0	-0.9
	comp=Z,16nm,0.9s						
SMRF	**Simiane la Rot**	**145.00**	**337**	*e*PKP1	PKPbc	06 05 41.1	+0.6
	comp=Z,11nm,0.7s						
LMR	**La Mourre**	**145.17**	**335**	*e*PKP1	PKPbc	06 05 39.2	-1.9
	comp=Z,10nm,0.7s						
KEST	**Kesra**	**149.57**	**323**	PKPbc	PKPbc	06 05 53.8	+0.3
	comp=Z,1.0nm,0.7s,baz=120,slow=2.9,SNR=5.0						
ESDC	**Sonseca Array**	**151.94**	**346**	PKPbc	PKPbc	06 05 59.0	+0.2
	comp=Z,0.8nm,0.6s,baz=21,slow=1.2,SNR=4.1						

*CSEM **24** 06:04:34.8±0.2,41°.88N×2°.63E,h5km,ML2.7/10,Error ellipse: s-maj=4.5km s-min=2.7km az=126.0*
*ISCJB **24** 06:04:34.7±0.4,41°.93N±0°.03×2°.58E±0°.03,h13km±3km, Error ellipse: s-maj=4.6km s-min=3.5km az=153.3*
*NEIC **24** 06:04:36.0,41°.87N×2°.58E,h6km,ML2.6(LDG), MN2.4(MDD),After MDD.*
*MDD **24** 06:04:36.5±0.2,41°.87N×2°.58E,h5km±4km,mbLg2.2/24, Error ellipse: s-maj=2.4km s-min=1.7km az=123.0, PRXIMO*
*LDG **24** 06:04:36.1±0.1,41°.86N×2°.59E,h5km,Md2.4/1,Ml2.6/10, Error ellipse: s-maj=1.2km s-min=0.8km az=138.0*

ISC 24 06:04:35.5±0.5,41°.90N±0°.02×2°.60E±0°.03,h13km±3km, n103,σ0°85/155,2C,Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFON	**Fontmartina**	**0.18**	**224**	Pg	**Pg**	**06 04 39.4**	**-0.2**
CFON				Lg		06 04 41.9	
CFON	**Fontmartina**	**0.18**	**224**	Pg	**Pg**	**06 04 39.4**	**-0.2**
	84nm,0.0s,SNR=509						
CFON				Lg		06 04 41.9	
	440nm,0.1s,SNR=7.9				

CAF	**Calviac**	**3.06**	**353**	*e*Pg	**Pg**	**06 05 33.5**	**-0.5**
CAF				*e*Sn	**Sn**	**06 05 59.4**	**-0.5**
CAF				*e*Sg	**Sg**	**06 06 12.9**	**-0.7**
	2.9nm,0.3s						
SJPF	**Ste Jean**	**3.08**	**295**	*e*Pn	**Pn**	**06 05 25.2**	**+1.4**
SJPF				*e*Sn	**Sn**	**06 05 59.7**	**-0.8**
SJPF				*e*Sg	**Sg**	**06 06 13.8**	**-0.7**
	7.8nm,0.5s						
SJPF	**Ste Jean**	**3.08**	**295**	Pn	**Pn**	**06 05 25.2**	**+1.4**
SJPF				Sn	**Sn**	**06 05 59.7**	**-0.8**
SJPF				Lg		06 06 13.8	
	3.9nm,0.5s						
SJPF	**Ste Jean**	**3.08**	**295**	*e*Pn	**Pn**	**06 05 25.2**	**+1.4**
SJPF				*e*Sg	**Sg**	**06 06 13.8**	**-0.7**
	3.9nm,0.5s						
LMR	**La Mourre**	**3.22**	**62**	*e*Sn	**Sn**	**06 06 02.5**	**-1.5**
	1.0nm,0.2s						
LMR	**La Mourre**	**3.22**	**62**	*e*Sn	**Sn**	**06 06 02.5**	**-1.5**
	0.5nm,0.2s						
VIVF	**Saint-Julien-l**	**3.32**	**26**	*e*Pg	**Pg**	**06 05 38.0**	**-1.1**
VIVF				*e*Sg	**Sg**	**06 06 21.2**	**-1.0**
	2.0nm,0.2s						
VIVF	**Saint-Julien-l**	**3.32**	**26**	*e*PKP1	**Pg**	**06 05 38.9**	**-0.2**
	4.4nm,0.6s						
VIVF	**Saint-Julien-l**	**3.32**	**26**	*e*Pn	**Pn**	**06 05 27.9**	**+0.8**
VIVF				*e*Pg	**Pg**	**06 05 38.0**	**-1.1**
VIVF				*e*Sg	**Sg**	**06 06 21.2**	**-1.0**
VIVF	**Saint-Julien-l**	**3.32**	**26**	*e*Pn	**Pn**	**06 05 27.9**	**+0.8**
VIVF	**Saint-Julien-l**	**3.32**	**26**	*e*Pg	**Pg**	**06 05 38.0**	**-1.1**
VIVF				*e*Sg	**Sg**	**06 06 21.2**	**-1.0**
	1.0nm,0.2s						
LFF	**La Frestale**	**3.33**	**337**	*e*Pg	**Pg**	**06 05 38.3**	**-1.0**
LFF				*e*Sg	**Sg**	**06 06 21.8**	**-0.7**
	5.1nm,0.3s						
LFF	**La Frestale**	**3.33**	**337**	*e*Pg	**Pg**	**06 05 38.3**	**-1.0**
LFF				*e*Sg	**Sg**	**06 06 21.8**	**-0.7**
	2.5nm,0.3s						
FRF	**La Foret Royal**	**3.41**	**59**	*e*PKP1	**Pg**	**06 05 40.2**	**-0.6**
	19nm,0.8s						
RJF	**Les Rejaudoux**	**3.50**	**347**	*e*Pg	**Pg**	**06 05 41.5**	**-1.0**
RJF				*e*Sg	**Sg**	**06 06 26.7**	**-1.1**
	2.9nm,0.3s						
RJF	**Les Rejaudoux**	**3.50**	**347**	*e*PKP1	**Pg**	**06 05 41.6**	**-0.9**
	5.2nm,0.6s						
RJF	**Les Rejaudoux**	**3.50**	**347**	*e*Pg	**Pg**	**06 05 41.5**	**-1.0**
RJF				*e*Sg	**Sg**	**06 06 26.7**	**-1.1**
	1.5nm,0.3s						
ORIF	**Oris-en-Rattie**	**3.85**	**37**	*e*PKP1	**Pn**	**06 05 38.1**	**+3.7**
	12nm,0.6s						
SBF	**Sospel**	**4.06**	**59**	*e*PKP1	**Pn**	**06 05 38.2**	**+0.9**
	18nm,0.7s						
MBDF	**Montbardon**	**4.15**	**46**	*e*PKP1	**Pn**	**06 05 36.9**	**-1.7**
PGF	**Pioggiola**	**4.79**	**80**	*e*PKP1	**Pn**	**06 05 39.6**	**-7.8**
	14nm,0.7s						

IDC 24 06:08:29.9±4.6, 18°92S×176°16W, h0km, mb4.1/2, mb1 4.3/2, mb1mx3.7/16, mbtmp4.1/2, Error ellipse: s-maj=302.1km s-min=54.6km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**46.55**	**260**	P	P	06 16 59.4	-0.3
	0.5nm,0.5s,baz=95,slow=8.2,SNR=9.6						
ASAR	**Alice Springs**	**46.58**	**255**	P	P	06 17 00.1	+0.2
	3.4nm,0.5s,baz=92,slow=8.4,SNR=39						
ARCES	**ARCESS Array B**	**127.67**	**351**	PKP	PKPdf	06 27 36.2	-0.3
	2.4nm,1.0s,baz=45,slow=0.1,SNR=3.7						

*CSEM **24** 06:13:44.4, 38°13N×22°60E, h11km, ML2.4/7, After THE*
THE 24 06:13:44.4, 38°13N×22°60E, h11km±2km, ML2.4/7, Error ellipse: s-maj=2.5km s-min=0.3km az=186.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUR	**Goura**	**0.28**	**227**	P	Pg	06 13 50.1	0.0
GUR				S	Sg	06 13 54.4	+0.4
GUR	**Goura**	**0.28**	**227**	P	Pg	06 13 50.1	0.0
GUR				S	Sg	06 13 54.4	+0.4
DSF	**Desfina**	**0.29**	**348**	P	Pg	06 13 49.9	-0.4
DSF				S	Sg	06 13 54.7	+0.5
DSF	**Desfina**	**0.29**	**348**	P	Pg	06 13 49.9	-0.4
DSF				S	Sg	06 13 54.7	+0.5
LTK	**Loutraki**	**0.31**	**110**	P	Pg	06 13 50.5	-0.1
LTK				S	Sg	06 13 55.4	+0.6
LTK	**Loutraki**	**0.31**	**110**	*e*PN	Pg	06 13 50.5	-0.1
LTK	**Loutraki**	**0.31**	**110**	*e*Pn	Pg	06 13 50.5	-0.1
LTK	**Loutraki**	**0.31**	**110**	P	Pg	06 13 50.5	-0.1
LTK				S	Sg	06 13 55.4	+0.6
KALE	**Kalithea**	**0.45**	**306**	P	Pg	06 13 53.1	-0.1
KALE				S	Sg	06 13 59.8	+0.6
KALE	**Kalithea**	**0.45**	**306**	P	Pg	06 13 53.1	-0.1
KALE				S	Sg	06 13 59.8	+0.6
TRIZ	**Trizonia**	**0.48**	**300**	P	Pg	06 13 53.6	-0.2
TRIZ				S	Sg	06 14 01.0	+0.8
TRIZ	**Trizonia**	**0.48**	**300**	P	Pg	06 13 53.6	-0.2
TRIZ				S	Sg	06 14 01.0	+0.8
LAKA	**Lakka**	**0.50**	**283**	P	Pg	06 13 54.2	-0.1
LAKA				S	Sg	06 14 01.5	+0.6
LAKA	**Lakka**	**0.50**	**283**	P	Pg	06 13 54.2	-0.1
LAKA				S	Sg	06 14 01.5	+0.6
LKR	**Lokris**	**0.61**	**31**	P	Pg	06 13 55.6	-0.6
LKR				S	Sg	06 14 05.1	+0.9
LKR	**Lokris**	**0.61**	**31**	P	Pg	06 13 55.6	-0.6
LKR				S	Sg	06 14 05.1	+0.9
EFP	**Efpalio**	**0.62**	**299**	P	Pg	06 13 56.7	+0.2
EFP	**Efpalio**	**0.62**	**299**	P	Pg	06 13 56.7	+0.2
ATAL	**Atalanti**	**0.65**	**30**	P	Pg	06 13 56.9	-0.2
ATAL	**Atalanti**	**0.65**	**30**	P	Pg	06 13 56.9	-0.2

*KISR **24** 06:37:44.1±1.4, 30°99N×51°25E, h23km±999km, ML2.6*
*ISCJB **24** 06:37:44.0±0.5, 30°93N±0°04×51°39E±0°04, h10km, Error ellipse: s-maj=5.7km s-min=4.3km az=146.1*
*TEH **24** 06:37:46.8, 30°94N×51°41E, h25km*
ISC 24 06:37:45.0±1.6, 30°94N±0°04×51°39E±0°05, h9km±13km, n13, σ0°35/19, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPIR	**Pirpir**	**1.79**	**346**	*e*Pn	**Pn**	**06 38 16.4**	**+0.2**
IPIR				*e*		06 38 19.7	
	comp=Z,1μm,0.3s						
IPAR	**Pars**	**1.80**	**127**	*e*Pn	**Pn**	**06 38 16.6**	**+0.4**
IPAR				*e*		06 38 57.8	
	comp=N,3μm,0.2s						
IZEF	**Zefreh**	**2.11**	**22**	*e*Pn	**Pn**	**06 38 20.6**	**+0.1**
IZEF				*e*		06 38 24.9	
	comp=Z,622nm,0.2s						
IZEF				*e*Sg	**Sg**	**06 38 52.7**	**-0.1**
ISRV	**Sarvestan**	**2.15**	**136**	*e*Pn	**Pn**	**06 38 20.6**	**-0.5**
ISRV				*e*Pn	**Pn**	**06 38 21.0**	**-0.1**
ISRV				*e*		06 38 31.9	
	comp=E,250nm,0.1s						
ISRV				*e*Sg	**Sg**	**06 38 54.1**	**0.0**
ISRV				*e*		06 38 59.5	
	comp=Z,1μm,0.3s						
ISAD	**Sadrabad**	**2.19**	**63**	*e*Pn	**Pn**	**06 38 21.7**	**+0.1**
ISAD				*e*		06 38 54.5	
	comp=Z,3μm,0.4s						
IMOK	**Mouk**	**2.21**	**148**	*e*Pn	**Pn**	**06 38 22.2**	**+0.4**
IMOK				*e*		06 39 10.5	
	comp=Z,1μm,0.3s						
IKLH	**Kolahrood**	**2.38**	**4**	*e*Pn	**Pn**	**06 38 24.3**	**+0.1**
IKLH				*e*		06 38 31.4	
	comp=Z,746nm,0.2s						
IMEH	**Mehriz**	**2.80**	**80**	*e*Pn	**Pn**	**06 38 29.7**	**-0.3**
IMEH				*e*		06 38 33.5	
	comp=Z,363nm,0.1s						
IBAF	**Bafgh**	**3.63**	**79**	*e*Pn	**Pn**	**06 38 41.1**	**-0.4**
IBAF				*e*		06 38 43.2	
	comp=Z,220nm,0.1s						
KBD	**Kabd**	**3.66**	**242**	*e*P	**Pn**	**06 38 41.9**	**+0.1**
QRN	**Al-Qurain**	**3.73**	**235**	*e*P	**Pn**	**06 38 42.3**	**-0.4**
QRN				*e*S	**Sn**	**06 39 26.7**	**-0.1**
QRN				AML	AML	06 39 29.1	
	comp=Z,11nm,0.4s						
RDF	**Al-Radifah**	**3.89**	**240**	*e*P	**Pn**	**06 38 45.6**	**+0.6**
RDF				*e*S	**Sn**	**06 39 31.5**	**+0.6**
RDF				AML	AML	06 39 34.1	
	comp=Z,14nm,0.5s						
NAY	**Al-Naaiem**	**3.97**	**246**	*e*P	**Pn**	**06 38 45.9**	**-0.3**
NAY				*e*S	**Sn**	**06 39 32.1**	**-0.7**
NAY				AML	AML	06 39 37.6	
	comp=Z,4.7nm,0.5s						

*CSEM **24** 07:01:21.6±0.1, 42°90N×1°11W, h10km, ML2.2/2, Error ellipse: s-maj=3.0km s-min=2.0km az=11.0*
*ISCJB **24** 07:01:21.4±0.4, 42°87N±0°03×1°09W±0°03, h10km, Error ellipse: s-maj=4.5km s-min=3.5km az=10.4*
*MDD **24** 07:01:22.8±0.3, 42°89N×1°13W, h0km, mbLg1.7/10, Error ellipse: s-maj=2.9km s-min=2.1km az=24.0, PRXIMO*
*LDG **24** 07:01:22.5±0.1, 42°91N×1°14W, h2km, Md2.1/2, Ml2.2/2, Error ellipse: s-maj=2.5km s-min=1.6km az=19.0*
ISC 24 07:01:22.1±0.5, 42°87N±0°03×1°12W±0°03, h0km±9km, n59, σ0°49/61, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJPF	**Ste Jean**	**0.25**	**343**	*e*Pg	**Pg**	**07 01 27.0**	**+0.1**
SJPF				*e*Sg	**Sg**	**07 01 30.5**	**+0.2**
	37nm,0.3s						
SJPF	**Ste Jean**	**0.25**	**343**	Pg	**Pg**	**07 01 27.0**	**+0.1**
SJPF				Lg		07 01 30.5	
	18nm,0.3s						
SJPF	**Ste Jean**	**0.25**	**343**	*e*Pg	**Pg**	**07 01 27.0**	**+0.1**
SJPF				*e*Sg	**Sg**	**07 01 30.5**	**+0.2**
	18nm,0.3s						
EARA	**Aranguren**	**0.35**	**254**	Pg	**Pg**	**07 01 29.0**	**+0.2**
	18nm,0.2s,SNR=6.5						
EARA				Lg		07 01 34.9	
	18nm,0.2s,SNR=8.5

HCY	Herceg Novi	1.52	306	⇑ *i* Pg	Pn	07 02 48.4	-0.7
HCY				*e*Sg	Sg	07 03 12.2	+1.7
HCY	Herceg Novi	1.52	306	⇑ *i* Pg	Pn	07 02 48.4	-0.7
HCY				*e*Sg	Sg	07 03 12.2	+1.7
BARS	Barje	1.75	44	*e*Pn	Pn	07 02 51.4	-0.9
BARS				*e*Sg	Sg	07 03 16.9	-1.0
BARS	Barje	1.75	44	*e*Pn	Pn	07 02 51.4	-0.9
BARS				*e*Sg	Sg	07 03 16.9	-1.0
BRY	Bratogost	1.80	319	*e*Sn	Sg	07 03 19.1	-0.2
VAY	Valandovo	1.83	97	*e*Pn	Pn	07 02 54.5	+1.3
VAY	Valandovo	1.83	97	P	Pn	07 02 55.0	+1.8
VAY	Valandovo	1.83	97	P	Pn	07 02 55.0	+1.8
PLE	Pljevlja	1.85	342	‖ *i* Pn	Pn	07 02 54.3	+0.7
PLE				*e*Sn	Sg	07 03 21.2	+0.1
PLE	Pljevlja	1.85	342	‖ Pn	Pn	07 02 54.3	+0.7
UPM	Unac-Piva	1.88	331	‖ *i* Pn	Pg	07 02 55.4	-2.2
UPM				*e*Sn	Sg	07 03 22.0	0.0
UPM	Unac-Piva	1.88	331	‖ *i* Pn	Pg	07 02 55.4	-2.2
BBLS	Lazići	2.37	347	*e*Pn	Pn	07 02 58.2	-2.5
BBLS				*e*Sg	Sn	07 03 32.3	+2.3
BBLS	Lazići	2.37	347	*e*Pn	Pn	07 02 58.2	-2.5
BBLS				*e*Sg	Sn	07 03 32.3	+2.3
DIVS	Divibare	2.54	357	*e*Pn	Pn	07 03 00.0	-3.0
DIVS				*e*Sg	Sn	07 03 36.2	+2.1
DIVS	Divibare	2.54	357	*e*Pn	Pn	07 03 00.0	-3.0
DIVS				*e*Sg	Sn	07 03 36.2	+2.1

IDC 24 07:13:04.9±2.1, 10.°40S×120.°29E, h0km, mb3.4/1, mb1 3.7/5, mb1mx3.5/19, mbtmp3.6/5, ML3.6/4, MS3.5/1, Ms1 3.4/1, ms1mx2.3/16, Error ellipse: s-maj=105.7km s-min=23.3km az=59.0, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	Kappang	5.38	354	Pn	Pn	07 14 26.4	0.0
3.9nm,0.3s,baz=215,slow=14,SNR=7.4							
FITZ	Fitzroy Crossi	9.24	147	Pn	Pn	07 15 19.1	-0.4
0.6nm,0.3s,baz=324,slow=8.7,SNR=15							
FITZ				Sn	Sn	07 16 55.6	-8.8
0.9nm,0.3s,baz=188,slow=19,SNR=8.5							
WRA	Warramunga Arr	16.54	127	Pn	Pn	07 16 57.8	-0.6
0.1nm,0.3s,baz=301,slow=13,SNR=5.3							
WRA				Sn	Sn	07 19 52.6	-10
0.1nm,0.3s,baz=296,slow=21,SNR=3.9							
ASAR	Alice Springs	18.51	137	P	Pn	07 17 24.1	+1.2
0.2nm,0.3s,baz=313,slow=12,SNR=12							
ASAR				S	Sn	07 20 42.7	-7.9
0.1nm,0.3s,baz=306,slow=22,SNR=4.1							
STKA	Stephens Creek	29.07	140	LR	LR	07 30 50.4	
comp=Z,84nm,18.1s,baz=32,slow=37							
MKAR	Makanchi Array	66.28	332	P	P	07 23 54.8	-0.1
0.3nm,0.7s,baz=138,slow=5.2,SNR=4.0							

*CSEM **24** 07:16:30.0, 41.°65N×17.°58E, h7km, MD2.9/13, After ROM*
*ROM **24** 07:16:30.0±0.4, 41.°65N×17.°58E, h7km, Md2.9/13, Ml2.7/11, Error ellipse: s-maj=4.2km s-min=3.0km az=75.0*
*ISCJB **24** 07:16:30.3±0.9, 41.°63N±0.°03×17.°51E±0.°06, h0km±7km, Error ellipse: s-maj=8.5km s-min=4.7km az=18.3*
ISC 24 07:16:31.3±0.9, 41.°63N±0.°03×17.°52E±0.°07, h8km±6km, n29, σ0.°92/46, Adriatic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOCI	Noci	0.91	203	Pg	Pg	07 16 48.0	-0.7
NOCI				Sg	Sg	07 17 01.4	+0.9
301nm,0.3s							
NOCI	Noci	0.91	203	Pg	Pg	07 16 48.0	-0.7
NOCI				Sg	Sg	07 17 01.4	+0.9
301nm,0.3s							
AMUR	Altamura	1.00	224	Pg	Pg	07 16 49.2	-1.3
AMUR				Sg	Sg	07 17 04.1	+0.6
150nm,0.3s							
AMUR	Altamura	1.00	224	Pg	Pg	07 16 49.2	-1.3
AMUR				Sg	Sg	07 17 04.1	+0.6
150nm,0.3s							
MRVN	Minervino Murg	1.15	241	Pg	Pg	07 16 52.4	-0.9
MRVN				Sg	Sg	07 17 08.3	+0.1
103nm,0.3s							
MRVN	Minervino Murg	1.15	241	Pg	Pg	07 16 52.4	-0.9
MRVN				Sg	Sg	07 17 08.3	+0.1
103nm,0.3s							
MATE	Matera	1.16	213	Pg	Pg	07 16 52.4	-1.1
MATE				Sg	Sg	07 17 09.5	+1.0
99nm,0.2s							
MATE	Matera	1.16	213	Pg	Pg	07 16 52.4	-1.1
MATE				Sg	Sg	07 17 09.5	+1.0
99nm,0.2s							
MSAG	Monte S. Angel	1.21	274	Pg	Pg	07 16 53.2	-1.3
MSAG				Sg	Sg	07 17 10.8	+0.5
96nm,0.3s							
MSAG	Monte S. Angel	1.21	274	Pg	Pg	07 16 53.2	-1.3
MSAG				Sg	Sg	07 17 10.8	+0.5
96nm,0.3s							
STON	Ston	1.25	6	*i* Pg	Pg	07 16 55.2	-0.1
STON				Sg	Sg	07 17 12.9	+1.4
MIGL	Miglionico	1.31	219	Pg	Pn	07 16 54.9	-1.0
MIGL				Sg	Sg	07 17 14.4	+1.0
380nm,0.3s							
MIGL	Miglionico	1.31	219	Pg	Pn	07 16 54.9	-1.0
MIGL				Sg	Sg	07 17 14.4	+1.0
380nm,0.3s							
SGRT	San Giovanni R	1.34	276	Pg	Pn	07 16 54.9	-1.4
SGRT				Sg	Sg	07 17 14.7	+0.4
57nm,0.2s							
SGRT	San Giovanni R	1.34	276	Pg	Pn	07 16 54.9	-1.4
SGRT				Sg	Sg	07 17 14.7	+0.4
57nm,0.2s							
ACER	Acerenza	1.46	235	Pg	Pn	07 16 57.4	-0.6
ACER				Sg	Sg	07 17 17.6	-0.6
ACER	Acerenza	1.46	235	Pg	Pn	07 16 57.4	-0.6
ACER				Sg	Sg	07 17 17.6	-0.6
MRLC	Muro Lucano	1.76	241	Pg	Pn	07 17 03.5	+1.3
48nm,0.4s							
MRLC	Muro Lucano	1.76	241	Pg	Pn	07 17 03.5	+1.3
48nm,0.4s							
SCHR	S. Chirico Rap	1.80	218	Pg	Pn	07 17 03.2	+0.5
29nm,0.9s							
SCHR	S. Chirico Rap	1.80	218	Pg	Pn	07 17 03.2	+0.5
29nm,0.9s							
MCEL	Monticello	1.84	226	Pg	Pn	07 17 04.1	+0.8
42nm,0.4s							
MCEL	Monticello	1.84	226	Pg	Pn	07 17 04.1	+0.8
42nm,0.4s							
SIRI	Monte Sirino -	1.91	221	Pg	Pn	07 17 05.1	+0.9
33nm,0.3s							
SIRI	Monte Sirino -	1.91	221	Pg	Pn	07 17 05.1	+0.9
33nm,0.3s							
CDRU	Civita di Ruta	2.03	237	Pg	Pn	07 17 06.5	+0.7
CDRU	Civita di Ruta	2.03	237	Pg	Pn	07 17 06.5	+0.7
BULG	Bulgheria - Ca	2.25	227	Pg	Pn	07 17 07.8	-1.0
BULG	Bulgheria - Ca	2.25	227	Pg	Pn	07 17 07.8	-1.0

*ATH **24** 07:38:17.6, 35.°81N×21.°64E, h13km±2km, MD3.3/6*
*CSEM **24** 07:38:19.6±1.0, 35.°92N×21.°77E, h2km, ML3.6/2, Error ellipse: s-maj=19.4km s-min=10.1km az=48.0*
*THE **24** 07:38:23.4, 36.°07N×21.°70E, h12km, ML3.6/2, Error ellipse: s-maj=2.5km s-min=0.6km az=257.0*
ISC 24 07:38:20.2±1.9, 35.°95N±0.°07×21.°7E±0.°1, h2km±8km, n24, σ0.°98/34, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.95	3	P	Pg	07 38 39.0	+0.7
PYL				S	Sg	07 38 51.1	+0.5
PYL	PYLOS	0.95	3	*e*PN	Pg	07 38 38.5	+0.2
PYL				*e*SB	Sb	07 38 52.8	+0.5
PYL	PYLOS	0.95	3	*e*Pn	Pg	07 38 38.5	+0.2
PYL	PYLOS	0.95	3	P	Pg	07 38 39.0	+0.7
PYL				S	Sg	07 38 51.1	+0.5
PYL				*e*Sb	Sb	07 38 52.8	+0.5
KYTH	Kithira	1.15	73	*e*PB	Pg	07 38 40.8	-1.4
KYTH	Kithira	1.15	73	*e*Pb	Pg	07 38 40.8	-1.4
ITM	Ithomi	1.25	9	P	Pg	07 38 43.9	-0.1
ITM				S	Sg	07 39 00.1	-0.1
ITM	Ithomi	1.25	9	*e*PB	Pg	07 38 43.9	-0.1
ITM	Ithomi	1.25	9	P	Pg	07 38 43.9	-0.1
ITM				S	Sg	07 39 00.1	-0.1
VLI	Veliai	1.27	53	*e*PG	Pn	07 38 43.4	-1.5
VLI				*e*SB	Sb	07 39 03.1	+1.4
VLI	Veliai	1.27	53	*e*Pg	Pn	07 38 43.4	-1.5
VLI				*e*Sb	Sb	07 39 03.1	+1.4
VLX	Vlachokerasia	1.53	21	P	Pn	07 38 48.0	-0.4
VLX				S	Sn	07 39 07.3	-1.5
VLX	Vlachokerasia	1.53	21	*e*PG	Pn	07 38 48.3	-0.1
VLX	Vlachokerasia	1.53	21	P	Pn	07 38 48.0	-0.4
VLX	Vlachokerasia	1.53	21	*e*Pg	Pn	07 38 48.3	-0.1
VLX				S	Sn	07 39 07.3	-1.5
KARN	Karanos	1.90	106	P	Pn	07 38 55.3	+1.7
GUR	Goura	2.05	15	P	Pn	07 38 55.5	-0.2
GUR	Goura	2.05	15	*e*PN	Pn	07 38 56.1	+0.4
GUR	Goura	2.05	15	P	Pn	07 38 55.5	-0.2
GUR	Goura	2.05	15	*e*Pn	Pn	07 38 56.1	+0.4
LTK	Loutraki	2.31	26	P	Pn	07 38 59.0	-0.2
LTK	Loutraki	2.31	26	*e*PN	Pn	07 39 00.0	+0.8
LTK	Loutraki	2.31	26	P	Pn	07 38 59.0	-0.2
LTK	Loutraki	2.31	26	*e*Pn	Pn	07 39 00.0	+0.8

DJA 24 07:51:26, 8.°07S×115.°85E, h260km, MLv3.7/7, Bali region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHKI	Kahang-Kahang	0.38	219	P	Pn	07 51 59.0	-0.7
KHKI				S	S	07 52 27.0	+0.7
SRBI	Singaraja	0.63	269	P	Pn	07 52 00.4	0.0
DNP	Denpasar	0.87	226	P	Pn	07 52 02.3	+0.8
IGBI	Denpasar	1.02	223	P	Pn	07 52 02.1	-0.1
IGBI				S	S	07 52 31.0	+0.3
BYJI	Banyuwangi	1.49	264	P	Pn	07 52 06.7	+1.5
GMJI	Gumukmas	2.39	265	P	Pn	07 52 13.2	+0.3
PWJI	Pagerwojo	4.01	270	P	Pn	07 52 29.5	-0.9
SJI	Sawahan	4.06	274	P	Pn	07 52 31.3	+0.3
PCJI	Pacitan	4.63	268	P	Pn	07 52 37.4	-0.3

IDC 24 07:52:56.8±2.7, 53.°74N×90.°84E, h0km, mb1 3.5/4, mb1mx3.3/27, mbtmp3.5/4, ML3.5/4, 1D, Error ellipse: s-maj=23.9km s-min=17.8km az=70.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	Zalesovo Beam	3.57	276	Pn	Pn	07 53 53.8	+0.3
1.1nm,0.3s,baz=94,slow=15,SNR=13							
ZALV				Pg	Pg	07 53 59.0	-6.2
2.1nm,0.3s,baz=95,slow=16,SNR=38							
ZALV				Lg		07 54 48.5	
5.2nm,0.3s,baz=90,slow=29,SNR=11							
KURK	Kurchatov	8.09	253	Pn	Pn	07 54 56.3	+0.9
0.5nm,0.3s,baz=66,slow=15,SNR=25							
KURK				Sn	Sn	07 56 27.6	+0.2
0.1nm,0.3s,baz=68,slow=22,SNR=3.2							
KURK				Lg		07 57 17.5	
0.2nm,0.3s,baz=72,slow=33,SNR=11							
MK31	Makanchi Array	8.84	222	Pn	Pn	07 55 06.5	+0.7
0.9nm,0.6s,baz=42,slow=14,SNR=23							
MK31				‖ Lg		07 57 32.1	
19nm,1.0s,baz=43,slow=36,SNR=4.6							
MKAR	Makanchi Array	8.84	222	Pn	Pn	07 55 06.1	+0.3
0.5nm,0.3s,baz=32,slow=14,SNR=18							
MKAR				Sn	Sn	07 56 45.0	-1.0
0.1nm,0.3s,baz=24,slow=18,SNR=2.7							
MKAR				Lg		07 57 31.8	
0.1nm,0.3s,baz=36,slow=27,SNR=3.4							
SONM	Songino Array	11.47	115	Sn	Sn	07 57 55.8	+5.4
0.1nm,0.3s,baz=303,slow=19,SNR=2.3							
SONM				Lg		07 58 52.0	
0.2nm,0.3s,baz=299,slow=30,SNR=9.1							
BVAR	Borovoye Array	12.23	275	Pn	Pn	07 55 51.8	-0.3
0.3nm,0.3s,baz=71,slow=14,SNR=3.8							
BVAR				Sn	Sn	07 58 03.0	-6.0
0.2nm,0.3s,baz=70,slow=17,SNR=2.5							

*CSEM **24** 09:09:57.4±0.1, 39.°80N×30.°53E, h8km, MD3.0, Error ellipse: s-maj=1.8km s-min=1.2km az=64.0*
*DDA **24** 09:09:57.6, 39.°81N×30.°57E, h6km±2km, Md3.0*
*ISK **24** 09:09:57.0, 39.°81N×30.°55E, h10km, MD3.0*
*ISCJB **24** 09:09:57.3±0.5, 39.°80N±0.°02×30.°54E±0.°04, h1km±5km, Error ellipse: s-maj=4.9km s-min=3.6km az=151.6*
ISC 24 09:09:57.9±0.4, 39.°80N±0.°02×30.°54E±0.°04, h9km±4km, n48, σ0.°64/65, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORA	Eskisehir	0.10	320	*i* P	Pg	09 10 00.2	-0.2
BORA				*i* S	Sg	09 10 02.2	+0.1
BORA	Eskisehir	0.10	320	*i* P	Pg	09 10 00.2	-0.2
BORA				*i* S	Sg	09 10 02.2	+0.1
ESKT	Eskisehir	0.37	140	*e*PG	Pg	09 10 04.8	-0.4
ESKT				*e*SG	Sg	09 10 10.5	+0.3
ESKT	Eskisehir	0.37	140	*i* P	Pg	09 10 04.9	-0.2
ESKT				*i* S	Sg	09 10 10.7	+0.5
ESKT	Eskisehir	0.37	140	*e*Pg	Pg	09 10 04.8	-0.4
ESKT				*e*Sg	Sg	09 10 10.5	+0.4
SEYT	Eskypehyr	0.37	140	*i* P	Pg	09 10 04.9	-0.3
SEYT				*i* S	Sg	09 10 10.7	+0.6
GPA	Golpazari	0.52	340	*e*PG	Pg	09 10 07.0	-0.8
GPA	Golpazari	0.52	340	*e*Pg	Pg	09 10 07.1	-0.8
GULT	Gulveren	0.63	358	*e*PG	Pg	09 10 09.6	-0.5
GULT				*e*SG	Sg	09 10 18.8	+0.5
GULT	Gulveren	0.63	358	*e*Pg	Pg	09 10 09.6	-0.4
GULT				*e*Sg	Sg	09 10 18.8	+0.6
CAVI	Cavuskoy	0.67	307	*e*PG	Pg	09 10 10.7	0.0
CAVI	Cavuskoy	0.67	307	*e*Pg	Pg	09 10 10.7	0.0
ALT	Altintas	0.82	204	*e*PG	Pg	09 10 13.1	-0.5
ALT	Altintas	0.82	204	*e*Pg	Pg	09 10 13.1	-0.5
MDU	Mudurnu	0.84	38	*e*PG	Pg	09 10 13.5	-0.5
MDU	Mudurnu	0.84	38	*e*Pg	Pg	09 10 13.5	-0.6
SVRH	Sivrihisar-ESK	0.84	115	*e*PG	Pg	09 10 13.2	-0.9
SVRH	Sivrihisar-ESK	0.84	115	*e*Pg	Pg	09 10 13.2	-0.9
ADVT	Abdulvahap	0.88	316	*e*PG	Pg	09 10 14.2	-0.5
ADVT	Abdulvahap	0.88	316	*e*Pg	Pg	09 10 14.3	-0.5
HENT	Hendek	1.05	15	*i* P	Pg	09 10 18.2	0.0
HENT				*i* S	Sg	09 10 34.8	+3.0
HENT	Hendek	1.05	15	*i* P	Pg	09 10 18.2	0.0
GDZ	Gediz	1.09	229	*i* P	Pg	09 10 18.7	-0.1
GDZ				*i* S	Sg	09 10 34.5	+1.7
GDZ	Gediz	1.09	229	*i* P	Pg	09 10 18.7	0.0
GDZ				*i* S	Sg	09 10 34.5	+1.7
ULDT	Uludag	1.13	288	*i* P	Pb	09 10 20.1	+0.6
ULDT				*i* S	Sg	09 10 34.4	+0.2
ULDT	Uludag	1.13	288	*i* P	Pb	09 10 20.1	+0.6
ULDT				*i* S	Sg	09 10 34.4	+0.2
BOLV	Bolvadin	1.13	163	*i* P	Pb	09 10 19.9	+0.3
BOLV				*i* S	Sb	09 10 34.9	+0.6
BOLV	Bolvadin	1.13	163	*i* P	Pb	09 10 19.9	+0.3
BOLV				*i* S	Sb	09 10 34.9	+0.5
YLV	Yalova	1.17	311	*e*PN	Pn	09 10 20.3	-0.1
YLV	Yalova	1.17	311	*e*Pn	Pn	09 10 20.3	-0.1
GEMT	Gemlik	1.21	302	*e*PN	Pn	09 10 20.8	-0.2
GEMT	Gemlik	1.21	302	*e*Pn	Pn	09 10 20.8	-0.2
SHUT	Suhut-Afyon	1.25	179	*e*PN	Pn	09 10 21.0	-0.5
SHUT	Suhut-Afyon	1.25	179	*e*Pn	Pn	09 10 21.0	-0.5
KIZT	Kizilcal	1.39	131	*e*PN	Pn	09 10 23.5	+0.1
KIZT	Kizilcal	1.39	131	*e*Pn	Pn	09 10 23.5	+0.1
SGKT	Sivrigoynuk	1.39	56	*i* P	Pn	09 10 23.5	0.0
SGKT				*i* S	Sn	09 10 43.0	+1.0
SGKT	Sivrigoynuk	1.39	56	*i* P	Pn	09 10 23.5	0.0
SGKT				*i* S	Sn	09 10 43.0	+1.0
ARMT	Armutlu	1.49	301	*e*PN	Pn	09 10 24.9	0.0
ARMT	Armutlu	1.49	301	*e*Pn	Pn	09 10 24.9	+0.1
SILT	Sile	1.51	333	*e*PN	Pn	09 10 24.5	-0.6
SILT	Sile	1.51	333	*e*Pn	Pn	09 10 24.5	-0.6
KHL	Karahalli	1.68	208	*e*PN	Pn	09 10 27.0	-0.3
KHL	Karahalli	1.68	208	*e*Pn	Pn	09 10 27.0	-0.4
KCT	Karacabey	1.74	286	*e*PN	Pn	09 10 27.6	-0.6
KCT	Karacabey	1.74	286	*e*Pn	Pn	09 10 27.6	-0.6
KONT	Konya--Tatoy	2.34	142	*e*PN	Pn	09 10 36.2	-0.3
KONT	Konya--Tatoy	2.34	142	*e*Pn	Pn	09 10 36.2	-0.3

*NEIC **24** 09:16:21.4, 37.°81N×139.°81E, h127km, MG3.3(JMA), After JMA.*
*IDC **24** 09:16:21.3±1.2, 37.°79N×139.°84E, h130km±11km, mb3.5/10, mb1 3.7/14, mb1mx3.6/26, mbtmp3.6/14, Error ellipse: s-maj=17.0km s-min=11.5km az=88.0*
*JMA **24** 09:16:21.3±0.1, 37.°81N×139.°81E, h127km±1km, M3.3*
ISC 24 09:16:21.3±0.3, 37.°81N±0.°03×139.°84E±0.°05, h129km±2km, n32, σ0.°80/47, mb3.7/11, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNS	Sasagawa	0.42	271	P	Pn	09 16 39.5	-0.2
JNS				S	Sn	09 16 53.0	-0.6
JFY	Yanaizu	0.42	195	P	Pn	09 16 39.8	0.0
JFY				*e*S	Sn	09 16 53.1	-0.6
JMM	Marumori	0.75	86	P	Pn	09 16 41.7	-0.2
JMM				*e*S	Sn	09 16 57.1	-0.4
JAW	Awa shima	0.80	324	P	Pn	09 16 42.4	+0.2
JAW				S	Sn	09 16 58.4	+0.3
JYK	Kaneyama	1.18	20	P	Pn	09 16 46.0	+0.3
JYK				*e*S	Sn	09 17 04.8	+0.4
JSD	Sado	1.27	281	P	Pn	09 16 46.4	-0.3
JSD				*e*S	Sn	09 17 05.5	-0.6
JAG	Ashikaga	1.42	193	P	Pn	09 16 48.5	+0.1
JAG				*e*S	Sn	09 17 09.5	+0.5
JMK	Ichinoseki	1.57	43	P	Pn	09 16 50.2	+0.2
MAJO	Matsushiro	1.82	226	*e*Pn	Pn	09 16 53.4	+0.4
MAT	Matsushiro	1.82	226	P	Pn	09 16 53.4	+0.4
MAT				S	Sn	09 17 18.1	+0.9
MAT	Matsushiro	1.82	226	P	Pn	09 16 53.3	+0.3
MAT				*e*S	Sn	09 17 18.0	+0.8
MJAR	Matsushiro Arr	1.82	226	P	Pn	09 16 53.4	+0.3
26nm,0.3s,baz=31,slow=12,SNR=317							
MJAR				S	Sn	09 17 17.5	+0.3
4.6nm,0.3s,baz=254,slow=32,SNR=6.8							
JRY	Ryogami san	1.94	203	P	Pn	09 16 54.6	+0.1
JRY				*e*S	Sn	09 17 21.4	+1.5
JSZ	Suzu	2.00	260	P	Pn	09 16 55.0	-0.2
JSZ				*e*S	Sn	09 17 20.6	-0.5
JOM	Ohasama	2.01	34	P	Pn	09 16 55.9	+0.7
JOM				S	Sn	09 17 22.1	+0.8
JHJ	Hachijo jima 2	4.68	181	P	Pn	09 17 28.7	-1.4
34nm,0.3s,baz=98,slow=6.2,SNR=8.1							
JHJ				S	Sn	09 18 21.9	-1.7
60nm,0.3s,baz=77,slow=23,SNR=7.4							
ERM	Erimo	4.91	30	*e*Pn	Pn	09 17 34.1	+1.1
ERM				*e*Sn	Sn	09 18 26.6	-2.3
ASAJ	Asahikawa	6.63	17	P	Pn	09 17 54.8	-1.4
2.4nm,0.3s,baz=199,slow=32,SNR=9.4							
KSRS	Korea Array	9.46	271	P	Pn	09 18 36.1	+1.7
0.3nm,0.3s,baz=84,slow=14,SNR=8.4							
PETK	Petropavlovsk-	19.68	33	P	P	09 20 40.8	+0.7
0.3nm,0.3s,baz=210,slow=6.0,SNR=8.3							
ENH	Enshi	26.18	262	*e*P	P	09 21 42.5	-1.2
25nm,0.3s							
SONM	Songino Array	26.31	303	P	P	09 21 44.8	+0.1
1.2nm,0.7s,mb3.6,baz=97,slow=8.9,SNR=8.5							
MKAR	Makanchi Array	42.65	301	P	P	09 24 03.5	-1.3
0.5nm,0.6s,mb3.3,baz=82,slow=11,SNR=5.3							
WRAB	Tennant Creek	57.67	186	*e*P	P	09 25 58.0	-0.1
7.1nm,0.9s,mb4.5							
WRA	Warramunga Arr	57.68	186	P	P	09 25 57.8	-0.4
2.4nm,0.6s,mb4.2,baz=4.3,slow=7.4,SNR=28							
ASAR	Alice Springs	61.41	186	P	P	09 26 23.9	+0.2
1.0nm,0.8s,mb3.7,baz=8.0,slow=8.2,SNR=10							
ARCES	ARCESS Array B	62.83	339	P	P	09 26 32.5	-0.2
5.2nm,1.1s,mb4.3,baz=54,slow=8.2,SNR=5.5							
YKA	Yellowknife Ar	63.76	30	P	P	09 26 39.4	+0.4
0.5nm,0.8s,mb3.4,baz=294,slow=6.0,SNR=4.4							
FINES	FINESS Array B	67.54	332	P	P	09 27 02.6	-0.7
1.1nm,0.5s,mb3.9,baz=115,slow=6.6,SNR=3.3							
AKASG	Malin Array Be	72.92	321	P	P	09 27 36.0	-0.1
0.4nm,0.3s,mb3.6,baz=45,slow=5.5,SNR=5.0							
PDAR	Pinedale Array	78.00	45	P	P	09 28 06.5	+1.2
0.4nm,0.8s,mb3.1,baz=45,slow=0.6,SNR=4.6							
TXAR	Lajitas Array	90.62	51	P	P	09 29 10.7	+1.3
0.2nm,0.7s,mb3.3,baz=269,slow=6.3,SNR=3.7							

IDC 24 09:33:11.7±57.0, 21.°28S×179.°54E, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.8/15, mbtmp4.1/3, Error ellipse: s-maj=1030.0km s-min=148.5km az=83.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	35.38	245	P	P	09 40 08.4	-0.8
1.7nm,0.6s,baz=103,slow=14,SNR=6.3							
ASAR	Alice Springs	42.10	258	P	P	09 41 05.6	-0.2
1.4nm,0.6s,baz=88,slow=8.5,SNR=18							
WRA	Warramunga Arr	42.22	263	P	P	09 41 07.4	+0.7
1.7nm,0.6s,baz=96,slow=8.5,SNR=21							

*NEIC **24** 09:40:15.6±0.7, 4.°69N×94.°68E, h35km, mb4.5/3, Error ellipse: s-maj=20.4km s-min=9.1km az=47.0*
*IDC **24** 09:40:19.5±4.8, 4.°87N×94.°94E, h66km±40km, mb3.9/9, mb1 4.1/11, mb1mx3.7/24, mbtmp3.9/11, ML3.9/1, Error ellipse: s-maj=53.8km s-min=15.8km az=58.0*
*ISCJB **24** 09:40:20.4±2.4, 5.°0N±0.°1×95.°1E±0.°1, h87km±21km, mb4.2/12, Error ellipse: s-maj=25.1km s-min=12.9km az=146.6*
ISC 24 09:40:22.0±2.3, 5.°0N±0.°1×95.°1E±0.°1, h85km±20km, n19, σ0.°63/19, mb4.2/12, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	4.35	119	P	Pn	09 41 25.5	-0.3
5.2nm,0.3s,baz=330,slow=17,SNR=11							
PSI				S

KARA	Karaisali	0.65	277	*e*Pg	Pg	09 52 41.3 -1.1
KRTS	Karatas	0.72	213	*e*PG	Pg	09 52 42.9 -0.9
KRTS	Karatas	0.72	213	*e*Pg	Pg	09 52 42.9 -0.9
COBT	Iskenderun	0.73	155	*e*P	Pg	09 52 44.0 0.0
COBT				*e*S	Sg	09 52 53.8 +0.3
COBT	Iskenderun	0.73	155	*e*P	Pg	09 52 44.0 0.0
COBT				*e*S	Sg	09 52 53.8 +0.3
KMRS	Kahramanmaras	0.89	68	*e*PG	Pg	09 52 46.8 -0.1
KMRS	Kahramanmaras	0.89	68	*e*Pg	Pg	09 52 46.8 -0.1
GAZ	Gaziantep	1.08	90	*e*PN	Pg	09 52 49.4 -1.1
GAZ	Gaziantep	1.08	90	*e*Pn	Pg	09 52 49.4 -1.1
HTY	Hatay	1.08	168	*e*PN	Pg	09 52 49.7 -0.9
HTY	Hatay	1.08	168	*e*Pn	Pg	09 52 49.7 -0.9
MERS	Mersin	1.12	254	*e*PN	Pg	09 52 50.0 -1.3
MERS	Mersin	1.12	254	*e*Pn	Pg	09 52 50.0 -1.3
SARI	SarD1z-Kayseri	1.63	24	*e*PN	Pn	09 52 53.7 -5.3
IKL	Isikli	1.99	242	*e*PN	Pn	09 53 03.7 -0.3
IKL	Isikli	1.99	242	*e*Pn	Pn	09 53 03.7 -0.3
SULT	Sultanhani-AKS	2.12	299	*e*PN	Pn	09 53 05.5 -0.3
SULT	Sultanhani-AKS	2.12	299	*e*Pn	Pn	09 53 05.5 -0.3
DARE	Darende-Malaty	2.34	40	*e*PN	Pn	09 53 02.6 -6.2
URFA	Urfa	2.37	83	*e*PN	Pn	09 53 09.2 0.0
URFA	Urfa	2.37	83	*e*Pn	Pn	09 53 09.3 0.0
HDMB	Hadim	2.71	266	*e*PN	Pn	09 53 14.6 +0.7
HDMB	Hadim	2.71	266	*e*Pn	Pn	09 53 14.6 +0.7
PTK	Pertek	3.27	57	*e*PN	Pn	09 53 22.7 +1.1
PTK	Pertek	3.27	57	*e*Pn	Pn	09 53 22.7 +1.1

*CSEM **24** 09:57:39.6±0.1, 37°.16N×35°.87E, h12km, MD3.1, Error ellipse: s-maj=2.4km s-min=2.3km az=78.0*
*DDA **24** 09:57:39.6, 37°.15N×35°.88E, h7km±3km, Md2.9*
*ISK **24** 09:57:39.1, 37°.17N×35°.85E, h11km, MD3.1*
*ISCJB **24** 09:57:39.5±0.5, 37°.19N±0°.03×35°.85E±0°.05, h12km±4km, Error ellipse: s-maj=6.1km s-min=4.8km az=5.2*

ISC 24 09:57:39.8±0.5, 37°.17N±0°.03×35°.86E±0°.04, h13km±4km, n33, σ0s73/44, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEYT	Ceyhan	0.19	209	PG	Pg	09 57 43.5	-0.6
CEYT				*e*SG	Sg	09 57 46.8	-0.1
CEYT	Ceyhan	0.19	209	*i* Pg	Pg	09 57 43.5	-0.5
CEYT				*e*Sg	Sg	09 57 46.8	-0.1
KOZT	Kozan	0.31	355	*e*PG	Pg	09 57 45.7	-0.4
KOZT				*e*SG	Sg	09 57 51.4	+1.0
YURE	YURECIR	0.39	208	*e*P	Pg	09 57 48.0	+0.4
YURE				*e*S	Sg	09 57 55.5	+2.6
YURE	YURECIR	0.39	208	*e*P	Pg	09 57 48.0	+0.3
YURE				*e*S	Sg	09 57 55.5	+2.5
KARA	Karaisali	0.65	278	*e*PG	Pg	09 57 51.6	-0.9
KARA	Karaisali	0.65	278	*e*Pg	Pg	09 57 51.6	-0.9
KRTS	Karatas	0.72	213	*e*PG	Pg	09 57 53.3	-0.4
KRTS	Karatas	0.72	213	*e*Pg	Pg	09 57 53.3	-0.4
COBT	Iskenderun	0.72	154	*e*P	Pg	09 57 53.2	-0.7
COBT				*e*S	Sg	09 58 03.9	+0.5
COBT	Iskenderun	0.72	154	*e*P	Pg	09 57 53.2	-0.7
COBT				*e*S	Sg	09 58 03.9	+0.5
KMRS	Kahramanmaras	0.89	68	*e*PG	Pg	09 57 57.0	-0.1
KMRS	Kahramanmaras	0.89	68	*e*Pg	Pg	09 57 57.0	-0.1
KUZU	Kuzuini	1.05	112	*e*P	Pb	09 57 59.5	-0.4
KUZU				*e*S	Sb	09 58 13.9	+0.4
KUZU	Kuzuini	1.05	112	*e*P	Pb	09 57 59.5	-0.4
KUZU				*e*S	Sb	09 58 13.9	+0.4
HTY	Hatay	1.07	168	*e*PG	Pg	09 57 59.8	-0.7
HTY	Hatay	1.07	168	*e*Pg	Pg	09 57 59.8	-0.7
GAZ	Gaziantep	1.08	90	*e*PN	Pn	09 58 00.2	-0.4
GAZ	Gaziantep	1.08	90	*e*Pn	Pn	09 58 00.2	-0.5
MERS	Mersin	1.11	254	*e*PN	Pn	09 58 00.6	-0.6
MERS	Mersin	1.11	254	*e*Pn	Pn	09 58 00.6	-0.6
YAYL	Yayladag	1.15	170	*e*P	Pb	09 58 00.7	-0.9
YAYL				*e*S	Sb	09 58 16.9	+0.4
YAYL	Yayladag	1.15	170	*e*P	Pb	09 58 00.7	-1.0
YAYL				*e*S	Sb	09 58 16.9	+0.4
SARI	SarD1z-Kayseri	1.64	23	*e*PN	Pn	09 58 03.9	-4.5
IKL	Isikli	1.98	243	*e*PN	Pn	09 58 13.6	+0.5
IKL	Isikli	1.98	243	*e*Pn	Pn	09 58 13.6	+0.5
SULT	Sultanhani-AKS	2.12	299	*e*PN	Pn	09 58 15.4	+0.3
SULT	Sultanhani-AKS	2.12	299	*e*Pn	Pn	09 58 15.4	+0.4
DARE	Darende-Malaty	2.35	40	*e*PN	Pn	09 58 12.7	-5.4
URFA	Urfa	2.37	83	*e*PN	Pn	09 58 19.5	+1.0
URFA	Urfa	2.37	83	*e*Pn	Pn	09 58 19.5	+1.0
HDMB	Hadim	2.71	267	*e*PN	Pn	09 58 23.2	+0.1
HDMB	Hadim	2.71	267	*e*Pn	Pn	09 58 23.2	+0.1

*CSEM **24** 10:24:33.1, 42°.76N×45°.63E, h23km, mb3.9, After OBN*

MOS 24 10:24:33.9±0.3, 42°.76N×45°.63E, h23km, mb3.9/1, 2C-2D, Error ellipse: s-maj=23.0km s-min=8.8km az=31.8, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTLR	Botlikh	0.45	102	*i* Pg	Pb	10 24 45.0	+1.8
BTLR				*i* S	Sb	10 24 52.5	+3.0
BTLR				pmax	pmax		
	comp=Z,203nm,0.1s						
BTLR	Botlikh	0.45	102	*i* Pg	Pb	10 24 45.0	+1.8
	comp=Z,203nm,0.1s						
BTLR				*i* Sg	Sb	10 24 52.5	+3.0
SNJR	Sundja	0.67	297	⇑*i* PG	Pb	10 24 47.3	+0.4
SNJR				*i* S	Sb	10 24 57.4	+1.6
SNJR	Sundja	0.67	297	*i* Pg	Pb	10 24 47.3	+0.4
SNJR				*i* Sg	Sb	10 24 57.4	+1.6
VLKR	Vladikavkaz	0.75	293	*e*PG	Pb	10 24 48.7	+0.4
VLKR				*e*S	Sb	10 24 59.4	+1.3
VLKR	Vladikavkaz	0.75	293	*e*Pg	Pb	10 24 48.7	+0.4
VLKR				*e*Sg	Sb	10 24 59.4	+1.3
DBC	Dubki	0.92	73	*e*PG	Pb	10 24 50.8	-0.4
DBC	Dubki	0.92	73	*e*Pg	Pb	10 24 50.8	-0.4
LACR	Lac	0.98	274	⇓*i* PG	Pb	10 24 51.9	-0.3
LACR				*i* S	Sb	10 25 05.2	+0.5
LACR	Lac	0.98	274	*i* Pg	Pb	10 24 51.9	-0.3
LACR				*i* Sg	Sb	10 25 05.2	+0.5
BTKR	Batakoyurt	1.00	308	⇓*i* PG	Pn	10 24 52.6	+0.1
BTKR				*i* S	Sb	10 25 06.4	+1.1
BTKR	Batakoyurt	1.00	308	*i* Pg	Pn	10 24 52.6	+0.1
BTKR				*i* Sg	Sb	10 25 06.4	+1.1
ARNR	Ardon	1.08	294	*e*PG	Pn	10 24 53.6	+0.1
ARNR				*i* S	Sb	10 25 08.0	+0.6
ARNR	Ardon	1.08	294	*e*Pg	Pn	10 24 53.6	+0.1
ARNR				*i* Sg	Sb	10 25 08.0	+0.6
KMSR	Komsomolskaya	1.15	302	⇑*i* PG	Pn	10 24 54.5	-0.1
KMSR				*e*S	Sb	10 25 10.5	+0.9
KMSR	Komsomolskaya	1.15	302	*i* Pg	Pn	10 24 54.5	-0.1
KMSR				*e*Sg	Sb	10 25 10.5	+0.9
TRKR	Terskaya	1.16	326	*e*PG	Pn	10 24 55.1	+0.4
TRKR				*i* S	Sn	10 25 11.0	+1.1
TRKR	Terskaya	1.16	326	*e*Pg	Pn	10 24 55.1	+0.4
TRKR				*i* Sg	Sn	10 25 11.0	+1.1
KORR	Kora	1.19	286	*e*PG	Pn	10 24 55.5	+0.4
KORR				*e*S	Sn	10 25 11.1	+0.6
KORR	Kora	1.19	286	*e*Pg	Pn	10 24 55.5	+0.4
KORR				*e*Sg	Sn	10 25 11.1	+0.6
ZEI	Tsey	1.27	271	*e*PG	Pn	10 24 56.4	+0.2
ZEI				*i* S	Sn	10 25 12.7	+0.1
ZEI	Tsey	1.27	271	*e*Pg	Pn	10 24 56.4	+0.2
ZEI				*i* Sg	Sn	10 25 12.7	+0.1
PRTR	Priterechnaya	1.39	316	*e*PG	Pn	10 24 58.3	+0.4
PRTR				*e*S	Sn	10 25 16.3	+0.7
PRTR	Priterechnaya	1.39	316	*e*Pg	Pn	10 24 58.3	+0.4
PRTR				*e*Sg	Sn	10 25 16.3	+0.7
LSNR	Lesken	1.42	292	*e*PG	Pn	10 24 58.5	+0.2
LSNR				*e*S	Sn	10 25 17.1	+0.8
LSNR	Lesken	1.42	292	*e*Pg	Pn	10 24 58.5	+0.2
LSNR				*e*Sg	Sn	10 25 17.1	+0.8

*ATH **24** 10:25:12.7, 38°.59N×21°.94E, h21km±2km, MD3.3/7*
*NEIC **24** 10:25:12.7, 38°.59N×21°.94E, h21km, MD3.3(ATH), After ATH.*
*CSEM **24** 10:25:13.4±0.1, 38°.57N×21°.96E, h19km, MD3.3, Error ellipse: s-maj=4.2km s-min=3.4km az=94.0*
*THE **24** 10:25:13.4, 38°.59N×21°.93E, h19km, ML3.7/11, Error ellipse: s-maj=0.9km s-min=0.3km az=160.0*
*ISCJB **24** 10:25:13.4±0.3, 38°.60N±0°.02×21°.93E±0°.03, h20km±4km, Error ellipse: s-maj=4.1km s-min=3.2km az=9.5*

ISC 24 10:25:13.6±0.3, 38°.60N±0°.02×21°.94E±0°.03, h17km±2km, n83, σ0s78/115, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	Efpalio	0.17	190	P	Pg	10 25 17.8	-0.2
EFP				S	Sg	10 25 21.6	+0.7
EFP	Efpalio	0.17	190	*e*PB	Pg	10 25 17.8	-0.2
EFP	Efpalio	0.17	190	P	Pg	10 25 17.8	-0.2
EFP				S	Sg	10 25 21.6	+0.7
TRIZ	Trizonia	0.25	156	P	Pg	10 25 19.0	-0.2
TRIZ				S	Sg	10 25 23.6	+0.6
TRIZ	Trizonia	0.25	156	P	Pg	10 25 19.0	-0.2
TRIZ				S	Sg	10 25 23.6	+0.6
KALE	Kalithea	0.26	143	P	Pg	10 25 19.3	0.0
KALE				S	Sg	10 25 23.8	+0.7
KALE	Kalithea	0.26	143	P	Pg	10 25 19.3	0.0
KALE				S	Sg	10 25 23.8	+0.7
UPR	University Cam	0.34	202	P	Pg	10 25 20.3	-0.3
UPR				S	Sg	10 25 25.7	+0.3
UPR	University Cam	0.34	202	*e*PB	Pg	10 25 20.0	-0.6
UPR	University Cam	0.34	202	*e*Pb	Pg	10 25 20.0	-0.6
UPR	University Cam	0.34	202	P	Pg	10 25 20.3	-0.3
UPR				S	Sg	10 25 25.7	+0.3
EVR	Evrytania	0.34	342	*e*Pb	Pg	10 25 20.3	-0.4
EVR				*e*Sb	Sg	10 25 25.3	-0.2
EVR	Evrytania	0.34	342	*e*PB	Pg	10 25 20.3	-0.4
EVR				*e*SB	Sg	10 25 25.3	-0.2
EVR	Evrytania	0.34	342	*e*Pb	Pg	10 25 20.3	-0.4
EVR				*e*Sb	Sg	10 25 25.3	-0.2
LAKA	Lakka	0.36	176	P	Pg	10 25 20.6	-0.4
LAKA				S	Sg	10 25 26.6	+0.6
LAKA	Lakka	0.36	176	P	Pg	10 25 20.6	-0.4
LAKA				S	Sg	10 25 26.6	+0.6
DSF	Desfina	0.49	112	P	Pg	10 25 23.0	-0.5
DSF				S	Sg	10 25 30.8	+0.7
DSF	Desfina	0.49	112	P	Pg	10 25 23.0	-0.5
DSF				S	Sg	10 25 30.8	+0.7
AGG	Agios Georgios	0.52	35	*e*Pn	Pg	10 25 23.5	-0.5
AGG	Agios Georgios	0.52	35	P	Pg	10 25 23.4	-0.6
AGG				S	Sg	10 25 31.6	+0.6
AGG	Agios Georgios	0.52	35	*e*PN	Pg	10 25 23.5	-0.5
AGG	Agios Georgios	0.52	35	*e*Pn	Pg	10 25 23.5	-0.5
AGG				S	Sg	10 25 31.6	+0.6
RLS	Riolos of Patr	0.66	215	*e*Pn	Pg	10 25 25.4	-1.1
RLS				*e*Sn	Sg	10 25 35.2	0.0
RLS	Riolos of Patr	0.66	215	*e*PN	Pg	10 25 25.4	-1.1
RLS				*e*SN	Sg	10 25 35.2	0.0
RLS	Riolos of Patr	0.66	215	*e*Pn	Pg	10 25 25.4	-1.1
GUR	Goura	0.73	154	P	Pg	10 25 26.9	-0.9
GUR				S	Sg	10 25 37.9	+0.4
GUR	Goura	0.73	154	*e*PN	Pg	10 25 26.6	-1.2
GUR	Goura	0.73	154	*e*Pn	Pg	10 25 26.6	-1.2
GUR	Goura	0.73	154	P	Pg	10 25 26.9	-0.9
GUR				S	Sg	10 25 37.9	+0.4
LKR	Lokris	0.83	86	*e*Pn	Pg	10 25 29.0	-0.7
LKR				*e*Sn	Sg	10 25 40.4	-0.3
LKR	Lokris	0.83	86	P	Pb	10 25 28.9	-0.6
LKR				S	Sg	10 25 40.7	0.0
LKR	Lokris	0.83	86	*e*PN	Pg	10 25 29.0	-0.7
LKR				*e*SN	Sg	10 25 40.4	-0.3
LKR	Lokris	0.83	86	P	Pb	10 25 28.9	-0.6
LKR				*e*Sn	Sg	10 25 40.4	-0.3
LKR				S	Sg	10 25 40.7	0.0
ATAL	Atalanti	0.85	83	P	Pb	10 25 29.5	-0.4
ATAL				S	Sb	10 25 41.9	+0.9
ATAL	Atalanti	0.85	83	P	Pb	10 25 29.5	-0.4
ATAL				S	Sb	10 25 41.9	+0.9
THL	Klokotos Trika	0.97	3	P	Pb	10 25 31.1	-0.8
THL				S	Sb	10 25 44.7	+0.2
THL	Klokotos Trika	0.97	3	P	Pb	10 25 31.1	-0.8
THL				S	Sb	10 25 44.7	+0.2
LTK	Loutraki	0.99	125	P	Pb	10 25 31.8	-0.4
LTK	Loutraki	0.99	125	P	Pb	10 25 31.8	-0.4
KFL	Anninata	1.03	242	P	Pb	10 25 32.1	-0.9
VLS	Valsamata	1.14	249	*e*Pn	Pn	10 25 34.0	-0.8
VLS	Valsamata	1.14	249	P	Pn	10 25 33.1	-1.7
VLS	Valsamata	1.14	249	*e*PN	Pn	10 25 34.0	-0.8
VLS	Valsamata	1.14	249	P	Pn	10 25 33.1	-1.7
VLS	Valsamata	1.14	249	*e*Pn	Pn	10 25 34.0	-0.8
XOR	Xorichti	1.24	51	P	Pn	10 25 35.6	-0.5
XOR	Xorichti	1.24	51	P	Pn	10 25 35.6	-0.5
VLX	Vlachokerasia	1.27	164	P	Pn	10 25 36.2	-0.4
VLX				S	Sb	10 25 52.7	-0.4
VLX	Vlachokerasia	1.27	164	*e*PN	Pn	10 25 36.4	-0.2
VLX	Vlachokerasia	1.27	164	*e*Pn	Pn	10 25 36.4	-0.2
VLX				S	Sb	10 25 52.7	-0.4
JAN	Janina	1.36	322	*e*Pn	Pn	10 25 38.6	+0.8
JAN	Janina	1.36	322	*e*PN	Pn	10 25 38.6	+0.8
JAN	Janina	1.36	322	*e*Pn	Pn	10 25 38.6	+0.8
ITM	Ithomi	1.41	181	P	Pn	10 25 39.3	+0.8
ITM	Ithomi	1.41	181	P	Pn	10 25 38.5	0.0
ITM	Ithomi	1.41	181	P	Pn	10 25 38.5	0.0
AOS	Alonnisos	1.62	69	P	Pn	10 25 40.6	-0.7
AOS	Alonnisos	1.62	69	P	Pn	10 25 40.6	-0.7
VLY	Voula,Athens	1.64	116	P	Pn	10 25 41.8	+0.2
VLY	Voula,Athens	1.64	116	P	Pn	10 25 41.8	+0.2
PYL	PYLOS	1.71	185	P	Pn	10 25 43.9	+1.4
PYL	PYLOS	1.71	185	P	Pn	10 25 43.9	+1.4
KZN	Kozani	1.71	356	P	Pn	10 25 44.4	+1.7
KZN	Kozani	1.71	356	P	Pn	10 25 43.6	+0.9
KZN	Kozani	1.71	356	P	Pn	10 25 43.6	+0.9
PAIG	Paliouri	1.89	45	P	Pn	10 25 44.3	-0.8
PAIG	Paliouri	1.89	45	P	Pn	10 25 44.3	-0.8
KEK	Kerkira	2.01	304	P	Pn	10 25 47.3	+0.6
KEK	Kerkira	2.01	304	P	Pn	10 25 47.3	+0.6
VLI	Veliai	2.03	157	P	Pn	10 25 46.6	-0.4
VLI	Veliai	2.03	157	P	Pn	10 25 46.6	-0.4
PLG	Polygyros	2.12	33	P	Pn	10 25 48.3	0.0
PLG	Polygyros	2.12	33	P	Pn	10 25 48.3	0.0
FNA	Florina	2.23	349	P	Pn	10 25 50.8	+1.1
FNA	Florina	2.23	349	P	Pn	10 25 49.7	0.0
FNA	Florina	2.23	349	P	Pn	10 25 49.7	0.0
SOH	Sokhos	2.48	26	P	Pn	10 25 53.8	+0.7
SOH	Sokhos	2.48	26	P	Pn	10 25 53.8	+0.7
OHR	Ohrid	2.66	341	*e*Pn	Pn	10 25 53.5	-2.3
VAY	Valandovo	2.76	10	*i* Pn	Pn	10 25 58.3	+1.2
KRUS	Krusevo	2.82	349	*i* Pn	Pn	10 25 58.8	+0.9
TIP	Timpagrande	4.09	280	P	Pn	10 26 17.8	+2.5
TIP	Timpagrande	4.09	280	P	Pn	10 26 17.8	+2.5

JMA 24 10:28:46.1±0.3, 43°.92N×147°.85E, h0km, M3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	1.63	251	P	Pn	10 29 16.3	+0.3
NEM2				*e*S	Sn	10 29 37.8	+0.2
JRA	Rausu	1.97	271	P	Pn	10 29 21.2	+0.5
JRA				*e*S	Sn	10 29 46.7	+0.6
JNK	Nakash	2.29	263	P	Pn	10 29 25.9	+0.8
JNK				*e*S	Sn	10 29 54.8	+0.8
JAK	Akkeshi	2.48	249	P	Pn	10 29 28.5	+0.9
JAK				*e*S	Sn	10 29 59.4	+0.9
JTKR	Abashiri--Toko	2.85	272	P	Pn	10 29 34.8	+2.0
JAR	Ashorobuto	3.03	260	P	Pn	10 29 37.1	+1.9
JAR				*e*S	Sn	10 30 14.8	+2.6
JOB	Onbets	3.10	252	P	Pn	10 29 37.8	+1.6
JCH	Churui	3.53	250	P	Pn	10 29 43.7	+1.6
JCH				*e*S	Sn	10 30 25.5	+1.0
JNBK	Urakawa-nobuka	4.08	248	P	Pn	10 29 51.8	+2.1

*CSEM **24** 10:54:00.4±0.3, 39°.11N×20°.78E, h2km, ML2.6/3, Error ellipse: s-maj=8.0km s-min=6.0km az=33.0*
*THE **24** 10:54:01.3, 39°.09N×20°.81E, h6km±21km, ML2.6/3, Error ellipse: s-maj=21.3km s-min=0.7km az=289.0*

ATH 24 10:54:00.2, 39°.12N×20°.76E, h4km, MD2.9/4, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGT	Igoumenitsa	0.53	321	P	Pg	10 54 11.0	+0.6
IGT	Igoumenitsa	0.53	321	P	Pg	10 54 11.0	+0.6
JAN	Janina	0.54	7	*e*PG	Pg	10 54 10.0	-0.6
JAN				*e*SG	Sg	10 54 17.5	-0.1
KEK	Kerkira	0.95	309	P	Pg	10 54 20.1	+1.7
KEK				S	Sg	10 54 34.6	+3.8
KEK	Kerkira	0.95	309	P	Pg	10 54 18.7	+0.3
KEK				S	Sg	10 54 35.2	+4.4
KEK	Kerkira	0.95	309	*e*PG	Pg	10 54 18.4	0.0
KEK	Kerkira	0.95	309	*e*Pg	Pg	10 54 18.4	0.0
KEK	Kerkira	0.95	309	P	Pg	10 54 20.1	+1.7
VLS	Valsamata	0.95	188	P	Pg	10 54 18.2	-0.2
VLS	Valsamata	0.95	188	P	Pg	10 54 18.4	0.0
VLS	Valsamata	0.95	188	*e*PG	Pg	10 54 18.4	0.0
VLS	Valsamata	0.95	188	*e*Pg	Pg	10 54 18.4	0.0
KFL	Anninata	1.01	179	P	Pg	10 54 19.9	+0.4
THL	Klokotos Trika	1.07	65	P	Pg	10 54 21.1	+0.4
THL	Klokotos Trika	1.07	65	P	Pg	10 54 21.1	+0.4
THL	Klokotos Trika	1.07	65	*e*PG	Pg	10 54 20.8	+0.1
THL	Klokotos Trika	1.07	65	P	Pg	10 54 21.1	+0.4
AGG	Agios Georgios	1.23	94	P	Pg	10 54 23.5	-0.2
AGG	Agios Georgios	1.23	94	P	Pg	10 54 23.5	-0.2
AGG	Agios Georgios	1.23	94	P	Pg	10 54 23.5	-0.2

*NEIC **24** 11:12:19.5, 59°.10N×136°.76W, h5km, ML3.6(PGC), ML3.4(AEIC), ML3.3(PMR), After PGC.*

PGC 24 11:12:19.5±1.7, 59°.10N×136°.76W, h5km, ML3.6/4, 10D, 87km west of Haines, Ak Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLBC	Pleasant Camp	0.41	30	*e*P	Pg	11 12 27.1	-0.3
PLBC				*e*S	Sg	11 12 32.3	-0.5
PLBC	Pleasant Camp	0.41	30	⇓P	Pg	11 12 27.1	-0.3
PLBC				⇑S	Sg	11 12 32.3	-0.5
SKAG	Skagway	0.82	63	*e*Pg	Pg	11 12 33.9	-1.3
SKAG				*e*Sg	Sg	11 12 44.7	-1.2
SKAG				S	Sg	11 12 44.7	-1.1
BESE	Bessie Mountai	1.12	117	P	Pg	11 12 39.4	-1.6
PNL	Peninsula	1.46	294	P	Pn	11 12 45.5	-1.0
PNL				S	Sn	11 13 05.8	-0.2
YKU2	Yakutat	1.55	287	P	Pn	11 12 47.1	-0.6
HYT	Haines Junctio	1.77	348	*e*Pn	Pn	11 12 50.5	-0.2
HYT				*e*Sg	Sg	11 13 13.8	-2.5
HYT	Haines Junctio	1.77	348	⇓Pn	Pn	11 12 50.5	-0.2
HYT				⇓Sg	Sg	11 13 13.8	-2.5
WHY	Whitehorse	1.83	30	P	Pn	11 12 51.0	-0.6
WHY				S	Sn	11 13 15.6	+0.5
WHY	Whitehorse	1.83	30	⇓Pn	Pn	11 12 51.1	-0.4
WHY				⇑Sg	Sg	11 13 15.5	-2.8
SIT	Sitka	2.19	159	*e*Pn	Pn	11 12 55.8	-0.7
SIT				*e*Sn	Sn	11 13 20.9	-2.9
SIT				S	Sn	11 13 24.2	+0.4
DLBC	Dease Lake	3.57	98	P	Pn	11 13 14.3	-1.1
DLBC	Dease Lake	3.57	98	⇑Pn	Pn	11 13 14.3	-1.1
DLBC				⇑Pg	Pg	11 13 23.9	-3.9
DLBC				⇓Sg	Sg	11 14 09.2	-4.9
CRAG	Craig	4.14	150	*e*Pn	Pn	11 13 21.3	-2.0
BMRM	Bremner River	4.36	299	*e*Pn	Pn	11 13 27.0	+0.8
BMRM				*e*Sn	Sn	11 14 17.5	+0.2
BCA3	Beaver Creek A	4.67	331	P	Pn	11 13 30.4	-0.1
MENT	Mentasta	5.12	322	*e*Pn	Pn	11 13 37.0	+0.2
MENT				*e*Sn	Sn	11 14 32.4	-3.8
DAWY	Dawson	5.14	347	P	Pn	11 13 36.5	-0.5
NDB	Naden	5.57	156	*e*Pn	Pn	11 13 43.0	+0.1
NDB	Naden	5.57	156	⇓Pn	Pn	11 13 43.0	+0.1
DOT	Dot Lake	5.75	326	P	Pn	11 13 45.3	-0.2
RUBB	Prince Rupert	5.98	140	*e*Pn	Pn	11 13 48.3	-0.2
RUBB				*e*Sn	Sn	11 14 53.2	-4.0
RUBB				*e*Sg	Sg	11 15 24.8	-6.4
RUBB	Prince Rupert	5.98	140	⇓Pn	Pn	11 13 48.3	-0.2
RUBB				⇑Sn	Sn	11 14 53.2	-4.0
RUBB				⇓Sg	Sg	11 15 24.8	-6.4
EGAK	Eagle	6.06	342	P	Pn	11 13 50.1	+0.5
PMR	Palmer	6.63	297	*e*P	Pn	11 13 58.1	+0.7
TRF	Thorofare Moun	7.83	310	P	Pn	11 14 15.1	+1.1
OHAK	Old Harbor	8.94	265	P	Pn	11 14 28.4	-0.6

*IDC **24** 11:18:13.6±1.0, 50°.65N×73°.47E, h0km, mb1 3.1/5, mb1mx3.0/28, mbtmp3.1/5, ML3.0/3, Error ellipse: s-maj=19.7km s-min=7.5km az=23.0*
*ISCJB **24** 11:18:13.0±0.6, 50°.47N±0°.06×73°.23E±0°.08, h10km, Error ellipse: s-maj=10.4km s-min=4.6km az=39.3*
*NEIC **24** 11:18:14.4±0.6, 50°.68N×73°.50E, h10km, Error ellipse: s-maj=12.1km s-min=7.3km az=27.0*
*NNC **24** 11:18:15.4±1.7, 50°.62N×73°.23E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=23.5km s-min=7.6km az=29.0*

**ISC 24 11:18:14.7±0.6, 50°.59N±0°.06×73°.

CAW	**Cannon Point**	**0.91 160**	P	Pn	11 29 10.3	0.0
RAEZ	**Rainy Point**	**0.99 348**	P	Pn	11 29 11.3	0.0
TCW	**Tory Channel**	**0.99 196**	P	Pn	11 29 11.4	0.0
DFE	**Dawson Falls**	**1.02 336**	P	Pn	11 29 11.7	0.0
TSZ	**Takapari Road**	**1.02 79**	P	Pn	11 29 11.6	-0.1
WEL	**Wellington**	**1.03 175**	P	Pn	11 29 12.3	+0.5
SNZO	**South Karori**	**1.05 178**	P	Pn	11 29 12.3	+0.2
NEZ	**North Egmont**	**1.07 336**	P	Pn	11 29 12.3	-0.1
MTW	**Mount Morrison**	**1.11 144**	P	Pn	11 29 13.2	+0.4
VRZ	**Vera Road**	**1.14 4**	P	Pn	11 29 12.8	-0.3
PKE	**Pukeiti**	**1.18 334**	P	Pn	11 29 13.4	-0.3
WNVZ	**Wahianoa**	**1.18 38**	P	Pn	11 29 13.7	0.0
MOVZ	**Moawhango**	**1.20 45**	P	Pn	11 29 13.9	0.0
DRZ	**Dome Shelter**	**1.21 36**	P	Pn	11 29 15.3	+1.3
FWVZ	**Far West T-bar**	**1.22 35**	P	Pn	11 29 14.4	+0.2
MSWZ	**Moikau Station**	**1.24 159**	P	Pn	11 29 14.7	+0.3
TUVZ	**Tukino**	**1.26 38**	P	Pn	11 29 15.1	+0.5
PAWZ	**Paruwai Farm**	**1.27 153**	P	Pn	11 29 15.1	+0.3
BFZ	**Birch Farm**	**1.29 110**	P	Pn	11 29 14.7	-0.3
NGZ	**Ngauruhoe**	**1.31 34**	P	Pn	11 29 15.9	+0.6
TWVZ	**Taurewa**	**1.33 27**	P	Pn	11 29 14.9	-0.7
NNZ	**Nelson**	**1.36 225**	P	Pn	11 29 16.2	+0.3
CMWZ	**Cape Campbell**	**1.52 192**	P	Pn	11 29 19.1	+1.0
BSWZ	**Blackbirch Sta**	**1.57 202**	P	Pn	11 29 19.1	+0.5
RATZ	**Rangitukua**	**1.64 32**	P	Pn	11 29 21.5	+1.9
QRZ	**Quartz Range**	**1.71 250**	P	Pn	11 29 19.9	-0.6
HIZ	**Hauiti**	**1.75 5**	P	Pn	11 29 21.0	-0.1
HATZ	**Hinemaiaia**	**1.76 40**	P	Pn	11 29 20.7	-0.5
BKZ	**Black Stump Fm**	**1.79 53**	P	Pn	11 29 21.1	-0.5
THZ	**Tophouse**	**2.00 221**	P	Pn	11 29 25.0	+0.6
KHZ	**Kahutara**	**2.31 201**	P	Pn	11 29 28.5	-0.1
TOZ	**Tahuroa Road**	**2.61 15**	P	Pn	11 29 32.8	+0.2
DSZ	**Denniston Nort**	**2.62 234**	P	Pn	11 29 32.5	-0.2
KNZ	**Kokohu**	**2.64 63**	P	Pn	11 29 31.1	-1.9
URZ	**Urewera**	**2.76 45**	P	Pn	11 29 32.6	-2.0
MWZ	**Matawai**	**2.95 50**	P	Pn	11 29 35.1	-2.0
LTZ	**Lake Taylor**	**3.09 215**	P	Pn	11 29 38.4	-0.7
MKAZ	**Moumakai**	**3.17 7**	P	Pn	11 29 40.3	+0.1
WVZ	**Waitaha Valley**	**4.06 225**	P	Pn	11 29 52.7	+0.4

*ISK **24** 12:00:34.9, 40°.43N×29°.24E, h5km, MD2.5*
*CSEM **24** 12:00:35.4±0.1, 40°.43N×29°.24E, h5km, MD2.5, Error ellipse: s-maj=2.3km s-min=1.9km az=176.0*
*DDA **24** 12:00:35.8, 40°.43N×29°.28E, h6km±1km, Md2.8*
*ISCJB **24** 12:00:35.5±0.5, 40°.45N±0°.03×29°.25E±0°.04, h5km±6km, Error ellipse: s-maj=5.9km s-min=4.6km az=156.1*
ISC 24 12:00:35.9±0.5,**40°.45N**±0°.03×**29°.25E**±0°.04,**h3**km±6km,
n24,σ0§64/36,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEMT	**Gemlik**	**0.04**	**252**	PG	**Pg**	**12 00 36.4**	**-0.5**
GEMT				*e*SG	**Sg**	**12 00 37.5**	**-0.1**
GEMT	**Gemlik**	**0.04**	**252**	*i* Pg	**Pg**	**12 00 36.4**	**-0.5**
GEMT				*e*Sg	**Sg**	**12 00 37.5**	**-0.1**
YLV	**Yalova**	**0.15**	**39**	*e*PG	**Pg**	**12 00 38.9**	**+0.1**
YLV				*e*SG	**Sg**	**12 00 41.6**	**+0.7**
YLV	**Yalova**	**0.15**	**39**	*e*Pg	**Pg**	**12 00 38.9**	**0.0**
YLV				*e*Sg	**Sg**	**12 00 41.6**	**+0.7**
ARMT	**Armutlu**	**0.32**	**292**	*e*PG	**Pg**	**12 00 41.7**	**-0.2**
ARMT				*e*SG	**Sg**	**12 00 46.5**	**+0.5**
ARMT	**Armutlu**	**0.32**	**292**	*e*Pg	**Pg**	**12 00 41.7**	**-0.3**
ARMT				*e*Sg	**Sg**	**12 00 46.5**	**+0.4**
ULDT	**Uludag**	**0.32**	**195**	*i* P	**Pg**	**12 00 42.0**	**+0.1**
ULDT				*i* S	**Sg**	**12 00 45.9**	**-0.2**
ULDT	**Uludag**	**0.32**	**195**	*i* P	**Pg**	**12 00 42.0**	**0.0**
ULDT				*i* S	**Sg**	**12 00 45.9**	**-0.2**
ADVT	**Abdulvahap**	**0.38**	**92**	*e*PG	**Pg**	**12 00 42.8**	**-0.3**
ADVT				*e*SG	**Sg**	**12 00 48.7**	**+0.7**
ADVT	**Abdulvahap**	**0.38**	**92**	*e*Pg	**Pg**	**12 00 42.8**	**-0.3**
ADVT				*e*Sg	**Sg**	**12 00 48.7**	**+0.7**
ISK	**Istanbul-Kandi**	**0.63**	**347**	*e*PG	**Pg**	**12 00 48.0**	**0.0**
ISK	**Istanbul-Kandi**	**0.63**	**347**	*e*Pg	**Pg**	**12 00 48.1**	**+0.1**
SILT	**Sile**	**0.77**	**23**	*e*PG	**Pg**	**12 00 50.6**	**0.0**
SILT	**Sile**	**0.77**	**23**	*e*Pg	**Pg**	**12 00 50.6**	**0.0**
KLYT	**Kilyos**	**0.82**	**349**	*e*PG	**Pg**	**12 00 51.5**	**0.0**
KLYT	**Kilyos**	**0.82**	**349**	*e*Pg	**Pg**	**12 00 51.6**	**0.0**
CTKS	**Kestanelik-??a**	**0.97**	**325**	*e*PG	**Pg**	**12 00 54.5**	**+0.1**
CTKS	**Kestanelik-??a**	**0.97**	**325**	*e*Pg	**Pg**	**12 00 54.5**	**+0.1**
GULT	**Gulveren**	**0.97**	**91**	*e*PG	**Pg**	**12 00 54.0**	**-0.4**
GULT	**Gulveren**	**0.97**	**91**	*e*Pg	**Pg**	**12 00 54.0**	**-0.5**
CTYL	**Yal??k??y-??at**	**1.25**	**325**	*e*PN	**Pn**	**12 00 59.1**	**-1.1**
CTYL	**Yal??k??y-??at**	**1.25**	**325**	*e*Pn	**Pn**	**12 00 59.1**	**-1.2**
BALY	**Balya**	**1.43**	**241**	*i* P	**Pn**	**12 01 01.9**	**-0.8**
BALY				*i* S	**Sb**	**12 01 23.9**	**+2.0**
BALY	**Balya**	**1.43**	**241**	*i* P	**Pn**	**12 01 01.9**	**-0.8**
BALY				*i* S	**Sb**	**12 01 23.9**	**+2.1**

*NIED **24** 12:09:00, 46°.40N×153°.50E, h17km, Mw4.1 Best double couple: M0=1.45000×10^15 NP1:φ=221.00000°, δ87.00000°, λ151.00000°. NP2:φ=313.00000°, δ61.00000°, λ4.00000°.*
*JMA **24** 12:09:03.5±0.7, 46°.41N×153°.52E, h30km, M4.3*
*ISCJB **24** 12:09:05.0±0.4, 46°.21N±0°.06×153°.24E±0°.06, h14km, mb4.3/53, MS3.6/11, Error ellipse: s-maj=10.1km s-min=4.0km az=150.3*
*IDC **24** 12:09:04.6±0.7, 46°.36N×153°.13E, h0km, mb4.1/18, mb1 4.3/22, mb1mx4.2/29, mbtmp4.1/22, ML3.8/2, MS3.4/3, Ms1 3.5/3, ms1mx2.8/30, Error ellipse: s-maj=20.0km s-min=12.8km az=164.0*
*BJI **24** 12:09:05.6, 46°.90N×153°.19E, h7km, mB4.7/24, mb4.6/31, Ms4.3/20, Ms7 4.1/19*
*NEIC **24** 12:09:06.5±0.5, 46°.27N×153°.16E, h10km, mb4.4/23, Error ellipse: s-maj=12.1km s-min=6.6km az=152.0*
*MOS **24** 12:09:10.9±1.8, 46°.22N×152°.95E, h56km, mb4.6/34, Error ellipse: s-maj=9.0km s-min=7.2km az=99.7*
ISC 24 12:09:07.0±1.5,**46°.25N**±0°.07×**153°.15E**±0°.07,**h12**km±9km,
h15km±.8km:**pP-P,n152,**σ1§31/158,**mb4.3**/53,**MS3.6**/11,
2C-3D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.84**	**257**	⇑*i*PN	**Pn**	**12 10 06.8**	**+1.0**
KUR				*e*S	**Sn**	**12 10 53.0**	**+2.2**
KUR				pmax	pmax		
	comp=N,150nm,0.5s						
KUR				pmax	pmax		
	comp=E,80nm,0.5s						
KUR				pmax	pmax		
	comp=Z,420nm,0.5s						
KUR				smax			
	comp=N,320nm,0.8s						
KUR				smax			
	comp=E,230nm,0.8s						
SKR	**Severo-Kuril's**	**4.86**	**23**	*e*PN	**Pn**	**12 10 19.9**	**0.0**
SKR				pmax	pmax		
	comp=Z,50nm,0.5s						
SKR				pmax	pmax		
	comp=N,40nm,0.3s						
SKR				pmax	pmax		
	comp=E,30nm,0.3s						
NEM2	**Nemuro 2**	**6.00**	**244**	P	**Pn**	**12 10 34.1**	**-1.5**
NEM2				*e*S	**Sn**	**12 11 40.5**	**-3.8**
JRA	**Rausu**	**6.13**	**251**	P	**Pn**	**12 10 38.5**	**+1.1**
JNK	**Nakash**	**6.55**	**249**	P	**Pn**	**12 10 43.5**	**+0.4**
JAK	**Akkeshi**	**6.85**	**245**	*e*S	**Sn**	**12 12 00.4**	**-4.7**
JTKR	**Abashiri--Toko**	**6.92**	**254**	P	**Pn**	**12 10 49.4**	**+1.2**
YSS	**Yuzh-Sakhalins**	**7.20**	**279**	‖*e*PN	**Pn**	**12 10 57.0**	**+5.0**
YSS				*e*S	**Sn**	**12 12 20.0**	**+6.4**
YSS				pmax	pmax		
	comp=Z,40nm,1.0s						
YSS				MLR	MLR		
	comp=E,200nm,16.0s						
YSS				MLR	MLR		
	comp=Z,200nm,16.0s						
YSS	**Yuzh-Sakhalins**	**7.20**	**279**	*e*Pn	**Pn**	**12 10 51.2**	**-0.7**
JMP	**Maruseppu**	**7.28**	**256**	P	**Pn**	**12 10 54.6**	**+1.5**
JAR	**Ashorobuto**	**7.30**	**250**	P	**Pn**	**12 10 53.5**	**+0.1**
JAR				*e*S	**Sn**	**12 12 13.3**	**-2.8**
JOB	**Onbets**	**7.44**	**247**	*e*S	**Sn**	**12 12 15.6**	**-4.1**
PETK	**Petropavlovsk-**	**7.47**	**22**	Pn	**Pn**	**12 10 54.8**	**-1.0**
	comp=Z,0.9nm,0.3s,baz=177,slow=12,SNR=21						
PETK	**Petropavlovsk-**	**7.47**	**22**	PN	**Pn**	**12 10 54.8**	**-1.0**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
JKK2	**Kamakawa 2**	**7.74**	**256**	P	**Pn**	**12 11 01.3**	**+1.9**
ASAJ	**Asahikawa**	**7.75**	**258**	P	**Pn**	**12 11 01.9**	**+2.3**
ASAJ	**Asahikawa**	**7.75**	**258**	Pn	**Pn**	**12 11 00.6**	**+0.9**
	comp=Z,1.6nm,0.3s,baz=127,slow=30,SNR=9.7						
ASAJ	**Asahikawa**	**7.75**	**258**	PN	**Pn**	**12 11 00.6**	**+1.0**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
JCH	**Churui**	**7.89**	**246**	*e*S	**Sn**	**12 12 25.5**	**-5.1**
ERM	**Erimo**	**8.34**	**243**	*i* PN	**Pn**	**12 11 07.4**	**-0.2**
JNBK	**Urakawa-nobuka**	**8.45**	**246**	*e*S	**Sn**	**12 12 37.9**	**-6.5**
JNB	**Noboribetsu**	**9.46**	**251**	*e*S	**Sn**	**12 13 06.0**	**-3.3**
JANG	**Nango**	**10.31**	**239**	*e*S	**Sn**	**12 13 19.1**	**-11**
JTM	**Tenmabayashi**	**10.33**	**242**	*e*S	**Sn**	**12 13 20.0**	**-11**
JTH	**Tanohata**	**10.38**	**237**	*e*S	**Sn**	**12 13 20.4**	**-11**
JOSM	**Okushiri--Mats**	**10.67**	**252**	P	**Pn**	**12 11 38.5**	**-1.1**
HABR	**Khabarovsk**	**12.47**	**287**	PN	**Pn**	**12 12 10.7**	**+6.5**
HABR						12 14 29.9	
HABR				pmax	pmax		
	comp=E,23nm,1.1s						
HABR				pmax	pmax		
	comp=Z,26nm,1.1s						
HABR				pmax	pmax		
	comp=N,11nm,1.9s						
HABR				MLR	MLR		
	comp=Z,138nm,15.0s						
FX1	**Attu Island--F**	**14.56**	**56**	Pn	**Pn**	**12 12 29.6**	**-3.0**
	comp=Z,1.9nm,0.3s,baz=267,slow=19,SNR=6.4						
FX1				Sn	Sn	12 14 49.0	-25
	comp=Z,0.6nm,0.3s,baz=261,slow=13,SNR=3.7						
KLR	**Kul'dur**	**14.70**	**289**	*e*P	**Pn**	**12 12 33.9**	**-0.7**
MAJO	**Matsushiro**	**14.80**	**234**	*e*P	**Pn**	**12 12 35.6**	**-0.4**
MJAR	**Matsushiro Arr**	**14.80**	**234**	Pn	**Pn**	**12 12 35.2**	**-0.8**
	baz=40,slow=8.8,SNR=3.0						
MDJ	**Mudanjiang**	**16.61**	**273**	P	**Pn**	**12 13 00.9**	**+1.4**
MDJ				pmax	pmax		
	comp=Z,18nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,49nm,4.2s						
MDJ	**Mudanjiang**	**16.61**	**273**	*e*P	**Pn**	**12 12 59.8**	**+0.2**
	comp=Z,14nm,0.9s						
CN2	**Changchun**	**19.70**	**273**	*e*P	**Pn**	**12 13 37.0**	**-0.4**
CN2				*es*P	sP	12 13 44.0	+3.1
CN2				*e*S	**Sn**	**12 17 14.0**	**-4.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
KSRS	**Korea Array**	**20.68**	**254**	P	**P**	**12 13 47.4**	**+0.7**
	comp=Z,2.7nm,0.6s,baz=57,slow=11,SNR=13						
KSRS	**Korea Array**	**20.68**	**254**	P	**P**	**12 13 47.4**	**+0.7**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KS15	**Wonju Array Si**	**20.71**	**254**	P	**P**	**12 13 47.4**	**+0.3**
YAK	**Yakutsk**	**20.76**	**328**	*e*P	**P**	**12 13 47.1**	**-0.3**
YAK				pmax	pmax		
	comp=Z,14nm,0.5s						
YAK	**Yakutsk**	**20.76**	**328**	*e*P	**P**	**12 13 47.1**	**-0.3**
	comp=Z,14nm,0.5s						
BILL	**Bilibino**	**22.88**	**13**	⇑*e*P	**P**	**12 14 09.3**	**-0.7**
BILL				*e*		12 14 32.6	
BILL				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb3.8						
BILL				MLR	MLR		
	comp=Z,100nm,20.0s,MS3.3						
BILL	**Bilibino**	**22.88**	**13**	*e*P	**P**	**12 14 07.3**	**-2.7**
	comp=Z,2.3nm,0.5s,mb3.9						
BJI	**Beijing**	**27.50**	**270**	P	**P**	**12 14 55.6**	**+2.5**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
BJI				LR	LR		
	comp=N,110nm,13.1s,MS3.8						
BJI				LR	LR		
	comp=E,130nm,12.6s,MS3.8						
BJI				LR	LR		
	comp=Z,71nm,15.5s,MS3.4						
NJ2	**Nanjing**	**29.88**	**254**	*e*P	**P**	**12 15 18.3**	**+4.0**
NJ2				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.8						
HHC	**Hu-ho-hao-te**	**30.36**	**275**	*e*P	**P**	**12 15 19.3**	**+0.8**
HHC				pP	pP	12 15 23.6	+1.5
HHC				sP	sP	12 15 26.3	+2.7
HHC				PP	PP	12 16 18.8	-8.1
HHC				PcP	PcP	12 18 17.3	-0.9
HHC				S	**S**	**12 20 17.8**	**-0.8**
HHC				sS	sS	12 20 25.5	+1.0
HHC				SS	SS	12 21 56.5	-31
HHC				ScP	ScP	12 21 58.3	-2.0
HHC				PcS	PcS	12 22 00.3	-1.5
HHC				ScS	ScS	12 25 54.3	-1.8
HHC				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.8						
HHC				pmax	pmax		
	comp=Z,84nm,5.5s						
HHC				LR	LR		
	comp=N,98nm,18.0s,MS3.7						
HHC				LR	LR		
	comp=E,110nm,16.8s,MS3.7						
HHC				LR	LR		
	comp=Z,98nm,15.6s,MS3.6						
ULN	**Ulaanbaatar**	**31.09**	**290**	*e*P	**P**	**12 15 24.4**	**-0.5**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.2						
ULN	**Ulaanbaatar**	**31.09**	**290**	*e*P	**P**	**12 15 24.4**	**-0.5**
	comp=Z,4.0nm,1.0s,mb4.2						
SONM	**Songino Array**	**31.53**	**290**	P	**P**	**12 15 27.6**	**-1.1**
	comp=Z,0.9nm,0.6s,mb3.8,baz=68,slow=8.7,SNR=6.6						
SONM	**Songino Array**	**31.53**	**290**	P	**P**	**12 15 27.6**	**-1.2**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TLY	**Talaya**	**32.44**	**298**	*e*P	**P**	**12 15 34.2**	**-2.5**
TLY				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3						
TLY				MLR	MLR		
	comp=Z,118nm,15.0s,MS3.7						
TLY	**Talaya**	**32.44**	**298**	*e*P	**P**	**12 15 35.8**	**-0.9**
ZAK	**Zakamensk**	**32.92**	**296**	*e*P	**P**	**12 15 38.5**	**-2.4**
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
COLA	**College**	**36.52**	**38**	*e*P	**P**	**12 16 11.1**	**-0.7**
COLA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.2						
COLA	**College**	**36.52**	**38**	*e*P	**P**	**12 16 11.1**	**-0.7**
	comp=Z,3.0nm,0.8s,mb4.2						
LZH	**Lanzhou**	**37.93**	**272**	*e*P	**P**	**12 16 25.8**	**+1.6**
LZH				pP	pP	12 16 30.0	+2.2
LZH				sP	sP	12 16 33.0	+3.7
LZH				PP	PP	12 18 00.0	+9.3
LZH				pmax	pmax		
	comp=Z,26nm,1.0s,mb4.9						
LZH				pmax	pmax		
	comp=Z,87nm,4.9s						
GTA	**Gaotai**	**39.08**	**280**	P	**P**	**12 16 35.0**	**+1.2**
GTA				pP	pP	12 16 39.6	+2.2
GTA				sP	sP	12 16 42.1	+3.2
GTA				PP	PP	12 18 09.6	+6.4
GTA				S	**S**	**12 22 34.5**	**+1.7**
GTA				sS	sS	12 22 44.8	+5.9
GTA				SS	SS	12 25 19.1	-5.8
GTA				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5						
GTA				pmax	pmax		
	comp=Z,65nm,6.0s						
GTA				LR	LR		
	comp=N,110nm,13.5s,MS3.9						
GTA				LR	LR		
	comp=E,78nm,15.3s,MS3.9						
GTA				LR	LR		
	comp=Z,76nm,15.3s,MS3.6						
EGAK	**Eagle**	**39.38**	**38**	*e*P	**P**	**12 16 34.9**	**-1.1**
	comp=Z,6.6nm,1.3s,mb4.2						
CD2	**Chengdu**	**40.87**	**266**	*e*P	**P**	**12 16 51.6**	**+2.9**
CD2				pP	pP	12 16 56.1	+3.7
CD2				sP	sP	12 16 59.3	+5.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.6						
CD2				pmax	pmax		
	comp=Z,30nm,5.2s						
GYA	**Guiyang**	**41.63**	**258**	P	**P**	**12 16 58.9**	**+3.8**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4						
INK	**Inuvik**	**42.06**	**32**	*e*P	**P**	**12 16 58.5**	**+0.4**
INK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
INK	**Inuvik**	**42.06**	**32**	*e*P	**P**	**12 16 58.5**	**+0.4**
	comp=Z,4.6nm,1.3s,mb4.0						
ZAA0	**Zalesovo Array**	**42.93**	**306**	*e*P	**P**	**12 17 03.1**	**-2.2**
ZALV	**Zalesovo Beam**	**42.93**	**306**	P	**P**	**12 17 02.6**	**-2.7**
	comp=Z,1.5nm,0.6s,mb3.9,baz=60,slow=7.9,SNR=9.7						
ZALV				PcP	PcP	12 18 55.0	-0.7
	comp=Z,1.3nm,0.8s,baz=62,slow=3.5,SNR=4.4						
ZALV				LR	LR	12 36 27.2	
	comp=Z,60nm,19.7s,MS3.5,baz=78,slow=38						
ZALV	**Zalesovo Beam**	**42.93**	**306**	P	**P**	**12 17 02.6**	**-2.7**
ZALV						12 18 55.0	
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
ZALV				MLR	MLR		
	comp=Z,60nm,19.7s,MS3.5						
WMQ	**Urumqi**	**45.13**	**292**	*e*P	**P**	**12 17 25.0**	**+1.9**
KMI	**Kunming**	**45.18**	**260**	P	**P**	**12 17 27.0**	**+3.3**
KMI				pP	pP	12 17 30.1	+2.7
KMI				sP	sP	12 17 31.5	+2.6
KMI				PP	PP	12 19 14.0	+4.8
KMI				S	**S**	**12 24 07.0**	**+3.8**
KMI				SS	SS	12 27 21.1	-4.6
KMI				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
KMI				pmax	pmax		
	comp=Z,140nm,3.8s						
KMI				LR	LR		
	comp=N,120nm,14.3s,MS4.2						
KMI				LR	LR		
	comp=E,140nm,11.4s,MS4.2						
KMI				LR	LR		
	comp=Z,150nm,12.8s,MS4.1						
MK31	**Makanchi Array**	**47.20**	**298**	*e*P	**P**	**12 17 38.6**	**-0.7**
MKAR	**Makanchi Array**	**47.20**	**298**	P	**P**	**12 17 38.2**	**-1.1**
	comp=Z,4.7nm,0.8s,mb4.5,baz=63,slow=9.6,SNR=37						
MKAR				LR	LR	12 38 41.9	
	comp=Z,58nm,20.7s,MS3.5,baz=4.9,slow=38						
MKAR	**Makanchi Array**	**47.20**	**298**	P	**P**	**12 17 38.2**	**-1.1**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MKAR				MLR	MLR		
	comp=Z,58nm,20.7s						
KURK	**Kurchatov**	**47.67**	**304**	P	**P**	**12 17 42.1**	**-0.8**
	comp=Z,8.0nm,0.8s,mb4.8,baz=68,slow=8.4,SNR=24						
KURK	**Kurchatov**	**47.67**	**304**	‖*e*P	**P**	**12 17 41.7**	**-1.2**
KURK				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
KURK				MLR	MLR		
	comp=Z,59nm,15.0s,MS3.7						
KURK	**Kurchatov**	**47.67**	**304**	*e*P	**P**	**12 17 41.9**	**-1.1**
	comp=Z,12nm,1.0s,mb4.9						
BVAR	**Borovoye Array**	**51.20**	**310**	P	**P**	**12 18 08.8**	**-1.1**
	comp=Z,1.4nm,0.4s,mb4.2,baz=44,slow=8.8,SNR=7.2						
BVAR	**Borovoye Array**	**51.20**	**310**	P	**P**	**12 18 08.8**	**-1.1**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BRVK	**Borovoye**	**51.24**	**310**	*e*P	**P**	**12 18 09.4**	**-0.8**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
BRVK	**Borovoye**	**51.24**	**310**	*e*P	**P**	**12 18 09.4**	**-0.8**
	comp=Z,2.2nm,0.6s,mb4.3						
RES	**Resolute Bay**	**51.31**	**18**	*e*P	**P**	**12 18 11.8**	**+1.4**
RES				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
RES	**Resolute Bay**	**51.31**	**18**	*e*P	**P**	**12 18 11.8**	**+1.4**
	comp=Z,3.4nm,0.9s,mb4.3						
YKA	**Yellowknife Ar**	**51.31**	**36**	P	**P**	**12 18 09.7**	**-0.8**
	comp=Z,1.1nm,0.8s,mb3.9,baz=300,slow=7.7,SNR=7.6						
YKA	**Yellowknife Ar**	**51.31**	**36**	P	**P**	**12 18 09.7**	**-0.9**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**51.31**	**36**	P	**P**	**12 18 09.7**	**-0.8**
CHTO	**Chiang Mai**	**52.03**	**257**	*e*P	**P**	**12 18 17.5**	**+1.0**
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
CHTO	**Chiang Mai**	**52.03**	**257**	*e*P	**P**	**12 18 17.5**	**+1.1**
	comp=Z,7.1nm,1.2s,mb4.5						
CMAR	**Chiang Mai Arr**	**52.28**	**257**	P	**P**	**12 18 18.4**	**0.0**
	comp=Z,1.0nm,0.6s,mb3.9,baz=34,slow=8.1,SNR=7.2						
CMAR	**Chiang Mai Arr**	**52.28**	**257**	P	**P**	**12 18 18.4**	**+0.1**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TKM2	**Tokmak 2**	**53.24**	**296**	*e*P	**P**	**12 18 25.4**	**+0.2**
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
TKM2	**Tokmak 2**	**53.24**	**296**	*e*P	**P**	**12 18 25.4**	**+0.2**
	comp=Z,2.0nm,0.6s,mb4.2						
AAK	**Ala-Archa**	**54.08**	**297**	P	**P**	**12 18 30.5**	**-0.8**
	comp=Z,2.4nm,0.4s,mb4.5,baz=144,slow=3.0,SNR=9.6						
AAK	**Ala-Archa**	**54.08**	**297**	P	**P**	**12 18 30.5**	**-0.9**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						
KSH	**Kashi**	**54.87**	**293**	P	**P**	**12 18 40.8**	**+3.7**
KSH				pP	pP	12 18 45.3	+4.4
KSH				sP	sP	12 18 47.8	+5.5
KSH				PcP	PcP	12 19 42.3	+3.1
KSH				PP	PP	12 20 45.4	+5.7
KSH				ScP	ScP	12 23 38.9	+1.5
KSH				PcS	PcS	12 23 40.6	+1.7
KSH				S	**S**	**12 26 19.9**	**+1.8**
KSH				sS	sS	12 26 28.3	+4.0
KSH				ScS	ScS	12 28 26.0	-0.1
KSH				SS	SS	12 30 04.0	+3.1
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
KSH				pmax	pmax		
	comp=Z,45nm,3.1s						
KSH				LR	LR		
	comp=N,150nm,9.2s						
KSH				LR	LR		
	comp=E,110nm,7.3s						
KSH				LR	LR		
	comp=Z,54nm,5.0s						
ARU	**Arti**	**

comp=Z,4.0nm,0.5s,mb4.6
ASAR Alice Springs 71.74 199 P **P 12 20 29.0 +0.2**
comp=Z,0.3nm,0.3s,mb3.7,baz=19,slow=6.1,SNR=3.1
AKASG Malin Array Be 71.98 326 P **P 12 20 29.0 -1.2**
comp=Z,2.6nm,0.5s,mb4.5,baz=33,slow=6.2,SNR=14
AKASG Malin Array Be 71.98 326 P **P 12 20 29.0 -1.2**
AKASG pmax pmax
comp=Z,3.0nm,0.5s
KIEV Kiev 71.99 326 *eP* **P 12 20 29.3 -0.9**
KIEV pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
KIEV Kiev 71.99 326 *eP* **P 12 20 29.3 -1.0**
comp=Z,7.1nm,0.8s,mb4.7
GNI Garni 72.88 310 ‖ *eP* **P 12 20 37.6 +1.9**
GNI pmax pmax
comp=Z,7.0nm,0.7s
GNI MLR MLR
comp=Z,38nm,20.0s
BUR08 Bucovina Ar. S 76.01 327 *eP* **P 12 20 53.7 -0.1**
DPC Dobruska-Polom 76.79 333 *eP* **P 12 21 00.1 +2.0**
DPC Dobruska-Polom 76.79 333 *eP* **P 12 21 00.1 +2.0**
MORC Moravsky Berou 76.90 332 *eP* **P 12 20 59.0 +0.2**
MORC pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
MORC Moravsky Berou 76.90 332 *eP* **P 12 20 59.0 +0.3**
comp=Z,5.0nm,0.9s,mb4.4
CLL Collm 76.94 336 *i* P **P 12 20 59.3 +0.4**
CLL *e* 12 21 21.0
CLL pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
VYHS Vyhne 77.58 331 *eP* **P 12 21 04.2 +1.6**
VYHS pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
VYHS Vyhne 77.58 331 *eP* **P 12 21 04.2 +1.6**
comp=Z,1.8nm,1.1s,mb3.9
TXAR Lajitas Array 77.72 60 P **P 12 21 02.3 -1.4**
comp=Z,2.1nm,0.8s,mb4.1,baz=302,slow=3.8,SNR=23
TXAR Lajitas Array 77.72 60 P **P 12 21 02.3 -1.4**
TXAR pmax pmax
comp=Z,2.0nm,0.8s
KHC Kasperske Hory 78.70 334 *eP* **P 12 21 09.0 +0.2**
KHC pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
KHC Kasperske Hory 78.70 334 *eP* **P 12 21 09.4 +0.6**
KHC Kasperske Hory 78.70 334 *eP* **P 12 21 09.0 +0.2**
comp=Z,4.4nm,0.9s,mb4.4
KHC Kasperske Hory 78.70 334 *eP* **P 12 21 09.4 +0.6**
CDF Champ du Feu 81.13 338 *eP* **P 12 21 23.1 +1.1**
FLN La Foliniere 82.62 343 *eP* **P 12 21 31.9 +2.1**
GRR Gorron 83.06 343 *eP* **P 12 21 34.4 +2.3**
LOR Lormes 83.06 339 *eP* **P 12 21 33.5 +1.4**
CABF La Chapelle 83.11 338 *eP* **P 12 21 33.9 +1.5**
SSF Saint Saulge 83.34 340 *eP* **P 12 21 34.8 +1.2**
comp=Z,4.2nm,0.5s,mb4.4
SSF Saint Saulge 83.34 340 *eP* **P 12 21 34.8 +1.2**
SSF pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
SSF Saint Saulge 83.34 340 *eP* **P 12 21 34.8 +1.2**
comp=Z,2.1nm,0.5s,mb4.4
AVF Avril sur Loir 83.63 340 *eP* **P 12 21 36.6 +1.5**
comp=Z,11nm,0.9s,mb4.7
AVF Avril sur Loir 83.63 340 *eP* **P 12 21 36.6 +1.5**
AVF pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
AVF Avril sur Loir 83.63 340 *eP* **P 12 21 36.6 +1.5**
comp=Z,5.4nm,0.9s,mb4.7
SMF Signal de Mont 83.65 339 *eP* **P 12 21 36.7 +1.5**
comp=Z,13nm,0.9s,mb4.8
SMF Signal de Mont 83.65 339 *eP* **P 12 21 36.7 +1.5**
SMF pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
SMF Signal de Mont 83.65 339 *eP* **P 12 21 36.7 +1.5**
comp=Z,6.6nm,0.9s,mb4.8
LPL La Plagne 83.95 337 *eP* **P 12 21 38.9 +2.2**
LPG La Plagne 83.96 337 *eP* **P 12 21 39.0 +2.2**
PLCA Paso Flores 148.13 96 PKPbc PKPbc 12 28 52.7 +0.5
comp=Z,1.8nm,0.8s,baz=24,slow=7.9,SNR=5.2
PLCA Paso Flores 148.13 96 PKPbc PKPbc 12 28 52.7 +0.5
CPUP Villa Florida 148.69 61 PKPbc PKPbc 12 28 54.3 +0.3
comp=Z,0.5nm,0.4s,baz=339,slow=5.9,SNR=5.2

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*IDC **24** 12:57:37.0±0.8, 34°.71S×108°.17W, h0km, mb4.0/9, mb1 4.2/9, mb1mx4.1/17, mbtmp4.0/9, MS3.7/7, Ms1 3.7/7, ms1mx3.5/15, Error ellipse: s-maj=26.7km s-min=19.1km az=74.0*
*ISCJB **24** 12:57:37.3±0.8, 34°.7S±0°.1×108°.1W±0°.2, h10km, mb3.9/9, MS3.7/6, Error ellipse: s-maj=26.9km s-min=17.3km az=166.5*
*NEIC **24** 12:57:38.5±0.7, 34°.70S×108°.18W, h10km, mb4.3/2, Error ellipse: s-maj=23.8km s-min=17.5km az=72.0*
ISC 24 12:57:39.3±0.8, 34°.7S±0°.1×108°.1W±0°.2, h10km, n18, σ1§02/11, mb3.9/9, MS3.7/6, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**7.65**	**352**	LR		LR		13 01 43.3	
	comp=Z,232nm,22.0s,baz=135,slow=32								
PLCA	**Paso Flores**	**30.12**	**113**	P		**P**		**13 03 48.6**	**-0.5**
	5.4nm,0.8s,mb4.3,baz=263,slow=7.4,SNR=14								
PLCA				LR		LR		13 13 26.8	
	comp=Z,108nm,20.5s,MS3.5,baz=281,slow=32								
PLCA	**Paso Flores**	**30.12**	**113**	*eP*		**P**		**13 03 49.4**	**+0.2**
	5.8nm,0.8s,mb4.4								
PLCA				LR		LR		13 13 26.8	
USHA	**Ushuaia**	**33.96**	**139**	LR		LR		13 13 55.2	
	comp=Z,226nm,19.7s,MS3.9,baz=34,slow=29								
PMSA	**Palmer Station**	**39.99**	**152**	P		**P**		**13 05 14.6**	**+0.8**
	6.6nm,0.3s,mb4.8,baz=290,slow=12,SNR=7.5								
LPAZ	**La Paz**	**40.14**	**73**	P		**P**		**13 05 17.3**	**+1.7**
	3.3nm,0.7s,mb4.2,baz=237,slow=5.2,SNR=14								
LPAZ				LR		LR		13 17 13.5	
	comp=Z,49nm,21.5s,MS3.3,baz=317,slow=29								
LPAZ	**La Paz**	**40.14**	**73**	*eP*		**P**		**13 05 17.5**	**+1.9**
	3.0nm,0.6s,mb4.2								
LPAZ				LR		LR		13 17 13.5	
CPUP	**Villa Florida**	**44.13**	**93**	P		**P**		**13 05 46.0**	**-2.0**
	0.4nm,0.3s,mb3.6,baz=216,slow=3.9,SNR=4.9								
CPUP				LR		LR		13 19 36.5	
	comp=Z,77nm,20.1s,MS3.6,baz=355,slow=30								
ROSC	**El Rosal**	**50.60**	**46**	LR		LR		13 23 41.4	
	comp=Z,80nm,19.4s,MS3.7,baz=354,slow=31								
QSPA	**South Pole Qui**	**55.47**	**180**	P		**P**		**13 07 13.7**	**0.0**
	2.3nm,1.1s,mb4.1,baz=329,slow=6.4,SNR=5.1								
TXAR	**Lajitas Array**	**63.85**	**4**	P		**P**		**13 08 10.8**	**-1.1**
	0.3nm,1.0s,mb3.3,baz=184,slow=3.6,SNR=2.2								
NVAR	**Mina Array Bea**	**73.40**	**352**	P		**P**		**13 09 11.9**	**+0.6**
	0.4nm,0.7s,mb3.5,baz=206,slow=8.0,SNR=3.4								
PDAR	**Pinedale Array**	**77.13**	**359**	P		**P**		**13 09 33.0**	**+0.3**
	0.5nm,0.7s,mb3.6,baz=202,slow=3.2,SNR=4.0								
MAW	**Mawson**	**77.76**	**176**	P		**P**		**13 09 35.6**	**-0.4**
	1.2nm,0.9s,mb3.8,baz=241,slow=13,SNR=2.3								
STKA	**Stephens Creek**	**86.87**	**233**	LR		LR		13 44 01.7	
	comp=Z,103nm,20.6s,MS4.2,baz=206,slow=32								
AKASG	**Malin Array Be**	**145.35**	**49**	PKPbc		PKPbc		13 17 14.4	-2.4
	0.4nm,0.3s,baz=285,slow=3.2,SNR=5.3								
CMAR	**Chiang Mai Arr**	**151.03**	**243**	PKPbc		PKPbc		13 17 31.7	-1.3
	0.5nm,0.3s,baz=105,slow=2.1,SNR=3.9								
SONM	**Songino Array**	**151.22**	**308**	PKPbc		PKPbc		13 17 30.4	-2.1
	0.3nm,0.4s,baz=119,slow=2.7,SNR=4.9								

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*IDC **24** 13:24:49.6±0.8, 31°.22N×104°.06E, h0km, mb3.8/8, mb1 4.0/10, mb1mx3.7/25, mbtmp3.8/10, ML3.5/2, Error ellipse: s-maj=33.3km s-min=16.3km az=62.0*
*NEIC **24** 13:24:51.6±0.6, 31°.21N×103°.88E, h10km, mb4.6/1, Error ellipse: s-maj=16.2km s-min=10.1km az=67.0*
*BJI **24** 13:24:51.7, 31°.10N×103°.90E, h11km, ML3.5/14, Ms3.4/2, Ms7 2.9/3*
ISC 24 13:24:50.9±0.7, 31°.18N±0°.03×103°.96E±0°.05, h6km±5km, n18, σ1§06/25, mb3.9/8, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.32**	**212**	‖ *i* Pg		**Pg**		**13 24 56.9**	**-0.2**
CD2				Sg		**Sg**		**13 25 01.9**	**+0.6**
CD2				smax					
	comp=N,16μm,0.5s								
CD2				smax					
	comp=E,9μm,0.8s								
ENH	**Enshi**	**4.85**	**99**	*eP*		**Pn**		**13 26 07.3**	**+2.9**
LZH	**Lanzhou**	**4.89**	**359**	Pg		**Pg**		**13 26 23.3**	**-1.4**
LZH				Sg		**Sg**		**13 27 30.0**	**+1.9**
LZH				smax					
	comp=N,51nm,0.6s								
LZH				smax					
	comp=E,59nm,0.7s								
LZH				LR		LR			
	comp=N,330nm,4.6s								
LZH				LR		LR			
	comp=Z,370nm,5.7s								
XAN	**Xi'an**	**5.07**	**54**	Pn		**Pn**		**13 26 11.3**	**+3.9**
XAN				Pg		**Pg**		**13 26 26.4**	**-1.6**
XAN				Sn		**Sn**		**13 27 08.4**	**+2.2**
XAN				Sg		**Sg**		**13 27 33.8**	**+0.1**
XAN				smax					
	comp=N,64nm,0.7s								
XAN				smax					
	comp=E,38nm,0.9s								
XAN				LR		LR			
	comp=N,240nm,10.5s								
XAN				LR		LR			
	comp=E,39nm,5.4s								
XAN				LR		LR			
	comp=Z,67nm,5.2s								
GYA	**Guiyang**	**5.27**	**153**	Pn		**Pn**		**13 26 10.0**	**-0.2**
GYA				Sn		**Sn**		**13 27 10.8**	**-0.4**
GYA				Sg		**Sg**		**13 27 40.6**	**+0.4**
GYA				smax					
	comp=N,90nm,1.0s								
GYA				smax					
	comp=E,80nm,1.0s								
CMAR	**Chiang Mai Arr**	**13.46**	**201**	Pn		**Pn**		**13 28 03.8**	**+1.4**
	comp=E,0.1nm,0.3s,baz=7.3,slow=9.3,SNR=4.8								
SONM	**Songino Array**	**16.74**	**6**	Pn		**Pn**		**13 28 45.3**	**-0.5**
	comp=E,0.1nm,0.3s,baz=186,slow=13,SNR=3.9								
KSRS	**Korea Array**	**20.73**	**66**	P		**P**		**13 29 30.3**	**-1.9**
	comp=E,2.0nm,0.7s,baz=261,slow=11,SNR=11								
MK31	**Makanchi Array**	**22.84**	**319**	*eP*		**P**		**13 29 54.9**	**+0.4**
MKAR	**Makanchi Array**	**22.84**	**319**	P		**P**		**13 29 54.5**	**0.0**
	comp=E,1.3nm,0.7s,mb3.4,baz=108,slow=12,SNR=9.8								
ZALV	**Zalesovo Beam**	**26.60**	**334**	P		**P**		**13 30 30.4**	**+0.7**
	comp=E,0.6nm,0.4s,mb3.5,baz=126,slow=7.5,SNR=5.9								
KURK	**Kurchatov**	**27.11**	**323**	P		**P**		**13 30 33.3**	**-1.1**
	comp=E,1.3nm,0.8s,mb3.5,baz=128,slow=9.6,SNR=8.4								
WRAB	**Tennant Creek**	**58.60**	**146**	*eP*		**P**		**13 34 48.8**	**+0.1**
	comp=E,3.0nm,0.6s,mb4.5								
WRA	**Warramunga Arr**	**58.61**	**146**	P		**P**		**13 34 48.9**	**+0.1**
	comp=E,3.2nm,0.6s,mb4.5,baz=338,slow=7.9,SNR=31								
ASAR	**Alice Springs**	**61.62**	**149**	P		**P**		**13 35 08.7**	**-0.8**
	comp=E,0.4nm,0.6s,mb3.7,baz=335,slow=6.7,SNR=12								
STKA	**Stephens Creek**	**72.14**	**147**	P		**P**		**13 36 15.9**	**-0.3**
	comp=E,1.1nm,0.5s,mb4.1,baz=34,slow=22,SNR=5.1								
STKA	**Stephens Creek**	**72.14**	**147**	*eP*		**P**		**13 36 15.8**	**-0.5**
YKA	**Yellowknife Ar**	**81.66**	**17**	P		**P**		**13 37 09.1**	**-0.5**
	comp=E,0.4nm,0.6s,mb3.5,baz=330,slow=5.4,SNR=3.9								

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*NIED **24** 13:29:00, 33°.00N×142°.50E, h17km, Mw3.6 Best double couple: M0=2.58000×10^14 NP1:φs=156.00000°, δ70.00000°, λ-137.00000°. NP2:φs=47.00000°, δ50.00000°, λ-27.00000°*
*IDC **24** 13:29:04.9±2.1, 33°.10N×142°.60E, h0km, mb3.7/6, mb1 3.8/10, mb1mx3.6/27, mbtmp3.7/10, ML3.7/4, MS2.5/1, Ms1 2.5/1, ms1mx1.9/31, Error ellipse: s-maj=48.0km s-min=23.8km az=1.0*
*ISCJB **24** 13:29:05.7±1.8, 33°.06N±0°.06×142°.55E±0°.06, h18km±15km, mb3.7/6, Error ellipse: s-maj=10.2km s-min=7.9km az=22.0*
*NEIC **24** 13:29:06.7±1.6, 33°.13N×142°.62E, h10km, MG3.6(JMA), Error ellipse: s-maj=30.5km s-min=19.0km az=12.0*
*JMA **24** 13:29:07.3±0.4, 32°.98N×142°.49E, h76km, M3.6*
ISC 24 13:29:07.6±1.8, 33°.02N±0°.06×142°.51E±0°.07, h19km±14km, n28, σ1§01/41, mb3.7/6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**2.07**	**322**	P		**Pn**		**13 29 40.9**	**-0.3**
BSO1				*eS*		**Sn**		**13 30 05.8**	**-0.6**
BSO2	**Boso 2**	**2.26**	**320**	*eS*		**Sn**		**13 30 11.8**	**+0.6**
JHJ2	**Mitsune**	**2.26**	**273**	P		**Pn**		**13 29 43.1**	**-0.8**
JHJ2				*eS*		**Sn**		**13 30 10.9**	**-0.4**
JHJ	**Hachijo jima 2**	**2.29**	**273**	Pn		**Pn**		**13 29 43.3**	**-1.0**
	60nm,0.3s,baz=87,slow=20,SNR=38								
JHJ				Sn		**Sn**		**13 30 10.8**	**-1.1**
	64nm,0.3s,baz=81,slow=22,SNR=5.7								
BSO3	**Boso 3**	**2.43**	**317**	P		**Pn**		**13 29 46.4**	**+0.2**
BSO3				*eS*		**Sn**		**13 30 17.0**	**+1.6**
BSO4	**Boso 4**	**2.67**	**318**	P		**Pn**		**13 29 50.4**	**+0.9**
BSO4				S		**Sn**		**13 30 22.2**	**+1.0**
JOD2	**Odawara 2**	**3.61**	**309**	P		**Pn**		**13 30 02.0**	**-0.5**
JOD2				*eS*		**Sn**		**13 30 43.0**	**-1.6**
JYN	**Shimob**	**4.11**	**308**	P		**Pn**		**13 30 09.4**	**+0.1**
JYN				*eS*		**Sn**		**13 30 57.8**	**+1.0**
JRY	**Ryogami san**	**4.22**	**316**	*eS**		**Sn**		**13 30 59.3**	**-0.2**
JAG	**Ashikaga**	**4.22**	**324**	P		**Pn**		**13 30 11.6**	**+0.7**
MJAR	**Matsushiro Arr**	**4.99**	**316**	Pn		**Pn**		**13 30 19.5**	**-1.8**
	1.9nm,0.3s,baz=158,slow=14,SNR=19								
MJAR				Sn		**Sn**		**13 31 17.3**	**-1.1**
	3.1nm,0.3s,baz=157,slow=27,SNR=7.0								
MJAR	**Matsushiro Arr**	**4.99**	**316**	Pn		**Pn**		**13 30 19.5**	**-1.8**
MJAR				Sn		**Sn**		**13 31 17.3**	**-1.1**
MAJO	**Matsushiro**	**4.99**	**316**	*ePn*		**Pn**		**13 30 22.7**	**+1.3**
MAT	**Matsushiro**	**4.99**	**316**	P		**Pn**		**13 30 21.7**	**+0.3**
MAT				S		**Sn**		**13 31 18.1**	**-0.3**
MAT	**Matsushiro**	**4.99**	**316**	P		**Pn**		**13 30 23.0**	**+1.6**
MAT				S		**Sn**		**13 31 18.1**	**-0.3**
JIE	**Ise**	**5.03**	**287**	P		**Pn**		**13 30 22.4**	**+0.5**
JMM	**Marumori**	**5.03**	**344**	P		**Pn**		**13 30 20.8**	**-1.2**
JMM				*eS*		**Sn**		**13 31 15.1**	**-4.4**
ERM	**Erimo**	**8.99**	**3**	*ePn*		**Pn**		**13 31 15.3**	**-0.9**
ASAJ	**Asahikawa**	**11.08**	**0**	Pn		**Pn**		**13 31 43.5**	**-1.3**
	1.1nm,0.3s,baz=208,slow=12,SNR=9.5								
ASAJ				Sn		**Sn**		**13 33 41.1**	**-7.0**
	0.4nm,0.3s,baz=14,slow=29,SNR=3.4								
ASAJ				LR		LR		13 36 06.4	
	comp=Z,28nm,21.6s,baz=156,slow=38								
KSRS	**Korea Array**	**12.72**	**294**	Pn		**Pn**		**13 32 09.4**	**+2.0**
	0.1nm,0.3s,baz=100,slow=14,SNR=2.9								
SONM	**Songino Array**	**30.90**	**309**	P		**P**		**13 35 25.2**	**+2.5**
	0.3nm,0.3s,mb3.5,baz=116,slow=9.1,SNR=4.1								
ZALV	**Zalesovo Beam**	**45.34**	**315**	P		**P**		**13 37 24.8**	**+0.6**
	0.3nm,0.3s,mb3.6,baz=98,slow=8.2,SNR=2.1								
MKAR	**Makanchi Array**	**47.09**	**305**	P		**P**		**13 37 38.3**	**+0.2**
	0.7nm,0.6s,mb3.8,baz=78,slow=12,SNR=5.9								
KURK	**Kurchatov**	**49.18**	**311**	P		**P**		**13 37 54.5**	**+0.3**
	0.4nm,0.5s,mb3.7,baz=84,slow=7.4,SNR=3.5								
YKA	**Yellowknife Ar**	**66.83**	**29**	P		**P**		**13 39 57.0**	**-0.6**
	0.6nm,0.7s,mb3.7,baz=292,slow=6.1,SNR=5.5								
YKA	**Yellowknife Ar**	**66.83**	**29**	P		**P**		**13 39 57.0**	**-0.6**
TXAR	**Lajitas Array**	**91.83**	**53**	P		**P**		**13 42 14.8**	**+0.2**
	0.4nm,0.8s,mb3.8,baz=316,slow=4.1,SNR=4.8								
TXAR	**Lajitas Array**	**91.83**	**53**	P		**P**		**13 42 14.8**	**+0.2**

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*IDC **24** 13:31:10.8±11.0, 23°.52S×178°.86W, h650km±240km, mb3.1/3, mb1 3.3/4, mb1mx2.9/16, mbtmp3.2/4, Error ellipse: s-maj=208.7km s-min=69.5km az=73.0*
NEIC 24 13:31:06.8±1.8, 23°.20S×178°.83W, h600km, mb4.1/1, Error ellipse: s-maj=37.7km s-min=18.3km az=83.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.17**	**331**	*eP*		P		13 32 49.7	+0.1
URZ	**Urewera**	**15.41**	**192**	P		P		13 34 18.1	-0.4
	1.0nm,0.3s,baz=350,slow=6.1,SNR=6.9								
URZ				S		S		13 36 50.3	-4.6
	0.6nm,0.3s,baz=167,slow=17,SNR=6.8								
URZ	**Urewera**	**15.41**	**192**	*eP*		P		13 34 18.5	0.0
URZ				S		S		13 36 50.3	-4.6
EIDS	**Eidsvold**	**27.48**	**259**	*eP*		P		13 36 06.6	-0.3
STKA	**Stephens Creek**	**35.98**	**247**	P		P		13 37 18.9	+0.2
	1.2nm,0.4s,baz=84,slow=11,SNR=15.8								
STKA	**Stephens Creek**	**35.98**	**247**	*eP*		P		13 37 19.0	+0.2
ASAR	**Alice Springs**	**43.21**	**260**	P		P		13 38 17.1	+0.4
	2.0nm,0.5s,baz=96,slow=7.3,SNR=72								
WRAB	**Tennant Creek**	**43.52**	**265**	*eP*		P		13 38 18.8	-0.3
	2.1nm,0.4s								
WRA	**Warramunga Arr**	**43.53**	**265**	P		P		13 38 19.4	+0.3
	2.4nm,0.3s,baz=102,slow=8.4,SNR=92								

IDC 24 13:51:42.9±11.0, 19°.86S×178°.32W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/15, mbtmp3.9/3, Error ellipse: s-maj=350.1km s-min=91.8km az=135.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**44.37**	**256**	P		P	P	13 59 54.4	-0.9
	0.4nm,0.4s,baz=91,slow=7.2,SNR=22								
WRA	**Warramunga Arr**	**44.39**	**261**	P		P	P	13 59 56.4	+0.8
	0.5nm,0.5s,baz=95,slow=8.4,SNR=13								
CMAR	**Chiang Mai Arr**	**89.61**	**290**	P		P	P	14 04 43.0	0.0
	0.4nm,0.4s,baz=134,slow=3.9,SNR=4.1								

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*IDC **24** 14:07:33.0±0.9, 2°.90S×68°.09E, h0km, mb3.9/8, mb1 4.0/8, mb1mx3.8/24, mbtmp3.9/8, MS3.7/18, Ms1 3.7/18, ms1mx3.5/36, Error ellipse: s-maj=25.6km s-min=25.0km az=88.0*
*ISCJB **24** 14:07:32.4±0.8, 2°.8S±0°.1×68°.0E±0°.1, h10km, mb4.0/10, MS3.7/19, Error ellipse: s-maj=20.9km s-min=18.2km az=24.4*
*NEIC **24** 14:07:34.6±0.8, 2°.86S×68°.03E, h10km, mb4.5/1, Error ellipse: s-maj=20.5km s-min=20.2km az=86.0*
ISC 24 14:07:35.0±4.7, 2°.9S±0°.1×68°.0E±0°.2, h14km±29km, n27, σ0§63/13, mb4.0/10, MS3.7/19, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ATD	**Arta Tunnel**	**28.81**	**300**	LR		LR	LR	14 22 39.2	
	comp=Z,88nm,19.8s,MS3.4,baz=129,slow=31								
PSI	**Prapat**	**31.42**	**80**	LR		LR	LR	14 24 57.9	
	comp=Z,288nm,18.4s,MS4.0,baz=212,slow=33								
CMAR	**Chiang Mai Arr**	**37.11**	**54**	P		**P**		**14 14 46.0**	**+0.5**
	0.4nm,0.4s,mb3.6,baz=249,slow=10,SNR=3.8								
CMAR				LR		LR	LR	14 26 58.6	
	comp=Z,97nm,20.5s,MS3.6,baz=240,slow=31								
LSZ	**Lusaka**	**41.11**	**250**	P		**P**		**14 15 19.3**	**+0.3**
	2.6nm,0.8s,mb3.9,baz=74,slow=5.1,SNR=7.3								
LSZ				LR		LR	LR	14 30 04.7	
	comp=Z,198nm,18.9s,MS4.0,baz=120,slow=33								
LSZ	**Lusaka**	**41.11**	**250**	*eP*		**P**		**14 15 19.1**	**+0.1**
LSZ				LR		LR	LR	14 30 04.7	
ASF	**Jabal al Asfar**	**45.65**	**322**	LR		LR	LR	14 34 09.5	
	comp=Z,34nm,21.0s,MS3.3,baz=350,slow=35								
LBTB	**Lobatse**	**46.37**	**238**	LR		LR	LR	14 33 55.8	
	comp=Z,117nm,18.4s,MS3.9,baz=274,slow=34								
GNI	**Garni**	**47.81**	**336**	LR		LR	LR	14 35 28.2	
	comp=Z,41nm,19.6s,MS3.4,baz=136,slow=35								
BOSA	**Boshof**	**48.05**	**233**	LR		LR	LR	14 34 13.1	
	comp=Z,90nm,18.7s,MS3.8,baz=138,slow=33								
MKAR	**Makanchi Array**	**51.02**	**13**	P		**P**		**14 16 36.0**	**-0.6**
	0.4nm,0.5s,mb3.6,baz=202,slow=6.3,SNR=3.3								
MKAR				LR		LR	LR	14 37 12.2	
	comp=Z,37nm,19.0s,MS3.4,baz=354,slow=35								
MKAR	**Makanchi Array**	**51.02**	**13**	P		**P**		**14 16 36.0**	**-0.6**
MKAR				LR		LR	LR	14 37 12.2	
TSUM	**Tsumeb**	**51.85**	**248**	LR		LR	LR	14 36 09.2	
	comp=Z,75nm,19.4s,MS3.7,baz=142,slow=33								
BVAR	**Borovoye Array**	**55.72**	**2**	P		**P**		**14 17 11.4**	**+0.5**
	0.2nm,0.3s,mb3.6,baz=163,slow=15,SNR=2.6								
ZALV	**Zalesovo Beam**	**58.32**	**12**	P		**P**		**14 17 28.4**	**-1.0**
	0.6nm,0.3s,mb4.0,baz=205,slow=5.3,SNR=4.1								
ZALV				LR		LR	LR	14 42 18.8	
	comp=Z,31nm,20.2s,MS3.4,baz=236,slow=36								
HHC	**Hu-ho-hao-te**	**58.89**	**38**	*eP*		**P**		**14 17 33.8**	**+0.1**
HHC				pP		pP		14 17 38.4	+0.3
HHC				sP		sP		14 17 40.8	+1.0
HHC				PcP		PcP		14 18 22.5	-0.4
HHC				PP		PP		14 19 47.0	+3.0
HHC				ScP		ScP		14 22 20.8	-2.6
HHC				PcS		PcS		14 22 22.8	-1.8
HHC				S		**S**		**14 25 39.3**	**+0.1**
HHC				sS		sS		14 25 46.0	-0.6
HHC				ScS		ScS		14 27 20.1	-3.3
HHC				SS		SS		14 29 33.8	+0.7
HHC				pmax		pmax			
	comp=Z,12nm,0.7s,mb5.0								
HHC				pmax		pmax			
	comp=Z,61nm,5.0s								
HHC				LR		LR			
	comp=N,140nm,17.8s,MS4.3								
HHC				LR		LR			
	comp=E,160nm,16.7s,MS4.3								
HHC				LR		LR			
	comp=Z,150nm,16.7s,MS4.2								
SONM	**Songino Array**	**60.61**	**29**	P		**P**		**14 17 45.9**	**+0.6**
	comp=Z,1.5nm,0.9s,mb4.1,baz=213,slow=7.1,SNR=6.0								
MAW	**Mawson**	**64.72**	**182**	LR		LR	LR	14 40 03.4	
	comp=Z,57nm,20.0s,MS3.8,baz=196,slow=30								
WRA	**Warramunga Arr**	**66.81**	**110**	P		**P**		**14 18 26.1**	**-0.8**
	comp=Z,1.4nm,0.6s,mb4.2,baz=289,slow=5.8,SNR=10								
WRAB	**Tennant Creek**	**66.82**	**110**	*eP*		**P**		**14 18 27.9**	**+1.0**
	comp=Z,2.1nm,0.6s,mb4.3								
ASAR	**Alice Springs**	**66.82**	**114**	P		**P**		**14 18 26.3**	**-0.6**
	comp=Z,0.9nm,0.6s,mb4.0,baz=279,slow=6.1,SNR=9.1								
TORD	**Torodi Ar. Bea**	**67.68**	**285**	LR		LR		14 45 33.6	
	comp=Z,63nm,18.6s,MS3.9,baz=180,slow=34								
KSRS	**Korea Array**	**68.39**	**48**	LR		LR		14 48 10.6	
	comp=Z,38nm,19.0s,MS3.6,baz=286,slow=36								
DBIC	**Dimbokro**	**73.33**	**278**	LR		LR		14 52 45.2	
	comp=Z,42nm,18.2s,MS3.8,baz=138

CAVI	Cavuskoy	0.64	31	*e*PG	Pg	14 56 15.3	-0.2
CAVI				*e*SG	Sg	14 56 24.7	+1.0
CAVI	Cavuskoy	0.64	31	*e*Pg	Pg	14 56 15.3	-0.1
CAVI				*e*Sg	Sg	14 56 24.7	+0.9
ALT	Altintas	0.80	138	*e*PG	Pg	14 56 18.7	+0.2
ALT				*e*SG	Sg	14 56 29.4	+0.5
ALT	Altintas	0.80	138	*e*Pg	Pg	14 56 18.7	+0.2
ALT				*e*Sg	Sg	14 56 29.4	+0.5
GEMT	Gemlik	0.80	347	*e*PG	Pg	14 56 18.9	+0.3
GEMT				*e*SG	Sg	14 56 31.3	+2.3
GEMT	Gemlik	0.80	347	*e*Pg	Pg	14 56 18.9	+0.3
GEMT				*e*Sg	Sg	14 56 31.3	+2.3
DEMI	Demirci	0.81	222	*i* P	Pg	14 56 19.8	+1.0
DEMI	Demirci	0.81	222	*i* P	Pg	14 56 19.8	+1.0
ADVT	Abdulvahap	0.82	17	*e*PG	Pg	14 56 18.9	+0.1
ADVT	Abdulvahap	0.82	17	*e*Pg	Pg	14 56 18.9	0.0
BORA	Eskisehir	0.83	74	*i* P	Pg	14 56 18.4	-0.6
BORA	Eskisehir	0.83	74	*i* P	Pg	14 56 18.5	-0.6
BORA				*i* S	Sg	14 56 31.2	+1.4
YLV	Yalova	0.92	358	*e*PG	Pg	14 56 21.2	+0.5
YLV	Yalova	0.92	358	*e*Pg	Pg	14 56 21.2	+0.5
ARMT	Armutlu	1.01	335	*e*PG	Pg	14 56 23.2	+0.7
ARMT	Armutlu	1.01	335	*e*Pg	Pg	14 56 23.2	+0.7
KCT	Karacabey	1.02	307	*e*PG	Pg	14 56 22.0	-0.8
KCT	Karacabey	1.02	307	*e*Pg	Pg	14 56 22.0	-0.7
ESKT	Eskisehir	1.11	96	*e*PN	Pn	14 56 25.2	-0.8
ESKT	Eskisehir	1.11	96	*e*Pn	Pn	14 56 25.2	-0.8
GULT	Gulveren	1.15	47	*e*PN	Pn	14 56 25.6	-0.9
GULT	Gulveren	1.15	47	*e*Pn	Pn	14 56 25.6	-0.9
KULA	Kula-Manisa	1.28	208	*e*PN	Pn	14 56 25.7	-2.6
KULA	Kula-Manisa	1.28	208	*e*Pn	Pn	14 56 25.7	-2.5
KHAL	Karahalli	1.28	177	*i* P	Pg	14 56 28.2	+0.6
KHAL	Karahalli	1.28	177	*i* P	Pg	14 56 28.2	+0.5
KHAL				*i* S	Sg	14 56 46.3	+2.1
KHL	Karahalli	1.33	176	*e*PN	Pn	14 56 27.2	-1.7
KHL	Karahalli	1.33	176	*e*Pn	Pn	14 56 27.2	-1.7
BALY	Balya	1.39	274	*i* P	Pn	14 56 30.3	+0.6
BALY	Balya	1.39	274	*i* P	Pn	14 56 30.3	+0.5
ISK	Istanbul-Kandi	1.44	349	*e*PN	Pn	14 56 29.0	-1.4
ISK	Istanbul-Kandi	1.44	349	*e*Pn	Pn	14 56 29.0	-1.5
MDU	Mudurnu	1.60	59	*e*PN	Pn	14 56 32.2	-0.4
MDU	Mudurnu	1.60	59	*e*Pn	Pn	14 56 32.3	-0.4
KLYT	Kilyos	1.63	350	*e*PN	Pn	14 56 31.3	-1.7
KLYT	Kilyos	1.63	350	*e*Pn	Pn	14 56 31.3	-1.7
SVRH	Sivrihisar-ESK	1.64	96	*e*PN	Pn	14 56 32.2	-1.0
SVRH	Sivrihisar-ESK	1.64	96	*e*Pn	Pn	14 56 32.3	-0.9
MFT	Murefte	1.99	305	*e*PN	Pn	14 56 37.5	-0.6
MFT	Murefte	1.99	305	*e*Pn	Pn	14 56 37.5	-0.5
RKY	Sarkoy-Tekirda	2.00	302	*e*PN	Pn	14 56 36.4	-1.9
RKY	Sarkoy-Tekirda	2.00	302	*e*Pn	Pn	14 56 36.4	-1.8
KIZT	Kizilcal	2.06	111	*e*PN	Pn	14 56 37.8	-1.2
KIZT	Kizilcal	2.06	111	*e*Pn	Pn	14 56 37.8	-1.2

MEX 24 14:56:14.1±0.4,**16°.85N**×**98°.59W**,**h41**km±28km,**MD3.5,**
Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.63	136	*i* P	Pn	14 56 25.2	-1.4
PNIG				*i* S	Sn	14 56 33.6	-2.0
UTMO	Huajuapan	1.23	37	*i* P	Pn	14 56 33.2	-1.6
UTMO				*i* S	Sn	14 56 48.4	-1.8
ACX	Acapulco	1.27	271	*i* P	Pn	14 56 33.8	-1.6
ACX				*i* S	Sn	14 56 49.1	-2.1
CAIG	El Cayaco	1.62	277	*e*P	Pn	14 56 38.2	-1.9
CAIG				*i* S	Sn	14 56 58.3	-1.5
PPM	Popocatepetl	2.21	359	*e*P	Pn	14 56 48.4	+0.1
PPM				*i* S	Sn	14 57 15.7	+1.5

DJA 24 15:01:26,8°.00S×**120°.01E,h13**km,**MLv3.6/3,Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	Waingapu	1.68	170	P	Pn	15 01 55.3	+0.2
WSI				S	Sn	15 02 17.1	+0.5
MMRI	Maumere	2.29	106	P	Pn	15 02 02.6	-0.9
MMRI				S	Sn	15 02 34.0	+2.3
BKSI	Bulukumba	2.66	2	P	Pn	15 02 10.3	+1.7
BKSI				S	Sn	15 02 42.0	+1.2

ISK ***24*** *15:02:58.6,37°.27N×28°.20E,h5km,MD2.8*
CSEM ***24*** *15:02:59.8±0.1,37°.26N×28°.23E,h2km,MD2.8, Error ellipse: s-maj=3.1km s-min=2.7km az=23.0*
DDA ***24*** *15:02:59.7,37°.24N×28°.20E,h7km±5km,Md2.9*
ISCJB ***24*** *15:02:59.4±0.6,37°.26N±0°.04×28°.25E±0°.04,h6km±12km, Error ellipse: s-maj=6.8km s-min=4.5km az=27.0*
ISC 24 15:02:60.0±0.6,**37°.27N**±0°.04×**28°.25E**±0°.04,**h5**km±13km,
n20,σ0s**63/34,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.13	167	*e*PG	Pg	15 03 01.9	-0.8
YER				*e*SG	Sg	15 03 04.8	+0.4
YER	Yerkesik	0.13	167	*e*Pg	Pg	15 03 01.9	-0.8
YER				*e*Sg	Sg	15 03 04.8	+0.3
MLSB	Milas	0.38	275	*e*PG	Pg	15 03 06.4	-0.9
MLSB				*e*SG	Sg	15 03 12.2	0.0
MLSB	Milas	0.38	275	*e*Pg	Pg	15 03 06.4	-0.8
MLSB				*e*Sg	Sg	15 03 12.2	+0.1
TURN	Turunc	0.48	144	*i* P	Pg	15 03 08.3	-1.0
TURN				*i* S	Sg	15 03 16.1	+0.5
TURN	Turunc	0.48	144	*i* P	Pg	15 03 08.3	-1.0
TURN				*i* S	Sg	15 03 16.1	+0.5
AYDN	Tasoluk	0.49	324	*i* P	Pg	15 03 09.3	-0.1
AYDN				*i* S	Sg	15 03 16.6	+0.7
AYDN	Tasoluk	0.49	324	*i* P	Pg	15 03 09.4	0.0
AYDN				*i* S	Sg	15 03 16.6	+0.8
BDRM	Kayabasi	0.67	253	*i* P	Pg	15 03 11.9	-0.9
BDRM				*i* S	Sg	15 03 21.5	-0.1
BDRM	Kayabasi	0.67	253	*i* P	Pg	15 03 11.9	-1.0
BDRM				*i* S	Sg	15 03 21.5	-0.1
DAT	Datca	0.76	225	*e*PG	Pg	15 03 14.4	-0.1
DAT				*e*SG	Sg	15 03 25.7	+1.4
DAT	Datca	0.76	225	*e*Pg	Pg	15 03 14.4	-0.1
DAT				*e*Sg	Sg	15 03 25.7	+1.4
DNZL	Cakiroluk	0.77	56	*i* P	Pg	15 03 15.1	+0.4
DNZL				*i* S	Sg	15 03 29.9	+5.3
DNZL	Cakiroluk	0.77	56	*i* P	Pg	15 03 15.1	+0.4
KULA	Kula-Manisa	1.29	15	*e*PN	Pn	15 03 24.7	0.0
KULA	Kula-Manisa	1.29	15	*e*Pn	Pn	15 03 24.7	0.0
ELL	Elmali	1.43	111	*e*PN	Pg	15 03 27.4	+0.1
ELL	Elmali	1.43	111	*e*Pn	Pg	15 03 27.4	0.0
AKAS	Kas	1.50	133	*i* P	Pg	15 03 29.0	+0.2
AKAS				*i* S	Sg	15 03 55.4	+7.2
AKAS	Kas	1.50	133	*i* P	Pg	15 03 29.0	+0.2

ISK ***24*** *15:06:41.7,38°.80N×33°.07E,h5km,MD3.0*
DDA ***24*** *15:06:42.4,38°.77N×33°.08E,h7km±2km,Md3.1*
CSEM ***24*** *15:06:43.2±0.2,38°.79N×33°.10E,h5km,MD3.0, Error ellipse: s-maj=4.4km s-min=3.0km az=133.0*
ISCJB ***24*** *15:06:43.1±0.5,38°.82N±0°.02×33°.03E±0°.04,h10km, Error ellipse: s-maj=4.5km s-min=2.9km az=34.6*
ISC 24 15:06:43.3±0.6,**38°.80N**±0°.03×**33°.08E**±0°.04,**h1**km±8km,
n30,σ0s**77/46,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SULT	Sultanhani-AKS	0.69	150	*e*PG	Pg	15 06 56.2	-0.2
SULT	Sultanhani-AKS	0.69	150	*e*Pg	Pg	15 06 56.2	-0.3
BBAL	Bala	0.75	2	*e*P	Pg	15 06 57.5	-0.1
BBAL				*i* S	Sg	15 07 08.3	+0.9
BBAL	Bala	0.75	2	*e*P	Pg	15 06 57.5	-0.2
BBAL				*i* S	Sg	15 07 08.3	+0.9
KDHN	Kadinhani	0.81	250	*i* P	Pg	15 06 57.7	-1.1
KDHN				*i* S	Sg	15 07 09.9	+0.7
KDHN	Kadinhani	0.81	250	*i* P	Pg	15 06 57.7	-1.1
KDHN				*i* S	Sg	15 07 09.9	+0.7
LADK	Ladik-KONYA	0.82	224	*e*PG	Pg	15 06 58.4	-0.6
LADK				*e*SG	Sg	15 07 10.0	+0.3
LADK	Ladik-KONYA	0.82	224	*e*Pg	Pg	15 06 58.4	-0.6
LADK				*e*Sg	Sg	15 07 10.0	+0.4
KIZT	Kizilcal	0.94	276	*e*PG	Pg	15 07 01.1	-0.4
KIZT				*e*SG	Sg	15 07 15.1	+1.4
KIZT	Kizilcal	0.94	276	*e*Pg	Pg	15 07 01.1	-0.3
KIZT				*e*Sg	Sg	15 07 15.1	+1.4
KONT	Konya--Tatoy	1.02	214	*e*PG	Pg	15 07 02.4	-0.5
KONT				*e*SG	Sg	15 07 17.8	+1.7
KONT	Konya--Tatoy	1.02	214	*e*Pg	Pg	15 07 02.4	-0.5
KONT				*e*Sg	Sg	15 07 17.8	+1.7
LOD	Lodumlu	1.12	347	*e*PN	Pg	15 07 03.9	-0.9
LOD	Lodumlu	1.12	347	*e*Pn	Pg	15 07 03.9	-0.9
CDAG	Cicekdag	1.30	50	*i* P	Pg	15 07 07.7	-0.5
CDAG				*i* S	Sg	15 07 25.7	+0.6
CDAG	Cicekdag	1.30	50	*i* P	Pg	15 07 07.7	-0.5
CDAG				*i* S	Sg	15 07 25.7	+0.6
SVRH	Sivrihisar-ESK	1.38	299	*e*PN	Pn	15 07 08.8	-0.9
SVRH	Sivrihisar-ESK	1.38	299	*e*Pn	Pn	15 07 08.8	-0.8
BOLV	Bolvadin	1.67	268	*e*P	Pg	15 07 14.2	-1.2
BOLV				*i* S	Sg	15 07 36.5	-0.5
BOLV	Bolvadin	1.67	268	*e*P	Pg	15 07 14.2	-1.1
BOLV				*i* S	Sg	15 07 36.5	-0.5
ELDT	Eldivan	1.71	9	*e*P	Sg	15 07 38.9	+0.5
HDMB	Hadim	1.89	195	*e*PN	Pn	15 07 16.4	-0.3
HDMB	Hadim	1.89	195	*e*Pn	Pn	15 07 16.4	-0.3
YOZ	Yozgat	1.93	63	*e*PN	Pn	15 07 17.1	-0.2
YOZ	Yozgat	1.93	63	*e*Pn	Pn	15 07 17.1	-0.2
SGKT	Sivrigoynuk	1.94	336	*i* P	Pg	15 07 19.9	-0.8
SGKT				*i* S	Sg	15 07 46.5	+0.7
SGKT	Sivrigoynuk	1.94	336	*i* P	Pg	15 07 19.9	-0.7
SGKT				*i* S	Sg	15 07 46.5	+0.7
SUTC	Sutluce-Ispart	2.10	232	*e*PN	Pn	15 07 20.1	+0.4
SUTC	Sutluce-Ispart	2.10	232	*e*Pn	Pn	15 07 20.1	+0.5
KOZT	Kozan	2.53	120	*e*PN	Pn	15 07 26.4	+0.9

NEIC ***24*** *15:12:09.5±0.4,3°.08N×128°.00E,mb4.5/7, Error ellipse: s-maj=13.0km s-min=6.3km az=71.0*
IDC ***24*** *15:12:10.0±0.9,3°.01N×127°.76E,h84km±8km,mb4.0/16, mb1 4.1/17,mb1mx4.0/25,mbtmp4.0/17,MS2.7/1, Ms1 2.7/1,ms1mx2.2/27, Error ellipse: s-maj=31.9km s-min=9.9km az=74.0*
ISCJB ***24*** *15:12:12.0±0.8,3°.06N±0°.03×127°.87E±0°.08,h120km±7km, mb4.3/24, Error ellipse: s-maj=12.9km s-min=5.5km az=171.3*
DJA ***24*** *15:12:16,2°.96N×127°.71E,h98km,mb4.8/15*
ISC 24 15:12:12.9±0.8,**3°.04N**±0°.04×**127°.89E**±0°.08,**h113**km±7km,
h84km±3.7km:**pP-P,n67,**σ1s**11/67,mb4.3/24,3C-1D,**
Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	2.32	193	P	Pn	15 12 51.3	+1.2
SGSI	Sangihe	2.44	285	P	Pn	15 12 50.7	-0.9
MNI	Manado	3.43	242	P	Pn	15 13 05.0	+0.2
MATI	Mati	4.20	337	*e*P	Pn	15 13 16.5	+1.4
MATI				*e*S	Px	15 13 45.4	
GSPH	General Santos	4.21	316	⇓*i*P	Pn	15 13 13.7	-1.4
GSPH				*i* S	Sn	15 13 59.5	-3.9
KMSI	Cibinong	4.61	238	P	Pn	15 13 21.2	+0.6
DMPH	Davao City--Mi	4.66	330	⇑*e*P	Pn	15 13 21.2	0.0
DMPH				*e*S	Sn	15 14 09.4	-4.9
CTBH	Cotabato--PC H	5.51	319	⇑*e*P	Pn	15 13 31.1	-1.6
CTBH				*i* S	Px	15 14 06.3	
BUKP	Musuan	5.56	330	*e*P	Pn	15 13 34.3	+0.8
CGP	Cagayan de Oro	6.24	330	*e*S	Sn	15 14 58.0	+5.4
MRSI	Marisa 3μm212nm,0.8s	6.47	247	P	Pn	15 13 47.2	+1.5
LUWI	Luwuk 10μm100nm,0.7s	6.53	232	P	Pn	15 13 47.6	+1.1
PAGZ	Pagadian	6.55	317	*e*P	Pn	15 13 45.6	-1.2
AAI	Ambon 99nm,1.2s	6.69	177	P	Pn	15 13 51.8	+3.0
ZMPH	Zamboanga City	6.98	304	⇑*i*P	Pn	15 13 49.7	-2.9
ZMPH				*i* S	Px	15 14 01.6	
APSI	Ampana 3μm129nm,0.8s	7.37	238	P	Pn	15 13 58.1	+0.2
KDI	Kendari 2μm82nm,0.7s	8.72	217	P	Pn	15 14 15.0	-1.3
MYLDM	Lahad Datu 70nm,0.9s	9.60	283	P	Pn	15 14 29.9	+1.7
TTSI	Tana Toraja 35nm,0.5s	10.08	233	P	Pn	15 14 33.9	-0.8
SPSI	Sidrap Palu 39nm,0.7s	10.69	229	P	Pn	15 14 41.9	-1.0
BNSI	Bone 36nm,0.9s	10.73	226	P	Pn	15 14 43.3	-0.1
BKSI	Bulukumba 28nm,0.7s	11.37	223	P	Pn	15 14 52.8	+0.9
KAPI	Kappang 2.0nm,0.3s,baz=58,slow=18,SNR=9.5	11.41	225	P	Pn	15 14 48.8	-3.6
KAPI	Kappang	11.41	225	*e*P	Pn	15 14 52.2	-0.2
KKM	Kota Kinabalu 30nm,0.9s	12.01	285	*e*P	Pn	15 15 00.1	-0.3
KKM	Kota Kinabalu 32nm,1.1s	12.01	285	P	Pn	15 15 02.4	+1.9
KAKA	Kakadu 16nm,0.6s	16.29	164	*e*P	Pn	15 15 54.6	-0.7
KAKA	Kakadu 46nm,0.6s	16.29	164	*e*P	Pn	15 15 54.4	-0.9
KSM	Kuching	17.63	265	P	Pn	15 16 10.1	-1.6
GMJI	Gumukmas 51nm,0.9s	18.27	232	P	P	15 16 21.9	+3.9
KNA	Kununurra 156nm,0.8s	18.69	177	P	P	15 16 24.1	+1.5
SJI	Sawahan	19.32	236	P	P	15 16 31.1	+1.6
FITZ	Fitzroy Crossi 15nm,0.4s,mb4.7	21.13	186	*e*P	P	15 16 46.9	-2.0
FITZ	Fitzroy Crossi 7.8nm,0.5s,mb4.3,baz=15,slow=7.6,SNR=41	21.13	186	P	P	15 16 46.9	-2.0
FITZ	Fitzroy Crossi	21.13	186	*e*P	P	15 16 46.8	-2.1
WRAB	Tennant Creek 30nm,0.8s,mb4.7	23.70	165	*e*P	P	15 17 13.9	-0.6
WRA	Warramunga Arr 17nm,0.6s,mb4.6,baz=343,slow=10,SNR=79	23.71	165	P	P	15 17 13.9	-0.7
MBWA	Marble Bar 13nm,0.7s,mb4.5	25.34	198	*e*P	P	15 17 29.1	-0.4
ASAR	Alice Springs 1.9nm,0.6s,mb3.8,baz=358,slow=7.7,SNR=61	27.19	168	P	P	15 17 45.5	-0.6
ASAR				pP	pP	15 18 05.2	-5.5
	1.7nm,0.5s,baz=339,slow=9.2,SNR=3.6						
ASAR				PcP	PcP	15 21 04.2	+0.5
	2.5nm,0.5s,baz=356,slow=2.3,SNR=15						
JHJ	Hachijo jima 2	31.93	19	LR	LR	15 28 42.8	
	comp=Z,15nm,21.6s,baz=130,slow=31						
CMAR	Chiang Mai Arr 0.7nm,0.9s,mb3.4,baz=115,slow=6.6,SNR=2.7	32.21	300	P	P	15 18 28.6	-2.0
FORT	Forrest 32nm,0.6s,mb5.3	33.63	180	*e*P	P	15 18 42.0	-0.8
KSRS	Korea Array 0.7nm,0.7s,mb3.6,baz=176,slow=9.5,SNR=4.2	34.24	0	P	P	15 18 48.0	0.0
KLBR	Kellerberrin 186nm,1.9s	35.77	195	*e*P	P	15 19 00.5	-0.7
STKA	Stephens Creek 15nm,0.9s,mb4.9	37.09	160	*e*P	P	15 19 12.2	-0.2
STKA	Stephens Creek 17nm,0.7s,mb5.1,baz=336,slow=8.4,SNR=49	37.09	160	P	P	15 19 12.4	0.0
STKA				PcP	PcP	15 21 30.9	+0.2
	1.5nm,0.6s,baz=327,slow=8.9,SNR=2.9						
NWAO	Narrogin (SRO) 17nm,0.9s,mb5.0,baz=34,slow=1.9,SNR=7.8	37.17	195	P	P	15 19 12.7	-0.4
GTA	Gaotai	44.28	329	*e*P	P	15 20 12.8	+1.4
GTA				pP	pP	15 20 39.8	+2.4
GTA				sP	sP	15 20 49.8	-0.3
GTA				pmax	pmax		
	comp=Z,4.0nm,1.5s,mb3.9						
ULN	Ulaanbaatar comp=Z,1.7nm,0.7s,mb4.0	48.13	341	*e*P	P	15 20 42.2	+0.9
SONM	Songino Array comp=Z,1.1nm,0.7s,mb3.8,baz=154,slow=8.6,SNR=10	48.32	341	P	P	15 20 43.4	+0.6
SONM				pP	pP	15 21 03.1	-6.1
	comp=Z,0.5nm,0.5s,baz=158,slow=8.8,SNR=3.2						
SONM				PcP	PcP	15 22 08.3	+0.4
	comp=Z,0.9nm,0.8s,baz=160,slow=4.4,SNR=4.8						
MK31	Makanchi Array	58.77	325	*e*P	P	15 21 60.0	+0.8
MKAR	Makanchi Array comp=Z,3.2nm,0.4s,mb4.8,baz=98,slow=9.5,SNR=45	58.77	325	P	P	15 22 00.0	+0.8
MKAR				pP	pP	15 22 20.5	-6.0
	comp=Z,0.9nm,0.4s,baz=96,slow=9.0,SNR=3.5						
UCH	Uchtor	61.46	317	*e*P	P	15 22 19.8	+2.2
	comp=Z,1.9nm,0.8s,mb4.2						
ZALV	Zalesovo Beam comp=Z,1.0nm,0.4s,mb4.2,baz=122,slow=5.6,SNR=6.6	61.72	333	P	P	15 22 18.6	-0.5
AML	Almayashu comp=Z,1.5nm,0.3s,mb4.5	61.98	317	*e*P	P	15 22 22.6	+1.5
KURK	Kurchatov comp=Z,2.2nm,0.4s,mb4.4,baz=123,slow=6.9,SNR=44	62.94	327	P	P	15 22 27.6	+0.3
KURK	Kurchatov	62.94	327	*e*P	P	15 22 27.5	+0.2
BVAR	Borovoye Array comp=Z,1.9nm,0.7s,mb4.0,baz=121,slow=7.6,SNR=14	68.52	327	P	P	15 23 03.3	+0.2
BRVK	Borovoye	68.59	327	*e*P	P	15 23 03.6	0.0
	comp=Z,6.7nm,1.3s,mb4.3						
AKTK	Aktyubinsk	74.91	322	P	P	15 23 40.7	-0.7
AKTO	Aktyubinsk	74.91	322	P	P	15 23 40.7	-0.7
	comp=Z,0.9nm,0.5s,mb3.8,baz=78,slow=15,SNR=4.2						
MAW	Mawson	83.52	200	P	P	15 24 28.3	+0.5
	comp=Z,2.5nm,0.8s,mb4.1,baz=80,slow=11,SNR=4.5						
ARCES	ARCESS Array B	91.48	340	P	P	15 25 05.3	-1.0
	comp=Z,1.3nm,0.7s,mb4.2,baz=78,slow=4.7,SNR=5.8						
QSPA	South Pole Qui comp=Z,58nm,1.3s	92.95	180	*e*P	P	15 25 13.8	+1.0
FINES	FINESS Array B	92.98	332	P	P	15 25 12.6	-0.7
	comp=Z,2.7nm,1.0s,mb4.5,baz=74,slow=7.7,SNR=2.8						
FINES	FINESS Array B	92.98	332	P	P	15 25 12.6	-0.7
PLCA	Paso Flores	138.96	159	PKP	PKPdf	15 31 27.0	+0.4
	comp=Z,1.0nm,0.7s,baz=315,slow=1.4,SNR=4.4						

IDC ***24*** *16:01:47.8±13.0,18°.13S×168°.68E,h0km,mb3.8/4, mb1 4.0/4,mb1mx3.8/15,mbtmp3.8/4, Error ellipse: s-maj=390.0km s-min=49.2km az=132.0*
ISCJB ***24*** *16:01:58.8±2.4,17°.75S±0°.07×167°.5E±0°.4,h33km, mb3.7/4, Error ellipse: s-maj=50.6km s-min=9.0km az=175.8*
NOU ***24*** *16:02:00.2±0.8,17°.55S×167°.50E,h30km,MD3.3,ML3.1*
ISC 24 16:01:59.8±2.3,**17°.71S**±0°.06×**167°.7E**±0°.4,**h35**km,**n8,**
σ1s**02/9,mb3.7/4,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	Yate Dam	4.48	189	*e*S	Sn	16 03 55.7	-0.4
DZM	Mont Dzumac comp=Z,374nm,0.5s	4.49	195	AMP		16 03 02.9	
NOUC	Port Laguerre	4.55	196	*e*P	Pn	16 03 06.8	+0.6
NOUC				*e*S	Sn	16 03 57.0	-0.9
NOUC				AMP		16 04 01.6	
	comp=Z,16nm,4.3s						
LASL	Noumea	4.62	193	*e*P	Pn	16 03 09.0	+1.8
LASL				*e*S	Sn	16 03 59.3	-0.2
WRA	Warramunga Arr comp=Z,0.4nm,0.4s,mb3.6,baz=80,slow=6.1,SNR=11	31.60	261	P	P	16 08 19.8	+0.3
ASAR	Alice Springs comp=Z,1.0nm,0.5s,mb3.9,baz=82,slow=9.2,SNR=40	32.09	254	P	P	16 08 24.0	+0.2
CMAR	Chiang Mai Arr comp=Z,0.9nm,0.8s,mb3.7,baz=140,slow=4.1,SNR=5.0	76.52	295	P	P	16 13 47.3	+0.5
SONM	Songino Array comp=Z,0.4nm,0.6s,mb3.7,baz=118,slow=3.9,SNR=4.8	85.11	324	P	P	16 14 29.6	-2.5

ISCJB ***24*** *16:25:31.7±0.4,43°.62N±0°.02×17°.59E±0°.03,h10km, Error ellipse: s-maj=4.1km s-min=2.3km az=141.2*
CSEM ***24*** *16:25:32.7±0.2,43°.66N×17°.63E,h2km,ML2.8/10, Error ellipse: s-maj=6.0km s-min=3.1km az=48.0*
PDG ***24*** *16:25:32.8±0.4,43°.53N×17°.59E,h2km±1km,ML2.8/10, Error ellipse: s-maj=1.1km s-min=2.2km az=0.0*
NEIC ***24*** *16:25:32.8,43°.53N×17°.59E,h2km,ML2.8(PDG), After PDG.*
BEO ***24*** *16:25:33.5±0.5,43°.66N×17°.57E,h14km±5km,ML2.7/2*
VIE ***24*** *16:25:34.3±0.6,43°.76N×17°.73E,h10km,mb2.4/4,ML2.4/4, Error ellipse: s-maj=6.1km s-min=4.6km az=32.0 56 km W of Sarajevo*
ISC 24 16:25:31.3±0.6,**43°.61N**±0°.03×**17°.51E**±0°.03,**h2**km±6km,
n49,σ0s**97/90,20C-12D,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STON	Ston	0.75	170	*i* Pg	Pg	16 25 45.1	-0.6
STON				Sg	Sg	16 25 56.5	+1.0
STON	Ston	0.75	170	*i* Pg	Pg	16 25 45.1	-0.6
STON				Sg	Sg	16 25 56.5	+1.0
BRY	Bratogost	1.03	133	⇑*i*Pg	Pg	16 25 49.8	-1.4
BRY				*e*Sg	Sg	16 26 05.0	+0.4
BRY	Bratogost	1.03	133	⇑*i*Pg	Pg	16 25 49.8	-1.4
BRY				*e*Sg	Sg	16 26 05.0	+0.4
TREB	Trebinje	1.08	145	*e*Pg	Pg	16 25 52.6	+0.5
TREB				*i* Sg	Sg	16 26 09.7	+3.6
TREB	Trebinje	1.08	145	*e*Pg	Pg	16 25 52.6	+0.5
TREB				*i* Sg	Sg	16 26 09.7	+3.6
UPM	Unac-Piva	1.10	111	⇑*i*Pg	Pg	16 25 51.5	-0.8
UPM				*e*Sg	Sg	16 26 07.2	+0.7
UPM	Unac-Piva	1.10	111	⇑*i*Pg	Pg	16 25 51.5	-0.8
UPM				*e*Sg	Sg	16 26 07.2	+0.7
BLY	Banja Luka	1.16	348	⇓*i*Pg	Pn	16 25 54.4	-0.2
BLY				*i* Sg	Sn	16 26 10.8	-0.2
BLY	Banja Luka	1.16	348	⇓*i*Pg	Pn	16 25 54.4	-0.2
BLY				*i* Sg	Sn	16 26 10.8	-0.2
NKY	Niksic	1.35	126	⇓*i*Pg	Pn	16 25 55.9	-1.2
NKY				*i* Sg	Sg	16 26 15.3	+0.7
NKY	Niksic	1.35	126	⇓*i

couple: $M_0$5.33000×10^{16} NP1:ϕ_s327.00000°, δ60.00000°, λ69.00000°. NP2:ϕ_s184.00000°, δ36.00000°, λ122.00000°.
MOS ***24*** *17:02:32.8±1.1, 29°.03N×142°.46E, h33km, mb4.8/36, MS4.5/21, Error ellipse: s-maj=11.6km s-min=5.5km az=108.2*
GCMT ***24*** *17:02:33.6±0.2, 28°.87N×142°.68E, h12km, MW5.0, Moment Tensor Solution. s43,c59; s85,c145; Moment tensor: Scale 10^{16}Nm; M_{rr}3.56±.16; $M_{\theta\theta}$0.18±.09; $M_{\phi\phi}$-3.74±.11; $M_{r\theta}$1.15±.29; $M_{\theta\phi}$0.27±.07; $M_{\phi r}$1.68±.25; Best double couple: $M_0$4.20000×10^{16} NP1:ϕ_s160.00000°, δ35.00000°, λ62.00000°. NP2:ϕ_s13.00000°, δ59.00000°, λ108.00000°. Principal axes: T 4.2700, Plg70.0000°, Azm323.0000°; N -0.1600, Plg16.0000°, Azm183.0000°; P -4.1100, Plg12.0000°, Azm90.0000°; Data Used: II IU IC CN G.*
JMA ***24*** *17:02:33.8±0.2, 29°.03N×142°.24E, h51km, M4.5*
ISCJB ***24*** *17:02:33.2±0.2, 29°.09N±0°.02×142°.42E±0°.04, h33km, mb4.7/77, MS4.5/42, Error ellipse: s-maj=5.1km s-min=2.8km az=172.2*
BJI ***24*** *17:02:34.8, 29°.11N×142°.10E, h29km, mB4.9/35, mb4.6/42, Ms4.7/40, Ms7 4.5/38*
IDC ***24*** *17:02:35.5±0.6, 28°.96N×142°.45E, h40km±5km, mb4.1/20, mb1 4.3/23, mb1mx4.3/26, mbtmp4.2/23, ML4.2/3, MS4.4/19, Ms1 4.4/19, ms1mx4.2/32, Error ellipse: s-maj=14.9km s-min=11.2km az=93.0*
NEIC ***24*** *17:02:35.7±0.2, 29°.00N×142°.45E, mb4.7/39, MW5.1(NIED), Error ellipse: s-maj=5.5km s-min=4.9km az=107.0*
ISC 24 17:02:35.2±0.2, 29°.06N±0°.02×142°.44E±0°.04, h35km, h35km±2.8km:pP-P, n196, σ1§12/225, mb4.7/77, MS4.5/43, 8C, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.96**	**187**	P		**Pn**	**ISC**	**17 03 05.1**	**-0.9**
CBIJ				S		**Sn**	**ISC**	**17 03 27.9**	**-1.5**
CBIJ	**Chichi jima**	**1.96**	**187**	Pn		**Pn**	**ISC**	**17 03 03.9**	**-2.1**
	41nm,0.3s,baz=72,slow=22,SNR=14								
CBIJ				Sn		**Sn**	**ISC**	**17 03 25.0**	**-4.4**
	130nm,0.3s,baz=89,slow=23,SNR=16								
JHHJ	**Haha-jima-NKT**	**2.43**	**186**	P		**Pn**	**ISC**	**17 03 11.4**	**-0.9**
JHHJ				S		**Sn**	**ISC**	**17 03 39.7**	**-1.1**
JHJ2	**Mitsune**	**4.63**	**332**	P		**Pn**	**ISC**	**17 03 42.6**	**0.0**
JHJ2				*e*S		**Sn**	**ISC**	**17 04 34.8**	**-0.2**
JHJ	**Hachijo jima 2**	**4.65**	**331**	Pn		**Pn**	**ISC**	**17 03 42.5**	**-0.3**
	20nm,0.3s,baz=95,slow=20,SNR=13								
JHJ				Sn		**Sn**	**ISC**	**17 04 36.2**	**+0.7**
	77nm,0.3s,baz=234,slow=21,SNR=6.9								
JHJ				LR		LR		17 05 24.9	
	comp=Z,4μm,20.0s,baz=114,slow=36								
BSO1	**Boso 1**	**5.72**	**348**	P		**Pn**	**ISC**	**17 03 56.8**	**-0.8**
BSO1				*e*S		**Sn**	**ISC**	**17 05 01.1**	**-0.8**
JKO	**Kozu shima**	**5.84**	**332**	P		**Pn**	**ISC**	**17 03 59.4**	**+0.2**
JKO				*e*S		**Sn**	**ISC**	**17 05 04.9**	**0.0**
BSO2	**Boso 2**	**5.86**	**346**	*e*S		**Sn**	**ISC**	**17 05 06.2**	**+0.9**
BSO3	**Boso 3**	**5.96**	**345**	P		**Pn**	**ISC**	**17 03 59.8**	**-1.1**
BSO3				*e*S		**Sn**	**ISC**	**17 05 08.2**	**+0.3**
BSO4	**Boso 4**	**6.18**	**344**	P		**Pn**	**ISC**	**17 04 02.9**	**-1.0**
BSO4				S		**Sn**	**ISC**	**17 05 13.8**	**+0.5**
JOD2	**Odawara 2**	**6.81**	**336**	P		**Pn**	**ISC**	**17 04 12.3**	**-0.2**
JOD2				*e*S		**Sn**	**ISC**	**17 05 29.1**	**+0.3**
JHU	**Hanno**	**7.28**	**339**	P		**Pn**	**ISC**	**17 04 17.9**	**-1.1**
JHU				S		**Sn**	**ISC**	**17 05 38.3**	**-2.1**
JNY	**Yasuok**	**7.38**	**330**	P		**Pn**	**ISC**	**17 04 23.2**	**+2.8**
JYT	**Yasato**	**7.40**	**346**	P		**Pn**	**ISC**	**17 04 19.3**	**-1.3**
JRY	**Ryogami san**	**7.55**	**338**	P		**Pn**	**ISC**	**17 04 23.1**	**+0.3**
JRY				*e*S		**Sn**	**ISC**	**17 05 47.1**	**-0.1**
JHO	**Hitachi**	**7.70**	**349**	P		**Pn**	**ISC**	**17 04 22.2**	**-2.5**
JHO				*e*S		**Sn**	**ISC**	**17 05 45.1**	**-5.5**
JAG	**Ashikaga**	**7.77**	**342**	P		**Pn**	**ISC**	**17 04 24.1**	**-1.6**
JAG				*e*S		**Sn**	**ISC**	**17 05 48.9**	**-3.4**
MJAR	**Matsushiro Arr**	**8.27**	**336**	Pn		**Pn**	**ISC**	**17 04 32.4**	**-0.2**
	5.8nm,0.3s,baz=159,slow=11,SNR=70								
MJAR				Sn		**Sn**	**ISC**	**17 06 03.7**	**-1.0**
	2.1nm,0.3s,baz=157,slow=22,SNR=4.2								
MJAR	**Matsushiro Arr**	**8.27**	**336**	P		**Pn**	**ISC**	**17 04 32.4**	**-0.2**
MJAR								17 06 03.7	
MJAR				pmax		pmax			
	comp=Z,6.0nm,0.3s								
MJAR				smax					
	comp=N,2.0nm,0.3s								
MAJO	**Matsushiro**	**8.27**	**336**	*e*P		**Pn**	**ISC**	**17 04 32.3**	**-0.3**
MAJO				pmax		pmax			
	comp=Z,35nm,0.6s								
MAJO	**Matsushiro**	**8.27**	**336**	*e*Pn		**Pn**	**ISC**	**17 04 32.3**	**-0.3**
	comp=Z,35nm,0.6s								
MAT	**Matsushiro**	**8.27**	**336**	P		**Pn**	**ISC**	**17 04 32.3**	**-0.3**
MAT				S		**Sn**	**ISC**	**17 06 03.5**	**-1.3**
MAT	**Matsushiro**	**8.27**	**336**	P		**Pn**	**ISC**	**17 04 32.4**	**-0.2**
MAT				*e*S		**Sn**	**ISC**	**17 06 03.7**	**-1.1**
JFK	**Kawauchi**	**8.39**	**351**	P		**Pn**	**ISC**	**17 04 31.9**	**-2.3**
JFK				S		**Sn**	**ISC**	**17 06 00.8**	**-6.9**
ERM	**Erimo**	**12.94**	**2**	*i* P		**Pn**	**ISC**	**17 05 34.7**	**-1.8**
KSRS	**Korea Array**	**14.74**	**308**	Pn		**Pn**	**ISC**	**17 06 02.8**	**+1.8**
	comp=Z,0.8nm,0.3s,baz=115,slow=12,SNR=25								
KSRS				LR		LR		17 11 37.6	
	comp=Z,1μm,19.1s,baz=122,slow=37								
KSRS	**Korea Array**	**14.74**	**308**	P		**Pn**	**ISC**	**17 06 02.8**	**+1.7**
KSRS				pmax		pmax			
	comp=Z,1.0nm,0.3s								
KSRS				MLR		MLR			
	comp=Z,1μm,19.1s								
ASAJ	**Asahikawa**	**15.03**	**0**	Pn		**Pn**	**ISC**	**17 06 02.0**	**-2.8**
	comp=Z,0.7nm,0.3s,baz=183,slow=6.3,SNR=6.5								
ASAJ	**Asahikawa**	**15.03**	**0**	P		**Pn**	**ISC**	**17 06 02.1**	**-2.8**
ASAJ				pmax		pmax			
	comp=Z,1.0nm,0.3s								
GUMO	**Guam**	**15.55**	**171**	P		**Pn**	**ISC**	**17 06 10.4**	**-1.5**
GUMO				pmax		pmax			
	comp=Z,105nm,1.0s								
GUMO	**Guam**	**15.55**	**171**	Pn		**Pn**	**ISC**	**17 06 10.4**	**-1.5**
	comp=Z,105nm,1.0s								
INCN	**Inchon**	**15.65**	**307**	*e*Pn		**Pn**	**ISC**	**17 06 13.7**	**+0.8**
	comp=Z,22nm,0.6s								
VLA	**Vladivostok**	**16.40**	**332**	*e*P		**Pn**	**ISC**	**17 06 22.0**	**-0.5**
VLA				pmax		pmax			
	comp=Z,35nm,1.0s								
VLA				MLR		MLR			
	comp=Z,800nm,13.9s								
YSS	**Yuzh-Sakhalins**	**17.87**	**1**	*e*P		**Pn**	**ISC**	**17 06 41.4**	**+0.6**
YSS				*e*S		**S**	**ISC**	**17 09 58.0**	**-6.6**
YSS				pmax		pmax			
	comp=Z,30nm,1.0s								
YSS				MLR		MLR			
	comp=Z,1μm,14.0s								
YSS				MLR		MLR			
	comp=N,2μm,15.0s								
YSS	**Yuzh-Sakhalins**	**17.87**	**1**	*e*Pn		**Pn**	**ISC**	**17 06 41.2**	**+0.4**
	comp=N,22nm,1.1s								
SSE	**Sheshan**	**18.50**	**282**	P		**Pn**	**ISC**	**17 06 46.6**	**-2.1**
SSE				S		**S**	**ISC**	**17 10 14.8**	**-2.9**
SSE				pmax		pmax			
	comp=Z,16nm,1.0s								
SSE				pmax		pmax			
	comp=Z,520nm,10.7s								
SSE				LR		LR			
	comp=N,670nm,13.7s								
SSE				LR		LR			
	comp=E,670nm,13.7s								
SSE				LR		LR			
	comp=Z,730nm,14.1s								
MDJ	**Mudanjiang**	**18.59**	**330**	P		**Pn**	**ISC**	**17 06 49.4**	**-0.2**
MDJ				pP		pP		17 06 55.0	-3.4
MDJ				S		**S**	**ISC**	**17 10 17.3**	**-1.9**
MDJ				pmax		pmax			
	comp=Z,16nm,1.7s								
MDJ				pmax		pmax			
	comp=Z,250nm,7.4s								
MDJ				LR		LR			
	comp=N,1μm,17.9s								
MDJ				LR		LR			
	comp=E,1μm,16.2s								
MDJ				LR		LR			
	comp=Z,1μm,14.6s								
MDJ	**Mudanjiang**	**18.59**	**330**	*e*P		**Pn**	**ISC**	**17 06 48.4**	**-1.3**
	comp=Z,18nm,0.9s								
TATO	**Taipei**	**19.10**	**263**	P		**Pn**	**ISC**	**17 06 58.0**	**+2.1**
	comp=Z,75nm,1.0s								
NACB	**Ninganchiao**	**19.25**	**260**	P		**Pn**	**ISC**	**17 06 56.0**	**-1.8**
	comp=Z,27nm,0.7s								
YHNB	**Yeheng**	**19.29**	**262**	*e*P		**Pn**	**ISC**	**17 06 57.7**	**-0.5**
	comp=Z,21nm,0.6s								
DL2	**Dalian**	**19.82**	**305**	⇑P		**Pn**	**ISC**	**17 07 00.5**	**-3.9**
DL2				S		**S**	**ISC**	**17 10 38.1**	**-5.9**
DL2				pmax		pmax			
	comp=Z,10.0nm,0.7s								
DL2				pmax		pmax			
	comp=Z,140nm,6.6s								
DL2				LR		LR			
	comp=N,810nm,16.5s								
DL2				LR		LR			
	comp=E,420nm,18.0s								
DL2				LR		LR			
	comp=Z,770nm,18.6s								
SSLB	**Suanglung**	**19.93**	**260**	*e*P		**Pn**	**ISC**	**17 07 05.6**	**-0.3**
	comp=Z,57nm,0.6s								
CN2	**Changchun**	**20.03**	**322**	*e*P		**P**	**ISC**	**17 07 06.0**	**+1.1**
CN2				*e*pP				17 07 12.4	
CN2				*e*S		**S**	**ISC**	**17 10 46.4**	**-1.7**
CN2				pmax		pmax			
	comp=Z,10.0nm,1.1s								
CN2				pmax		pmax			
	comp=Z,200nm,4.0s								
CN2				LR		LR			
	comp=N,2μm,16.0s,MS4.6								
CN2				LR		LR			
	comp=E,1μm,16.0s,MS4.6								
CN2				LR		LR			
	comp=Z,1μm,16.0s,MS4.4								
HABR	**Khabarovsk**	**20.21**	**346**	*c i*P		**P**	**ISC**	**17 07 06.4**	**-0.4**
HABR				*e*				17 07 22.7	
HABR				*e*S		**S**	**ISC**	**17 10 52.9**	**+1.4**
HABR				*e**SS		sS		17 11 06.9	+0.6
HABR				*e*				17 11 18.1	
HABR				*e*SSS				17 11 25.5	
HABR				*e*				17 18 35.7	
HABR				pmax		pmax			
	comp=Z,27nm,1.1s								
HABR				pmax		pmax			
	comp=N,10.0nm,1.0s								
HABR				pmax		pmax			
	comp=E,10.0nm,0.8s								
HABR				MLR		MLR			
	comp=E,1μm,15.0s,MS4.4								
HABR				MLR		MLR			
	comp=Z,932nm,15.0s,MS4.3								
HABR				MLR		MLR			
	comp=N,607nm,14.0s,MS4.4								
TPUB	**Ta-pu**	**20.38**	**259**	*e*P		**P**	**ISC**	**17 07 10.5**	**+1.6**
	comp=N,29nm,0.6s								
NJ2	**Nanjing**	**20.52**	**284**	*e*P		**P**	**ISC**	**17 07 10.0**	**-0.4**
NJ2				pP				17 07 14.4	
NJ2				S		**S**	**ISC**	**17 10 57.0**	**-1.1**
NJ2				sS		sS		17 11 04.0	-8.9
NJ2				pmax		pmax			
	comp=Z,10.0nm,0.5s								
NJ2				pmax		pmax			
	comp=Z,570nm,4.1s								
NJ2				LR		LR			
	comp=E,1μm,15.5s								
NJ2				LR		LR			
	comp=Z,2μm,15.4s,MS4.5								
QZH	**Quanzhou**	**21.63**	**265**	*e*P		**P**	**ISC**	**17 07 22.8**	**+0.4**
QZH				S		**S**	**ISC**	**17 11 13.3**	**-6.7**
QZH				LR		LR			
	comp=Z,2μm,13.6s,MS4.7								
KLR	**Kul'dur**	**21.74**	**341**	*e*P		**P**	**ISC**	**17 07 20.2**	**-3.2**
KLR				*e*S		**S**	**ISC**	**17 11 20.0**	**-1.8**
KLR				smax					
	comp=N,1μm,11.0s								
KLR				smax					
	comp=E,500nm,11.0s								
SKR	**Severo-Kuril's**	**23.94**	**22**	*e*P		**P**	**ISC**	**17 07 48.5**	**+2.7**
SKR				*e*SS				17 13 10.0	
SKR				MLR		MLR			
	comp=N,1μm,10.0s,MS5.0								
SKR				MLR		MLR			
	comp=E,2μm,10.0s,MS5.0								
SKR				MLR		MLR			
	comp=Z,1μm,10.0s,MS4.6								
BJI	**Beijing**	**24.16**	**304**	P		**P**	**ISC**	**17 07 49.1**	**+1.1**
BJI				sP		sP		17 07 57.8	-4.5
BJI				S		**S**	**ISC**	**17 11 54.8**	**-8.9**
BJI				pmax		pmax			
	comp=Z,9.0nm,0.4s,mb4.5								
BJI				pmax		pmax			
	comp=Z,130nm,11.0s								
BJI				LR		LR			
	comp=N,930nm,16.5s,MS4.6								
BJI				LR		LR			
	comp=E,1μm,18.3s,MS4.6								
BJI				LR		LR			
	comp=Z,1μm,19.8s,MS4.4								
WHN	**Wuhan**	**24.40**	**280**	P		**P**	**ISC**	**17 07 51.0**	**+0.8**
WHN				S		**S**	**ISC**	**17 12 10.1**	**+2.4**
WHN				pmax		pmax			
	comp=Z,690nm,2.6s,mb5.6								
WHN				LR		LR			
	comp=N,2μm,20.3s								
WHN				LR		LR			
	comp=E,910nm,26.6s								
WHN				LR		LR			
	comp=Z,1μm,13.0s								
TGY	**Tagaytay City**	**24.86**	**238**	P		**P**	**ISC**	**17 07 54.2**	**-0.3**
	comp=Z,108nm,0.4s,mb5.7,baz=56,slow=15,SNR=3.1								
TGY	**Tagaytay City**	**24.86**	**238**	P		**P**		**17 07 54.2**	**-0.3**
TGY				pmax		pmax			
	comp=Z,108nm,0.4s								
PETK	**Petropavlovsk-**	**26.53**	**21**	P		**P**	**ISC**	**17 08 09.3**	**0.0**
	comp=Z,2.4nm,0.9s,mb3.7,baz=243,slow=4.7,SNR=3.2								
PETK				LR		LR		17 19 18.3	
	comp=Z,587nm,18.4s,MS4.2,baz=204,slow=38								
PETK	**Petropavlovsk-**	**26.53**	**21**	P		**P**		**17 08 09.3**	**0.0**
PETK				pmax		pmax			
	comp=Z,2.0nm,0.9s,mb3.6								
PETK				MLR		MLR			
	comp=Z,587nm,18.4s,MS4.2								
HIA	**Hailar**	**26.60**	**326**	*e*P		**P**	**ISC**	**17 08 11.6**	**+1.6**
HIA				pmax		pmax			
	comp=Z,13nm,0.8s								
HIA	**Hailar**	**26.60**	**326**	*e*P		**P**		**17 08 11.6**	**+1.7**
	comp=Z,13nm,0.8s,mb4.5								
HHC	**Hu-ho-hao-te**	**27.77**	**303**	*e*P		**P**		**17 08 20.8**	**+0.3**
HHC				pP		pP		17 08 27.9	-2.7
HHC				sP		sP		17 08 31.4	-3.5
HHC				PP				17 09 10.0	
HHC				PcP		PcP		17 11 36.9	+0.5
HHC				S		**S**		**17 13 03.0**	**+2.2**
HHC				sS		sS		17 13 13.0	-4.6
HHC				SS				17 14 21.3	
HHC				ScP		ScP		17 15 14.8	+0.3
HHC				PcS		PcS		17 15 18.3	0.0
HHC				ScS		ScS		17 19 06.3	-0.2
HHC				pmax		pmax			
	comp=Z,11nm,0.7s,mb4.6								
HHC				pmax		pmax			
	comp=Z,100nm,5.8s								
HHC				LR		LR			
	comp=N,510nm,15.5s,MS4.6								
HHC				LR		LR			
	comp=E,1μm,17.1s,MS4.6								
HHC				LR		LR			
	comp=Z,2μm,18.3s,MS4.6								
ENH	**Enshi**	**28.61**	**281**	P		**P**		**17 08 26.2**	**-1.9**
	comp=Z,6.6nm,0.6s,mb4.5								
XAN	**Xi'an**	**28.91**	**288**	P		**P**		**17 08 30.8**	**-0.1**
QIZ	**Qiongzhong**	**31.31**	**259**	P		**P**		**17 08 51.6**	**-0.5**
QIZ				S		**S**		**17 13 59.8**	**+3.0**
QIZ				pmax		pmax			
	comp=Z,14nm,1.8s,mb4.5								
QIZ				pmax		pmax			
	comp=Z,420nm,4.6s								
QIZ				LR		LR			
	comp=N,570nm,4.5s								
QIZ				LR		LR			
	comp=Z,750nm,12.3s,MS4.6								
GYA	**Guiyang**	**31.69**	**274**	P		**P**		**17 08 57.0**	**+1.5**
GYA				pP		pP		17 09 05.8	+0.2
GYA				PP		PP		17 10 02.1	-5.3
GYA				PcP		PcP		17 11 48.4	+1.6
GYA				S		**S**		**17 14 03.8**	**+1.0**
GYA				sS		sS		17 14 16.5	-3.0
GYA				ScP		ScP		17 15 29.3	+1.9
GYA				ScS		ScS		17 19 25.0	-0.6
GYA				pmax		pmax			
	comp=Z,10.0nm,0.8s,mb4.7								
GYA				pmax		pmax			
	comp=Z,90nm,4.9s								
GYA				LR		LR			
	comp=N,440nm,16.4s,MS4.3								
GYA				LR		LR			
	comp=E,380nm,17.3s,MS4.3								
GYA				LR		LR			
	comp=Z,460nm,17.9s,MS4.2								
ULN	**Ulaanbaatar**	**33.09**	**314**	*e*P		**P**		**17 09 08.0**	**+0.5**
ULN				pmax		pmax			
	comp=Z,7.0nm,0.8s,mb4.6								
ULN	**Ulaanbaatar**	**33.09**	**314**	*e*P		**P**		**17 09 08.0**	**+0.5**
	comp=Z,7.1nm,0.8s,mb4.7								
LZH	**Lanzhou**	**33.11**	**292**	*e*P		**P**		**17 09 07.0**	**-0.8**
LZH				pP		pP		17 09 14.0	-4.0
LZH				sP		sP		17 09 19.5	-2.8
LZH				PP		PP		17 10 18.0	-5.0
LZH				*e*S		**S**		**17 14 20.0**	**-4.7**
LZH				sS		sS		17 14 41.0	-0.5
LZH				SS		SS		17 16 22.0	-26
LZH				pmax		pmax			
	comp=Z,14nm,1.5s,mb4.7								
LZH				pmax		pmax			
	comp=Z,83nm,5.9s								
LZH				LR		LR			
	comp=N,780nm,13.1s								
LZH				LR		LR			
	comp=Z,900nm,15.1s,MS4.6								
CD2	**Chengdu**	**33.45**	**283**	*e*P		**P**		**17 09 10.4**	**-0.4**
CD2				pP		pP		17 09 17.8	-3.2
CD2				sP		sP		17 09 20.8	-4.5
CD2				PP		PP		17 10 21.5	-5.3
CD2				S		**S**		**17 14 29.1**	**-0.9**
CD2				sS		sS		17 14 41.3	-5.5
CD2				SS		SS		17 16 32.5	-23
CD2				pmax		pmax			
	comp=Z,10.0nm,0.5s,mb5.0								
CD2				pmax		pmax			
	comp=Z,30nm,5.2s								
CD2				LR		LR			
	comp=N,130nm,13.2s								
CD2				LR		LR			
	comp=Z,160nm,12.4s,MS3.9								
SONM	**Songino Array**	**33.49**	**314**	P		**P**		**17 09 12.2**	**+1.2**
	comp=Z,6.7nm,0.8s,mb4.6,baz=117,slow=8.3,SNR=44								
SONM				LR		LR		17 23 40.0	
	comp=Z,1μm,18.0s,MS4.6,baz=108,slow=38								
SONM	**Songino Array**	**33.49**	**314**	P		**P**		**17 09 12.2**	**+1.2**
SONM				pmax		pmax			
	comp=Z,7.0nm,0.8s								
SONM				MLR		MLR			
	comp=Z,1μm,18.0s								
YAK	**Yakutsk**	**34.04**	**349**	*c i*P		**P**		**17 09 14.8**	**-0.7**
YAK				*e**PP		pP		17 09 24.0	-1.7
YAK				*e*				17 10 25.8	
YAK				*e*PPP				17 10 43.9	
YAK				*e*				17 11 53.2	
YAK				*e*S		**S**		**17 14 36.3**	**-2.1**
YAK				*e**SS		sS		17 14 51.4	-3.8
YAK				*e*SS		SS		17 16 41.0	-25
YAK				*e*				17 19 39.5	
YAK				pmax		pmax			
	comp=Z,8.0nm,1.0s,mb4.6								
YAK				pmax		pmax			
	comp=N,7.0nm,1.6s								
YAK				pmax		pmax			
	comp=E,6.0nm,2.5s								
YAK				pmax		pmax			
	comp=Z,49nm,3.0s								
YAK				smax					
	comp=E,119nm,3.8s								
YAK				smax					
	comp=N,25nm,2.5s								
YAK				MLR		MLR			
	comp=Z,489nm,15.0s,MS4.4								
YAK				MLR		MLR			
	comp=N,361nm,16.0s,MS4.3								
YAK				MLR		MLR			
	comp=E,173nm,13.0s,MS4.3								
YAK	**Yakutsk**	**34.04**	**349**	*e*P		**P**		**17 09 14.9**	**-0.7**
	comp=E,5.9nm,0.6s,mb4.7								
KMI	**Kunming**	**35.45**	**273**	P		**P**		**17 09 29.5**	**+1.3**
KMI				pP		pP		17 09 37.8	-0.6
KMI				sP		sP		17 09 41.1	-1.6
KMI				PP		PP		17 10 50.1	+1.1
KMI				S		**S**		**17 15 02.3**	**+1.3**
KMI				sS		sS		17 15 15.6	-2.2
KMI				pmax		pmax			
	comp=Z,7.0nm,1.8s,mb4.3								
KMI				pmax		pmax			
	comp=Z,220nm,4.1s								
KMI				LR		LR			
	comp=N,540nm,14.3s,MS4.7								
KMI				LR		LR			
	comp=E,770nm,17.3s,MS4.7								
KMI				LR		LR			
	comp=Z,760nm,20.4s,MS4.4								
ZAK	**Zakamensk**	**36.31**	**317**	*e*P		**P**		**17 09 35.2**	**-0.1**
ZAK				*e*				17 15 18.4	
ZAK				pmax		pmax			
	comp=Z,10.0nm,1.5s,mb4.5								
GTA	**Gaotai**	**36.43**	**298**	P		**P**		**17 09 36.3**	**-0.1**
GTA				pP		pP		17 09 43.8	-2.9
GTA				sP		sP		17 09 46.9	-4.0
GTA				PP		PP		17 11 00.0	+0.4
GTA				S		**S**		**17 15 15.5**	**-0.2**
GTA				sS		sS		17 15 28.3	-4.3
GTA				SS		SS		17 17 40.1	-15
GTA				pmax		pmax			
	comp=Z,6.0nm,1.3s,mb4.4								
GTA				pmax		pmax			
	comp=Z,110nm,6.3s								
GTA				LR		LR			
	comp=N,700nm,16.5s,MS4.6								
GTA				LR		LR			
	comp=E,590nm,19.5s,MS4.6								
GTA				LR		LR			
	comp=Z,740nm,19.2s,MS4.5								
IRK	**Irkutsk**	**36.46**	**320**	⇑*i*P		**P**		**17 09 38.5**	**+2.0**
IRK				pmax		pmax			
	comp=Z,43nm,2.2s,mb5.0								
TLY	**Talaya**	**36.59**	**319**	*c i*P		**P**		**17 09 39.3**	**+1.7**
TLY				*e*S		**S**		**17 15 26.0**	**+8.2**
TLY				pmax		pmax			
	comp=Z,23nm,1.1s,mb4.9								
TLY				MLR		MLR			
	comp=Z,1μm,17.0s,MS4.7								
TLY	**Talaya**	**36.59**	**319**	*e*P		**P**		**17 09 39.4**	**+1.8**
	comp=Z,9.6nm,0.7s,mb4.7								
MOY	**Mondy**	**38.12**	**318**	*e*P		**P**		**17 09 52.1**	**+1.5**
MOY				pmax		pmax			
	comp=Z,47nm,3.4s								
KAPI	**Kappang**	**40.29**	**216**	LR		LR		17 25 51.5	
	comp=Z,297nm,21.3s,MS4.1,baz=331,slow=35								
CHTO	**Chiang Mai**	**40.84**	**265**	*e*P		**P**		**17 10 13.2**	**-0.5**
CHTO				pmax		pmax			
	comp=Z,14nm,1.1s,mb4.5								
CHTO	**Chiang Mai**	**40.84**	**265**	*e*P		**P**		**17 10 13.2**	**-0.5**
	comp=

WMQ sP sP 17 11 04.0 -2.8
WMQ PP PP 17 12 40.0 +0.8
WMQ S **S** **17 17 34.0 +1.6**
WMQ SS SS 17 20 50.0 -6.7
WMQ pmax pmax
comp=Z,23nm,1.0s,mb5.1
WMQ pmax pmax
comp=Z,85nm,4.0s
WMQ LR LR
comp=N,570nm,16.0s,MS4.7
WMQ LR LR
comp=E,430nm,16.0s,MS4.7
WMQ LR LR
comp=Z,550nm,16.0s,MS4.6
ZAA0 Zalesovo Array 48.17 318 *e*P **P** **17 11 11.8 0.0**
ZALV Zalesovo Beam 48.17 318 P **P** **17 11 12.2 +0.5**
comp=Z,3.9nm,0.4s,mb4.8,baz=95,slow=7.4,SNR=16
ZALV PcP PcP 17 12 39.0 +0.3
comp=Z,1.8nm,0.6s,baz=101,slow=4.8,SNR=2.9
ZALV LR LR 17 32 20.4
comp=Z,607nm,18.1s,MS4.6,baz=320,slow=37
ZALV Zalesovo Beam 48.17 318 P **P** **17 11 12.2 +0.4**
ZALV 17 12 39.0
ZALV pmax pmax
comp=Z,4.0nm,0.4s,mb4.8
ZALV MLR MLR
comp=Z,607nm,18.1s,MS4.6
CTA Charters Tower 48.99 175 LR LR 17 30 07.4
comp=Z,248nm,22.0s,MS4.2,baz=358,slow=34
NVS Novosibirsk 49.20 319 *e*P **P** **17 11 19.5 -0.1**
NVS *e*S **S** **17 18 18.7 -4.0**
NVS pmax pmax
comp=Z,81nm,2.7s,mb5.3
NVS pmax pmax
comp=E,66nm,2.5s
NVS smax
comp=N,39nm,2.6s
WRAB Tennant Creek 49.32 190 *e*P **P** **17 11 19.2 -1.7**
WRAB pmax pmax
comp=Z,11nm,0.6s,mb5.1
WRAB Tennant Creek 49.32 190 *e*P **P** **17 11 19.2 -1.7**
comp=Z,11nm,0.6s,mb5.1
WRA Warramunga Arr 49.33 190 P **P** **17 11 19.7 -1.3**
comp=Z,13nm,0.7s,mb5.1,baz=12,slow=8.4,SNR=65
WRA Warramunga Arr 49.33 190 P **P** **17 11 19.7 -1.3**
WRA pmax pmax
comp=Z,13nm,0.7s
MK31 Makanchi Array 49.42 308 *e*P **P** **17 11 21.6 +0.1**
MKAR Makanchi Array 49.42 308 P **P** **17 11 21.9 +0.4**
comp=Z,2.8nm,0.6s,mb4.5,baz=82,slow=10,SNR=24
MKAR LR LR 17 33 08.6
comp=Z,592nm,20.1s,MS4.6,baz=88,slow=37
MKAR Makanchi Array 49.42 308 P **P** **17 11 21.9 +0.4**
MKAR pmax pmax
comp=Z,3.0nm,0.6s
MKAR MLR MLR
comp=Z,592nm,20.1s
FITZ Fitzroy Crossi 49.61 201 P **P** **17 11 22.7 -0.4**
comp=Z,7.1nm,0.9s,mb4.7,baz=63,slow=9.5,SNR=9.1
FITZ LR LR 17 32 12.6
comp=Z,145nm,18.3s,MS4.0,baz=24,slow=36
KURK Kurchatov 51.79 313*c i*P **P** **17 11 39.9 +0.6**
KURK pmax pmax
comp=Z,30nm,1.0s,mb5.2
KURK MLR MLR
comp=Z,1μm,19.0s,MS5.0
KURK Kurchatov 51.79 313 *e*P **P** **17 11 39.7 +0.4**
comp=Z,39nm,1.1s,mb5.2
KDAK Kodiak Island 52.67 38 P **P** **17 11 45.5 -0.3**
comp=Z,9.2nm,0.8s,mb4.8,baz=256,slow=8.3,SNR=3.5
KDAK LR LR 17 32 53.1
comp=Z,705nm,20.8s,MS4.7,baz=266,slow=34
KDAK Kodiak Island 52.67 38 *i*P **P** **17 11 45.6 -0.1**
KDAK Kodiak Island 52.67 38 P **P** **17 11 45.5 -0.3**
KDAK LR LR 17 32 53.1
ASAR Alice Springs 53.06 190 P **P** **17 11 47.5 -1.4**
comp=Z,0.8nm,0.5s,mb3.9,baz=5.1,slow=5.7,SNR=24
ASAR Alice Springs 53.06 190 P **P** **17 11 47.5 -1.4**
ASAR pmax pmax
comp=Z,1.0nm,0.5s
TKM2 Tokmak 2 54.50 304 P **P** **17 12 00.6 +1.3**
TKM2 Tokmak 2 54.50 304 *e*P **P** **17 12 00.3 +1.0**
TKM2 pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
TKM2 Tokmak 2 54.50 304 *e*P **P** **17 12 00.3 +1.0**
comp=Z,4.1nm,0.6s,mb4.5
MBWA Marble Bar 54.51 206 *e*P **P** **17 11 58.1 -1.5**
KSH Kashi 54.79 300 P **P** **17 12 05.0 +3.5**
KSH pP pP 17 12 12.6 +0.5
KSH sP sP 17 12 15.9 -0.4
KSH PcP PcP 17 13 06.4 +2.8
KSH PP PP 17 14 09.6 +5.3
KSH ScP ScP 17 17 02.0 +2.5
KSH PcS PcS 17 17 04.9 +1.6
KSH S **S** **17 19 42.8 +2.9**
KSH sS sS 17 19 56.6 -0.8
KSH ScS ScS 17 21 49.0 +1.0
KSH pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
KSH pmax pmax
comp=Z,190nm,5.4s
KSH LR LR
comp=N,350nm,13.2s,MS4.7
KSH LR LR
comp=E,360nm,14.7s,MS4.7
KSH LR LR
comp=Z,100nm,5.0s
KZA Kyzart 54.88 303 P **P** **17 12 03.9 +1.8**
SNR=10
KBK Karagaybulak 55.01 304 P **P** **17 12 04.1 +1.1**
SNR=6.7
UCH Uchtor 55.40 303 P **P** **17 12 07.6 +1.8**
SNR=6.6
UCH Uchtor 55.40 303 *e*P **P** **17 12 06.9 +1.0**
comp=Z,3.0nm,0.7s,mb4.4
DZM Mont Dzumac 55.85 153 *e*LR LR 17 28 22.8
comp=Z,407nm,21.6s
EKS2 Erkin-Say 55.86 304 *e*P **P** **17 12 09.0 -0.2**
comp=Z,5.5nm,1.1s,mb4.5
AML Almayashu 56.01 303 P **P** **17 12 12.1 +1.8**
SNR=14
AML Almayashu 56.01 303 *e*P **P** **17 12 11.9 +1.7**
comp=Z,9.0nm,0.6s,mb5.0
BVAR Borovoye Array 56.77 317 P **P** **17 12 16.3 +0.9**
comp=Z,7.2nm,0.6s,mb4.9,baz=91,slow=7.5,SNR=64
BVAR Borovoye Array 56.77 317 P **P** **17 12 16.3 +0.9**
BVAR pmax pmax
comp=Z,7.0nm,0.6s
BRVK Borovoye 56.83 317 *e*P **P** **17 12 16.7 +0.8**
BRVK pmax pmax
comp=Z,17nm,1.0s,mb5.0
BRVK Borovoye 56.83 317 *e*P **P** **17 12 16.7 +0.8**
comp=Z,17nm,1.0s,mb5.0
BMRM Bremner River 56.84 34 *e*P **P** **17 12 16.7 +0.8**
comp=Z,5.8nm,1.0s,mb4.6
BMRM *e* pP 17 12 28.7 +2.2
STKA Stephens Creek 60.60 181 P **P** **17 12 40.9 -1.3**
comp=Z,1.8nm,0.8s,mb4.2,baz=28,slow=6.4,SNR=4.6
STKA LR LR 17 38 17.3
comp=Z,340nm,19.7s,MS4.5,baz=21,slow=35
STKA Stephens Creek 60.60 181 P **P** **17 12 40.9 -1.3**
STKA LR LR 17 38 17.3
INK Inuvik 61.16 25 *e*P **P** **17 12 46.0 +0.3**
INK *e* pP 17 12 58.2 +1.7
INK pmax pmax
comp=Z,9.0nm,0.9s
INK Inuvik 61.16 25 *e*P **P** **17 12 46.0 +0.3**
comp=Z,8.9nm,0.9s,mb4.9
INK *e* pP 17 12 58.2 +1.8
SVE Sverdlovsk 61.82 322 *e*P **P** **17 12 49.8 -0.5**
SVE *e*S **S** **17 21 17.4 +6.4**
SVE pmax pmax
comp=Z,16nm,1.2s,mb5.0
SVE MLR MLR
comp=Z,465nm,17.0s,MS4.7
ARU Arti 63.02 322*c i*P **P** **17 12 58.7 +0.4**
ARU *e* 17 13 34.0
ARU *e* 17 15 15.8
ARU S **S** **17 21 29.2 +3.0**
ARU pmax pmax
comp=Z,18nm,1.7s,mb4.9
ARU MLR MLR
comp=Z,347nm,18.0s,MS4.6
ARU Arti 63.02 322 *e*P **P** **17 12 58.6 +0.2**
comp=Z,6.7nm,0.6s,mb5.0

ABKAR Akbulak array 63.90 314 *e*P **P** **17 13 04.5 +0.2**
comp=Z,11nm,0.5s,mb5.1
RES Resolute Bay 70.11 14 *e*P **P** **17 13 43.3 0.0**
RES pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
RES Resolute Bay 70.11 14 *e*P **P** **17 13 43.3 0.0**
comp=Z,3.9nm,0.9s,mb4.3
YKA Yellowknife Ar 70.32 29 P **P** **17 13 44.4 -0.4**
comp=Z,2.1nm,0.6s,mb4.2,baz=295,slow=6.4,SNR=16
YKA pP pP 17 13 56.7 +1.0
comp=Z,3.0nm,0.6s,baz=295,slow=6.2,SNR=14
YKA Yellowknife Ar 70.32 29 P **P** **17 13 44.4 -0.4**
YKA *PP pP 17 13 56.7 +1.0
YKA pmax pmax
comp=Z,2.0nm,0.6s
ARCES ARCESS Array B 71.77 341 P **P** **17 13 54.4 +0.9**
comp=Z,1.2nm,0.6s,mb4.0,baz=58,slow=8.6,SNR=4.4
ARCES ARCESS Array B 71.77 341 P **P** **17 13 54.4 +0.9**
ARCES pmax pmax
comp=Z,1.0nm,0.6s
JOF Joensuu 73.43 334 *e*P **P** **17 14 03.3 -0.1**
JOF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
JOF Joensuu 73.43 334 *e*p **P** **17 14 03.3 -0.1**
comp=Z,4.1nm,0.6s,mb4.5
MAK Makhachkala 74.17 311 *e*P **P** **17 14 07.3 -0.8**
MAK *e* 17 14 22.8
MAK *e*PPP 17 18 47.5
MAK pmax pmax
comp=Z,33nm,0.7s,mb5.4
MAK MLR MLR
comp=Z,1μm,18.0s,MS5.3
OBN Obninsk 75.06 325 *e*P **P** **17 14 12.9 -0.1**
OBN *e* 17 14 26.8
OBN *e* 17 16 59.3
OBN pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
EDM Edmonton 75.12 37 *e*P **P** **17 14 13.7 +0.3**
KAF Kangasniemi 75.81 334 *e*P **P** **17 14 16.2 -1.0**
KAF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
KAF Kangasniemi 75.81 334 *e*p **P** **17 14 16.2 -1.0**
comp=Z,3.7nm,0.6s,mb4.5
FINES FINESS Array B 76.30 334 P **P** **17 14 20.3 +0.3**
comp=Z,2.5nm,0.7s,mb4.3,baz=76,slow=5.9,SNR=7.1
FINES FINESS Array B 76.30 334 P **P** **17 14 20.3 +0.3**
FINES pmax pmax
comp=Z,3.0nm,0.7s
FINES FINESS Array B 76.30 334 P **P** **17 14 20.3 +0.3**
ZEI Tsey 76.64 312 *e*P **P** **17 14 28.3 +6.0**
ZEI pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
KIV Kislovodsk 76.88 313 *e*P **P** **17 14 24.7 +1.1**
KIV *e*S S 17 24 09.7 +0.8
KIV pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
KIV MLR MLR
comp=Z,387nm,18.0s,MS4.8
KIV Kislovodsk 76.88 313 P **P** **17 14 23.5 -0.1**
SUMG Summit 78.64 0 *e*P **P** **17 14 34.2 +1.3**
comp=Z,12nm,1.2s,mb4.7
SOC Sochi 78.94 314 *e*P **P** **17 14 32.6 -2.5**
SOC *e*PP pP 17 14 44.0 -2.2
SOC *e* 17 17 30.6
SOC *e*S S 17 24 31.3 +0.1
SOC *e*SS SS 17 29 39.1 +3.0
SOC pmax pmax
comp=Z,3.0nm,0.4s,mb4.6
SOC MLR MLR
comp=Z,478nm,19.0s,MS4.8
NVAR Mina Array Bea 79.14 52 P **P** **17 14 37.1 +0.8**
comp=Z,0.8nm,0.5s,mb4.0,baz=278,slow=6.4,SNR=10
HLID Hailey 79.22 46 *e*P **P** **17 14 37.0 +0.4**
comp=Z,8.3nm,1.5s,mb4.4
LRM Limekiln Ridge 79.29 43 *e*P **P** **17 14 37.7 +0.7**
comp=Z,66nm,1.0s,mb5.5
ANN Anapa 79.75 316 *e*P **P** **17 14 36.0 -3.5**
ANN *e*PP pP 17 14 46.1 -4.5
ANN *e* 17 17 38.2
ANN *e*S S 17 24 36.2 -3.5
ANN pmax pmax
comp=Z,29nm,0.9s,mb5.2
ANN MLR MLR
comp=N,402nm,24.0s
ANN MLR MLR
comp=Z,557nm,24.0s,MS4.8
BOZ Bozeman (W) 79.88 43 *e*P **P** **17 14 41.4 +1.2**
BOZ pmax pmax
comp=Z,30nm,2.4s,mb4.8
BOZ Bozeman (W) 79.88 43 *e*P **P** **17 14 41.4 +1.2**
comp=Z,30nm,2.4s,mb4.8
KBD Kabd 80.16 298 *e*P **P** **17 14 42.2 +0.2**
KBD AMb AMB 17 14 44.1
comp=Z,26nm,0.6s,mb5.3
QRN Al-Qurain 80.18 297 *e*P **P** **17 14 42.8 +0.6**
QRN AMb AMB 17 14 45.0
comp=Z,35nm,0.6s,mb5.5
PPT Papeete 80.32 116 *e*LR LR 17 39 15.2
comp=Z,324nm,27.5s
PPT Papeete 80.32 116 LR LR 17 43 27.2
comp=Z,197nm,19.1s,MS4.5,baz=204,slow=30
RDF Al-Radifah 80.38 298 *e*P **P** **17 14 44.2 +0.9**
RDF AMb AMB 17 14 46.0
comp=Z,42nm,0.6s,mb5.5
NAY Al-Naaiem 80.47 298 *e*P **P** **17 14 44.1 +0.5**
NAY AMb AMB 17 14 49.2
comp=Z,31nm,0.6s,mb5.4
AKASG Malin Array Be 81.17 324 P **P** **17 14 46.8 -0.3**
comp=Z,2.0nm,0.5s,mb4.3,baz=51,slow=5.4,SNR=13
AKASG LR LR 17 53 29.7
comp=Z,626nm,19.0s,MS5.0,baz=55,slow=38
AKASG Malin Array Be 81.17 324 *i*P **P** **17 14 46.7 -0.3**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKBB Malin Array Si 81.17 324 *e*P **P** **17 14 46.6 -0.4**
KIEV Kiev 81.19 324 *e*P **P** **17 14 46.5 -0.6**
KIEV pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
KIEV Kiev 81.19 324 *e*P **P** **17 14 46.5 -0.6**
comp=Z,3.2nm,0.6s,mb4.4
SIM Simferopol' 81.68 317 P **P** **17 14 55.0 +5.2**
SIM *e*S S 17 25 05.0 +5.1
SIM pmax pmax
comp=Z,30nm,8.5s
SIM MLR MLR
comp=Z,260nm,18.1s,MS4.6
NB2 NORSAR Subarra 81.88 338 P **P** **17 14 50.4 -0.2**
comp=Z,1.5nm,0.5s,mb4.2,baz=42,slow=5.1
NOA NORSAR Array B 81.88 338 P **P** **17 14 50.5 -0.1**
comp=Z,1.8nm,0.6s,mb4.2,baz=40,slow=5.2,SNR=8.2
NOA pP pP 17 15 03.5 +1.8
comp=Z,1.9nm,0.5s,baz=41,slow=5.1,SNR=5.1
NOA NORSAR Array B 81.88 338 P **P** **17 14 50.5 -0.1**
NOA *PP pP 17 15 03.5 +1.8
NOA pmax pmax
comp=Z,2.0nm,0.6s
NOA NORSAR Array B 81.88 338 P **P** **17 14 50.5 -0.1**
NOA pP pP 17 15 03.5 +1.8
HWUT Hardware Ranch 82.03 47 *e*P **P** **17 14 51.8 0.0**
comp=Z,2.7nm,1.0s,mb4.1
HWUT *e* pP 17 15 04.4 +1.6
PDAR Pinedale Array 82.67 45 P **P** **17 14 56.0 +0.9**
comp=Z,0.5nm,0.4s,mb3.9,baz=341,slow=3.1,SNR=6.8
PDAR pP pP 17 15 08.6 +2.4
comp=Z,1.2nm,0.5s,baz=298,slow=1.5,SNR=7.5
PDAR LR LR 17 48 52.1
comp=Z,249nm,19.5s,MS4.6,baz=314,slow=34
PDAR Pinedale Array 82.67 45 P **P** **17 14 56.0 +0.9**
PDAR pP pP 17 15 08.6 +2.4
PDAR LR LR 17 48 52.1
MSU Marysvale 83.26 50 *e*P **P** **17 14 59.6 +1.4**
MSU pmax pmax
comp=Z,17nm,1.8s,mb4.8
MSU Marysvale 83.26 50 *e*P **P** **17 14 59.5 +1.3**
comp=Z,17nm,1.8s,mb4.8
TBI Tubuai 83.70 121 *e*LR LR 17 40 53.7
comp=Z,428nm,31.2s,baz=311
BR131 Keskin Array S 84.84 313 *e*P **P** **17 15 06.9 +0.7**
comp=Z,3.1nm,0.6s,mb4.6
ULM Lac du Bonnet 85.69 33 LR LR 17 52 10.2
comp=Z,257nm,19.7s,MS4.6,baz=270,slow=35
PV01 Paradox Valley 85.85 48 *e*P **P** **17 15 11.8 +0.5**
comp=Z,528nm,1.1s
MMAI Mount Meron Ar 87.33 306 P **P** **17 15 19.4 +0.7**
comp=Z,4.1nm,0.7s,mb4.8,baz=71,slow=3.9,SNR=4.9
SCHQ Schefferville 92.74 16 LR LR 17 58 47.1
comp=Z,180nm,21.3s,MS4.5,baz=299,slow=36
TXAR Lajitas Array 94.25 53 P **P** **17 15 52.8 +1.8**
comp=Z,0.9nm,0.8s,mb4.3,baz=261,slow=3.2,SNR=8.9
TXAR LR LR 17 54 24.6
comp=Z,223nm,18.8s,MS4.7,baz=345,slow=33
TXAR Lajitas Array 94.25 53 P **P** **17 15 52.8 +1.8**
TXAR pmax pmax
comp=Z,1.0nm,0.8s
TXAR MLR MLR
comp=Z,223nm,18.8s
TORD Torodi Ar. Bea 123.45 312 PKP PKPdf 17 21 29.1 -0.3
comp=Z,0.6nm,0.7s,baz=22,slow=1.9,SNR=7.7
TORD pPKP pPKPdf 17 21 41.8 +0.9
comp=Z,0.6nm,0.6s,baz=47,slow=2.1,SNR=4.4
LPAZ La Paz 149.16 72 PKPbc PKPbc 17 22 20.3 -0.1
comp=Z,2.7nm,0.7s,baz=336,slow=4.4,SNR=9.4
LPAZ La Paz 149.16 72 *e*PKPbc PKPbc 17 22 20.6 +0.1
PLCA Paso Flores 150.71 122 PKPbc PKPbc 17 22 24.0 +0.5
comp=Z,2.7nm,1.0s,baz=283,slow=0.8,SNR=4.5
PLCA Paso Flores 150.71 122 PKPbc PKPbc 17 22 24.0 +0.5

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*IDC **24** 17:09:32.6±2.9, 5°.20S×101°.46E, h0km, mb3.5/7, mb1 3.7/7, mb1mx3.5/20, mbtmp3.6/7, Error ellipse: s-maj=123.7km s-min=19.8km az=54.0*
*NEIC **24** 17:09:34.8±1.6, 5°.125S×101°.62E, h10km, mb4.0/2, Error ellipse: s-maj=68.5km s-min=12.5km az=54.0*
*ISCJB **24** 17:09:37.4±0.7, 4°.94S±0°.06×101°.79E±0°.06, h33km, mb3.7/9, Error ellipse: s-maj=9.3km s-min=8.2km az=35.3*
*DJA **24** 17:09:45, 4°.66S×102°.32E, h57km, MLv3.8/9*
ISC 24 17:09:40.0±0.7, 4°.87S±0°.06×101°.93E±0°.06, h35km, n23, σ1°.27/25, mb3.7/9, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**1.14**	**64**	P	**Pn**	**17 09 59.6**	**+0.1**
MNAI				S	**Sn**	**17 10 11.2**	**-2.8**
KSI	**Kapahiang**	**1.38**	**29**	P	**Pn**	**17 10 03.3**	**+0.5**
KSI				S	**Sn**	**17 10 18.8**	**-1.1**
LHSI	**Lahat**	**1.90**	**57**	P	**Pn**	**17 10 09.1**	**-0.9**
LWLI	**Liwa**	**2.13**	**94**	P	**Pn**	**17 10 14.3**	**+1.2**
MDSI	**Maura Dua**	**2.28**	**80**	P	**Pn**	**17 10 15.4**	**+0.3**
KASI	**Kota Agung**	**2.64**	**104**	P	**Pn**	**17 10 21.7**	**+1.6**
KASI				S	**Sn**	**17 10 48.6**	**-2.3**
KLSI		**2.80**	**86**	P	**Pn**	**17 10 23.5**	**+1.2**
SDSI	**Sungai Dareh**	**3.95**	**353**	P	**Pn**	**17 10 41.1**	**+3.0**
CGJI	**Cibinong**	**4.13**	**115**	P	**Pn**	**17 10 43.2**	**+2.6**
PDSI	**Padang**	**4.20**	**340**	P	**Pn**	**17 10 46.1**	**+4.5**
COCO	**West Island**	**8.84**	**214**	Pn	**Pn**	**17 11 42.0**	**-3.4**
CM31	**Chiang Mai Arr**	**23.37**	**353**	*e*P	**P**	**17 14 46.3**	**+0.5**
	4.1nm,0.9s,mb3.9						
CMAR	**Chiang Mai Arr**	**23.37**	**353**	P	**P**	**17 14 47.0**	**+1.3**
	1.0nm,0.7s,mb3.4,baz=188,slow=9.7,SNR=9.0						
WRA	**Warramunga Arr**	**34.92**	**118**	P	**P**	**17 16 28.1**	**-0.6**
	0.3nm,0.8s,mb3.3,baz=306,slow=8.8,SNR=2.8						
ASAR	**Alice Springs**	**36.03**	**124**	P	**P**	**17 16 38.2**	**0.0**
	0.4nm,0.9s,mb3.4,baz=298,slow=7.7,SNR=4.7						
SONM	**Songino Array**	**52.63**	**4**	P	**P**	**17 18 50.3**	**-0.2**
	0.4nm,0.4s,mb3.7,baz=181,slow=8.5,SNR=4.9						
TKM2	**Tokmak 2**	**53.22**	**336**	*e*P	**P**	**17 18 55.2**	**+0.3**
	1.3nm,0.6s,mb4.0						
MKAR	**Makanchi Array**	**54.30**	**343**	P	**P**	**17 19 02.2**	**-0.5**
	0.5nm,0.6s,mb3.6,baz=138,slow=8.3,SNR=5.4						
MKAR	**Makanchi Array**	**54.30**	**343**	P	**P**	**17 19 02.2**	**-0.6**
ZALV	**Zalesovo Beam**	**60.34**	**348**	P	**P**	**17 19 44.0**	**-1.2**
	0.7nm,0.4s,mb4.0,baz=172,slow=4.0,SNR=4.5						
ZALV	**Zalesovo Beam**	**60.34**	**348**	P	**P**	**17 19 44.0**	**-1.3**
BVAR	**Borovoye Array**	**63.53**	**339**	P	**P**	**17 20 05.7**	**-1.0**
	0.5nm,0.5s,mb3.8,baz=143,slow=9.3,SNR=4.0						
TXAR	**Lajitas Array**	**145.67**	**42**	PKPbc	PKPbc	17 29 15.4	-0.4
	0.4nm,0.6s,baz=279,slow=0.9,SNR=6.7						

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*ISK **24** 17:11:42.5, 36°.94N×29°.20E, h5km, MD3.0*
*CSEM **24** 17:11:43.4±0.3, 36°.92N×29°.19E, h0km±2km, MD3.1, Error ellipse: s-maj=4.6km s-min=1.7km az=156.0*
*DDA **24** 17:11:43.2, 36°.95N×29°.16E, h7km±5km, Md3.1*
*ISCJB **24** 17:11:43.6±0.6, 36°.96N±0°.04×29°.19E±0°.03, h2km±6km, Error ellipse: s-maj=6.2km s-min=3.9km az=11.4*
ISC 24 17:11:44.0±0.6, 36°.95N±0°.04×29°.19E±0°.03, h5km±6km, n36, σ0°.89/50, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.42**	**46**	*i*P	**Pg**	**17 11 50.9**	**-1.1**
GOLH				*i*S	**Sg**	**17 11 58.0**	**+0.5**
GOLH	**Golhisar**	**0.42**	**46**	*i*P	**Pg**	**17 11 50.9**	**-1.1**
GOLH				*i*S	**Sg**	**17 11 58.0**	**+0.5**
ELL	**Elmali**	**0.61**	**109**	*e*PG	**Pg**	**17 11 54.6**	**-1.1**
ELL				*e*SG	**Sg**	**17 12 05.0**	**+1.2**
ELL	**Elmali**	**0.61**	**109**	*e*Pg	**Pg**	**17 11 54.6**	**-1.2**
ELL				*e*Sg	**Sg**	**17 12 05.0**	**+1.3**
YER	**Yerkesik**	**0.75**	**285**	*e*PG	**Pg**	**17 11 58.2**	**-0.1**
YER				*e*SG	**Sg**	**17 12 09.4**	**+1.5**
YER	**Yerkesik**	**0.75**	**285**	*e*Pg	**Pg**	**17 11 58.2**	**-0.1**
YER				*e*Sg	**Sg**	**17 12 09.5**	**+1.5**
DNZL	**Cakiroluk**	**0.75**	**352**	*i*P	**Pg**	**17 11 57.1**	**-1.3**
DNZL				*i*S	**Sg**	**17 12 08.5**	**+0.4**
DNZL	**Cakiroluk**	**0.75**	**352**	*i*P	**Pg**	**17 11 57.1**	**-1.3**
DNZL				*i*S	**Sg**	**17 12 08.5**	**+0.4**
AKAS	**Kas**	**0.79**	**154**	*i*P	**Pg**	**17 11 58.9**	**-0.2**
AKAS				*i*S	**Sg**	**17 12 13.7**	**+4.3**
AKAS	**Kas**	**0.79**	**154**	*i*P	**Pg**	**17 11 58.9**	**-0.2**
DENT	**Denizli**	**0.81**	**351**	*e*PG	**Pg**	**17 11 59.6**	**0.0**
DENT	**Denizli**	**0.81**	**351**	*e*Pg	**Pg**	**17 11 59.6**	**0.0**
KORT	**Korkueli**	**0.94**	**86**	*i*P	**Pg**	**17 12 00.1**	**-1.8**
KORT				*i*S	**Sg**	**17 12 16.6**	**+2.6**
KORT	**Korkueli**	**0.94**	**86**	*i*P	**Pg**	**17 12 00.1**	**-1.8**
MLSB	**Milas**	**1.18**	**288**	*e*PN	**Pn**	**17 12 07.2**	**+0.1**
MLSB	**Milas**	**1.18**	**288**	*e*Pn	**Pn**	**17 12 07.2**	**+0.1**
BCK	**Bucak**	**1.23**	**65**	*e*PN	**Pn**	**17 12 06.8**	**-1.1**
BCK	**Bucak**	**1.23**	**65**	*e*Pn	**Pn**	**17 12 06.8**	**-1.1**
AYDN	**Tasoluk**	**1.26**	**305**	*i*P	**Pg**	**17 12 07.6**	**-0.6**
AYDN				*i*S	**Sg**	**17 12 24.9**	**+0.4**
AYDN	**Tasoluk**	**1.26**	**305**	*i*P	**Pg**	**17 12 07.6**	**-0.6**
AYDN				*i*S	**Sg**	**17 12 24.9**	**+0.4**
DAT	**Datca**	**1.31**	**261**	*e*PN	**Pn**	**17 12 09.3**	**+0.4**
DAT	**Datca**	**1.31**	**261**	*e*Pn	**Pn**	**17 12 09.3**	**+0.4**
ISP	**Isparta**	**1.38**	**50**	*e*PN	**Pn**	**17 12 10.1**	**+0.2**
ISP	**Isparta**	**1.38**	**50**	*e*Pn	**Pn**	**17 12 10.1**	**+0.2**
BDRM	**Kayabasi**	**1.40**	**275**	*i*P	**Pn**	**17 12 09.4**	**-0.7**
BDRM				*i*S	**Sb**	**17 12 28.9**	**+0.1**
BDRM	**Kayabasi**	**1.40**	**275**	*i*P	**Pn**	**17 12 09.4**	**-0.8**
BDRM				*i*S	**Sb**	**17 12 28.9**	**+0.2**
KHL	**Karahalli**	**1.40**	**11**	*e*PN	**Pn**	**17 12 10.7**	**+0.5**
KHL	**Karahalli**	**1.40**	**11**	*e*Pn	**Pn**	**17 12 10.7**	**+0.5**
SUTC	**Sutluce-Ispart**	**1.54**	**69**	*e*PN	**Pn**	**17 12 12.5**	**+0.4**
SUTC	**Sutluce-Ispart**	**1.54**	**69**	*e*Pn	**Pn**	**17 12 12.5**	**+0.4**
KULA	**Kula-Manisa**	**1.62**	**345**	*e*PN	**Pn**	**17 12 12.6**	**-0.6**
KULA	**Kula-Manisa**	**1.62**	**345**	*e*Pn	**Pn**	**17 12 12.6**	**-0.6**
SHUT	**Suhut-Afyon**	**1.93**	**34**	*e*PN	**Pn**	**17 12 17.7**	**+0.2**
SHUT	**Suhut-Afyon**	**1.93**	**34**	*e*Pn	**Pn**	**17 12 17.7**	**+0.2**
ALT	**Altintas**	**2.23**	**19**	*e*PN	**Pn**	**17 12 22.2**	**+0.7**
ALT	**Altintas**	**2.23**	**19**	*e*Pn	**Pn**	**17 12 22.3**	**+0.7**

DJA 24 17:16:58, 8°.80S×112°.47E, h39km, MLv3.5/7, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRKI	**Karangkates**	**0.64**	**358**	P	Pn	17 17 11.7	+1.1
KRKI				S	Sn	17 17 22.0	+2.4
PWJI	**Pagerwojo**	**1.02**	**320**	P	Pn	17 17 15.7	-0.1
PWJI				S	Sn	17 17 29.3	+0.5
GMJI	**Gumukmas**	**1.10**	**62**	P	Pn	17 17 16.9	0.0
SJI	**Sawahan**	**1.27**	**327**	P	Pn	17 17 19.3	+0.1
SJI				S	Sn	17 17 36.2	+1.2
PCJI	**Pacitan**	**1.41**	**295**	P	Pn	17 17 22.2	+1.0
PCJI				S	Sn	17 17 39.0	+0.4
ABJI	**Asem Bagus**	**2.01**	**60**	P	Pn	17 17 29.5	0.0
UGM	**Wanagama**	**2.12**	**294**	P	Pn	17 17 31.0	+0.1
NBBI	**Negara**	**2.17**	**79**	P	Pn	17 17 32.1	+0.5
KMMI	**Kalianget**	**2.29**	**41**	P	Pn	17 17 33.1	-0.1

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*JMA **24** 17:17:57.9, 25°.09N×122°.49E, h18km, M2.2*
*TAP **24** 17:17:58.1, 24°.56N×122°.14E, h50km, MLJ3.1, C*
*ISCJB **24** 17:17:58.2±0.4, 24°.57N±0°.03×122°.20E±0°.02, h44km±9km, Error ellipse: s-maj=4.9km s-min=3.3km az=166.1*
ISC 24 17:17:58.7±0.4, 24°.59N±0°.03×122°.20E±0°.02, h41km±10km, n38, σ0°.63/72, 2C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.32**	**273**	P	**Pn**	**17 18 07.0**	**-0.3**
	baz=280						
TWC				S	**Sn**	**17 18 13.2**	**-0.1**
	baz=280						
ILA	**Ilan**	**0.45**	**293**	*e*P	**Pn**	**17 18 08.7**	**-0.1**
	baz=303						
ILA				*e*S	**Sn**	**17 18 16.8**	**+0.9**
	baz=303						
ENA	**Nanau**	**0.45**	**249**	P	**Pn**	**17 18 08.5**	**-0.3**
	baz=249						
ENA				*e*S	**Sn**	**17 18 16.4**	**+0.5**
	baz=249						
TWB1	**Santiao Chiao**	**0.46**	**335**	*i* P	**Pn**	**17 18 08.8**	**-0.1**
	baz=335						
TWB1				*i* S	**Sn**	**17 18 16.4**	**+0.3**
	baz=335						
TWE	**Neicheng**	**0.50**	**285**	*i* P	**Pn**	**17 18 09.2**	**-0.3**
	baz=294						
TWE				S	**Sn**	**17 18 17.1**	**-0.1**
	baz=294						
ENTT	**Nioudou**	**0.58**	**275⇑**	*i* P	**Pn**	**17 18 10.3**	**-0.2**
	baz=284						
ENTT				S	**Sn**	**17 18 18.9**	**0.0**
	baz=284						
NWF	**Wu-fen Shan**	**0.61**	**321**	*i* P	**Pn**	**17 18 10.9**	**-0.1**
	baz=327						
NWF				*i* S	**Sn**	**17 18 19.9**	**+0.2**
	baz=327						
TWA	**Mucha**	**0.68**	**305**	*i* P	**Pn**	**17 18 11.6**	**-0.3**
	baz=319						
TWA				S	**Sn**	**17 18 21.1**	**-0.3**
	baz=319						
YOJ	**Yonaguni jima**	**0.75**	**100**	P	**Pn**	**17 18 12.6**	**-0.2**
YOJ				*e*S	**Sn**	**17 18 23.0**	**+0.1**
TWD	**Chiawan**	**0.75**	**228**	*e*P	**Pn**	**17 18 13.1**	**+0.2**
	baz=216						
TWD				*e*S	**Sn**	**17 18 22.1**	**-0.9**
	baz=216						
TAP1	**Taipei**	**0.76**	**306**	*e*P	**Pn**	**17 18 12.3**	**-0.6**
	baz=310						
TAP1				*e*S	**Sn**	**17 18 22.8**	**-0.5**
	baz=310						
NNS	**Nan Shan**	**0.77**	**259**	P	**Pn**	**17 18 12.8**	**-0.2**
	baz=260						
NNS				*e*S	**Sn**	**17 18 23.8**	**+0.3**
	baz=260						
NSK	**Sanguang**	**0.77**	**276⇑**	*i*P	**Pn**	**17 18 13.2**	**+0.1**
	baz=279						
NSK				S	**Sn**	**17 18 23.6**	**0.0**
	baz=279						
TWY	**Chenhua**	**0.87**	**321**	*e*P	**Pn**	**17 18 14.4**	**-0.1**
	baz=325						
TWY				*e*S	**Sn**	**17 18 26.0**	**-0.1**
	baz=325						
TWS1	**Kuangyinshan**	**0.88**	**306**	P	**Pn**	**17 18 14.1**	**-0.4**
	baz=318						
TWS1				S	**Sn**	**17 18 25.8**	**-0.2**
	baz=318						
WHF	**Hehuan Shan**	**0.96**	**243**	*e*P	**Pn**	**17 18 15.4**	**-0.3**
	baz=243						
WHF				*e*S	**Sn**	**17 18 28.2**	**0.0**
	baz=243						
TWT	**Tachien**	**0.99**	**250**	*e*P	**Pn**	**17 18 16.6**	**+0.5**
	baz=244						
TWT				*e*S	**Sn**	**17 18 28.6**	**-0.3**
	baz=244						
ESL	**Shilin**	**1.04**	**222**	*e*P	**Pn**	**17 18 15.6**	**-1.3**
	baz=232						
ESL				*e*S	**Sn**	**17 18 28.1**	**-2.1**
	baz=232						
NSTT	**Nanjuang**	**1.09**	**272**	P	**Pn**	**17 18 17.7**	**+0.2**
	baz=284						
NSTT				*e*S	**Sn**	**17 18 31.7**	**+0.3**
	baz=284						
TWQ1	**Liyutan**	**1.32**	**260**	*e*P	**Pn**	**17 18 20.6**	**0.0**
	baz=260						
EHY	**Hungye**	**1.35**	**217**	*e*P	**Pn**	**17 18 19.6**	**-1.4**
	baz=213						
SMLT	**Sun Moon Lake**	**1.38**	**240**	*e*P	**Pn**	**17 18 22.0**	**+0.6**
	baz=230						
SMLT				*e*S	**Sn**	**17 18 38.7**	**+0.2**
	baz=230						
TYC	**Yuchr**	**1.41**	**241**	*e*P	**Pn**	**17 18 22.3**	**+0.5**
	baz=232						
TYC				*e*S	**Sn**	**17 18 39.3**	**+0.2**
	baz=232						
IRIF	**Iriomote-Funau**	**1.42**	**100**	*e*S	**Sn**	**17 18 39.5**	**+0.2**
TWF1	**Yuli**	**1.48**	**214**	*e*P	**Pn**	**17 18 20.8**	**-2.1**
	baz=223						
TWF1				*e*S	**Sn**	**17 18 37.1**	**-3.9**
	baz=223						
JKRS	**Kuro-shima**	**1.68**	**102**	P	**Pn**	**17 18 26.1**	**+0.5**
JKRS				*e*S	**Sn**	**17 18 46.3**	**+0.3**
CHN5	**Tsauling**	**1.71**	**235**	*e*P	**Pn**	**17 18 25.9**	**0.0**
	baz=224						
CHN5				*e*S	**Sn**	**17 18 46.7**	**+0.1**
	baz=224						
WGK	**Gukeng**	**1.75**	**239**	*e*P	**Pn**	**17 18 27.2**	**+0.7**
	baz=229						
WGK				*e*S	**Sn**	**17 18 48.5**	**+1.0**
	baz=229						
ELDTW	**Lidau**	**1.77**	**218**	*e*P	**Pn**	**17 18 26.9**	**+0.1**
	baz=208						
ELDTW				*e*S	**Sn**	**17 18 45.0**	**-3.0**
	baz=208						
JIJ	**Ishigaki jima**	**1.78**	**97**	P	**Pn**	**17 18 26.8**	**-0.2**
JIJ				*e*S	**Sn**	**17 18 48.0**	**-0.4**
CHN4	**Tsaushan**	**1.92**	**230**	*e*P	**Pn**	**17 18 29.6**	**+0.7**
	baz=219						
CHN4				*e*S	**Sn**	**17 18 52.3**	**+0.5**
	baz=219						
WTP	**Ta-pu**	**1.98**	**228**	*e*P	**Pn**	**17 18 30.2**	**+0.6**
	baz=217						
WTP				*e*S	**Sn**	**17 18 53.6**	**+0.4**
	baz=217						
TWG	**Pinlang**	**2.04**	**211**	*e*P	**Pn**	**17 18 31.9**	**+1.3**
	baz=206						
TWK	**Hsinying**	**2.05**	**230**	*e*P	**Pn**	**17 18 31.1**	**+0.5**
	baz=219						
TWK				*e*S	**Sn**	**17 18 55.0**	**0.0**
	baz=219						
CHN1	**Nanshi**	**2.08**	**228**	*e*P	**Pn**	**17 18 31.7**	**+0.7**
	baz=227						
CHN1				*e*S	**Sn**	**17 18 55.9**	**+0.2**
	baz=227						
SGST	**Jiashian**	**2.11**	**225**	*e*P	**Pn**	**17 18 31.6**	**+0.1**
	baz=215						
SGST				*e*S	**Sn**	**17 18 56.3**	**-0.2**
	baz=215						
ECL	**Taimali**	**2.29**	**210**	*e*P	**Pn**	**17 18 34.3**	**+0.3**
	baz=208						
ECL				*e*S	**Sn**	**17 18 56.6**	**-4.3**
	baz=208						
SSD	**Sandimen**	**2.33**	**218**	*e*P	**Pn**	**17 18 35.6**	**+1.1**
	baz=217						
SSD				*e*S	**Sn**	**17 19 02.0**	**+0.1**
	baz=217						

IDC 24 17:20:43.1±5.9, 5°35S×152°32E, h52km±10km, mb3.3/4, mb1 3.4/4, mb1mx3.2/16, mbtmp3.3/4, Error ellipse: s-maj=186.5km s-min=24.3km az=108.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.73**	**229**	P	P	17 25 39.3	-1.5
	0.8nm,0.6s,baz=60,slow=9.9,SNR=9.5						
WRA				pP	pP	17 25 52.5	-0.3
	0.8nm,0.7s,baz=60,slow=9.4,SNR=3.4						
ASAR	**Alice Springs**	**25.42**	**222**	P	P	17 26 07.2	+1.1
	0.4nm,0.9s,baz=60,slow=9.5,SNR=6.4						
ASAR				pP	pP	17 26 20.2	+1.0
	0.2nm,0.8s,baz=58,slow=9.1,SNR=1.7						
MKAR	**Makanchi Array**	**80.43**	**319**	P	P	17 32 50.8	+1.6
	0.5nm,0.5s,baz=106,slow=6.1,SNR=4.6						
MKAR				pP	pP	17 33 04.0	-0.1
	0.6nm,0.7s,baz=119,slow=5.4,SNR=4.5						
ZALV	**Zalesovo Beam**	**81.34**	**326**	P	P	17 32 52.4	-1.6
	0.5nm,0.4s,baz=123,slow=5.3,SNR=2.7						

IDC 24 17:23:14.3±2.1, 7°39S×127°94E, h0km, mb3.6/1, mb1 3.6/4, mb1mx3.4/17, mbtmp3.4/4, ML3.1/3, Error ellipse: s-maj=107.0km s-min=27.8km az=73.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.88**	**192**	Pn	Pn	17 25 51.9	+0.5
	0.2nm,0.3s,baz=31,slow=12,SNR=4.2						
FITZ				Sn	Sn	17 27 47.7	-6.2
	0.1nm,0.3s,baz=90,slow=20,SNR=3.0						
WRA	**Warramunga Arr**	**13.94**	**154**	Pn	Pn	17 26 32.5	-0.7
	0.1nm,0.3s,baz=328,slow=14,SNR=7.0						
WRA				Sn	Sn	17 29 02.6	-6.1
	0.2nm,0.3s,baz=334,slow=22,SNR=5.3						
ASAR	**Alice Springs**	**17.16**	**161**	P	Pn	17 27 15.9	+0.2
	0.0nm,0.3s,baz=338,slow=11,SNR=4.2						
ASAR				S	Sn	17 30 21.8	-5.6
	0.1nm,0.3s,baz=319,slow=18,SNR=3.9						
MKAR	**Makanchi Array**	**67.45**	**328**	P	P	17 34 12.0	+0.1
	0.4nm,0.6s,baz=115,slow=7.0,SNR=3.9						

*ISK **24** 17:23:45.1, 37°14N×36°04E, h6km, MD2.8*
*DDA **24** 17:23:46.8, 37°20N×35°87E, h7km±5km, Md2.9*
*ISCJB **24** 17:23:46.8±0.7, 37°19N±0°04×35°89E±0°05, h5km±7km, Error ellipse: s-maj=6.4km s-min=5.9km az=166.1*
*CSEM **24** 17:23:47.3±0.3, 37°16N×35°85E, h13km±2km, MD2.8, Error ellipse: s-maj=6.2km s-min=5.4km az=76.0*

ISC 24 17:23:46.9±0.6, 37°19N±0°04×35°91E±0°05, h9km±7km, n18, σ1°9°05/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEYT	**Ceyhan**	**0.22**	**217**	PG	**Pg**	**17 23 50.9**	**-0.4**
CEYT				*e*SG	**Sg**	**17 23 55.1**	**+0.8**
CEYT	**Ceyhan**	**0.22**	**217**	*i* Pg	**Pg**	**17 23 50.9**	**-0.4**
CEYT				*e*Sg	**Sg**	**17 23 55.1**	**+0.8**
KOZT	**Kozan**	**0.30**	**347**	*e*PG	**Pg**	**17 23 53.0**	**+0.1**
KOZT				*e*SG	**Sg**	**17 23 58.6**	**+1.7**
YURE	**YUREGIR**	**0.42**	**212**	*i* P	**Pg**	**17 23 55.6**	**+0.5**
YURE				*i* S	**Sg**	**17 24 06.4**	**+5.8**
YURE	**YUREGIR**	**0.42**	**212**	*i* P	**Pg**	**17 23 55.6**	**+0.5**
KRTS	**Karatas**	**0.75**	**215**	*e*PG	**Pg**	**17 24 00.4**	**-0.8**
KRTS	**Karatas**	**0.75**	**215**	*e*Pg	**Pg**	**17 24 00.4**	**-0.8**
KMRS	**Kahramanmaras**	**0.85**	**68**	*e*PG	**Pg**	**17 24 01.2**	**-2.0**
GULE	**Gulek**	**0.91**	**277**	*i* P	**Pg**	**17 24 03.5**	**-0.9**
GULE				*i* S	**Sg**	**17 24 16.1**	**-0.1**
GULE	**Gulek**	**0.91**	**277**	*i* P	**Pg**	**17 24 03.5**	**-0.9**
GULE				*i* S	**Sg**	**17 24 16.1**	**-0.1**
KUZU	**Kuzuini**	**1.02**	**113**	*i* P	**Pb**	**17 24 07.1**	**+0.5**
KUZU				*i* S	**Sb**	**17 24 21.6**	**+1.5**
KUZU	**Kuzuini**	**1.02**	**113**	*i* P	**Pb**	**17 24 07.1**	**+0.4**
KUZU				*i* S	**Sb**	**17 24 21.6**	**+1.5**
GAZ	**Gaziantep**	**1.04**	**90**	*e*PG	**Pg**	**17 24 03.5**	**-3.3**
MERS	**Mersin**	**1.16**	**255**	*e*PN	**Pn**	**17 24 09.3**	**0.0**
MERS	**Mersin**	**1.16**	**255**	*e*Pn	**Pn**	**17 24 09.3**	**+0.1**
YAYL	**Yayladag**	**1.16**	**172**	*i* P	**Pb**	**17 24 08.1**	**-1.0**
YAYL				*i* S	**Sb**	**17 24 24.9**	**+0.7**
YAYL	**Yayladag**	**1.16**	**172**	*i* P	**Pb**	**17 24 08.1**	**-1.0**
YAYL				*i* S	**Sb**	**17 24 24.9**	**+0.7**
SARI	**SarD1z-Kayseri**	**1.61**	**22**	*e*PN	**Pn**	**17 24 10.7**	**-4.8**

*IDC **24** 17:38:15.9±1.0, 31°86N×104°43E, h0km, mb3.5/7, mb1 3.6/9, mb1mx3.5/26, mbtmp3.5/9, ML3.3/1, Error ellipse: s-maj=58.9km s-min=17.4km az=61.0*
*ISCJB **24** 17:38:15.2±1.0, 31°82N±0°05×104°53E±0°05, h8km±8km, mb3.6/7, Error ellipse: s-maj=9.5km s-min=5.8km az=142.0*
*NEIC **24** 17:38:17.5±0.6, 31°85N×104°50E, h10km, Error ellipse: s-maj=15.5km s-min=9.4km az=67.0*
*BJI **24** 17:38:20.5, 31°73N×104°26E, h9km, ML3.2/11*

ISC 24 17:38:17.0±0.9, 31°86N±0°04×104°41E±0°05, h5km±7km, n16, σ0°9°92/20, mb3.6/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.10**	**211**	Pg	**Pg**	**17 38 37.9**	**-0.2**
CD2				Sg	**Sg**	**17 38 52.4**	**+0.1**
CD2				smax			
	comp=N,1μm,0.6s						
LZH	**Lanzhou**	**4.25**	**354**	*e*Pg	**Pg**	**17 39 44.6**	**+6.2**
LZH				Sg	**Sg**	**17 40 32.5**	**-0.9**
LZH				smax			
	comp=N,70nm,0.5s						
LZH				smax			
	comp=E,66nm,0.5s						
LZH				LR	LR		
	comp=N,300nm,5.5s						
LZH				LR	LR		
	comp=Z,380nm,6.4s						
XAN	**Xi'an**	**4.37**	**59**	Pg	**Pg**	**17 39 40.3**	**-0.5**
XAN				Sg	**Sg**	**17 40 38.3**	**+0.8**
XAN				smax			
	comp=N,49nm,0.9s						
XAN				smax			
	comp=E,24nm,0.9s						
ENH	**Enshi**	**4.63**	**109**	*e*Pn	**Pn**	**17 39 25.6**	**-2.1**
ENH				*e*Sg	**Sg**	**17 40 46.1**	**+0.2**
CMAR	**Chiang Mai Arr**	**14.23**	**202**	Pn	**Pn**	**17 41 40.5**	**+1.4**
	baz=7.6,slow=9.1,SNR=2.5						
SONM	**Songino Array**	**16.03**	**5**	Pn	**Pn**	**17 42 04.7**	**+1.7**
	comp=E,0.1nm,0.3s,baz=182,slow=13,SNR=2.9						
SONM	**Songino Array**	**16.03**	**5**	Pn	**Pn**	**17 42 04.7**	**+1.7**
ULN	**Ulaanbaatar**	**16.11**	**6**	P	**Pn**	**17 42 05.1**	**+0.9**
MK31	**Makanchi Array**	**22.59**	**318**	P	**P**	**17 43 18.0**	**-0.2**
MKAR	**Makanchi Array**	**22.59**	**318**	P	**P**	**17 43 18.1**	**-0.1**
	comp=E,0.9nm,0.8s,mb3.2,baz=102,slow=12,SNR=7.1						
ZALV	**Zalesovo Beam**	**26.16**	**333**	P	**P**	**17 43 52.5**	**+0.5**
	comp=E,0.4nm,0.3s,mb3.4,baz=111,slow=7.9,SNR=3.7						
KURK	**Kurchatov**	**26.81**	**322**	P	**P**	**17 43 58.1**	**+0.2**
	comp=E,0.6nm,0.9s,mb3.1,baz=132,slow=9.2,SNR=3.5						
FINES	**FINESS Array B**	**57.09**	**326**	P	**P**	**17 48 03.6**	**-0.3**
	comp=E,2.6nm,0.8s,mb4.3,baz=90,slow=4.2,SNR=3.9						
WRA	**Warramunga Arr**	**58.95**	**147**	P	**P**	**17 48 18.3**	**+0.8**
	comp=E,0.3nm,0.5s,mb3.5,baz=340,slow=7.9,SNR=5.8						
ASAR	**Alice Springs**	**62.00**	**149**	P	**P**	**17 48 36.8**	**-1.4**
	comp=E,0.6nm,1.0s,mb3.7,baz=335,slow=6.7,SNR=3.7						
NOA	**NORSAR Array B**	**64.17**	**327**	P	**P**	**17 48 51.0**	**-1.2**
	comp=E,0.8nm,0.8s,mb3.8,baz=54,slow=10,SNR=3.0						

*IDC **24** 18:14:50.9±1.1, 38°28N×21°56E, h0km, mb3.8/11, mb1 3.8/13, mb1mx3.7/28, mbtmp3.8/13, ML3.7/2, Error ellipse: s-maj=24.2km s-min=19.7km az=60.0*
*CSEM **24** 18:14:52.9±0.1, 38°17N×21°62E, h12km, ML3.5, Error ellipse: s-maj=3.9km s-min=3.0km az=31.0*
*ATH **24** 18:14:52.4, 38°15N×21°68E, h20km, MD3.5/12, ML3.5*
*ISCJB **24** 18:14:52.8±0.4, 38°14N±0°02×21°60E±0°02, h23km±3km, mb3.8/14, Error ellipse: s-maj=3.3km s-min=2.7km az=33.4*
*THE **24** 18:14:53.5, 38°14N×21°68E, h12km±1km, ML4.1/18, Error ellipse: s-maj=1.4km s-min=0.9km az=225.0*
*NEIC **24** 18:14:53.8, 38°18N×21°61E, h5km, mb4.0/3, ML3.6(ATH), After ATH.*

ISC 24 18:14:53.4±0.4, 38°16N±0°02×21°64E±0°02, h14km±2km, n181, σ1°9°00/250, mb3.8/14, 2C-2D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.17**	**233**	*e*Pb	**Pg**	**18 14 57.5**	**0.0**
RLS				*e*Sb	**Sg**	**18 15 01.3**	**+1.0**
RLS	**Riolos of Patr**	**0.17**	**233**	*e*PB	**Pg**	**18 14 57.5**	**0.0**
RLS				*e*SB	**Sg**	**18 15 01.3**	**+1.0**
RLS	**Riolos of Patr**	**0.17**	**233**	*e*Pb	**Pg**	**18 14 57.5**	**0.0**
LAKA	**Lakka**	**0.28**	**73**	P	**Pg**	**18 14 59.1**	**-0.2**
LAKA	**Lakka**	**0.28**	**73**	P	**Pg**	**18 14 59.1**	**-0.2**
TRIZ	**Trizonia**	**0.40**	**59**	P	**Pg**	**18 15 01.0**	**-0.4**
TRIZ				S	**Sg**	**18 15 07.0**	**+0.2**
TRIZ	**Trizonia**	**0.40**	**59**	P	**Pg**	**18 15 01.0**	**-0.4**
TRIZ				S	**Sg**	**18 15 07.0**	**+0.2**
KALE	**Kalithea**	**0.46**	**59**	P	**Pg**	**18 15 01.9**	**-0.6**
KALE				S	**Sg**	**18 15 08.9**	**+0.3**
KALE	**Kalithea**	**0.46**	**59**	P	**Pg**	**18 15 01.9**	**-0.6**
KALE				S	**Sg**	**18 15 08.9**	**+0.3**
EVR	**Evrytania**	**0.77**	**10**	*e*Pn	**Pg**	**18 15 07.4**	**-0.9**
EVR				*e*Sn	**Sg**	**18 15 18.7**	**+0.3**
EVR	**Evrytania**	**0.77**	**10**	*e*PN	**Pg**	**18 15 07.4**	**-0.9**
EVR				*e*SN	**Sg**	**18 15 18.7**	**+0.3**
EVR	**Evrytania**	**0.77**	**10**	*e*Pn	**Pg**	**18 15 07.4**	**-0.9**
EVR				*e*Sn	**Sg**	**18 15 18.7**	**+0.3**
VLS	**Valsamata**	**0.83**	**271**	*e*Pn	**Pg**	**18 15 08.8**	**-0.7**
VLS				*e*Sn	**Sg**	**18 15 21.7**	**+1.4**
VLS	**Valsamata**	**0.83**	**271**	P	**Pg**	**18 15 07.8**	**-1.7**
VLS				S	**Sg**	**18 15 21.7**	**+1.4**
VLS	**Valsamata**	**0.83**	**271**	*e*PN	**Pg**	**18 15 08.8**	**-0.7**
VLS				*e*SN	**Sg**	**18 15 21.7**	**+1.4**
VLS	**Valsamata**	**0.83**	**271**	P	**Pg**	**18 15 07.8**	**-1.7**
VLS	**Valsamata**	**0.83**	**271**	*e*Pn	**Pg**	**18 15 08.8**	**-0.7**
VLS				S	**Sg**	**18 15 21.7**	**+1.4**
AGG	**Agios Georgios**	**1.02**	**32**	*e*Pn	**Pg**	**18 15 11.4**	**-1.6**
AGG	**Agios Georgios**	**1.02**	**32**	P	**Pg**	**18 15 11.2**	**-1.8**
AGG				S	**Sg**	**18 15 25.8**	**-0.5**
AGG	**Agios Georgios**	**1.02**	**32**	*e*PN	**Pg**	**18 15 11.4**	**-1.6**
AGG	**Agios Georgios**	**1.02**	**32**	P	**Pg**	**18 15 11.2**	**-1.8**
AGG				S	**Sg**	**18 15 25.8**	**-0.5**
LKR	**Lokris**	**1.17**	**65**	*e*Pn	**Pn**	**18 15 13.9**	**-1.5**
LKR				*e*Sn	**Sn**	**18 15 30.4**	**-0.8**
LKR	**Lokris**	**1.17**	**65**	P	**Pn**	**18 15 15.1**	**-0.3**
LKR				S	**Sb**	**18 15 30.7**	**+0.1**
LKR	**Lokris**	**1.17**	**65**	*e*PN	**Pn**	**18 15 13.9**	**-1.5**
LKR				*e*SN	**Sn**	**18 15 30.4**	**-0.8**
LKR	**Lokris**	**1.17**	**65**	*e*Pn	**Pn**	**18 15 13.9**	**-1.5**
LKR	**Lokris**	**1.17**	**65**	P	**Pn**	**18 15 15.1**	**-0.3**
LKR				*e*Sn	**Sn**	**18 15 30.4**	**-0.8**
LKR				S	**Sb**	**18 15 30.7**	**+0.1**
ATAL	**Atalanti**	**1.21**	**63**	P	**Pn**	**18 15 14.4**	**-1.5**
ATAL				S	**Sb**	**18 15 31.9**	**+0.4**
ATAL	**Atalanti**	**1.21**	**63**	P	**Pn**	**18 15 14.4**	**-1.5**
ATAL				S	**Sb**	**18 15 31.9**	**+0.4**
THL	**Klokotos Trika**	**1.43**	**12**	P	**Pn**	**18 15 18.9**	**-0.1**
THL				S	**Sn**	**18 15 39.3**	**+1.7**
THL	**Klokotos Trika**	**1.43**	**12**	*e*PN	**Pn**	**18 15 19.0**	**0.0**
THL				*e*SN	**Sn**	**18 15 38.7**	**+1.1**
THL	**Klokotos Trika**	**1.43**	**12**	P	**Pn**	**18 15 18.9**	**-0.1**
THL				*e*Sn	**Sn**	**18 15 38.7**	**+1.1**
THL				S	**Sn**	**18 15 39.3**	**+1.7**
NAIG	**Nisos Aigina**	**1.52**	**105**	*e*Pn	**Pn**	**18 15 19.8**	**-0.3**
NAIG	**Nisos Aigina**	**1.52**	**105**	*e*PN	**Pn**	**18 15 19.8**	**-0.3**
NAIG	**Nisos Aigina**	**1.52**	**105**	*e*Pn	**Pn**	**18 15 19.8**	**-0.3**
JAN	**Janina**	**1.62**	**338**	*e*Pn	**Pn**	**18 15 22.4**	**+0.9**
JAN	**Janina**	**1.62**	**338**	*e*PN	**Pn**	**18 15 22.4**	**+0.9**
JAN	**Janina**	**1.62**	**338**	*e*Pn	**Pn**	**18 15 22.4**	**+0.9**
ATH	**Athens Observa**	**1.65**	**96**	*e*Pn	**Pn**	**18 15 22.1**	**+0.1**
ATH	**Athens Observa**	**1.65**	**96**	*e*PN	**Pn**	**18 15 22.1**	**+0.1**
ATH	**Athens Observa**	**1.65**	**96**	*e*Pn	**Pn**	**18 15 22.1**	**+0.1**
NEO	**Neokhori**	**1.69**	**47**	*e*Pn	**Pn**	**18 15 22.7**	**+0.2**
NEO	**Neokhori**	**1.69**	**47**	*e*PN	**Pn**	**18 15 22.7**	**+0.2**
NEO	**Neokhori**	**1.69**	**47**	*e*Pn	**Pn**	**18 15 22.7**	**+0.2**
ATHU	**Athens Univers**	**1.70**	**96**	P	**Pn**	**18 15 22.5**	**-0.2**
ATHU				S	**Sn**	**18 15 44.3**	**0.0**
ATHU	**Athens Univers**	**1.70**	**96**	P	**Pn**	**18 15 22.5**	**-0.2**
ATHU				S	**Sn**	**18 15 44.3**	**0.0**
IGT	**Igoumenitsa**	**1.71**	**324**	P	**Pn**	**18 15 23.8**	**+1.0**
IGT				S	**Sn**	**18 15 45.9**	**+1.5**
IGT	**Igoumenitsa**	**1.71**	**324**	P	**Pn**	**18 15 23.8**	**+1.0**
IGT				S	**Sn**	**18 15 45.9**	**+1.5**
XOR	**Xorichti**	**1.71**	**45**	P	**Pn**	**18 15 22.2**	**-0.6**
XOR				S	**Sn**	**18 15 44.7**	**+0.3**
XOR	**Xorichti**	**1.71**	**45**	P	**Pn**	**18 15 22.2**	**-0.6**
XOR				S	**Sn**	**18 15 44.7**	**+0.3**
VLY	**Voula,Athens**	**1.73**	**100**	P	**Pn**	**18 15 23.0**	**0.0**
VLY	**Voula,Athens**	**1.73**	**100**	P	**Pn**	**18 15 23.0**	**0.0**
PTL	**Penteli**	**1.76**	**93**	*e*Pn	**Pn**	**18 15 23.1**	**-0.3**
PTL	**Penteli**	**1.76**	**93**	*e*PN	**Pn**	**18 15 23.1**	**-0.3**
PTL	**Penteli**	**1.76**	**93**	*e*Pn	**Pn**	**18 15 23.1**	**-0.3**
AOS	**Alonnisos**	**2.02**	**59**	P	**Pn**	**18 15 26.4**	**-0.7**
AOS				S	**Sn**	**18 15 51.3**	**-0.8**
AOS	**Alonnisos**	**2.02**	**59**	P	**Pn**	**18 15 26.4**	**-0.7**
AOS				S	**Sn**	**18 15 51.3**	**-0.8**
KEK	**Kerkira**	**2.11**	**318**	*e*Pb	**Pn**	**18 15 29.9**	**+0.8**
KEK	**Kerkira**	**2.11**	**318**	P	**Pn**	**18 15 29.1**	**+0.8**
KEK				S	**Sn**	**18 15 55.1**	**+0.7**
KEK	**Kerkira**	**2.11**	**318**	*e*PB	**Pn**	**18 15 29.1**	**+0.8**
KEK	**Kerkira**	**2.11**	**318**	P	**Pn**	**18 15 29.1**	**+0.8**
KEK				S	**Sn**	**18 15 55.1**	**+0.7**
SRN	**Sarande**	**2.14**	**324**	PN	**Pn**	**18 15 29.8**	**+1.1**
SRN				SN	Sx	18 16 45.6	
KZN	**Kozani**	**2.15**	**3**	*e*Pn	**Pn**	**18 15 30.1**	**+1.3**
KZN	**Kozani**	**2.15**	**3**	P	**Pn**	**18 15 30.2**	**+1.4**
KZN	**Kozani**	**2.15**	**3**	*e*PN	**Pn**	**18 15 30.1**	**+1.3**
KZN	**Kozani**	**2.15**	**3**	*e*Pn	**Pn**	**18 15 30.1**	**+1.3**
PAIG	**Paliouri**	**2.37**	**41**	P	**Pn**	**18 15 32.6**	**+0.7**
PAIG	**Paliouri**	**2.37**	**41**	P	**Pn**	**18 15 31.3**	**-0.6**
PAIG				S	**Sn**	**18 16 01.5**	**+0.7**
PAIG	**Paliouri**	**2.37**	**41**	P	**Pn**	**18 15 31.3**	**-0.6**
PAIG				S	**Sn**	**18 16 01.5**	**+0.7**
KBN	**Korca**	**2.55**	**345**	PN	**Pn**	**18 15 35.9**	**+1.6**
KBN	**Korca**	**2.55**	**345**	*e*Pn	**Pn**	**18 15 35.9**	**+1.6**
PLG	**Polygyros**	**2.62**	**32**	P	**Pn**	**18 15 37.1**	**+1.8**
PLG	**Polygyros**	**2.62**	**32**	P	**Pn**	**18 15 35.6**	**+0.3**
PLG				S	**Sn**	**18 16 07.1**	**+0.3**
PLG	**Polygyros**	**2.62**	**32**	P	**Pn**	**18 15 35.6**	**+0.3**
PLG				S	**Sn**	**18 16 07.1**	**+0.3**
FNA	**Florina**	**2.63**	**356**	P	**Pn**	**18 15 37.0**	**+1.6**
FNA	**Florina**	**2.63**	**356**	P	**Pn**	**18 15 37.1**	**+1.7**
FNA				S	**Sn**	**18 16 11.2**	**+4.1**
FNA	**Florina**	**2.63**	**356**	P	**Pn**	**18 15 37.0**	**+1.6**
FNA				S	**Sn**

LAST				S	Sn	18 16 48.6	+0.3
LAST	**Lasithi**	**4.30**	**133**	P	Pn	18 15 58.5	+0.1
LAST				S	Sn	18 16 48.6	+0.3
BCI	**Bajram Curri**	**4.37**	**345**	PN	Pn	18 15 56.9	-2.4
BCI	**Bajram Curri**	**4.37**	**345**	*e*Pn	Pn	18 15 56.9	-2.4
CEL	**Celeste**	**4.53**	**273**	*e*Pn	Pn	18 15 59.9	-1.6
CEL				*e*Sn	Sn	18 16 52.5	-1.5
CEL	**Celeste**	**4.53**	**273**	*e*Pn	Pn	18 15 59.9	-1.6
CEL				*e*Sn	Sn	18 16 52.5	-1.4
VTS	**Vitosha**	**4.58**	**15**	P	Pn	18 16 03.6	+1.3
VTS	**Vitosha**	**4.58**	**15**	P	Pn	18 16 03.6	+1.3
BARS	**Barje**	**4.65**	**2**	⇓*i*Pn	Pn	18 16 04.4	+1.2
SG1	**Sgolgore (BA)**	**4.68**	**306**	*e*Pn	Pn	18 16 04.1	+0.5
SG1				*e*Sn	Sn	18 16 57.9	+0.3
ZKR	**Zakros**	**4.77**	**128**	P	Pn	18 16 05.9	+1.0
ZKR	**Zakros**	**4.77**	**128**	P	Pn	18 16 05.9	+1.0
NISS		**5.24**	**2**	⇓*i*Pn	Pn	18 16 10.7	-0.6
STON	**Ston**	**5.58**	**329**	*e*Pn	Pn	18 16 15.1	-0.9
STON				Sn	Sn	18 17 16.5	-3.4
STON	**Ston**	**5.58**	**329**	*e*Pn	Pn	18 16 15.1	-0.9
BBLS	**Lazići**	**5.95**	**344**	⇑*i*Pn	Pn	18 16 20.3	-0.7
DIVS	**Divibare**	**6.06**	**349**	P	Pn	18 16 22.0	-0.6
DIVS	**Divibare**	**6.06**	**349**	P	Pn	18 16 22.0	-0.6
DIVS	**Divibare**	**6.06**	**349**	⇑*i*Pn	Pn	18 16 22.5	-0.1
MLR	**Muntele Rosu**	**8.00**	**22**	Pn	Pn	18 16 55.8	+6.7
	0.1nm,0.3s,baz=184,slow=12,SNR=3.4						
BOJS	**Bojanci**	**8.75**	**329**	*i* Pn	Pn	18 16 58.8	-0.6
BOJS				*i* Sn	Sn	18 18 33.9	-3.9
BOJS	**Bojanci**	**8.75**	**329**	*i* Pn	Pn	18 16 58.8	-0.6
VISS	**Visnje**	**9.16**	**329**	*i* Pn	Pn	18 17 04.5	-0.6
VISS				*i* Sn	Sn	18 18 43.4	-4.5
VISS	**Visnje**	**9.16**	**329**	*i* Pn	Pn	18 17 04.4	-0.7
BR131	**Keskin Array S**	**9.48**	**77**	*e*Pn	Pn	18 17 11.2	+1.7
BR131	**Keskin Array S**	**9.48**	**77**	*e*Pn	Pn	18 17 11.2	+1.7
JAVS	**Javornik**	**9.56**	**326**	*i* Pn	Pn	18 17 09.2	-1.3
JAVS				*i* Sn	Sn	18 18 50.5	-7.2
JAVS	**Javornik**	**9.56**	**326**	*i* Pn	Pn	18 17 09.2	-1.4
PSZ	**Piszkesteto**	**9.84**	**353**	Pn	Pn	18 17 13.3	-1.0
PSZ	**Piszkesteto**	**9.84**	**353**	Pn	Pn	18 17 13.3	-1.0
VRAC	**Vranov**	**11.72**	**344**	Pn	Pn	18 17 39.1	-1.0
	0.2nm,0.3s,baz=203,slow=13,SNR=3.0						
VRAC	**Vranov**	**11.72**	**344**	Pn	Pn	18 17 39.1	-1.0
HFS	**Hagfors**	**22.57**	**350**	P	**P**	18 19 51.3	-1.6
	2.5nm,0.8s,mb3.7,baz=161,slow=11,SNR=3.1						
HFS	**Hagfors**	**22.57**	**350**	P	**P**	18 19 51.3	-1.6
FINES	**FINESS Array B**	**23.47**	**5**	P	**P**	18 19 59.1	-3.4
	3.7nm,1.0s,mb3.8,baz=176,slow=11,SNR=4.2						
NB2	**NORSAR Subarra**	**23.82**	**347**	P	**P**	18 20 03.8	-1.9
	comp=Z,1.8nm,1.0s,mb3.5,baz=153,slow=10						
NB2	**NORSAR Subarra**	**23.82**	**347**	P	**P**	18 20 03.8	-1.9
	comp=Z,1.8nm,1.0s,mb3.5,SNR=4.2						
NOA	**NORSAR Array B**	**23.82**	**347**	P	**P**	18 20 04.1	-1.5
	comp=Z,0.7nm,0.8s,mb3.2,baz=165,slow=11,SNR=4.2						
NOA	**NORSAR Array B**	**23.82**	**347**	P	**P**	18 20 04.2	-1.5
EKA	**Eskdalemuir Ar**	**23.96**	**324**	P	**P**	18 20 06.3	-0.7
	comp=Z,1.8nm,0.7s,mb3.6,baz=125,slow=10,SNR=4.8						
EKA	**Eskdalemuir Ar**	**23.96**	**324**	P	**P**	18 20 06.3	-0.7
ESK	**Eskdalemuir**	**23.97**	**324**	P	**P**	18 20 08.2	+1.1
	comp=Z,4.8nm,0.8s,mb4.0						
ESK	**Eskdalemuir**	**23.97**	**324**	P	**P**	18 20 08.2	+1.1
	comp=Z,4.8nm,0.8s,mb4.0						
TORD	**Torodi Ar. Bea**	**30.58**	**221**	P	**P**	18 21 06.4	-0.4
	comp=Z,0.4nm,0.6s,mb3.5,baz=33,slow=9.7,SNR=4.6						
ARCES	**ARCESS Array B**	**31.50**	**3**	P	**P**	18 21 13.5	-0.9
	comp=Z,2.8nm,1.0s,mb4.1,baz=193,slow=7.4,SNR=3.8						
ARCES	**ARCESS Array B**	**31.50**	**3**	P	**P**	18 21 13.5	-1.0
BVAR	**Borovoye Array**	**36.45**	**50**	P	**P**	18 21 57.9	+0.3
	comp=Z,0.4nm,0.5s,mb3.6,baz=244,slow=8.1,SNR=3.4						
BVAR	**Borovoye Array**	**36.45**	**50**	P	**P**	18 21 57.9	+0.3
EKS2	**Erkin-Say**	**39.44**	**66**	*e*P	**P**	18 22 23.2	+0.3
	comp=Z,3.1nm,0.9s,mb4.0						
EKS2	**Erkin-Say**	**39.44**	**66**	*e*P	**P**	18 22 23.2	+0.3
	comp=Z,3.1nm,0.9s,mb4.0						
KURK	**Kurchatov**	**41.58**	**53**	*e*P	**P**	18 22 40.2	-0.3
	comp=Z,2.3nm,0.9s,mb3.8						
KURK				*e*		18 22 52.7	
KURK	**Kurchatov**	**41.58**	**53**	*e*P	**P**	18 22 40.2	-0.3
MK31	**Makanchi Array**	**44.56**	**59**	*e*P	**P**	18 23 03.4	-1.3
MK31	**Makanchi Array**	**44.56**	**59**	*e*P	**P**	18 23 03.4	-1.3
MKAR	**Makanchi Array**	**44.56**	**59**	P	**P**	18 23 03.5	-1.2
	comp=Z,1.4nm,0.5s,mb4.0,baz=297,slow=5.3,SNR=9.9						
MKAR	**Makanchi Array**	**44.56**	**59**	P	**P**	18 23 03.5	-1.2
ZAA0	**Zalesovo Array**	**45.05**	**48**	*e*P	**P**	18 23 08.2	-0.3
ZAA0	**Zalesovo Array**	**45.05**	**48**	*e*P	**P**	18 23 08.2	-0.3
ZALV	**Zalesovo Beam**	**45.05**	**48**	P	**P**	18 23 07.2	-1.3
	comp=Z,3.1nm,0.5s,mb4.4,baz=275,slow=8.3,SNR=13						
ZALV	**Zalesovo Beam**	**45.05**	**48**	P	**P**	18 23 07.2	-1.3
SONM	**Songino Array**	**59.79**	**51**	P	**P**	18 24 58.2	+0.3
	comp=Z,0.6nm,0.7s,mb3.7,baz=276,slow=7.7,SNR=5.0						
SONM	**Songino Array**	**59.79**	**51**	P	**P**	18 24 58.2	+0.3
KSRS	**Korea Array**	**78.66**	**51**	P	**P**	18 26 54.8	-0.2
	comp=Z,0.4nm,0.4s,mb3.7,baz=294,slow=4.9,SNR=3.2						

*NEIC **24** 18:24:29.6, 36°.02N×21°.39E, h3km, MD3.6(ATH), After ATH.*
*CSEM **24** 18:24:33.8±0.3, 36°.19N×21°.66E, h2km, ML3.6/9, Error ellipse: s-maj=6.9km s-min=3.5km az=54.0*
*ISCJB **24** 18:24:34.4±0.7, 36°.20N±0°.03×21°.71E±0°.05, h10km, Error ellipse: s-maj=7.0km s-min=3.6km az=149.4*
*THE **24** 18:24:35.5, 36°.25N×21°.82E, h0km±1km, ML3.6/9, Error ellipse: s-maj=3.1km s-min=0.9km az=240.0*
*ATH **24** 18:24:36.2, 36°.27N×21°.80E, h36km±4km, MD3.7/8*
ISC 24 18:24:34.9±0.7, 36°.19N±0°.03×21°.68E±0°.05, h10km, n54, σ0°.99/83, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**1.10**	**85**	*e*Pb	**Pg**	**18 24 55.2**	**-0.9**
KYTH	**Kithira**	**1.10**	**85**	*e*PN	**Pg**	**18 24 55.3**	**-0.8**
KYTH	**Kithira**	**1.10**	**85**	*e*Pb	**Pg**	**18 24 55.2**	**-0.9**
VLI	**Veliai**	**1.15**	**62**	*e*PN	**Pg**	**18 24 55.3**	**-1.6**
VLI				*e*SN	**Sg**	**18 25 09.8**	**-2.0**
RLS	**Riolos of Patr**	**1.87**	**355**	*e*Pn	**Pn**	**18 25 06.8**	**-0.2**
RLS	**Riolos of Patr**	**1.87**	**355**	*e*PB	**Pn**	**18 25 07.1**	**+0.1**
RLS	**Riolos of Patr**	**1.87**	**355**	*e*Pn	**Pn**	**18 25 06.8**	**-0.2**
KARN	**Karanos**	**1.98**	**113**	P	**Pn**	**18 25 08.6**	**+0.1**
KARN				S	**Sn**	**18 25 34.1**	**+0.7**
KARN	**Karanos**	**1.98**	**113**	*e*PN	**Pn**	**18 25 08.6**	**+0.1**
KARN	**Karanos**	**1.98**	**113**	P	**Pn**	**18 25 08.6**	**+0.1**
KARN				S	**Sn**	**18 25 34.1**	**+0.7**
LAKA	**Lakka**	**2.06**	**7**	P	**Pn**	**18 25 10.4**	**+0.8**
LAKA				S	**Sn**	**18 25 36.7**	**+1.3**
LAKA	**Lakka**	**2.06**	**7**	P	**Pn**	**18 25 10.4**	**+0.8**
LAKA				S	**Sn**	**18 25 36.7**	**+1.3**
NAIG	**Nisos Aigina**	**2.14**	**42**	*e*PB	**Pn**	**18 25 10.1**	**-0.5**
VLS	**Valsamata**	**2.17**	**337**	*e*Pn	**Pn**	**18 25 10.1**	**-0.9**
VLS	**Valsamata**	**2.17**	**337**	P	**Pn**	**18 25 11.0**	**0.0**
VLS				S	**Sn**	**18 25 40.8**	**+2.9**
VLS	**Valsamata**	**2.17**	**337**	*e*PN	**Pn**	**18 25 11.5**	**+0.5**
VLS				*e*SN	**Sn**	**18 25 37.5**	**-0.4**
VLS	**Valsamata**	**2.17**	**337**	*e*Pn	**Pn**	**18 25 10.1**	**-0.9**
VLS	**Valsamata**	**2.17**	**337**	P	**Pn**	**18 25 11.0**	**0.0**
VAM	**Vamos**	**2.19**	**110**	*e*Pn	**Pn**	**18 25 11.8**	**+0.4**
VAM	**Vamos**	**2.19**	**110**	*e*PN	**Pn**	**18 25 11.8**	**+0.4**
VAM	**Vamos**	**2.19**	**110**	*e*Pn	**Pn**	**18 25 11.8**	**+0.4**
TRIZ	**Trizonia**	**2.20**	**8**	P	**Pn**	**18 25 11.5**	**+0.1**
TRIZ				S	**Sn**	**18 25 39.9**	**+1.2**
TRIZ	**Trizonia**	**2.20**	**8**	P	**Pn**	**18 25 11.5**	**+0.1**
TRIZ				S	**Sn**	**18 25 39.9**	**+1.2**
KALE	**Kalithea**	**2.23**	**9**	P	**Pn**	**18 25 12.6**	**+0.7**
KALE				S	**Sn**	**18 25 41.2**	**+1.7**
KALE	**Kalithea**	**2.23**	**9**	P	**Pn**	**18 25 12.6**	**+0.7**
KALE				S	**Sn**	**18 25 41.2**	**+1.7**
VLY	**Voula,Athens**	**2.37**	**45**	*e*PN	**Pn**	**18 25 12.1**	**-1.8**
GVD	**Gavdhos**	**2.38**	**124**	P	**Pn**	**18 25 15.2**	**+1.2**
GVD				S	**Sn**	**18 25 44.5**	**+1.2**
GVD	**Gavdhos**	**2.38**	**124**	*e*PN	**Pn**	**18 25 14.3**	**+0.3**
GVD	**Gavdhos**	**2.38**	**124**	P	**Pn**	**18 25 15.2**	**+1.2**
GVD				S	**Sn**	**18 25 44.5**	**+1.2**
ATHU	**Athens Univers**	**2.45**	**43**	P	**Pn**	**18 25 13.8**	**-1.1**
ATHU				S	**Sn**	**18 25 44.7**	**-0.2**
ATHU	**Athens Univers**	**2.45**	**43**	P	**Pn**	**18 25 13.8**	**-1.1**
ATHU				S	**Sn**	**18 25 44.7**	**-0.2**
LKR	**Lokris**	**2.67**	**23**	P	**Pn**	**18 25 17.1**	**-0.9**
LKR				S	**Sn**	**18 25 51.1**	**+0.6**
LKR	**Lokris**	**2.67**	**23**	*e*PN	**Pn**	**18 25 17.5**	**-0.5**
LKR	**Lokris**	**2.67**	**23**	P	**Pn**	**18 25 17.1**	**-0.9**
LKR				S	**Sn**	**18 25 51.1**	**+0.6**
ATAL	**Atalanti**	**2.72**	**23**	P	**Pn**	**18 25 18.1**	**-0.5**
ATAL				S	**Sn**	**18 25 51.8**	**+0.2**
ATAL	**Atalanti**	**2.72**	**23**	P	**Pn**	**18 25 18.1**	**-0.5**
ATAL				S	**Sn**	**18 25 51.8**	**+0.2**
IDI	**Anoyia**	**2.77**	**108**	*e*PN	**Pn**	**18 25 19.4**	**+0.2**
AGG	**Agios Georgios**	**2.88**	**10**	*e*Pn	**Pn**	**18 25 22.0**	**+1.2**
AGG	**Agios Georgios**	**2.88**	**10**	P	**Pn**	**18 25 21.0**	**+0.2**
AGG				S	**Sn**	**18 25 55.1**	**-0.3**
AGG	**Agios Georgios**	**2.88**	**10**	*e*PN	**Pn**	**18 25 21.3**	**+0.5**
AGG	**Agios Georgios**	**2.88**	**10**	P	**Pn**	**18 25 21.0**	**+0.2**
AGG	**Agios Georgios**	**2.88**	**10**	*e*Pn	**Pn**	**18 25 22.0**	**+1.2**
AGG				S	**Sn**	**18 25 55.1**	**-0.3**
APE	**Apeiranthos**	**3.22**	**73**	*e*PN	**Pn**	**18 25 24.5**	**-1.0**
LAST	**Lasithi**	**3.26**	**107**	P	**Pn**	**18 25 25.9**	**-0.2**
LAST				S	**Sn**	**18 26 06.5**	**+1.6**
LAST	**Lasithi**	**3.26**	**107**	*e*PN	**Pn**	**18 25 25.8**	**-0.3**
LAST	**Lasithi**	**3.26**	**107**	P	**Pn**	**18 25 25.9**	**-0.2**
LAST				S	**Sn**	**18 26 06.5**	**+1.6**
THL	**Klokotos Trika**	**3.38**	**4**	*e*PN	**Pn**	**18 25 27.1**	**-0.6**
XOR	**Xorichti**	**3.39**	**20**	P	**Pn**	**18 25 28.3**	**+0.4**
XOR				S	**Sn**	**18 26 09.2**	**+1.0**
XOR	**Xorichti**	**3.39**	**20**	P	**Pn**	**18 25 28.3**	**+0.4**
XOR				S	**Sn**	**18 26 09.2**	**+1.0**
AOS	**Alonnisos**	**3.45**	**30**	P	**Pn**	**18 25 28.2**	**-0.5**
AOS				S	**Sn**	**18 26 09.8**	**+0.2**
AOS	**Alonnisos**	**3.45**	**30**	P	**Pn**	**18 25 28.2**	**-0.5**
AOS				S	**Sn**	**18 26 09.8**	**+0.2**
TIP	**Timpagrande**	**4.91**	**309**	*e*Pn	**Pn**	**18 25 47.8**	**-1.0**
TIP				*e*Sn	**Sn**	**18 26 38.3**	**-7.3**
TIP	**Timpagrande**	**4.91**	**309**	*e*Pn	**Pn**	**18 25 47.8**	**-0.9**
STON	**Ston**	**7.35**	**337**	*e*Pn	**Pn**	**18 26 19.1**	**-3.1**
STON				Sn	**Sn**	**18 27 36.6**	**-9.0**

*IDC **24** 18:26:46.4±0.4, 40°.00N×70°.83E, h0km, mb4.7/28, mb1 4.8/35, mb1mx4.8/38, mbtmp4.7/35, ML4.4/6, MS4.1/19, Ms1 4.1/19, ms1mx3.8/35, Error ellipse: s-maj=9.9km s-min=7.1km az=152.0*
*ISCJB **24** 18:26:46.2±0.7, 40°.03N±0°.02×70°.82E±0°.02, h9km±4km, mb4.9/228, MS4.2/54, Error ellipse: s-maj=3.3km s-min=2.5km az=17.7*
*NNC **24** 18:26:49.1±3.0, 40°.08N×70°.76E, h0km, mb5.4, mpv5.2, Error ellipse: s-maj=27.4km s-min=16.3km az=17.0*
*SZGRF **24** 18:26:49.8, 39°.84N×70°.95E, h33km, mb4.9, MS4.2, Tajikistan*
*MOS **24** 18:26:49.7±0.9, 40°.03N×70°.82E, h33km, mb5.2/97, MS4.2/41, Error ellipse: s-maj=6.0km s-min=3.6km az=44.1*
*BJI **24** 18:26:51.1, 40°.24N×70°.80E, h43km, mB4.9/27, mb4.7/40, ML4.8/4, Ms4.5/35, Ms7 4.3/35*
*NEIC **24** 18:26:53.0±0.4, 40°.04N×70°.84E, h49km±4km, mb5.0/138, Error ellipse: s-maj=3.5km s-min=2.3km az=186.0*
NEIC Felt at Tashkent, Uzbekistan.
*BGS **24** 18:26:55.0±1.4, 40°.55N×70°.96E, h49km, mb4.9*
ISC 24 18:26:48.7±0.7, 40°.10N±0°.02×70°.85E±0°.02, h13km±4km, h34km±2.0km: pP-P, n657, σ0°.92/695, mb4.9/228, MS4.2/54, 153C-42D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**2.96**	**46**	P	**Pn**	**18 27 38.8**	**+3.4**
	SNR=137						
AML	**Almayashu**	**2.96**	**46**	*e*Pn	**Pn**	**18 27 37.8**	**+2.5**
KK31	**Karatay Array**	**3.02**	**355**	Pn	**Pn**	**18 27 38.9**	**+2.8**
	184nm,0.6s,baz=178,slow=12,SNR=9530						
KK31				⇑Pg	**Pg**	**18 27 45.8**	**-0.7**
	394nm,0.3s,baz=172,slow=17						
KK31				⇓Lg		18 28 24.8	
	8μm,0.6s,baz=164,slow=28						
EKS2	**Erkin-Say**	**3.38**	**40**	P	**Pn**	**18 27 44.7**	**+3.6**
	SNR=115						
EKS2	**Erkin-Say**	**3.38**	**40**	*e*Pn	**Pn**	**18 27 44.2**	**+3.1**
UCH	**Uchtor**	**3.49**	**51**	P	**Pn**	**18 27 46.5**	**+3.8**
	SNR=114						
UCH	**Uchtor**	**3.49**	**51**	*e*Pn	**Pn**	**18 27 46.4**	**+3.7**
AAK	**Ala-Archa**	**3.73**	**46**	Pn	**Pn**	**18 27 50.8**	**+4.8**
	6μm,0.5s,SNR=74						
AAK	**Ala-Archa**	**3.73**	**46**	Pn	**Pn**	**18 27 49.9**	**+3.8**
	0.8nm,0.3s,baz=212,slow=8.6,SNR=205						
AAK				Sn	**Sb**	**18 28 37.5**	**-2.1**
	1.4nm,0.3s,baz=195,slow=19,SNR=5.6						
AAK				Lg		18 28 48.6	
	1.2nm,0.3s,baz=162,slow=20,SNR=8.4						
AAK	**Ala-Archa**	**3.73**	**46**	PN	**Pn**	**18 27 49.9**	**+3.9**
AAK						18 28 37.5	
AAK				pmax	pmax		
	comp=Z,38nm,0.3s						
AAK				smax			
	comp=N,71nm,0.3s						
KZA	**Kyzart**	**3.87**	**58**	P	**Pn**	**18 27 52.1**	**+4.3**
	SNR=241						
FRU	**Bishkek**	**3.94**	**45**	*i* PN	**Pn**	**18 27 52.0**	**+3.2**
FRU				*i*		18 28 02.0	
FRU				*i* S	**Sg**	**18 28 54.0**	**-1.0**
FRU				pmax	pmax		
	comp=Z,2μm,1.2s						
FRU				smax			
	comp=N,3μm,1.4s						
KSH	**Kashi**	**3.99**	**97**	⇓*i*P	**Pn**	**18 27 50.6**	**+1.1**
KSH				S	**Sn**	**18 28 33.4**	**-2.7**
KSH				smax			
	comp=N,2μm,0.8s						
KSH				smax			
	comp=E,1μm,0.8s						
KBK	**Karagaybulak**	**4.01**	**49**	P	**Pn**	**18 27 54.1**	**+4.4**
	SNR=108						
CHMS	**Chumysh**	**4.12**	**44**	P	**Pn**	**18 27 54.8**	**+3.5**
	SNR=152						
USP	**Ospenovka**	**4.18**	**40**	P	**Pn**	**18 27 55.4**	**+3.2**
	SNR=123						
TKM2	**Tokmak 2**	**4.55**	**50**	⇑Pn	**Pn**	**18 28 00.9**	**+3.7**
	comp=E,181nm,0.5s						
TKM2				⇓Lg		18 29 14.3	
	comp=E,1μm,1.1s						
TKM2	**Tokmak 2**	**4.55**	**50**	P	**Pn**	**18 28 01.0**	**+3.8**
	SNR=80						
TKM2	**Tokmak 2**	**4.55**	**50**	*e*Pn	**Pn**	**18 28 00.7**	**+3.5**
TKM2				*e*S	**Sg**	**18 29 13.2**	**-1.4**
KNDC	**Almaty**	**5.54**	**54**	⇑Pn	**Pn**	**18 28 14.9**	**+4.0**
	comp=E,392nm,0.8s						
KNDC				⇑Lg		18 29 51.9	
	comp=E,3μm,1.0s						
AAA	**Alma-Ata**	**5.56**	**53**	*e*PN	**Pg**	**18 28 35.8**	**+0.7**
AAA				pmax	pmax		
	comp=Z,662nm,0.6s						
KBL	**Kabul**	**5.73**	**195**	*e*PN	**Pn**	**18 28 17.2**	**+3.8**
KBL				*e*		18 29 24.6	
KBL				pmax	pmax		
	comp=Z,216nm,0.7s						
KBL	**Kabul**	**5.73**	**195**	*e*Pn	**Pn**	**18 28 17.2**	**+3.8**
	comp=Z,216nm,0.7s						
KBL				*e*Sn	**Sn**	**18 29 24.6**	**+5.5**
CEP	**Cherat**	**6.32**	**172**	⇓P	**Pn**	**18 28 25.3**	**+3.8**
CEP				S	**Sn**	**18 29 34.0**	**+0.4**
CHCP	**Chirah Chowk**	**6.71**	**162**	P	**Pn**	**18 28 30.9**	**+4.0**
DLH	**Dalhousie**	**8.59**	**150**	*e*PKP	**Pn**	**18 28 53.0**	**+0.2**
DLH				*ex*	x	18 30 29.0	
THN	**Thein Dam**	**8.60**	**151**	*e*PKP	**Pn**	**18 28 53.0**	**+0.2**
THN				*ex*	x	18 30 28.6	
BHK	**Bhakra**	**9.77**	**151**	*e*PKP	**Pn**	**18 29 07.0**	**-1.9**
BHK				*ex*	x	18 30 57.8	
SDNR	**Sundarnagar**	**9.91**	**148**	*e*PKP	**Pn**	**18 29 10.9**	**+0.1**
SDNR				*ex*	x	18 30 54.5	
ABKT	**Ailbek**	**10.14**	**262**	Pn	**Pn**	**18 29 12.9**	**-1.1**
	comp=Z,1μm,0.6s,SNR=43						
VAN	**Vannovskaya**	**10.14**	**262**	⇑*i*P	**Pn**	**18 29 12.8**	**-1.2**
VAN				S	**Sn**	**18 30 59.6**	**-8.0**
SMLA	**Simla**	**10.32**	**148**	*i* P	**Pn**	**18 29 17.4**	**+1.0**
SMLA				*i* S	**Sn**	**18 31 03.6**	**-8.3**
SMLA				*i* S	**Sn**	**18 31 04.7**	**-7.1**
SMLA				⇓E		18 31 10.9	
	comp=N,2μm,0.5s						
SMLA				⇓E		18 31 11.5	
	comp=E,2μm,0.5s						
QUE	**Quetta**	**10.39**	**199**	*e*P	**Pn**	**18 29 25.0**	**+7.7**
QUE				*e*S	**Sn**	**18 31 21.0**	**+7.4**
MK31	**Makanchi Array**	**10.67**	**47**	Pn	**Pn**	**18 29 23.3**	**+2.1**
	comp=E,38nm,0.6s,baz=231,slow=11,SNR=279						
MK31				⇑Lg		18 32 26.1	
	comp=E,186nm,0.8s						
MK31	**Makanchi Array**	**10.67**	**47**	*e*Pn	**Pn**	**18 29 22.6**	**+1.5**
MKAR	**Makanchi Array**	**10.67**	**47**	Pn	**Pn**	**18 29 23.3**	**+2.1**
	comp=E,2.3nm,0.3s,baz=233,slow=11,SNR=108						
MKAR				Lg		18 32 26.8	
	comp=E,2.2nm,0.3s,baz=239,slow=28,SNR=5.0						
MKAR				LR	LR	18 32 52.8	
	comp=E,149nm,21.3s,baz=240,slow=34						
MKAR	**Makanchi Array**	**10.67**	**47**	Pn	**Pn**	**18 29 23.3**	**+2.1**
MKAR				Lg		18 32 26.8	
MKAR				LR	LR	18 32 52.8	
DDI	**Dehra Dun**	**11.39**	**147**	*e*PKP	**Pn**	**18 29 30.0**	**-1.1**
DDI				*ex*	x	18 31 34.3	
KURK	**Kurchatov**	**11.93**	**25**	Pn	**Pn**	**18 29 37.5**	**-0.9**
	comp=E,243nm,1.1s,SNR=29						
KURK	**Kurchatov**	**11.93**	**25**	⇑Pn	**Pn**	**18 29 36.8**	**-1.5**
	comp=E,39nm,0.9s						
KURK				⇓Lg		18 33 03.4	
	comp=E,617nm,1.1s						
KURK	**Kurchatov**	**11.93**	**25**	Pn	**Pn**	**18 29 35.7**	**-2.7**
	comp=E,0.6nm,0.3s,baz=211,slow=12,SNR=63						
KURK				Lg		18 33 03.8	
	comp=E,1.4nm,0.3s,baz=211,slow=28,SNR=6.1						
KURK				LR	LR	18 34 36.1	
	comp=E,2μm,21.1s,baz=215,slow=39						
KURK	**Kurchatov**	**11.93**	**25**	*d iP*	**Pn**	**18 29 36.9**	**-1.5**
KURK				pmax	pmax		
	comp=Z,59nm,1.2s						
KURK	**Kurchatov**	**11.93**	**25**	*e*Pn	**Pn**	**18 29 36.9**	**-1.5**
	comp=Z,29nm,0.8s						
KURK				*e*Sn	**Sn**	**18 31 56.3**	**+5.0**
KURK	**Kurchatov**	**11.93**	**25**	⇑P	**Pn**	**18 29 37.5**	**-0.9**
	SNR=23						
KURK				⇑P		18 29 37.5	
	SNR=23						
AB31	**Akbulak array**	**11.99**	**323**	⇑Pn	**Pn**	**18 29 37.4**	**-1.8**
	comp=Z,40nm,0.5s,baz=141,slow=12,SNR=648						
AB31				⇑Sn	**Sn**	**18 31 59.8**	**+7.1**
	comp=Z,71nm,0.4s						
ABKAR	**Akbulak array**	**11.99**	**323**	*e*Pn	**Pn**	**18 29 37.2**	**-2.0**
	comp=Z,4.7nm,1.0s						
ABKAR				*e*Sn	**Sn**	**18 31 42.0**	**-11**
NDI	**New Delhi**	**12.54**	**153**	*e*PKP	**Pn**	**18 29 44.0**	**-2.7**
NDI				*ex*	x	18 31 57.0	
VOSK	**Vostochnaya**	**12.63**	**0**	⇑Pn	**Pn**	**18 29 46.6**	**-1.3**
	comp=Z,27nm,0.7s						
VOSK				⇑Lg		18 33 30.0	
	comp=Z,500nm,1.0s						
ZRNK	**Zerenda**	**12.92**	**355**	⇑Pn	**Pn**	**18 29 50.3**	**-1.6**
	comp=Z,29nm,0.7s						
ZRNK				⇑Lg		18 33 34.2	
	comp=Z,776nm,1.3s						
BVAR	**Borovoye Array**	**12.94**	**359**	Pn	**Pn**	**18 29 51.0**	**-1.1**
	comp=Z,2.4nm,0.3s,baz=180,slow=7.7,SNR=71						
BVAR				Lg		18 33 38.5	
	comp=Z,4.4nm,0.3s,baz=180,slow=30,SNR=3.5						
BRVK	**Borovoye**	**12.97**	**358**	Pn	**Pn**	**18 29 51.4**	**-1.2**
	comp=Z,266nm,0.6s,SNR=30						
BRVK	**Borovoye**	**12.97**	**358**	*d iP*	**Pn**	**18 29 51.5**	**-1.1**
BRVK				pmax	pmax		
	comp=Z,21nm,0.6s						
BRVK	**Borovoye**	**12.97**	**358**	*e*Pn	**Pn**	**18 29 51.1**	**-1.5**
	comp=Z,34nm,0.6s						
BRVK	**Borovoye**	**12.97**	**358**	P	**Pn**	**18 29 52.1**	**-0.5**
	SNR=22						
BRVK				P		18 29 52.1	
	SNR=22						
WMQ	**Urumqi**	**13.08**	**68**	*e*P	**Pn**	**18 30 00.0**	**+5.9**
WMQ				pP		18 30 06.0	
WMQ				sP		18 30 10.0	
WMQ				S	**Sn**	**18 32 27.0**	**+7.7**
WMQ				pmax	pmax		
	comp=Z,18nm,0.6s

MTA	**Mtatsminda**	**19.74 283**	P	**Pn**	**18 31 17.9**	**-1.7**
MTA			S	**Sn**	**18 34 56.6**	**-4.6**
ASHO	**Ashiyiah**	**19.76 223**	⇑P	**Pn**	**18 31 18.7**	**-1.2**
	SNR=10.0					
ASHO			⇑P		18 31 18.7	
	SNR=10.0					
ASHO			⇑P		18 31 18.7	
	SNR=10.0					
ASHO			⇑P		18 31 18.7	
	SNR=10.0					
ASHO			⇑P		18 31 18.7	
	SNR=10.0					
TBLG	**Delisi**	**19.78 283**	*e*P	**Pn**	**18 31 17.9**	**-2.1**
TBLG			*e*S	**Sn**	**18 34 57.3**	**-4.8**
TBLG	**Delisi**	**19.78 283**	P	**Pn**	**18 31 18.0**	**-2.1**
TBLG			S	**Sn**	**18 34 57.3**	**-4.8**
GNI	**Garni**	**19.95 279**	P	**Pn**	**18 31 22.0**	**0.0**
	comp=Z,1.9nm,0.3s,baz=82,slow=2.5,SNR=17					
GNI			LR	LR	18 40 18.8	
	comp=Z,151nm,19.4s,baz=91,slow=41					
GNI	**Garni**	**19.95 279**	*d i*P	**Pn**	**18 31 22.5**	**+0.5**
GNI			pmax	pmax		
	comp=Z,107nm,1.7s					
GNI			MLR	MLR		
	comp=Z,167nm,22.0s					
GNI	**Garni**	**19.95 279**	*e*P	**Pn**	**18 31 21.6**	**-0.4**
	comp=Z,94nm,0.9s					
AKL	**Akola**	**20.04 163**	*e*PKP	**P**	**18 31 20.0**	**-1.4**
AKL			AMb	AMB	18 31 26.1	
	comp=Z,120nm,1.0s					
HOQ	**Hoqain**	**20.04 219**	⇑P	**P**	**18 31 23.0**	**+1.5**
	SNR=7.3					
HOQ			⇑P		18 31 23.0	
	SNR=7.3					
HOQ			⇑P		18 31 23.0	
	SNR=7.3					
HOQ			⇑P		18 31 23.0	
	SNR=7.3					
HOQ			⇑P		18 31 23.0	
	SNR=7.3					
WBK	**Wadi Bani Khal**	**20.14 214**	P	**P**	**18 31 24.2**	**+1.7**
	SNR=8.3					
WBK			P		18 31 24.2	
	SNR=8.3					
WBK			P		18 31 24.2	
	SNR=8.3					
WBK			P		18 31 24.2	
	SNR=8.3					
WBK			P		18 31 24.2	
	SNR=8.3					
NGP	**Nagpur**	**20.14 157**	*e*PKP	**P**	**18 31 21.7**	**-0.8**
NGP			AMb	AMB	18 31 24.3	
	comp=Z,95nm,1.5s					
ASUD	**Al Ashush, Dub**	**20.20 225**	P	**P**	**18 31 24.9**	**+1.8**
	SNR=5.2					
ASUD			P		18 31 24.9	
	SNR=5.2					
ASUD			P		18 31 24.9	
	SNR=5.2					
ASUD			P		18 31 24.9	
	SNR=5.2					
ASUD			P		18 31 24.9	
	SNR=5.2					
GOR	**Gori**	**20.23 284**	P	**P**	**18 31 24.3**	**+0.9**
KEH	**Kehvi**	**20.34 285**	P	**P**	**18 31 24.0**	**-0.7**
ZEI	**Tsey**	**20.35 286**	*e*P	**P**	**18 31 23.0**	**-1.7**
ZEI			pmax	pmax		
	comp=Z,19nm,0.6s					
ARQ	**Araqi**	**20.64 220**	⇓P	**P**	**18 31 28.9**	**+1.0**
	SNR=16					
ARQ			⇓P		18 31 28.9	
	SNR=16					
ARQ			⇓P		18 31 28.9	
	SNR=16					
ARQ			⇓P		18 31 28.9	
	SNR=16					
ARQ			⇓P		18 31 28.9	
	SNR=16					
ONI	**Oni**	**20.69 286**	P	**P**	**18 31 29.0**	**+0.7**
ONI			S	**S**	**18 35 19.4**	**+0.3**
JMDO	**Jabal Madar**	**20.72 215**	⇑P	**P**	**18 31 30.0**	**+1.1**
	SNR=5.9					
JMDO			⇑P		18 31 30.0	
	SNR=5.9					
JMDO			⇑P		18 31 30.0	
	SNR=5.9					
JMDO			⇑P		18 31 30.0	
	SNR=5.9					
JMDO			⇑P		18 31 30.0	
	SNR=5.9					
BSY	**Bisya**	**20.81 218**	⇓P	**P**	**18 31 30.7**	**+0.8**
	SNR=8.7					
BSY			⇓P		18 31 30.7	
	SNR=8.7					
BSY			⇓P		18 31 30.7	
	SNR=8.7					
BSY			⇓P		18 31 30.7	
	SNR=8.7					
BSY			⇓P		18 31 30.7	
	SNR=8.7					
KIV	**Kislovodsk**	**21.23 290**	P	**P**	**18 31 34.1**	**-0.1**
	comp=Z,427nm,0.7s,mb5.9,SNR=9.1					
KIV	**Kislovodsk**	**21.23 290**	*e*P	**P**	**18 31 33.7**	**-0.5**
KIV			*e*S	**S**	**18 35 24.4**	**-5.4**
KIV			pmax	pmax		
	comp=Z,52nm,0.9s,mb4.9					
KIV			MLR	MLR		
	comp=Z,174nm,12.0s,MS3.7					
KIV	**Kislovodsk**	**21.23 290**	*e*P	**P**	**18 31 33.5**	**-0.7**
	comp=Z,58nm,0.7s,mb5.0					
KIV			*e*S	**S**	**18 35 26.1**	**-3.6**
KIV	**Kislovodsk**	**21.23 290**	⇑P	**P**	**18 31 33.9**	**-0.3**
	SNR=21					
KIV			⇑P		18 31 33.9	
	SNR=21					
SOKR	**Solikamsk**	**21.41 340**	*c i*P	**P**	**18 31 38.1**	**+2.1**
SOKR			S	**S**	**18 35 31.3**	**-1.8**
SOKR			pmax	pmax		
	comp=Z,60nm,1.3s,mb4.8					
SOKR			MLR	MLR		
	comp=Z,1μm,19.0s,MS4.3					
POO	**Poona**	**21.65 172**	*e*x	**P**	**18 31 38.4**	**-0.5**
POO			AMb	AMB	18 31 51.8	
	comp=Z,110nm,1.1s,mb5.2					
UMR	**Umm Al-Rimmam**	**21.65 248**	*e*P	**P**	**18 31 39.4**	**+0.6**
UMR			AMb	AMB	18 31 40.7	
	comp=Z,332nm,0.8s,mb5.8					
MIB	**Mutribah**	**21.78 249**	*e*P	**P**	**18 31 40.6**	**+0.4**
MIB			AMb	AMB	18 31 42.6	
	comp=Z,287nm,0.8s,mb5.8					
KBD	**Kabd**	**21.89 247**	*e*P	**P**	**18 31 41.9**	**+0.5**
KBD			AMb	AMB	18 31 43.2	
	comp=Z,128nm,0.8s,mb5.4					
RDF	**Al-Radifah**	**22.13 247**	*e*P	**P**	**18 31 44.6**	**+0.6**
RDF			AMb	AMB	18 31 46.1	
	comp=Z,177nm,1.0s,mb5.5					
NAY	**Al-Naaiem**	**22.16 248**	*e*P	**P**	**18 31 44.4**	**0.0**
NAY			AMb	AMB	18 31 48.0	
	comp=Z,82nm,0.9s,mb5.2					
GTA	**Gaotai**	**22.24 82**	⇑P	**P**	**18 31 46.1**	**+1.0**
GTA			pP		18 31 55.5	
GTA			sP	sP	18 31 59.6	+9.2
GTA			S	**S**	**18 35 48.8**	**-0.9**
GTA			sS	sS	18 36 03.4	+7.8
GTA			pmax	pmax		
	comp=Z,19nm,1.7s,mb4.2					
GTA			pmax	pmax		
	comp=Z,110nm,4.5s					
GTA			LR	LR		
	comp=N,390nm,12.6s,MS4.1					
GTA			LR	LR		
	comp=E,330nm,12.9s,MS4.1					
GTA			LR	LR		
	comp=Z,460nm,14.4s,MS4.0					
SHL	**Shillong**	**22.78 123**	*e*PKP	**P**	**18 31 52.0**	**+1.1**
SHL			*e*x	x	18 35 57.5	
SOC	**Sochi**	**23.38 289**	*e*P	**P**	**18 31 53.1**	**-4.0**
SOC			*e**PP		18 32 03.0	
SOC			*e**SP	sP	18 32 07.4	+4.9
SOC			*e*		18 32 27.0	
SOC			*e*S	**S**	**18 36 03.0**	**-6.5**
SOC			MLR	MLR		
	comp=Z,287nm,13.0s,MS3.9					
HYB	**Hyderabad**	**23.57 161**	*i* P	**P**	**18 31 58.5**	**-0.6**
MOY	**Mondy**	**23.79 51**	*e*P	**P**	**18 32 03.0**	**+2.1**
MOY			pmax	pmax		
	comp=Z,63nm,2.2s,mb4.7					
VSR	**Storozhevoye**	**24.59 307**	*e*P	**P**	**18 32 07.7**	**-0.6**
VSR			*e**PP		18 32 16.9	
VSR			*e*S	**S**	**18 36 22.0**	**-6.8**
VSR			pmax	pmax		
	comp=N,10.0nm,0.9s					
VSR			pmax	pmax		
	comp=E,60nm,0.9s					
VSR			pmax	pmax		
	comp=Z,50nm,0.9s,mb5.0					
VSR			smax			
	comp=N,70nm,2.0s					
VSR			smax			
	comp=Z,30nm,2.0s					
VSR			smax			
	comp=E,30nm,1.0s					
VSR			MLR	MLR		
	comp=E,480nm,22.0s					
VSR			MLR	MLR		
	comp=Z,570nm,22.0s,MS4.0					
VSR			MLR	MLR		
	comp=N,220nm,11.0s					
VOR	**Voronezh**	**24.70 309**	P	**P**	**18 32 10.0**	**+0.7**
VOR			pmax	pmax		
	comp=Z,140nm,1.6s,mb5.2					
VIS	**Vishakhapatnam**	**24.78 151**	*e*PKP	**P**	**18 32 10.2**	**0.0**
VIS			AMb	AMB	18 32 26.3	
	comp=Z,59nm,1.3s,mb5.0					
ZAK	**Zakamensk**	**24.86 55**	*e*P	**P**	**18 32 11.7**	**+1.0**
ANN	**Anapa**	**24.99 292**	*e*P	**P**	**18 32 10.5**	**-1.5**
ANN			*e**PP		18 32 20.8	
ANN			*e*		18 32 45.0	
ANN			*e*		18 35 44.5	
ANN			*e*S	**S**	**18 36 31.6**	**-3.8**
ANN			pmax	pmax		
	comp=Z,155nm,1.3s,mb5.4					
ANN			MLR	MLR		
	comp=N,329nm,16.0s,MS4.2					
ANN			MLR	MLR		
	comp=E,428nm,16.0s,MS4.2					
ANN			MLR	MLR		
	comp=Z,360nm,16.0s,MS4.0					
TLY	**Talaya**	**25.38 52**	*e*P	**P**	**18 32 16.8**	**+1.4**
TLY			*e*		18 32 51.1	
TLY			*e*PPP		18 33 09.7	
TLY			*e*S	**S**	**18 36 44.1**	**+2.7**
TLY			*e*SSS		18 37 54.5	
TLY			pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.2					
TLY			MLR	MLR		
	comp=Z,865nm,17.0s,MS4.3					
TLY	**Talaya**	**25.38 52**	*e*P	**P**	**18 32 16.7**	**+1.3**
	comp=Z,7.2nm,0.9s,mb4.2					
IRK	**Irkutsk**	**25.89 51**	*e*P	**P**	**18 32 21.7**	**+1.6**
IRK			pmax	pmax		
	comp=Z,25nm,1.5s,mb4.5					
LZH	**Lanzhou**	**26.19 88**	*e*P	**P**	**18 32 24.5**	**+1.6**
LZH			pP	pP	18 32 36.4	+10
LZH			sP	sP	18 32 39.0	+11
LZH			PP		18 33 07.1	
LZH			*e*S	**S**	**18 36 53.0**	**-1.5**
LZH			sS	sS	18 37 09.4	+8.4
LZH			SS		18 38 01.0	
LZH			pmax	pmax		
	comp=Z,38nm,1.0s,mb4.9					
LZH			pmax	pmax		
	comp=Z,150nm,4.0s					
LZH			LR	LR		
	comp=N,590nm,14.3s					
LZH			LR	LR		
	comp=Z,780nm,15.0s,MS4.4					
SONM	**Songino Array**	**26.55 61**	P	**P**	**18 32 27.3**	**+1.3**
	comp=Z,3.4nm,0.7s,mb4.0,baz=265,slow=9.5,SNR=24					
SONM			LR	LR	18 44 27.5	
	comp=Z,333nm,20.6s,MS3.9,baz=270,slow=40					
MOS	**Moscow**	**26.88 317**	*e*P	**P**	**18 32 25.7**	**-3.2**
MOS			*e*		18 32 38.1	
MOS			*e*		18 33 12.2	
MOS			*e*		18 38 13.3	
MOS			pmax	pmax		
	comp=Z,74nm,1.3s,mb5.1					
MOS			MLR	MLR		
	comp=E,1μm,16.0s					
MOS			MLR	MLR		
	comp=Z,2μm,16.0s,MS4.6					
ULN	**Ulaanbaatar**	**26.99 61**	*e*P	**P**	**18 32 30.9**	**+0.9**
ULN			pmax	pmax		
	comp=Z,24nm,1.3s,mb4.6					
ULN	**Ulaanbaatar**	**26.99 61**	*e*P	**P**	**18 32 30.9**	**+0.8**
	comp=Z,24nm,1.3s,mb4.6					
OBN	**Obninsk**	**27.22 315**	*c i*P	**P**	**18 32 32.1**	**+0.1**
OBN			*e*		18 35 52.4	
OBN			*e*S	**S**	**18 37 09.6**	**-0.9**
OBN			pmax	pmax		
	comp=Z,52nm,1.2s,mb4.9					
OBN			MLR	MLR		
	comp=Z,500nm,15.0s,MS4.2					
OBN	**Obninsk**	**27.22 315**	*e*P	**P**	**18 32 31.6**	**-0.4**
	comp=Z,43nm,1.0s,mb4.9					
ABTO	**Aybut**	**27.29 219**	P	**P**	**18 32 33.3**	**+0.3**
	SNR=5.7					
ABTO			P		18 32 33.3	
	SNR=5.7					
ABTO			P		18 32 33.3	
	SNR=5.7					
ABTO			P		18 32 33.3	
	SNR=5.7					
ABTO			P		18 32 33.3	
	SNR=5.7					
SIM	**Simferopol'**	**27.34 292**	*d i*P	**P**	**18 32 35.0**	**+1.7**
SIM			S	**S**	**18 37 10.0**	**-2.6**
SIM			pmax	pmax		
	comp=Z,27nm,0.8s,mb4.8					
CD2	**Chengdu**	**28.18 99**	*e*P	**P**	**18 32 43.3**	**+2.4**
CD2			pP	pP	18 32 50.3	+5.5
CD2			sP	sP	18 32 53.8	+7.4
CD2			PP	PP	18 33 33.3	-11
CD2			S	**S**	**18 37 25.8**	**-0.3**
CD2			SS		18 38 49.5	
CD2			pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.6					
CD2			pmax	pmax		
	comp=Z,50nm,6.2s					
CD2			LR	LR		
	comp=N,330nm,12.0s,MS4.4					
CD2			LR	LR		
	comp=E,470nm,12.0s,MS4.4					
CD2			LR	LR		
	comp=Z,350nm,9.6s					
ASF	**Jabal al Asfar**	**28.41 265**	P	**P**	**18 32 43.4**	**+0.5**
	comp=Z,1.1nm,0.4s,mb3.9,baz=59,slow=5.9,SNR=3.9					
ASF	**Jabal al Asfar**	**28.41 265**	P	**P**	**18 32 43.4**	**+0.5**
ASF			pmax	pmax		
	comp=Z,1.0nm,0.4s					
BR131	**Keskin Array S**	**28.41 281**	*e*P	**P**	**18 32 43.0**	**+0.1**
	comp=Z,10nm,0.7s,mb4.6					
MMAI	**Mount Meron Ar**	**29.20 267**	LR	LR	18 47 32.7	
	comp=Z,82nm,18.4s,MS3.4,baz=100,slow=43					
CSS	**Prodhromos**	**30.04 272**	P	**P**	**18 32 55.6**	**-1.8**
KMI	**Kunming**	**30.54 110**	P	**P**	**18 33 03.3**	**+1.5**
KMI			pP	pP	18 33 15.0	+9.2
KMI			sP	sP	18 33 19.5	+12
KMI			PP	PP	18 34 05.5	-5.3
KMI			S	**S**	**18 38 02.5**	**-0.7**
KMI			sS	sS	18 38 20.9	+11
KMI			SS	SS	18 39 45.1	-28
KMI			pmax	pmax		
	comp=Z,8.0nm,2.0s,mb4.2					
KMI			pmax	pmax		
	comp=Z,140nm,4.5s					
KMI			LR	LR		
	comp=N,230nm,17.9s,MS4.1					
KMI			LR	LR		
	comp=E,300nm,18.5s,MS4.1					
KMI			LR	LR		
	comp=Z,280nm,17.9s,MS4.0					
AKASG	**Malin Array Be**	**30.71 304**	P	**P**	**18 33 02.5**	**-0.6**
	comp=Z,8.7nm,0.4s,mb4.9,baz=81,slow=7.4,SNR=32					
AKASG	**Malin Array Be**	**30.71 304**	*i* P	**P**	**18 33 02.5**	**-0.6**
AKASG			pmax	pmax		
	comp=Z,9.0nm,0.4s					
AKBB	**Malin Array Si**	**30.71 304**	*e*P	**P**	**18 33 02.8**	**-0.3**
HHC	**Hu-ho-hao-te**	**30.79 75**	*e*P	**P**	**18 33 05.9**	**+2.0**
HHC			pP	pP	18 33 15.4	+7.6
HHC			sP	sP	18 33 19.4	+10
HHC			PP	PP	18 34 08.1	-5.2
HHC			PcP	PcP	18 36 03.4	+2.4
HHC			S	**S**	**18 38 06.3**	**-0.5**
HHC			sS	sS	18 38 21.9	+8.6
HHC			ScP	ScP	18 39 42.0	-1.3
HHC			PcS	PcS	18 39 46.8	+2.0
HHC			SS	SS	18 39 50.5	-28
HHC			ScS	ScS	18 43 37.5	-2.3
HHC			pmax	pmax		
	comp=Z,17nm,0.8s,mb4.9					
HHC			pmax	pmax		
	comp=Z,63nm,6.7s					
HHC			LR	LR		
	comp=N,340nm,11.2s,MS4.4					
HHC			LR	LR		
	comp=E,360nm,11.4s,MS4.4					
HHC			LR	LR		
	comp=Z,430nm,14.7s,MS4.2					
XAN	**Xi'an**	**30.81 89**	P	**P**	**18 33 04.6**	**+0.5**
XAN			pP	pP	18 33 14.9	+6.8
XAN			pmax	pmax		
	comp=Z,49nm,0.9s,mb5.3					
CHTO	**Chiang Mai**	**32.15 123**	*e*P	**P**	**18 33 14.9**	**-1.2**
CHTO			pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2					
CHTO	**Chiang Mai**	**32.15 123**	*e*P	**P**	**18 33 14.9**	**-1.2**
	comp=Z,4.2nm,0.9s,mb4.3					
CMAR	**Chiang Mai Arr**	**32.41 123**	P	**P**	**18 33 17.7**	**-0.7**
	comp=Z,2.7nm,0.7s,mb4.2,baz=310,slow=8.7,SNR=17					
CMAR			PcP	PcP	18 36 05.8	+0.1
	comp=Z,4.1nm,0.8s,baz=304,slow=4.1,SNR=13					
CMAR			LR	LR	18 48 40.1	
	comp=Z,243nm,21.4s,MS3.9,baz=315,slow=41					
CMAR	**Chiang Mai Arr**	**32.41 123**	P	**P**	**18 33 17.7**	**-0.7**
CMAR					18 36 05.8	
CMAR			pmax	pmax		
	comp=Z,3.0nm,0.7s					
CMAR			MLR	MLR		
	comp=Z,243nm,21.4s					
VRI	**Vrincioaia**	**32.47 295**	⇑P	**P**	**18 33 19.9**	**+1.3**
VRI	**Vrincioaia**	**32.47 295**	⇑*i*P	**P**	**18 33 19.9**	**+1.3**
PLOR	**Plostina**	**32.52 295**	⇓P	**P**	**18 33 20.6**	**+1.5**
PLOR	**Plostina**	**32.52 295**	⇓*i*P	**P**	**18 33 20.6**	**+1.5**
GYA	**Guiyang**	**32.66 104**	P	**P**	**18 33 21.8**	**+1.3**
GYA			pP	pP	18 33 34.3	+10
GYA			sP	sP	18 33 38.0	+12
GYA			PP	PP	18 34 35.3	+1.1
GYA			PcP	PcP	18 36 07.3	+1.0
GYA			sS	sS	18 38 52.6	+10
GYA			ScP	ScP	18 39 47.0	-2.8
GYA			SS	SS	18 40 33.3	-23
GYA			pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0					
GYA			pmax	pmax		
	comp=Z,120nm,4.7s					
GYA			LR	LR		
	comp=N,740nm,13.4s,MS4.7					
GYA			LR	LR		
	comp=E,680nm,14.3s,MS4.7					
GYA			LR	LR		
	comp=Z,760nm,15.9s,MS4.5					
JOF	**Joensuu**	**32.74 327**	*e*P	**P**	**18 33 20.7**	**-0.1**
JOF			pmax	pmax		
	comp=Z,32nm,0.8s,mb5.3					
JOF	**Joensuu**	**32.74 327**	*e*p	**P**	**18 33 20.7**	**-0.1**
	comp=Z,32nm,0.8s,mb5.3					
JOF	**Joensuu**	**32.74 327**	*e*p	**P**	**18 33 20.7**	**-0.1**
	comp=Z,32nm,0.8s,mb5.3					
ENH	**Enshi**	**32.84 95**	*e*P	**P**	**18 33 22.7**	**+0.6**
	comp=Z,12nm,0.9s,mb4.8					
MLR	**Muntele Rosu**	**33.05 294**	P	**P**	**18 33 25.5**	**+1.8**
	comp=Z,16nm,0.9s,mb5.0,baz=92,slow=3.5,SNR=29					
MLR	**Muntele Rosu**	**33.05 294**	P	**P**	**18 33 25.5**	**+1.8**
MLR			pmax	pmax		
	comp=Z,16nm,0.9s					
MLR	**Muntele Rosu**	**33.05 294**	⇑P	**P**	**18 33 25.1**	**+1.4**
MLR	**Muntele Rosu**	**33.05 294**	⇑*i*P	**P**	**18 33 25.1**	**+1.4**
JMB	**Yambol**	**33.07 289**	*i* P	**P**	**18 33 25.4**	**+1.5**
BURAR	**Bucovina Array**	**33.35 298**	⇓P	**P**	**18 33 26.6**	**+0.3**
BURAR	**Bucovina Array**	**33.35 298**	⇓*i*P	**P**	**18 33 26.6**	**+0.3**
BUR08	**Bucovina Ar. S**	**33.36 298**	*e*P	**P**	**18 33 26.4**	**0.0**
SZH	**Strazhica**	**33.39 290**	*i* P	**P**	**18 33 27.0**	**+0.3**
PVL	**Pavlikeni**	**33.83 290**	*i* P	**P**	**18 33 32.6**	**+2.0**
LVV	**L'vov**	**34.03 302**	*i* P	**P**	**18 33 32.0**	**-0.2**
LVZ	**Lovozero**	**34.10 337**	⇓*e*P	**P**	**18 33 33.1**	**+0.5**
LVZ			pmax	pmax		
	comp=Z,41nm,1.7s,mb5.1					
LVZ			MLR	MLR		
	comp=Z,705nm,17.0s,MS4.5					
APA	**Apatity**	**34.30 336**	⇑*i*P	**P**	**18 33 35.8**	**+1.5**
APA			*i*		18 34 54.0	
APA			*i*		18 36 16.0	
APA			*e*SS	SS	18 41 08.0	-21
APA			pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9					
APA			MLR	MLR		
	comp=Z,1μm,17.0s,MS4.6					
BJI	**Beijing**	**34.40 75**	P	**P**	**18 33 36.8**	**+1.3**
BJI			S	**S**	**18 39 02.4**	**-0.6**
BJI			pmax	pmax		
	comp=Z,14nm,0.5s,mb5.2					
BJI			pmax	pmax		
	comp=Z,80nm,3.5s					
BJI			LR	LR		
	comp=N,420nm,15.3s,MS4.4					
BJI			LR	LR		
	comp=E,410nm,19.1s,MS4.4					
BJI			LR	LR		
	comp=Z,290nm,19.5s,MS4.0					
FINES	**FINESS Array B**	**34.48 323**	P	**P**	**18 33 36.5**	**+0.5**
	comp=Z,20nm,0.5s,mb5.3,baz=107,slow=9.6,SNR=106					
FINES			LR	LR	18 48 33.8	
	comp=Z,860nm,18.6s,MS4.5,baz=118,slow=38					
FINES	**FINESS Array B**	**34.48 323**	P	**P**	**18 33 36.5**	**+0.5**
FINES			pmax	pmax		
	comp=Z,20nm,0.5s					
FINES			MLR	MLR		
	comp=Z,861nm,18.6s					
KAF	**Kangasniemi**	**34.59 324**	*e*P	**P**	**18 33 36.6**	**-0.3**
KAF			pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.9					
KAF	**Kangasniemi**	**34.59 324**	*e*p	**P**	**18 33 36.6**	**-0.3**
	comp=Z,7.5nm,0.5s,mb4.9					
KAF	**Kangasniemi**	**34.59 324**	*e*p	**P**	**18 33 36.6**	**-0.3**
	comp=Z,7.5nm,0.5s,mb4.9					
RZN	**Rozhen**	**34.59 288**	*i* P	**P**	**18 33 37.8**	**+0.6**
KWP	**Kalwaria Pacla**	**34.89 302**	*e*P	**P**	**18 33 40.4**	**+0.7**
KWP			LMZ		18 50 28.3	
	comp=Z,500nm,19.5s					
KWP	**Kalwaria Pacla**	**34.89 302**	*e*P	**P**	**18 33 40.2**	**+0.5**
	comp=Z,11nm,0.6s,mb5.0					
KWP	**Kalwaria Pacla**	**34.89 302**	⇑*i*P	**P**	**18 33 40.2**	**+0.5**
UZH	**Uzhgorod**	**35.23 300**	*e*P	**P**	**18 33 42.4**	**-0.2**
UZH			*e*PPP		18 35 14.4	
UZH			*e*S	**S**	**18 39 10.2**	**-5.4**
UZH			MLR	MLR		
	comp=N,70nm,15.0s,MS4.0					
UZH			MLR	MLR		
	comp=E,200nm,15.0s,MS4.0					
UZH			MLR	MLR		
	comp=Z,160nm,15.0s,MS3.9					
GZR	**Gura Zlata**	**35.28 295**	⇑P	**P**	**18 33 44.0**	**+1.0**
GZR	**Gura Zlata**	**35.28 295**	⇑*i*P	**P**	**18 33 44.0**	**+1.0**
VTS	**Vitosha**	**35.49 290**	⇑P	**P**	**18 33 46.0**	**+1.1**
VTS	**Vitosha**	**35.49 290**	⇑*i*P	**P**	**18 33 46.0**	**+1.1**
KKB	**Krupnik**	**35.74 289**	*i* P	**P**	**18 33 47.5**	**+0.5**
CRVS	**Cervenica-Dubn**	**35.76 301**	*e*P	**P**	**18 33 48.2**	**+1.1**
	comp=Z,4.1nm,0.8s,mb4.4					
CRVS			*e*PP	PP	18 35 10.8	+2.6
CRVS			LR	LR		
	comp=Z,200nm,19.2s,MS3.9					
CRVS	**Cervenica-Dubn**	**35.76 301**	*e*P	**P**	**18 33 48.2**	**+1.1**
CRVS			*e*PP	PP	18 35 10.8	+2.6
STHS	**Stebnicka Huta**	**35.86 302**	*e*P	**P**	**18 33 47.2**	**-0.8**
STHS			pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7					
STHS	**Stebnicka Huta**	**35.86 302**	*e*P	**P**	**18 33 47.2**	**-0.8**
	comp=Z,7.3nm,0.7s,mb4.7					
STHS	**Stebnicka Huta**	**35.86 302**	*e*P	**P**	**18 33 47.2**	**-0.8**
BZS	**Buzias**	**36.05 295**	⇑P	**P**	**18 33 50.5**	**+0.9**
BZS	**Buzias**	**36.05 295**	⇑*i*P	**P**	**18 33 50.5**	**+0.9**
VAY	**Valandovo**	**36.24 288**	*i* P	**P**	**18 33 51.2**	**-0.2**
IDI	**Anoyia**	**36.37 277**	P	**P**	**18 33 51.5**	**-1.0**
	comp=Z,5.9nm,0.6s,mb4.7,baz=84,slow=9.8,SNR=6.4					
KECS	**Kecovo**	**36.44 300**	*e*P	**P**	**18 33 53.5**	**+0.6**

KECS pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
KECS Kecovo 36.44 300 *e*P **P 18 33 53.5 +0.6**
comp=Z,5.9nm,1.2s,mb4.4
KECS *e*PP PP 18 35 19.0 +3.3
KECS Kecovo 36.44 300 *e*P **P 18 33 53.5 +0.6**
KECS *e*PP PP 18 35 19.0 +3.3
NIE Niedzica 36.46 302 *e*P **P 18 33 54.3 +1.2**
OJC Ojcow 36.73 303 *e*P **P 18 33 53.8 -1.6**
PSZ Piszkesteto 36.89 300 *e*P **P 18 33 57.4 +0.6**
PSZ pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
PSZ Piszkesteto 36.89 300 ⇑P **P 18 33 57.8 +1.0**
PSZ Piszkesteto 36.89 300 *e*P **P 18 33 57.4 +0.5**
comp=Z,5.4nm,0.8s,mb4.4
PSZ Piszkesteto 36.89 300⇑*e*P **P 18 33 57.5 +0.7**
PSZ Piszkesteto 36.89 300⇑*i*P **P 18 33 57.8 +1.0**
SKO Skopje 36.91 289 *e*P **P 18 33 58.0 +0.9**
GVD Gavdhos 37.15 277 *e*P **P 18 33 58.1 -1.1**
comp=Z,47nm,0.6s,mb5.5
KRUS Krusevo 37.20 289 *i* P **P 18 33 59.1 -0.4**
BIA Bitola 37.23 288 *e*P **P 18 33 58.5 -1.3**
KEV Kevo 37.44 337 *e*P **P 18 33 59.5 -1.7**
KEV pmax pmax
comp=Z,15nm,0.8s,mb4.9
KEV Kevo 37.44 337 *e*p **P 18 33 59.5 -1.7**
comp=Z,15nm,0.8s,mb4.9
KEV Kevo 37.44 337 *e*p **P 18 33 59.5 -1.7**
comp=Z,15nm,0.8s,mb4.9
VYHS Vyhne 37.53 301 *e*P **P 18 34 03.1 +0.9**
VYHS pmax pmax
comp=Z,7.0nm,1.1s,mb4.3
VYHS Vyhne 37.53 301 *e*P **P 18 34 03.1 +0.9**
comp=Z,6.5nm,1.1s,mb4.3
VYHS *e*PP PP 18 35 32.0 +4.3
VYHS *e*S **S 18 39 59.9 +9.2**
VYHS Vyhne 37.53 301 *e*P **P 18 34 03.1 +0.9**
VYHS *e*PP PP 18 35 32.0 +4.3
VYHS *e*S **S 18 39 59.9 +9.2**
OHR Ohrid 37.59 288 *i* P **P 18 34 01.6 -1.2**
ATD Arta Tunnel 37.70 229 P **P 18 34 04.1 +0.1**
comp=Z,8.2nm,0.6s,mb4.6,baz=39,slow=14,SNR=6.0
ATD LR LR 18 52 50.3
comp=Z,216nm,18.1s,MS4.0,baz=34,slow=42
ARCES ARCESS Array B 37.80 336 P **P 18 34 04.4 +0.2**
comp=Z,13nm,0.7s,mb4.8,baz=110,slow=8.0,SNR=63
ARCES ARCESS Array B 37.80 336 P **P 18 34 04.4 +0.2**
ARCES pmax pmax
comp=Z,13nm,0.7s
KOLL Kolacno 37.80 301 *e*P **P 18 34 05.3 +0.8**
KOLL Kolacno 37.80 301 *e*P **P 18 34 05.3 +0.8**
OKC Ostrava-Krasne 37.83 303 *e*P **P 18 34 05.1 +0.4**
OKC MLR MLR
comp=Z,200nm,14.9s,MS4.0
OKC Ostrava-Krasne 37.83 303 *e*P **P 18 34 05.1 +0.4**
OKC AMS AMS 18 53 00.0
comp=Z,200nm,14.9s
PKSM Moragy 38.00 297 ⇓P **P 18 34 06.9 +0.7**
PKSM Moragy 38.00 297⇓*i*P **P 18 34 06.9 +0.7**
GKP Gorka Klasztor 38.16 309 *e*P **P 18 34 08.2 +0.6**
GKP LMZ 18 52 36.8
comp=Z,500nm,18.5s
MORC Moravsky Berou 38.22 303 ⇓P **P 18 34 08.6 +0.5**
MORC Moravsky Berou 38.22 303 *e*P **P 18 34 08.3 +0.2**
comp=Z,24nm,1.1s,mb4.8
MORC Moravsky Berou 38.22 303⇓*i*P **P 18 34 08.6 +0.5**
KTK1 Kautokeino 38.30 335 *e*P **P 18 34 09.0 +0.6**
SMOL Smolenice 38.45 301 *e*P **P 18 34 11.3 +1.3**
SMOL Smolenice 38.45 301 *e*P **P 18 34 11.3 +1.3**
ZST Bratislava 38.71 300 *e*P **P 18 34 13.1 +0.9**
comp=Z,6.7nm,0.6s,mb4.5
ZST LR LR
comp=Z,400nm,14.9s,MS4.4
ZST Bratislava 38.71 300 *e*P **P 18 34 13.1 +0.9**
VRAC Vranov 38.89 302 P **P 18 34 14.7 +1.0**
comp=Z,15nm,0.8s,mb4.8,baz=85,slow=9.3,SNR=18
VRAC Vranov 38.89 302 ⇓P **P 18 34 14.7 +1.0**
VRAC Vranov 38.89 302⇓*i*P **P 18 34 14.7 +1.0**
KSP Ksiaz 38.91 305 *e*P **P 18 34 14.4 +0.6**
KSP LMZ 18 53 29.5
comp=Z,700nm,17.1s
KSP Ksiaz 38.91 305 *e*P **P 18 34 14.2 +0.4**
DPC Dobruska-Polom 38.94 304 *e*P **P 18 34 15.0 +0.9**
DPC MLR MLR
comp=Z,300nm,13.7s,MS4.3
DPC Dobruska-Polom 38.94 304 *e*P **P 18 34 15.0 +0.9**
DPC AMS AMS 18 53 20.0
comp=Z,300nm,13.7s
UPC Upice 39.12 304 *e*P **P 18 34 16.4 +0.8**
UPC Upice 39.12 304 *e*P **P 18 34 16.4 +0.8**
NJ2 Nanjing 39.23 86 *e*P **P 18 34 18.4 +1.7**
NJ2 pP pP 18 34 28.3 +7.6
NJ2 sP sP 18 34 32.5 +10
NJ2 PP PP 18 35 53.3 +6.7
NJ2 S **S 18 40 17.0 +0.2**
NJ2 sS sS 18 40 35.0 +12
NJ2 pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
NJ2 pmax pmax
comp=Z,610nm,3.6s
NJ2 LR LR
comp=N,240nm,16.6s
NJ2 LR LR
comp=E,420nm,24.2s
NJ2 LR LR
comp=Z,400nm,24.4s
CONA Conrad Observa 39.58 300⇑*i*P **P 18 34 20.0 +0.6**
comp=Z,26nm,1.0s,mb4.9,SNR=16
TREC Trest 39.61 302 *e*P **P 18 34 20.6 +0.9**
TREC MLR MLR
comp=Z,300nm,15.1s,MS4.2
TREC Trest 39.61 302 *e*P **P 18 34 20.6 +0.9**
TREC AMS AMS 18 54 10.0
comp=Z,300nm,15.1s
ARSA Arzberg 39.92 299⇑*i*P **P 18 34 22.6 +0.3**
comp=Z,8.0nm,0.8s,mb4.5
PVCC Panska Ves 40.03 304 *e*P **P 18 34 24.2 +1.0**
PVCC MLR MLR
comp=Z,400nm,13.9s,MS4.4
PVCC Panska Ves 40.03 304 *e*P **P 18 34 24.2 +1.0**
PVCC AMS AMS 18 54 10.0
comp=Z,400nm,13.9s
GOLS Golise 40.09 297 *i* P **P 18 34 24.3 +0.5**
PRU Pruhonice 40.12 304 *e*P **P 18 34 25.4 +1.5**
PRU MLR MLR
comp=Z,400nm,19.9s,MS4.3
PRU Pruhonice 40.12 304 *e*P **P 18 34 25.4 +1.5**
PRU AMS AMS 18 54 00.0
comp=Z,400nm,19.9s
CN2 Changchun 40.16 66 *e*P **P 18 34 25.3 +1.0**
CN2 *e*pP pP 18 34 35.0 +6.7
CN2 *e*S **S 18 40 28.4 -2.1**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,21.0s,MS4.4
CN2 LR LR
comp=E,500nm,21.0s,MS4.4
CN2 LR LR
comp=Z,600nm,22.0s,MS4.4
HFS Hagfors 40.22 319 P **P 18 34 24.8 +0.2**
comp=Z,106nm,0.5s,mb5.8,baz=98,slow=11,SNR=420
HFS Hagfors 40.22 319 P **P 18 34 24.8 +0.2**
HFS pmax pmax
comp=Z,106nm,0.5s
RUE Ruedersdorf 40.31 307 P **P 18 34 25.3 -0.1**
SOKA Soboth 40.36 298⇑*i*P **P 18 34 26.2 +0.2**
comp=Z,19nm,1.2s,mb4.7
BRG Berggiesshubel 40.38 305 *e*P **P 18 34 26.5 +0.4**
comp=Z,34nm,0.8s,mb5.1
BRG Berggiesshubel 40.38 305⇑*i*P **P 18 34 26.7 +0.6**
comp=Z,30nm,0.7s,mb5.1
BRG
comp=N,199nm,15.5s
BRG
comp=E,180nm,16.7s
BRG
comp=Z,327nm,16.2s
BOJS Bojanci 40.46 297 *i* P **P 18 34 27.0 +0.2**
MOA Molln 40.65 300⇑*i*P **P 18 34 28.5 +0.2**
comp=Z,9.8nm,0.8s,mb4.5,SNR=8.1
MOR8 Moi Rana 40.66 329 *e*P **P 18 34 27.4 -0.7**
MOR8 AMb AMB 18 34 28.5
comp=Z,20nm,0.7s,mb4.8
MOR8 Moi Rana 40.66 329 *e*P **P 18 34 27.4 -0.7**
comp=Z,20nm,0.7s,mb4.9
OBKA Obir 40.72 298⇑*i*P **P 18 34 29.5 +0.6**
comp=Z,18nm,1.3s,mb4.5
GEC2 GERESS Array S 40.84 302 *e*P **P 18 34 30.6 +0.7**
comp=Z,28nm,1.0s,mb4.8
GEC2 GERESS Array S 40.84 302 *e*P **P 18 34 30.6 +0.7**
GEC2 pmax pmax
comp=Z,28nm,1.0s,mb4.8
KHC Kasperske Hory 40.87 302 *e*P **P 18 34 30.5 +0.3**
KHC pmax pmax
comp=Z,25nm,0.8s,mb4.9
KHC Kasperske Hory 40.87 302 *e*P **P 18 34 30.5 +0.4**
comp=Z,25nm,0.8s,mb4.9
KHC Kasperske Hory 40.87 302 *e*P **P 18 34 31.1 +0.9**
KHC *e*x x 18 34 55.0
KHC AMS AMS 18 54 50.0
comp=Z,400nm,16.5s
CLL Collm 40.92 306 *e*P **P 18 34 30.6 +0.1**
comp=Z,30nm,0.7s,mb5.0
CLL Collm 40.92 306⇑*i*P **P 18 34 30.4 -0.1**
CLL *i* 18 34 37.3
CLL pmax pmax
comp=Z,30nm,0.7s,mb5.0
CLL MLR MLR
comp=Z,500nm,18.7s,MS4.4
CLL Collm 40.92 306⇑*i*P **P 18 34 30.4 -0.1**
comp=Z,30nm,0.7s,mb5.0
CLL *i* pP pP 18 34 37.3 +2.8
CLL *e*PP PP 18 36 01.0 -3.7
CLL *e* 18 36 13.0
CLL *e*ScP ScP 18 40 16.0 -4.1
CLL *e*S **S 18 40 50.0 +8.4**
CLL *e* 18 41 34.0
CLL *e*SSS 18 43 48.0
CEY Cerknica 40.97 297 *i* P **P 18 34 31.4 +0.3**
TIP Timpagrande 41.12 287 *e*P **P 18 34 31.5 -0.9**
comp=Z,9.0nm,0.8s,mb4.5
YAK Yakutsk 41.16 38 *e*P **P 18 34 32.5 +0.2**
YAK *e**PP pP 18 34 39.2 +2.9
YAK *e* 18 36 04.7
YAK *e* 18 36 30.1
YAK *e*PPP 18 36 36.1
YAK *e*S **S 18 40 43.9 -1.0**
YAK *e**SS sS 18 40 56.9 +5.4
YAK *e*SS SS 18 43 44.6 -2.7
YAK *e*SSS 18 44 17.5
YAK *e* 18 44 29.0
YAK pmax pmax
comp=N,4.0nm,1.4s
YAK pmax pmax
comp=Z,80nm,1.1s,mb5.3
YAK pmax pmax
comp=E,26nm,1.2s
YAK pmax pmax
comp=Z,11nm,0.7s,mb4.6
YAK pmax pmax
comp=N,23nm,2.5s
YAK pmax pmax
comp=E,13nm,1.3s
YAK smax
comp=E,86nm,2.0s
YAK smax
comp=N,62nm,1.8s
YAK MLR MLR
comp=N,166nm,16.0s,MS4.6
YAK MLR MLR
comp=Z,657nm,15.0s,MS4.6
YAK MLR MLR
comp=E,599nm,16.0s,MS4.6
YAK Yakutsk 41.16 38 *e*P **P 18 34 32.5 +0.2**
comp=E,74nm,0.8s,mb5.4
JAVS Javornik 41.18 297 *i* P **P 18 34 32.7 0.0**
KONS Konsvik 41.24 329 *e*P **P 18 34 33.5 +0.5**
STOK Stokkvaagen 41.25 329 *e*P **P 18 34 39.0 +6.0**
VOY Vojsko 41.27 298 *e*P **P 18 34 33.4 0.0**
VOY *e* 18 34 45.3
SKDS Skadanscina 41.30 297 *i* P **P 18 34 33.6 -0.1**
MYKA Terra Mystica 41.31 299⇑*i*P **P 18 34 34.0 +0.2**
comp=E,7.4nm,0.7s,mb4.4
WET Wettzell 41.33 303 *e*P **P 18 34 34.4 +0.5**
comp=Z,25nm,0.9s,mb4.8
WET Wettzell 41.33 303 *e*P **P 18 34 34.4 +0.5**
WET pmax pmax
comp=Z,25nm,0.9s,mb4.8
TANN Tannenbergstha 41.38 304 *e*P **P 18 34 34.9 +0.6**
comp=Z,18nm,1.2s,mb4.6
KBA Koelnbreinsper 41.41 299 *i* P **P 18 34 34.9 +0.2**
comp=Z,17nm,1.2s,mb4.5,SNR=6.5
NKC Novy Kostel 41.42 304 *e*P **P 18 34 36.5 +1.9**
NKC MLR MLR
comp=Z,500nm,13.9s,MS4.5
NKC Novy Kostel 41.42 304 *e*P **P 18 34 36.5 +1.9**
NKC AMS AMS 18 54 50.0
comp=Z,500nm,13.9s
NB2 NORSAR Subarra 41.48 321 P **P 18 34 34.8 -0.2**
comp=Z,44nm,0.8s,mb5.1,baz=93,slow=8.6
NOA NORSAR Array B 41.48 321 P **P 18 34 34.8 -0.2**
comp=Z,35nm,0.7s,mb5.1,baz=93,slow=8.2,SNR=95
NOA LR LR 18 52 40.1
comp=Z,652nm,18.0s,MS4.5,baz=95,slow=37
NOA NORSAR Array B 41.48 321 P **P 18 34 34.8 -0.2**
NOA pmax pmax
comp=Z,35nm,0.7s
NOA MLR MLR
comp=Z,652nm,18.0s
NAO01 NORSAR Array S 41.64 320 *e*P **P 18 34 35.8 -0.5**
comp=Z,29nm,0.8s,mb5.0
RJOB Jochberg 41.64 300 *e*P **P 18 34 36.2 -0.3**
comp=Z,5.0nm,0.8s,mb4.2
ROTZ Rotzenmuhle 41.65 304 *e*P **P 18 34 37.4 +0.9**
comp=Z,9.0nm,1.1s,mb4.3
OSL Oslo 41.70 319 *e*P **P 18 34 36.5 -0.3**
MOX Moxa 41.88 305 *e*P **P 18 34 38.8 +0.4**
comp=Z,26nm,1.3s,mb4.7
MOX
comp=Z,200nm,20.0s
MOX Moxa 41.88 305 *e*P **P 18 34 38.8 +0.4**
MOX pmax pmax
comp=Z,26nm,1.3s,mb4.7
MOX MLR MLR
comp=Z,200nm,20.0s,MS4.0
ABTA Abfaltersbach 42.04 299⇓*i*P **P 18 34 39.0 -0.7**
comp=Z,4.7nm,0.6s,mb4.3
CEL Celeste 42.07 286 *e*P **P 18 34 39.8 -0.3**
comp=Z,13nm,0.6s,mb4.7
BSEG Bad Segeberg 42.23 310 *e*P **P 18 34 42.0 +0.8**
comp=Z,40nm,1.1s,mb5.0
BSEG Bad Segeberg 42.23 310 *e*P **P 18 34 42.0 +0.8**
BSEG pmax pmax
comp=Z,40nm,1.1s,mb5.0
KONO Kongsberg 42.27 319 *e*P **P 18 34 41.6 +0.2**
KONO Kongsberg 42.27 319 *e*P **P 18 34 41.4 0.0**
KONO pmax pmax
comp=Z,37nm,0.7s,mb5.1
KONO Kongsberg 42.27 319 *e*P **P 18 34 41.4 -0.1**
comp=Z,37nm,0.7s,mb5.1
GRA1 Grafenberg Arr 42.29 304 *e*P **P 18 34 43.0 +1.2**
comp=Z,54nm,0.9s,mb5.2
GRA1 LR LR
comp=Z,300nm,18.1s,MS4.2
GRF Grafenberg Arr 42.29 304 *e*P **P 18 34 43.0 +1.2**
comp=Z,54nm,0.9s,mb5.2
GRF *e*L 18 55 30.6
comp=Z,289nm,18.1s
GRF Grafenberg Arr 42.29 304 *e*P **P 18 34 43.0 +1.2**
GRF pmax pmax
comp=Z,54nm,0.9s,mb5.2
GRF MLR MLR
comp=Z,300nm,18.1s,MS4.2
GRF Grafenberg Arr 42.29 304 *e*P **P 18 34 43.0 +1.2**
GRF pmax pmax
comp=Z,54nm,0.9s,mb5.2
GRF MLR MLR
comp=Z,300nm,18.1s,MS4.2
CLZ Clausthal 42.47 307 *e*P **P 18 34 43.7 +0.5**
comp=Z,14nm,0.8s,mb4.6
CLZ Clausthal 42.47 307 *e*P **P 18 34 43.7 +0.5**
CLZ pmax pmax
comp=Z,14nm,0.8s,mb4.6
TIXI Tiksi 42.51 23 *e*P **P 18 34 43.4 +0.2**
TIXI pmax pmax
comp=Z,16nm,0.8s,mb4.8
TIXI Tiksi 42.51 23 *e*P **P 18 34 43.4 +0.1**
comp=Z,16nm,0.8s,mb4.8
WTTA Wattenberg 42.51 300⇑*i*P **P 18 34 43.4 -0.2**
comp=Z,34nm,1.2s,mb5.0,SNR=9.1
NRDL Niedersach Rie 42.53 308 *e*P **P 18 34 44.3 +0.6**
comp=Z,31nm,1.0s,mb5.0
WATA Walderalm 42.53 300⇑*i*P **P 18 34 43.4 -0.3**
comp=Z,10nm,0.7s,mb4.7
FUR Furstenfeldbru 42.55 301 *e*P **P 18 34 44.6 +0.7**
comp=Z,41nm,0.9s,mb5.2
FUR Furstenfeldbru 42.55 301 *e*P **P 18 34 44.6 +0.7**
FUR pmax pmax
comp=Z,41nm,0.9s,mb5.2
MUD Monsted U'grnd 42.64 314 *i* P **P 18 34 45.3 +0.8**
comp=Z,12nm,1.2s,mb4.5
MUD
comp=Z,340nm,18.0s
MDJ Mudanjiang 42.84 64 P **P 18 34 45.6 -0.7**
MDJ pP pP 18 34 54.0 +3.7
MDJ sP sP 18 34 58.3 +6.4
MDJ PP PP 18 36 24.8 -0.7
MDJ PcP PcP 18 36 36.5 -0.7
MDJ ScP ScP 18 40 24.8 -3.0
MDJ PcS PcS 18 40 28.6 -0.7
MDJ S **S 18 41 09.8 -0.4**
MDJ SS SS 18 44 16.8 -4.3
MDJ pmax pmax
comp=Z,4.0nm,1.5s,mb3.9
MDJ pmax pmax
comp=Z,77nm,5.4s
MDJ LR LR
comp=E,180nm,21.5s
MDJ LR LR
comp=Z,220nm,22.4s,MS4.0
MOTA Moosalm 42.85 300⇓*i*P **P 18 34 45.9 -0.4**
comp=Z,12nm,0.7s,mb4.8,SNR=9.9
UBBA Unterbreizbach 42.86 305 *e*P **P 18 34 46.6 +0.2**
comp=Z,7.0nm,0.7s,mb4.5
RETA Reutte 43.04 301⇑*i*P **P 18 34 47.5 -0.4**
comp=Z,4.6nm,0.8s,mb4.3
FETA Feichten 43.17 300⇓*i*P **P 18 34 48.1 -0.8**
comp=Z,12nm,1.0s,mb4.6
KLR Kul'dur 43.20 57 *e*P **P 18 34 45.7 -3.4**
SNART Snartemo 43.56 317 *e*P **P 18 34 52.5 +0.6**
DAVA Damuels 43.67 300⇓*i*P **P 18 34 52.8 -0.1**
comp=Z,21nm,0.6s,mb5.0
STU Stuttgart 43.78 303 *e*P **P 18 34 54.4 +0.6**
comp=Z,15nm,0.5s,mb5.0
DAVOX Davos/Dischmat 43.79 300 P **P 18 34 54.0 0.0**
comp=Z,16nm,0.5s,mb5.0,baz=107,slow=7.5,SNR=30
DAVOX PcP PcP 18 36 40.4 0.0
comp=Z,4.4nm,0.6s,baz=354,slow=4.8,SNR=3.3
TOD Tromm 43.85 304 *e*P **P 18 34 55.0 +0.6**
KSRS Korea Array 43.92 74 P **P 18 34 54.8 -0.3**
comp=Z,2.7nm,0.8s,mb4.0,baz=284,slow=7.0,SNR=9.6
KSRS PcP PcP 18 36 40.2 -0.8
comp=Z,2.4nm,0.9s,baz=280,slow=1.4,SNR=4.8
KSRS LR LR 18 55 21.6
comp=Z,123nm,18.2s,MS3.9,baz=57,slow=39
KSRS Korea Array 43.92 74 P **P 18 34 54.8 -0.3**
KSRS 18 36 40.3
TNS Taunus Mts 43.95 305 *e*P **P 18 34 55.6 +0.4**
comp=Z,12nm,0.8s,mb4.7
TNS Taunus Mts 43.95 305 *e*P **P 18 34 55.6 +0.4**
TNS pmax pmax
comp=Z,12nm,0.8s,mb4.7
IBBN Ibbenburen 43.99 308 *e*P **P 18 34 55.9 +0.5**
comp=Z,25nm,0.8s,mb5.0
SPAK Spaichingen-Ko 44.20 302 *e*P **P 18 34 57.5 +0.3**
BFO Black Forest 44.44 302 P **P 18 34 59.7 +0.6**
comp=Z,98nm,0.9s,mb5.5,SNR=5.9
BFO Black Forest 44.44 302 *e*P **P 18 34 59.1 0.0**
comp=Z,15nm,0.9s,mb4.7
BFO Black Forest 44.44 302 *e*P **P 18 34 59.1 0.0**
BFO pmax pmax
comp=Z,15nm,0.9s,mb4.7
BUG Bochum--Univer 44.44 307 *e*P **P 18 34 59.5 +0.4**
comp=Z,8.0nm,0.8s,mb4.5
LANF Langenberg 44.62 303 *e*P **P 18 35 00.8 +0.2**
FELD Feldberg im Sc 44.76 302 *e*P **P 18 35 01.7 0.0**
PSI Prapat 44.99 138 LR LR 18 54 33.1
comp=Z,227nm,21.4s,MS4.1,baz=96,slow=37
KBS Kingsbay 45.09 346 *e*P **P 18 35 05.0 +1.0**
KBS AMb AMB 18 35 23.0
comp=Z,58nm,1.8s,mb5.1
KBS Kingsbay 45.09 346*c i*P **P 18 35 04.9 +1.0**
KBS pmax pmax
comp=Z,61nm,2.5s,mb5.0
KBS Kingsbay 45.09 346 *e*P **P 18 35 05.0 +1.0**
comp=Z,58nm,1.8s,mb5.1
CDF Champ du Feu 45.10 303⇑*i*P **P 18 35 04.4 0.0**
comp=Z,32nm,1.0s,mb4.8
CDF Champ du Feu 45.10 303⇑*i*P **P 18 35 04.4 0.0**
CDF pmax pmax
comp=Z,16nm,1.0s,mb4.8
CDF Champ du Feu 45.10 303⇑*i*P **P 18 35 04.4 0.0**
comp=Z,16nm,1.0s,mb4.8
BBS Basel-Blauen 45.19 301 *e*P **P 18 35 03.6 -1.5**
MOF Molkenrain 45.33 302 *e*P **P 18 35 06.2 -0.1**
MEM Membach 45.39 306 P **P 18 35 06.8 +0.1**
comp=Z,8.8nm,1.2s,mb4.5
HABR Khabarovsk 45.49 57 *e*P **P 18 35 06.9 -0.6**
HABR *e**PP pP 18 35 16.8 +5.3
HABR *e* 18 36 44.8
HABR *e* 18 36 53.7
HABR *e*S **S 18 41 47.5 -1.2**
HABR *e**SS sS 18 42 04.1 +8.7
HABR *e* 18 45 00.4
HABR MLR MLR
comp=Z,309nm,15.0s,MS4.4
WLF Walferdange 45.52 305 P **P 18 35 08.8 +1.1**
comp=Z,22nm,1.5s,mb4.9
WLF Walferdange 45.52 305 *e*P **P 18 35 08.4 +0.7**
comp=Z,33nm,1.1s,mb5.2
WLF Walferdange 45.52 305 *e*P **P 18 35 07.9 +0.2**
WLF pmax pmax
comp=Z,44nm,1.3s,mb5.2
WLF Walferdange 45.52 305 *e*P **P 18 35 07.9 +0.2**
comp=Z,44nm,1.3s,mb5.2
HINF Hinteralfeld 45.52 302⇑*i*P **P 18 35 07.6 -0.2**
PGF Pioggiola 45.60 294⇑*i*P **P 18 35 08.3 -0.1**
comp=Z,19nm,0.9s,mb4.7
PGF Pioggiola 45.60 294⇑*i*P **P 18 35 08.3 -0.1**
PGF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
PGF Pioggiola 45.60 294⇑*i*P **P 18 35 08.3 -0.1**
comp=Z,9.3nm,0.9s,mb4.7
HAU Haudompre 45.80 302 *e*P **P 18 35 09.9 -0.1**
comp=Z,29nm,0.9s,mb4.9
HAU *e*MLR MLR
comp=Z,182nm,17.2s,MS3.8
HAU Haudompre 45.80 302 *e*P **P 18 35 09.9 -0.1**
HAU pmax pmax
comp=Z,14nm,0.9s,mb4.9
HAU MLR MLR
comp=Z,180nm,17.3s,MS4.1
HAU Haudompre 45.80 302 *e*P **P 18 35 09.9 -0.1**
comp=Z,14nm,0.9s,mb4.9
HAU LR LR
comp=Z,180nm,17.3s,MS4.1
BCLA Clavier 45.88 306 P **P 18 35 10.6 +0.1**
OG01 Vacheresse 46.04 300 *e*P **P 18 35 11.7 -0.2**
SAOF Saorge 46.15 297 *e*P **P 18 35 13.4 +0.7**
AUTN L'Aution 46.23 297 *e*P **P 18 35 13.9 +0.5**
LPG La Plagne 46.23 299 *e*P **P 18 35 13.7 +0.3**
comp=Z,32nm,0.7s,mb5.0
LPG La Plagne 46.23 299 *e*P **P 18 35 13.7 +0.3**
LPG pmax pmax
comp=Z,16nm,0.7s,mb5.1
LPG La Plagne 46.23 299 *e*P **P 18 35 13.7 +0.3**
comp=Z,16nm,0.7s,mb5.0
LPL La Plagne 46.24 299 *e*P **P 18 35 13.6 +0.1**
comp=Z,27nm,0.6s,mb5.0
LPL La Plagne 46.24 299 *e*P **P 18 35 13.6 +0.1**
LPL pmax pmax
comp=Z,14nm,0.6s,mb5.1
LPL La Plagne 46.24 299 *e*P **P 18 35 13.6 +0.1**
comp=Z,14nm,0.6s,mb5.1
GIVF Givet 46.25 305 *e*P **P 18 35 14.0 +0.5**
SBF Sospel 46.27 296⇑*i*P **P 18 35 14.0 +0.3**
comp=Z,92nm,0.9s,mb5.4
SBF Sospel 46.27 296⇑*i*P **P 18 35 14.0 +0.3**
SBF pmax pmax
comp=Z,46nm,0.9s,mb5.4
SBF Sospel 46.27 296⇑*i*P **P 18 35 14.0 +0.3**
comp=Z,46nm,0.9s,mb5.4
LUCF Luceram 46.32 297 *e*P **P 18 35 14.4 +0.3**
TOUF Mont Tournerai 46.35 297 *e*P **P 18 35 15.0 +0.7**

CABF La Chapelle 46.35 300⇑ iP P 18 35 14.1 -0.2
comp=Z,33nm,0.9s,mb5.0
CABF La Chapelle 46.35 300⇑ iP P 18 35 14.1 -0.2
CABF pmax pmax
comp=Z,17nm,0.9s,mb5.0
CABF La Chapelle 46.35 300⇑ iP P 18 35 14.1 -0.2
comp=Z,17nm,0.9s,mb5.0
DOU Dourbes 46.39 305 P P 18 35 15.3 +0.7
BNI Bardonecchia 46.42 298 eP P 18 35 14.6 -0.2
BNI pmax pmax
comp=Z,32nm,1.1s,mb5.2
BNI Bardonecchia 46.42 298 eP P 18 35 14.6 -0.3
comp=Z,32nm,1.1s,mb5.2
MBDF Montbardon 46.45 298 eP P 18 35 14.8 -0.3
comp=Z,53nm,0.9s,mb5.2
MBDF Montbardon 46.45 298 eP P 18 35 14.8 -0.3
MBDF pmax pmax
comp=Z,27nm,0.9s,mb5.2
MBDF Montbardon 46.45 298 eP P 18 35 14.8 -0.3
comp=Z,26nm,0.9s,mb5.2
SNF Seneffe 46.49 306 P P 18 35 15.7 +0.3
MEZF Maizieres J'vi 46.51 303 eP P 18 35 16.0 +0.5
comp=Z,100nm,1.2s,mb5.3
MEZF Maizieres J'vi 46.51 303 eP P 18 35 16.0 +0.5
comp=Z,100nm,1.2s,mb5.6
BAIF Baives 46.64 306⇑ iP P 18 35 17.2 +0.6
comp=Z,30nm,0.8s,mb5.0
BAIF Baives 46.64 306⇑ iP P 18 35 17.2 +0.6
BAIF pmax pmax
comp=Z,15nm,0.8s,mb5.0
BAIF Baives 46.64 306⇑ iP P 18 35 17.2 +0.6
comp=Z,15nm,0.8s,mb5.0
FRF La Foret Royal 46.91 296⇑ iP P 18 35 18.6 -0.1
comp=Z,58nm,1.0s,mb5.2
FRF La Foret Royal 46.91 296⇑ iP P 18 35 18.6 -0.1
FRF pmax pmax
comp=Z,29nm,1.0s,mb5.2
FRF La Foret Royal 46.91 296⇑ iP P 18 35 18.6 -0.1
comp=Z,29nm,1.0s,mb5.2
LMR La Mourre 47.07 296 eP P 18 35 19.7 -0.3
comp=Z,33nm,1.3s,mb4.8
LMR La Mourre 47.07 296 eP P 18 35 19.7 -0.3
LMR pmax pmax
comp=Z,16nm,1.3s,mb4.8
LMR La Mourre 47.07 296 eP P 18 35 19.7 -0.3
comp=Z,16nm,1.3s,mb4.8
SMRF Simiane la Rot 47.50 297⇑ iP P 18 35 23.4 0.0
comp=Z,37nm,1.0s,mb5.1
SMRF Simiane la Rot 47.50 297⇑ iP P 18 35 23.4 0.0
comp=Z,37nm,1.0s,mb5.4
LOR Lormes 47.63 302⇑ iP P 18 35 23.6 -0.7
comp=Z,15nm,0.8s,mb4.8
LOR eMLR MLR
comp=Z,134nm,19.5s,MS3.6
LOR Lormes 47.63 302⇑ iP P 18 35 23.6 -0.7
LOR pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
LOR MLR MLR
comp=Z,130nm,19.5s,MS3.9
LOR Lormes 47.63 302⇑ iP P 18 35 23.6 -0.7
comp=Z,7.4nm,0.8s,mb4.8
LOR LR LR
comp=Z,130nm,19.5s,MS3.9
LRW Lerwick 47.63 320 eP P 18 35 23.3 -0.8
LRW Lerwick 47.63 320 P P 18 35 23.3 -0.8
SSB Saint Sauveur 47.78 299 eP P 18 35 25.3 -0.2
SSB pmax pmax
comp=Z,39nm,1.4s,mb5.2
SSB Saint Sauveur 47.78 299 eP P 18 35 25.3 -0.2
comp=Z,39nm,1.4s,mb5.2
SMF Signal de Mont 47.82 301⇑ iP P 18 35 25.4 -0.4
comp=Z,15nm,0.6s,mb4.9
SMF Signal de Mont 47.82 301⇑ iP P 18 35 25.4 -0.4
SMF pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
SMF Signal de Mont 47.82 301⇑ iP P 18 35 25.4 -0.4
comp=Z,7.3nm,0.6s,mb4.9
VIVF Saint-Julien-l 47.83 299⇑ iP P 18 35 26.2 +0.3
comp=Z,78nm,1.2s,mb5.3
VIVF Saint-Julien-l 47.83 299⇑ iP P 18 35 26.2 +0.3
VIVF pmax pmax
comp=Z,39nm,1.2s,mb5.3
VIVF Saint-Julien-l 47.83 299⇑ iP P 18 35 26.2 +0.3
comp=Z,39nm,1.2s,mb5.3
KEST Kesra 47.87 285 P P 18 35 26.8 +0.4
comp=Z,4.2nm,0.7s,mb4.6,baz=349,slow=1.3,SNR=13
KEST Kesra 47.87 285 eP P 18 35 25.6 -0.8
SSF Saint Saulge 47.92 302 eP P 18 35 25.4 -1.1
comp=Z,13nm,0.8s,mb4.7
SSF Saint Saulge 47.92 302 eP P 18 35 25.4 -1.1
SSF pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
SSF Saint Saulge 47.92 302 eP P 18 35 25.4 -1.1
comp=Z,6.6nm,0.8s,mb4.7
AVF Avril sur Loir 48.10 301⇑ iP P 18 35 27.6 -0.3
comp=Z,65nm,1.1s,mb5.3
AVF Avril sur Loir 48.10 301⇑ iP P 18 35 27.6 -0.3
AVF pmax pmax
comp=Z,32nm,1.1s,mb5.3
AVF Avril sur Loir 48.10 301⇑ iP P 18 35 27.6 -0.3
comp=Z,32nm,1.1s,mb5.3
PLDF La Plantade 48.18 300 eP P 18 35 28.5 0.0
BGF Bois d'Agland 48.50 301 eP P 18 35 30.7 -0.3
LASF Ste Croix 48.64 298⇑ iP P 18 35 32.5 +0.4
comp=Z,52nm,0.9s,mb5.2
PYM Petit Puy Mans 48.65 300 eP P 18 35 32.1 -0.1
LBL Lubilhac 48.66 300 eP P 18 35 33.0 +0.7
TCF Toulx Ste Croi 49.01 301⇑ iP P 18 35 35.0 +0.1
comp=Z,49nm,1.0s,mb5.2
TCF Toulx Ste Croi 49.01 301⇑ iP P 18 35 35.0 +0.1
TCF pmax pmax
comp=Z,24nm,1.0s,mb5.2
TCF Toulx Ste Croi 49.01 301⇑ iP P 18 35 35.0 +0.1
comp=Z,24nm,1.0s,mb5.2
MME1 Meikle Cairn 49.09 316⇑ eP P 18 35 34.8 -0.5
MME1 Meikle Cairn 49.09 316 P P 18 35 34.8 -0.5
HPK Haverah Park 49.15 312 AMb AMB 18 35 35.1
comp=Z,76nm,2.8s,mb5.2
HPK eP 18 35 35.6
HPK Haverah Park 49.15 312 P P 18 35 35.6 -0.3
MCD Coleburn Disti 49.18 317⇑ eP P 18 35 35.4 -0.6
MCD Coleburn Disti 49.18 317 P P 18 35 35.4 -0.6
ESY Stoneypath 49.22 315 eP P 18 35 36.0 -0.5
ESY Stoneypath 49.22 315 P P 18 35 36.0 -0.5
XAL Allendale 49.26 313⇑ eP P 18 35 36.4 -0.3
XAL Allendale 49.26 313 P P 18 35 36.4 -0.3
LHO Holmfirth 49.39 311 eP P 18 35 38.2 +0.4
LHO Holmfirth 49.39 311 P P 18 35 38.2 +0.4
EBL Broad Law 49.49 314 eP P 18 35 38.2 -0.3
EBL Broad Law 49.49 314 P P 18 35 38.2 -0.3
EDI Edinburgh 49.53 315⇑ eP P 18 35 38.4 -0.4
EDI AMb AMB 18 35 46.4
comp=Z,64nm,2.4s,mb5.2
EDI Edinburgh 49.53 315 P P 18 35 38.4 -0.4
EDI AMb AMB 18 35 46.4
comp=Z,64nm,2.4s,mb5.2
CAF Calviac 49.56 300⇑ iP P 18 35 39.5 +0.4
comp=Z,30nm,1.0s,mb5.0
CAF Calviac 49.56 300⇑ iP P 18 35 39.5 +0.4
CAF pmax pmax
comp=Z,15nm,1.0s,mb5.0
CAF Calviac 49.56 300⇑ iP P 18 35 39.5 +0.4
comp=Z,15nm,1.0s,mb5.0
EBH Black Hill 49.63 315⇑ eP P 18 35 39.0 -0.6
EBH Black Hill 49.63 315 P P 18 35 39.0 -0.6
EKA Eskdalemuir Ar 49.67 314 P P 18 35 39.5 -0.4
comp=Z,24nm,0.7s,mb5.3,baz=90,slow=8.0,SNR=106
EKA Eskdalemuir Ar 49.67 314 P P 18 35 39.5 -0.3
EKA pmax pmax
comp=Z,24nm,0.7s
ECK Cauldkaine Hil 49.69 314⇑ eP P 18 35 39.3 -0.7
ECK Cauldkaine Hil 49.69 314 P P 18 35 39.3 -0.7
EAU Auchinoon 49.70 315 eP P 18 35 39.7 -0.3
EAU Auchinoon 49.70 315 P P 18 35 39.7 -0.3
ESK Eskdalemuir 49.70 314⇑ eP P 18 35 39.5 -0.6
ESK AMb AMB 18 35 43.5
comp=Z,58nm,3.2s
ESK Eskdalemuir 49.70 314 P P 18 35 39.5 -0.6
ESK AMb AMB 18 35 43.5
comp=Z,58nm,3.2s
ESK Eskdalemuir 49.70 314 *i* P **P 18 35 40.3 +0.3**
ESK Eskdalemuir 49.70 314 *eP* **P 18 35 39.5 -0.5**
comp=Z,11nm,0.7s,mb5.0
LDF La Druitiere 49.77 305⇑ iP P 18 35 40.3 -0.5
comp=Z,30nm,0.5s,mb5.2
LDF La Druitiere 49.77 305⇑ iP P 18 35 40.3 -0.5
LDF pmax pmax
comp=Z,15nm,0.5s,mb5.3
LDF La Druitiere 49.77 305⇑ iP P 18 35 40.3 -0.5
comp=Z,15nm,0.5s,mb5.3
RJF Les Rejaudoux 49.79 300⇑ iP P 18 35 41.3 +0.4
comp=Z,33nm,1.0s,mb5.0
RJF eMLR MLR
comp=Z,149nm,19.8s,MS3.7
RJF Les Rejaudoux 49.79 300⇑ iP P 18 35 41.3 +0.4
RJF pmax pmax
comp=Z,16nm,1.0s,mb5.0
RJF MLR MLR
comp=Z,150nm,19.8s,MS4.0
RJF Les Rejaudoux 49.79 300⇑ iP P 18 35 41.3 +0.4
comp=Z,16nm,1.0s,mb5.0
RJF LR LR
comp=Z,150nm,19.8s,MS4.0
MDO Dochfour 49.80 317⇑ eP P 18 35 40.1 -0.7
MDO Dochfour 49.80 317 P P 18 35 40.1 -0.7
FLN La Foliniere 49.95 305⇑ iP P 18 35 41.4 -0.7
comp=Z,24nm,0.9s,mb5.0
FLN eMLR MLR
comp=Z,300nm,22.2s,MS4.0
FLN La Foliniere 49.95 305⇑ iP P 18 35 41.4 -0.7
FLN pmax pmax
comp=Z,12nm,0.9s,mb4.9
FLN MLR MLR
comp=Z,300nm,22.3s,MS4.2
FLN La Foliniere 49.95 305⇑ iP P 18 35 41.4 -0.7
comp=Z,12nm,0.9s,mb4.9
FLN LR LR
comp=Z,300nm,22.3s,MS4.2
MTLF Montolieu 50.01 298⇑ iP P 18 35 42.8 +0.2
comp=Z,16nm,0.7s,mb4.8
MTLF Montolieu 50.01 298⇑ iP P 18 35 42.8 +0.2
MTLF pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
MTLF Montolieu 50.01 298⇑ iP P 18 35 42.8 +0.2
comp=Z,7.8nm,0.7s,mb4.8
EAB Aberfoyle 50.09 315⇑ eP P 18 35 42.4 -0.6
EAB Aberfoyle 50.09 315 P P 18 35 42.4 -0.6
GCD Castle Douglas 50.22 313 eP P 18 35 43.8 -0.2
GCD Castle Douglas 50.22 313 P P 18 35 43.8 -0.2
PGBU Glenifferbraes 50.27 315⇑ eP P 18 35 44.0 -0.4
PGBU AMb AMB 18 35 50.2
comp=Z,108nm,3.2s
PGBU Glenifferbraes 50.27 315 P P 18 35 44.0 -0.4
PGBU AMb AMB 18 35 50.2
comp=Z,108nm,3.2s
KAC Achnashellach 50.27 317 eP P 18 35 44.0 -0.4
KAC Achnashellach 50.27 317 P P 18 35 44.0 -0.4
GRR Gorron 50.30 305⇑ iP P 18 35 44.1 -0.7
comp=Z,34nm,0.8s,mb5.1
GRR Gorron 50.30 305⇑ iP P 18 35 44.1 -0.7
GRR pmax pmax
comp=Z,17nm,0.8s,mb5.1
GRR Gorron 50.30 305⇑ iP P 18 35 44.1 -0.7
comp=Z,17nm,0.8s,mb5.1
KSB Sheil Bridge 50.41 317 eP P 18 35 44.8 -0.6
KSB Sheil Bridge 50.41 317 P P 18 35 44.8 -0.6
LFF La Frestale 50.43 300⇑ iP P 18 35 46.0 +0.2
comp=Z,28nm,0.6s,mb5.2
LFF La Frestale 50.43 300⇑ iP P 18 35 46.0 +0.2
LFF pmax pmax
comp=Z,14nm,0.6s,mb5.2
LFF La Frestale 50.43 300⇑ iP P 18 35 46.0 +0.2
comp=Z,14nm,0.6s,mb5.2
MFF Saint Martin d 50.44 302 eP P 18 35 45.1 -0.7
comp=Z,31nm,1.1s,mb4.9
MFF Saint Martin d 50.44 302 eP P 18 35 45.1 -0.7
MFF pmax pmax
comp=Z,16nm,1.1s,mb5.0
MFF Saint Martin d 50.44 302 eP P 18 35 45.1 -0.7
comp=Z,16nm,1.1s,mb5.0
CLLI Llivia 50.49 297 P P 18 35 46.2 -0.1
KPL Plockton 50.50 317⇑ eP P 18 35 45.4 -0.7
KPL AMb AMB 18 35 47.3
comp=Z,91nm,2.6s,mb5.3
KPL Plockton 50.50 317 P P 18 35 45.4 -0.7
KPL AMb AMB 18 35 47.3
comp=Z,91nm,2.6s,mb5.3
GAL1 Galloway 50.65 314 eP P 18 35 47.1 -0.2
GAL1 Galloway 50.65 314 P P 18 35 47.1 -0.2
KAR1 Arisaig 50.70 316⇑ eP P 18 35 47.5 -0.1
KAR1 Arisaig 50.70 316 P P 18 35 47.5 -0.1
JSA Saint Aubin 50.87 306 eP P 18 35 48.9 -0.1
JSA Saint Aubin 50.87 306 P P 18 35 48.9 -0.1
YSS Yuzh-Sakhalins 50.91 57⇑ eP P 18 35 50.2 +0.8
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.2
YSS MLR MLR
comp=Z,300nm,15.0s,MS4.4
YSS MLR MLR
comp=E,500nm,14.0s
YSS Yuzh-Sakhalins 50.91 57 eP P 18 35 50.2 +0.8
comp=E,29nm,1.1s,mb5.1
ETOS Mallorca 50.96 293 P P 18 35 49.8 -0.1
comp=E,72nm,1.4s,mb5.4
CSOR Sort 51.11 297 P P 18 35 51.2 +0.3
comp=E,33nm,1.5s,mb5.0
KMBO Kilima Mbogo 51.22 225 P P 18 35 53.0 +1.0
comp=E,7.0nm,0.8s,mb4.6,baz=0.0,slow=20,SNR=16
KMBO LR LR 18 59 17.5
comp=E,137nm,19.4s,MS4.0,baz=93,slow=38
KMBO Kilima Mbogo 51.22 225 P P 18 35 53.0 +0.9
KMBO pmax pmax
comp=Z,7.0nm,0.8s
KMBO MLR MLR
comp=Z,137nm,19.4s
KMBO Kilima Mbogo 51.22 225 *eP* **P 18 35 52.8 +0.7**
comp=Z,5.0nm,0.8s,mb4.5
DAG Danmarks Havn 51.26 343⇓ eP P 18 35 52.1 +0.5
DAG pmax pmax
comp=Z,16nm,0.7s,mb5.1
DAG Danmarks Havn 51.26 343⇓ eP P 18 35 52.1 +0.5
comp=Z,16nm,0.7s,mb5.1
DAG Danmarks Havn 51.26 343⇓ iP P 18 35 52.1 +0.5
comp=Z,16nm,0.7s,mb5.1
EPF Esparros 51.40 298 eP P 18 35 52.3 -0.8
comp=Z,7.8nm,0.6s,mb4.5
EPF Esparros 51.40 298 eP P 18 35 52.3 -0.8
EPF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
EPF Esparros 51.40 298 eP P 18 35 52.3 -0.8
comp=Z,3.9nm,0.6s,mb4.5
SGMF Saint Gilles 51.42 305⇑ iP P 18 35 52.8 -0.4
comp=Z,33nm,0.7s,mb5.1
SGMF Saint Gilles 51.42 305⇑ iP P 18 35 52.8 -0.4
SGMF pmax pmax
comp=Z,17nm,0.6s,mb5.2
SGMF Saint Gilles 51.42 305⇑ iP P 18 35 52.8 -0.4
comp=Z,16nm,0.6s,mb5.1
GMM Mts of Mourne 51.52 313 eP P 18 35 53.3 -0.5
GMM Mts of Mourne 51.52 313 P P 18 35 53.3 -0.5
EBIE Bielsa 51.67 297 P P 18 35 55.1 0.0
comp=Z,18nm,1.0s,mb5.0
MAJO Matsushiro 51.82 71 P P 18 35 55.2 -1.1
MAJO pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
MAJO Matsushiro 51.82 71 P P 18 35 55.2 -1.2
comp=Z,8.6nm,0.9s,mb4.7
MJAR Matsushiro Arr 51.82 71 P P 18 35 56.1 -0.2
comp=Z,2.8nm,0.8s,mb4.2,baz=294,slow=10.0,SNR=8.7
MJAR LR LR 18 59 34.9
comp=Z,211nm,18.5s,MS4.2,baz=260,slow=38
MJAR Matsushiro Arr 51.82 71 P P 18 35 56.2 -0.2
MJAR pmax pmax
comp=Z,3.0nm,0.8s
MJAR MLR MLR
comp=Z,211nm,18.5s
ROSF Rostrenen 51.84 305⇑ iP P 18 35 55.8 -0.5
comp=Z,24nm,0.7s,mb5.0
ROSF Rostrenen 51.84 305⇑ iP P 18 35 55.8 -0.5
ROSF pmax pmax
comp=Z,12nm,0.7s,mb4.9
ROSF Rostrenen 51.84 305⇑ iP P 18 35 55.8 -0.5
comp=Z,12nm,0.7s,mb4.9
QUIF Quistinic 51.92 305⇑ iP P 18 35 56.3 -0.6
comp=Z,26nm,0.6s,mb5.0
QUIF Quistinic 51.92 305⇑ iP P 18 35 56.3 -0.6
QUIF pmax pmax
comp=Z,13nm,0.6s,mb5.0
QUIF Quistinic 51.92 305⇑ iP P 18 35 56.3 -0.6
comp=Z,13nm,0.6s,mb5.0
ETSF Etsaut 52.06 298⇑ iP P 18 35 58.2 +0.2
comp=Z,21nm,0.8s,mb4.8
ETSF Etsaut 52.06 298⇑ iP P 18 35 58.2 +0.2
ETSF pmax pmax
comp=Z,11nm,0.8s,mb4.8
ETSF Etsaut 52.06 298⇑ iP P 18 35 58.2 +0.2
comp=Z,11nm,0.8s,mb4.8
SJPF Ste Jean 52.43 298 *eP* **P 18 36 00.2 -0.6**
comp=Z,9.9nm,0.9s,mb4.4
SJPF Ste Jean 52.43 298 *eP* **P 18 36 00.2 -0.6**
SJPF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
SJPF Ste Jean 52.43 298 *eP* **P 18 36 00.2 -0.6**
comp=Z,4.9nm,0.9s,mb4.4
ESAC San Caprasio 52.46 297 P P 18 36 00.9 -0.1
comp=Z,18nm,0.6s,mb5.2
KSM Kuching 52.52 127 *eP* **P 18 36 02.2 +0.4**
comp=Z,12nm,1.0s,mb4.8
EMOS Mosqueruela 53.02 295 P P 18 36 05.1 0.0
comp=Z,60nm,1.5s,mb5.3
ECHE Chera 53.69 294 P P 18 36 10.5 +0.4
ECHE pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
ECHE Chera 53.69 294 P P 18 36 10.5 +0.4
comp=Z,9.5nm,0.8s,mb4.8
SCO Scoresbysund 53.73 335 *i* P **P 18 36 11.2 +1.3**
SCO
comp=Z,320nm,19.0s
ELAN Lanestosa 53.86 299 P P 18 36 11.4 +0.1
comp=Z,30nm,0.7s,mb5.3
ETOB Tobarra 54.50 294 P P 18 36 16.3 +0.2
comp=Z,8.3nm,0.7s,mb4.9
EVIA Vianos 55.18 294 P P 18 36 21.4 +0.4
EVIA pmax pmax
comp=Z,15nm,0.8s,mb5.1
EVIA Vianos 55.18 294 P P 18 36 21.4 +0.4
comp=Z,15nm,0.8s,mb5.1
BILL Bilibino 55.45 27 *c iP* **P 18 36 23.4 +0.9**
BILL *e*PP pP 18 36 31.5 +4.9
BILL pmax pmax
comp=Z,19nm,1.3s,mb5.0
BILL MLR MLR
comp=Z,500nm,17.0s,MS4.7
BILL Bilibino 55.45 27 *eP* **P 18 36 23.1 +0.7**
comp=Z,18nm,1.1s,mb5.0
EHUE Huescar 55.61 293 P P 18 36 24.3 +0.2
EHUE pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
EHUE Huescar 55.61 293 P P 18 36 24.3 +0.2
comp=Z,8.0nm,0.8s,mb4.8
ESDC Sonseca Array 55.73 296 P P 18 36 24.6 -0.4
comp=Z,8.5nm,0.7s,mb4.9,baz=57,slow=7.2,SNR=29
ESDC Sonseca Array 55.73 296 P P 18 36 24.4 -0.5
comp=Z,12nm,0.7s,mb5.0
ESLA Sonseca Array 55.73 296 *eP* **P 18 36 24.0 -1.0**
comp=Z,2.2nm,0.9s,mb4.2
EQES Quesada 55.95 293 P P 18 36 26.3 -0.2
comp=Z,31nm,1.2s,mb5.2
EBER Berja 56.24 292 P P 18 36 28.7 +0.1
comp=Z,13nm,0.8s,mb5.0
EBAN Banos Encina 56.29 294 P P 18 36 28.9 -0.1
EBAN pmax pmax
comp=Z,15nm,0.6s,mb5.2
EBAN Banos Encina 56.29 294 P P 18 36 28.9 -0.1
comp=Z,15nm,0.6s,mb5.2
ECAL Calabor 56.62 299 P P 18 36 31.1 -0.2
comp=Z,18nm,1.0s,mb5.1
EGUA Guajares 56.75 292 P P 18 36 31.2 -1.1
EGUA pmax pmax
comp=Z,66nm,0.8s,mb5.7
EGUA Guajares 56.75 292 P P 18 36 31.2 -1.0
comp=Z,66nm,0.8s,mb5.7
ERON Agron 56.83 293 P P 18 36 31.7 -1.2
comp=Z,9.7nm,0.6s,mb5.0
EADA Adamuz 56.84 294 P P 18 36 32.5 -0.4
comp=Z,16nm,0.8s,mb5.1
EPLA Plasencia 57.02 297 P P 18 36 34.1 0.0
EPLA pmax pmax
comp=Z,29nm,1.1s,mb5.2
EPLA Plasencia 57.02 297 P P 18 36 34.1 0.0
comp=Z,29nm,1.1s,mb5.2
TAM Tamanrasset 57.14 273 *eP* **P 18 36 34.9 -0.3**
TAM pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
TAM Tamanrasset 57.14 273 *eP* **P 18 36 34.9 -0.3**
comp=Z,6.6nm,0.9s,mb4.7
MVO Moncorvo 57.16 299 *eP* **P 18 36 35.3 +0.2**
comp=Z,25nm,1.9s,mb4.9
PETK Petropavlovsk- 57.50 46 P P 18 36 37.0 -0.3
comp=Z,4.3nm,0.7s,mb4.6,baz=292,slow=5.1,SNR=7.9
PETK LR LR 19 02 27.9
comp=Z,169nm,18.4s,MS4.2,baz=275,slow=37
PETK Petropavlovsk- 57.50 46 P P 18 36 37.0 -0.3
PETK pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
PETK MLR MLR
comp=Z,169nm,18.4s,MS4.2
ELOB Lobios 57.54 300 P P 18 36 37.8 +0.1
comp=Z,23nm,0.7s,mb5.3
PVRL Vila Real 57.57 299 *eP* **P 18 36 38.0 0.0**
comp=Z,17nm,1.9s,mb4.8
PCAB Cabril 57.58 300 *eP* **P 18 36 38.6 +0.5**
comp=Z,31nm,1.8s,mb5.0
SUMG Summit 57.63 340 *eP* **P 18 36 39.2 +1.2**
comp=Z,22nm,0.8s,mb5.2
SUMG Summit 57.63 340⇑ *iP* **P 18 36 39.1 +1.1**
comp=Z,24nm,0.8s,mb5.3
SUMG
comp=Z,80nm,18.0s
PVIS Viseu 57.95 298 *eP* **P 18 36 41.0 +0.3**
comp=Z,33nm,1.5s,mb5.1
PCBR Castelo Branco 58.07 297 *eP* **P 18 36 41.5 0.0**
comp=Z,15nm,1.6s,mb4.8
PMRV Marv??o 58.20 297 *eP* **P 18 36 42.7 +0.2**
comp=Z,21nm,1.2s,mb5.0
EBAD Badajoz 58.26 296 P P 18 36 42.3 -0.5
comp=Z,14nm,0.8s,mb5.0
EMIN Mina Concepcio 58.49 295 P P 18 36 43.9 -0.6
comp=Z,14nm,0.7s,mb5.1
PBAR Barrancos 58.55 295 *eP* **P 18 36 45.1 +0.2**
comp=Z,20nm,1.6s,mb4.9
PTOM Tomar 58.81 297 *eP* **P 18 36 47.1 +0.4**
comp=Z,29nm,0.9s,mb5.3
EGRO El Granado 59.17 295 P P 18 36 48.8 -0.5
comp=Z,13nm,0.7s,mb5.1
PBEJ Beja 59.20 296 *eP* **P 18 36 49.4 0.0**
comp=Z,22nm,1.2s,mb5.1
PVAQ Vaqueiros 59.40 295 *eP* **P 18 36 50.9 +0.1**
comp=Z,36nm,1.5s,mb5.2
MDT Midelt 59.46 289 P P 18 36 51.1 -0.2
comp=Z,2.5nm,0.7s,mb4.3,baz=38,slow=5.5,SNR=2.6
PBDV Barranco-do-Ve 59.62 295 *eP* **P 18 36 52.8 +0.4**
comp=Z,34nm,1.1s,mb5.3
SFJD Kangerlussuaq 64.37 338 *i* P **P 18 37 23.7 -0.1**
comp=Z,13nm,0.8s,mb5.0
SFJD
comp=Z,90nm,20.0s
TORD Torodi Ar. Bea 65.74 267 P P 18 37 31.9 -1.5
comp=Z,14nm,0.6s,mb5.2,baz=48,slow=5.8,SNR=92
LSZ Lusaka 67.89 225 *eP* **P 18 37 46.3 -0.7**
LSZ pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
LSZ Lusaka 67.89 225 *eP* **P 18 37 46.3 -0.7**
comp=Z,6.3nm,0.7s,mb4.8
COLD Coldfoot 68.55 16 *eP* **P 18 37 50.9 +0.4**
comp=Z,18nm,1.0s,mb5.0
COLD *e* 18 37 58.3
INK Inuvik 70.38 9 *eP* **P 18 38 02.1 +0.3**
INK *e* 18 38 09.5
INK pmax pmax
comp=Z,24nm,1.0s
INK Inuvik 70.38 9 *eP* **P 18 38 02.1 +0.3**
comp=Z,24nm,1.0s,mb5.1
INK *e* 18 38 09.5
BPAW Bear Paw Mtn. 71.01 18 *eP* **P 18 38 05.6 -0.1**
comp=Z,17nm,1.3s,mb4.8
COLA College 71.06 16 *eP* **P 18 38 06.2 +0.2**
COLA *e* 18 38 13.4
COLA pmax pmax
comp=Z,23nm,1.0s,mb5.1
COLA College 71.06 16 *eP* **P 18 38 06.2 +0.2**
comp=Z,24nm,1.0s,mb5.1
COLA *e* 18 38 13.4
PPLA Purkeypile 71.73 19 *eP* **P 18 38 10.1 0.0**
comp=Z,11nm,0.9s,mb4.8
EGAK Eagle 72.49 14 *eP* **P 18 38 14.1 -0.4**
comp=Z,11nm,1.1s,mb4.7
EGAK *e* 18 38 22.1
PAX Paxson 73.25 16 *eP* **P 18 38 18.6 -0.5**

PAX e 18 38 26.3
PAX pmax pmax
comp=Z,16nm,1.0s,mb4.9
PAX Paxson 73.25 16 *e*P **P 18 38 18.6 -0.4**
comp=Z,16nm,1.0s,mb4.9
PAX e 18 38 26.3
PMR Palmer 73.60 19 *e*P **P 18 38 20.7 -0.5**
PMR pmax pmax
comp=Z,13nm,1.0s,mb4.8
PMR Palmer 73.60 19 *e*P **P 18 38 20.7 -0.5**
comp=Z,13nm,1.0s,mb4.8
DBIC Dimbokro 74.80 266 P **P 18 38 27.7 -1.3**
comp=Z,12nm,0.8s,mb4.8,baz=65,slow=5.8,SNR=9.6
DBIC Dimbokro 74.80 266 P **P 18 38 27.7 -1.3**
DBIC pmax pmax
comp=Z,12nm,0.9s
DBIC Dimbokro 74.80 266 *e*P **P 18 38 27.6 -1.3**
KIC Kosan Boka 74.91 266 *e*P **P 18 38 28.3 -1.3**
comp=Z,23nm,0.7s,mb5.2
TIC Toumodi 74.94 266 *e*P **P 18 38 28.4 -1.4**
comp=Z,6.6nm,0.2s,mb5.1
TIC Toumodi 74.94 266 *e*P **P 18 38 28.4 -1.4**
TIC pmax pmax
comp=Z,7.0nm,0.2s,mb5.2
BMRM Bremner River 75.21 17 *e*P **P 18 38 31.0 +0.4**
comp=Z,25nm,1.2s,mb5.0
LIC Lamto 75.22 266 *e*P **P 18 38 29.8 -1.6**
LIC *e*MLR MLR
comp=Z,216nm,18.2s,MS4.2
LIC Lamto 75.22 266 *e*P **P 18 38 29.9 -1.5**
comp=Z,67nm,1.2s,mb5.5
LIC Lamto 75.22 266 *e*P **P 18 38 29.8 -1.6**
LIC LR LR
comp=Z,110nm,18.3s,MS4.2
KDAK Kodiak Island 75.92 22 *i*P **P 18 38 35.2 +0.5**
KDAK Kodiak Island 75.92 22 *e*P **P 18 38 33.4 -1.3**
comp=Z,9.7nm,0.8s,mb4.8
TSUM Tsumeb 77.06 231 *e*P **P 18 38 41.2 -0.4**
comp=Z,6.9nm,0.6s,mb4.8
LBTB Lobatse 77.28 221 *e*P **P 18 38 42.5 -0.2**
LBTB pmax pmax
comp=Z,57nm,1.7s,mb5.2
LBTB Lobatse 77.28 221 *e*P **P 18 38 42.5 -0.3**
comp=Z,57nm,1.7s,mb5.2
PNL Peninsula 77.50 15 *e*P **P 18 38 44.4 +0.8**
comp=Z,11nm,0.8s,mb4.8
YKA Yellowknife Ar 77.67 3 P **P 18 38 44.4 -0.1**
comp=Z,7.3nm,0.8s,mb4.7,baz=350,slow=5.7,SNR=72
YKA Yellowknife Ar 77.67 3 P **P 18 38 44.4 0.0**
YKA pmax pmax
comp=Z,7.0nm,0.8s
SKAG Skagway 78.46 13 *e*P **P 18 38 49.5 +0.6**
comp=Z,15nm,1.1s,mb4.8
SCHQ Schefferville 78.75 337 P **P 18 38 50.6 0.0**
comp=Z,5.7nm,0.7s,mb4.6,baz=32,slow=4.9,SNR=6.3
SCHQ LR LR 19 13 16.5
comp=Z,110nm,20.0s,MS4.2,baz=84,slow=35
DLBC Dease Lake 80.29 11 *e*P **P 18 38 59.5 +0.6**
DLBC *e* 18 39 06.7
BOSA Boshof 80.43 220 P **P 18 38 59.6 -0.4**
comp=Z,5.0nm,0.8s,mb4.5,baz=49,slow=5.9,SNR=6.2
BOSA Boshof 80.43 220 P **P 18 38 59.6 -0.3**
BOSA pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
BOSA Boshof 80.43 220 *e*P **P 18 38 58.9 -1.0**
FCC Fort Churchill 80.71 352 *e*P **P 18 39 00.8 -0.3**
WRA Warramunga Arr 84.00 122 P **P 18 39 18.1 -0.8**
comp=Z,10.0nm,0.8s,mb5.0,baz=323,slow=4.7,SNR=57
WRA PKKPbc PKKPbc 18 57 32.2 -0.7
comp=Z,0.5nm,0.6s,baz=133,slow=2.6,SNR=6.2
WRA Warramunga Arr 84.00 122 P **P 18 39 18.1 -0.8**
WRA PKKPbc PKKPbc 18 57 32.2 -0.7
WRAB Tennant Creek 84.00 122 *e*P **P 18 39 17.8 -1.0**
FFC Flin Flon 85.35 356 *i*P **P 18 39 25.7 +0.4**
FFC Flin Flon 85.35 356 *e*P **P 18 39 25.0 -0.3**
comp=Z,16nm,1.0s,mb5.1
FFC *e* 18 39 32.5
SUR Sutherland 85.70 221 *e*P **P 18 39 27.5 +0.4**
ASAR Alice Springs 86.41 125 P **P 18 39 29.9 -0.9**
comp=Z,6.3nm,0.8s,mb4.9,baz=318,slow=4.6,SNR=72
ASAR PKIKP PKIKP 18 44 36.8 -1.5
comp=Z,0.2nm,0.5s,baz=298,slow=1.0,SNR=5.5
ASAR PKKPbc PKKPbc 18 57 27.8 +0.5
comp=Z,0.5nm,0.7s,baz=126,slow=3.0,SNR=6.3
EDM Edmonton 86.99 3 *e*P **P 18 39 33.1 -0.3**
ULM Lac du Bonnet 89.28 352 LR LR 19 22 15.0
comp=Z,148nm,18.6s,MS4.4,baz=356,slow=37
EYMN Ely 90.95 348 *e*P **P 18 39 51.7 -0.4**
comp=Z,6.7nm,1.0s,mb4.9
EYMN *e* 18 39 59.1
AGMN Agassiz Nation 91.20 351 *e*P **P 18 39 52.7 -0.6**
comp=Z,4.2nm,0.9s,mb4.8
JCW Jim Creek 91.36 9 *e*P **P 18 39 54.0 -0.1**
comp=Z,46nm,0.7s,mb5.9
CTAO Charters Tower 92.14 114 *e*P **P 18 39 56.9 -1.1**
BSMT Bassoo Peak 92.29 4 *e*P **P 18 39 58.6 +0.2**
comp=Z,12nm,1.4s,mb5.0
LON Longmire 92.80 9 *e*P **P 18 40 01.2 +0.4**
LON pmax pmax
comp=Z,6.0nm,0.7s,mb5.1
LON Longmire 92.80 9 *e*P **P 18 40 01.2 +0.4**
comp=Z,6.1nm,0.7s,mb5.1
SLMT Seeley Lake 92.96 3 *e*P **P 18 40 01.5 0.0**
comp=Z,6.9nm,0.8s,mb5.1
PDAR Pinedale Array 97.52 0 P **P 18 40 23.1 +0.7**
comp=Z,0.9nm,0.9s,mb4.3,baz=42,slow=6.1,SNR=3.3
PDAR PP PP 18 44 22.6 +4.1
comp=Z,0.3nm,0.3s,baz=96,slow=3.0,SNR=3.8
PDAR LR LR 19 28 58.3
comp=Z,112nm,18.1s,MS4.4,baz=72,slow=38
TXAR Lajitas Array 110.74 355 PKKPbc PKKPbc 18 56 19.0 0.0
comp=Z,0.6nm,0.6s,baz=184,slow=5.2,SNR=7.4
CPUP Villa Florida 135.12 271 PKP PKPdf 18 46 06.7 -1.2
comp=Z,0.4nm,0.3s,baz=36,slow=3.3,SNR=7.5
LPAZ La Paz 137.28 292 PKP PKPdf 18 46 12.1 0.0
comp=Z,0.6nm,0.8s,baz=60,slow=0.8,SNR=5.1
TRQA Tornquist 143.66 258 *e*PKPpre PKPpre 18 46 16.3
PLCA Paso Flores 150.76 256 PKPbc PKPbc 18 46 40.2 -0.2
comp=Z,11nm,0.9s,baz=76,slow=0.8,SNR=26
PLCA Paso Flores 150.76 256 *e*PKPbc PKPbc 18 46 40.0 -0.3

IDC 24 18:52:52.0±2.4, 11°.61S×162°.89E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.6/18, mbtmp3.7/5, ML4.4/1, MS3.7/3, Ms1 3.6/3, ms1mx3.2/24, Error ellipse: s-maj=49.5km s-min=35.4km az=102.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.62**	**306**	Pn	Pn	18 53 49.5	+0.2
34nm,0.3s,baz=136,slow=1.7,SNR=14							
HNR				Sn	Sn	18 54 33.3	+0.6
42nm,0.3s,baz=175,slow=22,SNR=5.7							
HNR				LR	LR	18 55 08.7	
comp=Z,786nm,18.6s,baz=349,slow=38							
CTA	**Charters Tower**	**18.08**	**240**	LR	LR	19 03 26.8	
comp=Z,163nm,18.3s,baz=62,slow=35							
STKA	**Stephens Creek**	**28.15**	**221**	LR	LR	19 08 39.9	
comp=Z,178nm,18.5s,baz=24,slow=34							
WRA	**Warramunga Arr**	**28.66**	**250**	P	P	18 58 50.4	-0.4
0.3nm,0.6s,baz=80,slow=9.1,SNR=3.4							
ASAR	**Alice Springs**	**30.05**	**243**	P	P	18 59 03.5	+0.5
0.2nm,0.6s,baz=68,slow=9.5,SNR=3.4							
SONM	**Songino Array**	**77.49**	**325**	P	P	19 04 50.2	+0.9
0.7nm,0.9s,baz=126,slow=5.8,SNR=5.7							
KURK	**Kurchatov**	**95.29**	**321**	P	P	19 06 17.1	-0.7
0.1nm,0.2s,baz=122,slow=7.1,SNR=2.9							

NEIC ***24*** *18:53:13.2±2.4, 36°.30N×66°.39E, h10km, Error ellipse: s-maj=33.3km s-min=14.4km az=71.0*
ISCJB ***24*** *18:53:13.8±1.7, 36°.34N±0°.07×66°.3E±0°.2, h33km, Error ellipse: s-maj=20.7km s-min=8.5km az=161.7*
IDC ***24*** *18:53:18.4±18.0, 36°.32N×67°.33E, h0km, mb3.4/1, mb1 3.4/6, mb1mx3.2/28, mbtmp3.4/6, ML3.0/3, MS2.7/1, Ms1 2.7/1, ms1mx2.1/23, Error ellipse: s-maj=229.5km s-min=39.8km az=9.0*

ISC 24 18:53:14.1±1.8, 36°.25N±0°.08×66°.1E±0°.2, h35km, n13, σ0°.98/15, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.92**	**125**	*e*Pn	**Pn**	**18 53 57.9**	**-0.1**
KBL				*e*Sn	**Sn**	**18 54 32.3**	**+0.5**
EKS2	**Erkin-Say**	**8.71**	**40**	*e*Pn	**Pn**	**18 55 17.8**	**+0.3**
EKS2				*e*S	**Sn**	**18 56 55.4**	**+0.9**
UCH	**Uchtor**	**8.82**	**45**	*e*Pn	**Pn**	**18 55 19.0**	**-0.1**
2.9nm,0.4s							
AAK	**Ala-Archa**	**9.08**	**43**	Pn	**Pn**	**18 55 21.6**	**-0.9**
0.0nm,0.3s,baz=197,slow=15,SNR=5.2							
TKM2	**Tokmak 2**	**9.88**	**45**	*e*Pn	**Pn**	**18 55 32.6**	**-1.0**
1.8nm,0.4s							
AKTK	**Aktyubinsk**	**15.35**	**340**	Pn	**Pn**	**18 56 56.5**	**+8.6**
AKTO	**Aktyubinsk**	**15.35**	**340**	Pn	**Pn**	**18 56 56.5**	**+8.6**
0.1nm,0.3s,baz=154,slow=15,SNR=4.3							
MK31	**Makanchi Array**	**16.01**	**44**	*e*Pn	**Pn**	**18 56 56.3**	**-0.2**
MKAR	**Makanchi Array**	**16.01**	**44**	Pn	**Pn**	**18 56 54.5**	**-2.0**
0.0nm,0.3s,baz=228,slow=11,SNR=2.5							
KURK	**Kurchatov**	**17.03**	**28**	Pn	**Pn**	**18 57 04.6**	**-4.7**
0.0nm,0.3s,baz=221,slow=11,SNR=2.5							
BVAR	**Borovoye Array**	**17.04**	**9**	Pn	**Pn**	**18 57 10.1**	**+0.7**
0.2nm,0.3s,baz=192,slow=10,SNR=5.1							
BRVK	**Borovoye**	**17.06**	**9**	P	**Pn**	**18 57 09.8**	**+0.1**
ZALV	**Zalesovo Beam**	**21.96**	**30**	P	**P**	**18 58 07.3**	**+2.8**
0.8nm,0.4s,baz=234,slow=10.0,SNR=5.0							
ZALV				LR	LR	19 06 28.9	
comp=Z,17nm,18.4s,baz=316,slow=37							

BJI ***24*** *19:14:39.9, 3°.62S×101°.35E, h50km, mB5.1/35, mb5.2/56, Ms4.7/49, Ms7 4.5/45*
MOS ***24*** *19:14:41.2±1.0, 3°.09S×101°.48E, h33km, mb5.6/60, MS4.3/11, Error ellipse: s-maj=9.3km s-min=4.7km az=114.9*
ISCJB ***24*** *19:14:43.2±0.1, 3°.23S±0°.03×101°.27E±0°.02, h50km, mb5.4/170, MS4.3/42, Error ellipse: s-maj=4.0km s-min=2.4km az=33.8*
SZGRF ***24*** *19:14:43.5, 3°.10S×101°.84E, h48km, mb5.4, MS4.3, Southern Sumatera, Indonesia*
NEIC ***24*** *19:14:44.1±0.1, 3°.19S×101°.43E, mb5.3/81, Error ellipse: s-maj=6.5km s-min=4.2km az=49.0*
NEIC Felt [III] at Mukomuko and [II] at Padang.
IDC ***24*** *19:14:44.5±0.5, 3°.14S×101°.40E, h47km±4km, mb4.9/21, mb1 5.0/23, mb1mx5.0/23, mbtmp4.9/23, MS4.2/20, Ms1 4.2/20, ms1mx4.0/36, Error ellipse: s-maj=14.0km s-min=9.7km az=64.0*
DJA ***24*** *19:14:45, 3°.36S×101°.13E, h49km, Mw5.5/28*
GCMT ***24*** *19:14:48.7±0.2, 3°.39S×101°.04E, h49km±1km, MW5.1, Moment Tensor Solution. s57,c86; s71,c106; Moment tensor: Scale 10^16Nm; Mrr=4.77±.17; Mθθ=-2.27±.13; Mφφ=-2.49±.15; Mrθ=1.93±.10; Mθφ=2.75±.09; Mφr=1.34±.12; Best double couple: Mo=5.50000×10^16 NP1:φs=322.00000°, δ=33.00000°, λ=99.00000°. NP2:φs=131.00000°, δ=58.00000°, λ=84.00000°. Principal axes: T 5.3200, Plg77.0000°, Azm23.0000°; N 0.3300, Plg5.0000°, Azm134.0000°; P -5.6400, Plg13.0000°, Azm225.0000°; Data Used: II IU IC G CN.*

ISC 24 19:14:45.1±0.1, 3°.25S±0°.02×101°.25E±0°.02, h52km, h52km±1.0km: pP-P, n822, σ0°.97/519, mb5.4/171, MS4.3/42, 188C-136D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**1.33**	**291**	P	**Pn**	**19 15 07.5**	**+0.2**
KSI	**Kapahiang**	**1.40**	**107**	P	**Pn**	**19 15 07.1**	**-1.1**
MNAI	**Manna**	**2.03**	**123**	P	**Pn**	**19 15 17.2**	**+0.4**
SDSI	**Sungai Dareh**	**2.30**	**4**	P	**Pn**	**19 15 21.6**	**+1.0**
PDSI	**Padang**	**2.45**	**341**	P	**Pn**	**19 15 23.3**	**+0.7**
SISI	**Saibi**	**2.88**	**311**	P	**Pn**	**19 15 28.7**	**+0.1**
PPI	**Padang Panjang**	**2.90**	**343**	P	**Pn**	**19 15 29.2**	**+0.4**
RGRI	**Rengat**	**3.07**	**21**	P	**Pn**	**19 15 32.3**	**+1.1**
MDSI	**Maura Dua**	**3.17**	**113**	P	**Pn**	**19 15 32.0**	**-0.4**
LWLI	**Liwa**	**3.31**	**122**	P	**Pn**	**19 15 35.4**	**+1.1**
PMBI	**Palembang**	**3.53**	**85**	P	**Pn**	**19 15 37.3**	**-0.1**
BKNI	**Bangkinang**	**3.55**	**357**	P	**Pn**	**19 15 38.9**	**+1.1**
KLSI		**3.75**	**113**	P	**Pn**	**19 15 41.6**	**+1.1**
KLI	**Kotabumi**	**3.94**	**114**	P	**Pn**	**19 15 44.3**	**+1.3**
KASI	**Kota Agung**	**3.95**	**125**	P	**Pn**	**19 15 43.0**	**-0.1**
MNSI	**Mandailing Nat**	**4.35**	**337**	P	**Pn**	**19 15 48.7**	**0.0**
RBSI	**Rajabasa**	**5.17**	**120**	P	**Pn**	**19 16 00.9**	**+1.0**
CGJI	**Cibinong**	**5.54**	**127**	P	**Pn**	**19 16 03.5**	**-1.6**
KGM	**Kluang**	**5.62**	**22**	P	**Pn**	**19 16 07.8**	**+1.7**
MYKOM	**Kota Tinggi**	**5.63**	**27**	P	**Pn**	**19 16 08.0**	**+1.7**
MYKOM	**Kota Tinggi**	**5.63**	**27**	P	**Pn**	**19 16 07.4**	**+1.1**
3.1nm9μm417nm,0.9s							
SBJI	**Serang**	**5.64**	**121**	P	**Pn**	**19 16 07.8**	**+1.5**
2.7nm8μm375nm,1.2s							
GSI	**Gunungsitoli**	**5.83**	**121**	P	**Pn**	**19 16 08.2**	**-0.7**
6.5nm882nm,0.6s							
TNG	**Tangerang**	**6.11**	**119**	P	**Pn**	**19 16 13.7**	**+0.9**
TNG	**Tangerang**	**6.11**	**119**	P		19 16 14.1	
9.1nm1μm,1.0s							
TPI	**Tanjungpandan**	**6.41**	**86**	P	**Pn**	**19 16 17.1**	**+0.2**
1.2nm1μm90nm,0.9s							
PSI	**Prapat**	**6.44**	**339**	P	**Pn**	**19 16 15.1**	**-2.3**
15nm,0.3s,baz=199,slow=8.5,SNR=25							
PSI				LR	LR	19 19 09.2	
comp=Z,5μm,21.7s,baz=146,slow=42							
FRIM	**Kepong**	**6.45**	**3**	P	**Pn**	**19 16 19.4**	**+1.9**
SKJI	**Sukabumi**	**6.47**	**125**	P	**Pn**	**19 16 18.7**	**+1.0**
3.0nm7μm476nm,0.9s							
LEM	**Lembang**	**7.27**	**120**	P	**Pn**	**19 16 30.0**	**+1.3**
1.5nm5μm445nm,1.1s							
TPTI		**7.64**	**328**	P	**Pn**	**19 16 34.1**	**+0.3**
1.0nm4μm156nm,0.7s							
IPM	**Ipoh**	**7.68**	**358**	P	**Pn**	**19 16 37.4**	**+3.1**
0.9nm2μm250nm,1.0s							
KULM	**Kulim**	**8.50**	**356**	*e*Pn	**Pn**	**19 16 46.7**	**+1.1**
188nm,0.9s							
KULM	**Kulim**	**8.50**	**356**	P	**Pn**	**19 16 47.5**	**+1.9**
2μm236nm,0.9s							
KTGM	**Kuala Trenggan**	**8.72**	**12**	P	**Pn**	**19 16 50.4**	**+1.8**
SMRI	**Semarang**	**9.90**	**113**	P	**Pn**	**19 17 05.6**	**+0.8**
251nm,0.9s							
COCO	**West Island**	**9.91**	**206**	Pn	**Pn**	**19 17 01.8**	**-3.1**
3μm,0.7s,SNR=5.7							
COCO	**West Island**	**9.91**	**206**	*e*P	**Pn**	**19 17 00.8**	**-4.1**
COCO				pmax	pmax		
comp=Z,373nm,0.8s							
COCO	**West Island**	**9.91**	**206**	*e*Pn	**Pn**	**19 17 00.8**	**-4.0**
comp=Z,373nm,0.8s							
COCO	**West Island**	**9.91**	**206**	P	**Pn**	**19 17 01.0**	**-3.9**
comp=Z,476nm,0.9s							
KSM	**Kuching**	**10.19**	**63**	P	**Pn**	**19 17 10.1**	**+1.3**
KSM	**Kuching**	**10.19**	**63**	*i*Pn	**Pn**	**19 17 09.0**	**+0.2**
comp=Z,30nm,0.8s							
KSM	**Kuching**	**10.19**	**63**	P	**Pn**	**19 17 09.8**	**+1.0**
comp=Z,519nmcomp=Z,38nm,0.9s							
UGM	**Wanagama**	**10.32**	**117**	P	**Pn**	**19 17 10.4**	**-0.2**
comp=Z,180nm,0.8s							
STKI	**Sintang**	**10.73**	**72**	P	**Pn**	**19 17 19.3**	**+3.1**
comp=Z,1μmcomp=Z,77nm,1.3s							
NGJI	**Ngawi**	**10.96**	**112**	P	**Pn**	**19 17 20.1**	**+0.9**
comp=Z,108nm,1.2s							
SJI	**Sawahan**	**11.37**	**114**	P	**Pn**	**19 17 24.6**	**-0.3**
comp=Z,201nm,0.7s							
PWJI	**Pagerwojo**	**11.52**	**115**	P	**Pn**	**19 17 25.6**	**-1.3**
comp=Z,94nm,0.7s							
SBUM	**Sibu**	**12.34**	**63**	P	**Pn**	**19 17 42.2**	**+4.2**
SBUM	**Sibu**	**12.34**	**63**	P	**Pn**	**19 17 41.9**	**+3.8**
GMJI	**Gumukmas**	**13.11**	**113**	P	**Pn**	**19 17 49.1**	**+0.4**
comp=Z,61nm,1.7s							
BTM	**Bintulu**	**13.45**	**62**	P	**Pn**	**19 17 57.3**	**+4.1**
ABJI	**Asem Bagus**	**13.69**	**110**	P	**Pn**	**19 17 58.1**	**+1.6**
comp=Z,4μmcomp=Z,305nm,0.9s							
KBKI	**Kotabaru**	**14.89**	**91**	P	**Pn**	**19 18 16.7**	**+4.2**
KKM	**Kota Kinabalu**	**17.56**	**58**	P	**Pn**	**19 18 49.2**	**+2.9**
KKM	**Kota Kinabalu**	**17.56**	**58**	*e*Pn	**Pn**	**19 18 46.6**	**+0.3**
comp=Z,130nm,1.2s							
KKM	**Kota Kinabalu**	**17.56**	**58**	P	**Pn**	**19 18 48.6**	**+2.3**
comp=Z,2μmcomp=Z,97nm,1.7s							
SDKM	**Sandakan**	**18.20**	**61**	P	**Pn**	**19 18 56.1**	**+1.9**
TSM	**Tawau**	**18.22**	**66**	P	**Pn**	**19 18 55.8**	**+1.5**
SPSI	**Sidrap Palu**	**18.49**	**93**	P	**Pn**	**19 18 57.0**	**-0.7**
KAPI	**Kappang**	**18.53**	**96**	Pn	**Pn**	**19 18 58.5**	**+0.3**
comp=Z,863nm,1.1s,SNR=12							
KAPI	**Kappang**	**18.53**	**96**	P	**Pn**	**19 18 55.9**	**-2.2**
comp=Z,4.8nm,0.3s,baz=272,slow=11,SNR=26							
KAPI				LR	LR	19 27 54.4	
comp=Z,708nm,18.1s,baz=279,slow=43							
TTSI	**Tana Toraja**	**18.54**	**90**	P	**Pn**	**19 18 58.6**	**+0.4**
comp=Z,1μmcomp=Z,128nm,1.3s							
KDM	**Kudat**	**18.54**	**57**	P	**Pn**	**19 18 59.5**	**+1.3**
PCI	**Palu**	**18.71**	**83**	P	**Pn**	**19 19 01.1**	**+0.7**
comp=Z,244nm,1.0s							
BNSI	**Bone**	**18.84**	**94**	P	**Pn**	**19 19 02.3**	**+0.4**
comp=Z,2μmcomp=Z,218nm,1.0s							
BKSI	**Bulukumba**	**18.93**	**97**	P	**Pn**	**19 19 02.6**	**-0.3**
comp=Z,2μmcomp=Z,294nm,1.1s							
MYLDM	**Lahad Datu**	**19.15**	**64**	P	**Pn**	**19 19 06.9**	**+1.3**
MYLDM	**Lahad Datu**	**19.15**	**64**	P	**Pn**	**19 19 06.3**	**+0.7**
comp=Z,2μmcomp=Z,185nm,1.0s							
WSI	**Waingapu**	**19.96**	**110**	P	**Pn**	**19 19 15.7**	**+0.5**
comp=Z,5μmcomp=Z,384nm,0.5s							
APSI	**Ampana**	**20.51**	**84**	P	**P**	**19 19 20.0**	**+0.9**
comp=Z,3μmcomp=Z,483nm,1.0s							
MRSI	**Marisa**	**21.00**	**80**	P	**P**	**19 19 24.8**	**+0.4**
comp=Z,1μmcomp=Z,176nm,0.8s,mb5.4							
KDI	**Kendari**	**21.33**	**93**	P	**P**	**19 19 29.3**	**+1.3**
comp=Z,66nm,1.3s,mb4.8							
LUWI	**Luwuk**	**21.61**	**85**	P	**P**	**19 19 32.1**	**+1.1**
comp=Z,3μmcomp=Z,299nm,1.3s,mb5.6							
CM31	**Chiang Mai Arr**	**21.68**	**354**	*e*Pn	**P**	**19 19 28.1**	**-3.5**
comp=Z,42nm,0.9s,mb4.9							
CMAR	**Chiang Mai Arr**	**21.68**	**354**	P	**P**	**19 19 28.6**	**-3.0**
comp=Z,32nm,0.8s,mb4.8,baz=185,slow=10,SNR=73							
CMAR				PcP	PcP	19 23 31.9	+0.6
comp=Z,6.7nm,0.9s,baz=216,slow=2.4,SNR=8.9							
CMAR				ScP	ScP	19 27 04.0	-0.4
comp=Z,1.9nm,0.9s,baz=227,slow=2.4,SNR=6.2							
CMAR				LR	LR	19 27 55.2	
comp=Z,697nm,21.2s,MS4.0,baz=176,slow=37							
CMAR	**Chiang Mai Arr**	**21.68**	**354**	P	**P**	**19 19 28.6**	**-3.0**
CMAR						19 23 32.0	
CHTO	**Chiang Mai**	**22.04**	**354**	*e*P	**P**	**19 19 31.8**	**-3.6**
CHTO				pmax	pmax		
comp=Z,16nm,0.8s,mb4.5							
CHTO	**Chiang Mai**	**22.04**	**354**	*e*P	**P**	**19 19 31.8**	**-3.6**
comp=Z,16nm,0.8s,mb4.5							
CHTO	**Chiang Mai**	**22.04**	**354**	P	**P**	**19 19 34.7**	**-0.7**
comp=Z,29nm,0.9s,mb4.7							
QIZ	**Qiongzhong**	**23.69**	**21**	P	**P**	**19 19 52.3**	**+0.1**
QIZ				S	**S**	**19 24 05.5**	**+1.9**
QIZ				pmax	pmax		
comp=Z,28nm,0.8s,mb4.7							
QIZ				pmax	pmax		
comp=Z,370nm,5.0s							
QIZ				LR	LR		
comp=N,800nm,18.6s							
QIZ				LR	LR		
comp=Z,910nm,24.4s							
QIZ	**Qiongzhong**	**23.69**	**21**	*e*P	**P**	**19 19 51.7**	**-0.5**
comp=Z,128nm,1.4s,mb5.2							
QIZ				*e*		19 20 09.2	
MNI	**Manado**	**24.03**	**79**	P	**P**	**19 19 55.8**	**+0.3**
comp=Z,2μmcomp=Z,216nm,0.8s,mb5.6							
MBWA	**Marble Bar**	**25.30**	**136**	*e*P	**P**	**19 20 07.5**	**+0.6**
MBWA	**Marble Bar**	**25.30**	**136**	*e*P	**P**	**19 20 05.8**	**-1.1**
comp=Z,37nm,1.0s,mb4.9							
MBWA	**Marble Bar**	**25.30**	**136**	P	**P**	**19 20 08.3**	**+1.4**
comp=Z,40nm,1.5s,mb4.7							
TGY	**Tagaytay City**	**26.04**	**48**	P	**P**	**19 20 13.4**	**-0.3**
comp=Z,332nm,0.8s,mb5.9,baz=171,slow=7.3,SNR=10							
VIS	**Vishakhapatnam**	**27.32**	**320**	*e*PKP	**P**	**19 20 25.6**	**+0.4**
FITZ	**Fitzroy Crossi**	**28.08**	**123**	*e*P	**P**	**19 20 30.7**	**-1.3**
comp=Z,48nm,0.8s,mb5.2							
FITZ	**Fitzroy Crossi**	**28.08**	**123**	P	**P**	**19 20 30.7**	**-1.2**
comp=Z,30nm,0.8s,mb5.0,baz=293,slow=5.6,SNR=40							
FITZ				LR	LR	19 31 15.0	
comp=Z,307nm,21.6s,MS3.9,baz=299,slow=35							
FITZ	**Fitzroy Crossi**	**28.08**	**123**	*e*P	**P**	**19 20 30.6**	**-1.4**
comp=Z,35nm,0.9s,mb5.0							
FITZ	**Fitzroy Crossi**	**28.08**	**123**	P	**P**	**19 20 31.0**	**-1.0**
comp=Z,83nm,0.9s,mb5.4							
KMI	**Kunming**	**28.24**	**3**	⇓P	**P**	**19 20 33.6**	**+0.4**
KMI				pP	pP	19 20 48.6	+2.0
KMI				sP	sP	19 20 54.3	+1.5
KMI				PP	PP	19 21 27.9	-10
KMI				S	**S**	**19 25 14.8**	**-0.8**
KMI				sS	sS	19 25 40.0	+1.8
KMI				SS	SS	19 26 41.3	-35
KMI				pmax	pmax		
comp=Z,19nm,1.2s,mb4.6							
KMI				pmax	pmax		
comp=Z,160nm,4.6s							
KMI				LR	LR		
comp=N,900nm,15.7s,MS4.6							
KMI				LR	LR		
comp=E,770nm,18.0s,MS4.6							
KMI				LR	LR		
comp=Z,860nm,15.7s,MS4.5							
KNA	**Kununurra**	**29.79**	**116**	P	**P**	**19 20 44.8**	**-2.4**
GYA	**Guiyang**	**29.99**	**10**	⇑*i*P	**P**	**19 20 47.9**	**-0.9**
GYA				pP	pP	19 21 02.8	+0.6
GYA				sP	sP	19 21 10.3	+1.9
GYA				PP	PP	19 21 50.8	-6.5
GYA				PcP	PcP	19 23 51.4	+1.2
GYA				S	**S**	**19 25 45.5**	**+2.4**
GYA				sS	sS	19 26 08.8	+3.0
GYA				SS	SS	19 27 24.6	-28
GYA				pmax	pmax		
comp=Z,20nm,1.0s,mb4.8							
GYA				pmax	pmax		
comp=Z,120nm,5.4s							
GYA				LR	LR		
comp=N,840nm,16.4s,MS4.6							
GYA				LR	LR		
comp=E,780nm,15.3s,MS4.6							
GYA				LR	LR		
comp=Z,960nm,17.9s,MS4.5							
SHL	**Shillong**	**30.05**	**343**	*e*PKP	**P**	**19 20 49.0**	**-0.3**
SHL				*ex*	x	19 25 43.0	
HYB	**Hyderabad**	**30.39**	**313**	*i*P	**P**	**19 20 53.0**	**+0.6**
KAKA	**Kakadu**	**32.24**	**109**	*e*P	**P**	**19 21 05.5**	**-3.4**
comp=Z,11nm,0.9s,mb4.7							
ODAN	**Odare**	**32.79**	**337**	*e*P	**P**	**19 21 14.0**	**+0.6**
comp=Z,409nm,0.7s,mb6.5							
NWAO	**Narrogin (SRO)**	**33.10**	**155**	P	**P**	**19 21 15.4**	**-0.7**
comp=Z,12nm,0.9s,mb4.8,baz=320,slow=12,SNR=4.1							
NWAO	**Narrogin (SRO)**	**33.10**	**155**	P	**P**	**19 21 14.5**	**-1.6**
TAPN	**Taplejung**	**33.10**

WHN	**Wuhan**	**35.85**	**19**	P	**P**	**19 21 39.3**	**-0.6**
WHN				pP	pP	19 21 51.8	-1.6
WHN				sP	sP	19 21 57.0	-2.6
WHN				LR	LR		
	comp=N,2μm,27.8s,MS4.7						
WHN				LR	LR		
	comp=E,1μm,26.0s,MS4.7						
WHN				LR	LR		
	comp=Z,1μm,26.4s,MS4.6						
WRA	**Warramunga Arr**	**36.29**	**120**	P	**P**	**19 21 42.4**	**-1.4**
	comp=Z,32nm,0.5s,mb5.5,baz=305,slow=8.7,SNR=261						
WRA				PcP	PcP	19 24 08.0	0.0
	comp=Z,7.1nm,0.9s,baz=310,slow=2.0,SNR=5.6						
WRA				S	**S**	**19 27 16.9**	**-4.2**
	comp=Z,4.2nm,0.9s,baz=293,slow=16,SNR=6.7						
WRAB	**Tennant Creek**	**36.29**	**120**	P	**P**	**19 21 42.0**	**-1.9**
	comp=Z,488nm,0.8s,mb6.5,SNR=69						
WRAB	**Tennant Creek**	**36.29**	**120**	*e*P	**P**	**19 21 42.2**	**-1.7**
WRAB				pmax	pmax		
	comp=Z,45nm,0.6s,mb5.6						
WRAB	**Tennant Creek**	**36.29**	**120**	*e*P	**P**	**19 21 42.2**	**-1.6**
	comp=Z,45nm,0.6s,mb5.6						
WRAB	**Tennant Creek**	**36.29**	**120**	P	**P**	**19 21 42.4**	**-1.5**
	comp=Z,102nm,1.2s,mb5.6						
FORT	**Forrest**	**37.29**	**140**	*e*P	**P**	**19 21 49.8**	**-2.4**
	comp=Z,26nm,0.7s,mb5.2						
SMPI	**Sarmi**	**37.44**	**89**	P	**P**	**19 21 51.6**	**-2.1**
ASAR	**Alice Springs**	**37.51**	**126**	P	**P**	**19 21 53.4**	**-0.8**
	comp=Z,56nm,0.9s,mb5.3,baz=300,slow=8.1,SNR=374						
ASAR				PcP	PcP	19 24 11.8	+0.1
	comp=Z,8.8nm,0.8s,baz=328,slow=3.0,SNR=8.9						
ASAR				S	**S**	**19 27 35.7**	**-4.0**
	comp=Z,2.9nm,0.8s,baz=301,slow=13,SNR=7.9						
XAN	**Xi'an**	**37.78**	**10**	P	**P**	**19 21 54.8**	**-1.5**
XAN				pP	pP	19 22 07.3	-2.6
XAN				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.8						
XAN				pmax	pmax		
	comp=Z,42nm,4.9s						
PTH	**Pithoragarh**	**38.34**	**330**	*e*PKP	**P**	**19 22 01.5**	**+0.5**
PTH				*ex*	x	19 23 04.8	
NJ2	**Nanjing**	**38.88**	**24**	*e*P	**P**	**19 22 05.6**	**+0.1**
NJ2				pP	pP	19 22 17.8	-1.4
NJ2				sP	sP	19 22 23.3	-2.0
NJ2				PP	PP	19 23 39.3	+3.8
NJ2				S	**S**	**19 28 00.0**	**-0.1**
NJ2				sS	sS	19 28 21.0	-2.1
NJ2				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.1						
NJ2				pmax	pmax		
	comp=Z,640nm,4.7s						
NJ2				LR	LR		
	comp=N,2μm,18.8s,MS5.1						
NJ2				LR	LR		
	comp=E,810nm,19.6s,MS5.1						
NJ2				LR	LR		
	comp=Z,2μm,21.6s,MS4.9						
SSE	**Sheshan**	**39.08**	**28**	P	**P**	**19 22 04.8**	**-2.4**
SSE				S	**S**	**19 28 01.3**	**-1.8**
SSE				pmax	pmax		
	comp=Z,39nm,1.1s,mb5.0						
SSE				pmax	pmax		
	comp=Z,260nm,3.8s						
SSE				LR	LR		
	comp=N,420nm,23.2s,MS4.3						
SSE				LR	LR		
	comp=E,280nm,23.2s,MS4.3						
SSE				LR	LR		
	comp=Z,540nm,20.5s,MS4.4						
AJM	**Ajmer**	**39.18**	**321**	*e*PKP	**P**	**19 22 08.0**	**-0.1**
LZH	**Lanzhou**	**39.20**	**3**	⇑P	**P**	**19 22 07.9**	**-0.2**
LZH				pP	pP	19 22 20.8	-1.0
LZH				sP	sP	19 22 26.5	-1.4
LZH				PP	PP	19 23 44.4	+5.4
LZH				*e*S	**S**	**19 28 08.0**	**+3.2**
LZH				sS	sS	19 28 28.1	+0.3
LZH				SS	SS	19 30 58.0	-1.6
LZH				pmax	pmax		
	comp=Z,74nm,1.0s,mb5.4						
LZH				pmax	pmax		
	comp=Z,280nm,4.0s						
LZH				LR	LR		
	comp=N,1μm,16.2s						
LZH				LR	LR		
	comp=Z,1μm,17.0s,MS4.9						
NDI	**New Delhi**	**39.26**	**326**	*e*PKP	**P**	**19 22 07.0**	**-1.7**
JAY	**Jayapura**	**39.41**	**90**	P	**P**	**19 22 11.0**	**+0.8**
DDI	**Dehra Dun**	**40.07**	**328**	⇑*i*P	**P**	**19 22 15.0**	**-0.5**
SMLA	**Simla**	**41.17**	**328**	*i* P	**P**	**19 22 25.0**	**+0.4**
SDNR	**Sundarnagar**	**41.57**	**328**	*e*PKP	**P**	**19 22 29.5**	**+1.7**
BHK	**Bhakra**	**41.80**	**327**	*ex*	x	19 22 26.4	
GTA	**Gaotai**	**42.47**	**358**	⇑P	**P**	**19 22 34.6**	**-0.4**
GTA				pP	pP	19 22 47.5	-1.3
GTA				sP	sP	19 22 52.5	-2.4
GTA				PP	PP	19 24 16.9	+2.6
GTA				PcP	PcP	19 24 27.8	+0.7
GTA				S	**S**	**19 28 52.5**	**-0.7**
GTA				sS	sS	19 29 12.9	-3.5
GTA				SS	SS	19 31 57.3	-7.1
GTA				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.4						
GTA				pmax	pmax		
	comp=Z,170nm,5.4s						
GTA				LR	LR		
	comp=N,610nm,17.7s,MS4.6						
GTA				LR	LR		
	comp=E,300nm,16.8s,MS4.6						
GTA				LR	LR		
	comp=Z,870nm,18.6s,MS4.7						
THN	**Thein Dam**	**42.96**	**328**	*e*PKP	**P**	**19 22 37.8**	**-1.3**
BTO	**Baotou**	**44.37**	**10**	*e*P	**P**	**19 22 49.1**	**-1.2**
HHC	**Hu-ho-hao-te**	**44.88**	**11**	*e*P	**P**	**19 22 54.3**	**-0.1**
HHC				pP	pP	19 23 06.8	-1.5
HHC				sP	sP	19 23 12.0	-2.4
HHC				PcP	PcP	19 24 35.5	+0.2
HHC				PP	PP	19 24 40.4	+0.2
HHC				ScP	ScP	19 28 22.4	-1.1
HHC				PcS	PcS	19 28 28.0	-0.9
HHC				S	**S**	**19 29 29.5**	**+1.0**
HHC				sS	sS	19 29 50.3	-1.5
HHC				SS	SS	19 32 42.8	-8.7
HHC				ScS	ScS	19 32 45.3	-1.9
HHC				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.8						
HHC				pmax	pmax		
	comp=Z,300nm,5.4s						
HHC				LR	LR		
	comp=N,430nm,18.4s,MS4.5						
HHC				LR	LR		
	comp=E,280nm,14.0s,MS4.5						
HHC				LR	LR		
	comp=Z,490nm,19.3s						
BJI	**Beijing**	**45.20**	**16**	P	**P**	**19 22 56.5**	**-0.4**
BJI				pP	pP	19 23 09.3	-1.5
BJI				sP	sP	19 23 14.3	-2.6
BJI				PP	PP	19 24 44.3	+0.8
BJI				S	**S**	**19 29 36.4**	**+3.3**
BJI				sS	sS	19 29 55.9	-0.6
BJI				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.1						
BJI				pmax	pmax		
	comp=Z,92nm,4.3s						
BJI				LR	LR		
	comp=N,700nm,18.7s,MS4.7						
BJI				LR	LR		
	comp=E,230nm,17.9s,MS4.7						
BJI				LR	LR		
	comp=Z,380nm,18.9s,MS4.3						
DL2	**Dalian**	**45.97**	**22**	P	**P**	**19 23 01.6**	**-1.4**
DL2				pP	pP	19 23 15.4	-1.5
DL2				*e*S	**S**	**19 29 42.3**	**-1.8**
DL2				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
DL2				pmax	pmax		
	comp=Z,130nm,5.0s						
DL2				LR	LR		
	comp=N,250nm,19.4s,MS4.3						
DL2				LR	LR		
	comp=E,200nm,14.4s,MS4.3						
DL2				LR	LR		
	comp=Z,240nm,16.7s,MS4.2						
GUMO	**Guam**	**46.39**	**68**	*e*P	**P**	**19 23 02.4**	**-4.3**
GUMO				pmax	pmax		
	comp=Z,41nm,0.5s,mb5.6						
GUMO	**Guam**	**46.39**	**68**	*e*P	**P**	**19 23 02.4**	**-4.3**
	comp=Z,41nm,0.5s,mb5.6						
CTA	**Charters Tower**	**46.94**	**115**	*e*P	**P**	**19 23 09.9**	**-1.1**
	comp=Z,78nm,0.8s,mb5.7						
CTAO	**Charters Tower**	**46.94**	**115**	*e*P	**P**	**19 23 09.7**	**-1.3**
CTAO				pmax	pmax		
	comp=Z,143nm,0.9s,mb5.9						
CTAO	**Charters Tower**	**46.94**	**115**	*e*P	**P**	**19 23 09.7**	**-1.3**
	comp=Z,143nm,0.9s,mb5.9						
CTAO	**Charters Tower**	**46.94**	**115**	P	**P**	**19 23 10.3**	**-0.7**
	comp=Z,160nm,1.1s,mb5.9						
STKA	**Stephens Creek**	**47.39**	**132**	*e*P	**P**	**19 23 14.0**	**-0.3**
	comp=Z,35nm,0.7s,mb5.4						
STKA	**Stephens Creek**	**47.39**	**132**	P	**P**	**19 23 14.1**	**-0.3**
	comp=Z,10nm,0.5s,mb5.0,baz=309,slow=7.1,SNR=47						
STKA				LR	LR	19 43 06.2	
	comp=Z,406nm,21.4s,MS4.4,baz=349,slow=36						
STKA	**Stephens Creek**	**47.39**	**132**	*e*P	**P**	**19 23 13.6**	**-0.7**
	comp=Z,11nm,0.9s,mb4.8						
STKA				*ep*P	pP	19 23 28.2	-0.1
KSRS	**Korea Array**	**47.47**	**29**	P	**P**	**19 23 14.2**	**-0.5**
	comp=Z,12nm,0.9s,mb4.8,baz=219,slow=7.9,SNR=30						
KSRS				LR	LR	19 41 35.7	
	comp=Z,157nm,21.8s,MS3.9,baz=69,slow=34						
KBL	**Kabul**	**48.27**	**324**	*e*P	**P**	**19 23 20.4**	**-0.7**
KBL				pmax	pmax		
	comp=Z,14nm,0.6s,mb5.2						
KBL	**Kabul**	**48.27**	**324**	*e*P	**P**	**19 23 20.4**	**-0.6**
	comp=Z,14nm,0.6s,mb5.2						
WMQ	**Urumqi**	**48.41**	**347**	P	**P**	**19 23 23.0**	**+1.0**
WMQ				pP	pP	19 23 36.0	0.0
WMQ				sP	sP	19 23 41.0	-1.0
WMQ				PP	PP	19 25 16.0	+0.9
WMQ				S	**S**	**19 30 19.0**	**+0.1**
WMQ				sS	sS	19 30 41.0	-1.4
WMQ				ScS	ScS	19 33 08.0	-2.1
WMQ				SS	SS	19 33 45.0	-4.4
WMQ				pmax	pmax		
	comp=Z,52nm,1.0s,mb5.5						
WMQ				pmax	pmax		
	comp=Z,250nm,5.0s						
WMQ				LR	LR		
	comp=N,210nm,16.0s,MS4.4						
WMQ				LR	LR		
	comp=E,230nm,16.0s,MS4.4						
WMQ				LR	LR		
	comp=Z,210nm,16.0s,MS4.2						
KSH	**Kashi**	**48.49**	**334**	⇑*i*P	**P**	**19 23 21.6**	**-1.1**
KSH				pP	pP	19 23 34.1	-2.6
KSH				sP	sP	19 23 39.3	-3.4
KSH				PcP	PcP	19 24 48.8	+0.7
KSH				PP	PP	19 25 13.8	-2.1
KSH				ScP	ScP	19 28 38.0	-0.7
KSH				PcS	PcS	19 28 43.1	-1.0
KSH				S	**S**	**19 30 15.5**	**-4.6**
KSH				sS	sS	19 30 37.6	-6.1
KSH				ScS	ScS	19 33 07.8	-3.1
KSH				SS	SS	19 33 41.0	-10
KSH				pmax	pmax		
	comp=Z,88nm,0.8s,mb5.8						
KSH				LR	LR		
	comp=N,78nm,4.8s						
KSH				LR	LR		
	comp=E,96nm,4.9s						
KSH				LR	LR		
	comp=Z,63nm,4.8s						
SNY	**Shenyang**	**49.24**	**22**	⇑P	**P**	**19 23 26.8**	**-1.5**
SNY				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.9						
SNY				LR	LR		
	comp=N,320nm,15.3s,MS4.6						
SNY				LR	LR		
	comp=E,310nm,16.2s,MS4.6						
SNY				LR	LR		
	comp=Z,490nm,14.4s,MS4.6						
CBIJ	**Chichi jima**	**49.69**	**50**	LR	LR	19 46 48.0	
	comp=Z,129nm,18.0s,MS4.0,baz=117,slow=39						
KZA	**Kyzart**	**50.91**	**335**	P	**P**	**19 23 42.1**	**+1.1**
	SNR=9.4						
SONM	**Songino Array**	**51.07**	**4**	P	**P**	**19 23 42.5**	**+0.4**
	comp=Z,50nm,0.9s,mb5.4,baz=184,slow=9.3,SNR=296						
SONM				pP	pP	19 23 54.8	-1.4
	comp=Z,26nm,0.7s,baz=183,slow=6.7,SNR=14						
SONM				PcP	PcP	19 24 56.8	-0.5
	comp=Z,16nm,0.8s,baz=190,slow=4.6,SNR=11						
SONM				ScP	ScP	19 28 48.5	-0.9
	comp=Z,1.8nm,1.0s,baz=192,slow=4.3,SNR=5.5						
SONM				S	**S**	**19 30 57.2**	**+1.5**
	comp=Z,0.4nm,0.9s,baz=188,slow=9.2,SNR=2.7						
SONM				LR	LR	19 48 32.9	
	comp=Z,553nm,19.0s,MS4.6,baz=189,slow=40						
SONM	**Songino Array**	**51.07**	**4**	P	**P**	**19 23 42.5**	**+0.5**
SONM				*PP	pP	19 23 54.8	-1.4
SONM						19 24 56.8	
SONM				S	**S**	**19 30 57.2**	**+1.5**
ULN	**Ulaanbaatar**	**51.15**	**5**	*e*P	**P**	**19 23 42.8**	**+0.1**
ULN				*e**PP	pP	19 23 55.0	-1.8
ULN				pmax	pmax		
	comp=Z,36nm,0.9s,mb5.3						
ULN	**Ulaanbaatar**	**51.15**	**5**	*e*P	**P**	**19 23 42.8**	**+0.1**
	comp=Z,36nm,0.9s,mb5.3						
ULN				*ep*P	pP	19 23 55.0	-1.8
ULN				*es*P	sP	19 23 59.9	-2.9
ULN	**Ulaanbaatar**	**51.15**	**5**	P	**P**	**19 23 42.6**	**-0.1**
	comp=Z,637nmcomp=Z,48nm,1.1s,mb5.3						
UCH	**Uchtor**	**51.35**	**335**	P	**P**	**19 23 45.3**	**+1.0**
	SNR=35						
TKM2	**Tokmak 2**	**51.47**	**336**	P	**P**	**19 23 45.5**	**+0.4**
	SNR=141						
TKM2	**Tokmak 2**	**51.47**	**336**	*e*P	**P**	**19 23 45.4**	**+0.2**
TKM2				*e**PP	pP	19 23 59.2	-0.1
TKM2				pmax	pmax		
	comp=Z,84nm,0.8s,mb5.7						
TKM2	**Tokmak 2**	**51.47**	**336**	*e*P	**P**	**19 23 45.4**	**+0.2**
	comp=Z,84nm,0.8s,mb5.7						
TKM2				*ep*P	pP	19 23 59.2	-0.1
KBK	**Karagaybulak**	**51.52**	**335**	P	**P**	**19 23 46.6**	**+1.0**
	SNR=35						
AML	**Almayashu**	**51.62**	**334**	P	**P**	**19 23 47.4**	**+1.0**
	SNR=34						
AML	**Almayashu**	**51.62**	**334**	*e*P	**P**	**19 23 47.1**	**+0.8**
	comp=Z,55nm,0.7s,mb5.6						
AML				*ep*P	pP	19 24 00.9	+0.4
CN2	**Changchun**	**51.64**	**22**	⇑P	**P**	**19 23 45.4**	**-1.0**
CN2				*ep*P	pP	19 23 57.9	-2.7
CN2				*es*P	sP	19 24 03.3	-3.3
CN2				*e*S	**S**	**19 31 02.8**	**-1.0**
CN2				pmax	pmax		
	comp=Z,70nm,0.9s,mb5.6						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,21.0s,MS4.3						
CN2				LR	LR		
	comp=E,200nm,21.0s,MS4.3						
CN2				LR	LR		
	comp=Z,200nm,21.0s,MS4.1						
AAK	**Ala-Archa**	**51.69**	**335**	P	**P**	**19 23 47.3**	**+0.5**
	comp=Z,205nm,0.8s,mb6.1,SNR=17						
FRU	**Bishkek**	**51.80**	**335**	*e*P	**P**	**19 23 47.0**	**-0.6**
FRU				*e*	pP	19 23 59.0	-2.8
FRU				pmax	pmax		
	comp=Z,100nm,1.0s,mb5.7						
CHMS	**Chumysh**	**51.88**	**335**	P	**P**	**19 23 48.3**	**+0.1**
	SNR=30						
EKS2	**Erkin-Say**	**52.02**	**334**	P	**P**	**19 23 50.2**	**+0.9**
	SNR=252						
EKS2	**Erkin-Say**	**52.02**	**334**	*e*P	**P**	**19 23 49.7**	**+0.4**
	comp=Z,125nm,0.8s,mb5.9						
EKS2				*ep*P	pP	19 24 03.4	0.0
USP	**Ospenovka**	**52.20**	**335**	P	**P**	**19 23 50.9**	**+0.2**
	SNR=31						
MAJO	**Matsushiro**	**52.47**	**38**	*e*P	**P**	**19 23 50.5**	**-2.2**
MAJO				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.1						
MAJO	**Matsushiro**	**52.47**	**38**	*e*P	**P**	**19 23 50.5**	**-2.3**
	comp=Z,25nm,1.1s,mb5.0						
MAT	**Matsushiro**	**52.47**	**38**	P	**P**	**19 23 50.8**	**-1.9**
MJAR	**Matsushiro Arr**	**52.47**	**38**	P	**P**	**19 23 51.1**	**-1.6**
	comp=Z,17nm,0.9s,mb5.0,baz=219,slow=7.7,SNR=47						
MJAR				ScP	ScP	19 28 55.1	-0.8
	comp=Z,0.4nm,0.4s,baz=213,slow=5.0,SNR=5.2						
MJAR				LR	LR	19 46 59.5	
	comp=Z,117nm,21.4s,MS3.9,baz=160,slow=37						
MK31	**Makanchi Array**	**52.56**	**344**	*e*P	**P**	**19 23 52.8**	**-0.4**
MK31				*e**PP	pP	19 24 05.8	-1.6
MK31	**Makanchi Array**	**52.56**	**344**	*e*P	**P**	**19 23 52.8**	**-0.5**
MK31				*ep*P	pP	19 24 05.8	-1.6
MK31				*es*P	sP	19 24 11.3	-2.1
MKAR	**Makanchi Array**	**52.56**	**344**	P	**P**	**19 23 52.9**	**-0.3**
	comp=Z,55nm,0.6s,mb5.7,baz=141,slow=8.3,SNR=686						
MKAR				pP	pP	19 24 06.0	-1.4
	comp=Z,19nm,0.6s,baz=133,slow=8.4,SNR=7.5						
MKAR				S	**S**	**19 31 16.8**	**+0.4**
	comp=Z,1.2nm,1.1s,baz=156,slow=14,SNR=3.9						
MKAR				LR	LR	19 51 08.1	
	comp=Z,201nm,20.7s,MS4.1,baz=153,slow=42						
MKAR	**Makanchi Array**	**52.56**	**344**	P	**P**	**19 23 52.9**	**-0.3**
MKAR				*PP	pP	19 24 06.0	-1.4
MKAR				S	**S**	**19 31 16.8**	**+0.5**
MKAR	**Makanchi Array**	**52.56**	**344**	P	**P**	**19 23 52.9**	**-0.3**
MKAR				pP	pP	19 24 06.0	-1.4
MKAR				S	**S**	**19 31 16.8**	**+0.4**
MKAR				LR	LR	19 51 08.1	
EIDS	**Eidsvold**	**52.65**	**120**	*e*P	**P**	**19 23 53.5**	**-0.8**
EIDS	**Eidsvold**	**52.65**	**120**	*e*P	**P**	**19 23 53.2**	**-1.2**
	comp=Z,48nm,1.1s,mb5.3						
ZAK	**Zakamensk**	**53.44**	**2**	⇓*i*P	**P**	**19 23 59.3**	**-0.3**
ZAK				*e*		19 25 04.5	
ZAK				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
VLA	**Vladivostok**	**53.79**	**28**	*i* P	**P**	**19 24 01.4**	**-1.0**
VLA				*e**PP	pP	19 24 13.4	-3.2
VLA				*e*		19 25 05.8	
VLA				pmax	pmax		
	comp=Z,55nm,0.9s,mb5.5						
MDJ	**Mudanjiang**	**53.97**	**25**	P	**P**	**19 24 02.9**	**-0.7**
MDJ				pP	pP	19 24 14.6	-3.2
MDJ				sP	sP	19 24 19.8	-4.0
MDJ				PP	PP	19 26 04.3	-1.2
MDJ				ScP	ScP	19 29 02.3	+0.1
MDJ				S	**S**	**19 31 38.3**	**+2.8**
MDJ				SS	SS	19 35 16.3	-1.3
MDJ				pmax	pmax		
	comp=Z,37nm,1.0s,mb5.3						
MDJ				pmax	pmax		
	comp=Z,52nm,5.1s						
MDJ				LR	LR		
	comp=E,390nm,22.6s						
MDJ				LR	LR		
	comp=Z,420nm,25.0s,MS4.4						
MDJ	**Mudanjiang**	**53.97**	**25**	*e*P	**P**	**19 24 02.6**	**-1.0**
	comp=Z,30nm,0.8s,mb5.3						
ARMA	**Armidale**	**54.66**	**125**	*e*P	**P**	**19 24 09.2**	**+0.2**
	comp=Z,18nm,0.9s,mb5.1						
MOY	**Mondy**	**54.70**	**360**	*e*P	**P**	**19 24 09.0**	**+0.2**
MOY				pmax	pmax		
	comp=Z,48nm,2.0s,mb5.2						
HIA	**Hailar**	**54.70**	**15**	*e*P	**P**	**19 24 07.5**	**-1.4**
HIA				pmax	pmax		
	comp=Z,25nm,0.9s						
HIA	**Hailar**	**54.70**	**15**	*e*P	**P**	**19 24 07.5**	**-1.4**
	comp=Z,25nm,0.9s,mb5.2						
TLY	**Talaya**	**54.75**	**2**	P	**P**	**19 24 10.6**	**+1.4**
	comp=Z,394nm,0.9s,mb6.4,SNR=14						
TLY	**Talaya**	**54.75**	**2**	*c i*P	**P**	**19 24 09.7**	**+0.5**
TLY				*e*		19 25 16.4	
TLY				*e*S	**S**	**19 31 41.8**	**-4.1**
TLY				*e*PS		19 31 54.4	
TLY				pmax	pmax		
	comp=Z,55nm,0.8s,mb5.6						
TLY				MLR	MLR		
	comp=Z,531nm,18.0s,MS4.7						
TLY	**Talaya**	**54.75**	**2**	*e*P	**P**	**19 24 09.7**	**+0.5**
	comp=Z,53nm,0.8s,mb5.6						
IRK	**Irkutsk**	**55.34**	**2**	⇑*i*P	**P**	**19 24 13.2**	**-0.2**
IRK				pmax	pmax		
	comp=Z,61nm,1.3s,mb5.5						
CIT	**Chita**	**56.04**	**9**	*e*P	**P**	**19 24 18.9**	**+0.5**
CIT				*e*	pP	19 24 30.9	-1.8
CIT				pmax	pmax		
	comp=Z,102nm,1.4s,mb5.7						
KURK	**Kurchatov**	**57.15**	**343**	P	**P**	**19 24 25.5**	**-0.8**
	comp=Z,656nm,0.7s,SNR=90						
KURK	**Kurchatov**	**57.15**	**343**	S	**S**	**19 32 17.7**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=160,slow=11,SNR=4.8						
KURK				LR	LR	19 52 12.1	
	comp=Z,165nm,18.2s,MS4.2,baz=165,slow=39						
KURK	**Kurchatov**	**57.15**	**343**	*e*P	**P**	**19 24 25.6**	**-0.7**
KURK				*e**PP	pP	19 24 39.3	-1.4
KURK				pmax	pmax		
	comp=Z,115nm,0.9s,mb5.9						
KURK	**Kurchatov**	**57.15**	**343**	*e*P	**P**	**19 24 25.6**	**-0.8**
	comp=Z,115nm,0.9s,mb5.9						
KURK				*ep*P	pP	19 24 39.3	-1.3
KURK				*es*P	sP	19 24 44.0	-2.7
ABKT	**Ailbek**	**57.20**	**320**	P	**P**	**19 24 26.0**	**-0.9**
	comp=Z,182nm,0.9s,mb6.1,SNR=22						
KLR	**Kul'dur**	**58.57**	**23**	⇓*i*P	**P**	**19 24 32.0**	**-4.3**
KLR				pmax	pmax		
	comp=E,56nm,1.0s						
KLR				pmax	pmax		
	comp=Z,92nm,1.0s,mb5.8						
HNR	**Honiara**	**58.60**	**99**	*e*P	**P**	**19 24 36.2**	**-1.0**
ZAA0	**Zalesovo Array**	**58.62**	**349**	*e*P	**P**	**19 24 35.8**	**-0.8**
ZAA0				*ep*P	pP	19 24 49.0	-1.9
ZAA0				*es*P	sP	19 24 53.8	-3.1
ZALV	**Zalesovo Beam**	**58.62**	**349**	P	**P**	**19 24 35.9**	**-0.6**
	comp=Z,166nm,0.9s,mb6.1,baz=160,slow=4.7,SNR=470						
ZALV				pP	pP	19 24 48.7	-2.3
	comp=Z,156nm,0.8s,baz=172,slow=6.9,SNR=15						
ZALV				S	**S**	**19 32 35.3**	**-1.5**
	comp=Z,1.8nm,0.7s,baz=155,slow=11,SNR=6.6						
ZALV				LR	LR	19 53 10.8	
	comp=Z,186nm,20.1s,MS4.2,baz=241,slow=39						
ZALV	**Zalesovo Beam**	**58.62**	**349**	P	**P**	**19 24 35.9**	**-0.7**
ZALV				*PP	pP	19 24 48.7	-2.3
ZALV				S	**S**	**19 32 35.3**	**-1.6**
HABR	**Khabarovsk**	**59.33**	**25**	*ce*P	**P**	**19 24 39.8**	**-1.8**
HABR				*SP	sP	19 24 58.5	-3.4
HABR				*e*		19 25 26.9	
HABR				*e*S	**S**	**19 32 45.1**	**-1.1**
HABR				*e*		19 33 00.9	
HABR				*e*		19 34 25.2	
HABR				*e*SS	SS	19 36 41.1	-0.7
HABR				pmax	pmax		
	comp=Z,42nm,0.8s,mb5.5						
HABR				pmax	pmax		
	comp=E,24nm,0.8s						
HABR				pmax	pmax		
	comp=N,9.0nm,0.9s						
HABR				MLR	MLR		
	comp=Z,224nm,19.0s,MS4.3						
NVS	**Novosibirsk**	**59.78**	**348**	⇑*i*P	**P**	**19 24 43.3**	**-1.3**
NVS				*e*	pP	19 24 56.0	-3.0
NVS				*e*S	**S**	**19 32 44.1**	**-7.7**
NVS				pmax	pmax		
	comp=N,63nm,1.5s						
NVS				pmax	pmax		
	comp=Z,82nm,1.5s,mb5.5						
NVS				pmax	pmax		
	comp=E,36nm,1.3s						
NVS				smax			
	comp=E,41nm,1.7s						
NVS				smax			
	comp=N,39nm,2.3s						
KBD	**Kabd**	**60.57**	**306**	*e*P	**P**	**19 24 50.3**	**-0.3**
KBD				AMb	AMB	19 24 51.6	
	comp=Z,43nm,0.9s,mb5.6						
UMR	**

comp=Z,170nm,1.0s,mb6.1
YSS pmax pmax
comp=N,50nm,0.9s
YSS pmax pmax
comp=E,50nm,0.9s
YSS Yuzh-Sakhalins 61.88 31 *e*P **P** **19 24 58.3 -0.8**
comp=E,139nm,0.8s,mb6.1
CLNS Chul'man 62.89 14 *e*P **P** **19 25 03.6 -1.9**
CLNS *e**PP pP 19 25 12.7 -7.4
CLNS *e* pP 19 25 22.0 +1.9
CLNS pmax pmax
comp=E,24nm,0.9s
CLNS pmax pmax
comp=N,35nm,0.9s
CLNS pmax pmax
comp=Z,65nm,0.9s,mb5.8
CLNS MLR MLR
comp=Z,240nm,16.0s,MS4.5
CLNS MLR MLR
comp=N,174nm,17.0s,MS4.4
CLNS MLR MLR
comp=E,197nm,22.0s,MS4.4
CASY Casey 63.25 176 *e*P **P** **19 25 08.9 +1.1**
comp=E,43nm,1.6s,mb5.3
ABKAR Akbulak array 63.33 331 *e*P **P** **19 25 07.7 -0.9**
comp=E,96nm,0.8s,mb6.0
ABKAR *e*pP pP 19 25 21.8 -1.4
KMBO Kilima Mbogo 63.98 270 P **P** **19 25 15.2 +1.6**
comp=E,1.7nm,0.7s,mb4.2,baz=180,slow=20,SNR=6.1
KMBO LR LR 19 47 28.2
comp=E,233nm,21.1s,MS4.3,baz=92,slow=31
KMBO Kilima Mbogo 63.98 270 *e*P **P** **19 25 14.9 +1.2**
KMBO *e**PP pP 19 25 29.6 +1.4
KMBO pmax pmax
comp=Z,8.0nm,1.0s
KMBO Kilima Mbogo 63.98 270 *e*P **P** **19 25 14.9 +1.3**
comp=Z,8.3nm,1.0s,mb4.7
KMBO *e*pP pP 19 25 29.6 +1.3
AKTO Aktyubinsk 65.04 331 LR LR 19 57 18.1
comp=Z,121nm,21.0s,MS4.1,baz=133,slow=39
MAK Makhachkala 66.72 320 *e*P **P** **19 25 28.3 -2.5**
MAK *e* 19 27 59.7
MAK *e*S S 19 34 16.6 -2.3
MAK pmax pmax
comp=Z,51nm,0.8s,mb5.6
HAKT HAKKARI 66.94 313⇑ *i*P **P** **19 25 30.7 -1.6**
GNI Garni 67.29 316 LR LR 19 55 23.7
comp=Z,67nm,21.9s,MS3.8,baz=100,slow=36
GNI Garni 67.29 316*c i*P **P** **19 25 35.1 +0.7**
GNI pmax pmax
comp=Z,12nm,0.8s
GNI Garni 67.29 316 *e*P **P** **19 25 34.7 +0.3**
comp=Z,24nm,0.9s,mb5.2
DGRG David-gareji 67.42 318 P **P** **19 25 36.5 +1.2**
MTA Mtatsminda 67.92 318 P **P** **19 25 38.9 +0.5**
MTA S S 19 34 33.3 -0.1
TBLG Delisi 67.97 318 *i*P **P** **19 25 39.3 +0.5**
TBLG Delisi 67.97 318 P **P** **19 25 39.3 +0.5**
SVE Sverdlovsk 68.31 337⇓ *e*P **P** **19 25 40.1 -0.4**
SVE pmax pmax
comp=Z,88nm,1.0s,mb5.7
GOR Gori 68.51 318 P **P** **19 25 42.2 +0.1**
YAK Yakutsk 68.63 14*c i*P **P** **19 25 40.7 -1.7**
YAK *e* pP 19 25 57.2 +0.1
YAK *e**PP pP 19 26 02.3 +5.2
YAK *e* 19 28 08.2
YAK *e*PPP 19 29 55.4
YAK *e*S S 19 34 35.3 -5.7
YAK *e**SS sS 19 35 22.3 +17
YAK *e* 19 35 32.5
YAK *e*SS SS 19 39 01.6 -4.8
YAK pmax pmax
comp=Z,249nm,0.9s,mb6.1
YAK pmax pmax
comp=E,21nm,0.8s
YAK pmax pmax
comp=N,39nm,1.0s
YAK pmax pmax
comp=Z,40nm,3.7s
YAK pmax pmax
comp=N,27nm,1.7s
YAK pmax pmax
comp=E,22nm,2.1s
YAK smax
comp=N,8.0nm,1.4s
YAK smax
comp=E,15nm,1.6s
YAK Yakutsk 68.63 14 *e*P **P** **19 25 40.6 -1.8**
comp=E,211nm,0.8s,mb6.1
KEH Kehvi 68.77 318 P **P** **19 25 43.1 -0.6**
ARU Arti 68.84 336 P **P** **19 25 43.6 -0.2**
comp=E,246nm,1.0s,mb6.1,SNR=19
ARU Arti 68.84 336*c i*P **P** **19 25 43.0 -0.8**
ARU *e**PP pP 19 25 56.6 -1.9
ARU *e* 19 26 09.7
ARU *e* 19 28 16.3
ARU *e*PPP 19 29 56.0
ARU S S 19 34 46.6 +2.8
ARU SS SS 19 39 12.2 +2.3
ARU pmax pmax
comp=Z,63nm,1.2s,mb5.4
ARU MLR MLR
comp=Z,194nm,23.0s,MS4.3
ARU Arti 68.84 336 *e*P **P** **19 25 42.7 -1.1**
comp=Z,45nm,1.0s,mb5.3
ARU *e*pP pP 19 25 56.6 -1.9
ZEI Tsey 68.99 318 *e*P **P** **19 25 45.1 0.0**
ZEI *e*S S 19 34 52.0 +6.0
ZEI pmax pmax
comp=Z,43nm,0.7s,mb5.5
ONI Oni 69.21 318 P **P** **19 25 47.1 +0.7**
ONI S S 19 34 46.8 -1.9
MAW Mawson 69.40 195 P **P** **19 25 49.1 +2.0**
comp=Z,3.9nm,0.9s,mb4.3,baz=16,slow=9.2,SNR=6.2
MAW pP pP 19 26 02.2 +0.3
comp=Z,21nm,1.1s,baz=48,slow=9.8,SNR=12
MAW LR LR 19 49 11.8
comp=Z,515nm,21.9s,MS4.7,baz=41,slow=30
MAW Mawson 69.40 195 *e*P **P** **19 25 48.7 +1.6**
comp=Z,6.7nm,1.2s,mb4.5
MAW *e*pP pP 19 26 02.0 +0.2
ARTV Artvin 69.66 316 *i*P **P** **19 25 49.7 +0.5**
DDEM Demirkent 69.67 316⇑ *i*P **P** **19 25 49.7 +0.4**
DBAD Bademkaya 69.76 316⇑ *i*P **P** **19 25 50.4 +0.5**
KIV Kislovodsk 70.30 319 P **P** **19 25 53.7 +0.6**
comp=Z,264nm,0.8s,mb6.2,SNR=11
KIV Kislovodsk 70.30 319*c i*P **P** **19 25 53.3 +0.2**
KIV *e*S S 19 35 01.7 +0.3
KIV *e*SS SS 19 39 33.8 +1.0
KIV pmax pmax
comp=Z,51nm,1.1s,mb5.4
KIV Kislovodsk 70.30 319 *e*P **P** **19 25 52.9 -0.2**
comp=Z,42nm,0.9s,mb5.4
SKR Severo-Kuril's 71.21 33 *e*P **P** **19 25 57.5 -1.0**
SKR *e* pP 19 26 10.1 -3.1
SKR *e* 19 26 22.0
SKR pmax pmax
comp=E,90nm,1.0s
SKR pmax pmax
comp=Z,160nm,1.0s,mb5.9
KEMA Kemaliye 71.38 313⇑ *i*P **P** **19 26 00.5 +0.7**
GZT Gaziantep 71.42 311⇑ *i*P **P** **19 26 00.9 +0.8**
SOKR Solikamsk 71.68 338*c i*P **P** **19 26 00.0 -1.1**
SOKR pmax pmax
comp=Z,60nm,1.0s,mb5.5
MMAI Mount Meron Ar 71.78 306 P **P** **19 26 03.8 +1.4**
comp=Z,14nm,0.7s,mb5.0,baz=96,slow=8.5,SNR=27
MMAI LR LR 19 59 22.0
comp=Z,190nm,18.7s,MS4.4,baz=190,slow=37
YAYL Yayladag 72.11 309⇑ *i*P **P** **19 26 04.9 +0.7**
SOC Sochi 72.11 318*c i*P **P** **19 26 03.2 -0.9**
SOC *e**PP pP 19 26 16.6 -2.3
SOC *e**SP sP 19 26 21.6 -3.1
SOC *e* 19 28 51.7
SOC *e*PPP 19 30 32.2
SOC *e*S S 19 35 17.5 -4.9
SOC *e*SSS 19 43 05.4
SOC MLR MLR
comp=Z,111nm,22.0s,MS4.1
GRSN GIRESUNGRSN 72.12 315 *i*P **P** **19 26 03.7 -0.6**
LSZ Lusaka 72.82 255 *e*P **P** **19 26 08.9 0.0**
LSZ *e**PP pP 19 26 23.1 -0.6
LSZ pmax pmax
comp=Z,18nm,1.1s,mb4.9
LSZ Lusaka 72.82 255 *e*P **P** **19 26 08.9 +0.1**
comp=Z,18nm,1.1s,mb4.9
LSZ *e*pP pP 19 26 23.1 -0.6
PEA0B Petropavlovsk- 73.27 32 *e*P **P** **19 26 09.1 -1.7**
PEA0B *e*pP pP 19 26 26.3 +0.7
PETK Petropavlovsk- 73.27 32 P **P** **19 26 09.8 -0.9**
comp=Z,22nm,0.8s,mb5.2,baz=204,slow=4.0,SNR=37
GULE Gulek 73.51 310⇑ *i*P **P** **19 26 13.1 +0.6**
CSS Prodhromos 73.97 308 *e*P **P** **19 26 14.1 -1.2**
comp=Z,31nm,0.9s,mb5.2
ANN Anapa 74.09 318 *e*P **P** **19 26 11.1 -4.6**
ANN *e**PP pP 19 26 25.9 -4.7
ANN *e*S S 19 35 39.9 -4.9
ANN pmax pmax
comp=Z,91nm,1.3s,mb5.5
CDAG Cicekdag 74.51 313⇑ *i*P **P** **19 26 17.7 -0.6**
BR131 Keskin Array S 75.08 312 *e*P **P** **19 26 20.7 -0.9**
comp=Z,17nm,0.7s,mb5.1
BBAL Bala 75.41 312⇑ *i*P **P** **19 26 23.2 -0.3**
VSR Storozhevoye 75.51 325*c i*P **P** **19 26 22.9 -0.9**
VSR *e* pP 19 26 34.7 -4.0
LBTB Lobatse 75.64 245 *e*P **P** **19 26 20.7 -4.4**
LBTB pmax pmax
comp=Z,14nm,1.1s,mb4.8
LBTB Lobatse 75.64 245 *e*P **P** **19 26 20.7 -4.4**
comp=Z,14nm,1.1s,mb4.8
BALT Daday 75.80 314⇑ *i*P **P** **19 26 25.8 +0.1**
KDHN Kadinhani 75.88 311⇑ *i*P **P** **19 26 25.4 -0.8**
BOSA Boshof 76.16 241 P **P** **19 26 28.6 +0.6**
comp=Z,2.5nm,0.6s,mb4.3,baz=112,slow=1.6,SNR=10.0
BOSA LR LR 19 52 47.6
comp=Z,364nm,21.8s,MS4.7,baz=150,slow=30
BOSA Boshof 76.16 241 *e*P **P** **19 26 28.5 +0.4**
BOSA pmax pmax
comp=Z,11nm,1.0s,mb4.7
BOSA Boshof 76.16 241 *e*P **P** **19 26 28.5 +0.5**
comp=Z,11nm,1.0s,mb4.8
SIM Simferopol' 76.36 318*c i*P **P** **19 26 30.0 +1.2**
SIM *e*S S 19 36 06.0 -3.9
SIM pmax pmax
comp=Z,46nm,0.7s,mb5.5
SGKT Sivrigoynuk 76.49 313 *i*P **P** **19 26 29.3 -0.3**
TIXI Tiksi 76.89 9 *e*P **P** **19 26 29.0 -2.2**
TIXI *e**PP pP 19 26 42.2 -3.9
TIXI *e**SP sP 19 26 47.3 -4.7
TIXI pmax pmax
comp=Z,44nm,1.0s,mb5.3
TIXI Tiksi 76.89 9 *e*P **P** **19 26 29.0 -2.3**
comp=Z,44nm,1.0s,mb5.3
TIXI *e*pP pP 19 26 42.2 -3.9
TIXI *e*sP sP 19 26 47.3 -4.7
ISP Isparta 76.91 310 *e*P **P** **19 26 30.1 -1.9**
comp=Z,5.4nm,0.7s,mb4.6
ESKT Eskisehir 77.09 312⇑ *i*P **P** **19 26 32.6 -0.4**
SYO Syowa Base 77.10 199⇓ *e*P **P** **19 26 35.8 +3.3**
GOLH Golhisar 77.50 309⇑ *i*P **P** **19 26 34.8 -0.6**
MOS Moscow 78.20 329 *e*P **P** **19 26 36.8 -2.1**
MOS *e* pP 19 26 52.5 -1.3
MOS *e*S S 19 36 25.3 -4.2
MOS *e* 19 36 51.6
MOS pmax pmax
comp=Z,123nm,0.9s,mb5.8
MOS pmax pmax
comp=Z,200nm,1.1s,mb6.0
OBN Obninsk 78.51 328 P **P** **19 26 40.3 -0.3**
comp=Z,850nm,0.8s,SNR=10
OBN Obninsk 78.51 328*c i*P **P** **19 26 40.2 -0.4**
OBN *e**PP pP 19 26 54.2 -1.3
OBN *e* 19 29 33.7
OBN *e*S S 19 36 31.2 -1.6
OBN *e*SS SS 19 41 44.2 +7.0
OBN pmax pmax
comp=Z,124nm,0.8s,mb5.9
OBN Obninsk 78.51 328 *e*P **P** **19 26 40.2 -0.3**
comp=Z,88nm,0.7s,mb5.8
ULDT Uludag 78.53 312⇑ *i*P **P** **19 26 40.7 -0.3**
KDAG Bornova 79.54 310 *i*P **P** **19 26 47.2 +0.7**
BALY Balya 79.57 311⇑ *i*P **P** **19 26 46.6 -0.1**
PSN Preselentsi 80.08 315 *i*P **P** **19 26 49.6 +0.2**
SUR Sutherland 80.20 238 *e*P **P** **19 26 51.5 +1.2**
PRD Provadia 80.52 315 *i*P **P** **19 26 52.0 +0.2**
LEOM Leova 80.73 318 P **P** **19 26 53.5 +0.6**
LEOM Leova 80.73 318⇑ *i*P **P** **19 26 53.1 +0.2**
JMB Yambol 80.94 314 *i*P **P** **19 26 54.5 +0.5**
AKASG Malin Array Be 81.23 322 P **P** **19 26 54.6 -0.8**
comp=Z,25nm,0.8s,mb5.2,baz=85,slow=5.2,SNR=79
AKASG pP pP 19 27 09.4 -1.0
comp=Z,9.3nm,0.8s,baz=89,slow=5.3,SNR=5.3
AKASG PP PP 19 29 58.0 -3.4
comp=Z,3.0nm,0.7s,baz=85,slow=7.1,SNR=5.5
AKBB Malin Array Si 81.23 322 *e*P **P** **19 26 54.0 -1.4**
AKBB *e**PP pP 19 27 07.9 -2.5
KIEV Kiev 81.24 322 *e*P **P** **19 26 54.2 -1.2**
KIEV *e**PP pP 19 27 07.9 -2.5
KIEV pmax pmax
comp=Z,26nm,0.8s,mb5.2
KIEV Kiev 81.24 322 *e*P **P** **19 26 54.2 -1.2**
comp=Z,26nm,0.8s,mb5.2
KIEV *e*pP pP 19 27 07.9 -2.5
GVD Gavdhos 81.35 306 *e*P **P** **19 26 56.4 0.0**
comp=Z,52nm,0.8s,mb5.5
GVD *e*pP pP 19 27 11.0 -0.4
SZH Strazhica 81.58 314 *i*P **P** **19 26 57.2 -0.2**
VRI Vrincioaia 81.61 317⇑ P **P** **19 26 58.3 +0.8**
VRI Vrincioaia 81.61 317 P **P** **19 26 58.2 +0.6**
VRI Vrincioaia 81.61 317⇑ *i*P **P** **19 26 58.3 +0.8**
PLOR Plostina 81.66 317 P **P** **19 26 59.0 +1.2**
SBA Scott Base 81.80 169 *e*P **P** **19 26 56.9 -1.0**
SBA *e**PP pP 19 27 13.2 +0.2
SBA pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
SBA Scott Base 81.80 169 *e*P **P** **19 26 56.9 -1.1**
comp=Z,9.7nm,0.8s,mb4.8
SBA *e*pP pP 19 27 13.2 +0.2
MLR Muntele Rosu 82.06 317 P **P** **19 27 00.6 +0.7**
MLR Muntele Rosu 82.06 317⇑ *i*P **P** **19 27 00.5 +0.6**
RZN Rozhen 82.14 313 *i*P **P** **19 27 00.6 +0.2**
PGB Panagyurishte 82.70 313 *i*P **P** **19 27 03.2 -0.1**
MMB Musomiste 82.84 312 *i*P **P** **19 27 03.6 -0.5**
TSUM Tsumeb 82.97 251 *e*P **P** **19 27 06.1 +0.9**
comp=Z,17nm,1.4s,mb4.9
BUR01 Bucovina Ar. S 83.02 319 P **P** **19 27 06.1 +1.3**
BURAR Bucovina Array 83.02 319⇑ P **P** **19 27 06.1 +1.3**
BURAR Bucovina Array 83.02 319⇑ *i*P **P** **19 27 06.1 +1.3**
BUR08 Bucovina Ar. S 83.03 319 *e*P **P** **19 27 05.8 +0.9**
MICGM Minsk 83.05 326 *e* **P** **19 27 03.0 -1.9**
MNK Minsk 83.08 326 *e*P **P** **19 27 03.0 -2.0**
PUL Pulkovo 83.31 331⇓ *e*P **P** **19 27 06.7 +0.6**
KKB Krupnik 83.37 313 *i*P **P** **19 27 06.5 -0.3**
VTS Vitosha 83.41 313 *i*P **P** **19 27 06.9 -0.1**
VAY Valandovo 83.65 312 *i*P **P** **19 27 07.4 -0.9**
NACGM Naroch 83.77 326 *e*P **P** **19 27 06.0 -2.5**
JOF Joensuu 83.87 334 *e*P **P** **19 27 08.1 -0.8**
JOF pmax pmax
comp=Z,19nm,0.7s,mb5.3
JOF Joensuu 83.87 334 *e*p **P** **19 27 08.1 -0.8**
comp=Z,19nm,0.7s,mb5.3
JOF Joensuu 83.87 334 *e*p **P** **19 27 08.1 -0.8**
comp=Z,19nm,0.7s,mb5.3
BILL Bilibino 83.89 20*c i*P **P** **19 27 07.5 -1.3**
BILL *e**PP pP 19 27 25.4 +1.5
BILL *e*SS SS 19 42 55.0 -1.8
BILL pmax pmax
comp=Z,23nm,1.7s,mb5.0
BILL Bilibino 83.89 20 *e*P **P** **19 27 07.8 -1.1**
comp=Z,25nm,1.1s,mb5.2
BMR Baia Mare 84.17 318 ⇓P **P** **19 27 12.0 +1.3**
BMR Baia Mare 84.17 318⇓ *i*P **P** **19 27 12.0 +1.3**
GZR Gura Zlata 84.22 316 ⇑P **P** **19 27 12.1 +1.0**
GZR Gura Zlata 84.22 316 P **P** **19 27 11.6 +0.6**
GZR Gura Zlata 84.22 316⇑ *i*P **P** **19 27 12.1 +1.0**
LVV L'vov 84.25 321 *i*P **P** **19 27 11.0 -0.1**
LVV *e* pP 19 27 29.0 +2.8
LVZ Lovozero 84.38 340*c i*P **P** **19 27 10.5 -0.8**
LVZ pmax pmax
comp=Z,24nm,0.7s,mb5.4
LVZ Lovozero 84.38 340⇑ *i*P **P** **19 27 10.6 -0.7**
DRGR 84.53 317 ⇓P **P** **19 27 13.5 +0.9**
DRGR 84.53 317 P **P** **19 27 13.1 +0.5**
DRGR 84.53 317⇓ *i*P **P** **19 27 13.5 +0.9**
KRUS Krusevo 84.64 312 *i*P **P** **19 27 11.9 -1.4**
APA Apatity 84.69 339⇑ *i*P **P** **19 27 12.7 -0.2**
APA *i* 19 30 24.0
APA *e*S S 19 37 34.0 -2.2
APA pmax pmax
comp=Z,15nm,0.9s,mb5.1
APA MLR MLR
comp=Z,300nm,20.0s,MS4.7
OHR Ohrid 84.94 312 *i*P **P** **19 27 13.3 -1.5**
KWP Kalwaria Pacla 85.06 320 *e*P **P** **19 27 15.6 +0.4**
KWP Kalwaria Pacla 85.06 320 *e*P **P** **19 27 15.2 +0.1**
comp=Z,16nm,0.4s,mb5.5
BZS Buzias 85.07 316 ⇑P **P** **19 27 15.5 +0.2**
BZS Buzias 85.07 316⇑ *i*P **P** **19 27 15.5 +0.2**
UZH Uzhgorod 85.14 319 *e*P **P** **19 27 16.0 +0.4**
UZH *e* pP 19 27 34.4 +3.7
SUW Suwalki 85.62 325 *i*P **P** **19 27 17.9 0.0**
SUW Suwalki 85.62 325 *e*P **P** **19 27 17.6 -0.3**
comp=Z,204nm,0.9s,mb6.4
SUW *e*pP pP 19 27 32.1 -0.9
CRVS Cervenica-Dubn 85.73 319 *i*P **P** **19 27 19.1 +0.6**
CRVS pmax pmax
comp=Z,12nm,1.0s,mb5.1
CRVS Cervenica-Dubn 85.73 319 *i*P **P** **19 27 19.1 +0.6**
comp=Z,12nm,1.0s,mb5.1
CRVS *e*PP pP 19 27 35.0 +1.3
CRVS *e*SP 19 27 39.6
CRVS Cervenica-Dubn 85.73 319 *i*P **P** **19 27 19.1 +0.6**
CRVS *e*pP pP 19 27 35.0 +1.3
CRVS *e*sP sP 19 27 39.6 +0.1
FINES FINESS Array B 85.79 332 P **P** **19 27 18.4 -0.2**
comp=Z,17nm,0.9s,mb5.3,baz=101,slow=4.8,SNR=26
FINES PP PP 19 30 36.1 -2.3
comp=Z,4.8nm,0.9s,baz=115,slow=7.9,SNR=4.3
KAF Kangasniemi 85.86 333 *e*P **P** **19 27 18.1 -0.8**
KAF pmax pmax
comp=Z,30nm,0.7s,mb5.6
KAF Kangasniemi 85.86 333 *e*p **P** **19 27 18.1 -0.8**
comp=Z,30nm,0.7s,mb5.6
KAF Kangasniemi 85.86 333 *e*p **P** **19 27 18.1 -0.8**
comp=Z,30nm,0.7s,mb5.6
STHS Stebnicka Huta 85.96 320 *e*P **P** **19 27 20.6 +1.0**
STHS pmax pmax
comp=Z,23nm,0.8s,mb5.5
STHS Stebnicka Huta 85.96 320 *e*P **P** **19 27 20.6 +1.0**
comp=Z,23nm,0.8s,mb5.5
STHS Stebnicka Huta 85.96 320 *e*P **P** **19 27 20.6 +1.0**
KECS Kecovo 86.30 319 *e*P **P** **19 27 21.7 +0.4**
KECS *e* pP 19 27 37.9 +1.4
KECS pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
KECS Kecovo 86.30 319 *e*P **P** **19 27 21.7 +0.4**
comp=Z,8.9nm,0.8s,mb5.0
KECS *e* pP 19 27 37.9 +1.4
KECS Kecovo 86.30 319 *e*P **P** **19 27 21.7 +0.4**
KECS *e*pP pP 19 27 37.9 +1.4
NIE Niedzica 86.56 320 *e*P **P** **19 27 23.0 +0.4**
PSZ Piszkesteto 86.60 318 P **P** **19 27 23.2 +0.3**
PSZ Piszkesteto 86.60 318 *e*P **P** **19 27 22.8 -0.1**
comp=Z,19nm,0.9s,mb5.3
PSZ Piszkesteto 86.60 318⇑ *e*P **P** **19 27 23.2 +0.3**
MAIT Maitri 86.80 199 *e*P pP 19 27 39.7 +1.2
OJC Ojcow 87.01 320 *e*P **P** **19 27 22.3 -2.5**
PKSM Moragy 87.21 316 P **P** **19 27 26.1 +0.2**
VYHS Vyhne 87.38 319 *e*P **P** **19 27 26.9 +0.3**
VYHS pmax pmax
comp=Z,9.0nm,1.2s,mb4.9
VYHS Vyhne 87.38 319 *e*P **P** **19 27 26.9 +0.3**
comp=Z,8.7nm,1.2s,mb4.9
VYHS *e*PP pP 19 27 41.6 -0.2
VYHS Vyhne 87.38 319 *e*P **P** **19 27 26.8 +0.2**
VYHS *e*pP pP 19 27 41.6 -0.2
KEV Kevo 87.61 340 *e*P **P** **19 27 22.8 -4.5**
KEV pmax pmax
comp=Z,30nm,0.9s,mb5.5
KEV Kevo 87.61 340 *e*P **P** **19 27 22.8 -4.5**
comp=Z,30nm,0.9s,mb5.5
KEV *e*P 19 27 26.6
KEV *e*pP pP 19 27 41.0 -1.5
KEV Kevo 87.61 340 *e*p **P** **19 27 22.8 -4.5**
comp=Z,30nm,0.9s,mb5.5
KOLL Kolacno 87.68 319 *e*P **P** **19 27 28.8 +0.7**
KOLL Kolacno 87.68 319 *e*P **P** **19 27 28.8 +0.7**
TIP Timpagrande 87.76 309 *e*P **P** **19 27 29.5 +0.8**
comp=Z,12nm,1.0s,mb5.1
OKC Ostrava-Krasne 88.01 320 *e*P **P** **19 27 30.4 +0.8**
OKC Ostrava-Krasne 88.01 320 *e*P **P** **19 27 30.4 +0.8**
OKC AMS AMS 20 16 00.0
ARCES ARCESS Array B 88.06 340 P **P** **19 27 29.2 -0.2**
comp=Z,29nm,0.8s,mb5.5,baz=100,slow=5.0,SNR=62
ARCES PP PP 19 30 55.6 -0.9
comp=Z,9.0nm,1.0s,baz=106,slow=5.7,SNR=6.2
CEL Celeste 88.34 308 *e*P **P** **19 27 32.3 +0.8**
comp=Z,52nm,1.2s,mb5.6
MORC Moravsky Berou 88.39 320 P **P** **19 27 32.2 +0.8**
ZST Bratislava 88.50 318 *e*P **P** **19 27 32.8 +0.9**
ZST pmax pmax
comp=Z,20nm,0.7s,mb5.5
ZST Bratislava 88.50 318 *e*P **P** **19 27 32.8 +0.9**
comp=Z,20nm,0.7s,mb5.5
ZST Bratislava 88.50 318 *e*P **P** **19 27 32.8 +0.9**
GKP Gorka Klasztor 89.00 323 *e*P **P** **19 27 34.6 +0.5**
DPC Dobruska-Polom 89.24 320 *e*P **P** **19 27 36.4 +1.0**
DPC Dobruska-Polom 89.24 320 *e*P **P** **19 27 36.4 +1.0**
DPC AMS AMS 20 16 10.0
CONA Conrad Observa 89.29 318⇑ *i*P **P** **19 27 35.8 +0.1**
comp=Z,10nm,0.9s,mb5.1,SNR=6.5
KSP Ksiaz 89.31 321 *e*P **P** **19 27 36.6 +0.9**
KSP Ksiaz 89.31 321 *e*P **P** **19 27 36.1 +0.4**
KSP *e**PP pP 19 27 50.7 -0.2
UPC Upice 89.45 320 *e*P **P** **19 27 37.2 +0.8**
UPC Upice 89.45 320 *e*P **P** **19 27 37.2 +0.8**
ARSA Arzberg 89.46 317⇓ *i*P **P** **19 27 37.1 +0.6**
comp=Z,23nm,1.1s,mb5.4,SNR=15
BOJS Bojanci 89.49 315 *i*P **P** **19 27 37.2 +0.5**
BOJS *i* 19 27 42.4
BOJS *i* pP 19 27 55.2 +3.3
TREC Trest 89.67 319 *e*P **P** **19 27 38.2 +0.8**
TREC Trest 89.67 319 *e*P **P** **19 27 38.2 +0.8**
TREC AMS AMS 20 19 00.0
PERS Pernice 89.68 317 *i*P **P** **19 27 38.1 +0.6**
PERS *i* 19 27 42.3
PERS *i* pP 19 27 56.2 +3.5
SOKA Soboth 89.74 317⇑ *i*P **P** **19 27 38.6 +0.7**
comp=Z,35nm,0.9s,mb5.7
OBKA Obir 90.06 316⇑ *i*P **P** **19 27 40.0 +0.7**
comp=Z,26nm,1.6s,mb5.3,SNR=8.3
CEY Cerknica 90.08 316 *i*P **P** **19 27 39.6 +0.2**
CEY *i* 19 27 43.1
CEY *i* pP 19 27 57.5 +2.8
PRU Pruhonice 90.34 320 *e*P **P** **19 27 42.0 +1.4**
PRU MLR MLR
comp=Z,100nm,15.1s,MS4.4
PRU Pruhonice 90.34 320 *e*P **P** **19 27 42.0 +1.4**
PRU AMS AMS 20 17 20.0
comp=Z,100nm,15.1s
JAVS Javornik 90.35 316 *i*P **P** **19 27 40.7 0.0**
JAVS *i* 19 27 45.9
JAVS *i* pP 19 27 57.1 +1.2
MOA Molln 90.36 318⇑ *i*P **P** **19 27 40.4 -0.2**
comp=Z,9.6nm,0.8s,mb5.2
PVCC Panska Ves 90.37 320 *e*P **P** **19 27 41.9 +1.2**
PVCC Panska Ves 90.37 320 *e*P **P** **19 27 41.9 +1.2**
PVCC AMS AMS 20 17 20.0
GORS Gorjuse 90.43 316 *e*P **P** **19 27 41.5 +0.4**
VOY Vojsko 90.48 316 *e*P **P** **19 27 41.3 0.0**
VOY *e* pP 19 27 59.3 +2.8
AQU L'Aquila 90.57 312 ⇓P **P** **19 27 42.5 +0.7**
AQU L'Aquila 90.57 312 *e*P **P** **19 27 42.2 +0.4**
comp=Z,35nm,0.9s,mb5.7
AQU L'Aquila 90.57 312⇓ *i*P **P** **19 27 42.5 +0.7**
MYKA Terra Mystica 90.69 316⇑ *i*P **P** **19 27 42.7 +0.4**
comp=Z,7.6nm,0.7s,mb5.2
BRG Berggiesshubel 90.79 321 *e*P **P** **19 27 42.9 +0.3**
comp=Z,22nm,0.9s,mb5.5
BRG *e*S S 19 38 36.4 +1.3
BRG Berggiesshubel 90.79 321 *i*P **P** **19 27 43.2 +0.6**
comp=Z,22nm,0.9s,mb5.5
BRG *e* pP 19 27 57.0 -0.8
comp=Z,12nm,1.1s
BRG *e*PP PP 19 31 26.0 +7.2
comp=Z,5.2nm,1.0s
BRG S S 19 38 36.0 +0.9
BRG S SS 19 44 54.4 +16
comp=Z,4.2nm,1.2s
BRG
comp=N,220nm,14.9s
BRG

comp=E,224nm,17.5s
BRG
comp=Z,377nm,16.0s
GEC2 GERESS Array S 90.81 319 *e*P **P 19 27 43.1 +0.4**
comp=Z,52nm,1.6s,mb5.6
GEC2 *e*S S 19 38 37.8 +2.5
GEC2 GERESS Array S 90.81 319 *e*P **P 19 27 43.1 +0.4**
GEC2 *e*S S 19 38 37.8 +2.5
GEC2 pmax pmax
comp=Z,52nm,1.6s,mb5.6
KHC Kasperske Hory 90.91 319 *e*P **P 19 27 42.8 -0.4**
comp=Z,5.2nm,0.8s,mb4.9
KHC Kasperske Hory 90.91 319 *e*P **P 19 27 43.8 +0.6**
KHC AMS AMS 20 17 30.0
KBA Koelnbreinsper 90.93 317⇑ *i*P **P 19 27 43.2 -0.1**
comp=Z,15nm,1.4s,mb5.1,SNR=7.5
RUE Ruedersdorf 91.01 322 *e*P **P 19 27 43.6 0.0**
comp=Z,48nm,1.1s,mb5.7
RJOB Jochberg 91.34 318 *e*P **P 19 27 44.6 -0.6**
comp=Z,12nm,0.9s,mb5.2
WET Wettzell 91.37 319 *e*P **P 19 27 45.6 +0.3**
comp=Z,26nm,1.1s,mb5.5
WET *e*S S 19 38 41.5 +1.1
WET Wettzell 91.37 319 *e*P **P 19 27 45.6 +0.3**
WET *e*S S 19 38 41.5 +1.1
WET pmax pmax
comp=Z,26nm,1.1s,mb5.5
CLL Collm 91.41 321 *e*P **P 19 27 45.4 -0.1**
comp=Z,15nm,1.1s,mb5.2
CLL *e*S S 19 38 42.3 +1.6
CLL Collm 91.41 321 *i*P **P 19 27 45.5 0.0**
CLL *i* *PP pP 19 28 00.3 -0.4
CLL *e*S S 19 38 39.0 -1.7
CLL pmax pmax
comp=Z,15nm,1.1s,mb5.2
CLL MLR MLR
comp=Z,100nm,22.8s,MS4.2
CLL Collm 91.41 321 *i*P **P 19 27 45.5 0.0**
comp=Z,15nm,1.1s,mb5.2
CLL *i*pP pP 19 28 00.3 -0.4
CLL *e* pP 19 28 04.0 +3.3
CLL *e*PPP 19 33 36.0
CLL *e*S S 19 38 39.0 -1.7
CLL *e*PS PS 19 39 58.0 +1.7
CLL *e*SSSS 19 51 24.0
ABTA Abfaltersbach 91.48 317⇑ *i*P **P 19 27 45.6 -0.3**
comp=Z,12nm,1.1s,mb5.1
HFS Hagfors 91.57 330 PP PP 19 31 24.9 +0.3
comp=Z,7.9nm,0.9s,baz=80,slow=9.2,SNR=5.4
NKC Novy Kostel 91.70 320 *e*P **P 19 27 47.6 +0.7**
NKC Novy Kostel 91.70 320 *e*P **P 19 27 47.6 +0.7**
NKC AMS AMS 20 14 50.0
TANN Tannenbergstha 91.71 320 *e*P **P 19 27 47.0 +0.1**
comp=Z,8.0nm,1.1s,mb5.0
TANN *e*S S 19 38 45.9 +2.5
ROTZ Rotzenmuhle 91.84 320 *e*P **P 19 27 48.2 +0.7**
comp=Z,17nm,1.2s,mb5.2
WTTA Wattenberg 92.10 317⇑ *i*P **P 19 27 48.7 -0.1**
comp=Z,21nm,0.9s,mb5.5
MOX Moxa 92.26 320 *e*P **P 19 27 49.8 +0.4**
comp=Z,14nm,1.3s,mb5.1
MOX Moxa 92.26 320 *e*P **P 19 27 49.5 +0.1**
comp=Z,15nm,1.3s,mb5.2
MOX Moxa 92.26 320 *e*P **P 19 27 49.8 +0.4**
MOX pmax pmax
comp=Z,14nm,1.3s,mb5.1
FUR Furstenfeldbru 92.38 318 *e*S S 19 38 50.1 +0.5
MOTA Moosalm 92.47 317⇑ *i*P **P 19 27 50.3 -0.1**
comp=Z,14nm,0.7s,mb5.4,SNR=15
GRA1 Grafenberg Arr 92.47 319 *e*P **P 19 27 50.9 +0.5**
comp=Z,22nm,0.9s,mb5.5
GRA1 *e*pP pP 19 28 05.0 -0.7
GRA1 *e*sP sP 19 28 08.8 -2.6
GRA1 *e*S S 19 38 52.1 +1.8
GRA1 LR LR
comp=Z,100nm,21.0s,MS4.2
GRF Grafenberg Arr 92.47 319 *e*P **P 19 27 50.9 +0.5**
comp=Z,22nm,0.9s,mb5.5
GRF *e*pP pP 19 28 05.0 -0.7
GRF *e*sP sP 19 28 08.8 -2.6
GRF *e*S S 19 38 52.1 +1.8
GRF *e*L 20 15 19.5
comp=Z,114nm,21.0s
GRF Grafenberg Arr 92.47 319 *e*P **P 19 27 50.9 +0.5**
GRF *e**PP pP 19 28 05.0 -0.7
GRF *e*S S 19 38 52.1 +1.8
GRF pmax pmax
comp=Z,22nm,0.9s,mb5.5
GRF MLR MLR
comp=Z,100nm,21.0s,MS4.2
GRF Grafenberg Arr 92.47 319 *e*P **P 19 27 50.9 +0.5**
GRF *e**PP pP 19 28 05.0 -0.7
GRF *e*S S 19 38 52.1 +1.8
GRF pmax pmax
comp=Z,22nm,0.9s,mb5.5
GRF MLR MLR
comp=Z,100nm,21.0s,MS4.2
RETA Reutte 92.70 317 *i*P **P 19 27 51.5 0.0**
comp=Z,18nm,0.8s,mb5.6,SNR=11
FETA Feichten 92.71 317⇑ *i*P **P 19 27 51.6 0.0**
comp=Z,12nm,0.9s,mb5.3
NOA NORSAR Array B 92.83 331 P **P 19 27 51.1 -0.7**
comp=Z,6.8nm,0.9s,mb5.1,baz=94,slow=4.9,SNR=15
NOA pP pP 19 28 05.6 -1.4
comp=Z,4.0nm,0.8s,baz=95,slow=5.0,SNR=5.6
NOA PP PP 19 31 33.2 -1.4
comp=Z,3.3nm,0.8s,baz=90,slow=7.5,SNR=6.4
NOA LR LR 20 13 35.9
comp=Z,98nm,21.4s,MS4.2,baz=115,slow=38
NOA NORSAR Array B 92.83 331 P **P 19 27 51.2 -0.6**
NOA *PP pP 19 28 05.6 -1.5
NOA 19 31 33.2
NOA NORSAR Array B 92.83 331 P **P 19 27 51.1 -0.7**
NOA pP pP 19 28 05.6 -1.4
NOA PP PP 19 31 33.2 -1.4
NOA LR LR 20 13 35.9
CLZ Clausthal 93.08 322 *e*P **P 19 27 53.2 0.0**
comp=Z,13nm,1.0s,mb5.3
CLZ Clausthal 93.08 322 *e*P **P 19 27 53.2 0.0**
CLZ pmax pmax
comp=Z,13nm,1.0s,mb5.3
BSEG Bad Segeberg 93.15 324 *e*P **P 19 27 53.2 -0.3**
comp=Z,14nm,1.0s,mb5.3
BSEG Bad Segeberg 93.15 324 *e*P **P 19 27 53.2 -0.3**
BSEG pmax pmax
comp=Z,14nm,1.0s,mb5.3
NRDL Niedersach Rie 93.25 322 *e*P **P 19 27 54.1 +0.1**
comp=Z,13nm,0.9s,mb5.4
NRDL *e*S S 19 38 57.7 +0.6
DAVA Damuels 93.30 317⇑ *i*P **P 19 27 54.8 +0.5**
comp=Z,24nm,0.8s,mb5.6
VNA1 Neumayer--Stat 93.33 198 *e*P pP 19 28 10.9 +1.7
KEST Kesra 93.42 305 P **P 19 27 56.8 +1.6**
comp=Z,5.0nm,0.9s,mb4.9,baz=358,slow=2.3,SNR=12
KEST LR LR 20 08 11.5
comp=Z,71nm,20.7s,MS4.1,baz=188,slow=34
KEST Kesra 93.42 305 *e*P **P 19 27 56.3 +1.1**
STU Stuttgart 93.78 319 *e*S S 19 39 04.7 +2.8
PGF Pioggiola 93.84 312 *e*P **P 19 27 57.1 +0.2**
comp=Z,18nm,1.0s,mb5.1
PGF Pioggiola 93.84 312 *e*P **P 19 27 57.1 +0.2**
PGF pmax pmax
comp=Z,9.0nm,1.0s,mb5.2
PGF Pioggiola 93.84 312 *e*P **P 19 27 57.1 +0.2**
comp=Z,8.9nm,1.0s,mb5.2
TNS Taunus Mts 94.27 320 *e*P **P 19 27 58.9 +0.2**
comp=Z,35nm,0.9s,mb5.8
TNS Taunus Mts 94.27 320 *e*P **P 19 27 58.9 +0.2**
TNS pmax pmax
comp=Z,35nm,0.9s,mb5.8
BFO Black Forest 94.35 318 *e*P **P 19 27 58.5 -0.6**
comp=Z,5.0nm,0.9s,mb4.9
BFO *e*S S 19 39 07.8 +0.9
BFO Black Forest 94.35 318 *e*P **P 19 27 58.5 -0.6**
BFO *e*S S 19 39 07.8 +0.9
BFO pmax pmax
comp=Z,5.0nm,0.9s,mb4.9
BUG Bochum--Univer 95.01 321 *e*S S 19 39 15.6 +3.1
CDF Champ du Feu 95.05 318 *e*P **P 19 28 02.0 -0.3**
LPG La Plagne 95.46 315 *e*P **P 19 28 04.5 +0.2**
comp=Z,10nm,0.8s,mb5.0
LPG La Plagne 95.46 315 *e*P **P 19 28 04.5 +0.2**
LPG pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
LPG La Plagne 95.46 315 *e*P **P 19 28 04.5 +0.2**
comp=Z,5.1nm,0.8s,mb5.0
LPL La Plagne 95.47 315 *e*P **P 19 28 04.4 +0.1**
comp=Z,16nm,0.9s,mb5.1
LPL La Plagne 95.47 315 *e*P **P 19 28 04.4 +0.1**
LPL pmax pmax
comp=Z,8.0nm,0.9s,mb5.2
LPL La Plagne 95.47 315 *e*P **P 19 28 04.4 +0.1**
comp=Z,7.8nm,0.9s,mb5.1
HAU Haudompre 95.68 318 *e*P **P 19 28 04.9 -0.3**
comp=Z,14nm,0.8s,mb5.1
HAU Haudompre 95.68 318 *e*P **P 19 28 04.9 -0.3**
HAU pmax pmax
comp=Z,7.0nm,0.8s,mb5.1
HAU Haudompre 95.68 318 *e*P **P 19 28 04.9 -0.3**
comp=Z,7.1nm,0.8s,mb5.2
WLF Walferdange 95.76 319 *e*P **P 19 28 05.5 0.0**
comp=Z,39nm,1.9s,mb5.5
CABF La Chapelle 95.90 316 *e*P **P 19 28 06.6 +0.4**
BAIF Baives 97.00 320 *e*P **P 19 28 11.3 +0.1**
comp=Z,13nm,0.9s,mb5.1
BAIF Baives 97.00 320 *e*P **P 19 28 11.3 +0.1**
BAIF pmax pmax
comp=Z,7.0nm,0.9s,mb5.1
BAIF Baives 97.00 320 *e*P **P 19 28 11.3 +0.1**
comp=Z,6.6nm,0.9s,mb5.1
LOR Lormes 97.39 317 *e*P **P 19 28 12.9 -0.1**
comp=Z,11nm,1.0s,mb5.0
LOR Lormes 97.39 317 *e*P **P 19 28 12.9 -0.1**
LOR pmax pmax
comp=Z,5.0nm,1.0s,mb4.9
LOR Lormes 97.39 317 *e*P **P 19 28 12.9 -0.1**
comp=Z,5.3nm,1.0s,mb4.9
SMF Signal de Mont 97.44 316 *e*P **P 19 28 12.9 -0.3**
comp=Z,17nm,1.2s,mb5.1
SMF Signal de Mont 97.44 316 *e*P **P 19 28 12.9 -0.3**
SMF pmax pmax
comp=Z,9.0nm,1.2s,mb5.1
SMF Signal de Mont 97.44 316 *e*P **P 19 28 12.9 -0.3**
comp=Z,8.6nm,1.2s,mb5.1
TORD Torodi Ar. Bea 100.03 283 P Pdif 19 28 25.2 +0.6
comp=Z,0.9nm,1.0s,baz=98,slow=4.5,SNR=4.0
EKA Eskdalemuir Ar 100.84 326 PP PP 19 32 30.3 -6.1
comp=Z,1.3nm,0.7s,baz=82,slow=7.7,SNR=4.4
YKA Yellowknife Ar 115.18 17 PKP PKiKP 19 33 18.6 -1.6
comp=Z,1.3nm,0.8s,baz=309,slow=2.2,SNR=11
YKA PP PP 19 34 16.2 -4.2
comp=Z,0.9nm,0.9s,baz=330,slow=7.7,SNR=4.1
A05A Maple Falls 121.37 32⇑P PKPdf 19 33 31.9 -0.7
baz=121
F03A Seaside 122.32 36⇓P PKPdf 19 33 34.0 -0.5
baz=122
F04A Amboy 122.97 35⇑P PKPdf 19 33 35.2 -0.6
baz=123,SNR=5.9
ETW Entiat 123.14 32 *e*PKPdf PKPdf 19 33 32.1 -3.9
B08A Colville Reser 123.20 31⇑P PKPdf 19 33 35.2 -0.9
baz=123
H04A Detroit Lake 123.82 36⇓P PKPdf 19 33 36.7 -0.7
baz=124
D08A Wollman Farm, 124.24 32⇑P PKPdf 19 33 37.6 -0.5
baz=124
HAWA Hanford 124.32 33 PKPdf PKPdf 19 33 37.9 -0.4
G06A Carlson Farm, 124.40 35⇑P PKPdf 19 33 38.4 -0.1
baz=124
HUMO Hull Mountain 124.49 39 *e*PKPdf PKPdf 19 33 38.8 0.0
E08A Dider Farm, El 124.52 33⇑P PKPdf 19 33 38.3 -0.4
baz=124
A13A Flathead Natio 125.25 28⇑P PKPdf 19 33 39.6 -0.5
baz=125
FFC Flin Flon 125.31 16 *i* PKIKP PKPdf 19 33 39.2 -0.8
FFC Flin Flon 125.31 16 *e*PKPdf PKPdf 19 33 38.5 -1.4
G08A Pilot Rock 125.31 34⇓P PKPdf 19 33 39.7 -0.6
baz=125
LNOR Lincton Mounta 125.32 33 *e*PKIKP PKPdf 19 33 39.1 -1.2
B13A Whitefish 125.62 29⇓P PKPdf 19 33 40.3 -0.5
baz=125
A14A Double T Ranch 125.69 27⇑P PKPdf 19 33 40.5 -0.3
baz=126
K05A Summer Lake 125.70 38⇑P PKPdf 19 33 41.0 -0.1
baz=126
BSMT Bassoo Peak 125.83 29 *e*PKPdf PKPdf 19 33 40.4 -0.8
H08A Prairie City 125.95 35⇑P PKPdf 19 33 41.1 -0.4
baz=126
G09A Cove 125.97 33⇑P PKPdf 19 33 40.6 -1.0
baz=126
A15A Johnson Ranch, 126.00 27⇓P PKPdf 19 33 40.4 -1.1
baz=126,SNR=6.2
F11A Grangeville 126.45 32⇑P PKPdf 19 33 41.8 -0.6
baz=126
D13A Huson 126.51 30⇑P PKPdf 19 33 41.5 -1.0
baz=126
MOD Modoc 126.52 38 *e*PKPdf PKPdf 19 33 42.9 +0.2
A16A West Butte Ran 126.53 26⇑P PKPdf 19 33 41.8 -0.7
baz=126
B15A Bradely Ranch, 126.56 28⇓P PKPdf 19 33 41.5 -1.1
baz=126,SNR=12
G11A Walters Elk Ra 126.71 32⇓P PKPdf 19 33 42.4 -0.5
baz=126
J08A Circle Bar Ran 126.77 36⇑P PKPdf 19 33 43.0 -0.2
baz=127,SNR=16
I09A Lost Marbles R 126.81 35⇓P PKPdf 19 33 42.6 -0.6
baz=127
SLMT Seeley Lake 126.88 29 *e*PKPdf PKPdf 19 33 41.9 -1.3
C15A Salmond Ranch, 126.92 28⇑P PKPdf 19 33 42.5 -0.7
baz=127,SNR=10
MSO Missoula 126.95 30 *e*PKPdf PKPdf 19 33 42.5 -0.9
H10A Noah's Angus R 126.98 33⇓P PKPdf 19 33 42.8 -0.7
baz=127,SNR=6.3
D14A Greenough 126.99 29⇓P PKPdf 19 33 42.6 -0.8
baz=127
F12A Elk City 127.01 31⇑P PKPdf 19 33 43.0 -0.5
baz=127
E13A Victor 127.09 30⇓P PKPdf 19 33 43.5 -0.2
baz=127
J09A Fry Pan Ranch, 127.19 35⇓P PKPdf 19 33 43.7 -0.2
baz=127,SNR=5.7
WVOR Wild Horse Val 127.22 37 *e*PKIKP PKPdf 19 33 43.7 -0.3
CHMT Chamberlain Mo 127.23 29 *e*PKPdf PKPdf 19 33 42.9 -1.0
I10A Payette 127.27 34⇓P PKPdf 19 33 43.6 -0.4
baz=127
H11A Donnelly 127.30 33⇓P PKPdf 19 33 43.8 -0.3
baz=127
C16A Fuhringer Ranc 127.31 27⇑P PKPdf 19 33 43.7 -0.3
baz=127
A18A Metzger Ranch, 127.31 25⇑P PKPdf 19 33 43.6 -0.4
baz=127
B17A L&G Farms, Che 127.37 26⇑P PKPdf 19 33 43.5 -0.6
baz=127
E14A Clinton 127.46 30⇓P PKPdf 19 33 43.5 -0.8
baz=127
F13A Darby 127.47 31⇓P PKPdf 19 33 43.7 -0.6
baz=127
D15A Lincoln 127.49 29⇓P PKPdf 19 33 43.9 -0.4
baz=127
BEKR Beckworth 127.62 40⇑P PKPdf 19 33 44.7 -0.2
baz=127
SCHQ Schefferville 127.67 351 PKP PKPdf 19 33 44.4 0.0
comp=Z,5.5nm,0.8s,baz=18,slow=5.4,SNR=5.4
SCHQ Schefferville 127.67 351 PKP PKPdf 19 33 44.4 -0.1
J10A Berg Farm, Mel 127.70 35⇑P PKPdf 19 33 44.6 -0.3
baz=128
B18A Beardsley Farm 127.74 26⇓P PKPdf 19 33 44.6 -0.2
baz=128
I11A Placerville 127.85 34⇑P PKPdf 19 33 44.8 -0.4
baz=128
E15A Deer Lodge 127.87 29⇑P PKPdf 19 33 45.0 -0.1
baz=128
C17A Wharram Farm, 127.88 27⇓P PKPdf 19 33 44.7 -0.4
baz=128
D16A Dana Ranch, Ca 127.96 28⇓P PKPdf 19 33 44.9 -0.3
baz=128,SNR=10
G13A Cobalt 127.99 31⇑P PKPdf 19 33 45.2 -0.2
baz=128
H12A Diamond D Ranc 128.03 32⇑P PKPdf 19 33 45.1 -0.3
baz=128
EGMT Eagleton 128.03 26⇑P PKPdf 19 33 44.9 -0.5
baz=128
K10A MacKenzie Ranc 128.05 35⇓P PKPdf 19 33 45.7 +0.1
baz=128
MFID Camas Ranch 128.24 34⇑P PKPdf 19 33 45.8 -0.1
baz=128,SNR=8.4
E16A East Helena 128.26 29⇑P PKPdf 19 33 46.0 +0.1
baz=128
WCN Washoe City 128.32 40⇓P PKPdf 19 33 46.0 -0.2
baz=128
F15A Butte 128.36 30⇑P PKPdf 19 33 45.7 -0.3
baz=128
I12A Atlanta 128.38 33⇑P PKPdf 19 33 46.0 -0.2
baz=128,SNR=6.3
K11A Parker Ranch, 128.53 35⇓P PKPdf 19 33 46.3 -0.2
baz=128
DLMT Dillon 128.64 30 *e*PKPdf PKPdf 19 33 46.6 -0.1
E17A Martinsdale 128.70 28⇑P PKPdf 19 33 46.5 -0.2
baz=128
L10A Juniper Basin 128.72 36⇑P PKPdf 19 33 46.9 0.0
baz=128,SNR=7.0
J12A Stokes Ranch, 128.75 34⇓P PKPdf 19 33 46.9 0.0
baz=129,SNR=9.9
H14A Leadore 128.77 31⇓P PKPdf 19 33 46.9 0.0
baz=129
G15A Dillon 128.84 30⇑P PKPdf 19 33 46.9 -0.1
baz=129,SNR=7.3
I13A Wildhorse Cree 128.85 32⇓P PKPdf 19 33 47.0 -0.1
baz=129,SNR=8.3
BOZ Bozeman (W) 128.92 29⇑P PKPdf 19 33 47.0 -0.2
baz=129,SNR=7.2
BOZ Bozeman (W) 128.92 29 *e*PKPdf PKPdf 19 33 46.6 -0.5
BOZ *e*pPKPdf pPKPdf 19 34 04.5 +1.6
HLID Hailey 128.92 33⇑P PKPdf 19 33 47.1 -0.1
baz=129,SNR=5.6
HLID Hailey 128.92 33 *e*PKPdf PKPdf 19 33 47.3 +0.1
L11A Cat Creek Ranc 129.07 35⇑P PKPdf 19 33 47.8 +0.3
baz=129
G16A Moss Hill, Enn 129.13 30⇑P PKPdf 19 33 47.4 -0.1
baz=129,SNR=7.8
H15A Lima 129.14 31⇓P PKPdf 19 33 47.7 +0.1
baz=129,SNR=5.5
J13A Cove Ranch, Pi 129.16 33⇓P PKPdf 19 33 47.5 -0.1
baz=129,SNR=6.8
I14A Mackay 129.19 32⇑P PKPdf 19 33 47.5 -0.2
baz=129
F17A Fitzpatrick Pl 129.20 28⇓P PKPdf 19 33 47.6 -0.1
baz=129
K12A Draper Farm, C 129.26 34⇓P PKPdf 19 33 48.1 +0.2
baz=129
L12A House Creek Ra 129.51 35⇓P PKPdf 19 33 48.4 0.0
baz=129,SNR=10
M11A Holland Ranch, 129.52 36⇓P PKPdf 19 33 48.8 +0.3
baz=129
J14A Carey 129.57 33⇑P PKPdf 19 33 48.4 0.0
baz=129
F18A Big Timber 129.65 28⇓P PKPdf 19 33 48.3 -0.2
baz=129
K13A Stover Farm, H 129.71 34⇑P PKPdf 19 33 49.1 +0.4
baz=130
NVAR Mina Array Bea 129.75 41 PKP PKPdf 19 33 49.7 +0.7
comp=Z,3.2nm,0.7s,baz=267,slow=2.1,SNR=26
NVAR SKPbc 19 37 07.4
comp=Z,1.6nm,0.8s,baz=269,slow=4.7,SNR=5.6
NVAR Mina Array Bea 129.75 41 PKP PKPdf 19 33 49.7 +0.7
NVAR SKPbc 19 37 07.4
H16A Russell Place, 129.78 30⇓P PKPdf 19 33 48.9 +0.1
baz=130
O10A Cortez Mining, 129.79 38⇓P PKPdf 19 33 49.2 +0.2
baz=130
M12A Wells 130.04 35⇑P PKPdf 19 33 49.4 0.0
baz=130,SNR=11
J15A Blackfoot 130.09 32⇓P PKPdf 19 33 49.4 -0.1
baz=130,SNR=5.6
P10A Eureka 130.22 38⇑P PKPdf 19 33 49.8 0.0
baz=130
K14A Jones Ranch, D 130.28 33⇓P PKPdf 19 33 49.9 +0.1
baz=130
N12A Clover Valley, 130.32 36⇑P PKPdf 19 33 50.2 +0.2
baz=130
N12A Clover Valley, 130.32 36 *e*PKPdf PKPdf 19 33 50.4 +0.4
O11A Cowboy Ranch, 130.40 37⇑P PKPdf 19 33 49.9 -0.2
baz=130
RLMT Red Lodge 130.44 28⇓P PKPdf 19 33 50.0 -0.1
baz=130
M13A Montello 130.50 35⇑P PKPdf 19 33 50.1 -0.2
baz=130,SNR=11
M13A Montello 130.50 35 *e*PKPdf PKPdf 19 33 50.8 +0.5
M13A *e*SKP 19 37 09.3
L14A Malta 130.58 34⇓P PKPdf 19 33 50.2 -0.2
baz=130
PKM Peak Mountain 130.60 45⇓P PKPdf 19 33 50.5 -0.2
baz=130
P11A Circle Ranch, 130.70 38⇑P PKPdf 19 33 50.7 0.0
baz=130
Q10A Clear Creek Ra 130.74 39⇓P PKPdf 19 33 51.1 +0.2
baz=130
N13A Wendover, West 130.81 36⇑P PKPdf 19 33 50.9 +0.1
baz=131
M14A Sheep Mountain 130.88 34⇑P PKPdf 19 33 51.0 0.0
baz=131,SNR=16
REDW Red Top Meadow 130.94 31 *e*PKPdf PKPdf 19 33 51.3 +0.3
ULM Lac du Bonnet 130.97 15 PKP PKPdf 19 33 49.9 -1.0
comp=Z,9.7nm,0.7s,baz=346,slow=2.6,SNR=8.1
ULM Lac du Bonnet 130.97 15 *e*PKPdf PKPdf 19 33 49.9 -1.0
HVU Hansel Valley 131.01 34 *e*PKIKP PKPdf 19 33 50.9 -0.3
L15A Malad City 131.07 33⇓P PKPdf 19 33 51.2 -0.1
baz=131,SNR=10
S10A Tonopah Range, 131.14 40⇓P PKPdf 19 33 51.7 +0.1
baz=131
ISA Isabella 131.14 44⇑P PKPdf 19 33 51.5 -0.1
baz=131
Q11A Duckwater 131.19 39⇑P PKPdf 19 33 52.1 +0.4
baz=131
N14A Grayback Hills 131.40 35⇑P PKPdf 19 33 51.9 -0.1
baz=131
M15A Larsen Ranch, 131.41 34⇓P PKPdf 19 33 51.9 -0.1
baz=131
R11A Troy Canyon, C 131.53 39⇓P PKPdf 19 33 52.5 +0.2
baz=131
MPMC Manual Prospec 131.60 43⇑P PKPdf 19 33 52.6 +0.1
baz=131
N15A Stansbury Isla 131.75 34⇑P PKPdf 19 33 52.6 -0.1
baz=132,SNR=5.2
LRMC Laurel Mountai 131.78 43⇑P PKPdf 19 33 52.7 -0.2
baz=132
HWUT Hardware Ranch 131.79 33 *e*PKPdf PKPdf 19 33 52.2 -0.5
HWUT *e*SKP 19 37 13.6
FURC Furnace Creek, 131.80 42⇓P PKPdf 19 33 52.8 -0.1
baz=132
P13A Bates Ranch, G 131.81 37⇓P PKPdf 19 33 53.1 +0.3
baz=132
K18A Toltan Ranch, 131.88 31⇓P PKPdf 19 33 52.9 0.0
baz=132
EDW2 Edwards Air Fo 131.89 44⇑P PKPdf 19 33 53.3 +0.2
baz=132
M16A Huntsville 131.96 33⇓P PKPdf 19 33 52.7 -0.4
baz=132
BW06 Boulder Array 132.03 31⇑P PKPdf 19 33 53.0 -0.2
baz=132
PDAR Pinedale Array 132.03 31 PKP PKPdf 19 33 52.1 -1.0
comp=Z,2.0nm,0.7s,baz=224,slow=0.7,SNR=14
PDAR SKPbc SKPbc 19 37 14.5 -0.6
comp=Z,2.6nm,1.0s,baz=325,slow=2.3,SNR=7.4
DUG Dugway 132.04 35⇑P PKPdf 19 33 53.5 +0.2
baz=132
DUG Dugway 132.04 35 *e*PKPdf PKPdf 19 33 54.0 +0.7
DUG *e*SKP 19 37 15.0
Q13A Wheeler Ranch, 132.12 37⇑P PKPdf 19 33 53.6 +0.1
baz=132,SNR=9.1
P14A Drum Mountains 132.29 36⇑P PKPdf 19 33 53.7 0.0
baz=132,SNR=12
N16A Rees Ranch, Co 132.36 34⇓P PKPdf 19 33 53.6 -0.2
baz=132
M17A Scullys Gap (B 132.37 33⇑P PKPdf 19 33 53.9 0.0
baz=132,SNR=5.8
T11A Corn Creek, Al 132.42 40⇑P PKPdf 19 33 54.1 +0.1
baz=132,SNR=8.6
S12A Delamar Landin 132.44 39⇑P PKPdf 19 33 54.1 0.0
baz=132
BFSC Mount Baldy Ra 132.46 45⇓P PKPdf 19 33 54.1 -0.2
baz=132
GSC Goldstone 132.48 43⇓P PKPdf 19 33 54.3 +0.1
baz=132
Q14A Sevier Lake (B 132.55 37⇓P PKPdf 19 33 54.2 0.0
baz=132
AGMN Agassiz Nation 132.77 16 *e*PKPdf PKPdf 19 33 53.1 -1.2
AGMN *e*PP PP 19 36 14.7 -3.8
DAU Daniels Canyon 132.78 34 *e*PKIKP PKPdf 19 33 54.5 -0.1
HEC Hector,Ludlow 133.07 43⇓P PKPdf 19 33 55.2 -0.1
baz=133
S13A Holt Ranch, En 133.08 39⇓P PKPdf 19 33 55.6 +0.3
baz=133,SNR=5.9
O17A Robinson Place 133.22 34⇑P PKPdf 19 33 55.8 +0.3
baz=133,SNR=13
U12A Valley of Fire 133.34 40⇑P PKPdf 19 33 55.9 0.0
baz=133
T13A Saint George 133.39 39⇓P PKPdf 19 33 56.4 +0.5
baz=133
MSU Marysvale 133.51 37 *e*PKPdf PKPdf 19 33 56.8 +0.7

MSU				*e*SKP		19 37 21.1	
GMRC	**Granite Mounta**	**133.55**	**43**	⇓P	PKPdf	19 33 56.7	+0.4
	baz=133,SNR=10						
V12A	**Nelson**	**133.55**	**41**	⇓P	PKPdf	19 33 56.7	+0.4
	baz=133						
RSSD	**Black Hills**	**133.56**	**25**	*e*PKPdf	PKPdf	19 33 55.0	-1.0
RSSD				*e*SKP		19 37 19.2	
O18A	**Roosevelt**	**133.57**	**33**	⇓P	PKPdf	19 33 56.4	+0.3
	baz=133						
N19A	**John Jarvie Ra**	**133.57**	**32**	⇑P	PKPdf	19 33 56.4	+0.3
	baz=133						
PFO	**Pinyon Flat Ob**	**133.64**	**45**	⇓P	PKPdf	19 33 56.5	0.0
	baz=134						
M20A	**Sweetwater, Wa**	**133.66**	**31**	⇓P	PKPdf	19 33 56.6	+0.3
	baz=133						
P17A	**Butcher Ranch,**	**133.71**	**35**	⇑P	PKPdf	19 33 56.5	+0.1
	baz=134						
L21A	**Rawlins**	**133.72**	**30**	⇑P	PKPdf	19 33 56.4	0.0
	baz=134						
BELC	**Belle Mtn. Jos**	**133.75**	**44**	⇑P	PKPdf	19 33 57.0	+0.4
	baz=134						
P18A	**Preston Nutter**	**133.88**	**34**	⇓P	PKPdf	19 33 57.0	+0.2
	baz=134,SNR=8.1						
V13A	**Grand Canyon W**	**134.05**	**41**	⇑P	PKPdf	19 33 57.4	+0.2
	baz=134						
MONP	**Monument Peak**	**134.05**	**46**	⇓P	PKPdf	19 33 57.1	-0.1
	baz=134						
R16A	**Teasdale**	**134.08**	**36**	⇓P	PKPdf	19 33 57.1	0.0
	baz=134						
SRU	**San Rafael**	**134.08**	**35**	⇓P	PKPdf	19 33 57.3	+0.2
	baz=134						
SRU	**San Rafael**	**134.08**	**35**	*e*PKPdf	PKPdf	19 33 55.5	-1.7
N20A	**Spence Gulch,**	**134.10**	**31**	⇓P	PKPdf	19 33 57.3	+0.2
	baz=134						
U14A	**Mt Trumbull**	**134.22**	**40**	⇓P	PKPdf	19 33 57.9	+0.4
	baz=134						
IRM	**Iron Mountain**	**134.25**	**43**	⇑P	PKPdf	19 33 57.6	+0.1
	baz=134						
Q18A	**Rafter H Ranch**	**134.31**	**34**	⇓P	PKPdf	19 33 57.6	+0.1
	baz=134						
BC3	**Big Chuckawall**	**134.32**	**44**	⇓P	PKPdf	19 33 58.1	+0.4
	baz=134						
S16A	**Weppner Ranch,**	**134.38**	**37**	⇑P	PKPdf	19 33 57.9	+0.2
	baz=134						
R17A	**Hanksville Air**	**134.44**	**36**	⇑P	PKPdf	19 33 57.8	-0.1
	baz=134,SNR=7.7						
SWSC	**Sam W. Stewart**	**134.47**	**45**	⇑P	PKPdf	19 33 58.2	+0.1
	baz=134						
N21A	**Black Mountain**	**134.53**	**31**	⇓P	PKPdf	19 33 58.4	+0.5
	baz=134						
W13A	**Hualapai Mount**	**134.56**	**41**	⇓P	PKPdf	19 33 58.5	+0.4
	baz=134						
P19A	**Cripple Cowboy**	**134.58**	**33**	⇓P	PKPdf	19 33 58.4	+0.3
	baz=134						
O20A	**White River Ci**	**134.62**	**32**	⇑P	PKPdf	19 33 58.6	+0.5
	baz=134						
V14A	**Boquillas Ranc**	**134.75**	**40**	⇑P	PKPdf	19 33 59.0	+0.5
	baz=135						
U15A	**North Rim**	**134.78**	**39**	⇓P	PKPdf	19 33 58.8	+0.3
	baz=135						
Q19A	**Hogan Spring (**	**134.90**	**34**	⇑P	PKPdf	19 33 58.8	+0.1
	baz=135,SNR=17						
S17A	**Black Ridge (B**	**134.91**	**37**	⇓P	PKPdf	19 33 59.0	+0.3
	baz=135						
Y12C	**Blythe**	**134.91**	**43**	⇑P	PKPdf	19 33 59.2	+0.4
	baz=135						
T16A	**Glen Canyon Da**	**134.91**	**38**	⇑P	PKPdf	19 33 59.2	+0.5
	baz=135						
R18A	**Canyonlands Na**	**134.93**	**35**	⇓P	PKPdf	19 33 59.3	+0.6
	baz=135,SNR=5.4						
W14A	**Seligman**	**135.02**	**41**	⇓P	PKPdf	19 33 59.2	+0.2
	baz=135						
GLA	**Glamis**	**135.09**	**44**	⇓P	PKPdf	19 33 59.4	+0.2
	baz=135						
V15A	**Kaibab Nationa**	**135.23**	**39**	⇑P	PKPdf	19 33 59.9	+0.5
	baz=135						
T17A	**Navajo Res., N**	**135.33**	**37**	⇓P	PKPdf	19 33 59.9	+0.4
	baz=135,SNR=7.4						
S18A	**Hurst Farm, Bl**	**135.35**	**36**	⇓P	PKPdf	19 34 00.2	+0.7
	baz=135						
R19A	**Curley Farm, L**	**135.36**	**35**	⇓P	PKPdf	19 34 00.1	+0.5
	baz=135						
Q20A	**Ridgley Place,**	**135.43**	**33**	⇑P	PKPdf	19 34 00.0	+0.4
	baz=135						
X14A	**Yava**	**135.59**	**42**	⇓P	PKPdf	19 34 00.7	+0.6
	baz=135						
PLCA	**Paso Flores**	**135.60**	**189**	PKP	PKPdf	19 33 58.9	-1.0
	comp=Z,1.8nm,0.8s,baz=351,slow=2.9,SNR=4.7						
PLCA				SKPbc	SKPbc	19 37 26.7	-0.3
	comp=Z,1.8nm,1.0s,baz=180,slow=1.7,SNR=3.2						
T18A	**Mexican Hat**	**135.79**	**36**	⇓P	PKPdf	19 34 00.4	0.0
	baz=136,SNR=6.4						
S19A	**Harvey Farm, M**	**135.81**	**35**	⇑P	PKPdf	19 34 00.8	+0.4
	baz=136						
Z13A	**Yuma Proving G**	**135.82**	**44**	⇑P	PKPdf	19 34 01.1	+0.5
	baz=136						
Q21A	**Lamborn Mesa,**	**135.91**	**33**	⇓P	PKPdf	19 34 01.2	+0.6
	baz=136						
R20A	**Redvale**	**135.93**	**34**	⇑P	PKPdf	19 34 01.2	+0.6
	baz=136						
WUAZ	**Wupatki**	**135.93**	**39**	⇑P	PKPdf	19 34 01.1	+0.5
	baz=136						
X15A	**Humboldt**	**136.01**	**41**	⇓P	PKPdf	19 34 01.3	+0.4
	baz=136						
W16A	**Flagstaff**	**136.09**	**40**	⇓P	PKPdf	19 34 01.5	+0.5
	baz=136						
Z14A	**Wintersburg**	**136.21**	**43**	⇑P	PKPdf	19 34 01.9	+0.6
	baz=136						
V17A	**Tonalea, Kykot**	**136.23**	**39**	⇓P	PKPdf	19 34 01.4	+0.1
	baz=136						
Q22A	**Crested Butte,**	**136.25**	**32**	⇑P	PKPdf	19 34 01.3	+0.1
	baz=136						
R21A	**Cimarron**	**136.26**	**33**	⇓P	PKPdf	19 34 01.4	+0.2
	baz=136						
Y15A	**Casa Rosa Ranc**	**136.27**	**42**	⇓P	PKPdf	19 34 01.4	0.0
	baz=136						
U18A	**Rough Rock, Ch**	**136.27**	**37**	⇑P	PKPdf	19 34 01.6	+0.3
	baz=136						
T19A	**Beclabito**	**136.50**	**36**	⇑P	PKPdf	19 34 02.1	+0.4
	baz=136						
MVCO	**Mesa Verde**	**136.54**	**35**	⇑P	PKPdf	19 34 02.2	+0.5
	baz=136						
MVCO	**Mesa Verde**	**136.54**	**35**	*e*PKPdf	PKPdf	19 34 02.5	+0.8
X16A	**Lo Mia Camp, P**	**136.57**	**41**	⇑P	PKPdf	19 34 02.6	+0.7
	baz=136						
114A	**Black Gap (USA**	**136.61**	**43**	⇑P	PKPdf	19 34 02.3	+0.3
	baz=136						
S21A	**Coal Bank Pass**	**136.63**	**34**	⇓P	PKPdf	19 34 02.5	+0.6
	baz=136,SNR=12						
ECSD	**EROS Data Cent**	**136.68**	**19**	*e*PKPdf	PKPdf	19 34 00.5	-1.4
V18A	**Ganado**	**136.70**	**38**	⇓P	PKPdf	19 34 02.9	+0.8
	baz=136						
R22A	**Saguache, Gunn**	**136.79**	**33**	⇓P	PKPdf	19 34 02.7	+0.5
	baz=137						
115A	**Sonoran Desert**	**137.09**	**43**	⇓P	PKPdf	19 34 03.4	+0.5
	baz=137						
U20A	**Newcomb**	**137.10**	**36**	⇓P	PKPdf	19 34 03.6	+0.8
	baz=137						
214A	**Organ Pipe Nat**	**137.11**	**44**	⇓P	PKPdf	19 34 03.7	+0.7
	baz=137						
W18A	**Petrified Fore**	**137.21**	**38**	⇑P	PKPdf	19 34 03.8	+0.7
	baz=137						
V19A	**Window Rock**	**137.24**	**37**	⇑P	PKPdf	19 34 03.8	+0.7
	baz=137						
Y17A	**Roosevelt**	**137.41**	**41**	⇑P	PKPdf	19 34 04.1	+0.6
	baz=137						
116A	**Eloy**	**137.52**	**43**	⇓P	PKPdf	19 34 04.2	+0.4
	baz=137						
V20A	**Brimhall**	**137.53**	**37**	⇑P	PKPdf	19 34 04.1	+0.5
	baz=137						
U21A	**Nageezi**	**137.57**	**35**	⇓P	PKPdf	19 34 04.3	+0.6
	baz=137						
T22A	**Edith**	**137.59**	**34**	⇓P	PKPdf	19 34 04.1	+0.3
	baz=137,SNR=6.4						
Y18A	**Canyon Day Jun**	**137.88**	**40**	⇑P	PKPdf	19 34 05.0	+0.6
	baz=138						
X19A	**St. Johns**	**137.94**	**39**	⇑P	PKPdf	19 34 05.3	+0.9
	baz=138						
W20A	**Ramah**	**137.96**	**37**	⇓P	PKPdf	19 34 04.9	+0.5
	baz=138,SNR=7.5						
U22A	**Llaves**	**138.07**	**35**	⇑P	PKPdf	19 34 05.4	+0.8
	baz=138						
117A	**Oracle**	**138.17**	**42**	⇓P	PKPdf	19 34 05.6	+0.7
	baz=138						
V22A	**San Miguel Ran**	**138.36**	**35**	⇓P	PKPdf	19 34 06.0	+0.8
	baz=138						
Z19A	**T-Link Ranch,**	**138.69**	**40**	⇑P	PKPdf	19 34 06.4	+0.6
	baz=138						
T25A	**Trinidad**	**138.85**	**32**	⇑P	PKPdf	19 34 06.7	+0.7
	baz=139						
X21A	**Alamocita Cree**	**138.86**	**38**	⇓P	PKPdf	19 34 06.9	+0.8
	baz=139						
119A	**Ashpeak Ranch,**	**139.00**	**41**	⇓P	PKPdf	19 34 07.0	+0.6
	baz=139						
218A	**Dragoon**	**139.00**	**42**	⇓P	PKPdf	19 34 07.1	+0.6
	baz=139						
Y21A	**Point of Rocks**	**139.22**	**38**	⇓P	PKPdf	19 34 07.5	+0.7
	baz=139						
Z20A	**Nine Sixteen R**	**139.23**	**40**	⇓P	PKPdf	19 34 07.6	+0.8
	baz=139						
X22A	**Bernardo**	**139.28**	**37**	⇑P	PKPdf	19 34 07.7	+0.8
	baz=139						
U25A	**Circle Dot Ran**	**139.40**	**32**	⇑P	PKPdf	19 34 07.6	+0.5
	baz=139						
219A	**White Tail Can**	**139.51**	**42**	⇑P	PKPdf	19 34 07.9	+0.5
	baz=139,SNR=9.5						
120A	**U Bar Ranch, L**	**139.57**	**40**	⇓P	PKPdf	19 34 08.1	+0.6
	baz=139						
Z21A	**St. Cloud Mine**	**139.69**	**39**	⇓P	PKPdf	19 34 08.5	+0.8
	baz=140						
Y22A	**Socorro**	**139.70**	**37**	⇑P	PKPdf	19 34 08.5	+0.8
	baz=140						
V25A	**Rancho No Teng**	**139.71**	**33**	⇓P	PKPdf	19 34 08.3	+0.7
	baz=140						
W24A	**Lazy 6 Ranch,**	**139.72**	**35**	⇑P	PKPdf	19 34 08.3	+0.6
	baz=140,SNR=6.9						
BNM	**Barren Site**	**139.76**	**37**	*e*PKPdf	PKPdf	19 34 06.9	-0.8
U26A	**Atchley Ranch,**	**139.76**	**32**	⇑P	PKPdf	19 34 08.5	+0.8
	baz=140						
319A	**Douglas**	**139.88**	**42**	⇓P	PKPdf	19 34 08.7	+0.7
	baz=140						
220A	**Playas Peak, P**	**140.05**	**41**	⇓P	PKPdf	19 34 09.0	+0.7
	baz=140,SNR=6.9						
121A	**Cookes Peak, D**	**140.13**	**40**	⇑P	PKPdf	19 34 08.9	+0.4
	baz=140						
Z22A	**Elephant Butte**	**140.16**	**38**	⇑P	PKPdf	19 34 09.1	+0.5
	baz=140						
V26A	**Tequesquite Ra**	**140.19**	**33**	⇓P	PKPdf	19 34 09.4	+0.9
	baz=140						
W25A	**X Bar L Ranch,**	**140.25**	**34**	⇓P	PKPdf	19 34 09.4	+0.7
	baz=140						
Y23A	**Lovelace Mesa,**	**140.25**	**37**	⇑P	PKPdf	19 34 09.4	+0.7
	baz=140						
221A	**Mesquite Ranch**	**140.47**	**40**	⇑P	PKPdf	19 34 10.0	+0.9
	baz=140						
Z23A	**Rita Site, Whi**	**140.61**	**38**	⇑P	PKPdf	19 34 10.4	+1.1
	baz=140						
Y24A	**Capitan**	**140.62**	**36**	⇓P	PKPdf	19 34 10.7	+1.3
	baz=140,SNR=7.3						
Y25A	**Mesa, Roswell**	**141.06**	**35**	⇑P	PKPdf	19 34 11.6	+1.5
	baz=141						
X26A	**CR and CF Fran**	**141.10**	**34**	⇑P	PKPdf	19 34 11.6	+1.4
	baz=141,SNR=5.8						
W27A	**Bowe Ranch, En**	**141.13**	**33**	⇑P	PKPdf	19 34 11.8	+1.5
	baz=141						
BINY	**Binghamton**	**141.14**	**357**	*e*PKPpre		19 34 02.5	
124A	**Stringfield Ra**	**141.47**	**37**	⇓P	PKPdf	19 34 11.8	+0.9
	baz=141						
MSTX	**Muleshoe**	**142.10**	**33**	⇑P	PKPdf	19 34 13.5	+1.5
	baz=142						
MNTX	**Cornudas Mount**	**142.20**	**39**	*e*PKPpre		19 34 07.4	
MNTX				*e*PKPdf	PKPdf	19 34 11.8	-0.5
Z27A	**Tatum**	**142.34**	**35**	⇑P	PKPdf	19 34 14.0	+1.5
	baz=142						
GDL2	**Guadalupe Moun**	**142.47**	**37**	*e*PKPdf	PKPdf	19 34 11.9	-0.8
325A	**Bean Ranch, Si**	**142.68**	**39**	⇓PKPdf	PKPdf	19 34 09.8	-3.4
	baz=142						
226A	**Malaga, Loving**	**142.73**	**37**	⇓PKPdf	PKPdf	19 34 10.7	-2.5
	baz=142						
ACSO	**Alum Creek Sta**	**142.98**	**5**	*e*PKPdf	PKPdf	19 34 08.1	-5.3
425A	**Indio Mountain**	**143.07**	**39**	⇓PKPdf	PKPdf	19 34 11.0	-2.8
	baz=143						
326A	**Caldwell Ranch**	**143.33**	**38**	⇓PKPdf	PKPdf	19 34 11.1	-3.2
	baz=143						
CCM	**Cathedral Cave**	**143.51**	**17**	*e*PKIKP	PKPdf	19 34 09.9	-4.5
WMOK	**Wichita Mounta**	**143.55**	**28**	*e*PKIKP	PKPdf	19 34 10.1	-4.5
426A	**McDonald Obser**	**143.75**	**38**	⇓PKPdf	PKPdf	19 34 12.2	-2.8
	baz=144						
328A	**Wristen Ranch,**	**143.98**	**36**	⇑PKPdf	PKPdf	19 34 12.8	-2.6
	baz=144						
427A	**Hayter Ranch,**	**144.01**	**38**	⇑PKPdf	PKPdf	19 34 13.1	-2.4
	baz=144						
CPUP	**Villa Florida**	**144.03**	**214**	PKP	PKPdf	19 34 13.7	-2.0
	comp=Z,3.2nm,0.6s,baz=45,slow=7.1,SNR=15						
526A	**Mary Lane Ranc**	**144.12**	**39**	⇑PKPdf	PKPdf	19 34 13.5	-2.1
	baz=144						
527A	**Woodward Ranch**	**144.37**	**39**	⇓PKPdf	PKPdf	19 34 14.4	-1.7
	baz=144						
SIUC	**Southern Illin**	**144.38**	**14**	*e*PKPdf	PKPdf	19 34 13.5	-2.4
626A	**Big Bend Ranch**	**144.44**	**40**	⇓PKPdf	PKPdf	19 34 14.4	-1.9
	baz=144						
USIN	**University of**	**144.49**	**12**	*e*PKPdf	PKPdf	19 34 13.6	-2.5
WCI	**Wyandotte Cave**	**144.50**	**10**	*e*PKIKP	PKPdf	19 34 13.2	-2.9
428A	**Kincaid Ranch,**	**144.53**	**37**	⇓PKPdf	PKPdf	19 34 15.4	-1.0
	baz=144						
528A	**Cox Ranch, San**	**144.87**	**38**	⇑PKPdf	PKPdf	19 34 15.8	-1.2
	baz=145						
TXAR	**Lajitas Array**	**144.89**	**40**	PKP	PKPdf	19 34 16.1	-0.9
	comp=Z,22nm,0.7s,baz=292,slow=1.1,SNR=303						
TXAR				SKPbc	SKPbc	19 37 51.2	-1.1
	comp=Z,0.9nm,0.7s,baz=252,slow=1.8,SNR=4.1						
627A	**Terlingua Ranc**	**144.98**	**39**	⇑PKPdf	PKPdf	19 34 16.5	-0.7
	baz=145						
628A	**Black Gap, Mar**	**145.28**	**39**	⇑PKPdf	PKPdf	19 34 17.5	-0.2
	baz=145						
GLAT	**Glass**	**145.73**	**15**	*e*PKPdf	PKPdf	19 34 18.2	-0.1
UTMT	**University of**	**145.77**	**15**	*e*PKPdf	PKPdf	19 34 18.4	0.0
MIAR	**Mount Ida**	**145.94**	**22**	*e*PKP2	PKPab	19 34 18.4	-1.5
HBAR	**Harrisburg**	**146.01**	**18**	*e*PKPdf	PKPdf	19 34 17.9	-0.8
ELN	**Prospectdale**	**146.13**	**3**	*e*PKPdf	PKPdf	19 34 18.0	-0.9
ELN				*e*pPKPdf	pPKPdf	19 34 31.6	-3.1
BLA	**Blacksburg**	**146.16**	**2**	*e*PKP2	PKPab	19 34 18.6	-2.0
UALR	**University of**	**146.18**	**20**	*e*PKPdf	PKPdf	19 34 18.6	-0.5
WVT	**Waverly**	**146.22**	**13**	*e*PKP2	PKPdf	19 34 18.2	-0.9
JCT	**Junction City**	**146.38**	**34**	*e*PKP2	PKPdf	19 34 19.1	-0.5
TZTN	**Tazewell**	**146.57**	**7**	*e*PKPdf	PKPdf	19 34 18.6	-1.2
OXF	**Oxford**	**147.35**	**16**	*e*PKIKP	PKPdf	19 34 19.4	-1.7
TKL	**Tuckaleechee C**	**147.41**	**8**	*e*PKIKP	PKPdf	19 34 20.8	-0.3
TKL				*e*		19 34 22.3	
SWET	**Sewanee**	**147.50**	**11**	*e*PKPdf	PKPdf	19 34 20.3	-1.0
SWET				*e*PKPbc	PKPbc	19 34 21.9	-1.9
CPCT	**Cooper Cave**	**147.51**	**9**	*e*PKPdf	PKPdf	19 34 20.5	-0.8
CPCT				*e*PKPbc	PKPbc	19 34 22.7	-1.2
NATX	**Nacogdoches**	**147.93**	**26**	*e*PKPbc	PKPbc	19 34 24.5	-0.6
HKT	**Hockley**	**148.90**	**30**	*e*PKIKP	PKPdf	19 34 23.5	-0.2
HKT				*e*		19 34 27.5	
JSC	**Jenkinsville**	**149.03**	**4**	*e*PKIKP	PKPdf	19 34 23.4	-0.4
JSC				*e*		19 34 27.0	
LRAL	**Lakeview Retre**	**149.37**	**14**	*e*PKPbc	PKPbc	19 34 27.0	-1.8
GOGA	**Godfrey**	**149.67**	**8**	*e*PKPbc	PKPbc	19 34 28.5	-1.1
GOGA				*e*PKPab	PKPab	19 34 33.5	-1.2
COW	**Cow Castle Cre**	**149.96**	**3**	*e*PKPbc	PKPbc	19 34 28.9	-1.4
NHSC	**New Hope**	**150.26**	**2**	*e*PKPbc	PKPbc	19 34 29.7	-1.3
DWPF	**Disney**	**155.14**	**6**	*e*PKPbc	PKPdf	19 34 40.9	+7.8
DWPF				*e*PKPab	PKPab	19 34 56.3	-1.4
LPAZ	**La Paz**	**157.94**	**208**	PKP	PKPdf	19 34 38.0	+1.0
	comp=Z,3.1nm,1.1s,baz=50,slow=3.6,SNR=7.7						
OTAV	**Otavalo**	**177.00**	**186**	*e*PKPdf	PKPdf	19 34 50.6	-0.1

THE 24 19:27:51.5, 40.°34N×21.°52E, h7km±13km, ML2.6/3, Error ellipse: s-maj=14.0km s-min=0.4km az=64.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZN	**Kozani**	**0.20**	**101**	P	Pg	19 27 55.6	+0.2
KZN				S	Sg	19 27 58.8	+0.7
FNA	**Florina**	**0.45**	**346**	P	Pg	19 28 00.3	0.0
FNA				S	Sg	19 28 06.7	+0.5
BIA	**Bitola**	**0.69**	**348**	*e*Pg	Pg	19 28 03.6	-1.2
BIA				*i* Sg	Sg	19 28 15.0	+1.2
THL	**Klokotos Trika**	**0.86**	**154**	P	Pg	19 28 07.6	-0.5
THL				S	Sg	19 28 20.5	+1.2
KRUS	**Krusevo**	**1.04**	**349**	*e*Pg	Pg	19 28 11.3	-0.3
KRUS				*i* Sg	Sg	19 28 26.1	+0.9

BJI ***24*** *19:35:29.2, 3.°03S×138.°81E, h5km, mB5.1/23, mb4.7/40, Ms4.6/24, Ms7 4.3/23*
NEIC ***24*** *19:35:35.1±4.3, 2.°54S×138.°41E, h5km±27km, mb4.8/35, Error ellipse: s-maj=8.8km s-min=5.8km az=223.0*
IDC ***24*** *19:35:35.1±0.5, 2.°50S×138.°28E, h0km, mb4.5/18, mb1 4.5/22, mb1mx4.5/23, mbtmp4.5/22, ML4.2/3, Error ellipse: s-maj=18.4km s-min=12.0km az=70.0*
ISCJB ***24*** *19:35:36.4±0.8, 2.°57S±0.°03×138.°60E±0.°04, h25km±5km, mb4.7/71, MS4.2/10, Error ellipse: s-maj=6.5km s-min=5.2km az=3.1*
MOS ***24*** *19:35:37.7±0.8, 2.°58S×138.°37E, h33km, mb5.0/20, Error ellipse: s-maj=13.3km s-min=7.1km az=110.0*
DJA ***24*** *19:35:38, 2.°44S×138.°69E, h20km, mb4.9/18*
ISC 24 19:35:37.4±0.8, 2.°55S±0.°03×138.°59E±0.°04, h18km±5km, h14km±2.2km:pP-P, n178, σ1§10/176, mb4.7/70, MS4.2/10, 5C-2D, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.56**	**12**	P	**Pg**	**19 35 46.9**	**-1.7**
SMPI				S	**Sg**	**19 35 56.8**	**+0.6**
JAY	**Jayapura**	**2.11**	**89**	P	**Pn**	**19 36 13.3**	**+1.5**
JAY				S	Px	19 36 21.8	
NLAI	**Namlea**	**11.50**	**266**	P	**Pn**	**19 38 21.4**	**+0.5**
	1μm153nm,0.9s						
TNTI	**Ternate**	**11.70**	**286**	P	**Pn**	**19 38 26.7**	**+3.1**
	1μm97nm,1.0s						
KAKA	**Kakadu**	**11.80**	**211**	*e*P	**Pn**	**19 38 23.5**	**-1.4**
	28nm,0.4s						
KAKA	**Kakadu**	**11.80**	**211**	*e*Pn	**Pn**	**19 38 23.4**	**-1.5**
	102nm,0.6s						
KAKA	**Kakadu**	**11.80**	**211**	P	**Pn**	**19 38 24.0**	**-0.9**
COEN	**Coen**	**12.21**	**158**	*e*P	**Pn**	**19 38 30.9**	**+0.4**
COEN	**Coen**	**12.21**	**158**	*e*Pn	**Pn**	**19 38 30.7**	**+0.1**
	152nm,0.6s						
COEN	**Coen**	**12.21**	**158**	P	**Pn**	**19 38 30.5**	**0.0**
	131nm,1.4s						
MNI	**Manado**	**14.31**	**286**	P	**Pn**	**19 38 59.3**	**0.0**
	971nm98nm,0.8s						
KMSI	**Cibinong**	**14.94**	**282**	P	**Pn**	**19 39 09.8**	**+2.0**
LUWI	**Luwuk**	**15.88**	**275**	P	**Pn**	**19 39 19.6**	**-0.7**
	1μm142nm,1.0s						
KDI	**Kendari**	**16.01**	**265**	P	**Pn**	**19 39 26.7**	**+4.8**
KNA	**Kununurra**	**16.31**	**216**	P	**Pn**	**19 39 25.6**	**0.0**
MTSU	**Mount Surprise**	**16.48**	**160**	*e*P	**Pn**	**19 39 30.2**	**+2.4**
	20nm,0.5s						
MRSI	**Marisa**	**16.92**	**280**	P	**Pn**	**19 39 33.6**	**+0.2**
	466nm59nm,0.7s						
APSI	**Ampana**	**17.02**	**275**	P	**Pn**	**19 39 35.5**	**+0.8**
	1μm150nm,1.0s						
WRAB	**Tennant Creek**	**17.77**	**193**	*e*P	**Pn**	**19 39 42.2**	**-1.8**
WRAB				pmax	pmax		
	comp=Z,28nm,0.8s						
WRAB	**Tennant Creek**	**17.77**	**193**	*e*Pn	**Pn**	**19 39 42.2**	**-1.8**
	comp=Z,28nm,0.8s						
WRAB	**Tennant Creek**	**17.77**	**193**	P	**Pn**	**19 39 45.6**	**+1.6**
	comp=Z,40nm,0.9s						
WRA	**Warramunga Arr**	**17.78**	**193**	P	**Pn**	**19 39 42.1**	**-2.0**
	comp=Z,1.5nm,0.3s,baz=13,slow=13,SNR=38						
BNSI	**Bone**	**18.55**	**264**	P	**Pn**	**19 39 56.2**	**+2.6**
	comp=Z,48nm,1.1s						
BKSI	**Bulukumba**	**18.63**	**261**	P	**Pn**	**19 39 56.1**	**+1.5**
	comp=Z,31nm,1.0s						
TTSI	**Tana Toraja**	**18.76**	**268**	P	**Pn**	**19 39 57.6**	**+1.4**
	comp=Z,679nmcomp=Z,56nm,0.8s						
PCI	**Palu**	**18.82**	**275**	P	**Pn**	**19 39 57.3**	**+0.4**
	comp=Z,84nm,1.0s						
SPSI	**Sidrap Palu**	**18.85**	**265**	P	**Pn**	**19 39 57.6**	**+0.3**
	comp=Z,615nmcomp=Z,39nm,0.9s						
KAPI	**Kappang**	**18.96**	**262**	P	**Pn**	**19 39 53.6**	**-5.0**
	comp=Z,2.1nm,0.3s,baz=122,slow=15,SNR=2.5						
CTA	**Charters Tower**	**18.97**	**157**	*e*P	**Pn**	**19 40 03.2**	**+4.5**
	comp=Z,13nm,1.1s						
CTA	**Charters Tower**	**18.97**	**157**	P	**Pn**	**19 39 60.0**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=338,slow=14,SNR=3.2						
CTAO	**Charters Tower**	**18.97**	**157**	*e*P	**Pn**	**19 39 56.7**	**-2.0**
CTAO				pmax	pmax		
	comp=Z,34nm,1.2s						
CTAO	**Charters Tower**	**18.97**	**157**	*e*P	**Pn**	**19 39 56.7**	**-1.9**
	comp=Z,34nm,1.2s						
FITZ	**Fitzroy Crossi**	**20.01**	**219**	*e*P	**P**	**19 40 07.6**	**-1.7**
	comp=Z,14nm,0.6s						
FITZ	**Fitzroy Crossi**	**20.01**	**219**	P	**P**	**19 40 07.7**	**-1.6**
	comp=Z,0.4nm,0.3s,baz=48,slow=

KMI pP pP 19 43 49.0 -3.2
KMI PP PP 19 45 32.1 +1.8
KMI S **S** **19 50 20.4 +0.1**
KMI SS SS 19 53 31.6 -7.7
KMI pmax pmax
comp=Z,10.0nm,1.2s,mb4.4
KMI pmax pmax
comp=Z,200nm,3.7s
KMI LR LR
comp=N,410nm,17.7s,MS4.4
KMI LR LR
comp=E,220nm,21.2s,MS4.4
KMI LR LR
comp=Z,350nm,22.1s,MS4.2
CHTO Chiang Mai 44.40 300 *e*P **P** **19 43 46.0 -1.4**
CHTO pmax pmax
comp=Z,23nm,1.3s,mb4.8
CHTO Chiang Mai 44.40 300 *e*P **P** **19 43 46.0 -1.4**
comp=Z,23nm,1.3s,mb4.8
XAN Xi'an 45.88 325 P **P** **19 43 57.8 -1.1**
XAN pP pP 19 44 03.5 -0.9
XAN pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
CD2 Chengdu 46.98 318⇓ *i*P **P** **19 44 07.6 0.0**
CD2 pP pP 19 44 12.1 -1.1
CD2 sP sP 19 44 14.8 -0.5
CD2 PP PP 19 45 57.9 -0.4
CD2 S **S** **19 50 57.9 -0.6**
CD2 SS SS 19 54 17.5 -8.1
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
CD2 pmax pmax
comp=Z,30nm,4.8s
CD2 LR LR
comp=N,130nm,14.2s
CD2 LR LR
comp=Z,120nm,15.2s,MS4.0
BJI Beijing 47.10 336 P **P** **19 44 09.4 +1.0**
BJI pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
CN2 Changchun 47.62 347 *e*P **P** **19 44 13.8 +1.4**
CN2 *e*sP sP 19 44 20.8 +0.7
CN2 *e*S **S** **19 51 09.1 +1.9**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,16.0s,MS4.3
CN2 LR LR
comp=E,200nm,16.0s,MS4.3
CN2 LR LR
comp=Z,200nm,21.0s,MS4.1
MDJ Mudanjiang 47.64 351 P **P** **19 44 11.8 -0.7**
MDJ PP PP 19 46 02.4 -1.8
MDJ S **S** **19 51 12.5 +5.2**
MDJ pmax pmax
comp=Z,7.0nm,1.2s,mb4.6
MDJ LR LR
comp=N,200nm,23.4s
MDJ LR LR
comp=E,140nm,29.6s
MDJ LR LR
comp=Z,140nm,21.9s,MS3.9
HHC Hu-ho-hao-te 49.73 333 *e*P **P** **19 44 29.8 +1.1**
HHC PcP PcP 19 45 50.9 +1.3
HHC PP PP 19 46 25.4 +1.9
HHC PcS PcS 19 49 46.5 +0.2
HHC ScP ScP 19 49 47.6 +3.0
HHC S **S** **19 51 38.9 +1.9**
HHC ScS ScS 19 54 19.8 +0.1
HHC SS SS 19 55 07.8 -2.0
HHC pmax pmax
comp=Z,12nm,0.8s,mb5.0
HHC pmax pmax
comp=Z,470nm,6.6s
HHC LR LR
comp=N,280nm,18.0s,MS4.4
HHC LR LR
comp=E,170nm,18.0s,MS4.4
HHC LR LR
comp=Z,230nm,19.2s,MS4.2
RPZ Rata Peaks 50.09 150 P **P** **19 44 32.9 +1.5**
comp=Z,33nm,0.9s,mb5.4,baz=167,slow=6.5,SNR=5.5
LZH Lanzhou 50.28 323 *e*P **P** **19 44 33.5 +0.6**
LZH pP pP 19 44 35.0 -3.5
LZH sP sP 19 44 36.5 -4.2
LZH PP PP 19 46 28.0 -0.5
LZH pmax pmax
comp=Z,32nm,1.0s,mb5.3
LZH pmax pmax
comp=Z,170nm,5.0s
LZH LR LR
comp=E,170nm,13.1s
LZH LR LR
comp=Z,310nm,15.2s,MS4.4
KLR Kul'dur 51.91 354 *e*P **P** **19 44 40.7 -4.2**
SHL Shillong 53.15 305 *e*PKP **P** **19 44 55.0 +0.4**
SHL *ex* x 19 46 37.0
GTA Gaotai 54.87 324 ⇑P **P** **19 45 07.0 +0.1**
GTA pP pP 19 45 11.8 -0.7
GTA sP sP 19 45 14.0 -0.6
GTA PP PP 19 47 12.3 +2.3
GTA S **S** **19 52 49.5 +2.0**
GTA sS sS 19 52 57.3 +0.6
GTA SS SS 19 56 33.8 +2.6
GTA pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
GTA pmax pmax
comp=Z,170nm,5.1s
GTA LR LR
comp=N,120nm,18.6s,MS4.2
GTA LR LR
comp=E,150nm,21.0s,MS4.2
GTA LR LR
comp=Z,200nm,20.7s,MS4.2
ULN Ulaanbaatar 57.27 335 *e*P **P** **19 45 23.9 0.0**
ULN pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
ULN Ulaanbaatar 57.27 335 *e*P **P** **19 45 23.9 0.0**
comp=Z,4.4nm,0.8s,mb4.5
TAPN Taplejung 57.28 305 *e*P **P** **19 45 24.3 -0.1**
comp=Z,31nm,0.8s,mb5.4
ODAN Odare 57.36 304 *e*P **P** **19 45 24.5 -0.5**
comp=Z,46nm,0.8s,mb5.6
SONM Songino Array 57.52 335 P **P** **19 45 25.5 -0.1**
comp=Z,2.2nm,0.8s,mb4.2,baz=152,slow=7.9,SNR=14
PETK Petropavlovsk- 57.73 13 P **P** **19 45 27.7 +0.7**
comp=Z,2.0nm,0.7s,mb4.3,baz=174,slow=4.3,SNR=5.7
RAMN Ramite 58.05 304 *e*P **P** **19 45 29.1 -0.7**
comp=Z,54nm,1.0s,mb5.5
CIT Chita 58.36 342 *e*P **P** **19 45 32.0 +0.6**
JIRN Jiri 58.65 305 *e*P **P** **19 45 33.6 -0.4**
GUN Gumba 59.00 305 *e*P **P** **19 45 36.0 -0.4**
PKI Pulchoki 59.26 304 *e*P **P** **19 45 37.8 -0.4**
comp=Z,18nm,0.8s,mb5.2
PKI Pulchoki 59.26 304 *e*P **P** **19 45 37.8 -0.4**
PKI pmax pmax
comp=Z,18nm,0.8s,mb5.2
KKN Kakani 59.45 304 *e*P **P** **19 45 38.6 -0.9**
comp=Z,50nm,0.9s,mb5.5
KKN Kakani 59.45 304 *e*P **P** **19 45 38.6 -0.9**
KKN pmax pmax
comp=Z,50nm,0.9s,mb5.5
DMN Daman 59.53 304 *e*P **P** **19 45 39.5 -0.6**
comp=Z,56nm,0.9s,mb5.6
ZAK Zakamensk 60.79 335 *e*P **P** **19 45 47.9 -0.4**
ZAK pmax pmax
comp=Z,8.0nm,1.1s,mb4.8
TLY Talaya 61.62 336 *e*P **P** **19 45 54.0 +0.1**
TLY pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
TLY Talaya 61.62 336 P **P** **19 45 53.9 0.0**
IRK Irkutsk 61.80 337 *e*P **P** **19 45 57.2 +2.1**
IRK pmax pmax
comp=Z,19nm,1.5s,mb5.0
MOY Mondy 62.71 335 *e*P **P** **19 46 02.0 +0.8**
MOY pmax pmax
comp=Z,19nm,2.1s,mb4.9
YAK Yakutsk 64.76 355 *e*P **P** **19 46 13.6 -0.9**
YAK pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
YAK Yakutsk 64.76 355 *e*P **P** **19 46 13.8 -0.7**
comp=Z,22nm,0.8s,mb5.2
WMQ Urumqi 64.81 322 P **P** **19 46 15.0 -0.2**

WMQ sP sP 19 46 22.0 -1.0
WMQ PP PP 19 48 39.0 +1.1
WMQ S **S** **19 54 53.0 -2.4**
WMQ ScS ScS 19 56 05.0 -4.3
WMQ pmax pmax
comp=Z,25nm,1.1s,mb5.2
WMQ pmax pmax
comp=Z,94nm,6.0s
WMQ LR LR
comp=N,72nm,18.0s,MS4.0
WMQ LR LR
comp=E,66nm,18.0s,MS4.0
WMQ LR LR
comp=Z,56nm,18.0s,MS3.8
CASY Casey 66.61 192 *e*P **P** **19 46 21.3 -5.1**
comp=Z,8.1nm,1.0s,mb4.7
MK31 Makanchi Array 69.59 322 *e*P **P** **19 46 45.1 -0.4**
MKAR Makanchi Array 69.59 322 P **P** **19 46 45.2 -0.2**
comp=Z,8.2nm,0.8s,mb4.7,baz=101,slow=8.6,SNR=68
MKAR Makanchi Array 69.59 322 P **P** **19 46 45.2 -0.3**
KSH Kashi 70.89 313 P **P** **19 46 55.0 +1.4**
KSH pP pP 19 46 59.8 +0.5
KSH sP sP 19 47 02.1 +0.6
KSH PcP PcP 19 47 15.1 +1.0
KSH PP PP 19 49 35.0 +4.1
KSH S S 19 56 09.5 +1.1
KSH sS sS 19 56 18.1 +0.3
KSH SKS 19 56 52.9
KSH ScS ScS 19 56 55.3 -1.6
KSH SS SS 20 00 46.1 +4.8
KSH pmax pmax
comp=Z,16nm,1.2s,mb4.8
KSH LR LR
comp=N,53nm,5.1s
KSH LR LR
comp=E,38nm,3.5s
KSH LR LR
comp=Z,35nm,3.7s
MIR Mirnyy 71.32 198⇑ *i*P **P** **19 46 56.2 +0.5**
MIR pmax pmax
comp=Z,29nm,1.0s,mb5.2
ZAA0 Zalesovo Array 71.74 330 *e*P **P** **19 46 55.5 -2.9**
ZALV Zalesovo Beam 71.74 330 P **P** **19 46 57.0 -1.5**
comp=Z,3.3nm,0.7s,mb4.4,baz=112,slow=6.2,SNR=18
KZA Kyzart 72.29 316 P **P** **19 47 03.2 +1.2**
SNR=30
TKM2 Tokmak 2 72.35 317 P **P** **19 47 02.3 0.0**
SNR=16
TKM2 Tokmak 2 72.35 317 *e*P **P** **19 47 02.0 -0.3**
TKM2 pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
TKM2 Tokmak 2 72.35 317 *e*P **P** **19 47 02.0 -0.3**
comp=Z,8.2nm,0.8s,mb4.7
UCH Uchtor 72.86 316 P **P** **19 47 06.4 +1.0**
SNR=14
CHMS Chumysh 72.95 316 P **P** **19 47 06.1 +0.1**
SNR=6.5
NVS Novosibirsk 72.99 330 *i* P **P** **19 47 04.7 -1.2**
NVS pmax pmax
comp=Z,22nm,1.6s,mb4.8
NVS pmax pmax
comp=N,14nm,1.7s
NVS pmax pmax
comp=E,12nm,1.4s
AAK Ala-Archa 73.01 316 P **P** **19 47 05.6 -0.7**
comp=E,0.9nm,0.3s,mb4.1,baz=249,slow=8.7,SNR=7.9
BILL Bilibino 73.03 11 *i* P **P** **19 47 05.6 -0.2**
BILL *e* 19 47 22.1
BILL pmax pmax
comp=Z,1.0nm,0.7s,mb3.9
BILL Bilibino 73.03 11 P **P** **19 47 05.4 -0.5**
USP Ospenovka 73.22 317 P **P** **19 47 07.8 +0.3**
SNR=11
AML Almayashu 73.40 315 P **P** **19 47 05.4 -3.1**
SNR=7.0
AML Almayashu 73.40 315 *e*P **P** **19 47 08.0 -0.6**
AML pmax pmax
comp=Z,15nm,0.8s,mb5.0
AML Almayashu 73.40 315 *e*P **P** **19 47 08.0 -0.5**
comp=Z,15nm,0.8s,mb5.0
EKS2 Erkin-Say 73.51 316 P **P** **19 47 09.5 +0.3**
SNR=9.3
EKS2 Erkin-Say 73.51 316 *e*P **P** **19 47 08.9 -0.3**
EKS2 pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
EKS2 Erkin-Say 73.51 316 *e*P **P** **19 47 08.9 -0.4**
comp=Z,7.6nm,0.8s,mb4.7
KURK Kurchatov 73.52 325 P **P** **19 47 07.6 -1.5**
comp=Z,5.4nm,0.8s,mb4.5,baz=114,slow=5.4,SNR=12
KURK Kurchatov 73.52 325 *i* P **P** **19 47 08.1 -1.0**
KURK pmax pmax
comp=Z,11nm,0.9s,mb4.8
KURK Kurchatov 73.52 325 *e*P **P** **19 47 07.9 -1.2**
comp=Z,6.5nm,0.8s,mb4.6
TIXI Tiksi 74.33 357 *e*P **P** **19 47 10.6 -2.8**
TIXI pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
TIXI Tiksi 74.33 357 *e*P **P** **19 47 10.6 -2.9**
comp=Z,3.7nm,0.6s,mb4.5
SBA Scott Base 76.72 174 *e*P **P** **19 47 28.3 +1.2**
SBA pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
SBA Scott Base 76.72 174 *e*P **P** **19 47 28.3 +1.2**
comp=Z,6.2nm,1.2s,mb4.4
BVAR Borovoye Array 79.11 325 P **P** **19 47 40.4 -0.4**
comp=Z,9.7nm,0.7s,mb4.8,baz=111,slow=8.1,SNR=46
BRVK Borovoye 79.18 325 *c i*P **P** **19 47 40.7 -0.5**
BRVK pmax pmax
comp=Z,17nm,1.0s,mb4.9
BRVK Borovoye 79.18 325 *e*P **P** **19 47 40.9 -0.3**
comp=Z,9.9nm,0.8s,mb4.8
KDAK Kodiak Island 81.02 30 P **P** **19 47 52.0 +0.9**
comp=Z,7.0nm,0.8s,mb4.7,baz=194,slow=4.2,SNR=4.5
MAW Mawson 82.23 202 *e*P **P** **19 47 58.0 +0.7**
comp=Z,5.0nm,1.0s,mb4.4
MAW Mawson 82.23 202 P **P** **19 47 57.6 +0.4**
comp=Z,4.9nm,0.8s,mb4.5,baz=50,slow=6.4,SNR=7.3
MAW Mawson 82.23 202 *e*P **P** **19 47 57.4 +0.1**
MAW pmax pmax
comp=Z,3.0nm,1.3s
MAW Mawson 82.23 202 *e*P **P** **19 47 57.4 +0.1**
comp=Z,2.7nm,1.3s,mb4.0
CHUM Lake Minchumin 83.21 25 P **P** **19 48 04.9 +2.5**
comp=Z,14nm,1.0s,mb5.0
ABKAR Akbulak array 84.52 320 *e*P **P** **19 48 08.6 -0.8**
comp=Z,3.7nm,0.8s,mb4.6
DIV Divide 85.31 28 P **P** **19 48 12.4 -0.7**
comp=Z,11nm,0.7s,mb5.1
BMRM Bremner River 85.83 28 *e*P **P** **19 48 14.7 -1.0**
comp=Z,5.8nm,0.9s,mb4.8
AKTK Aktyubinsk 85.95 321 P **P** **19 48 15.9 -0.6**
AKTO Aktyubinsk 85.95 321 P **P** **19 48 15.9 -0.6**
comp=Z,0.6nm,0.6s,mb4.0,baz=96,slow=6.5,SNR=3.8
ARU Arti 86.59 327 *d i*P **P** **19 48 18.2 -1.4**
ARU 19 51 40.5
ARU S S 19 58 44.4 -11
ARU SS SS 20 04 27.7 -8.8
ARU pmax pmax
comp=Z,5.0nm,1.0s,mb4.7
ARU Arti 86.59 327 *e*P **P** **19 48 16.8 -2.8**
comp=Z,5.2nm,1.0s,mb4.7
EGAK Eagle 88.13 25 *e*P **P** **19 48 26.2 -0.6**
comp=Z,8.5nm,1.0s,mb4.9
SYO Syowa Base 90.87 201⇑ *e*P **P** **19 48 38.2 -1.4**
APA Apatity 98.12 338⇑ *e*P **P** **19 49 12.0 -0.8**
APA MLR MLR
comp=Z,300nm,20.0s,MS4.8
OBN Obninsk 98.96 325 *e*P **P** **19 49 14.9 -1.9**
OBN *e* 19 53 19.6
OBN pmax pmax
comp=Z,4.0nm,1.1s,mb4.9
YKA Yellowknife Ar 99.97 27 P Pdif 19 49 20.6 -0.7
comp=Z,0.4nm,0.8s,baz=284,slow=5.2,SNR=4.0
YKA Yellowknife Ar 99.97 27 P Pdif 19 49 20.6 -0.7
ARCES ARCESS Array B 100.32 341 P Pdif 19 49 20.6 -2.2
comp=Z,2.6nm,0.9s,baz=78,slow=7.7,SNR=4.1
NVAR Mina Array Bea 101.84 51 P Pdif 19 49 31.3 +1.7
comp=Z,0.5nm,0.7s,baz=248,slow=4.8,SNR=3.1
TXAR Lajitas Array 115.31 59 PKP PKPdf 19 54 19.9 +1.2
comp=Z,0.3nm,0.8s,baz=217,slow=4.3,SNR=3.3
TORD Torodi Ar. Bea 136.10 286 PKP PKPdf 19 54 58.8 +0.1
comp=Z,0.7nm,0.8s,baz=28,slow=1.8,SNR=3.5
TORD Torodi Ar. Bea 136.10 286 PKP PKPdf 19 54 58.8 +0.1
CPUP Villa Florida 147.43 153 PKPbc PKPbc 19 55 23.9 +2.9
comp=Z,4.1nm,0.8s,baz=203,slow=4.5,SNR=10
CPUP Villa Florida 147.43 153 PKPbc PKPbc 19 55 23.9 +2.9

LPAZ La Paz 147.63 126 PKPbc PKPbc 19 55 23.8 +1.9
comp=Z,4.2nm,0.9s,baz=321,slow=2.2,SNR=9.5
LPAZ La Paz 147.63 126 *e*PKPbc PKPbc 19 55 23.3 +1.5

BJI ***24*** *19:37:15.6,2.82S×138.84E,h33km,mB5.2/23,mb4.9/40, Ms4.8/25,Ms7 4.4/25*
IDC ***24*** *19:37:16.5±0.5,2.51S×138.34E,h0km,mb4.8/18, mb1 4.8/22,mb1mx4.8/23,mbtmp4.8/22,ML4.3/3,MS4.3/1, Ms1 4.3/1,ms1mx2.8/28,Error ellipse: s-maj=17.8km s-min=11.6km az=73.0*
NEIC ***24*** *19:37:17.6±4.7,2.52S×138.42E,h12km±29km,mb5.0/35, Error ellipse: s-maj=9.5km s-min=6.7km az=52.0*
ISCJB ***24*** *19:37:18.8±1.0,2.61S±0.03×138.53E±0.04,h33km±8km, mb4.9/74,MS4.5/12,Error ellipse: s-maj=7.4km s-min=5.8km az=171.7*
MOS ***24*** *19:37:19.3±1.0,2.56S×138.34E,h33km,mb5.2/20,Error ellipse: s-maj=13.4km s-min=7.1km az=106.9*
DJA ***24*** *19:37:26,1.99S×138.68E,h88km,mb4.9/18*
ISC 24 19:37:22.9±0.7,2.63S±0.04×138.50E±0.04,h51km±6km, h36km±1.9km:pP-P,n172,σ1§19/174,mb4.9/74,MS4.5/12, 8C-2D,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.67**	**18**	P	**Pn**	**19 37 38.7**	**+2.4**
NLAI	**Namlea**	**11.40**	**267**	P	**Pn**	**19 40 03.0**	**-0.2**
TNTI	**Ternate**	**11.63**	**287**	P	**Pn**	**19 40 11.7**	**+5.4**
KAKA	**Kakadu**	**11.68**	**211**	*e*P	**Pn**	**19 40 04.5**	**-2.4**
	66nm,0.7s						
COEN	**Coen**	**12.17**	**158**	*e*P	**Pn**	**19 40 12.7**	**-0.9**
COEN	**Coen**	**12.17**	**158**	*e*Pn	**Pn**	**19 40 12.3**	**-1.3**
	314nm,0.8s						
COEN	**Coen**	**12.17**	**158**	P	**Pn**	**19 40 13.0**	**-0.6**
MNI	**Manado**	**14.24**	**286**	P	**Pn**	**19 40 40.9**	**-1.0**
	1μm131nm,0.8s						
LUWI	**Luwuk**	**15.80**	**275**	P	**Pn**	**19 41 06.0**	**+3.9**
KDI	**Kendari**	**15.91**	**265**	P	**Pn**	**19 41 09.2**	**+5.6**
	50nm,1.2s						
KNA	**Kununurra**	**16.19**	**216**	P	**Pn**	**19 41 12.5**	**+5.5**
MTSU	**Mount Surprise**	**16.43**	**160**	*e*P	**Pn**	**19 41 12.1**	**+2.0**
	52nm,0.7s						
MRSI	**Marisa**	**16.84**	**280**	P	**Pn**	**19 41 16.9**	**+1.6**
	75nm,0.8s						
APSI	**Ampana**	**16.93**	**275**	P	**Pn**	**19 41 19.1**	**+2.7**
	2μm243nm,1.2s						
WRAB	**Tennant Creek**	**17.67**	**193**	*e*P	**Pn**	**19 41 24.3**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,51nm,0.8s						
WRAB	**Tennant Creek**	**17.67**	**193**	*e*Pn	**Pn**	**19 41 24.3**	**-1.2**
	comp=Z,52nm,0.8s						
WRAB	**Tennant Creek**	**17.67**	**193**	P	**Pn**	**19 41 34.1**	**+8.6**
	comp=Z,81nm,0.9s						
WRA	**Warramunga Arr**	**17.68**	**193**	P	**Pn**	**19 41 23.7**	**-1.9**
	comp=Z,2.5nm,0.3s,baz=14,slow=13,SNR=9.0						
WRA				S	**S**	**19 44 37.2**	**-10**
	comp=Z,0.4nm,0.3s,baz=13,slow=23,SNR=3.3						
TTSI	**Tana Toraja**	**18.66**	**268**	P	**Pn**	**19 41 43.9**	**+6.3**
PCI	**Palu**	**18.73**	**275**	P	**Pn**	**19 41 40.0**	**+1.5**
SPSI	**Sidrap Palu**	**18.75**	**265**	P	**Pn**	**19 41 40.2**	**+1.6**
	comp=Z,45nm,1.3s						
KAPI	**Kappang**	**18.86**	**262**	P	**Pn**	**19 41 36.9**	**-3.1**
	comp=Z,0.3nm,0.3s,baz=62,slow=15,SNR=2.8						
CTA	**Charters Tower**	**18.93**	**157**	*e*P	**Pn**	**19 41 42.0**	**+1.2**
	comp=Z,19nm,0.9s						
CTA	**Charters Tower**	**18.93**	**157**	P	**Pn**	**19 41 41.9**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=335,slow=14,SNR=3.8						
CTAO	**Charters Tower**	**18.93**	**157**	*e*P	**Pn**	**19 41 41.5**	**+0.7**
CTAO				pmax	pmax		
	comp=Z,30nm,1.0s						
CTAO	**Charters Tower**	**18.93**	**157**	*e*P	**Pn**	**19 41 41.5**	**+0.7**
	comp=Z,30nm,1.0s						
CTAO	**Charters Tower**	**18.93**	**157**	P	**Pn**	**19 41 47.3**	**+6.5**
	comp=Z,35nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.89**	**218**	*e*P	**Pn**	**19 41 49.1**	**-3.1**
	comp=Z,31nm,0.7s						
FITZ	**Fitzroy Crossi**	**19.89**	**218**	P	**Pn**	**19 41 49.0**	**-3.2**
	comp=Z,0.6nm,0.3s,baz=44,slow=12,SNR=4.9						
FITZ				S	**S**	**19 45 27.6**	**-3.8**
	comp=Z,0.5nm,0.3s,baz=184,slow=15,SNR=3.0						
FITZ				LR	LR	19 50 05.4	
	comp=Z,806nm,19.2s,baz=38,slow=39						
FITZ	**Fitzroy Crossi**	**19.89**	**218**	*e*P	**Pn**	**19 41 49.0**	**-3.1**
	comp=Z,18nm,0.9s						
ASAR	**Alice Springs**	**21.38**	**192**	P	**P**	**19 42 05.4**	**-0.9**
	comp=Z,30nm,0.9s,mb4.6,baz=25,slow=9.8,SNR=6.5						
ASAR				S	**S**	**19 46 03.9**	**+3.1**
	comp=Z,11nm,0.9s,baz=18,slow=24,SNR=3.9						
MYLDM	**Lahad Datu**	**21.43**	**291**	P	**P**	**19 42 08.1**	**+1.2**
	comp=Z,117nm,1.3s,mb5.0						
KBKI	**Kotabaru**	**22.32**	**268**	P	**P**	**19 42 19.7**	**+3.4**
HNR	**Honiara**	**22.36**	**109**	P	**P**	**19 42 18.2**	**+1.4**
	comp=Z,105nm,0.8s,mb5.3,baz=178,slow=2.8,SNR=6.6						
HNR	**Honiara**	**22.36**	**109**	*e*P	**P**	**19 42 18.0**	**+1.2**
HNR				pmax	pmax		
	comp=Z,108nm,0.8s,mb5.3						
HNR	**Honiara**	**22.36**	**109**	*e*P	**P**	**19 42 18.0**	**+1.2**
	comp=Z,108nm,0.8s,mb5.3						
KKM	**Kota Kinabalu**	**23.86**	**291**	*e*P	**P**	**19 42 30.7**	**-1.1**
	comp=Z,68nm,1.0s,mb5.0						
KKM	**Kota Kinabalu**	**23.86**	**291**	P	**P**	**19 42 32.1**	**+0.3**
	comp=Z,660nmcomp=Z,70nm,1.1s,mb5.0						
TGY	**Tagaytay City**	**24.07**	**314**	P	**P**	**19 42 32.1**	**-1.6**
	comp=Z,153nm,0.3s,mb5.9,baz=190,slow=6.1,SNR=6.3						
EIDS	**Eidsvold**	**25.65**	**153**	*e*P	**P**	**19 42 49.4**	**+1.5**
EIDS	**Eidsvold**	**25.65**	**153**	*e*P	**P**	**19 42 47.4**	**-0.5**
	comp=Z,20nm,0.9s,mb4.6						
MBWA	**Marble Bar**	**25.95**	**223**	*e*P	**P**	**19 42 49.8**	**-0.9**
MBWA	**Marble Bar**	**25.95**	**223**	*e*P	**P**	**19 42 49.0**	**-1.7**
	comp=Z,60nm,1.3s,mb5.0						
MBWA	**Marble Bar**	**25.95**	**223**	P	**P**	**19 42 53.5**	**+2.8**
	comp=Z,38nm,1.2s,mb4.8						
SBUM	**Sibu**	**26.75**	**281**	P	**P**	**19 42 59.4**	**+1.3**
	comp=Z,12nm,1.4s,mb4.2						
KSM	**Kuching**	**28.48**	**278**	*e*P	**P**	**19 43 13.2**	**-0.3**
	comp=Z,8.5nm,0.8s,mb4.4						
KSM	**Kuching**	**28.48**	**278**	P	**P**	**19 43 15.1**	**+1.6**
	comp=Z,18nm,1.4s,mb4.5						
STKA	**Stephens Creek**	**29.24**	**175**	P	**P**	**19 43 21.8**	**+1.8**
	comp=Z,4.1nm,0.6s,mb4.3,baz=336,slow=9.9,SNR=3.0						
STKA	**Stephens Creek**	**29.24**	**175**	P	**P**	**19 43 19.4**	**-0.6**
MDSI	**Maura Dua**	**34.30**	**266**	P	**P**	**19 44 05.1**	**+0.3**
	comp=Z,34nm,1.1s,mb5.2						
QIZ	**Qiongzhong**	**35.46**	**309**	P	**P**	**19 44 12.0**	**-2.6**
QIZ				S	**S**	**19 49 48.3**	**+1.9**
QIZ				pmax	pmax		
	comp=Z,25nm,1.6s,mb4.9						
QIZ				pmax	pmax		
	comp=Z,160nm,4.2s						
QIZ				LR	LR		
	comp=N,490nm,4.3s						
QIZ				LR	LR		
	comp=Z,380nm,4.5s						
NWAO	**Narrogin (SRO)**	**36.14**	**211**	P	**P**	**19 44 20.2**	**0.0**
	comp=Z,8.7nm,0.6s,mb4.8,baz=38,slow=7.4,SNR=4.5						
NWAO	**Narrogin (SRO)**	**36.14**	**211**	P	**P**	**19 44 19.8**	**-0.5**
NWAO				pmax	pmax		
	comp=Z,85nm,1.4s						
NWAO	**Narrogin (SRO)**	**36.14**	**211**	P	**P**	**19 44 19.8**	**-0.5**
	comp=Z,85nm,1.4s,mb5.5						
SDSI	**Sungai Dareh**	**37.09**	**272**	P	**P**	**19 44 28.2**	**-0.5**
	comp=Z,23nm,1.0s,mb5.0						
BKNI	**Bangkinang**	**37.56**	**274**	P	**P**	**19 44 33.1**	**+0.4**
PDSI	**Padang**	**38.06**	**272**	P	**P**	**19 44 36.7**	**-0.2**
IPM	**Ipoh**	**38.11**	**281**	P	**P**	**19 44 38.5**	**+1.2**
	comp=Z,41nm,1.2s,mb5.0						
PPI	**Padang Panjang**	**38.15**	**273**	P	**P**	**19 44 37.8**	**+0.2**
KULM	**Kulim**	**38.62**	**282**	*e*P	**P**	**19 44 40.9**	**-0.7**
	comp=Z,28nm,0.9s,mb5.0						
MJAR	**Matsushiro Arr**	**38.97**	**360**	P	**P**	**19 44 43.3**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=176,slow=9.2,SNR=2.8						
MNSI	**Mandailing Nat**	**39.06**	**274**	P	**P**	**19 44 44.0**	**-1.3**
	comp=Z,30nm,0.8s,mb5.1						
NJ2	**Nanjing**	**39.21**	**333**	*e*P	**P**	**19 44 45.5**	**-0.7**
NJ2				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.8						
SISI	**Saibi**	**39.41**	**271**	P	**P**	**19 44 47.5**	**-0.7**
PSI	**Prapat**	**39.93**	**277**	P	**P**	**19 44 51.6**	**-0.9**
	comp=Z,31nm,0.8s,mb5.1,baz=99,slow=3.0,SNR=16						
WHN	**Wuhan**	**40.24**	**327**	⇓P	**P**	**19 44 55.0**	**+0.2**
WHN				LR	LR		
	comp=Z,810nm,14.7s,MS4.7						
KSRS	**Korea Array**	**41.07**	**347**	P	**P**	**19 45 00.5**	**-1.0**
	comp=Z,2.7nm,0.8s,mb3.9,baz=164,slow=9.0,SNR=7.7						

KSRS PcP PcP 19 47 00.8 +0.2
comp=Z,1.5nm,0.9s,baz=169,slow=4.8,SNR=3.3
GSI Gunungsitoli 41.10 275 P **P** **19 45 00.3 -1.9**
comp=Z,46nm,0.9s,mb5.1
GYA Guiyang 42.22 315 P **P** **19 45 11.4 +0.3**
GYA pP pP 19 45 22.0 -2.7
GYA sP sP 19 45 28.5 -2.2
GYA PP PP 19 46 53.3 +3.6
GYA PcP PcP 19 47 06.9 +2.4
GYA ScP ScP 19 50 53.0 +1.9
GYA S **S** **19 51 29.4 +1.4**
GYA SS SS 19 54 31.8 -6.0
GYA pmax pmax
comp=Z,20nm,1.0s,mb4.7
GYA pmax pmax
comp=Z,120nm,4.7s
GYA LR LR
comp=N,640nm,18.0s,MS4.7
GYA LR LR
comp=E,580nm,17.8s,MS4.7
GYA LR LR
comp=Z,760nm,18.0s,MS4.6
ENH Enshi 42.87 322 *e*P **P** **19 45 14.5 -1.8**
comp=Z,20nm,1.0s,mb4.8
CM31 Chiang Mai Arr 44.22 300 *e*P **P** **19 45 26.8 -0.5**
comp=Z,7.4nm,0.6s,mb4.6
CMAR Chiang Mai Arr 44.22 300 P **P** **19 45 27.2 -0.1**
comp=Z,9.1nm,0.8s,mb4.6,baz=118,slow=6.4,SNR=29
KMI Kunming 44.31 311 P **P** **19 45 27.8 -0.2**
KMI pP pP 19 45 37.8 -3.9
KMI sP sP 19 45 42.5 -5.1
KMI PP PP 19 47 14.4 +2.2
KMI S **S** **19 52 00.6 +2.0**
KMI sS sS 19 52 18.4 -3.2
KMI SS SS 19 55 11.5 -7.2
KMI pmax pmax
comp=Z,20nm,1.1s,mb4.8
KMI pmax pmax
comp=Z,210nm,5.7s
KMI LR LR
comp=N,410nm,15.0s,MS4.5
KMI LR LR
comp=E,290nm,17.4s,MS4.5
KMI LR LR
comp=Z,260nm,18.3s,MS4.2
CHTO Chiang Mai 44.36 300 *e*P **P** **19 45 27.4 -1.1**
CHTO pmax pmax
comp=Z,48nm,1.6s,mb5.0
CHTO Chiang Mai 44.36 300 *e*P **P** **19 45 27.4 -1.1**
comp=Z,48nm,1.6s,mb5.0
CHTO Chiang Mai 44.36 300 P **P** **19 45 27.6 -0.9**
XAN Xi'an 45.89 325 P **P** **19 45 39.3 -1.1**
XAN pP pP 19 45 47.5 -6.6
XAN pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
CD2 Chengdu 46.98 318 *e*P **P** **19 45 49.3 +0.3**
CD2 pP pP 19 45 59.1 -3.7
CD2 sP sP 19 46 03.0 -5.7
CD2 PP PP 19 47 39.4 -0.7
CD2 S **S** **19 52 37.6 +0.6**
CD2 sS sS 19 52 53.9 -6.1
CD2 SS SS 19 55 57.4 -7.1
CD2 pmax pmax
comp=Z,40nm,1.2s,mb5.2
CD2 pmax pmax
comp=Z,100nm,4.2s
BJI Beijing 47.13 337 P **P** **19 45 51.0 +0.9**
BJI pmax pmax
comp=Z,13nm,0.9s,mb4.9
BJI LR LR
comp=N,270nm,19.0s,MS4.3
BJI LR LR
comp=E,200nm,18.3s,MS4.3
BJI LR LR
comp=Z,75nm,23.3s,MS3.6
CN2 Changchun 47.68 347 *e*P **P** **19 45 57.1 +2.9**
CN2 *e*pP pP 19 46 07.0 -1.0
CN2 eS **S** **19 52 50.5 +4.0**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,16.0s,MS4.3
CN2 LR LR
comp=E,200nm,16.0s,MS4.3
CN2 LR LR
comp=Z,300nm,21.0s,MS4.2
MDJ Mudanjiang 47.70 351 P **P** **19 45 53.8 -0.6**
MDJ sP sP 19 46 05.8 -8.3
MDJ S **S** **19 52 47.8 +1.0**
MDJ pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
MDJ LR LR
comp=N,210nm,28.1s,MS4.3
MDJ LR LR
comp=E,410nm,28.1s,MS4.3
MDJ LR LR
comp=Z,300nm,21.9s
YSS Yuzh-Sakhalins 49.51 4 P **P** **19 46 08.7 +0.5**
HHC Hu-ho-hao-te 49.76 333 *e*P **P** **19 46 09.1 -1.2**
HHC pP pP 19 46 19.1 -5.0
HHC sP sP 19 46 22.9 -7.2
HHC PcP PcP 19 47 30.3 -0.3
HHC PP PP 19 48 04.1 -1.3
HHC ScP ScP 19 51 21.6 -0.5
HHC PcS PcS 19 51 25.3 -2.1
HHC S **S** **19 53 15.8 -0.1**
HHC sS sS 19 53 32.6 -6.6
HHC ScS ScS 19 55 54.8 -2.6
HHC SS SS 19 56 44.1 -5.1
HHC pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
HHC pmax pmax
comp=Z,140nm,6.1s
HHC LR LR
comp=N,280nm,16.8s,MS4.4
HHC LR LR
comp=E,220nm,16.8s,MS4.4
HHC LR LR
comp=Z,230nm,18.0s,MS4.2
RPZ Rata Peaks 50.07 149 P **P** **19 46 15.0 +2.4**
comp=Z,70nm,0.9s,mb5.7,baz=18,slow=15,SNR=8.1
LZH Lanzhou 50.29 323 *e*P **P** **19 46 14.5 +0.1**
LZH pP pP 19 46 25.0 -3.2
LZH sP sP 19 46 30.0 -4.2
LZH PP PP 19 48 10.5 +0.2
LZH S **S** **19 53 23.5 +0.1**
LZH sS sS 19 53 39.5 -7.2
LZH SS SS 19 56 53.6 -4.1
LZH pmax pmax
comp=Z,31nm,1.0s,mb5.3
LZH pmax pmax
comp=Z,280nm,5.0s
LZH LR LR
comp=E,480nm,15.9s
LZH LR LR
comp=Z,660nm,16.4s,MS4.7
GTA Gaotai 54.88 324 ⇑P **P** **19 46 48.4 +0.2**
GTA pP pP 19 46 59.1 -3.2
GTA sP sP 19 47 02.8 -5.4
GTA PP PP 19 48 54.0 +2.3
GTA S **S** **19 54 27.5 +1.5**
GTA sS sS 19 54 44.6 -4.9
GTA SS SS 19 58 11.9 +1.7
GTA pmax pmax
comp=Z,15nm,2.1s,mb4.7
GTA pmax pmax
comp=Z,93nm,5.1s
GTA LR LR
comp=N,160nm,18.6s,MS4.2
GTA LR LR
comp=E,150nm,21.0s,MS4.2
GTA LR LR
comp=Z,200nm,21.0s,MS4.2
ULN Ulaanbaatar 57.30 335 *e*P **P** **19 47 05.3 -0.1**
ULN pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
ULN Ulaanbaatar 57.30 335 *e*P **P** **19 47 05.3 0.0**
comp=Z,7.1nm,0.9s,mb4.7
SONM Songino Array 57.55 335 P **P** **19 47 07.0 -0.2**
comp=Z,1.8nm,0.6s,mb4.3,baz=156,slow=8.0,SNR=8.4
PETK Petropavlovsk- 57.83 14 P **P** **19 47 09.1 +0.1**
comp=Z,1.2nm,0.6s,mb4.1,baz=142,slow=5.4,SNR=2.9
PETK Petropavlovsk- 57.83 14 P **P** **19 47 09.1 +0.1**

ZAK Zakamensk 60.82 335 *e*P **P** **19 47 29.5 -0.2**
ZAK pmax pmax
comp=Z,8.0nm,1.2s,mb4.7
TLY Talaya 61.66 336 *e*P **P** **19 47 36.0 +0.7**
TLY pmax pmax
comp=Z,12nm,1.3s,mb4.9
TLY MLR MLR
comp=Z,183nm,20.0s,MS4.2
TLY Talaya 61.66 336 *e*P **P** **19 47 35.2 -0.1**
comp=Z,5.4nm,0.7s,mb4.8
IRK Irkutsk 61.84 337 *e*P **P** **19 47 36.2 -0.3**
IRK pmax pmax
comp=Z,20nm,1.4s,mb5.0
HYB Hyderabad 62.35 291 *i*P **P** **19 47 40.0 -0.6**
WMQ Urumqi 64.81 322 P **P** **19 47 57.0 +0.6**
WMQ pP pP 19 48 07.0 -3.8
WMQ sP sP 19 48 11.0 -5.6
WMQ PP PP 19 50 21.0 +1.4
WMQ S **S** **19 56 33.0 -0.6**
WMQ ScS ScS 19 57 45.0 -1.9
WMQ SS SS 20 00 47.0 +1.1
WMQ pmax pmax
comp=Z,52nm,1.1s,mb5.5
WMQ pmax pmax
comp=Z,270nm,6.0s
WMQ LR LR
comp=N,130nm,18.0s,MS5.0
WMQ LR LR
comp=E,980nm,18.0s,MS5.0
WMQ LR LR
comp=Z,980nm,18.0s,MS5.0
YAK Yakutsk 64.83 355 *e*P **P** **19 47 55.6 -0.5**
YAK pmax pmax
comp=Z,23nm,0.9s,mb5.2
YAK pmax pmax
comp=N,10.0nm,1.4s
YAK Yakutsk 64.83 355 *e*P **P** **19 47 55.6 -0.5**
comp=N,17nm,0.6s,mb5.2
CASY Casey 66.51 192 *e*P **P** **19 48 07.2 +0.2**
comp=N,18nm,1.1s,mb5.0
MK31 Makanchi Array 69.59 322 *e*P **P** **19 48 26.1 -0.5**
MKAR Makanchi Array 69.59 322 P **P** **19 48 26.7 +0.1**
comp=N,24nm,0.9s,mb5.1,baz=101,slow=8.6,SNR=20
MKAR Makanchi Array 69.59 322 *c e*P **P** **19 48 26.7 +0.1**
MKAR pmax pmax
comp=Z,24nm,0.9s
KSH Kashi 70.88 313 P **P** **19 48 36.1 +1.5**
KSH pP pP 19 48 46.3 -2.9
KSH sP sP 19 48 50.3 -4.6
KSH PcP PcP 19 48 56.9 +1.9
KSH PP PP 19 51 15.1 +2.8
KSH S S 19 57 45.9 -0.4
KSH sS sS 19 58 04.3 -6.4
KSH SKS 19 58 31.3
KSH ScS ScS 19 58 33.4 -1.0
KSH SS SS 20 02 21.8 +1.9
KSH pmax pmax
comp=Z,24nm,1.0s,mb5.1
KSH LR LR
comp=N,110nm,5.2s
KSH LR LR
comp=E,130nm,7.8s
KSH LR LR
comp=Z,46nm,3.8s
MIR Mirnyy 71.22 198 ⇑*i*P **P** **19 48 37.6 +1.4**
MIR pmax pmax
comp=Z,45nm,1.0s,mb5.3
ZAA0 Zalesovo Array 71.76 330 *e*P **P** **19 48 38.0 -1.7**
ZALV Zalesovo Beam 71.76 330 P **P** **19 48 38.4 -1.2**
comp=Z,6.4nm,0.9s,mb4.6,baz=117,slow=5.7,SNR=11
ZALV Zalesovo Beam 71.76 330 P **P** **19 48 38.4 -1.2**
KZA Kyzart 72.28 316 P **P** **19 48 44.7 +1.6**
SNR=29
TKM2 Tokmak 2 72.34 317 P **P** **19 48 43.9 +0.5**
SNR=20
TKM2 Tokmak 2 72.34 317 *e*P **P** **19 48 43.4 0.0**
TKM2 pmax pmax
comp=Z,20nm,0.8s,mb5.1
TKM2 Tokmak 2 72.34 317 *e*P **P** **19 48 43.4 0.0**
comp=Z,20nm,0.8s,mb5.1
KBK Karagaybulak 72.69 316 P **P** **19 48 46.5 +1.0**
SNR=12
UCH Uchtor 72.85 316 P **P** **19 48 47.7 +1.3**
SNR=17
CHMS Chumysh 72.95 317 P **P** **19 48 47.4 +0.4**
SNR=13
AAK Ala-Archa 73.00 316 P **P** **19 48 48.4 +1.1**
comp=Z,80nm,1.2s,mb5.5,SNR=6.3
AAK Ala-Archa 73.00 316 P **P** **19 48 48.3 +1.0**
comp=Z,2.3nm,0.4s,mb4.5,baz=125,slow=3.4,SNR=11
NVS Novosibirsk 73.02 330 ⇑*i*P **P** **19 48 45.9 -1.2**
NVS pmax pmax
comp=Z,32nm,1.4s,mb5.1
NVS pmax pmax
comp=N,22nm,1.6s
NVS pmax pmax
comp=E,21nm,1.5s
BILL Bilibino 73.12 11 ⇓*e*P **P** **19 48 47.3 -0.2**
BILL *e* pP 19 49 02.1 0.0
BILL *e* 19 51 26.3
BILL pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
BILL Bilibino 73.12 11 *e*P **P** **19 48 44.2 -3.3**
comp=Z,7.2nm,1.3s,mb4.4
USP Ospenovka 73.22 317 P **P** **19 48 48.9 +0.3**
SNR=20
AML Almayashu 73.39 315 P **P** **19 48 50.9 +1.3**
SNR=12
AML Almayashu 73.39 315 *e*P **P** **19 48 50.5 +0.8**
comp=Z,36nm,0.9s,mb5.3
EKS2 Erkin-Say 73.51 316 P **P** **19 48 51.1 +0.8**
SNR=17
EKS2 Erkin-Say 73.51 316 *e*P **P** **19 48 50.7 +0.4**
comp=Z,26nm,1.0s,mb5.1
KURK Kurchatov 73.53 325 P **P** **19 48 49.4 -0.8**
comp=Z,83nm,1.0s,mb5.6,SNR=8.0
KURK Kurchatov 73.53 325 P **P** **19 48 49.7 -0.5**
comp=Z,6.3nm,0.9s,mb4.6,baz=116,slow=5.5,SNR=12
KURK Kurchatov 73.53 325 *c i*P **P** **19 48 49.5 -0.7**
KURK pmax pmax
comp=Z,28nm,1.7s,mb4.9
KURK Kurchatov 73.53 325 *e*P **P** **19 48 49.3 -1.0**
comp=Z,51nm,1.6s,mb5.2
TIXI Tiksi 74.41 357 *e*P **P** **19 48 53.3 -1.7**
TIXI pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
TIXI Tiksi 74.41 357 *e*P **P** **19 48 53.3 -1.6**
comp=Z,8.9nm,0.8s,mb4.8
KBL Kabul 74.71 307 *e*P **P** **19 48 57.0 -0.5**
KBL pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
KBL Kabul 74.71 307 *e*P **P** **19 48 57.0 -0.5**
comp=Z,7.8nm,1.2s,mb4.5
SBA Scott Base 76.65 174 *e*P **P** **19 49 09.5 +1.7**
SBA pmax pmax
comp=Z,11nm,1.1s,mb4.7
SBA Scott Base 76.65 174 *e*P **P** **19 49 09.5 +1.7**
comp=Z,10nm,1.1s,mb4.7
BVAR Borovoye Array 79.12 325 P **P** **19 49 21.9 -0.1**
comp=Z,16nm,0.8s,mb5.0,baz=115,slow=7.0,SNR=17
BRVK Borovoye 79.20 325 P **P** **19 49 22.9 +0.6**
comp=Z,156nm,1.0s,mb5.9,SNR=13
BRVK Borovoye 79.20 325 *c i*P **P** **19 49 22.1 -0.2**
BRVK pmax pmax
comp=Z,30nm,1.0s,mb5.2
BRVK Borovoye 79.20 325 *e*P **P** **19 49 22.2 -0.1**
comp=Z,27nm,0.9s,mb5.2
SVW2 Sparrevohn 80.89 27 *e*P **P** **19 49 34.6 +3.3**
KDAK Kodiak Island 81.14 30 P **P** **19 49 34.2 +1.6**
comp=Z,6.3nm,0.3s,mb5.0,baz=258,slow=2.6,SNR=6.3
MAW Mawson 82.12 202 *e*P **P** **19 49 39.4 +1.7**
comp=Z,8.9nm,1.1s,mb4.6
MAW Mawson 82.12 202 P **P** **19 49 39.2 +1.5**
comp=Z,11nm,1.0s,mb4.8,baz=66,slow=5.4,SNR=10.0
MAW Mawson 82.12 202 *e*P **P** **19 49 39.0 +1.3**
MAW pmax pmax
comp=Z,3.0nm,1.1s
MAW Mawson 82.12 202 *e*P **P** **19 49 39.0 +1.3**
comp=Z,3.4nm,1.1s,mb4.2
PPLA Purkeypile 83.04 26 P **P** **19 49 41.1 -1.4**
CHUM Lake Minchumin 83.32 25 *e*P **P** **19 49 43.1 -0.9**
comp=Z,23nm,1.1s,mb5.1
ABKAR Akbulak array 84.52 320 *e*P **P** **19 49 49.7 -0.7**
comp=Z,18nm,1.2s,mb5.1
MCK McKinley 84.70 25 *e*P **P** **19 49 49.9 -1.1**
MCK pmax pmax
comp=Z,16nm,1.3s,mb5.0
MCK McKinley 84.70 25 *e*P **P** **19 49 49.9 -1.1**
comp=Z,16nm,1.3s,mb5.0
COLD Coldfoot 85.25 22 *e*P **P** **19 49 54.2 +0.5**
comp=Z,17nm,1.5s,mb5.0
DIV Divide 85.43 28 *e*P **P** **19 49 54.0 -0.7**
comp=Z,16nm,0.7s,mb5.3
SVE Sverdlovsk 85.56 327 *e*P **P** **19 49 56.2 +0.8**
SVE pmax pmax
comp=Z,12nm,1.3s,mb5.0
BMRM Bremner River 85.94 28 *e*P **P** **19 49 54.1 -3.1**
comp=Z,14nm,1.1s,mb5.1
AKTK Aktyubinsk 85.95 321 P **P** **19 49 58.0 +0.5**
AKTO Aktyubinsk 85.95 321 P **P** **19 49 58.0 +0.5**
comp=Z,1.6nm,0.8s,mb4.3,baz=48,slow=8.1,SNR=5.1
ARU Arti 86.61 327 *c i*P **P** **19 49 59.2 -1.4**
ARU 19 53 18.9
ARU S S 20 00 24.9 -8.6
ARU SS SS 20 06 13.2 -2.1
ARU pmax pmax
comp=Z,10.0nm,1.0s,mb5.0
ARU Arti 86.61 327 *e*P **P** **19 49 57.1 -3.5**
comp=Z,7.4nm,0.9s,mb4.9
EGAK Eagle 88.24 25 *e*P **P** **19 50 07.9 -0.4**
comp=Z,14nm,1.1s,mb5.1
APA Apatity 98.16 338 ⇑*e*P **P** **19 50 51.8 -2.1**
APA MLR MLR
comp=Z,300nm,20.0s,MS4.8
OBN Obninsk 98.97 325 *e*P **P** **19 50 56.7 -1.1**
OBN pmax pmax
comp=Z,4.0nm,1.0s,mb4.9
YKA Yellowknife Ar 100.08 27 P Pdif 19 51 02.8 +0.1
comp=Z,0.6nm,0.7s,baz=287,slow=4.7,SNR=6.1
ARCES ARCESS Array B 100.36 341 P Pdif 19 51 02.1 -1.9
comp=Z,4.2nm,0.9s,baz=69,slow=4.4,SNR=6.8
NVAR Mina Array Bea 101.96 51 P Pdif 19 51 12.1 +1.0
comp=Z,0.3nm,0.3s,baz=263,slow=7.1,SNR=3.6
CLL Collm 113.55 326 *e*PP PP 19 56 40.0 -7.3
CLL e(pPP) 19 56 52.0
TXAR Lajitas Array 115.43 59 PKP PKPdf 19 56 01.2 +1.5
comp=Z,0.4nm,0.7s,baz=205,slow=2.9,SNR=3.8
PLCA Paso Flores 129.35 151 PKP PKPdf 19 56 28.0 +1.9
comp=Z,1.4nm,0.9s,baz=334,slow=1.7,SNR=3.5
TORD Torodi Ar. Bea 136.03 286 PKP PKPdf 19 56 40.3 +1.0
comp=Z,0.9nm,0.7s,baz=135,slow=1.7,SNR=4.3
CPUP Villa Florida 147.40 153 PKPbc PKPbc 19 57 03.2 +1.4
comp=Z,4.5nm,0.7s,baz=193,slow=2.7,SNR=9.3
CPUP Villa Florida 147.40 153 PKPbc PKPbc 19 57 03.2 +1.4
LPAZ La Paz 147.66 126 PKPbc PKPbc 19 57 05.2 +2.5
comp=Z,15nm,1.1s,baz=215,slow=2.3,SNR=9.2
LPAZ La Paz 147.66 126 *e*PKPbc PKPbc 19 57 04.8 +2.1

IDC ***24*** *19:46:05.0±1.2, 2°.55S×138°.53E, h0km, mb4.1/9, mb1 4.2/11, mb1mx4.1/17, mbtmp4.1/11, ML4.0/2, Error ellipse: s-maj=40.0km s-min=19.0km az=89.0*
ISCJB ***24*** *19:46:08.5±0.8, 2°.58S±0°.07×138°.4E±0°.2, h33km, mb4.2/18, Error ellipse: s-maj=29.5km s-min=9.2km az=175.9*
NEIC ***24*** *19:46:10.5±0.6, 2°.59S×138°.43E, h35km, mb4.4/8, Error ellipse: s-maj=21.9km s-min=7.9km az=84.0*
ISC 24 19:46:10.8±0.8, 2°.61S±0°.06×138°.4E±0°.2, h35km, n25, σ0s97/24, mb4.2/18, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRAB	**Tennant Creek**	**17.66**	**193**	*e*Pn	**Pn**	**19 50 14.3**	**+0.2**
WRA	**Warramunga Arr**	**17.67**	**193**	P	**Pn**	**19 50 13.2**	**-1.1**
	0.8nm,0.3s,baz=13,slow=13,SNR=14						
FITZ	**Fitzroy Crossi**	**19.81**	**218**	P	**Pn**	**19 50 39.0**	**-1.2**
	0.1nm,0.3s,baz=16,slow=14,SNR=3.7						
ASAR	**Alice Springs**	**21.37**	**191**	P	**P**	**19 50 55.3**	**0.0**
	5.3nm,0.7s,mb4.0,baz=22,slow=8.7,SNR=14						
PSI	**Prapat**	**39.78**	**277**	P	**P**	**19 53 41.1**	**+0.3**
	3.3nm,0.4s,mb4.4,baz=136,slow=6.2,SNR=5.2						
KSRS	**Korea Array**	**41.02**	**347**	P	**P**	**19 53 49.0**	**-1.7**
	0.4nm,0.5s,mb3.3,baz=134,slow=6.9,SNR=3.2						
CMAR	**Chiang Mai Arr**	**44.08**	**300**	P	**P**	**19 54 16.7**	**+0.9**
	1.5nm,0.8s,mb3.8,baz=118,slow=6.3,SNR=9.3						
CHTO	**Chiang Mai**	**44.23**	**300**	P	**P**	**19 54 17.1**	**+0.1**
	13nm,1.5s,mb4.4						
GTA	**Gaotai**	**54.78**	**324**	*e*P	**P**	**19 55 38.1**	**+0.9**
GTA				pP	pP	19 55 42.5	-5.3
GTA				sP	sP	19 55 45.3	-6.6
GTA				pmax	pmax		
	comp=Z,5.0nm,2.0s,mb4.2						
ULN	**Ulaanbaatar**	**57.23**	**335**	*e*P	**P**	**19 55 54.1**	**-0.4**
	comp=Z,1.8nm,0.9s,mb4.1						
SONM	**Songino Array**	**57.48**	**335**	P	**P**	**19 55 57.2**	**+0.9**
	comp=Z,0.3nm,0.5s,mb3.5,baz=137,slow=6.6,SNR=3.5						
TLY	**Talaya**	**61.59**	**336**	P	**P**	**19 56 22.2**	**-2.3**
MK31	**Makanchi Array**	**69.50**	**323**	*e*P	**P**	**19 57 15.8**	**0.0**
MKAR	**Makanchi Array**	**69.50**	**323**	P	**P**	**19 57 16.2**	**+0.4**
	comp=Z,3.2nm,0.9s,mb4.3,baz=106,slow=8.9,SNR=24						
MKAR	**Makanchi Array**	**69.50**	**323**	P	**P**	**19 57 16.2**	**+0.4**
ZALV	**Zalesovo Beam**	**71.67**	**330**	P	**P**	**19 57 27.6**	**-1.2**
	comp=Z,0.8nm,0.5s,mb4.0,baz=106,slow=5.3,SNR=4.9						
TKM2	**Tokmak 2**	**72.23**	**317**	*e*P	**P**	**19 57 32.4**	**-0.1**
	comp=Z,2.3nm,0.9s,mb4.1						
UCH	**Uchtor**	**72.74**	**316**	*e*P	**P**	**19 57 37.3**	**+1.8**
	comp=Z,12nm,1.5s,mb4.6						
EKS2	**Erkin-Say**	**73.40**	**316**	*e*P	**P**	**19 57 40.4**	**+1.0**
	comp=Z,4.4nm,1.1s,mb4.3						
KURK	**Kurchatov**	**73.44**	**325**	P	**P**	**19 57 38.6**	**-0.8**
	comp=Z,0.8nm,0.4s,mb4.0,baz=115,slow=5.9,SNR=5.3						
SBA	**Scott Base**	**76.68**	**174**	*e*P	**P**	**19 57 59.4**	**+1.7**
	comp=Z,2.6nm,1.0s,mb4.1						
BVAR	**Borovoye Array**	**79.03**	**325**	P	**P**	**19 58 11.3**	**+0.1**
	comp=Z,2.3nm,0.5s,mb4.3,baz=122,slow=7.7,SNR=14						
BRVK	**Borovoye**	**79.10**	**325**	*e*P	**P**	**19 58 11.2**	**-0.4**
	comp=Z,9.4nm,1.1s,mb4.6						
QSPA	**South Pole Qui**	**87.33**	**180**	*e*P	**P**	**19 58 54.0**	**+0.4**
	comp=Z,9.5nm,1.1s,mb4.9						
LPAZ	**La Paz**	**147.78**	**127**	PKPbc	PKPbc	20 05 53.2	+0.3
	comp=Z,1.1nm,0.7s,baz=80,slow=1.1,SNR=5.6						

IDC ***24*** *19:46:52.7±2.0, 2°.55S×138°.59E, h0km, mb4.1/8, mb1 4.2/9, mb1mx4.1/16, mbtmp4.1/9, ML4.2/1, MS4.3/1, Ms1 4.3/1, ms1mx3.2/21, Error ellipse: s-maj=60.7km s-min=24.4km az=89.0*
ISCJB ***24*** *19:46:57.5±1.0, 2°.57S±0°.09×138°.2E±0°.3, h33km, mb4.1/13, Error ellipse: s-maj=37.4km s-min=11.2km az=168.0*
NEIC ***24*** *19:46:59.5±0.9, 2°.57S×138°.19E, h35km, mb4.3/5, Error ellipse: s-maj=34.2km s-min=10.2km az=78.0*
ISC 24 19:46:59.8±1.0, 2°.59S±0°.09×138°.2E±0°.3, h35km, n20, σ0s96/19, mb4.1/13, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.64**	**192**	P	**Pn**	**19 51 01.8**	**-1.1**
	0.9nm,0.3s,baz=13,slow=13,SNR=6.8						
ASAR	**Alice Springs**	**21.35**	**191**	P	**P**	**19 51 43.0**	**-1.1**
	5.3nm,0.7s,mb4.0,baz=16,slow=11,SNR=5.7						
STKA	**Stephens Creek**	**29.31**	**174**	P	**P**	**19 53 00.1**	**+0.9**
PSI	**Prapat**	**39.58**	**278**	P	**P**	**19 54 29.4**	**+1.3**
	3.9nm,0.3s,mb4.6,baz=245,slow=9.3,SNR=2.5						
CMAR	**Chiang Mai Arr**	**43.89**	**300**	P	**P**	**19 55 04.4**	**+1.0**
	0.8nm,0.7s,mb3.6,baz=119,slow=6.9,SNR=4.3						
CHTO	**Chiang Mai**	**44.04**	**301**	P	**P**	**19 55 03.3**	**-1.3**
ASAJ	**Asahikawa**	**46.67**	**4**	LR	LR	20 14 05.9	
	comp=Z,354nm,21.9s,baz=311,slow=35						
SONM	**Songino Array**	**57.38**	**335**	P	**P**	**19 56 43.7**	**-0.9**
	0.4nm,0.7s,mb3.5,baz=155,slow=6.6,SNR=2.5						
MK31	**Makanchi Array**	**69.35**	**323**	*e*P	**P**	**19 58 04.1**	**+0.2**
MKAR	**Makanchi Array**	**69.35**	**323**	P	**P**	**19 58 04.2**	**+0.3**
	1.6nm,0.9s,mb4.0,baz=88,slow=11,SNR=6.6						
ZALV	**Zalesovo Beam**	**71.55**	**330**	P	**P**	**19 58 16.1**	**-1.1**
	0.6nm,0.5s,mb3.8,baz=86,slow=5.2,SNR=2.6						
TKM2	**Tokmak 2**	**72.07**	**317**	*e*P	**P**	**19 58 21.5**	**+1.0**
	2.2nm,0.7s,mb4.2						
UCH	**Uchtor**	**72.58**	**316**	P	**P**	**19 58 24.4**	**+0.8**
	3.6nm,1.1s,mb4.2						
EKS2	**Erkin-Say**	**73.24**	**316**	P	**P**	**19 58 26.4**	**-1.1**
	5.1nm,1.2s,mb4.3						
KURK	**Kurchatov**	**73.30**	**325**	P	**P**	**19 58 27.6**	**-0.1**
	2.8nm,0.2s,mb4.8,baz=106,slow=6.8,SNR=1.9						
KURK	**Kurchatov**	**73.30**	**325**	P	**P**	**19 58 25.6**	**-2.1**
BVAR	**Borovoye Array**	**78.89**	**325**	P	**P**	**19 58 59.4**	**-0.1**
	1.7nm,0.6s,mb4.2,baz=127,slow=8.6,SNR=4.3						
BRVK	**Borovoye**	**78.97**	**325**	*e*P	**P**	**19 59 00.1**	**+0.3**
MAW	**Mawson**	**82.02**	**202**	P	**P**	**19 59 16.2**	**+0.2**
	0.7nm,1.1s,mb3.5						

QSPA South Pole Qui 87.35 180 *eP* **P 19 59 44.2 +1.5**
9.9nm,1.2s,mb4.9

IDC ***24*** *19:48:05.3±0.4,2˚.56S×138˚.40E,h0km,mb5.0/21, mb1 4.9/25,mb1mx4.9/26,mbtmp4.9/25,ML4.6/4,MS4.4/6, Ms1 4.4/6,ms1mx4.0/22,Error ellipse: s-maj=15.9km s-min=9.4km az=80.0*
BJI ***24*** *19:48:07.2,2˚.67S×138˚.72E,h43km,mB5.3/33,mb5.1/53, Ms4.8/40,Ms7 4.5/39*
ISCJB ***24*** *19:48:08.6±0.6,2˚.58S±0˚.03×138˚.54E±0˚.03,h38km±5km, mb5.2/124,MS4.5/23,Error ellipse: s-maj=5.0km s-min=4.9km az=153.2*
MOS ***24*** *19:48:08.2±1.1,2˚.55S×138˚.40E,h33km,mb5.4/36,Error ellipse: s-maj=11.9km s-min=6.1km az=107.1*
GCMT ***24*** *19:48:09.6±0.2,2˚.61S×138˚.59E,h15km,MW5.1,Moment Tensor Solution. s34,c47; s71,c113; Moment tensor: Scale 10^16Nm; Mrr4.52±.23; Mθθ-1.36±.14; Mφφ-3.16±.17; Mrθ1.25±.30; Mθφ3.36±.11; Mφr3.47±.37; Best double couple: M0 6.40000×10^16 NP1:φs117.00000°,δ41.00000°, λ45.00000°. NP2:φs350.00000°,δ63.00000°,λ122.00000°. Principal axes: T 6.6200, Plg59.0000°, Azm307.0000°; N -0.4600, Plg28.0000°, Azm154.0000°; P -6.1600, Plg12.0000°, Azm58.0000°; Data Used: IU II IC G CN.*
NEIC ***24*** *19:48:10.1±0.2,2˚.56S×138˚.45E,h35km,mb5.3/61 Error ellipse: s-maj=5.7km s-min=4.1km az=80.0*
DJA ***24*** *19:48:11,2˚.50S×138˚.61E,h38km,mb5.4/43*
ISC 24 19:48:10.4±0.6,2˚.56S±0˚.03×138˚.56E±0˚.03,h37km±5km, h36km±1.5km:pP-P,n275,σ1♀04/276,mb5.2/124,MS4.5/23, 18C-5D,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.58**	**15**	P	**Pn**	**19 48 21.1**	**-1.1**
JAY	**Jayapura**	**2.15**	**89**	P	**Pn**	**19 48 44.2**	**+0.5**
MMPI	**Merauke**	**6.15**	**163**	P	**Pn**	**19 49 41.6**	**+2.8**
	7.2nm1μm,0.7s						
TLE	**Tual**	**6.56**	**242**	P	**Pn**	**19 49 53.1**	**+8.6**
AAI	**Ambon**	**10.41**	**264**	P	**Pn**	**19 50 38.4**	**+1.1**
	2μm204nm,1.0s						
NLAI	**Namlea**	**11.46**	**266**	P	**Pn**	**19 50 51.8**	**+0.1**
	3μm243nm,0.8s						
TNTI	**Ternate**	**11.67**	**286**	P	**Pn**	**19 50 55.8**	**+1.3**
	2μm145nm,1.8s						
KAKA	**Kakadu**	**11.77**	**211**	*e*P	**Pn**	**19 50 53.1**	**-2.8**
	74nm,0.6s						
KAKA				*e*S	**Sn**	**19 53 03.2**	**-2.8**
KAKA	**Kakadu**	**11.77**	**211**	*e*Pn	**Pn**	**19 50 52.8**	**-3.0**
	428nm,0.7s						
KAKA				*e*Sn	**Sn**	**19 53 02.8**	**-3.2**
KAKA	**Kakadu**	**11.77**	**211**	P	**Pn**	**19 50 55.7**	**-0.1**
	3μm287nm,0.6s						
COEN	**Coen**	**12.21**	**158**	*e*Pn	**Pn**	**19 51 01.4**	**-0.5**
	367nm,0.6s						
COEN	**Coen**	**12.21**	**158**	P	**Pn**	**19 51 01.5**	**-0.4**
	352nm,1.1s						
MNI	**Manado**	**14.28**	**286**	P	**Pn**	**19 51 29.8**	**-0.4**
	2μm202nm,1.2s						
LUWI	**Luwuk**	**15.85**	**275**	P	**Pn**	**19 51 49.7**	**-1.2**
	4μm466nm,1.0s						
KDI	**Kendari**	**15.97**	**265**	P	**Pn**	**19 51 51.5**	**-1.0**
	85nm,1.3s						
DAV	**Davao City (W)**	**16.10**	**307**	Pn	**Pn**	**19 51 55.4**	**+1.2**
KNA	**Kununurra**	**16.27**	**216**	*e*P	**Pn**	**19 51 54.5**	**-1.8**
	127nm,0.9s						
KNA				*e*S	**S**	**19 54 49.7**	**-18**
KNA	**Kununurra**	**16.27**	**216**	P	**Pn**	**19 51 54.5**	**-1.8**
	4μm482nm,0.8s						
APSI	**Ampana**	**16.98**	**275**	P	**Pn**	**19 52 05.9**	**+0.6**
	4μm375nm,1.2s						
GUMO	**Guam**	**17.22**	**21**	LR	LR	19 57 19.6	
	comp=Z,1μm,21.8s,baz=182,slow=32						
GUMO	**Guam**	**17.22**	**21**	*e*P	**Pn**	**19 52 04.7**	**-3.5**
GUMO				pmax	pmax		
	comp=Z,261nm,1.3s						
GUMO	**Guam**	**17.22**	**21**	*e*Pn	**Pn**	**19 52 04.7**	**-3.5**
	comp=Z,261nm,1.3s						
GUMO	**Guam**	**17.22**	**21**	P	**Pn**	**19 52 08.8**	**+0.6**
	comp=Z,205nm,1.3s						
MMRI	**Maumere**	**17.32**	**249**	P	**Pn**	**19 52 11.2**	**+1.7**
	comp=Z,115nm,1.1s						
WRAB	**Tennant Creek**	**17.75**	**193**	Pn	**Pn**	**19 52 14.0**	**-0.8**
	comp=Z,826nm,0.6s,SNR=8.0						
WRAB	**Tennant Creek**	**17.75**	**193**	*e*P	**Pn**	**19 52 12.8**	**-2.0**
WRAB				*e*		19 55 19.4	
WRAB				pmax	pmax		
	comp=Z,99nm,0.7s						
WRAB	**Tennant Creek**	**17.75**	**193**	*e*Pn	**Pn**	**19 52 12.8**	**-2.0**
	comp=Z,99nm,0.7s						
WRAB				*e*Sn	**Sn**	**19 55 19.4**	**-12**
WRAB	**Tennant Creek**	**17.75**	**193**	P	**Pn**	**19 52 15.1**	**+0.3**
	comp=Z,161nm,0.8s						
WRA	**Warramunga Arr**	**17.76**	**193**	P	**Pn**	**19 52 13.8**	**-1.1**
	comp=Z,4.8nm,0.3s,baz=2.8,slow=12,SNR=18						
WRA				S	**S**	**19 55 24.6**	**-13**
	comp=Z,0.5nm,0.3s,baz=10,slow=23,SNR=4.6						
BNSI	**Bone**	**18.51**	**264**	P	**Pn**	**19 52 25.7**	**+1.6**
	comp=Z,105nm,1.0s						
BKSI	**Bulukumba**	**18.59**	**261**	P	**Pn**	**19 52 26.6**	**+1.5**
	comp=Z,975nmcomp=Z,78nm,1.2s						
TTSI	**Tana Toraja**	**18.72**	**268**	P	**Pn**	**19 52 28.0**	**+1.3**
PCI	**Palu**	**18.78**	**275**	P	**Pn**	**19 52 28.8**	**+1.4**
	comp=Z,176nm,1.1s						
SPSI	**Sidrap Palu**	**18.81**	**265**	P	**Pn**	**19 52 28.3**	**+0.5**
KAPI	**Kappang**	**18.92**	**262**	P	**Pn**	**19 52 27.6**	**-1.5**
	comp=Z,0.8nm,0.3s,baz=96,slow=6.6,SNR=2.9						
KAPI	**Kappang**	**18.92**	**262**	P	**Pn**	**19 52 27.6**	**-1.5**
KAPI				*e*P		19 52 29.6	
CTA	**Charters Tower**	**18.98**	**157**	*e*P	**Pn**	**19 52 29.6**	**-0.1**
	comp=Z,35nm,0.8s						
CTA	**Charters Tower**	**18.98**	**157**	P	**Pn**	**19 52 29.9**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=340,slow=11,SNR=6.9						
CTAO	**Charters Tower**	**18.98**	**157**	*e*P	**Pn**	**19 52 29.9**	**+0.2**
CTAO				pmax	pmax		
	comp=Z,50nm,0.8s						
CTAO	**Charters Tower**	**18.98**	**157**	*e*P	**Pn**	**19 52 29.9**	**+0.2**
	comp=Z,50nm,0.8s						
CTAO				*e*pP	pP	19 52 39.0	+0.7
CTAO	**Charters Tower**	**18.98**	**157**	P	**Pn**	**19 52 30.4**	**+0.7**
	comp=Z,63nm,0.9s						
FITZ	**Fitzroy Crossi**	**19.98**	**218**	*e*P	**Pn**	**19 52 38.2**	**-3.4**
	comp=Z,52nm,0.9s						
FITZ				*e*S	**S**	**19 56 13.5**	**-9.1**
FITZ	**Fitzroy Crossi**	**19.98**	**218**	P	**Pn**	**19 52 38.1**	**-3.5**
	comp=Z,0.9nm,0.3s,baz=46,slow=13,SNR=9.1						
FITZ				S	**S**	**19 56 16.2**	**-6.4**
	comp=Z,0.7nm,0.3s,baz=228,slow=16,SNR=6.0						
FITZ				LR	LR	20 00 31.0	
	comp=Z,2μm,20.5s,baz=39,slow=38						
FITZ	**Fitzroy Crossi**	**19.98**	**218**	*e*P	**Pn**	**19 52 37.9**	**-3.8**
	comp=Z,45nm,1.0s						
FITZ				*e*S	**S**	**19 56 14.9**	**-7.7**
FITZ	**Fitzroy Crossi**	**19.98**	**218**	P	**Pn**	**19 52 37.4**	**-4.2**
MYLDM	**Lahad Datu**	**21.46**	**291**	P	**P**	**19 52 57.6**	**+1.8**
	comp=Z,3μmcomp=Z,236nm,1.4s,mb5.3						
ASAR	**Alice Springs**	**21.46**	**192**	P	**P**	**19 52 54.6**	**-1.1**
	comp=Z,38nm,0.7s,mb4.8,baz=22,slow=10,SNR=24						
ASAR				S	**S**	**19 56 53.9**	**+2.1**
	comp=Z,21nm,1.0s,baz=13,slow=26,SNR=4.8						
TSM	**Tawau**	**21.76**	**288**	P	**P**	**19 53 00.0**	**+1.0**
HNR	**Honiara**	**22.33**	**109**	P	**P**	**19 53 07.5**	**+2.4**
	comp=Z,94nm,0.7s,mb5.3,baz=357,slow=0.9,SNR=8.0						
HNR	**Honiara**	**22.33**	**109**	*e*P	**P**	**19 53 07.3**	**+2.2**
HNR				pmax	pmax		
	comp=Z,121nm,0.8s,mb5.4						
HNR	**Honiara**	**22.33**	**109**	*e*P	**P**	**19 53 07.2**	**+2.1**
	comp=Z,121nm,0.8s,mb5.4						
KBKI	**Kotabaru**	**22.37**	**268**	P	**P**	**19 53 06.3**	**+0.7**
SDKM	**Sandakan**	**22.84**	**291**	P	**P**	**19 53 11.5**	**+1.0**
KDM	**Kudat**	**23.64**	**294**	P	**P**	**19 53 18.7**	**+0.2**
KKM	**Kota Kinabalu**	**23.89**	**291**	P	**P**	**19 53 21.2**	**+0.3**
KKM	**Kota Kinabalu**	**23.89**	**291**	*e*P	**P**	**19 53 19.6**	**-1.2**
	comp=Z,272nm,1.4s,mb5.5						
KKM	**Kota Kinabalu**	**23.89**	**291**	P	**P**	**19 53 20.4**	**-0.5**
	comp=Z,2μmcomp=Z,128nm,1.4s,mb5.2						
TGY	**Tagaytay City**	**24.06**	**314**	P	**P**	**19 53 22.7**	**+0.3**
	comp=Z,140nm,0.4s,mb5.7,baz=180,slow=5.1,SNR=12						
KMMI	**Kalianget**	**24.90**	**259**	P	**P**	**19 53 32.5**	**+2.4**
	comp=Z,3μmcomp=Z,136nm,1.3s,mb5.3						
EIDS	**Eidsvold**	**25.69**	**153**	*e*P	**P**	**19 53 38.0**	**+0.9**
	comp=Z,48nm,0.9s,mb5.0						
MBWA	**Marble Bar**	**26.04**	**223**	*e*P	**P**	**19 53 39.0**	**-1.3**
MBWA	**Marble Bar**	**26.04**	**223**	*e*P	**P**	**19 53 38.5**	**-1.9**
	comp=Z,31nm,0.8s,mb4.9						
MBWA	**Marble Bar**	**26.04**	**223**	P	**P**	**19 53 39.5**	**-0.8**
	comp=Z,52nm,1.7s,mb4.8						
GRJI	**Gresik**	**26.34**	**260**	P	**P**	**19 53 44.8**	**+1.6**
	comp=Z,206nm,1.0s,mb5.6						
SBUM	**Sibu**	**26.79**	**280**	P	**P**	**19 53 47.9**	**+0.6**
	comp=Z,22nm,1.3s,mb4.5						
STKI	**Sintang**	**27.20**	**275**	P	**P**	**19 53 51.8**	**+0.9**
	comp=Z,2μmcomp=Z,37nm,1.2s,mb4.8						
KSM	**Kuching**	**28.52**	**278**	P	**P**	**19 54 03.4**	**+0.6**
KSM	**Kuching**	**28.52**	**278**	*e*P	**P**	**19 54 02.1**	**-0.6**
	comp=Z,42nm,1.2s,mb5.0						
KSM	**Kuching**	**28.52**	**278**	P	**P**	**19 54 03.3**	**+0.5**
	comp=Z,396nmcomp=Z,28nm,1.2s,mb4.8						
STKA	**Stephens Creek**	**29.30**	**175**	P	**P**	**19 54 09.5**	**0.0**
	comp=Z,6.7nm,0.7s,mb4.5,baz=352,slow=8.1,SNR=4.7						
STKA				LR	LR	20 07 14.5	
	comp=Z,2μm,19.6s,MS4.6,baz=347,slow=39						
ARMA	**Armidale**	**30.35**	**157**	*e*P	**P**	**19 54 20.1**	**+1.4**
ARMA	**Armidale**	**30.35**	**157**	*e*P	**P**	**19 54 19.6**	**+0.8**
	comp=Z,22nm,1.0s,mb4.8						
NACB	**Ninganchiao**	**31.27**	**329**	*e*P	**P**	**19 54 25.5**	**-1.4**
	comp=Z,61nm,1.1s,mb5.3						
YHNB	**Yeheng**	**31.79**	**329**	*e*P	**P**	**19 54 31.5**	**-0.1**
KLSI		**33.82**	**265**	P	**P**	**19 54 51.3**	**+1.8**
	comp=Z,29nm,1.1s,mb5.1						
KASI	**Kota Agung**	**34.10**	**264**	P	**P**	**19 54 53.1**	**+1.2**
	comp=Z,66nm,1.0s,mb5.5						
CNB	**Canberra Magne**	**34.10**	**164**	*e*P	**P**	**19 54 52.4**	**+0.8**
ARPS	**Mount Arapiles**	**34.18**	**175**	*e*P	**P**	**19 54 51.5**	**-0.7**
	comp=Z,56nm,0.9s,mb5.5						
MDSI	**Maura Dua**	**34.37**	**266**	P	**P**	**19 54 52.9**	**-1.3**
	comp=Z,87nm,1.0s,mb5.6						
MYKOM	**Kota Tinggi**	**34.97**	**277**	P	**P**	**19 55 00.2**	**+0.8**
	comp=Z,65nm,1.0s,mb5.5						
QIZ	**Qiongzhong**	**35.46**	**308**	P	**P**	**19 55 02.0**	**-1.5**
QIZ				S	**S**	**20 00 36.3**	**-0.1**
QIZ				pmax	pmax		
	comp=Z,37nm,1.5s,mb5.1						
QIZ				pmax	pmax		
	comp=Z,280nm,5.4s						
QIZ				LR	LR		
	comp=N,680nm,20.2s						
QIZ				LR	LR		
	comp=Z,570nm,20.7s,MS4.3						
QIZ	**Qiongzhong**	**35.46**	**308**	*e*P	**P**	**19 55 02.0**	**-1.5**
	comp=Z,66nm,1.1s,mb5.5						
KGM	**Kluang**	**35.52**	**277**	P	**P**	**19 55 04.4**	**+0.3**
KSI	**Kapahiang**	**35.93**	**267**	P	**P**	**19 55 08.4**	**+0.8**
	comp=Z,57nm,1.0s,mb5.5						
NWAO	**Narrogin (SRO)**	**36.23**	**211**	P	**P**	**19 55 09.4**	**-0.5**
	comp=Z,16nm,1.0s,mb4.9,baz=30,slow=14,SNR=3.3						
NWAO	**Narrogin (SRO)**	**36.23**	**211**	*e*P	**P**	**19 55 08.6**	**-1.3**
KTGM	**Kuala Trenggan**	**36.24**	**283**	P	**P**	**19 55 10.2**	**-0.1**
SDSI	**Sungai Dareh**	**37.15**	**272**	P	**P**	**19 55 17.7**	**-0.3**
	comp=Z,40nm,1.2s,mb5.1						
FRIM	**Kepong**	**37.36**	**279**	P	**P**	**19 55 19.9**	**0.0**
BKNI	**Bangkinang**	**37.62**	**274**	P	**P**	**19 55 21.7**	**-0.3**
	comp=Z,2μmcomp=Z,186nm,0.9s,mb5.8						
PDSI	**Padang**	**38.11**	**272**	P	**P**	**19 55 25.4**	**-0.8**
	comp=Z,82nm,0.9s,mb5.5						
IPM	**Ipoh**	**38.15**	**280**	P	**P**	**19 55 25.9**	**-0.6**
	comp=Z,38nm,1.6s,mb4.9						
PPI	**Padang Panjang**	**38.20**	**272**	P	**P**	**19 55 26.1**	**-0.9**
	comp=Z,2μmcomp=Z,100nm,1.0s,mb5.5						
KULM	**Kulim**	**38.66**	**282**	P	**P**	**19 55 30.7**	**-0.1**
KULM	**Kulim**	**38.66**	**282**	*e*P	**P**	**19 55 29.9**	**-0.9**
	comp=Z,48nm,1.2s,mb5.1						
KULM	**Kulim**	**38.66**	**282**	P	**P**	**19 55 30.1**	**-0.7**
	comp=Z,42nm,1.3s,mb5.0						
MJAR	**Matsushiro Arr**	**38.90**	**360**	P	**P**	**19 55 30.8**	**-1.6**
	comp=Z,1.5nm,0.8s,baz=179,slow=10.0,SNR=6.2						
MAJO	**Matsushiro**	**38.90**	**360**	P	**P**	**19 55 30.7**	**-1.7**
MAJO				pmax	pmax		
	comp=Z,21nm,1.4s,mb4.7						
MAJO	**Matsushiro**	**38.90**	**360**	P	**P**	**19 55 30.7**	**-1.8**
	comp=Z,21nm,1.4s,mb4.7						
MNSI	**Mandailing Nat**	**39.11**	**274**	P	**P**	**19 55 33.5**	**-1.1**
	comp=Z,40nm,0.7s,mb5.2						
NJ2	**Nanjing**	**39.17**	**333**	*e*P	**P**	**19 55 34.9**	**+0.1**
NJ2				pP	pP	19 55 47.1	+1.6
NJ2				sP	sP	19 55 52.6	+2.6
NJ2				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.1						
NJ2				pmax	pmax		
	comp=Z,330nm,5.7s						
NJ2				LR	LR		
	comp=N,680nm,19.4s,MS4.7						
NJ2				LR	LR		
	comp=E,800nm,21.5s,MS4.7						
NJ2				LR	LR		
	comp=Z,790nm,16.5s,MS4.6						
SISI	**Saibi**	**39.46**	**271**	P	**P**	**19 55 36.3**	**-1.2**
	comp=Z,103nm,0.9s,mb5.5						
PSI	**Prapat**	**39.97**	**277**	P	**P**	**19 55 40.8**	**-1.0**
	comp=Z,52nm,0.9s,mb5.3,baz=107,slow=3.3,SNR=31						
WHN	**Wuhan**	**40.21**	**327**	P	**P**	**19 55 42.8**	**-0.7**
KSRS	**Korea Array**	**41.01**	**347**	P	**P**	**19 55 49.3**	**-0.7**
	comp=Z,5.3nm,0.9s,mb4.2,baz=167,slow=9.7,SNR=14						
GSI	**Gunungsitoli**	**41.15**	**275**	P	**P**	**19 55 49.4**	**-2.1**
	comp=Z,75nm,0.8s,mb5.4						
TPTI		**41.76**	**278**	P	**P**	**19 55 55.0**	**-1.5**
	comp=Z,30nm,1.1s,mb4.8						
GYA	**Guiyang**	**42.21**	**315**	P	**P**	**19 56 00.9**	**+1.0**
GYA				pP	pP	19 56 10.8	+0.1
GYA				sP	sP	19 56 16.3	+1.1
GYA				PP	PP	19 57 42.6	+4.4
GYA				PcP	PcP	19 57 55.4	+1.7
GYA				ScP	ScP	20 01 42.0	+0.4
GYA				S	**S**	**20 02 19.8**	**+2.0**
GYA				SS	SS	20 05 21.0	-6.0
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.7						
GYA				pmax	pmax		
	comp=Z,140nm,4.7s						
GYA				LR	LR		
	comp=N,840nm,18.0s,MS4.8						
GYA				LR	LR		
	comp=E,680nm,17.8s,MS4.8						
GYA				LR	LR		
	comp=Z,860nm,18.0s,MS4.7						
ENH	**Enshi**	**42.85**	**322**	*e*P	**P**	**19 56 04.3**	**-0.8**
	comp=Z,30nm,1.0s,mb5.0						
DL2	**Dalian**	**44.11**	**341**	P	**P**	**19 56 15.9**	**+0.8**
DL2				S	**S**	**20 02 47.9**	**+2.5**
DL2				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.8						
DL2				pmax	pmax		
	comp=Z,140nm,7.6s						
DL2				LR	LR		
	comp=N,120nm,14.2s,MS4.2						
DL2				LR	LR		
	comp=E,200nm,17.7s,MS4.2						
DL2				LR	LR		
	comp=Z,170nm,15.6s,MS4.1						
CM31	**Chiang Mai Arr**	**44.23**	**300**	*e*P	**P**	**19 56 16.0**	**-0.4**
	comp=Z,32nm,0.9s,mb5.0						
CMAR	**Chiang Mai Arr**	**44.23**	**300**	P	**P**	**19 56 16.2**	**-0.2**
	comp=Z,23nm,0.8s,mb5.0,baz=117,slow=6.5,SNR=55						
CMAR				LR	LR	20 16 09.6	
	comp=Z,283nm,19.1s,MS4.2,baz=130,slow=38						
KMI	**Kunming**	**44.30**	**311**	P	**P**	**19 56 16.9**	**0.0**
KMI				pP	pP	19 56 27.8	0.0
KMI				sP	sP	19 56 32.5	+0.3
KMI				PP	PP	19 58 03.3	+2.5
KMI				S	**S**	**20 02 49.4**	**+0.7**
KMI				sS	sS	20 03 06.6	+0.1
KMI				SS	SS	20 06 01.1	-7.0
KMI				pmax	pmax		
	comp=Z,36nm,1.4s,mb4.9						
KMI				pmax	pmax		
	comp=Z,110nm,3.1s						
KMI				LR	LR		
	comp=N,310nm,15.2s,MS4.7						
KMI				LR	LR		
	comp=E,530nm,12.6s,MS4.7						
KMI				LR	LR		
	comp=Z,640nm,16.6s,MS4.6						
CHTO	**Chiang Mai**	**44.37**	**300**	*e*P	**P**	**19 56 16.8**	**-0.8**
CHTO				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.0						
CHTO	**Chiang Mai**	**44.37**	**300**	*e*P	**P**	**19 56 16.8**	**-0.8**
	comp=Z,26nm,0.9s,mb5.0						
CHTO	**Chiang Mai**	**44.37**	**300**	P	**P**	**19 56 17.5**	**-0.1**
VLA	**Vladivostok**	**45.86**	**353**	*e*P	**P**	**19 56 28.7**	**-0.3**
VLA				pmax	pmax		
	comp=Z,40nm,1.7s,mb5.1						
XAN	**Xi'an**	**45.86**	**325**	P	**P**	**19 56 28.5**	**-0.7**
XAN				pP	pP	19 56 36.6	-3.4
XAN				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.7						
SNY	**Shenyang**	**46.22**	**344**	⇓P	**P**	**19 56 33.1**	**+1.2**
SNY				S	**S**	**20 03 15.4**	**-0.4**
SNY				pmax	pmax		
	comp=Z,410nm,6.9s						
SNY				LR	LR		
	comp=N,330nm,17.7s,MS4.4						
SNY				LR	LR		
	comp=E,240nm,17.4s,MS4.4						
SNY				LR	LR		
	comp=Z,450nm,17.7s,MS4.5						
CD2	**Chengdu**	**46.97**	**318**	⇑*i*P	**P**	**19 56 37.8**	**-0.1**
CD2				pP	pP	19 56 47.6	-1.2
CD2				sP	sP	19 56 51.5	-1.7
CD2				PcP	PcP	19 58 10.1	+0.1
CD2				PP	PP	19 58 27.9	-0.9
CD2				PcS	PcS	20 02 03.8	-1.3
CD2				S	**S**	**20 03 26.1**	**-0.7**
CD2				sS	sS	20 03 42.4	-2.4
CD2				ScS	ScS	20 06 26.8	-2.9
CD2				SS	SS	20 06 45.9	-8.3
CD2				pmax	pmax		
	comp=Z,100nm,1.2s,mb5.6						
CD2				pmax	pmax		
	comp=Z,180nm,5.2s						
CD2				LR	LR		
	comp=N,480nm,21.4s,MS4.6						
CD2				LR	LR		
	comp=E,520nm,20.2s,MS4.6						
CD2				LR	LR		
	comp=Z,610nm,19.0s,MS4.6						
BJT	**Baijiatuau**	**47.08**	**336**	*e*P	**P**	**19 56 37.7**	**-0.9**
BJT				pmax	pmax		
	comp=Z,15nm,0.6s						
BJT	**Baijiatuau**	**47.08**	**336**	*e*P	**P**	**19 56 37.7**	**-0.9**
	comp=Z,15nm,0.6s,mb5.1						
BJI	**Beijing**	**47.09**	**336**	P	**P**	**19 56 38.0**	**-0.7**
BJI				S	**S**	**20 03 24.5**	**-3.9**
BJI				pmax	pmax		
	comp=Z,24nm,1.1s,mb5.0						
BJI				LR	LR		
	comp=N,500nm,16.2s,MS4.7						
BJI				LR	LR		
	comp=E,390nm,17.7s,MS4.7						
BJI				LR	LR		
	comp=Z,410nm,16.4s,MS4.5						
CN2	**Changchun**	**47.63**	**347**	*e*P	**P**	**19 56 42.6**	**-0.2**
CN2				*e*sP	sP	19 56 56.4	-1.7
CN2				*e*S	**S**	**20 03 36.0**	**+0.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,600nm,19.0s,MS4.6						
CN2				LR	LR		
	comp=E,300nm,19.0s,MS4.6						
CN2				LR	LR		
	comp=Z,700nm,20.0s,MS4.6						
MDJ	**Mudanjiang**	**47.64**	**351**	P	**P**	**19 56 42.3**	**-0.6**
MDJ				pP	pP	19 56 51.8	-2.0
MDJ				sP	sP	19 56 55.3	-2.9
MDJ				PP	PP	19 58 33.4	-1.4
MDJ				pmax	pmax		
	comp=Z,11nm,1.6s,mb4.6						
MDJ				pmax	pmax		
	comp=Z,210nm,9.1s						
MDJ				LR	LR		
	comp=N,210nm,24.9s						
MDJ				LR	LR		
	comp=E,410nm,32.6s						
MDJ				LR	LR		
	comp=Z,290nm,24.9s,MS4.2						
MDJ	**Mudanjiang**	**47.64**	**351**	*e*P	**P**	**19 56 43.1**	**+0.2**
	comp=Z,26nm,1.1s,mb5.2						
YSS	**Yuzh-Sakhalins**	**49.44**	**4**	*e*P	**P**	**19 56 56.0**	**-0.7**
YSS	**Yuzh-Sakhalins**	**49.44**	**4**	*e*P	**P**	**19 56 55.9**	**-0.8**
HHC	**Hu-ho-hao-te**	**49.73**	**333**	*e*P	**P**	**19 56 58.8**	**-0.2**
HHC				pP	pP	19 57 08.6	-1.3
HHC				sP	sP	19 57 12.5	-1.8
HHC				PcP	PcP	19 58 19.9	+0.2
HHC				PP	PP	19 58 53.8	-0.1
HHC				ScP	ScP	20 02 11.4	-1.2
HHC				PcS	PcS	20 02 14.9	-1.5
HHC				S	**S**	**20 04 05.3**	**-0.2**
HHC				sS	sS	20 04 21.8	-1.8
HHC				ScS	ScS	20 06 45.6	-2.1
HHC				SS	SS	20 07 34.3	-4.2
HHC				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0						
HHC				pmax	pmax		
	comp=Z,220nm,5.3s						
HHC				LR	LR		
	comp=N,190nm,15.6s,MS4.4						
HHC				LR	LR		
	comp=E,280nm,18.0s,MS4.4						
HHC				LR	LR		
	comp=Z,230nm,14.9s,MS4.3						
URZ	**Urewera**	**50.03**	**140**	P	**P**	**19 57 01.6**	**+0.2**
	comp=Z,16nm,1.1s,mb5.0,baz=315,slow=10.0,SNR=1.9						
RPZ	**Rata Peaks**	**50.10**	**149**	P	**P**	**19 57 03.1**	**+1.3**
	comp=Z,82nm,1.0s,mb5.7,baz=358,slow=5.6,SNR=9.3						
RPZ	**Rata Peaks**	**50.10**	**149**	*e*P	**P**	**19 57 02.9**	**+1.1**
	comp=Z,82nm,0.9s,mb5.8						
BTO	**Baotou**	**50.24**	**332**	*e*P	**P**	**19 57 01.4**	**-1.5**
LZH	**Lanzhou**	**50.27**	**323**	⇓P	**P**	**19 57 03.9**	**+0.7**
LZH				pP	pP	19 57 15.1	+0.9
LZH				sP	sP	19 57 20.0	+1.4
LZH				PP	PP	19 59 00.3	+1.4
LZH

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TAPN Taplejung          57.26 305 eP        P        19 57 54.4 -0.1
     comp=Z,307nm,1.3s,mb6.2
ULN  Ulaanbaatar        57.26 335⇑iP        P        19 57 55.1 +1.0
ULN  Ulaanbaatar        57.26 335 eP        P        19 57 54.3 +0.1
     comp=Z,38nm,1.4s,mb5.2
ODAN Odare              57.34 304 eP        P        19 57 54.8 -0.3
     comp=Z,172nm,0.9s,mb6.1
SONM Songino Array      57.52 335 P         P        19 57 56.2 +0.3
     comp=Z,3.0nm,1.0s,mb4.3,baz=147,slow=6.2,SNR=14
SONM                            PKP2bc              20 27 57.6
     comp=Z,0.4nm,1.0s,baz=321,slow=1.8,SNR=3.6
SONM Songino Array      57.52 335 P         P        19 57 56.2 +0.3
SONM                          ⇑e                    20 27 57.6
PETK Petropavlovsk-     57.75  14 P         P        19 57 59.4 +1.9
     comp=Z,5.6nm,0.9s,mb4.6,baz=157,slow=4.6,SNR=7.1
RAMN Ramite             58.02 304 eP        P        19 57 59.8 -0.1
     comp=Z,223nm,1.1s,mb6.1
CIT  Chita              58.35 342 eP        P        19 58 02.7 +1.0
CIT                             pmax        pmax
     comp=Z,119nm,2.1s,mb5.5
JIRN Jiri               58.63 305 eP        P        19 58 04.0 -0.1
     comp=Z,114nm,1.1s,mb5.8
GUN  Gumba              58.98 305 eP        P        19 58 06.5  0.0
     comp=Z,154nm,0.9s,mb6.0
PKI  Pulchoki           59.24 304 eP        P        19 58 07.8 -0.6
     comp=Z,100nm,1.2s,mb5.7
PKI  Pulchoki           59.24 304 eP        P        19 58 07.8 -0.6
PKI                             pmax        pmax
     comp=Z,100nm,1.2s,mb5.7
KKN  Kakani             59.42 304 eP        P        19 58 09.5 -0.1
     comp=Z,152nm,1.0s,mb6.0
KKN  Kakani             59.42 304 eP        P        19 58 09.5 -0.1
KKN                             pmax        pmax
     comp=Z,152nm,1.0s,mb6.0
DMN  Daman              59.50 304 eP        P        19 58 10.1 -0.1
     comp=Z,124nm,1.0s,mb5.9
CLNS Chul'man           60.23 351 eP        P        19 58 16.1 +1.5
CLNS                            pmax        pmax
     comp=Z,16nm,1.1s,mb5.0
CLNS                            pmax        pmax
     comp=N,15nm,1.6s
CLNS                            pmax        pmax
     comp=E,2.0nm,0.8s
ZAK  Zakamensk          60.78 335 eP        P        19 58 18.3 -0.2
ZAK                             pmax        pmax
     comp=Z,23nm,1.4s,mb5.1
TLY  Talaya             61.62 336 P         P        19 58 25.2 +1.1
     comp=Z,104nm,0.7s,mb6.1,SNR=6.4
TLY  Talaya             61.62 336⇑iP        P        19 58 24.7 +0.6
TLY                             pmax        pmax
     comp=Z,17nm,0.8s,mb5.2
TLY  Talaya             61.62 336 eP        P        19 58 24.5 +0.4
     comp=Z,9.4nm,0.7s,mb5.0
IRK  Irkutsk            61.80 337⇑iP        P        19 58 25.9 +0.6
IRK                             pmax        pmax
     comp=Z,46nm,2.2s,mb5.2
HYB  Hyderabad          62.38 291 iP        P        19 58 29.0 -0.9
MOY  Mondy              62.71 335 eP        P        19 58 31.9 +0.5
MOY                             pmax        pmax
     comp=Z,68nm,2.2s,mb5.4
YAK  Yakutsk            64.77 355c iP       P        19 58 44.9 +0.1
YAK                             pmax        pmax
     comp=Z,31nm,0.8s,mb5.4
YAK                             pmax        pmax
     comp=N,20nm,1.1s
YAK                             pmax        pmax
     comp=E,4.0nm,1.0s
YAK  Yakutsk            64.77 355 eP        P        19 58 45.2 +0.4
     comp=E,75nm,1.0s,mb5.7
WMQ  Urumqi             64.80 322 P         P        19 58 46.0 +0.6
WMQ                             pP          pP       19 58 56.0 -0.6
WMQ                             sP          sP       19 59 00.0 -1.0
WMQ                             PP          PP       20 01 10.0 +1.7
WMQ                             S           S        20 07 22.0 -1.6
WMQ                             ScS         ScS      20 08 34.0 -3.2
WMQ                             pmax        pmax
     comp=Z,63nm,1.0s,mb5.6
WMQ                             pmax        pmax
     comp=Z,290nm,6.0s
WMQ                             LR          LR
     comp=N,230nm,18.0s,MS4.5
WMQ                             LR          LR
     comp=E,160nm,18.0s,MS4.5
WMQ                             LR          LR
     comp=Z,150nm,18.0s,MS4.2
DDI  Dehra Dun          66.23 305 ePKP      P        19 58 52.5 -2.4
CASY Casey              66.59 192 eP        P        19 58 56.9 +0.4
CASY Casey              66.59 192 eP        P        19 58 56.4 -0.1
     comp=Z,12nm,1.0s,mb4.9
MK31 Makanchi Array     69.57 322 eP        P        19 59 15.6  0.0
MKAR Makanchi Array     69.57 322 P         P        19 59 15.8 +0.2
     comp=Z,51nm,0.9s,mb5.4,baz=103,slow=9.2,SNR=58
MKAR Makanchi Array     69.57 322ceP        P        19 59 15.8 +0.2
MKAR                            pmax        pmax
     comp=Z,51nm,0.9s
MKAR Makanchi Array     69.57 322 P         P        19 59 15.8 +0.2
KSH  Kashi              70.87 313⇓iP        P        19 59 25.1 +1.4
KSH                             pP          pP       19 59 35.3 +0.2
KSH                             sP          sP       19 59 39.3 -0.1
KSH                             PcP         PcP      19 59 45.8 +1.6
KSH                             PP          PP       20 02 04.1 +2.9
KSH                             S           S        20 08 35.0 -1.5
KSH                             sS          sS       20 08 53.3 -2.1
KSH                             SKS         SKS      20 09 20.3
KSH                             ScS         ScS      20 09 22.4 -2.5
KSH                             SS          SS       20 13 10.8 +1.1
KSH                             pmax        pmax
     comp=Z,61nm,1.2s,mb5.4
KSH                             LR          LR
     comp=N,70nm,4.7s
KSH                             LR          LR
     comp=E,90nm,6.3s
KSH                             LR          LR
     comp=Z,150nm,4.5s
MIR  Mirnyy             71.30 198⇑iP        P        19 59 26.6 +0.8
MIR                             pmax        pmax
     comp=Z,65nm,1.2s,mb5.4
MIR                             MLR         MLR
     comp=N,600nm,16.0s,MS5.1
MIR                             MLR         MLR
     comp=E,600nm,16.0s,MS5.1
MIR                             MLR         MLR
     comp=Z,800nm,16.0s,MS5.1
ZAA0 Zalesovo Array     71.73 330 eP        P        19 59 27.1 -1.5
ZALV Zalesovo Beam      71.73 330 P         P        19 59 27.6 -1.0
     comp=Z,17nm,0.9s,mb5.0,baz=110,slow=5.4,SNR=22
ZALV                            LR          LR       20 34 40.8
     comp=Z,190nm,18.9s,MS4.4,baz=266,slow=39
PPT  Papeete            71.95 108 LR        LR       20 27 13.9
     comp=Z,232nm,19.1s,MS4.5,baz=192,slow=33
KZA  Kyzart             72.27 316 P         P        19 59 33.8 +1.6
     SNR=66
TKM2 Tokmak 2           72.33 317 P         P        19 59 33.1 +0.6
     SNR=36
TKM2 Tokmak 2           72.33 317 eP        P        19 59 32.8 +0.4
TKM2                            pmax        pmax
     comp=Z,99nm,1.4s,mb5.5
TKM2 Tokmak 2           72.33 317 eP        P        19 59 32.8 +0.4
     comp=Z,99nm,1.4s,mb5.5
KBK  Karagaybulak       72.68 316 P         P        19 59 35.1 +0.6
     SNR=14
UCH  Uchtor             72.84 316 P         P        19 59 37.0 +1.5
     SNR=41
UCH  Uchtor             72.84 316 eP        P        19 59 36.6 +1.2
     comp=Z,3μm,1.4s
CHMS Chumysh            72.94 316 P         P        19 59 36.4 +0.3
     SNR=20
FRU  Bishkek            72.97 316 eP        P        19 59 34.0 -2.3
FRU                           e                      19 59 57.0
FRU                             pmax        pmax
     comp=Z,80nm,1.6s,mb5.4
NVS  Novosibirsk        72.98 330⇑iP        P        19 59 35.2 -0.8
NVS                           eS          S        20 08 57.9 -2.3
NVS                             pmax        pmax
     comp=Z,60nm,1.3s,mb5.4
NVS                             pmax        pmax
     comp=N,39nm,1.7s
NVS                             pmax        pmax
     comp=E,50nm,1.8s
NVS                             smax
     comp=E,20nm,2.4s
AAK  Ala-Archa          72.99 316 P         P        19 59 37.8 +1.4
     comp=E,161nm,1.4s,mb5.8,SNR=8.2
AAK  Ala-Archa          72.99 316 P         P        19 59 36.6 +0.3
     comp=E,13nm,1.0s,mb4.8,baz=127,slow=6.1,SNR=24
BILL Bilibino           73.05  11c iP       P        19 59 36.3 +0.1
BILL                          e                      19 59 51.0
BILL                            pmax        pmax
     comp=Z,12nm,1.2s,mb4.7
BILL                            MLR         MLR
     comp=Z,100nm,18.0s,MS4.1
BILL Bilibino           73.05  11 eP        P        19 59 36.1  0.0
     comp=Z,20nm,1.4s,mb4.9
USP  Ospenovka          73.20 317 P         P        19 59 38.0 +0.4
     SNR=38
AML  Almayashu          73.38 315 P         P        19 59 40.0 +1.4
     SNR=25
AML  Almayashu          73.38 315 eP        P        19 59 39.5 +0.9
     comp=Z,320nm,1.1s,mb6.2
EKS2 Erkin-Say          73.50 316 P         P        19 59 39.9 +0.6
     SNR=42
EKS2 Erkin-Say          73.50 316 eP        P        19 59 40.0 +0.6
     comp=Z,100nm,1.4s,mb5.5
KURK Kurchatov          73.50 325 P         P        19 59 39.0 -0.3
     comp=Z,22nm,0.9s,mb5.1,baz=116,slow=4.7,SNR=16
KURK Kurchatov          73.50 325c iP       P        19 59 38.9 -0.3
KURK                            pmax        pmax
     comp=Z,68nm,1.7s,mb5.3
KURK Kurchatov          73.50 325 eP        P        19 59 38.8 -0.4
     comp=Z,40nm,1.1s,mb5.3
TIXI Tiksi              74.34 357 eP        P        19 59 42.0 -1.7
TIXI                            pmax        pmax
     comp=Z,15nm,0.8s,mb5.0
TIXI Tiksi              74.34 357 eP        P        19 59 42.0 -1.7
     comp=Z,15nm,0.8s,mb5.0
KBL  Kabul              74.72 307 eP        P        19 59 46.0 -0.7
KBL                             pmax        pmax
     comp=Z,22nm,1.4s,mb4.9
KBL  Kabul              74.72 307 eP        P        19 59 46.0 -0.7
     comp=Z,22nm,1.4s,mb4.9
GAMB Gambell            75.69  20 eP        P        19 59 53.4 +1.8
     comp=Z,21nm,1.2s,mb4.9
SBA  Scott Base         76.72 174 eP        P        19 59 59.1 +1.8
SBA                             pmax        pmax
     comp=Z,17nm,1.0s,mb4.9
SBA  Scott Base         76.72 174 eP        P        19 59 59.1 +1.8
     comp=Z,17nm,1.0s,mb4.9
BVAR Borovoye Array     79.10 325 P         P        20 00 11.1 +0.2
     comp=Z,33nm,0.9s,mb5.3,baz=116,slow=6.9,SNR=32
BRVK Borovoye           79.17 325 P         P        20 00 11.7 +0.4
     comp=Z,281nm,0.8s,mb6.2,SNR=14
BRVK Borovoye           79.17 325c iP       P        20 00 11.3  0.0
BRVK                            pmax        pmax
     comp=Z,96nm,1.7s,mb5.5
BRVK Borovoye           79.17 325 eP        P        20 00 10.9 -0.4
     comp=Z,50nm,0.9s,mb5.4
OHAK Old Harbor         80.50  31 eP        P        20 00 18.8 +0.4
     comp=Z,32nm,1.0s,mb5.2
SVW2 Sparrevohn         80.81  27 eP        P        20 00 21.0 +1.0
KDAK Kodiak Island      81.05  30 P         P        20 00 22.0 +0.7
     comp=Z,14nm,0.8s,mb5.0,baz=265,slow=5.8,SNR=7.2
KDAK Kodiak Island      81.05  30 iP        P        20 00 24.1 +2.8
TTA  Tatalina           81.33  25 P         P        20 00 23.8 +1.0
TTA                             pmax        pmax
     comp=Z,17nm,1.1s,mb4.9
TTA  Tatalina           81.33  25 P         P        20 00 23.8 +1.0
     comp=Z,17nm,1.1s,mb4.9
MAW  Mawson             82.21 202 eP        P        20 00 28.5 +1.2
     comp=Z,12nm,1.0s,mb4.8
MAW  Mawson             82.21 202 P         P        20 00 28.1 +0.8
     comp=Z,13nm,0.8s,mb4.9,baz=59,slow=6.1,SNR=14
MAW  Mawson             82.21 202 eP        P        20 00 27.3  0.0
MAW                             pmax        pmax
     comp=Z,3.0nm,0.9s
MAW  Mawson             82.21 202 eP        P        20 00 27.3  0.0
     comp=Z,3.3nm,0.9s,mb4.3
PPLA Purkeypile         82.95  26 eP        P        20 00 31.1 -0.1
     comp=Z,110nm,1.7s,mb5.6
CHUM Lake Minchumin     83.23  25 eP        P        20 00 33.0 +0.3
     comp=Z,130nm,1.6s,mb5.7
SEW  Seward             83.32  29 eP        P        20 00 32.6 -0.6
     comp=Z,73nm,1.7s,mb5.4
RC01 Rabbit Creek A     83.47  28 eP        P        20 00 32.3 -1.7
     comp=Z,92nm,1.6s,mb5.6
PMR  Palmer             83.90  27 eP        P        20 00 35.0 -1.1
PMR                             pmax        pmax
     comp=Z,37nm,1.3s,mb5.3
PMR  Palmer             83.90  27 eP        P        20 00 35.0 -1.1
     comp=Z,37nm,1.3s,mb5.4
TRF  Thorofare Moun     83.95  25 eP        P        20 00 35.2 -1.1
     comp=Z,56nm,1.8s,mb5.4
ABKT Ailbek             84.02 308 P         P        20 00 38.2 +0.9
     comp=Z,71nm,1.7s,mb5.5,SNR=7.0
ABKAR Akbulak array     84.50 320 eP        P        20 00 38.9 -0.6
     comp=Z,33nm,1.3s,mb5.3
MCK  McKinley           84.61  25 eP        P        20 00 39.1 -0.6
MCK                             pmax        pmax
     comp=Z,28nm,1.2s,mb5.3
MCK  McKinley           84.61  25 eP        P        20 00 39.1 -0.6
     comp=Z,28nm,1.2s,mb5.3
COLD Coldfoot           85.17  22 eP        P        20 00 43.2 +0.8
     comp=Z,47nm,1.6s,mb5.4
DIV  Divide             85.34  28 eP        P        20 00 43.4  0.0
     comp=Z,32nm,1.0s,mb5.4
COLA College            85.39  24 P         P        20 00 42.8 -0.8
SVE  Sverdlovsk         85.53 327⇓eP        P        20 00 45.4 +0.9
SVE                             pmax        pmax
     comp=Z,20nm,1.4s,mb5.2
BMRM Bremner River      85.86  28 eP        P        20 00 46.0  0.0
     comp=Z,16nm,0.9s,mb5.2
PAX  Paxson             85.92  26 eP        P        20 00 46.4 +0.2
PAX                             pmax        pmax
     comp=Z,12nm,1.1s,mb5.0
PAX  Paxson             85.92  26 eP        P        20 00 46.4 +0.1
     comp=Z,12nm,1.1s,mb5.0
AKTK Aktyubinsk         85.93 321 P         P        20 00 47.3 +0.7
AKTO Aktyubinsk         85.93 321 P         P        20 00 47.3 +0.7
     comp=Z,5.5nm,0.9s,mb4.8,baz=76,slow=6.3,SNR=14
ARU  Arti               86.58 327 P         P        20 00 48.3 -1.4
     comp=Z,84nm,1.0s,mb5.9,SNR=8.5
ARU  Arti               86.58 327d iP       P        20 00 49.1 -0.6
ARU                                         20 04 11.5
ARU                             S           S        20 11 15.0 -8.6
ARU                             pmax        pmax
     comp=Z,21nm,1.2s,mb5.2
ARU  Arti               86.58 327 eP        P        20 00 48.1 -1.5
     comp=Z,20nm,1.1s,mb5.3
EGAK Eagle              88.15  25 eP        P        20 00 57.3 +0.2
     comp=Z,34nm,1.1s,mb5.5
PNL  Peninsula          88.17  30 eP        P        20 00 56.4 -0.8
     comp=Z,13nm,0.8s,mb5.2
SYO  Syowa Base         90.85 201⇑eP        P        20 01 09.0 -0.6
MAK  Makhachkala        92.50 313 eP        P        20 01 15.7 -2.1
MAK                           e                      20 04 53.0
MAK                           ePPP                   20 06 59.4
MAK                           e                      20 12 12.8
MAK                             pmax        pmax
     comp=Z,35nm,0.9s,mb5.7
ZEI  Tsey               95.15 313 eP        P        20 01 30.2 +0.2
ZEI                             pmax        pmax
     comp=Z,5.0nm,0.5s,mb5.2
HEBO Mount Hebo         97.23  45 eP        P        20 01 39.7 +0.3
     comp=Z,7.5nm,0.9s,mb5.1
LVZ  Lovozero           97.58 338 iP        P        20 01 39.3 -1.2
VSR  Storozhevoye       97.87 321 eP        P        20 01 41.0 -1.2
VSR                             pmax        pmax
     comp=N,3.0nm,0.5s
VSR                             pmax        pmax
     comp=E,3.0nm,0.5s
VSR                             pmax        pmax
     comp=Z,4.0nm,0.5s,mb5.2
APA  Apatity            98.11 338⇑eP        P        20 01 37.4 -5.5
APA                             MLR         MLR
     comp=Z,200nm,23.0s,MS4.5
SOC  Sochi              98.16 313c iP       P        20 01 42.5 -1.2
SOC                           e                      20 05 44.6
SOC                           ePPP                   20 07 47.8
SOC                           eS          SKSac    20 12 19.7 +0.9
SOC                           eSS         SS       20 19 51.1 -0.7
SOC                             pmax        pmax
     comp=Z,7.0nm,0.5s,mb5.5
OBN  Obninsk            98.94 325 eP        P        20 01 45.0 -1.9
OBN                           e                      20 05 47.9
OBN                           eSS         SS       20 20 08.5 +6.5
OBN                             pmax        pmax
     comp=Z,5.0nm,0.8s,mb5.1
YKA  Yellowknife Ar     100.00  27 P        Pdif     20 01 52.9 +1.4
     comp=Z,1.2nm,0.8s,baz=287,slow=4.9,SNR=5.4
YKA  Yellowknife Ar     100.00  27 P        Pdif     20 01 52.9 +1.4
NVAR Mina Array Bea     101.88  51 P        Pdif     20 02 01.8 +1.9
     comp=Z,0.4nm,0.7s,baz=253,slow=7.6,SNR=3.8
AKASG Malin Array Be    104.15 322 PP       PP       20 06 25.9 -2.2
     comp=Z,1.1nm,0.7s,baz=65,slow=6.7,SNR=6.5
CRVS Cervenica-Dubn     109.48 321 eP       Pdif     20 02 35.1 +1.3
CRVS Cervenica-Dubn     109.48 321 PDIF     Pdif     20 02 35.1 +1.3
DPC  Dobruska-Polom     112.05 324 ePP      PP       20 07 30.4 +4.7
CLL  Collm              113.52 326 ePKiKP   PKiKP    20 06 43.0 -1.6
CLL                             MLR         MLR
     comp=Z,300nm,18.7s,MS4.9
CLL  Collm              113.52 326 ePKiKP   PKiKP    20 06 43.0 -1.6
CLL                           e(PP)                  20 07 27.0
CLL                             LmV                  21 00 00.0
     comp=Z,300nm,18.7s
KHC  Kasperske Hory     114.18 324 ePP      PP       20 07 42.1 +1.2
TXAR Lajitas Array      115.35  59 PKP      PKPdf    20 06 49.8 +1.0
     comp=Z,0.5nm,0.8s,baz=241,slow=2.2,SNR=4.7
PLCA Paso Flores        129.38 151 PKP      PKPdf    20 07 17.9 +2.5
     comp=Z,1.2nm,0.6s,baz=200,slow=5.2,SNR=5.4
TORD Torodi Ar. Bea     136.07 286 PKP      PKPdf    20 07 29.5 +0.9
     comp=Z,1.4nm,0.7s,baz=78,slow=2.0,SNR=8.3
DBIC Dimbokro           143.31 278 PKIKP    PKPdf    20 07 42.3 +0.4
ROSC El Rosal           147.10  85 PKPbc    PKPbc    20 07 52.1 +1.5
     comp=Z,9.7nm,0.4s,baz=282,slow=20,SNR=5.5
CPUP Villa Florida      147.43 153 PKPbc    PKPbc    20 07 51.4 +0.2
     comp=Z,13nm,0.8s,baz=220,slow=2.7,SNR=25
LPAZ La Paz             147.66 126 PKPbc    PKPbc    20 07 52.8 +0.8
     comp=Z,8.3nm,1.0s,baz=220,slow=1.4,SNR=16
LPAZ La Paz             147.66 126 ePKPdf   PKPbc    20 07 51.4 -0.6
CRPR Cabo Rojo, PR      150.52  57 ePKPbc   PKPbc    20 07 58.4 -0.7
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MEX 24 19:51:06.3±1.1, 17°.65N×95°.39W, h102km±34km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
VHO	Vista Hermosa	1.41	246	eP		Pn	19 51 31.2	-0.4
VHO				i S		Sn	19 51 50.5	-0.3
HUIG	Huatulco	2.00	200	eP		Pn	19 51 36.8	-2.1
HUIG				i S		Sn	19 52 02.4	-1.5
TPIG	Tehuac#an	2.03	292	i P		Pn	19 51 38.6	-0.8
TPIG				i S		Sn	19 52 04.0	-0.6
UTMO	Huajuapan	2.31	275	i P		Pn	19 51 42.0	-1.1
UTMO				i S		Sn	19 52 08.4	-2.7
TGIG		2.33	112	i P		Pn	19 51 42.4	-0.9
TGIG				i S		Sn	19 52 09.6	-2.0
PCIG		2.84	133	i P		Pn	19 51 49.2	-0.8
PCIG				i S		Sn	19 52 22.2	-1.4
PNIG	Pinotepa	2.91	245	i P		Pn	19 51 47.0	-3.8
PNIG				i S		Sn	19 52 21.0	-4.2
PPM	Popocatepetl	3.38	295	i P		Pn	19 51 58.2	+0.9
PPM				i S		Sn	19 52 37.9	+1.3

IDC 24 20:09:15.8±8.8, 2°.45S×138°.62E, h0km, mb3.3/2, mb1 3.6/3, mb1mx3.3/14, mbtmp3.4/3, ML3.6/1, Error ellipse: s-maj=378.5km s-min=29.1km az=85.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.88	193	P		Pn	20 13 25.1	-1.0
	0.2nm,0.3s,baz=14,slow=13,SNR=10							
ASAR	Alice Springs	21.58	192	P		P	20 14 07.8	+0.7
	0.7nm,0.7s,baz=22,slow=10,SNR=10							
MKAR	Makanchi Array	69.53	322	P		P	20 20 26.5	+0.1
	0.6nm,1.0s,baz=106,slow=7.2,SNR=3.6							

*IDC **24** 20:10:26.0±1.1, 2°.54S×138°.50E, h0km, mb4.0/6, mb1 4.2/8, mb1mx4.0/14, mbtmp4.1/8, ML4.1/1, MS3.6/1, Ms1 3.6/1, ms1mx2.2/29, Error ellipse: s-maj=42.1km s-min=13.9km az=88.0*

*NEIC **24** 20:10:31.1±0.7, 2°.57S×138°.41E, h35km, mb4.3/8, Error ellipse: s-maj=23.5km s-min=8.7km az=84.0*

ISC 24 20:10:32.4±5.5, 2°.6S±0°.2×138°.2E±0°.2, h37km±52km, n28, σ1§03/27, mb4.2/14, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
WRAB	Tennant Creek	17.61	192	ePn		Pn	20 14 36.0	+1.0
	12nm,0.8s							
WRA	Warramunga Arr	17.62	192	P		Pn	20 14 34.4	-0.8
	0.6nm,0.3s,baz=17,slow=12,SNR=15							
WRA				S		S	20 17 45.2	-12
	0.1nm,0.3s,baz=8.9,slow=22,SNR=3.7							
FITZ	Fitzroy Crossi	19.71	218	P		Pn	20 14 59.6	-0.9
	0.1nm,0.3s,baz=84,slow=17,SNR=3.1							
FITZ				LR		LR	20 22 57.2	
	comp=Z,145nm,18.4s,baz=127,slow=38							
ASAR	Alice Springs	21.33	191	P		P	20 15 16.1	-0.1
	5.8nm,0.7s,mb4.0,baz=23,slow=9.4,SNR=14							
ASAR				S		S	20 19 16.9	+5.7
	0.9nm,0.9s,baz=12,slow=28,SNR=3.6							
KKM	Kota Kinabalu	23.60	291	P		P	20 15 39.4	-0.9
MBWA	Marble Bar	25.76	223	eP		P	20 16 03.0	+3.3
	10nm,1.0s,mb4.3							
KSM	Kuching	28.20	278	eP		P	20 16 27.8	+5.9
	7.6nm,1.2s,mb4.2							
CM31	Chiang Mai Arr	43.97	300	P		P	20 18 37.5	+1.1
	2.4nm,0.6s,mb4.1							
CMAR	Chiang Mai Arr	43.97	300	P		P	20 18 37.3	+1.0
	0.9nm,0.6s,mb3.7,baz=117,slow=6.3,SNR=10.0							
GTA	Gaotai	54.71	324	eP		P	20 20 01.1	+3.0
GTA				pP		pP	20 20 06.0	-3.0
GTA				sP		sP	20 20 08.1	-5.2
GTA				pmax		pmax		
	comp=Z,4.0nm,1.2s,mb4.3							
ULN	Ulaanbaatar	57.18	336	eP		P	20 20 15.2	-0.4
SONM	Songino Array	57.44	335	P		P	20 20 17.4	0.0
	comp=Z,0.6nm,0.8s,mb3.7,baz=141,slow=5.7,SNR=5.8							
TLY	Talaya	61.54	336	P		P	20 20 41.0	-4.6
YAK	Yakutsk	64.81	356	P		P	20 21 08.4	+1.4
CASY	Casey	66.45	192	P		P	20 21 17.7	+0.1
MK31	Makanchi Array	69.42	323	eP		P	20 21 33.2	-3.5
MKAR	Makanchi Array	69.42	323	P		P	20 21 36.7	0.0
	comp=Z,5.1nm,1.1s,mb4.4,baz=97,slow=9.9,SNR=13							
MKAR	Makanchi Array	69.42	323	P		P	20 21 36.7	0.0
ZAA0	Zalesovo Array	71.62	330	eP		P	20 21 49.1	-0.9
ZALV	Zalesovo Beam	71.62	330	P		P	20 21 49.0	-0.9
	comp=Z,1.3nm,0.7s,mb4.0,baz=96,slow=4.5,SNR=5.2							
TKM2	Tokmak 2	72.15	317	eP		P	20 21 52.2	-1.2
	comp=Z,2.7nm,0.8s,mb4.2							
PPT	Papeete	72.25	108	eLR		LR	20 21 40.8	
	comp=Z,475nm,25.2s							
UCH	Uchtor	72.65	316	eP		P	20 21 57.6	+1.2
	comp=Z,15nm,1.6s,mb4.7							
KURK	Kurchatov	73.37	325	eP		P	20 21 59.9	-0.6
	comp=Z,4.9nm,1.1s,mb4.3							
BVAR	Borovoye Array	78.96	325	P		P	20 22 32.1	-0.1
	comp=Z,3.2nm,0.9s,mb4.3,baz=116,slow=6.8,SNR=15							
BRVK	Borovoye	79.03	325	eP		P	20 22 32.1	-0.5
	comp=Z,4.1nm,0.9s,mb4.4							
CPUP	Villa Florida	147.53	153	PKPbc		PKPbc	20 30 11.4	-2.0
	comp=Z,0.5nm,0.3s,baz=336,slow=3.1,SNR=3.6							
LPAZ	La Paz	147.89	127	PKPbc		PKPbc	20 30 14.6	0.0
	comp=Z,2.0nm,0.8s,baz=248,slow=5.4,SNR=4.3							

IDC 24 20:15:37.7±6.6, 2°.60S×138°.18E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.5/13, mbtmp3.6/5, ML3.4/1, Error ellipse: s-maj=316.5km s-min=26.6km az=86.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.64	192	P		Pn	20 19 44.8	-0.3
	0.1nm,0.3s,baz=13,slow=12,SNR=3.6							
ASAR	Alice Springs	21.35	191	P		P	20 20 27.0	+0.3
	0.7nm,0.7s,baz=11,slow=12,SNR=4.6							
MKAR	Makanchi Array	69.38	323	P		P	20 26 47.6	+0.2
	0.6nm,0.8s,baz=116,slow=6.5,SNR=5.1							
ZALV	Zalesovo Beam	71.57	330	P		P	20 27 00.7	+0.1
	0.3nm,0.3s,baz=114,slow=4.0,SNR=2.6							
BVAR	Borovoye Array	78.92	325	P		P	20 27 43.0	0.0
	0.3nm,0.5s,baz=114,slow=6.6,SNR=3.9							

*BJI **24** 20:22:31.4, 62°.49N×150°.33W, h106km, mB4.8/5, mb4.5/6*

*ISCJB **24** 20:22:35.6±0.2, 62°.90N±0°.03×150°.74W±0°.06, h112km±2km, mb4.1/24, Error ellipse: s-maj=4.9km s-min=4.5km az=145.3*

*NEIC **24** 20:22:37.0, 62°.89N×150°.70W, h104km, mb4.1/6, After AEIC.*

*IDC **24** 20:22:38.2±1.0, 63°.11N×150°.66W, h106km±9km, mb3.6/14, mb1 3.7/15, mb1mx3.6/26, mbtmp3.6/15, MS3.9/3,*

Ms1 3.9/3, ms1mx3.1/38, Error ellipse: s-maj=26.6km s-min=12.6km az=33.0

ISC 24 20:22:36.8±0.2, 62°.89N±0°.03×150°.76W±0°.06, h105km±2km, h108km±2.1km; pP-P, n75, σ0s91/80, mb4.1/24, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRF	**Thorofare Moun**	**0.60**	**20**	P	**Pn**	**20 22 53.9**	**+0.1**
TRF				S	**Sn**	**20 23 06.5**	**-0.1**
PPLA	**Purkeypile**	**0.66**	**271**	P	**Pn**	**20 22 54.7**	**+0.5**
PPLA				S	**Sn**	**20 23 07.7**	**+0.3**
SKT	**Skwentna**	**0.98**	**202**	P	**Pn**	**20 22 57.3**	**0.0**
RND	**Reindeer**	**1.01**	**58**	P	**Pn**	**20 22 57.6**	**0.0**
RND				S	**Sn**	**20 23 12.7**	**+3.8**
MCK	**McKinley**	**1.18**	**43**	P	**Pn**	**20 22 59.5**	**0.0**
CHUM	**Lake Minchumin**	**1.22**	**326**	P	**Pn**	**20 23 00.2**	**+0.3**
CHUM				S	**Sn**	**20 23 17.1**	**+3.1**
GHO	**Glory Hole Cre**	**1.41**	**142**	P	**Pn**	**20 23 02.7**	**+0.6**
PMR	**Palmer**	**1.51**	**149**	P	**Pn**	**20 23 03.2**	**-0.1**
PMR				S	**Sn**	**20 23 23.2**	**+2.2**
SML	**Sawmill**	**1.56**	**133**	P	**Pn**	**20 23 04.1**	**+0.1**
SML				S	**Sn**	**20 23 26.1**	**+3.7**
FIB	**Fire Island**	**1.75**	**171**	P	**Pn**	**20 23 07.3**	**+1.0**
RC01	**Rabbit Creek A**	**1.87**	**165**	P	**Pn**	**20 23 07.4**	**-0.4**
COLA	**College**	**2.37**	**32**	P	**Pn**	**20 23 14.3**	**0.0**
SLKM	**Skilak Lake**	**2.40**	**174**	P	**Pn**	**20 23 14.8**	**+0.1**
TTA	**Tatalina**	**2.41**	**273**	eP	**Pn**	**20 23 14.6**	**-0.1**
TT01	**Tatalina**	**2.41**	**273**	P	**Pn**	**20 23 14.8**	**0.0**
PAX	**Paxson**	**2.42**	**86**	P	**Pn**	**20 23 15.5**	**+0.6**
IL1	**Eielson Array**	**2.55**	**40**	P	**Pn**	**20 23 16.4**	**-0.2**
RSO	**Redoubt South**	**2.61**	**202**	ePn	**Pn**	**20 23 18.3**	**+0.9**
SEW	**Seward**	**2.86**	**167**	P	**Pn**	**20 23 20.9**	**+0.2**
SVW2	**Sparrevohn**	**2.90**	**234**	P	**Pn**	**20 23 21.3**	**+0.1**
DIV	**Divide**	**2.94**	**125**	P	**Pn**	**20 23 20.6**	**-1.1**
DOT	**Dot Lake**	**3.12**	**73**	P	**Pn**	**20 23 24.3**	**+0.1**
MENT	**Mentasta**	**3.22**	**86**	eP	**Pn**	**20 23 25.7**	**+0.2**
EYAK	**Cordova Ski Ar**	**3.34**	**132**	P	**Pn**	**20 23 26.7**	**-0.4**
IM3	**Indian Mountai**	**3.37**	**339**	P	**Pn**	**20 23 27.6**	**+0.2**
BMRM	**Bremner River**	**3.49**	**121**	P	**Pn**	**20 23 28.0**	**-1.1**
AUL	**Augustine Lava**	**3.75**	**201**	P	**Pn**	**20 23 34.8**	**+2.2**
MID	**Middleton Isla**	**4.08**	**146**	eP	**Pn**	**20 23 36.5**	**-0.5**
BCA3	**Beaver Creek A**	**4.10**	**84**	P	**Pn**	**20 23 36.9**	**-0.4**
COLD	**Coldfoot**	**4.37**	**3**	P	**Pn**	**20 23 41.3**	**+0.5**
EGAK	**Eagle**	**4.65**	**62**	P	**Pn**	**20 23 44.2**	**-0.5**
KDAK	**Kodiak Island**	**5.20**	**191**	P	**Pn**	**20 23 50.6**	**-1.5**
	6.9nm,0.3s,baz=41,slow=9.0,SNR=50						
KDAK				S	**Sn**	**20 24 48.5**	**-2.3**
	7.9nm,0.3s,baz=295,slow=21,SNR=5.6						
KDAK	**Kodiak Island**	**5.20**	**191**	P	**Pn**	**20 23 51.5**	**-0.7**
DAWY	**Dawson**	**5.23**	**72**	P	**Pn**	**20 23 52.5**	**0.0**
BM3	**Burnt Mountain**	**5.24**	**27**	P	**Pn**	**20 23 52.8**	**+0.3**
OHAK	**Old Harbor**	**5.82**	**194**	P	**Pn**	**20 23 59.1**	**-1.5**
PNL	**Peninsula**	**6.35**	**115**	P	**Pn**	**20 24 07.8**	**+0.1**
SKAG	**Skagway**	**8.20**	**108**	eP	**Pn**	**20 24 32.2**	**-0.6**
BESE	**Bessie Mountai**	**8.90**	**112**	P	**Pn**	**20 24 41.5**	**-0.7**
INK	**Inuvik**	**8.94**	**45**	ePn	**Pn**	**20 24 43.7**	**+0.9**
	35nm,0.8s						
YKA	**Yellowknife Ar**	**16.46**	**75**	P	**Pn**	**20 26 20.5**	**-0.6**
	0.6nm,0.3s,baz=285,slow=10,SNR=20						
RES	**Resolute Bay**	**22.30**	**35**	eP	**P**	**20 27 22.1**	**-2.8**
	3.6nm,0.7s,mb3.8						
ELK	**Elko**	**30.54**	**120**	P	**P**	**20 28 42.5**	**+2.7**
	0.2nm,0.3s,mb3.4,baz=14,slow=13,SNR=2.4						
ELK				pP	pP	20 29 04.7	+1.6
	0.7nm,0.7s,baz=270,slow=10,SNR=2.5						
ELK	**Elko**	**30.54**	**120**	P	**P**	**20 28 42.5**	**+2.7**
ELK				pP	pP	20 29 04.7	+1.6
PDAR	**Pinedale Array**	**31.21**	**111**	P	**P**	**20 28 48.1**	**+2.3**
	0.6nm,0.7s,mb3.4,baz=331,slow=5.6,SNR=5.1						
PDAR				pP	pP	20 29 11.3	+2.2
	0.7nm,0.7s,baz=324,slow=7.3,SNR=3.4						
PDAR				LR	LR	20 42 19.3	
	comp=Z,182nm,21.8s,baz=344,slow=38						
NVAR	**Mina Array Bea**	**31.37**	**126**	pP	pP	20 29 12.8	+2.3
	0.7nm,0.8s,baz=282,slow=7.3,SNR=3.5						
SPITS	**Spitsbergen Ar**	**38.95**	**4**	P	**P**	**20 29 51.6**	**-0.1**
	0.8nm,0.4s,mb4.0,baz=8.3,slow=6.3,SNR=14						
SCHQ	**Schefferville**	**41.15**	**61**	P	**P**	**20 30 10.8**	**+0.7**
	3.9nm,0.6s,mb4.4,baz=340,slow=8.0,SNR=6.3						
SCHQ	**Schefferville**	**41.15**	**61**	P	**P**	**20 30 10.8**	**+0.7**
TXAR	**Lajitas Array**	**45.12**	**116**	P	**P**	**20 30 43.7**	**+1.4**
	0.4nm,0.6s,mb3.4,baz=327,slow=8.1,SNR=6.0						
MDJ	**Mudanjiang**	**47.08**	**286**	P	**P**	**20 30 57.3**	**-0.2**
MDJ				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
MDJ				pmax	pmax		
	comp=Z,100nm,5.2s						
ARCES	**ARCESS Array B**	**47.84**	**2**	P	**P**	**20 31 02.5**	**-0.6**
	comp=Z,3.3nm,0.9s,mb4.2,baz=17,slow=8.9,SNR=5.3						
ARCES	**ARCESS Array B**	**47.84**	**2**	P	**P**	**20 31 02.5**	**-0.6**
TKL	**Tuckaleechee C**	**48.57**	**91**	LR	LR	20 54 59.8	
	comp=Z,268nm,21.7s,baz=346,slow=40						
ULN	**Ulaanbaatar**	**53.70**	**305**	eP	**P**	**20 31 47.6**	**+0.3**
	comp=Z,0.9nm,0.5s,mb4.1						
SONM	**Songino Array**	**53.97**	**306**	P	**P**	**20 31 50.5**	**+1.2**
	comp=Z,1.3nm,0.8s,mb4.0,baz=27,slow=6.1,SNR=13						
SONM				pP	pP	20 32 16.2	+1.8
	comp=Z,0.3nm,0.9s,baz=88,slow=36,SNR=2.1						
ZAA0	**Zalesovo Array**	**55.68**	**324**	eP	**P**	**20 32 01.0**	**-0.5**
ZALV	**Zalesovo Beam**	**55.68**	**324**	P	**P**	**20 32 01.1**	**-0.3**
	comp=Z,1.0nm,0.5s,mb4.1,baz=12,slow=7.6,SNR=6.0						
HFS	**Hagfors**	**56.73**	**9**	P	**P**	**20 32 08.7**	**-0.1**
	comp=Z,1.6nm,0.8s,mb4.1,baz=345,slow=9.2,SNR=4.7						
HHC	**Hu-ho-hao-te**	**57.81**	**297**	eP	**P**	**20 32 17.1**	**+0.4**
HHC				pP	pP	20 32 43.9	+1.7
HHC				sP	sP	20 32 56.5	+2.7
HHC				PcP	PcP	20 33 08.9	+0.8
HHC				PP	PP	20 34 29.0	+3.5
HHC				ScP	ScP	20 36 57.3	-0.8
HHC				PcS	PcS	20 37 09.6	+0.1
HHC				S	**S**	**20 40 05.0**	**-2.6**
HHC				sS	sS	20 40 51.1	-0.2
HHC				ScS	ScS	20 41 52.3	-3.4
HHC				SS	SS	20 43 58.3	-0.7
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
HHC				pmax	pmax		
	comp=Z,95nm,4.8s						
HHC				LR	LR		
	comp=N,74nm,16.8s						
HHC				LR	LR		
	comp=E,120nm,15.6s						
HHC				LR	LR		
	comp=Z,95nm,15.6s						
EKA	**Eskdalemuir Ar**	**59.44**	**21**	P	**P**	**20 32 27.2**	**-0.5**
	comp=Z,1.4nm,0.8s,mb4.0,baz=324,slow=5.3,SNR=3.7						
BRVK	**Borovoye**	**59.99**	**333**	eP	**P**	**20 32 31.5**	**-0.1**
	comp=Z,3.6nm,0.9s,mb4.4						
BVAR	**Borovoye Array**	**60.00**	**333**	P	**P**	**20 32 31.9**	**+0.2**
	comp=Z,1.4nm,0.3s,mb4.4,baz=53,slow=6.5,SNR=18						
BVAR				PcP	PcP	20 33 18.5	+1.8
	comp=Z,0.4nm,0.4s,baz=4.5,slow=2.4,SNR=4.3						
KURK	**Kurchatov**	**60.23**	**326**	eP	**P**	**20 32 33.1**	**-0.2**
MK31	**Makanchi Array**	**62.83**	**322**	eP	**P**	**20 32 49.3**	**-1.5**
MKAR	**Makanchi Array**	**62.83**	**322**	P	**P**	**20 32 50.4**	**-0.4**
	comp=Z,0.9nm,0.6s,mb3.9,baz=49,slow=9.5,SNR=15						
WMQ	**Urumqi**	**63.91**	**317**	eP	**P**	**20 32 59.0**	**+1.0**
LZH	**Lanzhou**	**65.00**	**300**	eP	**P**	**20 33 04.5**	**-0.6**
LZH				pP	pP	20 33 30.5	-0.6
LZH				sP	sP	20 33 39.0	-3.6
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.7						
ABKAR	**Akbulak array**	**65.58**	**338**	eP	**P**	**20 33 08.6**	**-0.1**
	comp=Z,1.6nm,0.5s,mb4.1						
AKASG	**Malin Array Be**	**66.76**	**0**	P	**P**	**20 33 15.6**	**-0.6**
	comp=Z,0.5nm,0.4s,mb3.7,baz=3.1,slow=6.8,SNR=5.1						
TKM2	**Tokmak 2**	**68.23**	**325**	eP	**P**	**20 33 26.0**	**+0.3**
	comp=Z,2.8nm,0.8s,mb4.1						
EKS2	**Erkin-Say**	**68.95**	**326**	eP	**P**	**20 33 31.0**	**+0.9**
	comp=Z,2.9nm,0.9s,mb4.1						
CD2	**Chengdu**	**69.56**	**298**	eP	**P**	**20 33 33.6**	**-0.4**
CD2				pP	pP	20 34 01.3	+1.0
CD2				sP	sP	20 34 13.6	+1.9
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
CD2				pmax	pmax		
	comp=Z,30nm,4.2s						
KEST	**Kesra**	**80.43**	**16**	LR	LR	21 14 13.7	
	comp=Z,39nm,19.9s,baz=25,slow=39						
CMAR	**Chiang Mai Arr**	**82.60**	**296**	P	**P**	**20 34 49.1**	**+1.1**
	comp=Z,0.4nm,0.5s,mb3.5,baz=3.6,slow=7.3,SNR=4.2						

*IDC **24** 20:26:15.9±2.5, 2°.56S×138°.74E, h0km, mb3.7/7, mb1 3.9/8, mb1mx3.8/15, mbtmp3.8/8, ML4.1/1, Error ellipse: s-maj=83.1km s-min=21.5km az=90.0*
*ISCJB **24** 20:26:20.9±3.8, 2°.67S±0°.06×138°.3E±0°.2, h33km±27km, mb3.7/7, Error ellipse: s-maj=38.6km s-min=9.0km az=7.0*
*NEIC **24** 20:26:21.7±1.2, 2°.64S×138°.63E, h35km, mb4.0/2, Error ellipse: s-maj=40.5km s-min=8.6km az=92.0*

ISC 24 20:26:23.7±2.9, 2.70S±0°.09×138°.4E±0°.2, h48km±24km, n14, σ0s89/17, mb3.7/7, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**11.57**	**210**	ePn	**Pn**	**20 29 06.7**	**+0.4**
KAKA				eSn	**Sn**	**20 31 14.2**	**0.0**
WRAB	**Tennant Creek**	**17.58**	**193**	ePn	**Pn**	**20 30 26.2**	**+0.8**
	5.8nm,0.7s						
WRA	**Warramunga Arr**	**17.59**	**193**	P	**Pn**	**20 30 24.6**	**-1.0**
	0.7nm,0.3s,baz=16,slow=13,SNR=24						
WRA				S	**S**	**20 33 37.8**	**-8.6**
	0.1nm,0.3s,baz=8.8,slow=23,SNR=4.1						
FITZ	**Fitzroy Crossi**	**19.78**	**218**	P	**Pn**	**20 30 51.0**	**-1.0**
	0.8nm,0.5s,baz=44,slow=13,SNR=5.5						
ASAR	**Alice Springs**	**21.29**	**191**	P	**P**	**20 31 07.0**	**+0.6**
	2.6nm,0.7s,mb3.7,baz=20,slow=11,SNR=30						
ASAR				S	**S**	**20 35 00.1**	**-0.2**
	1.2nm,0.8s,baz=9.0,slow=24,SNR=4.6						
CMAR	**Chiang Mai Arr**	**44.18**	**300**	P	**P**	**20 34 28.6**	**+0.3**
	0.7nm,0.6s,mb3.6,baz=119,slow=6.2,SNR=6.3						
SONM	**Songino Array**	**57.59**	**335**	P	**P**	**20 36 07.1**	**-1.5**
	0.2nm,0.6s,mb3.4,baz=162,slow=9.1,SNR=2.3						
MK31	**Makanchi Array**	**69.61**	**323**	eP	**P**	**20 37 28.7**	**+0.7**
MKAR	**Makanchi Array**	**69.61**	**323**	P	**P**	**20 37 27.8**	**-0.2**
	1.1nm,0.8s,mb3.8,baz=98,slow=8.9,SNR=11						
MKAR	**Makanchi Array**	**69.61**	**323**	P	**P**	**20 37 27.8**	**-0.2**
ZALV	**Zalesovo Beam**	**71.78**	**330**	P	**P**	**20 37 39.9**	**-1.1**
	0.4nm,0.3s,mb3.8,baz=104,slow=6.1,SNR=3.4						
UCH	**Uchtor**	**72.84**	**316**	P	**P**	**20 37 50.0**	**+2.3**
BVAR	**Borovoye Array**	**79.14**	**325**	P	**P**	**20 38 23.2**	**0.0**
	0.8nm,0.7s,mb3.8,baz=114,slow=6.8,SNR=6.2						
BRVK	**Borovoye**	**79.21**	**325**	eP	**P**	**20 38 23.9**	**+0.2**
	2.1nm,0.7s,mb4.2						

MAN 24 20:36:08, 8°.88N×126°.40E, h21km, mb4.9, ML3.9, MS3.9, 3C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.78**	**276**	eP	Pb	20 36 23.8	+0.9
BUTP				eS	Sb	20 36 35.4	+2.5
BUKP	**Musuan**	**1.66**	**233**	eP	Pn	20 36 37.2	+1.3
BUKP				eS	Sn	20 36 58.5	+2.0
CGP	**Cagayan de Oro**	**1.74**	**256**	⇑P	Pn	20 36 36.7	-0.3
CGP				/S	Sn	20 36 58.8	+0.2
MATI	**Mati**	**1.93**	**184**	eP	Pn	20 36 40.0	+0.4
MSLP	**Maasin**	**1.97**	**309**	eP	Pn	20 36 41.8	+1.7
MSLP				eS	Sn	20 36 56.1	-8.0
DMPH	**Davao City--Mi**	**2.00**	**206**	⇑eP	Pn	20 36 41.5	+1.0
DMPH				eS	Sn	20 37 07.2	+2.3
TBP	**Tagbilaran**	**2.63**	**288**	eP	Pn	20 36 50.5	+1.2
OCLP	**Ormoc**	**2.79**	**321**	eP	Pn	20 36 53.7	+2.3
LLP	**Lapu-Lapu**	**2.79**	**301**	⇑eP	Pn	20 36 53.4	+1.9
LLP				eS	Sn	20 37 28.1	+3.4
BESP	**Borongan**	**2.86**	**341**	eP	Pn	20 36 54.7	+2.2
PAGZ	**Pagadian**	**3.16**	**251**	eP	Pn	20 36 57.7	+1.2
CNP	**Cataman**	**3.99**	**335**	eP	Pn	20 37 08.9	+0.9
GUIM	**Jordan**	**4.14**	**295**	eP	Pn	20 37 11.4	+1.4
PVCP	**Virac**	**5.18**	**335**	eP	Pn	20 37 26.1	+1.8

*TAP **24** 20:47:58.5, 21°.51N×121°.30E, h73km, ML3.9, C*
*JMA **24** 20:48:03.1±0.4, 21°.77N×121°.46E, h84km, M3.7*

ISC 24 20:48:01.3±0.7, 21°.58N±0°.04×121°.41E±0°.03, h51km±11km, n43, σ1s01/80, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.48**	**16**	P	**Pn**	**20 48 12.5**	**+0.1**
	baz=24						
LAY				S	**Sn**	**20 48 22.8**	**+2.5**
	baz=24						
TSEB	**Hengchuen, Pin**	**0.57**	**304**	eP	**Pn**	**20 48 12.9**	**-0.6**
	baz=309						
TSEB				eS	**Sn**	**20 48 23.6**	**+1.3**
	baz=309						
TWK1	**Hengchun**	**0.67**	**303**	eP	**Pn**	**20 48 14.0**	**-0.7**
	baz=311						
TWK1				eS	**Sn**	**20 48 24.9**	**+0.4**
	baz=311						
HEN	**Hengchun**	**0.76**	**305**	eP	**Pn**	**20 48 15.1**	**-0.7**
	baz=304						
HEN				eS	**Sn**	**20 48 27.1**	**+0.8**
	baz=304						
TAW	**Tawu**	**0.91**	**329**	eP	**Pn**	**20 48 15.8**	**-2.0**
	baz=344						
TAW				eS	**Sn**	**20 48 28.0**	**-2.1**
	baz=344						
EAST	**Anshuo**	**0.96**	**327**	⇑iP	**Pn**	**20 48 17.4**	**-1.1**
	baz=342						
EAST				eS	**Sn**	**20 48 29.4**	**-1.7**
	baz=342						
SCZT	**Fangliau**	**1.08**	**317**	eP	**Pn**	**20 48 20.0**	**-0.2**
	baz=324						
SCZT				eS	**Sn**	**20 48 32.9**	**-1.1**
	baz=324						
ECL	**Taimali**	**1.10**	**338**	P	**Pn**	**20 48 18.8**	**-1.6**
	baz=350						
ECL				eS	**Sn**	**20 48 32.6**	**-2.0**
	baz=350						
TTN	**Taitung**	**1.20**	**348**	eP	**Pn**	**20 48 21.6**	**-0.1**
	baz=353						
TTN				eS	**Sn**	**20 48 37.3**	**+0.4**
	baz=353						
TWG	**Pinlang**	**1.28**	**346**	eP	**Pn**	**20 48 21.2**	**-1.6**
	baz=351						
TWG				eS	**Sn**	**20 48 35.8**	**-3.0**
	baz=351						
SSD	**Sandimen**	**1.37**	**328**	eP	**Pn**	**20 48 23.3**	**-0.8**
	baz=341						
SSD				eS	**Sn**	**20 48 41.0**	**-0.1**
	baz=341						
TWM1	**Shoushan**	**1.54**	**324**	eP	**Pn**	**20 48 26.1**	**-0.3**
	baz=316						
TWM1				eS	**Sn**	**20 48 47.2**	**+1.9**
	baz=316						
ELDTW	**Lidau**	**1.65**	**347**	eP	**Pn**	**20 48 27.1**	**-0.8**
	baz=355						
SGST	**Jiashian**	**1.68**	**333**	eP	**Pn**	**20 48 28.8**	**+0.5**
	baz=337						
SGST				eS	**Sn**	**20 48 50.3**	**+1.6**
	baz=337						
STYT	**Tauyuan**	**1.69**	**339**	eP	**Pn**	**20 48 28.9**	**+0.4**
	baz=343						
STYT				eS	**Sn**	**20 48 48.7**	**-0.2**
	baz=343						
TWF1	**Yuli**	**1.77**	**357**	eP	**Pn**	**20 48 28.9**	**-0.7**
	baz=353						
TWF1				eS	**Sn**	**20 48 50.6**	**-0.3**
	baz=353						
CHN1	**Nanshi**	**1.80**	**333**	eP	**Pn**	**20 48 31.0**	**+1.1**
	baz=347						
CHN1				eS	**Sn**	**20 48 52.6**	**+1.0**
	baz=347						
WTP	**Ta-pu**	**1.82**	**336**	eP	**Pn**	**20 48 30.1**	**0.0**
	baz=340						
WTP				eS	**Sn**	**20 48 53.3**	**+1.3**
	baz=340						
TWK	**Hsinying**	**1.89**	**333**	eP	**Pn**	**20 48 31.9**	**+0.8**
	baz=348						
TWK				eS	**Sn**	**20 48 54.1**	**+0.4**
	baz=348						
CHN4	**Tsaushan**	**1.92**	**337**	eP	**Pn**	**20 48 32.3**	**+0.7**
	baz=340						
CHN4				eS	**Sn**	**20 48 55.5**	**+0.9**
	baz=340						
EHY	**Hungye**	**1.92**	**358**	eP	**Pn**	**20 48 31.0**	**-0.6**
	baz=354						
EHY				eS	**Sn**	**20 48 53.2**	**-1.4**
	baz=354						
CHN5	**Tsauling**	**2.12**	**342**	eP	**Pn**	**20 48 33.7**	**-0.7**
	baz=345						
CHN5				eS	**Sn**	**20 48 59.2**	**-0.3**
	baz=345						
ESL	**Shilin**	**2.23**	**1**	eP	**Pn**	**20 48 35.4**	**-0.4**
	baz=357						
ESL				eS	**Sn**	**20 49 01.1**	**-1.0**
	baz=357						
WGK	**Gukeng**	**2.24**	**340**	eP	**Pn**	**20 48 36.0**	**0.0**
	baz=343						
SMLT	**Sun Moon Lake**	**2.34**	**349**	eP	**Pn**	**20 48 37.9**	**+0.5**
	baz=342						
SMLT				eS	**Sn**	**20 49 06.2**	**+1.2**
	baz=342						
TYC	**Yuchr**	**2.37**	**348**	eP	**Pn**	**20 48 37.7**	**-0.1**
	baz=350						
WNT	**Mingjian**	**2.39**	**344**	eP	**Pn**	**20 48 39.1**	**+1.1**
	baz=337						
WHF	**Hehuan Shan**	**2.56**	**357**	eP	**Pn**	**20 48 41.2**	**+0.9**
	baz=348						
WHF				eS	**Sn**	**20 49 11.7**	**+1.4**
	baz=348						
PNG	**Penghu**	**2.62**	**320**	eP	**Pn**	**20 48 38.8**	**-2.4**
	baz=322						
TWT	**Tachien**	**2.67**	**355**	eP	**Pn**	**20 48 42.8**	**+0.9**
	baz=348						
TWT				eS	**Sn**	**20 49 13.2**	**+0.2**
	baz=348						
TWQ1	**Liyutan**	**2.82**	**348**	eP	**Pn**	**20 48 42.9**	**-1.0**
	baz=350						
TWQ1				eS	**Sn**	**20 49 16.0**	**-0.7**
	baz=350						
NNS	**Nan Shan**	**2.85**	**359**	eP	**Pn**	**20 48 45.8**	**+1.5**
	baz=350						
NNS				eS	**Sn**	**20 49 17.8**	**+0.4**
	baz=350						
ENA	**Nanau**	**2.86**	**6**	P	**Pn**	**20 48 44.7**	**+0.4**
	baz=355						
ENA				eS	**Sn**	**20 49 16.9**	**-0.7**
	baz=355						
ENTT	**Nioudou**	**3.05**	**3**	eP	**Pn**	**20 48 47.2**	**+0.2**
	baz=4.0						
ENTT				eS	**Sn**	**20 49 23.1**	**+0.7**
	baz=4.0						
NSTT	**Nanjuang**	**3.06**	**353**	eP	**Pn**	**20 48 48.0**	**+0.7**
	baz=355						
NSK	**Sanguang**	**3.09**	**359**	eP	**Pn**	**20 48 48.6**	**+1.1**
	baz=350						
NSK				eS	**Sn**	**20 49 23.4**	**+0.2**
	baz=350						
TWE	**Neicheng**	**3.14**	**4**	eP	**Pn**	**20 48 48.9**	**+0.7**
	baz=358						
TWE				eS	**Sn**	**20 49 25.3**	**+0.8**
	baz=358						
YOJ	**Yonaguni jima**	**3.23**	**27**	P	**Pn**	**20 48 50.0**	**+0.5**
YOJ				S	**Sn**	**20 49 24.9**	**-1.8**
HATJ	**Hateruma jima**	**3.31**	**41**	P	**Pn**	**20 48 51.2**	**+0.5**
HATJ				S	**Sn**	**20 49 28.4**	**-0.4**
IRIF	**Iriomote-Funau**	**3.48**	**37**	P	**Pn**	**20 48 53.8**	**+0.8**
IRIF				S	**Sn**	**20 49 32.8**	**-0.1**
JKRS	**Kuro-shima**	**3.57**	**42**	P	**Pn**	**20 48 55.2**	**+1.0**
JKRS				S	**Sn**	**20 49 35.1**	**-0.1**
JIJ	**Ishigaki jima**	**3.75**	**42**	P	**Pn**	**20 48 57.0**	**+0.4**
JIJ				eS	**Sn**	**20 49 37.6**	**-1.9**
JTJ	**Tarama**	**4.30**	**44**	P	**Pn**	**20 49 05.1**	**+0.9**
JTJ				S	**Sn**	**20 49 52.6**	**-0.5**

*IDC **24** 20:48:54.6±1.3, 2°.57S×138°.52E, h0km, mb3.6/5, mb1 3.8/7, mb1mx3.6/15, mbtmp3.7/7, ML3.6/2, Error ellipse: s-maj=49.1km s-min=22.8km az=82.0*
*ISCJB **24** 20:48:57.0±1.2, 2°.62S±0°.10×138°.7E±0°.2, h33km, mb3.5/5, Error ellipse: s-maj=35.0km s-min=12.7km az=169.1*
*NEIC **24** 20:48:59.6±0.7, 2°.63S×138°.59E, h35km, mb3.8/2, Error ellipse: s-maj=23.2km s-min=9.9km az=81.0*

ISC 24 20:48:59.3±1.1, 2°.65S±0°.10×138°.6E±0°.2, h35km, n10, σ0s94/9, mb3.5/5, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRAB	**Tennant Creek**	**17.67**	**193**	eP	**Pn**	**20 53 04.5**	**+1.7**
	5.1nm,0.9s						
WRA	**Warramunga Arr**	**17.68**	**193**	P	**Pn**	**20 53 02.9**	**-0.1**
	0.3nm,0.3s,baz=13,slow=13,SNR=9.5						
CTAO	**Charters Tower**	**18.87**	**157**	eP	**Pn**	**20 53 16.8**	**-0.7**
	8.1nm,1.0s						
FITZ	**Fitzroy Crossi**	**19.93**	**219**	P	**Pn**	**20 53 28.2**	**-2.0**
	0.1nm,0.3s,baz=41,slow=14,SNR=2.0						
ASAR	**Alice Springs**	**21.38**	**192**	P	**P**	**20 53 44.5**	**+0.6**
	1.1nm,0.7s,mb3.3,baz=19,slow=10,SNR=12						
CMAR	**Chiang Mai Arr**	**44.31**	**300**	P	**P**	**20 57 07.1**	**+0.8**
	0.7nm,0.8s,mb3.4,baz=110,slow=6.8,SNR=3.6						
MKAR	**Makanchi Array**	**69.68**	**322**	P	**P**	**21 00 05.0**	**-0.4**
	0.6nm,0.8s,mb3.5,baz=104,slow=10,SNR=5.2						
KURK	**Kurchatov**	**73.61**	**325**	P	**P**	**21 00 29.0**	**0.0**
	0.2nm,0.2s,mb3.7,baz=111,slow=6.9,SNR=4.2						
BVAR	**Borovoye Array**	**79.20**	**325**	P	**P**	**21 01 00.5**	**-0.1**
	0.6nm,0.7s,mb3.6,baz=103,slow=6.5,SNR=4.2						
LPAZ	**La Paz**	**147.57**	**126**	PKPbc	PKPbc	21 08 42.9	+1.9
	0.9nm,0.3s,baz=260,slow=6.1,SNR=19						

*BJI **24** 20:49:14.6, 23°.57N×94°.47E, h134km, mB4.6/2, mb4.4/3*
*ISCJB **24** 20:49:15.9±0.7, 23°.42N±0°.08×94°.49E±0°.07, h122km±8km, mb4.0/14, Error ellipse: s-maj=16.2km s-min=5.5km az=34.6*
*NEIC **24** 20:49:17.7±0.4, 23°.46N×94°.62E, mb4.2/5, Error ellipse: s-maj=12.4km s

ARU	Arti	42.10	331	*e*P	P	20 56 57.7 -0.2
	2.6nm,0.5s,mb4.2					
JOF	Joensuu	57.23	331	*e*p	P	20 58 51.2 -1.2
JOF	Joensuu	57.23	331	*e*p	P	20 58 51.2 -1.2
WRA	Warramunga Arr	58.02	135	P	P	20 58 57.5 -1.0
	3.4nm,0.6s,mb4.5,baz=322,slow=7.5,SNR=10					
WRAB	Tennant Creek	58.03	135	P	P	20 58 57.5 -1.0
VRI	Vrincioaia	58.30	310 ⇓	*i*P	P	20 59 01.6 +1.4
PLOR	Plostina	58.35	310 ⇑	*i*P	P	20 59 02.5 +1.9
MLR	Muntele Rosu	58.86	310 ⇑	*i*P	P	20 59 05.6 +1.5
KAF	Kangasniemi	59.37	330	*e*p	P	20 59 04.8 -2.5
	3.1nm,0.6s,mb4.5					
KAF	Kangasniemi	59.37	330	*e*p	P	20 59 04.8 -2.5
	3.1nm,0.6s,mb4.5					
FINES	FINESS Array B	59.39	329	P	P	20 59 07.2 -0.3
	0.8nm,0.4s,mb4.1,baz=111,slow=7.3,SNR=9.2					
ASAR	Alice Springs	60.46	138	P	P	20 59 14.8 -0.5
	2.6nm,0.7s,mb4.4,baz=318,slow=6.6,SNR=9.4					
ARCES	ARCESS Array B	60.91	338	P	P	20 59 17.7 0.0
	1.6nm,0.7s,mb4.2,baz=83,slow=9.9,SNR=6.8					
NOA	NORSAR Array B	66.56	328	P	P	20 59 54.1 -0.8
	1.1nm,0.8s,mb3.8,baz=86,slow=6.1,SNR=3.5					
STKA	Stephens Creek	71.08	139	P	P	21 00 21.1 -2.2
	1.4nm,1.1s,mb3.7					
LBTB	Lobatse	82.36	239	*e*P	P	21 01 28.3 +1.4
	1.7nm,0.6s,mb4.0					
BOSA	Boshof	84.43	236	P	P	21 01 38.6 +1.2
	2.9nm,0.6s,mb4.3,baz=60,slow=6.7,SNR=9.3					
BOSA				pP	pP	21 02 08.4 +2.5
	1.6nm,0.8s,baz=101,slow=6.3,SNR=1.8					
BOSA	Boshof	84.43	236	*e*P	P	21 01 38.5 +1.0
	3.5nm,0.7s,mb4.3					
BOSA				pP	pP	21 02 08.4 +2.6

GUC ***24*** *20:50:27.4±0.8, 35°.84S×71°.76W, h79km±7km, ML4.6*
NEIC ***24*** *20:50:27.4, 35°.84S×71°.76W, h79km, mb4.2/5, After GUC.*
ISCJB ***24*** *20:50:27.0±0.4, 35°.82S±0°.03×71°.84W±0°.08, h84km±4km, mb4.0/7, Error ellipse: s-maj=11.3km s-min=4.0km az=21.9*
IDC ***24*** *20:50:29.2±2.7, 35°.83S×71°.65W, h78km±23km, mb3.9/4, mb1 3.9/9, mb1mx3.8/17, mbtmp3.7/9, Error ellipse: s-maj=38.0km s-min=13.8km az=99.0*

ISC 24 20:50:28.1±0.4, 35°.81S±0°.03×71°.85W±0°.08, h78km±4km, n50, σ0s72/66, mb4.0/7, 6B-14D, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCO	Chanco	0.56	278	⇑*i*P	Pn	20 50 42.8	+0.6
CNCO				*i*S	Sn	20 50 53.4	+0.8
CNCO	Chanco	0.56	278	⇑*i*P	Pn	20 50 42.8	+0.6
CNCO				*i*S	Sn	20 50 53.4	+0.8
CCHI	Chillan	0.81	193	⇓*i*P	Pn	20 50 44.5	-0.3
CCHI				*i*S	Sn	20 50 56.8	-0.4
CCHI	Chillan	0.81	193	⇓*i*P	Pn	20 50 44.5	-0.3
CCHI				*i*S	Sn	20 50 56.8	-0.4
NICH	Los Niches	0.95	32	⇓*i*P	Pn	20 50 46.3	-0.2
NICH				*i*S	Sn	20 50 59.7	-0.5
LNV	Longovilo	1.89	11	⇓*i*P	Pn	20 50 58.6	+0.1
LNV	Longovilo	1.89	11	⇓*i*P	Pn	20 50 58.6	+0.1
CACH	El Canelo	1.98	32	⇓*i*P	Pn	20 50 59.6	0.0
CACH				*i*S	Sn	20 51 24.1	+0.5
CACH	El Canelo	1.98	32	⇓*i*P	Pn	20 50 59.6	0.0
CACH				*i*S	Sn	20 51 24.1	+0.5
CHCH	Chadas Angostu	2.12	28	⇑*i*P	Pn	20 51 01.2	-0.3
CHCH				*i*S	Sn	20 51 27.0	0.0
CHCH	Chadas Angostu	2.12	28	⇑*i*P	Pn	20 51 01.2	-0.3
CHCH				*i*S	Sn	20 51 27.0	0.0
TACH	Talagante	2.28	20	⇑*i*P	Pn	20 51 03.3	-0.4
TACH	Talagante	2.28	20	⇑*i*P	Pn	20 51 03.3	-0.4
PCH	Pirque	2.45	27	⇓*i*P	Pn	20 51 05.9	-0.1
PCH				*i*S	Sn	20 51 35.7	+0.7
PCH	Pirque	2.45	27	⇓*i*P	Pn	20 51 05.9	-0.1
PCH				*i*S	Sn	20 51 35.7	+0.7
ANTU	Antumapu	2.45	25	⇓*i*P	Pn	20 51 06.3	+0.3
ANTU				*i*S	Sn	20 51 35.0	0.0
ANTU	Antumapu	2.45	25	⇓*i*P	Pn	20 51 06.3	+0.3
ANTU				*i*S	Sn	20 51 35.0	0.0
ANTU				AML	AML	20 51 38.4	
	comp=E,3μm,0.6s						
SAN	Santiago	2.55	23	⇑*i*P	Pn	20 51 06.7	-0.7
SAN	Santiago	2.55	23	⇑*i*P	Pn	20 51 07.6	-0.7
SAN				AML	AML	20 52 12.4	
	comp=E,3μm,0.5s						
CLCH	Cerro Calan	2.64	25	⇓*i*P	Pn	20 51 08.3	-0.2
CLCH				*e*S	Sn	20 51 39.8	+0.2
CLCH				AML	AML	20 51 54.3	
	comp=N,2μm,0.2s						
FCH	Farellones	2.79	28	⇓*i*P	Pn	20 51 10.8	+0.3
FCH				*i*S	Sn	20 51 44.5	+1.2
FCH	Farellones	2.79	28	⇓*i*P	Pn	20 51 10.8	+0.3
FCH				*i*S	Sn	20 51 44.5	+1.2
FCH				AML	AML	20 51 57.8	
	comp=N,2μm,0.2s						
TMU	Temuco	2.98	191	*e*P	Pn	20 51 13.0	0.0
TMU				*i*S	Sn	20 51 46.5	-1.2
TMU	Temuco	2.98	191	*e*P	Pn	20 51 13.0	0.0
TMU				*i*S	Sn	20 51 46.5	-1.2
PLCA	Paso Flores	5.02	169	P	Pn	20 51 41.8	+0.9
	comp=N,4.2nm,0.3s,baz=329,slow=11,SNR=98						
PLCA	Paso Flores	5.02	169	*e*Pn	Pn	20 51 41.7	+0.9
CFAA	Coronel Fontan	5.17	37	P	Pn	20 51 42.1	-0.8
	comp=N,2.0nm,0.3s,baz=206,slow=7.7,SNR=123						
CFAA				S	Sn	20 52 40.5	-0.7
	comp=N,1.2nm,0.3s,baz=276,slow=17,SNR=4.0						
LCO	Las Campanas	6.85	8	*e*Pn	Pn	20 52 04.6	-1.3
LCO				*e*Sn	Sn	20 53 18.3	-4.1
TRQA	Tornquist	8.22	109	*e*Pn	Pn	20 52 24.8	+0.3
	comp=N,5.0nm,0.5s						
CPUP	Villa Florida	15.61	57	P	Pn	20 54 04.5	+1.0
	comp=N,0.3nm,0.3s,baz=243,slow=16,SNR=2.4						
CPUP	Villa Florida	15.61	57	P	Pn	20 54 04.5	+1.0
USHA	Ushuaia	19.17	174	P	Pn	20 54 46.5	-0.2
	comp=N,0.5nm,0.3s,baz=348,slow=14,SNR=3.2						
LPAZ	La Paz	19.73	11	P	Pn	20 54 53.8	+0.2
	comp=N,0.2nm,0.3s,baz=187,slow=5.8,SNR=19						
BCIP	Isla Barro Col	45.37	349	P	P	20 58 37.4	-1.3
FDF	Fort de France	51.28	13	*e*P	P	20 59 23.0	-1.1
QSPA	South Pole Qui	54.43	180	P	P	20 59 48.4	+1.8
	comp=N,4.1nm,0.8s,mb4.5,baz=144,slow=1.6,SNR=42						
QSPA	South Pole Qui	54.43	180	*e*P	P	20 59 48.3	+1.7
	comp=N,3.3nm,0.6s,mb4.5						
TXAR	Lajitas Array	71.39	331	P	P	21 01 41.2	+1.6
	comp=N,0.2nm,0.5s,mb3.2,baz=144,slow=4.7,SNR=4.0						
TXAR				pP	pP	21 02 00.1	0.0
	comp=N,0.4nm,0.6s,baz=152,slow=8.1,SNR=4.1						
TXAR	Lajitas Array	71.39	331	P	P	21 01 41.2	+1.6
TXAR				pP	pP	21 02 00.1	0.0
MAW	Mawson	71.41	163	P	P	21 01 40.0	+0.7
	comp=N,2.0nm,0.6s,mb4.2,baz=277,slow=3.2,SNR=8.8						
MAW	Mawson	71.41	163	*e*P	P	21 01 39.7	+0.4
	comp=N,1.0nm,1.0s,mb3.6						
SWET	Sewanee	71.87	348	P	P	21 01 41.5	-0.9
MIAR	Mount Ida	72.87	341	*e*P	P	21 01 55.6	+7.3
	comp=N,5.7nm,1.1s,mb4.3						
TSUM	Tsumeb	78.58	105	P	P	21 02 21.1	-0.3
	comp=N,2.0nm,0.9s,mb4.0						
BOSA	Boshof	79.10	117	P	P	21 02 24.2	0.0
	comp=N,2.7nm,0.6s,mb4.2,baz=231,slow=4.2,SNR=6.7						
LBTB	Lobatse	81.41	115	*e*P	P	21 02 36.6	0.0
	comp=N,1.9nm,0.7s,mb4.0						
WRA	Warramunga Arr	119.25	208	PKP	PKPdf	21 09 08.3	-0.3
	comp=N,0.5nm,0.9s,baz=145,slow=1.4,SNR=3.9						
BVAR	Borovoye Array	148.48	45	PKPbc	PKPbc	21 10 06.3	+1.2
	comp=N,0.2nm,0.4s,baz=264,slow=2.6,SNR=3.7						
KURK	Kurchatov	154.06	46	PKPbc	PKPbc	21 10 18.6	+0.5
	comp=N,0.3nm,0.5s,baz=302,slow=3.2,SNR=2.7						
ZALV	Zalesovo Beam	155.65	35	PKPab	PKPab	21 10 41.0	+2.4
	comp=N,0.3nm,0.4s,baz=293,slow=4.4,SNR=2.5						

IDC 24 20:51:47.3±2.5, 2°.62S×138°.94E, h0km, mb3.7/7, mb1 3.8/8, mb1mx3.7/16, mbtmp3.7/8, ML3.8/1, Error ellipse: s-maj=86.4km s-min=21.9km az=91.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.79	194	P	Pn	20 55 55.7	-0.8
	0.3nm,0.3s,baz=16,slow=13,SNR=9.9						
FITZ	Fitzroy Crossi	20.17	219	P	P	20 56 22.9	-0.6
	1.5nm,0.8s,baz=45,slow=13,SNR=2.6						
ASAR	Alice Springs	21.48	193	P	P	20 56 38.5	+0.9
	2.6nm,0.9s,baz=22,slow=11,SNR=8.1						
CMAR	Chiang Mai Arr	44.59	300	P	P	21 00 01.6	+0.1
	0.6nm,1.0s,baz=118,slow=5.2,SNR=4.1						
KMI	Kunming	44.63	310	P	P	21 00 04.1	+2.3
KMI				pmax	pmax		
	comp=Z,7.0nm,1.3s						
MKAR	Makanchi Array	69.86	322	P	P	21 03 00.9	+1.0
	comp=Z,1.7nm,1.0s,baz=104,slow=7.6,SNR=8.6						
ZALV	Zalesovo Beam	71.97	330	P	P	21 03 11.5	-1.1
	comp=Z,0.2nm,0.3s,baz=121,slow=10,SNR=2.6						
KURK	Kurchatov	73.77	325	P	P	21 03 22.9	-0.4
	comp=Z,0.7nm,1.0s,baz=114,slow=6.1,SNR=4.3						
BVAR	Borovoye Array	79.37	325	P	P	21 03 55.8	+0.8
	comp=Z,0.7nm,0.8s,baz=120,slow=6.0,SNR=6.6						

IDC ***24*** *20:52:35.4±1.2, 2°.50S×138°.35E, h0km, mb3.8/8, mb1 3.9/9, mb1mx3.8/15, mbtmp3.8/9, ML3.5/1, MS3.4/2, Ms1 3.4/2, ms1mx2.7/21, Error ellipse: s-maj=57.0km s-min=20.3km az=76.0*
ISCJB ***24*** *20:52:38.1±1.1, 2°.55S±0°.08×138°.5E±0°.3, h33km, mb4.0/13, MS3.4/2, Error ellipse: s-maj=39.7km s-min=10.8km az=173.3*
NEIC ***24*** *20:52:40.6±0.7, 2°.59S×138°.31E, h35km, mb4.4/5, Error ellipse: s-maj=26.7km s-min=8.7km az=83.0*

ISC 24 20:52:41.9±6.4, 2°.6S±0°.2×138°.3E±0°.4, h47km±56km, n19, σ0s79/16, mb4.0/13, MS3.4/2, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRAB	Tennant Creek	17.64	192	P	Pn	20 56 44.9	+0.5
	10nm,0.8s						
WRA	Warramunga Arr	17.65	192	P	Pn	20 56 44.0	-0.4
	0.2nm,0.3s,baz=19,slow=12,SNR=2.8						
ASAR	Alice Springs	21.36	191	P	P	20 57 25.6	+0.3
	1.5nm,0.8s,mb3.4,baz=23,slow=9.3,SNR=3.1						
KKM	Kota Kinabalu	23.71	291	*e*P	P	20 57 50.6	+0.8
	24nm,1.2s,mb4.5						
STKA	Stephens Creek	29.26	174	LR	LR	21 11 54.6	
	comp=Z,100nm,21.7s,MS3.4,baz=200,slow=40						
NWAO	Narrogin (SRO)	36.06	211	P	P	20 59 37.0	-2.1
	36nm,1.3s,mb5.1						
CMAR	Chiang Mai Arr	44.07	300	P	P	21 00 45.8	+0.2
	0.7nm,0.7s,mb3.5,baz=121,slow=6.4,SNR=7.1						
GTA	Gaotai	54.78	324	*e*P	P	21 02 11.0	+4.0
GTA				pP	pP	21 02 15.6	-4.5
GTA				sP	sP	21 02 18.1	-7.4
GTA				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.3						
SONM	Songino Array	57.48	335	P	P	21 02 25.1	-1.0
	comp=Z,0.2nm,0.5s,mb3.5,baz=131,slow=5.9,SNR=2.8						
PETK	Petropavlovsk-	57.86	14	LR	LR	21 22 29.0	
	comp=Z,27nm,21.2s,MS3.3,baz=320,slow=31						
MK31	Makanchi Array	69.49	323	*e*P	P	21 03 45.9	+0.4
MKAR	Makanchi Array	69.49	323	P	P	21 03 45.8	+0.3
	comp=Z,1.1nm,0.8s,mb3.8,baz=98,slow=8.9,SNR=7.6						
ZALV	Zalesovo Beam	71.67	330	P	P	21 03 57.5	-1.1
	comp=Z,0.4nm,0.3s,mb3.8,baz=95,slow=5.1,SNR=2.6						
UCH	Uchtor	72.73	316	*e*P	P	21 04 05.5	+0.3
	comp=Z,6.5nm,1.2s,mb4.4						
KURK	Kurchatov	73.43	325	P	P	21 04 08.9	-0.2
	comp=Z,0.9nm,0.8s,mb3.8,baz=112,slow=5.1,SNR=5.1						
BVAR	Borovoye Array	79.03	325	P	P	21 04 41.2	+0.4
	comp=Z,1.2nm,0.6s,mb4.0,baz=115,slow=6.7,SNR=9.4						
BRVK	Borovoye	79.10	325	*e*P	P	21 04 41.2	0.0
	comp=Z,1.9nm,0.8s,mb4.1						
QSPA	South Pole Qui	87.33	180	P	P	21 05 24.3	+1.1
	comp=Z,2.9nm,1.0s,mb4.5,baz=325,slow=5.3,SNR=4.8						
LPAZ	La Paz	147.79	127	PKPbc	PKPbc	21 12 24.6	+1.9
	comp=Z,1.2nm,0.7s,baz=201,slow=1.9,SNR=5.9						

ATH ***24*** *20:53:47.5, 37°.79N×21°.41E, h22km±2km, MD2.7/4*
CSEM ***24*** *20:53:48.9±0.3, 37°.85N×21°.42E, h19km, MD2.7, Error ellipse: s-maj=7.4km s-min=6.5km az=84.0*
THE ***24*** *20:53:48.8, 37°.84N×21°.42E, h9km±1km, ML2.6/10, Error ellipse: s-maj=1.4km s-min=0.9km az=200.0*
ISCJB ***24*** *20:53:48.2±0.6, 37°.83N±0°.03×21°.41E±0°.03, h9km±4km, Error ellipse: s-maj=4.4km s-min=4.2km az=173.6*

ISC 24 20:53:48.8±0.6, 37°.83N±0°.03×21°.40E±0°.03, h13km±4km, n38, σ0s88/63, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.23	13	*e*PB	Pg	20 53 54.0	+0.2
RLS				*e*SB	Sg	20 53 58.5	+1.4
RLS	Riolos of Patr	0.23	13	*e*Pb	Pg	20 53 54.0	+0.2
RLS				*e*Sb	Sg	20 53 58.5	+1.4
UPR	University Cam	0.54	34	P	Pg	20 53 58.1	-1.3
UPR				S	Sg	20 54 07.4	+0.8
UPR	University Cam	0.54	34	P	Pg	20 53 58.1	-1.3
KFL	Anninata	0.56	300	P	Pg	20 54 00.0	+0.2
LAKA	Lakka	0.61	48	P	Pg	20 53 59.9	-0.8
LAKA				S	Sg	20 54 09.8	+1.1
LAKA	Lakka	0.61	48	P	Pg	20 53 59.9	-0.8
LAKA				S	Sg	20 54 09.8	+1.1
EFP	Efpalio	0.71	34	P	Pg	20 54 01.6	-1.1
EFP				S	Sg	20 54 12.6	+0.6
EFP	Efpalio	0.71	34	*e*PN	Pg	20 54 01.6	-1.1
EFP	Efpalio	0.71	34	P	Pg	20 54 01.6	-1.1
VLS	Valsamata	0.73	298	P	Pg	20 54 02.3	-0.7
VLS				S	Sg	20 54 13.4	+0.9
VLS	Valsamata	0.73	298	*e*PN	Pg	20 54 02.2	-0.8
VLS				*e*SN	Sg	20 54 13.5	+1.0
VLS	Valsamata	0.73	298	P	Pg	20 54 02.3	-0.7
VLS				*e*Sn	Sg	20 54 13.5	+1.0
TRIZ	Trizonia	0.75	45	P	Pg	20 54 02.2	-1.1
TRIZ				S	Sg	20 54 13.7	+0.5
TRIZ	Trizonia	0.75	45	P	Pg	20 54 02.2	-1.1
GUR	Goura	0.75	82	P	Pg	20 54 02.0	-1.4
GUR				S	Sg	20 54 13.3	+0.1
GUR	Goura	0.75	82	*e*PN	Pg	20 54 02.1	-1.3
GUR				*e*SN	Sg	20 54 13.2	0.0
GUR	Goura	0.75	82	P	Pg	20 54 02.0	-1.4
GUR				*e*Sn	Sg	20 54 13.2	0.0
KALE	Kalithea	0.80	46	P	Pg	20 54 03.2	-1.2
KALE				S	Sg	20 54 14.3	-0.6
KALE	Kalithea	0.80	46	P	Pg	20 54 03.2	-1.2
VLX	Vlachokerasia	0.90	121	P	Pg	20 54 06.6	+0.3
VLX				S	Sg	20 54 18.9	+0.9
VLX	Vlachokerasia	0.90	121	P	Pg	20 54 06.6	+0.3
PYL	PYLOS	0.97	164	P	Pg	20 54 06.7	-0.9
PYL				S	Sg	20 54 21.8	+1.4
PYL	PYLOS	0.97	164	P	Pg	20 54 06.7	-0.9
PYL				S	Sg	20 54 21.8	+1.4
DSF	Desfina	1.06	57	P	Pg	20 54 07.7	-1.5
DSF				S	Sg	20 54 23.4	+0.4
DSF	Desfina	1.06	57	P	Pg	20 54 07.7	-1.5
LTK	Loutraki	1.25	81	P	Pn	20 54 10.7	-1.3
LTK				S	Sb	20 54 29.1	+0.8
LTK	Loutraki	1.25	81	*e*PN	Pn	20 54 11.5	-0.5
LTK	Loutraki	1.25	81	P	Pn	20 54 10.7	-1.3
LTK	Loutraki	1.25	81	*e*Pn	Pn	20 54 11.5	-0.5
AGG	Agios Georgios	1.39	31	P	Pn	20 54 13.5	-0.4
AGG				S	Sn	20 54 31.3	-0.9
AGG	Agios Georgios	1.39	31	*e*PN	Pn	20 54 14.3	+0.4
AGG	Agios Georgios	1.39	31	P	Pn	20 54 13.5	-0.4
AGG	Agios Georgios	1.39	31	*e*Pn	Pn	20 54 14.3	+0.4
AGG				S	Sn	20 54 31.3	-0.9
LKR	Lokris	1.50	57	P	Pn	20 54 15.8	+0.4
LKR				S	Sn	20 54 35.4	+0.6
LKR	Lokris	1.50	57	P	Pn	20 54 15.8	+0.4
LKR				S	Sn	20 54 35.4	+0.6
THL	Klokotos Trika	1.79	15	P	Pn	20 54 20.1	+0.7
THL				S	Sn	20 54 42.9	+0.8
THL	Klokotos Trika	1.79	15	P	Pn	20 54 20.1	+0.7
THL				S	Sn	20 54 42.9	+0.8

CSEM ***24*** *20:57:51.6±0.2, 39°.66N×38°.46E, h12km, MD3.2, Error ellipse: s-maj=6.7km s-min=4.8km az=79.0*
DDA ***24*** *20:57:51.6, 39°.62N×38°.41E, h7km±3km, Md3.2*
ISK ***24*** *20:57:51.0, 39°.69N×38°.43E, h8km, MD3.0*
ISCJB ***24*** *20:57:51.8±0.8, 39°.67N±0°.03×38°.46E±0°.05, h10km±6km, Error ellipse: s-maj=6.4km s-min=5.1km az=168.9*

ISC 24 20:57:52.0±0.7, 39°.68N±0°.03×38°.49E±0°.05, h13km±6km, n24, σ0s99/37, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEMA	Kemaliye	0.41	180	*i*P	Pg	20 57 59.3	-1.0
KEMA				*i*S	Sg	20 58 05.5	-0.3
KEMA	Kemaliye	0.41	180	*i*P	Pg	20 57 59.3	-1.0
KEMA				*i*S	Sg	20 58 05.6	-0.2
EZC	Erzincan	0.67	84	*e*PG	Pg	20 58 05.4	+0.3
EZC				*e*SG	Sg	20 58 16.0	+2.1
DARE	Darende-Malaty	0.90	216	*e*PN	Pg	20 58 16.1	+6.6
DARE	Darende-Malaty	0.90	216	*e*Pn	Pn	20 58 16.1	+5.7
PTK	Pertek	1.06	138	*e*PN	Pn	20 58 11.4	-1.1
PTK				*e*SN	Sn	20 58 28.1	+1.1
PTK	Pertek	1.06	138	*e*Pn	Pn	20 58 11.4	-1.1
PTK				*e*Sn	Sn	20 58 28.2	+1.1
GUMT	Gumushane	1.09	44	*e*PN	Pn	20 58 12.3	-0.6
GUMT	Gumushane	1.09	44	*e*Pn	Pn	20 58 12.3	-0.6
SVSK	Karacayir	1.17	282	*e*PN	Pn	20 58 13.2	-0.8
SVSK				*e*SN	Sn	20 58 29.3	-0.6
SVSK	Karacayir	1.17	282	*e*Pn	Pn	20 58 13.2	-0.9
SVSK				*e*Sn	Sn	20 58 29.3	-0.6
ESPY	Espiye-Giresun	1.25	8	*e*PN	Pn	20 58 15.2	+0.2
ESPY	Espiye-Giresun	1.25	8	*e*Pn	Pn	20 58 15.3	+0.2
ELZG	Elazig	1.25	162	*i*P	Pn	20 58 14.3	-0.8
ELZG				*i*S	Sb	20 58 31.4	+0.1
ELZG	Elazig	1.25	162	*i*P	Pn	20 58 14.4	-0.7
ELZG				*i*S	Sb	20 58 31.4	+0.1
GRSN	GIRESUNGRSN	1.25	352	*i*P	Pn	20 58 16.3	+1.2
GRSN				*i*S	Sb	20 58 32.2	+0.8
GRSN	GIRESUNGRSN	1.25	352	*i*P	Pn	20 58 16.3	+1.1
GRSN				*i*S	Sb	20 58 32.2	+0.7
MYA	Malataya	1.36	182	*e*PN	Pn	20 58 17.5	+0.8
MYA	Malataya	1.36	182	*e*Pn	Pn	20 58 17.5	+0.9
SVRC	Sivrice-ELAZID	1.45	154	*e*PN	Pn	20 58 17.7	-0.2
SVRC	Sivrice-ELAZID	1.45	154	*e*Pn	Pn	20 58 17.7	-0.2
SARI	SarD1z-Kayseri	1.72	235	*e*PN	Pg	20 58 26.8	+1.8
DBAD	Bademkaya	2.79	60	*i*P	Pg	20 58 44.1	-1.3
DBAD				*i*S	Sg	20 59 20.4	-1.2
DBAD	Bademkaya	2.79	60	*i*P	Pg	20 58 44.1	-1.4
DBAD				*i*S	Sg	20 59 20.4	-1.2

IDC 24 20:59:17.1±7.5, 2°.18S×138°.26E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.4/15, mbtmp3.4/4, ML3.6/1, MS2.5/1, Ms1 2.5/1, ms1mx2.2/17, Error ellipse: s-maj=347.6km s-min=28.0km az=85.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.07	192	P	Pn	21 03 28.8	-0.9
	0.2nm,0.3s,baz=13,slow=13,SNR=7.2						
ASAR	Alice Springs	21.77	191	P	P	21 04 11.2	+0.7
	1.0nm,0.7s,baz=21,slow=11,SNR=8.2						
TGY	Tagaytay City	23.59	314	LR	LR	21 12 37.2	
	comp=Z,12nm,21.6s,baz=112,slow=34						
MKAR	Makanchi Array	69.09	322	P	P	21 10 24.9	-0.1
	0.3nm,0.8s,baz=120,slow=5.2,SNR=2.9						
BVAR	Borovoye Array	78.62	325	P	P	21 11 20.9	+0.2
	0.1nm,0.4s,baz=116,slow=7.4,SNR=2.2						

CSEM ***24*** *21:05:26.3, 45°.04N×23°.08E, h5km, ML2.4, After BEO*
BEO ***24*** *21:05:26.3±1.1, 45°.04N×23°.08E, h5km±7km, ML2.4/4*
BUC ***24*** *21:05:27.1±2.1, 45°.09N×22°.99E, h7km±9km, MD2.7/3, Error ellipse: s-maj=14.4km s-min=8.2km az=0.0*

ISC 24 21:05:27.0±1.2, 45°.05N±0°.04×22°.98E±0°.07, h4km±10km, n37, σ0s83/51, 16C, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GZR	Gura Zlata	0.37	337	⇑*i*P	Pg	21 05 34.5	+0.4
GZR				*i*S	Sg	21 05 39.1	+0.2
GZR	Gura Zlata	0.37	337	⇑*i*P	Pg	21 05 34.5	+0.4
GZR				*i*S	Sg	21 05 39.1	+0.2
DEV	Deva	0.83	356	⇑*i*P	Pg	21 05 42.7	-0.2
DEV				*i*S	Sg	21 05 54.5	+0.8
DEV	Deva	0.83	356	⇑*i*P	Pg	21 05 42.7	-0.2
DEV	Deva	0.83	356	S	Sg	21 05 54.5	+0.8
BZS	Buzias	1.11	301	*e*Pg	Pg	21 05 48.2	-0.1
BZS				*e*Sg	Sg	21 06 03.5	+0.8
BZS	Buzias	1.11	301	⇑*i*P	Pg	21 05 48.4	+0.1
BZS				*i*S	Sg	21 06 03.6	+0.9
BZS	Buzias	1.11	301	⇑*i*P	Pg	21 05 48.4	+0.1
BZS	Buzias	1.11	301	S	Sg	21 06 03.6	+0.9
BZS	Buzias	1.11	301	*e*Pg	Pg	21 05 48.2	-0.1
BZS				*e*Sg	Sg	21 06 03.5	+0.8
BOLS	Boljevac	1.43	211	*e*Pg	Pn	21 05 52.9	-0

comp=E,16nm,0.7s
UCH Sn **Sn** **21 12 31.4 -10**
EKS2 Erkin-Say 7.02 24 P **Pn** **21 11 25.9 +0.8**
SNR=21
EKS2 Erkin-Say 7.02 24 *e*Pn **Pn** **21 11 25.7 +0.6**
comp=E,11nm,0.7s
EKS2 *e*Sn **Sn** **21 12 44.0 +0.3**
KZA Kyzart 7.10 34 P **Pn** **21 11 26.8 +0.7**
SNR=14
AAK Ala-Archa 7.25 28 P **Pn** **21 11 29.2 +1.1**
comp=E,0.1nm,0.3s,baz=181,slow=5.1,SNR=13
AAK S **Sn** **21 12 48.8 -0.3**
comp=E,0.0nm,0.3s,baz=128,slow=23,SNR=13
CHMS Chumysh 7.66 27 P **Pn** **21 11 34.4 +0.8**
SNR=25
USP Ospenovka 7.80 25 P **Pn** **21 11 36.5 +0.9**
SNR=9.4
TKM2 Tokmak 2 7.93 32 ⇑P **Pn** **21 11 37.7 +0.4**
comp=E,5.7nm,0.5s
TKM2 ⇓S **Sn** **21 13 04.6 -0.9**
comp=E,15nm,0.8s
TKM2 Tokmak 2 7.93 32 P **Pn** **21 11 37.5 +0.3**
SNR=20
TKM2 Tokmak 2 7.93 32 *e*Pn **Pn** **21 11 37.5 +0.2**
comp=E,8.3nm,0.5s
KHET Khetri 9.57 147 *e*S **Sn** **21 13 33.8 -12**
JOSI Joshimath 9.86 123 *e*S **Sn** **21 13 43.6 -8.5**
JOSI AML AML 21 13 51.0
comp=E,59nm,0.4s
JOSI AML AML 21 13 51.3
comp=N,104nm,0.5s
SONA Sohna 10.03 141 *e*S **Sn** **21 13 44.2 -12**
AGRA Agra 11.30 141 *e*x x 21 14 15.0
AGRA AML AML 21 14 21.2
comp=N,57nm,0.8s
AGRA AML AML 21 14 21.3
comp=E,54nm,0.3s
MK31 Makanchi Array 13.97 37 P **Pn** **21 13 01.2 +4.9**
comp=E,5.2nm,0.6s,baz=205,slow=8.1,SNR=33
MK31 Makanchi Array 13.97 37 *e*Pn **Pn** **21 12 58.4 +2.1**
MKAR Makanchi Array 13.97 37 P **Pn** **21 12 57.5 +1.2**
comp=E,0.9nm,0.3s,baz=207,slow=9.3,SNR=39
AB31 Akbulak array 14.88 334 P **Pn** **21 13 07.2 -0.4**
comp=E,4.4nm,0.3s,baz=154,slow=11,SNR=224
AB31 S **Sn** **21 15 43.5 -9.2**
comp=E,1.3nm,0.4s,baz=160,slow=24,SNR=7.9
ABKAR Akbulak array 14.88 334 *e*Pn **Pn** **21 13 06.8 -0.8**
comp=E,12nm,0.4s
ABKAR *e*Sn **Sn** **21 15 42.1 -11**
KURK Kurchatov 15.72 21 P **Pn** **21 13 16.1 -1.9**
comp=E,0.1nm,0.3s,baz=211,slow=10,SNR=12
KURK Kurchatov 15.72 21 Pn **Pn** **21 13 18.7 +0.6**
VOSK Vostochnaya 16.45 2 ⇓P **Pn** **21 13 26.4 -0.6**
comp=E,1.0nm,0.5s
AKTK Aktyubinsk 16.56 332 P **Pn** **21 13 28.9 +0.7**
AKTK S **S** **21 16 20.8 -12**
AKTO Aktyubinsk 16.56 332 P **Pn** **21 13 28.9 +0.7**
comp=E,0.3nm,0.3s,baz=133,slow=14,SNR=11
AKTO S **S** **21 16 20.8 -12**
comp=E,0.1nm,0.3s,baz=217,slow=20,SNR=4.3
ZRNK Zerenda 16.68 358 ⇓P **Pn** **21 13 29.0 -0.7**
comp=E,1.5nm,0.7s
BVAR Borovoye Array 16.74 1 P **Pn** **21 13 30.2 -0.2**
comp=E,0.5nm,0.3s,baz=180,slow=11,SNR=15
BVAR S **S** **21 16 34.6 -1.8**
comp=E,0.1nm,0.3s,baz=170,slow=18,SNR=2.7
BRVK Borovoye 16.77 1 ⇑P **Pn** **21 13 30.7 -0.2**
comp=E,3.7nm,0.8s
BRVK Borovoye 16.77 1 *e*Pn **Pn** **21 13 30.4 -0.4**
comp=E,1.4nm,0.4s
GNI Garni 20.15 289 P **P** **21 14 07.4 -0.1**
ZAA0 Zalesovo Array 20.47 26 *e*Pn **P** **21 14 11.8 +1.1**
ZALV Zalesovo Beam 20.47 26 P **P** **21 14 11.6 +0.9**
comp=E,2.9nm,0.4s,baz=220,slow=11,SNR=20
SONM Songino Array 29.16 55 P **P** **21 15 32.8 +0.9**
comp=E,0.2nm,0.4s,mb3.2,baz=260,slow=8.3,SNR=2.7
ULN Ulaanbaatar 29.60 55 P **P** **21 15 35.5 -0.3**
ARCES ARCESS Array B 41.02 338 P **P** **21 17 14.1 +1.1**
comp=E,1.4nm,0.8s,mb3.6,baz=114,slow=8.1,SNR=6.5
ARCES ARCESS Array B 41.02 338 P **P** **21 17 14.1 +1.1**
NOA NORSAR Array B 44.04 323 P **P** **21 17 36.6 -0.9**
comp=E,0.6nm,0.6s,mb3.4,baz=99,slow=7.8,SNR=2.8
YKA Yellowknife Ar 81.49 2 P **P** **21 46.1 +0.9**
comp=E,0.2nm,0.4s,mb3.1,baz=353,slow=5.5,SNR=5.2
WRA Warramunga Arr 82.60 121 P **P** **21 50.4 -1.3**
comp=E,0.9nm,0.9s,mb3.5,baz=327,slow=4.9,SNR=4.6
ASAR Alice Springs 84.83 124 P **P** **21 22 02.2 -0.7**
comp=E,0.4nm,0.8s,mb3.2,baz=324,slow=4.6,SNR=3.7

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*ISCJB **24** 21:10:03.8±5.2,2°.56S±0°.08×139°.9E±0°.2,h20km±39km, mb3.7/7,Error ellipse: s-maj=26.8km s-min=13.7km az=8.6*
*NEIC **24** 21:10:07.7±0.5,2°.58S×139°.93E,h35km,mb4.0/1,Error ellipse: s-maj=17.1km s-min=8.7km az=92.0*
*IDC **24** 21:10:07.8±1.4,2°.60S×138°.32E,h0km,mb3.5/6, mb1 3.7/7,mb1mx3.6/14,mbtmp3.5/7,ML3.6/1,MS3.3/1, Ms1 3.3/1,ms1mx2.5/21,Error ellipse: s-maj=58.8km s-min=22.9km az=78.0*
ISC 24 21:10:06.3±5.4,2°.57S±0°.08×139°.9E±0°.2,h24km±41km, n18,σ0§83/16,mb3.7/7,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**16.79**	**17**	Pn	**Pn**	**21 14 00.3**	**+0.3**
WRAB	**Tennant Creek**	**18.09**	**197**	*e*P	**Pn**	**21 14 17.9**	**+1.8**
13nm,1.1s							
WRA	**Warramunga Arr**	**18.11**	**197**	P	**Pn**	**21 14 14.6**	**-1.7**
0.2nm,0.3s,baz=13,slow=13,SNR=8.3							
WRA	**Warramunga Arr**	**18.11**	**197**	P	**Pn**	**21 14 14.6**	**-1.7**
CTA	**Charters Tower**	**18.49**	**161**	LR	LR	21 22 21.3	
comp=Z,97nm,21.1s,baz=344,slow=38							
HNR	**Honiara**	**21.06**	**110**	*e*P	**P**	**21 14 48.7**	**-0.2**
ASAR	**Alice Springs**	**21.76**	**195**	P	**P**	**21 14 56.5**	**+0.1**
1.7nm,0.8s,mb3.5,baz=18,slow=11,SNR=12							
CMAR	**Chiang Mai Arr**	**45.40**	**299**	P	**P**	**21 18 19.6**	**-3.8**
0.5nm,0.7s,mb3.5,baz=122,slow=7.1,SNR=4.3							
MDJ	**Mudanjiang**	**47.87**	**350**	P	**P**	**21 18 41.7**	**-0.6**
SONM	**Songino Array**	**58.10**	**334**	P	**P**	**21 19 57.7**	**0.0**
0.3nm,0.6s,mb3.5,baz=146,slow=8.0,SNR=2.4							
MK31	**Makanchi Array**	**70.40**	**322**	*e*P	**P**	**21 21 18.5**	**0.0**
MKAR	**Makanchi Array**	**70.40**	**322**	P	**P**	**21 21 18.6**	**+0.2**
0.8nm,0.8s,mb3.7,baz=102,slow=10,SNR=4.4							
KURK	**Kurchatov**	**74.28**	**325**	P	**P**	**21 21 40.3**	**-1.2**
0.3nm,0.7s,mb3.3,baz=110,slow=6.5,SNR=3.2							
KURK	**Kurchatov**	**74.28**	**325**	P	**P**	**21 21 42.0**	**+0.5**
BVAR	**Borovoye Array**	**79.87**	**325**	P	**P**	**21 22 13.8**	**+0.9**
0.7nm,0.7s,mb3.7,baz=120,slow=8.8,SNR=5.9							
QSPA	**South Pole Qui**	**87.38**	**180**	P	**P**	**21 22 51.1**	**+0.2**
GNI	**Garni**	**95.59**	**310**	*e*P	**P**	**21 23 29.9**	**-0.1**
2.2nm,0.6s,mb4.8							
LPAZ	**La Paz**	**146.56**	**125**	PKPbc	PKPbc	21 29 57.2	+10
0.9nm,0.8s,baz=225,slow=1.4,SNR=3.0							

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*ROM **24** 21:17:06.9±0.2,41°.86N×15°.33E,h6km±1km,Ml2.7/38, Error ellipse: s-maj=2.2km s-min=1.2km az=14.0*
*CSEM **24** 21:17:07.2±0.2,41°.80N×15°.30E,h20km,ML3.5/10,Error ellipse: s-maj=4.1km s-min=2.3km az=20.0*
*ISCJB **24** 21:17:07.2±0.4,41°.86N±0°.02×15°.31E±0°.02,h10km±3km, Error ellipse: s-maj=4.0km s-min=2.5km az=15.3*
ISC 24 21:17:07.9±0.4,41°.85N±0°.02×15°.31E±0°.02,h12km±3km, n91,σ0§96/126,2C-4D,Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FG2	**Serracapriola**	**0.12**	**247**	⇓*i*Pg	**Pg**	**21 17 11.5**	**+0.6**
FG2	**Serracapriola**	**0.12**	**247**	⇓*i*Pg	**Pg**	**21 17 11.5**	**+0.6**
MELA	**Melanico ??? S**	**0.20**	**223**	⇓*i*Pg	**Pg**	**21 17 12.2**	**+0.1**
MELA				Sg	**Sg**	**21 17 15.5**	**+0.5**
4μm,0.4s							
MELA	**Melanico ??? S**	**0.20**	**223**	⇓*i*Pg	**Pg**	**21 17 12.2**	**+0.1**
MELA				Sg	**Sg**	**21 17 15.5**	**+0.5**
4μm,0.4s							
RGNG	**Rignano Grg**	**0.28**	**130**	⇑*i*Pg	**Pg**	**21 17 13.1**	**-0.4**
RGNG				Sg	**Sg**	**21 17 17.1**	**-0.2**
RGNG	**Rignano Grg**	**0.28**	**130**	⇑*i*Pg	**Pg**	**21 17 13.1**	**-0.4**
RGNG				Sg	**Sg**	**21 17 17.1**	**-0.2**
SGRT	**San Giovanni R**	**0.34**	**106**	Pg	**Pg**	**21 17 14.8**	**+0.1**
SGRT				Sg	**Sg**	**21 17 20.3**	**+1.0**
2μm,0.1s							
SGRT	**San Giovanni R**	**0.34**	**106**	Pg	**Pg**	**21 17 14.8**	**+0.1**
SGRT				Sg	**Sg**	**21 17 20.3**	**+1.0**
2μm,0.1s							
CIGN	**Sant'Elia a Pi**	**0.36**	**237**	Pg	**Pg**	**21 17 15.3**	**+0.3**
CIGN				Sg	**Sg**	**21 17 21.6**	**+1.8**
223nm,0.6s							
CIGN	**Sant'Elia a Pi**	**0.36**	**237**	Pg	**Pg**	**21 17 15.3**	**+0.3**
CIGN				Sg	**Sg**	**21 17 21.6**	**+1.8**
223nm,0.6s							
MSAG	**Monte S. Angel**	**0.47**	**107**	Pg	**Pg**	**21 17 17.0**	**-0.2**
MSAG				Sg	**Sg**	**21 17 24.4**	**+1.0**
802nm,0.2s							
MSAG	**Monte S. Angel**	**0.47**	**107**	Pg	**Pg**	**21 17 17.0**	**-0.2**
MSAG				Sg	**Sg**	**21 17 24.4**	**+1.0**
802nm,0.2s							
FRES	**Fresagrandinar**	**0.49**	**285**	Pg	**Pg**	**21 17 18.0**	**+0.5**
518nm,0.4s							
FRES	**Fresagrandinar**	**0.49**	**285**	Pg	**Pg**	**21 17 18.0**	**+0.5**
518nm,0.4s							
MOCO	**Biccari - m.te**	**0.49**	**193**	Pg	**Pg**	**21 17 17.1**	**-0.4**
MOCO				Sg	**Sg**	**21 17 24.6**	**+0.5**
95nm,0.5s							
MS1	**Monte Sant'Ang**	**0.50**	**107**	*i* Pg	**Pg**	**21 17 17.9**	**+0.3**
MS1				*e*Sg	**Sg**	**21 17 25.5**	**+1.3**
FG5	**Orsara di Pugl**	**0.57**	**183**	Pg	**Pg**	**21 17 18.6**	**-0.4**
FG5				Sg	**Sg**	**21 17 26.9**	**+0.5**
111nm,0.2s							
FG5	**Orsara di Pugl**	**0.57**	**183**	Pg	**Pg**	**21 17 18.6**	**-0.4**
FG5				Sg	**Sg**	**21 17 26.9**	**+0.5**
111nm,0.2s							
BSSO	**Busso**	**0.61**	**240**	Pg	**Pg**	**21 17 19.6**	**-0.2**
BSSO				Sg	**Sg**	**21 17 30.2**	**+2.3**
115nm,0.5s							
BSSO	**Busso**	**0.61**	**240**	Pg	**Pg**	**21 17 19.6**	**-0.2**
SACR	**S. Croce Del S**	**0.64**	**225**	Pg	**Pg**	**21 17 19.7**	**-0.6**
SACR				Sg	**Sg**	**21 17 29.6**	**+0.9**
129nm,0.4s							
SACR	**S. Croce Del S**	**0.64**	**225**	Pg	**Pg**	**21 17 19.7**	**-0.6**
SACR				Sg	**Sg**	**21 17 29.6**	**+0.9**
129nm,0.4s							
SGTA	**Sant Agata di**	**0.72**	**176**	Pg	**Pg**	**21 17 20.3**	**-1.5**
SGTA				Sg	**Sg**	**21 17 32.5**	**+1.4**
223nm,0.3s							
SGTA	**Sant Agata di**	**0.72**	**176**	Pg	**Pg**	**21 17 20.3**	**-1.5**
PSB1	**Pescosannita**	**0.73**	**211**	Pg	**Pg**	**21 17 21.1**	**-0.9**
105nm,0.4s							
PSB1	**Pescosannita**	**0.73**	**211**	Pg	**Pg**	**21 17 21.1**	**-0.9**
105nm,0.4s							
MRB1	**Monte Rocchett**	**0.77**	**199**	Pg	**Pg**	**21 17 22.2**	**-0.5**
MRB1				Sg	**Sg**	**21 17 35.7**	**+3.0**
318nm,0.5s							
MRB1	**Monte Rocchett**	**0.77**	**199**	Pg	**Pg**	**21 17 22.2**	**-0.5**
CAFR	**Castel Frentan**	**0.81**	**298**	Pg	**Pg**	**21 17 23.4**	**-0.1**
636nm,0.3s							
CAFR	**Castel Frentan**	**0.81**	**298**	Pg	**Pg**	**21 17 23.4**	**-0.1**
636nm,0.3s							
MIDA	**Miranda**	**0.81**	**255**	Pg	**Pg**	**21 17 22.5**	**-1.1**
MIDA				Sg	**Sg**	**21 17 35.7**	**+1.5**
125nm,0.5s							
MIDA	**Miranda**	**0.81**	**255**	Pg	**Pg**	**21 17 22.5**	**-1.1**
MIDA				Sg	**Sg**	**21 17 35.7**	**+1.5**
125nm,0.5s							
CAFE	**Carife**	**0.82**	**184**	Pg	**Pg**	**21 17 22.3**	**-1.5**
CAFE				Sg	**Sg**	**21 17 35.7**	**+1.2**
64nm,0.3s							
CAFE	**Carife**	**0.82**	**184**	Pg	**Pg**	**21 17 22.3**	**-1.5**
CAFE				Sg	**Sg**	**21 17 35.7**	**+1.2**
64nm,0.3s							
SGG	**Gregorio Mates**	**0.83**	**237**	Pg	**Pg**	**21 17 23.0**	**-1.0**
110nm,0.4s							
SGG	**Gregorio Mates**	**0.83**	**237**	Pg	**Pg**	**21 17 23.0**	**-1.0**
110nm,0.4s							
LPEL	**Lama dei Pelig**	**0.86**	**284**	Pg	**Pg**	**21 17 23.9**	**-0.6**
218nm,0.2s							
LPEL	**Lama dei Pelig**	**0.86**	**284**	Pg	**Pg**	**21 17 23.9**	**-0.6**
218nm,0.2s							
RNI2	**Rionero Sannit**	**0.88**	**261**	Pg	**Pg**	**21 17 23.9**	**-0.9**
RNI2				Sg	**Sg**	**21 17 38.1**	**+1.9**
184nm,0.4s							
RNI2	**Rionero Sannit**	**0.88**	**261**	Pg	**Pg**	**21 17 23.9**	**-0.9**
VAGA	**Valle Agricola**	**0.91**	**242**	Pg	**Pg**	**21 17 24.7**	**-0.8**
198nm,0.5s							
VAGA	**Valle Agricola**	**0.91**	**242**	Pg	**Pg**	**21 17 24.7**	**-0.8**
198nm,0.5s							
VULT	**Monte Vulture**	**0.93**	**165**	Pg	**Pg**	**21 17 25.0**	**-0.7**
561nm,0.4s							
VULT	**Monte Vulture**	**0.93**	**165**	Pg	**Pg**	**21 17 25.0**	**-0.7**
561nm,0.4s							
CERA	**Filignano**	**1.00**	**256**	Pg	**Pg**	**21 17 26.4**	**-0.7**
165nm,0.6s							
CERA	**Filignano**	**1.00**	**256**	Pg	**Pg**	**21 17 26.4**	**-0.7**
165nm,0.6s							
CSSN	**Cassano Irpino**	**1.01**	**192**	Pg	**Pg**	**21 17 27.1**	**-0.3**
27nm,0.3s							
CSSN	**Cassano Irpino**	**1.01**	**192**	Pg	**Pg**	**21 17 27.1**	**-0.3**
27nm,0.3s							
PALZ	**Palazzo San Ge**	**1.03**	**151**	Pg	**Pg**	**21 17 26.9**	**-0.8**
659nm,0.9s							
PALZ	**Palazzo San Ge**	**1.03**	**151**	Pg	**Pg**	**21 17 26.9**	**-0.8**
659nm,0.9s							
MRVN	**Minervino Murg**	**1.03**	**139**	Pg	**Pg**	**21 17 26.4**	**-1.4**
MRVN				Sg	**Sg**	**21 17 42.0**	**+0.7**
181nm,0.2s							
MRVN	**Minervino Murg**	**1.03**	**139**	Pg	**Pg**	**21 17 26.4**	**-1.4**
MRVN				Sg	**Sg**	**21 17 42.0**	**+0.7**
181nm,0.2s							
INTR	**Introdacqua**	**1.06**	**279**	Pg	**Pg**	**21 17 26.7**	**-1.5**
203nm,0.3s							
INTR	**Introdacqua**	**1.06**	**279**	Pg	**Pg**	**21 17 26.7**	**-1.5**
203nm,0.3s							
MCRV	**Calabrutti - M**	**1.07**	**186**	Pg	**Pg**	**21 17 26.8**	**-1.7**
225nm,0.5s							
MCRV	**Calabrutti - M**	**1.07**	**186**	Pg	**Pg**	**21 17 26.8**	**-1.7**
225nm,0.5s							
MRLC	**Muro Lucano**	**1.10**	**173**	Pg	**Pg**	**21 17 27.9**	**-1.2**
136nm,0.4s							
MRLC	**Muro Lucano**	**1.10**	**173**	Pg	**Pg**	**21 17 27.9**	**-1.2**
136nm,0.4s							
SDI	**San Donato**	**1.13**	**263**	Pg	**Pg**	**21 17 28.9**	**-0.7**
27nm,0.2s							
SDI	**San Donato**	**1.13**	**263**	Pg	**Pg**	**21 17 28.9**	**-0.7**
27nm,0.2s							
ACER	**Acerenza**	**1.17**	**155**	Pg	**Pg**	**21 17 29.1**	**-1.2**
ACER				Sg	**Sg**	**21 17 46.3**	**+0.8**
492nm,0.5s							
ACER	**Acerenza**	**1.17**	**155**	Pg	**Pg**	**21 17 29.1**	**-1.2**
ACER				Sg	**Sg**	**21 17 46.3**	**+0.8**
492nm,0.5s							
POFI	**Posta Fibreno**	**1.20**	**264**	Pg	**Pn**	**21 17 29.4**	**-1.1**
57nm,0.7s							
POFI	**Posta Fibreno**	**1.20**	**264**	Pg	**Pn**	**21 17 29.4**	**-1.1**
57nm,0.7s							
VVLD	**Villa Vallelon**	**1.26**	**271**	Pg	**Pn**	**21 17 31.3**	**0.0**
164nm,0.6s							
VVLD	**Villa Vallelon**	**1.26**	**271**	Pg	**Pn**	**21 17 31.3**	**0.0**
164nm,0.6s							
MODR	**Mondragone**	**1.28**	**237**	Pg	**Pn**	**21 17 31.7**	**+0.1**
32nm,0.6s							
MODR	**Mondragone**	**1.28**	**237**	Pg	**Pn**	**21 17 31.7**	**+0.1**
32nm,0.6s							
SGO	**Sicignano**	**1.29**	**180**	Pg	**Pn**	**21 17 31.1**	**-0.6**
40nm,0.4s							
SGO	**Sicignano**	**1.29**	**180**	Pg	**Pn**	**21 17 31.1**	**-0.6**
40nm,0.4s							
AMUR	**Altamura**	**1.36**	**134**	Pg	**Pn**	**21 17 31.9**	**-0.8**
AMUR				Sg	**Sn**	**21 17 51.4**	**+0.8**
274nm,0.2s							
AMUR	**Altamura**	**1.36**	**134**	Pg	**Pn**	**21 17 31.9**	**-0.8**
AMUR				Sg	**Sn**	**21 17 51.4**	**+0.8**
274nm,0.2s							
CDRU	**Civita di Ruta**	**1.36**	**180**	Pg	**Pn**	**21 17 31.9**	**-0.8**
44nm,0.4s							
CDRU	**Civita di Ruta**	**1.36**	**180**	Pg	**Pn**	**21 17 31.9**	**-0.8**
44nm,0.4s							
BAI	**Bari**	**1.40**	**122**	*i* Pg	**Pn**	**21 17 33.0**	**-0.2**
BAI				*e*Sg	**Sn**	**21 17 53.1**	**+1.5**
SG1	**Sgolgore (BA)**	**1.45**	**134**	*i* Pg	**Pn**	**21 17 33.1**	**-0.8**
SG1				*e*Sg	**Sn**	**21 17 54.0**	**+1.2**
GUAR	**Guarcino**	**1.49**	**268**	Pg	**Pn**	**21 17 36.0**	**+1.5**
40nm,0.4s							
GUAR	**Guarcino**	**1.49**	**268**	Pg	**Pn**	**21 17 36.0**	**+1.5**
40nm,0.4s							
MIGL	**Miglionico**	**1.51**	**145**	Pg	**Pn**	**21 17 34.1**	**-0.7**
332nm,0.5s							
MIGL	**Miglionico**	**1.51**	**145**	Pg	**Pn**	**21 17 34.1**	**-0.7**
332nm,0.5s							
GIUL	**Giuliano Di Ro**	**1.56**	**260**	Pg	**Pn**	**21 17 36.0**	**+0.5**
33nm,1.0s							
GIUL	**Giuliano Di Ro**	**1.56**	**260**	Pg	**Pn**	**21 17 36.0**	**+0.5**
33nm,1.0s							
MATE	**Matera**	**1.60**	**138**	Pg	**Pn**	**21 17 35.2**	**-0.8**
173nm,0.2s							
MATE	**Matera**	**1.60**	**138**	Pg	**Pn**	**21 17 35.2**	**-0.8**
173nm,0.2s							
MTSN	**Montesano sull**	**1.62**	**168**	Pg	**Pn**	**21 17 35.9**	**-0.4**
49nm,0.4s							
MTSN	**Montesano sull**	**1.62**	**168**	Pg	**Pn**	**21 17 35.9**	**-0.4**
49nm,0.4s							
LTRZ	**Laterza**	**1.69**	**137**	Pg	**Pn**	**21 17 36.5**	**-0.7**
188nm,0.3s							
NOCI	**Noci**	**1.70**	**128**	Pg	**Pn**	**21 17 36.7**	**-0.6**
203nm,0.3s							
STON	**Ston**	**2.05**	**59**	*e*Pn	**Pn**	**21 17 42.9**	**+0.7**
STON				Sn	**Sn**	**21 18 08.2**	**+0.6**
NVLJ	**Novalja**	**2.73**	**353**	*e*Pn	**Pn**	**21 17 52.7**	**+1.1**
NVLJ				Sn	**Sn**	**21 18 25.6**	**+1.1**
NVLJ	**Novalja**	**2.73**	**353**	*e*Pn	**Pn**	**21 17 52.6**	**+1.1**
NVLJ				Sn	**Sn**	**21 18 25.6**	**+1.1**

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*DDA **24** 21:23:54.4,37°.63N×43°.78E,h10km±1km,Md3.7*
*ISK **24** 21:23:55.7,37°.63N×43°.83E,h10km,MD3.5*
*TEH **24** 21:23:56.2,37°.78N×43°.85E,h5km*
*CSEM **24** 21:23:56.8±0.1,37°.68N×43°.78E,h2km,MD3.7,Error ellipse: s-maj=3.0km s-min=1.7km az=90.0*
*ISCJB **24** 21:23:56.0±0.3,37°.68N±0°.02×43°.86E±0°.03,h10km,Error ellipse: s-maj=3.5km s-min=2.8km az=3.1*
ISC 24 21:23:57.0±0.3,37°.69N±0°.02×43°.85E±0°.03,h10km,n44, σ1§16/65,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAKT	**HAKKARI**	**0.18**	**221**	*i* P	**Pg**	**21 23 57.0**	**-3.8**
HAKT				*i* S	**Sg**	**21 24 00.1**	**-3.2**
CUKT	**Cukurca**	**0.49**	**204**	PG	**Pg**	**21 24 04.4**	**-2.1**
CUKT				*e*SG	**Sg**	**21 24 11.1**	**-1.8**
CUKT	**Cukurca**	**0.49**	**204**	*i* Pg	**Pg**	**21 24 04.4**	**-2.0**
CUKT				*e*Sg	**Sg**	**21 24 11.1**	**-1.8**
VANT	**Van**	**0.86**	**328**	*e*PG	**Pg**	**21 24 13.7**	**+0.2**
TVAN	**Van**	**0.91**	**337**	*i* P	**Pg**	**21 24 12.3**	**-2.1**
TVAN				*i* S	**Sg**	**21 24 26.0**	**-0.1**
TVAN	**Van**	**0.91**	**337**	*i* P	**Pg**	**21 24 12.3**	**-2.1**
TVAN				*i* S	**Sg**	**21 24 26.0**	**-0.2**
MSL	**Mosul**	**1.42**	**205**	*e*Pn	**Pg**	**21 24 25.0**	**+0.8**
MSL				*e*Sn	**Sg**	**21 24 44.0**	**+1.3**
MSL	**Mosul**	**1.42**	**205**	*e*Pn	**Pg**	**21 24 25.0**	**+0.8**
MSL				*e*Sn	**Sg**	**21 24 44.0**	**+1.3**
CLDR	**Caldiran**	**1.45**	**2**	*e*PN	**Pn**	**21 24 22.8**	**-0.5**
CLDR				*e*SN	**Sg**	**21 24 44.1**	**+0.6**
CLDR	**Caldiran**	**1.45**	**2**	*e*Pn	**Pn**	**21 24 22.8**	**-0.4**
CLDR				*e*Sn	**Sg**	**21 24 44.1**	**+0.6**
ISHB	**Shabestar**	**1.51**	**67**	*e*Pg	**Pn**	**21 24 22.6**	**-1.5**
ISHB				*e*Sg	**Sn**	**21 24 42.9**	**-0.9**
ISHB				*e*		21 24 56.4	
comp=Z,2μm,0.3s							
IAZR	**Azarshahr**	**1.69**	**90**	*e*Pn	**Pn**	**21 24 25.6**	**-0.9**
IMRD	**Marand**	**1.78**	**55**	*e*Pn	**Pn**	**21 24 27.3**	**-0.4**
IMRD				*e*		21 24 42.2	
comp=Z,3μm,0.2s							
DYDN	**Diyadin**	**1.85**	**356**	*i* P	**Pn**	**21 24 30.1**	**+1.4**
DYDN				*i* S	**Sg**	**21 24 56.6**	**+0.1**
DYDN	**Diyadin**	**1.85**	**356**	*i* P	**Pn**	**21 24 30.1**	**+1.3**
DYDN				*i* S	**Sg**	**21 24 56.6**	**+0.1**
ITBZ	**Tabriz**	**1.89**	**73**	*e*Pn	**Pn**	**21 24 29.2**	**-0.1**
ITBZ				*e*		21 24 33.3	
comp=Z,885nm,0.2s							
TUTA	**Tutak**	**1.89**	**335**	*i* P	**Pn**	**21 24 30.0**	**+0.7**
TUTA				*i* S	**Sg**	**21 24 56.0**	**-1.8**
TUTA	**Tutak**	**1.89**	**335**	*i* P	**Pn**	**21 24 30.0**	**+0.7**
TUTA				*i* S	**Sg**	**21 24 56.0**	**-1.7**
BTMT	**Batman**	**1.94**	**286**	*e*PN	**Pb**	**21 24 31.2**	**-1.1**
BEST	**Besiri**	**2.06**	**276**	*i* P	**Pn**	**21 24 31.7**	**+0.1**
BEST				*i* S	**Sg**	**21 25 00.4**	**-2.6**
BNGL	**BINGOL**	**2.47**	**301**	*e*P	**Pb**	**21 24 42.0**	**+0.6**
BNGL				*e*S	**Sg**	**21 25 17.5**	**+1.2**
MARD	**Mardin**	**2.48**	**262**	*i* P	**Pn**	**21 24 37.0**	**-0.3**
MARD				*i* S	**Sn**	**21 25 09.8**	**+2.2**
GNI	**Garni**	**2.55**	**15**	*e*PN	**Pn**	**21 24 40.0**	**+1.6**
GNI	**Garni**	**2.55**	**15**	*e*Pn	**Pn**	**21 24 40.0**	**+1.7**
IHRS	**Heris**	**2.59**	**75**	*e*Pn	**Pn**	**21 24 38.9**	**-0.1**
IHRS				*e*		21 24 47.9	
comp=Z,715nm,0.2s							
DIY	**Diyarbakir**	**2.88**	**275**	*e*PN	**Pn**	**21 24 43.1**	**+0.2**
DIY	**Diyarbakir**	**2.88**	**275**	*e*Pn	**Pn**	**21 24 43.1**	**+0.2**
BINT	**Bingol**	**2.90**	**295**	*e*PN	**Pn**	**21 24 43.7**	**+0.5**
BINT	**Bingol**	**2.90**	**295**	*e*Pn	**Pn**	**21 24 43.7**	**+0.5**
ERZM	**Erzurum**	**2.94**	**319**	*e*P	**Pn**	**21 24 46.3**	**+2.5**
ERZM				*i* S	**Sb**	**21 25 25.8**	**+0.3**
ERZM	**Erzurum**	**2.94**	**319**	*e*P	**Pn**	**21 24 46.3**	**+2.6**
DIYA	**Diyarbakir**	**2.97**	**276**	*e*P	**Pn**	**21 24 44.9**	**+0.8**
DIYA				*i* S	**Sg**	**21 25 30.1**	**-2.1**
DIYA	**Diyarbakir**	**2.97**	**276**	*e*P	**Pn**	**21 24 44.9**	**+0.8**
ISRB	**Sarab**	**3.02**	**86**	*e*Pn	**Pn**	**21 24 44.1**	**-0.8**
ISR

ellipse: s-maj=13.0km s-min=8.0km az=58.0

ISC 24 21:28:10.6±0.6, 50°53S±0°07×148°6E±0°2, h10km, n41, σ0°66/35, mb4.6/14, MS3.7/6, South of Tasmania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**7.48**	**126**	*e*Pn	**Pn**	**21 29 55.4**	**-4.2**
MCQ				Sn	**Sn**	**21 31 08.5**	**-16**
MOO	**Moorlands**	**8.15**	**353**	*e*P	**Pn**	**21 30 08.3**	**-0.5**
TOO	**Toolangi**	**13.14**	**349**	*e*P	**Pn**	**21 31 17.8**	**+0.6**
ARPS	**Mount Arapiles** 148nm,1.0s	**14.58**	**338**	*e*P	**Pn**	**21 31 36.3**	**-0.5**
CAN	**Canberra** 79nm,0.9s	**15.21**	**1**	*e*Pn	**Pn**	**21 31 46.2**	**+0.9**
CNB	**Canberra Magne**	**15.22**	**2**	*e*P	**Pn**	**21 31 45.7**	**+0.3**
RPZ	**Rata Peaks** comp=Z,571nm,21.5s,baz=235,slow=31	**16.72**	**75**	LR	LR	21 36 40.0	
STKA	**Stephens Creek** 13nm,1.0s	**19.34**	**342**	*e*P	**Pn**	**21 32 36.1**	**-1.0**
STKA	**Stephens Creek** 0.3nm,0.3s,baz=158,slow=12,SNR=12	**19.34**	**342**	P	**Pn**	**21 32 36.4**	**-0.7**
STKA	comp=Z,269nm,18.5s,baz=205,slow=35			LR	LR	21 39 16.6	
STKA	**Stephens Creek** 4.0nm,1.0s	**19.34**	**342**	*e*P	**Pn**	**21 32 36.2**	**-0.9**
STKA				LR	LR	21 39 16.6	
ARMA	**Armidale**	**20.22**	**8**	*e*P	**P**	**21 32 47.3**	**+1.7**
ARMA	**Armidale** 14nm,0.8s	**20.22**	**8**	*e*P	**P**	**21 32 47.1**	**+1.5**
SNZO	**South Karori**	**20.30**	**73**	*e*P	**P**	**21 32 46.2**	**-0.2**
URZ	**Urewera** 15nm,0.7s,mb4.5,baz=209,slow=5.8,SNR=5.6	**23.64**	**70**	P	**P**	**21 33 21.2**	**-0.7**
URZ	comp=Z,223nm,18.8s,MS3.6,baz=73,slow=34			LR	LR	21 41 25.8	
URZ	**Urewera** 21nm,0.8s,mb4.6	**23.64**	**70**	*e*P	**P**	**21 33 20.9**	**-1.0**
URZ				LR	LR	21 41 25.8	
FORT	**Forrest** 23nm,0.7s,mb4.8	**24.98**	**314**	*e*P	**P**	**21 33 33.9**	**-0.3**
FORT	**Forrest** 27nm,0.7s,mb4.9	**24.98**	**314**	*e*P	**P**	**21 33 33.9**	**-0.3**
EIDS	**Eidsvold**	**25.20**	**5**	*e*P	**P**	**21 33 36.7**	**+0.5**
SBA	**Scott Base** 5.3nm,1.2s,mb4.0	**28.26**	**172**	*e*P	**P**	**21 34 04.2**	**+0.9**
ASAR	**Alice Springs** 7.4nm,1.0s,mb4.4,baz=163,slow=8.4,SNR=30	**29.14**	**332**	P	**P**	**21 34 11.8**	**+0.2**
ASAR				PcP	PcP	21 37 22.4	+3.2
CTA	**Charters Tower** comp=Z,76nm,20.6s,MS3.3,baz=0.5,slow=38	**30.43**	**356**	LR	LR	21 47 27.2	
WRA	**Warramunga Arr** 10nm,0.7s,mb4.9,baz=159,slow=7.8,SNR=48	**32.54**	**335**	P	**P**	**21 34 41.1**	**-0.5**
WRAB	**Tennant Creek** 13nm,0.8s,mb4.9	**32.55**	**335**	*e*P	**P**	**21 34 41.2**	**-0.5**
COEN	**Coen**	**36.74**	**351**	*e*P	**P**	**21 35 17.9**	**-0.1**
MBWA	**Marble Bar** 4.8nm,0.7s,mb4.4	**37.05**	**312**	*e*P	**P**	**21 35 20.0**	**-0.6**
FITZ	**Fitzroy Crossi** 14nm,0.8s,mb4.9	**37.17**	**322**	*e*P	**P**	**21 35 20.6**	**-1.1**
FITZ	**Fitzroy Crossi** 7.3nm,0.7s,mb4.6,baz=172,slow=9.2,SNR=11	**37.17**	**322**	P	**P**	**21 35 20.9**	**-0.7**
FITZ	comp=Z,77nm,18.5s,MS3.5,baz=172,slow=37			LR	LR	21 51 10.0	
FITZ	**Fitzroy Crossi** 7.1nm,0.6s,mb4.7	**37.17**	**322**	*e*P	**P**	**21 35 21.5**	**-0.1**
FITZ				LR	LR	21 51 10.0	
QSPA	**South Pole Qui** 4.7nm,0.7s,mb4.3,baz=296,slow=2.2,SNR=34	**39.59**	**180**	P	**P**	**21 35 41.8**	**+0.4**
QSPA	**South Pole Qui** 5.4nm,0.8s,mb4.3	**39.59**	**180**	*e*P	**P**	**21 35 41.6**	**+0.3**
KAKA	**Kakadu** 21nm,0.6s,mb5.0	**39.95**	**335**	*e*P	**P**	**21 35 44.5**	**-0.5**
KAKA	**Kakadu** 46nm,0.6s,mb5.4	**39.95**	**335**	*e*P	**P**	**21 35 44.9**	**-0.1**
PPT	**Papeete** comp=Z,103nm,20.6s,MS3.9,baz=178,slow=30	**58.80**	**80**	LR	LR	21 57 36.3	
CMAR	**Chiang Mai Arr** 0.9nm,0.7s,mb3.8,baz=171,slow=7.0,SNR=6.2	**81.36**	**313**	P	**P**	**21 40 28.0**	**+0.8**
CHTO	**Chiang Mai** 2.3nm,0.8s,mb4.2	**81.67**	**313**	*e*P	**P**	**21 40 29.5**	**+0.6**
KSRS	**Korea Array** 3.9nm,1.0s,mb4.7,baz=163,slow=5.6,SNR=9.3	**89.48**	**344**	P	**P**	**21 41 07.8**	**+0.5**
KSRS	comp=Z,21nm,19.9s,MS3.5,baz=160,slow=36			LR	LR	22 21 16.5	
HHC	**Hu-ho-hao-te**	**96.60**	**333**	*e*P	**P**	**21 41 39.6**	**-0.4**
HHC				pP	pP	21 41 44.4	+1.0
HHC				sP	sP	21 41 46.6	+2.0
HHC				PP	PP	21 45 37.8	+2.7
HHC				SKS		21 52 14.6	
HHC				S	S	21 52 58.4	-2.2
HHC				sS	sS	21 53 07.3	+1.1
HHC				SS	SS	21 59 39.9	+4.0
HHC	comp=Z,12nm,0.8s,mb5.4			pmax	pmax		
HHC	comp=Z,55nm,6.1s			pmax	pmax		
HHC	comp=N,73nm,23.8s,MS4.4			LR	LR		
HHC	comp=E,120nm,21.4s,MS4.4			LR	LR		
HHC	comp=Z,120nm,22.6s,MS4.3			LR	LR		
FINES	**FINESS Array B** comp=Z,2.8nm,0.9s,baz=94,slow=5.7,SNR=5.1	**147.13**	**312**	PKPbc	PKPbc	21 47 52.9	+0.4
KEST	**Kesra** comp=Z,2.3nm,1.1s,baz=229,slow=6.5,SNR=4.1	**147.22**	**259**	PKPbc	PKPbc	21 47 55.6	+2.1
SPITS	**Spitsbergen Ar** comp=Z,1.8nm,0.5s,baz=82,slow=6.0,SNR=9.2	**147.32**	**344**	PKPbc	PKPbc	21 47 52.7	+0.1
ARCES	**ARCESS Array B** comp=Z,3.5nm,0.8s,baz=92,slow=3.6,SNR=4.8	**147.47**	**327**	PKPbc	PKPbc	21 47 53.0	-0.2

KRSC 24 21:38:56.6±0.6, 54°59N×162°74E, h26km±26km, ML3.8, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.59**	**267**	*e*P	Pb	21 39 08.7	+0.4
MKZ				*e*S	Sb	21 39 16.9	+0.6
KBTR	**Krutoberegovo**	**1.62**	**2**	*e*P	Pn	21 39 23.0	-0.5
KBTR				*e*S	Sn	21 39 42.3	-1.2
ZLN	**Zelenaya**	**1.81**	**323**	*e*P	Pn	21 39 27.2	+1.2
ZLN				*e*S	Sn	21 39 49.4	+1.3
KMNR	**Kamenistaya**	**1.85**	**310**	*e*P	Pn	21 39 27.7	+1.1
KMNR				*e*S	Sn	21 39 50.8	+1.7
BZMR	**Bezymyannaya**	**1.86**	**317**	*e*P	Pn	21 39 28.1	+1.3
BZMR				*e*S	Sn	21 39 50.5	+1.1
CIRR	**Tsirk**	**1.91**	**324**	*e*P	Pn	21 39 28.8	+1.5
CIRR				*e*S	Sn	21 39 52.4	+1.9
KIRR	**Kirishev**	**1.94**	**316**	*e*P	Pn	21 39 29.6	+1.8
BKI	**Bering**	**1.97**	**70**	*e*S	Sn	21 39 50.7	-1.2
KPT	**Kopyto**	**1.99**	**315**	*e*P	Pn	21 39 30.0	+1.4
KPT				*e*S	Sn	21 39 54.1	+1.5
KII	**Karymskiy**	**2.01**	**255**	*e*P	Pn	21 39 30.2	+1.5
KII				*e*S	Sn	21 39 54.1	+1.2
KRSR	**Krestovskiy**	**2.05**	**324**	P	Pn	21 39 30.5	+1.2
KLY	**Klyuchi**	**2.10**	**326**	*e*P	Pn	21 39 30.7	+0.7
SMKR	**Semkarok**	**2.12**	**341**	*e*P	Pn	21 39 32.2	+1.9
SMKR				*e*S	Sn	21 39 57.6	+1.8
BDR	**Baidarnaya**	**2.17**	**337**	*e*P	Pn	21 39 32.7	+1.8
BDR				*e*S	Sn	21 39 58.9	+2.0
SPN	**Mys Shipunski**	**2.20**	**228**	*e*P	Pn	21 39 31.4	+0.1
SPN				*e*S	Sn	21 39 56.4	-1.2
KOZ	**Kozyrevsk**	**2.20**	**313**	*e*P	Pn	21 39 33.3	+1.9
KOZ				*e*S	Sn	21 40 00.0	+2.2
SRDR	**Sorokina**	**2.25**	**337**	*e*P	Pn	21 39 34.2	+2.1
SRDR	**Sredinnyy**	**2.44**	**316**	*e*P	Pn	21 39 35.9	+1.2
SRDR				*e*S	Sn	21 40 04.5	+0.8
NLC	**Nalytchevo**	**2.46**	**236**	*e*P	Pn	21 39 35.7	+0.7
NLC				*e*S	Sn	21 40 03.9	-0.3
AVH	**Avacha**	**2.71**	**242**	*e*P	Pn	21 39 40.6	+2.2
AVH				*e*S	Sn	21 40 12.6	+2.2
PET	**Petropavlovsk**	**2.89**	**239**	*e*S	Sn	21 40 16.2	+1.6
GNL	**Ganaly**	**2.96**	**254**	*e*P	Pn	21 39 44.2	+2.4

*IDC **24** 21:43:10.0±0.9, 4°79S×102°99E, h0km, mb4.3/16, mb1 4.4/16, mb1mx4.2/22, mbtmp4.3/16, Error ellipse: s-maj=37.3km s-min=12.9km az=51.0*
*NEIC **24** 21:43:12.5±2.7, 4°82S×102°97E, h19km±17km, mb4.6/7, Error ellipse: s-maj=6.8km s-min=4.7km az=53.0*
*ISCJB **24** 21:43:18.1±0.7, 4°85S±0°07×103°03E±0°06, h82km±4km, mb4.3/23, Error ellipse: s-maj=14.8km s-min=5.5km az=38.5*

*DJA **24** 21:43:19, 4°93S×103°03E, h44km, MLv4.4/10*

ISC 24 21:43:19.1±0.7, 4°85S±0°07×103°04E±0°06, h75km±5km, n57, σ0°75/59, mb4.3/23, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.50**	**350**	P	**Pn**	**21 43 30.9**	**-1.5**
MNAI				S	**Sn**	**21 43 41.0**	**-1.1**
LWLI	**Liwa**	**1.03**	**99**	P	**Pn**	**21 43 37.1**	**-1.1**
MDSI	**Maura Dua**	**1.19**	**72**	P	**Pn**	**21 43 39.9**	**-0.4**
MDSI				S	**Sn**	**21 43 56.5**	**+0.3**
KSI	**Kapahiang**	**1.27**	**340**	P	**Pn**	**21 43 41.2**	**-0.1**
KSI				S	**Sn**	**21 43 58.5**	**+0.5**
KLSI		**1.69**	**85**	P	**Pn**	**21 43 46.7**	**-0.1**
KLSI				S	**Sn**	**21 44 08.0**	**+0.2**
KLI	**Kotabumi**	**1.81**	**90**	P	**Pn**	**21 43 48.4**	**0.0**
PMBI	**Palembang**	**2.58**	**42**	P	**Pn**	**21 43 59.6**	**+0.9**
RBSI	**Rajabasa**	**2.87**	**110**	P	**Pn**	**21 44 03.3**	**+0.7**
CGJI	**Cibinong**	**3.17**	**124**	P	**Pn**	**21 44 06.0**	**-0.7**
SDSI	**Sungai Dareh**	**4.21**	**338**	P	**Pn**	**21 44 22.3**	**+1.3**
RGRI	**Rengat**	**4.53**	**351**	P	**Pn**	**21 44 27.0**	**+1.7**
PDSI	**Padang**	**4.68**	**327**	P	**Pn**	**21 44 28.2**	**+0.8**
BKNI	**Bangkinang**	**5.52**	**339**	P	**Pn**	**21 44 40.4**	**+1.6**
COCO	**West Island**	**9.53**	**220**	*e*Pn	**Pn**	**21 45 28.0**	**-5.6**
KSM	**Kuching**	**9.60**	**49**	Pn	**Pn**	**21 45 29.9**	**-4.7**
CM31	**Chiang Mai Arr**	**23.51**	**350**	*e*P	**P**	**21 48 20.6**	**-2.0**
CMAR	**Chiang Mai Arr** 1.6nm,0.4s,mb3.7,baz=184,slow=8.7,SNR=21	**23.51**	**350**	P	**P**	**21 48 22.4**	**-0.2**
CHTO	**Chiang Mai**	**23.86**	**350**	*e*P	**P**	**21 48 25.2**	**-0.6**
FITZ	**Fitzroy Crossi** 5.0nm,0.8s,mb4.0,baz=321,slow=6.4,SNR=18	**25.72**	**123**	P	**P**	**21 48 42.9**	**+0.1**
WRA	**Warramunga Arr** 2.6nm,0.4s,mb4.4,baz=304,slow=8.9,SNR=28	**33.95**	**119**	P	**P**	**21 49 56.0**	**+0.4**
WRAB	**Tennant Creek** 2.5nm,0.4s,mb4.4	**33.96**	**119**	*e*P	**P**	**21 49 56.0**	**+0.3**
ASAR	**Alice Springs** 1.7nm,0.3s,mb4.3,baz=297,slow=7.6,SNR=28	**35.14**	**125**	P	**P**	**21 50 06.6**	**+0.8**
ASAR				PcP	PcP	21 52 37.1	+1.2
CTA	**Charters Tower** 9.3nm,0.8s,mb4.6,baz=209,slow=10,SNR=4.5	**44.66**	**114**	P	**P**	**21 51 24.8**	**-0.1**
CTA	**Charters Tower**	**44.66**	**114**	P	**P**	**21 51 24.8**	**-0.1**
CTAO	**Charters Tower**	**44.66**	**114**	P	**P**	**21 51 25.0**	**+0.1**
STKA	**Stephens Creek** 2.5nm,0.5s,mb4.2,baz=328,slow=10,SNR=7.2	**45.00**	**131**	P	**P**	**21 51 28.8**	**+1.4**
STKA	**Stephens Creek**	**45.00**	**131**	*e*P	**P**	**21 51 28.2**	**+0.9**
KSRS	**Korea Array** 1.1nm,0.6s,mb3.9,baz=234,slow=7.7,SNR=5.7	**48.05**	**27**	P	**P**	**21 51 51.7**	**+0.6**
SONM	**Songino Array** 2.5nm,0.6s,mb4.4,baz=181,slow=9.3,SNR=20	**52.55**	**3**	P	**P**	**21 52 25.4**	**+0.6**
SONM				PcP	PcP	21 53 34.7	+0.5
MAJO	**Matsushiro** 0.6nm,0.3s,baz=188,slow=4.2,SNR=9.9	**52.69**	**36**	P	**P**	**21 52 25.9**	**-0.2**
MJAR	**Matsushiro Arr** 0.5nm,0.4s,mb3.9,baz=219,slow=6.9,SNR=5.4	**52.69**	**36**	P	**P**	**21 52 25.0**	**-1.1**
UCH	**Uchtor**	**53.56**	**334**	P	**P**	**21 52 32.5**	**+0.1**
TKM2	**Tokmak 2** 7.7nm,0.5s,mb5.0	**53.66**	**335**	*e*P	**P**	**21 52 33.1**	**+0.1**
EKS2	**Erkin-Say** 4.1nm,0.7s,mb4.6	**54.23**	**334**	*e*P	**P**	**21 52 36.9**	**-0.4**
MK31	**Makanchi Array**	**54.61**	**343**	*e*P	**P**	**21 52 39.4**	**-0.5**
MKAR	**Makanchi Array** 2.7nm,0.8s,mb4.4,baz=123,slow=8.8,SNR=32	**54.61**	**343**	P	**P**	**21 52 39.9**	**0.0**
HNR	**Honiara**	**56.60**	**98**	*e*P	**P**	**21 52 54.9**	**0.0**
KURK	**Kurchatov** 2.1nm,0.8s,mb4.2	**59.21**	**342**	*e*P	**P**	**21 53 11.4**	**-1.0**
ZAA0	**Zalesovo Array**	**60.55**	**348**	*e*P	**P**	**21 53 20.9**	**-0.6**
ZALV	**Zalesovo Beam** 2.8nm,0.3s,mb4.7,baz=161,slow=5.4,SNR=19	**60.55**	**348**	P	**P**	**21 53 21.0**	**-0.5**
BVAR	**Borovoye Array** 3.0nm,0.6s,mb4.3,baz=138,slow=8.5,SNR=17	**63.91**	**339**	P	**P**	**21 53 43.5**	**-0.5**
BRVK	**Borovoye** 2.8nm,0.5s,mb4.3	**63.97**	**339**	*e*P	**P**	**21 53 44.0**	**-0.4**
ABKAR	**Akbulak array** 1.3nm,0.4s,mb4.1	**65.59**	**331**	*e*P	**P**	**21 53 54.0**	**-1.0**
GNI	**Gani**	**69.67**	**316**	P	**P**	**21 54 20.9**	**0.0**
MMAI	**Mount Meron Ar** 1.2nm,0.6s,mb3.8,baz=148,slow=6.8,SNR=3.6	**74.16**	**306**	P	**P**	**21 54 49.1**	**+1.2**
AKASG	**Malin Array Be** 0.7nm,0.5s,mb3.8,baz=98,slow=4.6,SNR=4.6	**83.58**	**322**	P	**P**	**21 55 39.3**	**+0.2**
TSUM	**Tsumeb**	**84.14**	**251**	P	**P**	**21 55 42.8**	**+0.1**
BILL	**Bilibino** 2.7nm,0.4s,mb4.5	**84.78**	**20**	*e*P	**P**	**21 55 44.5**	**-0.4**
BUR08	**Bucovina Ar. S**	**85.41**	**318**	*e*P	**P**	**21 55 48.7**	**+0.2**
JOF	**Joensuu**	**86.08**	**334**	*e*p	**P**	**21 55 50.8**	**-0.7**
JOF	**Joensuu**	**86.08**	**334**	*e*p	**P**	**21 55 50.8**	**-0.7**
FINES	**FINESS Array B** 2.1nm,0.5s,mb4.4,baz=112,slow=5.8,SNR=17	**88.03**	**332**	P	**P**	**21 56 01.9**	**+0.9**
KAF	**Kangasniemi**	**88.09**	**333**	*e*p	**P**	**21 56 01.3**	**+0.1**
KAF	**Kangasniemi**	**88.09**	**333**	*e*p	**P**	**21 56 01.3**	**+0.1**
ARCES	**ARCESS Array B** 2.0nm,0.8s,mb4.3,baz=102,slow=5.9,SNR=7.6	**90.17**	**340**	P	**P**	**21 56 11.2**	**+0.4**
TXAR	**Lajitas Array** 1.1nm,0.4s,baz=293,slow=2.0,SNR=7.7	**144.91**	**43**	PKP	PKPdf	22 02 48.4	0.0
TXAR	**Lajitas Array**	**144.91**	**43**	PKP	PKPdf	22 02 48.4	0.0

KRSC 24 22:24:47.8±1.4, 50°07N×158°97E, h110km±120km, ML4.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**2.33**	**291**	*e*P	Pn	22 25 26.2	+1.3
ALID				*e*S	Sn	22 25 54.3	+0.9
MIPR	**Malaya Ipel'ka**	**2.61**	**329**	*e*P	Pn	22 25 31.5	+2.9
MIPR				*e*S	Sn	22 26 03.3	+3.3
PET	**Petropavlovsk**	**2.96**	**356**	*e*S	Sn	22 26 11.3	+3.0
SPN	**Mys Shipunski**	**3.10**	**12**	*e*P	Pn	22 25 38.1	+3.0
SPN				*e*S	Sn	22 26 14.3	+2.8
NLC	**Nalytchevo**	**3.12**	**4**	*e*S	Sn	22 26 12.7	+0.9
AVH	**Avacha**	**3.20**	**358**	*e*P	Pn	22 25 41.5	+5.1
GNL	**Ganaly**	**3.69**	**350**	*e*P	Pn	22 25 46.9	+4.1
MKZ	**Mys Kozlova**	**4.80**	**20**	*e*P	Pn	22 26 00.2	+2.4
MKZ				*e*S	Sn	22 26 52.9	+0.7

*ISCJB **24** 22:28:16.7±1.5, 19°2S±0°2×177°8W±0°1, h565km±23km, mb3.6/9, Error ellipse: s-maj=28.9km s-min=16.1km az=164.5*
*NEIC **24** 22:28:17.8±0.9, 19°16S×177°76W, h565km±12km, mb3.9/5, Error ellipse: s-maj=17.4km s-min=9.8km az=162.0*
*IDC **24** 22:28:18.2±6.0, 19°12S×177°79W, h564km±71km, mb3.0/5, mb1 3.3/5, mb1mx3.1/16, mbtmp3.0/5, Error ellipse: s-maj=107.4km s-min=25.5km az=156.0*

ISC 24 22:28:17.7±1.5, 19°2S±0°2×177°8W±0°1, h561km±21km, n19, σ0°39/17, mb3.6/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.78**	**49**	P	**P**	**22 30 13.6**	**-0.1**
HNR	**Honiara**	**23.63**	**291**	*e*P	**P**	**22 32 45.7**	**-0.3**
CTAO	**Charters Tower** 2.5nm,0.5s,mb4.0	**33.85**	**262**	*e*P	**P**	**22 34 15.0**	**+0.6**
STKA	**Stephens Creek** 1.6nm,0.5s,mb3.8,baz=98,slow=13,SNR=6.5	**38.57**	**243**	P	**P**	**22 34 53.8**	**+0.6**
STKA	**Stephens Creek** 0.5nm,0.6s,mb3.2	**38.57**	**243**	*e*P	**P**	**22 34 53.6**	**+0.5**
WRAB	**Tennant Creek** 1.5nm,0.3s,mb4.0	**45.00**	**261**	*e*P	**P**	**22 35 43.8**	**-0.2**
WRA	**Warramunga Arr** 2.1nm,0.4s,mb4.1,baz=97,slow=8.0,SNR=52	**45.01**	**261**	P	**P**	**22 35 43.9**	**-0.1**
ASAR	**Alice Springs** 2.3nm,0.4s,mb4.0,baz=86,slow=8.2,SNR=42	**45.04**	**255**	P	**P**	**22 35 44.4**	**+0.2**
ASAR				PcP	PcP	22 37 12.7	-0.4
FITZ	**Fitzroy Crossi** 1.9nm,0.5s,mb3.7	**53.42**	**261**	*e*P	**P**	**22 36 46.0**	**0.0**
MBWA	**Marble Bar** 5.1nm,0.6s,mb3.9	**58.36**	**257**	*e*P	**P**	**22 37 19.7**	**-0.3**
SBA	**Scott Base**	**59.20**	**184**	*e*P	**P**	**22 37 25.2**	**+0.4**
KKM	**Kota Kinabalu**	**69.63**	**284**	*e*P	**P**	**22 38 31.4**	**-0.3**
QSPA	**South Pole Qui**	**70.89**	**180**	*e*P	**P**	**22 38 37.2**	**-0.8**
NVAR	**Mina Array Bea** 0.3nm,0.5s,mb2.9,baz=228,slow=9.5,SNR=3.2	**79.92**	**43**	P	**P**	**22 39 29.4**	**+0.6**
NVAR	**Mina Array Bea**	**79.92**	**43**	P	**P**	**22 39 29.4**	**+0.6**
TXAR	**Lajitas Array** 0.1nm,0.6s,mb2.7,baz=254,slow=6.5,SNR=2.8	**86.16**	**57**	P	**P**	**22 40 00.2**	**0.0**
TXAR	**Lajitas Array**	**86.16**	**57**	P	**P**	**22 40 00.2**	**0.0**
BVAR	**Borovoye Array** 0.2nm,0.3s,baz=101,slow=3.3,SNR=3.1	**118.20**	**320**	PKP	PKPdf	22 46 00.4	-0.8
MMAI	**Mount Meron Ar** 1.2nm,0.5s,baz=74,slow=6.2,SNR=5.3	**147.32**	**302**	PKPbc	PKPbc	22 46 59.6	+0.5

*ATH **24** 22:33:25.6, 37°81N×23°43E, h33km±3km, MD2.5/4, ML2.2*
*CSEM **24** 22:33:27.5±0.2, 37°92N×23°40E, h10km, ML2.2, Error ellipse: s-maj=5.9km s-min=3.1km az=29.0*
*ISCJB **24** 22:33:27.3±0.8, 37°88N±0°05×23°39E±0°04, h13km±5km, Error ellipse: s-maj=9.1km s-min=4.1km az=16.4*
*THE **24** 22:33:28.6, 37°98N×23°40E, h5km±2km, ML1.7/5, Error ellipse: s-maj=2.8km s-min=1.1km az=197.0*

ISC 24 22:33:27.7±0.8, 37°91N±0°05×23°38E±0°03, h13km±5km, n24, σ0°68/42, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NAIG	**Nisos Aigina**	**0.17**	**150**	*e*PB	**Pg**	**22 33 31.5**	**-0.2**
NAIG	**Nisos Aigina**	**0.17**	**150**	*e*Pb	**Pg**	**22 33 31.5**	**-0.2**
ATH	**Athens Observa**	**0.27**	**77**	*e*PB	**Pg**	**22 33 33.2**	**-0.2**
ATH				*e*SB	**Sg**	**22 33 38.4**	**+1.1**
ATH	**Athens Observa**	**0.27**	**77**	*e*Pb	**Pg**	**22 33 33.2**	**-0.2**
ATH				*e*Sb	**Sg**	**22 33 38.4**	**+1.1**
ATHU	**Athens Univers**	**0.33**	**80**	P	**Pg**	**22 33 34.3**	**0.0**
ATHU				S	**Sg**	**22 33 38.7**	**-0.1**
ATHU	**Athens Univers**	**0.33**	**80**	P	**Pg**	**22 33 34.3**	**0.0**
ATHU				S	**Sg**	**22 33 38.7**	**-0.1**
VLY	**Voula,Athens**	**0.33**	**100**	*e*PB	**Pg**	**22 33 33.3**	**-1.2**
VLY	**Voula,Athens**	**0.33**	**100**	*e*Pb	**Pg**	**22 33 33.3**	**-1.2**
LTK	**Loutraki**	**0.35**	**289**	P	**Pg**	**22 33 34.9**	**+0.2**
LTK				S	**Sg**	**22 33 40.0**	**+0.6**
LTK	**Loutraki**	**0.35**	**289**	P	**Pg**	**22 33 34.9**	**+0.2**
LTK				S	**Sg**	**22 33 40.0**	**+0.6**
PTL	**Penteli**	**0.41**	**70**	*e*PB	**Pg**	**22 33 35.2**	**-0.6**
PTL				*e*SB	**Sg**	**22 33 42.0**	**+0.7**
PTL	**Penteli**	**0.41**	**70**	*e*Pb	**Pg**	**22 33 35.2**	**-0.6**
PTL				*e*Sb	**Sg**	**22 33 42.0**	**+0.7**
LKR	**Lokris**	**0.80**	**338**	P	**Pg**	**22 33 43.3**	**+0.1**
LKR				S	**Sg**	**22 33 53.4**	**-0.2**
LKR	**Lokris**	**0.80**	**338**	*e*PN	**Pn**	**22 33 43.1**	**-1.5**
LKR	**Lokris**	**0.80**	**338**	*e*Pn	**Pn**	**22 33 43.1**	**-1.5**
LKR	**Lokris**	**0.80**	**338**	P	**Pg**	**22 33 43.3**	**+0.1**
LKR				S	**Sg**	**22 33 53.4**	**-0.2**
ATAL	**Atalanti**	**0.83**	**340**	P	**Pg**	**22 33 44.0**	**+0.2**
ATAL				S	**Sg**	**22 33 53.5**	**-1.2**
ATAL	**Atalanti**	**0.83**	**340**	P	**Pg**	**22 33 44.0**	**+0.2**
ATAL				S	**Sg**	**22 33 53.5**	**-1.2**
DSF	**Desfina**	**0.84**	**307**	P	**Pg**	**22 33 43.7**	**-0.2**
DSF				S	**Sg**	**22 33 55.2**	**+0.3**
DSF	**Desfina**	**0.84**	**307**	P	**Pg**	**22 33 43.7**	**-0.2**
DSF				S	**Sg**	**22 33 55.2**	**+0.3**
AOS	**Alonnisos**	**1.32**	**17**	P	**Pn**	**22 33 52.1**	**+0.4**
AOS				S	**Sb**	**22 34 09.2**	**+0.2**
AOS	**Alonnisos**	**1.32**	**17**	P	**Pn**	**22 33 52.1**	**+0.4**
AOS				S	**Sb**	**22 34 09.2**	**+0.2**
AGG	**Agios Georgios**	**1.38**	**324**	P	**Pn**	**22 33 54.0**	**+1.4**
AGG				S	**Sn**	**22 34 10.8**	**+0.1**
AGG	**Agios Georgios**	**1.38**	**324**	P	**Pn**	**22 33 54.0**	**+1.4**
AGG				S	**Sn**	**22 34 10.8**	**+0.1**

*IDC **24** 22:54:27.4±1.1, 6°73N×72°92W, h158km±12km, mb3.4/6, mb1 3.7/9, mb1mx3.5/20, mbtmp3.5/9, Error ellipse: s-maj=17.3km s-min=14.2km az=128.0*
*ISCJB **24** 22:54:27.6±0.4, 6°88N±0°04×72°96W±0°05, h170km±4km, mb3.8/9, Error ellipse: s-maj=8.9km s-min=5.3km az=42.5*
*FUNV **24** 22:54:28.4, 6°79N×73°14W, h163km, MW4.1*
*NEIC **24** 22:54:28.2±0.5, 6°73N×72°95W, h170km±5km, mb4.0/6, Error ellipse: s-maj=7.8km s-min=5.6km az=111.0*

ISC 24 22:54:28.4±0.4, 6°85N±0°04×72°96W±0°05, h163km±4km, n39, σ1°00/47, mb3.8/9, 8C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.19**	**32⇑**	*i*P	**Pn**	**22 54 57.2**	**+1.2**
CAPV				*e*S	**Sn**	**22 55 17.4**	**+0.1**
ROSC	**El Rosal** 100nm,0.3s,baz=87,slow=23,SNR=130	**2.41**	**215**	P	**Pn**	**22 55 08.9**	**-0.1**
ROSC	70nm,0.3s,baz=83,slow=15,SNR=11			S	**Sn**	**22 55 38.1**	**-2.4**
SOCV	**Socops**	**2.52**	**55⇑**	*i*P	**Pn**	**22 55 11.9**	**+1.4**
SOCV				*e*S	**Sn**	**22 55 44.0**	**+1.0**
VIGV	**El Vigia**	**2.53**	**38⇑**	*i*P	**Pn**	**22 55 11.7**	**+1.1**
VIGV				*e*S	**Sn**	**22 55 43.7**	**+0.5**
ELOV	**Elorza**	**3.45**	**87**	*e*P	**Pn**	**22 55 23.3**	**+1.3**
ELOV				*e*S	**Sn**	**22 56 04.0**	**+0.5**
VIRV	**Villa del Rosa**	**3.67**	**8⇑**	*i*P	**Pn**	**22 55 24.0**	**-0.8**
VIRV				*e*S	**

ISC 24 23:08:38.8±0.5, 37°.07N±0°.03×29°.22E±0°.04, h17km±4km, n30, σ0°.79/45, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.33**	**58**	*i* P	**Pg**	**23 08 44.6**	**-1.1**
GOLH				*i* S	**Sg**	**23 08 51.4**	**+1.2**
GOLH	**Golhisar**	**0.33**	**58**	*i* P	**Pg**	**23 08 44.6**	**-1.0**
GOLH				*i* S	**Sg**	**23 08 51.4**	**+1.1**
TURN	**Turunc**	**0.53**	**249**	*i* P	**Pg**	**23 08 50.8**	**+1.5**
TURN				*i* S	**Sg**	**23 09 03.5**	**+7.1**
TURN	**Turunc**	**0.53**	**249**	*i* P	**Pg**	**23 08 50.8**	**+1.5**
ELL	**Elmali**	**0.64**	**119**	*e*PG	**Pg**	**23 08 50.6**	**-0.7**
ELL				*e*SG	**Sg**	**23 08 59.8**	**0.0**
ELL	**Elmali**	**0.64**	**119**	*e*Pg	**Pg**	**23 08 50.6**	**-0.7**
ELL				*e*Sg	**Sg**	**23 08 59.8**	**0.0**
DNZL	**Cakiroluk**	**0.64**	**348**	*i* P	**Pg**	**23 08 49.8**	**-1.6**
DNZL				*i* S	**Sg**	**23 09 00.1**	**+0.2**
DNZL	**Cakiroluk**	**0.64**	**348**	*i* P	**Pg**	**23 08 49.8**	**-1.6**
DNZL				*i* S	**Sg**	**23 09 00.1**	**+0.2**
DENT	**Denizli**	**0.70**	**348**	*e*PG	**Pg**	**23 08 52.3**	**-0.3**
DENT				*e*SG	**Sg**	**23 09 02.9**	**+1.0**
DENT	**Denizli**	**0.70**	**348**	*e*Pg	**Pg**	**23 08 52.3**	**-0.3**
DENT				*e*Sg	**Sg**	**23 09 02.9**	**+1.0**
YER	**Yerkesik**	**0.75**	**276**	*e*PG	**Pg**	**23 08 53.0**	**-0.5**
YER				*e*SG	**Sg**	**23 09 03.1**	**-0.2**
YER	**Yerkesik**	**0.75**	**276**	*e*Pg	**Pg**	**23 08 53.0**	**-0.4**
YER				*e*Sg	**Sg**	**23 09 03.1**	**-0.3**
AKAS	**Kas**	**0.89**	**159**	*e*P	**Pb**	**23 08 49.2**	**-6.5**
AKAS				*i* S	**Sb**	**23 09 08.0**	**+0.8**
AKAS	**Kas**	**0.89**	**159**	*i* S	**Sb**	**23 09 08.0**	**+0.8**
ANTB	**Antalya**	**1.16**	**98**	*e*PN	**Pn**	**23 08 59.8**	**-0.5**
ANTB	**Antalya**	**1.16**	**98**	*e*Pn	**Pn**	**23 08 59.8**	**-0.4**
MLSB	**Milas**	**1.17**	**282**	*e*PN	**Pn**	**23 09 00.4**	**0.0**
MLSB	**Milas**	**1.17**	**282**	*e*Pn	**Pn**	**23 09 00.4**	**0.0**
AYDN	**Tasoluk**	**1.22**	**300**	*i* P	**Pn**	**23 09 00.3**	**-0.8**
AYDN				*i* S	**Sb**	**23 09 16.6**	**-0.2**
AYDN	**Tasoluk**	**1.22**	**300**	*i* P	**Pn**	**23 09 00.3**	**-0.7**
AYDN				*i* S	**Sb**	**23 09 16.6**	**-0.3**
KHL	**Karahalli**	**1.28**	**11**	*e*PN	**Pn**	**23 09 01.8**	**-0.1**
KHL	**Karahalli**	**1.28**	**11**	*e*Pn	**Pn**	**23 09 01.8**	**-0.1**
KHAL	**Karahalli**	**1.32**	**9**	*i* P	**Pn**	**23 09 03.6**	**+1.1**
KHAL				*i* S	**Sn**	**23 09 23.4**	**+3.7**
KHAL	**Karahalli**	**1.32**	**9**	*i* P	**Pn**	**23 09 03.6**	**+1.2**
DAT	**Datca**	**1.36**	**256**	*e*PN	**Pn**	**23 09 03.1**	**+0.2**
DAT	**Datca**	**1.36**	**256**	*e*Pn	**Pn**	**23 09 03.1**	**+0.2**
SUTC	**Sutluce-Ispart**	**1.48**	**73**	*e*PN	**Pn**	**23 09 04.1**	**-0.5**
SUTC	**Sutluce-Ispart**	**1.48**	**73**	*e*Pn	**Pn**	**23 09 04.1**	**-0.5**
KULA	**Kula-Manisa**	**1.51**	**343**	*e*PN	**Pn**	**23 09 05.2**	**+0.1**
KULA	**Kula-Manisa**	**1.51**	**343**	*e*Pn	**Pn**	**23 09 05.2**	**+0.1**

*IDC **24** 23:13:22.4±0.7, 48°.49N×155°.44E, h0km, mb3.9/15, mb1 4.0/17, mb1mx4.0/25, mbtmp3.9/17, ML3.9/1, MS3.2/6, Ms1 3.2/6, ms1mx2.9/24, Error ellipse: s-maj=20.6km s-min=13.1km az=155.0*
*ISCJB **24** 23:13:24.5±1.8, 48°.43N±0°.06×155°.6E±0°.1, h29km±13km, mb4.0/28, MS3.2/6, Error ellipse: s-maj=13.6km s-min=5.5km az=37.9*
*MOS **24** 23:13:25.2±1.5, 48°.40N×155°.65E, h39km, mb4.4/15, Error ellipse: s-maj=11.6km s-min=7.2km az=74.3*
*NEIC **24** 23:13:26.7±0.9, 48°.38N×155°.56E, h38km±8km, mb4.1/9, Error ellipse: s-maj=11.6km s-min=6.3km az=140.0*

ISC 24 23:13:26.3±1.9, 48°.41N±0°.05×155°.60E±0°.10, h28km±13km, n90, σ1°.27/93, mb4.0/28, MS3.2/6, 6C-4D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.30**	**8**	*e*PN	**Pn**	**23 14 02.0**	**-0.3**
SKR				*e*S	**Sn**	**23 14 29.0**	**-0.7**
SKR				pmax	pmax		
	comp=N,60nm,0.4s						
SKR				pmax	pmax		
	comp=Z,90nm,0.4s						
SKR				smax			
	comp=N,350nm,0.5s						
SKR				smax			
	comp=E,150nm,0.5s						
SKR				smax			
	comp=N,1μm,2.0s						
SKR				smax			
	comp=E,1μm,2.0s						
SKR				MLR	MLR		
	comp=Z,1μm,16.0s						
SKR				MLR	MLR		
	comp=N,1μm,14.0s						
PEA0B	**Petropavlovsk-**	**4.89**	**15**	*e*Pn	**Pn**	**23 14 39.0**	**+1.2**
PEA0B				*e*S	**Sn**	**23 15 47.6**	**+14**
PETK	**Petropavlovsk-**	**4.89**	**15**	Pn	**Pn**	**23 14 39.1**	**+1.2**
	comp=N,3.7nm,0.3s,baz=182,slow=12,SNR=39						
PETK				LR	LR	23 16 48.6	
	comp=N,143nm,21.2s,baz=203,slow=43						
PET	**Petropavlovsk**	**5.01**	**22**	⇓*i*PN	**Pn**	**23 14 39.4**	**-0.1**
PET				pmax	pmax		
	comp=Z,42nm,0.6s						
PET	**Petropavlovsk**	**5.01**	**22**	*e*Pn	**Pn**	**23 14 39.0**	**-0.5**
	comp=Z,20nm,0.4s						
PET				*e*Sn	**Sn**	**23 15 36.3**	**-0.2**
KUR	**Kuril'sk**	**6.18**	**242**	*e*PN	**Pn**	**23 14 58.0**	**+2.4**
KUR				pmax	pmax		
	comp=Z,140nm,0.8s						
YSS	**Yuzh-Sakhalins**	**8.79**	**265**	PN	**Pn**	**23 15 32.2**	**+0.8**
ASAJ	**Asahikawa**	**9.97**	**249**	Pn	**Pn**	**23 15 51.6**	**+4.0**
	comp=Z,1.5nm,0.3s,baz=79,slow=16,SNR=7.4						
ASAJ	**Asahikawa**	**9.97**	**249**	PN	**Pn**	**23 15 51.6**	**+4.0**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ERM	**Erimo**	**10.85**	**239**	*i* PN	**Pn**	**23 16 01.7**	**+2.1**
FX1	**Attu Island--F**	**12.01**	**62**	Pn	**Pn**	**23 16 13.8**	**-1.6**
	comp=Z,2.8nm,0.3s,baz=65,slow=20,SNR=18						
FX1				Sn	**Sn**	**23 18 16.6**	**-12**
	comp=Z,7.0nm,0.3s,baz=49,slow=21,SNR=9.3						
MAJO	**Matsushiro**	**17.42**	**234**	*e*P	**Pn**	**23 17 26.0**	**-1.1**
MJAR	**Matsushiro Arr**	**17.42**	**234**	P	**Pn**	**23 17 26.0**	**-1.1**
	baz=34,slow=13,SNR=3.8						
BILL	**Bilibino**	**20.41**	**12**	⇑*e*P	**P**	**23 17 59.9**	**-0.8**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,100nm,19.0s,MS3.2						
BILL	**Bilibino**	**20.41**	**12**	*e*P	**P**	**23 18 00.2**	**-0.5**
	comp=Z,2.5nm,0.6s						
KSRS	**Korea Array**	**22.91**	**252**	P	**P**	**23 18 27.6**	**-0.1**
	comp=Z,1.6nm,0.5s,mb3.7,baz=46,slow=11,SNR=6.2						
KSRS				LR	LR	23 26 48.0	
	comp=Z,53nm,18.1s,MS3.0,baz=347,slow=35						
KSRS	**Korea Array**	**22.91**	**252**	*e*P	**P**	**23 18 30.6**	**+2.9**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.8						
INCN	**Inchon**	**23.71**	**253**	*e*P	**P**	**23 18 34.1**	**-1.6**
UNV	**Unalaska Valle**	**24.19**	**63**	P	**P**	**23 18 38.6**	**-1.3**
ULN	**Ulaanbaatar**	**31.97**	**288**	*e*P	**P**	**23 19 49.1**	**-0.5**
NJ2	**Nanjing**	**32.09**	**253**	*e*P	**P**	**23 19 51.3**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.1						
SONM	**Songino Array**	**32.40**	**288**	P	**P**	**23 19 53.0**	**-0.3**
	comp=Z,0.3nm,0.4s,mb3.5,baz=75,slow=8.3,SNR=4.2						
SONM				LR	LR	23 33 26.8	
	comp=Z,39nm,20.0s,MS3.1,baz=247,slow=37						
NACB	**Ninganchiao**	**36.08**	**240**	P	**P**	**23 20 24.4**	**-1.0**
YULB	**Yu-li**	**36.86**	**240**	*e*P	**P**	**23 20 31.0**	**-1.1**
INK	**Inuvik**	**39.34**	**34**	P	**P**	**23 20 51.0**	**-1.5**
ZALV	**Zalesovo Beam**	**43.02**	**305**	LR	LR	23 39 15.4	
	comp=Z,19nm,19.4s,MS3.0,baz=79,slow=36						
MK31	**Makanchi Array**	**47.68**	**297**	*e*P	**P**	**23 21 58.3**	**-1.6**
MKAR	**Makanchi Array**	**47.68**	**297**	P	**P**	**23 21 59.5**	**-0.4**
	comp=Z,1.8nm,0.6s,mb4.3,baz=65,slow=11,SNR=26						
MKAR				LR	LR	23 43 34.7	
	comp=Z,37nm,19.4s,MS3.4,baz=10,slow=38						
MKAR	**Makanchi Array**	**47.68**	**297**	*e*P	**P**	**23 21 59.5**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KURK	**Kurchatov**	**47.85**	**303**	⇓*e*P	**P**	**23 22 00.4**	**-0.8**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
KURK	**Kurchatov**	**47.85**	**303**	*e*P	**P**	**23 22 00.2**	**-1.0**
YKA	**Yellowknife Ar**	**48.59**	**38**	P	**P**	**23 22 07.6**	**+0.9**
	comp=Z,0.4nm,0.7s,mb3.6,baz=297,slow=8.3,SNR=3.5						
RES	**Resolute Bay**	**48.72**	**19**	*e*P	**P**	**23 22 06.6**	**-1.0**
BVAR	**Borovoye Array**	**51.11**	**309**	P	**P**	**23 22 25.0**	**-1.0**
	comp=Z,0.6nm,0.4s,mb3.9,baz=68,slow=6.5,SNR=5.4						
BVAR	**Borovoye Array**	**51.11**	**309**	P	**P**	**23 22 25.0**	**-1.0**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TKM2	**Tokmak 2**	**53.78**	**296**	P	**P**	**23 22 44.2**	**-1.7**
CHTO	**Chiang Mai**	**54.13**	**258**	*e*P	**P**	**23 22 46.6**	**-2.2**
CMAR	**Chiang Mai Arr**	**54.39**	**257**	P	**P**	**23 22 51.8**	**+1.2**
	comp=Z,1.1nm,0.4s,mb4.2,baz=32,slow=7.0,SNR=4.8						
CMAR	**Chiang Mai Arr**	**54.39**	**257**	P	**P**	**23 22 51.8**	**+1.2**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ARU	**Arti**	**54.92**	**318**	*e*P	**P**	**23 22 53.1**	**-0.9**
ARU	**Arti**	**54.92**	**318**	*e*P	**P**	**23 22 53.1**	**-1.0**
EKS2	**Erkin-Say**	**55.01**	**297**	*e*P	**P**	**23 22 53.5**	**-1.4**
	comp=Z,1.3nm,0.7s,mb4.1						
AML	**Almayashu**	**55.38**	**297**	*e*P	**P**	**23 22 57.0**	**-0.5**
	comp=Z,0.8nm,0.6s,mb3.9						
ARCES	**ARCESS Array B**	**56.83**	**341**	P	**P**	**23 23 05.8**	**-1.8**
	comp=Z,2.1nm,0.8s,mb4.2,baz=39,slow=7.7,SNR=10						
ARCES				LR	LR	23 51 29.1	
	comp=Z,30nm,19.9s,MS3.4,baz=212,slow=40						
ARCES	**ARCESS Array B**	**56.83**	**341**	P	**P**	**23 23 05.8**	**-1.7**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES				MLR	MLR		
	comp=Z,30nm,19.9s						
ABKAR	**Akbulak array**	**58.65**	**310**	*e*P	**P**	**23 23 19.4**	**-1.1**
	comp=Z,0.7nm,0.4s,mb4.0						
PDAR	**Pinedale Array**	**62.42**	**56**	P	**P**	**23 23 47.9**	**+1.5**
	comp=Z,0.6nm,0.8s,mb3.8,baz=328,slow=5.3,SNR=3.7						
FINES	**FINESS Array B**	**63.25**	**335**	P	**P**	**23 23 51.0**	**-0.6**
	comp=Z,0.6nm,0.4s,mb4.1,baz=35,slow=7.0,SNR=6.9						
FINES	**FINESS Array B**	**63.25**	**335**	P	**P**	**23 23 51.0**	**-0.6**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
OBN	**Obninsk**	**64.88**	**326**	*e*P	**P**	**23 24 03.5**	**+1.1**
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
NOA	**NORSAR Array B**	**67.19**	**342**	P	**P**	**23 24 16.2**	**-0.9**
	comp=Z,0.8nm,0.6s,mb3.9,baz=25,slow=6.5,SNR=3.8						
NOA	**NORSAR Array B**	**67.19**	**342**	P	**P**	**23 24 16.2**	**-0.9**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRAB	**Tennant Creek**	**70.64**	**201**	*e*P	**P**	**23 24 36.0**	**-3.0**
WRAB				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
WRAB	**Tennant Creek**	**70.64**	**201**	*e*P	**P**	**23 24 36.0**	**-2.9**
	comp=Z,5.1nm,1.0s,mb4.4						
WRA	**Warramunga Arr**	**70.65**	**201**	P	**P**	**23 24 38.7**	**-0.3**
	comp=Z,0.4nm,0.7s,mb3.5,baz=11,slow=9.7,SNR=2.8						
AKASG	**Malin Array Be**	**71.09**	**327**	P	**P**	**23 24 40.9**	**-0.5**
	comp=Z,1.7nm,0.5s,mb4.2,baz=32,slow=5.8,SNR=9.0						
AKASG	**Malin Array Be**	**71.09**	**327**	*e*P	**P**	**23 24 40.9**	**-0.6**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	**Malin Array Be**	**71.09**	**327**	P	**P**	**23 24 40.9**	**-0.6**
ASAR	**Alice Springs**	**74.33**	**201**	P	**P**	**23 25 01.9**	**+1.0**
	comp=Z,0.2nm,0.4s,mb3.4,baz=14,slow=4.9,SNR=2.8						
STHS	**Stebnicka Huta**	**74.90**	**331**	*e*P	**P**	**23 25 05.8**	**+1.7**
STHS				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
STHS	**Stebnicka Huta**	**74.90**	**331**	*e*P	**P**	**23 25 05.8**	**+1.7**
	comp=Z,2.6nm,0.9s,mb4.2						
STHS	**Stebnicka Huta**	**74.90**	**331**	*e*P	**P**	**23 25 05.8**	**+1.7**
BUR08	**Bucovina Ar. S**	**75.09**	**328**	*e*P	**P**	**23 25 03.9**	**-1.3**
BURAR	**Bucovina Array**	**75.11**	**328**	⇑*i*P	**P**	**23 25 05.6**	**+0.3**
TXAR	**Lajitas Array**	**75.22**	**63**	P	**P**	**23 25 07.4**	**+1.1**
	comp=Z,1.0nm,0.8s,mb3.8,baz=296,slow=4.5,SNR=12						
TXAR	**Lajitas Array**	**75.22**	**63**	P	**P**	**23 25 07.4**	**+1.1**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
DPC	**Dobruska-Polom**	**75.58**	**334**	*e*P	**P**	**23 25 09.1**	**+1.1**
DPC				*e*		23 35 44.0	
DPC	**Dobruska-Polom**	**75.58**	**334**	*e*P	**P**	**23 25 09.1**	**+1.1**
CLL	**Collm**	**75.63**	**337**	*i* P	**P**	**23 25 08.5**	**+0.3**
CLL				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
CLL	**Collm**	**75.63**	**337**	*i* P	**P**	**23 25 08.5**	**+0.3**
	comp=Z,4.0nm,0.9s,mb4.3						
MORC	**Moravsky Berou**	**75.73**	**333**	*e*P	**P**	**23 25 07.6**	**-1.3**
MORC				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.1						
MORC	**Moravsky Berou**	**75.73**	**333**	*e*P	**P**	**23 25 07.6**	**-1.2**
	comp=Z,3.3nm,1.1s,mb4.2						
MORC	**Moravsky Berou**	**75.73**	**333**	⇓*i*P	**P**	**23 25 09.9**	**+1.0**
VRI	**Vrincioaia**	**76.04**	**326**	⇓*i*P	**P**	**23 25 11.1**	**+0.4**
VRAC	**Vranov**	**76.43**	**334**	⇑*i*P	**P**	**23 25 14.6**	**+1.8**
VYHS	**Vyhne**	**76.48**	**332**	*e*P	**P**	**23 25 14.2**	**+1.1**
VYHS				pmax	pmax		
	comp=Z,2.0nm,1.4s,mb3.9						
VYHS	**Vyhne**	**76.48**	**332**	*e*P	**P**	**23 25 14.2**	**+1.1**
	comp=Z,2.2nm,1.4s,mb3.9						
VYHS	**Vyhne**	**76.48**	**332**	*e*P	**P**	**23 25 14.2**	**+1.1**
MLR	**Muntele Rosu**	**76.65**	**326**	⇑*i*P	**P**	**23 25 15.3**	**+1.2**
TREC	**Trest**	**76.77**	**334**	*e*P	**P**	**23 25 15.9**	**+1.2**
TREC	**Trest**	**76.77**	**334**	*e*P	**P**	**23 25 15.9**	**+1.2**
KHC	**Kasperske Hory**	**77.45**	**336**	*e*P	**P**	**23 25 20.0**	**+1.4**
KHC	**Kasperske Hory**	**77.45**	**336**	*e*P	**P**	**23 25 20.0**	**+1.4**
BZS	**Buzias**	**78.09**	**329**	⇑*i*P	**P**	**23 25 23.0**	**+0.8**
BR131	**Keskin Array S**	**78.31**	**318**	*e*P	**P**	**23 25 21.8**	**-1.7**
	comp=Z,2.3nm,0.9s,mb4.1						
VTS	**Vitosha**	**80.15**	**326**	⇑*i*P	**P**	**23 25 35.0**	**+1.5**
AVF	**Avril sur Loir**	**82.15**	**341**	*e*P	**P**	**23 25 45.9**	**+1.8**
LPL	**La Plagne**	**82.58**	**338**	*e*P	**P**	**23 25 48.9**	**+2.6**
LPG	**La Plagne**	**82.59**	**338**	*e*P	**P**	**23 25 49.1**	**+2.7**
	comp=Z,3.5nm,0.5s,mb4.4						
MMAI	**Mount Meron Ar**	**82.95**	**313**	P	**P**	**23 25 50.5**	**+2.0**
	comp=Z,3.0nm,0.5s,mb4.5,baz=47,slow=7.3,SNR=8.5						

*VIE **24** 23:48:57.8±0.3, 45°.47N×15°.34E, h8km±1km, mb1.7/2, ML2.0/2, Error ellipse: s-maj=1.9km s-min=1.0km az=144.0 16 km W of Karlovac*
*LJU **24** 23:48:58.4, 45°.51N×15°.31E, h7km, ML1.6*
*ISCJB **24** 23:48:58.2±0.4, 45°.50N±0°.02×15°.27E±0°.03, h10km, Error ellipse: s-maj=3.4km s-min=3.0km az=34.9*
*CSEM **24** 23:48:59.0±0.1, 45°.52N×15°.27E, h2km, ML2.5/10, Error ellipse: s-maj=2.7km s-min=2.5km az=36.0*

ISC 24 23:48:58.6±0.5, 45°.49N±0°.03×15°.30E±0°.03, h10km, n49, σ0°.60/75, 7C-1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOJS	**Bojanci**	**0.03**	**297**	⇑*i*Pg	**Pg**	**23 49 00.1**	**-0.4**
BOJS				*i* Sg	**Sg**	**23 49 01.2**	**-0.6**
BOJS							
	comp=Z,453nm,0.1s						
BOJS	**Bojanci**	**0.03**	**297**	⇑*i*Pg	**Pg**	**23 49 00.1**	**-0.4**
BOJS				*i* Sg	**Sg**	**23 49 01.2**	**-0.6**
	comp=Z,453nm,0.1s						
CRES	**Cresnjev**	**0.36**	**19**	*i* Pg	**Pg**	**23 49 04.8**	**-0.8**
CRES							
	comp=Z,41nm,0.2s						
CRES	**Cresnjev**	**0.36**	**19**	*i* Pg	**Pg**	**23 49 04.8**	**-0.8**
	comp=Z,41nm,0.2s						
GCIS	**Gornji Cirnik**	**0.45**	**32**	*i* Pg	**Pg**	**23 49 07.0**	**-0.3**
GCIS				*i* Sg	**Sg**	**23 49 13.1**	**-0.1**
GCIS							
	comp=Z,26nm,0.1s						
GCIS	**Gornji Cirnik**	**0.45**	**32**	*i* Pg	**Pg**	**23 49 06.9**	**-0.4**
GCIS				*i* Sg	**Sg**	**23 49 13.1**	**-0.1**
	comp=Z,26nm,0.1s						
VISS	**Visnje**	**0.45**	**315**	*i* Pg	**Pg**	**23 49 07.4**	**0.0**
VISS				*i* Sg	**Sg**	**23 49 13.1**	**-0.2**
VISS							
	comp=Z,28nm,0.1s						
VISS	**Visnje**	**0.45**	**315**	*i* Pg	**Pg**	**23 49 07.4**	**0.0**
VISS				*i* Sg	**Sg**	**23 49 13.1**	**-0.2**
	comp=Z,28nm,0.1s						
LEGS	**Legarje**	**0.46**	**2**	*i* Pg	**Pg**	**23 49 07.3**	**-0.3**
LEGS	**Legarje**	**0.46**	**2**	*i* Pg	**Pg**	**23 49 07.3**	**-0.3**
CESS	**Cesta pri Krsk**	**0.50**	**14**	*i* Pg	**Pg**	**23 49 08.0**	**-0.3**
CESS	**Cesta pri Krsk**	**0.50**	**14**	*i* Pg	**Pg**	**23 49 08.0**	**-0.3**
GOLS	**Golise**	**0.57**	**24**	*i* Pg	**Pg**	**23 49 09.3**	**-0.3**
GOLS				*i* Sg	**Sg**	**23 49 17.1**	**-0.1**
GOLS							
	comp=Z,12nm,0.1s						
GOLS	**Golise**	**0.57**	**24**	*i* Pg	**Pg**	**23 49 09.4**	**-0.3**
GOLS				*i* Sg	**Sg**	**23 49 17.1**	**-0.1**
	comp=Z,12nm,0.1s						
PDKS	**Podkum**	**0.61**	**340**	*i* Pg	**Pg**	**23 49 10.4**	**0.0**
PDKS				*i* Sg	**Sg**	**23 49 18.1**	**-0.3**
PDKS							
	comp=Z,14nm,0.2s						
CEY	**Cerknica**	**0.66**	**293**	⇑*i*Pg	**Pg**	**23 49 11.2**	**-0.1**
CEY							
	comp=Z,14nm,0.2s						
CEY	**Cerknica**	**0.66**	**293**	⇑*i*Pg	**Pg**	**23 49 11.2**	**-0.1**
	comp=Z,14nm,0.2s						
DOBS	**Dobrina**	**0.67**	**10**	*i* Pg	**Pg**	**23 49 11.4**	**-0.2**
DOBS	**Dobrina**	**0.67**	**10**	*i* Pg	**Pg**	**23 49 11.4**	**-0.2**
VNDS	**Vrh nad Dolski**	**0.74**	**326**	*i* Pg	**Pg**	**23 49 12.9**	**0.0**
SISC	**Sisak**	**0.76**	**91**	*e*Pg	**Pg**	**23 49 13.7**	**+0.5**
SISC				Sg	**Sg**	**23 49 23.6**	**+0.5**
SISC	**Sisak**	**0.76**	**91**	*e*Pg	**Pg**	**23 49 13.6**	**+0.4**
SISC				Sg	**Sg**	**23 49 23.6**	**+0.5**
LJU	**Ljubljana**	**0.77**	**316**	*i* Pg	**Pg**	**23 49 13.7**	**+0.2**
LJU	**Ljubljana**	**0.77**	**316**	*i* Pg	**Pg**	**23 49 13.7**	**+0.2**
SKDS	**Skadanscina**	**0.90**	**274**	*i* Pg	**Pg**	**23 49 15.0**	**-0.9**
CRNS	**Crni Vrh**	**0.94**	**310**	*i* Pg	**Pg**	**23 49 16.5**	**-0.1**
CRNS				*i* Sg	**Sg**	**23 49 30.7**	**+2.0**
CRNS							
	comp=Z,9.0nm,0.2s						
JAVS	**Javornik**	**0.95**	**296**	*e*Pg	**Pg**	**23 49 16.6**	**-0.3**
JAVS	**Javornik**	**0.95**	**296**	*e*Pg	**Pg**	**23 49 16.6**	**-0.3**
NVLJ	**Novalja**	**0.97**	**198**	*e*Pg	**Pg**	**23 49 17.1**	**-0.2**
NVLJ				Sg	**Sg**	**23 49 30.8**	**+0.8**
NVLJ	**Novalja**	**0.97**	**198**	*e*Pg	**Pg**	**23 49 17.0**	**-0.3**
NVLJ				Sg	**Sg**	**23 49 30.7**	**+0.8**
GROS	**Grobnik**	**0.98**	**8**	*i* Pg	**Pg**	**23 49 17.6**	**+0.1**
GROS	**Grobnik**	**0.98**	**8**	*i* Pg	**Pg**	**23 49 17.6**	**+0.1**
MOZS	**Mozjanca**	**1.00**	**324**	*i* Pg	**Pg**	**23 49 17.9**	**+0.1**
VOJS	**Vojsko**	**1.13**	**299**	*i* Pg	**Pg**	**23 49 19.9**	**-0.4**
VOJS				*i* Sg	**Sg**	**23 49 34.7**	**-0.2**
VOJS							
	comp=Z,4.0nm,0.1s						
VOJS	**Vojsko**	**1.13**	**299**	*i* Pg	**Pg**	**23 49 19.9**	**-0.4**
VOJS				*i* Sg	**Sg**	**23 49 34.7**	**-0.2**
	comp=Z,4.0nm,0.1s						
OBKA	**Obir**	**1.15**	**333**	⇑*i*Pg	**Pg**	**23 49 20.6**	**0.0**
OBKA				⇓*i*Sg	**Sg**	**23 49 36.9**	**+1.4**
	comp=Z,19nm,0.3s						
OBKA	**Obir**	**1.15**	**333**	Pg	**Pg**	**23 49 20.6**	**0.0**
OBKA				Sg	**Sg**	**23 49 36.9**	**+1.4**
	comp=Z,19nm,0.3s						
PERS	**Pernice**	**1.15**	**354**	*i* Pg	**Pg**	**23 49 21.2**	**+0.4**
PERS	**Pernice**	**1.15**	**354**	*i* Pg	**Pg**	**23 49 21.2**	**+0.4**
KOGS	**Kog**	**1.17**	**34**	*i* Pg	**Pg**	**23 49 20.7**	**-0.3**
KOGS							
	comp=Z,13nm,0.3s						
KOGS	**Kog**	**1.17**	**34**	*i* Pg	**Pg**	**23 49 20.7**	**-0.3**
	comp=Z,13nm,0.3s						
SOKA	**Soboth**	**1.20**	**351**	⇑*i*Pg	**Pg**	**23 49 21.4**	**-0.3**
SOKA				⇑*i*Sg	**Sg**	**23 49 38.7**	**+1.4**
	comp=Z,1.5nm,0.2s						
SOKA	**Soboth**	**1.20**	**351**	Pg	**Pg**	**23 49 21.4**	**-0.3**
SOKA				Sg	**Sg**	**23 49 38.7**	**+1.4**
	comp=Z,1.5nm,0.2s						
GORS	**Gorjuse**	**1.23**	**313**	*e*Pg	**Pg**	**23 49 21.6**	**-0.6**
GORS				*i* Sg	**Sg**	**23 49 38.1**	**0.0**
GORS							
	comp=Z,10.0nm,0.2s						
GORS	**Gorjuse**	**1.23**	**313**	*e*Pg	**Pg**	**23 49 21.6**	**-0.6**
GORS				*i* Sg	**Sg**	**23 49 38.1**	**0.0**
	comp=Z,10.0nm,0.2s						
CADS	**Cadrg**	**1.32**	**305**	*i* Pg	**Pg**	**23 49 23.6**	**-0.3**
CADS				*i* Sg	**Sg**	**23 49 41.0**	**+0.1**
CADS							
	comp=Z,14nm,0.3s						
CADS	**Cadrg**	**1.32**	**305**	*i* Pg	**Pg**	**23 49 23.5**	**-0.4**
CADS				*i* Sg	**Sg**	**23 49 41.0**	**+0.1**

JIO	Ouri	0.55	129	⇓P	Pg	00 50 50.2	-0.1
JIO				S	Sg	00 50 57.9	+0.5
JRG	Rokugo	0.61	347	P	Pg	00 50 52.0	+0.4
JOM	Ohasama	0.77	29	P	Pg	00 50 54.4	-0.3
JYS	Shirataka	0.82	226	⇑P	Pg	00 50 55.8	+0.2
JYS				S	Sg	00 51 06.8	+0.5
JYA	Atsumi	0.88	257	P	Pg	00 50 56.7	-0.1
JYA				S	Sg	00 51 08.7	+0.5
JMM	Marumori	0.93	181	⇓P	Pg	00 50 57.1	-0.7
JMM				S	Sg	00 51 09.4	-0.4
MAT	Matsushiro	3.06	223	P	Pn	00 51 31.5	+2.4
MAT				S	Sn	00 52 12.3	+6.1

ISCJB ***25*** *00:52:19.8±1.0, 35°.94N×0°.05×21°.62E±0°.06, h10km, Error ellipse: s-maj=8.8km s-min=5.0km az=141.4*
ATH ***25*** *00:52:21.2, 36°.00N×21°.69E, h5km, MD3.4/5*
CSEM ***25*** *00:52:23.2±0.6, 36°.10N×21°.70E, h2km, ML3.6/2, Error ellipse: s-maj=13.1km s-min=7.1km az=50.0*
THE ***25*** *00:52:24.6, 36°.16N×21°.78E, h0km±2km, ML3.6/2, Error ellipse: s-maj=3.7km s-min=1.4km az=243.0*
NEIC ***25*** *00:52:24.6, 36°.00N×21°.69E, h5km, MD3.4(ATH), ML3.6(THE), After ATH.*

ISC 25 00:52:21.2±1.0, 35°.98N±0°.05×21°.66E±0°.06, h10km, n38, σ1§07/56, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.92	4	P	Pg	00 52 38.4	-0.4
PYL				S	Sg	00 52 48.9	-1.9
PYL	PYLOS	0.92	4	ePB	Pg	00 52 38.4	-0.4
PYL	PYLOS	0.92	4	P	Pg	00 52 38.4	-0.4
PYL				S	Sg	00 52 48.9	-1.9
KYTH	Kithira	1.15	74	ePb	Pg	00 52 42.8	-0.5
KYTH	Kithira	1.15	74	ePB	Pg	00 52 42.8	-0.5
KYTH	Kithira	1.15	74	ePb	Pg	00 52 42.8	-0.5
VLI	Veliai	1.27	54	ePb	Pb	00 52 44.9	-0.2
VLI				eSb	Sb	00 53 02.6	+1.1
VLI	Veliai	1.27	54	ePB	Pb	00 52 44.9	-0.2
VLI				eSB	Sb	00 53 02.6	+1.1
VLI	Veliai	1.27	54	ePb	Pb	00 52 44.9	-0.2
VLI				eSb	Sb	00 53 02.6	+1.1
VLX	Vlachokerasia	1.50	22	P	Pn	00 52 48.2	0.0
VLX				S	Sn	00 53 08.0	+0.2
VLX	Vlachokerasia	1.50	22	ePG	Pg	00 52 48.5	-1.5
VLX	Vlachokerasia	1.50	22	P	Pn	00 52 48.2	0.0
VLX	Vlachokerasia	1.50	22	ePg	Pg	00 52 48.5	-1.5
VLX				S	Sn	00 53 08.0	+0.2
KARN	Karanos	1.92	107	P	Pg	00 52 57.6	-0.5
KARN				S	Sg	00 53 23.0	0.0
KARN	Karanos	1.92	107	P	Pg	00 52 57.6	-0.5
KARN				S	Sg	00 53 23.0	0.0
GUR	Goura	2.03	15	P	Pb	00 52 57.0	-1.1
GUR				S	Sn	00 53 22.2	+1.4
GUR	Goura	2.03	15	ePN	Pb	00 52 58.7	+0.6
GUR	Goura	2.03	15	P	Pb	00 52 57.0	-1.1
GUR	Goura	2.03	15	ePn	Pb	00 52 58.7	+0.6
GUR				S	Sn	00 53 22.2	+1.4
VAM	Vamos	2.14	105	ePn	Pb	00 53 00.4	+0.3
VAM	Vamos	2.14	105	ePN	Pb	00 53 00.4	+0.3
VAM	Vamos	2.14	105	ePn	Pb	00 53 00.4	+0.3
GVD	Gavdhos	2.28	119	P	Pb	00 53 02.3	-0.2
GVD	Gavdhos	2.28	119	P	Pb	00 53 02.3	-0.2
GVD	Gavdhos	2.28	119	P	Pb	00 53 02.3	-0.2
LTK	Loutraki	2.29	27	P	Pb	00 53 01.6	-1.0
LTK				S	Sn	00 53 28.4	+1.1
LTK	Loutraki	2.29	27	ePN	Pb	00 53 02.1	-0.5
LTK	Loutraki	2.29	27	P	Pb	00 53 01.6	-1.0
LTK	Loutraki	2.29	27	ePn	Pb	00 53 02.1	-0.5
LTK				S	Sn	00 53 28.4	+1.1
VLS	Valsamata	2.36	339	ePg	Pb	00 53 04.8	+1.1
VLS				S	Sn	00 53 30.9	+2.0
VLS	Valsamata	2.36	339	P	Pb	00 53 02.9	-0.8
VLS				S	Sn	00 53 30.9	+2.0
VLS	Valsamata	2.36	339	ePG	Pb	00 53 04.8	+1.1
VLS	Valsamata	2.36	339	P	Pb	00 53 02.9	-0.8
VLS	Valsamata	2.36	339	ePg	Pb	00 53 04.8	+1.1
VLS				S	Sn	00 53 30.9	+2.0
STON	Ston	7.53	337	*i* Pn	Pn	00 54 11.6	+0.6
STON				Sn	Sn	00 55 32.7	-3.7
STON	Ston	7.53	337	*i* Pn	Pn	00 54 11.6	+0.6
NVLJ	Novalja	10.02	331	ePn	Pn	00 54 46.1	+1.1
NVLJ				Sn	Sn	00 56 34.5	-3.0
NVLJ	Novalja	10.02	331	ePn	Pn	00 54 46.1	+1.0

THE ***25*** *01:01:55.7, 37°.95N×23°.32E, h11km±1km, ML1.8/3, Error ellipse: s-maj=2.3km s-min=0.8km az=197.0*
CSEM ***25*** *01:01:55.6±0.1, 37°.99N×23°.29E, h8km, ML2.2, Error ellipse: s-maj=2.1km s-min=1.0km az=19.0*
ATH ***25*** *01:01:55.0, 37°.95N×23°.25E, h17km±5km, MD2.5/5, ML2.2*
ISCJB ***25*** *01:01:55.7±0.6, 37°.95N±0°.06×23°.30E±0°.04, h11km±7km, Error ellipse: s-maj=9.6km s-min=4.5km az=13.7*

ISC 25 01:01:55.5±0.8, 37°.93N±0°.06×23°.29E±0°.04, h17km±8km, n21, σ0§60/35, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NAIG	Nisos Aigina	0.23	137	ePB	Pg	01 02 01.2	+0.4
NAIG	Nisos Aigina	0.23	137	ePb	Pg	01 02 01.2	+0.4
LTK	Loutraki	0.28	291	P	Pg	01 02 01.0	-0.6
LTK				S	Sg	01 02 05.6	-0.1
LTK	Loutraki	0.28	291	P	Pg	01 02 01.0	-0.6
LTK				S	Sg	01 02 05.6	-0.1
ATH	Athens Observa	0.34	82	ePB	Pg	01 02 02.3	-0.3
ATH				eSB	Sg	01 02 07.9	+0.5
ATH	Athens Observa	0.34	82	ePb	Pg	01 02 02.3	-0.3
ATH				eSb	Sg	01 02 07.9	+0.5
ATHU	Athens Univers	0.39	84	P	Pg	01 02 03.3	-0.3
ATHU				S	Sg	01 02 08.4	-0.6
ATHU	Athens Univers	0.39	84	P	Pg	01 02 03.3	-0.3
ATHU				S	Sg	01 02 08.4	-0.6
VLY	Voula,Athens	0.40	100	ePB	Pg	01 02 03.7	-0.1
VLY				eSB	Sg	01 02 10.0	+0.7
VLY	Voula,Athens	0.40	100	ePb	Pg	01 02 03.7	-0.1
VLY				eSb	Sg	01 02 10.0	+0.7
PTL	Penteli	0.47	74	ePB	Pg	01 02 04.5	-0.5
PTL				eSB	Sg	01 02 11.6	+0.3
PTL	Penteli	0.47	74	ePb	Pg	01 02 04.5	-0.5
PTL				eSb	Sg	01 02 11.6	+0.3
GUR	Goura	0.75	271	P	Pg	01 02 10.3	+0.1
GUR	Goura	0.75	271	P	Pg	01 02 10.3	+0.1
LKR	Lokris	0.76	342	P	Pg	01 02 09.0	-1.4
LKR				S	Sg	01 02 20.8	+0.3
LKR	Lokris	0.76	342	ePN	Pg	01 02 09.0	-1.4
LKR	Lokris	0.76	342	P	Pg	01 02 09.0	-1.4
LKR				S	Sg	01 02 20.8	+0.3
DSF	Desfina	0.78	309	P	Pb	01 02 10.1	-0.4
DSF				S	Sg	01 02 22.2	+1.3
DSF	Desfina	0.78	309	P	Pb	01 02 10.1	-0.4
DSF				S	Sg	01 02 22.2	+1.3
NEO	Neokhori	1.38	358	ePN	Pn	01 02 20.6	+0.6
NEO	Neokhori	1.38	358	ePn	Pn	01 02 20.6	+0.6

IDC ***25*** *01:09:33.6±5.5, 11°.48N×87°.34W, h0km, mb4.0/5, mb1 4.2/6, mb1mx3.9/19, mbtmp3.9/6, ML2.4/1, MS2.9/4, Ms1 2.9/4, ms1mx2.6/31, Error ellipse: s-maj=103.6km s-min=35.7km az=11.0*
NEIC ***25*** *01:09:39.0±0.8, 11°.51N×87°.42W, h35km, mb4.0/1, Error ellipse: s-maj=19.5km s-min=10.6km az=96.0*
CASC ***25*** *01:09:44.5±2.0, 12°.03N×87°.72W, h24km±8km, MD4.1, ML4.2, mb4.0(NEIC)*
ISCJB ***25*** *01:09:44.7±0.6, 12°.00N±0°.05×87°.72W±0°.05, h52km±8km, mb3.9/7, MS3.2/4, Error ellipse: s-maj=10.4km s-min=3.8km az=41.7*

ISC 25 01:09:46.2±0.5, 12°.09N±0°.06×87°.64W±0°.05, h54km±7km, n49, σ1§03/53, mb3.9/7, MS3.2/4, 2C, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEON	Leon	0.80	66	eP	Pn	01 10 00.3	-1.1
TELN	Telica	0.94	57	eP	Pn	01 10 02.6	-0.7
COPN	Copaltepe	1.03	85	⇑*i* P	Pn	01 10 03.6	-0.8
COPN				eS	Sn	01 10 20.6	+2.7
MOMN	Momotombo	1.12	74	eP	Pn	01 10 05.0	-0.6
CNCH	Conchagua	1.19	351	eP	Pn	01 10 05.8	-0.8
CNCH				eS	Sn	01 10 24.0	+2.2
CSAN		1.20	86	eP	Pn	01 10 06.4	-0.3
APYN	Apoyeque	1.27	84	eP	Pn	01 10 07.0	-0.6
MGAN	Managua	1.36	88	eP	Pn	01 10 08.4	-0.5
TICN	Ticuantepe	1.38	92	eP	Pn	01 10 08.9	-0.2
HUEN		1.46	80	⇑*i* P	Pn	01 10 09.5	-0.6
BLLM	Bellamira	1.46	337	eP	Pn	01 10 09.2	-1.1
BLLM				eS	Sn	01 10 30.7	+2.3
VSM	San Miguel	1.47	335	eP	Pn	01 10 09.6	-0.8
APON	Apoyo	1.55	96	eP	Pn	01 10 11.1	-0.3
CAHU	Cacacuatique	1.76	342	eP	Pn	01 10 14.5	+0.2
SNVI	San Vicente	1.91	322	eP	Pn	01 10 15.5	-0.9
SNVI				eS	Sn	01 10 40.8	+1.5
BOAB	BOACO BROADBAN	.96	79	eP	Pn	01 10 16.4	-0.7
TGUH	Tegucigalpa,Un	1.99	10	ePn	Pn	01 10 16.9	-0.6
TGUH				Sn	Sn	01 10 45.0	+3.9
TGUH	Tegucigalpa,Un	1.99	10	eP	Pn	01 10 17.7	+0.3
TGUH				eS	Sn	01 10 43.8	+2.7
TGUH				AML	AML	01 10 45.8	
	comp=N,3μm,0.4s						
CONN	Concepcion	2.04	105	eP	Pn	01 10 17.1	-1.0
LFRS	El Faro	2.06	318	eP	Pn	01 10 17.4	-1.0
LFRS				eS	Sn	01 10 42.9	0.0
LBRS	Las Brisas	2.13	320	eP	Pn	01 10 18.8	-0.6
BOQS	Boqueron	2.29	316	eP	Pn	01 10 21.2	-0.3
NY14	Universidad de	2.52	125	*i* P	Pn	01 10 24.6	-0.1
GB1A	Borinquen Arri	2.54	120	*i* P	Pn	01 10 24.9	-0.1
GB1A				*i* S	Sn	01 10 54.8	+0.1
MESS	Mesas	2.75	119	*i* P	Pn	01 10 27.6	-0.2
RBDL	Robledal	2.83	315	eP	Pn	01 10 28.4	-0.5
PTEN	Parque Tenorio	2.94	117	*i* P	Pn	01 10 30.8	+0.4
JCR	Jicaral	3.34	132	eS	Sx	01 11 31.1	
CGA2	Cerro Gallo 2	3.74	123	eP	Pn	01 10 42.2	+0.8
PRS1	Puriscal	3.88	122	eP	Pn	01 10 45.4	+2.0
APG	El Apazote	3.99	317	Pn	Pn	01 10 44.7	-0.2
	comp=N,0.2nm,0.3s,baz=112,slow=17,SNR=2.2						
APG				Sn	Sn	01 11 39.8	+9.4
	comp=N,0.6nm,0.3s,baz=102,slow=16,SNR=3.9						
APG				LR	LR	01 12 41.5	
	comp=N,100nm,18.7s,baz=58,slow=40						
LAJ	Bijagual	4.10	122	eP	Pn	01 10 42.5	-3.9
URSC	Urasca	4.41	120	eP	Pn	01 10 53.6	+3.0
BUS	Buena Vista	4.57	123	eP	Pn	01 10 54.1	+1.2
BAR1		5.11	123	eP	Pn	01 11 01.8	+1.6
CMIG	Matias Romero	8.59	306	Pn	Pn	01 11 48.0	0.0
	comp=N,0.2nm,0.3s,baz=28,slow=18,SNR=2.2						
PAYG	Puerto Ayora	12.95	192	Pn	Px	01 12 33.4	
PCRV	Puerto La Cruz	22.65	93	LR	LR	01 22 29.1	
	comp=N,28nm,21.1s,MS2.7,baz=189,slow=35						
TXAR	Lajitas Array	22.73	321	P	P	01 14 44.9	+1.1
	comp=N,6.3nm,0.8s,mb4.1,baz=137,slow=10,SNR=70						
TXAR				LR	LR	01 26 57.0	
	comp=N,41nm,18.3s,MS2.9,baz=175,slow=45						
MIAR	Mount Ida	23.00	347	eP	P	01 14 46.4	0.0
	comp=N,4.2nm,0.8s,mb3.9						
CPCT	Cooper Cave	23.43	6	eP	P	01 14 51.7	+1.0
TKL	Tuckaleechee C	23.72	8	P	P	01 14 53.1	-0.2
	comp=N,2.1nm,0.7s,mb3.7,baz=193,slow=13,SNR=6.7						
PDAR	Pinedale Array	36.00	332	P	P	01 16 42.8	+0.8
	comp=N,1.0nm,0.9s,mb3.8,baz=119,slow=8.6,SNR=6.9						
NVAR	Mina Array Bea	37.85	319	P	P	01 17 01.8	+4.0
	comp=N,0.5nm,0.7s,mb3.4,baz=127,slow=11,SNR=3.5						
ULM	Lac du Bonnet	38.64	352	LR	LR	01 36 15.2	
	comp=N,23nm,19.2s,MS3.0,baz=326,slow=41						
SCHQ	Schefferville	45.67	17	P	P	01 18 00.0	-1.4
	comp=N,2.5nm,0.6s,mb4.4,baz=232,slow=9.9,SNR=7.0						
YKA	Yellowknife Ar	53.91	345	P	P	01 19 02.4	-1.4
	comp=N,0.8nm,0.7s,mb3.7,baz=141,slow=7.1,SNR=7.5						
YKA	Yellowknife Ar	53.91	345	P	P	01 19 02.4	-1.4
PPT	Papeete	67.88	245	LR	LR	01 42 28.2	
	comp=N,151nm,20.0s,MS4.2,baz=160,slow=29						

DDA ***25*** *01:20:07.2, 33°.76N×25°.28E, h18km, Md3.6*
ISCJB ***25*** *01:20:12.2±1.0, 34°.12N±0°.04×25°.47E±0°.04, h18km±7km, mb3.8/6, Error ellipse: s-maj=7.2km s-min=4.6km az=20.2*
IDC ***25*** *01:20:12.1±1.4, 34°.31N×25°.47E, h0km, mb3.9/6, mb1 3.9/9, mb1mx3.7/26, mbtmp3.8/9, ML3.6/3, Error ellipse: s-maj=30.0km s-min=16.1km az=27.0*
CSEM ***25*** *01:20:13.1±0.3, 34°.21N×25°.40E, h10km, MD3.7, Error ellipse: s-maj=8.0km s-min=5.5km az=9.0*
ATH ***25*** *01:20:15.1, 34°.29N×25°.28E, h30km±6km, MD3.7/5*
NEIC ***25*** *01:20:15.1, 34°.29N×25°.28E, h30km, mb3.7/3, MD3.7(ATH), After ATH.*
THE ***25*** *01:20:16.2, 34°.38N×25°.33E, h0km±1km, Error ellipse: s-maj=3.2km s-min=1.1km az=172.0*

ISC 25 01:20:12.7±0.9, 34°.18N±0°.04×25°.39E±0°.03, h8km±5km, n95, σ1§15/126, mb3.8/6, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	Sivas	0.96	331	ePn	Pg	01 20 31.2	0.0
SIVA				eSn	Sn	01 20 43.5	-3.0
SIVA	Sivas	0.96	331	P	Pg	01 20 31.2	0.0
SIVA				S	Sg	01 20 43.4	-0.3
SIVA	Sivas	0.96	331	ePN	Pg	01 20 31.2	0.0
SIVA				eSN	Sn	01 20 43.5	-3.0
SIVA	Sivas	0.96	331	P	Pg	01 20 31.2	0.0
SIVA				S	Sg	01 20 43.4	-0.3
LAST	Lasithi	0.98	4	P	Pg	01 20 31.4	-0.2
LAST				S	Sg	01 20 43.5	-0.9
LAST	Lasithi	0.98	4	P	Pg	01 20 31.4	-0.2
LAST				S	Sg	01 20 43.5	-0.9
NPS	Neapolis	1.10	10	ePb	Pb	01 20 33.4	-0.6
NPS	Neapolis	1.10	10	ePB	Pb	01 20 33.4	-0.6
NPS	Neapolis	1.10	10	ePb	Pb	01 20 33.4	-0.6
ZKR	Zakros	1.16	36	P	Pg	01 20 35.0	0.0
ZKR				S	Sg	01 20 51.7	+1.7
ZKR	Zakros	1.16	36	P	Pg	01 20 35.0	0.0
IDI	Anoyia	1.18	340	Pn	Pn	01 20 35.1	-0.5
	16nm,0.3s,baz=161,slow=13,SNR=105						
IDI				Sn	Sn	01 20 52.0	+0.2
	53nm,0.3s,baz=266,slow=18,SNR=13						
IDI	Anoyia	1.18	340	Pn	Pn	01 20 35.1	-0.5
IDI				Sn	Sn	01 20 52.0	+0.1
GVD	Gavdhos	1.26	302	ePn	Pn	01 20 36.2	-0.4
GVD	Gavdhos	1.26	302	P	Pn	01 20 36.5	-0.1
GVD				S	Sb	01 20 53.9	+0.8
GVD	Gavdhos	1.26	302	ePN	Pn	01 20 36.2	-0.4
GVD	Gavdhos	1.26	302	ePn	Pn	01 20 36.2	-0.4
GVD	Gavdhos	1.26	302	P	Pn	01 20 36.5	-0.1
GVD				S	Sb	01 20 53.9	+0.8
VAM	Vamos	1.57	322	ePn	Pn	01 20 41.3	+0.4
VAM	Vamos	1.57	322	ePN	Pn	01 20 41.3	+0.4
VAM	Vamos	1.57	322	ePn	Pn	01 20 41.3	+0.4
KARN	Karanos	1.72	316	P	Pn	01 20 44.1	+1.1
KARN				S	Sn	01 21 05.6	+0.5
KARN	Karanos	1.72	316	P	Pn	01 20 44.1	+1.1
KARN				S	Sn	01 21 05.6	+0.5
KARP	Karpathos	2.00	46	ePb	Pb	01 20 49.3	0.0
KARP	Karpathos	2.00	46	ePB	Pb	01 20 49.3	0.0
KARP	Karpathos	2.00	46	ePb	Pb	01 20 49.3	0.0
THR1	Thera Island	2.19	2	P	Pn	01 20 51.1	+1.7
THR1				S	Sn	01 21 15.9	-0.8
THR1	Thera Island	2.19	2	P	Pn	01 20 51.1	+1.7
THR1				S	Sn	01 21 15.9	-0.8
THR3	Thira Island,	2.23	0	P	Pn	01 20 50.4	+0.5
THR3	Thira Island,	2.23	0	P	Pn	01 20 50.4	+0.5
APE	Apeiranthos	2.89	2	P	Pn	01 20 00.4	+1.4
APE				S	Sn	01 21 33.8	-0.2
APE	Apeiranthos	2.89	2	P	Pn	01 20 00.4	+1.4
APE				S	Sn	01 21 33.8	-0.2
ARG	Arkhangelos	3.03	47	ePn	Pn	01 20 03.4	+2.4
ARG	Arkhangelos	3.03	47	P	Pn	01 20 03.4	+2.4
ARG				S	Sn	01 21 39.6	+2.2
ARG	Arkhangelos	3.03	47	ePN	Pn	01 20 03.4	+2.4
ARG	Arkhangelos	3.03	47	ePn	Pn	01 20 03.4	+2.4
DAT	Datca	3.11	34	eP	Pn	01 21 01.7	-0.4
MLSB	Milas	3.67	31	eP	Pn	01 21 09.5	-0.2
TURN	Turunc	3.76	43	*i* P	Pn	01 21 08.6	-2.4
TURN				*i* S	Sn	01 21 49.3	-6.1
TURN	Turunc	3.76	43	*i* P	Pn	01 21 08.6	-2.4
YER	Yerkesik	3.78	38	eP	Pn	01 21 12.3	+1.0
AKAS	Kas	4.02	58	*i* P	Pn	01 21 15.9	+1.3
AKAS				*i* S	Sn	01 22 00.8	-1.1
AKAS	Kas	4.02	58	*i* P	Pn	01 21 15.9	+1.3
AKAS				*i* S	Sn	01 22 00.8	-1.1
ELL	Elmali	4.49	54	eP	Pn	01 21 21.0	-0.1
GOLH	Golhisar	4.57	47	*i* P	Pn	01 21 23.9	+1.8
GOLH				*i* S	Sn	01 22 17.8	+2.4
GOLH	Golhisar	4.57	47	*i* P	Pn	01 21 23.9	+1.8
GOLH				*i* S	Sn	01 22 17.8	+2.4
KULA	Kula-Manisa	5.07	30	eP	Pn	01 21 28.9	-0.2
SUTC	Sutluce-Ispart	5.62	53	eP	Pn	01 21 35.3	-1.3
GAZI	Gazipasa	6.03	68	*i* P	Pn	01 21 42.1	-0.2
GAZI				*i* S	Sn	01 22 45.0	-6.5
GAZI	Gazipasa	6.03	68	*i* P	Pn	01 21 42.1	-0.2
LEF	Lefka	6.26	79	eP	Pn	01 21 38.5	-6.8
HDMB	Hadim	6.42	62	eP	Pn	01 21 45.5	-2.1
CSS	Prodhromos	6.60	81	eP	Pn	01 21 43.2	-6.9
KONT	Konya--Tatoy	6.78	54	eP	Pn	01 21 51.0	-1.6
LFK	Lefkose	6.80	78	eP	Pn	01 21 45.5	-7.3
KIZT	Kizilcal	7.02	46	eP	Pn	01 21 54.7	-1.2
IKL	Isikli	7.10	71	eP	Pn	01 21 51.9	-5.0
MERS	Mersin	7.92	68	eP	Pn	01 22 03.4	-4.7
MMAI	Mount Meron Ar	8.44	95	Pn	Pn	01 22 14.8	-0.5
	1.0nm,0.3s,baz=285,slow=10,SNR=7.3						
MMAI				Sn	Sn	01 23 45.9	-4.8
	1.3nm,0.3s,baz=261,slow=24,SNR=5.5						
KARA	Karaisali	8.44	66	eP	Pn	01 22 11.3	-4.1
TIP	Timpagrande	8.54	308	ePn	Pn	01 22 15.2	-1.5
	3.5nm,0.8s						
TIP				eSn	Sn	01 23 51.6	-1.6
TIP	Timpagrande	8.54	308	ePn	Pn	01 22 15.2	-1.4
	3.5nm,0.8s						
TIP				eSn	Sn	01 23 51.6	-1.6
CEL	Celeste	8.68	301	ePn	Pn	01 22 18.6	-0.1
	9.5nm,0.9s						
CEL	Celeste	8.68	301	ePn	Pn	01 22 18.6	0.0
	9.5nm,0.9s						
KOZT	Kozan	9.10	66	eP	Pn	01 22 20.0	-4.3
EIL	Elat	9.29	116	Pn	Pn	01 22 25.8	-1.2
	1.0nm,0.3s,baz=304,slow=6.4,SNR=21						
EIL				Sn	Sn	01 24 03.0	-8.7
	0.3nm,0.3s,baz=333,slow=2.3,SNR=2.7						
EIL	Elat	9.29	116	Pn	Pn	01 22 25.8	-1.2
EIL				Sn	Sn	01 24 03.0	-8.7
EIL	Elat	9.29	116	Pn	Pn	01 22 25.8	-1.2
ASF	Jabal al Asfar	9.85	99	Pn	Pn	01 22 35.6	+0.9
	0.2nm,0.3s,baz=117,slow=6.8,SNR=2.1						
STON	Ston	10.56	328	ePn	Pn	01 22 40.0	-4.4
STON				Sn	Sn	01 24 33.4	-9.3
NVLJ	Novalja	13.17	325	ePn	Pn	01 23 16.5	-3.5
NVLJ				Sn	Sn	01 25 35.6	-11
MORC	Moravsky Berou	16.63	342	eP	Pn	01 24 08.0	+1.9
	3.0nm,0.9s						
MORC	Moravsky Berou	16.63	342	eP	Pn	01 24 07.9	+1.9
	3.0nm,0.9s						
KIEV	Kiev	16.74	8	eP	Pn	01 24 07.8	+0.4
	5.4nm,0.9s						
KIEV	Kiev	16.74	8	eP	Pn	01 24 07.8	+0.3
	5.4nm,0.9s						
AKASG	Malin Array Be	16.75	8	Pn	Pn	01 24 08.7	+1.1
	1.4nm,0.3s,baz=200,slow=10,SNR=4.8						
AKASG	Malin Array Be	16.75	8	Pn	Pn	01 24 08.6	+1.0
AKBB	Malin Array Si	16.75	8	eP	Pn	01 24 07.8	+0.2
AKBB	Malin Array Si	16.75	8	eP	Pn	01 24 07.8	+0.2
TAM	Tamanrasset	20.78	242	eP	P	01 24 55.5	+1.1
	7.7nm,1.6s						
TAM	Tamanrasset	20.78	242	eP	P	01 24 55.5	+1.2
	7.7nm,1.6s						
ESDC	Sonseca Array	24.04	292	P	P	01 25 28.8	+0.6
	1.1nm,0.7s,mb3.4,baz=81,slow=9.6,SNR=7.2						
ESDC	Sonseca Array	24.04	292	P	P	01 25 28.8	+0.6
MDT	Midelt	25.02	275	P	P	01 25 38.8	+1.6
	2.0nm,0.9s,mb3.6,baz=168,slow=23,SNR=2.5						
MDT	Midelt	25.02	275	P	P	01 25 38.8	+1.6
HFS	Hagfors	27.07	347	P	P	01 25 54.2	-1.3
	4.0nm,0.9s,mb3.9,baz=141,slow=17,SNR=2.3						
HFS	Hagfors	27.07	347	P	P	01 25 54.1	-1.4
HFS	Hagfors	27.07	347	P	P	01 25 54.2	-1.3
FINES	FINESS Array B	27.29	1	P	P	01 25 56.0	-1.5
	3.8nm,1.0s,mb3.9,baz=171,slow=15,SNR=1.9						
FINES	FINESS Array B	27.29	1	P	P	01 25 56.0	-1.4
MK31	Makanchi Array	44.17	56	eP	P	01 28 21.9	+0.1
MK31	Makanchi Array	44.17	56	eP	P	01 28 22.0	+0.1
MKAR	Makanchi Array	44.17	56	P	P	01 28 22.1	+0.2
	0.7nm,0.4s,mb3.8,baz=271,slow=6.3,SNR=22						
MKAR	Makanchi Array	44.17	56	P	P	01 28 22.1	+0.2
ZALV	Zalesovo Beam	45.55	45	P	P	01 28 32.2	-0.6
	0.6nm,0.4s,mb3.9,baz=259,slow=8.2,SNR=2.8						

CSEM ***25*** *01:22:54.3±0.4, 47°.51N×21°.72E, h2km, ML2.5, Error ellipse: s-maj=11.6km s-min=8.6km az=70.0*

BUC 25 01:22:55.7±1.7, 47°.41N×21°.77E, h5km, MD2.6/1, 6C-2D, Error ellipse: s-maj=33.3km s-min=6.6km az=39.0, Hungary

| Code | Station Name | Δ° | A

IDC ***25*** *01:52:33.2±0.4, 1°.31N×97°.24E, h0km, mb4.6/29, mb1 4.6/30, mb1mx4.6/31, mbtmp4.6/30, ML4.9/1, MS5.1/20, Ms1 5.1/20, ms1mx4.8/39, Error ellipse: s-maj=16.4km s-min=10.9km az=51.0*

DJA ***25*** *01:52:34, 1°.36N×96°.95E, h10km, Mw5.5/17*

BJI ***25*** *01:52:35.6, 1°.08N×97°.20E, h41km, mB5.7/48, mb5.3/60, Ms5.6/65, Ms7 5.5/57*

ISCJB ***25*** *01:52:35.6±0.2, 1°.33N±0°.03×97°.15E±0°.02, h27km, mb5.2/179, MS5.2/79, Error ellipse: s-maj=4.0km s-min=2.7km az=24.5*

SZGRF ***25*** *01:52:36.4, 1°.67N×97°.76E, h25km, mb5.1, MS5.1, Southern Sumatera, Indonesia*

NEIC ***25*** *01:52:36.0±0.1, 1°.32N×97°.16E, h19km, mb5.3/85, MW5.3, Error ellipse: s-maj=4.9km s-min=4.2km az=212.0, Moment Tensor Solution. s53 Moment tensor: Scale 10^{17}Nm; M_{rr}1.05; $M_{\theta\theta}$-0.49; $M_{\phi\phi}$-0.56; $M_{r\theta}$0.67; $M_{\theta\phi}$0.09; $M_{\phi r}$-0.67; Best double couple: $M_0$1.30000×10^{17} NP1: ϕ_s322.00000°, δ21.00000°, λ95.00000°. NP2: ϕ_s137.00000°, δ69.00000°, λ88.00000°. Principal axes: T 1.4800, Plg65.0000°, Azm43.0000°; N -0.4300, Plg1.0000°, Azm137.0000°; P -1.0500, Plg24.0000°, Azm228.0000°;*

NEIC Felt [III] at Gunungsitoli. Felt [II] at Sibolga, Sumatra.

MOS ***25*** *01:52:37.0±1.1, 1°.45N×97°.20E, h33km, mb5.4/74, MS5.1/31 Error ellipse: s-maj=8.9km s-min=4.5km az=114.3*

GCMT ***25*** *01:52:39.9±0.2, 1°.00N×96°.97E, h20km, MW5.5, Moment Tensor Solution. s81,c135; s78,c113; Moment tensor: Scale 10^{17}Nm; M_{rr}1.05±.03; $M_{\theta\theta}$-0.66±.02; $M_{\phi\phi}$-0.39±.03; $M_{r\theta}$1.35±.05; $M_{\theta\phi}$0.73±.02; $M_{\phi r}$-0.76±.05; Best double couple: $M_0$1.90000×10^{17} NP1:ϕ_s322.00000°, δ19.00000°, λ110.00000°. NP2:ϕ_s121.00000°, δ72.00000°, λ83.00000°. Principal axes: T 1.8500, Plg63.0000°, Azm21.0000°; N 0.1800, Plg6.0000°, Azm123.0000°; P -2.0300, Plg27.0000°, Azm216.0000°; Data Used: II IU IC CN G.*

ISC 25 01:52:37.6±0.2, 1°.31N±0°.03×97°.15E±0°.02, h28km, h28km±1.4km:pP-P,n560,σ1§02/534,mb5.2/179,MS5.2/79, 38C-15D,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.42**	**91**	P	**Pb**	**01 52 46.3**	**-0.4**
GSI				S	**Sb**	**01 52 56.3**	**+3.4**
TPTI		**1.94**	**1**	P	**Pn**	**01 53 06.7**	**-1.9**
PSI	**Prapat**	**2.31**	**50**	Pn	**Pn**	**01 53 13.8**	**+0.1**
	86nm,0.3s,baz=213,slow=7.3,SNR=227						
PSI				LR	LR	01 53 42.9	
	comp=Z,11μm,21.7s,baz=299,slow=32						
PSI	**Prapat**	**2.31**	**50**	Pn	**Pn**	**01 53 13.8**	**+0.1**
PSI				LR	LR	01 53 42.9	
MNSI	**Mandailing Nat**	**2.48**	**102**	P	**Pn**	**01 53 15.4**	**-0.7**
MNSI				S	**Sn**	**01 53 53.6**	**+8.2**
SISI	**Saibi**	**3.26**	**144**	P	**Pn**	**01 53 25.4**	**-1.4**
PPI	**Padang Panjang**	**3.69**	**118**	P	**Pn**	**01 53 32.2**	**-0.5**
PDSI	**Padang**	**3.98**	**124**	P	**Pn**	**01 53 36.7**	**0.0**
BKNI	**Bangkinang**	**4.01**	**104**	P	**Pn**	**01 53 36.6**	**-0.5**
SDSI	**Sungai Dareh**	**4.82**	**118**	P	**Pn**	**01 53 48.0**	**-0.3**
	4.5nm288nm,1.3s						
FRIM	**Kepong**	**4.86**	**67**	P	**Pn**	**01 53 50.0**	**+1.1**
PPSI	**Pulau Pagai**	**4.95**	**145**	P	Px	01 54 03.7	
IPM	**Ipoh**	**4.99**	**51**	P	**Pn**	**01 53 52.4**	**+1.8**
IPM	**Ipoh**	**4.99**	**51**	P	**Pn**	**01 53 51.1**	**+0.5**
	6.4nm415nm,1.2s						
KULM	**Kulim**	**5.27**	**41**	P	**Pn**	**01 53 55.7**	**+1.2**
KULM	**Kulim**	**5.27**	**41**	*e*Pn	**Pn**	**01 53 53.8**	**-0.8**
	748nm,1.1s						
RGRI	**Rengat**	**5.44**	**108**	P	Px	01 54 20.0	
KGM	**Kluang**	**6.20**	**83**	P	**Pn**	**01 54 08.4**	**+1.1**
MYKOM	**Kota Tinggi**	**6.71**	**86**	P	**Pn**	**01 54 15.6**	**+1.3**
MYKOM	**Kota Tinggi**	**6.71**	**86**	P	**Pn**	**01 54 15.0**	**+0.7**
	2.3nm3μm143nm,1.6s						
KTGM	**Kuala Trenggan**	**7.18**	**56**	P	**Pn**	**01 54 21.7**	**+0.9**
KSI	**Kapahiang**	**7.34**	**132**	P	**Pn**	**01 54 24.9**	**+2.0**
	2.6nm472nm,0.9s						
MDSI	**Maura Dua**	**9.08**	**129**	P	**Pn**	**01 54 44.6**	**-2.2**
LWLI	**Liwa**	**9.33**	**132**	P	Px	01 55 00.7	
PPBI	**Pangkal Pinang**	**9.62**	**111**	P	**Pn**	**01 54 56.2**	**+1.9**
	46nm,1.5s						
KLSI		**9.63**	**128**	P	**Pn**	**01 54 52.3**	**-2.2**
	3μm126nm,1.0s						
KASI	**Kota Agung**	**9.99**	**133**	P	**Pn**	**01 55 05.8**	**+6.4**
	105nm,0.8s						
TPI	**Tanjungpandan**	**11.25**	**111**	P	**Pn**	**01 55 18.3**	**+1.7**
	2μm88nm,1.6s						
KSM	**Kuching**	**13.15**	**89**	P	**Pn**	**01 55 45.4**	**+2.8**
KSM	**Kuching**	**13.15**	**89**	*e*Pn	**Pn**	**01 55 44.8**	**+2.2**
KSM	**Kuching**	**13.15**	**89**	P	**Pn**	**01 55 44.3**	**+1.7**
	2μm58nm,1.5s						
STKI	**Sintang**	**14.38**	**95**	P	**Pn**	**01 56 00.5**	**+1.2**
	104nm,1.5s						
SBUM	**Sibu**	**15.10**	**85**	P	**Pn**	**01 56 10.2**	**+1.1**
SBUM	**Sibu**	**15.10**	**85**	P	**Pn**	**01 56 10.2**	**+1.1**
SBUM	**Sibu**	**15.10**	**85**	P	**Pn**	**01 56 09.8**	**+0.7**
	2μm114nm,1.4s						
BTM	**Bintulu**	**16.03**	**83**	P	**Pn**	**01 56 22.5**	**+1.3**
CM31	**Chiang Mai Arr**	**17.13**	**6**	*e*P	**Pn**	**01 56 36.8**	**+1.7**
	63nm,1.0s						
CMAR	**Chiang Mai Arr**	**17.13**	**6**	Pn	**Pn**	**01 56 34.1**	**-1.0**
	1.7nm,0.3s,baz=195,slow=13,SNR=24						
CMAR				LR	LR	02 04 04.3	
	comp=Z,9μm,19.7s,baz=193,slow=40						
CHTO	**Chiang Mai**	**17.48**	**6**	*e*P	**Pn**	**01 56 37.1**	**-2.3**
CHTO				pmax	pmax		
	comp=Z,62nm,1.2s						
CHTO	**Chiang Mai**	**17.48**	**6**	*e*P	**Pn**	**01 56 37.1**	**-2.4**
	comp=Z,62nm,1.2s						
CHTO	**Chiang Mai**	**17.48**	**6**	Pn	**Pn**	**01 56 38.9**	**-0.6**
	SNR=12						
CHTO				Pn	**Pn**	**01 56 38.9**	**-0.6**
	SNR=12						
CHTO	**Chiang Mai**	**17.48**	**6**	P	**Pn**	**01 56 38.9**	**-0.6**
	SNR=12						
CHTO				P		01 56 38.9

DL2				S	S	02 07 07.3	+0.2
DL2				ScS	ScS	02 10 36.5	-0.6
DL2				pmax	pmax		
	comp=Z,60nm,1.6s,mb5.1						
DL2				pmax	pmax		
	comp=Z,530nm,3.2s						
DL2				LR	LR		
	comp=N,970nm,15.4s,MS5.1						
DL2				LR	LR		
	comp=E,1μm,15.2s,MS5.1						
DL2				LR	LR		
	comp=Z,2μm,15.0s,MS5.1						
INCN	**Inchon**	**45.08**	**34**	*e*P	**P**	**02 00 50.9**	**-0.3**
	comp=Z,126nm,1.3s,mb5.6						
INCN	**Inchon**	**45.08**	**34**	P	**P**	**02 00 51.3**	**+0.1**
	SNR=7.0						
INCN				P		02 00 51.3	
	SNR=7.0

HNR pmax pmax
comp=Z,254nm,1.4s,mb6.2
HNR Honiara 63.43 101 *e*P **P 02 03 04.3 -1.1**
comp=Z,254nm,1.4s,mb6.2
KIV Kislovodsk 64.19 319*c i*P **P 02 03 09.7 -0.1**
KIV *e* 02 03 45.5
KIV *e* 02 05 31.2
KIV *e*S **S 02 11 44.4 -1.0**
KIV *e*SS SS 02 15 53.1 -2.1
KIV pmax pmax
comp=Z,26nm,0.9s,mb5.3
KIV Kislovodsk 64.19 319 *e*P **P 02 03 09.9 +0.1**
comp=Z,49nm,1.3s,mb5.4
KIV Kislovodsk 64.19 319 P **P 02 03 10.2 +0.4**
SNR=11
KIV P 02 03 10.2
SNR=11
KIV Kislovodsk 64.19 319 P **P 02 03 10.2 +0.4**
SNR=11
KIV P 02 03 10.2
SNR=11
KIV Kislovodsk 64.19 319 P **P 02 03 10.2 +0.4**
SNR=11
KIV P 02 03 10.2
SNR=11
ASF Jabal al Asfar 64.36 305 P **P 02 03 12.6 +1.4**
comp=Z,1.7nm,0.6s,mb4.3,baz=158,slow=5.2,SNR=4.8
YAK Yakutsk 65.33 16 *e*P **P 02 03 16.1 -0.7**
YAK *e**PP pP 02 03 23.2 -2.5
YAK *e* 02 03 29.8
YAK *e* 02 05 38.6
YAK *e*S S 02 11 56.5 -2.2
YAK *e* 02 13 02.0
YAK *e*SS SS 02 16 07.8 -4.3
YAK pmax pmax
comp=Z,92nm,1.6s,mb5.6
YAK pmax pmax
comp=N,42nm,1.5s
YAK pmax pmax
comp=E,49nm,1.5s
YAK pmax pmax
comp=Z,16nm,0.6s,mb5.2
YAK pmax pmax
comp=E,8.0nm,0.7s
YAK pmax pmax
comp=N,3.0nm,0.4s
YAK smax
comp=N,363nm,4.1s
YAK smax
comp=E,186nm,3.6s
YAK MLR MLR
comp=Z,3μm,21.0s,MS5.5
YAK MLR MLR
comp=E,2μm,15.0s
YAK MLR MLR
comp=N,713nm,19.0s
YAK Yakutsk 65.33 16 *e*P **P 02 03 16.4 -0.4**
comp=N,258nm,1.4s,mb6.1
MMAI Mount Meron Ar 65.80 306 P **P 02 03 22.1 +1.5**
comp=N,2.0nm,0.5s,mb4.4,baz=85,slow=10,SNR=7.4
MMAI LR LR 02 33 08.0
comp=N,634nm,18.5s,MS4.8,baz=100,slow=37
SOC Sochi 66.01 318*c i*P **P 02 03 19.0 -2.6**
SOC *e**PP pP 02 03 29.4 -1.1
SOC *e**SP sP 02 03 33.5 -0.3
SOC *e* 02 03 51.3
SOC *e* 02 05 45.9
SOC *e*PPP 02 07 27.6
SOC *e*S S 02 12 04.2 -3.5
SOC *e*SS SS 02 16 15.2 -8.2
SOC pmax pmax
comp=Z,139nm,3.1s
SOC pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
SOC MLR MLR
comp=Z,687nm,22.0s,MS4.8
CSS Prodhromos 67.96 307 *e*P **P 02 03 33.9 -0.4**
ANN Anapa 67.99 318 *e*P **P 02 03 31.8 -2.4**
ANN *e*PPP 02 07 45.8
ANN *e*S S 02 12 26.0 -5.6
ANN pmax pmax
comp=Z,215nm,9.2s
ANN MLR MLR
comp=Z,619nm,19.0s,MS4.8
BR131 Keskin Array S 69.00 312 *e*P **P 02 03 40.0 -0.6**
VSR Storozhevoye 69.45 325 *e*P **P 02 03 41.1 -2.1**
VSR *e**PP pP 02 03 50.2 -1.9
VSR *e* 02 06 13.7
VSR *e*S S 02 12 42.0 -6.7
VSR *e*SS SS 02 17 08.7 -7.7
VSR pmax pmax
comp=Z,30nm,1.5s,mb5.0
VSR pmax pmax
comp=N,5.0nm,0.4s
VSR pmax pmax
comp=E,10.0nm,0.8s
VSR pmax pmax
comp=E,50nm,2.5s
VSR pmax pmax
comp=Z,60nm,2.5s,mb5.1
VSR pmax pmax
comp=N,130nm,5.1s
VSR smax
comp=N,120nm,3.7s
VSR smax
comp=E,60nm,3.7s
VSR smax
comp=Z,120nm,3.7s
VOR Voronezh 69.65 326 P **P 02 03 46.0 +1.6**
VOR pmax pmax
comp=Z,100nm,1.6s,mb5.5
SKR Severo-Kuril's 69.79 36 *e*P **P 02 03 38.0 -7.3**
SKR *e* 02 03 54.0
SKR *e* 02 04 05.5
SKR *e*S S 02 12 59.0 +6.3
SKR *e*SSS 02 20 22.0
SKR pmax pmax
comp=Z,1μm,16.0s
SKR pmax pmax
comp=Z,90nm,1.0s,mb5.7
SKR smax
comp=N,1μm,16.0s
SKR smax
comp=E,1μm,16.0s
SKR MLR MLR
comp=N,1μm,20.0s,MS5.3
SKR MLR MLR
comp=E,1μm,20.0s,MS5.3
SKR MLR MLR
comp=Z,2μm,20.0s,MS5.2
LSZ Lusaka 70.10 253 *e*P **P 02 03 48.5 +0.7**
LSZ pmax pmax
comp=Z,34nm,1.8s,mb5.0
LSZ Lusaka 70.10 253 *e*P **P 02 03 48.5 +0.6**
comp=Z,34nm,1.8s,mb5.0
SIM Simferopol' 70.25 318*c i*P **P 02 03 49.3 +1.1**
SIM *i*S S 02 12 57.6 -0.8
SIM pmax pmax
comp=Z,29nm,1.5s,mb5.0
SIM MLR MLR
comp=Z,300nm,17.6s,MS4.6
PETK Petropavlovsk- 71.67 34 P **P 02 03 56.4 -0.2**
comp=Z,2.6nm,0.8s,mb4.2,baz=150,slow=12,SNR=5.1
PETK LR LR 02 39 28.1
comp=Z,1μm,18.2s,MS5.2,baz=248,slow=39
PETK Petropavlovsk- 71.67 34 P **P 02 03 56.4 -0.2**
PETK LR LR 02 39 28.1
PET Petropavlovsk 72.17 34 *e*P **P 02 03 58.8 -0.8**
PET *e* 02 06 42.7
PET *e*PPP 02 08 19.3
PET *e*S S 02 13 16.8 -3.4
PET *e*PS 02 13 59.1
PET pmax pmax
comp=Z,34nm,1.1s,mb5.2
PET pmax pmax
comp=Z,500nm,6.7s
PET pmax pmax
comp=Z,500nm,16.9s
PET pmax pmax
comp=Z,200nm,19.4s
PET MLR MLR
comp=Z,1μm,19.0s,MS5.2
PET MLR MLR
comp=Z,900nm,17.0s
MOS Moscow 72.21 329 *e*P **P 02 03 56.8 -3.1**
MOS *e* 02 04 16.8
MOS *e* 02 06 45.2
MOS *e*S S 02 13 15.0 -5.6
MOS pmax pmax
comp=Z,43nm,0.8s,mb5.4
OBN Obninsk 72.50 328*c i*P **P 02 03 59.0 -2.6**
OBN *i* pP 02 04 05.9 -4.7
OBN *i* 02 04 17.4
OBN *i* 02 06 44.2
OBN *i*S S 02 13 22.2 -1.7
OBN *e*SS SS 02 18 08.0 +4.9
OBN pmax pmax
comp=Z,48nm,1.6s,mb5.2
OBN MLR MLR
comp=Z,700nm,21.0s,MS4.9
OBN Obninsk 72.50 328 *e*P **P 02 03 58.8 -2.8**
comp=Z,57nm,1.4s,mb5.3
MAW Mawson 72.81 193 P **P 02 04 03.7 +0.6**
comp=Z,3.4nm,1.0s,mb4.2,baz=275,slow=8.7,SNR=1.7
MAW LR LR 02 32 27.7
comp=Z,1μm,18.6s,MS5.2,baz=34,slow=33
TIXI Tiksi 73.09 10 *e*P **P 02 04 03.7 -1.1**
TIXI pmax pmax
comp=Z,177nm,2.1s,mb5.6
TIXI Tiksi 73.09 10 *e*P **P 02 04 03.7 -1.0**
comp=Z,176nm,2.1s,mb5.6
LBTB Lobatse 73.89 244 *e*P **P 02 04 11.6 +1.1**
LBTB pmax pmax
comp=Z,129nm,2.5s,mb5.4
LBTB Lobatse 73.89 244 *e*P **P 02 04 11.6 +1.1**
comp=Z,129nm,2.5s,mb5.4
KIS Kishinev 74.38 319 *e*P **P 02 04 12.0 -0.9**
KIS *e*S S 02 13 39.0 -6.6
KIS LRM 02 42 26.0
comp=Z,300nm,16.0s
KIS Kishinev 74.38 319 *e*P **P 02 04 12.0 -0.9**
KIS *e*S S 02 13 39.0 -6.6
LEOM Leova 74.63 318 ⇑P **P 02 04 14.6 +0.3**
LEOM Leova 74.63 318 ⇑*i*P **P 02 04 14.6 +0.3**
BOSA Boshof 74.79 240 P **P 02 04 15.3 -0.3**
comp=Z,1.5nm,0.6s,mb4.1,baz=150,slow=7.7,SNR=5.6
BOSA LR LR 02 32 02.1
comp=Z,1μm,19.3s,MS5.2,baz=75,slow=32
BOSA Boshof 74.79 240 *e*P **P 02 04 16.6 +1.0**
BOSA pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
BOSA Boshof 74.79 240 *e*P **P 02 04 16.6 +1.0**
comp=Z,3.5nm,0.6s,mb4.5
AKASG Malin Array Be 75.14 322 P **P 02 04 16.0 -1.2**
comp=Z,1.1nm,0.4s,mb4.2,baz=91,slow=4.8,SNR=18
AKASG Malin Array Be 75.14 322 *i*P **P 02 04 16.0 -1.2**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKBB Malin Array Si 75.14 322 *e*P **P 02 04 15.8 -1.4**
KIEV Kiev 75.15 322 *e*P **P 02 04 15.3 -1.9**
KIEV pmax pmax
comp=Z,13nm,1.0s,mb4.8
KIEV Kiev 75.15 322 *e*P **P 02 04 15.2 -2.0**
comp=Z,13nm,1.0s,mb4.8
VRI Vrincioaia 75.50 317 P **P 02 04 19.8 +0.4**
VRI Vrincioaia 75.50 317 ⇓*i*P **P 02 04 20.0 +0.6**
PLOR Plostina 75.56 317 ⇑P **P 02 04 28.1 +8.4**
PLOR Plostina 75.56 317 ⇑*i*P **P 02 04 28.1 +8.4**
MLR Muntele Rosu 75.95 317 P **P 02 04 22.6 +0.6**
MLR Muntele Rosu 75.95 317 ⇑*i*P **P 02 04 22.2 +0.2**
BUR01 Bucovina Ar. S 76.91 319 P **P 02 04 28.3 +1.0**
BURAR Bucovina Array 76.91 319 ⇓*i*P **P 02 04 28.1 +0.8**
BUR08 Bucovina Ar. S 76.93 319 *e*P **P 02 04 27.7 +0.3**
VTS Vitosha 77.32 313 ⇓P **P 02 04 26.6 -3.1**
VTS Vitosha 77.32 313 ⇓*i*P **P 02 04 26.6 -3.1**
VAY Valandovo 77.58 312 *e*P **P 02 04 29.5 -1.7**
JOF Joensuu 78.03 335 *e*P **P 02 04 32.6 -0.6**
JOF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
JOF Joensuu 78.03 335 *e*p **P 02 04 32.6 -0.6**
comp=Z,10nm,0.9s,mb4.8
JOF Joensuu 78.03 335 *e*p **P 02 04 32.6 -0.6**
comp=Z,10nm,0.9s,mb4.8
GZR Gura Zlata 78.12 316 ⇑P pP 02 04 44.8 +1.6
GZR Gura Zlata 78.12 316 ⇑*i*P **P 02 04 44.8 +11**
LVV L'vov 78.15 321 *e*P **P 02 04 33.6 -0.6**
LVV *e*S S 02 14 16.8 -10
DRGR 78.42 317 P **P 02 04 36.2 +0.4**
DRGR 78.42 317 ⇓*i*P **P 02 04 39.3 +3.5**
KRUS Krusevo 78.57 312 *e*P **P 02 04 34.3 -2.4**
KWP Kalwaria Pacla 78.95 320 *e*P **P 02 04 38.5 -0.1**
KWP pmax pmax
comp=Z,63nm,1.5s,mb5.3
KWP Kalwaria Pacla 78.95 320 *e*P **P 02 04 38.5 -0.2**
comp=Z,63nm,1.5s,mb5.3
KWP Kalwaria Pacla 78.95 320 ⇓*i*P **P 02 04 34.4 -4.2**
BZS Buzias 78.96 316 P **P 02 04 39.3 +0.5**
BZS Buzias 78.96 316 ⇓*i*P **P 02 04 38.8 0.0**
APA Apatity 79.01 339 ⇓P **P 02 04 41.4 +2.8**
APA *i* 02 04 46.0
APA *i* 02 07 46.0
APA *i*S S 02 14 38.0 +2.6
APA pmax pmax
comp=Z,13nm,1.0s,mb4.8
APA MLR MLR
comp=Z,1μm,19.0s,MS5.2
UZH Uzhgorod 79.03 319 *e*P **P 02 04 40.0 +0.9**
UZH *e* pP 02 04 50.1 +1.9
UZH *e* 02 07 41.5
UZH *e*PPP 02 09 29.5
UZH *e*S S 02 14 35.0 -1.4
UZH *e* 02 14 46.0
UZH *e* 02 14 56.0
UZH *e*PS 02 15 16.0
UZH *e*SS SS 02 19 46.4 +4.0
UZH *e*SSS 02 23 06.0
SUW Suwalki 79.56 325 *e*P **P 02 04 41.0 -0.8**
SUW Suwalki 79.56 325 *e*P **P 02 04 41.0 -0.9**
CRVS Cervenica-Dubn 79.62 319 *e*P **P 02 04 42.6 +0.3**
comp=Z,42nm,2.2s,mb5.0
CRVS *e*PP pP 02 04 51.6 +0.2
CRVS *e*S S 02 14 39.3 -3.3
CRVS LR LR
comp=Z,200nm,21.8s,MS4.4
CRVS Cervenica-Dubn 79.62 319 *e*P **P 02 04 42.6 +0.3**
CRVS *e*pP pP 02 04 51.5 +0.1
CRVS *e*S S 02 14 39.3 -3.3
STHS Stebnicka Huta 79.85 320 *e*P **P 02 04 44.4 +0.9**
STHS pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
STHS Stebnicka Huta 79.85 320 *e*P **P 02 04 44.4 +0.9**
comp=Z,5.2nm,1.0s,mb4.4
STHS *e*PP pP 02 04 52.0 -0.6
STHS Stebnicka Huta 79.85 320 *e*P **P 02 04 44.4 +0.9**
STHS *e*pP pP 02 04 52.0 -0.6
FINES FINESS Array B 79.88 333 P **P 02 04 43.7 +0.3**
comp=Z,3.3nm,0.7s,mb4.4,baz=117,slow=6.0,SNR=15
FINES LR LR 02 47 03.8
comp=Z,805nm,18.9s,MS5.1,baz=113,slow=41
KAF Kangasniemi 79.96 333 *e*P **P 02 04 41.3 -2.6**
KAF pmax pmax
comp=Z,13nm,0.7s,mb5.0
KAF Kangasniemi 79.96 333 *e*p **P 02 04 41.3 -2.6**
comp=Z,13nm,0.7s,mb5.0
KAF Kangasniemi 79.96 333 *e*p **P 02 04 41.3 -2.6**
comp=Z,13nm,0.7s,mb5.0
KECS Kecovo 80.19 319 *e*P **P 02 04 45.5 +0.1**
KECS pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
KECS Kecovo 80.19 319 *e*P **P 02 04 45.5 +0.1**
comp=Z,2.3nm,0.8s,mb4.2
KECS *e*PP pP 02 04 52.0 -2.5
KECS Kecovo 80.19 319 *e*P **P 02 04 45.5 +0.1**
KECS *e*pP pP 02 04 52.0 -2.5
NIE Niedzica 80.45 320 *e*P **P 02 04 47.1 +0.3**
PSZ Piszkesteto 80.50 318 *e*P **P 02 04 46.8 -0.2**
PSZ *e**PP pP 02 04 54.0 -2.1
PSZ pmax pmax
comp=Z,35nm,1.5s,mb5.1
PSZ Piszkesteto 80.50 318 *e*P **P 02 04 46.8 -0.2**
comp=Z,35nm,1.5s,mb5.1
PSZ *e*pP pP 02 04 54.0 -2.1
PSZ Piszkesteto 80.50 318 ⇑*e*P **P 02 04 47.2 +0.2**
PSZ Piszkesteto 80.50 318 ⇑*i*P **P 02 04 38.7 -8.3**
TSUM Tsumeb 80.58 250 *e*P **P 02 04 49.2 +1.1**
comp=Z,8.8nm,1.0s,mb4.6
OJC Ojcow 80.91 321 *e*P **P 02 04 47.4 -1.8**
OJC *e*S S 02 14 52.9 -3.2
OJC L 02 47 02.0
comp=Z,0.6nm,20.7s
OJC Ojcow 80.91 321 *e*P **P 02 04 47.4 -1.8**
OJC *e*S S 02 14 52.9 -3.2
BILL Bilibino 81.08 21*c i*P **P 02 04 48.4 -1.3**
BILL *e*S S 02 14 53.1 -4.1
BILL pmax pmax
comp=Z,23nm,1.6s,mb4.9
BILL MLR MLR
comp=Z,3μm,18.0s,MS5.7
BILL Bilibino 81.08 21 *e*P **P 02 04 49.0 -0.8**
comp=Z,24nm,1.4s,mb4.9
PKSM Moragy 81.11 316 P **P 02 04 50.4 +0.1**
PKSM Moragy 81.11 316 ⇑*i*P **P 02 04 50.6 +0.3**
VYHS Vyhne 81.28 319 *e*P **P 02 04 51.2 0.0**
comp=Z,11nm,1.7s,mb4.5
VYHS *e*PP pP 02 04 58.7 -1.6
VYHS *e*S S 02 14 58.5 -1.5
VYHS *e*SS SS 02 20 24.6 +8.7
VYHS LR LR
comp=Z,300nm,20.8s,MS4.6
VYHS Vyhne 81.28 319 *e*P **P 02 04 51.2 0.0**
VYHS *e*pP pP 02 04 58.7 -1.6
VYHS *e*S S 02 14 58.5 -1.5
VYHS *e*SS SS 02 20 24.6 +8.7
KOLL Kolacno 81.58 319 *e*P **P 02 04 53.3 +0.5**
KOLL *e* pP 02 05 00.8 -1.1
KOLL Kolacno 81.58 319 *e*P **P 02 04 53.3 +0.5**
KOLL *e*pP pP 02 05 00.8 -1.1
TIP Timpagrande 81.72 309 *e*P **P 02 04 53.7 -0.1**
OKC Ostrava-Krasne 81.91 320 *e*P **P 02 04 54.4 -0.1**
OKC *e* pP 02 05 01.2 -2.4
OKC *e* 02 15 06.2
OKC MLR MLR
comp=Z,500nm,15.2s,MS5.0
OKC Ostrava-Krasne 81.91 320 *e*P **P 02 04 54.4 -0.1**
OKC *e*pP pP 02 05 01.2 -2.4
OKC *e*S S 02 15 06.2 -0.2
OKC AMS AMS 02 52 40.0
comp=Z,500nm,15.2s
MORC Moravsky Berou 82.29 320 *e*P **P 02 04 57.0 +0.5**
MORC pmax pmax
comp=Z,17nm,1.3s,mb4.8
MORC Moravsky Berou 82.29 320 *e*P **P 02 04 57.0 +0.4**
comp=Z,17nm,1.3s,mb4.8
MORC Moravsky Berou 82.29 320 ⇓*i*P **P 02 04 57.1 +0.6**
CEL Celeste 82.32 308 *e*P **P 02 04 57.9 +1.0**
comp=Z,17nm,1.0s,mb4.9
ZST Bratislava 82.39 318 *e*P **P 02 04 57.5 +0.4**
comp=Z,6.3nm,0.8s,mb4.6
ZST *e*PP pP 02 05 04.5 -1.7
ZST *e*S S 02 15 21.1 +10
ZST LR LR
comp=Z,300nm,19.4s,MS4.7
ZST Bratislava 82.39 318 *e*P **P 02 04 57.5 +0.4**
ZST *e*pP pP 02 05 04.5 -1.7
ARCES ARCESS Array B 82.42 340 P **P 02 04 57.2 +0.4**
comp=Z,2.5nm,0.5s,mb4.4,baz=101,slow=4.9,SNR=21
ARCES LR LR 02 46 03.8
comp=Z,1μm,20.2s,MS5.3,baz=38,slow=39
ARE0 ARCESS Array S 82.42 340 *e*P **P 02 04 56.3 -0.4**
KOGS Kog 82.78 317 *e*P **P 02 04 58.8 -0.4**
DPC Dobruska-Polom 83.14 320 *e*P **P 02 05 01.4 +0.5**
DPC *e* pP 02 05 08.3 -1.7
DPC *e* 02 15 19.4
DPC MLR MLR
comp=Z,500nm,16.9s,MS5.0
DPC Dobruska-Polom 83.14 320 *e*P **P 02 05 01.4 +0.5**
DPC *e*pP pP 02 05 08.3 -1.7
DPC *e*S S 02 15 19.4 +0.4
DPC AMS AMS 02 48 10.0
comp=Z,500nm,16.9s
KSP Ksiaz 83.21 321 *e*P **P 02 05 01.7 +0.4**
KSP *e*S S 02 15 18.0 -1.7
UPC Upice 83.35 321 *e*P **P 02 05 02.7 +0.7**
UPC *e* 02 05 08.9
UPC Upice 83.35 321 *e*P **P 02 05 02.7 +0.7**
UPC *e*pP pP 02 05 08.9 -2.2
ARSA Arzberg 83.35 317 ⇑*i*P **P 02 05 02.2 +0.1**
comp=Z,12nm,1.1s,mb4.8
BOJS Bojanci 83.39 316 *e*P **P 02 05 02.3 0.0**
TREC Trest 83.57 319 *e*P **P 02 05 03.5 +0.4**
TREC *e* 02 05 09.3
TREC *e* 02 15 24.4
TREC MLR MLR
comp=Z,500nm,22.5s,MS4.8
TREC Trest 83.57 319 *e*P **P 02 05 03.5 +0.4**
TREC *e*pP pP 02 05 09.3 -3.0
TREC *e*S S 02 15 24.4 +1.0
TREC AMS AMS 02 52 10.0
comp=Z,500nm,22.5s
PERS Pernice 83.58 317 *e*P **P 02 05 03.3 +0.1**
PERS *e*S S 02 15 23.1 -0.4
SOKA Soboth 83.64 317 ⇑*i*P **P 02 05 03.7 +0.2**
comp=Z,15nm,1.2s,mb5.0
LJU Ljubljana 83.93 316 *e*P **P 02 05 05.1 0.0**
PRU Pruhonice 84.24 320 *e*P **P 02 05 07.3 +0.7**
PRU *e* 02 05 13.8
PRU *e* 02 15 30.6
PRU MLR MLR
comp=Z,600nm,21.8s,MS4.9
PRU Pruhonice 84.24 320 *e*P **P 02 05 07.3 +0.7**
PRU *e*pP pP 02 05 13.8 -1.9
PRU *e*S S 02 15 30.6 +0.5
PRU AMS AMS 02 48 40.0
comp=Z,600nm,21.8s
PVCC Panska Ves 84.27 320 *e*P **P 02 05 07.2 +0.5**
PVCC *e* 02 05 13.4
PVCC MLR MLR
comp=Z,600nm,19.7s,MS5.0
PVCC Panska Ves 84.27 320 *e*P **P 02 05 07.2 +0.5**
PVCC *e*pP pP 02 05 13.4 -2.4
PVCC AMS AMS 02 48 20.0
comp=Z,600nm,19.7s
VOY Vojsko 84.37 316 *e*P **P 02 05 07.3 0.0**
VOY *e* pP 02 05 14.1 -2.4
VOY *e* 02 05 43.0
CADS Cadrg 84.50 316 *e*P **P 02 05 07.4 -0.6**
AQU L'Aquila 84.50 312 *e*P **P 02 05 07.8 -0.2**
AQU pmax pmax
comp=Z,36nm,1.1s,mb5.4
AQU L'Aquila 84.50 312 *e*P **P 02 05 07.8 -0.3**
comp=Z,36nm,1.1s,mb5.4
TRO Tromso 84.68 340 *e*P **P 02 05 08.6 +0.2**
TRO *e*SKS 02 15 30.7
TRO *e*SS SS 02 21 06.1 +0.8
TRO AMS AMS 02 46 44.8
comp=Z,1μm,21.8s,MS5.3
BRG Berggiesshubel 84.69 321 *e*P **P 02 05 08.9 +0.1**
comp=Z,17nm,1.5s,mb5.0
BRG *e*S S 02 15 36.7 +2.1
BRG Berggiesshubel 84.69 321 *e*P **P 02 05 09.1 +0.3**
comp=Z,17nm,1.5s,mb4.9
BRG S S 02 15 31.0 -3.6
BRG SS SS 02 21 21.0 +15
BRG *e*PKPPKP 02 31 19.7
comp=Z,7.2nm,1.6s
BRG
comp=N,620nm,16.2s
BRG
comp=E,635nm,17.9s
BRG
comp=Z,1μm,16.0s
GEC2 GERESS Array S 84.70 319 *e*P **P 02 05 08.8 -0.1**
comp=Z,29nm,1.6s,mb5.2
GEC2 *e*S S 02 15 34.3 -0.5
GEC2 GERESS Array S 84.70 319 *e*P **P 02 05 08.8 -0.1**
GEC2 *e*S S 02 15 34.3 -0.5
GEC2 pmax pmax
comp=Z,29nm,1.6s,mb5.2
KHC Kasperske Hory 84.80 319 *e*P **P 02 05 07.9 -1.5**
KHC *e* pP 02 05 17.3 -1.2
KHC *e* 02 15 34.5
KHC MLR MLR
comp=Z,500nm,18.2s,MS4.9
KHC Kasperske Hory 84.80 319 *e*P **P 02 05 08.6 -0.8**
comp=Z,3.0nm,1.1s,mb4.3
KHC Kasperske Hory 84.80 319 *e*P **P 02 05 07.9 -1.5**
KHC *e*pP pP 02 05 17.3 -1.2
KHC *e*S S 02 15 34.5 -1.2
KHC AMS AMS 02 49 10.0
comp=Z,500nm,18.2s
RJOB Jochberg 85.23 318 *e*S S 02 15 38.1 -2.0
WET Wettzell 85.26 319 *e*P **P 02 05 11.7 0.0**
comp=Z,18nm,1.6s,mb5.0

WET *e*pP pP 02 05 18.9 -2.0
WET *e*S S 02 15 41.5 +1.2
WET Wettzell 85.26 319 *e*P **P 02 05 11.7 0.0**
WET *e**PP pP 02 05 18.9 -2.0
WET *e*S S 02 15 41.5 +1.2
WET pmax pmax
comp=Z,18nm,1.6s,mb5.0
CLL Collm 85.32 321 *e*P **P 02 05 11.5 -0.5**
comp=Z,19nm,1.8s,mb4.9
CLL *e*pP pP 02 05 19.0 -2.1
CLL *e*S S 02 15 41.5 +0.7
CLL Collm 85.32 321 *e*P **P 02 05 10.0 -2.0**
CLL *i* pP 02 05 18.8 -2.3
CLL *e*S S 02 15 40.0 -0.8
CLL pmax pmax
comp=Z,19nm,1.8s,mb4.9
CLL MLR MLR
comp=Z,500nm,19.6s,MS4.9
CLL Collm 85.32 321 *e*P **P 02 05 11.0 -1.0**
comp=Z,19nm,1.8s,mb4.9
CLL *i* pP pP 02 05 18.8 -2.3
comp=Z,15nm,1.4s
CLL *e*PPPP 02 12 12.0
CLL *e*S S 02 15 40.0 -0.8
CLL *e*PS 02 16 49.0
CLL *e* 02 17 52.0
CLL *e*(SS) 02 20 48.0
CLL *e*SSS 02 24 42.0
CLL *e*SSSS 02 27 57.0
CLL LmV 02 51 00.0
comp=Z,500nm,19.6s
HFS Hagfors 85.60 330 P **P 02 05 13.4 +0.2**
comp=Z,2.9nm,0.8s,mb4.6,baz=106,slow=4.8,SNR=10
NKC Novy Kostel 85.60 320 *e*P **P 02 05 14.0 +0.6**
NKC *e* 02 15 45.4
NKC MLR MLR
comp=Z,700nm,18.4s,MS5.1
NKC Novy Kostel 85.60 320 *e*P **P 02 05 14.0 +0.6**
NKC *e*S S 02 15 45.4 +1.8
NKC AMS AMS 02 51 40.0
comp=Z,700nm,18.4s
TANN Tannenbergstha 85.61 320 *e*P **P 02 05 13.3 -0.1**
comp=Z,13nm,1.7s,mb4.9
TANN *e*S S 02 15 46.7 +3.1
ROTZ Rotzenmuhle 85.73 320 *e*P **P 02 05 14.6 +0.5**
comp=Z,15nm,1.6s,mb5.0
ROTZ *e*pP pP 02 05 21.8 -1.4
ROTZ *e*S S 02 15 47.7 +2.8
MOX Moxa 86.16 320 *e*P **P 02 05 16.6 +0.5**
comp=Z,13nm,1.4s,mb5.0
MOX *e*S S 02 15 50.0 +1.0
MOX
comp=Z,500nm,21.0s
MOX Moxa 86.16 320 *e*P **P 02 05 16.1 0.0**
comp=Z,9.0nm,1.4s,mb4.8
MOX *e*S S 02 15 51.0 +2.0
MOX Moxa 86.16 320 *e*P **P 02 05 16.6 +0.5**
MOX *e*S S 02 15 50.0 +1.0
MOX pmax pmax
comp=Z,13nm,1.4s,mb5.0
MOX MLR MLR
comp=Z,500nm,21.0s,MS4.9
MOX Moxa 86.16 320 *e*P **P 02 05 16.6 +0.5**
comp=Z,13nm,1.4s,mb5.0
MOX *e*S S 02 15 50.0 +1.0
MOX LR LR
comp=Z,500nm,21.0s,MS4.9
FUR Furstenfeldbru 86.27 318 *e*S S 02 15 49.4 -0.9
MOTA Moosalm 86.36 317 ⇑ *i*P **P 02 05 16.4 -0.8**
comp=Z,6.2nm,0.9s,mb4.8
GRA1 Grafenberg Arr 86.37 320 *e*P **P 02 05 17.2 0.0**
comp=Z,56nm,1.8s,mb5.5
GRA1 *e*pP pP 02 05 24.4 -2.0
GRA1 *e*S S 02 15 53.1 +2.0
GRA1 LR LR
comp=Z,800nm,21.6s,MS5.1
GRF Grafenberg Arr 86.37 320 *e*P **P 02 05 17.2 0.0**
comp=Z,56nm,1.8s,mb5.5
GRF *e*pP pP 02 05 24.4 -2.0
GRF *e*S S 02 15 53.1 +2.0
GRF *e*L 02 50 23.3
comp=Z,773nm,21.6s
GRF Grafenberg Arr 86.37 320 *e*P **P 02 05 17.2 0.0**
GRF *e**PP pP 02 05 24.4 -2.0
GRF *e*S S 02 15 53.1 +2.0
GRF pmax pmax
comp=Z,56nm,1.8s,mb5.5
GRF MLR MLR
comp=Z,800nm,21.6s,MS5.1
SPITS Spitsbergen Ar 86.83 348 P **P 02 05 19.9 +0.9**
comp=Z,1.7nm,0.5s,mb4.5,baz=124,slow=16,SNR=3.8
SPITS LR LR 02 51 21.0
comp=Z,2μm,19.1s,MS5.4,baz=95,slow=41
NB2 NORSAR Subarra 86.89 331 P **P 02 05 18.5 -1.0**
comp=Z,28nm,1.7s,mb5.2,baz=93,slow=5.3
NOA NORSAR Array B 86.89 331 P **P 02 05 19.7 +0.2**
comp=Z,2.3nm,0.8s,mb4.5,baz=94,slow=4.9,SNR=6.0
NOA NORSAR Array B 86.89 331 P **P 02 05 19.7 +0.2**
CLZ Clausthal 86.98 322 *e*P **P 02 05 20.4 +0.2**
comp=Z,27nm,1.6s,mb5.2
CLZ *e*S S 02 15 56.6 -0.4
CLZ Clausthal 86.98 322 *e*P **P 02 05 20.4 +0.2**
CLZ *e*S S 02 15 56.6 -0.4
CLZ pmax pmax
comp=Z,27nm,1.6s,mb5.2
SBA Scott Base 87.04 169 *e*P **P 02 05 22.3 +2.3**
SBA pmax pmax
comp=Z,46nm,1.8s,mb5.4
SBA Scott Base 87.04 169 *e*P **P 02 05 22.3 +2.4**
comp=Z,46nm,1.8s,mb5.4
BSEG Bad Segeberg 87.08 324 *e*P **P 02 05 20.9 +0.3**
comp=Z,41nm,1.7s,mb5.4
BSEG *e*S S 02 15 57.9 0.0
BSEG Bad Segeberg 87.08 324 *e*P **P 02 05 20.9 +0.3**
BSEG *e*S S 02 15 57.9 0.0
BSEG pmax pmax
comp=Z,41nm,1.7s,mb5.4
NRDL Niedersach Rie 87.16 322 *e*P **P 02 05 20.8 -0.2**
comp=Z,37nm,1.6s,mb5.4
NRDL *e*S S 02 15 58.4 -0.3
UBBA Unterbreizbach 87.19 321 *e*S S 02 15 59.4 +0.4
KEST Kesra 87.46 306 P **P 02 05 23.7 +0.8**
comp=Z,2.1nm,0.9s,mb4.3,baz=337,slow=1.0,SNR=6.9
KEST LR LR 02 44 59.6
comp=Z,331nm,20.4s,MS4.7,baz=358,slow=36
KEST Kesra 87.46 306 *e*P **P 02 05 23.7 +0.8**
KONO Kongsberg 87.64 329 *e*P **P 02 05 24.3 +1.1**
KONO *e*SKS 02 15 48.4
KONO AMS AMS 02 50 34.1
comp=Z,722nm,14.6s,MS5.2
STU Stuttgart 87.67 319 *e*S S 02 16 03.5 -0.3
PGF Pioggiola 87.76 312 *e*P **P 02 05 23.4 -0.7**
comp=Z,30nm,1.4s,mb5.0
PGF Pioggiola 87.76 312 *e*P **P 02 05 23.4 -0.7**
PGF pmax pmax
comp=Z,15nm,1.4s,mb5.0
PGF Pioggiola 87.76 312 *e*P **P 02 05 23.4 -0.7**
comp=Z,15nm,1.4s,mb5.0
KBS Kingsbay 87.80 349 *e*P **P 02 05 23.2 -0.4**
KBS *e*SKS 02 15 47.8
KBS AMS AMS 02 53 01.8
comp=Z,1μm,17.5s,MS5.3
TNS Taunus Mts 88.17 320 *e*P **P 02 05 26.5 +0.6**
comp=Z,42nm,1.9s,mb5.3
TNS *e*S S 02 16 11.7 +3.2
TNS Taunus Mts 88.17 320 *e*P **P 02 05 26.5 +0.6**
TNS *e*S S 02 16 11.7 +3.2
TNS pmax pmax
comp=Z,42nm,1.9s,mb5.3
BFO Black Forest 88.25 318 *e*P **P 02 05 25.7 -0.6**
comp=Z,3.0nm,0.9s,mb4.5
BFO *e*S S 02 16 09.2 -0.1
BFO Black Forest 88.25 318 *e*P **P 02 05 25.7 -0.6**
BFO *e*S S 02 16 09.2 -0.1
BFO pmax pmax
comp=Z,3.0nm,0.9s,mb4.5
IBBN Ibbenburen 88.60 322 *e*P **P 02 05 28.4 +0.5**
comp=Z,253nm,3.1s
IBBN *e*S S 02 16 14.1 +1.6
SBF Sospel 88.90 314 *e*P **P 02 05 28.7 -0.8**
comp=Z,29nm,1.0s,mb5.3
SBF Sospel 88.90 314 *e*P **P 02 05 28.7 -0.8**
SBF pmax pmax
comp=Z,15nm,1.0s,mb5.3
SBF Sospel 88.90 314 *e*P **P 02 05 28.7 -0.8**
comp=Z,14nm,1.0s,mb5.3
BUG Bochum--Univer 88.91 321 *e*P **P 02 05 29.4 0.0**
comp=Z,13nm,1.0s,mb5.2
BUG *e*S S 02 16 16.4 +1.0
CDF Champ du Feu 88.95 318 *e*P **P 02 05 28.9 -0.7**
HINF Hinteralfeld 89.24 318 *e*P **P 02 05 30.2 -0.8**
LPG La Plagne 89.36 315 *e*P **P 02 05 31.4 -0.2**
comp=Z,18nm,1.0s,mb5.1
LPG La Plagne 89.36 315 *e*P **P 02 05 31.4 -0.2**
LPG pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
LPG La Plagne 89.36 315 *e*P **P 02 05 31.4 -0.2**
comp=Z,8.9nm,1.0s,mb5.0
MBDF Montbardon 89.36 315 *e*P **P 02 05 30.4 -1.2**
LPL La Plagne 89.37 315 *e*P **P 02 05 31.4 -0.3**
comp=Z,24nm,1.0s,mb5.2
LPL La Plagne 89.37 315 *e*P **P 02 05 31.4 -0.3**
LPL pmax pmax
comp=Z,12nm,1.0s,mb5.2
LPL La Plagne 89.37 315 *e*P **P 02 05 31.4 -0.3**
comp=Z,12nm,1.0s,mb5.2
BNI Bardonecchia 89.42 315 *e*P **P 02 05 32.3 +0.4**
BNI pmax pmax
comp=Z,14nm,1.3s,mb5.1
BNI Bardonecchia 89.42 315 *e*P **P 02 05 32.3 +0.4**
comp=Z,14nm,1.3s,mb5.1
FRF La Foret Royal 89.47 313 *e*P **P 02 05 31.7 -0.5**
comp=Z,33nm,1.1s,mb5.3
FRF La Foret Royal 89.47 313 *e*P **P 02 05 31.7 -0.5**
FRF pmax pmax
comp=Z,16nm,1.1s,mb5.3
FRF La Foret Royal 89.47 313 *e*P **P 02 05 31.7 -0.5**
comp=Z,16nm,1.1s,mb5.3
HAU Haudompre 89.58 318 *e*P **P 02 05 31.7 -0.9**
comp=Z,22nm,1.2s,mb5.1
HAU *e*MLR MLR
comp=Z,681nm,22.0s,MS4.7
HAU Haudompre 89.58 318 *e*P **P 02 05 31.7 -0.9**
HAU pmax pmax
comp=Z,11nm,1.2s,mb5.1
HAU MLR MLR
comp=Z,680nm,22.0s,MS5.0
HAU Haudompre 89.58 318 *e*P **P 02 05 31.7 -0.9**
comp=Z,11nm,1.2s,mb5.1
HAU LR LR
comp=Z,680nm,22.0s,MS5.0
LMR La Mourre 89.58 313 *e*P **P 02 05 32.2 -0.5**
comp=Z,16nm,1.0s,mb5.0
LMR La Mourre 89.58 313 *e*P **P 02 05 32.2 -0.5**
LMR pmax pmax
comp=Z,8.0nm,1.0s,mb5.0
LMR La Mourre 89.58 313 *e*P **P 02 05 32.2 -0.5**
comp=Z,7.8nm,1.0s,mb5.0
WLF Walferdange 89.66 319 P **P 02 05 32.5 -0.4**
comp=Z,19nm,1.8s,mb5.1
WLF Walferdange 89.66 319 *e*S S 02 16 24.7 +2.2
WLF Walferdange 89.66 319 *e*P **P 02 05 33.0 +0.1**
WLF pmax pmax
comp=Z,25nm,1.3s,mb5.4
WLF Walferdange 89.66 319 *e*P **P 02 05 33.0 0.0**
comp=Z,25nm,1.3s,mb5.4
NVL N'lazarevskaya 89.68 199 *e*P **P 02 05 38.4 +5.8**
NVL *e**PP pP 02 05 46.1 +4.4
NVL *e**SP sP 02 05 54.0 +9.0
NVL *e*SS SS 02 22 22.9 +4.5
NVL pmax pmax
comp=Z,19nm,1.0s,mb5.4
MEM Membach 89.73 320 P **P 02 05 33.0 -0.2**
BER Bergen 89.77 330 *e*P **P 02 05 35.1 +1.9**
BER *e*SKS 02 16 02.5
BER *e*SS SS 02 22 22.6 +2.5
BER AMS AMS 02 51 08.8
comp=Z,531nm,15.9s,MS5.1
CABF La Chapelle 89.79 316 *e*P **P 02 05 33.4 -0.2**
FOO Floro 89.86 331 *e*P **P 02 05 33.6 0.0**
FOO AMS AMS 02 53 30.2
comp=Z,522nm,15.1s,MS5.1
ORIF Oris-en-Rattie 89.99 315 *e*P **P 02 05 33.3 -1.3**
ORIF *e*MLR MLR
comp=Z,788nm,19.8s,MS4.8
SMRF Simiane la Rot 90.24 314 *e*P **P 02 05 34.1 -1.7**
MEZF Maizieres J'vi 90.42 318 *e*P **P 02 05 36.1 -0.4**
GIVF Givet 90.50 320 *e*P **P 02 05 36.5 -0.4**
DOU Dourbes 90.65 320 P **P 02 05 38.0 +0.4**
SNF Seneffe 90.83 320 P **P 02 05 38.4 +0.1**
VIVF Saint-Julien-l 90.85 315 *e*P **P 02 05 38.2 -0.4**
comp=Z,27nm,1.3s,mb5.1
VIVF Saint-Julien-l 90.85 315 *e*P **P 02 05 38.2 -0.4**
VIVF pmax pmax
comp=Z,14nm,1.3s,mb5.1
VIVF Saint-Julien-l 90.85 315 *e*P **P 02 05 38.2 -0.4**
comp=Z,14nm,1.3s,mb5.1
BAIF Baives 90.90 320 *e*P **P 02 05 38.6 -0.1**
comp=Z,75nm,1.4s,mb5.5
BAIF Baives 90.90 320 *e*P **P 02 05 38.6 -0.1**
BAIF pmax pmax
comp=Z,38nm,1.4s,mb5.5
BAIF Baives 90.90 320 *e*P **P 02 05 38.6 -0.1**
comp=Z,38nm,1.4s,mb5.5
TAM Tamanrasset 91.00 293 *e*P **P 02 05 40.7 +0.9**
TAM pmax pmax
comp=Z,8.0nm,1.0s,mb5.0
TAM Tamanrasset 91.00 293 *e*P **P 02 05 40.7 +0.9**
comp=Z,8.4nm,1.0s,mb5.0
QSPA South Pole Qui 91.25 180 *e*P **P 02 05 39.9 +0.2**
comp=Z,8.9nm,1.2s,mb5.0
LOR Lormes 91.29 317 *e*P **P 02 05 40.1 -0.5**
comp=Z,41nm,1.2s,mb5.3
LOR *e*MLR MLR
comp=Z,740nm,20.8s,MS4.8
LOR Lormes 91.29 317 *e*P **P 02 05 40.1 -0.5**
LOR pmax pmax
comp=Z,20nm,1.2s,mb5.3
LOR MLR MLR
comp=Z,740nm,20.8s,MS5.1
LOR Lormes 91.29 317 *e*P **P 02 05 40.1 -0.5**
comp=Z,20nm,1.2s,mb5.3
LOR LR LR
comp=Z,740nm,20.8s,MS5.1
SMF Signal de Mont 91.34 317 *e*P **P 02 05 40.2 -0.6**
comp=Z,24nm,1.1s,mb5.1
SMF Signal de Mont 91.34 317 *e*P **P 02 05 40.2 -0.6**
SMF pmax pmax
comp=Z,12nm,1.1s,mb5.1
SMF Signal de Mont 91.34 317 *e*P **P 02 05 40.2 -0.6**
comp=Z,12nm,1.1s,mb5.1
SSF Saint Saulge 91.54 317 *e*P **P 02 05 41.4 -0.4**
comp=Z,44nm,1.5s,mb5.3
SSF Saint Saulge 91.54 317 *e*P **P 02 05 41.4 -0.4**
SSF pmax pmax
comp=Z,22nm,1.5s,mb5.3
SSF Saint Saulge 91.54 317 *e*P **P 02 05 41.4 -0.4**
comp=Z,22nm,1.5s,mb5.3
AVF Avril sur Loir 91.66 317 *e*P **P 02 05 41.7 -0.6**
comp=Z,38nm,1.4s,mb5.2
AVF Avril sur Loir 91.66 317 *e*P **P 02 05 41.7 -0.6**
AVF pmax pmax
comp=Z,19nm,1.4s,mb5.2
AVF Avril sur Loir 91.66 317 *e*P **P 02 05 41.7 -0.6**
comp=Z,19nm,1.4s,mb5.2
BGF Bois d'Agland 92.03 316 *e*P **P 02 05 41.8 -2.2**
comp=Z,49nm,1.3s,mb5.4
BGF Bois d'Agland 92.03 316 *e*P **P 02 05 41.8 -2.2**
BGF pmax pmax
comp=Z,24nm,1.3s,mb5.4
BGF Bois d'Agland 92.03 316 *e*P **P 02 05 41.8 -2.2**
comp=Z,24nm,1.3s,mb5.4
TCF Toulx Ste Croi 92.49 316 *e*P **P 02 05 44.8 -1.3**
comp=Z,53nm,1.7s,mb5.3
TCF Toulx Ste Croi 92.49 316 *e*P **P 02 05 44.8 -1.3**
TCF pmax pmax
comp=Z,26nm,1.7s,mb5.3
TCF Toulx Ste Croi 92.49 316 *e*P **P 02 05 44.8 -1.3**
comp=Z,26nm,1.7s,mb5.3
JMIC Jan Mayen 93.84 342 LR LR 02 52 14.1
comp=Z,559nm,21.0s,MS5.0,baz=84,slow=38
FLN La Foliniere 94.06 319 *e*P **P 02 05 51.3 -2.1**
FLN *e*MLR MLR
comp=Z,752nm,21.0s,MS4.8
FLN La Foliniere 94.06 319 *e*P **P 02 05 51.3 -2.1**
FLN LR LR
comp=Z,750nm,21.0s,MS5.1
EKA Eskdalemuir Ar 94.80 326 P **P 02 05 56.8 +0.2**
comp=Z,1.3nm,0.7s,mb4.5,baz=82,slow=5.0,SNR=6.9
COLD Coldfoot 97.41 21 *e*P **P 02 06 08.1 -0.1**
comp=Z,15nm,1.7s,mb5.1
CHUM Lake Minchumin 97.75 25 *e*P **P 02 06 10.4 +0.7**
comp=Z,3.0nm,0.5s,mb5.1
MDT Midelt 99.17 303 LR LR 02 50 05.5
comp=Z,681nm,21.3s,MS5.1,baz=98,slow=35
INK Inuvik 102.38 17 *e*P Pdif 02 06 30.5 -0.1
YKA Yellowknife Ar 112.00 15 PP PP 02 11 53.8 +0.8
comp=Z,0.6nm,0.8s,baz=327,slow=5.0,SNR=6.8
SCHQ Schefferville 122.51 349 PKP PKPdf 02 11 30.7 +0.4
comp=Z,3.9nm,0.9s,baz=63,slow=4.8,SNR=2.9
SLMT Seeley Lake 124.71 25 *e*PKPdf PKPdf 02 11 33.5 -1.2
MSO Missoula 124.84 26 *e*PKPdf PKPdf 02 11 34.2 -0.8
CHMT Chamberlain Mo 125.07 25 *e*PKPdf PKPdf 02 11 34.8 -0.7
WVOR Wild Horse Val 125.81 32 *e*PKIKP PKPdf 02 11 37.3 +0.3
DLMT Dillon 126.57 26 *e*PKPdf PKPdf 02 11 38.1 -0.3
BOZ Bozeman (W) 126.76 25 *e*PKIKP PKPdf 02 11 38.6 -0.1
MCMT McKenzie Canyo 126.88 26 *e*PKPdf PKPdf 02 11 39.5 +0.5
HLID Hailey 127.13 29 *e*PKPdf PKPdf 02 11 40.0 +0.5
HLID *e*PP PP 02 13 39.5 +2.0
ULM Lac du Bonnet 127.44 11 *e*PKPdf PKPdf 02 11 40.6 +0.7
LAO LASA Array 127.97 20 *e*PKPdf PKPdf 02 11 41.5 +0.5
NVAR Mina Array Bea 128.72 36 PKP PKPdf 02 11 43.9 +1.2
comp=Z,1.1nm,0.8s,baz=238,slow=2.5,SNR=8.1
TPAW Teton Pass 128.77 26 *e*PKPdf PKPdf 02 11 42.6 0.0
LOHW Long Hollow 128.83 26 *e*PKPdf PKPdf 02 11 43.5 +0.7
M13A Montello 128.90 30 *e*PKPdf PKPdf 02 11 43.4 +0.5
REDW Red Top Meadow 128.92 26 *e*PKPdf PKPdf 02 11 43.4 +0.5
BGU Big Grassy Mou 129.79 30 *e*PKPdf PKPdf 02 11 45.3 +0.7
BW06 Boulder Array 129.96 26 *e*PKPdf PKPdf 02 11 44.7 -0.3
PDAR Pinedale Array 129.96 26 PKP PKPdf 02 11 45.1 +0.2
comp=Z,0.9nm,0.7s,baz=270,slow=0.3,SNR=7.2
PDAR PP PP 02 13 54.9 -1.1
comp=Z,2.0nm,1.2s,baz=322,slow=4.5,SNR=4.2
HWUT Hardware Ranch 129.98 28 *e*PKPpre PKPpre 02 11 38.0
HWUT *e*PKPdf PKPdf 02 11 45.1 +0.1
DUG Dugway 130.45 30 *e*PKPdf PKPdf 02 11 46.3 +0.4
DUG *e*SKPbc SKPbc 02 15 07.0 -0.4
RSSD Black Hills 130.96 20 *e*PKIKP PKPdf 02 11 47.1 +0.3
NLU North Lily Min 131.00 30 *e*PKPdf PKPdf 02 11 47.7 +0.7
NLU *e*SKP 02 15 07.2
MSU Marysvale 132.04 31 *e*PKPdf PKPdf 02 11 50.1 +1.1
MSU *e*SKP 02 15 13.2
CCUT Cedar City 132.12 33 *e*PKPdf PKPdf 02 11 49.5 +0.4
SRU San Rafael 132.42 29 *e*PKIKP PKPdf 02 11 50.9 +1.2
TUC Tucson 137.38 36 *e*PKIKP PKPdf 02 11 59.6 +0.4
ANMO Albuquerque 137.69 29 *e*PKIKP PKPdf 02 12 00.4 +0.7
TRQA Tornquist 138.71 205 *e*PKPdf PKPdf 02 12 02.3 +0.8
WCI Wyandotte Cave 140.53 4 *e*PKIKP PKPdf 02 12 04.1 -0.6
MNTX Cornudas Mount 140.83 31 *e*PKPpre PKPpre 02 12 00.0
MNTX *e*PKPdf PKPdf 02 12 05.5 0.0
WVT Waverly 142.46 7 *e*PKPpre PKPpre 02 12 02.5
WVT *e*SKPbc SKPbc 02 15 43.3 -1.1
MIAR Mount Ida 142.94 15 *e*PKPpre PKPpre 02 12 04.0
MIAR *e*SKPbc SKPbc 02 15 44.5 -1.1
TXAR Lajitas Array 143.60 32 PKP PKPdf 02 12 07.8 -2.7
comp=Z,0.8nm,0.5s,baz=270,slow=1.3,SNR=22
TXAR PP PP 02 15 22.4 +0.8
comp=Z,0.4nm,0.8s,baz=242,slow=3.9,SNR=4.7
JCT Junction City 144.50 26 *e*PKIKP PKPdf 02 12 10.5 -1.5
CPUP Villa Florida 145.06 222 PKPbc PKPbc 02 12 12.4 -0.1
comp=Z,3.5nm,0.7s,baz=94,slow=1.9,SNR=16
CPUP Villa Florida 145.06 222 *e*PKPdf PKPdf 02 12 12.2 -0.8
NATX Nacogdoches 145.25 18 *e*PKPbc PKPbc 02 12 11.9 -1.1
GOGA Godfrey 145.46 1 *e*PKIKP PKPdf 02 12 12.9 -0.7
LRAL Lakeview Retre 145.62 6 *e*PKPbc PKPbc 02 12 13.0 -1.1
NHSC New Hope 145.68 356 *e*PKPbc PKPbc 02 12 14.2 0.0
VBMS Vicksburg 145.87 12 *e*PKPbc PKPbc 02 12 15.5 +0.6
HKT Hockley 146.53 21 *e*PKP2 PKPab 02 12 16.6 -1.3
CFAA Coronel Fontan 146.86 203 PKPbc PKPbc 02 12 17.3 -0.5
comp=Z,0.5nm,0.5s,baz=152,slow=2.7,SNR=9.0
LCO Las Campanas 150.12 202 *e*PKPbc PKPbc 02 12 26.8 +0.4
LPAZ La Paz 159.22 223 PKP PKPdf 02 12 36.8 +2.6
comp=Z,2.1nm,0.9s,baz=129,slow=5.2,SNR=4.8
LPAZ La Paz 159.22 223 *e*PKPdf PKPdf 02 12 35.7 +1.4
OTAV Otavalo 175.34 289 *e*PKPdf PKPdf 02 12 45.7 -0.4

NIED ***25*** *02:06:00,36°.50N×141°.60E,h5km,Mw4.2 Best double couple: M0=2.30000×10^15 NP1:φs=341.00000°,δ=77.00000°, λ=87.00000°. NP2:φs=176.00000°,δ=13.00000°,λ=104.00000°.*
NEIC ***25*** *02:06:19.6±0.3,36°.53N×141°.55E,h10km,mb4.6/9, MW4.2(NIED),Error ellipse: s-maj=8.3km s-min=7.7km az=170.0*
NEIC Recorded [1 JMA] in Ibaraki.
ISCJB ***25*** *02:06:20.8±1.2,36°.55N±0°.03×141°.58E±0°.05,h30km±8km, mb4.2/25,Error ellipse: s-maj=6.8km s-min=5.6km az=5.7*
JMA ***25*** *02:06:21.0±0.1,36°.56N×141°.54E,h50km±3km,M4.0*
JMA Felt I J1.
IDC ***25*** *02:06:23.0±0.8,36°.51N×141°.45E,h31km±5km,mb4.0/17, mb1 4.1/19,mb1mx4.0/28,mbtmp4.0/19,ML4.1/2,MS4.1/2, Ms1 4.1/2,ms1mx3.2/38,Error ellipse: s-maj=16.8km s-min=14.5km az=63.0*

ISC 25 02:06:20.6±1.0,36°.56N±0°.03×141°.53E±0°.05,h15km±5km, h31km±1.4km:pP-P,n56,σ0°.74/63,mb4.2/25,1C-5D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.78**	**274**	⇓P	S	**Sg**	**02 06 35.7**	**0.0**
JHO					S	**Sg**	**02 06 46.4**	**+0.5**
ONAJ	**Iwakimizuishiy**	**0.80**	**313**	⇓P	S	**Sg**	**02 06 35.8**	**-0.3**
JFK	**Kawauchi**	**0.96**	**327**	P	P	**Pb**	**02 06 38.3**	**-0.6**
CHOJ	**Choshi**	**1.02**	**213**	⇓P	P	**Pb**	**02 06 39.1**	**-0.8**
JYT	**Yasato**	**1.13**	**253**	⇓P	P	**Pb**	**02 06 40.7**	**-1.1**
JFT	**Otama**	**1.35**	**315**	⇓P	P	**Pn**	**02 06 44.9**	**0.0**
JMM	**Marumori**	**1.43**	**336**	P	P	**Pn**	**02 06 45.0**	**-1.0**
JAG	**Ashikaga**	**1.68**	**266**	P	P	**Pn**	**02 06 49.2**	**-0.2**
JAG					S	**Sn**	**02 07 09.5**	**-1.2**
JFY	**Yanaizu**	**1.69**	**300**	P	P	**Pn**	**02 06 50.0**	**+0.5**
JFY					S	**Sn**	**02 07 11.5**	**+0.6**
JKT	**Katashina**	**1.85**	**277**	P	P	**Pn**	**02 06 52.1**	**+0.4**
JKT					S	**Sn**	**02 07 14.8**	**0.0**
JIO	**Ouri**	**1.89**	**356**	P	P	**Pn**	**02 06 51.0**	**-1.4**
JOU	**Okura**	**1.93**	**339**	P	P	**Pn**	**02 06 53.1**	**+0.3**
JOU					S	**Sn**	**02 07 16.8**	**0.0**
BSO3	**Boso 3**	**1.94**	**206**	⇑P	P	**Pn**	**02 06 53.8**	**+0.7**
BSO1	**Boso 1**	**1.96**	**193**	P	P	**Pn**	**02 06 53.8**	**+0.5**
MJAR	**Matsushiro Arr**	**2.67**	**271**	Pn	**Pn**	**Pn**	**02 07 03.8**	**+0.7**
	28nm,0.3s,baz=87,slow=9.2,SNR=114							
MJAR					Sn	**Sn**	**02 07 34.2**	**-1.0**
	20nm,0.3s,baz=160,slow=26,SNR=6.5							
MJAR					LR	LR	02 08 15.4	
	comp=Z,504nm,19.1s,baz=95,slow=44							
MJAR	**Matsushiro Arr**	**2.67**	**271**	Pn	**Pn**	**Pn**	**02 07 03.8**	**+0.7**
MJAR					Sn	**Sn**	**02 07 34.2**	**-1.0**
MJAR					LR	LR	02 08 15.4	
MAJO	**Matsushiro**	**2.68**	**271**	*e*Pn	**Pn**	**Pn**	**02 07 04.2**	**+1.0**
MAT	**Matsushiro**	**2.68**	**271**	P	**Pn**	**Pn**	**02 07 04.3**	**+1.2**
MAT					S	**Sn**	**02 07 38.5**	**+3.2**
JHJ	**Hachijo jima 2**	**3.72**	**203**	Pn	**Pn**	**Pn**	**02 07 18.2**	**+0.7**
	66nm,0.3s,baz=217,slow=7.9,SNR=14							
JHJ					Sn	**Sn**	**02 08 00.7**	**-0.5**
	55nm,0.3s,baz=56,slow=22,SNR=8.6							
ERM	**Erimo**	**5.59**	**13**	*e*Pn	**Pn**	**Pn**	**02 07 43.0**	**-0.2**
KSRS	**Korea Array**	**10.92**	**279**	Pn	**Pn**	**Pn**	**02 08 59.9**	**+3.6**
	0.2nm,0.3s,baz=20,slow=16,SNR=2.9							
SONM	**Songino Array**	**28.13**	**305**	P	**P**	**P**	**02 12 11.8**	**0.0**
	3.4nm,0.8s,mb4.0,baz=104,slow=8.7,SNR=17							
ZALV	**Zalesovo Beam**	**42.30**	**313**	P	**P**	**P**	**02 14 13.7**	**+0.2**
	3.8nm,0.5s,mb4.3,baz=96,slow=6.9,SNR=16							
ZALV					PcP	PcP	02 16 05.3	-1.5
	0.9nm,0.3s,baz=85,slow=3.0,SNR=4.4							
MK31	**Makanchi Array**	**44.45**	**303**	*e*P	**P**	**P**	**02 14 30.9**	**0.0**
MKAR	**Makanchi Array**	**44.45**	**303**	P	**P**	**P**	**02 14 30.9**	**0.0**
	1.7nm,0.7s,mb3.9,baz=84,slow=12,SNR=10							
KURK	**Kurchatov**	**46.30**	**308**	P	**P**	**P**	**02 14 46.1**	**+0.6**
	5.2nm,0.5s,mb4.7,baz=84,slow=7.8,SNR=11							
KURK	**Kurchatov**	**46.30**	**308**	*e*P	**P**	**P**	**02 14 44.6**	**-0.8**
	5.8nm,0.6s,mb4.7							
TKM2	**Tokmak 2**	**49.94**	**299**	*e*P	**P**	**P**	**02 15 14.4**	**+0.7**
	2.4nm,0.5s,mb4.5							
UCH	**Uchtor**	**50.90**	**298**	*e*P	**P**	**P**	**02 15 21.9**	**+0.9**
	1.7nm,0.8s,mb4.0							
BVAR	**Borovoye Array**	**50.96**	**313**	P	**P**	**P**	**02 15 21.0**	**-0.3**
	0.9nm,0.4s,mb4.0,baz=81,slow=11,SNR=3.1							
BVAR					PcP	PcP	02 16 37.1	-0.3
	1.4nm,0.5s,baz=82,slow=3.3,SNR=4.4							
WRAB	**Tennant Creek**	**56.60**	**188**	*e*P	**P**	**P**	**02 16 01.8**	**-1.0**
	6.1nm,1.0s,mb4.6							
WRA	**Warramunga Arr**	**56.61**	**188**	P	**P**	**P**	**02 16 01.9**	**-1.0**
	1.8nm,0.4s,mb4.5,baz=6.4,slow=7.4,SNR=30							
ARU	**Arti**	**56.77**	**319**	*e*P	**P**	**P**	**02 16 03.4**	**-0.3**

2.9nm,0.6s,mb4.5
ABKAR **Akbulak array** 58.31 310 *e*P P 02 16 14.4 -0.3
2.9nm,0.6s,mb4.5
AKTK **Aktyubinsk** 59.06 312 P P 02 16 19.6 -0.2
AKTO **Aktyubinsk** 59.06 312 P P 02 16 19.6 -0.2
1.8nm,0.6s,mb4.3,baz=69,slow=11,SNR=9.1
ASAR **Alice Springs** 60.33 188 P P 02 16 28.1 -0.7
2.2nm,0.7s,mb4.3,baz=11,slow=6.3,SNR=19
ARCES **ARCESS Array B** 64.47 339 P P 02 16 55.6 -0.5
2.0nm,0.8s,mb4.2,baz=47,slow=8.0,SNR=5.5
FINES **FINESS Array B** 69.28 332 P P 02 17 25.8 -0.9
2.3nm,0.6s,mb4.3,baz=50,slow=10,SNR=6.3
KIV **Kislovodsk** 71.29 311 *e*P P 02 17 40.1 +0.8
4.6nm,0.7s,mb4.5
HFS **Hagfors** 74.56 336 P P 02 17 58.5 +0.1
0.9nm,0.5s,mb4.0,baz=72,slow=9.3,SNR=4.2
HFS LR LR 02 51 44.6
comp=Z,655nm,18.1s,baz=330,slow=36
NB2 **NORSAR Subarra** 74.66 337 P P 02 17 59.1 +0.1
comp=Z,1.4nm,0.6s,mb4.1,baz=39,slow=6.2
NOA **NORSAR Array B** 74.66 337 P P 02 17 59.4 +0.4
comp=Z,3.1nm,0.8s,mb4.3,baz=38,slow=5.8,SNR=10.0
AKASG **Malin Array Be** 74.73 322 P P 02 17 59.4 -0.2
comp=Z,2.9nm,0.4s,mb4.5,baz=46,slow=6.4,SNR=19
AKASG pP pP 02 18 09.4 +5.0
comp=Z,0.7nm,0.4s,baz=44,slow=6.1,SNR=3.6
AKBB **Malin Array Si** 74.73 322 *e*P P 02 17 58.9 -0.7
KIEV **Kiev** 74.74 322 *e*P P 02 17 59.1 -0.5
comp=Z,4.2nm,0.5s,mb4.6
NVAR **Mina Array Bea** 75.20 53 P P 02 18 04.4 +1.8
comp=Z,0.5nm,0.5s,mb3.7,baz=256,slow=15,SNR=5.2
NVAR pP pP 02 18 13.3 +5.8
comp=Z,1.0nm,0.7s,baz=280,slow=6.5,SNR=7.6
NVAR **Mina Array Bea** 75.20 53 P P 02 18 04.4 +1.8
NVAR pP pP 02 18 13.3 +5.8
PDAR **Pinedale Array** 77.93 45 P P 02 18 19.1 +1.2
comp=Z,0.4nm,0.8s,mb3.4,baz=343,slow=2.8,SNR=2.9
KWP **Kalwaria Pacla** 78.57 324 *e*P P 02 18 21.7 +0.4
comp=Z,9.9nm,1.0s,mb4.7
BUR08 **Bucovina Ar. S** 78.73 322 *e*P P 02 18 22.6 +0.4
MMAI **Mount Meron Ar** 82.31 305 P P 02 18 41.5 -0.3
comp=Z,2.2nm,0.7s,mb4.2,baz=36,slow=11,SNR=5.0
TXAR **Lajitas Array** 90.33 52 P P 02 19 22.0 +0.7
comp=Z,0.3nm,0.7s,mb3.7,baz=338,slow=6.8,SNR=2.7
TXAR pP pP 02 19 31.0 +4.7
comp=Z,0.3nm,0.7s,baz=305,slow=3.7,SNR=3.1
TXAR **Lajitas Array** 90.33 52 P P 02 19 22.0 +0.7
TXAR pP pP 02 19 31.0 +4.7
LPAZ **La Paz** 146.85 60 PKPbc PKPbc 02 26 03.0 +0.3
comp=Z,1.5nm,0.8s,baz=268,slow=1.7,SNR=7.7
LPAZ **La Paz** 146.85 60 *e*PKPbc PKPbc 02 26 02.7 +0.1

KNET ***25*** *02:09:25.9±0.5, 43°.24N×74°.88E, h20km±4km, ml2.5, Error ellipse: s-maj=4.7km s-min=2.3km az=177.0*
ISCJB ***25*** *02:09:26.5±0.9, 43°.28N±0°.05×74°.88E±0°.04, h10km±5km, Error ellipse: s-maj=7.8km s-min=5.2km az=178.1*
ISC 25 02:09:26.8±0.9, 43°.27N±0°.05×74°.87E±0°.04, h11km±5km**, n10, σ0s=67/20, 13C-6D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USP	**Ospenovka**	**0.27**	**270**	⇓P	**Pg**	**02 09 32.6**	**+0.3**
	96nm,0.1s,SNR=89						
USP				⇑S	**Sg**	**02 09 36.4**	**+0.5**
	1μm,0.2s						
CHMS	**Chumysh**	**0.28**	**198**	⇑P	**Pg**	**02 09 32.7**	**+0.3**
	55nm,0.2s,SNR=111						
CHMS				⇑S	**Sg**	**02 09 36.8**	**+0.5**
	2μm,0.3s						
KBK	**Karagaybulak**	**0.61**	**175**	⇓P	**Pg**	**02 09 38.7**	**+0.1**
	108nm,0.1s,SNR=226						
KBK				⇑S	**Sg**	**02 09 47.4**	**+0.7**
	789nm,0.2s						
TKM2	**Tokmak 2**	**0.64**	**123**	⇓P	**Pg**	**02 09 38.5**	**-0.6**
	60nm,0.2s,SNR=438						
TKM2				⇓S	**Sg**	**02 09 47.2**	**-0.2**
	296nm,0.1s						
AAK	**Ala-Archa**	**0.69**	**204**	⇓P	**Pg**	**02 09 39.8**	**-0.3**
	12nm,0.1s,SNR=11						
AAK				⇑S	**Sg**	**02 09 49.0**	**-0.2**
	117nm,0.2s						
EKS2	**Erkin-Say**	**1.00**	**233**	⇑P	**Pg**	**02 09 45.3**	**-0.8**
	19nm,0.1s,SNR=84						
EKS2				⇑S	**Sg**	**02 09 59.1**	**0.0**
	167nm,0.3s						
UCH	**Uchtor**	**1.07**	**194**	⇓P	**Pb**	**02 09 46.6**	**-0.7**
	6.3nm,0.1s,SNR=27						
UCH				⇑S	**Sb**	**02 10 00.7**	**-0.6**
	74nm,0.2s						
KZA	**Kyzart**	**1.22**	**167**	P	**Pn**	**02 09 49.5**	**-0.3**
	48nm,0.3s,SNR=111						
KZA				⇑S	**Sb**	**02 10 05.9**	**+0.2**
	132nm,0.3s						
AML	**Almayashu**	**1.43**	**218**	⇑P	**Pn**	**02 09 53.0**	**+0.3**
	23nm,0.2s,SNR=14						
AML				⇑S	**Sn**	**02 10 11.9**	**+0.5**
	46nm,0.4s						
KNDC	**Almaty**	**1.53**	**91**	⇑P	**Pn**	**02 09 52.8**	**-1.3**
	40nm,0.7s						
KNDC				⇑S	**Sn**	**02 10 16.1**	**+2.0**
	107nm,0.4s						

NEIC 25 02:18:52.0, 37°.02S×177°.49E, h81km**, ML3.8**(WEL)**, After WEL., Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	**White Island**	**0.56**	**205**	P	Pn	02 19 06.8	+0.4
MXZ	**Matakaoa Point**	**0.85**	**130**	P	Pn	02 19 09.3	0.0
MXZ				S	Sn	02 19 22.7	+0.5
PUZ	**Puketiti**	**1.22**	**150**	P	Pn	02 19 13.8	+0.1
URZ	**Urewera**	**1.27**	**194**	P	Pn	02 19 14.6	+0.1
MWZ	**Matawai**	**1.31**	**179**	P	Pn	02 19 14.9	-0.1
MWZ				S	Sn	02 19 32.1	-0.1
KNZ	**Kokohu**	**2.00**	**176**	P	Pn	02 19 22.6	-1.3
BKZ	**Black Stump Fm**	**2.28**	**200**	P	Pn	02 19 27.8	+0.1

BJI ***25*** *02:27:50.2, 17°.43N×146°.26E, h135km, mB5.2/10, mb4.6/16*
ISCJB ***25*** *02:27:51.9±1.0, 17°.62N±0°.04×145°.70E±0°.04, h118km±9km, mb4.5/68, Error ellipse: s-maj=6.9km s-min=6.4km az=19.6*
MOS ***25*** *02:27:54.1±0.9, 17°.60N×145°.57E, h147km, mb4.7/17, Error ellipse: s-maj=14.0km s-min=7.2km az=83.5*
NEIC ***25*** *02:27:55.2±1.0, 17°.59N×145°.70E, h141km±9km, mb4.5/38, Error ellipse: s-maj=7.3km s-min=5.2km az=96.0*
IDC ***25*** *02:27:55.2±2.9, 17°.61N×145°.72E, h143km±27km, mb4.0/19, mb1 4.2/20, mb1mx4.1/25, mbtmp4.0/20, MS3.9/1, Ms1 3.9/1, ms1mx2.7/41, Error ellipse: s-maj=15.9km s-min=9.9km az=93.0*
ISC 25 02:27:54.4±0.9, 17°.58N±0°.04×145°.75E±0°.04, h130km±8km**, h136**km±3.7km**; pP-P, n337, σ0s=57/335, mb4.3/68, 108C-93D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.05**	**192**	*e*Pn	**Pn**	**02 28 55.2**	**+0.2**
GUMO				*e*Sn	**Sn**	**02 29 41.8**	**-0.1**
JHJ	**Hachijo jima 2**	**16.38**	**342**	LR	LR	02 37 01.4	
	comp=Z,446nm,21.2s,baz=298,slow=33						
MJAR	**Matsushiro Arr**	**20.04**	**342**	P	**P**	**02 32 17.3**	**+0.2**
	1.1nm,0.3s,baz=165,slow=9.9,SNR=7.0						
MAJO	**Matsushiro**	**20.04**	**342**	*e*P	**P**	**02 32 18.1**	**+0.9**
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MAJO	**Matsushiro**	**20.04**	**342**	*e*P	**P**	**02 32 18.1**	**+0.9**
	comp=Z,8.1nm,0.6s						
MAT	**Matsushiro**	**20.04**	**342**	P	**P**	**02 32 18.5**	**+1.4**
KSRS	**Korea Array**	**25.26**	**325**	P	**P**	**02 33 07.7**	**-0.7**
	comp=Z,1.5nm,0.6s,mb3.7,baz=143,slow=9.5,SNR=7.6						
ASAJ	**Asahikawa**	**26.59**	**355**	P	**P**	**02 33 19.6**	**-0.7**
	comp=Z,12nm,0.7s,mb4.7,baz=108,slow=7.8,SNR=6.4						
NJ2	**Nanjing**	**28.25**	**306**	*e*P	**P**	**02 33 38.6**	**+3.3**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.0						
MDJ	**Mudanjiang**	**30.18**	**337**	P	**P**	**02 33 52.8**	**+0.6**
MDJ				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
MDJ				pmax	pmax		
	comp=Z,750nm,11.6s						
CN2	**Changchun**	**31.26**	**331**	*e*P	**P**	**02 34 04.0**	**+2.2**
PEA0B	**Petropavlovsk-**	**36.67**	**12**	*e*P	**P**	**02 34 48.2**	**-0.1**
PETK	**Petropavlovsk-**	**36.67**	**12**	P	**P**	**02 34 48.4**	**0.0**
	comp=Z,10nm,0.6s,mb4.6,baz=182,slow=7.7,SNR=27						
GYA	**Guiyang**	**37.18**	**291**	P	**P**	**02 34 53.3**	**+0.2**
GYA				pP	pP	02 35 23.4	+1.6
GYA				sP	sP	02 35 39.8	+3.1
GYA				PcP	PcP	02 37 11.3	+0.8
GYA				S	**S**	**02 40 30.6**	**+0.4**
GYA				ScP	ScP	02 40 43.9	-1.7
GYA				PcS	PcS	02 40 59.6	+0.6
GYA				ScS	ScS	02 44 51.3	-2.4
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.5						
HHC	**Hu-ho-hao-te**	**37.42**	**315**	*e*P	**P**	**02 34 55.4**	**+0.5**
HHC				pP	pP	02 35 26.4	+2.7
HHC				sP	sP	02 35 42.6	+4.0
HHC				PP	PP	02 36 27.4	+4.5
HHC				PcP	PcP	02 37 11.5	+0.6
HHC				S	**S**	**02 40 32.8**	**-0.8**
HHC				ScP	ScP	02 40 43.8	-2.4
HHC				PcS	PcS	02 41 00.1	+0.6
HHC				sS	sS	02 41 26.8	+3.1
HHC				SS	SS	02 43 13.8	-9.3
HHC				ScS	ScS	02 44 52.0	-2.6
HHC				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.5						
HHC				pmax	pmax		
	comp=Z,320nm,6.3s						
HHC				LR	LR		
	comp=N,280nm,13.2s						
HHC				LR	LR		
	comp=E,220nm,13.2s						
HHC				LR	LR		
	comp=Z,290nm,13.2s						
CTA	**Charters Tower**	**37.43**	**179**	P	**P**	**02 34 55.5**	**+0.3**
	comp=Z,2.6nm,0.4s,mb4.3,baz=345,slow=12,SNR=4.2						
CTAO	**Charters Tower**	**37.43**	**179**	*e*P	**P**	**02 34 55.8**	**+0.7**
CTAO				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.3						
CTAO	**Charters Tower**	**37.43**	**179**	*e*P	**P**	**02 34 55.8**	**+0.6**
	comp=Z,5.3nm,0.6s,mb4.3						
WRAB	**Tennant Creek**	**38.92**	**197**	*e*P	**P**	**02 35 07.0**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.7						
WRAB	**Tennant Creek**	**38.92**	**197**	*e*P	**P**	**02 35 07.0**	**-0.6**
	comp=Z,17nm,0.8s,mb4.7						
WRA	**Warramunga Arr**	**38.93**	**197**	P	**P**	**02 35 07.3**	**-0.4**
	comp=Z,3.8nm,0.2s,mb4.6,baz=7.2,slow=8.0,SNR=64						
CD2	**Chengdu**	**40.29**	**297**	*e*P	**P**	**02 35 19.3**	**+0.3**
CD2				pP	pP	02 35 46.3	-1.8
CD2				PP	PP	02 36 57.1	+2.8
CD2				S	**S**	**02 41 17.6**	**+0.7**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.7						
CD2				pmax	pmax		
	comp=Z,30nm,4.2s						
FITZ	**Fitzroy Crossi**	**40.60**	**210**	*e*P	**P**	**02 35 21.6**	**+0.1**
	comp=Z,7.9nm,0.2s,mb5.0						
KMI	**Kunming**	**40.62**	**288**	P	**P**	**02 35 24.3**	**+2.5**
KMI				pP	pP	02 35 54.3	+3.4
KMI				sP	sP	02 36 09.6	+3.9
KMI				PP	PP	02 37 02.4	+4.4
KMI				S	**S**	**02 41 22.4**	**+0.5**
KMI				sS	sS	02 42 15.4	+2.9
KMI				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.3						
KMI				pmax	pmax		
	comp=Z,280nm,5.6s						
KMI				LR	LR		
	comp=N,470nm,12.3s						
KMI				LR	LR		
	comp=E,200nm,12.9s						
KMI				LR	LR		
	comp=Z,330nm,11.7s						
FX1	**Attu Island--F**	**41.24**	**25**	P	**P**	**02 35 26.6**	**+0.2**
	comp=Z,11nm,0.5s,mb4.7,baz=15,slow=20,SNR=9.3						
LZH	**Lanzhou**	**41.32**	**305**	*e*P	**P**	**02 35 25.0**	**-2.3**
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.5						
ASAR	**Alice Springs**	**42.59**	**196**	P	**P**	**02 35 37.5**	**-0.2**
	comp=Z,1.3nm,0.3s,mb4.0,baz=24,slow=12,SNR=22						
ULN	**Ulaanbaatar**	**43.68**	**322**	*e*P	**P**	**02 35 45.8**	**-0.4**
	comp=Z,0.9nm,0.5s,mb3.7						
RMQ	**Roma**	**43.89**	**176**	*e*P	**P**	**02 35 47.4**	**-0.7**
	comp=Z,36nm,0.7s,mb5.1						
SONM	**Songino Array**	**44.05**	**322**	P	**P**	**02 35 48.0**	**-1.1**
	comp=Z,0.5nm,0.4s,mb3.5,baz=138,slow=7.2,SNR=6.1						
SONM				ScP	ScP	02 41 10.2	-1.9
	comp=Z,0.7nm,0.8s,baz=142,slow=3.3,SNR=4.1						
CMAR	**Chiang Mai Arr**	**44.42**	**279**	P	**P**	**02 35 53.8**	**+1.2**
	comp=Z,5.9nm,0.8s,mb4.3,baz=71,slow=6.6,SNR=19						
MBWA	**Marble Bar**	**46.18**	**215**	*e*P	**P**	**02 36 06.7**	**+0.4**
	comp=Z,10nm,0.8s,mb4.5						
ZAK	**Zakamensk**	**47.08**	**324**	*e*P	**P**	**02 36 10.8**	**-2.1**
ARMA	**Armidale**	**48.05**	**173**	*e*P	**P**	**02 36 20.5**	**-0.1**
STKA	**Stephens Creek**	**49.33**	**185**	*e*P	**P**	**02 36 29.5**	**-0.9**
	comp=Z,4.5nm,0.8s,mb4.2						
STKA	**Stephens Creek**	**49.33**	**185**	P	**P**	**02 36 29.1**	**-1.3**
	comp=Z,2.5nm,0.3s,mb4.3,baz=29,slow=10,SNR=12						
STKA	**Stephens Creek**	**49.33**	**185**	*e*P	**P**	**02 36 29.5**	**-0.9**
	comp=Z,3.5nm,1.2s,mb3.9						
BBOO	**Buckleboo**	**50.95**	**191**	*e*P	**P**	**02 36 42.1**	**-0.5**
	comp=Z,16nm,1.5s,mb4.4						
BILL	**Bilibino**	**52.11**	**10**	⇓*i*P	**P**	**02 36 50.1**	**-0.7**
BILL				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.7						
BILL	**Bilibino**	**52.11**	**10**	*e*P	**P**	**02 36 49.8**	**-1.0**
	comp=Z,27nm,1.1s,mb4.8						
WMQ	**Urumqi**	**55.08**	**311**	*e*P	**P**	**02 37 14.0**	**+1.1**
ZALV	**Zalesovo Beam**	**58.93**	**323**	P	**P**	**02 37 38.2**	**-1.6**
	comp=Z,2.4nm,0.6s,mb4.2,baz=101,slow=7.0,SNR=6.4						
MK31	**Makanchi Array**	**59.27**	**314**	*e*P	**P**	**02 37 42.6**	**+0.3**
MKAR	**Makanchi Array**	**59.27**	**314**	P	**P**	**02 37 40.9**	**-1.4**
	comp=Z,0.7nm,0.5s,mb3.8,baz=81,slow=10.0,SNR=19						
OHAK	**Old Harbor**	**59.76**	**33**	*e*P	**P**	**02 37 45.5**	**+0.2**
	comp=Z,33nm,0.8s,mb5.2						
TTA	**Tatalina**	**60.23**	**27**	*e*P	**P**	**02 37 48.4**	**-0.1**
KDAK	**Kodiak Island**	**60.27**	**33**	P	**P**	**02 37 47.7**	**-1.2**
	comp=Z,12nm,0.6s,mb4.9,baz=55,slow=4.7,SNR=8.8						
KDAK	**Kodiak Island**	**60.27**	**33**	*e*P	**P**	**02 37 48.3**	**-0.6**
KDAK				pmax	pmax		
	comp=Z,161nm,2.2s,mb5.5						
KDAK	**Kodiak Island**	**60.27**	**33**	*e*P	**P**	**02 37 48.3**	**-0.6**
	comp=Z,161nm,2.2s,mb5.5						
RSO	**Redoubt South**	**60.91**	**30**	*e*P	**P**	**02 37 52.6**	**-0.5**
PPLA	**Purkeypile**	**61.87**	**27**	*e*P	**P**	**02 37 59.6**	**0.0**
	comp=Z,21nm,1.2s,mb4.8						
KURK	**Kurchatov**	**62.14**	**319**	*e*P	**P**	**02 38 01.9**	**+0.3**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.2						
KURK	**Kurchatov**	**62.14**	**319**	*e*P	**P**	**02 38 01.9**	**+0.3**
	comp=Z,2.9nm,0.8s,mb4.2						
PMR	**Palmer**	**62.90**	**29**	*e*P	**P**	**02 38 05.4**	**-1.1**
PMR				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.8						
PMR	**Palmer**	**62.90**	**29**	*e*P	**P**	**02 38 05.4**	**-1.1**
	comp=Z,17nm,1.0s,mb4.8						
KSH	**Kashi**	**63.56**	**306**	*e*P	**P**	**02 38 15.0**	**+3.8**
KSH				pP	pP	02 38 48.8	+6.1
KSH				sP	sP	02 39 04.3	+7.4
KSH				PP	PP	02 40 38.8	+6.3
KSH				ScP		02 42 37.1	
KSH				PcS		02 42 51.8	
KSH				S	**S**	**02 46 35.0**	**+0.4**
KSH				sS	sS	02 47 35.8	+6.9
KSH				ScS	ScS	02 47 50.9	-1.4
KSH				SS	SS	02 50 49.1	+5.0
KSH				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.4						
KSH				pmax	pmax		
	comp=Z,260nm,8.8s						
KSH				LR	LR		
	comp=N,57nm,3.6s						
KSH				LR	LR		
	comp=E,44nm,5.8s						
KSH				LR	LR		
	comp=Z,120nm,8.9s						
COLA	**College**	**64.25**	**26**	*e*P	**P**	**02 38 14.4**	**-0.9**
COLA				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5						
COLA	**College**	**64.25**	**26**	*e*P	**P**	**02 38 14.4**	**-0.9**
	comp=Z,8.0nm,0.9s,mb4.5						
UCH	**Uchtor**	**64.61**	**309**	*e*P	**P**	**02 38 19.0**	**+1.0**
UCH				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.8						
UCH	**Uchtor**	**64.61**	**309**	*e*P	**P**	**02 38 19.0**	**+1.0**
	comp=Z,1.3nm,0.6s,mb3.9						
EGAK	**Eagle**	**67.04**	**26**	*e*P	**P**	**02 38 32.5**	**-0.7**
	comp=Z,5.6nm,0.9s,mb4.4						
BVAR	**Borovoye Array**	**67.37**	**321**	P	**P**	**02 38 34.3**	**-1.2**
	comp=Z,2.8nm,0.5s,mb4.3,baz=95,slow=7.8,SNR=14						
BRVK	**Borovoye**	**67.43**	**321**	*e*P	**P**	**02 38 35.6**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3						
BRVK	**Borovoye**	**67.43**	**321**	*e*P	**P**	**02 38 35.6**	**-0.2**
	comp=Z,4.1nm,0.8s,mb4.3						
DAWY	**Dawson**	**67.72**	**27**	*e*P	**P**	**02 38 37.4**	**-0.1**
HYT	**Haines Junctio**	**68.36**	**31**	*e*P	**P**	**02 38 42.2**	**+0.6**
INK	**Inuvik**	**70.38**	**23**	*e*P	**P**	**02 38 53.0**	**-0.8**
INK				pmax	pmax		
	comp=Z,18nm,0.8s						
INK	**Inuvik**	**70.38**	**23**	*e*P	**P**	**02 38 53.0**	**-0.8**
	comp=Z,18nm,0.8s,mb4.8						
DLBC	**Dease Lake**	**72.20**	**33**	*e*P	**P**	**02 39 05.0**	**+0.1**
NLWA	**Neilton Lookou**	**77.53**	**44**	⇑P	**P**	**02 39 36.2**	**+0.4**
	baz=77						
GNW	**Green Mountain**	**78.19**	**44**	*e*P	**P**	**02 39 40.0**	**+0.6**
	comp=Z,3.8nm,0.8s,mb4.1						
JCW	**Jim Creek**	**78.63**	**43**	*e*P	**P**	**02 39 42.5**	**+0.6**
D05A	**Enumclaw**	**78.83**	**44**	⇑P	**P**	**02 39 43.2**	**+0.3**
	baz=79						
F04A	**Amboy**	**78.83**	**45**	⇓P	**P**	**02 39 43.1**	**0.0**
	baz=79						
RPW	**Rockport**	**78.84**	**43**	*e*P	**P**	**02 39 42.8**	**-0.2**
YKA	**Yellowknife Ar**	**78.95**	**28**	P	**P**	**02 39 42.4**	**-0.9**
	comp=Z,4.1nm,0.8s,mb4.1,baz=290,slow=5.5,SNR=19						
YKA	**Yellowknife Ar**	**78.95**	**28**	P	**P**	**02 39 42.4**	**-0.9**
HUMO	**Hull Mountain**	**79.25**	**49**	*e*P	**P**	**02 39 45.9**	**+0.6**
	comp=Z,51nm,2.3s,mb4.8						
H04A	**Detroit Lake**	**79.29**	**47**	⇑P	**P**	**02 39 45.1**	**-0.5**
	baz=79						
ETW	**Entiat**	**79.81**	**43**	*e*P	**P**	**02 39 48.8**	**+0.4**
B08A	**Colville Reser**	**80.27**	**42**	⇑P	**P**	**02 39 50.7**	**-0.1**
	baz=80						
RES	**Resolute Bay**	**80.50**	**14**	*e*P	**P**	**02 39 51.1**	**-0.4**
RES				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.6						
RES	**Resolute Bay**	**80.50**	**14**	*e*P	**P**	**02 39 51.1**	**-0.4**
	comp=Z,14nm,0.8s,mb4.6						
K05A	**Summer Lake**	**80.69**	**48**	⇓P	**P**	**02 39 53.9**	**+0.7**
	baz=80						
D08A	**Wollman Farm,**	**80.89**	**44**	⇓P	**P**	**02 39 53.7**	**-0.3**
	baz=81						
OD2	**Odessa Site #2**	**80.93**	**43**	*e*P	**P**	**02 39 53.8**	**-0.5**
	comp=Z,10nm,1.0s,mb4.4						
MOD	**Modoc**	**81.33**	**49**	*e*P	**P**	**02 39 56.5**	**0.0**
	comp=Z,4.2nm,0.7s,mb4.2						
BEKR	**Beckworth**	**81.85**	**51**	⇑P	**P**	**02 39 59.4**	**+0.1**
	baz=82						
G09A	**Cove**	**82.15**	**45**	⇑P	**P**	**02 40 00.7**	**-0.1**
	baz=82						
J08A	**Circle Bar Ran**	**82.22**	**47**	⇓P	**P**	**02 40 01.3**	**+0.1**
	baz=82						
WVOR	**Wild Horse Val**	**82.38**	**48**	*e*P	**P**	**02 40 01.8**	**-0.2**
WVOR				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
WVOR	**Wild Horse Val**	**82.38**	**48**	*e*P	**P**	**02 40 01.8**	**-0.2**
	comp=Z,2.1nm,0.8s,mb3.8						
C11A	**Tepee Creek (N**	**82.39**	**42**	⇑P	**P**	**02 40 01.6**	**-0.4**
	baz=82						
I09A	**Lost Marbles R**	**82.56**	**46**	⇓P	**P**	**02 40 02.7**	**-0.2**
	baz=82						
G10A	**Bishop Farm, J**	**82.59**	**45**	⇓P	**P**	**02 40 02.8**	**-0.3**
	baz=82						
BMO	**Blue Mountains**	**82.59**	**45**	*e*P	**P**	**02 40 02.7**	**-0.4**
BMO				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.2						
BMO	**Blue Mountains**	**82.59**	**45**	*e*P	**P**	**02 40 02.7**	**-0.4**
	comp=Z,4.9nm,1.0s,mb4.2						
F11A	**Grangeville**	**83.05**	**44**	⇑P	**P**	**02 40 04.9**	**-0.5**
	baz=83						
G11A	**Walters Elk Ra**	**83.13**	**45**	⇑P	**P**	**02 40 05.3**	**-0.5**
	baz=83						
I10A	**Payette**	**83.17**	**46**	⇑P	**P**	**02 40 06.2**	**+0.1**
	baz=83						
D12A	**Red Ives Fores**	**83.22**	**43**	⇑P	**P**	**02 40 05.7**	**-0.5**
	baz=83						
E12A	**Beaver Dam Sad**	**83.28**	**44**	⇓P	**P**	**02 40 06.5**	**-0.1**
	baz=83						
BSMT	**Bassoo Peak**	**83.33**	**42**	*e*P	**P**	**02 40 07.4**	**+0.6**
B13A	**Whitefish**	**83.36**	**41**	⇓P	**P**	**02 40 07.1**	**+0.1**
	baz=83,SNR=5.3						
H11A	**Connelly**	**83.52**	**45**	⇑P	**P**	**02 40 07.3**	**-0.5**
	baz=83						
C13A	**Hot Springs**	**83.52**	**42**	⇑P	**P**	**02 40 06.8**	**-1.0**
	baz=83						
K10A	**MacKenzie Ranc**	**83.52**	**47**	⇓P	**P**	**02 40 07.9**	**0.0**
	baz=83						
ARCES	**ARCESS Array B**	**83.57**	**342**	P	**P**	**02 40 05.8**	**-1.8**
	comp=Z,4.8nm,0.7s,mb4.3,baz=69,slow=6.6,SNR=12						
PKM	**Peak Mountain**	**83.67**	**56**	⇑P	**P**	**02 40 09.2**	**+0.4**
	baz=84						
F12A	**Elk City**	**83.69**	**44**	⇓P	**P**	**02 40 09.2**	**+0.5**
	baz=84,SNR=7.4						
D13A	**Huson**	**83.78**	**43**	⇑P	**P**	**02 40 09.1**	**-0.1**
	baz=84						
NVAR	**Mina Array Bea**	**83.79**	**52**	P	**P**	**02 40 09.8**	**+0.4**
	comp=Z,3.1nm,0.5s,mb4.3,baz=2.1,slow=28,SNR=29						
NVAR	**Mina Array Bea**	**83.79**	**52**	P	**P**	**02 40 09.8**	**+0.4**
I11A	**Placerville**	**83.80**	**46**	⇑P	**P**	**02 40 09.2**	**-0.1**
	baz=84						
A14A	**Double T Ranch**	**83.82**	**41**	⇑P	**P**	**02 40 09.1**	**-0.2**
	baz=84						
G12A	**Big Creek, Yel**	**83.85**	**45**	⇑P	**P**	**02 40 08.7**	**-0.8**
	baz=84,SNR=5.1						
L10A	**Juniper Basin**	**84.02**	**48**

baz=85,SNR=8.9
C16A Fuhringer Ranc 85.27 41 ⇓P P 02 40 16.0 -0.6
baz=85,SNR=5.7
H14A Leadore 85.33 45 ⇑P P 02 40 17.2 +0.2
baz=85,SNR=12
M12A Wells 85.33 48 ⇑P P 02 40 17.5 +0.4
baz=85,SNR=5.3
N12A Clover Valley, 85.43 49 ⇑P P 02 40 17.5 -0.1
baz=85
F15A Butte 85.49 43 ⇑P P 02 40 17.6 -0.1
baz=85,SNR=11
FURC Furnace Creek, 85.49 53 ⇑P P 02 40 17.5 -0.5
baz=85
I14A Mackay 85.51 45 ⇓P P 02 40 18.4 +0.5
baz=85,SNR=8.4
LRM Limekiln Ridge 85.52 43 *eP* **P 02 40 17.8 0.0**
DLMT Dillon 85.58 44 *eP* **P 02 40 18.4 +0.2**
comp=Z,2.5nm,0.5s,mb4.2
MCMT McKenzie Canyo 85.60 44 *eP* **P 02 40 18.0 -0.3**
comp=Z,0.9nm,0.6s,mb3.7
HRY Holter Researc 85.61 42 *eP* **P 02 40 18.5 +0.2**
J14A Carey 85.67 46 ⇑P P 02 40 19.4 +0.7
baz=86,SNR=11
D16A Dana Ranch, Ca 85.67 42 ⇑P P 02 40 18.5 -0.2
baz=86,SNR=7.8
B17A L&G Farms, Che 85.69 41 ⇑P P 02 40 18.3 -0.4
baz=86,SNR=7.0
G15A Dillon 85.72 44 ⇑P P 02 40 18.7 -0.2
baz=86,SNR=6.0
E16A East Helena 85.77 43 ⇓P P 02 40 18.9 -0.2
baz=86
L13A Double Diamond 85.79 47 ⇓P P 02 40 19.8 +0.5
baz=86
H15A Lima 85.81 45 ⇑P P 02 40 19.0 -0.4
baz=86
O12A Currie 85.83 49 ⇑P P 02 40 19.8 +0.2
baz=86
R11A Troy Canyon, C 85.85 51 ⇓P P 02 40 19.7 +0.1
baz=86,SNR=7.1
M13A Montello 85.88 48 ⇓P P 02 40 19.6 -0.2
baz=86
GSC Goldstone 85.90 54 ⇓P P 02 40 19.6 -0.3
baz=86
U10A Ash Meadows, A 85.91 53 ⇓P P 02 40 19.3 -0.7
baz=86
C17A Wharram Farm, 85.95 41 ⇑P P 02 40 19.3 -0.6
baz=86
P12A McGill 85.98 50 ⇑P P 02 40 19.9 -0.4
baz=86
A18A Metzger Ranch, 86.04 40 ⇓P P 02 40 19.7 -0.6
baz=86
F16A Kennard Place, 86.07 43 ⇑P P 02 40 20.4 -0.2
baz=86
BOZ Bozeman (W) 86.12 43 ⇑P P 02 40 20.9 +0.1
baz=86,SNR=8.7
BOZ Bozeman (W) 86.12 43 *eP* **P 02 40 20.5 -0.3**
BOZ pmax pmax
comp=Z,8.0nm,1.3s,mb4.3
BOZ Bozeman (W) 86.12 43 *eP* **P 02 40 20.5 -0.4**
comp=Z,7.8nm,1.3s,mb4.3
G16A Moss Hill, Enn 86.16 44 ⇑P P 02 40 21.0 0.0
baz=86,SNR=13
K14A Jones Ranch, D 86.17 47 ⇓P P 02 40 21.1 -0.1
baz=86
D17A Six Diamond Ra 86.18 42 ⇑P P 02 40 20.9 -0.2
baz=86,SNR=13
Q12A Willow Creek R 86.18 50 ⇓P P 02 40 21.0 -0.3
baz=86
B18A Beardsley Farm 86.28 40 ⇑P P 02 40 21.7 +0.1
baz=86
L14A Malta 86.30 47 ⇑P P 02 40 22.2 +0.4
baz=86,SNR=5.5
E17A Martinsdale 86.32 42 ⇓P P 02 40 21.8 0.0
baz=86
J15A Blackfoot 86.38 46 ⇓P P 02 40 23.0 +0.8
baz=86,SNR=14
M14A Sheep Mountain 86.41 48 ⇑P P 02 40 22.6 +0.2
baz=86,SNR=5.3
EGMT Eagleton 86.44 41 ⇓P P 02 40 22.4 0.0
baz=86
T11A Corn Creek, Al 86.48 52 ⇓P P 02 40 22.4 -0.5
baz=86
TUQ Turquoise Moun 86.54 54 ⇑P P 02 40 22.7 -0.5
baz=86
R12A Pony Springs, 86.58 51 ⇑P P 02 40 23.2 -0.1
baz=86
P13A Bates Ranch, G 86.63 50 ⇓P P 02 40 23.6 +0.1
baz=86,SNR=9.8
S12A Delamar Landin 86.64 52 ⇓P P 02 40 23.4 -0.2
baz=86
F17A Fitzpatrick Pl 86.66 43 ⇓P P 02 40 23.5 0.0
baz=86
H16A Russell Place, 86.71 44 ⇓P P 02 40 23.9 +0.1
baz=86
N14A Grayback Hills 86.75 48 ⇓P P 02 40 23.6 -0.4
baz=87
BGU Big Grassy Mou 86.84 48 *eP* **P 02 40 24.1 -0.3**
comp=Z,1.4nm,0.7s,mb3.9
I16A Newdale 86.86 45 ⇓P P 02 40 24.8 +0.3
baz=87
E18A Harlowton 86.89 42 ⇓P P 02 40 24.6 0.0
baz=87,SNR=6.0
L15A Malad City 86.91 47 ⇓P P 02 40 24.7 -0.1
baz=87,SNR=5.6
BELC Belle Mtn. Jos 86.94 55 ⇓P P 02 40 24.8 -0.4
baz=87
GMRC Granite Mounta 86.95 55 ⇑P P 02 40 24.9 -0.3
baz=87
J16A Bone 86.99 46 ⇑P P 02 40 25.7 +0.6
baz=87,SNR=5.4
M15A Larsen Ranch, 87.06 47 ⇑P P 02 40 25.4 -0.1
baz=87,SNR=6.3
R13A O'Grain Ranch, 87.10 51 ⇑P P 02 40 25.8 0.0
baz=87
RRI2 Red Ridge 87.16 45 *eP* **P 02 40 26.9 +0.9**
K16A Soda Springs 87.17 46 ⇓P P 02 40 26.6 +0.6
baz=87,SNR=5.4
DUG Dugway 87.25 49 ⇓P P 02 40 26.5 +0.1
baz=87,SNR=7.9
DUG Dugway 87.25 49 *eP* **P 02 40 26.6 +0.1**
DUG pmax pmax
comp=Z,4.0nm,0.6s,mb4.4
DUG Dugway 87.25 49 *eP* **P 02 40 26.6 +0.2**
comp=Z,3.9nm,0.6s,mb4.4
V12A Nelson 87.27 53 ⇑P P 02 40 26.7 +0.1
baz=87
F18A Big Timber 87.27 43 ⇓P P 02 40 27.0 +0.5
baz=87
H17A Grant Village 87.27 44 ⇓P P 02 40 27.5 +1.0
baz=87
P14A Drum Mountains 87.28 49 ⇑P P 02 40 26.7 +0.1
baz=87,SNR=9.5
Q14A Sevier Lake (B 87.33 50 ⇑P P 02 40 26.8 -0.1
baz=87
TPAW Teton Pass 87.36 45 *eP* **P 02 40 27.2 +0.3**
comp=Z,1.6nm,0.5s,mb4.1
S13A Holt Ranch, En 87.39 51 ⇑P P 02 40 27.3 +0.1
baz=87
REDW Red Top Meadow 87.47 45 *eP* **P 02 40 28.1 +0.6**
BC3 Big Chuckawall 87.49 56 ⇓P P 02 40 27.6 -0.2
baz=87
T13A Saint George 87.55 52 ⇑P P 02 40 28.0 +0.1
baz=87
IRM Iron Mountain 87.56 55 ⇑P P 02 40 27.5 -0.6
baz=87
L16A Fish Haven 87.57 47 ⇑P P 02 40 28.1 +0.2
baz=87,SNR=7.6
HWUT Hardware Ranch 87.63 47 *eP* **P 02 40 28.2 0.0**
comp=Z,13nm,1.3s,mb4.6
ARUT Antelope Range 87.63 51 *eP* **P 02 40 27.8 -0.5**
ARUT pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
ARUT Antelope Range 87.63 51 *eP* **P 02 40 27.8 -0.5**
comp=Z,4.6nm,0.7s,mb4.4
CASY Casey 87.66 194 *eP* **P 02 40 27.6 0.0**
M16A Huntsville 87.69 47 ⇑P P 02 40 28.0 -0.5
baz=88
U13A Pakoon Wash 87.71 53 ⇑P P 02 40 29.0 +0.3
baz=88,SNR=6.4
CCUT Cedar City 87.77 51 *eP* **P 02 40 30.0 +1.0**
P15A Leamington 87.85 49 ⇑P P 02 40 29.4 0.0
baz=88
V13A Grand Canyon W 87.89 53 ⇑P P 02 40 29.4 -0.1
baz=88
FINES FINESS Array B 87.92 335 P P 02 40 25.7 -3.4
comp=Z,1.5nm,0.5s,mb4.1,baz=66,slow=4.4,SNR=11
FFC Flin Flon 88.01 32 *eP* **P 02 40 28.5 -1.3**
FFC pmax pmax
comp=Z,16nm,1.0s,mb4.8
FFC Flin Flon 88.01 32 *eP* **P 02 40 28.5 -1.2**
comp=Z,16nm,1.0s,mb4.8
JLU Jordanelle 88.07 48 *eP* **P 02 40 31.0 +0.6**
J18A Kendall Valley 88.09 45 ⇑P P 02 40 30.5 +0.1
baz=88
T14A Hurricane 88.15 52 ⇑P P 02 40 30.9 +0.1
baz=88
O16A Springville 88.18 48 ⇑P P 02 40 31.1 +0.2
baz=88
DAU Daniels Canyon 88.28 48 *eP* **P 02 40 32.1 +0.7**
U14A Mt Trumbull 88.30 52 ⇓P P 02 40 32.0 +0.5
baz=88,SNR=5.6
M17A Scullys Gap (B 88.30 47 ⇑P P 02 40 31.8 +0.3
baz=88
MSU Marysvale 88.31 50 *eP* **P 02 40 31.7 +0.2**
L18A Fontenelle, Gr 88.57 46 ⇑P P 02 40 33.6 +0.9
baz=88
PDAR Pinedale Array 88.58 45 P P 02 40 31.3 -1.4
comp=Z,0.7nm,0.4s,mb4.0,baz=142,slow=2.1,SNR=7.8
V14A Boquillas Ranc 88.63 53 ⇓P P 02 40 33.9 +0.7
baz=88,SNR=6.7
T15A Red Dirt Ranch 88.69 52 ⇑P P 02 40 33.4 +0.1
baz=88
O17A Robinson Place 88.73 48 ⇓P P 02 40 33.6 +0.1
baz=89
M18A Lyman 88.74 47 ⇑P P 02 40 33.6 +0.1
baz=89
W14A Seligman 88.80 53 ⇓P P 02 40 34.1 +0.2
baz=89
Q16A Castle Valley 88.89 49 ⇑P P 02 40 34.9 +0.7
baz=89
R16A Teasdale 88.90 50 ⇓P P 02 40 35.0 +0.7
baz=89,SNR=7.5
U15A North Rim 88.97 52 ⇑P P 02 40 35.4 +0.7
baz=89,SNR=5.3
L19A Farson 88.97 46 ⇑P P 02 40 35.1 +0.6
baz=89
P17A Butcher Ranch, 89.00 49 ⇓P P 02 40 35.1 +0.3
baz=89
S16A Weppner Ranch, 89.02 51 ⇑P P 02 40 35.4 +0.5
baz=89
K19A Absolon Red Bu 89.03 45 ⇓P P 02 40 35.1 +0.2
baz=89
Z13A Yuma Proving G 89.05 56 ⇑P P 02 40 35.1 -0.1
baz=89
N18A Larsen Ranch, 89.18 47 ⇑P P 02 40 35.9 +0.3
baz=89
X14A Yava 89.21 54 ⇑P P 02 40 36.2 +0.4
baz=89
O18A Roosevelt 89.22 48 ⇑P P 02 40 36.1 +0.3
baz=89
V15A Kaibab Nationa 89.28 53 ⇓P P 02 40 36.9 +0.8
baz=89,SNR=5.7
SRU San Rafael 89.29 49 ⇓P P 02 40 35.8 -0.3
baz=89
SRU San Rafael 89.29 49 *eP* **P 02 40 36.4 +0.3**
P18A Preston Nutter 89.29 49 ⇑P P 02 40 36.3 +0.2
baz=89
Y14A Wickenburg 89.31 55 ⇑P P 02 40 36.4 0.0
baz=89
R17A Hanksville Air 89.41 50 ⇓P P 02 40 36.7 0.0
baz=89,SNR=7.9
W15A Williams 89.44 53 ⇓P P 02 40 37.6 +0.7
baz=89
K20A Yellowstone Ra 89.44 45 ⇑P P 02 40 36.6 -0.1
baz=89
Q18A Rafter H Ranch 89.57 49 ⇓P P 02 40 37.5 +0.1
baz=89
S17A Black Ridge (B 89.64 51 ⇓P P 02 40 38.0 +0.2
baz=90
FCC Fort Churchill 89.64 27 *eP* **P 02 40 36.6 -0.7**
comp=Z,0.4nm,1.0s,mb3.3
L20A Wamsutter 89.70 46 ⇑P P 02 40 37.8 -0.2
baz=90
X15A Humboldt 89.71 54 ⇓P P 02 40 38.8 +0.7
baz=90,SNR=5.5
114A Black Gap (USA 89.82 56 ⇓P P 02 40 38.6 -0.1
baz=90
Y15A Casa Rosa Ranc 89.82 54 ⇑P P 02 40 38.8 0.0
baz=90
T17A Navajo Res., N 89.87 51 ⇑P P 02 40 38.9 +0.1
baz=90
WUAZ Wupatki 89.99 53 ⇑P P 02 40 39.6 +0.2
baz=90
M20A Sweetwater, Wa 90.01 46 ⇓P P 02 40 39.7 +0.2
baz=90
R18A Canyonlands Na 90.02 50 ⇓P P 02 40 39.2 -0.4
baz=90,SNR=7.0
214A Organ Pipe Nat 90.16 56 ⇑P P 02 40 40.5 +0.1
baz=90
P19A Cripple Cowboy 90.19 48 ⇓P P 02 40 40.5 +0.2
baz=90,SNR=11
S18A Hurst Farm, Bl 90.21 50 ⇓P P 02 40 40.3 -0.2
baz=90,SNR=5.4
N20A Spence Gulch, 90.22 47 ⇑P P 02 40 40.6 +0.2
baz=90
L21A Rawlins 90.38 46 ⇑P P 02 40 40.9 -0.3
baz=90
V17A Tonalea, Kykot 90.39 52 ⇓P P 02 40 41.6 +0.3
baz=90
T18A Mexican Hat 90.51 51 ⇓P P 02 40 41.9 0.0
baz=90
Y16A Circle Bar Ran 90.51 54 ⇓P P 02 40 42.1 +0.1
baz=90
R19A Curley Farm, L 90.51 49 ⇑P P 02 40 42.0 +0.2
baz=90
O20A White River Ci 90.52 47 ⇓P P 02 40 41.9 +0.1
baz=90
M21A Separation Pea 90.53 46 ⇑P P 02 40 41.7 -0.2
baz=90
PV04 Paradox Valley 90.73 49 *eP* **P 02 40 42.9 +0.1**
N21A Black Mountain 90.77 47 ⇓P P 02 40 43.0 +0.1
baz=91
U18A Rough Rock, Ch 90.78 51 ⇑P P 02 40 43.4 +0.3
baz=91
Q20A Ridgley Place, 90.95 49 ⇓P P 02 40 44.1 +0.2
baz=91,SNR=9.1
V18A Ganado 91.01 52 ⇑P P 02 40 44.2 0.0
baz=91
R20A Redvale 91.19 49 ⇓P P 02 40 45.0 0.0
baz=91
T19A Beclabito 91.25 51 ⇑P P 02 40 45.7 +0.4
baz=91
MVCO Mesa Verde 91.49 50 ⇑P P 02 40 46.8 +0.4
baz=91
Q21A Lamborn Mesa, 91.51 48 ⇑P P 02 40 46.8 +0.4
baz=91
TUC Tucson 91.63 55 *eP* **P 02 40 46.2 -1.0**
TUC pmax pmax
comp=Z,5.0nm,1.3s,mb4.4
TUC Tucson 91.63 55 *eP* **P 02 40 46.2 -1.0**
comp=Z,4.5nm,1.3s,mb4.3
Y18A Canyon Day Jun 91.67 54 ⇑P P 02 40 47.7 +0.4
baz=92
RSSD Black Hills 91.67 43 *eP* **P 02 40 46.6 -0.5**
R21A Cimarron 91.72 49 ⇓P P 02 40 47.9 +0.5
baz=92,SNR=8.7
SMCO Snowmass 91.80 48 *eP* **P 02 40 48.6 +0.8**
comp=Z,7.4nm,1.1s,mb4.6
S21A Coal Bank Pass 91.83 50 ⇑P P 02 40 48.1 +0.1
baz=92
Q22A Crested Butte, 91.97 48 ⇓P P 02 40 49.0 +0.4
baz=92
V20A Brimhall 92.07 52 ⇓P P 02 40 49.4 +0.2
baz=92
Y19A Nutrioso 92.20 53 ⇓P P 02 40 50.2 +0.4
baz=92
R22A Saguache, Gunn 92.34 49 ⇑P P 02 40 50.9 +0.6
baz=92
U21A Nageezi 92.42 51 ⇓P P 02 40 50.7 0.0
baz=92
ISCO Idaho Springs 92.49 47 *eP* **P 02 40 50.9 -0.1**
ISCO pmax pmax
comp=Z,5.0nm,1.3s,mb4.4
ISCO Idaho Springs 92.49 47 *eP* **P 02 40 50.9 -0.1**
comp=Z,4.5nm,1.3s,mb4.3
318A Bisbee 92.58 56 ⇓P P 02 40 51.7 +0.1
baz=92
119A Ashpeak Ranch, 92.62 55 ⇓P P 02 40 51.9 +0.2
baz=92
T22A Edith 92.74 50 ⇑P P 02 40 52.5 +0.3
baz=93
Y20A Horse Springs, 92.89 53 ⇑P P 02 40 53.6 +0.6
baz=93
Z20A Nine Sixteen R 93.03 54 ⇓P P 02 40 54.1 +0.5
baz=93
X21A Alamocita Cree 93.12 53 ⇓P P 02 40 54.5 +0.5
baz=93
319A Douglas 93.17 56 ⇑P P 02 40 54.8 +0.5
baz=93
Y21A Point of Rocks 93.38 53 ⇓P P 02 40 55.6 +0.4
baz=93
SDCO Great Sand Dun 93.45 49 *eP* **P 02 40 55.1 -0.3**
comp=Z,3.4nm,1.2s,mb4.3
ULM Lac du Bonnet 93.49 34 *eP* **P 02 40 54.3 -1.1**
ULM pmax pmax
comp=Z,2.0nm,0.5s
ULM Lac du Bonnet 93.49 34 *eP* **P 02 40 54.3 -1.1**
comp=Z,1.9nm,0.5s,mb4.5
Z21A St. Cloud Mine 93.67 54 ⇑P P 02 40 57.1 +0.6
baz=94
ANMO Albuquerque 93.92 52 *eP* **P 02 40 58.2 +0.6**
Y22A Socorro 93.95 53 ⇑P P 02 40 58.2 +0.4
baz=94
Z22A Elephant Butte 94.23 53 ⇑P P 02 40 59.5 +0.4
baz=94
W24A Lazy 6 Ranch, 94.59 51 ⇑P P 02 41 01.0 +0.3
baz=94
Y23A Lovelace Mesa, 94.64 52 ⇓P P 02 41 01.6 +0.6
baz=94
Y25A Mesa, Roswell 95.67 52 ⇓P P 02 41 05.7 0.0
baz=96
TXAR Lajitas Array 98.43 56 P P 02 41 16.3 -1.9
comp=Z,0.1nm,0.3s,mb3.7,baz=256,slow=2.7,SNR=2.3
BCIP Isla Barro Col 127.71 63 *e*PKPdf PKPdf 02 46 44.2 -1.1
OTAV Otavalo 133.05 73 *e*PKPdf PKPdf 02 46 55.9 +0.4
NNA Nana 138.51 88 *e*PKIKP PKPdf 02 47 05.6 0.0
PLCA Paso Flores 141.20 134 PKhKP 02 47 04.4
comp=Z,1.2nm,0.8s,baz=253,slow=7.8,SNR=2.9
LCO Las Campanas 144.77 116 *e*PKPdf PKPdf 02 47 16.4 0.0
LPAZ La Paz 147.59 93 PKPbc PKPbc 02 47 25.5 +1.2
comp=Z,5.2nm,0.7s,baz=273,slow=3.2,SNR=19
LPAZ La Paz 147.59 93 *e*PKPbc PKPbc 02 47 24.9 +0.6

NEIC ***25*** *02:35:16.5±1.1,56°.03S×144°.44W,h10km,mb4.2/3,Error ellipse: s-maj=35.3km s-min=25.5km az=168.0*
ISCJB ***25*** *02:35:16.9±1.3,56°.4S±0°.3×143°.9W±0°.4,h10km,mb4.0/5, Error ellipse: s-maj=39.4km s-min=25.9km az=158.5*
IDC ***25*** *02:35:17.2±1.3,56°.83S×143°.88W,h0km,mb3.9/3, mb1 4.1/3,mb1mx3.9/12,mbtmp3.9/3,Error ellipse: s-maj=248.0km s-min=28.2km az=179.0*
GCMT ***25*** *02:35:23.5±0.3,56°.29S×143°.21W,h22km±1km,MW5.2, Moment Tensor Solution. s27,c36; s65,c95; Moment tensor: Scale 10^{16}Nm; M_{rr}-0.55±.39; $M_{\theta\theta}$7.06±.40; $M_{\phi\phi}$-6.51±.32; $M_{r\theta}$2.93±.59; $M_{\theta\phi}$3.78±.25; $M_{\phi r}$-0.22±.49; Best double couple: $M_0$8.30000×10^{16} NP1:$\phi_0$29.00000°, δ72.00000°, λ174.00000°. NP2:$\phi_0$121.00000°, δ84.00000°, λ18.00000°. Principal axes: T 8.8700, Plg17.0000°, Azm346.0000°; N -1.2400, Plg71.0000°, Azm138.0000°; P -7.6300, Plg8.0000°, Azm254.0000°; Data Used: II G IU CN IC.*

ISC 25 02:35:19.0±1.3,56°.3S±0°.3×143°.9W±0°.4,h10km,n12, σ1°25/7,mb4.0/5,Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
TBI	**Tubuai**	**33.20**	**351**		*e*LR	LR	02 50 20.6	
	1μm,30.2s							
RKT	**Rikitea**	**33.82**	**15**		*e*LQ		02 49 26.0	
	633nm,29.8s							
RKT					*e*LR	LR	02 50 44.0	
	974nm,29.5s							
QSPA	**South Pole Qui**	**33.82**	**180**		*e*P	**P**	**02 42 02.1**	**+1.5**
	3.2nm,0.9s,mb4.2							
PPT	**Papeete**	**38.94**	**351**		*e*LR	LR	02 53 01.9	
	2μm,27.2s							
DZM	**Mont Dzumac**	**49.87**	**292**		*e*LR	LR	02 58 17.0	
	651nm,23.5s							
MAW	**Mawson**	**54.79**	**192**		*e*P	**P**	**02 44 46.7**	**-1.6**
	1.1nm,1.1s,mb3.8							
STKA	**Stephens Creek**	**55.75**	**263**		P	**P**	**02 44 50.3**	**-5.3**
ASAR	**Alice Springs**	**66.39**	**263**		P	**P**	**02 46 08.2**	**+0.2**
	0.6nm,0.7s,mb3.7,baz=134,slow=5.3,SNR=2.6							
CPUP	**Villa Florida**	**66.63**	**103**		P	**P**	**02 46 08.2**	**-1.3**
	0.4nm,0.4s,mb3.8,baz=203,slow=7.7,SNR=3.6							
LPAZ	**La Paz**	**68.70**	**87**		P	**P**	**02 46 24.1**	**+1.5**
	2.1nm,1.0s,mb4.0,baz=223,slow=5.2,SNR=6.4							
LPAZ	**La Paz**	**68.70**	**87**		*e*P	**P**	**02 46 23.4**	**+0.8**
	7.6nm,1.4s,mb4.4							
MKAR	**Makanchi Array**	**150.29**	**271**		PKPbc	PKPbc	02 55 07.5	-1.8
	0.6nm,0.8s,baz=94,slow=5.8,SNR=4.6							

ISCJB ***25*** *02:39:21.5±2.3,7°.05S±0°.08×155°.94E±0°.09,h76km±23km, mb4.6/30,Error ellipse: s-maj=16.5km s-min=11.6km az=33.3*
NEIC ***25*** *02:39:24.1±1.3,7°.08S×155°.97E,h88km±13km,mb4.7/14, Error ellipse: s-maj=11.4km s-min=8.2km az=117.0*
IDC ***25*** *02:39:24.3±2.7,7°.09S×156°.01E,h89km±27km,mb4.3/14, mb1 4.4/15,mb1mx4.3/19,mbtmp4.3/15,Error ellipse: s-maj=20.6km s-min=14.9km az=88.0*

ISC 25 02:39:23.7±2.1,7°.07S±0°.08×155°.95E±0°.10,h82km±22km, n50,σ0°66/41,mb4.6/30,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.60**	**121**		P	**Pn**	**02 40 31.0**	**+0.2**
	18nm,0.3s,baz=245,slow=6.0,SNR=5.4							
HNR					S	**Sn**	**02 41 22.7**	**-0.3**
	17nm,0.3s,baz=237,slow=21,SNR=6.2							
CTA	**Charters Tower**	**16.00**	**215**		P	**Pn**	**02 43 08.4**	**+4.5**
	0.2nm,0.3s,baz=49,slow=15,SNR=2.9							
CTAO	**Charters Tower**	**16.00**	**215**		*e*P	**Pn**	**02 43 09.3**	**+5.4**
	12nm,0.9s							
ARMA	**Armidale**	**23.58**	**189**		*e*P	**P**	**02 44 27.5**	**+0.5**
KAKA	**Kakadu**	**23.82**	**255**		*e*P	**P**	**02 44 29.8**	**+0.4**
	13nm,0.4s,mb4.6							
KAKA	**Kakadu**	**23.82**	**255**		*e*P	**P**	**02 44 29.3**	**0.0**
	42nm,0.5s,mb5.0							
WRAB	**Tennant Creek**	**24.55**	**236**		*e*P	**P**	**02 44 36.4**	**+0.4**
	20nm,0.7s,mb4.7							
WRA	**Warramunga Arr**	**24.56**	**236**		P	**P**	**02 44 36.5**	**+0.4**
	18nm,0.7s,mb4.6,baz=60,slow=9.8,SNR=62							
WRA					PcP	PcP	02 48 11.6	-0.8
	1.7nm,0.7s,baz=63,slow=2.6,SNR=5.7							
ASAR	**Alice Springs**	**26.84**	**230**		P	**P**	**02 44 56.2**	**-0.4**
	3.7nm,0.9s,mb3.9,baz=59,slow=9.8,SNR=19							
ASAR					PcP	PcP	02 48 17.8	+0.3
	0.7nm,0.5s,baz=60,slow=2.4,SNR=4.6							
STKA	**Stephens Creek**	**28.08**	**207**		P	**P**	**02 45 07.2**	**-0.4**
	6.4nm,1.1s,mb4.0,baz=0.0,slow=4.0,SNR=2.2							
CNB	**Canberra Magne**	**28.75**	**191**		*e*P	**P**	**02 45 14.1**	**+0.5**
FITZ	**Fitzroy Crossi**	**31.49**	**247**		*e*P	**P**	**02 45 37.5**	**-0.5**
	15nm,0.6s,mb4.9							
FORT	**Forrest**	**35.19**	**224**		*e*P	**P**	**02 46 09.8**	**-0.3**
	36nm,1.0s,mb5.2							
MBWA	**Marble Bar**	**37.70**	**244**		*e*P	**P**	**02 46 30.9**	**-0.6**
	5.1nm,0.6s,mb4.5							
KMBL	**Kambalda**	**39.95**	**228**		*e*P	**P**	**02 46 50.4**	**+0.2**
	72nm,0.6s,mb5.7							
KKM	**Kota Kinabalu**	**41.73**	**287**		*e*P	**P**	**02 47 05.1**	**0.0**
	9.3nm,0.4s,mb4.9							
KLBR	**Kellerberrin**	**43.16**	**230**		*e*P	**P**	**02 47 15.6**	**-0.9**
	15nm,0.5s,mb5.0							
MJAR	**Matsushiro Arr**	**46.46**	**340**		P	**P**	**02 47 41.5**	**-1.1**
	0.8nm,0.4s,mb3.8,baz=177,slow=7.1,SNR=3.9							
KSRS	**Korea Array**	**51.45**	**331**		P	**P**	**02 48 21.0**	**+0.3**
	3.4nm,0.6s,mb4.6,baz=146,slow=7.2,SNR=13							
PETK	**Petropavlovsk-**	**59.96**	**1**		P	**P**	**02 49 21.8**	**+0.5**
	3.4nm,0.8s,mb4.4,baz=130,slow=7.8,SNR=3.5							
CMAR	**Chiang Mai Arr**	**61.67**	**295**		P	**P**	**02 49 34.5**	**+0.9**
	7.2nm,0.9s,mb4.7,baz=114,slow=5.0,SNR=20							
CHTO	**Chiang Mai**	**61.79**	**296**		*e*P	**P**	**02 49 34.6**	**+0.3**
	3.4nm,0.6s,mb4.5							
ULN	**Ulaanbaatar**	**69.58**	**327**		*e*P	**P**	**02 50 25.0**	**+1.1**
	10nm,0.9s,mb4.7							
SONM	**Songino Array**	**69.91**	**327**		P	**P**	**02 50 27.0**	**+1.1**
	14nm,0.8s,mb4.8,baz=140,slow=6.8,SNR=78							
QSPA	**South Pole Qui**	**82.91**	**180**		P	**P**	**02 51 39.4**	**+0.5**
	7.3nm,0.7s,mb4.6,baz=319,slow=0.6,SNR=41							
MK31	**Makanchi Array**	**84.09**	**318**		*e*P	**P**	**02 51 45.6**	**+0.1**
MKAR	**Makanchi Array**	**84.09**	**318**		P	**P**	**02 51 45.9**	**+0.4**
	8.7nm,0.7s,mb4.7,baz=84,slow=7.8,SNR=116							
MAW	**Mawson**	**84.69**	**203**		P	**P**	**02 51 48.5**	**+0.2**
	7.2nm,0.7s,mb4.7,baz=87,slow=5.9,SNR=13							
MAW	**Mawson**	**84.69**	**203**		*e*	**P**	**02 51 48.2**	**0.0**
ZAA0	**Zalesovo Array**	**84.77**	**326**		*e*P	**P**	**02 51 47.7**	**-1.2**
ZALV	**Zalesovo Beam**	**84.77**	**326**		P	**P**	**02 51 48.0**	**-0.8**
	3.9nm,0.4s,mb4.7,baz=119,slow=5.6,SNR=18							

ZALV	Zalesovo Beam	84.77	326	P		P	02 51 48.0	-0.8
KURK	Kurchatov	87.48	322	*e*P		P	02 52 01.4	-0.8
	3.4nm,0.4s,mb4.6							
TKM2	Tokmak 2	87.75	314	*e*P		P	02 52 03.8	+0.1
	4.4nm,0.6s,mb4.7							
UCH	Uchtor	88.40	313	*e*P		P	02 52 07.8	+1.0
	1.6nm,0.7s,mb4.2							
AAK	Ala-Archa	88.49	313	P		P	02 52 07.9	+0.7
	2.2nm,0.5s,mb4.5,baz=117,slow=6.4,SNR=5.4							
EKS2	Erkin-Say	89.02	313	*e*P		P	02 52 10.1	+0.4
	1.3nm,0.7s,mb4.1							
KBL	Kabul	91.42	304	*e*P		P	02 52 20.1	-1.0
	5.2nm,0.6s,mb4.8							
BVAR	Borovoye Array	92.92	323	P		P	02 52 26.6	-1.0
	3.6nm,0.7s,mb4.8,baz=98,slow=6.1,SNR=19							
BRVK	Borovoye	92.99	323	*e*P		P	02 52 26.9	-0.9
	3.9nm,0.9s,mb4.7							
AKTK	Aktyubinsk	100.46	320	P		Pdif	02 52 59.7	-2.0
AKTO	Aktyubinsk	100.46	320	P		Pdif	02 52 59.7	-2.0
	0.8nm,0.9s,baz=56,slow=7.3,SNR=3.8							
AKASG	Malin Array Be	118.15	325	PKP		PKPdf	02 57 59.7	-1.5
	0.4nm,0.3s,baz=58,slow=2.7,SNR=3.9							
BOSA	Boshof	120.71	231	PKP		PKPdf	02 58 06.7	-0.2
	0.8nm,0.3s,baz=56,slow=2.5,SNR=3.7							
BOSA	Boshof	120.71	231	PKP		PKPdf	02 58 06.7	-0.2
LBTB	Lobatse	122.11	235	*e*PKPdf		PKPdf	02 58 09.2	-0.6
TSUM	Tsumeb	131.38	237	*e*PKPdf		PKPdf	02 58 28.5	+1.0
TAM	Tamanrasset	147.53	302	*e*PKPbc		PKPbc	02 58 59.8	+0.5
MDT	Midelt	148.66	327	PKPbc		PKPbc	02 59 01.3	-0.7
	3.1nm,0.9s,baz=8.6,slow=8.6,SNR=5.5							
DBIC	Dimbokro	160.94	270	PKPab		PKPab	02 59 57.9	-0.7
	4.6nm,0.8s,baz=89,slow=15,SNR=4.9							

IDC ***25*** *02:41:41.6±0.8, 55°.96S×143°.63W, h0km, mb4.3/9, mb1 4.5/9, mb1mx4.3/14, mbtmp4.3/9, MS4.4/1, Ms1 4.4/1, ms1mx4.0/15, Error ellipse: s-maj=33.6km s-min=17.9km az=4.0*

ISCJB ***25*** *02:41:41.8±0.8, 56°.2S±0°.2×143°.7W±0°.2, h10km, mb4.4/11, MS4.0/2, Error ellipse: s-maj=23.8km s-min=14.3km az=2.6*

NEIC ***25*** *02:41:43.4±0.6, 56°.02S×143°.69W, h10km, mb4.6/4, Error ellipse: s-maj=22.8km s-min=12.6km az=181.0*

GCMT ***25*** *02:41:49.3±0.2, 56°.30S×143°.48W, h20km±1km, MW5.3, Moment Tensor Solution. s42,c53; s81,c128; Moment tensor: Scale 10^17^Nm; Mrr0.00; Mθθ0.00; Mφφ0.00; Mrθ0.00; Mrφ0.00; Mθφ0.00; Best double couple: M0 1.10000×10^17^ NP1:φs21.00000°, δ77.00000°, λ174.00000°. NP2:φs113.00000°, δ84.00000°, λ13.00000°. Principal axes: T 1.1800, Plg13.0000°, Azm338.0000°; N -0.0700, Plg76.0000°, Azm137.0000°; P -1.1100, Plg5.0000°, Azm247.0000°; Data Used: II IU G CN IC.*

ISC 25 02:41:44.0±0.8, 56°.2S±0°.2×143.7W±0°.2, h10km, n29, σ0.98/18, mb4.4/11, MS4.0/2, 1D, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBI	Tubuai	33.09	350	*e*LR	LR	02 56 48.7	
	3μm,29.0s						
RKT	Rikitea	33.65	15	*e*LQ		02 55 42.4	
	1μm,28.0s						
RKT				*e*LR	LR	02 57 10.6	
	2μm,30.2s						
QSPA	South Pole Qui	33.96	180	P	P	02 48 28.8	+2.0
	6.8nm,0.8s,mb4.6,baz=86,slow=3.0,SNR=44						
QSPA	South Pole Qui	33.96	180	P	P	02 48 28.8	+2.0
PPT	Papeete	38.82	351	*e*LR	LR	02 59 23.0	
	3μm,28.0s						
PPT	Papeete	38.82	351	LR	LR	03 02 57.7	
	comp=Z,510nm,18.3s,MS4.4,baz=208,slow=33						
CASY	Casey	45.84	213	*e*P	P	02 50 06.0	+0.5
	11nm,1.2s,mb4.7						
TAOE	Nuku Hiva Isla	47.30	5	*e*S	S	02 57 01.2	-10
	2μm,26.1s						
TAOE				*e*LR	LR	03 03 33.3	
	2μm,26.7s						
PLCA	Paso Flores	48.51	104	P	P	02 50 27.1	+0.5
	2.8nm,0.8s,mb4.3,baz=215,slow=10,SNR=5.5						
PLCA	Paso Flores	48.51	104	*e*P	P	02 50 27.6	+0.9
	9.5nm,1.2s,mb4.7						
VNA1	Neumayer--Stat	49.52	162	*e*	P	02 50 33.1	-0.9
DZM	Mont Dzumac	49.93	292	*e*LQ		03 02 50.8	
	4μm,30.3s						
MAW	Mawson	54.95	192	*e*P	P	02 51 14.2	-0.2
	2.6nm,0.8s,mb4.3						
MAW	Mawson	54.95	192	P	P	02 51 14.6	+0.2
	3.9nm,0.9s,mb4.4,baz=130,slow=8.5,SNR=6.4						
TRQA	Tornquist	55.05	108	*e*P	P	02 51 15.5	0.0
	5.3nm,1.0s,mb4.5						
SYO	Syowa Base	55.08	181⇓	*e*P	P	02 51 13.6	-1.7
STKA	Stephens Creek	55.89	262	P	P	02 51 22.2	+0.6
	9.3nm,1.0s,mb4.8,baz=155,slow=14,SNR=3.6						
CTA	Charters Tower	62.48	275	P	P	02 52 08.2	+0.8
	1.7nm,0.4s,mb4.6,baz=178,slow=14,SNR=2.2						
ASAR	Alice Springs	66.52	262	P	P	02 52 32.8	-1.0
	3.2nm,0.8s,mb4.4,baz=139,slow=6.4,SNR=20						
CPUP	Villa Florida	66.55	103	P	P	02 52 33.0	-0.9
	1.0nm,0.5s,mb4.1,baz=236,slow=10,SNR=4.9						
NWAO	Narrogin (SRO)	68.03	244	LR	LR	03 16 32.2	
	comp=Z,36nm,19.5s,MS3.6,baz=338,slow=31						
LPAZ	La Paz	68.57	87	P	P	02 52 46.7	-0.1
	1.5nm,0.7s,mb4.0,baz=165,slow=4.2,SNR=7.8						
LPAZ	La Paz	68.57	87	*e*P	P	02 52 48.3	+1.5
	1.4nm,0.8s,mb3.9						
WRA	Warramunga Arr	69.25	265	P	P	02 52 50.4	-0.7
	1.8nm,0.9s,mb4.0,baz=146,slow=5.6,SNR=7.9						
ESDC	Sonseca Array	148.90	105	PKPbc	PKPbc	03 01 30.1	-1.0
	1.3nm,0.8s,baz=234,slow=3.2,SNR=8.4						
MK31	Makanchi Array	150.41	271	*e*PKPbc	PKPbc	03 01 33.0	-1.5
MKAR	Makanchi Array	150.41	271	PKPbc	PKPbc	03 01 32.9	-1.7
	1.8nm,0.9s,baz=94,slow=4.0,SNR=9.3						
ZALV	Zalesovo Beam	152.61	286	PKPbc	PKPbc	03 01 42.8	+3.5
	0.5nm,0.4s,baz=101,slow=2.9,SNR=2.9						
BVAR	Borovoye Array	160.15	275	PKPab	PKPab	03 02 21.4	-1.2
	1.5nm,0.8s,baz=122,slow=5.6,SNR=6.6						

IDC ***25*** *02:53:22.6±0.4, 1°.34N×97°.31E, h0km, mb5.0/38, mb1 5.1/39, mb1mx5.1/39, mbtmp5.0/39, ML5.1/1, MS5.3/25, Ms1 5.4/25, ms1mx5.2/36, Error ellipse: s-maj=13.2km s-min=9.8km az=45.0*

NEIC ***25*** *02:53:25.4±0.1, 1°.34N×97°.19E, h16km, mb5.5/129, MS5.5/206, MW5.6, MW5.5, Error ellipse: s-maj=4.0km s-min=3.2km az=205.0, Moment Tensor Solution. s40 Moment tensor: Scale 10^17^Nm; Mrr2.35; Mθθ-1.20; Mφφ-1.15; Mrθ1.08; Mrφ0.89; Mθφ-0.90; Best double couple: M0 2.60000×10^17^ NP1:φs316.00000°, δ29.00000°, λ93.00000°. NP2:φs132.00000°, δ61.00000°, λ88.00000°. Principal axes: T 2.7600, Plg73.0000°, Azm37.0000°; N -0.2900, Plg1.0000°, Azm132.0000°; P -2.4700, Plg16.0000°, Azm223.0000°;*

NEIC Felt [IV] at Gunungsitoli. Felt [III] at Sibolga, Sumatra.

ISCJB ***25*** *02:53:25.4±0.1, 1°.34N±0°.02×97°.20E±0°.02, h26km, mb5.4/249, MS5.5/275 Error ellipse: s-maj=3.3km s-min=2.6km az=25.2*

MOS ***25*** *02:53:26.7±0.9, 1°.43N×97°.27E, h33km, mb5.7/91, MS5.3/80, Error ellipse: s-maj=7.6km s-min=4.0km az=117.4*

BJI ***25*** *02:53:26.0, 1°.17N×97°.30E, h42km, mB5.8/45, mb5.6/64, Ms5.9/72, Ms7 5.7/60*

SZGRF ***25*** *02:53:28.4, 1°.78N×97°.12E, h25km, mb5.3, MS5.2, Northern Sumatera, Indonesia*

DJA ***25*** *02:53:28, 1°.17N×97°.25E, h31km, Mw5.5/12*

GCMT ***25*** *02:53:29.8±0.2, 1°.12N×97°.00E, h14km, MW5.7, Moment Tensor Solution. s84,c157; s15,c16; Moment tensor: Scale 10^17^Nm; Mrr1.75±.04; Mθθ-0.86±.04; Mφφ-0.88±.04; Mrθ2.92±.09; Mrφ1.31±.03; Mθφ-2.54±.09; Best double couple: M0 4.30000×10^17^ NP1:φs321.00000°, δ14.00000°, λ100.00000°. NP2:φs131.00000°, δ77.00000°, λ88.00000°. Principal axes: T 4.1300, Plg58.0000°, Azm38.0000°; N 0.4300, Plg2.0000°, Azm132.0000°; P -4.5500, Plg32.0000°, Azm223.0000°; Data Used: II IU IC G CN. Surface waves: sta= 79, comp=125, per= 50.*

ISC 25 02:53:27.4±0.1, 1°.34N±0°.02×97°.17E±0°.02, h28km, h28km±1.0km; pP-P, n939, σ0.96/746, mb5.4/249, MS5.5/275, 73C-14D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.40	95	P		Pb	02 53 36.3	+0.1
GSI				S		Sb	02 53 44.8	+2.6
TPTI		1.91	0	P		Pn	02 53 57.7	-0.4
TPTI				S		Sn	02 54 26.6	+5.4
PSI	Prapat	2.27	50	Pn		Pn	02 54 03.3	+0.2
	95nm,0.3s,baz=213,slow=6.4,SNR=297							
PSI				LR		LR	02 54 43.6	
	comp=Z,35μm,21.4s,baz=287,slow=38							
MNSI	Mandailing Nat	2.47	103	P		Pn	02 54 06.5	+0.7
SISI	Saibi	3.27	144	P		Pn	02 54 15.8	-1.0
PPI	Padang Panjang	3.69	119	P		Pn	02 54 22.8	+0.2
PDSI	Padang	3.98	124	P		Pn	02 54 26.3	-0.3
SDSI	Sungai Dareh	4.82	118	P		Pn	02 54 38.6	+0.5
FRIM	Kepong	4.83	67	P		Pn	02 54 40.2	+1.9
IPM	Ipoh	4.95	51	P		Pn	02 54 42.0	+2.0
IPM	Ipoh	4.95	51	P		Pn	02 54 41.5	+1.5
	12nm1μm,0.8s							
KULM	Kulim	5.24	41	P		Pn	02 54 45.0	+1.0
KULM	Kulim	5.24	41⇑	*e*P		Pn	02 54 44.6	+0.7
	1μm,0.9s							
KULM	Kulim	5.24	41	P		Pn	02 54 44.7	+0.8
	5.2nm2μm,1.0s							
KGM	Kluang	6.18	84	P		Pn	02 54 58.4	+1.5
MYKOM	Kota Tinggi	6.69	86	P		Pn	02 55 05.7	+1.8
MYKOM	Kota Tinggi	6.69	86	P		Pn	02 55 04.6	+0.7
	2.9nm5μm356nm,1.5s							
KTGM	Kuala Trenggan	7.15	56	P		Pn	02 55 11.3	+1.1
MNAI	Manna	8.09	134	P		Pn	02 55 23.7	+0.6
	4.3nm9μm638nm,0.7s							
MNAI				S		Sn	02 56 49.7	-4.0
	4.3nm9μm638nm,0.7s							
MDSI	Maura Dua	9.08	130	P		Pn	02 55 35.3	-1.4
	4μm258nm,1.8s							
KLSI		9.64	128	P		Pn	02 55 43.5	-0.9
	4μm306nm,0.9s							
KASI	Kota Agung	10.00	133	P		Pn	02 55 48.5	-0.8
	2μm196nm,0.9s							
KASI				S		Sn	02 57 36.0	-4.7
	2μm196nm,0.9s							
KSM	Kuching	13.13	89	P		Pn	02 56 35.4	+3.1
KSM	Kuching	13.13	89	*e*Pn		Pn	02 56 33.0	+0.8
SBUM	Sibu	15.08	86	P		Pn	02 57 00.3	+1.6
SBUM	Sibu	15.08	86	P		Pn	02 56 59.8	+1.1
	4μm246nm,1.3s							
BTM	Bintulu	16.00	83	P		Pn	02 57 12.9	+2.2
UGM	Wanagama	16.18	125	P		Pn	02 57 09.0	-4.0
	168nm,1.5s							
CM31	Chiang Mai Arr	17.10	6	*e*Pn		Pn	02 57 24.1	-0.5
CMAR	Chiang Mai Arr	17.10	6	P		Pn	02 57 23.6	-1.0
	2.7nm,0.3s,baz=195,slow=12,SNR=58							
CMAR				LR		LR	03 04 53.3	
	comp=Z,16μm,19.9s,baz=191,slow=40							
CMAR				ScP		ScP	03 05 43.9	+1.8
	0.5nm,0.3s,baz=227,slow=2.6,SNR=4.5							
PWJI	Pagerwojo	17.30	123	P		Pn	02 57 25.3	-1.8
	2μm70nm,1.3s							
PALK	Pallekele	17.44	290	Pn		Pn	02 57 29.3	+0.4
	624nm,1.9s,SNR=5.7							
CHTO	Chiang Mai	17.45	6	*e*P		Pn	02 57 27.6	-1.3
CHTO				pmax		pmax		
	comp=Z,88nm,0.9s							
CHTO	Chiang Mai	17.45	6	*e*P		Pn	02 57 27.6	-1.4
	comp=Z,88nm,0.9s							
CHTO	Chiang Mai	17.45	6	P		Pn	02 57 28.3	-0.6
	SNR=24							
CHTO				P			02 57 28.3	
	SNR=24

comp=Z,93nm,1.0s,mb5.7
XAN pmax pmax
comp=Z,180nm,7.7s
XAN LR LR
comp=N,9μm,15.8s,MS5.6
XAN LR LR
comp=E,3μm,15.5s,MS5.6
XAN LR LR
comp=Z,6μm,16.6s,MS5.4
LZH Lanzhou 35.12 9 ⇑P **P 03 00 18.8 +0.3**
LZH pP pP 03 00 28.5 +1.7
LZH sP sP 03 00 32.6 +2.4
LZH PP PP 03 01 38.3 -0.3
LZH S **S 03 05 49.1 -0.6**
LZH sS sS 03 06 05.1 +1.8
LZH SS SS 03 08 06.4 -17
LZH pmax pmax
comp=Z,190nm,1.2s,mb5.9
LZH pmax pmax
comp=Z,1μm,4.9s
LZH LR LR
comp=N,19μm,16.0s
LZH LR LR
comp=Z,20μm,17.5s,MS5.9
SMLA Simla 35.16 329 *i* P **P 03 00 20.4 +1.4**
BHK Bhakra 35.78 329 *ex* x 03 00 22.0
BHK *ex* x 03 00 40.8
NJ2 Nanjing 36.76 32 *eP* **P 03 00 33.0 +0.4**
NJ2 pP pP 03 00 42.5 +1.6
NJ2 sP sP 03 00 47.9 +3.6
NJ2 PP PP 03 02 01.0 +4.3
NJ2 S **S 03 06 14.0 -0.9**
NJ2 sS sS 03 06 30.0 +1.4
NJ2 pmax pmax
comp=Z,190nm,1.2s,mb5.8
NJ2 pmax pmax
comp=Z,190nm,3.6s
NJ2 LR LR
comp=N,12μm,14.9s,MS5.9
NJ2 LR LR
comp=E,8μm,15.0s,MS5.9
NJ2 LR LR
comp=Z,22μm,14.8s,MS6.1
SSE Sheshan 37.31 35 P **P 03 00 37.9 +0.5**
SSE pP pP 03 00 49.0 +3.3
SSE PP PP 03 02 03.9 +1.1
SSE S **S 03 06 24.4 +1.0**
SSE pmax pmax
comp=Z,55nm,1.2s,mb5.3
SSE pmax pmax
comp=Z,940nm,9.6s
SSE LR LR
comp=N,9μm,15.0s,MS5.8
SSE LR LR
comp=E,6μm,15.0s,MS5.8
SSE LR LR
comp=Z,11μm,15.4s,MS5.8
KAKA Kakadu 37.68 113 *eP* **P 03 00 37.9 -2.8**
comp=Z,62nm,0.9s,mb5.3
KAKA Kakadu 37.68 113 *eP* **P 03 00 38.0 -2.7**
comp=Z,299nm,1.2s,mb5.9
GTA Gaotai 37.97 3 ⇑P **P 03 00 43.1 +0.4**
GTA pP pP 03 00 52.8 +1.7
GTA sP sP 03 00 56.9 +2.4
GTA PP PP 03 02 13.4 +3.5
GTA PcP PcP 03 02 59.1 +0.9
GTA S **S 03 06 31.8 -1.2**
GTA ScP ScP 03 06 43.4 -0.8
GTA sS sS 03 06 47.4 +0.7
GTA ScS ScS 03 10 52.1 -1.1
GTA pmax pmax
comp=Z,95nm,1.3s,mb5.4
GTA pmax pmax
comp=Z,920nm,6.6s
GTA LR LR
comp=N,8μm,15.0s,MS5.7
GTA LR LR
comp=E,6μm,14.7s,MS5.7
GTA LR LR
comp=Z,8μm,15.0s,MS5.7
KLBR Kellerberrin 38.13 151 *eP* **P 03 00 50.2 +5.9**
comp=Z,50nm,1.2s,mb5.1
TIY Taiyuan 38.83 19 *eP* **P 03 00 50.1 +0.1**
TIY S **S 03 06 44.8 -1.3**
TIY LR LR
comp=N,15μm,12.9s,MS6.0
TIY LR LR
comp=E,10μm,14.6s,MS6.0
TIY LR LR
comp=Z,18μm,13.8s,MS6.1
NWAO Narrogin (SRO) 38.99 153 PFAKE 03 01 00.0 +8.5
NWAO LR LR
comp=Z,6μm,21.0s,MS5.4
BTO Baotou 40.78 15 *eP* **P 03 01 06.0 -0.3**
HHC Hu-ho-hao-te 41.43 17 *eP* **P 03 01 12.5 +0.9**
HHC pP pP 03 01 24.9 +5.0
HHC PP PP 03 02 52.8 +5.2
HHC PcP PcP 03 03 09.8 +0.6
HHC ScP ScP 03 06 54.8 -2.8
HHC PcS PcS 03 06 59.8 -0.6
HHC S **S 03 07 24.6 -0.4**
HHC sS sS 03 07 47.3 +8.5
HHC SS SS 03 10 26.6 -3.3
HHC ScS ScS 03 11 09.9 -3.7
HHC pmax pmax
comp=Z,57nm,1.0s,mb5.2
HHC pmax pmax
comp=Z,1μm,5.1s
HHC LR LR
comp=N,15μm,15.5s,MS6.0
HHC LR LR
comp=E,6μm,16.6s,MS6.0
HHC LR LR
comp=Z,15μm,16.7s,MS5.9
MSEY Mahe Island 42.08 262 PFAKE 03 01 30.0 +13
MSEY LR LR
comp=Z,4μm,20.0s,MS5.3
WRA Warramunga Arr 42.13 122 P **P 03 01 16.1 -1.6**
comp=Z,19nm,0.6s,mb4.9,baz=301,slow=9.1,SNR=66
WRA ScP ScP 03 07 00.7 -0.2
comp=Z,5.9nm,1.2s,baz=328,slow=3.0,SNR=5.4
WRA S **S 03 07 31.5 -4.5**
comp=Z,7.5nm,1.2s,baz=295,slow=15,SNR=5.9
WRAB Tennant Creek 42.14 122 P **P 03 01 16.8 -0.9**
comp=Z,364nm,0.9s,mb6.0,SNR=26
WRAB Tennant Creek 42.14 122 *eP* **P 03 01 16.4 -1.3**
WRAB pmax pmax
comp=Z,54nm,0.8s,mb5.2
WRAB MLR MLR
comp=Z,5μm,22.0s,MS5.4
WRAB Tennant Creek 42.14 122 *eP* **P 03 01 16.4 -1.3**
comp=Z,54nm,0.8s,mb5.2
WRAB LR LR
comp=Z,5μm,22.0s,MS5.4
KBL Kabul 42.19 325 *eP* **P 03 01 20.2 +2.3**
KBL pmax pmax
comp=Z,17nm,0.7s,mb4.8
KBL Kabul 42.19 325 *eP* **P 03 01 20.2 +2.3**
comp=Z,17nm,0.7s,mb4.8
BJT Baijiatuau 42.20 22 *eP* **P 03 01 18.5 +0.6**
BJT pmax pmax
comp=Z,182nm,0.7s
BJT MLR MLR
comp=Z,4μm,19.0s
BJT Baijiatuau 42.20 22 *eP* **P 03 01 18.5 +0.6**
comp=Z,182nm,0.7s,mb5.8
BJT LR LR
comp=Z,4μm,19.0s,MS5.4
BJI Beijing 42.22 22 P **P 03 01 18.8 +0.8**
BJI pP pP 03 01 28.9 +2.5
BJI sP sP 03 01 32.0 +2.2
BJI PP PP 03 02 58.4 +2.2
BJI S **S 03 07 34.5 -2.2**
BJI pmax pmax
comp=Z,230nm,0.8s,mb5.9
BJI pmax pmax
comp=Z,1μm,11.6s
BJI LR LR
comp=N,5μm,14.6s,MS5.6
BJI LR LR
comp=E,3μm,15.2s,MS5.6
BJI LR LR
comp=Z,3μm,22.1s
KSH Kashi 42.63 336 ⇑*iP* **P 03 01 20.5 -0.9**
KSH PP PP 03 03 01.8 +1.2
KSH PcP PcP 03 03 14.9 +1.7
KSH ScP ScP 03 07 01.6 -0.8
KSH PcS PcS 03 07 05.5 +0.2
KSH S **S 03 07 37.6 -5.2**
KSH ScS ScS 03 11 17.9 -3.1
KSH pmax pmax
comp=Z,46nm,1.0s,mb5.2
KSH pmax pmax
comp=Z,440nm,7.5s
KSH LR LR
comp=N,3μm,17.3s,MS5.3
KSH LR LR
comp=E,3μm,17.9s,MS5.3
KSH LR LR
comp=Z,4μm,18.3s,MS5.3
WBK Wadi Bani Khal 42.71 303 P pP 03 01 32.0 +1.3
SNR=5.7
WBK Wadi Bani Khal 42.71 303 P pP 03 01 32.0 +1.3
SNR=5.7
WBK Wadi Bani Khal 42.71 303 P pP 03 01 32.0 +1.3
SNR=5.7
WBK Wadi Bani Khal 42.71 303 P pP 03 01 32.0 +1.3
SNR=5.7
WBK Wadi Bani Khal 42.71 303 P pP 03 01 32.0 +1.3
SNR=5.7
WBK Wadi Bani Khal 42.71 303 P pP 03 01 32.0 +1.3
SNR=5.7
WBK Wadi Bani Khal 42.71 303 P pP 03 01 32.0 +1.3
SNR=5.7
WMQ Urumqi 43.13 350 P **P 03 01 26.6 +1.2**
WMQ pP pP 03 01 36.6 +2.8
WMQ sP sP 03 01 40.6 +3.5
WMQ PP PP 03 03 09.6 +3.7
WMQ S **S 03 07 49.6 -0.4**
WMQ sS sS 03 08 06.6 +2.8
WMQ SS SS 03 10 56.6 -6.7
WMQ pmax pmax
comp=Z,180nm,1.0s,mb5.8
WMQ pmax pmax
comp=Z,3μm,4.0s
WMQ LR LR
comp=N,3μm,15.0s,MS5.7
WMQ LR LR
comp=E,6μm,15.0s,MS5.7
WMQ LR LR
comp=Z,3μm,15.0s,MS5.4
FORT Forrest 43.40 140 *eP* **P 03 01 28.5 +0.7**
comp=Z,55nm,0.6s,mb5.5
FORT Forrest 43.40 140 *eP* **P 03 01 29.2 +1.4**
comp=Z,116nm,0.8s,mb5.7
ASAR Alice Springs 43.50 127 P **P 03 01 27.6 -1.1**
comp=Z,14nm,0.7s,mb4.8,baz=298,slow=7.4,SNR=54
ASAR PcP PcP 03 03 15.5 -1.0
comp=Z,4.4nm,0.8s,baz=304,slow=5.3,SNR=4.5
ASAR ScP ScP 03 07 07.3 +1.0
comp=Z,4.7nm,1.1s,baz=301,slow=3.4,SNR=6.6
ASAR S **S 03 07 52.9 -3.0**
comp=Z,9.3nm,1.1s,baz=296,slow=14,SNR=11
ASAR Alice Springs 43.50 127 P **P 03 01 27.6 -1.1**
ASAR 03 03 15.5
ASAR S **S 03 07 52.9 -3.1**
DL2 Dalian 43.56 28 ⇑P **P 03 01 29.3 +0.3**
DL2 S **S 03 07 56.0 -0.5**
DL2 pmax pmax
comp=Z,100nm,1.3s,mb5.4
DL2 pmax pmax
comp=Z,700nm,6.2s
DL2 LR LR
comp=N,3μm,15.1s,MS5.4
DL2 LR LR
comp=E,2μm,12.7s,MS5.4
DL2 LR LR
comp=Z,3μm,15.1s,MS5.4
SMDO Samad 43.66 303 P pP 03 01 38.7 +0.2
SNR=7.0
SMDO Samad 43.66 303 P pP 03 01 38.7 +0.2
SNR=7.0
SMDO Samad 43.66 303 P pP 03 01 38.7 +0.2
SNR=7.0
SMDO Samad 43.66 303 P pP 03 01 38.7 +0.2
SNR=7.0
SMDO Samad 43.66 303 P pP 03 01 38.7 +0.2
SNR=7.0
SMDO Samad 43.66 303 P pP 03 01 38.7 +0.2
SNR=7.0
BSY Bisya 44.26 302 P **P 03 01 37.3 +2.5**
SNR=9.1
BSY Bisya 44.26 302 P **P 03 01 37.3 +2.5**
SNR=9.1
BSY Bisya 44.26 302 P **P 03 01 37.3 +2.5**
SNR=9.1
BSY Bisya 44.26 302 P **P 03 01 37.3 +2.5**
SNR=9.1
BSY Bisya 44.26 302 P **P 03 01 37.3 +2.5**
SNR=9.1
BSY Bisya 44.26 302 P **P 03 01 37.3 +2.5**
SNR=9.1
BSY Bisya 44.26 302 P **P 03 01 37.3 +2.5**
SNR=9.1
HOQ Hoqain 44.50 303 P **P 03 01 38.9 +2.2**
SNR=7.4
HOQ Hoqain 44.50 303 P **P 03 01 38.9 +2.2**
SNR=7.4
HOQ Hoqain 44.50 303 P **P 03 01 38.9 +2.2**
SNR=7.4
HOQ Hoqain 44.50 303 P **P 03 01 38.9 +2.2**
SNR=7.4
HOQ Hoqain 44.50 303 P **P 03 01 38.9 +2.2**
SNR=7.4
HOQ Hoqain 44.50 303 P **P 03 01 38.9 +2.2**
SNR=7.4
HOQ Hoqain 44.50 303 P **P 03 01 38.9 +2.2**
SNR=7.4
INCN Inchon 45.05 34 *eP* **P 03 01 40.2 -0.6**
comp=Z,128nm,1.0s,mb5.7
INCN LR LR
comp=Z,6μm,21.0s,MS5.5
INCN Inchon 45.05 34 P **P 03 01 41.0 +0.1**
SNR=10
INCN P 03 01 41.0
SNR=10
INCN Inchon 45.05 34 P **P 03 01 41.0 +0.1**
SNR=10
INCN P 03 01 41.0
SNR=10
INCN Inchon 45.05 34 P **P 03 01 41.0 +0.1**
SNR=10
INCN P 03 01 41.0
SNR=10
INCN Inchon 45.05 34 P **P 03 01 41.0 +0.1**
SNR=10
INCN P 03 01 41.0
SNR=10
INCN Inchon 45.05 34 P **P 03 01 41.0 +0.1**
SNR=10
INCN P 03 01 41.0
SNR=10
INCN Inchon 45.05 34 P **P 03 01 41.0 +0.1**
SNR=10
INCN P 03 01 41.0
SNR=10
KZA Kyzart 45.09 337 P **P 03 01 43.0 +1.8**
SNR=19
AAA Alma-Ata 45.49 339 *i* P **P 03 01 45.7 +1.4**
AAA *i* S **S 03 08 27.3 +3.0**
AAA pmax pmax
comp=Z,1μm,11.0s
AAA smax
comp=N,4μm,21.7s
UCH Uchtor 45.51 336 P **P 03 01 46.2 +1.8**
SNR=47
UCH Uchtor 45.51 336 *eP* **P 03 01 45.6 +1.1**
comp=N,88nm,0.9s,mb5.7
UCH LR LR
comp=Z,3μm,20.0s,MS5.3
TKM2 Tokmak 2 45.68 338 P **P 03 01 47.2 +1.4**
SNR=48
TKM2 Tokmak 2 45.68 338 *eP* **P 03 01 46.7 +0.9**
TKM2 pmax pmax
comp=Z,222nm,1.5s,mb5.9
TKM2 MLR MLR
comp=Z,4μm,20.0s,MS5.3
TKM2 Tokmak 2 45.68 338 *eP* **P 03 01 46.7 +0.9**
comp=Z,222nm,1.5s,mb5.9
TKM2 LR LR
comp=Z,4μm,20.0s,MS5.3
KBK Karagaybulak 45.70 337 P **P 03 01 47.9 +1.9**
SNR=33
KSRS Korea Array 45.75 35 P **P 03 01 46.1 -0.3**
comp=Z,207nm,0.9s,mb6.1,baz=228,slow=8.1,SNR=164
KSRS LR LR 03 21 30.6
comp=Z,4μm,21.0s,MS5.3,baz=226,slow=37
KSRS Korea Array 45.75 35 P **P 03 01 46.1 -0.3**
KSRS pmax pmax
comp=Z,207nm,0.9s,mb6.1
KSRS MLR MLR
comp=Z,4μm,21.0s,MS5.3
AML Almayashu 45.76 336 *eP* **P 03 01 47.6 +1.1**
comp=Z,95nm,0.8s,mb5.8
AML LR LR
comp=Z,4μm,21.0s,MS5.3
AAK Ala-Archa 45.86 337 P **P 03 01 48.1 +0.9**
comp=Z,379nm,1.0s,mb6.3,SNR=20
AAK Ala-Archa 45.86 337 P **P 03 01 48.9 +1.7**
SNR=14
AAK Ala-Archa 45.86 337 P **P 03 01 48.4 +1.1**
comp=Z,13nm,0.6s,mb5.0,baz=154,slow=6.9,SNR=31
AAK LR LR 03 24 11.8
comp=Z,5μm,19.5s,MS5.5,baz=163,slow=40
AAK Ala-Archa 45.86 337 P **P 03 01 48.4 +1.1**
AAK LR LR 03 24 11.8
FRU Bishkek 45.98 337 ⇑*iP* **P 03 01 48.0 -0.2**
FRU *eS* **S 03 08 34.0 +2.6**
FRU pmax pmax
comp=Z,250nm,2.5s,mb5.7
FRU MLR MLR
comp=Z,4μm,19.5s,MS5.4
CHMS Chumysh 46.07 337 P **P 03 01 49.6 +0.7**
SNR=15
EKS2 Erkin-Say 46.17 336 P **P 03 01 51.5 +1.8**
SNR=39
EKS2 Erkin-Say 46.17 336 *eP* **P 03 01 50.4 +0.7**
comp=Z,45nm,0.7s,mb5.5
EKS2 LR LR
comp=Z,3μm,21.0s,MS5.2
RER Riviere de l'E 46.27 239 PFAKE 03 02 00.0 +9.2
RER LR LR
comp=Z,2μm,19.0s,MS5.2
USP Ospenovka 46.39 337 P **P 03 01 52.6 +1.2**
SNR=43
ASUD Al Ashush, Dub 46.57 303 P pP 03 02 02.4 +0.8
SNR=6.0
ASUD Al Ashush, Dub 46.57 303 P pP 03 02 02.4 +0.8
SNR=6.0
ASUD Al Ashush, Dub 46.57 303 P pP 03 02 02.4 +0.8
SNR=6.0
ASUD Al Ashush, Dub 46.57 303 P pP 03 02 02.4 +0.8
SNR=6.0
ASUD Al Ashush, Dub 46.57 303 P pP 03 02 02.4 +0.8
SNR=6.0
ASUD Al Ashush, Dub 46.57 303 P pP 03 02 02.4 +0.8
SNR=6.0
SNY Shenyang 46.79 27 ⇑P **P 03 01 54.3 -0.2**
SNY pP pP 03 02 05.0 +2.0
SNY PP PP 03 03 40.3 -4.6
SNY S **S 03 08 39.9 -3.1**
SNY pmax pmax
comp=Z,93nm,1.4s,mb5.5
SNY pmax pmax
comp=Z,980nm,5.0s
SNY LR LR
comp=N,6μm,14.9s,MS5.8
SNY LR LR
comp=E,7μm,15.9s,MS5.8
SNY LR LR
comp=Z,10μm,15.7s,MS5.9
IDAH Dahanechah 46.95 316 *eP* **P 03 01 55.9 0.0**
SONM Songino Array 47.00 8 P **P 03 01 56.7 +0.7**
comp=Z,83nm,0.8s,mb5.7,baz=190,slow=9.5,SNR=240
SONM PcP PcP 03 03 28.6 +0.5
comp=Z,9.0nm,0.7s,baz=205,slow=4.5,SNR=6.0
SONM ScP ScP 03 07 22.9 +2.7
comp=Z,3.1nm,1.1s,baz=190,slow=5.1,SNR=4.7
SONM LR LR 03 24 20.5
comp=Z,18μm,18.2s,MS6.1,baz=189,slow=40
SONM PKPPKP 03 33 04.8
comp=Z,0.7nm,1.0s,baz=236,slow=1.6,SNR=4.7
SONM Songino Array 47.00 8 P **P 03 01 56.7 +0.7**
SONM 03 03 28.6
MK31 Makanchi Array 47.10 346 *eP* **P 03 01 57.3 +0.4**
MKAR Makanchi Array 47.10 346 P **P 03 01 57.5 +0.6**
comp=Z,40nm,0.6s,mb5.6,baz=138,slow=6.8,SNR=278
MKAR S **S 03 08 49.3 +2.0**
comp=Z,2.9nm,1.1s,baz=153,slow=13,SNR=3.5
MKAR LR LR 03 25 35.0
comp=Z,3μm,21.5s,MS5.2,baz=159,slow=41
MKAR Makanchi Array 47.10 346 P **P 03 01 57.5 +0.6**
MKAR S **S 03 08 49.3 +2.0**
MKAR Makanchi Array 47.10 346 P **P 03 01 57.5 +0.6**
MKAR S **S 03 08 49.3 +2.0**
MKAR LR LR 03 25 35.0
ULN Ulaanbaatar 47.13 9 *eP* **P 03 01 57.5 +0.4**
ULN pmax pmax
comp=Z,109nm,1.1s,mb5.7
ULN MLR MLR
comp=Z,11μm,21.0s,MS5.8
ULN Ulaanbaatar 47.13 9 *eP* **P 03 01 57.5 +0.4**
comp=Z,109nm,1.1s,mb5.7
ULN LR LR
comp=Z,11μm,21.0s,MS5.8
ULN Ulaanbaatar 47.13 9 P **P 03 01 57.9 +0.8**
SNR=57
ULN P 03 01 57.9
SNR=57
ULN Ulaanbaatar 47.13 9 P **P 03 01 57.9 +0.8**
SNR=57
ULN P 03 01 57.9
SNR=57
ULN Ulaanbaatar 47.13 9 P **P 03 01 57.9 +0.8**
SNR=57
ULN P 03 01 57.9
SNR=57
ULN Ulaanbaatar 47.13 9 P **P 03 01 57.9 +0.8**
SNR=57
ULN P 03 01 57.9
SNR=57
ULN Ulaanbaatar 47.13 9 P **P 03 01 57.9 +0.8**
SNR=57
ULN P 03 01 57.9
SNR=57
ULN Ulaanbaatar 47.13 9 P **P 03 01 57.9 +0.8**
SNR=57
ULN P 03 01 57.9
SNR=57
IKOO Kooshah 47.38 315 *eP* **P 03 01 52.5 -6.8**
ITEG Tejag 47.82 315 *eP* **P 03 02 01.1 -1.6**
GUMO Guam 48.72 73 PFAKE 03 02 20.0 +10
GUMO LR LR
comp=Z,1μm,21.0s,MS4.9
ZAK Zakamensk 49.14 5 ⇓*iP* **P 03 02 12.5 0.0**
ZAK *e* 03 04 07.4
ZAK *e* 03 09 31.5
ZAK pmax pmax
comp=Z,28nm,1.1s,mb5.2
CN2 Changchun 49.19 27 ⇑P **P 03 02 12.6 -0.5**
CN2 *e*pP pP 03 02 23.5 +1.9
CN2 *e*S **S 03 09 15.4 -1.6**
CN2 pmax pmax
comp=Z,10.0nm,1.4s,mb4.7
CN2 pmax pmax
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,9μm,16.0s,MS5.9
CN2 LR LR
comp=E,6μm,16.0s,MS5.9
CN2 LR LR
comp=Z,9μm,16.0s,MS5.9
IBAF Bafgh 49.45 312 *eP* **P 03 02 12.6 -2.7**
IMEH Mehriz 50.08 311 *eP* **P 03 02 18.5 -1.6**
MOY Mondy 50.25 3 *eP* **P 03 02 21.7 +0.7**
MOY pmax pmax
comp=Z,82nm,1.9s,mb5.4
TLY Talaya 50.46 5 P **P 03 02 23.4 +0.8**
comp=Z,330nm,0.8s,mb6.4,SNR=9.7
TLY Talaya 50.46 5 *eP* **P 03 02 23.2 +0.6**
TLY pmax pmax
comp=Z,42nm,0.7s,mb5.6
TLY MLR MLR

comp=Z,10μm,20.0s,MS5.8
TLY Talaya 50.46 5 *e*P **P 03 02 23.2 +0.6**
comp=Z,42nm,0.7s,mb5.6
TLY LR LR
comp=Z,10μm,20.0s,MS5.8
TLY Talaya 50.46 5 P **P 03 02 23.9 +1.3**
SNR=19
TLY P 03 02 23.9
SNR=19
TLY Talaya 50.46 5 P **P 03 02 23.9 +1.3**
SNR=19
TLY P 03 02 23.9
SNR=19
TLY Talaya 50.46 5 P **P 03 02 23.9 +1.3**
SNR=19
TLY P 03 02 23.9
SNR=19
TLY Talaya 50.46 5 P **P 03 02 23.9 +1.3**
SNR=19
TLY P 03 02 23.9
SNR=19
TLY Talaya 50.46 5 P **P 03 02 23.9 +1.3**
SNR=19
TLY P 03 02 23.9
SNR=19
IRK Irkutsk 51.07 6⇑ *i*P **P 03 02 27.4 +0.2**
IRK pmax pmax
comp=Z,168nm,1.8s,mb5.7
ABKT Ailbek 51.09 320 P **P 03 02 28.4 +0.8**
comp=Z,366nm,0.8s,mb6.4,SNR=6.0
HIA Hailar 51.52 19 PFAKE 03 02 40.0 +9.4
HIA LR LR
comp=Z,9μm,22.0s,MS5.7
MAJO Matsushiro 51.60 42 *e*P **P 03 02 31.1 -0.4**
MAJO pmax pmax
comp=Z,36nm,1.0s,mb5.3
MAJO MLR MLR
comp=Z,4μm,21.0s,MS5.4
MAJO Matsushiro 51.60 42 *e*P **P 03 02 31.1 -0.4**
comp=Z,36nm,1.0s,mb5.3
MAJO LR LR
comp=Z,4μm,21.0s,MS5.4
MAT Matsushiro 51.60 42 P **P 03 02 30.4 -1.1**
MAT S **S 03 09 55.0 +4.2**
MJAR Matsushiro Arr 51.60 42 P **P 03 02 31.2 -0.3**
comp=Z,20nm,0.8s,mb5.1,baz=223,slow=6.1,SNR=33
MJAR LR LR 03 24 37.5
comp=Z,3μm,21.4s,MS5.3,baz=240,slow=36
KURK Kurchatov 51.65 345 P **P 03 02 32.1 +0.6**
comp=Z,433nm,1.0s,mb6.3,SNR=50
KURK Kurchatov 51.65 345 P **P 03 02 31.5 0.0**
comp=Z,30nm,0.6s,mb5.4,baz=156,slow=7.4,SNR=141
KURK S **S 03 09 47.1 -3.8**
comp=Z,0.6nm,0.3s,baz=150,slow=14,SNR=3.6
KURK LR LR 03 28 57.4
comp=Z,4μm,18.4s,MS5.5,baz=185,slow=41
KURK Kurchatov 51.65 345*c i*P **P 03 02 31.9 +0.4**
KURK pmax pmax
comp=Z,111nm,1.2s,mb5.7
KURK MLR MLR
comp=Z,5μm,18.0s,MS5.6
KURK Kurchatov 51.65 345 *e*P **P 03 02 31.7 +0.1**
comp=Z,87nm,0.9s,mb5.7
KURK LR LR
comp=Z,4μm,20.0s,MS5.5
KURK Kurchatov 51.65 345 P **P 03 02 32.4 +0.9**
KURK P 03 02 32.4
SNR=44
KURK Kurchatov 51.65 345 P **P 03 02 32.4 +0.9**
SNR=44
KURK P 03 02 32.4
SNR=44
KURK Kurchatov 51.65 345 P **P 03 02 32.4 +0.9**
SNR=44
KURK P 03 02 32.4
SNR=44
KURK Kurchatov 51.65 345 P **P 03 02 32.4 +0.9**
SNR=44
KURK P 03 02 32.4
SNR=44
KURK Kurchatov 51.65 345 P **P 03 02 32.4 +0.9**
SNR=44
KURK P 03 02 32.4
SNR=44
MDJ Mudanjiang 51.76 29 P **P 03 02 33.0 +0.5**
MDJ pP pP 03 02 42.0 +1.0
MDJ sP sP 03 02 45.8 +1.4
MDJ ScP ScP 03 07 40.5 -0.1
MDJ PcS PcS 03 07 44.0 +0.6
MDJ S **S 03 09 52.8 +0.1**
MDJ sS sS 03 10 08.3 +1.6
MDJ pmax pmax
comp=Z,86nm,1.4s,mb5.5
MDJ pmax pmax
comp=Z,980nm,6.9s
MDJ LR LR
comp=N,5μm,19.3s,MS5.7
MDJ LR LR
comp=E,4μm,19.3s,MS5.7
MDJ LR LR
comp=Z,10μm,16.8s,MS5.9
MDJ Mudanjiang 51.76 29 PFAKE 03 02 40.0 +7.5
MDJ LR LR
comp=Z,6μm,20.0s,MS5.6
VLA Vladivostok 51.87 32 *e*P **P 03 02 32.6 -0.7**
VLA *e**PP pP 03 02 40.0 -1.9
VLA *e**SP sP 03 02 45.3 +0.1
VLA *e*S **S 03 09 57.3 +3.1**
VLA pmax pmax
comp=Z,414nm,1.2s,mb6.2
VLA MLR MLR
comp=Z,7μm,13.7s,MS5.8
CIT Chita 52.34 13 *e*P **P 03 02 37.4 +0.7**
CIT *e* pP 03 02 46.2 +1.0
CIT pmax pmax
comp=Z,435nm,1.5s,mb6.2
IGAR Gharneh 52.48 311 *e*P **P 03 02 36.4 -1.7**
IZEF Zefreh 52.49 312 *e*P **P 03 02 36.3 -1.8**
CTA Charters Tower 52.59 117 *e*P **P 03 02 38.4 -0.7**
comp=Z,20nm,0.9s,mb5.0
CTA Charters Tower 52.59 117 LR LR 03 29 15.9
comp=Z,5μm,19.2s,MS5.6,baz=283,slow=41
CTAO Charters Tower 52.59 117 *e*P **P 03 02 38.0 -1.1**
CTAO pmax pmax
comp=Z,134nm,1.7s,mb5.6
CTAO MLR MLR
comp=Z,5μm,19.0s,MS5.6
CTAO Charters Tower 52.59 117 *e*P **P 03 02 38.0 -1.1**
comp=Z,134nm,1.7s,mb5.6
CTAO LR LR
comp=Z,5μm,19.0s,MS5.6
OPO Ambohidratompo 52.96 246 P **P 03 02 42.9 +1.1**
comp=Z,12nm,0.9s,mb4.8,baz=56,slow=8.5,SNR=12
ABPO Ambohimpanom 53.05 245 *e*P **P 03 02 42.8 +0.3**
ABPO pmax pmax
comp=Z,87nm,1.5s,mb5.5
ABPO MLR MLR
comp=Z,4μm,20.0s,MS5.4
ABPO Ambohimpanom 53.05 245 *e*P **P 03 02 42.8 +0.3**
comp=Z,87nm,1.5s,mb5.5
ABPO LR LR
comp=Z,4μm,20.0s,MS5.4
ZAA0 Zalesovo Array 53.41 351 *e*P **P 03 02 44.7 +0.1**
ZALV Zalesovo Beam 53.41 351 P **P 03 02 44.9 +0.3**
comp=Z,111nm,0.7s,mb5.9,baz=178,slow=6.7,SNR=197
ZALV S **S 03 10 16.9 +1.9**
comp=Z,5.1nm,0.9s,baz=163,slow=12,SNR=6.1
ZALV LR LR 03 31 06.9
comp=Z,2μm,19.1s,MS5.3,baz=170,slow=42
ZALV Zalesovo Beam 53.41 351 P **P 03 02 44.9 +0.3**
ZALV S **S 03 10 16.9 +1.9**
STKA Stephens Creek 53.47 132 *e*P **P 03 02 45.2 -0.2**
comp=Z,39nm,1.0s,mb5.3
STKA Stephens Creek 53.47 132 P **P 03 02 45.2 -0.2**
comp=Z,19nm,0.6s,mb5.2,baz=307,slow=7.4,SNR=29
STKA LR LR 03 27 19.5
comp=Z,6μm,21.4s,MS5.6,baz=295,slow=38
STKA Stephens Creek 53.47 132 *e*P **P 03 02 45.0 -0.4**
comp=Z,42nm,1.6s,mb5.1
IPIR Pirpir 53.48 311 *e*P **P 03 02 45.0 -0.4**
IDMV Damavand 53.96 314 *e*P **P 03 02 45.0 -4.0**
NVS Novosibirsk 54.53 350⇑ *i*P **P 03 02 52.3 -0.4**
NVS *i* S **S 03 10 29.4 -0.7**
NVS pmax pmax
comp=N,115nm,1.3s
NVS pmax pmax
comp=Z,149nm,1.3s,mb5.9
NVS pmax pmax
comp=E,62nm,1.1s
NVS smax
comp=N,117nm,1.6s
RDF Al-Radifah 54.63 305 *e*P **P 03 02 54.1 +0.2**
RDF AMb AMB 03 03 02.8
comp=Z,181nm,1.1s,mb6.0
IR3 Iran Long-Peri 54.64 314 *e*P **P 03 02 52.4 -1.5**
ATD Arta Tunnel 54.83 283 P **P 03 02 57.8 +2.2**
comp=Z,3.3nm,0.3s,mb4.8,baz=224,slow=21,SNR=6.2
ATD LR LR 03 24 06.1
comp=Z,2μm,18.0s,MS5.1,baz=229,slow=34
NAY Al-Naaiem 54.99 305 *e*P **P 03 02 56.3 -0.3**
NAY AMb AMB 03 03 04.9
comp=Z,55nm,1.0s,mb5.5
MIB Mutribah 55.11 306 *e*P **P 03 02 57.4 0.0**
MIB AMb AMB 03 03 06.1
comp=Z,194nm,1.0s,mb6.1
IRAZ Razeghan 55.40 313 *e*P **P 03 02 59.4 0.0**
BVAR Borovoye Array 56.11 341 P **P 03 03 03.8 -0.3**
comp=Z,52nm,0.8s,mb5.6,baz=145,slow=8.6,SNR=99
BVAR S **S 03 10 49.8 -1.4**
comp=Z,4.0nm,1.1s,baz=134,slow=10,SNR=6.5
KLR Kul'dur 56.14 27‖ *i*P **P 03 03 01.2 -3.2**
KLR *e* 03 05 16.0
KLR *e*S **S 03 10 52.0 +0.2**
KLR pmax pmax
comp=E,150nm,1.4s
KLR pmax pmax
comp=Z,250nm,1.4s,mb6.0
KLR pmax pmax
comp=Z,2μm,7.0s
KLR MLR MLR
comp=E,4μm,12.0s
KLR MLR MLR
comp=Z,13μm,12.0s,MS6.2
BRVK Borovoye 56.17 341 P **P 03 03 04.8 +0.2**
comp=Z,384nm,0.7s,mb6.5,SNR=24
BRVK Borovoye 56.17 341*c i*P **P 03 03 04.1 -0.5**
BRVK pmax pmax
comp=Z,118nm,1.7s,mb5.6
BRVK MLR MLR
comp=Z,4μm,22.0s,MS5.5
BRVK Borovoye 56.17 341 *e*P **P 03 03 03.7 -0.8**
comp=Z,56nm,0.6s,mb5.8
BRVK LR LR
comp=Z,4μm,22.0s,MS5.5
BRVK Borovoye 56.17 341 P **P 03 03 04.5 0.0**
SNR=26
BRVK P 03 03 04.5
SNR=26
BRVK Borovoye 56.17 341 P **P 03 03 04.5 0.0**
SNR=26
BRVK P 03 03 04.5
SNR=26
BRVK Borovoye 56.17 341 P **P 03 03 04.5 0.0**
SNR=26
BRVK P 03 03 04.5
SNR=26
BRVK Borovoye 56.17 341 P **P 03 03 04.5 0.0**
SNR=26
BRVK P 03 03 04.5
SNR=26
BRVK Borovoye 56.17 341 P **P 03 03 04.5 0.0**
SNR=26
BRVK P 03 03 04.5
SNR=26
HABR Khabarovsk 57.15 29*ce*P **P 03 03 10.1 -1.5**
HABR *e**PP pP 03 03 19.0 -1.2
HABR *e* 03 04 03.5
HABR *e* 03 05 16.5
HABR *e*PPP 03 06 32.9
HABR S **S 03 11 03.2 -1.9**
HABR *e* 03 11 14.7
HABR *e**SS sS 03 11 19.2 -0.1
HABR *e* 03 12 55.6
HABR *e*SS SS 03 14 52.2 -2.2
HABR pmax pmax
comp=Z,196nm,1.5s,mb5.9
HABR pmax pmax
comp=N,36nm,1.3s
HABR pmax pmax
comp=E,145nm,1.6s
HABR MLR MLR
comp=Z,3μm,18.0s,MS5.4
ABKAR Akbulak array 57.38 332 *e*P **P 03 03 12.5 -0.7**
comp=Z,89nm,0.8s,mb5.8
ERM Erimo 57.78 39 PFAKE 03 03 30.0 +14
ERM LR LR
comp=Z,2μm,21.0s,MS5.2
EIDS Eidsvold 58.47 121 *e*P **P 03 03 21.3 -0.1**
comp=Z,51nm,0.8s,mb5.6
TOO Toolangi 59.06 136 *e*P pP 03 03 34.2 +0.3
AKTK Aktyubinsk 59.09 332 P **P 03 03 24.5 -0.7**
AKTO Aktyubinsk 59.09 332 P **P 03 03 24.5 -0.7**
comp=Z,29nm,0.9s,mb5.3,baz=136,slow=7.1,SNR=62
CLNS Chul'man 59.61 17 *e*P **P 03 03 28.5 -0.1**
CLNS *e**PP pP 03 03 35.4 -1.9
CLNS *e* 03 04 17.0
CLNS *e* 03 05 39.2
CLNS *e*S **S 03 11 36.4 -0.6**
CLNS pmax pmax
comp=Z,68nm,1.0s,mb5.6
CLNS pmax pmax
comp=E,39nm,1.0s
CLNS pmax pmax
comp=N,39nm,0.9s
CLNS pmax pmax
comp=E,8.0nm,1.0s
CLNS pmax pmax
comp=N,16nm,1.0s
CLNS pmax pmax
comp=Z,13nm,1.1s,mb4.9
CLNS smax
comp=E,257nm,14.8s
CLNS smax
comp=N,565nm,13.0s
CLNS MLR MLR
comp=N,6μm,15.0s,MS5.9
CLNS MLR MLR
comp=Z,9μm,17.0s,MS6.0
CLNS MLR MLR
comp=E,5μm,16.0s,MS5.9
KMBO Kilima Mbogo 59.97 268 P **P 03 03 32.6 +0.7**
comp=E,3.1nm,0.8s,mb4.4,baz=1.0,slow=23,SNR=6.9
KMBO LR LR 03 28 36.2
comp=E,3μm,18.1s,MS5.5,baz=91,slow=35
KMBO Kilima Mbogo 59.97 268 *e*P **P 03 03 33.4 +1.5**
comp=E,52nm,1.7s,mb5.3
KMBO LR LR
comp=Z,2μm,19.0s,MS5.3
KMBO Kilima Mbogo 59.97 268 P pP 03 03 40.6 0.0
SNR=5.3
KMBO P 03 03 40.6
SNR=5.3
KMBO Kilima Mbogo 59.97 268 P pP 03 03 40.6 0.0
SNR=5.3
KMBO P 03 03 40.6
SNR=5.3
KMBO Kilima Mbogo 59.97 268 P pP 03 03 40.6 0.0
SNR=5.3
KMBO P 03 03 40.6
SNR=5.3
KMBO Kilima Mbogo 59.97 268 P pP 03 03 40.6 0.0
SNR=5.3
KMBO P 03 03 40.6
SNR=5.3
KMBO Kilima Mbogo 59.97 268 *e*P **P 03 03 33.2 +1.3**
YSS Yuzh-Sakhalins 60.25 34*oe*P **P 03 03 33.1 -0.1**
YSS *e* pP 03 03 41.4 -0.5
YSS *e**SP sP 03 03 50.1 +4.9
YSS *e*S **S 03 11 48.0 +2.5**
YSS *e*PS 03 11 58.0
YSS *e*PPS 03 12 14.0
YSS pmax pmax
comp=N,110nm,1.1s
YSS pmax pmax
comp=Z,210nm,1.1s,mb6.1
YSS MLR MLR
comp=E,5μm,15.0s,MS5.8
YSS MLR MLR
comp=Z,5μm,15.0s,MS5.8
YSS MLR MLR
comp=N,2μm,14.0s,MS5.8
YSS Yuzh-Sakhalins 60.25 34 *e*P **P 03 03 34.1 +0.9**
comp=N,280nm,1.1s,mb6.2
YSS LR LR
comp=Z,573nm,20.0s,MS4.7
YUK Yuzh-Kuril'sk 60.52 38 *e*P **P 03 03 33.2 -1.9**
YUK *e*S **S 03 12 07.0 +18**
YUK pmax pmax
comp=N,700nm,16.0s
YUK pmax pmax
comp=E,700nm,16.0s
YUK pmax pmax
comp=Z,600nm,16.0s
YUK MLR MLR
comp=Z,3μm,14.0s,MS5.6
YUK MLR MLR
comp=N,800nm,15.0s,MS5.5
YUK MLR MLR
comp=E,3μm,15.0s,MS5.5
CAN Canberra 60.53 132 *e*P **P 03 03 36.5 +1.1**
CAN pmax pmax
comp=Z,25nm,0.8s,mb5.4
CAN MLR MLR
comp=Z,9μm,21.0s,MS5.9
CAN Canberra 60.53 132 *e*P **P 03 03 36.5 +1.1**
comp=Z,25nm,0.8s,mb5.4
CAN LR LR
comp=Z,9μm,21.0s,MS5.9
MAK Makhachkala 60.61 320 *e*P **P 03 03 33.0 -2.8**
MAK *i* 03 04 16.2
MAK *e*S **S 03 11 47.7 -2.6**
MAK *i* 03 13 20.7
MAK *e*SS SS 03 15 46.0 -3.1
MAK pmax pmax
comp=Z,117nm,1.6s,mb5.8
ARMA Armidale 60.64 126 *e*P **P 03 03 37.3 +1.1**
ARMA Armidale 60.64 126 *e*P **P 03 03 37.5 +1.3**
comp=Z,169nm,1.6s,mb5.9
CNB Canberra Magne 60.80 132 *e*P **P 03 03 37.3 +0.1**
GNI Garni 61.17 316 P **P 03 03 39.3 -0.4**
comp=Z,4.1nm,0.4s,mb4.9,baz=352,slow=20,SNR=13
GNI Garni 61.17 316 *e*P **P 03 03 39.7 0.0**
GNI pmax pmax
comp=Z,64nm,0.9s
GNI MLR MLR
comp=Z,1μm,19.0s
GNI Garni 61.17 316 *e*P **P 03 03 39.7 +0.1**
comp=Z,64nm,0.9s,mb5.8
GNI LR LR
comp=Z,1μm,19.0s,MS5.1
GNI Garni 61.17 316 P **P 03 03 40.6 +0.9**
SNR=10.0
GNI P 03 03 40.6
SNR=10.0
GNI Garni 61.17 316 P **P 03 03 40.6 +0.9**
SNR=10.0
GNI P 03 03 40.6
SNR=10.0
GNI Garni 61.17 316 P **P 03 03 40.6 +0.9**
SNR=10.0
GNI P 03 03 40.6
SNR=10.0
GNI Garni 61.17 316 P **P 03 03 40.6 +0.9**
SNR=10.0
GNI P 03 03 40.6
SNR=10.0
DGRG David-gareji 61.31 318 P **P 03 03 41.1 +0.6**
MTA Mtatsminda 61.81 318 P **P 03 03 43.8 -0.1**
TBLG Delisi 61.86 318 *i* P **P 03 03 44.4 +0.1**
TBLG Delisi 61.86 318 P **P 03 03 44.4 +0.2**
GOR Gori 62.40 318 P **P 03 03 48.4 +0.5**
SVE Sverdlovsk 62.55 338‖ *e*P **P 03 03 48.5 0.0**
SVE *e* 03 04 35.5
SVE *e* 03 06 02.5
SVE *e*S **S 03 12 12.6 -1.7**
SVE *e* 03 13 42.6
SVE pmax pmax
comp=Z,140nm,1.2s,mb6.0
SVE MLR MLR
comp=Z,3μm,18.0s,MS5.5
KEH Kehvi 62.65 318 P **P 03 03 48.5 -1.1**
ZEI Tsey 62.88 318 *e*P **P 03 03 48.0 -3.0**
ZEI pmax pmax
comp=Z,60nm,1.0s,mb5.7
ARU Arti 63.04 337 P **P 03 03 51.6 -0.3**
comp=Z,322nm,1.3s,mb6.3,SNR=13
ARU Arti 63.04 337*c i*P **P 03 03 51.2 -0.7**
ARU 03 04 26.2
ARU 03 06 13.0
ARU PPP 03 07 41.0
ARU S **S 03 12 21.0 +0.4**
ARU 03 13 37.5
ARU SSS 03 19 16.9
ARU pmax pmax
comp=Z,129nm,1.7s,mb5.8
ARU MLR MLR
comp=Z,3μm,18.0s,MS5.5
ARU Arti 63.04 337 *e*P **P 03 03 50.8 -1.1**
comp=Z,95nm,1.2s,mb5.8
ARU LR LR
comp=Z,3μm,20.0s,MS5.4
ONI Oni 63.09 318 P **P 03 03 52.7 +0.2**
HNR Honiara 63.42 101 *e*P **P 03 03 54.2 -1.0**
HNR pmax pmax
comp=Z,92nm,0.6s,mb6.1
HNR MLR MLR
comp=Z,2μm,21.0s,MS5.2
HNR Honiara 63.42 101 *e*P **P 03 03 54.2 -0.9**
comp=Z,92nm,0.6s,mb6.1
HNR LR LR
comp=Z,2μm,21.0s,MS5.2
KIV Kislovodsk 64.18 319 P **P 03 03 59.6 -0.1**
comp=Z,444nm,0.9s,mb6.5,SNR=10.0
KIV Kislovodsk 64.18 319*c i*P **P 03 03 59.5 -0.2**
KIV *e* 03 04 34.9
KIV *e*S **S 03 12 34.0 -1.3**
KIV *e*SS SS 03 16 43.7 -1.3
KIV pmax pmax
comp=Z,154nm,6.9s
KIV pmax pmax
comp=Z,83nm,1.1s,mb5.7
KIV Kislovodsk 64.18 319 *e*P **P 03 03 59.4 -0.2**
comp=Z,72nm,0.9s,mb5.7
KIV LR LR
comp=Z,1μm,20.0s,MS5.1
KIV Kislovodsk 64.18 319 P **P 03 03 59.9 +0.2**
SNR=16
KIV P 03 03 59.9
SNR=16
KIV Kislovodsk 64.18 319 P **P 03 03 59.9 +0.2**
SNR=16
KIV P 03 03 59.9
SNR=16
KIV Kislovodsk 64.18 319 P **P 03 03 59.9 +0.2**
SNR=16
KIV P 03 03 59.9
SNR=16
KIV Kislovodsk 64.18 319 P **P 03 03 59.9 +0.2**
SNR=16
KIV P 03 03 59.9
SNR=16
ASF Jabal al Asfar 64.36 305 P **P 03 04 00.9 -0.2**
comp=Z,7.9nm,0.9s,mb4.7,baz=346,slow=3.0,SNR=12
YAK Yakutsk 65.29 16 *e*P **P 03 04 05.7 -0.8**
YAK *e**PP pP 03 04 13.7 -1.6
YAK *e* 03 06 28.1
YAK *e*S S 03 12 46.4 -1.8
YAK pmax pmax
comp=Z,458nm,1.6s,mb6.3
YAK pmax pmax
comp=N,164nm,1.5s
YAK pmax pmax
comp=E,160nm,1.5s
YAK pmax pmax
comp=Z,26nm,0.4s,mb5.6
YAK pmax pmax
comp=N,8.0nm,0.6s
YAK pmax pmax
comp=E,7.0nm,0.5s
YAK smax
comp=N,427nm,4.7s
YAK smax
comp=E,279nm,5.1s
YAK MLR MLR
comp=N,7μm,18.0s,MS6.0
YAK MLR MLR
comp=Z,10μm,17.0s,MS6.1
YAK MLR MLR
comp=E,5μm,16.0s,MS6.0

YAK	**Yakutsk**	**65.29**	**16**	*e*P	**P**	**03 04 06.1**	**-0.4**
	comp=E,355nm,1.0s,mb6.3						
YAK				LR	LR		
	comp=Z,7μm,22.0s,MS5.8						
EIL	**Elat**	**65.36**	**302**	P	**P**	**03 04 08.7**	**+1.0**
	comp=Z,16nm,0.8s,mb5.1,baz=96,slow=3.5,SNR=21						
MMAI	**Mount Meron Ar**	**65.80**	**306**	P	**P**	**03 04 12.2**	**+1.8**
	comp=Z,12nm,1.0s,mb4.9,baz=102,slow=8.0,SNR=12						
MMAI				LR	LR	03 33 58.5	
	comp=Z,1μm,19.5s,MS5.1,baz=110,slow=37						
SOC	**Sochi**	**66.00**	**318***c*	*i*P	**P**	**03 04 09.5**	**-2.0**
SOC				*e**PP	pP	03 04 18.8	-1.4
SOC				*e**SP	sP	03 04 21.8	-1.7
SOC				*e*		03 04 39.1	
SOC				*e*PPP		03 08 11.6	
SOC				*e*S	S	03 12 54.8	-2.8
SOC				*e**SS	sS	03 13 29.0	+17
SOC				*e*		03 13 54.5	
SOC				*e*SS	SS	03 17 11.9	-1.3
SOC				pmax	pmax		
	comp=Z,59nm,1.1s,mb5.5						
SOC				MLR	MLR		
	comp=Z,1μm,22.0s,MS5.1						
SOC	**Sochi**	**66.00**	**318**⇑	*i*P	**P**	**03 04 09.7**	**-1.8**
MIR	**Mirnyy**	**67.81**	**182**	*e*P	**P**	**03 04 23.0**	**+0.5**
MIR				*i*	pP	03 04 30.0	-1.3
MIR				pmax	pmax		
	comp=Z,54nm,2.0s,mb5.2						
CSS	**Prodhromos**	**67.96**	**307**	*e*P	**P**	**03 04 23.8**	**-0.3**
	comp=Z,72nm,1.3s,mb5.5						
CSS				LR	LR		
	comp=Z,2μm,20.0s,MS5.3						
ANN	**Anapa**	**67.98**	**318**	*e*P	**P**	**03 04 21.0**	**-3.0**
ANN				*e*PPP		03 08 36.5	
ANN				*e*S	S	03 13 16.9	-4.5
ANN				pmax	pmax		
	comp=Z,284nm,9.9s						
ANN				MLR	MLR		
	comp=Z,1μm,21.0s,MS5.0						
CASY	**Casey**	**68.15**	**174**	*e*P	**P**	**03 04 25.9**	**+1.3**
CASY	**Casey**	**68.15**	**174**	*e*P	**P**	**03 04 26.1**	**+1.5**
	comp=Z,27nm,1.2s,mb5.2						
CASY				LR	LR		
	comp=Z,3μm,20.0s,MS5.5						
BR131	**Keskin Array S**	**69.00**	**312**	*e*P	**P**	**03 04 29.7**	**-0.8**
	comp=Z,11nm,0.6s,mb5.0						
BR131				LR	LR		
	comp=Z,518nm,19.0s,MS4.8						
POGA	**Pongola**	**69.07**	**240**⇑	*i*P	**P**	**03 04 31.1**	**-0.1**
VSR	**Storozhevoye**	**69.44**	**325***c*	*i*P	**P**	**03 04 31.4**	**-1.6**
VSR				*i* *SP	sP	03 04 42.5	-2.6
VSR				*e*S	S	03 13 30.5	-8.0
VSR				pmax	pmax		
	comp=E,20nm,0.8s						
VSR				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.4						
VSR				pmax	pmax		
	comp=N,4.0nm,0.4s						
VSR				smax			
	comp=E,60nm,2.1s						
VSR				smax			
	comp=Z,80nm,4.2s						
VSR				smax			
	comp=N,50nm,1.4s						
VSR				MLR	MLR		
	comp=N,2μm,23.0s,MS5.3						
VSR				MLR	MLR		
	comp=E,1μm,23.0s,MS5.3						
VSR				MLR	MLR		
	comp=Z,1μm,23.0s,MS5.2						
MSNA	**Messina**	**69.47**	**246**	*e*P	pP	03 04 41.0	-1.6
MSNA				AMS	AMS	03 32 44.8	
	comp=Z,3μm,17.9s,MS5.5						
VOR	**Voronezh**	**69.64**	**326**	*e*P	**P**	**03 04 35.0**	**+0.8**
VOR				pmax	pmax		
	comp=Z,200nm,2.0s,mb5.7						
SKR	**Severo-Kuril's**	**69.75**	**36**	*e*P	**P**	**03 04 35.5**	**+0.5**
SKR				*e*		03 04 51.0	
SKR				*e*		03 07 15.0	
SKR				*e*PPP		03 08 43.0	
SKR				*e*S	S	03 13 43.0	+0.8
SKR				*e*		03 14 33.0	
SKR				*e*SS	SS	03 18 11.0	-0.1
SKR				pmax	pmax		
	comp=E,90nm,1.0s						
SKR				pmax	pmax		
	comp=Z,110nm,1.0s,mb5.7						
SKR				pmax	pmax		
	comp=E,1μm,6.0s						
SKR				pmax	pmax		
	comp=Z,1μm,6.0s						
SKR				smax			
	comp=N,2μm,18.0s						
SKR				smax			
	comp=E,2μm,18.0s						
SKR				MLR	MLR		
	comp=N,1μm,18.0s,MS5.4						
SKR				MLR	MLR		
	comp=E,2μm,18.0s,MS5.4						
SKR				MLR	MLR		
	comp=Z,2μm,18.0s,MS5.5						
LSZ	**Lusaka**	**70.13**	**253**	*e*P	**P**	**03 04 38.6**	**+0.7**
LSZ				pmax	pmax		
	comp=Z,67nm,1.7s,mb5.3						
LSZ				MLR	MLR		
	comp=Z,4μm,19.0s,MS5.7						
LSZ	**Lusaka**	**70.13**	**253**	*e*P	**P**	**03 04 38.5**	**+0.6**
	comp=Z,67nm,1.7s,mb5.3						
LSZ				LR	LR		
	comp=Z,4μm,19.0s,MS5.7						
LSZ	**Lusaka**	**70.13**	**253**	P	pP	03 04 45.8	-1.0
	SNR=6.1						
LSZ				P		03 04 45.8	
	SNR=6.1

KEV Kevo 81.96 341 *e*P **P 03 05 43.9 -0.4**
KEV pmax pmax
comp=Z,29nm,1.0s,mb5.2
KEV MLR MLR
comp=Z,3μm,21.0s,MS5.6
KEV Kevo 81.96 341 *e*P **P 03 05 43.9 -0.3**
comp=Z,29nm,1.0s,mb5.2
KEV LR LR
comp=Z,3μm,21.0s,MS5.6
SMOL Smolenice 82.20 319 *e*P **P 03 05 47.0 +1.0**
SMOL Smolenice 82.20 319 *e*P **P 03 05 47.0 +1.0**
MORC Moravsky Berou 82.28 320 P **P 03 05 46.7 +0.3**
MORC Moravsky Berou 82.28 320 *e*P **P 03 05 46.3 -0.1**
comp=Z,35nm,1.3s,mb5.1
MORC Moravsky Berou 82.28 320⇑ *i*P **P 03 05 46.5 +0.1**
FUNA Funafuti 82.31 99 PFAKE 03 06 00.0 +13
FUNA LR LR
comp=Z,6μm,20.0s,MS6.0
CEL Celeste 82.32 308 *e*P **P 03 05 46.8 0.0**
comp=Z,48nm,1.0s,mb5.4
CEL LR LR
comp=Z,512nm,21.0s,MS4.9
ZST Bratislava 82.38 318 *e*P **P 03 05 47.4 +0.5**
comp=Z,18nm,0.8s,mb5.1
ZST *e*S S 03 16 13.2 +12
ZST LR LR
comp=Z,500nm,20.2s,MS4.9
ZST Bratislava 82.38 318 *e*P **P 03 05 47.4 +0.5**
ZST *e*pP pP 03 05 55.0 -0.9
ZST Bratislava 82.38 318 *e*S S 03 16 13.2 +12
ARCES ARCESS Array B 82.39 340 P **P 03 05 47.0 +0.4**
comp=Z,12nm,0.8s,mb4.8,baz=97,slow=4.7,SNR=40
ARCES LR LR 03 46 53.0
comp=Z,3μm,20.2s,MS5.6,baz=289,slow=39
ARE0 ARCESS Array S 82.39 340 *e*P **P 03 05 46.8 +0.2**
KOGS Kog 82.77 317 *e*P **P 03 05 49.0 0.0**
VRAC Vranov 82.84 319 P **P 03 05 48.7 -0.6**
comp=Z,1.9nm,0.6s,mb4.3,baz=44,slow=0.5,SNR=7.5
VRAC Vranov 82.84 319⇑⇑ **P 03 05 49.4 +0.2**
VRAC Vranov 82.84 319⇑ *i*P **P 03 05 49.4 +0.1**
GKP Gorka Klasztor 82.91 323 *e*P **P 03 05 49.0 -0.5**
URZ Urewera 82.92 129 LR LR 03 43 59.1
comp=Z,3μm,20.8s,MS5.7,baz=90,slow=37
URZ Urewera 82.92 129 *e*P **P 03 05 49.0 -1.0**
comp=Z,91nm,1.4s,mb5.6
DPC Dobruska-Polom 83.13 320 *e*P **P 03 05 51.1 +0.3**
DPC *e**PP pP 03 05 57.8 -1.9
DPC *e* 03 16 09.3
DPC MLR MLR
comp=Z,1μm,16.4s,MS5.3
DPC Dobruska-Polom 83.13 320 *e*P **P 03 05 51.1 +0.3**
DPC *e*pP pP 03 05 57.8 -1.9
DPC *e*S S 03 16 09.3 +0.5
DPC AMS AMS 03 52 50.0
comp=Z,1μm,16.4s
CONA Conrad Observa 83.18 318⇑ *i*P **P 03 05 50.7 -0.4**
comp=Z,6.9nm,0.9s,mb4.7
KSP Ksiaz 83.20 321 *e*P **P 03 05 51.7 +0.5**
KSP Ksiaz 83.20 321⇑ *e*P **P 03 05 51.5 +0.4**
KSP *e*S S 03 16 08.0 -1.5
WDD Wield Dalam 83.26 306 PFAKE 03 06 00.0 +8.2
WDD LR LR
comp=Z,923nm,21.0s,MS5.1
UPC Upice 83.34 321 *e*P **P 03 05 52.2 +0.3**
UPC *e**PP pP 03 05 59.5 -1.3
UPC Upice 83.34 321 *e*P **P 03 05 52.2 +0.3**
UPC *e*pP pP 03 05 59.5 -1.3
ARSA Arzberg 83.34 317⇑ *i*P **P 03 05 52.2 +0.2**
comp=Z,23nm,1.2s,mb5.1,SNR=6.5
BOJS Bojanci 83.38 315 *e*P **P 03 05 52.0 -0.2**
TREC Trest 83.56 319 *e*P **P 03 05 52.8 -0.2**
TREC *e**PP pP 03 05 59.6 -2.4
TREC *e* 03 16 10.7
TREC MLR MLR
comp=Z,900nm,22.0s,MS5.1
TREC Trest 83.56 319 *e*P **P 03 05 52.8 -0.2**
TREC *e*pP pP 03 05 59.6 -2.4
TREC *e*S S 03 16 10.7 -2.5
TREC AMS AMS 03 53 50.0
comp=Z,900nm,22.0s
PERS Pernice 83.57 317 *e*P **P 03 05 53.4 +0.3**
PERS *e*S S 03 16 11.1 -2.4
SOKA Soboth 83.63 317⇓ *i*P **P 03 05 53.6 +0.2**
comp=Z,39nm,1.7s,mb5.3
LJU Ljubljana 83.93 316 *e*P **P 03 05 55.1 +0.1**
PRU Pruhonice 84.23 320 *e*P **P 03 05 57.0 +0.6**
PRU *e**PP pP 03 06 03.2 -2.2
PRU *e* 03 16 20.7
PRU MLR MLR
comp=Z,900nm,20.0s,MS5.2
PRU Pruhonice 84.23 320 *e*P **P 03 05 57.0 +0.6**
PRU *e*pP pP 03 06 03.2 -2.2
PRU *e*S S 03 16 20.7 +0.7
PRU AMS AMS 03 49 30.0
comp=Z,900nm,20.0s
MOA Molln 84.24 318⇑ *i*P **P 03 05 56.1 -0.5**
comp=Z,12nm,1.0s,mb5.0
PVCC Panska Ves 84.26 320 *e*P **P 03 05 56.6 0.0**
PVCC *e**PP pP 03 06 02.7 -2.8
PVCC *e* 03 16 21.2
PVCC MLR MLR
comp=Z,1μm,19.3s,MS5.2
PVCC Panska Ves 84.26 320 *e*P **P 03 05 56.6 0.0**
PVCC *e*pP pP 03 06 02.7 -2.8
PVCC *e*S S 03 16 21.2 +1.0
PVCC AMS AMS 03 49 20.0
comp=Z,1μm,19.3s
PRA Prague 84.31 320 P **P 03 05 57.0 +0.2**
VOY Vojsko 84.37 316 *e*P **P 03 05 56.8 -0.4**
VOY *e* 03 06 07.9
VOY *e* 03 06 27.8
TRI Trieste 84.43 316 PFAKE 03 06 10.0 +12
TRI LR LR
comp=Z,810nm,20.0s,MS5.1
BSD Bornholm Skovb 84.47 325 *i* P **P 03 05 56.2 -1.3**
comp=Z,18nm,1.0s,mb5.2
CADS Cadrg 84.49 316 *e*P **P 03 05 57.4 -0.4**
AQU L'Aquila 84.49 312 P **P 03 05 58.3 +0.4**
AQU L'Aquila 84.49 312 *e*P **P 03 05 57.9 -0.1**
comp=Z,39nm,0.9s,mb5.5
AQU LR LR
comp=Z,1μm,20.0s,MS5.2
AQU L'Aquila 84.49 312⇑ *i*P **P 03 05 58.0 +0.1**
ROBS Robic 84.65 316 *e*P **P 03 05 57.9 -0.7**
ROBS *e* 03 10 54.3
BRG Berggiesshubel 84.68 321 *e*P **P 03 05 58.6 -0.1**
comp=Z,62nm,1.9s,mb5.4
BRG *e*S S 03 16 23.8 -0.7
BRG Berggiesshubel 84.68 321 *e*P **P 03 05 58.8 +0.1**
comp=Z,24nm,1.3s,mb5.2
BRG *i* 03 06 10.2
comp=Z,39nm,1.7s
BRG *e*PP PP 03 09 12.4 -2.3
comp=Z,16nm,1.9s
BRG S S 03 16 25.0 +0.5
BRG
comp=N,1μm,22.3s
BRG
comp=E,850nm,20.0s
BRG
comp=Z,1μm,22.3s
GEC2 GERESS Array S 84.69 319 *e*P **P 03 05 58.8 0.0**
comp=Z,76nm,1.6s,mb5.6
GEC2 *e*pP pP 03 06 06.0 -1.8
GEC2 *e*S S 03 16 23.1 -1.5
GEC2 GERESS Array S 84.69 319 *e*P **P 03 05 58.8 0.0**
GEC2 *e**PP pP 03 06 06.0 -1.8
GEC2 *e*S S 03 16 23.1 -1.5
GEC2 pmax pmax
comp=Z,76nm,1.6s,mb5.6
KHC Kasperske Hory 84.79 319 *e*P **P 03 05 58.8 -0.5**
KHC *e**PP pP 03 06 06.1 -2.2
KHC *e* 03 16 23.0
KHC MLR MLR
comp=Z,1μm,19.5s,MS5.2
KHC Kasperske Hory 84.79 319 *e*P **P 03 05 59.0 -0.2**
comp=Z,7.3nm,0.8s,mb4.9
KHC Kasperske Hory 84.79 319 *e*P **P 03 05 58.8 -0.5**
KHC *e*pP pP 03 06 06.1 -2.2
KHC *e*S S 03 16 23.0 -2.6
KHC AMS AMS 03 50 00.0
comp=Z,1μm,19.5s
KBA Koelnbreinsper 84.81 317⇑ *i*P **P 03 05 58.4 -1.0**
comp=Z,18nm,1.8s,mb4.9,SNR=7.2

RJOB Jochberg 85.22 318 *e*P **P 03 06 00.6 -0.9**
comp=Z,14nm,1.2s,mb5.0
RJOB *e*S S 03 16 25.9 -4.1
WET Wettzell 85.25 319 *e*P **P 03 06 01.4 -0.2**
comp=Z,29nm,1.3s,mb5.2
WET *e*S S 03 16 29.7 -0.5
WET Wettzell 85.25 319 *e*P **P 03 06 01.4 -0.2**
WET *e*S S 03 16 29.7 -0.5
WET pmax pmax
comp=Z,29nm,1.3s,mb5.2
CLL Collm 85.31 321 *e*P **P 03 06 01.2 -0.6**
comp=Z,18nm,1.3s,mb5.0
CLL *e*S S 03 16 28.6 -2.0
CLL Collm 85.31 321 *i* P **P 03 06 01.5 -0.3**
CLL *i* pP 03 06 11.6 +0.8
CLL *e*S S 03 16 27.0 -3.6
CLL pmax pmax
comp=Z,17nm,1.2s,mb5.0
CLL MLR MLR
comp=Z,1μm,17.3s,MS5.3
CLL Collm 85.31 321 *i* P **P 03 06 01.5 -0.3**
comp=Z,17nm,1.2s,mb5.0
CLL *i* PcP PcP 03 06 04.0 -0.9
CLL *i* pP pP 03 06 08.0 -2.8
CLL *i* sPcP pP 03 06 11.6 +0.8
CLL *e*(PP) 03 09 07.0
CLL *e*PPP 03 11 06.0
CLL *e* 03 12 05.0
CLL *e*S S 03 16 27.0 -3.6
CLL *e*PS 03 17 35.0
CLL *e*SSS 03 25 41.0
CLL *e* 03 26 54.0
CLL *e*SSSS 03 28 34.0
MIDW Midway 85.36 62 PFAKE 03 06 10.0 +7.4
MIDW LR LR
comp=Z,662nm,20.0s,MS5.0
HFS Hagfors 85.59 330 P **P 03 06 02.5 -0.5**
comp=Z,13nm,1.0s,mb5.1,baz=113,slow=3.9,SNR=12
NKC Novy Kostel 85.59 320 *e*P **P 03 06 03.3 0.0**
NKC *e**PP pP 03 06 10.5 -1.8
NKC *e* 03 16 35.9
NKC MLR MLR
comp=Z,1μm,17.7s,MS5.3
NKC Novy Kostel 85.59 320 *e*P **P 03 06 03.3 0.0**
NKC *e*pP pP 03 06 10.5 -1.8
NKC *e*S S 03 16 35.9 +2.4
NKC AMS AMS 03 52 40.0
comp=Z,1μm,17.7s
TANN Tannenbergstha 85.59 320 *e*P **P 03 06 03.1 -0.2**
comp=Z,15nm,1.3s,mb5.1
TANN *e*S S 03 16 35.3 +1.8
ROTZ Rotzenmuhle 85.72 320 *e*P **P 03 06 04.2 +0.3**
ROTZ *e*P 03 06 04.7
ROTZ *e*pP pP 03 06 11.6 -1.3
ROTZ *e*S S 03 16 36.3 +1.5
WTTA Wattenberg 85.99 317⇑ *i*P **P 03 06 04.6 -0.6**
comp=Z,14nm,0.9s,mb5.2
MOX Moxa 86.15 320 *e*P **P 03 06 06.5 +0.5**
comp=Z,30nm,1.7s,mb5.2
MOX *e*S S 03 16 32.0 -6.9
MOX
comp=Z,800nm,21.0s
MOX Moxa 86.15 320 *e*P **P 03 06 05.8 -0.2**
comp=Z,22nm,1.5s,mb5.2
MOX Moxa 86.15 320 *e*P **P 03 06 06.5 +0.5**
MOX *e*S S 03 16 32.0 -6.9
MOX pmax pmax
comp=Z,30nm,1.7s,mb5.2
MOX MLR MLR
comp=Z,800nm,21.0s,MS5.1
RAO Raoul Island 86.20 119 LR LR 03 44 23.6
comp=Z,2μm,20.4s,MS5.4,baz=336,slow=36
RAO Raoul Island 86.20 119 PFAKE 03 06 20.0 +13
RAO LR LR
comp=Z,3μm,19.0s,MS5.8
FUR Furstenfeldbru 86.27 318 *e*P **P 03 06 05.9 -0.7**
comp=Z,10.0nm,0.5s,mb5.3
FUR *e*S S 03 16 38.7 -1.5
FUR Furstenfeldbru 86.27 318 *e*P **P 03 06 05.9 -0.7**
FUR *e*S S 03 16 38.7 -1.5
FUR pmax pmax
comp=Z,10.0nm,0.5s,mb5.3
MOTA Moosalm 86.35 317⇑ *i*P **P 03 06 06.2 -0.9**
comp=Z,9.4nm,0.9s,mb5.0
GRA1 Grafenberg Arr 86.36 320 *e*P **P 03 06 07.2 +0.1**
comp=Z,40nm,1.2s,mb5.5
GRA1 *e*pP pP 03 06 14.6 -1.5
GRA1 *e*PP PP 03 09 29.3 +0.9
GRA1 *e*pPP 03 09 38.9
GRA1 *e*S S 03 16 39.6 -1.4
GRA1 LR LR
comp=Z,1μm,21.4s,MS5.2
GRF Grafenberg Arr 86.36 320 *e*P **P 03 06 07.2 +0.1**
comp=Z,40nm,1.2s,mb5.5
GRF *e*pP pP 03 06 14.6 -1.5
GRF *e*PP PP 03 09 29.3 +0.9
GRF *e*pPP 03 09 38.9
GRF *e*S S 03 16 39.6 -1.4
GRF *e*L 03 51 48.1
comp=Z,978nm,21.4s
GRF Grafenberg Arr 86.36 320 *e*P **P 03 06 07.2 +0.1**
GRF *e**PP pP 03 06 14.6 -1.5
GRF *e* 03 09 29.3
GRF *e*S S 03 16 39.6 -1.4
GRF pmax pmax
comp=Z,40nm,1.2s,mb5.5
GRF Grafenberg Arr 86.36 320 *e*P **P 03 06 07.2 +0.1**
GRF *e**PP pP 03 06 14.6 -1.5
GRF *e* 03 09 29.3
GRF *e*S S 03 16 39.6 -1.4
GRF pmax pmax
comp=Z,40nm,1.2s,mb5.5
GRF MLR MLR
comp=Z,1μm,21.4s,MS5.2
ADK Adak 86.56 38 PFAKE 03 06 20.0 +12
ADK LR LR
comp=Z,687nm,21.0s,MS5.0
RETA Reutte 86.59 317⇑ *i*P **P 03 06 07.8 -0.5**
comp=Z,25nm,1.2s,mb5.3,SNR=7.0
FETA Feichten 86.60 317⇑ *i*P **P 03 06 07.9 -0.4**
comp=Z,20nm,1.8s,mb5.0,SNR=6.1
VLC Villacollemand 86.76 314 PFAKE 03 06 20.0 +11
VLC LR LR
comp=Z,1μm,21.0s,MS5.2
SPITS Spitsbergen Ar 86.81 348 P **P 03 06 07.1 -1.7**
comp=Z,35nm,1.1s,mb5.5,baz=107,slow=7.9,SNR=12
SPITS Spitsbergen Ar 86.81 348 P **P 03 06 07.1 -1.7**
NB2 NORSAR Subarra 86.87 331 P **P 03 06 08.5 -0.8**
comp=Z,106nm,2.0s,mb5.7,baz=95,slow=4.8
NB2 NORSAR Subarra 86.87 331 P **P 03 06 08.5 -0.8**
NB2 NORSAR Subarra 86.87 331 P **P 03 06 08.5 -0.8**
NOA NORSAR Array B 86.87 331 P **P 03 06 08.8 -0.5**
comp=Z,7.6nm,0.8s,mb5.0,baz=94,slow=4.9,SNR=24
NOA PP PP 03 09 33.1 +0.9
comp=Z,2.8nm,0.9s,baz=92,slow=8.7,SNR=3.7
NOA LR LR 03 50 58.1
comp=Z,1μm,20.4s,MS5.3,baz=100,slow=40
NOA NORSAR Array B 86.87 331 P **P 03 06 08.8 -0.5**
NOA 03 09 33.1
NOA NORSAR Array B 86.87 331 P **P 03 06 08.8 -0.5**
NOA PP PP 03 09 33.1 +0.9
NOA LR LR 03 50 58.1
CLZ Clausthal 86.97 322 *e*P **P 03 06 10.0 0.0**
comp=Z,33nm,1.4s,mb5.4
CLZ *e*pP pP 03 06 17.5 -1.5
CLZ *e*S S 03 16 43.2 -3.7
CLZ Clausthal 86.97 322 *e*P **P 03 06 10.0 0.0**
CLZ *e**PP pP 03 06 17.5 -1.5
CLZ *e*S S 03 16 43.2 -3.7
CLZ pmax pmax
comp=Z,33nm,1.4s,mb5.4
NAO01 NORSAR Array S 87.02 331 *e*P **P 03 06 10.0 -0.1**
comp=Z,16nm,0.9s,mb5.2
NAO01 LR LR
comp=Z,2μm,20.0s,MS5.5
SBA Scott Base 87.07 169 *e*P **P 03 06 10.8 +0.8**
SBA pmax pmax
comp=Z,38nm,1.2s,mb5.5
SBA MLR MLR
comp=Z,2μm,20.0s,MS5.5
SBA Scott Base 87.07 169 *e*P **P 03 06 10.8 +0.8**
comp=Z,38nm,1.2s,mb5.5
SBA LR LR
comp=Z,2μm,20.0s,MS5.5

BSEG Bad Segeberg 87.07 324 *e*P **P 03 06 10.7 +0.3**
comp=Z,51nm,1.4s,mb5.6
BSEG *e*pP pP 03 06 17.9 -1.5
BSEG *e*S S 03 16 46.6 -1.1
BSEG Bad Segeberg 87.07 324 *e*P **P 03 06 10.7 +0.3**
BSEG *e**PP pP 03 06 17.9 -1.5
BSEG *e*S S 03 16 46.6 -1.1
BSEG pmax pmax
comp=Z,51nm,1.4s,mb5.6
NRDL Niedersach Rie 87.15 322 *e*P **P 03 06 11.2 +0.3**
comp=Z,60nm,1.6s,mb5.6
NRDL *e*S S 03 16 46.2 -2.4
DAVOX Davos/Dischmat 87.17 317 P **P 03 06 11.2 +0.1**
comp=Z,8.1nm,0.6s,mb5.1,baz=133,slow=4.4,SNR=18
UBBA Unterbreizbach 87.18 321 *e*P **P 03 06 10.9 -0.1**
comp=Z,9.0nm,1.0s,mb5.0
UBBA *e*pP pP 03 06 18.2 -1.9
UBBA *e*S S 03 16 46.4 -2.5
DAVA Damuels 87.18 317⇑ *i*P **P 03 06 11.1 0.0**
comp=Z,18nm,1.1s,mb5.2,SNR=7.0
VSL Villasalto 87.45 309 *e*P **P 03 06 12.7 0.0**
comp=Z,26nm,1.3s,mb5.3
VSL LR LR
comp=Z,400nm,19.0s,MS4.8
KEST Kesra 87.46 306 P **P 03 06 12.8 0.0**
comp=Z,5.4nm,0.9s,mb4.8,baz=322,slow=2.1,SNR=18
KEST LR LR 03 45 50.1
comp=Z,643nm,20.6s,MS5.0,baz=7.6,slow=36
KEST Kesra 87.46 306 *e*P **P 03 06 13.4 +0.7**
TUE Stuetta 87.53 316 *e*P **P 03 06 12.7 -0.2**
comp=Z,24nm,1.4s,mb5.2
TUE LR LR
comp=Z,976nm,19.0s,MS5.2
KONO Kongsberg 87.62 329 *e*P **P 03 06 12.7 -0.3**
KONO pmax pmax
comp=Z,29nm,1.3s,mb5.3
KONO MLR MLR
comp=Z,1μm,19.0s,MS5.4
KONO Kongsberg 87.62 329 *e*P **P 03 06 12.7 -0.3**
comp=Z,29nm,1.3s,mb5.3
KONO LR LR
comp=Z,1μm,19.0s,MS5.4
STU Stuttgart 87.66 319 *e*P **P 03 06 13.1 -0.3**
comp=Z,14nm,0.8s,mb5.2
STU *e*S S 03 16 52.7 -1.0
PGF Pioggiola 87.75 312 *e*P **P 03 06 13.6 -0.4**
comp=Z,42nm,1.4s,mb5.2
PGF Pioggiola 87.75 312 *e*P **P 03 06 13.6 -0.4**
PGF pmax pmax
comp=Z,21nm,1.4s,mb5.2
PGF Pioggiola 87.75 312 *e*P **P 03 06 13.6 -0.4**
comp=Z,21nm,1.4s,mb5.2
KBS Kingsbay 87.77 349 *e*P **P 03 06 12.4 -1.0**
KBS MLR MLR
comp=Z,2μm,20.0s,MS5.6
KBS Kingsbay 87.77 349⇑ *e*P **P 03 06 12.4 -1.0**
KBS LR LR
comp=Z,2μm,20.0s,MS5.6
MUD Monsted U'grnd 87.78 326 *i* P **P 03 06 13.9 +0.1**
comp=Z,15nm,1.1s,mb5.1
TOD Tromm 87.93 319 *e*P **P 03 06 14.4 -0.3**
SPAK Spaichingen-Ko 87.93 318 *e*P **P 03 06 14.4 -0.3**
TNS Taunus Mts 88.16 320 *e*P **P 03 06 16.0 +0.2**
comp=Z,61nm,1.6s,mb5.6
TNS *e*S S 03 16 58.9 +0.6
TNS Taunus Mts 88.16 320 *e*P **P 03 06 16.0 +0.2**
TNS *e*S S 03 16 58.9 +0.6
TNS pmax pmax
comp=Z,61nm,1.6s,mb5.6
BFO Black Forest 88.24 318 *e*P **P 03 06 15.6 -0.6**
comp=Z,9.0nm,1.1s,mb4.9
BFO *e*S S 03 16 58.9 -0.2
BFO Black Forest 88.24 318 *e*P **P 03 06 15.6 -0.6**
comp=Z,9.0nm,1.1s,mb4.9
BFO *e*S S 03 16 58.9 -0.2
BFO LR LR
comp=Z,898nm,21.0s,MS5.2
FELD Feldberg im Sc 88.46 318 *e*P **P 03 06 17.2 0.0**
LANF Langenberg 88.58 319 *e*P **P 03 06 18.3 +0.5**
IBBN Ibbenburen 88.59 322 *e*P **P 03 06 17.9 +0.1**
comp=Z,81nm,1.5s,mb5.8
IBBN *e*pP pP 03 06 25.5 -1.3
IBBN *e*S S 03 17 01.3 -1.0
SAOF Saorge 88.80 314 *e*P **P 03 06 18.1 -0.9**
SBF Sospel 88.89 314 *e*P **P 03 06 19.0 -0.4**
comp=Z,67nm,1.1s,mb5.6
SBF Sospel 88.89 314 *e*P **P 03 06 19.0 -0.4**
SBF pmax pmax
comp=Z,33nm,1.1s,mb5.6
SBF Sospel 88.89 314 *e*P **P 03 06 19.0 -0.4**
comp=Z,33nm,1.1s,mb5.6
AUTN L'Aution 88.89 314 *e*P **P 03 06 20.3 +0.9**
BUG Bochum--Univer 88.90 321 *e*P **P 03 06 19.3 +0.1**
comp=Z,45nm,1.3s,mb5.6
BUG *e*S S 03 17 05.0 -0.3
CDF Champ du Feu 88.94 318 *e*P **P 03 06 18.9 -0.6**
comp=Z,40nm,1.5s,mb5.2
CDF Champ du Feu 88.94 318 *e*P **P 03 06 18.9 -0.6**
CDF pmax pmax
comp=Z,20nm,1.5s,mb5.2
CDF Champ du Feu 88.94 318 *e*P **P 03 06 18.9 -0.6**
comp=Z,20nm,1.5s,mb5.2
LUCF Luceram 88.95 314 *e*P **P 03 06 19.9 +0.2**
ECH Echery 89.02 318 *e*P **P 03 06 20.1 +0.2**
ECH Echery 89.02 318 *e*P **P 03 06 19.3 -0.6**
ECH pmax pmax
comp=Z,28nm,1.9s,mb5.3
ECH MLR MLR
comp=Z,849nm,20.0s,MS5.2
ECH Echery 89.02 318 *e*P **P 03 06 19.3 -0.5**
comp=Z,28nm,1.9s,mb5.3
ECH LR LR
comp=Z,849nm,20.0s,MS5.2
TOUF Mont Tournerai 89.02 314 *e*P **P 03 06 20.7 +0.7**
MVIF Mont Vial 89.09 314 *e*P **P 03 06 21.1 +0.8**
HINF Hinteralfeld 89.23 318 *e*P **P 03 06 20.0 -0.9**
LOMF Lomont 89.26 317 *e*P **P 03 06 21.4 +0.4**
CALN Calern 89.29 314 *e*P **P 03 06 21.8 +0.6**
LPG La Plagne 89.35 315 *e*P **P 03 06 21.5 0.0**
comp=Z,52nm,1.1s,mb5.5
LPG La Plagne 89.35 315 *e*P **P 03 06 21.5 0.0**
LPG pmax pmax
comp=Z,26nm,1.1s,mb5.5
LPG La Plagne 89.35 315 *e*P **P 03 06 21.5 0.0**
comp=Z,26nm,1.1s,mb5.5
MBDF Montbardon 89.35 315 *e*P **P 03 06 20.6 -0.9**
comp=Z,13nm,0.8s,mb5.0
MBDF Montbardon 89.35 315 *e*P **P 03 06 20.6 -0.9**
MBDF pmax pmax
comp=Z,7.0nm,0.8s,mb5.0
MBDF Montbardon 89.35 315 *e*P **P 03 06 20.6 -0.9**
comp=Z,6.7nm,0.8s,mb5.0
LPL La Plagne 89.36 315 *e*P **P 03 06 21.4 -0.1**
comp=Z,78nm,1.1s,mb5.6
LPL La Plagne 89.36 315 *e*P **P 03 06 21.4 -0.1**
LPL pmax pmax
comp=Z,39nm,1.1s,mb5.7
LPL La Plagne 89.36 315 *e*P **P 03 06 21.4 -0.1**
comp=Z,39nm,1.1s,mb5.7
BNI Bardonecchia 89.41 315 *e*P **P 03 06 20.7 -1.1**
BNI pmax pmax
comp=Z,10.0nm,0.9s,mb5.2
BNI MLR MLR
comp=Z,743nm,20.0s,MS5.1
BNI Bardonecchia 89.41 315 *e*P **P 03 06 20.7 -1.1**
comp=Z,10nm,0.9s,mb5.2
BNI LR LR
comp=Z,743nm,20.0s,MS5.1
FRF La Foret Royal 89.47 313 *e*P **P 03 06 21.9 -0.2**
comp=Z,26nm,0.9s,mb5.3
FRF La Foret Royal 89.47 313 *e*P **P 03 06 21.9 -0.2**
FRF pmax pmax
comp=Z,13nm,0.9s,mb5.3
FRF La Foret Royal 89.47 313 *e*P **P 03 06 21.9 -0.2**
comp=Z,13nm,0.9s,mb5.2
HAU Haudompre 89.57 318 *e*P **P 03 06 21.8 -0.6**
comp=Z,70nm,1.3s,mb5.5
HAU *e*MLR MLR
comp=Z,1μm,21.8s,MS5.0
HAU Haudompre 89.57 318 *e*P **P 03 06 21.8 -0.6**
HAU pmax pmax
comp=Z,35nm,1.3s,mb5.5
HAU MLR MLR
comp=Z,1μm,21.8s,MS5.2
HAU Haudompre 89.57 318 *e*P **P 03 06 21.8 -0.6**
comp=Z,35nm,1.3s,mb5.5

HAU LR LR
comp=Z,1µm,21.8s,MS5.2
LMR La Mourre 89.57 313 *e*P **P 03 06 22.2 -0.4**
comp=Z,55nm,1.5s,mb5.4
LMR La Mourre 89.57 313 *e*P **P 03 06 22.2 -0.4**
LMR pmax pmax
comp=Z,28nm,1.5s,mb5.4
LMR La Mourre 89.57 313 *e*P **P 03 06 22.2 -0.4**
comp=Z,28nm,1.5s,mb5.4
WLF Walferdange 89.65 319 P **P 03 06 22.8 0.0**
comp=Z,27nm,1.6s,mb5.3
WLF Walferdange 89.65 319 *e*P **P 03 06 23.2 +0.4**
comp=Z,65nm,1.5s,mb5.7
WLF *e*pP pP 03 06 30.3 -1.5
WLF *e*S S 03 17 11.8 -0.6
WLF Walferdange 89.65 319 *e*P **P 03 06 23.5 +0.7**
WLF pmax pmax
comp=Z,41nm,1.4s,mb5.6
WLF MLR MLR
comp=Z,884nm,20.0s,MS5.2
WLF Walferdange 89.65 319 *e*P **P 03 06 23.4 +0.7**
comp=Z,41nm,1.4s,mb5.6
WLF LR LR
comp=Z,884nm,20.0s,MS5.2
NVL N'lazarevskaya 89.71 199 *e*P **P 03 06 28.8 +6.2**
NVL *e**PP pP 03 06 38.6 +6.9
NVL *e**SP sP 03 06 46.8 +12
NVL *e*S SKSac 03 16 49.7 -1.3
NVL *e*SS SS 03 23 17.7 +8.8
NVL pmax pmax
comp=Z,59nm,0.9s,mb5.9
NVL MLR MLR
comp=Z,1µm,16.0s,MS5.5
MEM Membach 89.72 320 P **P 03 06 23.3 +0.2**
comp=Z,16nm,1.6s,mb5.1
MAIT Maitri 89.75 199 *e*P **P 03 06 25.3 +2.5**
MAIT *e*E pP 03 06 32.1 +0.3
CABF La Chapelle 89.78 316 *e*P **P 03 06 23.5 0.0**
comp=Z,71nm,1.3s,mb5.5
CABF La Chapelle 89.78 316 *e*P **P 03 06 23.5 0.0**
CABF pmax pmax
comp=Z,35nm,1.3s,mb5.5
CABF La Chapelle 89.78 316 *e*P **P 03 06 23.5 0.0**
comp=Z,36nm,1.3s,mb5.5
BEBN Eben Emael 89.92 321 P **P 03 06 24.0 0.0**
ORIF Oris-en-Rattie 89.98 315 *e*P **P 03 06 24.5 0.0**
comp=Z,132nm,1.7s,mb5.7
ORIF *e*MLR MLR
comp=Z,1µm,19.8s,MS5.1
ORIF Oris-en-Rattie 89.98 315 *e*P **P 03 06 24.5 0.0**
ORIF pmax pmax
comp=Z,66nm,1.7s,mb5.7
ORIF Oris-en-Rattie 89.98 315 *e*P **P 03 06 24.5 0.0**
comp=Z,66nm,1.7s,mb5.7
BCLA Clavier 90.17 320 P **P 03 06 25.8 +0.6**
comp=Z,17nm,1.8s,mb5.1
SMRF Simiane la Rot 90.23 314 *e*P **P 03 06 25.0 -0.6**
comp=Z,56nm,1.2s,mb5.5
SMRF Simiane la Rot 90.23 314 *e*P **P 03 06 25.0 -0.6**
comp=Z,56nm,1.3s,mb5.7
MEZF Maizieres J'vi 90.42 318 *e*P **P 03 06 26.2 -0.2**
comp=Z,123nm,1.6s,mb5.7
MEZF Maizieres J'vi 90.42 318 *e*P **P 03 06 26.2 -0.2**
comp=Z,123nm,1.6s,mb6.0
GIVF Givet 90.49 320 *e*P **P 03 06 26.7 0.0**
DOU Dourbes 90.64 320 P **P 03 06 27.6 +0.2**
comp=Z,16nm,1.8s,mb5.0
UCC Uccle 90.76 321 P **P 03 06 28.0 +0.1**
SNF Seneffe 90.82 320 P **P 03 06 28.6 +0.3**
comp=Z,24nm,1.9s,mb5.2
VIVF Saint-Julien-I 90.84 315 *e*P **P 03 06 28.3 -0.2**
comp=Z,42nm,1.2s,mb5.3
VIVF Saint-Julien-I 90.84 315 *e*P **P 03 06 28.3 -0.2**
VIVF pmax pmax
comp=Z,21nm,1.2s,mb5.3
VIVF Saint-Julien-I 90.84 315 *e*P **P 03 06 28.3 -0.2**
comp=Z,21nm,1.2s,mb5.3
BAIF Baives 90.89 320 *e*P **P 03 06 28.7 +0.1**
comp=Z,102nm,1.2s,mb5.7
BAIF Baives 90.89 320 *e*P **P 03 06 28.7 +0.1**
BAIF pmax pmax
comp=Z,51nm,1.2s,mb5.7
BAIF Baives 90.89 320 *e*P **P 03 06 28.7 +0.1**
comp=Z,51nm,1.2s,mb5.7
SSB Saint Sauveur 90.91 315 *e*P **P 03 06 28.7 -0.1**
SSB pmax pmax
comp=Z,21nm,1.2s,mb5.3
SSB MLR MLR
comp=Z,482nm,19.0s,MS5.0
SSB Saint Sauveur 90.91 315 *e*P **P 03 06 28.6 -0.1**
comp=Z,21nm,1.2s,mb5.3
SSB LR LR
comp=Z,482nm,19.0s,MS5.0
TAM Tamanrasset 91.01 293 *e*P **P 03 06 31.0 +1.3**
TAM pmax pmax
comp=Z,28nm,1.1s,mb5.5
TAM MLR MLR
comp=Z,843nm,19.0s,MS5.2
TAM Tamanrasset 91.01 293 *e*P **P 03 06 31.0 +1.2**
comp=Z,28nm,1.1s,mb5.5
TAM LR LR
comp=Z,843nm,19.0s,MS5.2
LOR Lormes 91.28 317 *e*P **P 03 06 30.2 -0.2**
comp=Z,81nm,1.2s,mb5.6
LOR *e*MLR MLR
comp=Z,1µm,21.0s,MS5.0
LOR Lormes 91.28 317 *e*P **P 03 06 30.2 -0.2**
LOR pmax pmax
comp=Z,41nm,1.2s,mb5.6
LOR MLR MLR
comp=Z,1µm,21.0s,MS5.3
LOR Lormes 91.28 317 *e*P **P 03 06 30.2 -0.2**
comp=Z,41nm,1.2s,mb5.6
LOR LR LR
comp=Z,1µm,21.0s,MS5.3
QSPA South Pole Qui 91.28 180 P **P 03 06 30.7 +1.0**
comp=Z,3.1nm,0.8s,mb4.7,baz=240,slow=1.6,SNR=14
QSPA South Pole Qui 91.28 180 *e*P **P 03 06 30.9 +1.1**
comp=Z,28nm,1.3s,mb5.4
QSPA LR LR
comp=Z,2µm,20.0s,MS5.6
SMF Signal de Mont 91.33 317 *e*P **P 03 06 30.3 -0.4**
comp=Z,77nm,1.2s,mb5.6
SMF Signal de Mont 91.33 317 *e*P **P 03 06 30.3 -0.4**
SMF pmax pmax
comp=Z,39nm,1.2s,mb5.6
SMF Signal de Mont 91.33 317 *e*P **P 03 06 30.3 -0.4**
comp=Z,38nm,1.2s,mb5.6
LASF Ste Croix 91.47 314 *e*P **P 03 06 31.5 +0.1**
comp=Z,64nm,1.4s,mb5.5
COLF Collangettes 91.50 315 *e*P **P 03 06 31.4 -0.1**
PLDF La Plantade 91.52 316 *e*P **P 03 06 32.5 +0.9**
SSF Saint Saulge 91.53 317 *e*P **P 03 06 31.5 -0.1**
comp=Z,87nm,1.5s,mb5.6
SSF Saint Saulge 91.53 317 *e*P **P 03 06 31.5 -0.1**
SSF pmax pmax
comp=Z,44nm,1.5s,mb5.6
SSF Saint Saulge 91.53 317 *e*P **P 03 06 31.5 -0.1**
comp=Z,44nm,1.5s,mb5.6
AVF Avril sur Loir 91.66 317 *e*P **P 03 06 31.8 -0.4**
comp=Z,44nm,1.1s,mb5.4
AVF Avril sur Loir 91.66 317 *e*P **P 03 06 31.8 -0.4**
AVF pmax pmax
comp=Z,22nm,1.1s,mb5.4
AVF Avril sur Loir 91.66 317 *e*P **P 03 06 31.8 -0.4**
comp=Z,22nm,1.1s,mb5.4
LBL Lubilhac 91.83 315 *e*P **P 03 06 33.4 +0.4**
AGO Saint Agoulin 91.86 316 *e*P **P 03 06 33.9 +0.8**
PYM Petit Puy Mans 91.96 316 *e*P **P 03 06 34.1 +0.5**
BGF Bois d'Agland 92.02 316 *e*P **P 03 06 34.0 +0.1**
comp=Z,88nm,1.2s,mb5.7
BGF Bois d'Agland 92.02 316 *e*P **P 03 06 34.0 +0.1**
BGF pmax pmax
comp=Z,44nm,1.2s,mb5.7
BGF Bois d'Agland 92.02 316 *e*P **P 03 06 34.0 +0.1**
comp=Z,44nm,1.2s,mb5.7
HYF Humbligny 92.11 317 *e*P **P 03 06 34.6 +0.3**
TCF Toulx Ste Croi 92.48 316 *e*P **P 03 06 36.0 0.0**
comp=Z,44nm,1.4s,mb5.3
TCF Toulx Ste Croi 92.48 316 *e*P **P 03 06 36.0 0.0**
TCF pmax pmax
comp=Z,22nm,1.4s,mb5.3
TCF Toulx Ste Croi 92.48 316 *e*P **P 03 06 36.0 0.0**
comp=Z,22nm,1.4s,mb5.3
CAF Calviac 92.69 315 *e*P **P 03 06 37.3 +0.3**
comp=Z,40nm,1.3s,mb5.4
CAF Calviac 92.69 315 *e*P **P 03 06 37.3 +0.3**

CAF pmax pmax
comp=Z,20nm,1.3s,mb5.4
CAF Calviac 92.69 315 *e*P **P 03 06 37.3 +0.3**
comp=Z,20nm,1.3s,mb5.4
MTLF Montolieu 92.70 313 *e*P **P 03 06 37.2 +0.1**
comp=Z,28nm,1.1s,mb5.3
MTLF Montolieu 92.70 313 *e*P **P 03 06 37.2 +0.1**
MTLF pmax pmax
comp=Z,14nm,1.1s,mb5.3
MTLF Montolieu 92.70 313 *e*P **P 03 06 37.2 +0.1**
comp=Z,14nm,1.1s,mb5.3
JOHN Johnston Islan 92.78 73 PFAKE 03 06 50.0 +12
JOHN LR LR
comp=Z,2µm,22.0s,MS5.4
RJF Les Rejaudoux 93.04 315 *e*P **P 03 06 38.9 +0.3**
comp=Z,77nm,1.4s,mb5.6
RJF *e*MLR MLR
comp=Z,986nm,20.0s,MS5.0
RJF Les Rejaudoux 93.04 315 *e*P **P 03 06 38.9 +0.3**
RJF pmax pmax
comp=Z,39nm,1.4s,mb5.6
RJF MLR MLR
comp=Z,990nm,20.0s,MS5.3
RJF Les Rejaudoux 93.04 315 *e*P **P 03 06 38.9 +0.3**
comp=Z,38nm,1.4s,mb5.6
RJF LR LR
comp=Z,990nm,20.0s,MS5.3
LFF La Frestale 93.62 315 *e*P **P 03 06 41.6 +0.3**
comp=Z,67nm,1.4s,mb5.6
LFF La Frestale 93.62 315 *e*P **P 03 06 41.6 +0.3**
LFF pmax pmax
comp=Z,34nm,1.4s,mb5.6
LFF La Frestale 93.62 315 *e*P **P 03 06 41.6 +0.3**
comp=Z,34nm,1.4s,mb5.6
LDF La Druitiere 93.84 319 *e*P **P 03 06 41.8 -0.4**
comp=Z,70nm,1.5s,mb5.6
LDF La Druitiere 93.84 319 *e*P **P 03 06 41.8 -0.4**
LDF pmax pmax
comp=Z,35nm,1.5s,mb5.6
LDF La Druitiere 93.84 319 *e*P **P 03 06 41.8 -0.4**
comp=Z,35nm,1.5s,mb5.6
FLN La Foliniere 94.05 319 *e*P **P 03 06 42.8 -0.4**
comp=Z,35nm,1.1s,mb5.4
FLN *e*MLR MLR
comp=Z,1µm,21.5s,MS5.0
FLN La Foliniere 94.05 319 *e*P **P 03 06 42.8 -0.4**
FLN pmax pmax
comp=Z,18nm,1.1s,mb5.4
FLN MLR MLR
comp=Z,1µm,21.5s,MS5.3
FLN La Foliniere 94.05 319 *e*P **P 03 06 42.8 -0.4**
comp=Z,18nm,1.1s,mb5.4
FLN LR LR
comp=Z,1µm,21.5s,MS5.3
MFF Saint Martin d 94.07 317 *e*P **P 03 06 43.0 -0.3**
comp=Z,110nm,1.7s,mb5.7
MFF Saint Martin d 94.07 317 *e*P **P 03 06 43.0 -0.3**
MFF pmax pmax
comp=Z,55nm,1.7s,mb5.7
MFF Saint Martin d 94.07 317 *e*P **P 03 06 43.0 -0.3**
comp=Z,55nm,1.7s,mb5.7
GRR Gorron 94.35 319 *e*P **P 03 06 44.4 -0.2**
comp=Z,79nm,1.5s,mb5.6
GRR Gorron 94.35 319 *e*P **P 03 06 44.4 -0.2**
GRR pmax pmax
comp=Z,40nm,1.5s,mb5.6
GRR Gorron 94.35 319 *e*P **P 03 06 44.4 -0.2**
comp=Z,40nm,1.5s,mb5.6
DAG Danmarks Havn 94.46 348 *e*P **P 03 06 43.0 -1.5**
DAG pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
DAG Danmarks Havn 94.46 348 *e*P **P 03 06 43.0 -1.5**
comp=Z,5.2nm,0.8s,mb5.0
DAG Danmarks Havn 94.46 348 *i*P **P 03 06 43.0 -1.5**
comp=Z,5.2nm,0.8s,mb5.0
EKA Eskdalemuir Ar 94.78 326 P **P 03 06 47.2 +0.8**
comp=Z,3.3nm,0.7s,mb4.9,baz=105,slow=4.7,SNR=14
EKA PP PP 03 10 38.0 +3.0
comp=Z,2.8nm,0.9s,baz=84,slow=7.9,SNR=4.2
ESK Eskdalemuir 94.81 326 *e*P **P 03 06 46.7 +0.2**
ESK pmax pmax
comp=Z,47nm,1.6s,mb5.7
ESK MLR MLR
comp=Z,1µm,20.0s,MS5.3
ESK Eskdalemuir 94.81 326 *e*P **P 03 06 46.7 +0.1**
comp=Z,47nm,1.6s,mb5.7
ESK LR LR
comp=Z,1µm,20.0s,MS5.3
SGMF Saint Gilles 95.49 319 *e*P **P 03 06 48.0 -1.8**
TTA Tatalina 96.41 26 *e*P **P 03 06 53.4 -0.3**
TTA pmax pmax
comp=Z,33nm,1.4s,mb5.6
TTA Tatalina 96.41 26 *e*P **P 03 06 53.4 -0.3**
comp=Z,33nm,1.4s,mb5.6
COLD Coldfoot 97.37 21 *e*P **P 03 06 57.8 -0.2**
comp=Z,26nm,1.7s,mb5.4
ESDC Sonseca Array 97.72 310 P **P 03 07 00.1 0.0**
comp=Z,0.5nm,0.5s,mb4.3,baz=41,slow=4.6,SNR=4.3
ESLA Sonseca Array 97.72 310 PFAKE 03 07 10.0 +10
ESLA LR LR
comp=Z,3µm,20.0s,MS5.8
PAB San Pablo 98.03 310 PFAKE 03 07 10.0 +8.5
PAB LR LR
comp=Z,830nm,19.0s,MS5.2
SCO Scoresbysund 98.14 343 *i*P PP 03 11 03.2 +2.8
comp=Z,3.1nm,1.0s
COLA College 99.16 23 PFAKE 03 07 20.0 +14
COLA LR LR
comp=Z,2µm,19.0s,MS5.5
MCK McKinley 99.17 24 *e*P **P 03 07 05.1 -0.9**
MCK pmax pmax
comp=Z,25nm,1.3s,mb5.6
MCK McKinley 99.17 24 *e*P **P 03 07 05.1 -1.0**
comp=Z,25nm,1.3s,mb5.6
KDAK Kodiak Island 99.54 31 PFAKE 03 07 20.0 +12
KDAK LR LR
comp=Z,2µm,19.0s,MS5.6
SFS San Fernando 99.95 307 PFAKE 03 07 20.0 +10
SFS LR LR
comp=Z,1µm,20.0s,MS5.4
MTE Manteigas 100.31 311 PFAKE 03 07 20.0 +8.7
MTE LR LR
comp=Z,741nm,19.0s,MS5.2
BORG Borgarnes 100.58 337 PFAKE 03 07 20.0 +7.5
BORG LR LR
comp=Z,1µm,19.0s,MS5.4
SUMG Summit 101.14 348 *i*P PKiKP 03 11 37.1 -2.3
comp=Z,8.2nm,1.0s
EGAK Eagle 101.77 22 PFAKE 03 07 30.0 +12
EGAK LR LR
comp=Z,5µm,19.0s,MS6.1
DBIC Dimbokro 101.79 277 PFAKE 03 07 30.0 +12
DBIC LR LR
comp=Z,1µm,19.0s,MS5.4
BMRM Bremner River 102.14 26 *e*Pdif Pdif 03 07 19.4 -0.1
comp=Z,13nm,1.0s
INK Inuvik 102.35 17 *e*P Pdif 03 07 19.9 -0.5
SHEL Horse Pasture 102.79 254 PFAKE 03 07 30.0 +7.7
SHEL LR LR
comp=Z,2µm,20.0s,MS5.7
KIP Kipapa 103.28 68 PFAKE 03 07 40.0 +15
KIP LR LR
comp=Z,638nm,20.0s,MS5.2
POHA Pohakuloa 105.79 69 PFAKE 03 12 00.0 +11
POHA LR LR
comp=Z,1µm,22.0s,MS5.4
SFJD Kangerlussuaq 108.13 347 PFAKE 03 12 00.0 +7.6
SFJD LR LR
comp=Z,2µm,20.0s,MS5.7
SFJD Kangerlussuaq 108.13 347 *i*P PP 03 12 16.7 +1.8
comp=Z,7.3nm,1.1s
ASCN Ascension 111.51 262 PFAKE 03 12 10.0 +10
ASCN LR LR
comp=Z,2µm,21.0s,MS5.6
TBI Tubuai 111.94 115 *e*Sdif Sdif 03 20 32.2 +10
comp=Z,561nm,27.5s
TBI *e*LR LR 03 45 42.4
comp=Z,2µm,24.2s
YKA Yellowknife Ar 111.96 15 PP PP 03 12 39.4 -3.2
comp=Z,2.1nm,0.7s,baz=330,slow=7.2,SNR=9.1
YKA PKKPbc PKKPbc 03 22 56.3 +1.9
comp=Z,0.7nm,0.9s,baz=148,slow=3.5,SNR=3.9
PPT Papeete 112.55 108 *e*Sdif Sdif 03 20 35.3 +7.9
comp=Z,689nm,25.5s
PPT Papeete 112.55 108 *e*PS PS 03 22 23.2 -0.5
comp=Z,892nm,27.2s
PPT *e*LR LR 03 45 47.1

comp=Z,1µm,23.8s
CMLA Cha da Macela 114.45 313 PFAKE 03 12 20.0 +15
CMLA LR LR
comp=Z,735nm,19.0s,MS5.3
NLWA Neilton Lookou 119.69 31 PFAKE 03 12 30.0 +15
NLWA LR LR
comp=Z,1µm,19.0s,MS5.5
EDM Edmonton 119.95 21 *e*PKIKP PKPdf 03 12 14.9 -0.4
COR Corvallis 121.81 33 PFAKE 03 12 30.0 +11
COR LR LR
comp=Z,932nm,20.0s,MS5.4
FFC Flin Flon 121.93 13 *e*PKIKP PKPdf 03 12 18.0 -1.1
FFC *e* 03 13 50.3
FFC MLR MLR
comp=Z,2µm,19.0s,MS5.7
OD2 Odessa Site #2 122.23 28 *e*PKPdf PKPdf 03 12 19.9 0.0
TAOE Nuku Hiva Isla 122.48 100 *e*PS PS 03 23 56.7 +3.0
comp=Z,433nm,23.6s
TAOE *e*LR LR 03 50 21.9
comp=Z,916nm,23.7s
SCHQ Schefferville 122.48 349 PKP PKPdf 03 12 19.1 -1.0
comp=Z,3.2nm,0.7s,baz=72,slow=5.6,SNR=4.8
SCHQ PP PP 03 14 00.4 +4.6
comp=Z,9.7nm,1.2s,baz=18,slow=9.9,SNR=5.0
SCHQ Schefferville 122.48 349 PKP PKPdf 03 12 19.1 -1.0
SCHQ PP PP 03 14 00.4 +4.6
SCHQ LR LR
comp=Z,1µm,20.0s,MS5.6
HAWA Hanford 122.55 29 *e*PKPdf PKPdf 03 12 21.3 +0.8
HAWA LR LR
comp=Z,1µm,21.0s,MS5.5
HUMO Hull Mountain 123.27 35 *e*PKPdf PKPdf 03 12 22.4 +0.3
HUMO LR LR
comp=Z,939nm,21.0s,MS5.4
BSMT Bassoo Peak 123.65 25 *e*PKPdf PKPdf 03 12 22.4 -0.2
YBH Yreka Blue Hor 123.97 35 PFAKE 03 12 30.0 +6.6
YBH LR LR
comp=Z,829nm,21.0s,MS5.4
SWMT Swartz Lake 124.25 25 *e*PKPdf PKPdf 03 12 23.2 -0.5
SLMT Seeley Lake 124.67 25 *e*PKPdf PKPdf 03 12 24.0 -0.6
WDC Whiskeytown Da 124.80 36 PFAKE 03 12 40.0 +15
WDC LR LR
comp=Z,1µm,21.0s,MS5.5
MSO Missoula 124.81 26 *e*PKPdf PKPdf 03 12 24.0 -0.8
MSO LR LR
comp=Z,1µm,20.0s,MS5.5
RKT Rikitea 125.02 117 *e*LR LR 03 51 29.7
comp=Z,2µm,24.5s
CHMT Chamberlain Mo 125.03 25 *e*PKPdf PKPdf 03 12 24.8 -0.5
CHMT *e*PP PP 03 14 13.6 +0.2
MOD Modoc 125.23 34 PFAKE 03 12 40.0 +14
MOD LR LR
comp=Z,1µm,21.0s,MS5.5
HOPS Hopland 125.46 38 PFAKE 03 12 40.0 +14
HOPS LR LR
comp=Z,954nm,20.0s,MS5.5
EGMT Eagleton 125.53 22 *e*PKPdf PKPdf 03 12 26.3 +0.1
EGMT LR LR
comp=Z,2µm,19.0s,MS5.7
WVOR Wild Horse Val 125.77 32 *e*PKIKP PKPdf 03 12 27.5 +0.7
WVOR MLR MLR
comp=Z,1µm,19.0s,MS5.5
MCCM Marconi Confer 126.09 39 PFAKE 03 12 40.0 +12
MCCM LR LR
comp=Z,832nm,20.0s,MS5.4
LRM Limekiln Ridge 126.24 25 *e*PKPdf PKPdf 03 12 27.6 0.0
DLMT Dillon 126.54 26 *e*PKPdf PKPdf 03 12 28.7 +0.5
BOZ Bozeman (W) 126.72 25 *e*PKIKP PKPdf 03 12 28.6 0.0
BOZ *e* 03 14 24.9
BOZ MLR MLR
comp=Z,1µm,20.0s,MS5.5
MCMT McKenzie Canyo 126.84 26 *e*PKPdf PKPdf 03 12 29.4 +0.6
MCMT *e*PP PP 03 14 24.1 -1.3
DGMT Dagmar 127.03 18 PFAKE 03 12 40.0 +11
DGMT LR LR
comp=Z,2µm,20.0s,MS5.8
HLID Hailey 127.09 29 *e*PKPdf PKPdf 03 12 29.9 +0.6
HLID *e*PP PP 03 14 28.7 +1.6
HLID LR LR
comp=Z,2µm,21.0s,MS5.7
ULM Lac du Bonnet 127.40 11 PKP PKPdf 03 12 27.4 -2.3
comp=Z,8.3nm,0.8s,baz=178,slow=1.4,SNR=6.0
ULM Lac du Bonnet 127.40 11 *e*PKPdf PKPdf 03 12 28.8 -0.9
ULM LR LR
comp=Z,3µm,20.0s,MS5.9
GCMT Greycliff 127.41 23 *e*PKPdf PKPdf 03 12 30.1 +0.3
GCMT *e*PP PP 03 14 27.6 -1.5
CMB Columbia Colle 127.70 37 *e*PKIKP PKPdf 03 12 30.7 0.0
CMB MLR MLR
comp=Z,847nm,19.0s,MS5.5
SAO San Andreas Ge 127.83 39 PFAKE 03 12 40.0 +9.0
SAO LR LR
comp=Z,954nm,19.0s,MS5.5
LAO LASA Array 127.94 20 *e*PKPdf PKPdf 03 12 31.7 +0.8
LAO LR LR
comp=Z,847nm,20.0s,MS5.4
YFT Old Faithful 128.02 25 *e*PKPdf PKPdf 03 12 33.0 +1.9
LKWY Lake 128.11 25 PFAKE 03 12 40.0 +8.8
LKWY LR LR
comp=Z,3µm,19.0s,MS6.0
RLMT Red Lodge 128.12 24 PFAKE 03 12 40.0 +8.8
RLMT LR LR
comp=Z,2µm,21.0s,MS5.7
NVAR Mina Array Bea 128.69 36 PKP PKPdf 03 12 32.4 -0.1
comp=Z,4.0nm,0.9s,baz=250,slow=2.0,SNR=19
RRI2 Red Ridge 128.69 26 *e*PKPdf PKPdf 03 12 33.9 +1.5
TPAW Teton Pass 128.74 26 *e*PKPdf PKPdf 03 12 33.1 +0.6
ELK Elko 128.77 31 PFAKE 03 12 40.0 +7.4
ELK LR LR
comp=Z,952nm,19.0s,MS5.5
LOHW Long Hollow 128.79 26 *e*PKPdf PKPdf 03 12 33.0 +0.4
N12A Clover Valley, 128.79 31 *e*PKPdf PKPdf 03 12 33.9 +1.2
SNOW Snow King Moun 128.85 26 *e*PKPdf PKPdf 03 12 33.5 +0.8
M13A Montello 128.86 30 *e*PKPdf PKPdf 03 12 33.5 +0.7
REDW Red Top Meadow 128.88 26 *e*PKPdf PKPdf 03 12 33.2 +0.4
N13A Wendover, West 129.22 31 *e*PKPdf PKPdf 03 12 34.6 +1.1
AHID Auburn Hatcher 129.25 27 PFAKE 03 12 50.0 +17
AHID LR LR
comp=Z,2µm,19.0s,MS5.8
AGMN Agassiz Nation 129.28 11 PFAKE 03 12 40.0 +6.7
AGMN LR LR
comp=Z,2µm,20.0s,MS5.8
TPH Tonopah 129.55 35 PFAKE 03 12 50.0 +16
TPH LR LR
comp=Z,379nm,20.0s,MS5.1
BGU Big Grassy Mou 129.76 30 *e*PKPdf PKPdf 03 12 35.1 +0.6
BW06 Boulder Array 129.93 26 *e*PKPdf PKPdf 03 12 35.0 +0.3
BW06 *e*PP PP 03 14 45.9 +0.3
BW06 LR LR
comp=Z,1µm,20.0s,MS5.5
PDAR Pinedale Array 129.93 26 PKP PKPdf 03 12 33.6 -1.2
comp=Z,2.2nm,0.7s,baz=280,slow=0.9,SNR=17
PDAR PP PP 03 14 46.4 +0.8
comp=Z,3.9nm,1.1s,baz=354,slow=1.5,SNR=6.5
HWUT Hardware Ranch 129.94 28 *e*PKPdf PKPdf 03 12 35.3 +0.4
HWUT LR LR
comp=Z,2µm,19.0s,MS5.8
EYMN Ely 130.34 8 *e*PKPdf PKPdf 03 12 34.9 -0.5
EYMN *e*PP PP 03 14 44.6 -3.3
EYMN LR LR
comp=Z,2µm,21.0s,MS5.7
DUG Dugway 130.42 30 *e*PKPdf PKPdf 03 12 35.3 -0.5
DUG *e*SKPdf SKPdf 03 16 10.7 +1.4
DUG LR LR
comp=Z,1µm,20.0s,MS5.5
DAC Darwin (Calif) 130.54 37 PFAKE 03 12 50.0 +14
DAC LR LR
comp=Z,471nm,20.0s,MS5.2
RSSD Black Hills 130.93 20 *e*PKIKP PKPdf 03 12 36.6 0.0
RSSD *e* 03 14 50.5
RSSD MLR MLR
comp=Z,1µm,21.0s,MS5.5
RSSD Black Hills 130.93 20 *e*PKPdf PKPdf 03 12 36.6 0.0
RSSD *e*PP PP 03 14 50.5 -1.5
RSSD *e*SKPdf SKPdf 03 16 10.3 +0.1
RSSD LR LR
comp=Z,1µm,21.0s,MS5.5
NLU North Lily Min 130.97 30 *e*PKPdf PKPdf 03 12 35.6 -1.2
NLU *e*SKPdf SKPdf 03 16 12.5 +2.1
DAU Daniels Canyon 131.02 29 *e*PKPdf PKPdf 03 12 37.7 +0.8
DAU *e*SKPdf SKPdf 03 16 13.3 +2.8
GSC Goldstone 131.66 38 *e*PKPdf PKPdf 03 12 38.1 -0.1
GSC *e*SKP 03 16 02.3
GSC *e*SKPdf SKPdf 03 16 12.0 +0.1

RWWY	Rawlins	131.81	25	ePKPdf	PKPdf	03 12 37.9	-0.5
RWWY				eSKPdf	SKPdf	03 16 12.2	+0.3
MVU	Marysvale	132.00	31	PFAKE		03 12 50.0	+11
MVU				LR	LR		
comp=Z,435nm,19.0s,MS5.2							
MSU	Marysvale	132.01	31	ePKPdf	PKPdf	03 12 39.3	+0.4
MSU				eSKPdf	SKPdf	03 16 13.1	+0.7
PKME	Peaks-Kenny Pk	132.06	347	PFAKE		03 12 50.0	+11
PKME				LR	LR		
comp=Z,1μm,20.0s,MS5.6							
CCUT	Cedar City	132.09	33	ePKPdf	PKPdf	03 12 40.3	+1.3
SRU	San Rafael	132.38	29	ePKIKP	PKPdf	03 12 39.8	+0.3
COWI	Conover	132.43	6	PFAKE		03 12 50.0	+11
COWI				LR	LR		
comp=Z,2μm,20.0s,MS5.8							
LDFC	Landfair	132.84	37	ePKPdf	PKPdf	03 12 41.5	+0.9
RCBR	Riachuelo	132.97	263	PFAKE		03 12 50.0	+8.7
RCBR				LR	LR		
comp=Z,733nm,19.0s,MS5.4							
PFO	Pinyon Flat Ob	132.99	39	PFAKE		03 12 50.0	+9.2
PFO				LR	LR		
comp=Z,810nm,20.0s,MS5.4							
ECSD	EROS Data Cent	133.46	14	ePKPdf	PKPdf	03 12 39.9	-1.5
ECSD				ePP	PP	03 15 06.3	-1.7
ECSD				LR	LR		
comp=Z,2μm,22.0s,MS5.7							
LBNH	Lisbon	133.59	349	PFAKE		03 12 50.0	+8.4
LBNH				LR	LR		
comp=Z,923nm,20.0s,MS5.5							
LONY	Lake Ozonia	133.66	352	PFAKE		03 12 50.0	+8.3
LONY				LR	LR		
comp=Z,936nm,20.0s,MS5.5							
PV04	Paradox Valley	133.73	29	ePKPdf	PKPdf	03 12 43.2	+1.1
SMCO	Snowmass	133.98	26	ePKPdf	PKPdf	03 12 44.0	+1.5
SMCO				ePP	PP	03 15 09.9	-1.8
ISCO	Idaho Springs	134.05	25	ePKIKP	PKPdf	03 12 43.1	+0.5
ISCO				e		03 15 12.1	
ISCO				MLR	MLR		
comp=Z,1μm,19.0s,MS5.7							
PV01	Paradox Valley	134.09	28	ePKPdf	PKPdf	03 12 42.8	+0.1
NCB	Newcomb	134.24	351	PFAKE		03 12 50.0	+7.1
NCB				LR	LR		
comp=Z,1μm,20.0s,MS5.7							
OGNE	Ogallala	134.43	20	PFAKE		03 12 50.0	+6.7
OGNE				LR	LR		
comp=Z,2μm,19.0s,MS5.8							
WUAZ	Wupatki	134.67	33	ePKPdf	PKPdf	03 12 44.9	+0.9
WUAZ				LR	LR		
comp=Z,896nm,20.0s,MS5.5							
MVCO	Mesa Verde	134.86	29	ePKPdf	PKPdf	03 12 44.8	+0.6
MVCO				LR	LR		
comp=Z,1μm,20.0s,MS5.7							
JFWS	Jewell Farm	135.44	8	PFAKE		03 13 00.0	+15
JFWS				LR	LR		
comp=Z,2μm,20.0s,MS5.7							
SDCO	Great Sand Dun	135.81	26	ePKPdf	PKPdf	03 12 44.8	-1.2
SDCO				ePP	PP	03 15 22.4	-1.0
SDCO				LR	LR		
comp=Z,2μm,20.0s,MS5.8							
SCIA	State Center	135.94	11	PFAKE		03 13 00.0	+14
SCIA				LR	LR		
comp=Z,2μm,20.0s,MS5.8							
BINY	Binghamton	136.22	353	ePKPdf	PKPdf	03 12 47.1	+0.4
BINY				LR	LR		
comp=Z,993nm,20.0s,MS5.5							
AAM	Ann Arbor	136.55	1	PFAKE		03 13 00.0	+13
AAM				LR	LR		
comp=Z,1μm,20.0s,MS5.6							
ERPA	Erie	136.67	357	PFAKE		03 13 00.0	+13
ERPA				LR	LR		
comp=Z,1μm,20.0s,MS5.7							
CBKS	Cedar Bluff	137.12	20	PFAKE		03 13 00.0	+12
CBKS				LR	LR		
comp=Z,2μm,19.0s,MS5.8							
TUC	Tucson	137.34	36	ePKIKP	PKPdf	03 12 49.7	+0.7
TUC				MLR	MLR		
comp=Z,810nm,20.0s,MS5.5							
ANMO	Albuquerque	137.66	29	ePKPpre		03 12 41.7	
ANMO				ePKPdf	PKPdf	03 12 50.6	+1.1
ANMO				LR	LR		
comp=Z,1μm,19.0s,MS5.7							
LAZ	Ladron	137.75	30	ePKPdf	PKPdf	03 12 50.6	+0.9
KSU1	Kansas State U	137.81	16	PFAKE		03 13 00.0	+10
KSU1				LR	LR		
comp=Z,2μm,19.0s,MS5.8							
HDIL	Hopedale	137.89	7	PFAKE		03 13 00.0	+10
HDIL				LR	LR		
comp=Z,1μm,19.0s,MS5.7							
SSPA	Standing Stone	137.98	354	PFAKE		03 13 00.0	+10
SSPA				LR	LR		
comp=Z,1μm,20.0s,MS5.6							
BNM	Barren Site	138.21	30	ePKPpre		03 12 41.9	
BNM				ePKPdf	PKPdf	03 12 50.9	+0.3
BNM				ePP	PP	03 15 39.8	+1.3
ACSO	Alum Creek Sta	138.63	0	ePKPdf	PKPdf	03 12 50.4	-0.7
ACSO				LR	LR		
comp=Z,1μm,19.0s,MS5.7							
TRQA	Tornquist	138.75	205	ePKPdf	PKPdf	03 12 51.0	-0.4
TRQA				eSKP		03 16 23.8	
TRQA				LR	LR		
comp=Z,932nm,20.0s,MS5.5							
MCWV	Mont Chateau	139.11	356	PFAKE		03 13 00.0	+8.0
MCWV				LR	LR		
comp=Z,2μm,21.0s,MS5.8							
SPB	Sao Paulo	139.19	234	PFAKE		03 13 00.0	+7.4
SPB				LR	LR		
comp=Z,884nm,19.0s,MS5.5							
PLCA	Paso Flores	139.24	194	PKP	PKPdf	03 12 50.9	-1.4
comp=Z,2.9nm,1.0s,baz=318,slow=4.9,SNR=3.7							
PLCA	Paso Flores	139.24	194	PKIKP	PKPdf	03 12 50.9	-1.3
PLCA				pmax	pmax		
comp=Z,3.0nm,1.0s							
PLCA	Paso Flores	139.24	194	ePKIKP	PKPdf	03 12 52.2	0.0
PLCA				MLR	MLR		
comp=Z,1μm,19.0s							
PLCA	Paso Flores	139.24	194	ePKPdf	PKPdf	03 12 52.2	0.0
PLCA				LR	LR		
comp=Z,1μm,19.0s,MS5.7							
AMTX	Amarillo	139.87	24	PFAKE		03 13 10.0	+16
AMTX				LR	LR		
comp=Z,946nm,21.0s,MS5.5							
CCM	Cathedral Cave	140.03	10	PFAKE		03 13 10.0	+16
CCM				LR	LR		
comp=Z,1μm,19.0s,MS5.7							
CBN	Corbin	140.33	353	PFAKE		03 13 10.0	+16
CBN				LR	LR		
comp=Z,1μm,19.0s,MS5.6							
WCI	Wyandotte Cave	140.50	4	PFAKE		03 13 10.0	+15
WCI				LR	LR		
comp=Z,1μm,20.0s,MS5.7							
MNTX	Cornudas Mount	140.79	31	ePKPpre		03 12 48.3	
MNTX				ePKPdf	PKPdf	03 12 55.8	+0.5
MNTX				LR	LR		
comp=Z,1μm,19.0s,MS5.6							
WMOK	Wichita Mounta	141.12	21	PFAKE		03 13 10.0	+14
WMOK				LR	LR		
comp=Z,1μm,22.0s,MS5.7							
BLA	Blacksburg	141.58	357	PFAKE		03 13 10.0	+13
BLA				LR	LR		
comp=Z,2μm,19.0s,MS5.8							
BBSR	BB Station	142.34	334	PFAKE		03 13 10.0	+12
BBSR				LR	LR		
comp=Z,883nm,22.0s,MS5.5							
WVT	Waverly	142.43	7	ePKPpre		03 12 52.4	
WVT				eSKPbc	SKPbc	03 16 33.1	-1.1
WVT				LR	LR		
comp=Z,2μm,20.0s,MS5.9							
MIAR	Mount Ida	142.91	15	ePKIKP	PKPdf	03 12 54.8	-4.2
MIAR				MLR	MLR		
comp=Z,2μm,19.0s,MS5.8							
UALR	University of	142.98	13	ePKPpre		03 12 55.2	
TKL	Tuckaleechee C	143.18	1	ePKIKP	PKPdf	03 12 55.1	-4.4
TKL				e		03 16 09.7	
CNNC	Cliffs of the	143.32	353	PFAKE		03 13 10.0	+10
CNNC				LR	LR		
comp=Z,2μm,21.0s,MS5.8							
CPCT	Cooper Cave	143.37	2	ePKPpre		03 12 55.8	
SWET	Sewanee	143.52	4	ePKPpre		03 12 48.4	
TXAR	Lajitas Array	143.56	32	PKP	PKPdf	03 12 57.8	-2.6
comp=Z,4.2nm,0.8s,baz=270,slow=1.3,SNR=39							
OXF	Oxford	143.81	9	PFAKE		03 13 10.0	+9.4
OXF				LR	LR		
comp=Z,2μm,19.0s,MS5.8							
JCT	Junction City	144.46	26	ePKPdf	PKPdf	03 12 59.9	-2.0
JCT				eSKPbc	SKPbc	03 16 39.3	0.0
JCT				LR	LR		
comp=Z,908nm,21.0s,MS5.5							
JSC	Jenkinsville	144.54	358	ePKIKP	PKPdf	03 13 00.3	-1.6
CPUP	Villa Florida	145.09	222	PKPbc	PKPbc	03 13 02.8	+0.2
comp=Z,27nm,0.9s,baz=91,slow=3.2,SNR=35							
CPUP	Villa Florida	145.09	222	ePKPbc	PKPbc	03 13 02.4	-0.1
CPUP				LR	LR		
comp=Z,262nm,19.0s,MS5.0							
NATX	Nacogdoches	145.22	18	ePKPbc	PKPbc	03 13 02.9	+0.2
NATX				LR	LR		
comp=Z,1μm,19.0s,MS5.7							
COW	Cow Castle Cre	145.41	357	ePKPbc	PKPbc	03 13 03.4	+0.1
GOGA	Godfrey	145.43	1	ePKIKP	PKPdf	03 13 02.7	-0.8
GOGA				MLR	MLR		
comp=Z,1μm,20.0s,MS5.7							
LMEL	Las Melosas	145.57	199	i P	PKPdf	03 13 06.7	+3.0
LMEL	Las Melosas	145.57	199	i P	PKPdf	03 13 06.7	+3.0
LRAL	Lakeview Retre	145.58	6	ePKPbc	PKPbc	03 13 02.6	-1.2
LRAL				LR	LR		
comp=Z,2μm,19.0s,MS5.8							
NHSC	New Hope	145.65	356	ePKPbc	PKPbc	03 13 04.0	-0.1
NHSC				LR	LR		
comp=Z,1μm,19.0s,MS5.7							
VBMS	Vicksburg	145.84	12	ePKPbc	PKPbc	03 13 05.2	+0.5
VBMS				LR	LR		
comp=Z,2μm,20.0s,MS5.8							
FCH	Farellones	146.07	199	i P	PKPab	03 13 06.3	+0.4
HKT	Hockley	146.50	21	ePKP2	PKPab	03 13 06.4	-1.3
HKT				MLR	MLR		
comp=Z,1μm,20.0s,MS5.7							
BRAL	Brewton	147.58	7	PFAKE		03 13 20.0	+13
BRAL				LR	LR		
comp=Z,2μm,22.0s,MS5.8							
KVTX	Kingsville	147.83	26	ePKPbc	PKPbc	03 13 11.9	+1.3
KVTX				LR	LR		
comp=Z,1μm,21.0s,MS5.6							
LCO	Las Campanas	150.15	202	ePKPbc	PKPbc	03 13 17.4	+1.0
LCO				LR	LR		
comp=Z,2μm,19.0s,MS5.8							
DWPF	Disney	150.69	357	ePKPbc	PKPbc	03 13 17.3	-0.4
DWPF				LR	LR		
comp=Z,1μm,20.0s,MS5.7							
ANWB	Willy Bob	151.96	313	PFAKE		03 13 30.0	+16
ANWB				LR	LR		
comp=Z,788nm,22.0s,MS5.5							
FDF	Fort de France	153.25	307	PFAKE		03 13 30.0	+14
FDF				LR	LR		
comp=Z,885nm,21.0s,MS5.5							
GRTK	Grand Turk	154.57	334	PFAKE		03 13 30.0	+12
GRTK				LR	LR		
comp=Z,1μm,20.0s,MS5.8							
SJG	San Juan	154.64	320	PFAKE		03 13 30.0	+12
SJG				LR	LR		
comp=Z,800nm,21.0s,MS5.5							
GRGR	Grenville	155.07	303	PFAKE		03 13 30.0	+11
GRGR				LR	LR		
comp=Z,1μm,20.0s,MS5.7							
SDDR	Presa de Saban	156.84	331	PFAKE		03 13 30.0	+8.8
SDDR				LR	LR		
comp=Z,2μm,21.0s,MS5.8							
GTBY	Guantanamo Bay	157.55	341	PFAKE		03 13 30.0	+7.9
GTBY				LR	LR		
comp=Z,1μm,20.0s,MS5.7							
TEIG	Tepich	157.91	14	PFAKE		03 13 30.0	+7.5
TEIG				LR	LR		
comp=Z,1μm,20.0s,MS5.7							
LPAZ	La Paz	159.26	223	PKP	PKPdf	03 13 25.5	+1.3
comp=Z,1.3nm,0.7s,baz=62,slow=3.9,SNR=6.3							
LPAZ				PP	PP	03 17 46.9	+5.2
comp=Z,5.6nm,1.3s,baz=119,slow=5.1,SNR=6.1							
LPAZ	La Paz	159.26	223	ePKPdf	PKPdf	03 13 24.8	+0.6
LPAZ				ePKPbc	PKPbc	03 13 32.1	+7.9
LPAZ				LR	LR		
comp=Z,838nm,21.0s,MS5.6							
MTDJ	Mount Denham	159.87	345	PFAKE		03 13 40.0	+15
MTDJ				LR	LR		
comp=Z,1μm,19.0s,MS5.8							
TGUH	Tegucigalpa,Un	164.08	16	PFAKE		03 13 40.0	+11
TGUH				LR	LR		
comp=Z,2μm,19.0s							
NNA	Nana	167.87	209	PFAKE		03 13 40.0	+7.7
NNA				LR	LR		
comp=Z,1μm,22.0s							
BCIP	Isla Barro Col	169.15	344	PFAKE		03 13 40.0	+6.8
BCIP				LR	LR		
comp=Z,881nm,21.0s							
ROSC	El Rosal	169.51	306	PKP	PKPdf	03 13 32.2	-1.2
comp=Z,2.9nm,0.4s,baz=102,slow=22,SNR=7.2							
ROSC	El Rosal	169.51	306	ePKPdf	PKPdf	03 13 33.1	-0.3
PAYG	Puerto Ayora	172.51	85	PFAKE		03 13 50.0	+15
PAYG				LR	LR		
comp=Z,1μm,20.0s							
OTAV	Otavalo	175.35	290	ePKPdf	PKPdf	03 13 36.4	+0.4
OTAV				LR	LR		
comp=Z,1μm,19.0s							

DDA ***25*** *03:03:57.5, 39°.53N×27°.01E, h7km±4km, Md3.2*
ISK ***25*** *03:03:57.3, 39°.52N×27°.02E, h9km, MD3.2*
CSEM ***25*** *03:03:57.9±0.1, 39°.51N×27°.00E, h10km, MD3.2, Error ellipse: s-maj=2.0km s-min=1.9km az=120.0*
ISCJB ***25*** *03:03:57.3±0.4, 39°.52N±0°.02×27°.01E±0°.02, h5km±3km, Error ellipse: s-maj=3.0km s-min=2.7km az=149.5*
THE ***25*** *03:03:59.0, 39°.47N×26°.96E, h9km±2km, ML3.3/5, Error ellipse: s-maj=2.7km s-min=1.0km az=246.0*

ISC 25 03:03:58.1±0.3, 39°.51N±0°.02×27°.00E±0°.02, h9km±3km, n84, σ0.9/67/118, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYVA	Ayvalik	0.32	230	i P	Pg	03 04 04.2	-0.2
AYVA				i S	Sg	03 04 08.8	+0.1
AYVA	Ayvalik	0.32	230	i P	Pg	03 04 04.2	-0.2
AYVA				i S	Sg	03 04 08.8	+0.2
BALY	Balya	0.53	64	i P	Pg	03 04 08.5	+0.1
BALY				i S	Sg	03 04 16.0	+0.8
BALY	Balya	0.53	64	i P	Pg	03 04 08.5	+0.2
BALY				i S	Sg	03 04 16.0	+0.7
EZN	Ezine	0.61	301	PG	Pg	03 04 09.4	-0.5
EZN				SG	Sg	03 04 18.8	+1.0
EZN	Ezine	0.61	301	i Pg	Pg	03 04 09.4	-0.5
EZN				i Sg	Sg	03 04 18.8	+0.9
PRK	Paraskevi	0.63	245	P	Pg	03 04 09.5	-0.7
PRK				S	Sg	03 04 19.3	+0.9
PRK	Paraskevi	0.63	245	P	Pg	03 04 09.5	-0.7
PRK				S	Sg	03 04 19.3	+0.9
BALB	Balikesir	0.69	79	ePG	Pg	03 04 11.2	-0.3
BALB				eSG	Sg	03 04 20.2	-0.2
BALB	Balikesir	0.69	79	ePg	Pg	03 04 11.2	-0.2
BALB				eSg	Sg	03 04 20.2	-0.2
LPK	Lapseki	0.88	348	ePG	Pg	03 04 15.1	+0.1
LPK	Lapseki	0.88	348	ePg	Pg	03 04 15.1	+0.1
AKHS	Akhisar	0.89	135	i P	Pg	03 04 15.3	0.0
AKHS				i S	Sg	03 04 28.2	+1.3
AKHS	Akhisar	0.89	135	i P	Pg	03 04 15.3	0.0
AKHS				i S	Sg	03 04 28.2	+1.3
AKS	Akhisar	0.89	135	ePG	Pg	03 04 14.8	-0.4
AKS	Akhisar	0.89	135	ePg	Pg	03 04 14.8	-0.5
SIGR	SIGRI	0.94	252	P	Pg	03 04 15.2	-1.0
SIGR				S	Sg	03 04 29.5	+1.1
SIGR	SIGRI	0.94	252	P	Pg	03 04 15.2	-1.0
SIGR				S	Sg	03 04 29.5	+1.1
GADA	Gvkgeada	1.09	309	ePN	Pg	03 04 18.3	-0.7
GADA	Gvkgeada	1.09	309	ePn	Pg	03 04 18.3	-0.7
BNT	Bandirma	1.10	40	ePG	Pg	03 04 17.9	-1.3
BLCB	Balcova	1.13	178	ePN	Pg	03 04 19.6	-0.2
BLCB	Balcova	1.13	178	P	Pg	03 04 19.9	+0.2
BLCB				S	Sg	03 04 34.6	+0.2
BLCB	Balcova	1.13	178	ePn	Pg	03 04 19.6	-0.1
BLCB	Balcova	1.13	178	P	Pg	03 04 19.9	+0.2
BLCB				S	Sg	03 04 34.6	+0.2
KDAG	Bornova	1.13	169	i P	Pg	03 04 19.4	-0.4
KDAG				i S	Sg	03 04 34.6	+0.2
KDAG	Bornova	1.13	169	i P	Pg	03 04 19.4	-0.4
KDAG				i S	Sg	03 04 34.6	+0.2
IZM	Izmir	1.13	170	ePN	Pg	03 04 19.8	-0.1
IZM	Izmir	1.13	170	ePn	Pg	03 04 19.8	0.0
DURS	Dursunbey	1.14	85	i P	Pg	03 04 19.8	-0.2
DURS				i S	Sg	03 04 35.3	+0.5
DURS	Dursunbey	1.14	85	i P	Pg	03 04 19.8	-0.2
DURS				i S	Sg	03 04 35.3	+0.5
RKY	Sarkoy-Tekirda	1.18	6	ePN	Pn	03 04 20.4	-0.3
RKY	Sarkoy-Tekirda	1.18	6	ePn	Pn	03 04 20.4	-0.3
SART	Tekirdag	1.18	7	i P	Pb	03 04 20.3	-0.4
SART				i S	Sb	03 04 35.4	-0.6
SART	Tekirdag	1.18	7	i P	Pb	03 04 20.3	-0.4
SART				i S	Sb	03 04 35.4	-0.6
URLA	Izmir	1.20	196	i P	Pb	03 04 19.8	-1.1
URLA				i S	Sb	03 04 37.3	+0.9
URLA	Izmir	1.20	196	i P	Pb	03 04 19.8	-1.1
URLA				i S	Sb	03 04 37.3	+0.9
KCT	Karacabey	1.28	54	ePN	Pn	03 04 21.5	-0.7
KCT	Karacabey	1.28	54	ePn	Pn	03 04 21.5	-0.7
CHOS	Chios island	1.35	214	P	Pn	03 04 21.6	-1.4
CHOS				S	Sb	03 04 40.1	-0.7
CHOS	Chios island	1.35	214	P	Pn	03 04 21.6	-1.4
CHOS				S	Sb	03 04 40.1	-0.7
ENEZ	Enez	1.38	332	ePN	Pn	03 04 23.5	0.0
ENEZ	Enez	1.38	332	ePn	Pn	03 04 23.5	0.0
DEMI	Demirci	1.41	109	i P	Pn	03 04 24.5	+0.6
DEMI				i S	Sn	03 04 42.8	+0.2
DEMI	Demirci	1.41	109	i P	Pn	03 04 24.5	+0.6
DEMI				i S	Sn	03 04 42.8	+0.2
LIA	Limnos Island	1.46	286	P	Pn	03 04 23.9	-0.6
LIA				S	Sn	03 04 42.6	-1.1
LIA	Limnos Island	1.46	286	P	Pn	03 04 23.9	-0.6
LIA				S	Sn	03 04 42.6	-1.1
TKR	Tekirdag	1.53	15	ePN	Pn	03 04 25.3	-0.3
TKR	Tekirdag	1.53	15	ePn	Pn	03 04 25.3	-0.2
ALN	Alexandroupoli	1.56	332	P	Pn	03 04 25.6	-0.4
ALN				S	Sn	03 04 47.6	+1.2
ALN	Alexandroupoli	1.56	332	P	Pn	03 04 25.6	-0.4
ALN				S	Sn	03 04 47.6	+1.2
KULA	Kula-Manisa	1.63	127	ePN	Pn	03 04 26.7	-0.3
KULA	Kula-Manisa	1.63	127	ePn	Pn	03 04 26.7	-0.2
CRLT	Corlu	1.71	19	ePN	Pn	03 04 28.0	0.0
CRLT	Corlu	1.71	19	ePn	Pn	03 04 28.0	0.0
ARMT	Armutlu	1.77	53	ePN	Pn	03 04 29.4	+0.6
ARMT	Armutlu	1.77	53	ePn	Pn	03 04 29.4	+0.5
SLVT	Silivri	1.95	28	ePN	Pn	03 04 31.3	0.0
SLVT	Silivri	1.95	28	ePn	Pn	03 04 31.3	0.0
RDO	Rodhopi	1.98	326	P	Pn	03 04 31.5	-0.2
RDO				S	Sn	03 04 58.0	+1.4
RDO	Rodhopi	1.98	326	P	Pn	03 04 31.5	-0.2
RDO				S	Sn	03 04 58.0	+1.4
CTKS	Kestanelik-??a	2.07	33	ePN	Pn	03 04 33.1	+0.1
CTKS	Kestanelik-??a	2.07	33	ePn	Pn	03 04 33.1	+0.1
YLV	Yalova	2.10	59	ePN	Pn	03 04 32.5	-0.9
YLV	Yalova	2.10	59	ePn	Pn	03 04 32.5	-0.9
BGKT	Bogazkoy	2.15	39	ePN	Pn	03 04 33.5	-0.5
BGKT	Bogazkoy	2.15	39	ePn	Pn	03 04 33.6	-0.4
CTYL	Yal??k??y-??at	2.19	26	ePN	Pn	03 04 34.5	-0.2
CTYL	Yal??k??y-??at	2.19	26	ePn	Pn	03 04 34.5	-0.1
KLYT	Kilyos	2.33	41	ePN	Pn	03 04 36.8	+0.2
KLYT	Kilyos	2.33	41	ePn	Pn	03 04 36.8	+0.2
EDRB	Edirne	2.34	355	ePN	Pn	03 04 37.2	+0.6
EDRB	Edirne	2.34	355	ePn	Pn	03 04 37.2	+0.5
ALT	Altintas	2.45	100	ePN	Pn	03 04 38.1	-0.1
ALT	Altintas	2.45	100	ePn	Pn	03 04 38.2	0.0
GPA	Golpazari	2.66	72	ePN	Pn	03 04 40.9	-0.1
GPA	Golpazari	2.66	72	ePn	Pn	03 04 40.9	-0.2
GULT	Gulveren	2.85	70	ePN	Pn	03 04 44.1	+0.4
GULT	Gulveren	2.85	70	ePn	Pn	03 04 44.1	+0.4
PSN	Preselentsi	4.26	12	i P	Pn	03 05 04.0	+1.0
PSN	Preselentsi	4.26	12	i P	Pn	03 05 04.0	+1.0
KARN	Karanos	4.78	212	P	Pn	03 05 10.8	+0.5
KARN	Karanos	4.78	212	P	Pn	03 05 10.8	+0.5
BOLS	Boljevac	5.73	320	eP	Pn	03 05 24.9	+1.6

DDA ***25*** *03:05:34.9, 37°.60N×43°.93E, h4km±2km, Md3.9*
ISCJB ***25*** *03:05:36.6±0.6, 37°.62N±0°.02×43°.86E±0°.02, h5km±4km, mb4.0/18, Error ellipse: s-maj=3.2km s-min=3.1km az=20.9*
ISK ***25*** *03:05:37.1, 37°.62N×43°.91E, h12km, ML4.2*
IDC ***25*** *03:05:37.2±0.8, 37°.60N×43°.75E, h0km, mb3.9/11, mb1 4.0/17, mb1mx3.9/30, mbtmp3.9/17, ML3.8/5, MS3.7/1, Ms1 3.7/1, ms1mx2.9/34, Error ellipse: s-maj=18.0km s-min=10.4km az=129.0*
CSEM ***25*** *03:05:37.0±0.2, 37°.62N×43°.94E, h2km, mb4.3/7, Error ellipse: s-maj=4.6km s-min=4.2km az=102.0*
MOS ***25*** *03:05:38.5±1.1, 37°.60N×43°.76E, h24km, mb4.3/7, Error ellipse: s-maj=12.2km s-min=8.2km az=83.2*
KISR ***25*** *03:05:38.0±0.5, 36°.80N×43°.43E, h0km, ML4.1*
NEIC ***25*** *03:05:41.3±2.3, 37°.68N×43°.84E, h30km±18km, mb4.3/9, ML4.2(ISK), Error ellipse: s-maj=7.9km s-min=5.5km az=151.0*

ISC 25 03:05:37.8±0.6, 37°.64N±0°.02×43°.87E±0°.02, h1km±4km, n174, σ1.9/20/197, mb4.0/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAKT	HAKKARI	0.15	238	i P	Pg	03 05 38.8	-1.9
HAKT				i S	Sg	03 05 42.0	-0.6
HAKT	HAKKARI	0.15	238	i P	Pg	03 05 38.8	-1.8
HAKT				i S	Sg	03 05 42.0	-0.6
CUKT	Cukurca	0.44	208	PG	Pg	03 05 46.0	-0.2
CUKT				SG	Sg	03 05 53.2	+1.3
CUKT	Cukurca	0.44	208	i Pg	Pg	03 05 46.0	-0.2
CUKT				i Sg	Sg	03 05 53.3	+1.4
VANT	Van	0.92	329	ePG	Pg	03 05 55.8	+0.4
TVAN	Van	0.96	338	i P	Pg	03 05 54.2	-2.0
TVAN				i S	Sg	03 06 08.4	-0.3
TVAN	Van	0.96	338	i P	Pg	03 05 54.2	-2.0
TVAN				i S	Sg	03 06 08.4	-0.3
CLDR	Caldiran	1.50	2	ePN	Pn	03 06 04.1	-1.8
CLDR	Caldiran	1.50	2	ePn	Pn	03 06 04.1	-1.8
ISHB	Shabestar	1.53	64	eP	Pn	03 06 04.7	-1.5
IAZR	Azarshahr	1.68	88	eP	Pn	03 06 07.8	-0.5
IMRD	Marand	1.80	53	eP	Pn	03 06 09.7	-0.3
ITBZ	Tabriz	1.90	71	eP	Pn	03 06 11.0	-0.3
DYDN	Diyadin	1.91	356	i P	Pn	03

IGHG	Ghaleghazi	3.96	146	*e*P	Pn	03 06 41.6 +1.9
DGRG	David-gareji	3.98	17	P	Pg	03 06 51.4 -2.7
EZC	Erzincan	4.11	302	*e*PN	Pn	03 06 42.4 +0.6
MTA	Mtatsminda	4.11	10	P	Pn	03 06 43.7 +2.0
TBLG	Delisi	4.14	9	*e*P	Pg	03 06 56.9 -0.3
TBLG	Delisi	4.14	9	P	Pg	03 06 57.0 -0.2
BCA	Borcka	4.18	336	*e*PN	Pn	03 06 43.3 +0.7
BCA	Borcka	4.18	336	*e*Pn	Pn	03 06 43.3 +0.7
GOR	Gori	4.35	2	P	Pb	03 06 58.1 +3.2
MYA	Malataya	4.35	281	*e*PN	Pn	03 06 45.3 +0.3
MYA	Malataya	4.35	281	*e*Pn	Pn	03 06 45.3 +0.3
BHD	Baghdad	4.38	174	*e*Pn	Pb	03 06 55.7 +0.2
BHD				*e*Sn	Sn	03 07 37.7 +0.7
BHD				*e*Sg	Sg	03 07 54.5 -3.9
GUMT	Gumushane	4.43	311	*e*PN	Pn	03 06 47.3 +1.3
GUMT	Gumushane	4.43	311	*e*Pn	Pn	03 06 47.3 +1.3
ATAB	Bozova	4.43	270	*i* P	Pn	03 06 45.2 -0.9
ATAB				*i* S	Sg	03 07 57.7 -2.4
ATAB	Bozova	4.43	270	*i* P	Pn	03 06 45.2 -0.9
IKOM	Komasi	4.55	138	*e*P	Pn	03 06 49.1 +1.4
KEH	Kehvi	4.67	1	P	Pb	03 07 02.9 +2.5
AKCD	Akcadag	4.74	280	*e*P	Pn	03 06 50.0 -0.4
AKCD				*i* S	Sg	03 08 12.2 +2.0
AKCD	Akcadag	4.74	280	*e*P	Pn	03 06 50.0 -0.4
DARE	Darende-Malaty	4.94	287	*e*PN	Pn	03 06 57.4 +4.2
DARE	Darende-Malaty	4.94	287	*e*Pn	Pn	03 06 57.4 +4.3
ONI	Oni	4.96	356	P	Pb	03 07 04.8 -0.5
ESPY	Espiye-Giresun	5.16	311	*e*PN	Pn	03 06 56.8 +0.7
ESPY	Espiye-Giresun	5.16	311	*e*Pn	Pn	03 06 56.8 +0.7
GAZ	Gaziantep	5.32	267	*e*PN	Pn	03 06 59.9 +1.6
GAZ	Gaziantep	5.32	267	*e*Pn	Pn	03 06 59.9 +1.6
IRAZ	Razeghan	5.37	113	*e*P	Pn	03 07 00.7 +1.7
KMRS	Kahramanmaras	5.54	271	*e*PN	Pn	03 07 01.8 +0.5
KMRS	Kahramanmaras	5.54	271	*e*Pn	Pn	03 07 01.8 +0.5
SARI	SarD1z-Kayseri	5.74	283	*e*PN	Pn	03 07 08.9 +4.8
SVSK	Karacayir	5.83	295	*e*PN	Pn	03 07 06.1 +0.8
SVSK	Karacayir	5.83	295	*e*Pn	Pn	03 07 06.1 +0.8
KIV	Kislovodsk	6.37	352	*e*P	Pn	03 07 13.3 +0.5
KIV	Kislovodsk	6.37	352	*e*Pn	Pn	03 07 13.3 +0.5
KIV	Kislovodsk	6.37	352	*e*P	Pn	03 07 13.3 +0.5
KOZT	Kozan	6.39	271	*e*PN	Pn	03 07 14.6 +1.7
IDMV	Damavand	6.88	105	*e*P	Pn	03 07 20.2 +0.4
KARA	Karaisali	7.02	270	*e*PN	Pn	03 07 22.5 +0.8
KARA	Karaisali	7.02	270	*e*Pn	Pn	03 07 22.5 +0.9
HWQ	Hawqa	7.24	245	*e*Pn	Pn	03 07 24.8 +0.1
HWQ	Hawqa	7.24	245	*e*Pn	Pn	03 07 24.8 +0.1
IPIR	Pirpir	7.58	129	*e*P	Pn	03 07 29.7 +0.3
IKLH	Kolahrood	7.62	122	*e*P	Pn	03 07 31.2 +1.2
BHL	Bhannes	7.64	243	*e*Pn	Pn	03 07 31.7 +1.5
BHL	Bhannes	7.64	243	*e*Pn	Pn	03 07 31.7 +1.5
ASF	Jabal al Asfar	7.90	228	Pn	Pn	03 07 33.3 -0.4
	2.4nm,0.3s,baz=303,slow=6.7,SNR=12					
ASF				Lg		03 09 47.0
	2.3nm,0.3s,baz=47,slow=23,SNR=4.2					
BR131	Keskin Array S	8.27	288	*e*Pn	Pn	03 07 40.3 +1.6
BR131	Keskin Array S	8.27	288	*e*Pn	Pn	03 07 40.3 +1.6
MMAI	Mount Meron Ar	8.31	239	Pn	Pn	03 07 39.3 0.0
	2.5nm,0.3s,baz=61,slow=16,SNR=8.8					
MMAI				Lg		03 09 57.4
	1.3nm,0.3s,baz=43,slow=30,SNR=3.1					
MIB	Mutribah	8.33	159	*e*P	Pn	03 07 37.6 -2.1
MIB				*e*S	Sn	03 09 06.7 -7.7
MIB				AML	AML	03 09 08.1
	comp=Z,27nm,0.7s					
MIB	Mutribah	8.33	159	*e*P	Pn	03 07 37.6 -2.1
IZEF	Zefreh	8.38	122	*e*P	Pn	03 07 41.5 +1.1
IGAR	Gharneh	8.50	125	*e*P	Pn	03 07 42.9 +1.0
NAY	Al-Naaiem	8.83	160	*e*P	Pn	03 07 43.8 -2.7
NAY				*e*S	Sn	03 09 18.8 -7.8
NAY				AML	AML	03 09 21.2
	comp=Z,9.4nm,0.7s					
NAY	Al-Naaiem	8.83	160	*e*P	Pn	03 07 43.8 -2.7
RDF	Al-Radifah	9.22	159	*e*P	Pn	03 07 49.9 -1.9
RDF				*e*S	Sn	03 09 28.8 -7.4
RDF				AML	AML	03 09 29.7
	comp=Z,16nm,0.5s					
RDF	Al-Radifah	9.22	159	*e*P	Pn	03 07 49.9 -1.9
EIL	Elat	10.87	226	Pn	Pn	03 08 14.2 -0.3
	comp=Z,0.1nm,0.3s,baz=16,slow=20,SNR=1.7					
EIL				Lg		03 11 21.6
	comp=Z,0.5nm,0.3s,baz=307,slow=20,SNR=2.8					
EIL				LR	LR	03 13 23.1
	comp=Z,380nm,18.7s,baz=94,slow=43					
EIL	Elat	10.87	226	Pn	Pn	03 08 14.1 -0.4
IPAR	Pars	10.90	133	*e*P	Pn	03 08 13.7 -1.2
IDI	Anoyia	15.45	267	Pn	Pn	03 09 18.6 +1.8
	comp=Z,0.2nm,0.3s,baz=78,slow=14,SNR=3.1					
IDI	Anoyia	15.45	267	Pn	Pn	03 09 18.6 +1.8
GVD	Gavdhos	16.20	266	*e*Pn	Pn	03 09 25.8 -0.8
GVD	Gavdhos	16.20	266	*e*Pn	Pn	03 09 25.8 -0.8
AKTK	Aktyubinsk	16.31	34	Pn	Pn	03 09 27.2 -0.6
AKTK	Aktyubinsk	16.31	34	Pn	Pn	03 09 27.2 -0.7
AKTO	Aktyubinsk	16.31	34	Pn	Pn	03 09 27.2 -0.6
	comp=Z,0.4nm,0.3s,baz=244,slow=12,SNR=6.5					
ABKAR	Akbulak array	16.43	40	*e*Pn	Pn	03 09 27.7 -1.7
ABKAR	Akbulak array	16.43	40	*e*Pn	Pn	03 09 27.7 -1.7
AKASG	Malin Array Be	16.72	326	Pn	Pn	03 09 32.9 -0.2
	comp=Z,0.3nm,0.3s,baz=135,slow=11,SNR=4.5					
AKASG	Malin Array Be	16.72	326	Pn	Pn	03 09 32.9 -0.2
AKASG	Malin Array Be	16.72	326	Pn	Pn	03 09 32.8 -0.3
KIEV	Kiev	16.72	326	*e*P	Pn	03 09 32.5 -0.6
KIEV	Kiev	16.72	326	*e*Pn	Pn	03 09 32.5 -0.6
PSZ	Piszkesteto	20.30	308	*e*P	P	03 10 14.8 0.0
PSZ				pmax	pmax	
	comp=Z,9.0nm,0.8s					
PSZ	Piszkesteto	20.30	308	*e*P	P	03 10 14.8 -0.1
	comp=Z,9.0nm,0.8s					
PSZ	Piszkesteto	20.30	308	*e*P	P	03 10 14.8 0.0
	comp=Z,9.0nm,0.8s					
KBL	Kabul	20.56	91	*e*P	P	03 10 20.0 +2.1
KBL				pmax	pmax	
	comp=Z,21nm,1.0s					
KBL	Kabul	20.56	91	*e*P	P	03 10 20.0 +2.2
	comp=Z,21nm,1.0s					
NIE	Niedzica	20.65	312	*e*P	P	03 10 20.3 +1.7
ARU	Arti	21.22	23	P	P	03 10 27.9 +3.2
ARU	Arti	21.22	23	*e*P	P	03 10 23.4 -1.3
	comp=Z,15nm,0.7s,mb4.4					
ARU	Arti	21.22	23	*e*P	P	03 10 23.4 -1.3
	comp=Z,15nm,0.7s,mb4.4					
TIP	Timpagrande	21.27	283	*e*P	P	03 10 25.3 -0.2
	comp=Z,30nm,1.2s,mb4.5					
TIP	Timpagrande	21.27	283	*e*P	P	03 10 25.3 -0.2
	comp=Z,30nm,1.2s,mb4.5					
MORC	Moravsky Berou	22.44	311	*e*P	P	03 10 36.5 -1.4
MORC				pmax	pmax	
	comp=Z,11nm,1.3s,mb4.1					
MORC	Moravsky Berou	22.44	311	*e*P	P	03 10 36.5 -1.4
	comp=Z,11nm,1.3s,mb4.1					
MORC	Moravsky Berou	22.44	311	*e*P	P	03 10 36.5 -1.4
	comp=Z,11nm,1.3s,mb4.1					
EKS2	Erkin-Say	23.34	68	*e*P	P	03 10 48.5 +1.0
	comp=Z,4.7nm,1.0s,mb4.0					
EKS2	Erkin-Say	23.34	68	*e*P	P	03 10 48.5 +1.0
	comp=Z,4.7nm,1.0s,mb4.0					
BRVK	Borovoye	23.94	41	*e*P	P	03 10 53.2 0.0
BRVK	Borovoye	23.94	41	*e*P	P	03 10 53.2 0.0
TKM2	Tokmak 2	24.69	68	*e*P	P	03 10 59.3 -0.8
TKM2				pmax	pmax	
	comp=Z,4.0nm,0.9s,mb4.2					
TKM2	Tokmak 2	24.69	68	*e*P	P	03 10 59.3 -0.8
	comp=Z,3.8nm,0.9s,mb4.1					
TKM2	Tokmak 2	24.69	68	*e*P	P	03 10 59.3 -0.8
	comp=Z,3.8nm,0.9s,mb4.1					
FINES	FINESS Array B	26.30	341	P	P	03 11 12.6 -2.0
	comp=Z,0.8nm,0.4s,mb3.7,baz=136,slow=13,SNR=3.7					
FINES	FINESS Array B	26.30	341	P	P	03 11 12.6 -1.9
KEST	Kesra	27.66	277	P	P	03 11 25.4 -1.6
	comp=Z,0.7nm,0.8s,mb3.6,baz=333,slow=6.8,SNR=2.6					
KURK	Kurchatov	27.87	51	P	P	03 11 28.0 -0.8
	comp=Z,1.1nm,0.7s,mb3.8,baz=267,slow=9.3,SNR=3.2					
KURK	Kurchatov	27.87	51	P	P	03 11 28.0 -0.8
HFS	Hagfors	29.55	329	P	P	03 11 43.0 -0.6
	comp=Z,1.2nm,0.5s,mb4.0,baz=138,slow=11,SNR=3.8					
HFS	Hagfors	29.55	329	P	P	03 11 43.0 -0.6
MK31	Makanchi Array	29.64	60	*e*P	P	03 11 43.6 -1.0
MK31	Makanchi Array	29.64	60	*e*P	P	03 11 43.6 -1.0
MKAR	Makanchi Array	29.64	60	P	P	03 11 44.6 0.0
	comp=Z,1.1nm,0.8s,mb3.7,baz=271,slow=6.7,SNR=4.4					
MKAR	Makanchi Array	29.64	60	P	P	03 11 44.6 0.0
EKA	Eskdalemuir Ar	36.07	315	P	P	03 12 39.4 -1.2
	comp=Z,1.1nm,0.7s,mb3.8,baz=114,slow=8.6,SNR=3.7					
EKA	Eskdalemuir Ar	36.07	315	P	P	03 12 39.4 -1.2
ESDC	Sonseca Array	37.06	288	P	P	03 12 47.0 -2.3
	comp=Z,0.7nm,0.6s,mb3.5,baz=52,slow=8.3,SNR=3.7					
ESDC	Sonseca Array	37.06	288	P	P	03 12 47.0 -2.3
SPITS	Spitsbergen Ar	42.25	352	P	P	03 13 31.2 -0.8
	comp=Z,0.5nm,0.3s,mb3.7,baz=92,slow=16,SNR=3.5					
SPITS	Spitsbergen Ar	42.25	352	P	P	03 13 31.3 -0.7
CHTO	Chiang Mai	51.29	96	*e*P	P	03 14 42.0 -1.5
CHTO				pmax	pmax	
	comp=Z,3.0nm,0.7s,mb4.3					
CHTO	Chiang Mai	51.29	96	*e*P	P	03 14 42.0 -1.6
	comp=Z,3.4nm,0.7s,mb4.4					
CHTO	Chiang Mai	51.29	96	*e*P	P	03 14 42.0 -1.5
	comp=Z,3.4nm,0.7s,mb4.4					
CMAR	Chiang Mai Arr	51.48	96	P	P	03 14 44.5 -0.6
	comp=Z,1.4nm,0.3s,mb4.3,baz=296,slow=8.6,SNR=4.5					
CMAR	Chiang Mai Arr	51.48	96	P	P	03 14 44.5 -0.5
KSRS	Korea Array	64.30	61	P	P	03 16 16.3 +1.5
	comp=Z,0.9nm,0.6s,mb4.2,baz=292,slow=5.9,SNR=4.1					
KSRS	Korea Array	64.30	61	P	P	03 16 16.3 +1.5
KSRS				pmax	pmax	
	comp=Z,1.0nm,0.6s,mb4.2					
LBTB	Lobatse	64.64	198	*e*P	P	03 16 17.4 +0.4
LBTB				pmax	pmax	
	comp=Z,2.0nm,0.6s,mb4.5					
LBTB	Lobatse	64.64	198	*e*P	P	03 16 17.4 +0.4
	comp=Z,1.9nm,0.6s,mb4.5					
LBTB	Lobatse	64.64	198	*e*P	P	03 16 17.4 +0.4
	comp=Z,1.9nm,0.6s,mb4.5					
BOSA	Boshof	68.17	198	P	P	03 16 38.7 -0.8
	comp=Z,1.3nm,0.7s,mb4.3,baz=359,slow=4.6,SNR=3.8					
BOSA	Boshof	68.17	198	P	P	03 16 38.7 -0.8
BOSA	Boshof	68.17	198	P	P	03 16 38.7 -0.8
MAJO	Matsushiro	71.81	58	*e*P	P	03 17 00.9 -1.2
MAJO	Matsushiro	71.81	58	*e*P	P	03 17 00.9 -1.2

*BJI **25** 03:08:57.0, 27°.31N×102°.71E, h8km, ML3.3/7*
*IDC **25** 03:08:57.3±1.1, 27°.52N×102°.84E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.6/24, mbtmp3.6/6, ML4.3/1, Error ellipse: s-maj=44.7km s-min=20.0km az=71.0*
*ISCJB **25** 03:08:57.2±0.5, 27°.49N±0°.05×102°.73E±0°.05, h10km, mb3.5/6, Error ellipse: s-maj=7.0km s-min=6.8km az=156.1*
*NEIC **25** 03:08:59.0±0.6, 27°.49N×102°.80E, h10km, mb3.5/2, Error ellipse: s-maj=12.9km s-min=10.1km az=77.0*
ISC 25 03:08:59.1±0.5, 27°.46N±0°.05×102°.73E±0°.05, h10km, n14, σ0s73/19, mb3.5/6, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	Kunming	2.32	180	↑Pg	Pn	03 09 36.3	-1.0
KMI				Sg	Sn	03 10 05.8	-0.2
KMI				smax			
	comp=N,120nm,1.2s						
KMI				smax			
	comp=E,130nm,0.9s						
GYA	Guiyang	3.65	105	Pn	Pn	03 09 56.3	+0.7
GYA				Pg	Pb	03 10 03.9	+0.3
GYA				Sn	Sn	03 10 39.1	+0.4
GYA				Sg	Sg	03 10 51.8	-4.5
GYA				smax			
	comp=N,60nm,0.7s						
GYA				smax			
	comp=E,100nm,0.8s						
ENH	Enshi	6.55	63	*e*Pn	Pn	03 10 34.8	-0.8
ENH				*e*Sn	Sn	03 11 50.2	-0.1
CMAR	Chiang Mai Arr	9.61	202	Pn	Pn	03 11 18.3	+0.8
	comp=E,0.7nm,0.3s,baz=14,slow=11,SNR=2.4						
CMAR				Pg	Pn	03 11 55.0	+37
	comp=E,0.8nm,0.3s,baz=4.8,slow=17,SNR=4.7						
SONM	Songino Array	20.55	7	P	P	03 13 37.6	0.0
	comp=E,1.0nm,0.9s,baz=194,slow=12,SNR=4.5						
MK31	Makanchi Array	25.13	326	*e*P	P	03 14 24.9	+0.8
MKAR	Makanchi Array	25.13	326	P	P	03 14 24.4	+0.3
	comp=E,0.6nm,0.5s,mb3.4,baz=133,slow=8.9,SNR=7.6						
MKAR	Makanchi Array	25.13	326	P	P	03 14 24.4	+0.3
EKS2	Erkin-Say	27.97	310	*e*P	P	03 14 50.8	+1.1
	comp=E,1.0nm,0.6s,mb3.6						
KURK	Kurchatov	29.58	328	P	P	03 15 02.5	-1.5
	comp=E,0.9nm,0.6s,mb3.7,baz=135,slow=9.4,SNR=3.1						
KURK	Kurchatov	29.58	328	*e*P	P	03 15 02.4	-1.6
ABKAR	Akbulak array	39.31	315	*e*P	P	03 16 27.8	-0.3
	comp=E,0.3nm,0.6s,mb3.2						
WRA	Warramunga Arr	56.19	144	P	P	03 18 38.4	-0.9
	comp=E,0.6nm,0.6s,mb3.8,baz=334,slow=8.3,SNR=5.0						
ASAR	Alice Springs	59.06	146	P	P	03 19 00.0	+0.5
	comp=E,0.4nm,0.8s,mb3.5,baz=328,slow=6.3,SNR=4.2						

IDC 25 03:32:41.8±50.0, 22°.68S×176°.60W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.8/15, mbtmp4.1/3, Error ellipse: s-maj=931.8km s-min=156.9km az=86.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.08	247	P	P	03 40 01.6	-0.7
	2.2nm,0.6s,baz=92,slow=13,SNR=5.8						
ASAR	Alice Springs	45.33	259	P	P	03 41 01.9	0.0
	0.6nm,0.5s,baz=95,slow=7.3,SNR=10						
WRA	Warramunga Arr	45.63	264	P	P	03 41 04.6	+0.4
	2.4nm,0.5s,baz=101,slow=8.3,SNR=18						

*CRAAG **25** 03:46:05.2, 36°.59N×6°.02E, Ml3.5*
*ISCJB **25** 03:46:05.6±0.4, 36°.80N±0°.03×6°.09E±0°.04, h10km, Error ellipse: s-maj=4.4km s-min=3.5km az=148.5*
*CSEM **25** 03:46:07.8±0.3, 36°.78N×6°.25E, h10km, ML3.5, Error ellipse: s-maj=10.1km s-min=6.9km az=44.0*
*MDD **25** 03:46:07.7±0.4, 36°.55N×6°.03E, h0km, mb4.3/6, Error ellipse: s-maj=5.9km s-min=3.5km az=12.0, PRXIMO*
*NEIC **25** 03:46:09.7, 36°.67N×5°.97E, h0km, MG4.1(MDD), After MDD.*
*LDG **25** 03:46:12.1±0.3, 36°.95N×5°.72E, h10km, Ml3.1/12, Error ellipse: s-maj=5.1km s-min=3.2km az=146.0*
ISC 25 03:46:07.0±0.6, 36°.70N±0°.06×6°.10E±0°.04, h13km±8km, n125, σ1s51/174, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DFRA	Djebel Bou Aff	0.24	229	P	Pg	03 46 09.6	-2.4
DFRA	Djebel Bou Aff	0.24	229	P	Pg	03 46 09.6	-2.4
DFRA	Djebel Bou Aff	0.24	229	P	Pg	03 46 09.6	-2.4
CASM	Ain Smara	0.54	144	P	Pg	03 46 16.0	-1.6
CASM	Ain Smara	0.54	144	P	Pg	03 46 16.0	-1.6
CASM	Ain Smara	0.54	144	P	Pg	03 46 16.0	-1.6
CKFL	Kef-Lekhel	0.58	121	P	Pg	03 46 18.4	+0.1
CKFL	Kef-Lekhel	0.58	121	P	Pg	03 46 18.4	+0.1
CKFL	Kef-Lekhel	0.58	121	P	Pg	03 46 18.4	+0.1
CAEH	'Ain El Ouahch	0.61	82	P	Pg	03 46 20.4	+1.6
CAEH	'Ain El Ouahch	0.61	82	P	Pg	03 46 20.4	+1.6
CAEH	'Ain El Ouahch	0.61	82	P	Pg	03 46 20.4	+1.6
CTEI	Djebel Teioual	0.68	159	P	Pg	03 46 18.8	-1.4
CTEI	Djebel Teioual	0.68	159	P	Pg	03 46 18.8	-1.4
CTEI	Djebel Teioual	0.68	159	P	Pg	03 46 18.8	-1.4
SET	Setif	0.75	229	P	Pg	03 46 19.0	-2.6
SET	Setif	0.75	229	P	Pg	03 46 19.0	-2.6
SET	Setif	0.75	229	P	Pg	03 46 19.0	-2.6
CKHR	Kef el Ahmar	0.83	215	P	Pg	03 46 20.6	-2.5
CKHR	Kef el Ahmar	0.83	215	P	Pg	03 46 20.6	-2.5
CKHR	Kef el Ahmar	0.83	215	P	Pg	03 46 20.6	-2.5
CMAH	Djebel Manchou	1.06	94	P	Pb	03 46 28.0	+0.8
CMAH	Djebel Manchou	1.06	94	P	Pb	03 46 28.0	+0.8
CMAH	Djebel Manchou	1.06	94	P	Pb	03 46 28.0	+0.8
ABSA	Djebel Ababsia	1.19	111	P	Pn	03 46 29.0	-0.3
ABSA	Djebel Ababsia	1.19	111	P	Pn	03 46 29.0	-0.3
CABS	Djebel Ababsia	1.19	111	P	Pn	03 46 29.0	-0.3
AKF	Akfadou	1.23	267	P	Pn	03 46 29.9	-0.1
AKF	Akfadou	1.23	267	P	Pn	03 46 29.9	-0.1
AKF	Akfadou	1.23	267	P	Pn	03 46 29.9	-0.1
ATAF	Djebel Tarf	1.69	241	P	Pg	03 46 44.0	+4.6
ATAF	Djebel Tarf	1.69	241	P	Pg	03 46 44.0	+4.6
ATAF	Djebel Tarf	1.69	241	P	Pg	03 46 44.0	+4.6
AKET	Djebel Ketaf	1.91	251	P	Pg	03 46 45.0	+1.5
AKET	Djebel Ketaf	1.91	251	P	Pg	03 46 45.0	+1.5
AKET	Djebel Ketaf	1.91	251	P	Pg	03 46 45.0	+1.5
ADJB	Djebel Djouab	2.21	257	P	Pg	03 46 51.0	+1.6
ADJB	Djebel Djouab	2.21	257	P	Pg	03 46 51.0	+1.6
ADJB	Djebel Djouab	2.21	257	P	Pg	03 46 51.0	+1.6
ABA	Alger-Bouzarea	2.46	273	P	Pg	03 46 53.5	-0.7
ABA	Alger-Bouzarea	2.46	273	P	Pg	03 46 53.5	-0.7
ABA	Alger-Bouzarea	2.46	273	P	Pg	03 46 53.5	-0.7
ABA	Alger-Bouzarea	2.46	273	P	Pg	03 46 53.5	-0.7
EMHD	Djebel Mahouad	2.59	260	P	Pg	03 46 56.0	-0.6
EMHD	Djebel Mahouad	2.59	260	P	Pg	03 46 56.0	-0.6
EMHD	Djebel Mahouad	2.59	260	P	Pg	03 46 56.0	-0.6
ETOS	Mallorca	4.01	321	P	Pn	03 47 09.4	+1.3
ETOS				*e*		03 47 51.0	
ETOS				S	Sn	03 47 54.1	-0.9
ETOS	Mallorca	4.01	321	P	Pn	03 47 09.4	+1.3
	2.5nm,0.3s,SNR=13						
ETOS				UNK		03 47 51.0	
	SNR=7.9						
ETOS				S	Sn	03 47 54.1	-0.9
	3.8nm,0.3s,SNR=6.2						
ETOS	Mallorca	4.01	321	P	Pn	03 47 09.4	+1.3
	2.5nm,0.3s,SNR=13						
ETOS				S	Sn	03 47 54.1	-0.8
	3.8nm,0.3s,SNR=6.2						
EANR	'Ain N'Sour	4.11	261	P	Pb	03 47 19.0	-0.1
EANR	'Ain N'Sour	4.11	261	P	Pb	03 47 19.0	-0.1
EANR	'Ain N'Sour	4.11	261	P	Pb	03 47 19.0	-0.1
EIBI	Ibiza	4.42	303	P	Pn	03 47 15.7	+1.9
EIBI				S	Sn	03 48 04.3	-0.8
EIBI	Ibiza	4.42	303	P	Pn	03 47 15.7	+1.9
	12nm,0.3s,SNR=20						
EIBI				S	Sn	03 48 04.3	-0.8
	4.4nm,0.3s,SNR=13						
EIBI	Ibiza	4.42	303	P	Pn	03 47 15.7	+1.9
	12nm,0.3s,SNR=20						
EIBI				S	Sn	03 48 04.3	-0.8
	4.4nm,0.3s,SNR=13						
EBEN	Beniarda	5.40	294	P	Pn	03 47 29.9	+2.7
EBEN	Beniarda	5.40	294	P	Pn	03 47 29.9	+2.7
	1.2nm,0.2s,SNR=7.9						
EBEN	Beniarda	5.40	294	P	Pn	03 47 29.9	+2.7
	1.2nm,0.2s,SNR=7.9						
CFON	Fontmartina	5.80	332	S	Sn	03 48 37.5	-1.5
	4.2nm,0.3s,SNR=7.9						
CFON	Fontmartina	5.80	332	S	Sn	03 48 37.5	-1.6
	4.2nm,0.3s,SNR=7.9						
EPOB	Poblet	6.07	321	P	Pn	03 47 39.3	+2.9
EPOB				S	Sn	03 48 44.7	-1.1
EPOB	Poblet	6.07	321	P	Pn	03 47 39.3	+2.9
	0.7nm,0.2s,SNR=7.9						
EPOB				S	Sn	03 48 44.7	-1.1
	1.1nm,0.3s,SNR=7.9						
EPOB	Poblet	6.07	321	P	Pn	03 47 39.3	+2.9
	0.7nm,0.2s,SNR=7.9						
EPOB				S	Sn	03 48 44.7	-1.0
	1.1nm,0.3s,SNR=7.9						
ERTA	Horta de San J	6.19	315	P	Pn	03 47 40.6	+2.5
ERTA				S	Sn	03 48 46.7	-2.0
ERTA	Horta de San J	6.19	315	P	Pn	03 47 40.6	+2.5
	0.6nm,0.2s,SNR=7.9						
ERTA				S	Sn	03 48 46.7	-2.0
	1.1nm,0.4s,SNR=7.9						
ERTA	Horta de San J	6.19	315	P	Pn	03 47 40.6	+2.5
	0.6nm,0.2s,SNR=7.9						
ERTA				S	Sn	03 48 46.7	-2.0
	1.1nm,0.4s,SNR=7.9						
EJON	La Jonquera	6.25	338	S	Sn	03 48 50.5	+0.3
	1.4nm,0.3s,SNR=7.9						
EJON	La Jonquera	6.25	338	S	Sn	03 48 50.5	+0.3
	1.4nm,0.3s,SNR=7.9						
PGF	Pioggiola	6.25	20	*e*Pn	Pn	03 47 39.8	+0.9
PGF				*e*Sn	Sn	03 48 47.1	-3.1
	11nm,0.4s						
PGF	Pioggiola	6.25	20	P	Pn	03 47 39.8	+0.9
PGF				S	Sn	03 48 47.1	-3.1
	5.4nm,0.4s						
PGF	Pioggiola	6.25	20	*e*Pn	Pn	03 47 39.8	+0.9
PGF				*e*Sn	Sn	03 48 47.1	-3.1
	5.4nm,0.4s						
EMOS	Mosqueruela	6.32	307	P	Pn	03 47 42.1	+2.3
EMOS				S	Sn	03 48 50.2	-1.6
EMOS	Mosqueruela	6.32	307	P	Pn	03 47 42.1	+2.3
	0.8nm,0.2s,SNR=8.0						
EMOS				S	Sn	03 48 50.2	-1.6
	0.9nm,0.3s,SNR=8.7						
EMOS	Mosqueru

18nm,0.6s,SNR=13
LASF Ste Croix 7.56 348 *e*Pn **Pn 03 47 56.1 -0.8**
LASF *e*Sn **Sn 03 49 14.6 -7.8**
2.6nm,0.4s
LASF Ste Croix 7.56 348 *e*Pn **Pn 03 47 56.1 -0.8**
LASF *e*Sn **Sn 03 49 14.6 -7.8**
1.3nm,0.4s
EPF Esparros 7.72 327 *e*P **Pn 03 48 02.4 +3.4**
EPF *e*Sn **Sn 03 49 15.4 -11**
3.6nm,0.4s
EPF Esparros 7.72 327 *e*Pn **Pn 03 47 56.5 -2.5**
EPF *e*P 03 48 02.4
EPF *e*Sn **Sn 03 49 15.4 -11**
EPF Esparros 7.72 327 *e*Pn **Pn 03 47 56.5 -2.5**
EPF Esparros 7.72 327 *e*P **Pn 03 48 02.4 +3.4**
EPF *e*Sn **Sn 03 49 15.4 -11**
1.8nm,0.4s
ETSF Etsaut 8.03 322 *e*P **Pn 03 48 06.7 +3.3**
ETSF *e*Sn **Sn 03 49 22.3 -12**
0.4nm,0.3s
ETSF Etsaut 8.03 322 *e*Pn **Pn 03 48 01.0 -2.4**
ETSF *e*P 03 48 06.7
ETSF *e*Sn **Sn 03 49 22.3 -12**
ETSF Etsaut 8.03 322 *e*Pn **Pn 03 48 01.0 -2.4**
ETSF Etsaut 8.03 322 *e*P **Pn 03 48 06.7 +3.3**
ETSF *e*Sn **Sn 03 49 22.3 -12**
0.2nm,0.3s
VIVF Saint-Julien-l 8.22 353 *e*Pn **Pn 03 48 06.4 +0.5**
VIVF *e*Sn **Sn 03 49 30.3 -8.3**
1.9nm,0.4s
VIVF Saint-Julien-l 8.22 353 *e*Pn **Pn 03 48 06.4 +0.5**
VIVF *e*Sn **Sn 03 49 30.3 -8.3**
0.9nm,0.4s
EALK Alkurruntz 8.74 320 P **Pn 03 48 16.7 +3.6**
EALK Alkurruntz 8.74 320 P **Pn 03 48 16.7 +3.6**
3.6nm,0.6s,SNR=5.6
EALK Alkurruntz 8.74 320 P **Pn 03 48 16.7 +3.6**
3.6nm,0.6s,SNR=5.6
CAF Calviac 8.77 341 *e*Pn **Pn 03 48 12.7 -0.7**
CAF *e*Sn **Sn 03 49 41.5 -11**
0.9nm,0.4s
CAF Calviac 8.77 341 *e*Pn **Pn 03 48 12.7 -0.7**
CAF *e*Sn **Sn 03 49 41.5 -11**
0.4nm,0.4s

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*IDC **25** 04:16:20.9±2.3, 12°.56N×87°.99W, h38km±21km, mb4.0/14, mb1 4.2/17, mb1mx4.0/26, mbtmp4.0/17, ML3.2/3, Error ellipse: s-maj=24.9km s-min=11.8km az=54.0*
*CASC **25** 04:16:21.6±2.5, 12°.49N×88°.16W, h39km±194km, MD4.5, ML4.4, mb4.4(NEIC)*
*ISCJB **25** 04:16:21.2±0.4, 12°.48N±0°.04×88°.12W±0°.04, h51km±3km, mb4.4/51, Error ellipse: s-maj=8.3km s-min=2.7km az=135.4*
*BJI **25** 04:16:23.8, 12°.60N×88°.10W, h71km, mB5.0/3, Ms5.4/2, Ms7 4.9/2*
*NEIC **25** 04:16:24.9±0.9, 12°.56N×88°.11W, h72km±9km, mb4.4/44, Error ellipse: s-maj=11.3km s-min=5.4km az=51.0*
ISC 25 04:16:22.5±0.4, 12°.53N±0°.04×88°.09W±0°.04, h43km±3km, n336, σ0°78/341, mb4.4/51, 107C-109D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.78**	**18**	‖*e*P	**Pn**	**04 16 37.4**	**+0.3**
CNCH				*e*S	**Sn**	**04 16 49.1**	**+1.3**
VSM	**San Miguel**	**0.91**	**349**	*e*P	**Pn**	**04 16 38.8**	**-0.1**
BLLM	**Bellamira**	**0.92**	**351**	*e*P	**Pn**	**04 16 38.7**	**-0.3**
BLLM				*e*S	**Sn**	**04 16 51.4**	**+0.4**
CRIN	**San Cristobal**	**1.03**	**80**	*e*P	**Pn**	**04 16 40.9**	**+0.5**
CRIN				AML	AML	04 17 05.6	
	comp=E,21μm,0.4s						
LEON	**Leon**	**1.17**	**95**	*e*P	**Pn**	**04 16 41.5**	**-0.9**
TELN	**Telica**	**1.23**	**86**	*e*P	**Pn**	**04 16 43.2**	**+0.1**
CAHU	**Cacacuatique**	**1.24**	**354**	*e*P	**Pn**	**04 16 43.8**	**+0.5**
SNVI	**San Vicente**	**1.30**	**326**	*e*P	**Pn**	**04 16 43.2**	**-1.1**
SNVI				*e*S	**Sn**	**04 17 01.0**	**+0.6**
CNGN	**Cerro Negro**	**1.36**	**91**	*e*P	**Pn**	**04 16 44.3**	**-0.6**
CNGN				AML	AML	04 17 13.7	
	comp=N,7μm,0.6s						
LFRS	**El Faro**	**1.44**	**319**	*e*P	**Pn**	**04 16 44.2**	**-2.0**
COPN	**Copaltepe**	**1.50**	**103**	*e*P	**Pn**	**04 16 46.4**	**-0.5**
MOMN	**Momotombo**	**1.52**	**94**	*e*P	**Pn**	**04 16 47.1**	**0.0**
SNET	**Serv Nac Est T**	**1.60**	**316**	*e*P	**Pn**	**04 16 46.7**	**-1.6**
SNET				*e*S	**Sn**	**04 17 07.6**	**-0.2**
CSAN		**1.66**	**102**	*e*P	**Pn**	**04 16 48.8**	**-0.4**
BOQS	**Boqueron**	**1.67**	**316**	*i* P	**Pn**	**04 16 48.1**	**-1.1**
BOQS				*e*S	**Sn**	**04 17 09.2**	**-0.2**
TGUH	**Tegucigalpa,Un**	**1.71**	**27**	*e*Pn	**Pn**	**04 16 51.2**	**+1.4**
TGUH	**Tegucigalpa,Un**	**1.71**	**27**	*e*P	**Pn**	**04 16 51.1**	**+1.3**
TGUH				AML	AML	04 17 15.6	
	comp=N,17μm,0.5s						
APYN	**Apoyeque**	**1.72**	**100**	*e*P	**Pn**	**04 16 49.9**	**-0.1**
XAVN	**Gruta Xavier**	**1.76**	**102**	*e*P	**Pn**	**04 16 49.9**	**-0.6**
MGAN	**Managua**	**1.84**	**102**	*e*P	**Pn**	**04 16 50.8**	**-0.8**
MGAN				AML	AML	04 17 16.8	
	comp=Z,3μm,0.5s						
TICN	**Ticuantepe**	**1.88**	**105**	*e*P	**Pn**	**04 16 51.2**	**-0.9**
HUEN		**1.88**	**96**	*e*P	**Pn**	**04 16 51.7**	**-0.4**
SBLS	**San Blas**	**1.98**	**311**	*e*P	**Pn**	**04 16 52.6**	**-1.0**
APON	**Apoyo**	**2.07**	**107**	*e*P	**Pn**	**04 16 54.1**	**-0.6**
BOAB	**BOACO BROADBAN**	**2.37**	**92**	*e*P	**Pn**	**04 16 58.4**	**-0.4**
GBS2	**Las Lilas**	**3.08**	**123**	*i* P	**Pn**	**04 17 07.6**	**-1.1**
NY14	**Universidad de**	**3.12**	**126**	*i* P	**Pn**	**04 17 09.2**	**0.0**
GB1A	**Borinquen Arri**	**3.13**	**125**	*i* P	**Pn**	**04 17 09.4**	**+0.1**
LAPC	**Finca la Perla**	**3.13**	**124**	*i* P	**Pn**	**04 17 09.4**	**+0.1**
LAPC				*i* S	**Sn**	**04 17 44.9**	**-0.7**
GPS3	**Bodega del ICE**	**3.20**	**123**	*i* P	**Pn**	**04 17 11.2**	**+1.0**
GPS3				*i* S	**Sn**	**04 17 47.4**	**+0.2**
MESS	**Mesas**	**3.34**	**122**	*i* P	**Pn**	**04 17 11.9**	**-0.3**
MESS				*i* S	**Sn**	**04 17 48.9**	**-1.9**
APG	**El Apazote**	**3.38**	**317**	Pn	**Pn**	**04 17 12.3**	**-0.4**
	comp=Z,3.5nm,0.3s,baz=136,slow=7.0,SNR=38						
APG				Sn	**Sn**	**04 17 57.1**	**+5.6**
	comp=Z,10nm,0.3s,baz=28,slow=15,SNR=5.2						
VCR	**Vista de Mar**	**3.39**	**134**	*e*P	**Pn**	**04 17 11.8**	**-1.1**
JCR	**Jicaral**	**3.95**	**132**	*e*P	**Pn**	**04 17 20.5**	**-0.1**
CGA2	**Cerro Gallo 2**	**4.34**	**125**	*e*P	**Pn**	**04 17 27.7**	**+1.7**
PRS1	**Puriscal**	**4.49**	**124**	*e*P	**Pn**	**04 17 29.6**	**+1.7**
LAJ	**Bijagual**	**4.71**	**124**	*e*P	**Pn**	**04 17 28.5**	**-2.5**
SJS	**Escuela Geolog**	**4.72**	**123**	*e*P	**Pn**	**04 17 35.2**	**+4.1**
QCR	**Quepos**	**4.93**	**128**	‖*e*P	**Pn**	**04 17 34.9**	**+0.8**
URSC	**Urasca**	**5.00**	**122**	*e*P	**Pn**	**04 17 36.9**	**+1.9**
URSC				*e*S	**Sn**	**04 18 34.0**	**+2.3**
BUS	**Buena Vista**	**5.18**	**124**	*e*P	**Pn**	**04 17 39.7**	**+2.3**
BAR1		**5.71**	**124**	‖*e*P	**Pn**	**04 17 46.2**	**+1.4**
ACR	**Cerro Adams**	**6.18**	**128**	*e*P	**Pn**	**04 17 52.4**	**+1.1**
TEIG	**Tepich**	**7.66**	**359**	*e*Pn	**Pn**	**04 18 14.2**	**+2.8**
TEIG	**Tepich**	**7.66**	**359**	*e*P	**Pn**	**04 18 13.5**	**+2.0**
CMIG	**Matias Romero**	**7.99**	**305**	Pn	**Pn**	**04 18 15.3**	**-0.7**
	comp=Z,1.3nm,0.3s,baz=95,slow=8.9,SNR=13						
CMIG				Sn	**Sn**	**04 19 52.6**	**+7.5**
	comp=Z,1.6nm,0.3s,baz=289,slow=24,SNR=4.4						
BCIP	**Isla Barro Col**	**8.77**	**112**	*e*Pn	**Pn**	**04 18 29.9**	**+3.2**
OTAV	**Otavalo**	**15.51**	**141**	*e*Pn	**Pn**	**04 20 00.5**	**+2.2**
	comp=Z,16nm,1.4s						
ROSC	**El Rosal**	**15.58**	**118**	Pn	**Pn**	**04 19 56.3**	**-3.0**
	comp=Z,0.6nm,0.3s,baz=86,slow=16,SNR=2.6						
ROSC	**El Rosal**	**15.58**	**118**	*e*Pn	**Pn**	**04 20 03.5**	**+4.3**
HKT	**Hockley**	**18.77**	**339**	*e*P	**Pn**	**04 20 39.8**	**+1.0**
	comp=Z,6.2nm,1.1s						
VBMS	**Vicksburg**	**19.73**	**354**	*e*P	**Pn**	**04 20 50.2**	**0.0**
	comp=Z,25nm,0.6s						
LRAL	**Lakeview Retre**	**20.44**	**3**	*e*P	**P**	**04 20 58.0**	**+1.8**
JCT	**Junction City**	**20.90**	**331**	*e*P	**P**	**04 21 00.3**	**-0.8**
	comp=Z,13nm,0.6s						
GOGA	**Godfrey**	**21.21**	**11**	*e*P	**P**	**04 21 05.3**	**+0.7**
	comp=Z,13nm,0.9s,mb4.3						
628A	**Black Gap, Mar**	**21.77**	**323**	⇑P	**P**	**04 21 10.3**	**-0.3**
	baz=22,SNR=15						
ATAH	**Atahualpa**	**21.78**	**153**	P	**P**	**04 21 10.0**	**-0.8**
	comp=Z,4.4nm,0.6s,mb4.1,baz=352,slow=8.2,SNR=3.8						
SJG	**San Juan**	**21.86**	**73**	P	**P**	**04 21 09.9**	**-1.8**
	comp=Z,9.8nm,0.6s,mb4.4,baz=284,slow=4.2,SNR=3.1						
627A	**Terlingua Ranc**	**22.04**	**322**	⇓P	**P**	**04 21 13.4**	**-0.1**
	baz=22,SNR=33						
TXAR	**Lajitas Array**	**22.12**	**321**	P	**P**	**04 21 14.3**	**0.0**
	comp=Z,13nm,0.8s,mb4.4,baz=138,slow=9.6,SNR=12						
528A	**Cox Ranch, San**	**22.21**	**324**	⇑P	**P**	**04 21 14.3**	**-1.0**
	baz=22,SNR=7.2						
MIAR	**Mount Ida**	**22.48**	**348**	*e*P	**P**	**04 21 17.6**	**-0.5**
	comp=Z,19nm,0.9s,mb4.5						
UALR	**University of**	**22.48**	**351**	*e*P	**P**	**04 21 18.7**	**+0.6**
	comp=Z,8.7nm,0.6s,mb4.4						
JSC	**Jenkinsville**	**22.53**	**15**	*e*P	**P**	**04 21 19.7**	**+1.1**
626A	**Big Bend Ranch**	**22.56**	**321**	⇓P	**P**	**04 21 18.7**	**-0.4**
	baz=23,SNR=14						
428A	**Kincaid Ranch,**	**22.58**	**326**	⇑P	**P**	**04 21 19.1**	**-0.1**
	baz=23,SNR=8.8						
527A	**Woodward Ranch**	**22.68**	**323**	⇓P	**P**	**04 21 19.5**	**-0.7**
	baz=23						
526A	**Mary Lane Ranc**	**22.90**	**322**	⇓P	**P**	**04 21 21.8**	**-0.7**
	baz=23,SNR=16						
CPCT	**Cooper Cave**	**23.05**	**7**	*e*P	**P**	**04 21 24.5**	**+0.5**
PCRV	**Puerto La Cruz**	**23.11**	**93**	P	**P**	**04 21 24.7**	**-0.3**
	comp=Z,13nm,0.9s,mb4.4,baz=304,slow=1.0,SNR=6.1						
328A	**Wristen Ranch,**	**23.16**	**326**	⇓P	**P**	**04 21 24.4**	**-0.9**
	baz=23,SNR=17						
426A	**McDonald Obser**	**23.30**	**323**	⇑P	**P**	**04 21 25.1**	**-1.8**
	baz=23,SNR=17						
TKL	**Tuckaleechee C**	**23.36**	**9**	P	**P**	**04 21 26.7**	**-0.6**
	comp=Z,18nm,1.0s,mb4.5,baz=182,slow=11,SNR=20						
TKL	**Tuckaleechee C**	**23.36**	**9**	*e*P	**P**	**04 21 26.9**	**-0.4**
326A	**Caldwell Ranch**	**23.75**	**324**	⇑P	**P**	**04 21 29.6**	**-1.4**
	baz=24,SNR=15						
227A	**Bennet, Jal**	**23.90**	**327**	⇑P	**P**	**04 21 31.3**	**-1.0**
	baz=24,SNR=6.4						
425A	**Indio Mountain**	**23.96**	**322**	⇑P	**P**	**04 21 32.1**	**-0.7**
	baz=24						
WMOK	**Wichita Mounta**	**24.15**	**338**	*e*P	**P**	**04 21 33.2**	**-1.2**
	comp=Z,16nm,1.3s,mb4.3						
325A	**Bean Ranch, Si**	**24.37**	**323**	⇑P	**P**	**04 21 36.4**	**-0.2**
	baz=24,SNR=13						
226A	**Malaga, Loving**	**24.38**	**325**	⇑P	**P**	**04 21 36.3**	**-0.4**
	baz=24,SNR=12						
127A	**Arkansas Junct**	**24.45**	**328**	⇓P	**P**	**04 21 36.4**	**-0.9**
	baz=24						
GDL2	**Guadalupe Moun**	**24.63**	**325**	*e*P	**P**	**04 21 39.8**	**+0.8**
324A	**Moseley Ranch,**	**24.72**	**322**	⇓P	**P**	**04 21 38.9**	**-0.9**
	baz=25,SNR=19						
126A	**Clayton Basin,**	**24.78**	**326**	⇓P	**P**	**04 21 39.4**	**-1.0**
	baz=25,SNR=6.6						
225A	**Deer Hill, Car**	**24.82**	**324**	⇑P	**P**	**04 21 40.2**	**-0.5**
	baz=25,SNR=12						
MNTX	**Cornudas Mount**	**24.85**	**323**	*e*P	**P**	**04 21 40.1**	**-0.8**
	comp=Z,15nm,1.6s,mb4.3						
Z27A	**Tatum**	**24.88**	**329**	⇑P	**P**	**04 21 39.8**	**-1.4**
	baz=25,SNR=19						
125A	**Gardner Draw,**	**25.14**	**326**	⇑P	**P**	**04 21 43.2**	**-0.4**
	baz=25,SNR=24						
MSTX	**Muleshoe**	**25.19**	**330**	⇓P	**P**	**04 21 42.9**	**-1.1**
	baz=25,SNR=22						
224A	**Cornudas Mount**	**25.20**	**323**	⇑P	**P**	**04 21 44.1**	**0.0**
	baz=25,SNR=15						
Z26A	**Caprock**	**25.25**	**327**	⇑P	**P**	**04 21 43.7**	**-0.8**
	baz=25,SNR=7.8						
Y27A	**Causey**	**25.31**	**330**	⇓P	**P**	**04 21 44.1**	**-1.0**
	baz=25,SNR=20						
AMTX	**Amarillo**	**25.44**	**333**	*e*P	**P**	**04 21 45.2**	**-1.0**
	comp=Z,21nm,0.8s,mb4.7						
CCM	**Cathedral Cave**	**25.58**	**354**	*e*P	**P**	**04 21 45.3**	**-2.1**
	comp=Z,6.2nm,0.8s,mb4.2						
124A	**Stringfield Ra**	**25.62**	**324**	⇓P	**P**	**04 21 48.5**	**+0.6**
	baz=26,SNR=16						
Z25A	**Roswell**	**25.64**	**326**	⇑P	**P**	**04 21 47.8**	**-0.3**
	baz=26,SNR=19						
WCI	**Wyandotte Cave**	**25.64**	**3**	*e*P	**P**	**04 21 46.9**	**-1.1**
	comp=Z,8.6nm,0.8s,mb4.3						
X27A	**F and S Farms,**	**25.90**	**331**	⇑P	**P**	**04 21 49.8**	**-0.6**
	baz=26,SNR=14						
Z24A	**Sheeppen Canyo**	**26.04**	**325**	⇓P	**P**	**04 21 52.3**	**+0.6**
	baz=26,SNR=12						
Y25A	**Mesa, Roswell**	**26.12**	**327**	⇓P	**P**	**04 21 52.8**	**+0.3**
	baz=26,SNR=21						
X26A	**CR and CF Fran**	**26.17**	**330**	⇓P	**P**	**04 21 52.6**	**-0.3**
	baz=26						
W27A	**Bowe Ranch, En**	**26.22**	**331**	⇑P	**P**	**04 21 52.8**	**-0.5**
	baz=26,SNR=20						
Z23A	**Rita Site, Whi**	**26.47**	**324**	⇑P	**P**	**04 21 57.0**	**+1.3**
	baz=26,SNR=5.3						
Y24A	**Capitan**	**26.52**	**326**	⇑P	**P**	**04 21 56.4**	**+0.3**
	baz=27,SNR=15						
W26A	**Owens Ranch, T**	**26.57**	**330**	⇑P	**P**	**04 21 56.9**	**+0.4**
	baz=27,SNR=5.8						
X25A	**Clemmons Ranch**	**26.58**	**328**	⇑P	**P**	**04 21 56.7**	**+0.2**
	baz=27						
Y23A	**Lovelace Mesa,**	**26.87**	**325**	⇑P	**P**	**04 21 59.7**	**+0.5**
	baz=27,SNR=11						
121A	**Cookes Peak, D**	**26.88**	**321**	⇓P	**P**	**04 22 00.7**	**+1.4**
	baz=27						
220A	**Playas Peak, P**	**26.93**	**319**	⇑P	**P**	**04 22 00.1**	**+0.3**
	baz=27						
W25A	**X Bar L Ranch,**	**27.02**	**329**	⇑P	**P**	**04 22 00.7**	**+0.2**
	baz=27,SNR=24						
V26A	**Tequesquite Ra**	**27.16**	**331**	⇑P	**P**	**04 22 01.5**	**-0.3**
	baz=27,SNR=24						
BNM	**Barren Site**	**27.35**	**325**	*e*P	**P**	**04 22 04.4**	**+0.9**
	comp=Z,8.7nm,1.2s,mb4.2						
Z21A	**St. Cloud Mine**	**27.35**	**322**	⇓P	**P**	**04 22 05.5**	**+2.0**
	baz=27,SNR=5.7						
Y22A	**Socorro**	**27.38**	**324**	⇑P	**P**	**04 22 04.3**	**+0.5**
	baz=27						
120A	**U Bar Ranch, L**	**27.42**	**320**	⇑P	**P**	**04 22 05.0**	**+0.8**
	baz=27						
219A	**White Tail Can**	**27.46**	**318**	⇓P	**P**	**04 22 05.6**	**+1.1**
	baz=28						
W24A	**Lazy 6 Ranch,**	**27.49**	**328**	⇑P	**P**	**04 22 04.9**	**+0.2**
	baz=28,SNR=12						
LENM	**Lemitar**	**27.55**	**325**	*e*P	**P**	**04 22 04.6**	**-0.8**
	comp=Z,4.3nm,0.7s,mb4.2						
V25A	**Rancho No Teng**	**27.59**	**330**	⇓P	**P**	**04 22 05.6**	**0.0**
	baz=28,SNR=30						
U26A	**Atchley Ranch,**	**27.63**	**332**	⇓P	**P**	**04 22 05.5**	**-0.5**
	baz=28,SNR=9.8						
W23A	**Werner Place,**	**27.84**	**327**	⇓P	**P**	**04 22 08.7**	**+0.8**
	baz=28,SNR=9.1						
Y21A	**Point of Rocks**	**27.84**	**323**	⇓P	**P**	**04 22 08.7**	**+0.8**
	baz=28						
ANMO	**Albuquerque**	**27.85**	**326**	P	**P**	**04 22 08.8**	**+0.9**
	comp=Z,1.4nm,0.8s,mb3.6,baz=145,slow=13,SNR=4.7						
ANMO	**Albuquerque**	**27.85**	**326**	*e*P	**P**	**04 22 08.7**	**+0.7**
	comp=Z,0.3nm,0.8s,mb3.0						
U25A	**Circle Dot Ran**	**27.94**	**331**	⇓P	**P**	**04 22 08.8**	**0.0**
	baz=28,SNR=5.8						
Y20A	**Horse Springs,**	**28.19**	**322**	⇓P	**P**	**04 22 11.8**	**+0.8**
	baz=28						
X21A	**Alamocita Cree**	**28.22**	**324**	⇓P	**P**	**04 22 12.2**	**+0.9**
	baz=28						
V23A	**Ortiz Mt. (NFS**	**28.31**	**328**	⇑P	**P**	**04 22 13.1**	**+1.0**
	baz=28						
T25A	**Trinidad**	**28.54**	**332**	⇓P	**P**	**04 22 14.8**	**+0.6**
	baz=29,SNR=6.7						
TUC	**Tucson**	**28.66**	**317**	*e*P	**P**	**04 22 15.5**	**+0.3**
	comp=Z,4.5nm,0.9s,mb4.2						
X20A	**Quemado**	**28.70**	**323**	⇑P	**P**	**04 22 17.1**	**+1.5**
	baz=29						
U23A	**El Rito**	**28.76**	**329**	⇑P	**P**	**04 22 16.1**	**+0.1**
	baz=29,SNR=18						
V22A	**San Miguel Ran**	**28.82**	**327**	⇑P	**P**	**04 22 16.8**	**+0.3**
	baz=29						
Y18A	**Canyon Day Jun**	**29.11**	**320**	⇑P	**P**	**04 22 19.8**	**+0.6**
	baz=29						
V21A	**Milan**	**29.13**	**326**	⇓P	**P**	**04 22 20.3**	**+1.0**
	baz=29						
U22A	**Llaves**	**29.14**	**328**	⇑P	**P**	**04 22 19.8**	**+0.4**
	baz=29,SNR=5.3						
SDCO	**Great Sand Dun**	**29.54**	**331**	*e*P	**P**	**04 22 23.4**	**+0.5**
	comp=Z,7.0nm,1.1s,mb4.3						
U21A	**Nageezi**	**29.60**	**327**	⇓P	**P**	**04 22 24.7**	**+1.1**
	baz=30						
T22A	**Edith**	**29.65**	**329**	⇓P	**P**	**04 22 25.0**	**+1.0**
	baz=30						
T21A	**Navajo Lake**	**29.96**	**328**	⇑P	**P**	**04 22 27.5**	**+0.8**
	baz=30						
Y16A	**Circle Bar Ran**	**30.09**	**319**	⇓P	**P**	**04 22 28.7**	**+0.8**
	baz=30						
U19A	**Dine' College,**	**30.35**	**325**	⇓P	**P**	**04 22 30.8**	**+0.6**
	baz=30						
X16A	**Lo Mia Camp, P**	**30.41**	**320**	⇑P	**P**	**04 22 31.3**	**+0.6**
	baz=30						
R22A	**Saguache, Gunn**	**30.52**	**330**	⇓P	**P**	**04 22 32.3**	**+0.6**
	baz=31						
S21A	**Coal Bank Pass**	**30.60**	**328**	⇑P	**P**	**04 22 32.8**	**+0.4**
	baz=31						
T19A	**Beclabito**	**30.64**	**326**	⇑P	**P**	**04 22 33.2**	**+0.5**
	baz=31						
V17A	**Tonalea, Kykot**	**30.81**	**322**	⇓P	**P**	**04 22 34.5**	**+0.2**
	baz=31						
X15A	**Humboldt**	**30.96**	**319**	⇑P	**P**	**04 22 35.9**	**+0.3**
	baz=31						
WUAZ	**Wupatki**	**31.09**	**321**	⇑P	**P**	**04 22 37.0**	**+0.3**
	baz=31						
Q22A	**Crested Butte,**	**31.10**	**331**	⇑P	**P**	**04 22 36.9**	**+0.2**
	baz=31,SNR=5.2						
R20A	**Redvale**	**31.30**	**328**	⇓P	**P**	**04 22 39.1**	**+0.5**
	baz=31						
S19A	**Harvey Farm, M**	**31.37**	**327**	⇑P	**P**	**04 22 39.4**	**+0.2**
	baz=31						
SMCO	**Snowmass**	**31.38**	**331**	*e*P	**P**	**04 22 40.0**	**+0.9**
	comp=Z,8.1nm,1.0s,mb4.5						
Y13A	**Salome**	**31.60**	**316**	⇓P	**P**	**04 22 41.8**	**+0.6**
	baz=32						
T17A	**Navajo Res., N**	**31.76**	**324**	⇑P	**P**	**04 22 43.0**	**+0.4**
	baz=32						
V15A	**Kaibab Nationa**	**31.78**	**321**	⇓P	**P**	**04 22 43.4**	**+0.7**
	baz=32						
S18A	**Hurst Farm, Bl**	**31.79**	**326**	⇓P	**P**	**04 22 43.7**	**+0.8**
	baz=32						
R19A	**Curley Farm, L**	**31.84**	**327**	⇓P	**P**	**04 22 43.5**	**+0.2**
	baz=32						
W14A	**Seligman**	**31.96**	**319**	⇓P	**P**	**04 22 45.0**	**+0.6**
	baz=32						
PDMCI	**Parker Dam,Lak**	**32.10**	**317**	⇑P	**P**	**04 22 46.0**	**+0.5**
	baz=32						
S17A	**Black Ridge (B**	**32.20**	**325**	⇑P	**P**	**04 22 47.7**	**+1.3**
	baz=32						
V14A	**Boquillas Ranc**	**32.24**	**320**	⇓P	**P**	**04 22 47.7**	**+0.9**
	baz=32						
R18A	**Canyonlands Na**	**32.24**	**327**	⇓P	**P**	**04 22 46.5**	**-0.3**
	baz=32						
U15A	**North Rim**	**32.25**	**322**	⇑P	**P**	**04 22 47.4**	**+0.6**
	baz=32						
P20A	**De Beque**	**32.31**	**330**	⇓P	**P**	**04 22 47.8**	**+0.4**
	baz=32,SNR=6.6						
Q19A	**Hogan Spring (**	**32.34**	**328**	⇑P	**P**	**04 22 47.6**	**0.0**
	baz=32						
W13A	**Hualapai Mount**	**32.41**	**318**	⇓P	**P**	**04 22 48.1**	**-0.1**
	baz=32						
N22A	**Wattenberg Ran**	**32.45**	**334**	⇑P	**P**	**04 22 49.5**	**+0.9**
	baz=32						
O20A	**White River Ci**	**32.73**	**331**	⇓P	**P**	**04 22 51.6**	**+0.5**
	baz=33,SNR=12						
U14A	**Mt Trumbull**	**32.78**	**321**	⇓P	**P**	**04 22 52.1**	**+0.5**
	baz=33						
N21A	**Black Mountain**	**32.89**	**332**	⇑P	**P**	**04 22 53.0**	**+0.6**
	baz=33,SNR=9.7						
Q18A	**Rafter H Ranch**	**32.90**	**327**	⇓P	**P**	**04 22 52.9**	**+0.3**
	baz=33						
V13A	**Grand Canyon W**	**32.93**	**319**	⇑P	**P**	**04 22 53.7**	**+0.9**
	baz=33						
R16A	**Teasdale**	**33.04**	**325**	⇑P	**P**	**04 22 54.5**	**+0.8**
	baz=33						
SRU	**San Rafael**	**33.11**	**327**	⇑P	**P**	**04 22 54.9**	**+0.6**
	baz=33						
U13A	**Pakoon Wash**	**33.27**	**320**	⇑P	**P**	**04 22 56.2**	**+0.4**
	baz=33						
O19A	**Miners Draw (B**	**33.29**	**330**	⇓P	**P**	**04 22 56.2**	**+0.3**
	baz=33						
N20A	**Spence Gulch,**	**33.29**	**332**	⇓P	**P**	**04 22 56.5**	**+0.5**
	baz=33,SNR=13						
P18A	**Preston Nutter**	**33.34**	**328**	⇑P	**P**	**04 22 56.6**	**+0.2**
	baz=33,SNR=6.2						
V12A	**Nelson**	**33.41**	**318**	⇓P	**P**	**04 22 57.6**	**+0.6**
	baz=33						
L22A	**Ellis Ranch, M**	**33.46**	**335**	⇑P	**P**	**04 22 57.8**	**+0.5**
	baz=34,SNR=5.4						
P17A	**Butcher Ranch,**	**33.49**	**327**	⇑P	**P**	**04 22 57.9**	**+0.2**
	baz=34						
M21A	**Separation Pea**	**33.51**	**333**	⇓P	**P**	**04 22 58.2**	**+0.4**
	baz=34						
RWWY	**Rawlins**	**33.51**	**334**	*e*P	**P**	**04 22 58.5**	**+0.7**
	comp=Z,7.9nm,0.9s,mb4.6						
O18A	**Roosevelt**	**33.70**	**329**	⇓P	**P**	**04 23 00.3**	**+0.8**
	baz=34						
N19A	**John Jarvie Ra**	**33.77**	**331**	⇓P	**P**	**04 23 00.1**	**0.0**
	baz=34						
M20A	**Sweetwater, Wa**	**33.78**	**332**	⇑P	**P**	**04 23 00.3**	**+0.2**
	baz=34						
L21A	**Rawlins**	**33.80**	**334**	⇓P	**P**	**04 23 00.5**	**+0.2**
	baz=34,SNR=12						
TUQ	**Turquoise Moun**	**33.95**	**317**	⇓P	**P**	**04 23 02.5**	**+0.8**
	baz=34						
S13A	**Holt Ranch, En**	**33.95**	**322**	⇑P	**P**	**04 23 02.

J16A	Bone	36.76	331	⇓P	P	04 23 26.0	+0.2
	baz=37,SNR=5.3						
K15A	Arbon	36.77	329	⇓P	P	04 23 26.0	+0.1
	baz=37						
I17A	Pilgrim Ck.	36.78	333	⇓P	P	04 23 26.5	+0.6
	baz=37						
N12A	Clover Valley,	36.80	325	⇑P	P	04 23 26.3	+0.1
	baz=37						
IMW	Indian Meadow	36.92	332	*e*P	P	04 23 27.2	+0.1
	comp=Z,3.3nm,0.5s,mb4.4						
K14A	Jones Ranch, D	36.99	329	⇓P	P	04 23 27.5	-0.3
	baz=37,SNR=15						
I16A	Newdale	37.16	332	⇓P	P	04 23 29.2	+0.1
	baz=37						
RLMT	Red Lodge	37.17	335	⇑P	P	04 23 29.0	-0.2
	baz=37,SNR=5.1						
RLMT	Red Lodge	37.17	335	*e*P	P	04 23 27.8	-1.5
	comp=Z,8.8nm,0.9s,mb4.6						
NVAR	Mina Array Bea	37.24	319	P	P	04 23 29.4	-0.5
	comp=Z,1.5nm,0.8s,mb3.9,baz=137,slow=7.6,SNR=7.1						
NVAR				PcP	PcP	04 25 49.4	+0.4
	comp=Z,0.4nm,0.4s,baz=131,slow=4.1,SNR=4.4						
NVAR	Mina Array Bea	37.24	319	P	P	04 23 29.4	-0.5
NVAR				PcP	PcP	04 25 49.4	+0.4
J15A	Blackfoot	37.25	330	⇑P	P	04 23 29.7	-0.2
	baz=37,SNR=7.7						
G18A	Lazy EL Ranch,	37.45	335	⇓P	P	04 23 31.6	0.0
	baz=38						
L12A	House Creek Ra	37.67	327	⇑P	P	04 23 33.8	+0.3
	baz=38						
H16A	Russell Place,	37.69	333	⇑P	P	04 23 34.1	+0.4
	baz=38						
J14A	Carey	37.73	329	⇑P	P	04 23 34.5	+0.5
	baz=38,SNR=5.5						
K12A	Draper Farm, C	37.95	327	⇑P	P	04 23 36.3	+0.4
	baz=38						
G17A	Pierce Place,	37.95	334	⇓P	P	04 23 37.3	+1.5
	baz=38,SNR=6.6						
F18A	Big Timber	37.99	335	⇓P	P	04 23 35.9	-0.2
	baz=38,SNR=11						
I14A	Mackay	38.14	330	⇑P	P	04 23 37.8	+0.4
	baz=38,SNR=8.0						
ULM	Lac du Bonnet	38.15	352	P	P	04 23 34.8	-2.6
	comp=Z,3.3nm,0.4s,mb4.4,baz=169,slow=6.3,SNR=4.5						
ULM	Lac du Bonnet	38.15	352	*e*P	P	04 23 35.3	-2.1
	comp=Z,7.9nm,0.9s,mb4.4						
DGMT	Dagmar	38.26	343	⇑P	P	04 23 38.3	-0.1
	baz=38						
H15A	Lima	38.26	331	⇓P	P	04 23 38.9	+0.4
	baz=38,SNR=9.1						
G16A	Moss Hill, Enn	38.35	333	⇓P	P	04 23 39.4	+0.2
	baz=38,SNR=12						
HLID	Hailey	38.35	329	⇑P	P	04 23 39.4	+0.2
	baz=38						
HLID	Hailey	38.35	329	*e*P	P	04 23 39.4	+0.1
	comp=Z,2.8nm,1.0s,mb4.0						
F17A	Fitzpatrick Pl	38.38	334	⇓P	P	04 23 40.2	+0.7
	baz=38,SNR=16						
I13A	Wildhorse Cree	38.45	329	⇑P	P	04 23 40.6	+0.5
	baz=38,SNR=8.6						
J12A	Stokes Ranch,	38.48	328	⇑P	P	04 23 40.3	-0.1
	baz=38						
MCMT	McKenzie Canyo	38.52	331	*e*P	P	04 23 41.4	+0.8
	comp=Z,11nm,1.0s,mb4.5						
BOZ	Bozeman (W)	38.59	333	⇑P	P	04 23 41.2	-0.1
	baz=39,SNR=11						
BOZ	Bozeman (W)	38.59	333	*e*P	P	04 23 40.6	-0.6
	comp=Z,8.6nm,1.1s,mb4.4						
H14A	Leadore	38.60	331	⇑P	P	04 23 41.7	+0.4
	baz=39,SNR=15						
E18A	Harlowton	38.61	336	⇓P	P	04 23 40.8	-0.5
	baz=39,SNR=5.8						
G15A	Dillon	38.61	332	⇓P	P	04 23 41.8	+0.4
	baz=39,SNR=12						
F16A	Kennard Place,	38.70	333	⇑P	P	04 23 42.0	-0.2
	baz=39,SNR=9.5						
DLMT	Dillon	38.81	332	*e*P	P	04 23 43.2	+0.1
	comp=Z,14nm,1.0s,mb4.7						
I12A	Atlanta	38.88	328	⇑P	P	04 23 43.6	-0.1
	baz=39						
E17A	Martinsdale	38.91	335	⇓P	P	04 23 43.7	-0.2
	baz=39,SNR=8.3						
MFID	Camas Ranch	38.98	327	⇑P	P	04 23 44.5	0.0
	baz=39						
H13A	Challis	38.99	330	⇓P	P	04 23 44.8	+0.2
	baz=39,SNR=17						
D18A	Linhart Farms,	39.08	336	⇑P	P	04 23 45.4	+0.1
	baz=39,SNR=10.0						
LRM	Limekiln Ridge	39.09	333	*e*P	P	04 23 45.3	-0.1
	comp=Z,65nm,1.0s,mb5.3						
F15A	Butte	39.13	333	⇓P	P	04 23 45.7	0.0
	baz=39,SNR=17						
H12A	Diamond D Ranc	39.28	329	⇓P	P	04 23 47.3	+0.3
	baz=39,SNR=7.0						
E16A	East Helena	39.31	334	⇓P	P	04 23 47.4	+0.2
	baz=39,SNR=13						
G13A	Cobalt	39.37	331	⇓P	P	04 23 47.9	+0.1
	baz=39						
I11A	Placerville	39.39	328	⇓P	P	04 23 48.0	0.0
	baz=39,SNR=10						
D17A	Six Diamond Ra	39.39	336	⇓P	P	04 23 47.6	-0.3
	baz=39,SNR=18						
E15A	Deer Lodge	39.64	333	⇓P	P	04 23 50.0	0.0
	baz=40						
D16A	Dana Ranch, Ca	39.65	335	⇓P	P	04 23 49.9	-0.2
	baz=40,SNR=12						
EGMT	Eagleton	39.74	337	⇓P	P	04 23 50.9	+0.1
	baz=40						
EGMT	Eagleton	39.74	337	*e*P	P	04 23 50.5	-0.3
	comp=Z,6.6nm,0.3s,mb4.8						
C17A	Wharram Farm,	39.81	336	⇑P	P	04 23 50.9	-0.5
	baz=40,SNR=8.9						
WVOR	Wild Horse Val	39.87	324	*e*P	P	04 23 51.3	-0.7
	comp=Z,3.5nm,1.0s,mb4.0						
G12A	Big Creek, Yel	39.93	330	⇓P	P	04 23 52.2	-0.2
	baz=40						
F13A	Darby	39.93	331	⇑P	P	04 23 52.4	0.0
	baz=40,SNR=8.4						
E14A	Clinton	40.02	333	⇑P	P	04 23 52.9	-0.2
	baz=40,SNR=6.1						
B18A	Beardsley Farm	40.05	337	⇑P	P	04 23 53.1	-0.3
	baz=40,SNR=5.3						
C16A	Fuhringer Ranc	40.34	335	⇑P	P	04 23 55.5	-0.3
	baz=40						
F12A	Elk City	40.35	330	⇑P	P	04 23 55.6	-0.3
	baz=40,SNR=22						
E13A	Victor	40.35	332	⇓P	P	04 23 55.4	-0.5
	baz=40,SNR=6.3						
B17A	L&G Farms, Che	40.36	337	⇓P	P	04 23 55.8	-0.2
	baz=40						
J08A	Circle Bar Ran	40.37	325	⇓P	P	04 23 55.5	-0.6
	baz=40						
A18A	Metzger Ranch,	40.52	338	⇓P	P	04 23 56.8	-0.4
	baz=41,SNR=7.1						
D14A	Greenough	40.53	333	⇓P	P	04 23 56.8	-0.5
	baz=41,SNR=7.6						
MSO	Missoula	40.53	333	*e*P	P	04 23 56.8	-0.6
	comp=Z,10nm,1.1s,mb4.4						
G11A	Walters Elk Ra	40.59	329	⇓P	P	04 23 56.7	-1.2
	baz=41,SNR=5.9						
SLMT	Seeley Lake	40.65	333	*e*P	P	04 23 57.3	-1.0
	comp=Z,5.7nm,1.1s,mb4.1						
C15A	Salmond Ranch,	40.68	335	⇓P	P	04 23 58.2	-0.3
	baz=41,SNR=12						
F11A	Grangeville	40.88	330	⇑P	P	04 23 59.7	-0.6
	baz=41						
G10A	Bishop Farm, J	40.95	328	⇑P	P	04 24 00.1	-0.7
	baz=41						
D13A	Huson	40.96	332	⇑P	P	04 24 00.3	-0.6
	baz=41,SNR=7.6						
E12A	Beaver Dam Sad	40.98	331	⇑P	P	04 24 00.1	-0.9
	baz=41						
B15A	Bradely Ranch,	41.08	335	⇑P	P	04 24 01.2	-0.7
	baz=41,SNR=5.5						
C14A	Swan Lake	41.16	334	⇑P	P	04 24 02.3	-0.2
	baz=41						
D12A	Red Ives Fores	41.34	332	⇑P	P	04 24 03.4	-0.7
	baz=41						
C13A	Hot Springs	41.45	333	⇑P	P	04 24 04.5	-0.4
	baz=42						
F10A	Beach Ranch, E	41.47	329	⇑P	P	04 24 04.2	-0.9
	baz=42						
A15A	Johnson Ranch,	41.68	336	⇑P	P	04 24 06.0	-0.7
	baz=42,SNR=16						
B13A	Whitefish	41.93	334	⇓P	P	04 24 08.8	0.0
	baz=42						
A14A	Double T Ranch	41.95	335	⇑P	P	04 24 08.7	-0.4
	baz=42,SNR=24						
C11A	Tepee Creek (N	42.34	332	⇓P	P	04 24 11.7	-0.4
	baz=42						
A13A	Flathead Natio	42.34	334	⇓P	P	04 24 12.2	+0.1
	baz=42						
D08A	Wollman Farm,	43.07	329	⇑P	P	04 24 17.7	-0.4
	baz=43						
H04A	Detroit Lake	43.29	324	⇓P	P	04 24 19.5	-0.4
	baz=43						
FFC	Flin Flon	43.49	348	*e*P	P	04 24 19.8	-1.6
	comp=Z,9.0nm,1.3s,mb4.3						
B08A	Colville Reser	44.16	330	⇓P	P	04 24 26.6	-0.3
	baz=44						
RPW	Rockport	45.30	329	*e*P	P	04 24 34.4	-1.5
	comp=Z,2.1nm,0.7s,mb4.1						
EDM	Edmonton	45.31	339	*e*P	P	04 24 34.0	-1.9
SCHQ	Schefferville	45.38	17	P	P	04 24 34.0	-2.5
	comp=Z,1.8nm,0.4s,mb4.2,baz=232,slow=7.9,SNR=7.2						
CPUP	Villa Florida	48.85	142	P	P	04 25 01.9	-2.1
	comp=Z,1.1nm,0.7s,mb4.0,baz=319,slow=11,SNR=4.5						
CPUP	Villa Florida	48.85	142	*e*P	P	04 25 04.1	+0.2
	comp=Z,5.1nm,1.0s,mb4.5						
YKA	Yellowknife Ar	53.37	345	P	P	04 25 34.7	-2.7
	comp=Z,3.4nm,1.0s,mb4.2,baz=140,slow=7.8,SNR=17						
YKA				PcP	PcP	04 26 41.7	-2.5
	comp=Z,0.4nm,0.6s,baz=143,slow=4.1,SNR=3.8						
YKA				ScP	ScP	04 30 39.1	+0.5
	comp=Z,0.4nm,0.9s,baz=142,slow=5.8,SNR=3.7						
YKA	Yellowknife Ar	53.37	345	P	P	04 25 34.7	-2.7
YKA				PcP	PcP	04 26 41.7	-2.5
YKA				ScP	ScP	04 30 39.1	+0.5
PLCA	Paso Flores	55.42	164	P	P	04 25 50.8	-1.7
	comp=Z,2.7nm,0.9s,mb4.3,baz=322,slow=9.1,SNR=4.4						
PLCA	Paso Flores	55.42	164	*e*P	P	04 25 51.1	-1.4
	comp=Z,4.0nm,0.9s,mb4.5						
HHC	Hu-ho-hao-te	123.86	342	*e*PKP	PKPdf	04 35 09.9	-6.2
HHC				sPKP		04 35 47.3	
HHC				PP	PP	04 36 58.0	-0.4
HHC				PKS		04 38 45.8	
HHC				AMB	AMB		
	comp=Z,64nm,6.2s						
HHC				LR	LR		
	comp=N,120nm,16.8s						
HHC				LR	LR		
	comp=E,190nm,18.0s						
HHC				LR	LR		
	comp=Z,140nm,20.4s						
LZH	Lanzhou	130.35	347	*e*PKP	PKPdf	04 35 28.5	-0.2
LZH				sPKP		04 35 58.0	
CD2	Chengdu	135.34	345	*e*PKP	PKPdf	04 35 35.8	-2.4
WRA	Warramunga Arr	138.69	254	PKP	PKPdf	04 35 42.7	-1.9
	comp=Z,0.7nm,0.7s,baz=95,slow=2.6,SNR=4.1						
WRA	Warramunga Arr	138.69	254	PKP	PKPdf	04 35 42.7	-1.9
ASAR	Alice Springs	138.72	248	PKP	PKPdf	04 35 44.6	0.0
	comp=Z,0.4nm,0.7s,baz=101,slow=2.3,SNR=3.2						

IDC 25 04:22:14.3±2.9, 46.58N×153.30E, h0km, mb3.8/3, mb1 4.0/4, mb1mx3.5/24, mbtmp3.8/4, ML3.6/1, Error ellipse: s-maj=72.1km s-min=48.3km az=7.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	7.13	22	Pn	Pn	04 23 59.7	0.0
	1.1nm,0.3s,baz=210,slow=17,SNR=3.5						
NOA	NORSAR Array B	68.43	341	P	P	04 33 17.8	+0.3
	0.7nm,0.6s,baz=27,slow=6.5,SNR=3.9						
AKASG	Malin Array Be	71.76	326	P	P	04 33 38.0	-0.1
	0.4nm,0.3s,baz=32,slow=5.7,SNR=4.7						
TXAR	Lajitas Array	77.47	61	P	P	04 34 11.8	+0.2
	0.3nm,0.6s,baz=283,slow=4.1,SNR=5.0						

IDC 25 04:23:45.4±2.1, 7.47S×130.59E, h0km, mb3.5/1, mb1 3.6/4, mb1mx3.4/17, mbtmp3.4/4, ML2.9/3, Error ellipse: s-maj=75.2km s-min=26.1km az=77.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.62	204	Pn	Pn	04 26 30.8	-1.8
	0.0nm,0.3s,baz=74,slow=15,SNR=6.1						
FITZ				Sn	Sn	04 28 29.3	-14
	0.2nm,0.3s,baz=90,slow=20,SNR=5.5						
WRA	Warramunga Arr	12.93	164	Pn	Pn	04 26 51.8	+1.3
	0.1nm,0.3s,baz=348,slow=13,SNR=3.8						
WRA				Sn	Sn	04 29 16.4	+1.2
	0.2nm,0.3s,baz=346,slow=21,SNR=6.2						
ASAR	Alice Springs	16.42	169	Pn	Pn	04 27 38.0	+0.7
	0.1nm,0.3s,baz=348,slow=7.1,SNR=4.8						
MKAR	Makanchi Array	68.93	327	P	P	04 34 52.4	+0.2
	0.4nm,0.8s,baz=134,slow=6.2,SNR=3.4						

*ISCJB **25** 04:28:56.9±0.3, 52.94N±0.05×173.97W±0.05, h212km±3km, mb3.6/23, Error ellipse: s-maj=8.7km s-min=4.8km az=169.5*
*NEIC **25** 04:28:57.8±0.4, 52.81N×173.89W, h212km±4km, mb4.0/26, Error ellipse: s-maj=9.4km s-min=4.9km az=167.0*
*IDC **25** 04:28:58.8±1.9, 52.99N×173.99W, h221km±18km, mb3.3/6, mb1 3.7/8, mb1mx3.3/27, mbtmp3.4/8, Error ellipse: s-maj=46.4km s-min=13.7km az=6.0*
ISC 25 04:28:57.9±0.3, 52.93N±0.05×173.93W±0.05, h204km±3km, n249, σ0.58/255, mb3.6/23, 106C-93D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	Great Sitkin T	1.55	238	*e*Pn	Pn	04 29 33.3	+1.0
GSTR				*e*S	Sn	04 29 59.2	+0.2
ADK	Adak	1.99	239	*e*Pn	Pn	04 29 36.6	+0.2
ADK				*e*S	Sn	04 30 05.5	-1.0
AMKA	Amchitka	4.45	252	*e*P	Pn	04 30 05.0	-0.3
UNV	Unalaska Valle	4.54	75	*e*Pn	Pn	04 30 06.0	-0.4
UNV				*e*S	Sn	04 31 00.1	-0.3
AKUT	Akutan	5.01	73	*e*P	Pn	04 30 12.9	+0.5
	88nm,0.4s						
FX1	Attu Island--F	7.81	275	P	Pn	04 30 49.2	+0.8
	11nm,0.3s,baz=72,slow=20,SNR=58						
FX1				S	Sn	04 32 15.2	-1.3
	0.7nm,0.3s,baz=268,slow=18,SNR=3.6						
SDPT	Sand Point	8.26	68	*e*P	Pn	04 30 52.2	-2.1
SVW2	Sparrevohn	12.88	43	*e*Pn	Pn	04 31 54.5	+1.2
KDAK	Kodiak Island	13.06	60	P	Pn	04 31 52.4	-3.2
	5.2nm,0.3s,baz=244,slow=6.4,SNR=19						
KDAK				S	S	04 34 18.4	-2.6
	0.8nm,0.3s,baz=344,slow=22,SNR=6.0						
RSO	Redoubt South	13.82	49	*e*Pn	Pn	04 32 07.1	+2.1
PPLA	Purkeypile	15.18	40	*e*Pn	Pn	04 32 23.4	+1.6
	20nm,0.7s						
SEW	Seward	15.23	52	*e*Pn	Pn	04 32 20.9	-1.4
	35nm,0.5s						
RC01	Rabbit Creek A	15.42	48	*e*P	Pn	04 32 24.6	-0.1
CHUM	Lake Minchumin	15.67	37	*e*P	Pn	04 32 29.0	+1.4
	5.9nm,0.5s						
TRF	Thorofare Moun	16.21	40	*e*P	P	04 32 34.6	+1.2
	14nm,0.4s						
MCK	McKinley	16.87	40	*e*P	P	04 32 41.0	+0.3
	26nm,0.7s						
PETK	Petropavlovsk-	17.03	282	P	P	04 32 43.7	+1.2
	0.9nm,0.3s,baz=84,slow=14,SNR=17						
PETK	Petropavlovsk-	17.03	282	P	P	04 32 43.7	+1.2
BMRM	Bremner River	17.77	52	*e*P	P	04 32 52.2	+1.7
	21nm,0.8s						
COLA	College	17.84	38	*e*P	P	04 32 51.4	+0.1
	8.9nm,0.6s						
BILL	Bilibino	17.87	335	*e*P	P	04 32 52.7	+1.1
	29nm,0.9s						
PAX	Paxson	17.98	45	*e*P	P	04 32 52.7	-0.1
	8.8nm,0.6s						
COLD	Coldfoot	18.40	30	*e*P	P	04 32 59.0	+1.8
	3.1nm,0.8s						
MENT	Mentasta	18.72	46	*e*P	P	04 33 00.7	-0.1
EGAK	Eagle	20.40	42	*e*P	P	04 33 18.2	-0.6
	5.7nm,0.5s						
DAWY	Dawson	20.91	44	*e*P	P	04 33 23.7	-0.5
YKA	Yellowknife Ar	31.97	49	P	P	04 35 03.4	-0.8
	0.2nm,0.3s,mb3.1,baz=282,slow=7.2,SNR=7.4						
YKA	Yellowknife Ar	31.97	49	P	P	04 35 03.4	-0.8
D05A	Enumclaw	33.22	79	⇑P	P	04 35 16.1	+0.9
	baz=33						
F04A	Amboy	33.59	81	⇓P	P	04 35 19.0	+0.6
	baz=33						
B08A	Colville Reser	34.21	75	⇑P	P	04 35 24.1	+0.3
	baz=34,SNR=6.9						
H04A	Detroit Lake	34.39	83	⇑P	P	04 35 26.2	+0.8
	baz=34						
D08A	Wollman Farm,	35.10	77	⇓P	P	04 35 31.1	-0.2
	baz=35						
K05A	Summer Lake	36.26	85	⇑P	P	04 35 42.4	+1.1
	baz=36						
G09A	Cove	36.70	79	⇑P	P	04 35 44.9	0.0
	baz=36						
G10A	Bishop Farm, J	37.09	78	⇑P	P	04 35 48.3	+0.1
	baz=37						
D12A	Red Ives Fores	37.20	75	⇑P	P	04 35 48.3	-0.8
	baz=37						
MDJ	Mudanjiang	37.26	280	P	P	04 35 50.0	+0.3
MDJ				pP	pP	04 36 29.9	-2.3
MDJ				sP	sP	04 36 51.9	-3.5
MDJ				PP	PP	04 37 18.8	-0.1
MDJ				S	S	04 41 22.4	+1.2
MDJ				ScP	ScP	04 41 34.8	+3.0
MDJ				PcS	PcS	04 41 54.8	+1.8
MDJ				pmax	pmax		
	comp=Z,4.0nm,1.8s,mb3.6						
MDJ				pmax	pmax		
	comp=Z,13nm,3.1s						
C13A	Hot Springs	37.33	74	⇓P	P	04 35 49.9	-0.2
	baz=37						
A14A	Double T Ranch	37.34	71	⇑P	P	04 35 49.9	-0.4
	baz=37						
F11A	Grangeville	37.34	77	⇑P	P	04 35 50.1	-0.2
	baz=37						
J08A	Circle Bar Ran	37.36	82	⇓P	P	04 35 50.4	-0.1
	baz=37						
E12A	Beaver Dam Sad	37.40	76	⇑P	P	04 35 50.5	-0.3
	baz=37						
G11A	Walters Elk Ra	37.53	78	⇑P	P	04 35 51.7	-0.3
	baz=37						
B14A	Marquette Ranc	37.73	72	⇑P	P	04 35 53.1	-0.5
	baz=38						
C14A	Swan Lake	37.76	73	⇑P	P	04 35 53.4	-0.4
	baz=38						
WVOR	Wild Horse Val	37.79	83	*e*P	P	04 35 54.2	0.0
	comp=Z,2.1nm,0.6s,mb3.8						
F12A	Elk City	37.94	77	⇓P	P	04 35 55.2	-0.2
	baz=38,SNR=8.5						
MSO	Missoula	38.14	74	*e*P	P	04 35 56.3	-0.7
	comp=Z,1.4nm,0.6s,mb3.7						
B15A	Bradely Ranch,	38.16	71	⇓P	P	04 35 56.4	-0.8
	baz=38						
E13A	Victor	38.20	75	⇑P	P	04 35 57.5	0.0
	baz=38						
G12A	Big Creek, Yel	38.24	77	⇑P	P	04 35 57.8	0.0
	baz=38						
D14A	Greenough	38.26	74	⇓P	P	04 35 57.3	-0.6
	baz=38,SNR=7.6						
BEKR	Beckworth	38.29	88	⇑P	P	04 35 58.8	+0.4
	baz=38						
C15A	Salmond Ranch,	38.41	72	⇓P	P	04 35 59.3	0.0
	baz=38,SNR=8.4						
F13A	Darby	38.46	76	⇑P	P	04 35 59.4	-0.3
	baz=38						
E14A	Clinton	38.62	75	⇓P	P	04 36 00.6	-0.4
	baz=38						
K10A	MacKenzie Ranc	38.65	82	⇑P	P	04 36 02.0	+0.6
	baz=38						
H12A	Diamond D Ranc	38.84	78	⇑P	P	04 36 02.6	-0.2
	baz=39						
D15A	Lincoln	38.85	73	⇑P	P	04 36 02.4	-0.5
	baz=39						
C16A	Fuhringer Ranc	38.90	72	⇓P	P	04 36 02.6	-0.7
	baz=39						
G13A	Cobalt	38.91	77	⇓P	P	04 36 03.3	0.0
	baz=39						
I12A	Atlanta	39.10	79	⇑P	P	04 36 05.1	+0.1
	baz=39						
K11A	Parker Ranch,	39.16	81	⇑P	P	04 36 05.6	+0.1
	baz=39						
H13A	Challis	39.19	78	⇑P	P	04 36 05.7	0.0
	baz=39						
L10A	Juniper Basin	39.30	82	⇓P	P	04 36 06.9	+0.2
	baz=39						
J12A	Stokes Ranch,	39.44	80	⇑P	P	04 36 07.9	+0.1
	baz=39						
E16A	East Helena	39.61	73	⇓P	P	04 36 09.0	-0.2
	baz=39						
I13A	Wildhorse Cree	39.64	78	⇓P	P	04 36 09.5	0.0
	baz=40,SNR=5.1						
HLID	Hailey	39.66	79	⇑P	P	04 36 09.8	+0.1
	baz=40,SNR=6.0						
HLID	Hailey	39.66	79	*e*P	P	04 36 09.6	-0.1
	comp=Z,2.0nm,0.8s,mb3.6						
L11A	Cat Creek Ranc	39.68	82	⇓P	P	04 36 10.0	+0.2
	baz=40						
H14A	Leadore	39.68	77	⇑P	P	04 36 09.9	0.0
	baz=40						
D17A	Six Diamond Ra	39.85	72	⇑P	P	04 36 11.1	-0.1
	baz=40						
G15A	Dillon	39.89	76	⇑P	P	04 36 11.0	-0.5
	baz=40						
J13A	Cove Ranch, Pi	39.90	79	⇓P	P	04 36 11.9	+0.3
	baz=40						
K12A	Draper Farm, C	39.91	80	⇓P	P	04 36 12.5	+0.8
	baz=40						
I14A	Mackay	40.02	78	⇓P	P	04 36 12.8	+0.2
	baz=40,SNR=8.1						
F16A	Kennard Place,	40.05	74	⇓P	P	04 36 12.8	0.0
	baz=40						
M11A	Holland Ranch,	40.09	83	⇑P	P	04 36 13.6	+0.4
	baz=40						
E17A	Martinsdale	40.12	73	⇓P	P	04 36 13.0	-0.4
	baz=40						
BOZ	Bozeman (W)	40.12	75	⇑P	P	04 36 13.2	-0.3
	baz=40,SNR=8.3						
BOZ	Bozeman (W)	40.12	75	*e*P	P	04 36 13.1	-0.4
	comp=Z,2.3nm,0.6s,mb3.8						
L12A	House Creek Ra	40.13	81	⇑P	P	04 36 14.0	+0.4
	baz=40						
G16A	Moss Hill, Enn	40.26	75	⇑P	P	04 36 14.2	-0.3
	baz=40						
J14A	Carey	40.33	79	⇓P	P	04 36 15.6	+0.4
	baz=40						
NVAR	Mina Array Bea	40.44	88	P	P	04 36 16.4	+0.3
	comp=Z,1.2nm,0.6s,mb3.5,baz=295,slow=7.6,SNR=7.5						
NVAR				ScP	ScP	04 41 41.1	-3.1
	comp=Z,0.3nm,0.7s,baz=291,slow=5.7,SNR=3.6						
F17A	Fitzpatrick Pl	40.55	74	⇑P	P	04 36 16.7	-0.2
	baz=40						
E18A	Harlowton	40.61	72	⇑P	P	04 36 17.1	-0.3
	baz=40						
H16A	Russell Place,	40.88	75	⇓P	P	04 36 19.6	0.0
	baz=41						
J15A	Blackfoot	40.93	78

	baz=42						
N15A	Stansbury Isla	42.38	81	⇓P	P	04 36 31.6	-0.2
	baz=42						
J18A	Kendall Valley	42.47	77	⇓P	P	04 36 32.3	-0.2
	baz=42						
MPMC	Manual Prospec	42.47	90	⇑P	P	04 36 33.1	+0.5
	baz=42						
FURC	Furnace Creek,	42.58	89	⇓P	P	04 36 34.1	+0.6
	baz=42						
L17A	Cokeville	42.63	78	⇑P	P	04 36 33.8	0.0
	baz=42						
DUG	Dugway	42.64	82	⇓P	P	04 36 34.1	+0.2
	baz=42						
DUG	Dugway	42.64	82	eP	P	04 36 33.9	0.0
	comp=Z,1.2nm,0.5s,mb3.6						
M16A	Huntsville	42.66	80	⇑P	P	04 36 34.1	+0.1
	baz=42						
Q13A	Wheeler Ranch,	42.69	84	⇑P	P	04 36 34.8	+0.5
	baz=42						
P14A	Drum Mountains	42.86	83	⇑P	P	04 36 35.8	0.0
	baz=43						
BW06	Boulder Array	43.00	77	⇓P	P	04 36 36.4	-0.4
	baz=43,SNR=10						
BW06	Boulder Array	43.00	77	eP	P	04 36 36.4	-0.4
	comp=Z,4.7nm,0.8s,mb4.0						
PDAR	Pinedale Array	43.01	77	P	P	04 36 36.5	-0.3
	comp=Z,5.0nm,0.6s,mb4.1,baz=311,slow=4.3,SNR=39						
S12A	Delamar Landin	43.05	86	⇑P	P	04 36 37.8	+0.5
	baz=43						
T11A	Corn Creek, Al	43.07	87	⇓P	P	04 36 37.6	+0.2
	baz=43,SNR=7.8						
Q14A	Sevier Lake (B	43.12	84	⇑P	P	04 36 37.8	+0.1
	baz=43						
L18A	Fontenelle, Gr	43.23	78	⇓P	P	04 36 38.7	+0.1
	baz=43						
K19A	Absolon Red Bu	43.39	76	⇓P	P	04 36 38.9	-1.0
	baz=43,SNR=6.6						
GSC	Goldstone	43.39	90	⇓P	P	04 36 40.7	+0.7
	baz=43						
O16A	Springville	43.42	81	⇓P	P	04 36 40.5	+0.4
	baz=43						
L19A	Farson	43.52	77	⇓P	P	04 36 40.9	-0.1
	baz=43						
BFSC	Mount Baldy Ra	43.59	92	⇓P	P	04 36 41.8	+0.1
	baz=44						
S13A	Holt Ranch, En	43.67	86	⇑P	P	04 36 42.4	+0.2
	baz=44						
K20A	Yellowstone Ra	43.79	76	⇑P	P	04 36 42.4	-0.7
	baz=44						
V11A	Goodsprings	43.87	89	⇓P	P	04 36 44.0	+0.2
	baz=44						
T13A	Saint George	44.01	86	⇑P	P	04 36 44.8	-0.1
	baz=44						
U13A	Pakoon Wash	44.37	87	⇑P	P	04 36 48.5	+0.7
	baz=44						
N19A	John Jarvie Ra	44.37	79	⇑P	P	04 36 47.6	-0.2
	baz=44						
Q16A	Castle Valley	44.43	82	⇑P	P	04 36 48.6	+0.4
	baz=44						
GMRC	Granite Mounta	44.44	90	⇓P	P	04 36 48.7	+0.3
	baz=44						
P18A	Preston Nutter	44.53	81	⇑P	P	04 36 49.2	+0.3
	baz=44						
M20A	Sweetwater, Wa	44.59	77	⇓P	P	04 36 48.9	-0.5
	baz=44						
SRU	San Rafael	44.69	82	⇑P	P	04 36 50.3	0.0
	baz=44						
V13A	Grand Canyon W	44.73	88	⇑P	P	04 36 51.3	+0.7
	baz=45						
O19A	Miners Draw (B	44.78	79	⇑P	P	04 36 50.9	0.0
	baz=45						
L21A	Rawlins	44.78	76	⇓P	P	04 36 50.3	-0.6
	baz=45						
U14A	Mt Trumbull	44.84	86	⇑P	P	04 36 52.0	+0.5
	baz=45						
Q18A	Rafter H Ranch	44.93	81	⇑P	P	04 36 51.9	-0.3
	baz=45						
S16A	Weppner Ranch,	44.94	84	⇑P	P	04 36 52.7	+0.5
	baz=45						
N20A	Spence Gulch,	44.95	78	⇓P	P	04 36 52.1	-0.2
	baz=45						
M21A	Separation Pea	45.00	77	⇑P	P	04 36 52.2	-0.5
	baz=45						
R17A	Hanksville Air	45.02	82	⇓P	P	04 36 52.7	-0.2
	baz=45						
IRM	Iron Mountain	45.17	90	⇓P	P	04 36 54.2	+0.1
	baz=45						
P19A	Cripple Cowboy	45.28	80	⇑P	P	04 36 54.7	-0.2
	baz=45,SNR=8.1						
L22A	Ellis Ranch, M	45.29	76	⇑P	P	04 36 54.9	-0.1
	baz=45						
W13A	Hualapai Mount	45.30	88	⇓P	P	04 36 55.2	+0.1
	baz=45						
U15A	North Rim	45.37	86	⇑P	P	04 36 56.2	+0.6
	baz=45,SNR=6.6						
O20A	White River Ci	45.40	79	⇓P	P	04 36 55.5	-0.3
	baz=45						
V14A	Boquillas Ranc	45.41	87	⇓P	P	04 36 56.1	+0.2
	baz=45						
N21A	Black Mountain	45.44	78	⇑P	P	04 36 55.7	-0.4
	baz=45						
S17A	Black Ridge (B	45.48	83	⇓P	P	04 36 56.5	0.0
	baz=45,SNR=7.5						
R18A	Canyonlands Na	45.53	82	⇓P	P	04 36 56.3	-0.6
	baz=45						
Q19A	Hogan Spring (	45.55	81	⇓P	P	04 36 56.7	-0.3
	baz=45						
W14A	Seligman	45.70	88	⇓P	P	04 36 58.6	+0.3
	baz=46						
P20A	De Beque	45.72	80	⇓P	P	04 36 57.8	-0.5
	baz=46						
Y12C	Blythe	45.83	90	⇓P	P	04 36 59.9	+0.7
	baz=46						
V15A	Kaibab Nationa	45.85	86	⇓P	P	04 36 59.9	+0.5
	baz=46,SNR=5.4						
T17A	Navajo Res., N	45.89	84	⇓P	P	04 37 00.2	+0.5
	baz=46						
S18A	Hurst Farm, Bl	45.93	83	⇑P	P	04 36 60.0	0.0
	baz=46						
R19A	Curley Farm, L	45.98	82	⇓P	P	04 36 59.8	-0.5
	baz=46						
N22A	Wattenberg Ran	46.04	77	⇓P	P	04 37 00.5	-0.4
	baz=46						
Q20A	Ridgley Place,	46.12	80	⇓P	P	04 37 01.1	-0.4
	baz=46						
X14A	Yava	46.32	88	⇑P	P	04 37 03.7	+0.6
	baz=46						
T18A	Mexican Hat	46.36	83	⇓P	P	04 37 02.7	-0.7
	baz=46						
S19A	Harvey Farm, M	46.41	82	⇑P	P	04 37 03.3	-0.4
	baz=46						
WUAZ	Wupatki	46.53	86	⇓P	P	04 37 05.0	+0.3
	baz=46						
R20A	Redvale	46.57	81	⇑P	P	04 37 04.7	-0.2
	baz=46						
X15A	Humboldt	46.71	88	⇓P	P	04 37 06.5	+0.4
	baz=47						
Z13A	Yuma Proving G	46.73	90	⇑P	P	04 37 06.4	+0.2
	baz=47						
V17A	Tonalea, Kykot	46.81	85	⇑P	P	04 37 07.3	+0.4
	baz=47						
Y15A	Casa Rosa Ranc	47.01	88	⇓P	P	04 37 08.5	+0.1
	baz=47						
T19A	Beclabito	47.07	83	⇓P	P	04 37 08.6	-0.3
	baz=47						
S21A	Coal Bank Pass	47.27	81	⇓P	P	04 37 10.6	+0.2
	baz=47						
U19A	Dine' College,	47.32	84	⇓P	P	04 37 10.6	-0.2
	baz=47						
114A	Black Gap (USA	47.51	90	⇑P	P	04 37 12.5	+0.2
	baz=47						
115A	Sonoran Desert	47.94	89	⇓P	P	04 37 15.9	+0.3
	baz=48						
X18A	Snowflake	48.06	86	⇑P	P	04 37 17.0	+0.5
	baz=48						
Y17A	Roosevelt	48.09	87	⇑P	P	04 37 17.0	+0.2
	baz=48						
214A	Organ Pipe Nat	48.10	91	⇑P	P	04 37 16.8	-0.1
	baz=48						
U21A	Nageezi	48.16	82	⇓P	P	04 37 17.3	0.0
	baz=48,SNR=5.1						
R24A	Sanders Place,	48.49	79	⇓P	P	04 37 19.5	-0.3
	baz=48						
Y18A	Canyon Day Jun	48.52	87	⇓P	P	04 37 20.3	+0.3
	baz=48						
Q25A	Bedland, Calha	48.55	77	⇓P	P	04 37 19.8	-0.4
	baz=48						
SDCO	Great Sand Dun	48.58	79	eP	P	04 37 20.3	-0.1
	comp=Z,0.5nm,0.5s,mb3.1						
U22A	Llaves	48.68	82	⇓P	P	04 37 21.3	+0.1
	baz=48						
Y19A	Nutrioso	48.87	86	⇑P	P	04 37 23.0	+0.3
	baz=49						
X20A	Quemado	48.93	85	⇑P	P	04 37 23.5	+0.4
	baz=49						
V22A	San Miguel Ran	48.95	82	⇑P	P	04 37 23.3	0.0
	baz=49						
TUC	Tucson	49.09	89	eP	P	04 37 24.4	+0.1
	comp=Z,1.7nm,0.6s,mb3.5						
U23A	El Rito	49.11	81	⇑P	P	04 37 24.6	+0.2
	baz=49						
S25A	Robets Cordova	49.27	79	⇑P	P	04 37 25.3	-0.4
	baz=49						
118A	Homack Ranch,	49.35	88	⇑P	P	04 37 26.6	+0.3
	baz=49						
X21A	Alamocita Cree	49.42	84	⇑P	P	04 37 27.2	+0.4
	baz=49						
Y20A	Horse Springs,	49.43	85	⇓P	P	04 37 27.6	+0.7
	baz=49						
T25A	Trinidad	49.63	79	⇓P	P	04 37 28.5	+0.2
	baz=49						
Z20A	Nine Sixteen R	49.85	86	⇑P	P	04 37 30.2	+0.1
	baz=50						
U25A	Circle Dot Ran	50.12	80	⇑P	P	04 37 32.1	-0.1
	baz=50						
120A	U Bar Ranch, L	50.22	87	⇑P	P	04 37 33.1	+0.2
	baz=50						
219A	White Tail Can	50.23	88	⇓P	P	04 37 33.5	+0.5
	baz=50						
Y22A	Socorro	50.27	84	⇑P	P	04 37 33.5	+0.3
	baz=50						
W24A	Lazy 6 Ranch,	50.33	82	⇑P	P	04 37 34.1	+0.4
	baz=50						
V25A	Rancho No Teng	50.38	81	⇑P	P	04 37 34.1	+0.1
	baz=50						
U26A	Atchley Ranch,	50.52	80	⇑P	P	04 37 34.9	-0.2
	baz=50						
220A	Playas Peak, P	50.73	87	⇑P	P	04 37 36.9	+0.1
	baz=51						
Z22A	Elephant Butte	50.74	85	⇓P	P	04 37 37.2	+0.5
	baz=51						
Y23A	Lovelace Mesa,	50.82	84	⇓P	P	04 37 37.3	0.0
	baz=51						
W25A	X Bar L Ranch,	50.89	81	⇑P	P	04 37 37.7	-0.1
	baz=51						
V26A	Tequesquite Ra	50.90	80	⇓P	P	04 37 37.7	-0.2
	baz=51						
320A	Kipp Ranch, An	51.13	88	⇓P	P	04 37 39.9	+0.1
	baz=51						
Y24A	Capitan	51.19	83	⇑P	P	04 37 40.2	0.0
	baz=51,SNR=6.2						
CBKS	Cedar Bluff	51.27	74	eP	P	04 37 39.8	-0.8
	comp=Z,9.6nm,0.6s,mb4.4						
Y25A	Mesa, Roswell	51.64	83	⇓P	P	04 37 43.4	-0.1
	baz=52						
Z24A	Sheeppen Canyo	51.65	84	⇓P	P	04 37 43.6	+0.1
	baz=52						
124A	Stringfield Ra	52.03	84	⇑P	P	04 37 46.5	+0.1
	baz=52						
224A	Cornudas Mount	52.43	85	⇑P	P	04 37 49.1	-0.2
	baz=52						
125A	Gardner Draw,	52.54	84	⇓P	P	04 37 49.9	-0.2
	baz=52						
Y27A	Causey	52.59	81	⇑P	P	04 37 50.2	-0.2
	baz=52						
MNTX	Cornudas Mount	52.78	85	eP	P	04 37 51.3	-0.6
	comp=Z,1.3nm,0.8s,mb3.4						
126A	Clayton Basin,	52.93	83	⇓P	P	04 37 52.4	-0.6
	baz=53						
325A	Bean Ranch, Si	53.26	85	⇑P	P	04 37 55.2	-0.1
	baz=53						
226A	Malaga, Loving	53.29	84	⇑P	P	04 37 55.4	-0.2
	baz=53						
425A	Indio Mountain	53.66	86	⇓P	P	04 37 58.3	0.0
	baz=54						
326A	Caldwell Ranch	53.89	84	⇑P	P	04 37 59.4	-0.5
	baz=54						
426A	McDonald Obser	54.32	85	⇓P	P	04 38 02.4	-0.6
	baz=54						
328A	Wristen Ranch,	54.55	83	⇑P	P	04 38 04.2	-0.5
	baz=54						
WMOK	Wichita Mounta	54.60	78	eP	P	04 38 02.9	-2.1
	comp=Z,1.5nm,0.7s,mb3.6						
526A	Mary Lane Ranc	54.72	86	⇑P	P	04 38 05.4	-0.5
	baz=55						
626A	Big Bend Ranch	55.06	86	⇑P	P	04 38 07.9	-0.5
	baz=55						
428A	Kincaid Ranch,	55.09	84	⇓P	P	04 38 08.4	-0.2
	baz=55						
528A	Cox Ranch, San	55.43	84	⇑P	P	04 38 10.5	-0.5
	baz=55						
TXAR	Lajitas Array	55.50	86	P	P	04 38 10.8	-0.7
	comp=Z,1.5nm,0.8s,mb3.5,baz=301,slow=5.2,SNR=10						
TXAR				ScP	ScP	04 42 45.3	-2.5
	comp=Z,0.3nm,0.8s,baz=278,slow=3.4,SNR=4.5						
627A	Terlingua Ranc	55.58	85	⇓P	P	04 38 11.7	-0.4
	baz=55						
628A	Black Gap, Mar	55.86	85	⇓P	P	04 38 13.6	-0.4
	baz=56						
JCT	Junction City	57.00	82	eP	P	04 38 20.6	-1.5
	comp=Z,2.0nm,0.7s,mb3.9						
KURK	Kurchatov	60.07	316	eP	P	04 38 42.0	-0.9
	comp=Z,1.4nm,0.7s,mb3.7						
MKAR	Makanchi Array	61.36	311	P	P	04 38 49.8	-1.9
	comp=Z,0.4nm,0.8s,mb3.1,baz=44,slow=6.7,SNR=3.5						
BVAR	Borovoye Array	61.59	322	P	P	04 38 52.4	-0.7
	comp=Z,0.5nm,0.4s,mb3.5,baz=40,slow=12,SNR=4.6						
EKS2	Erkin-Say	68.41	313	eP	P	04 39 36.8	-0.4
	comp=Z,1.9nm,0.7s,mb3.8						
ABKAR	Akbulak array	68.44	325	eP	P	04 39 36.8	-0.5
	comp=Z,0.3nm,0.4s,mb3.3						

*NNC **25** 04:33:40.2±8.1, 37°.48N×70°.38E, h0km, mb3.9, mpv3.7, Error ellipse: s-maj=88.3km s-min=62.3km az=76.0*

ISC 25 04:33:45.4±3.9, 37°.5N±0°.3×71°.3E±0°.4, h249km±47km, n9, σ0553/12, 2C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	Kashi	4.23	59	⇓iPn	Pn	04 34 44.0	-7.8
KSH				Sn	S	04 35 35.8	-8.7
KSH				smax			
	comp=N,11nm,0.3s						
KSH				smax			
	comp=E,13nm,0.4s						
AML	Almayashu	5.04	21	P	Pn	04 35 01.7	+0.2
	SNR=22						
UCH	Uchtor	5.39	27	P	Pn	04 35 05.5	-0.2
	SNR=13						
KZA	Kyzart	5.55	32	P	Pn	04 35 07.2	-0.6
	SNR=6.7						
EKS2	Erkin-Say	5.55	19	P	Pn	04 35 08.8	+1.0
	SNR=5.4						
KK31	Karatay Array	5.68	354	⇑Pn	Pn	04 35 08.7	-0.7
	comp=E,1.8nm,0.5s,baz=177,slow=13,SNR=49						
KK31				⇑Sn	S	04 36 16.7	+0.2
	comp=E,0.7nm,0.3s,baz=187,slow=21,SNR=5.1						
TKM2	Tokmak 2	6.39	30	⇓Pn	Pn	04 35 17.7	-0.6
	comp=E,7.8nm,0.7s						
TKM2	Tokmak 2	6.39	30	P	Pn	04 35 18.8	+0.5
	SNR=6.7						
AB31	Akbulak array	14.37	329	⇓Pn	Pn	04 36 58.3	+0.4
	comp=E,0.5nm,0.6s,baz=147,slow=12,SNR=5.4						
AB31				Sn	S	04 39 36.5	-0.2
	comp=E,0.4nm,0.6s,baz=34,slow=6.4,SNR=4.9						

GUC 25 04:36:13.0±0.5, 22°.81S×70°.30W, h33km±2km, MD3.6, ML2.9, 3C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MECH	Mejillones	0.33	204	⇑iP	Pb	04 36 20.4	-0.7
MECH				i S	Sb	04 36 26.3	-0.3
MECH				AML	AML	04 36 27.1	
	comp=E,3μm,0.5s						
CEN1	Los Morros	0.59	171	⇑iP	Pb	04 36 26.6	+1.6
CEN1				i S	Sb	04 36 37.2	+3.9
ANCH	Antofagasta	0.88	186	⇑iP	Pn	04 36 28.7	-0.3
ANCH				i S	Sn	04 36 40.6	-0.1
ANCH				AML	AML	04 36 41.5	
	comp=N,442nm,0.4s						
PB04	Plate Boundary	0.93	55	⇓iP	Pn	04 36 23.7	-5.9
PB04				i S	Sn	04 36 31.6	-10
PB04				AML	AML	04 36 33.0	
	comp=E,2μm,0.2s						
PB01	Plate Boundary	1.91	23	⇓iP	Pn	04 36 45.3	+2.1
PB01				i S	Sn	04 37 09.6	+3.4
PB01				AML	AML	04 37 15.6	
	comp=E,164nm,0.3s						
HMBC	Humberston	2.54	9	eP	Pn	04 36 54.2	+2.3
HMBC				i S	Sn	04 37 25.7	+3.9
HMBC				AML	AML	04 37 42.5	
	comp=N,96nm,0.5s						
PSGC	Pisagua	3.20	3	eP	Pn	04 37 00.8	-0.1
PSGC				eS	Sn	04 37 38.7	+0.8
PSGC				AML	AML	04 38 03.9	
	comp=E,22nm,0.4s						
MNMC	Miæe Miæ	3.72	10	⇓iP	Pn	04 37 09.6	+1.5
MNMC				i S	Sn	04 37 53.9	+3.2

*IDC **25** 04:54:22.1±1.3, 6°.10S×131°.64E, h0km, mb4.0/3, mb1 3.9/5, mb1mx3.7/16, mbtmp3.8/5, ML3.4/2, Error ellipse: s-maj=145.9km s-min=24.8km az=69.0*

NEIC 25 04:54:28.1±0.9, 6°.23S×131°.48E, h35km, mb4.0/2, Error ellipse: s-maj=86.4km s-min=11.3km az=72.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	13.91	169	Pn	Pn	04 57 42.0	-0.9
	0.2nm,0.3s,baz=347,slow=12,SNR=4.6						
WRA				Sn	Sn	05 00 05.0	-11
	0.6nm,0.3s,baz=329,slow=24,SNR=9.8						
WRA	Warramunga Arr	13.91	169	Pn	Pn	04 57 42.0	-0.9
WRA				Sn	Sn	05 00 05.0	-11
ASAR	Alice Springs	17.49	173	P	Pn	04 58 28.8	-0.5
	0.1nm,0.3s,baz=341,slow=10,SNR=6.9						
ASAR				S	S	05 01 31.4	-19
	0.2nm,0.3s,baz=355,slow=26,SNR=7.6						
MK31	Makanchi Array	68.40	326	eP	P	05 05 26.1	-0.1
MKAR	Makanchi Array	68.40	326	P	P	05 05 25.9	-0.3
	1.3nm,0.5s,baz=127,slow=7.1,SNR=19						
MKAR	Makanchi Array	68.40	326	P	P	05 05 25.9	-0.3
EKS2	Erkin-Say	71.39	319	eP	P	05 05 44.0	-0.8
	0.7nm,0.4s						
ZALV	Zalesovo Beam	71.56	333	P	P	05 05 44.6	-0.9
	0.6nm,0.3s,baz=132,slow=2.1,SNR=3.4						
KURK	Kurchatov	72.64	328	P	P	05 05 50.9	-1.2
	1.1nm,0.7s,baz=128,slow=4.9,SNR=5.3						
KURK	Kurchatov	72.64	328	eP	P	05 05 50.9	-1.1
	0.9nm,0.5s						
CPUP	Villa Florida	146.52	166	PKPbc	PKPbc	05 14 06.0	-0.5
	0.7nm,0.6s,baz=197,slow=11,SNR=3.3						
LPAZ	La Paz	150.38	139	PKPbc	PKPbc	05 14 16.9	0.0
	0.4nm,0.4s,baz=35,slow=5.6,SNR=5.5						

*CSEM **25** 04:59:15.5±0.1, 84°.19N×1°.09E, h2km, mb4.1/22, Error ellipse: s-maj=8.6km s-min=5.0km az=33.0*
*MOS **25** 04:59:15.2±0.7, 84°.08N×0°.68E, h10km, mb4.4/10, Error ellipse: s-maj=84.1km s-min=10.4km az=93.0*
*IDC **25** 04:59:15.8±0.7, 84°.26N×1°.10E, h0km, mb3.8/16, mb1 4.0/18, mb1mx3.9/30, mbtmp3.9/18, ML3.9/2, MS3.7/8, Ms1 3.7/8, ms1mx3.3/32, Error ellipse: s-maj=20.4km s-min=13.6km az=27.0*
*ISCJB **25** 04:59:15.4±0.3, 84°.01N±0°.07×0°.5E±0°.4, h10km, mb4.0/35, MS3.7/6, Error ellipse: s-maj=10.5km s-min=5.0km az=29.6*
*NEIC **25** 04:59:17.4±0.2, 84°.15N×0°.94E, h10km, mb4.2/22, Error ellipse: s-maj=8.0km s-min=4.7km az=210.0*
*NAO **25** 04:59:25.1±11.0, 83°.66N×8°.63E, ML2.0*

ISC 25 04:59:17.4±0.3, 84°.05N±0°.06×0°.7E±0°.4, h10km, n115, σ0997/116, mb4.0/35, MS3.7/6, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	Kingsbay	5.40	156	Pn	Pn	05 00 36.7	-1.1
KBS				Sn	Sn	05 01 35.9	-3.9
KBS	Kingsbay	5.40	156	eP	Pn	05 00 37.1	-0.7
KBS				eS	Sn	05 01 36.3	-3.5
KBS				AML	AML	05 01 40.3	
	comp=Z,35nm,0.5s						
KBS	Kingsbay	5.40	156	eP	Pn	05 00 37.1	-0.7
KBS				eS	Sn	05 01 36.3	-3.5
KBS	Kingsbay	5.40	156	eP	Pn	05 00 37.1	-0.7
	SNR=76						
SPA0	Spitsbergen Ar	6.34	150	Pn	Pn	05 00 49.6	-1.1
	baz=354,slow=8.6						
SPA0	Spitsbergen Ar	6.34	150	Pn	Pn	05 00 49.6	-1.1
	baz=354,slow=8.2,SNR=122						
SPITS	Spitsbergen Ar	6.34	150	Pn	Pn	05 00 50.2	-0.5
	baz=5.5,slow=9.6,SNR=36						
SPITS				LR	LR	05 03 13.0	
	comp=Z,359nm,20.5s,baz=325,slow=36						
SPITS	Spitsbergen Ar	6.34	150	P	Pn	05 00 50.2	-0.5
SUMG	Summit	13.42	235	ePn	Pn	05 02 26.4	-1.1
	comp=Z,11nm,0.6s						
SUMG	Summit	13.42	235	i P	Pn	05 02 27.4	-0.1
	comp=Z,15nm,0.9s						
ARA0	ARCESS Array S	15.35	146	P	Pn	05 02 52.0	-1.7
	baz=2.1,slow=14						
ARCES	ARCESS Array B	15.35	146	Pn	Pn	05 02 50.6	-3.1
	comp=Z,0.5nm,0.3s,baz=10,slow=8.6,SNR=15						
ARCES				LR	LR	05 09 08.3	
	comp=Z,167nm,18.2s,baz=261,slow=38						
RES	Resolute Bay	17.05	296	eP	Pn	05 03 14.1	-1.3
RES				pmax	pmax		
	comp=Z,14nm,1.1s						
RES	Resolute Bay	17.05	296	ePn	Pn	05 03 14.1	-1.3
	comp=Z,14nm,1.1s						
RES	Resolute Bay	17.05	296	eP	Pn	05 03 14.1	-1.3
	comp=Z,14nm,1.1s						
SFJD	Kangerlussuaq	19.93	244	P	Pn	05 03 49.6	-0.8
	comp=Z,6.7nm,0.6s,baz=328,slow=14,SNR=4.1						
SFJD	Kangerlussuaq	19.93	244	eP	Pn	05 03 50.7	+0.2
SFJD				pmax	pmax		
	comp=Z,20nm,1.1s						
SFJD	Kangerlussuaq	19.93	244	eP	Pn	05 03 50.7	+0.2
	comp=Z,20nm,1.1s						
SFJD	Kangerlussuaq	19.93	244	eP	Pn	05 03 50.7	+0.2
	comp=Z,20nm,1.1s						
NB2	NORSAR Subarra	23.26	167	P	P	05 04 26.0	+1.5
	comp=Z,2.7nm,0.9s,mb3.7,baz=359,slow=11						
NB2	NORSAR Subarra	23.26	167	P	P	05 04 26.0	+1.5
	comp=Z,2.7nm,0.9s,mb3.7,baz=359,slow=11,SNR=5.1						
NOA	NORSAR Array B	23.26	167	P	P	05 04 27.1	+2.6
	comp=Z,2.3nm,0.9s,mb3.6,baz=353,slow=8.5,SNR=4.4						
NOA				LR	LR	05 12 12.4	
	comp=Z,52nm,21.9s,MS2.9,baz=315,slow=33						
NOA	NORSAR Array B	23.26	167	P	P	05 04 27.1	+2.6
FIA0	FINESS Array S	23.44	149	P	P	05 04 28.1	+1.7
FIA0	FINESS Array S	23.44	149	P	P	05 04 28.1	+1.7
FINES	FINESS Array B	23.44	149	P	P	05 04 28.3	+1.9
	comp=Z,6.1nm,0.9s,mb4.0,baz=306,slow=6.6,SNR=4.9						
FINES	FINESS Array B	23.44	149	P	P	05 04 28.3	+1.9
HFS	Hagfors	24.23	164	P	P	05 04 37.1	+3.3
	comp=Z,3.6nm,0.9s,mb3.8,baz=125,slow=31,SNR=3.2						
HFS	Hagfors	24.23	164	P	P

comp=Z,1.3nm,0.5s,mb4.1
BRVK Borovoye 35.42 103 *e*P **P 05 06 12.9 0.0**
BRVK pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
BRVK Borovoye 35.42 103 *e*P **P 05 06 12.9 0.0**
comp=Z,2.4nm,0.6s,mb4.3
BRVK Borovoye 35.42 103 *e*P **P 05 06 12.9 0.0**
comp=Z,2.4nm,0.6s,mb4.3
BVAR Borovoye Array 35.46 103 P **P 05 06 13.6 +0.3**
comp=Z,1.8nm,0.8s,mb4.1,baz=343,slow=9.3,SNR=9.4
BVAR Borovoye Array 35.46 103 P **P 05 06 13.6 +0.3**
ZALV Zalesovo Beam 36.05 88 P **P 05 06 17.9 -0.4**
comp=Z,0.5nm,0.3s,mb3.9,baz=352,slow=9.0,SNR=3.7
ZALV LR LR 05 23 05.4
comp=Z,66nm,20.6s,MS3.4,baz=75,slow=40
AKTK Aktyubinsk 36.81 116 P **P 05 06 25.1 +0.3**
AKTK LR LR 05 24 00.2
AKTK Aktyubinsk 36.81 116 P **P 05 06 25.1 +0.3**
AKTO Aktyubinsk 36.81 116 P **P 05 06 25.1 +0.3**
comp=Z,1.9nm,1.0s,mb3.9,baz=356,slow=9.7,SNR=3.9
AKTO LR LR 05 24 00.3
comp=Z,266nm,18.4s,MS4.1,baz=182,slow=40
ABKAR Akbulak array 38.16 114 *e*P **P 05 06 37.0 +0.7**
comp=Z,0.7nm,0.6s,mb3.6
ABKAR Akbulak array 38.16 114 *e*P **P 05 06 37.0 +0.7**
comp=Z,0.7nm,0.6s,mb3.6
KURK Kurchatov 38.59 95 P **P 05 06 40.7 +0.8**
comp=Z,1.4nm,0.7s,mb3.8,baz=356,slow=7.6,SNR=9.9
KURK Kurchatov 38.59 95 P **P 05 06 40.7 +0.8**
KURK pmax pmax
comp=Z,1.0nm,0.7s,mb3.6
KURK Kurchatov 38.59 95 *e*P **P 05 06 39.4 -0.5**
comp=Z,1.8nm,0.7s,mb3.9
KURK Kurchatov 38.59 95 *e*P **P 05 06 39.4 -0.5**
comp=Z,1.8nm,0.7s,mb3.9
ULM Lac du Bonnet 40.99 284 LR LR 05 24 13.3
comp=Z,179nm,18.9s,MS4.0,baz=35,slow=36
MK31 Makanchi Array 42.85 92 *e*P **P 05 07 15.1 +0.1**
MK31 Makanchi Array 42.85 92 *e*P **P 05 07 15.1 +0.1**
MKAR Makanchi Array 42.85 92 P **P 05 07 13.7 -1.4**
comp=Z,0.9nm,0.8s,mb3.5,baz=9.2,slow=9.8,SNR=5.7
ZEI Tsey 43.20 133 *e*P **P 05 07 17.7 -0.3**
ZEI pmax pmax
comp=Z,5.0nm,0.5s,mb4.5
ZEI Tsey 43.20 133 *e*P **P 05 07 17.7 -0.3**
comp=Z,5.0nm,0.5s,mb4.5
SONM Songino Array 44.28 68 P **P 05 07 26.7 +0.2**
comp=Z,0.8nm,0.8s,mb3.5,baz=350,slow=7.6,SNR=4.5
SONM Songino Array 44.28 68 P **P 05 07 26.7 +0.2**
BSMT Bassoo Peak 45.18 301 *e*P **P 05 07 34.3 +0.5**
comp=Z,2.0nm,1.0s,mb3.9
BSMT Bassoo Peak 45.18 301 *e*P **P 05 07 34.3 +0.5**
comp=Z,2.0nm,1.0s,mb3.9
TKM2 Tokmak 2 45.99 100 *e*P **P 05 07 40.1 -0.1**
TKM2 pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
TKM2 Tokmak 2 45.99 100 *e*P **P 05 07 40.1 -0.1**
comp=Z,1.3nm,0.6s,mb4.0
TKM2 Tokmak 2 45.99 100 *e*P **P 05 07 40.1 -0.1**
comp=Z,1.3nm,0.6s,mb4.0
AAK Ala-Archa 46.16 101 P **P 05 07 41.9 +0.4**
comp=Z,1.1nm,0.3s,mb4.3,baz=343,slow=8.0,SNR=5.3
AAK Ala-Archa 46.16 101 P **P 05 07 41.9 +0.4**
UCH Uchtor 46.56 101 *e*P **P 05 07 46.6 +1.9**
comp=Z,3.7nm,1.1s,mb4.2
UCH Uchtor 46.56 101 *e*P **P 05 07 46.6 +1.9**
comp=Z,3.7nm,1.1s,mb4.2
BOZ Bozeman (W) 47.08 298 *e*P **P 05 07 48.4 -0.3**
BOZ pmax pmax
comp=Z,3.0nm,1.3s,mb4.1
BOZ Bozeman (W) 47.08 298 *e*P **P 05 07 48.4 -0.3**
comp=Z,3.2nm,1.3s,mb4.1
BOZ Bozeman (W) 47.08 298 *e*P **P 05 07 48.4 -0.3**
comp=Z,3.2nm,1.3s,mb4.1
TPAW Teton Pass 49.16 297 *e*P **P 05 08 05.5 +0.7**
comp=Z,1.5nm,0.9s,mb4.0
TPAW Teton Pass 49.16 297 *e*P **P 05 08 05.5 +0.7**
comp=Z,1.5nm,0.9s,mb4.0
HLID Hailey 49.40 300 *e*P **P 05 08 05.9 -0.7**
comp=Z,0.6nm,0.6s,mb3.8
HLID Hailey 49.40 300 *e*P **P 05 08 05.9 -0.8**
comp=Z,0.6nm,0.6s,mb3.8
BW06 Boulder Array 49.74 295 *e*P **P 05 08 09.1 -0.2**
comp=Z,1.3nm,0.8s,mb4.0
BW06 Boulder Array 49.74 295 *e*P **P 05 08 09.1 -0.2**
comp=Z,1.3nm,0.8s,mb4.0
PDAR Pinedale Array 49.74 295 P **P 05 08 09.4 +0.2**
comp=Z,0.9nm,0.8s,mb3.8,baz=12,slow=7.6,SNR=7.1
PDAR LR LR 05 29 35.5
comp=Z,139nm,18.3s,MS4.0,baz=87,slow=37
PDAR Pinedale Array 49.74 295 P **P 05 08 09.4 +0.1**
HWUT Hardware Ranch 51.08 297 *e*P **P 05 08 19.6 +0.2**
comp=Z,1.6nm,0.7s,mb4.1
HWUT Hardware Ranch 51.08 297 *e*P **P 05 08 19.5 +0.1**
comp=Z,1.6nm,0.7s,mb4.1
DUG Dugway 52.60 298 *e*P **P 05 08 30.7 0.0**
DUG Dugway 52.60 298 *e*P **P 05 08 30.7 0.0**
SMCO Snowmass 53.05 292 *e*P **P 05 08 35.4 +1.3**
comp=Z,3.4nm,1.0s,mb4.2
SMCO Snowmass 53.05 292 *e*P **P 05 08 35.4 +1.3**
comp=Z,3.4nm,1.0s,mb4.2
PV01 Paradox Valley 54.24 293 *e*P **P 05 08 43.2 +0.4**
comp=Z,216nm,0.8s
PV01 Paradox Valley 54.24 293 *e*P **P 05 08 43.2 +0.4**
comp=Z,216nm,0.8s
MVCO Mesa Verde 55.15 293 *e*P **P 05 08 51.1 +1.7**
comp=Z,7.7nm,1.1s,mb4.7
MVCO Mesa Verde 55.15 293 *e*P **P 05 08 51.1 +1.7**
comp=Z,7.7nm,1.1s,mb4.7
WMOK Wichita Mounta 56.64 283 *e*P **P 05 09 00.7 +0.6**
WMOK pmax pmax
comp=Z,4.0nm,1.2s,mb4.3
WMOK Wichita Mounta 56.64 283 *e*P **P 05 09 00.7 +0.6**
comp=Z,3.7nm,1.2s,mb4.3
WMOK Wichita Mounta 56.64 283 *e*P **P 05 09 00.7 +0.6**
comp=Z,3.7nm,1.2s,mb4.3
ANMO Albuquerque 57.19 291 *e*P **P 05 09 03.5 -0.5**
ANMO pmax pmax
comp=Z,1.0nm,1.2s
ANMO Albuquerque 57.19 291 *e*P **P 05 09 03.5 -0.5**
comp=Z,0.8nm,1.2s,mb3.6
ANMO Albuquerque 57.19 291 *e*P **P 05 09 03.5 -0.5**
comp=Z,0.8nm,1.2s,mb3.6
TUC Tucson 60.22 295 *e*P **P 05 09 25.9 +0.8**
TUC pmax pmax
comp=Z,1.0nm,0.8s,mb3.9
TUC Tucson 60.22 295 *e*P **P 05 09 25.9 +0.7**
comp=Z,1.4nm,0.8s,mb4.0
TUC Tucson 60.22 295 *e*P **P 05 09 25.9 +0.8**
comp=Z,1.4nm,0.8s,mb4.0
JCT Junction City 60.96 284 *e*P **P 05 09 31.5 +1.3**
JCT pmax pmax
comp=Z,4.0nm,0.6s,mb4.7
JCT Junction City 60.96 284 *e*P **P 05 09 31.5 +1.3**
comp=Z,3.6nm,0.6s,mb4.7
JCT Junction City 60.96 284 *e*P **P 05 09 31.5 +1.3**
comp=Z,3.6nm,0.6s,mb4.7
TXAR Lajitas Array 62.48 288 P **P 05 09 40.0 -0.4**
comp=Z,0.3nm,0.7s,mb3.6,baz=70,slow=1.5,SNR=4.0
TXAR Lajitas Array 62.48 288 P **P 05 09 40.0 -0.4**
CMAR Chiang Mai Arr 72.61 80 P **P 05 10 43.8 -0.8**
comp=Z,1.0nm,0.5s,mb4.0,baz=346,slow=7.5,SNR=6.6
CMAR LR LR 05 44 29.1
comp=Z,68nm,18.2s,MS4.0,baz=189,slow=37
CMAR Chiang Mai Arr 72.61 80 P **P 05 10 43.8 -0.8**
CMAR LR LR 05 44 29.1
CMAR Chiang Mai Arr 72.61 80 P **P 05 10 43.8 -0.7**

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*IPEC **25** 05:14:56.9±0.2, 49°.88N×18°.57E, h4km±1km, ML1.9/3, Error ellipse: s-maj=1.3km s-min=1.0km az=12.0*
*CSEM **25** 05:14:56.8±0.2, 49°.89N×18°.50E, h2km, ML2.6/6, Error ellipse: s-maj=4.7km s-min=2.7km az=11.0*
*ISCJB **25** 05:14:56.2±0.5, 49°.88N±0°.03×18°.47E±0°.03, h0km, Error ellipse: s-maj=4.7km s-min=2.5km az=13.9*
*PRU **25** 05:14:58.5, 49°.88N×18°.43E, h0km*
ISC 25 05:14:57.3±0.4, 49°.86N±0°.03×18°.47E±0°.03, h0km, n29, σ1§06/52, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.21**	**265**	*e*PG	**Pg**	**05 15 02.9**	**+1.6**
OKC				*e*SG	**Sg**	**05 15 05.9**	**+1.9**
comp=Z,118nm,0.5s							
OKC	**Ostrava-Krasne**	**0.21**	**265**	*e*Pg	**Pg**	**05 15 02.5**	**+1.2**
baz=81							
OKC				Sg	**Sg**	**05 15 05.9**	**+1.9**
comp=Z,118nm,0.5s							
MORC	**Moravsky Berou**	**0.61**	**263**	*e*Pg	**Pg**	**05 15 09.4**	**+0.5**
baz=81							
MORC				*e*Sg	**Sg**	**05 15 18.1**	**+1.4**
comp=Z,20nm,0.3s,baz=81							
OJC	**Ojcow**	**0.93**	**66**	*e*Pg	**Pg**	**05 15 13.1**	**-2.0**
OJC				*e*Sg	**Sg**	**05 15 26.0**	**-1.2**
OJC	**Ojcow**	**0.93**	**66**	*e*Pg	**Pg**	**05 15 13.0**	**-2.1**
baz=247							
OJC				*e*Sg	**Sg**	**05 15 26.0**	**-1.2**
JAVC	**Velka Javorina**	**1.13**	**208**	*e*Pn	**Pn**	**05 15 20.2**	**-0.1**
baz=30							
NIE	**Niedzica**	**1.28**	**109**	*e*Pg	**Pg**	**05 15 21.6**	**-0.1**
NIE				*e*Sg	**Sg**	**05 15 40.1**	**+1.9**
NIE	**Niedzica**	**1.28**	**109**	*e*Pg	**Pg**	**05 15 21.6**	**-0.1**
NIE				*e*Sg	**Sg**	**05 15 40.1**	**+1.9**
KOLL	**Kolacno**	**1.28**	**182**	*e*PN	**Pn**	**05 15 21.9**	**-0.5**
KOLL				*e*SN	**Sn**	**05 15 39.7**	**-0.5**
KOLL	**Kolacno**	**1.28**	**182**	*e*Pn	**Pn**	**05 15 21.9**	**-0.5**
KOLL				*e*Sn	**Sn**	**05 15 39.7**	**-0.5**
VRAC	**Vranov**	**1.34**	**247**	*e*Pn	**Pn**	**05 15 22.8**	**-0.4**
VRAC				*e*Sg	**Sg**	**05 15 40.5**	**+0.2**
comp=Z,14nm,0.3s,baz=65							
VYHS	**Vyhne**	**1.39**	**170**	*e*PN	**Pn**	**05 15 23.4**	**-0.4**
VYHS				*e*SN	**Sn**	**05 15 42.3**	**-0.5**
VYHS	**Vyhne**	**1.39**	**170**	*e*Pn	**Pn**	**05 15 23.1**	**-0.7**
baz=353							
VYHS				*e*Sg	**Sg**	**05 15 41.2**	**-0.5**
baz=353							
VYHS				*e*Sn	**Sn**	**05 15 42.3**	**-0.5**
DPC	**Dobruska-Polom**	**1.47**	**290**	*e*PG	**Pg**	**05 15 25.3**	**-0.1**
DPC				*e*SG	**Sg**	**05 15 45.2**	**+0.8**
comp=Z,9.4nm,0.3s							
DPC	**Dobruska-Polom**	**1.47**	**290**	*e*Pn	**Pn**	**05 15 25.0**	**0.0**
baz=107							
DPC	**Dobruska-Polom**	**1.47**	**290**	Pg	**Pg**	**05 15 25.3**	**-0.1**
DPC				Sg	**Sg**	**05 15 45.2**	**+0.8**
comp=Z,9.4nm,0.3s							
KRUC	**Moravsky**	**1.57**	**240**	*e*Pn	**Pn**	**05 15 26.1**	**-0.3**
baz=59							
KRUC				*e*Sg	**Sg**	**05 15 47.5**	**-0.2**
comp=Z,13nm,0.3s,baz=59							
UPC	**Upice**	**1.71**	**293**	*e*PG	**Pg**	**05 15 29.5**	**-0.5**
UPC				*e*SG	**Sg**	**05 15 52.5**	**+0.3**
UPC	**Upice**	**1.71**	**293**	Pg	**Pg**	**05 15 29.5**	**-0.5**
UPC				Sg	**Sg**	**05 15 52.5**	**+0.3**
STHS	**Stebnicka Huta**	**1.86**	**103**	*e*PN	**Pn**	**05 15 33.2**	**+2.9**
STHS				*e*SN	**Sn**	**05 15 58.9**	**+4.5**
STHS	**Stebnicka Huta**	**1.86**	**103**	*e*Pn	**Pn**	**05 15 33.2**	**+2.9**
KECS	**Kecovo**	**1.91**	**135**	*e*PN	**Pn**	**05 15 31.5**	**+0.5**
KECS				*e*SN	**Sn**	**05 15 55.1**	**-0.6**
CRVS	**Cervenica-Dubn**	**2.18**	**115**	*e*PN	**Pn**	**05 15 38.4**	**+3.7**
CRVS				*e*SG	**Sg**	**05 16 10.1**	**+3.0**
CRVS	**Cervenica-Dubn**	**2.18**	**115**	*e*Pn	**Pn**	**05 15 38.4**	**+3.7**
CRVS				*e*Sg	**Sg**	**05 16 10.1**	**+3.0**
PRU	**Pruhonice**	**2.54**	**274**	*e*SG	**Sg**	**05 16 18.2**	**-0.7**
comp=Z,4.0nm,0.3s							
PRU	**Pruhonice**	**2.54**	**274**	Sg	**Sg**	**05 16 18.2**	**-0.7**
comp=Z,4.0nm,0.3s							
BRG	**Bergqiesshubel**	**3.07**	**291**	SG	**Sg**	**05 16 35.7**	**-0.2**
comp=Z,2.5nm,0.7s							
KHC	**Kasperske Hory**	**3.27**	**259**	*e*PG	**Pg**	**05 15 58.5**	**-1.4**
KHC				*e*SG	**Sg**	**05 16 40.4**	**-1.9**
comp=Z,5.3nm,0.8s							
KHC	**Kasperske Hory**	**3.27**	**259**	Pg	**Pg**	**05 15 58.5**	**-1.4**

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*NEIC **25** 05:36:48.2, 36°.16S×71°.71W, h124km, MG4.1(GUC), After GUC.*
GUC 25 05:36:48.2±0.6, 36°.16S×71°.71W, h124km±3km, ML4.1, 13C-11D, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCHI	**Chillan**	**0.54**	**214**	⇑*i*P	Pn	05 37 06.7	-0.1
CCHI				*i* S	Sn	05 37 20.2	-0.6
CCHI	**Chillan**	**0.54**	**214**	⇑*i*P	Pn	05 37 06.7	-0.1
CCHI				*i* S	Sn	05 37 20.2	-0.6
CCHI				AML	AML	05 37 20.8	
comp=N,4μm,0.6s							
TALC	**Talca**	**0.76**	**4**	⇓*i*P	Pn	05 37 08.6	+0.2
TALC				*i* S	Sn	05 37 23.5	-0.2
TALC	**Talca**	**0.76**	**4**	⇓*i*P	Pn	05 37 08.6	+0.2
TALC				*i* S	Sn	05 37 23.5	-0.2
CNCO	**Chanco**	**0.79**	**302**	⇑*i*P	Pn	05 37 10.8	+2.1
CNCO				*i* S	Sn	05 37 26.4	+2.3
CNCO	**Chanco**	**0.79**	**302**	⇑*i*P	Pn	05 37 10.8	+2.1
CNCO				*i* S	Sn	05 37 26.4	+2.3
NICH	**Los Niches**	**1.22**	**19**	⇓*i*P	Pn	05 37 13.2	+0.4
NICH				*e*S	Sn	05 37 31.4	+0.1
CACH	**El Canelo**	**2.23**	**24**	⇓*i*P	Pn	05 37 25.6	+0.9
CACH				*i* S	Sn	05 37 53.3	+0.7
CACH	**El Canelo**	**2.23**	**24**	⇓*i*P	Pn	05 37 25.6	+0.9
CACH				*i* S	Sn	05 37 53.3	+0.7
CHCH	**Chadas Angostu**	**2.38**	**22**	⇓*i*P	Pn	05 37 27.3	+0.7
CHCH				*i* S	Sn	05 37 56.7	+0.7
CHCH	**Chadas Angostu**	**2.38**	**22**	⇓*i*P	Pn	05 37 27.3	+0.7
CHCH				*i* S	Sn	05 37 56.7	+0.7
TACH	**Talagante**	**2.58**	**14**	⇑*i*P	Pn	05 37 29.6	+0.5
TACH	**Talagante**	**2.58**	**14**	⇑*i*P	Pn	05 37 29.6	+0.5
LMEL	**Las Melosas**	**2.61**	**29**	⇓*i*P	Pn	05 37 30.5	+0.9
LMEL				*e*S	Sn	05 38 02.7	+1.3
LMEL	**Las Melosas**	**2.61**	**29**	⇓*i*P	Pn	05 37 30.5	+0.9
LMEL				*e*S	Sn	05 38 02.7	+1.3
LMEL				AML	AML	05 38 07.2	
comp=N,616nm,0.3s							
PCH	**Pirque**	**2.71**	**21**	⇑*i*P	Pn	05 37 31.6	+0.7
PCH				*i* S	Sn	05 38 04.6	+0.9
PCH	**Pirque**	**2.71**	**21**	⇑*i*P	Pn	05 37 31.6	+0.7
PCH				*i* S	Sn	05 38 04.6	+0.9
ANTU	**Antumapu**	**2.73**	**19**	⇑*i*P	Pn	05 37 31.8	+0.7
ANTU				*i* S	Sn	05 38 04.5	+0.4
ANTU	**Antumapu**	**2.73**	**19**	⇑*i*P	Pn	05 37 31.8	+0.7
ANTU				*i* S	Sn	05 38 04.5	+0.4
ANTU				AML	AML	05 38 13.8	
comp=N,588nm,0.5s							
SAN	**Santiago**	**2.83**	**18**	*e*P	Pn	05 37 32.7	+0.3
SAN				*i* S	Sn	05 38 06.7	+0.3
SAN	**Santiago**	**2.83**	**18**	*e*P	Pn	05 37 32.7	+0.3
SAN				*i* S	Sn	05 38 06.7	+0.3
CLCH	**Cerro Calan**	**2.92**	**20**	⇓*i*P	Pn	05 37 34.1	+0.6
CLCH				*e*S	Sn	05 38 08.7	+0.3
CLCH				AML	AML	05 38 12.8	
comp=E,787nm,0.4s							
FCH	**Farellones**	**3.05**	**23**	⇓*i*P	Pn	05 37 34.6	-0.7
FCH				*i* S	Sn	05 38 11.8	+0.2
PEL	**Peldehue**	**3.12**	**16**	⇑*i*P	Pn	05 37 36.9	+0.7
PEL				*i* S	Sn	05 38 13.7	+0.4
JACH	**Jahuel**	**3.59**	**15**	⇑*i*P	Pn	05 37 43.1	+0.8
JACH	**Jahuel**	**3.59**	**15**	⇑*i*P	Pn	05 37 43.1	+0.8
PLCA	**Paso Flores**	**4.66**	**169**	*e*Pn	Pn	05 37 55.0	-1.6
TRQA	**Tornquist**	**8.00**	**107**	*e*Pn	Pn	05 38 37.6	-4.0

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*BJI **25** 05:40:32.0, 8°.53N×92°.11E, h85km, mB5.0/3, mb4.3/4*
*IDC **25** 05:40:42.6±4.0, 9°.42N×93°.04E, h69km±32km, mb3.9/12, mb1 4.0/14, mb1mx3.7/28, mbtmp3.9/14, ML4.3/2, Error ellipse: s-maj=49.4km s-min=12.7km az=59.0*
*ISCJB **25** 05:40:43.3±2.4, 9°.43N±0°.10×93°.2E±0°.2, h94km±21km, mb4.3/20, Error ellipse: s-maj=30.5km s-min=10.8km az=155.2*
*NEIC **25** 05:40:44.2±1.9, 9°.42N×93°.12E, h85km±16km, mb4.8/7, Error ellipse: s-maj=26.7km s-min=8.8km az=65.0*
ISC 25 05:40:45.0±2.0, 9°.43N±0°.10×93°.2E±0°.2, h93km±17km, n30, σ1§02/28, mb4.3/20, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	**Kulim**	**8.50**	**118**	*e*Pn	**Pn**	**05 42 43.3**	**-2.0**
PSI	**Prapat**	**8.73**	**139**	P	**Pn**	**05 42 50.1**	**+1.6**
1.8nm,0.3s,baz=314,slow=13,SNR=7.8							
CMAR	**Chiang Mai Arr**	**10.58**	**31**	P	**Pn**	**05 43 13.7**	**0.0**
1.2nm,0.3s,baz=221,slow=14,SNR=13							
CHTO	**Chiang Mai**	**10.88**	**30**	*e*Pn	**Pn**	**05 43 18.2**	**+0.5**
3.8nm,0.8s							
LSA	**Lhasa**	**20.25**	**355**	P	**P**	**05 45 12.1**	**-0.8**
GTA	**Gaotai**	**30.44**	**10**	*e*P	**P**	**05 46 49.4**	**+0.8**
GTA				pmax	pmax		
comp=Z,6.0nm,1.1s,mb4.1							
TKM2	**Tokmak 2**	**36.73**	**338**	*e*P	**P**	**05 47 43.7**	**+0.5**
comp=Z,2.7nm,0.8s,mb4.2							
AML	**Almayashu**	**36.79**	**336**	P	**P**	**05 47 44.0**	**+0.3**
comp=Z,11nm,0.5s,mb5.0							
AAK	**Ala-Archa**	**36.90**	**337**	P	**P**	**05 47 46.4**	**+1.8**
comp=Z,2.5nm,0.5s,mb4.4,baz=116,slow=1.4,SNR=11							
EKS2	**Erkin-Say**	**37.20**	**336**	*e*P	**P**	**05 47 48.5**	**+1.3**
comp=Z,7.6nm,0.8s,mb4.7							
MKAR	**Makanchi Array**	**38.37**	**348**	P	**P**	**05 47 56.4**	**-0.5**
comp=Z,1.7nm,0.7s,mb4.0,baz=148,slow=7.1,SNR=20							
MKAR				PcP	PcP	05 50 10.2	+1.4
comp=Z,0.5nm,0.6s,baz=140,slow=2.2,SNR=3.7							
MKAR	**Makanchi Array**	**38.37**	**348**	P	**P**	**05 47 56.4**	**-0.5**
MKAR				PcP	PcP	05 50 10.2	+1.4
SONM	**Songino Array**	**39.88**	**14**	P	**P**	**05 48 09.8**	**+0.4**
comp=Z,1.8nm,0.4s,mb4.2,baz=198,slow=7.9,SNR=22							
SONM				PcP	PcP	05 50 14.7	+1.2
comp=Z,1.1nm,0.5s,baz=212,slow=3.4,SNR=6.3							
KURK	**Kurchatov**	**42.87**	**346**	P	**P**	**05 48 31.4**	**-2.6**
comp=Z,1.7nm,0.5s,mb4.0,baz=171,slow=6.9,SNR=15							
ZALV	**Zalesovo Beam**	**44.89**	**353**	P	**P**	**05 48 49.9**	**-0.2**
comp=Z,0.8nm,0.3s,mb3.9,baz=162,slow=10,SNR=5.8							
ZALV	**Zalesovo Beam**	**44.89**	**353**	P	**P**	**05 48 49.9**	**-0.2**
BVAR	**Borovoye Array**	**47.21**	**341**	P	**P**	**05 49 07.9**	**-0.3**
comp=Z,1.0nm,0.5s,mb3.8,baz=131,slow=8.4,SNR=9.1							
ABKAR	**Akbulak array**	**48.40**	**331**	*e*P	**P**	**05 49 18.1**	**+0.5**
comp=Z,1.7nm,0.6s,mb4.0							
WRA	**Warramunga Arr**	**49.96**	**126**	P	**P**	**05 49 29.7**	**-0.1**
comp=Z,2.5nm,0.5s,mb4.4,baz=303,slow=9.0,SNR=21							
WRA				PcP	PcP	05 50 49.5	+0.7
comp=Z,0.6nm,0.6s,baz=317,slow=3.2,SNR=6.2							
WRAB	**Tennant Creek**	**49.96**	**126**	*e*P	**P**	**05 49 30.1**	**+0.2**
comp=Z,45nm,1.9s,mb5.1							
AKTK	**Aktyubinsk**	**50.12**	**331**	P	**P**	**05 49 28.7**	**-1.9**
AKTO	**Aktyubinsk**	**50.12**	**331**	P	**P**	**05 49 28.7**	**-1.9**
comp=Z,1.2nm,0.6s,mb4.0,baz=84,slow=5.0,SNR=4.8							
ASAR	**Alice Springs**	**51.66**	**130**	P	**P**	**05 49 42.3**	**-0.3**
comp=Z,1.6nm,0.6s,mb4.3,baz=306,slow=6.9,SNR=17							
ASAR				PcP	PcP	05 50 57.1	+2.0
comp=Z,1.0nm,0.6s,baz=308,slow=3.8,SNR=6.1							
TIXI	**Tiksi**	**65.91**	**12**	*e*P	**P**	**05 51 20.0**	**-0.5**
comp=Z,14nm,0.3s,mb5.3							
ARCES	**ARCESS Array B**	**73.48**	**340**	P	**P**	**05 52 07.7**	**+0.6**
comp=Z,4.8nm,1.1s,mb4.2,baz=104,slow=9.4,SNR=3.7							
HFS	**Hagfors**	**76.63**	**330**	P	**P**	**05 52 24.9**	**-0.4**
comp=Z,0.8nm,0.3s,mb3.9,baz=77,slow=8.1,SNR=6.2							
SPITS	**Spitsbergen Ar**	**78.12**	**348**	P	**P**	**05 52 34.1**	**+0.8**
comp=Z,2.8nm,0.5s,mb4.3,baz=89,slow=11,SNR=7.6							
CHUM	**Lake Minchumin**	**92.02**	**24**	*e*P	**P**	**05 53 44.1**	**+0.9**
comp=Z,3.0nm,0.6s,mb4.7							
PDAR	**Pinedale Array**	**124.06**	**20**	PKP	PKPdf	05 59 33.9	+1.1
comp=Z,0.4nm,0.7s,baz=5.7,slow=2.7,SNR=3.8							
TXAR	**Lajitas Array**	**138.18**	**22**	PKP	PKPdf	06 00 02.6	+2.7
comp=Z,0.1nm,0.4s,baz=120,slow=1.1,SNR=3.7							

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*MOS **25** 06:40:42.2±0.9, 11°.97N×125°.62E, h33km, mb5.6/43, MS5.0/19, Error ellipse: s-maj=11.6km s-min=5.2km az=119.0*
*IDC **25** 06:40:43.2±1.7, 11°.84N×125°.68E, h33km±11km, mb4.7/21, mb1 4.8/21, mb1mx4.8/22, mbtmp4.7/21, MS4.7/23, Ms1 4.7/23, ms1mx4.6/30, Error ellipse: s-maj=18.8km s-min=9.3km az=77.0*
*MAN **25** 06:40:44, 12°.07N×125°.70E, h19km, mb5.8, ML4.8, MS5.3*
MAN INTENSITY III - CAN-AVID SAMAR; BORONGAN E. SAMAR; INTENSITY II - PALO LEYTE; TACLOBAN CITY; CATBALOGAN SAMAR.
*DJA **25** 06:40:44, 12°.69N×125°.79E, h55km, Mw5.5/21*
*GCMT **25** 06:40:45.5±0.2, 12°.11N×125°.81E, h15km, MW5.4, Moment Tensor Solution. s75,c123; s89,c154; Moment tensor: Scale 10^{17}Nm; M_{rr}0.68±.02; $M_{\theta\theta}$0.07±.01; $M_{\phi\phi}$-0.75±.02; $M_{r\theta}$0.14±.05; $M_{r\phi}$0.13±.01; $M_{\theta\phi}$1.51±.10; Best double couple: $M_0$1.70000×10^{17} NP1:ϕ_s156.00000°, δ14.00000°, λ63.00000°. NP2:ϕ_s4.00000°, δ78.00000°, λ97.00000°. Principal axes: T 1.6600, Plg57.0000°, Azm283.0000°; N 0.0500, Plg6.0000°, Azm183.0000°; P -1.7100, Plg32.0000°, Azm89.0000°; Data Used: II IU IC G CN.*
*ISCJB **25** 06:40:45.1±0.5, 11°.98N±0°.02×125°.68E±0°.03, h59km±3km, mb5.3/146, MS4.8/72 Error ellipse: s-maj=5.7km s-min=3.6km az=162.7*
*NEIC **25** 06:40:47.6±0.6, 11°.98N×125°.65E, h68km±4km, mb5.2/55, Error ellipse: s-maj=5.6km s-min=3.9km az=86.0*
NEIC Felt [III PIVS] at Borongan and Can-Avid; [II PIVS] at Catbalogan. Also felt [II PIVS] Palo and Tacloban, Leyte.
*BJI **25** 06:40:47.0, 12°.25N×125°.71E, h66km, mB5.3/36, mb5.1/62, Ms5.0/67, Ms7 4.8/59*
ISC 25 06:40:47.6±0.4, 11°.99N±0°.02×125°.63E±0°.04, h68km±3km, h76km±1.9km:pP-P, n451, σ0§97/454, mb5.2/145, 53C-27D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.43**	**205**	*e*P	**Pn**	**06 40 55.0**	**-4.7**
PLP	**Palo**	**1.04**	**218**	⇑*i*P	**Pn**	**06 41 02.6**	**-3.9**
PLP				*i* S	**Sn**	**06 41 29.3**	**+8.7**
CNP	**Cataman**	**1.07**	**299**	*e*P	**Pn**	**06 41 04.1**	**-2.8**
OCLP	**Ormoc**	**1.37**	**227**	*e*P	**Pn**	**06 41 10.0**	**-0.8**
MMPH	**Masbate**	**1.99**	**281**	⇓*e*P	**Pn**	**06 41 18.0**	**-1.1**
MMPH				*i* S	**Sn**	**06 41 43.9**	**+0.8**
PVCP	**Virac**	**2.15**	**318**	*e*P	**Pn**	**06 41 20.0**	**-1.2**
TBP	**Tagbilaran**	**2.87**	**217**	*e*P	**Pn**	**06 41 30.1**	**-1.0**
BUTP	**Butuan**	**3.01**	**180**	*e*P	**Pn**	**06 41 34.9**	**+2.0**
AUQP	**San Andres**	**3.17**	**295**	*e*P	**Pn**	**06 41 38.1**	**+2.9**
GUIM	**Jordan**	**3.28**	**246**	*e*P	**Pn**	**06 41 36.4**	**-0.2**

comp=Z,590nm,11.9s
QIZ LR LR
comp=N,3μm,20.0s
QIZ LR LR
comp=E,920nm,24.4s
QIZ LR LR
comp=Z,5μm,19.7s
KAPI Kappang 17.88 199 Pn **Pn 06 44 54.6 +2.7**
comp=Z,522nm,1.0s,SNR=5.0
KAPI Kappang 17.88 199 P **Pn 06 44 52.1 +0.2**
comp=Z,1.5nm,0.3s,baz=163,slow=17,SNR=14
KAPI Kappang 17.88 199 *e*P **Pn 06 44 51.5 -0.3**
comp=Z,118nm,1.1s
KSM Kuching 18.44 237 *e*P **Pn 06 44 59.0 +0.2**
comp=Z,173nm,1.5s
SSE Sheshan 19.45 348 P **Pn 06 45 06.0 -4.6**
SSE S **S 06 48 43.3 -1.7**
SSE sS sS 06 48 58.0 -10
SSE pmax pmax
comp=Z,110nm,1.2s
SSE pmax pmax
comp=Z,940nm,9.8s
SSE LR LR
comp=N,820nm,15.8s
SSE LR LR
comp=E,2μm,15.8s
SSE LR LR
comp=Z,2μm,17.5s
NJ2 Nanjing 20.91 344 *e*P **P 06 45 23.0 -1.6**
NJ2 PP 06 45 45.0
NJ2 S **S 06 49 10.3 -3.8**
NJ2 pmax pmax
comp=Z,80nm,1.3s
NJ2 pmax pmax
comp=Z,640nm,4.5s
NJ2 LR LR
comp=N,760nm,16.6s
NJ2 LR LR
comp=E,2μm,14.3s
NJ2 LR LR
comp=Z,6μm,13.6s
WHN Wuhan 21.21 332 P **P 06 45 28.0 +0.1**
WHN S **S 06 49 18.3 -1.6**
WHN pmax pmax
comp=Z,410nm,1.2s,mb5.6
WHN pmax pmax
comp=Z,3μm,3.5s
WHN LR LR
comp=N,7μm,20.7s
WHN LR LR
comp=E,4μm,13.4s
WHN LR LR
comp=Z,5μm,17.2s
CBIJ Chichi jima 21.62 44 LR LR 06 52 58.4
comp=Z,1μm,19.0s,baz=263,slow=34
GYA Guiyang 22.92 312⇑*i*P **P 06 45 45.3 -0.8**
GYA pP 06 46 03.8
GYA sP sP 06 46 13.0 +4.0
GYA PP 06 46 19.5
GYA PcP PcP 06 49 37.5 +3.0
GYA S **S 06 49 47.0 -4.0**
GYA sS sS 06 50 16.5 -0.7
GYA SS 06 50 37.3
GYA pmax pmax
comp=Z,60nm,0.8s,mb5.0
GYA pmax pmax
comp=Z,160nm,4.6s
GYA LR LR
comp=N,3μm,13.5s
GYA LR LR
comp=E,2μm,14.0s
GYA LR LR
comp=Z,3μm,12.9s
JHJ Hachijo jima 2 24.70 29 P **P 06 46 01.0 -1.5**
comp=Z,111nm,0.3s,mb5.8,baz=62,slow=22,SNR=4.0
JHJ LR LR 06 53 44.4
comp=Z,1μm,19.9s,baz=238,slow=32
KMI Kunming 25.27 304⇑⇑P **P 06 46 08.5 +0.8**
KMI pP pP 06 46 26.0 +2.2
KMI sP sP 06 46 36.8 +5.0
KMI PP 06 46 52.5
KMI PcP PcP 06 49 42.3 +2.7
KMI S **S 06 50 26.5 -2.3**
KMI sS sS 06 50 58.3 +1.8
KMI SS 06 51 35.0
KMI ScP ScP 06 53 13.3 +0.2
KMI PcS PcS 06 53 22.0 +1.8
KMI pmax pmax
comp=Z,54nm,1.2s,mb4.8
KMI pmax pmax
comp=Z,550nm,7.3s
KMI LR LR
comp=N,2μm,16.3s
KMI LR LR
comp=E,3μm,15.2s
KMI LR LR
comp=Z,3μm,16.8s
TIA Tai'an 25.30 344 *e*P **P 06 46 06.5 -1.4**
TIA sS sS 06 50 55.5 -1.2
TIA LR LR
comp=N,2μm,15.5s
TIA LR LR
comp=E,640nm,17.2s
KSRS Korea Array 25.43 4 P **P 06 46 08.8 -0.3**
comp=E,22nm,1.0s,mb4.6,baz=183,slow=11,SNR=57
KSRS ScP ScP 06 53 17.9 +4.6
comp=E,0.4nm,0.3s,baz=190,slow=3.8,SNR=5.0
KSRS LR LR 06 55 49.0
comp=E,1μm,19.8s,baz=178,slow=35
KAKA Kakadu 25.46 164 *e*P **P 06 46 07.7 -1.8**
comp=E,33nm,0.6s,mb4.9
KAKA Kakadu 25.46 164 *e*P **P 06 46 07.7 -1.8**
comp=E,111nm,0.6s,mb5.5
CM31 Chiang Mai Arr 26.52 287 *e*P **P 06 46 19.4 +0.3**
CMAR Chiang Mai Arr 26.52 287 P **P 06 46 17.7 -1.4**
comp=E,41nm,1.0s,mb4.9,baz=97,slow=6.7,SNR=75
CMAR PcP PcP 06 49 43.5 +1.0
comp=E,0.9nm,0.3s,baz=103,slow=0.9,SNR=4.5
CMAR ScP ScP 06 53 21.6 +4.8
comp=E,1.5nm,0.6s,baz=81,slow=1.1,SNR=6.3
CMAR LR LR 06 57 37.5
comp=E,1μm,19.0s,baz=127,slow=38
CMAR Chiang Mai Arr 26.52 287 P **P 06 46 17.7 -1.4**
CMAR 06 49 43.6
CHTO Chiang Mai 26.58 288 *e*P **P 06 46 18.7 -1.0**
CHTO pmax pmax
comp=Z,26nm,1.1s,mb4.7
CHTO Chiang Mai 26.58 288 *e*P **P 06 46 18.7 -1.0**
comp=Z,26nm,1.1s,mb4.7
CHTO Chiang Mai 26.58 288 P **P 06 46 19.8 +0.1**
SNR=7.7
CHTO P 06 46 19.8
SNR=7.7
CHTO Chiang Mai 26.58 288 P **P 06 46 19.8 +0.1**
SNR=7.7
CHTO P 06 46 19.8
SNR=7.7
CHTO Chiang Mai 26.58 288 P **P 06 46 19.8 +0.1**
SNR=7.7
CHTO P 06 46 19.8
SNR=7.7
XAN Xi'an 26.71 328 P **P 06 46 20.0 -0.7**
XAN pP pP 06 46 37.5 +0.7
XAN sP sP 06 46 45.0 +0.2
XAN PP 06 47 07.3
XAN PcP PcP 06 49 43.8 +1.1
XAN S **S 06 50 46.5 -5.0**
XAN SS 06 52 03.5
XAN ScP ScP 06 53 16.8 -0.3
XAN PcS PcS 06 53 24.3 +0.2
XAN ScS ScS 06 57 02.8 -5.0
XAN pmax pmax
comp=Z,31nm,1.3s,mb4.7
XAN pmax pmax
comp=Z,130nm,14.7s
XAN LR LR
comp=N,1μm,14.8s
XAN LR LR
comp=E,630nm,14.8s
XAN LR LR
comp=Z,1μm,15.3s
MJAR Matsushiro Arr 26.94 23 P **P 06 46 22.9 +0.2**
comp=Z,1.2nm,0.5s,baz=199,slow=9.9,SNR=4.0
MJAR ScP ScP 06 53 22.6 +4.9
comp=Z,0.5nm,0.3s,baz=218,slow=3.3,SNR=4.9
MJAR LR LR 06 55 26.4
comp=Z,1μm,20.5s,baz=210,slow=33
DL2 Dalian 27.04 353 P **P 06 46 23.3 -0.2**
DL2 S **S 06 50 56.5 +0.1**
DL2 pmax pmax
comp=Z,30nm,1.6s,mb4.6
DL2 pmax pmax
comp=Z,400nm,2.6s,mb5.5
DL2 LR LR
comp=N,500nm,18.3s
DL2 LR LR
comp=E,600nm,15.1s
DL2 LR LR
comp=Z,400nm,17.4s
CD2 Chengdu 27.63 316⇑*i*P **P 06 46 29.0 +0.1**
CD2 pP pP 06 46 46.3 +1.2
CD2 sP sP 06 46 55.5 +2.5
CD2 PP PP 06 47 20.5 -12
CD2 PcP PcP 06 49 43.8 -1.2
CD2 S **S 06 51 04.8 -1.1**
CD2 sS sS 06 51 35.0 +1.3
CD2 SS 06 52 30.0
CD2 PcS PcS 06 53 24.5 -2.4
CD2 pmax pmax
comp=Z,170nm,0.8s,mb5.6
CD2 pmax pmax
comp=Z,320nm,6.8s
CD2 LR LR
comp=N,5μm,19.0s
CD2 LR LR
comp=E,6μm,19.2s
CD2 LR LR
comp=Z,4μm,16.7s
KNA Kununurra 27.74 173 *e*P **P 06 46 35.4 +5.4**
comp=Z,25nm,0.8s,mb4.8
PSI Prapat 27.98 253 P **P 06 46 31.6 -0.7**
comp=Z,3.3nm,0.6s,baz=179,slow=6.8,SNR=7.0
PSI ScP ScP 06 53 24.5 +3.2
comp=Z,16nm,1.1s,baz=153,slow=3.6,SNR=6.7
PSI LR LR 06 58 51.9
comp=Z,4μm,19.4s,baz=245,slow=39
BJI Beijing 29.16 345 P **P 06 46 42.0 -0.4**
BJI pP pP 06 47 00.5 +1.9
BJI sP sP 06 47 09.5 +2.9
BJI S **S 06 51 31.0 +1.2**
BJI pmax pmax
comp=Z,35nm,1.0s,mb4.9
BJI pmax pmax
comp=Z,250nm,3.6s
BJI LR LR
comp=N,1μm,18.5s
BJI LR LR
comp=E,330nm,15.9s
BJI LR LR
comp=Z,850nm,18.9s
SNY Shenyang 29.77 357⇓⇓P **P 06 46 48.0 +0.2**
SNY S **S 06 51 41.8 +2.4**
SNY pmax pmax
comp=Z,400nm,1.7s,mb5.8
SNY LR LR
comp=E,2μm,16.3s
SNY LR LR
comp=Z,890nm,15.5s
FITZ Fitzroy Crossi 29.90 180 *e*P **P 06 46 48.6 -0.6**
comp=Z,15nm,0.6s,mb4.8
FITZ Fitzroy Crossi 29.90 180 P **P 06 46 47.4 -1.8**
comp=Z,9.5nm,0.7s,mb4.5,baz=8.0,slow=9.5,SNR=29
FITZ LR LR 06 59 43.8
comp=Z,348nm,21.1s,baz=85,slow=38
FITZ Fitzroy Crossi 29.90 180 *e*P **P 06 46 48.3 -0.9**
comp=Z,98nm,1.6s,mb5.2
LZH Lanzhou 31.01 324⇓⇓P **P 06 47 00.0 +1.1**
LZH pP pP 06 47 18.0 +2.8
LZH sP sP 06 47 27.0 +3.9
LZH PP PP 06 48 01.0 -9.0
LZH S **S 06 51 52.0 -7.0**
LZH sS sS 06 52 22.5 -4.4
LZH pmax pmax
comp=Z,150nm,1.4s,mb5.5
LZH pmax pmax
comp=Z,490nm,4.0s
LZH LR LR
comp=N,4μm,15.8s
LZH LR LR
comp=Z,4μm,16.5s
COEN Coen 31.10 145 P **P 06 46 58.6 -1.3**
HHC Hu-ho-hao-te 31.29 339 *e*P **P 06 47 01.3 +0.1**
HHC pP pP 06 47 19.0 +1.5
HHC sP sP 06 47 28.3 +2.8
HHC PP PP 06 48 07.3 -5.7
HHC PcP PcP 06 49 53.5 -0.6
HHC S **S 06 52 01.5 -1.7**
HHC sS sS 06 52 33.3 +2.2
HHC ScP ScP 06 53 28.3 -3.1
HHC PcS PcS 06 53 36.5 -1.8
HHC SS SS 06 53 54.5 -25
HHC ScS ScS 06 57 24.0 -4.8
HHC pmax pmax
comp=Z,30nm,0.8s,mb5.1
HHC pmax pmax
comp=Z,290nm,5.4s
HHC LR LR
comp=N,880nm,20.9s
HHC LR LR
comp=E,930nm,17.6s
HHC LR LR
comp=Z,820nm,17.7s
BTO Baotou 31.64 337 *e*P **P 06 47 02.0 -2.3**
CN2 Changchun 31.69 360 *e*P **P 06 47 07.5 +2.8**
CN2 *e*pP pP 06 47 25.3 +4.3
CN2 *e*S **S 06 52 11.0 +1.6**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,13.0s
CN2 LR LR
comp=E,300nm,13.0s
CN2 LR LR
comp=Z,500nm,15.0s
MDJ Mudanjiang 32.69 5 P **P 06 47 13.0 -0.4**
MDJ pP pP 06 47 29.8 0.0
MDJ sP sP 06 47 38.0 +0.3
MDJ PP PP 06 48 27.5 -0.9
MDJ S **S 06 52 23.5 -1.3**
MDJ sS sS 06 52 53.0 +0.2
MDJ ScP ScP 06 53 35.5 -0.6
MDJ PcS PcS 06 53 43.3 +0.4
MDJ pmax pmax
comp=Z,16nm,1.5s,mb4.6
MDJ pmax pmax
comp=Z,110nm,3.3s
MDJ LR LR
comp=N,460nm,20.2s
MDJ LR LR
comp=E,1μm,18.1s
MDJ LR LR
comp=Z,600nm,22.3s
WRAB Tennant Creek 32.87 165 *e*P **P 06 47 15.6 +0.4**
WRAB pmax pmax
comp=Z,23nm,1.2s,mb4.9
WRAB Tennant Creek 32.87 165 *e*P **P 06 47 15.6 +0.3**
comp=Z,23nm,1.2s,mb4.9
WRA Warramunga Arr 32.87 165 P **P 06 47 13.4 -1.9**
comp=Z,3.0nm,0.7s,mb4.2,baz=343,slow=9.7,SNR=13
WRA PcP PcP 06 49 59.0 +0.2
comp=Z,6.2nm,0.9s,baz=346,slow=3.3,SNR=8.2
WRA S **S 06 52 23.1 -5.0**
comp=Z,1.5nm,1.0s,baz=337,slow=15,SNR=4.6
WRA ScP ScP 06 53 40.1 +3.0
comp=Z,6.4nm,1.1s,baz=338,slow=3.6,SNR=7.5
WRA Warramunga Arr 32.87 165 P **P 06 47 13.4 -1.9**
WRA 06 49 59.0
WRA S **S 06 52 23.2 -5.0**
SHL Shillong 34.57 298⇑*i*P **P 06 47 30.0 -0.1**
SHL *ex* x 06 53 13.0
GTA Gaotai 35.62 325⇑⇑P **P 06 47 39.5 +0.6**
GTA pP pP 06 47 57.8 +2.4
GTA sP sP 06 48 07.0 +3.8
GTA PP PP 06 49 01.5 +0.6
GTA PcP PcP 06 50 08.0 +1.6
GTA S **S 06 53 10.5 +0.3**
GTA sS sS 06 53 41.3 +2.9
GTA SS SS 06 55 34.3 -13
GTA pmax pmax
comp=Z,51nm,1.5s,mb5.2
GTA pmax pmax
comp=Z,480nm,4.4s
GTA LR LR
comp=N,1μm,16.5s
GTA LR LR
comp=E,1μm,16.8s
GTA LR LR
comp=Z,1μm,15.6s
ASAR Alice Springs 36.35 167 P **P 06 47 44.7 -0.6**
comp=Z,3.9nm,0.5s,mb4.6,baz=347,slow=8.1,SNR=58
ASAR PcP PcP 06 50 09.1 +0.3
comp=Z,4.0nm,0.8s,baz=324,slow=1.6,SNR=4.5
ASAR S **S 06 53 20.9 -0.9**
comp=Z,0.8nm,0.9s,baz=353,slow=15,SNR=3.0
ASAR ScP ScP 06 53 52.7 +3.2
comp=Z,7.7nm,1.0s,baz=360,slow=3.8,SNR=15
ASAR Alice Springs 36.35 167 P **P 06 47 44.7 -0.6**
ASAR 06 50 09.1
ASAR S **S 06 53 20.9 -0.8**
LSA Lhasa 36.53 304 P **P 06 47 48.3 +1.5**
LSA S **S 06 53 32.5 +8.0**
LSA pmax pmax
comp=Z,80nm,1.0s,mb5.6
LSA LR LR
comp=N,710nm,17.0s
LSA LR LR
comp=E,880nm,21.0s
LSA LR LR
comp=Z,2μm,19.0s
HABR Khabarovsk 37.21 10 *e*P **P 06 47 48.8 -3.5**
HABR *e**SP sP 06 48 03.0 -14
HABR *e* 06 49 13.5
HABR *e*S **S 06 53 33.5 -0.7**
HABR *e**SS sS 06 53 50.5 -12
HABR *e*SS SS 06 56 11.3 -6.5
HABR *e* 06 58 02.2
HABR pmax pmax
comp=N,14nm,0.7s
HABR pmax pmax
comp=E,27nm,0.7s
HABR pmax pmax
comp=Z,25nm,0.7s,mb5.2
HABR MLR MLR
comp=Z,290nm,17.0s
KLR Kul'dur 37.47 7 *e*P **P 06 47 48.8 -5.7**
KLR *e* 06 49 20.5
KLR *e*S **S 06 53 35.0 -3.2**
KLR MLR MLR
comp=N,500nm,14.5s
KLR MLR MLR
comp=E,1μm,14.5s
YSS Yuzh-Sakhalins 37.72 19 *e*P pP 06 48 10.9 -2.4
YSS *e* sP 06 48 24.0 +2.9
CTA Charters Tower 37.80 147 LR LR 07 03 09.3
comp=E,885nm,20.5s,baz=122,slow=36
TAPN Taplejung 38.65 299 *e*P **P 06 48 05.3 +0.5**
comp=E,567nm,1.6s,mb6.2
ODAN Odare 38.80 298 *e*P **P 06 48 06.4 +0.3**
comp=E,395nm,1.2s,mb6.1
ULN Ulaanbaatar 39.00 340 *e*P **P 06 48 07.8 +0.4**
ULN pmax pmax
comp=Z,413nm,2.8s,mb5.8
ULN Ulaanbaatar 39.00 340 *e*P **P 06 48 07.8 +0.5**
comp=Z,413nm,2.8s,mb5.8
ULN Ulaanbaatar 39.00 340 P **P 06 48 08.2 +0.8**
SNR=27
ULN P 06 48 08.2
SNR=27
ULN Ulaanbaatar 39.00 340 P **P 06 48 08.2 +0.8**
SNR=27
ULN P 06 48 08.2
SNR=27
ULN Ulaanbaatar 39.00 340 P **P 06 48 08.2 +0.8**
SNR=27
ULN P 06 48 08.2
SNR=27
ULN Ulaanbaatar 39.00 340 P **P 06 48 08.2 +0.8**
SNR=27
ULN P 06 48 08.2
SNR=27
MEEK Meekatharra 39.00 190 *e*P **P 06 48 06.2 -1.4**
SONM Songino Array 39.19 339 P **P 06 48 09.2 +0.2**
comp=Z,20nm,1.1s,mb4.9,baz=157,slow=9.1,SNR=66
SONM LR LR 07 05 10.0
comp=Z,1μm,19.4s,baz=153,slow=37
RAMN Ramite 39.51 298 *e*P **P 06 48 12.5 +0.6**
comp=Z,535nm,1.3s,mb6.2
JIRN Jiri 40.04 299 *e*P **P 06 48 17.0 +0.6**
GUN Gumba 40.37 299 *e*P **P 06 48 19.7 +0.6**
comp=Z,534nm,1.2s,mb6.3
PKI Pulchoki 40.69 298 *e*P **P 06 48 21.4 -0.3**
comp=Z,292nm,1.3s,mb6.0
PKIN Phulchoki 40.70 298 *e*P **P 06 48 21.6 -0.2**
comp=Z,236nm,1.4s,mb5.8
KKN Kakani 40.85 299 *e*P **P 06 48 23.0 -0.1**
comp=Z,380nm,1.3s,mb6.1
DMN Daman 40.96 298 *e*P **P 06 48 23.8 -0.1**
comp=Z,373nm,1.3s,mb6.1
VIS Vishakhapatnam 41.21 283 *e*PKP **P 06 48 24.4 -1.7**
VIS AMb AMB 06 48 27.4
comp=Z,31nm,1.1s,mb5.1
MORW Morawa 41.86 193 *e*P **P 06 48 29.8 -1.4**
ZAK Zakamensk 42.44 339 *e*P **P 06 48 34.5 -1.2**
ZAK *e* 06 50 33.5
FORT Forrest 42.59 177 *e*P **P 06 48 36.4 -0.7**
comp=Z,42nm,0.6s,mb5.3
KMBL Kambalda 43.26 185 *e*P **P 06 48 42.0 -0.5**
comp=Z,824nm,1.3s,mb6.3
TLY Talaya 43.41 340 P **P 06 48 44.3 +0.8**
comp=Z,74nm,1.5s,mb5.2,SNR=8.5
TLY Talaya 43.41 340*c i*P **P 06 48 43.8 +0.3**
TLY *e* 06 50 22.4
TLY *e*S **S 06 55 09.7 +3.1**
TLY *e*SS SS 06 58 31.0 +8.2
TLY *e*SSS 06 59 14.4
TLY pmax pmax
comp=Z,40nm,1.8s,mb4.8
TLY MLR MLR
comp=Z,553nm,19.0s
TLY Talaya 43.41 340 *e*P **P 06 48 43.1 -0.3**
comp=Z,69nm,1.8s,mb5.1
TLY Talaya 43.41 340 P **P 06 48 44.3 +0.8**
SNR=19
TLY P 06 48 44.3
SNR=19
TLY Talaya 43.41 340 P **P 06 48 44.3 +0.8**
SNR=19
TLY P 06 48 44.3
SNR=19
TLY Talaya 43.41 340 P **P 06 48 44.3 +0.8**
SNR=19
TLY P 06 48 44.3
SNR=19
TLY Talaya 43.41 340 P **P 06 48 44.3 +0.8**
SNR=19
TLY P 06 48 44.3
SNR=19
IRK Irkutsk 43.68 341⇑*i*P **P 06 48 45.8 +0.1**
IRK pmax pmax
comp=Z,59nm,2.1s,mb5.0
KLBR Kellerberrin 43.99 190 *e*P **P 06 48 47.6 -0.8**
comp=Z,35nm,1.1s,mb5.0
MDRS Chennai 44.27 276 *ex* x 06 55 48.2
MDRS *ex* x 06 59 24.2
MOY Mondy 44.32 338 *e*P **P 06 48 51.6 +0.8**
MOY pmax pmax
comp=Z,133nm,2.9s,mb5.2
CLNS Chul'man 44.75 359 *e*P **P 06 48 53.1 -1.0**
CLNS *e**PP pP 06 48 58.9 -12
CLNS *e* 06 50 33.7
CLNS *e* 06 50 38.9
CLNS *e*S **S 06 55 19.8 -6.1**
CLNS *e*SS SS 06 58 38.7 -10
CLNS *e*SSS 06 59 40.9
CLNS pmax pmax
comp=Z,44nm,1.1s,mb5.1
CLNS pmax pmax
comp=N,29nm,1.0s
CLNS pmax pmax
comp=E,9.0nm,1.0s
CLNS smax
comp=E,136nm,12.2s
CLNS smax
comp=N,128nm,11.9s
CLNS MLR MLR

comp=N,525nm,13.0s
CLNS MLR MLR
comp=E,544nm,13.0s
CLNS MLR MLR
comp=Z,297nm,14.0s
NGP Nagpur 45.42 288 *e*PKP **P 06 48 59.5 -0.6**
NGP AMb AMB 06 49 00.4
comp=Z,63nm,1.1s,mb5.3
WMQ Urumqi 45.49 321 P **P 06 49 01.0 +0.8**
WMQ pP pP 06 49 20.0 +2.8
WMQ sP sP 06 49 29.0 +4.0
WMQ PP PP 06 50 49.0 +1.2
WMQ S **S 06 55 36.0 -1.0**
WMQ sS sS 06 56 08.0 +2.1
WMQ SS SS 06 58 51.0 -11
WMQ pmax pmax
comp=Z,65nm,1.0s,mb5.3
WMQ pmax pmax
comp=Z,120nm,4.0s
WMQ LR LR
comp=N,1μm,15.0s
WMQ LR LR
comp=E,2μm,15.0s
WMQ LR LR
comp=Z,1μm,15.0s
BBOO Buckleboo 45.65 168 *e*P **P 06 49 01.0 -0.6**
comp=Z,19nm,0.5s,mb5.1
HYB Hyderabad 45.76 283 *i* P **P 06 49 02.0 -0.8**
STKA Stephens Creek 46.23 161 *e*P **P 06 49 06.3 +0.2**
comp=Z,16nm,0.9s,mb4.8
STKA Stephens Creek 46.23 161 P **P 06 49 04.7 -1.4**
comp=Z,8.9nm,0.8s,mb4.5,baz=324,slow=6.6,SNR=6.9
STKA LR LR 07 11 06.1
comp=Z,535nm,18.6s,baz=162,slow=40
STKA Stephens Creek 46.23 161 *e*P **P 06 49 06.3 +0.2**
comp=Z,6.5nm,1.0s,mb4.3
BHPL Bhopal 47.09 291 *i* P **P 06 49 12.6 -0.5**
BHPL AMb AMB 06 49 14.9
comp=Z,63nm,0.9s,mb5.3
BHPL *i* x x 06 49 24.6
AKL Akola 47.30 287 *e*PKP **P 06 49 15.1 +0.4**
AKL AMb AMB 06 49 16.3
comp=Z,68nm,1.2s,mb5.3
PEA0B Petropavlovsk- 48.35 25 *e*P **P 06 49 22.9 +0.5**
PETK Petropavlovsk- 48.35 25 P **P 06 49 21.8 -0.5**
comp=Z,7.3nm,0.8s,mb4.6,baz=195,slow=4.9,SNR=14
PETK LR LR 07 06 43.5
comp=Z,468nm,21.3s,baz=220,slow=32
PETK Petropavlovsk- 48.35 25 P **P 06 49 21.8 -0.5**
PETK LR LR 07 06 43.5
PET Petropavlovsk 48.69 26 *e*P **P 06 49 25.8 +0.8**
PET *e*S **S 06 56 23.5 +1.1**
PET pmax pmax
comp=Z,200nm,7.9s
PET pmax pmax
comp=Z,200nm,15.1s
ARMA Armidale 49.03 150 *e*P **P 06 49 28.7 +0.8**
ARMA Armidale 49.03 150 *e*P **P 06 49 29.3 +1.5**
comp=Z,44nm,1.4s,mb5.2
AJM Ajmer 49.94 295 *e*PKP **P 06 49 34.0 -1.0**
AJM ⇑*i*P 06 49 34.6
AJM *i* x x 06 49 44.8
THN Thein Dam 49.98 302 *e*PKP **P 06 49 35.2 0.0**
YAK Yakutsk 50.04 2 *e*P **P 06 49 34.1 -1.0**
YAK *e**PP pP 06 49 43.0 -9.4
YAK *e* 06 51 29.5
YAK *e*S **S 06 56 40.4 -0.6**
YAK *e**SS sS 06 57 02.2 -8.0
YAK *e* 06 59 19.4
YAK *e*SS SS 07 00 20.3 +5.6
YAK pmax pmax
comp=Z,103nm,1.3s,mb5.6
YAK pmax pmax
comp=N,50nm,1.2s
YAK pmax pmax
comp=E,10.0nm,1.2s
YAK pmax pmax
comp=Z,18nm,0.6s,mb5.2
YAK pmax pmax
comp=N,8.0nm,0.6s
YAK pmax pmax
comp=E,2.0nm,0.3s
YAK smax
comp=N,44nm,1.4s
YAK smax
comp=E,40nm,1.6s
YAK MLR MLR
comp=E,384nm,18.0s
YAK MLR MLR
comp=Z,417nm,20.0s
YAK MLR MLR
comp=N,422nm,17.0s
YAK Yakutsk 50.04 2 *e*P **P 06 49 34.7 -0.4**
POO Poona 50.24 284 *e*PKP **P 06 49 37.1 -0.2**
POO AMb AMB 06 49 38.7
comp=Z,59nm,0.9s,mb5.5
MK31 Makanchi Array 50.28 322 *e*P **P 06 49 38.1 +0.9**
MKAR Makanchi Array 50.28 322 P **P 06 49 38.1 +0.9**
comp=Z,97nm,1.0s,mb5.7,baz=104,slow=8.2,SNR=378
MKAR ScP ScP 06 54 49.6 +4.2
comp=Z,2.3nm,1.0s,baz=94,slow=6.6,SNR=3.7
MKAR LR LR 07 12 41.1
comp=Z,1μm,18.4s,baz=133,slow=38
MKAR Makanchi Array 50.28 322 *ce*P **P 06 49 38.0 +0.8**
MKAR pmax pmax
comp=Z,97nm,1.0s
KSH Kashi 51.62 311 ⇑*i*P **P 06 49 50.0 +2.6**
KSH pP pP 06 50 09.0 +4.3
KSH sP sP 06 50 17.8 +5.4
KSH PcP PcP 06 51 03.0 +2.6
KSH PP PP 06 51 49.3 +3.8
KSH ScP ScP 06 54 51.5 +0.1
KSH PcS PcS 06 54 59.5 +1.2
KSH S **S 06 57 03.3 -0.3**
KSH sS sS 06 57 36.3 +3.4
KSH ScS ScS 06 59 29.8 -1.8
KSH SS SS 07 00 38.5 -2.1
KSH pmax pmax
comp=Z,83nm,1.2s,mb5.6
KSH pmax pmax
comp=Z,380nm,3.2s
KSH LR LR
comp=N,570nm,14.3s
KSH LR LR
comp=E,2μm,19.3s
KSH LR LR
comp=Z,2μm,17.9s
DZM Mont Dzumac 52.43 130 *e*S **S 06 57 22.5 +7.5**
comp=Z,1μm,25.2s
DZM *e*LR LR 07 05 04.8
comp=Z,666nm,24.1s
ZALV Zalesovo Beam 52.82 331 P **P 06 49 56.1 0.0**
comp=Z,18nm,0.9s,mb5.1,baz=115,slow=6.7,SNR=41
ZALV LR LR 07 14 03.8
comp=Z,645nm,18.5s,baz=324,slow=38
KZA Kyzart 52.96 314 P **P 06 49 59.4 +2.1**
SNR=84
TKM2 Tokmak 2 53.00 315 P **P 06 49 58.8 +1.2**
SNR=39
TKM2 Tokmak 2 53.00 315 *e*P **P 06 49 58.7 +1.1**
TKM2 pmax pmax
comp=Z,63nm,1.3s,mb5.5
TKM2 Tokmak 2 53.00 315 *e*P **P 06 49 58.7 +1.1**
comp=Z,63nm,1.3s,mb5.5
KBK Karagaybulak 53.36 315 P **P 06 50 02.0 +1.7**
SNR=12
UCH Uchtor 53.52 314 P **P 06 50 03.6 +2.1**
SNR=119
CHMS Chumysh 53.61 315 P **P 06 50 03.1 +1.0**
SNR=21
FRU Bishkek 53.65 315 *e*P **P 06 50 02.0 -0.3**
FRU pmax pmax
comp=Z,150nm,2.2s,mb5.6
FRU MLR MLR
comp=Z,1μm,17.0s
AAK Ala-Archa 53.67 315 P **P 06 50 03.9 +1.4**
comp=Z,120nm,1.4s,mb5.7,SNR=13
AAK Ala-Archa 53.67 315 P **P 06 50 04.0 +1.5**
SNR=8.6
AAK Ala-Archa 53.67 315 LR LR 07 13 27.2
comp=Z,2μm,20.3s,baz=92,slow=36
USP Ospenovka 53.87 315 P **P 06 50 04.9 +0.9**
SNR=32
AML Almayashu 54.07 314 P **P 06 50 07.2 +1.7**
SNR=65
AML Almayashu 54.07 314 *e*P **P 06 50 07.0 +1.6**
comp=Z,104nm,1.1s,mb5.8
NVS Novosibirsk 54.10 331 ⇑*i*P **P 06 50 05.2 -0.2**
NVS *e*S **S 06 57 40.2 +3.5**
NVS pmax pmax
comp=Z,79nm,1.1s,mb5.7
NVS pmax pmax
comp=N,90nm,1.9s
NVS pmax pmax
comp=E,56nm,1.2s
NVS smax
comp=N,55nm,2.4s
NVS smax
comp=E,41nm,2.5s
EKS2 Erkin-Say 54.18 314 P **P 06 50 07.7 +1.5**
SNR=57
EKS2 Erkin-Say 54.18 314 *e*P **P 06 50 07.2 +0.9**
comp=E,72nm,1.1s,mb5.6
KURK Kurchatov 54.30 325 P **P 06 50 07.3 +0.4**
comp=E,1μm,1.0s
KURK Kurchatov 54.30 325 LR LR 07 13 54.5
comp=E,424nm,19.5s,baz=145,slow=37
KURK Kurchatov 54.30 325 *e*P **P 06 50 07.5 +0.6**
KURK pmax pmax
comp=Z,277nm,1.0s,mb6.2
KURK Kurchatov 54.30 325 *e*P **P 06 50 07.5 +0.6**
comp=Z,277nm,1.0s,mb6.2
KURK Kurchatov 54.30 325 P **P 06 50 07.8 +0.9**
SNR=128
KURK P 06 50 07.8
SNR=128
KURK Kurchatov 54.30 325 P **P 06 50 07.8 +0.9**
SNR=128
KURK P 06 50 07.8
SNR=128
KURK Kurchatov 54.30 325 P **P 06 50 07.8 +0.9**
SNR=128
KURK P 06 50 07.8
SNR=128
KURK Kurchatov 54.30 325 P **P 06 50 07.8 +0.9**
SNR=128
KURK P 06 50 07.8
SNR=128
KBL Kabul 55.85 304 *e*P **P 06 50 18.8 +0.4**
TIXI Tiksi 59.65 1 *e*P **P 06 50 42.1 -2.3**
TIXI *e* 06 51 28.6
TIXI *e*S **S 06 58 51.0 +1.6**
TIXI pmax pmax
comp=Z,44nm,1.7s,mb5.2
TIXI Tiksi 59.65 1 *e*P **P 06 50 43.7 -0.7**
comp=Z,18nm,1.0s,mb5.1
BVAR Borovoye Array 59.90 325 P **P 06 50 46.9 +0.5**
comp=Z,57nm,1.0s,mb5.6,baz=111,slow=8.1,SNR=140
BRVK Borovoye 59.97 325 P **P 06 50 47.0 +0.1**
comp=Z,637nm,1.0s,SNR=42
BRVK Borovoye 59.97 325 *e*P **P 06 50 47.6 +0.7**
BRVK pmax pmax
comp=Z,93nm,0.9s,mb5.8
BRVK Borovoye 59.97 325 *e*P **P 06 50 47.5 +0.6**
comp=Z,93nm,0.9s,mb5.8
BRVK Borovoye 59.97 325 P **P 06 50 47.8 +0.9**
SNR=52
BRVK P 06 50 47.8
SNR=52
BRVK Borovoye 59.97 325 P **P 06 50 47.8 +0.9**
SNR=52
BRVK P 06 50 47.8
SNR=52
BRVK Borovoye 59.97 325 P **P 06 50 47.8 +0.9**
SNR=52
BRVK P 06 50 47.8
SNR=52
BRVK Borovoye 59.97 325 P **P 06 50 47.8 +0.9**
SNR=52
BRVK P 06 50 47.8
SNR=52
BILL Biiibino 61.93 16 ⇑*i*P **P 06 50 59.8 -0.1**
BILL *i* 06 51 05.6
BILL pmax pmax
comp=Z,26nm,1.3s,mb5.1
BILL MLR MLR
comp=Z,300nm,16.0s
BILL Biiibino 61.93 16 *e*P **P 06 50 59.6 -0.4**
comp=Z,39nm,1.4s,mb5.2
ABKT Aibek 65.02 306 P **P 06 51 22.9 +2.0**
comp=Z,229nm,1.3s,mb5.8,SNR=11
ABKAR Akbulak array 65.17 319 *e*P **P 06 51 21.7 +0.1**
comp=Z,66nm,1.0s,mb5.4
SVE Sverdlovsk 66.43 327 ⇓*e*P **P 06 51 29.9 +0.3**
SVE *e*PPP 06 55 31.6
SVE *e*S S 07 00 20.1 +5.6
SVE pmax pmax
comp=Z,110nm,1.2s,mb5.6
SVE MLR MLR
comp=Z,976nm,17.0s
ARU Arti 67.45 326 P **P 06 51 36.9 +0.8**
comp=Z,281nm,1.4s,mb5.9,SNR=8.2
ARU Arti 67.45 326 *c i*P **P 06 51 35.9 -0.2**
ARU 06 52 01.7
ARU *e* 06 54 03.4
ARU PPP 06 55 38.1
ARU S S 07 00 30.9 +4.0
ARU SS SS 07 04 49.1 +1.2
ARU pmax pmax
comp=Z,81nm,1.2s,mb5.4
ARU MLR MLR
comp=Z,710nm,16.0s
ARU Arti 67.45 326 *e*P **P 06 51 35.8 -0.3**
comp=Z,52nm,1.0s,mb5.3
SOKR Solikamsk 69.05 329 *c i*P **P 06 51 46.1 +0.1**
SOKR S S 07 00 52.2 +6.4
SOKR pmax pmax
comp=Z,40nm,1.3s,mb5.1
SOKR MLR MLR
comp=Z,1μm,18.0s
MAK Makhachkala 73.26 311 *e*P **P 06 52 10.2 -1.6**
MAK *e* pP 06 52 25.4 -4.6
MAK *e* 06 54 53.5
MAK *e*PPP 06 56 41.9
MAK *e*S S 07 01 41.0 +5.9
MAK *i* 07 02 18.8
MAK *e*SS SS 07 06 17.4 -0.4
MAK pmax pmax
comp=Z,28nm,0.3s,mb5.6
MAK MLR MLR
comp=Z,475nm,14.0s
QRN Al-Qurain 73.64 297 *e*P **P 06 52 13.1 -1.2**
QRN AMb AMB 06 52 15.2
comp=Z,70nm,1.0s,mb5.3
KBD Kabd 73.80 297 *e*P **P 06 52 14.7 -0.6**
KBD AMb AMB 06 52 16.3
comp=Z,58nm,1.1s,mb5.2
TTA Tatalina 74.10 28 *e*P **P 06 52 16.2 -0.1**
TTA pmax pmax
comp=Z,42nm,1.7s,mb4.9
TTA Tatalina 74.10 28 *e*P **P 06 52 16.2 -0.2**
comp=Z,42nm,1.7s,mb4.9
NAY Al-Naaiem 74.19 297 *e*P **P 06 52 16.4 -1.1**
NAY AMb AMB 06 52 18.3
comp=Z,50nm,1.1s,mb5.2
TBLG Delisi 75.35 310 P **P 06 52 24.5 +0.5**
GNI Garni 75.44 309 *ce*P **P 06 52 25.9 +1.4**
GNI pmax pmax
comp=Z,63nm,1.2s
GNI Garni 75.44 309 *e*P **P 06 52 26.1 +1.6**
comp=Z,33nm,1.1s,mb5.0
GNI Garni 75.44 309 P **P 06 52 26.1 +1.6**
SNR=13
GNI P 06 52 26.1
SNR=13
GNI Garni 75.44 309 P **P 06 52 26.1 +1.6**
SNR=13
GNI P 06 52 26.1
SNR=13
GNI Garni 75.44 309 P **P 06 52 26.1 +1.6**
SNR=13
GNI P 06 52 26.1
SNR=13
GNI Garni 75.44 309 P **P 06 52 26.1 +1.6**
SNR=13
GNI P 06 52 26.1
SNR=13
CHUM Lake Minchumin 75.82 27 *e*P **P 06 52 27.5 +1.3**
comp=Z,43nm,1.9s,mb4.8
PPLA Purkeypile 75.85 28 *e*P **P 06 52 27.8 +1.4**
comp=Z,46nm,1.6s,mb5.0
ZEI Tsey 75.92 311 *e*P **P 06 52 24.1 -3.1**
ZEI pmax pmax
comp=Z,60nm,1.3s,mb5.2
TRF Thorofare Moun 76.72 27 *e*P **P 06 52 31.4 +0.1**
comp=Z,57nm,1.6s,mb5.0
KIV Kislovodsk 76.72 313 P **P 06 52 32.7 +0.9**
comp=Z,290nm,1.2s,mb5.9,SNR=8.8
KIV Kislovodsk 76.72 313 *e*P **P 06 52 32.6 +0.8**
KIV *e* 06 55 25.4
KIV *e*S S 07 02 18.1 +4.5
KIV pmax pmax
comp=Z,53nm,1.1s,mb5.2
KIV pmax pmax
comp=Z,106nm,5.0s
KIV MLR MLR
comp=Z,679nm,19.0s
KIV Kislovodsk 76.72 313 *e*P **P 06 52 31.7 -0.1**
comp=Z,45nm,1.0s,mb5.2
KIV Kislovodsk 76.72 313 P **P 06 52 32.6 +0.9**
SNR=17
KIV P 06 52 32.6
SNR=17
KIV Kislovodsk 76.72 313 P **P 06 52 32.6 +0.9**
SNR=17
KIV P 06 52 32.6
SNR=17
KIV Kislovodsk 76.72 313 P **P 06 52 32.6 +0.9**
SNR=17
KIV P 06 52 32.6
SNR=17
COLD Coldfoot 76.77 23 *e*P **P 06 52 32.2 +0.7**
comp=Z,59nm,1.7s,mb5.0
MCK McKinley 77.32 27 *e*P **P 06 52 34.3 -0.4**
MCK pmax pmax
comp=Z,33nm,1.1s,mb5.0
MCK McKinley 77.32 27 *e*P **P 06 52 34.3 -0.4**
comp=Z,33nm,1.1s,mb5.0
COLA College 77.76 26 *e*P **P 06 52 36.8 -0.3**
COLA pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
COLA College 77.76 26 *e*P **P 06 52 36.8 -0.3**
comp=Z,3.1nm,0.6s,mb4.2
VORD Divnogorie 78.49 320 *e*P **P 06 52 40.6 -0.9**
VORD pmax pmax
comp=Z,1.0nm,0.6s
VORD pmax pmax
comp=E,1.0nm,1.3s
VORD MLR MLR
comp=N,8.0nm,25.0s
VORD MLR MLR
comp=E,6.0nm,25.0s
VORD MLR MLR
comp=Z,10.0nm,25.0s
VSR Storozhevoye 78.55 320 *c i*P **P 06 52 41.4 -0.4**
VSR pmax pmax
comp=E,50nm,1.1s
VSR pmax pmax
comp=Z,60nm,1.1s,mb5.3
VSR pmax pmax
comp=N,4.0nm,0.4s
SOC Sochi 78.90 312 *c i*P **P 06 52 43.0 -0.9**
SOC *e**PP pP 06 52 52.4 -10
SOC *e**SP sP 06 52 56.2 -13
SOC *e*S S 07 02 40.5 +3.5
SOC pmax pmax
comp=Z,37nm,1.2s,mb5.1
SOC MLR MLR
comp=Z,850nm,18.0s
PAX Paxson 78.92 28 *e*P **P 06 52 43.6 +0.1**
PAX pmax pmax
comp=Z,54nm,1.8s,mb5.1
PAX Paxson 78.92 28 *e*P **P 06 52 43.6 +0.1**
comp=Z,54nm,1.8s,mb5.1
DIV Divide 78.92 30 *e*P **P 06 52 44.2 +0.6**
comp=Z,35nm,1.2s,mb5.1
MOS Moscow 79.07 325 *e*P **P 06 52 41.7 -2.8**
MOS *i* S S 07 02 47.0 +8.6
MOS pmax pmax
comp=Z,400nm,2.3s,mb5.8
MOS pmax pmax
comp=Z,133nm,1.5s,mb5.5
MOS MLR MLR
comp=Z,800nm,17.0s
LVZ Lovozero 79.35 337 P **P 06 52 46.7 +0.9**
comp=Z,298nm,1.3s,mb6.0,SNR=12
LVZ Lovozero 79.35 337 ⇑*e*P **P 06 52 45.9 +0.1**
BMRM Bremner River 79.50 30 *e*P **P 06 52 47.0 +0.2**
comp=Z,33nm,1.5s,mb5.0
MENT Mentasta 79.72 28 *e*P **P 06 52 48.2 +0.3**
OBN Obninsk 79.73 324 ⇑*i*P **P 06 52 48.0 -0.1**
OBN *e* 06 55 50.2
OBN *e*S S 07 02 48.2 +2.8
OBN pmax pmax
comp=Z,110nm,1.3s,mb5.5
OBN MLR MLR
comp=Z,800nm,17.0s
OBN Obninsk 79.73 324 *e*P **P 06 52 47.9 -0.2**
comp=Z,16nm,0.4s,mb5.2
ANN Anapa 80.39 314 *e*P **P 06 52 49.0 -2.9**
ANN *e*S S 07 02 52.7 0.0
ANN pmax pmax
comp=Z,137nm,7.9s
ANN MLR MLR
comp=Z,569nm,21.0s
EGAK Eagle 80.62 26 *e*P **P 06 52 52.0 -0.7**
comp=Z,5.6nm,0.9s,mb4.4
JOF Joensuu 81.38 333 *e*p **P 06 52 56.0 -0.8**
comp=Z,41nm,0.9s,mb5.3
JOF Joensuu 81.38 333 *e*p **P 06 52 56.0 -0.8**
comp=Z,41nm,0.9s,mb5.3
DAWY Dawson 81.48 26 *e*P **P 06 52 57.8 +0.5**
KEV Kevo 81.81 340 *e*P **P 06 52 58.1 -0.8**
KEV pmax pmax
comp=Z,36nm,1.0s,mb5.2
KEV Kevo 81.81 340 *e*p **P 06 52 58.1 -0.8**
comp=Z,36nm,1.0s,mb5.2
KEV Kevo 81.81 340 *e*p **P 06 52 58.1 -0.8**
comp=Z,36nm,1.0s,mb5.2
MIR Mirnyy 81.92 193 ⇓*i*P **P 06 52 58.9 -0.5**
MIR pmax pmax
comp=Z,51nm,1.6s,mb5.1
PNL Peninsula 82.25 31 *e*P **P 06 53 01.3 -0.2**
comp=Z,44nm,1.6s,mb5.0
ARCES ARCESS Array B 82.37 340 P **P 06 53 02.5 +0.6**
comp=Z,84nm,1.0s,mb5.5,baz=72,slow=5.2,SNR=68
ARE0 ARCESS Array S 82.37 340 *e*P **P 06 53 02.0 +0.1**
SIM Simferopol' 82.70 314 *c i*P **P 06 53 05.5 +1.4**
SIM *e*S S 07 03 21.6 +5.0
SIM *e*PS 07 04 30.0
SIM pmax pmax
comp=Z,30nm,1.1s,mb5.0
KBS Kingsbay 82.73 350 *e*P **P 06 53 08.5 +4.9**
KBS *e*S S 07 03 17.6 +1.8
KBS AMS AMS 07 22 21.7
comp=Z,837nm,20.1s
KBS Kingsbay 82.73 350 *ce*P **P 06 53 04.8 +1.2**
KBS pmax pmax
comp=Z,23nm,1.0s,mb5.0
KBS Kingsbay 82.73 350 *e*P **P 06 53 03.2 -0.4**
INK Inuvik 82.92 22 *e*P **P 06 53 04.6 -0.2**
INK pmax pmax
comp=Z,9.0nm,0.9s
INK Inuvik 82.92 22 *e*P **P 06 53 04.5 -0.2**
comp=Z,9.0nm,0.9s,mb4.6
ABPO Ambohimpanom 83.15 249 *e*P **P 06 53 06.1 -0.8**
MMAI Mount Meron Ar 83.76 302 P **P 06 53 10.8 +1.0**
comp=Z,29nm,0.9s,mb5.1,baz=46,slow=5.1,SNR=25
MMAI LR LR 07 35 35.3
comp=Z,158nm,19.4s,baz=100,slow=39
KAF Kangasniemi 83.82 332 *e*P **P 06 53 08.2 -1.3**
KAF pmax pmax
comp=Z,63nm,1.0s,mb5.4
KAF Kangasniemi 83.82 332 *e*p **P 06 53 08.2 -1.3**
comp=Z,63nm,1.0s,mb5.4
KAF Kangasniemi 83.82 332 *e*p **P 06 53 08.2 -1.3**
comp=Z,63nm,1.0s,mb5.4
BR131 Keskin Array S 83.96 309 *e*P **P 06 53 10.4 -0.3**
comp=Z,3.7nm,0.7s,mb4.3
FINES FINESS Array B 84.08 332 P **P 06 53 11.0 +0.1**
comp=Z,70nm,1.0s,mb5.5,baz=73,slow=6.4,SNR=50
SKAG Skagway 84.32 30 *e*P **P 06 53 13.1 +1.0**
comp=Z,21nm,1.2s,mb4.8
VSU Vasula 84.48 329 ⇓*i*P **P 06 53 12.8 -0.1**
TRO Tromso 84.55 340 *e*P **P 06 53 12.4 -0.6**
TRO *e*SKS 07 03 30.4
TRO AMS AMS 07 35 44.2
comp=Z,432nm,6.7s

AKASG	Malin Array Be	84.84	321	P	P	06 53 14.7	-0.2
	comp=Z,63nm,1.1s,mb5.5,baz=64,slow=4.8,SNR=83						
AKASG				LR	LR	07 35 40.1	
	comp=Z,527nm,19.9s,baz=105,slow=39						
AKASG	Malin Array Be	84.84	321	*i* P	P	06 53 14.6	-0.3
AKASG				pmax	pmax		
	comp=Z,63nm,1.1s						
AKBB	Malin Array Si	84.84	321	*e*P	P	06 53 14.6	-0.3
KIEV	Kiev	84.85	321	*e*P	P	06 53 14.6	-0.4
KIEV				pmax	pmax		
	comp=Z,67nm,1.1s,mb5.5						
KIEV	Kiev	84.85	321	*e*P	P	06 53 14.6	-0.3
	comp=Z,67nm,1.1s,mb5.5						
CSS	Prodhromos	85.09	305	*e*P	P	06 53 16.4	-0.1
	comp=Z,175nm,1.1s,mb5.9						
IDID	Didziasalis	85.24	325	*e*P	P	06 53 16.9	+0.1
IDID				AMB	AMB	06 53 19.4	
	comp=Z,20nm,1.2s,mb4.9						
IZAR	Zarasai	85.41	326	*e*P	P	06 53 17.7	+0.1
IZAR				AMB	AMB	06 53 20.2	
	comp=Z,22nm,1.4s,mb4.9						
ISAL	Salakas	85.52	326	*e*P	P	06 53 18.1	0.0
ISAL				AMB	AMB	06 53 19.3	
	comp=Z,13nm,1.6s,mb4.6						
IIGN	Ignalina	85.52	326	*e*P	P	06 53 18.2	0.0
IIGN				AMB	AMB	06 53 19.5	
	comp=Z,17nm,1.3s,mb4.8						
ALE	Alert	85.56	1	P	P	06 53 18.1	+0.1
	comp=Z,59nm,1.4s,mb5.3,SNR=7.0						
KIS	Kishinev	85.92	317	*e*P	P	06 53 18.0	-2.4
KIS				LRM		07 37 08.0	
	comp=Z,300nm,16.0s						
KIS	Kishinev	85.92	317	*e*P	P	06 53 18.0	-2.4
KIS				*e*		06 53 28.0	
ESKT	Eskisehir	86.11	309	⇑*i*P	P	06 53 21.0	-0.5
ESKT	Eskisehir	86.11	309	*i* P	P	06 53 20.9	-0.6
BORA	Eskisehir	86.33	310	⇑*i*P	P	06 53 22.0	-0.6
TLCR		86.34	315	⇑P	P	06 53 22.7	+0.2
TLCR		86.34	315	⇑*i*P	P	06 53 22.7	+0.2
LEOM	Leova	86.42	317	P	P	06 53 22.1	-0.8
ISP	Isparta	86.72	308	⇑*i*P	P	06 53 23.8	-0.7
TIRR	Tirgusor	86.78	315	*e*P	P	06 53 24.7	0.0
TIRR				pmax	pmax		
	comp=Z,35nm,1.1s,mb5.2						
TIRR	Tirgusor	86.78	315	*e*P	P	06 53 24.7	0.0
	comp=Z,35nm,1.1s,mb5.2						
KORT	Korkueli	87.04	307	⇑*i*P	P	06 53 25.1	-0.9
GDZ	Gediz	87.24	309	⇑*i*P	P	06 53 26.5	-0.5
KHAL	Karahalli	87.40	309	⇑*i*P	P	06 53 26.6	-1.1
KHAL	Karahalli	87.40	309	*i* P	P	06 53 26.7	-1.1
SUW	Suwalki	87.58	325	*e*P	P	06 53 27.8	-0.5
SUW	Suwalki	87.58	325	*e*P	P	06 53 27.8	-0.5
	comp=Z,107nm,1.0s,mb5.8						
VRI	Vrincioaia	87.60	316	⇑P	P	06 53 29.6	+1.0
VRI	Vrincioaia	87.60	316	P	P	06 53 29.5	+0.9
VRI	Vrincioaia	87.60	316	⇑*i*P	P	06 53 29.5	+0.9
GOLH	Golhisar	87.60	307	⇑*i*P	P	06 53 26.7	-2.1
GOLH	Golhisar	87.60	307	*i* P	P	06 53 22.6	-6.1
PLOR	Plostina	87.65	316	⇓P	P	06 53 30.2	+1.4
PLOR	Plostina	87.65	316	⇓*i*P	P	06 53 30.1	+1.3
AKAS	Kas	87.79	306	⇑*i*P	P	06 53 26.1	-3.7
PRD	Provadia	87.80	314	P	P	06 53 29.9	+0.3
DNZL	Cakiroluk	87.89	308	⇑*i*P	P	06 53 27.6	-2.6
DNZL	Cakiroluk	87.89	308	*i* P	P	06 53 28.8	-1.4
BUR01	Bucovina Ar. S	88.14	318	P	P	06 53 32.2	+1.1
BURAR	Bucovina Array	88.14	318	⇓P	P	06 53 32.1	+1.0
BURAR	Bucovina Array	88.14	318	⇓*i*P	P	06 53 32.1	+1.0
BUR08	Bucovina Ar. S	88.15	318	*e*P	P	06 53 31.7	+0.6
MLR	Muntele Rosu	88.22	316	P	P	06 53 32.4	+0.8
MLR	Muntele Rosu	88.22	316	⇑*i*P	P	06 53 31.7	+0.1
LVV	L'vov	88.29	321	*e*P	P	06 53 31.8	+0.1
BALY	Balya	88.49	310	⇑*i*P	P	06 53 29.9	-3.0
JMB	Yambol	88.56	313	P	P	06 53 32.9	-0.3
KMBO	Kilima Mbogo	88.64	269	P	P	06 53 34.0	-0.2
	comp=Z,3.1nm,1.0s,mb4.3,baz=181,slow=24,SNR=3.5						
KMBO				LR	LR	07 35 04.1	
	comp=Z,302nm,18.9s,baz=86,slow=37						
PPT	Papeete	88.70	108	*e*S	S	07 04 20.7	+4.4
	comp=Z,409nm,24.8s						
PPT				*e*LR	LR	07 21 44.3	
	comp=Z,486nm,22.0s,baz=297						
PPT	Papeete	88.70	108	LR	LR	07 25 18.1	
	comp=Z,347nm,22.0s,baz=281,slow=30						
AYDN	Tasoluk	88.80	308	*i* P	P	06 53 34.4	-0.1
SZH	Strazhica	88.82	314	P	P	06 53 34.2	-0.2
DAG	Danmarks Havn	88.97	352	⇓*e*P	P	06 53 34.0	-0.5
DAG				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
DAG	Danmarks Havn	88.97	352	⇓*e*P	P	06 53 34.0	-0.5
	comp=Z,6.3nm,1.1s,mb4.6						
DAG	Danmarks Havn	88.97	352	⇓*i*P	P	06 53 34.0	-0.5
	comp=Z,6.3nm,1.1s,mb4.6						
KWP	Kalwaria Pacla	89.16	321	*e*P	P	06 53 36.3	+0.4
KWP	Kalwaria Pacla	89.16	321	*e*P	P	06 53 36.6	+0.7
KWP				pmax	pmax		
	comp=Z,74nm,1.1s,mb5.6						
KWP	Kalwaria Pacla	89.16	321	*e*P	P	06 53 36.5	+0.7
	comp=Z,74nm,1.1s,mb5.6						
KWP	Kalwaria Pacla	89.16	321	⇓*i*P	P	06 53 36.5	+0.6
GCAM	G?zelcaml?	89.29	308	⇑*i*P	P	06 53 36.5	-0.2
UZH	Uzhgorod	89.73	320	⇑*i*P	P	06 53 39.0	+0.5
UZH				*i*		06 53 45.0	
UZH				*e*S	S	07 04 20.0	-4.9
UZH				*e*PS	PS	07 05 33.0	-5.9
DRGR		90.02	318	P	P	06 53 40.6	+0.7
DRGR		90.02	318	⇓*i*P	P	06 53 40.6	+0.7
TBI	Tubuai	90.09	114	*e*S	S	07 04 35.9	+6.8
	comp=Z,418nm,26.8s						
TBI				*e*LR	LR	07 22 27.5	
	comp=Z,606nm,24.8s						
RZN	Rozhen	90.11	313	P	P	06 53 40.0	-0.5
STHS	Stebnicka Huta	90.14	321	*e*P	P	06 53 41.6	+1.2
STHS				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.8						
STHS	Stebnicka Huta	90.14	321	*e*P	P	06 53 41.6	+1.2
	comp=Z,10nm,1.3s,mb4.8						
STHS	Stebnicka Huta	90.14	321	*e*P	P	06 53 41.6	+1.2
CRVS	Cervenica-Dubn	90.16	320	*e*P	P	06 53 41.7	+1.1
HFS	Hagfors	90.24	332	LR	LR	07 37 10.5	
	comp=Z,833nm,21.0s,baz=62,slow=38						
PGB	Panagyurishte	90.26	314	P	P	06 53 41.3	+0.1
GZR	Gura Zlata	90.39	317	P	P	06 53 41.9	+0.1
GZR	Gura Zlata	90.39	317	⇓*i*P	P	06 53 41.9	+0.2
NIE	Niedzica	90.71	321	*e*P	P	06 53 44.6	+1.5
OJC	Ojcow	90.76	322	*e*P	P	06 53 41.8	-1.5
OJC				*e*pP	pP	06 53 50.7	-11
OJC				*e*SKSac	SKSac	07 04 10.6	+1.4
OJC				*e*E		07 04 34.1	
OJC				L		07 38 53.2	
	comp=Z,0.5nm,21.1s						
OJC	Ojcow	90.76	322	*e*P	P	06 53 41.9	-1.4
OJC				*e**PP	pP	06 53 50.7	-11
OJC				*e*		07 04 10.6	
OJC				*e*S	S	07 04 34.1	-0.2
MMB	Musomiste	90.85	313	P	P	06 53 42.8	-1.1
KECS	Kecovo	90.91	320	*e*P	P	06 53 45.1	+1.0
KECS				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.9						
KECS	Kecovo	90.91	320	*e*P	P	06 53 45.1	+1.0
	comp=Z,9.8nm,1.1s,mb4.8						
KECS	Kecovo	90.91	320	*e*P	P	06 53 45.1	+1.0
VTS	Vitosha	90.93	314	⇓P	P	06 53 43.0	-1.3
VTS	Vitosha	90.93	314	⇓*i*P	P	06 53 43.0	-1.3
VTS	Vitosha	90.93	314	*i* P	P	06 53 44.3	0.0
NB2	NORSAR Subarra	90.94	334	P	P	06 53 42.8	-1.1
	comp=Z,9.8nm,1.0s,mb4.9,baz=66,slow=4.6						
NOA	NORSAR Array B	90.94	334	P	P	06 53 42.6	-1.3
	comp=Z,4.7nm,0.9s,mb4.6,baz=66,slow=4.6,SNR=8.8						
NOA				LR	LR	07 38 31.6	
	comp=Z,676nm,18.4s,baz=60,slow=38						
MAW	Mawson	91.09	200	P	P	06 53 43.4	-0.9
	comp=Z,3.2nm,1.1s,mb4.4,baz=14,slow=7.7,SNR=4.4						
MAW				LR	LR	07 30 23.0	
	comp=Z,176nm,21.7s,baz=222,slow=33						
KKB	Krupnik	91.23	313	*i* P	P	06 53 44.8	-0.9
PSZ	Piszkesteto	91.47	320	⇑*e*PcP	PcP	06 53 47.0	-0.6
OKC	Ostrava-Krasne	91.89	322	*e*P	P	06 53 49.5	+0.9
OKC				MLR	MLR		
	comp=Z,500nm,24.4s						
OKC	Ostrava-Krasne	91.89	322	*e*P	P	06 53 49.5	+0.9
OKC				*e*SKKS	SKKSac	07 04 28.1	-4.3
OKC				AMS	AMS	07 39 00.0	
	comp=Z,500nm,24.4s						
VYHS	Vyhne	91.94	320	*e*P	P	06 53 49.3	+0.5
	comp=Z,39nm,2.4s,mb5.2						
VYHS				*e*S	S	07 04 53.8	+8.7
VYHS				LR	LR		
	comp=Z,200nm,24.2s						
VYHS	Vyhne	91.94	320	*e*P	P	06 53 49.3	+0.5
MORC	Moravsky Berou	92.28	322	⇓P	P	06 53 51.3	+0.9
MORC	Moravsky Berou	92.28	322	⇓*i*P	P	06 53 51.3	+0.9
KONO	Kongsberg	92.30	333	*e*P	P	06 53 53.6	+3.4
KONO				*e*SKS		07 04 17.6	
KONO				AMS	AMS	07 39 32.1	
	comp=Z,685nm,17.8s						
YKA	Yellowknife Ar	92.45	24	P	P	06 53 50.7	-0.1
	comp=Z,1.3nm,1.0s,baz=292,slow=5.3,SNR=5.9						
YKA	Yellowknife Ar	92.45	24	P	P	06 53 50.7	-0.1
KSP	Ksiaz	92.62	323	*e*P	P	06 53 51.5	-0.4
KSP				*e*		06 57 37.0	
KSP				*e*		07 04 23.0	
KSP				*e*PS	PS	07 06 12.0	+1.2
KSP				MLR	MLR		
	comp=Z,1μm,16.9s						
DPC	Dobruska-Polom	92.79	323	*e*P	P	06 53 52.4	-0.3
DPC	Dobruska-Polom	92.79	323	*e*P	P	06 53 52.4	-0.3
PKSM	Moragy	92.86	318	⇓P	P	06 53 54.2	+1.1
PKSM	Moragy	92.86	318	⇓*i*P	P	06 53 54.2	+1.1
UPC	Upice	92.91	323	*e*P	P	06 53 54.1	+0.8
UPC	Upice	92.91	323	*e*P	P	06 53 54.1	+0.8
UPC				*e*x	x	06 53 59.5	
VRAC	Vranov	93.02	322	⇑P	P	06 53 55.3	+1.5
VRAC	Vranov	93.02	322	P	P	06 53 54.8	+1.0
VRAC	Vranov	93.02	322	⇑*i*P	P	06 53 55.3	+1.5
ZST	Bratislava	93.13	321	*e*P	P	06 53 55.4	+1.1
	comp=Z,7.6nm,0.8s,mb5.1						
ZST				*e*S	S	07 04 41.3	-14
ZST				*e*SS	SS	07 11 36.3	+25
ZST				LR	LR		
	comp=Z,300nm,16.8s						
ZST	Bratislava	93.13	321	*e*P	P	06 53 55.4	+1.1
FOO	Floro	93.25	336	AMS	AMS	07 40 35.7	
	comp=Z,898nm,15.8s						
TREC	Trest	93.70	322	AMS	AMS	07 38 50.0	
	comp=Z,600nm,20.8s						
PVCC	Panska Ves	93.75	323	*e*P	P	06 53 58.1	+1.0
PVCC				MLR	MLR		
	comp=Z,600nm,18.4s						
PVCC	Panska Ves	93.75	323	*e*P	P	06 53 58.1	+1.0
PVCC				AMS	AMS	07 40 00.0	
	comp=Z,600nm,18.4s						
BER	Bergen	93.78	335	*e*P	P	06 53 58.1	+1.1
BER				AMS	AMS	07 40 17.4	
	comp=Z,670nm,21.9s						
BER	Bergen	93.78	335	*e*P	P	06 54 02.0	+5.0
BER				LR	LR		
	comp=Z,670nm,21.9s						
BRG	Berggiesshubel	93.97	324	*e*Pdiff	P	06 53 58.0	-0.2
BRG	Berggiesshubel	93.97	324	*e*PDIF	P	06 53 58.4	+0.2
	comp=Z,35nm,1.9s,mb5.4						
BRG				*e*		06 57 48.7	
	comp=Z,4.2nm,1.0s						
BRG				SKS		07 04 35.0	
BRG				S	S	07 05 14.0	+11
BRG							
	comp=N,478nm,20.0s						
BRG							
	comp=E,446nm,15.0s						
BRG							
	comp=Z,780nm,17.9s						
PRU	Pruhonice	93.99	323	*e*P	P	06 53 59.2	+1.0
PRU				*e*		07 04 58.2	
PRU				MLR	MLR		
	comp=Z,700nm,16.5s						
PRU	Pruhonice	93.99	323	*e*P	P	06 53 59.2	+1.0
PRU				*e*x	x	07 03 50.1	
PRU				*e*S	S	07 04 58.2	-4.9
PRU				AMS	AMS	07 40 20.0	
	comp=Z,700nm,16.5s						
CONA	Conrad Observa	94.00	321	⇑*i*P	P	06 53 58.9	+0.5
	comp=Z,16nm,1.3s,mb5.2						
KOGS	Kog	94.32	319	*e*P	P	06 53 59.7	-0.1
CLL	Collm	94.33	324	*e*Pdiff	P	06 53 59.4	-0.4
CLL	Collm	94.33	324	*e*P	P	06 54 00.0	+0.2
CLL				*e*		07 04 33.0	
CLL				*e*S	S	07 05 13.0	+6.9
CLL				pmax	pmax		
	comp=Z,23nm,1.6s,mb5.3						
CLL				MLR	MLR		
	comp=Z,700nm,17.7s						
CLL	Collm	94.33	324	*e*P	P	06 54 00.0	+0.2
	comp=Z,23nm,1.6s,mb5.3						
CLL				*e*PP	PP	06 57 45.0	-2.2
CLL				*e*SKSac	SKSac	07 04 33.0	+3.9
CLL				*e*S	S	07 05 13.0	+6.9
CLL				*e*PS	PS	07 06 27.0	-2.6
CLL				*e*PPS		07 07 03.0	
CLL				*e*SS	SS	07 11 35.0	+6.8
CLL				*e*SSSS		07 18 48.0	
CLL				Lm		07 40 00.0	
	comp=N,200nm,21.8s						
CLL				Lm		07 40 00.0	
	comp=E,500nm,19.9s						
ARSA	Arzberg	94.47	320	⇓*i*P	P	06 54 01.0	+0.5
	comp=E,12nm,1.4s,mb5.0						
KHC	Kasperske Hory	94.91	322	*e*P	P	06 54 02.7	+0.2
KHC				*e*		06 54 09.1	
KHC				*e*		07 04 38.7	
KHC				MLR	MLR		
	comp=Z,600nm,17.2s						
KHC	Kasperske Hory	94.91	322	*e*P	P	06 54 02.5	0.0
	comp=Z,12nm,1.4s,mb5.1						
KHC	Kasperske Hory	94.91	322	*e*P	P	06 54 02.7	+0.2
KHC				*e*x	x	06 54 09.1	
KHC				*e*SKS		07 04 38.7	
KHC				AMS	AMS	07 42 40.0	
	comp=Z,600nm,17.2s						
GEC2	GERESS Array S	94.95	322	*e*Pdiff	P	06 54 02.5	-0.2
SUMG	Summit	94.97	355	*e*P	P	06 54 02.0	-0.2
	comp=Z,9.0nm,1.0s,mb5.2						
PERS	Pernice	94.97	320	*e*P	P	06 54 02.9	+0.1
SOKA	Soboth	95.00	320	⇑*i*P	P	06 54 03.0	+0.1
	comp=Z,16nm,1.3s,mb5.3						
MOA	Molln	95.02	321	⇑*i*P	P	06 54 03.6	+0.6
	comp=Z,22nm,1.2s,mb5.5						
TANN	Tannenbergstha	95.02	324	*e*Pdiff	P	06 54 03.0	0.0
NKC	Novy Kostel	95.11	324	AMS	AMS	07 40 40.0	
	comp=Z,900nm,20.0s						
WET	Wettzell	95.32	323	*e*Pdiff	P	06 54 04.5	+0.1
BOJS	Bojanci	95.32	319	*i* P	P	06 54 04.8	+0.4
BOJS				*e*		06 57 58.1	
OBKA	Obir	95.38	320	⇑*i*P	P	06 54 04.9	+0.2
	comp=Z,13nm,1.1s,mb5.2						
MOX	Moxa	95.41	324	*e*PDIFF	P	06 54 05.3	+0.6
	comp=Z,19nm,1.6s,mb5.3						
MOX							
	comp=Z,400nm,18.0s						
MOX	Moxa	95.41	324	*e*Pdiff	P	06 54 04.8	+0.1
MOX	Moxa	95.41	324	*e*P	P	06 54 05.3	+0.6
MOX				pmax	pmax		
	comp=Z,19nm,1.6s,mb5.3						
MOX				MLR	MLR		
	comp=Z,400nm,18.0s						
NRDL	Niedersach Rie	95.42	326	*e*Pdiff	P	06 54 05.2	+0.5
ROTZ	Rotzenmuhle	95.45	323	*e*Pdiff	P	06 54 05.6	+0.7
CLZ	Clausthal	95.57	326	*e*Pdiff	P	06 54 05.6	+0.2
LJU	Ljubljana	95.58	319	*e*P	P	06 54 05.8	+0.2
KNDS	Knezji Dol	95.88	319	*e*P	P	06 54 07.0	0.0
TAOE	Nuku Hiva Isla	95.90	98	*e*SKSac	SKSac	07 04 46.8	+8.0
	comp=Z,264nm,24.4s						
TAOE	Nuku Hiva Isla	95.90	98	*e*PS	PS	07 06 52.2	+3.7
	comp=Z,331nm,26.0s						
TAOE				*e*LR	LR	07 25 06.6	
	comp=Z,419nm,21.5s,baz=281						
KBA	Koelnbreinsper	95.90	321	⇑*i*P	P	06 54 06.9	-0.2
	comp=Z,9.6nm,1.1s,mb5.1						
RJOB	Jochberg	95.97	321	*e*Pdiff	P	06 54 07.3	0.0
CADS	Cadrg	96.01	320	*i* P	P	06 54 07.0	-0.6
GRA1	Grafenberg Arr	96.06	324	*e*Pdif	P	06 54 07.7	0.0
GRF	Grafenberg Arr	96.06	324	*e*Pdiff	P	06 54 07.7	0.0
TRI	Trieste	96.20	319	*e*P	P	06 54 06.7	-1.7
TRI				pmax	pmax		
	comp=Z,24nm,1.3s,mb5.5						
TRI	Trieste	96.20	319	*e*P	P	06 54 06.7	-1.7
	comp=Z,24nm,1.3s,mb5.5						
UBBA	Unterbreizbach	96.25	325	*e*Pdiff	P	06 54 08.5	0.0
TIP	Timpagrande	96.66	312	*e*P	P	06 54 10.5	-0.2
	comp=Z,3.3nm,0.9s,mb4.8						
WTTA	Wattenberg	96.88	321	⇑*i*P	P	06 54 11.5	0.0
	comp=Z,20nm,1.1s,mb5.4						
MOTA	Moosalm	97.17	321	⇓*i*P	P	06 54 13.3	+0.5
	comp=Z,15nm,1.1s,mb5.3						
TNS	Taunus Mts	97.40	325	*e*Pdiff	P	06 54 13.5	-0.3
FETA	Feichten	97.54	321	⇑*i*P	P	06 54 14.7	+0.2
	comp=Z,13nm,1.2s,mb5.3						
BFO	Black Forest	98.38	323	*e*Pdiff	P	06 54 19.2	+1.0
WLF	Walferdange	98.97	325	P	P	06 54 22.3	+1.5
	comp=Z,15nm,1.3s,mb5.4						
WLF	Walferdange	98.97	325	*e*Pdiff	P	06 54 21.9	+1.1
BORG	Borgarnes	99.52	346	LR	LR	07 44 31.0	
	comp=Z,334nm,18.8s,baz=38,slow=38						
DOU	Dourbes	99.61	326	P	Pdif	06 54 23.8	+0.2
	comp=Z,9.1nm,2.2s						
LPG	La Plagne	100.69	321	⇑*i*PP	PP	06 58 38.5	+2.4
	comp=Z,68nm,1.4s						
LPL	La Plagne	100.70	321	⇑*i*PP	PP	06 58 38.3	+2.2
	comp=Z,44nm,1.2s						
NVAR	Mina Array Bea	102.12	46	P	Pdif	06 54 36.7	+2.0
	comp=Z,0.3nm,0.7s,baz=280,slow=8.9,SNR=3.7						
NVAR	Mina Array Bea	102.12	46	P	Pdif	06 54 36.7	+2.0
RKT	Rikitea	103.16	111	*e*LR	LR	07 28 37.5	
	comp=Z,382nm,28.0s						
ESDC	Sonseca Array	110.49	321	PP	PP	06 59 49.4	+0.9
	comp=Z,4.0nm,0.9s,baz=52,slow=7.7,SNR=9.8						
TXAR	Lajitas Array	117.17	48	PKP	PKPdf	06 59 26.6	+0.9
	comp=Z,0.2nm,0.5s,baz=360,slow=2.3,SNR=5.1						
TXAR				PP	PP	07 00 37.9	+1.7
	comp=Z,1.0nm,1.0s,baz=316,slow=3.5,SNR=4.2						
WVT	Waverly	122.66	32	*e*PKIKP	PKPdf	06 59 36.0	-0.2
PLCA	Paso Flores	148.03	156	PKPbc	PKPbc	07 00 23.8	-2.0
	comp=Z,26nm,1.2s,baz=212,slow=4.0,SNR=11						
TRQA	Tornquist	153.17	167	*e*PKPbc	PKPbc	07 00 37.1	-1.0
OTAV	Otavalo	153.18	65	*e*PKPdf	PKPdf	07 00 32.9	+1.5
OTAV				*e*PKPbc	PKPbc	07 00 39.7	+0.8
CPUP	Villa Florida	165.47	169	PKP	PKPdf	07 00 45.9	+0.8
	comp=Z,2.5nm,0.8s,baz=20,slow=4.0,SNR=7.6						
CPUP	Villa Florida	165.47	169	PKP	PKPdf	07 00 45.9	+0.8
LPAZ	La Paz	165.99	109	PKP	PKPdf	07 00 47.6	+1.8
	comp=Z,1.8nm,1.1s,baz=16,slow=4.2,SNR=7.6						

IDC ***25*** *06:53:32.5±1.1, 12°.13N×125°.94E, h0km, mb4.0/7, mb1 4.1/7, mb1mx3.8/20, mbtmp4.0/7, Error ellipse: s-maj=64.6km s-min=19.3km az=65.0*

ISCJB ***25*** *06:53:37.3±4.1, 12°.0N±0°.2×125°.7E±0°.3, h46km±35km, mb4.0/7, Error ellipse: s-maj=46.3km s-min=21.0km az=151.1*

ISC 25 06:53:38.4±4.2, 12°.0N±0°.2×125°.7E±0°.2, h38km±38km, n9, σ0=71/10, mb4.0/7, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLP	Palo	1.07	221	⇓*e*P	Pn	06 53 56.3	-0.7
PLP				*e*S	Sn	06 54 10.3	-0.4
TBP	Tagbilaran	2.90	219	*e*P	Pn	06 54 23.0	+0.9
CMAR	Chiang Mai Arr	26.58	287	P	P	06 59 14.0	+0.7
	0.7nm,0.4s,mb3.5,baz=81,slow=7.2,SNR=4.8						
WRA	Warramunga Arr	32.84	165	P	P	07 00 07.8	-0.9
	0.3nm,0.8s,mb3.3,baz=332,slow=11,SNR=2.8						
ASAR	Alice Springs	36.33	167	P	P	07 00 40.0	+1.2
	0.5nm,0.4s,mb3.8,baz=344,slow=7.7,SNR=9.8						
MKAR	Makanchi Array	50.33	322	P	P	07 02 31.8	+0.3
	2.7nm,0.8s,mb4.3,baz=103,slow=9.2,SNR=21						
BVAR	Borovoye Array	59.95	325	P	P	07 03 40.8	0.0
	1.7nm,0.9s,mb4.1,baz=116,slow=10,SNR=6.8						
ARCES	ARCESS Array B	82.40	340	P	P	07 05 56.0	-0.2
	2.7nm,0.7s,mb4.3,baz=77,slow=6.8,SNR=11						
FINES	FINESS Array B	84.13	332	P	P	07 06 04.4	-0.9
	3.2nm,0.9s,mb4.5,baz=130,slow=9.8,SNR=3.3						

IDC ***25*** *06:57:59.1±1.4, 2°.58S×138°.20E, h0km, mb4.0/4, mb1 4.1/6, mb1mx3.9/15, mbtmp4.0/6, ML4.0/1, Error ellipse: s-maj=56.5km s-min=15.0km az=90.0*

ISCJB ***25*** *06:58:01.7±1.0, 2°.70S±0°.07×138°.3E±0°.2, h33km, mb3.9/4, Error ellipse: s-maj=28.5km s-min=9.6km az=178.5*

NEIC ***25*** *06:58:04.2±0.7, 2°.70S×138°.28E, h35km, Error ellipse: s-maj=23.0km s-min=10.0km az=86.0*

ISC 25 06:58:04.2±1.0, 2°.71S±0°.08×138°.3E±0°.2, h35km, n12, σ0=71/14, mb3.9/4, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	11.48	210	*e*Pn	Pn	07 00 45.2	-0.5
COEN	Coen	12.18	157	*e*P	Pn	07 00 55.0	-0.3
WRAB	Tennant Creek	17.54	192	*e*Pn	Pn	07 02 05.2	-0.8
WRA	Warramunga Arr	17.55	192	P	Pn	07 02 06.6	+0.5
	0.5nm,0.3s,baz=15,slow=13,SNR=16						
WRA				S	S	07 05 18.6	-8.9
	0.1nm,0.3s,baz=6.5,slow=22,SNR=4.1						
WRA	Warramunga Arr	17.55	192	P	Pn	07 02 06.6	+0.5
WRA				S	S	07 05 18.6	-8.9
FITZ	Fitzroy Crossi	19.67	218	P	Pn

SUMG	Summit	13.56	235	eP		Pn	07 22 30.2	-3.1
	comp=Z,34nm,1.1s							
SUMG	Summit	13.56	235	i P		Pn	07 22 28.6	-4.7
	comp=Z,15nm,0.9s							
SCO	Scoresbysund	14.47	212⇑	iP		Pn	07 22 44.1	-1.5
	comp=Z,16nm,1.0s							
KEV	Kevo	15.33	145	eP		Pn	07 22 59.3	+2.1
KEV					pmax	pmax		
	comp=Z,33nm,1.4s							
KEV	Kevo	15.33	145	ePn		Pn	07 22 59.3	+2.0
	comp=Z,33nm,1.4s							
KEV	Kevo	15.33	145	ePn		Pn	07 22 59.3	+2.1
	comp=Z,33nm,1.4s							
ARCES	ARCESS Array B	15.47	147	Pn		Pn	07 22 56.6	-2.4
	comp=Z,0.1nm,0.3s,baz=354,slow=9.8,SNR=5.3							
RES	Resolute Bay	17.02	295	eP		Pn	07 23 17.3	-1.6
RES					pmax	pmax		
	comp=Z,10.0nm,1.0s							
RES	Resolute Bay	17.02	295	ePn		Pn	07 23 17.3	-1.6
	comp=Z,9.8nm,1.0s							
RES	Resolute Bay	17.02	295	ePn		Pn	07 23 17.3	-1.6
	comp=Z,9.8nm,1.0s							
SFJD	Kangerlussuaq	20.05	244	P		P	07 23 51.1	-2.9
	comp=Z,2.9nm,0.4s,baz=324,slow=8.7,SNR=2.5							
SFJD				LR		LR	07 31 39.6	
	comp=Z,241nm,19.6s,MS3.5,baz=327,slow=37							
SFJD	Kangerlussuaq	20.05	244	eP		P	07 23 54.4	+0.4
SFJD					pmax	pmax		
	comp=Z,19nm,1.0s							
SFJD	Kangerlussuaq	20.05	244	eP		P	07 23 54.4	+0.4
	comp=Z,19nm,1.0s							
SFJD				LR		LR	07 31 39.6	
SFJD	Kangerlussuaq	20.05	244	i P		P	07 23 54.5	+0.5
	comp=Z,15nm,0.9s							
SFJD	Kangerlussuaq	20.05	244	eP		P	07 23 54.4	+0.4
	comp=Z,19nm,1.0s							
TIXI	Tiksi	22.48	41	eP		P	07 24 19.6	-0.4
TIXI					pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.0							
TIXI	Tiksi	22.48	41	eP		P	07 24 19.6	-0.4
	comp=Z,9.0nm,1.4s,mb4.0							
NB2	NORSAR Subarra	23.41	168	P		P	07 24 29.8	-0.2
	comp=Z,38nm,1.7s,mb4.5,baz=358,slow=9.3							
NB2	NORSAR Subarra	23.41	168	P		P	07 24 29.8	-0.2
	comp=Z,38nm,1.7s,mb4.5,baz=358,slow=9.1							
NOA	NORSAR Array B	23.41	168	P		P	07 24 29.0	-1.0
	comp=Z,2.7nm,0.9s,mb3.7,baz=357,slow=10,SNR=4.1							
NOA	NORSAR Array B	23.41	168	P		P	07 24 29.0	-1.0
FINES	FINESS Array B	23.56	150	P		P	07 24 29.2	-2.2
	comp=Z,3.2nm,0.9s,mb3.7,baz=350,slow=14,SNR=3.3							
FINES	FINESS Array B	23.56	150	P		P	07 24 29.3	-2.1
HFS	Hagfors	24.38	165	P		P	07 24 38.8	-0.1
	comp=Z,2.0nm,0.9s,mb3.5,baz=349,slow=21,SNR=2.1							
HFS	Hagfors	24.38	165	P		P	07 24 38.8	-0.2
INK	Inuvik	26.23	323	eP		P	07 24 56.0	+0.3
INK					pmax	pmax		
	comp=Z,37nm,1.6s							
INK	Inuvik	26.23	323	eP		P	07 24 56.0	+0.3
	comp=Z,37nm,1.6s,mb4.7							
INK	Inuvik	26.23	323	eP		P	07 24 56.0	+0.3
	comp=Z,37nm,1.6s,mb4.7							
EGAK	Eagle	30.18	329	eP		P	07 25 31.5	+0.7
	comp=Z,7.6nm,1.1s,mb4.3							
EGAK	Eagle	30.18	329	eP		P	07 25 31.5	+0.6
	comp=Z,7.6nm,1.1s,mb4.3							
YKA	Yellowknife Ar	30.62	305	P		P	07 25 34.0	-0.7
	comp=Z,0.4nm,0.8s,mb3.3,baz=6.1,slow=9.1,SNR=5.3							
YKA				PcP		PcP	07 28 32.6	+0.1
	comp=Z,0.5nm,0.7s,baz=357,slow=2.5,SNR=4.5							
YKA	Yellowknife Ar	30.62	305	P		P	07 25 34.0	-0.7
YKA				PcP		PcP	07 28 32.6	+0.1
YKA	Yellowknife Ar	30.62	305	P		P	07 25 34.0	-0.8
YKA	Yellowknife Ar	30.62	305	PcP		PcP	07 28 32.6	+0.1
DAWY	Dawson	30.79	327	eP		P	07 25 35.9	-0.4
DAWY	Dawson	30.79	327	eP		P	07 25 35.9	-0.4
MENT	Mentasta	32.14	330	eP		P	07 25 47.1	-1.0
MENT	Mentasta	32.14	330	eP		P	07 25 47.2	-1.0
CLL	Collm	33.20	166	eP		P	07 25 58.0	+0.4
CLL				e			07 26 04.0	
CLL	Collm	33.20	166	eP		P	07 25 58.0	+0.4
CLL				e(sP)		sP	07 26 04.0	+2.1
CLL	Collm	33.20	166	eP		P	07 25 58.0	+0.4
BRG	Berggiesshubel	33.66	165	eP		P	07 26 02.1	+0.5
	comp=Z,4.3nm,1.1s,mb4.3							
HYT	Haines Junctio	33.91	325	eP		P	07 26 04.8	+1.1
HYT	Haines Junctio	33.91	325	eP		P	07 26 04.8	+1.2
AKASG	Malin Array Be	34.44	148	P		P	07 26 06.7	-1.6
	comp=Z,1.4nm,0.6s,mb4.1,baz=352,slow=9.5,SNR=5.0							
AKASG	Malin Array Be	34.44	148	P		P	07 26 06.7	-1.6
AKASG	Malin Array Be	34.44	148	P		P	07 26 06.7	-1.6
GRA1	Grafenberg Arr	34.78	169	eP		P	07 26 11.2	-0.1
	comp=Z,9.0nm,1.4s,mb4.5							
GRA1				epP		pP	07 26 17.0	+2.6
GRA1	Grafenberg Arr	34.78	169	eP		P	07 26 11.2	-0.1
	comp=Z,9.0nm,1.4s,mb4.5							
GRA1				epP		pP	07 26 17.0	+2.6
GRF	Grafenberg Arr	34.78	169	eP		P	07 26 11.2	-0.1
	comp=Z,9.0nm,1.4s,mb4.5							
GRF				epP		pP	07 26 17.0	+2.6
	comp=Z,9.0nm,1.4s							
GRF	Grafenberg Arr	34.78	169	eP		P	07 26 11.2	-0.1
GRF				e*PP		pP	07 26 17.0	+2.6
GRF					pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.5							
GRF	Grafenberg Arr	34.78	169	eP		P	07 26 11.2	-0.1
GRF				e*PP		pP	07 26 17.0	+2.6
GRF					pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.5							
GRF					pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.5							
GRF	Grafenberg Arr	34.78	169	eP		P	07 26 11.2	-0.1
	comp=Z,9.0nm,1.4s,mb4.5							
GRF				epP		pP	07 26 17.0	+2.6
BVAR	Borovoye Array	35.45	103	P		P	07 26 16.4	-0.6
	comp=Z,1.2nm,0.7s,mb4.0,baz=352,slow=9.0,SNR=8.6							
BVAR	Borovoye Array	35.45	103	P		P	07 26 16.4	-0.6
ZALV	Zalesovo Beam	35.99	88	P		P	07 26 21.8	+0.2
	comp=Z,0.3nm,0.4s,mb3.6,baz=8.8,slow=10,SNR=2.2							
ZALV				LR		LR	07 42 43.3	
	comp=Z,129nm,20.2s,MS3.7,baz=248,slow=39							
CDF	Champ du Feu	36.00	173	eP		P	07 26 22.4	+0.6
CDF	Champ du Feu	36.00	173	eP		P	07 26 22.4	+0.6
BFO	Black Forest	36.10	172	eP		P	07 26 22.9	+0.3
BFO					pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4							
BFO	Black Forest	36.10	172	eP		P	07 26 22.9	+0.3
	comp=Z,4.0nm,0.8s,mb4.4							
BFO	Black Forest	36.10	172	eP		P	07 26 22.9	+0.3
	comp=Z,4.0nm,0.8s,mb4.4							
AKTK	Aktyubinsk	36.84	117	P		P	07 26 28.4	-0.5
AKTK	Aktyubinsk	36.84	117	P		P	07 26 28.4	-0.5
AKTO	Aktyubinsk	36.84	117	P		P	07 26 28.4	-0.5
	comp=Z,0.6nm,0.4s,mb3.8,baz=40,slow=6.2,SNR=3.6							
LOR	Lormes	37.12	177	eP		P	07 26 31.4	+0.1
	comp=Z,16nm,1.0s,mb4.5							
LOR	Lormes	37.12	177	eP		P	07 26 31.4	+0.1
LOR					pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.5							
LOR	Lormes	37.12	177	eP		P	07 26 31.4	+0.1
	comp=Z,7.8nm,1.0s,mb4.5							
LOR	Lormes	37.12	177	eP		P	07 26 31.4	+0.1
	comp=Z,7.8nm,1.0s,mb4.5							
BUR08	Bucovina Ar. S	37.29	153	eP		P	07 26 33.4	+0.6
BUR08	Bucovina Ar. S	37.29	153	eP		P	07 26 33.4	+0.6
SSF	Saint Saulge	37.32	177	eP		P	07 26 33.2	+0.2
SSF	Saint Saulge	37.32	177	eP		P	07 26 33.2	+0.2
AVF	Avril sur Loir	37.59	178	eP		P	07 26 35.6	+0.3
AVF	Avril sur Loir	37.59	178	eP		P	07 26 35.6	+0.3
CABF	La Chapelle	37.79	175	eP		P	07 26 37.8	+0.8
	comp=Z,36nm,1.3s,mb4.6							
CABF	La Chapelle	37.79	175	eP		P	07 26 37.8	+0.8
CABF					pmax	pmax		
	comp=Z,18nm,1.3s,mb4.6							
CABF	La Chapelle	37.79	175	eP		P	07 26 37.8	+0.8
	comp=Z,18nm,1.3s,mb4.6							
CABF	La Chapelle	37.79	175	eP		P	07 26 37.8	+0.8
	comp=Z,18nm,1.3s,mb4.6							
BGF	Bois d'Agland	37.82	178	eP		P	07 26 37.6	+0.3
BGF	Bois d'Agland	37.82	178	eP		P	07 26 37.6	+0.3
TCF	Toulx Ste Croi	38.09	179	eP		P	07 26 39.6	+0.1
TCF	Toulx Ste Croi	38.09	179	eP		P	07 26 39.6	+0.1
KURK	Kurchatov	38.55	96	P		P	07 26 43.4	0.0
	comp=Z,2.7nm,0.9s,mb4.0,baz=351,slow=7.3,SNR=5.5							
KURK				PcP		PcP	07 28 55.5	-0.1
	comp=Z,0.4nm,0.7s,baz=351,slow=3.1,SNR=4.2							
KURK	Kurchatov	38.55	96	P		P	07 26 43.4	0.0
KURK	Kurchatov	38.55	96	PcP		PcP	07 28 55.5	-0.1
LPL	La Plagne	38.89	174	eP		P	07 26 47.7	+1.4
	comp=Z,73nm,1.8s,mb4.8							
LPL	La Plagne	38.89	174	eP		P	07 26 47.7	+1.4
LPL					pmax	pmax		
	comp=Z,36nm,1.8s,mb4.8							
LPL	La Plagne	38.89	174	eP		P	07 26 47.7	+1.4
	comp=Z,36nm,1.8s,mb4.8							
LPL	La Plagne	38.89	174	eP		P	07 26 47.7	+1.4
	comp=Z,36nm,1.8s,mb4.8							
LPG	La Plagne	38.91	174	eP		P	07 26 48.1	+1.7
	comp=Z,30nm,1.3s,mb4.6							
LPG	La Plagne	38.91	174	eP		P	07 26 48.1	+1.7
LPG					pmax	pmax		
	comp=Z,15nm,1.3s,mb4.6							
LPG	La Plagne	38.91	174	eP		P	07 26 48.1	+1.7
	comp=Z,15nm,1.3s,mb4.6							
LPG	La Plagne	38.91	174	eP		P	07 26 48.1	+1.7
	comp=Z,15nm,1.3s,mb4.6							
RJF	Les Rejaudoux	39.07	180	eP		P	07 26 48.0	+0.2
RJF	Les Rejaudoux	39.07	180	eP		P	07 26 48.0	+0.2
ORIF	Oris-en-Rattie	39.48	175	eP		P	07 26 52.3	+1.1
ORIF	Oris-en-Rattie	39.48	175	eP		P	07 26 52.3	+1.1
VIVF	Saint-Julien-I	39.53	176	eP		P	07 26 52.0	+0.4
	comp=Z,37nm,1.4s,mb4.6							
VIVF	Saint-Julien-I	39.53	176	eP		P	07 26 52.0	+0.4
VIVF					pmax	pmax		
	comp=Z,19nm,1.4s,mb4.6							
VIVF	Saint-Julien-I	39.53	176	eP		P	07 26 52.0	+0.4
	comp=Z,19nm,1.4s,mb4.6							
VIVF	Saint-Julien-I	39.53	176	eP		P	07 26 52.0	+0.4
	comp=Z,19nm,1.4s,mb4.6							
EDM	Edmonton	39.69	301	eP		P	07 26 52.9	+0.1
EDM	Edmonton	39.69	301	eP		P	07 26 52.9	+0.1
SBF	Sospel	40.55	173	eP		P	07 27 00.9	+0.8
SBF	Sospel	40.55	173	eP		P	07 27 00.9	+0.8
ULM	Lac du Bonnet	41.00	284	LR		LR	07 44 17.8	
	comp=Z,348nm,18.1s,MS4.3,baz=238,slow=37							
PGF	Pioggiola	41.89	171	eP		P	07 27 11.5	+0.4
	comp=Z,18nm,0.9s,mb4.4							
PGF	Pioggiola	41.89	171	eP		P	07 27 11.5	+0.4
PGF					pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.4							
PGF	Pioggiola	41.89	171	eP		P	07 27 11.5	+0.4
	comp=Z,8.8nm,0.9s,mb4.4							
PGF	Pioggiola	41.89	171	eP		P	07 27 11.5	+0.4
	comp=Z,8.8nm,0.9s,mb4.4							
MKAR	Makanchi Array	42.80	93	P		P	07 27 18.0	-0.5
	comp=Z,0.4nm,0.7s,mb3.2,baz=355,slow=7.2,SNR=3.6							
MKAR				LR		LR	07 47 28.7	
	comp=Z,62nm,18.1s,MS3.5,baz=128,slow=40							
ZEI	Tsey	43.28	133	eP		P	07 27 22.4	0.0
ZEI					pmax	pmax		
	comp=Z,29nm,1.6s,mb4.8							
WALA	Waterton Lakes	43.87	301	eP		P	07 27 28.5	+1.5
	comp=Z,0.7nm,1.8s							
WALA	Waterton Lakes	43.87	301	eP		P	07 27 28.5	+1.5
	comp=Z,0.7nm,1.8s							
SONM	Songino Array	44.17	69	P		P	07 27 29.4	-0.1
	comp=Z,1.8nm,1.0s,mb3.8,baz=332,slow=5.0,SNR=12							
SONM				LR		LR	07 46 10.9	
	comp=Z,95nm,20.2s,MS3.7,baz=167,slow=36							
SONM	Songino Array	44.17	69	P		P	07 27 29.4	-0.1
SONM				LR		LR	07 46 10.8	
SONM	Songino Array	44.17	69	P		P	07 27 29.4	-0.1
ULN	Ulaanbaatar	44.20	68	eP		P	07 27 30.2	+0.5
ULN					pmax	pmax		
	comp=Z,13nm,1.4s,mb4.5							
ULN	Ulaanbaatar	44.20	68	eP		P	07 27 30.2	+0.5
	comp=Z,13nm,1.4s,mb4.5							
ULN	Ulaanbaatar	44.20	68	eP		P	07 27 30.2	+0.5
	comp=Z,13nm,1.4s,mb4.5							
BSMT	Bassoo Peak	45.14	301	eP		P	07 27 38.5	+1.2
BSMT	Bassoo Peak	45.14	301	eP		P	07 27 38.5	+1.3
LAO	LASA Array	45.52	293	eP		P	07 27 40.2	0.0
	comp=Z,8.2nm,0.8s,mb4.7							
LAO	LASA Array	45.52	293	eP		P	07 27 40.2	-0.1
	comp=Z,8.2nm,0.8s,mb4.7							
SLMT	Seeley Lake	45.63	300	eP		P	07 27 40.6	-0.5
SLMT	Seeley Lake	45.63	300	eP		P	07 27 40.7	-0.4
CHMT	Chamberlain Mo	45.94	300	eP		P	07 27 43.5	-0.1
	comp=Z,2.0nm,1.1s,mb4.0							
CHMT	Chamberlain Mo	45.94	300	eP		P	07 27 43.5	0.0
	comp=Z,2.0nm,1.1s,mb4.0							
AAK	Ala-Archa	46.14	101	P		P	07 27 46.0	+0.8
	comp=Z,1.7nm,0.5s,mb4.2,baz=160,slow=21,SNR=5.8							
UCH	Uchtor	46.54	102	eP		P	07 27 50.2	+1.8
	comp=Z,6.3nm,1.0s,mb4.5							
UCH	Uchtor	46.54	102	eP		P	07 27 50.2	+1.8
	comp=Z,6.3nm,1.0s,mb4.5							
LRM	Limekiln Ridge	46.95	299	eP		P	07 27 51.4	-0.1
	comp=Z,13nm,1.4s,mb5.0							
LRM	Limekiln Ridge	46.95	299	eP		P	07 27 51.4	-0.1
	comp=Z,28nm,1.4s,mb5.0							
BOZ	Bozeman (W)	47.05	298	eP		P	07 27 53.6	+1.3
BOZ					pmax	pmax		
	comp=Z,16nm,1.9s,mb4.6							
BOZ	Bozeman (W)	47.05	298	eP		P	07 27 53.6	+1.3
	comp=Z,16nm,1.9s,mb4.6							
BOZ	Bozeman (W)	47.05	298	eP		P	07 27 53.6	+1.3
	comp=Z,16nm,1.9s,mb4.6							
MCMT	McKenzie Canyo	47.97	299	eP		P	07 27 59.9	+0.5
	comp=Z,1.7nm,1.1s,mb4.0							
MCMT	McKenzie Canyo	47.97	299	eP		P	07 27 59.9	+0.4
	comp=Z,1.7nm,1.1s,mb4.0							
KEST	Kesra	48.70	171	P		P	07 28 06.0	+0.8
	comp=Z,4.1nm,1.2s,mb4.3,baz=290,slow=4.7,SNR=5.5							
KEST	Kesra	48.70	171	eP		P	07 28 06.4	+1.3
KEST	Kesra	48.70	171	eP		P	07 28 06.4	+1.2
SNOW	Snow King Moun	49.14	297	eP		P	07 28 08.5	+0.1
	comp=Z,7.5nm,1.4s,mb4.5							
SNOW	Snow King Moun	49.14	297	eP		P	07 28 08.5	+0.1
	comp=Z,7.5nm,1.4s,mb4.5							
PDAR	Pinedale Array	49.72	296	P		P	07 28 12.6	-0.3
	comp=Z,0.7nm,0.8s,mb3.7,baz=3.4,slow=7.4,SNR=5.5							
PDAR				LR		LR	07 49 42.3	
	comp=Z,239nm,18.5s,MS4.2,baz=348,slow=37							
PDAR	Pinedale Array	49.72	296	P		P	07 28 12.6	-0.3
HWUT	Hardware Ranch	51.05	297	eP		P	07 28 21.7	-1.3
	comp=Z,4.6nm,0.9s,mb4.4							
HWUT	Hardware Ranch	51.05	297	eP		P	07 28 21.7	-1.3
	comp=Z,4.6nm,0.9s,mb4.4							
SMCO	Snowmass	53.04	292	eP		P	07 28 38.4	+0.6
	comp=Z,6.3nm,1.1s,mb4.5							
SMCO	Snowmass	53.04	292	eP		P	07 28 38.4	+0.6
	comp=Z,6.3nm,1.1s,mb4.5							
PV01	Paradox Valley	54.22	294	eP		P	07 28 46.4	-0.1
	comp=Z,892nm,1.4s							
PV01	Paradox Valley	54.22	294	eP		P	07 28 46.4	-0.1
	comp=Z,892nm,1.4s							
MVCO	Mesa Verde	55.13	294	eP		P	07 28 54.0	+0.9
	comp=Z,11nm,1.4s,mb4.7							
MVCO	Mesa Verde	55.13	294	eP		P	07 28 54.0	+0.9
	comp=Z,11nm,1.4s,mb4.7							
MIAR	Mount Ida	56.32	279	eP		P	07 29 01.0	-0.7
MIAR					pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.6							
MIAR	Mount Ida	56.32	279	eP		P	07 29 01.0	-0.6
	comp=Z,8.9nm,1.4s,mb4.6							
MIAR	Mount Ida	56.32	279	eP		P	07 29 01.0	-0.7
	comp=Z,8.9nm,1.4s,mb4.6							
KSRS	Korea Array	56.34	50	LR		LR	07 53 39.4	
	comp=Z,44nm,20.0s,MS3.5,baz=338,slow=36							
MJAR	Matsushiro Arr	57.99	40	P		P	07 29 12.6	-0.8
	comp=Z,0.8nm,0.6s,mb3.9,baz=352,slow=6.3,SNR=5.3							
MJAR	Matsushiro Arr	57.99	40	P		P	07 29 12.6	-0.8
JCT	Junction City	60.97	284	eP		P	07 29 34.2	+0.1
JCT					pmax	pmax		
	comp=Z,20nm,1.4s,mb5.0							
JCT	Junction City	60.97	284	eP		P	07 29 34.2	+0.2
	comp=Z,20nm,1.4s,mb5.1							
JCT	Junction City	60.97	284	eP		P	07 29 34.2	+0.1
	comp=Z,20nm,1.4s,mb5.1							
TXAR	Lajitas Array	62.48	288	P		P	07 29 43.6	-0.6
	comp=Z,0.6nm,0.9s,mb3.7,baz=18,slow=5.3,SNR=4.1							
TXAR				LR		LR	07 57 35.2	
	comp=Z,334nm,18.2s,MS4.5,baz=0.0,slow=37							
TXAR	Lajitas Array	62.48	288	P		P	07 29 43.7	-0.5
CMAR	Chiang Mai Arr	72.53	80	P		P	07 30 47.0	-0.8
	comp=Z,1.0nm,0.3s,mb4.2,baz=350,slow=6.1,SNR=8.8							
CMAR				LR		LR	08 04 32.2	
	comp=Z,32nm,18.3s,MS3.6,baz=185,slow=37							
CMAR	Chiang Mai Arr	72.53	80	P		P	07 30 47.0	-0.9
PSI	Prapat	88.01	82	P		P	07 32 09.7	-1.5
	comp=Z,2.0nm,0.5s,mb4.7,baz=18,slow=19,SNR=3.1							

ISCJB ***25*** *07:23:43.7±0.9, 21°.0S±0°.2×179°.1W±0°.1, h623km±15km, mb3.8/7, Error ellipse: s-maj=25.5km s-min=17.9km az=153.8*

NEIC ***25*** *07:23:44.4±0.7, 20°.98S×179°.04W, h619km±16km, Error ellipse: s-maj=22.7km s-min=15.7km az=188.0*

IDC ***25*** *07:23:44.6±5.2, 20°.94S×179°.01W, h628km±59km, mb3.2/6, mb1 3.4/7, mb1mx3. 1/17, mbtmp3.2/7, Error ellipse: s-maj=41.7km s-min=22.9km az=33.0*

ISC 25 07:23:44.5±1.0, 21°.0S±0°.2×179°.1W±0°.1, h616km±15km, n17, σ0°.48/14, mb3.8/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.25	319	eP			P	07 25 13.2	+0.2
AFI	Afiamalu	9.89	46	P			P	07 26 02.5	-0.1
URZ	Urewera	17.52	190	P			P	07 27 14.3	-0.5
	0.5nm,0.3s,baz=311,slow=5.2,SNR=3.6								
CTA	Charters Tower	32.47	265	P			P	07 29 26.4	0.0
	2.4nm,0.4s,mb4.2,baz=231,slow=22,SNR=5.1								
CTA	Charters Tower	32.47	265	P			P	07 29 26.4	0.0
CTAO	Charters Tower	32.47	265	eP			P	07 29 26.4	0.0
STKA	Stephens Creek	36.69	245	P			P	07 30 02.0	+0.8
	2.7nm,0.5s,mb4.0,baz=80,slow=11,SNR=3.7								
ASAR	Alice Springs	43.45	257	P			P	07 30 55.0	-0.1
	3.9nm,0.5s,mb4.2,baz=96,slow=7.5,SNR=64								
ASAR				PcP			PcP	07 32 28.2	-0.7
	0.3nm,0.7s,baz=101,slow=5.1,SNR=4.1								
WRAB	Tennant Creek	43.55	263	eP			P	07 30 55.2	-0.7
WRA	Warramunga Arr	43.56	263	P			P	07 30 55.3	-0.6
	1.9nm,0.3s,mb4.0,baz=97,slow=7.6,SNR=67								
QSPA	South Pole Qui	69.07	180	P			P	07 33 50.1	+0.6
	0.5nm,0.5s,mb3.2,baz=50,slow=2.5,SNR=6.1								
QSPA	South Pole Qui	69.07	180	P			P	07 33 50.1	+0.6
TXAR	Lajitas Array	88.15	58	P			P	07 35 31.1	-0.2
	0.5nm,0.9s,mb3.3,baz=236,slow=4.2,SNR=5.1								
CMAR	Chiang Mai Arr	89.36	290	P			P	07 35 37.6	+0.5
	0.7nm,0.6s,mb3.6,baz=112,slow=2.2,SNR=4.4								
BVAR	Borovoye Array	118.83	320	PKP			PKPdf	07 41 21.9	-1.8
	0.6nm,0.4s,baz=111,slow=2.3,SNR=4.6								
ARCES	ARCESS Array B	129.23	349	PKP			PKPdf	07 41 42.0	-1.1
	3.1nm,0.9s,baz=21,slow=10,SNR=4.7								
AKASG	Malin Array Be	142.96	330	PKP			PKPdf	07 42 05.2	-3.8
	2.9nm,0.4s,baz=43,slow=4.3,SNR=18								

IDC ***25*** *07:27:37.7±3.5, 33°.63S×179°.98W, h0km, mb4.5/4, mb1 4.6/5, mb1mx4.2/17, mbtmp4.5/5, ML4.1/1, MS3.9/8, Ms1 3.9/8, ms1mx3.5/21, Error ellipse: s-maj=78.1km s-min=29.5km az=50.0*

ISCJB ***25*** *07:27:39.3±5.6, 33°.79S±0°.09×179°.8E±0°.2, h17km±38km, mb4.5/6, MS3.9/7, Error ellipse: s-maj=26.1km s-min=15.4km az=2.4*

NEIC ***25*** *07:27:42.0±1.0, 33°.74S×179°.87E, h25km, mb4.5/1, Error ellipse: s-maj=17.8km s-min=17.4km az=159.0*

ISC 25 07:27:41.6±5.9, 33°.76S±0°.09×179°.9E±0°.2, h20km±36km, n15, σ0°.85/12, mb4.5/6, MS3.9/7, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
URZ	Urewera	5.01	206	Pn			Pn	07 28 56.5	+0.8
	7.4nm,0.3s,baz=345,slow=1.2,SNR=32								
URZ				Sn			Sn	07 29 51.3	-1.7
	16nm,0.3s,baz=294,slow=22,SNR=9.4								
URZ				LR			LR	07 30 59.1	
	comp=Z,468nm,20.2s,baz=36,slow=39								
URZ	Urewera	5.01	206	ePn			Pn	07 28 56.2	+0.5
URZ				eSn			Sn	07 29 53.8	+0.8
URZ				LR			LR	07 30 59.1	
OUZ	Omahuta	5.37	252	ePn			Pn	07 28 59.2	-1.3
	92nm,0

BZS	**Buzias**	**1.67**	**28**	⇓P	**Pn**	**07 30 39.7**	**-0.5**
BZS				S	**Sn**	**07 31 01.6**	**-0.3**
BZS	**Buzias**	**1.67**	**28**	⇓*i*P	**Pn**	**07 30 39.7**	**-0.5**
BZS	**Buzias**	**1.67**	**28**	S	**Sn**	**07 31 01.6**	**-0.4**
BZS	**Buzias**	**1.67**	**28**	⇓P	**Pn**	**07 30 39.7**	**-0.5**
BZS				S	**Sn**	**07 31 01.6**	**-0.4**
ZAPS	**Zavoj**	**1.77**	**119**	⇑*i*Pn	**Pn**	**07 30 41.5**	**-0.1**
ZAPS				*i* Sg	**Sg**	**07 31 08.0**	**+0.8**
BRY	**Bratogost**	**1.90**	**230**	⇑*i*Pn	**Pn**	**07 30 42.9**	**-0.4**
BRY				*e*Sn	**Sn**	**07 31 07.4**	**-0.1**
BRY	**Bratogost**	**1.90**	**230**	⇑*i*Pn	**Pn**	**07 30 42.9**	**-0.4**
BRY				*e*Sn	**Sn**	**07 31 07.4**	**-0.1**
GZR	**Gura Zlata**	**2.04**	**52**	⇑P	**Pn**	**07 30 45.1**	**-0.2**
GZR				S	**Sn**	**07 31 10.3**	**-0.9**
GZR	**Gura Zlata**	**2.04**	**52**	⇑*i*P	**Pn**	**07 30 45.1**	**-0.2**
GZR	**Gura Zlata**	**2.04**	**52**	S	**Sn**	**07 31 10.3**	**-0.9**
GZR	**Gura Zlata**	**2.04**	**52**	⇑P	**Pn**	**07 30 45.1**	**-0.2**
GZR				S	**Sn**	**07 31 10.3**	**-0.9**
BUM	**Brajici-Budva**	**2.19**	**213**	⇑*i*Pn	**Pn**	**07 30 48.0**	**+0.7**
BUM				*e*Sn	**Sn**	**07 31 15.3**	**+0.5**
BUM	**Brajici-Budva**	**2.19**	**213**	⇑*i*Pn	**Pn**	**07 30 48.0**	**+0.7**
BUM				*e*Sn	**Sn**	**07 31 15.3**	**+0.5**
ULC	**Ulcinj**	**2.37**	**203**	⇑*i*Pn	**Pn**	**07 30 50.8**	**+1.0**
ULC				*e*Sn	**Sn**	**07 31 21.1**	**+1.9**
ULC	**Ulcinj**	**2.37**	**203**	⇑*i*Pn	**Pn**	**07 30 50.8**	**+1.0**
ULC				*e*Sn	**Sn**	**07 31 21.1**	**+1.9**
DRGR		**3.07**	**30**	S	**Sn**	**07 31 35.1**	**-1.3**
DRGR		**3.07**	**30**	S	**Sn**	**07 31 35.1**	**-1.3**

FUNV 25 07:35:53.4, 6.72N×73.08W, h167km, MW3.6, 1C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.37**	**34**	⇑*i*P	Pn	07 36 22.7	-0.3
CAPV				*e*S	Sn	07 36 43.9	-1.9
SOCV	**Socops**	**2.70**	**55**	*e*P	Pn	07 36 37.3	-0.4
SOCV				*e*S	Sn	07 37 08.9	-3.2
VIGV	**El Vigia**	**2.71**	**39**	*e*P	Pn	07 36 36.9	-1.0
VIGV				*e*S	Sn	07 37 08.5	-3.8
VIRV	**Villa del Rosa**	**3.82**	**10**	*e*P	Pn	07 36 49.6	-2.2
VIRV				*e*S	Sn	07 37 33.3	-4.0
SANV	**Sanarito**	**4.47**	**52**	*e*P	Pn	07 36 59.0	-1.1
SANV				*e*S	Sn	07 37 47.3	-5.0
CURV	**Curarigua**	**4.50**	**43**	*e*P	Pn	07 36 59.3	-1.3
CURV				*e*S	Sn	07 37 47.5	-5.5
TEPV	**Terepaima**	**5.02**	**50**	*e*P	Pn	07 37 06.3	-1.0
BAUV	**El Baul**	**5.46**	**66**	*e*P	Pn	07 37 10.7	-2.5
MONV	**Montecano**	**6.04**	**30**	*e*P	Pn	07 37 18.7	-2.1

IDC 25 07:50:51.3±5.9, 9.32S×128.87E, h0km, mb4.2/1, mb1 3.8/4, mb1mx3.5/17, mbtmp3.6/4, ML3.5/3, Error ellipse: s-maj=68.9km s-min=53.0km az=145.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.27**	**199**	Pn	Pn	07 53 07.1	+0.8
	0.3nm,0.3s,baz=25,slow=9.7,SNR=20						
FITZ				Sn	Sn	07 54 55.1	+3.7
	1.5nm,0.3s,baz=236,slow=14,SNR=6.9						
WRA	**Warramunga Arr**	**11.81**	**154**	Pn	Pn	07 53 39.8	-1.2
	0.4nm,0.3s,baz=327,slow=14,SNR=21						
WRA				Sn	Sn	07 55 54.9	+1.3
	0.8nm,0.3s,baz=330,slow=22,SNR=10						
ASAR	**Alice Springs**	**15.05**	**162**	Pn	Pn	07 54 24.1	-1.3
	0.1nm,0.3s,baz=335,slow=10,SNR=8.0						
ASAR				Sn	Sn	07 57 15.8	+2.8
	0.2nm,0.3s,baz=348,slow=27,SNR=5.2						
STKA	**Stephens Creek**	**25.36**	**154**	P	P	07 56 20.3	+0.1
	3.5nm,1.0s,baz=326,slow=7.3,SNR=2.9						

FUNV 25 08:01:31.9, 6.41N×71.91W, h4km, MW3.7, 2C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.50**	**344**	⇑*e*P	Pn	08 01 58.8	-0.8
CAPV				*e*S	Sn	08 02 19.8	+0.2
SOCV	**Socops**	**2.13**	**29**	*e*P	Pn	08 02 07.1	-1.2
SOCV				*e*S	Sn	08 02 33.8	-1.5
VIGV	**El Vigia**	**2.47**	**13**	*e*P	Pn	08 02 12.6	-0.4
VIGV				*e*S	Sn	08 02 42.7	-1.0
ELOV	**Elorza**	**2.48**	**76**	*e*P	Pn	08 02 12.7	-0.5
ELOV				*e*S	Sn	08 02 42.2	-1.7
SANV	**Sanarito**	**3.87**	**37**	*e*P	Pn	08 02 30.7	-1.5
QARV	**Quebrada Arrib**	**4.01**	**20**	*e*P	Pn	08 02 33.3	-0.9
CURV	**Curarigua**	**4.06**	**28**	*e*P	Pn	08 02 33.7	-1.2
VIRV	**Villa del Rosa**	**4.09**	**353**	*e*P	Pn	08 02 33.4	-1.9
VIRV				*e*S	Sn	08 03 19.9	-3.8
TEPV	**Terepaima**	**4.44**	**37**	*e*P	Pn	08 02 38.8	-1.3
BAUV	**El Baul**	**4.58**	**57**	*e*P	Pn	08 02 39.9	-2.2
BAUV				*e*S	Sn	08 03 30.9	-4.9
SIQV	**Siquisique**	**4.69**	**26**	*e*P	Pn	08 02 42.5	-1.1
MAPV	**Macapo**	**4.82**	**45**	*e*P	Pn	08 02 43.5	-1.8
CAOV	**Caicara del Or**	**5.62**	**80**	⇑*e*P	Pn	08 02 54.7	-1.7
CAOV				*e*S	Sn	08 03 55.6	-5.9
TURV	**Turiamo**	**5.68**	**45**	*e*P	Pn	08 02 55.1	-2.1
MERV	**Las Mercedes**	**6.24**	**63**	*e*P	Pn	08 03 03.0	-1.8
BIRV	**Birongo**	**6.89**	**54**	*e*P	Pn	08 03 12.2	-1.6
CUPV	**Cœpira**	**7.06**	**59**	*e*P	Pn	08 03 13.4	-2.7

*IDC **25** 08:06:50.5±0.5, 6.82S×155.04E, h0km, mb4.7/17, mb1 4.8/18, mb1mx4.8/19, mbtmp4.7/18, ML3.8/1, MS4.0/10, Ms1 4.0/10, ms1mx3.7/21, Error ellipse: s-maj=19.4km s-min=14.7km az=94.0*

*ISCJB **25** 08:06:58.4±1.4, 6.91S±0.06×155.00E±0.05, h67km±13km, mb4.8/63, Error ellipse: s-maj=10.2km s-min=7.6km az=164.5*

*NEIC **25** 08:07:00.6±1.2, 6.85S×154.95E, h75km±11km, mb4.9/28, Error ellipse: s-maj=8.2km s-min=6.4km az=156.0*

*BJI **25** 08:07:01.9, 6.26S×154.98E, h71km, mB5.0/19, mb4.8/32, Ms4.8/19, Ms7 4.5/21*

ISC 25 08:07:01.7±1.2, 6.97S±0.06×155.02E±0.05, h85km±12km, h76km±1.0km; pP-P, n116, σ1.9 05/105, mb4.8/63, 3C, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.45**	**117**	*e*Pn	**Pn**	**08 08 22.4**	**+1.9**
	408nm,0.8s						
HNR				*e*Sn	**Sn**	**08 09 28.3**	**+6.4**
COEN	**Coen**	**13.56**	**238**	*e*Pn	**Pn**	**08 10 11.0**	**+0.5**
	336nm,0.8s						
CTA	**Charters Tower**	**15.57**	**212**	*e*P	**Pn**	**08 10 34.5**	**-1.9**
	17nm,0.7s						
CTA	**Charters Tower**	**15.57**	**212**	Pn	**Pn**	**08 10 34.6**	**-1.8**
	0.2nm,0.3s,baz=40,slow=17,SNR=4.9						
CTA				LR	LR	08 16 01.7	
	comp=Z,970nm,18.8s,baz=16,slow=35						
CTAO	**Charters Tower**	**15.57**	**212**	*e*Pn	**Pn**	**08 10 36.2**	**-0.2**
	30nm,0.9s						
DZM	**Mont Dzumac**	**18.62**	**145**	*e*P	**Pn**	**08 11 13.1**	**-0.8**
	43nm,1.0s						
DZM				*e*LR	LR	08 15 38.7	
	652nm,25.5s						
DZM	**Mont Dzumac**	**18.62**	**145**	*e*P	**Pn**	**08 11 13.8**	**-0.1**
	30nm,0.9s						
EIDS	**Eidsvold**	**18.68**	**191**	*e*P	**Pn**	**08 11 14.5**	**0.0**
	23nm,1.2s						
KAKA	**Kakadu**	**22.96**	**254**	*e*P	**P**	**08 11 57.6**	**-1.7**
	34nm,0.6s,mb4.8						
KAKA	**Kakadu**	**22.96**	**254**	*e*P	**P**	**08 11 58.1**	**-1.2**
	11nm,0.7s,mb5.3						
ARMA	**Armidale**	**23.54**	**187**	*e*P	**P**	**08 12 05.4**	**+1.0**
ARMA	**Armidale**	**23.54**	**187**	*e*P	**P**	**08 12 07.7**	**+3.3**
	30nm,1.1s,mb4.5						
WRAB	**Tennant Creek**	**23.84**	**235**	*e*P	**P**	**08 12 07.1**	**-0.2**
	36nm,0.9s,mb4.7						
WRA	**Warramunga Arr**	**23.85**	**235**	P	**P**	**08 12 07.0**	**-0.3**
	18nm,0.6s,mb4.5,baz=58,slow=9.7,SNR=100						
WRA				PcP	PcP	08 15 50.0	+1.5
	2.8nm,0.6s,baz=60,slow=2.5,SNR=10.0						
WRA				LR	LR	08 21 01.1	
	comp=Z,394nm,21.8s,baz=65,slow=36						
MSVF	**Nonsavu**	**24.87**	**118**	*e*P	**P**	**08 12 17.2**	**+0.5**
	55nm,1.0s,mb4.9						
ASAR	**Alice Springs**	**26.21**	**228**	P	**P**	**08 12 28.4**	**-0.3**
	9.9nm,0.7s,mb4.4,baz=61,slow=8.6,SNR=116						
ASAR				ScP	ScP	08 19 34.3	+8.2
	1.7nm,0.9s,baz=63,slow=2.6,SNR=6.6						
STKA	**Stephens Creek**	**27.77**	**205**	*e*P	**P**	**08 12 42.3**	**-0.3**
	12nm,0.6s,mb4.6						
STKA	**Stephens Creek**	**27.77**	**205**	P	**P**	**08 12 42.8**	**+0.2**
	17nm,0.8s,mb4.6,baz=11,slow=9.0,SNR=17						
STKA				LR	LR	08 23 46.7	
	comp=Z,656nm,18.9s,baz=29,slow=36						
STKA	**Stephens Creek**	**27.77**	**205**	*e*P	**P**	**08 12 42.3**	**-0.3**
	4.8nm,0.9s,mb4.0						
FITZ	**Fitzroy Crossi**	**30.69**	**246**	*e*P	**P**	**08 13 07.9**	**-0.8**
	27nm,0.6s,mb5.2						
FITZ	**Fitzroy Crossi**	**30.69**	**246**	LR	LR	08 25 38.0	
	comp=Z,526nm,19.4s,baz=75,slow=37						
FITZ	**Fitzroy Crossi**	**30.69**	**246**	*e*P	**P**	**08 13 07.5**	**-1.2**
	12nm,0.6s,mb4.8						
AFI	**Afiamalu**	**33.34**	**105**	P	**P**	**08 13 30.4**	**-1.6**
	31nm,1.0s,mb5.1,baz=172,slow=23,SNR=3.8						
AFI				LR	LR	08 23 20.4	
	comp=Z,173nm,21.0s,baz=290,slow=30						
MBWA	**Marble Bar**	**36.91**	**244**	*e*P	**P**	**08 14 02.0**	**-0.6**
URZ	**Urewera**	**37.01**	**151**	P	**P**	**08 14 04.1**	**+0.9**
	16nm,1.1s,mb4.9,baz=217,slow=5.1,SNR=2.0						
KMBL	**Kambalda**	**39.33**	**228**	*e*P	**P**	**08 14 21.7**	**-1.1**
	107nm,0.8s,mb5.7						
MEEK	**Meekatharra**	**39.75**	**236**	*e*P	**P**	**08 14 25.5**	**-0.8**
MJAR	**Matsushiro Arr**	**46.07**	**341**	P	**P**	**08 15 15.6**	**-1.6**
	1.2nm,0.6s,mb3.8,baz=171,slow=9.0,SNR=5.0						
KSRS	**Korea Array**	**50.93**	**332**	P	**P**	**08 15 52.9**	**-1.6**
	2.7nm,0.8s,mb4.3,baz=141,slow=7.7,SNR=11						
NJ2	**Nanjing**	**51.91**	**320**	*e*P	**P**	**08 16 03.8**	**+1.9**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
ASAJ	**Asahikawa**	**52.08**	**349**	LR	LR	08 36 57.8	
	comp=Z,112nm,18.2s,baz=199,slow=35						
WHN	**Wuhan**	**53.94**	**316**	P	**P**	**08 16 16.5**	**-0.4**
WHN				pP	pP	08 16 35.8	-2.2
PPT	**Papeete**	**54.98**	**106**	*e*LR	LR	08 32 27.1	
	comp=Z,93nm,21.5s						
TBI	**Tubuai**	**55.66**	**113**	*e*LQ		08 30 31.3	
	comp=Z,443nm,32.0s						
TBI				*e*LR	LR	08 32 52.1	
	comp=Z,205nm,33.5s						
MDJ	**Mudanjiang**	**56.23**	**338**	P	**P**	**08 16 31.5**	**-1.6**
MDJ				pP	pP	08 16 49.3	-5.0
MDJ				sP	sP	08 16 57.5	-6.3
MDJ				PP	PP	08 18 36.8	-2.5
MDJ				ScP	ScP	08 21 22.0	+0.4
MDJ				PcS	PcS	08 21 29.5	-0.7
MDJ				S	**S**	**08 24 14.5**	**-1.8**
MDJ				sS	sS	08 24 45.8	-6.7
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.9s,mb4.4						
MDJ				pmax	pmax		
	comp=Z,80nm,4.8s						
MDJ				LR	LR		
	comp=Z,60nm,24.3s						
CN2	**Changchun**	**57.18**	**335**	*e*P	**P**	**08 16 42.5**	**+2.6**
CN2				*e*pP	pP	08 17 01.8	+0.7
CN2				*e*S	**S**	**08 24 30.5**	**+1.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,18.0s						
CN2				LR	LR		
	comp=E,300nm,18.0s						
CN2				LR	LR		
	comp=Z,400nm,19.0s						
GYA	**Guiyang**	**57.46**	**307**	P	**P**	**08 16 44.0**	**+1.8**
GYA				pP	pP	08 17 03.3	-0.1
GYA				sP	sP	08 17 13.8	+0.9
GYA				PcP	PcP	08 17 37.0	+2.0
GYA				PP	PP	08 18 53.5	+2.9
GYA				ScP	ScP	08 21 28.5	+1.0
GYA				S	**S**	**08 24 34.3**	**+1.1**
GYA				sS	sS	08 25 07.0	-2.5
GYA				SS	SS	08 28 25.0	+0.6
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
GYA				pmax	pmax		
	comp=Z,120nm,5.0s						
GYA				LR	LR		
	comp=N,440nm,18.5s						
GYA				LR	LR		
	comp=E,380nm,19.0s						
GYA				LR	LR		
	comp=Z,460nm,18.9s						
BJI	**Beijing**	**58.92**	**326**	P	**P**	**08 16 52.8**	**+0.7**
BJI				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
BJI				LR	LR		
	comp=Z,84nm,29.3s						
PEA0B	**Petropavlovsk-**	**59.89**	**2**	*e*P	**P**	**08 16 56.2**	**-2.3**
PETK	**Petropavlovsk-**	**59.89**	**2**	P	**P**	**08 16 57.4**	**-1.1**
	comp=Z,11nm,0.6s,mb5.0,baz=159,slow=6.4,SNR=13						
PETK				LR	LR	08 38 01.2	
	comp=Z,84nm,20.5s,baz=72,slow=31						
KMI	**Kunming**	**60.03**	**304**	⇑P	**P**	**08 17 01.3**	**+1.3**
KMI				pP	pP	08 17 19.8	-1.6
KMI				sP	sP	08 17 29.5	-1.3
KMI				PP	PP	08 19 17.3	+3.9
KMI				S	**S**	**08 25 08.3**	**+1.8**
KMI				sS	sS	08 25 40.8	-2.3
KMI				SS	SS	08 29 04.0	-0.8
KMI				pmax	pmax		
	comp=Z,23nm,1.4s,mb5.0						
KMI				pmax	pmax		
	comp=Z,140nm,3.1s						
KMI				LR	LR		
	comp=N,140nm,18.9s						
KMI				LR	LR		
	comp=E,160nm,16.2s						
KMI				LR	LR		
	comp=Z,150nm,18.9s						
CM31	**Chiang Mai Arr**	**60.80**	**296**	*e*P	**P**	**08 17 06.0**	**+0.6**
CMAR	**Chiang Mai Arr**	**60.80**	**296**	P	**P**	**08 17 05.6**	**+0.2**
	comp=Z,13nm,0.7s,mb5.1,baz=119,slow=5.2,SNR=49						
CMAR				LR	LR	08 43 03.5	
	comp=Z,76nm,19.5s,baz=324,slow=36						
CHTO	**Chiang Mai**	**60.91**	**296**	*e*P	**P**	**08 17 06.9**	**+0.7**
	comp=Z,16nm,1.0s,mb5.0						
CD2	**Chengdu**	**61.82**	**310**	⇑*i*P	**P**	**08 17 12.8**	**+0.7**
CD2				pP	pP	08 17 32.3	-1.3
CD2				sP	sP	08 17 40.8	-2.2
CD2				PP	PP	08 19 31.8	+2.6
CD2				S	**S**	**08 25 28.5**	**-0.6**
CD2				sS	sS	08 26 02.0	-3.9
CD2				SS	SS	08 29 32.3	-0.4
CD2				pmax	pmax		
	comp=Z,40nm,0.7s,mb5.6						
CD2				pmax	pmax		
	comp=Z,120nm,5.8s						
CD2				LR	LR		
	comp=N,180nm,15.2s						
CD2				LR	LR		
	comp=Z,150nm,14.8s						
HHC	**Hu-ho-hao-te**	**62.09**	**324**	*e*P	**P**	**08 17 15.0**	**+1.3**
HHC				pP	pP	08 17 34.5	-0.7
HHC				sP	sP	08 17 43.0	-1.6
HHC				PcP	PcP	08 17 54.3	+1.1
HHC				PP	PP	08 19 35.3	+3.9
HHC				ScP	ScP	08 21 48.0	+0.3
HHC				PcS	PcS	08 21 55.5	-0.9
HHC				S	**S**	**08 25 32.5**	**+0.3**
HHC				sS	sS	08 26 06.0	-2.9
HHC				ScS	ScS	08 26 56.0	-1.9
HHC				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0						
HHC				pmax	pmax		
	comp=Z,89nm,4.9s						
HHC				LR	LR		
	comp=N,280nm,21.5s						
HHC				LR	LR		
	comp=E,380nm,20.6s						
HHC				LR	LR		
	comp=Z,100nm,20.4s						
TAOE	**Nuku Hiva Isla**	**64.17**	**96**	*e*LR	LR	08 36 48.7	
	comp=Z,170nm,22.5s						
LZH	**Lanzhou**	**64.32**	**316**	*e*P	**P**	**08 17 30.5**	**+2.0**
LZH				pP	pP	08 17 51.3	+1.1
LZH				sP	sP	08 17 56.0	-3.5
LZH				PP	PP	08 19 51.0	-0.1
LZH				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
LZH				pmax	pmax		
	comp=Z,67nm,4.5s						
LZH				LR	LR		
	comp=E,100nm,10.9s						
LZH				LR	LR		
	comp=Z,250nm,11.5s						
GTA	**Gaotai**	**68.74**	**317**	*e*P	**P**	**08 17 57.5**	**+0.9**
GTA				pP	pP	08 18 17.3	-1.2
GTA				sP	sP	08 18 26.0	-1.8
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
SONM	**Songino Array**	**69.33**	**327**	P	**P**	**08 18 00.1**	**0.0**
	comp=Z,4.1nm,0.8s,mb4.3,baz=136,slow=6.8,SNR=8.9						
LSA	**Lhasa**	**71.28**	**304**	*e*P	**P**	**08 18 14.0**	**+1.6**
TAPN	**Taplejung**	**73.41**	**301**	*e*P	**P**	**08 18 25.8**	**+0.7**
	comp=Z,78nm,1.0s,mb5.5						
ODAN	**Odare**	**73.54**	**301**	*e*P	**P**	**08 18 26.6**	**+0.7**
	comp=Z,115nm,0.7s,mb5.7						
RAMN	**Ramite**	**74.25**	**300**	*e*P	**P**	**08 18 30.2**	**+0.2**
	comp=Z,26nm,0.7s,mb5.0						
VIS	**Vishakhapatnam**	**74.89**	**290**	*e*PKP	**P**	**08 18 33.0**	**-0.9**
VIS				AMb	AMB	08 18 44.9	
	comp=Z,24nm,2.2s,mb4.5						
GUN	**Gumba**	**75.13**	**301**	*e*P	**P**	**08 18 36.0**	**+0.9**
	comp=Z,70nm,0.6s,mb5.6						
BILL	**Bilibino**	**75.26**	**4**	*e*P	**P**	**08 18 34.2**	**-0.7**
	comp=Z,21nm,1.1s,mb4.8						
PKI	**Pulchoki**	**75.44**	**301**	*e*P	**P**	**08 18 37.2**	**+0.3**
PKIN	**Phulchoki**	**75.45**	**301**	*e*P	**P**	**08 18 37.5**	**+0.6**
KKN	**Kakani**	**75.61**	**301**	*e*P	**P**	**08 18 38.1**	**+0.3**
	comp=Z,46nm,0.8s,mb5.3						
DMN	**Daman**	**75.70**	**301**	*e*P	**P**	**08 18 39.2**	**+0.8**
	comp=Z,91nm,0.9s,mb5.5						
MDRS	**Chennai**	**76.88**	**285**	*ex*	x	08 18 52.1	
SVW2	**Sparrevohn**	**77.97**	**22**	*e*P	**P**	**08 18 50.9**	**+0.6**
WMQ	**Urumqi**	**78.83**	**317**	*e*P	**P**	**08 18 57.0**	**+1.5**
TTA	**Tatalina**	**78.99**	**21**	*e*P	**P**	**08 18 56.1**	**+0.1**
PMR	**Palmer**	**80.76**	**24**	*e*P	**P**	**08 19 05.0**	**-0.5**
	comp=Z,16nm,0.7s,mb5.0						
CHUM	**Lake Minchumin**	**80.89**	**21**	*e*P	**P**	**08 19 05.4**	**-0.8**
	comp=Z,16nm,1.0s,mb4.8						
JOSI	**Joshimath**	**81.14**	**302**	*e*PKP	**P**	**08 19 07.3**	**-1.0**
TRF	**Thorofare Moun**	**81.37**	**22**	*e*P	**P**	**08 19 07.2**	**-1.6**
	comp=Z,10nm,0.7s,mb4.8						
BHPL	**Bhopal**	**81.44**	**295**	*e*PKP	**P**	**08 19 10.0**	**0.0**
BHPL				AMb	AMB	08 19 12.9	
	comp=Z,15nm,1.1s,mb4.7						
AGRA	**Agra**	**81.79**	**299**	*e*PKP	**P**	**08 19 10.2**	**-1.6**
DIV	**Divide**	**81.88**	**25**	*e*P	**P**	**08 19 11.2**	**-0.3**
	comp=Z,10nm,0.9s,mb4.7						
MCK	**McKinley**	**82.03**	**22**	*e*P	**P**	**08 19 11.0**	**-1.2**
	comp=Z,23nm,0.7s,mb5.1						
BMRM	**Bremner River**	**82.29**	**25**	*e*P	**P**	**08 19 13.5**	**-0.2**
	comp=Z,14nm,1.1s,mb4.7						
KLP	**Kalpa**	**82.46**	**303**	*e*PKP	**P**	**08 19 16.1**	**+0.9**
KLP				AMb	AMB	08 19 17.2	
	comp=Z,17nm,1.0s,mb4.8						
AYAN	**Aya Nagar**	**82.76**	**300**	*e*PKP	**P**	**08 19 15.6**	**-1.2**
QSPA	**South Pole Qui**	**83.00**	**180**	*e*P	**P**	**08 19 18.4**	**+1.3**
	comp=Z,20nm,1.0s,mb4.9						
MK31	**Makanchi Array**	**83.41**	**319**	*e*P	**P**	**08 19 19.4**	**-0.3**
MKAR	**Makanchi Array**	**83.41**	**319**	P	**P**	**08 19 18.8**	**-0.9**
	comp=Z,4.2nm,0.7s,mb4.4,baz=86,slow=7.4,SNR=45						
COLD	**Coldfoot**	**83.58**	**19**	*e*P	**P**	**08 19 20.3**	**+0.1**
	comp=Z,8.7nm,1.2s,mb4.5						
KHET	**Khetri**	**83.82**	**299**	*e*PKP	**P**	**08 19 21.3**	**-1.0**
KHET				AMb	AMB	08 19 22.7	
	comp=Z,25nm,0.4s,mb5.3						
PNL	**Peninsula**	**84.01**	**28**	*e*P	**P**	**08 19 21.7**	**-0.8**
	comp=Z,19nm,0.9s,mb4.9						
ZAA0	**Zalesovo Array**	**84.18**	**326**	*e*P	**P**	**08 19 21.2**	**-2.3**
ZALV	**Zalesovo Beam**	**84.18**	**326**	P	**P**	**08 19 21.9**	**-1.5**
	comp=Z,2.6nm,0.6s,mb4.2,baz=112,slow=5.6,SNR=10						
ZALV				LR	LR	08 56 49.5	
	comp=Z,42nm,20.0s,baz=90,slow=36						
MAW	**Mawson**	**84.43**	**203**	*e*P	**P**	**08 19 25.8**	**+1.2**
	comp=Z,5.4nm,0.7s,mb4.5						
MAW	**Mawson**	**84.43**	**203**	P	**P**	**08 19 24.2**	**-0.4**
	comp=Z,3.8nm,0.6s,mb4.4,baz=88,slow=6.0,SNR=10						
MAW	**Mawson**	**84.43**	**203**	*e*P	**P**	**08 19 25.6**	**+1.0**
	comp=Z,2.3nm,1.0s,mb4.0						
AJM	**Ajmer**	**84.53**	**297**	*e*PKP	**P**	**08 19 25.6**	**-0.4**
AJM				AMb	AMB	08 19 27.2	
	comp=Z,30nm,0.9s,mb5.2						
HYT	**Haines Junctio**	**85.34**	**27**	*e*P	**P**	**08 19 30.0**	**+0.8**
EGAK	**Eagle**	**85.49**	**23**	*e*P	**P**	**08 19 30.1**	**+0.2**
	comp=Z,13nm,0.8s,mb4.9						
DAWY	**Dawson**	**85.86**	**24**	*e*P	**P**	**08 19 31.6**	**-0.1**
KSH	**Kashi**	**86.02**	**310**	P	**P**	**08 19 35.0**	**+2.0**
KSH				pP	pP	08 19 55.5	-0.2
KSH				sP	sP	08 20 04.0	-0.8
KSH				PP	PP	08 22 58.3	+4.0
KSH				SKS		08 29 51.5	
KSH				S	S	08 29 59.5	-0.9
KSH				sS	sS	08 30 37.5	-1.7
KSH				SS	SS	08 35 45.5	+5.1
KSH				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
KSH				pmax	pmax		
	comp=Z,90nm,5.1s						
KSH				LR	LR		
	comp=N,110nm,4.9s						
KSH				LR	LR		
	comp=E,66nm,4.4s						
KSH				LR	LR		
	comp=Z,53nm,4.4s						
DLBC	**Dease Lake**	**88.11**	**31**	*e*P	**P**	**08 19 42.7**	**0.0**
INK	**Inuvik**	**89.69**	**21**	*e*P	**P**	**08 19 49.7**	**-0.2**
	comp=Z,16nm,1.4s,mb5.0

mb1 4.2/21,mb1mx4.1/25,mbtmp4.1/21,ML4.5/2,MS3.6/4, Ms1 3.7/4,ms1mx3.1/25,Error ellipse: s-maj=21.8km s-min=10.4km az=61.0
ISCJB ***25*** *08:15:29.9±0.6,0°.57N×98°.55E±0°.05,h67km±5km, mb4.4/46,Error ellipse: s-maj=9.2km s-min=6.3km az=137.4*
DJA ***25*** *08:15:29,0°.57N×98°.55E,h21km,MLv4.6/9*
ISC 25 08:15:31.0±0.6,0°.52N±0°.05×98°.53E±0°.05,h63km±5km, h41km±1.9km:pP-P,n131,σ1º04/124,mb4.5/46,7C-2D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**1.08**	**75**	P	**Pn**	**08 15 49.4**	**-0.9**
MNSI	**Mandailing Nat**	**1.08**	**75**	P	**Pn**	**08 15 48.7**	**-1.6**
MNSI				S	**Sn**	**08 16 00.3**	**-4.3**
GSI	**Gunungsitoli**	**1.23**	**309**	P	**Pn**	**08 15 51.7**	**-0.6**
GSI	**Gunungsitoli**	**1.23**	**309**	P	**Pn**	**08 15 50.9**	**-1.4**
SISI	**Saibi**	**1.92**	**163**	P	**Pn**	**08 16 01.0**	**-0.5**
SISI	**Saibi**	**1.92**	**163**	P	**Pn**	**08 16 00.5**	**-1.0**
PPI	**Padang Panjang**	**2.10**	**118**	P	**Pn**	**08 16 05.4**	**+1.4**
PPI	**Padang Panjang**	**2.10**	**118**	P	**Pn**	**08 16 04.2**	**+0.2**
PPI				S	**Sn**	**08 16 32.4**	**+3.3**
PSI	**Prapat**	**2.30**	**10**	Pn	**Pn**	**08 16 04.3**	**-2.4**
	49nm,0.3s,baz=194,slow=4.7,SNR=63						
PDSI	**Padang**	**2.40**	**126**	P	**Pn**	**08 16 09.3**	**+1.3**
PDSI	**Padang**	**2.40**	**126**	P	**Pn**	**08 16 07.3**	**-0.7**
BKNI	**Bangkinang**	**2.51**	**94**	P	**Pn**	**08 16 14.5**	**+4.9**
TSI	**Tuntungan**	**2.96**	**1**	P	**Pn**	**08 16 18.8**	**+3.1**
TPTI		**3.04**	**334**	P	**Pn**	**08 16 18.7**	**+2.0**
TPTI		**3.04**	**334**	P	**Pn**	**08 16 14.9**	**-1.8**
SDSI	**Sungai Dareh**	**3.23**	**117**	P	**Pn**	**08 16 20.2**	**+0.8**
SDSI	**Sungai Dareh**	**3.23**	**117**	P	**Pn**	**08 16 16.7**	**-2.7**
IPM	**Ipoh**	**4.65**	**32**	P	**Pn**	**08 16 39.6**	**+0.8**
IPM	**Ipoh**	**4.65**	**32**	P	**Pn**	**08 16 41.1**	**+2.3**
IPM	**Ipoh**	**4.65**	**32**	P	**Pn**	**08 16 39.6**	**+0.8**
KGM	**Kluang**	**5.01**	**73**	P	**Pn**	**08 16 43.5**	**-0.3**
KULM	**Kulim**	**5.19**	**24**	P	**Pn**	**08 16 47.1**	**+0.9**
KULM	**Kulim**	**5.19**	**24**	*e*Pn	**Pn**	**08 16 44.3**	**-1.9**
	64nm,0.7s						
KULM	**Kulim**	**5.19**	**24**	P	**Pn**	**08 16 46.5**	**+0.4**
	97nm,0.9s						
MYKOM	**Kota Tinggi**	**5.46**	**77**	P	**Pn**	**08 16 49.1**	**-0.8**
MYKOM	**Kota Tinggi**	**5.46**	**77**	P	**Pn**	**08 16 52.0**	**+2.1**
MYKOM	**Kota Tinggi**	**5.46**	**77**	P	**Pn**	**08 16 49.0**	**-0.9**
	0.4nm1μm43nm,0.7s						
MNAI	**Manna**	**6.56**	**138**	P	**Pn**	**08 17 06.6**	**+1.6**
KTGM	**Kuala Trenggan**	**6.62**	**44**	P	**Pn**	**08 17 06.2**	**+0.4**
SBUM	**Sibu**	**13.81**	**82**	P	**Pn**	**08 18 45.5**	**+1.5**
CMAR	**Chiang Mai Arr**	**17.83**	**1**	P	**Pn**	**08 19 33.9**	**-1.0**
	1.0nm,0.3s,baz=188,slow=10,SNR=9.7						
CMAR				LR	LR	08 26 59.4	
	comp=Z,178nm,19.1s,baz=37,slow=39						
KKM	**Kota Kinabalu**	**18.48**	**72**	P	**Pn**	**08 19 44.2**	**+1.3**
SDKM	**Sandakan**	**19.31**	**74**	P	**Pn**	**08 19 53.2**	**+0.4**
TSM	**Tawau**	**19.68**	**79**	P	**Pn**	**08 19 57.2**	**0.0**
MYLDM	**Lahad Datu**	**20.47**	**77**	P	**P**	**08 20 06.1**	**+2.3**
MYLDM	**Lahad Datu**	**20.47**	**77**	P	Px	08 20 24.2	
KAPI	**Kappang**	**21.90**	**105**	LR	LR	08 29 00.1	
	comp=Z,120nm,20.3s,baz=193,slow=37						
WHN	**Wuhan**	**33.42**	**25**	*e*P	**P**	**08 22 02.8**	**-1.1**
GTA	**Gaotai**	**38.72**	**2**	*e*P	**P**	**08 22 49.5**	**+0.5**
GTA				pP	pP	08 22 58.5	-6.2
GTA				sP	sP	08 23 02.3	-10
GTA				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.5						
WRA	**Warramunga Arr**	**40.55**	**122**	P	**P**	**08 23 02.5**	**-2.0**
	comp=Z,1.1nm,0.9s,mb3.5,baz=305,slow=8.8,SNR=11						
WRA				pP	pP	08 23 13.2	-7.1
	comp=Z,2.3nm,0.5s,baz=303,slow=9.1,SNR=9.1						
WRA				PcP	PcP	08 25 06.7	+0.7
	comp=Z,1.8nm,0.7s,baz=308,slow=2.5,SNR=7.9						
WRA				pPcP		08 25 19.6	
	comp=Z,0.8nm,0.7s,baz=315,slow=2.5,SNR=4.8						
WRA	**Warramunga Arr**	**40.55**	**122**	P	**P**	**08 23 02.5**	**-2.0**
WRA				*PP	pP	08 23 13.2	-7.1
WRA						08 25 06.7	
WRAB	**Tennant Creek**	**40.55**	**122**	*e*P	**P**	**08 23 02.9**	**-1.7**
ASAR	**Alice Springs**	**41.93**	**127**	P	**P**	**08 23 14.3**	**-1.5**
	comp=Z,1.4nm,0.7s,mb3.7,baz=302,slow=7.6,SNR=15						
ASAR				pP	pP	08 23 24.9	-6.8
	comp=Z,1.6nm,0.7s,baz=300,slow=7.7,SNR=7.0						
ASAR				PcP	PcP	08 25 11.3	+0.9
	comp=Z,1.7nm,0.8s,baz=306,slow=2.5,SNR=8.8						
BJT	**Baijiatuau**	**42.47**	**20**	*e*P	**P**	**08 23 20.9**	**+1.0**
BJT				pmax	pmax		
	comp=Z,26nm,0.5s						
BJT	**Baijiatuau**	**42.47**	**20**	*e*P	**P**	**08 23 20.9**	**+1.0**
	comp=Z,26nm,0.5s,mb5.1						
KSRS	**Korea Array**	**45.66**	**33**	P	**P**	**08 23 44.3**	**-1.3**
	comp=Z,10nm,0.8s,mb4.8,baz=223,slow=8.7,SNR=31						
KSRS				LR	LR	08 42 46.6	
	comp=Z,95nm,18.4s,baz=352,slow=36						
UCH	**Uchtor**	**46.81**	**336**	*e*P	**P**	**08 23 55.4**	**+0.9**
UCH				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
UCH	**Uchtor**	**46.81**	**336**	*e*P	**P**	**08 23 55.4**	**+0.9**
	comp=Z,8.6nm,0.8s,mb4.7						
TKM2	**Tokmak 2**	**46.95**	**337**	*e*P	**P**	**08 23 56.5**	**+0.9**
TKM2				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.9						
TKM2	**Tokmak 2**	**46.95**	**337**	*e*P	**P**	**08 23 56.5**	**+0.9**
	comp=Z,14nm,0.8s,mb5.0						
AAK	**Ala-Archa**	**47.15**	**336**	P	**P**	**08 23 57.9**	**+0.7**
	comp=Z,1.5nm,0.4s,mb4.3,baz=153,slow=7.6,SNR=5.0						
AAK	**Ala-Archa**	**47.15**	**336**	P	**P**	**08 23 57.9**	**+0.7**
EKS2	**Erkin-Say**	**47.47**	**335**	*e*P	**P**	**08 24 00.3**	**+0.7**
EKS2				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
EKS2	**Erkin-Say**	**47.47**	**335**	*e*P	**P**	**08 24 00.3**	**+0.7**
	comp=Z,5.6nm,0.8s,mb4.5						
SONM	**Songino Array**	**47.62**	**7**	P	**P**	**08 23 60.0**	**-0.7**
	comp=Z,5.4nm,0.7s,mb4.7,baz=193,slow=9.3,SNR=11						
SONM				PcP	PcP	08 25 30.2	+0.8
	comp=Z,2.9nm,0.7s,baz=183,slow=3.3,SNR=4.1						
ULN	**Ulaanbaatar**	**47.73**	**8**	*e*P	**P**	**08 24 01.8**	**+0.2**
ULN				*e*PP	pP	08 24 13.5	-4.2
ULN				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
ULN	**Ulaanbaatar**	**47.73**	**8**	*e*P	**P**	**08 24 01.8**	**+0.3**
	comp=Z,6.1nm,1.0s,mb4.6						
ULN				*e*pP	pP	08 24 13.5	-4.2
MK31	**Makanchi Array**	**48.23**	**345**	*e*P	**P**	**08 24 05.2**	**-0.2**
MKAR	**Makanchi Array**	**48.23**	**345**	P	**P**	**08 24 05.7**	**+0.3**
	comp=Z,15nm,0.7s,mb5.2,baz=134,slow=7.3,SNR=98						
CN2	**Changchun**	**49.32**	**26**	⇑P	**P**	**08 24 13.5**	**-0.3**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
ZAK	**Zakamensk**	**49.84**	**4**	*e*P	**P**	**08 24 18.2**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
TLY	**Talaya**	**51.16**	**4**	*e*P	**P**	**08 24 26.2**	**-1.4**
TLY				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
TLY				MLR	MLR		
	comp=Z,148nm,20.0s						
MJAR	**Matsushiro Arr**	**51.30**	**41**	P	**P**	**08 24 27.4**	**-1.6**
	comp=Z,1.3nm,0.6s,mb4.1,baz=220,slow=4.7,SNR=3.1						
HIA	**Hailar**	**51.87**	**18**	P	**P**	**08 24 32.5**	**-0.4**
STKA	**Stephens Creek**	**51.92**	**132**	P	**P**	**08 24 33.0**	**-0.7**
	comp=Z,2.8nm,0.7s,mb4.3,baz=308,slow=15,SNR=6.6						
STKA				LR	LR	08 46 01.8	
	comp=Z,85nm,20.5s,baz=283,slow=35						
KURK	**Kurchatov**	**52.79**	**344**	P	**P**	**08 24 39.5**	**-0.2**
	comp=Z,7.9nm,0.8s,mb4.7,baz=166,slow=7.5,SNR=34						
KURK				pP	pP	08 24 52.2	-4.0
	comp=Z,2.2nm,0.5s,baz=161,slow=7.3,SNR=6.9						
KURK	**Kurchatov**	**52.79**	**344**	*e*P	**P**	**08 24 40.3**	**+0.5**
KURK				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.0						
KURK	**Kurchatov**	**52.79**	**344**	P	**P**	**08 24 39.5**	**-0.2**
KURK				pP	pP	08 24 52.2	-4.0
ZAA0	**Zalesovo Array**	**54.44**	**350**	*e*P	**P**	**08 24 51.9**	**+0.2**
ZAA0				*e*pP	pP	08 25 04.7	-3.5
ZALV	**Zalesovo Beam**	**54.44**	**350**	P	**P**	**08 24 51.9**	**+0.1**
	comp=Z,11nm,0.7s,mb4.9,baz=176,slow=5.7,SNR=37						
ZALV				pP	pP	08 25 04.6	-3.6
	comp=Z,9.0nm,0.5s,baz=181,slow=6.6,SNR=8.0						
NVS	**Novosibirsk**	**55.58**	**349**	*e*P	**P**	**08 24 59.0**	**-0.9**
NVS				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.7						
BVAR	**Borovoye Array**	**57.33**	**340**	P	**P**	**08 25 12.1**	**-0.3**
	comp=Z,5.8nm,0.7s,mb4.7,baz=139,slow=9.2,SNR=29						
BVAR				pP	pP	08 25 23.6	-5.4
	comp=Z,4.4nm,0.6s,baz=141,slow=9.6,SNR=6.9						
BRVK	**Borovoye**	**57.39**	**340**	*e*P	**P**	**08 25 12.6**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
BRVK	**Borovoye**	**57.39**	**340**	*e*P	**P**	**08 25 12.0**	**-0.9**
	comp=Z,3.1nm,0.6s,mb4.5						
BRVK				*e*pP	pP	08 25 22.7	-6.8
ABKAR	**Akbulak array**	**58.74**	**331**	*e*P	**P**	**08 25 21.7**	**-0.6**
	comp=Z,5.4nm,0.7s,mb4.7						
AKTK	**Aktyubinsk**	**60.45**	**331**	P	**P**	**08 25 33.6**	**-0.6**
AKTO	**Aktyubinsk**	**60.45**	**331**	P	**P**	**08 25 33.6**	**-0.6**
	comp=Z,2.0nm,0.7s,mb4.3,baz=128,slow=6.6,SNR=6.7						
GNI	**Garni**	**62.70**	**316**	*e*P	**P**	**08 25 51.5**	**+2.0**
GNI				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SVE	**Sverdlovsk**	**63.81**	**338**	⇑*e*P	**P**	**08 25 56.7**	**+0.2**
SVE				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
ARU	**Arti**	**64.33**	**337**	*d i*P	**P**	**08 25 59.5**	**-0.4**
ARU						08 28 18.4	
ARU				S	**S**	**08 34 37.2**	**+4.1**
ARU				SS	SS	08 38 41.4	-2.5
ARU				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
ZEI	**Tsey**	**64.39**	**318**	*e*P	**P**	**08 25 58.6**	**-2.0**
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.8						
KIV	**Kislovodsk**	**65.69**	**319**	*e*P	**P**	**08 26 10.4**	**+1.4**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
PETK	**Petropavlovsk-**	**71.56**	**33**	P	**P**	**08 26 45.6**	**+0.2**
	comp=Z,2.2nm,0.8s,mb4.2,baz=180,slow=4.4,SNR=4.3						
MAW	**Mawson**	**72.36**	**194**	P	**P**	**08 26 49.2**	**-0.7**
	comp=Z,0.8nm,0.9s,mb3.7,baz=312,slow=11,SNR=2.0						
TIXI	**Tiksi**	**73.62**	**10**	*e*P	**P**	**08 26 56.2**	**-1.1**
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.6						
TIXI	**Tiksi**	**73.62**	**10**	*e*P	**P**	**08 26 56.1**	**-1.2**
	comp=Z,7.5nm,0.9s,mb4.6						
OBN	**Obninsk**	**73.89**	**328**	⇓*i*P	**P**	**08 26 58.9**	**-0.3**
OBN				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
AKASG	**Malin Array Be**	**76.61**	**322**	P	**P**	**08 27 13.9**	**-1.0**
	comp=Z,2.9nm,0.6s,mb4.4,baz=84,slow=5.5,SNR=12						
AKASG	**Malin Array Be**	**76.61**	**322**	*i* P	**P**	**08 27 13.8**	**-1.1**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
VRI	**Vrincioaia**	**77.02**	**317**	⇑*i*P	**P**	**08 27 18.0**	**+0.7**
BURAR	**Bucovina Array**	**78.41**	**319**	⇑*i*P	**P**	**08 27 26.2**	**+1.2**
BUR08	**Bucovina Ar. S**	**78.43**	**319**	*e*P	**P**	**08 27 25.9**	**+0.8**
JOF	**Joensuu**	**79.32**	**335**	*e*p	**P**	**08 27 29.0**	**-0.7**
	comp=Z,7.1nm,0.8s,mb4.7						
JOF	**Joensuu**	**79.32**	**335**	*e*p	**P**	**08 27 29.0**	**-0.7**
	comp=Z,7.1nm,0.8s,mb4.7						
CRVS	**Cervenica-Dubn**	**81.12**	**319**	*e*P	**P**	**08 27 40.1**	**+0.5**
CRVS				pmax	pmax		
	comp=Z,5.0nm,1.6s,mb4.2						
CRVS	**Cervenica-Dubn**	**81.12**	**319**	*e*P	**P**	**08 27 40.1**	**+0.5**
	comp=Z,5.2nm,1.6s,mb4.2						
CRVS	**Cervenica-Dubn**	**81.12**	**319**	*e*P	**P**	**08 27 40.1**	**+0.5**
FINES	**FINESS Array B**	**81.21**	**332**	P	**P**	**08 27 40.0**	**+0.2**
	comp=Z,6.2nm,0.7s,mb4.7,baz=93,slow=6.1,SNR=17						
BILL	**Bilibino**	**81.32**	**21**	*e*P	**P**	**08 27 40.4**	**+0.1**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.9						
STHS	**Stebnicka Huta**	**81.34**	**320**	*e*P	**P**	**08 27 42.2**	**+1.4**
STHS				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
STHS	**Stebnicka Huta**	**81.34**	**320**	*e*P	**P**	**08 27 42.2**	**+1.4**
	comp=Z,4.1nm,0.8s,mb4.4						
STHS	**Stebnicka Huta**	**81.34**	**320**	*e*P	**P**	**08 27 42.2**	**+1.4**
VYHS	**Vyhne**	**82.78**	**319**	*e*P	**P**	**08 27 48.5**	**+0.1**
VYHS				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.8						
VYHS	**Vyhne**	**82.78**	**319**	*e*P	**P**	**08 27 48.5**	**+0.1**
	comp=Z,1.4nm,1.1s,mb3.9						
VYHS	**Vyhne**	**82.78**	**319**	*e*P	**P**	**08 27 48.5**	**+0.1**
ARCES	**ARCESS Array B**	**83.62**	**340**	P	**P**	**08 27 52.6**	**+0.4**
	comp=Z,2.0nm,0.7s,mb4.4,baz=103,slow=5.5,SNR=12						
ARCES				pP	pP	08 28 03.5	-6.2
	comp=Z,3.4nm,0.9s,baz=83,slow=5.0,SNR=2.5						
CLL	**Collm**	**86.79**	**321**	*e*P	**P**	**08 28 11.0**	**+2.5**
CLL	**Collm**	**86.79**	**321**	*e*PcP	PcP	08 28 11.0	+0.3
NOA	**NORSAR Array B**	**88.24**	**331**	P	**P**	**08 28 14.7**	**-0.5**
	comp=Z,0.9nm,0.8s,mb4.1,baz=119,slow=4.0,SNR=3.2						
KEST	**Kesra**	**89.04**	**306**	P	**P**	**08 28 20.3**	**+0.7**
	comp=Z,0.6nm,0.5s,mb4.2,baz=293,slow=6.0,SNR=3.7						
CDF	**Champ du Feu**	**90.45**	**318**	*e*P	**P**	**08 28 25.8**	**-0.1**
LPG	**La Plagne**	**90.88**	**315**	*e*P	**P**	**08 28 28.4**	**+0.4**
	comp=Z,7.2nm,0.7s,mb4.8						
LPG	**La Plagne**	**90.88**	**315**	*e*P	**P**	**08 28 28.4**	**+0.4**
LPG				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.9						
LPG	**La Plagne**	**90.88**	**315**	*e*P	**P**	**08 28 28.4**	**+0.4**
	comp=Z,3.6nm,0.7s,mb4.8						
LPL	**La Plagne**	**90.90**	**315**	*e*P	**P**	**08 28 28.5**	**+0.5**
	comp=Z,12nm,0.9s,mb4.9						
LPL	**La Plagne**	**90.90**	**315**	*e*P	**P**	**08 28 28.5**	**+0.5**
LPL				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.9						
LPL	**La Plagne**	**90.90**	**315**	*e*P	**P**	**08 28 28.5**	**+0.5**
	comp=Z,5.9nm,0.9s,mb4.9						
CABF	**La Chapelle**	**91.31**	**316**	*e*P	**P**	**08 28 30.2**	**+0.3**
	comp=Z,25nm,1.1s,mb5.2						
CABF	**La Chapelle**	**91.31**	**316**	*e*P	**P**	**08 28 30.2**	**+0.3**
CABF				pmax	pmax		
	comp=Z,12nm,1.1s,mb5.1						
CABF	**La Chapelle**	**91.31**	**316**	*e*P	**P**	**08 28 30.2**	**+0.3**
	comp=Z,12nm,1.1s,mb5.2						
LOR	**Lormes**	**92.80**	**317**	*e*P	**P**	**08 28 36.8**	**0.0**
SMF	**Signal de Mont**	**92.85**	**317**	*e*P	**P**	**08 28 37.0**	**0.0**
	comp=Z,17nm,1.0s,mb5.1						
SMF	**Signal de Mont**	**92.85**	**317**	*e*P	**P**	**08 28 37.0**	**0.0**
SMF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb5.2						
SMF	**Signal de Mont**	**92.85**	**317**	*e*P	**P**	**08 28 37.0**	**0.0**
	comp=Z,8.5nm,1.0s,mb5.1						
PDAR	**Pinedale Array**	**130.05**	**27**	PKP	PKPdf	08 34 35.2	+1.1
	comp=Z,0.5nm,0.7s,baz=169,slow=1.5,SNR=4.4						
TXAR	**Lajitas Array**	**143.51**	**34**	PKP	PKPdf	08 34 57.5	-1.8
	comp=Z,0.6nm,0.5s,baz=254,slow=1.6,SNR=11						
JCT	**Junction City**	**144.57**	**28**	*e*PKIKP	PKPdf	08 35 00.0	-1.2
CPUP	**Villa Florida**	**145.38**	**220**	PKPbc	PKPbc	08 35 02.5	-0.2
	comp=Z,1.9nm,0.6s,baz=86,slow=3.1,SNR=9.1						
JSC	**Jenkinsville**	**145.38**	**360**	PKIKP	PKPdf	08 35 02.2	-0.2
GOGA	**Godfrey**	**146.19**	**3**	*e*PKP2	PKPab	08 35 04.5	-1.1
LRAL	**Lakeview Retre**	**146.22**	**8**	*e*PKPbc	PKPbc	08 35 04.5	-0.4

ISCJB ***25*** *08:19:10.4±1.0,32°.34N±0°.04×105°.06E±0°.06,h4km±7km, mb4.1/5,Error ellipse: s-maj=8.6km s-min=5.4km az=31.6*
IDC ***25*** *08:19:11.6±0.9,32°.32N×104°.93E,h0km,mb4.0/5, mb1 4.1/7,mb1mx3.9/24,mbtmp3.9/7,ML4.1/1,Error ellipse: s-maj=55.7km s-min=19.7km az=69.0*
BJI ***25*** *08:19:13.1,32°.28N×105°.14E,h11km,ML3.7/14,Ms3.7/2, Ms7 3.2/3*
NEIC ***25*** *08:19:13.1±0.5,32°.31N×105°.05E,h10km,Error ellipse: s-maj=15.4km s-min=9.1km az=76.0*
ISC 25 08:19:13.9±0.9,32°.33N±0°.03×105°.00E±0°.05,h12km±7km, n14,σ1º13/23,mb4.1/5,1C,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.77**	**217**	⇑*i*Pn	**Pn**	**08 19 45.0**	**+0.7**
CD2				Pg	**Pg**	**08 19 50.0**	**+2.2**
CD2				Sn	**Sn**	**08 20 07.5**	**+0.8**
CD2				Sg	**Sg**	**08 20 10.3**	**-0.4**
CD2				smax			
	comp=N,4μm,0.5s						
CD2				smax			
	comp=E,2μm,0.5s						
XAN	**Xi'an**	**3.70**	**61**	Pn	**Pn**	**08 20 12.3**	**+1.4**
XAN				Sn	**Sn**	**08 20 56.8**	**+2.3**
XAN				Sg	**Sg**	**08 21 12.5**	**-0.3**
XAN				smax			
	comp=N,170nm,0.8s						
XAN				smax			
	comp=E,69nm,0.8s						
LZH	**Lanzhou**	**3.87**	**346**	Pn	**Pn**	**08 20 16.8**	**+3.5**
LZH				Pg	**Pg**	**08 20 27.3**	**-0.8**
LZH				Sg	**Sg**	**08 21 17.8**	**-0.5**
LZH				smax			
	comp=N,260nm,0.6s						
LZH				smax			
	comp=E,620nm,0.8s						
LZH				LR	LR		
	comp=E,690nm,4.7s						
LZH				LR	LR		
	comp=Z,880nm,5.9s						
ENH	**Enshi**	**4.35**	**117**	Pn	**Pn**	**08 20 18.2**	**-1.6**
GYA	**Guiyang**	**6.02**	**166**	Pn	**Pn**	**08 20 46.0**	**+3.2**
GYA				Sn	**Sn**	**08 21 50.5**	**-1.2**
GYA				Sg	**Sg**	**08 22 20.0**	**-7.2**
GYA				smax			
	comp=N,120nm,0.7s						
GYA				smax			
	comp=E,90nm,0.8s						
CMAR	**Chiang Mai Arr**	**14.85**	**203**	Pn	**Pn**	**08 22 43.2**	**-0.5**
	comp=E,0.3nm,0.3s,baz=11,slow=11,SNR=2.6						
SONM	**Songino Array**	**15.53**	**4**	Pn	**Pn**	**08 22 52.7**	**+0.1**
	baz=207,slow=6.1,SNR=1.8						
ARCES	**ARCESS Array B**	**56.47**	**335**	P	**P**	**08 28 55.1**	**-0.1**
	comp=E,3.6nm,1.0s,mb4.4,baz=70,slow=11,SNR=3.6						
FINES	**FINESS Array B**	**56.99**	**326**	P	**P**	**08 28 57.8**	**-1.2**
	comp=E,2.0nm,0.7s,mb4.2,baz=33,slow=5.3,SNR=2.1						
WRAB	**Tennant Creek**	**59.07**	**147**	*e*P	**P**	**08 29 12.9**	**-1.1**
WRA	**Warramunga Arr**	**59.07**	**148**	P	**P**	**08 29 13.9**	**-0.2**
	comp=E,1.7nm,0.6s,mb4.3,baz=341,slow=7.7,SNR=19						
ASAR	**Alice Springs**	**62.15**	**150**	P	**P**	**08 29 34.9**	**-0.1**
	comp=E,0.9nm,0.5s,mb4.2,baz=335,slow=6.9,SNR=8.2						
YKA	**Yellowknife Ar**	**80.30**	**17**	P	**P**	**08 31 24.2**	**-0.2**
	comp=E,0.4nm,0.5s,mb3.6,baz=328,slow=5.0,SNR=7.3						
YKA	**Yellowknife Ar**	**80.30**	**17**	P	**P**	**08 31 24.2**	**-0.2**

ATH ***25*** *08:19:21.8,38°.06N×21°.58E,h15km±1km,MD3.5/17*
THE ***25*** *08:19:21.6,38°.03N×21°.55E,h0km±1km,ML3.3/8,Error ellipse: s-maj=1.7km s-min=0.5km az=215.0*
NEIC ***25*** *08:19:21.8,38°.06N×21°.58E,h15km,MD3.5(ATH),After ATH.*
CSEM ***25*** *08:19:21.7±0.2,38°.02N×21°.57E,h10km,MD3.5,Error ellipse: s-maj=3.9km s-min=3.5km az=106.0*
ISCJB ***25*** *08:19:21.7±0.4,38°.03N±0°.02×21°.56E±0°.02,h1km±4km, Error ellipse: s-maj=3.3km s-min=3.0km az=33.7*
ISC 25 08:19:22.4±0.4,38°.04N±0°.02×21°.56E±0°.02,h6km±3km, n70,σ1º14/121,3C,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.07**	**280**	⇑*i*Pb	**Pg**	**08 19 24.8**	**+0.6**
RLS				*e*Sb	**Sg**	**08 19 27.5**	**+2.0**
RLS	**Riolos of Patr**	**0.07**	**280**	⇑*i*PB	**Pg**	**08 19 24.8**	**+0.6**
RLS				*e*SB	**Sg**	**08 19 27.5**	**+2.0**
RLS	**Riolos of Patr**	**0.07**	**280**	⇑*i*Pb	**Pg**	**08 19 24.8**	**+0.6**
RLS				*e*Sb	**Sg**	**08 19 27.5**	**+2.0**
UPR	**University Cam**	**0.30**	**37**	P	**Pg**	**08 19 28.7**	**+0.5**
UPR				S	**Sg**	**08 19 33.0**	**+0.8**
UPR	**University Cam**	**0.30**	**37**	*e*PB	**Pg**	**08 19 27.4**	**-0.8**
UPR	**University Cam**	**0.30**	**37**	*e*Pb	**Pg**	**08 19 27.4**	**-0.8**
UPR	**University Cam**	**0.30**	**37**	P	**Pg**	**08 19 28.7**	**+0.5**
UPR				S	**Sg**	**08 19 33.0**	**+0.8**
LAKA	**Lakka**	**0.38**	**59**	P	**Pg**	**08 19 29.2**	**-0.6**
LAKA				S	**Sg**	**08 19 35.8**	**+0.9**
LAKA	**Lakka**	**0.38**	**59**	P	**Pg**	**08 19 29.2**	**-0.6**
LAKA				S	**Sg**	**08 19 35.8**	**+0.9**
EFP	**Efpalio**	**0.47**	**35**	P	**Pg**	**08 19 30.8**	**-0.7**
EFP				S	**Sg**	**08 19 38.7**	**+1.1**
EFP	**Efpalio**	**0.47**	**35**	*e*PB	**Pg**	**08 19 30.9**	**-0.6**
EFP				*e*SB	**Sg**	**08 19 37.6**	**0.0**
EFP	**Efpalio**	**0.47**	**35**	*e*Pb	**Pg**	**08 19 30.9**	**-0.6**
EFP				*e*Sb	**Sg**	**08 19 37.6**	**

NEO	**Neokhori**	**1.81**	**45**	*e*PB	**Pb**	**08 19 53.5**	**-2.4**
KYTH	**Kithira**	**2.12**	**146**	*e*Pn	**Pn**	**08 20 00.9**	**+2.6**
KYTH	**Kithira**	**2.12**	**146**	*e*PN	**Pn**	**08 20 00.9**	**+2.6**
KEK	**Kerkira**	**2.16**	**321**	*e*Pn	**Pn**	**08 19 59.9**	**+1.1**
KEK	**Kerkira**	**2.16**	**321**	*e*PN	**Pn**	**08 19 59.9**	**+1.1**
KEK	**Kerkira**	**2.16**	**321**	*e*Pn	**Pn**	**08 19 59.9**	**+1.1**

*IDC **25** 08:23:19.3±1.5, 35°.15N×136°.86E, h270km±37km, mb2.9/4, mb1 3.1/5, mb1mx2.9/26, mbtmp3.0/5, Error ellipse: s-maj=82.8km s-min=12.4km az=64.0*
*ISCJB **25** 08:23:19.4±0.6, 35°.34N±0°.08×137°.31E±0°.07, h298km±4km, mb3.0/4, Error ellipse: s-maj=12.3km s-min=9.6km az=177.6*
*JMA **25** 08:23:20.1±0.2, 35°.29N×137°.27E, h294km±2km, M2.5*

ISC 25 08:23:20.4±0.6, 35°.31N±0°.08×137°.28E±0°.08, h292km±4km, n18, σ0s64/29, mb3.0/4, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAO	**Obara**	**0.05**	**205**	P	**Pn**	**08 23 57.8**	**+0.3**
JAO				S	**S**	**08 24 26.9**	**0.0**
JNY	**Yasuok**	**0.47**	**84**	P	**Pn**	**08 23 58.3**	**+0.3**
JNY				S	**S**	**08 24 27.4**	**-0.4**
JGM	**Miyama**	**0.60**	**310**	P	**Pn**	**08 23 58.5**	**+0.2**
JGM				S	**S**	**08 24 28.2**	**-0.1**
MAT	**Matsushiro**	**1.44**	**31**	P	**Pn**	**08 24 02.8**	**+0.5**
MAT				S	**S**	**08 24 35.6**	**+0.1**
MAT	**Matsushiro**	**1.44**	**31**	P	**Pn**	**08 24 02.7**	**+0.4**
MAT				S	**S**	**08 24 35.7**	**+0.2**
MJAR	**Matsushiro Arr**	**1.44**	**31**	P	**Pn**	**08 24 02.7**	**+0.4**
	3.2nm,0.3s,baz=212,slow=7.8,SNR=23						
MJAR				S	**S**	**08 24 35.0**	**-0.5**
	0.5nm,0.3s,baz=228,slow=22,SNR=11						
JOD2	**Odawara 2**	**1.48**	**91**	P	**Pn**	**08 24 02.8**	**+0.2**
JRY	**Ryogami san**	**1.49**	**61**	P	**Pn**	**08 24 03.2**	**+0.6**
JRY				S	**S**	**08 24 37.1**	**+0.9**
JWT	**Wachi**	**1.54**	**269**	P	**Pn**	**08 24 03.0**	**0.0**
JWT				S	**S**	**08 24 35.6**	**-1.2**
JWY	**Kouya**	**1.77**	**232**	P	**Pn**	**08 24 04.6**	**-0.1**
JYT	**Yasato**	**2.54**	**68**	P	**Pn**	**08 24 10.1**	**-1.0**
JYT				S	**S**	**08 24 47.4**	**-4.0**
JHO	**Hitachi**	**2.96**	**63**	P	**Pn**	**08 24 14.2**	**-1.0**
JHO				S	**S**	**08 24 54.9**	**-3.9**
JHJ	**Hachijo jima 2**	**3.01**	**136**	P	**Pn**	**08 24 16.1**	**+0.4**
	5.3nm,0.3s,baz=252,slow=20,SNR=3.2						
JHJ				S	**S**	**08 25 00.6**	**+0.7**
	3.8nm,0.3s,baz=75,slow=20,SNR=3.3						
JHS	**Saijyo**	**3.43**	**266**	P	**Pn**	**08 24 20.6**	**+0.6**
MKAR	**Makanchi Array**	**42.23**	**303**	P	**P**	**08 30 46.0**	**+0.7**
	0.2nm,0.5s,mb2.6,baz=83,slow=12,SNR=3.0						
KURK	**Kurchatov**	**44.39**	**309**	P	**P**	**08 31 02.8**	**+0.4**
	0.2nm,0.3s,mb2.8,baz=92,slow=7.7,SNR=2.5						
WRA	**Warramunga Arr**	**55.02**	**183**	P	**P**	**08 32 21.1**	**-1.1**
	0.7nm,0.3s,mb3.6,baz=0.3,slow=7.6,SNR=23						
ASAR	**Alice Springs**	**58.74**	**184**	P	**P**	**08 32 47.6**	**-0.5**
	0.2nm,0.3s,mb3.0,baz=0.0,slow=6.5,SNR=6.5						

IDC 25 09:02:51.3±3.2, 4°.04S×153°.46E, h0km, mb3.9/3, mb1 4.2/3, mb1mx3.6/17, mbtmp3.9/3, MS3.2/1, Ms1 3.2/1, ms1mx2.8/21, Error ellipse: s-maj=120.8km s-min=47.4km az=123.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**17.43**	**203**	LR	LR	09 11 55.9	
	comp=Z,81nm,20.5s,baz=65,slow=31						
WRA	**Warramunga Arr**	**24.44**	**228**	P	P	09 08 12.9	+1.0
	2.3nm,0.5s,baz=54,slow=10,SNR=34						
ASAR	**Alice Springs**	**27.15**	**222**	P	P	09 08 36.1	-0.4
	0.5nm,0.6s,baz=54,slow=8.8,SNR=4.6						
FITZ	**Fitzroy Crossi**	**30.60**	**241**	P	P	09 09 07.5	+0.2
	2.9nm,0.5s,baz=68,slow=7.2,SNR=7.9						
TORD	**Torodi Ar. Bea**	**150.68**	**290**	PKPbc	PKPbc	09 22 45.7	-0.9
	0.6nm,1.0s,baz=74,slow=1.8,SNR=2.7						

*NEIC **25** 09:08:24.1, 36°.02N×21°.77E, h5km, MD3.6(ATH), After ATH.*
*ATH **25** 09:08:24.1, 36°.02N×21°.77E, h5km, MD3.6/4*
*ISCJB **25** 09:08:24.7±1.3, 36°.10N±0°.05×21°.88E±0°.09, h0km±5km, Error ellipse: s-maj=14.5km s-min=4.5km az=145.4*
*THE **25** 09:08:27.5, 36°.19N×21°.98E, h6km±2km, ML3.7/1, Error ellipse: s-maj=2.9km s-min=1.0km az=54.0*
*CSEM **25** 09:08:27.1±0.6, 36°.19N×21°.93E, h2km, ML3.7/1, Error ellipse: s-maj=13.5km s-min=5.5km az=54.0*

ISC 25 09:08:25.4±1.3, 36°.10N±0°.06×21°.88E±0°.09, h4km±6km, n54, σ0s86/67, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.80**	**352**	P	**Pg**	**09 08 40.6**	**-0.2**
PYL				S	**Sg**	**09 08 52.7**	**+1.5**
PYL	**PYLOS**	**0.80**	**352**	*e*PB	**Pg**	**09 08 40.9**	**+0.1**
PYL	**PYLOS**	**0.80**	**352**	P	**Pg**	**09 08 40.6**	**-0.2**
PYL	**PYLOS**	**0.80**	**352**	*e*Pb	**Pg**	**09 08 40.9**	**+0.1**
PYL				S	**Sg**	**09 08 52.7**	**+1.5**
KYTH	**Kithira**	**0.95**	**79**	*e*Pb	**Pg**	**09 08 44.9**	**+1.2**
KYTH	**Kithira**	**0.95**	**79**	*e*PB	**Pg**	**09 08 44.9**	**+1.2**
KYTH	**Kithira**	**0.95**	**79**	*e*Pb	**Pg**	**09 08 44.9**	**+1.2**
VLI	**Veliai**	**1.05**	**54**	*e*Pg	**Pg**	**09 08 46.2**	**+0.6**
VLI	**Veliai**	**1.05**	**54**	*e*PG	**Pg**	**09 08 46.2**	**+0.6**
VLI	**Veliai**	**1.05**	**54**	*e*Pg	**Pg**	**09 08 46.2**	**+0.6**
ITM	**Ithomi**	**1.08**	**2**	*e*Pb	**Pg**	**09 08 46.2**	**+0.1**
ITM				*e*Sb	**Sn**	**09 09 02.7**	**0.0**
ITM	**Ithomi**	**1.08**	**2**	P	**Pg**	**09 08 45.8**	**-0.3**
ITM				S	**Sg**	**09 09 00.2**	**+0.1**
ITM	**Ithomi**	**1.08**	**2**	*e*PB	**Pg**	**09 08 46.2**	**+0.1**
ITM				*e*SB	**Sn**	**09 09 02.7**	**0.0**
ITM	**Ithomi**	**1.08**	**2**	P	**Pg**	**09 08 45.8**	**-0.3**
ITM	**Ithomi**	**1.08**	**2**	*e*Pb	**Pg**	**09 08 46.2**	**+0.1**
ITM				S	**Sg**	**09 09 00.2**	**+0.1**
ITM				*e*Sb	**Sn**	**09 09 02.7**	**0.0**
VLX	**Vlachokerasia**	**1.33**	**17**	P	**Pn**	**09 08 50.1**	**-0.6**
VLX				S	**Sn**	**09 09 08.1**	**-0.8**
VLX	**Vlachokerasia**	**1.33**	**17**	*e*PG	**Pg**	**09 08 50.8**	**-0.1**
VLX	**Vlachokerasia**	**1.33**	**17**	P	**Pn**	**09 08 50.1**	**-0.6**
VLX	**Vlachokerasia**	**1.33**	**17**	*e*Pg	**Pg**	**09 08 50.8**	**-0.1**
VLX				S	**Sn**	**09 09 08.1**	**-0.8**
KARN	**Karanos**	**1.80**	**112**	P	**Pb**	**09 08 58.5**	**-0.4**
KARN				S	**Sn**	**09 09 20.8**	**+0.4**
KARN	**Karanos**	**1.80**	**112**	*e*PG	**Pg**	**09 08 58.9**	**-0.9**
KARN	**Karanos**	**1.80**	**112**	P	**Pb**	**09 08 58.5**	**-0.4**
KARN	**Karanos**	**1.80**	**112**	*e*Pg	**Pg**	**09 08 58.9**	**-0.9**
KARN				S	**Sn**	**09 09 20.8**	**+0.4**
GUR	**Goura**	**1.87**	**11**	P	**Pb**	**09 09 00.1**	**0.0**
GUR	**Goura**	**1.87**	**11**	*e*PG	**Pb**	**09 09 00.3**	**+0.2**
GUR	**Goura**	**1.87**	**11**	*e*Pg	**Pb**	**09 09 00.3**	**+0.2**
VAM	**Vamos**	**2.01**	**109**	*e*Pg	**Pb**	**09 09 02.7**	**+0.2**
VAM	**Vamos**	**2.01**	**109**	*e*PG	**Pb**	**09 09 02.7**	**+0.2**
VAM	**Vamos**	**2.01**	**109**	*e*Pg	**Pb**	**09 09 02.7**	**+0.2**
LTK	**Loutraki**	**2.11**	**24**	*e*PG	**Pb**	**09 09 05.2**	**+1.1**
LTK	**Loutraki**	**2.11**	**24**	*e*Pg	**Pb**	**09 09 05.2**	**+1.1**
LAKA	**Lakka**	**2.14**	**2**	P	**Pb**	**09 09 03.6**	**-1.1**
LAKA	**Lakka**	**2.14**	**2**	P	**Pb**	**09 09 03.6**	**-1.1**
KFL	**Anninata**	**2.19**	**337**	P	**Pn**	**09 09 03.3**	**+0.8**
TRIZ	**Trizonia**	**2.27**	**4**	P	**Pb**	**09 09 06.1**	**-0.8**
TRIZ	**Trizonia**	**2.27**	**4**	P	**Pb**	**09 09 06.1**	**-0.8**
KALE	**Kalithea**	**2.30**	**5**	P	**Pb**	**09 09 06.2**	**-1.2**
KALE	**Kalithea**	**2.30**	**5**	P	**Pb**	**09 09 06.2**	**-1.2**
VLS	**Valsamata**	**2.31**	**334**	*e*Pb	**Pn**	**09 09 05.1**	**+0.8**
VLS	**Valsamata**	**2.31**	**334**	P	**Pn**	**09 09 05.1**	**+0.8**
VLS				S	**Sn**	**09 09 33.8**	**+0.6**
VLS	**Valsamata**	**2.31**	**334**	*e*PB	**Pn**	**09 09 05.1**	**+0.8**
VLS	**Valsamata**	**2.31**	**334**	P	**Pn**	**09 09 05.1**	**+0.8**
VLS				S	**Sn**	**09 09 33.8**	**+0.6**
EFP	**Efpalio**	**2.32**	**1**	P	**Pb**	**09 09 07.6**	**-0.2**
EFP	**Efpalio**	**2.32**	**1**	*e*PG	**Pg**	**09 09 09.1**	**-0.8**
EFP	**Efpalio**	**2.32**	**1**	*e*Pg	**Pg**	**09 09 09.1**	**-0.8**
IDI	**Anoyia**	**2.58**	**107**	*e*Pn	**Pb**	**09 09 11.0**	**-1.2**
IDI	**Anoyia**	**2.58**	**107**	*e*PN	**Pb**	**09 09 11.0**	**-1.2**
IDI	**Anoyia**	**2.58**	**107**	*e*Pn	**Pb**	**09 09 11.0**	**-1.2**
EVR	**Evrytania**	**2.81**	**359**	*e*Pn	**Pb**	**09 09 14.8**	**-1.4**
EVR	**Evrytania**	**2.81**	**359**	*e*PN	**Pb**	**09 09 14.8**	**-1.4**
EVR	**Evrytania**	**2.81**	**359**	*e*Pn	**Pb**	**09 09 14.8**	**-1.4**
ZKR	**Zakros**	**3.67**	**104**	*e*Pn	**Pn**	**09 09 24.9**	**+2.0**
ZKR	**Zakros**	**3.67**	**104**	*e*PN	**Pn**	**09 09 24.9**	**+2.0**
ZKR	**Zakros**	**3.67**	**104**	*e*Pn	**Pn**	**09 09 24.9**	**+2.0**

GUC 25 09:10:38.7±0.6, 22°.74S×67°.36W, h240km, ML3.5, 2C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**2.02**	**283**	⇑*i*P	Pn	09 11 28.5	+8.0
PB04				*e*S	S	09 12 06.4	+13
PB04				AML	AML	09 12 10.8	
	comp=N,47nm,0.2s						
PB01	**Plate Boundary**	**2.60**	**310**	*e*P	Pn	09 11 28.4	+2.1
PB01				*e*S	S	09 12 05.8	+2.0
PB01				AML	AML	09 12 11.3	
	comp=N,42nm,0.2s						
CEN1	**Los Morros**	**2.69**	**256**	⇑*i*P	Pn	09 11 31.4	+4.2
CEN1				*i*S	S	09 12 10.7	+5.3
HMBC	**Humberston**	**3.40**	**316**	*e*P	Pn	09 11 37.3	+2.2
HMBC				*e*S	S	09 12 22.5	+2.9
HMBC				AML	AML	09 12 26.1	
	comp=E,37nm,0.5s						
MNMC	**Miæe Miæ**	**4.16**	**329**	*e*P	Pn	09 11 46.9	+3.0
MNMC				*e*S	S	09 12 39.4	+3.7
MNMC				AML	AML	09 12 42.5	
	comp=E,32nm,0.5s						

MEX 25 09:29:32.0±0.7, 16°.36N×99°.37W, h16km±6km, MD4.1, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.73**	**314**	*i*P	Pg	09 29 43.3	-2.9
ACX				*i*S	Sg	09 29 51.7	-4.1
CAIG	**El Cayaco**	**1.10**	**309**	*i*P	Pb	09 29 49.4	-3.2
CAIG				*i*S	Sb	09 30 02.0	-4.7
PNIG	**Pinotepa**	**1.20**	**88**	*i*P	Pn	09 29 50.5	-3.6
PNIG				*i*S	Sb	09 30 04.0	-5.6
MEIG	**Mezcala**	**1.57**	**351**	*i*P	Pn	09 29 55.3	-4.0
MEIG				*i*S	Sn	09 30 14.4	-4.9
PLIG	**Platanillo**	**2.02**	**356**	*i*P	Pn	09 30 03.0	-2.5
PLIG				*i*S	Sn	09 30 26.3	-4.2
UTMO	**Huajuapan**	**2.10**	**46**	*i*P	Pn	09 30 03.2	-3.2
UTMO				*i*S	Sn	09 30 27.7	-4.5
ZIIG	**Zihuatanejo**	**2.35**	**302**	*i*P	Pn	09 30 07.3	-2.7
ZIIG				*i*S	Sn	09 30 34.9	-3.7
YAIG	**Yautepec**	**2.50**	**7**	*e*P	Pn	09 30 09.1	-3.0
YAIG				*i*S	Sn	09 30 38.6	-3.8
VHO	**Vista Hermosa**	**2.63**	**74**	*i*P	Pn	09 30 11.1	-2.7
VHO				*i*S	Sn	09 30 41.8	-3.5
OXX	**Oaxaca**	**2.64**	**74**	*i*P	Pn	09 30 11.4	-2.5
OXX				*i*S	Sn	09 30 42.3	-3.3
PPM	**Popocatepetl**	**2.78**	**15**	*e*P	Pn	09 30 13.6	-2.3
PPM				*i*S	Sn	09 30 46.0	-3.2
TPIG	**Tehuac#an**	**2.81**	**43**	*i*P	Pn	09 30 14.1	-2.2
TPIG				*i*S	Sn	09 30 46.2	-3.6
MZVM		**2.82**	**3**	*i*P	Pn	09 30 13.6	-2.8
MZVM				*i*S	Sn	09 30 46.7	-3.4
UNM	**Universidad Na**	**2.96**	**4**	*i*P	Pn	09 30 16.1	-2.3
UNM				*i*S	Sn	09 30 49.4	-4.1
PBVM	**Pinon**	**3.08**	**5**	*e*P	Pn	09 30 17.7	-2.2
PBVM				*i*S	Sn	09 30 52.9	-3.5
HUIG	**Huatulco**	**3.19**	**100**	*i*P	Pn	09 30 19.2	-2.4
HUIG				*i*S	Sn	09 30 56.0	-3.3
PTVM	**Pico Tres Padr**	**3.23**	**4**	*e*P	Pn	09 30 20.6	-1.4
PTVM				*i*S	Sn	09 30 57.5	-2.6
IIO	**Organos**	**3.27**	**11**	*i*P	Pn	09 30 20.8	-1.8
IIO				*i*S	Sn	09 30 58.0	-3.3
MOIG	**Morelia**	**3.73**	**333**	*e*P	Pn	09 30 29.5	+0.6
MOIG				*i*S	Sn	09 31 12.8	+0.3
DEIG	**Demacu**	**3.93**	**5**	*e*P	Pn	09 30 27.8	-4.0
DEIG				*i*S	Sn	09 31 16.5	-1.1
CMIG	**Matias Romero**	**4.36**	**80**	*e*P	Pn	09 30 37.8	+0.1
CMIG				*i*S	Sn	09 31 30.4	+2.2
SFJM	**Santa Fe**	**5.38**	**320**	*e*P	Pn	09 30 41.3	-10
SFJM				*i*S	Sn	09 31 51.4	-2.0

*IDC **25** 09:33:40.6±0.9, 32°.86N×95°.19E, h0km, mb3.7/7, mb1 3.9/9, mb1mx3.7/25, mbtmp3.7/9, ML3.1/1, MS3.4/4, Ms1 3.4/4, ms1mx2.8/36, Error ellipse: s-maj=44.5km s-min=18.6km az=60.0*
*NEIC **25** 09:33:42.4±0.7, 32°.94N×95°.37E, h10km, mb4.1/3, Error ellipse: s-maj=14.3km s-min=12.0km az=223.0*
*BJI **25** 09:33:43.5, 32°.91N×95°.26E, h13km, mb4.3/2, ML3.3/3, Ms3.6/3, Ms7 3.6/2*

ISC 25 09:33:43.3±3.2, 32°.88N±0°.08×95°.3E±0°.1, h15km±21km, n19, σ0s90/17, mb3.7/8, MS4.0/2, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**4.73**	**229**	Pn	**Pn**	**09 35 00.0**	**+5.9**
LSA				Sg	**Sg**	**09 36 14.8**	**-0.5**
LSA				smax			
	comp=N,20nm,1.0s						
LSA				smax			
	comp=E,60nm,1.0s						
GTA	**Gaotai**	**7.49**	**28**	*e*Pn	**Pn**	**09 35 37.3**	**+5.4**
LZH	**Lanzhou**	**7.78**	**63**	*e*Pn	**Pn**	**09 35 39.5**	**+3.5**
MKAR	**Makanchi Array**	**17.06**	**328**	P	**Pn**	**09 37 40.5**	**-0.6**
	baz=121,slow=14,SNR=6.1						
SONM	**Songino Array**	**17.15**	**26**	P	**Pn**	**09 37 41.7**	**-0.7**
	comp=E,0.1nm,0.3s,baz=212,slow=12,SNR=12						
SONM				LR	LR	09 45 06.9	
	comp=E,31nm,20.4s,baz=18,slow=40						
NIL	**Nilore**	**18.41**	**278**	*e*Pn	**Pn**	**09 38 00.4**	**+2.3**
	comp=E,12nm,0.5s						
UCH	**Uchtor**	**18.86**	**306**	*e*P	**Pn**	**09 38 08.6**	**+5.1**
	comp=E,1.9nm,0.7s						
AAK	**Ala-Archa**	**19.04**	**307**	LR	LR	09 46 44.6	
	comp=E,51nm,21.0s,baz=25,slow=41						
KURK	**Kurchatov**	**21.62**	**330**	P	**P**	**09 38 32.7**	**0.0**
	comp=E,7.3nm,0.8s,mb4.2,baz=138,slow=11,SNR=23						
KURK	**Kurchatov**	**21.62**	**330**	P	**P**	**09 38 32.7**	**0.0**
KBL	**Kabul**	**21.85**	**282**	*e*P	**P**	**09 38 36.3**	**+1.0**
	comp=E,9.0nm,0.8s,mb4.2						
ZALV	**Zalesovo Beam**	**22.33**	**344**	P	**P**	**09 38 40.1**	**-0.1**
	comp=E,1.8nm,0.8s,mb3.6,baz=153,slow=10.0,SNR=6.7						
EIL	**Elat**	**51.03**	**283**	LR	LR	10 05 19.0	
	comp=E,127nm,19.4s,MS4.0,baz=100,slow=37						
NOA	**NORSAR Array B**	**59.03**	**326**	P	**P**	**09 43 41.9**	**-0.3**
	comp=E,0.6nm,0.7s,mb3.7,baz=76,slow=6.9,SNR=2.7						
WRA	**Warramunga Arr**	**64.45**	**139**	P	**P**	**09 44 19.2**	**-0.1**
	comp=E,0.2nm,0.4s,mb3.5,baz=315,slow=11,SNR=7.5						
ASAR	**Alice Springs**	**67.24**	**142**	P	**P**	**09 44 37.4**	**+0.2**
	comp=E,0.4nm,0.6s,mb3.6,baz=324,slow=6.4,SNR=6.7						
YKA	**Yellowknife Ar**	**81.97**	**14**	P	**P**	**09 46 01.7**	**-0.5**
	comp=E,0.1nm,0.5s,mb3.0,baz=333,slow=5.7,SNR=3.9						
TORD	**Torodi Ar. Bea**	**85.91**	**283**	P	**P**	**09 46 22.1**	**-1.1**
	comp=E,0.4nm,0.8s,mb3.7,baz=42,slow=5.0,SNR=2.5						
DBIC	**Dimbokro**	**94.84**	**281**	LR	LR	10 32 42.2	
	comp=E,52nm,18.1s,MS4.0,baz=298,slow=37						

*ISCJB **25** 09:39:29.6±0.4, 55°.29N±0°.03×110°.50E±0°.04, h10km, Error ellipse: s-maj=4.5km s-min=2.4km az=137.6*
*MOS **25** 09:39:32.1±1.2, 55°.47N×110°.42E, h6km, mb4.4/1, Error ellipse: s-maj=16.2km s-min=10.0km az=60.6*
*BYKL **25** 09:39:33.0±0.3, 55°.44N×110°.42E*
*IDC **25** 09:39:36.5±8.4, 55°.33N×109°.99E, h0km, mb1 3.3/4, mb1mx3.1/28, mbtmp3.3/4, ML3.1/2, Error ellipse: s-maj=110.1km s-min=32.1km az=76.0*

ISC 25 09:39:32.1±0.3, 55°.38N±0°.02×110°.46E±0°.04, h10km, n35, σ1s57/69, 6C-5D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YLYR	**Ulyunkhan**	**0.65**	**141**	⇓*i*Pg	**Pg**	**09 39 45.3**	**+0.7**
	130nm,0.4s						
YLYR				⇑*i*Pg	**Pg**	**09 39 45.3**	**+0.7**
	103nm,0.4s						
YLYR				⇑*i*Pg	**Pg**	**09 39 45.3**	**+0.7**
	155nm,0.4s						
YLYR				*e*Sg	**Sg**	**09 39 54.6**	**+1.5**
YLYR				Pmax			
	195nm,0.7s						
YLYR				Smax			
	390nm,0.4s						
NIZ	**Nizh Angarsk**	**0.65**	**307**	⇑*i*Pg	**Pg**	**09 39 44.0**	**-0.7**
NIZ				*e*Sg	**Sg**	**09 39 52.7**	**-0.6**
NIZ				Pmax			
	72nm,0.3s						
NIZ				Smax			
	532nm,0.2s						

KMO	**Kumora**	**0.66**	**39**	*e*PG	**Pg**	**09 39 44.1**	**-0.7**
KMO				*e*		09 39 51.8	
KMO				pmax	pmax		
	comp=Z,238nm,0.3s						
KMO				smax			
	comp=N,1μm,0.9s						
KMO	**Kumora**	**0.66**	**39**	⇓⇓*i*Pg	**Pg**	**09 39 44.2**	**-0.6**
	comp=N,10.0nm,0.3s						
KMO				⇓⇓*i*Pg	**Pg**	**09 39 44.2**	**-0.6**
	comp=N,24nm,0.3s						
KMO				⇓⇓*i*Pg	**Pg**	**09 39 44.2**	**-0.6**
	comp=N,195nm,0.3s						
KMO				*e*Sg	**Sg**	**09 39 52.5**	**-0.9**
KMO				Pmax			
	comp=N,241nm,0.3s						
KMO				Smax			
	comp=N,1μm,0.9s						
YOA	**Uoyan**	**1.04**	**43**	⇑*i*PG	**Pg**	**09 39 51.8**	**-0.2**
YOA				*i*		09 40 05.6	
YOA				pmax	pmax		
	comp=Z,216nm,0.3s						
YOA				smax			
	comp=N,1μm,0.4s						
YOA	**Uoyan**	**1.04**	**43**	*e*Pg	**Pg**	**09 39 51.7**	**-0.3**
YOA				*e*Sg	**Sg**	**09 40 05.1**	**-0.4**
YOA				Pmax			
	comp=N,192nm,0.4s						
YOA				Smax			
	comp=N,1μm,0.8s						
SYVR	**Suvo**	**1.75**	**189**	*e*PN	**Pn**	**09 40 05.0**	**+2.6**
SYVR				*e*		09 40 29.6	
SYVR				pmax	pmax		
	comp=Z,76nm,0.4s						
SYVR				smax			
	comp=N,425nm,1.1s						
SYVR	**Suvo**	**1.75**	**189**	*e*Pg	**Pg**	**09 40 05.2**	**-0.4**
SYVR				*i* Sg	**Sg**	**09 40 29.4**	**+1.2**
SYVR				Pmax			
	comp=N,75nm,0.4s						
SYVR				Smax			
	comp=N,418nm,1.3s						
SVKR	**Severomuysk**	**1.90**	**66**	*e*PN	**Pn**	**09 40 07.3**	**+2.8**
SVKR				*e*		09 40 32.7	
SVKR				pmax	pmax		
	comp=Z,257nm,1.0s						
SVKR				smax			
	comp=E,871nm,1.5s						
SVKR	**Severomuysk**	**1.90**	**66**	*e*Pg	**Pg**	**09 40 07.7**	**-0.8**
SVKR				*e*Sg	**Sg**	**09 40 33.4**	**+0.3**
SVKR				Pmax			
	comp=E,319nm,0.3s						
SVKR				Smax			
	comp=E,869nm,1.2s						
OGRR	**Ongureny**	**2.41**	**225**	*e*PN	**Pn**	**09 40 15.5**	**+4.0**
OGRR				*e*		09 40 48.6	
OGRR				pmax	pmax		
	comp=Z,30nm,0.5s						
OGRR				smax			
	comp=E,169nm,0.5s						
OGRR	**Ongureny**	**2.41**	**225**	*e*Pn	**Pn**	**09 40 14.0**	**+2.5**
OGRR				*e*Pg	**Pg**	**09 40 16.6**	**-1.7**
OGRR				*e*		09 40 18.3	
OGRR				*e*Sg	**Sg**	**09 40 48.3**	**-1.2**
OGRR				max			
	comp=E,29nm,0.3s						
OGRR				Smax			
	comp=E,170nm,0.4s						
NLYR	**Nelyaty**	**3.15**	**67**	*e*PN	**Pn**	**09 40 23.6**	**+1.9**
NLYR				*e*		09 40 29.3	
NLYR				*e*S	**Sn**	**09 40 58.3**	**-1.0**
NLYR				*e*		09 41 09.9	
NLYR				pmax	pmax		
	comp=Z,50nm,0.9s						
NLYR				smax			
	comp=N,226nm,0.9s						
NLYR	**Nelyaty**	**3.15**	**67**	⇑*i*Pn	**Pn**	**09 40 23.8**	**+2.1**
NLYR				⇑*i*Pg	**Pg**	**09 40 29.5**	**-2.9**
NLYR				*e*		09 41 00.5	
NLYR				*e*Sg	**Sg**	**09 41 11.1**	**-2.1**
NLYR				Pmax			
	comp=N,51nm,0.7s						
NLYR				Smax			
	comp=N,225nm,0.7s						
TRG	**Tyrgan**	**3.57**	**224**	*e*Pn	**Pn**	**09 40 31.4**	**+3.9**
TRG				*e*Pg	**Pg**	**09 40 38.4**	**-2.1**
TRG				*e*Sn	**Sn**	**09 41 12.6**	**+2.9**
TRG				*e*Sg	**Sg**	**09 41 25.5**	**-1.2**
TRG				Pmax			
	comp=N,10.0nm,0.2s						
TRG				Smax			
	comp=N,73nm,0.8s						
CIT	**Chita**	**3.84**	**150**	*e*Sg	**Sg**	**09 41 32.4**	**-2.8**
CIT				Smax			
	comp=N,135nm,0.2s						
UUDB	**Ulan-Yde**	**3.90**	**206**	*e*	**Pg**	**09 40 44.8**	**-1.8**
UUDB				*e*Sg	**Sg**	**09 41 36.1**	**-1.0**
UUDB				Smax			
	comp=N,75nm,1.2s						
FFNB	**Fofonovo**	**4.00**	**215**	*e*Sg	**Sg**	**09 41 39.9**	**-0.4**
FFNB				Smax			
	comp=N,111nm,0.8s						
HRMR	**Khuramsha**	**4.30**	**211**	*e*	**Pn**	**09 40 42.2**	**+4.7**
HRMR				*e*Pg	**Pg**	**09 40 50.8**	**-3.7**
HRMR				*e*Sg	**Sg**	**09 41 47.5**	**-2.

MOY Smax
comp=E,50nm,1.8s
ORL Orlik 6.90 250 *e*PN **Pn 09 41 17.0 +3.9**
ORL *e* 09 41 38.2
ORL *e* 09 43 06.2
ORL pmax pmax
comp=Z,5.0nm,0.8s
ORL smax
comp=N,38nm,1.0s
ORL Orlik 6.90 250 *e*Pn **Pn 09 41 14.7 +1.6**
ORL *e*Sn **Sn 09 42 32.5 +0.9**
ORL *e*Sg **Sg 09 43 05.6 -7.7**
ORL max
comp=N,6.0nm,1.0s
ORL Smax
comp=N,64nm,1.0s
SONM Songino Array 7.97 200 Pn **Pn 09 41 31.5 +3.6**
comp=N,0.2nm,0.3s,baz=17,slow=15,SNR=5.1
SONM Pg Pn 09 41 58.3 +30
comp=N,0.2nm,0.3s,baz=18,slow=17,SNR=3.7
SONM Lg 09 43 46.9
comp=N,0.6nm,0.3s,baz=9.3,slow=26,SNR=17
SONM Songino Array 7.97 200 PN **Pn 09 41 31.5 +3.7**
SONM 09 41 58.3
ZALV Zalesovo Beam 14.88 275 Pn **Pn 09 43 04.1 +1.9**
comp=N,0.1nm,0.3s,baz=72,slow=9.5,SNR=4.9
MKAR Makanchi Array 19.56 256 P **Pn 09 44 02.2 +1.2**
comp=N,0.1nm,0.3s,baz=64,slow=13,SNR=2.7
KURK Kurchatov 19.60 269 P **Pn 09 44 04.8 +3.4**
comp=N,0.1nm,0.3s,baz=66,slow=12,SNR=5.6

*ISCJB **25** 09:42:41.8±0.6, 49°.02N±0°.08×153°.1E±0°.1, h164km±6km, mb3.8/15, Error ellipse: s-maj=16.2km s-min=6.6km az=141.6*
*NEIC **25** 09:42:42.8±0.8, 48°.91N×153°.09E, h162km±7km, mb4.2/5, Error ellipse: s-maj=11.9km s-min=5.8km az=146.0*
*MOS **25** 09:42:42.3±1.0, 49°.10N×152°.93E, h105km, mb4.3/4, Error ellipse: s-maj=19.4km s-min=9.9km az=55.4*
*BJI **25** 09:42:43.8, 48°.90N×153°.10E, h162km, mB4.6/4, mb4.6/5*
*IDC **25** 09:42:43.6±2.0, 48°.89N×153°.16E, h167km±19km, mb3.4/11, mb1 3.8/15, mb1mx3.6/27, mbtmp3.6/15, Error ellipse: s-maj=21.3km s-min=10.6km az=151.0*
ISC 25 09:42:42.9±0.6, 49°.01N±0°.08×153°.1E±0°.1, h157km±6km, n37, σ0.97/42, mb3.8/15, 1C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.60**	**49**	*e*PN	**Pn**	**09 43 24.5**	**-0.9**
SKR				*e*S	**Sn**	**09 43 57.5**	**-0.8**
SKR				pmax	pmax		
	comp=N,50nm,0.6s						
SKR				pmax	pmax		
	comp=Z,110nm,0.6s						
SKR				pmax	pmax		
	comp=E,100nm,0.9s						
SKR				pmax	pmax		
	comp=Z,1μm,2.0s						
SKR				smax			
	comp=N,310nm,0.3s						
SKR				smax			
	comp=E,460nm,0.3s						
PEA0B	**Petropavlovsk-**	**5.04**	**34**	*e*Pn	**Pn**	**09 43 57.8**	**+1.0**
PETK	**Petropavlovsk-**	**5.04**	**34**	P	**Pn**	**09 43 57.5**	**+0.8**
	comp=E,3.8nm,0.3s,baz=203,slow=12,SNR=66						
PET	**Petropavlovsk**	**5.35**	**39**	*e*PN	**Pn**	**09 44 02.3**	**+1.4**
PET				*e*S	**Sn**	**09 45 00.8**	**-1.1**
PET				pmax	pmax		
	comp=Z,16nm,0.7s						
PET				smax			
	comp=N,86nm,0.4s						
ASAJ	**Asahikawa**	**8.71**	**240**	P	**Pn**	**09 44 47.5**	**+2.0**
	comp=N,5.8nm,0.3s,baz=68,slow=12,SNR=60						
ASAJ	**Asahikawa**	**8.71**	**240**	P	**Pn**	**09 44 47.5**	**+2.0**
ASAJ				pmax	pmax		
	comp=Z,6.0nm,0.3s						
ERM	**Erimo**	**9.85**	**228**	*e*P	**Pn**	**09 44 59.7**	**-1.0**
ERM	**Erimo**	**9.85**	**228**	*e*Pn	**Pn**	**09 44 59.7**	**-1.0**
ERM				*e*Sn	**Sn**	**09 46 40.2**	**-10**
FX1	**Attu Island--F**	**13.25**	**65**	P	**Pn**	**09 45 45.0**	**+0.2**
	comp=Z,3.4nm,0.3s,baz=107,slow=22,SNR=20						
FX1				S	**Sn**	**09 48 00.3**	**-11**
	comp=Z,10nm,0.3s,baz=339,slow=22,SNR=13						
FX1	**Attu Island--F**	**13.25**	**65**	P	**Pn**	**09 45 45.0**	**+0.2**
FX1				S	**Sn**	**09 48 00.3**	**-11**
MAJO	**Matsushiro**	**16.52**	**227**	*e*P	**Pn**	**09 46 24.7**	**-0.7**
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MAJO	**Matsushiro**	**16.52**	**227**	*e*P	**Pn**	**09 46 24.7**	**-0.7**
	comp=Z,5.8nm,0.5s						
MJAR	**Matsushiro Arr**	**16.52**	**227**	P	**Pn**	**09 46 24.2**	**-1.1**
	comp=Z,0.8nm,0.3s,baz=33,slow=10,SNR=11						
MDJ	**Mudanjiang**	**16.62**	**264**	*e*P	**Pn**	**09 46 26.9**	**+0.3**
	comp=Z,5.7nm,0.5s						
KSRS	**Korea Array**	**21.54**	**247**	P	**P**	**09 47 20.8**	**+1.3**
	comp=Z,5.7nm,0.8s,mb4.0,baz=48,slow=10,SNR=23						
KSRS	**Korea Array**	**21.54**	**247**	*e*P	**P**	**09 47 20.7**	**+1.2**
KSRS				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.1						
SONM	**Songino Array**	**30.61**	**286**	P	**P**	**09 48 41.2**	**-0.5**
	comp=Z,0.5nm,0.6s,mb3.4,baz=60,slow=8.5,SNR=3.9						
MK31	**Makanchi Array**	**45.90**	**295**	*e*P	**P**	**09 50 49.2**	**-0.1**
MKAR	**Makanchi Array**	**45.90**	**295**	P	**P**	**09 50 49.5**	**+0.3**
	comp=Z,1.1nm,0.7s,mb3.6,baz=61,slow=12,SNR=12						
MKAR				PcP	PcP	09 52 24.5	+1.0
	comp=Z,0.3nm,0.4s,baz=68,slow=4.7,SNR=4.4						
MKAR	**Makanchi Array**	**45.90**	**295**	P	**P**	**09 50 49.5**	**+0.3**
MKAR				PcP	PcP	09 52 24.5	+1.0
KURK	**Kurchatov**	**46.10**	**302**	*e*P	**P**	**09 50 49.7**	**-1.1**
	comp=Z,9.2nm,1.0s,mb4.4						
YKA	**Yellowknife Ar**	**49.15**	**38**	P	**P**	**09 51 14.3**	**+0.3**
	comp=Z,0.9nm,0.7s,mb3.5,baz=299,slow=6.9,SNR=5.0						
BRVK	**Borovoye**	**49.45**	**308**	P	**P**	**09 51 16.8**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.4						
BRVK	**Borovoye**	**49.45**	**308**	P	**P**	**09 51 16.8**	**+0.3**
	comp=Z,6.8nm,0.7s,mb4.4						
CMAR	**Chiang Mai Arr**	**52.90**	**255**	P	**P**	**09 51 44.0**	**+1.4**
	comp=Z,2.9nm,0.7s,mb4.1,baz=36,slow=6.6,SNR=11						
ARU	**Arti**	**53.33**	**316**	*c i*P	**P**	**09 51 44.0**	**-1.3**
ARU						09 53 44.7	
ARU				S	**S**	**09 59 03.8**	**-0.6**
ARU				SS	SS	10 02 43.1	-2.5
ARU				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
SLMT	**Seeley Lake**	**58.41**	**53**	*e*P	**P**	**09 52 21.1**	**-0.4**
	comp=Z,2.1nm,0.6s,mb4.1						
NVAR	**Mina Array Bea**	**61.44**	**63**	P	**P**	**09 52 42.8**	**+0.5**
	comp=Z,0.9nm,0.5s,mb3.8,baz=300,slow=7.4,SNR=11						
FINES	**FINESS Array B**	**61.98**	**334**	P	**P**	**09 52 45.3**	**-0.3**
	comp=Z,1.0nm,0.5s,mb3.9,baz=34,slow=10,SNR=5.2						
PDAR	**Pinedale Array**	**63.46**	**55**	P	**P**	**09 52 56.1**	**+0.5**
	comp=Z,0.9nm,0.7s,mb3.7,baz=314,slow=1.6,SNR=9.1						
ISCO	**Idaho Springs**	**67.66**	**55**	*e*P	**P**	**09 53 23.7**	**+1.1**
WRA	**Warramunga Arr**	**70.64**	**199**	P	**P**	**09 53 38.3**	**-2.8**
	comp=Z,0.4nm,0.9s,mb3.1,baz=16,slow=6.2,SNR=5.8						
ASAR	**Alice Springs**	**74.34**	**198**	P	**P**	**09 54 01.9**	**-1.0**
	comp=Z,0.2nm,0.3s,mb3.3,baz=17,slow=6.1,SNR=4.8						
ASAR	**Alice Springs**	**74.34**	**198**	*e*P	**P**	**09 54 04.7**	**+1.8**
TXAR	**Lajitas Array**	**76.42**	**61**	P	**P**	**09 54 14.8**	**-0.1**
	comp=Z,1.7nm,0.5s,mb3.9,baz=300,slow=4.5,SNR=31						
TXAR	**Lajitas Array**	**76.42**	**61**	P	**P**	**09 54 14.8**	**-0.1**
PLCA	**Paso Flores**	**148.38**	**92**	PKPbc	PKPbc	10 02 08.7	-1.3
	comp=Z,0.7nm,0.5s,baz=240,slow=18,SNR=4.9						

IDC 25 09:49:41.3±1.1, 51°.74N×75°.65E, h0km, mb1 2.5/4, mb1mx2.5/28, mbtmp2.5/4, ML2.4/3, Error ellipse: s-maj=27.4km s-min=8.8km az=27.0, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURK	**Kurchatov**	**2.13**	**118**	Pn	Pn	09 50 18.4	+0.3
	0.4nm,0.3s,baz=304,slow=18,SNR=14						
KURK				Lg		09 50 49.0	
	0.4nm,0.3s,baz=302,slow=32,SNR=9.7						
BVAR	**Borovoye Array**	**3.47**	**294**	Pn	Pn	09 50 35.8	-0.8
	0.2nm,0.3s,baz=112,slow=15,SNR=3.4						
BVAR				Sn	Sn	09 51 19.2	+0.9
	0.6nm,0.3s,baz=116,slow=29,SNR=4.5						
BVAR				Lg		09 51 30.2	
	1.0nm,0.3s,baz=110,slow=26,SNR=6.8						
ZALV	**Zalesovo Beam**	**5.98**	**65**	Pn	Pn	09 51 10.0	-1.0
	0.3nm,0.3s,baz=248,slow=16,SNR=4.1						
MKAR	**Makanchi Array**	**6.58**	**136**	Pn	Pn	09 51 18.0	-1.2
	0.0nm,0.3s,baz=327,slow=15,SNR=3.1						
MKAR				Lg		09 53 04.7	
	0.1nm,0.3s,baz=322,slow=31,SNR=3.5						
AAK	**Ala-Archa**	**9.14**	**185**	Lg		09 54 24.8	
	0.0nm,0.3s,baz=191,slow=10,SNR=3.8						

*ISCJB **25** 09:56:20.4±0.3, 33°.61N±0°.03×48°.60E±0°.02, h10km, mb4.1/20, MS3.2/8, Error ellipse: s-maj=4.6km s-min=2.9km az=8.7*
*THR **25** 09:56:20.6±1.8, 33°.67N×48°.59E, h14km±13km, ML4.1*
*NEIC **25** 09:56:20.3, 33°.70N×48°.57E, h14km, mb4.6/6, ML4.1(THR), MN4.2(TEH), After THR.*
*CSEM **25** 09:56:22.0±0.2, 33°.65N×48°.60E, h10km, mb4.4/7, Error ellipse: s-maj=7.3km s-min=5.0km az=21.0*
*IDC **25** 09:56:22.6±1.3, 33°.87N×48°.36E, h0km, mb4.0/13, mb1 4.2/18, mb1mx4.0/30, mbtmp4.1/18, ML4.1/5, MS3.2/10, Ms1 3.3/10, ms1mx3.1/30, Error ellipse: s-maj=29.8km s-min=14.6km az=160.0*
*MOS **25** 09:56:24.4±1.2, 33°.75N×48°.33E, h33km, mb4.5/6, Error ellipse: s-maj=14.9km s-min=10.7km az=116.1*
*TEH **25** 09:56:24.8, 33°.85N×48°.71E, h10km*
*OMAN **25** 09:58:24.6±99.0, 26°.58N×55°.11E, h10km, Error ellipse: s-maj=85.6km s-min=12.5km az=321.0*
ISC 25 09:56:22.7±0.2, 33°.74N±0°.03×48°.65E±0°.03, h10km, n154, σ1.43/164, mb4.1/19, MS3.2/8, 10C-4D, Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IKOM	**Komasi**	**1.04**	**295**	Pg	**Pg**	**09 56 40.5**	**-2.2**
IKOM				Sg	**Sg**	**09 56 58.5**	**+2.3**
IKOM	**Komasi**	**1.04**	**295**	↑*e*Pg	**Pg**	**09 56 40.5**	**-2.2**
IKOM				*e*Sg	**Sg**	**09 56 58.5**	**+2.3**
IKOM				*e*		09 56 59.8	
	comp=Z,13μm,0.3s						
IKOM	**Komasi**	**1.04**	**295**	↑*e*Pg	**Pg**	**09 56 40.5**	**-2.2**
IKOM				*e*Sg	**Sg**	**09 56 58.5**	**+2.3**
SHGR	**Shooshtar-Gavs**	**1.63**	**175**	*e*Pg	**Pn**	**09 56 49.0**	**-2.5**
SHGR	**Shooshtar-Gavs**	**1.63**	**175**	*e*Pg	**Pn**	**09 56 49.6**	**-1.9**
SHGR				AML	AML	09 57 19.8	
	comp=N,2μm,0.7s						
SHGR				AML	AML	09 57 24.7	
	comp=E,2μm,0.8s						
SHGR	**Shooshtar-Gavs**	**1.63**	**175**	*e*Pg	**Pn**	**09 56 49.6**	**-1.9**
IVIS	**Veis**	**1.68**	**298**	Pn	**Pn**	**09 56 52.3**	**+0.1**
IVIS	**Veis**	**1.68**	**298**	*e*Pn	**Pn**	**09 56 52.3**	**+0.1**
IVIS				*e*		09 57 25.4	
	comp=Z,25μm,0.3s						
IVIS	**Veis**	**1.68**	**298**	*e*Pn	**Pn**	**09 56 52.3**	**+0.1**
SNGE	**Sanandaj**	**1.73**	**322**	*e*Pg	**Pn**	**09 56 51.0**	**-1.8**
SNGE	**Sanandaj**	**1.73**	**322**	*e*Pg	**Pn**	**09 56 51.7**	**-1.1**
SNGE				AML	AML	09 57 22.2	
	comp=N,3μm,0.5s						
SNGE	**Sanandaj**	**1.73**	**322**	*e*Pg	**Pn**	**09 56 51.0**	**-1.8**
IGHG	**Ghaleghazi**	**1.82**	**289**	Pn	**Pn**	**09 56 56.2**	**+2.1**
IGHG	**Ghaleghazi**	**1.82**	**289**	↑*e*Pn	**Pn**	**09 56 56.3**	**+2.2**
IGHG	**Ghaleghazi**	**1.82**	**289**	↑*e*Pn	**Pn**	**09 56 56.3**	**+2.2**
IGHG				*e*		09 57 30.8	
	comp=Z,45μm,0.3s						
ILIN	**Lien**	**1.82**	**311**	Pn	**Pn**	**09 56 55.2**	**+1.1**
ILIN	**Lien**	**1.82**	**311**	*e*Pn	**Pn**	**09 56 55.2**	**+1.1**
ILIN				*e*		09 57 25.4	
	comp=N,26μm,0.2s						
ILIN	**Lien**	**1.82**	**311**	*e*Pn	**Pn**	**09 56 55.2**	**+1.1**
IRAZ	**Razeghan**	**1.97**	**32**	Pn	**Pn**	**09 56 56.3**	**+0.1**
IRAZ	**Razeghan**	**1.97**	**32**	*e*Pn	**Pn**	**09 56 56.4**	**+0.2**
IRAZ				*e*		09 57 31.2	
	comp=Z,28μm,0.3s						
IRAZ	**Razeghan**	**1.97**	**32**	*e*Pn	**Pn**	**09 56 56.4**	**+0.2**
IDHR	**Dehrash**	**2.10**	**298**	Pn	**Pn**	**09 56 59.7**	**+1.7**
IDHR	**Dehrash**	**2.10**	**298**	*e*Pn	**Pn**	**09 56 59.8**	**+1.8**
IDHR				*e*		09 57 35.8	
	comp=N,46μm,0.2s						
IDHR	**Dehrash**	**2.10**	**298**	*e*Pn	**Pn**	**09 56 59.8**	**+1.8**
IPIR	**Pirpir**	**2.16**	**119**	Pn	**Pn**	**09 57 00.8**	**+2.1**
IPIR	**Pirpir**	**2.16**	**119**	*e*Pn	**Pn**	**09 57 00.8**	**+2.1**
IPIR				*e*		09 57 45.3	
	comp=Z,16μm,0.3s						
IPIR	**Pirpir**	**2.16**	**119**	*e*Pn	**Pn**	**09 57 00.8**	**+2.1**
GHVR	**GHOM**	**2.32**	**71**	*e*Pn	**Pn**	**09 57 00.0**	**-1.0**
GHVR				Sn	**Sn**	**09 57 29.0**	**-0.5**
GHVR	**GHOM**	**2.32**	**71**	*e*Pn	**Pn**	**09 57 00.1**	**-0.8**
GHVR				*e*Sg	**Sg**	**09 57 34.0**	**-3.3**
GHVR				AML	AML	09 57 37.2	
	comp=E,850nm,0.6s						
GHVR				AML	AML	09 57 43.4	
	comp=N,944nm,0.8s						
GHVR	**GHOM**	**2.32**	**71**	*e*Pn	**Pn**	**09 57 00.1**	**-0.9**
GHVR				Sn	**Sn**	**09 57 29.0**	**-0.5**
GHVR				*e*Sg	**Sg**	**09 57 34.0**	**-3.3**
IKLH	**Kolahrood**	**2.49**	**99**	Pn	**Pn**	**09 57 05.7**	**+2.5**
IKLH	**Kolahrood**	**2.49**	**99**	*e*Pn	**Pn**	**09 57 05.7**	**+2.5**
IKLH	**Kolahrood**	**2.49**	**99**	*e*Pn	**Pn**	**09 57 05.7**	**+2.5**
IMHD	**Mahdasht**	**2.56**	**40**	Pn	**Pn**	**09 57 04.9**	**+0.6**
IMHD	**Mahdasht**	**2.56**	**40**	*e*	**Sg**	**09 57 41.3**	**-3.6**
	comp=Z,9μm,0.2s						
IMHD				*e*Pn	**Pn**	**09 57 05.0**	**+0.7**
IVRN	**Varamin**	**2.84**	**63**	Pn	**Pn**	**09 57 08.6**	**+0.5**
IVRN	**Varamin**	**2.84**	**63**	*e*	**Pg**	**09 57 22.1**	**+4.9**
	comp=Z,6μm,0.2s						
IVRN				↓*e*Pn	**Pn**	**09 57 08.7**	**+0.6**
THKV	**Tehran--Karaj**	**2.85**	**40**	*e*Pn	**Pn**	**09 57 09.0**	**+0.8**
THKV	**Tehran--Karaj**	**2.85**	**40**	*e*Pn	**Pn**	**09 57 09.7**	**+1.5**
THKV	**Tehran--Karaj**	**2.85**	**40**	*e*Pn	**Pn**	**09 57 09.7**	**+1.5**
ZNJK	**Zanjan**	**2.93**	**1**	*e*Pn	**Pn**	**09 57 10.6**	**+1.3**
CHTH	**Charan**	**2.98**	**43**	*e*Pn	**Pn**	**09 57 10.0**	**0.0**
CHTH	**Charan**	**2.98**	**43**	*e*Pn	**Pn**	**09 57 10.6**	**+0.6**
CHTH	**Charan**	**2.98**	**43**	*e*Pn	**Pn**	**09 57 10.3**	**+0.3**
IGAR	**Gharneh**	**3.15**	**114**	*e*Pn	**Pn**	**09 57 14.0**	**+1.7**
IGAR				*e*		09 58 11.9	
	comp=Z,6μm,0.4s						
IZEF	**Zefreh**	**3.20**	**104**	*e*	**Sg**	**09 58 09.3**	**+3.9**
	comp=Z,4μm,0.4s						
DAMV	**Damavand**	**3.33**	**55**	*e*Pn	**Pn**	**09 57 15.0**	**+0.2**
DAMV	**Damavand**	**3.33**	**55**	*e*Pn	**Pn**	**09 57 15.4**	**+0.6**
DAMV	**Damavand**	**3.33**	**55**	*e*Pn	**Pn**	**09 57 15.4**	**+0.6**
IDMV	**Damavand**	**3.34**	**56**	Pn	**Pn**	**09 57 15.5**	**+0.5**
IDMV	**Damavand**	**3.34**	**56**	↑*e*Pn	**Pn**	**09 57 15.5**	**+0.5**
IDMV				*e*		09 58 18.6	
	comp=Z,5μm,0.3s						
IDMV	**Damavand**	**3.34**	**56**	↑*e*Pn	**Pn**	**09 57 15.5**	**+0.5**
BHD	**Baghdad**	**3.59**	**264**	*e*Pn	**Pn**	**09 57 15.0**	**-3.5**
BHD				*e*Sn	**Sn**	**09 58 00.0**	**-1.0**
BHD				*i* Lg		09 58 17.0	
BHD				*i* Sg	**Sg**	**09 58 20.0**	**+1.8**
BHD	**Baghdad**	**3.59**	**264**	*e*Pn	**Pn**	**09 57 15.0**	**-3.5**
BHD				*e*Sn	**Sn**	**09 58 00.0**	**-1.0**
BHD				*i* Lg		09 58 17.0	
BHD				*i* Sg	**Sg**	**09 58 20.0**	**+1.8**
IFIR	**Firoozkooh**	**3.88**	**60**	Pn	**Pn**	**09 57 22.8**	**+0.4**
IFIR	**Firoozkooh**	**3.88**	**60**	*e*Pn	**Pn**	**09 57 22.8**	**+0.4**
IFIR				*e*		09 58 27.8	
	comp=Z,2μm,0.2s						
IFIR	**Firoozkooh**	**3.88**	**60**	*e*Pn	**Pn**	**09 57 22.8**	**+0.4**
UMR	**Umm Al-Rimmam**	**4.25**	**191**	*e*P	**Pn**	**09 57 29.4**	**+1.9**
UMR	**Umm Al-Rimmam**	**4.25**	**191**	*e*P	**Pn**	**09 57 29.4**	**+1.9**
KBD	**Kabd**	**4.62**	**190**	*e*P	**Pn**	**09 57 34.5**	**+1.8**
KBD				AML	AML	09 58 31.2	
	comp=Z,44nm,0.6s						
KBD	**Kabd**	**4.62**	**190**	*e*P	**Pn**	**09 57 34.5**	**+1.9**
NAY	**Al-Naaiem**	**4.63**	**195**	*e*P	**Pn**	**09 57 34.7**	**+1.9**
NAY				AML	AML	09 58 35.5	
	comp=Z,26nm,0.7s						
NAY	**Al-Naaiem**	**4.63**	**195**	*e*P	**Pn**	**09 57 34.7**	**+1.9**
RDF	**Al-Radifah**	**4.89**	**191**	*e*P	**Pn**	**09 57 38.9**	**+2.6**
RDF				AML	AML	09 58 39.0	
	comp=Z,169nm,0.9s						
RDF	**Al-Radifah**	**4.89**	**191**	*e*P	**Pn**	**09 57 38.9**	**+2.6**
QRN	**Al-Qurain**	**5.02**	**187**	*e*P	**Pn**	**09 57 39.8**	**+1.7**
QRN				AML	AML	09 58 39.4	
	comp=Z,91nm,0.4s						
GRMI	**Germi**	**5.10**	**353**	*e*Pn	**Pn**	**09 57 38.0**	**-1.1**
GRMI	**Germi**	**5.10**	**353**	*e*Pn	**Pn**	**09 57 40.3**	**+1.2**
GRMI	**Germi**	**5.10**	**353**	*e*Pn	**Pn**	**09 57 38.9**	**-0.2**
MSL	**Mosul**	**5.26**	**302**	*e*Pn	**Pn**	**09 57 41.0**	**-0.4**
MSL				*e*Sn	**Sn**	**09 58 45.0**	**+3.0**
GHIR	**Ghir-Karzin**	**6.59**	**144**	*e*Pn	**Pn**	**09 57 59.0**	**-0.7**
GHIR	**Ghir-Karzin**	**6.59**	**144**	*e*Pn	**Pn**	**09 57 59.2**	**-0.5**
GHIR	**Ghir-Karzin**	**6.59**	**144**	*e*Pn	**Pn**	**09 57 59.0**	**-0.7**
GNI	**Garni**	**7.12**	**335**	Pg	**Pb**	**09 58 26.0**	**-0.4**
	comp=Z,1.0nm,0.3s,baz=95,slow=14,SNR=4.6						
GNI				LR	LR	10 01 10.1	
	comp=Z,364nm,21.7s,baz=328,slow=42						
ZEI	**Tsey**	**9.76**	**339**	*e*P	**Pn**	**09 58 50.2**	**+7.1**
ZEI				pmax	pmax		
	comp=Z,25nm,1.5s						
ASF	**Jabal al Asfar**	**9.99**	**264**	Pn	**Pn**	**09 58 45.0**	**-1.4**
	comp=Z,0.7nm,0.3s,baz=339,slow=11,SNR=4.4						
ASF				LR	LR	10 02 02.9	
	comp=Z,40nm,19.1s,baz=102,slow=35						
BANOM	**Banah**	**10.23**	**138**	⇑P	**Pn**	**09 58 48.7**	**-1.0**
	SNR=16						
BANOM	**Banah**	**10.23**	**138**	P	**Pn**	**09 58 48.4**	**-1.3**
	SNR=16						
ASUD	**Al Ashush, Dub**	**10.79**	**146**	⇓P	**Pn**	**09 58 57.2**	**-0.1**
	SNR=13						
ASUD	**Al Ashush, Dub**	**10.79**	**146**	P	**Pn**	**09 58 57.1**	**-0.2**
	SNR=13						
HATD	**Hatta, Dubai**	**11.02**	**142**	⇑P	**Pn**	**09 58 59.2**	**-1.3**
	SNR=7.8						
HATD	**Hatta, Dubai**	**11.02**	**142**	P	**Pn**	**09 58 59.2**	**-1.3**
	SNR=7.8						
MMAI	**Mount Meron Ar**	**11.10**	**270**	Pn	**Pn**	**09 59 00.5**	**-0.9**
	comp=Z,2.4nm,0.3s,baz=94,slow=16,SNR=3.1						
ASHO	**Ashiyiah**	**11.10**	**142**	⇑P	**Pn**	**09 58 59.8**	**-1.8**
	SNR=14						
ASHO	**Ashiyiah**	**11.10**	**142**	P	**Pn**	**09 58 59.5**	**-2.0**
	SNR=14						
EIL	**Elat**	**12.34**	**255**	Pn	**Pn**	**09 59 17.6**	**-0.9**
	comp=Z,1.0nm,0.3s,baz=57,slow=9.8,SNR=4.8						
EIL	**Elat**	**12.34**	**255**	Pn	**Pn**	**09 59 17.6**	**-0.9**
BSY	**Bisya**	**13.29**	**143**	⇓P	**Pn**	**09 59 28.7**	**-2.8**
	SNR=6.9						
BSYO	**Bisya**	**13.32**	**143**	P	**Pn**	**09 59 28.7**	**-3.2**
	SNR=6.9						
BR131	**Keskin Array S**	**13.43**	**301**	*e*Pn	**Pn**	**09 59 35.1**	**+1.8**
	comp=Z,1.8nm,0.6s						
BR131	**Keskin Array S**	**13.43**	**301**	*e*Pn	**Pn**	**09 59 35.1**	**+1.8**
	comp=Z,1.8nm,0.6s						
JMDO	**Jabal Madar**	**14.06**	**141**	⇑P	**Pn**	**09 59 38.9**	**-3.1**
	SNR=5.2						
AKTK	**Aktyubinsk**	**18.05**	**20**	P	**Pn**	**10 00 33.5**	**0.0**
AKTK	**Aktyubinsk**	**18.05**	**20**	P	**Pn**	**10 00 33.5**	**0.0**
AKTO	**Aktyubinsk**	**18.05**	**20**	P	**Pn**	**10 00 33.5**	**0.0**
	comp=Z,0.2nm,0.3s,baz=206,slow=12,SNR=9.2						
IDI	**Anoyia**	**19.63**	**281**	P	**Pn**	**10 00 50.7**	**-2.0**
	comp=Z,2.2nm,0.3s,baz=102,slow=9.9,SNR=8.0						
IDI	**Anoyia**	**19.63**	**281**	P	**Pn**	**10 00 50.7**	**-2.1**
MLR	**Muntele Rosu**	**20.98**	**311**	P	**P**	**10 01 03.8**	**-2.2**
	comp=Z,1.9nm,0.6s,baz=41,slow=11,SNR=1.9						
MLR	**Muntele Rosu**	**20.98**	**311**	P	**P**	**10 01 03.8**	**-2.2**
AAK	**Ala-Archa**	**22.11**	**59**	LR	LR	10 10 34.4	
	comp=Z,66nm,18.5s,MS3.1,baz=45,slow=38						
AKASG	**Malin Array Be**	**22.12**	**326**	P	**P**	**10 01 16.9**	**-1.2**
	comp=Z,7.1nm,0.9s,mb4.1,baz=129,slow=8.8,SNR=7.7						
AKASG	**Malin Array Be**	**22.12**	**326**	P	**P**	**10 01 17.0**	**-1.2**
AKBB	**Malin Array Si**	**22.12**	**326**	*e*P	**P**	**10 01 18.9**	**+0.7**
AKBB	**Malin Array Si**	**22.12**	**326**	*e*P	**P**	**10 01 18.9**	**+0.7**
BUR08	**Bucovina Ar. S**	**22.45**	**315**	*e*P	**P**	**10 01 23.0**	**+1.4**
BUR08	**Bucovina Ar. S**	**22.45**	**315**	*e*P	**P**	**10 01 23.0**	**+1.3**
ATD	**Arta Tunnel**	**22.73**	**195**	LR	LR	10 09 23.3	
	comp=Z,44nm,19.8s,MS2.9,baz=345,slow=34						
OBN	**Obninsk**	**22.98**	**342**	*e*P	**P**	**10 01 32.6**	**+5.3**
OBN				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.4						
BVAR	**Borovoye Array**	**24.75**	**32**	P	**P**	**10 01 47.6**	**+3.4**
	comp=Z,3.5nm,0.8s,mb4.0,baz=224,slow=8.3,SNR=8.2						
PSZ	**Piszkesteto**	**25.78**	**312**	↓*e*P	**P**	**10 01 54.3**	**+0.7**
TIP	**Timpagrande**	**26.13**	**291**	*e*P	**P**	**10 01 55.7**	**-1.2**
	comp=Z,9.6nm,1.0s,mb4.3						
TIP	**Timpagrande**	**26.13**	**291**	*e*P	**P**	**10 01 55.7**	**-1.2**
	comp=Z,9.6nm,1.0s,mb4.3						
CEL	**Celeste**	**26.80**	**289**	*e*P	**P**	**10 02 03.7**	**+0.8**
	comp=Z,31nm,1.0s,mb4.8						
CEL	**Celeste**	**26.80**	**289**	*e*P	**P**	**10 02 03.7**	**+0.8**
	comp=Z,31nm,1.0s,mb4.8

mb1mx2.6/28, mbtmp2.6/4, ML2.6/4, Error ellipse: s-maj=35.3km s-min=8.1km az=31.0
*ISCJB **25** 09:58:11.3±0.6, 51.°6N±0.°1×75.°5E±0.°1, h10km, Error ellipse: s-maj=18.0km s-min=4.5km az=30.6*
ISC 25 09:58:13.0±0.6, 51.7N±0.°1×75.4E±0.°1, h10km, n7, σ0s71/12, 2C-1D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**2.21**	**114**	Pn	**Pn**	**09 58 48.9**	**-0.8**
	0.5nm,0.3s,baz=304,slow=18,SNR=30						
KURK				Lg		09 59 20.4	
	0.5nm,0.3s,baz=309,slow=34,SNR=6.0						
VOSK	**Vostochnaya**	**2.95**	**293**	Pn	**Pn**	**09 59 00.2**	**+0.4**
	2.9nm,0.5s						
VOSK				Sn	**Sn**	**09 59 40.4**	**+5.2**
	24nm,0.7s						
BVAR	**Borovoye Array**	**3.39**	**296**	Pn	**Pn**	**09 59 05.9**	**0.0**
	0.3nm,0.3s,baz=109,slow=12,SNR=3.6						
BVAR				Sn	**Sn**	**09 59 46.3**	**+0.2**
	0.8nm,0.3s,baz=98,slow=23,SNR=7.1						
BVAR				Lg		09 59 55.4	
	1.9nm,0.3s,baz=113,slow=27,SNR=10.0						
ZRNK	**Zerenda**	**4.16**	**291**	Pn	**Pb**	**09 59 24.8**	**-1.4**
	0.9nm,0.5s						
ZRNK				Sn	**Sb**	**10 00 17.1**	**+0.7**
	13nm,0.7s						
ZALV	**Zalesovo Beam**	**6.13**	**64**	Pn	**Pn**	**09 59 44.0**	**+0.4**
	0.5nm,0.3s,baz=264,slow=16,SNR=3.5						
MK31	**Makanchi Array**	**6.62**	**135**	⇓Pn	**Pn**	**09 59 51.2**	**+1.0**
	0.1nm,0.4s,baz=321,slow=12,SNR=2.6						
MK31				⇑Sn	**Sn**	**10 01 06.0**	**+0.3**
	0.3nm,0.4s,baz=342,slow=22,SNR=4.2						
MK31				⇑Lg		10 01 35.0	
	1.9nm,0.6s,baz=330,slow=26,SNR=5.7						
MKAR	**Makanchi Array**	**6.62**	**135**	Pn	**Pn**	**09 59 49.2**	**-1.0**
	0.1nm,0.3s,baz=324,slow=9.3,SNR=4.6						
MKAR				Sn	**Sn**	**10 01 05.8**	**+0.2**
	0.3nm,0.3s,baz=338,slow=20,SNR=6.9						
MKAR				Lg		10 01 37.8	
	0.3nm,0.3s,baz=335,slow=26,SNR=5.3						

*KNET **25** 10:01:45.9±0.2, 43.°04N×74.°90E, h7km±3km, ml2.0, Error ellipse: s-maj=1.8km s-min=1.1km az=66.0*
*ISCJB **25** 10:01:45.7±1.0, 43.°05N±0.°05×74.°92E±0.°07, h8km±8km, Error ellipse: s-maj=9.8km s-min=6.7km az=146.3*
ISC 25 10:01:45.6±1.0, 43.°06N±0.°05×74.°85E±0.°07, h16km±6km, n9, σ0s97/14, 11C-1D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHMS	**Chumysh**	**0.10**	**229**	⇑P	**Pg**	**10 01 48.5**	**-0.4**
	182nm,0.2s,SNR=282						
CHMS				⇑S	**Sg**	**10 01 50.5**	**-0.6**
	869nm,0.3s						
USP	**Ospenovka**	**0.33**	**309**	⇑P	**Pg**	**10 01 53.4**	**+0.9**
	63nm,0.1s,SNR=132						
USP				⇓S	**Sg**	**10 01 58.8**	**+1.7**
	96nm,0.2s						
KBK	**Karagaybulak**	**0.41**	**170**	⇑P	**Pg**	**10 01 53.9**	**0.0**
	124nm,0.1s,SNR=90						
KBK				⇑S	**Sg**	**10 01 59.8**	**+0.4**
	338nm,0.3s						
AAK	**Ala-Archa**	**0.50**	**212**	⇑P	**Pg**	**10 01 55.9**	**+0.3**
	26nm,0.2s,SNR=13						
AAK				⇑S	**Sg**	**10 02 03.0**	**+0.8**
	81nm,0.3s						
TKM2	**Tokmak 2**	**0.56**	**104**	⇑P	**Pg**	**10 01 55.7**	**-1.0**
	13nm,0.1s,SNR=33						
UCH	**Uchtor**	**0.87**	**197**	⇑P	**Pb**	**10 02 02.4**	**+0.1**
	12nm,0.3s,SNR=19						
EKS2	**Erkin-Say**	**0.88**	**244**	⇑P	**Pb**	**10 02 03.5**	**+1.0**
	12nm,0.1s,SNR=47						
KZA	**Kyzart**	**1.03**	**163**	P	**Pb**	**10 02 05.1**	**+0.1**
	10nm,0.2s,SNR=33						
KK31	**Karatay Array**	**3.18**	**272**	Pn	**Pg**	**10 02 44.6**	**-1.8**
	0.3nm,0.2s,baz=91,slow=15,SNR=26						
KK31				⇑Sn	**Sg**	**10 03 25.8**	**-1.9**
	1.5nm,0.3s,baz=79,slow=30,SNR=6.2						

*IDC **25** 10:06:40.5±6.1, 59.°89N×152.°36W, h83km±84km, mb3.6/7, mb1 3.7/9, mb1mx3.4/27, mbtmp3.6/9, ML3.8/1, Error ellipse: s-maj=67.9km s-min=27.2km az=156.0*
*ISCJB **25** 10:06:40.5±0.4, 59.°86N±0.°04×152.°50W±0.°08, h102km±5km, mb4.0/7, Error ellipse: s-maj=6.9km s-min=5.9km az=28.7*
*NEIC **25** 10:06:43.1, 59.°86N×152.°51W, h85km, MG3.4(AEIC), After AEIC.*
ISC 25 10:06:41.8±0.4, 59.°85N±0.°04×152.°53W±0.°08, h92km±6km, n42, σ0s87/50, mb4.0/7, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSO	**Redoubt South**	**0.62**	**350**	*e*Pn	**Pn**	**10 06 57.9**	**+0.3**
SLKM	**Skilak Lake**	**1.33**	**59**	*e*Pn	**Pn**	**10 07 05.8**	**+0.5**
SLKM				*e*Sn	**Sn**	**10 07 22.7**	**-0.5**
SEW	**Seward**	**1.57**	**79**	*e*Pn	**Pn**	**10 07 08.6**	**+0.2**
SEW				*e*Sn	**Sn**	**10 07 28.1**	**-0.4**
FIB	**Fire Island**	**1.76**	**40**	*e*Pn	**Pn**	**10 07 12.5**	**+1.7**
FIB				*e*Sb	**Sn**	**10 07 33.1**	**+0.2**
RC01	**Rabbit Creek A**	**1.86**	**47**	*e*Pn	**Pn**	**10 07 12.5**	**+0.5**
RC01				*e*Sn	**Sn**	**10 07 35.1**	**-0.1**
SVW2	**Sparrevohn**	**1.96**	**311**	*e*P	**Pn**	**10 07 12.2**	**-1.2**
KDAK	**Kodiak Island**	**2.08**	**181**	P	**Pn**	**10 07 14.7**	**-0.2**
	26nm,0.3s,baz=31,slow=8.8,SNR=175						
KDAK				S	**Sn**	**10 07 39.9**	**-0.4**
	45nm,0.3s,baz=212,slow=22,SNR=18						
KDAK	**Kodiak Island**	**2.08**	**181**	*e*Pn	**Pn**	**10 07 15.7**	**+0.8**
KDAK				*e*Sn	**Sn**	**10 07 39.5**	**-0.8**
PMR	**Palmer**	**2.41**	**42**	*e*P	**Pn**	**10 07 19.0**	**-0.4**
OHAK	**Old Harbor**	**2.67**	**189**	*e*P	**Pn**	**10 07 21.9**	**-0.9**
PPLA	**Purkeypile**	**3.06**	**3**	*e*Pn	**Pn**	**10 07 28.9**	**+0.8**
MID	**Middleton Isla**	**3.17**	**95**	*e*P	**Pn**	**10 07 30.1**	**+0.6**
EYAK	**Cordova Ski Ar**	**3.46**	**75**	*e*Pn	**Pn**	**10 07 32.6**	**-0.7**
TTA	**Tatalina**	**3.51**	**333**	*e*P	**Pn**	**10 07 33.1**	**-1.0**
DIV	**Divide**	**3.58**	**66**	*e*Pn	**Pn**	**10 07 34.9**	**-0.1**
TRF	**Thorofare Moun**	**3.77**	**15**	*e*Pn	**Pn**	**10 07 37.6**	**+0.1**
CHUM	**Lake Minchumin**	**4.05**	**1**	*e*Pn	**Pn**	**10 07 41.4**	**+0.1**
BMRM	**Bremner River**	**4.08**	**71**	*e*Pn	**Pn**	**10 07 41.2**	**-0.6**
BMRM				*e*Sn	**Sn**	**10 08 25.3**	**-3.2**
MCK	**McKinley**	**4.25**	**22**	*e*Pn	**Pn**	**10 07 45.0**	**+0.9**
PAX	**Paxson**	**4.61**	**44**	*e*Pn	**Pn**	**10 07 49.0**	**0.0**
PAX				*e*Sn	**Sn**	**10 08 39.6**	**-1.6**
MENT	**Mentasta**	**5.24**	**50**	*e*P	**Pn**	**10 07 57.8**	**+0.3**
COLA	**College**	**5.49**	**21**	*e*Pn	**Pn**	**10 08 00.7**	**-0.1**
YKU2	**Yakutat**	**6.52**	**87**	*e*P	**Pn**	**10 08 17.0**	**+2.1**
PNL	**Peninsula**	**6.64**	**86**	*e*Pn	**Pn**	**10 08 16.9**	**+0.4**
	88nm,0.3s						
EGAK	**Eagle**	**7.24**	**42**	*e*Pn	**Pn**	**10 08 24.0**	**-0.6**
COLD	**Coldfoot**	**7.48**	**7**	*e*Pn	**Pn**	**10 08 28.1**	**+0.3**
	7.6nm,0.7s						
DAWY	**Dawson**	**7.49**	**50**	*e*Pn	**Pn**	**10 08 28.2**	**+0.1**
HYT	**Haines Junctio**	**7.52**	**76**	*e*Pn	**Pn**	**10 08 29.4**	**+1.0**
SKAG	**Skagway**	**8.71**	**85**	*e*P	**Pn**	**10 08 45.9**	**+1.1**
SIT	**Sitka**	**9.44**	**100**	*e*P	**Pn**	**10 08 54.2**	**-0.4**
	9.3nm,0.5s						
CRAG	**Craig**	**11.27**	**104**	*e*P	**Pn**	**10 09 18.7**	**-0.8**
	51nm,1.6s						
DLBC	**Dease Lake**	**11.62**	**87**	*e*Pn	**Pn**	**10 09 27.5**	**+3.2**
YKA	**Yellowknife Ar**	**18.30**	**65**	P	**Pn**	**10 10 47.4**	**-1.7**
	0.5nm,0.3s,baz=278,slow=9.9,SNR=53						
FX1	**Attu Island--F**	**20.06**	**265**	P	**P**	**10 11 07.6**	**+0.3**
	3.7nm,0.5s,baz=349,slow=5.2,SNR=4.3						
MDJ	**Mudanjiang**	**47.16**	**288**	P	**P**	**10 15 04.0**	**-0.5**
MDJ	**Mudanjiang**	**47.16**	**288**	P	**P**	**10 15 04.5**	**0.0**
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
MDJ				pmax	pmax		
	comp=Z,6.0nm,3.4s						
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
MDJ				pmax	pmax		
	comp=Z,6.0nm,3.6s						
KSRS	**Korea Array**	**53.45**	**283**	P	**P**	**10 15 52.9**	**+1.0**
	comp=Z,1.1nm,0.7s,mb4.0,baz=41,slow=7.9,SNR=3.9						
SONM	**Songino Array**	**55.07**	**306**	P	**P**	**10 16 04.6**	**+1.0**
	comp=Z,0.7nm,0.5s,mb3.9,baz=49,slow=5.5,SNR=8.0						
ZALV	**Zalesovo Beam**	**57.64**	**324**	P	**P**	**10 16 21.9**	**+0.2**
	comp=Z,1.4nm,0.4s,mb4.3,baz=33,slow=9.4,SNR=4.0						
KURK	**Kurchatov**	**62.29**	**326**	P	**P**	**10 16 53.7**	**+0.2**
	comp=Z,0.8nm,0.6s,mb3.9,baz=26,slow=7.4,SNR=3.8						
BVAR	**Borovoye Array**	**62.31**	**332**	P	**P**	**10 16 52.3**	**-1.4**
	comp=Z,1.1nm,0.5s,mb4.1,baz=22,slow=6.5,SNR=6.4						
MKAR	**Makanchi Array**	**64.70**	**322**	P	**P**	**10 17 08.9**	**-0.6**
	comp=Z,0.4nm,0.6s,mb3.5,baz=39,slow=10,SNR=5.4						

*IDC **25** 10:20:01.9±0.6, 6.°47S×154.°62E, h0km, mb4.4/15, mb1 4.5/15, mb1mx4.5/18, mbtmp4.4/15, MS3.8/12, Ms1 3.8/12, ms1mx3.7/22, Error ellipse: s-maj=22.4km s-min=15.9km az=103.0*
*ISCJB **25** 10:20:07.5±1.8, 6.°49S±0.°08×154.°58E±0.°06, h47km±16km, mb4.8/30, MS3.9/12, Error ellipse: s-maj=12.8km s-min=9.9km az=173.7*
*GCMT **25** 10:20:09.6±0.4, 6.°81S×154.°61E, h32km±1km, MW5.0, Moment Tensor Solution. s34,c39; s44,c63; Moment tensor: Scale 10^{16}Nm; M_{rr}3.61±.21; $M_{\theta\theta}$-1.46±.14; $M_{\phi\phi}$-2.15±.15; $M_{r\theta}$1.25±.19; $M_{\theta\phi}$1.22±.09; $M_{\phi r}$-1.36±.17; Best double couple: $M_0$3.80000×10^{16} NP1:ϕ_s325.00000°, δ31.00000°, λ94.00000°. NP2:ϕ_s140.00000°, δ59.00000°, λ88.00000°. Principal axes: T 4.0900, Plg75.0000°, Azm44.0000°; N -0.5400, Plg2.0000°, Azm142.0000°; P -3.5500, Plg14.0000°, Azm232.0000°; Data Used: II IU G CN IC.*
*NEIC **25** 10:20:10.2±1.1, 6.°53S×154.°55E, h58km±10km, mb5.3/15 Error ellipse: s-maj=9.2km s-min=7.3km az=171.0*
ISC 25 10:20:04.7±3.3, 6.°45S±0.°07×154.°71E±0.°07, h15km±20km, n55, σ0s85/50, mb4.8/30, MS3.9/12, 1C, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.97**	**120**	*e*Pn	**Pn**	**10 21 38.4**	**+5.8**
	150nm,0.8s						
HNR				*e*Sn	**Sn**	**10 22 57.1**	**+16**
PMG	**Port Moresby**	**8.04**	**248**	*e*Pn	**Pn**	**10 22 01.1**	**+0.1**
	43nm,0.7s						
PMG				*e*Sn	**Sn**	**10 23 32.7**	**+1.0**
COEN	**Coen**	**13.58**	**236**	Pn	**Pn**	**10 23 16.5**	**-0.5**
CTA	**Charters Tower**	**15.85**	**210**	*e*P	**Pn**	**10 23 52.3**	**+4.8**
	12nm,0.8s						
CTA	**Charters Tower**	**15.85**	**210**	Pn	**Pn**	**10 23 48.9**	**+1.4**
	0.7nm,0.3s,baz=32,slow=12,SNR=12						
CTA				LR	LR	10 27 33.5	
	comp=Z,200nm,20.4s,baz=27,slow=29						
CTAO	**Charters Tower**	**15.85**	**210**	Pn	**Pn**	**10 23 48.5**	**+1.0**
	28nm,1.0s						
DZM	**Mont Dzumac**	**19.23**	**145**	*e*LR	LR	10 29 19.0	
	826nm,24.9s						
RMQ	**Roma**	**20.72**	**195**	*e*P	**P**	**10 24 45.5**	**+0.8**
	55nm,1.2s						
KAKA	**Kakadu**	**22.81**	**253**	*e*P	**P**	**10 25 06.1**	**-1.2**
	16nm,0.5s,mb4.7						
KAKA	**Kakadu**	**22.81**	**253**	*e*P	**P**	**10 25 05.9**	**-1.4**
	42nm,0.5s,mb5.1						
WRAB	**Tennant Creek**	**23.89**	**234**	*e*P	**P**	**10 25 17.1**	**-1.0**
	7.9nm,0.8s,mb4.2						
WRA	**Warramunga Arr**	**23.90**	**234**	P	**P**	**10 25 17.5**	**-0.6**
	8.2nm,0.6s,mb4.3,baz=55,slow=9.2,SNR=47						
WRA				PcP	PcP	10 29 00.8	-0.1
	2.4nm,0.6s,baz=59,slow=2.4,SNR=11						
WRA				ScP	ScP	10 32 38.0	-1.1
	0.9nm,0.9s,baz=62,slow=2.9,SNR=5.5						
WRA	**Warramunga Arr**	**23.90**	**234**	P	**P**	**10 25 17.5**	**-0.6**
WRA				PcP	PcP	10 29 00.8	-0.1
WRA				ScP	ScP	10 32 38.0	-1.1
ARMA	**Armidale**	**24.02**	**187**	*e*P	**P**	**10 25 22.3**	**+3.2**
ASAR	**Alice Springs**	**26.33**	**227**	P	**P**	**10 25 39.2**	**-1.0**
	1.7nm,0.7s,mb3.7,baz=61,slow=8.8,SNR=27						
ASAR				PcP	PcP	10 29 06.0	-0.2
	1.0nm,0.6s,baz=48,slow=2.2,SNR=5.5						
ASAR				ScP	ScP	10 32 45.1	-0.8
	0.8nm,0.8s,baz=51,slow=2.4,SNR=5.0						
CMSA	**Cobar Meteorol**	**26.35**	**198**	*e*P	**P**	**10 25 40.5**	**+0.2**
STKA	**Stephens Creek**	**28.11**	**204**	*e*P	**P**	**10 25 55.2**	**-0.9**
	2.8nm,0.5s,mb4.2						
STKA	**Stephens Creek**	**28.11**	**204**	P	**P**	**10 25 54.9**	**-1.2**
	2.9nm,0.5s,mb4.1,baz=34,slow=14,SNR=12						
STKA				LR	LR	10 37 13.0	
	comp=Z,522nm,18.4s,MS4.2,baz=279,slow=37						
STKA	**Stephens Creek**	**28.11**	**204**	P	**P**	**10 25 54.9**	**-1.2**
STKA				*e*PcP	PcP	10 29 11.0	+0.6
STKA				LR	LR	10 37 13.0	
FITZ	**Fitzroy Crossi**	**30.62**	**245**	*e*P	**P**	**10 26 18.2**	**-0.4**
	9.2nm,0.6s,mb4.8						
FITZ	**Fitzroy Crossi**	**30.62**	**245**	*e*P	**P**	**10 26 17.1**	**-1.5**
	5.1nm,0.6s,mb4.5						
URZ	**Urewera**	**37.62**	**151**	P	**P**	**10 27 18.8**	**-0.2**
	7.0nm,0.6s,mb4.5,baz=18,slow=3.2,SNR=3.9						
TPUB	**Ta-pu**	**44.53**	**313**	*e*P	**P**	**10 28 15.7**	**-0.5**
	34nm,0.8s,mb5.2						
SSLB	**Suanglung**	**44.59**	**314**	*e*P	**P**	**10 28 17.7**	**+1.1**
	12nm,0.6s,mb4.9						
KSRS	**Korea Array**	**50.33**	**332**	P	**P**	**10 29 00.1**	**-0.9**
	2.0nm,0.7s,mb4.3,baz=141,slow=6.9,SNR=9.0						
KSRS				LR	LR	10 47 25.8	
	comp=Z,65nm,18.2s,MS3.7,baz=16,slow=33						
PPT	**Papeete**	**55.42**	**107**	*e*LR	LR	10 46 20.1	
	78nm,23.0s						
TBI	**Tubuai**	**56.15**	**114**	*e*LQ		10 44 13.7	
	408nm,33.0s						
TBI				*e*LR	LR	10 46 40.2	
	158nm,24.8s						
PETK	**Petropavlovsk-**	**59.38**	**2**	P	**P**	**10 30 06.6**	**+0.3**
	1.8nm,0.6s,mb4.2,baz=192,slow=11,SNR=6.8						
PETK				LR	LR	10 51 36.5	
	comp=Z,99nm,20.1s,MS3.9,baz=194,slow=32						
KMI	**Kunming**	**59.48**	**304**	P	**P**	**10 30 09.8**	**+2.2**
KMI				pP	pP	10 30 18.0	+5.7
KMI				S	**S**	**10 38 16.0**	**-0.8**
KMI				pmax	pmax		
	comp=Z,15nm,0.7s,mb5.1						
KMI				LR	LR		
	comp=Z,95nm,18.1s,MS4.0						
CMAR	**Chiang Mai Arr**	**60.30**	**295**	P	**P**	**10 30 13.7**	**+0.4**
	comp=Z,2.6nm,0.5s,mb4.5,baz=124,slow=5.3,SNR=9.4						
CMAR				LR	LR	10 55 07.3	
	comp=Z,66nm,20.0s,MS3.8,baz=195,slow=35						
SONM	**Songino Array**	**68.73**	**327**	P	**P**	**10 31 07.2**	**-0.7**
	comp=Z,0.9nm,0.5s,mb4.0,baz=136,slow=5.2,SNR=7.2						
SONM				LR	LR	11 03 03.7	
	comp=Z,86nm,18.5s,MS4.0,baz=321,slow=38						
SHL	**Shillong**	**68.78**	**300**	⇑*e*P	**P**	**10 31 10.0**	**+1.3**
TAPN	**Taplejung**	**72.88**	**301**	*e*P	**P**	**10 31 33.8**	**+0.2**
	comp=Z,39nm,0.8s,mb5.4						
ODAN	**Odare**	**73.01**	**300**	*e*P	**P**	**10 31 34.6**	**+0.2**
	comp=Z,111nm,0.7s,mb5.9						
RAMN	**Ramite**	**73.72**	**300**	*e*P	**P**	**10 31 38.5**	**0.0**
	comp=Z,32nm,0.6s,mb5.4						
JIRN	**Jiri**	**74.26**	**301**	*e*P	**P**	**10 31 42.0**	**+0.3**
	comp=Z,44nm,0.6s,mb5.5						
GUN	**Gumba**	**74.59**	**301**	*e*P	**P**	**10 31 43.9**	**+0.2**
	comp=Z,102nm,0.6s,mb5.9						
BILL	**Bilibino**	**74.76**	**4**	*e*P	**P**	**10 31 43.4**	**-0.4**
	comp=Z,4.8nm,0.6s,mb4.6						
PKI	**Pulchoki**	**74.90**	**301**	*e*P	**P**	**10 31 45.4**	**-0.1**
	comp=Z,27nm,0.6s,mb5.3						
KKN	**Kakani**	**75.07**	**301**	*e*P	**P**	**10 31 46.5**	**+0.1**
	comp=Z,66nm,0.7s,mb5.7						
DMN	**Daman**	**75.17**	**301**	*e*P	**P**	**10 31 47.3**	**+0.3**
	comp=Z,94nm,0.6s,mb5.9						
MK31	**Makanchi Array**	**82.81**	**319**	*e*P	**P**	**10 32 28.4**	**0.0**
MKAR	**Makanchi Array**	**82.81**	**319**	P	**P**	**10 32 28.8**	**+0.4**
	comp=Z,3.6nm,0.6s,mb4.6,baz=83,slow=7.6,SNR=46						
MKAR				LR	LR	11 11 00.3	
	comp=Z,59nm,18.7s,MS4.0,baz=8,slow=37						
ZALV	**Zalesovo Beam**	**83.57**	**326**	P	**P**	**10 32 30.7**	**-1.5**
	comp=Z,1.8nm,0.5s,mb4.4,baz=122,slow=5.6,SNR=4.2						
ZALV				LR	LR	11 07 29.6	
	comp=Z,34nm,18.6s,MS3.8,baz=241,slow=34						
MAW	**Mawson**	**84.79**	**203**	P	**P**	**10 32 37.9**	**-0.4**
	comp=Z,2.3nm,0.5s,mb4.5,baz=109,slow=6.3,SNR=20						
MAW				LR	LR	11 04 32.0	
	comp=Z,93nm,19.4s,MS4.2,baz=269,slow=32						
AAK	**Ala-Archa**	**87.17**	**313**	LR	LR	11 12 41.1	
	comp=Z,65nm,19.1s,MS4.1,baz=202,slow=36						
YBH	**Yreka Blue Hor**	**88.73**	**48**	P	**P**	**10 32 58.7**	**+0.7**
	comp=Z,2.6nm,1.0s,mb4.5,baz=297,slow=4.5,SNR=3.7						
NVAR	**Mina Array Bea**	**91.61**	**52**	P	**P**	**10 33 12.6**	**+1.1**
	comp=Z,1.3nm,0.7s,mb4.4,baz=255,slow=6.1,SNR=15						
RPN	**Rapa Nui**	**92.37**	**117**	LR	LR	11 09 22.4	
	comp=Z,12nm,18.9s,MS3.4,baz=346,slow=32						
YKA	**Yellowknife Ar**	**95.99**	**28**	P	**P**	**10 33 31.1**	**+0.1**
	comp=Z,0.3nm,0.5s,mb4.0,baz=265,slow=4.5,SNR=9.0						
YKA				PKKPbc	PKKPbc	10 50 17.3	-4.5
	comp=Z,0.2nm,0.6s,baz=77,slow=2.6,SNR=4.1						
YKA	**Yellowknife Ar**	**95.99**	**28**	P	**P**	**10 33 31.1**	**+0.1**
YKA				PKKPbc	PKKPbc	10 50 17.3	-4.5
PDAR	**Pinedale Array**	**98.55**	**48**	P	**P**	**10 33 41.6**	**-1.4**
	comp=Z,0.4nm,0.6s,mb4.1,baz=258,slow=3.6,SNR=3.2						
PDAR				LR	LR	11 15 15.2	
	comp=Z,80nm,19.2s,MS4.2,baz=274,slow=34						
LPAZ	**La Paz**	**131.97**	**119**	PKPdf		10 39 19.4	+0.7
	comp=Z,0.5nm,0.6s,baz=217,slow=4.7,SNR=3.7						
TORD	**Torodi Ar. Bea**	**152.61**	**286**	PKP	PKPdf	10 39 53.3	-1.5
	comp=Z,0.7nm,0.6s,baz=59,slow=1.3,SNR=5.7						
TORD				PKPbc	PKPbc	10 40 00.7	-1.1
	comp=Z,1.7nm,0.4s,baz=86,slow=1.9,SNR=34						
TORD				PKPab	PKPab	10 40 09.1	-3.3
	comp=Z,2.9nm,0.7s,baz=76,slow=3.3,SNR=8.0						
TORD	**Torodi Ar. Bea**	**152.61**	**286**	PKP	PKPdf	10 39 53.4	-1.5
TORD				PKPbc	PKPbc	10 40 00.7	-1.1
TORD				PKPab	PKPab	10 40 09.1	-3.3

*DDA **25** 10:40:52.8, 36.°76N×26.°52E, h8km±4km, Md3.2*
*NEIC **25** 10:40:55.1, 36.°84N×26.°59E, h5km, MD3.4(ATH), After ATH.*
*ATH **25** 10:40:55.1, 36.°84N×26.°59E, h5km, MD3.4/6*
*CSEM **25** 10:40:55.4±0.1, 36.°86N×26.°60E, h5km, ML3.6/2, Error ellipse: s-maj=4.0km s-min=2.9km az=141.0*
*ISK **25** 10:40:56.3, 36.°84N×26.°67E, h20km, MD3.3*
*THE **25** 10:40:56.0, 36.°78N×26.°59E, h0km±1km, ML3.6/2, Error ellipse: s-maj=1.5km s-min=0.9km az=247.0*
ISC 25 10:40:55.6±0.4, 36.°86N±0.°02×26.°59E±0.°02, h5km±3km, n86, σ1s25/133, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIS1	**Nisyros Isl.**	**0.54**	**118**	P	**Pg**	**10 41 06.2**	**+0.3**
NIS1				S	**Sg**	**10 41 13.6**	**+0.8**
NIS1	**Nisyros Isl.**	**0.54**	**118**	P	**Pg**	**10 41 06.2**	**+0.3**
NIS1				S	**Sg**	**10 41 13.6**	**+0.8**
BDRM	**Kayabasi**	**0.71**	**73**	*i* P	**Pg**	**10 41 09.5**	**+0.3**
BDRM				*i* S	**Sg**	**10 41 19.7**	**+1.1**
BDRM	**Kayabasi**	**0.71**	**73**	*i* P	**Pg**	**10 41 09.5**	**+0.2**
DAT	**Datca**	**0.80**	**99**	*e*PG	**Pg**	**10 41 11.3**	**+0.3**
DAT				*e*SG	**Sg**	**10 41 22.2**	**+0.8**
DAT	**Datca**	**0.80**	**99**	*e*Pg	**Pg**	**10 41 11.3**	**+0.3**
DAT				*e*Sg	**Sg**	**10 41 22.2**	**+0.8**
SMG	**Samos**	**0.87**	**13**	*e*Pg	**Pg**	**10 41 11.8**	**-0.5**
SMG				*e*Sb	**Sb**	**10 41 24.0**	**-1.2**
SMG	**Samos**	**0.87**	**13**	*e*PG	**Pg**	**10 41 11.8**	**-0.5**
SMG				*e*SB	**Sb**	**10 41 24.0**	**-1.2**
SMG	**Samos**	**0.87**	**13**	*e*Pg	**Pg**	**10 41 11.8**	**-0.5**
SMG				*e*Sb	**Sb**	**10 41 24.0**	**-1.2**
APE	**Apeiranthos**	**0.88**	**284**	*e*Pb	**Pb**	**10 41 12.3**	**-0.9**
APE				*e*Sb	**Sb**	**10 41 25.2**	**0.0**
APE	**Apeiranthos**	**0.88**	**284**	P	**Pg**	**10 41 12.2**	**-0.1**
APE				S	**Sg**	**10 41 26.2**	**+2.5**
APE	**Apeiranthos**	**0.88**	**284**	*e*PB	**Pb**	**10 41 12.3**	**-0.9**
APE				*e*SB	**Sb**	**10 41 25.2**	**0.0**
APE	**Apeiranthos**	**0.88**	**284**	P	**Pg**	**10 41 12.2**	**-0.1**
APE				*e*Sb	**Sb**	**10 41 25.2**	**0.0**
GCAM	**G?zelcaml?**	**0.98**	**31**	*i* P	**Pg**	**10 41 13.9**	**-0.6**
GCAM				*i* S	**Sg**	**10 41 28.9**	**+1.6**
GCAM	**G?zelcaml?**	**0.98**	**31**	*i* P	**Pg**	**10 41 13.9**	**-0.6**
GCAM				*i* S	**Sg**	**10 41 28.9**	**+1.7**
THR2	**Thira island,**	**1.02**	**247**	P	**Pg**	**10 41 14.8**	**-0.2**
THR2	**Thira island,**	**1.02**	**247**	P	**Pg**	**10 41 14.8**	**-0.2**
THR1	**Thera Island**	**1.03**	**242**	P	**Pg**	**10 41 15.0**	**-0.3**
THR1				S	**Sg**	**10 41 30.2**	**+1.5**
THR1	**Thera Island**	**1.03**	**242**	P	**Pg**	**10 41 15.0**	**-0.3**
THR1				S	**Sg**	**10 41 30.2**	**+1.5**
MLSB	**Milas**	**1.04**	**65**	*e*PG	**Pg**	**10 41 15.6**	**0.0**
MLSB				*e*SG	**Sg**	**10 41 29.7**	**+0.5**
MLSB	**Milas**	**1.04**	**65**	*e*P

KARN	Karanos	2.61	237	P	Pn	10 41 37.6	-0.7
KARN	Karanos	2.61	237	*e*Pn	Pn	10 41 40.4	+2.1
KARN				S	Sn	10 42 10.3	-0.1
ELL	Elmali	2.67	91	*e*PN	Pn	10 41 38.3	-0.8
ELL	Elmali	2.67	91	*e*Pn	Pn	10 41 38.3	-0.8
HDMB	Hadim	4.72	87	*e*PN	Pn	10 42 07.4	0.0
HDMB	Hadim	4.72	87	*e*Pn	Pn	10 42 07.4	-0.1

TAP 25 10:45:08.1, 22.°15N×121.°64E, h116km, ML3.6, 2C, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	Lan-yu	0.14	218	*i* P	Pn	10 45 24.4	+0.2
	baz=223						
LAY				S	Sn	10 45 36.1	0.0
	baz=223						
TAW	Tawu	0.72	287	*e*P	Pn	10 45 27.8	+0.5
	baz=290						
TAW				*e*S	Sn	10 45 41.9	+0.2
	baz=290						
TSEB	Hengchuen, Pin	0.73	251	*e*P	Pn	10 45 28.4	+1.1
	baz=256						
TSEB				S	Sn	10 45 43.8	+2.0
	baz=256						
EAST	Anshuo	0.77	288	P	Pn	10 45 28.0	+0.3
	baz=293						
EAST				*e*S	Sn	10 45 43.0	+0.6
	baz=293						
ECL	Taimali	0.78	305	P	Pn	10 45 27.7	0.0
	baz=313						
ECL				*e*S	Sn	10 45 42.2	-0.4
	baz=313						
TWK1	Hengchun	0.80	256	⇑P	Pn	10 45 28.8	+0.8
	baz=257						
TWK1				*e*S	Sn	10 45 43.0	+0.1
	baz=257						
TWG	Pinlang	0.85	322	*i* P	Pn	10 45 28.5	+0.1
	baz=320						
TWG				S	Sn	10 45 43.0	-0.8
	baz=320						
SCZT	Fangliau	0.97	284	*i* P	Pn	10 45 29.9	+0.4
	baz=285						
SCZT				*e*S	Sn	10 45 45.3	-0.5
	baz=285						
SSD	Sandimen	1.11	303	⇑*i* P	Pn	10 45 31.6	+0.6
	baz=297						
SSD				S	Sn	10 45 48.0	-0.2
	baz=297						
ELDTW	Lidau	1.19	331	*e*P	Pn	10 45 32.3	+0.5
	baz=334						
ELDTW				*e*S	Sn	10 45 51.5	+1.8
	baz=334						
TWF1	Yuli	1.24	345	*e*P	Pn	10 45 32.6	+0.3
	baz=339						
TWF1				*e*S	Sn	10 45 50.5	-0.3
	baz=339						
TWM1	Shoushan	1.31	301	*e*P	Pn	10 45 34.1	+1.0
	baz=304						
TWM1				*e*S	Sn	10 45 54.1	+1.9
	baz=304						
SGST	Jiashian	1.35	314	P	Pn	10 45 34.2	+0.6
	baz=309						
SGST				*e*S	Sn	10 45 53.0	+0.1
	baz=309						
WTP	Ta-pu	1.45	319	P	Pn	10 45 35.3	+0.6
	baz=314						
WTP				*e*S	Sn	10 45 54.9	0.0
	baz=314						
CHN1	Nanshi	1.46	315	*i* P	Pn	10 45 35.5	+0.7
	baz=310						
CHN1				S	Sn	10 45 54.9	-0.2
	baz=310						
CHN4	Tsaushan	1.54	321	*e*P	Pn	10 45 36.3	+0.5
	baz=324						
CHN4				*e*S	Sn	10 45 56.9	0.0
	baz=324						
TWK	Hsinying	1.54	317	*e*P	Pn	10 45 36.3	+0.5
	baz=312						
ALS	Alishan	1.56	331	P	Pn	10 45 36.6	+0.6
	baz=324						
ESL	Shilin	1.67	353	*e*P	Pn	10 45 36.8	-0.6
	baz=350						
ESL				*e*S	Sn	10 45 58.3	-1.3
	baz=350						
CHN5	Tsauling	1.69	329	P	Pn	10 45 38.0	+0.4
	baz=323						
CHN5				*e*S	Sn	10 46 00.2	0.0
	baz=323						
SMLT	Sun Moon Lake	1.86	339	*e*P	Pn	10 45 39.7	0.0
	baz=333						
SMLT				*e*S	Sn	10 46 04.1	+0.4
	baz=333						
TYC	Yuchr	1.89	338	P	Pn	10 45 40.3	+0.2
	baz=332						
TYC				*e*S	Sn	10 46 03.2	-1.3
	baz=332						
WHF	Hehuan Shan	2.02	350	P	Pn	10 45 42.6	+0.9
	baz=357						
ENTT	Nioudou	2.48	358	*e*P	Pn	10 45 48.2	+0.7
	baz=360						
NSK	Sanguang	2.53	354	*e*P	Pn	10 45 49.1	+0.9
	baz=356						

ATH ***25*** *10:56:29.4, 35.°77N×26.°48E, h31km±1km, MD3.3/5*
THE ***25*** *10:56:29.5, 35.°74N×26.°54E, h2km±2km, ML3.5/1, Error ellipse: s-maj=2.8km s-min=1.0km az=100.0*
NEIC ***25*** *10:56:29.4, 35.°77N×26.°48E, h31km, MD3.3(ATH), After ATH.*
CSEM ***25*** *10:56:29.7±0.2, 35.°74N×26.°51E, h15km, MD3.3, Error ellipse: s-maj=5.0km s-min=3.8km az=136.0*
ISCJB ***25*** *10:56:30.3±0.5, 35.°75N±0.°03×26.°52E±0.°04, h20km±7km, Error ellipse: s-maj=6.6km s-min=4.3km az=139.4*
ISC 25 10:56:29.7±0.5, 35.°76N±0.°03×26.°51E±0.°04, h12km±4km, n53, σ0.°86/72, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.57	112	*e*Pn	Pg	10 56 42.1	+1.3
KARP	Karpathos	0.57	112	*e*PN	Pg	10 56 42.1	+1.3
KARP	Karpathos	0.57	112	*e*Pn	Pg	10 56 42.1	+1.3
ZKR	Zakros	0.69	201	*e*Pn	Pg	10 56 43.1	0.0
ZKR	Zakros	0.69	201	P	Pg	10 56 42.5	-0.6
ZKR				S	Sg	10 56 52.6	+0.5
ZKR	Zakros	0.69	201	*e*PN	Pg	10 56 43.1	0.0
ZKR	Zakros	0.69	201	P	Pg	10 56 42.5	-0.6
ZKR	Zakros	0.69	201	*e*Pn	Pg	10 56 43.1	0.0
ZKR				S	Sg	10 56 52.6	+0.5
NPS	Neapolis	0.89	236	*e*Pn	Pg	10 56 46.2	-0.6
NPS	Neapolis	0.89	236	*e*PN	Pg	10 56 46.2	-0.6
NPS	Neapolis	0.89	236	*e*Pn	Pg	10 56 46.2	-0.6
NIS1	Nisyros Isl.	1.00	32	P	Pg	10 56 47.9	-1.1
NIS1				S	Sg	10 57 03.0	+1.0
NIS1	Nisyros Isl.	1.00	32	P	Pg	10 56 47.9	-1.1
NIS1				S	Sg	10 57 03.0	+1.0
LAST	Lasithi	1.03	235	*e*Pn	Pg	10 56 49.6	0.0
LAST				*e*Sn	Sg	10 57 02.8	-0.3
LAST	Lasithi	1.03	235	P	Pg	10 56 48.4	-1.2
LAST				S	Sg	10 57 02.9	-0.2
LAST	Lasithi	1.03	235	*e*PN	Pg	10 56 49.6	0.0
LAST				*e*SN	Sg	10 57 02.8	-0.3
LAST	Lasithi	1.03	235	P	Pg	10 56 48.4	-1.2
LAST	Lasithi	1.03	235	*e*Pn	Pg	10 56 49.6	0.0
LAST				S	Sg	10 57 02.9	-0.2
THR1	Thera Island	1.05	306	P	Pg	10 56 50.7	+0.8
THR1				S	Sg	10 57 04.9	+1.3
THR1	Thera Island	1.05	306	P	Pg	10 56 50.7	+0.8
THR1				S	Sg	10 57 04.9	+1.3
XRY	Khrisi	1.11	217	*e*Pn	Pg	10 56 51.1	+0.1
XRY	Khrisi	1.11	217	*e*PN	Pg	10 56 51.1	+0.1
XRY	Khrisi	1.11	217	*e*Pn	Pg	10 56 51.1	+0.1
THR3	Thira Island,	1.11	306	P	Pg	10 56 50.4	-0.7
THR3	Thira Island,	1.11	306	P	Pg	10 56 50.4	-0.7
THR5	Thira Island,	1.15	305	P	Pb	10 56 50.8	-0.7
THR5	Thira Island,	1.15	305	P	Pb	10 56 50.8	-0.7
ARG	Arkhangelos	1.39	70	*e*Pn	Pn	10 56 54.8	-0.1
ARG	Arkhangelos	1.39	70	P	Pn	10 56 54.9	0.0
ARG				S	Sn	10 57 12.9	-0.2
ARG	Arkhangelos	1.39	70	*e*PN	Pn	10 56 54.8	-0.1
ARG	Arkhangelos	1.39	70	*e*Pn	Pn	10 56 54.8	-0.1
ARG				S	Sn	10 57 12.9	-0.2
IDI	Anoyia	1.41	251	*e*Pn	Pn	10 56 54.3	-0.8
IDI				*e*Sn	Sn	10 57 13.1	-0.5
IDI	Anoyia	1.41	251	*e*PN	Pn	10 56 54.3	-0.8
IDI				*e*SN	Sn	10 57 13.1	-0.5
IDI	Anoyia	1.41	251	*e*Pn	Pn	10 56 54.3	-0.8
IDI				*e*Sn	Sn	10 57 13.1	-0.5
APE	Apeiranthos	1.53	329	*e*Pn	Pn	10 56 56.3	-0.5
APE	Apeiranthos	1.53	329	P	Pn	10 56 56.1	-0.7
APE	Apeiranthos	1.53	329	*e*PN	Pn	10 56 56.3	-0.5
APE	Apeiranthos	1.53	329	*e*Pn	Pn	10 56 56.3	-0.5
SIVA	Sivas	1.58	242	*e*Pn	Pn	10 56 57.6	+0.1
SIVA	Sivas	1.58	242	P	Pn	10 56 57.6	+0.1
SIVA				S	Sn	10 57 19.2	+1.4
SIVA	Sivas	1.58	242	*e*PN	Pn	10 56 57.6	+0.1
SIVA	Sivas	1.58	242	P	Pn	10 56 57.6	+0.1
SIVA				S	Sn	10 57 19.2	+1.4
KARN	Karanos	2.15	261	P	Pn	10 57 05.6	+0.3
KARN				S	Sn	10 57 33.6	+1.7
KARN	Karanos	2.15	261	*e*PB	Pb	10 57 05.8	-2.7
KARN	Karanos	2.15	261	P	Pn	10 57 05.6	+0.3
KARN				S	Sn	10 57 33.6	+1.7
GVD	Gavdhos	2.19	246	*e*Pn	Pn	10 57 05.7	-0.2
GVD	Gavdhos	2.19	246	*e*PN	Pn	10 57 05.7	-0.2
GVD	Gavdhos	2.19	246	*e*Pn	Pn	10 57 05.7	-0.2
CHOS	Chios island	2.65	352	P	Pn	10 57 12.2	0.0
CHOS	Chios island	2.65	352	P	Pn	10 57 12.2	0.0
KYTH	Kithira	2.87	281	*e*Pn	Pn	10 57 15.2	0.0
KYTH	Kithira	2.87	281	*e*PN	Pn	10 57 15.2	0.0
KYTH	Kithira	2.87	281	*e*Pn	Pn	10 57 15.2	0.0

DDA 25 10:56:33.1, 37.°31N×27.°59E, h7km±5km, Md2.1, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	Kayabasi	0.27	205	*i* P	Pg	10 56 37.9	-0.5
BDRM				*i* S	Sg	10 56 43.9	+1.8
AYDN	Tasoluk	0.42	34	*i* P	Pg	10 56 41.3	0.0
AYDN				*i* S	Sg	10 56 48.5	+1.7

IDC ***25*** *11:01:18.4±1.6, 0.°96N×96.°83E, h0km, mb3.5/7, mb1 3.6/8, mb1mx3.5/23, mbtmp3.5/8, ML3.2/1, MS3.1/1, Ms1 3.1/1, ms1mx2.5/25, Error ellipse: s-maj=46.5km s-min=20.4km az=57.0*
DJA ***25*** *11:01:19, 1.°21N×96.°78E, h4km, MLv4.3/4*
ISCJB ***25*** *11:01:21.6±0.9, 1.°04N±0.°10×96.°89E±0.°07, h33km, mb3.5/8, Error ellipse: s-maj=14.4km s-min=9.9km az=17.3*
NEIC ***25*** *11:01:25.2±0.8, 1.°21N×97.°25E, h35km, mb3.9/1, Error ellipse: s-maj=21.9km s-min=11.7km az=58.0*
ISC 25 11:01:24.3±0.9, 1.°12N±0.°10×96.°99E±0.°08, h35km, n18, σ1.°35/19, mb3.5/8, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.61	73	P	Pn	11 01 33.5	-3.0
GSI				S	Sn	11 01 46.3	+1.1
TPTI		2.14	5	P	Pn	11 01 55.4	-2.1
PSI	Prapat	2.56	49	Pn	Pn	11 02 05.6	+2.4
	3.9nm,0.3s,baz=158,slow=13,SNR=9.4						
PSI				LR	LR	11 03 14.8	
	comp=Z,360nm,19.7s,baz=268,slow=43						
MNSI	Mandailing Nat	2.61	97	P	Pn	11 02 02.7	-1.3
MNSI				S	Sn	11 02 45.0	+11
PPI	Padang Panjang	3.75	115	P	Pn	11 02 23.1	+3.4
PDSI	Padang	4.01	120	P	Px	11 02 48.1	
KULM	Kulim	5.53	41	*e*Pn	Pn	11 02 41.6	-2.5
	32nm,0.8s						
WRA	Warramunga Arr	42.17	122	P	P	11 09 13.3	-0.5
	0.5nm,0.7s,mb3.3,baz=301,slow=9.1,SNR=3.7						
WRA	Warramunga Arr	42.17	122	P	P	11 09 13.3	-0.5
ASAR	Alice Springs	43.51	127	P	P	11 09 24.6	-0.1
	0.3nm,0.9s,mb3.0,baz=304,slow=9.4,SNR=2.8						
KSRS	Korea Array	46.03	35	P	P	11 09 43.9	-0.7
	1.2nm,0.8s,mb3.9,baz=223,slow=8.2,SNR=3.2						
SONM	Songino Array	47.24	9	P	P	11 09 54.0	+0.2
	0.7nm,0.9s,mb3.6,baz=188,slow=8.5,SNR=2.4						
MK31	Makanchi Array	47.27	346	*e*P	P	11 09 55.4	+1.4
MKAR	Makanchi Array	47.27	346	P	P	11 09 55.2	+1.2
	0.3nm,0.4s,mb3.5,baz=165,slow=7.8,SNR=6.0						
MKAR	Makanchi Array	47.27	346	P	P	11 09 55.2	+1.2
KURK	Kurchatov	51.82	345	P	P	11 10 28.5	-0.1
	0.2nm,0.3s,mb3.5,baz=169,slow=6.5,SNR=2.2						
ZALV	Zalesovo Beam	53.60	351	P	P	11 10 42.4	+0.6
	0.3nm,0.3s,mb3.8,baz=156,slow=8.6,SNR=2.3						
TARA	Tarawa	75.91	89	*e*P	P	11 13 07.7	-0.4
	1.0nm,0.7s,mb3.9						

IDC ***25*** *11:07:46.5±1.5, 6.°58S×154.°83E, h0km, mb3.9/5, mb1 4.2/5, mb1mx3.9/16, mbtmp3.9/5, MS3.6/3, Ms1 3.6/3, ms1mx3.0/17, Error ellipse: s-maj=55.0km s-min=29.1km az=130.0*
ISCJB ***25*** *11:07:50.7±1.4, 6.°5S±0.°2×154.°7E±0.°2, h33km, mb4.4/8, MS3.6/3, Error ellipse: s-maj=36.2km s-min=21.7km az=30.5*
ISC 25 11:07:52.4±1.3, 6.°6S±0.°2×154.°7E±0.°2, h35km, n18, σ0.°51/14, mb4.4/8, MS3.6/3, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.83	234	P	P	11 13 02.3	-0.2
	3.2nm,0.9s,mb3.8,baz=55,slow=9.6,SNR=15						
ASAR	Alice Springs	26.25	228	P	P	11 13 24.5	+0.1
	1.0nm,0.8s,mb3.4,baz=60,slow=8.8,SNR=7.0						
STKA	Stephens Creek	27.99	204	LR	LR	11 24 45.8	
	comp=Z,160nm,20.0s,MS3.6,baz=24,slow=36						
PETK	Petropavlovsk-	59.53	2	LR	LR	11 40 44.9	
	comp=Z,20nm,18.9s,MS3.3,baz=341,slow=33						
CMAR	Chiang Mai Arr	60.38	295	P	P	11 17 60.0	+1.4
	1.8nm,0.9s,mb4.1,baz=117,slow=4.8,SNR=5.5						
TAPN	Taplejung	72.97	301	*e*P	P	11 19 18.9	+0.1
ODAN	Odare	73.11	301	*e*P	P	11 19 19.6	0.0
	33nm,0.8s,mb5.3						
RAMN	Ramite	73.81	300	*e*P	P	11 19 23.3	-0.5
JIRN	Jiri	74.36	301	*e*P	P	11 19 27.0	+0.1
GUN	Gumba	74.69	301	*e*P	P	11 19 28.8	-0.1
	32nm,0.7s,mb5.4						
PKI	Pulchoki	75.00	301	*e*P	P	11 19 30.3	-0.4
PKIN	Phulchoki	75.01	301	*e*P	P	11 19 31.1	+0.4
KKN	Kakani	75.17	301	*e*P	P	11 19 31.4	-0.2
DMN	Daman	75.27	301	*e*P	P	11 19 32.3	+0.1
	26nm,0.7s,mb5.2						
MKAR	Makanchi Array	82.93	319	P	P	11 20 12.7	-1.0
	0.7nm,0.7s,mb3.8,baz=84,slow=7.4,SNR=9.2						
NVAR	Mina Array Bea	91.68	52	P	P	11 20 56.7	+0.3
	1.0nm,0.8s,mb4.2,baz=248,slow=7.0,SNR=6.1						
PDAR	Pinedale Array	98.62	48	LR	LR	12 07 55.1	
	comp=Z,37nm,18.1s,MS3.9,baz=259,slow=37						
TORD	Torodi Ar. Bea	152.67	286	PKPbc	PKPbc	11 27 45.9	-0.5
	1.8nm,0.9s,baz=87,slow=2.4,SNR=8.3						
TORD				PKPab	PKPab	11 27 55.9	-1.3
	1.1nm,0.7s,baz=67,slow=2.7,SNR=4.9						

IDC ***25*** *11:09:08.6±1.9, 17.°87S×178.°43W, h541km±22km, mb3.6/7, mb1 3.8/8, mb1mx3.4/18, mbtmp3.7/8, Error ellipse: s-maj=45.3km s-min=16.9km az=154.0*
ISCJB ***25*** *11:09:08.3±0.9, 17.°9S±0.°2×178.°3W±0.°1, h570km±13km, mb4.2/12, Error ellipse: s-maj=29.0km s-min=18.5km az=161.7*
NEIC ***25*** *11:09:09.0±0.8, 17.°96S×178.°29W, h558km±9km, mb4.3/3, Error ellipse: s-maj=25.0km s-min=13.8km az=153.0*
ISC 25 11:09:09.1±0.9, 17.°9S±0.°2×178.°3W±0.°1, h562km±12km, n27, σ0.°81/21, mb4.2/12, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.49	272	*e*Pn	P	11 10 29.1	+0.9
AFI	Afiamalu	7.42	59	P	P	11 11 00.9	-0.7
	5.7nm,0.3s,baz=84,slow=7.1,SNR=9.2						
DZM	Mont Dzumac	14.94	251	*e*Pn	P	11 12 17.8	0.0
URZ	Urewera	20.69	190	*e*P	P	11 13 10.1	-0.6
	59nm,1.3s						
EIDS	Eidsvold	29.38	250	*e*P	P	11 14 26.9	-0.7
ARMA	Armidale	30.04	240	*e*P	P	11 14 34.2	+0.9
RMQ	Roma	31.61	248	*e*P	P	11 14 47.0	+0.2
	8.2nm,0.6s,mb4.4						
CTA	Charters Tower	33.56	260	P	P	11 15 02.9	-0.4
	5.1nm,0.6s,mb4.2,baz=65,slow=11,SNR=5.3						
STKA	Stephens Creek	38.73	241	*e*P	P	11 15 46.8	+1.0
	9.9nm,0.6s,mb4.5						
STKA	Stephens Creek	38.73	241	P	P	11 15 46.9	+1.1
	11nm,0.5s,mb4.7,baz=91,slow=9.6,SNR=35						
STKA	Stephens Creek	38.73	241	*e*P	P	11 15 46.7	+0.9
	1.8nm,0.5s,mb3.9						
BBOO	Buckleboo	43.51	241	*e*P	P	11 16 24.1	+0.5
	12nm,0.3s,mb4.9						
WRAB	Tennant Creek	44.73	260	*e*P	P	11 16 32.0	-1.2
	4.9nm,0.6s,mb4.2						
WRA	Warramunga Arr	44.74	260	P	P	11 16 32.4	-0.9
	4.6nm,0.7s,mb4.1,baz=92,slow=7.1,SNR=58						
WRA				PcP	PcP	11 18 04.1	+0.7
	1.4nm,0.8s,baz=92,slow=3.6,SNR=5.1						
ASAR	Alice Springs	44.90	254	P	P	11 16 34.4	-0.1
	40nm,0.6s,mb5.1,baz=89,slow=7.8,SNR=767						
ASAR				PcP	PcP	11 18 04.7	+0.8
	1.5nm,0.4s,baz=102,slow=3.9,SNR=6.5						
KAKA	Kakadu	47.69	269	*e*P	P	11 16 55.2	-0.5
	5.8nm,0.4s,mb4.5						
KNA	Kununurra	50.58	264	*e*P	P	11 17 16.4	-0.6
	6.4nm,0.4s,mb4.3						
MAW	Mawson	83.91	200	P	P	11 20 40.1	+0.2
	1.5nm,0.5s,mb3.8,baz=71,slow=10,SNR=7.5						
TXAR	Lajitas Array	85.89	58	P	P	11 20 53.8	+3.5
	0.3nm,0.7s,mb3.0,baz=226,slow=6.8,SNR=4.5						
TXAR	Lajitas Array	85.89	58	P	P	11 20 53.8	+3.5
CMAR	Chiang Mai Arr	88.98	290	P	P	11 21 06.3	+1.4
	0.8nm,0.3s,mb4.0,baz=117,slow=4.2,SNR=4.9						
MKAR	Makanchi Array	109.20	314	PKiKP	PKiKP	11 26 35.2	-0.3
	0.4nm,0.5s,baz=80,slow=1.5,SNR=5.4						
BVAR	Borovoye Array	116.90	321	PKP	PKPdf	11 26 50.2	+0.2
	0.5nm,0.4s,baz=331,slow=1.8,SNR=4.3						
BUR08	Bucovina Ar. S	144.64	332	*e*PKPdf	PKPdf	11 27 44.3	+2.3
BR131	Keskin Array S	144.85	315	*e*PKPdf	PKPdf	11 27 44.2	+1.5
CLL	Collm	145.47	347	*e*PKPbc	PKPbc	11 27 46.0	+1.3
MMAI	Mount Meron Ar	146.23	303	PKPbc	PKPbc	11 27 48.9	+1.5
	3.4nm,0.5s,baz=75,slow=3.5,SNR=5.2						

ISCJB ***25*** *11:37:11.6±0.6, 52.°47S±0.°08×13.°3E±0.°2, h10km, mb4.2/9, MS3.7/4, Error ellipse: s-maj=20.0km s-min=11.6km az=1.3*
IDC ***25*** *11:37:12.3±0.7, 52.°45S×13.°29E, h0km, mb4.3/10, mb1 4.4/10, mb1mx4.2/18, mbtmp4.3/10, MS3.7/4, Ms1 3.7/4, ms1mx3.4/16, Error ellipse: s-maj=23.2km s-min=17.7km az=95.0*
NEIC ***25*** *11:37:13.8±0.5, 52.°45S×13.°31E, h10km, mb4.0/1, Error ellipse: s-maj=19.4km s-min=13.2km az=94.0*
ISC 25 11:37:13.7±0.6, 52.°48S±0.°08×13.°4E±0.°2, h10km, n22, σ1.°05/15, mb4.2/9, MS3.7/4, 1C, Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SYO	Syowa Base	20.66	153	⇑*e*P	P	11 41 52.0	-1.2
VNA1	Neumayer--Stat	20.71	200	*e*	P	11 41 54.0	+0.3
VNA1				*e*		11 42 02.5	
SUR	Sutherland	20.80	18	P	P	11 41 55.5	+0.5
	12nm,0.9s,baz=205,slow=3.8,SNR=5.9						
BOSA	Boshof	25.42	25	P	P	11 42 42.3	+0.9
	2.3nm,0.9s,mb3.7,baz=192,slow=14,SNR=2.6						
BOSA				LR	LR	11 51 03.5	
	comp=Z,122nm,18.3s,MS3.5,baz=37,slow=33						
BOSA	Boshof	25.42	25	P	P	11 42 36.9	-4.5
BOSA				P		11 42 42.3	
BOSA				LR	LR	11 51 03.5	
MAW	Mawson	28.00	142	P	P	11 43 03.8	-0.5
	3.8nm,0.9s,mb4.0,baz=264,slow=10,SNR=5.0						
LBTB	Lobatse	28.95	23	P	P	11 43 13.8	+0.7
	0.8nm,0.4s,mb3.8,baz=239,slow=12,SNR=2.7						
LBTB				LR	LR	11 52 48.5	
	comp=Z,110nm,19.7s,MS3.5,baz=20,slow=32						
LBTB	Lobatse	28.95	23	P	P	11 43 13.8	+0.7
LBTB				LR	LR	11 52 48.5	
QSPA	South Pole Qui	37.76	180	P	P	11 44 29.9	+0.7
	5.3nm,0.7s,mb4.4,baz=228,slow=4.1,SNR=30						
CPUP	Villa Florida	57.97	268	P	P	11 47 05.5	-0.7
	3.7nm,0.7s,mb4.5,baz=118,slow=7.1,SNR=14						
TOA0	Torodi Ar. Sit	66.13	348	*e*P	P	11 47 59.7	-1.3
TORD	Torodi Ar. Bea	66.13	348	P	P	11 47 59.5	-1.5
	2.6nm,0.9s,mb4.2,baz=186,slow=6.6,SNR=9.1						
LPAZ	La Paz	72.10	266	P	P	11 48 39.9	+1.6
	6.6nm,0.9s,mb4.6,baz=133,slow=3.6,SNR=28						
MMAI	Mount Meron Ar	87.28	18	LR	LR	12 29 05.8	
	comp=Z,42nm,18.5s,MS3.9,baz=180,slow=36						
ASAR	Alice Springs	88.23	128	P	P	11 50 06.9	+1.7
	2.3nm,0.7s,mb4.5,baz=204,slow=5.3,SNR=14						
WRA	Warramunga Arr	91.59	126	P	P	11 50 20.2	-0.7
	0.6nm,1.0s,mb3.9,baz=209,slow=3.8,SNR=3.6						
MLR	Muntele Rosu	98.19	9	LR	LR	12 37 32.0	
	comp=Z,62nm,18.7s,MS4.1,baz=276,slow=37						
TPUB	Ta-pu	118.55	88	*e*PKPdf	PKPdf	11 55 56.9	-4.6
TXAR	Lajitas Array	128.93	269	PKP	PKPdf	11 56 23.2	+2.0
	0.1nm,0.6s,baz=169,slow=1.3,SNR=3.4						
TIXI	Tiksi	146.49	31	*e*PKPdf	PKPdf	11 56 52.3	+0.3
WVOR	Wild Horse Val	146.60	272	*e*PKPbc	PKPbc	11 56 55.7	+1.0
YKA	Yellowknife Ar	151.10	311	PKPbc	PKPbc	11 57 05.0	-0.5
	4.2nm,0.7s,baz=93,slow=2.5,SNR=49						

CSEM ***25*** *11:52:47.7±0.2, 39.°56N×36.°85E, h5km, MD3.1, Error ellipse: s-maj=6.4km s-min=5.5km az=64.0*
DDA ***25*** *11:52:47.1, 39.°54N×37.°01E, h6km±4km, Md3.1*
ISK ***25*** *11:52:47.3, 39.°55N×36.°82E, h8km, MD3.1*
ISCJB ***25*** *11:52:47.9±0.6, 39.°56N±0.°03×36.°85E±0.°04, h10km±6km, Error ellipse: s-maj=5.3km s-min=5.0km az=147.2*
ISC 25 11:52:48.7±0.6, 39.°56N±0.°03×36.°88E±0.°04, h13km±6km, n31, σ1.°08/41, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVSK	Karacayir	0.37	15	PG	Pg	11 52 55.0	-1.1
SVSK				*e*SG	Sg	11 53 01.7	+0.6
SVSK	Karacayir	0.37	15	*i* Pg	Pg	11 52 55.0	-1.1

Error ellipse: s-maj=4.3km s-min=3.8km az=169.0

ISC 25 12:04:15.1±0.4,37°02N±0°02×29°24E±0°03,h12km±3km, n74,σ1§21/96,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.25**	**57**	PG	**Pg**	**12 04 19.2**	**-1.1**
GLHS				*e*SG	**Sg**	**12 04 25.3**	**+1.4**
GLHS	**Glhisar (BURDU**	**0.25**	**57**	*i* Pg	**Pg**	**12 04 19.3**	**-1.0**
GOLH	**Golhisar**	**0.34**	**50**	*i* P	**Pg**	**12 04 21.2**	**-0.7**
GOLH				*i* S	**Sg**	**12 04 28.2**	**+1.7**
GOLH	**Golhisar**	**0.34**	**50**	*i* P	**Pg**	**12 04 21.2**	**-0.7**
GOLH				*i* S	**Sg**	**12 04 28.2**	**+1.7**
TURN	**Turunc**	**0.53**	**254**	*i* P	**Pg**	**12 04 28.2**	**+2.8**
TURN				*i* S	**Sg**	**12 04 40.5**	**+8.1**
TURN	**Turunc**	**0.53**	**254**	*i* P	**Pg**	**12 04 28.2**	**+2.8**
ELL	**Elmali**	**0.60**	**117**	*e*PG	**Pg**	**12 04 25.2**	**-1.6**
ELL				*e*SG	**Sg**	**12 04 35.4**	**+0.7**
ELL	**Elmali**	**0.60**	**117**	*e*Pg	**Pg**	**12 04 25.3**	**-1.5**
ELL				*e*Sg	**Sg**	**12 04 35.4**	**+0.6**
DNZL	**Cakiroluk**	**0.69**	**347**	*i* P	**Pg**	**12 04 26.5**	**-1.9**
DNZL				*i* S	**Sg**	**12 04 38.3**	**+0.9**
DNZL	**Cakiroluk**	**0.69**	**347**	*i* P	**Pg**	**12 04 26.5**	**-1.9**
DNZL				*i* S	**Sg**	**12 04 38.3**	**+0.9**
DENT	**Denizli**	**0.75**	**348**	*e*PG	**Pg**	**12 04 28.3**	**-1.3**
DENT				*e*SG	**Sg**	**12 04 40.6**	**+1.1**
DENT	**Denizli**	**0.75**	**348**	*e*Pg	**Pg**	**12 04 28.3**	**-1.3**
YER	**Yerkesik**	**0.77**	**279**	*e*PG	**Pg**	**12 04 28.3**	**-1.7**
YER				*e*SG	**Sg**	**12 04 39.6**	**-0.5**
YER	**Yerkesik**	**0.77**	**279**	*e*Pg	**Pg**	**12 04 28.3**	**-1.7**
YER				*e*Sg	**Sg**	**12 04 39.6**	**-0.5**
AKAS	**Kas**	**0.84**	**159**	*i* P	**Pg**	**12 04 29.9**	**-1.4**
AKAS				*i* S	**Sg**	**12 04 44.4**	**+2.2**
AKAS	**Kas**	**0.84**	**159**	*i* P	**Pg**	**12 04 29.9**	**-1.4**
AKAS				*i* S	**Sg**	**12 04 44.4**	**+2.2**
KSL	**Kastellorizon**	**0.91**	**162**	*e*Pn	**Pn**	**12 04 31.8**	**-1.8**
KSL	**Kastellorizon**	**0.91**	**162**	*e*PN	**Pn**	**12 04 31.8**	**-1.8**
BCK	**Bucak**	**1.17**	**67**	*e*PN	**Pn**	**12 04 36.7**	**-0.4**
BCK	**Bucak**	**1.17**	**67**	*e*Pn	**Pn**	**12 04 36.7**	**-0.4**
MLSB	**Milas**	**1.20**	**284**	*e*PN	**Pn**	**12 04 36.2**	**-1.3**
MLSB	**Milas**	**1.20**	**284**	*e*Pn	**Pn**	**12 04 36.2**	**-1.4**
ARG	**Arkhangelos**	**1.20**	**228**	*e*Pn	**Pn**	**12 04 36.5**	**-1.1**
ARG				*e*Sn	**Sn**	**12 04 53.4**	**-0.4**
ARG	**Arkhangelos**	**1.20**	**228**	*e*PN	**Pn**	**12 04 36.5**	**-1.1**
ARG				*e*SN	**Sn**	**12 04 53.4**	**-0.4**
ARG	**Arkhangelos**	**1.20**	**228**	*e*Pn	**Pn**	**12 04 36.5**	**-1.1**
ARG				*e*Sn	**Sn**	**12 04 53.4**	**-0.4**
AYDN	**Tasoluk**	**1.26**	**301**	*i* P	**Pn**	**12 04 37.3**	**-1.1**
AYDN				*i* S	**Sb**	**12 04 55.2**	**+0.5**
AYDN	**Tasoluk**	**1.26**	**301**	*i* P	**Pn**	**12 04 37.3**	**-1.1**
AYDN				*i* S	**Sb**	**12 04 55.2**	**+0.5**
ISP	**Isparta**	**1.30**	**52**	*e*PN	**Pn**	**12 04 38.8**	**-0.2**
ISP	**Isparta**	**1.30**	**52**	*e*Pn	**Pn**	**12 04 38.8**	**-0.2**
KHL	**Karahalli**	**1.32**	**10**	*e*Pn	**Pn**	**12 04 38.7**	**-0.5**
KHL	**Karahalli**	**1.32**	**10**	*e*Pn	**Pn**	**12 04 38.7**	**-0.6**
DAT	**Datca**	**1.36**	**258**	*e*PN	**Pn**	**12 04 38.4**	**-1.4**
DAT	**Datca**	**1.36**	**258**	*e*Pn	**Pn**	**12 04 38.4**	**-1.4**
KHAL	**Karahalli**	**1.36**	**8**	*i* P	**Pn**	**12 04 39.7**	**-0.1**
KHAL				*i* S	**Sn**	**12 05 00.7**	**+2.9**
KHAL	**Karahalli**	**1.36**	**8**	*i* P	**Pn**	**12 04 39.7**	**-0.1**
KHAL				*i* S	**Sn**	**12 05 00.7**	**+2.9**
BDRM	**Kayabasi**	**1.44**	**272**	*i* P	**Pn**	**12 04 40.3**	**-0.5**
BDRM				*i* S	**Sn**	**12 05 02.0**	**+2.5**
BDRM	**Kayabasi**	**1.44**	**272**	*i* P	**Pn**	**12 04 40.3**	**-0.5**
BDRM				*i* S	**Sn**	**12 05 02.0**	**+2.5**
SUTC	**Sutluce-Ispart**	**1.48**	**72**	*e*PN	**Pn**	**12 04 41.5**	**+0.1**
SUTC	**Sutluce-Ispart**	**1.48**	**72**	*e*Pn	**Pn**	**12 04 41.5**	**+0.1**
KULA	**Kula-Manisa**	**1.56**	**343**	*e*PN	**Pn**	**12 04 41.6**	**-0.9**
KULA	**Kula-Manisa**	**1.56**	**343**	*e*Pn	**Pn**	**12 04 41.6**	**-0.9**
SHUT	**Suhut-Afyon**	**1.85**	**34**	*e*PN	**Pn**	**12 04 45.8**	**-0.7**
SHUT	**Suhut-Afyon**	**1.85**	**34**	*e*Pn	**Pn**	**12 04 45.8**	**-0.7**
ALT	**Altintas**	**2.15**	**18**	*e*PN	**Pn**	**12 04 50.6**	**0.0**
ALT	**Altintas**	**2.15**	**18**	*e*Pn	**Pn**	**12 04 50.6**	**0.0**
KARP	**Karpathos**	**2.23**	**229**	*e*Pb	**Pb**	**12 04 51.7**	**-3.5**
KARP	**Karpathos**	**2.23**	**229**	*e*PB	**Pb**	**12 04 51.7**	**-3.5**
KARP	**Karpathos**	**2.23**	**229**	*e*Pb	**Pb**	**12 04 51.7**	**-3.5**
HDMB	**Hadim**	**2.60**	**90**	*e*PN	**Pn**	**12 04 57.8**	**+0.9**
HDMB	**Hadim**	**2.60**	**90**	*e*Pn	**Pn**	**12 04 57.8**	**+0.9**
KONT	**Konya--Tatoy**	**2.65**	**69**	*e*PN	**Pn**	**12 04 57.2**	**-0.3**
KONT	**Konya--Tatoy**	**2.65**	**69**	*e*Pn	**Pn**	**12 04 57.3**	**-0.2**
KIZT	**Kizilcal**	**2.79**	**48**	*e*PN	**Pn**	**12 04 59.4**	**-0.1**
KIZT	**Kizilcal**	**2.79**	**48**	*e*Pn	**Pn**	**12 04 59.4**	**-0.1**
ZKR	**Zakros**	**3.10**	**233**	*e*Pn	**Pn**	**12 05 04.9**	**+1.2**
ZKR	**Zakros**	**3.10**	**233**	*e*PN	**Pn**	**12 05 04.9**	**+1.2**
ZKR	**Zakros**	**3.10**	**233**	*e*Pn	**Pn**	**12 05 04.9**	**+1.2**
NPS	**Neapolis**	**3.42**	**240**	*e*Pn	**Pn**	**12 05 08.8**	**+0.7**
NPS	**Neapolis**	**3.42**	**240**	*e*PN	**Pn**	**12 05 08.8**	**+0.7**
NPS	**Neapolis**	**3.42**	**240**	*e*Pn	**Pn**	**12 05 08.8**	**+0.7**
LAST	**Lasithi**	**3.56**	**240**	*e*Pn	**Pn**	**12 05 10.5**	**+0.4**
LAST	**Lasithi**	**3.56**	**240**	*e*PN	**Pn**	**12 05 10.5**	**+0.4**
LAST	**Lasithi**	**3.56**	**240**	*e*Pn	**Pn**	**12 05 10.5**	**+0.4**
XRY	**Khrisi**	**3.58**	**234**	*e*Pn	**Pn**	**12 05 11.7**	**+1.3**
XRY	**Khrisi**	**3.58**	**234**	*e*PN	**Pn**	**12 05 11.7**	**+1.3**
XRY	**Khrisi**	**3.58**	**234**	*e*Pn	**Pn**	**12 05 11.7**	**+1.3**
IDI	**Anoyia**	**3.92**	**245**	*e*Pn	**Pn**	**12 05 15.3**	**+0.3**
IDI	**Anoyia**	**3.92**	**245**	*e*PN	**Pn**	**12 05 15.3**	**+0.3**
IDI	**Anoyia**	**3.92**	**245**	*e*Pn	**Pn**	**12 05 15.3**	**+0.3**
KARN	**Karanos**	**4.59**	**251**	*e*PN	**Pn**	**12 05 26.0**	**+1.7**
KARN	**Karanos**	**4.59**	**251**	*e*Pn	**Pn**	**12 05 26.0**	**+1.7**
KYTH	**Kithira**	**5.04**	**263**	*e*Pn	**Pn**	**12 05 32.0**	**+1.6**
KYTH	**Kithira**	**5.04**	**263**	*e*PN	**Pn**	**12 05 32.0**	**+1.6**
KYTH	**Kithira**	**5.04**	**263**	*e*Pn	**Pn**	**12 05 32.0**	**+1.6**

NIED ***25*** *12:11:00,23°60N×145°50E,h14km,Mw4.8 Best double couple: M0 1.62000×10^16 NP1:φs55.00000°,δ84.00000°, λ-66.00000°. NP2:φs159.00000°,δ25.00000°, λ-165.00000°.*

IDC ***25*** *12:11:41.8±0.6,22°52N×144°55E,h0km,mb4.3/18, mb1 4.5/20,mb1mx4.4/26,mbtmp4.3/20,ML4.3/2,MS4.2/13, Ms1 4.2/13,ms1mx4.0/20,Error ellipse: s-maj=20.5km s-min=13.4km az=80.0*

BJI ***25*** *12:11:45.3,22°63N×144°89E,h37km,mB4.9/29,mb4.7/38, Ms4.5/36,Ms7 4.3/34*

MOS ***25*** *12:11:45.5±1.0,22°54N×144°46E,h33km,mb4.8/29,Error ellipse: s-maj=12.7km s-min=6.4km az=98.9*

ISCJB ***25*** *12:11:47.6±0.2,22°64N±0°03×144°53E±0°04,h44km, mb4.7/94,MS4.2/36,Error ellipse: s-maj=5.6km s-min=4.3km az=135.1*

JMA ***25*** *12:11:47.8±0.4,23°56N×145°45E,h0km,M4.7*

NEIC ***25*** *12:11:48.7±0.2,22°56N×144°52E,mb4.8/42, MW4.7(NIED),Error ellipse: s-maj=6.5km s-min=5.9km az=79.0*

ISC 25 12:11:49.3±0.2,22°60N±0°03×144°54E±0°04,h46km, h46km±.9km:pP-P,n185,σ1§20/186,mb4.7/94,MS4.2/36, 4C-3D,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**4.55**	**332**	P	**Pn**	**12 12 56.2**	**+0.5**
JHHJ				*e*S	**Sn**	**12 13 47.0**	**-0.3**
CBIJ	**Chichi jima**	**4.96**	**335**	P	**Pn**	**12 13 00.4**	**-0.9**
CBIJ	**Chichi jima**	**4.96**	**335**	Pn	**Pn**	**12 12 59.4**	**-2.0**
	32nm,0.3s,baz=113,slow=22,SNR=7.0						
CBIJ				Sn	**Sn**	**12 13 56.0**	**-1.3**
	29nm,0.3s,baz=112,slow=23,SNR=4.3						
GUMO	**Guam**	**8.96**	**178**	P	**Pn**	**12 13 55.1**	**-1.2**
JHU	**Hanno**	**13.98**	**342**	P	**Pn**	**12 15 01.0**	**-3.7**
JNY	**Yasuok**	**13.99**	**337**	P	**Pn**	**12 15 05.5**	**+0.7**
JRY	**Ryogami san**	**14.24**	**341**	P	**Pn**	**12 15 05.9**	**-2.4**
JAG	**Ashikaga**	**14.47**	**343**	P	**Pn**	**12 15 07.2**	**-4.1**
MJAR	**Matsushiro Arr**	**14.94**	**340**	Pn	**Pn**	**12 15 14.8**	**-2.7**
	0.8nm,0.3s,baz=166,slow=12,SNR=13						
MAJO	**Matsushiro**	**14.94**	**340**	*e*P	**Pn**	**12 15 16.8**	**-0.7**
MAT	**Matsushiro**	**14.94**	**340**	P	**Pn**	**12 15 14.3**	**-3.2**
MAT				*e*S	**Sn**	**12 17 59.0**	**-2.8**
KSRS	**Korea Array**	**20.59**	**320**	P	**P**	**12 16 23.6**	**-0.9**
	10nm,0.8s,baz=134,slow=12,SNR=15						
KSRS				LR	LR	12 24 04.9	
	comp=Z,1μm,20.4s,MS4.2,baz=130,slow=36						
YULB	**Yu-li**	**21.41**	**277**	*e*P	**P**	**12 16 34.4**	**+1.1**
	24nm,0.8s,mb4.6						
ASAJ	**Asahikawa**	**21.52**	**356**	P	**P**	**12 16 34.3**	**-0.1**
	16nm,0.9s,mb4.4,baz=226,slow=12,SNR=5.7						
SSLB	**Suanglung**	**21.71**	**278**	*e*P	**P**	**12 16 38.5**	**+2.0**
	62nm,0.8s,mb5.1						
SSE	**Sheshan**	**22.45**	**297**	P	**P**	**12 16 41.5**	**-3.0**
SSE				S	**S**	**12 20 46.5**	**-2.0**
SSE				sS	sS	12 21 00.5	-6.2
SSE				pmax	pmax		
	comp=Z,42nm,0.8s,mb4.9						
SSE				pmax	pmax		
	comp=Z,150nm,4.7s						
SSE				LR	LR		
	comp=N,380nm,18.5s,MS4.0						
SSE				LR	LR		
	comp=E,320nm,18.5s,MS4.0						
SSE				LR	LR		
	comp=Z,560nm,17.7s,MS4.0						
VLA	**Vladivostok**	**23.00**	**336**	*e*P	**P**	**12 16 52.2**	**+2.1**
VLA				pmax	pmax		
	comp=Z,51nm,1.1s,mb4.9						
YSS	**Yuzh-Sakhalins**	**24.34**	**357**	*e*P	**P**	**12 17 02.8**	**+0.1**
YSS				*e*S	**S**	**12 21 21.0**	**+2.2**
YSS				*e*SS		12 22 06.0	
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb4.7						
YSS				MLR	MLR		
	comp=Z,400nm,17.0s,MS4.0						
YSS	**Yuzh-Sakhalins**	**24.34**	**357**	*e*P	**P**	**12 17 03.2**	**+0.5**
	comp=Z,27nm,0.9s,mb4.7						
NJ2	**Nanjing**	**24.63**	**298**	*e*P	**P**	**12 17 07.5**	**+2.0**
NJ2				pP		12 17 16.0	
NJ2				sP	sP	12 17 20.5	-2.6
NJ2				PP		12 17 43.5	
NJ2				S	**S**	**12 21 23.5**	**-0.3**
NJ2				sS	sS	12 21 37.3	-6.8
NJ2				pmax	pmax		
	comp=Z,20nm,0.7s,mb4.8						
NJ2				pmax	pmax		
	comp=Z,290nm,3.9s						
NJ2				LR	LR		
	comp=N,1μm,12.5s,MS4.6						
NJ2				LR	LR		
	comp=E,470nm,14.8s,MS4.6						
MDJ	**Mudanjiang**	**25.16**	**334**	P	**P**	**12 17 08.3**	**-1.9**
MDJ				pP	pP	12 17 19.0	-3.3
MDJ				sP	sP	12 17 24.3	-3.5
MDJ				S	**S**	**12 21 27.5**	**-4.5**
MDJ				sS	sS	12 21 47.0	-5.3
MDJ				ScP	ScP	12 24 19.5	+0.9
MDJ				PcS	PcS	12 24 24.5	+1.1
MDJ				ScS	ScS	12 28 07.8	+0.8
MDJ				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb3.9						
MDJ				pmax	pmax		
	comp=Z,52nm,3.8s						
MDJ				LR	LR		
	comp=N,320nm,17.1s,MS4.0						
MDJ				LR	LR		
	comp=E,260nm,17.1s,MS4.0						
MDJ				LR	LR		
	comp=Z,520nm,17.6s,MS4.1						
MDJ	**Mudanjiang**	**25.16**	**334**	*e*P	**P**	**12 17 10.4**	**+0.2**
	comp=Z,9.3nm,0.8s,mb4.4						
DL2	**Dalian**	**25.43**	**315**	P	**P**	**12 17 16.0**	**+3.3**
DL2				S	**S**	**12 21 40.8**	**+4.5**
DL2				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.5						
DL2				pmax	pmax		
	comp=Z,90nm,3.3s						
DL2				LR	LR		
	comp=E,250nm,19.9s						
DL2				LR	LR		
	comp=Z,200nm,24.7s,MS3.5						
CN2	**Changchun**	**26.38**	**328**	*e*P	**P**	**12 17 22.5**	**+1.3**
CN2				*es*P	sP	12 17 38.3	-0.6
CN2				*e*S	**S**	**12 21 48.5**	**-2.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.5						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,500nm,14.0s,MS4.4						
CN2				LR	LR		
	comp=E,500nm,14.0s,MS4.4						
CN2				LR	LR		
	comp=Z,700nm,18.0s,MS4.2						
HABR	**Khabarovsk**	**26.91**	**346**	*e*P	**P**	**12 17 24.2**	**-1.7**
HABR				*e**PP	pP	12 17 33.0	-5.0
HABR						12 18 05.7	
HABR				*e*		12 20 44.3	
HABR				*e*S	**S**	**12 22 00.8**	**+1.4**
HABR				*e**SS	sS	12 22 16.1	-3.8
HABR				*e*SS		12 23 08.0	
HABR				*e*		12 28 13.0	
HABR				pmax	pmax		
	comp=Z,49nm,1.9s,mb4.7						
HABR				pmax	pmax		
	comp=N,28nm,1.8s						
HABR				pmax	pmax		
	comp=E,28nm,1.9s						
HABR				MLR	MLR		
	comp=Z,338nm,16.0s,MS4.0						
KLR	**Kul'dur**	**28.44**	**342**	*e*P	**P**	**12 17 34.8**	**-4.8**
KLR				MLR	MLR		
	comp=N,500nm,15.0s						
KLR				MLR	MLR		
	comp=Z,900nm,15.0s,MS4.5						
BJI	**Beijing**	**29.64**	**312**	P	**P**	**12 17 49.3**	**-1.1**
BJI				S	**S**	**12 22 47.5**	**+4.8**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.6						
BJI				pmax	pmax		
	comp=Z,58nm,7.5s						
BJI				LR	LR		
	comp=N,290nm,19.6s,MS4.1						
BJI				LR	LR		
	comp=E,360nm,20.3s,MS4.1						
BJI				LR	LR		
	comp=Z,340nm,20.7s,MS4.0						
PETK	**Petropavlovsk-**	**32.08**	**15**	P	**P**	**12 18 11.5**	**-0.2**
	comp=Z,1.5nm,0.7s,mb3.9,baz=224,slow=9.2,SNR=3.1						
PETK				LR	LR	12 33 15.0	
	comp=Z,290nm,18.2s,MS4.0,baz=198,slow=40						
PET	**Petropavlovsk**	**32.24**	**16**	*e*P	**P**	**12 18 12.8**	**-0.3**
PET				*e*S	**S**	**12 23 25.0**	**+2.0**
PET				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.8						
PET				pmax	pmax		
	comp=Z,100nm,18.3s						
PET				MLR	MLR		
	comp=Z,300nm,20.0s,MS4.0						
PET				MLR	MLR		
	comp=Z,400nm,17.0s						
QIZ	**Qiongzhong**	**32.58**	**270**	P	**P**	**12 18 15.3**	**-1.2**
QIZ				S	**S**	**12 23 24.0**	**-5.1**
QIZ				pmax	pmax		
	comp=Z,14nm,1.8s,mb4.6						
QIZ				pmax	pmax		
	comp=Z,100nm,4.7s						
QIZ				LR	LR		
	comp=N,310nm,4.3s						
QIZ				LR	LR		
	comp=Z,340nm,15.6s,MS4.2						
HHC	**Hu-ho-hao-te**	**33.17**	**311**	*e*P	**P**	**12 18 23.8**	**+2.4**
HHC				pP	pP	12 18 35.8	+2.1
HHC				sP	sP	12 18 41.0	+1.8
HHC				PP	PP	12 19 35.0	-2.0
HHC				PcP	PcP	12 21 06.8	+3.3
HHC				S	**S**	**12 23 37.8**	**0.0**
HHC				sS	sS	12 23 58.0	-0.4
HHC				ScP	ScP	12 24 46.0	+1.9
HHC				PcS	PcS	12 24 51.8	+2.8
HHC				SS	SS	12 25 39.8	-22
HHC				ScS	ScS	12 28 45.0	+0.4
HHC				pmax	pmax		
	comp=Z,18nm,0.6s,mb5.2						
HHC				pmax	pmax		
	comp=Z,120nm,5.4s						
HHC				LR	LR		
	comp=N,260nm,14.3s,MS4.3						
HHC				LR	LR		
	comp=E,420nm,15.7s,MS4.3						
HHC				LR	LR		
	comp=Z,370nm,16.7s,MS4.2						
GYA	**Guiyang**	**34.59**	**284**	P	**P**	**12 18 36.0**	**+2.1**
GYA				pP	pP	12 18 48.5	+2.3
GYA				sP	sP	12 18 53.3	+1.6
GYA				PP	PP	12 19 54.0	+1.1
GYA				S	**S**	**12 24 02.0**	**+1.9**
GYA				sS	sS	12 24 22.8	+2.1
GYA				PcS	PcS	12 24 51.8	-2.7
GYA				ScS	ScS	12 28 53.0	+0.4
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
GYA				pmax	pmax		
	comp=Z,110nm,4.5s						
GYA				LR	LR		
	comp=N,580nm,17.5s,MS4.5						
GYA				LR	LR		
	comp=E,540nm,16.0s,MS4.5						
GYA				LR	LR		
	comp=Z,610nm,17.9s,MS4.4						
COEN	**Coen**	**36.35**	**182**	*e*P	**P**	**12 18 47.8**	**-1.3**
COEN	**Coen**	**36.35**	**182**	*e*P	**P**	**12 18 47.8**	**-1.2**
	comp=Z,135nm,0.6s						
COEN				*e*pP	pP	12 18 59.7	-1.7
CLNS	**Chul'man**	**37.10**	**342**	*e*P	pP	12 19 10.3	+2.9
CLNS				*e**PP	sP	12 19 18.6	+5.7
CLNS				*e*		12 20 37.1	
CLNS				pmax	pmax		
	comp=N,9.0nm,0.7s						
CLNS				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.7						
CLNS				pmax	pmax		
	comp=E,8.0nm,0.9s						
CLNS				MLR	MLR		
	comp=N,333nm,18.0s						
CLNS				MLR	MLR		
	comp=Z,329nm,16.0s,MS4.2						
CD2	**Chengdu**	**37.18**	**292**	*e*P	**P**	**12 18 57.8**	**+1.7**
CD2				pP	pP	12 19 10.0	+1.6
CD2				sP	sP	12 19 15.3	+1.4
CD2				PP	PP	12 20 25.0	+3.6
CD2				S	**S**	**12 24 39.5**	**-0.2**
CD2				sS	sS	12 25 00.0	-0.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
CD2				pmax	pmax		
	comp=Z,30nm,5.3s						
CD2				LR	LR		
	comp=N,420nm,14.3s						
CD2				LR	LR		
	comp=E,670nm,21.4s						
CD2				LR	LR		
	comp=Z,500nm,19.0s,MS4.3						
LZH	**Lanzhou**	**37.66**	**300**	*e*P	**P**	**12 19 02.3**	**+2.2**
LZH				pP	pP	12 19 14.0	+1.5
LZH				sP	sP	12 19 20.5	+2.5
LZH				PP	PP	12 20 31.3	+4.6
LZH				*e*S	**S**	**12 24 44.0**	**-2.9**
LZH				sS	sS	12 25 07.3	-0.4
LZH				SS	SS	12 27 25.0	-8.5
LZH				pmax	pmax		
	comp=Z,42nm,1.5s,mb5.0						
LZH				pmax	pmax		
	comp=Z,130nm,5.3s						
LZH				LR	LR		
	comp=E,610nm,15.8s						
LZH				LR	LR		
	comp=Z,660nm,17.5s,MS4.5						
KMI	**Kunming**	**38.20**	**282**	P	**P**	**12 19 07.8**	**+3.0**
KMI				pP	pP	12 19 19.5	+2.3
KMI				sP	sP	12 19 24.5	+1.9
KMI				PP	PP	12 20 39.0	+6.3
KMI				S	**S**	**12 24 56.5**	**+1.2**
KMI				PcS	PcS	12 25 10.3	+2.4
KMI				sS	sS	12 25 17.5	+1.4
KMI				SS	SS	12 27 35.5	-9.1
KMI				pmax	pmax		
	comp=Z,5.0nm,1.5s,mb4.0						
KMI				pmax	pmax		
	comp=Z,92nm,4.9s						
KMI				LR	LR		
	comp=N,230nm,21.3s						
KMI				LR	LR		
	comp=E,240nm,14.2s						
KMI				LR	LR		
	comp=Z,220nm,16.2s						
ULN	**Ulaanbaatar**	**39.08**	**319**	*e*P	**P**	**12 19 12.2**	**+0.4**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.3						
ULN	**Ulaanbaatar**	**39.08**	**319**	*e*P	**P**	**12 19 12.2**	**+0.4**
	comp=Z,7.4nm,1.1s,mb4.3						
SONM	**Songino Array**	**39.46**	**319**	P	**P**	**12 19 15.1**	**0.0**
	comp=Z,1.4nm,0.6s,mb3.9,baz=128,slow=7.7,SNR=12						
SONM				LR	LR	12 36 06.7	
	comp=Z,708nm,20.4s,MS4.5,baz=105,slow=37						
YAK	**Yakutsk**	**40.71**	**349**	*e*P	**P**	**12 19 24.4**	**-0.7**
YAK				*e**PP	pP	12 19 30.0	-7.6
YAK				*e*		12 20 59.0	
YAK				*e*		12 21 28.8	
YAK				*e*S	**S**	**12 25 28.9**	**-3.0**
YAK				pmax	pmax		
	comp=Z,34nm,0.9s,mb5.0						
YAK				pmax	pmax		
	comp=N,9.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.4s						
YAK				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.7						
YAK				smax			
	comp=N,179nm,19.6s						
YAK				smax			
	comp=E,102nm,20.7s						
YAK				MLR	MLR		
	comp=Z,443nm,21.0s,MS4.3						
YAK				MLR	MLR		
	comp=N,334nm,20.0s,MS4.3						
YAK				MLR	MLR		
	comp=E,251nm,20.0s,MS4.3						
YAK	**Yakutsk**	**40.71**	**349**	*e*P	**P**	**12 19 24.8**	**-0.4**
	comp=E,44nm,0.8s,mb5.1						
KNA	**Kununurra**	**41.12**	**203**	*e*P	**P**	**12 19 31.2**	**+2.2**
	comp=E,99nm,1.9s,mb5.1						
GTA	**Gaotai**	**41.39**	**304**	*e*P	**P**	**12 19 32.3**	**+1.2**
GTA				pP	pP	12 19 44.5	+0.9
GTA				sP	sP	12 19 49.8	+0.8
GTA				PP	PP	12 21 12.0	+4.8
GTA				S	**S**	**12 25 42.8**	**+0.1**
GTA				sS	sS	12 26 02.3	-1.3
GTA				SS	SS	12 28 41.8	-6.0
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.1						
GTA				pmax	pmax		
	comp=Z,110nm,9.6s						
GTA				LR	LR		
	comp=N,330nm,16.5s,MS4.3						
GTA				LR	LR		
	comp=E,190nm,16.8s,MS4.3						
GTA				LR	LR		
	comp=Z,380nm,17.1s,MS4.3						
ZAK	**Zakamensk**	**42.41**	**321**	*e*P	**P**	**12 19 39.3**	**0.0**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.4s,mb3.9						
IRK	**Irkutsk**	**42.70**	**324**	*e*P	pP	12 19 55.3	+1.2
IRK				pmax	pmax

comp=Z,300nm,17.0s,MS4.3
BILL Bilibino 47.40 11 *e*P **P 12 20 18.1 -0.5**
comp=Z,6.0nm,0.9s,mb4.5
LSA Lhasa 48.10 290 *e*P **P 12 20 28.5 +3.8**
DZM Mont Dzumac 49.26 153 *e*LR LR 12 34 47.7
comp=Z,400nm,25.7s
DZM Mont Dzumac 49.26 153 *e*P **P 12 20 32.2 -1.3**
comp=Z,32nm,0.8s,mb5.4
DZM *e*pP pP 12 20 45.9 -0.5
TIXI Tiksi 49.89 354 *e*P **P 12 20 36.2 -1.6**
TIXI pmax pmax
comp=Z,8.0nm,1.7s,mb4.5
TIXI MLR MLR
comp=Z,234nm,18.0s,MS4.2
TIXI Tiksi 49.89 354 *e*P **P 12 20 36.9 -0.8**
comp=Z,41nm,2.4s,mb5.0
WMQ Urumqi 50.99 309 *e*P **P 12 20 49.0 +2.5**
WMQ pP pP 12 21 02.0 +2.7
WMQ sP sP 12 21 07.0 +2.4
WMQ PP PP 12 22 46.0 +2.8
WMQ S **S 12 28 00.0 -0.2**
WMQ ScS ScS 12 30 32.0 -1.2
WMQ SS SS 12 31 33.0 -2.5
WMQ pmax pmax
comp=Z,21nm,1.0s,mb5.0
WMQ pmax pmax
comp=Z,86nm,5.0s
WMQ LR LR
comp=N,170nm,16.0s,MS4.4
WMQ LR LR
comp=E,270nm,16.0s,MS4.4
WMQ LR LR
comp=Z,230nm,16.0s,MS4.3
TAPN Taplejung 51.36 288 *e*P **P 12 20 52.2 +2.6**
ODAN Odare 51.72 287 *e*P **P 12 20 53.2 +1.0**
RAMN Ramite 52.40 287 *e*P **P 12 20 57.4 +0.1**
comp=Z,19nm,0.8s,mb5.1
JIRN Jiri 52.66 288 *e*P **P 12 20 59.2 0.0**
comp=Z,16nm,0.5s,mb5.2
CMSA Cobar Meteorol 53.84 179 *e*P **P 12 21 05.5 -2.1**
STKA Stephens Creek 54.24 183 *e*P **P 12 21 07.9 -2.6**
comp=Z,3.9nm,0.7s,mb4.5
STKA Stephens Creek 54.24 183 P **P 12 21 08.5 -2.0**
comp=Z,6.8nm,0.9s,mb4.6,baz=359,slow=8.9,SNR=5.3
STKA LR LR 12 43 59.7
comp=Z,171nm,19.7s,MS4.1,baz=24,slow=36
ZAA0 Zalesovo Array 54.29 321 *e*P **P 12 21 10.3 -0.5**
ZALV Zalesovo Beam 54.29 321 P **P 12 21 10.0 -0.7**
comp=Z,1.3nm,0.4s,mb4.2,baz=98,slow=6.6,SNR=9.0
ZALV LR LR 12 44 51.2
comp=Z,222nm,19.2s,MS4.2,baz=294,slow=37
ZALV Zalesovo Beam 54.29 321 P **P 12 21 10.0 -0.7**
ZALV LR LR 12 44 51.2
MK31 Makanchi Array 55.02 312 *e*P **P 12 21 16.6 +0.5**
MKAR Makanchi Array 55.02 312 P **P 12 21 15.9 -0.2**
comp=Z,2.3nm,0.8s,mb4.3,baz=82,slow=10,SNR=19
MKAR LR LR 12 45 18.9
comp=Z,111nm,18.1s,MS4.0,baz=192,slow=37
MKAR Makanchi Array 55.02 312 *i* P **P 12 21 16.2 +0.1**
MKAR pmax pmax
comp=Z,2.0nm,0.8s
NVS Novosibirsk 55.37 322 *e*P **P 12 21 14.9 -3.6**
FORT Forrest 55.38 197 *e*P **P 12 21 17.3 -1.5**
comp=Z,34nm,0.8s,mb5.4
KDAK Kodiak Island 56.75 35 P **P 12 21 27.2 -1.1**
comp=Z,4.1nm,0.5s,mb4.7,baz=290,slow=12,SNR=3.7
KDAK Kodiak Island 56.75 35 *i* P **P 12 21 28.4 +0.1**
KURK Kurchatov 57.68 317 *ce*P **P 12 21 35.0 0.0**
KURK pmax pmax
comp=Z,7.0nm,1.2s,mb4.6
KURK Kurchatov 57.68 317 *e*P **P 12 21 34.1 -0.8**
PPLA Purkeypile 58.00 29 *e*P **P 12 21 36.8 -0.2**
comp=Z,33nm,1.5s,mb5.1
BPAW Bear Paw Mtn. 58.80 28 *e*P **P 12 21 42.1 -0.4**
comp=Z,6.2nm,0.7s,mb4.8
TRF Thorofare Moun 58.96 28 *e*P **P 12 21 42.7 -1.0**
comp=Z,10nm,0.9s,mb4.9
TRF *e*pP pP 12 21 54.9 -1.8
PMR Palmer 59.14 31 *e*pP sP 12 22 04.6 +1.3
MCK McKinley 59.61 28 *e*P **P 12 21 46.7 -1.5**
MCK pmax pmax
comp=Z,12nm,1.0s,mb4.9
MCK McKinley 59.61 28 *e*P **P 12 21 46.7 -1.5**
comp=Z,12nm,1.0s,mb4.9
KSH Kashi 59.78 304 ⇓ *i*P **P 12 21 53.0 +3.2**
KSH pP pP 12 22 05.8 +3.0
KSH sP sP 12 22 11.0 +2.9
KSH PcP PcP 12 22 39.5 +3.3
KSH PP PP 12 24 06.8 +4.9
KSH ScP ScP 12 26 35.3 +1.9
KSH PcS PcS 12 26 40.5 +2.2
KSH S **S 12 29 57.5 -0.2**
KSH sS sS 12 30 19.5 0.0
KSH ScS ScS 12 31 35.8 -0.6
KSH pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
KSH pmax pmax
comp=Z,48nm,3.5s
KSH LR LR
comp=N,71nm,4.8s
KSH LR LR
comp=E,76nm,6.6s
KSH LR LR
comp=Z,64nm,4.5s
COLD Coldfoot 59.84 24 *e*P **P 12 21 50.0 +0.3**
comp=Z,71nm,0.9s,mb5.7
UCH Uchtor 60.64 307 *e*P **P 12 21 57.4 +1.8**
UCH pmax pmax
comp=Z,5.0nm,0.6s,mb4.8
UCH Uchtor 60.64 307 *e*P **P 12 21 57.4 +1.7**
comp=Z,4.6nm,0.6s,mb4.8
PAX Paxson 61.03 29 *e*P **P 12 21 57.2 -0.7**
PAX pmax pmax
comp=Z,8.0nm,1.2s,mb4.7
PAX Paxson 61.03 29 *e*P **P 12 21 57.2 -0.8**
comp=Z,7.9nm,1.2s,mb4.7
EKS2 Erkin-Say 61.15 307 *e*P **P 12 21 59.6 +0.5**
EKS2 pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
EKS2 Erkin-Say 61.15 307 *e*P **P 12 21 59.6 +0.6**
comp=Z,4.6nm,1.0s,mb4.6
BMRM Bremner River 61.23 32 *e*P **P 12 21 58.5 -0.8**
comp=Z,28nm,1.3s,mb5.2
BMRM *e*pP pP 12 22 13.6 +1.2
BVAR Borovoye Array 62.81 319 P **P 12 22 09.8 -0.2**
comp=Z,6.4nm,0.9s,mb4.8,baz=81,slow=9.2,SNR=19
BRVK Borovoye 62.87 319 *ce*P **P 12 22 11.1 +0.7**
BRVK pmax pmax
comp=Z,11nm,1.2s,mb4.9
BRVK Borovoye 62.87 319 *e*P **P 12 22 10.6 +0.1**
comp=Z,9.7nm,0.9s,mb4.9
EGAK Eagle 63.11 28 *e*P **P 12 22 10.6 -1.2**
comp=Z,5.3nm,1.1s,mb4.6
HYT Haines Junctio 64.69 32 *e*P **P 12 22 22.8 +0.6**
KBL Kabul 66.00 299 *e*P **P 12 22 31.7 +0.4**
INK Inuvik 66.25 24 *e*P **P 12 22 31.6 -0.6**
INK pmax pmax
comp=Z,3.0nm,0.9s
INK Inuvik 66.25 24 *e*P **P 12 22 31.6 -0.6**
comp=Z,3.5nm,0.9s,mb4.4
DLBC Dease Lake 68.68 34 *e*P **P 12 22 47.8 0.0**
DLBC *e*pP pP 12 23 01.7 +0.7
ARU Arti 69.28 324 *d i*P **P 12 22 51.6 +0.1**
ARU *e* 12 25 20.5
ARU S S 12 31 58.2 +3.8
ARU SS SS 12 36 23.4 +2.1
ARU pmax pmax
comp=Z,8.0nm,1.7s,mb4.4
ARU Arti 69.28 324 *e*P **P 12 22 51.2 -0.4**
comp=Z,4.4nm,0.6s,mb4.6
ARU *e*pP pP 12 23 03.8 -1.0
YKA Yellowknife Ar 75.08 28 P **P 12 23 25.0 -1.0**
comp=Z,1.7nm,0.5s,mb4.2,baz=292,slow=5.8,SNR=26
GNW Green Mountain 75.39 44 *e*P **P 12 23 28.9 +0.8**
comp=Z,4.6nm,1.1s,mb4.3
GNW *e*pP pP 12 23 41.8 +0.2
GNW *e*sP sP 12 23 46.7 0.0
JCW Jim Creek 75.77 44 *e*P **P 12 23 30.8 +0.5**
PPT Papeete 75.79 116 *e*LR LR 12 46 39.7
comp=Z,100nm,21.0s
PPT Papeete 75.79 116 LR LR 12 50 14.0
comp=Z,150nm,21.5s,MS4.3,baz=268,slow=30
HOOD Mount Hood Mea 76.86 46 *e*pP pP 12 23 50.2 +0.2
APA Apatity 77.00 338 ⇑ *e*P **P 12 23 39.4 +2.5**
YBH Yreka Blue Hor 77.28 50 *e*P **P 12 23 40.0 +1.0**
YBH pmax pmax
comp=Z,8.0nm,1.0s
YBH Yreka Blue Hor 77.28 50 *e*P **P 12 23 40.0 +1.0**
comp=Z,7.6nm,1.0s,mb4.6
ARCES ARCESS Array B 78.47 342 P **P 12 23 43.8 -1.2**
comp=Z,0.8nm,0.5s,mb3.9,baz=66,slow=6.8,SNR=6.9
ARCES LR LR 13 04 12.1
comp=Z,226nm,18.9s,MS4.5,baz=285,slow=40
TBI Tubuai 78.76 121 *e*S S 12 33 48.4 +6.5
comp=Z,154nm,31.4s
TBI *e*LR LR 12 48 06.2
comp=Z,168nm,22.8s,baz=327
EDM Edmonton 79.13 37 *e*P **P 12 23 49.9 +1.0**
EDM *e**PP pP 12 24 02.2 -0.3
MAK Makhachkala 79.84 312 *e*P **P 12 23 46.2 -6.8**
WVOR Wild Horse Val 79.89 48 *e*P **P 12 23 54.0 +0.7**
WVOR *e**PP pP 12 24 06.3 -0.6
WVOR *e* 12 26 50.7
WVOR pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
WVOR Wild Horse Val 79.89 48 *e*P **P 12 23 54.0 +0.7**
comp=Z,8.4nm,1.0s,mb4.6
WVOR *e*pP pP 12 24 06.3 -0.6
WVOR *e*sP sP 12 24 13.2 +1.1
WVOR *e*PP PP 12 26 50.6 -4.3
BMO Blue Mountains 79.91 46 *e*P **P 12 23 53.4 0.0**
BMO *e**PP pP 12 24 06.5 -0.4
BMO pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
BMO Blue Mountains 79.91 46 *e*P **P 12 23 53.4 0.0**
comp=Z,5.3nm,0.9s,mb4.5
BMO *e*pP pP 12 24 06.5 -0.4
TAOE Nuku Hiva Isla 80.03 104 *e*LR LR 12 48 55.5
comp=Z,132nm,25.6s
CMB Columbia Colle 80.22 53 *e*P **P 12 23 54.8 -0.4**
CMB pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
CMB Columbia Colle 80.22 53 *e*P **P 12 23 54.8 -0.5**
comp=Z,3.2nm,0.7s,mb4.4
PAHR Pah Rah Range 80.35 51 *e*pP pP 12 24 06.5 -3.0
BSMT Bassoo Peak 80.38 42 *e*P **P 12 23 57.0 +1.2**
SWMT Swartz Lake 81.01 42 *e*P **P 12 23 59.3 +0.1**
comp=Z,3.4nm,0.9s,mb4.3
OBN Obninsk 81.44 326 *e*P **P 12 24 00.6 -0.7**
OBN pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
NVAR Mina Array Bea 81.60 52 P **P 12 24 02.4 -0.2**
comp=Z,2.6nm,0.8s,mb4.2,baz=275,slow=5.2,SNR=20
NVAR Mina Array Bea 81.60 52 P **P 12 24 02.4 -0.2**
HLID Hailey 82.32 46 *e*P **P 12 24 06.4 +0.2**
ZEI Tsey 82.36 313 *e*P **P 12 24 05.8 -0.7**
ZEI pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
LRM Limekiln Ridge 82.67 43 *e*P **P 12 24 08.1 +0.1**
LRM *e*pP pP 12 24 20.9 -0.7
LRM *e*sP sP 12 24 28.5 +1.7
HRY Holter Researc 82.69 42 *e*P **P 12 24 08.3 +0.2**
KIV Kislovodsk 82.69 315 *e*P **P 12 24 07.1 -1.1**
KIV pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
KIV MLR MLR
comp=Z,352nm,20.0s,MS4.7
FINES FINESS Array B 82.91 335 P **P 12 24 08.2 -0.8**
comp=Z,2.4nm,0.6s,mb4.4,baz=70,slow=6.3,SNR=6.9
FINES LR LR 13 04 02.4
comp=Z,111nm,19.6s,MS4.2,baz=356,slow=38
BOZ Bozeman (W) 83.27 43 *e*P **P 12 24 11.2 +0.1**
GSC Goldstone 83.92 54 *e*P **P 12 24 14.6 0.0**
GSC *e**PP pP 12 24 28.0 -0.3
FFC Flin Flon 84.40 32 *i* P **P 12 24 16.7 0.0**
FFC Flin Flon 84.40 32 *e*P **P 12 24 15.8 -0.8**
comp=Z,11nm,1.3s,mb4.8
FFC *e*PcP PcP 12 24 20.5 +0.2
FFC *e*pP pP 12 24 30.0 -0.4
IMW Indian Meadow 84.47 45 *e*P **P 12 24 18.4 +1.1**
comp=Z,6.7nm,0.9s,mb4.8
IMW *e*pP pP 12 24 31.5 +0.6
TPAW Teton Pass 84.64 45 *e*P **P 12 24 19.5 +1.4**
comp=Z,6.2nm,1.1s,mb4.7
DUG Dugway 84.80 49 P **P 12 24 19.0 0.0**
DUG pmax pmax
comp=Z,8.0nm,1.1s,mb4.8
DUG Dugway 84.80 49 P **P 12 24 19.0 0.0**
comp=Z,7.6nm,1.1s,mb4.7
MIB Mutribah 84.94 300 *e*P **P 12 24 19.8 -0.1**
MIB AMb AMB 12 24 32.5
comp=Z,49nm,0.9s,mb5.6
RLMT Red Lodge 84.99 43 *e*P **P 12 24 20.1 +0.2**
comp=Z,7.2nm,0.8s,mb4.8
RLMT *e*pP pP 12 24 32.5 -1.0
HWUT Hardware Ranch 85.05 47 *e*P **P 12 24 20.5 +0.3**
comp=Z,6.9nm,0.9s,mb4.8
SUMG Summit 85.05 1 *e*P **P 12 24 20.9 +1.3**
SUMG pmax pmax
comp=Z,8.0nm,1.0s
SUMG Summit 85.05 1 *e*P **P 12 24 20.9 +1.3**
comp=Z,8.3nm,1.0s,mb4.8
RDF Al-Radifah 85.11 299 *e*P **P 12 24 21.3 +0.5**
RDF AMb AMB 12 24 28.1
comp=Z,28nm,1.0s,mb5.3
NAY Al-Naaiem 85.23 300 *e*P **P 12 24 21.1 -0.3**
NAY AMb AMB 12 24 28.5
comp=Z,20nm,0.8s,mb5.3
ARUT Antelope Range 85.38 51 *e*P **P 12 24 23.3 +1.3**
ARUT pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
ARUT Antelope Range 85.38 51 *e*P **P 12 24 23.3 +1.3**
comp=Z,5.1nm,0.8s,mb4.7
JLU Jordanelle 85.57 48 *e*P **P 12 24 23.6 +0.8**
comp=Z,7.0nm,0.8s,mb4.9
PDAR Pinedale Array 85.87 45 P **P 12 24 23.8 -0.5**
comp=Z,0.7nm,0.6s,mb4.1,baz=291,slow=4.6,SNR=5.5
MSU Marysvale 85.97 50 *e*P **P 12 24 24.9 0.0**
LAO LASA Array 86.13 41 *e*P **P 12 24 26.1 +0.6**
comp=Z,25nm,1.2s,mb5.3
SRU San Rafael 86.87 49 *e*P **P 12 24 30.2 +0.9**
WUAZ Wupatki 87.86 52 *e*P **P 12 24 35.0 +0.9**
comp=Z,8.7nm,1.1s,mb4.9
PV04 Paradox Valley 88.32 49 *e*P **P 12 24 37.1 +0.8**
HFS Hagfors 88.38 338 P **P 12 24 33.2 -2.8**
comp=Z,1.8nm,0.7s,mb4.4,baz=90,slow=4.4,SNR=4.7
NB2 NORSAR Subarra 88.56 339 P **P 12 24 35.0 -1.9**
comp=Z,4.4nm,0.8s,mb4.8,baz=45,slow=4.4
NB2 NORSAR Subarra 88.56 339 P **P 12 24 35.0 -1.9**
NB2 NORSAR Subarra 88.56 339 P **P 12 24 35.0 -1.9**
NOA NORSAR Array B 88.56 339 P **P 12 24 35.6 -1.3**
comp=Z,0.8nm,0.7s,mb4.1,baz=51,slow=4.2,SNR=7.6
PV01 Paradox Valley 88.67 49 *e*P **P 12 24 37.5 -0.5**
comp=Z,197nm,0.7s
SMCO Snowmass 89.28 47 *e*P **P 12 24 42.1 +1.4**
comp=Z,5.5nm,1.0s,mb4.8
ULM Lac du Bonnet 90.00 34 LR LR 13 04 47.5
comp=Z,79nm,18.6s,MS4.2,baz=5.4,slow=35
SDCO Great Sand Dun 90.99 48 P **P 12 24 49.8 +1.1**
comp=Z,1.7nm,1.1s,mb4.3
LAZ Ladron 91.45 52 P **P 12 24 52.4 +1.4**
MMAI Mount Meron Ar 92.71 307 LR LR 13 13 36.3
comp=Z,64nm,18.5s,MS4.1,baz=50,slow=40
MNTX Cornudas Mount 94.06 53 P **P 12 25 04.0 +1.0**
comp=Z,4.6nm,1.3s,mb4.8
CLL Collm 95.00 332 *e*SKSac SKSac 12 35 47.0 +8.1
CLL *e*SP SP 12 37 34.0 +0.3
CLL *e*sPS 12 38 05.0
CLL *e*SS SS 12 42 45.0 +2.5
TXAR Lajitas Array 96.51 55 P **P 12 25 14.8 +0.5**
comp=Z,0.2nm,0.7s,mb3.7,baz=318,slow=5.0,SNR=2.7
SCHQ Schefferville 98.33 18 LR LR 13 15 01.5
comp=Z,96nm,18.7s,MS4.3,baz=177,slow=39
CPCT Cooper Cave 105.89 40 *e*PKPdf PKiKP 12 30 09.7 +1.3
TKL Tuckaleechee C 106.19 39 *e*PKPdf PKiKP 12 29 59.9 -9.0
ELN Prospectdale 106.79 36 *e*PKPdf PKiKP 12 30 17.0 +7.0
TORD Torodi Ar. Bea 129.13 311 PKP PKPdf 12 30 52.9 -0.4
comp=Z,0.4nm,0.5s,baz=56,slow=2.2,SNR=4.2
PLCA Paso Flores 145.39 130 PKPbc PKPbc 12 31 21.8 -0.4
comp=Z,3.7nm,0.9s,baz=229,slow=7.0,SNR=11
LPAZ La Paz 148.61 84 PKPbc PKPbc 12 31 32.7 +0.6
comp=Z,5.3nm,0.6s,baz=295,slow=2.1,SNR=28
LPAZ La Paz 148.61 84 *e*PKPbc PKPbc 12 31 32.7 +0.7

CSEM ***25*** *12:26:56.6±0.1, 38°.54N×31°.26E, h16km, MD2.7, Error ellipse: s-maj=1.4km s-min=1.0km az=178.0*
DDA ***25*** *12:26:56.9, 38°.53N×31°.28E, h7km±2km, Md2.8*
ISK ***25*** *12:26:56.5, 38°.56N×31°.26E, h6km, MD2.7*

ISCJB ***25*** *12:26:57.3±0.6, 38°.53N±0°.06×31°.25E±0°.04, h16km±20km, Error ellipse: s-maj=9.6km s-min=5.2km az=177.3*
ISC 25 12:26:56.9±0.6, 38°.55N±0°.06×31°.26E±0°.05, h19km±10km, n18, σ0°.31/28, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
BOLV	**Bolvadin**	**0.30**	**306**	*i* P		**Pg**	**12 27 03.6**	**+0.2**
BOLV				*i* S		**Sg**	**12 27 08.1**	**+0.2**
BOLV	**Bolvadin**	**0.30**	**306**	*i* P		**Pg**	**12 27 03.6**	**+0.1**
BOLV				*i* S		**Sg**	**12 27 08.1**	**+0.2**
SHUT	**Suhut-Afyon**	**0.56**	**271**	*e*PG		**Pg**	**12 27 08.5**	**+0.5**
SHUT				*e*SG		**Sg**	**12 27 15.5**	**0.0**
SHUT	**Suhut-Afyon**	**0.56**	**271**	*e*Pg		**Pg**	**12 27 08.5**	**+0.5**
SHUT				*e*Sg		**Sg**	**12 27 15.5**	**0.0**
KIZT	**Kizilcal**	**0.59**	**55**	*e*Pg		**Pg**	**12 27 08.5**	**-0.1**
KIZT				*e*Sg		**Sg**	**12 27 16.7**	**+0.1**
KIZT	**Kizilcal**	**0.59**	**55**	*e*PG		**Pg**	**12 27 08.4**	**-0.2**
KIZT				*e*SG		**Sg**	**12 27 16.7**	**+0.1**
KDHN	**Kadinhani**	**0.67**	**92**	*i* P		**Pb**	**12 27 10.2**	**+0.2**
KDHN				*i* S		**Sb**	**12 27 19.0**	**0.0**
KDHN	**Kadinhani**	**0.67**	**92**	*i* P		**Pb**	**12 27 10.2**	**+0.2**
KDHN				*i* S		**Sb**	**12 27 19.0**	**0.0**
SVRH	**Sivrihisar-ESK**	**0.92**	**13**	*e*PG		**Pg**	**12 27 14.7**	**-0.2**
SVRH				*e*SG		**Sg**	**12 27 27.4**	**+0.3**
SVRH	**Sivrihisar-ESK**	**0.92**	**13**	*e*Pg		**Pg**	**12 27 14.7**	**-0.2**
SVRH				*e*Sg		**Sg**	**12 27 27.4**	**+0.3**
ESKT	**Eskisehir**	**1.02**	**342**	*e*PG		**Pg**	**12 27 16.7**	**-0.1**
ESKT	**Eskisehir**	**1.02**	**342**	*e*Pg		**Pg**	**12 27 16.7**	**-0.1**
ALT	**Altintas**	**1.03**	**300**	*e*PG		**Pg**	**12 27 16.1**	**-0.9**
ALT	**Altintas**	**1.03**	**300**	*e*Pg		**Pg**	**12 27 16.1**	**-0.8**
KONT	**Konya--Tatoy**	**1.05**	**124**	*e*PG		**Pg**	**12 27 17.1**	**-0.3**
KONT	**Konya--Tatoy**	**1.05**	**124**	*e*Pg		**Pg**	**12 27 17.1**	**-0.3**
SUTC	**Sutluce-Ispart**	**1.09**	**191**	*e*PN		**Pn**	**12 27 17.3**	**+0.2**
SUTC	**Sutluce-Ispart**	**1.09**	**191**	*e*Pn		**Pn**	**12 27 17.3**	**+0.2**

JMA 25 12:46:02.1±0.2, 30°.18N×142°.72E, h4km, M4.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.11**	**189**	P		Pn	12 46 53.2	+1.3
JHU	**Hanno**	**6.35**	**334**	P		Pn	12 47 39.3	+2.9
JHO	**Hitachi**	**6.66**	**345**	P		Pn	12 47 43.2	+2.5
JAG	**Ashikaga**	**6.80**	**337**	P		Pn	12 47 45.8	+3.2

DDA ***25*** *13:12:08.7, 39°.53N×40°.11E, h19km±4km, Md3.0*
CSEM ***25*** *13:12:09.4±0.2, 39°.65N×40°.11E, h2km, MD2.9, Error ellipse: s-maj=4.5km s-min=3.2km az=174.0*
ISK ***25*** *13:12:09.6, 39°.62N×40°.04E, h10km, MD2.9*
ISCJB ***25*** *13:12:09.1±0.8, 39°.65N±0°.04×40°.10E±0°.04, h1km±7km, Error ellipse: s-maj=6.6km s-min=4.7km az=25.7*
ISC 25 13:12:09.7±0.7, 39°.65N±0°.04×40°.08E±0°.05, h3km±7km, n26, σ1°.19/34, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
EZC	**Erzincan**	**0.23**	**295**	*e*PG		**Pg**	**13 12 20.7**	**+6.6**
EZC				*e*SG		**Sg**	**13 12 28.9**	**+12**
KOPT	**Kop Dagi**	**0.48**	**41**	*i* P		**Pg**	**13 12 18.7**	**-0.3**
KOPT				*i* S		**Sg**	**13 12 30.1**	**+4.8**
KOPT	**Kop Dagi**	**0.48**	**41**	*i* P		**Pg**	**13 12 18.7**	**-0.3**
BINT	**Bingol**	**0.84**	**158**	*e*PG		**Pg**	**13 12 26.8**	**+1.1**
BINT				*e*SG		**Sg**	**13 12 37.2**	**+0.7**
BINT	**Bingol**	**0.84**	**158**	*e*Pg		**Pg**	**13 12 26.8**	**+1.1**
BINT				*e*Sg		**Sg**	**13 12 37.2**	**+0.7**
GUMT	**Gumushane**	**0.93**	**330**	*e*PG		**Pg**	**13 12 27.9**	**+0.4**
GUMT	**Gumushane**	**0.93**	**330**	*e*Pg		**Pg**	**13 12 27.9**	**+0.4**
ERZM	**Erzurum**	**1.02**	**75**	*i* P		**Pg**	**13 12 27.8**	**-1.4**
ERZM	**Erzurum**	**1.02**	**75**	*i* P		**Pg**	**13 12 27.8**	**-1.4**
BNGL	**BINGOL**	**1.08**	**130**	*i* P		**Pg**	**13 12 28.1**	**-2.3**
BNGL				*i* S		**Sg**	**13 12 46.4**	**+1.9**
KEMA	**Kemaliye**	**1.29**	**253**	*i* P		**Pn**	**13 12 33.8**	**-0.7**
KEMA				*i* S		**Sg**	**13 12 50.5**	**-0.6**
KEMA	**Kemaliye**	**1.29**	**253**	*i* P		**Pn**	**13 12 33.8**	**-0.7**
KEMA				*i* S		**Sg**	**13 12 50.5**	**-0.6**
SVRC	**Sivrice-ELAZID**	**1.41**	**206**	*e*PN		**Pn**	**13 12 34.5**	**-1.7**
SVRC	**Sivrice-ELAZID**	**1.41**	**206**	*e*Pn		**Pn**	**13 12 34.5**	**-1.6**
HOMI	**Horasan**	**1.46**	**74**	*i* P		**Pn**	**13 12 36.1**	**-0.6**
ESPY	**Espiye-Giresun**	**1.64**	**321**	*e*PN		**Pn**	**13 12 39.9**	**+0.6**
ESPY	**Espiye-Giresun**	**1.64**	**321**	*e*Pn		**Pn**	**13 12 39.9**	**+0.7**
DBAD	**Bademkaya**	**1.84**	**42**	*i* P		**Pn**	**13 12 42.7**	**+0.6**
DBAD	**Bademkaya**	**1.84**	**42**	*i* P		**Pn**	**13 12 42.7**	**+0.6**
GRSN	**GIRESUNGRSN**	**1.88**	**313**	*i* P		**Pn**	**13 12 45.0**	**+2.3**
GRSN	**GIRESUNGRSN**	**1.88**	**313**	*i* P		**Pn**	**13 12 45.0**	**+2.4**
BEST	**Besiri**	**1.99**	**152**	*i* P		**Pn**	**13 12 43.3**	**-0.8**
BEST				*i* S		**Sn**	**13 13 12.8**	**+3.4**
TUTA	**Tutak**	**2.13**	**96**	*i* P		**Pn**	**13 12 45.7**	**-0.3**
TUTA	**Tutak**	**2.13**	**96**	*i* P		**Pn**	**13 12 45.7**	**-0.3**
SVSK	**Karacayir**	**2.39**	**277**	*e*PN		**Pn**	**13 12 50.2**	**+0.6**
SVSK	**Karacayir**	**2.39**	**277**	*e*Pn		**Pn**	**13 12 50.2**	**+0.6**

KRSC 25 13:19:07.4±0.7, 54°.71N×163°.13E, h34km±23km, ML3.9, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.83**	**260**	*i* P		Pn	13 19 22.7	+0.1
MKZ				*i* S		Sn	13 19 34.2	+0.6
KBTR	**Krutoberegovo**	**1.51**	**353**	*i* P		Pn	13 19 31.5	-0.5
KBTR				*i* S		Sn	13 19 49.9	-0.6
BKI	**Bering**	**1.71**	**72**	*e*P		Pn	13 19 34.4	-0.4
BKI				*i* S		Sn	13 19 53.7	-1.7
BZGR	**Bezymyannyi-Gr**	**1.86**	**313**	*e*P		Pn	13 19 38.7	+1.9
BZGR				*i* S		Sn	13 20 01.6	+2.6
ZLN	**Zelenaya**	**1.86**	**316**	*e*P		Pn	13 19 38.5	+1.6
ZLN				*i* S		Sn	13 20 01.0	+1.8
KMNR	**Kamenistaya**	**1.96**	**304**	*i* P		Pn	13 19 40.0	+1.8
KMNR				*i* S		Sn	13 20 03.9	+2.4
KPT	**Kopyto**	**2.08**	**308**	*e*P		Pn	13 19 41.4	+1.5
KPT				*i* S		Sn	13 20 06.4	+1.8
KRSR	**Krestovskiy**	**2.10**	**317**	P		Pn	13 19 41.3	+1.2
KRSR				*i* S		Sn	13 20 05.9	+0.9
KLY	**Klyuchi**	**2.14**	**320**	*e*P		Pn	13 19 40.9	+0.3
KLY				*i* S		Sn	13 20 04.9	-1.0
SRKR	**Sorokina**	**2.24**	**331**	P		Pn	13 19 43.3	+1.3
SRKR				*i* S		Sn	13 20 08.9	+0.4
KII	**Karymskiy**	**2.26**	**254**	*e*P		Pn	13 19 44.4	+2.2
KII				*i* S		Sn	13 20 11.5	+2.7
KOZ	**Kozyrevsk**	**2.30**	**307**	P		Pn	13 19 44.9	+2.1
KOZ				*i* S		Sn	13 20 12.5	+2.7
SPN	**Mys Shipunski**	**2.45**	**230**	P		Pn	13 19 44.9	0.0
SPN				*i* S		Sn	13 20 12.1	-1.4
SRDR	**Sredinnyy**	**2.52**	**311**	*e*P		Pn	13 19 47.8	+1.9
SRDR				*e*S		Sn	13 20 16.8	+1.4
NLC	**Nalytchevo**	**2.72**	**237**	P		Pn	13 19 49.3	+0.7
NLC				*i* S		Sn	13 20 20.2	0.0
AVH	**Avacha**	**2.97**	**243**	*e*P		Pn	13 19 54.8	+2.8
AVH				*i* S		Sn	13 20 29.3	+2.9
PET	**Petropavlovsk**	**3.14**	**239**	P		Pn	13 19 56.3	+1.9
PET				*i* S		Sn	13 20 31.9	+1.2
GNL	**Ganaly**	**3.21**	**254**	*i* P		Pn	13 19 57.8	+2.4
MIPR	**Malaya Ipel'ka**	**4.52**	**240**	P		Pn	13 20 16.6	+3.3

IDC ***25*** *13:36:30.2±1.3, 46°.39N×154°.71E, h0km, mb3.5/4, mb1 3.7/6, mb1mx3.5/25, mbtmp3.6/6, ML3.3/2, MS3.5/2, Ms1 3.5/2, ms1mx2.5/34, Error ellipse: s-maj=35.5km s-min=23.4km az=138.0*
ISCJB ***25*** *13:36:34.0±1.0, 46°.4N±0°.1×154°.5E±0°.2, h33km, mb3.5/5, MS3.5/2, Error ellipse: s-maj=23.8km s-min=9.1km az=33.5*
MOS ***25*** *13:36:35.0±1.6, 46°.56N×154°.34E, h41km, mb3.9/4, Error ellipse: s-maj=34.6km s-min=17.1km az=71.5*
ISC 25 13:36:35.8±1.1, 46°.3N±0°.1×154°.6E±0°.2, h35km, n15, σ1°.19/14, mb3.5/5, MS3.5/2, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**4.47**	**13**	*e*PN		**Pn**	**13 37 41.0**	**0.0**
PETK	**Petropavlovsk-**	**7.07**	**15**	Pn		**Pn**	**13 38 13.1**	**-3.6**
	0.2nm,0.3s,baz=197,slow=12,SNR=6.7							
PETK					Sn	**Sn**	**13 39 37.4**	**+1.6**
	0.0nm,0.3s,baz=167,slow=24,SNR=2.1							

ASAJ			pmax	pmax		
	comp=Z,1.0nm,0.3s					
CBIJ	**Chichi jima**	**21.57 211**	LR	LR	13 47 45.6	
	comp=Z,51nm,21.0s,MS2.9,baz=107,slow=31					
KSRS	**Korea Array**	**21.66 255**	P	**P**	**13 41 24.6**	**+1.5**
	comp=Z,0.6nm,0.5s,mb3.3,baz=62,slow=11,SNR=4.4					
KSRS	**Korea Array**	**21.66 255**	P	**P**	**13 41 24.6**	**+1.5**
KSRS			pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.5					
BILL	**Bilibino**	**22.58 11**	*e*P	**P**	**13 41 31.4**	**-1.3**
BILL			pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.2					
MKAR	**Makanchi Array**	**48.03 298**	P	**P**	**13 45 10.9**	**-0.4**
	comp=Z,0.6nm,0.7s,mb3.8,baz=60,slow=9.3,SNR=7.2					
MKAR	**Makanchi Array**	**48.03 298**	*e*P	**P**	**13 45 11.2**	**-0.1**
MKAR			pmax	pmax		
	comp=Z,1.0nm,0.7s					
FITZ	**Fitzroy Crossi**	**69.27 209**	LR	LR	14 13 45.8	
	comp=Z,96nm,20.6s,MS4.0,baz=4.5,slow=32					
ASAR	**Alice Springs**	**72.15 200**	P	**P**	**13 47 56.9**	**+0.3**
	comp=Z,0.5nm,0.7s,mb3.5,baz=12,slow=6.7,SNR=4.4					
ASAR	**Alice Springs**	**72.15 200**	*e*P	**P**	**13 47 58.4**	**+1.8**
ASAR			pmax	pmax		
	comp=Z,1.0nm,0.7s					
TXAR	**Lajitas Array**	**76.81 61**	P	**P**	**13 48 23.6**	**-0.3**
	comp=Z,0.4nm,0.6s,mb3.5,baz=289,slow=3.3,SNR=4.2					

*IDC **25** 13:46:39.0±1.7,32°.85N×91°.56E,h0^{km},mb3.4/4,*
mb1 3.6/7,mb1mx3.4/26,mbtmp3.4/7,ML3.6/2,Error
ellipse: s-maj=71.6km s-min=21.7km az=68.0
*ISCJB **25** 13:46:41.8±0.9,33°.40N±0°.08×92°.2E±0°.1,h33^{km},mb3.6/3,*
Error ellipse: s-maj=16.6km s-min=10.6km az=12.2
*DMN **25** 13:48:11.0±0.2,28°.26N×87°.25E,h25^{km},Error ellipse:*
s-maj=7.5km s-min=1.1km az=38.0
ISC 25 13:46:44.0±0.9,**33°.46N**±0°.07×**92°.2E**±0°.1,**h35**^{km},**n14,**
σ1^{s}02/15,mb3.6/3,Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.85**	**194**	Pg	**Pn**	**13 47 41.8**	**+1.1**
LSA				Sg	**Sn**	**13 48 32.0**	**+7.3**
LSA				smax			
	comp=N,30nm,0.8s						
LSA				smax			
	comp=E,50nm,1.0s						
GUN	**Gumba**	**7.75**	**226**	*e*P	**Pn**	**13 48 33.7**	**-0.6**
	comp=E,12nm,0.4s						
ODAN	**Odare**	**7.78**	**214**	*e*P	**Pn**	**13 48 35.5**	**+0.8**
RAMN	**Ramite**	**8.09**	**218**	*e*P	**Pn**	**13 48 35.9**	**-3.0**
KKN	**Kakani**	**8.20**	**228**	*e*P	**Pn**	**13 48 41.4**	**+0.9**
	comp=E,11nm,0.5s						
PKIN	**Phulchoki**	**8.28**	**227**	*e*P	**Pn**	**13 48 40.5**	**-1.1**
	comp=E,10nm,0.5s						
DMN	**Daman**	**8.44**	**228**	*e*P	**Pn**	**13 48 44.2**	**+0.4**
	comp=E,11nm,0.6s						
MKAR	**Makanchi Array**	**15.30**	**333**	Pn	**Pn**	**13 50 17.9**	**+0.6**
	baz=127,slow=11,SNR=2.2						
CMAR	**Chiang Mai Arr**	**16.12**	**156**	Pn	**Pn**	**13 50 23.8**	**-4.1**
	comp=E,0.1nm,0.3s,baz=338,slow=12,SNR=3.7						
SONM	**Songino Array**	**17.91**	**33**	P	**Pn**	**13 50 58.8**	**+8.6**
	comp=E,0.2nm,0.3s,baz=206,slow=12,SNR=5.1						
KURK	**Kurchatov**	**19.91**	**334**	P	**Pn**	**13 51 13.9**	**-0.4**
	comp=E,0.2nm,0.3s,baz=143,slow=9.8,SNR=2.9						
ZALV	**Zalesovo Beam**	**21.14**	**348**	P	**P**	**13 51 32.0**	**+6.3**
	comp=E,0.4nm,0.4s,mb3.1,baz=163,slow=11,SNR=3.8						
WRA	**Warramunga Arr**	**66.61**	**137**	P	**P**	**13 57 29.9**	**-1.1**
	comp=E,0.9nm,0.8s,mb3.8,baz=325,slow=6.1,SNR=3.6						
ASAR	**Alice Springs**	**69.32**	**139**	P	**P**	**13 57 48.5**	**+0.6**
	comp=E,0.5nm,0.5s,mb3.7,baz=324,slow=6.4,SNR=4.5						

*DDA **25** 13:50:54.5,38°.53N×29°.95E,h6^{km}±3^{km},Md2.7*
*CSEM **25** 13:50:56.2±0.1,38°.43N×29°.73E,h12^{km},MD2.8,Error*
ellipse: s-maj=2.3km s-min=1.9km az=167.0
*ISK **25** 13:50:56.2,38°.40N×29°.75E,h18^{km},MD2.8*
*ISCJB **25** 13:50:56.4±0.6,38°.48N±0°.04×29°.74E±0°.05,h10^{km}±6^{km},*
Error ellipse: s-maj=6.6km s-min=5.3km az=41.4
ISC 25 13:50:56.7±0.5,**38°.47N**±0°.04×**29°.72E**±0°.05,**h15**^{km}±5^{km},
n23,σ0^{s}73/32,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHL	**Karahalli**	**0.21**	**228**	*e*PG	**Pg**	**13 51 00.6**	**-0.9**
KHL				*e*SG	**Sg**	**13 51 05.6**	**+0.8**
KHL	**Karahalli**	**0.21**	**228**	*e*Pg	**Pg**	**13 51 00.6**	**-0.9**
KHL				*e*Sg	**Sg**	**13 51 05.6**	**+0.8**
GDZ	**Gediz**	**0.65**	**343**	*i* P	**Pg**	**13 51 09.9**	**+0.5**
GDZ				*i* S	**Sg**	**13 51 17.4**	**-0.6**
GDZ	**Gediz**	**0.65**	**343**	*i* P	**Pg**	**13 51 09.9**	**+0.4**
GDZ				*i* S	**Sg**	**13 51 17.5**	**-0.6**
SHUT	**Suhut-Afyon**	**0.66**	**82**	*e*PG	**Pg**	**13 51 09.2**	**-0.3**
SHUT				*e*SG	**Sg**	**13 51 18.8**	**+0.5**
SHUT	**Suhut-Afyon**	**0.66**	**82**	*e*Pg	**Pg**	**13 51 09.2**	**-0.4**
SHUT				*e*Sg	**Sg**	**13 51 18.8**	**+0.5**
ALT	**Altintas**	**0.66**	**27**	*e*PG	**Pg**	**13 51 10.8**	**+1.1**
ALT	**Altintas**	**0.66**	**27**	*e*Pg	**Pg**	**13 51 10.8**	**+1.1**
KULA	**Kula-Manisa**	**0.83**	**274**	*e*PG	**Pg**	**13 51 12.5**	**-0.4**
KULA	**Kula-Manisa**	**0.83**	**274**	*e*Pg	**Pg**	**13 51 12.5**	**-0.4**
ISP	**Isparta**	**0.88**	**135**	*e*PG	**Pg**	**13 51 12.9**	**-0.9**
DNZL	**Cakiroluk**	**0.94**	**215**	*i* P	**Pb**	**13 51 15.2**	**+0.5**
DNZL				*i* S	**Sb**	**13 51 31.5**	**+4.5**
DNZL	**Cakiroluk**	**0.94**	**215**	*i* P	**Pb**	**13 51 15.2**	**+0.5**
GOLH	**Golhisar**	**1.23**	**186**	*i* P	**Pn**	**13 51 19.2**	**-0.3**
GOLH				*i* S	**Sb**	**13 51 39.0**	**+3.6**
GOLH	**Golhisar**	**1.23**	**186**	*i* P	**Pn**	**13 51 19.2**	**-0.2**
GOLH				*i* S	**Sb**	**13 51 39.0**	**+3.6**
ESKT	**Eskisehir**	**1.37**	**40**	*e*PN	**Pn**	**13 51 21.3**	**0.0**
ESKT	**Eskisehir**	**1.37**	**40**	*e*Pn	**Pn**	**13 51 21.3**	**0.0**
SUTC	**Sutluce-Ispart**	**1.41**	**134**	*e*PN	**Pn**	**13 51 20.9**	**-1.0**
SUTC	**Sutluce-Ispart**	**1.41**	**134**	*e*Pn	**Pn**	**13 51 20.9**	**-1.0**
SVRH	**Sivrihisar-ESK**	**1.71**	**55**	*e*PN	**Pn**	**13 51 26.2**	**+0.2**
SVRH	**Sivrihisar-ESK**	**1.71**	**55**	*e*Pn	**Pn**	**13 51 26.2**	**+0.2**
KIZT	**Kizilcal**	**1.74**	**76**	*e*PN	**Pn**	**13 51 26.5**	**+0.1**
KIZT	**Kizilcal**	**1.74**	**76**	*e*Pn	**Pn**	**13 51 26.5**	**+0.1**

*MOS **25** 13:59:36.9±1.0,2°.57N×126°.47E,h33^{km},mb5.0/19,Error*
ellipse: s-maj=18.9km s-min=7.2km az=112.7
*DJA **25** 13:59:38,2°.78N×127°.00E,h15^{km},Mw5.2/8*
*BJI **25** 13:59:38.8,2°.31N×126°.77E,h69^{km},mB4.9/27,mb4.7/36,*
Ms4.4/23,Ms7 4.1/24
*IDC **25** 13:59:38.6±3.7,2°.56N×126°.51E,h30^{km}±25^{km},mb4.3/20,*
mb1 4.4/21,mb1mx4.3/26,mbtmp4.3/21,MS3.6/12,
Ms1 3.7/12,ms1mx3.4/34,Error ellipse: s-maj=25.1km
s-min=9.5km az=77.0
*NEIC **25** 13:59:39.2±1.6,2°.60N×126°.57E,h36^{km}±15^{km},mb4.7/21,*
Error ellipse: s-maj=13.7km s-min=6.4km az=70.0
*ISCJB **25** 13:59:40.5±0.7,2°.63N±0°.03×126°.72E±0°.05,h67^{km}±6^{km},*
mb4.6/66,Error ellipse: s-maj=8.5km s-min=4.7km
az=156.9
ISC 25 13:59:42.3±0.6,**2°.61N**±0°.03×**126°.73E**±0°.05,**h66**^{km}±5^{km},
h77^{km}±1.1^{km}:**pP-P,n164,**σ1^{s}**33**/167,**mb4.6**/66,**3C-3D,**
Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.61**	**312**	P	**Pn**	**14 00 04.4**	**-4.3**
TNTI	**Ternate**	**1.93**	**161**	P	**Pn**	**14 00 11.8**	**-1.2**
MNI	**Manado**	**2.22**	**239**	P	**Pn**	**14 00 16.2**	**-0.7**
LBMI	**Labuha**	**3.31**	**167**	P	**Pn**	**14 00 32.0**	**+0.2**
KMSI	**Cibinong**	**3.41**	**234**	P	**Pn**	**14 00 33.7**	**+0.6**
MRSI	**Marisa**	**5.24**	**246**	P	**Pn**	**14 00 59.0**	**+0.9**
	1.8nm5μm420nm,0.6s						
LUWI	**Luwuk**	**5.37**	**228**	P	**Pn**	**14 01 03.2**	**+3.3**
	1.3nm3μm288nm,0.8s						
BUKP	**Musuan**	**5.50**	**342**	*e*P	**Pn**	**14 01 00.9**	**-0.8**
APSI	**Ampana**	**6.17**	**236**	P	**Pn**	**14 01 14.9**	**+4.0**
	3μm321nm,0.7s						
PAGZ	**Pagadian**	**6.19**	**327**	*e*P	**Pn**	**14 01 10.2**	**-0.9**
IPIL	**Ipil**	**6.61**	**321**	*e*P	**Pn**	**14 01 14.5**	**-2.4**
KDI	**Kendari**	**7.71**	**212**	P	**Pn**	**14 01 30.7**	**-1.2**
	44nm,0.7s						
PCI	**Palu**	**7.73**	**243**	P	**Pn**	**14 01 33.5**	**+1.3**
	85nm,0.8s						
MYLDM	**Lahad Datu**	**8.60**	**288**	P	**Pn**	**14 01 45.2**	**+1.0**
MYLDM	**Lahad Datu**	**8.60**	**288**	P	**Pn**	**14 01 45.7**	**+1.5**
	2μm181nm,0.9s						
TTSI	**Tana Toraja**	**8.90**	**231**	P	**Pn**	**14 01 50.7**	**+2.4**
	774nm77nm,0.9s						
TSM	**Tawau**	**9.00**	**281**	P	**Pn**	**14 01 47.8**	**-1.9**

SPSI	**Sidrap Palu**	**9.54**	**227**	P	**Pn**	**14 02 00.1**	**+3.1**
	31nm,0.9s					
SDKM	**Sandakan**	**9.98**	**288**	P	**Pn**	**14 02 02.5**	**-0.5**
KAPI	**Kappang**	**10.29**	**223**	Pn	**Pn**	**14 02 03.4**	**-3.9**
	baz=195,slow=20,SNR=2.4					
KDM	**Kudat**	**10.75**	**294**	P	**Pn**	**14 02 20.2**	**+6.6**
KKM	**Kota Kinabalu**	**11.03**	**288**	P	**Pn**	**14 02 18.8**	**+1.4**
KKM	**Kota Kinabalu**	**11.03**	**288**	*e*P	**Pn**	**14 02 18.9**	**+1.5**
	48nm,0.9s						
KKM	**Kota Kinabalu**	**11.03**	**288**	P	**Pn**	**14 02 19.5**	**+2.1**
	559nm61nm,1.1s						
BTM	**Bintulu**	**13.64**	**273**	P	**Pn**	**14 02 56.8**	**+3.9**
SBUM	**Sibu**	**14.50**	**270**	P	**Pn**	**14 03 06.8**	**+2.6**
SBUM	**Sibu**	**14.50**	**270**	P	**Pn**	**14 03 08.8**	**+4.6**
	545nm57nm,0.8s						
KHKI	**Kahang-Kahang**	**15.55**	**225**	P	**Pn**	**14 03 21.8**	**+4.1**
KAKA	**Kakadu**	**16.24**	**160**	*e*P	**Pn**	**14 03 28.2**	**+1.8**
	27nm,0.9s						
KAKA	**Kakadu**	**16.24**	**160**	*e*Pn	**Pn**	**14 03 26.5**	**+0.1**
	71nm,0.8s						
KSM	**Kuching**	**16.45**	**266**	P	**Pn**	**14 03 32.3**	**+3.2**
KSM	**Kuching**	**16.45**	**266**	*e*P	**Pn**	**14 03 31.4**	**+2.3**
	18nm,0.9s						
KNA	**Kununurra**	**18.35**	**174**	*e*P	**Pn**	**14 03 51.4**	**-0.9**
	20nm,0.8s						
FITZ	**Fitzroy Crossi**	**20.60**	**183**	*e*P	**P**	**14 04 15.9**	**-0.3**
	22nm,0.7s						
FITZ	**Fitzroy Crossi**	**20.60**	**183**	P	**P**	**14 04 14.9**	**-1.3**
	8.3nm,0.6s,baz=20,slow=6.6,SNR=19						
FITZ	**Fitzroy Crossi**	**20.60**	**183**	*e*P	**P**	**14 04 14.9**	**-1.3**
	10nm,0.6s						
SSLB	**Suanglung**	**21.79**	**346**	*e*P	**P**	**14 04 26.7**	**-2.2**
	19nm,0.8s,mb4.5						
MYKOM	**Kota Tinggi**	**22.88**	**268**	P	**P**	**14 04 42.5**	**+1.9**
QIZ	**Qiongzhong**	**23.23**	**316**	P	**P**	**14 04 42.5**	**-1.5**
QIZ				S	**S**	**14 08 50.8**	**-0.2**
QIZ				pmax	pmax		
	comp=Z,11nm,1.5s,mb4.0						
QIZ				pmax	pmax		
	comp=Z,69nm,5.1s						
QIZ				LR	LR		
	comp=N,320nm,4.0s						
QIZ				LR	LR		
	comp=E,110nm,4.1s						
QIZ				LR	LR		
	comp=Z,400nm,28.6s						
QIZ	**Qiongzhong**	**23.23**	**316**	P	**P**	**14 04 42.7**	**-1.3**
WRAB	**Tennant Creek**	**23.61**	**162**	*e*P	**P**	**14 04 46.5**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,19nm,0.6s,mb4.6						
WRAB	**Tennant Creek**	**23.61**	**162**	*e*P	**P**	**14 04 46.5**	**-1.0**
	comp=Z,19nm,0.6s,mb4.6						
WRA	**Warramunga Arr**	**23.62**	**162**	P	**P**	**14 04 46.0**	**-1.5**
	comp=Z,16nm,0.6s,mb4.5,baz=344,slow=10.0,SNR=83						
WRA				S	**S**	**14 09 00.6**	**+3.3**
	comp=Z,1.2nm,0.8s,baz=334,slow=20,SNR=4.2						
WRA	**Warramunga Arr**	**23.62**	**162**	P	**P**	**14 04 46.0**	**-1.5**
WRA				S	**S**	**14 09 00.6**	**+3.3**
KTGM	**Kuala Trenggan**	**23.70**	**277**	P	**P**	**14 04 51.1**	**+2.7**
MBWA	**Marble Bar**	**24.59**	**196**	*e*P	**P**	**14 04 56.5**	**+0.1**
FRIM	**Kepong**	**25.08**	**272**	P	**P**	**14 05 02.4**	**+1.4**
MTSU	**Mount Surprise**	**26.92**	**141**	*e*P	**P**	**14 05 18.2**	**+0.7**
	comp=Z,18nm,0.6s,mb4.8						
ASAR	**Alice Springs**	**27.03**	**165**	P	**P**	**14 05 17.8**	**-0.7**
	comp=Z,3.8nm,0.5s,mb4.2,baz=346,slow=6.7,SNR=57						
ASAR				PcP	PcP	14 08 39.8	+1.3
	comp=Z,0.9nm,0.5s,baz=354,slow=1.7,SNR=5.4						
PSI	**Prapat**	**27.78**	**271**	LR	LR	14 15 36.0	
	comp=Z,228nm,20.0s,baz=124,slow=35						
CBIJ	**Chichi jima**	**28.50**	**30**	LR	LR	14 15 42.9	
	comp=Z,42nm,21.5s,baz=152,slow=34						
MEEK	**Meekatharra**	**30.11**	**195**	*e*P	**P**	**14 05 46.3**	**+0.5**
NJ2	**Nanjing**	**30.21**	**347**	*e*P	**P**	**14 05 48.5**	**+1.8**
NJ2				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.8						
GYA	**Guiyang**	**30.55**	**323**	P	**P**	**14 05 51.0**	**+1.3**
GYA				pP	pP	14 06 09.5	+3.7
GYA				sP	sP	14 06 19.8	+6.2
GYA				PP	PP	14 06 55.5	-4.3
GYA				S	**S**	**14 10 48.3**	**+1.4**
GYA				sS	sS	14 11 19.0	+4.6
GYA				ScP	ScP	14 12 23.5	-0.8
GYA				PcS	PcS	14 12 31.5	+0.3
GYA				ScS	ScS	14 16 19.0	-1.7
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.9						
GYA				pmax	pmax		
	comp=Z,110nm,4.5s						
GYA				LR	LR		
	comp=N,510nm,17.8s						
GYA				LR	LR		
	comp=E,470nm,16.9s						
GYA				LR	LR		
	comp=Z,480nm,17.4s						
CM31	**Chiang Mai Arr**	**31.45**	**302**	*e*P	**P**	**14 05 56.9**	**-0.8**
	comp=Z,6.0nm,0.8s,mb4.4						
CMAR	**Chiang Mai Arr**	**31.45**	**302**	P	**P**	**14 05 57.1**	**-0.7**
	comp=Z,5.5nm,0.8s,mb4.3,baz=123,slow=7.7,SNR=16						
CMAR				LR	LR	14 18 52.9	
	comp=Z,133nm,20.6s,baz=133,slow=37						
CHTO	**Chiang Mai**	**31.61**	**303**	*e*P	**P**	**14 05 57.9**	**-1.3**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
CHTO	**Chiang Mai**	**31.61**	**303**	*e*P	**P**	**14 05 57.9**	**-1.3**
	comp=Z,6.6nm,0.8s,mb4.4						
ENH	**Enshi**	**32.00**	**331**	P	**P**	**14 06 00.5**	**-1.9**
	comp=Z,6.7nm,0.6s,mb4.5						
KMI	**Kunming**	**32.18**	**316**	P	**P**	**14 06 06.0**	**+1.9**
KMI				pP	pP	14 06 24.5	+4.3
KMI				sP	sP	14 06 33.5	+5.5
KMI				PP	PP	14 07 18.0	+0.1
KMI				S	**S**	**14 11 13.3**	**+0.9**
KMI				sS	sS	14 11 44.8	+4.9
KMI				SS	SS	14 13 13.0	-20
KMI				pmax	pmax		
	comp=Z,7.0nm,1.9s,mb4.1						
KMI				pmax	pmax		
	comp=Z,98nm,4.3s						
KMI				LR	LR		
	comp=N,170nm,13.3s						
KMI				LR	LR		
	comp=E,170nm,9.8s						
KMI				LR	LR		
	comp=Z,270nm,25.7s						
FORT	**Forrest**	**33.22**	**178**	*e*P	**P**	**14 06 12.6**	**-0.5**
	comp=Z,35nm,0.8s,mb5.2						
KMBL	**Kambalda**	**34.10**	**187**	*e*P	**P**	**14 06 21.0**	**+0.3**
	comp=Z,59nm,0.5s,mb5.7						
KSRS	**Korea Array**	**34.70**	**2**	P	**P**	**14 06 26.2**	**+0.4**
	comp=Z,3.8nm,0.8s,mb4.3,baz=181,slow=9.7,SNR=21						
KSRS				PcP	PcP	14 09 00.1	+1.5
	comp=Z,1.1nm,0.8s,baz=206,slow=2.5,SNR=4.2						
MJAR	**Matsushiro Arr**	**35.39**	**16**	P	**P**	**14 06 32.1**	**+0.3**
	comp=Z,2.3nm,0.8s,mb4.0,baz=192,slow=9.0,SNR=7.1						
MJAR				LR	LR	14 19 40.3	
	comp=Z,104nm,20.4s,baz=210,slow=34						
MAT	**Matsushiro**	**35.39**	**16**	P	**P**	**14 06 34.2**	**+2.4**
CD2	**Chengdu**	**35.55**	**325**	*e*P	**P**	**14 06 34.0**	**+0.7**
CD2				pP	pP	14 06 52.0	+2.5
CD2				sP	sP	14 07 01.0	+3.7
CD2				PP	PP	14 07 57.0	+1.8
CD2				S	**S**	**14 12 05.0**	**+0.6**
CD2				sS	sS	14 12 36.3	+4.2
CD2				SS	SS	14 14 30.0	-12
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
CD2				pmax	pmax		
	comp=Z,40nm,5.2s						
CD2				LR	LR		
	comp=N,170nm,14.2s						
CD2				LR	LR		
	comp=Z,190nm,14.4s						
BBOO	**Buckleboo**	**36.31**	**167**	*e*P	**P**	**14 06 39.0**	**-0.7**
	comp=Z,16nm,1.8s,mb4.7						
NWAO	**Narrogin (SRO)**	**36.46**	**194**	P	**P**	**14 06 40.0**	**-1.0**
	comp=Z,12nm,0.9s,mb4.8,baz=60,slow=8.1,SNR=5.9						
EIDS	**Eidsvold**	**36.47**	**141**	*e*P	**P**	**14 06 40.3**	**-0.9**
STKA	**Stephens Creek**	**37.08**	**159**	*e*P	**P**	**14 06 46.9**	**+0.6**
	comp=Z,11nm,0.7s,mb4.9						
STKA	**Stephens Creek**	**37.08**	**159**	P	**P**	**14 06 46.9**	**+0.6**
	comp=Z,12nm,0.7s,mb5.0,baz=333,slow=9.1,SNR=20						
CMSA	**Cobar Meteorol**	**38.44**	**154**	*e*P	**P**	**14 06 57.6**	**-0.2**
BJI	**Beijing**	**38.48**	**347**	P	**P**	**14 07 00.0**	**+2.1**
BJI				S	**S**	**14 12 40.8**	**-7.7**
BJI				pmax	pmax		
	comp=Z,18nm,0.7s,mb5.0						

BJI			pmax	pmax		
	comp=Z,79nm,3.5s					
BJI			LR	LR		
	comp=Z,95nm,30.6s					
LZH	**Lanzhou**	**39.47**	**330**	*e*P	**P**	**14 07 05.5**	**-0.8**
LZH			pP	pP	14 07 23.5	+0.7
LZH			sP	sP	14 07 32.5	+2.0
LZH			PP	PP	14 08 41.8	+3.7
LZH			pmax	pmax		
	comp=Z,16nm,1.0s,mb4.8					
LZH			pmax	pmax		
	comp=Z,89nm,4.0s					
HHC	**Hu-ho-hao-te**	**40.46**	**342**	*e*P	**P**	**14 07 14.5**	**+0.1**
HHC			pP	pP	14 07 33.0	+2.0
HHC			sP	sP	14 07 42.0	+3.4
HHC			PP	PP	14 08 52.8	+4.0
HHC			PcP	PcP	14 09 16.0	-0.1
HHC			ScP	ScP	14 12 58.0	-1.9
HHC			PcS	PcS	14 13 06.0	-0.7
HHC			S	**S**	**14 13 18.5**	**+0.2**
HHC			sS	sS	14 13 50.5	+4.1
HHC			SS	SS	14 16 15.8	-4.3
HHC			ScS	ScS	14 17 11.0	-3.1
HHC			pmax	pmax		
	comp=Z,14nm,0.8s,mb4.8					
HHC			pmax	pmax		
	comp=Z,43nm,4.6s					
HHC			LR	LR		
	comp=N,78nm,15.6s					
HHC			LR	LR		
	comp=E,110nm,16.8s					
HHC			LR	LR		
	comp=Z,150nm,22.8s					
ARMA	**Armidale**	**40.53**	**146**	*e*P	**P**	**14 07 15.6**	**+0.4**
CN2	**Changchun**	**41.04**	**359**	*e*P	**P**	**14 07 21.8**	**+2.7**
CN2			*es*P	sP	14 07 48.8	+5.4
CN2			*e*S	**S**	**14 13 29.5**	**+2.7**
CN2			pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8					
CN2			pmax	pmax		
	comp=Z,200nm,3.0s					
CN2			LR	LR		
	comp=N,200nm,15.0s					
CN2			LR	LR		
	comp=E,300nm,15.0s					
CN2			LR	LR		
	comp=Z,300nm,17.0s					
MDJ	**Mudanjiang**	**41.91**	**3**	P	**P**	**14 07 26.5**	**+0.2**
MDJ			pP	pP	14 07 44.0	+1.1
MDJ			sP	sP	14 07 52.3	+1.8
MDJ			PP	PP	14 09 04.8	+0.4
MDJ			ScP	ScP	14 13 04.8	-0.8
MDJ			PcS	PcS	14 13 12.5	+0.2
MDJ			S	**S**	**14 13 40.5**	**+0.8**
MDJ			sS	sS	14 14 10.5	+2.6
MDJ			SS	SS	14 16 51.0	+2.3
MDJ			ScS	ScS	14 17 22.3	-0.4
MDJ			pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.1					
MDJ			pmax	pmax		
	comp=Z,65nm,6.0s					
MDJ			LR	LR		
	comp=N,50nm,33.4s					
MDJ			LR	LR		
	comp=E,86nm,28.0s					
MDJ			LR	LR		
	comp=Z,110nm,28.0s					
GTA	**Gaotai**	**44.06**	**330**	*e*P	**P**	**14 07 46.5**	**+2.8**
GTA			pP	pP	14 08 05.3	+4.9
GTA			sP	sP	14 08 14.0	+5.9
GTA			PP	PP	14 09 32.5	+4.9
GTA			S	**S**	**14 14 15.0**	**+3.6**
GTA			sS	sS	14 14 47.0	+7.3
GTA			SS	SS	14 17 26.8	-4.1
GTA			pmax	pmax		
	comp=Z,3.0nm,1.3s,mb3.9					
GTA			pmax	pmax		
	comp=Z,62nm,4.7s					
GTA			LR	LR		
	comp=N,140nm,19.2s					
GTA			LR	LR		
	comp=E,85nm,19.2s					
GTA			LR	LR		
	comp=Z,200nm,21.0s					
TAPN	**Taplejung**	**44.69**	**307**	*e*P	**P**	**14 07 45.7**	**-3.3**
ODAN	**Odare**	**44.73**	**306**	*e*P	**P**	**14 07 47.7**	**-1.6**
	comp=Z,21nm,0.7s,mb5.0						
RAMN	**Ramite**	**45.40**	**306**	*e*P	**P**	**14 07 53.1**	**-1.5**
JIRN	**Jiri**	**46.04**	**307**	*e*P	**P**	**14 07 57.7**	**-1.9**
HABR	**Khabarovsk**	**46.25**	**8**	*e*P	**P**	**14 08 01.7**	**+0.8**
HABR			*e**PP	pP	14 08 13.2	-4.5
HABR			*e**SP	sP	14 08 20.1	-5.3
HABR					14 09 35.1	
HABR			*e*		14 09 50.4	
HABR			*e*S	**S**	**14 14 46.1**	**+3.4**
HABR			*e*		14 17 50.7	
HABR			*e*SSS		14 19 10.8	
HABR			pmax	pmax		
	comp=N,29nm,2.2s					
HABR			pmax	pmax		
	comp=Z,35nm,1.8s,mb4.8					
HABR			pmax	pmax		
	comp=E,45nm,2.4s					
HABR			MLR	MLR		
	comp=Z,69nm,15.0s					
GUN	**Gumba**	**46.39**	**307**	*e*P	**P**	**14 08 00.3**	**-2.1**
	comp=Z,44nm,0.7s,mb5.3					
PKI	**Pulchoki**	**46.63**	**306**	*e*P	**P**	**14 08 03.4**	**-0.8**
PKIN	**Phulchoki**	**46.64**	**306**	*e*P	**P**	**14 08 02.5**	**-1.8**
KKN	**Kakani**	**46.82**	**306**	*e*P	**P**	**14 08 03.9**	**-1.9**
**H

KSH sS sS 14 18 04.8 +0.4
KSH ScS ScS 14 19 14.0 -4.3
KSH pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
KSH pmax pmax
comp=Z,120nm,5.3s
KSH LR LR
comp=N,73nm,4.2s
KSH LR LR
comp=E,69nm,7.8s
KSH LR LR
comp=Z,95nm,4.7s
YAK Yakutsk 59.33 2 *e*P **P 14 09 37.3 +0.2**
YAK pmax pmax
comp=Z,12nm,0.9s,mb4.9
YAK Yakutsk 59.33 2 *e*P **P 14 09 36.8 -0.3**
comp=Z,15nm,0.6s,mb5.2
KZA Kyzart 60.44 318 P **P 14 09 47.2 +2.1**
SNR=6.6
TKM2 Tokmak 2 60.59 319 P **P 14 09 47.7 +1.6**
SNR=6.5
TKM2 Tokmak 2 60.59 319 *e*P **P 14 09 46.0 -0.1**
TKM2 pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
TKM2 Tokmak 2 60.59 319 *e*P **P 14 09 46.0 -0.1**
comp=Z,4.5nm,0.7s,mb4.6
UCH Uchtor 61.00 318 P **P 14 09 50.8 +1.8**
SNR=11
UCH Uchtor 61.00 318 *e*P **P 14 09 50.2 +1.2**
UCH pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
UCH Uchtor 61.00 318 *e*P **P 14 09 50.2 +1.3**
comp=Z,8.3nm,0.8s,mb4.8
AAK Ala-Archa 61.19 318 P **P 14 09 49.8 -0.4**
comp=Z,1.4nm,0.3s,mb4.4,baz=14,slow=8.4,SNR=5.1
USP Ospenovka 61.46 319 P **P 14 09 53.1 +1.0**
SNR=6.4
ZAA0 Zalesovo Array 61.59 333 *e*P **P 14 09 52.8 +0.1**
ZALV Zalesovo Beam 61.59 333 P **P 14 09 51.2 -1.4**
comp=Z,1.6nm,0.4s,mb4.4,baz=120,slow=6.7,SNR=9.5
ZALV LR LR 14 38 49.3
comp=Z,48nm,18.8s,baz=249,slow=38
RAO Raoul Island 61.68 125 LR LR 14 30 39.2
comp=Z,933nm,21.3s,baz=162,slow=30
EKS2 Erkin-Say 61.68 318 P **P 14 09 54.3 +0.7**
SNR=6.9
EKS2 Erkin-Say 61.68 318 *e*P **P 14 09 54.1 +0.6**
EKS2 pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
EKS2 Erkin-Say 61.68 318 *e*P **P 14 09 54.1 +0.6**
comp=Z,5.9nm,0.7s,mb4.7
KBL Kabul 62.21 308 *e*P **P 14 09 55.4 -1.9**
KBL pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
KBL Kabul 62.21 308 *e*P **P 14 09 55.4 -1.8**
comp=Z,5.1nm,0.7s,mb4.7
KURK Kurchatov 62.69 328 P **P 14 09 59.2 -0.9**
comp=Z,10.0nm,0.8s,mb4.8,baz=128,slow=6.0,SNR=26
KURK Kurchatov 62.69 328 *ce*P **P 14 09 59.8 -0.3**
KURK pmax pmax
comp=Z,13nm,0.7s,mb5.0
KURK Kurchatov 62.69 328 *e*P **P 14 09 59.4 -0.7**
comp=Z,18nm,0.9s,mb5.0
NVS Novosibirsk 62.87 333 *i*P **P 14 09 57.2 -4.0**
BVAR Borovoye Array 68.26 327 P **P 14 10 35.2 -0.8**
comp=Z,2.3nm,0.6s,mb4.2,baz=136,slow=9.5,SNR=15
BRVK Borovoye 68.33 327 *ce*P **P 14 10 34.7 -1.8**
BRVK pmax pmax
comp=Z,5.0nm,1.0s,mb4.3
BRVK Borovoye 68.33 327 *e*P **P 14 10 34.2 -2.3**
comp=Z,30nm,0.8s,mb5.2
TIXI Tiksi 68.96 1 *e*P **P 14 10 39.3 -0.7**
TIXI pmax pmax
comp=Z,12nm,2.1s,mb4.4
TIXI Tiksi 68.96 1 *e*P **P 14 10 40.1 +0.1**
comp=Z,2.8nm,0.6s,mb4.3
BILL Bilibino 70.63 15⇑ *e*P **P 14 10 51.4 +1.0**
BILL pmax pmax
comp=Z,1.0nm,0.8s,mb3.7
AKTK Aktyubinsk 74.54 322 P **P 14 11 13.6 -0.4**
AKTO Aktyubinsk 74.54 322 P **P 14 11 13.6 -0.4**
comp=Z,6.4nm,0.7s,mb4.5,baz=100,slow=8.4,SNR=16
SVE Sverdlovsk 74.92 329⇓ *e*P **P 14 11 16.0 0.0**
SVE pmax pmax
comp=Z,29nm,1.0s,mb5.0
ARU Arti 75.88 328 *d*iP **P 14 11 20.6 -0.9**
ARU *e* 14 14 09.1
ARU S S 14 21 00.5 +1.7
ARU pmax pmax
comp=Z,20nm,1.0s,mb4.8
ARU Arti 75.88 328 *e*P **P 14 11 20.4 -1.1**
comp=Z,17nm,0.8s,mb4.8
RDF Al-Radifah 79.28 299 *e*P **P 14 11 40.3 -0.7**
RDF AMb AMB 14 11 43.6
comp=Z,28nm,1.3s,mb4.9
MIB Mutribah 79.51 300 *e*P **P 14 11 41.4 -0.9**
MIB AMb AMB 14 11 48.0
comp=Z,18nm,0.6s,mb5.1
NAY Al-Naaiem 79.56 299 *e*P **P 14 11 41.3 -1.3**
NAY AMb AMB 14 11 48.9
comp=Z,11nm,1.1s,mb4.6
ABPO Ambohimpanom 80.94 250 *e*P **P 14 11 52.1 +1.9**
GNI Garni 82.20 310 LR LR 14 52 43.2
comp=Z,34nm,20.5s,baz=206,slow=39
MAW Mawson 82.71 200 P **P 14 11 58.3 -0.2**
comp=Z,1.3nm,0.6s,mb3.9,baz=343,slow=11,SNR=3.9
ZEI Tsey 82.97 313 *e*P **P 14 12 00.2 -0.2**
ZEI pmax pmax
comp=Z,13nm,1.0s,mb4.7
KIV Kislovodsk 83.91 314 *e*P **P 14 12 03.8 -1.4**
KIV pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
COLD Coldfoot 84.92 23 *e*P **P 14 12 11.9 +2.2**
comp=Z,4.6nm,1.0s,mb4.4
SOC Sochi 86.06 313 *e*P **P 14 12 13.5 -2.4**
SOC *e* 14 15 39.1
SOC *e*S SKSac 14 22 34.6 -1.7
SOC *e*SSS 14 31 58.9
SOC pmax pmax
comp=Z,10.0nm,0.4s,mb5.1
VSR Storozhevoye 86.46 321 *e*P **P 14 12 16.5 -1.2**
VSR pmax pmax
comp=E,20nm,1.0s
VSR pmax pmax
comp=Z,30nm,1.0s,mb5.2
VSR pmax pmax
comp=N,4.0nm,0.3s
OBN Obninsk 87.98 325⇓ *i*P **P 14 12 25.9 +0.9**
OBN pmax pmax
comp=Z,24nm,1.2s,mb5.1
EIL Elat 90.28 300 LR LR 14 57 53.3
comp=Z,42nm,21.2s,baz=100,slow=39
BR131 Keskin Array S 90.74 310 *e*P **P 14 12 38.2 -0.1**
comp=Z,3.2nm,0.8s,mb4.5
ARCES ARCESS Array B 91.50 340 P **P 14 12 41.4 +0.3**
comp=Z,2.3nm,0.7s,mb4.4,baz=64,slow=5.6,SNR=6.4
ARCES LR LR 14 54 58.5
comp=Z,31nm,18.6s,baz=267,slow=36
ARCES ARCESS Array B 91.50 340 P **P 14 12 41.4 +0.3**
ARCES LR LR 14 54 58.5
QSPA South Pole Qui 92.52 180 P **P 14 12 48.2 +2.5**
comp=Z,0.7nm,0.6s,mb4.2,baz=258,slow=0.8,SNR=7.1
FINES FINESS Array B 92.82 332 P **P 14 12 48.7 +1.3**
comp=Z,2.6nm,0.9s,mb4.6,baz=77,slow=8.2,SNR=2.5
NOA NORSAR Array B 99.79 334 LR LR 15 05 37.7
comp=Z,28nm,18.1s,baz=60,slow=40
YKA Yellowknife Ar 100.52 24 PKiKP PKiKP 14 17 51.4 +3.0
comp=Z,0.3nm,0.6s,baz=296,slow=1.4,SNR=4.4
TXAR Lajitas Array 122.28 53 PKP PKPdf 14 18 31.9 +1.4
comp=Z,0.3nm,0.6s,baz=207,slow=1.4,SNR=4.3
TXAR Lajitas Array 122.28 53 PKP PKPdf 14 18 31.9 +1.4
TORD Torodi Ar. Bea 123.26 287 PKP PKPdf 14 18 33.4 +0.6
comp=Z,1.1nm,0.7s,baz=44,slow=2.0,SNR=5.3

IDC 25 14:00:34.0±8.1, 54.80S×151.31W, h0km, mb3.5/1, mb1 3.7/1, mb1mx3.5/12, mbtmp3.5/1, MS3.8/1, Ms1 3.8/1, ms1mx2.9/17, Error ellipse: s-maj=849.2km s-min=93.4km az=166.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**31.92**	**312**	LR	LR	14 17 16.5	
	comp=Z,143nm,18.7s,baz=5.8,slow=31						
ASAR	**Alice Springs**	**62.31**	**268**	P	P	14 10 58.0	+0.1
	0.4nm,0.7s,baz=142,slow=6.7,SNR=5.3						
MKAR	**Makanchi Array**	**145.94**	**279**	PKPbc	PKPbc	14 20 13.4	-1.1
	0.6nm,0.7s,baz=94,slow=5.9,SNR=8.3						
ZALV	**Zalesovo Beam**	**148.04**	**292**	PKPbc	PKPbc	14 20 19.5	-0.6
	0.3nm,0.4s,baz=132,slow=2.1,SNR=3.4						
KURK	**Kurchatov**	**150.03**	**283**	PKPbc	PKPbc	14 20 25.1	-0.1
	0.9nm,0.7s,baz=120,slow=1.4,SNR=6.6						

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*IDC **25** 14:06:39.2±2.8, 23.47S×179.79W, h501km±32km, mb3.8/10, mb1 3.9/12, mb1mx3.6/22, mbtmp3.8/12, Error ellipse: s-maj=21.7km s-min=18.1km az=3.0*
*ISCJB **25** 14:06:39.6±1.3, 23.52S±0.08×179.8W±0.1, h522km±18km, mb4.5/15, Error ellipse: s-maj=16.8km s-min=12.2km az=11.8*
*NEIC **25** 14:06:40.4±0.9, 23.57S×179.72W, h520km±14km, mb4.7/1, Error ellipse: s-maj=16.2km s-min=13.9km az=130.0*
ISC 25 14:06:39.9±1.0, 23.64S±0.08×179.7W±0.1, h515km±15km, n28, σ1.903/30, mb4.5/15, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.24**	**340**	*e*P	**P**	**14 08 21.1**	**+1.8**
AFI	**Afiamalu**	**12.24**	**39**	P	**P**	**14 09 19.3**	**-1.8**
	2.6nm,0.3s,baz=220,slow=23,SNR=7.2						
AFI				S	**S**	**14 11 24.7**	**-9.1**
	1.2nm,0.3s,baz=264,slow=23,SNR=3.5						
AFI	**Afiamalu**	**12.24**	**39**	*e*P	**P**	**14 09 19.6**	**-1.5**
AFI				S	**S**	**14 11 24.7**	**-9.1**
URZ	**Urewera**	**14.83**	**190**	P	**P**	**14 09 48.0**	**+0.1**
	1.4nm,0.3s,baz=12,slow=2.2,SNR=8.9						
URZ				S	**S**	**14 12 21.2**	**-1.7**
	0.3nm,0.3s,baz=82,slow=21,SNR=3.1						
RPZ	**Rata Peaks**	**21.43**	**199**	P	**P**	**14 10 52.5**	**+2.0**
	8.5nm,0.6s,mb4.6,baz=290,slow=20,SNR=6.4						
EIDS	**Eidsvold**	**26.62**	**260**	*e*P	**P**	**14 11 37.4**	**+0.4**
EIDS	**Eidsvold**	**26.62**	**260**	*e*P	**P**	**14 11 37.3**	**+0.3**
RMQ	**Roma**	**28.68**	**258**	*e*P	**P**	**14 11 56.5**	**+1.5**
	17nm,0.9s,mb4.7						
CMSA	**Cobar Meteorol**	**31.57**	**248**	*e*P	**P**	**14 12 20.1**	**+0.2**
CTA	**Charters Tower**	**31.75**	**270**	*e*P	**P**	**14 12 21.8**	**+0.2**
	14nm,0.3s,mb5.0						
CTA	**Charters Tower**	**31.75**	**270**	P	**P**	**14 12 21.9**	**+0.3**
	21nm,0.3s,mb5.1,baz=97,slow=11,SNR=63						
CTAO	**Charters Tower**	**31.75**	**270**	*e*P	**P**	**14 12 21.6**	**0.0**
STKA	**Stephens Creek**	**35.08**	**248**	*e*P	**P**	**14 12 49.7**	**+0.2**
	3.5nm,0.4s,mb4.2						
STKA	**Stephens Creek**	**35.08**	**248**	P	**P**	**14 12 49.6**	**0.0**
	3.9nm,0.4s,mb4.3,baz=100,slow=8.7,SNR=17						
ASAR	**Alice Springs**	**42.35**	**260**	P	**P**	**14 13 48.3**	**-0.3**
	9.0nm,0.6s,mb4.5,baz=92,slow=7.5,SNR=176						
WRAB	**Tennant Creek**	**42.69**	**266**	*e*P	**P**	**14 13 50.1**	**-1.2**
	21nm,0.8s,mb4.7						
WRA	**Warramunga Arr**	**42.70**	**266**	P	**P**	**14 13 50.4**	**-1.0**
	10nm,0.3s,mb4.8,baz=94,slow=8.6,SNR=576						
FORT	**Forrest**	**46.66**	**249**	*e*P	**P**	**14 14 21.5**	**-0.3**
	36nm,0.7s,mb5.0						
KNA	**Kununurra**	**48.94**	**269**	*e*P	**P**	**14 14 38.5**	**-0.6**
	34nm,1.1s,mb4.8						
FITZ	**Fitzroy Crossi**	**51.12**	**265**	*e*P	**P**	**14 14 55.3**	**+0.2**
	12nm,0.7s,mb4.3						
FITZ	**Fitzroy Crossi**	**51.12**	**265**	P	**P**	**14 14 55.0**	**-0.1**
	4.2nm,0.4s,mb4.1,baz=130,slow=7.0,SNR=42						
NWAO	**Narrogin (SRO)**	**55.59**	**245**	P	**P**	**14 15 26.2**	**-0.5**
	18nm,1.1s,mb4.2,baz=100,slow=12,SNR=3.6						
MORW	**Morawa**	**57.22**	**250**	*e*P	**P**	**14 15 37.3**	**-0.7**
QSPA	**South Pole Qui**	**66.45**	**180**	P	**P**	**14 16 39.2**	**+2.0**
	2.6nm,1.0s,mb3.7,baz=358,slow=0.5,SNR=6.2						
CMAR	**Chiang Mai Arr**	**89.69**	**290**	P	**P**	**14 18 44.2**	**+0.9**
	1.8nm,0.9s,mb3.9,baz=151,slow=4.2,SNR=7.1						
TXAR	**Lajitas Array**	**90.06**	**58**	P	**P**	**14 18 45.2**	**+0.4**
	0.7nm,0.8s,mb3.5,baz=224,slow=5.2,SNR=6.6						
HHC	**Hu-ho-hao-te**	**90.43**	**315**	*e*P	**P**	**14 18 45.5**	**-0.7**
HHC				S	S	14 28 55.5	-1.5
HHC				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.7						
HHC				pmax	pmax		
	comp=Z,40nm,6.9s						
MMAI	**Mount Meron Ar**	**147.84**	**295**	PKPbc	PKPbc	14 25 26.8	-0.3
	comp=Z,1.3nm,0.4s,baz=68,slow=4.6,SNR=4.6						

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*GEN **25** 14:09:19.9, 45.95N×15.31E, h0km, ML3.9*
*ISCJB **25** 14:09:21.7±0.2, 45.92N±0.01×15.09E±0.01, h5km±2km, Error ellipse: s-maj=2.3km s-min=1.6km az=176.1*
*LDG **25** 14:09:21.8±0.1, 45.91N×15.12E, h10km, ML3.3/8, Error ellipse: s-maj=2.7km s-min=1.9km az=170.0*
*LJU **25** 14:09:21.6, 45.90N×15.09E, h15km, ML3.0*
*NEIC **25** 14:09:22.2±0.4, 45.89N×15.04E, h9km±4km, ML3.1(SZGRF), ML3.0(LJU), Error ellipse: s-maj=5.2km s-min=3.5km az=164.0*
NEIC Felt [IV] at Novo Mesto.
*CSEM **25** 14:09:22.2±0.1, 45.90N×15.07E, h5km, ML3.6/24, Error ellipse: s-maj=2.2km s-min=1.6km az=171.0*
*VIE **25** 14:09:22.1±0.2, 45.92N×15.09E, h8km±1km, mb3.0/11, ML3.3/11, Error ellipse: s-maj=1.2km s-min=0.8km az=152.0 31 km W of Krsko*
*PRU **25** 14:09:23.8, 46.00N×15.09E, h0km*
*SZGRF **25** 14:09:25.4, 46.08N×15.28E, h10km, mb3.1, Northwestern Balkan Peninsula*
*BGR **25** 14:09:25.4±0.8, 46.08N×15.28E, h10km, ML3.1, Error ellipse: s-maj=14.5km s-min=12.2km az=73.0*
*IPEC **25** 14:09:25.1±0.5, 45.99N×14.94E, h27km±3km, ML2.3/1, Error ellipse: s-maj=3.2km s-min=2.1km az=164.0*
ISC 25 14:09:22.5±0.2, 45.90N±0.01×15.10E±0.01, h7km±2km, n208, σ0.97/345, 54C-34D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEGS	**Legarje**	**0.16**	**74⇑**	*i*Pg	**Pg**	**14 09 25.8**	**+0.1**
LEGS				*i* Sg	**Sg**	**14 09 28.1**	**+0.1**
LEGS	**Legarje**	**0.16**	**74⇑**	*i*Pg	**Pg**	**14 09 25.8**	**0.0**
LEGS				*i* Sg	**Sg**	**14 09 28.1**	**+0.1**
PDKS	**Podkum**	**0.17**	**336⇓**	*i*Pg	**Pg**	**14 09 26.3**	**+0.3**
PDKS				*i* Sg	**Sg**	**14 09 28.9**	**+0.6**
PDKS							
	comp=Z,3μm,0.2s						
PDKS	**Podkum**	**0.17**	**336⇓**	*i*Pg	**Pg**	**14 09 26.3**	**+0.3**
PDKS				*i* Sg	**Sg**	**14 09 28.9**	**+0.6**
VISS	**Visnje**	**0.21**	**241**	*i* Pg	**Pg**	**14 09 26.5**	**-0.1**
VISS				*i* Sg	**Sg**	**14 09 29.6**	**+0.3**
VISS							
	comp=Z,3μm,0.2s						
VISS	**Visnje**	**0.21**	**241**	*i* Pg	**Pg**	**14 09 26.5**	**-0.1**
VISS				*i* Sg	**Sg**	**14 09 29.6**	**+0.3**
VISS	**Visnje**	**0.21**	**241**	*i* Pg	**Pg**	**14 09 26.5**	**-0.1**
VISS				*i* Sg	**Sg**	**14 09 29.6**	**+0.3**
	comp=Z,3μm,0.2s						
CRES	**Cresnjev**	**0.26**	**107⇑**	*i*Pg	**Pg**	**14 09 27.4**	**-0.2**
CRES				*i* Sg	**Sg**	**14 09 31.0**	**-0.1**
CRES							
	comp=Z,744nm,0.1s						
CRES	**Cresnjev**	**0.26**	**107⇑**	*i*Pg	**Pg**	**14 09 27.4**	**-0.2**
CRES				*i* Sg	**Sg**	**14 09 31.0**	**-0.1**
CRES	**Cresnjev**	**0.26**	**107⇑**	*i*Pg	**Pg**	**14 09 27.4**	**-0.2**
CRES				*i* Sg	**Sg**	**14 09 31.0**	**-0.1**
	comp=Z,744nm,0.1s						
CESS	**Cesta pri Krsk**	**0.27**	**75⇑**	*i*Pg	**Pg**	**14 09 27.6**	**0.0**
CESS				*i* Sg	**Sg**	**14 09 31.4**	**+0.2**
CESS							
	comp=Z,1μm,0.1s						
CESS	**Cesta pri Krsk**	**0.27**	**75⇑**	*i*Pg	**Pg**	**14 09 27.6**	**0.0**
CESS				*i* Sg	**Sg**	**14 09 31.4**	**+0.2**
CESS	**Cesta pri Krsk**	**0.27**	**75⇑**	*i*Pg	**Pg**	**14 09 27.6**	**-0.1**
CESS				*i* Sg	**Sg**	**14 09 31.4**	**+0.2**
	comp=Z,1μm,0.1s						
VNDS	**Vrh nad Dolski**	**0.34**	**306⇑**	*i*Pg	**Pg**	**14 09 29.3**	**+0.2**
VNDS				*i* Sg	**Sg**	**14 09 33.4**	**-0.2**
VNDS							
	comp=Z,1μm,0.3s						
DOBS	**Dobrina**	**0.36**	**46⇓**	*i*Pg	**Pg**	**14 09 29.4**	**0.0**
DOBS				*i* Sg	**Sg**	**14 09 34.3**	**+0.2**
DOBS							
	comp=Z,620nm,0.1s						
DOBS	**Dobrina**	**0.36**	**46⇓**	*i*Pg	**Pg**	**14 09 29.4**	**0.0**
DOBS				*i* Sg	**Sg**	**14 09 34.3**	**+0.2**
DOBS	**Dobrina**	**0.36**	**46⇓**	*i*Pg	**Pg**	**14 09 29.4**	**0.0**
DOBS				*i* Sg	**Sg**	**14 09 34.3**	**+0.2**
	comp=Z,620nm,0.1s						
GCIS	**Gornji Cirnik**	**0.37**	**95⇑**	*i*Pg	**Pg**	**14 09 29.4**	**-0.2**
GCIS				*i* Sg	**Sg**	**14 09 34.9**	**+0.3**
GCIS							
	comp=Z,439nm,0.1s						
GCIS	**Gornji Cirnik**	**0.37**	**95⇑**	*i*Pg	**Pg**	**14 09 29.4**	**-0.2**
GCIS				*i* Sg	**Sg**	**14 09 34.9**	**+0.3**
GCIS	**Gornji Cirnik**	**0.37**	**95⇑**	*i*Pg	**Pg**	**14 09 29.5**	**-0.2**
GCIS				*i* Sg	**Sg**	**14 09 34.9**	**+0.3**
	comp=Z,439nm,0.1s						
GOLS	**Golise**	**0.38**	**74⇑**	*i*Pg	**Pg**	**14 09 30.1**	**+0.2**
GOLS				*i* Sg	**Sg**	**14 09 35.2**	**+0.2**
GOLS							
	comp=Z,1μm,0.1s						
GOLS	**Golise**	**0.38**	**74⇑**	*i*Pg	**Pg**	**14 09 30.1**	**+0.2**
GOLS				*i* Sg	**Sg**	**14 09 35.2**	**+0.2**
GOLS	**Golise**	**0.38**	**74⇑**	*i*Pg	**Pg**	**14 09 30.1**	**+0.2**
GOLS				*i* Sg	**Sg**	**14 09 35.2**	**+0.3**
	comp=Z,1μm,0.1s						
BOJS	**Bojanci**	**0.41**	**165⇓**	*i*Pg	**Pg**	**14 09 29.8**	**-0.7**
BOJS				*i* Sg	**Sg**	**14 09 36.0**	**+0.2**
BOJS							
	comp=Z,1μm,0.2s						
BOJS	**Bojanci**	**0.41**	**165⇓**	*i*Pg	**Pg**	**14 09 29.8**	**-0.7**
BOJS				*i* Sg	**Sg**	**14 09 36.0**	**+0.2**
BOJS	**Bojanci**	**0.41**	**165⇓**	*i*Pg	**Pg**	**14 09 29.8**	**-0.7**
BOJS				*i* Sg	**Sg**	**14 09 36.0**	**+0.1**
	comp=Z,1μm,0.2s						
LJU	**Ljubljana**	**0.42**	**290⇑**	*i*Pg	**Pg**	**14 09 30.8**	**+0.2**
LJU				*i* Sg	**Sg**	**14 09 36.2**	**+0.1**
LJU	**Ljubljana**	**0.42**	**290⇑**	*i*Pg	**Pg**	**14 09 30.8**	**+0.2**
LJU				*i* Sg	**Sg**	**14 09 36.2**	**+0.1**
CEY	**Cerknica**	**0.50**	**251⇑**	*i*Pg	**Pg**	**14 09 32.0**	**0.0**
CEY				*i* Sg	**Sg**	**14 09 38.6**	**+0.1**
CEY							
	comp=Z,415nm,0.2s						
CEY	**Cerknica**	**0.50**	**251⇑**	*i*Pg	**Pg**	**14 09 32.0**	**0.0**
CEY				*i* Sg	**Sg**	**14 09 38.6**	**+0.1**
CEY	**Cerknica**	**0.50**	**251⇑**	*i*Pg	**Pg**	**14 09 32.0**	**0.0**
CEY				*i* Sg	**Sg**	**14 09 38.6**	**+0.1**
	comp=Z,415nm,0.2s						
MOZS	**Mozjanca**	**0.60**	**311⇑**	*i*Pg	**Pg**	**14 09 34.2**	**+0.2**
MOZS				*i* Sg	**Sg**	**14 09 41.8**	**0.0**
CRNS	**Crni Vrh**	**0.61**	**287⇑**	*i*Pg	**Pg**	**14 09 34.2**	**+0.1**
CRNS				*i* Sg	**Sg**	**14 09 42.5**	**+0.4**
GROS	**Grobnik**	**0.62**	**27⇓**	*i*Pg	**Pg**	**14 09 34.4**	**-0.1**
GROS							
	comp=Z,156nm,0.1s						
GROS	**Grobnik**	**0.62**	**27⇓**	*i*Pg	**Pg**	**14 09 34.4**	**-0.1**
	comp=Z,156nm,0.1s						
KNDS	**Knezji Dol**	**0.63**	**233⇑**	*i*Pg	**Pg**	**14 09 34.1**	**-0.4**
KNDS				*i* Sg	**Sg**	**14 09 42.3**	**-0.4**
KNDS							
	comp=Z,512nm,0.2s						
KNDS	**Knezji Dol**	**0.63**	**233⇑**	*i*Pg	**Pg**	**14 09 34.1**	**-0.4**
KNDS				*i* Sg	**Sg**	**14 09 42.3**	**-0.4**
KNDS	**Knezji Dol**	**0.63**	**233⇑**	*i*Pg	**Pg**	**14 09 34.1**	**-0.4**
KNDS				*i* Sg	**Sg**	**14 09 42.3**	**-0.4**
	comp=Z,512nm,0.2s						
OBKA	**Obir**	**0.71**	**328**	*e*Pg	**Pg**	**14 09 36.3**	**0.0**
OBKA	**Obir**	**0.71**	**328⇓**	*e*Pg	**Pg**	**14 09 36.2**	**0.0**
	SNR=130						
OBKA				⇓*i*Sg	**Sg**	**14 09 45.7**	**+0.1**
	comp=Z,479nm,0.3s						
OBKA	**Obir**	**0.71**	**328**	*e*Pg	**Pg**	**14 09 36.2**	**0.0**
	baz=152						
OBKA				Sg	**Sg**	**14 09 45.7**	**+0.2**
	comp=Z,479nm,0.3s						
JAVS	**Javornik**	**0.72**	**270⇑**	*i*Pg	**Pg**	**14 09 35.8**	**-0.5**
JAVS							
	comp=Z,259nm,0.3s						
JAVS	**Javornik**	**0.72**	**270⇑**	*i*Pg	**Pg**	**14 09 35.8**	**-0.5**
	comp=Z,259nm,0.3s						
PERS	**Pernice**	**0.73**	**1⇓**	*i*Pg	**Pg**	**14 09 36.4**	**-0.1**
PERS							
	comp=Z,244nm,0.2s						
PERS	**Pernice**	**0.73**	**1⇓**	*i*Pg	**Pg**	**14 09 36.4**	**-0.2**
	comp=Z,244nm,0.2s						
BISS	**Bistriski jare**	**0.74**	**2⇓**	*i*Pg	**Pg**	**14 09 36.6**	**-0.1**
BISS	**Bistriski jare**	**0.74**	**2⇓**	*i*Pg	**Pg**	**14 09 36.7**	**-0.1**
SOKA	**Soboth**	**0.78**	**357**	*i*Pg	**Pg**	**14 09 37.2**	**-0.2**
SOKA				⇑*i*Sg	**Sg**	**14 09 47.0**	**-0.5**
	comp=Z,74nm,0.2s						
SOKA	**Soboth**	**0.78**	**357**	Pg	**Pg**	**14 09 37.2**	**-0.2**
SOKA				Sg	**Sg**	**14 09 47.0**	**-0.5**
	comp=Z,74nm,0.2s						
SKDS	**Skadanscina**	**0.84**	**245**	*e*Pg	**Pg**	**14 09 37.5**	**-1.1**
SKDS				*i* Sg	**Sg**	**14 09 49.2**	**-0.2**
SKDS							
	comp=Z,210nm,0.2s						
VOJS	**Vojsko**	**0.86**	**279⇑**	*i*Pg	**Pg**	**14 09 38.1**	**-0.8**
VOJS	**Vojsko**	**0.86**	**279⇑**	*i*Pg	**Pg**	**14 09 38.1**	**-0.8**
GORS	**Gorjuse**	**0.87**	**299**	*i* Pg	**Pg**	**14 09 38.8**	**-0.4**
GORS				*i* Sg	**Sg**	**14 09 51.1**	**+0.6**
GORS							
	comp=Z,430nm,0.4s						
GORS	**Gorjuse**	**0.87**	**299**	*i* Pg	**Pg**	**14 09 38.8**	**-0.4**
GORS				*i* Sg	**Sg**	**14 09 51.1**	**+0.6**
GORS	**Gorjuse**	**0.87**	**299**	*i* Pg	**Pg**	**14 09 38.8**	**-0.4**
GORS				*i* Sg	**Sg**	**14 09 51.1**	**+0.6**
	comp=Z,430nm,0.4s						
TRI	**Trieste**	**0.95**	**259⇑**	*e*Pg	**Pg**	**14 09 39.8**	**-1.0**
TRI				*e*Sg	**Sg**	**14 09 53.5**	**+0.4**
TRI	**Trieste**	**0.95**	**259**	*e*P	**Pg**	**14 09 39.5**	**-1.2**
TRI	**Trieste**	**0.95**	**259**	*e*P	**Pg**	**14 09 39.5**	**-1.2**
TRI	**Trieste**	**0.95**	**259**	*e*Pg	**Pg**	**14 09 39.8**	**-0.9**
TRI				*e*Sg	**Sg**	**14 09 53.5**	**+0.4**
KOGS	**Kog**	**0.97**	**55**	*i* Pg	**Pg**	**14 09 41.1**	**0.0**
KOGS				*i* Sg	**Sg**	**14 09 53.8**	**+0.2**
KOGS							
	comp=Z,352nm,0.2s						
KOGS	**Kog**	**0.97**	**55**	*i* Pg	**Pg**	**14 09 41.1**	**0.0**
KOGS				*i* Sg	**Sg**	**14 09 53.8**	**+0.2**
KOGS	**Kog**	**0.97**	**55**	*i* Pg	**Pg**	**14 09 41.1**	**0.0**
KOGS				*i* Sg	**Sg**	**14 09 53.8**	**+0.2**
	comp=Z,352nm,0.2s						
SISC	**Sisak**	**0.99**	**115**	*e*Pg	**Pg**	**14 09 42.5**	**+1.0**
SISC				Sg	**Sg**	**14 09 55.4**	**+1.0**
SISC	**Sisak**	**0.99**	**115**	*e*Pg	**Pg**	**14 09 42.4**	**+0.9**
SISC				Sg	**Sg**	**14 09 55.4**	**+1.0**
CADS	**Cadrg**	**1.00**	**289⇑**	*i*Pg	**Pg**	**14 09 40.8**	**-0.9**
CADS				*i* Sg	**Sg**	**14 09 55.4**	**+0.8**
CADS							
	comp=Z,375nm,0.3s						
CADS	**Cadrg**	**1.00**	**289⇑**	*i*Pg	**Pg**	**14 09 40.8**	**-0.9**
CADS				*i* Sg	**Sg**	**14 09 55.4**	**+0.8**
CADS	**Cadrg**	**1.00**	**289⇑**	*i*Pg	**Pg**	**14 09 40.8**	**-0.9**
CADS				*i* Sg	**Sg**	**14 09 55.4**	**+0.7**
	comp=Z,375nm,0.3s						
SABO	**M.te Sabotino**	**1.05**	**275⇑**	*i*Pg	**Pg**	**14 09 41.3**	**-1.2**
SABO				*i* Sg	**Sg**	**14 09 56.3**	**+0.2**
SABO	**M.te Sab

BAD	Bernadia	1.33 285	⇑	iPg	Pn	14 09 46.6	-0.8
BAD				iSg	Sg	14 10 05.6	+0.3
BAD	Bernadia	1.33 285		iPg	Pn	14 09 46.6	-0.9
BAD				iSg	Sg	14 10 05.6	+0.3
NVLJ	Novalja	1.35 187		ePg	Pg	14 09 47.8	-0.5
NVLJ				Sg	Sg	14 10 07.5	+1.7
NVLJ	Novalja	1.35 187		ePg	Pg	14 09 47.8	-0.5
NVLJ				Sg	Sg	14 10 07.5	+1.7
ARSA	Arzberg	1.38 12		ePg	Pn	14 09 47.7	-0.5
ARSA	Arzberg	1.38 12	⇓	ePg	Pn	14 09 47.8	-0.4
ARSA	SNR=62		⇑	iSg	Sg	14 10 06.8	0.0
ARSA	comp=Z,92nm,0.5s						
ARSA	Arzberg	1.38 12		ePn	Pn	14 09 47.6	-0.5
ARSA	baz=198						
ARSA	Arzberg	1.38 12		Pg	Pn	14 09 47.8	-0.3
ARSA	SNR=62			Sg	Sg	14 10 06.8	0.0
ARSA	comp=Z,92nm,0.5s						
TLI	Talmassons	1.39 271	⇑	ePg	Pg	14 09 49.0	-0.1
TLI	Talmassons	1.39 271		ePg	Pg	14 09 49.0	-0.2
BUA	Buia	1.41 284	⇑	ePg	Pn	14 09 48.4	-0.2
BUA	Buia	1.41 284		ePg	Pn	14 09 48.4	-0.1
PLRO	Paularo	1.50 296	⇓	iPg	Pn	14 09 50.0	+0.2
PLRO				iSg	Sg	14 10 11.3	+0.7
PLRO	Paularo	1.50 296		iPg	Pn	14 09 50.0	+0.2
PLRO				iSg	Sg	14 10 11.3	+0.7
MPRI	Monte Prat	1.51 284	⇓	ePg	Pn	14 09 50.3	+0.5
MPRI				eSg	Sg	14 10 12.1	+1.2
MPRI	Monte Prat	1.51 284		ePg	Pn	14 09 50.3	+0.4
MPRI				eSg	Sg	14 10 12.1	+1.2
FUSE	Fusea	1.54 290	⇓	iPg	Pn	14 09 50.6	+0.2
FUSE				iSg	Sg	14 10 12.8	+0.8
FUSE	Fusea	1.54 290		iPg	Pn	14 09 50.6	+0.2
FUSE				iSg	Sg	14 10 12.8	+0.7
KBA	Koelnbreinsper	1.69 315		ePn	Pn	14 09 53.1	+0.7
KBA				eSg	Sg	14 10 18.7	+2.0
KBA	Koelnbreinsper	1.69 315	⇑	ePn	Pn	14 09 51.8	-0.6
KBA	SNR=39		⇓	iPg	Pg	14 09 54.5	-0.3
KBA			⇓	iSg	Sg	14 10 17.8	+1.1
KBA	comp=Z,38nm,0.3s						
KBA	Koelnbreinsper	1.69 315		Pn	Pn	14 09 53.1	+0.7
MLNI	Malnisio	1.75 279	⇑	ePg	Pn	14 09 53.7	+0.5
MLNI				eSg	Sg	14 10 18.9	+0.2
MLNI	Malnisio	1.75 279		ePg	Pn	14 09 53.7	+0.5
MLNI				eSg	Sg	14 10 18.9	+0.2
CSMI	Casera Mimoias	1.80 291	⇑	iPn	Pn	14 09 54.9	+1.0
CSMI				i Sn	Sn	14 10 18.7	+1.6
CSMI	Casera Mimoias	1.80 291		i Pn	Pn	14 09 54.9	+0.9
CSMI				i Sn	Sn	14 10 18.7	+1.6
CAE	Caneva	1.86 274	⇓	iPn	Pn	14 09 55.2	+0.5
CAE	Caneva	1.86 274		i Pn	Pn	14 09 55.2	+0.5
CSO	Casso	1.96 282	⇑	iPn	Pn	14 09 56.2	+0.1
CSO				i Sn	Sn	14 10 22.4	+1.3
CSO	Casso	1.96 282		i Pn	Pn	14 09 56.2	0.0
CSO				i Sn	Sn	14 10 22.4	+1.3
ABTA	Abfaltersbach	1.98 296	⇓	iPn	Pn	14 09 56.1	-0.3
ABTA			⇑	ePg	Pg	14 09 59.8	-0.6
ABTA	SNR=30		⇑	iSn	Sn	14 10 21.4	0.0
ABTA			⇓	iSg	Sg	14 10 27.7	+1.6
ABTA	comp=Z,43nm,0.4s						
ABTA	Abfaltersbach	1.98 296		Pn	Pn	14 09 56.1	-0.3
MOA	Molln	2.03 344		ePg	Pg	14 09 58.1	-3.3
MOA				eSg	Sg	14 10 24.2	-3.5
MOA	Molln	2.03 344	⇓	ePn	Pn	14 09 56.7	-0.4
MOA	SNR=9.8		⇓	iPg	Pg	14 10 00.6	-0.8
MOA			⇓	iSn	Sn	14 10 22.4	-0.2
MOA			⇑	iSg	Sg	14 10 29.1	+1.5
MOA	comp=Z,24nm,0.5s						
MOA	Molln	2.03 344		Pn	Pn	14 09 56.7	-0.3
VARN	Col Varnada, M	2.09 274	⇑	ePn	Pn	14 09 58.0	+0.1
VARN	Col Varnada, M	2.09 274		ePn	Pn	14 09 58.0	+0.1
CONA	Conrad Observa	2.09 14	⇓	ePn	Pn	14 09 57.9	-0.1
CONA	SNR=33		⇑	iSg	Sg	14 10 31.5	+1.8
CONA	comp=Z,33nm,0.5s						
CONA	Conrad Observa	2.09 14		Pn	Pn	14 09 57.9	0.0
CONA	SNR=33			Sg	Sg	14 10 31.5	+1.8
CONA	comp=Z,33nm,0.5s						
FAU	Forcella Aurin	2.19 280	⇑	ePn	Pn	14 10 01.6	+2.2
FAU				eSn	Sn	14 10 28.4	+1.6
FAU	Forcella Aurin	2.19 280		ePn	Pn	14 10 01.6	+2.3
FAU				eSn	Sn	14 10 28.4	+1.7
TEOL	Teolo	2.46 258		ePn	Pn	14 10 03.3	+0.2
TEOL	Teolo	2.46 258		ePn	Pn	14 10 03.3	+0.3
ZST	Bratislava	2.67 30		ePn	Pn	14 10 05.7	-0.2
ZST				eSg	Sg	14 10 48.1	-0.2
ZST	Bratislava	2.67 30		ePN	Pn	14 10 05.7	-0.2
ZST				eSG	Sg	14 10 48.1	-0.2
ZST	Bratislava	2.67 30		ePn	Pn	14 10 05.7	-0.2
ZST				eSg	Sg	14 10 48.1	-0.2
WTTA	Wattenberg	2.75 301		ePn	Pn	14 10 09.2	+2.3
WTTA	Wattenberg	2.75 301	⇓	ePn	Pn	14 10 06.7	-0.2
WTTA	SNR=10						
WTTA	Wattenberg	2.75 301		Pn	Pn	14 10 06.7	-0.2
SMOL	Smolenice	3.06 30		ePn	Pn	14 10 12.4	+1.2
SMOL				eSn	Sn	14 10 41.9	-6.1
SMOL				eSg	Sg	14 11 01.5	+0.9
SMOL	Smolenice	3.06 30		ePN	Pn	14 10 12.4	+1.2
SMOL				eSN	Sn	14 10 41.9	-6.1
SMOL				eSG	Sg	14 11 01.5	+0.9
SMOL	Smolenice	3.06 30		ePn	Pn	14 10 12.4	+1.2
SMOL				eSg	Sg	14 11 01.5	+0.9
GEC2	GERESS Array S	3.09 343		ePn	Pn	14 10 12.9	+1.2
GEC2	GERESS Array S	3.09 343		Pn	Pn	14 10 12.9	+1.2
FETA	Feichten	3.22 292	⇓	iPn	Pn	14 10 15.9	+2.5
FETA	Feichten	3.22 292		Pn	Pn	14 10 15.9	+2.5
KRUC	Moravsky	3.28 15		ePn	Pn	14 10 13.7	-0.5
KRUC	baz=198			eSg	Sg	14 11 07.5	-0.3
KRUC	comp=Z,9.8nm,0.5s,baz=198						
KHC	Kasperske Hory	3.39 343		ePn	Pn	14 10 15.4	-0.4
KHC	Kasperske Hory	3.39 343		ePN	Pn	14 10 15.5	-0.2
KHC				ePG	Pg	14 10 24.5	-2.9
KHC				eSG	Sg	14 11 08.0	-3.3
KHC	comp=Z,18nm,0.8s						
KHC	Kasperske Hory	3.39 343		Pn	Pn	14 10 15.5	-0.2
KHC	Kasperske Hory	3.39 343		Pg	Pg	14 10 24.5	-2.9
KHC				Sg	Sg	14 11 08.0	-3.3
KHC	comp=Z,18nm,0.8s						
JAVC	Velka Javorina	3.44 30		ePn	Pn	14 10 16.5	+0.1
KOLL	Kolacno	3.50 39		ePn	Pn	14 10 17.8	+0.6
KOLL				eSn	Sn	14 10 54.1	-4.7
KOLL				eSg	Sg	14 11 15.6	+0.9
KOLL	Kolacno	3.50 39		ePN	Pn	14 10 17.8	+0.6
KOLL				eSN	Sn	14 10 54.1	-4.7
KOLL				eSG	Sg	14 11 15.6	+0.9
KOLL	Kolacno	3.50 39		ePn	Pn	14 10 17.8	+0.6
KOLL				eSg	Sg	14 11 15.6	+0.9
VRAC	Vranov	3.55 16		ePn	Pn	14 10 17.3	-0.7
STON	Ston	3.56 147		ePn	Pn	14 10 20.7	+2.6
STON	Ston	3.56 147		ePn	Pn	14 10 20.6	+2.5
VYHS	Vyhne	3.63 43		ePn	Pn	14 10 19.6	+0.5
VYHS				eSn	Sn	14 10 58.4	-3.8
VYHS	Vyhne	3.63 43		ePN	Pn	14 10 19.6	+0.5
VYHS				eSN	Sn	14 10 58.3	-3.9
VYHS	Vyhne	3.63 43		ePn	Pn	14 10 19.6	+0.5
VYHS				eSn	Sn	14 10 58.4	-3.8
BBLS	Lazići	3.68 122		ePn	Pn	14 10 20.2	+0.5
MAIM	Mastiano	3.83 240		P	Pn	14 10 21.1	-0.7
DAVA	Damuels	3.85 293		ePn	Pn	14 10 23.7	+1.6
DAVA	Damuels	3.85 293		Pn	Pn	14 10 23.7	+1.6
DIVS	Divibare	3.91 116		ePn	Pn	14 10 23.2	+0.3
TUE	Stuetta	4.03 280		eP	Pn	14 10 27.6	+3.0
TUE	Stuetta	4.03 280		eP	Pn	14 10 27.6	+3.0
PRU	Pruhonice	4.11 355		eSG	Sg	14 11 29.5	-4.7
PRU	comp=Z,20nm,1.0s Pruhonice	4.11 355		Sg	Sg	14 11 29.5	-4.7
MORC	comp=Z,20nm,1.0s Moravsky Berou	4.21 22		ePn	Pn	14 10 26.8	-0.2
SC2M	baz=206 Scurtabo	4.21 251		P	Pn	14 10 28.3	+1.3
KECS	Kecovo	4.49 53		ePn	Pn	14 10 31.2	+0.3
KECS				eSn	Sn	14 11 18.6	-4.7
KECS				eSg	Sg	14 11 51.8	+5.3
KECS	Kecovo	4.49 53		ePN	Pn	14 10 31.2	+0.3
KECS				eSN	Sn	14 11 18.6	-4.7
KECS				eSG	Sg	14 11 51.8	+5.3
DPC	Dobruska-Polom	4.53 10		ePG	Pg	14 10 42.6	-6.5
DPC	comp=Z,17nm,0.8s			eSG	Sg	14 11 45.7	-2.0
DPC	Dobruska-Polom	4.53 10		Sg	Sg	14 11 45.7	-2.0
GRA1	Grafenberg Arr	4.60 327		Sg	Sg	14 11 50.1	-0.1
GRF	Grafenberg Arr	4.60 327		eSg	Sg	14 11 50.1	-0.1
PVCC	Panska Ves	4.64 356		ePG	Pg	14 10 44.6	-6.7
PVCC				eSG	Sg	14 11 47.9	-3.5
PVCC	Panska Ves	4.64 356		Sg	Sg	14 11 47.9	-3.5
NKC	Novy Kostel	4.68 339		eSG	Sg	14 11 49.6	-3.1
NKC	comp=Z,54nm,1.8s Novy Kostel	4.68 339		Sg	Sg	14 11 49.6	-3.1
NKC	comp=Z,54nm,1.8s						
WERN	Wernitzgruen	4.75 338		ePn	Pn	14 10 35.5	+1.1
WERN				eSn	Sn	14 11 24.2	-5.5
WERN	Wernitzgruen	4.75 338		Pn	Pn	14 10 35.5	+1.1
PCP	Piancastagn	4.83 256		P	Pn	14 10 35.6	+0.1
GUNZ	Gunzen	4.83 338		eSn	Sn	14 11 27.2	-4.6
GUNZ	Gunzen	4.83 338		Sn	Sn	14 11 27.2	-4.5
WERD	Werda	4.92 339		eSn	Sn	14 11 29.3	-4.5
WERD	Werda	4.92 339		Sn	Sn	14 11 29.3	-4.5
BRG	Berggiesshubel	5.03 352		PN	Pn	14 10 45.0	+6.7
BRG				e		14 10 54.6	
BRG	Berggiesshubel	5.03 352		SN	Sn	14 11 32.9	-3.8
BRG				SG	Sg	14 12 02.7	-1.3
BRG	comp=Z,5.8nm,0.8s						
MOX	Moxa	5.28 335		ePN	Pn	14 10 41.5	-0.2
MOX				eSG	Sg	14 12 12.5	+0.5
MOX	Moxa	5.28 335		Pn	Pn	14 10 41.5	-0.2
MOX				Sg	Sg	14 12 12.5	+0.5
IMI	Imperia	5.49 251		P	Pn	14 10 43.4	-1.2
PGF	Pioggiola	5.52 235		ePn	Pn	14 10 42.4	-2.6
PGF				eSn	Sn	14 11 42.6	-6.0
PGF	comp=Z,4.8nm,0.4s						
SBF	Sospel	5.81 252		eSn	Sn	14 11 49.4	-6.5
SBF	comp=Z,10nm,0.4s						
LPG	La Plagne	5.86 269		ePn	Pn	14 10 47.9	-1.8
LPG				eSn	Sn	14 11 50.7	-6.4
LPG	comp=Z,10nm,0.6s						
LPG	La Plagne	5.86 269		ePn	Pn	14 10 47.9	-1.8
LPL	La Plagne	5.87 269		eSn	Sn	14 11 50.5	-6.8
LPL	comp=Z,11nm,0.7s						
HINF	Hinteralfeld	5.97 292		ePn	Pn	14 10 48.4	-2.8
HINF				eSn	Sn	14 11 52.2	-7.5
HINF	comp=Z,5.5nm,0.4s						
MBDF	Montbardon	5.99 262		ePn	Pn	14 10 49.5	-1.9
MBDF				eSn	Sn	14 11 53.7	-6.5
MBDF	comp=Z,8.3nm,0.5s						
MBDF	Montbardon	5.99 262		ePn	Pn	14 10 49.5	-1.9
CABF	La Chapelle	6.29 280		ePn	Pn	14 10 52.5	-3.1
CABF	La Chapelle	6.29 280		eP	Pn	14 10 56.5	+0.9
CABF	La Chapelle	6.29 280		eP	Pn	14 10 56.5	+0.9
HAU	Haudompre	6.35 292		ePn	Pn	14 10 54.0	-2.4
HAU	Haudompre	6.35 292		ePn	Pn	14 10 54.0	-2.4
FRF	La Foret Royal	6.46 252		ePn	Pn	14 10 55.5	-2.4
FRF				eSn	Sn	14 12 04.7	-7.1
FRF	comp=Z,2.4nm,0.3s						
FRF	La Foret Royal	6.46 252		ePn	Pn	14 10 55.5	-2.4
ORIF	Oris-en-Rattie	6.56 265		eP	Pn	14 11 01.2	+1.9
ORIF	Oris-en-Rattie	6.56 265		eP	Pn	14 11 01.2	+1.9
LMR	La Mourre	6.64 250		ePn	Pn	14 10 58.3	-2.2
LMR				eSn	Sn	14 12 09.3	-7.1
LMR	comp=Z,5.0nm,0.4s						
LMR	La Mourre	6.64 250		ePn	Pn	14 10 58.3	-2.2
VIVF	Saint-Julien-l	7.42 266		ePn	Pn	14 11 07.9	-3.1
AVF	Avril sur Loir	8.18 280		ePn	Pn	14 11 18.2	-3.3

IDC 25 14:14:31.9±7.3, 6°57S×128°20E, h394km±90km, mb3.0/2, mb1 3.3/5, mb1mx2.9/18, mbtmp3.2/5, Error ellipse: s-maj=62.5km s-min=40.2km az=54.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.73	192	P	Pn	14 17 08.0	-2.0
	0.9nm,0.3s,baz=35,slow=9.1,SNR=14						
FITZ				S	S	14 19 18.5	0.0
	0.1nm,0.3s,baz=233,slow=18,SNR=2.5						
WRA	Warramunga Arr	14.57	156	P	P	14 17 39.6	-0.3
	0.8nm,0.3s,baz=334,slow=12,SNR=25						
WRA				S	S	14 20 14.2	-1.5
	0.1nm,0.3s,baz=340,slow=21,SNR=3.0						
ASAR	Alice Springs	17.86	163	P	P	14 18 16.1	+0.8
	1.3nm,0.3s,baz=345,slow=12,SNR=121						
MKAR	Makanchi Array	66.89	328	P	P	14 24 43.1	0.0
	0.3nm,0.7s,baz=122,slow=11,SNR=4.3						
AKTO	Aktyubinsk	82.64	323	P	P	14 26 12.3	+0.1
	0.6nm,0.5s,baz=149,slow=5.9,SNR=3.1						

CASC 25 14:19:49.0±1.7, 12°92N×89°20W, h27km±6km, MD3.5, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFRS	El Faro	0.72	11	eP	Pb	14 20 03.0	+0.1
SNVI	San Vicente	0.78	27	eP	Pb	14 20 04.0	+0.1
SNVI				eS	Sb	14 20 15.5	+1.4
BOQS	Boqueron	0.82	355	eP	Pb	14 20 04.0	-0.6
BOQS				eS	Sb	14 20 16.2	+0.9
VSM	San Miguel	1.04	60	eP	Pn	14 20 08.2	+0.4
VSM				eS	Sn	14 20 21.8	+0.4
BLLM	Bellamira	1.07	61	eP	Pn	14 20 08.5	+0.2
RBDL	Robledal	1.28	338	eP	Pn	14 20 11.8	+0.6
CAHU	Cacacuatique	1.28	48	eP	Pn	14 20 11.8	+0.6
CAHU				eS	Sn	14 20 29.5	+1.9
CNCH	Conchagua	1.38	75	eP	Pn	14 20 12.6	+0.1
CNCH				eS	Sn	14 20 29.4	-0.5

IDC 25 14:23:46.7±3.6, 1°70S×99°86E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.4/20, mbtmp3.6/5, MS2.9/1, Ms1 2.9/1, ms1mx2.2/29, Error ellipse: s-maj=159.9km s-min=22.3km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	4.57	348	LR	LR	14 26 22.9	
	comp=Z,147nm,18.7s,baz=160,slow=35						
WRA	Warramunga Arr	38.27	121	P	P	14 31 09.2	+0.2
	0.4nm,0.8s,baz=304,slow=9.0,SNR=3.9						
ASAR	Alice Springs	39.55	126	P	P	14 31 19.6	-0.1
	0.1nm,0.5s,baz=303,slow=8.3,SNR=5.5						
SONM	Songino Array	49.66	6	P	P	14 32 40.0	0.0
	0.5nm,0.5s,baz=186,slow=11,SNR=4.7						
MKAR	Makanchi Array	50.70	344	P	P	14 32 48.4	+0.4
	0.4nm,0.6s,baz=128,slow=7.9,SNR=6.7						
ZALV	Zalesovo Beam	56.85	349	P	P	14 33 32.7	-0.2
	1.1nm,0.7s,baz=142,slow=5.6,SNR=4.7						
TXAR	Lajitas Array	144.55	37	PKP	PKPdf	14 43 24.9	-1.1
	0.7nm,0.7s,baz=221,slow=1.6,SNR=5.5						

MAN 25 14:24:41, 18°42N×120°63E, h32km, mb4.3, ML3.2, MS3.0, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	Pasuquin	0.10	188	⇑ iP	Pb	14 24 47.6	+1.0
ABRA	Dolores	0.77	174	eP	Pn	14 24 56.4	+0.7
ABRA				eS	Sn	14 25 04.6	-1.6
APYP	Conner	0.81	134	eP	Pn	14 24 56.6	+0.5
APYP				eS	Sn	14 25 05.6	-1.4
SGCP	Mt. Cagua	1.35	97	eP	Pn	14 25 04.2	+0.6

KRSC 25 14:32:59.2±0.7, 55°56N×161°98E, h59km±51km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.80	36	i P	Pn	14 33 15.7	+1.1
KBTR				i S	Sn	14 33 27.8	+1.8
ZLN	Zelenaya	0.81	305	i P	Pn	14 33 16.0	+1.3
ZLN				i S	Sn	14 33 28.0	+2.0
BZGR	Bezymyannyi-Gr	0.82	298	i P	Pn	14 33 15.8	+1.0
BZGR				i S	Sn	14 33 28.4	+2.1
KMNR	Kamenistaya	1.01	282	eP	Pn	14 33 18.6	+1.4
KMNR				i S	Sn	14 33 32.3	+1.7
MKZ	Mys Kozlova	1.02	188	eP	Pn	14 33 17.7	+0.3
MKZ				i S	Sn	14 33 31.7	+0.9
KRSR	Krestovskiy	1.03	310	i P	Pn	14 33 18.1	+0.5
KRSR				i S	Sn	14 33 32.3	+1.1
KLY	Klyuchi	1.06	316	i P	Pn	14 33 17.6	-0.4
KLY				i S	Sn	14 33 30.9	-1.0
KPT	Kopyto	1.07	293	i P	Pn	14 33 19.2	+1.1
KPT				i S	Sn	14 33 34.2	+2.0
SRKR	Sorokina	1.19	338	i P	Pn	14 33 20.7	+1.1
SRKR				i S	Sn	14 33 36.9	+2.1
KOZ	Kozyrevsk	1.29	294	i P	Pn	14 33 22.4	+1.4
KOZ				i S	Sn	14 33 39.0	+1.7
SRDR	Sredinnyy	1.48	302	i P	Pn	14 33 24.3	+0.7
SRDR				i S	Sn	14 33 42.2	+0.3
BKI	Bering	2.31	97	i P	Pn	14 33 35.3	+0.6
BKI				i S	Sn	14 34 01.4	-0.5
SPN	Mys Shipunski	2.72	206	eP	Pn	14 33 40.8	+0.4
SPN				i S	Sn	14 34 11.9	-0.2
NLC	Nalytchevo	2.85	214	eP	Pn	14 33 43.4	+1.3
NLC				i S	Sn	14 34 16.2	+1.0
AVH	Avacha	2.98	221	i P	Pn	14 33 46.7	+2.8
AVH				i S	Sn	14 34 20.5	+2.1
GNL	Ganaly	3.00	233	eP	Pn	14 33 46.2	+2.0
PET	Petropavlovsk	3.20	219	eP	Pn	14 33 49.0	+2.0
PET				i S	Sn	14 34 25.9	+2.0
MIPR	Malaya Ipel'ka	4.51	225	P	Pn	14 34 08.9	+4.0

*IDC **25** 14:42:23.0±0.8, 51°84N×75°58E, h0km, mb1 2.5/4, mb1mx2.5/28, mbtmp2.5/4, ML2.4/3, Error ellipse: s-maj=27.2km s-min=6.4km az=29.0*
*NNC **25** 14:42:24.9±0.9, 51°18N×75°36E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=32.7km s-min=5.8km az=26.0*
*ISCJB **25** 14:42:24.7±0.5, 51°77N±0°07×75°80E±0°07, h10km, Error ellipse: s-maj=10.3km s-min=4.3km az=25.0*

ISC 25 14:42:26.5±0.6, 51°78N±0°07×75°74E±0°07, h10km, n9, σ1§42/19, 5C-6D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	Kurchatov	2.10	119	⇓ Pn	Pn	14 43 00.6	-1.1
	2.9nm,0.5s						
KURK				⇓ Sn	Sn	14 43 30.0	+2.1
	9.3nm,0.6s						
KURK	Kurchatov	2.10	119	Pn	Pn	14 43 00.4	-1.2
	0.4nm,0.3s,baz=304,slow=19,SNR=28						
KURK				Pg	Pb	14 43 02.9	-1.7
	0.4nm,0.3s,baz=279,slow=18,SNR=58						
KURK				Lg		14 43 32.5	
	0.4nm,0.3s,baz=308,slow=30,SNR=12						
VOSK	Vostochnaya	3.07	290	⇑ Pn	Pn	14 43 15.3	+0.3
	2.0nm,0.6s						
VOSK				⇓ Sn	Sn	14 43 52.1	+0.3
	6.6nm,0.6s						
VOSK				⇑ Rg		14 44 23.9	
	13nm,1.7s						
BVAR	Borovoye Array	3.50	293	Pn	Pn	14 43 18.2	-2.8
	0.3nm,0.3s,baz=113,slow=16,SNR=3.9						
BVAR				Pg	Pb	14 43 22.6	-6.0
	0.3nm,0.3s,baz=112,slow=16,SNR=9.4						
BVAR				Sn	Sn	14 43 57.1	-5.3
	0.4nm,0.3s,baz=114,slow=14,SNR=3.7						
BVAR				Lg		14 44 08.7	
	1.1nm,0.3s,baz=104,slow=25,SNR=7.7						
BRVK	Borovoye	3.58	293	⇓ Pn	Pn	14 43 20.9	-1.1
	2.1nm,0.6s						
BRVK				⇓ Sn	Sn	14 44 09.5	+5.4
	11nm,0.7s						
BRVK				⇑ Rg		14 44 40.0	
	7.4nm,1.1s						
ZRNK	Zerenda	4.29	288	⇑ Pn	Pn	14 43 33.8	+2.1
	0.8nm,0.6s						
ZRNK				⇓ Sn	Sn	14 44 24.7	+3.0
	4.2nm,0.7s						
ZALV	Zalesovo Beam	5.91	65	Pn	Pn	14 43 54.6	+0.6
	baz=255,slow=11,SNR=2.0						
ZALV				Sn	Sn	14 45 01.9	+0.2
	0.2nm,0.3s,baz=245,slow=24,SNR=3.4						
MK31	Makanchi Array	6.58	137	Pn	Pn	14 44 01.9	-1.2
	0.4nm,0.6s,baz=328,slow=12,SNR=5.3						
MK31				⇑ Sn	Sn	14 45 19.4	+1.3
	0.5nm,0.6s,baz=131,slow=11,SNR=2.6						
MK31				Lg		14 45 43.9	
	2.3nm,0.7s,baz=324,slow=26,SNR=5.6						
MKAR	Makanchi Array	6.58	137	Pn	Pn	14 44 01.6	-1.5
	0.1nm,0.3s,baz=331,slow=11,SNR=5.4						
MKAR				Sn	Sn	14 45 19.0	+0.8
	0.1nm,0.3s,baz=325,slow=25,SNR=3.7						
MKAR				Lg		14 45 50.6	
	0.2nm,0.3s,baz=323,slow=26,SNR=8.5						

*DDA **25** 15:03:33.1, 37°25N×28°34E, h7km±4km, Md2.6*
*ISK **25** 15:03:33.3, 37°10N×28°16E, h13km, MD2.9*
*CSEM **25** 15:03:34.5±0.1, 37°24N×28°23E, h5km, MD2.9, Error ellipse: s-maj=4.8km s-min=2.4km az=57.0*
*ISCJB **25** 15:03:34.3±0.6, 37°21N±0°05×28°21E±0°06, h10km, Error ellipse: s-maj=9.6km s-min=4.1km az=44.5*

ISC 25 15:03:34.6±0.6, 37°23N±0°07×28°23E±0°08, h7km±10km, n16, σ0§59/23, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.10	156	PG	Pg	15 03 36.7	-0.2
YER				SG	Sg	15 03 39.0	+0.5
YER	Yerkesik	0.10	156	i Pg	Pg	15 03 36.7	-0.2
YER				i Sg	Sg	15 03 39.1	+0.6
MLSB	Milas	0.37	280	ePG	Pg	15 03 41.0	-0.7
MLSB				eSG	Sg	15 03 46.9	+0.2
MLSB	Milas	0.37	280	ePg	Pg	15 03 41.0	-0.8
MLSB				eSg	Sg	15 03 46.9	+0.3
TURN	Turunc	0.46	140	i P	Pg	15 03 42.5	-1.1
TURN				i S	Sg	15 03 50.0	+0.3
TURN	Turunc	0.46	140	i S	Sg	15 03 50.0	+0.4
AYDN	Tasoluk	0.51	327

59nm,0.8s,mb5.1
ARMA Armidale 23.59 188 *e*P **P 15 20 21.4 +8.7**
WRAB Tennant Creek 23.96 235 *e*P **P 15 20 16.2 -0.1**
16nm,0.9s,mb4.5
WRA Warramunga Arr 23.97 235 P **P 15 20 16.2 -0.2**
10nm,0.8s,mb4.3,baz=58,slow=9.4,SNR=34
WRA Warramunga Arr 23.97 235 P **P 15 20 16.2 -0.2**
ASAR Alice Springs 26.32 229 P **P 15 20 37.9 +0.2**
4.9nm,0.7s,mb4.1,baz=59,slow=8.5,SNR=59
STKA Stephens Creek 27.85 205 *e*P **P 15 20 52.0 +0.7**
6.8nm,0.9s,mb4.3
STKA Stephens Creek 27.85 205 P **P 15 20 52.0 +0.7**
7.2nm,0.8s,mb4.3,baz=21,slow=12,SNR=9.8
STKA LR LR 15 32 07.9
comp=Z,200nm,21.7s,baz=26,slow=37
FITZ Fitzroy Crossi 30.82 246 *e*P **P 15 21 17.3 -0.5**
8.9nm,0.5s,mb4.8
PETK Petropavlovsk- 59.86 2 P **P 15 25 06.7 -0.2**
1.4nm,0.7s,mb4.1,baz=106,slow=42,SNR=3.0
KMI Kunming 60.12 304 P **P 15 25 10.5 +1.2**
KMI pmax pmax
comp=Z,11nm,1.4s,mb4.7
CMAR Chiang Mai Arr 60.90 295 P **P 15 25 15.7 +1.0**
comp=Z,4.1nm,0.9s,mb4.6,baz=114,slow=5.0,SNR=23
CHTO Chiang Mai 61.02 296 *e*P **P 15 25 16.2 +0.7**
comp=Z,9.9nm,1.4s,mb4.8
SONM Songino Array 69.38 327 P **P 15 26 08.9 -0.3**
comp=Z,0.8nm,0.7s,mb3.7,baz=136,slow=7.5,SNR=5.6
MK31 Makanchi Array 83.47 319 *e*P **P 15 27 28.7 -0.4**
MKAR Makanchi Array 83.47 319 P **P 15 27 28.7 -0.3**
comp=Z,1.1nm,0.8s,mb4.0,baz=88,slow=8.6,SNR=14
ZALV Zalesovo Beam 84.22 326 P **P 15 27 30.1 -2.7**
comp=Z,0.4nm,0.5s,mb3.9,baz=147,slow=3.4,SNR=2.7
MAW Mawson 84.50 203 P **P 15 27 34.2 +0.2**
comp=Z,1.8nm,0.7s,mb4.3,baz=261,slow=2.5,SNR=6.9
EGAK Eagle 85.41 23 *e*P **P 15 27 39.7 +1.2**
comp=Z,3.7nm,0.8s,mb4.6
NVAR Mina Array Bea 91.57 52 P **P 15 28 08.4 0.0**
comp=Z,0.8nm,0.8s,mb4.1,baz=250,slow=6.1,SNR=5.4
YKA Yellowknife Ar 96.22 28 P **P 15 28 29.1 -0.1**
comp=Z,2.4nm,1.0s,mb4.6,baz=271,slow=4.5,SNR=15
PDAR Pinedale Array 98.55 48 P **P 15 28 40.3 +0.1**
comp=Z,0.2nm,0.3s,mb4.1,baz=236,slow=6.4,SNR=2.2
TORD Torodi Ar. Bea 153.16 285 PKPbc PKPbc 15 35 00.1 0.0
comp=Z,2.3nm,0.9s,baz=53,slow=2.6,SNR=10.0

IDC 25 15:18:26.8±27.0, 22°.12S×173°.77W, h0km, mb4.1/4, mb1 4.3/4, mb1mx3.8/18, mbtmp4.1/4, Error ellipse: s-maj=496.9km s-min=145.0km az=78.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**37.28**	**266**	P	P	15 25 41.1	+0.4
2.2nm,0.3s,baz=101,slow=14,SNR=7.2							
STKA	**Stephens Creek**	**40.70**	**246**	P	P	15 26 09.4	+0.1
3.9nm,1.1s,baz=86,slow=15,SNR=3.3							
ASAR	**Alice Springs**	**48.01**	**258**	P	P	15 27 07.7	-0.2
0.6nm,0.4s,baz=94,slow=7.3,SNR=20							
WRA	**Warramunga Arr**	**48.29**	**263**	P	P	15 27 09.8	-0.4
0.8nm,0.3s,baz=102,slow=8.4,SNR=27							

*IDC **25** 15:30:13.3±0.7, 56°.70S×150°.78W, h0km, mb4.4/8, mb1 4.5/8, mb1mx4.4/13, mbtmp4.4/8, Error ellipse: s-maj=32.5km s-min=17.9km az=9.0*
*ISCJB **25** 15:30:13.3±0.8, 56°.7S±0°.2×150°.8W±0°.2, h10km, mb4.4/8, Error ellipse: s-maj=31.3km s-min=16.3km az=10.1*
*NEIC **25** 15:30:14.9±0.6, 56°.65S×150°.75W, h10km, mb4.5/1, Error ellipse: s-maj=24.0km s-min=14.1km az=190.0*
ISC 25 15:30:15.4±0.8, 56°.7S±0°.2×150°.8W±0°.2, h10km, n17, σ0§61/12, mb4.4/8, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QSPA	**South Pole Qui**	**33.43**	**180**	P	P	**15 36 53.2**	**-0.4**
7.6nm,1.0s,mb4.6,baz=53,slow=2.8,SNR=15							
QSPA	**South Pole Qui**	**33.43**	**180**	*e*P	P	**15 36 53.8**	**+0.3**
6.5nm,1.0s,mb4.5							
STKA	**Stephens Creek**	**51.89**	**269**	P	P	**15 39 24.6**	**+0.8**
5.0nm,0.8s,mb4.5,baz=126,slow=10,SNR=7.2							
STKA	**Stephens Creek**	**51.89**	**269**	*e*P	P	**15 39 25.4**	**+1.6**
PLCA	**Paso Flores**	**52.18**	**109**	P	P	**15 39 26.3**	**+0.5**
2.8nm,0.9s,mb4.2,baz=178,slow=7.6,SNR=4.8							
MAW	**Mawson**	**53.50**	**195**	P	P	**15 39 35.3**	**+0.1**
2.3nm,0.8s,mb4.1,baz=156,slow=6.7,SNR=4.4							
ASAR	**Alice Springs**	**62.52**	**268**	P	P	**15 40 38.5**	**-0.5**
3.6nm,0.6s,mb4.7,baz=138,slow=6.7,SNR=72							
WRA	**Warramunga Arr**	**65.27**	**271**	P	P	**15 40 56.6**	**-0.6**
3.1nm,1.0s,mb4.3,baz=146,slow=5.6,SNR=11							
WRAB	**Tennant Creek**	**65.27**	**271**	*e*P	P	**15 40 57.0**	**-0.2**
CPUP	**Villa Florida**	**70.25**	**108**	P	P	**15 41 27.6**	**-0.8**
4.2nm,0.8s,mb4.4,baz=216,slow=7.5,SNR=9.8							
LPAZ	**La Paz**	**72.54**	**93**	P	P	**15 41 42.8**	**+0.3**
3.8nm,0.8s,mb4.4,baz=176,slow=1.7,SNR=15							
LPAZ	**La Paz**	**72.54**	**93**	*e*P	P	**15 41 42.9**	**+0.4**
YKA	**Yellowknife Ar**	**122.17**	**19**	PKP	PKPdf	15 49 08.2	-0.4
0.8nm,0.9s,baz=192,slow=2.4,SNR=6.6							
YKA	**Yellowknife Ar**	**122.17**	**19**	PKP	PKPdf	15 49 08.2	-0.4
MKAR	**Makanchi Array**	**146.47**	**276**	PKPbc	PKPbc	15 49 55.0	-0.7
7.6nm,0.7s,baz=93,slow=7.1,SNR=60							
MKAR	**Makanchi Array**	**146.47**	**276**	PKPbc	PKPbc	15 49 55.0	-0.7
ZALV	**Zalesovo Beam**	**148.97**	**289**	PKP	PKPdf	15 49 55.9	-2.2
0.3nm,0.3s,baz=48,slow=2.1,SNR=3.3							
ZALV				PKPbc	PKPbc	15 50 01.1	-1.0
4.1nm,0.7s,baz=117,slow=3.8,SNR=19							

*ISCJB **25** 15:31:40.4±0.2, 43°.11N±0°.01×0°.04E±0°.01, h5km±2km, Error ellipse: s-maj=2.2km s-min=1.8km az=2.3*
*STR **25** 15:31:41.9±0.1, 42°.97N×0°.01E, h5km, Ml3.2, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*CSEM **25** 15:31:41.3±0.1, 43°.06N×0°.04E, h2km, ML3.5/19*
*LDG **25** 15:31:42.4±0.1, 43°.01N×0°.05E, h3km, Md3.4/3, Ml3.5/16, Error ellipse: s-maj=1.4km s-min=1.2km az=174.0*
*NEIC **25** 15:31:42.4, 43°.01N×0°.05E, h3km, ML3.5(LDG), ML3.0(STR), MN2.8(MDD), After LDG.*
*MRB **25** 15:31:42.7, 42°.97N×0°.02E, h0km±2km, ML2.8/10, Error ellipse: s-maj=1.9km s-min=0.8km az=278.0*
*MDD **25** 15:31:42.5±0.2, 43°.02N×0°.04E, h0km, mbLg2.8/36, Error ellipse: s-maj=2.1km s-min=1.3km az=8.0, PRXIMO*
ISC 25 15:31:41.5±0.2, 43°.07N±0°.01×0°.04E±0°.01, h7km±2km, n232, σ1§06/368, 7C, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LABF	**Labassere**	**0.04**	**127**	Pg	**Pg**	**15 31 43.6**	**+0.7**
LABF	**Labassere**	**0.04**	**127**	Pg	**Pg**	**15 31 43.6**	**+0.7**
LABF	**Labassere**	**0.04**	**127**	Pg	**Pg**	**15 31 43.6**	**+0.7**
VIEF	**Viey**	**0.19**	**182**	Pg	**Pg**	**15 31 44.6**	**-0.7**
VIEF	**Viey**	**0.19**	**182**	Pg	**Pg**	**15 31 44.7**	**-0.6**
VIEF	**Viey**	**0.19**	**182**	Pg	**Pg**	**15 31 44.6**	**-0.7**
EPF	**Esparros**	**0.23**	**100**	*e*Pg	**Pg**	**15 31 46.6**	**+0.6**
EPF				*e*Sg	**Sg**	**15 31 49.9**	**+0.8**
2μm,0.3s,SNR=1.0							
EPF	**Esparros**	**0.23**	**100**	Pg	**Pg**	**15 31 46.6**	**+0.6**
EPF				Lg		15 31 49.9	
854nm,0.3s							
EPF	**Esparros**	**0.23**	**100**	*e*Pg	**Pg**	**15 31 46.6**	**+0.6**
EPF				*e*Sg	**Sg**	**15 31 49.9**	**+0.8**
854nm,0.3s,SNR=1.0							
REYF	**Montagne du Re**	**0.31**	**270**	Pg	**Pg**	**15 31 47.8**	**+0.2**
REYF				Sg	**Sg**	**15 31 52.4**	**+0.6**
REYF	**Montagne du Re**	**0.31**	**270**	Pg	**Pg**	**15 31 47.8**	**+0.2**
REYF				Lg		15 31 52.5	
REYF	**Montagne du Re**	**0.31**	**270**	Pg	**Pg**	**15 31 47.8**	**+0.2**
REYF				Sg	**Sg**	**15 31 52.4**	**+0.6**
RESF	**Ens**	**0.34**	**139**	Pg	**Pg**	**15 31 47.9**	**-0.3**
RESF	**Ens**	**0.34**	**139**	Pg	**Pg**	**15 31 48.2**	**-0.1**
RESF				Lg		15 31 52.5	
RESF	**Ens**	**0.34**	**139**	Pg	**Pg**	**15 31 47.9**	**-0.3**
EBIE	**Bielsa**	**0.39**	**168**	⇑Pg	**Pg**	**15 31 48.4**	**-0.7**
EBIE				Lg		15 31 52.8	
EBIE	**Bielsa**	**0.39**	**168**	⇑Pg	**Pg**	**15 31 48.4**	**-0.7**
82nm,0.1s,SNR=18							
EBIE				Lg		15 31 52.8	
679nm,0.1s,SNR=20							
EBIE	**Bielsa**	**0.39**	**168**	P	**Pg**	**15 31 48.5**	**-0.6**
EBIE				Lg		15 31 52.8	
679nm,0.1s,SNR=20							
EBIE				S	**Sg**	**15 31 53.0**	**-1.2**
ETSF	**Etsaut**	**0.47**	**249**	*e*Pg	**Pg**	**15 31 50.4**	**-0.2**
SNR=1.0							
ETSF				*e*Sg	**Sg**	**15 31 56.1**	**-0.6**
720nm,0.2s,SNR=1.0							
ETSF	**Etsaut**	**0.47**	**249**	Pg	**Pg**	**15 31 50.4**	**-0.2**
ETSF				Lg		15 31 56.1	
360nm,0.2s							
ETSF	**Etsaut**	**0.47**	**249**	*e*Pg	**Pg**	**15 31 50.4**	**-0.2**
SNR=1.0							
ETSF				*e*Sg	**Sg**	**15 31 56.1**	**-0.6**
360nm,0.2s,SNR=1.0							
FDAF	**Les Forges d'A**	**0.51**	**241**	Pg	**Pg**	**15 31 51.0**	**-0.4**
FDAF				Lg		15 31 57.4	
ATE	**Arette**	**0.54**	**272**	Pg	**Pg**	**15 31 52.0**	**+0.1**
ATE				Sg	**Sg**	**15 32 00.2**	**+1.3**
ATE	**Arette**	**0.54**	**272**	Pg	**Pg**	**15 31 52.0**	**+0.1**
ATE				Sg	**Sg**	**15 32 00.2**	**+1.3**
MELF	**Melles**	**0.57**	**110**	Pg	**Pg**	**15 31 52.2**	**-0.2**
MELF				Sg	**Sg**	**15 32 00.2**	**+0.4**
MELF	**Melles**	**0.57**	**110**	Pg	**Pg**	**15 31 52.2**	**-0.2**
MELF				Lg		15 32 00.5	
MELF	**Melles**	**0.57**	**110**	Pg	**Pg**	**15 31 52.2**	**-0.2**
MELF				Sg	**Sg**	**15 32 00.2**	**+0.4**
ORDF	**Ordiarp**	**0.72**	**282**	Pg	**Pg**	**15 31 56.2**	**+0.7**
ORDF				Sg	**Sg**	**15 32 06.6**	**+1.7**
ORDF	**Ordiarp**	**0.72**	**282**	Pg	**Pg**	**15 31 56.2**	**+0.8**
ORDF				Lg		15 32 06.6	
ORDF	**Ordiarp**	**0.72**	**282**	Pg	**Pg**	**15 31 56.2**	**+0.7**
ORDF				Sg	**Sg**	**15 32 06.6**	**+1.7**
MLS	**Moulis**	**0.79**	**98**	Pg	**Pg**	**15 31 56.0**	**-0.6**
MLS				Sg	**Sg**	**15 32 08.8**	**+2.0**
MLS	**Moulis**	**0.79**	**98**	Pg	**Pg**	**15 31 56.1**	**-0.5**
MLS				Lg		15 32 08.7	
MLS	**Moulis**	**0.79**	**98**	Pg	**Pg**	**15 31 56.0**	**-0.6**
MLS				Sg	**Sg**	**15 32 08.8**	**+2.0**
SALF	**Salau**	**0.90**	**110**	Pg	**Pg**	**15 31 58.5**	**-0.4**
SALF				Sg	**Sg**	**15 32 11.1**	**+0.5**
SALF	**Salau**	**0.90**	**110**	Pg	**Pg**	**15 31 57.7**	**-1.2**
SALF				Lg		15 32 10.2	
SALF	**Salau**	**0.90**	**110**	Pg	**Pg**	**15 31 58.5**	**-0.4**
SALF				Sg	**Sg**	**15 32 11.1**	**+0.5**
CTRE	**Tremp**	**0.92**	**144**	Pg	**Pg**	**15 31 58.6**	**-0.6**
CTRE				Lg		15 32 11.1	
96nm,0.2s							
CTRE	**Tremp**	**0.92**	**144**	P	**Pg**	**15 31 58.7**	**-0.5**
CTRE				S	**Sg**	**15 32 11.1**	**-0.1**
96nm,0.2s							
SJPF	**Ste Jean**	**0.92**	**273**	*e*Pg	**Pg**	**15 32 01.0**	**+1.7**
SNR=1.0							
SJPF				*e*Sg	**Sg**	**15 32 10.7**	**-0.6**
80nm,0.3s							
SJPF	**Ste Jean**	**0.92**	**273**	*e*Pn	**Pn**	**15 31 58.9**	**-2.0**
SJPF				*e*Pg	**Pg**	**15 32 01.0**	**+1.7**
SJPF				*e*Sg	**Sg**	**15 32 10.7**	**-0.6**
SJPF	**Ste Jean**	**0.92**	**273**	Pg	**Pg**	**15 32 01.0**	**+1.7**
SJPF				Lg		15 32 10.7	
40nm,0.3s							
SJPF	**Ste Jean**	**0.92**	**273**	*e*Pn	**Pn**	**15 31 58.9**	**-2.0**
SNR=1.0							
SJPF	**Ste Jean**	**0.92**	**273**	*e*Pg	**Pg**	**15 32 01.0**	**+1.7**
SNR=1.0							
SJPF				*e*Sg	**Sg**	**15 32 10.7**	**-0.6**
40nm,0.3s							
OSSF	**Osses**	**0.97**	**282**	Pg	**Pg**	**15 31 59.5**	**-0.6**
OSSF	**Osses**	**0.97**	**282**	Pg	**Pg**	**15 31 59.6**	**-0.5**
OSSF				Lg		15 32 12.9	
OSSF	**Osses**	**0.97**	**282**	Pg	**Pg**	**15 31 59.5**	**-0.6**
EORO	**Oroz-Betelu**	**1.00**	**260**	Pg	**Pg**	**15 32 00.3**	**-0.5**
23nm,0.2s,SNR=7.9							
EORO				Lg		15 32 15.0	
71nm,0.1s,SNR=7.9							
EORO	**Oroz-Betelu**	**1.00**	**260**	Pg	**Pg**	**15 32 00.3**	**-0.5**
23nm,0.2s,SNR=7.9							
EORO				Lg		15 32 15.0	
71nm,0.1s,SNR=7.9							
CEST	**Esterri de Car**	**1.01**	**117**	Pg	**Pg**	**15 32 01.0**	**0.0**
CEST				Lg		15 32 14.9	
68nm,0.2s							
CEST	**Esterri de Car**	**1.01**	**117**	P	**Pg**	**15 32 01.1**	**+0.1**
CEST				S	**Sg**	**15 32 15.0**	**+0.9**
68nm,0.2s							
IPRE	**Itoiz**	**1.05**	**256**	Pg	**Pg**	**15 32 01.7**	**-0.1**
10.0nm,0.2s,SNR=9.4							
IPRE				Lg		15 32 16.0	
30nm,0.2s,SNR=12							
IPRE	**Itoiz**	**1.05**	**256**	Pg	**Pg**	**15 32 01.7**	**-0.1**
10.0nm,0.2s,SNR=9.4							
IPRE				Lg		15 32 16.0	
30nm,0.2s,SNR=12							
CSOR	**Sort**	**1.07**	**130**	⇑Pg	**Pg**	**15 32 01.3**	**-0.6**
CSOR				Lg		15 32 15.2	
CSOR	**Sort**	**1.07**	**130**	⇑Pg	**Pg**	**15 32 01.3**	**-0.6**
3.5nm,0.1s,SNR=18							
CSOR				Lg		15 32 15.2	
66nm,0.2s,SNR=10							
CSOR	**Sort**	**1.07**	**130**	P	**Pg**	**15 32 01.4**	**-0.6**
CSOR				Lg		15 32 15.2	
66nm,0.2s,SNR=10							
CSOR				S	**Sg**	**15 32 15.9**	**+0.1**
149nm,0.3s							
IZUN	**Zunzarren**	**1.11**	**260**	Pg	**Pg**	**15 32 02.4**	**-0.5**
1.2nm,0.1s,SNR=7.9							
IZUN				Lg		15 32 19.0	
14nm,0.1s,SNR=7.9							
IZUN	**Zunzarren**	**1.11**	**260**	Pg	**Pg**	**15 32 02.4**	**-0.5**
1.2nm,0.1s,SNR=7.9							
IZUN				Lg		15 32 19.0	
14nm,0.1s,SNR=7.9							
GRBF	**Gourbit**	**1.13**	**101**	Pg	**Pg**	**15 32 03.4**	**+0.3**
GRBF				Lg		15 32 18.4	
EALK	**Alkurruntz**	**1.14**	**278**	Pg	**Pg**	**15 32 03.5**	**+0.1**
EALK				Lg		15 32 20.6	
EALK	**Alkurruntz**	**1.14**	**278**	Pg	**Pg**	**15 32 03.5**	**+0.1**
3.3nm,0.2s,SNR=25							
EALK				Lg		15 32 20.6	
43nm,0.2s,SNR=33							
EALK	**Alkurruntz**	**1.14**	**278**	Pg	**Pg**	**15 32 03.5**	**+0.1**
3.3nm,0.2s,SNR=25							
EALK				Lg		15 32 20.6	
43nm,0.2s,SNR=33							
ELIZ	**Elizondo**	**1.15**	**275**	Pg	**Pg**	**15 32 03.4**	**-0.2**
ELIZ				Lg		15 32 19.0	
ELIZ	**Elizondo**	**1.15**	**275**	Pg	**Pg**	**15 32 03.4**	**-0.2**
2.7nm,0.2s,SNR=30							
ELIZ				Lg		15 32 19.0	
38nm,0.2s,SNR=8.6							
ELIZ	**Elizondo**	**1.15**	**275**	Pg	**Pg**	**15 32 03.4**	**-0.2**
2.7nm,0.2s,SNR=30							
ELIZ				Lg		15 32 19.0	
38nm,0.2s,SNR=8.6							
IUSE	**Utxeti**	**1.17**	**265**	Pg	**Pg**	**15 32 03.3**	**-0.6**
4.3nm,0.1s,SNR=23							
IUSE				Lg		15 32 20.2	
26nm,0.2s,SNR=11							
IUSE	**Utxeti**	**1.17**	**265**	Pg	**Pg**	**15 32 03.3**	**-0.6**
4.3nm,0.1s,SNR=23							
IUSE				Lg		15 32 20.2	
26nm,0.2s,SNR=11							
IUNC	**Unciti**	**1.17**	**255**	⇑Pg	**Pg**	**15 32 04.4**	**+0.5**
20nm,0.2s,SNR=18							
IUNC				Lg		15 32 20.6	
46nm,0.2s,SNR=14							
IUNC	**Unciti**	**1.17**	**255**	Pg	**Pg**	**15 32 04.4**	**+0.4**
20nm,0.2s,SNR=18							
IUNC				Lg		15 32 20.6	
46nm,0.2s,SNR=14							
EARA	**Aranguren**	**1.22**	**257**	Pg	**Pg**	**15 32 06.4**	**+1.5**
8.6nm,0.1s,SNR=4.0							
EARA				Lg		15 32 23.3	
33nm,0.2s,SNR=8.2							
EARA	**Aranguren**	**1.22**	**257**	Pg	**Pg**	**15 32 06.4**	**+1.4**
8.6nm,0.1s,SNR=4.0							
EARA				Lg		15 32 23.3	
33nm,0.2s,SNR=8.2							
PAND	**Andorre**	**1.24**	**116**	Lg		15 32 21.9	
CORG	**Organya**	**1.26**	**131**	Pg	**Pn**	**15 32 05.1**	**-0.5**
CORG				Lg		15 32 21.7	
41nm,0.3s							
CORG	**Organya**	**1.26**	**131**	P	**Pn**	**15 32 05.1**	**-0.5**
CORG				S	**Sb**	**15 32 21.7**	**-0.4**
82nm,0.3s							
CAVN	**Les Avellanes**	**1.30**	**156**	Pg	**Pn**	**15 32 05.3**	**-0.8**
CAVN				Lg		15 32 22.3	
312nm,0.2s							
CAVN	**Les Avellanes**	**1.30**	**156**	P	**Pn**	**15 32 05.3**	**-0.8**
CAVN				S	**Sb**	**15 32 22.4**	**-0.7**
623nm,0.2s							
LPEF	**Le Peyrat**	**1.38**	**94**	Lg		15 32 26.1	
ESAC	**San Caprasio**	**1.40**	**196**	Pg	**Pg**	**15 32 07.7**	**-0.6**
ESAC				Lg		15 32 26.9	
ESAC	**San Caprasio**	**1.40**	**196**	Pg	**Pg**	**15 32 07.7**	**-0.6**
536nm,0.3s,SNR=7.9							
ESAC				Lg		15 32 26.9	
292nm,0.1s,SNR=17							
ESAC	**San Caprasio**	**1.40**	**196**	Pg	**Pg**	**15 32 07.7**	**-0.6**
536nm,0.3s,SNR=7.9							
ESAC				Lg		15 32 26.9	
292nm,0.1s,SNR=17							
CLLI	**Llivia**	**1.54**	**112**	Pg	**Pg**	**15 32 11.1**	**-0.1**
CLLI				Lg		15 32 31.5	
CLLI	**Llivia**	**1.54**	**112**	Pg	**Pg**	**15 32 11.1**	**-0.1**
2.1nm,0.2s,SNR=16							
CLLI				Lg		15 32 31.5	
37nm,0.2s,SNR=17							
CLLI	**Llivia**	**1.54**	**112**	P	**Pn**	**15 32 10.8**	**+1.4**
CLLI	**Llivia**	**1.54**	**112**	Pg	**Pg**	**15 32 11.1**	**0.0**
2.1nm,0.2s,SNR=16							
CLLI				Lg		15 32 31.5	
37nm,0.2s,SNR=17							
CLLI				S	**Sn**	**15 32 31.5**	**+1.8**
60nm,0.3s							
CARF	**Carcanieres**	**1.56**	**102**	Pg	**Pg**	**15 32 11.2**	**-0.3**
CARF				Sg	**Sg**	**15 32 32.6**	**+0.9**
CARF	**Carcanieres**	**1.56**	**102**	Pg	**Pg**	**15 32 11.2**	**-0.3**
CARF				Lg		15 32 31.4	
CARF	**Carcanieres**	**1.56**	**102**	Pg	**Pg**	**15 32 11.2**	**-0.3**
CARF				Sg	**Sg**	**15 32 32.6**	**+0.9**
VALF	**Valcebollere**	**1.61**	**114**	Pg	**Pg**	**15 32 12.3**	**0.0**
VALF	**Valcebollere**	**1.61**	**114**	Pg	**Pg**	**15 32 11.5**	**-0.8**
VALF				Lg		15 32 33.5	
VALF	**Valcebollere**	**1.61**	**114**	Pg	**Pg**	**15 32 12.3**	**0.0**
MTLF	**Montolieu**	**1.62**	**80**	*e*Pg	**Pg**	**15 32 12.5**	**-0.1**
SNR=1.0							
MTLF				*e*Sn	**Sn**	**15 32 29.5**	**-2.1**
SNR=1.0							
MTLF				*e*Sg	**Sg**	**15 32 34.1**	**+0.6**
136nm,0.3s							
MTLF	**Montolieu**	**1.62**	**80**	*e*Pn	**Pn**	**15 32 09.8**	**-0.7**
MTLF				*e*Pg	**Pg**	**15 32 12.5**	**-0.1**
MTLF				*e*Sn	**Sn**	**15 32 29.5**	**-2.1**
MTLF				*e*Sg	**Sg**	**15 32 34.1**	**+0.6**
MTLF	**Montolieu**	**1.62**	**80**	*e*Pn	**Pn**	**15 32 09.8**	**-0.7**
MTLF				*e*Pg	**Pg**	**15 32 12.5**	**-0.1**
MTLF				Sn	**Sn**	**15 32 29.5**	**-2.1**
MTLF				Lg		15 32 34.1	
68nm,0.3s							
MTLF	**Montolieu**	**1.62**	**80**	*e*Pn	**Pn**	**15 32 09.8**	**-0.7**
SNR=1.0							
MTLF	**Montolieu**	**1.62**	**80**	*e*Pg	**Pg**	**15 32 12.5**	**-0.1**
SNR=1.0							
MTLF				*e*Sn	**Sn**	**15 32 29.5**	**-2.1**
SNR=1.0							
MTLF				*e*Sg	**Sg**	**15 32 34.1**	**+0.6**
68nm,0.3s							
CBRU	**Bruguera**	**1.77**	**116**	Pg	**Pn**	**15 32 13.6**	**+1.1**
CBRU				Lg		15 32 36.6	
56nm,0.5s							
CBRU	**Bruguera**	**1.77**	**116**	P	**Pn**	**15 32 13.6**	**+1.1**
CBRU				S	**Sn**	**15 32 36.6**	**+1.4**
112nm,0.5s							
EPOB	**Poblet**	**1.88**	**155**	Pn	**Pn**	**15 32 14.2**	**+0.1**
EPOB				Pg	**Pg**	**15 32 15.9**	**-1.7**
EPOB				Sn	**Sn**	**15 32 37.9**	**-0.1**
EPOB				Lg		15 32 39.6	
EPOB	**Poblet**	**1.88**	**155**	Pn	**Pn**	**15 32 14.2**	**+0.2**
0.2nm,0.1s,SNR=4.0							
EPOB				Pg	**Pg**	**15 32 15.9**	**-1.7**
10nm,0.1s,SNR=64							
EPOB				Sn	**Sn**	**15 32 37.9**	**-0.1**
11nm,0.1s,SNR=7.9							
EPOB				Lg		15 32 39.6	
48nm,0.1s,SNR=20							
EPOB	**Poblet**	**1.88**	**155**	Pn	**Pn**	**15 32 14.2**	**+0.1**
0.2nm,0.1s,SNR=4.0							
ECRI	**Cripan**	**1.93**	**257**	Pg	**Pb**	**15 32 16.8**	**-0.1**
ECRI				Lg		15 32 42.3	
ECRI	**Cripan**	**1.93**	**257**	Pg	**Pb**	**15 32 16.8**	**-0.2**
19nm,0.2s,SNR=7.9							
ECRI				Lg		15 32 42.3	
15nm,0.2s,SNR=7.9							
ECRI	**Cripan**	**1.93**	**257**	Pg	**Pb**	**15 32 16.8**	**-0.2**
19nm,0.2s,SNR=7.9							
ECRI				Lg		15 32 42.3	
15nm,0.2s,SNR=7.9							
FILF	**Fillols**	**1.93**	**104**	Pg	**Pb**	**15 32 16.1**	**-0.9**
FILF	**Fillols**	**1.93**	**104**	Pg	**Pb**	**15 32 16.2**	**-0.8**
FILF				Lg		15 32 38.7	
FILF	**Fillols**	**1.93**	**104**	Pg	**Pb**	**15 32 16.1**	**-0.9**
LFF	**La Frestale**	**1.94**	**15**	*e*Pg	**Pg**	**15 32 19.4**	**+0.7**
SNR=1.0							
LFF				*e*Sg	**Sg**	**15 32 45.5**	**+1.7**
127nm,0.3s,SNR=1.0							
LFF	**La Frestale**	**1.94**	**15**	*e*Pn	**Pn**	**15 32 15.9**	**+1.0**
LFF				*e*Pg	**Pg**	**15 32 19.4**	**+0.7**
LFF				*e*Sg	**Sg**	**15 32 45.5**	**+1.7**
LFF	**La Frestale**	**1.94**	**15**	Pn	**Pn**	**15 32 15.9**	**+1.0**
LFF				Pg	**Pg**	**15 32 19.4**	**+0.7**
LFF				Lg		15 32 45.5	
64nm,0.3s							
LFF	**La Frestale**	**1.94**	**15**	*e*Pn	**Pn**	**15 32 15.9**	**+1.0**
SNR=1.0						

	37nm,0.3s						
CAF	**Calviac**	**2.36**	**38**	*e*Pn	**Pn**	**15 32 20.9**	**+0.2**
	SNR=1.0						
CAF	**Calviac**	**2.36**	**38**	*e*Pg	**Pg**	**15 32 27.1**	**+0.3**
CAF				*e*Sn	**Sn**	**15 32 49.8**	**-0.2**
	SNR=1.0						
CAF				*e*Sg	**Sg**	**15 32 57.8**	**+0.3**
	37nm,0.3s						
CCAS	**Cassa de la Se**	**2.43**	**118**	Pg	**Pg**	**15 32 22.5**	**-5.6**
CCAS				Lg		15 32 52.7	
	36nm,0.4s						
CCAS	**Cassa de la Se**	**2.43**	**118**	P	**Pn**	**15 32 22.6**	**+1.0**
CCAS				S	**Sn**	**15 32 52.8**	**+1.2**
	36nm,0.4s						
RJF	**Les Rejaudoux**	**2.48**	**25**	*e*Pg	**Pg**	**15 32 28.7**	**-0.3**
RJF				*e*Sn	**Sn**	**15 32 52.5**	**-0.2**
	SNR=1.0						
RJF				*e*Sg	**Sg**	**15 33 02.4**	**+1.4**
	60nm,0.2s						
RJF	**Les Rejaudoux**	**2.48**	**25**	*e*Pn	**Pn**	**15 32 21.4**	**-0.9**
RJF				*e*Pg	**Pg**	**15 32 28.7**	**-0.3**
RJF				*e*Sn	**Sn**	**15 32 52.5**	**-0.2**
RJF				*e*Sg	**Sg**	**15 33 02.4**	**+1.4**
RJF	**Les Rejaudoux**	**2.48**	**25**	Pn	**Pn**	**15 32 21.4**	**-0.9**
RJF				Pg	**Pg**	**15 32 28.7**	**-0.3**
RJF				Sn	**Sn**	**15 32 52.5**	**-0.2**
RJF				Lg		15 33 02.4	
	30nm,0.2s						
RJF	**Les Rejaudoux**	**2.48**	**25**	*e*Pn	**Pn**	**15 32 21.4**	**-0.9**
	SNR=1.0						
RJF	**Les Rejaudoux**	**2.48**	**25**	*e*Pg	**Pg**	**15 32 28.7**	**-0.3**
RJF				*e*Sn	**Sn**	**15 32 52.5**	**-0.2**
	SNR=1.0						
RJF				*e*Sg	**Sg**	**15 33 02.4**	**+1.4**
	30nm,0.2s						
ELAN	**Lanestosa**	**2.54**	**275**	Pn	**Pn**	**15 32 25.1**	**+1.9**
ELAN				Pg	**Pg**	**15 32 29.9**	**-0.3**
ELAN				Sn	**Sn**	**15 32 56.9**	**+2.5**
ELAN	**Lanestosa**	**2.54**	**275**	Pn	**Pn**	**15 32 25.1**	**+2.0**
	0.0nm,0.1s,SNR=7.9						
ELAN				Pg	**Pg**	**15 32 29.9**	**-0.3**
	0.9nm,0.1s,SNR=11						
ELAN				Sn	**Sn**	**15 32 56.9**	**+2.5**
	3.2nm,0.2s,SNR=4.7						
ELAN	**Lanestosa**	**2.54**	**275**	Pn	**Pn**	**15 32 25.1**	**+1.9**
	SNR=7.9						
EMOS	**Mosqueruela**	**2.73**	**188**	Pn	**Pn**	**15 32 26.9**	**+1.1**
EMOS				Pg	**Pg**	**15 32 31.8**	**-2.0**
EMOS				Lg		15 33 06.0	
EMOS	**Mosqueruela**	**2.73**	**188**	Pn	**Pn**	**15 32 26.9**	**+1.1**
	0.2nm,0.1s,SNR=33						
EMOS				Pg	**Pg**	**15 32 31.8**	**-2.0**
	1.2nm,0.1s,SNR=7.9						
EMOS				Lg		15 33 06.1	
	8.1nm,0.1s,SNR=5.8						
EMOS	**Mosqueruela**	**2.73**	**188**	Pn	**Pn**	**15 32 26.9**	**+1.2**
	0.2nm,0.1s,SNR=33						
ETOR	**Torete**	**2.74**	**215**	⇑Pn	**Pn**	**15 32 26.6**	**+0.8**
ETOR				Pg	**Pg**	**15 32 32.8**	**-1.2**
ETOR				Sn	**Sn**	**15 32 59.5**	**+0.4**
ETOR	**Torete**	**2.74**	**215**	⇑Pn	**Pn**	**15 32 26.6**	**+0.8**
	21nm,0.2s,SNR=18						
ETOR				Pg	**Pg**	**15 32 32.8**	**-1.2**
	25nm,0.3s,SNR=17						
ETOR				Sn	**Sn**	**15 32 59.5**	**+0.4**
	33nm,0.2s,SNR=7.9						
ETOR	**Torete**	**2.74**	**215**	Pn	**Pn**	**15 32 26.6**	**+0.8**
	21nm,0.2s,SNR=18						
ETOR	**Torete**	**2.74**	**215**	Pg	**Pg**	**15 32 32.8**	**-1.1**
	25nm,0.3s,SNR=17						
ETOR				Sn	**Sn**	**15 32 59.5**	**+0.4**
	33nm,0.2s,SNR=7.9						
LASF	**Ste Croix**	**2.95**	**69**	*e*Pn	**Pn**	**15 32 28.2**	**-0.6**
	SNR=1.0						
LASF	**Ste Croix**	**2.95**	**69**	*e*P	**Pn**	**15 32 32.2**	**+3.4**
LASF	**Ste Croix**	**2.95**	**69**	*e*Pg	**Pg**	**15 32 37.7**	**-0.4**
LASF				*e*Sg	**Sg**	**15 33 16.0**	**-0.4**
	52nm,0.4s						
LASF	**Ste Croix**	**2.95**	**69**	*e*P	**Pn**	**15 32 32.2**	**+3.4**
LASF				*e*Pg	**Pg**	**15 32 37.7**	**-0.4**
LASF				*e*Sg	**Sg**	**15 33 16.0**	**-0.4**
LASF	**Ste Croix**	**2.95**	**69**	Pn	**Pn**	**15 32 28.2**	**-0.6**
LASF				Pg	**Pg**	**15 32 37.7**	**-0.4**
LASF				Lg		15 33 16.0	
	26nm,0.4s						
LASF	**Ste Croix**	**2.95**	**69**	*e*Pn	**Pn**	**15 32 28.2**	**-0.6**
	SNR=1.0						
LASF	**Ste Croix**	**2.95**	**69**	*e*P	**Pn**	**15 32 32.2**	**+3.4**
LASF	**Ste Croix**	**2.95**	**69**	*e*Pg	**Pg**	**15 32 37.7**	**-0.4**
LASF				*e*Sg	**Sg**	**15 33 16.0**	**-0.4**
	26nm,0.4s						
VERF	**Verneugheol**	**3.20**	**32**	Pn	**Pn**	**15 32 34.1**	**+1.9**
VERF	**Verneugheol**	**3.20**	**32**	Pn	**Pn**	**15 32 34.1**	**+1.9**
MFF	**Saint Martin d**	**3.54**	**358**	*e*Pg	**Pg**	**15 32 48.9**	**-0.3**
MFF				*e*Sn	**Sn**	**15 33 17.6**	**-1.2**
	SNR=1.0						
MFF				*e*Sg	**Sg**	**15 33 34.6**	**-0.4**
	26nm,0.3s						
MFF	**Saint Martin d**	**3.54**	**358**	*e*Pn	**Pn**	**15 32 37.0**	**+0.2**
MFF				*e*Pg	**Pg**	**15 32 48.9**	**-0.3**
MFF				*e*Sn	**Sn**	**15 33 17.6**	**-1.2**
MFF				*e*Sg	**Sg**	**15 33 34.6**	**-0.4**
MFF	**Saint Martin d**	**3.54**	**358**	Pn	**Pn**	**15 32 37.0**	**+0.2**
MFF				Pg	**Pg**	**15 32 48.9**	**-0.3**
MFF				Sn	**Sn**	**15 33 17.6**	**-1.2**
MFF				Lg		15 33 34.6	
	13nm,0.3s						
MFF	**Saint Martin d**	**3.54**	**358**	*e*Pn	**Pn**	**15 32 37.0**	**+0.2**
	SNR=1.0						
MFF	**Saint Martin d**	**3.54**	**358**	*e*Pg	**Pg**	**15 32 48.9**	**-0.3**
MFF				*e*Sn	**Sn**	**15 33 17.6**	**-1.2**
	SNR=1.0						
MFF				*e*Sg	**Sg**	**15 33 34.6**	**-0.4**
	13nm,0.3s						
ECHE	**Chera**	**3.56**	**193**	Pn	**Pn**	**15 32 38.0**	**+0.9**
ECHE				Pg	**Pg**	**15 32 49.0**	**-0.7**
ECHE				Lg		15 33 33.1	
ECHE	**Chera**	**3.56**	**193**	Pn	**Pn**	**15 32 38.0**	**+0.9**
	0.4nm,0.1s,SNR=7.9						
ECHE				Pg	**Pg**	**15 32 49.0**	**-0.7**
	2.8nm,0.2s,SNR=5.6						
ECHE				Lg		15 33 33.1	
	2.7nm,0.2s,SNR=7.9						
ECHE	**Chera**	**3.56**	**193**	Pn	**Pn**	**15 32 38.0**	**+0.9**
	0.4nm,0.1s,SNR=7.9						
ECHE	**Chera**	**3.56**	**193**	Pg	**Pg**	**15 32 49.0**	**-0.7**
	2.8nm,0.2s,SNR=5.6						
ECHE				Lg		15 33 33.1	
	2.7nm,0.2s,SNR=7.9						
TCF	**Toulx Ste Croi**	**3.57**	**25**	*e*Pg	**Pg**	**15 32 49.2**	**-0.8**
TCF				*e*Sn	**Sn**	**15 33 18.1**	**-1.7**
	39nm,0.4s,SNR=1.0						
TCF	**Toulx Ste Croi**	**3.57**	**25**	*e*Pn	**Pn**	**15 32 36.1**	**-1.2**
TCF				*e*Pg	**Pg**	**15 32 49.2**	**-0.8**
TCF				*e*Sn	**Sn**	**15 33 18.1**	**-1.7**
TCF	**Toulx Ste Croi**	**3.57**	**25**	Pn	**Pn**	**15 32 36.1**	**-1.2**
TCF				Pg	**Pg**	**15 32 49.2**	**-0.8**
TCF				Sn	**Sn**	**15 33 18.1**	**-1.7**
	20nm,0.4s						
TCF	**Toulx Ste Croi**	**3.57**	**25**	*e*Pn	**Pn**	**15 32 36.1**	**-1.2**
VIVF	**Saint-Julien-l**	**3.79**	**60**	*e*Pg	**Pg**	**15 32 53.0**	**-1.2**
VIVF				*e*Sg	**Sg**	**15 33 42.2**	**-1.2**
	25nm,0.4s,SNR=1.0						
VIVF	**Saint-Julien-l**	**3.79**	**60**	*e*Pn	**Pn**	**15 32 40.3**	**-0.1**
VIVF				*e*Pg	**Pg**	**15 32 53.0**	**-1.2**
VIVF				*e*Sg	**Sg**	**15 33 42.2**	**-1.2**
VIVF	**Saint-Julien-l**	**3.79**	**60**	Pn	**Pn**	**15 32 40.3**	**-0.1**
VIVF				Pg	**Pg**	**15 32 53.0**	**-1.2**
VIVF				Lg		15 33 42.2	
	12nm,0.4s						
VIVF	**Saint-Julien-l**	**3.79**	**60**	*e*Pn	**Pn**	**15 32 40.3**	**-0.1**
VIVF	**Saint-Julien-l**	**3.79**	**60**	*e*Pg	**Pg**	**15 32 53.0**	**-1.2**
VIVF				*e*Sg	**Sg**	**15 33 42.2**	**-1.2**
	12nm,0.4s,SNR=1.0						
EARI	**Arriondas**	**3.84**	**275**	Pn	**Pn**	**15 32 42.9**	**+1.9**
EARI				Sn	**Sn**	**15 33 27.3**	**+0.9**
EARI	**Arriondas**	**3.84**	**275**	Pn	**Pn**	**15 32 42.9**	**+1.9**
	0.8nm,0.2s,SNR=6.1						
EARI				Sn	**Sn**	**15 33 27.3**	**+0.9**
	1.3nm,0.3s,SNR=7.9						
EARI	**Arriondas**	**3.84**	**275**	Pn	**Pn**	**15 32 42.9**	**+1.9**
	0.8nm,0.2s,SNR=6.1						
EARI				Sn	**Sn**	**15 33 27.3**	**+0.9**
	1.3nm,0.3s,SNR=7.9						
ETOS	**Mallorca**	**3.91**	**147**	Pn	**Pn**	**15 32 43.6**	**+1.8**
ETOS				Sn	**Sn**	**15 33 25.6**	**-2.3**
ETOS	**Mallorca**	**3.91**	**147**	Pn	**Pn**	**15 32 43.6**	**+1.8**
	0.4nm,0.1s,SNR=7.9						
ETOS				Sn	**Sn**	**15 33 25.6**	**-2.3**
	0.9nm,0.2s,SNR=7.9						
ETOS	**Mallorca**	**3.91**	**147**	Pn	**Pn**	**15 32 43.7**	**+1.8**
	0.4nm,0.1s,SNR=7.9						
ETOS				Sn	**Sn**	**15 33 25.6**	**-2.4**
	0.9nm,0.2s,SNR=7.9						
SSB	**Saint Sauveur**	**3.92**	**54**	*e*Pg	**Pg**	**15 32 57.4**	**+0.7**
SSB	**Saint Sauveur**	**3.92**	**54**	*e*Pg	**Pg**	**15 32 57.4**	**+0.7**
BGF	**Bois d'Agland**	**4.02**	**29**	*e*Sg	**Sg**	**15 33 51.2**	**+0.6**
	133nm,0.4s,SNR=1.0						
BGF	**Bois d'Agland**	**4.02**	**29**	*e*Sg	**Sg**	**15 33 51.2**	**+0.6**
	67nm,0.4s,SNR=1.0						
EIBI	**Ibiza**	**4.16**	**166**	Sn	**Sn**	**15 33 30.2**	**-4.0**
	2.5nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**4.16**	**166**	Sn	**Sn**	**15 33 30.2**	**-4.0**
	2.5nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**4.37**	**183**	Pn	**Pn**	**15 32 48.0**	**-0.2**
EBEN				Pg	**Pg**	**15 33 00.3**	**-4.9**
EBEN				Sn	**Sn**	**15 33 36.2**	**-3.1**
EBEN	**Beniarda**	**4.37**	**183**	Pn	**Pn**	**15 32 48.0**	**-0.2**
	0.3nm,0.1s,SNR=7.9						
EBEN				Pg	**Pg**	**15 33 00.3**	**-4.9**
	0.1nm,0.1s,SNR=4.0						
EBEN				Sn	**Sn**	**15 33 36.2**	**-3.1**
	0.3nm,0.1s,SNR=4.0						
EBEN	**Beniarda**	**4.37**	**183**	Pn	**Pn**	**15 32 48.0**	**-0.2**
	0.3nm,0.1s,SNR=7.9						
EBEN	**Beniarda**	**4.37**	**183**	Pg	**Pg**	**15 33 00.3**	**-4.8**
	0.1nm,0.1s,SNR=4.0						
EBEN				Sn	**Sn**	**15 33 36.2**	**-3.1**
	0.3nm,0.1s,SNR=4.0						
AVF	**Avril sur Loir**	**4.40**	**31**	*e*Sg	**Sg**	**15 34 01.3**	**-1.6**
	19nm,0.3s,SNR=1.0						
AVF	**Avril sur Loir**	**4.40**	**31**	*e*Sg	**Sg**	**15 34 01.3**	**-1.6**
	9.6nm,0.3s,SNR=1.0						
SMF	**Signal de Mont**	**4.48**	**36**	*e*Pn	**Pn**	**15 32 50.3**	**+0.5**
	SNR=1.0						
SMF	**Signal de Mont**	**4.48**	**36**	*e*Pn	**Pn**	**15 32 50.3**	**+0.5**
	SNR=1.0						
ETOB	**Tobarra**	**4.58**	**196**	Pn	**Pn**	**15 32 52.3**	**+1.2**
ETOB				Sn	**Sn**	**15 33 40.9**	**-3.7**
ETOB	**Tobarra**	**4.58**	**196**	Pn	**Pn**	**15 32 52.3**	**+1.2**
	0.6nm,0.2s,SNR=7.9						
ETOB				Sn	**Sn**	**15 33 40.9**	**-3.7**
	0.5nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	**4.58**	**196**	Pn	**Pn**	**15 32 52.3**	**+1.1**
	0.6nm,0.2s,SNR=7.9						
ETOB				Sn	**Sn**	**15 33 40.9**	**-3.7**
	0.5nm,0.1s,SNR=7.9						
LMR	**La Mourre**	**4.74**	**85**	*e*Sg	**Sg**	**15 34 09.3**	**-4.4**
	6.2nm,0.4s,SNR=1.0						
LMR	**La Mourre**	**4.74**	**85**	*e*Sg	**Sg**	**15 34 09.3**	**-4.4**
	3.1nm,0.4s,SNR=1.0						
LOR	**Lormes**	**4.99**	**31**	*e*Sg	**Sg**	**15 34 18.8**	**-3.0**
	25nm,0.4s,SNR=1.0						
LOR	**Lormes**	**4.99**	**31**	*e*Sg	**Sg**	**15 34 18.8**	**-3.0**
	13nm,0.4s,SNR=1.0						
ECAL	**Calabor**	**5.13**	**260**	Pn	**Pn**	**15 32 59.6**	**+0.8**
ECAL				Sn	**Sn**	**15 33 54.8**	**-3.4**
ECAL	**Calabor**	**5.13**	**260**	Pn	**Pn**	**15 32 59.6**	**+0.8**
	0.9nm,0.2s,SNR=7.1						
ECAL				Sn	**Sn**	**15 33 54.8**	**-3.4**
	2.1nm,0.2s,SNR=6.3						
ECAL	**Calabor**	**5.13**	**260**	Pn	**Pn**	**15 32 59.6**	**+0.9**
	0.9nm,0.2s,SNR=7.1						
ECAL				Sn	**Sn**	**15 33 54.8**	**-3.4**
	2.1nm,0.2s,SNR=6.3						
PBRG	**Braganca**	**5.17**	**258**	*e*Sn	**Sn**	**15 33 57.8**	**-1.4**
PBRG				A		15 34 00.2	
	2.3nm,0.1s						
PBRG	**Braganca**	**5.17**	**258**	*e*Sn	**Sn**	**15 33 57.8**	**-1.4**
	2.3nm,0.1s						
EPON	**Pontenova**	**5.26**	**275**	Pn	**Pn**	**15 33 02.3**	**+1.8**
EPON				Sn	**Sn**	**15 34 01.9**	**+0.6**
EPON	**Pontenova**	**5.26**	**275**	Pn	**Pn**	**15 33 02.3**	**+1.8**
	0.6nm,0.2s,SNR=7.9						
EPON				Sn	**Sn**	**15 34 01.9**	**+0.6**
	3.8nm,0.3s,SNR=7.9						
EPON	**Pontenova**	**5.26**	**275**	Pn	**Pn**	**15 33 02.3**	**+1.8**
	0.6nm,0.2s,SNR=7.9						
EPON				Sn	**Sn**	**15 34 01.9**	**+0.6**
	3.8nm,0.3s,SNR=7.9						
QUIF	**Quistinic**	**5.34**	**336**	*e*Sg	**Sg**	**15 34 31.9**	**-1.1**
	6.3nm,0.3s,SNR=1.0						
QUIF	**Quistinic**	**5.34**	**336**	*e*Sg	**Sg**	**15 34 31.9**	**-1.1**
	3.2nm,0.3s,SNR=1.0						
GRR	**Gorron**	**5.36**	**354**	*e*Sg	**Sg**	**15 34 33.9**	**+0.5**
	6.9nm,0.2s,SNR=1.0						
GRR	**Gorron**	**5.36**	**354**	*e*Sg	**Sg**	**15 34 33.9**	**+0.5**
	3.5nm,0.2s,SNR=1.0						
EPLA	**Plasencia**	**5.48**	**239**	Pn	**Pn**	**15 33 03.6**	**0.0**
EPLA				Sn	**Sn**	**15 34 04.3**	**-2.5**
EPLA	**Plasencia**	**5.48**	**239**	Pn	**Pn**	**15 33 03.6**	**0.0**
	0.7nm,0.1s,SNR=7.9						
EPLA				Sn	**Sn**	**15 34 04.3**	**-2.5**
	1.0nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	**5.48**	**239**	Pn	**Pn**	**15 33 03.6**	**0.0**
	0.7nm,0.1s,SNR=7.9						
LDF	**La Druitiere**	**5.53**	**359**	*e*Pn	**Pn**	**15 33 04.6**	**+0.4**
	SNR=1.0						
LDF				*e*Sn	**Sn**	**15 34 05.3**	**-2.6**
	SNR=1.0						
LDF				*e*Sg	**Sg**	**15 34 36.4**	**-2.5**
	9.0nm,0.4s,SNR=1.0						
LDF	**La Druitiere**	**5.53**	**359**	*e*Pn	**Pn**	**15 33 04.6**	**+0.4**
	SNR=1.0						
MVO	**Moncorvo**	**5.59**	**252**	Pn	**Pn**	**15 33 05.4**	**+0.4**
MVO				Sn	**Sn**	**15 34 06.2**	**-3.3**
MVO	**Moncorvo**	**5.59**	**252**	Pn	**Pn**	**15 33 05.4**	**+0.4**
	1.1nm,0.2s,SNR=7.9						
MVO				Sn	**Sn**	**15 34 06.2**	**-3.3**
	1.0nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**5.59**	**252**	*e*Pn	**Pn**	**15 33 05.8**	**+0.8**
MVO				*e*Sn	**Sn**	**15 34 06.9**	**-2.5**
MVO				A		15 34 10.7	
	3.5nm,0.2s						
MVO	**Moncorvo**	**5.59**	**252**	Pn	**Pn**	**15 33 05.4**	**+0.4**
	1.1nm,0.2s,SNR=7.9						
EQES	**Quesada**	**5.77**	**205**	Pn	**Pn**	**15 33 09.1**	**+1.6**
EQES	**Quesada**	**5.77**	**205**	Pn	**Pn**	**15 33 09.1**	**+1.6**
	1.7nm,0.1s,SNR=4.0						
EQES	**Quesada**	**5.77**	**205**	Pn	**Pn**	**15 33 09.1**	**+1.6**
	1.7nm,0.1s,SNR=4.0						
EADA	**Adamuz**	**6.02**	**217**	Pn	**Pn**	**15 33 12.0**	**+1.0**
EADA				Sn	**Sn**	**15 34 15.8**	**-4.4**
EADA	**Adamuz**	**6.02**	**217**	Pn	**Pn**	**15 33 12.0**	**+1.0**
	0.4nm,0.1s,SNR=7.9						
EADA				Sn	**Sn**	**15 34 15.8**	**-4.4**
	0.2nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**6.02**	**217**	Pn	**Pn**	**15 33 12.0**	**+1.0**
	0.4nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**6.11**	**261**	Pn	**Pn**	**15 33 12.5**	**+0.3**
ELOB				Sn	**Sn**	**15 34 19.2**	**-3.0**
ELOB	**Lobios**	**6.11**	**261**	Pn	**Pn**	**15 33 12.5**	**+0.3**
	0.0nm,0.0s,SNR=7.9						
ELOB				Sn	**Sn**	**15 34 19.2**	**-3.0**
	0.5nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**6.11**	**261**	Pn	**Pn**	**15 33 12.5**	**+0.4**
	SNR=7.9						
EBAD	**Badajoz**	**6.86**	**233**	Sn	**Sn**	**15 34 35.8**	**-5.0**
	0.8nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**7.36**	**226**	Sn	**Sn**	**15 34 46.5**	**-6.6**
	0.1nm,0.1s,SNR=7.9						

MAN 25 15:35:49.7°06N×126°72E, h5^{km}, mb4.6, ML3.5, MS3.4, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.47**	**256**	*e*P	Pg	15 35 59.4	+1.3
MATI				*e*S	Sg	15 36 03.1	-1.1
DMPH	**Davao City--Mi**	**1.20**	**271**	⇓*i*P	Pg	15 36 12.2	+0.1
DMPH				*e*S	Sg	15 36 30.3	+2.6
BUKP	**Musuan**	**1.83**	**296**	*e*P	Pn	15 36 21.5	+0.4
BUKP				*e*S	Sn	15 36 37.9	-6.8
MSLP	**Maasin**	**3.56**	**329**	*e*P	Pn	15 36 46.7	+1.7

*IDC **25** 15:38:07.8±2.7, 2°.54S×138°.35E, h0^{km}, mb3.7/4, mb1 3.9/6, mb1mx3.7/14, mbtmp3.7/6, ML3.5/2, Error ellipse: s-maj=85.8km s-min=23.1km az=87.0*
*NEIC **25** 15:38:12.7±1.8, 2°.58S×138°.50E, h35^{km}, mb4.2/2, Error ellipse: s-maj=54.1km s-min=12.4km az=89.0*

ISC 25 15:38:12.4±1.9, 2°.56S±0°.09×138°.6E±0°.4, h35^{km}, n10, $_{\sigma}$0^{s}98/10, mb3.8/5, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**11.78**	**211**	*e*Pn	**Pn**	**15 40 59.5**	**+1.4**
WRAB	**Tennant Creek**	**17.76**	**193**	*e*P	**Pn**	**15 42 16.5**	**-0.5**
	2.9nm,0.6s						
WRA	**Warramunga Arr**	**17.77**	**193**	P	**Pn**	**15 42 16.8**	**-0.3**
	0.3nm,0.3s,baz=14,slow=12,SNR=9.7						
FITZ	**Fitzroy Crossi**	**19.99**	**219**	P	**Pn**	**15 42 39.9**	**-4.1**
	0.1nm,0.3s,baz=45,slow=11,SNR=2.6						
ASAR	**Alice Springs**	**21.47**	**192**	P	**P**	**15 42 58.0**	**+0.1**
	0.9nm,0.7s,mb3.2,baz=20,slow=10.0,SNR=15						
CMAR	**Chiang Mai Arr**	**44.25**	**300**	P	**P**	**15 46 17.8**	**-1.1**
	0.7nm,0.7s,mb3.5,baz=116,slow=6.9,SNR=3.3						
MK31	**Makanchi Array**	**69.59**	**322**	*e*P	**P**	**15 49 17.8**	**-0.2**
MKAR	**Makanchi Array**	**69.59**	**322**	P	**P**	**15 49 18.0**	**0.0**
	1.4nm,1.0s,mb3.8,baz=111,slow=7.9,SNR=8.0						
KBL	**Kabul**	**74.73**	**307**	*e*P	**P**	**15 49 51.6**	**+2.6**
	15nm,1.3s,mb4.8						
BVAR	**Borovoye Array**	**79.11**	**325**	P	**P**	**15 50 13.2**	**-0.1**
	0.6nm,0.5s,mb3.8,baz=110,slow=8.1,SNR=6.0						

*BJI **25** 15:41:20.4, 5°.79S×152°.43E, h50^{km}, mB5.4/47, mb5.2/61, Ms5.2/64, Ms7 5.1/55*
*MOS **25** 15:41:25.6±0.9, 5°.07S×151°.60E, h33^{km}, mb5.6/45, MS5.2/59, Error ellipse: s-maj=9.3km s-min=6.4km az=92.9*
*ISCJB **25** 15:41:25.3±0.8, 5°.23S±0°.03×151°.71E±0°.02, h37^{km}±7^{km}, mb5.4/192, MS5.2/243, Error ellipse: s-maj=5.3km s-min=3.3km az=179.1*
*IDC **25** 15:41:27.6±1.4, 5°.25S×151°.69E, h52^{km}±11^{km}, mb5.0/25, mb1 5.1/27, mb1mx5.1/27, mbtmp5.0/27, MS4.9/20, Ms1 4.9/20, ms1mx4.9/24, Error ellipse: s-maj=11.9km s-min=8.7km az=123.0*
*NEIC **25** 15:41:28.0±0.1, 5°.27S×151°.69E, mb5.3/105, MW5.7, MW5.7, Error ellipse: s-maj=4.8km s-min=4.0km az=141.0, Moment Tensor Solution. s39 Moment tensor: Scale 10^{17}Nm; M_{rr}5.19; $M_{\theta\theta}$-3.56; $M_{\phi\phi}$-1.63; $M_{r\theta}$0.94; $M_{\theta\phi}$-0.55; $M_{\phi r}$-0.08; Best double couple: $M_0$4.70000×10^{17} NP1: ϕ_s253.00000°, δ39.00000°, λ86.00000°. NP2:ϕ_s78.00000°, δ51.00000°, λ93.00000°. Principal axes: T 5.2900, Plg83.0000°, Azm10.0000°; N -1.5000, Plg2.0000°, Azm256.0000°; P -3.7900, Plg5.0000°, Azm165.0000°;*
*GCMT **25** 15:41:32.7±0.1, 5°.52S×151°.84E, h47^{km}, MW5.7, Moment Tensor Solution. s100, c193; s54, c63; Moment tensor: Scale 10^{17}Nm; M_{rr}3.73±.05; $M_{\theta\theta}$-3.91±.03; $M_{\phi\phi}$0.18±.03; $M_{r\theta}$0.91±.03; $M_{\theta\phi}$-1.29±.03; $M_{\phi r}$-0.47±.03; Best double couple: $M_0$4.20000×10^{17} NP1:ϕ_s242.00000°, δ41.00000°, λ72.00000°. NP2:ϕ_s85.00000°, δ51.00000°, λ105.00000°. Principal axes: T 3.9500, Plg77.0000°, Azm50.0000°; N 0.4000, Plg12.0000°, Azm256.0000°; P -4.3500, Plg5.0000°, Azm165.0000°; Data Used: II IU IC G CN. Surface waves: sta=110, comp=221, per= 50.*
*DJA **25** 15:41:37, 5°.40S×151°.60E, h128^{km}, Mw5.6/23*

ISC 25 15:41:29.6±0.7, 5°.31S±0°.03×151°.75E±0°.02, h63^{km}±6^{km}, h53^{km}±2.2^{km}: pP-P, n1036, $_{\sigma}$0^{s}94/634, mb5.4/189, 193C-153D, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**9.10**	**117**	P	**Pn**	**15 43 37.0**	**-1.3**
	12nm,0.3s,baz=230,slow=4.8,SNR=15						
HNR				S	**Sn**	**15 45 17.4**	**-1.9**
	4.2nm,0.3s,baz=54,slow=19,SNR=2.6						
HNR				LR	LR	15 46 19.2	
	comp=Z,4μm,21.9s,baz=290,slow=32						
HNR	**Honiara**	**9.10**	**117**	P	**Pn**	**15 43 37.0**	**-1.3**
HNR				S	**Sn**	**15 45 17.4**	**-1.9**
HNR				pmax	pmax		
	comp=Z,12nm,0.3s						
HNR				smax			
	comp=N,4.0nm,0.3s						
HNR				MLR	MLR		
	comp=Z,4μm,21.9s						
HNR	**Honiara**	**9.10**	**117**	*e*Pn	**Pn**	**15 43 37.1**	**-1.2**
	comp=Z,308nm,0.8s						
JAY	**Jayapura**	**11.37**	**284**	P	**Pn**	**15 44 13.7**	**+4.4**
COEN	**Coen**	**12.05**	**224**	*e*Pn	**Pn**	**15 44 19.4**	**+0.7**
	comp

ASAR PcP PcP 15 50 22.7 +1.0
comp=Z,9.7nm,0.9s,baz=44,slow=4.5,SNR=4.2
ASAR S **S** **15 51 09.6 +1.0**
comp=Z,5.6nm,1.1s,baz=48,slow=12,SNR=3.3
ASAR ScP ScP 15 53 56.6 +1.0
comp=Z,17nm,0.9s,baz=47,slow=3.4,SNR=20
ASAR P3KPbc 16 19 50.6
comp=Z,1.0nm,0.9s,baz=212,slow=4.4,SNR=5.4
ASAR Alice Springs 25.08 222 P **P** **15 46 47.6 -0.8**
ASAR 15 50 22.7
ASAR S **S** **15 51 09.6 +1.0**
ASAR Alice Springs 25.08 222 P **P** **15 46 47.6 -0.8**
ASAR PcP PcP 15 50 22.7 +1.0
ASAR S **S** **15 51 09.6 +1.0**
ASAR ScP ScP 15 53 56.6 +1.0
FUNA Funafuti 27.43 98 PFAKE 15 47 20.0 +10
FUNA LR LR
comp=Z,6μm,19.0s
MNI Manado 27.71 283 P **P** **15 47 13.5 +1.2**
comp=Z,3μmcomp=Z,192nm,1.2s,mb5.6
STKA Stephens Creek 28.09 199 *e*P **P** **15 47 16.2 +0.7**
comp=Z,24nm,1.0s,mb4.8
STKA *e*S **S** **15 51 58.0 +2.0**
STKA Stephens Creek 28.09 199 P **P** **15 47 15.0 -0.5**
comp=Z,9.9nm,0.6s,mb4.6,baz=36,slow=11,SNR=17
STKA ScP ScP 15 54 06.7 +2.3
comp=Z,14nm,1.1s,baz=16,slow=2.5,SNR=4.4
STKA LR LR 15 58 54.1
comp=Z,4μm,19.0s,baz=282,slow=37
STKA Stephens Creek 28.09 199 *e*P **P** **15 47 15.3 -0.2**
comp=Z,8.8nm,1.0s,mb4.3
KMSI Cibinong 28.34 281 P **P** **15 47 17.5 -0.5**
comp=Z,4μmcomp=Z,308nm,1.2s,mb5.8
RIV Riverview 28.39 181 *e*P **P** **15 47 25.9 +7.8**
FITZ Fitzroy Crossi 28.50 241 *e*P **P** **15 47 18.2 -1.1**
comp=Z,264nm,0.8s,mb6.0
FITZ *e*S **S** **15 52 00.4 -2.4**
FITZ Fitzroy Crossi 28.50 241 P **P** **15 47 18.0 -1.3**
comp=Z,191nm,1.0s,mb5.8,baz=81,slow=7.0,SNR=65
FITZ S **S** **15 52 02.4 -0.4**
comp=Z,48nm,1.2s,baz=122,slow=21,SNR=4.4
FITZ LR LR 16 00 11.3
comp=Z,4μm,18.5s,baz=64,slow=40
FITZ Fitzroy Crossi 28.50 241 *e*P **P** **15 47 17.9 -1.4**
comp=Z,150nm,0.9s,mb5.7
FITZ Fitzroy Crossi 28.50 241 P **P** **15 47 18.3 -1.0**
comp=Z,4μmcomp=Z,390nm,1.0s,mb6.1
MSVF Nonsavu 28.52 118 PFAKE 15 47 30.0 +11
MSVF LR LR
comp=Z,3μm,21.0s
DAV Davao City (W) 28.87 295 PFAKE 15 47 30.0 +7.4
DAV LR LR
comp=Z,3μm,20.0s
LUWI Luwuk 29.24 277 P **P** **15 47 27.4 +1.5**
comp=Z,2μmcomp=Z,104nm,0.9s,mb5.5
MMRI Maumere 29.48 262 P **P** **15 47 28.7 +0.7**
comp=Z,1μmcomp=Z,141nm,1.3s,mb5.5
BUKP Musuan 29.67 296 *e*P **P** **15 47 31.7 +2.0**
CNB Canberra Magne 29.95 184 *e*P **P** **15 47 39.7 +7.8**
CNB *e*S **S** **15 52 16.5 -8.5**
CAN Canberra 29.98 185 PFAKE 15 47 40.0 +7.9
CAN LR LR
comp=Z,2μm,21.0s
MRSI Marisa 30.32 280 P **P** **15 47 37.7 +2.2**
comp=Z,628nmcomp=Z,47nm,1.2s,mb5.1
APSI Ampana 30.37 277 P **P** **15 47 36.8 +0.9**
comp=Z,1μmcomp=Z,99nm,1.3s,mb5.4
WSI Waingapu 31.48 260 P **P** **15 47 46.4 +0.7**
comp=Z,837nm,0.9s,mb6.5
KAPI Kappang 31.87 269 P **P** **15 47 48.3 -0.9**
comp=Z,24nm,0.8s,mb5.1,baz=82,slow=3.3,SNR=7.5
KAPI PcP PcP 15 50 37.3 -1.6
comp=Z,37nm,1.0s,baz=103,slow=5.3,SNR=5.3
KAPI LR LR 16 02 31.9
comp=Z,857nm,19.2s,baz=266,slow=40
SPSI Sidrap Palu 31.91 271 P **P** **15 47 49.4 -0.1**
comp=Z,22nm,1.1s,mb4.9
TTSI Tana Toraja 31.93 273 P **P** **15 47 51.5 +1.9**
comp=Z,685nmcomp=Z,21nm,1.2s,mb4.8
PCI Palu 32.16 277 P **P** **15 47 53.7 +2.0**
comp=Z,134nm,1.1s,mb5.7
CNP Catarman 32.22 303 *e*P **P** **15 47 52.9 +0.8**
FORT Forrest 33.74 219 *e*P **P** **15 48 03.9 -1.4**
comp=Z,50nm,0.6s,mb5.6
FORT Forrest 33.74 219 *e*P **P** **15 48 03.5 -1.8**
comp=Z,80nm,0.8s,mb5.7
CUYO Cuyo Island 34.55 298 *e*P **P** **15 48 14.1 +1.6**
MYLDM Lahad Datu 34.80 287 P **P** **15 48 17.2 +2.5**
MYLDM Lahad Datu 34.80 287 P **P** **15 48 17.7 +3.0**
MBWA Marble Bar 34.82 240 *e*P **P** **15 48 13.5 -1.2**
comp=Z,102nm,0.9s,mb5.8
MBWA LR LR
comp=Z,4μm,20.0s
MBWA Marble Bar 34.82 240 ⇑P **P** **15 48 14.1 -0.6**
SNR=9.2
MBWA ⇑P 15 48 14.1
SNR=9.2
MBWA Marble Bar 34.82 240 P **P** **15 48 15.4 +0.7**
comp=Z,156nm,1.1s,mb5.9
BOAC Boac 35.06 302 *e*P **P** **15 48 18.2 +1.3**
SJMP San Jose 35.20 300 *e*P **P** **15 48 20.6 +2.5**
BUSP Coron 35.78 299 *e*P **P** **15 48 25.1 +2.0**
ENPP El Nido 36.11 297 *e*P **P** **15 48 27.0 +1.1**
TGY Tagaytay City 36.15 303 P **P** **15 48 27.4 +1.2**
comp=Z,275nm,0.7s,mb6.3,baz=195,slow=3.3,SNR=13
TGY LR LR 16 00 28.5
comp=Z,10nm,21.7s,baz=333,slow=32
SDKM Sandakan 36.18 287 P **P** **15 48 28.5 +2.0**
BALP Baler 36.47 305 *e*P **P** **15 48 29.9 +1.0**
LUBP Lubang 36.55 301 *e*P **P** **15 48 30.5 +0.9**
BATP Bataraza 36.63 292 *e*P **P** **15 48 32.5 +2.1**
KDM Kudat 36.91 289 P **P** **15 48 35.3 +2.6**
AFI Afiamalu 36.91 106 P **P** **15 48 32.6 -0.1**
comp=Z,42nm,0.8s,mb5.3,baz=106,slow=17,SNR=4.3
AFI LR LR 16 01 16.9
comp=Z,877nm,21.4s,baz=154,slow=32
AFI Afiamalu 36.91 106 P **P** **15 48 32.6 -0.1**
AFI LR LR 16 01 16.9
KKM Kota Kinabalu 37.23 287 P **P** **15 48 37.3 +1.8**
KKM Kota Kinabalu 37.23 287 *e*P **P** **15 48 35.7 +0.2**
comp=Z,87nm,1.4s,mb5.4
KKM LR LR
comp=Z,1μm,21.0s
KKM Kota Kinabalu 37.23 287 P **P** **15 48 36.9 +1.5**
comp=Z,628nmcomp=Z,48nm,1.6s,mb5.1
RAO Raoul Island 37.27 133 LR LR 16 00 13.7
comp=Z,2μm,19.9s,baz=199,slow=30
RAO Raoul Island 37.27 133 PFAKE 15 48 50.0 +14
RAO LR LR
comp=Z,3μm,19.0s
APYP Conner 37.90 308 *e*P **P** **15 48 41.5 +0.4**
ABRA Dolores 38.20 307 *e*P **P** **15 48 44.9 +1.3**
BTM Bintulu 39.54 281 P **P** **15 48 56.4 +1.5**
PWJI Pagerwojo 39.76 264 P **P** **15 48 56.5 -0.2**
comp=Z,72nm,0.9s,mb5.4
JHJ Hachijo jima 2 39.87 344 LR LR 16 03 07.7
comp=Z,2μm,18.7s,baz=274,slow=33
SBUM Sibu 40.23 280 P **P** **15 49 02.8 +2.1**
SBUM Sibu 40.23 280 P **P** **15 49 02.4 +1.8**
comp=Z,442nmcomp=Z,25nm,1.1s,mb4.9
PCJI Pacitan 40.38 264 P **P** **15 49 01.3 -0.6**
STKI Sintang 40.57 276 P **P** **15 49 05.0 +1.6**
comp=Z,45nm,1.1s,mb5.0
YULB Yu-li 41.20 315 *e*P **P** **15 49 08.6 +0.2**
comp=Z,34nm,0.8s,mb5.0
KLBR Kellerberrin 41.20 226 *e*P **P** **15 49 08.0 -0.4**
comp=Z,80nm,1.2s,mb5.2
SNZO South Karori 41.31 154 PFAKE 15 49 20.0 +11
SNZO LR LR
comp=Z,5μm,20.0s
NACB Ninganchiao 41.50 316 *e*P **P** **15 49 11.8 +1.0**
comp=Z,81nm,0.8s,mb5.4
TPUB Ta-pu 41.62 314 *e*P **P** **15 49 12.1 +0.3**
comp=Z,73nm,1.1s,mb5.2
SSLB Suanglung 41.70 315 *e*P **P** **15 49 13.8 +1.4**
comp=Z,37nm,0.8s,mb5.1
RPZ Rata Peaks 41.87 159 P **P** **15 49 14.4 +0.9**
comp=Z,19nm,0.8s,mb4.8,baz=323,slow=23,SNR=3.9
KSM Kuching 41.94 278 P **P** **15 49 15.8 +1.1**
KSM Kuching 41.94 278 *e*P **P** **15 49 13.2 -1.5**
comp=Z,50nm,1.0s,mb5.1
KSM LR LR
comp=Z,445nm,20.0s
KSM Kuching 41.94 278 P **P** **15 49 15.8 +1.1**
comp=Z,642nmcomp=Z,52nm,1.1s,mb5.1
YHNB Yeheng 41.97 317 *e*P **P** **15 49 16.1 +1.4**
comp=Z,78nm,0.8s,mb5.4
YHNB LR LR
comp=Z,4μm,22.0s
TATO Taipei 42.10 317 PFAKE 15 49 30.0 +14
TATO LR LR
comp=Z,5μm,21.0s
NWAO Narrogin (SRO) 42.29 225 LR LR 16 07 54.4
comp=Z,21nm,19.4s,baz=64,slow=38
NWAO Narrogin (SRO) 42.29 225 PFAKE 15 49 30.0 +13
NWAO LR LR
comp=Z,3μm,19.0s
MJAR Matsushiro Arr 43.52 344 P **P** **15 49 24.8 -2.2**
comp=Z,12nm,0.9s,mb4.6,baz=172,slow=9.1,SNR=18
MJAR ScP ScP 15 54 60.0 -0.3
comp=Z,3.6nm,1.1s,baz=181,slow=5.3,SNR=5.4
MJAR LR LR 16 06 41.8
comp=Z,2μm,19.8s,baz=175,slow=35
MJAR Matsushiro Arr 43.52 344 P **P** **15 49 24.8 -2.2**
MJAR ScP ScP 15 54 60.0 -0.3
MJAR LR LR 16 06 41.8
MAJO Matsushiro 43.52 344 *e*P **P** **15 49 24.1 -2.9**
MAJO pmax pmax
comp=Z,27nm,0.8s,mb5.0
MAJO MLR MLR
comp=Z,2μm,20.0s
MAJO Matsushiro 43.52 344 *e*P **P** **15 49 24.1 -2.9**
comp=Z,27nm,0.8s,mb5.0
MAJO LR LR
comp=Z,2μm,20.0s
QZH Quanzhou 44.09 314 ⇑*i*P **P** **15 49 32.5 +0.7**
QZH S **S** **15 56 02.8 +2.7**
QZH LR LR
comp=N,5μm,23.0s
QZH LR LR
comp=E,5μm,20.1s
QZH LR LR
comp=Z,5μm,21.2s
JOHN Johnston Islan 44.10 59 PFAKE 15 49 40.0 +8.0
JOHN LR LR
comp=Z,4μm,22.0s
CBJI Citeko 44.67 266 P **P** **15 49 35.7 -1.0**
comp=Z,9μmcomp=Z,219nm,1.0s,mb6.0
MIDW Midway 44.68 40 PFAKE 15 49 50.0 +14
MIDW LR LR
comp=Z,1μm,19.0s
CGJI Cibinong 45.82 266 P **P** **15 49 45.2 -0.6**
comp=Z,147nm,1.0s,mb5.9
SSE Sheshan 46.50 323 P **P** **15 49 48.0 -2.8**
SSE S **S** **15 56 31.0 -3.8**
SSE pmax pmax
comp=Z,31nm,0.7s,mb5.3
SSE pmax pmax
comp=Z,380nm,9.3s
SSE LR LR
comp=N,2μm,25.0s
SSE LR LR
comp=E,2μm,25.0s
SSE LR LR
comp=Z,3μm,25.0s
KASI Kota Agung 47.04 267 P **P** **15 49 53.5 -1.8**
comp=Z,131nm,1.1s,mb5.8
MDSI Maura Dua 47.40 269 P **P** **15 49 56.8 -1.4**
comp=Z,68nm,1.1s,mb5.5
QIZ Qiongzhong 47.83 302 P **P** **15 50 01.3 -0.1**
QIZ S **S** **15 57 06.0 +12**
QIZ pmax pmax
comp=Z,37nm,1.2s,mb5.3
QIZ LR LR
comp=N,1μm,23.3s
QIZ LR LR
comp=E,550nm,28.9s
QIZ LR LR
comp=Z,3μm,28.3s
QIZ Qiongzhong 47.83 302 *e*P **P** **15 50 02.9 +1.5**
comp=Z,59nm,1.1s,mb5.5
QIZ LR LR
comp=Z,2μm,20.0s
KSRS Korea Array 47.99 334 P **P** **15 50 01.9 -0.3**
comp=Z,4.8nm,0.6s,mb4.7,baz=155,slow=6.9,SNR=31
KSRS ScP ScP 15 55 16.8 -2.0
comp=Z,0.2nm,0.3s,baz=122,slow=4.4,SNR=2.8
KSRS LR LR 16 08 34.4
comp=Z,1μm,21.6s,baz=145,slow=34
MYKOM Kota Tinggi 48.37 277 P **P** **15 50 06.3 +0.7**
MYKOM Kota Tinggi 48.37 277 P **P** **15 50 06.7 +1.1**
comp=Z,36nm,1.1s,mb5.3
INCN Inchon 48.58 333 *e*P **P** **15 50 07.7 +0.8**
comp=Z,163nm,1.1s,mb6.0
INCN LR LR
comp=Z,2μm,22.0s
NJ2 Nanjing 48.59 322 *e*P **P** **15 50 08.5 +1.5**
NJ2 pP pP 15 50 19.0 -4.2
NJ2 sP sP 15 50 24.5 -5.9
NJ2 PP PP 15 52 01.5 +1.0
NJ2 S **S** **15 57 05.3 +1.0**
NJ2 pmax pmax
comp=Z,30nm,1.2s,mb5.2
NJ2 pmax pmax
comp=Z,510nm,5.0s
NJ2 LR LR
comp=N,4μm,15.6s
NJ2 LR LR
comp=E,2μm,19.6s
NJ2 LR LR
comp=Z,2μm,16.0s
KGM Kluang 48.92 277 P **P** **15 50 10.8 +0.9**
YUK Yuzh-Kuril'sk 49.40 354 ⇑*i*P **P** **15 50 11.5 -1.5**
YUK *i* 15 52 12.5
YUK *i* S **S** **15 57 19.0 +3.7**
YUK *i* SS SS 16 00 39.7 -8.3
YUK pmax pmax
comp=N,200nm,4.8s
YUK pmax pmax
comp=E,100nm,3.2s
KTGM Kuala Trenggan 49.69 282 P **P** **15 50 17.0 +1.3**
ASAJ Asahikawa 49.88 351 P **P** **15 50 16.3 -0.3**
comp=E,27nm,0.7s,mb5.4,baz=224,slow=11,SNR=19
ASAJ Asahikawa 49.88 351 P **P** **15 50 16.3 -0.3**
ASAJ pmax pmax
comp=Z,27nm,0.7s
SDSI Sungai Dareh 50.42 273 P **P** **15 50 21.1 -0.2**
WHN Wuhan 50.51 317 P **P** **15 50 21.5 -0.1**
WHN pP pP 15 50 37.8 -0.1
WHN sP sP 15 50 42.5 -2.6
WHN S **S** **15 57 33.0 +1.8**
WHN pmax pmax
comp=Z,440nm,2.1s,mb6.0
WHN LR LR
comp=N,1μm,10.4s
WHN LR LR
comp=E,4μm,19.2s
WHN LR LR
comp=Z,6μm,23.5s
FRIM Kepong 50.79 279 P **P** **15 50 24.0 0.0**
BKNI Bangkinang 50.95 275 P **P** **15 50 25.9 +0.6**
comp=Z,92nm,1.0s,mb5.7
XMAS Kiritimati 51.27 83 PFAKE 15 50 40.0 +12
XMAS LR LR
comp=Z,3μm,21.0s
PDSI Padang 51.38 273 P **P** **15 50 27.3 -1.3**
comp=Z,77nm,0.7s,mb5.8
VLA Vladivostok 51.45 341 *e*P **P** **15 50 27.2 -1.3**
VLA *e**PP pP 15 50 45.0 +0.2
VLA *e*S **S** **15 57 38.3 -5.5**
VLA pmax pmax
comp=Z,57nm,2.4s,mb5.1
PPI Padang Panjang 51.50 274 P **P** **15 50 28.7 -0.7**
comp=Z,3μmcomp=Z,140nm,1.1s,mb5.8
IPM Ipoh 51.59 280 P **P** **15 50 30.0 0.0**
IPM Ipoh 51.59 280 P **P** **15 50 29.8 -0.3**
comp=Z,57nm,1.0s,mb5.5
DL2 Dalian 52.08 330 P **P** **15 50 33.5 +0.2**
DL2 S **S** **15 57 55.3 +2.7**
DL2 sS sS 15 58 17.3 -3.0
DL2 pmax pmax
comp=Z,30nm,1.1s,mb5.1
DL2 pmax pmax
comp=Z,200nm,5.4s
DL2 LR LR
comp=N,600nm,21.3s
DL2 LR LR
comp=E,400nm,22.8s
DL2 LR LR
comp=Z,1μm,26.2s
KULM Kulim 52.10 281 P **P** **15 50 34.2 +0.3**
KULM Kulim 52.10 281 P **P** **15 50 32.2 -1.7**
comp=Z,41nm,1.0s,mb5.3
KULM LR LR
comp=Z,719nm,20.0s
MNSI Mandailing Nat 52.46 275 P **P** **15 50 35.5 -1.1**
comp=Z,1μmcomp=Z,80nm,1.0s,mb5.6
YSS Yuzh-Sakhalins 52.64 352 *e*P **P** **15 50 38.5 +1.3**
YSS *e**PP pP 15 50 56.4 +2.8
YSS *e*S **S** **15 58 06.0 +6.0**
YSS *e*PS 15 58 16.0
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.2
YSS MLR MLR
comp=N,900nm,18.0s
YSS MLR MLR
comp=Z,900nm,18.0s
YSS Yuzh-Sakhalins 52.64 352 PFAKE 15 50 50.0 +13
YSS LR LR
comp=Z,424nm,22.0s
PSI Prapat 53.38 277 P **P** **15 50 42.6 -0.8**
comp=Z,21nm,0.9s,mb5.0,baz=164,slow=3.1,SNR=13
SNY Shenyang 53.49 334 ⇑P **P** **15 50 42.5 -1.1**
SNY S **S** **15 58 08.5 -3.2**
SNY pmax pmax
comp=Z,380nm,3.7s
SNY LR LR
comp=N,750nm,22.5s
SNY LR LR
comp=E,770nm,22.1s
SNY LR LR
comp=Z,2μm,28.4s
MDJ Mudanjiang 53.53 340 P **P** **15 50 44.8 +0.9**
MDJ pP pP 15 50 58.5 -1.8
MDJ sP sP 15 51 04.5 -2.9
MDJ PP PP 15 52 46.0 +0.9
MDJ ScP ScP 15 55 43.5 +1.0
MDJ PcS PcS 15 55 49.5 +0.6
MDJ S **S** **15 58 16.0 +3.8**
MDJ sS sS 15 58 39.5 -0.5
MDJ pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
MDJ pmax pmax
comp=Z,250nm,8.1s
MDJ LR LR
comp=N,1μm,32.4s
MDJ LR LR
comp=E,960nm,29.3s
MDJ LR LR
comp=Z,2μm,30.1s
MDJ Mudanjiang 53.53 340 *e*P **P** **15 50 43.3 -0.5**
comp=Z,19nm,1.0s,mb5.0
MDJ LR LR
comp=Z,1μm,21.0s
ENH Enshi 53.74 314 *e*P **P** **15 50 44.6 -1.1**
comp=Z,125nm,1.1s,mb5.8
ENH LR LR
comp=Z,1μm,22.0s
GYA Guiyang 53.88 308 ⇑*i*P **P** **15 50 48.0 +1.3**
GYA pP pP 15 51 01.8 -1.4
GYA sP sP 15 51 09.8 -0.5
GYA PP PP 15 52 51.5 +2.9
GYA ScP ScP 15 55 45.3 +0.8
GYA S **S** **15 58 18.0 +0.5**
GYA sS sS 15 58 42.8 -2.5
GYA SS SS 16 01 59.5 -0.1
GYA pmax pmax
comp=Z,40nm,0.7s,mb5.5
GYA pmax pmax
comp=Z,230nm,5.2s
GYA LR LR
comp=N,3μm,19.8s
GYA LR LR
comp=E,1μm,18.9s
GYA LR LR
comp=Z,2μm,19.4s
CN2 Changchun 54.34 337 ⇑P **P** **15 50 53.3 +3.6**
CN2 *e*S **S** **15 58 27.3 +4.2**
CN2 pmax pmax
comp=Z,20nm,0.7s,mb5.2
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,1μm,21.0s
CN2 LR LR
comp=E,500nm,21.0s
CN2 LR LR
comp=Z,1μm,22.0s
GSI Gunungsitoli 54.51 275 P **P** **15 50 50.6 -1.0**
comp=Z,97nm,1.2s,mb5.7
COCO West Island 54.63 259 PFAKE 15 51 00.0 +7.6
COCO LR LR
comp=Z,2μm,19.0s
TPTI 55.17 278 P **P** **15 50 55.2 -1.2**
comp=Z,29nm,1.0s,mb5.3
HABR Khabarovsk 55.52 347 *ce*P **P** **15 50 55.3 -2.9**
HABR *e**PP pP 15 51 10.2 -4.5
HABR 15 51 54.9
HABR *e*PPP 15 54 12.9
HABR *e*S **S** **15 58 34.9 -3.9**
HABR *e**SS sS 15 59 01.7 -4.9
HABR *e* 16 00 38.2
HABR *e*SS SS 16 02 20.7 -4.0
HABR pmax pmax
comp=E,35nm,2.4s
HABR pmax pmax
comp=N,53nm,2.9s
HABR pmax pmax
comp=Z,83nm,2.6s,mb5.3
HABR MLR MLR
comp=Z,840nm,19.0s
BJT Baijiatuau 55.73 327 PFAKE 15 51 10.0 +10
BJT LR LR
comp=Z,2μm,22.0s
BJI Beijing 55.74 327 P **P** **15 50 59.0 -1.0**
BJI pP pP 15 51 14.3 -2.2
BJI sP sP 15 51 20.0 -3.6
BJI PP PP 15 53 04.0 -1.1
BJI sS sS 15 59 08.3 -1.7
BJI SS SS 16 02 38.5 +10
BJI pmax pmax
comp=Z,15nm,1.1s,mb4.9
BJI pmax pmax
comp=Z,430nm,10.2s
BJI LR LR
comp=N,2μm,20.6s
BJI LR LR
comp=E,1μm,21.7s
BJI LR LR
comp=Z,2μm,24.4s
SKR Severo-Kuril's 55.89 3 *e*PPP 15 54 18.0
SKR *e*S **S** **15 58 40.0 -3.6**
SKR *e*SSS 16 04 35.0
SKR smax
comp=N,1μm,20.0s
SKR smax
comp=E,1μm,20.0s
SKR MLR MLR
comp=N,1μm,18.0s
SKR MLR MLR
comp=E,2μm,18.0s
SKR MLR MLR
comp=Z,2μm,18.0s
KIP Kipapa 55.94 60 PFAKE 15 51 10.0 +8.3
KIP LR LR
comp=Z,2μm,21.0s
XAN Xi'an 56.27 317 P **P** **15 51 05.5 +1.6**
XAN pP pP 15 51 15.8 -4.6
XAN PP PP 15 53 07.8 -2.1
XAN S **S** **15 58 52.3 +2.9**
XAN pmax pmax
comp=Z,12nm,1.3s,mb4.8
XAN pmax pmax
comp=Z,110nm,9.6s
XAN LR LR
comp=N,1μm,22.9s
XAN LR LR
comp=E,350nm,21.6s
XAN LR LR
comp=Z,520nm,24.7s
KMI Kunming 56.41 305 P **P** **15 51 07.0 +2.0**
KMI pP pP 15 51 21.0 -0.5
KMI sP sP 15 51 26.8 -1.8
KMI PcP PcP 15 52 02.3 +0.8
KMI PP PP 15 53 12.5 +1.2
KMI ScP ScP 15 55 56.8 +1.2
KMI S **S** **15 58 50.5 -0.9**

KMI sS sS 15 59 16.5 -2.9
KMI ScS ScS 16 00 48.0 -1.1
KMI SS SS 16 02 42.3 +2.7
KMI pmax pmax
comp=Z,61nm,1.4s,mb5.4
KMI pmax pmax
comp=Z,340nm,5.9s
KMI LR LR
comp=N,590nm,25.3s
KMI LR LR
comp=E,760nm,21.1s
KMI LR LR
comp=Z,2μm,26.4s
KLR Kul'dur 57.04 344 *e*P **P 15 51 04.2 -4.8**
KLR *e* 15 54 38.5
KLR *e* 16 05 04.5
CM31 Chiang Mai Arr 57.15 296 *e*P **P 15 51 10.3 0.0**
comp=Z,108nm,1.1s,mb5.8
CM31 LR LR
comp=Z,995nm,20.0s
CMAR Chiang Mai Arr 57.15 296 P **P 15 51 10.3 -0.1**
comp=Z,71nm,1.0s,mb5.6,baz=113,slow=4.3,SNR=93
CMAR LR LR 16 15 34.3
comp=Z,978nm,20.4s,baz=108,slow=36
CMAR PKP2bc 16 21 13.4
comp=Z,6.6nm,0.9s,baz=290,slow=4.6,SNR=11
CMAR Chiang Mai Arr 57.15 296 P **P 15 51 10.3 -0.1**
CMAR LR LR 16 15 34.3
CMAR ⇑*e* 16 21 13.4
CHTO Chiang Mai 57.27 296 *e*P **P 15 51 10.5 -0.7**
CHTO pmax pmax
comp=Z,96nm,1.2s,mb5.7
CHTO MLR MLR
comp=Z,540nm,20.0s
CHTO Chiang Mai 57.27 296 *e*P **P 15 51 10.5 -0.7**
comp=Z,96nm,1.2s,mb5.7
CHTO LR LR
comp=Z,540nm,20.0s
CHTO Chiang Mai 57.27 296 ⇓P **P 15 51 12.4 +1.2**
SNR=19
CHTO ⇓P 15 51 12.4
SNR=19
BSI Banda Aceh 57.38 280 P **P 15 51 10.2 -2.0**
comp=Z,71nm,1.1s,mb5.6
POHA Pohakuloa 57.50 63 PFAKE 15 51 30.0 +17
POHA LR LR
comp=Z,2μm,22.0s
CD2 Chengdu 58.28 311 ⇑*i*P **P 15 51 19.3 +1.2**
CD2 pP pP 15 51 33.5 -1.2
CD2 sP sP 15 51 39.3 -2.5
CD2 PcP PcP 15 52 08.3 -0.4
CD2 PP PP 15 53 30.0 +2.2
CD2 PcS PcS 15 56 09.5 -0.8
CD2 S **S 15 59 15.5 -0.3**
CD2 sS sS 15 59 39.3 -4.6
CD2 ScS ScS 16 01 01.3 -1.2
CD2 pmax pmax
comp=Z,110nm,0.6s,mb6.1
CD2 pmax pmax
comp=Z,560nm,8.3s
CD2 LR LR
comp=N,1μm,21.4s
CD2 LR LR
comp=E,2μm,21.4s
CD2 LR LR
comp=Z,2μm,22.6s
PET Petropavlovsk 58.40 5 *e*P **P 15 51 13.9 -4.6**
PET *e*S **S 15 59 11.8 -4.8**
PET *e*PS 15 59 33.5
PET pmax pmax
comp=Z,15nm,1.7s,mb4.8
PET pmax pmax
comp=Z,400nm,13.7s
PET pmax pmax
comp=Z,400nm,21.0s
PET MLR MLR
comp=Z,1μm,16.0s
PET MLR MLR
comp=Z,1μm,21.0s
PET Petropavlovsk 58.40 5 PFAKE 15 51 30.0 +12
PET LR LR
comp=Z,1μm,22.0s
PEA0B Petropavlovsk- 58.41 4 *e*P **P 15 51 19.0 +0.5**
PETK Petropavlovsk- 58.41 4 P **P 15 51 18.9 +0.3**
comp=Z,9.3nm,0.7s,mb4.9,baz=157,slow=5.8,SNR=17
PETK LR LR 16 13 01.5
comp=Z,1μm,21.4s,baz=191,slow=32
PPT Papeete 58.57 107 *e*S **S 15 59 16.5 -3.6**
comp=Z,1μm,25.0s
PPT *e*SS SS 16 03 06.1 -7.6
comp=Z,699nm,28.8s
PPT *e*LQ 16 06 11.2
comp=Z,2μm,27.5s
PPT *e*LR LR 16 08 41.2
comp=Z,1μm,24.0s,baz=280
PPT Papeete 58.57 107 P **P 15 51 22.5 +2.2**
comp=Z,45nm,1.0s,mb5.5,baz=198,slow=2.8,SNR=3.7
PPT LR LR 16 10 46.2
comp=Z,604nm,20.9s,baz=284,slow=30
TIAR Tiarei 58.79 107 *e*P **P 15 51 24.6 +2.7**
comp=Z,175nm,0.9s,mb6.1
HHC Hu-ho-hao-te 58.85 325 *e*P **P 15 51 21.5 -0.4**
HHC pP pP 15 51 34.5 -4.0
HHC sP sP 15 51 39.5 -6.1
HHC PcP PcP 15 52 10.0 -0.8
HHC PP PP 15 53 34.5 +1.8
HHC ScP ScP 15 56 05.5 -0.5
HHC PcS PcS 15 56 11.0 -1.5
HHC S **S 15 59 23.5 +0.6**
HHC sS sS 15 59 45.0 -6.0
HHC ScS ScS 16 01 03.8 -2.5
HHC SS SS 16 03 18.8 +1.3
HHC pmax pmax
comp=Z,16nm,0.9s,mb5.0
HHC pmax pmax
comp=Z,370nm,5.6s
HHC LR LR
comp=N,1μm,19.9s
HHC LR LR
comp=E,1μm,20.2s
HHC LR LR
comp=Z,2μm,21.6s
TBI Tubuai 59.30 114 *e*S **S 15 59 24.0 -5.4**
comp=Z,1μm,28.2s
TBI *e*LQ 16 06 08.3
comp=Z,4μm,35.5s
TBI *e*LR LR 16 08 35.4
comp=Z,3μm,30.8s
BTO Baotou 59.59 324 *e*P **P 15 51 26.8 -0.2**
PMOR Pomariorio Ree 60.02 104 *e*P **P 15 51 32.8 +2.3**
comp=Z,301nm,1.0s,mb6.3
MEH Mehetia 60.03 107 *e*P **P 15 51 32.8 +2.4**
comp=Z,212nm,1.0s,mb6.1
FX1 Attu Island--F 60.74 15 P **P 15 51 33.6 -0.9**
comp=Z,10nm,0.6s,mb5.1,baz=68,slow=22,SNR=8.1
LZH Lanzhou 60.87 317 *e*P **P 15 51 37.3 +1.5**
LZH pP pP 15 51 46.0 -6.5
LZH sP sP 15 51 53.0 -6.6
LZH PP PP 15 53 53.5 +2.8
LZH *e*S **S 15 59 50.3 +1.3**
LZH SS SS 16 03 50.3 +1.0
LZH pmax pmax
comp=Z,43nm,1.0s,mb5.5
LZH pmax pmax
comp=Z,410nm,5.9s
LZH LR LR
comp=E,1μm,16.3s
LZH LR LR
comp=Z,2μm,17.6s
HIA Hailar 61.07 337 *e*P **P 15 51 38.7 +1.8**
HIA pmax pmax
comp=Z,27nm,0.8s
HIA MLR MLR
comp=Z,1μm,22.0s
HIA Hailar 61.07 337 *e*P **P 15 51 38.7 +1.8**
comp=Z,27nm,0.8s,mb5.4
HIA LR LR
comp=Z,1μm,22.0s
DRV Dumont d'Urvil 61.80 185 P **P 15 51 54.0 +12**
DRV S **S 16 00 05.0 +5.2**
DRV SP 16 00 14.0
DRV SS SS 16 04 33.0 +30
DRV R 16 11 00.0
GTA Gaotai 65.32 318 ⇑P **P 15 52 04.5 -0.8**
GTA pP pP 15 52 17.5 -4.7
GTA sP sP 15 52 22.5 -6.7
GTA PP PP 15 54 31.3 +1.5
GTA S S 16 00 44.0 -0.5
GTA pmax pmax
comp=Z,25nm,1.3s,mb5.1
GTA pmax pmax
comp=Z,390nm,7.2s
GTA LR LR
comp=N,860nm,18.6s
GTA LR LR
comp=E,860nm,19.2s
GTA LR LR
comp=Z,1μm,19.5s
SHL Shillong 65.67 301 *e*PKP **P 15 52 07.5 -0.3**
SHL *e*x x 16 01 12.0
CLNS Chul'man 65.70 344 *e*P **P 15 52 05.5 -1.8**
CLNS *e**PP pP 15 52 20.8 -3.4
CLNS *e* 15 52 32.1
CLNS *e* 15 54 27.8
CLNS *e*PPP 15 56 01.5
CLNS *e*S S 16 00 46.5 -1.9
CLNS *e* 16 01 53.1
CLNS pmax pmax
comp=N,5.0nm,0.7s
CLNS pmax pmax
comp=Z,17nm,0.9s,mb5.1
CLNS pmax pmax
comp=E,4.0nm,0.9s
CLNS pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
CLNS pmax pmax
comp=N,6.0nm,1.1s
CLNS pmax pmax
comp=E,4.0nm,1.1s
CLNS smax
comp=E,224nm,12.9s
CLNS smax
comp=N,243nm,9.4s
CLNS MLR MLR
comp=N,631nm,19.0s
CLNS MLR MLR
comp=Z,617nm,18.0s
CLNS MLR MLR
comp=E,199nm,18.0s
CIT Chita 65.71 335 *e*P **P 15 52 07.7 +0.2**
ULN Ulaanbaatar 65.88 329 *e*P **P 15 52 07.8 -0.9**
ULN pmax pmax
comp=Z,27nm,0.9s,mb5.3
ULN MLR MLR
comp=Z,1μm,21.0s
ULN Ulaanbaatar 65.88 329 *e*P **P 15 52 07.8 -0.9**
comp=Z,28nm,0.9s,mb5.3
ULN LR LR
comp=Z,1μm,21.0s
ULN Ulaanbaatar 65.88 329 ⇑P **P 15 52 08.8 +0.1**
SNR=17
ULN ⇑P 15 52 08.8
SNR=17
ULN Ulaanbaatar 65.88 329 P **P 15 52 10.1 +1.4**
comp=Z,640nmcomp=Z,34nm,1.1s,mb5.3
SONM Songino Array 66.20 328 P **P 15 52 10.0 -0.7**
comp=Z,18nm,0.7s,mb5.2,baz=146,slow=5.3,SNR=74
SONM PKKP 16 12 23.9
comp=Z,0.4nm,0.9s,baz=152,slow=6.7,SNR=3.8
SONM LR LR 16 19 37.0
comp=Z,2μm,20.6s,baz=128,slow=35
SONM PKP2bc 16 20 44.5
comp=Z,1.3nm,0.9s,baz=121,slow=0.9,SNR=3.6
SONM Songino Array 66.20 328 P **P 15 52 10.0 -0.7**
SONM PKKP 16 12 23.9
SONM LR LR 16 19 37.0
SONM ⇑*e* 16 20 44.5
CASY Casey 67.23 197 *e*P **P 15 52 15.9 -1.1**
CASY Casey 67.23 197 *e*P **P 15 52 15.6 -1.4**
comp=Z,90nm,1.4s,mb5.6
CASY *e*pP pP 15 52 30.1 -3.9
CASY LR LR
comp=Z,3μm,20.0s
TAOE Nuku Hiva Isla 67.60 97 *e*S S 16 01 10.2 -2.8
comp=Z,971nm,27.6s
TAOE *e*LQ 16 09 55.2
comp=Z,738nm,28.9s
TAOE *e*LR LR 16 12 45.0
comp=Z,1μm,32.4s
TAOE Nuku Hiva Isla 67.60 97 *e*LR LR 15 52 20.6
comp=Z,476nm,25.7s
LSA Lhasa 67.67 305 *e*P **P 15 52 20.5 0.0**
YAK Yakutsk 69.26 349 *e*P **P 15 52 28.5 -1.2**
YAK *e**PP pP 15 52 36.9 -10
YAK *e* pP 15 52 47.8 +1.1
YAK *e* 15 55 06.8
YAK *e*S S 16 01 30.9 -0.1
YAK *e* 16 02 16.3
YAK *e*SS SS 16 05 59.0 +0.1
YAK pmax pmax
comp=Z,21nm,1.1s,mb5.0
YAK pmax pmax
comp=E,1.0nm,1.0s
YAK pmax pmax
comp=N,4.0nm,1.3s
YAK pmax pmax
comp=Z,91nm,3.5s
YAK pmax pmax
comp=N,64nm,3.3s
YAK pmax pmax
comp=E,41nm,2.5s
YAK smax
comp=N,42nm,2.5s
YAK smax
comp=E,33nm,3.0s
YAK MLR MLR
comp=Z,547nm,20.0s
YAK MLR MLR
comp=N,379nm,17.0s
YAK MLR MLR
comp=E,108nm,18.0s
YAK Yakutsk 69.26 349 *e*P **P 15 52 31.3 +1.6**
comp=E,18nm,0.6s,mb5.2
YAK LR LR
comp=Z,745nm,22.0s
ZAK Zakamensk 69.38 329 *e*P **P 15 52 29.4 -1.3**
ZAK pmax pmax
comp=Z,28nm,0.9s,mb5.2
TAPN Taplejung 69.78 302 *e*P **P 15 52 32.1 -1.5**
comp=Z,150nm,1.1s,mb5.8
ODAN Odare 69.90 301 *e*P **P 15 52 32.1 -2.3**
comp=Z,153nm,0.8s,mb6.0
TLY Talaya 70.00 330 P **P 15 52 35.9 +1.5**
comp=Z,95nm,0.8s,mb5.8,SNR=5.1
TLY Talaya 70.00 330 *c i*P **P 15 52 33.7 -0.7**
TLY *e* 15 52 55.7
TLY *e*S S 16 01 41.2 +1.2
TLY *e* 16 02 00.1
TLY *e*SS SS 16 06 04.8 -5.8
TLY pmax pmax
comp=Z,22nm,1.1s,mb5.0
TLY Talaya 70.00 330 *e*P **P 15 52 34.8 +0.3**
comp=Z,14nm,0.8s,mb5.0
TLY LR LR
comp=Z,879nm,20.0s
TLY Talaya 70.00 330 P **P 15 52 35.6 +1.2**
SNR=9.5
TLY P 15 52 35.6
SNR=9.5
IRK Irkutsk 70.04 331 *e*P **P 15 52 33.0 -1.7**
IRK *e* 15 52 56.1
IRK pmax pmax
comp=Z,50nm,2.5s,mb5.0
RAMN Ramite 70.60 301 *e*P **P 15 52 36.5 -2.2**
JIRN Jiri 71.16 301 *e*P **P 15 52 40.8 -1.3**
comp=Z,69nm,0.7s,mb5.7
VIS Vishakhapatnam 71.26 291 *e*PKP **P 15 52 41.6 -1.2**
VIS AMb AMB 15 52 45.3
comp=Z,84nm,1.4s,mb5.5
MOY Mondy 71.31 329 *e*P **P 15 52 43.7 +1.3**
MOY pmax pmax
comp=Z,62nm,2.9s,mb5.0
GUN Gumba 71.49 302 *e*P **P 15 52 42.3 -1.8**
comp=Z,191nm,0.7s,mb6.1
PKI Pulchoki 71.80 301 *e*P **P 15 52 43.8 -2.1**
comp=Z,134nm,1.1s,mb5.8
PKIN Phulchoki 71.81 301 *e*P **P 15 52 44.0 -2.0**
comp=Z,131nm,1.2s,mb5.8
KKN Kakani 71.97 301 *e*P **P 15 52 44.4 -2.5**
comp=Z,106nm,0.8s,mb5.8
DMN Daman 72.06 301 *e*P **P 15 52 45.6 -1.9**
comp=Z,230nm,0.9s,mb6.1
RKT Rikitea 72.56 112 *e*S S 16 02 06.3 -4.5
comp=Z,650nm,25.5s
RKT *e*SS SS 16 06 48.8 -2.2
comp=Z,564nm,34.2s
RKT *e*LQ 16 12 11.5
comp=Z,2μm,36.0s
RKT *e*LR LR 16 15 14.2
comp=Z,3μm,29.5s,baz=272
SBA Scott Base 72.93 177 PFAKE 15 53 00.0 +8.2
SBA LR LR
comp=Z,644nm,19.0s
MIR Mirnyy 73.08 201 ⇑*i*P **P 15 52 53.8 +1.0**
MIR *i* 15 53 04.0
MIR *e* pP 15 53 07.0 -3.0
MIR pmax pmax
comp=Z,108nm,1.2s,mb5.7
BILL Bilibino 73.89 6 ⇑*e*P **P 15 52 56.9 -0.5**
BILL *e*S S 16 02 23.0 -1.1
BILL pmax pmax
comp=Z,13nm,1.2s,mb4.7
BILL Bilibino 73.89 6 *e*P **P 15 52 56.3 -1.1**
comp=Z,12nm,0.9s,mb4.8
BILL LR LR
comp=Z,1μm,21.0s
WMQ Urumqi 75.41 318 P **P 15 53 07.0 +0.3**
WMQ pP pP 15 53 20.0 -4.0
WMQ sP sP 15 53 25.0 -5.9
WMQ PP PP 15 55 58.0 +1.5
WMQ S S 16 02 42.0 0.0
WMQ ScS ScS 16 03 13.0 -1.7
WMQ SS SS 16 07 36.0 +2.4
WMQ pmax pmax
comp=Z,36nm,1.1s,mb5.2
WMQ pmax pmax
comp=Z,95nm,7.0s
WMQ LR LR
comp=N,860nm,18.0s
WMQ LR LR
comp=E,790nm,18.0s
WMQ LR LR
comp=Z,1μm,18.0s
HYB Hyderabad 75.67 289 *i* P **P 15 53 09.0 +0.2**
NGP Nagpur 75.91 293 *e*PKP **P 15 53 09.0 -1.1**
NGP AMb AMB 15 53 09.9
comp=Z,35nm,1.2s,mb5.2
KDAK Kodiak Island 77.09 27 *i* P **P 15 53 24.0 +8.0**
KDAK Kodiak Island 77.09 27 PFAKE 15 53 30.0 +14
KDAK LR LR
comp=Z,1μm,22.0s
JOSI Joshimath 77.51 303 *e*PKP **P 15 53 19.1 +0.1**
AKL Akola 77.69 292 *e*PKP **P 15 53 19.9 -0.3**
AKL AMb AMB 15 53 22.0
comp=Z,98nm,0.9s,mb5.7
SVW2 Sparrevohn 77.69 23 *e*P **P 15 53 19.9 +0.6**
BHPL Bhopal 77.80 295 *e*PKP **P 15 53 20.2 -0.5**
BHPL AMb AMB 15 53 20.9
comp=Z,33nm,0.8s,mb5.3
TIXI Tiksi 78.26 353 *e*P **P 15 53 21.8 -0.4**
TIXI *e*S S 16 03 08.4 -3.6
TIXI *e* 16 03 29.4
TIXI *e*SS SS 16 08 10.6 -5.0
TIXI pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
TIXI Tiksi 78.26 353 PFAKE 15 53 30.0 +7.8
TIXI LR LR
comp=Z,897nm,21.0s
TTA Tatalina 78.62 22 *e*P **P 15 53 23.8 -0.5**
TTA pmax pmax
comp=Z,15nm,0.6s,mb5.1
TTA Tatalina 78.62 22 *e*P **P 15 53 23.8 -0.6**
comp=Z,14nm,0.6s,mb5.1
KLP Kalpa 78.83 303 *e*PKP **P 15 53 26.1 -0.2**
BISR Bishrakh 78.87 300 *e*PKP **P 15 53 25.6 -0.9**
NDI New Delhi 79.08 300 *e*PKP **P 15 53 25.0 -2.7**
SONA Sohna 79.11 300 *e*PKP **P 15 53 26.9 -0.9**
SONA AMb AMB 15 53 28.6
comp=Z,53nm,0.8s,mb5.5
KKR Kurukshetra 79.69 302 *e*PKP **P 15 53 30.6 -0.3**
SEW Seward 79.69 26 *e*P **P 15 53 29.4 -0.9**
comp=Z,20nm,0.7s,mb5.2
MK31 Makanchi Array 80.02 319 *e*P **P 15 53 30.2 -2.2**
MKAR Makanchi Array 80.02 319 P **P 15 53 30.6 -1.8**
comp=Z,17nm,0.8s,mb5.0,baz=90,slow=6.1,SNR=58
MKAR PKKPbc PKKPbc 16 12 17.3 -1.6
comp=Z,0.9nm,0.8s,baz=2.5,slow=2.8,SNR=8.3
MKAR PKPPKP 16 20 21.9
comp=Z,1.1nm,1.0s,baz=352,slow=2.5,SNR=6.6
MKAR LR LR 16 27 27.1
comp=Z,876nm,20.6s,baz=95,slow=34
RC01 Rabbit Creek A 80.07 25 *e*P **P 15 53 32.1 -0.1**
comp=Z,18nm,0.5s,mb5.3
KHET Khetri 80.17 300 *e*PKP **P 15 53 33.2 -0.4**
KHET AMb AMB 15 53 34.1
comp=Z,63nm,1.0s,mb5.5
CHUM Lake Minchumin 80.53 22 *e*P **P 15 53 35.0 +0.3**
comp=Z,24nm,0.6s,mb5.3
PMR Palmer 80.57 25 *e*P **P 15 53 34.6 -0.4**
PMR pmax pmax
comp=Z,13nm,0.6s,mb5.0
PMR Palmer 80.57 25 *e*P **P 15 53 34.6 -0.4**
comp=Z,13nm,0.6s,mb5.0
AJM Ajmer 80.89 298 *e*PKP **P 15 53 35.7 -1.8**
ZAA0 Zalesovo Array 80.99 327 *e*P **P 15 53 35.0 -2.4**
ZALV Zalesovo Beam 80.99 327 P **P 15 53 34.4 -3.0**
comp=Z,19nm,0.7s,mb5.2,baz=107,slow=5.1,SNR=43
ZALV PKKPbc PKKPbc 16 12 14.5 -2.6
comp=Z,1.2nm,0.6s,baz=302,slow=3.5,SNR=7.4
ZALV PKPPKP 16 20 18.6
comp=Z,0.4nm,0.3s,baz=309,slow=3.1,SNR=4.7
ZALV LR LR 16 28 50.3
comp=Z,863nm,19.6s,baz=111,slow=35
ZALV Zalesovo Beam 80.99 327 P **P 15 53 34.4 -3.0**
ZALV 16 12 14.5
ZALV pmax pmax
comp=Z,19nm,0.7s,mb5.1
ZALV MLR MLR
comp=Z,863nm,19.6s
TRF Thorofare Moun 81.06 23 *e*P **P 15 53 36.9 -0.7**
comp=Z,11nm,0.6s,mb5.0
THN Thein Dam 81.13 304 *e*x **P 15 53 35.8 -2.8**
BPAW Bear Paw Mtn. 81.14 22 *e*P **P 15 53 35.9 -2.1**
comp=Z,7.3nm,0.7s,mb4.7
MCK McKinley 81.73 23 *e*P **P 15 53 40.3 -0.8**
MCK pmax pmax
comp=Z,30nm,0.7s,mb5.3
MCK McKinley 81.73 23 *e*P **P 15 53 40.3 -0.7**
comp=Z,30nm,0.7s,mb5.3
DIV Divide 81.78 26 *e*P **P 15 53 41.9 +0.5**
comp=Z,13nm,0.6s,mb5.0
NVS Novosibirsk 82.18 327 *e*P **P 15 53 42.3 -1.3**
NVS *e*S S 16 03 44.1 -10
NVS pmax pmax
comp=N,16nm,1.1s
NVS pmax pmax
comp=E,28nm,1.1s
NVS pmax pmax
comp=Z,52nm,1.1s,mb5.4
NVS smax
comp=N,9.0nm,1.5s
NVS smax
comp=E,90nm,3.0s
BMRM Bremner River 82.21 26 *e*P **P 15 53 44.0 +0.3**
comp=E,48nm,1.3s,mb5.3
KSH Kashi 82.47 311 ⇑*i*P **P 15 53 46.5 +1.0**
KSH pP pP 15 54 00.0 -3.0
KSH sP sP 15 54 05.0 -4.9
KSH PP PP 15 56 58.0 +2.5
KSH S S 16 03 56.0 -1.4
KSH SKS 16 03 59.5
KSH pmax pmax
comp=Z,32nm,1.0s,mb5.2
KSH pmax pmax
comp=Z,360nm,5.2s
KSH LR LR
comp=N,90nm,6.7s
KSH LR LR
comp=E,140nm,6.1s
KSH LR LR
comp=Z,180nm,6.5s
COLA College 82.70 22 *e*P **P 15 53 45.7 -0.5**
COLA pmax pmax
comp=Z,27nm,0.7s,mb5.4
COLA MLR MLR
comp=Z,802nm,19.0s
COLA College 82.70 22 *e*P **P 15 53 45.7 -0.5**

comp=Z,27nm,0.7s,mb5.4
COLA LR LR
comp=Z,802nm,19.0s
PAX Paxson 82.74 24 *e*P **P** **15 53 46.0 -0.4**
PAX pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
PAX Paxson 82.74 24 *e*P **P** **15 53 46.0 -0.4**
comp=Z,8.7nm,0.9s,mb4.8
COLD Coldfoot 83.08 19 *e*P **P** **15 53 48.5 +0.5**
comp=Z,9.9nm,0.7s,mb5.0
NIL Nilore 83.40 305 PFAKE 15 54 00.0 +10
NIL LR LR
comp=Z,89nm,20.0s
MENT Mentasta 83.44 25 *e*P **P** **15 53 50.0 0.0**
KURK Kurchatov 83.52 322 P **P** **15 53 48.9 -1.8**
comp=Z,208nm,1.1s,mb6.2,SNR=12
KURK Kurchatov 83.52 322 P **P** **15 53 48.5 -2.2**
comp=Z,16nm,0.9s,mb5.2,baz=112,slow=4.3,SNR=53
KURK PKPPKP 16 20 16.9
comp=Z,1.0nm,0.9s,baz=268,slow=2.3,SNR=4.7
KURK LR LR 16 29 53.1
comp=Z,712nm,21.6s,baz=60,slow=35
KURK Kurchatov 83.52 322 *ce*P **P** **15 53 49.2 -1.5**
KURK pmax pmax
comp=Z,52nm,1.2s,mb5.5
KURK Kurchatov 83.52 322 *e*P **P** **15 53 48.3 -2.4**
comp=Z,36nm,1.0s,mb5.5
KURK LR LR
comp=Z,1μm,22.0s
KURK Kurchatov 83.52 322 P **P** **15 53 49.3 -1.4**
SNR=21
KURK P 15 53 49.3
SNR=21
TKM2 Tokmak 2 83.53 314 P **P** **15 53 49.9 -1.0**
SNR=29
TKM2 Tokmak 2 83.53 314 *e*P **P** **15 53 49.6 -1.3**
TKM2 pmax pmax
comp=Z,58nm,0.6s,mb5.9
TKM2 MLR MLR
comp=Z,670nm,22.0s
TKM2 Tokmak 2 83.53 314 *e*P **P** **15 53 49.6 -1.3**
comp=Z,58nm,0.6s,mb5.9
TKM2 LR LR
comp=Z,670nm,22.0s
KBK Karagaybulak 83.93 314 P **P** **15 53 54.2 +1.2**
SNR=18
PNL Peninsula 84.08 28 *e*P **P** **15 53 52.6 -0.7**
comp=Z,26nm,0.7s,mb5.5
CHMS Chumysh 84.15 314 P **P** **15 53 55.0 +0.9**
SNR=28
UCH Uchtor 84.15 313 P **P** **15 53 54.5 +0.3**
SNR=47
UCH Uchtor 84.15 313 PFAKE 15 54 10.0 +16
UCH LR LR
comp=Z,976nm,22.0s
FRU Bishkek 84.21 314 *e*P **P** **15 53 53.5 -0.9**
FRU pmax pmax
comp=Z,120nm,1.8s,mb5.7
AAK Ala-Archa 84.25 314 P **P** **15 53 55.2 +0.6**
comp=Z,239nm,1.0s,mb6.3,SNR=12
AAK Ala-Archa 84.25 314 P **P** **15 53 56.0 +1.3**
SNR=25
AAK Ala-Archa 84.25 314 LR LR 16 31 29.6
comp=Z,1μm,21.4s,baz=84,slow=36
USP Ospenovka 84.39 314 P **P** **15 53 54.2 -1.1**
SNR=44
MAW Mawson 84.71 203 *e*P **P** **15 53 55.3 -1.1**
comp=Z,36nm,1.1s,mb5.4
MAW *e*S S 16 04 14.4 -4.4
MAW Mawson 84.71 203 P **P** **15 53 54.4 -2.0**
comp=Z,34nm,0.8s,mb5.5,baz=94,slow=6.2,SNR=44
MAW PKKPbc PKKPbc 16 12 05.7 -2.8
comp=Z,2.6nm,0.9s,baz=2.5,slow=0.5,SNR=11
MAW LR LR 16 29 11.7
comp=Z,1μm,20.8s,baz=87,slow=34
MAW Mawson 84.71 203 *e*P **P** **15 53 55.2 -1.2**
MAW pmax pmax
comp=Z,12nm,1.0s
MAW MLR MLR
comp=Z,2μm,21.0s
MAW Mawson 84.71 203 *e*P **P** **15 53 55.2 -1.2**
comp=Z,12nm,1.0s,mb5.0
MAW LR LR
comp=Z,2μm,21.0s
AML Almayashu 84.73 313 P **P** **15 53 56.9 -0.1**
SNR=149
AML Almayashu 84.73 313 *e*P **P** **15 53 56.5 -0.5**
comp=Z,3.0nm,1.0s,mb4.4
AML LR LR
comp=Z,851nm,21.0s
EKS2 Erkin-Say 84.78 314 P **P** **15 53 56.4 -0.8**
SNR=49
EKS2 Erkin-Say 84.78 314 *e*P **P** **15 53 56.2 -1.1**
comp=Z,65nm,1.0s,mb5.7
EKS2 LR LR
comp=Z,1μm,21.0s
BHJ Bhuj 84.85 294 *e*PKP **P** **15 53 57.7 -0.3**
BHJ AMb AMB 15 53 60.0
comp=Z,63nm,1.0s,mb5.7
EGAK Eagle 85.23 23 *e*P **P** **15 53 58.9 -0.1**
comp=Z,24nm,0.9s,mb5.3
EGAK LR LR
comp=Z,1μm,22.0s
KBL Kabul 86.99 305 *e*P **P** **15 54 06.8 -1.6**
KBL pmax pmax
comp=Z,21nm,1.1s,mb5.3
KBL Kabul 86.99 305 *e*P **P** **15 54 06.8 -1.6**
comp=Z,21nm,1.1s,mb5.3
BVAR Borovoye Array 89.02 323 P **P** **15 54 14.6 -3.0**
comp=Z,30nm,0.8s,mb5.7,baz=104,slow=6.3,SNR=45
BRVK Borovoye 89.09 323 P **P** **15 54 17.9 0.0**
comp=Z,158nm,0.9s,mb6.3,SNR=18
BRVK Borovoye 89.09 323 *ce*P **P** **15 54 15.9 -2.0**
BRVK pmax pmax
comp=Z,24nm,0.8s,mb5.6
BRVK Borovoye 89.09 323 *e*P **P** **15 54 15.3 -2.6**
comp=Z,23nm,0.8s,mb5.5
BRVK LR LR
comp=Z,849nm,19.0s
BRVK Borovoye 89.09 323 ⇓P **P** **15 54 16.5 -1.4**
SNR=12
BRVK ⇓P 15 54 16.5
SNR=12
INK Inuvik 89.30 21 *e*P **P** **15 54 17.5 -1.1**
INK pmax pmax
comp=Z,8.0nm,0.9s
INK Inuvik 89.30 21 *e*P **P** **15 54 17.5 -1.1**
comp=Z,8.3nm,0.9s,mb5.1
HOPS Hopland 89.56 51 PFAKE 15 54 30.0 +10
HOPS LR LR
comp=Z,2μm,22.0s
MCCM Marconi Confer 89.60 52 PFAKE 15 54 30.0 +9.3
MCCM LR LR
comp=Z,2μm,22.0s
RNO Roman Nose 89.69 46 P **P** **15 54 22.6 +1.6**
OBC Olympics--Boni 90.01 42 P **P** **15 54 23.6 +1.3**
NLWA Neilton Lookou 90.06 43 ⇑P **P** **15 54 22.6 0.0**
baz=90,SNR=7.9
NLWA Neilton Lookou 90.06 43 *e*P **P** **15 54 22.4 -0.2**
comp=Z,31nm,1.1s,mb5.5
NLWA *e*pP pP 15 54 36.2 -4.1
NLWA LR LR
comp=Z,1μm,21.0s
F03A Seaside 90.08 44 ⇑P **P** **15 54 23.2 +0.5**
baz=90
COR Corvallis 90.09 45 PFAKE 15 54 30.0 +7.2
COR LR LR
comp=Z,1μm,21.0s
HUMO Hull Mountain 90.09 47 *e*P **P** **15 54 22.8 -0.1**
comp=Z,52nm,1.0s,mb5.8
HUMO LR LR
comp=Z,1μm,20.0s
WDC Whiskeytown Da 90.16 49 *e*P **P** **15 54 23.8 +0.6**
WDC pmax pmax
comp=Z,55nm,1.7s,mb5.6
WDC MLR MLR
comp=Z,1μm,22.0s
WDC Whiskeytown Da 90.16 49 *e*P **P** **15 54 23.8 +0.6**
comp=Z,55nm,1.7s,mb5.6
WDC LR LR
comp=Z,1μm,22.0s
YBH Yreka Blue Hor 90.17 48 P **P** **15 54 24.2 +1.0**
comp=Z,21nm,1.0s,mb5.4,baz=247,slow=1.8,SNR=19
YBH Yreka Blue Hor 90.17 48 *e*P **P** **15 54 24.4 +1.2**
YBH pmax pmax
comp=Z,56nm,1.4s
YBH MLR MLR
comp=Z,1μm,21.0s
YBH Yreka Blue Hor 90.17 48 *e*P **P** **15 54 24.4 +1.1**
comp=Z,56nm,1.4s,mb5.7
YBH LR LR
comp=Z,1μm,21.0s
PGC Sidney 90.51 41 *e*P **P** **15 54 25.1 +0.5**
comp=Z,14nm,1.1s
BUOR Burton Butte 90.58 48 P **P** **15 54 26.3 +1.2**
SAO San Andreas Ge 90.58 53 PFAKE 15 54 40.0 +15
SAO LR LR
comp=Z,2μm,21.0s
G04A Mulino 90.75 45 ⇑P **P** **15 54 25.8 -0.1**
baz=91
GNW Green Mountain 90.79 42 *e*P **P** **15 54 26.8 +0.8**
comp=Z,13nm,1.0s,mb5.2
F04A Amboy 90.87 44 ⇓P **P** **15 54 26.2 -0.2**
baz=91
H04A Detroit Lake 90.89 45 ⇑P **P** **15 54 26.1 -0.5**
baz=91,SNR=11
MCW Mount Constitu 90.92 41 P **P** **15 54 27.2 +0.6**
BKCOR Black Crater 91.20 46 P **P** **15 54 29.1 +1.1**
D05A Enumclaw 91.31 43 ⇑P **P** **15 54 28.5 +0.1**
baz=91
LON Longmire 91.38 43 *e*P **P** **15 54 29.0 +0.2**
LON pmax pmax
comp=Z,5.0nm,0.7s,mb5.0
LON Longmire 91.38 43 *e*P **P** **15 54 29.0 +0.2**
comp=Z,4.9nm,0.7s,mb5.0
A05A Maple Falls 91.44 41 ⇓P **P** **15 54 28.7 -0.3**
baz=92
JCW Jim Creek 91.46 42 *e*P **P** **15 54 29.9 +0.9**
comp=Z,32nm,1.2s,mb5.5
VFP Flag Point 91.47 45 P **P** **15 54 30.0 +0.8**
CMB Columbia Colle 91.55 52 *e*P **P** **15 54 30.6 +0.8**
CMB pmax pmax
comp=Z,25nm,1.4s,mb5.3
CMB MLR MLR
comp=Z,2μm,21.0s
CMB Columbia Colle 91.55 52 *e*P **P** **15 54 30.6 +0.8**
comp=Z,25nm,1.4s,mb5.4
CMB LR LR
comp=Z,2μm,21.0s
SMMC Simmler 91.60 55 ⇑P **P** **15 54 29.6 -0.4**
baz=92
K05A Summer Lake 91.62 47 ⇓P **P** **15 54 30.3 +0.3**
baz=92,SNR=26
GMO Grizzlie Mount 91.74 46 P **P** **15 54 31.4 +1.0**
BEKR Beckworth 91.74 50 ⇓P **P** **15 54 30.3 -0.3**
baz=92,SNR=10
SBC Santa Barbara 91.75 56 ⇓P **P** **15 54 30.9 +0.1**
baz=92
RPW Rockport 91.76 42 *e*P **P** **15 54 30.8 +0.3**
comp=Z,3.1nm,0.8s,mb4.7
BSC Santa Cruz Isl 91.78 56 ⇑P **P** **15 54 31.5 +0.6**
baz=92
B06A Marblemount 91.79 42 ⇑P **P** **15 54 30.4 -0.2**
baz=92
SNCC San Nicolas Is 91.81 57 ⇓P **P** **15 54 31.5 +0.5**
baz=92
MOD Modoc 91.97 48 P **P** **15 54 30.8 -0.8**
comp=Z,55nm,1.1s,mb5.8
MOD LR LR
comp=Z,1μm,22.0s
G06A Carlson Farm, 92.04 45 ⇑P **P** **15 54 31.5 -0.4**
baz=92
G06A ⇑S S 16 05 24.4 -4.6
baz=92
WRW Wenatchee Ridg 92.12 42 P **P** **15 54 32.7 +0.5**
WCN Washoe City 92.15 51 ⇓P **P** **15 54 32.9 +0.4**
baz=92,SNR=5.6
TBM Table Mountain 92.25 43 P **P** **15 54 33.5 +0.7**
BLG Laguna Peak 92.26 56 ⇓P **P** **15 54 33.1 -0.1**
baz=92
RCTC Rector, Farmer 92.30 54 ⇑P **P** **15 54 33.1 -0.2**
baz=92
ETW Entiat 92.47 43 *e*P **P** **15 54 34.2 +0.5**
comp=Z,18nm,0.8s,mb5.5
OSI Osito Adit 92.58 56 ⇓P **P** **15 54 34.9 +0.2**
baz=93
F07A Phinny Hill Vi 92.60 44 ⇑P **P** **15 54 34.2 -0.2**
baz=93
F07A ⇑S S 16 05 28.7 -5.2
baz=93
E07A Sunnyside 92.70 44 ⇓P **P** **15 54 34.7 -0.2**
baz=93
E07A ⇑S S 16 05 28.8 -6.1
baz=93
MLAC Mammoth Lakes 92.73 53 ⇓P **P** **15 54 35.2 0.0**
baz=93
CIS Catalina Islan 92.75 57 ⇑P **P** **15 54 35.5 +0.1**
baz=93
SYO Syowa Base 92.85 200 ⇑*e*P **P** **15 54 32.4 -2.7**
SYO Syowa Base 92.85 200 ⇑/P **P** **15 54 34.2 -0.9**
FMP Fort Macarthur 92.87 57 ⇓P **P** **15 54 35.4 -0.6**
baz=93
ISA Isabella 92.87 55 ⇑P **P** **15 54 35.6 -0.3**
baz=93,SNR=8.7
ISA Isabella 92.87 55 *e*P **P** **15 54 36.4 +0.5**
ISA *e**PP pP 15 54 53.6 0.0
ISA pmax pmax
comp=Z,11nm,1.1s,mb5.2
ISA Isabella 92.87 55 *e*P **P** **15 54 36.4 +0.5**
comp=Z,11nm,1.1s,mb5.2
ISA *e*pP pP 15 54 53.6 0.0
RSW Rattlesnake Hi 92.87 44 P **P** **15 54 35.8 +0.2**
comp=Z,12nm,0.6s,mb5.5
DECC Green Verdugo 92.88 56 ⇓P **P** **15 54 36.1 +0.1**
baz=93
HAWA Hanford 92.91 44 *e*P **P** **15 54 36.6 +0.8**
comp=Z,17nm,0.9s,mb5.5
HAWA LR LR
comp=Z,701nm,21.0s
PASC Pasadena Art C 92.99 56 *e*P **P** **15 54 37.2 +0.6**
MWC Mount Wilson 93.10 56 *e*P **P** **15 54 38.2 +1.2**
MWC pmax pmax
comp=Z,55nm,1.1s,mb5.9
MWC Mount Wilson 93.10 56 *e*P **P** **15 54 38.2 +1.2**
comp=Z,55nm,1.1s,mb5.9
TIN Tinemaha 93.17 53 ⇓P **P** **15 54 37.7 +0.4**
baz=93
B08A Colville Reser 93.20 42 ⇑P **P** **15 54 36.5 -0.7**
baz=93,SNR=6.6
EDW2 Edwards Air Fo 93.21 55 ⇑P **P** **15 54 38.3 +0.8**
baz=93,SNR=6.1
NVAR Mina Array Bea 93.22 52 P **P** **15 54 37.2 -0.3**
comp=Z,16nm,0.8s,mb5.5,baz=250,slow=5.4,SNR=80
NVAR PP PP 15 58 25.5 +3.7
comp=Z,0.5nm,0.6s,baz=252,slow=7.6,SNR=3.7
NVAR Mina Array Bea 93.22 52 P **P** **15 54 37.2 -0.3**
NVAR PP PP 15 58 25.5 +3.7
G08A Pilot Rock 93.23 45 ⇑P **P** **15 54 37.1 -0.3**
baz=93,SNR=18
E08A Dider Farm, El 93.25 44 ⇓P **P** **15 54 37.2 -0.2**
baz=93,SNR=6.8
CWC Cottonwood Cre 93.25 54 ⇑P **P** **15 54 38.0 +0.3**
baz=93,SNR=9.6
WVOR Wild Horse Val 93.25 48 *e*P **P** **15 54 37.2 -0.3**
WVOR pmax pmax
comp=Z,46nm,1.3s,mb5.8
WVOR MLR MLR
comp=Z,971nm,19.0s
WVOR Wild Horse Val 93.25 48 *e*P **P** **15 54 37.1 -0.4**
comp=Z,46nm,1.3s,mb5.8
WVOR LR LR
comp=Z,971nm,19.0s
H08A Prairie City 93.38 46 ⇑P **P** **15 54 37.7 -0.3**
baz=93,SNR=9.2
D08A Wollman Farm, 93.38 43 ⇑P **P** **15 54 37.7 -0.3**
baz=93,SNR=6.4
BFSC Mount Baldy Ra 93.44 56 ⇓P **P** **15 54 38.5 -0.1**
baz=94
J08A Circle Bar Ran 93.44 47 ⇓P **P** **15 54 38.1 -0.2**
baz=94,SNR=17
LRMC Laurel Mountai 93.50 55 ⇑P **P** **15 54 39.1 +0.3**
baz=94,SNR=12
OD2 Odessa Site #2 93.55 43 *e*P **P** **15 54 38.6 -0.1**
comp=Z,50nm,1.1s,mb5.9
DAC Darwin (Calif) 93.63 54 PFAKE 15 54 50.0 +11
DAC LR LR
comp=Z,2μm,22.0s
MPMC Manual Prospec 93.70 54 ⇑P **P** **15 54 40.6 +0.9**
baz=94,SNR=19
MURC Murrieta 93.77 57 ⇑P **P** **15 54 40.1 -0.1**
baz=94
109C Camp Elliot, M 93.80 57 ⇑P **P** **15 54 40.4 +0.1**
baz=94
GRAC Grapevine Rang 93.86 53 ⇓P **P** **15 54 41.1 +0.6**
baz=94,SNR=5.3
E09A Wood Farm, Sta 93.88 44 ⇑P **P** **15 54 39.9 -0.4**
baz=94,SNR=6.2
I09A Lost Marbles R 94.01 46 ⇓P **P** **15 54 40.7 -0.3**
baz=94,SNR=6.1
RRX Edison Barstow 94.02 55 ⇑P **P** **15 54 41.1 -0.2**
baz=94
TPH Tonopah 94.04 52 PFAKE 15 54 50.0 +8.7
TPH LR LR
comp=Z,1μm,22.0s
BBRC Big Bear Solar 94.05 56 ⇑P **P** **15 54 40.8 -0.6**
baz=94
G09A Cove 94.06 45 ⇑P **P** **15 54 40.8 -0.4**
baz=94,SNR=20
H09A Durkee 94.10 46 ⇑P **P** **15 54 41.2 -0.2**
baz=94
BMN Battle Mountai 94.18 50 *e*P **P** **15 54 42.8 +0.9**
BMN pmax pmax
comp=Z,3.0nm,0.7s,mb4.8
BMN MLR MLR
comp=Z,1μm,20.0s
BMN Battle Mountai 94.18 50 *e*P **P** **15 54 42.8 +0.9**
comp=Z,3.5nm,0.7s,mb4.9
BMN LR LR
comp=Z,1μm,20.0s
GSC Goldstone 94.20 55 ⇑P **P** **15 54 41.9 -0.2**
baz=94
GSC Goldstone 94.20 55 *e*P **P** **15 54 43.3 +1.2**
GSC pmax pmax
comp=Z,13nm,0.8s,mb5.4
GSC Goldstone 94.20 55 *e*P **P** **15 54 43.2 +1.2**
comp=Z,13nm,0.8s,mb5.4
FURC Furnace Creek, 94.23 54 ⇑P **P** **15 54 42.7 +0.6**
baz=94,SNR=11
BMO Blue Mountains 94.37 46 *e*P **P** **15 54 41.5 -1.1**
BMO pmax pmax
comp=Z,23nm,1.2s,mb5.5
BMO Blue Mountains 94.37 46 *e*P **P** **15 54 41.5 -1.1**
comp=Z,22nm,1.2s,mb5.5
MONP Monument Peak 94.38 58 ⇓P **P** **15 54 43.3 +0.3**
baz=94,SNR=8.0
PFO Pinyon Flat Ob 94.39 57 ⇓P **P** **15 54 42.9 -0.1**
baz=94
PFO Pinyon Flat Ob 94.39 57 PFAKE 15 54 50.0 +7.0
PFO LR LR
comp=Z,1μm,22.0s
F10A Beach Ranch, E 94.48 44 ⇑P **P** **15 54 42.1 -1.0**
baz=94,SNR=21
G10A Bishop Farm, J 94.52 45 ⇓P **P** **15 54 42.7 -0.6**
baz=95,SNR=8.2
S10A Tonopah Range, 94.53 52 ⇓P **P** **15 54 43.6 +0.1**
baz=95,SNR=59
HEC Hector,Ludlow 94.57 56 ⇑P **P** **15 54 44.1 +0.3**
baz=95,SNR=9.0
K10A MacKenzie Ranc 94.58 48 ⇓P **P** **15 54 43.5 -0.1**
baz=95,SNR=16
DVTC Desert V Tower 94.63 58 ⇑P **P** **15 54 44.3 +0.2**
baz=95
U10A Ash Meadows, A 94.66 54 ⇑P **P** **15 54 44.5 +0.4**
baz=95,SNR=8.0
SHOC Shoshone 94.67 55 ⇓P **P** **15 54 44.6 +0.4**
baz=95,SNR=14
J10A Berg Farm, Mel 94.68 47 ⇓P **P** **15 54 44.2 +0.1**
baz=95
I10A Payette 94.69 46 ⇑P **P** **15 54 44.5 +0.4**
baz=95
P10A Eureka 94.72 51 ⇓P **P** **15 54 44.5 +0.2**
baz=95
O10A Cortez Mining, 94.72 50 ⇓P **P** **15 54 44.7 +0.4**
baz=95
Q10A Clear Creek Ra 94.73 52 ⇑P **P** **15 54 44.7 +0.3**
baz=95
N10A Dunphy 94.74 50 ⇑P **P** **15 54 44.8 +0.4**
baz=95
H10A Noah's Angus R 94.75 46 ⇑P **P** **15 54 43.8 -0.6**
baz=95,SNR=22
M10A I.L. Ranch, Tu 94.76 49 ⇓P **P** **15 54 44.7 +0.3**
baz=95
R10A Warm Springs 94.78 52 ⇑P **P** **15 54 45.2 +0.6**
baz=95
BELC Belle Mtn. Jos 94.79 56 ⇑P **P** **15 54 45.4 +0.6**
baz=95,SNR=10.0
L10A Juniper Basin 94.83 48 ⇓P **P** **15 54 44.8 0.0**
baz=95,SNR=19
SWSC Sam W. Stewart 94.91 57 ⇑P **P** **15 54 45.7 +0.3**
baz=95
TUQ Turquoise Moun 94.93 55 ⇓P **P** **15 54 45.6 +0.2**
baz=95,SNR=18
GMRC Granite Mounta 95.11 56 ⇑P **P** **15 54 46.1 -0.2**
baz=95,SNR=14
G11A Walters Elk Ra 95.13 45 ⇓P **P** **15 54 44.8 -1.3**
baz=95,SNR=8.2
S11A Rachel 95.18 53 ⇓P **P** **15 54 46.0 -0.5**
baz=95
K11A Parker Ranch, 95.19 48 ⇑P **P** **15 54 46.1 -0.3**
baz=95,SNR=11
F11A Grangeville 95.23 45 ⇓P **P** **15 54 45.8 -0.7**
baz=95,SNR=6.9
BC3 Big Chuckawall 95.23 57 ⇓P **P** **15 54 47.7 +0.9**
baz=95,SNR=9.5
C11A Tepee Creek (N 95.23 43 ⇓P **P** **15 54 46.0 -0.5**
baz=95,SNR=9.1
P11A Circle Ranch, 95.26 51 ⇑P **P** **15 54 47.0 +0.2**
baz=95
H11A Donnelly 95.28 46 ⇓P **P** **15 54 46.1 -0.7**
baz=95,SNR=6.1
I11A Placerville 95.29 46 ⇑P **P** **15 54 46.1 -0.7**
baz=95,SNR=6.8
Q11A Duckwater 95.31 52 ⇓P **P** **15 54 46.8 -0.2**
baz=95,SNR=5.3
M11A Holland Ranch, 95.31 49 ⇑P **P** **15 54 47.0 0.0**
baz=95
N11A Elko Archery C 95.33 50 ⇑P **P** **15 54 47.5 +0.3**
baz=95
R11A Troy Canyon, C 95.34 52 ⇓P **P** **15 54 47.3 +0.1**
baz=95,SNR=19
O11A Cowboy Ranch, 95.36 50 ⇓P **P** **15 54 47.3 0.0**
baz=95,SNR=9.3
MFID Camas Ranch 95.37 47 ⇓P **P** **15 54 46.9 -0.3**
baz=95,SNR=11
L11A Cat Creek Ranc 95.37 48 ⇓P **P** **15 54 47.4 +0.2**
baz=95,SNR=14
U11A Corn Creek 95.42 54 ⇑P **P** **15 54 47.6 -0.1**
baz=96
IRM Iron Mountain 95.50 56 ⇓P **P** **15 54 48.8 +0.7**
baz=96,SNR=18
E12A Beaver Dam Sad 95.65 44 ⇑P **P** **15 54 47.4 -1.0**
baz=96,SNR=9.6
A12A Yaak River Ran 95.67 41 ⇑P **P** **15 54 48.8 +0.4**
baz=96
B12A Libby 95.70 42 ⇑P **P** **15 54 48.6 0.0**
baz=96
ELK Elko 95.70 50 PFAKE 15 55 00.0 +11
ELK LR LR
comp=Z,1μm,22.0s
GLA Glamis 95.72 57 ⇓P **P** **15 54 49.3 +0.2**
baz=96
C12B Naegeli Ranch, 95.75 43 ⇓P **P** **15 54 48.6 -0.3**
baz=96
W12A Cal Nev Ari 95.79 55 ⇑P **P** **15 54 48.7 -0.6**
baz=96
MSEY Mahe Island 95.80 265 PFAKE 15 55 00.0 +10
MSEY LR LR
comp=Z,575nm,20.0s
V12A Nelson 95.82 55 ⇓P **P** **15 54 49.9 +0.4**
baz=96,SNR=10
F12A Elk City 95.85 45 ⇓P **P** **15 54 48.4 -0.9**
baz=96,SNR=8.8
N12A Clover Valley, 95.86 50 ⇓P **P** **15 54 49.2 -0.4**
baz=96,SNR=17
N12A Clover Valley, 95.86 50 *e*P **P** **15 54 49.5 0.0**
comp=Z,23nm,1.0s,mb5.6
I12A Atlanta 95.88 47 ⇓P **P** **15 54 49.5 -0.1**
baz=96
J12A Stokes Ranch, 95.89 47 ⇑P **P** **15 54 49.6 -0.1**
baz=96,SNR=23
S12A Delamar Landin 95.89 53 ⇑P **P** **15 54 49.8 +0.1**
baz=96
112A Yuma 95.91 58 ⇑P **P** **15 54 50.5 +0.5**
baz=96
P12A McGill 95.92 51 ⇑P **P** **15 54 49.6 -0.2**
baz=96,SNR=11
L12A House Creek Ra 95.92 48 ⇓P **P** **15 54 49.6 -0.1**
baz=96
Q12A Willow Creek R 95.96 51 ⇓P **P** **15 54 49.8 -0.2**
baz=96,SNR=5.1
T12A Moapa 95.97 54 ⇑P **P** **15 54 50.1 0.0**
baz=96

NEE2 **Needles Airpor** 95.97 56 ⇓P P 15 54 50.3 +0.1
baz=96
M12A **Wells** 95.97 49 ⇓P P 15 54 49.8 -0.2
baz=96,SNR=7.4
Y12C **Blythe** 96.01 57 ⇓P P 15 54 50.1 -0.3
baz=96
K12A **Draper Farm, C** 96.02 48 ⇑P P 15 54 49.9 -0.3
baz=96,SNR=6.1
O12A **Currie** 96.07 50 ⇑P P 15 54 50.8 +0.4
baz=96,SNR=12
U12A **Valley of Fire** 96.10 54 ⇑P P 15 54 51.0 +0.3
baz=96
H12A **Diamond D Ranc** 96.10 46 ⇑P P 15 54 50.1 -0.4
baz=96
R12A **Pony Springs,** 96.11 52 ⇓P P 15 54 50.9 +0.2
baz=96
ARU **Arti** 96.15 326 P P 15 54 49.0 -1.5
ARU 15 58 40.8
ARU S SKSac 16 05 19.5 -1.9
ARU SP SP 16 07 25.5 +1.8
ARU PS PS 16 07 37.7 +5.7
ARU SS SS 16 12 39.3 +2.0
ARU MLR MLR
comp=Z,3μm,23.0s
ARU **Arti** 96.15 326 eP P 15 54 48.5 -2.0
comp=Z,8.5nm,0.8s,mb5.2
ARU LR LR
comp=Z,2μm,22.0s
BSMT **Bassoo Peak** 96.22 43 eP P 15 54 50.9 -0.1
comp=Z,8.1nm,1.0s,mb5.1
BSMT epP pP 15 55 06.7 -2.0
PDMCI **Parker Dam,Lak** 96.35 56 ⇑P P 15 54 51.6 -0.3
baz=96
YKA **Yellowknife Ar** 96.36 28 P P 15 54 50.1 -1.2
comp=Z,3.1nm,0.6s,mb4.9,baz=271,slow=4.8,SNR=32
YKA PKiKP PKiKP 15 59 29.1 +0.3
comp=Z,1.2nm,0.6s,baz=264,slow=1.4,SNR=11
YKA PKKPbc PKKPbc 16 11 34.5 -4.7
comp=Z,0.6nm,0.8s,baz=88,slow=2.8,SNR=6.7
C13A **Hot Springs** 96.36 43 ⇑P P 15 54 50.9 -0.7
baz=96
HLID **Hailey** 96.40 47 ⇓P P 15 54 51.7 -0.2
baz=96,SNR=13
HLID **Hailey** 96.40 47 eP P 15 54 51.3 -0.6
comp=Z,7.1nm,0.9s,mb5.1
HLID LR LR
comp=Z,918nm,19.0s
D13A **Huson** 96.43 43 ⇓P P 15 54 51.0 -1.0
baz=96
AKTK **Aktyubinsk** 96.44 320 P P 15 54 49.2 -2.7
AKTO **Aktyubinsk** 96.44 320 P P 15 54 49.2 -2.7
comp=Z,5.9nm,1.1s,mb4.9,baz=72,slow=6.4,SNR=8.7
B13A **Whitefish** 96.44 42 ⇓P P 15 54 51.8 -0.2
baz=96,SNR=12
A13A **Flathead Natio** 96.48 41 ⇑P P 15 54 52.2 +0.1
baz=96
N13A **Wendover, West** 96.49 50 ⇑P P 15 54 52.4 0.0
baz=96
N13A **Wendover, West** 96.49 50 eP P 15 54 53.4 +1.0
comp=Z,17nm,1.0s,mb5.4
F13A **Darby** 96.50 45 ⇑P P 15 54 51.4 -0.9
baz=97,SNR=16
V13A **Grand Canyon W** 96.53 55 ⇓P P 15 54 52.8 +0.2
baz=97,SNR=16
H13A **Challis** 96.53 46 ⇑P P 15 54 52.0 -0.5
baz=97,SNR=19
M13A **Montello** 96.53 49 ⇑P P 15 54 52.0 -0.6
baz=97
M13A **Montello** 96.53 49 eP P 15 54 53.5 +0.9
comp=Z,14nm,1.0s,mb5.3
G13A **Cobalt** 96.56 45 ⇓P P 15 54 52.4 -0.1
baz=97,SNR=8.4
U13A **Pakoon Wash** 96.56 54 ⇓P P 15 54 53.3 +0.5
baz=97,SNR=9.9
J13A **Cove Ranch, Pi** 96.57 47 ⇓P P 15 54 52.6 -0.1
baz=97
W13A **Hualapai Mount** 96.58 55 ⇑P P 15 54 53.6 +0.7
baz=97,SNR=13
Q13A **Wheeler Ranch,** 96.59 52 ⇓P P 15 54 53.0 +0.1
baz=97,SNR=6.0
Y13A **Salome** 96.59 57 ⇓P P 15 54 53.6 +0.6
baz=97
113A **Mohawk Valley,** 96.60 58 ⇑P P 15 54 53.6 +0.5
baz=97
P13A **Bates Ranch, G** 96.60 51 ⇓P P 15 54 53.1 +0.2
baz=97,SNR=11
R13A **O'Grain Ranch,** 96.61 52 ⇑P P 15 54 53.6 +0.6
baz=97,SNR=8.0
I13A **Wildhorse Cree** 96.62 47 ⇑P P 15 54 52.8 -0.1
baz=97,SNR=12
K13A **Stover Farm, H** 96.62 48 ⇑P P 15 54 53.2 +0.2
baz=97
T13A **Saint George** 96.62 53 ⇑P P 15 54 54.0 +0.9
baz=97,SNR=15
O13A **Hicks Ranch, I** 96.65 50 ⇑P P 15 54 53.5 +0.4
baz=97
S13A **Holt Ranch, En** 96.68 53 ⇓P P 15 54 53.8 +0.5
baz=97,SNR=16
Z13A **Yuma Proving G** 96.71 57 ⇓P P 15 54 54.5 +0.9
baz=97,SNR=8.4
L13A **Double Diamond** 96.72 48 ⇓P P 15 54 53.4 +0.1
baz=97
SWMT **Swartz Lake** 96.75 43 eP P 15 54 52.7 -0.7
MSO **Missoula** 96.78 44 PFAKE 15 55 00.0 +6.4
MSO LR LR
comp=Z,320nm,20.0s
C14A **Swan Lake** 96.92 43 ⇑P P 15 54 53.5 -0.6
baz=97
ARUT **Antelope Range** 97.02 53 eP P 15 54 55.2 +0.4
ARUT pmax pmax
comp=Z,11nm,1.1s,mb5.2
ARUT **Antelope Range** 97.02 53 eP P 15 54 55.1 +0.3
comp=Z,10nm,1.1s,mb5.2
J14A **Carey** 97.05 47 ⇓P P 15 54 54.8 0.0
baz=97
CCUT **Cedar City** 97.07 53 eP P 15 54 56.6 +1.5
comp=Z,16nm,1.1s,mb5.4
D14A **Greenough** 97.08 43 ⇓P P 15 54 54.0 -0.9
baz=97
E14A **Clinton** 97.09 44 ⇑P P 15 54 54.2 -0.8
baz=97
I14A **Mackay** 97.10 47 ⇓P P 15 54 55.0 0.0
baz=97,SNR=8.0
A14A **Double T Ranch** 97.14 41 ⇑P P 15 54 55.2 +0.1
baz=97,SNR=10
M14A **Sheep Mountain** 97.15 49 ⇓P P 15 54 55.1 -0.2
baz=97,SNR=18
H14A **Leadore** 97.17 46 ⇑P P 15 54 54.9 -0.5
baz=97
Q14A **Sevier Lake (B** 97.17 51 ⇑P P 15 54 55.4 -0.1
baz=97,SNR=11
F14A **Wisdom** 97.17 45 ⇑P P 15 54 54.8 -0.5
baz=97
U14A **Mt Trumbull** 97.19 54 ⇑P P 15 54 56.1 +0.4
baz=97,SNR=17
S14A **Cedar City** 97.23 53 ⇓P P 15 54 56.0 +0.2
baz=97
V14A **Boquillas Ranc** 97.24 55 ⇑P P 15 54 56.8 +0.9
baz=97,SNR=14
B14A **Marquette Ranc** 97.24 42 ⇑P P 15 54 55.0 -0.5
baz=97,SNR=9.1
L14A **Malta** 97.24 48 ⇑P P 15 54 55.8 0.0
baz=97,SNR=17
W14A **Seligman** 97.24 55 ⇑P P 15 54 57.0 +1.1
baz=97,SNR=7.8
CHMT **Chamberlain Mo** 97.26 44 eP P 15 54 55.7 0.0
comp=Z,3.7nm,1.2s,mb4.7
N14A **Grayback Hills** 97.27 50 ⇓P P 15 54 55.7 -0.2
baz=97,SNR=5.7
Y14A **Wickenburg** 97.28 57 ⇑P P 15 54 56.1 0.0
baz=97
T14A **Hurricane** 97.28 53 ⇑P P 15 54 56.4 +0.3
baz=97,SNR=5.7
K14A **Jones Ranch, D** 97.29 48 ⇑P P 15 54 55.8 -0.1
baz=97,SNR=5.6
Z14A **Wintersburg** 97.31 57 ⇓P P 15 54 56.4 +0.1
baz=97
P14A **Drum Mountains** 97.34 51 ⇓P P 15 54 56.3 +0.1
baz=97,SNR=12
114A **Black Gap (USA** 97.35 58 ⇓P P 15 54 56.8 +0.4
baz=97
BGU **Big Grassy Mou** 97.39 50 eP P 15 54 56.7 +0.3
comp=Z,3.8nm,0.9s,mb4.8
X14A **Yava** 97.39 56 ⇑P P 15 54 57.1 +0.5
baz=97,SNR=6.6
214A **Organ Pipe Nat** 97.39 59 ⇓P P 15 54 57.5 +0.8
baz=97
MCMT **McKenzie Canyo** 97.54 46 eP P 15 54 57.9 +0.9
comp=Z,3.2nm,1.1s,mb4.8
DUG **Dugway** 97.54 50 ⇑P P 15 54 57.1 0.0
baz=98
DUG **Dugway** 97.54 50 P P 15 54 58.0 +0.8
DUG pmax pmax
comp=Z,7.0nm,0.3s,mb5.7
DUG MLR MLR
comp=Z,802nm,21.0s
DUG **Dugway** 97.54 50 P P 15 54 58.0 +0.8
comp=Z,7.4nm,0.3s,mb5.7
DUG LR LR
comp=Z,802nm,21.0s
HVU **Hansel Valley** 97.58 49 eP P 15 54 56.5 -0.8
HVU pmax pmax
comp=Z,18nm,1.0s,mb5.6
HVU **Hansel Valley** 97.58 49 eP P 15 54 56.5 -0.8
comp=Z,18nm,1.0s,mb5.6
A15A **Johnson Ranch,** 97.59 41 ⇑P P 15 54 56.7 -0.4
baz=98,SNR=17
E15A **Deer Lodge** 97.68 44 ⇑P P 15 54 57.0 -0.6
baz=98,SNR=8.5
H15A **Lima** 97.69 46 ⇓P P 15 54 57.3 -0.4
baz=98,SNR=5.1
C15A **Salmond Ranch,** 97.69 43 ⇓P P 15 54 56.9 -0.7
baz=98,SNR=14
B15A **Bradely Ranch,** 97.71 42 ⇑P P 15 54 56.8 -0.9
baz=98
DLMT **Dillon** 97.72 45 eP P 15 54 57.8 0.0
comp=Z,6.2nm,1.1s,mb5.0
D15A **Lincoln** 97.76 43 ⇓P P 15 54 57.4 -0.6
baz=98
K15A **Arbon** 97.77 48 ⇑P P 15 54 58.1 0.0
baz=98,SNR=7.7
F15A **Butte** 97.78 45 ⇑P P 15 54 57.5 -0.6
baz=98
G15A **Dillon** 97.79 45 ⇓P P 15 54 58.3 +0.1
baz=98
I15A **Monteview** 97.80 46 ⇑P P 15 54 58.5 +0.3
baz=98
O15A **The Old Anders** 97.81 50 ⇑P P 15 54 58.3 -0.1
baz=98
M15A **Larsen Ranch,** 97.83 49 ⇓P P 15 54 58.1 -0.3
baz=98,SNR=5.7
Y15A **Casa Rosa Ranc** 97.84 57 ⇓P P 15 54 59.8 +1.2
baz=98,SNR=5.3
T15A **Red Dirt Ranch** 97.84 53 ⇓P P 15 54 58.3 -0.3
baz=98
S15A **Panguitch** 97.87 53 ⇓P P 15 54 58.5 -0.1
baz=98
L15A **Malad City** 97.88 48 ⇓P P 15 54 58.1 -0.5
baz=98,SNR=6.5
U15A **North Rim** 97.91 54 ⇑P P 15 54 59.8 +0.9
baz=98,SNR=12
W15A **Williams** 97.91 55 ⇑P P 15 54 59.2 +0.3
baz=98
X15A **Humboldt** 97.93 56 ⇑P P 15 55 00.6 +1.5
baz=98,SNR=6.4
R15A **Junction** 97.94 52 ⇓P P 15 54 58.9 -0.1
baz=98
P15A **Leamington** 97.95 51 ⇑P P 15 54 59.3 +0.3
baz=98,SNR=5.8
MVU **Marysvale** 97.99 52 PFAKE 15 55 10.0 +11
MVU LR LR
comp=Z,2μm,21.0s
V15A **Kaibab Nationa** 98.00 55 ⇓P P 15 54 58.6 -0.7
baz=98,SNR=14
C16A **Fuhringer Ranc** 98.27 43 ⇓Pdiff P 15 54 59.9 -0.3
baz=98
G16A **Moss Hill, Enn** 98.28 45 ⇓Pdiff P 15 54 59.9 -0.4
baz=98
B16A **M & M Farms, S** 98.28 42 ⇓Pdiff P 15 54 59.6 -0.7
baz=98
E16A **East Helena** 98.34 44 ⇑Pdiff P 15 55 00.2 -0.4
baz=98
BOZ **Bozeman (W)** 98.39 45 ⇑Pdiff P 15 55 01.1 +0.3
baz=98
BOZ **Bozeman (W)** 98.39 45 eP P 15 55 00.8 0.0
BOZ pmax pmax
comp=Z,5.0nm,0.8s,mb5.1
BOZ MLR MLR
comp=Z,911nm,22.0s
BOZ **Bozeman (W)** 98.39 45 eP P 15 55 00.8 -0.1
comp=Z,4.7nm,0.8s,mb5.1
BOZ LR LR
comp=Z,911nm,22.0s
F16A **Kennard Place,** 98.39 45 ⇑Pdiff P 15 55 00.7 -0.1
baz=98
D16A **Dana Ranch, Ca** 98.42 43 ⇑Pdiff P 15 55 01.3 +0.4
baz=98
P16A **Fountain Green** 98.43 51 ⇓Pdiff P 15 55 00.9 -0.2
baz=98
J16A **Bone** 98.44 47 ⇑Pdiff P 15 55 01.9 +0.8
baz=98
M16A **Huntsville** 98.44 49 ⇑Pdiff P 15 55 01.9 +0.7
baz=98
K16A **Soda Springs** 98.46 48 ⇓Pdiff P 15 55 02.0 +0.7
baz=98
S16A **Weppner Ranch,** 98.48 53 ⇓Pdiff P 15 55 02.2 +0.8
baz=98
HWUT **Hardware Ranch** 98.49 49 eP P 15 55 01.2 -0.2
comp=Z,2.6nm,0.7s,mb4.9
HWUT LR LR
comp=Z,866nm,22.0s
W16A **Flagstaff** 98.51 55 ⇑Pdiff P 15 55 02.1 +0.5
baz=99
I16A **Newdale** 98.52 47 ⇓Pdiff P 15 55 02.1 +0.7
baz=99
216A **Three Points,** 98.54 59 ⇓Pdiff P 15 55 02.8 +1.0
baz=99
T16A **Glen Canyon Da** 98.55 54 ⇓Pdiff P 15 55 02.3 +0.5
baz=99
Y16A **Circle Bar Ran** 98.55 57 ⇑Pdiff P 15 55 02.3 +0.5
baz=99
O16A **Springville** 98.55 50 ⇑Pdiff P 15 55 01.9 +0.3
baz=99
R16A **Teasdale** 98.57 52 ⇑Pdiff P 15 55 02.6 +0.8
baz=99
L16A **Fish Haven** 98.59 48 ⇑Pdiff P 15 55 02.1 +0.3
baz=99
N16A **Rees Ranch, Co** 98.59 50 ⇑Pdiff P 15 55 01.8 -0.1
baz=99
WUAZ **Wupatki** 98.65 55 ⇑Pdiff P 15 55 02.5 +0.2
baz=99
WUAZ **Wupatki** 98.65 55 eP P 15 55 04.2 +2.0
comp=Z,6.6nm,0.9s,mb5.2
WUAZ LR LR
comp=Z,1μm,22.0s
RRI2 **Red Ridge** 98.65 47 eP P 15 55 02.3 +0.3
comp=Z,14nm,0.9s,mb5.5
H16A **Russell Place,** 98.68 46 ⇑Pdiff P 15 55 02.4 +0.3
baz=99
TMUT **Trail Mountain** 98.78 51 eP P 15 55 02.6 -0.1
comp=Z,18nm,0.8s,mb5.7
Q16A **Castle Valley** 98.81 52 ⇑Pdiff P 15 55 03.1 +0.2
baz=99
AHID **Auburn Hatcher** 98.82 48 PFAKE 15 55 10.0 +7.2
AHID LR LR
comp=Z,1μm,21.0s
B17A **L&G Farms, Che** 98.89 42 ⇓Pdiff P 15 55 03.0 0.0
baz=99
E17A **Martinsdale** 98.91 44 ⇓Pdiff P 15 55 03.0 -0.2
baz=99
IMW **Indian Meadow** 98.92 47 eP P 15 55 04.1 +0.9
comp=Z,2.4nm,0.5s,mb5.0
TPAW **Teton Pass** 98.92 47 eP P 15 55 04.0 +0.7
comp=Z,5.3nm,0.9s,mb5.1
C17A **Wharram Farm,** 98.94 43 ⇓Pdiff P 15 55 02.6 -0.7
baz=99
L17A **Cokeville** 99.00 48 ⇑Pdiff P 15 55 03.5 -0.2
baz=99
D17A **Six Diamond Ra** 99.01 43 ⇑Pdiff P 15 55 03.0 -0.5
baz=99
G17A **Pierce Place,** 99.03 45 ⇓Pdiff P 15 55 03.9 +0.2
baz=99
N17A **Moffit Pass** 99.05 50 ⇑Pdiff P 15 55 03.8 -0.1
baz=99
F17A **Fitzpatrick Pl** 99.06 44 ⇑Pdiff P 15 55 03.9 +0.1
baz=99
Y17A **Roosevelt** 99.07 57 ⇓Pdiff P 15 55 04.0 -0.2
baz=99
S17A **Black Ridge (B** 99.11 53 ⇑Pdiff P 15 55 04.3 0.0
baz=99
T17A **Navajo Res., N** 99.11 54 ⇑Pdiff P 15 55 04.8 +0.5
baz=99
TUC **Tucson** 99.11 58 PFAKE 15 55 20.0 +16
TUC LR LR
comp=Z,924nm,21.0s
V17A **Tonalea, Kykot** 99.12 55 ⇓Pdiff P 15 55 05.1 +0.8
baz=99
O17A **Robinson Place** 99.13 50 ⇑Pdiff P 15 55 04.0 -0.3
baz=99
P17A **Butcher Ranch,** 99.14 51 ⇓Pdiff P 15 55 04.2 -0.1
baz=99
M17A **Scullys Gap (B** 99.17 49 ⇓Pdiff P 15 55 04.3 -0.1
baz=99
R17A **Hanksville Air** 99.17 52 ⇓Pdiff P 15 55 04.6 +0.1
baz=99
I17A **Pilgrim Ck.** 99.18 47 ⇑Pdiff P 15 55 04.3 -0.1
baz=99
W17A **Winslow** 99.19 55 ⇓Pdiff P 15 55 04.1 -0.5
baz=99
LKWY **Lake** 99.29 46 PFAKE 15 55 20.0 +15
LKWY LR LR
comp=Z,1μm,21.0s
SRU **San Rafael** 99.31 51 ⇑Pdiff P 15 55 05.3 +0.2
baz=99
SRU **San Rafael** 99.31 51 eP P 15 55 05.5 +0.4
SRU pmax pmax
comp=Z,4.0nm,0.8s,mb5.0
SRU **San Rafael** 99.31 51 eP P 15 55 05.5 +0.4
comp=Z,4.2nm,0.8s,mb5.0
A18A **Metzger Ranch,** 99.50 41 ⇓Pdiff Pdif 15 55 05.3 -0.2
baz=100
E18A **Harlowton** 99.56 44 ⇑Pdiff Pdif 15 55 06.4 +0.5
baz=100
MAIT **Maitri** 99.56 192 ePKPab Pdif 15 55 06.0 +0.1
B18A **Beardsley Farm** 99.57 42 ⇓Pdiff Pdif 15 55 05.5 -0.4
baz=100
EGMT **Eagleton** 99.60 42 ⇓Pdiff Pdif 15 55 05.5 -0.5
baz=100
EGMT **Eagleton** 99.60 42 ePdif Pdif 15 55 06.3 +0.3
comp=Z,6.8nm,1.0s
EGMT LR LR
comp=Z,688nm,20.0s
J18A **Kendall Valley** 99.60 47 ⇓Pdiff Pdif 15 55 06.1 0.0
baz=100
K18A **Toltan Ranch,** 99.61 48 ⇓Pdiff Pdif 15 55 06.0 0.0
baz=100
D18A **Linhart Farms,** 99.61 43 ⇑Pdiff Pdif 15 55 05.9 -0.1
baz=100
Q18A **Rafter H Ranch** 99.62 51 ⇓Pdiff Pdif 15 55 06.3 +0.2
baz=100
M18A **Lyman** 99.62 49 ⇑Pdiff Pdif 15 55 05.8 -0.3
baz=100
O18A **Roosevelt** 99.69 50 ⇑Pdiff Pdif 15 55 06.9 +0.4
baz=100
F18A **Big Timber** 99.72 44 ⇑Pdiff Pdif 15 55 06.9 +0.4
baz=100
I18A **Diamond G Ranc** 99.74 47 ⇓Pdiff Pdif 15 55 06.5 -0.1
baz=100
S18A **Hurst Farm, Bl** 99.75 53 ⇓Pdiff Pdif 15 55 07.1 +0.5
baz=100
GCMT **Greycliff** 99.76 45 ePdif Pdif 15 55 06.8 +0.1
comp=Z,1.7nm,0.7s
118A **Homack Ranch,** 99.80 58 ⇑Pdiff Pdif 15 55 07.7 +0.8
baz=100
X18A **Snowflake** 99.81 56 ⇓Pdiff Pdif 15 55 07.8 +0.8
baz=100
R18A **Canyonlands Na** 99.81 52 ⇓Pdiff Pdif 15 55 07.8 +0.8
baz=100
T18A **Mexican Hat** 99.85 53 ⇓Pdiff Pdif 15 55 07.4 +0.3
baz=100
G18A **Lazy EL Ranch,** 99.86 45 ⇑Pdiff Pdif 15 55 07.4 +0.2
baz=100
U18A **Rough Rock, Ch** 99.86 54 ⇓Pdiff Pdif 15 55 07.7 +0.4
baz=100
BW06 **Boulder Array** 99.96 48 ⇑Pdiff Pdif 15 55 07.4 -0.2
baz=100
BW06 **Boulder Array** 99.96 48 PFAKE 15 55 20.0 +12
BW06 LR LR
comp=Z,1μm,21.0s
PDAR **Pinedale Array** 99.96 48 P Pdif 15 55 05.9 -1.7
comp=Z,7.9nm,0.9s,baz=329,slow=1.7,SNR=46
PDAR PP PP 15 59 07.4 -6.2
comp=Z,0.8nm,0.8s,baz=289,slow=3.6,SNR=3.3
PDAR LR LR 16 33 29.3
comp=Z,1μm,21.5s,baz=269,slow=31
RLMT **Red Lodge** 100.07 45 Pdif Pdif 15 55 08.5 +0.4
comp=Z,5.3nm,0.9s
RLMT LR LR
comp=Z,1μm,22.0s
L19A **Farson** 100.13 48 ⇓Pdiff Pdif 15 55 08.3 0.0
baz=100
Q19A **Hogan Spring (** 100.30 52 ⇑Pdiff Pdif 15 55 08.9 -0.2
baz=100
R19A **Curley Farm, L** 100.31 52 ⇑Pdiff Pdif 15 55 09.9 +0.7
baz=100
O19A **Miners Draw (B** 100.36 50 ⇑Pdiff Pdif 15 55 09.5 +0.1
baz=100
319A **Douglas** 100.39 59 ⇓Pdiff Pdif 15 55 10.2 +0.6
baz=100
Y19A **Nutrioso** 100.39 57 ⇓Pdiff Pdif 15 55 10.2 +0.7
baz=100
U19A **Dine' College,** 100.40 54 ⇑Pdiff Pdif 15 55 10.4 +0.9
baz=100
S19A **Harvey Farm, M** 100.43 53 ⇑Pdiff Pdif 15 55 10.3 +0.6
baz=100
K19A **Absolon Red Bu** 100.48 48 ⇓Pdiff Pdif 15 55 09.5 -0.4
baz=100
PV04 **Paradox Valley** 100.59 52 ePdif Pdif 15 55 09.6 -0.9
K20A **Yellowstone Ra** 100.86 48 ⇓Pdiff Pdif 15 55 11.5 -0.1
baz=101
PV01 **Paradox Valley** 100.86 52 Pdif Pdif 15 55 12.6 +1.0
comp=Z,715nm,1.1s
L20A **Wamsutter** 100.89 48 ⇑Pdiff Pdif 15 55 12.0 +0.2
baz=101
MVCO **Mesa Verde** 100.95 53 ⇓Pdiff Pdif 15 55 11.7 -0.3
baz=101
MVCO **Mesa Verde** 100.95 53 ePdif Pdif 15 55 13.8 +1.8
comp=Z,5.1nm,0.8s
MVCO LR LR
comp=Z,1μm,22.0s
Z20A **Nine Sixteen R** 100.96 57 ⇓Pdiff Pdif 15 55 11.7 -0.4
baz=101
N20A **Spence Gulch,** 101.00 50 ⇓Pdiff Pdif 15 55 12.2 0.0
baz=101
R20A **Redvale** 101.01 52 ⇓Pdiff Pdif 15 55 12.6 +0.3
baz=101
M20A **Sweetwater, Wa** 101.03 49 ⇓Pdiff Pdif 15 55 12.7 +0.3
baz=101
O20A **White River Ci** 101.05 50 ⇑Pdiff Pdif 15 55 12.3 -0.2
baz=101
Q20A **Ridgley Place,** 101.05 51 ⇑Pdiff Pdif 15 55 12.6 +0.1
baz=101
S21A **Coal Bank Pass** 101.50 53 ⇓Pdiff Pdif 15 55 15.1 +0.6
baz=102
N21A **Black Mountain** 101.57 50 ⇓Pdiff Pdif 15 55 15.2 +0.4
baz=102
L21A **Rawlins** 101.61 48 ⇑Pdiff Pdif 15 55 15.5 +0.5
baz=102
O21A **Pagoda** 101.63 50 ⇓Pdiff Pdif 15 55 15.5 +0.4
baz=102
M21A **Separation Pea** 101.64 49 ⇓Pdiff Pdif 15 55 14.6 -0.5
baz=102
U21A **Nageezi** 101.65 54 ⇓Pdiff Pdif 15 55 16.0 +0.9
baz=102
P21A **Newcastle** 101.68 51 ⇑Pdiff Pdif 15 55 16.3 +1.0
baz=102
RWWY **Rawlins** 101.75 49 ePdif Pdif 15 55 15.9 +0.3
comp=Z,11nm,1.2s
ABPO **Ambohimpanom** 101.92 249 PFAKE 15 55 30.0 +14
ABPO LR LR
comp=Z,943nm,22.0s
SMCO **Snowmass** 102.07 51 ePdif Pdif 15 55 18.9 +1.9
comp=Z,5.4nm,0.8s
LAO **LASA Array** 102.09 44 ePdif Pdif 15 55 18.1 +1.0
comp=Z,27nm,1.3s
LAO LR LR
comp=Z,798nm,22.0s
Q22A **Crested Butte,** 102.14 52 ⇓Pdiff Pdif 15 55 18.3 +1.0
baz=102
T22A **Edith** 102.23 53 ⇑Pdiff Pdif 15 55 18.4 +0.6
baz=102
U22A **Llaves** 102.30 54 ⇑Pdiff Pdif 15 55 19.3 +1.3
baz=102
L22A **Ellis Ranch, M** 102.31 48 ⇑Pdiff Pdif 15 55 18.6 +0.5
baz=102
N22A **Wattenberg Ran** 102.37 50 ⇑Pdiff Pdif 15 55 19.3 +0.9
baz=102
ANMO **Albuquerque** 102.68 56 PFAKE 15 55 30.0 +10
ANMO LR LR
comp=Z,630nm,22.0s
ISCO **Idaho Springs** 103.08 51 PFAKE 15 55 30.0 +8.5
ISCO LR LR
comp=Z,918nm,22.0s
DGMT **Dagmar** 103.26 42 PFAKE 15 55 30.0 +7.7

DGMT LR LR
comp=Z,779nm,20.0s
SDCO Great Sand Dun 103.31 53 *e*Pdif Pdif 15 55 23.6 +1.1
comp=Z,4.8nm,1.5s
SDCO LR LR
comp=Z,2μm,22.0s
FFC Flin Flon 103.69 35 PFAKE 15 55 40.0 +16
FFC LR LR
comp=Z,669nm,21.0s
MNTX Cornudas Mount 103.71 59 PFAKE 15 55 40.0 +16
MNTX LR LR
comp=Z,853nm,22.0s
KBS Kingsbay 103.72 353 *e*PP PP 15 59 40.1 -0.7
KBS AMS AMS 16 37 01.5
comp=Z,716nm,29.0s
KBS Kingsbay 103.72 353 PFAKE 15 55 30.0 +5.7
KBS LR LR
comp=Z,462nm,20.0s
RSSD Black Hills 103.87 46 *e*P Pdif 15 55 25.6 +0.6
RSSD pmax pmax
comp=Z,7.0nm,0.9s
RSSD MLR MLR
comp=Z,634nm,22.0s
RSSD Black Hills 103.87 46 *e*Pdif Pdif 15 55 25.6 +0.6
comp=Z,7.4nm,0.9s
RSSD LR LR
comp=Z,634nm,22.0s
325A Bean Ranch, Si 104.07 59 ⇑Pdiff Pdif 15 55 27.0 +1.1
baz=104
V25A Rancho No Teng 104.14 55 ⇓Pdiff Pdif 15 55 27.7 +1.5
baz=104
Y25A Mesa, Roswell 104.19 56 ⇓Pdiff Pdif 15 55 27.5 +1.1
baz=104
U25A Circle Dot Ran 104.27 54 ⇑Pdiff Pdif 15 55 27.6 +0.8
baz=104
U26A Atchley Ranch, 104.80 54 ⇑Pdiff Pdif 15 55 30.6 +1.5
baz=105
TXAR Lajitas Array 105.29 61 Pdiff Pdif 15 55 35.3 +4.0
comp=Z,0.8nm,0.9s,baz=251,slow=3.8,SNR=6.0
TXAR PKiKP PKiKP 15 59 44.3 -1.5
comp=Z,1.7nm,0.8s,baz=185,slow=0.6,SNR=12
TXAR PKKPbc PKKPbc 16 11 13.8 +1.5
comp=Z,0.8nm,0.7s,baz=126,slow=6.4,SNR=5.1
TXAR PKKPab PKKPab 16 11 28.1 -1.2
comp=Z,1.7nm,0.8s,baz=116,slow=2.9,SNR=5.7
TXAR Lajitas Array 105.29 61 Pdif Pdif 15 55 35.3 +4.0
TXAR PKPdif PKiKP 15 59 44.3 -1.5
TXAR PKKPbc PKKPbc 16 11 13.8 +1.5
TXAR PKKPab PKKPab 16 11 28.1 -1.2
527A Woodward Ranch105.30 60 ⇓Pdiff PKiKP 15 59 46.6 +0.8
baz=105
427A Hayter Ranch, 105.44 60 ⇑Pdiff PKiKP 15 59 46.5 +0.4
baz=106
W27A Bowe Ranch, En 105.45 55 ⇑Pdiff PKiKP 15 59 45.9 -0.1
baz=106
Y27A Causey 105.46 56 ⇑Pdiff PKiKP 15 59 46.4 +0.4
baz=106
627A Terlingua Ranc 105.52 61 ⇓Pdiff PKiKP 15 59 46.6 +0.3
baz=106
OGNE Ogallala 105.70 49 PFAKE 16 00 00.0 +14
OGNE LR LR
comp=Z,891nm,22.0s
MSTX Muleshoe 105.78 56 ⇑Pdiff PKiKP 15 59 47.2 +0.5
baz=106
328A Wristen Ranch, 105.92 59 ⇓Pdiff PKiKP 15 59 47.4 +0.4
baz=106
628A Black Gap, Mar 105.96 61 ⇑Pdiff PKiKP 15 59 47.5 +0.4
baz=106
528A Cox Ranch, San 106.01 60 ⇓Pdiff PKiKP 15 59 47.3 +0.2
baz=106
GNI Garni 106.40 310 PFAKE 16 00 00.0 +12
GNI LR LR
comp=Z,268nm,21.0s
KEV Kevo 106.48 343 PFAKE 16 00 00.0 +13
KEV LR LR
comp=Z,556nm,21.0s
AMTX Amarillo 106.60 55 PFAKE 16 00 00.0 +12
AMTX LR LR
comp=Z,831nm,22.0s
ZEI Tsey 106.68 313 *e*P Pdif 15 55 36.1 -1.4
ZEI pmax pmax
comp=Z,5.0nm,0.4s
ARCES ARCESS Array B 107.04 343 PKiKP PKiKP 15 59 45.9 -2.0
comp=Z,2.6nm,0.6s,baz=48,slow=1.8,SNR=20
ARCES ARCESS Array B 107.04 343 PKPdif PKiKP 15 59 45.9 -2.0
KIV Kislovodsk 107.36 314 *e*P Pdif 15 55 39.6 -1.0
KIV *e* 16 00 08.9
KIV *e* 16 06 16.2
KIV *e*PS PS 16 09 29.9 -1.5
KIV *e*SS SS 16 15 10.4 -2.8
KIV pmax pmax
comp=Z,6.0nm,1.0s
KIV MLR MLR
comp=Z,672nm,22.0s
KIV Kislovodsk 107.36 314 PFAKE 16 00 00.0 +11
KIV LR LR
comp=Z,692nm,20.0s
CBKS Cedar Bluff 107.72 51 PFAKE 16 00 00.0 +10
CBKS LR LR
comp=Z,2μm,22.0s
ULM Lac du Bonnet 108.28 39 PFAKE 16 00 00.0 +9.2
ULM LR LR
comp=Z,668nm,19.0s
JCT Junction City 108.56 60 *e*PKiKP PKiKP 15 59 52.1 +0.2
JCT LR LR
comp=Z,657nm,22.0s
OBN Obninsk 108.58 327 *e*P Pdif 15 55 45.8 -0.2
OBN pmax pmax
comp=Z,8.0nm,0.8s
OBN MLR MLR
comp=Z,1μm,23.0s
OBN Obninsk 108.58 327 PFAKE 16 00 00.0 +8.8
OBN LR LR
comp=Z,1μm,22.0s
AGMN Agassiz Nation 108.76 41 PFAKE 16 00 00.0 +8.3
AGMN LR LR
comp=Z,815nm,20.0s
TRO Tromso 108.84 344 *e* PP 16 00 10.6 -8.0
TRO *e*SKS SKSac 16 06 20.1 -0.7
TRO AMS AMS 16 43 26.4
comp=Z,540nm,23.2s
WMOK Wichita Mounta 108.99 55 *e*PKiKP PKiKP 15 59 53.0 +0.4
WMOK LR LR
comp=Z,479nm,22.0s
ECSD EROS Data Cent 109.23 46 *e*PKiKP PKiKP 15 59 51.9 -0.9
ECSD LR LR
comp=Z,686nm,22.0s
KSU1 Kansas State U 110.08 50 PFAKE 16 00 10.0 +15
KSU1 LR LR
comp=Z,1μm,22.0s
KVTX Kingsville 110.47 63 PFAKE 16 00 10.0 +14
KVTX LR LR
comp=Z,898nm,21.0s
ANN Anapa 110.88 316 *i* PKIKP PKiKP 15 59 53.2 -2.6
ANN pmax pmax
comp=Z,58nm,1.2s
FINES FINESS Array B 111.08 335 PKiKP PKiKP 15 59 54.0 -1.7
comp=Z,3.4nm,0.7s,baz=109,slow=2.7,SNR=9.3
EYMN Ely 111.67 40 PFAKE 16 00 10.0 +13
EYMN LR LR
comp=Z,1μm,21.0s
HKT Hockley 112.03 60 PFAKE 16 00 10.0 +12
HKT LR LR
comp=Z,1μm,22.0s
SCIA State Center 112.06 47 PFAKE 16 00 10.0 +12
SCIA LR LR
comp=Z,1μm,22.0s
NATX Nacogdoches 112.80 58 PFAKE 16 00 10.0 +10
NATX LR LR
comp=Z,616nm,19.0s
MIAR Mount Ida 113.26 55 PFAKE 16 00 10.0 +9.3
MIAR LR LR
comp=Z,1μm,22.0s
COWI Conover 113.77 42 *e*PKiKP PKiKP 16 00 01.1 -0.2
COWI LR LR
comp=Z,1μm,22.0s
JFWS Jewell Farm 113.94 45 *e*PKIKP PKiKP 16 00 01.1 -0.6
JFWS MLR MLR
comp=Z,824nm,22.0s
KMBO Kilima Mbogo 114.27 266 PKP PKiKP 16 00 03.4 +0.1
comp=Z,1.5nm,0.6s,baz=360,slow=23,SNR=5.9
KMBO Kilima Mbogo 114.27 266 PKP PKiKP 16 00 03.4 +0.1
KMBO LR LR
comp=Z,308nm,20.0s
AKASG Malin Array Be 114.29 324 PKP PKiKP 16 00 00.3 -1.9
comp=Z,4.0nm,0.6s,baz=60,slow=2.4,SNR=11
AKASG PKKPbc PKKPbc 16 10 41.9 -2.1
comp=Z,0.9nm,0.4s,baz=259,slow=3.4,SNR=4.1
KIEV Kiev 114.30 324 PFAKE 16 00 10.0 +7.8
KIEV LR LR
comp=Z,908nm,22.0s
CCM Cathedral Cave 114.41 51 *e*PKIKP PKiKP 16 00 02.6 -0.2
CCM MLR MLR
comp=Z,2μm,22.0s
BR131 Keskin Array S 114.86 311 *e*PKiKP PKiKP 16 00 03.3 -0.3
BR131 LR LR
comp=Z,195nm,20.0s
MMAI Mount Meron Ar 114.91 304 PKP PKiKP 16 00 02.3 -1.6
comp=Z,1.7nm,0.5s,baz=98,slow=6.0,SNR=4.6
HDIL Hopedale 115.26 47 PFAKE 16 00 20.0 +16
HDIL LR LR
comp=Z,1μm,22.0s
VBMS Vicksburg 116.20 57 PFAKE 16 00 20.0 +14
VBMS LR LR
comp=Z,803nm,22.0s
CSS Prodhromos 116.21 306 PFAKE 16 00 20.0 +14
CSS LR LR
comp=Z,375nm,22.0s
SFJD Kangerlussuaq 116.51 10 PFAKE 16 00 20.0 +14
SFJD LR LR
comp=Z,491nm,21.0s
TLCR 116.61 318 ⇑PKIKP PKPdf 16 00 06.6 -0.2
OLIL Olney 116.64 49 *e*PKPdf PKPdf 16 00 07.3 +0.3
OXF Oxford 116.64 54 PFAKE 16 00 20.0 +13
OXF LR LR
comp=Z,844nm,22.0s
NB2 NORSAR Subarra117.03 340 PKPdf PKPdf 16 00 06.1 -1.0
comp=Z,2.1nm,0.7s,baz=44,slow=1.9
NB2 NORSAR Subarra117.03 340 PKPdf PKPdf 16 00 06.1 -1.0
baz=44,slow=1.9
NOA NORSAR Array B 117.03 340 PKP PKPdf 16 00 06.8 -0.3
comp=Z,5.5nm,0.9s,baz=46,slow=1.9,SNR=14
NOA NORSAR Array B 117.03 340 PKP PKPdf 16 00 06.8 -0.3
NAO01 NORSAR Array S 117.28 340 PFAKE 16 00 20.0 +12
NAO01 LR LR
comp=Z,890nm,20.0s
WVT Waverly 117.52 52 *e*PKIKP PKPdf 16 00 08.4 -0.4
WVT MLR MLR
comp=Z,1μm,22.0s
ISP Isparta 117.71 310 PFAKE 16 00 20.0 +11
ISP LR LR
comp=Z,416nm,22.0s
BUR08 Bucovina Ar. S 117.95 322 *e*PKPdf PKPdf 16 00 09.8 +0.5
BURAR Bucovina Array 117.95 322 ⇓PKIKP PKPdf 16 00 09.9 +0.6
WCI Wyandotte Cave 118.14 49 *e*PKIKP PKPdf 16 00 10.0 0.0
WCI MLR MLR
comp=Z,955nm,22.0s
MLR Muntele Rosu 118.37 320 PKKPbc PKKPbc 16 10 28.3 -1.2
comp=Z,1.2nm,0.4s,baz=153,slow=11,SNR=3.5
MLR Muntele Rosu 118.37 320 ⇓PKIKP PKPdf 16 00 10.4 +0.2
BOSA Boshof 118.49 234 PKP PKPdf 16 00 10.9 -0.1
comp=Z,7.2nm,0.7s,baz=109,slow=1.9,SNR=15
BOSA PKKPbc PKKPbc 16 10 28.4 -0.2
comp=Z,5.8nm,0.7s,baz=268,slow=2.9,SNR=15
BOSA Boshof 118.49 234 PKP PKPdf 16 00 10.9 -0.1
BOSA PKKPbc PKKPbc 16 10 28.4 -0.2
BOSA LR LR
comp=Z,891nm,19.0s
KWP Kalwaria Pacla 118.53 325 PFAKE 16 00 20.0 +10
KWP LR LR
comp=Z,1μm,22.0s
KONO Kongsberg 118.58 339 *e*PP PP 16 01 26.9 -0.8
KONO AMS AMS 16 54 30.8
comp=Z,442nm,20.8s
KONO Kongsberg 118.58 339 PFAKE 16 00 20.0 +10
KONO LR LR
comp=Z,587nm,22.0s
AAM Ann Arbor 118.75 44 PFAKE 16 00 20.0 +9.0
AAM LR LR
comp=Z,947nm,19.0s
LRAL Lakeview Retre 118.93 55 *e*PKPdf PKPdf 16 00 11.1 -0.5
LRAL LR LR
comp=Z,640nm,21.0s
VOIR 118.96 320 ⇓PKIKP PKPdf 16 00 12.8 +1.5
UZH Uzhgorod 119.25 324 *e*PKIKP PKPdf 16 00 19.0 +7.2
SWET Sewanee 119.25 52 *e*PKPdf PKPdf 16 00 11.3 -0.9
BRAL Brewton 119.33 57 PFAKE 16 00 20.0 +7.5
BRAL LR LR
comp=Z,685nm,22.0s
BER Bergen 119.46 342 AMS AMS 16 52 06.0
comp=Z,797nm,18.4s
STHS Stebnicka Huta 119.47 325 *e*PKIKP PKPdf 16 00 12.9 +0.7
CRVS Cervenica-Dubn 119.60 325 *e*PKIKP PKPdf 16 00 12.7 +0.3
LBTB Lobatse 119.63 237 *e*PKIKP PKPdf 16 00 13.1 -0.1
LBTB MLR MLR
comp=Z,631nm,20.0s
DRGR 119.85 322 ⇑PKIKP PKPdf 16 00 12.9 -0.1
OJC Ojcow 119.87 327 *e*PKP PKPdf 16 00 11.0 -1.9
TEIG Tepich 119.91 70 PFAKE 16 00 30.0 +16
TEIG LR LR
comp=Z,579nm,21.0s
ACSO Alum Creek Sta 119.95 46 *e*PKPdf PKPdf 16 00 13.2 -0.1
ACSO LR LR
comp=Z,572nm,20.0s
NIE Niedzica 120.00 326 *e*PKP PKPdf 16 00 14.3 +1.1
PLCA Paso Flores 120.00 144 PKP PKPdf 16 00 13.1 -0.4
comp=Z,4.5nm,0.7s,baz=221,slow=4.4,SNR=8.8
PLCA PKKPbc PKKPbc 16 10 22.8 -0.8
comp=Z,2.9nm,0.8s,baz=138,slow=5.4,SNR=5.0
PLCA Paso Flores 120.00 144 PKP PKPdf 16 00 13.1 -0.4
PLCA PKKPbc PKKPbc 16 10 22.8 -0.8
PLCA LR LR
comp=Z,399nm,19.0s
SUR Sutherland 120.21 228 PFAKE 16 00 30.0 +16
SUR LR LR
comp=Z,980nm,21.0s
CPCT Cooper Cave 120.29 52 PKPdf PKPdf 16 00 12.3 -1.9
KECS Kecovo 120.37 325 *e*PKIKP PKPdf 16 00 14.3 +0.4
GZR Gura Zlata 120.43 321 ⇑PKIKP PKPdf 16 00 14.2 +0.1
BORG Borgarnes 120.47 357 PFAKE 16 00 20.0 +6.4
BORG LR LR
comp=Z,550nm,20.0s
LSZ Lusaka 120.48 249 *e*PKIKP PKPdf 16 00 14.0 -1.1
LSZ MLR MLR
comp=Z,567nm,20.0s
TZTN Tazewell 120.73 50 *e*PKPdf PKPdf 16 00 15.0 0.0
TKL Tuckaleechee C 120.82 51 *e*PKIKP PKPdf 16 00 13.8 -1.4
OKC Ostrava-Krasne 120.98 327 *e*PKIKP PKPdf 16 00 16.1 +1.1
OKC *e* 16 01 46.7
OKC MLR MLR
comp=Z,800nm,21.6s
OKC Ostrava-Krasne 120.98 327 *e*PKPdf PKPdf 16 00 16.1 +1.1
OKC *e*PP PP 16 01 46.7 +2.2
OKC *e*PKPPKP 16 19 12.2
OKC AMS AMS 16 52 50.0
comp=Z,800nm,21.6s
PSZ Piszkesteto 120.99 324 ⇓PKIKP PKPdf 16 00 15.4 +0.3
PSZ MLR MLR
comp=Z,663nm,22.0s
BZS Buzias 121.06 321 ⇓PKIKP PKPdf 16 00 15.6 +0.3
TGUH Tegucigalpa,Un 121.30 77 PFAKE 16 00 30.0 +13
TGUH LR LR
comp=Z,621nm,20.0s
VYHS Vyhne 121.31 325 *e*PKIKP PKPdf 16 00 15.7 0.0
MORC Moravsky Berou 121.34 327 ⇓PKIKP PKPdf 16 00 15.9 +0.2
MORC Moravsky Berou 121.34 327 PKPdf PKPdf 16 00 14.5 -1.3
ERPA Erie 121.34 43 PFAKE 16 00 30.0 +14
ERPA LR LR
comp=Z,596nm,20.0s
KOLL Kolacno 121.51 325 *e*PKIKP PKPdf 16 00 16.7 +0.6
DPC Dobruska-Polom 121.67 328 *e*PKIKP PKPdf 16 00 16.7 +0.3
DPC *e* 16 01 51.3
DPC *e*PS PS 16 11 44.3 +0.8
DPC MLR MLR
comp=Z,1μm,22.3s
DPC Dobruska-Polom 121.67 328 *e*PKPdf PKPdf 16 00 16.7 +0.3
DPC *e*PP PP 16 01 51.3 +2.2
DPC *e*PS PS 16 11 44.3 +0.8
DPC *ex* x 16 19 18.0
DPC AMS AMS 16 52 10.0
comp=Z,1μm,22.3s
SCHQ Schefferville 121.69 25 PKP PKPdf 16 00 15.9 -0.3
comp=Z,12nm,0.9s,baz=50,slow=15,SNR=6.4
SCHQ Schefferville 121.69 25 *e*PKPdf PKPdf 16 00 16.1 -0.1
SCHQ LR LR
comp=Z,1μm,22.0s
GOGA Godfrey 121.70 54 PFAKE 16 00 30.0 +13
GOGA LR LR
comp=Z,897nm,21.0s
UPC Upice 121.74 328 *e*PKIKP PKPdf 16 00 16.7 +0.2
UPC Upice 121.74 328 *e*PKPdf PKPdf 16 00 16.7 +0.2
VRAC Vranov 122.11 327 ⇑PKIKP PKPdf 16 00 17.5 +0.3
BSEG Bad Segeberg 122.31 334 *e*PKPdf PKPdf 16 00 18.1 +0.6
MCWV Mont Chateau 122.40 46 PFAKE 16 00 30.0 +12
MCWV LR LR
comp=Z,962nm,22.0s
ZST Bratislava 122.44 326 *e*PKIKP PKPdf 16 00 18.3 +0.4
BRG Berggiesshubel 122.58 330 *e*PKPdf PKPdf 16 00 18.2 +0.1
BRG Berggiesshubel 122.58 330 *e*PKP PKPdf 16 00 18.3 +0.2
comp=Z,25nm,1.2s
BRG PP PP 16 01 58.0 +2.7
BRG SS SS 16 18 42.0 +10
BRG
comp=N,848nm,24.1s
BRG
comp=E,655nm,24.5s
BRG
comp=Z,877nm,24.0s
PKSM Moragy 122.59 323 ⇓PKIKP PKPdf 16 00 18.3 0.0
ELN Prospectdale 122.62 49 *e*PKPdf PKPdf 16 00 17.9 -0.7
TREC Trest 122.72 327 *e*PKIKP PKPdf 16 00 18.9 +0.5
TREC *e* 16 01 54.8
TREC *e* 16 18 54.3
TREC MLR MLR
comp=Z,1μm,22.1s
TREC Trest 122.72 327 *e*PKPdf PKPdf 16 00 18.9 +0.5
TREC *e*PP PP 16 01 54.8 -1.5
TREC *e*PKPPKP 16 18 54.3
TREC AMS AMS 16 54 10.0
comp=Z,1μm,22.1s
CLL Collm 122.78 331 *e*PKPdf PKPdf 16 00 18.5 0.0
CLL Collm 122.78 331 *e*PKIKP PKPdf 16 00 17.0 -1.5
CLL *e* 16 02 02.0
CLL pmax pmax
comp=Z,17nm,0.9s
CLL MLR MLR
comp=Z,800nm,21.3s
PRU Pruhonice 122.81 329 *e*PKIKP PKPdf 16 00 19.3 +0.7
PRU *e* 16 02 00.0
PRU MLR MLR
comp=Z,1μm,21.2s
PRU Pruhonice 122.81 329 *e*PKPdf PKPdf 16 00 19.3 +0.7
PRU *e*PP PP 16 02 00.0 +3.1
PRU *e*PS PS 16 12 01.1 +7.5
PRU *ex* x 16 19 38.4
PRU AMS AMS 16 55 40.0
comp=Z,1μm,21.2s
BLA Blacksburg 122.88 49 PFAKE 16 00 30.0 +11
BLA LR LR
comp=Z,2μm,22.0s
JSC Jenkinsville 123.20 52 *e*PKIKP PKPdf 16 00 20.4 +0.6
CONA Conrad Observa 123.29 326 ⇑*i*PKPdf PKPdf 16 00 17.9 -1.7
comp=Z,8.2nm,0.7s,SNR=6.8
NRDL Niedersach Rie 123.38 333 *e*PKPdf PKPdf 16 00 19.8 +0.2
SSPA Standing Stone 123.39 44 *e*PKPdf PKPdf 16 00 18.6 -1.4
SSPA LR LR
comp=Z,853nm,22.0s
GVD Gavdhos 123.56 309 *e*PKPdf PKPdf 16 00 18.7 -1.8
TANN Tannenbergstha 123.61 330 *e*PKPdf PKPdf 16 00 20.2 +0.1
CLZ Clausthal 123.69 332 *e*PKPdf PKPdf 16 00 20.8 +0.6
NKC Novy Kostel 123.73 330 *e*PKIKP PKPdf 16 00 20.8 +0.5
NKC *e* 16 02 06.0
NKC *e*PS PS 16 11 49.6 -12
NKC MLR MLR
comp=Z,2μm,28.6s
NKC Novy Kostel 123.73 330 *e*PKPdf PKPdf 16 00 20.8 +0.5
NKC *e*PP PP 16 02 06.0 +3.0
NKC *e*SP SP 16 11 49.6 -3.6
NKC AMS AMS 16 52 40.0
comp=Z,2μm,28.6s
LONY Lake Ozonia 123.73 38 *e*PKPdf PKPdf 16 00 18.4 -2.1
LONY LR LR
comp=Z,924nm,22.0s
KHC Kasperske Hory 123.83 328 *e*PKIKP PKPdf 16 00 20.7 +0.2
KHC *e* 16 02 07.3
KHC MLR MLR
comp=Z,1μm,30.0s
KHC Kasperske Hory 123.83 328 *e*PKPdf PKPdf 16 00 18.9 -1.6
KHC Kasperske Hory 123.83 328 *e*PKPdf PKPdf 16 00 20.7 +0.2
KHC *e*PP PP 16 02 07.3 +3.6
KHC *ex* x 16 12 15.9
KHC *ex* x 16 19 49.0
KHC AMS AMS 16 51 30.0
comp=Z,1μm,30.0s
MOX Moxa 123.88 331 *e*PKP PKPdf 16 00 20.9 +0.3
comp=Z,24nm,1.4s
MOX *e*S PS 16 12 00.0 -3.0
MOX
comp=Z,500nm,21.0s
MOX Moxa 123.88 331 *e*PKIKP PKPdf 16 00 20.9 +0.3
MOX *e*S PS 16 12 00.0 -3.0
MOX pmax pmax
comp=Z,24nm,1.4s
MOX MLR MLR
comp=Z,500nm,21.0s
COW Cow Castle Cre 123.92 53 *e*PKPdf PKPdf 16 00 22.4 +1.1
GEC2 GERESS Array S 123.93 328 *e*PKPdf PKPdf 16 00 20.7 -0.1
BINY Binghamton 123.99 42 *e*PKPdf PKPdf 16 00 20.5 -0.6
BINY LR LR
comp=Z,1μm,22.0s
TIR Tirane 124.13 317 PFAKE 16 00 30.0 +8.6
TIR LR LR
comp=Z,811nm,22.0s
WET Wettzell 124.18 329 *e*PKPdf PKPdf 16 00 21.2 0.0
MOA Molln 124.21 327 ⇑*i*PKPdf PKPdf 16 00 20.8 -0.5
comp=Z,8.6nm,1.1s
NCB Newcomb 124.28 39 PFAKE 16 00 30.0 +8.4
NCB LR LR
comp=Z,612nm,20.0s
NHSC New Hope 124.42 53 PFAKE 16 00 30.0 +7.8
NHSC LR LR
comp=Z,907nm,22.0s
PERS Pernice 124.43 325 *e*PKPdf PKPdf 16 00 21.3 -0.4
UBBA Unterbreizbach 124.55 332 *e*PKPdf PKPdf 16 00 22.0 +0.1
IBBN Ibbenburen 124.55 334 *e*PKPdf PKPdf 16 00 22.1 +0.3
GRA1 Grafenberg Arr 124.69 330 *e*PKPdf PKPdf 16 00 22.6 +0.4
GRA1 *e*PP PP 16 02 11.4 +2.0
GRA1 LR LR
comp=Z,900nm,21.4s
GRF Grafenberg Arr 124.69 330 *e*PKPdf PKPdf 16 00 22.6 +0.4
GRF *e*PP PP 16 02 11.4 +2.0
GRF *e*L 16 57 12.1
comp=Z,908nm,21.4s
GRF Grafenberg Arr 124.69 330 *e*PKIKP PKPdf 16 00 22.6 +0.4
GRF *e* 16 02 11.4
CBN Corbin 124.75 46 PFAKE 16 00 30.0 +7.3
CBN LR LR
comp=Z,701nm,22.0s
DWPF Disney 124.76 59 *e*PKPdf PKPdf 16 00 23.8 +0.8
DWPF LR LR
comp=Z,535nm,21.0s
BOJS Bojanci 124.98 324 *i* PKPdf PKPdf 16 00 23.0 +0.1
RJOB Jochberg 125.08 327 *e*PKPdf PKPdf 16 00 22.8 -0.2
LJU Ljubljana 125.10 325 *e*PKPdf PKPdf 16 00 23.0 0.0
KBA Koelnbreinsper 125.17 326 ⇑*i*PKPdf PKPdf 16 00 22.5 -0.7
comp=Z,20nm,1.3s,SNR=6.5
BUG Bochum--Univer 125.38 334 *e*PKPdf PKPdf 16 00 23.9 +0.5
CADS Cadrg 125.45 325 *i* PKPdf PKPdf 16 00 23.1 -0.6
KNDS Knezji Dol 125.48 324 *e*PKPdf PKPdf 16 00 23.4 -0.4
CNNC Cliffs of the 125.49 50 PFAKE 16 00 40.0 +16
CNNC LR LR
comp=Z,962nm,21.0s
LBNH Lisbon 125.56 38 *e*PKIKP PKPdf 16 00 23.2 -0.8
LBNH MLR MLR
comp=Z,974nm,21.0s
FUR Furstenfeldbru 125.62 328 *e*PKPdf PKPdf 16 00 24.3 +0.3
TNS Taunus Mts 125.68 332 *e*PKPdf PKPdf 16 00 24.4 +0.3
TRI Trieste 125.73 325 PFAKE 16 00 40.0 +16
TRI LR LR
comp=Z,856nm,22.0s
ABTA Abfaltersbach 125.83 326 ⇑*i*PKPdf PKPdf 16 00 23.6 -0.8
comp=Z,23nm,1.2s,SNR=11
WTTA Wattenberg 125.99 327 ⇑*i*PKPdf PKPdf 16 00 23.1 -1.7
comp=Z,44nm,1.2s,SNR=11
MOTA Moosalm 126.23 328 ⇑*i*PKPdf PKPdf 16 00 23.6 -1.6
comp=Z,16nm,0.6s,SNR=11
ESK Eskdalemuir 126.23 343 PFAKE 16 00 40.0 +15
ESK LR LR
comp=Z,750nm,22.0s
STU Stuttgart 126.29 330 *e*PKPdf PKPdf 16 00 25.6 +0.3
STU Stuttgart 126.29 330 PKPdf PKPdf 16 00 24.2 -1.1
MEM Membach 126.53 333 PKP PKPdf 16 00 26.2 +0.5
BEBN Eben Emael 126.54 334 PKP PKPdf 16 00 25.6 -0.1
FETA Feichten 126.63 328 ⇑*i*PKPdf PKPdf 16 00 26.1 +0.2

comp=Z,32nm,1.1s,SNR=16
TRQA Tornquist 126.68 147 PFAKE 16 00 40.0 +14
TRQA LR LR
comp=Z,519nm,20.0s
LCO Las Campanas 126.81 132 *e*PKPdf PKPdf 16 00 26.8 -0.2
LCO LR LR
comp=Z,254nm,20.0s
DAVA Damuels 126.91 328 ⇑ *i*PKPdf PKPdf 16 00 26.6 +0.1
comp=Z,18nm,0.9s
BCLA Clavier 126.98 334 PKP PKPdf 16 00 27.1 +0.5
BCLA APKP 16 00 42.7
BFO Black Forest 127.02 330 *e*PKPdf PKPdf 16 00 26.3 -0.4
WLF Walferdange 127.14 333 PKP PKPdf 16 00 28.0 +1.1
WLF APKP 16 00 44.5
WLF Walferdange 127.14 333 *e*PKPdf PKPdf 16 00 27.9 +1.0
WLF Walferdange 127.14 333 *e*PKIKP PKPdf 16 00 27.8 +0.9
WLF MLR MLR
comp=Z,942nm,20.0s
WLF Walferdange 127.14 333 *e*PKPdf PKPdf 16 00 27.8 +0.9
WLF LR LR
comp=Z,942nm,20.0s
TIP Timpagrande 127.23 316 *e*PKPdf PKPdf 16 00 26.4 -1.0
TIP LR LR
comp=Z,461nm,21.0s
SNF Seneffe 127.36 334 PKP PKPdf 16 00 27.6 +0.3
GIVF Givet 127.42 334 *e*PKIKP PKPdf 16 00 27.6 +0.2
comp=Z,64nm,1.0s
CDF Champ du Feu 127.48 331 *e*PKIKP PKPdf 16 00 27.2 -0.4
comp=Z,23nm,1.0s
DOU Dourbes 127.52 334 PKP PKPdf 16 00 28.2 +0.6
ECH Echery 127.67 331 *e*PKIKP PKPdf 16 00 27.3 -0.6
ECH MLR MLR
comp=Z,585nm,21.0s
TUE Stuetta 127.71 328 *e*PKPdf PKPdf 16 00 26.8 -1.2
TUE LR LR
comp=Z,1μm,21.0s
BAIF Baives 127.72 334 *e*PKIKP PKPdf 16 00 28.1 +0.1
comp=Z,36nm,1.1s
AQU L'Aquila 127.82 321 *e*PKIKP PKPdf 16 00 28.9 +0.5
AQU MLR MLR
comp=Z,640nm,20.0s
HINF Hinteralfeld 128.09 330 *e*PKIKP PKPdf 16 00 28.4 -0.3
comp=Z,94nm,1.3s
HAU Haudompre 128.21 331 *e*PKIKP PKPdf 16 00 28.9 -0.1
comp=Z,70nm,1.1s
HAU *e*MLR MLR
comp=Z,913nm,22.5s
HAU Haudompre 128.21 331 *e*PKPdf PKPdf 16 00 28.9 -0.1
HAU LR LR
comp=Z,910nm,22.5s
CEL Celeste 128.26 316 *e*PKPdf PKPdf 16 00 28.1 -1.2
CEL LR LR
comp=Z,274nm,20.0s
MEZF Maizieres J'vi 128.47 332 *e*PKIKP PKPdf 16 00 29.9 +0.5
comp=Z,141nm,1.4s
VLC Villacollemand 128.58 325 PFAKE 16 00 40.0 +10
VLC LR LR
comp=Z,1μm,22.0s
BCIP Isla Barro Col 128.71 83 PFAKE 16 00 40.0 +9.1
BCIP LR LR
comp=Z,513nm,22.0s
TSUM Tsumeb 128.73 240 *e*PKPdf PKPdf 16 00 30.7 -0.1
TSUM LR LR
comp=Z,528nm,20.0s
CABF La Chapelle 129.30 330 *e*PKIKP PKPdf 16 00 31.6 +0.5
comp=Z,88nm,1.4s
OTAV Otavalo 129.62 94 PKPdf PKPdf 16 00 34.5 +1.8
OTAV LR LR
comp=Z,301nm,21.0s
LPL La Plagne 129.72 328 *e*PKIKP PKPdf 16 00 32.4 +0.5
comp=Z,17nm,0.7s
LPG La Plagne 129.72 328 *e*PKIKP PKPdf 16 00 32.5 +0.6
comp=Z,20nm,0.7s
LOR Lormes 129.92 332 *e*PKIKP PKPdf 16 00 32.4 +0.2
comp=Z,58nm,1.4s
LOR *e*MLR MLR
comp=Z,1μm,21.8s
LOR Lormes 129.92 332 *e*PKPdf PKPdf 16 00 32.4 +0.2
LOR LR LR
comp=Z,1μm,21.8s
BNI Bardonecchia 130.05 328 *e*PKIKP PKPdf 16 00 31.4 -1.2
BNI MLR MLR
comp=Z,2μm,22.0s
MBDF Montbardon 130.22 328 *e*PKIKP PKPdf 16 00 32.9 0.0
MTDJ Mount Denham 130.23 71 PFAKE 16 00 50.0 +16
MTDJ LR LR
comp=Z,537nm,22.0s
SSF Saint Saulge 130.23 332 *e*PKIKP PKPdf 16 00 33.1 +0.3
comp=Z,38nm,1.0s
WDD Wield Dalam 130.34 314 PFAKE 16 00 40.0 +6.6
WDD LR LR
comp=Z,229nm,20.0s
PGF Pioggiola 130.36 324 *e*PKIKP PKPdf 16 00 33.3 +0.1
comp=Z,78nm,1.1s
SMF Signal de Mont 130.38 331 *e*PKIKP PKPdf 16 00 33.1 0.0
comp=Z,59nm,1.2s
SBF Sospel 130.43 326 *e*PKIKP PKPdf 16 00 33.0 -0.3
comp=Z,150nm,1.5s
AVF Avril sur Loir 130.50 332 *e*PKIKP PKPdf 16 00 33.4 0.0
comp=Z,21nm,1.1s
ORIF Oris-en-Rattie 130.56 328 *e*PKIKP PKPdf 16 00 33.8 +0.3
comp=Z,19nm,0.8s
ORIF *e*MLR MLR
comp=Z,2μm,21.5s
LDF La Druitiere 130.67 336 *e*PKIKP PKPdf 16 00 33.7 +0.1
FLN La Foliniere 130.69 336 *e*PKIKP PKPdf 16 00 33.4 -0.2
comp=Z,66nm,1.2s
FLN *e*MLR MLR
comp=Z,878nm,22.2s
FLN La Foliniere 130.69 336 *e*PKPdf PKPdf 16 00 33.4 -0.2
FLN LR LR
comp=Z,880nm,22.3s
BGF Bois d'Agland 130.91 332 *e*PKIKP PKPdf 16 00 34.5 +0.3
SSB Saint Sauveur 131.00 330 PFAKE 16 00 50.0 +16
SSB LR LR
comp=Z,536nm,22.0s
FRF La Foret Royal 131.06 327 *e*PKIKP PKPdf 16 00 34.5 0.0
GRR Gorron 131.13 336 *e*PKIKP PKPdf 16 00 34.7 +0.2
VIVF Saint-Julien-l 131.23 329 *e*PKIKP PKPdf 16 00 35.1 +0.3
comp=Z,31nm,1.1s
LMR La Mourre 131.28 326 *e*PKIKP PKPdf 16 00 35.1 +0.1
comp=Z,54nm,1.2s
SMRF Simiane la Rot 131.36 328 *e*PKIKP PKPdf 16 00 35.7 +0.6
comp=Z,40nm,1.1s
TCF Toulx Ste Croi 131.41 332 *e*PKIKP PKPdf 16 00 35.5 +0.4
comp=Z,26nm,0.8s
VSL Villasalto 131.95 321 *e*PKPdf PKPdf 16 00 34.7 -1.6
VSL LR LR
comp=Z,297nm,22.0s
ROSF Rostrenen 132.12 338 *e*PKIKP PKPdf 16 00 36.0 -0.4
LASF Ste Croix 132.19 329 *e*PKIKP PKPdf 16 00 37.2 +0.5
comp=Z,63nm,1.2s
GTBY Guantanamo Bay 132.20 68 PFAKE 16 00 50.0 +13
GTBY LR LR
comp=Z,867nm,21.0s
MFF Saint Martin d 132.24 334 *e*PKIKP PKPdf 16 00 37.0 +0.3
comp=Z,21nm,1.0s
QUIF Quistinic 132.43 337 *e*PKIKP PKPdf 16 00 36.6 -0.4
RJF Les Rejaudoux 132.46 332 *e*PKIKP PKPdf 16 00 37.7 +0.6
RJF *e*MLR MLR
comp=Z,633nm,22.5s
RJF Les Rejaudoux 132.46 332 *e*PKPdf PKPdf 16 00 37.7 +0.6
RJF LR LR
comp=Z,630nm,22.5s
CAF Calviac 132.48 331 *e*PKIKP PKPdf 16 00 38.1 +0.9
comp=Z,46nm,1.4s
LFF La Frestale 133.10 332 *e*PKIKP PKPdf 16 00 38.5 +0.2
MTLF Montolieu 133.55 329 *e*PKIKP PKPdf 16 00 39.7 +0.5
KEST Kesra 134.06 316 PKP PKPdf 16 00 38.5 -2.0
comp=Z,8.1nm,1.0s,baz=273,slow=2.2,SNR=12
KEST SKP 16 04 06.6
comp=Z,2.0nm,1.0s,baz=282,slow=5.6,SNR=3.7
KEST Kesra 134.06 316 *e*PKPdf PKPdf 16 00 38.5 -1.9
ROSC El Rosal 134.10 88 PKP PKPdf 16 00 40.5 -0.6
comp=Z,18nm,0.5s,baz=121,slow=17,SNR=7.9
ROSC El Rosal 134.10 88 *e*PKPdf PKPdf 16 00 42.0 +0.9
EPF Esparros 134.72 330 *e*PKIKP PKPdf 16 00 40.6 -0.8
LPAZ La Paz 135.09 119 PKhKP PKPpre 16 00 28.9
comp=Z,1.5nm,0.5s,baz=224,slow=3.9,SNR=4.6
LPAZ PKP PKPdf 16 00 42.0 -0.9
comp=Z,18nm,0.8s,baz=309,slow=0.1,SNR=34
LPAZ SKP 16 04 13.3
comp=Z,5.7nm,1.1s,baz=157,slow=19,SNR=4.9
LPAZ La Paz 135.09 119 PKHKP PKPpre 16 00 29.0
LPAZ 16 00 42.0
LPAZ pmax pmax
comp=Z,2.0nm,0.5s
LPAZ pmax pmax
comp=Z,18nm,0.9s
LPAZ La Paz 135.09 119 *e*PKPpre PKPpre 16 00 27.6
LPAZ PKP PKPdf 16 00 42.0 -0.9
LPAZ SKP 16 04 13.3
LPAZ LR LR
comp=Z,408nm,21.0s
ETSF Etsaut 135.25 331 *e*PKIKP PKPdf 16 00 42.1 -0.3
comp=Z,38nm,1.0s
SJPF Ste Jean 135.41 332 *e*PKIKP PKPdf 16 00 42.0 -0.7
comp=Z,9.0nm,0.7s
GRTK Grand Turk 135.47 65 PFAKE 16 01 00.0 +17
GRTK LR LR
comp=Z,650nm,19.0s
SDDR Presa de Saban 135.92 68 PFAKE 16 01 00.0 +16
SDDR LR LR
comp=Z,634nm,20.0s
BBSR BB Station 136.61 47 PFAKE 16 01 00.0 +15
BBSR LR LR
comp=Z,1μm,21.0s
CPUP Villa Florida 137.77 140 PKP PKPdf 16 00 48.5 +0.8
comp=Z,9.4nm,0.9s,baz=249,slow=1.4,SNR=15
CPUP Villa Florida 137.77 140 PKP PKPdf 16 00 48.5 +0.8
ESDC Sonseca Array 139.37 331 PKhKP PKPpre 16 00 44.4
comp=Z,0.2nm,0.3s,baz=72,slow=4.2,SNR=2.7
ESDC PP PP 16 03 42.9 -0.8
comp=Z,2.6nm,0.7s,baz=27,slow=7.0,SNR=8.6
ESDC Sonseca Array 139.37 331 PKP PKPpre 16 00 44.4
ESDC PP PP 16 03 42.9 -0.8
ESLA Sonseca Array 139.37 331 PFAKE 16 01 00.0 +10
ESLA LR LR
comp=Z,4μm,22.0s
MVO Moncorvo 139.56 335 *e*PKPdf PKPdf 16 00 50.9 +0.5
MVO Moncorvo 139.56 335 *e*LR LR 16 54 56.8
comp=Z,373nm,20.0s
PAB San Pablo 139.66 331 *e*PKIKP PKPdf 16 00 49.9 -0.8
PAB MLR MLR
comp=Z,582nm,21.0s
PVRL Vila Real 139.75 336 *e*PKPdf PKPdf 16 00 51.6 +0.8
PVIS Viseu 140.29 336 *e*PKPdf PKPdf 16 00 49.3 -2.5
MTE Manteigas 140.41 335 PFAKE 16 01 00.0 +8.0
MTE LR LR
comp=Z,829nm,21.0s
MTE Manteigas 140.41 335 *e*PKPdf PKPdf 16 00 53.6 +1.6
MTE Manteigas 140.41 335 *e*LR LR 16 54 18.4
comp=Z,656nm,22.0s
PCBR Castelo Branco 140.85 334 *e*PKPdf PKPdf 16 00 53.4 +0.6
SJG San Juan 140.86 68 *e*PKIKP PKPdf 16 00 52.2 -1.2
SJG MLR MLR
comp=Z,437nm,22.0s
PMRV Marv??o 141.15 334 *e*PKPdf PKPdf 16 00 50.6 -2.8
PMRV Marv??o 141.15 334 *e*LR LR 16 53 49.3
comp=Z,576nm,22.0s
MTP Monte Pirata 141.42 68 *e*PKPpre PKPpre 16 00 48.8
PTOM Tomar 141.43 335 *e*PKPdf PKPdf 16 00 50.2 -3.7
PESTR Estremoz 141.70 334 *e*LR LR 16 52 49.0
comp=Z,483nm,22.0s
PBAR Barrancos 142.02 332 *e*LR LR 16 54 14.2
comp=Z,662nm,20.0s
EVO Evora 142.16 334 *e*PKIKP PKPdf 16 00 56.6 +1.4
EVO *e*MLR MLR
comp=Z,756nm,22.5s
EVOP Sao Brissos 142.22 334 *e*P PKPdf 16 00 54.8 -0.5
PMAFR Mafra 142.35 335 *e*LR LR 16 53 41.5
comp=Z,558nm,20.0s
PBEJ Beja 142.51 333 *e*PKPdf PKPdf 16 00 56.3 +0.4
PCVE Castro Verde 142.92 333 *e*PKPdf PKPdf 16 00 55.2 -1.4
PCVE Castro Verde 142.92 333 *e*LR LR 16 54 31.0
comp=Z,483nm,20.0s
PVAQ Vaqueiros 142.96 332 *e*PKPdf PKPdf 16 00 53.6 -3.1
PVAQ Vaqueiros 142.96 332 *e*LR LR 16 54 34.2
comp=Z,626nm,20.0s
SFS San Fernando 142.98 330 PFAKE 16 01 10.0 +13
SFS LR LR
comp=Z,1μm,21.0s
TAM Tamanrasset 143.06 301 *e*PKHKP PKPpre 16 00 53.1
TAM MLR MLR
comp=Z,260nm,21.0s
PBDV Barranco-do-Ve 143.19 332 *e*LR LR 16 54 41.7
comp=Z,627nm,18.0s
MORF Marmelete 143.46 333 *e*PKPdf PKPdf 16 00 57.9 +0.3
MORF Marmelete 143.46 333 *e*LR LR 16 54 45.9
comp=Z,560nm,22.0s
PFVI Vila Bisbo 143.68 333 *e*PKPdf PKPdf 16 00 58.9 +0.9
PFVI Vila Bisbo 143.68 333 *e*LR LR 16 55 16.0
comp=Z,440nm,20.0s
ANWB Willy Bob 144.99 67 PFAKE 16 01 10.0 +9.3
ANWB LR LR
comp=Z,852nm,22.0s
LZG Guadaloupe-1 145.40 69 *e*P PKPdf 16 01 00.8 -0.7
PHG Guadaloupe-2 145.56 69 *e*P PKPdf 16 01 02.1 +0.4
SEG Port Louis 145.59 69 *e*P PKPdf 16 01 02.4 +0.6
SPB Sao Paulo 145.72 148 *e*PKPdf PKPdf 16 01 01.3 -0.6
SPB LR LR
comp=Z,491nm,20.0s
MGG Marie-Galante 145.88 69 *e*P PKPdf 16 01 03.1 +0.8
GRGR Grenville 146.31 76 *e*PKPdf PKPdf 16 01 00.7 -2.4
FDF Fort de France 146.32 71 *e*PKP2 PKPab 16 01 04.0 -1.2
FDF MLR MLR
comp=Z,630nm,21.0s
FDF Fort de France 146.32 71 *e*P PKPdf 16 01 03.9 +0.8
BIM Bigot 146.44 72 *e*P PKPdf 16 01 05.3 +2.1
MVM Montagne Vaucl 146.60 72 *e*P PKPdf 16 01 05.3 +1.8
CMLA Cha da Macela 147.60 356 PFAKE 16 01 20.0 +15
CMLA LR LR
comp=Z,772nm,20.0s
SHEL Horse Pasture 149.30 226 PKHKP PKPbc 16 01 11.4 -0.9
SHEL MLR MLR
comp=Z,854nm,19.0s
TORD Torodi Ar. Bea 149.46 287 PKP PKPdf 16 01 06.5 -1.8
comp=Z,84nm,1.0s,baz=78,slow=2.0,SNR=64
TORD PKPbc PKPbc 16 01 10.9 -1.9
comp=Z,141nm,0.9s,baz=53,slow=1.8,SNR=150
KIC Kosan Boka 156.59 274 *e*PKP1 PKPdf 16 01 18.1 -0.6
comp=Z,57nm,0.9s
DBIC Dimbokro 156.70 275 PKP PKPdf 16 01 16.9 -1.9
comp=Z,7.3nm,0.8s,baz=334,slow=4.8,SNR=3.8
DBIC PKPbc PKPdf 16 01 27.6 +8.8
comp=Z,14nm,0.8s,baz=94,slow=0.7,SNR=8.2
DBIC PKPab PKPab 16 01 48.3 -0.1
comp=Z,14nm,0.7s,baz=94,slow=3.7,SNR=6.4
DBIC Dimbokro 156.70 275 *e*PKPdf PKPdf 16 01 19.2 +0.4
DBIC *e* 16 01 27.9
DBIC LR LR
comp=Z,815nm,21.0s
TIC Toumodi 156.86 274 *e*PKP1 PKPdf 16 01 17.4 -1.6
comp=Z,16nm,0.2s
LIC Lamto 156.88 273 *e*PKP1 PKPdf 16 01 18.6 -0.5
comp=Z,83nm,1.0s
LIC Lamto 156.88 273 *e*PKIKP PKPdf 16 01 18.8 -0.3
comp=Z,65nm,1.0s
LIC *e*MLR MLR
comp=Z,669nm,19.8s
LIC Lamto 156.88 273 *e*PKPdf PKPdf 16 01 18.8 -0.3
LIC LR LR
comp=Z,330nm,19.8s
RCBR Riachuelo 166.56 145 PFAKE 16 01 40.0 +11
RCBR LR LR
comp=Z,588nm,20.0s
SACV Santiago Islan 169.37 335 PFAKE 16 01 40.0 +9.1
SACV LR LR
comp=Z,735nm,19.0s

BJI ***25*** *16:03:03.7, 2°.60S×138°.40E, h21km, mb4.5/7, Ms4.6/1, Ms7 4.3/1*
IDC ***25*** *16:03:03.2±1.3, 2°.66S×138°.36E, h0km, mb4.0/7, mb1 4.2/9, mb1mx4.0/15, mbtmp4.1/9, ML4.1/2, Error ellipse: s-maj=47.2km s-min=12.6km az=89.0*
ISCJB ***25*** *16:03:03.8±1.4, 2°.63S±0°.05×138°.70E±0°.08, h20km±10km, mb4.3/18, Error ellipse: s-maj=13.4km s-min=8.0km az=1.0*
NEIC ***25*** *16:03:06.7±5.2, 2°.60S×138°.39E, h21km±38km, mb4.7/6, Error ellipse: s-maj=17.3km s-min=12.8km az=58.0*
DJA ***25*** *16:03:10, 2°.75S×138°.64E, h30km, mb4.7/16*
ISC 25 16:03:05.4±1.4, 2°.60S±0°.04×138°.61E±0°.07, h14km±9km, h20km±3.2km; pP-P, n53, σ1°31/47, mb4.3/18, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.61**	**10**	P	**Pg**	**16 03 15.6**	**-1.9**
JAY	**Jayapura**	**2.10**	**88**	P	**Pn**	**16 03 42.3**	**+2.2**
MMPI	**Merauke**	**6.09**	**163**	P	Px	16 04 46.1	
TLE	**Tual**	**6.59**	**243**	P	**Pn**	**16 04 38.7**	**-3.2**
AAI	**Ambon**	**10.45**	**264**	P	**Pn**	**16 05 37.7**	**+2.7**
	53nm,1.2s						
NLAI	**Namlea**	**11.51**	**267**	P	**Pn**	**16 05 51.8**	**+2.3**
	2μm45nm,0.9s						
KAKA	**Kakadu**	**11.76**	**211**	*e*P	**Pn**	**16 05 51.7**	**-1.1**
	14nm,0.6s						
KAKA	**Kakadu**	**11.76**	**211**	*e*P	**Pn**	**16 05 51.8**	**-1.0**
	60nm,0.7s						
KAKA	**Kakadu**	**11.76**	**211**	P	**Pn**	**16 05 52.2**	**-0.6**
	382nm37nm,0.6s						
COEN	**Coen**	**12.15**	**158**	*e*P	**Pn**	**16 05 59.5**	**+1.2**
COEN	**Coen**	**12.15**	**158**	P	**Pn**	**16 05 59.8**	**+1.5**
	90nm,2.5s						
KMSI	**Cibinong**	**14.96**	**282**	P	**Pn**	**16 06 38.6**	**+2.0**
	74nm,1.1s						
LUWI	**Luwuk**	**15.90**	**275**	P	**Pn**	**16 06 48.1**	**-0.9**
	968nm69nm,1.4s						
KNA	**Kununurra**	**16.27**	**216**	P	**Pn**	**16 06 52.8**	**-0.9**
	62nm,1.2s						
MRSI	**Marisa**	**16.94**	**280**	P	**Pn**	**16 07 05.1**	**+2.8**
	21nm,1.0s						
APSI	**Ampana**	**17.03**	**275**	P	**Pn**	**16 07 04.5**	**+1.1**
	1μm91nm,1.5s						
MMRI	**Maumere**	**17.35**	**249**	P	Px	16 07 12.9	
WRAB	**Tennant Creek**	**17.72**	**193**	*e*P	**Pn**	**16 07 13.0**	**+1.1**
	20nm,1.0s						
WRAB	**Tennant Creek**	**17.72**	**193**	P	Px	16 07 24.8	
WRA	**Warramunga Arr**	**17.73**	**193**	P	**Pn**	**16 07 11.5**	**-0.6**
	0.8nm,0.3s,baz=12,slow=13,SNR=28						
TTSI	**Tana Toraja**	**18.77**	**268**	P	Px	16 07 29.1	
	28nm,1.3s						
PCI	**Palu**	**18.84**	**275**	P	Px	16 07 33.1	
SPSI	**Sidrap Palu**	**18.86**	**265**	P	Px	16 07 29.7	
	16nm,1.4s						
FITZ	**Fitzroy Crossi**	**19.98**	**219**	*e*P	**Pn**	**16 07 37.3**	**-2.0**
	10nm,1.0s						
FITZ	**Fitzroy Crossi**	**19.98**	**219**	P	**Pn**	**16 07 36.0**	**-3.2**
	0.3nm,0.3s,baz=39,slow=12,SNR=9.2						
FITZ	**Fitzroy Crossi**	**19.98**	**219**	*e*P	**Pn**	**16 07 36.4**	**-2.9**
FITZ	**Fitzroy Crossi**	**19.98**	**219**	P	**Pn**	**16 07 39.3**	**0.0**
	20nm,2.0s						
ASAR	**Alice Springs**	**21.43**	**192**	P	**P**	**16 07 52.9**	**-0.4**
	5.6nm,0.9s,mb3.9,baz=21,slow=10,SNR=45						
ASAR				S	**S**	**16 11 50.1**	**-0.6**
	1.3nm,0.9s,baz=14,slow=24,SNR=4.2						
MYLDM	**Lahad Datu**	**21.52**	**291**	P	**P**	**16 07 56.0**	**+1.7**
	33nm,1.5s,mb4.5						
KKM	**Kota Kinabalu**	**23.95**	**291**	P	**P**	**16 08 17.1**	**-2.5**
	88nm,1.5s,mb5.0						
KKM	**Kota Kinabalu**	**23.95**	**291**	P	**P**	**16 08 21.9**	**+2.3**
	34nm,1.6s,mb4.5						
MBWA	**Marble Bar**	**26.04**	**223**	*e*P	**P**	**16 08 37.5**	**-0.9**
SBUM	**Sibu**	**26.85**	**281**	P	**P**	**16 08 38.7**	**-7.2**
MDSI	**Maura Dua**	**34.41**	**266**	P	**P**	**16 09 56.7**	**+4.0**
	12nm,1.5s,mb4.6						
CMAR	**Chiang Mai Arr**	**44.30**	**300**	P	**P**	**16 11 14.0**	**-1.2**
	2.5nm,0.7s,mb4.0,baz=118,slow=6.4,SNR=14						
XAN	**Xi'an**	**45.93**	**325**	P	**P**	**16 11 27.8**	**-0.1**
XAN				pP	pP	16 11 39.5	+7.1
XAN				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.1						
HHC	**Hu-ho-hao-te**	**49.79**	**333**	*e*P	**P**	**16 11 58.0**	**+0.3**
HHC				pP	pP	16 12 04.0	+1.8
HHC				sP	sP	16 12 06.8	+2.8
HHC				PcP	PcP	16 13 18.5	0.0
HHC				PP	PP	16 13 53.8	+1.3
HHC				ScP	ScP	16 17 11.0	-2.9
HHC				PcS	PcS	16 17 14.3	-0.9
HHC				S	**S**	**16 19 06.0**	**-0.8**
HHC				ScS	ScS	16 21 45.3	-3.8
HHC				SS	SS	16 22 36.3	-3.3
HHC				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.0						
HHC				LR	LR		
	comp=N,260nm,15.5s						
HHC				LR	LR		
	comp=E,160nm,16.7s						
HHC				LR	LR		
	comp=Z,260nm,15.1s						
LZH	**Lanzhou**	**50.33**	**323**	*e*P	**P**	**16 12 01.0**	**-1.0**
LZH				pP	pP	16 12 06.0	-0.5
LZH				sP	sP	16 12 09.3	+1.1
LZH				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.9						
GTA	**Gaotai**	**54.92**	**324**	*e*P	**P**	**16 12 36.8**	**+0.9**
GTA				pP	pP	16 12 41.8	+1.4
GTA				sP	sP	16 12 45.5	+3.4
GTA				pmax	pmax		
	comp=Z,5.0nm,1.9s,mb4.2						
ULN	**Ulaanbaatar**	**57.32**	**335**	P	**P**	**16 12 52.5**	**-0.4**
	comp=Z,1.5nm,0.8s,mb4.1						
ULN	**Ulaanbaatar**	**57.32**	**335**	P	**P**	**16 12 56.4**	**+3.5**
SONM	**Songino Array**	**57.58**	**335**	P	**P**	**16 12 56.1**	**+1.4**
	comp=Z,0.4nm,0.6s,mb3.6,baz=122,slow=7.0,SNR=3.9						
MK31	**Makanchi Array**	**69.64**	**322**	*e*P	**P**	**16 14 14.6**	**+0.1**
MKAR	**Makanchi Array**	**69.64**	**322**	P	**P**	**16 14 13.7**	**-0.7**
	comp=Z,4.2nm,0.9s,mb4.4,baz=97,slow=9.9,SNR=18						
ZALV	**Zalesovo Beam**	**71.79**	**330**	P	**P**	**16 14 25.4**	**-2.0**
	comp=Z,0.8nm,0.6s,mb3.9,baz=101,slow=7.7,SNR=4.9						
TKM2	**Tokmak 2**	**72.39**	**317**	*e*P	**P**	**16 14 31.3**	**+0.1**
UCH	**Uchtor**	**72.90**	**316**	*e*P	**P**	**16 14 34.6**	**+0.3**
	comp=Z,12nm,1.3s,mb4.7						
AML	**Almayashu**	**73.44**	**315**	*e*P	**P**	**16 14 37.7**	**+0.3**
	comp=Z,8.0nm,0.9s,mb4.7						
KURK	**Kurchatov**	**73.57**	**325**	P	**P**	**16 14 37.4**	**-0.7**
	comp=Z,2.4nm,0.9s,mb4.1,baz=110,slow=5.7,SNR=6.3						
BVAR	**Borovoye Array**	**79.16**	**325**	P	**P**	**16 15 09.2**	**-0.5**
	comp=Z,3.0nm,0.8s,mb4.3,baz=115,slow=7.2,SNR=15						
BRVK	**Borovoye**	**79.23**	**325**	P	**P**	**16 15 09.5**	**-0.6**
	comp=Z,8.1nm,1.0s,mb4.6						
LPAZ	**La Paz**	**147.59**	**126**	PKPbc	PKPbc	16 22 51.5	+1.1
	comp=Z,2.6nm,1.0s,baz=205,slow=2.3,SNR=6.6						
LPAZ	**La Paz**	**147.59**	**126**	PKPbc	PKPbc	16 22 51.5	+1.1

ISK ***25*** *16:21:01.5, 40°.62N×34°.75E, h4km, MD2.9*
CSEM ***25*** *16:21:02.4±0.2, 40°.60N×34°.71E, h8km, MD3.0, Error ellipse: s-maj=6.6km s-min=4.2km az=83.0*
DDA ***25*** *16:21:02.5, 40°.54N×34°.76E, h10km±2km, Md3.0*
ISCJB ***25*** *16:21:02.2±0.6, 40°.59N±0°.03×34°.74E±0°.06, h11km±5km, Error ellipse: s-maj=7.8km s-min=5.6km az=3.9*
ISC 25 16:21:02.9±0.6, 40°.59N±0°.03×34°.75E±0°.06, h9km±5km, n17, σ0°80/25, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTKT	**Corum**	**0.04**	**43**	*i* P	**Pg**	**16 21 05.4**	**+0.7**
CTKT				*i* S	**Sg**	**16 21 06.7**	**+0.7**
CTKT	**Corum**	**0.04**	**43**	*i* P	**Pg**	**16 21 05.4**	**+0.7**
CTKT				*i* S	**Sg**	**16 21 06.7**	**+0.7**
CORM	**Corum**	**0.42**	**193**	*e*PG	**Pg**	**16 21 11.0**	**-0.1**
CORM				*e*SG	**Sg**	**16 21 17.9**	**+1.2**
CORM	**Corum**	**0.42**	**193**	*e*Pg	**Pg**	**16 21 11.0**	**-0.1**
CORM				*e*Sg	**Sg**	**16 21 17.9**	**+1.2**
TOS	**Tosya**	**0.71**	**309**	*e*PG	**Pg**	**16 21 15.4**	**-1.1**
TOS				*e*SG	**Sg**	**16 21 25.8**	**-0.1**
TOS	**Tosya**	**0.71**	**309**	*e*Pg	**Pg**	**16 21 15.5**	**-1.1**
TOS				*e*Sg	**Sg**	**16 21 25.8**	**0.0**
CDAG	**Cicekdag**	**1.01**	**197**	*i* P	**Pg**	**16 21 21.4**	**-0.8**
CDAG				*i* S	**Sg**	**16 21 34.2**	**-1.1**
CDAG	**Cicekdag**	**1.01**	**197**	*i* P	**Pg**	**16 21 21.4**	**-0.9**
CDAG				*i* S	**Sg**	**16 21 34.2**	**-1.2**
KVT	**Kavak**	**1.10**	**63**	*e*PN	**Pg**	**16 21 23.0**	**-1.0**
KVT	**Kavak**	**1.10**	**63**	*e*Pn	**Pg**	**16 21 23.0**	**-1.0**
DIKM	**Dikmen**	**1.12**	**20**	*e*PN	**Pg**	**16 21 23.9**	**-0.5**
DIKM	**Dikmen**	**1.12**	**20**	*e*Pn	**Pg**	**16 21 24.0**	**-0.5**
BALT	**Daday**	**1.40**	**313**	*i* P	**Pn**	**16 21 29.5**	**+1.0**
BALT	**Daday**	**1.40**	**313**	*i* P	**Pn**	**16 21 29.5**	**+1.0**
SVSK	**Karacayir**	**1.85**	**111**	*e*PN	**Pn**	**16 21 35.1**	**+0.5**
SVSK	**Karacayir**	**1.85**	**111**	*e*Pn	**Pn**	**16 21 35.1**	**+0.4**
ESKT	**Eskisehir**	**3.18**	**252**	*i* P	**Sn**	**16 22 31.5**	**+0.5**

IDC 25 16:42:34.4±4.0, 5°.06S×151°.47E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.6/16, mbtmp3.8/4, Error ellipse: s-maj=120.3km s-min=32.0km az=109.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.29**	**227**	P	P	16 47 33.5	+0.1
	0.9nm,0.5s,baz=53,slow=10,SNR=8.5						
ASAR	**Alice Springs**	**25.07**	**221**	P	P	16 48 00.5	-0.3

2.3nm,0.7s,baz=53,slow=8.7,SNR=29
FITZ Fitzroy Crossi 28.37 241 P P 16 48 30.9 +0.3
1.3nm,0.6s,baz=48,slow=12,SNR=5.4
ZALV Zalesovo Beam 80.64 327 P P 16 54 49.1 +0.1
0.4nm,0.5s,baz=102,slow=6.1,SNR=2.7

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*IDC **25** 16:46:19.3±2.6,2°.40S×139°.25E, h0km, mb3.7/5, mb1 3.9/6, mb1mx3.6/15, mbtmp3.7/6, ML3.7/1, Error ellipse: s-maj=81.5km s-min=22.5km az=89.0*
*ISCJB **25** 16:46:23.8±1.8,2°.51S±0°.09×139°.0E±0°.4, h33km, mb3.6/4, Error ellipse: s-maj=53.4km s-min=12.9km az=179.9*
*NEIC **25** 16:46:25.2±1.5,2°.50S×139°.12E, h35km, mb3.7/1, Error ellipse: s-maj=43.6km s-min=10.6km az=90.0*
ISC 25 16:46:25.3±1.8,2°.50S±0°.09×139°.1E±0°.4, h35km, n9, σ0§69/9, mb3.6/4, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**12.11**	**213**	*eP*	**Pn**	**16 49 15.3**	**-0.2**
WRAB	**Tennant Creek**	**17.94**	**195**	*eP*	**Pn**	**16 50 32.7**	**+0.6**
	5.2nm,0.8s						
WRA	**Warramunga Arr**	**17.95**	**195**	P	**Pn**	**16 50 31.5**	**-0.8**
	0.2nm,0.3s,baz=15,slow=12,SNR=8.4						
FITZ	**Fitzroy Crossi**	**20.38**	**220**	P	**P**	**16 51 00.1**	**+1.0**
	3.9nm,1.0s,baz=63,slow=14,SNR=3.0						
ASAR	**Alice Springs**	**21.64**	**193**	P	**P**	**16 51 12.2**	**-0.4**
	1.4nm,0.7s,mb3.5,baz=19,slow=12,SNR=15						
CMAR	**Chiang Mai Arr**	**44.69**	**299**	P	**P**	**16 54 34.2**	**-1.0**
	0.5nm,0.7s,mb3.5,baz=120,slow=6.9,SNR=5.0						
MK31	**Makanchi Array**	**69.88**	**322**	*eP*	**P**	**16 57 33.6**	**+1.0**
MKAR	**Makanchi Array**	**69.88**	**322**	P	**P**	**16 57 32.3**	**-0.3**
	0.8nm,0.8s,mb3.7,baz=101,slow=7.5,SNR=7.7						
BVAR	**Borovoye Array**	**79.38**	**325**	P	**P**	**16 58 27.7**	**+0.1**
	1.0nm,0.6s,mb3.9,baz=104,slow=6.3,SNR=6.8						

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*IDC **25** 16:47:29.5±0.9, 53°.14N×167°.38W, h0km, mb3.6/6, mb1 3.9/8, mb1mx3.6/28, mbtmp3.7/8, ML3.2/2, Error ellipse: s-maj=42.7km s-min=14.8km az=172.0*
*ISCJB **25** 16:47:37.7±0.6, 53°.5N±0°.2×167°.6W±0°.2, h81km±7km, mb3.6/5, Error ellipse: s-maj=30.5km s-min=8.3km az=155.1*
*NEIC **25** 16:47:38.7±0.7, 53°.45N×167°.51W, h75km±7km, MG3.6(AEIC), Error ellipse: s-maj=26.8km s-min=7.5km az=161.0*
ISC 25 16:47:38.8±0.6, 53°.5N±0°.2×167°.5W±0°.1, h74km±7km, n13, σ0§82/15, mb3.6/5, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UNV	**Unalaska Valle**	**0.72**	**57**	*eP*	**Pn**	**16 47 54.4**	**+0.3**
NIKO	**Nikolski**	**0.94**	**240**	*eP*	**Pn**	**16 47 56.5**	**-0.1**
NIKO				*eS*	**Sn**	**16 48 09.9**	**0.0**
AKUT	**Akutan**	**1.24**	**56**	*eP*	**Pn**	**16 48 00.9**	**+0.6**
SDPT	**Sand Point**	**4.53**	**62**	*eP*	**Pn**	**16 48 46.1**	**+1.4**
OHAK	**Old Harbor**	**8.94**	**59**	*eP*	**Pn**	**16 49 43.0**	**-1.9**
	61nm,1.4s						
KDAK	**Kodiak Island**	**9.49**	**57**	Pn	**Pn**	**16 49 50.8**	**-1.5**
	0.3nm,0.3s,baz=236,slow=7.3,SNR=3.3						
KDAK				Sn	**Sn**	**16 51 27.1**	**-10**
	0.2nm,0.3s,baz=357,slow=18,SNR=1.9						
FX1	**Attu Island--F**	**11.61**	**275**	Pn	**Pn**	**16 50 21.5**	**+0.2**
	0.4nm,0.3s,baz=120,slow=20,SNR=5.3						
PETK	**Petropavlovsk-**	**20.68**	**283**	P	**P**	**16 52 12.6**	**+0.2**
	0.7nm,0.5s,baz=84,slow=13,SNR=8.3						
YKA	**Yellowknife Ar**	**28.68**	**51**	P	**P**	**16 53 28.8**	**+0.6**
	0.3nm,0.4s,mb3.3,baz=276,slow=8.2,SNR=4.6						
PDAR	**Pinedale Array**	**39.12**	**82**	P	**P**	**16 54 59.1**	**+0.6**
	0.6nm,0.7s,mb3.5,baz=308,slow=5.5,SNR=4.3						
TXAR	**Lajitas Array**	**51.63**	**91**	P	**P**	**16 56 38.0**	**+0.4**
	0.5nm,0.5s,mb3.8,baz=297,slow=5.7,SNR=9.6						
WRA	**Warramunga Arr**	**88.56**	**233**	P	**P**	**17 00 22.2**	**-0.8**
	0.4nm,0.7s,mb3.6,baz=32,slow=5.8,SNR=3.6						
ASAR	**Alice Springs**	**91.95**	**232**	P	**P**	**17 00 38.7**	**-0.1**
	0.6nm,1.0s,mb3.8,baz=32,slow=4.7,SNR=3.3						

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*ISCJB **25** 16:56:00.2±0.5, 31°.82N±0°.04×104°.67E±0°.05, h10km, mb3.5/5, Error ellipse: s-maj=7.0km s-min=4.5km az=32.9*
*IDC **25** 16:56:01.1±0.9, 31°.92N×104°.69E, h0km, mb3.5/4, mb1 3.7/7, mb1mx3.5/26, mbtmp3.5/7, ML3.2/2, MS3.6/2, Ms1 3.7/2, ms1mx2.8/34, Error ellipse: s-maj=36.9km s-min=17.4km az=59.0*
*NEIC **25** 16:56:03.3±0.7, 31°.94N×104°.53E, h10km, Error ellipse: s-maj=19.9km s-min=11.8km az=65.0*
*BJI **25** 16:56:03.7, 31°.81N×104°.50E, h14km, mb3.9/2, ML3.7/13, Ms3.4/5, Ms7 3.4/4*
ISC 25 16:56:02.1±0.5, 31°.84N±0°.03×104°.57E±0°.05, h10km, n15, σ1§37/23, mb3.5/5, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.16**	**217**	⇑*i*Pg	**Pg**	**16 56 23.5**	**-0.9**
CD2				Sg	**Sg**	**16 56 38.0**	**-1.4**
CD2				smax			
	comp=N,6μm,0.6s						
CD2				smax			
	comp=E,7μm,0.5s						
XAN	**Xi'an**	**4.27**	**58**	Pn	**Pn**	**16 57 10.0**	**+2.9**
XAN				Pg	**Pg**	**16 57 22.5**	**-1.4**
XAN				Sn	**Sn**	**16 57 56.0**	**-1.0**
XAN				Sg	**Sg**	**16 58 19.5**	**+0.3**
XAN				smax			
	comp=N,250nm,0.4s						
XAN				smax			
	comp=E,99nm,0.5s						
XAN				LR	LR		
	comp=N,290nm,9.0s						
XAN				LR	LR		
	comp=E,62nm,6.8s						
XAN				LR	LR		
	comp=Z,68nm,9.0s						
LZH	**Lanzhou**	**4.28**	**352**	Pn	**Pn**	**16 57 10.8**	**+3.6**
LZH				Pg	**Pg**	**16 57 22.8**	**-1.2**
LZH				Sn	**Sn**	**16 57 59.0**	**+1.8**
LZH				Sg	**Sg**	**16 58 17.5**	**-1.9**
LZH				smax			
	comp=N,110nm,0.5s						
LZH				smax			
	comp=E,110nm,0.7s						
LZH				LR	LR		
	comp=E,280nm,5.1s						
LZH				LR	LR		
	comp=Z,300nm,6.0s						
ENH	**Enshi**	**4.50**	**109**	*e*Pn	**Pn**	**16 57 14.5**	**+4.1**
GYA	**Guiyang**	**5.67**	**161**	Pn	**Pn**	**16 57 28.8**	**+2.4**
GYA				Sn	**Sn**	**16 58 31.5**	**-0.1**
GYA				Sg	**Sg**	**16 59 01.8**	**-2.4**
GYA				smax			
	comp=N,100nm,0.8s						
GYA				smax			
	comp=E,140nm,0.8s						
CMAR	**Chiang Mai Arr**	**14.26**	**202**	Pn	**Pn**	**16 59 28.1**	**+3.9**
	baz=34,slow=13,SNR=3.6						
CMAR				LR	LR	17 06 03.5	
	comp=E,43nm,21.6s,baz=215,slow=42						
SONM	**Songino Array**	**16.03**	**4**	Pn	**Pn**	**16 59 47.8**	**+0.2**
	comp=E,0.1nm,0.3s,baz=185,slow=12,SNR=4.4						
KSRS	**Korea Array**	**20.00**	**67**	P	**Pn**	**17 00 34.2**	**-2.3**
	comp=E,0.1nm,0.3s,baz=263,slow=10,SNR=5.8						
MKAR	**Makanchi Array**	**22.69**	**318**	P	**P**	**17 01 04.5**	**+0.8**
	comp=E,0.3nm,0.6s,mb2.9,baz=107,slow=14,SNR=4.3						
ZALV	**Zalesovo Beam**	**26.24**	**333**	P	**P**	**17 01 37.3**	**+0.2**
	comp=E,0.6nm,0.4s,mb3.5,baz=142,slow=9.7,SNR=2.9						
KURK	**Kurchatov**	**26.90**	**322**	P	**P**	**17 01 43.6**	**+0.5**
	comp=E,0.3nm,0.2s,mb3.4,baz=126,slow=9.3,SNR=2.9						
WRAB	**Tennant Creek**	**58.87**	**147**	*eP*	**P**	**17 06 01.9**	**+0.7**
WRA	**Warramunga Arr**	**58.87**	**147**	P	**P**	**17 06 01.9**	**+0.7**
	comp=E,0.8nm,0.5s,mb4.0,baz=340,slow=7.9,SNR=14						
ASAR	**Alice Springs**	**61.92**	**149**	P	**P**	**17 06 22.4**	**+0.5**
	comp=E,0.4nm,0.5s,mb3.8,baz=335,slow=6.7,SNR=15						
PDAR	**Pinedale Array**	**99.42**	**25**	LR	LR	17 56 25.7	
	comp=E,138nm,20.1s,baz=84,slow=36						

IDC 25 17:03:27.4±7.5, 2°.79N×127°.11E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.3/19, mbtmp3.6/3, Error ellipse: s-maj=145.4km s-min=116.2km az=77.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.68**	**163**	P	P	17 08 39.5	-1.6
	0.9nm,0.3s,baz=342,slow=11,SNR=13						
ASAR	**Alice Springs**	**27.11**	**166**	P	P	17 09 14.0	+1.8
	0.2nm,0.4s,baz=354,slow=8.4,SNR=5.9						
STKA	**Stephens Creek**	**37.12**	**159**	P	P	17 10 39.5	-0.3
	0.9nm,0.4s,baz=349,slow=10,SNR=4.0						

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*IDC **25** 17:06:56.6±4.9, 14°.04N×91°.54W, h59km±34km, mb3.5/1, mb1 3.7/3, mb1mx3.3/19, mbtmp3.3/3, ML3.8/2, MS2.8/1, Ms1 2.8/1, ms1mx2.7/33, Error ellipse: s-maj=51.0km s-min=12.2km az=3.0*
*ISCJB **25** 17:07:00.5±1.0, 14°.55N±0°.08×91°.61W±0°.05, h71km±8km, Error ellipse: s-maj=12.6km s-min=7.3km az=178.0*
*MEX **25** 17:07:02.9±0.8, 14°.54N×91°.77W, h86km±8km, MD4.3*
ISC 25 17:07:01.4±1.1, 14°.52N±0°.08×91°.68W±0°.04, h64km±10km, n15, σ1§30/26, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.69**	**304**	*i* P	**Pn**	**17 07 16.8**	**+1.0**
THIG				*i* S	**Sn**	**17 07 28.1**	**+1.7**
APG	**El Apazote**	**1.27**	**68**	P	**Pn**	**17 07 20.3**	**-2.9**
	25nm,0.3s,baz=217,slow=6.3,SNR=157						
APG				S	**Sn**	**17 07 38.1**	**-1.3**
	33nm,0.3s,baz=345,slow=20,SNR=17						
PCIG		**1.90**	**308**	*i* P	**Pn**	**17 07 32.0**	**+0.4**
PCIG				*i* S	**Sn**	**17 07 53.0**	**-1.6**
SCX	**San Cristobal**	**2.39**	**337**	*i* P	**Pn**	**17 07 37.8**	**-0.5**
SCX				*i* S	**Sn**	**17 08 07.4**	**+1.0**
TGIG		**2.64**	**328**	*i* P	**Pn**	**17 07 42.0**	**+0.3**
TGIG				*i* S	**Sn**	**17 08 12.1**	**-0.5**
CMIG	**Matias Romero**	**4.01**	**310**	P	**Pn**	**17 08 01.6**	**+1.2**
	6.7nm,0.3s,baz=122,slow=8.6,SNR=40						
CMIG				S	**Sn**	**17 08 51.5**	**+5.4**
	5.5nm,0.3s,baz=240,slow=16,SNR=6.7						
CMIG				LR	LR	17 09 09.8	
	comp=Z,95nm,18.8s,baz=8.0,slow=30						
SCIG	**Sabancuy**	**4.44**	**6**	*i* P	**Pn**	**17 08 06.9**	**+0.5**
SCIG				*i* S	**Sn**	**17 08 57.6**	**+0.8**
HUIG	**Huatulco**	**4.46**	**287**	*e*P	**Pn**	**17 08 06.0**	**-0.5**
HUIG				*i* S	**Sn**	**17 08 55.0**	**-2.1**
VHO	**Vista Hermosa**	**5.49**	**298**	*i* P	**Pn**	**17 08 20.8**	**+0.1**
VHO				*i* S	**Sn**	**17 09 21.5**	**-1.0**
PNIG	**Pinotepa**	**6.49**	**287**	*e*P	**Pn**	**17 08 38.4**	**+4.0**
PNIG				*i* S	**Sn**	**17 09 51.0**	**+3.9**
UTMO	**Huajuapan**	**6.74**	**300**	*e*P	**Pn**	**17 08 39.9**	**+2.1**
UTMO				*i* S	**Sn**	**17 09 51.2**	**-2.0**
PPM	**Popocatepetl**	**8.04**	**305**	*e*P	**Pn**	**17 08 59.1**	**+3.4**
PPM				*i* S	**Sn**	**17 10 23.6**	**-1.6**
TXAR	**Lajitas Array**	**18.44**	**325**	P	**Pn**	**17 11 12.4**	**-0.2**
	0.1nm,0.3s,baz=134,slow=7.6,SNR=2.8						
NVAR	**Mina Array Bea**	**33.47**	**320**	P	**P**	**17 13 35.8**	**+1.3**
	0.9nm,0.8s,baz=140,slow=9.0,SNR=5.9						
CMAR	**Chiang Mai Arr**	**145.60**	**342**	PKPbc	PKPbc	17 26 29.3	-4.3
	1.4nm,0.6s,baz=336,slow=3.5,SNR=12						

IDC 25 17:16:32.1±50.0, 22°.28S×176°.21W, h0km, mb4.2/3, mb1 4.3/3, mb1mx3.8/16, mbtmp4.2/3, Error ellipse: s-maj=922.0km s-min=163.9km az=86.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.56**	**246**	P	P	17 23 57.1	+0.3
	3.2nm,1.1s,baz=101,slow=10,SNR=4.3						
ASAR	**Alice Springs**	**45.76**	**258**	P	P	17 24 55.4	-0.2
	1.5nm,0.6s,baz=95,slow=7.3,SNR=31						
WRA	**Warramunga Arr**	**46.03**	**263**	P	P	17 24 57.6	-0.1
	1.8nm,0.3s,baz=102,slow=8.3,SNR=54						

IDC 25 17:30:50.3±15.0, 23°.40S×179°.58E, h650km±203km, mb3.2/5, mb1 3.4/5, mb1mx3.1/15, mbtmp3.2/5, Error ellipse: s-maj=106.1km s-min=71.9km az=148.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**31.09**	**270**	P	P	17 36 19.1	+0.2
	9.2nm,0.5s,baz=102,slow=11,SNR=12						
STKA	**Stephens Creek**	**34.55**	**247**	P	P	17 36 47.6	-0.1
	3.6nm,1.0s,baz=72,slow=9.6,SNR=3.3						
ASAR	**Alice Springs**	**41.73**	**260**	P	P	17 37 45.9	+0.4
	1.5nm,0.6s,baz=94,slow=7.2,SNR=22						
WRA	**Warramunga Arr**	**42.05**	**266**	P	P	17 37 48.0	0.0
	1.2nm,0.3s,baz=103,slow=8.5,SNR=42						
TXAR	**Lajitas Array**	**90.50**	**58**	P	P	17 42 45.2	+0.2
	0.5nm,0.7s,baz=212,slow=6.8,SNR=4.9						

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*IDC **25** 17:36:08.2±1.2, 6°.20S×130°.38E, h0km, mb3.9/3, mb1 4.3/6, mb1mx3.9/16, mbtmp4.1/6, ML4.3/3, Error ellipse: s-maj=73.2km s-min=19.7km az=73.0*
*NEIC **25** 17:36:21.5±3.4, 6°.54S×130°.19E, h120km±35km, mb4.0/2, Error ellipse: s-maj=34.7km s-min=25.4km az=69.0*
ISC 25 17:36:16.2±4.2, 6°.4S±0°.2×130°.3E±0°.2, h65km±43km, n12, σ0§58/14, mb3.7/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.65**	**162**	*e*P	**Pn**	**17 37 57.2**	**+6.0**
	36nm,0.6s						
KAKA				*e*S	**Sn**	**17 39 05.7**	**+0.1**
KAKA	**Kakadu**	**6.65**	**162**	*e*P	**Pn**	**17 37 56.7**	**+5.5**
	110nm,0.4s						
KAKA				*e*S	**Sn**	**17 39 05.1**	**-0.6**
FITZ	**Fitzroy Crossi**	**12.53**	**201**	*e*P	**Pn**	**17 39 12.1**	**+0.4**
	5.2nm,0.2s						
FITZ				*e*S	Sx	17 41 19.5	
FITZ	**Fitzroy Crossi**	**12.53**	**201**	Pn	**Pn**	**17 39 12.1**	**+0.4**
	1.8nm,0.3s,baz=36,slow=7.7,SNR=17						
FITZ				Sn	Sx	17 41 17.2	
	0.7nm,0.3s,baz=348,slow=20,SNR=3.4						
WRAB	**Tennant Creek**	**14.05**	**164**	*e*P	**Pn**	**17 39 31.8**	**-0.3**
	9.0nm,0.6s						
WRAB				*e*S	Sx	17 41 55.4	
WRA	**Warramunga Arr**	**14.05**	**164**	Pn	**Pn**	**17 39 31.9**	**-0.2**
	0.9nm,0.3s,baz=343,slow=13,SNR=14						
WRA				Sn	Sx	17 41 55.3	
	2.6nm,0.3s,baz=340,slow=22,SNR=9.8						
ASAR	**Alice Springs**	**17.55**	**169**	P	**Pn**	**17 40 17.6**	**+1.1**
	2.2nm,0.3s,baz=345,slow=9.2,SNR=78						
ASAR				S	Sx	17 43 22.0	
	0.4nm,0.3s,baz=358,slow=25,SNR=5.0						
MBWA	**Marble Bar**	**17.93**	**214**	*e*P	**Pn**	**17 40 20.6**	**-0.6**
	3.9nm,0.8s						
STKA	**Stephens Creek**	**27.48**	**159**	*e*P	**P**	**17 41 56.2**	**-0.2**
	1.8nm,0.3s,mb4.1						
STKA	**Stephens Creek**	**27.48**	**159**	P	**P**	**17 41 56.3**	**-0.1**
	2.0nm,0.3s,mb4.1,baz=335,slow=9.8,SNR=16						
SONM	**Songino Array**	**57.94**	**341**	P	**P**	**17 46 01.0**	**-0.7**
	0.1nm,0.3s,mb3.3,baz=155,slow=6.3,SNR=2.8						
MKAR	**Makanchi Array**	**67.87**	**327**	P	**P**	**17 47 08.4**	**+0.7**
	0.7nm,0.4s,mb3.8,baz=141,slow=6.6,SNR=14						

IDC 25 17:42:16.4±5.9, 19°.98S×177°.05W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/16, mbtmp3.8/3, Error ellipse: s-maj=184.4km s-min=95.6km az=144.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.82**	**244**	P	P	17 49 42.2	-0.9
	1.3nm,0.5s,baz=100,slow=11,SNR=3.9						
ASAR	**Alice Springs**	**45.51**	**256**	P	P	17 50 38.0	+0.2
	1.1nm,0.7s,baz=88,slow=8.6,SNR=20						
WRA	**Warramunga Arr**	**45.56**	**261**	P	P	17 50 38.6	+0.3
	0.4nm,0.7s,baz=97,slow=7.4,SNR=9.7						
AKASG	**Malin Array Be**	**142.98**	**332**	PKP	PKPdf	18 01 51.2	-0.7
	1.1nm,0.4s,baz=44,slow=4.1,SNR=8.5						

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*PDG **25** 18:05:28.4±0.8, 41°.35N×19°.63E, h11km±1km, MD3.8/10, ML3.8/5, Error ellipse: s-maj=0.8km s-min=1.0km az=0.0*
*CSEM **25** 18:05:28.9±0.1, 41°.39N×19°.59E, h10km, Ms3.6, Error ellipse: s-maj=2.8km s-min=1.9km az=46.0*
*LDG **25** 18:05:28.6±0.1, 41°.41N×19°.67E, h10km, Ml4.0/10, Error ellipse: s-maj=2.6km s-min=1.5km az=33.0*
*NEIC **25** 18:05:28.4, 41°.35N×19°.63E, h11km, ML4.0(ATH), ML3.8(PDG), After PDG.*
*VIE **25** 18:05:29.5±0.4, 41°.42N×19°.55E, h10km, mb3.1/6, Ms3.6/6, Error ellipse: s-maj=3.8km s-min=2.9km az=76.0 15 km NNE of Durres*
*BEO **25** 18:05:29.9±0.6, 41°.44N×19°.68E, h9km±3km, ML3.7/6*
*THE **25** 18:05:30.6, 41°.44N×19°.79E, h9km, ML4.1/15, Error ellipse: s-maj=1.2km s-min=0.7km az=279.0*
*IDC **25** 18:05:32.0±2.2, 41°.44N×19°.58E, h48km±20km, mb3.5/6, mb1 3.7/10, mb1mx3.5/28, mbtmp3.7/10, ML3.8/5, MS2.5/1, Ms1 2.6/1, ms1mx2.2/29, Error ellipse: s-maj=23.0km s-min=16.3km az=24.0*
ISC 25 18:05:29.7±0.3, 41°.40N±0°.01×19°.59E±0°.02, h15km±2km, n294, σ1§29/438, mb4.0/5, 28C-36D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.21**	**104**	⇓*i*Pg	**Pg**	**18 05 33.6**	**-1.0**
TIR				*i* Sg	**Sg**	**18 05 36.8**	**-1.1**
TIR	**Tirane**	**0.21**	**104**	P	**Pg**	**18 05 33.1**	**-1.5**
TIR	**Tirane**	**0.21**	**104**	P	**Pg**	**18 05 33.5**	**-1.1**
TIR	**Tirane**	**0.21**	**104**	P	**Pg**	**18 05 33.5**	**-1.1**
TIR				*i* Sg	**Sg**	**18 05 36.8**	**-1.1**
LACI	**Lac**	**0.25**	**21**	PG	**Pg**	**18 05 34.9**	**-0.3**
LACI				SG	**Sg**	**18 05 39.5**	**+0.5**
LACI	**Lac**	**0.25**	**21**	*i* Pg	**Pg**	**18 05 34.9**	**-0.3**
LACI				*i* Sg	**Sg**	**18 05 39.5**	**+0.5**
ULC	**Ulcinj**	**0.62**	**336**	PG	**Pg**	**18 05 41.0**	**-0.8**
ULC	**Ulcinj**	**0.62**	**336**	⇓*i*Pg	**Pg**	**18 05 41.4**	**-0.4**
ULC				*e*Sg	**Sg**	**18 05 51.6**	**+1.6**
ULC	**Ulcinj**	**0.62**	**336**	⇓*i*Pg	**Pg**	**18 05 41.4**	**-0.4**
ULC				*e*Sg	**Sg**	**18 05 51.6**	**+1.6**
PUK	**Puka**	**0.68**	**19**	PG	**Pg**	**18 05 42.0**	**-1.0**
PUK				SG	**Sg**	**18 05 54.5**	**+2.5**
PUK	**Puka**	**0.68**	**19**	*e*Pg	**Pg**	**18 05 42.0**	**-1.0**
PUK				*i* Sg	**Sg**	**18 05 54.5**	**+2.5**
OHR	**Ohrid**	**0.96**	**107**	PG	**Pg**	**18 05 44.8**	**-3.4**
OHR	**Ohrid**	**0.96**	**107**	*i* Pg	**Pg**	**18 05 45.2**	**-3.0**
OHR				*i* Sg	**Sg**	**18 05 59.5**	**-1.2**
OHR	**Ohrid**	**0.96**	**107**	P	**Pg**	**18 05 45.5**	**-2.7**
OHR				S	**Sg**	**18 05 57.5**	**-3.2**
OHR	**Ohrid**	**0.96**	**107**	*e*Pg	**Pg**	**18 05 44.8**	**-3.4**
OHR	**Ohrid**	**0.96**	**107**	P	**Pg**	**18 05 45.5**	**-2.7**
OHR				S	**Sg**	**18 05 57.5**	**-3.2**
BCI	**Bajram Curri**	**1.03**	**20**	PG	**Pg**	**18 05 47.2**	**-2.4**
BCI				SG	**Sg**	**18 06 05.6**	**+2.5**
BCI	**Bajram Curri**	**1.03**	**20**	*e*Pg	**Pg**	**18 05 47.2**	**-2.4**
BCI				*i* Sg	**Sg**	**18 06 05.6**	**+2.5**
BUM	**Brajici-Budva**	**1.04**	**330**	PG	**Pg**	**18 05 50.7**	**+1.0**
BUM	**Brajici-Budva**	**1.04**	**330**	⇓*i*Pg	**Pg**	**18 05 49.5**	**-0.2**
BUM				*e*Sg	**Sg**	**18 06 06.3**	**+3.0**
BUM	**Brajici-Budva**	**1.04**	**330**	⇓*i*Pg	**Pg**	**18 05 49.5**	**-0.2**
BUM				*e*Sg	**Sg**	**18 06 06.3**	**+3.0**
PDG	**Podgorica**	**1.06**	**347**	PG	**Pg**	**18 05 49.0**	**-1.1**
PDG	**Podgorica**	**1.06**	**347**	⇓*i*Pg	**Pg**	**18 05 49.2**	**-0.9**
PDG				*e*Sg	**Sg**	**18 06 06.3**	**+2.3**
TTG	**Podgorica**	**1.06**	**347**	⇓*i*Pg	**Pg**	**18 05 49.2**	**-0.9**
TTG				*e*Sg	**Sg**	**18 06 06.3**	**+2.3**
TTG	**Podgorica**	**1.06**	**347**	⇓*i*Pg	**Pg**	**18 05 49.2**	**-0.9**
TTG				*e*Sg	**Sg**	**18 06 06.3**	**+2.3**
KBN	**Korca**	**1.19**	**130**	PG	**Pg**	**18 05 50.7**	**-2.0**
KBN	**Korca**	**1.19**	**130**	*e*Pg	**Pg**	**18 05 50.7**	**-2.0**
PVY	**Plav**	**1.23**	**13**	PG	**Pg**	**18 05 51.0**	**-2.4**
PVY	**Plav**	**1.23**	**13**	⇓*i*Pg	**Pg**	**18 05 51.2**	**-2.2**
PVY				*e*Sg	**Sg**	**18 06 11.9**	**+2.5**
PVY	**Plav**	**1.23**	**13**	⇓*i*Pg	**Pg**	**18 05 51.2**	**-2.2**
PVY				*e*Sg	**Sg**	**18 06 11.9**	**+2.5**
KRUS	**Krusevo**	**1.25**	**91**	*i* Pg	**Pg**	**18 05 49.6**	**-4.2**
KRUS				*i* Sg	**Sg**	**18 06 07.9**	**-2.1**
HCY	**Herceg Novi**	**1.32**	**323**	*e*Pg	**Pg**	**18 05 54.1**	**-1.1**
HCY				*e*Sg	**Sg**	**18 06 14.6**	**+2.1**
HCY	**Herceg Novi**	**1.32**	**323**	*e*Pg	**Pg**	**18 05 54.1**	**-1.1**
HCY				*e*Sg	**Sg**	**18 06 14.6**	**+2.1**
BIA	**Bitola**	**1.36**	**106**	*i* Pg	**Pn**	**18 05 52.2**	**-1.9**
BIA				*i* Sg	**Sg**	**18 06 12.0**	**-1.7**
BIA	**Bitola**	**1.36**	**106**	P	**Pn**	**18 05 53.8**	**-1.1**
BIA				S	**Sn**	**18 06 11.5**	**-0.4**
BIA	**Bitola**	**1.36**	**106**	P	**Pn**	**18 05 53.0**	**-1.1**
BIA				S	**Sn**	**18 06 11.5**	**-0.4**
NKY	**Niksic**	**1.48**	**343**	⇑*i*Pg	**Pn**	**18 05 56.6**	**+0.9**
NKY				*e*Sg	**Sg**	**18 06 19.0**	**+1.6**
NKY	**Niksic**	**1.48**	**343**	⇑*i*Pg	**Pn**	**18 05 56.6**	**+0.9**
NKY				*e*Sg	**Sg**	**18 06 19.0**	**+1.6**
FNA	**Florina**	**1.48**	**114**	PG	**Pn**	**18 05 55.8**	**0.0**
FNA	**Florina**	**1.48**	**114**	P	**Pn**	**18 05 55.4**	**-0.4**
FNA	**Florina**	**1.48**	**114**	P	**Pn**	**18 05 55.4**	**-0.4**
FNA				S	**Sn**	**18 06 14.1**	**-0.8**
FNA	**Florina**	**1.48**	**114**	P	**Pn**	**18 05 55.4**	**-0.4**
FNA	**Florina**	**1.48**	**114**	*e*Pg	**Pn**	**18 05 55.8**	**0.0**
FNA				S	**Sn**	**18 06 14.1**	**-0.8**
BEY	**Berane**	**1.49**	**9**	⇓*i*Pg	**Pn**	**18 05 56.1**	**+0.3**
BEY				*e*Sg	**Sg**	**18 06 19.2**	**+1.5**
IVA	**Berane**	**1.49**	**9**	⇓*i*Pg	**Pn**	**18 05 56.1**	**+0.3**
IVA				*e*Sg	**Sg**	**18 06 19.2**	**+1.5**
IVA	**Berane**	**1.49**	**9**	⇓*i*Pg	**Pn**	**18 05 56.1**	**+0.3**
IVA				*e*Sg	**Sg**	**18 06 19.2**	**+

THL				S	Sn	18 06 43.1	+0.6
THL	**Klokotos Trika**	**2.60**	**134**	P	Pn	18 06 11.3	+0.1
THL				S	Sn	18 06 43.1	+0.6
GRUS	**Gruza**	**2.62**	**18**	*e*Pn	Pn	18 06 11.4	0.0
GRUS	**Gruza**	**2.62**	**18**	*e*Pn	Pn	18 06 11.4	0.0
NISS		**2.66**	**40**	*e*Pn	Pn	18 06 11.8	-0.1
NISS		**2.66**	**40**	*e*Pn	Pn	18 06 11.8	-0.1
THE	**Thessaloniki**	**2.67**	**106**	P	Pn	18 06 11.7	-0.3
THE				S	Sn	18 06 43.9	-0.1
THE	**Thessaloniki**	**2.67**	**106**	P	Pn	18 06 11.7	-0.3
THE				S	Sn	18 06 43.9	-0.1
DIVS	**Divibare**	**2.71**	**6**	⇑*i*Pn	Pn	18 06 13.3	+0.6
DIVS	**Divibare**	**2.71**	**6**	P	Pn	18 06 13.3	+0.6
DIVS				S	Sn	18 06 45.5	+0.3
DIVS	**Divibare**	**2.71**	**6**	P	Pn	18 06 13.3	+0.6
DIVS				S	Sn	18 06 45.5	+0.3
MS1	**Monte Sant'Ang**	**2.75**	**278**	*i* Pn	Pn	18 06 13.4	+0.2
MS1				*e*Sn	Sn	18 06 47.9	+1.7
HORT	**Hortiatis**	**2.78**	**106**	P	Pn	18 06 13.0	-0.5
HORT				S	Sn	18 06 45.7	-1.0
HORT	**Hortiatis**	**2.78**	**106**	P	Pn	18 06 13.0	-0.5
HORT				S	Sn	18 06 45.7	-1.0
TRUS	**Trudelj**	**2.88**	**12**	*e*Pn	Pn	18 06 16.0	+1.0
TRUS	**Trudelj**	**2.88**	**12**	*e*Pn	Pn	18 06 16.0	+1.0
SOH	**Sokhos**	**2.90**	**100**	P	Pn	18 06 15.3	0.0
SOH	**Sokhos**	**2.90**	**100**	P	Pn	18 06 15.1	-0.2
SOH				S	Sn	18 06 49.3	-0.6
SOH	**Sokhos**	**2.90**	**100**	P	Pn	18 06 15.1	-0.2
SOH				S	Sn	18 06 49.3	-0.6
ZAPS	**Zavoj**	**2.93**	**49**	⇑*i*Pn	Pn	18 06 16.5	+0.8
BOLS	**Boljevac**	**2.99**	**35**	*e*Pn	Pn	18 06 16.3	-0.2
BOLS	**Boljevac**	**2.99**	**35**	*e*Pn	Pn	18 06 16.3	-0.2
EVR	**Evrytania**	**3.01**	**145**	P	Pn	18 06 19.1	+2.4
EVR	**Evrytania**	**3.01**	**145**	*e*P	Pn	18 06 18.9	+2.2
EVR	**Evrytania**	**3.01**	**145**	P	Pn	18 06 19.1	+2.4
SRS	**Serrai**	**3.03**	**94**	P	Pn	18 06 16.5	-0.5
SRS	**Serrai**	**3.03**	**94**	P	Pn	18 06 16.6	-0.4
SRS	**Serrai**	**3.03**	**94**	P	Pn	18 06 16.6	-0.4
PLG	**Polygyros**	**3.10**	**108**	P	Pn	18 06 17.7	-0.3
PLG	**Polygyros**	**3.10**	**108**	P	Pn	18 06 17.6	-0.4
PLG				S	Sn	18 06 54.8	+0.1
PLG	**Polygyros**	**3.10**	**108**	*e*P	Pn	18 06 17.5	-0.5
PLG	**Polygyros**	**3.10**	**108**	P	Pn	18 06 17.7	-0.3
PLG				S	Sn	18 06 54.8	+0.1
TIP	**Timpagrande**	**3.10**	**225**	P	Pn	18 06 17.3	-0.7
TIP	**Timpagrande**	**3.10**	**225**	P	Pn	18 06 17.3	-0.7
SVIS	**Svilajnac**	**3.10**	**22**	*e*Pn	Pn	18 06 19.0	+1.0
AGG	**Agios Georgios**	**3.17**	**138**	P	Pn	18 06 20.2	+1.3
AGG	**Agios Georgios**	**3.17**	**138**	P	Pn	18 06 20.0	+1.1
AGG				S	Sn	18 06 57.1	+0.7
AGG	**Agios Georgios**	**3.17**	**138**	P	Pn	18 06 20.0	+1.1
AGG				S	Sn	18 06 57.1	+0.7
NVR	**Nevrokopi**	**3.22**	**89**	P	Pn	18 06 20.0	+0.4
NVR	**Nevrokopi**	**3.22**	**89**	P	Pn	18 06 20.0	+0.4
XOR	**Xorichti**	**3.42**	**125**	P	Pn	18 06 22.2	-0.2
XOR	**Xorichti**	**3.42**	**125**	P	Pn	18 06 21.8	-0.6
XOR				S	Sn	18 07 03.1	+0.5
XOR	**Xorichti**	**3.42**	**125**	P	Pn	18 06 22.2	-0.2
XOR				S	Sn	18 07 03.1	+0.5
PAIG	**Paliouri**	**3.44**	**114**	P	Pn	18 06 22.3	-0.4
PAIG	**Paliouri**	**3.44**	**114**	P	Pn	18 06 22.8	+0.1
PAIG				S	Sn	18 07 02.7	-0.5
PAIG	**Paliouri**	**3.44**	**114**	P	Pn	18 06 22.3	-0.4
PAIG				S	Sn	18 07 02.7	-0.5
EFP	**Efpalio**	**3.46**	**148**	P	Pn	18 06 24.3	+1.3
EFP				S	Sn	18 07 05.5	+1.8
EFP	**Efpalio**	**3.46**	**148**	P	Pn	18 06 24.3	+1.3
EFP				S	Sn	18 07 05.5	+1.8
OUR	**Ouranopolis**	**3.50**	**106**	P	Pn	18 06 22.6	-0.8
OUR				S	Sn	18 07 03.3	-1.2
OUR	**Ouranopolis**	**3.50**	**106**	P	Pn	18 06 22.6	-0.8
OUR				S	Sn	18 07 03.3	-1.2
TRIZ	**Trizonia**	**3.58**	**147**	P	Pn	18 06 26.0	+1.4
TRIZ				S	Sn	18 07 08.1	+1.5
TRIZ	**Trizonia**	**3.58**	**147**	P	Pn	18 06 26.0	+1.4
TRIZ				S	Sn	18 07 08.1	+1.5
LAKA	**Lakka**	**3.65**	**149**	P	Pn	18 06 26.3	+0.7
LAKA				S	Sn	18 07 10.3	+1.9
LAKA	**Lakka**	**3.65**	**149**	P	Pn	18 06 26.3	+0.7
LAKA				S	Sn	18 07 10.3	+1.9
KAVA	**Kavala**	**3.74**	**95**	P	Pn	18 06 26.6	-0.1
KAVA				S	Sn	18 07 09.4	-1.1
KAVA	**Kavala**	**3.74**	**95**	P	Pn	18 06 26.6	-0.1
KAVA				S	Sn	18 07 09.4	-1.1
DSF	**Desfina**	**3.74**	**142**	P	Pn	18 06 27.6	+0.8
DSF				S	Sn	18 07 12.2	+1.6
DSF	**Desfina**	**3.74**	**142**	P	Pn	18 06 27.6	+0.8
DSF				S	Sn	18 07 12.2	+1.6
FRGS	**Fruska Gora**	**3.76**	**2**	⇓*i*Pn	Pn	18 06 26.9	-0.1
LKR	**Lokris**	**3.79**	**135**	P	Pn	18 06 28.2	+0.7
LKR				S	Sn	18 07 12.5	+0.6
LKR	**Lokris**	**3.79**	**135**	P	Pn	18 06 28.2	+0.7
LKR				S	Sn	18 07 12.5	+0.6
PLD	**Plovdiv**	**3.89**	**78**	P	Pn	18 06 29.1	+0.3
PLD				S	Sn	18 07 13.2	-1.0
PLD	**Plovdiv**	**3.89**	**78**	P	Pn	18 06 29.1	+0.3
PLD				S	Sn	18 07 13.2	-1.0
DJES	**Djerdap**	**3.91**	**32**	*e*Pn	Pn	18 06 29.2	+0.1
AOS	**Alonnisos**	**3.97**	**123**	P	Pn	18 06 29.8	-0.1
AOS	**Alonnisos**	**3.97**	**123**	P	Pn	18 06 29.8	-0.1
CEL	**Celeste**	**4.23**	**223**	P	Pn	18 06 32.7	-0.9
CEL	**Celeste**	**4.23**	**223**	P	Pn	18 06 32.7	-0.9
BZS	**Buzias**	**4.47**	**19**	⇓P	Pn	18 06 36.8	+0.1
BZS				S	Sn	18 07 27.3	-1.1
BZS	**Buzias**	**4.47**	**19**	⇓*i*P	Pn	18 06 36.8	+0.1
BZS	**Buzias**	**4.47**	**19**	S	Sn	18 07 27.3	-1.1
BZS	**Buzias**	**4.47**	**19**	⇓P	Pn	18 06 36.8	+0.1
BZS				S	Sn	18 07 27.3	-1.1
RDO	**Rodhopi**	**4.49**	**91**	P	Pn	18 06 37.0	-0.1
RDO	**Rodhopi**	**4.49**	**91**	P	Pn	18 06 36.9	-0.2
RDO	**Rodhopi**	**4.49**	**91**	*e*P	Pn	18 06 36.7	-0.4
RDO	**Rodhopi**	**4.49**	**91**	P	Pn	18 06 36.9	-0.2
ITM	**Ithomi**	**4.59**	**156**	P	Pn	18 06 38.7	+0.3
ITM	**Ithomi**	**4.59**	**156**	P	Pn	18 06 38.7	+0.3
GZR	**Gura Zlata**	**4.62**	**29**	⇑P	Pn	18 06 40.4	+1.5
GZR				S	Sn	18 07 33.7	+1.5
GZR	**Gura Zlata**	**4.62**	**29**	⇑*i*P	Pn	18 06 40.3	+1.5
GZR	**Gura Zlata**	**4.62**	**29**	S	Sn	18 07 33.7	+1.6
GZR	**Gura Zlata**	**4.62**	**29**	⇑P	Pn	18 06 40.3	+1.5
GZR				S	Sn	18 07 33.7	+1.6
NVLJ	**Novalja**	**4.69**	**314**	*e*Pn	Pn	18 06 40.6	+0.8
NVLJ				Sn	Sn	18 07 33.3	-0.5
NVLJ	**Novalja**	**4.69**	**314**	*e*Pn	Pn	18 06 40.5	+0.7
NVLJ				Sn	Sn	18 07 33.3	-0.5
AQU	**L'Aquila**	**4.72**	**284**	*e*Pn	Pn	18 06 39.8	-0.4
AQU	**L'Aquila**	**4.72**	**284**	*e*Pn	Pn	18 06 39.8	-0.4
VLY	**Voula,Athens**	**4.81**	**136**	P	Pn	18 06 43.3	+1.9
VLY	**Voula,Athens**	**4.81**	**136**	P	Pn	18 06 43.3	+1.9
PKSM	**Moragy**	**4.86**	**352**	⇓P	Pn	18 06 42.3	+0.2
PKSM				S	Sn	18 07 36.7	-1.4
PKSM	**Moragy**	**4.86**	**352**	⇓*i*P	Pn	18 06 42.3	+0.2
PKSM	**Moragy**	**4.86**	**352**	S	Sn	18 07 36.7	-1.4
PKSM	**Moragy**	**4.86**	**352**	⇓P	Pn	18 06 42.3	+0.2
PKSM				S	Sn	18 07 36.7	-1.4
ALN	**Alexandroupoli**	**4.90**	**94**	P	Pn	18 06 42.7	0.0
ALN	**Alexandroupoli**	**4.90**	**94**	P	Pn	18 06 42.7	0.0
ALN	**Alexandroupoli**	**4.90**	**94**	P	Pn	18 06 42.7	0.0
BOJS	**Bojanci**	**5.17**	**324**	*i* Pn	Pn	18 06 47.5	+1.0
BOJS				*i* Sn	Sn	18 07 45.9	0.0
BOJS	**Bojanci**	**5.17**	**324**	*i* Pn	Pn	18 06 47.5	+1.0
BOJS				*i* Sn	Sn	18 07 45.9	0.0
VOIR		**5.67**	**43**	⇑*i*P	Pn	18 06 54.5	+1.3
VOIR		**5.67**	**43**	S	Sn	18 08 00.4	+2.5
VOIR		**5.67**	**43**	⇑*i*P	Pn	18 06 54.5	+1.3
VOIR				S	Sn	18 08 00.4	+2.5
KYTH	**Kithira**	**5.78**	**151**	*e*P	Pn	18 06 55.1	+0.3
DRGR		**5.84**	**22**	⇑P	Pn	18 06 55.8	+0.2
DRGR				S	Sn	18 08 01.2	-1.0
DRGR		**5.84**	**22**	⇑*i*P	Pn	18 06 55.8	+0.2
DRGR		**5.84**	**22**	S	Sn	18 08 01.2	-1.0
DRGR		**5.84**	**22**	⇑P	Pn	18 06 55.8	+0.2
DRGR				S	Sn	18 08 01.2	-1.0
JAVS	**Javornik**	**6.02**	**320**	*i* Pn	Pn	18 06 58.8	+0.7
JAVS				*i* Sn	Sn	18 08 04.5	-2.1
JAVS	**Javornik**	**6.02**	**320**	*i* Pn	Pn	18 06 58.8	+0.7
PERS	**Pernice**	**6.15**	**330**	*i* Pn	Pn	18 07 00.7	+0.9
PERS				*i* Sn	Sn	18 08 06.7	-3.1
PERS	**Pernice**	**6.15**	**330**	*i* Pn	Pn	18 07 00.7	+0.9
MLR	**Muntele Rosu**	**6.17**	**46**	P	Pn	18 07 02.0	+1.8
	2.3nm,0.3s,baz=156,slow=11,SNR=38						
MLR				S	Sn	18 08 09.2	-1.2
	0.4nm,0.3s,baz=152,slow=13,SNR=1.5						
MLR	**Muntele Rosu**	**6.17**	**46**	P	Pn	18 07 02.5	+2.3
MLR	**Muntele Rosu**	**6.17**	**46**	⇑*i*P	Pn	18 07 01.5	+1.3
MLR	**Muntele Rosu**	**6.17**	**46**	P	Pn	18 07 02.5	+2.3
VOY	**Vojsko**	**6.20**	**320**	*e*Pn	Pn	18 07 01.3	+0.7
VOY				*e*Sn	Sn	18 08 09.4	-1.7
VOY	**Vojsko**	**6.20**	**320**	*e*Pn	Pn	18 07 01.3	+0.7
SOKA	**Soboth**	**6.21**	**330**	⇓*i*Pn	Pn	18 07 01.4	+0.6
SOKA				⇓*i*Sn	Sn	18 08 09.1	-2.3
SOKA	**Soboth**	**6.21**	**330**	Pn	Pn	18 07 01.4	+0.7
OBKA	**Obir**	**6.27**	**326**	⇑*i*Pn	Pn	18 07 01.8	+0.3
OBKA				⇑*i*Sn	Sn	18 08 14.7	+1.9
OBKA	**Obir**	**6.27**	**326**	Pn	Pn	18 07 01.8	+0.3
OBKA				Sn	Sn	18 08 14.7	+1.9
PSZ	**Piszkesteto**	**6.52**	**2**	*e*Pn	Pn	18 07 04.8	-0.1
	8.0nm,0.4s						
PSZ	**Piszkesteto**	**6.52**	**2**	⇑*i*P	Pn	18 07 05.3	+0.3
PSZ	**Piszkesteto**	**6.52**	**2**	S	Sn	18 08 16.3	-2.7
PSZ	**Piszkesteto**	**6.52**	**2**	*e*Pn	Pn	18 07 04.8	-0.2
	8.0nm,0.4s						
PSZ	**Piszkesteto**	**6.52**	**2**	⇑*i*P	Pn	18 07 05.3	+0.3
MYKA	**Terra Mystica**	**6.76**	**323**	⇓*i*Pn	Pn	18 07 08.4	+0.2
MYKA				⇑*i*Sn	Sn	18 08 26.4	+1.6
MYKA	**Terra Mystica**	**6.76**	**323**	Pn	Pn	18 07 08.4	+0.2
MYKA				Sn	Sn	18 08 26.4	+1.5
VRI	**Vrincioaia**	**6.84**	**47**	⇓*i*P	Pn	18 07 10.7	+1.4
VRI	**Vrincioaia**	**6.84**	**47**	⇓*i*P	Pn	18 07 10.7	+1.4
ZST	**Bratislava**	**7.02**	**346**	*e*Pn	Pn	18 07 16.5	+4.7
ZST				*e*Sn	Sn	18 08 28.6	-2.7
ZST	**Bratislava**	**7.02**	**346**	*e*PN	Pn	18 07 16.5	+4.7
ZST				*e*SN	Sn	18 08 28.6	-2.7
KECS	**Kecovo**	**7.11**	**5**	*e*Pn	Pn	18 07 14.9	+1.9
KECS				*e*Sn	Sn	18 08 30.8	-2.7
KECS	**Kecovo**	**7.11**	**5**	*e*PN	Pn	18 07 14.9	+1.9
KECS				*e*SN	Sn	18 08 30.8	-2.7
KECS	**Kecovo**	**7.11**	**5**	*e*Pn	Pn	18 07 14.9	+1.9
VYHS	**Vyhne**	**7.11**	**356**	*e*Pn	Pn	18 07 18.6	+5.5
VYHS				*e*Sn	Sn	18 08 32.5	-1.1
VYHS	**Vyhne**	**7.11**	**356**	*e*PN	Pn	18 07 18.6	+5.5
VYHS				*e*SN	Sn	18 08 32.5	-1.1
TIRR	**Tirgusor**	**7.16**	**62**	*e*Pn	Pn	18 07 13.3	-0.4
	5.4nm,0.6s						
TIRR	**Tirgusor**	**7.16**	**62**	*e*Pn	Pn	18 07 13.3	-0.4
	5.4nm,0.6s						
KOLL	**Kolacno**	**7.23**	**354**	*e*Pn	Pn	18 07 20.2	+5.6
KOLL				*e*Sn	Sn	18 08 29.7	-6.7
KOLL	**Kolacno**	**7.23**	**354**	*e*PN	Pn	18 07 20.2	+5.6
KOLL				*e*SN	Sn	18 08 29.7	-6.7
ABTA	**Abfaltersbach**	**7.38**	**319**	⇑*i*Pn	Pn	18 07 17.4	+0.6
ABTA	**Abfaltersbach**	**7.38**	**319**	Pn	Pn	18 07 17.4	+0.6
IDI	**Anoyia**	**7.39**	**144**	P	Pn	18 07 16.1	-0.7
	0.7nm,0.3s,baz=337,slow=11,SNR=6.2						
IDI				S	Sn	18 08 35.3	-5.1
	2.7nm,0.3s,baz=112,slow=23,SNR=7.8						
IDI	**Anoyia**	**7.39**	**144**	P	Pn	18 07 16.1	-0.8
BURAR	**Bucovina Array**	**7.40**	**31**	⇑P	Pn	18 07 17.4	+0.4
BURAR	**Bucovina Array**	**7.40**	**31**	⇑*i*P	Pn	18 07 17.4	+0.4
BURAR	**Bucovina Array**	**7.40**	**31**	⇑P	Pn	18 07 17.4	+0.4
BUR08	**Bucovina Ar. S**	**7.42**	**31**	*e*Pn	Pn	18 07 18.2	+0.9
BUR08	**Bucovina Ar. S**	**7.42**	**31**	*e*Pn	Pn	18 07 18.2	+0.9
CRVS	**Cervenica-Dubn**	**7.62**	**9**	*e*Pn	Pn	18 07 22.6	+2.6
CRVS				*e*Sn	Sn	18 08 42.3	-3.7
CRVS	**Cervenica-Dubn**	**7.62**	**9**	*e*PN	Pn	18 07 22.6	+2.6
CRVS				*e*SN	Sn	18 08 42.3	-3.7
CRVS	**Cervenica-Dubn**	**7.62**	**9**	*e*Pn	Pn	18 07 22.6	+2.6
TLCR		**7.72**	**58**	⇑P	Pn	18 07 22.8	+1.3
TLCR		**7.72**	**58**	⇑*i*P	Pn	18 07 22.8	+1.4
TLCR		**7.72**	**58**	⇑P	Pn	18 07 22.8	+1.4
PGF	**Pioggiola**	**7.97**	**282**	*e*Pn	Pn	18 07 25.4	+0.5
PGF				*e*Sn	Sn	18 08 49.0	-5.8
	0.7nm,0.2s						
PGF	**Pioggiola**	**7.97**	**282**	*e*Pn	Pn	18 07 25.4	+0.5
STHS	**Stebnicka Huta**	**8.10**	**8**	*e*Pn	Pn	18 07 30.0	+3.4
STHS				*e*Sn	Sn	18 08 58.4	+0.6
STHS	**Stebnicka Huta**	**8.10**	**8**	*e*PN	Pn	18 07 30.0	+3.4
STHS				*e*SN	Sn	18 08 58.4	+0.6
WATA	**Walderalm**	**8.25**	**319**	⇑*i*Pn	Pn	18 07 28.8	+0.1
WATA				⇓*i*Sn	Sn	18 09 02.7	+1.1
WATA	**Walderalm**	**8.25**	**319**	Pn	Pn	18 07 28.8	+0.1
WATA				Sn	Sn	18 09 02.7	+1.1
MOTA	**Moosalm**	**8.50**	**317**	⇓*i*Pn	Pn	18 07 32.6	+0.5
MOTA				⇓*i*Sn	Sn	18 09 08.2	+0.7
MOTA	**Moosalm**	**8.50**	**317**	Pn	Pn	18 07 32.6	+0.5
MOTA				Sn	Sn	18 09 08.2	+0.6
KHC	**Kasperske Hory**	**8.81**	**333**	*e*PN	Pn	18 07 37.4	+1.0
KHC				*ex*	x	18 07 46.5	
KHC				*e*SN	Sn	18 09 09.3	-6.0
KHC	**Kasperske Hory**	**8.81**	**333**	Pn	Pn	18 07 37.4	+1.0
DAVOX	**Davos/Dischmat**	**8.81**	**311**	P	Pn	18 07 38.2	+1.8
	0.7nm,0.3s,baz=118,slow=17,SNR=4.2						
DAVOX				S	Sn	18 09 13.3	-2.0
	0.9nm,0.3s,baz=156,slow=23,SNR=2.8						
DAVOX	**Davos/Dischmat**	**8.81**	**311**	P	Pn	18 07 38.2	+1.8
SBF	**Sospel**	**9.29**	**289**	*e*Pn	Pn	18 07 41.3	-1.7
SBF				*e*Sn	Sn	18 09 20.6	-6.5
	11nm,0.4s						
SBF	**Sospel**	**9.29**	**289**	*e*Pn	Pn	18 07 41.3	-1.7
FRF	**La Foret Royal**	**9.80**	**287**	*e*Pn	Pn	18 07 50.8	+0.8
FRF	**La Foret Royal**	**9.80**	**287**	*e*Pn	Pn	18 07 50.8	+0.8
LMR	**La Mourre**	**9.87**	**286**	*e*Pn	Pn	18 07 49.6	-1.3
LMR	**La Mourre**	**9.87**	**286**	*e*Pn	Pn	18 07 49.6	-1.3
MBDF	**Montbardon**	**9.95**	**294**	*e*Pn	Pn	18 07 49.4	-2.6
MBDF				*e*Sn	Sn	18 09 36.5	-6.8
	9.0nm,0.5s						
LPG	**La Plagne**	**10.19**	**298**	*e*Pn	Pn	18 07 53.1	-2.2
LPG				*e*Sn	Sn	18 09 42.0	-7.2
	14nm,0.5s						
LPL	**La Plagne**	**10.21**	**298**	*e*Pn	Pn	18 07 52.8	-2.7
LPL				*e*Sn	Sn	18 09 41.5	-8.2
	12nm,0.4s						
BFO	**Black Forest**	**10.57**	**315**	*e*Pn	Pn	18 07 60.0	-0.5
BFO	**Black Forest**	**10.57**	**315**	*e*Pn	Pn	18 08 00.0	-0.4
ORIF	**Oris-en-Rattie**	**10.61**	**294**	*e*Pn	Pn	18 07 58.0	-3.1
ORIF				*e*Sn	Sn	18 09 51.6	-8.0
	2.7nm,0.3s						
CABF	**La Chapelle**	**11.03**	**303**	*e*Pn	Pn	18 08 04.6	-2.1
HINF	**Hinteralfeld**	**11.11**	**310**	*e*Pn	Pn	18 08 06.5	-1.3
HINF				*e*Sn	Sn	18 10 03.7	-8.0
	4.7nm,0.4s						
HINF	**Hinteralfeld**	**11.11**	**310**	*e*Pn	Pn	18 08 06.5	-1.3
CDF	**Champ du Feu**	**11.19**	**313**	*e*Pn	Pn	18 08 06.7	-2.2
HAU	**Haudompre**	**11.50**	**309**	*e*Pn	Pn	18 08 12.3	-0.8
HAU				*e*Sn	Sn	18 10 12.8	-8.4
	7.2nm,0.3s						
HAU	**Haudompre**	**11.50**	**309**	*e*Pn	Pn	18 08 12.3	-0.8
SMF	**Signal de Mont**	**12.48**	**300**	*e*Pn	Pn	18 08 23.7	-2.9
SMF				*e*Sn	Sn	18 10 36.5	-8.8
	3.6nm,0.2s						
LOR	**Lormes**	**12.69**	**303**	*e*Pn	Pn	18 08 28.8	-0.6
	baz=123						
LOR				*e*Sn	Sn	18 10 41.1	-9.2
	7.7nm,0.3s						
LOR	**Lormes**	**12.69**	**303**	*e*Pn	Pn	18 08 28.8	-0.6
	baz=123						
SSF	**Saint Saulge**	**12.84**	**302**	*e*Pn	Pn	18 08 28.9	-2.6
BGF	**Bois d'Agland**	**13.11**	**299**	*e*Pn	Pn	18 08 33.6	-1.5
BGF	**Bois d'Agland**	**13.11**	**299**	*e*Pn	Pn	18 08 33.6	-1.5
MMAI	**Mount Meron Ar**	**15.11**	**119**	P	Pn	18 09 04.6	+2.2
	1.2nm,0.3s,baz=316,slow=8.3,SNR=6.0						
HFS	**Hagfors**	**19.11**	**351**	P	Pn	18 09 50.4	-2.1
	0.3nm,0.3s,baz=159,slow=13,SNR=6.4						
HFS	**Hagfors**	**19.11**	**351**	P	Pn	18 09 50.4	-2.1
NOA	**NORSAR Array B**	**20.32**	**348**	P	P	18 10 03.7	-1.2
	0.7nm,0.7s,baz=162,slow=8.4,SNR=3.2						
NOA				LR	LR	18 18 51.3	
	comp=Z,13nm,21.5s,baz=255,slow=39						
NOA	**NORSAR Array B**	**20.32**	**348**	P	P	18 10 03.7	-1.1
EKA	**Eskdalemuir Ar**	**20.43**	**321**	P	P	18 10 04.3	-1.7
	1.2nm,0.8s,baz=108,slow=11,SNR=3.8						
EKA	**Eskdalemuir Ar**	**20.43**	**321**	P	P	18 10 04.3	-1.8
FINES	**FINESS Array B**	**20.46**	**9**	P	P	18 10 04.3	-2.0
	2.0nm,0.3s,baz=192,slow=10,SNR=23						
FINES	**FINESS Array B**	**20.46**	**9**	P	P	18 10 04.3	-2.0
KAF	**Kangasniemi**	**21.13**	**9**	*ep*	P	18 10 09.0	-4.6
	3.6nm,0.5s,mb4.0						
KAF	**Kangasniemi**	**21.13**	**9**	*ep*	P	18 10 09.0	-4.6
	3.6nm,0.5s,mb4.0						
JOF	**Joensuu**	**22.65**	**14**	*ep*	P	18 10 26.9	-2.9
	2.0nm,0.5s,mb3.8						
JOF	**Joensuu**	**22.65**	**14**	*ep*	P	18 10 26.9	-2.9
	2.0nm,0.5s,mb3.8						
ZALV	**Zalesovo Beam**	**44.13**	**50**	P	P	18 13 34.9	-2.3
	1.6nm,0.4s,mb4.1,baz=284,slow=7.3,SNR=7.8						
MK31	**Makanchi Array**	**44.30**	**61**	*e*P	P	18 13 35.9	-2.7
MKAR	**Makanchi Array**	**44.30**	**61**	P	P	18 13 36.7	-1.9
	1.4nm,0.5s,mb3.9,baz=297,slow=7.0,SNR=25						
MKAR	**Makanchi Array**	**44.30**	**61**	P	P	18 13 36.7	-1.9
SONM	**Songino Array**	**59.00**	**52**	P	P	18 15 27.2	-1.3
	1.0nm,0.6s,mb4.0,baz=276,slow=7.6,SNR=9.6						
SONM	**Songino Array**	**59.00**	**52**	P	P	18 15 27.2	-1.2
ASAR	**Alice Springs**	**123.16**	**94**	PKP	PKPdf	18 24 23.1	-2.6
	0.2nm,0.6s,baz=306,slow=1.3,SNR=5.8						

NEIC ***25*** *18:13:40.2±2.2,21°.52S×170°.00E,h35km,mb3.6/1,Error ellipse: s-maj=76.8km s-min=24.5km az=148.0*
IDC ***25*** *18:13:42.3±5.3,20°.50S×168°.96E,h0km,mb3.7/4, mb1 3.9/4,mb1mx3.8/14,mbtmp3.7/4,MS3.8/3,Ms1 3.8/3, ms1mx3.2/20,Error ellipse: s-maj=143.7km s-min=45.5km az=127.0*
SZGRF ***25*** *18:13:43.0,20°.92S×168°.34E,h33km,Loyalty Islands*
ISC 25 18:13:40.6±1.7,21°.6S±0°.5×170°.0E±0°.2,h35km,n19, σ0s90/11,mb3.6/4,MS3.9/3,1D,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.98**	**258**	*e*S	Sn	18 15 00.7	+0.9
DZM	**Mont Dzumac**	**3.37**	**261**	*e*Pn	Pn	18 14 30.1	-0.6
	17nm,0.2s						
DZM				*e*Sn	Sn	18 15 09.3	-0.1
	30nm,0.2s						
DZM	**Mont Dzumac**	**3.37**	**261**	*e*P	Pn	18 14 29.6	-1.1
DZM				*e*S	Sn	18 15 09.0	-0.5
DZM	**Mont Dzumac**	**3.37**	**261**	*e*P	Pn	18 14 29.9	-0.8
STKA	**Stephens Creek**	**27.32**	**242**	P	P	18 19 25.5	+3.3
	4.2nm,1.0s,mb3.9,baz=95,slow=12,SNR=2.1						
STKA	**Stephens Creek**	**27.32**	**242**	*e*P	P	18 19 22.1	-0.1
	1.9nm,1.3s,mb3.5						
ASAR	**Alice Springs**	**33.36**	**259**	P	P	18 20 15.9	+0.3
	0.5nm,0.7s,mb3.5,baz=79,slow=9.2,SNR=8.2						
WRA	**Warramunga Arr**	**33.37**	**266**	P	P	18 20 14.4	-1.3
	0.3nm,0.4s,mb3.6,baz=96,slow=

CHN5				eS		Sn	18 26 45.0 +0.6
	baz=340						
CHN8	**Yiju**	**1.55**	**320**	*e*P		**Pn**	**18 26 24.6 +0.2**
	baz=321						
CHY	**Chiayi**	**1.55**	**329**	*e*P		**Pn**	**18 26 23.4 -1.0**
	baz=330						
CHY				eS		Sn	18 26 44.2 -0.6
	baz=330						
CHN2	**Minshiung**	**1.56**	**331**	*e*P		**Pn**	**18 26 24.5 0.0**
	baz=332						
CHN2				eS		Sn	18 26 44.7 -0.2
	baz=332						
ESL	**Shilin**	**1.65**	**4**	*e*P		**Pn**	**18 26 25.2 -0.5**
	baz=7.0						
ESL				eS		Sn	18 26 46.8 -0.3
	baz=7.0						
WGK	**Gukeng**	**1.66**	**336**	*e*P		**Pn**	**18 26 26.0 +0.1**
	baz=338						
WGK				eS		Sn	18 26 47.3 -0.1
	baz=338						
SMLT	**Sun Moon Lake**	**1.75**	**348**	*e*P		**Pn**	**18 26 27.2 +0.1**
	baz=350						
SMLT				eS		Sn	18 26 49.1 -0.5
	baz=350						
TYC	**Yuchr**	**1.78**	**347**	P		**Pn**	**18 26 27.8 +0.3**
	baz=349						
TYC				S		Sn	18 26 50.1 -0.2
	baz=349						
WNT	**Mingjian**	**1.80**	**342**	*e*P		**Pn**	**18 26 27.9 +0.2**
	baz=343						
WNT				eS		Sn	18 26 51.4 +0.6
	baz=343						
WHF	**Hehuan Shan**	**1.97**	**359**	*e*P		**Pn**	**18 26 29.9 -0.3**
	baz=1.0						
WHF				eS		Sn	18 26 54.5 -0.6
	baz=1.0						
TCU	**Taichung**	**2.05**	**344**	*e*P		**Pn**	**18 26 31.0 -0.3**
	baz=345						
TWT	**Tachien**	**2.08**	**357**	*e*P		**Pn**	**18 26 33.1 +1.4**
	baz=358						
TWT				eS		Sn	18 26 58.3 +0.5
	baz=358						
PNG	**Penghu**	**2.13**	**311**	*e*P		**Pn**	**18 26 30.5 -1.9**
	baz=311						
TWQ1	**Liyutan**	**2.23**	**348**	*e*P		**Pn**	**18 26 34.3 +0.6**
	baz=349						
TWQ1				S		Sn	18 27 01.8 +0.4
	baz=349						
NNS	**Nan Shan**	**2.26**	**2**	*e*P		**Pn**	**18 26 35.5 +1.3**
	baz=3.0						
NNS				eS		Sn	18 27 04.3 +2.0
	baz=3.0						
ENA	**Nanau**	**2.29**	**10**	*e*P		**Pn**	**18 26 35.0 +0.4**
	baz=12						
ENA				eS		Sn	18 27 03.9 +1.0
	baz=12						
NSY	**Sanyi**	**2.29**	**348**	*e*P		**Pn**	**18 26 34.4 -0.2**
	baz=349						
NSY				eS		Sn	18 27 03.4 +0.3
	baz=349						
NSTT	**Nanjuang**	**2.47**	**354**	*e*P		**Pn**	**18 26 37.6 +0.5**
	baz=355						
NSTT				eS		Sn	18 27 08.0 +0.6
	baz=355						
ENTT	**Nioudou**	**2.47**	**6**	*e*P		**Pn**	**18 26 38.2 +1.1**
	baz=7.0						
ENTT				eS		Sn	18 27 08.7 +1.1
	baz=7.0						
TWC	**Suao**	**2.48**	**12**	*e*P		**Pn**	**18 26 37.6 +0.4**
	baz=13						
TWC				eS		Sn	18 27 08.9 +1.1
	baz=13						
NSK	**Sanguang**	**2.50**	**1**	*e*P		**Pn**	**18 26 37.3 -0.1**
	baz=3.0						
TWE	**Neicheng**	**2.56**	**7**	*e*P		**Pn**	**18 26 40.2 +1.9**
	baz=9.0						
TWE				eS		Sn	18 27 09.9 +0.2
	baz=9.0						
YOJ	**Yonaguni jima**	**2.77**	**34**	P		**Pn**	**18 26 43.2 +2.0**
YOJ				eS		Sn	18 27 16.8 +1.9
TWB1	**Santiao Chiao**	**2.90**	**12**	*e*P		**Pn**	**18 26 44.2 +1.3**
	baz=14						
TWB1				eS		Sn	18 27 18.3 +0.3
	baz=14						
NWF	**Wu-fen Shan**	**2.92**	**9**	*e*P		**Pn**	**18 26 44.2 +0.9**
	baz=10.0						
HATJ	**Hateruma jima**	**2.98**	**50**	P		**Pn**	**18 26 43.2 -0.8**
HATJ				eS		Sn	18 27 18.0 -1.9
IRIF	**Iriomote-Funau**	**3.11**	**46**	P		**Pn**	**18 26 45.5 -0.3**
IRIF				eS		Sn	18 27 21.7 -1.4
JKRS	**Kuro-shima**	**3.23**	**50**	P		**Pn**	**18 26 47.3 -0.3**
JKRS				eS		Sn	18 27 24.1 -2.2
JIJ	**Ishigaki jima**	**3.41**	**50**	P		**Pn**	**18 26 49.0 -1.0**
JIJ				eS		Sn	18 27 27.6 -3.0
JTJ	**Tarama**	**3.98**	**51**	P		**Pn**	**18 26 57.3 -0.5**
JTJ				eS		Sn	18 27 42.0 -2.7
JOGS	**Gusukube**	**4.57**	**55**	*e*S		**Sn**	**18 27 55.4 -3.8**

GUC 25 18:39:22.8±0.6, 20°.35S×69°.10W, h97km±5km, MD3.6, ML3.6, 4C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMBC	**Humberston**	**0.75**	**275**	⇑*i*P		Pn	18 39 40.4 +0.1
HMBC				*i* S		Sn	18 39 54.3 +0.8
HMBC				AML	AML	18 39 56.3	
	comp=E,2μm,0.3s						
PB01	**Plate Boundary**	**0.78**	**208**	⇑*i*P		Pn	18 39 40.7 0.0
PB01				*i* S		Sn	18 39 54.9 +0.8
PB01				AML	AML	18 39 58.9	
	comp=E,2μm,0.1s						
PSGC	**Pisagua**	**1.22**	**308**	⇑*i*P		Pn	18 39 45.6 +0.1
PSGC				*i* S		Sn	18 40 03.4 +0.8
PSGC				AML	AML	18 40 05.9	
	comp=N,986nm,0.4s						
MNMC	**Miæe Miæ**	**1.30**	**339**	*e*P		Pn	18 39 47.3 +0.8
MNMC				*i* S		Sn	18 40 06.1 +1.7
MNMC				AML	AML	18 40 14.1	
	comp=E,3μm,0.2s						
MACH	**Maria Elena**	**1.94**	**198**	⇑*i*P		Pn	18 39 54.7 +0.3
MACH				*i* S		Sn	18 40 19.6 +1.1
PB04	**Plate Boundary**	**1.94**	**191**	*i* P		Pn	18 39 58.2 +3.7
PB04				*i* S		Sn	18 40 24.9 +6.3
PB04				AML	AML	18 40 35.0	
	comp=N,429nm,0.1s						
CEN1	**Los Morros**	**3.19**	**199**	*e*P		Pn	18 40 13.6 +2.5
CEN1				*i* S		Sn	18 40 53.6 +5.3
CEN1				AML	AML	18 41 08.6	
	comp=N,161nm,0.4s						
ANCH	**Antofagasta**	**3.53**	**200**	*e*S		Sn	18 40 58.1 +1.7

IDC ***25*** *18:46:03.8±2.8, 5°.42S×152°.34E, h0km, mb3.8/7, mb1 4.0/7, mb1mx3.8/17, mbtmp3.8/7, Error ellipse: s-maj=86.7km s-min=22.1km az=115.0*
NEIC ***25*** *18:46:05.5±1.4, 5°.38S×152°.35E, h10km, mb4.3/2, Error ellipse: s-maj=48.7km s-min=13.6km az=120.0*
ISCJB ***25*** *18:46:07.5±1.6, 5°.3S±0°.2×152°.3E±0°.3, h33km, mb3.9/9, Error ellipse: s-maj=55.3km s-min=16.0km az=29.4*
ISC 25 18:46:09.2±1.6, 5°.4S±0°.2×152°.3E±0°.3, h35km, n9, σ0§79/9, mb3.9/9, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRAB	**Tennant Creek**	**22.68**	**229**	*e*P		**P**	**18 51 09.5 +1.8**
	4.6nm,0.8s,mb4.0						
WRA	**Warramunga Arr**	**22.70**	**229**	P		**P**	**18 51 06.5 -1.4**
	1.4nm,0.8s,mb3.4,baz=54,slow=10,SNR=3.2						
ASAR	**Alice Springs**	**25.39**	**223**	P		**P**	**18 51 33.5 0.0**
	0.9nm,0.7s,mb3.4,baz=58,slow=9.6,SNR=16						
FITZ	**Fitzroy Crossi**	**28.97**	**242**	P		**P**	**18 52 05.3 -0.3**
	4.2nm,0.9s,mb4.2,baz=71,slow=6.4,SNR=3.8						
CMAR	**Chiang Mai Arr**	**57.73**	**296**	P		**P**	**18 55 56.8 -0.2**
	0.6nm,0.8s,mb3.7,baz=104,slow=6.0,SNR=4.7						
PETK	**Petropavlovsk-**	**58.48**	**4**	P		**P**	**18 56 01.4 -0.1**
	1.3nm,0.8s,mb4.0,baz=163,slow=5.6,SNR=2.5						
SONM	**Songino Array**	**66.61**	**328**	P		**P**	**18 56 56.7 +0.7**
	0.6nm,0.7s,mb3.7,baz=146,slow=5.3,SNR=4.4						
MCK	**McKinley**	**81.61**	**23**	*e*P		**P**	**18 58 23.2 0.0**
	4.1nm,0.7s,mb4.5						
BVAR	**Borovoye Array**	**89.46**	**323**	P		**P**	**18 59 02.1 -0.4**
	0.9nm,0.7s,mb4.2,baz=85,slow=3.1,SNR=7.5						

TAP ***25*** *18:48:13.0, 24°.26N×121°.67E, h29km, ML3.9, B*
JMA ***25*** *18:48:12.8±0.2, 24°.58N×121°.72E, h82km±3km, M2.8*
ISCJB ***25*** *18:48:13.1±0.3, 24°.23N±0°.02×121°.76E±0°.02, h23km±3km, Error ellipse: s-maj=3.5km s-min=2.1km az=143.3*
ISC 25 18:48:13.4±0.3, 24°.24N±0°.02×121°.75E±0°.02, h20km±3km, n63, σ0§83/109, 9C-7D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.07**	**355**	*e*P		**Pb**	**18 48 17.8 +0.7**
	baz=54						
ENA	**Nanau**	**0.19**	**358**	⇓*i*P		**Pb**	**18 48 19.0 +0.6**
	baz=22						
ENA				*e*S		**Sb**	**18 48 23.4 +1.6**
	baz=22						
TWD	**Chiawan**	**0.21**	**221**	⇑*i*P		**Pb**	**18 48 19.1 +0.4**
	baz=206						
TWD				*i* S		**Sb**	**18 48 23.6 +1.4**
	baz=206						
HWA	**Hwalien**	**0.29**	**207**	P		**Pb**	**18 48 20.6 +0.7**
	baz=200						
TWC	**Suao**	**0.38**	**14**	P		**Pb**	**18 48 21.9 +0.5**
	baz=21						
TWC				S		**Sb**	**18 48 28.2 +1.3**
	baz=21						
NNS	**Nan Shan**	**0.40**	**300**	⇑*i*P		**Pb**	**18 48 21.1 -0.6**
	baz=303						
NNS				S		**Sb**	**18 48 26.8 -0.6**
	baz=303						
ENTT	**Nioudou**	**0.43**	**338**	⇑*i*P		**Pb**	**18 48 21.8 -0.5**
	baz=346						
ENTT				S		**Sb**	**18 48 28.0 -0.4**
	baz=346						
WHF	**Hehuan Shan**	**0.45**	**258**	⇑*i*P		**Pb**	**18 48 22.2 -0.4**
	baz=258						
WHF				S		**Sb**	**18 48 28.4 -0.5**
	baz=258						
TWE	**Neicheng**	**0.48**	**351**	P		**Pb**	**18 48 22.8 -0.5**
	baz=359						
TWE				S		**Sb**	**18 48 29.8 -0.1**
	baz=359						
ESL	**Shilin**	**0.51**	**214**	⇓*i*P		**Pb**	**18 48 22.6 -1.1**
	baz=206						
TWT	**Tachien**	**0.52**	**272**	⇑*i*P		**Pb**	**18 48 23.6 -0.3**
	baz=268						
TWT				*i* S		**Sb**	**18 48 30.6 -0.4**
	baz=268						
ILA	**Ilan**	**0.52**	**0**	P		**Pb**	**18 48 23.5 -0.4**
	baz=2.0						
ILA				S		**Sb**	**18 48 31.6 +0.5**
	baz=2.0						
NSK	**Sanguang**	**0.56**	**321**	⇑*i*P		**Pb**	**18 48 23.7 -0.8**
	baz=318						
NSK				S		**Sb**	**18 48 30.9 -1.3**
	baz=318						
TWA	**Mucha**	**0.75**	**349**	*e*P		**Pb**	**18 48 27.1 -0.7**
	baz=353						
TWA				*e*S		**Sb**	**18 48 37.5 -0.1**
	baz=353						
NSTT	**Nanjuang**	**0.78**	**300**	⇑*i*P		**Pb**	**18 48 27.7 -0.6**
	baz=301						
NSTT				S		**Sb**	**18 48 37.5 -1.1**
	baz=301						
TWB1	**Santiao Chiao**	**0.80**	**16**	P		**Pb**	**18 48 28.8 +0.3**
	baz=17						
TWB1				*e*S		**Sb**	**18 48 39.9 +1.0**
	baz=17						
TAP1	**Taipei**	**0.82**	**346**	*i* P		**Pb**	**18 48 28.8 -0.2**
	baz=350						
TAP1				S		**Sb**	**18 48 39.3 -0.3**
	baz=350						
EHY	**Hungye**	**0.83**	**208**	*e*P		**Pb**	**18 48 26.6 -2.5**
	baz=203						
NWF	**Wu-fen Shan**	**0.83**	**2**	P		**Pb**	**18 48 29.1 0.0**
	baz=355						
NWF				S		**Sb**	**18 48 40.5 +0.6**
	baz=355						
SMLT	**Sun Moon Lake**	**0.85**	**246**	P		**Pb**	**18 48 28.6 -0.9**
	baz=237						
SMLT				*e*S		**Sb**	**18 48 40.2 -0.3**
	baz=237						
TYC	**Yuchr**	**0.88**	**248**	⇓P		**Pb**	**18 48 28.9 -1.0**
	baz=240						
TYC				*e*S		**Sb**	**18 48 40.7 -0.6**
	baz=240						
NCU	**National Centr**	**0.89**	**325**	P		**Pb**	**18 48 29.9 -0.2**
	baz=328						
NCU				S		**Sb**	**18 48 42.0 +0.4**
	baz=328						
TWQ1	**Liyutan**	**0.90**	**277**	⇑*i*P		**Pb**	**18 48 30.4 +0.1**
	baz=275						
TWQ1				*e*S		**Sb**	**18 48 41.4 -0.4**
	baz=275						
HSN	**Hsinchu**	**0.90**	**309**	*e*P		**Pb**	**18 48 29.6 -0.8**
	baz=323						
HSN				*e*S		**Sb**	**18 48 42.5 +0.5**
	baz=323						
TWS1	**Kuangyinshan**	**0.91**	**341**	P		**Pb**	**18 48 30.0 -0.5**
	baz=354						
TWS1				S		**Sb**	**18 48 42.5 +0.4**
	baz=354						
NSY	**Sanyi**	**0.92**	**281**	P		**Pb**	**18 48 30.7 +0.2**
	baz=279						
NSY				*e*S		**Sb**	**18 48 42.9 +0.6**
	baz=279						
TWF1	**Yuli**	**0.97**	**205**	⇓P		**Pb**	**18 48 28.6 -3.0**
	baz=201						
TCU	**Taichung**	**0.98**	**265**	P		**Pb**	**18 48 31.7 0.0**
	baz=261						
TCU				*e*S		**Sb**	**18 48 45.1 +0.9**
	baz=261						
WNT	**Mingjian**	**1.04**	**250**	⇓P		**Pb**	**18 48 32.5 -0.1**
	baz=245						
WNT				*e*S		**Sb**	**18 48 47.3 +1.5**
	baz=245						
TWY	**Chenhua**	**1.04**	**353**	*e*P		**Pb**	**18 48 32.4 -0.3**
	baz=356						
CHN5	**Tsauling**	**1.17**	**237**	P		**Pn**	**18 48 34.1 -0.5**
	baz=232						
CHN5				*e*S		**Sb**	**18 48 50.4 +0.8**
	baz=232						
YOJ	**Yonaguni jima**	**1.17**	**79**	P		**Pn**	**18 48 34.4 -0.2**
YOJ				*e*S		**Sb**	**18 48 50.4 +0.7**
YOJ	**Yonaguni jima**	**1.17**	**79**	*e*P		**Pn**	**18 48 34.4 -0.3**
	baz=80						
YOJ				*e*S		**Sb**	**18 48 50.1 +0.4**
	baz=80						
WGK	**Gukeng**	**1.22**	**243**	⇓P		**Pn**	**18 48 35.3 +0.1**
	baz=239						
WGK				*e*S		**Sb**	**18 48 51.8 +0.8**
	baz=239						
ELDTW	**Lidau**	**1.24**	**213**	*e*P		**Pn**	**18 48 33.1 -2.5**
	baz=202						
CHN2	**Minshiung**	**1.36**	**239**	P		**Pn**	**18 48 37.9 +0.7**
	baz=235						
CHN2				*e*S		**Sn**	**18 48 56.1 +1.5**
	baz=235						
CHN4	**Tsaushan**	**1.38**	**230**	P		**Pn**	**18 48 37.8 +0.3**
	baz=217						
CHN4				*e*S		**Sn**	**18 48 56.0 +0.9**
	baz=217						
WTCT	**Ta-ch'eng**	**1.39**	**255**	*e*P		**Pn**	**18 48 36.7 -0.9**
	baz=250						
WTCT				*e*S		**Sn**	**18 48 55.5 0.0**
	baz=250						
STYT	**Tauyuan**	**1.40**	**220**	*e*P		**Pn**	**18 48 37.2 -0.6**
	baz=209						
CHY	**Chiayi**	**1.42**	**239**	*e*P		**Pn**	**18 48 38.5 +0.5**
	baz=234						
CHY				*e*S		**Sn**	**18 48 57.2 +1.1**
	baz=234						
WTP	**Ta-pu**	**1.43**	**227**	⇓*i*P		**Pn**	**18 48 38.4 +0.1**
	baz=212						
WTP				*e*S		**Sn**	**18 48 57.5 +1.0**
	baz=212						
TWK	**Hsinying**	**1.51**	**230**	*e*P		**Pn**	**18 48 39.6 +0.4**
	baz=214						
TWK				*e*S		**Sn**	**18 48 58.5 +0.3**
	baz=214						
WSF	**Szhu**	**1.52**	**247**	*e*P		**Pn**	**18 48 40.0 +0.6**
	baz=242						
WSF				*e*S		**Sn**	**18 48 59.4 +0.8**
	baz=242						
CHN1	**Nanshi**	**1.53**	**227**	⇑P		**Pn**	**18 48 39.8 +0.2**
	baz=212						
CHN1				*e*S		**Sn**	**18 49 00.8 +1.8**
	baz=212						
TWG	**Pinlang**	**1.54**	**204**	*e*P		**Pn**	**18 48 37.5 -2.2**
	baz=194						
TWG				*e*S		**Sn**	**18 48 57.9 -1.3**
	baz=194						
SGST	**Jiashian**	**1.57**	**223**	P		**Pn**	**18 48 40.4 +0.3**
	baz=210						
SGST				*e*S		**Sn**	**18 49 00.6 +0.8**
	baz=210						
TTN	**Taitung**	**1.58**	**201**	*e*P		**Pn**	**18 48 39.8 -0.4**
	baz=200						
CHN8	**Yiju**	**1.67**	**238**	*e*P		**Pn**	**18 48 41.4 0.0**
	baz=220						
CHN8				S		**Sn**	**18 49 03.5 +1.4**
	baz=220						
CHN3	**Shinhua**	**1.72**	**228**	*e*P		**Pn**	**18 48 42.0 -0.1**
	baz=224						
SCLT	**Jiali**	**1.77**	**234**	*e*P		**Pn**	**18 48 42.8 -0.1**
	baz=229						
ECL	**Taimali**	**1.79**	**204**	*e*P		**Pn**	**18 48 41.7 -1.4**
	baz=195						
ECL				*e*S		**Sn**	**18 49 02.8 -2.5**
	baz=195						
SSD	**Sandimen**	**1.81**	**215**	P		**Pn**	**18 48 43.6 +0.2**
	baz=204						
SSD				*e*S		**Sn**	**18 49 06.2 +0.6**
	baz=204						
IRIF	**Iriomote-Funau**	**1.81**	**87**	P		**Pn**	**18 48 42.9 -0.5**
IRIF				*e*S		**Sn**	**18 49 05.7 -0.1**
TWM1	**Shoushan**	**1.86**	**221**	*e*P		**Pn**	**18 48 45.1 +1.0**
	baz=217						
HATJ	**Hateruma jima**	**1.89**	**95**	P		**Pn**	**18 48 44.7 +0.2**
HATJ				*e*S		**Sn**	**18 49 09.2 +1.5**
EAST	**Anshuo**	**2.02**	**204**	*e*P		**Pn**	**18 48 45.9 -0.4**
	baz=196						
TAW	**Tawu**	**2.03**	**203**	*e*P		**Pn**	**18 48 46.1 -0.3**
	baz=195						
JKRS	**Kuro-shima**	**2.06**	**90**	P		**Pn**	**18 48 47.1 +0.2**
JKRS				*e*S		**Sn**	**18 49 13.1 +1.1**
PNG	**Penghu**	**2.12**	**252**	*e*P		**Pn**	**18 48 46.3 -1.3**
	baz=248						
SCZT	**Fangliau**	**2.13**	**209**	*e*P		**Pn**	**18 48 48.4 +0.7**
	baz=198						
JIJ	**Ishigaki jima**	**2.19**	**86**	P		**Pn**	**18 48 48.3 -0.3**
JIJ				*e*S		**Sn**	**18 49 15.0 -0.1**
JTJ	**Tarama**	**2.72**	**81**	P		**Pn**	**18 48 55.0 -0.9**
JTJ				*e*S		**Sn**	**18 49 27.8 -0.5**
KNM	**Kinmen**	**3.03**	**274**	*e*P		**Pn**	**18 49 00.0 -0.1**
	baz=271						

DDA ***25*** *18:56:51.2, 37°.79N×27°.74E, h9km±2km, Md3.0*
CSEM ***25*** *18:56:51.4±0.2, 37°.79N×27°.77E, h2km, MD3.0, Error ellipse: s-maj=5.3km s-min=3.9km az=58.0*
ISK ***25*** *18:56:51.0, 37°.77N×27°.76E, h17km, MD3.1*
ISCJB ***25*** *18:56:51.2±0.5, 37°.79N±0°.02×27°.75E±0°.04, h4km±5km, Error ellipse: s-maj=5.3km s-min=3.5km az=153.0*
NEIC ***25*** *18:56:51.0, 37°.77N×27°.77E, h19km, MD3.2(ATH), MD3.0(ISK), After ISK.*
ATH ***25*** *18:56:52.4, 37°.71N×27°.69E, h18km±5km, MD3.2/3*
ISC 25 18:56:51.6±0.4, 37°.80N±0°.02×27°.76E±0°.04, h1km±5km, n60, σ1§03/78, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYDN	**Tasoluk**	**0.17**	**145**	*i* P		**Pg**	**18 56 55.5 +0.7**
AYDN				*i* S		**Sg**	**18 56 57.9 +0.9**
AYDN	**Tasoluk**	**0.17**	**145**	*i* P		**Pg**	**18 56 55.5 +0.7**
AYDN				*i* S		**Sg**	**18 56 57.9 +0.9**
MLSB	**Milas**	**0.50**	**178**	*e*PG		**Pg**	**18 57 01.1 -0.1**
MLSB				*e*SG		**Sg**	**18 57 07.9 +0.1**
MLSB	**Milas**	**0.50**	**178**	*e*Pg		**Pg**	**18 57 01.1 -0.1**
MLSB				*e*Sg		**Sg**	**18 57 07.9 +0.2**
IZM	**Izmir**	**0.71**	**327**	*e*PG		**Pg**	**18 57 06.1 +0.9**
IZM	**Izmir**	**0.71**	**327**	*e*Pg		**Pg**	**18 57 06.1 +0.8**
SMG	**Samos**	**0.73**	**263**	*e*Pn		**Pg**	**18 57 05.5 -0.2**
SMG	**Samos**	**0.73**	**263**	*e*PN		**Pg**	**18 57 05.5 -0.2**
SMG	**Samos**	**0.73**	**263**	*e*Pn		**Pg**	**18 57 05.5 -0.2**
BDRM	**Kayabasi**	**0.77**	**199**	*i* P		**Pg**	**18 57 05.8 -0.6**
BDRM				*i* S		**Sg**	**18 57 15.8 -0.6**
BDRM	**Kayabasi**	**0.77**	**199**	*i* P		**Pg**	**18 57 05.8 -0.6**
BDRM				*i* S		**Sg**	**18 57 15.8 -0.6**
YER	**Yerkesik**	**0.78**	**148**	*e*PG		**Pg**	**18 57 06.3 -0.3**
YER				*e*SG		**Sg**	**18 57 17.4 +0.7**
YER	**Yerkesik**	**0.78**	**148**	*e*Pg		**Pg**	**18 57 06.3 -0.3**
YER				*e*Sg		**Sg**	**18 57 17.4 +0.7**
BLCB	**Balcova**	**0.81**	**316**	*e*PG		**Pg**	**18 57 07.5 +0.4**
BLCB	**Balcova**	**0.81**	**316**	*e*Pg		**Pg**	**18 57 07.5 +0.3**
KULA	**Kula-Manisa**	**1.01**	**45**	*e*PG		**Pg**	**18 57 11.2 +0.3**
KULA	**Kula-Manisa**	**1.01**	**45**	*e*Pg		**Pg**	**18 57 11.2 +0.3**
DENT	**Denizli**	**1.01**	**92**	*e*PG		**Pg**	**18 57 10.9 -0.1**
DENT	**Denizli**	**1.01**	**92**	*e*Pg		**Pg**	**18 57 10.9 -0.1**
DNZL	**Cakiroluk**	**1.03**	**96**	*i* P		**Pg**	**18 57 11.4 +0.2**
DNZL				*i* S		**Sg**	**18 57 26.0 +1.4**
DNZL	**Cakiroluk**	**1.03**	**96**	*i* P		**Pg**	**18 57 11.4 +0.1**
DNZL				*i* S		**Sg**	**18 57 26.0 +1.4**
URLA	**Izmir**	**1.07**	**302**	*i* P		**Pg**	**18 57 12.3 +0.2**
URLA	**Izmir**	**1.07**	**302**	*i* P		**Pg**	**18 57 12.3 +0.1**
AKHS	**Akhisar**	**1.08**	**2**	*i* P		**Pg**	**18 57 12.1 -0.1**
AKHS				*i* S		**Sg**	**18 57 25.4 -0.8**
AKHS	**Akhisar**	**1.08**	**2**	*i* P		**Pg**	**18 57 12.1 -0.2**
AKHS				*i* S		**Sg**	**18 57 25.4 -0.8**
AKS	**Akhisar**	**1.08**	**2**	*e*PN		**Pg**	**18 57 12.3 0.0**
AKS	**Akhisar**	**1.08**	**2**	*e*Pn		**Pg**	**18 57 12.3 0.0**
TURN	**Turunc**	**1.14**	**144**	*i* P		**Pg**	**18 57 11.7 -1.8**
TURN				*i* S		**Sg**	**18 57 27.3 -1.0**
TURN	**Turunc**	**1.14**	**144**	*i* P		**Pg**	**18 57 11.7 -1.8**
TURN				*i* S		**Sg**	**18 57 27.3 -1.0**
DEMI	**Demirci**	**1.45**	**31**	*i* P		**Pn**	**18 57 19.0 +0.1**
DEMI				*i* S		**Sb**	**18 57 37.5 -0.9**
DEMI	**Demirci**	**1.45**	**31**	*i* P		**Pn**	**18 57 19.0 +0.1**
DEMI				*i* S		**Sb**	**18 57 37.5 -0.9**
CHOS	**Chios island**	**1.47**	**294**	*e*PN		**Pn**	**18 57 20.2 +1.1**
CHOS	**Chios island**	**1.47**	**294**	*e*Pn		**Pn**	**18 57 20.2 +1.1**
KHL	**Karahalli**	**1.49**	**69**	*e*PN		**Pn**	**18 57 17.8 -1.7**
KHL	**Karahalli**	**1.49**	**69**	*e*Pn		**Pn**	**18 57 17.8 -1.6**
GLHS	**Glhisar (BURDU**	**1.53**	**114**	*e*PN		**Pn**	**18 57 18.1 -1.8**
GLHS	**Glhisar (BURDU**	**1.53**	**114**	*e*Pn		**Pn**	**18 57 18.1 -1.9**
GOLH	**Golhisar**	**1.54**	**111**	*i* P		**Pn**	**18 57 21.0 +0.9**
GOLH				*i* S		**Sn**	**18 57 42.7 +2.0**
GOLH	**Golhisar**	**1.54**	**111**	*i* P		**Pn**	**18 57 21.0 +0.9**
GOLH				*i* S		**Sn**	**18 57 42.7 +1.9**
ARG	**Arkhangelos**	**1.61**	**169**	*e*Pn		**Pn**	**18 57 21.2 +0.1**
ARG	**Arkhangelos**	**1.61**	**169**	*e*PN		**Pn**	**18 57 21.2 +0.1**
ARG	**Arkhangelos**	**1.61**	**169**	*e*Pn		**Pn**	**18 57 21.2 +0.1**
AYVA	**Ayvalik**	**1.72**	**331**	*i* P		**Pn**	**18 57 21.0 -1.7**
AYVA	**Ayvalik**	**1.72**	**331**	*i* P		**Pn**	**18 57 21.0 -1.7**
PRK	**Paraskevi**	**1.86**	**322**	*e*Pn		**Pn**	**18 57 26.0 +1.5**
PRK	**Paraskevi**	**1.86**	**322**	*e*PN		**Pn**	**18 57 26.0 +1.5**
PRK	**Paraskev

mb3.5/8 Error ellipse: s-maj=5.6km s-min=3.9km az=16.5
NEIC ***25*** *18:57:47.7±0.8, 38°.87N×140°.83E, h35km, mb3.8/1, Error ellipse: s-maj=19.5km s-min=11.2km az=91.0*
NEIC Recorded [3 JMA] in Miyagi, [2 JMA] in Iwate and [1 JMA] in Yamagata.

ISC 25 18:57:44.0±0.4, 38°.85N±0°.02×140°.83E±0°.04, h7km±4km, n26, σ0°.86/35, mb3.5/8, 5C-3D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.32**	**72**	⇑P	**Pg**	**18 57 50.2**	**0.0**
JMK				S	**Sg**	**18 57 54.8**	**+0.4**
JYK	**Kaneyama**	**0.38**	**280**	⇓P	**Pg**	**18 57 51.1**	**-0.2**
JYK				S	**Sg**	**18 57 56.1**	**-0.1**
JOU	**Okura**	**0.50**	**195**	⇑P	**Pg**	**18 57 53.7**	**0.0**
JOU				S	**Sg**	**18 58 00.4**	**+0.2**
JRG	**Rokugo**	**0.56**	**344**	⇑P	**Pg**	**18 57 54.8**	**-0.1**
JRG				eS	**Sg**	**18 58 02.8**	**+0.5**
JIO	**Ouri**	**0.57**	**134**	⇓P	**Pg**	**18 57 54.6**	**-0.3**
JIO				S	**Sg**	**18 58 02.8**	**+0.5**
JOM	**Ohasama**	**0.72**	**30**	⇑P	**Pg**	**18 57 57.3**	**-0.5**
JOM				eS	**Sg**	**18 58 07.3**	**+0.2**
JYS	**Shiratake**	**0.87**	**224**	⇑P	**Pg**	**18 58 00.3**	**-0.4**
JYS				eS	**Sg**	**18 58 11.9**	**-0.1**
JYA	**Atsumi**	**0.91**	**254**	⇓P	**Pg**	**18 58 01.0**	**-0.5**
JMM	**Marumori**	**0.98**	**182**	P	**Pg**	**18 58 01.7**	**-1.2**
JMM				eS	**Sg**	**18 58 15.0**	**-0.6**
MAJO	**Matsushiro**	**3.11**	**223**	eP	**Pn**	**18 58 35.0**	**+1.5**
MAT	**Matsushiro**	**3.11**	**223**	P	**Pn**	**18 58 35.2**	**+1.8**
MAT				S	**Sn**	**18 59 16.5**	**+5.7**
MJAR	**Matsushiro Arr**	**3.11**	**223**	Pn	**Pn**	**18 58 34.4**	**+0.9**
	1.6nm,0.3s,baz=32,slow=16,SNR=14						
MJAR				Sn	**Sn**	**18 59 10.8**	**0.0**
	2.0nm,0.3s,baz=186,slow=25,SNR=4.7						
MJAR				Lg		18 59 19.8	
	3.2nm,0.3s,baz=77,slow=37,SNR=4.8						
MJAR				LR	LR	18 59 56.8	
	comp=Z,239nm,18.2s,baz=80,slow=44						
ASAJ	**Asahikawa**	**5.42**	**14**	Pn	**Pn**	**18 59 07.0**	**+1.7**
	1.2nm,0.3s,baz=211,slow=9.5,SNR=11						
ASAJ				Sn	**Sn**	**19 00 06.2**	**-1.7**
	0.2nm,0.3s,baz=270,slow=32,SNR=1.6						
KSRS	**Korea Array**	**10.26**	**266**	Pn	**Pn**	**19 00 15.3**	**+3.6**
	0.4nm,0.3s,baz=81,slow=14,SNR=9.1						
CBIJ	**Chichi jima**	**11.78**	**174**	LR	LR	19 04 27.2	
	comp=Z,48nm,20.8s,baz=95,slow=34						
SONM	**Songino Array**	**26.42**	**301**	P	**P**	**19 03 21.7**	**+0.6**
	0.2nm,0.6s,mb2.8,baz=106,slow=11,SNR=3.8						
ZALV	**Zalesovo Beam**	**40.37**	**311**	P	**P**	**19 05 21.5**	**-0.7**
	0.5nm,0.5s,mb3.5,baz=81,slow=9.6,SNR=3.5						
MKAR	**Makanchi Array**	**42.78**	**300**	P	**P**	**19 05 41.1**	**-1.1**
	0.4nm,0.9s,mb3.1,baz=94,slow=3.6,SNR=2.7						
KURK	**Kurchatov**	**44.47**	**307**	P	**P**	**19 05 55.4**	**-0.2**
	0.9nm,0.6s,mb3.7,baz=82,slow=8.5,SNR=8.5						
KURK	**Kurchatov**	**44.47**	**307**	eP	**P**	**19 05 54.8**	**-0.7**
	1.3nm,0.8s,mb3.7						
BVAR	**Borovoye Array**	**49.02**	**311**	P	**P**	**19 06 29.7**	**-1.6**
	0.4nm,0.7s,mb3.6,baz=69,slow=8.1,SNR=4.0						
AKTK	**Aktyubinsk**	**57.13**	**311**	P	**P**	**19 07 31.9**	**+0.9**
AKTO	**Aktyubinsk**	**57.13**	**311**	P	**P**	**19 07 31.9**	**+0.9**
	0.8nm,0.6s,mb3.9,baz=86,slow=14,SNR=5.2						
WRA	**Warramunga Arr**	**58.80**	**187**	P	**P**	**19 07 42.0**	**-0.9**
	1.0nm,1.0s,mb3.8,baz=4.1,slow=7.2,SNR=7.9						
ASAR	**Alice Springs**	**62.53**	**187**	P	**P**	**19 08 07.8**	**-0.5**
	0.3nm,0.6s,mb3.6,baz=355,slow=4.2,SNR=9.3						
LPAZ	**La Paz**	**146.12**	**57**	PKPbc	PKPbc	19 17 25.8	+0.5
	0.4nm,0.3s,baz=0.0,slow=2.0,SNR=3.5						

MOS ***25*** *19:15:47.6±0.9, 43°.02N×46°.07E, h17km, mb4.0/1, Error ellipse: s-maj=20.5km s-min=7.2km az=17.6*
CSEM ***25*** *19:15:47.1, 43°.02N×46°.07E, h17km, mb4.0, After OBN*
ISCJB ***25*** *19:15:48.3±0.5, 43°.09N±0°.05×46°.10E±0°.04, h17km±6km, Error ellipse: s-maj=8.7km s-min=3.2km az=23.0*

ISC 25 19:15:47.9±0.4, 43°.00N±0°.03×46°.01E±0°.02, h9km±5km, n39, σ0°.84/70, 1C-4D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBC	**Dubki**	**0.60**	**88**	eP	**Pg**	**19 15 58.7**	**-0.8**
DBC	**Dubki**	**0.60**	**88**	ePg	**Pg**	**19 15 58.7**	**-0.8**
UNCR	**Uncukul**	**0.64**	**116**	⇓iPG	**Pg**	**19 15 59.5**	**-0.8**
UNCR				i S	**Sg**	**19 16 08.5**	**-0.2**
UNCR				pmax	pmax		
	comp=Z,34nm,0.2s						
UNCR	**Uncukul**	**0.64**	**116**	i Pg	**Pg**	**19 15 59.5**	**-0.8**
	comp=Z,34nm,0.2s						
UNCR				i Sg	**Sg**	**19 16 08.5**	**-0.2**
KRNR	**Karanay**	**0.68**	**104**	ePG	**Pg**	**19 15 59.8**	**-1.2**
KRNR				i S	**Sg**	**19 16 10.0**	**+0.1**
KRNR				pmax	pmax		
	comp=Z,52nm,0.1s						
KRNR	**Karanay**	**0.68**	**104**	ePg	**Pg**	**19 15 59.8**	**-1.2**
	comp=Z,52nm,0.1s						
KRNR				i Sg	**Sg**	**19 16 10.0**	**+0.1**
BUJR	**Buynaksk**	**0.83**	**102**	ePG	**Pg**	**19 16 05.2**	**+1.4**
BUJR				i S	**Sg**	**19 16 16.8**	**+2.3**
BUJR	**Buynaksk**	**0.83**	**102**	ePg	**Pg**	**19 16 05.2**	**+1.4**
BUJR				i Sg	**Sg**	**19 16 16.8**	**+2.3**
SNJR	**Sundja**	**0.88**	**275**	ePG	**Pg**	**19 16 03.9**	**-0.9**
SNJR				eS	**Sg**	**19 16 17.2**	**+0.9**
SNJR	**Sundja**	**0.88**	**275**	ePg	**Pg**	**19 16 03.9**	**-0.9**
SNJR				eSg	**Sg**	**19 16 17.2**	**+0.9**
VLKR	**Vladikavkaz**	**0.98**	**273**	ePG	**Pg**	**19 16 05.9**	**-0.8**
VLKR				eS	**Sg**	**19 16 20.4**	**+1.0**
VLKR	**Vladikavkaz**	**0.98**	**273**	ePg	**Pg**	**19 16 05.9**	**-0.8**
VLKR				eSg	**Sg**	**19 16 20.4**	**+1.0**
BTKR	**Batakoyurt**	**1.14**	**290**	⇓iPG	**Pg**	**19 16 09.0**	**-0.7**
BTKR				i S	**Sg**	**19 16 25.4**	**+0.9**
BTKR	**Batakoyurt**	**1.14**	**290**	i Pg	**Pg**	**19 16 09.0**	**-0.7**
BTKR				i Sg	**Sg**	**19 16 25.4**	**+0.9**
TRKR	**Terskaya**	**1.18**	**308**	⇓iPG	**Pg**	**19 16 09.7**	**-0.9**
TRKR				eS	**Sg**	**19 16 26.8**	**+0.9**
TRKR	**Terskaya**	**1.18**	**308**	i Pg	**Pg**	**19 16 09.7**	**-0.9**
TRKR				eSg	**Sg**	**19 16 26.8**	**+0.9**
KMKR	**Kumukh**	**1.18**	**137**	ePG	**Pg**	**19 16 10.0**	**-0.6**
KMKR				i S	**Sg**	**19 16 26.5**	**+0.6**
KMKR				pmax	pmax		
	comp=Z,56nm,0.2s						
KMKR	**Kumukh**	**1.18**	**137**	ePg	**Pg**	**19 16 10.0**	**-0.6**
	comp=Z,56nm,0.2s						
KMKR				i Sg	**Sg**	**19 16 26.5**	**+0.6**
LACR	**Lac**	**1.27**	**263**	⇑iPG	**Pn**	**19 16 10.9**	**-0.9**
LACR				i S	**Sg**	**19 16 28.9**	**+0.1**
LACR	**Lac**	**1.27**	**263**	i Pg	**Pn**	**19 16 10.9**	**-0.9**
LACR				i Sg	**Sg**	**19 16 28.9**	**+0.1**
ARNR	**Ardon**	**1.28**	**279**	ePG	**Pn**	**19 16 11.5**	**-0.4**
ARNR				eS	**Sg**	**19 16 29.6**	**+0.5**
ARNR	**Ardon**	**1.28**	**279**	ePg	**Pn**	**19 16 11.5**	**-0.4**
ARNR				eSg	**Sg**	**19 16 29.6**	**+0.5**
KMSR	**Komsomolskaya**	**1.31**	**287**	ePG	**Pn**	**19 16 11.8**	**-0.5**
KMSR				eS	**Sg**	**19 16 30.5**	**+0.5**
KMSR	**Komsomolskaya**	**1.31**	**287**	ePg	**Pn**	**19 16 11.8**	**-0.5**
KMSR				eSg	**Sg**	**19 16 30.5**	**+0.5**
KORR	**Kora**	**1.43**	**274**	ePG	**Pn**	**19 16 14.1**	**+0.2**
KORR				i S	**Sg**	**19 16 34.0**	**+0.2**
KORR	**Kora**	**1.43**	**274**	ePg	**Pn**	**19 16 14.1**	**+0.2**
KORR				i Sg	**Sg**	**19 16 34.0**	**+0.2**
PRTR	**Priterechnaya**	**1.47**	**301**	⇓iPG	**Pn**	**19 16 14.5**	**0.0**
PRTR				eS	**Sg**	**19 16 35.2**	**+0.1**
PRTR	**Priterechnaya**	**1.47**	**301**	i Pg	**Pn**	**19 16 14.5**	**0.0**
PRTR				eSg	**Sg**	**19 16 35.2**	**+0.1**
ZEI	**Tsey**	**1.57**	**262**	ePG	**Pn**	**19 16 15.7**	**-0.2**
ZEI				eS	**Sg**	**19 16 37.6**	**-0.7**
ZEI	**Tsey**	**1.57**	**262**	ePg	**Pn**	**19 16 15.7**	**-0.2**
ZEI				eSg	**Sg**	**19 16 37.6**	**-0.7**
TBLG	**Delisi**	**1.58**	**217**	P	**Sg**	**19 16 39.7**	**+1.0**
MTA	**Mtatsminda**	**1.58**	**215**	P	**Sg**	**19 16 39.6**	**+0.8**
DGRG	**David-gareji**	**1.62**	**197**	P	**Pg**	**19 16 19.0**	**+0.1**
DGRG				S	**Sg**	**19 16 44.9**	**+5.0**
LSNR	**Lesken**	**1.63**	**280**	ePN	**Pn**	**19 16 17.0**	**+0.3**
LSNR				i S	**Sn**	**19 16 38.9**	**+1.1**
LSNR	**Lesken**	**1.63**	**280**	ePn	**Pn**	**19 16 17.0**	**+0.3**
LSNR				i Sg	**Sn**	**19 16 38.9**	**+1.1**
KEH	**Kehvi**	**1.68**	**246**	P	**Sg**	**19 16 40.5**	**-1.3**
DIGR	**Digorskoe uzhe**	**1.79**	**268**	ePN	**Pn**	**19 16 19.1**	**+0.2**
DIGR	**Digorskoe uzhe**	**1.79**	**268**	ePn	**Pn**	**19 16 19.1**	**+0.2**
ONI	**Oni**	**1.93**	**259**	P	**Sg**	**19 16 48.0**	**-1.8**

NEIC ***25*** *19:22:35.9, 19°.64N×64°.50W, h56km, MD3.5(RSPR), After RSPR.*

RSPR 25 19:22:35.9, 19°.64N×64°.50W, h56km±18km, MD3.5/4, MD3.5/4, 4C-4D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STVI	**Saint Thomas**	**1.35**	**199**	⇑eP	Pn	19 22 57.4	-1.1
STVI				eS	Sn	19 23 14.7	-0.8
STVI	**Saint Thomas**	**1.35**	**199**	⇑eP	Pn	19 22 57.4	-1.1
STVI				eS	Sn	19 23 14.7	-0.8
MTP	**Monte Pirata**	**1.83**	**213**	⇑eP	Pn	19 23 04.7	-0.3
MTP				eS	Sn	19 23 26.3	-0.8
MTP	**Monte Pirata**	**1.83**	**213**	⇑eP	Pn	19 23 04.7	-0.3
MTP				eS	Sn	19 23 26.3	-0.8
CBYP	**Canovanas**	**1.87**	**224**	⇓eP	Pn	19 23 04.7	-0.9
CBYP	**Canovanas**	**1.87**	**224**	⇓eP	Pn	19 23 04.7	-0.9
HUMP	**Col San Antoni**	**1.96**	**221**	⇓eP	Pn	19 23 05.9	-1.0
HUMP	**Col San Antoni**	**1.96**	**221**	⇓eP	Pn	19 23 05.9	-1.0

IDC 25 19:26:54.6±2.9, 6°.71S×102°.93E, h0km, mb3.6/7, mb1 3.7/7, mb1mx3.6/20, mbtmp3.6/7, Error ellipse: s-maj=99.8km s-min=22.6km az=54.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**25.31**	**351**	P	P	19 32 23.2	+0.1
	1.2nm,0.5s,baz=181,slow=8.9,SNR=13						
WRA	**Warramunga Arr**	**33.19**	**116**	P	P	19 33 32.6	-0.7
	0.4nm,0.6s,baz=282,slow=13,SNR=3.1						
ASAR	**Alice Springs**	**34.19**	**123**	P	P	19 33 42.5	+0.5
	0.3nm,0.8s,baz=296,slow=7.7,SNR=4.2						
KSRS	**Korea Array**	**49.74**	**26**	P	P	19 35 48.9	+0.1
	0.8nm,0.5s,baz=215,slow=7.8,SNR=4.7						
SONM	**Songino Array**	**54.39**	**3**	P	P	19 36 22.7	-0.6
	0.9nm,0.7s,baz=184,slow=9.1,SNR=8.1						
MKAR	**Makanchi Array**	**56.34**	**343**	P	P	19 36 36.2	-1.0
	0.3nm,0.6s,baz=129,slow=9.2,SNR=5.1						
ZALV	**Zalesovo Beam**	**62.33**	**348**	P	P	19 37 20.2	+1.6
	0.6nm,0.4s,baz=160,slow=8.1,SNR=3.7						

NEIC ***25*** *19:29:07.3, 32°.32N×115°.30W, h6km, ML3.2(ECX), ML2.9(PAS), After ECX.*

ECX 25 19:29:07.3±0.7, 32°.32N×115°.31W, h6km, MD3.0, ML3.2, 5C-6D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.10**	**4**	eP	Pg	19 29 08.1	-1.4
CPBX				eS	Sg	19 29 10.9	-0.1
CPBX				⇑e		19 29 12.6	
	comp=N,40μm,0.3s						
EMX	**El Mayor**	**0.33**	**170**	eP	Pg	19 29 12.9	-0.9
EMX				eS	Sg	19 29 17.9	-0.3
EMX				⇓e		19 29 18.2	
	comp=N,1μm,0.1s						
EMX	**El Mayor**	**0.33**	**170**	eP	Pg	19 29 12.9	-0.9
EMX				eS	Sg	19 29 17.9	-0.3
SGL	**Mount Signal**	**0.48**	**314**	⇓eP	Pg	19 29 15.8	-0.7
COA	**Coachella**	**0.57**	**16**	⇓eP	Pg	19 29 17.8	-0.4
YUH	**Yuha Desert**	**0.61**	**303**	⇓eP	Pg	19 29 18.0	-1.1
RDX	**Rancho Dawling**	**0.66**	**234**	⇑eP	Pg	19 29 18.9	-1.1
RDX				eS	Sg	19 29 28.0	-0.6
RDX				⇓e		19 29 29.9	
	comp=N,510nm,0.3s						
RDX	**Rancho Dawling**	**0.66**	**234**	⇑eP	Pg	19 29 18.9	-1.1
RDX				eS	Sg	19 29 28.0	-0.6
YMD	**Yuma Desert**	**0.69**	**70**	⇑eP	Pg	19 29 19.5	-1.1
RMX	**La Rumorosa**	**0.71**	**294**	eP	Pg	19 29 19.6	-1.3
CRR	**Carrizo Plain**	**0.79**	**316**	⇓eP	Pg	19 29 21.4	-1.2
GLA	**Glamis**	**0.84**	**29**	⇑eP	Pg	19 29 21.4	-2.0
GLA	**Glamis**	**0.84**	**29**	ePg	Pg	19 29 21.0	-2.4
ECBX	**El Chinero**	**0.87**	**165**	eP	Pg	19 29 22.2	-1.9
ECBX				eS	Sg	19 29 34.6	-0.7
CBX	**Cerro Bola**	**1.14**	**270**	eP	Pg	19 29 27.4	-1.9
CBX				eS	Sg	19 29 42.5	-1.5
BAR	**Barrett**	**1.20**	**288**	ePg	Pg	19 29 28.5	-1.9
BAR				eS	Sg	19 29 43.6	-2.4
ECNX	**Esteban Cantu**	**1.27**	**239**	eP	Pn	19 29 29.4	-2.2
ECNX				eP		19 29 28.6	
SPX	**San Pedro Mart**	**1.28**	**186**	eP	Pn	19 29 29.1	-2.5
SPX				eS	Sg	19 29 47.2	-1.1
PBX	**Punta Banda**	**1.33**	**245**	eP	Pn	19 29 30.1	-2.3
PFO	**Pinyon Flat Ob**	**1.61**	**324**	ePn	Pn	19 29 31.8	-4.4
TUC	**Tucson**	**3.83**	**89**	ePn	Pn	19 30 02.4	-4.5
TUC				eS	Sn	19 31 04.1	+12

IDC ***25*** *19:37:11.9±2.5, 41°.79N×142°.48E, h0km, mb3.6/6, mb1 3.6/6, mb1mx3.5/22, mbtmp3.6/6, Error ellipse: s-maj=87.6km s-min=29.8km az=65.0*
JMA ***25*** *19:37:19.8±0.1, 41°.57N×142°.08E, h65km±3km, M3.2*
JMA Felt I J1.
ISCJB ***25*** *19:37:19.4±0.5, 41°.57N±0°.04×142°.06E±0°.05, h66km±5km, mb3.4/6, Error ellipse: s-maj=8.4km s-min=4.9km az=136.9*

ISC 25 19:37:20.3±0.5, 41°.57N±0°.04×142°.06E±0°.05, h57km±6km, n18, σ0°.52/26, mb3.5/6, 1C-3D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOT	**Ohata**	**0.78**	**257**	P	**Pn**	**19 37 35.4**	**0.0**
JOT				eS	**Sn**	**19 37 46.8**	**+0.4**
JKB	**Kayabe**	**0.83**	**293**	⇓P	**Pn**	**19 37 35.8**	**-0.2**
JNBK	**Urakawa-nobuka**	**0.88**	**36**	P	**Pn**	**19 37 36.1**	**-0.5**
JEM	**Erimo**	**0.93**	**61**	⇑P	**Pn**	**19 37 37.0**	**-0.3**
JEM				eS	**Sn**	**19 37 49.6**	**-0.3**
JTM	**Tenmabayashi**	**1.08**	**224**	⇓P	**Pn**	**19 37 39.6**	**+0.3**
JTM				eS	**Sn**	**19 37 53.5**	**+0.2**
JANG	**Nango**	**1.26**	**199**	P	**Pn**	**19 37 41.8**	**+0.1**
JANG				eS	**Sn**	**19 37 57.1**	**-0.6**
JEW	**Eniwo**	**1.35**	**341**	⇓P	**Pn**	**19 37 43.2**	**+0.3**
JEW				eS	**Sn**	**19 38 00.3**	**+0.5**
JCH	**Churui**	**1.43**	**42**	P	**Pn**	**19 37 44.3**	**+0.4**
JCH				eS	**Sn**	**19 38 02.9**	**+1.3**
JFR	**Furan**	**1.64**	**14**	P	**Pn**	**19 37 46.7**	**-0.1**
JOSM	**Okushiri--Mats**	**2.00**	**286**	P	**Pn**	**19 37 51.3**	**-0.4**
JOSM				eS	**Sn**	**19 38 15.1**	**-0.5**
JSK	**Shakotan**	**2.13**	**327**	P	**Pn**	**19 37 53.8**	**+0.3**
JAR	**Ashorobuto**	**2.14**	**36**	P	**Pn**	**19 37 53.6**	**0.0**
JAR				eS	**Sn**	**19 38 18.2**	**-0.8**
SONM	**Songino Array**	**25.95**	**296**	P	**P**	**19 42 47.6**	**+0.5**
	0.2nm,0.4s,mb3.0,baz=80,slow=7.2,SNR=4.0						
ZALV	**Zalesovo Beam**	**39.36**	**308**	P	**P**	**19 44 43.5**	**-0.3**
	0.3nm,0.3s,mb3.5,baz=64,slow=6.8,SNR=3.8						
MKAR	**Makanchi Array**	**42.28**	**298**	P	**P**	**19 45 07.9**	**-0.1**
	0.2nm,0.4s,mb3.1,baz=77,slow=14,SNR=3.2						
BVAR	**Borovoye Array**	**47.99**	**309**	P	**P**	**19 45 53.2**	**+0.1**
	0.6nm,0.4s,mb4.0,baz=71,slow=7.9,SNR=8.5						
FINES	**FINESS Array B**	**65.06**	**332**	P	**P**	**19 47 53.1**	**-1.1**
	0.8nm,0.6s,mb3.9,baz=46,slow=12,SNR=4.2						
ASAR	**Alice Springs**	**65.34**	**188**	P	**P**	**19 47 57.5**	**+1.1**
	0.6nm,0.8s,mb3.7,baz=17,slow=8.1,SNR=4.7						

SZGRF ***25*** *19:44:16.6, 17°.57S×177°.25W, h33km, Fiji Islands region*
ISCJB ***25*** *19:45:11.0±1.1, 17°.95S±0°.3×178°.3W±0°.2, h515km±15km, mb3.8/15, Error ellipse: s-maj=46.5km s-min=12.4km az=148.9*
IDC ***25*** *19:45:12.3±1.5, 17°.97S×178°.19W, h522km±17km, mb3.4/13, mb1 3.6/14, mb1mx3.6/19, mbtmp3.4/14, Error ellipse: s-maj=31.6km s-min=10.2km az=148.0*
NEIC ***25*** *19:45:13.0±1.2, 17°.98S×178°.10W, h533km±10km, mb4.2/2, Error ellipse: s-maj=43.2km s-min=13.2km az=154.0*

ISC 25 19:45:11.6±1.1, 17°.95±0°.3×178°.2W±0°.2, h510km±15km, n88, σ0°.78/26, mb3.8/15, 4D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.55**	**273**	eP	**P**	**19 46 33.4**	**+6.1**
AFI	**Afiamalu**	**7.38**	**58**	P	**P**	**19 47 01.9**	**-0.2**
	4.8nm,0.3s,baz=226,slow=18,SNR=5.2						
AFI				S	**S**	**19 48 32.4**	**-0.1**
	4.3nm,0.3s,baz=17,slow=16,SNR=4.2						
AFI	**Afiamalu**	**7.38**	**58**	eP	**P**	**19 47 01.6**	**-0.5**
AFI				S	**S**	**19 48 32.4**	**-0.1**
CTA	**Charters Tower**	**33.61**	**261**	P	**P**	**19 51 09.7**	**+0.3**
	2.8nm,0.4s,mb4.2,baz=83,slow=11,SNR=8.9						
STKA	**Stephens Creek**	**38.77**	**241**	P	**P**	**19 51 52.8**	**+0.9**
	4.4nm,0.5s,mb4.3,baz=99,slow=9.9,SNR=19						
STKA	**Stephens Creek**	**38.77**	**241**	eP	**P**	**19 51 52.9**	**+1.1**
WRA	**Warramunga Arr**	**44.80**	**260**	P	**P**	**19 52 39.2**	**-0.6**
	4.4nm,0.5s,mb4.3,baz=93,slow=6.8,SNR=107						
WRA				PcP	PcP	19 54 10.1	-1.0
	0.8nm,0.4s,baz=90,slow=3.8,SNR=4.8						
ASAR	**Alice Springs**	**44.95**	**254**	P	**P**	**19 52 41.0**	**+0.2**
	41nm,0.5s,baz=89,slow=8.3,SNR=1121						
ASAR				PcP	PcP	19 54 10.8	-0.7
	1.7nm,0.6s,baz=98,slow=3.9,SNR=5.1						
ASAR				S	**S**	**19 58 39.1**	**-2.6**
	1.2nm,0.9s,baz=84,slow=16,SNR=6.0						
FITZ	**Fitzroy Crossi**	**53.19**	**261**	P	**P**	**19 53 41.8**	**-0.2**
	1.0nm,0.3s,mb3.6,baz=98,slow=13,SNR=12						
MBWA	**Marble Bar**	**58.23**	**256**	eP	**P**	**19 54 16.3**	**-0.8**
	3.2nm,0.6s,mb3.7						
MJAR	**Matsushiro Arr**	**68.03**	**323**	P	**P**	**19 55 19.4**	**-0.3**
	2.5nm,0.6s,mb3.9,baz=159,slow=6.4,SNR=8.4						
MJAR	**Matsushiro Arr**	**68.03**	**323**	P	**P**	**19 55 19.4**	**-0.3**
PETK	**Petropavlovsk-**	**73.75**	**345**	P	**P**	**19 55 53.0**	**-0.1**
	1.5nm,0.4s,mb3.8,baz=107,slow=9.5,SNR=8.9						
KSRS	**Korea Array**	**74.84**	**318**	P	**P**	**19 56 00.6**	**+1.0**
	1.7nm,0.7s,mb3.6,baz=131,slow=6.5,SNR=9.4						
NVAR	**Mina Array Bea**	**79.32**	**44**	P	**P**	**19 56 24.7**	**+0.6**
	1.1nm,0.7s,mb3.3,baz=221,slow=8.6,SNR=8.1						
NVAR	**Mina Array Bea**	**79.32**	**44**	P	**P**	**19 56 24.7**	**+0.6**
ELK	**Elko**	**82.56**	**43**	P	**P**	**19 56 41.3**	**+0.5**
	1.2nm,0.8s,mb3.5,baz=270,slow=4.9,SNR=4.3						
ENH	**Enshi**	**84.43**	**304**	eP	**P**	**19 56 51.1**	**+0.8**
	20nm,1.2s,mb4.5						
PDAR	**Pinedale Array**	**87.25**	**43**	P	**P**	**19 57 03.5**	**0.0**
	0.7nm,0.6s,mb3.5,baz=236,slow=2.7,SNR=5.7						
CMAR	**Chiang Mai Arr**	**89.06**	**290**	P	**P**	**19 57 13.6**	**+1.1**
	1.7nm,0.9s,mb3.9,baz=114,slow=2.4,SNR=11						
SONM	**Songino Array**	**93.68**	**319**	P	**P**	**19 57 32.6**	**-0.6**
	0.3nm,0.5s,mb3.7,baz=118,slow=5.0,SNR=4.1						
YKA	**Yellowknife Ar**	**94.28**	**25**	P	**P**	**19 57 33.7**	**-1.8**
	0.8nm,0.7s,mb3.9,baz=254,slow=4.2,SNR=3.8						
YKA	**Yellowknife Ar**	**94.28**	**25**	P	**P**	**19 57 33.7**	**-1.8**
MKAR	**Makanchi Array**	**109.28**	**314**	PKiKP	PKiKP	20 02 41.6	-1.7
	0.8nm,0.5s,baz=71,slow=3.8,SNR=20						
KURK	**Kurchatov**	**111.96**	**318**	eP	PKiKP	20 02 45.8	-2.6
BVAR	**Borovoye Array**	**116.97**	**321**	PKP	PKPdf	20 02 56.5	-1.4
	1.4nm,0.5s,baz=191,slow=0.5,SNR=11						
ARCES	**ARCESS Array B**	**126.37**	**350**	PKP	PKPdf	20 03 14.0	-1.4
	3.7nm,0.9s,baz=25,slow=4.0,SNR=6.7						
ARCES	**ARCESS Array B**	**126.37**	**350**	PKP	PKPdf	20 03 14.0	-1.4
FINES	**FINESS Array B**	**133.26**	**344**	PKP	PKPdf	20 03 27.0	-1.7
	2.4nm,0.9s,baz=225,slow=16,SNR=3.3						
BSEG	**Bad Segeberg**	**143.47**	**352**	ePKPbc	PKPdf	20 03 45.0	-2.5
BUR08	**Bucovina Ar. S**	**144.70**	**332**	ePKPdf	PKPdf	20 03 50.0	+0.1
STHS	**Stebnicka Huta**	**144.88**	**338**	eP	PKPdf	20 03 51.7	+1.6
STHS	**Stebnicka Huta**	**144.88**	**338**	ePKP	PKPdf	20 03 51.7	+1.6
NRDL	**Niedersach Rie**	**144.90**	**351**	ePKPbc	PKPdf	20 03 49.1	-1.0
BR131	**Keskin Array S**	**144.92**	**315**	ePKPdf	PKPdf	20 03 50.7	+0.2
NIE	**Niedzica**	**145.21**	**339**	eP	PKPdf	20 03 51.6	+0.9
CRVS	**Cervenica-Dubn**	**145.23**	**337**	eP	PKPdf	20 03 51.5	+0.7
CRVS				e		20 04 02.1	
CRVS	**Cervenica-Dubn**	**145.23**	**337**	ePKP	PKPdf	20 03 51.5	+0.7
CRVS				e		20 04 02.1	
CLZ	**Clausthal**	**145.49**	**351**	ePKPbc	PKPbc	20 03 51.7	-0.6
CLL	**Collm**	**145.53**	**348**	ePKPbc	PKPbc	20 03 51.6	-0.9
CLL	**Collm**	**145.53**	**348**	⇓iPKPbc	PKPbc	20 03 51.7	-0.8

BOQS				*e*S	Sn	19 53 12.8	-0.7
CONN	**Concepcion**	**2.21**	**129**	*e*P	Pn	19 52 49.2	+0.1
SSN	**San Juan del S**	**2.23**	**138**	*e*P	Pn	19 52 48.8	-0.6
SNJE	**San Jose**	**2.35**	**292**	*e*P	Pn	19 52 50.5	-0.2
SBLS	**San Blas**	**2.35**	**292**	*e*P	Pn	19 52 50.5	-0.3
RBDL	**Robledal**	**2.52**	**297**	*e*P	Pn	19 52 52.5	-0.3
MRL	**Marmol**	**3.06**	**313⇓**	*e*P	Pn	19 53 01.7	+2.0
IXG	**Ixpaco**	**3.23**	**292⇓**	*e*P	Pn	19 53 02.0	+0.2
APG	**El Apazote**	**3.62**	**304**	P	Pn	19 53 07.7	+0.8
comp=Z,5.3nm,0.3s,baz=131,slow=9.0,SNR=47							
FUG	**Fuego 3**	**3.67**	**294**	*e*P	Pn	19 53 09.3	+1.7
JCR	**Jicaral**	**3.82**	**144**	*e*P	Pn	19 53 09.1	-0.4
TP2	**Tecpan 2**	**3.97**	**297**	*e*P	Pn	19 53 13.3	+1.8
CGA2	**Cerro Gallo 2**	**4.10**	**136**	*e*P	Pn	19 53 13.6	+0.4
PRS1	**Puriscal**	**4.22**	**134**	*e*P	Pn	19 53 15.8	+0.9
JAT	**Jato**	**4.36**	**288**	*e*P	Pn	19 53 17.0	+0.4
URSC	**Urasca**	**4.71**	**131**	*e*P	Pn	19 53 22.3	+1.1
QCR	**Quepos**	**4.73**	**138**	*e*P	Pn	19 53 21.2	-0.3
BUS	**Buena Vista**	**4.91**	**133**	*e*P	Pn	19 53 25.4	+1.4
BAR1		**5.45**	**133**	*e*P	Pn	19 53 31.5	+0.4
ACR	**Cerro Adams**	**5.96**	**136**	*e*P	Pn	19 53 37.4	-0.5
CMIG	**Matias Romero**	**8.33**	**300**	P	Pn	19 54 09.0	-0.6
comp=Z,3.7nm,0.3s,baz=148,slow=9.4,SNR=35							
CMIG				S	Sn	19 55 33.5	-8.7
baz=316,slow=18,SNR=1.8							
TXAR	**Lajitas Array**	**22.22**	**320**	P	P	19 56 55.9	-0.7
comp=Z,0.5nm,0.4s,mb3.3,baz=153,slow=11,SNR=1.8							
PDAR	**Pinedale Array**	**35.35**	**331**	P	P	19 58 52.4	-0.6
comp=Z,0.3nm,0.5s,mb3.2,baz=116,slow=10,SNR=3.6							
PDAR	**Pinedale Array**	**35.35**	**331**	P	P	19 58 52.4	-0.6
SCHQ	**Schefferville**	**44.75**	**17**	P	P	20 00 08.4	-2.0
comp=Z,4.2nm,0.7s,mb4.2,baz=243,slow=15,SNR=5.0							
WRA	**Warramunga Arr**	**139.49**	**254**	PKP	PKPdf	20 11 21.1	-1.6
comp=Z,1.0nm,0.8s,baz=86,slow=2.6,SNR=16							
ASAR	**Alice Springs**	**139.53**	**249**	PKP	PKPdf	20 11 21.1	-1.6
comp=Z,0.8nm,0.6s,baz=95,slow=1.7,SNR=13							

NEIC ***25*** *19:57:28.4, 36°.02N×21°.82E, h11km, MD3.5(ATH), After ATH.*
ATH ***25*** *19:57:28.4, 36°.02N±21°.82E, h11km±3km, MD3.5/7*
CSEM ***25*** *19:57:29.9±0.7, 36°.07N×21°.92E, h2km, ML3.7/1, Error ellipse: s-maj=17.8km s-min=5.7km az=58.0*
THE ***25*** *19:57:29.1, 36°.02N×21°.75E, h8km±1km, ML3.7/1, Error ellipse: s-maj=4.6km s-min=0.9km az=247.0*
ISCJB ***25*** *19:57:29.1±1.6, 36°.04N±0°.06×22°.0E±0°.1, h3km±7km, Error ellipse: s-maj=17.1km s-min=5.1km az=147.5*

ISC 25 19:57:29.7±1.7, 36°.03N±0°.06×21°.9E±0°.1, h8km±7km, n32, σ1§11/48, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.88**	**351**	P	Pg	19 57 45.1	-1.5
PYL				S	Sg	19 57 58.5	+0.5
PYL	**PYLOS**	**0.88**	**351**	*e*PB	Pg	19 57 45.1	-1.5
PYL				*e*SB	Sg	19 57 57.5	-0.5
PYL	**PYLOS**	**0.88**	**351**	P	Pg	19 57 45.1	-1.5
PYL				*e*Sb	Sg	19 57 57.5	-0.5
PYL				S	Sg	19 57 58.5	+0.5
KYTH	**Kithira**	**0.94**	**74**	*e*Pb	Pg	19 57 47.9	+0.1
KYTH	**Kithira**	**0.94**	**74**	*e*PB	Pg	19 57 47.9	+0.1
KYTH	**Kithira**	**0.94**	**74**	*e*Pb	Pg	19 57 47.9	+0.1
VLI	**Veliai**	**1.07**	**50**	*e*Pg	Pg	19 57 49.8	-0.5
VLI	**Veliai**	**1.07**	**50**	*e*PG	Pg	19 57 49.8	-0.5
VLI	**Veliai**	**1.07**	**50**	*e*Pg	Pg	19 57 49.8	-0.5
ITM	**Ithomi**	**1.15**	**0**	*e*Pn	Pn	19 57 50.2	-1.9
ITM				*e*Sb	Sb	19 58 06.6	-0.3
ITM	**Ithomi**	**1.15**	**0**	P	Pn	19 57 50.4	-1.7
ITM				S	Sg	19 58 07.8	+1.1
ITM	**Ithomi**	**1.15**	**0**	*e*PN	Pn	19 57 50.2	-1.9
ITM				*e*SB	Sb	19 58 06.6	-0.3
ITM	**Ithomi**	**1.15**	**0**	P	Pn	19 57 50.4	-1.7
ITM				*e*Sb	Sb	19 58 06.6	-0.3
ITM				S	Sg	19 58 07.8	+1.1
VLX	**Vlachokerasia**	**1.39**	**15**	P	Pn	19 57 54.5	-0.9
VLX				S	Sg	19 58 14.2	-0.3
VLX	**Vlachokerasia**	**1.39**	**15**	*e*PG	Pn	19 57 54.3	-1.1
VLX				*e*SB	Sg	19 58 14.1	-0.4
VLX	**Vlachokerasia**	**1.39**	**15**	P	Pn	19 57 54.5	-0.9
VLX				*e*Sb	Sg	19 58 14.1	-0.4
KARN	**Karanos**	**1.74**	**110**	P	Pb	19 58 01.3	-0.6
KARN				S	Sg	19 58 25.0	-0.7
KARN	**Karanos**	**1.74**	**110**	*e*PN	Pb	19 58 01.6	-0.3
KARN	**Karanos**	**1.74**	**110**	P	Pb	19 58 01.3	-0.6
KARN	**Karanos**	**1.74**	**110**	*e*Pn	Pb	19 58 01.6	-0.3
KARN				S	Sg	19 58 25.0	-0.7
GUR	**Goura**	**1.94**	**10**	P	Pn	19 58 03.9	+1.0
GUR	**Goura**	**1.94**	**10**	*e*PN	Pn	19 58 04.1	+1.2
GUR	**Goura**	**1.94**	**10**	P	Pn	19 58 03.9	+1.0
VAM	**Vamos**	**1.96**	**108**	P	Pg	19 58 10.6	+3.4
RLS	**Riolos of Patr**	**2.06**	**350**	P	Pg	19 58 10.4	+1.2
LAKA	**Lakka**	**2.21**	**1**	P	Pn	19 58 07.1	+0.4
LAKA				S	Sn	19 58 34.8	+0.6
LAKA	**Lakka**	**2.21**	**1**	P	Pn	19 58 07.1	+0.4
LAKA				S	Sn	19 58 34.8	+0.6
IDI	**Anoyia**	**2.53**	**106**	P	Pg	19 58 19.3	+1.1
AGG	**Agios Georgios**	**3.01**	**6**	P	Pb	19 58 21.8	-1.7
AGG	**Agios Georgios**	**3.01**	**6**	P	Pb	19 58 21.8	-1.7
PAIG	**Paliouri**	**4.13**	**19**	P	Pn	19 58 35.3	+2.2
PAIG	**Paliouri**	**4.13**	**19**	P	Pn	19 58 35.3	+2.2

ISK ***25*** *20:02:17.8, 37°.01N×29°.18E, h5km, MD3.0*
DDA ***25*** *20:02:18.4, 37°.00N×29°.13E, h6km±3km, Md3.1*
ISCJB ***25*** *20:02:18.6±0.9, 36°.99N±0°.06×29°.18E±0°.04, h4km±8km, Error ellipse: s-maj=9.4km s-min=5.2km az=176.5*
CSEM ***25*** *20:02:19.0±0.2, 36°.99N×29°.20E, h10km, MD3.0, Error ellipse: s-maj=5.0km s-min=3.8km az=176.0*

ISC 25 20:02:19.2±0.8, 36°.99N±0°.05×29°.19E±0°.04, h9km±6km, n24, σ0§73/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**57**	*e*PG	Pg	20 02 24.6	-0.5
GLHS				*e*SG	Sg	20 02 30.0	+0.9
GLHS	**Glhisar (BURDU**	**0.30**	**57**	*e*Pg	Pg	20 02 24.6	-0.5
GLHS				*e*Sg	Sg	20 02 30.0	+0.8
GOLH	**Golhisar**	**0.39**	**51**	*i* P	Pg	20 02 26.3	-0.4
GOLH	**Golhisar**	**0.39**	**51**	*i* P	Pg	20 02 26.3	-0.5
DNZL	**Cakiroluk**	**0.70**	**351**	*i* P	Pg	20 02 31.6	-1.2
DNZL				*i* S	Sg	20 02 42.4	+0.4
DNZL	**Cakiroluk**	**0.70**	**351**	*i* P	Pg	20 02 31.6	-1.2
DNZL				*i* S	Sg	20 02 42.4	+0.4
YER	**Yerkesik**	**0.74**	**281**	*e*PG	Pg	20 02 33.1	-0.3
YER				*e*SG	Sg	20 02 44.3	+1.3
YER	**Yerkesik**	**0.74**	**281**	*e*Pg	Pg	20 02 33.1	-0.3
YER				*e*Sg	Sg	20 02 44.3	+1.3
DENT	**Denizli**	**0.77**	**351**	*e*PG	Pg	20 02 33.4	-0.6
DENT	**Denizli**	**0.77**	**351**	*e*Pg	Pg	20 02 33.4	-0.6
AKAS	**Kas**	**0.83**	**156**	*i* P	Pg	20 02 35.3	+0.2
AKAS	**Kas**	**0.83**	**156**	*i* P	Pg	20 02 35.3	+0.2
MLSB	**Milas**	**1.17**	**285**	*e*PN	Pn	20 02 40.9	-0.7
MLSB	**Milas**	**1.17**	**285**	*e*Pn	Pn	20 02 40.9	-0.7
BCK	**Bucak**	**1.22**	**67**	*e*PN	Pn	20 02 42.2	-0.1
BCK	**Bucak**	**1.22**	**67**	*e*Pn	Pn	20 02 42.2	-0.1
KHL	**Karahalli**	**1.36**	**11**	*e*PN	Pn	20 02 44.8	+0.6
KHL	**Karahalli**	**1.36**	**11**	*e*Pn	Pn	20 02 44.8	+0.6
BDRM	**Kayabasi**	**1.40**	**274**	*i* P	Pn	20 02 43.5	-1.3
BDRM				*i* S	Sb	20 03 03.7	+0.5
BDRM	**Kayabasi**	**1.40**	**274**	*i* P	Pn	20 02 43.5	-1.3
BDRM				*i* S	Sb	20 03 03.7	+0.5
SUTC	**Sutluce-Ispart**	**1.53**	**71**	*e*PN	Pn	20 02 47.4	+0.8
SUTC	**Sutluce-Ispart**	**1.53**	**71**	*e*Pn	Pn	20 02 47.4	+0.8
KULA	**Kula-Manisa**	**1.58**	**345**	*e*PN	Pn	20 02 47.6	+0.4
KULA	**Kula-Manisa**	**1.58**	**345**	*e*Pn	Pn	20 02 47.7	+0.4

NIED ***25*** *20:12:00, 46°.60N×152°.50E, h35km, Mw3.9 Best double couple: M0:6.95000×10^14 NP1:φ=114.00000°, δ=75.00000°, λ=-50.00000°. NP2:φ=221.00000°, δ=43.00000°, λ=-157.00000°.*
JMA ***25*** *20:12:42.7±0.9, 46°.60N×152°.48E, h30km, M4.3*

ISC 25 20:12:47.4±1.7, 45°.0N±0°.4×152°.8E±0°.2, h30km, n14, σ0§79/20, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**5.35**	**255**	P	Pn	20 14 05.3	+0.1
NEM2				*e*S	Sn	20 15 07.1	+1.4
JRA	**Rausu**	**5.62**	**262**	P	Pn	20 14 09.9	+1.1
JNK	**Nakash**	**6.00**	**259**	P	Pn	20 14 14.3	+0.3
JAK	**Akkeshi**	**6.20**	**254**	P	Pn	20 14 16.8	0.0
JAK				*e*S	Sn	20 15 27.2	+0.6
JTKR	**Abashiri--Toko**	**6.47**	**264**	P	Pn	20 14 19.7	-0.8
JAR	**Ashorobuto**	**6.74**	**259**	P	Pn	20 14 24.5	+0.3
JAR				*e*S	Sn	20 15 41.2	+1.3
JOB	**Onbets**	**6.82**	**256**	P	Pn	20 14 25.9	+0.6
JOB				*e*S	Sn	20 15 41.7	-0.2
JMP	**Maruseppu**	**6.85**	**265**	P	Pn	20 14 25.4	-0.3
JCH	**Churui**	**7.25**	**254**	P	Pn	20 14 31.2	0.0
JCH				*e*S	Sn	20 15 50.9	-1.6
JKK2	**Kamakawa 2**	**7.31**	**265**	P	Pn	20 14 31.2	-0.8
ASAJ	**Asahikawa**	**7.37**	**267**	P	Pn	20 14 32.2	-0.6
JFR	**Furan**	**7.60**	**260**	P	Pn	20 14 36.4	+0.4
JNBK	**Urakawa-nobuka**	**7.80**	**253**	P	Pn	20 14 38.4	-0.3
JNBK				*e*S	Sn	20 16 04.3	-1.6
JTM	**Tenmabayashi**	**9.60**	**248**	P	Pn	20 15 03.5	+0.1

ISCJB ***25*** *20:24:56.7±0.4, 32°.32N±0°.02×115°.29W±0°.02, h10km±3km, Error ellipse: s-maj=3.1km s-min=2.7km az=175.8*
NEIC ***25*** *20:24:58.3, 32°.32N×115°.30W, h7km, ML3.8(ECX), ML3.4(PAS), After ECX.*
ECX ***25*** *20:24:58.3±0.6, 32°.32N×115°.31W, h7km, MD3.6, ML3.8*

ISC 25 20:24:57.1±0.3, 32°.32N±0°.02×115°.30W±0°.02, h13km±2km, n44, σ0§92/68, 17C-16D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.10**	**0⇓**	*e*P	Pg	20 25 00.2	+0.2
CPBX				*e*S	Sg	20 25 02.5	+0.3
EMX	**El Mayor**	**0.34**	**171⇓**	*e*P	Pg	20 25 04.1	+0.1
EMX				*e*S	Sg	20 25 09.1	+0.5
SGL	**Mount Signal**	**0.48**	**313⇓**	*e*P	Pg	20 25 07.0	+0.3
COA	**Coachella**	**0.56**	**16⇑**	*e*P	Pg	20 25 08.8	+0.7
YUH	**Yuha Desert**	**0.61**	**302⇓**	*e*P	Pg	20 25 09.1	0.0
COK	**Cook Ranch**	**0.64**	**326⇓**	*e*P	Pg	20 25 09.8	+0.2
112A	**Yuma**	**0.65**	**71⇑**	P	Pg	20 25 09.9	+0.1
baz=0.7,SNR=58							
112A				⇑S	Sg	20 25 19.1	+0.8
baz=0.7							
RDX	**Rancho Dawling**	**0.67**	**234⇑**	*e*P	Pg	20 25 10.1	-0.1
RDX				*e*S	Sg	20 25 19.1	+0.1
RDX				⇓*e*		20 25 21.1	
comp=N,3μm,0.5s							
RDX	**Rancho Dawling**	**0.67**	**234⇑**	*e*P	Pg	20 25 10.1	-0.1
RDX				*e*S	Sg	20 25 19.1	+0.1
YMD	**Yuma Desert**	**0.68**	**70⇑**	*e*P	Pg	20 25 10.4	0.0
RMX	**La Rumorosa**	**0.71**	**293**	*e*P	Pg	20 25 10.7	-0.3
RMX				*e*S	Sg	20 25 20.4	+0.1
SWSC	**Sam W. Stewart**	**0.74**	**326**	P	Pg	20 25 11.1	-0.4
baz=0.8,SNR=112							
SWSC				⇑S	Sg	20 25 21.3	0.0
baz=0.8							
DVTC	**Desert V Tower**	**0.75**	**297**	P	Pg	20 25 11.8	+0.1
baz=0.8,SNR=35							
DVTC				⇓S	Sg	20 25 21.9	+0.3
baz=0.8							
CRR	**Carrizo Plain**	**0.79**	**315⇓**	*e*P	Pg	20 25 12.2	-0.3
GLA	**Glamis**	**0.83**	**29**	P	Pg	20 25 12.5	-0.7
baz=0.9,SNR=155							
GLA				⇑S	Sg	20 25 24.1	0.0
baz=0.9							
GLA	**Glamis**	**0.83**	**29⇑**	*e*P	Pg	20 25 12.5	-0.7
GLA	**Glamis**	**0.83**	**29**	*e*Pg	Pg	20 25 12.4	-0.8
GLA				*e*Sg	Sg	20 25 24.9	+0.8
ECBX	**El Chinero**	**0.88**	**166**	*e*P	Pg	20 25 13.3	-0.8
ECBX				*e*S	Sg	20 25 25.4	-0.1
MONP	**Monument Peak**	**1.10**	**301**	⇓P	Pb	20 25 17.1	-0.8
baz=1.1,SNR=316							
MONP				⇓S	Sb	20 25 31.9	-0.3
baz=1.1							
CBX	**Cerro Bola**	**1.15**	**270**	*e*P	Pb	20 25 18.5	-0.4
CBX				*e*S	Sb	20 25 33.6	-0.1
BAR	**Barrett**	**1.21**	**287**	*e*Pg	Pg	20 25 19.1	-1.3
BAR				*e*Sg	Sg	20 25 35.1	-1.1
SPX	**San Pedro Mart**	**1.28**	**186⇓**	*e*P	Pn	20 25 20.2	-0.5
SPX				*e*S	Sb	20 25 38.3	+0.8
ECNX	**Esteban Cantu**	**1.28**	**239**	*e*P	Pn	20 25 20.4	-0.3
ECNX				*e*P		20 25 19.9	
ECNX				*e*S	Sb	20 25 36.3	-1.2
ECNX				*e*S	Sb	20 25 37.9	+0.4
BC3	**Big Chuckawall**	**1.33**	**355**	P	Pn	20 25 20.0	-1.4
baz=1.4,SNR=52							
BC3				⇑S	Sb	20 25 36.9	-2.1
baz=1.4							
PBX	**Punta Banda**	**1.34**	**245**	*e*P	Pn	20 25 21.2	-0.3
PBX				*e*S	Sb	20 25 39.2	+0.1
113A	**Mohawk Valley,**	**1.37**	**71**	P	Pn	20 25 20.8	-1.1
baz=1.4,SNR=57							
113A				⇑S	Sn	20 25 38.3	-1.7
baz=1.4							
PFO	**Pinyon Flat Ob**	**1.61**	**323**	⇓P	Pn	20 25 23.8	-1.4
baz=1.7,SNR=34							
PFO	**Pinyon Flat Ob**	**1.61**	**323**	*e*P	Pn	20 25 23.8	-1.4
109C	**Camp Elliot, M**	**1.62**	**291**	⇓Sb	Sb	20 25 47.4	+0.1
baz=1.6							
Z13A	**Yuma Proving G**	**1.64**	**57**	⇑P	Pn	20 25 24.5	-1.1
baz=1.7,SNR=97							
IRM	**Iron Mountain**	**1.84**	**4**	⇓Sb	Sb	20 25 54.6	+1.1
baz=1.9							
MURC	**Murrieta**	**2.04**	**309**	⇓Sb	Sb	20 26 00.2	+0.9
baz=2.1							
114A	**Black Gap (USA**	**2.09**	**78**	⇓P	Pn	20 25 30.8	-1.0
baz=2.1							
114A				⇑Sb	Sb	20 26 02.3	+1.6
baz=2.1							
214A	**Organ Pipe Nat**	**2.15**	**99**	⇑P	Pn	20 25 31.2	-1.4
baz=2.1,SNR=17							
214A				⇑Sb	Sb	20 26 04.4	+2.0
baz=2.1							
LDFC	**Landfair**	**2.75**	**3**	*e*Pn	Pn	20 25 48.6	+7.6
SCI	**San Clemente I**	**2.81**	**284**	⇑Sb	Sb	20 26 23.3	+1.7
baz=2.8							
CIS	**Catalina Islan**	**2.82**	**293**	⇑Sb	Sb	20 26 23.6	+1.8
baz=2.9							
MWC	**Mount Wilson**	**2.99**	**310**	*e*Pn	Pn	20 25 46.9	+2.7
PASC	**Pasadena Art C**	**3.04**	**308**	*e*Pn	Pn	20 25 46.3	+1.4
GSC	**Goldstone**	**3.22**	**338**	*e*Pn	Pn	20 25 55.1	+7.7
TUC	**Tucson**	**3.83**	**89**	*e*Pn	Pn	20 25 55.9	+0.2
TUC				*e*Pg	Pg	20 26 10.5	+0.1
ISA	**Isabella**	**4.25**	**323**	*e*Pn	Pn	20 26 02.8	+1.3
ISA				*e*Pg	Pg	20 26 17.7	-0.8
WUAZ	**Wupatki**	**4.56**	**45**	*e*Pn	Pn	20 26 06.8	+1.0
ARUT	**Antelope Range**	**5.66**	**15**	*e*Pg	Pg	20 26 41.0	-4.6
comp=N,38nm,1.0s							

ISK ***25*** *20:25:17.4, 34°.22N×33°.57E, h54km, MD3.3*
NIC ***25*** *20:25:19.8±0.2, 34°.18N×33°.29E, h34km, ML3.3, MW2.7*
NEIC ***25*** *20:25:19.8, 34°.18N×33°.29E, h34km, ML3.3(NIC), After NIC.*
CSEM ***25*** *20:25:20.6±0.9, 34°.35N×33°.39E, h45km, Mw2.7*

ISC 25 20:25:18.9±1.7, 34°.3N±0°.1×33°.35E±0°.09, h75km±14km, n23, σ0§89/37, 3D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SZAC	**Souni-Zanaja**	**0.62**	**322**	P	Pn	20 25 32.7	-0.6
SZAC				S	Sn	20 25 42.7	-1.3
SZAC	**Souni-Zanaja**	**0.62**	**322**	P	Pn	20 25 32.7	-0.6
SZAC				S	Sn	20 25 42.7	-1.3
CSS	**Prodhromos**	**0.70**	**359**	P	Pn	20 25 33.7	-0.4
6.2nm,0.1s							
CSS				S	Sn	20 25 45.9	+0.5
CSS	**Prodhromos**	**0.70**	**359**	*e*PG	Pn	20 25 32.7	-1.4
CSS				*e*SG	Sn	20 25 44.1	-1.3
CSS	**Prodhromos**	**0.70**	**359**	*e*Pg	Pn	20 25 32.7	-1.4
CSS	**Prodhromos**	**0.70**	**359**	P	Pn	20 25 33.7	-0.4
6.2nm,0.1s							
CSS				*e*Sg	Sn	20 25 44.1	-1.3
CSS				S	Sn	20 25 45.9	+0.5
MAMC	**Mammari**	**0.91**	**353**	P	Pn	20 25 37.2	+0.6
MAMC	**Mammari**	**0.91**	**353**	P	Pn	20 25 37.2	+0.6
PHNC	**Paralimni**	**0.93**	**37**	P	Pn	20 25 37.8	+1.0
PHNC				S	Sn	20 25 51.2	+1.1
PHNC	**Paralimni**	**0.93**	**37**	P	Pn	20 25 37.8	+1.0
PHNC				S	Sn	20 25 51.2	+1.1
LEF	**Lefka**	**0.93**	**336**	*e*PG	Pn	20 25 37.0	+0.2
LEF				*e*SG	Sn	20 25 51.3	+1.1
LEF	**Lefka**	**0.93**	**336**	*e*Pg	Pn	20 25 37.0	+0.2
LEF				*e*Sg	Sn	20 25 51.3	+1.1
PPCY	**Paphos**	**1.03**	**307**	⇓P	Pn	20 25 38.1	+0.1
PPCY	**Paphos**	**1.03**	**307⇓**	*i*P	Pn	20 25 38.1	+0.1
PPCY	**Paphos**	**1.03**	**307⇓**	*i*P	Pn	20 25 38.1	+0.1
ALFC	**Alevga**	**1.08**	**326**	P	Pn	20 25 39.2	+0.5
12nm,0.1s							
ALFC				S	Sn	20 25 54.1	+0.7
ALFC	**Alevga**	**1.08**	**326**	P	Pn	20 25 39.2	+0.5
12nm,0.1s							
ALFC				S	Sn	20 25 54.1	+0.7
EREN	**Erenkoy**	**1.43**	**28**	*e*PN	Pn	20 25 41.6	-1.5
EREN	**Erenkoy**	**1.43**	**28**	*e*Pn	Pn	20 25 41.6	-1.5
MERS	**Mersin**	**2.77**	**20**	*e*PN	Pn	20 26 00.9	-0.1
MERS				*e*SN	Sn	20 26 32.2	-1.2
MERS	**Mersin**	**2.77**	**20**	*e*Pn	Pn	20 26 00.9	-0.1
MERS				*e*Sn	Sn	20 26 32.2	-1.2
KARA	**Karaisali**	**3.30**	**24**	*e*PN	Pn	20 26 08.7	+0.6
KARA	**Karaisali**	**3.30**	**24**	*e*Pn	Pn	20 26 08.7	+0.6

CASC 25 20:56:38.7±1.7, 13°.30N×90°.02W, h32km±4km, MD3.5, ML3.4, 2D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.66**	**36**	*e*P	Pn	20 56 52.0	+0.2
SBLS				*e*S	Sb	20 57 02.3	+1.6
SNJE	**San Jose**	**0.69**	**36**	*e*P	Pn	20 56 52.1	-0.1
SNJE				*e*S	Sb	20 57 02.7	+1.1
BOQS	**Boqueron**	**0.84**	**59**	*e*P	Pn	20 56 54.3	0.0
BOQS				*e*S	Sn	20 57 06.7	+1.2
SNET	**Serv Nac Est T**	**0.85**	**63**	*e*S	Sn	20 57 06.6	+0.7
RBDL	**Robledal**	**0.87**	**22**	*e*P	Pn	20 56 54.5	-0.1
RBDL				*e*S	Sn	20 57 07.4	+1.2
IXG	**Ixpaco**	**0.96**	**334⇓**	*e*P	Pn	20 56 56.0	0.0
IXG				*e*S	Sn	20 57 09.5	+1.0
LFRS	**El Faro**	**0.98**	**71**	*e*P	Pn	20 56 56.9	+0.6
SNVI	**San Vicente**	**1.19**	**75**	*e*P	Pn	20 56 59.3	+0.2
SNVI				*e*S	Sn	20 57 15.4	+1.3
NBG	**Las Nubes**	**1.31**	**346**	*e*P	Pn	20 57 02.8	+2.0
FUG	**Fuego 3**	**1.39**	**325**	*e*P	Pn	20 57 02.0	+0.1
FUG				*e*S	Sn	20 57 19.9	+0.8
BLLM	**Bellamira**	**1.74**	**85**	*e*P	Pn	20 57 06.6	0.0
TP2	**Tecpan 2**	**1.76**	**327⇓**	*e*P	Pn	20 57 08.5	+1.5
TP2				*e*S	Sn	20 57 31.7	+3.4
CAHU	**Cacacuatique**	**1.82**	**75**	*e*P	Pn	20 57 07.6	-0.1
CAHU				*e*P		20 57 07.8	
JAT	**Jato**	**1.87**	**303**	*e*P	Pn	20 57 09.4	+1.0
CNCH	**Conchagua**	**2.13**	**90**	*e*P	Pn	20 57 11.6	-0.4
CNCH				*e*S	Sn	20 57 38.6	+1.3
CNCH				AML	AML	20 57 43.3	
comp=Z,321nm,0.4s							
CRIN	**San Cristobal**	**2.96**	**101**	*e*P	Pn	20 57 24.0	+0.6
CRIN				*e*S	Sn	20 57 58.1	+0.3

PRU ***25*** *20:59:39.9, 38°.38N×21°.26E, h0km, M4.0*
IDC ***25*** *20:59:41.2±0.7, 38°.74N×22°.84E, h0km, mb4.0/14, mb1 4.0/20, mb1mx3.9/31, mbtmp3.9/20, ML4.0/4, MS3.3/9, Ms1 3.3/9, ms1mx3.0/38, Error ellipse: s-maj=15.0km s-min=12.8km az=117.0*
NEIC ***25*** *20:59:42.6, 38°.73N×22°.87E, h21km, mb4.0/10, ML4.5(ATH), ML4.0(PDG), After ATH.*
NEIC Felt at Athens, Chalkida, Kallithea and Lamia.
PDG ***25*** *20:59:42.7±0.5, 38°.72N×22°.91E, h11km, ML4.0/10, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*
ATH ***25*** *20:59:42.6, 38°.73N×22°.87E, h21km±1km, ML4.5*
ISCJB ***25*** *20:59:43.2±0.2, 38°.72N±0°.01×22°.86E±0°.01, h19km±2km, mb4.2/22, MS3.3/6, Error ellipse: s-maj=1.8km s-min=1.7km az=143.5*
CSEM ***25*** *20:59:43.4±0.1, 38°.69N×22°.86E, h10km, mb4.3/8, Ms3.3, Error ellipse: s-maj=2.1km s-min=1.9km az=53.0*
THE ***25*** *20:59:43.2, 38°.71N×22°.85E, h8km±1km, ML4.7/30, Error ellipse: s-maj=1.1km s-min=0.6km az=181.0*
MOS ***25*** *20:59:44.9±0.9, 38°.78N×22°.89E, h33km, mb4.0/3, Error ellipse: s-maj=5.9km s-min=3.1km az=106.5*
HLW ***25*** *20:59:46.9, 38°.44N×22°.78E, h30km±25km, Md4.0

UPR	University Cam	0.94 244	P	Pg	21 00 00.8	-0.7
UPR			S	Sg	21 00 14.1	+0.4
UPR			eSn	Sg	21 00 14.7	+1.0
ATH	Athens Observa	1.00 137	P	Pg	21 00 02.7	+0.1
ATH			S	Sg	21 00 18.1	+2.6
ATH	Athens Observa	1.00 137	ePN	Pg	21 00 02.0	-0.6
ATH	Athens Observa	1.00 137	ePn	Pg	21 00 02.0	-0.6
PTL	Penteli	1.03 129	ePn	Pg	21 00 02.5	-0.7
PTL	Penteli	1.03 129	ePN	Pg	21 00 02.5	-0.7
PTL	Penteli	1.03 129	ePn	Pg	21 00 02.5	-0.7
ATHU	Athens Univers	1.04 135	P	Pg	21 00 02.7	-0.7
ATHU			S	Sg	21 00 18.1	+1.3
ATHU	Athens Univers	1.04 135	P	Pg	21 00 02.7	-0.7
ATHU			S	Sg	21 00 18.1	+1.3
NAIG	Nisos Aigina	1.07 152	ePn	Pg	21 00 03.7	-0.3
NAIG	Nisos Aigina	1.07 152	ePN	Pg	21 00 03.7	-0.3
NAIG	Nisos Aigina	1.07 152	ePn	Pg	21 00 03.7	-0.3
THL	Klokotos Trika	1.08 323	P	Pg	21 00 02.5	-1.7
THL			S	Sg	21 00 18.0	-0.2
THL	Klokotos Trika	1.08 323	ePN	Pg	21 00 02.5	-1.7
THL			eSN	Sg	21 00 17.9	-0.3
THL	Klokotos Trika	1.08 323	P	Pg	21 00 02.5	-1.7
THL			S	Sg	21 00 18.0	-0.2
VLY	Voula,Athens	1.13 139	ePn	Pg	21 00 05.2	+0.1
VLY			eSn	Sg	21 00 20.3	+0.6
VLY	Voula,Athens	1.13 139	ePN	Pg	21 00 05.2	+0.1
VLY			eSN	Sg	21 00 20.3	+0.6
VLY	Voula,Athens	1.13 139	ePn	Pg	21 00 05.2	+0.1
VLY			eSn	Sg	21 00 20.3	+0.6
RLS	Riolos of Patr	1.27 240	ePn	Pn	21 00 06.9	-0.5
RLS	Riolos of Patr	1.27 240	ePN	Pn	21 00 06.9	-0.5
RLS	Riolos of Patr	1.27 240	ePn	Pn	21 00 06.9	-0.5
PAIG	Paliouri	1.38 27	P	Pn	21 00 07.4	-1.5
PAIG			S	Sb	21 00 27.6	+0.5
PAIG	Paliouri	1.38 27	P	Pn	21 00 07.4	-1.5
PAIG			S	Sb	21 00 27.6	+0.5
PAIG	Paliouri	1.38 27	P	Pn	21 00 07.4	-1.5
PAIG			S	Sb	21 00 27.6	+0.5
VLX	Vlachokerasia	1.39 196	P	Pn	21 00 07.9	-1.1
VLX			S	Sb	21 00 27.0	-0.4
VLX	Vlachokerasia	1.39 196	ePN	Pn	21 00 08.7	-0.3
VLX	Vlachokerasia	1.39 196	P	Pn	21 00 07.9	-1.1
VLX	Vlachokerasia	1.39 196	ePn	Pn	21 00 08.7	-0.3
VLX			S	Sb	21 00 27.0	-0.4
MEV	Metsovon	1.66 311	P	Pn	21 00 12.7	-0.1
MEV			S	Sn	21 00 35.1	+0.8
MEV	Metsovon	1.66 311	P	Pn	21 00 12.7	-0.1
MEV			S	Sn	21 00 35.1	+0.8
MEV	Metsovon	1.66 311	P	Pn	21 00 12.7	-0.1
MEV			S	Sn	21 00 35.1	+0.8
ITM	Ithomi	1.69 206	P	Pn	21 00 12.9	-0.3
ITM			S	Sn	21 00 35.1	0.0
ITM	Ithomi	1.69 206	P	Pn	21 00 12.9	-0.3
ITM			S	Sn	21 00 35.1	0.0
ITM	Ithomi	1.69 206	ePN	Pn	21 00 14.1	+0.9
ITM	Ithomi	1.69 206	P	Pn	21 00 12.9	-0.3
ITM	Ithomi	1.69 206	ePn	Pn	21 00 14.1	+0.9
ITM			S	Sn	21 00 35.1	0.0
LKD2	Lefkada island	1.72 273	P	Pn	21 00 14.7	+1.0
LKD2			S	Sn	21 00 36.6	+0.8
LKD2	Lefkada island	1.72 273	P	Pn	21 00 14.7	+1.0
LKD2			S	Sn	21 00 36.6	+0.8
PLG	Polygyros	1.73 15	P	Pn	21 00 12.4	-1.3
PLG			S	Sn	21 00 34.1	-1.9
PLG	Polygyros	1.73 15	P	Pn	21 00 12.4	-1.3
PLG			S	Sn	21 00 34.1	-1.9
PLG	Polygyros	1.73 15	ePN	Pn	21 00 12.6	-1.1
PLG	Polygyros	1.73 15	ePn	Pn	21 00 12.6	-1.1
PLG			S	Sn	21 00 34.1	-1.9
KFL	Anninata	1.73 251	P	Pn	21 00 14.1	+0.3
KZN	Kozani	1.81 333	P	Pn	21 00 14.6	-0.2
KZN			S	Sn	21 00 38.7	+0.8
KZN	Kozani	1.81 333	P	Pn	21 00 14.6	-0.2
KZN			S	Sn	21 00 38.7	+0.8
KZN	Kozani	1.81 333	ePN	Pn	21 00 15.1	+0.3
KZN	Kozani	1.81 333	P	Pn	21 00 14.6	-0.2
KZN	Kozani	1.81 333	ePn	Pn	21 00 15.1	+0.3
KZN			S	Sn	21 00 38.7	+0.8
JAN	Janina	1.83 302	P	Pn	21 00 17.7	+2.6
JAN	Janina	1.83 302	P	Pn	21 00 17.7	+2.6
OUR	Ouranopolis	1.84 28	P	Pn	21 00 14.1	-1.3
OUR			S	Sn	21 00 38.6	-0.2
OUR	Ouranopolis	1.84 28	P	Pn	21 00 14.1	-1.3
OUR			S	Sn	21 00 38.6	-0.2
OUR	Ouranopolis	1.84 28	P	Pn	21 00 14.1	-1.3
OUR			S	Sn	21 00 38.6	-0.2
VLS	Valsamata	1.86 254	P	Pn	21 00 16.2	+0.7
VLS	Valsamata	1.86 254	P	Pn	21 00 16.2	+0.7
VLS	Valsamata	1.86 254	ePN	Pn	21 00 16.4	+0.9
VLS	Valsamata	1.86 254	P	Pn	21 00 16.2	+0.7
HORT	Hortiatis	1.90 6	P	Pn	21 00 15.3	-0.8
HORT			S	Sn	21 00 39.1	-1.1
HORT	Hortiatis	1.90 6	P	Pn	21 00 15.3	-0.8
HORT			S	Sn	21 00 39.1	-1.1
HORT	Hortiatis	1.90 6	P	Pn	21 00 15.3	-0.8
HORT			S	Sn	21 00 39.1	-1.1
THE	Thessaloniki	1.93 2	P	Pn	21 00 15.3	-1.2
THE			S	Sn	21 00 40.5	-0.4
THE	Thessaloniki	1.93 2	P	Pn	21 00 15.3	-1.2
THE			S	Sn	21 00 40.5	-0.4
THE	Thessaloniki	1.93 2	P	Pn	21 00 15.3	-1.2
THE			S	Sn	21 00 40.5	-0.4
VLI	Veliai	1.98 178	ePb	Pb	21 00 16.6	-3.2
VLI	Veliai	1.98 178	ePB	Pb	21 00 16.6	-3.2
PYL	PYLOS	2.01 206	P	Pn	21 00 18.2	+0.6
PYL			S	Sn	21 00 42.8	-0.1
PYL	PYLOS	2.01 206	ePN	Pn	21 00 18.7	+1.1
PYL	PYLOS	2.01 206	P	Pn	21 00 18.2	+0.6
PYL	PYLOS	2.01 206	ePn	Pn	21 00 18.7	+1.1
PYL			S	Sn	21 00 42.8	-0.1
IGT	Igoumenitsa	2.13 294	P	Pn	21 00 20.1	+0.8
IGT			S	Sn	21 00 45.6	-0.3
IGT	Igoumenitsa	2.13 294	P	Pn	21 00 20.1	+0.8
IGT			S	Sn	21 00 45.6	-0.3
IGT	Igoumenitsa	2.13 294	P	Pn	21 00 20.1	+0.8
IGT			S	Sn	21 00 45.6	-0.3
SOH	Sokhos	2.15 10	P	Pn	21 00 19.1	-0.4
SOH			S	Sn	21 00 46.8	+0.5
SOH	Sokhos	2.15 10	P	Pn	21 00 19.1	-0.4
SOH			S	Sn	21 00 46.8	+0.5
SOH	Sokhos	2.15 10	ePN	Pn	21 00 19.3	-0.2
SOH	Sokhos	2.15 10	ePn	Pn	21 00 19.3	-0.2
SOH			S	Sn	21 00 46.8	+0.5
LIA	Limnos Island	2.16 56	P	Pn	21 00 18.6	-1.1
LIA			S	Sn	21 00 45.7	-1.0
LIA	Limnos Island	2.16 56	P	Pn	21 00 18.6	-1.1
LIA			S	Sn	21 00 45.7	-1.0
LIA	Limnos Island	2.16 56	ePB	Pb	21 00 18.8	-4.0
LIA	Limnos Island	2.16 56	P	Pn	21 00 18.6	-1.1
LIA			S	Sn	21 00 45.7	-1.0
FNA	Florina	2.37 332	P	Pn	21 00 23.0	+0.4
FNA			S	Sn	21 00 50.4	-1.4
FNA	Florina	2.37 332	P	Pn	21 00 23.0	+0.4
FNA			S	Sn	21 00 50.4	-1.4
FNA	Florina	2.37 332	P	Pn	21 00 23.0	+0.4
FNA			S	Sn	21 00 50.4	-1.4
SIGR	SIGRI	2.39 77	P	Pn	21 00 22.1	-0.8
SIGR			S	Sn	21 00 52.0	-0.3
SIGR	SIGRI	2.39 77	P	Pn	21 00 22.1	-0.8
SIGR			S	Sn	21 00 52.0	-0.3
SIGR	SIGRI	2.39 77	P	Pn	21 00 22.1	-0.8
SIGR			S	Sn	21 00 52.0	-0.3
KYTH	Kithira	2.42 177	ePn	Pn	21 00 23.5	+0.2
KYTH	Kithira	2.42 177	ePN	Pn	21 00 23.5	+0.2
KYTH	Kithira	2.42 177	ePn	Pn	21 00 23.5	+0.2
SRS	Serrai	2.47 13	P	Pn	21 00 23.3	-0.7
SRS	Serrai	2.47 13	P	Pn	21 00 23.3	-0.7
SRS	Serrai	2.47 13	P	Pn	21 00 23.3	-0.7
KBN	Korca	2.49 321	PN	Pn	21 00 27.1	+2.8
KBN	Korca	2.49 321	ePn	Pn	21 00 27.1	+2.8
SRN	Sarande	2.51 299	PN	Pn	21 00 28.8	+4.3
SRN			SN	Sn	21 01 02.6	+7.4
CHOS	Chios island	2.53 96	P	Pn	21 00 24.6	-0.1
CHOS			S	Sn	21 00 55.7	0.0
CHOS	Chios island	2.53 96	ePN	Pn	21 00 24.9	+0.2
CHOS	Chios island	2.53 96	P	Pn	21 00 24.6	-0.1
CHOS	Chios island	2.53 96	ePn	Pn	21 00 24.9	+0.2
CHOS			S	Sn	21 00 55.7	0.0
KEK	Kerkira	2.58 294	P	Pn	21 00 25.7	+0.2
KEK			S	Sn	21 00 58.6	+1.6
KEK	Kerkira	2.58 294	P	Pn	21 00 25.7	+0.2
KEK			S	Sn	21 00 58.6	+1.6
KEK	Kerkira	2.58 294	P	Pn	21 00 25.7	+0.2
KEK			S	Sn	21 00 58.6	+1.6
BIA	Bitola	2.59 333	P	Pn	21 00 25.4	-0.3
BIA			S	Sn	21 00 57.3	-0.1
BIA	Bitola	2.59 333	*i* Pn	Pn	21 00 26.2	+0.5
BIA	Bitola	2.59 333	P	Pn	21 00 25.4	-0.3
BIA			S	Sn	21 00 57.3	-0.1
BIA	Bitola	2.59 333	P	Pn	21 00 25.4	-0.3
BIA			S	Sn	21 00 57.3	-0.1
KAVA	Kavala	2.62 29	P	Pn	21 00 24.5	-1.5
KAVA			S	Sn	21 00 57.5	-0.5
KAVA	Kavala	2.62 29	P	Pn	21 00 24.5	-1.5
KAVA			S	Sn	21 00 57.5	-0.5
APE	Apeiranthos	2.67 127	P	Pn	21 00 26.6	-0.1
APE	Apeiranthos	2.67 127	P	Pn	21 00 26.6	-0.1
APE	Apeiranthos	2.67 127	⇓*i*P	Pn	21 00 27.0	+0.3
APE	Apeiranthos	2.67 127	ePN	Pn	21 00 26.6	-0.1
APE	Apeiranthos	2.67 127	P	Pn	21 00 26.6	-0.1
PRK	Paraskevi	2.71 77	P	Pn	21 00 26.6	-0.7
PRK	Paraskevi	2.71 77	P	Pn	21 00 26.6	-0.7
PRK	Paraskevi	2.71 77	ePN	Pn	21 00 26.8	-0.5
PRK	Paraskevi	2.71 77	ePn	Pn	21 00 26.8	-0.5
NVR	Nevrokopi	2.75 16	ePn	Pn	21 00 27.1	-0.7
NVR	Nevrokopi	2.75 16	ePN	Pn	21 00 27.1	-0.7
NVR	Nevrokopi	2.75 16	ePn	Pn	21 00 27.1	-0.7
GADA	Gvkgeada	2.78 57	ePN	Pn	21 00 27.8	-0.5
GADA	Gvkgeada	2.78 57	ePn	Pn	21 00 27.8	-0.5
OHR	Ohrid	2.88 327	P	Pn	21 00 30.2	+0.6
OHR			S	Sn	21 01 03.2	-1.1
OHR	Ohrid	2.88 327	*i* Pn	Pn	21 00 30.5	+1.0
OHR	Ohrid	2.88 327	P	Pn	21 00 30.2	+0.6
OHR			S	Sn	21 01 03.2	-1.1
OHR	Ohrid	2.88 327	P	Pn	21 00 30.2	+0.6
OHR			S	Sn	21 01 03.2	-1.1
KRUS	Krusevo	2.93 336	*i* Pn	Pn	21 00 30.5	+0.1
URLA	Izmir	2.95 96	*i* P	Pn	21 00 30.6	0.0
URLA	Izmir	2.95 96	*i* P	Pn	21 00 30.5	-0.1
THR5	Thira Island,	3.02 138	P	Pn	21 00 31.9	+0.4
THR5	Thira Island,	3.02 138	P	Pn	21 00 31.9	+0.4
THR5	Thira Island,	3.02 138	P	Pn	21 00 31.9	+0.4
THR2	Thira island,	3.05 137	P	Pn	21 00 31.1	-0.8
THR2	Thira island,	3.05 137	P	Pn	21 00 31.1	-0.8
THR3	Thira Island,	3.06 138	P	Pn	21 00 32.7	+0.7
THR3	Thira Island,	3.06 138	P	Pn	21 00 32.7	+0.7
THR3	Thira Island,	3.06 138	P	Pn	21 00 32.7	+0.7
RDO	Rodhopi	3.19 39	P	Pn	21 00 32.2	-1.7
RDO	Rodhopi	3.19 39	P	Pn	21 00 32.2	-1.7
RDO	Rodhopi	3.19 39	ePN	Pn	21 00 32.4	-1.5
RDO	Rodhopi	3.19 39	ePn	Pn	21 00 32.4	-1.5
ENEZ	Enez	3.25 50	ePN	Pn	21 00 34.3	-0.4
ENEZ	Enez	3.25 50	ePn	Pn	21 00 34.3	-0.4
ALN	Alexandroupoli	3.29 47	P	Pn	21 00 33.8	-1.4
ALN	Alexandroupoli	3.29 47	P	Pn	21 00 33.8	-1.4
ALN	Alexandroupoli	3.29 47	ePN	Pn	21 00 34.1	-1.1
ALN	Alexandroupoli	3.29 47	P	Pn	21 00 33.8	-1.4
ALN	Alexandroupoli	3.29 47	ePn	Pn	21 00 34.1	-1.1
SMG	Samos	3.29 106	ePn	Pn	21 00 35.1	-0.1
SMG	Samos	3.29 106	ePN	Pn	21 00 35.1	-0.1
SMG	Samos	3.29 106	ePn	Pn	21 00 35.1	-0.1
BLCB	Balcova	3.30 94	ePN	Pn	21 00 35.0	-0.4
BLCB	Balcova	3.30 94	P	Pn	21 00 35.9	+0.6
BLCB	Balcova	3.30 94	P	Pn	21 00 35.9	+0.6
BLCB	Balcova	3.30 94	ePn	Pn	21 00 35.0	-0.3
BLCB	Balcova	3.30 94	P	Pn	21 00 35.9	+0.6
KARN	Karanos	3.41 165	P	Pn	21 00 36.3	-0.5
KARN			S	Sn	21 01 16.9	-0.4
KARN	Karanos	3.41 165	ePN	Pn	21 00 36.5	-0.3
KARN	Karanos	3.41 165	P	Pn	21 00 36.3	-0.5
KARN			S	Sn	21 01 16.9	-0.4
SKO	Skopje	3.44 342	P	Pn	21 00 37.9	+0.6
SKO	Skopje	3.44 342	*i* Pn	Pn	21 00 38.2	+0.9
SKO	Skopje	3.44 342	P	Pn	21 00 37.9	+0.6
SKO	Skopje	3.44 342	P	Pn	21 00 37.9	+0.6
SKO	Skopje	3.44 342	⇑*i*Pn	Pn	21 00 38.2	+0.9
VAM	Vamos	3.46 162	*e*P	Pn	21 00 37.9	+0.3
VAM	Vamos	3.46 162	ePN	Pn	21 00 37.9	+0.3
VAM	Vamos	3.46 162	ePn	Pn	21 00 37.9	+0.3
IZM	Izmir	3.47 94	ePN	Pn	21 00 38.6	+1.0
TIR	Tirane	3.50 320	P	Pn	21 00 38.5	+0.4
TIR	Tirane	3.50 320	P	Pn	21 00 38.5	+0.4
TIR	Tirane	3.50 320	P	Pn	21 00 38.5	+0.4
TIR	Tirane	3.50 320	ePn	Pn	21 00 40.5	+2.4
PLD	Plovdiv	3.68 22	P	Pn	21 00 40.5	0.0
PLD			S	Sn	21 01 24.1	+0.1
PLD	Plovdiv	3.68 22	P	Pn	21 00 40.5	0.0
PLD			S	Sn	21 01 24.1	+0.1
PLD	Plovdiv	3.68 22	P	Pn	21 00 40.5	0.0
PLD			S	Sn	21 01 24.1	+0.1
IDI	Anoyia	3.78 154	Pn	Pn	21 00 42.0	+0.1
	8.9nm,0.3s,baz=330,slow=13,SNR=65					
IDI			Sn	Sn	21 01 28.3	+1.7
	14nm,0.3s,baz=274,slow=22,SNR=6.0					
IDI	Anoyia	3.78 154	Pn	Pn	21 00 42.0	0.0
IDI			Sn	Sn	21 01 28.3	+1.7
BALY	Balya	3.84 73	*i* P	Pn	21 00 40.8	-2.0
BALY	Balya	3.84 73	*i* P	Pn	21 00 40.8	-2.0
AKHS	Akhisar	3.88 86	*i* P	Pn	21 00 46.7	+3.4
AKHS	Akhisar	3.88 86	*i* P	Pn	21 00 46.7	+3.4
GVD	Gavdhos	3.98 165	P	Pn	21 00 46.3	+1.5
GVD			S	Sn	21 01 30.4	-1.2
GVD	Gavdhos	3.98 165	P	Pn	21 00 46.3	+1.5
GVD			S	Sn	21 01 30.4	-1.2
GVD	Gavdhos	3.98 165	ePN	Pn	21 00 46.5	+1.7
GVD	Gavdhos	3.98 165	P	Pn	21 00 46.3	+1.5
GVD			S	Sn	21 01 30.4	-1.2
SIVA	Sivas	4.00 156	P	Pn	21 00 46.3	+1.3
SIVA			S	Sn	21 01 31.3	-0.7
SIVA	Sivas	4.00 156	P	Pn	21 00 46.3	+1.3
SIVA			S	Sn	21 01 31.3	-0.7
SIVA	Sivas	4.00 156	P	Pn	21 00 46.3	+1.3
SIVA			S	Sn	21 01 31.3	-0.7
PUK	Puka	4.03 327	PN	Pn	21 00 48.6	+3.2
PUK			SN	Sn	21 01 37.6	+4.9
PUK	Puka	4.03 327	ePn	Pn	21 00 48.6	+3.2
PUK			*i* Sn	Sn	21 01 37.6	+4.9
NPS	Neapolis	4.08 146	*e*P	Pn	21 00 47.9	+1.8
NPS	Neapolis	4.08 146	ePN	Pn	21 00 47.9	+1.8
NPS	Neapolis	4.08 146	ePn	Pn	21 00 47.9	+1.8
LAST	Lasithi	4.11 149	ePn	Pn	21 00 47.8	+1.2
LAST	Lasithi	4.11 149	ePN	Pn	21 00 47.8	+1.2
LAST	Lasithi	4.11 149	ePn	Pn	21 00 47.8	+1.2
MLSB	Milas	4.13 108	ePN	Pn	21 00 46.9	+0.1
MLSB	Milas	4.13 108	ePn	Pn	21 00 46.9	+0.1
BARS	Barje	4.18 349	⇑*i*Pn	Pn	21 00 47.7	+0.2
BCI	Bajram Curri	4.23 331	PN	Pn	21 00 50.7	+2.6
BCI			SN	Sn	21 01 41.6	+3.9
BCI	Bajram Curri	4.23 331	ePn	Pn	21 00 50.7	+2.6
BCI			*i* Sn	Sn	21 01 41.6	+3.9
BNT	Bandirma	4.25 66	ePN	Pn	21 00 49.2	+0.9
TKR	Tekirdag	4.26 56	ePN	Pn	21 00 49.7	+1.1
TKR	Tekirdag	4.26 56	ePn	Pn	21 00 49.7	+1.1
ULC	Ulcinj	4.26 321	⇑*i*Pn	Pn	21 00 49.5	+0.9
ULC			*e*Sn	Sn	21 01 39.8	+1.3
ULC	Ulcinj	4.26 321	⇑*i*Pn	Pn	21 00 49.5	+0.9
ULC			*e*Sn	Sn	21 01 39.8	+1.3
EDRB	Edirne	4.32 42	ePN	Pn	21 00 50.6	+1.2
EDRB	Edirne	4.32 42	ePn	Pn	21 00 50.6	+1.2
DURS	Dursunbey	4.46 77	*i* P	Pn	21 00 46.2	-5.1
DURS	Dursunbey	4.46 77	*i* P	Pn	21 00 46.2	-5.1
PVY	Plav	4.46 331	⇑*i*Pn	Pn	21 00 52.5	+1.2
PVY			*e*Sn	Sn	21 01 44.3	+0.9
PVY	Plav	4.46 331	⇑*i*Pn	Pn	21 00 52.5	+1.2
PVY			*e*Sn	Sn	21 01 44.3	+0.9
CRLT	Corlu	4.46 56	ePN	Pn	21 00 52.0	+0.6
CRLT	Corlu	4.46 56	ePn	Pn	21 00 52.0	+0.6
KULA	Kula-Manisa	4.55 91	ePN	Pn	21 00 53.4	+0.8
KULA	Kula-Manisa	4.55 91	ePn	Pn	21 00 53.4	+0.9
YER	Yerkesik	4.57 108	ePN	Pn	21 00 53.4	+0.6
YER	Yerkesik	4.57 108	ePn	Pn	21 00 53.4	+0.6
DEMI	Demirci	4.58 84	*i* P	Pn	21 00 56.8	+3.7
DEMI	Demirci	4.58 84	*i* P	Pn	21 00 56.8	+3.8
PDG	Podgorica	4.62 325	⇓*i*Pn	Pn	21 00 54.5	+1.0
PDG			*e*Sn	Sn	21 01 48.6	+1.3
TTG	Podgorica	4.62 325	⇓*i*Pn	Pn	21 00 54.5	+1.0
TTG			*e*Sn	Sn	21 01 48.6	+1.3
TTG	Podgorica	4.62 325	*i* P	Pn	21 00 54.5	+1.0
TTG			*e*S	Sn	21 01 48.6	+1.3
KARP	Karpathos	4.67 131	*e*Pn	Pn	21 00 55.5	+1.4
KARP	Karpathos	4.67 131	*e*PN	Pn	21 00 55.5	+1.4
KARP	Karpathos	4.67 131	*e*Pn	Pn	21 00 55.5	+1.4
TAR1	Taranto	4.67 295	*e*Pn	Pn	21 00 54.7	+0.5
PE1	Pezze di Greco	4.68 298	*e*Pn	Pn	21 00 54.7	+0.3
BUM	Brajici-Budva	4.69 321	⇑*i*Pn	Pn	21 00 55.4	+0.9
BUM			*e*Sn	Sn	21 01 49.5	+0.5
BUM	Brajici-Budva	4.69 321	⇑*i*Pn	Pn	21 00 55.4	+0.9
BUM			*e*Sn	Sn	21 01 49.5	+0.5
BEY	Berane	4.73 333	⇑*i*Pn	Pn	21 00 56.1	+1.1
BEY			*e*Sn	Sn	21 01 50.6	+0.6
IVA	Berane	4.73 333	⇑*i*Pn	Pn	21 00 56.1	+1.1
IVA			*e*Sn	Sn	21 01 50.6	+0.6
IVA	Berane	4.73 333	⇑*i*Pn	Pn	21 00 56.1	+1.1
IVA			*e*Sn	Sn	21 01 50.6	+0.6
NISS		4.74 352	⇑*i*Pn	Pn	21 00 55.7	+0.5
TIP	Timpagrande	4.78 278	P	Pn	21 00 55.9	+0.2
TIP	Timpagrande	4.78 278	P	Pn	21 00 55.9	+0.2
SLVT	Silivri	4.82 57	*e*PN	Pn	21 00 57.5	+1.2
SLVT	Silivri	4.82 57	*e*Pn	Pn	21 00 57.5	+1.2
TURN	Turunc	4.91 110	*i* P	Pn	21 00 55.4	-2.0
TURN	Turunc	4.91 110	*i* P	Pn	21 00 55.4	-2.0
DNZL	Cakiroluk	4.98 100	*i* P	Pn	21 00 58.6	+0.2
DNZL	Cakiroluk	4.98 100	*i* P	Pn	21 00 58.6	+0.1
ARMT	Armutlu	4.99 66	*e*PN	Pn	21 00 59.4	+0.7
ARMT	Armutlu	4.99 66	*e*Pn	Pn	21 00 59.4	+0.8
HCY	Herceg Novi	5.00 320	⇑*i*Pn	Pn	21 00 59.1	+0.4
HCY			*e*Sn	Sn	21 01 57.2	+0.6
HCY	Herceg Novi	5.00 320	⇑*i*Pn	Pn	21 00 59.1	+0.4
HCY			*e*Sn	Sn	21 01 57.2	+0.6
CTYL	Yal??k??y-??at	5.00 55	*e*PN	Pn	21 00 59.8	+1.1
CTYL	Yal??k??y-??at	5.00 55	*e*Pn	Pn	21 00 59.8	+1.1
CTKS	Kestanelik-??a	5.02 58	*e*PN	Pn	21 00 59.8	+0.8
CTKS	Kestanelik-??a	5.02 58	*e*Pn	Pn	21 00 59.8	+0.8
NKY	Niksic	5.04 326	*e*Pn	Pn	21 01 00.0	+0.7
NKY			*e*Sn	Sn	21 01 58.6	+0.9
NKY	Niksic	5.04 326	*e*Pn	Pn	21 01 00.0	+0.7
NKY			*e*Sn	Sn	21 01 58.6	+0.9
ULDT	Uludag	5.07 72	*i* P	Pn	21 00 59.7	+0.1
ULDT	Uludag	5.07 72	*i* P	Pn	21 00 59.7	0.0
BAI	Bari	5.18 299	*e*Pn	Pn	21 01 01.7	+0.4
SG1	Sgolgore (BA)	5.21 296	*e*Pn	Pn	21 01 02.3	+0.6
KHL	Karahalli	5.24 92	*e*PN	Pn	21 01 02.6	+0.5
KHL	Karahalli	5.24 92	*e*Pn	Pn	21 01 02.6	+0.5
PLE	Pljevlja	5.31 332	⇑*i*Pn	Pn	21 01 04.4	+1.4
PLE			*e*Sn	Sn	21 02 05.0	+0.7
PLE	Pljevlja	5.31 332	⇑*i*Pn	Pn	21 01 04.4	+1.4
PLE			*e*Sn	Sn	21 02 05.0	+0.7
BRY	Bratogost	5.32 323	⇑*i*Pn	Pn	21 01 04.1	+1.0
BRY			*e*Sn	Sn	21 02 05.0	+0.5
BRY	Bratogost	5.32 323	⇑*i*Pn	Pn	21 01 04.1	+1.0
BRY			*e*Sn	Sn	21 02 05.0	+0.5
KLYT	Kilyos	5.39 60	*e*PN	Pn	21 01 05.4	+1.3
KLYT	Kilyos	5.39 60	*e*Pn	Pn	21 01 05.4	+1.3
UPM	Unac-Piva	5.39 328	⇓*i*Pn	Pn	21 01 05.3	+1.2
UPM			*e*Sn	Sn	21 02 06.5	+0.1
UPM	Unac-Piva	5.39 328	⇓*i*Pn	Pn	21 01 05.3	+1.2
UPM			*e*Sn	Sn	21 02 06.5	+0.1
CEL	Celeste	5.48 268	P	Pn	21 01 05.9	+0.5
CEL	Celeste	5.48 268	P	Pn	21 01 05.9	+0.5
GOLH	Golhisar	5.50 103	*i* P	Pn	21 01 07.8	+2.3
GOLH	Golhisar	5.50 103	*i* P	Pn	21 01 07.8	+2.3
ALT	Altintas	5.67 84	*e*PN	Pn	21 01 08.6	+0.7
ALT	Altintas	5.67 84	*e*Pn	Pn	21 01 08.6	+0.7
BBLS	Lazići	5.77 334	⇑*i*Pn	Pn	21 01 10.7	+1.4
DIVS	Divibare	5.80 339	⇑*i*Pn	Pn	21 01 10.1	+0.4
MS1	Monte Sant'Ang	6.08 302	*e*Pn	Pn	21 01 13.6	0.0
GULT	Gulveren	6.16 71	*e*PN	Pn	21 01 16.0	+1.3
GULT	Gulveren	6.16 71	*e*Pn	Pn	21 01 16.0	+1.3
ESKT	Eskisehir	6.27 80	*e*PN	Pn	21 01 17.4	+1.2
ESKT

comp=Z,10.0nm,0.8s
PSZ Piszkesteto 9.46 348 *e*P Pn 21 02 00.3 +0.5
comp=Z,9.6nm,0.8s
PSZ Piszkesteto 9.46 348⇑*i*P Pn 21 02 00.8 +0.9
PSZ Piszkesteto 9.46 348 *e*P Pn 21 02 00.3 +0.4
comp=Z,9.6nm,0.8s
LUJL Ujela 9.65 188 *e*P Pn 21 02 03.7 +1.1
SNR=34
SWA2 9.68 166 P Pn 21 02 01.2 -1.8
baz=165
SWA2 AMP 21 03 00.0
comp=E,40μm,0.4s,logA/T=5.0,baz=165
SWA2 S Sn 21 03 44.2 -7.7
baz=165
SWA2 9.68 166 P Pn 21 02 01.2 -1.8
JAVS Javornik 9.69 321 *i* Pn Pn 21 02 02.6 -0.4
JAVS *i* Sn Sn 21 03 50.4 -1.6
JAVS Javornik 9.69 321 *i* Pn Pn 21 02 02.6 -0.5
JAVS *i* Sn Sn 21 03 50.4 -1.6
SOKA Soboth 9.83 327⇓*i*Pn Pn 21 02 03.8 -1.2
SOKA Soboth 9.83 327 Pn Pn 21 02 03.8 -1.1
VOY Vojsko 9.87 321 *e*Pn Pn 21 02 05.8 +0.2
VOY *e* 21 02 19.7
VOY *e*Sn Sn 21 03 49.9 -6.6
VOY Vojsko 9.87 321 *e*Pn Pn 21 02 05.8 +0.2
OBKA Obir 9.91 325⇓*i*Pn Pn 21 02 05.1 -1.0
OBKA ⇑*i*Sn Sn 21 03 54.8 -2.6
OBKA Obir 9.91 325 Pn Pn 21 02 05.1 -1.0
KECS Kecovo 9.92 351 *e*P Pn 21 02 06.1 -0.1
KECS Kecovo 9.92 351 *e*PN Pn 21 02 06.1 -0.1
ARSA Arzberg 10.09 330⇓*i*Pn Pn 21 02 08.0 -0.4
ARSA Arzberg 10.09 330 Pn Pn 21 02 08.0 -0.5
VYHS Vyhne 10.21 345 *e*Pn Pn 21 02 10.9 +0.8
VYHS *e*Sn Sn 21 04 00.7 -4.0
VYHS Vyhne 10.21 345 *e*P Pn 21 02 10.9 +0.8
CRVS Cervenica-Dubn 10.24 355 *e*P Pn 21 02 12.1 +1.5
CRVS Cervenica-Dubn 10.24 355 *e*P Pn 21 02 12.1 +1.5
KOLL Kolacno 10.38 343 *e*P Pn 21 02 10.7 -1.8
KOLL Kolacno 10.38 343 *e*P Pn 21 02 10.7 -1.8
STHS Stebnicka Huta 10.77 354 *e*P Pn 21 02 22.7 +4.9
KWP Kalwaria Pacla 10.92 359 *e*P Pn 21 02 18.7 -1.2
KWP pmax pmax
comp=Z,22nm,1.0s
KWP Kalwaria Pacla 10.92 359 *e*P Pn 21 02 18.7 -1.3
comp=Z,22nm,1.0s
KWP Kalwaria Pacla 10.92 359 *e*P Pn 21 02 18.7 -1.2
comp=Z,22nm,1.0s
KEST Kesra 11.18 259 Pn Pn 21 02 21.7 -1.8
comp=Z,0.0nm,0.3s,baz=223,slow=21,SNR=2.3
PGF Pioggiola 11.21 294 *e*P Pn 21 02 26.1 +2.2
comp=Z,22nm,1.1s
PGF Pioggiola 11.21 294 *e*P Pn 21 02 26.1 +2.2
PGF pmax pmax
comp=Z,11nm,1.1s
PGF Pioggiola 11.21 294 *e*P Pn 21 02 26.1 +2.2
comp=Z,11nm,1.1s
PGF Pioggiola 11.21 294 *e*P Pn 21 02 26.1 +2.2
comp=Z,11nm,1.1s
LJFR Jufra 11.22 213 *e*P Pn 21 02 23.5 -0.6
SNR=34
OKC Ostrava-Krasne 11.63 345 *e*P Pn 21 02 31.2 +1.7
OKC MLR MLR
comp=Z,300nm,21.3s
OKC Ostrava-Krasne 11.63 345 *e*P Pn 21 02 31.2 +1.7
OKC AMS AMS 21 07 30.0
comp=Z,300nm,21.3s
OKC Ostrava-Krasne 11.63 345 *e*P Pn 21 02 31.2 +1.7
comp=Z,300nm,21.3s
MMAI Mount Meron Ar 11.65 115 Pn Pn 21 02 29.4 -0.6
comp=Z,0.2nm,0.3s,baz=292,slow=12,SNR=2.2
MMAI LR LR 21 08 12.5
comp=Z,52nm,19.9s,baz=145,slow=44
TREC Trest 11.83 336 AMS AMS 21 07 40.0
comp=Z,400nm,7.2s
KHC Kasperske Hory 12.37 330 *e*P Pn 21 02 40.4 +0.7
KHC MLR MLR
comp=Z,500nm,8.8s
KHC Kasperske Hory 12.37 330 *e*P Pn 21 02 40.4 +0.7
KHC AMS AMS 21 07 40.0
comp=Z,500nm,8.8s
KHC Kasperske Hory 12.37 330 *e*P Pn 21 02 40.4 +0.7
comp=Z,500nm,8.8s
DAVOX Davos/Dischmat 12.48 314 LR LR 21 08 20.2
comp=Z,118nm,19.4s,baz=277,slow=42
DPC Dobruska-Polom 12.53 340 AMS AMS 21 08 20.0
comp=Z,300nm,18.0s
SBF Sospel 12.69 299 *e*P Pn 21 02 45.3 +1.2
SBF Sospel 12.69 299 *e*P Pn 21 02 45.3 +1.2
PRU Pruhonice 12.74 335 AMS AMS 21 07 40.0
comp=Z,200nm,11.7s
AKASG Malin Array Be 12.81 19 Pn Pn 21 02 44.5 -1.2
comp=Z,0.6nm,0.3s,baz=205,slow=12,SNR=3.1
AKASG Malin Array Be 12.81 19 P Pn 21 02 44.6 -1.1
PVCC Panska Ves 13.20 336 AMS AMS 21 08 30.0
comp=Z,400nm,8.7s
MBDF Montbardon 13.43 302 *e*P Pn 21 02 55.2 +1.0
MBDF Montbardon 13.43 302 *e*P Pn 21 02 55.2 +1.0
EIL Elat 13.46 128 Pn Pn 21 02 49.0 -5.6
comp=Z,0.9nm,0.3s,baz=282,slow=17,SNR=8.0
NKC Novy Kostel 13.70 331 AMS AMS 21 09 40.0
comp=Z,400nm,16.6s
LPG La Plagne 13.74 305 *e*P Pn 21 02 59.5 +1.1
comp=Z,32nm,1.3s
LPG La Plagne 13.74 305 *e*P Pn 21 02 59.5 +1.1
LPG pmax pmax
comp=Z,16nm,1.3s
LPG La Plagne 13.74 305 *e*P Pn 21 02 59.5 +1.1
comp=Z,16nm,1.3s
LPG La Plagne 13.74 305 *e*P Pn 21 02 59.5 +1.1
comp=Z,16nm,1.3s
LPL La Plagne 13.76 305 *e*P Pn 21 02 58.9 +0.2
LPL La Plagne 13.76 305 *e*P Pn 21 02 58.9 +0.2
ORIF Oris-en-Rattie 14.09 302 *e*P Pn 21 03 04.4 +1.2
comp=Z,13nm,1.1s
ORIF *e*MLR MLR
comp=Z,246nm,21.0s
ORIF Oris-en-Rattie 14.09 302 *e*P Pn 21 03 04.4 +1.2
ORIF pmax pmax
comp=Z,6.0nm,1.1s
ORIF Oris-en-Rattie 14.09 302 *e*P Pn 21 03 04.4 +1.2
comp=Z,6.4nm,1.1s
ORIF Oris-en-Rattie 14.09 302 *e*P Pn 21 03 04.4 +1.2
comp=Z,6.4nm,1.1s
CLL Collm 14.38 334 *e*P Pn 21 03 08.0 +0.9
LKFR Kufra 14.50 179 *e*P Pn 21 03 15.2 +6.2
SNR=135
CABF La Chapelle 14.63 308 *e*P Pn 21 03 10.4 -0.2
comp=Z,65nm,1.5s
CABF La Chapelle 14.63 308 *e*P Pn 21 03 10.4 -0.2
CABF pmax pmax
comp=Z,32nm,1.5s
CABF La Chapelle 14.63 308 *e*P Pn 21 03 10.4 -0.2
comp=Z,32nm,1.5s
CDF Champ du Feu 14.86 316 *e*P Pn 21 03 13.0 -0.7
SMF Signal de Mont 16.05 306 *e*P Pn 21 03 29.7 +0.3
comp=Z,27nm,1.2s
SMF Signal de Mont 16.05 306 *e*P Pn 21 03 29.7 +0.3
SMF pmax pmax
comp=Z,14nm,1.2s
SMF Signal de Mont 16.05 306 *e*P Pn 21 03 29.7 +0.3
comp=Z,14nm,1.2s
MEZF Maizieres J'vi 16.16 313 *e*P Pn 21 03 30.3 -0.4
comp=Z,127nm,1.6s
MEZF Maizieres J'vi 16.16 313 *e*P Pn 21 03 30.3 -0.4
comp=Z,127nm,1.6s
LOR Lormes 16.29 308 *e*P Pn 21 03 31.4 -1.1
comp=Z,29nm,1.3s
LOR *e*MLR MLR
comp=Z,111nm,19.2s
LOR Lormes 16.29 308 *e*P Pn 21 03 31.4 -1.1
LOR pmax pmax
comp=Z,15nm,1.3s
LOR Lormes 16.29 308 *e*P Pn 21 03 31.4 -1.1
comp=Z,15nm,1.3s
AVF Avril sur Loir 16.42 306 *e*P Pn 21 03 33.9 -0.2
comp=Z,24nm,1.2s
AVF Avril sur Loir 16.42 306 *e*P Pn 21 03 33.9 -0.2
AVF pmax pmax
comp=Z,12nm,1.2s
AVF Avril sur Loir 16.42 306 *e*P Pn 21 03 33.9 -0.2
comp=Z,12nm,1.2s
SSF Saint Saulge 16.43 307 *e*P Pn 21 03 34.4 +0.2
comp=Z,17nm,1.1s
SSF Saint Saulge 16.43 307 *e*P Pn 21 03 34.4 +0.2
SSF pmax pmax
comp=Z,9.0nm,1.1s
SSF Saint Saulge 16.43 307 *e*P Pn 21 03 34.4 +0.2
comp=Z,8.5nm,1.1s
IIGN Ignalina 16.80 7 *e*P Pn 21 03 38.1 -0.8
IIGN Ignalina 16.80 7 *e*P Pn 21 03 38.1 -0.8
SNR=67
IDID Didziasalis 16.82 8 *e*P Pn 21 03 38.5 -0.6
IDID Didziasalis 16.82 8 *e*P Pn 21 03 38.5 -0.6
SNR=66
ISAL Salakas 17.02 6 *e*P Pn 21 03 39.9 -1.7
ISAL Salakas 17.02 6 *e*P Pn 21 03 39.9 -1.6
SNR=57
IZAR Zarasai 17.20 6 *e*P Pn 21 03 42.5 -1.3
IZAR Zarasai 17.20 6 *e*P Pn 21 03 42.5 -1.4
SNR=57
BAIF Baives 17.45 317 *e*P Pn 21 03 47.4 +0.3
comp=Z,59nm,1.6s
BAIF Baives 17.45 317 *e*P Pn 21 03 47.4 +0.3
BAIF pmax pmax
comp=Z,30nm,1.6s
BAIF Baives 17.45 317 *e*P Pn 21 03 47.4 +0.3
comp=Z,30nm,1.6s
BAIF Baives 17.45 317 *e*P Pn 21 03 47.4 +0.3
comp=Z,30nm,1.6s
MFF Saint Martin d 18.62 302 *e*P Pn 21 04 01.7 +0.2
comp=Z,9.5nm,0.8s
MFF Saint Martin d 18.62 302 *e*P Pn 21 04 01.7 +0.2
MFF pmax pmax
comp=Z,5.0nm,0.8s
MFF Saint Martin d 18.62 302 *e*P Pn 21 04 01.7 +0.2
comp=Z,4.8nm,0.8s
MFF Saint Martin d 18.62 302 *e*P Pn 21 04 01.7 +0.2
comp=Z,4.8nm,0.8s
SJPF Ste Jean 18.71 291 *e*P Pn 21 04 02.6 +0.1
SJPF Ste Jean 18.71 291 *e*P Pn 21 04 02.6 +0.1
LDF La Druitiere 19.28 308 *e*P Pn 21 04 07.7 -1.7
LDF La Druitiere 19.28 308 *e*P Pn 21 04 07.7 -1.7
FLN La Foliniere 19.56 308 *e*P Pn 21 04 10.3 -2.5
comp=Z,7.1nm,0.5s
FLN *e*MLR MLR
comp=Z,142nm,17.8s
FLN La Foliniere 19.56 308 *e*P Pn 21 04 10.3 -2.5
FLN pmax pmax
comp=Z,4.0nm,0.5s
FLN La Foliniere 19.56 308 *e*P Pn 21 04 10.3 -2.5
comp=Z,3.5nm,0.5s
FLN La Foliniere 19.56 308 *e*P Pn 21 04 10.3 -2.5
comp=Z,3.5nm,0.5s
GRR Gorron 19.66 307 *e*P Pn 21 04 10.9 -3.0
comp=Z,38nm,1.1s
GRR Gorron 19.66 307 *e*P Pn 21 04 10.9 -3.0
GRR pmax pmax
comp=Z,19nm,1.1s
GRR Gorron 19.66 307 *e*P Pn 21 04 10.9 -3.0
comp=Z,19nm,1.1s
GRR Gorron 19.66 307 *e*P Pn 21 04 10.9 -3.0
comp=Z,19nm,1.1s
ESDC Sonseca Array 20.79 281 P P 21 04 24.9 0.0
comp=Z,1.8nm,0.3s,baz=76,slow=11,SNR=29
ESDC Sonseca Array 20.79 281 P P 21 04 24.9 0.0
ESDC Sonseca Array 20.79 281 P P 21 04 24.9 0.0
QUIF Quistinic 20.97 304 *e*P P 21 04 26.2 -0.6
QUIF Quistinic 20.97 304 *e*P P 21 04 26.2 -0.6
HFS Hagfors 22.22 348 P P 21 04 37.8 -2.2
comp=Z,2.6nm,0.7s,mb3.8,baz=102,slow=18,SNR=6.6
PBRG Braganca 22.75 287 *e*P P 21 04 44.0 -1.9
comp=Z,25nm,1.6s,mb4.4
PBRG Braganca 22.75 287 *e*P P 21 04 44.0 -1.9
comp=Z,25nm,1.6s,mb4.4
FINES FINESS Array B 22.85 4 P P 21 04 44.6 -2.2
comp=Z,2.7nm,0.9s,mb3.7,baz=175,slow=11,SNR=5.5
FINES LR LR 21 15 12.6
comp=Z,91nm,19.4s,MS3.2,baz=156,slow=41
FINES FINESS Array B 22.85 4 P P 21 04 44.6 -2.2
PMRV Marv??o 23.45 281 *e*P P 21 04 52.5 -0.8
comp=Z,24nm,2.2s,mb4.2
PMRV Marv??o 23.45 281 *e*P P 21 04 52.5 -0.8
comp=Z,24nm,2.2s,mb4.2
NB2 NORSAR Subarra 23.51 346 P P 21 04 51.7 -2.0
comp=Z,7.8nm,1.1s,mb4.0,baz=160,slow=11
NB2 NORSAR Subarra 23.51 346 P P 21 04 51.7 -2.0
comp=Z,7.8nm,1.1s,mb4.0,baz=160,slow=10,SNR=9.2
NOA NORSAR Array B 23.51 346 P P 21 04 51.8 -1.9
comp=Z,1.8nm,0.8s,mb3.6,baz=158,slow=10.0,SNR=4.8
NOA NORSAR Array B 23.51 346 P P 21 04 51.8 -1.9
PVAQ Vaqueiros 24.06 277 *e*P P 21 04 57.9 -1.2
comp=Z,30nm,1.4s,mb4.5
PVAQ Vaqueiros 24.06 277 *e*P P 21 04 57.9 -1.2
comp=Z,30nm,1.4s,mb4.5
EKA Eskdalemuir Ar 24.10 322 P P 21 04 58.0 -1.2
comp=Z,7.7nm,0.8s,mb4.2,baz=120,slow=10.0,SNR=15
EKA Eskdalemuir Ar 24.10 322 P P 21 04 58.0 -1.2
PBDV Barranco-do-Ve 24.26 276 *e*P P 21 04 59.9 -1.0
comp=Z,27nm,1.2s,mb4.5
PBDV Barranco-do-Ve 24.26 276 *e*P P 21 04 59.9 -1.0
comp=Z,27nm,1.2s,mb4.5
AKTO Aktyubinsk 27.40 53 LR LR 21 19 54.0
comp=Z,30nm,20.3s,MS2.9,baz=49,slow=44
ARCES ARCESS Array B 30.92 2 LR LR 21 18 08.3
comp=Z,39nm,21.7s,MS3.0,baz=204,slow=36
KURK Kurchatov 40.49 54 P P 21 07 21.3 -1.1
comp=Z,1.3nm,0.8s,mb3.7,baz=284,slow=8.4,SNR=6.9
KURK Kurchatov 40.49 54 P P 21 07 21.3 -1.1
DBIC Dimbokro 40.55 225 P P 21 07 22.1 -1.2
comp=Z,6.0nm,0.8s,mb4.3,baz=10,slow=6.6,SNR=6.4
DBIC LR LR 21 24 18.4
comp=Z,38nm,18.2s,MS3.3,baz=31,slow=36
DBIC Dimbokro 40.55 225 P P 21 07 22.1 -1.2
TIC Toumodi 40.66 225 *e*P P 21 07 25.3 +1.1
comp=Z,105nm,1.6s,mb5.2
TIC Toumodi 40.66 225 *e*P P 21 07 25.3 +1.1
KIC Kosan Boka 40.74 225 *e*P P 21 07 22.7 -2.2
comp=Z,55nm,1.4s,mb5.0
KIC Kosan Boka 40.74 225 *e*P P 21 07 22.7 -2.2
LIC Lamto 41.01 225 *e*P P 21 07 26.5 -0.6
comp=Z,56nm,0.9s,mb5.2
LIC Lamto 41.01 225 *e*P P 21 07 26.5 -0.6
MKAR Makanchi Array 43.46 59 P P 21 07 46.1 -0.7
comp=Z,0.7nm,0.5s,mb3.6,baz=276,slow=7.0,SNR=7.9
ZALV Zalesovo Beam 43.97 49 P P 21 07 49.5 -1.3
comp=Z,2.0nm,0.5s,mb4.1,baz=274,slow=9.0,SNR=8.4
ZALV LR LR 21 26 06.3
comp=Z,34nm,20.4s,MS3.2,baz=34,slow=36
ZALV Zalesovo Beam 43.97 49 P P 21 07 49.5 -1.3
ZALV LR LR 21 26 06.2
ZALV Zalesovo Beam 43.97 49 P P 21 07 49.5 -1.3
ZAK Zakamensk 55.82 50 *e*P P 21 09 22.2 +1.3
ZAK pmax pmax
comp=Z,1.0nm,2.2s,mb3.5
ZAK Zakamensk 55.82 50 *e*P P 21 09 22.2 +1.3
comp=Z,1.0nm,2.2s,mb3.5
TIXI Tiksi 58.51 21 *e*P P 21 09 39.6 0.0
TIXI pmax pmax
comp=Z,5.0nm,1.8s,mb4.2
TIXI Tiksi 58.51 21 *e*P P 21 09 39.6 0.0
comp=Z,5.0nm,1.8s,mb4.2
SONM Songino Array 58.70 52 P P 21 09 40.7 -0.7
comp=Z,0.6nm,0.6s,mb3.8,baz=275,slow=6.9,SNR=6.9
SONM Songino Array 58.70 52 P P 21 09 40.7 -0.6
SCHQ Schefferville 59.31 318 P P 21 09 44.8 -0.6
comp=Z,1.9nm,0.6s,mb4.3,baz=100,slow=6.1,SNR=3.4
SCHQ Schefferville 59.31 318 P P 21 09 44.8 -0.6
BOSA Boshof 67.01 178 P P 21 10 37.8 +1.1
comp=Z,2.1nm,0.7s,mb4.3,baz=356,slow=2.8,SNR=5.8
BOSA Boshof 67.01 178 P P 21 10 37.8 +1.1
YKA Yellowknife Ar 73.51 341 P P 21 11 13.6 -2.6
comp=Z,0.5nm,0.6s,mb3.6,baz=28,slow=5.3,SNR=3.0
KSRS Korea Array 77.57 52 P P 21 11 38.7 -1.2
comp=Z,1.3nm,0.6s,mb4.0,baz=316,slow=7.0,SNR=5.6
KSRS Korea Array 77.57 52 P P 21 11 38.7 -1.2
KSRS pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
KSRS Korea Array 77.57 52 P P 21 11 38.7 -1.2
comp=Z,1.0nm,0.6s,mb3.9
PETK Petropavlovsk- 80.55 26 LR LR 21 48 01.2
comp=Z,68nm,21.8s,MS4.0,baz=220,slow=36
WRA Warramunga Arr 118.73 93 PKP PKPdf 21 18 29.2 -3.2
comp=Z,0.5nm,1.0s,baz=15,slow=1.1,SNR=2.9
ASAR Alice Springs 120.41 97 PKP PKPdf 21 18 32.7 -2.8
comp=Z,0.3nm,0.6s,baz=305,slow=1.1,SNR=5.2

*IDC **25** 21:09:26.9±1.3, 41°.09N×73°.91E, h0km, mb3.8/5, mb1 3.9/10, mb1mx3.7/28, mbtmp3.8/10, ML3.6/5, Error ellipse: s-maj=18.4km s-min=12.1km az=124.0*
*NNC **25** 21:09:27.0±5.3, 41°.01N×73°.75E, h0km, mb4.6, mpv4.3, Error ellipse: s-maj=52.5km s-min=17.5km az=171.0*
*ISCJB **25** 21:09:27.9±1.1, 41°.26N±0°.03×73°.55E±0°.05, h3km±8km, mb3.8/6, Error ellipse: s-maj=6.6km s-min=4.4km az=21.8*
*BJI **25** 21:09:30.9, 41°.37N×73°.74E, h18km, ML3.8/4*
*KNET **25** 21:09:31.0±0.5, 41°.36N×73°.93E, h5km±3km, ml3.8, Error ellipse: s-maj=3.7km s-min=3.1km az=41.0*
*NEIC **25** 21:09:32.9±0.9, 41°.25N×73°.74E, h39km±11km, mb3.8/2, Error ellipse: s-maj=12.4km s-min=9.8km az=130.0*
ISC 25 21:09:30.5±0.8, 41°.32N±0°.03×73°.64E±0°.05, h8km±5km, n42, σ1§35/60, mb3.8/6, 15C-4D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**0.81**	**3**	⇑P	**Pg**	**21 09 46.3**	**+0.2**
	738nm,0.1s,SNR=3217						
AML				⇓S	**Sg**	**21 09 58.7**	**+2.0**
	2μm,0.3s						
AML	**Almayashu**	**0.81**	**3**	⇓*i*P	**Pg**	**21 09 46.4**	**+0.2**
AML				*e*S	**Sg**	**21 09 58.3**	**+1.5**
UCH	**Uchtor**	**1.12**	**36**	P	**Pg**	**21 09 50.1**	**-1.9**
	173nm,0.2s,SNR=327						
UCH				⇑S	**Sg**	**21 10 05.3**	**-1.3**
	474nm,0.2s						
UCH	**Uchtor**	**1.12**	**36**	*e*P	**Pg**	**21 09 50.1**	**-1.9**
UCH				*e*S	**Sg**	**21 10 06.3**	**-0.3**
EKS2	**Erkin-Say**	**1.34**	**4**	P	**Pn**	**21 09 55.7**	**+0.1**
	109nm,0.1s,SNR=468						
EKS2	**Erkin-Say**	**1.34**	**4**	*e*Pn	**Pn**	**21 09 55.6**	**0.0**
EKS2				*e*Sn	**Sn**	**21 10 12.8**	**-0.8**
KZA	**Kyzart**	**1.43**	**57**	⇑P	**Pn**	**21 09 53.9**	**-2.7**
	207nm,0.3s,SNR=233						
AAK	**Ala-Archa**	**1.46**	**26**	P	**Pn**	**21 09 56.9**	**-0.3**
	195nm,0.2s,SNR=242						
AAK				⇑S	**Sn**	**21 10 16.1**	**-0.3**
	621nm,0.3s						
AAK	**Ala-Archa**	**1.46**	**26**	Pg	**Pg**	**21 09 56.9**	**-1.7**
	1.9nm,0.3s,baz=169,slow=8.4,SNR=264						
AAK				Lg		21 10 16.6	
	3.2nm,0.3s,baz=114,slow=3.6,SNR=26						
KBK	**Karagaybulak**	**1.66**	**36**	⇑P	**Pn**	**21 09 59.8**	**-0.1**
	155nm,0.2s,SNR=205						
CHMS	**Chumysh**	**1.87**	**26**	⇑P	**Pn**	**21 10 04.1**	**+1.2**
	201nm,0.3s,SNR=119						
CHMS				⇑S	**Sn**	**21 10 28.6**	**+2.0**
	1μm,0.6s						
USP	**Ospenovka**	**2.05**	**18**	P	**Pn**	**21 10 07.7**	**+2.4**
	321nm,0.3s,SNR=270						
TKM2	**Tokmak 2**	**2.17**	**42**	⇑Pn	**Pn**	**21 10 08.3**	**+1.4**
	80nm,0.3s						
TKM2				⇓Sn	**Sn**	**21 10 36.1**	**+2.3**
	399nm,0.5s						
TKM2	**Tokmak 2**	**2.17**	**42**	⇑P	**Pn**	**21 10 08.3**	**+1.5**
	184nm,0.2s,SNR=233						
TKM2	**Tokmak 2**	**2.17**	**42**	*e*Pn	**Pn**	**21 10 08.0**	**+1.2**
TKM2				*e*Sn	**Sn**	**21 10 35.5**	**+1.7**
KSH	**Kashi**	**2.54**	**135**	Pn	**Pn**	**21 10 12.5**	**+0.6**
KSH				Sn	**Sn**	**21 10 44.8**	**+1.9**
KSH				smax			
	comp=N,480nm,0.5s						
KSH				smax			
	comp=E,260nm,0.6s						
KK31	**Karatay Array**	**2.93**	**309**	Pn	**Pn**	**21 10 20.1**	**+2.8**
	comp=E,21nm,0.2s,baz=129,slow=13,SNR=1260						
KK31				Sn	**Sg**	**21 11 05.9**	**+1.4**
	comp=E,129nm,0.3s,baz=122,slow=28,SNR=11						
KNDC	**Almaty**	**3.12**	**51**	⇑Pn	**Pn**	**21 10 20.6**	**+0.7**
	comp=E,135nm,0.6s						
KNDC				⇑Sn	**Sn**	**21 11 03.8**	**+6.5**
	comp=E,551nm,0.8s						
CEP	**Cherat**	**7.61**	**191**	P	**Pn**	**21 11 21.4**	**-0.2**
CEP				S	**Sn**	**21 12 43.0**	**-5.0**
CHCP	**Chirah Chowk**	**7.65**	**182**	P	**Pn**	**21 11 21.7**	**-0.6**
KBL	**Kabul**	**7.68**	**210**	*e*Pn	**Pn**	**21 11 22.7**	**+0.1**
	comp=E,19nm,0.4s						
KBL				*e*Sn	**Sn**	**21 12 48.3**	**-1.4**
MK31	**Makanchi Array**	**8.29**	**46**	⇑Pn	**Pn**	**21 11 31.1**	**+0.2**
	comp=E,3.7nm,0.6s,baz=223,slow=10,SNR=30						
MK31				⇓Lg		21 13 52.0	
	comp=E,9.3nm,0.6s						
MK31	**Makanchi Array**	**8.29**	**46**	*e*Pn	**Pn**	**21 11 30.9**	**-0.1**
MK31				S	**Sn**	**21 13 02.1**	**-2.6**
MKAR	**Makanchi Array**	**8.29**	**46**	Pn	**Pn**	**21 11 29.8**	**-1.2**
	comp=E,0.2nm,0.3s,baz=225,slow=9.9,SNR=9.3						
MKAR				Lg		21 13 51.4	
	comp=E,1.3nm,0.3s,baz=234,slow=22,SNR=5.3						
MKAR	**Makanchi Array**	**8.29**	**46**	Pn	**Pn**	**21 11 29.8**	**-1.2**
MKAR				Lg		21 13 51.4	
KURK	**Kurchatov**	**10.01**	**19**	Pn	**Pn**	**21 11 52.7**	**-1.8**
	comp=E,0.1nm,0.3s,baz=210,slow=13,SNR=16						
KURK				Sn	**Sn**	**21 13 44.5**	**-2.5**
	comp=E,0.1nm,0.3s,baz=116,slow=35,SNR=3.0						
KURK				Lg		21 14 43.4	
	comp=E,0.4nm,0.3s,baz=197,slow=30,SNR=7.6						
KURK	**Kurchatov**	**10.01**	**19**	*e*Pn	**Pn**	**21 11 52.9**	**-1.6**
	comp=E,3.8nm,0.8s						
KURK				Sn	**Sn**	**21 13 57.2**	**+10**
VOSK	**Vostochnaya**	**11.55**	**352**	⇑Pn	**Pn**	**21 12 14.1**	**-1.5**
	comp=E,3.7nm,0.7s						
BVAR	**Borovoye Array**	**11.91**	**350**	Pn	**Pn**	**21 12 21.0**	**+0.5**
	comp=E,0.7nm,0.3s,baz=153,slow=12,SNR=5.4						
BVAR				Sn	**Sn**	**21 14 31.4**	**-2.2**
	comp=E,0.2nm,0.3s,baz=139,slow=25,SNR=2.9						
BVAR				Lg		21 15 46.3	
	comp=E,0.7nm,0.3s,baz=165,slow=23,SNR=5.1						
BRVK	**Borovoye**	**11.96**	**350**	⇑Pn	**Pn**	**21 12 24.1**	**+2.9**
	comp=E,11nm,0.6s						
ZRNK	**Zerenda**	**12.05**	**346**	⇑Pn	**Pn**	**21 12 20.3**	**-2.1**
	comp=E,6.4nm,0.7s						
AKTK	**Aktyubinsk**	**14.17**	**315**	Pn	**Pn**	**21 12 51.7**	**+0.4**
AKTO	**Aktyubinsk**	**14.17**	**315**	Pn	**Pn**	**21 12 51.7**	**+0.4**
	comp=E,0.3nm,0.3s,baz=119,slow=15,SNR=7.3						
ZAA0	**Zalesovo Array**	**14.69**	**27**	*e*Pn	**Pn**	**21 12 59.1**	**+0.7**
ZALV	**Zalesovo Beam**	**14.69**	**27**	Pn	**Pn**	**21 12 59.0**	**+0.7**
	comp=E,0.4nm,0.3s,baz=218,slow=13,SNR=17						
ZALV				Lg		21 17 15.1	
	comp=E,0.2nm,0.3s,baz=217,slow=24,SNR=3.7						
ARU	**Arti**	**18.02**	**332**	*e*P	**Pn**	**21 13 40.7**	**-0.4**
	comp=E,3.6nm,0.8s						
FINES	**FINESS Array B**	**34.81**	**322**	P	**P**	**21 16 21.6**	**+0.3**
	comp=E,2.2nm,0.8s,mb4.1,baz=127,slow=15,SNR=3.2						
ARCES	**ARCESS Array B**	**37.58**	**335**	P	**P**	**21 16 44.2**	**-0.7**
	comp=E,1.5nm,0.8s,mb3.8,baz=102,slow=8.4,SNR=4.5						
TIXI	**Tiksi**	**40.54**	**24**	*e*P	**P**	**21 17 12.4**	**+2.7**
	comp=E,3.3nm,0.8s,mb4.0						
HFS	**Hagfors**	**40.69**	**318**	P	**P**	**21 17 11.0**	**-0.1**
	comp=E,1.0nm,0.6s,mb3.6,baz=93,slow=12,SNR=4.8						
NOA	**NORSAR Array B**	**41.90**	**320**	P	**P**	**21 17 19.6**	**-1.4**
	comp=E,0.7nm,0.7s,mb3.4,baz=114,slow=5.5,SNR=3.6						
ASAR	**Alice Springs**	**85.41**	**127**	P	**P**	**21 22 03.9**	**-4.6**
	comp=E,0.5nm,0.7s,mb3.7,baz=336,slow=5.8,SNR=3.4						

*IDC **25** 21:09:33.8±1.3, 30°.84N×103°.14E, h0km, mb3.9/4, mb1 3.9/6, mb1mx3.7/23, mbtmp3.8/6, ML3.1/2, MS3.9/2, Ms1 3.9/2, ms1mx2.8/27, Error ellipse: s-maj=39.9km s-min=23.0km az=80.0*
*NEIC **25** 21:09:35.2±0.4, 30°.88N×103°.11E, h10km, mb4.5/2, Error ellipse: s-maj=10.1km s-min=6.8km az=67.0*
*BJI **25** 21:09:35.8, 30°.87N×103°.13E, h14km, mb4.0/1, ML3.8/16, Ms3.9/5, Ms7 3.8/4*
ISC 25 21:09:34.7±1.3, 30°.87N±0°.03×103°.15E±0°.06, h4km±8km, n22, σ1§10/34, mb4.2/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.52**	**86**	Pg	**Pg**	**21 09 46.3**	**+1.5**
CD2				Sg	**Sg**	**21 09 56.0**	**+4.4**
CD2				smax			
	comp=N,5μm,0.6s						
CD2				smax			
	comp=E,8μm,0.6s						
LZH	**Lanzhou**	**5.23**	**6**	Pn	**Pn**	**21 10 57.3**	**+3.6**
LZH				Sn	**Sn**	**21 11 54.3**	**-0.2**
LZH				Sg	**Sg**	**21 12 19.3**	**-3.5**
LZH				smax			
	comp=N,97nm,1.2s						
LZH				smax			
	comp=E,130nm,1.3s						
LZH				LR	LR		
	comp=N,990nm,4.9s						
LZH				LR	LR		
	comp=Z,1μm,6.0s						
GYA	**Guiyang**	**5.37**	**144**	Pn	**Pn**	**21 10 57.5**	**+1.9**
GYA				Sn	**Sn**	**21 11 56.5**	**-1.4**
GYA				Sg	**Sg**	**21 12 26.5**	**-0.8**

GYA smax
comp=N,130nm,0.9s
GYA smax
comp=E,150nm,0.7s
ENH Enshi 5.50 95 *e*Pn **Pn 21 10 58.1 +0.8**
comp=E,42nm,0.6s
ENH *e*Pg **Pg 21 11 19.1 -0.9**
ENH Sg **Sg 21 12 31.1 -0.1**
KMI Kunming 5.74 184 Pn **Pn 21 11 01.8 +1.1**
KMI Sn **Sn 21 12 07.5 +0.6**
KMI Sg **Sg 21 12 36.0 -3.0**
KMI smax
comp=N,35nm,1.4s
KMI smax
comp=E,47nm,1.0s
KMI LR LR
comp=N,400nm,4.8s
KMI LR LR
comp=E,560nm,7.2s
XAN Xi'an 5.81 56 Pn **Pn 21 11 02.5 +0.9**
XAN Pg **Pg 21 11 20.3 -5.7**
XAN Sn **Sn 21 12 18.0 +9.3**
XAN Sg **Sg 21 12 37.5 -3.8**
XAN smax
comp=N,190nm,0.9s
XAN smax
comp=E,73nm,0.7s
XAN LR LR
comp=N,410nm,12.3s
XAN LR LR
comp=E,85nm,10.0s
XAN LR LR
comp=Z,74nm,7.0s
WHN Wuhan 9.65 89 *e*P **Pn 21 11 57.0 +2.7**
WHN S **Sn 21 13 39.0 -4.1**
WHN LR LR
comp=N,930nm,8.1s
WHN LR LR
comp=E,920nm,9.9s
WHN LR LR
comp=Z,1μm,4.9s
LSA Lhasa 10.44 267 P **Pn 21 12 07.0 +1.8**
CMAR Chiang Mai Arr 12.94 198 Pn **Pn 21 12 39.8 +0.4**
comp=Z,0.0nm,0.3s,baz=14,slow=11,SNR=5.5
SONM Songino Array 17.12 7 Pn **Pn 21 13 34.8 0.0**
comp=Z,0.0nm,0.3s,baz=192,slow=12,SNR=5.5
SONM LR LR 21 20 41.4
comp=Z,103nm,19.5s,baz=346,slow=39
TLY Talaya 20.79 1 P **P 21 14 16.3 -0.4**
KSRS Korea Array 21.49 66 P **P 21 14 24.4 0.0**
comp=Z,4.0nm,0.7s,mb3.9,baz=248,slow=9.2,SNR=13
ZALV Zalesovo Beam 26.58 335 P **P 21 15 13.6 -0.1**
comp=Z,1.9nm,0.8s,mb3.7,baz=154,slow=7.8,SNR=5.6
ARU Arti 40.12 323 *e*P **P 21 17 10.9 -0.3**
KIV Kislovodsk 48.76 303 *e*P **P 21 18 19.9 -0.7**
comp=Z,2.1nm,0.5s,mb4.4
BR131 Keskin Array S 56.14 300 P **P 21 19 15.4 -0.1**
KEV Kevo 56.61 336 *e*P **P 21 19 17.4 -0.8**
comp=Z,14nm,1.4s,mb4.8
WRAB Tennant Creek 58.74 145 *e*P **P 21 19 33.3 -0.5**
comp=Z,4.7nm,0.8s,mb4.6
WRA Warramunga Arr 58.74 145 P **P 21 19 33.0 -0.8**
comp=Z,1.2nm,0.4s,mb4.2,baz=337,slow=7.5,SNR=22
TIRR Tirgusor 58.77 306 P **P 21 19 32.8 -1.0**
ASAR Alice Springs 61.72 148 P **P 21 19 54.0 -0.2**
comp=Z,0.7nm,0.6s,mb3.9,baz=336,slow=6.9,SNR=8.2
URZ Urewera 97.34 130 LR LR 22 04 26.8
comp=Z,222nm,18.5s,baz=355,slow=34

*DDA **25** 21:12:17.8, 39°.52N×37°.55E, h5km±1km, Ml4.6*
*CSEM **25** 21:12:19.0, 39°.52N×37°.48E, h4km, ML4.0, After ISK*
*ISK **25** 21:12:19.0, 39°.52N×37°.48E, h4km, ML4.0*
*ISCJB **25** 21:12:19.9±0.2, 39°.54N±0°.02×37°.51E±0°.02, h10km, Error ellipse: s-maj=2.9km s-min=2.3km az=16.1*
ISC 25 21:12:20.6±0.2, 39°.54N±0°.02×37°.55E±0°.02, h10km, n105, σ1.13/123, 7C-6D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SVSK	**Karacayir**	**0.57**	**312**	PG		**Pg**	**21 12 30.0**	**-1.6**
SVSK					*e*SG	**Sg**	**21 12 38.8**	**-0.3**
SVSK	**Karacayir**	**0.57**	**312**	*i* Pg		**Pg**	**21 12 30.0**	**-1.6**
SVSK					*e*Sg	**Sg**	**21 12 38.8**	**-0.3**
DARE	**Darende-Malaty**	**0.62**	**161**	*e*PG		**Pg**	**21 12 37.7**	**+5.2**
DARE					*e*SG	**Sg**	**21 12 50.7**	**+10**
DARE	**Darende-Malaty**	**0.62**	**161**	*e*Pg		**Pg**	**21 12 37.7**	**+5.2**
DARE					*e*Sg	**Sg**	**21 12 50.7**	**+10**
KEMA	**Kemaliye**	**0.78**	**110**	⇑*i*P		**Pg**	**21 12 33.1**	**-2.5**
KEMA					*i* S	**Sg**	**21 12 44.2**	**-1.6**
SARI	**SarD1z-Kayseri**	**1.08**	**218**	*e*PN		**Pg**	**21 12 45.6**	**+4.3**
TOKT	**Tokat**	**1.10**	**316**	*e*PG		**Pg**	**21 12 39.5**	**-2.1**
TOKT					*e*SG	**Sg**	**21 12 55.2**	**-0.7**
TOKT	**Tokat**	**1.10**	**316**	*e*Pg		**Pg**	**21 12 39.6**	**-2.1**
TOKT					*e*Sg	**Sg**	**21 12 55.2**	**-0.7**
PINB	**Pinarbasi**	**1.24**	**226**	⇓*i*P		**Pn**	**21 12 41.0**	**-2.9**
PINB					*i* S	**Sb**	**21 12 59.4**	**-0.6**
AKCD	**Akcadag**	**1.27**	**167**	⇑*i*P		**Pn**	**21 12 41.5**	**-2.9**
AKCD					*i* S	**Sb**	**21 13 00.1**	**-0.9**
MYA	**Malataya**	**1.39**	**150**	*e*PN		**Pn**	**21 12 45.0**	**-1.0**
MYA	**Malataya**	**1.39**	**150**	*e*Pn		**Pn**	**21 12 45.0**	**-1.0**
EZC	**Erzincan**	**1.41**	**81**	*e*PN		**Pn**	**21 12 45.4**	**-0.9**
GRSN	**GIRESUNGRSN**	**1.49**	**22**	⇓*i*P		**Pn**	**21 12 46.2**	**-1.2**
GRSN					*i* S	**Sn**	**21 13 05.4**	**-1.5**
ELZG	**Elazig**	**1.53**	**132**	⇑*i*P		**Pn**	**21 12 46.5**	**-1.4**
ELZG					*i* S	**Sn**	**21 13 07.9**	**+0.1**
ESPY	**Espiye-Giresun**	**1.65**	**33**	*e*PN		**Pn**	**21 12 49.5**	**-0.1**
ESPY	**Espiye-Giresun**	**1.65**	**33**	*e*Pn		**Pn**	**21 12 49.5**	**-0.1**
YOZ	**Yozgat**	**1.72**	**274**	*e*PN		**Pn**	**21 12 50.6**	**0.0**
YOZ	**Yozgat**	**1.72**	**274**	*e*Pn		**Pn**	**21 12 50.6**	**0.0**
GUMT	**Gumushane**	**1.75**	**58**	*e*PN		**Pn**	**21 12 51.0**	**+0.1**
GUMT	**Gumushane**	**1.75**	**58**	*e*Pn		**Pn**	**21 12 51.1**	**+0.2**
SVRC	**Sivrice-ELAZID**	**1.79**	**130**	*e*PN		**Pn**	**21 12 52.3**	**+0.7**
SVRC	**Sivrice-ELAZID**	**1.79**	**130**	*e*Pn		**Pn**	**21 12 52.3**	**+0.7**
KVT	**Kavak**	**1.92**	**324**	*e*PN		**Pn**	**21 12 52.9**	**-0.4**
KVT	**Kavak**	**1.92**	**324**	*e*Pn		**Pn**	**21 12 52.9**	**-0.4**
KMRS	**Kahramanmaras**	**2.09**	**194**	*e*PN		**Pn**	**21 12 56.1**	**+0.5**
KMRS	**Kahramanmaras**	**2.09**	**194**	*e*Pn		**Pn**	**21 12 56.1**	**+0.5**
ATAB	**Bozova**	**2.15**	**164**	*i* P		**Pn**	**21 12 56.2**	**-0.2**
GZT	**Gaziantep**	**2.18**	**180**	*i* P		**Pn**	**21 12 57.0**	**+0.2**
MACK	**Trabzon**	**2.21**	**50**	⇓*i*P		**Pn**	**21 12 58.3**	**+1.1**
MACK					*i* S	**Sb**	**21 13 28.5**	**+0.6**
KTUT	**Trabzon**	**2.23**	**49**	*e*PN		**Pn**	**21 12 59.3**	**+1.7**
KTUT	**Trabzon**	**2.23**	**49**	*e*Pn		**Pn**	**21 12 59.3**	**+1.7**
URFA	**Urfa**	**2.32**	**154**	*e*PN		**Pn**	**21 12 58.8**	**0.0**
URFA	**Urfa**	**2.32**	**154**	*e*Pn		**Pn**	**21 12 58.8**	**0.0**
CORM	**Corum**	**2.33**	**287**	*e*PN		**Pn**	**21 12 58.0**	**-1.0**
CORM	**Corum**	**2.33**	**287**	*e*Pn		**Pn**	**21 12 58.0**	**-1.0**
GAZ	**Gaziantep**	**2.38**	**186**	*e*PN		**Pn**	**21 12 59.7**	**+0.2**
GAZ	**Gaziantep**	**2.38**	**186**	*e*Pn		**Pn**	**21 12 59.7**	**+0.2**
CTKT	**Corum**	**2.38**	**298**	⇑*i*P		**Pn**	**21 13 01.0**	**+1.4**
CTKT					*i* S	**Sg**	**21 13 35.1**	**-1.8**
BINT	**Bingol**	**2.38**	**105**	*e*PN		**Pn**	**21 13 00.9**	**+1.3**
BINT	**Bingol**	**2.38**	**105**	*e*Pn		**Pn**	**21 13 00.9**	**+1.3**
CDAG	**Cicekdag**	**2.45**	**273**	⇑*i*P		**Pn**	**21 13 01.3**	**+0.7**
CDAG					*i* S	**Sn**	**21 13 33.3**	**+2.6**
KOZT	**Kozan**	**2.46**	**214**	*e*PN		**Pn**	**21 13 00.6**	**0.0**
DIYA	**Diyarbakir**	**2.58**	**128**	*i* P		**Pn**	**21 13 02.3**	**0.0**
DIYA					*i* S	**Sb**	**21 13 39.2**	**+0.6**
DIY	**Diyarbakir**	**2.66**	**127**	*e*PN		**Pn**	**21 13 04.7**	**+1.2**
DIY	**Diyarbakir**	**2.66**	**127**	*e*Pn		**Pn**	**21 13 04.7**	**+1.2**
DIKM	**Dikmen**	**2.74**	**321**	*e*PN		**Pn**	**21 13 04.9**	**+0.4**
DIKM	**Dikmen**	**2.74**	**321**	*e*Pn		**Pn**	**21 13 04.9**	**+0.4**
BNGL	**BINGOL**	**2.86**	**101**	*i* P		**Pb**	**21 13 10.9**	**-0.7**
BYBT	**Boyabat**	**2.87**	**313**	*e*PN		**Pn**	**21 13 06.7**	**+0.5**
BYBT	**Boyabat**	**2.87**	**313**	*e*Pn		**Pn**	**21 13 06.7**	**+0.4**
CEYT	**Ceyhan**	**2.89**	**210**	*e*PN		**Pn**	**21 13 06.7**	**+0.1**
CEYT	**Ceyhan**	**2.89**	**210**	*e*Pn		**Pn**	**21 13 06.7**	**+0.1**
EZM	**Erzurum**	**2.97**	**82**	*e*PN		**Pn**	**21 13 09.0**	**+1.4**
KARA	**Karaisali**	**3.00**	**222**	*e*PN		**Pn**	**21 13 09.0**	**+0.9**
KARA	**Karaisali**	**3.00**	**222**	*e*Pn		**Pn**	**21 13 09.0**	**+0.9**
PZAR	**Pazar-Rize**	**3.04**	**56**	*e*PN		**Pn**	**21 13 10.7**	**+2.0**
PZAR	**Pazar-Rize**	**3.04**	**56**	*e*Pn		**Pn**	**21 13 10.7**	**+2.0**
TOS	**Tosya**	**3.08**	**300**	*e*PN		**Pn**	**21 13 10.3**	**+1.0**
TOS	**Tosya**	**3.08**	**300**	*e*Pn		**Pn**	**21 13 10.3**	**+1.0**
GULE	**Gulek**	**3.13**	**225**	*i* P		**Pn**	**21 13 10.9**	**+1.0**
GULE					*i* S	**Sg**	**21 13 57.8**	**-3.2**
CANT	**Cankiri**	**3.20**	**291**	*e*PN		**Pn**	**21 13 10.1**	**-0.7**
BEST	**Besiri**	**3.34**	**118**	*i* P		**Pn**	**21 13 12.9**	**0.0**
BTMT	**Batman**	**3.36**	**112**	*e*PN		**Pn**	**21 13 13.4**	**+0.4**
MARD	**Mardin**	**3.37**	**130**	*i* P		**Pn**	**21 13 11.4**	**-1.9**
HOMI	**Horasan**	**3.40**	**80**	*i* P		**Pb**	**21 13 19.9**	**-0.9**
SULT	**Sultanhani-AKS**	**3.42**	**248**	*e*PN		**Pn**	**21 13 14.3**	**+0.4**
SULT	**Sultanhani-AKS**	**3.42**	**248**	*e*Pn		**Pn**	**21 13 14.3**	**+0.4**
DDEM	**Demirkent**	**3.49**	**66**	*i* P		**Pb**	**21 13 21.8**	**-0.7**
MERS	**Mersin**	**3.57**	**223**	*e*PN		**Pn**	**21 13 16.0**	**0.0**
MERS	**Mersin**	**3.57**	**223**	*e*Pn		**Pn**	**21 13 16.0**	**0.0**
HTY	**Hatay**	**3.59**	**199**	*e*PN		**Pn**	**21 13 16.6**	**+0.4**
HTY	**Hatay**	**3.59**	**199**	*e*Pn		**Pn**	**21 13 16.6**	**+0.4**
ARTV	**Artvin**	**3.73**	**62**	*i* P		**Pn**	**21 13 18.8**	**+0.6**
ARTV					*e*S	**Sb**	**21 14 11.6**	**-0.1**
BALT	**Daday**	**3.75**	**304**	⇑*i*P		**Pn**	**21 13 18.9**	**+0.5**
SAFT	**Safranbolu**	**4.08**	**296**	*e*PN		**Pn**	**21 13 23.0**	**0.0**
SAFT	**Safranbolu**	**4.08**	**296**	*e*Pn		**Pn**	**21 13 23.0**	**0.0**
LADK	**Ladik-KONYA**	**4.26**	**253**	*e*PN		**Pn**	**21 13 25.4**	**-0.1**
LADK	**Ladik-KONYA**	**4.26**	**253**	*e*Pn		**Pn**	**21 13 25.4**	**0.0**
KARS	**Kars**	**4.38**	**74**	*e*PN		**Pn**	**21 13 30.0**	**+2.9**
KARS	**Kars**	**4.38**	**74**	*e*Pn		**Pn**	**21 13 30.0**	**+2.9**
KIZT	**Kizilcal**	**4.45**	**263**	*e*PN		**Pn**	**21 13 28.3**	**+0.2**
KIZT	**Kizilcal**	**4.45**	**263**	*e*Pn		**Pn**	**21 13 28.3**	**+0.2**
SVRH	**Sivrihisar-ESK**	**4.66**	**271**	*e*PN		**Pn**	**21 13 31.2**	**+0.3**
SVRH	**Sivrihisar-ESK**	**4.66**	**271**	*e*Pn		**Pn**	**21 13 31.2**	**+0.3**
KDZE	**Karadeniz Ereo**	**4.98**	**293**	*e*PN		**Pn**	**21 13 36.5**	**+1.1**
KDZE	**Karadeniz Ereo**	**4.98**	**293**	*e*Pn		**Pn**	**21 13 36.5**	**+1.1**
ESKT	**Eskisehir**	**5.18**	**272**	*e*PN		**Pn**	**21 13 40.0**	**+1.9**
ESKT	**Eskisehir**	**5.18**	**272**	*e*Pn		**Pn**	**21 13 40.0**	**+2.0**
ONI	**Oni**	**5.41**	**54**	P		**Pn**	**21 13 46.4**	**+5.2**
GULT	**Gulveren**	**5.47**	**282**	*e*PN		**Pn**	**21 13 43.2**	**+1.0**
GULT	**Gulveren**	**5.47**	**282**	*e*Pn		**Pn**	**21 13 43.2**	**+1.1**
GNI	**Garni**	**5.57**	**81**	*e*PN		**Pn**	**21 13 47.0**	**+3.5**
GNI	**Garni**	**5.57**	**81**	*e*Pn		**Pn**	**21 13 47.0**	**+3.5**
KEH	**Kehvi**	**5.58**	**58**	P		**Pn**	**21 13 44.2**	**+0.7**
ALT	**Altintas**	**5.79**	**268**	*e*PN		**Pn**	**21 13 47.5**	**+1.1**
ALT	**Altintas**	**5.79**	**268**	*e*Pn		**Pn**	**21 13 47.5**	**+1.1**
TBLG	**Delisi**	**5.89**	**66**	P		**Pb**	**21 14 05.2**	**+1.8**
MTA	**Mtatsminda**	**5.92**	**66**	P		**Pb**	**21 14 03.8**	**0.0**
DGRG	**David-gareji**	**6.27**	**70**	P		**Pg**	**21 14 18.6**	**-1.9**
TIRR	**Tirgusor**	**8.39**	**309**	*e*Pn		**Pn**	**21 14 20.6**	**-1.6**
	6.4nm,0.8s							
TIRR					*e*Sn	**Sn**	**21 15 47.1**	**-10**
CVD	**Cernavoda**	**8.55**	**307**	⇓*i*P		**Pn**	**21 14 18.9**	**-5.4**
TLCR		**8.58**	**314**	⇓*i*P		**Pn**	**21 14 22.8**	**-1.9**
MLR	**Muntele Rosu**	**10.42**	**309**	⇓*i*P		**Pn**	**21 14 50.9**	**+0.9**
BURAR	**Bucovina Array**	**12.04**	**316**	⇑*i*P		**Pn**	**21 15 11.3**	**-0.7**

*IDC **25** 21:15:30.8±1.6, 12°.27N×126°.34E, h0km, mb4.1/5, mb1 4.2/5, mb1mx3.7/20, mbtmp4.1/5, Error ellipse: s-maj=160.3km s-min=24.5km az=68.0*
*ISCJB **25** 21:15:36.6±4.7, 12°.0N±0°.2×125°.7E±0°.3, h49km±41km, mb4.1/5, Error ellipse: s-maj=57.0km s-min=27.6km az=160.3*
ISC 25 21:15:37.7±4.8, 12°.0N±0°.2×125°.7E±0°.3, h42km±44km, n8, σ0.73/8, mb4.1/5, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PLP	**Palo**	**1.12**	**221**	⇓*e*P		**Pn**	**21 15 56.0**	**-0.8**
PLP					*e*S	**Sn**	**21 16 10.9**	**-0.1**
TBP	**Tagbilaran**	**2.95**	**218**	*e*P		**Pn**	**21 16 23.0**	**+1.0**
WRA	**Warramunga Arr**	**32.87**	**165**	PcP		PcP	21 24 51.8	-0.1
0.3nm,0.7s,baz=340,slow=2.8,SNR=4.5								
ASAR	**Alice Springs**	**36.36**	**167**	P		**P**	**21 22 38.0**	**+0.1**
0.3nm,0.4s,mb3.5,baz=349,slow=7.6,SNR=5.3								
ASAR				PcP		PcP	21 25 01.4	-0.6
0.3nm,0.5s,baz=352,slow=2.8,SNR=4.2								
MKAR	**Makanchi Array**	**50.32**	**322**	P		**P**	**21 24 30.7**	**+0.5**
0.8nm,0.7s,mb3.9,baz=97,slow=12,SNR=7.9								
KURK	**Kurchatov**	**54.33**	**325**	P		**P**	**21 24 59.9**	**0.0**
3.3nm,0.6s,mb4.4,baz=125,slow=7.4,SNR=33								
ARCES	**ARCESS Array B**	**82.38**	**340**	P		**P**	**21 27 54.6**	**-0.3**
3.5nm,0.8s,mb4.3,baz=69,slow=6.6,SNR=10								
FINES	**FINESS Array B**	**84.11**	**332**	P		**P**	**21 28 03.6**	**-0.4**
1.7nm,0.7s,mb4.3,baz=60,slow=5.0,SNR=5.1								

*IDC **25** 21:21:57.9±0.6, 11°.98N×125°.72E, h0km, mb4.4/19, mb1 4.4/19, mb1mx4.4/24, mbtmp4.4/19, MS4.0/13, Ms1 4.1/13, ms1mx3.7/35, Error ellipse: s-maj=29.4km s-min=12.0km az=69.0*
*MOS **25** 21:22:00.6±0.9, 11°.98N×125°.80E, h33km, mb4.9/18, Error ellipse: s-maj=14.0km s-min=6.7km az=124.3*
*MAN **25** 21:22:01, 12°.19N×125°.85E, h26km, mb5.0, ML3.9, MS4.0*
*BJI **25** 21:22:01.5, 12°.02N×125°.92E, h46km, mB4.9/14, mb4.4/17, Ms4.4/8, Ms7 4.1/8*
*ISCJB **25** 21:22:02.3±0.7, 12°.06N±0°.04×125°.85E±0°.05, h47km±6km, mb4.6/51, MS4.1/18, Error ellipse: s-maj=8.5km s-min=5.0km az=150.1*
*NEIC **25** 21:22:05.0±0.9, 12°.00N×125°.77E, h56km±9km, mb4.7/22, Error ellipse: s-maj=7.4km s-min=4.5km az=66.0*
ISC 25 21:22:04.5±0.7, 12°.05N±0°.04×125°.79E±0°.05, h50km±6km, h30km±7.4km: pP-P, n134, σ0.94/131, mb4.6/51, MS4.1/18, 4C-5D, Samar

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PLP	**Palo**	**1.18**	**222**	⇓*e*P		**Pn**	**21 22 22.5**	**-2.2**
PLP					*e*S	**Sn**	**21 22 34.9**	**-4.8**
CNP	**Catarman**	**1.20**	**293**	*e*P		**Pn**	**21 22 22.3**	**-2.6**
OCLP	**Ormoc**	**1.52**	**230**	*e*P		**Pn**	**21 22 29.0**	**-0.4**
MSLP	**Maasin**	**2.11**	**206**	*e*P		**Pn**	**21 22 40.2**	**+2.8**
MMPH	**Masbate**	**2.14**	**279**	⇑*e*P		**Pn**	**21 22 37.4**	**-0.4**
MMPH					*e*S	**Sn**	**21 23 03.2**	**0.0**
PVCP	**Virac**	**2.22**	**314**	*e*P		**Pn**	**21 22 36.1**	**-2.8**
BUTP	**Butuan**	**3.06**	**183**	*e*P		**Pn**	**21 22 52.3**	**+1.9**
AUQP	**San Andres**	**3.30**	**293**	*e*P		**Pn**	**21 22 54.8**	**+1.1**
GUIM	**Jordan**	**3.44**	**246**	*e*P		**Pn**	**21 22 55.4**	**-0.3**
OTRP	**Odiongan**	**3.70**	**275**	*e*P		**Pn**	**21 22 59.5**	**+0.3**
CGP	**Cagayan de Oro**	**3.73**	**197**	⇓*e*P		**Pn**	**21 23 00.4**	**+0.8**
CGP					*e*S	**Sn**	**21 23 49.0**	**+6.7**
GQP	**Guinayangan**	**3.75**	**300**	*e*P		**Pn**	**21 22 55.6**	**-4.3**
BUKP	**Musuan**	**4.20**	**190**	*e*P		**Pn**	**21 23 06.8**	**+0.7**
PAGZ	**Pagadian**	**4.80**	**210**	*e*P		**Pn**	**21 23 15.2**	**+0.9**
CUYO	**Cuyo Island**	**4.83**	**256**	*e*P		**Pn**	**21 23 15.0**	**+0.3**
DMPH	**Davao City--Mi**	**4.94**	**183**	⇓*i*P		Px	21 23 28.1	
DAV	**Davao City (W)**	**4.95**	**182**	Pn		**Pn**	**21 23 16.5**	**+0.2**
TGY	**Tagaytay City**	**5.15**	**294**	Pn		**Pn**	**21 23 20.4**	**+1.3**
baz=58,slow=21,SNR=2.6								
BUSP	**Coron**	**5.47**	**270**	*e*P		**Pn**	**21 23 24.1**	**+0.5**
BALP	**Baler**	**5.50**	**312**	*e*P		**Pn**	**21 23 23.2**	**-0.7**
LUBP	**Lubang**	**5.66**	**288**	*e*P		**Pn**	**21 23 28.5**	**+2.4**
CAUP	**Cauayan**	**6.20**	**322**	*e*P		**Pn**	**21 23 32.0**	**-1.5**
APYP	**Conner**	**7.26**	**323**	*e*P		**Pn**	**21 23 46.6**	**-1.4**
QIZ	**Qiongzhong**	**16.86**	**296**	P		**Pn**	**21 25 58.8**	**+1.7**
QIZ					S	**S**	**21 29 04.0**	**-7.9**
QIZ					pmax	pmax		
comp=Z,9.0nm,1.3s								
QIZ					pmax	pmax		
comp=Z,310nm,14.5s								
QIZ					LR	LR		
comp=N,500nm,21.1s								
QIZ					LR	LR		
comp=E,150nm,23.8s								
QIZ					LR	LR		
comp=Z,1μm,17.1s								
KAPI	**Kappang**	**17.98**	**200**	P		**Pn**	**21 26 12.5**	**+1.5**
comp=Z,0.7nm,0.3s,baz=14,slow=12,SNR=4.8								
KSM	**Kuching**	**18.60**	**237**	*e*P		**Pn**	**21 26 16.2**	**-2.4**
comp=Z,15nm,0.9s								
GUMO	**Guam**	**18.66**	**83**	P		**Pn**	**21 26 18.4**	**-0.9**
CBIJ	**Chichi jima**	**21.47**	**43**	LR		LR	21 33 23.8	
comp=Z,164nm,18.1s,MS3.5,baz=118,slow=32								
ENH	**Enshi**	**23.61**	**323**	*e*P		**P**	**21 27 10.4**	**-0.7**
comp=Z,53nm,1.6s,mb4.7								
KSRS	**Korea Array**	**25.37**	**4**	P		**P**	**21 27 27.5**	**+0.5**
comp=Z,3.6nm,0.9s,mb3.9,baz=183,slow=11,SNR=13								
KSRS					LR	LR	21 37 07.5	
comp=Z,189nm,18.8s,MS3.6,baz=49,slow=36								
KMI	**Kunming**	**25.37**	**304**	P		**P**	**21 27 27.0**	**-0.2**
KMI					S	**S**	**21 31 49.8**	**-0.5**
KMI					pmax	pmax		
comp=Z,5.0nm,1.3s,mb3.9								
KMI					pmax	pmax		
comp=Z,150nm,4.8s								
KMI					LR	LR		
comp=N,410nm,14.6s,MS4.3								
KMI					LR	LR		
comp=E,520nm,14.0s,MS4.3								
KMI					LR	LR		
comp=Z,540nm,15.8s,MS4.2								
KAKA	**Kakadu**	**25.46**	**165**	*e*P		**P**	**21 27 26.8**	**-1.2**
comp=Z,13nm,0.6s,mb4.6								
KAKA	**Kakadu**	**25.46**	**165**	*e*P		**P**	**21 27 26.8**	**-1.2**
comp=Z,128nm,1.1s,mb5.4								
KULM	**Kulim**	**25.73**	**257**	*e*P		**P**	**21 27 30.9**	**+0.3**
CM31	**Chiang Mai Arr**	**26.66**	**287**	*e*P		**P**	**21 27 39.3**	**+0.5**
CMAR	**Chiang Mai Arr**	**26.66**	**287**	P		**P**	**21 27 37.8**	**-1.0**
comp=Z,2.5nm,0.7s,mb3.8,baz=93,slow=7.4,SNR=11								
CMAR					LR	LR	21 38 47.0	
comp=Z,261nm,19.0s,MS3.8,baz=150,slow=38								
CHTO	**Chiang Mai**	**26.72**	**288**	*e*P		**P**	**21 27 39.6**	**+0.2**
XAN	**Xi'an**	**26.76**	**328**	P		**P**	**21 27 40.5**	**+0.9**
XAN					pP	pP	21 27 48.0	-4.5
XAN					pmax	pmax		
comp=Z,2.0nm,1.6s								
PSI	**Prapat**	**28.15**	**253**	LR		LR	21 40 01.1	
comp=Z,611nm,18.6s,MS4.2,baz=272,slow=38								
FITZ	**Fitzroy Crossi**	**29.96**	**180**	P		**P**	**21 28 07.6**	**-0.6**
comp=Z,5.0nm,0.7s,mb4.4,baz=23,slow=7.8,SNR=8.4								
FITZ	**Fitzroy Crossi**	**29.96**	**180**	*e*P		**P**	**21 28 07.8**	**-0.4**
comp=Z,5.4nm,0.8s,mb4.3								
LZH	**Lanzhou**	**31.07**	**324**	*e*P		**P**	**21 28 17.5**	**-0.4**
LZH					pmax	pmax		
comp=Z,22nm,1.4s,mb4.8								
LZH					pmax	pmax		
comp=Z,130nm,5.5s								
HHC	**Hu-ho-hao-te**	**31.30**	**339**	*e*P		**P**	**21 28 21.0**	**+1.1**
HHC					pP	pP	21 28 36.0	+3.1
HHC					sP	sP	21 28 43.0	+4.1
HHC					PP	PP	21 29 26.0	-5.3
HHC					PcP	PcP	21 31 14.0	+0.9
HHC					S	**S**	**21 33 23.8**	**+0.6**
HHC					sS	sS	21 33 48.3	+3.1
HHC					ScP	ScP	21 34 50.3	-1.9
HHC					PcS	PcS	21 34 58.0	+0.7
HHC					SS	SS	21 35 14.3	-24
HHC					ScS	ScS	21 38 46.3	-3.2
HHC					pmax	pmax		
comp=Z,7.0nm,0.9s,mb4.5								
HHC					pmax	pmax		
comp=Z,100nm,5.3s								
HHC					LR	LR		
comp=N,200nm,16.5s,MS4.0								
HHC					LR	LR		
comp=E,170nm,13.7s,MS4.0								
HHC					LR	LR		
comp=Z,210nm,14.9s,MS3.9								
MDJ	**Mudanjiang**	**32.62**	**5**	*e*P		**P**	**21 28 31.4**	**0.0**
WRAB	**Tennant Creek**	**32.88**	**165**	*e*P		**P**	**21 28 32.8**	**-1.1**
WRAB					pmax	pmax		
comp=Z,2.0nm,0.7s,mb4.2								
WRAB	**Tennant Creek**	**32.88**	**165**	*e*P		**P**	**21 28 32.8**	**-1.0**
comp=Z,2.4nm,0.7s,mb4.2								
WRA	**Warramunga Arr**	**32.88**	**165**	P		**P**	**21 28 32.0**	**-1.9**
comp=Z,3.3nm,1.0s,mb4.2,baz=344,slow=9.2,SNR=7.9								
WRA					PcP	PcP	21 31 18.5	+0.7
comp=Z,2.7nm,0.9s,baz=344,slow=3.1,SNR=6.8								
MBWA	**Marble Bar**	**33.53**	**190**	P		**P**	**21 28 39.1**	**-0.5**
GTA	**Gaotai**	**35.67**	**324**	*e*P		**P**	**21 28 58.8**	**+0.9**
GTA					pP	pP	21 29 07.3	-3.7
GTA					sP	sP	21 29 11.0	-6.0
GTA					pmax	pmax		
comp=Z,7.0nm,2.2s,mb4.2								
GTA					pmax	pmax		
comp=Z,140nm,7.8s								
GTA					LR	LR		
comp=N,240nm,17.4s,MS4.2								
GTA					LR	LR		
comp=E,240nm,17.4s,MS4.2								
GTA					LR	LR		
comp=Z,280nm,16.8s,MS4.1								
ASAR	**Alice Springs**	**36.37**	**167**	P		**P**	**21 29 03.4**	**-0.6**
comp=Z,1.1nm,0.5s,mb4.1,baz=350,slow=7.6,SNR=23								
ASAR					PP	PP	21 30 32.5	+4.9
comp=Z,2.1nm,0.9s,baz=3.3,slow=11,SNR=5.5								
ASAR					PcP	Pc

TIXI Tiksi 59.59 1 *e*P **P 21 32 03.0 +0.2**
comp=Z,6.9nm,1.1s,mb4.6
BVAR Borovoye Array 59.95 325 P **P 21 32 05.5 0.0**
comp=Z,4.6nm,0.9s,mb4.5,baz=116,slow=10,SNR=16
BRVK Borovoye 60.02 325 *ce*P **P 21 32 07.1 +1.1**
BRVK pmax pmax
comp=Z,16nm,1.2s,mb4.9
BRVK Borovoye 60.02 325 *e*P **P 21 32 06.0 0.0**
comp=Z,9.7nm,0.8s,mb4.9
BRVK PcP PcP 21 32 47.2 -4.4
BILL Bilibino 61.83 16⇓ *e*P **P 21 32 19.1 +1.1**
BILL pmax pmax
comp=Z,10.0nm,1.6s,mb4.7
BILL Bilibino 61.83 16 *e*P **P 21 32 18.3 +0.2**
SVE Sverdlovsk 66.47 327 *e*P **P 21 32 49.1 +0.5**
SVE *e* 21 35 24.4
SVE *e*PPP 21 36 55.6
SVE *e*SS SS 21 45 51.2 -1.5
SVE pmax pmax
comp=Z,27nm,1.6s,mb5.0
SVE MLR MLR
comp=Z,221nm,16.0s,MS4.5
ARU Arti 67.50 326 *d i*P **P 21 32 56.2 +1.1**
ARU *e* 21 35 19.3
ARU PPP 21 36 59.4
ARU S S 21 41 54.3 +6.7
ARU SS SS 21 46 17.1 +8.6
ARU pmax pmax
comp=Z,12nm,1.7s,mb4.7
ARU Arti 67.50 326 *e*P **P 21 32 54.3 -0.8**
comp=Z,4.4nm,0.6s,mb4.7
GNI Garni 75.53 309 P **P 21 33 46.5 +2.6**
comp=Z,1.1nm,0.3s,mb4.2,baz=308,slow=22,SNR=2.8
GNI LR LR 22 09 49.1
comp=Z,78nm,21.3s,MS4.0,baz=283,slow=38
GNI Garni 75.53 309 *e*P **P 21 33 45.6 +1.7**
GNI pmax pmax
comp=Z,13nm,1.7s
ZEI Tsey 76.00 311 *e*P **P 21 33 46.5 0.0**
ZEI pmax pmax
comp=Z,5.0nm,0.4s,mb4.8
BPAW Bear Paw Mtn. 76.29 27 *e*P **P 21 33 48.3 +0.6**
comp=Z,17nm,1.2s,mb4.8
KIV Kislovodsk 76.81 313 *e*P **P 21 33 50.9 -0.2**
KIV pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
KIV MLR MLR
comp=Z,161nm,19.0s,MS4.4
KIV Kislovodsk 76.81 313 *e*P **P 21 33 51.0 -0.1**
comp=Z,4.3nm,0.8s,mb4.4
MCK McKinley 77.20 27 *e*P **P 21 33 53.7 +0.8**
MCK pmax pmax
comp=Z,13nm,1.1s,mb4.8
MCK McKinley 77.20 27 *e*P **P 21 33 53.6 +0.8**
comp=Z,13nm,1.1s,mb4.8
OBN Obninsk 79.79 324⇑ *i*P **P 21 34 08.1 +0.8**
OBN pmax pmax
comp=Z,22nm,1.6s,mb4.8
OBN Obninsk 79.79 324 P **P 21 34 07.4 +0.1**
JOF Joensuu 81.41 333 *ep* **P 21 34 15.5 -0.3**
comp=Z,4.3nm,0.5s,mb4.6
ARCES ARCESS Array B 82.38 340 P **P 21 34 20.6 -0.1**
comp=Z,9.7nm,0.9s,mb4.8,baz=79,slow=6.0,SNR=30
ARE0 ARCESS Array S 82.38 340 *e*P **P 21 34 21.1 +0.3**
ASF Jabal al Asfar 82.77 301 LR LR 22 14 57.8
comp=Z,53nm,18.2s,MS3.9,baz=103,slow=38
INK Inuvik 82.82 22 *e*P **P 21 34 23.2 +0.1**
KAF Kangasniemi 83.85 332 *e*P **P 21 34 21.8 -6.7**
KAF pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
KAF Kangasniemi 83.85 332 *ep* **P 21 34 21.8 -6.7**
comp=Z,9.7nm,0.9s,mb4.9
MMAI Mount Meron Ar 83.87 302 P **P 21 34 30.1 +0.9**
comp=Z,2.2nm,0.7s,mb4.4,baz=60,slow=4.9,SNR=3.3
FINES FINESS Array B 84.11 332 P **P 21 34 30.5 +0.6**
comp=Z,6.9nm,0.8s,mb4.9,baz=58,slow=5.5,SNR=13
FINES LR LR 22 14 59.6
comp=Z,134nm,18.8s,MS4.3,baz=320,slow=38
EIL Elat 84.86 299 LR LR 22 17 42.7
comp=Z,94nm,18.2s,MS4.2,baz=274,slow=39
AKASG Malin Array Be 84.90 321 P **P 21 34 34.5 +0.4**
comp=Z,0.8nm,0.4s,mb4.2,baz=64,slow=4.5,SNR=20
KIEV Kiev 84.91 321 *e*P **P 21 34 33.9 -0.2**
KIEV pmax pmax
comp=Z,15nm,1.4s,mb4.9
KIEV Kiev 84.91 321 *e*P **P 21 34 33.9 -0.2**
comp=Z,15nm,1.4s,mb4.9
CSS Prodhromos 85.19 305 *e*P **P 21 34 35.2 -0.7**
comp=Z,11nm,0.8s,mb5.0
PPT Papeete 88.56 108 LR LR 22 07 16.7
comp=Z,142nm,19.4s,MS4.4,baz=345,slow=31
NB2 NORSAR Subarra 90.97 334 P **P 21 35 02.4 -0.5**
comp=Z,2.5nm,1.1s,mb4.5,baz=69,slow=4.6
NOA NORSAR Array B 90.97 334 P **P 21 35 03.2 +0.3**
comp=Z,0.6nm,0.6s,mb4.1,baz=67,slow=4.8,SNR=4.2
NOA LR LR 22 19 59.4
comp=Z,122nm,18.2s,MS4.4,baz=70,slow=38
PSZ Piszkesteto 91.54 320 *e*P **P 21 35 06.2 +0.3**
SUMG Summit 94.93 355 *e*P **P 21 35 20.8 -0.2**
TXAR Lajitas Array 117.01 48 PKP PKPdf 21 40 45.6 +1.1
comp=Z,0.3nm,0.7s,baz=48,slow=1.9,SNR=3.6
PLCA Paso Flores 148.01 156 PKPbc PKPbc 21 41 46.8 +2.1
comp=Z,5.4nm,1.0s,baz=180,slow=5.9,SNR=6.1

*ISCJB **25** 21:37:18.2±0.7, 36°.41N±0°.07×26°.93E±0°.05, h141km±7km, Error ellipse: s-maj=11.4km s-min=5.8km az=166.7*
*NEIC **25** 21:37:19.0, 36°.74N×26°.77E, h33km, MD3.2(ATH), After ATH.*
*ATH **25** 21:37:19.0, 36°.74N×26°.77E, h33km±21km, MD3.2/6*
*CSEM **25** 21:37:20.0±0.3, 36°.68N×26°.80E, h20km, MD3.2, Error ellipse: s-maj=8.4km s-min=4.7km az=169.0*
*THE **25** 21:37:21.0, 36°.71N×26°.66E, h15km±4km, Error ellipse: s-maj=5.8km s-min=1.2km az=353.0*
*HLW **25** 21:37:23.8, 35°.94N×27°.29E, h27km±12km, Md2.9, Ml2.9*
ISC 25 21:37:18.9±0.7, 36°.42N±0°.07×26°.94E±0°.05, h138km±8km, n54, σ0°87/71, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.89**	**168**	*e*Pn	**Pn**	**21 37 41.8**	**+0.2**
KARP				*e*Sn	**Sn**	21 37 58.4	-0.4
KARP	**Karpathos**	**0.89**	**168**	*e*PN	**Pn**	21 37 41.8	+0.2
KARP				*e*SN	**Sn**	21 37 58.4	-0.4
KARP	**Karpathos**	**0.89**	**168**	*e*Pn	**Pn**	21 37 41.8	+0.2
KARP				*e*Sn	**Sn**	21 37 58.4	-0.4
ARG	**Arkhangelos**	**0.98**	**102**	*e*Pn	**Pn**	21 37 42.4	+0.1
ARG	**Arkhangelos**	**0.98**	**102**	P	**Pn**	21 37 42.5	+0.2
ARG				S	**Sn**	21 38 00.3	+0.2
ARG	**Arkhangelos**	**0.98**	**102**	*e*PN	**Pn**	21 37 42.4	+0.1
ARG	**Arkhangelos**	**0.98**	**102**	*e*Pn	**Pn**	21 37 42.4	+0.1
ARG				S	**Sn**	21 38 00.3	+0.2
TURN	**Turunc**	**1.41**	**71**	*i* P	**Pn**	21 37 42.7	-3.8
ZKR	**Zakros**	**1.43**	**205**	*e*Pn	**Pn**	21 37 48.0	+1.2
ZKR	**Zakros**	**1.43**	**205**	P	**Pn**	21 37 47.9	+1.1
ZKR				S	**Sn**	21 38 09.2	+1.1
ZKR	**Zakros**	**1.43**	**205**	*e*PN	**Pn**	21 37 48.0	+1.2
ZKR	**Zakros**	**1.43**	**205**	P	**Pn**	21 37 47.9	+1.1
ZKR				S	**Sn**	21 38 09.2	+1.1
NPS	**Neapolis**	**1.58**	**223**	*e*Pn	**Pn**	21 37 48.3	-0.1
NPS	**Neapolis**	**1.58**	**223**	*e*PN	**Pn**	21 37 48.3	-0.1
NPS	**Neapolis**	**1.58**	**223**	*e*Pn	**Pn**	21 37 48.3	-0.1
LAST	**Lasithi**	**1.73**	**224**	*e*Pn	**Pn**	21 37 50.0	-0.1
LAST	**Lasithi**	**1.73**	**224**	P	**Pn**	21 37 50.0	-0.1
LAST				S	**Sn**	21 38 12.9	-1.1
LAST	**Lasithi**	**1.73**	**224**	*e*PN	**Pn**	21 37 50.0	-0.1
LAST	**Lasithi**	**1.73**	**224**	P	**Pn**	21 37 50.0	-0.1
LAST				S	**Sn**	21 38 12.9	-1.1
IDI	**Anoyia**	**2.01**	**236**	*e*Pn	**Pn**	21 37 53.0	-0.4
IDI	**Anoyia**	**2.01**	**236**	*e*PN	**Pn**	21 37 53.0	-0.4
IDI	**Anoyia**	**2.01**	**236**	*e*Pn	**Pn**	21 37 53.0	-0.4
KSL	**Kastellorizon**	**2.15**	**96**	*e*Pn	**Pn**	21 37 56.1	+1.0
KSL	**Kastellorizon**	**2.15**	**96**	*e*PN	**Pn**	21 37 56.1	+1.0
KSL	**Kastellorizon**	**2.15**	**96**	*e*Pn	**Pn**	21 37 56.1	+1.0
AKAS	**Kas**	**2.16**	**94**	*i* P	**Pn**	21 37 55.9	+0.7
AKAS	**Kas**	**2.16**	**94**	*i* P	**Pn**	21 37 55.9	+0.7
AKAS				*i* S	**Sn**	21 38 20.0	-3.1
SIVA	**Sivas**	**2.23**	**232**	P	**Pn**	21 37 56.8	+0.7
SIVA				S	**Sn**	21 38 25.2	+0.6
SIVA	**Sivas**	**2.23**	**232**	P	**Pn**	21 37 56.8	+0.7
SIVA				S	**Sn**	21 38 25.2	+0.6
GOLH	**Golhisar**	**2.25**	**68**	*i* P	**Pn**	21 37 56.5	+0.1
GOLH	**Golhisar**	**2.25**	**68**	*i* P	**Pn**	21 37 56.5	+0.2
KARN	**Karanos**	**2.66**	**248**	P	**Pn**	21 38 02.0	+0.6
KARN				S	**Sn**	21 38 32.0	-2.1
KARN	**Karanos**	**2.66**	**248**	*e*PN	**Pn**	21 38 03.0	+1.6
KARN	**Karanos**	**2.66**	**248**	P	**Pn**	21 38 02.0	+0.6
KARN	**Karanos**	**2.66**	**248**	*e*Pn	**Pn**	21 38 03.0	+1.6
KARN				S	**Sn**	21 38 32.0	-2.1
GVD	**Gavdhos**	**2.81**	**237**	P	**Pn**	21 38 04.2	+0.9
GVD				S	**Sn**	21 38 37.6	0.0
GVD	**Gavdhos**	**2.81**	**237**	P	**Pn**	21 38 04.2	+0.9
GVD				S	**Sn**	21 38 37.6	0.0
KYTH	**Kithira**	**3.15**	**269**	*e*Pn	**Pn**	21 38 07.4	-0.3
KYTH	**Kithira**	**3.15**	**269**	*e*PN	**Pn**	21 38 07.4	-0.3
KYTH	**Kithira**	**3.15**	**269**	*e*Pn	**Pn**	21 38 07.4	-0.3
VLI	**Veliai**	**3.24**	**276**	*e*Pn	**Pn**	21 38 08.1	-0.7
VLI	**Veliai**	**3.24**	**276**	*e*PN	**Pn**	21 38 08.1	-0.7
VLI	**Veliai**	**3.24**	**276**	*e*Pn	**Pn**	21 38 08.1	-0.7
ITM	**Ithomi**	**4.09**	**282**	*e*Pn	**Pn**	21 38 20.2	+0.2
ITM	**Ithomi**	**4.09**	**282**	*e*PN	**Pn**	21 38 20.2	+0.2
ITM	**Ithomi**	**4.09**	**282**	*e*Pn	**Pn**	21 38 20.2	+0.2
SLUM		**5.12**	**197**	P	**Pn**	21 38 34.1	+0.4
baz=202							
SLUM		**5.12**	**197**	P	**Pn**	21 38 34.1	+0.4
HMAT	**Matruh**	**5.31**	**179**	P	**Pn**	21 38 35.0	-1.3
baz=182							
HMAT				AMP		21 39 00.0	
comp=N,10μm,0.3s,logA/T=4.5,baz=182							
HMAT				S	**Sn**	21 39 28.9	-7.7
baz=182							
SWA2		**7.26**	**190**	P	**Pn**	21 39 02.6	+0.1
baz=194							
SWA2		**7.26**	**190**	P	**Pn**	21 39 02.6	+0.1
AMAG	**Maghara**	**7.78**	**136**	P	**Pn**	21 39 08.4	-0.9
baz=135							
HFRF	**Wahat Farafira**	**9.32**	**172**	P	**Pn**	21 39 30.2	+0.2
baz=174							
HFRF	**Wahat Farafira**	**9.32**	**172**	P	**Pn**	21 39 30.2	+0.2

*IDC **25** 21:59:41.8±0.7, 29°.00N×69°.50E, h0km, mb4.0/20, mb1 4.2/21, mb1mx4.1/28, mbtmp4.1/21, ML3.8/1, MS3.4/6, Ms1 3.4/6, ms1mx3.1/27, Error ellipse: s-maj=17.4km s-min=14.6km az=33.0*
*ISCJB **25** 21:59:41.9±0.3, 29°.10N±0°.03×69°.70E±0°.02, h10km, mb4.2/35, MS3.4/6, Error ellipse: s-maj=4.7km s-min=3.0km az=13.9*
*NEIC **25** 21:59:43.5±4.1, 29°.09N×69°.56E, h9km±25km, mb4.5/8, Error ellipse: s-maj=9.7km s-min=5.7km az=197.0*
*BJI **25** 21:59:45.6, 29°.37N×69°.84E, h8km, mB4.6/4, mb4.5/7, Ms3.9/3, Ms7 3.6/2*
*MOS **25** 21:59:45.3±1.0, 29°.07N×69°.60E, h33km, mb4.5/10, Error ellipse: s-maj=10.8km s-min=6.8km az=91.9*
ISC 25 21:59:44.0±0.3, 29°.10N±0°.03×69°.58E±0°.03, h10km, n107, σ1°12/124, mb4.2/35, MS3.4/6, 1C-2D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AJM	**Ajmer**	**5.19**	**119**	*e*PKP	**Pn**	**22 01 03.0**	**+1.3**
AJM				*ex*	**Sg**	22 02 31.0	+0.3
KBL	**Kabul**	**5.44**	**355**	*e*P	**Pn**	**22 01 08.0**	**+2.9**
KBL				*e*		22 02 09.2	
KBL				pmax	pmax		
comp=Z,27nm,1.0s							
KBL	**Kabul**	**5.44**	**355**	*e*Pn	**Pn**	**22 01 08.0**	**+2.8**
comp=Z,27nm,1.0s							
KBL				*e*Sn	**Sn**	22 02 09.2	+1.4
KHET	**Khetri**	**5.57**	**99**	*e*PKP	**Pn**	22 01 07.7	+0.8
KHET				*ex*	**Sn**	22 02 04.9	-6.1
THN	**Thein Dam**	**6.24**	**56**	*ex*	**Pn**	22 01 17.1	+1.0
THN				*e*S	**Sn**	22 02 27.8	+0.4
BHK	**Bhakra**	**6.35**	**67**	*ex*	**Pg**	22 01 46.0	+0.5
SONA	**Sohna**	**6.65**	**96**	*e*PKP	**Pn**	22 01 22.5	+0.8
SONA				*e*S	**Sn**	22 02 34.8	-2.7
NDI	**New Delhi**	**6.71**	**92**	*e*PKP	**Pn**	22 01 22.0	-0.6
NDI				*ex*	**Sg**	22 03 19.0	-0.3
SDNR	**Sundarnagar**	**6.82**	**68**	*e*PKP	**Pb**	22 01 36.5	-6.1
SDNR				*e*SB	**Sg**	22 03 24.5	+1.6
SMLA	**Simla**	**6.87**	**71**	*i* P	**Pn**	22 01 26.4	+1.6
SMLA				*i* S	**Sn**	22 02 43.3	+0.2
SMLA				*i* S	**Sn**	22 02 44.0	+0.8
SMLA				⇓E		22 02 47.9	
comp=E,831nm,0.2s							
SMLA				⇓E		22 02 48.6	
comp=N,872nm,0.6s							
BISR	**Bishrakh**	**6.91**	**93**	*ex*	**Pn**	**22 01 27.5**	**+2.1**
DDI	**Dehra Dun**	**7.47**	**79**	*ex*	**Pn**	**22 01 40.5**	**+7.5**
DDI				*ex*	**Sg**	22 03 49.0	+5.2
AGRA	**Agra**	**7.61**	**102**	*e*PKP	**Pn**	22 01 36.8	+1.8
AGRA				*ex*	**Sg**	22 03 47.7	-0.7
KLP	**Kalpa**	**7.88**	**70**	*e*PKP	**Pn**	22 01 41.7	+3.1
KLP				*e*S	**Sn**	22 03 06.3	-1.4
KLP				AML	AML	22 04 32.9	
comp=N,244nm,0.7s							
KLP				AML	AML	22 04 43.2	
comp=E,202nm,0.6s							
JOSI	**Joshimath**	**8.79**	**78**	*ex*	x	22 02 05.3	
JOSI				*e*S	**Sn**	**22 03 26.2**	**-3.9**
JOSI				AML	AML	22 04 47.0	
comp=N,373nm,0.7s							
JOSI				AML	AML	22 05 19.9	
comp=E,246nm,0.6s							
PTH	**Pithoragarh**	**9.29**	**85**	*ex*	x	22 02 08.2	
NGP	**Nagpur**	**11.67**	**131**	*ex*	x	22 05 16.2	
NGP				*ex*	x	22 05 44.7	
AML	**Almayashu**	**13.42**	**13**	P	**Pn**	**22 02 54.9**	**+0.5**
SNR=12							
AML	**Almayashu**	**13.42**	**13**	*e*Pn	**Pn**	**22 02 53.7**	**-0.8**
comp=E,22nm,0.5s							
AML				*e*Sn	**Sn**	**22 05 17.0**	**-6.7**
UCH	**Uchtor**	**13.69**	**16**	P	**Pn**	**22 02 58.0**	**-0.1**
SNR=13							
UCH	**Uchtor**	**13.69**	**16**	*e*Pn	**Pn**	**22 02 57.8**	**-0.3**
KZA	**Kyzart**	**13.74**	**18**	P	**Pn**	**22 02 59.0**	**+0.3**
SNR=21							
DMN	**Daman**	**13.75**	**92**	*e*P	**Pn**	**22 02 57.1**	**-2.0**
comp=E,32nm,0.7s							
KKN	**Kakani**	**13.88**	**92**	*e*P	**Pn**	**22 02 57.7**	**-3.1**
EKS2	**Erkin-Say**	**13.95**	**13**	P	**Pn**	**22 03 02.1**	**+0.5**
SNR=8.5							
EKS2	**Erkin-Say**	**13.95**	**13**	*e*Pn	**Pn**	**22 03 01.8**	**+0.1**
comp=E,13nm,0.9s							
EKS2				*e*Sn	**Sn**	**22 05 33.8**	**-2.7**
PKIN	**Phulchoki**	**14.01**	**92**	*e*P	**Pn**	**22 02 59.3**	**-3.3**
comp=E,23nm,0.7s							
PKI	**Pulchoki**	**14.03**	**92**	*e*P	**Pn**	**22 02 59.4**	**-3.4**
comp=E,24nm,0.6s							
AAK	**Ala-Archa**	**14.07**	**15**	P	**Pn**	**22 03 03.6**	**+0.2**
SNR=7.9							
AAK	**Ala-Archa**	**14.07**	**15**	Pn	**Pn**	**22 03 03.4**	**+0.1**
comp=E,0.0nm,0.3s,baz=169,slow=4.3,SNR=10							
AAK				Sn	**Sn**	**22 05 38.5**	**-1.1**
comp=E,0.0nm,0.3s,baz=132,slow=22,SNR=4.2							
AAK				LR	LR	22 09 37.0	
comp=E,125nm,20.6s,baz=200,slow=42							
AAK	**Ala-Archa**	**14.07**	**15**	P	**Pn**	**22 03 03.4**	**+0.1**
AAK						22 05 38.5	
AAK	**Ala-Archa**	**14.07**	**15**	Pn	**Pn**	**22 03 03.4**	**+0.1**
AAK				Sn	**Sn**	**22 05 38.5**	**-1.1**
AAK				LR	LR	22 09 37.0	
KBK	**Karagaybulak**	**14.20**	**16**	P	**Pn**	**22 03 08.0**	**+2.9**
SNR=8.6							
GUN	**Gumba**	**14.38**	**91**	*e*P	**Pn**	**22 03 04.2**	**-3.5**
comp=E,167nm,1.1s							
CHMS	**Chumysh**	**14.48**	**15**	P	**Pn**	**22 03 08.1**	**-0.7**
SNR=19							
TKM2	**Tokmak 2**	**14.62**	**18**	P	**Pn**	**22 03 10.4**	**-0.4**
SNR=18							
TKM2	**Tokmak 2**	**14.62**	**18**	*e*P	**Pn**	**22 03 10.3**	**-0.4**
TKM2				*e*		22 05 50.6	
TKM2				pmax	pmax		
comp=Z,24nm,0.9s							
TKM2	**Tokmak 2**	**14.62**	**18**	*e*Pn	**Pn**	**22 03 10.3**	**-0.4**
comp=Z,24nm,0.9s							
TKM2				*e*Sn	**Sn**	**22 05 50.6**	**-2.2**
JIRN	**Jiri**	**14.69**	**92**	*e*P	**Pn**	**22 03 08.0**	**-3.9**
RAMN	**Ramite**	**15.18**	**94**	*e*P	**Pn**	**22 03 15.3**	**-3.2**
ODAN	**Odare**	**15.89**	**94**	*e*P	**Pn**	**22 03 24.0**	**-3.8**
TAPN	**Taplejung**	**16.08**	**92**	*e*P	**Pn**	**22 03 25.3**	**-4.9**
SHL	**Shillong**	**20.12**	**95**	*e*PKP	**P**	**22 04 20.5**	**+2.4**
SHL				*ex*	x	22 10 46.5	
MK31	**Makanchi Array**	**20.26**	**26**	*e*P	**P**	**22 04 19.8**	**+0.4**
MKAR	**Makanchi Array**	**20.26**	**26**	P	**P**	**22 04 19.5**	**+0.1**
comp=Z,3.1nm,0.5s,baz=203,slow=7.9,SNR=20							
KURK	**Kurchatov**	**22.64**	**15**	P	**P**	**22 04 43.4**	**-1.5**
comp=Z,5.5nm,0.9s,mb4.0,baz=207,slow=9.6,SNR=29							
KURK	**Kurchatov**	**22.64**	**15**	P	**P**	**22 04 43.4**	**-1.5**
KURK				*e*Pn	**P**	**22 04 45.0**	**0.0**
AKTK	**Aktyubinsk**	**23.03**	**341**	P	**P**	**22 04 49.3**	**+0.2**
AKTK				LR	LR	22 15 34.5	
AKTO	**Aktyubinsk**	**23.03**	**341**	P	**P**	**22 04 49.3**	**+0.2**
comp=Z,1.5nm,0.7s,mb3.5,baz=150,slow=12,SNR=5.8							
AKTO				LR	LR	22 15 34.5	
comp=Z,124nm,18.0s,MS3.4,baz=338,slow=41							
GNI	**Garni**	**23.15**	**305**	P	**P**	**22 04 51.3**	**+0.9**
comp=Z,1.3nm,0.3s,mb3.8,baz=52,slow=14,SNR=7.1							
GNI	**Garni**	**23.15**	**305**	P	**P**	**22 04 51.3**	**+0.8**
GNI				pmax	pmax		
comp=Z,1.0nm,0.3s							
GNI	**Garni**	**23.15**	**305**	*e*P	**P**	**22 04 51.2**	**+0.7**
BVAR	**Borovoye Array**	**23.91**	**1**	P	**P**	**22 04 58.0**	**+0.2**
comp=Z,4.3nm,0.6s,mb4.0,baz=163,slow=11,SNR=21							
BRVK	**Borovoye**	**23.94**	**1**	*e*P	**P**	**22 04 58.6**	**+0.5**
BRVK				pmax	pmax		
comp=Z,15nm,1.1s,mb4.3							
BRVK	**Borovoye**	**23.94**	**1**	*e*P	**P**	**22 04 58.6**	**+0.5**
comp=Z,15nm,1.1s,mb4.3							
ZEI	**Tsey**	**24.75**	**310**	*e*P	**P**	**22 05 06.8**	**+1.2**
ZEI				pmax	pmax		
comp=Z,6.0nm,0.4s,mb4.5							
GTA	**Gaotai**	**26.91**	**60**	*e*P	**P**	**22 05 28.0**	**+2.8**
GTA				pmax	pmax		
comp=Z,3.0nm,0.9s,mb3.8							
ZAA0	**Zalesovo Array**	**27.20**	**20**	*e*P	**P**	**22 05 27.7**	**+0.1**
ZALV	**Zalesovo Beam**	**27.20**	**20**	P	**P**	**22 05 28.2**	**+0.6**
comp=Z,1.1nm,0.5s,mb3.7,baz=217,slow=9.1,SNR=6.0							
ZALV				LR	LR	22 16 44.0	
comp=Z,20nm,21.8s,MS2.6,baz=49,slow=37							
ARU	**Arti**	**28.41**	**347**	*e*P	**P**	**22 05 38.0**	**-0.5**
ARU				pmax	pmax		
comp=Z,4.0nm,1.1s,mb4.0							
ARU	**Arti**	**28.41**	**347**	*e*P	**P**	**22 05 38.0**	**-0.5**
comp=Z,4.2nm,1.1s,mb4.0							
CHTO	**Chiang Mai**	**28.65**	**104**	P	**P**	**22 05 41.0**	**0.0**
CMAR	**Chiang Mai Arr**	**28.81**	**105**	P	**P**	**22 05 42.1**	**-0.3**
comp=Z,0.7nm,0.8s,mb3.5,baz=304,slow=8.1,SNR=4.8							
CMAR				LR	LR	22 17 40.3	
comp=Z,49nm,20.4s,MS3.1,baz=180,slow=37							
ZAK	**Zakamensk**	**33.09**	**41**	*e*P	**P**	**22 06 21.2**	**+1.4**
SONM	**Songino Array**	**33.94**	**46**	P	**P**	**22 06 28.8**	**+1.5**
comp=Z,2.5nm,0.8s,mb4.2,baz=248,slow=8.7,SNR=17							
ULN	**Ulaanbaatar**	**34.37**	**47**	*e*P	**P**	**22 06 31.7**	**+0.7**
ULN				pmax	pmax		
comp=Z,5.0nm,1.1s,mb4.4							
ULN	**Ulaanbaatar**	**34.37**	**47**	*e*P	**P**	**22 06 31.7**	**+0.7**
comp=Z,4.8nm,1.1s,mb4.3							
ENH	**Enshi**	**34.57**	**78**	P	**P**	**22 06 33.2**	**+0.2**
OBN	**Obninsk**	**35.15**	**327**⇑ *i*P	**P**	**22 06 38.7**	**+1.1**
OBN				pmax	pmax		
comp=Z,9.0nm,0.9s,mb4.7							
OBN	**Obninsk**	**35.15**	**327**	*e*P	**P**	**22 06 36.9**	**-0.7**
HHC	**Hu-ho-hao-te**	**36.02**	**60**	*e*P	**P**	**22 06 43.3**	**-2.1**
HHC				pP	pP	22 06 47.8	-0.6
HHC				sP	sP	22 06 50.3	+0.6
HHC				PP	PP	22 08 05.5	-1.7
HHC				PcP	PcP	22 09 10.5	-1.2
HHC				S	**S**	**22 12 21.8**	**-2.4**
HHC				sS	sS	22 12 28.3	-1.0
HHC				ScP	ScP	22 12 54.8	-3.3
HHC				PcS	PcS	22 12 56.3	-2.8
HHC				SS	SS	22 14 43.5	-18
HHC				ScS	ScS	22 16 58.5	-5.0
HHC				pmax	pmax		
comp=Z,6.0nm,0.7s,mb4.6							
HHC				pmax	pmax		
comp=Z,58nm,5.0s							
HHC				LR	LR		
comp=N,49nm,14.3s,MS3.8							
HHC				LR	LR		
comp=E,93nm,14.3s,MS3.8							
HHC				LR	LR		
comp=Z,73nm,15.5s,MS3.6							
AKASG	**Malin Array Be**	**37.11**	**317**	P	**P**	**22 06 54.4**	**-0.1**
comp=Z,3.5nm,0.8s,mb4.3,baz=101,slow=7.0,SNR=10							
IDID	**Didziasalis**	**40.20**	**323**	*e*P	**P**	**22 07 20.6**	**+0.2**
IDID				AMB	AMB	22 07 22.0	
comp=Z,3.9nm,0.9s,mb4.1							
IIGN	**Ignalina**	**40.48**	**323**	*e*P	**P**	**22 07 22.9**	**+0.2**
IIGN				AMB	AMB	22 07 24.5	
comp=Z,4.8nm,0.8s,mb4.3							
ISAL	**Salakas**	**40.62**	**323**	*e*P	**P**	**22 07 24.0**	**+0.2**
ISAL				AMB	AMB	22 07 25.6	
comp=Z,4.4nm,1.1s,mb4.0							
IZAR	**Zarasai**	**40.62**	**323**	*e*P	**P**	**22 07 23.8**	**0.0**
IZAR				AMB	AMB	22 07 25.7	
comp=Z,4.3nm,0.9s,mb4.1							
KWP	**Kalwaria Pacla**	**40.83**	**313**	*e*P	**P**	**22 07 25.5**	**-0.2**
PSZ	**Piszkesteto**	**42.36**	**310**	*e*P	**P**	**22 07 37.5**	**-0.7**
FINES	**FINESS Array B**	**43.17**	**331**	P	**P**	**22 07 44.0**	**-0.6**
comp=Z,3.6nm,0.9s,mb4.1,baz=141,slow=12,SNR=4.8							
FINES				LR	LR	22 28 30.1	
comp=Z,127nm,18.2s,MS3.9,baz=136,slow=40							
AQU	**L'Aquila**	**46.70**	**302**	*e*P	**P**	**22 08 12.8**	**-0.2**
KEV	**Kevo**	**47.32**	**341**	*e*P	**P**	**22 08 16.9**	**-0.5**
ARCES	**ARCESS Array B**	**47.62**	**341**	P	**P**	**22 08 20.1**	**+0.4**
comp=Z,4.8nm,0.6s,mb4.7,baz=132,slow=8.1,SNR=35							
ARCES				LR	LR	22 30 30.4	
comp=Z,71nm,19.9s,MS3.6,baz=83,slow=39							
KSRS	**Korea Array**	**48.81**	**64**	P	**P**	**22 08 30.1**	**+0.6**
comp=Z,2.1nm,0.8s,mb4.2,baz=263,slow=7.4,SNR=9.2							

ellipse: s-maj=20.5km s-min=6.8km az=94.0

ISC 25 22:05:28.3±4.2, 3°40'S±0°09'×148°7'E±0°2, h30km±30km, n31, σ0°78/26, mb4.2/10, MS3.7/9, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**12.65**	**119**	LR	LR	22 11 28.7	
	comp=Z,92nm,18.4s,baz=106,slow=29						
CTA	**Charters Tower**	**16.77**	**188**	Pn	**Pn**	**22 09 21.3**	**+0.2**
	0.2nm,0.3s,baz=0.0,slow=12,SNR=2.2						
CTA				LR	LR	22 15 35.0	
	comp=Z,207nm,20.0s,baz=207,slow=36						
CTAO	**Charters Tower**	**16.77**	**188**	Pn	**Pn**	**22 09 20.1**	**-1.0**
GUMO	**Guam**	**17.31**	**347**	LR	LR	22 15 13.1	
	comp=Z,104nm,18.5s,slow=34						
KAKA	**Kakadu**	**18.58**	**239**	*e*P	**Pn**	**22 09 42.3**	**-1.3**
	20nm,0.8s						
KAKA	**Kakadu**	**18.58**	**239**	*e*P	**Pn**	**22 09 42.5**	**-1.1**
	84nm,1.2s						
WRAB	**Tennant Creek**	**21.61**	**219**	*e*P	**P**	**22 10 16.4**	**+0.2**
	12nm,0.8s,mb4.4						
WRA	**Warramunga Arr**	**21.62**	**219**	P	**P**	**22 10 15.7**	**-0.6**
	6.5nm,1.2s,mb4.0,baz=41,slow=11,SNR=13						
ASAR	**Alice Springs**	**24.73**	**214**	P	**P**	**22 10 47.4**	**+0.1**
	1.9nm,0.7s,mb3.7,baz=46,slow=7.7,SNR=16						
FITZ	**Fitzroy Crossi**	**26.93**	**235**	*e*P	**P**	**22 11 08.6**	**+1.3**
	16nm,0.8s,mb4.6						
FITZ	**Fitzroy Crossi**	**26.93**	**235**	P	**P**	**22 11 08.8**	**+1.5**
	9.2nm,0.8s,mb4.4,baz=63,slow=12,SNR=10						
FITZ				LR	LR	22 22 15.5	
	comp=Z,285nm,21.1s,MS3.8,baz=59,slow=37						
FITZ	**Fitzroy Crossi**	**26.93**	**235**	P	**P**	**22 11 08.8**	**+1.5**
FITZ				LR	LR	22 22 15.5	
STKA	**Stephens Creek**	**29.11**	**193**	LR	LR	22 23 59.8	
	comp=Z,196nm,20.2s,MS3.7,baz=16,slow=38						
NACB	**Ninganchiao**	**38.06**	**317**	P	**P**	**22 12 44.5**	**+0.1**
MJAR	**Matsushiro Arr**	**40.93**	**347**	LR	LR	22 28 02.0	
	comp=Z,72nm,21.7s,MS3.5,baz=210,slow=33						
MAJO	**Matsushiro**	**40.93**	**347**	P	**P**	**22 13 07.3**	**-0.9**
CMAR	**Chiang Mai Arr**	**53.61**	**296**	P	**P**	**22 14 48.2**	**+0.9**
	0.7nm,0.3s,mb4.0,baz=116,slow=6.1,SNR=4.8						
CMAR				LR	LR	22 40 10.9	
	comp=Z,40nm,18.2s,MS3.5,baz=205,slow=39						
HHC	**Hu-ho-hao-te**	**55.59**	**326**	*e*P	**P**	**22 15 01.0**	**-0.3**
HHC				pP	pP	22 15 11.3	+0.9
HHC				sP	sP	22 15 15.3	+1.4
HHC				PcP	PcP	22 15 59.8	-1.0
HHC				PP	PP	22 17 07.3	+1.6
HHC				ScP	ScP	22 19 55.3	-2.6
HHC				PcS	PcS	22 19 59.5	-1.4
HHC				S	**S**	**22 22 44.0**	**-1.2**
HHC				ScS	ScS	22 24 44.8	-3.7
HHC				SS	SS	22 26 29.5	-1.3
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
HHC				pmax	pmax		
	comp=Z,64nm,5.0s						
HHC				LR	LR		
	comp=N,130nm,16.6s,MS4.1						
HHC				LR	LR		
	comp=E,76nm,17.8s,MS4.1						
HHC				LR	LR		
	comp=Z,130nm,19.0s,MS4.0						
PETK	**Petropavlovsk-**	**56.80**	**6**	LR	LR	22 34 50.4	
	comp=Z,56nm,21.1s,MS3.6,baz=47,slow=31						
HIA	**Hailar**	**58.16**	**338**	*e*P	**P**	**22 15 19.3**	**0.0**
ULN	**Ulaanbaatar**	**62.71**	**330**	*e*P	**P**	**22 15 49.8**	**-0.7**
SONM	**Songino Array**	**63.02**	**329**	P	**P**	**22 15 54.5**	**+2.0**
	comp=Z,1.3nm,1.1s,mb4.0,baz=127,slow=4.5,SNR=5.4						
SONM				LR	LR	22 45 22.5	
	comp=Z,49nm,18.5s,MS3.7,baz=61,slow=38						
TLY	**Talaya**	**66.87**	**331**	P	**P**	**22 16 16.6**	**-0.9**
	comp=Z,2.2nm,0.6s,mb4.4						
MK31	**Makanchi Array**	**76.62**	**320**	*e*P	**P**	**22 17 16.6**	**+0.3**
MKAR	**Makanchi Array**	**76.62**	**320**	P	**P**	**22 17 15.9**	**-0.4**
	comp=Z,1.4nm,1.1s,mb3.8,baz=90,slow=4.3,SNR=6.4						
MKAR				LR	LR	22 51 36.5	
	comp=Z,42nm,18.3s,MS3.8,baz=267,slow=36						
ZALV	**Zalesovo Beam**	**77.76**	**327**	LR	LR	22 48 40.2	
	comp=Z,40nm,20.5s,MS3.7,baz=80,slow=33						
KURK	**Kurchatov**	**80.19**	**323**	P	**P**	**22 17 36.5**	**+0.6**
	comp=Z,0.7nm,0.8s,mb3.6,baz=104,slow=4.2,SNR=6.3						
KURK	**Kurchatov**	**80.19**	**323**	*e*P	**P**	**22 17 35.9**	**+0.1**
	comp=Z,6.7nm,1.3s,mb4.4						
UCH	**Uchtor**	**80.66**	**314**	P	**P**	**22 17 39.3**	**+0.7**
KBL	**Kabul**	**83.44**	**305**	P	**P**	**22 17 53.6**	**+0.2**
QSPA	**South Pole Qui**	**86.55**	**180**	P	**P**	**22 18 08.1**	**-0.1**

*ATH **25** 22:05:58.3, 38°72'N×22°83'E, h20km±1km, ML3.1*
*THE **25** 22:05:58.7, 38°70'N×22°81'E, h10km, ML3.6/13, Error ellipse: s-maj=0.8km s-min=0.4km az=168.0*
*NEIC **25** 22:05:58.3, 38°72'N×22°83'E, h20km, ML3.6(THE), ML3.1(ATH), After ATH.*
*CSEM **25** 22:05:58.2±0.1, 38°71'N×22°82'E, h10km, ML3.6/13, Error ellipse: s-maj=3.1km s-min=2.5km az=128.0*
*ISCJB **25** 22:05:58.3±0.4, 38°71'N±0°02×22°81'E±0°02, h11km±3km, Error ellipse: s-maj=3.2km s-min=2.9km az=147.9*

ISC 25 22:05:58.5±0.3, 38°71'N±0°02×22°81'E±0°02, h14km±2km, n72, σ0°90/114, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKR	**Lokris**	**0.16**	**112**	*e*Pb	**Pg**	**22 06 02.3**	**-0.1**
LKR				*e*Sb	**Sg**	**22 06 05.2**	**+0.1**
LKR	**Lokris**	**0.16**	**112**	P	**Pg**	**22 06 02.2**	**-0.2**
LKR				S	**Sg**	**22 06 04.9**	**-0.2**
LKR	**Lokris**	**0.16**	**112**	*e*PB	**Pg**	**22 06 02.3**	**-0.1**
LKR				*e*SB	**Sg**	**22 06 05.2**	**+0.1**
LKR	**Lokris**	**0.16**	**112**	P	**Pg**	**22 06 02.2**	**-0.2**
LKR				S	**Sg**	**22 06 04.9**	**-0.2**
LKR				*e*Sb	**Sg**	**22 06 05.2**	**+0.1**
ATAL	**Atalanti**	**0.17**	**96**	P	**Pg**	**22 06 02.3**	**-0.2**
ATAL				S	**Sg**	**22 06 05.3**	**0.0**
ATAL	**Atalanti**	**0.17**	**96**	P	**Pg**	**22 06 02.3**	**-0.2**
ATAL				S	**Sg**	**22 06 05.3**	**0.0**
DSF	**Desfina**	**0.37**	**217**	P	**Pg**	**22 06 05.7**	**-0.3**
DSF				S	**Sg**	**22 06 11.0**	**-0.1**
DSF	**Desfina**	**0.37**	**217**	P	**Pg**	**22 06 05.7**	**-0.3**
DSF				S	**Sg**	**22 06 11.0**	**-0.1**
AGG	**Agios Georgios**	**0.49**	**310**	*e*Pb	**Pb**	**22 06 08.3**	**-0.6**
AGG				*e*Sb	**Sb**	**22 06 15.7**	**-0.2**
AGG	**Agios Georgios**	**0.49**	**310**	P	**Pg**	**22 06 08.1**	**0.0**
AGG				S	**Sg**	**22 06 15.5**	**+0.8**
AGG	**Agios Georgios**	**0.49**	**310**	*e*PB	**Pb**	**22 06 08.3**	**-0.6**
AGG				*e*SB	**Sb**	**22 06 15.7**	**-0.2**
AGG	**Agios Georgios**	**0.49**	**310**	*e*Pb	**Pb**	**22 06 08.3**	**-0.6**
AGG				S	**Sg**	**22 06 15.5**	**+0.8**
KALE	**Kalithea**	**0.61**	**239**	P	**Pg**	**22 06 10.5**	**0.0**
KALE				S	**Sg**	**22 06 19.8**	**+1.1**
KALE	**Kalithea**	**0.61**	**239**	P	**Pg**	**22 06 10.5**	**0.0**
KALE				S	**Sg**	**22 06 19.8**	**+1.1**
TRIZ	**Trizonia**	**0.67**	**239**	P	**Pg**	**22 06 11.0**	**-0.6**
TRIZ				S	**Sg**	**22 06 21.1**	**+0.6**
TRIZ	**Trizonia**	**0.67**	**239**	P	**Pg**	**22 06 11.0**	**-0.6**
TRIZ				S	**Sg**	**22 06 21.1**	**+0.6**
NEO	**Neokhori**	**0.68**	**28**	*e*Pn	**Pn**	**22 06 11.8**	**-1.9**
NEO	**Neokhori**	**0.68**	**28**	*e*PN	**Pn**	**22 06 11.8**	**-1.9**
NEO	**Neokhori**	**0.68**	**28**	*e*Pn	**Pn**	**22 06 11.8**	**-1.9**
LTK	**Loutraki**	**0.70**	**170**	P	**Pg**	**22 06 11.5**	**-0.6**
LTK				S	**Sg**	**22 06 21.7**	**+0.4**
LTK	**Loutraki**	**0.70**	**170**	*e*PN	**Pn**	**22 06 12.3**	**-1.7**
LTK	**Loutraki**	**0.70**	**170**	P	**Pg**	**22 06 11.5**	**-0.6**
LTK	**Loutraki**	**0.70**	**170**	*e*Pn	**Pn**	**22 06 12.3**	**-1.7**
LTK				S	**Sg**	**22 06 21.7**	**+0.4**
XOR	**Xorichti**	**0.72**	**24**	P	**Pg**	**22 06 12.1**	**-0.4**
XOR	**Xorichti**	**0.72**	**24**	P	**Pg**	**22 06 12.1**	**-0.4**
XOR	**Xorichti**	**0.72**	**24**	P	**Pg**	**22 06 12.1**	**-0.4**
EFP	**Efpalio**	**0.76**	**248**	P	**Pg**	**22 06 13.7**	**+0.4**
EFP				S	**Sg**	**22 06 23.8**	**+0.4**
EFP	**Efpalio**	**0.76**	**248**	*e*PN	**Pn**	**22 06 13.5**	**-1.4**
EFP				*e*SN	**Sn**	**22 06 24.2**	**-2.0**
EFP	**Efpalio**	**0.76**	**248**	P	**Pg**	**22 06 13.7**	**+0.4**
EFP				S	**Sg**	**22 06 23.8**	**+0.4**
EFP				*e*Sn	**Sn**	**22 06 24.2**	**-2.0**
LAKA	**Lakka**	**0.81**	**235**	P	**Pg**	**22 06 13.8**	**-0.3**
LAKA				S	**Sg**	**22 06 25.0**	**+0.3**
LAKA	**Lakka**	**0.81**	**235**	P	**Pg**	**22 06 13.8**	**-0.3**
LAKA				S	**Sg**	**22 06 25.0**	**+0.3**
GUR	**Goura**	**0.86**	**206**	P	**Pg**	**22 06 14.2**	**-0.9**
GUR				S	**Sg**	**22 06 27.1**	**+0.8**
GUR	**Goura**	**0.86**	**206**	*e*PB	**Pb**	**22 06 14.3**	**-0.8**
GUR	**Goura**	**0.86**	**206**	*e*Pb	**Pb**	**22 06 14.3**	**-0.8**
GUR				S	**Sg**	**22 06 27.1**	**+0.8**
UPR	**University Cam**	**0.91**	**242**	*e*PN	**Pn**	**22 06 16.7**	**-0.2**
UPR	**University Cam**	**0.91**	**242**	*e*Pn	**Pn**	**22 06 16.7**	**-0.2**
AOS	**Alonnisos**	**0.95**	**61**	P	**Pb**	**22 06 16.6**	**-0.2**
AOS				S	**Sb**	**22 06 30.3**	**+1.1**
AOS	**Alonnisos**	**0.95**	**61**	P	**Pb**	**22 06 16.6**	**-0.2**
AOS				S	**Sb**	**22 06 30.3**	**+1.1**
AOS	**Alonnisos**	**0.95**	**61**	P	**Pb**	**22 06 16.6**	**-0.2**
AOS				S	**Sb**	**22 06 30.3**	**+1.1**
ATH	**Athens Observa**	**1.02**	**136**	*e*Pn	**Pn**	**22 06 18.6**	**+0.1**
ATH	**Athens Observa**	**1.02**	**136**	*e*PN	**Pn**	**22 06 18.6**	**+0.1**
ATH	**Athens Observa**	**1.02**	**136**	*e*Pn	**Pn**	**22 06 18.6**	**+0.1**
THL	**Klokotos Trika**	**1.05**	**324**	P	**Pb**	**22 06 18.4**	**-0.1**
THL				S	**Sb**	**22 06 34.2**	**+2.0**
THL	**Klokotos Trika**	**1.05**	**324**	*e*PN	**Pn**	**22 06 17.9**	**-1.0**
THL	**Klokotos Trika**	**1.05**	**324**	*e*Pn	**Pn**	**22 06 17.9**	**-1.0**
THL	**Klokotos Trika**	**1.05**	**324**	P	**Pb**	**22 06 18.4**	**-0.1**
THL				S	**Sb**	**22 06 34.2**	**+2.0**
ATHU	**Athens Univers**	**1.07**	**134**	P	**Pb**	**22 06 18.1**	**-0.6**
ATHU				S	**Sb**	**22 06 33.8**	**+1.3**
ATHU	**Athens Univers**	**1.07**	**134**	P	**Pb**	**22 06 18.1**	**-0.6**
ATHU				S	**Sb**	**22 06 33.8**	**+1.3**
NAIG	**Nisos Aigina**	**1.09**	**150**	*e*Pn	**Pn**	**22 06 19.5**	**+0.1**
NAIG	**Nisos Aigina**	**1.09**	**150**	*e*PN	**Pn**	**22 06 19.5**	**+0.1**
NAIG	**Nisos Aigina**	**1.09**	**150**	*e*Pn	**Pn**	**22 06 19.5**	**+0.1**
VLY	**Voula,Athens**	**1.16**	**138**	*e*Pn	**Pn**	**22 06 20.4**	**+0.2**
VLY	**Voula,Athens**	**1.16**	**138**	*e*PN	**Pn**	**22 06 20.4**	**+0.2**
VLY	**Voula,Athens**	**1.16**	**138**	*e*Pn	**Pn**	**22 06 20.4**	**+0.2**
VLX	**Vlachokerasia**	**1.38**	**194**	P	**Pn**	**22 06 24.0**	**+0.6**
VLX				S	**Sn**	**22 06 42.8**	**+1.4**
VLX	**Vlachokerasia**	**1.38**	**194**	*e*PN	**Pn**	**22 06 24.5**	**+1.1**
VLX	**Vlachokerasia**	**1.38**	**194**	P	**Pn**	**22 06 24.0**	**+0.6**
VLX	**Vlachokerasia**	**1.38**	**194**	*e*Pn	**Pn**	**22 06 24.5**	**+1.1**
VLX				S	**Sn**	**22 06 42.8**	**+1.4**
PAIG	**Paliouri**	**1.39**	**29**	P	**Pn**	**22 06 23.1**	**-0.4**
PAIG				S	**Sn**	**22 06 43.3**	**+1.7**
PAIG	**Paliouri**	**1.39**	**29**	P	**Pn**	**22 06 23.1**	**-0.4**
PAIG				S	**Sn**	**22 06 43.3**	**+1.7**
PAIG	**Paliouri**	**1.39**	**29**	P	**Pn**	**22 06 23.1**	**-0.4**
PAIG				S	**Sn**	**22 06 43.3**	**+1.7**
PLG	**Polygyros**	**1.73**	**16**	P	**Pn**	**22 06 28.1**	**-0.1**
PLG				S	**Sn**	**22 06 50.3**	**+0.2**
PLG	**Polygyros**	**1.73**	**16**	P	**Pn**	**22 06 28.1**	**-0.1**
PLG				S	**Sn**	**22 06 50.3**	**+0.2**
PLG	**Polygyros**	**1.73**	**16**	P	**Pn**	**22 06 28.1**	**-0.1**
PLG				S	**Sn**	**22 06 50.3**	**+0.2**
IGT	**Igoumenitsa**	**2.10**	**294**	P	**Pn**	**22 06 39.7**	**+6.5**
IGT	**Igoumenitsa**	**2.10**	**294**	P	**Pn**	**22 06 39.7**	**+6.5**
SOH	**Sokhos**	**2.15**	**11**	*e*Pb	**Pb**	**22 06 35.0**	**-2.2**
SOH	**Sokhos**	**2.15**	**11**	*e*PB	**Pb**	**22 06 35.0**	**-2.2**
SOH	**Sokhos**	**2.15**	**11**	*e*Pb	**Pb**	**22 06 35.0**	**-2.2**
CHOS	**Chios island**	**2.56**	**96**	*e*PN	**Pn**	**22 06 40.2**	**+0.6**
CHOS	**Chios island**	**2.56**	**96**	*e*Pn	**Pn**	**22 06 40.2**	**+0.6**
KRUS	**Krusevo**	**2.91**	**336**	*e*Pn	**Pn**	**22 06 46.4**	**+2.0**

*CSEM **25** 22:23:40.7±0.2, 38°04'N×21°52'E, h10km, ML3.2, Error ellipse: s-maj=3.3km s-min=3.1km az=26.0*
*ATH **25** 22:23:40.7, 38°05'N×21°52'E, h20km±1km, MD3.5/6, ML3.2*
*THE **25** 22:23:40.9, 38°05'N×21°53'E, h5km, ML3.9/14, Error ellipse: s-maj=0.7km s-min=0.4km az=203.0*
*NEIC **25** 22:23:40.7, 38°06'N×21°52'E, h20km, ML3.9(THE), ML3.2(ATH), After ATH.*
*ISCJB **25** 22:23:40.6±0.4, 38°02'N±0°02×21°53'E±0°03, h8km±3km, Error ellipse: s-maj=3.4km s-min=3.4km az=148.7*

ISC 25 22:23:41.1±0.4, 38°03'N±0°02×21°53'E±0°02, h9km±2km, n102, σ1°00/154, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.06**	**300**	*e*Pb	**Pg**	**22 23 44.2**	**+1.2**
RLS				*e*Sb	**Sg**	**22 23 47.0**	**+2.5**
RLS	**Riolos of Patr**	**0.06**	**300**	*e*PB	**Pg**	**22 23 44.2**	**+1.2**
RLS				*e*SB	**Sg**	**22 23 47.0**	**+2.5**
RLS	**Riolos of Patr**	**0.06**	**300**	*e*Pb	**Pg**	**22 23 44.2**	**+1.2**
LAKA	**Lakka**	**0.41**	**59**	P	**Pg**	**22 23 48.7**	**-0.5**
LAKA				S	**Sg**	**22 23 54.6**	**-0.1**
LAKA	**Lakka**	**0.41**	**59**	P	**Pg**	**22 23 48.7**	**-0.5**
LAKA				S	**Sg**	**22 23 54.6**	**-0.1**
EFP	**Efpalio**	**0.50**	**37**	P	**Pg**	**22 23 50.2**	**-0.6**
EFP				S	**Sg**	**22 23 57.5**	**+0.2**
EFP	**Efpalio**	**0.50**	**37**	P	**Pg**	**22 23 50.2**	**-0.6**
EFP				S	**Sg**	**22 23 57.5**	**+0.2**
TRIZ	**Trizonia**	**0.55**	**52**	P	**Pg**	**22 23 51.0**	**-0.7**
TRIZ				S	**Sg**	**22 23 59.2**	**+0.4**
TRIZ	**Trizonia**	**0.55**	**52**	P	**Pg**	**22 23 51.0**	**-0.7**
TRIZ				S	**Sg**	**22 23 59.2**	**+0.4**
KALE	**Kalithea**	**0.60**	**53**	P	**Pg**	**22 23 51.9**	**-0.9**
KALE				S	**Sg**	**22 24 00.6**	**-0.1**
KALE	**Kalithea**	**0.60**	**53**	P	**Pg**	**22 23 51.9**	**-0.9**
KALE				S	**Sg**	**22 24 00.6**	**-0.1**
GUR	**Goura**	**0.65**	**98**	P	**Pg**	**22 23 52.7**	**-1.0**
GUR				S	**Sg**	**22 24 02.5**	**+0.3**
GUR	**Goura**	**0.65**	**98**	P	**Pg**	**22 23 52.7**	**-1.0**
GUR				S	**Sg**	**22 24 02.5**	**+0.3**
VLS	**Valsamata**	**0.75**	**282**	*e*Pn	**Pg**	**22 23 54.9**	**-0.7**
VLS				S	**Sg**	**22 24 06.3**	**+0.8**
VLS	**Valsamata**	**0.75**	**282**	P	**Pg**	**22 23 54.9**	**-0.7**
VLS				S	**Sg**	**22 24 06.3**	**+0.8**
VLS	**Valsamata**	**0.75**	**282**	*e*PN	**Pg**	**22 23 54.9**	**-0.7**
VLS	**Valsamata**	**0.75**	**282**	P	**Pg**	**22 23 54.9**	**-0.7**
VLS				S	**Sg**	**22 24 06.3**	**+0.8**
DSF	**Desfina**	**0.88**	**64**	P	**Pg**	**22 23 56.5**	**-1.4**
DSF				S	**Sg**	**22 24 09.4**	**+0.1**
DSF	**Desfina**	**0.88**	**64**	P	**Pg**	**22 23 56.5**	**-1.4**
DSF				S	**Sg**	**22 24 09.4**	**+0.1**
ITM	**Ithomi**	**0.91**	**159**	*e*Pb	**Pg**	**22 23 58.1**	**-0.4**
ITM				S	**Sg**	**22 24 12.0**	**+1.7**
ITM				*e*Sn	**Sg**	**22 24 12.2**	**+1.9**
ITM	**Ithomi**	**0.91**	**159**	P	**Pg**	**22 23 58.2**	**-0.3**
ITM				S	**Sg**	**22 24 12.0**	**+1.7**
ITM	**Ithomi**	**0.91**	**159**	*e*PB	**Pg**	**22 23 58.1**	**-0.4**
ITM				*e*SN	**Sg**	**22 24 12.2**	**+1.9**
ITM	**Ithomi**	**0.91**	**159**	*e*Pb	**Pg**	**22 23 58.1**	**-0.4**
ITM				*e*Sn	**Sg**	**22 24 12.2**	**+1.9**
EVR	**Evrytania**	**0.91**	**14**	*e*Pn	**Pg**	**22 23 58.0**	**-0.7**
EVR	**Evrytania**	**0.91**	**14**	*e*PN	**Pg**	**22 23 58.0**	**-0.7**
EVR	**Evrytania**	**0.91**	**14**	*e*Pn	**Pg**	**22 23 58.0**	**-0.7**
VLX	**Vlachokerasia**	**0.94**	**134**	P	**Pg**	**22 23 58.5**	**-0.8**
VLX				S	**Sg**	**22 24 12.7**	**+1.2**
VLX	**Vlachokerasia**	**0.94**	**134**	P	**Pg**	**22 23 58.5**	**-0.8**
VLX				S	**Sg**	**22 24 12.7**	**+1.2**
LKD2	**Lefkada island**	**1.02**	**318**	P	**Pg**	**22 23 59.6**	**-1.1**
LKD2				S	**Sg**	**22 24 14.3**	**+0.3**
LKD2	**Lefkada island**	**1.02**	**318**	P	**Pg**	**22 23 59.6**	**-1.1**
LKD2				S	**Sg**	**22 24 14.3**	**+0.3**
LTK	**Loutraki**	**1.14**	**90**	P	**Pg**	**22 24 01.5**	**-1.4**
LTK	**Loutraki**	**1.14**	**90**	P	**Pg**	**22 24 01.5**	**-1.4**
PYL	**PYLOS**	**1.15**	**171**	P	**Pg**	**22 24 03.0**	**-0.1**
PYL	**PYLOS**	**1.15**	**171**	P	**Pg**	**22 24 03.0**	**-0.1**
AGG	**Agios Georgios**	**1.17**	**32**	*e*Pn	**Pn**	**22 24 02.5**	**-1.2**
AGG				S	**Sb**	**22 24 19.3**	**+0.5**
AGG	**Agios Georgios**	**1.17**	**32**	P	**Pb**	**22 24 02.6**	**-0.9**
AGG				S	**Sb**	**22 24 19.3**	**+0.5**
AGG	**Agios Georgios**	**1.17**	**32**	*e*PN	**Pn**	**22 24 02.5**	**-1.2**
AGG	**Agios Georgios**	**1.17**	**32**	P	**Pb**	**22 24 02.6**	**-0.9**
AGG				S	**Sb**	**22 24 19.3**	**+0.5**
LKR	**Lokris**	**1.31**	**61**	*e*Pb	**Pn**	**22 24 04.4**	**-1.2**
LKR				S	**Sb**	**22 24 23.6**	**+0.8**
LKR	**Lokris**	**1.31**	**61**	P	**Pn**	**22 24 04.5**	**-1.1**
LKR				S	**Sb**	**22 24 23.6**	**+0.8**
LKR	**Lokris**	**1.31**	**61**	*e*PB	**Pn**	**22 24 04.4**	**-1.2**
LKR	**Lokris**	**1.31**	**61**	P	**Pn**	**22 24 04.5**	**-1.1**
LKR				S	**Sb**	**22 24 23.6**	**+0.8**
ATAL	**Atalanti**	**1.35**	**60**	P	**Pn**	**22 24 05.5**	**-0.5**
ATAL				S	**Sb**	**22 24 23.9**	**+0.1**
ATAL	**Atalanti**	**1.35**	**60**	P	**Pn**	**22 24 05.5**	**-0.5**
ATAL				S	**Sb**	**22 24 23.9**	**+0.1**
NAIG	**Nisos Aigina**	**1.58**	**99**	*e*Pn	**Pn**	**22 24 09.9**	**+0.7**
NAIG	**Nisos Aigina**	**1.58**	**99**	*e*PN	**Pn**	**22 24 09.9**	**+0.7**
NAIG	**Nisos Aigina**	**1.58**	**99**	*e*Pn	**Pn**	**22 24 09.9**	**+0.7**
THL	**Klokotos Trika**	**1.58**	**14**	P	**Pn**	**22 24 09.4**	**+0.2**
THL				S	**Sn**	**22 24 31.2**	**+1.5**
THL	**Klokotos Trika**	**1.58**	**14**	*e*PN	**Pn**	**22 24 10.1**	**+0.9**
THL	**Klokotos Trika**	**1.58**	**14**	P	**Pn**	**22 24 09.4**	**+0.2**
THL	**Klokotos Trika**	**1.58**	**14**	*e*Pn	**Pn**	**22 24 10.1**	**+0.9**
THL				S	**Sn**	**22 24 31.2**	**+1.5**
VLI	**Veliai**	**1.73**	**139**	*e*Pn	**Pn**	**22 24 12.8**	**+1.6**
VLI	**Veliai**	**1.73**	**139**	*e*PN	**Pn**	**22 24 12.8**	**+1.6**
VLI	**Veliai**	**1.73**	**139**	*e*Pn	**Pn**	**22 24 12.8**	**+1.6**
ATH	**Athens Observa**	**1.73**	**91**	*e*Pn	**Pn**	**22 24 11.6**	**+0.3**
ATH	**Athens Observa**	**1.73**	**91**	*e*PN	**Pn**	**22 24 11.6**	**+0.3**
ATH	**Athens Observa**	**1.73**	**91**	*e*Pn	**Pn**	**22 24 11.6**	**+0.3**
ATHU	**Athens Univers**	**1.79**	**91**	P	**Pn**	**22 24 11.3**	**-0.7**
ATHU	**Athens Univers**	**1.79**	**91**	P	**Pn**	**22 24 11.3**	**-0.7**
VLY	**Voula,Athens**	**1.80**	**95**	P	**Pn**	**22 24 11.8**	**-0.5**
VLY	**Voula,Athens**	**1.80**	**95**	P	**Pn**	**22 24 11.8**	**-0.5**
NEO	**Neokhori**	**1.84**	**46**	*e*Pb	**Pn**	**22 24 12.1**	**-0.7**
NEO	**Neokhori**	**1.84**	**46**	*e*PB	**Pn**	**22 24 12.1**	**-0.7**
PTL	**Penteli**	**1.85**	**89**	*e*Pb	**Pn**	**22 24 12.8**	**-0.1**
PTL	**Penteli**	**1.85**	**89**	*e*PB	**Pn**	**22 24 12.8**	**-0.1**
XOR	**Xorichti**	**1.86**	**44**	P	**Pn**	**22 24 12.5**	**-0.6**
XOR				S	**Sn**	**22 24 37.6**	**+0.8**
XOR	**Xorichti**	**1.86**	**44**	P	**Pn**	**22 24 12.6**	**-0.5**
XOR				S	**Sn**	**22 24 37.6**	**+0.8**
XOR	**Xorichti**	**1.86**	**44**	P	**Pn**	**22 24 12.5**	**-0.6**
XOR				S	**Sn**	**22 24 37.6**	**+0.8**
KEK	**Kerkira**	**2.15**	**322**	P	**Pn**	**22 24 19.0**	**+1.9**
KEK	**Kerkira**	**2.15**	**322**	P	**Pn**	**22 24 19.0**	**+1.9**
AOS	**Alonnisos**	**2.17**	**58**	P	**Pn**	**22 24 17.0**	**-0.3**
AOS				S	**Sn**	**22 24 44.3**	**+0.1**
AOS	**Alonnisos**	**2.17**	**58**	P	**Pn**	**22 24 16.2**	**-1.1**
AOS				S	**Sn**	**22 24 44.3**	**+0.1**
AOS	**Alonnisos**	**2.17**	**58**	P	**Pn**	**22 24 16.2**	**-1.1**
AOS				S	**Sn**	**22 24 44.3**	**+0.1**
PAIG	**Paliouri**	**2.53**	**41**	P	**Pn**	**22 24 21.6**	**-0.7**
PAIG				S	**Sn**	**22 24 54.1**	**+0.9**
PAIG	**Paliouri**	**2.53**	**41**	P	**Pn**	**22 24 21.5**	**-0.8**
PAIG				S	**Sn**	**22 24 54.1**	**+0.9**
PAIG	**Paliouri**	**2.53**	**41**	P	**Pn**	**22 24 21.5**	**-0.8**
PAIG				S	**Sn**	**22 24 54.1**	**+0.9**
FNA	**Florina**	**2.75**	**358**	P	**Pn**	**22 24 27.6**	**+2.2**
FNA	**Florina**	**2.75**	**358**	P	**Pn**	**22 24 27.6**	**+2.2**
PLG	**Polygyros**	**2.77**	**32**	P	**Pn**	**22 24 25.8**	**+0.1**
PLG	**Polygyros**	**2.77**	**32**	P	**Pn**	**22 24 25.8**	**+0.1**
PLG	**Polygyros**	**2.77**	**32**	P	**Pn**	**22 24 25.8**	**+0.1**
HORT	**Hortiatis**	**2.84**	**25**	P	**Pn**	**22 24 26.4**	**-0.1**
HORT				S	**Sn**	**22 25 02.0**	**+1.2**
HORT	**Hortiatis**	**2.84**	**25**	P	**Pn**	**22 24 26.4**	**-0.1**
HORT				S	**Sn**	**22 25 02.0**	**+1.2**
HORT	**Hortiatis**	**2.84**	**25**	P	**Pn**	**22 24 26.4**	**-0.1**
HORT				S	**Sn**	**22 25 02.0**	**+1.2**
SOH	**Sokhos**	**3.13**	**26**	P	**Pn**	**22 24 30.5**	**0.0**
SOH	**Sokhos**	**3.13**	**26**	P	**Pn**	**22 24 30.5**	**0.0**
SOH	**Sok

*NEIC **25** 22:52:58.4±0.8, 18°.63N×121°.13E, h35km, mb4.2/3, Error ellipse: s-maj=15.7km s-min=9.6km az=112.0*
*MAN **25** 22:52:59, 18°.54N×120°.81E, h1km, mb5.2, ML4.2, MS4.4*
*ISCJB **25** 22:52:59.1±0.3, 18°.81N±0°.02×120°.80E±0°.07, h33km, mb3.7/9, MS3.3/2, Error ellipse: s-maj=10.1km s-min=3.5km az=1.2*
ISC 25 22:53:00.3±0.4, **18°.74N**±0°.03×**120°.92E**±0°.08, **h35**km, **n36**, σ1°**38**/44, **mb3.7**/9, **MS3.3**/2, **1C-1D**, **Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APYP	**Conner**	**0.92**	**161**	*eP*	**Pn**	**22 53 15.9**	**-0.8**
APYP				*eS*	**Sn**	22 53 25.9	-2.8
ABRA	**Dolores**	**1.10**	**191**	*eP*	**Pn**	22 53 16.2	-3.0
ABRA				*eS*	**Sn**	22 53 26.9	-6.3
SGCP	**Mt. Cagua**	**1.17**	**115**	*eP*	**Pn**	22 53 23.3	+3.1
BBP	**Basco**	**1.96**	**30**	*eP*	**Pn**	22 53 38.1	+7.1
PALP	**Palanan**	**2.19**	**139**	*eP*	**Pn**	22 53 37.3	+3.1
BCPH	**Baguio City Da**	**2.36**	**188⇓**	*eP*	**Pn**	22 53 35.0	-1.6
BOLP	**Bolinao**	**2.53**	**203**	*eP*	**Pn**	22 53 40.1	+1.2
BALP	**Baler**	**3.04**	**168**	*eP*	**Pn**	22 53 47.5	+1.6
SCZP	**Santa Cruz**	**3.10**	**198**	*eP*	**Pn**	22 53 48.7	+2.0
PCPH	**Palayan**	**3.16**	**177⇑**	*eP*	**Pn**	22 53 47.8	+0.2
TWG	**Pinlang**	**4.07**	**2**	Pn	**Pn**	22 54 00.1	+0.1
TWG				*eSn*	**Sn**	22 54 44.6	-1.8
TPUB	**Ta-pu**	**4.55**	**357**	Pn	**Pn**	22 54 05.7	-1.0
TPUB				Sn	**Sn**	22 54 59.6	+1.3
TGY	**Tagaytay City**	**4.61**	**180**	Pn	**Pn**	22 54 09.5	+2.0
	20nm,0.3s,baz=135,slow=19,SNR=2.1						
YULB	**Yu-li**	**4.65**	**4**	*e*Pn	**Pn**	22 54 07.9	-0.1
YULB				*e*Sn	**Sn**	22 55 00.1	-0.7
LUBP	**Lubang**	**5.01**	**188**	*eP*	**Pn**	22 54 17.0	+3.9
SSLB	**Suanglung**	**5.03**	**0**	*e*Pn	**Pn**	22 54 12.4	-0.9
SSLB				*e*Sn	**Sn**	22 55 11.1	+0.9
NACB	**Ninganchiao**	**5.45**	**6**	Pn	**Pn**	22 54 18.1	-0.9
NACB				*e*Sn	**Sn**	22 55 21.5	+1.0
YHNB	**Yeheng**	**5.92**	**4**	*e*Pn	**Pn**	22 54 24.5	-1.0
YHNB				*e*Sn	**Sn**	22 55 32.6	+0.5
QIZ	**Qiongzhong**	**10.49**	**273**	*e*Pn	**Pn**	22 55 24.9	-3.4
	20nm,0.8s						
QIZ				*e*Sn	**Sn**	22 57 18.7	-6.0
KSRS	**Korea Array**	**19.63**	**17**	P	**Pn**	22 57 27.4	+0.1
	0.2nm,0.3s,baz=194,slow=12,SNR=6.3						
CHTO	**Chiang Mai**	**20.81**	**274**	*eP*	**P**	22 57 38.2	-0.7
	2.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**20.84**	**273**	P	**P**	22 57 39.7	+0.6
	0.8nm,0.4s,baz=79,slow=9.3,SNR=6.8						
SONM	**Songino Array**	**31.35**	**341**	P	**P**	22 59 20.4	+3.0
	0.3nm,0.5s,mb3.4,baz=159,slow=9.3,SNR=2.7						
SONM				LR	LR	23 12 56.7	
	comp=Z,70nm,18.9s,MS3.4,baz=67,slow=38						
WRA	**Warramunga Arr**	**40.63**	**160**	P	**P**	**23 00 31.9**	**-5.1**
	1.0nm,0.8s,mb3.5,baz=341,slow=8.8,SNR=6.0						
MKAR	**Makanchi Array**	**42.22**	**320**	P	**P**	**23 00 51.8**	**+1.9**
	0.8nm,0.7s,mb3.5,baz=101,slow=7.5,SNR=7.6						
ASAR	**Alice Springs**	**44.01**	**163**	P	**P**	**23 01 00.8**	**-3.7**
	0.2nm,0.3s,mb3.4,baz=342,slow=7.1,SNR=3.8						
PETK	**Petropavlovsk-**	**44.57**	**31**	LR	LR	23 22 25.0	
	comp=Z,28nm,18.1s,MS3.2,baz=60,slow=40						
ZALV	**Zalesovo Beam**	**44.76**	**330**	P	**P**	**23 01 12.6**	**+2.4**
	0.3nm,0.5s,mb3.4,baz=123,slow=5.3,SNR=2.0						
UCH	**Uchtor**	**45.65**	**311**	Pn	**P**	**23 01 17.7**	**+0.2**
AML	**Almayashu**	**46.21**	**311**	P	**P**	**23 01 21.4**	**-0.5**
KURK	**Kurchatov**	**46.21**	**324**	*eP*	**P**	**23 01 21.7**	**-0.1**
	2.3nm,0.7s,mb4.2						
KBL	**Kabul**	**48.46**	**300**	*eP*	**P**	**23 01 40.0**	**+0.5**
ARU	**Arti**	**59.36**	**325**	*eP*	**P**	**23 02 57.3**	**-1.5**
	1.2nm,0.5s,mb4.2						
PMR	**Palmer**	**73.69**	**30**	P	**P**	**23 04 27.4**	**-2.9**
NOA	**NORSAR Array B**	**82.92**	**333**	P	**P**	**23 05 21.3**	**+0.1**
	0.7nm,0.9s,mb3.7,baz=78,slow=7.0,SNR=2.9						
YKA	**Yellowknife Ar**	**88.07**	**23**	P	**P**	**23 05 46.8**	**0.0**
	0.7nm,0.8s,mb4.0,baz=321,slow=4.9,SNR=4.8						

*CSEM **25** 23:00:41.4±0.5, 36°.02N×21°.75E, h5km, ML3.2/1, Error ellipse: s-maj=10.9km s-min=4.9km az=59.0*
*ATH **25** 23:00:43.2, 36°.11N×21°.79E, h5km, MD3.0/5*
*THE **25** 23:00:44.0, 36°.20N×21°.33E, h18km±2km, ML3.2/1, Error ellipse: s-maj=5.3km s-min=1.1km az=264.0*
ISC 25 23:00:42.5±1.9, **36°.07N**±0°.07×**21°.7E**±0°.1, **h8**km±9km, **n15**, σ0°**54**/25, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.82**	**1**	P	**Pg**	**23 00 58.0**	**-0.4**
PYL				S	**Sg**	23 01 09.7	+0.6
PYL	**PYLOS**	**0.82**	**1**	*e*PG	**Pg**	23 00 58.0	-0.4
PYL	**PYLOS**	**0.82**	**1**	P	**Pg**	23 00 58.0	-0.4
PYL				S	**Sg**	23 01 09.7	+0.6
KYTH	**Kithira**	**1.08**	**78**	*e*PN	**Pg**	23 01 03.2	-0.1
KYTH	**Kithira**	**1.08**	**78**	*e*Pn	**Pg**	23 01 03.2	-0.1
ITM	**Ithomi**	**1.12**	**8**	P	**Pg**	23 01 03.7	-0.3
ITM				S	**Sg**	23 01 18.4	-0.2
ITM	**Ithomi**	**1.12**	**8**	*e*PN	**Pg**	23 01 03.5	-0.5
ITM				*e*SB	**Sb**	23 01 19.0	+0.2
ITM	**Ithomi**	**1.12**	**8**	P	**Pg**	23 01 03.7	-0.3
ITM				S	**Sg**	23 01 18.4	-0.2
ITM				*e*Sb	**Sb**	23 01 19.0	+0.2
VLI	**Veliai**	**1.17**	**56**	*e*PN	**Pn**	23 01 04.3	-0.9
VLI				*e*SB	**Sb**	23 01 19.9	-0.5
VLI	**Veliai**	**1.17**	**56**	*e*Pn	**Pn**	23 01 04.3	-0.9
VLI				*e*Sb	**Sb**	23 01 19.9	-0.5
VLX	**Vlachokerasia**	**1.40**	**22**	P	**Pn**	23 01 08.8	+0.5
VLX				S	**Sb**	23 01 27.6	+0.7
VLX	**Vlachokerasia**	**1.40**	**22**	P	**Pn**	23 01 08.8	+0.5
VLX				S	**Sb**	23 01 27.6	+0.7
KARN	**Karanos**	**1.91**	**110**	P	**Pg**	23 01 19.9	+0.9
GUR	**Goura**	**1.93**	**15**	*e*PN	**Pg**	23 01 18.9	-0.6
GUR	**Goura**	**1.93**	**15**	*e*Pn	**Pg**	23 01 18.9	-0.6

*ISK **25** 23:03:43.4, 38°.44N×43°.83E, h11km, MD2.6*
*CSEM **25** 23:03:43.5±0.2, 38°.44N×43°.86E, h10km, MD2.6, Error ellipse: s-maj=6.4km s-min=4.2km az=83.0*
*ISCJB **25** 23:03:43.3±1.2, 38°.41N±0°.05×43°.87E±0°.09, h3km±22km, Error ellipse: s-maj=12.7km s-min=8.8km az=17.2*
ISC 25 23:03:43.9±1.1, **38°.42N**±0°.06×**43°.85E**±0°.10, **h9**km±19km, **n11**, σ0°**50**/15, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVAN	**Van**	**0.36**	**288**	*i P*	**Pg**	**23 03 51.0**	**-0.1**
TVAN	**Van**	**0.36**	**288**	*i P*	**Pg**	23 03 51.0	-0.1
VANB	**Van**	**0.40**	**297**	PG	**Pg**	23 03 51.3	-0.4
VANB				*e*SG	**Sg**	23 03 57.3	+0.2
VANB	**Van**	**0.40**	**297**	*i* Pg	**Pg**	23 03 51.3	-0.5
VANB				*e*Sg	**Sg**	23 03 57.3	+0.2
VANT	**Van**	**0.46**	**271**	*e*PG	**Pg**	23 03 52.9	+0.1
CLDR	**Caldiran**	**0.73**	**4**	*e*PG	**Pg**	23 03 57.0	-1.0
CLDR				*e*SG	**Sg**	23 04 08.3	+0.8
CLDR	**Caldiran**	**0.73**	**4**	*e*Pg	**Pg**	23 03 57.0	-1.0
CLDR				*e*Sg	**Sg**	23 04 08.3	+0.8
HKR	**Hakkari**	**0.84**	**186**	*e*PG	**Pg**	23 04 00.3	+0.2
HKR	**Hakkari**	**0.84**	**186**	*e*Pg	**Pg**	23 04 00.4	+0.3
CUKT	**Cukurca**	**1.18**	**189**	*e*PN	**Pn**	23 04 06.7	+0.1
CUKT	**Cukurca**	**1.18**	**189**	*e*Pn	**Pn**	23 04 06.7	+0.1

*DDA **25** 23:05:42.1, 39°.62N×39°.71E, h14km±2km, Md3.4, Ml3.7*
*ISK **25** 23:05:43.1, 39°.62N×39°.68E, h15km, MD3.5*
*CSEM **25** 23:05:43.3±0.2, 39°.62N×39°.69E, h10km, MD3.5, Error ellipse: s-maj=4.5km s-min=3.8km az=116.0*
*ISCJB **25** 23:05:43.0±0.6, 39°.62N±0°.02×39°.70E±0°.03, h5km±5km, Error ellipse: s-maj=4.4km s-min=3.8km az=7.5*
ISC 25 23:05:43.8±0.5, **39°.63N**±0°.02×**39°.69E**±0°.03, **h9**km±4km, **n51**, σ1°**05**/68, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZC	**Erzincan**	**0.29**	**296**	PG	**Pg**	**23 05 49.5**	**0.0**
KOPT	**Kop Dagi**	**0.74**	**58**	*i P*	**Pg**	23 05 56.3	-1.7
KOPT				*i* S	**Sg**	23 06 08.2	+0.7
KOPT	**Kop Dagi**	**0.74**	**58**	*i P*	**Pg**	23 05 56.3	-1.7
KOPT				*i* S	**Sg**	23 06 08.2	+0.6
GUMT	**Gumushane**	**0.85**	**349**	*e*PG	**Pg**	23 05 59.8	-0.3
GUMT				*e*SG	**Sg**	23 06 12.3	+1.1
GUMT	**Gumushane**	**0.85**	**349**	*e*Pg	**Pg**	23 05 59.8	-0.3
GUMT				*e*Sg	**Sg**	23 06 12.3	+1.1
BINT	**Bingol**	**0.97**	**140**	*e*PG	**Pg**	23 06 02.4	0.0
BINT				*e*SG	**Sg**	23 06 16.7	+1.6
BINT	**Bingol**	**0.97**	**140**	*e*Pg	**Pg**	23 06 02.4	-0.1
BINT				*e*Sg	**Sg**	23 06 16.7	+1.6
KEMA	**Kemaliye**	**0.99**	**249**	*i P*	**Pg**	23 06 01.6	-1.2
KEMA				*i* S	**Sg**	23 06 16.2	+0.6
KEMA	**Kemaliye**	**0.99**	**249**	*i P*	**Pg**	23 06 01.6	-1.2
KEMA				*i* S	**Sg**	23 06 16.2	+0.5
ELZG	**Elazig**	**1.25**	**206**	*i P*	**Pn**	23 06 05.7	-1.7
ELZG				*i* S	**Sb**	23 06 23.3	-0.4
ELZG	**Elazig**	**1.25**	**206**	*i P*	**Pn**	23 06 05.7	-1.7
ELZG				*i* S	**Sb**	23 06 23.3	-0.4
SVRC	**Sivrice-ELAZID**	**1.28**	**194**	*e*PN	**Pn**	23 06 06.1	-1.7
SVRC				*e*SN	**Sn**	23 06 23.8	-1.2
SVRC	**Sivrice-ELAZID**	**1.28**	**194**	*e*Pn	**Pn**	23 06 06.1	-1.7
SVRC				*e*Sn	**Sn**	23 06 23.8	-1.2
MACK	**Trabzon**	**1.32**	**3**	*i P*	**Pn**	23 06 08.0	-0.3
MACK	**Trabzon**	**1.32**	**3**	*i P*	**Pn**	23 06 08.0	-0.3
BNGL	**BINGOL**	**1.32**	**120**	*i P*	**Pn**	23 06 05.5	-2.8
EZM	**Erzurum**	**1.32**	**77**	*e*PN	**Pn**	23 06 07.2	-1.1
ERZM	**Erzurum**	**1.32**	**77**	*i P*	**Pn**	23 06 07.0	-1.4
ERZM	**Erzurum**	**1.32**	**77**	*i P*	**Pn**	23 06 07.0	-1.4
KTUT	**Trabzon**	**1.36**	**3**	*e*PN	**Pn**	23 06 08.3	-0.7
KTUT	**Trabzon**	**1.36**	**3**	*e*Pn	**Pn**	23 06 08.3	-0.6
ESPY	**Espiye-Giresun**	**1.48**	**331**	*e*PN	**Pn**	23 06 10.3	-0.3
ESPY	**Espiye-Giresun**	**1.48**	**331**	*e*Pn	**Pn**	23 06 10.3	-0.3
MYA	**Malataya**	**1.63**	**218**	*e*PN	**Pn**	23 06 12.1	-0.5
MYA	**Malataya**	**1.63**	**218**	*e*Pn	**Pn**	23 06 12.1	-0.5
GRSN	**GIRESUNGRSN**	**1.69**	**321**	*i P*	**Pn**	23 06 13.4	0.0
GRSN				*i* S	**Sn**	23 06 36.8	+1.5
GRSN	**GIRESUNGRSN**	**1.69**	**321**	*i P*	**Pn**	23 06 13.4	-0.1
GRSN				*i* S	**Sn**	23 06 36.8	+1.6
DIYA	**Diyarbakir**	**1.73**	**169**	*i P*	**Pn**	23 06 14.9	+0.9
DIYA				*i* S	**Sn**	23 06 39.1	+2.9
DIYA	**Diyarbakir**	**1.73**	**169**	*i P*	**Pn**	23 06 14.9	+0.9
DIYA				*i* S	**Sn**	23 06 39.1	+2.9
HOMI	**Horasan**	**1.76**	**75**	*i P*	**Pn**	23 06 14.6	+0.2
PZAR	**Pazar-Rize**	**1.81**	**30**	*e*PN	**Pn**	23 06 15.0	0.0
PZAR	**Pazar-Rize**	**1.81**	**30**	*e*Pn	**Pn**	23 06 15.0	0.0
AKCD	**Akcadag**	**1.91**	**227**	*i P*	**Pn**	23 06 17.0	+0.5
AKCD	**Akcadag**	**1.91**	**227**	*i P*	**Pn**	23 06 17.0	+0.5
BTMT	**Batman**	**2.00**	**135**	*e*PN	**Pn**	23 06 17.3	-0.4
DDEM	**Demirkent**	**2.02**	**51**	*i P*	**Pn**	23 06 18.8	+0.8
DDEM				*i* S	**Sn**	23 06 47.1	+3.8
DBAD	**Bademkaya**	**2.07**	**47**	*i P*	**Pn**	23 06 18.6	-0.1
SVSK	**Karacayir**	**2.09**	**279**	*e*PN	**Pn**	23 06 18.9	-0.1
SVSK	**Karacayir**	**2.09**	**279**	*e*Pn	**Pn**	23 06 18.9	-0.1
BEST	**Besiri**	**2.13**	**144**	*i P*	**Pn**	23 06 20.6	+1.2
URFA	**Urfa**	**2.28**	**198**	*e*PN	**Pn**	23 06 21.7	+0.1
URFA	**Urfa**	**2.28**	**198**	*e*Pn	**Pn**	23 06 21.7	+0.1
ARTV	**Artvin**	**2.31**	**47**	*i P*	**Pn**	23 06 21.7	-0.3
MARD	**Mardin**	**2.46**	**159**	*i P*	**Pn**	23 06 25.4	+1.4
SARI	**SarD1z-Kayseri**	**2.51**	**249**	*e*PN	**Pn**	23 06 29.2	+4.5
KARS	**Kars**	**2.79**	**68**	*e*PN	**Pn**	23 06 28.8	+0.4
KARS	**Kars**	**2.79**	**68**	*e*Pn	**Pn**	23 06 28.8	+0.3
GZT	**Gaziantep**	**2.81**	**217**	*i P*	**Pn**	23 06 31.7	+2.8
KMRS	**Kahramanmaras**	**3.04**	**227**	*e*PN	**Pn**	23 06 32.3	+0.3
KMRS	**Kahramanmaras**	**3.04**	**227**	*e*Pn	**Pn**	23 06 32.3	+0.3
KOZT	**Kozan**	**3.71**	**236**	*e*PN	**Pn**	23 06 41.4	+0.2

*CSEM **25** 23:27:16.6±0.1, 37°.46N×38°.68E, h10km±1km, MD2.7, Error ellipse: s-maj=3.5km s-min=2.5km az=141.0*
*ISK **25** 23:27:16.0, 37°.48N×38°.67E, h8km, MD2.7*
*ISCJB **25** 23:27:16.8±0.6, 37°.50N±0°.04×38°.71E±0°.04, h7km±5km, Error ellipse: s-maj=6.7km s-min=5.0km az=141.3*
*DDA **25** 23:27:17.5, 37°.53N×38°.66E, h8km±4km, Md3.1*
ISC 25 23:27:16.8±0.7, **37°.47N**±0°.04×**38°.72E**±0°.04, **h13**km±4km, **n20**, σ0°**64**/33, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.08**	**108**	PG	**Pg**	**23 27 19.4**	**-0.2**
URFA				SG	**Sg**	23 27 21.5	-0.1
URFA	**Urfa**	**0.08**	**108**	*i* Pg	**Pg**	23 27 19.5	-0.1
URFA				*i* Sg	**Sg**	23 27 21.5	-0.1
ATAB	**Bozova**	**0.34**	**271**	*i P*	**Pg**	23 27 23.1	-0.6
ATAB				*i* S	**Sg**	23 27 28.8	+0.5
ATAB	**Bozova**	**0.34**	**271**	*i P*	**Pg**	23 27 23.1	-0.6
ATAB				*i* S	**Sg**	23 27 28.8	+0.4
MYA	**Malataya**	**0.89**	**345**	*e*PG	**Pg**	23 27 33.0	-1.0
MYA	**Malataya**	**0.89**	**345**	*e*Pg	**Pg**	23 27 33.0	-1.0
GZT	**Gaziantep**	**0.93**	**263**	*i P*	**Pb**	23 27 34.9	+0.2
GZT				*i* S	**Sg**	23 27 48.1	+1.2
SVRC	**Sivrice-ELAZID**	**1.02**	**27**	*e*PG	**Pg**	23 27 35.6	-0.9
SVRC				*e*SG	**Sg**	23 27 51.2	+1.4
SVRC	**Sivrice-ELAZID**	**1.02**	**27**	*e*Pg	**Pg**	23 27 35.6	-0.9
SVRC				*e*Sg	**Sg**	23 27 51.2	+1.4
AKCD	**Akcadag**	**1.04**	**323**	*i P*	**Pb**	23 27 36.5	-0.2
AKCD				*i* S	**Sb**	23 27 49.5	-0.7
AKCD	**Akcadag**	**1.04**	**323**	*i P*	**Pb**	23 27 36.5	-0.2
AKCD				*i* S	**Sb**	23 27 49.5	-0.7
ELZG	**Elazig**	**1.05**	**11**	*i P*	**Pb**	23 27 37.3	+0.5
ELZG				*i* S	**Sb**	23 27 51.2	+0.7
ELZG	**Elazig**	**1.05**	**11**	*i P*	**Pb**	23 27 37.3	+0.5
ELZG				*i* S	**Sb**	23 27 51.2	+0.8
GAZ	**Gaziantep**	**1.24**	**257**	*e*PN	**Pn**	23 27 39.8	0.0
GAZ	**Gaziantep**	**1.24**	**257**	*e*Pn	**Pn**	23 27 39.8	0.0
KMRS	**Kahramanmaras**	**1.45**	**272**	*e*PN	**Pn**	23 27 42.3	-0.4
KMRS	**Kahramanmaras**	**1.45**	**272**	*e*Pn	**Pn**	23 27 42.3	-0.4
MARD	**Mardin**	**1.64**	**95**	*i P*	**Pn**	23 27 45.5	+0.2
KEMA	**Kemaliye**	**1.81**	**354**	*i P*	**Pn**	23 27 47.5	-0.1
KEMA				*i* S	**Sg**	23 28 14.7	-0.3
KEMA	**Kemaliye**	**1.81**	**354**	*i P*	**Pn**	23 27 47.5	-0.1
KEMA				*i* S	**Sg**	23 28 14.7	-0.3

*BGS **25** 23:36:45.6±1.9, 37°.89N×145°.28E, h33km, mb5.3*
*NIED **25** 23:37:00, 41°.90N×142°.60E, h53km, Mw5.4 Best double couple: M0 1.57000×10^17 NP1:φs33.00000°, δ69.00000°, λ78.00000°. NP2:φs243.00000°, δ24.00000°, λ117.00000°.*
*MOS **25** 23:37:09.2±1.1, 42°.10N×142°.43E, h38km, mb5.6/121, MS4.9/28, Error ellipse: s-maj=7.7km s-min=6.4km az=80.6*
MOS Felt (II) at Yuzhno-Kuril'sk.
*BJI **25** 23:37:09.7, 41°.81N×142°.50E, h58km, mB5.4/38, mb5.0/53, Ms4.8/58, Ms7 4.6/50*
*NEIC **25** 23:37:12.0±0.1, 41°.94N×142°.49E, mb5.3/230, MW5.5, MW5.4, MW5.4(NIED), Error ellipse: s-maj=3.0km s-min=1.9km az=159.0, Moment Tensor Solution. s89 Moment tensor: Scale 10^17Nm; Mrr 1.21; Mθθ-0.44; Mφφ-0.77; Mrθ 0.47; Mθφ-0.61; Mφr 1.03; Best double couple: M0 1.70000×10^17 NP1:φs28.00000°, δ67.00000°, λ83.00000°. NP2:φs226.00000°, δ24.00000°, λ106.00000°. Principal axes: T 1.6700, Plg67.0000°, Azm285.0000°; N 0.0000, Plg6.0000°, Azm31.0000°; P -1.6600, Plg21.0000°, Azm123.0000°;*
NEIC Felt at Misawa, Honshu. Recorded [4 JMA] in southern Hokkaido. Recorded [2 JMA] in Aomori and Iwate; [1 JMA] in Miyagi, Honshu.
*JMA **25** 23:37:11.1±0.1, 41°.83N×142°.67E, h55km±2km, M5.4 Broadband fault plane solution: P waves. NP1: φs201.00000°, δ10.00000°, λ90.00000°. NP2:φs21.00000°, δ80.00000°, λ90.00000°. Principal axes: T Plg55.0000°, Azm291.0000°; N Plg0.0000°, Azm21.0000°; P Plg35.0000°, Azm111.0000°;*
JMA Felt IV J1.
*ISCJB **25** 23:37:11.1±0.2, 41°.90N±0°.02×142°.47E±0°.02, h59km±1km, mb5.3/338, MS4.9/59 Error ellipse: s-maj=3.0km s-min=1.9km az=163.4*
*IDC **25** 23:37:12.5±0.3, 41°.86N×142°.55E, h62km±2km, mb4.7/30, mb1 4.8/33, mb1mx4.8/34, mbtmp4.7/33, MS4.8/20, Ms1 4.8/20, ms1mx4.5/29, Error ellipse: s-maj=8.8km s-min=5.9km az=101.0*
*GCMT **25** 23:37:14.1±0.1, 41°.86N×142°.79E, h58km, MW5.4, Moment Tensor Solution. s88,c170; s9,c10; Moment tensor: Scale 10^17Nm; Mrr 1.4±.03; Mθθ-0.25±.02; Mφφ-1.16±.02; Mrθ 0.38±.02; Mφθ-0.54±.02; Mφr 0.77±.02; Best double couple: M0 1.70000×10^17 NP1:φs204.00000°, δ29.00000°, λ89.00000°. NP2:φs26.00000°, δ61.00000°, λ91.00000°. Principal axes: T 1.6500, Plg74.0000°, Azm297.0000°; N 0.0100, Plg1.0000°, Azm205.0000°; P -1.6600, Plg16.0000°, Azm115.0000°; Data Used: II IU IC G CN. Surface waves: sta=100, comp=204, per= 50.*
*SZGRF **25** 23:37:16.9, 42°.77N×143°.34E, h77km, mb5.5, Hokkaido, Japan, region*
ISC 25 23:37:12.6±0.2, **41°.95N**±0°.02×**142°.45E**±0°.02, **h57**km±1km, **h58**km±6km: **pP-P**, **n1378**, σ0°**76**/1423, **mb5.3**/338, **MS4.9**/59, **442C-239D**, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.40**	**34**	⇑P	**Pn**	**23 37 22.2**	**-1.1**
JNBK				*e*S	**Sn**	23 37 30.1	-0.9
ERM	**Erimo**	**0.53**	**83**	Pn	**Pn**	23 37 21.9	-2.7
	960μm,0.5s						
ERM	**Erimo**	**0.53**	**83**	⇓*i P*	**Pn**	23 37 21.6	-3.0
ERM				*e*S	**Sn**	23 37 28.9	-4.6
JEM	**Erimo**	**0.53**	**83**	⇑P	**Pn**	23 37 21.6	-3.0
JBT2	**Biratori 2**	**0.83**	**356**	⇓P	**Pn**	23 37 28.7	+0.4
JBT2				*e*S	**Sn**	23 37 41.0	+1.2
JCH	**Churui**	**0.95**	**45**	⇑P	**Pn**	23 37 28.4	-1.4
JCH				*e*S	**Sn**	23 37 40.5	-2.0
JKB	**Kayabe**	**1.06**	**267**	⇓P	**Pn**	23 37 31.6	+0.4
JKB				*e*S	**Sn**	23 37 46.8	+1.8
JEW	**Eniwo**	**1.16**	**321**	⇓P	**Pn**	23 37 33.9	+1.4
JNB	**Noboribetsu**	**1.17**	**297**	⇓P	**Pn**	23 37 33.3	+0.6
JNB				*e*S	**Sn**	23 37 50.3	+2.6
JOT	**Ohata**	**1.19**	**242**	⇓P	**Pn**	23 37 32.9	-0.1
JFR	**Furan**	**1.22**	**5**	⇓P	**Pn**	23 37 33.6	+0.2
JOB	**Onbets**	**1.40**	**47**	⇓P	**Pn**	23 37 35.2	-0.6
JOB				*e*S	**Sn**	23 37 52.8	-0.5
JYM2	**Yakumo 2**	**1.56**	**277**	⇓P	**Pn**	23 37 38.7	+0.8
JTM	**Tenmabayashi**	**1.56**	**222**	⇓P	**Pn**	23 37 38.8	-0.1
JAR	**Ashorobuto**	**1.66**	**35**	P	**Pn**	23 37 38.5	-0.9
JANG	**Nango**	**1.73**	**204**	⇓P	**Pn**	23 37 39.1	-1.1
JHR	**Hokuryu**	**1.87**	**344**	⇓P	**Pn**	23 37 44.3	+2.1
JSH	**Shimam**	**1.91**	**292**	⇓P	**Pn**	23 37 44.0	+1.3
JAK	**Akkeshi**	**1.96**	**57**	⇓P	**Pn**	23 37 41.0	-2.5
JSK	**Shakotan**	**2.02**	**315**	⇓P	**Pn**	23 37 45.7	+1.5
JKZ	**Kuzumaki**	**2.14**	**204**	⇑P	**Pn**	23 37 45.3	-0.5
JMP	**Maruseppu**	**2.16**	**18**	⇑P	**Pn**	23 37 46.7	+0.6
ASAJ	**Asahikawa**	**2.17**	**3**	P	**Pn**	23 37 47.5	+1.3
	360nm,0.3s,baz=213,slow=10,SNR=171						
ASAJ				S	**Sn**	**23 38 15.7**	**+3.8**
	382nm,0.3s,baz=131,slow=18,SNR=15						
JOSM	**Okushiri--Mats**	**2.22**	**274**	⇓P	**Pn**	23 37 47.7	+0.8
JTKR	**Abashiri--Toko**	**2.29**	**27**	⇓P	**Pn**	23 37 47.7	-0.1
JSS	**Shosan**	**2.49**	**350**	⇓P	**Pn**	23 37 52.9	+2.3
JOM	**Ohasama**	**2.62**	**200**	⇑P	**Pn**	23 37 51.7	-0.8
YUK	**Yuzh-Kuril'sk**	**3.26**	**49**	⇓*i*PN	**Pn**	23 37 59.5	-1.6
YUK				*i* S	**Sn**	23 38 35.5	-3.1
YUK				pmax	pmax		
	comp=Z,4μm,0.5s						
YUK				pmax	pmax		
	comp=N,939nm,0.4s						
YUK				pmax	pmax		
	comp=E,1μm,0.3s						
YUK				pmax	pmax		
	comp=Z,6μm,0.8s						
YUK				smax			
	comp=N,35μm,0.8s						
YUK				smax			
	comp=E,52μm,0.8s						
YUK				smax			
	comp=N,43μm,0.6s						
YUK				smax			
	comp=E,7μm,0.3s						
YUK				MLR	MLR		
	comp=E,18μm,18.0s						
YUK				MLR	MLR		
	comp=Z,12μm,18.0s						
YSS	**Yuzh-Sakhalins**	**5.01**	**2**	*e*PN	**Pn**	**23 38 27.0**	**+1.9**
YSS				*i* S	**Sn**	**23 39 24.0**	**+2.4**
YSS				pmax	pmax		
	comp=N,2μm,3.0s						
YSS				pmax	pmax

comp=Z,13nm,3.3s
MDJ LR LR
comp=N,2μm,17.3s
MDJ LR LR
comp=E,4μm,22.1s
MDJ LR LR
comp=Z,7μm,21.5s
MDJ Mudanjiang 9.75 290⇑ ePn Pn 23 39 32.5 +2.6
comp=Z,246nm,1.5s
MDJ eSn **Sn 23 41 24.4 +6.6**
KLR Kul'dur 10.44 318 ePN **Pn 23 39 37.4 -2.0**
KLR e 23 41 38.5
KLR pmax pmax
comp=E,180nm,2.0s
KLR pmax pmax
comp=Z,100nm,2.0s
KLR pmax pmax
comp=E,800nm,8.0s
KLR pmax pmax
comp=Z,1μm,8.0s
KLR MLR MLR
comp=N,4μm,13.0s
KLR MLR MLR
comp=Z,9μm,13.0s
KSRS Korea Array 12.05 253 P **Pn 23 40 03.9 +2.5**
comp=Z,0.9nm,0.3s,baz=67,slow=13,SNR=24
KSRS S **Sn 23 42 25.6 +11**
comp=Z,1.3nm,0.3s,baz=68,slow=24,SNR=4.5
KSRS LR LR 23 44 16.4
comp=Z,5μm,20.6s,baz=71,slow=35
KSRS Korea Array 12.05 253 PN **Pn 23 40 03.9 +2.5**
KSRS S **Sn 23 42 25.6 +11**
KSRS pmax pmax
comp=Z,1.0nm,0.3s
KSRS smax
comp=N,1.0nm,0.3s
KSRS MLR MLR
comp=Z,5μm,20.6s
CN2 Changchun 12.61 284 ⇓P **Pn 23 40 11.3 +2.3**
CN2 eS **Sn 23 42 24.8 -2.9**
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,200nm,4.0s
SKR Severo-Kuril's 12.85 43 ePN **Pn 23 40 08.0 -4.2**
SKR pmax pmax
comp=E,60nm,0.7s
SKR pmax pmax
comp=Z,70nm,0.7s
SKR pmax pmax
comp=N,110nm,1.0s
SKR pmax pmax
comp=N,1μm,4.0s
SKR pmax pmax
comp=E,1μm,4.0s
SKR pmax pmax
comp=Z,1μm,4.0s
SKR MLR MLR
comp=E,4μm,18.0s
SKR MLR MLR
comp=Z,3μm,18.0s
SKR MLR MLR
comp=N,2μm,20.0s
INCN Inchon 12.96 255 ePn **Pn 23 40 15.9 +2.0**
SNY Shenyang 14.06 276 ⇓P **Pn 23 40 29.5 +0.8**
SNY sP 23 40 49.3
SNY S **Sn 23 43 08.0 +4.9**
SNY pmax pmax
comp=Z,6.0nm,0.3s
SNY pmax pmax
comp=Z,550nm,4.1s
SNY LR LR
comp=E,3μm,20.1s
SNY LR LR
comp=Z,3μm,23.5s
CBIJ Chichi jima 14.82 181 P **Pn 23 40 33.0 -5.7**
comp=Z,23nm,0.3s,baz=55,slow=16,SNR=7.2
CBIJ S **Sn 23 43 06.0 -16**
comp=Z,15nm,0.3s,baz=287,slow=19,SNR=4.0
PEA0B Petropavlovsk- 15.15 37 ePn **Pn 23 40 40.6 -2.3**
PEA0B S **S 23 43 41.8 -1.9**
PETK Petropavlovsk- 15.15 37 P **Pn 23 40 38.8 -4.0**
comp=Z,1.2nm,0.3s,baz=219,slow=11,SNR=14
PETK LR LR 23 47 47.3
comp=Z,1μm,18.2s,baz=222,slow=42
PET Petropavlovsk 15.54 39 eP **Pn 23 40 44.7 -3.1**
PET eS **S 23 43 34.8 -17**
PET pmax pmax
comp=Z,29nm,0.7s
PET pmax pmax
comp=Z,600nm,4.9s
PET pmax pmax
comp=Z,300nm,7.7s
PET smax
comp=N,400nm,12.2s
PET MLR MLR
comp=Z,2μm,21.0s
PET MLR MLR
comp=Z,2μm,16.0s
PET Petropavlovsk 15.54 39 ePn **Pn 23 40 47.6 -0.2**
DL2 Dalian 16.14 266 P **Pn 23 40 56.0 +0.5**
DL2 pP pP 23 41 07.0 -3.2
DL2 sP sP 23 41 15.3 -2.2
DL2 S **S 23 43 55.0 -9.0**
DL2 pmax pmax
comp=Z,60nm,0.9s
DL2 pmax pmax
comp=Z,410nm,5.0s
DL2 LR LR
comp=E,1μm,20.4s
DL2 LR LR
comp=Z,1μm,21.2s
HIA Hailar 17.45 303⇑ eP **Pn 23 41 10.8 -0.9**
HIA e 23 44 24.1
HIA pmax pmax
comp=Z,46nm,0.8s
HIA Hailar 17.45 303⇑ ePn **Pn 23 41 10.8 -0.9**
comp=Z,46nm,0.8s
HIA eSn **Sn 23 44 24.1 -0.9**
CLNS Chul'man 18.69 329 c iP **Pn 23 41 25.0 -1.7**
CLNS eS **S 23 44 53.0 -2.4**
CLNS pmax pmax
comp=Z,118nm,0.8s
CLNS pmax pmax
comp=N,88nm,0.9s
CLNS pmax pmax
comp=E,45nm,0.8s
CLNS smax
comp=E,771nm,13.2s
CLNS smax
comp=N,433nm,14.2s
CLNS MLR MLR
comp=Z,2μm,20.0s
CLNS MLR MLR
comp=E,1μm,17.0s
CLNS MLR MLR
comp=N,1μm,20.0s
BJI Beijing 19.90 273 P **Pn 23 41 38.0 -3.3**
BJI S **S 23 45 13.3 -6.7**
BJI pmax pmax
comp=Z,74nm,1.8s
BJI pmax pmax
comp=Z,470nm,3.7s
BJI LR LR
comp=N,1μm,12.6s
BJI LR LR
comp=E,3μm,16.8s
BJI LR LR
comp=Z,3μm,25.4s
BJT Baijiatuau 19.91 273⇑ eP **Pn 23 41 37.9 -3.5**
BJT S **S 23 45 19.5 -0.7**
BJT pmax pmax
comp=Z,122nm,1.0s
BJT Baijiatuau 19.91 273⇑ eP **Pn 23 41 37.9 -3.5**
comp=Z,122nm,1.0s
BJT S **S 23 45 19.5 -0.7**
SSE Sheshan 20.18 244 P **P 23 41 40.5 -1.8**
SSE S **S 23 45 27.0 +1.4**
SSE pmax pmax
comp=Z,63nm,1.0s
SSE pmax pmax
comp=Z,400nm,12.0s
SSE LR LR
comp=N,1μm,18.9s,MS4.5
SSE LR LR
comp=E,2μm,18.9s,MS4.5
SSE LR LR
comp=Z,2μm,21.6s,MS4.3
TIA Tai'an 20.44 262 P **P 23 41 43.0 -2.1**
TIA S **S 23 45 27.5 -3.3**
TIA LR LR
comp=N,2μm,23.0s
TIA LR LR
comp=E,1μm,17.9s
NJ2 Nanjing 21.22 250 eP **P 23 41 50.8 -2.7**
NJ2 pP 23 42 05.0
NJ2 sP sP 23 42 14.3 +1.0
NJ2 PP 23 42 15.5
NJ2 S **S 23 45 37.3 -8.8**
NJ2 sS sS 23 46 01.8 -5.0
NJ2 pmax pmax
comp=Z,40nm,0.6s,mb4.9
NJ2 pmax pmax
comp=Z,340nm,3.7s
NJ2 LR LR
comp=N,3μm,16.5s,MS5.0
NJ2 LR LR
comp=E,4μm,17.2s,MS5.0
NJ2 LR LR
comp=Z,9μm,19.0s,MS5.2
YAK Yakutsk 21.52 343 eP **P 23 41 52.6 -3.8**
YAK e 23 42 13.6
YAK eS **S 23 45 43.7 -7.7**
YAK e 23 45 56.6
YAK eSSS 23 46 22.6
YAK pmax pmax
comp=Z,70nm,0.9s,mb5.1
YAK pmax pmax
comp=N,31nm,1.0s
YAK pmax pmax
comp=E,30nm,1.3s
YAK pmax pmax
comp=Z,495nm,1.3s,mb5.8
YAK pmax pmax
comp=N,910nm,1.8s
YAK pmax pmax
comp=E,320nm,1.6s
YAK smax
comp=N,1μm,2.7s
YAK smax
comp=E,645nm,2.3s
YAK MLR MLR
comp=N,1μm,22.0s,MS4.6
YAK MLR MLR
comp=E,2μm,18.0s,MS4.6
YAK Yakutsk 21.52 343⇑ eP **P 23 41 52.1 -4.3**
comp=E,491nm,1.5s,mb5.7
CIT Chita 22.00 307 eP **P 23 41 59.2 -2.5**
CIT e 23 42 29.8
CIT e 23 42 35.9
CIT e 23 46 04.0
HHC Hu-ho-hao-te 23.14 278 eP **P 23 42 10.5 -3.3**
HHC pP 23 42 24.8
HHC sP sP 23 42 32.3 -1.5
HHC PP 23 42 43.5
HHC PcP PcP 23 46 00.0 -0.5
HHC S **S 23 46 14.5 -6.1**
HHC sS sS 23 46 38.3 -5.9
HHC SS 23 47 03.5
HHC ScP ScP 23 49 31.0 -2.4
HHC PcS PcS 23 49 37.0 -2.5
HHC pmax pmax
comp=Z,21nm,0.7s,mb4.7
HHC pmax pmax
comp=Z,410nm,7.7s
HHC LR LR
comp=N,2μm,16.4s,MS4.7
HHC LR LR
comp=E,2μm,20.3s,MS4.7
HHC LR LR
comp=Z,3μm,22.2s,MS4.7
FX1 Attu Island--F 23.31 51 P **P 23 42 15.7 +0.4**
comp=Z,24nm,0.6s,mb4.8,baz=239,slow=4.6,SNR=26
FX1 S **S 23 46 25.6 +2.4**
comp=Z,7.3nm,0.5s,baz=117,slow=20,SNR=7.1
SMY Shemya 23.82 52 eP **P 23 42 20.7 +0.8**
SMY e 23 42 32.1
SMY pmax pmax
comp=Z,163nm,1.1s,mb5.4
SMY Shemya 23.82 52 eP **P 23 42 20.7 +0.7**
comp=Z,162nm,1.1s,mb5.4
SMY e 23 42 32.1
TATO Taipei 24.23 232 eP **P 23 42 23.5 -0.5**
comp=Z,771nm,1.8s,mb5.8
TATO e 23 42 41.2
BTO Baotou 24.33 278 eP **P 23 42 22.3 -2.5**
YHNB Yeheng 24.53 232 ePn **P 23 42 25.1 -1.6**
comp=Z,106nm,0.8s,mb5.4
YHNB e 23 42 43.7
NACB Ninganchiao 24.79 231 P **P 23 42 25.7 -3.4**
WHN Wuhan 25.25 252 P **P 23 42 30.5 -2.7**
WHN S **S 23 46 51.5 -3.2**
WHN LR LR
comp=N,3μm,14.1s,MS5.1
WHN LR LR
comp=E,1μm,11.2s,MS5.1
WHN LR LR
comp=Z,5μm,20.8s
SSLB Suanglung 25.45 231 eP **P 23 42 33.4 -1.7**
comp=Z,64nm,1.1s,mb5.1
SSLB e 23 42 54.2
YULB Yu-li 25.56 230 eP **P 23 42 36.0 -0.1**
comp=Z,36nm,0.8s,mb5.0
YULB e pP 23 42 47.0 -3.1
ULN Ulaanbaatar 25.60 295⇑ iP **P 23 42 35.9 -0.3**
ULN e pP 23 42 52.7 +2.4
ULN S **S 23 47 07.4 +7.4**
ULN pmax pmax
comp=Z,200nm,2.0s,mb5.3
ULN Ulaanbaatar 25.60 295⇑ iP **P 23 42 35.9 -0.3**
comp=Z,200nm,2.0s,mb5.3
ULN e pP 23 42 52.7 +2.4
ULN S **S 23 47 07.4 +7.4**
ULN Ulaanbaatar 25.60 295 ⇓P **P 23 42 37.0 +0.8**
SNR=33
ULN ⇓P 23 42 37.0
SNR=33
TPUB Ta-pu 26.02 231 eP **P 23 42 39.6 -0.6**
comp=Z,93nm,0.8s,mb5.4
TPUB e 23 42 58.2
QZH Quanzhou 26.02 237⇑ iP **P 23 42 40.8 +0.6**
QZH pmax pmax
comp=Z,2μm,3.0s
QZH LR LR
comp=Z,1μm,23.0s,MS4.4
SONM Songino Array 26.04 295 P **P 23 42 40.5 +0.3**
comp=Z,14nm,0.8s,mb4.6,baz=79,slow=4.6,SNR=76
SONM LR LR 23 53 35.7
comp=Z,3μm,21.3s,MS4.8,baz=89,slow=38
TWG Pinlang 26.14 230 eP **P 23 42 41.1 -0.2**
comp=Z,53nm,0.7s,mb5.2
IRK Irkutsk 27.65 305 i P **P 23 42 54.7 +0.1**
IRK e pP 23 43 09.7 +0.9
IRK pmax pmax
comp=Z,127nm,2.6s,mb5.1
TLY Talaya 27.98 304 P **P 23 42 58.7 +1.1**
comp=Z,175nm,0.8s,mb5.7,SNR=17
TLY Talaya 27.98 304 c iP **P 23 42 58.1 +0.5**
TLY e pP 23 43 12.8 +1.0
TLY e 23 43 41.5
TLY eS **S 23 47 40.2 +2.7**
TLY e 23 48 02.8
TLY eSSS 23 49 11.3
TLY pmax pmax
comp=Z,28nm,0.9s,mb4.9
TLY MLR MLR
comp=Z,3μm,20.0s,MS4.8
TLY Talaya 27.98 304⇑ iP **P 23 42 58.0 +0.4**
comp=Z,24nm,0.8s,mb4.9
TLY ePcP PcP 23 46 08.6 -2.6
TLY eS **S 23 47 38.3 +0.8**
TLY Talaya 27.98 304 ⇑P **P 23 42 58.4 +0.8**
SNR=25
TLY ⇑P 23 42 58.4
SNR=25
ZAK Zakamensk 28.13 301⇓ iP **P 23 42 58.8 -0.1**
ZAK pmax pmax
comp=Z,12nm,1.6s,mb4.3
ENH Enshi 28.89 257 eP **P 23 43 04.8 -1.1**
comp=Z,73nm,0.9s,mb5.4
ENH e 23 43 23.6
BILL Bilibino 29.10 18⇑ iP **P 23 43 05.4 -1.9**
BILL i pP 23 43 21.5 -0.1
BILL e 23 44 01.6
BILL i 23 46 13.2
BILL eS **S 23 47 49.4 -5.4**
BILL pmax pmax
comp=Z,17nm,1.4s,mb4.6
BILL MLR MLR
comp=Z,1μm,19.0s,MS4.6
BILL Bilibino 29.10 18 eP **P 23 43 04.3 -3.0**
MOY Mondy 29.63 303 eP **P 23 43 12.9 +0.7**
MOY pmax pmax
comp=Z,211nm,2.9s,mb5.4
TIXI Tiksi 30.53 352 eP **P 23 43 16.1 -3.8**
TIXI e 23 44 21.5
TIXI eS **S 23 48 18.0 +0.9**
TIXI pmax pmax
comp=Z,14nm,1.4s,mb4.6
TIXI MLR MLR
comp=Z,589nm,16.0s,MS4.3
TIXI Tiksi 30.53 352 eP **P 23 43 16.1 -3.8**
comp=Z,7.5nm,0.8s,mb4.6
TIXI eP 23 43 19.2
GTA Gaotai 32.19 280 ⇑P **P 23 43 35.0 +0.1**
GTA pP pP 23 43 50.0 +0.8
GTA sP sP 23 43 57.3 +1.4
GTA PP PP 23 44 43.8 -4.5
GTA PcP PcP 23 46 22.5 +0.1
GTA S **S 23 48 42.5 -1.2**
GTA sS sS 23 49 06.8 -1.2
GTA PcS PcS 23 50 09.0 +1.8
GTA SS SS 23 50 39.5 -24
GTA ScS ScS 23 53 59.3 -0.6
GTA pmax pmax
comp=Z,5.0nm,1.5s
GTA pmax pmax
comp=Z,330nm,8.1s
GTA LR LR
comp=N,1μm,18.5s,MS4.9
GTA LR LR
comp=E,2μm,17.9s,MS4.9
GTA LR LR
comp=Z,2μm,19.7s,MS4.9
CD2 Chengdu 32.77 263 eP **P 23 43 47.8 +7.7**
CD2 pP pP 23 44 18.0 +24
CD2 sP sP 23 44 34.5 +33
CD2 PP PP 23 45 02.0 +7.1
CD2 PcP PcP 23 46 28.8 +4.6
CD2 S **S 23 48 52.8 0.0**
CD2 sS sS 23 49 45.3 +28
CD2 SS SS 23 51 01.3 -14
CD2 ScS ScS 23 53 58.0 -5.2
CD2 pmax pmax
comp=Z,80nm,0.7s,mb5.8
CD2 pmax pmax
comp=Z,120nm,5.8s
CD2 LR LR
comp=N,1μm,19.0s,MS4.8
CD2 LR LR
comp=E,1μm,21.4s,MS4.8
CD2 LR LR
comp=Z,1μm,28.2s
CD2 Chengdu 32.77 263 eP **P 23 43 40.5 +0.4**
CD2 pP pP 23 43 56.3 +1.9
CD2 sP sP 23 44 02.3 +1.2
CD2 PP PP 23 44 52.3 -2.6
CD2 S **S 23 48 52.3 -0.5**
CD2 sS sS 23 49 18.8 +1.7
CD2 SS SS 23 50 54.0 -22
CD2 pmax pmax
comp=Z,20nm,0.7s,mb5.2
CD2 pmax pmax
comp=Z,120nm,5.6s
CD2 LR LR
comp=N,310nm,14.2s
CD2 LR LR
comp=Z,250nm,13.8s
GYA Guiyang 33.11 254⇑ iP **P 23 43 52.5 +9.4**
GYA pP pP 23 44 23.8 +26
GYA sP sP 23 44 40.5 +36
GYA PP PP 23 45 08.8 +10
GYA PcP PcP 23 46 31.3 +6.1
GYA S **S 23 49 02.0 +3.8**
GYA sS sS 23 49 56.5 +34
GYA ScP ScP 23 50 01.3 -3.1
GYA PcS PcS 23 50 16.8 +6.0
GYA ScS ScS 23 54 01.5 -3.5
GYA pmax pmax
comp=Z,20nm,0.8s,mb5.1
GYA pmax pmax
comp=Z,120nm,1.0s,mb5.8
QIZ Qiongzhong 35.87 240 P **P 23 44 06.0 -1.0**
QIZ pmax pmax
comp=Z,13nm,1.6s,mb4.6
QIZ pmax pmax
comp=Z,280nm,7.6s
QIZ LR LR
comp=N,880nm,19.6s,MS4.6
QIZ LR LR
comp=E,240nm,16.9s,MS4.6
QIZ LR LR
comp=Z,720nm,24.4s
KMI Kunming 36.73 256 ⇑P **P 23 44 14.5 +0.2**
KMI pP pP 23 44 32.5 +3.7
KMI PP PP 23 45 42.0 +3.2
KMI PcP PcP 23 46 37.8 +2.1
KMI S **S 23 49 54.0 0.0**
KMI ScP ScP 23 50 17.3 -0.2
KMI PcS PcS 23 50 24.3 +0.4
KMI SS SS 23 52 23.3 -13
KMI ScS ScS 23 54 22.5 -2.1
KMI pmax pmax
comp=Z,45nm,1.5s,mb5.1
KMI pmax pmax
comp=Z,550nm,3.1s
KMI LR LR
comp=N,810nm,17.0s,MS4.7
KMI LR LR
comp=E,920nm,18.5s,MS4.7
KMI LR LR
comp=Z,1μm,17.0s,MS4.8
ZAA0 Zalesovo Array 39.35 308⇑ iP **P 23 44 36.1 +0.1**
ZAA0 epP pP 23 44 52.2 +1.6
ZAA0 ePcP PcP 23 46 43.4 +0.1
ZAA0 eS **S 23 50 35.5 +2.6**
ZALV Zalesovo Beam 39.35 308 P **P 23 44 35.4 -0.6**
comp=Z,36nm,0.7s,mb5.2,baz=87,slow=7.8,SNR=127
ZALV pP pP 23 44 52.6 +2.0
comp=Z,45nm,0.8s,baz=91,slow=6.6,SNR=9.9
ZALV PcP PcP 23 46 43.3 0.0
comp=Z,7.8nm,0.6s,baz=100,slow=2.1,SNR=3.6
ZALV S **S 23 50 33.4 +0.5**
comp=Z,0.4nm,0.3s,baz=43,slow=24,SNR=2.4
ZALV LR LR 00 02 18.5
comp=Z,2μm,18.3s,MS4.9,baz=86,slow=38
ZALV Zalesovo Beam 39.35 308 P **P 23 44 35.4 -0.6**
ZALV *PP pP 23 44 52.6 +2.0
ZALV 23 46 43.3
ZALV S **S 23 50 33.4 +0.5**
WMQ Urumqi 39.55 292 P **P 23 44 38.5 +0.8**
WMQ pP pP 23 44 53.5 +1.2
WMQ sP sP 23 45 01.5 +2.5
WMQ PP PP 23 46 13.5 +4.3
WMQ S **S 23 50 36.5 +0.4**
WMQ sS sS 23 51 02.5 +1.8
WMQ SS SS 23 53 27.5 -4.8
WMQ pmax pmax
comp=Z,48nm,1.0s,mb5.2
WMQ pmax pmax
comp=Z,170nm,4.0s
WMQ LR LR
comp=N,1μm,16.0s,MS4.9
WMQ LR LR
comp=E,970nm,16.0s,MS4.9
WMQ LR LR
comp=Z,1μm,16.0s,MS4.8
NVS Novosibirsk 40.17 310⇑ iP **P 23 44 42.6 -0.2**
NVS i *PP pP 23 44 58.5 +1.1
NVS eS **S 23 50 36.4 -8.7**
NVS pmax pmax
comp=Z,155nm,1.8s,mb5.4
NVS pmax pmax
comp=N,30nm,1.4s
NVS pmax pmax
comp=E,151nm,1.9s

NVS smax
comp=N,30nm,1.8s
NVS smax
comp=E,80nm,1.8s
TTA Tatalina 40.99 38 *eP* **P 23 44 48.9 -0.5**
SVW2 Sparrevohn 41.20 41 *eP* **P 23 44 51.2 0.0**
SVW2 *ePcP* PcP 23 46 48.1 -1.0
MK31 Makanchi Array 42.36 298⇑*iP* **P 23 45 01.1 +0.3**
MK31 *e**PP pP 23 45 16.7 +1.2
MK31 *e* 23 46 53.1
MKAR Makanchi Array 42.36 298 P **P 23 45 00.5 -0.4**
comp=E,33nm,0.9s,mb5.0,baz=77,slow=14,SNR=204
MKAR pP pP 23 45 17.7 +2.2
comp=E,50nm,0.9s,baz=79,slow=12,SNR=12
MKAR LR LR 00 04 11.7
comp=E,1µm,18.9s,MS4.8,baz=78,slow=38
MKAR Makanchi Array 42.36 298 P **P 23 45 00.5 -0.3**
MKAR *PP pP 23 45 17.7 +2.2
RSO Redoubt South 42.62 41 *eP* **P 23 45 02.9 +0.2**
CHUM Lake Minchumin 42.65 36 *eP* **P 23 45 02.8 -0.2**
CHUM *ePcP* PcP 23 46 54.5 +0.6
KKM Kota Kinabalu 42.68 220 *eP* **P 23 45 03.7 0.0**
comp=E,68nm,1.3s,mb5.2
KKM *e* pP 23 45 21.8 +3.3
OHAK Old Harbor 42.69 46 *eP* **P 23 45 02.3 -1.1**
comp=E,105nm,1.2s,mb5.4
OHAK *e*PP PP 23 46 42.8 -0.3
OHAK *e*PcP PcP 23 46 54.9 +0.7
PPLA Purkeypile 42.74 38 *eP* **P 23 45 03.6 -0.1**
comp=E,108nm,1.3s,mb5.4
PPLA *e*pP pP 23 45 19.6 +1.1
LSA Lhasa 42.77 270 P **P 23 45 06.3 +1.9**
LSA pmax pmax
comp=Z,50nm,1.0s,mb5.2
KDAK Kodiak Island 42.99 45 P **P 23 45 05.2 -0.6**
comp=Z,17nm,0.6s,mb5.0,baz=272,slow=3.4,SNR=5.0
KDAK Kodiak Island 42.99 45 *eP* **P 23 45 05.5 -0.4**
BPAW Bear Paw Mtn. 43.23 36⇑*eP* **P 23 45 07.2 -0.5**
comp=Z,20nm,0.8s,mb4.9
BPAW *e*pP pP 23 45 23.1 +0.7
BPAW *e*PcP PcP 23 46 56.2 +0.3
CHTO Chiang Mai 43.45 251 *eP* **P 23 45 10.1 +0.1**
CHTO *e* pP 23 45 28.0 +3.3
CHTO pmax pmax
comp=Z,38nm,0.8s,mb5.2
CHTO Chiang Mai 43.45 251 *eP* **P 23 45 10.1 +0.1**
comp=Z,38nm,0.8s,mb5.2
CHTO *e* pP 23 45 28.0 +3.3
CHTO Chiang Mai 43.45 251 ⇑P **P 23 45 10.6 +0.7**
SNR=10
CHTO ⇑P 23 45 10.6
SNR=10
COLD Coldfoot 43.51 31 *eP* **P 23 45 09.3 -0.6**
comp=Z,18nm,0.9s,mb4.8
COLD *e*pP pP 23 45 22.4 -2.2
TRF Thorofare Moun 43.57 37 *eP* **P 23 45 09.9 -0.5**
comp=Z,26nm,0.8s,mb5.0
TRF *e*pP pP 23 45 26.6 +1.4
TRF *e*PP PP 23 46 52.7 +0.3
TRF *e*PcP PcP 23 46 58.0 +1.0
TRF *e*ScP ScP 23 50 44.2 +0.7
KURK Kurchatov 43.68 304 P **P 23 45 11.8 +0.4**
comp=Z,689nm,0.8s,mb6.4
KURK Kurchatov 43.68 304 P **P 23 45 12.2 +0.8**
comp=Z,55nm,0.7s,mb5.4,baz=77,slow=8.7,SNR=151
KURK pP pP 23 45 29.9 +3.7
comp=Z,76nm,0.7s,baz=78,slow=8.7,SNR=10
KURK Kurchatov 43.68 304*ceP* **P 23 45 11.4 0.0**
KURK pmax pmax
comp=Z,94nm,0.7s,mb5.6
KURK Kurchatov 43.68 304 P **P 23 45 11.8 +0.4**
SNR=56
KURK P 23 45 11.8
SNR=56
CM31 Chiang Mai Arr 43.68 251 *eP* **P 23 45 12.8 +0.9**
CMAR Chiang Mai Arr 43.68 251 P **P 23 45 12.3 +0.5**
comp=Z,7.8nm,0.8s,mb4.5,baz=42,slow=7.5,SNR=25
CMAR pP pP 23 45 29.7 +3.1
comp=Z,10nm,0.8s,baz=32,slow=7.6,SNR=4.5
CMAR LR LR 00 04 54.2
comp=Z,995nm,18.3s,MS4.8,baz=56,slow=38
CMAR Chiang Mai Arr 43.68 251 P **P 23 45 12.4 +0.5**
CMAR *PP pP 23 45 29.7 +3.1
RC01 Rabbit Creek A 44.03 40 *eP* **P 23 45 13.9 -0.2**
comp=Z,73nm,1.2s,mb5.3
RC01 *e*PcP PcP 23 46 58.4 -0.2
MCK McKinley 44.16 36 *eP* **P 23 45 14.8 -0.3**
MCK *e*ScP ScP 23 50 44.8 -1.1
PMR Palmer 44.27 40 *eP* **P 23 45 15.3 -0.7**
PMR pmax pmax
comp=Z,28nm,0.8s,mb5.0
PMR Palmer 44.27 40 *eP* **P 23 45 15.3 -0.7**
comp=Z,28nm,0.8s,mb5.0
SEW Seward 44.30 42 *eP* **P 23 45 15.9 -0.4**
comp=Z,52nm,0.9s,mb5.3
SEW *e*PcP PcP 23 46 56.4 -3.1
SHL Shillong 44.45 265 *e*PKP **P 23 45 18.0 0.0**
SHL *ex* x 23 51 11.0
SHL *ex* x 23 53 35.0
COLA College 44.54 35 *eP* **P 23 45 18.1 -0.1**
COLA *e* 23 46 59.6
COLA pmax pmax
comp=Z,61nm,0.9s,mb5.4
COLA College 44.54 35 *eP* **P 23 45 18.1 -0.1**
comp=Z,61nm,0.9s,mb5.4
COLA *e*PcP PcP 23 46 59.5 -0.8
PAX Paxson 45.79 37 P **P 23 45 27.9 -0.2**
PAX pmax pmax
comp=Z,22nm,0.4s,mb5.4
PAX Paxson 45.79 37 P **P 23 45 27.9 -0.2**
comp=Z,22nm,0.4s,mb5.4
DIV Divide 45.94 40 *eP* **P 23 45 29.2 0.0**
comp=Z,62nm,1.1s,mb5.5
DIV *e* pP 23 45 43.2 -0.9
DIV *e*PcP PcP 23 47 06.3 +1.1
BMRM Bremner River 46.52 40 *eP* **P 23 45 33.8 -0.1**
comp=Z,58nm,1.1s,mb5.4
BMRM *e* pP 23 45 47.6 -1.2
BMRM *e*PcP PcP 23 47 07.5 +0.2
BMRM *e*PP PP 23 47 24.1 +0.5
TAPN Taplejung 46.57 270 *eP* **P 23 45 35.5 +0.8**
MENT Mentasta 46.59 37 *eP* **P 23 45 34.2 -0.1**
MENT *e* pP 23 45 50.6 +1.4
ODAN Odare 47.08 270 *eP* **P 23 45 39.1 +0.4**
EGAK Eagle 47.40 34⇑*eP* **P 23 45 39.4 -1.2**
EGAK *e* pP 23 45 55.2 -0.4
JIRN Jiri 47.54 271 *eP* **P 23 45 43.0 +0.8**
comp=Z,118nm,0.8s,mb6.0
RAMN Ramite 47.62 270 *eP* **P 23 45 43.0 +0.1**
GUN Gumba 47.64 272 *eP* **P 23 45 43.5 +0.5**
comp=Z,357nm,0.6s
BVAR Borovoye Array 47.97 309 P **P 23 45 45.7 +0.5**
comp=Z,20nm,0.5s,mb5.4,baz=76,slow=8.1,SNR=137
BVAR pP pP 23 46 02.3 +2.1
comp=Z,34nm,0.7s,baz=79,slow=9.1,SNR=8.2
BVAR S **S 23 52 50.0 +11**
comp=Z,0.8nm,0.7s,baz=28,slow=16,SNR=2.8
BRVK Borovoye 48.02 309 P **P 23 45 46.6 +1.0**
comp=Z,286nm,0.9s,mb6.3,SNR=25
BRVK Borovoye 48.02 309⇑*eP* **P 23 45 46.1 +0.5**
BRVK *e* pP 23 46 03.5 +3.0
BRVK *e* 23 47 12.7
BRVK *e* 23 47 38.0
BRVK S **S 23 52 39.4 +0.1**
BRVK pmax pmax
comp=Z,76nm,1.0s,mb5.7
BRVK Borovoye 48.02 309⇑*eP* **P 23 45 46.1 +0.5**
comp=Z,76nm,1.0s,mb5.7
BRVK *e* pP 23 46 03.5 +2.9
BRVK *e*PcP PcP 23 47 12.7 -0.1
BRVK *e*PP PP 23 47 38.0 +0.2
BRVK S **S 23 52 39.4 +0.1**
BRVK Borovoye 48.02 309 P **P 23 45 46.2 +0.7**
SNR=43
BRVK P 23 45 46.2
SNR=43
TKM2 Tokmak 2 48.14 295 P **P 23 45 47.9 +1.2**
SNR=190
TKM2 Tokmak 2 48.14 295⇑*iP* **P 23 45 47.5 +0.8**
TKM2 *e* pP 23 46 05.6 +4.0
TKM2 pmax pmax
comp=Z,113nm,0.8s,mb6.0
TKM2 Tokmak 2 48.14 295⇑*iP* **P 23 45 47.5 +0.8**
comp=Z,112nm,0.8s,mb6.0
TKM2 *e* pP 23 46 05.6 +3.9

KKN Kakani 48.15 272 *eP* **P 23 45 47.2 +0.3**
comp=Z,223nm,0.8s,mb6.2
PKI Pulchoki 48.17 272 *eP* **P 23 45 47.4 +0.3**
PKIN Phulchoki 48.18 272 *eP* **P 23 45 47.7 +0.5**
comp=Z,58nm,0.7s,mb5.7
DAWY Dawson 48.28 35 *eP* **P 23 45 46.8 -0.7**
DAWY *e* pP 23 46 03.2 +0.8
DAWY *e*PcP PcP 23 47 12.8 -0.7
DMN Daman 48.38 272 *eP* **P 23 45 49.0 +0.3**
comp=Z,172nm,0.8s,mb6.1
CHMS Chumysh 48.68 295 P **P 23 45 51.2 +0.4**
SNR=14
KBK Karagaybulak 48.68 295 P **P 23 45 51.9 +1.0**
SNR=105
KZA Kyzart 48.71 294 P **P 23 45 53.0 +1.9**
SNR=38
USP Ospenovka 48.74 296 P **P 23 45 51.9 +0.6**
SNR=46
FRU Bishkek 48.84 295 *iP* **P 23 45 51.5 -0.5**
FRU pmax pmax
comp=Z,180nm,2.2s,mb5.7
FRU MLR MLR
comp=Z,1µm,20.0s,MS4.8
AAK Ala-Archa 49.00 295 P **P 23 45 53.0 -0.3**
comp=Z,204nm,0.7s,mb6.3,SNR=8.1
AAK Ala-Archa 49.00 295 P **P 23 45 53.8 +0.5**
SNR=13
AAK Ala-Archa 49.00 295 P **P 23 45 53.7 +0.4**
comp=Z,15nm,0.6s,mb5.2,baz=128,slow=6.5,SNR=28
UCH Uchtor 49.15 294 P **P 23 45 55.6 +1.2**
SNR=12
UCH Uchtor 49.15 294⇑*eP* **P 23 45 55.3 +0.9**
comp=Z,15nm,0.8s,mb5.1
KSH Kashi 49.28 291⇑*iP* **P 23 45 59.8 +4.3**
KSH pP pP 23 46 18.5 +8.0
KSH PcP PcP 23 47 20.5 +3.0
KSH PP PP 23 47 55.8 +6.3
KSH ScP ScP 23 51 07.8 0.0
KSH PcS PcS 23 51 15.8 +1.7
KSH S **S 23 53 00.3 +2.9**
KSH sS sS 23 53 33.5 +11
KSH ScS ScS 23 55 41.0 -1.0
KSH SS SS 23 56 30.0 +0.9
KSH pmax pmax
comp=Z,24nm,1.0s,mb5.2
KSH pmax pmax
comp=Z,280nm,3.0s
KSH LR LR
comp=N,920nm,14.2s,MS5.1
KSH LR LR
comp=E,900nm,13.6s,MS5.1
KSH LR LR
comp=Z,1µm,14.4s,MS5.0
PNL Peninsula 49.34 41 *eP* **P 23 45 54.9 -0.7**
comp=Z,33nm,1.2s,mb5.2
PNL *e* pP 23 46 10.5 -0.1
PNL *e*PP PP 23 47 50.2 +0.5
EKS2 Erkin-Say 49.47 295 P **P 23 45 57.5 +0.6**
SNR=70
EKS2 Erkin-Say 49.47 295⇑*eP* **P 23 45 57.0 +0.1**
comp=Z,46nm,0.7s,mb5.6
EKS2 *e*PcP PcP 23 47 18.2 0.0
EKS2 *e*ScP ScP 23 51 09.2 +0.7
KSM Kuching 49.57 224 *eP* **P 23 45 58.2 +0.2**
comp=Z,128nm,1.6s,mb5.7
KSM *e* pP 23 46 13.9 +1.0
INK Inuvik 49.68 29⇑*eP* **P 23 45 57.3 -0.8**
INK *e* pP 23 46 11.2 -1.9
INK *e* 23 47 18.5
AML Almayashu 49.74 295 P **P 23 46 00.3 +1.4**
SNR=44
AML Almayashu 49.74 295⇑*eP* **P 23 46 00.2 +1.3**
comp=Z,40nm,0.9s,mb5.4
AML *e* pP 23 46 13.9 -0.1
AML *e*S **S 23 53 10.6 +6.8**
HYT Haines Junctio 49.93 39 *eP* **P 23 46 01.2 +1.1**
JOSI Joshimath 50.94 279 *e*PKP **P 23 46 08.3 +0.1**
KAPI Kappang 51.11 210 P **P 23 46 07.7 -1.8**
comp=Z,12nm,0.9s,mb4.8,baz=47,slow=14,SNR=7.3
KAPI pP pP 23 46 25.7 +1.0
comp=Z,87nm,1.2s,baz=6.1,slow=6.7,SNR=11
KAPI LR LR 00 05 41.2
comp=Z,289nm,19.7s,MS4.3,baz=219,slow=34
KAPI Kappang 51.11 210 *eP* **P 23 46 08.1 -1.4**
KAPI *e* pP 23 46 24.7 +0.1
SKAG Skagway 51.38 40 *eP* **P 23 46 10.9 -0.2**
comp=Z,26nm,1.0s,mb5.1
KLP Kalpa 51.40 280 *e*PKP **P 23 46 12.6 +1.0**
KULM Kulim 52.06 237 *eP* **P 23 46 16.8 +0.1**
comp=Z,61nm,0.8s,mb5.6
KULM *e* pP 23 46 34.2 +2.4
SVE Sverdlovsk 52.07 316⇓*eP* **P 23 46 16.9 +0.7**
SVE *e* 23 48 14.9
SVE *e*S **S 23 53 35.2 -0.3**
SVE pmax pmax
comp=Z,140nm,1.5s,mb5.7
SVE MLR MLR
comp=Z,3µm,18.0s,MS5.3
DDI Dehra Dun 52.17 279 *e*PKP **P 23 46 16.8 -0.5**
SIT Sitka 52.20 43 *eP* **P 23 46 17.1 -0.1**
SIT pmax pmax
comp=Z,32nm,1.2s,mb5.1
SIT Sitka 52.20 43 *eP* **P 23 46 17.1 -0.1**
comp=Z,32nm,1.2s,mb5.1
SMLA Simla 52.40 281 *iP* **P 23 46 19.5 +0.4**
THN Thein Dam 52.80 283 *ex* x 23 51 21.0
BHK Bhakra 52.80 281 *ex* x 23 46 26.8
SOKR Solikamsk 52.99 321*cP* **P 23 46 22.0 -0.9**
SOKR S **S 23 53 53.4 +5.4**
SOKR pmax pmax
comp=Z,90nm,1.1s,mb5.6
SOKR MLR MLR
comp=Z,1µm,18.0s,MS5.0
KKR Kurukshetra 53.27 279 *e*PKP **P 23 46 26.0 +0.5**
ARU Arti 53.28 316 P **P 23 46 25.1 0.0**
comp=Z,390nm,1.2s,mb6.2,SNR=22
ARU Arti 53.28 316⇑*iP* **P 23 46 25.1 0.0**
ARU *e* 23 47 31.4
ARU *e*S **S 23 53 50.0 -2.1**
ARU pmax pmax
comp=Z,146nm,1.3s,mb5.8
ARU Arti 53.28 316⇑*iP* **P 23 46 25.1 0.0**
comp=Z,146nm,1.3s,mb5.8
ARU *e*PcP PcP 23 47 31.4 -0.7
ARU *e*S **S 23 53 50.0 -2.1**
HNR Honiara 53.59 158 LR LR 00 05 51.5
comp=Z,540nm,19.8s,MS4.6,baz=335,slow=32
AGRA Agra 53.91 276 *e*PKP **P 23 46 30.1 -0.1**
AGRA AMb AMB 23 46 36.9
comp=Z,82nm,0.1s
SONA Sohna 53.99 278 *e*PKP **P 23 46 30.8 0.0**
SONA AMb AMB 23 46 32.7
comp=Z,84nm,0.6s,mb5.8
DLBC Dease Lake 54.31 40⇑*eP* **P 23 46 33.5 +0.8**
DLBC *e* pP 23 46 47.4 -0.5
DLBC *e*PcP PcP 23 47 35.7 -0.3
KHET Khetri 55.03 278 *e*PKP **P 23 46 38.4 +0.1**
KHET AMb AMB 23 46 40.5
comp=Z,52nm,0.8s,mb5.6
PSI Prapat 55.07 237 P **P 23 46 38.9 +0.2**
comp=Z,2.6nm,0.3s,mb4.7,baz=350,slow=6.9,SNR=5.9
PSI pP pP 23 46 54.7 +0.8
comp=Z,21nm,0.8s,baz=342,slow=6.4,SNR=5.8
ALE Alert 55.16 4 P **P 23 46 37.0 -1.5**
comp=Z,209nm,1.0s,mb6.1,SNR=9.1
KAKA Kakadu 55.16 192 *eP* **P 23 46 37.6 -1.6**
comp=Z,43nm,0.8s,mb5.5
KAKA Kakadu 55.16 192 *eP* **P 23 46 38.1 -1.1**
comp=Z,279nm,1.3s,mb6.1
KAKA *e* pP 23 46 54.6 +0.1
KAKA *e*PcP PcP 23 47 39.9 +0.1
VIS Vishakhapatnam 55.50 263 *e*PKP **P 23 46 41.7 -0.1**
VIS AMb AMB 23 46 45.9
comp=Z,55nm,1.4s,mb5.4
COEN Coen 55.63 179 *eP* **P 23 46 42.1 -0.4**
comp=Z,343nm,1.1s,mb6.3
COEN *e* pP 23 46 57.5 -0.3
KBS Kingsbay 55.96 350⇑*iP* **P 23 46 44.0 -0.2**
KBS *e*S **S 23 54 32.8 +5.2**
KBS AMS AMS 00 06 56.6
comp=Z,436nm,28.7s,MS4.4
KBS Kingsbay 55.96 350*ceP* **P 23 46 44.0 -0.3**
KBS pmax pmax
comp=Z,38nm,1.2s,mb5.3
KBS Kingsbay 55.96 350 *eP* **P 23 46 44.1 -0.2**
comp=Z,38nm,1.4s,mb5.2
KBS *e* pP 23 46 58.5 -1.1
KBL Kabul 56.51 288⇑*eP* **P 23 46 48.1 -0.7**
KBL *e* 23 47 45.5
KBL *e* 23 48 53.3
KBL pmax pmax
comp=Z,35nm,0.8s,mb5.4
KBL Kabul 56.51 288⇑*eP* **P 23 46 48.0 -0.8**
comp=Z,35nm,0.8s,mb5.4
KBL *e*PcP PcP 23 47 45.5 +0.5
KBL *e*PP PP 23 48 53.3 -1.5
BHPL Bhopal 56.56 272 *e*PKP **P 23 46 48.8 -0.6**
BHPL AMb AMB 23 46 52.1
comp=Z,95nm,1.3s,mb5.7
AJM Ajmer 56.77 277 *e*PKP **P 23 46 50.9 +0.1**
AJM AMb AMB 23 46 53.9
comp=Z,103nm,0.9s,mb5.9
RES Resolute Bay 57.65 15⇑*eP* **P 23 46 54.9 -1.4**
RES *e* 23 47 48.1
LVZ Lovozero 57.98 335⇑*eP* **P 23 46 58.6 -0.1**
APA Apatity 58.56 335⇑*iP* **P 23 47 02.4 -0.3**
APA *i* 23 47 52.0
APA *i* 23 49 10.0
APA *i* PPP 23 50 32.0
APA *i* S **S 23 54 58.0 -3.9**
APA *i* PS 23 55 20.0
APA *i* SS SS 23 58 54.0 -0.4
APA pmax pmax
comp=Z,18nm,1.1s,mb5.0
KEV Kevo 59.15 339 *eP* **P 23 47 03.9 -2.9**
KEV pmax pmax
comp=Z,28nm,0.8s,mb5.3
KEV Kevo 59.15 339 *ep* **P 23 47 03.9 -2.9**
comp=Z,28nm,0.8s,mb5.3
KEV Kevo 59.15 339 *ep* **P 23 47 03.9 -2.9**
comp=Z,28nm,0.8s,mb5.3
YKA Yellowknife Ar 59.19 32 P **P 23 47 06.5 -0.6**
comp=Z,15nm,0.9s,mb5.0,baz=302,slow=7.1,SNR=42
YKA pP pP 23 47 22.0 -0.5
comp=Z,12nm,0.8s,baz=307,slow=6.6,SNR=11
YKA Yellowknife Ar 59.19 32 P **P 23 47 06.5 -0.6**
YKA pP pP 23 47 22.1 -0.5
HYB Hyderabad 59.23 266 *iP* **P 23 47 08.0 -0.1**
HYB *e*pP pP 23 47 21.0 -2.5
ARCES ARCESS Array B 59.70 339 P **P 23 47 09.7 -0.8**
comp=Z,13nm,0.9s,mb4.9,baz=42,slow=6.9,SNR=24
ARCES LR LR 00 18 01.1
comp=Z,915nm,19.9s,MS4.9,baz=209,slow=41
ARCES ARCESS Array B 59.70 339 P **P 23 47 09.7 -0.9**
ARCES LR LR 00 18 01.1
ARE0 ARCESS Array S 59.70 339 *eP* **P 23 47 09.8 -0.7**
KTK1 Kautokeino 60.65 339 *eP* **P 23 47 16.8 -0.3**
DAG Danmarks Havn 60.95 355⇓*iP* **P 23 47 17.9 -1.1**
comp=Z,31nm,1.2s,mb5.3
TRO Tromso 61.34 341 *eP* **P 23 47 21.3 -0.5**
TRO *eS* **S 23 55 38.4 +0.8**
TRO AMS AMS 00 19 53.2
comp=Z,509nm,26.1s,MS4.6
FITZ Fitzroy Crossi 61.74 198 *eP* **P 23 47 24.3 -0.6**
comp=Z,23nm,1.1s,mb5.2
FITZ *e* pP 23 47 40.4 0.0
FITZ Fitzroy Crossi 61.74 198 P **P 23 47 24.3 -0.6**
comp=Z,10nm,1.0s,mb4.9,baz=28,slow=8.1,SNR=5.2
FITZ pP pP 23 47 40.5 +0.1
comp=Z,39nm,1.1s,baz=27,slow=9.3,SNR=11
FITZ Fitzroy Crossi 61.74 198 *eP* **P 23 47 24.1 -0.8**
comp=Z,56nm,1.8s,mb5.4
FITZ *e* pP 23 47 40.5 0.0
CTA Charters Tower 61.82 176 *eP* **P 23 47 24.3 -1.2**
comp=Z,16nm,1.4s,mb4.9
CTA Charters Tower 61.82 176 P **P 23 47 24.4 -1.1**
comp=Z,5.2nm,0.6s,mb4.8,baz=13,slow=7.9,SNR=6.5
CTAO Charters Tower 61.82 176 *eP* **P 23 47 24.5 -1.0**
WRAB Tennant Creek 62.02 189 P **P 23 47 25.0 -1.8**
comp=Z,464nm,0.9s,SNR=9.9
WRAB Tennant Creek 62.02 189 *eP* **P 23 47 25.2 -1.6**
comp=Z,7µm,0.7s
WRAB *e* pP 23 47 41.9 -0.4
JOF Joensuu 62.03 331 *ep* **P 23 47 24.8 -1.7**
comp=Z,37nm,0.7s,mb5.6
JOF Joensuu 62.03 331 *ep* **P 23 47 24.8 -1.7**
comp=Z,37nm,0.7s,mb5.6
WRA Warramunga Arr 62.03 189 P **P 23 47 25.3 -1.6**
comp=Z,10nm,0.5s,mb5.2,baz=7.7,slow=6.8,SNR=44
WRA pP pP 23 47 42.0 -0.4
comp=Z,56nm,0.9s,baz=8.2,slow=6.7,SNR=20
POO Poona 62.05 270 *e*PKP **P 23 47 27.4 +0.1**
ABKT Ailbek 62.23 297 P **P 23 47 28.6 +0.4**
comp=Z,353nm,1.0s,SNR=13
BHJ Bhuj 62.33 277 *e*PKP **P 23 47 29.7 +0.6**
KAD Karad 62.56 269 *e*PKP **P 23 47 30.7 0.0**
NLWA Neilton Lookou 62.87 50⇑P **P 23 47 32.5 +0.2**
baz=63,SNR=7.8
NLWA Neilton Lookou 62.87 50 *eP* **P 23 47 32.9 +0.6**
comp=Z,29nm,1.0s,mb5.4
NLWA *e* pP 23 47 47.9 +0.1
A05A Maple Falls 62.98 47⇑P **P 23 47 32.7 -0.3**
baz=63
CMW Cultus Mountai 63.28 48 P **P 23 47 35.3 +0.3**
GNW Green Mountain 63.36 49 *eP* **P 23 47 34.8 -0.8**
GNW *e* pP 23 47 51.0 -0.1
STEI Steigen 63.51 340 *eP* **P 23 47 35.5 -0.7**
JCW Jim Creek 63.51 48 P **P 23 47 36.7 +0.1**
B06A Marblemount 63.58 48⇓P **P 23 47 36.7 -0.3**
baz=63
RPW Rockport 63.60 48 *eP* **P 23 47 37.1 0.0**
comp=Z,9.1nm,0.6s,mb5.0
RPW *e* pP 23 47 50.9 -1.8
MOS Moscow 63.81 322 *eP* **P 23 47 36.2 -2.2**
MOS *e* pP 23 47 54.9 +1.0
MOS *e* 23 48 09.9
MOS *e* 23 49 55.6
MOS *eS* **S 23 56 02.3 -6.6**
MOS pmax pmax
comp=Z,500nm,2.6s,mb6.1
MOS pmax pmax
comp=Z,141nm,1.6s,mb5.8
MOS MLR MLR
comp=N,800nm,17.0s,MS5.1
MOS MLR MLR
comp=E,600nm,17.0s,MS5.1
F03A Seaside 63.85 51⇑P **P 23 47 39.3 +0.5**
baz=64
D05A Emmmclaw 64.04 49⇑P **P 23 47 40.8 +0.7**
baz=64
D05A ⇓S **S 23 56 12.3 +0.3**
baz=64
KAF Kangasniemi 64.33 332 *eP* **P 23 47 39.4 -2.3**
KAF pmax pmax
comp=Z,39nm,0.7s,mb5.5
KAF Kangasniemi 64.33 332 *ep* **P 23 47 39.4 -2.3**
comp=Z,39nm,0.7s,mb5.5
KAF Kangasniemi 64.33 332 *ep* **P 23 47 39.4 -2.3**
comp=Z,39nm,0.7s,mb5.5
LON Longmire 64.39 49 *eP* **P 23 47 42.0 -0.4**
LON *e* pP 23 47 57.1 -0.8
LON pmax pmax
comp=Z,25nm,1.1s,mb5.2
LON Longmire 64.39 49 *eP* **P 23 47 42.0 -0.4**
comp=Z,25nm,1.1s,mb5.2
LON *e* pP 23 47 57.1 -0.8
PUL Pulkovo 64.39 329⇑*eP* **P 23 47 41.4 -0.7**
NLW Nelson Butte 64.46 48 P **P 23 47 43.0 +0.2**
F04A Amboy 64.51 50⇓P **P 23 47 42.8 -0.3**
baz=64,SNR=5.3
F04A ⇓S **S 23 56 19.6 +1.8**
baz=64
OBN Obninsk 64.67 322 P **P 23 47 43.3 -0.7**
comp=Z,433nm,1.0s,mb6.4,SNR=9.7
OBN Obninsk 64.67 322⇑*iP* **P 23 47 43.6 -0.4**
OBN *i* pP 23 48 00.2 +0.6
OBN *eS* **S 23 56 22.5 +3.0**
OBN *eSS* SS 00 00 31.4 +1.1
OBN pmax pmax
comp=Z,118nm,1.2s,mb5.8
OBN MLR MLR
comp=Z,2µm,17.0s,MS5.2
OBN Obninsk 64.67 322 *eP* **P 23 47 43.6 -0.5**
comp=Z,95nm,1.0s,mb5.8
OBN *e* pP 23 47 59.0 -0.6
ETW Entiat 64.73 48 *eP* **P 23 47 44.6 0.0**
comp=Z,120nm,1.5s,mb5.7
ETW *e* pP 23 47 58.9 -1.2
B08A Colville Reser 64.84 47⇓P **P 23 47 44.9 -0.4**
baz=65,SNR=6.8

B08A ⇑S **S** **23 56 22.2 +0.4**
baz=65
FINES FINESS Array B 64.86 332 P **P** **23 47 44.6 -0.5**
comp=Z,61nm,0.8s,mb5.7,baz=42,slow=7.5,SNR=105
FINES pP pP 23 48 01.4 +0.6
comp=Z,34nm,0.7s,baz=47,slow=8.4,SNR=7.4
FINES LR LR 00 18 36.9
comp=Z,2µm,20.4s,MS5.4,baz=45,slow=38
FINES FINESS Array B 64.86 332 P **P** **23 47 44.6 -0.5**
FINES *PP pP 23 48 01.4 +0.7
G04A Mulino 64.89 51 ⇓P **P** **23 47 46.1 +0.5**
baz=65
NAC Naches 64.96 49 P **P** **23 47 46.5 +0.5**
EBG Ellensburg 65.00 49 P **P** **23 47 46.8 +0.5**
EDM Edmonton 65.03 40 *eP* **P** **23 47 45.9 -0.5**
EDM *e* pP 23 48 00.5 -1.5
MOR8 Moi Rana 65.04 339⇑*iP* **P** **23 47 44.4 -1.9**
MOR8 AMb AMB 23 47 46.0
comp=Z,80nm,0.8s,mb5.8
MOR8 Moi Rana 65.04 339⇑*iP* **P** **23 47 44.4 -1.9**
comp=Z,80nm,0.8s,mb5.8
H04A Detroit Lake 65.36 51 ⇓P **P** **23 47 48.1 -0.6**
baz=65,SNR=12
E07A Sunnyside 65.60 49 ⇓P **P** **23 47 50.1 -0.1**
baz=65
OD2 Odessa Site #2 65.75 47 P **P** **23 47 50.9 -0.3**
ASAR Alice Springs 65.76 189 P **P** **23 47 50.4 -0.9**
comp=Z,4.8nm,0.7s,mb4.7,baz=1.5,slow=5.3,SNR=42
ASAR PKPPKP 00 16 33.5
comp=Z,1.1nm,1.0s,baz=198,slow=3.7,SNR=5.4
SUMG Summit 65.78 0 *eP* **P** **23 47 51.2 +0.3**
comp=Z,63nm,0.7s,mb5.8
SUMG *e* pP 23 48 06.7 +0.2
SUMG Summit 65.78 0⇑*iP* **P** **23 47 51.4 +0.5**
comp=Z,58nm,0.7s,mb5.7
VSR Storozhevoye 65.80 318*c iP* **P** **23 47 51.1 -0.3**
VSR *e**SP sP 23 48 07.9 -5.5
VSR *e* 23 50 15.4
VSR *eS* S 23 56 33.4 0.0
VSR pmax pmax
comp=N,30nm,1.0s
VSR pmax pmax
comp=E,40nm,1.0s
VSR pmax pmax
comp=Z,90nm,1.0s,mb5.8
VSR pmax pmax
comp=Z,100nm,2.8s,mb5.3
VSR pmax pmax
comp=N,30nm,0.9s
VSR pmax pmax
comp=E,40nm,1.4s
VSR smax
comp=E,150nm,4.8s
VSR smax
comp=Z,120nm,4.8s
VSR MLR MLR
comp=N,780nm,20.0s,MS5.0
VSR MLR MLR
comp=E,480nm,20.0s,MS5.0
VSR MLR MLR
comp=Z,1µm,20.0s,MS5.1
D08A Wollman Farm, 65.83 48 ⇓P **P** **23 47 51.3 -0.4**
baz=66,SNR=7.3
RSW Rattlesnake Hi 65.85 49 *eP* **P** **23 47 51.5 -0.2**
comp=Z,53nm,1.2s,mb5.4
RSW *e* pP 23 48 07.0 -0.4
WRD Warden 65.86 48 P **P** **23 47 52.0 +0.2**
HAWA Hanford 65.88 49 *eP* **P** **23 47 51.5 -0.5**
comp=Z,38nm,1.2s,mb5.3
HAWA *e* pP 23 48 07.2 -0.4
VORD Divnogorie 65.88 318*c iP* **P** **23 47 51.8 -0.2**
VORD *e**PP pP 23 48 03.6 -4.0
VORD *e**SP sP 23 48 08.5 -5.5
VORD MLR MLR
comp=N,10.0nm,22.0s
VORD MLR MLR
comp=E,10.0nm,22.0s
VORD MLR MLR
comp=Z,10.0nm,22.0s
F07A Phinny Hill Vi 65.95 49⇑P **P** **23 47 52.6 +0.1**
baz=66
E08A Dider Farm, El 66.09 48 ⇓P **P** **23 47 53.4 0.0**
baz=66
E08A ⇑S S 23 56 36.9 -0.2
baz=66
HUMO Hull Mountain 66.11 54 *eP* **P** **23 47 53.8 +0.3**
comp=Z,24nm,1.4s,mb5.0
HUMO *e* pP 23 48 09.4 +0.2
MAK Makhachkala 66.11 307 *eP* **P** **23 47 51.8 -1.7**
MAK *e**PP pP 23 48 08.1 -1.0
MAK *i* 23 48 21.5
MAK *i* 23 50 17.5
MAK *e*PPP 23 52 02.2
MAK *eS* S 23 56 36.6 -0.8
MAK *e* 23 56 56.8
MAK *i **SS sS 23 57 04.6 +0.8
MAK pmax pmax
comp=Z,45nm,0.7s,mb5.6
MAK MLR MLR
comp=Z,732nm,18.0s,MS4.9
MBWA Marble Bar 66.22 203 *eP* **P** **23 47 54.3 0.0**
MBWA *e* pP 23 48 10.1 +0.1
MBWA Marble Bar 66.22 203 ⇓P **P** **23 48 10.9 +17**
SNR=5.1
MBWA ⇓P 23 48 10.9
SNR=5.1
A12A Yaak River Ran 66.47 45⇑P **P** **23 47 55.8 0.0**
baz=66
E09A Wood Farm, Sta 66.58 48⇑P **P** **23 47 56.2 -0.3**
baz=66,SNR=8.1
E09A ⇓S S 23 56 42.9 -0.2
baz=66
VSU Vasula 66.64 329⇑*iP* **P** **23 47 56.2 -0.5**
YBH Yreka Blue Hor 66.77 54 *eP* **P** **23 47 58.4 +0.6**
YBH *e* pP 23 48 13.1 -0.3
YBH pmax pmax
comp=Z,27nm,1.1s
YBH Yreka Blue Hor 66.77 54 *eP* **P** **23 47 58.4 +0.6**
comp=Z,27nm,1.1s,mb5.2
YBH *e* pP 23 48 13.1 -0.3
B12A Libby 66.79 45 ⇓P **P** **23 47 57.9 +0.2**
baz=66
G08A Pilot Rock 66.86 49⇑P **P** **23 47 57.9 -0.3**
baz=67,SNR=5.7
LNOR Lincton Mounta 66.89 49 *eP* **P** **23 47 58.7 +0.2**
LNOR *e* pP 23 48 13.8 -0.3
LNOR pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
LNOR Lincton Mounta 66.89 49 *eP* **P** **23 47 58.6 +0.2**
comp=Z,10nm,0.8s,mb4.9
LNOR *e* pP 23 48 13.8 -0.3
NSS Namsos 66.98 339 *eP* **P** **23 47 56.9 -1.8**
K05A Summer Lake 67.27 53⇑P **P** **23 48 01.5 +0.6**
baz=67,SNR=13
WALA Waterton Lakes 67.30 44 *eP* **P** **23 48 00.4 -0.6**
comp=Z,1.1nm,1.0s
WALA *e* pP 23 48 15.9 -0.8
SCO Scoresbysund 67.31 354⇑*iP* **P** **23 48 00.1 -0.6**
comp=Z,11nm,0.9s,mb4.9
SCO *i* 23 48 23.5
C12B Naegeli Ranch, 67.31 46⇑P **P** **23 48 01.2 0.0**
baz=67
F10A Beach Ranch, E 67.42 48⇑P **P** **23 48 02.3 +0.5**
baz=67
B13A Whitefish 67.44 45⇑P **P** **23 48 01.8 -0.1**
baz=67,SNR=18
EIDS Eidsvold 67.45 172 *eP* **P** **23 48 02.0 -0.1**
comp=Z,18nm,0.8s,mb5.2
EIDS *e* pP 23 48 17.9 +0.1
DZM Mont Dzumac 67.46 156 *e*LR LR 00 08 39.4
comp=Z,1µm,23.4s
H08A Prairie City 67.48 50⇑P **P** **23 48 02.4 +0.1**
baz=67,SNR=8.0
G09A Cove 67.53 49⇑P **P** **23 48 02.4 -0.1**
baz=67,SNR=9.4
WDC Whiskeytown Da 67.55 55 *eP* **P** **23 48 03.2 +0.5**
WDC *e* pP 23 48 18.1 -0.3
WDC pmax pmax
comp=Z,21nm,1.0s,mb5.1
WDC Whiskeytown Da 67.55 55 *eP* **P** **23 48 03.2 +0.4**
comp=Z,21nm,1.0s,mb5.1
WDC *e* pP 23 48 18.1 -0.3
BSMT Bassoo Peak 67.59 45 *eP* **P** **23 48 03.3 +0.4**
comp=Z,24nm,1.3s,mb5.1
BSMT *e* pP 23 48 19.0 +0.4
A14A Double T Ranch 67.61 44 ⇓P **P** **23 48 02.7 -0.2**
baz=67
C13A Hot Springs 67.81 45⇑P **P** **23 48 04.3 0.0**
baz=68,SNR=7.4
LTIM Timbered Crate 67.83 54 P **P** **23 48 04.9 +0.4**
G10A Bishop Farm, J 67.89 49 ⇓P **P** **23 48 04.9 +0.1**
baz=68
JTMT Jette 67.92 45 *eP* **P** **23 48 05.4 +0.4**
comp=Z,25nm,1.0s,mb5.2
JTMT *e* pP 23 48 20.9 +0.2
A15A Johnson Ranch, 67.96 43⇑P **P** **23 48 04.3 -0.9**
baz=68,SNR=13
H09A Durkee 67.97 49⇑P **P** **23 48 05.7 +0.4**
baz=68
YBMT Yellow Bay 67.99 45 *eP* **P** **23 48 05.8 +0.4**
comp=Z,19nm,1.0s,mb5.1
YBMT *e* pP 23 48 19.9 -1.2
BMO Blue Mountains 68.06 49 *eP* **P** **23 48 05.6 -0.2**
BMO *e* pP 23 48 20.9 -0.7
F11A Grangeville 68.06 48 ⇓P **P** **23 48 05.3 -0.6**
baz=68,SNR=13
B14A Marquette Ranc 68.07 44⇑P **P** **23 48 05.6 -0.3**
baz=68,SNR=13
SWMT Swartz Lake 68.22 45 *eP* **P** **23 48 07.2 +0.3**
comp=Z,33nm,1.0s,mb5.3
D13A Huson 68.23 46 ⇓P **P** **23 48 06.4 -0.5**
baz=68,SNR=13
G11A Walters Elk Ra 68.30 48 ⇓P **P** **23 48 06.8 -0.5**
baz=68,SNR=25
J08A Circle Bar Ran 68.30 51⇑P **P** **23 48 07.7 +0.3**
baz=68,SNR=13
KIV Kislovodsk 68.33 310 P **P** **23 48 08.0 +0.4**
comp=Z,862nm,0.8s,SNR=25
KIV Kislovodsk 68.33 310*c iP* **P** **23 48 08.5 +0.9**
KIV *e* 23 48 33.4
KIV *e* 23 50 38.0
KIV *e*S S 23 57 05.4 +1.3
KIV *e*SS SS 00 01 28.9 +1.4
KIV pmax pmax
comp=Z,176nm,1.2s,mb6.0
KIV pmax pmax
comp=Z,114nm,4.4s
KIV Kislovodsk 68.33 310 *eP* **P** **23 48 08.0 +0.5**
comp=Z,115nm,0.8s,mb6.0
KIV Kislovodsk 68.33 310⇑P **P** **23 48 08.7 +1.1**
SNR=51
KIV ⇑P 23 48 08.7
SNR=51
I09A Lost Marbles R 68.35 50 ⇓P **P** **23 48 07.5 -0.2**
baz=68,SNR=7.9
ZEI Tsey 68.35 308 *eP* **P** **23 48 06.8 -0.9**
ZEI pmax pmax
comp=Z,32nm,0.8s,mb5.4
B15A Bradely Ranch, 68.47 44 ⇓P **P** **23 48 08.0 -0.4**
baz=68,SNR=34
TBLG Delisi 68.49 307 *i* P **P** **23 48 09.6 +1.0**
TBLG Delisi 68.49 307 P **P** **23 48 09.6 +1.0**
H10A Noah's Angus R 68.53 49⇑P **P** **23 48 08.3 -0.5**
baz=68,SNR=16
KEH Kehvi 68.61 308 P **P** **23 48 08.9 -0.5**
F12A Elk City 68.64 47 ⇓P **P** **23 48 09.3 -0.1**
baz=68,SNR=22
SLMT Seeley Lake 68.66 45 *eP* **P** **23 48 09.4 -0.2**
comp=Z,37nm,1.1s,mb5.2
SLMT *e* pP 23 48 24.6 -0.6
MSO Missoula 68.68 46 *eP* **P** **23 48 09.1 -0.6**
comp=Z,16nm,1.1s,mb4.9
MSO *e* pP 23 48 25.0 -0.4
GOR Gori 68.70 308 P **P** **23 48 11.2 +1.3**
IZAR Zarasai 68.71 327 *eP* **P** **23 48 09.9 +0.2**
IZAR AMB AMB 23 48 11.3
comp=Z,15nm,0.9s,mb4.9
ONI Oni 68.72 308 P **P** **23 48 11.2 +1.2**
D14A Greenough 68.75 45 ⇓P **P** **23 48 09.6 -0.5**
baz=68,SNR=14
WVOR Wild Horse Val 68.77 52 *eP* **P** **23 48 10.5 +0.1**
WVOR *e* pP 23 48 24.9 -1.2
WVOR pmax pmax
comp=Z,14nm,0.9s,mb4.9
WVOR Wild Horse Val 68.77 52 *eP* **P** **23 48 10.5 +0.1**
comp=Z,14nm,0.9s,mb4.9
WVOR *e* pP 23 48 24.9 -1.1
C15A Salmond Ranch, 68.78 44 ⇓P **P** **23 48 10.6 +0.2**
baz=68,SNR=24
E13A Victor 68.79 46 ⇓P **P** **23 48 10.0 -0.3**
baz=68
I10A Payette 68.81 49 ⇓P **P** **23 48 11.0 +0.5**
baz=69
IDID Didziasalis 68.81 326 *eP* **P** **23 48 10.6 +0.2**
IDID AMB AMB 23 48 12.7
comp=Z,23nm,1.1s,mb5.0
B16A M & M Farms, S 68.84 43 ⇓P **P** **23 48 10.2 -0.5**
baz=69,SNR=16
H11A Donnelly 68.87 49⇑P **P** **23 48 10.3 -0.7**
baz=69,SNR=9.2
ISAL Salakas 68.88 327 *eP* **P** **23 48 11.1 +0.3**
ISAL AMB AMB 23 48 13.1
comp=Z,28nm,1.0s,mb5.2
MICGM Minsk 68.90 325⇓*eP* **P** **23 48 10.0 -0.9**
MNK Minsk 68.92 325⇓*eP* **P** **23 48 10.0 -1.0**
MNK pmax pmax
comp=Z,280nm,1.0s,mb6.2
MNK MLR MLR
comp=Z,5µm,20.0s,MS5.7
MNK MLR MLR
comp=N,4µm,20.0s
CHMT Chamberlain Mo 68.99 45 *eP* **P** **23 48 11.1 -0.6**
comp=N,7.7nm,0.9s,mb4.6
IIGN Ignalina 69.00 327 *eP* **P** **23 48 11.8 +0.3**
IIGN AMB AMB 23 48 13.8
comp=Z,26nm,1.0s,mb5.1
NACGM Naroch 69.08 326 *e* **P** **23 48 10.0 -2.1**
F13A Darby 69.12 47 ⇓P **P** **23 48 12.0 -0.5**
baz=69
FFC Flin Flon 69.17 34 P **P** **23 48 12.7 +0.1**
comp=Z,421nm,0.9s,mb6.4,SNR=30
FFC Flin Flon 69.17 34 *i* P **P** **23 48 12.1 -0.5**
FFC Flin Flon 69.17 34 *eP* **P** **23 48 12.2 -0.4**
comp=Z,72nm,0.9s,mb5.6
FFC *e* pP 23 48 27.3 -1.0
E14A Clinton 69.18 46 ⇓P **P** **23 48 12.2 -0.6**
baz=69,SNR=6.3
C16A Fuhringer Ranc 69.22 44 ⇓P **P** **23 48 12.7 -0.3**
baz=69,SNR=19
J10A Berg Farm, Mel 69.24 50⇑P **P** **23 48 13.3 0.0**
baz=69
FCC Fort Churchill 69.27 28 *eP* **P** **23 48 12.5 -0.6**
comp=Z,3.4nm,1.3s
FCC *e*pP pP 23 48 27.4 -1.4
D15A Lincoln 69.30 45 ⇓P **P** **23 48 13.2 -0.4**
baz=69,SNR=5.7
BEKR Beckworth 69.31 55 ⇓P **P** **23 48 13.6 -0.2**
baz=69,SNR=20
B17A L&G Farms, Che 69.39 43⇑P **P** **23 48 13.4 -0.6**
baz=69,SNR=7.4
I11A Placerville 69.40 49 ⇓P **P** **23 48 14.2 0.0**
baz=69
GNI Garni 69.45 306*ce*P **P** **23 48 16.2 +1.6**
GNI pmax pmax
comp=Z,79nm,1.2s
GNI Garni 69.45 306 *eP* **P** **23 48 16.0 +1.4**
comp=Z,185nm,1.4s,mb5.8
GNI Garni 69.45 306 ⇓P **P** **23 48 16.7 +2.1**
SNR=22
GNI ⇓P 23 48 16.7
SNR=22
A18A Metzger Ranch, 69.46 42 ⇓P **P** **23 48 13.9 -0.6**
baz=69,SNR=17
K10A MacKenzie Ranc 69.58 51 ⇓P **P** **23 48 15.6 +0.2**
baz=69,SNR=12
G13A Cobalt 69.61 47 ⇓P **P** **23 48 14.6 -1.0**
baz=69,SNR=6.9
H12A Diamond D Ranc 69.61 48⇑P **P** **23 48 15.1 -0.4**
baz=69,SNR=11
E15A Deer Lodge 69.63 45 ⇓P **P** **23 48 14.9 -0.7**
baz=69,SNR=16
F14A Wisdom 69.63 46 ⇓P **P** **23 48 15.5 -0.1**
baz=69
MOL Molde 69.73 340 *eP* **P** **23 48 15.0 -1.0**
MFID Camas Ranch 69.78 49 ⇓P **P** **23 48 16.5 -0.1**
baz=70,SNR=7.2
D16A Dana Ranch, Ca 69.81 44 ⇓P **P** **23 48 16.6 -0.1**
baz=70,SNR=12
C17A Wharram Farm, 69.83 44 ⇓P **P** **23 48 16.2 -0.6**
baz=70,SNR=10
B18A Beardsley Farm 69.84 43 ⇓P **P** **23 48 16.6 -0.2**
baz=70,SNR=18
HRY Holter Researc 69.87 45 *eP* **P** **23 48 16.8 -0.3**
comp=Z,19nm,0.7s,mb5.1
HRY *e*pP pP 23 48 32.0 -0.8
I12A Atlanta 69.93 49⇑P **P** **23 48 17.6 +0.1**
baz=70,SNR=23
H13A Challis 69.94 48⇑P **P** **23 48 17.3 -0.3**
baz=70,SNR=20
G14A Jackson 69.94 47⇑P **P** **23 48 16.8 -0.7**
baz=70
NB2 NORSAR Subarra 69.97 337 P **P** **23 48 16.7 -0.7**
comp=Z,56nm,0.8s,mb5.5,baz=37,slow=6.2
NOA NORSAR Array B 69.97 337 P **P** **23 48 16.9 -0.5**
comp=Z,44nm,0.8s,mb5.5,baz=37,slow=6.1,SNR=190
NOA pP pP 23 48 34.7 +1.5
comp=Z,20nm,0.7s,baz=36,slow=6.1,SNR=5.4
NOA LR LR 00 22 36.8
comp=Z,810nm,20.6s,MS5.0,baz=35,slow=39
NOA NORSAR Array B 69.97 337 P **P** **23 48 17.0 -0.4**
NOA *PP pP 23 48 34.7 +1.5
WCN Washoe City 70.03 55 ⇓P **P** **23 48 18.8 +0.7**
baz=70
E16A East Helena 70.07 45⇑P **P** **23 48 18.0 -0.3**
baz=70,SNR=17
K11A Parker Ranch, 70.07 50 ⇓P **P** **23 48 18.2 -0.2**
baz=70,SNR=9.2
F15A Butte 70.08 46⇑P **P** **23 48 18.4 0.0**
baz=70,SNR=14
EGMT Eagleton 70.09 43⇑P **P** **23 48 17.9 -0.5**
baz=70,SNR=14
EGMT Eagleton 70.09 43 *eP* **P** **23 48 18.2 -0.2**
comp=Z,37nm,0.8s,mb5.4
EGMT *e*pP pP 23 48 33.0 -1.1
LRM Limekiln Ridge 70.11 46 *eP* **P** **23 48 18.7 +0.1**
comp=Z,186nm,1.0s,mb6.0
LRM *e*pP pP 23 48 33.4 -0.9
D17A Six Diamond Ra 70.18 44 ⇓P **P** **23 48 18.4 -0.5**
baz=70,SNR=9.7
NAO01 NORSAR Array S 70.22 337 *eP* **P** **23 48 18.5 -0.5**
comp=Z,26nm,0.8s,mb5.2
SOC Sochi 70.24 311*c iP* **P** **23 48 19.6 +0.2**
SOC *e**PP pP 23 48 35.1 -0.1
SOC *e* 23 50 51.2
SOC *eS* S 23 57 26.6 -0.1
SOC *e**SS sS 23 57 55.3 +2.1
SOC pmax pmax
comp=Z,333nm,2.5s,mb5.8
SOC pmax pmax
comp=Z,116nm,1.8s,mb5.5
SOC MLR MLR
comp=Z,1µm,18.0s,MS5.2
L10A Juniper Basin 70.25 51⇑P **P** **23 48 19.5 0.0**
baz=70,SNR=6.5
J12A Stokes Ranch, 70.30 49 ⇓P **P** **23 48 19.8 +0.1**
baz=70,SNR=7.7
DLMT Dillon 70.33 46 *eP* **P** **23 48 20.2 +0.3**
comp=Z,39nm,1.1s,mb5.2
H14A Leadore 70.39 47 ⇓P **P** **23 48 20.2 -0.1**
baz=70
CMB Columbia Colle 70.42 56 *eP* **P** **23 48 20.2 -0.4**
CMB *e**PP pP 23 48 35.7 -0.7
CMB pmax pmax
comp=Z,48nm,1.2s,mb5.3
CMB Columbia Colle 70.42 56 *eP* **P** **23 48 20.2 -0.4**
comp=Z,48nm,1.2s,mb5.3
CMB *e*pP pP 23 48 35.7 -0.7
I13A Wildhorse Cree 70.43 48 ⇓P **P** **23 48 20.7 +0.2**
baz=70,SNR=22
ARTV Artvin 70.48 308 *i* P **P** **23 48 21.9 +1.0**
HLID Hailey 70.48 49⇑P **P** **23 48 20.9 0.0**
baz=70,SNR=13
HLID Hailey 70.48 49 *eP* **P** **23 48 21.1 +0.2**
comp=Z,11nm,1.0s,mb4.8
HLID *e*pP pP 23 48 36.1 -0.6
G15A Dillon 70.52 46⇑P **P** **23 48 20.9 -0.1**
baz=70,SNR=30
MCMT McKenzie Canyo 70.54 47 *eP* **P** **23 48 21.4 +0.2**
comp=Z,4.0nm,0.9s,mb4.3
E17A Martinsdale 70.54 45⇑P **P** **23 48 21.6 +0.4**
baz=70,SNR=19
WBK Wadi Bani Khal 70.56 283 ⇓P **P** **23 48 23.1 +1.4**
SNR=6.0
M10A I.L. Ranch, Tu 70.56 51 ⇓P **P** **23 48 22.0 +0.6**
baz=70,SNR=9.0
F16A Kennard Place, 70.58 46 ⇓P **P** **23 48 21.4 0.0**
baz=70,SNR=8.7
L11A Cat Creek Ranc 70.61 50 ⇓P **P** **23 48 22.0 +0.3**
baz=70,SNR=20
D18A Linhart Farms, 70.61 44⇑P **P** **23 48 21.4 -0.2**
baz=70,SNR=6.1
BOZ Bozeman (W) 70.67 46⇑P **P** **23 48 22.1 +0.2**
baz=70,SNR=31
BOZ Bozeman (W) 70.67 46 *eP* **P** **23 48 21.5 -0.5**
BOZ *e**PP pP 23 48 36.4 -1.3
BOZ pmax pmax
comp=Z,29nm,1.0s,mb5.2
BOZ Bozeman (W) 70.67 46 *eP* **P** **23 48 21.5 -0.5**
comp=Z,29nm,1.0s,mb5.2
BOZ *e*pP pP 23 48 36.4 -1.3
J13A Cove Ranch, Pi 70.72 49⇑P **P** **23 48 22.6 +0.2**
baz=70,SNR=14
ANN Anapa 70.73 313*d iP* **P** **23 48 20.9 -1.4**
ANN *i **PP pP 23 48 37.9 -0.2
ANN *eS* S 23 57 30.5 -1.8
ANN *e*SS SS 00 02 02.7 -1.6
ANN pmax pmax
comp=Z,109nm,1.4s,mb5.6
ANN MLR MLR
comp=Z,738nm,22.0s,MS4.9
DBAD Bademkaya 70.73 308 *i* P **P** **23 48 23.6 +1.2**
DDEM Demirkent 70.77 308 *i* P **P** **23 48 23.3 +0.6**
H15A Lima 70.79 47 ⇓P **P** **23 48 22.6 -0.1**
baz=70
I14A Mackay 70.79 48⇑P **P** **23 48 22.7 -0.1**
baz=70,SNR=19
K12A Draper Farm, C 70.80 50⇑P **P** **23 48 22.9 0.0**
baz=70,SNR=5.1
G16A Moss Hill, Enn 70.84 46 ⇓P **P** **23 48 22.8 -0.2**
baz=71,SNR=11
BMN Battle Mountai 70.85 53 *eP* **P** **23 48 23.6 +0.5**
BMN pmax pmax
comp=Z,12nm,1.0s,mb4.8
BMN Battle Mountai 70.85 53 *eP* **P** **23 48 23.6 +0.4**
comp=Z,12nm,1.0s,mb4.8
AKASG Malin Array Be 70.92 322 P **P** **23 48 23.0 -0.4**
comp=Z,57nm,0.8s,mb5.6,baz=44,slow=5.9,SNR=140
AKASG LR LR 00 22 46.3
comp=Z,2µm,18.7s,MS5.3,baz=35,slow=38
AKASG Malin Array Be 70.92 322 P **P** **23 48 23.0 -0.4**
AKASG LR LR 00 22 46.3
AKBB Malin Array Si 70.92 322 *eP* **P** **23 48 22.7 -0.7**
SFJD Kangerlussuaq 70.93 5 *eP* **P** **23 48 22.4 -0.8**
SFJD *e**PP pP 23 48 37.9 -1.0
SFJD pmax pmax
comp=Z,59nm,1.1s,mb5.4
SFJD Kangerlussuaq 70.93 5 *eP* **P** **23 48 22.4 -0.8**
comp=Z,59nm,1.1s,mb5.4
SFJD *e*pP pP 23 48 37.9 -1.0
SFJD Kangerlussuaq 70.93 5⇑*iP* **P** **23 48 22.4 -0.8**
comp=Z,21nm,0.9s,mb5.1
KIEV Kiev 70.93 322 *eP* **P** **23 48 22.9 -0.6**
KIEV pmax pmax
comp=Z,59nm,0.8s,mb5.6
KIEV Kiev 70.93 322 *eP* **P** **23 48 22.9 -0.5**
comp=Z,59nm,0.8s,mb5.6
SMDO Samad 70.95 284⇑P **P** **23 48 25.7 +1.6**
SNR=6.9
E18A Harlowton 70.97 44⇑P **P** **23 48 23.8 0.0**
baz=71,SNR=12
OSL Oslo 71.01 337 *eP* **P** **23 48 22.5 -1.3**
OSL AMb AMB 23 48 24.8
comp=Z,61nm,2.0s,mb5.2
F17A Fitzpatrick Pl 71.01 45⇑P **P** **23 48 24.0 -0.1**
baz=71,SNR=8.4
L12A House Creek Ra 71.05 50 ⇓P **P** **23 48 24.8 +0.5**
baz=71,SNR=8.0
M11A Holland Ranch, 71.05 51 ⇓P **P** **23 48 25.3 +0.9**
baz=71,SNR=13
TUTA Tutak 71.08 306 *i* P **P** **23 48 25.6 +1.1**
N10A Dunphy 71.09 52⇑P **P** **23 48 25.5 +0.9**
baz=71
J14A Carey 71.14 48 ⇓P **P** **23 48 25.8 +0.9**
baz=71,SNR=24
HOQ Hoqain 71.16 285 ⇓P **P** **23 48 25.7 +0.4**
SNR=7.3
SUW Suwalki 71.19 327 *eP* **P** **23 48 24.2 -0.8**
SUW Suwalki 71.19 327 *eP* **P** **23 48 24.5 -0.5**
HOMI Horasan 71.22 307 *i* P **P** **23 48 26.9 +1.5**

HATD Hatta, Dubai 71.24 287 ⇑P P 23 48 26.3 +0.6
SNR=10
K13A Stover Farm, H 71.25 49 ⇓P P 23 48 26.1 +0.6
baz=71
TVAN Van 71.27 305 *i* P **P 23 48 25.6 -0.2**
I15A Monteview 71.27 47 ⇑P P 23 48 26.3 +0.7
baz=71
QLMT Earthquake Lak 71.31 46 *e*P **P 23 48 26.4 +0.6**
comp=Z,8.2nm,0.9s,mb4.7
QLMT *e*pP pP 23 48 41.6 0.0
JMDO Jabal Madar 71.33 284 ⇓P P 23 48 27.4 +1.0
SNR=5.9
G17A Pierce Place, 71.35 45 ⇑P P 23 48 26.8 +0.7
baz=71
O10A Cortez Mining, 71.36 52 ⇓P P 23 48 27.1 +0.8
baz=71
ASHO Ashiyiah 71.38 287 ⇑P P 23 48 27.3 +0.7
SNR=13
NVAR Mina Array Bea 71.45 55 P **P 23 48 27.4 +0.5**
comp=Z,11nm,0.7s,mb4.9,baz=288,slow=5.9,SNR=79
NVAR pP pP 23 48 42.3 -0.4
comp=Z,12nm,0.8s,baz=278,slow=5.0,SNR=12
N11A Elko Archery C 71.48 52 ⇑P P 23 48 27.7 +0.7
baz=71
H16A Russell Place, 71.49 46 ⇓P P 23 48 27.5 +0.5
baz=71
F18A Big Timber 71.51 44 ⇑P P 23 48 26.9 -0.1
baz=71,SNR=18
M12A Wells 71.57 51 ⇑P P 23 48 28.4 +0.9
baz=71
KONO Kongsberg 71.57 337 *e*S S 23 57 41.9 +0.3
KONO AMS AMS 00 22 37.0
comp=Z,592nm,22.7s,MS4.8
KONO Kongsberg 71.57 337⇑ *e*P **P 23 48 28.6 +1.4**
GCMT Greycliff 71.61 45 *e*P **P 23 48 28.5 +0.9**
comp=Z,23nm,1.2s,mb5.0
GCMT *e*pP pP 23 48 43.3 -0.2
MLAC Mammoth Lakes 71.63 56 ⇑P P 23 48 28.9 +1.0
baz=71
HAKT HAKKARI 71.69 304 *i* P **P 23 48 26.6 -1.7**
J15A Blackfoot 71.69 48 ⇑P P 23 48 28.7 +0.5
baz=71,SNR=8.6
L13A Double Diamond 71.69 50 ⇓P P 23 48 28.8 +0.5
baz=71
BSY Bisya 71.76 284 ⇑P P 23 48 29.7 +0.8
SNR=8.2
P10A Eureka 71.81 53 ⇓P P 23 48 29.6 +0.6
baz=72
ELK Elko 71.81 51 *e*P **P 23 48 29.1 +0.1**
ELK *e**PP pP 23 48 44.3 -0.5
K14A Jones Ranch, D 71.83 49 ⇑P P 23 48 29.4 +0.3
baz=72,SNR=6.8
N12A Clover Valley, 71.86 51 ⇓P P 23 48 29.6 +0.3
baz=72,SNR=7.3
N12A Clover Valley, 71.86 51 *e*P **P 23 48 29.8 +0.5**
comp=Z,48nm,1.3s,mb5.3
N12A *e*pP pP 23 48 44.2 -0.9
YFT Old Faithful 71.87 46 *e*P **P 23 48 30.8 +1.5**
comp=Z,20nm,0.4s,mb5.4
ARQ Araqi 71.88 285 P **P 23 48 30.8 +1.2**
SNR=5.8
I16A Newdale 71.90 47 ⇑P P 23 48 30.0 +0.5
baz=72,SNR=7.6
O11A Cowboy Ranch, 71.96 52 ⇑P P 23 48 30.7 +0.9
baz=72
G18A Lazy EL Ranch, 71.98 45 ⇓P P 23 48 29.8 0.0
baz=72
M13A Montello 72.04 50 ⇓P P 23 48 30.5 +0.2
baz=72,SNR=9.6
M13A Montello 72.04 50 *e*P **P 23 48 30.3 0.0**
comp=Z,18nm,1.2s,mb4.9
M13A *e*pP pP 23 48 45.6 -0.5
KOPT Kop Dagi 72.07 308 *i* P **P 23 48 31.6 +1.1**
ASK Askoy 72.10 339 *e*P **P 23 48 29.4 -0.9**
K15A Arbon 72.10 48 ⇑P P 23 48 31.2 +0.5
baz=72,SNR=7.4
L14A Malta 72.13 49 ⇑P P 23 48 31.2 +0.4
baz=72,SNR=10
BER Bergen 72.15 339 *e*P **P 23 48 30.6 -0.1**
IMW Indian Meadow 72.18 47 *e*P **P 23 48 30.9 -0.2**
comp=Z,33nm,1.0s,mb5.2
IMW *e*pP pP 23 48 47.1 +0.1
RCTC Rector, Farmer 72.21 57 ⇑P P 23 48 32.9 +1.4
baz=72
J16A Bone 72.23 48 ⇑P P 23 48 31.5 +0.1
baz=72,SNR=13
DCID1 Drake Creek 72.25 47 *e*P **P 23 48 32.0 +0.4**
comp=Z,12nm,0.6s,mb5.0
RLMT Red Lodge 72.26 45 ⇑P P 23 48 31.8 +0.2
baz=72
RLMT Red Lodge 72.26 45 *e*P **P 23 48 31.1 -0.5**
comp=Z,18nm,1.1s,mb4.9
RLMT *e*pP pP 23 48 47.0 -0.4
P11A Circle Ranch, 72.28 53 ⇑P P 23 48 32.5 +0.7
baz=72
RRI2 Red Ridge 72.34 47 *e*P **P 23 48 32.3 +0.2**
comp=Z,66nm,1.3s,mb5.4
RRI2 *e*pP pP 23 48 46.5 -1.4
N13A Wendover, West 72.34 51 ⇑P P 23 48 32.8 +0.6
baz=72
N13A Wendover, West 72.34 51 *e*P **P 23 48 32.1 0.0**
comp=Z,12nm,0.8s,mb4.9
N13A *e*pP pP 23 48 47.8 -0.1
Q10A Clear Creek Ra 72.36 54 ⇑P P 23 48 32.2 -0.1
baz=72,SNR=7.0
BNGL BINGOL 72.36 307 *i* P **P 23 48 33.8 +1.5**
SMMC Simmler 72.36 58 ⇓P P 23 48 34.9 +2.5
baz=72
I17A Pilgrim Ck. 72.37 46 ⇓P P 23 48 33.5 +1.2
baz=72
TIN Tinemaha 72.37 56 ⇓P P 23 48 32.9 +0.5
baz=72
SIM Simferopol' 72.40 315*c* *i*P **P 23 48 33.9 +1.5**
SIM *e*S S 23 57 53.9 +2.3
SIM pmax pmax
comp=Z,44nm,0.9s,mb5.4
SIM MLR MLR
comp=Z,1μm,17.2s,MS5.2
O12A Currie 72.41 52 ⇑P P 23 48 32.8 +0.3
baz=72,SNR=12
M14A Sheep Mountain 72.41 50 ⇓P P 23 48 32.7 +0.2
baz=72,SNR=14
TPAW Teton Pass 72.45 47 *e*P **P 23 48 33.3 +0.6**
comp=Z,40nm,1.2s,mb5.2
TPAW *e*pP pP 23 48 48.7 +0.1
DGMT Dagmar 72.53 40 ⇓P P 23 48 32.4 -0.7
baz=72,SNR=5.3
DGMT Dagmar 72.53 40 *e*P **P 23 48 32.2 -0.9**
comp=Z,47nm,0.9s,mb5.4
DGMT *e*pP pP 23 48 47.3 -1.6
K16A Soda Springs 72.53 48 ⇓P P 23 48 34.0 +0.8
baz=72,SNR=12
LOHW Long Hollow 72.56 47 *e*P **P 23 48 33.6 +0.2**
comp=Z,40nm,1.5s,mb5.1
LOHW *e*pP pP 23 48 48.8 -0.3
SNOW Snow King Moun 72.57 47 *e*P **P 23 48 34.4 +1.0**
comp=Z,9.3nm,0.9s,mb4.7
SNOW *e*pP pP 23 48 49.0 -0.3
REDW Red Top Meadow 72.58 47 *e*P **P 23 48 34.0 +0.5**
comp=Z,52nm,1.4s,mb5.3
REDW *e*pP pP 23 48 48.9 -0.4
L15A Malad City 72.63 49 ⇑P P 23 48 33.8 0.0
baz=72,SNR=6.3
BLS5 Blasjo 72.66 338 *e*P **P 23 48 33.9 +0.2**
J17A Brown Place, J 72.66 47 ⇓P P 23 48 34.8 +0.8
baz=72
PKM Peak Mountain 72.74 59 ⇓P P 23 48 35.4 +0.8
baz=72
R10A Warm Springs 72.76 54 ⇑P P 23 48 34.9 +0.2
baz=72
LAO LASA Array 72.77 42 *e*P **P 23 48 34.2 -0.3**
comp=Z,109nm,1.8s,mb5.5
LAO *e*pP pP 23 48 49.2 -1.2
GRSN GIRESUNGRSN 72.78 310 *i* P **P 23 48 33.9 -0.8**
Q11A Duckwater 72.79 53 ⇑P P 23 48 35.4 +0.5
baz=72
S10A Tonopah Range, 72.81 54 ⇑P P 23 48 35.2 +0.2
baz=73,SNR=13
CWC Cottonwood Cre 72.85 56 ⇓P P 23 48 35.6 +0.3
baz=73
BORG Borgarnes 72.88 353 *e*P **P 23 48 33.9 -1.0**
I18A Diamond G Ranc 72.92 46 ⇑P P 23 48 36.3 +0.8
baz=73
N14A Grayback Hills 72.93 50 ⇓P P 23 48 35.7 0.0
baz=73,SNR=14
GRAC Grapevine Rang 72.93 56 ⇓P P 23 48 36.1 +0.3
baz=73,SNR=9.5

O13A Hicks Ranch, I 72.94 51 ⇑P P 23 48 36.2 +0.5
baz=73
M15A Larsen Ranch, 72.95 49 ⇓P P 23 48 36.0 +0.2
baz=73,SNR=24
K17A Gardner Place, 72.95 48 ⇑P P 23 48 35.3 -0.4
baz=73
BEST Besiri 72.97 306 *i* P **P 23 48 37.1 +1.2**
BGU Big Grassy Mou 72.97 50 *e*P **P 23 48 35.9 +0.1**
comp=Z,14nm,1.1s,mb4.8
BGU *e*pP pP 23 48 51.3 -0.4
SPUT South Promonto 73.05 49 *e*P **P 23 48 36.0 -0.3**
comp=Z,25nm,1.3s,mb5.0
SPUT *e*pP pP 23 48 51.5 -0.7
SBC Santa Barbara 73.09 59 ⇑P P 23 48 37.5 +0.8
baz=73
ISA Isabella 73.10 57 ⇑P P 23 48 37.6 +0.9
baz=73
ISA Isabella 73.10 57 *e*P **P 23 48 35.7 -1.0**
ISA *e**PP pP 23 48 51.2 -1.4
ISA pmax pmax
comp=Z,19nm,1.1s,mb4.9
ISA Isabella 73.10 57 *e*P **P 23 48 35.7 -1.0**
comp=Z,19nm,1.1s,mb5.0
ISA *e*pP pP 23 48 51.2 -1.4
J18A Kendall Valley 73.14 47 ⇑P P 23 48 37.1 +0.2
baz=73,SNR=6.3
R11A Troy Canyon, C 73.15 53 ⇓P P 23 48 37.1 +0.1
baz=73,SNR=12
Q12A Willow Creek R 73.15 53 ⇓P P 23 48 37.2 +0.2
baz=73,SNR=7.7
L16A Fish Haven 73.16 48 ⇓P P 23 48 37.5 +0.5
baz=73
KMY Karmoy 73.17 339 *e*P **P 23 48 36.7 0.0**
N15A Stansbury Isla 73.29 50 ⇑P P 23 48 37.9 +0.2
baz=73,SNR=7.4
HWUT Hardware Ranch 73.35 49 *e*P **P 23 48 38.2 +0.1**
comp=Z,98nm,1.7s,mb5.5
HWUT *e*pP pP 23 48 53.8 -0.2
P13A Bates Ranch, G 73.36 52 ⇑P P 23 48 38.4 +0.2
baz=73,SNR=8.2
L17A Cokeville 73.41 48 ⇑P P 23 48 38.6 +0.2
baz=73
MPMC Manual Prospec 73.46 56 ⇑P P 23 48 39.1 +0.2
baz=73,SNR=11
STKA Stephens Creek 73.47 181 *e*P **P 23 48 37.8 -0.8**
comp=Z,5.8nm,0.9s,mb4.5
STKA *e* pP 23 48 55.7 +1.2
STKA Stephens Creek 73.47 181 P **P 23 48 38.2 -0.4**
comp=Z,5.5nm,0.9s,mb4.5,baz=297,slow=7.8,SNR=4.5
STKA pP pP 23 48 55.2 +0.8
comp=Z,26nm,0.9s,baz=360,slow=6.3,SNR=12
STKA LR LR 00 20 04.7
comp=Z,451nm,21.8s,MS4.7,baz=13,slow=35
STKA Stephens Creek 73.47 181 *e*P **P 23 48 38.3 -0.3**
comp=Z,7.8nm,1.1s,mb4.5
STKA *e* pP 23 48 55.2 +0.7
BSD Bornholm Skovb 73.50 332⇑ *i*P **P 23 48 38.0 -0.7**
comp=Z,32nm,0.9s,mb5.2
S11A Rachel 73.51 54 ⇓P P 23 48 39.4 +0.3
baz=73,SNR=6.7
K18A Toltan Ranch, 73.51 47 ⇑P P 23 48 39.3 +0.3
baz=73,SNR=5.5
FORT Forrest 73.57 193 *e*P **P 23 48 38.7 -0.6**
comp=Z,18nm,0.8s,mb5.0
FORT *e* pP 23 48 55.9 +0.8
DUG Dugway 73.58 51 ⇑P P 23 48 39.9 +0.5
baz=73,SNR=18
DUG Dugway 73.58 51 *e*P **P 23 48 39.7 +0.3**
DUG *e**PP pP 23 48 54.5 -0.8
DUG pmax pmax
comp=Z,20nm,1.0s,mb5.0
DUG Dugway 73.58 51 *e*P **P 23 48 39.6 +0.2**
comp=Z,20nm,1.0s,mb5.0
DUG *e*pP pP 23 48 54.5 -0.8
FURC Furnace Creek, 73.59 56 ⇓P P 23 48 39.5 -0.1
baz=73,SNR=14
OSI Osito Adit 73.61 58 ⇓P P 23 48 40.4 +0.6
baz=73
NOQ North Oquirrh 73.67 50 *e*P **P 23 48 40.2 +0.2**
comp=Z,97nm,1.3s,mb5.6
NOQ *e*pP pP 23 48 55.4 -0.5
Q13A Wheeler Ranch, 73.69 52 ⇑P P 23 48 40.6 +0.4
baz=73,SNR=16
KIS Kishinev 73.69 319 *e*P **P 23 48 38.0 -2.0**
KIS *e*S S 23 58 10.0 +3.9
KIS LRM 00 23 48.0
comp=Z,600nm,17.0s
KIS Kishinev 73.69 319 *e*P **P 23 48 38.0 -2.0**
KIS *e* 23 51 24.0
KIS *e*S S 23 58 10.0 +3.9
KIS *e* 23 58 32.0
KIS MLR MLR
comp=Z,500nm,16.0s,MS4.9
KIS MLR MLR
comp=Z,600nm,17.0s
BW06 Boulder Array 73.69 47 ⇑P P 23 48 39.5 -0.6
baz=73,SNR=22
BW06 Boulder Array 73.69 47 *e*P **P 23 48 39.8 -0.2**
comp=Z,29nm,1.2s,mb5.1
BW06 *e*pP pP 23 48 55.4 -0.5
PDAR Pinedale Array 73.69 47 P **P 23 48 39.9 -0.2**
comp=Z,10.0nm,0.7s,mb4.9,baz=270,slow=1.5,SNR=72
PDAR pP pP 23 48 55.8 -0.1
comp=Z,8.6nm,0.8s,baz=282,slow=2.9,SNR=8.6
LRMC Laurel Mountai 73.71 57 ⇑P P 23 48 40.4 +0.1
baz=74
O15A The Old Anders 73.72 50 ⇓P P 23 48 40.7 +0.4
baz=74
BLG Laguna Peak 73.72 59 ⇑P P 23 48 41.5 +1.2
baz=74
KEMA Kemaliye 73.73 308 *i* P **P 23 48 41.0 +0.6**
R12A Pony Springs, 73.75 53 ⇑P P 23 48 40.9 +0.4
baz=74
P14A Drum Mountains 73.83 51 ⇓P P 23 48 41.2 +0.2
baz=74,SNR=14
LVV L'vov 73.89 324 *e*P **P 23 48 41.1 0.0**
LVV MLR MLR
comp=N,700nm,16.0s,MS5.2
LVV MLR MLR
comp=E,900nm,16.0s,MS5.2
LVV MLR MLR
comp=Z,1μm,16.0s,MS5.2
LVV L'vov 73.89 324 *e*P **P 23 48 40.0 -1.1**
COP Copenhagen 73.90 333⇑ *i*P **P 23 48 40.7 -0.4**
comp=Z,21nm,0.9s,mb5.1
N16A Rees Ranch, Co 73.90 49 ⇑P P 23 48 41.8 +0.4
baz=74
EDW2 Edwards Air Fo 73.91 58 ⇑P P 23 48 41.8 +0.4
baz=74
ELZG Elazig 73.94 307 *i* P **P 23 48 42.0 +0.3**
M17A Scullys Gap (B 73.95 48 ⇓P P 23 48 41.5 -0.1
baz=74,SNR=6.9
U10A Ash Meadows, A 73.95 55 ⇑P P 23 48 42.5 +0.8
baz=74
SNCC San Nicolas Is 73.97 60 ⇓P P 23 48 42.5 +0.6
baz=74
L18A Fontenelle, Gr 73.99 48 ⇑P P 23 48 41.7 -0.2
baz=74,SNR=5.8
K19A Absolon Red Bu 74.03 46 ⇓P P 23 48 41.4 -0.7
baz=74,SNR=6.1
S12A Delamar Landin 74.07 54 ⇓P P 23 48 42.9 +0.5
baz=74
JLU Jordanelle 74.09 50 *e*P **P 23 48 42.1 -0.3**
comp=Z,20nm,1.3s,mb4.9
JLU *e*pP pP 23 48 57.2 -1.1
T11A Corn Creek, Al 74.09 54 ⇓P P 23 48 42.6 +0.1
baz=74,SNR=13
GKP Gorka Klasztor 74.09 329 *i* P **P 23 48 42.2 0.0**
DECC Green Verdugo 74.09 58 ⇓P P 23 48 42.5 -0.1
baz=74
Q14A Sevier Lake (B 74.10 52 ⇑P P 23 48 42.8 +0.2
baz=74,SNR=18
IAS Iasi 74.16 320 ⇑P P 23 48 42.9 +0.2
IAS Iasi 74.16 320⇑ *i*P **P 23 48 42.8 +0.1**
NLU North Lily Min 74.16 50 *e*P **P 23 48 43.4 +0.6**
comp=Z,17nm,0.9s,mb5.0
NLU *e* pP 23 48 58.2 -0.5
N17A Moffit Pass 74.21 49 ⇑P P 23 48 43.3 +0.2
baz=74
R13A O'Grain Ranch, 74.22 53 ⇓P P 23 48 43.5 +0.2
baz=74
MIB Mutribah 74.24 296 *e*P **P 23 48 42.5 -1.0**
MIB AMb AMB 23 48 44.6
comp=Z,59nm,0.9s,mb5.5
L19A Farson 74.25 47 ⇓P P 23 48 43.2 -0.1
baz=74,SNR=6.4
MWC Mount Wilson 74.28 58 *e*P **P 23 48 43.5 -0.2**

MWC *e* pP 23 48 57.8 -1.8
MWC pmax pmax
comp=Z,83nm,1.5s,mb5.4
MWC Mount Wilson 74.28 58 *e*P **P 23 48 43.5 -0.2**
comp=Z,82nm,1.5s,mb5.4
MWC *e* pP 23 48 57.8 -1.8
P15A Leamington 74.30 51 ⇓P P 23 48 43.8 +0.1
baz=74,SNR=6.9
M18A Lyman 74.31 48 ⇑P P 23 48 43.3 -0.4
baz=74
SHOC Shoshone 74.31 56 ⇓P P 23 48 43.9 +0.1
baz=74
O16A Springville 74.32 50 ⇓P P 23 48 44.1 +0.3
baz=74,SNR=6.9
DAU Daniels Canyon 74.32 50 *e*P **P 23 48 43.5 -0.3**
DAU pmax pmax
comp=Z,16nm,1.1s,mb4.9
DAU Daniels Canyon 74.32 50 *e*P **P 23 48 43.5 -0.4**
comp=Z,16nm,1.1s,mb4.9
MUD Monsted U'grnd 74.33 335 *i* P **P 23 48 41.8 -1.8**
comp=Z,20nm,0.9s,mb5.0
MPU Maple Canyon 74.37 50 *e*P **P 23 48 43.8 -0.3**
comp=Z,15nm,0.8s,mb5.0
MPU *e*pP pP 23 48 58.8 -1.2
GSC Goldstone 74.38 57 ⇓P P 23 48 44.5 +0.3
baz=74
GSC Goldstone 74.38 57 *e*P **P 23 48 43.9 -0.3**
GSC *e* pP 23 48 59.4 -0.7
GSC pmax pmax
comp=Z,65nm,1.5s,mb5.3
GSC Goldstone 74.38 57 *e*P **P 23 48 43.9 -0.3**
comp=Z,65nm,1.5s,mb5.3
GSC *e* pP 23 48 59.4 -0.7
K20A Yellowstone Ra 74.42 46 ⇓P P 23 48 43.7 -0.6
baz=74
QRN Al-Qurain 74.52 295 *e*P **P 23 48 44.0 -1.1**
QRN AMb AMB 23 48 45.3
comp=Z,43nm,0.8s,mb5.4
U11A Corn Creek 74.52 55 ⇑P P 23 48 45.6 +0.6
baz=74
CIS Catalina Islan 74.59 59 ⇓P P 23 48 47.0 +1.6
baz=74
KWP Kalwaria Pacla 74.61 324 *i* P **P 23 48 46.1 +0.8**
KWP Kalwaria Pacla 74.61 324 *e*P **P 23 48 45.4 0.0**
comp=Z,163nm,1.2s,mb5.8
KWP Kalwaria Pacla 74.61 324⇑ *i*P **P 23 48 45.8 +0.5**
Q15A Fillmore 74.62 51 ⇑P P 23 48 45.9 +0.4
baz=74
P16A Fountain Green 74.63 50 ⇑P P 23 48 46.0 +0.4
baz=74
RDF Al-Radifah 74.66 295 *e*P **P 23 48 44.7 -1.2**
RDF AMb AMB 23 48 47.5
comp=Z,94nm,1.1s,mb5.6
NAY Al-Naaiem 74.66 296 *e*P **P 23 48 44.2 -1.7**
NAY AMb AMB 23 48 46.9
comp=Z,24nm,1.3s,mb5.0
S13A Holt Ranch, En 74.68 53 ⇓P P 23 48 46.5 +0.6
baz=74,SNR=9.6
AKCD Akcadag 74.70 308 *i* P **P 23 48 46.8 +0.7**
T12A Moapa 74.73 54 ⇑P P 23 48 47.0 +0.8
baz=74
M19A Rock Springs 74.76 48 ⇑P P 23 48 46.1 -0.2
baz=74
O17A Robinson Place 74.76 49 ⇑P P 23 48 46.6 +0.3
baz=74,SNR=8.6
ARUT Antelope Range 74.80 53 *e*P **P 23 48 46.8 +0.2**
ARUT *e* pP 23 49 00.3 -2.2
ARUT pmax pmax
comp=Z,28nm,1.3s,mb5.0
ARUT Antelope Range 74.80 53 *e*P **P 23 48 46.8 +0.2**
comp=Z,28nm,1.3s,mb5.0
ARUT *e*PcP PcP 23 49 00.3 -0.2
TUQ Turquoise Moun 74.83 56 ⇑P P 23 48 46.9 0.0
baz=75,SNR=6.3
L20A Wamsutter 74.87 47 ⇑P P 23 48 46.8 -0.1
baz=75,SNR=9.6
V11A Goodsprings 74.88 55 ⇑P P 23 48 47.5 +0.4
baz=75
CTKT Corum 74.95 311 *i* P **P 23 48 48.0 +0.6**
BUR08 Bucovina Ar. S 74.95 321 *e*P **P 23 48 47.6 +0.3**
BURAR Bucovina Array 74.96 321 P **P 23 48 47.8 +0.4**
BURAR Bucovina Array 74.96 321 ⇑P **P 23 48 47.7 +0.3**
BURAR Bucovina Array 74.96 321⇑ *i*P **P 23 48 47.7 +0.3**
TLCR 74.97 318 ⇑P **P 23 48 47.3 -0.1**
TLCR 74.97 318⇑ *i*P **P 23 48 47.3 -0.1**
BBRC Big Bear Solar 74.98 57 ⇓P P 23 48 47.8 +0.1
baz=75
S14A Cedar City 74.98 53 ⇑P P 23 48 48.2 +0.6
baz=75
HEC Hector,Ludlow 74.98 57 ⇓P P 23 48 47.8 +0.1
baz=75,SNR=8.4
ULM Lac du Bonnet 74.98 34 P **P 23 48 46.2 -1.2**
comp=Z,10nm,0.6s,mb5.0,baz=312,slow=7.1,SNR=13
ULM LR LR 00 23 37.4
comp=Z,303nm,21.1s,MS4.6,baz=181,slow=37
ULM Lac du Bonnet 74.98 34 *e*P **P 23 48 46.3 -1.1**
comp=Z,35nm,1.2s,mb5.2
ULM *e* pP 23 48 59.9 -3.4
CCUT Cedar City 75.00 53 *e*P **P 23 48 47.9 +0.1**
comp=Z,42nm,1.5s,mb5.2
CCUT *e*pP pP 23 49 03.5 -0.2
T13A Saint George 75.03 54 ⇑P P 23 48 48.7 +0.8
baz=75,SNR=11
MSU Marysvale 75.06 52 *e*P **P 23 48 48.8 +0.7**
MSU *e**PP pP 23 49 04.0 0.0
MSU pmax pmax
comp=Z,33nm,1.4s,mb5.1
MSU Marysvale 75.06 52 *e*P **P 23 48 48.8 +0.7**
comp=Z,33nm,1.4s,mb5.1
MSU *e*pP pP 23 49 04.0 0.0
TMUT Trail Mountain 75.10 50 *e*P **P 23 48 48.3 0.0**
comp=Z,29nm,1.1s,mb5.1
TMUT *e* pP 23 49 04.0 -0.2
O18A Roosevelt 75.13 49 ⇑P P 23 48 48.8 +0.3
baz=75,SNR=7.4
N19A John Jarvie Ra 75.17 48 ⇑P P 23 48 48.2 -0.5
baz=75,SNR=7.5
R15A Junction 75.20 52 ⇓P P 23 48 49.9 +1.0
baz=75
P17A Butcher Ranch, 75.25 50 ⇑P P 23 48 49.4 +0.2
baz=75,SNR=9.4
ILGA Ilgaz 75.25 312 *i* P **P 23 48 49.6 +0.4**
M20A Sweetwater, Wa 75.30 47 ⇓P P 23 48 49.7 +0.2
baz=75,SNR=9.3
V12A Nelson 75.30 55 ⇑P P 23 48 50.2 +0.7
baz=75
PINB Pinarbasi 75.34 309 *i* P **P 23 48 50.9 +1.2**
Q16A Castle Valley 75.37 51 ⇑P P 23 48 50.7 +0.8
baz=75
U13A Pakoon Wash 75.39 54 ⇓P P 23 48 50.3 +0.3
baz=75,SNR=14
STHS Stebnicka Huta 75.41 325 *e*P **P 23 48 50.7 +0.8**
STHS pmax pmax
comp=Z,23nm,0.8s,mb5.2
STHS Stebnicka Huta 75.41 325 *e*P **P 23 48 50.7 +0.8**
comp=Z,23nm,0.8s,mb5.2
STHS Stebnicka Huta 75.41 325 *e*P **P 23 48 50.7 +0.8**
OJC Ojcow 75.41 326 *e*P **P 23 48 48.5 -1.4**
OJC *e*S S 23 58 24.7 -0.5
OJC L 00 24 49.2
comp=Z,1.8nm,21.4s
OJC Ojcow 75.41 326 *e*P **P 23 48 48.5 -1.4**
OJC *e*S S 23 58 24.7 -0.5
OJC MLR MLR
comp=Z,2μm,21.4s,MS5.3
L21A Rawlins 75.42 46 ⇓P P 23 48 49.9 -0.2
baz=75,SNR=18
P18A Preston Nutter 75.42 50 ⇑P P 23 48 50.5 +0.3
baz=75,SNR=13
GMRC Granite Mounta 75.43 56 ⇓P P 23 48 50.5 +0.2
baz=75,SNR=7.9
T14A Hurricane 75.49 53 ⇓P P 23 48 51.3 +0.7
baz=75
S15A Panguitch 75.51 52 ⇓P P 23 48 51.5 +0.9
baz=75
VRI Vrincioaia 75.51 319 ⇑P P 23 48 51.0 +0.5
VRI Vrincioaia 75.51 319⇑ *i*P **P 23 48 51.0 +0.5**
UZH Uzhgorod 75.54 324⇓ *i*P **P 23 48 50.0 -0.7**
UZH *e*S S 23 58 20.0 -6.7
UZH *i* PS 23 59 01.7
UZH MLR MLR
comp=N,600nm,16.0s,MS5.3
UZH MLR MLR
comp=E,1μm,16.0s,MS5.3
UZH MLR MLR
comp=Z,660nm,16.0s,MS5.0

GZT	Gaziantep	75.54	307	*i* P	P	23 48 52.5	+1.7
PLOR	Plostina	75.56	319	⇑P	P	23 48 51.3	+0.5
PLOR	Plostina	75.56	319	⇑*i*P	P	23 48 51.3	+0.5
W12A	Cal Nev Ari	75.57	55	⇓P	P	23 48 51.5	+0.4
	baz=75						
O19A	Miners Draw (B	75.60	49	⇓P	P	23 48 50.6	-0.6
	baz=75,SNR=7.9						
SRU	San Rafael	75.61	50	⇓P	P	23 48 51.2	-0.1
	baz=75,SNR=15						
SRU	San Rafael	75.61	50	*e*P	P	23 48 51.1	-0.2
SRU				*e**PP	pP	23 49 06.9	-0.3
SRU				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.2						
SRU	San Rafael	75.61	50	*e*P	P	23 48 51.1	-0.2
	comp=Z,30nm,0.9s,mb5.2						
SRU				*e*pP	pP	23 49 06.9	-0.3
R16A	Teasdale	75.62	51	⇑P	P	23 48 52.1	+0.8
	baz=75,SNR=13						
RSSD	Black Hills	75.66	43	*e*P	P	23 48 50.6	-0.8
RSSD				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
RSSD	Black Hills	75.66	43	*e*P	P	23 48 50.6	-0.9
	comp=Z,13nm,0.9s,mb4.9						
M21A	Separation Pea	75.67	47	⇓P	P	23 48 51.3	-0.3
	baz=75,SNR=14						
TIRR	Tirgusor	75.68	318	P	P	23 48 51.7	+0.1
TIRR	Tirgusor	75.68	318	*e*P	P	23 48 51.1	-0.4
	comp=Z,19nm,1.0s,mb5.0						
PFO	Pinyon Flat Ob	75.69	58	⇓P	P	23 48 51.8	0.0
	baz=76						
PFO	Pinyon Flat Ob	75.69	58	*e*P	P	23 48 51.4	-0.4
PFO				*e**PP	pP	23 49 07.1	-0.6
PFO				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.1						
PFO	Pinyon Flat Ob	75.69	58	*e*P	P	23 48 51.4	-0.5
	comp=Z,30nm,1.1s,mb5.1						
PFO				*e*pP	pP	23 49 07.1	-0.6
RWWY	Rawlins	75.70	46	*e*P	P	23 48 51.2	-0.5
	comp=Z,49nm,1.0s,mb5.4						
RWWY				*e*pP	pP	23 49 06.9	-0.7
CRVS	Cervenica-Dubn	75.70	324	*e*P	P	23 48 52.0	+0.4
	comp=Z,24nm,1.0s,mb5.1						
CRVS				*e*PP	pP	23 49 03.0	-4.5
CRVS				*e*S	S	23 58 32.0	+3.5
CRVS				LR	LR		
	comp=Z,800nm,20.4s,MS5.0						
CRVS	Cervenica-Dubn	75.70	324	*e*P	P	23 48 52.0	+0.4
CRVS				*e*pP	pP	23 49 03.0	-4.5
CRVS				*e*S	S	23 58 32.0	+3.5
BMR	Baia Mare	75.71	322	⇑P	P	23 48 52.6	+0.9
BMR	Baia Mare	75.71	322	⇑*i*P	P	23 48 52.6	+0.9
N20A	Spence Gulch,	75.71	48	⇑P	P	23 48 52.0	+0.2
	baz=76,SNR=20						
BELC	Belle Mtn. Jos	75.73	57	⇓P	P	23 48 51.9	-0.1
	baz=76						
V13A	Grand Canyon W	75.75	55	⇓P	P	23 48 52.4	+0.3
	baz=76,SNR=11						
109C	Camp Elliot, M	75.75	59	⇓P	P	23 48 52.1	0.0
	baz=76						
ELDT	Eldivan	75.80	312	*i* P	P	23 48 52.9	+0.6
NIE	Niedzica	75.80	325	*e*P	P	23 48 53.1	+0.9
Q18A	Rafter H Ranch	75.84	50	⇑P	P	23 48 52.6	+0.1
	baz=76						
U14A	Mt Trumbull	75.86	54	⇑P	P	23 48 53.3	+0.5
	baz=76,SNR=8.3						
CDAG	Cicekdag	75.86	311	*i* P	P	23 48 52.4	-0.3
L22A	Ellis Ranch, M	75.88	46	⇑P	P	23 48 52.6	-0.2
	baz=76,SNR=10						
S16A	Weppner Ranch,	75.93	52	⇑P	P	23 48 53.6	+0.5
	baz=76,SNR=7.8						
T15A	Red Dirt Ranch	75.94	53	⇓P	P	23 48 53.8	+0.6
	baz=76						
R17A	Hanksville Air	75.97	51	⇓P	P	23 48 53.2	-0.1
	baz=76,SNR=13						
RUE	Ruedersdorf	76.01	331	*e*P	P	23 48 52.8	-0.4
	comp=Z,16nm,0.4s,mb5.3						
BSEG	Bad Segeberg	76.04	333	*e*P	P	23 48 53.8	+0.4
	comp=Z,57nm,0.9s,mb5.5						
BSEG	Bad Segeberg	76.04	333	*e*P	P	23 48 53.8	+0.4
BSEG				pmax	pmax		
	comp=Z,57nm,0.9s,mb5.5						
NEE2	Needles Airpor	76.08	56	⇓P	P	23 48 54.1	+0.1
	baz=76						
P19A	Cripple Cowboy	76.14	49	⇓P	P	23 48 54.2	0.0
	baz=76,SNR=20						
IRM	Iron Mountain	76.15	57	⇑P	P	23 48 54.6	+0.2
	baz=76						
MLR	Muntele Rosu	76.16	320	⇓P	P	23 48 54.5	+0.2
MLR	Muntele Rosu	76.16	320	⇓*i*P	P	23 48 54.5	+0.2
N21A	Black Mountain	76.17	47	⇓P	P	23 48 54.4	0.0
	baz=76,SNR=8.5						
RAC	Raciborz	76.18	327	*e*P	P	23 48 55.0	+0.7
MONP	Monument Peak	76.19	58	⇑P	P	23 48 55.1	+0.5
	baz=76						
O20A	White River Ci	76.20	48	⇓P	P	23 48 54.3	-0.3
	baz=76,SNR=6.6						
BR131	Keskin Array S	76.20	311	*e*P	P	23 48 54.9	+0.2
	comp=Z,13nm,0.8s,mb4.9						
BC3	Big Chuckawall	76.30	57	⇓P	P	23 48 55.6	+0.4
	baz=76						
W13A	Hualapai Mount	76.31	55	⇑P	P	23 48 55.6	+0.3
	baz=76,SNR=6.1						
KSP	Ksiaz	76.35	328	*e*P	P	23 48 55.7	+0.5
KSP	Ksiaz	76.35	328	⇑*i*P	P	23 48 55.6	+0.4
KSP				*e**PP	pP	23 49 13.0	+1.8
PSN	Preselentsi	76.35	317	P	P	23 48 56.2	+0.8
U15A	North Rim	76.39	53	⇓P	P	23 48 56.4	+0.7
	baz=76,SNR=13						
OKC	Ostrava-Krasne	76.39	327	*e*P	P	23 48 55.9	+0.4
OKC				*e**PP	pP	23 49 09.9	-1.5
OKC				*e*S	SKSac	23 59 02.5	+0.7
OKC	Ostrava-Krasne	76.39	327	*e*P	P	23 48 55.9	+0.4
OKC				*e*pP	pP	23 49 09.9	-1.5
OKC				*e*sP	sP	23 49 16.9	-0.9
OKC				*e*XS	sS	23 59 02.5	-0.4
OKC				AMS	AMS	00 25 20.0	
	comp=Z,1μm,22.8s						
V14A	Boquillas Ranc	76.43	54	⇓P	P	23 48 56.6	+0.6
	baz=76,SNR=18						
Q19A	Hogan Spring (	76.44	50	⇑P	P	23 48 55.9	-0.1
	baz=76,SNR=16						
KECS	Kecovo	76.44	325	*e*P	P	23 48 56.2	+0.4
KECS				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
KECS	Kecovo	76.44	325	*e*P	P	23 48 56.2	+0.4
	comp=Z,8.5nm,1.0s,mb4.6						
KECS	Kecovo	76.44	325	*e*P	P	23 48 56.2	+0.4
S17A	Black Ridge (B	76.45	51	⇑P	P	23 48 55.9	-0.2
	baz=76,SNR=7.9						
AGMN	Agassiz Nation	76.46	36	*e*P	P	23 48 54.6	-1.3
	comp=Z,19nm,0.9s,mb5.0						
R18A	Canyonlands Na	76.47	50	⇓P	P	23 48 55.7	-0.4
	baz=76,SNR=10.0						
T16A	Glen Canyon Da	76.48	52	⇓P	P	23 48 55.8	-0.4
	baz=76						
SGKT	Sivrigoynuk	76.50	313	*i* P	P	23 48 57.2	+0.9
DVTC	Desert V Tower	76.54	58	⇑P	P	23 48 56.8	+0.1
	baz=76						
SWSC	Sam W. Stewart	76.55	58	⇑P	P	23 48 56.7	0.0
	baz=76						
P20A	De Beque	76.56	49	⇓P	P	23 48 56.4	-0.2
	baz=76						
O21A	Pagoda	76.58	48	⇑P	P	23 48 56.5	-0.2
	baz=76						
LIKS	Likavka	76.60	326	*e*P	P	23 48 58.0	+1.3
LIKS				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.2						
LIKS	Likavka	76.60	326	*e*P	P	23 48 58.0	+1.3
	comp=Z,30nm,0.9s,mb5.2						
LIKS	Likavka	76.60	326	*e*P	P	23 48 58.0	+1.3
VOIR		76.63	320	P	P	23 48 57.6	+0.7
KLBR	Kellerberrin	76.63	201	*e*P	P	23 48 55.9	-1.0
	comp=Z,39nm,1.5s,mb5.1						
KLBR				*e*	pP	23 49 13.5	+0.7
PDMCI	Parker Dam,Lak	76.68	56	⇑P	P	23 48 57.4	-0.1
	baz=76						
W14A	Seligman	76.72	55	⇑P	P	23 48 58.0	+0.4
	baz=76,SNR=13						
DRGR		76.72	322	⇓P	P	23 48 57.9	+0.5
DRGR		76.72	322	⇓*i*P	P	23 48 57.9	+0.5
N22A	Wattenberg Ran	76.72	47	⇑P	P	23 48 58.0	+0.4
	baz=76,SNR=9.6						
UPC	Upice	76.72	328	*e*P	P	23 48 57.9	+0.5
UPC	Upice	76.72	328	*e*P	P	23 48 57.9	+0.5
UPC				*e*sP	sP	23 49 19.8	+0.2
DPC	Dobruska-Polom	76.72	328	*e*P	P	23 48 58.2	+0.8
DPC				*e**PP	pP	23 49 11.9	-1.4
DPC				*e*	pP	23 49 18.7	+5.4
DPC				*e*S	SKSac	23 59 07.7	+3.5
DPC	Dobruska-Polom	76.72	328	*e*P	P	23 48 58.2	+0.8
DPC				*e*pP	pP	23 49 11.9	-1.4
DPC				*e*sP	sP	23 49 18.7	-1.0
DPC				*e*XS	sS	23 59 07.7	+1.2
DPC				AMS	AMS	00 25 50.0	
	comp=Z,600nm,17.4s						
Y12C	Blythe	76.81	56	⇑P	P	23 48 58.4	+0.2
	baz=77						
V15A	Kaibab Nationa	76.87	54	⇓P	P	23 48 59.3	+0.8
	baz=77,SNR=6.6						
COBT	Iskenderun	76.88	307	*i* P	P	23 48 55.5	-3.0
T17A	Navajo Res., N	76.88	52	⇓P	P	23 48 58.5	0.0
	baz=77						
S18A	Hurst Farm, Bl	76.88	51	⇑P	P	23 48 58.6	+0.1
	baz=77,SNR=12						
R19A	Curley Farm, L	76.89	50	⇑P	P	23 48 58.8	+0.3
	baz=77						
PHWY	Pilot Hill	76.91	46	*e*P	P	23 48 58.3	-0.2
	comp=Z,22nm,1.1s,mb5.0						
PHWY				*e*	pP	23 49 13.8	-0.7
PV10	Paradox Valley	76.96	50	*e*P	P	23 48 59.1	+0.2
	comp=Z,999nm,0.8s						
PV10				*e*	pP	23 49 14.4	-0.5
Q20A	Ridgley Place,	76.99	49	⇑P	P	23 48 58.7	-0.4
	baz=77,SNR=13						
PV04	Paradox Valley	77.03	50	*e*P	P	23 48 59.4	+0.1
PV04				*e*pP	pP	23 49 14.8	-0.5
P21A	Newcastle	77.07	48	⇓P	P	23 48 59.6	+0.1
	baz=77,SNR=13						
GLA	Glamis	77.09	57	⇑P	P	23 48 60.0	+0.3
	baz=77						
GLA	Glamis	77.09	57	*e*P	P	23 48 58.3	-1.4
GLA				*e*	pP	23 49 15.4	-0.3
GLA				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.1						
GLA	Glamis	77.09	57	*e*P	P	23 48 58.3	-1.4
	comp=Z,24nm,0.9s,mb5.1						
GLA				*e*	pP	23 49 15.4	-0.2
PRD	Provadia	77.10	317	P	P	23 49 00.4	+0.8
PSZ	Piszkesteto	77.13	324	*e*P	P	23 49 00.4	+0.7
PSZ				pmax	pmax		
	comp=Z,95nm,1.4s,mb5.5						
PSZ	Piszkesteto	77.13	324	*e*P	P	23 49 00.4	+0.7
	comp=Z,95nm,1.4s,mb5.5						
PSZ	Piszkesteto	77.13	324	⇑*i*P	P	23 49 00.3	+0.6
VYHS	Vyhne	77.14	325	*e*P	P	23 49 00.2	+0.5
	comp=Z,25nm,1.3s,mb5.0						
VYHS				*e*SP		23 49 20.2	
VYHS				*e*S	S	23 58 41.9	-2.3
VYHS				LR	LR		
	comp=Z,800nm,21.1s,MS5.0						
VYHS	Vyhne	77.14	325	*e*P	P	23 49 00.2	+0.5
VYHS				*e*sP	sP	23 49 20.2	-1.8
VYHS				*e*S	S	23 58 41.9	-2.3
Y13A	Salome	77.20	56	⇑P	P	23 49 00.8	+0.4
	baz=77						
GULE	Gulek	77.23	309	*i* P	P	23 49 00.5	+0.1
BRG	Berggiesshubel	77.23	329	*e*P	P	23 49 00.3	+0.1
	comp=Z,84nm,1.9s,mb5.3						
BRG	Berggiesshubel	77.23	329	*e*P	P	23 49 00.1	-0.1
	comp=Z,83nm,1.9s,mb5.3						
BRG				*e*PP	PP	23 52 13.9	+20
	comp=Z,14nm,1.4s						
BRG							
	comp=N,852nm,21.4s						
BRG							
	comp=E,740nm,26.3s						
BRG							
	comp=Z,1μm,26.4s						
CLL	Collm	77.24	330	*e*P	P	23 49 00.0	-0.2
	comp=Z,52nm,1.0s,mb5.4						
CLL	Collm	77.24	330	⇑*i*P	P	23 49 00.0	-0.2
CLL				*e*	pP	23 49 17.0	+0.8
CLL				*e*S	S	23 58 46.0	+0.8
CLL				pmax	pmax		
	comp=Z,52nm,1.0s,mb5.4						
CLL				MLR	MLR		
	comp=Z,1μm,21.0s,MS5.3						
CLL	Collm	77.24	330	⇑*i*P	P	23 49 00.0	-0.2
	comp=Z,52nm,1.0s,mb5.4						
CLL				*e*		23 49 04.0	
CLL				*e*pP	pP	23 49 17.0	+0.8
CLL				*e*(sP)	sP	23 49 25.0	+2.5
CLL				*e*PP	PP	23 51 52.0	-2.0
CLL				*e*S	S	23 58 46.0	+0.8
CLL				*e*SP		23 59 18.0	
CLL				*e*PPS		23 59 47.0	
CLL				*e*SS	SS	00 03 42.0	-0.7
CLL				*e*		00 05 06.0	
CLL				*e*		00 10 48.0	
U17A	Shonto	77.24	52	⇓P	P	23 49 01.0	+0.5
	baz=77,SNR=5.2						
W15A	Williams	77.24	54	⇓P	P	23 49 01.4	+0.9
	baz=77						
KOLL	Kolacno	77.26	326	*e*P	P	23 49 01.0	+0.6
KOLL	Kolacno	77.26	326	*e*P	P	23 49 01.0	+0.6
PVCC	Panska Ves	77.27	329	*e*P	P	23 49 01.1	+0.7
PVCC				*e*	pP	23 49 20.8	+4.4
PVCC				*e*S	sS	23 59 14.3	+1.8
PVCC	Panska Ves	77.27	329	*e*P	P	23 49 01.1	+0.7
PVCC				*e*sP	sP	23 49 20.8	-1.9
PVCC				*e*XS	sS	23 59 14.3	+1.8
PVCC				AMS	AMS	00 25 50.0	
	comp=Z,900nm,19.8s						
NRDL	Niedersach Rie	77.30	332	*e*P	P	23 49 00.6	0.0
	comp=Z,33nm,1.0s,mb5.2						
T18A	Mexican Hat	77.33	51	⇑P	P	23 49 00.6	-0.4
	baz=77,SNR=17						
X14A	Yava	77.34	55	⇑P	P	23 49 01.6	+0.5
	baz=77,SNR=10						
S19A	Harvey Farm, M	77.34	50	⇓P	P	23 49 00.9	-0.1
	baz=77,SNR=9.0						
PV01	Paradox Valley	77.40	50	*e*P	P	23 49 01.6	+0.3
	comp=Z,2μm,1.1s						
PV01				*e*pP	pP	23 49 16.6	-0.7
VRAC	Vranov	77.44	327	P	P	23 49 02.2	+0.8
VRAC	Vranov	77.44	327	⇑P	P	23 49 02.0	+0.6
VRAC	Vranov	77.44	327	⇑*i*P	P	23 49 02.0	+0.6
R20A	Redvale	77.47	50	⇓P	P	23 49 01.9	+0.2
	baz=77,SNR=7.2						
Q21A	Lamborn Mesa,	77.48	49	⇑P	P	23 49 02.0	+0.2
	baz=77,SNR=6.8						
KPL	Plockton	77.52	343	*e*P	P	23 49 01.6	0.0
KPL				AMb	AMB	23 49 11.7	
	comp=Z,193nm,2.8s,mb5.5						
KPL	Plockton	77.52	343	P	P	23 49 01.6	0.0
KPL				AMb	AMB	23 49 11.7	
	comp=Z,193nm,2.8s,mb5.5						
WUAZ	Wupatki	77.55	53	⇑P	P	23 49 02.5	+0.3
	baz=77,SNR=7.9						
WUAZ	Wupatki	77.55	53	*e*P	P	23 49 03.0	+0.7
	comp=Z,49nm,1.3s,mb5.3						
WUAZ				*e*	pP	23 49 17.6	-0.6
112A	Yuma	77.58	57	⇑P	P	23 49 02.5	0.0
	baz=77						
Y14A	Wickenburg	77.62	55	⇓P	P	23 49 02.9	+0.2
	baz=77,SNR=5.8						
PRU	Pruhonice	77.71	329	*e*P	P	23 49 03.7	+0.8
PRU				*e*		23 49 08.7	
PRU				*e*S	sS	23 59 20.2	+2.9
PRU	Pruhonice	77.71	329	*e*P	P	23 49 03.7	+0.8
PRU				*e*PCP	PcP	23 49 08.7	-4.1
PRU				*e*sP	sP	23 49 25.5	+0.3
PRU				*e*XS	sS	23 59 20.2	+2.9
PRU				AMS	AMS	00 24 20.0	
	comp=Z,800nm,22.2s						
Z13A	Yuma Proving G	77.72	56	⇑P	P	23 49 03.4	+0.2
	baz=78,SNR=11						
X15A	Humboldt	77.73	55	⇑P	P	23 49 04.0	+0.8
	baz=78,SNR=13						
GZR	Gura Zlata	77.74	321	⇑P	P	23 49 03.5	+0.4
GZR	Gura Zlata	77.74	321	⇑*i*P	P	23 49 03.5	+0.4
W16A	Flagstaff	77.74	54	⇑P	P	23 49 04.4	+1.0
	baz=78						
CLZ	Clausthal	77.75	332	*e*P	P	23 49 03.5	+0.4
	comp=Z,70nm,0.9s,mb5.6						
CLZ	Clausthal	77.75	332	*e*P	P	23 49 03.5	+0.4
CLZ				pmax	pmax		
	comp=Z,70nm,0.9s,mb5.6						
SZH	Strazhica	77.79	318	P	P	23 49 03.6	+0.2
R21A	Cimarron	77.81	49	⇑P	P	23 49 04.3	+0.6
	baz=78,SNR=11						
V17A	Tonalea, Kykot	77.82	53	⇑P	P	23 49 04.5	+0.7
	baz=78,SNR=24						
U18A	Rough Rock, Ch	77.83	52	⇑P	P	23 49 04.4	+0.7
	baz=78,SNR=6.9						
Q22A	Crested Butte,	77.83	48	⇓P	P	23 49 04.4	+0.6
	baz=78,SNR=9.1						
BORA	Eskisehir	77.86	313	*i* P	P	23 49 03.4	-0.5
ISCO	Idaho Springs	77.89	47	*e*P	P	23 49 04.6	+0.5
ISCO				*e**PP	pP	23 49 19.5	-0.5
ISCO				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.1						
ISCO	Idaho Springs	77.89	47	*e*P	P	23 49 04.6	+0.5
	comp=Z,27nm,1.1s,mb5.1						
ISCO				*e*pP	pP	23 49 19.4	-0.6
TREC	Trest	77.89	328	*e*P	P	23 49 04.3	+0.4
TREC				*e**PP	pP	23 49 17.6	-2.3
TREC				*e*	pP	23 49 24.8	+4.9
TREC				*e*S	sS	23 59 22.4	+3.1
TREC	Trest	77.89	328	*e*P	P	23 49 04.3	+0.4
TREC				*e*pP	pP	23 49 17.6	-2.3
TREC				*e*sP	sP	23 49 24.8	-1.4
TREC				*e*XS	sS	23 59 22.4	+3.1
TREC				AMS	AMS	00 25 00.0	
	comp=Z,600nm,20.6s						
KDHN	Kadinhani	77.89	311	*i* P	P	23 49 03.1	-1.0
ESKT	Eskisehir	77.89	313	*i* P	P	23 49 04.4	+0.3
113A	Mohawk Valley,	77.94	57	⇑P	P	23 49 04.8	+0.3
	baz=78						
EBH	Black Hill	78.02	341	*e*P	P	23 49 05.5	+1.0
EBH	Black Hill	78.02	341	P	P	23 49 05.5	+1.0
Y15A	Casa Rosa Ranc	78.03	55	⇑P	P	23 49 05.3	+0.3
	baz=78,SNR=6.5						
NWAO	Narrogin (SRO)	78.03	201	P	P	23 49 04.0	-0.6
	comp=Z,17nm,0.9s,mb5.0,baz=21,slow=5.2,SNR=6.0						
NWAO				pP	pP	23 49 20.8	+0.1
	comp=Z,81nm,1.0s,baz=26,slow=8.4,SNR=11						
NWAO	Narrogin (SRO)	78.03	201	*e*P	P	23 49 04.3	-0.4
NWAO				*e**PP	pP	23 49 20.9	+0.2
NWAO				pmax	pmax		
	comp=Z,140nm,1.3s						
NWAO	Narrogin (SRO)	78.03	201	*e*P	P	23 49 04.3	-0.4
	comp=Z,140nm,1.3s,mb5.7						
NWAO				*e*pP	pP	23 49 20.9	+0.2
T19A	Beclabito	78.04	51	⇓P	P	23 49 05.5	+0.6
	baz=78						
JMB	Yambol	78.04	317	P	P	23 49 05.9	+1.0
Z14A	Wintersburg	78.05	56	⇓P	P	23 49 05.2	+0.1
	baz=78						
MVCO	Mesa Verde	78.08	50	⇑P	P	23 49 05.4	+0.2
	baz=78,SNR=7.5						
MVCO	Mesa Verde	78.08	50	*e*P	P	23 49 04.7	-0.5
	comp=Z,52nm,1.4s,mb5.3						
MVCO				*e*pP	pP	23 49 20.6	-0.5
BZS	Buzias	78.11	322	⇑P	P	23 49 05.0	-0.2
BZS	Buzias	78.11	322	⇑*i*P	P	23 49 05.0	-0.2
PVL	Pavlikeni	78.12	318	P	P	23 49 05.9	+0.6
TANN	Tannenbergstha	78.16	330	*e*P	P	23 49 05.6	+0.2
	comp=Z,71nm,2.0s,mb5.2						
S21A	Coal Bank Pass	78.17	50	⇓P	P	23 49 06.7	+1.0
	baz=78,SNR=15						
W17A	Winslow	78.24	53	⇓P	P	23 49 06.7	+0.5
	baz=78						
X16A	Lo Mia Camp, P	78.25	54	⇓P	P	23 49 07.1	+0.9
	baz=78						
IBBN	Ibbenburen	78.26	334	*e*P	P	23 49 05.9	0.0
	comp=Z,60nm,0.9s,mb5.5						
EAB	Aberfoyle	78.27	342	*e*P	P	23 49 06.3	+0.4
EAB	Aberfoyle	78.27	342	P	P	23 49 06.3	+0.4
V18A	Ganado	78.27	52	⇑P	P	23 49 06.9	+0.6
	baz=78						
MOX	Moxa	78.29	331	*e*P	P	23 49 06.0	-0.1
	comp=Z,123nm,2.0s,mb5.5						
MOX				*e*	pP	23 49 19.8	-2.3
MOX	Moxa	78.29	331	*e*P	P	23 49 06.2	+0.1
	comp=Z,44nm,1.3s,mb5.2						
MOX	Moxa	78.29	331	*e*P	P	23 49 06.0	-0.1
MOX				*e*	pP	23 49 19.8	-2.3
MOX				pmax	pmax		
	comp=Z,123nm,2.0s,mb5.5						
U19A	Dine' College,	78.30	52	⇑P	P	23 49 06.6	+0.2
	baz=78,SNR=7.4						
NKC	Novy Kostel	78.31	330	*e*P	P	23 49 06.3	+0.1
NKC				*e*		23 49 11.2	
NKC				*e**PP	pP	23 49 24.4	+2.2
NKC	Novy Kostel	78.31	330	*e*P	P	23 49 06.3	+0.1
NKC				*e*PCP	PcP	23 49 11.2	-4.2
NKC				*e*pP	pP	23 49 24.4	+2.2
NKC				AMS	AMS	00 26 00.0	
	comp=Z,1μm,22.1s						
EBL	Broad Law	78.34	341	*e*P	P	23 49 05.8	-0.4
EBL	Broad Law	78.34	341	P	P	23 49 05.8	-0.4
R22A	Saguache, Gunn	78.36	49	⇑P	P	23 49 07.7	+1.0
	baz=78,SNR=12						
EAU	Auchinoon	78.37	341	*e*P	P	23 49 07.0	+0.5
EAU	Auchinoon	78.37	341	P	P	23 49 07.0	+0.5
114A	Black Gap (USA	78.50	56	⇑P	P	23 49 07.9	+0.3
	baz=78,SNR=5.5						
Z15A	Gila River Ind	78.58	55	⇑P	P	23 49 08.0	-0.1
	baz=78						
EYMN	Ely	78.59	34	*e*P	P	23 49 06.7	-1.1
	comp=Z,30nm,0.9s,mb5.2						
EYMN				*e*pP	pP	23 49 22.1	-1.7
Y16A	Circle Bar Ran	78.60	55	⇓P	P	23 49 08.6	+0.5
	baz=78,SNR=6.4						
U20A	Newcomb	78.64	51	⇑P	P	23 49 08.5	+0.2
	baz=78						
PGBU	Glenifferbraes	78.65	342	*e*P	P	23 49 07.9	-0.1
PGBU				AMb	AMB	23 49 08.7	
	comp=Z,110nm,1.8s,mb5.5						
PGBU	Glenifferbraes	78.65	342	P	P	23 49 07.9	-0.1
PGBU				AMb	AMB	23 49 08.7	
	comp=Z,110nm,1.8s,mb5.5						
X17A	Forest Lakes	78.69	54	⇑P	P	23 49 08.9	+0.2
	baz=78						
UBBA	Unterbreizbach	78.73	331	*e*P	P	23 49 08

baz=79
W19A **Sanders** 79.01 53 ⇑P P 23 49 11.1 +0.7
baz=79
WET **Wettzell** 79.03 329 eP P 23 49 10.9 +0.7
comp=Z,43nm,1.1s,mb5.3
WET **Wettzell** 79.03 329 eP P 23 49 10.9 +0.7
WET pmax pmax
comp=Z,43nm,1.1s,mb5.3
V20A **Brimhall** 79.07 51 ⇓P P 23 49 11.0 +0.3
baz=79
X18A **Snowflake** 79.08 53 ⇑P P 23 49 11.4 +0.6
baz=79
214A **Organ Pipe Nat** 79.08 57 ⇑P P 23 49 11.1 +0.4
baz=79
U21A **Nageezi** 79.11 51 ⇑P P 23 49 11.0 +0.2
baz=79,SNR=8.1
Y17A **Roosevelt** 79.11 54 ⇓P P 23 49 11.2 +0.3
baz=79,SNR=5.6
DURS **Dursunbey** 79.13 314 i P P 23 49 10.4 -0.5
T22A **Edith** 79.13 50 ⇑P P 23 49 11.5 +0.6
baz=79,SNR=12
BUG **Bochum--Univer** 79.15 333 eP P 23 49 10.6 -0.2
comp=Z,53nm,1.0s,mb5.4
PGB **Panagyurishte** 79.19 319 P P 23 49 12.0 +0.8
GRA1 **Grafenberg Arr** 79.21 330 eP P 23 49 11.8 +0.6
comp=Z,87nm,0.9s,mb5.7
GRA1 epP pP 23 49 32.3 +5.1
GRA1 eS S 23 59 04.1 -2.3
GRF **Grafenberg Arr** 79.21 330 eP P 23 49 11.8 +0.6
comp=Z,87nm,0.9s,mb5.7
GRF epP pP 23 49 32.3 +5.1
GRF eS S 23 59 04.1 -2.3
GRF **Grafenberg Arr** 79.21 330 eP P 23 49 11.8 +0.6
GRF e*PP pP 23 49 32.3 +5.1
GRF eS S 23 59 04.1 -2.3
GRF pmax pmax
comp=Z,87nm,0.9s,mb5.7
GRF **Grafenberg Arr** 79.21 330 eP P 23 49 11.8 +0.6
GRF e*PP pP 23 49 32.3 +5.1
GRF eS S 23 59 04.1 -2.3
GRF pmax pmax
comp=Z,87nm,0.9s,mb5.7
KDZ **Kurdzhali** 79.23 317 P P 23 49 12.5 +1.1
PLD **Plovdiv** 79.25 318 P P 23 49 11.9 +0.4
ISP **Isparta** 79.28 312 eP P 23 49 11.7 0.0
116A **Eloy** 79.36 56 ⇓P P 23 49 12.4 +0.1
baz=79
DEMI **Demirci** 79.40 314 i P P 23 49 10.4 -2.0
SDCO **Great Sand Dun** 79.40 48 eP P 23 49 12.4 0.0
comp=Z,13nm,1.1s,mb4.8
SDCO epP pP 23 49 27.9 -0.5
KHAL **Karahalli** 79.46 313 i P P 23 49 12.6 -0.1
ALN **Alexandroupoli** 79.46 316 P P 23 49 12.9 +0.2
BALY **Balya** 79.48 315 i P P 23 49 12.9 0.0
ARSA **Arzberg** 79.50 326 ⇑iP P 23 49 13.0 +0.2
comp=Z,24nm,1.2s,mb5.0,SNR=12
W20A **Ramah** 79.52 52 ⇓P P 23 49 13.4 +0.2
baz=79,SNR=5.3
MOA **Molln** 79.53 327 ⇑iP P 23 49 13.2 +0.3
comp=Z,14nm,0.9s,mb4.9,SNR=11
RDO **Rodhopi** 79.54 317 P P 23 49 13.7 +0.6
RDO **Rodhopi** 79.54 317 eP P 23 49 13.3 +0.2
X19A **St. Johns** 79.54 53 ⇑P P 23 49 13.9 +0.7
baz=79,SNR=18
Y18A **Canyon Day Jun** 79.54 54 ⇓P P 23 49 14.1 +0.8
baz=79
V21A **Milan** 79.55 51 ⇑P P 23 49 13.7 +0.4
baz=79
RZN **Rozhen** 79.56 318 P P 23 49 14.2 +1.0
GAL1 **Galloway** 79.56 341 eP P 23 49 11.7 -1.3
GAL1 eP 23 49 12.3
GAL1 AMb AMB 23 49 13.4
comp=Z,95nm,1.9s,mb5.4
GAL1 **Galloway** 79.56 341 P P 23 49 11.7 -1.3
GAL1 **Galloway** 79.56 341 P P 23 49 12.3 -0.6
GAL1 AMb AMB 23 49 13.4
comp=Z,95nm,1.9s,mb5.4
ECSD **EROS Data Cent** 79.59 39 eP P 23 49 12.0 -1.4
comp=Z,26nm,0.9s,mb5.2
ECSD epP pP 23 49 27.5 -1.9
U22A **Llaves** 79.60 50 ⇓P P 23 49 14.1 +0.5
baz=79,SNR=8.5
Z17A **San Carlos Hig** 79.61 54 ⇑P P 23 49 14.4 +0.8
baz=79
HPK **Haverah Park** 79.61 339 eP P 23 49 13.1 -0.2
HPK **Haverah Park** 79.61 339 P P 23 49 13.1 -0.2
VTS **Vitosha** 79.63 319 P P 23 49 14.3 +0.7
CSS **Prodhromos** 79.67 308 eP P 23 49 12.7 -1.3
comp=Z,38nm,1.0s,mb5.3
TNS **Taunus Mts** 79.77 332 eP P 23 49 14.4 +0.2
comp=Z,52nm,1.2s,mb5.3
TNS **Taunus Mts** 79.77 332 eP P 23 49 14.4 +0.2
TNS pmax pmax
comp=Z,52nm,1.2s,mb5.3
MMAI **Mount Meron Ar** 79.78 305 P P 23 49 15.5 +1.0
comp=Z,26nm,0.9s,mb5.2,baz=46,slow=7.1,SNR=22
MMAI pP pP 23 49 32.7 +2.1
comp=Z,44nm,0.9s,baz=38,slow=7.3,SNR=11
MMAI LR LR 00 28 28.4
comp=Z,480nm,21.4s,MS4.8,baz=20,slow=38
KOGS **Kog** 79.83 325 eP P 23 49 14.1 -0.5
Y19A **Nutrioso** 79.89 53 ⇑P P 23 49 15.9 +0.7
baz=80,SNR=5.8
216A **Three Points,** 79.89 56 ⇓P P 23 49 15.4 +0.2
baz=80
V22A **San Miguel Ran** 79.90 50 ⇓P P 23 49 15.3 +0.2
baz=80,SNR=6.3
X20A **Quemado** 79.93 52 ⇑P P 23 49 16.1 +0.7
baz=80,SNR=8.3
117A **Oracle** 79.94 55 ⇑P P 23 49 15.6 +0.1
baz=80,SNR=5.3
DIVS **Divibare** 80.01 322 P P 23 49 15.5 -0.1
U23A **El Rito** 80.02 50 ⇓P P 23 49 16.5 +0.7
baz=80,SNR=16
Z18A **Geronimo** 80.02 54 ⇑P P 23 49 16.5 +0.7
baz=80
W21A **San Fidel** 80.03 52 ⇓P P 23 49 16.3 +0.5
baz=80
TUC **Tucson** 80.09 55 eP P 23 49 16.1 -0.2
TUC e*PP pP 23 49 31.3 -1.0
TUC pmax pmax
comp=Z,29nm,1.4s,mb5.0
TUC **Tucson** 80.09 55 eP P 23 49 16.1 -0.2
comp=Z,29nm,1.4s,mb5.0
TUC epP pP 23 49 31.3 -1.0
MMB **Musomiste** 80.12 318 P P 23 49 16.8 +0.5
PERS **Pernice** 80.16 326 i P P 23 49 16.6 +0.3
SOKA **Soboth** 80.16 326 ⇑iP P 23 49 16.6 +0.2
comp=Z,56nm,1.0s,mb5.4
TOD **Tromm** 80.16 331 eP P 23 49 16.2 -0.1
RJOB **Jochberg** 80.21 328 eP P 23 49 17.4 +0.8
comp=Z,38nm,1.0s,mb5.3
KBI1 **Birley Grange** 80.22 339 eP P 23 49 16.1 -0.5
KBI1 **Birley Grange** 80.22 339 P P 23 49 16.1 -0.5
BEBN **Eben Emael** 80.23 334 P P 23 49 16.4 -0.2
GOLH **Golhisar** 80.23 312 i P P 23 49 14.3 -2.6
KKB **Krupnik** 80.24 319 P P 23 49 17.7 +0.8
NVR **Nevrokopi** 80.24 318 eP P 23 49 17.2 +0.3
MEM **Membach** 80.28 334 P P 23 49 16.9 0.0
comp=Z,19nm,1.1s,mb4.9
Z19A **T-Link Ranch,** 80.34 54 ⇑P P 23 49 18.4 +0.8
baz=80
118A **Homack Ranch,** 80.37 55 ⇓P P 23 49 18.1 +0.3
baz=80,SNR=11
ABH **Alteburg** 80.37 332 eP P 23 49 17.4 0.0
SCHQ **Schefferville** 80.40 17 P P 23 49 16.7 -0.8
comp=Z,28nm,0.8s,mb5.3,baz=353,slow=6.7,SNR=21
SCHQ pP pP 23 49 34.5 +0.9
comp=Z,34nm,0.9s,baz=357,slow=9.0,SNR=9.5
SCHQ PKKPbc PKKPbc 00 08 03.2 +5.3
comp=Z,4.8nm,0.9s,baz=162,slow=4.4,SNR=3.7
SCHQ LR LR 00 29 25.0
comp=Z,160nm,18.9s,MS4.4,baz=134,slow=39
SCHQ **Schefferville** 80.40 17 eP P 23 49 17.2 -0.3
comp=Z,42nm,0.9s,mb5.4
SCHQ epP pP 23 49 34.1 +0.6
GMM **Mts of Mourne** 80.43 342 eP P 23 49 17.0 -0.7
GMM **Mts of Mourne** 80.43 342 P P 23 49 17.0 -0.7
V23A **Ortiz Mt. (NFS** 80.43 50 ⇑P P 23 49 19.2 +1.2
baz=80,SNR=5.8
T25A **Trinidad** 80.44 48 ⇑P P 23 49 17.9 -0.1
baz=80,SNR=16
Y20A **Horse Springs,** 80.44 53 ⇑P P 23 49 19.0 +0.9
baz=80,SNR=15
FUR **Furstenfeldbru** 80.45 329 eP P 23 49 18.4 +0.5
comp=Z,73nm,0.9s,mb5.6
FUR pmax pmax
comp=Z,73nm,0.9s,mb5.6
U24A **Moreno Valley** 80.48 49 ⇑P P 23 49 19.1 +0.8
baz=80
OBKA **Obir** 80.50 326 ⇑iP P 23 49 18.2 0.0
comp=Z,22nm,0.8s,mb5.2,SNR=13
W22A **Albuquerque** 80.51 51 ⇓P P 23 49 19.2 +0.7
baz=80
KBA **Koelnbreinsper** 80.53 327 ⇑iP P 23 49 18.7 +0.3
comp=Z,38nm,0.9s,mb5.3,SNR=16
CWF **Charnwood Fore** 80.62 339 eP P 23 49 18.1 -0.6
CWF AMb AMB 23 49 19.9
comp=Z,40nm,2.0s,mb5.0
CWF **Charnwood Fore** 80.62 339 P P 23 49 18.1 -0.6
CWF AMb AMB 23 49 19.9
comp=Z,40nm,2.0s,mb5.0
KTD **Kalmit** 80.66 332 eP P 23 49 18.9 -0.1
BCLA **Clavier** 80.67 334 P P 23 49 18.7 -0.3
119A **Ashpeak Ranch,** 80.68 54 ⇑P P 23 49 19.8 +0.4
baz=80
STU **Stuttgart** 80.72 331 eP P 23 49 19.5 +0.2
comp=Z,52nm,1.0s,mb5.4
STU **Stuttgart** 80.72 331 eP P 23 49 19.3 0.0
STU pmax pmax
comp=Z,42nm,0.8s,mb5.4
STU **Stuttgart** 80.72 331 eP P 23 49 19.2 -0.1
comp=Z,42nm,0.8s,mb5.4
MYKA **Terra Mystica** 80.77 327 ⇑iP P 23 49 19.2 -0.4
comp=Z,34nm,1.2s,mb5.2
218A **Dragoon** 80.78 55 ⇓P P 23 49 20.6 +0.7
baz=80
Y21A **Point of Rocks** 80.79 52 ⇓P P 23 49 20.9 +0.9
baz=80,SNR=6.9
LAZ **Ladron** 80.83 52 eP P 23 49 20.5 +0.3
comp=Z,23nm,1.5s,mb4.9
LAZ epP pP 23 49 36.2 0.0
X22A **Bernardo** 80.83 52 ⇑P P 23 49 21.2 +1.1
baz=81
ANMO **Albuquerque** 80.84 51 eP P 23 49 20.6 +0.3
comp=Z,5.2nm,1.1s,mb4.4
ANMO epP pP 23 49 35.7 -0.6
AYDN **Tasoluk** 80.85 313 i P P 23 49 20.6 +0.3
W23A **Werner Place,** 80.87 51 ⇑P P 23 49 21.1 +0.8
baz=81,SNR=5.1
Z20A **Nine Sixteen R** 80.87 54 ⇓P P 23 49 21.0 +0.6
baz=81,SNR=20
LJU **Ljubljana** 80.88 326 eP P 23 49 19.8 -0.4
PLE **Pljevlja** 80.88 322 ⇑iP P 23 49 21.1 +0.8
PLE **Pljevlja** 80.88 322 ⇑iP P 23 49 21.1 +0.8
VAY **Valandovo** 80.90 319 ⇑iP P 23 49 20.4 -0.1
AKAS **Kas** 80.92 311 i P P 23 49 19.5 -1.1
SNF **Seneffe** 80.93 334 P P 23 49 20.4 0.0
comp=Z,34nm,2.4s,mb4.9
SKO **Skopje** 80.96 320 ⇑iP P 23 49 22.1 +1.4
U25A **Circle Dot Ran** 80.97 49 ⇓P P 23 49 20.9 0.0
baz=81,SNR=6.4
IVA **Berane** 81.00 321 ⇑iP P 23 49 21.4 +0.5
IVA **Berane** 81.00 321 ⇑iP P 23 49 21.4 +0.5
BOJS **Bojanci** 81.01 325 eP P 23 49 20.7 -0.2
WATA **Walderalm** 81.01 329 ⇑iP P 23 49 21.1 +0.1
comp=Z,19nm,0.7s,mb5.1
TURN **Turunc** 81.02 312 i P P 23 49 21.5 +0.4
WLF **Walferdange** 81.04 333 P P 23 49 22.0 +1.0
comp=Z,28nm,2.0s,mb4.8
WLF **Walferdange** 81.04 333 eP P 23 49 21.3 +0.3
comp=Z,134nm,2.1s,mb5.5
WLF **Walferdange** 81.04 333 eP P 23 49 21.6 +0.6
WLF pmax pmax
comp=Z,84nm,1.6s,mb5.4
WLF **Walferdange** 81.04 333 eP P 23 49 21.6 +0.6
comp=Z,84nm,1.6s,mb5.4
COWI **Conover** 81.04 34 eP P 23 49 19.0 -2.0
comp=Z,42nm,1.4s,mb5.2
LANF **Langenberg** 81.04 332 eP P 23 49 20.6 -0.5
WTTA **Wattenberg** 81.05 329 ⇑iP P 23 49 21.5 +0.4
comp=Z,53nm,1.3s,mb5.3,SNR=16
CADS **Cadrg** 81.06 327 i P P 23 49 20.0 -1.2
GIVF **Givet** 81.10 334 ⇑iP P 23 49 20.7 -0.6
comp=Z,63nm,1.1s,mb5.1
GIVF **Givet** 81.10 334 ⇑iP P 23 49 20.7 -0.6
GIVF pmax pmax
comp=Z,31nm,1.1s,mb5.2
GIVF **Givet** 81.10 334 ⇑iP P 23 49 20.7 -0.6
comp=Z,31nm,1.1s,mb5.2
ABTA **Abfaltersbach** 81.13 328 ⇑iP P 23 49 20.8 -0.7
comp=Z,20nm,1.5s,mb4.8
VOY **Vojsko** 81.15 327 eP P 23 49 20.4 -1.3
VOY e 23 49 43.1
PLG **Polygyros** 81.18 317 P P 23 49 21.6 -0.3
PLG **Polygyros** 81.18 317 eP P 23 49 21.7 -0.2
PVY **Plav** 81.18 321 ⇑iP P 23 49 21.6 -0.3
PVY **Plav** 81.18 321 ⇑iP P 23 49 21.7 -0.2
318A **Bisbee** 81.18 56 ⇑P P 23 49 22.1 0.0
baz=81,SNR=13
DOU **Dourbes** 81.18 334 P P 23 49 21.2 -0.5
comp=Z,14nm,1.7s,mb4.6
Y22D **IRIS PASSCAL I** 81.19 52 ⇑P P 23 49 22.9 +0.8
baz=81
MOTA **Moosalm** 81.19 329 ⇑iP P 23 49 22.1 +0.3
comp=Z,60nm,1.0s,mb5.5,SNR=31
RETA **Reutte** 81.20 329 i P P 23 49 22.2 +0.3
comp=Z,51nm,1.0s,mb5.4,SNR=22
UPM **Unac-Piva** 81.20 322 ⇑iP P 23 49 21.3 -0.7
UPM **Unac-Piva** 81.20 322 ⇑iP P 23 49 21.4 -0.6
120A **U Bar Ranch, L** 81.24 54 ⇑P P 23 49 22.8 +0.4
baz=81,SNR=6.5
219A **White Tail Can** 81.24 55 ⇓P P 23 49 22.8 +0.3
baz=81,SNR=18
X23A **Hourglass Bar** 81.25 51 ⇑P P 23 49 23.1 +0.6
baz=81
W24A **Lazy 6 Ranch,** 81.26 50 ⇑P P 23 49 23.5 +1.0
baz=81,SNR=15
V25A **Rancho No Teng** 81.26 49 ⇓P P 23 49 22.9 +0.5
baz=81,SNR=13
Y22A **Socorro** 81.26 52 ⇑P P 23 49 23.1 +0.6
baz=81
Z21A **St. Cloud Mine** 81.28 53 ⇑P P 23 49 23.2 +0.6
baz=81,SNR=19
BNM **Barren Site** 81.30 52 eP P 23 49 22.8 0.0
comp=Z,12nm,1.1s,mb4.7
BNM epP pP 23 49 38.0 -0.8
BCI **Bajram Curri** 81.31 321 PN P 23 49 22.2 -0.4
BAIF **Baives** 81.34 334 ⇑iP P 23 49 22.0 -0.6
comp=Z,48nm,1.1s,mb5.0
BAIF **Baives** 81.34 334 ⇑iP P 23 49 22.0 -0.6
BAIF pmax pmax
comp=Z,24nm,1.1s,mb5.0
BAIF **Baives** 81.34 334 ⇑iP P 23 49 22.0 -0.6
comp=Z,24nm,1.1s,mb5.0
U26A **Atchley Ranch,** 81.35 48 ⇓P P 23 49 23.0 +0.1
baz=81
KNDS **Knezji Dol** 81.35 326 i P P 23 49 22.3 -0.4
PAIG **Paliouri** 81.39 317 P P 23 49 21.6 -1.5
BFO **Black Forest** 81.41 331 P P 23 49 22.5 -0.5
comp=Z,148nm,1.2s,mb5.8,SNR=12
BFO **Black Forest** 81.41 331 eP P 23 49 23.0 0.0
comp=Z,60nm,1.3s,mb5.4
BFO **Black Forest** 81.41 331 eP P 23 49 23.0 0.0
BFO pmax pmax
comp=Z,60nm,1.3s,mb5.4
SPAK **Spaichingen-Ko** 81.43 331 eP P 23 49 22.8 -0.3
TRI **Trieste** 81.46 326 eP P 23 49 22.1 -1.2
TRI pmax pmax
comp=Z,31nm,0.9s,mb5.2
TRI **Trieste** 81.46 326 eP P 23 49 22.1 -1.2
comp=Z,31nm,0.9s,mb5.2
NKY **Niksic** 81.47 322 ⇓iP P 23 49 22.9 -0.5
NKY **Niksic** 81.47 322 ⇓iP P 23 49 23.0 -0.4
KRUS **Krusevo** 81.51 319 ⇑iP P 23 49 23.5 -0.2
BDRM **Kayabasi** 81.52 313 i P P 23 49 24.1 +0.2
FETA **Feichten** 81.60 329 ⇑iP P 23 49 24.3 +0.3
comp=Z,33nm,1.1s,mb5.2,SNR=15
BRY **Bratogost** 81.61 322 ⇑iP P 23 49 22.6 -1.6
BRY **Bratogost** 81.61 322 ⇑iP P 23 49 22.7 -1.5
TTG **Podgorica** 81.64 321 ⇑iP P 23 49 23.8 -0.5
TTG **Podgorica** 81.64 321 ⇑iP P 23 49 23.8 -0.5
PUK **Puka** 81.64 321 PN P 23 49 24.5 +0.1
319A **Douglas** 81.66 55 ⇑P P 23 49 24.9 +0.2
baz=81,SNR=7.1
X24A **Lazy VL Ranch,** 81.70 51 ⇑P P 23 49 25.8 +1.0
baz=81
DAVA **Damuels** 81.70 330 i P P 23 49 24.7 +0.1
comp=Z,43nm,0.9s,mb5.4,SNR=17
CDF **Champ du Feu** 81.71 332 ⇑iP P 23 49 24.2 -0.4
comp=Z,66nm,1.1s,mb5.2
CDF **Champ du Feu** 81.71 332 ⇑iP P 23 49 24.2 -0.4
CDF pmax pmax
comp=Z,33nm,1.1s,mb5.2
CDF **Champ du Feu** 81.71 332 ⇑iP P 23 49 24.2 -0.4
comp=Z,33nm,1.1s,mb5.2
Z22A **Elephant Butte** 81.74 52 ⇑P P 23 49 25.4 +0.4
baz=82,SNR=12
BIA **Bitola** 81.74 319 eP P 23 49 24.0 -0.9
HTR **Trewern Hill** 81.74 339 eP P 23 49 24.1 -0.6
HTR **Trewern Hill** 81.74 339 P P 23 49 24.1 -0.6
220A **Playas Peak, P** 81.75 54 ⇑P P 23 49 25.4 +0.3
baz=82,SNR=8.4
V26A **Tequesquite Ra** 81.75 49 ⇓P P 23 49 25.1 0.0
baz=82
121A **Cookes Peak, D** 81.76 53 ⇑P P 23 49 25.8 +0.6
baz=82,SNR=10
W25A **X Bar L Ranch,** 81.79 50 ⇓P P 23 49 25.7 +0.4
baz=82,SNR=14
Y23A **Lovelace Mesa,** 81.79 51 ⇑P P 23 49 25.6 +0.3
baz=82,SNR=13
LIBD **Limburg** 81.82 331 eP P 23 49 25.5 +0.3
FNA **Florina** 81.89 319 P P 23 49 25.5 -0.2
FELD **Feldberg im Sc** 81.91 331 eP P 23 49 25.0 -0.6
BUM **Brajici-Budva** 81.91 321 ⇑iP P 23 49 25.6 -0.2
BUM **Brajici-Budva** 81.91 321 ⇑iP P 23 49 25.7 -0.1
ECH **Echery** 81.92 332 eP P 23 49 25.0 -0.7
ECH **Echery** 81.92 332 eP P 23 49 25.2 -0.5
ECH pmax pmax
comp=Z,28nm,1.0s,mb5.2
ECH **Echery** 81.92 332 eP P 23 49 25.2 -0.5
comp=Z,28nm,1.0s,mb5.2
OHR **Ohrid** 81.93 319 ⇑iP P 23 49 25.2 -0.6
HCY **Herceg Novi** 81.98 322 ⇓iP P 23 49 25.5 -0.6
HCY **Herceg Novi** 81.98 322 ⇓iP P 23 49 25.5 -0.6
ULC **Ulcinj** 82.01 321 ⇓iP P 23 49 26.2 -0.1
ULC **Ulcinj** 82.01 321 ⇓iP P 23 49 26.3 0.0
XOR **Xorichti** 82.06 317 P P 23 49 25.4 -1.2
NEO **Neokhori** 82.09 317 eP P 23 49 26.0 -0.8
122A **Conniff Cattle** 82.11 53 ⇓P P 23 49 27.7 +0.7
baz=82
221A **Mesquite Ranch** 82.13 54 ⇓P P 23 49 27.7 +0.5
baz=82
320A **Kipp Ranch, An** 82.15 55 ⇑P P 23 49 28.0 +0.7
baz=82
Y24A **Capitan** 82.16 51 ⇓P P 23 49 27.2 0.0
baz=82,SNR=6.4
Z23A **Rita Site, Whi** 82.17 52 ⇓P P 23 49 28.0 +0.7
baz=82
X25A **Clemmons Ranch** 82.17 50 ⇑P P 23 49 27.4 +0.1
baz=82,SNR=7.7
TIR **Tirane** 82.19 320 eP P 23 49 27.5 +0.2
TIR pmax pmax
comp=Z,75nm,1.2s,mb5.5
TIR **Tirane** 82.19 320 eP P 23 49 27.5 +0.3
comp=Z,75nm,1.2s,mb5.5
MOF **Molkenrain** 82.24 331 eP P 23 49 26.7 -0.7
W26A **Owens Ranch, T** 82.28 49 ⇑P P 23 49 28.6 +0.8
baz=82
KBN **Korca** 82.31 319 PN P 23 49 27.5 -0.4
HINF **Hinteralfeld** 82.37 332 ⇑iP P 23 49 27.3 -0.7
comp=Z,20nm,0.8s,mb4.8
HINF **Hinteralfeld** 82.37 332 ⇑iP P 23 49 27.3 -0.7
HINF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
HINF **Hinteralfeld** 82.37 332 ⇑iP P 23 49 27.3 -0.7
comp=Z,10nm,0.8s,mb4.8
HAU **Haudompre** 82.39 332 ⇑iP P 23 49 27.5 -0.6
comp=Z,31nm,0.9s,mb4.9
HAU eMLR MLR
comp=Z,831nm,20.0s,MS4.8
HAU **Haudompre** 82.39 332 ⇑iP P 23 49 27.5 -0.6
HAU pmax pmax
comp=Z,15nm,0.9s,mb4.9
HAU MLR MLR
comp=Z,830nm,20.0s,MS5.1
HAU **Haudompre** 82.39 332 ⇑iP P 23 49 27.5 -0.6
comp=Z,15nm,0.9s,mb4.9
HAU LR LR
comp=Z,830nm,20.0s,MS5.1
MEZF **Maizieres J'vi** 82.41 333 ⇑iP P 23 49 28.0 -0.2
comp=Z,160nm,1.4s,mb5.4
MEZF **Maizieres J'vi** 82.41 333 ⇑iP P 23 49 28.0 -0.2
comp=Z,160nm,1.4s,mb5.8
BBS **Basel-Blauen** 82.43 331 eP P 23 49 28.0 -0.4
222A **Williams Famil** 82.47 53 ⇓P P 23 49 29.6 +0.7
baz=82
THL **Klokotos Trika** 82.51 318 eP P 23 49 27.3 -1.6
TUE **Stuetta** 82.59 329 eP P 23 49 28.8 -0.4
comp=Z,21nm,0.8s,mb5.2
Y25A **Mesa, Roswell** 82.59 51 ⇑P P 23 49 29.1 -0.3
baz=82,SNR=6.2
123A **Bell Site, Whi** 82.59 52 ⇑P P 23 49 30.1 +0.6
baz=82
Z24A **Sheeppen Canyo** 82.63 51 ⇑P P 23 49 29.8 +0.1
baz=82,SNR=5.5
X26A **CR and CF Fran** 82.64 50 ⇓P P 23 49 29.8 +0.1
baz=82,SNR=9.7
ATAL **Atalanti** 82.66 317 P P 23 49 29.2 -0.5
W27A **Bowe Ranch, En** 82.69 49 ⇓P P 23 49 30.4 +0.4
baz=82
LKR **Lokris** 82.70 317 P P 23 49 29.0 -1.0
LKR **Lokris** 82.70 317 eP P 23 49 28.9 -1.1
AGG **Agios Georgios** 82.76 317 P P 23 49 28.9 -1.4
LOMF **Lomont** 82.77 331 eP P 23 49 29.3 -0.9
223A **Chaparral, Ant** 82.94 53 ⇑P P 23 49 31.7 +0.4
baz=83
X27A **F and S Farms,** 82.98 49 ⇑P P 23 49 31.8 +0.4
baz=83
JAN **Janina** 83.02 319 eP P 23 49 31.6 0.0
124A **Stringfield Ra** 83.02 52 ⇓P P 23 49 31.9 +0.2
baz=83,SNR=6.5
Z25A **Roswell** 83.04 51 ⇑P P 23 49 32.2 +0.4
baz=83,SNR=10
Y26A **Elida** 83.09 50 ⇑P P 23 49 32.2 +0.2
baz=83
DSF **Desfina** 83.12 317 P P 23 49 30.6 -1.5
JFWS **Jewell Farm** 83.13 36 eP P 23 49 30.9 -1.2
JFWS e*PP pP 23 49 46.4 -1.8
JFWS pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
JFWS **Jewell Farm** 83.13 36 eP P 23 49 30.9 -1.2
comp=Z,10nm,1.0s,mb4.8
JFWS epP pP 23 49 46.4 -1.8
SRN **Sarande** 83.26 319 PN P 23 49 28.3 -4.5
KALE **Kalithea** 83.33 317 P P 23 49 32.3 -0.9
IGT **Igoumenitsa** 83.37 319 P P 23 49 32.1 -1.3
TRIZ **Trizonia** 83.39 317 P P 23 49 32.6 -0.9
EFP **Efpalio** 83.43 317 P P 23 49 33.4 -0.3
224A **Cornudas Mount** 83.43 52 ⇓P P 23 49 33.8 0.0
baz=83,SNR=14
Z26A **Caprock** 83.47 51 ⇓P P 23 49 34.1 +0.1
baz=83,SNR=14
KEK **Kerkira** 83.49 319 P P 23 49 33.4 -0.6
KEK **Kerkira** 83.49 319 eP P 23 49 33.6 -0.4
Y27A **Causey** 83.49 50 ⇑P P 23 49 33.9 -0.2
baz=83
125A **Gardner Draw,** 83.52 51 ⇑P P 23 49 34.4 +0.1
baz=83,SNR=11
LAKA **Lakka** 83.53 317 P P 23 49 33.9 -0.4
GUR **Goura** 83.58 316 P P 23 49 33.4 -1.1
MSTX **Muleshoe** 83.65 49 ⇓P P 23 49 34.7 -0.2
baz=83
CABF **La Chapelle** 83.67 331 eP P 23 49 34.4 -0.4
LKD2 **Lefkada island** 83.78 318 P P 23 49 33.2 -2.3
MNTX **Cornudas Mount** 83.78 53 eP P 23 49 35.1 -0.5
comp=Z,40nm,1.5s,mb5.3
MNTX epP pP 23 49 51.7 -0.1
225A **Deer Hill, Car** 83.82 52 ⇓P P 23 49 36.0 +0.2
baz=84
LOR **Lormes** 83.88 333 ⇑iP P 23 49 35.2 -0.6
comp=Z,68nm,0.9s,mb5.5
LOR eMLR MLR
comp=Z,1μm,21.8s,MS5.0
LOR **Lormes** 83.88 333 ⇑iP P 23 49 35.2 -0.6
LOR pmax pmax
comp=Z,34nm,0.9s,mb5.5
LOR MLR MLR
comp=Z,1μm,21.8s,MS5.3
LOR **Lormes** 83.88 333 ⇑iP P 23 49 35.2 -0.6
comp=Z,34nm,0.9s,mb5.5
LOR LR LR
comp=Z,1μm,21.8s,MS5.3
Z27A **Tatum** 83.88 50 ⇓P P 23 49 35.7 -0.4
baz=84,SNR=33
126A **Clayton Basin,** 83.90 51 ⇑P P 23 49 36.1 -0.2
baz=84

324A Moseley Ranch, 83.91 53 ⇑P P 23 49 35.9 -0.4
baz=84,SNR=8.9
RLS Riolos of Patr 83.93 317 *eP* **P 23 49 36.1 -0.2**
FLN La Foliniere 83.94 336 *eP* **P 23 49 35.3 -0.9**
comp=Z,31nm,0.9s,mb5.1
FLN *e*MLR MLR
comp=Z,889nm,22.8s,MS4.8
FLN La Foliniere 83.94 336 *eP* **P 23 49 35.3 -0.9**
FLN pmax pmax
comp=Z,16nm,0.9s,mb5.2
FLN MLR MLR
comp=Z,890nm,22.8s,MS5.1
FLN La Foliniere 83.94 336 *eP* **P 23 49 35.3 -0.9**
comp=Z,16nm,0.9s,mb5.1
FLN LR LR
comp=Z,890nm,22.8s,MS5.1
LDF La Druitiere 83.99 336⇑*iP* **P 23 49 35.6 -0.8**
comp=Z,25nm,0.7s,mb5.1
LDF La Druitiere 83.99 336⇑*iP* **P 23 49 35.6 -0.8**
LDF pmax pmax
comp=Z,12nm,0.7s,mb5.1
LDF La Druitiere 83.99 336⇑*iP* **P 23 49 35.6 -0.8**
comp=Z,12nm,0.7s,mb5.2
LAST Lasithi 84.00 313 P **P 23 49 36.6 -0.1**
GDL2 Guadalupe Moun 84.02 52 *eP* **P 23 49 36.9 0.0**
comp=Z,34nm,1.2s,mb5.3
GDL2 *e*pP pP 23 49 53.0 -0.1
VLC Villacollemand 84.11 328 *eP* **P 23 49 37.2 +0.1**
comp=Z,21nm,1.0s,mb5.2
SSF Saint Saulge 84.18 333⇑*iP* **P 23 49 36.8 -0.6**
comp=Z,38nm,0.9s,mb5.2
SSF Saint Saulge 84.18 333⇑*iP* **P 23 49 36.8 -0.6**
SSF pmax pmax
comp=Z,19nm,0.9s,mb5.2
SSF Saint Saulge 84.18 333⇑*iP* **P 23 49 36.8 -0.6**
comp=Z,19nm,0.9s,mb5.2
CLNB Carlsbad 84.26 51 *eP* **P 23 49 38.8 +0.7**
comp=Z,0.9nm,0.2s,mb4.5
CLNB *e*pP pP 23 49 54.1 -0.1
127A Arkansas Junct 84.26 51 ⇓P P 23 49 37.9 -0.2
baz=84
325A Bean Ranch, Si 84.26 53 ⇓P P 23 49 38.0 -0.1
baz=84,SNR=11
RSL Roselend 84.26 331 *eP* **P 23 49 37.5 -0.3**
226A Malaga, Loving 84.28 52 ⇑P P 23 49 38.1 0.0
baz=84,SNR=9.9
VLS Valsamata 84.28 318 P **P 23 49 37.5 -0.6**
VLS Valsamata 84.28 318 *eP* **P 23 49 37.5 -0.6**
AQU L'Aquila 84.34 325 P **P 23 49 38.9 +0.6**
ITM Ithomi 84.37 316 P **P 23 49 37.8 -0.7**
ITM Ithomi 84.37 316 *eP* **P 23 49 37.6 -0.9**
LPL La Plagne 84.37 330⇑*iP* **P 23 49 38.5 +0.1**
comp=Z,81nm,1.2s,mb5.4
LPL La Plagne 84.37 330⇑*iP* **P 23 49 38.5 +0.1**
LPL pmax pmax
comp=Z,41nm,1.2s,mb5.4
LPL La Plagne 84.37 330⇑*iP* **P 23 49 38.5 +0.1**
comp=Z,41nm,1.2s,mb5.4
LPG La Plagne 84.38 330⇑*iP* **P 23 49 38.7 +0.3**
comp=Z,137nm,1.4s,mb5.6
LPG La Plagne 84.38 330⇑*iP* **P 23 49 38.7 +0.3**
LPG pmax pmax
comp=Z,69nm,1.4s,mb5.6
LPG La Plagne 84.38 330⇑*iP* **P 23 49 38.7 +0.3**
comp=Z,69nm,1.4s,mb5.6
GRR Gorron 84.39 336⇑*iP* **P 23 49 37.9 -0.5**
comp=Z,70nm,1.0s,mb5.5
GRR Gorron 84.39 336⇑*iP* **P 23 49 37.9 -0.5**
GRR pmax pmax
comp=Z,35nm,1.0s,mb5.4
GRR Gorron 84.39 336⇑*iP* **P 23 49 37.9 -0.5**
comp=Z,35nm,1.0s,mb5.5
SMF Signal de Mont 84.42 333⇑*iP* **P 23 49 38.2 -0.4**
comp=Z,94nm,1.0s,mb5.6
SMF Signal de Mont 84.42 333⇑*iP* **P 23 49 38.2 -0.4**
SMF pmax pmax
comp=Z,47nm,1.0s,mb5.6
SMF Signal de Mont 84.42 333⇑*iP* **P 23 49 38.2 -0.4**
comp=Z,47nm,1.0s,mb5.6
AVF Avril sur Loir 84.46 333⇑*iP* **P 23 49 38.5 -0.3**
comp=Z,123nm,0.9s,mb5.7
AVF Avril sur Loir 84.46 333⇑*iP* **P 23 49 38.5 -0.3**
AVF pmax pmax
comp=Z,61nm,0.9s,mb5.7
AVF Avril sur Loir 84.46 333⇑*iP* **P 23 49 38.5 -0.3**
comp=Z,61nm,0.9s,mb5.7
SIVA Sivas 84.47 313 P **P 23 49 38.9 -0.2**
VAM Vamos 84.51 314 *eP* **P 23 49 39.1 -0.2**
KARN Karanos 84.66 314 P **P 23 49 39.9 -0.2**
425A Indio Mountain 84.67 53 ⇓P P 23 49 40.0 -0.3
baz=84,SNR=14
PYL PYLOS 84.68 316 P **P 23 49 38.9 -1.2**
227A Bennet, Jal 84.78 51 ⇑P P 23 49 40.6 -0.1
baz=84
BNI Bardonecchia 84.79 330 *eP* **P 23 49 39.8 -0.7**
BNI pmax pmax
comp=Z,24nm,1.0s,mb5.3
BNI Bardonecchia 84.79 330 *eP* **P 23 49 39.8 -0.7**
comp=Z,24nm,1.0s,mb5.3
BGF Bois d'Agland 84.84 333⇑*iP* **P 23 49 40.4 -0.3**
comp=Z,41nm,1.0s,mb5.2
BGF Bois d'Agland 84.84 333⇑*iP* **P 23 49 40.4 -0.3**
BGF pmax pmax
comp=Z,21nm,1.0s,mb5.2
BGF Bois d'Agland 84.84 333⇑*iP* **P 23 49 40.4 -0.3**
comp=Z,21nm,1.0s,mb5.2
326A Caldwell Ranch 84.89 52 ⇓P P 23 49 41.1 -0.2
baz=85,SNR=14
GVD Gavdhos 84.99 313 *eP* **P 23 49 40.9 -0.8**
comp=Z,109nm,0.8s,mb6.0
MBDF Montbardon 85.03 330⇑*iP* **P 23 49 41.1 -0.6**
comp=Z,47nm,0.8s,mb5.3
MBDF Montbardon 85.03 330⇑*iP* **P 23 49 41.1 -0.6**
MBDF pmax pmax
comp=Z,23nm,0.8s,mb5.4
MBDF Montbardon 85.03 330⇑*iP* **P 23 49 41.1 -0.6**
comp=Z,23nm,0.8s,mb5.4
PLDF La Plantade 85.09 333 *eP* **P 23 49 42.7 +0.7**
327A Balmorhea Ranc 85.13 52 ⇓P P 23 49 42.6 +0.1
baz=85
ROSF Rostrenen 85.14 338⇑*iP* **P 23 49 42.0 -0.2**
comp=Z,276nm,1.5s,mb5.8
ROSF Rostrenen 85.14 338⇑*iP* **P 23 49 42.0 -0.2**
ROSF pmax pmax
comp=Z,138nm,1.5s,mb5.9
ROSF Rostrenen 85.14 338⇑*iP* **P 23 49 42.0 -0.2**
comp=Z,138nm,1.5s,mb5.9
AGO Saint Agoulin 85.18 333 *eP* **P 23 49 43.4 +0.9**
ORIF Oris-en-Rattie 85.19 331⇑*iP* **P 23 49 42.5 0.0**
comp=Z,56nm,0.9s,mb5.4
ORIF *e*MLR MLR
comp=Z,930nm,20.2s,MS4.9
ORIF Oris-en-Rattie 85.19 331⇑*iP* **P 23 49 42.5 0.0**
ORIF pmax pmax
comp=Z,28nm,0.9s,mb5.4
ORIF Oris-en-Rattie 85.19 331⇑*iP* **P 23 49 42.5 0.0**
comp=Z,28nm,0.9s,mb5.4
TCF Toulx Ste Croi 85.29 334⇑*iP* **P 23 49 42.8 -0.2**
comp=Z,138nm,1.6s,mb5.5
TCF Toulx Ste Croi 85.29 334⇑*iP* **P 23 49 42.8 -0.2**
TCF pmax pmax
comp=Z,69nm,1.6s,mb5.5
TCF Toulx Ste Croi 85.29 334⇑*iP* **P 23 49 42.8 -0.2**
comp=Z,69nm,1.6s,mb5.5
WMOK Wichita Mounta 85.29 46 *eP* **P 23 49 42.4 -0.8**
WMOK *e**PP pP 23 49 58.0 -1.4
WMOK pmax pmax
comp=Z,40nm,1.3s,mb5.4
WMOK Wichita Mounta 85.29 46 *eP* **P 23 49 42.4 -0.8**
comp=Z,40nm,1.3s,mb5.4
WMOK *e*pP pP 23 49 58.0 -1.4
426A McDonald Obser 85.33 52 ⇑P P 23 49 43.3 -0.2
baz=85,SNR=12
SAOF Saorge 85.36 329 *eP* **P 23 49 42.3 -1.1**
SSB Saint Sauveur 85.36 332 *eP* **P 23 49 42.8 -0.6**
SSB pmax pmax
comp=Z,17nm,0.8s,mb5.2
SSB Saint Sauveur 85.36 332 *eP* **P 23 49 42.8 -0.6**
comp=Z,17nm,0.8s,mb5.2
TIP Timpagrande 85.37 321 *eP* **P 23 49 42.7 -0.8**
comp=Z,88nm,1.5s,mb5.7
AUTN L'Aution 85.40 329 *eP* **P 23 49 43.0 -0.6**
HDIL Hopedale 85.45 37 *eP* **P 23 49 42.9 -0.9**
comp=Z,50nm,1.4s,mb5.5
HDIL *e*pP pP 23 49 58.7 -1.4
COLF Collangettes 85.45 332 *eP* **P 23 49 44.3 +0.5**

TOUF Mont Tournerai 85.46 329 *eP* **P 23 49 43.0 -0.9**
PYM Petit Puy Mans 85.49 333 *eP* **P 23 49 44.3 +0.3**
QUIF Quistinic 85.49 338⇑*iP* **P 23 49 43.5 -0.4**
comp=Z,72nm,1.1s,mb5.4
QUIF Quistinic 85.49 338⇑*iP* **P 23 49 43.5 -0.4**
QUIF pmax pmax
comp=Z,36nm,1.1s,mb5.4
QUIF Quistinic 85.49 338⇑*iP* **P 23 49 43.5 -0.4**
comp=Z,36nm,1.1s,mb5.4
SBF Sospel 85.51 329⇑*iP* **P 23 49 43.1 -1.0**
comp=Z,92nm,0.9s,mb5.7
SBF Sospel 85.51 329⇑*iP* **P 23 49 43.1 -1.0**
SBF pmax pmax
comp=Z,46nm,0.9s,mb5.7
SBF Sospel 85.51 329⇑*iP* **P 23 49 43.1 -1.0**
comp=Z,46nm,0.9s,mb5.7
LUCF Luceram 85.52 329 *eP* **P 23 49 43.6 -0.6**
328A Wristen Ranch, 85.52 51 ⇑P P 23 49 44.3 -0.1
baz=85,SNR=20
427A Hayter Ranch, 85.56 52 ⇑P P 23 49 44.9 +0.2
baz=85,SNR=11
MVIF Mont Vial 85.59 329 *eP* **P 23 49 43.8 -0.7**
OG25 Le Caire 85.59 330 *eP* **P 23 49 44.5 0.0**
VIVF Saint-Julien-l 85.69 331⇑*iP* **P 23 49 44.9 -0.1**
comp=Z,93nm,1.1s,mb5.6
VIVF Saint-Julien-l 85.69 331⇑*iP* **P 23 49 44.9 -0.1**
VIVF pmax pmax
comp=Z,46nm,1.1s,mb5.6
VIVF Saint-Julien-l 85.69 331⇑*iP* **P 23 49 44.9 -0.1**
comp=Z,46nm,1.1s,mb5.6
526A Mary Lane Ranc 85.73 53 ⇓P P 23 49 45.5 0.0
baz=86,SNR=18
MFF Saint Martin d 85.77 335⇑*iP* **P 23 49 45.4 0.0**
comp=Z,101nm,1.0s,mb5.7
MFF Saint Martin d 85.77 335⇑*iP* **P 23 49 45.4 0.0**
MFF pmax pmax
comp=Z,51nm,1.0s,mb5.7
MFF Saint Martin d 85.77 335⇑*iP* **P 23 49 45.4 0.0**
comp=Z,50nm,1.0s,mb5.7
CALN Calern 85.81 329 *eP* **P 23 49 44.9 -0.7**
LBL Lubilhac 85.86 332 *eP* **P 23 49 45.0 -0.8**
527A Woodward Ranch 85.95 53 ⇑P P 23 49 46.5 -0.1
baz=86
FRF La Foret Royal 86.07 329⇑*iP* **P 23 49 46.1 -0.8**
comp=Z,127nm,1.5s,mb5.6
FRF La Foret Royal 86.07 329⇑*iP* **P 23 49 46.1 -0.8**
FRF pmax pmax
comp=Z,63nm,1.5s,mb5.6
FRF La Foret Royal 86.07 329⇑*iP* **P 23 49 46.1 -0.8**
comp=Z,64nm,1.5s,mb5.6
626A Big Bend Ranch 86.07 53 ⇓P P 23 49 47.1 -0.1
baz=86
428A Kincaid Ranch, 86.08 52 ⇑P P 23 49 47.3 +0.1
baz=86,SNR=17
SMRF Simiane la Rot 86.11 330⇑*iP* **P 23 49 47.0 -0.1**
comp=Z,98nm,1.6s,mb5.5
SMRF Simiane la Rot 86.11 330⇑*iP* **P 23 49 47.0 -0.1**
comp=Z,98nm,1.6s,mb5.8
PPT Papeete 86.16 118 *eS* S 00 00 13.1 -4.8
comp=Z,198nm,25.0s
PPT *e*LR LR 00 16 30.5
comp=Z,2μm,24.2s,baz=316
PPT Papeete 86.16 118 LR LR 00 20 36.2
comp=Z,506nm,19.8s,MS4.9,baz=350,slow=30
LMR La Mourre 86.32 329⇑*iP* **P 23 49 47.4 -0.7**
comp=Z,189nm,1.5s,mb5.8
LMR La Mourre 86.32 329⇑*iP* **P 23 49 47.4 -0.7**
LMR pmax pmax
comp=Z,95nm,1.5s,mb5.8
LMR La Mourre 86.32 329⇑*iP* **P 23 49 47.4 -0.7**
comp=Z,95nm,1.5s,mb5.8
RJF Les Rejaudoux 86.38 334⇑*iP* **P 23 49 48.4 0.0**
comp=Z,96nm,1.1s,mb5.6
RJF *e*MLR MLR
comp=Z,1μm,22.0s,MS4.9
RJF Les Rejaudoux 86.38 334⇑*iP* **P 23 49 48.4 0.0**
RJF pmax pmax
comp=Z,48nm,1.1s,mb5.6
RJF MLR MLR
comp=Z,1μm,22.0s,MS5.2
RJF Les Rejaudoux 86.38 334⇑*iP* **P 23 49 48.4 0.0**
comp=Z,48nm,1.1s,mb5.6
RJF LR LR
comp=Z,1μm,22.0s,MS5.2
528A Cox Ranch, San 86.43 52 ⇑P P 23 49 49.3 +0.3
baz=86,SNR=15
CEL Celeste 86.51 321 *eP* **P 23 49 48.6 -0.6**
comp=Z,23nm,1.0s,mb5.4
TXAR Lajitas Array 86.51 53 P **P 23 49 48.7 -0.6**
comp=Z,5.6nm,0.7s,mb4.9,baz=296,slow=3.4,SNR=66
TXAR pP pP 23 50 05.0 -0.5
comp=Z,21nm,1.0s,baz=292,slow=2.7,SNR=12
TXAR PKKPbc PKKPbc 00 07 46.4 +3.0
comp=Z,0.1nm,0.5s,baz=100,slow=5.2,SNR=4.9
TXAR Lajitas Array 86.51 53 P **P 23 49 48.7 -0.7**
TXAR *PP pP 23 50 05.0 -0.6
CAF Calviac 86.53 333⇑*iP* **P 23 49 49.6 +0.4**
comp=Z,129nm,1.0s,mb5.8
CAF Calviac 86.53 333⇑*iP* **P 23 49 49.6 +0.4**
CAF pmax pmax
comp=Z,65nm,1.0s,mb5.8
CAF Calviac 86.53 333⇑*iP* **P 23 49 49.6 +0.4**
comp=Z,65nm,1.0s,mb5.8
CCM Cathedral Cave 86.55 40 *eP* **P 23 49 47.7 -1.7**
CCM *e**PP pP 23 50 03.8 -1.8
CCM pmax pmax
comp=Z,23nm,0.8s,mb5.5
CCM Cathedral Cave 86.55 40 *eP* **P 23 49 47.7 -1.7**
comp=Z,23nm,0.8s,mb5.5
CCM *e*pP pP 23 50 03.8 -1.8
SLM Saint Louis 86.56 39 *eP* **P 23 49 48.8 -0.6**
SLM pmax pmax
comp=Z,24nm,0.6s,mb5.6
SLM Saint Louis 86.56 39 *eP* **P 23 49 48.8 -0.7**
comp=Z,24nm,0.6s,mb5.6
627A Terlingua Ranc 86.59 53 ⇓P P 23 49 49.8 +0.1
baz=86,SNR=10
TAOE Nuku Hiva Isla 86.62 105 *eLR* LR 00 16 35.4
comp=Z,1μm,23.3s,baz=309
LASF Ste Croix 86.65 331⇑*iP* **P 23 49 50.0 +0.2**
comp=Z,140nm,1.5s,mb5.7
628A Black Gap, Mar 86.86 53 ⇑P P 23 49 50.8 -0.3
baz=87
LFF La Frestale 86.96 334⇑*iP* **P 23 49 51.7 +0.4**
comp=Z,198nm,1.1s,mb5.9
LFF La Frestale 86.96 334⇑*iP* **P 23 49 51.7 +0.4**
LFF pmax pmax
comp=Z,99nm,1.1s,mb6.0
LFF La Frestale 86.96 334⇑*iP* **P 23 49 51.7 +0.4**
comp=Z,99nm,1.1s,mb6.0
FVM French Village 87.00 39 *eP* **P 23 49 50.9 -0.7**
FVM *e**PP pP 23 50 06.7 -1.1
FVM pmax pmax
comp=Z,18nm,0.8s,mb5.3
FVM French Village 87.00 39 *eP* **P 23 49 50.9 -0.7**
comp=Z,18nm,0.8s,mb5.4
FVM *e*pP pP 23 50 06.7 -1.1
OLIL Olney 87.46 37 *eP* **P 23 49 53.4 -0.5**
comp=Z,26nm,0.8s,mb5.5
OLIL *e*pP pP 23 50 09.3 -0.8
LONY Lake Ozonia 87.66 25 *eP* **P 23 49 52.6 -2.0**
comp=Z,34nm,1.7s,mb5.3
LONY *e*pP pP 23 50 09.9 -0.9
SIUC Southern Illin 87.78 39 *eP* **P 23 49 54.8 -0.6**
comp=Z,72nm,0.7s,mb6.0
SIUC *e*pP pP 23 50 10.9 -0.7
MTLF Montolieu 87.87 332⇑*iP* **P 23 49 56.0 +0.3**
comp=Z,71nm,1.4s,mb5.4
MTLF Montolieu 87.87 332⇑*iP* **P 23 49 56.0 +0.3**
MTLF pmax pmax
comp=Z,35nm,1.4s,mb5.4
MTLF Montolieu 87.87 332⇑*iP* **P 23 49 56.0 +0.3**
comp=Z,35nm,1.4s,mb5.4
JCT Junction City 87.92 50 *eP* **P 23 49 55.4 -0.7**
JCT *e**PP pP 23 50 10.9 -1.5
JCT pmax pmax
comp=Z,40nm,1.7s,mb5.4
JCT Junction City 87.92 50 *eP* **P 23 49 55.4 -0.8**
comp=Z,40nm,1.7s,mb5.4
JCT *e*pP pP 23 50 10.9 -1.5
ERPA Erie 87.97 30 *eP* **P 23 49 55.8 -0.3**
comp=Z,8.2nm,0.5s,mb5.2
ERPA *e* pP 23 50 11.5 -0.9
MIAR Mount Ida 88.18 43 *eP* **P 23 49 56.8 -0.5**
MIAR *e**PP pP 23 50 12.4 -1.2
MIAR pmax pmax

comp=Z,52nm,1.3s,mb5.6
MIAR Mount Ida 88.18 43 *eP* **P 23 49 56.8 -0.5**
comp=Z,52nm,1.3s,mb5.6
MIAR *e*pP pP 23 50 12.4 -1.2
NCB Newcomb 88.35 26 *eP* **P 23 49 57.5 -0.4**
comp=Z,16nm,1.3s,mb5.1
NCB *e*pP pP 23 50 13.2 -1.0
ACSO Alum Creek Sta 88.42 33 *eP* **P 23 49 57.4 -0.9**
comp=Z,20nm,0.8s,mb5.4
ACSO *e*pP pP 23 50 13.3 -1.2
MLS Moulis 88.60 333 *eP* **P 23 49 59.4 +0.3**
WCI Wyandotte Cave 88.68 36 *eP* **P 23 49 59.0 -0.6**
WCI *e**PP pP 23 50 14.4 -1.5
WCI pmax pmax
comp=Z,18nm,0.8s,mb5.5
WCI Wyandotte Cave 88.68 36 *eP* **P 23 49 59.0 -0.7**
comp=Z,18nm,0.8s,mb5.5
WCI *e*pP pP 23 50 14.4 -1.5
EPF Esparros 88.79 333⇑*iP* **P 23 49 59.6 -0.4**
comp=Z,46nm,1.3s,mb5.3
EPF Esparros 88.79 333⇑*iP* **P 23 49 59.6 -0.4**
EPF pmax pmax
comp=Z,23nm,1.3s,mb5.3
EPF Esparros 88.79 333⇑*iP* **P 23 49 59.6 -0.4**
comp=Z,23nm,1.3s,mb5.3
LBNH Lisbon 88.83 24 *eP* **P 23 49 59.8 -0.4**
LBNH *e**PP pP 23 50 16.2 -0.2
RESF Ens 88.99 333 *eP* **P 23 50 01.8 +0.9**
ETSF Etsaut 89.21 334⇑*iP* **P 23 50 02.4 +0.4**
comp=Z,28nm,0.7s,mb5.4
ETSF Etsaut 89.21 334⇑*iP* **P 23 50 02.4 +0.4**
ETSF pmax pmax
comp=Z,14nm,0.7s,mb5.4
ETSF Etsaut 89.21 334⇑*iP* **P 23 50 02.4 +0.4**
comp=Z,14nm,0.7s,mb5.4
SJPF Ste Jean 89.23 334⇑*iP* **P 23 50 02.4 +0.3**
comp=Z,16nm,0.9s,mb5.0
SJPF Ste Jean 89.23 334⇑*iP* **P 23 50 02.4 +0.3**
SJPF pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
SJPF Ste Jean 89.23 334⇑*iP* **P 23 50 02.4 +0.3**
comp=Z,7.9nm,0.9s,mb5.0
BINY Binghamton 89.34 28 *eP* **P 23 50 02.0 -0.6**
comp=Z,102nm,2.1s,mb5.8
BINY *e*pP pP 23 50 17.6 -1.3
WVT Waverly 89.71 39 *eP* **P 23 50 03.6 -0.9**
WVT *e**PP pP 23 50 18.9 -1.9
WVT pmax pmax
comp=Z,14nm,0.9s,mb5.3
WVT Waverly 89.71 39 *eP* **P 23 50 03.6 -0.8**
comp=Z,14nm,0.9s,mb5.3
WVT *e*pP pP 23 50 18.9 -1.8
SSPA Standing Stone 90.04 30 *eP* **P 23 50 05.5 -0.4**
comp=Z,15nm,0.8s,mb5.4
SSPA *e*pP pP 23 50 21.6 -0.6
OXF Oxford 90.28 41 P **P 23 50 05.4 -1.7**
OXF pmax pmax
comp=Z,75nm,1.2s,mb5.9
OXF Oxford 90.28 41 P **P 23 50 05.4 -1.8**
comp=Z,75nm,1.2s,mb5.9
TBI Tubuai 90.38 121 *eS* S 00 00 52.2 -5.5
comp=Z,232nm,28.2s
TBI *e*LR LR 00 18 29.7
comp=Z,1μm,34.2s,baz=315
TZTN Tazewell 91.29 35 *eP* **P 23 50 11.1 -0.7**
comp=Z,14nm,0.8s,mb5.3
TZTN *e*pP pP 23 50 26.7 -1.4
SWET Sewanee 91.34 38 *eP* **P 23 50 10.9 -1.2**
SWET *e*pP pP 23 50 25.9 -2.5
KEST Kesra 91.58 324 P **P 23 50 11.9 -1.2**
comp=Z,1.9nm,0.9s,mb4.4,baz=246,slow=2.8,SNR=5.6
KEST PP PP 23 53 55.5 +4.5
comp=Z,1.3nm,0.9s,baz=5.0,slow=7.8,SNR=3.6
KEST LR LR 00 36 04.1
comp=Z,452nm,20.0s,MS4.9,baz=172,slow=38
CPCT Cooper Cave 91.78 37 *eP* **P 23 50 12.8 -1.3**
CPCT *e*pP pP 23 50 29.1 -1.3
ELN Prospectdale 91.88 33 *eP* **P 23 50 13.9 -0.6**
ELN *e*pP pP 23 50 30.0 -0.9
TKL Tuckaleechee C 91.94 36 *eP* **P 23 50 13.6 -1.2**
TKL *e**PP pP 23 50 30.0 -1.1
BLA Blacksburg 92.03 33 *eP* **P 23 50 15.0 -0.2**
BLA *e**PP pP 23 50 28.4 -3.1
BLA pmax pmax
comp=Z,12nm,0.9s,mb5.2
BLA Blacksburg 92.03 33 *eP* **P 23 50 15.0 -0.3**
comp=Z,12nm,0.9s,mb5.2
BLA *e*pP pP 23 50 28.4 -3.2
LRAL Lakeview Retre 92.64 40 *eP* **P 23 50 16.8 -1.3**
comp=Z,7.7nm,1.3s,mb5.0
ESDC Sonseca Array 93.22 335 P **P 23 50 20.4 -0.3**
comp=Z,2.9nm,0.7s,mb4.8,baz=19,slow=4.3,SNR=16
ESDC pP pP 23 50 37.1 +0.2
comp=Z,5.2nm,1.0s,baz=31,slow=3.0,SNR=4.6
ESDC LR LR 00 38 16.9
comp=Z,443nm,20.0s,MS4.9,baz=10.0,slow=39
MDT Midelt 99.67 332 LR LR 00 40 07.6
comp=Z,384nm,20.2s,MS4.9,baz=28,slow=38
RKT Rikitea 99.86 112 *eLR* LR 00 22 44.2
comp=Z,1μm,33.8s,baz=310
KMBO Kilima Mbogo 102.03 279 P Pdif 23 50 59.9 -0.6
comp=Z,2.6nm,0.8s,baz=180,slow=20,SNR=6.1
LSZ Lusaka 118.05 274 PKP PKPdf 23 55 52.8 -0.3
comp=Z,2.2nm,0.9s,baz=127,slow=5.1,SNR=2.7
LSZ pPKP pPKPdf 23 56 11.8 +1.7
comp=Z,3.5nm,1.0s,baz=29,slow=1.6,SNR=4.5
DBIC Dimbokro 123.14 320 PKP PKPdf 23 56 01.3 -1.8
comp=Z,6.0nm,0.9s,baz=224,slow=5.6,SNR=4.7
MAW Mawson 124.29 207 PKP PKPdf 23 56 03.4 -0.2
comp=Z,1.0nm,0.3s,baz=80,slow=6.1,SNR=3.6
LBTB Lobatse 125.86 267 *e*PKIKP PKPdf 23 56 08.2 +0.3
LBTB *e* 23 56 24.8
BOSA Boshof 128.10 264 PKP PKPdf 23 56 12.2 +0.1
comp=Z,2.4nm,0.8s,baz=108,slow=1.8,SNR=3.9
QSPA South Pole Qui 131.69 180 *e*PKPdf PKPdf 23 56 16.8 -0.6
QSPA *e*pPKPdf pPKPdf 23 56 33.8 -0.5
NVL N'lazarevskaya 142.12 204 *e*PKIKP PKiKP 23 56 51.5 +12
NVL pmax pmax
comp=Z,19nm,1.0s
LPAZ La Paz 143.36 55 PKhKP PKPpre 23 56 37.6
comp=Z,1.7nm,0.5s,baz=341,slow=1.3,SNR=8.3
LPAZ La Paz 143.36 55 PKPdf PKPpre 23 56 37.7
LPAZ *e*pPKPdf pPKPdf 23 56 58.5 +0.9
LCO Las Campanas 150.27 75 *e*PKPbc PKPbc 23 56 57.2 0.0
PLCA Paso Flores 155.28 98 PKPbc PKPdf 23 57 08.6 +10
comp=Z,2.3nm,1.0s,baz=188,slow=2.5,SNR=3.0
PLCA PKPab PKPab 23 57 24.5 +0.2
comp=Z,3.4nm,0.8s,baz=244,slow=2.8,SNR=8.0
PLCA Paso Flores 155.28 98 PKPbc PKPdf 23 57 08.6 +10
PLCA PKPab PKPab 23 57 24.5 +0.2
CPUP Villa Florida 157.48 52 PKP PKPdf 23 57 02.1 -0.1
comp=Z,1.0nm,0.7s,baz=26,slow=5.0,SNR=3.3
CPUP PKPab PKPab 23 57 32.1 -2.1
comp=Z,1.3nm,0.7s,baz=329,slow=2.3,SNR=4.2
CPUP pPKPab pPKPab 23 57 49.2 -1.3
comp=Z,18nm,1.1s,baz=322,slow=5.2,SNR=8.9
CPUP Villa Florida 157.48 52 PKIKP PKPdf 23 57 02.1 -0.1
CPUP 23 57 32.1

IDC 25 23:37:35.8±7.0, 7°.09S×133°.25E, h0km, mb4.2/1,
mb1 3.8/4, mb1mx3.7/15, mbtmp3.7/4, ML3.1/2, MS3.4/1,
Ms1 3.4/1, ms1mx2.6/16, Error ellipse: s-maj=92.2km
s-min=58.0km az=151.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**12.82**	**175**	Pn	Pn	23 40 37.9	-1.5
0.1nm,0.3s,baz=354,slow=13,SNR=3.4							
WRA				Sn	Sn	23 43 07.2	+4.2
0.1nm,0.3s,baz=358,slow=23,SNR=2.5							
FITZ	**Fitzroy Crossi**	**13.22**	**213**	Pn	Pn	23 40 43.3	-1.6
0.2nm,0.3s,baz=40,slow=13,SNR=11							
FITZ				Sn	Sn	23 43 16.1	+3.3
0.3nm,0.3s,baz=222,slow=18,SNR=5.4							
ASAR	**Alice Springs**	**16.50**	**178**	Pn	Pn	23 41 27.1	-1.6
0.1nm,0.3s,baz=1.9,slow=12,SNR=4.4							
CTA	**Charters Tower**	**18.06**	**137**	LR	LR	23 48 34.0	
comp=Z,133nm,21.3s,baz=224,slow=36							
STKA	**Stephens Creek**	**25.86**	**164**	P	P	23 43 10.3	+1.1
3.5nm,0.8s,baz=294,slow=10.0,SNR=2.8							

*IDC **25** 23:48:10.6±1.2, 1°.13N×97°.04E, h0km, mb4.2/9,*
mb1 4.2/10, mb1mx4.0/21, mbtmp4.1/10, ML3.4/1, Error

ellipse: s-maj=38.6km s-min=17.9km az=57.0
ISCJB ***25*** *23:48:11.2±3.2, 1.20N±0.09×97.10E±0.10, h16km±21km, mb4.3/21, Error ellipse: s-maj=18.6km s-min=11.8km az=144.4*
BJI ***25*** *23:48:14.9, 1.30N×97.20E, h44km, mB5.3/3, mb4.8/6*
NEIC ***25*** *23:48:17.0±2.0, 1.26N×97.22E, h44km±16km, mb4.4/9, Error ellipse: s-maj=18.8km s-min=7.1km az=52.0*

ISC 25 23:48:13.0±3.6, 1.21N±0.09×97.15E±0.09, h14km±22km, n32, σ0976/33, mb4.3/21, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.38**	**48**	Pn	**Pn**	**23 48 52.3**	**+0.7**
	8.5nm,0.3s,baz=163,slow=11,SNR=23						
KULM	**Kulim**	**5.35**	**41**	*e*Pn	**Pn**	**23 49 33.2**	**+0.7**
CMAR	**Chiang Mai Arr**	**17.23**	**6**	Pn	**Pn**	**23 52 11.1**	**-2.3**
	0.4nm,0.3s,baz=199,slow=13,SNR=6.2						
KKM	**Kota Kinabalu**	**19.62**	**75**	*e*Pn	**Pn**	**23 52 41.0**	**-1.7**
ENH	**Enshi**	**31.19**	**21**	*e*P	**P**	**23 54 30.8**	**-1.0**
	34nm,0.7s,mb5.3						
NACB	**Ninganchiao**	**32.88**	**44**	*e*P	**P**	**23 54 46.3**	**-0.5**
	10nm,0.7s,mb4.9						
XAN	**Xi'an**	**34.47**	**17**	P	**P**	**23 55 02.0**	**+1.5**
XAN				pP	pP	23 55 06.5	+1.7
XAN				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
GTA	**Gaotai**	**38.09**	**3**	*e*P	**P**	**23 55 32.0**	**+0.6**
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.3						
HHC	**Hu-ho-hao-te**	**41.56**	**17**	*e*P	**P**	**23 56 02.0**	**+1.8**
HHC				pP	pP	23 56 14.5	+10
HHC				sP	sP	23 56 19.8	+13
HHC				PP	PP	23 57 42.0	+5.6
HHC				PcP	PcP	23 57 59.3	+1.8
HHC				ScP	ScP	00 01 44.0	-3.4
HHC				PcS	PcS	00 01 49.0	+0.3
HHC				S	**S**	**00 02 15.3**	**-0.5**
HHC				sS	sS	00 02 36.3	+13
HHC				SS	SS	00 05 16.5	-4.4
HHC				ScS	ScS	00 05 59.3	-4.4
HHC				pmax	pmax		
	comp=Z,17nm,0.7s,mb4.8						
HHC				pmax	pmax		
	comp=Z,420nm,5.4s						
WRA	**Warramunga Arr**	**42.09**	**122**	P	**P**	**23 56 04.6**	**-0.2**
	comp=Z,1.4nm,0.5s,mb3.8,baz=304,slow=8.5,SNR=5.5						
WRAB	**Tennant Creek**	**42.09**	**122**	*e*P	**P**	**23 56 05.3**	**+0.4**
	comp=Z,1.6nm,0.5s,mb3.9						
KBL	**Kabul**	**42.28**	**325**	P	**P**	**23 56 05.3**	**-0.9**
BJT	**Baijiatuau**	**42.33**	**22**	*e*P	**P**	**23 56 06.2**	**-0.3**
	comp=Z,12nm,0.8s,mb4.6						
ASAR	**Alice Springs**	**43.45**	**127**	P	**P**	**23 56 16.2**	**+0.3**
	comp=Z,0.6nm,0.5s,mb3.6,baz=300,slow=8.0,SNR=7.4						
UCH	**Uchtor**	**45.62**	**336**	*e*P	**P**	**23 56 32.9**	**0.0**
	comp=Z,3.0nm,0.8s,mb4.3						
TKM2	**Tokmak 2**	**45.78**	**338**	*e*P	**P**	**23 56 34.2**	**0.0**
	comp=Z,3.0nm,0.9s,mb4.2						
KSRS	**Korea Array**	**45.87**	**35**	P	**P**	**23 56 35.0**	**+0.1**
	comp=Z,4.3nm,0.8s,mb4.4,baz=223,slow=9.2,SNR=17						
EKS2	**Erkin-Say**	**46.27**	**336**	*e*P	**P**	**23 56 38.0**	**0.0**
	comp=Z,1.5nm,0.4s,mb4.3						
SONM	**Songino Array**	**47.13**	**8**	P	**P**	**23 56 45.2**	**+0.6**
	comp=Z,2.3nm,0.7s,mb4.2,baz=188,slow=8.8,SNR=19						
SONM				PcP	PcP	23 58 16.6	+0.3
	comp=Z,0.5nm,0.5s,baz=202,slow=3.1,SNR=3.1						
MK31	**Makanchi Array**	**47.22**	**346**	*e*P	**P**	**23 56 45.1**	**-0.2**
MKAR	**Makanchi Array**	**47.22**	**346**	P	**P**	**23 56 46.1**	**+0.7**
	comp=Z,2.1nm,0.5s,mb4.3,baz=136,slow=9.2,SNR=38						
ULN	**Ulaanbaatar**	**47.26**	**9**	P	**P**	**23 56 45.9**	**+0.2**
TLY	**Talaya**	**50.59**	**5**	*e*P	**P**	**23 57 11.2**	**+0.1**
	comp=Z,4.1nm,0.8s,mb4.4						
HIA	**Hailar**	**51.65**	**19**	P	**P**	**23 57 18.5**	**-0.6**
KURK	**Kurchatov**	**51.77**	**345**	*e*P	**P**	**23 57 20.2**	**+0.2**
	comp=Z,3.0nm,0.9s,mb4.2						
STKA	**Stephens Creek**	**53.41**	**132**	P	**P**	**23 57 32.6**	**+0.1**
	comp=Z,1.5nm,0.6s,mb4.1,baz=315,slow=13,SNR=3.6						
STKA	**Stephens Creek**	**53.41**	**132**	*e*P	**P**	**23 57 32.1**	**-0.5**
ZAA0	**Zalesovo Array**	**53.54**	**351**	*e*P	**P**	**23 57 33.1**	**0.0**
ZALV	**Zalesovo Beam**	**53.54**	**351**	P	**P**	**23 57 33.3**	**+0.2**
	comp=Z,5.6nm,0.6s,mb4.7,baz=182,slow=6.5,SNR=28						
BVAR	**Borovoye Array**	**56.22**	**341**	P	**P**	**23 57 52.4**	**-0.2**
	comp=Z,2.0nm,0.6s,mb4.3,baz=130,slow=8.1,SNR=7.2						
BRVK	**Borovoye**	**56.28**	**341**	P	**P**	**23 57 52.4**	**-0.6**
ARCES	**ARCESS Array B**	**82.50**	**340**	P	**P**	**00 00 35.0**	**+0.2**
	comp=Z,1.6nm,0.8s,mb4.1,baz=106,slow=5.7,SNR=3.5						

IDC ***26*** *00:06:33.8±0.5, 8.88S×75.56W, h0km, mb4.8/14, mb1 5.0/16, mb1mx4.9/19, mbtmp4.8/16, ML4.1/4, MS4.6/14, Ms1 4.5/14, ms1mx4.3/23, Error ellipse: s-maj=17.1km s-min=10.4km az=57.0*
ISCJB ***26*** *00:06:34.9±2.0, 8.88S±0.03×75.68W±0.03, h17km±13km, mb5.1/217, MS4.5/16, Error ellipse: s-maj=6.7km s-min=3.7km az=36.5*
BJI ***26*** *00:06:36.6, 7.92S×75.05W, h13km, mB5.2/18, Ms5.2/19, Ms7 4.9/20*
SZGRF ***26*** *00:06:36.5, 8.68S×76.60W, h33km, mb5.4, Central Peru*
MOS ***26*** *00:06:38.9±0.7, 8.55S×75.66W, h33km, mb5.3/88, Error ellipse: s-maj=8.1km s-min=5.2km az=90.2*
GCMT ***26*** *00:06:39.4±0.3, 8.95S×75.46W, h13km, MW5.0, Moment Tensor Solution. s39,c47; s78,c117; Moment tensor: Scale 10^16 Nm; Mrr 4.29±.24; Mθθ -3.12±.15; Mφφ -1.17±.19; Mrθ 0.19±.37; Mθφ -1.95±.10; Mφr 1.12±.48; Best double couple: M0 4.50000×10^16 NP1:φ249.00000°, δ41.00000°, λ106.00000°. NP2:φ48.00000°, δ51.00000°, λ76.00000°. Principal axes: T 4.5200, Plg78.0000°, Azm262.0000°; N -0.1300, Plg11.0000°, Azm56.0000°; P -4.3900, Plg5.0000°, Azm147.0000°; Data Used: II IU IC CN G.*
NEIC ***26*** *00:06:39.6±0.6, 8.90S×75.63W, h38km±5km, mb5.2/190 Error ellipse: s-maj=4.6km s-min=2.9km az=47.0*

ISC 26 00:06:40.2±0.8, 8.88S±0.03×75.60W±0.03, h41km±6km, h36km±4.9km: pP-P, n913, σ0959/862, mb5.1/217, MS4.5/16, 251C-209D, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**3.27**	**302**	Pn	**Pn**	**00 07 28.7**	**-0.3**
	7.4nm,0.3s,baz=119,slow=11,SNR=28						
ATAH				Pg	**Pn**	**00 07 35.1**	**+6.2**
	68nm,0.3s,baz=128,slow=9.5,SNR=63						
ATAH				Lg		00 08 17.8	
	150nm,0.3s,baz=96,slow=19,SNR=7.3						
ATAH				LR	LR	00 08 56.0	
	comp=Z,16μm,18.2s,baz=125,slow=43						
NNA	**Nana**	**3.32**	**202**	Pn	**Pn**	**00 07 30.5**	**+0.8**
	5μm,1.1s,SNR=24						
NNA	**Nana**	**3.32**	**202**	Pn	**Pn**	**00 07 28.2**	**-1.5**
	18nm,0.3s,baz=7.2,slow=11,SNR=18						
NNA				Pg	**Pn**	**00 07 34.9**	**+5.2**
	58nm,0.3s,baz=22,slow=16,SNR=50						
NNA				Lg		00 08 14.8	
	96nm,0.3s,baz=150,slow=21,SNR=7.6						
NNA				LR	LR	00 08 56.8	
	comp=Z,12μm,19.0s,baz=12,slow=43						
NNA	**Nana**	**3.32**	**202**	*e*Pn	**Pn**	**00 07 28.8**	**-0.9**
NNA				*e*Sn	**Sn**	**00 08 14.0**	**+6.0**
OTAV	**Otavalo**	**9.49**	**342**	*e*Pn	**Pn**	**00 08 54.1**	**-0.4**
OTAV				*e*Sn	**Sn**	**00 10 45.8**	**+5.8**
LPAZ	**La Paz**	**10.35**	**136**	Pn	**Pn**	**00 09 06.0**	**-0.2**
	0.3nm,0.3s,baz=327,slow=15,SNR=4.4						
LPAZ				Lg		00 12 02.1	
	1.7nm,0.3s,baz=223,slow=22,SNR=4.5						
LPAZ				LR	LR	00 13 35.6	
	comp=Z,5μm,19.8s,baz=305,slow=41						
LPAZ	**La Paz**	**10.35**	**136**	*e*Pn	**Pn**	**00 09 06.7**	**+0.5**
LPAZ				Sn	**Sn**	**00 11 02.1**	**+1.0**
ROSC	**El Rosal**	**13.71**	**5**	Pn	**Pn**	**00 09 53.9**	**+1.8**
	1.0nm,0.3s,baz=273,slow=22,SNR=10						
ROSC				LR	LR	00 16 00.8	
	comp=Z,2μm,18.0s,baz=195,slow=41						
ROSC	**El Rosal**	**13.71**	**5**	*e*Pn	**Pn**	**00 09 53.9**	**+1.8**
ROSC				*e*Sn	**Sn**	**00 12 23.6**	**+0.5**
SIV	**San Ignacio**	**15.84**	**118**	Pn	**Pn**	**00 10 16.4**	**-4.0**
	3.5nm,0.3s,baz=289,slow=13,SNR=159						
SIV				Lg		00 14 49.7	
	2.7nm,0.3s,baz=182,slow=23,SNR=6.0						
BCIP	**Isla Barro Col**	**18.42**	**347**	*e*P	**Pn**	**00 10 52.7**	**+0.1**
LCO	**Las Campanas**	**20.55**	**168**	*e*P	**P**	**00 11 14.7**	**-0.6**
	48nm,1.1s						
JTS	**JuntasAbangare**	**21.20**	**334**	P	**P**	**00 11 23.9**	**+1.4**
	309nm,1.3s,mb5.5,SNR=5.8						
PCRV	**Puerto La Cruz**	**21.85**	**30**	P	**P**	**00 11 30.9**	**+1.5**
	41nm,0.9s,mb4.8,baz=94,slow=3.4,SNR=8.9						
PCRV				LR	LR	00 21 03.8	
	comp=Z,2μm,18.4s,MS4.6,baz=343,slow=40						
CFAA	**Coronel Fontan**	**23.62**	**164**	P	**P**	**00 11 46.2**	**-1.4**
	1.4nm,0.8s,baz=344,slow=9.4,SNR=21						
CFAA				LR	LR	00 21 11.2	
	comp=Z,84nm,19.0s,MS3.2,baz=30,slow=37						
CFAA	**Coronel Fontan**	**23.62**	**164**	P	**P**	**00 11 46.2**	**-1.4**
CFAA				LR	LR	00 21 11.2	
CPUP	**Villa Florida**	**24.52**	**137**	P	**P**	**00 11 54.2**	**-1.7**
	6.6nm,0.9s,mb4.2,baz=298,slow=11,SNR=7.8						
CPUP				LR	LR	00 23 48.2	
	comp=Z,3μm,18.0s,MS4.8,baz=303,slow=42						
CPUP	**Villa Florida**	**24.52**	**137**	*e*P	**P**	**00 11 54.3**	**-1.6**
CPUP				pmax	pmax		
	comp=Z,15nm,0.6s						
CPUP	**Villa Florida**	**24.52**	**137**	*e*P	**P**	**00 11 54.3**	**-1.7**
	comp=Z,15nm,0.6s,mb4.7						
FCH	**Farellones**	**24.82**	**169**	*e*P	**P**	**00 11 58.7**	**+0.2**
TGUH	**Tegucigalpa,Un**	**25.57**	**333**	*e*P	**P**	**00 12 06.8**	**+1.3**
	comp=Z,48nm,1.0s,mb5.0						
APG	**El Apazote**	**27.94**	**328**	P	**P**	**00 12 27.2**	**+0.4**
	comp=Z,17nm,1.0s,mb4.6,baz=161,slow=9.1,SNR=15						
OBIP	**Obispado Ponce**	**28.19**	**18**	*e*P	**P**	**00 12 29.4**	**+0.4**
	comp=Z,152nm,1.5s,mb5.4						
CELP	**Cerrillos**	**28.23**	**18**	*e*P	**P**	**00 12 29.5**	**+0.1**
SJG	**San Juan**	**28.40**	**19**	P	**P**	**00 12 30.3**	**-0.6**
	comp=Z,29nm,0.7s,mb5.0,baz=210,slow=5.1,SNR=7.1						
SJG	**San Juan**	**28.40**	**19**	*e*P	**P**	**00 12 30.1**	**-0.8**
SJG				pmax	pmax		
	comp=Z,148nm,1.6s						
SJG	**San Juan**	**28.40**	**19**	*e*P	**P**	**00 12 30.1**	**-0.8**
	comp=Z,148nm,1.6s,mb5.4						
AOPR	**Arecibo Observ**	**28.43**	**18**	*e*P	**P**	**00 12 31.0**	**-0.2**
	comp=Z,42nm,0.9s,mb5.1						
MTP	**Monte Pirata**	**28.58**	**20**	*e*P	**P**	**00 12 31.7**	**-0.9**
	comp=Z,44nm,1.0s,mb5.2						
CBYP	**Canovanas**	**28.64**	**20**	*e*P	**P**	**00 12 32.8**	**-0.3**
TEIG	**Tepich**	**31.50**	**337**	*e*P	**P**	**00 12 58.6**	**+0.2**
	comp=Z,46nm,0.9s,mb5.3						
TRQA	**Tornquist**	**31.54**	**159**	*e*P	**P**	**00 12 58.9**	**+0.4**
	comp=Z,6.0nm,0.9s,mb4.4						
PLCA	**Paso Flores**	**32.03**	**173**	P	**P**	**00 13 01.8**	**-1.1**
	comp=Z,10nm,1.1s,mb4.6,baz=352,slow=10.0,SNR=11						
PLCA				PcP	PcP	00 15 52.1	+0.2
	comp=Z,3.8nm,1.0s,baz=334,slow=3.2,SNR=3.5						
PLCA	**Paso Flores**	**32.03**	**173**	P	**P**	**00 13 01.8**	**-1.1**
PLCA				PcP	PcP	00 15 52.1	+0.2
DWPF	**Disney**	**37.20**	**351**	*e*P	**P**	**00 13 46.8**	**-0.9**
RCBR	**Riachuelo**	**39.47**	**88**	*e*P	**P**	**00 14 06.3**	**-0.7**
NHSC	**New Hope**	**41.98**	**354**	*e*P	**P**	**00 14 27.9**	**+0.5**
	comp=Z,89nm,1.1s,mb5.3						
GOGA	**Godfrey**	**42.72**	**350**	*e*P	**P**	**00 14 32.3**	**-1.0**
GOGA				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.6						
GOGA	**Godfrey**	**42.72**	**350**	*e*P	**P**	**00 14 32.3**	**-1.1**
	comp=Z,12nm,0.9s,mb4.6						
LRAL	**Lakeview Retre**	**43.08**	**346**	*e*P	**P**	**00 14 34.9**	**-1.3**
	comp=Z,29nm,1.5s,mb4.8						
HKT	**Hockley**	**43.24**	**334**	*e*P	**P**	**00 14 37.2**	**-0.4**
HKT				pmax	pmax		
	comp=Z,59nm,1.6s,mb5.1						
HKT	**Hockley**	**43.24**	**334**	*e*P	**P**	**00 14 37.2**	**-0.4**
	comp=Z,59nm,1.6s,mb5.1						
JSC	**Jenkinsville**	**43.26**	**353**	*e*P	**P**	**00 14 37.1**	**-0.6**
NATX	**Nacogdoches**	**44.34**	**337**	*e*P	**P**	**00 14 47.0**	**+0.6**
	comp=Z,101nm,0.9s,mb5.5						
CPCT	**Cooper Cave**	**44.89**	**350**	*e*P	**P**	**00 14 50.0**	**-0.8**
SWET	**Sewanee**	**44.93**	**348**	*e*P	**P**	**00 14 49.6**	**-1.5**
TKL	**Tuckaleechee C**	**44.97**	**351**	*e*P	**P**	**00 14 49.9**	**-1.5**
OXF	**Oxford**	**45.10**	**344**	*e*P	**P**	**00 14 51.8**	**-0.6**
JCT	**Junction City**	**45.52**	**330**	*e*P	**P**	**00 14 55.5**	**-0.4**
JCT				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
JCT	**Junction City**	**45.52**	**330**	*e*P	**P**	**00 14 55.5**	**-0.4**
	comp=Z,15nm,0.9s,mb4.9						
TZTN	**Tazewell**	**45.80**	**351**	*e*P	**P**	**00 14 57.0**	**-0.9**
	comp=Z,28nm,1.4s,mb5.0						
VWCC	**Virginia Weste**	**46.07**	**355**	*e*P	**P**	**00 15 00.4**	**+0.4**
BLA	**Blacksburg**	**46.07**	**355**	*e*P	**P**	**00 14 59.2**	**-0.9**
BLA				pmax	pmax		
	comp=Z,32nm,1.4s,mb5.1						
BLA	**Blacksburg**	**46.07**	**355**	*e*P	**P**	**00 14 59.2**	**-0.8**
	comp=Z,32nm,1.4s,mb5.0						
ELN	**Prospectdale**	**46.12**	**354**	*e*P	**P**	**00 15 00.4**	**-0.1**
UALR	**University of**	**46.22**	**341**	*e*P	**P**	**00 15 00.5**	**-0.8**
	comp=Z,37nm,1.0s,mb5.3						
WVT	**Waverly**	**46.23**	**346**	*e*P	**P**	**00 14 59.1**	**-2.2**
WVT				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
WVT	**Waverly**	**46.23**	**346**	*e*P	**P**	**00 14 59.1**	**-2.2**
	comp=Z,9.0nm,1.0s,mb4.7						
628A	**Black Gap, Mar**	**46.33**	**326**	⇑P	**P**	**00 15 02.9**	**+0.6**
	baz=46,SNR=33						
JSRW	**J. Sargeant Re**	**46.38**	**357**	*e*P	**P**	**00 15 02.4**	**-0.1**
MIAR	**Mount Ida**	**46.43**	**339**	*e*P	**P**	**00 15 02.4**	**-0.5**
MIAR				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
MIAR	**Mount Ida**	**46.43**	**339**	*e*P	**P**	**00 15 02.4**	**-0.5**
	comp=Z,9.2nm,0.8s,mb4.8						
627A	**Terlingua Ranc**	**46.58**	**326**	⇑P	**P**	**00 15 04.4**	**+0.2**
	baz=47,SNR=13						
TXAR	**Lajitas Array**	**46.64**	**326**	P	**P**	**00 15 04.5**	**-0.2**
	comp=Z,7.9nm,0.8s,mb4.7,baz=147,slow=9.4,SNR=95						
TXAR				PcP	PcP	00 16 38.5	+0.3
	comp=Z,2.4nm,0.8s,baz=134,slow=7.2,SNR=5.7						
GLAT	**Glass**	**46.72**	**345**	P	**P**	**00 15 04.3**	**-0.9**
528A	**Cox Ranch, San**	**46.80**	**327**	⇑P	**P**	**00 15 05.9**	**0.0**
	baz=47,SNR=28						
626A	**Big Bend Ranch**	**47.07**	**325**	⇑P	**P**	**00 15 08.3**	**+0.3**
	baz=47,SNR=19						
428A	**Kincaid Ranch,**	**47.19**	**328**	⇑P	**P**	**00 15 09.2**	**+0.2**
	baz=47,SNR=12						
527A	**Woodward Ranch**	**47.23**	**326**	⇑P	**P**	**00 15 09.3**	**-0.1**
	baz=47,SNR=36						
526A	**Mary Lane Ranc**	**47.43**	**326**	⇓P	**P**	**00 15 11.0**	**+0.2**
	baz=48,SNR=37						
427A	**Hayter Ranch,**	**47.67**	**327**	⇓P	**P**	**00 15 12.5**	**-0.2**
	baz=48,SNR=7.9						
328A	**Wristen Ranch,**	**47.77**	**328**	⇓P	**P**	**00 15 13.3**	**-0.2**
	baz=48,SNR=23						
426A	**McDonald Obser**	**47.87**	**326**	⇓P	**P**	**00 15 14.2**	**0.0**
	baz=48,SNR=24						
WCI	**Wyandotte Cave**	**47.92**	**349**	*e*P	**P**	**00 15 12.6**	**-1.9**
WCI				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
WCI	**Wyandotte Cave**	**47.92**	**349**	*e*P	**P**	**00 15 12.6**	**-1.9**
	comp=Z,9.7nm,0.8s,mb4.9						
SDMD	**Soldier's Deli**	**48.06**	**359**	*e*P	**P**	**00 15 14.3**	**-1.2**
	comp=Z,28nm,1.1s,mb5.2						
SIUC	**Southern Illin**	**48.07**	**345**	*e*P	**P**	**00 15 14.2**	**-1.5**
	comp=Z,30nm,0.9s,mb5.3						
327A	**Balmorhea Ranc**	**48.12**	**327**	⇓P	**P**	**00 15 16.4**	**+0.3**
	baz=48						
326A	**Caldwell Ranch**	**48.34**	**327**	⇑P	**P**	**00 15 17.7**	**-0.2**
	baz=48,SNR=24						
MCWV	**Mont Chateau**	**48.45**	**356**	*e*P	**P**	**00 15 18.8**	**+0.3**
	comp=Z,23nm,0.9s,mb5.2						
425A	**Indio Mountain**	**48.48**	**326**	⇓P	**P**	**00 15 18.8**	**-0.1**
	baz=49,SNR=22						
227A	**Bennet, Jal**	**48.52**	**328**	⇑P	**P**	**00 15 19.0**	**-0.2**
	baz=49,SNR=9.0						
WMOK	**Wichita Mounta**	**48.62**	**334**	*e*P	**P**	**00 15 19.1**	**-0.8**
WMOK				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8						
WMOK	**Wichita Mounta**	**48.62**	**334**	*e*P	**P**	**00 15 19.1**	**-0.8**
	comp=Z,11nm,1.0s,mb4.8						
FVM	**French Village**	**48.64**	**344**	*e*P	**P**	**00 15 18.3**	**-1.7**
FVM				pmax	pmax		
	comp=Z,39nm,1.0s,mb5.4						
FVM	**French Village**	**48.64**	**344**	*e*P	**P**	**00 15 18.2**	**-1.8**
	comp=Z,39nm,1.0s,mb5.4						
MVL	**Millersville**	**48.64**	**359**	*e*P	**P**	**00 15 20.4**	**+0.5**
	comp=Z,50nm,1.2s,mb5.4						
OLIL	**Olney**	**48.78**	**347**	*e*P	**P**	**00 15 19.5**	**-1.6**
	comp=Z,94nm,1.8s,mb5.5						
325A	**Bean Ranch, Si**	**48.92**	**326**	⇓P	**P**	**00 15 21.8**	**-0.5**
	baz=49,SNR=20						
CCM	**Cathedral Cave**	**48.93**	**344**	*e*P	**P**	**00 15 20.4**	**-1.9**
CCM				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.1						
CCM	**Cathedral Cave**	**48.93**	**344**	*e*P	**P**	**00 15 20.4**	**-1.8**
	comp=Z,17nm,0.8s,mb5.1						
226A	**Malaga, Loving**	**48.98**	**328**	⇑P	**P**	**00 15 23.3**	**+0.5**
	baz=49,SNR=22						
CLNB	**Carlsbad**	**49.02**	**328**	*e*P	**P**	**00 15 22.4**	**-0.7**
	comp=Z,8.8nm,1.0s,mb4.7						
127A	**Arkansas Junct**	**49.08**	**329**	⇓P	**P**	**00 15 23.0**	**-0.6**
	baz=49						
GDL2	**Guadalupe Moun**	**49.23**	**327**	*e*P	**P**	**00 15 25.1**	**+0.4**
324A	**Moseley Ranch,**	**49.26**	**326**	⇑P	**P**	**00 15 24.2**	**-0.7**
	baz=50,SNR=25						
SSPA	**Standing Stone**	**49.31**	**358**	*e*P	**P**	**00 15 25.1**	**0.0**
	comp=Z,27nm,1.1s,mb5.2						
ACSO	**Alum Creek Sta**	**49.34**	**353**	*e*P	**P**	**00 15 24.1**	**-1.3**
	comp=Z,24nm,0.9s,mb5.2						
126A	**Clayton Basin,**	**49.40**	**328**	⇓P	**P**	**00 15 26.0**	**0.0**
	baz=50,SNR=13						
MNTX	**Cornudas Mount**	**49.40**	**326**	*e*P	**P**	**00 15 25.2**	**-0.7**
	comp=Z,22nm,1.3s,mb5.0						
225A	**Deer Hill, Car**	**49.41**	**327**	⇓P	**P**	**00 15 26.1**	**0.0**
	baz=50,SNR=27						
Z27A	**Tatum**	**49.51**	**329**	⇑P	**P**	**00 15 26.1**	**-0.7**
	baz=50,SNR=21						
CPRX	**Cap Rock**	**49.62**	**329**	*e*P	**P**	**00 15 28.0**	**+0.4**
	comp=Z,54nm,1.0s,mb5.5						
PAL	**Palisades**	**49.66**	**2**	*e*P	**P**	**00 15 27.9**	**+0.1**
PAL				pmax	pmax		
	comp=Z,29nm,1.2s,mb5.2						
PAL	**Palisades**	**49.66**	**2**	*e*P	**P**	**00 15 27.9**	**+0.1**
	comp=Z,28nm,1.2s,mb5.2						
125A	**Gardner Draw,**	**49.74**	**328**	⇑P	**P**	**00 15 28.2**	**-0.4**
	baz=50,SNR=19						
224A	**Cornudas Mount**	**49.76**	**326**	⇑P	**P**	**00 15 28.1**	**-0.6**
	baz=50,SNR=23						
MSTX	**Muleshoe**	**49.81**	**330**	⇑P	**P**	**00 15 28.3**	**-0.8**
	baz=50,SNR=8.8						
Z26A	**Caprock**	**49.87**	**329**	⇓P	**P**	**00 15 29.3**	**-0.2**
	baz=50,SNR=40						
Y27A	**Causey**	**49.94**	**330**	⇑P	**P**	**00 15 29.4**	**-0.7**
	baz=50,SNR=8.0						
AMTX	**Amarillo**	**50.04**	**332**	*e*P	**P**	**00 15 30.5**	**-0.2**
	comp=Z,108nm,2.0s,mb5.5						
124A	**Stringfield Ra**	**50.20**	**327**	⇓P	**P**	**00 15 32.1**	**0.0**
	baz=50,SNR=13						
223A	**Chaparral, Ant**	**50.21**	**325**	⇑P	**P**	**00 15 31.9**	**-0.2**
	baz=50						
Z25A	**Roswell**	**50.26**	**328**	⇓P	**P**	**00 15 32.1**	**-0.4**
	baz=50,SNR=27						
Y26A	**Elida**	**50.30**	**329**	⇑P	**P**	**00 15 32.3**	**-0.5**
	baz=50						
ALLY	**Alegheny Colle**	**50.45**	**356**	*e*P	**P**	**00 15 33.4**	**-0.4**
	comp=Z,48nm,0.9s,mb5.5						
X27A	**F and S Farms,**	**50.52**	**330**	⇑P	**P**	**00 15 34.1**	**-0.3**
	baz=51						
123A	**Bell Site, Whi**	**50.59**	**326**	⇑P	**P**	**00 15 35.4**	**+0.3**
	baz=51						
222A	**Williams Famil**	**50.66**	**325**	⇑P	**P**	**00 15 35.9**	**+0.4**
	baz=51,SNR=13						
Y25A	**Mesa, Roswell**	**50.74**	**329**	⇑P	**P**	**00 15 35.8**	**-0.4**
	baz=51						
HDIL	**Hopedale**	**50.79**	**347**	*e*P	**P**	**00 15 34.3**	**-2.0**
	comp=Z,70nm,0.8s,mb5.7						
X26A	**CR and CF Fran**	**50.79**	**330**	⇑P	**P**	**00 15 36.1**	**-0.4**
	baz=51,SNR=42						
BINY	**Binghamton**	**50.83**	**360**	*e*P	**P**	**00 15 36.9**	**+0.3**
	comp=Z,48nm,1.3s,mb5.3						
W27A	**Bowe Ranch, En**	**50.84**	**331**	⇓P	**P**	**00 15 36.4**	**-0.4**
	baz=51,SNR=25						
ERPA	**Erie**	**50.91**	**356**	*e*P	**P**	**00 15 36.7**	**-0.5**
	comp=Z,41nm,0.8s,mb5.4						
320A	**Kipp Ranch, An**	**50.93**	**323**	⇓P	**P**	**00 15 37.8**	**+0.2**
	baz=51,SNR=17						
221A	**Mesquite Ranch**	**50.98**	**324**	⇓P	**P**	**00 15 38.7**	**+0.7**
	baz=51						
122A	**Conniff Cattle**	**51.05**	**326**	⇓P	**P**	**00 15 38.7**	**+0.2**
	baz=51						
Z23A	**Rita Site, Whi**	**51.05**	**327**	⇓P	**P**	**00

comp=Z,9.4nm,1.0s,mb4.7
U24A **Moreno Valley** 52.99 330 ⇓P P 00 15 53.3 +0.4
baz=53,SNR=6.9
Z18A **Geronimo** 53.07 324 ⇓P P 00 15 53.9 +0.4
baz=53
117A **Oracle** 53.12 323 ⇓P P 00 15 54.0 +0.1
baz=53,SNR=21
T25A **Trinidad** 53.15 331 ⇑P P 00 15 54.3 +0.3
baz=53,SNR=38
216A **Three Points,** 53.16 322 ⇓P P 00 15 54.1 -0.1
baz=53,SNR=10
W21A **San Fidel** 53.22 327 ⇓P P 00 15 55.0 +0.4
baz=53,SNR=8.5
Y19A **Nutrioso** 53.25 325 ⇑P P 00 15 55.5 +0.8
baz=53,SNR=17
X20A **Quemado** 53.25 326 ⇑P P 00 15 55.4 +0.6
baz=53
JFWS **Jewell Farm** 53.25 347 eP P 00 15 52.7 -1.9
JFWS pmax pmax
comp=Z,15nm,0.9s,mb4.9
JFWS **Jewell Farm** 53.25 347 eP P 00 15 52.7 -2.0
comp=Z,15nm,0.9s,mb4.9
LONY **Lake Ozonia** 53.26 1 eP P 00 15 54.9 +0.2
comp=Z,31nm,1.3s,mb5.1
U23A **El Rito** 53.39 329 ⇑P P 00 15 55.8 0.0
baz=54,SNR=18
V22A **San Miguel Ran** 53.43 328 ⇓P P 00 15 56.0 -0.1
baz=54,SNR=27
Z17A **San Carlos Hig** 53.48 323 ⇓P P 00 15 56.4 -0.1
baz=54
FRNY **Flat Rock** 53.50 2 eP P 00 15 56.6 +0.2
comp=Z,44nm,1.0s,mb5.3
Y18A **Canyon Day Jun** 53.56 324 ⇑P P 00 15 57.3 +0.2
baz=54,SNR=15
X19A **St. Johns** 53.61 325 ⇑P P 00 15 57.6 +0.2
baz=54,SNR=11
W20A **Ramah** 53.69 326 ⇓P P 00 15 58.3 +0.3
baz=54,SNR=20
116A **Eloy** 53.70 322 ⇓P P 00 15 58.4 +0.2
baz=54
V21A **Milan** 53.73 328 ⇑P P 00 15 58.5 +0.2
baz=54,SNR=7.9
U22A **Llaves** 53.76 329 ⇓P P 00 15 59.0 +0.5
baz=54,SNR=27
214A **Organ Pipe Nat** 53.97 321 ⇑P P 00 16 00.4 +0.2
baz=54,SNR=25
Y17A **Roosevelt** 53.98 323 ⇑P P 00 16 00.1 0.0
baz=54,SNR=7.3
X18A **Snowflake** 54.06 325 ⇑P P 00 16 01.0 +0.2
baz=54,SNR=14
Z16A **Peralta Trail,** 54.07 323 ⇓P P 00 16 00.9 0.0
baz=54
115A **Sonoran Desert** 54.12 322 ⇓P P 00 16 01.4 +0.2
baz=54,SNR=6.0
SDCO **Great Sand Dun** 54.16 331 eP P 00 16 01.5 +0.1
comp=Z,47nm,0.8s,mb5.5
W19A **Sanders** 54.16 326 ⇑P P 00 16 01.9 +0.4
baz=54
V20A **Brimhall** 54.17 327 ⇓P P 00 16 01.5 0.0
baz=54,SNR=6.5
PKME **Peaks-Kenny Pk** 54.19 5 eP P 00 16 01.6 +0.1
comp=Z,29nm,1.1s,mb5.1
U21A **Nageezi** 54.22 328 ⇓P P 00 16 01.9 0.0
baz=54,SNR=10
T22A **Edith** 54.28 329 ⇑P P 00 16 02.4 +0.1
baz=54,SNR=11
W18A **Petrified Fore** 54.36 326 ⇓P P 00 16 03.1 +0.2
baz=55,SNR=5.5
X17A **Forest Lakes** 54.41 324 ⇓P P 00 16 04.0 +0.7
baz=55,SNR=12
V19A **Window Rock** 54.42 327 ⇑P P 00 16 03.6 +0.2
baz=55,SNR=7.1
Z15A **Gila River Ind** 54.48 322 ⇓P P 00 16 03.8 -0.1
baz=55
Y16A **Circle Bar Ran** 54.48 323 ⇑P P 00 16 04.2 +0.4
baz=55,SNR=19
114A **Black Gap (USA** 54.55 321 ⇓P P 00 16 04.6 +0.2
baz=55,SNR=15
T21A **Navajo Lake** 54.58 329 ⇑P P 00 16 04.3 -0.2
baz=55,SNR=5.6
U20A **Newcomb** 54.63 327 ⇓P P 00 16 04.6 -0.3
baz=55,SNR=5.3
X16A **Lo Mia Camp, P** 54.84 324 ⇑P P 00 16 06.7 +0.3
baz=55,SNR=28
W17A **Winslow** 54.89 325 ⇑P P 00 16 06.8 +0.1
baz=55
V18A **Ganado** 54.91 326 ⇓P P 00 16 06.4 -0.4
baz=55
U19A **Dine' College,** 54.94 327 ⇑P P 00 16 06.6 -0.5
baz=55
Z14A **Wintersburg** 55.01 322 ⇓P P 00 16 07.9 +0.2
baz=55
Y15A **Casa Rosa Ranc** 55.04 323 ⇓P P 00 16 08.0 +0.1
baz=55,SNR=14
113A **Mohawk Valley,** 55.12 321 ⇑P P 00 16 08.4 -0.1
baz=55,SNR=6.0
R22A **Saguache, Gunn** 55.15 330 ⇑P P 00 16 08.6 +0.1
baz=55,SNR=20
S21A **Coal Bank Pass** 55.23 329 ⇓P P 00 16 09.0 -0.2
baz=55,SNR=8.1
T19A **Beclabito** 55.24 327 ⇓P P 00 16 08.8 -0.5
baz=55,SNR=7.4
MVCO **Mesa Verde** 55.25 328 ⇓P P 00 16 09.1 -0.2
baz=56,SNR=6.6
MVCO **Mesa Verde** 55.25 328 eP P 00 16 08.8 -0.5
comp=Z,26nm,1.3s,mb5.1
V17A **Tonalea, Kykot** 55.32 325 ⇓P P 00 16 10.4 +0.5
baz=56,SNR=46
Z13A **Yuma Proving G** 55.34 321 ⇑P P 00 16 09.9 -0.2
baz=56,SNR=6.0
X15A **Humboldt** 55.35 323 ⇑P P 00 16 10.4 +0.3
baz=56,SNR=12
W16A **Flagstaff** 55.37 324 ⇑P P 00 16 10.8 +0.6
baz=56,SNR=6.7
U18A **Rough Rock, Ch** 55.39 327 ⇓P P 00 16 10.2 -0.2
baz=56,SNR=7.4
Y14A **Wickenburg** 55.44 322 ⇓P P 00 16 10.8 0.0
baz=56,SNR=8.8
112A **Yuma** 55.48 320 ⇓P P 00 16 11.1 0.0
baz=56
WUAZ **Wupatki** 55.58 325 ⇓P P 00 16 12.2 +0.5
baz=56,SNR=15
WUAZ **Wupatki** 55.58 325 eP P 00 16 12.7 +1.0
comp=Z,45nm,1.0s,mb5.5
R21A **Cimarron** 55.65 330 ⇓P P 00 16 12.2 0.0
baz=56,SNR=8.4
Q22A **Crested Butte,** 55.72 331 ⇓P P 00 16 12.8 +0.2
baz=56,SNR=9.3
X14A **Yava** 55.73 323 ⇓P P 00 16 13.2 +0.4
baz=56,SNR=13
ECSD **EROS Data Cent** 55.74 342 eP P 00 16 10.6 -2.1
comp=Z,27nm,0.9s,mb5.3
ISCO **Idaho Springs** 55.85 332 eP P 00 16 14.0 +0.4
ISCO pmax pmax
comp=Z,49nm,1.9s,mb5.2
ISCO **Idaho Springs** 55.85 332 eP P 00 16 14.0 +0.4
comp=Z,49nm,1.9s,mb5.2
W15A **Williams** 55.85 324 ⇓P P 00 16 14.6 +0.9
baz=56
Y13A **Salome** 55.85 321 ⇑P P 00 16 14.1 +0.3
baz=56
T18A **Mexican Hat** 55.92 327 ⇑P P 00 16 13.5 -0.6
baz=56,SNR=26
R20A **Redvale** 55.93 329 ⇓P P 00 16 14.3 +0.1
baz=56,SNR=20
U17A **Shonto** 55.96 326 ⇓P P 00 16 14.3 -0.1
baz=56,SNR=7.2
GLA **Glamis** 55.97 320 ⇓P P 00 16 14.8 +0.2
baz=56
S19A **Harvey Farm, M** 55.98 328 ⇓P P 00 16 14.2 -0.4
baz=56,SNR=26
PV01 **Paradox Valley** 55.99 329 eP P 00 16 14.9 +0.4
comp=Z,3µm,0.9s
SMCO **Snowmass** 56.00 331 eP P 00 16 15.0 +0.4
comp=Z,23nm,1.0s,mb5.2
Q21A **Lamborn Mesa,** 56.02 330 ⇓P P 00 16 14.7 -0.1
baz=56
COWI **Conover** 56.06 349 eP P 00 16 13.7 -1.3
comp=Z,9.6nm,0.7s,mb4.9
Y12C **Blythe** 56.24 321 ⇓P P 00 16 16.7 +0.2
baz=56,SNR=7.3
V15A **Kaibab Nationa** 56.25 324 ⇑P P 00 16 17.0 +0.5
baz=56,SNR=11
T17A **Navajo Res., N** 56.32 326 ⇓P P 00 16 17.4 +0.4
baz=56,SNR=39
PV04 **Paradox Valley** 56.35 329 eP P 00 16 17.6 +0.4
W14A **Seligman** 56.36 323 ⇓P P 00 16 17.8 +0.5
baz=56,SNR=7.1

PDMCI **Parker Dam,Lak** 56.37 322 ⇓P P 00 16 17.6 +0.2
baz=57
S18A **Hurst Farm, Bl** 56.40 327 ⇓P P 00 16 17.5 0.0
baz=57,SNR=37
PV10 **Paradox Valley** 56.41 329 eP P 00 16 17.0 -0.6
comp=Z,304nm,0.9s
R19A **Curley Farm, L** 56.46 328 ⇑P P 00 16 17.6 -0.4
baz=57,SNR=16
Q20A **Ridgley Place,** 56.47 330 ⇑P P 00 16 17.8 -0.3
baz=57
P21A **Newcastle** 56.50 331 ⇓P P 00 16 18.6 +0.4
baz=57,SNR=19
V14A **Boquillas Ranc** 56.66 324 ⇓P P 00 16 20.0 +0.5
baz=57,SNR=27
T16A **Glen Canyon Da** 56.70 326 ⇑P P 00 16 20.2 +0.5
baz=57,SNR=5.3
U15A **North Rim** 56.75 325 ⇓P P 00 16 20.7 +0.6
baz=57,SNR=22
W13A **Hualapai Mount** 56.76 323 ⇑P P 00 16 20.9 +0.8
baz=57,SNR=24
BC3 **Big Chuckawall** 56.76 320 ⇑P P 00 16 20.5 +0.3
baz=57,SNR=8.3
S17A **Black Ridge (B** 56.79 327 ⇑P P 00 16 20.5 +0.2
baz=57
R18A **Canyonlands Na** 56.86 328 ⇑P P 00 16 20.3 -0.5
baz=57,SNR=8.2
MONP **Monument Peak** 56.89 319 ⇓P P 00 16 21.7 +0.6
baz=57
IRM **Iron Mountain** 56.90 321 ⇓P P 00 16 21.5 +0.3
baz=57,SNR=26
P20A **De Beque** 56.94 330 ⇑P P 00 16 21.2 -0.1
baz=57
Q19A **Hogan Spring (** 56.96 329 ⇑P P 00 16 21.3 -0.3
baz=57,SNR=19
NEE2 **Needles Airpor** 56.98 322 ⇑P P 00 16 22.1 +0.3
baz=57
PHWY **Pilot Hill** 56.99 333 eP P 00 16 21.9 +0.3
comp=Z,136nm,2.7s,mb5.5
N22A **Wattenberg Ran** 57.04 332 ⇓P P 00 16 22.1 +0.1
baz=57
O21A **Pagoda** 57.05 331 ⇓P P 00 16 22.4 +0.3
baz=57
T15A **Red Dirt Ranch** 57.22 325 ⇑P P 00 16 23.8 +0.5
baz=57,SNR=26
U14A **Mt Trumbull** 57.25 324 ⇓P P 00 16 24.1 +0.5
baz=57,SNR=21
S16A **Weppner Ranch,** 57.28 326 ⇑P P 00 16 23.6 -0.2
baz=58,SNR=10
R17A **Hanksville Air** 57.31 328 ⇓P P 00 16 23.9 -0.1
baz=58,SNR=31
V13A **Grand Canyon W** 57.33 323 ⇑P P 00 16 24.4 +0.2
baz=58,SNR=11
BELC **Belle Mtn. Jos** 57.33 320 ⇑P P 00 16 24.8 +0.5
baz=58
P19A **Cripple Cowboy** 57.33 330 ⇓P P 00 16 23.8 -0.3
baz=58,SNR=11
109C **Camp Elliot, M** 57.34 319 ⇓P P 00 16 24.1 -0.1
baz=58
O20A **White River Ci** 57.36 331 ⇑P P 00 16 24.2 -0.1
baz=58,SNR=11
PFO **Pinyon Flat Ob** 57.37 320 ⇑P P 00 16 24.7 +0.2
baz=58,SNR=7.3
PFO **Pinyon Flat Ob** 57.37 320 eP P 00 16 24.8 +0.3
PFO pmax pmax
comp=Z,17nm,1.2s,mb5.0
PFO **Pinyon Flat Ob** 57.37 320 eP P 00 16 24.8 +0.2
comp=Z,18nm,1.2s,mb5.0
W12A **Cal Nev Ari** 57.49 322 ⇑P P 00 16 25.7 +0.4
baz=58
N21A **Black Mountain** 57.50 332 ⇓P P 00 16 25.2 0.0
baz=58,SNR=11
Q18A **Rafter H Ranch** 57.52 328 ⇓P P 00 16 25.4 -0.1
baz=58,SNR=24
GMRC **Granite Mounta** 57.63 321 ⇑P P 00 16 26.7 +0.4
baz=58,SNR=19
R16A **Teasdale** 57.63 327 ⇓P P 00 16 26.4 +0.2
baz=58,SNR=9.6
T14A **Hurricane** 57.64 325 ⇓P P 00 16 26.8 +0.4
baz=58,SNR=11
S15A **Panguitch** 57.67 326 ⇑P P 00 16 27.1 +0.6
baz=58
U13A **Pakoon Wash** 57.70 324 ⇓P P 00 16 27.2 +0.4
baz=58,SNR=12
SRU **San Rafael** 57.73 328 ⇑P P 00 16 26.8 -0.1
baz=58
SRU **San Rafael** 57.73 328 eP P 00 16 26.9 0.0
SRU pmax pmax
comp=Z,23nm,0.9s,mb5.2
SRU **San Rafael** 57.73 328 eP P 00 16 26.9 -0.1
comp=Z,23nm,0.9s,mb5.2
V12A **Nelson** 57.76 323 ⇑P P 00 16 27.5 +0.2
baz=58,SNR=17
MURC **Murrieta** 57.84 319 ⇓P P 00 16 28.1 +0.3
baz=58
N20A **Spence Gulch,** 57.91 331 ⇓P P 00 16 27.8 -0.3
baz=58,SNR=18
O19A **Miners Draw (B** 57.91 330 ⇑P P 00 16 27.9 -0.3
baz=58,SNR=8.1
Q16A **Castle Valley** 57.92 328 ⇑P P 00 16 28.2 -0.1
baz=58,SNR=8.1
P18A **Preston Nutter** 57.97 329 ⇑P P 00 16 28.6 0.0
baz=58,SNR=6.9
L22A **Ellis Ranch, M** 58.01 333 ⇑P P 00 16 29.1 +0.3
baz=58,SNR=11
R15A **Junction** 58.01 326 ⇓P P 00 16 29.3 +0.4
baz=58
U12A **Valley of Fire** 58.05 323 ⇓P P 00 16 29.6 +0.4
baz=58
HEC **Hector,Ludlow** 58.08 321 ⇑P P 00 16 30.0 +0.5
baz=58,SNR=20
BBRC **Big Bear Solar** 58.09 320 ⇑P P 00 16 30.2 +0.7
baz=58
RWWY **Rawlins** 58.09 332 eP P 00 16 29.9 +0.6
comp=Z,39nm,1.1s,mb5.3
T13A **Saint George** 58.09 324 ⇓P P 00 16 30.0 +0.5
baz=58,SNR=18
M21A **Separation Pea** 58.09 332 ⇑P P 00 16 29.4 0.0
baz=58,SNR=10.0
P17A **Butcher Ranch,** 58.11 328 ⇓P P 00 16 29.5 -0.1
baz=58,SNR=18
CCUT **Cedar City** 58.15 325 eP P 00 16 30.9 +1.0
comp=Z,26nm,1.1s,mb5.2
MSU **Marysvale** 58.17 327 eP P 00 16 30.4 +0.4
S14A **Cedar City** 58.18 325 ⇑P P 00 16 30.3 +0.2
baz=58,SNR=6.1
V11A **Goodsprings** 58.19 322 ⇓P P 00 16 30.4 +0.2
baz=58,SNR=13
TUQ **Turquoise Moun** 58.22 322 ⇑P P 00 16 30.5 0.0
baz=58,SNR=7.1
TMUT **Trail Mountain** 58.22 328 eP P 00 16 30.9 +0.5
comp=Z,60nm,1.8s,mb5.3
EYMN **Ely** 58.30 347 eP P 00 16 29.0 -1.8
comp=Z,27nm,0.9s,mb5.3
O18A **Roosevelt** 58.33 329 ⇓P P 00 16 30.9 -0.2
baz=58,SNR=6.7
ARUT **Antelope Range** 58.35 325 eP P 00 16 32.0 +0.7
ARUT pmax pmax
comp=Z,36nm,1.1s,mb5.3
ARUT **Antelope Range** 58.35 325 eP P 00 16 32.0 +0.6
comp=Z,36nm,1.1s,mb5.3
T12A **Moapa** 58.36 323 ⇑P P 00 16 31.7 +0.4
baz=58
L21A **Rawlins** 58.38 333 ⇑P P 00 16 30.7 -0.7
baz=59,SNR=7.3
M20A **Sweetwater, Wa** 58.38 332 ⇑P P 00 16 31.2 -0.2
baz=59,SNR=11
N19A **John Jarvie Ra** 58.39 331 ⇓P P 00 16 30.9 -0.6
baz=59,SNR=14
S13A **Holt Ranch, En** 58.45 325 ⇑P P 00 16 32.8 +0.8
baz=59,SNR=24
R14A **James Farms, M** 58.48 326 ⇑P P 00 16 32.4 +0.2
baz=59
CIS **Catalina Islan** 58.51 318 ⇓P P 00 16 32.9 +0.4
baz=59
RRX **Edison Barstow** 58.53 320 ⇓P P 00 16 33.2 +0.5
baz=59
BFSC **Mount Baldy Ra** 58.54 319 ⇑P P 00 16 32.7 0.0
baz=59,SNR=6.1
U11A **Corn Creek** 58.55 323 ⇓P P 00 16 33.1 +0.4
baz=59
FMP **Fort Macarthur** 58.63 319 ⇑P P 00 16 33.8 +0.5
baz=59
Q15A **Fillmore** 58.63 327 ⇑P P 00 16 33.5 +0.3
baz=59
O17A **Robinson Place** 58.64 329 ⇓P P 00 16 33.4 +0.1
baz=59,SNR=14
GSC **Goldstone** 58.68 321 ⇓P P 00 16 33.8 +0.2
baz=59,SNR=8.0

GSC **Goldstone** 58.68 321 eP P 00 16 34.5 +0.8
GSC pmax pmax
comp=Z,18nm,0.9s,mb5.1
GSC **Goldstone** 58.68 321 eP P 00 16 34.5 +0.8
comp=Z,18nm,0.9s,mb5.1
P16A **Fountain Green** 58.69 328 ⇑P P 00 16 34.0 +0.3
baz=59
RSSD **Black Hills** 58.71 336 eP P 00 16 33.7 0.0
RSSD pmax pmax
comp=Z,15nm,1.0s,mb5.0
RSSD **Black Hills** 58.71 336 eP P 00 16 33.7 +0.1
comp=Z,15nm,1.0s,mb5.0
SHOC **Shoshone** 58.74 322 ⇓P P 00 16 34.0 -0.1
baz=59,SNR=7.1
MWC **Mount Wilson** 58.79 319 eP P 00 16 35.2 +0.8
MWC pmax pmax
comp=Z,18nm,0.9s,mb5.1
MWC **Mount Wilson** 58.79 319 eP P 00 16 35.2 +0.8
comp=Z,18nm,0.9s,mb5.1
M19A **Rock Springs** 58.85 331 ⇑P P 00 16 34.0 -0.7
baz=59
L20A **Wamsutter** 58.86 332 ⇓P P 00 16 34.4 -0.3
baz=59
R13A **O'Grain Ranch,** 58.93 325 ⇓P P 00 16 36.1 +0.8
baz=59,SNR=18
MPU **Maple Canyon** 58.97 328 eP P 00 16 36.6 +1.0
comp=Z,12nm,1.0s,mb4.9
DECC **Green Verdugo** 58.98 319 ⇑P P 00 16 36.3 +0.5
baz=59
P15A **Leamington** 58.99 327 ⇑P P 00 16 35.8 +0.1
baz=59
T11A **Corn Creek, Al** 59.00 324 ⇓P P 00 16 36.2 +0.3
baz=59,SNR=22
S12A **Delamar Landin** 59.04 324 ⇑P P 00 16 36.7 +0.6
baz=59
O16A **Springville** 59.05 328 ⇓P P 00 16 36.0 -0.1
baz=59,SNR=9.4
DAU **Daniels Canyon** 59.07 329 eP P 00 16 36.8 +0.5
Q14A **Sevier Lake (B** 59.11 326 ⇑P P 00 16 37.1 +0.6
baz=59,SNR=35
U10A **Ash Meadows, A** 59.12 322 ⇑P P 00 16 37.0 +0.3
baz=59,SNR=5.6
SNCC **San Nicolas Is** 59.16 317 ⇓P P 00 16 37.3 +0.3
baz=59
EDW2 **Edwards Air Fo** 59.16 320 ⇓P P 00 16 36.9 0.0
baz=59,SNR=5.2
NLU **North Lily Min** 59.16 328 eP P 00 16 37.4 +0.6
comp=Z,15nm,1.1s,mb5.0
M18A **Lyman** 59.23 330 ⇑P P 00 16 36.7 -0.6
baz=59
N17A **Moffit Pass** 59.25 329 ⇑P P 00 16 37.7 +0.2
baz=60
JLU **Jordanelle** 59.31 329 eP P 00 16 38.6 +0.6
comp=Z,21nm,0.9s,mb5.2
LRMC **Laurel Mountai** 59.35 321 ⇓P P 00 16 38.7 +0.5
baz=60
K20A **Yellowstone Ra** 59.37 332 ⇓P P 00 16 37.6 -0.7
baz=60,SNR=5.2
BLG **Laguna Peak** 59.38 318 ⇓P P 00 16 38.6 +0.1
baz=60
R12A **Pony Springs,** 59.39 325 ⇑P P 00 16 39.2 +0.7
baz=60,SNR=13
L19A **Farson** 59.41 331 ⇓P P 00 16 38.3 -0.2
baz=60,SNR=8.1
P14A **Drum Mountains** 59.43 327 ⇑P P 00 16 39.3 +0.5
baz=60,SNR=13
OSI **Osito Adit** 59.46 319 ⇓P P 00 16 39.3 +0.2
baz=60
FURC **Furnace Creek,** 59.47 322 ⇑P P 00 16 39.1 0.0
baz=60,SNR=13
Q13A **Wheeler Ranch,** 59.50 326 ⇓P P 00 16 39.6 +0.3
baz=60,SNR=16
N16A **Rees Ranch, Co** 59.51 329 ⇓P P 00 16 39.6 +0.3
baz=60,SNR=8.7
CTU **Camp Tracy** 59.53 329 eP P 00 16 39.7 +0.3
comp=Z,13nm,0.8s,mb5.0
M17A **Scullys Gap (B** 59.56 330 ⇑P P 00 16 39.0 -0.7
baz=60,SNR=8.0
S11A **Rachel** 59.59 324 ⇓P P 00 16 40.7 +0.9
baz=60
MPMC **Manual Prospec** 59.59 321 ⇓P P 00 16 39.9 -0.1
baz=60,SNR=12
L18A **Fontenelle, Gr** 59.60 331 ⇑P P 00 16 39.5 -0.4
baz=60
O15A **The Old Anders** 59.60 328 ⇓P P 00 16 40.3 +0.3
baz=60,SNR=6.4
BSC **Santa Cruz Isl** 59.68 318 ⇓P P 00 16 41.0 +0.4
baz=60
AGMN **Agassiz Nation** 59.68 344 eP P 00 16 39.2 -1.1
comp=Z,30nm,0.8s,mb5.4
NOQ **North Oquirrh** 59.69 328 eP P 00 16 40.9 +0.3
comp=Z,30nm,1.0s,mb5.3
DUG **Dugway** 59.72 328 ⇓P P 00 16 41.0 +0.2
baz=60,SNR=40
DUG **Dugway** 59.72 328 eP P 00 16 41.1 +0.3
DUG pmax pmax
comp=Z,37nm,0.9s,mb5.4
DUG **Dugway** 59.72 328 eP P 00 16 41.1 +0.4
comp=Z,37nm,0.9s,mb5.4
K19A **Absolon Red Bu** 59.73 332 ⇑P P 00 16 39.9 -0.8
baz=60,SNR=10
P13A **Bates Ranch, G** 59.85 326 ⇑P P 00 16 42.1 +0.4
baz=60,SNR=34
ARVC **Arvin** 59.85 320 ⇑P P 00 16 42.0 +0.2
baz=60
ISA **Isabella** 59.96 320 ⇓P P 00 16 42.5 0.0
baz=60,SNR=6.9
ISA **Isabella** 59.96 320 eP P 00 16 43.1 +0.6
ISA pmax pmax
comp=Z,13nm,0.9s,mb5.0
ISA **Isabella** 59.96 320 eP P 00 16 43.1 +0.6
comp=Z,13nm,0.9s,mb5.0
R11A **Troy Canyon, C** 59.97 324 ⇓P P 00 16 43.0 +0.5
baz=60,SNR=23
SBC **Santa Barbara** 60.00 318 ⇑P P 00 16 43.2 +0.4
baz=60
Q12A **Willow Creek R** 60.01 325 ⇑P P 00 16 42.9 +0.2
baz=60,SNR=14
BW06 **Boulder Array** 60.02 332 ⇓P P 00 16 41.9 -0.8
baz=60,SNR=13
BW06 **Boulder Array** 60.02 332 eP P 00 16 42.0 -0.8
comp=Z,14nm,1.1s,mb4.9
PDAR **Pinedale Array** 60.02 332 P P 00 16 41.5 -1.2
comp=Z,6.5nm,1.0s,mb4.6,baz=140,slow=7.7,SNR=34
PDAR PcP PcP 00 17 28.6 +0.2
comp=Z,3.7nm,1.0s,baz=134,slow=6.4,SNR=4.3
PDAR LR LR 00 43 15.0
comp=Z,454nm,21.3s,MS4.6,baz=133,slow=37
N15A **Stansbury Isla** 60.07 328 ⇓P P 00 16 42.9 -0.2
baz=60
HWUT **Hardware Ranch** 60.11 329 eP P 00 16 43.0 -0.4
comp=Z,36nm,0.8s,mb5.5
GRAC **Grapevine Rang** 60.13 322 ⇓P P 00 16 44.1 +0.5
baz=60
L17A **Cokeville** 60.14 330 ⇓P P 00 16 42.9 -0.6
baz=60
K18A **Toltan Ranch,** 60.14 331 ⇓P P 00 16 43.6 0.0
baz=60,SNR=9.1
CWC **Cottonwood Cre** 60.20 321 ⇑P P 00 16 44.5 +0.4
baz=60
S10A **Tonopah Range,** 60.27 323 ⇓P P 00 16 45.0 +0.5
baz=60,SNR=26
O13A **Hicks Ranch, I** 60.30 327 ⇑P P 00 16 45.2 +0.4
baz=60
R10A **Warm Springs** 60.34 324 ⇑P P 00 16 45.8 +0.7
baz=60,SNR=6.3
SPUT **South Promonto** 60.34 329 eP P 00 16 44.9 -0.1
comp=Z,40nm,1.2s,mb5.3
Q11A **Duckwater** 60.34 325 ⇑P P 00 16 45.4 +0.3
baz=60,SNR=38
PKM **Peak Mountain** 60.35 319 ⇓P P 00 16 45.6 +0.4
baz=60
L16A **Fish Haven** 60.35 330 ⇓P P 00 16 44.3 -0.7
baz=61,SNR=9.1
BGU **Big Grassy Mou** 60.37 328 eP P 00 16 44.6 -0.6
comp=Z,20nm,1.2s,mb5.0
N14A **Grayback Hills** 60.39 328 ⇑P P 00 16 45.0 -0.3
baz=61,SNR=21
M15A **Larsen Ranch,** 60.45 329 ⇑P P 00 16 45.2 -0.6
baz=61,SNR=18
J18A **Kendall Valley** 60.57 332 ⇑P P 00 16 45.8 -0.8
baz=61,SNR=11
K17A **Gardner Place,** 60.65 331 ⇓P P 00 16 46.2 -0.9
baz=61,SNR=7.9
TIN **Tinemaha** 60.69 322 ⇑P P 00 16 47.8 +0.4
baz=61
SMMC **Simmler** 60.72 319 ⇓P P 00 16 48.1 +0.4
baz=61

Q10A **Clear Creek Ra** 60.76 324 ⇓P P 00 16 48.6 +0.7
baz=61,SNR=9.2
O12A **Currie** 60.82 326 ⇓P P 00 16 48.4 +0.1
baz=61
L15A **Malad City** 60.82 329 ⇑P P 00 16 47.5 -0.8
baz=61,SNR=27
HVU **Hansel Valley** 60.85 329 eP P 00 16 48.4 -0.1
HVU pmax pmax
comp=Z,20nm,1.0s,mb5.2
HVU **Hansel Valley** 60.85 329 eP P 00 16 48.4 0.0
comp=Z,20nm,1.0s,mb5.2
I18A **Diamond G Banc** 60.86 332 ⇑P P 00 16 48.0 -0.4
baz=61,SNR=8.1
P11A **Circle Ranch,** 60.88 325 ⇑P P 00 16 49.0 +0.2
baz=61
N13A **Wendover, West** 60.94 327 ⇓P P 00 16 49.0 -0.1
baz=61
N13A **Wendover, West** 60.94 327 eP P 00 16 49.1 0.0
comp=Z,37nm,1.0s,mb5.5
M14A **Sheep Mountain** 60.95 328 ⇓P P 00 16 48.6 -0.6
baz=61,SNR=30
J17A **Brown Place, J** 61.02 331 ⇓P P 00 16 49.3 -0.2
baz=61
K16A **Soda Springs** 61.04 330 ⇑P P 00 16 49.7 0.0
baz=61,SNR=13
REDW **Red Top Meadow** 61.08 331 eP P 00 16 50.0 0.0
comp=Z,24nm,1.4s,mb5.1
MTUM **Tungsten Hills** 61.08 322 eP P 00 16 50.9 +0.7
LOHW **Long Hollow** 61.15 332 eP P 00 16 50.1 -0.3
comp=Z,8.6nm,1.0s,mb4.8
O11A **Cowboy Ranch,** 61.22 326 ⇑P P 00 16 51.2 +0.2
baz=61,SNR=9.3
TPAW **Teton Pass** 61.23 331 eP P 00 16 51.0 0.0
comp=Z,7.3nm,1.0s,mb4.8
M13A **Montello** 61.27 328 ⇑P P 00 16 50.9 -0.5
baz=62
M13A **Montello** 61.27 328 eP P 00 16 51.4 0.0
comp=Z,11nm,0.9s,mb5.0
L14A **Malta** 61.28 329 ⇓P P 00 16 50.8 -0.5
baz=62,SNR=11
RRI2 **Red Ridge** 61.29 331 eP P 00 16 51.5 +0.1
comp=Z,27nm,0.8s,mb5.4
P10A **Eureka** 61.33 325 ⇓P P 00 16 52.2 +0.5
baz=62,SNR=11
I17A **Pilgrim Ck.** 61.38 332 ⇓P P 00 16 51.8 -0.1
baz=62
J16A **Bone** 61.38 331 ⇑P P 00 16 51.8 -0.2
baz=62,SNR=12
N12A **Clover Valley,** 61.38 327 ⇓P P 00 16 52.0 -0.1
baz=62
N12A **Clover Valley,** 61.38 327 eP P 00 16 52.3 +0.3
comp=Z,12nm,0.9s,mb5.0
K15A **Arbon** 61.39 330 ⇑P P 00 16 51.5 -0.6
baz=62,SNR=9.2
ELK **Elko** 61.42 326 eP P 00 16 52.8 +0.5
ELK pmax pmax
comp=Z,23nm,1.1s
ELK **Elko** 61.42 326 eP P 00 16 52.8 +0.5
comp=Z,23nm,1.1s,mb5.2
ULM **Lac du Bonnet** 61.48 345 P P 00 16 51.1 -1.4
comp=Z,34nm,0.8s,mb5.5,baz=158,slow=6.4,SNR=26
ULM LR LR 00 43 14.3
comp=Z,212nm,21.5s,MS4.3,baz=23,slow=36
ULM **Lac du Bonnet** 61.48 345 eP P 00 16 51.2 -1.3
comp=Z,34nm,0.8s,mb5.5
IMW **Indian Meadow** 61.53 332 eP P 00 16 53.2 +0.2
comp=Z,9.8nm,0.8s,mb5.0
K14A **Jones Ranch, D** 61.62 329 ⇓P P 00 16 53.0 -0.6
baz=62,SNR=11
NVAR **Mina Array Bea** 61.62 323 P P 00 16 54.1 +0.4
comp=Z,6.6nm,0.8s,mb4.8,baz=142,slow=7.5,SNR=35
L13A **Double Diamond** 61.68 328 ⇑P P 00 16 53.8 -0.3
baz=62,SNR=7.4
LAO **LASA Array** 61.70 337 eP P 00 16 53.6 -0.4
comp=Z,28nm,1.3s,mb5.2
M12A **Wells** 61.71 327 ⇓P P 00 16 53.7 -0.6
baz=62,SNR=9.1
RLMT **Red Lodge** 61.71 334 ⇑P P 00 16 53.8 -0.4
baz=62
RLMT **Red Lodge** 61.71 334 eP P 00 16 54.2 0.0
comp=Z,14nm,1.1s,mb5.0
N11A **Elko Archery C** 61.74 326 ⇓P P 00 16 54.4 0.0
baz=62
I16A **Newdale** 61.77 331 ⇑P P 00 16 54.5 -0.2
baz=62,SNR=7.8
O10A **Cortez Mining,** 61.80 325 ⇑P P 00 16 55.4 +0.4
baz=62,SNR=22
J15A **Blackfoot** 61.87 330 ⇓P P 00 16 55.3 0.0
baz=62,SNR=9.5
YFT **Old Faithful** 61.90 332 eP P 00 16 58.5 +3.0
comp=Z,36nm,1.2s,mb5.4
G18A **Lazy EL Ranch,** 61.99 333 ⇓P P 00 16 55.5 -0.6
baz=62,SNR=11
N10A **Dunphy** 62.10 326 ⇑P P 00 16 56.7 -0.2
baz=62
K13A **Stover Farm, H** 62.15 329 ⇓P P 00 16 57.0 -0.2
baz=62
M11A **Holland Ranch,** 62.20 327 ⇓P P 00 16 57.5 0.0
baz=62,SNR=10
L12A **House Creek Ra** 62.28 328 ⇓P P 00 16 58.2 +0.1
baz=62,SNR=9.8
H16A **Russell Place,** 62.28 332 ⇑P P 00 16 58.5 +0.5
baz=62,SNR=11
BMN **Battle Mountai** 62.31 325 eP P 00 16 58.9 +0.6
BMN pmax pmax
comp=Z,17nm,0.9s,mb5.2
BMN **Battle Mountai** 62.31 325 eP P 00 16 58.9 +0.6
comp=Z,17nm,0.9s,mb5.2
I15A **Monteview** 62.34 331 ⇑P P 00 16 58.7 +0.2
baz=62
WAKR **Walker** 62.35 322 eP P 00 16 59.4 +0.8
J14A **Carey** 62.35 330 ⇓P P 00 16 59.0 +0.4
baz=63,SNR=31
GCMT **Greycliff** 62.41 334 eP P 00 16 58.4 -0.5
comp=Z,44nm,1.3s,mb5.4
DGMT **Dagmar** 62.42 339 ⇓P P 00 16 58.8 -0.1
baz=63
DGMT **Dagmar** 62.42 339 eP P 00 16 59.1 +0.1
comp=Z,9.7nm,0.7s,mb5.0
F18A **Big Timber** 62.52 334 ⇓P P 00 16 59.3 -0.3
baz=63,SNR=20
G17A **Pierce Place,** 62.52 333 ⇓P P 00 16 60.0 +0.3
baz=63
K12A **Draper Farm, C** 62.57 328 ⇓P P 00 17 00.3 +0.3
baz=63,SNR=19
CMB **Columbia Colle** 62.63 321 eP P 00 17 00.6 0.0
CMB pmax pmax
comp=Z,15nm,1.5s,mb4.9
CMB **Columbia Colle** 62.63 321 eP P 00 17 00.6 +0.1
comp=Z,15nm,1.5s,mb4.9
M10A **I.L. Ranch, Tu** 62.66 326 ⇓P P 00 17 00.3 -0.3
baz=63
L11A **Cat Creek Ranc** 62.69 327 ⇓P P 00 17 00.8 0.0
baz=63,SNR=20
J13A **Cove Ranch, Pi** 62.74 329 ⇓P P 00 17 01.2 0.0
baz=63,SNR=12
I14A **Mackay** 62.76 330 ⇑P P 00 17 01.5 +0.3
baz=63,SNR=9.7
H15A **Lima** 62.88 331 ⇓P P 00 17 02.5 +0.4
baz=63,SNR=11
F17A **Fitzpatrick Pl** 62.94 333 ⇓P P 00 17 02.4 0.0
baz=63,SNR=6.9
G16A **Moss Hill, Enn** 62.94 332 ⇑P P 00 17 02.4 0.0
baz=63,SNR=7.1
HLID **Hailey** 62.98 329 ⇑P P 00 17 02.8 +0.1
baz=63,SNR=15
HLID **Hailey** 62.98 329 eP P 00 17 02.9 +0.2
comp=Z,11nm,1.0s,mb5.0
L10A **Juniper Basin** 63.01 327 ⇓P P 00 17 03.0 0.0
baz=63,SNR=21
WCN **Washoe City** 63.05 323 ⇓P P 00 17 03.8 +0.5
baz=63,SNR=7.6
I13A **Wildhorse Cree** 63.08 330 ⇓P P 00 17 03.7 +0.3
baz=63,SNR=12
PAHR **Pah Rah Range** 63.08 323 eP P 00 17 04.0 +0.5
comp=Z,29nm,1.0s,mb5.4
J12A **Stokes Ranch,** 63.10 329 ⇑P P 00 17 03.4 -0.1
baz=63,SNR=7.8
E18A **Harlowton** 63.12 334 ⇓P P 00 17 03.5 -0.1
baz=63,SNR=8.7
MCMT **McKenzie Canyo** 63.13 331 eP P 00 17 04.1 +0.4
comp=Z,9.8nm,1.3s,mb4.8
BOZ **Bozeman (W)** 63.18 332 ⇑P P 00 17 03.5 -0.5
baz=63,SNR=19
BOZ **Bozeman (W)** 63.18 332 eP P 00 17 03.6 -0.4
BOZ pmax pmax
comp=Z,32nm,1.4s,mb5.3
BOZ **Bozeman (W)** 63.18 332 eP P 00 17 03.6 -0.4
comp=Z,32nm,1.4s,mb5.3
G15A **Dillon** 63.21 332 ⇓P P 00 17 04.0 -0.3
baz=63,SNR=11
H14A **Leadore** 63.23 331 ⇑P P 00 17 04.4 +0.1
baz=63,SNR=17
K11A **Parker Ranch,** 63.25 328 ⇑P P 00 17 04.5 -0.1
baz=64,SNR=15
F16A **Kennard Place,** 63.28 333 ⇑P P 00 17 04.3 -0.3
baz=64,SNR=5.4
DLMT **Dillon** 63.41 332 eP P 00 17 05.3 -0.2
comp=Z,24nm,1.4s,mb5.1
E17A **Martinsdale** 63.45 334 ⇑P P 00 17 05.5 -0.3
baz=64,SNR=13
I12A **Atlanta** 63.51 329 ⇑P P 00 17 06.4 +0.2
baz=64,SNR=11
D18A **Linhart Farms,** 63.57 335 ⇑P P 00 17 06.1 -0.4
baz=64
MFID **Camas Ranch** 63.60 328 ⇓P P 00 17 07.0 +0.2
baz=64,SNR=34
H13A **Challis** 63.62 330 ⇓P P 00 17 06.8 -0.2
baz=64,SNR=11
LRM **Limekiln Ridge** 63.69 332 eP P 00 17 07.2 -0.2
K10A **MacKenzie Ranc** 63.70 327 ⇓P P 00 17 07.4 -0.1
baz=64,SNR=21
F15A **Butte** 63.72 332 ⇑P P 00 17 07.1 -0.5
baz=64
G14A **Jackson** 63.73 331 ⇑P P 00 17 07.2 -0.5
baz=64
BEKR **Beckworth** 63.76 323 ⇑P P 00 17 08.4 +0.4
baz=64,SNR=8.4
E16A **East Helena** 63.87 333 ⇑P P 00 17 08.3 -0.3
baz=64,SNR=9.9
SCHQ **Schefferville** 63.90 6 P P 00 17 08.2 -0.3
comp=Z,13nm,0.9s,mb5.0,baz=183,slow=3.8,SNR=8.6
SCHQ LR LR 00 46 40.0
comp=Z,316nm,20.1s,MS4.5,baz=112,slow=38
SCHQ **Schefferville** 63.90 6 eP P 00 17 08.4 -0.1
comp=Z,16nm,0.9s,mb5.1
H12A **Diamond D Ranc** 63.91 330 ⇓P P 00 17 08.8 -0.1
baz=64,SNR=18
D17A **Six Diamond Ra** 63.91 334 ⇑P P 00 17 08.4 -0.4
baz=64,SNR=10
G13A **Cobalt** 63.99 331 ⇑P P 00 17 09.2 -0.2
baz=64,SNR=9.4
I11A **Placerville** 64.01 329 ⇑P P 00 17 09.4 -0.1
baz=64,SNR=19
J10A **Berg Farm, Mel** 64.10 328 ⇓P P 00 17 09.7 -0.5
baz=64
F14A **Wisdom** 64.11 332 ⇑P P 00 17 09.6 -0.5
baz=64
OHCM **Honcut** 64.11 322 eP P 00 17 10.8 +0.5
D16A **Dana Ranch, Ca** 64.19 334 ⇑P P 00 17 10.8 +0.1
baz=64,SNR=11
EGMT **Eagleton** 64.20 335 ⇑P P 00 17 10.2 -0.5
baz=64,SNR=9.2
EGMT **Eagleton** 64.20 335 eP P 00 17 10.4 -0.3
comp=Z,28nm,1.1s,mb5.2
E15A **Deer Lodge** 64.23 332 ⇓P P 00 17 10.5 -0.4
baz=64
C17A **Wharram Farm,** 64.32 334 ⇑P P 00 17 10.9 -0.5
baz=64,SNR=8.2
WVOR **Wild Horse Val** 64.43 326 eP P 00 17 11.5 -0.8
WVOR pmax pmax
comp=Z,25nm,1.1s,mb5.2
WVOR **Wild Horse Val** 64.43 326 eP P 00 17 11.5 -0.8
comp=Z,25nm,1.1s,mb5.2
B18A **Beardsley Farm** 64.50 335 ⇑P P 00 17 12.4 -0.2
baz=65,SNR=10
F13A **Darby** 64.55 331 ⇓P P 00 17 12.8 -0.2
baz=65,SNR=8.5
I10A **Payette** 64.57 328 ⇓P P 00 17 13.0 -0.2
baz=65
H11A **Donnelly** 64.60 329 ⇑P P 00 17 12.8 -0.5
baz=65
E14A **Clinton** 64.61 332 ⇓P P 00 17 13.4 0.0
baz=65,SNR=9.1
D15A **Lincoln** 64.64 333 ⇓P P 00 17 13.5 -0.1
baz=65
B17A **L&G Farms, Che** 64.84 335 ⇑P P 00 17 14.0 -0.8
baz=65
C16A **Fuhringer Ranc** 64.87 334 ⇑P P 00 17 14.9 -0.2
baz=65,SNR=13
CHMT **Chamberlain Mo** 64.87 332 eP P 00 17 15.4 +0.3
H10A **Noah's Angus R** 64.89 329 ⇓P P 00 17 14.5 -0.8
baz=65
A18A **Metzger Ranch,** 64.94 336 ⇓P P 00 17 15.1 -0.4
baz=65,SNR=14
E13A **Victor** 64.96 332 ⇑P P 00 17 15.6 -0.1
baz=65,SNR=8.4
J08A **Circle Bar Ran** 64.96 327 ⇑P P 00 17 15.4 -0.4
baz=65,SNR=6.5
F12A **Elk City** 64.97 330 ⇑P P 00 17 15.5 -0.3
baz=65,SNR=17
I09A **Lost Marbles R** 64.98 328 ⇓P P 00 17 15.4 -0.5
baz=65,SNR=6.9
MOD **Modoc** 65.03 325 eP P 00 17 16.7 +0.5
comp=Z,30nm,1.1s,mb5.2
D14A **Greenough** 65.11 332 ⇓P P 00 17 16.3 -0.3
baz=65
MSO **Missoula** 65.13 332 eP P 00 17 17.0 +0.3
comp=Z,22nm,1.0s,mb5.1
G11A **Walters Elk Ra** 65.22 330 ⇑P P 00 17 16.8 -0.6
baz=65,SNR=9.2
SLMT **Seeley Lake** 65.23 333 eP P 00 17 17.6 +0.2
C15A **Salmond Ranch,** 65.23 333 ⇑P P 00 17 17.7 +0.3
baz=65,SNR=20
B16A **M & M Farms, S** 65.32 334 ⇓P P 00 17 17.5 -0.5
baz=66
BMO **Blue Mountains** 65.36 329 eP P 00 17 17.9 -0.4
comp=Z,26nm,2.0s,mb4.9
H09A **Durkee** 65.42 328 ⇓P P 00 17 18.2 -0.5
baz=66
F11A **Grangeville** 65.51 330 ⇑P P 00 17 18.5 -0.8
baz=66,SNR=12
WDC **Whiskeytown Da** 65.52 322 eP P 00 17 17.8 -1.6
WDC pmax pmax
comp=Z,37nm,1.9s,mb5.1
WDC **Whiskeytown Da** 65.52 322 eP P 00 17 17.8 -1.6
comp=Z,37nm,1.9s,mb5.1
D13A **Huson** 65.56 332 ⇑P P 00 17 19.5 -0.1
baz=66,SNR=5.5
G10A **Bishop Farm, J** 65.57 329 ⇓P P 00 17 19.6 -0.1
baz=66,SNR=14
B15A **Bradely Ranch,** 65.62 334 ⇑P P 00 17 19.4 -0.5
baz=66,SNR=11
SWMT **Swartz Lake** 65.66 332 eP P 00 17 20.7 +0.6
H08A **Prairie City** 65.85 328 ⇑P P 00 17 21.5 0.0
baz=66,SNR=25
CMLA **Cha da Macela** 65.85 42 eLQ 00 34 47.0
CMLA eLR LR 00 38 58.5
K05A **Summer Lake** 65.89 325 ⇑P P 00 17 22.4 +0.6
baz=66,SNR=17
G09A **Cove** 65.90 329 ⇑P P 00 17 21.6 -0.1
baz=66,SNR=19
YBMT **Yellow Bay** 65.92 333 eP P 00 17 22.0 +0.1
D12A **Red Ives Fores** 65.95 331 ⇓P P 00 17 21.8 -0.2
baz=66
JTMT **Jette** 65.96 332 eP P 00 17 22.8 +0.7
B14A **Marquette Ranc** 65.96 333 ⇑P P 00 17 22.0 -0.1
baz=66,SNR=12
C13A **Hot Springs** 66.04 332 ⇓P P 00 17 22.8 +0.1
baz=66,SNR=13
F10A **Beach Ranch, E** 66.10 330 ⇓P P 00 17 23.0 0.0
baz=66,SNR=11
A15A **Johnson Ranch,** 66.19 334 ⇑P P 00 17 22.7 -0.9
baz=66,SNR=6.7
BSMT **Bassoo Peak** 66.27 332 eP P 00 17 24.4 +0.4
YBH **Yreka Blue Hor** 66.32 323 eP P 00 17 23.5 -1.1
YBH pmax pmax
comp=Z,9.0nm,0.9s
YBH **Yreka Blue Hor** 66.32 323 eP P 00 17 23.5 -1.0
comp=Z,9.4nm,0.9s,mb4.8
C12B **Negeli Ranch,** 66.48 332 ⇓P P 00 17 25.5 0.0
baz=67
A14A **Double T Ranch** 66.49 334 ⇑P P 00 17 25.0 -0.5
baz=67,SNR=7.4
B13A **Whitefish** 66.51 333 ⇑P P 00 17 25.5 -0.1
baz=67
G08A **Pilot Rock** 66.52 328 ⇓P P 00 17 25.6 -0.1
baz=67,SNR=5.2
LNOR **Lincton Mounta** 66.56 329 eP P 00 17 25.9 -0.1
WALA **Waterton Lakes** 66.77 334 eP P 00 17 27.5 +0.3
comp=Z,0.6nm,0.9s
A13A **Flathead Natio** 66.89 333 ⇓P P 00 17 28.4 +0.3
baz=67
E09A **Wood Farm, Sta** 66.93 329 ⇓P P 00 17 27.8 -0.6
baz=67
B12A **Libby** 67.09 332 ⇓P P 00 17 29.2 -0.1
baz=67
FFC **Flin Flon** 67.13 344 P P 00 17 28.2 -1.2
comp=Z,109nm,0.8s,mb5.9,SNR=7.0
FFC **Flin Flon** 67.13 344 eP P 00 17 28.6 -0.8
FFC pmax pmax
comp=Z,16nm,0.9s,mb5.0
FFC **Flin Flon** 67.13 344 eP P 00 17 29.0 -0.4
FFC **Flin Flon** 67.13 344 eP P 00 17 28.6 -0.9
comp=Z,16nm,0.9s,mb5.1
E08A **Dider Farm, El** 67.38 329 ⇑P P 00 17 31.0 -0.2
baz=68
F07A **Phinny Hill Vi** 67.43 328 ⇓P P 00 17 32.2 +0.7
baz=68
A12A **Yaak River Ran** 67.45 333 ⇑P P 00 17 31.9 +0.3
baz=68
HAWA **Hanford** 67.55 329 P P 00 17 32.4 +0.1
D08A **Wollman Farm,** 67.69 330 ⇑P P 00 17 33.3 +0.1
baz=68
OD2 **Odessa Site #2** 67.82 330 P P 00 17 34.4 +0.4
E07A **Sunnyside** 67.83 329 ⇑P P 00 17 34.5 +0.4
baz=68
H04A **Detroit Lake** 67.86 326 ⇓P P 00 17 33.8 -0.5
baz=68,SNR=5.5
HOOD **Mount Hood Mea** 67.97 327 eP P 00 17 35.9 +1.0
comp=Z,76nm,1.1s,mb5.6
G04A **Mulino** 68.35 326 ⇑P P 00 17 37.2 -0.1
baz=68
COR **Corvallis** 68.42 325 eP P 00 17 38.6 +0.8
COR pmax pmax
comp=Z,229nm,2.0s,mb5.9
COR **Corvallis** 68.42 325 eP P 00 17 38.6 +0.9
comp=Z,229nm,2.0s,mb5.9
NAC **Naches** 68.45 328 P P 00 17 38.8 +0.9
ETW **Entiat** 68.77 329 eP P 00 17 40.8 +0.9
F04A **Amboy** 68.77 327 ⇑P P 00 17 39.6 -0.4
baz=69
B08A **Colville Reser** 68.78 330 ⇓P P 00 17 39.7 -0.3
baz=69,SNR=5.1
LON **Longmire** 68.97 328 eP P 00 17 41.2 0.0
LON pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
LON **Longmire** 68.97 328 eP P 00 17 41.2 0.0
comp=Z,8.6nm,1.0s,mb4.6
FCC **Fort Churchill** 69.05 350 eP P 00 17 40.6 -0.8
comp=Z,1.8nm,1.0s,mb4.0
D05A **Enumclaw** 69.35 328 ⇓P P 00 17 43.6 +0.1
baz=70
F03A **Seaside** 69.39 326 ⇑P P 00 17 43.9 +0.1
baz=70
EDM **Edmonton** 69.68 337 eP P 00 17 44.4 -1.0
RPW **Rockport** 69.92 329 eP P 00 17 45.9 -1.1
comp=Z,2.3nm,0.7s,mb4.2
B06A **Marblemount** 69.96 329 ⇓P P 00 17 46.8 -0.4
baz=70
JCW **Jim Creek** 69.97 329 eP P 00 17 47.0 -0.3
NLWA **Neilton Lookou** 70.47 327 ⇓P P 00 17 50.8 +0.5
baz=71,SNR=8.1
NLWA **Neilton Lookou** 70.47 327 eP P 00 17 51.3 +0.9
comp=Z,24nm,0.9s,mb5.1
A05A **Maple Falls** 70.57 330 ⇓P P 00 17 50.7 -0.3
baz=71
LIC **Lamto** 71.92 80 eP P 00 17 58.6 -1.3
comp=Z,155nm,1.6s,mb5.7
TIC **Toumodi** 72.01 80 eP P 00 17 59.2 -1.3
comp=Z,150nm,1.4s,mb5.7
TIC **Toumodi** 72.01 80 eP P 00 17 59.2 -1.3
TIC pmax pmax
comp=Z,150nm,1.4s,mb5.7
DBIC **Dimbokro** 72.18 80 P P 00 18 00.9 -0.5
comp=Z,21nm,1.0s,mb5.0,baz=230,slow=7.9,SNR=6.0
DBIC **Dimbokro** 72.18 80 eP P 00 18 01.3 -0.1
DBIC pmax pmax
comp=Z,61nm,1.3s
DBIC **Dimbokro** 72.18 80 eP P 00 18 01.3 -0.1
comp=Z,61nm,1.3s,mb5.4
KIC **Kosan Boka** 72.23 80 eP P 00 18 00.7 -1.0
comp=Z,192nm,1.8s,mb5.7
YKA **Yellowknife Ar** 77.25 343 P P 00 18 28.6 -1.1
comp=Z,13nm,1.0s,mb4.8,baz=137,slow=6.3,SNR=40
EVO **Evora** 78.44 48 eP P 00 18 36.5 -0.4
comp=Z,22nm,1.1s,mb4.7
DLBC **Dease Lake** 80.10 334 eP P 00 18 46.5 +0.9
EMIJ **Mijas** 80.19 51 P P 00 18 47.1 +0.6
comp=Z,17nm,1.1s,mb4.9
MAIT **Maitri** 80.80 160 eP P 00 18 49.3 +0.2
NVL **N'lazarevskaya** 80.83 160 eP P 00 18 47.1 -2.2
NVL pmax pmax
comp=Z,74nm,1.6s,mb5.4
ELOJ **Sierra Loja** 80.85 50 P P 00 18 51.5 +1.5
ELOJ pmax pmax
comp=Z,12nm,0.8s,mb4.9
ELOJ **Sierra Loja** 80.85 50 P P 00 18 51.5 +1.5
comp=Z,12nm,0.8s,mb4.9
ERON **Agron** 81.07 50 P P 00 18 52.8 +1.6
comp=Z,8.9nm,0.7s,mb4.8
QSPA **South Pole Qui** 81.23 180 eP P 00 18 51.4 +0.1
comp=Z,46nm,1.3s,mb5.2
ECOG **Cogollos-Vega** 81.33 50 P P 00 18 54.0 +1.4
ECOG pmax pmax
comp=Z,12nm,1.0s,mb4.8
ECOG **Cogollos-Vega** 81.33 50 P P 00 18 54.0 +1.3
comp=Z,12nm,1.0s,mb4.8
ESDC **Sonseca Array** 81.79 48 P P 00 18 55.7 +0.7
comp=Z,3.7nm,0.9s,mb4.3,baz=256,slow=5.7,SNR=13
ESDC **Sonseca Array** 81.79 48 P P 00 18 55.3 +0.3
comp=Z,12nm,1.3s,mb4.7
ESLA **Sonseca Array** 81.79 48 eP P 00 18 55.2 +0.2
EQES **Quesada** 81.87 50 P P 00 18 56.0 +0.6
comp=Z,60nm,1.7s,mb5.2
EHUE **Huescar** 82.23 50 P P 00 18 57.5 +0.1
EHUE pmax pmax
comp=Z,32nm,1.4s,mb5.1
EHUE **Huescar** 82.23 50 P P 00 18 57.5 +0.2
comp=Z,32nm,1.4s,mb5.1
EVIA **Vianos** 82.55 49 P P 00 19 00.7 +1.7
EVIA pmax pmax
comp=Z,19nm,0.7s,mb5.2
EVIA **Vianos** 82.55 49 P P 00 19 00.7 +1.7
comp=Z,19nm,0.7s,mb5.2
ETOB **Tobarra** 83.27 49 P P 00 19 03.6 +0.9
comp=Z,48nm,2.0s,mb5.2
ETOR **Torete** 83.53 47 P P 00 19 05.0 +1.0
ETOR pmax pmax
comp=Z,18nm,1.3s,mb5.0
ETOR **Torete** 83.53 47 P P 00 19 05.0 +1.0
comp=Z,18nm,1.3s,mb5.0
BORG **Borgarnes** 83.74 21 eP P 00 19 04.7 +0.2
ECRI **Cripan** 83.75 45 P P 00 19 06.0 +0.9
ECRI pmax pmax
comp=Z,9.0nm,0.9s,mb4.9
ECRI **Cripan** 83.75 45 P P 00 19 06.0 +0.9
comp=Z,9.3nm,0.9s,mb4.9
RES **Resolute Bay** 84.26 355 eP P 00 19 07.0 0.0
RES pmax pmax
comp=Z,15nm,1.0s,mb5.1
RES **Resolute Bay** 84.26 355 eP P 00 19 07.0 -0.1
comp=Z,15nm,1.0s,mb5.1
EMOS **Mosqueruela** 84.56 48 P P 00 19 10.4 +1.2
comp=Z,34nm,1.5s,mb5.2
HYT **Haines Junctio** 84.59 334 eP P 00 19 10.1 +1.1
EALK **Alkurruntz** 84.64 45 P P 00 19 11.5 +1.9
comp=Z,53nm,1.5s,mb5.5
SUMG **Summit** 84.78 11 eP P 00 19 10.0 +0.3
comp=Z,44nm,0.9s,mb5.6
SUMG **Summit** 84.78 11⇑ iP P 00 19 10.0 +0.4
comp=Z,31nm,0.8s,mb5.5
SJPF **Ste Jean** 84.81 45⇑ iP P 00 19 11.2 +0.8
comp=Z,134nm,1.6s,mb5.5
SJPF **Ste Jean** 84.81 45⇑ iP P 00 19 11.2 +0.8
SJPF pmax pmax
comp=Z,67nm,1.6s,mb5.5
SJPF **Ste Jean** 84.81 45⇑ iP P 00 19 11.2 +0.8
comp=Z,67nm,1.6s,mb5.5
ESAC **San Caprasio** 84.94 47 P P 00 19 13.4 +2.2
comp=Z,116nm,1.9s,mb5.7
QUIF **Quistinic** 85.00 40 eP P 00 19 11.0 -0.3
ROSF **Rostrenen** 85.07 40 eP P 00 19 11.5 -0.1
ETSF **Etsaut** 85.21 45 eP P 00 19 13.3 +0.8
comp=Z,70nm,1.5s,mb5.3
ETSF **Etsaut** 85.21 45 eP P 00 19 13.3 +0.8
ETSF pmax pmax
comp=Z,35nm,1.5s,mb5.3
ETSF **Etsaut** 85.21 45 eP P 00 19 13.3 +0.8
comp=Z,35nm,1.5s,mb5.3
TAM **Tamanrasset** 85.31 66 eP P 00 19 13.8 +0.4
TAM pmax pmax
comp=Z,34nm,1.5s,mb5.3

TAM Tamanrasset 85.31 66 *eP* **P 00 19 13.8 +0.3**
comp=Z,34nm,1.5s,mb5.3
EBIE Bielsa 85.65 46 P **P 00 19 16.0 +1.4**
comp=Z,50nm,1.9s,mb5.4
EPF Esparros 85.88 45 *eP* **P 00 19 16.5 +0.7**
comp=Z,96nm,1.6s,mb5.5
EPF Esparros 85.88 45 *eP* **P 00 19 16.5 +0.7**
EPF pmax pmax
comp=Z,48nm,1.6s,mb5.5
EPF Esparros 85.88 45 *eP* **P 00 19 16.5 +0.7**
comp=Z,48nm,1.6s,mb5.5
MFF Saint Martin d 86.56 42 *eP* **P 00 19 17.9 -1.1**
comp=Z,48nm,1.2s,mb5.3
MFF Saint Martin d 86.56 42 *eP* **P 00 19 17.9 -1.1**
MFF pmax pmax
comp=Z,24nm,1.2s,mb5.3
MFF Saint Martin d 86.56 42 *eP* **P 00 19 17.9 -1.1**
comp=Z,24nm,1.2s,mb5.3
GRR Gorron 86.61 40 *eP* **P 00 19 18.8 -0.5**
LFF La Frestale 86.69 44 *eP* **P 00 19 19.6 -0.1**
comp=Z,64nm,1.2s,mb5.4
LFF La Frestale 86.69 44 *eP* **P 00 19 19.6 -0.1**
LFF pmax pmax
comp=Z,32nm,1.2s,mb5.4
LFF La Frestale 86.69 44 *eP* **P 00 19 19.6 -0.1**
comp=Z,32nm,1.2s,mb5.4
DAWY Dawson 86.90 337 *eP* **P 00 19 19.8 -0.5**
FLN La Foliniere 86.96 40⇑*iP* **P 00 19 20.7 -0.3**
comp=Z,24nm,0.9s,mb5.1
FLN La Foliniere 86.96 40⇑*iP* **P 00 19 20.7 -0.3**
FLN pmax pmax
comp=Z,12nm,0.9s,mb5.1
FLN La Foliniere 86.96 40⇑*iP* **P 00 19 20.7 -0.3**
comp=Z,12nm,0.9s,mb5.1
INK Inuvik 86.98 342 *eP* **P 00 19 19.2 -1.4**
INK pmax pmax
comp=Z,23nm,1.0s
INK Inuvik 86.98 342 *eP* **P 00 19 19.2 -1.4**
comp=Z,23nm,1.0s,mb5.4
SCO Scoresbysund 87.00 16 *iP* **P 00 19 20.5 -0.2**
comp=Z,7.8nm,0.8s,mb5.0
LDF La Druitiere 87.14 40 *eP* **P 00 19 21.5 -0.3**
comp=Z,20nm,0.9s,mb5.0
LDF La Druitiere 87.14 40 *eP* **P 00 19 21.5 -0.3**
LDF pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
LDF La Druitiere 87.14 40 *eP* **P 00 19 21.5 -0.3**
comp=Z,9.9nm,0.9s,mb5.0
MTLF Montolieu 87.29 46 *eP* **P 00 19 22.1 -0.6**
comp=Z,12nm,1.0s,mb4.8
MTLF Montolieu 87.29 46 *eP* **P 00 19 22.1 -0.6**
MTLF pmax pmax
comp=Z,6.0nm,1.0s,mb4.8
MTLF Montolieu 87.29 46 *eP* **P 00 19 22.1 -0.6**
comp=Z,6.2nm,1.0s,mb4.8
RJF Les Rejaudoux 87.31 44⇑*iP* **P 00 19 22.5 -0.3**
CAF Calviac 87.59 44⇑*iP* **P 00 19 23.8 -0.3**
comp=Z,16nm,0.8s,mb5.0
CAF Calviac 87.59 44⇑*iP* **P 00 19 23.8 -0.3**
CAF pmax pmax
comp=Z,8.0nm,0.8s,mb5.0
CAF Calviac 87.59 44⇑*iP* **P 00 19 23.8 -0.3**
comp=Z,7.9nm,0.8s,mb5.0
EGAK Eagle 87.90 337 *eP* **P 00 19 24.7 -0.5**
comp=Z,34nm,1.0s,mb5.5
TCF Toulx Ste Croi 88.04 43⇑*iP* **P 00 19 25.5 -0.7**
comp=Z,9.3nm,0.7s,mb4.8
TCF Toulx Ste Croi 88.04 43⇑*iP* **P 00 19 25.5 -0.7**
TCF pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
TCF Toulx Ste Croi 88.04 43⇑*iP* **P 00 19 25.5 -0.7**
comp=Z,4.7nm,0.7s,mb4.8
MENT Mentasta 88.17 335 *eP* **P 00 19 26.0 -0.4**
PYM Petit Puy Mans 88.44 43 *eP* **P 00 19 28.2 +0.1**
LBL Lubilhac 88.48 44 *eP* **P 00 19 28.3 0.0**
BGF Bois d'Agland 88.53 43⇑*iP* **P 00 19 28.0 -0.5**
comp=Z,31nm,0.8s,mb5.4
BGF Bois d'Agland 88.53 43⇑*iP* **P 00 19 28.0 -0.5**
BGF pmax pmax
comp=Z,16nm,0.8s,mb5.4
BGF Bois d'Agland 88.53 43⇑*iP* **P 00 19 28.0 -0.5**
comp=Z,16nm,0.8s,mb5.4
AGO Saint Agoulin 88.60 43 *eP* **P 00 19 28.8 -0.1**
LASF Ste Croix 88.62 45 *eP* **P 00 19 29.1 +0.1**
PLDF La Plantade 88.91 43 *eP* **P 00 19 30.4 +0.1**
AVF Avril sur Loir 88.93 42⇑*iP* **P 00 19 29.5 -0.9**
comp=Z,18nm,1.0s,mb5.1
AVF Avril sur Loir 88.93 42⇑*iP* **P 00 19 29.5 -0.9**
AVF pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
AVF Avril sur Loir 88.93 42⇑*iP* **P 00 19 29.5 -0.9**
comp=Z,9.2nm,1.0s,mb5.1
SSF Saint Saulge 89.09 42⇑*iP* **P 00 19 30.3 -0.9**
comp=Z,17nm,1.0s,mb5.0
SSF Saint Saulge 89.09 42⇑*iP* **P 00 19 30.3 -0.9**
SSF pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
SSF Saint Saulge 89.09 42⇑*iP* **P 00 19 30.3 -0.9**
comp=Z,8.6nm,1.0s,mb5.0
SMF Signal de Mont 89.22 43⇑*iP* **P 00 19 31.2 -0.6**
comp=Z,44nm,1.1s,mb5.4
SMF Signal de Mont 89.22 43⇑*iP* **P 00 19 31.2 -0.6**
SMF pmax pmax
comp=Z,22nm,1.1s,mb5.4
SMF Signal de Mont 89.22 43⇑*iP* **P 00 19 31.2 -0.6**
comp=Z,22nm,1.1s,mb5.4
VIVF Saint-Julien-I 89.37 45⇑*iP* **P 00 19 32.7 +0.2**
comp=Z,30nm,1.0s,mb5.3
VIVF Saint-Julien-I 89.37 45⇑*iP* **P 00 19 32.7 +0.2**
VIVF pmax pmax
comp=Z,15nm,1.0s,mb5.3
VIVF Saint-Julien-I 89.37 45⇑*iP* **P 00 19 32.7 +0.2**
comp=Z,15nm,1.0s,mb5.3
SSB Saint Sauveur 89.38 44 *eP* **P 00 19 32.6 +0.1**
SSB pmax pmax
comp=Z,13nm,1.1s,mb5.2
SSB Saint Sauveur 89.38 44 *eP* **P 00 19 32.6 0.0**
comp=Z,13nm,1.1s,mb5.2
LOR Lormes 89.38 42 *eP* **P 00 19 31.7 -0.8**
comp=Z,13nm,0.8s,mb5.0
LOR Lormes 89.38 42 *eP* **P 00 19 31.7 -0.8**
LOR pmax pmax
comp=Z,6.0nm,0.8s,mb5.0
LOR Lormes 89.38 42 *eP* **P 00 19 31.7 -0.8**
comp=Z,6.3nm,0.8s,mb5.0
SMRF Simiane la Rot 89.81 46 *eP* **P 00 19 35.0 +0.4**
TSUM Tsumeb 90.09 109 *eP* **P 00 19 36.5 0.0**
comp=Z,27nm,1.2s,mb5.5
ORIF Oris-en-Rattie 90.22 45⇑*iP* **P 00 19 37.0 +0.5**
comp=Z,26nm,0.8s,mb5.3
ORIF Oris-en-Rattie 90.22 45⇑*iP* **P 00 19 37.0 +0.5**
ORIF pmax pmax
comp=Z,13nm,0.8s,mb5.3
ORIF Oris-en-Rattie 90.22 45⇑*iP* **P 00 19 37.0 +0.5**
comp=Z,13nm,0.8s,mb5.3
BAIF Baives 90.26 39⇑*iP* **P 00 19 36.1 -0.4**
comp=Z,16nm,0.9s,mb5.1
BAIF Baives 90.26 39⇑*iP* **P 00 19 36.1 -0.4**
BAIF pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
BAIF Baives 90.26 39⇑*iP* **P 00 19 36.1 -0.4**
comp=Z,8.1nm,0.9s,mb5.0
LMR La Mourre 90.33 46 *eP* **P 00 19 36.8 -0.3**
comp=Z,62nm,1.5s,mb5.4
LMR La Mourre 90.33 46 *eP* **P 00 19 36.8 -0.3**
LMR pmax pmax
comp=Z,31nm,1.5s,mb5.4
LMR La Mourre 90.33 46 *eP* **P 00 19 36.8 -0.3**
comp=Z,31nm,1.5s,mb5.4
FRF La Foret Royal 90.48 46 *eP* **P 00 19 37.4 -0.3**
comp=Z,45nm,1.2s,mb5.4
FRF La Foret Royal 90.48 46 *eP* **P 00 19 37.4 -0.3**
FRF pmax pmax
comp=Z,23nm,1.2s,mb5.4
FRF La Foret Royal 90.48 46 *eP* **P 00 19 37.4 -0.3**
comp=Z,22nm,1.2s,mb5.4
SYO Syowa Base 90.48 161⇓*iP* **P 00 19 34.0 -3.3**
DOU Dourbes 90.51 39 P **P 00 19 37.8 +0.1**
comp=Z,17nm,2.9s,mb4.9
DOU AP pP 00 19 49.6 -0.8
UCC Uccle 90.53 39 P **P 00 19 37.2 -0.5**
COLA College 90.58 336 *eP* **P 00 19 37.1 -0.6**
COLA pmax pmax
comp=Z,22nm,1.2s,mb5.4
COLA College 90.58 336 *eP* **P 00 19 37.1 -0.6**
comp=Z,22nm,1.2s,mb5.4

MCK McKinley 90.65 335 *eP* **P 00 19 38.1 +0.1**
MCK pmax pmax
comp=Z,54nm,1.9s,mb5.5
MCK McKinley 90.65 335 *eP* **P 00 19 38.1 +0.1**
comp=Z,54nm,1.9s,mb5.6
GIVF Givet 90.66 39 *eP* **P 00 19 38.2 -0.2**
comp=Z,63nm,0.8s,mb5.7
GIVF Givet 90.66 39 *eP* **P 00 19 38.2 -0.2**
GIVF pmax pmax
comp=Z,31nm,0.8s,mb5.7
GIVF Givet 90.66 39 *eP* **P 00 19 38.2 -0.2**
comp=Z,31nm,0.8s,mb5.7
CABF La Chapelle 90.72 43⇑*iP* **P 00 19 38.6 -0.2**
comp=Z,58nm,1.4s,mb5.4
CABF La Chapelle 90.72 43⇑*iP* **P 00 19 38.6 -0.2**
CABF pmax pmax
comp=Z,29nm,1.4s,mb5.4
CABF La Chapelle 90.72 43⇑*iP* **P 00 19 38.6 -0.2**
comp=Z,29nm,1.4s,mb5.4
MBDF Montbardon 90.80 45 *eP* **P 00 19 39.5 +0.3**
comp=Z,27nm,1.3s,mb5.1
MBDF Montbardon 90.80 45 *eP* **P 00 19 39.5 +0.3**
MBDF pmax pmax
comp=Z,14nm,1.3s,mb5.1
MBDF Montbardon 90.80 45 *eP* **P 00 19 39.5 +0.3**
comp=Z,14nm,1.3s,mb5.1
BNI Bardonecchia 90.80 45 *eP* **P 00 19 40.2 +1.0**
BNI pmax pmax
comp=Z,24nm,1.6s,mb5.3
BNI Bardonecchia 90.80 45 *eP* **P 00 19 40.2 +1.0**
comp=Z,24nm,1.6s,mb5.3
LPL La Plagne 90.94 44⇑*iP* **P 00 19 40.5 +0.7**
comp=Z,30nm,0.9s,mb5.3
LPL La Plagne 90.94 44⇑*iP* **P 00 19 40.5 +0.7**
LPL pmax pmax
comp=Z,15nm,0.9s,mb5.3
LPL La Plagne 90.94 44⇑*iP* **P 00 19 40.5 +0.7**
comp=Z,15nm,0.9s,mb5.3
LPG La Plagne 90.94 44⇑*iP* **P 00 19 40.7 +0.9**
comp=Z,36nm,1.0s,mb5.4
LPG La Plagne 90.94 44⇑*iP* **P 00 19 40.7 +0.9**
LPG pmax pmax
comp=Z,18nm,1.0s,mb5.4
LPG La Plagne 90.94 44⇑*iP* **P 00 19 40.7 +0.9**
comp=Z,18nm,1.0s,mb5.4
TOUF Mont Tournerai 91.00 46 *eP* **P 00 19 40.0 -0.1**
BCLA Clavier 91.03 39 P **P 00 19 40.3 +0.2**
REVF Revere 91.03 46 *eP* **P 00 19 40.5 +0.2**
LUCF Luceram 91.04 46 *eP* **P 00 19 40.3 0.0**
KEST Kesra 91.05 54 P **P 00 19 40.5 0.0**
comp=Z,1.7nm,1.0s,mb4.3,baz=223,slow=8.0,SNR=5.5
KEST LR LR 01 03 02.0
comp=Z,52nm,18.7s,MS4.0,baz=278,slow=37
SBF Sospel 91.10 46⇑*iP* **P 00 19 40.4 -0.2**
comp=Z,49nm,1.3s,mb5.4
SBF Sospel 91.10 46⇑*iP* **P 00 19 40.4 -0.2**
SBF pmax pmax
comp=Z,25nm,1.3s,mb5.4
SBF Sospel 91.10 46⇑*iP* **P 00 19 40.4 -0.2**
comp=Z,24nm,1.3s,mb5.4
AUTN L'Aution 91.12 46 *eP* **P 00 19 39.1 -1.6**
HAU Haudompre 91.18 42 *eP* **P 00 19 40.5 -0.4**
SAOF Saorge 91.21 46 *eP* **P 00 19 40.3 -0.8**
BEBN Eben Emael 91.34 39 P **P 00 19 41.7 +0.1**
RSO Redoubt South 91.40 331 *eP* **P 00 19 41.6 +0.1**
WLF Walferdange 91.40 40 P **P 00 19 42.1 +0.3**
WLF AP pP 00 19 53.7 -0.8
WLF Walferdange 91.40 40 *eP* **P 00 19 42.2 +0.3**
comp=Z,23nm,1.0s,mb5.5
WLF Walferdange 91.40 40 *eP* **P 00 19 42.4 +0.5**
WLF pmax pmax
comp=Z,18nm,0.9s,mb5.4
WLF Walferdange 91.40 40 *eP* **P 00 19 42.4 +0.6**
comp=Z,18nm,0.9s,mb5.4
DAG Danmarks Havn 91.44 11⇑*iP* **P 00 19 41.4 -0.1**
comp=Z,9.2nm,0.9s,mb5.1
HINF Hinteralfeld 91.48 42 *eP* **P 00 19 41.8 -0.5**
HGN Heimansgroeve 91.49 39 *eP* **P 00 19 28.0 -14**
comp=Z,25nm,3.5s
MEM Membach 91.50 39 P **P 00 19 42.4 0.0**
comp=Z,9.9nm,1.6s,mb4.9
BPAW Bear Paw Mtn. 91.62 335 *eP* **P 00 19 41.8 -0.8**
comp=Z,10nm,0.9s,mb5.2
ECH Echery 91.76 42 *eP* **P 00 19 42.2 -1.3**
CDF Champ du Feu 91.87 41⇑*iP* **P 00 19 43.6 -0.5**
comp=Z,36nm,1.4s,mb5.2
CDF Champ du Feu 91.87 41⇑*iP* **P 00 19 43.6 -0.5**
CDF pmax pmax
comp=Z,18nm,1.4s,mb5.2
CDF Champ du Feu 91.87 41⇑*iP* **P 00 19 43.6 -0.5**
comp=Z,18nm,1.4s,mb5.2
PGF Pioggiola 91.98 47 *eP* **P 00 19 45.7 +1.0**
comp=Z,36nm,1.5s,mb5.2
PGF Pioggiola 91.98 47 *eP* **P 00 19 45.7 +1.0**
PGF pmax pmax
comp=Z,18nm,1.5s,mb5.2
PGF Pioggiola 91.98 47 *eP* **P 00 19 45.7 +1.0**
comp=Z,18nm,1.5s,mb5.2
COLD Coldfoot 92.25 338 *eP* **P 00 19 44.7 -0.7**
comp=Z,7.4nm,1.0s,mb5.0
FELD Feldberg im Sc 92.25 42 *eP* **P 00 19 45.1 -0.7**
LANF Langenberg 92.33 41 *eP* **P 00 19 45.5 -0.7**
BUG Bochum-Univer 92.45 38 *eP* **P 00 19 46.9 +0.2**
comp=Z,26nm,1.4s,mb5.4
TUE Stuetta 92.90 44 *eP* **P 00 19 47.4 -1.5**
comp=Z,7.1nm,1.0s,mb5.0
FETA Feichten 93.93 43⇑*iP* **P 00 19 55.1 +1.5**
comp=Z,9.0nm,1.1s,mb5.1
MOTA Moosalm 94.23 43⇓*iP* **P 00 19 54.9 -0.1**
comp=Z,5.7nm,0.9s,mb5.0
CLZ Clausthal 94.43 38 *eP* **P 00 19 55.5 -0.3**
comp=Z,8.0nm,1.1s,mb5.1
CLZ Clausthal 94.43 38 *eP* **P 00 19 55.5 -0.3**
CLZ pmax pmax
comp=Z,8.0nm,1.1s,mb5.1
MUD Monsted U'grnd 94.45 34 *iP* **P 00 19 56.6 +0.9**
comp=Z,9.8nm,1.1s,mb5.2
WTTA Wattenberg 94.58 43⇑*iP* **P 00 19 56.6 0.0**
comp=Z,20nm,1.8s,mb5.2
GRA1 Grafenberg Arr 94.65 41 *eP* **P 00 19 57.8 +1.0**
comp=Z,16nm,1.2s,mb5.3
GRF Grafenberg Arr 94.65 41 *eP* **P 00 19 57.8 +1.0**
comp=Z,16nm,1.2s,mb5.3
GRF Grafenberg Arr 94.65 41 *eP* **P 00 19 57.8 +1.0**
GRF pmax pmax
comp=Z,16nm,1.2s,mb5.3
GRF Grafenberg Arr 94.65 41 *eP* **P 00 19 57.8 +1.0**
GRF pmax pmax
comp=Z,16nm,1.2s,mb5.3
BSEG Bad Segeberg 94.71 36 *eP* **P 00 19 58.1 +1.1**
comp=Z,21nm,1.5s,mb5.3
BSEG Bad Segeberg 94.71 36 *eP* **P 00 19 58.1 +1.1**
BSEG pmax pmax
comp=Z,21nm,1.5s,mb5.3
MOX Moxa 95.03 40 *eP* **P 00 19 58.6 0.0**
MOX Moxa 95.03 40 *eP* **P 00 19 58.4 -0.2**
comp=Z,110nm,3.2s
ABTA Abfaltersbach 95.10 44⇓*iP* **P 00 19 59.1 +0.1**
comp=Z,11nm,1.3s,mb5.2
BOSA Boshof 95.19 120 LR LR 00 58 58.6
comp=Z,391nm,20.2s,MS4.9,baz=330,slow=33
RJOB Jochberg 95.42 43 *eP* **P 00 20 00.4 0.0**
comp=Z,50nm,2.5s,mb5.5
NKC Novy Kostel 95.50 40 *eP* **P 00 20 01.2 +0.5**
NKC Novy Kostel 95.50 40 *eP* **P 00 20 01.2 +0.5**
TANN Tannenbergstha 95.53 40 *eP* **P 00 20 01.5 +0.6**
comp=Z,24nm,1.8s,mb5.3
WET Wettzell 95.65 41 *eP* **P 00 20 02.2 +0.8**
comp=Z,32nm,2.2s,mb5.4
WET Wettzell 95.65 41 *eP* **P 00 20 02.2 +0.8**
WET pmax pmax
comp=Z,32nm,2.2s,mb5.4
KBA Koelnbreinsper 95.71 43⇑*iP* **P 00 20 01.7 -0.1**
comp=Z,6.4nm,1.1s,mb5.0
MYKA Terra Mystica 95.86 44⇑*iP* **P 00 20 02.4 -0.1**
comp=Z,10nm,1.4s,mb5.1
CLL Collm 95.98 39 *eP* **P 00 20 03.0 +0.1**
comp=Z,5.0nm,0.8s,mb5.0
CLL Collm 95.98 39 *iP* **P 00 20 03.1 +0.2**
CLL *e**PP pP 00 20 17.0 +1.5
CLL pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
CLL Collm 95.98 39 *iP* **P 00 20 03.1 +0.2**
comp=Z,5.0nm,0.8s,mb5.0
CLL *e*(pP) pP 00 20 17.0 +1.5
SKDS Skadanscina 95.99 45 *eP* **P 00 20 03.4 +0.3**

JAVS Javornik 96.07 45 *iP* **P 00 20 04.0 +0.5**
KHC Kasperske Hory 96.10 41 *eP* **P 00 20 03.7 +0.2**
KHC *e* 00 20 09.7
KHC Kasperske Hory 96.10 41 *eP* **P 00 20 03.7 +0.2**
KHC *ex* x 00 20 09.7
GEC2 GERESS Array S 96.15 42 *eP* **P 00 20 05.1 +1.4**
comp=Z,6.0nm,1.2s,mb4.9
GEC2 GERESS Array S 96.15 42 *eP* **P 00 20 05.1 +1.4**
GEC2 pmax pmax
comp=Z,6.0nm,1.2s,mb4.9
NB2 NORSAR Subarra 96.16 29 P **P 00 20 03.6 +0.2**
comp=Z,6.1nm,1.1s,mb4.9,baz=263,slow=5.1
NOA NORSAR Array B 96.16 29 P **P 00 20 03.8 +0.4**
comp=Z,2.3nm,0.9s,mb4.6,baz=265,slow=4.8,SNR=5.0
NOA LR LR 01 00 16.6
comp=Z,98nm,18.8s,MS4.3,baz=270,slow=34
CEY Cerknica 96.30 45 *iP* **P 00 20 05.0 +0.6**
MOA Molln 96.42 43⇑*iP* **P 00 20 04.8 -0.2**
comp=Z,12nm,1.3s,mb5.2
BRG Berggiesshubel 96.53 40 *eP* **P 00 20 05.4 0.0**
comp=Z,11nm,1.3s,mb5.1
BRG Berggiesshubel 96.53 40 *eP* **P 00 20 05.7 +0.3**
comp=Z,11nm,1.3s,mb5.1
PRU Pruhonice 96.82 41 *eP* **P 00 20 07.8 +1.1**
PRU *e* 00 20 15.4
PRU Pruhonice 96.82 41 *eP* **P 00 20 07.8 +1.1**
PRU *e*pP pP 00 20 15.4 -4.0
BOJS Bojanci 96.85 45 *iP* **P 00 20 07.6 +0.6**
ARSA Arzberg 97.21 43⇑*iP* **P 00 20 08.2 -0.4**
comp=Z,6.0nm,1.1s,mb5.0
HFS Hagfors 97.28 30 LR LR 01 00 51.9
comp=Z,138nm,20.0s,MS4.4,baz=282,slow=34
TREC Trest 97.36 41 *eP* **P 00 20 09.9 +0.7**
TREC Trest 97.36 41 *eP* **P 00 20 09.9 +0.7**
UPC Upice 97.80 40 *eP* **P 00 20 11.9 +0.8**
UPC Upice 97.80 40 *eP* **P 00 20 11.9 +0.8**
DPC Dobruska-Polom 97.99 40 *eP* **P 00 20 12.9 +0.9**
DPC *e* 00 20 19.8
DPC Dobruska-Polom 97.99 40 *eP* **P 00 20 12.9 +0.9**
DPC *e*pP pP 00 20 19.8 -4.9
MAW Mawson 98.15 165 LR LR 01 01 23.5
comp=Z,434nm,21.2s,MS4.9,baz=227,slow=34
KOLL Kolacno 99.23 42 *eP* **P 00 20 18.8 +1.2**
KOLL Kolacno 99.23 42 PDIF **P 00 20 18.8 +1.2**
VYHS Vyhne 99.52 42 *eP* **P 00 20 19.4 +0.5**
VYHS *e* pP 00 20 30.8 -0.7
VYHS pmax pmax
comp=Z,10.0nm,2.1s,mb4.9
VYHS Vyhne 99.52 42 *eP* **P 00 20 19.4 +0.5**
comp=Z,10nm,2.1s,mb4.9
VYHS *e* pP 00 20 30.8 -0.7
VYHS Vyhne 99.52 42 PDIF **P 00 20 19.4 +0.5**
VYHS pPDIF pP 00 20 30.8 -0.7
KECS Kecovo 100.61 42 *eP* Pdif 00 20 25.1 +1.5
KECS pmax pmax
comp=Z,3.0nm,1.3s
KECS Kecovo 100.61 42 *eP* Pdif 00 20 25.1 +1.5
comp=Z,2.5nm,1.3s
KECS Kecovo 100.61 42 PDIF Pdif 00 20 25.1 +1.5
STHS Stebnicka Huta 101.13 41 *eP* Pdif 00 20 26.5 +0.6
STHS pmax pmax
comp=Z,2.0nm,1.0s
STHS Stebnicka Huta 101.13 41 *eP* Pdif 00 20 26.5 +0.6
comp=Z,1.5nm,1.0s
STHS Stebnicka Huta 101.13 41 PDIF Pdif 00 20 26.5 +0.6
CRVS Cervenica-Dubn 101.27 42 *eP* Pdif 00 20 29.1 +2.5
CRVS pmax pmax
comp=Z,5.0nm,1.2s
CRVS Cervenica-Dubn 101.27 42 *eP* Pdif 00 20 29.1 +2.5
comp=Z,4.5nm,1.2s
CRVS Cervenica-Dubn 101.27 42 PDIF Pdif 00 20 29.1 +2.5
STKA Stephens Creek 126.09 220 *e*PKP PKPdf 00 25 38.6 -0.1
comp=Z,6.4nm,0.6s
STKA Stephens Creek 126.09 220 PKP PKPdf 00 25 38.8 +0.1
comp=Z,9.2nm,0.7s,baz=116,slow=2.7,SNR=13
BRVK Borovoye 128.03 25*c iP*KIKP PKPdf 00 25 41.5 -0.2
BRVK pmax pmax
comp=Z,7.0nm,1.7s
BVAR Borovoye Array 128.10 25 PKP PKPdf 00 25 42.3 +0.5
comp=Z,2.8nm,0.8s,baz=270,slow=2.7,SNR=15
NVS Novosibirsk 131.16 16 *e*PKIKP PKPdf 00 25 46.2 -1.4
ZAA0 Zalesovo Array 132.38 16 *e*PKPdf PKPdf 00 25 49.3 -0.6
ZALV Zalesovo Beam 132.38 16 PKP PKPdf 00 25 49.9 0.0
comp=Z,6.5nm,0.7s,baz=278,slow=2.2,SNR=34
ZALV Zalesovo Beam 132.38 16 PKP PKPdf 00 25 49.9 0.0
HABR Khabarovsk 132.86 332 *iP*KIKP PKPdf 00 25 50.1 -0.9
HABR *e* 00 26 05.3
HABR *e* 00 28 13.7
HABR *e*SS SS 00 45 51.1 -2.9
HABR *e*SSS 00 50 46.9
KURK Kurchatov 133.16 22*c iP*KIKP PKPdf 00 25 51.5 0.0
KURK pmax pmax
comp=Z,11nm,1.2s
KURK Kurchatov 133.16 22 *e*PKPdf PKPdf 00 25 51.6 +0.1
ASAR Alice Springs 136.66 221 PKP PKPdf 00 25 58.5 -0.3
comp=Z,11nm,0.9s,baz=130,slow=2.2,SNR=50
AML Almayashu 137.26 34 *e*PKPdf PKPdf 00 26 00.5 +1.1
UCH Uchtor 137.65 33 *e*PKPdf PKPdf 00 26 00.2 +0.1
TKM2 Tokmak 2 137.74 32 *e*PKIKP PKPdf 00 26 00.2 -0.1
MK31 Makanchi Array 137.77 23 *e*PKIKP PKPdf 00 26 00.3 +0.1
MKAR Makanchi Array 137.77 23 PKhKP PKPpre 00 25 53.1
comp=Z,0.6nm,0.8s,baz=24,slow=3.3,SNR=4.5
MKAR PKP PKPdf 00 25 59.6 -0.6
comp=Z,3.9nm,1.0s,baz=54,slow=6.2,SNR=14
ZAK Zakamensk 138.62 1 *e*PKIKP PKPdf 00 26 01.8 +0.2
ZAK *e* 00 28 47.4
ZAK pmax pmax
comp=Z,2.0nm,1.4s
MJAR Matsushiro Arr 138.78 317 PKP PKPdf 00 26 02.1 -0.3
comp=Z,1.2nm,0.5s,baz=118,slow=0.9,SNR=4.9
WRAB Tennant Creek 138.90 226 *e*PKIKP PKPdf 00 26 02.6 -0.5
WRA Warramunga Arr 138.90 226 PKP PKPdf 00 26 02.7 -0.4
comp=Z,13nm,0.7s,baz=130,slow=1.9,SNR=42
KSH Kashi 140.30 35 PKP PKPdf 00 26 01.3 -3.7
KSH PKS 00 29 36.0
KSH SKS SKSdf 00 33 06.8 -5.4
KSH AMB AMB
comp=Z,110nm,4.4s
KSH LR LR
comp=N,52nm,4.0s
KSH LR LR
comp=E,77nm,5.4s
KSH LR LR
comp=Z,150nm,5.4s
CN2 Changchun 140.68 336 *e*PKP PKPdf 00 26 06.5 +0.9
CN2 PP PP 00 29 09.0 +4.4
CN2 AMB AMB
comp=Z,200nm,10.0s
CN2 LR LR
comp=N,200nm,19.0s,MS5.0
CN2 LR LR
comp=E,200nm,19.0s,MS5.0
CN2 LR LR
comp=Z,200nm,19.0s,MS4.9
ULN Ulaanbaatar 141.09 357 *e*PKIKP PKPdf 00 26 07.7 +1.5
SONM Songino Array 141.14 358 PKhKP PKPpre 00 26 00.3
comp=Z,1.5nm,0.6s,baz=328,slow=1.5,SNR=7.3
SONM PKP PKPdf 00 26 06.5 +0.2
comp=Z,2.1nm,0.8s,baz=318,slow=1.7,SNR=10.0
SONM PP PP 00 29 03.1 -4.0
comp=Z,2.4nm,1.1s,baz=15,slow=6.0,SNR=6.1
WMQ Urumqi 142.27 20 *e*PKP PKPdf 00 26 08.0 -0.4
KSRS Korea Array 144.48 327 PKP PKPdf 00 26 10.7 -1.9
comp=Z,14nm,0.8s,baz=54,slow=3.3,SNR=48
KAKA Kakadu 144.84 233 *e*PKP PKPdf 00 26 12.3 -1.5
comp=Z,18nm,0.8s
KAKA Kakadu 144.84 233 *e*PKPdf PKPdf 00 26 11.8 -2.0
KNA Kununurra 145.63 225 *e*PKP PKPdf 00 26 15.2 +0.1
comp=Z,53nm,0.9s
FITZ Fitzroy Crossi 145.96 218 *e*PKP PKPdf 00 26 15.7 +0.1
comp=Z,41nm,1.0s
FITZ Fitzroy Crossi 145.96 218 *e*PKPdf PKPdf 00 26 15.5 -0.2
MBWA Marble Bar 146.56 207 *e*PKP PKPdf 00 26 16.7 +0.1
MBWA Marble Bar 146.56 207 *e*PKPdf PKPdf 00 26 16.6 0.0
BJI Beijing 147.24 343 PKPbc PKPdf 00 26 16.8 -0.4
BJI PP PP 00 29 44.0 +0.3
BJI AMB AMB
comp=Z,110nm,4.7s
BJI LR LR
comp=N,200nm,26.7s,MS4.8
BJI LR LR
comp=E,81nm,26.7s,MS4.8
BJI LR LR
comp=Z,180nm,26.2s,MS4.7
HHC Hu-ho-hao-te 147.54 350 *e*PKPbc PKPdf 00 26 17.5 -0.1

HHC				PP	PP	00 29 50.0	+4.7
HHC				PKS		00 29 51.3	
HHC				SKS	SKSdf	00 33 20.5	-2.6
HHC				SKKS	SKKSac	00 36 33.5	-1.4
HHC				SS	SS	00 48 45.0	0.0
HHC				AMB	AMB		
	comp=Z,46nm,6.6s						
HHC				LR	LR		
	comp=N,140nm,21.6s,MS4.8						
HHC				LR	LR		
	comp=E,99nm,19.2s,MS4.8						
HHC				LR	LR		
	comp=Z,140nm,22.8s,MS4.7						
NDI	**New Delhi**	**147.73**	**49**	*e*PKP	PKPdf	00 26 17.0	-1.3
GTA	**Gaotai**	**149.32**	**7**	PKPbc	PKPdf	00 26 21.3	+0.7
GTA				PKS		00 29 54.8	
GTA				PP	PP	00 29 59.8	+4.1
GTA				SKS	SKSdf	00 33 23.5	-2.1
GTA				SKKS	SKKSac	00 36 45.0	+0.1
GTA				AMB	AMB		
	comp=Z,87nm,7.2s						
GTA				LR	LR		
	comp=N,100nm,18.3s,MS5.1						
GTA				LR	LR		
	comp=E,250nm,18.9s,MS5.1						
GTA				LR	LR		
	comp=Z,190nm,18.6s,MS4.9						
LZH	**Lanzhou**	**152.92**	**1**	*e*PKPbc	PKPdf	00 26 26.5	+0.3
NJ2	**Nanjing**	**153.33**	**332**	*e*PKPbc	PKPdf	00 26 29.0	+2.1
NJ2				PKPab	PKPab	00 26 51.0	+4.6
NJ2				AMB	AMB		
	comp=Z,280nm,6.0s						
NJ2				LR	LR		
	comp=N,220nm,20.2s						
NJ2				LR	LR		
	comp=E,250nm,26.2s						
NJ2				LR	LR		
	comp=Z,180nm,27.2s						
CD2	**Chengdu**	**158.07**	**1**	*e*PKP	PKPdf	00 26 33.5	+0.2
CD2				PKPab	PKPab	00 27 08.8	+2.2
CD2				PP	PP	00 30 49.5	+4.5
CD2				SKS	SKSdf	00 33 34.0	-2.1
CD2				SKKS	SKKSac	00 37 32.8	+0.4
CD2				AMB	AMB		
	comp=Z,180nm,10.2s						
CD2				LR	LR		
	comp=N,180nm,18.5s						
CD2				LR	LR		
	comp=Z,160nm,21.0s,MS4.8						
GYA	**Guiyang**	**162.39**	**353**	PKP	PKPdf	00 26 36.0	-2.2
GYA				PKPab	PKPab	00 27 26.0	+0.5
GYA				PKS		00 30 08.3	
GYA				PP	PP	00 31 11.3	+3.0
GYA				SKKS	SKKSac	00 37 52.8	-2.1
GYA				SS	SS	00 51 25.5	-0.3
GYA				AMB	AMB		
	comp=Z,120nm,8.0s						
GYA				LR	LR		
	comp=N,150nm,24.3s						
GYA				LR	LR		
	comp=E,130nm,25.4s						
GYA				LR	LR		
	comp=Z,140nm,24.8s						
KMI	**Kunming**	**163.77**	**5**	PKP	PKPdf	00 26 38.0	-1.6
KMI				PKPab	PKPab	00 27 31.3	-0.3
KMI				PP	PP	00 31 18.5	+2.9
KMI				SS	SS	00 51 39.5	-0.6
KMI				AMB	AMB		
	comp=Z,130nm,5.1s						
KMI				LR	LR		
	comp=N,140nm,19.9s						
KMI				LR	LR		
	comp=E,170nm,19.9s						
KMI				LR	LR		
	comp=Z,170nm,26.5s						
CMAR	**Chiang Mai Arr**	**169.10**	**29**	PKP	PKPdf	00 26 43.9	0.0
	comp=Z,1.6nm,0.6s,baz=260,slow=1.2,SNR=9.3						
CMAR				PKPab	PKPab	00 27 55.5	+0.1
	comp=Z,2.9nm,0.8s,baz=326,slow=5.7,SNR=10						

*IDC **26** 00:44:12.9±0.6, 6°.94S×130°.47E, h0km, mb4.4/13, mb1 4.6/15, mb1mx4.6/19, mbtmp4.5/15, ML5.1/3, Error ellipse: s-maj=29.7km s-min=13.8km az=78.0*
*NEIC **26** 00:44:18.1±0.8, 6°.98S×130°.47E, h39km±7km, mb4.4/11, Error ellipse: s-maj=8.7km s-min=5.1km az=59.0*
*ISCJB **26** 00:44:19.2±0.9, 7°.02S±0°.04×130°.33E±0°.05, h61km±10km, mb4.6/31, Error ellipse: s-maj=9.1km s-min=6.9km az=10.3*
*DJA **26** 00:44:25, 7°.12S×130°.67E, h98km, mb5.1/16*

ISC 26 00:44:19.7±0.8, **7°.01S**±0°.04×**130°.39E**±0°.06, **h49**km±8km, **n101**, σ1°.08/75, **mb4.6**/31, **Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**2.70**	**60**	P	**Pn**	**00 45 05.1**	**+4.5**
TLE				S	**Sn**	**00 45 35.7**	**+3.6**
AAI	**Ambon**	**3.96**	**326**	P	Px	00 45 25.6	
NLAI	**Namlea**	**4.98**	**319**	P	Px	00 45 42.1	
	5μm177nm,0.8s,0.7nm						
KAKA	**Kakadu**	**6.02**	**161**	*e*P	**Pn**	**00 45 48.4**	**+2.2**
	454nm,0.6s						
KAKA				*e*S	**Sn**	**00 46 51.5**	**-2.3**
KAKA	**Kakadu**	**6.02**	**161**	*e*Pn	**Pn**	**00 45 48.1**	**+2.0**
	847nm,0.6s						
KAKA				*e*Sn	**Sn**	**00 46 51.7**	**-2.1**
KAKA	**Kakadu**	**6.02**	**161**	P	**Pn**	**00 45 48.5**	**+2.3**
	4.3nm663nm,0.6s						
SWI	**Sorong**	**6.16**	**8**	P	**Pn**	**00 45 50.1**	**+1.9**
	3.1nm397nm,0.6s						
SWI				S	**Sn**	**00 46 54.0**	**-3.4**
	3.1nm397nm,0.6s						
LBMI	**Labuha**	**6.95**	**335**	P	Px	00 46 05.7	
	195nm,0.9s,2μm0.7nm						
MMRI	**Maumere**	**8.24**	**258**	P	Px	00 46 26.6	
	1μm,0.6s						
TNTI	**Ternate**	**8.29**	**339**	P	**Pn**	**00 46 22.3**	**+4.9**
	158nm,0.8s						
KDI	**Kendari**	**8.31**	**291**	P	Px	00 46 28.2	
	40nm,1.2s						
KNA	**Kununurra**	**8.84**	**190**	*e*P	**Pn**	**00 46 27.0**	**+2.2**
	141nm,0.4s						
KNA	**Kununurra**	**8.84**	**190**	P	**Pn**	**00 46 27.7**	**+2.9**
	9μm628nm,0.8s						
SMPI	**Sarmi**	**9.67**	**59**	P	**Pn**	**00 46 39.6**	**+3.3**
	7μm63nm,1.1s						
APSI	**Ampana**	**10.62**	**304**	P	Px	00 46 59.5	
	73nm,1.0s						
KAPI	**Kappang**	**10.77**	**280**	*e*Pn	**Pn**	**00 46 50.0**	**-1.3**
	14nm,0.7s						
SPSI	**Sidrap Palu**	**11.00**	**285**	P	Px	00 47 11.8	
MRSI	**Marisa**	**11.24**	**311**	P	Px	00 47 07.0	
	73nm,0.8s,1μm						
FITZ	**Fitzroy Crossi**	**11.96**	**202**	*e*P	**Pn**	**00 47 07.4**	**-0.2**
	66nm,0.5s						
FITZ				*e*S	Sx	00 49 11.7	
FITZ	**Fitzroy Crossi**	**11.96**	**202**	Pn	**Pn**	**00 47 07.5**	**-0.1**
	8.8nm,0.3s,baz=35,slow=11,SNR=155						
FITZ				Sn	Sx	00 49 13.5	
	6.5nm,0.3s,baz=176,slow=23,SNR=6.0						
FITZ	**Fitzroy Crossi**	**11.96**	**202**	*e*Pn	**Pn**	**00 47 07.5**	**-0.2**
FITZ				*e*Sn	Sx	00 49 14.3	
FITZ	**Fitzroy Crossi**	**11.96**	**202**	P	**Pn**	**00 47 08.5**	**+0.9**
	113nm,0.7s						
WRAB	**Tennant Creek**	**13.41**	**164**	*e*Pn	**Pn**	**00 47 25.2**	**-2.2**
	81nm,0.6s						
WRAB				*e*Sn	Sx	00 49 46.3	
WRAB	**Tennant Creek**	**13.41**	**164**	P	**Pn**	**00 47 25.9**	**-1.5**
	134nm,0.7s						
WRA	**Warramunga Arr**	**13.42**	**164**	Pn	**Pn**	**00 47 24.9**	**-2.6**
	9.1nm,0.3s,baz=350,slow=13,SNR=120						
WRA				Sn	Sx	00 49 43.9	
	11nm,0.3s,baz=346,slow=22,SNR=19						
COEN	**Coen**	**14.34**	**120**	*e*P	**Pn**	**00 47 39.2**	**-0.8**
COEN				*e*S	Sx	00 50 01.8	
COEN	**Coen**	**14.34**	**120**	*e*Pn	**Pn**	**00 47 39.4**	**-0.5**
	91nm,0.7s						
COEN				*e*Sn	Sx	00 50 01.3	
COEN	**Coen**	**14.34**	**120**	P	**Pn**	**00 47 41.1**	**+1.1**
	104nm,2.8s						
KBKI	**Kotabaru**	**14.64**	**284**	P	Px	00 47 55.4	
ASAR	**Alice Springs**	**16.91**	**169**	Pn	**Pn**	**00 48 11.6**	**-1.3**
	7.5nm,0.3s,baz=356,slow=12,SNR=284						
ASAR				Sn	Sx	00 51 10.2	
	2.9nm,0.3s,baz=354,slow=26,SNR=7.4						
MBWA	**Marble Bar**	**17.45**	**215**	*e*P	**Pn**	**00 48 20.5**	**+0.9**
MBWA	**Marble Bar**	**17.45**	**215**	*e*Pn	**Pn**	**00 48 20.1**	**+0.5**
	22nm,0.7s						
MBWA				*e*Sn	Sx	00 51 26.6	
MTSU	**Mount Surprise**	**17.51**	**130**	*e*P	**Pn**	**00 48 20.3**	**-0.1**
	173nm,1.8s						
MTSU				*e*S	Sx	00 51 17.6	
PWJI	**Pagerwojo**	**18.46**	**266**	P	**Pn**	**00 48 33.8**	**+1.7**
	28nm,2.8s						
KKM	**Kota Kinabalu**	**19.19**	**312**	P	**Pn**	**00 48 38.5**	**-2.3**
SBUM	**Sibu**	**20.43**	**297**	P	**P**	**00 48 57.5**	**+4.5**
MEEK	**Meekatharra**	**22.51**	**209**	*e*P	**P**	**00 49 22.8**	**+7.5**
MEEK				*e*S	Sx	00 53 01.2	
FORT	**Forrest**	**23.75**	**185**	*e*P	**P**	**00 49 29.2**	**+1.6**
	40nm,0.6s,mb5.0						
FORT	**Forrest**	**23.75**	**185**	*e*P	**P**	**00 49 28.8**	**+1.2**
	46nm,0.6s,mb5.1						
STKA	**Stephens Creek**	**26.86**	**159**	*e*P	**P**	**00 49 56.3**	**+0.5**
	3.0nm,0.6s,mb4.0						
STKA	**Stephens Creek**	**26.86**	**159**	P	**P**	**00 49 56.4**	**+0.6**
	2.0nm,0.5s,mb4.0,baz=321,slow=14,SNR=3.0						
STKA	**Stephens Creek**	**26.86**	**159**	*e*P	**P**	**00 49 55.2**	**-0.7**
	2.0nm,0.8s,mb3.7						
QIZ	**Qiongzhong**	**32.86**	**322**	P	**P**	**00 50 48.2**	**-0.9**
PSI	**Prapat**	**32.88**	**286**	P	**P**	**00 50 49.9**	**+0.5**
	5.1nm,0.4s,mb4.8,baz=135,slow=10.0,SNR=5.8						
PSI	**Prapat**	**32.88**	**286**	P	**P**	**00 50 49.9**	**+0.5**
DZM	**Mont Dzumac**	**37.84**	**117**	*e*P	**P**	**00 51 39.4**	**+7.4**
CMAR	**Chiang Mai Arr**	**40.03**	**310**	P	**P**	**00 51 49.9**	**-0.4**
	1.8nm,0.4s,mb4.2,baz=138,slow=8.1,SNR=7.8						
CMAR				PcP	PcP	00 53 56.1	+1.5
	1.8nm,0.4s,baz=165,slow=2.7,SNR=8.7						
CHTO	**Chiang Mai**	**40.24**	**310**	*e*P	**P**	**00 51 52.2**	**+0.2**
	6.8nm,0.8s,mb4.4						
MJAR	**Matsushiro Arr**	**43.93**	**9**	P	**P**	**00 52 20.3**	**-1.5**
	3.1nm,0.8s,mb4.1,baz=184,slow=9.0,SNR=8.0						
MAJO	**Matsushiro**	**43.93**	**9**	*e*P	**P**	**00 52 20.8**	**-1.0**
	8.6nm,0.8s,mb4.5						
KSRS	**Korea Array**	**44.29**	**357**	P	**P**	**00 52 23.9**	**-0.8**
	1.1nm,0.7s,mb3.7,baz=178,slow=8.6,SNR=4.2						
ODAN	**Odare**	**53.55**	**311**	*e*P	**P**	**00 53 35.8**	**-0.1**
	36nm,0.7s,mb5.4						
TAPN	**Taplejung**	**53.58**	**311**	*e*P	**P**	**00 53 35.7**	**-0.4**
	21nm,0.5s,mb5.3						
RAMN	**Ramite**	**54.20**	**310**	*e*P	**P**	**00 53 40.3**	**-0.3**
	59nm,0.6s,mb5.7						
JIRN	**Jiri**	**54.88**	**311**	*e*P	**P**	**00 53 45.3**	**-0.3**
	27nm,0.6s,mb5.5						
GUN	**Gumba**	**55.25**	**311**	*e*P	**P**	**00 53 47.9**	**-0.3**
	45nm,0.6s,mb5.7						
PKI	**Pulchoki**	**55.42**	**310**	*e*P	**P**	**00 53 49.1**	**-0.4**
	7.5nm,0.3s,mb5.2						
KKN	**Kakani**	**55.64**	**311**	*e*Pn	**P**	**00 53 50.5**	**-0.5**
	18nm,0.6s,mb5.3						
DMN	**Daman**	**55.67**	**310**	*e*Pn	**P**	**00 53 50.7**	**-0.6**
	7.5nm,0.3s,mb5.2						
ULN	**Ulaanbaatar**	**58.39**	**342**	*e*P	**P**	**00 54 10.2**	**+0.1**
	5.1nm,0.8s,mb4.6						
ULN				*e*PcP	PcP	00 54 59.4	-1.0
SONM	**Songino Array**	**58.57**	**341**	P	**P**	**00 54 11.8**	**+0.5**
	1.8nm,0.6s,mb4.3,baz=153,slow=6.8,SNR=8.9						
SONM				PcP	PcP	00 55 00.6	-0.6
	2.0nm,0.7s,baz=161,slow=4.4,SNR=6.6						
PETK	**Petropavlovsk-**	**64.21**	**18**	P	**P**	**00 54 49.6**	**+0.3**
	3.5nm,0.7s,mb4.5,baz=194,slow=5.5,SNR=5.6						
MK31	**Makanchi Array**	**68.44**	**327**	*e*P	**P**	**00 55 16.5**	**-0.1**
MKAR	**Makanchi Array**	**68.44**	**327**	P	**P**	**00 55 17.1**	**+0.6**
	2.7nm,0.4s,mb4.6,baz=97,slow=13,SNR=35						
TKM2	**Tokmak 2**	**70.24**	**320**	*e*P	**P**	**00 55 28.5**	**+0.8**
	2.0nm,0.6s,mb4.2						
UCH	**Uchtor**	**70.58**	**319**	*e*P	**P**	**00 55 30.9**	**+1.1**
	5.3nm,0.8s,mb4.5						
KBL	**Kabul**	**71.06**	**310**	*e*P	**P**	**00 55 33.6**	**+0.6**
	3.1nm,0.6s,mb4.4						
AML	**Almayashu**	**71.07**	**319**	*e*P	**P**	**00 55 33.7**	**+0.9**
	8.8nm,0.8s,mb4.7						
EKS2	**Erkin-Say**	**71.27**	**319**	*e*P	**P**	**00 55 35.0**	**+1.0**
	2.1nm,0.6s,mb4.2						
ZALV	**Zalesovo Beam**	**71.76**	**334**	P	**P**	**00 55 36.3**	**-0.4**
	2.0nm,0.6s,mb4.2,baz=99,slow=4.7,SNR=10						
KURK	**Kurchatov**	**72.72**	**328**	P	**P**	**00 55 42.7**	**+0.2**
	3.1nm,0.8s,mb4.3,baz=125,slow=4.9,SNR=3.6						
KURK	**Kurchatov**	**72.72**	**328**	*e*P	**P**	**00 55 42.6**	**0.0**
	7.0nm,1.0s,mb4.5						
MAW	**Mawson**	**75.09**	**201**	P	**P**	**00 55 56.4**	**+0.3**
	3.4nm,0.7s,mb4.4,baz=64,slow=8.9,SNR=7.2						
BVAR	**Borovoye Array**	**78.28**	**328**	P	**P**	**00 56 14.4**	**+0.1**
	2.8nm,0.8s,mb4.2,baz=122,slow=5.6,SNR=16						
BRVK	**Borovoye**	**78.35**	**328**	*e*P	**P**	**00 56 14.2**	**-0.6**
	1.4nm,0.6s,mb4.1						
QSPA	**South Pole Qui**	**82.97**	**180**	P	**P**	**00 56 39.3**	**+0.3**
	3.9nm,0.6s,mb4.6,baz=294,slow=2.2,SNR=27						
QSPA	**South Pole Qui**	**82.97**	**180**	*e*P	**P**	**00 56 39.6**	**+0.5**
	4.7nm,0.7s,mb4.6						
ARU	**Arti**	**85.92**	**328**	*e*P	**P**	**00 56 53.0**	**-1.2**
KMBO	**Kilima Mbogo**	**92.98**	**269**	P	**P**	**00 57 29.4**	**+0.8**
OBN	**Obninsk**	**97.89**	**325**	*e*P	**P**	**00 57 50.5**	**+0.5**
ARCES	**ARCESS Array B**	**101.72**	**340**	P	Pdif	00 58 07.6	+0.5
	2.0nm,0.7s,baz=64,slow=6.1,SNR=11						
CDF	**Champ du Feu**	**116.85**	**321**	*e*PKIKP	PKPdf	01 02 58.3	-0.6
HINF	**Hinteralfeld**	**117.33**	**321**	*e*PKIKP	PKPdf	01 02 58.4	-1.5
LPG	**La Plagne**	**118.22**	**318**	*e*PKIKP	PKPdf	01 03 00.9	-0.8
	2.6nm,0.6s						
LPL	**La Plagne**	**118.23**	**318**	*e*PKIKP	PKPdf	01 03 00.9	-0.8
	3.8nm,0.6s						
CABF	**La Chapelle**	**118.26**	**320**	*e*PKIKP	PKPdf	01 03 01.4	-0.3
	4.5nm,0.6s						
FRF	**La Foret Royal**	**118.95**	**316**	*e*PKIKP	PKPdf	01 03 02.5	-0.6
ORIF	**Oris-en-Rattie**	**119.00**	**318**	*e*PKIKP	PKPdf	01 03 02.6	-0.6
LOR	**Lormes**	**119.42**	**321**	*e*PKIKP	PKPdf	01 03 03.4	-0.5
SMRF	**Simiane la Rot**	**119.54**	**317**	*e*PKIKP	PKPdf	01 03 03.7	-0.5
SMF	**Signal de Mont**	**119.68**	**320**	*e*PKIKP	PKPdf	01 03 03.5	-0.9
SSF	**Saint Saulge**	**119.72**	**321**	*e*PKIKP	PKPdf	01 03 03.5	-1.0
VIVF	**Saint-Julien-l**	**119.83**	**318**	*e*PKIKP	PKPdf	01 03 04.1	-0.7
AVF	**Avril sur Loir**	**119.93**	**321**	*e*PKIKP	PKPdf	01 03 03.5	-1.4
BGF	**Bois d'Agland**	**120.34**	**321**	*e*PKIKP	PKPdf	01 03 05.4	-0.3
TCF	**Toulx Ste Croi**	**120.85**	**321**	*e*PKIKP	PKPdf	01 03 06.2	-0.5
MTLF	**Montolieu**	**122.04**	**317**	*e*PKIKP	PKPdf	01 03 08.0	-1.1
MFF	**Saint Martin d**	**122.18**	**322**	*e*PKIKP	PKPdf	01 03 08.7	-0.5
	5.1nm,0.6s						
DBIC	**Dimbokro**	**135.58**	**272**	PKP	PKPdf	01 03 35.3	-0.3
	2.5nm,0.6s,baz=124,slow=3.6,SNR=3.8						
CPUP	**Vila Florida**	**146.03**	**168**	PKPbc	PKPbc	01 03 55.2	+0.3
	7.8nm,0.8s,baz=193,slow=2.4,SNR=17						
LPAZ	**La Paz**	**150.47**	**142**	PKPbc	PKPbc	01 04 08.3	+1.4
	7.3nm,0.4s,baz=45,slow=1.7,SNR=56						

*DDA **26** 00:47:41.6, 37°.70N×38°.66E, h7km±1km, Md3.0*
*CSEM **26** 00:47:42.3±0.2, 37°.69N×38°.65E, h10km, MD3.0, Error ellipse: s-maj=6.5km s-min=3.9km az=111.0*
*ISCJB **26** 00:47:42.1±1.0, 37°.71N±0°.07×38°.64E±0°.07, h5km±15km, Error ellipse: s-maj=12.4km s-min=7.9km az=144.1*

ISC 26 00:47:42.5±0.8, **37°.70N**±0°.06×**38°.64E**±0°.07, **h9**km±15km, **n10**, σ0°.38/14, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.29**	**150**	*e*PG	**Pg**	**00 47 48.0**	**-0.4**
URFA				*e*SG	**Sg**	**00 47 52.5**	**+0.3**
URFA	**Urfa**	**0.29**	**150**	*e*Pg	**Pg**	**00 47 48.0**	**-0.3**
URFA				*e*Sg	**Sg**	**00 47 52.5**	**+0.2**
ATAB	**Bozova**	**0.35**	**231**	*i* P	**Pg**	**00 47 49.3**	**-0.2**
ATAB				*i* S	**Sg**	**00 47 54.7**	**+0.5**
ATAB	**Bozova**	**0.35**	**231**	*i* P	**Pg**	**00 47 49.3**	**-0.2**
ATAB				*i* S	**Sg**	**00 47 54.7**	**+0.5**
ELZG	**Elazig**	**0.84**	**19**	*i* P	**Pg**	**00 47 59.4**	**+0.6**
ELZG	**Elazig**	**0.84**	**19**	*i* P	**Pg**	**00 47 59.3**	**+0.5**
SVRC	**Sivrice-ELAZID**	**0.86**	**38**	*e*PG	**Pg**	**00 47 58.8**	**-0.3**
SVRC	**Sivrice-ELAZID**	**0.86**	**38**	*e*Pg	**Pg**	**00 47 58.8**	**-0.3**
GZT	**Gaziantep**	**0.92**	**249**	*i* P	**Pg**	**00 47 59.7**	**-0.6**
KMRS	**Kahramanmaras**	**1.40**	**263**	*e*PN	**Pn**	**00 48 08.3**	**+0.1**

*NIED **26** 01:14:00, 41°.50N×143°.30E, h32km, Mw3.8 Best double couple: M0:5.67000×10^14 NP1:φ=99.00000°, δ77.00000°, λ-56.00000°. NP2:φ=207.00000°, δ36.00000°, λ-157.00000°.*
*IDC **26** 01:14:35.9±0.9, 41°.50N×143°.31E, h34km±6km, mb3.6/8, mb1 3.8/10, mb1mx3.6/24, mbtmp3.6/10, ML3.3/2, MS2.7/2, Ms1 2.7/2, ms1mx2.4/30, Error ellipse: s-maj=26.3km s-min=17.5km az=79.0*
*ISCJB **26** 01:14:35.3±0.7, 41°.50N±0°.04×143°.37E±0°.08, h46km±7km, mb3.8/8, Error ellipse: s-maj=10.6km s-min=5.4km az=31.4*
*NEIC **26** 01:14:36.2, 41°.52N×143°.31E, h38km, MG3.9(JMA), After JMA.*
NEIC Recorded [1 JMA] in southern Hokkaido.
*JMA **26** 01:14:36.2±0.2, 41°.52N×143°.31E, h38km±3km, M3.9*
JMA Felt I J1.

ISC 26 01:14:36.1±0.9, **41°.53N**±0°.04×**143°.38E**±0°.07, **h32**km±5km, **h37**km±3.1km: **pP-P, n31**, σ0°.63/36, **mb3.8**/8, **2C-2D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERM	**Erimo**	**0.51**	**341**	*e*Pg	**Pb**	**01 14 46.7**	**-0.1**
ERM				*e*S	**Sb**	**01 14 53.7**	**-0.4**
JEM	**Erimo**	**0.51**	**341**	⇑P	**Pb**	**01 14 46.6**	**-0.2**
JEM				*e*S	**Sb**	**01 14 54.3**	**+0.1**
JNBK	**Urakawa-nobuka**	**0.88**	**328**	⇓P	**Pn**	**01 14 52.4**	**+0.2**
JNBK				*e*S	**Sn**	**01 15 05.2**	**+1.3**
JCH	**Churui**	**1.08**	**359**	P	**Pn**	**01 14 55.0**	**0.0**
JCH				*e*S	**Sn**	**01 15 09.2**	**+0.4**
JOB	**Onbets**	**1.41**	**14**	⇓P	**Pn**	**01 14 59.8**	**+0.3**
JBT2	**Biratori 2**	**1.46**	**329**	P	**Pn**	**01 14 59.8**	**-0.3**
JFR	**Furan**	**1.73**	**341**	P	**Pn**	**01 15 05.1**	**+1.2**
JAK	**Akkeshi**	**1.76**	**33**	P	**Pn**	**01 15 04.3**	**0.0**
JOT	**Ohata**	**1.76**	**266**	P	**Pn**	**01 15 04.3**	**0.0**
JOT				*e*S	**Sn**	**01 15 25.2**	**-0.4**
JAR	**Ashorobuto**	**1.79**	**9**	P	**Pn**	**01 15 04.5**	**-0.2**
JKB	**Kayabe**	**1.79**	**282**	P	**Pn**	**01 15 04.7**	**-0.1**
JKB				*e*S	**Sn**	**01 15 26.0**	**-0.4**
JANG	**Nango**	**1.83**	**231**	P	**Pn**	**01 15 04.3**	**-0.9**
JTM	**Tenmabayashi**	**1.90**	**248**	⇑P	**Pn**	**01 15 06.4**	**+0.2**
ASAJ	**Asahikawa**	**2.65**	**348**	Pn	**Pn**	**01 15 16.9**	**+0.5**
	2.7nm,0.3s,baz=81,slow=33,SNR=3.4						
MAJO	**Matsushiro**	**6.41**	**221**	Pn	**Pn**	**01 16 09.0**	**+0.9**
	9.8nm,0.4s						
MAT	**Matsushiro**	**6.41**	**221**	P	**Pn**	**01 16 08.6**	**+0.4**
MAT				S	**Sn**	**01 17 21.3**	**+1.2**
MJAR	**Matsushiro Arr**	**6.41**	**221**	Pn	**Pn**	**01 16 08.8**	**+0.6**
	1.5nm,0.3s,baz=35,slow=13,SNR=12						
MJAR	**Matsushiro Arr**	**6.41**	**221**	Pn	**Pn**	**01 16 08.8**	**+0.6**
KSRS	**Korea Array**	**12.62**	**256**	LR	LR	01 21 48.3	
	comp=Z,39nm,18.4s,baz=0.0,slow=34						
SONM	**Songino Array**	**26.85**	**296**	P	**P**	**01 20 12.8**	**-0.7**
	0.4nm,0.4s,mb3.3,baz=77,slow=8.8,SNR=3.6						
ZALV	**Zalesovo Beam**	**40.16**	**309**	P	**P**	**01 22 07.3**	**-1.5**
	0.5nm,0.3s,mb3.7,baz=81,slow=8.9,SNR=2.9						
ZALV				pP	pP	01 22 18.4	0.0
	0.7nm,0.5s,baz=52,slow=5.0,SNR=3.2						
BVAR	**Borovoye Array**	**48.77**	**310**	P	**P**	**01 23 17.2**	**-0.4**
	0.4nm,0.3s,mb3.9,baz=63,slow=9.4,SNR=4.0						
WRA	**Warramunga Arr**	**61.73**	**190**	P	**P**	**01 24 50.2**	**-1.0**
	0.6nm,0.5s,mb4.0,baz=5.9,slow=6.9,SNR=4.1						
ASAR	**Alice Springs**	**65.46**	**190**	P	**P**	**01 25 15.7**	**0.0**
	0.2nm,0.5s,mb3.4,baz=7.6,slow=7.1,SNR=2.5						
ASAR				pP	pP	01 25 24.9	-0.8
	0.9nm,0.6s,baz=138,slow=6.5,SNR=5.4						
ASAR	**Alice Springs**	**65.46**	**190**	P	**P**	**01 25 15.7**	**-0.1**
ASAR				pP	pP	01 25 24.9	-0.8
FINES	**FINESS Array B**	**65.56**	**332**	P	**P**	**01 25 15.0**	**-1.0**
	0.9nm,0.5s,mb4.1,baz=51,slow=9.1,SNR=7.4						
FINES				pP	pP	01 25 26.7	+0.7
	0.9nm,0.5s,baz=46,slow=8.2,SNR=2.0						
FINES	**FINESS Array B**	**65.56**	**332**	P	**P**	**01 25 15.0**	**-1.0**
FINES				pP	pP	01 25 26.7	+0.6
PDAR	**Pinedale Array**	**73.46**	**47**	P	**P**	**01 26 05.8**	**+0.7**
	0.8nm,0.6s,mb3.9,baz=202,slow=1.0,SNR=6.1						
NWAO	**Narrogin (SRO)**	**77.91**	**202**	LR	LR	02 00 31.1	
	comp=Z,2.6nm,18.1s,baz=138,slow=35						
TXAR	**Lajitas Array**	**86.20**	**54**	P	**P**	**01 27 14.1**	**-0.2**
	0.5nm,0.6s,mb4.0,baz=352,slow=2.8,SNR=4.3						
TXAR	**Lajitas Array**	**86.20**	**54**	P	**P**	**01 27 14.1**	**-0.2**

*ISCJB **26** 01:42:34.8±0.5, 32°.31N±0°.02×115°.26W±0°.02, h9km±3km, Error ellipse: s-maj=3.3km s-min=2.4km az=177.1*
*NEIC **26** 01:42:36.6, 32°.32N×115°.31W, h24km, ML3.9(ECX), ML3.7(PAS), After ECX.*
*ECX **26** 01:42:36.6±0.7, 32°.32N×115°.31W, h3km, MD3.7, ML3.9*

ISC 26 01:42:35.4±0.3, **32°.31N**±0°.02×**115°.29W**±0°.02, **h12**km±2km, **n63**, σ0°.97/87, **18C-27D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.11**	**354**	⇓*e*P	**Pg**	**01 42 37.9**	**-0.5**
CPBX				*e*

114A	Black Gap (USA	2.08	77	⇑P	Pn	01 43 09.4	-0.7
	baz=2.1,SNR=71						
114A				⇑Sb	Sb	01 43 40.4	+1.5
	baz=2.1						
214A	Organ Pipe Nat	2.13	99	⇓P	Pn	01 43 09.4	-1.4
	baz=2.1,SNR=55						
Z14A	Wintersburg	2.23	61	⇑P	Pn	01 43 11.2	-1.0
	baz=2.3,SNR=20						
GMRC	Granite Mounta	2.48	353	⇑P	Pn	01 43 14.6	-1.0
	baz=2.6						
115A	Sonoran Desert	2.62	81	⇑P	Pn	01 43 16.6	-0.8
	baz=2.6,SNR=21						
BFSC	Mount Baldy Ra	2.76	315	⇓Sb	Sb	01 43 60.0	+1.5
	baz=2.8						
LDFC	Landfair	2.76	3	*e*Pn	Pn	01 43 20.3	+0.8
LDFC				*e*S	Sn	01 44 04.9	+12
Z15A	Gila River Ind	2.81	69	⇓P	Pn	01 43 19.6	-0.5
	baz=2.8						
CIS	Catalina Islan	2.84	293	⇓Sb	Sb	01 44 02.3	+1.7
	baz=2.9						
FMP	Fort Macarthur	2.88	300	⇑Sb	Sb	01 44 03.1	+1.1
	baz=2.9						
Y15A	Casa Rosa Ranc	2.97	56	⇓P	Pn	01 43 21.8	-0.6
	baz=3.0,SNR=34						
MWC	Mount Wilson	3.00	310	*e*Pn	Pn	01 43 24.2	+1.5
MWC				*e*Sg	Sg	01 44 08.3	-3.5
PASC	Pasadena Art C	3.05	308	*e*Pn	Pn	01 43 27.3	+3.8
PASC				*e*Sg	Sg	01 44 10.2	-3.3
GSC	Goldstone	3.24	337	*e*Pn	Pn	01 43 28.9	+2.9
Z16A	Peralta Trail,	3.41	71	⇑P	Pn	01 43 27.2	-1.1
	baz=3.4						
Y16A	Circle Bar Ran	3.56	63	⇓P	Pn	01 43 29.9	-0.5
	baz=3.6,SNR=9.8						
OSI	Osito Adit	3.68	310	*e*Pn	Pn	01 43 34.8	+2.8
TUC	Tucson	3.81	89	*e*Pn	Pn	01 43 33.8	-0.1
TUC				*e*Sn	Sn	01 44 25.8	+7.1
117A	Oracle	3.86	85	⇓P	Pn	01 43 33.8	-0.6
	baz=3.9,SNR=13						
Y17A	Roosevelt	3.98	69	⇑P	Pn	01 43 35.6	-0.6
	baz=4.0,SNR=51						
ISA	Isabella	4.26	323	*e*Pn	Pn	01 43 39.8	-0.2
118A	Homack Ranch,	4.51	84	⇓P	Pn	01 43 42.9	-0.6
	baz=4.5,SNR=19						
WUAZ	Wupatki	4.56	44	*e*Pn	Pn	01 43 45.9	+1.7
CCUT	Cedar City	5.46	16	*e*Pn	Pn	01 43 58.7	+2.2
ARUT	Antelope Range	5.67	15	*e*Pn	Pn	01 44 03.8	+4.4
	comp=N,18nm,0.7s						
MSU	Marysvale	6.69	21	*e*Pn	Pn	01 44 17.9	+4.6
MVCO	Mesa Verde	7.42	47	*e*Pn	Pn	01 44 27.0	+3.6
MVCO				*e*Sg		01 46 34.2	
BNM	Barren Site	7.49	73	*e*Pn	Pn	01 44 25.4	+1.1
	comp=N,3.1nm,0.4s						
PV04	Paradox Valley	8.00	39	*e*Pn	Pn	01 44 36.8	+5.4
MNTX	Cornudas Mount	8.44	92	*e*Pn	Pn	01 44 38.3	+0.9
	comp=N,1.0nm,0.6s						

*IDC **26** 01:46:29.6±0.7, 1°.70S×126°.12E, h0km, mb4.4/8, mb1 4.4/10, mb1mx4.2/20, mbtmp4.3/10, ML4.0/2, MS3.7/4, Ms1 3.7/4, ms1mx3.1/26, Error ellipse: s-maj=78.1km s-min=14.7km az=65.0*

*ISCJB **26** 01:46:34.5±0.5, 1°.64S±0°.03×126°.51E±0°.03, h52km±6km, mb4.4/18, MS3.8/2, Error ellipse: s-maj=5.9km s-min=5.5km az=40.7*

*DJA **26** 01:46:35, 1°.56S×126°.57E, h92km, MLv4.6/11*

*BJI **26** 01:46:36.4, 1°.70S×126°.40E, h66km, mB5.1/3, mb4.7/6*

*NEIC **26** 01:46:38.0±2.2, 1°.71S×126°.43E, h67km±22km, mb4.5/10, Error ellipse: s-maj=25.8km s-min=8.9km az=53.0*

ISC 26 01:46:36.0±0.5, **1°.64S**±0°.03×**126°.55E**±0°.04, **h47**km±5km, **n49**, σ1§**16**/52, **mb4.4**/18, **MS3.8**/2, **Southern Moluccas Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	Labuha	1.37	44	P	Pn	01 46 57.0	-1.7
LBMI				S	Sn	01 47 17.1	+1.3
NLAI	Namlea	1.69	161	P	Pn	01 47 02.8	-0.2
NLAI				S	Sn	01 47 27.0	+3.6
TNTI	Ternate	2.53	19	P	Pn	01 47 13.1	-1.5
TNTI				S	Sn	01 47 43.8	-0.3
AAI	Ambon	2.62	141	P	Pn	01 47 15.6	-0.2
KMSI	Cibinong	3.38	310	P	Pn	01 47 29.2	+2.9
KMSI				S	Sn	01 48 06.4	+1.3
LUWI	Luwuk	3.82	279	P	Pn	01 47 33.0	+0.6
KDI	Kendari	4.55	239	P	Pn	01 47 43.2	+0.8
KDI				S	Sn	01 48 32.9	-1.2
SWI	Sorong	4.77	81	P	Pn	01 47 40.9	-4.5
APSI	Ampana	4.95	278	P	Pn	01 47 46.1	-1.8
APSI				S	Sn	01 48 42.9	-1.0
MRSI	Marisa	5.06	294	P	Pn	01 47 46.3	-3.1
	0.6nm2μm104nm,0.9s						
PCI	Palu	6.75	276	P	Pn	01 48 11.9	-0.7
	245nm,0.8s						
TTSI	Tana Toraja	6.87	258	P	Pn	01 48 16.0	+1.8
	2μm53nm,0.9s						
BNSI	Bone	7.00	247	P	Pn	01 48 16.9	+1.0
	21nm,1.3s						
SPSI	Sidrap Palu	7.16	251	P	Pn	01 48 18.1	0.0
	945nm48nm,0.5s						
KAPI	Kappang	7.57	244	LR	LR	01 51 19.4	
	comp=Z,562nm,21.3s,baz=41,slow=40						
MMRI	Maumere	8.17	212	P	Pn	01 48 32.1	0.0
KAKA	Kakadu	12.46	152	*e*Pn	Pn	01 49 32.5	+1.8
KAKA				*e*S	Sn	01 51 55.6	+7.4
FITZ	Fitzroy Crossi	16.39	183	Pn	Pn	01 50 20.5	-2.4
	0.3nm,0.3s,baz=31,slow=12,SNR=5.7						
FITZ				LR	LR	01 56 15.2	
	comp=Z,176nm,21.5s,baz=9.4,slow=36						
KSM	Kuching	16.53	281	*e*Pn	Pn	01 50 25.7	+1.0
	76nm,1.1s						
WRAB	Tennant Creek	19.72	158	*e*P	Pn	01 51 01.8	-1.7
	21nm,1.1s						
WRA	Warramunga Arr	19.73	158	P	Pn	01 51 01.5	-2.0
	0.8nm,0.3s,baz=338,slow=12,SNR=8.3						
WRA	Warramunga Arr	19.73	158	P	Pn	01 51 01.5	-2.0
ASAR	Alice Springs	23.03	163	P	P	01 51 37.5	+0.3
	20nm,0.9s,mb4.5,baz=341,slow=9.9,SNR=90						
CTA	Charters Tower	26.59	135	P	P	01 52 12.8	+2.8
	6.3nm,0.7s,mb4.2,baz=296,slow=8.7,SNR=4.7						
CTA	Charters Tower	26.59	135	P	P	01 52 12.8	+2.8
STKA	Stephens Creek	33.26	156	P	P	01 53 09.7	+0.8
	3.1nm,0.6s,mb4.5,baz=278,slow=8.5,SNR=5.0						
STKA	Stephens Creek	33.26	156	*e*P	P	01 53 09.5	+0.6
	1.3nm,0.9s,mb3.9						
KSRS	Korea Array	38.91	2	P	P	01 54 04.7	+7.5
	0.6nm,0.3s,mb3.8,baz=176,slow=12,SNR=3.2						
MJAR	Matsushiro Arr	39.50	15	LR	LR	02 06 54.8	
	comp=Z,90nm,22.0s,MS3.6,baz=220,slow=31						
LZH	Lanzhou	43.09	333	*e*P	P	01 54 32.5	+1.0
LZH				pmax	pmax		
	comp=Z,36nm,1.6s,mb4.8						
LZH				pmax	pmax		
	comp=Z,140nm,5.5s						
GTA	Gaotai	47.65	332	P	P	01 55 08.5	+0.9
GTA				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.7						
ULN	Ulaanbaatar	52.15	343	*e*P	P	01 55 41.7	+0.1
	comp=Z,17nm,1.5s,mb4.8						
SONM	Songino Array	52.32	343	P	P	01 55 42.7	-0.1
	comp=Z,1.6nm,0.7s,mb4.1,baz=164,slow=7.4,SNR=14						
WMQ	Urumqi	57.05	327	P	P	01 56 17.0	-0.2
MK31	Makanchi Array	61.88	327	*e*P	P	01 56 50.6	+0.1
MKAR	Makanchi Array	61.88	327	P	P	01 56 50.6	+0.1
	comp=Z,3.5nm,0.5s,mb4.8,baz=98,slow=11,SNR=59						
TKM2	Tokmak 2	63.68	320	*e*P	P	01 57 03.5	+0.9
	comp=Z,2.6nm,0.5s,mb4.5						
UCH	Uchtor	64.04	319	*e*P	P	01 57 06.2	+1.3
	comp=Z,2.7nm,0.8s,mb4.3						
EKS2	Erkin-Say	64.73	319	*e*P	P	01 57 10.3	+0.9
	comp=Z,1.8nm,0.5s,mb4.4						
ZAA0	Zalesovo Array	65.28	334	*e*P	P	01 57 11.9	-1.0
ZALV	Zalesovo Beam	65.28	334	P	P	01 57 11.8	-1.0
	comp=Z,0.6nm,0.3s,mb4.1,baz=116,slow=3.4,SNR=7.8						
ZALV	Zalesovo Beam	65.28	334	P	P	01 57 11.8	-1.0
KURK	Kurchatov	66.18	329	*e*P	P	01 57 18.2	-0.4
	comp=Z,5.9nm,0.5s,mb4.9						
BVAR	Borovoye Array	71.72	328	P	P	01 57 52.5	-0.5
	comp=Z,1.2nm,0.8s,mb3.9,baz=125,slow=7.4,SNR=10						
BRVK	Borovoye	71.79	328	*e*P	P	01 57 53.3	-0.2
	comp=Z,13nm,1.6s,mb4.6						
TIXI	Tiksi	73.17	1	*e*P	P	01 58 00.4	-0.9
	comp=Z,3.9nm,0.4s,mb4.7						
ARCES	ARCESS Array B	95.39	340	P	P	01 59 54.1	-0.8
	comp=Z,1.5nm,0.8s,mb4.5,baz=74,slow=6.7,SNR=4.0						
BOSA	Boshof	99.13	241	LR	LR	02 44 56.1	
	comp=Z,57nm,18.7s,MS4.1,baz=339,slow=36						
CPUP	Villa Florida	151.95	173	PKPbc	PKPbc	02 06 26.6	-0.1
	comp=Z,1.4nm,0.6s,baz=82,slow=2.8,SNR=5.2						

*IDC **26** 01:52:22.5±1.1, 1°.71N×125°.27E, h0km, mb3.9/9, mb1 4.1/9, mb1mx3.9/20, mbtmp3.9/9, MS3.9/1, Ms1 3.9/1, ms1mx3.0/23, Error ellipse: s-maj=58.3km s-min=18.6km az=67.0*

*MAN **26** 01:52:25, 12°.22N×125°.76E, h6km, mb5.3, ML4.3, MS4.5*

*ISCJB **26** 01:52:25.0±1.7, 12°.10N±0°.06×125°.94E±0°.09, h31km±11km, mb4.1/11, Error ellipse: s-maj=14.9km s-min=9.5km az=176.8*

*NEIC **26** 01:52:27.8±0.7, 11°.67N×125°.24E, h35km, Error ellipse: s-maj=38.0km s-min=11.6km az=66.0*

ISC 26 01:52:26.4±1.9, **12°.08N**±0°.06×**125°.87E**±0°.09, **h26**km±12km, **n21**, σ0§**98**/23, **mb4.1**/11, **1D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	Borongan	0.63	222	*e*P	Pb	01 52 38.9	0.0
BESP				*e*S	Sb	01 52 47.3	-0.1
CNP	Cataram	1.25	290	*e*P	Pn	01 52 47.2	-1.1
PLP	Palo	1.26	224	⇓*e*P	Pn	01 52 47.4	-0.9
PLP				*e*S	Sn	01 53 04.0	-0.4
OCLP	Ormoc	1.60	231	*e*P	Pn	01 52 54.5	+1.4
MSLP	Maasin	2.17	207	*e*P	Pn	01 53 04.9	+4.0
PVCP	Virac	2.25	312	*e*P	Pn	01 53 00.8	-1.2
PVCP				*e*S	Sn	01 53 28.1	-0.9
TBP	Tagbilaran	3.08	220	*e*P	Pn	01 53 14.7	+1.2
GUIM	Jordan	3.52	246	*e*P	Pn	01 53 20.8	+1.3
JHJ	Hachijo jima 2	24.52	29	LR	LR	02 05 52.4	
	comp=Z,300nm,21.3s,baz=54,slow=32						
CMAR	Chiang Mai Arr	26.72	287	P	P	01 57 59.2	-4.7
	1.4nm,0.3s,mb3.9,baz=103,slow=6.7,SNR=2.3						
WRA	Warramunga Arr	32.89	165	P	P	01 58 56.3	-2.3
	0.7nm,1.0s,mb3.6,baz=333,slow=10,SNR=2.9						
ASAR	Alice Springs	36.38	168	P	P	01 59 27.4	-1.2
	0.3nm,0.4s,mb3.5,baz=345,slow=7.5,SNR=5.2						
SONM	Songino Array	39.20	339	P	P	01 59 53.1	+0.9
	0.3nm,0.5s,mb3.3,baz=168,slow=7.4,SNR=2.6						
MK31	Makanchi Array	50.37	322	*e*P	P	02 01 22.0	+0.7
MKAR	Makanchi Array	50.37	322	P	P	02 01 21.9	+0.6
	2.3nm,0.8s,mb4.3,baz=96,slow=12,SNR=21						
ZALV	Zalesovo Beam	52.87	331	P	P	02 01 40.5	+0.7
	0.4nm,0.3s,mb3.9,baz=117,slow=8.5,SNR=4.4						
KURK	Kurchatov	54.37	325	*e*P	P	02 01 51.3	+0.4
	5.6nm,0.8s,mb4.5						
BVAR	Borovoye Array	59.97	325	P	P	02 02 30.8	+0.4
	1.0nm,0.6s,mb4.0,baz=116,slow=10,SNR=8.3						
BRVK	Borovoye	60.04	325	P	P	02 02 31.1	+0.2
	35nm,1.4s,mb5.2						
ARCES	ARCESS Array B	82.38	340	P	P	02 04 46.5	+0.8
	3.9nm,1.1s,mb4.3,baz=77,slow=5.4,SNR=5.0						
FINES	FINESS Array B	84.13	332	P	P	02 04 53.9	-1.0
	2.5nm,0.9s,mb4.4,baz=126,slow=14,SNR=4.0						

*ISK **26** 02:05:05.3, 37°.98N×42°.55E, h5km, MD3.2*

*CSEM **26** 02:05:05.4±0.4, 37°.97N×42°.58E, h5km, MD3.2, Error ellipse: s-maj=10.0km s-min=6.4km az=9.0*

*DDA **26** 02:05:06.1, 38°.07N×42°.72E, h7km±4km, Md3.3*

*ISCJB **26** 02:05:06.9±0.7, 38°.05N±0°.05×42°.69E±0°.03, h9km±7km, Error ellipse: s-maj=8.0km s-min=4.4km az=7.8*

ISC 26 02:05:07.2±0.6, **38°.06N**±0°.05×**42°.70E**±0°.04, **h12**km±7km, **n22**, σ1§**21**/31, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANT	Van	0.67	54	*e*PG	Pg	02 05 20.5	+0.4
TVAN	Van	0.73	50	*i* P	Pg	02 05 20.6	-0.7
TVAN	Van	0.73	50	*i* P	Pg	02 05 20.6	-0.7
VANB	Van	0.76	45	*e*PG	Pg	02 05 22.1	+0.2
VANB				*e*SG	Sg	02 05 35.8	+3.8
VANB	Van	0.76	45	*e*Pg	Pg	02 05 22.1	+0.1
VANB				*e*Sg	Sg	02 05 35.8	+3.8
HAKT	HAKKARI	0.94	122	*i* P	Pg	02 05 23.5	-1.9
HAKT				*i* S	Sg	02 05 37.7	0.0
HAKT	HAKKARI	0.94	122	*i* P	Pg	02 05 23.5	-1.8
HAKT				*i* S	Sg	02 05 37.7	+0.1
HKR	Hakkari	0.95	120	*e*PG	Pg	02 05 25.5	-0.1
HKR				*e*SG	Sg	02 05 40.0	+1.9
HKR	Hakkari	0.95	120	*e*Pg	Pg	02 05 25.5	-0.1
HKR				*e*Sg	Sg	02 05 40.0	+2.0
BTMT	Batman	0.96	278	*e*PG	Pg	02 05 24.9	-0.9
BTMT				*e*SG	Sg	02 05 39.0	+0.7
CUKT	Cukurca	1.08	138	*e*PN	Pn	02 05 26.7	-1.5
CUKT	Cukurca	1.08	138	*e*Pn	Pn	02 05 26.7	-1.5
BEST	Besiri	1.14	262	*i* P	Pb	02 05 28.7	-0.1
BEST				*i* S	Sb	02 05 44.5	+0.9
TUTA	Tutak	1.34	4	*i* P	Pn	02 05 30.7	-1.1
TUTA	Tutak	1.34	4	*i* P	Pn	02 05 30.7	-1.1
CLDR	Caldiran	1.45	41	*e*PN	Pn	02 05 35.6	+2.4
CLDR	Caldiran	1.45	41	*e*Pn	Pn	02 05 35.6	+2.4
MARD	Mardin	1.69	245	*i* P	Pn	02 05 36.7	+0.1
MARD				*i* S	Sn	02 06 00.7	+2.5
BINT	Bingol	1.92	296	*e*PN	Pn	02 05 39.1	-0.5
BINT	Bingol	1.92	296	*e*Pn	Pn	02 05 39.2	-0.4
SVRC	Sivrice-ELAZID	2.69	278	*e*PN	Pn	02 05 48.6	-1.7
SVRC	Sivrice-ELAZID	2.69	278	*e*Pn	Pn	02 05 48.6	-1.7

IDC 26 02:11:07.2±1.1, **9°.52S**×**159°.44E**, **h0**km, **mb3.6**/4, **mb1 3.8**/4, **mb1mx3.7**/16, **mbtmp3.6**/4, **Error ellipse: s-maj=43.6km s-min=15.6km az=170.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	0.51	80	Pn	Pg	02 11 21.6	+4.7
	276nm,0.3s,baz=117,slow=2.6,SNR=64						
HNR				Sn	Sg	02 11 38.2	+15
	1μm,0.3s,baz=206,slow=4.2,SNR=58						
WRA	Warramunga Arr	26.36	244	P	P	02 16 45.7	+0.5
	1.1nm,0.7s,baz=70,slow=9.8,SNR=3.3						
ASAR	Alice Springs	28.16	237	P	P	02 17 00.9	-0.4
	0.2nm,0.3s,baz=66,slow=11,SNR=4.8						
SONM	Songino Array	73.86	326	P	P	02 22 43.9	+0.2
	0.4nm,0.5s,baz=130,slow=8.1,SNR=2.5						
MKAR	Makanchi Array	88.21	318	P	P	02 24 00.8	+0.5
	0.3nm,0.6s,baz=97,slow=8.1,SNR=2.8						

*ISCJB **26** 02:55:46.8±1.4, 32°.25S±0°.08×178°.1W±0°.2, h33km, mb4.5/9, MS3.5/2, Error ellipse: s-maj=28.3km s-min=8.5km az=18.1*

*NEIC **26** 02:55:49.4±0.8, 32°.08S×178°.11W, h35km, mb4.5/4, Error ellipse: s-maj=18.5km s-min=12.3km az=121.0*

*IDC **26** 02:55:52.8±3.3, 31°.86S×178°.45W, h49km±29km, mb4.2/6, mb1 4.3/7, mb1mx4.0/19, mbtmp4.2/7, ML4.4/1, MS3.5/3, Ms1 3.5/3, ms1mx3.2/25, Error ellipse: s-maj=30.5km s-min=23.6km az=146.0*

ISC 26 02:55:49.2±1.4, **32°.20S**±0°.09×**178°.1W**±0°.2, **h35**km, **n28**, σ1§**14**/17, **mb4.5**/9, **MS3.5**/2, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	2.94	3	P	Pn	02 56 32.4	-1.0
	66nm,0.3s,baz=234,slow=22,SNR=4.9						
RAO				LR	LR	02 57 00.3	
	comp=Z,716nm,18.6s,baz=172,slow=26						
RAO				S	Sn	02 57 08.7	+1.2
	95nm,0.3s,baz=45,slow=23,SNR=1.9						
URZ	Urewera	7.22	212	P	Pn	02 57 27.1	-5.2
	4.3nm,0.3s,baz=79,slow=12,SNR=16						
URZ				S	Sx	02 58 46.7	
	5.8nm,0.3s,baz=264,slow=19,SNR=8.7						
URZ	Urewera	7.22	212	*e*Pn	Pn	02 57 28.6	-3.6
URZ				*e*S	Sx	02 58 38.7	
OUZ	Omahuta	7.57	244	*e*Pn	Pn	02 57 39.0	+2.0
RPZ	Rata Peaks	14.33	214	P	Pn	02 59 03.9	-5.6
	0.9nm,0.3s,baz=27,slow=4.5,SNR=3.9						
RPZ				S	Sx	03 01 28.4	
	0.9nm,0.3s,baz=122,slow=19,SNR=5.3						
RPZ	Rata Peaks	14.33	214	P	Pn	02 59 03.9	-5.6
RPZ				S	Sx	03 01 28.4	
EIDS	Eidsvold	27.82	276	*e*P	P	03 01 35.4	+0.1
	9.9nm,1.3s,mb4.3						
PPT	Papeete	29.55	67	LR	LR	03 11 39.3	
	comp=Z,52nm,20.3s,MS3.1,baz=203,slow=32						
STKA	Stephens Creek	34.05	260	P	P	03 02 31.4	+1.3
	2.4nm,0.7s,mb4.3,baz=105,slow=12,SNR=3.1						
STKA				LR	LR	03 14 56.9	
	comp=Z,186nm,20.0s,MS3.8,baz=23,slow=34						
CTA	Charters Tower	34.07	282	P	P	03 02 30.8	+0.4
	3.4nm,0.6s,mb4.5,baz=108,slow=12,SNR=5.1						
ASAR	Alice Springs	42.98	269	P	P	03 03 43.8	-1.5
	3.3nm,0.7s,mb4.2,baz=108,slow=7.5,SNR=20						
ASAR				pP	pP	03 03 57.0	+1.5
	2.5nm,0.5s,baz=107,slow=7.4,SNR=6.3						
WRAB	Tennant Creek	44.13	274	*e*P	P	03 03 53.6	-0.9
	12nm,0.9s,mb4.6						
WRA	Warramunga Arr	44.13	274	P	P	03 03 53.3	-1.2
	3.1nm,0.3s,mb4.5,baz=112,slow=8.0,SNR=17						
WRA				pP	pP	03 04 06.5	+1.6
	4.7nm,0.4s,baz=113,slow=8.0,SNR=6.8						
FITZ	Fitzroy Crossi	52.32	271	P	P	03 04 57.0	-0.8
	4.2nm,0.9s,mb4.4,baz=122,slow=9.5,SNR=4.0						
CASY	Casey	53.53	208	*e*P	P	03 05 06.2	+0.2
	32nm,2.2s,mb4.9						
QSPA	South Pole Qui	57.92	180	P	P	03 05 42.3	+5.1
	4.6nm,0.7s,mb4.6,baz=26,slow=2.1,SNR=8.6						
QSPA	South Pole Qui	57.92	180	*e*P	P	03 05 38.9	+1.7
	2.9nm,1.0s,mb4.3						
BVAR	Borovoye Array	127.64	315	PKP	PKPdf	03 14 50.6	+0.4
	0.4nm,0.4s,baz=126,slow=7.5,SNR=3.5						
ARCES	ARCESS Array B	140.33	347	PKhKP		03 15 08.1	
	1.0nm,0.7s,baz=29,slow=2.8,SNR=5.3						
ARCES				PKP	PKPdf	03 15 14.8	+1.3
	3.7nm,1.0s,baz=38,slow=1.6,SNR=4.2						
JOF	Joensuu	144.06	338	*ep*	PKPdf	03 15 17.2	-3.0
	3.3nm,1.1s						
JOF	Joensuu	144.06	338	*ep*	PKPdf	03 15 17.2	-3.0
	3.3nm,1.1s						
KAF	Kangasniemi	146.21	340	*ep*	PKPdf	03 15 23.8	-0.2
	4.4nm,0.6s						
KAF	Kangasniemi	146.21	340	*ep*	PKPdf	03 15 23.8	-0.2
	4.4nm,0.6s						
FINES	FINESS Array B	146.80	339	PKPbc	PKPbc	03 15 26.9	+0.1
	4.4nm,0.5s,baz=37,slow=4.6,SNR=45						
NOA	NORSAR Array B	150.51	351	PKPbc	PKPbc	03 15 36.7	+0.3
	1.0nm,0.5s,baz=13,slow=4.1,SNR=7.9						
NOA				PKPab	PKPab	03 15 45.5	+2.4
	1.6nm,0.9s,baz=18,slow=2.9,SNR=4.5						
NOA	NORSAR Array B	150.51	351	PKPbc	PKPbc	03 15 36.7	+0.3
NOA				PKPab	PKPab	03 15 45.5	+2.4
MMAI	Mount Meron Ar	151.85	281	PKPbc	PKPbc	03 15 40.8	+0.3
	1.4nm,0.5s,baz=42,slow=4.5,SNR=4.2						
AKASG	Malin Array Be	152.67	321	PKPbc	PKPbc	03 15 41.0	-0.6
	0.3nm,0.3s,baz=46,slow=1.7,SNR=3.3						

*ATH **26** 03:03:23.4, 37°.10N×28°.03E, h49km±11km, MD3.2/4*

*DDA **26** 03:03:24.8, 36°.95N×27°.66E, h7km±6km, Md3.1*

*ISCJB **26** 03:03:25.3±0.5, 36°.95N±0°.03×27°.64E±0°.03, h6km±6km, Error ellipse: s-maj=5.1km s-min=3.8km az=42.5*

*CSEM **26** 03:03:25.8±0.3, 36°.92N×27°.63E, h2km, MD3.0, Error ellipse: s-maj=6.0km s-min=4.8km az=67.0*

*NEIC **26** 03:03:26.0, 37°.01N×27°.73E, h5km, MD3.2(ATH), MD2.9(ISK), After ISK.*

*ISK **26** 03:03:29.6, 37°.16N×27°.90E, h5km, MD3.0*

ISC 26 03:03:25.9±0.5, **36°.95N**±0°.03×**27°.64E**±0°.03, **h10**km±5km, **n49**, σ0§**94**/69, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	Kayabasi	0.20	307	*i* P	Pg	03 03 29.6	-0.4
BDRM				*i* S	Sg	03 03 33.0	+0.2
BDRM	Kayabasi	0.20	307	*i* P	Pg	03 03 29.6	-0.4
BDRM				*i* S	Sg	03 03 33.0	+0.2
MLSB	Milas	0.36	18	*e*PG	Pg	03 03 32.9	-0.2
MLSB				*e*SG	Sg	03 03 37.5	-0.5
MLSB	Milas	0.36	18	*e*Pg	Pg	03 03 32.9	-0.2
MLSB				*e*Sg	Sg	03 03 37.5	-0.4
YER	Yerkesik	0.55	70	*e*PG	Pg	03 03 36.8	+0.2
YER				*e*SG	Sg	03 03 43.2	-0.5
YER	Yerkesik	0.55	70	*e*Pg	Pg	03 03 36.8	+0.3
YER				*e*Sg	Sg	03 03 43.2	-0.5
AYDN	Tasoluk	0.74	15	*i* P	Pg	03 03 39.9	-0.3
AYDN				*i* S	Sg	03 03 50.3	+0.6
AYDN	Tasoluk	0.74	15	*i* P	Pg	03 03 39.9	-0.2
AYDN				*i* S	Sg	03 03 50.3	+0.5
TURN	Turunc	0.78	95	*i* P	Pg	03 03 34.8	-6.0
TURN				*i* S	Sg	03 03 42.6	-8.3
GCAM	G?zelcaml?	0.82	337	*i* P	Pg	03 03 41.4	-0.3
GCAM				*i* S	Sg	03 03 53.1	+0.8
GCAM	G?zelcaml?	0.82	337	*i* P	Pg	03 03 41.4	-0.3
GCAM				*i* S	Sg	03 03 53.1	+0.8
ARG	Arkhangelos	0.83	152	*e*P	Pg	03 03 40.6	-1.2
ARG				*e*S	Sg	03 03 53.0	+0.4
ARG	Ar

PYL	PYLOS	0.75	294	P		Pg	03 12 02.7 -0.1
PYL				S		Sg	03 12 13.7 +1.2
ITM	Ithomi	0.79	318	*e*Pn		Pg	03 12 03.5 -0.2
ITM	Ithomi	0.79	318	P		Pg	03 12 03.6 -0.1
ITM				S		Sg	03 12 14.0 0.0
ITM	Ithomi	0.79	318	*e*PN		Pg	03 12 03.5 -0.2
ITM	Ithomi	0.79	318	P		Pg	03 12 03.6 -0.1
ITM				S		Sg	03 12 14.0 0.0
VLX	Vlachokerasia	0.80	348	P		Pg	03 12 03.4 -0.4
VLX				S		Sg	03 12 13.5 -0.6
VLX	Vlachokerasia	0.80	348	*e*PN		Pg	03 12 03.3 -0.5
VLX				*e*SN		Sg	03 12 13.8 -0.3
VLX	Vlachokerasia	0.80	348	P		Pg	03 12 03.4 -0.4
VLX				S		Sg	03 12 13.5 -0.6
GUR	Goura	1.36	352	P		Pn	03 12 13.0 -1.2
GUR				S		Sg	03 12 32.2 +0.1
GUR	Goura	1.36	352	*e*PN		Pn	03 12 12.9 -1.3
GUR	Goura	1.36	352	P		Pn	03 12 13.0 -1.2
GUR				S		Sg	03 12 32.2 +0.1
NAIG	Nisos Aigina	1.37	31	*e*Pn		Pn	03 12 13.1 -1.2
NAIG	Nisos Aigina	1.37	31	*e*PN		Pn	03 12 13.1 -1.2
NAIG	Nisos Aigina	1.37	31	*e*Pn		Pn	03 12 13.1 -1.2
LTK	Loutraki	1.46	12	P		Pn	03 12 14.8 -0.8
LTK				S		Sb	03 12 35.8 +0.7
LTK	Loutraki	1.46	12	*e*PN		Pn	03 12 15.2 -0.4
LTK				*e*SN		Sn	03 12 35.4 +0.3
LTK	Loutraki	1.46	12	P		Pn	03 12 14.8 -0.8
LTK	Loutraki	1.46	12	*e*Pn		Pn	03 12 15.2 -0.4
LTK				*e*Sn		Sn	03 12 35.4 +0.3
LTK				S		Sb	03 12 35.8 +0.7
VLY	Voula,Athens	1.58	37	P		Pn	03 12 16.8 -0.5
VLY	Voula,Athens	1.58	37	P		Pn	03 12 16.8 -0.5
KARN	Karanos	1.60	137	P		Pn	03 12 17.8 +0.3
KARN				S		Sn	03 12 40.0 +1.4
KARN	Karanos	1.60	137	P		Pn	03 12 17.8 +0.3
KARN				S		Sn	03 12 40.0 +1.4
ATH	Athens Observa	1.64	33	*e*Pn		Pn	03 12 18.4 +0.3
ATH				*e*Sn		Sn	03 12 40.1 +0.4
ATH	Athens Observa	1.64	33	*e*PN		Pn	03 12 18.4 +0.3
ATH				*e*SN		Sn	03 12 40.1 +0.4
ATH	Athens Observa	1.64	33	*e*Pn		Pn	03 12 18.4 +0.3
ATH				*e*Sn		Sn	03 12 40.1 +0.4
ATHU	Athens Univers	1.67	34	P		Pn	03 12 18.8 +0.3
ATHU				S		Sn	03 12 41.7 +1.4
ATHU	Athens Univers	1.67	34	P		Pn	03 12 18.8 +0.3
ATHU				S		Sn	03 12 41.7 +1.4
LAKA	Lakka	1.72	344	P		Pn	03 12 19.4 +0.3
LAKA				S		Sn	03 12 41.2 -0.2
LAKA	Lakka	1.72	344	P		Pn	03 12 19.4 +0.3
LAKA				S		Sn	03 12 41.2 -0.2
RLS	Riolos of Patr	1.72	329	*e*Pn		Pn	03 12 19.9 +0.8
RLS	Riolos of Patr	1.72	329	*e*PN		Pn	03 12 19.9 +0.8
RLS	Riolos of Patr	1.72	329	*e*Pn		Pn	03 12 19.9 +0.8
VAM	Vamos	1.76	132	*e*Pb		Pb	03 12 19.0 -2.3
VAM	Vamos	1.76	132	*e*PB		Pb	03 12 19.0 -2.3
PTL	Penteli	1.77	35	*e*Pn		Pn	03 12 19.8 -0.1
PTL				*e*Sn		Sn	03 12 42.7 -0.2
PTL	Penteli	1.77	35	*e*PN		Pn	03 12 19.8 -0.1
PTL				*e*SN		Sn	03 12 42.7 -0.2
PTL	Penteli	1.77	35	*e*Pn		Pn	03 12 19.8 -0.1
PTL				*e*Sn		Sn	03 12 42.7 -0.2
DSF	Desfina	1.82	358	P		Pn	03 12 20.4 -0.1
DSF				S		Sn	03 12 44.0 +0.1
DSF	Desfina	1.82	358	P		Pn	03 12 20.4 -0.1
DSF				S		Sn	03 12 44.0 +0.1
TRIZ	Trizonia	1.82	347	P		Pn	03 12 21.6 +1.1
TRIZ				S		Sn	03 12 44.8 +0.9
TRIZ	Trizonia	1.82	347	P		Pn	03 12 21.6 +1.1
TRIZ				S		Sn	03 12 44.8 +0.9
KALE	Kalithea	1.83	349	P		Pn	03 12 21.5 +0.8
KALE				S		Sn	03 12 44.1 -0.2
KALE	Kalithea	1.83	349	P		Pn	03 12 21.5 +0.8
KALE				S		Sn	03 12 44.1 -0.2
EFP	Efpalio	1.91	344	P		Pn	03 12 22.1 +0.3
EFP				S		Sn	03 12 45.9 -0.3
EFP	Efpalio	1.91	344	*e*PN		Pn	03 12 22.7 +0.9
EFP	Efpalio	1.91	344	P		Pn	03 12 22.1 +0.3
EFP	Efpalio	1.91	344	*e*Pn		Pn	03 12 22.7 +0.9
EFP				S		Sn	03 12 45.9 -0.3
LKR	Lokris	2.08	9	*e*Pb		Pn	03 12 23.8 -0.3
LKR	Lokris	2.08	9	P		Pn	03 12 23.8 -0.3
LKR	Lokris	2.08	9	*e*PB		Pn	03 12 23.8 -0.3
LKR	Lokris	2.08	9	P		Pn	03 12 23.8 -0.3
ATAL	Atalanti	2.12	9	P		Pn	03 12 24.5 -0.2
ATAL	Atalanti	2.12	9	P		Pn	03 12 24.5 -0.2
GVD	Gavdhos	2.13	145	Pn		Pn	03 12 24.7 -0.1
GVD	Gavdhos	2.13	145	P		Pn	03 12 27.9 +3.1
GVD	Gavdhos	2.13	145	Pn		Pn	03 12 24.7 -0.1
GVD	Gavdhos	2.13	145	P		Pn	03 12 27.9 +3.1
THR5	Thira Island,	2.23	94	P		Pn	03 12 25.4 -0.7
THR5	Thira Island,	2.23	94	P		Pn	03 12 25.4 -0.7
VLS	Valsamata	2.25	315	*e*Pn		Pn	03 12 27.7 +1.3
VLS	Valsamata	2.25	315	*e*PN		Pn	03 12 27.7 +1.3
VLS	Valsamata	2.25	315	*e*Pn		Pn	03 12 27.7 +1.3
IDI	Anoyia	2.27	124	P		Pn	03 12 26.9 +0.1
IDI	Anoyia	2.27	124	P		Pn	03 12 26.9 +0.1
SIVA	Sivas	2.39	130	P		Pn	03 12 31.9 +3.5
SIVA	Sivas	2.39	130	P		Pn	03 12 31.9 +3.5
EVR	Evrytania	2.40	345	*e*Pn		Pn	03 12 29.0 +0.5
EVR	Evrytania	2.40	345	*e*PN		Pn	03 12 29.0 +0.5
EVR	Evrytania	2.40	345	*e*Pn		Pn	03 12 29.0 +0.5
APE	Apeiranthos	2.41	78	P		Pn	03 12 27.2 -1.4
APE				S		Sn	03 12 55.4 -3.0
APE	Apeiranthos	2.41	78	P		Pn	03 12 27.2 -1.4
APE				S		Sn	03 12 55.4 -3.0
AGG	Agios Georgios	2.44	355	P		Pn	03 12 30.4 +1.4
AGG	Agios Georgios	2.44	355	P		Pn	03 12 29.5 +0.5
AGG	Agios Georgios	2.44	355	P		Pn	03 12 29.5 +0.5
LKD2	Lefkada island	2.68	326	P		Pn	03 12 36.4 +4.1
LKD2	Lefkada island	2.68	326	P		Pn	03 12 36.4 +4.1
LAST	Lasithi	2.75	120	P		Pn	03 12 32.6 -0.6
LAST				S		Sn	03 13 10.3 +3.5
LAST	Lasithi	2.75	120	P		Pn	03 12 32.6 -0.6
LAST				S		Sn	03 13 10.3 +3.5
NEO	Neokhori	2.76	10	*e*Pn		Pn	03 12 33.2 -0.2
NEO	Neokhori	2.76	10	*e*PN		Pn	03 12 33.2 -0.2
NEO	Neokhori	2.76	10	*e*Pn		Pn	03 12 33.2 -0.2
AOS	Alonnisos	2.77	21	P		Pn	03 12 35.8 +2.2
AOS	Alonnisos	2.77	21	P		Pn	03 12 32.5 -1.1
AOS				S		Sn	03 13 05.3 -2.1
AOS	Alonnisos	2.77	21	P		Pn	03 12 32.5 -1.1
AOS				S		Sn	03 13 05.3 -2.1
NPS	Neapolis	2.79	118	*e*Pn		Pn	03 12 34.4 +0.6
NPS	Neapolis	2.79	118	*e*PN		Pn	03 12 34.4 +0.6
NPS	Neapolis	2.79	118	*e*Pn		Pn	03 12 34.4 +0.6
XOR	Xorichti	2.81	10	P		Pn	03 12 34.9 +0.8
XOR	Xorichti	2.81	10	P		Pn	03 12 34.2 +0.1
XOR	Xorichti	2.81	10	P		Pn	03 12 34.2 +0.1
THL	Klokotos Trika	3.00	351	P		Pn	03 12 37.6 +0.8
THL	Klokotos Trika	3.00	351	*e*PN		Pn	03 12 37.7 +0.9
THL	Klokotos Trika	3.00	351	P		Pn	03 12 37.6 +0.8
PAIG	Paliouri	3.44	14	P		Pn	03 12 43.6 +0.8
PAIG	Paliouri	3.44	14	P		Pn	03 12 43.6 +0.8
KARP	Karpathos	3.85	104	P		Pn	03 12 47.4 -1.0
KARP	Karpathos	3.85	104	P		Pn	03 12 47.4 -1.0
ARG	Arkhangelos	4.48	93	P		Pn	03 13 00.6 +3.5
ARG	Arkhangelos	4.48	93	P		Pn	03 13 00.6 +3.5
TIP	Timpagrande	5.29	301	*e*Pn		Pn	03 13 06.3 -1.9
TIP				*e*S		Sn	03 13 59.8 -1.0
TIP	Timpagrande	5.29	301	*e*Pn		Pn	03 13 06.3 -1.9
CEL	Celeste	5.58	289	*e*Pn		Pn	03 13 11.1 -1.2
CEL				*e*S		Sn	03 14 15.2 -1.6
CEL	Celeste	5.58	289	*e*Pn		Pn	03 13 11.1 -1.2
CEL				*e*S		Sn	03 14 15.2 -1.6

DJA 26 03:17:39.9±96.96S×114°.14E, h20km, MLv4.0/9, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NBBI	Negara	1.65	17	P		Pn	03 18 07.9 +1.1
NBBI				S		Sn	03 18 29.2 +1.7
DNP	Denpasar	1.66	40	P		Pn	03 18 07.8 +0.9
DNP				S		Sn	03 18 27.7 +0.1
BYJI	Banyuwangi	1.75	7	P		Pn	03 18 09.1 +0.9
BYJI				S		Sn	03 18 32.2 +2.3
GMJI	Gumukmas	1.81	338	P		Pn	03 18 08.4 -0.7
GMJI				S		Sn	03 18 28.9 -2.6
SRBI	Singaraja	2.14	30	P		Pn	03 18 14.4 +0.8
KHKI	Kahang-Kahang	2.15	43	P		Pn	03 18 14.8 +1.1
KHKI				S		Sn	03 18 44.4 +4.6
ABJI	Asem Bagus	2.15	2	P		Pn	03 18 15.7 +1.9
KRKI	Karangkates	2.45	317	P		Pn	03 18 18.7 +0.9
KMMI	Kalianget	2.90	357	P		Pn	03 18 25.3 +1.3
PWJI	Pagerwojo	3.01	310	P		Pn	03 18 26.2 +0.7
PWJI				S		Sn	03 19 03.2 +2.2
SJI	Sawahan	3.22	313	P		Pn	03 18 29.0 +0.5
PCJI	Pacitan	3.41	301	P		Pn	03 18 31.9 +0.8
GRJI	Gresik	3.44	331	S		Sn	03 19 14.9 +3.1
UGM	Wanagama	4.11	299	P		Pn	03 18 42.6 +1.9

*ISCJB **26** 03:18:09.5±1.2, 47°.31N±0°.10×153°.2E±0°.1, h65km±10km, mb3.6/16, Error ellipse: s-maj=19.2km s-min=8.0km az=143.0*
*MOS **26** 03:18:10.3±1.5, 47°.22N×153°.16E, h78km, mb4.0/1, Error ellipse: s-maj=17.1km s-min=11.0km az=58.6*
*IDC **26** 03:18:10.9±0.6, 47°.28N×153°.12E, h62km±5km, mb3.5/16, mb1 3.7/19, mb1mx3.7/26, mbtmp3.5/19, Error ellipse: s-maj=19.2km s-min=13.1km az=146.0*
*NEIC **26** 03:18:11.5±1.1, 47°.22N×153°.17E, h70km±10km, Error ellipse: s-maj=16.9km s-min=8.6km az=148.0*
ISC 26 03:18:11.4±1.0, 47°.31N±0°.09×153°.2E±0°.1, h65km±9km, h61km±.7km: pP-P, n32, σ1§19/33, mb3.6/16, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.89	29	*e*PN	Pn	03 19 08.5	-0.1
SKR				*e*S	Sn	03 19 51.1	-1.9
SKR				pmax	pmax		
	comp=Z,30nm,0.5s						
SKR				smax			
	comp=N,160nm,0.3s						
SKR				smax			
	comp=E,150nm,0.3s						
PEA0B	Petropavlovsk-	6.49	25	*e*Pn	Pn	03 19 46.1	+2.0
PEA0B				*e*S	Sn	03 20 51.3	-5.3
PETK	Petropavlovsk-	6.49	25	P	Pn	03 19 46.2	+2.0
	comp=E,0.5nm,0.3s,baz=184,slow=13,SNR=7.1						
PETK	Petropavlovsk-	6.49	25	*e*PN	Pn	03 19 50.0	+5.9
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	Petropavlovsk-	6.49	25	P	Pn	03 19 46.2	+2.0
YSS	Yuzh-Sakhalins	7.13	271	PN	Pn	03 19 54.2	+1.3
ASAJ	Asahikawa	8.07	251	P	Pn	03 20 06.3	+0.5
	comp=Z,1.0nm,0.3s,baz=88,slow=15,SNR=5.0						
ASAJ	Asahikawa	8.07	251	PN	Pn	03 20 06.4	+0.6
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ERM	Erimo	8.89	237	*e*PN	Pn	03 20 14.5	-2.6
ERM	Erimo	8.89	237	*e*Pn	Pn	03 20 14.7	-2.4
ERM				*e*S	Sn	03 21 37.1	-19
FX1	Attu Island--F	13.96	59	P	Pn	03 21 24.4	-1.4
	comp=Z,1.5nm,0.3s,baz=0.9,slow=11,SNR=14						
KSRS	Korea Array	21.02	251	P	Pn	03 22 48.2	-1.3
	comp=Z,1.6nm,0.7s,mb3.5,baz=67,slow=11,SNR=5.4						
KSRS	Korea Array	21.02	251	*e*P	P	03 22 51.9	+2.4
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.6						
SONM	Songino Array	31.20	289	P	P	03 24 23.2	-1.0
	comp=Z,0.5nm,0.6s,mb3.4,baz=90,slow=10,SNR=2.3						
MKAR	Makanchi Array	46.73	297	P	P	03 26 34.7	+1.0
	comp=Z,0.2nm,0.5s,mb3.1,baz=52,slow=9.5,SNR=2.5						
KURK	Kurchatov	47.10	303	P	P	03 26 36.0	-0.5
	comp=Z,0.3nm,0.4s,mb3.4,baz=64,slow=7.2,SNR=2.9						
YKA	Yellowknife Ar	50.45	37	P	P	03 27 02.6	+0.7
	comp=Z,1.2nm,0.8s,mb3.9,baz=302,slow=7.3,SNR=5.7						
YKA				pP	pP	03 27 18.5	-0.1
	comp=Z,0.8nm,0.8s,baz=299,slow=7.0,SNR=3.3						
BVAR	Borovoye Array	50.55	309	PcP	PcP	03 28 18.9	-0.9
	comp=Z,0.5nm,0.7s,baz=325,slow=1.8,SNR=3.5						
CMAR	Chiang Mai Arr	52.55	256	P	P	03 27 19.3	+1.1
	comp=Z,1.1nm,0.3s,mb4.3,baz=33,slow=7.8,SNR=4.2						
ARCES	ARCESS Array B	57.34	341	P	P	03 27 51.9	-0.3
	comp=Z,1.7nm,0.9s,mb4.1,baz=25,slow=11,SNR=2.9						
NVAR	Mina Array Bea	62.13	63	P	P	03 28 26.9	+1.5
	comp=Z,0.2nm,0.5s,mb3.4,baz=271,slow=11,SNR=2.4						
NVAR				pP	pP	03 28 42.5	-0.2
	comp=Z,0.6nm,0.7s,baz=272,slow=7.8,SNR=4.3						
FINES	FINESS Array B	63.56	335	P	P	03 28 33.5	-1.0
	comp=Z,1.0nm,0.4s,mb4.0,baz=24,slow=6.9,SNR=7.9						
PDAR	Pinedale Array	64.38	54	P	P	03 28 41.1	+0.9
	comp=Z,0.1nm,0.3s,mb3.1,baz=305,slow=9.5,SNR=2.5						
PDAR				pP	pP	03 28 57.4	-0.2
	comp=Z,1.3nm,0.7s,baz=288,slow=3.7,SNR=9.6						
NB2	NORSAR Subarra	67.72	341	P	P	03 29 00.5	-0.8
	comp=Z,0.7nm,0.7s,mb3.6,baz=30,slow=6.2						
NOA	NORSAR Array B	67.72	341	P	P	03 29 01.0	-0.3
	comp=Z,1.3nm,0.9s,mb3.8,baz=28,slow=6.3,SNR=5.7						
NOA	NORSAR Array B	67.72	341	P	P	03 29 01.0	-0.3
WRA	Warramunga Arr	69.06	199	P	P	03 29 08.9	-1.2
	comp=Z,0.4nm,0.3s,mb3.7,baz=17,slow=6.9,SNR=5.2						
AKASG	Malin Array Be	71.11	326	P	P	03 29 20.8	-1.6
	comp=Z,0.4nm,0.3s,mb3.7,baz=34,slow=5.9,SNR=3.4						
ASAR	Alice Springs	72.75	198	P	P	03 29 32.5	+0.1
	comp=Z,0.8nm,0.6s,mb3.7,baz=17,slow=5.1,SNR=7.6						
ASAR				pP	pP	03 29 48.6	-1.5
	comp=Z,0.4nm,0.7s,baz=22,slow=5.3,SNR=1.2						
TXAR	Lajitas Array	77.17	61	P	P	03 29 58.4	+0.3
	comp=Z,0.5nm,0.5s,mb3.5,baz=295,slow=4.6,SNR=14						
TXAR				pP	pP	03 30 15.1	-0.8
	comp=Z,0.8nm,0.6s,baz=308,slow=4.4,SNR=8.5						
MMAI	Mount Meron Ar	82.48	311	P	P	03 30 27.3	+0.5
	comp=Z,0.5nm,0.3s,mb3.8,baz=5.7,slow=2.9,SNR=1.9						
CPUP	Villa Florida	148.14	60	PKPbc	PKPbc	03 37 49.0	-0.7
	comp=Z,0.6nm,0.4s,baz=225,slow=4.3,SNR=4.9						

*IDC **26** 03:18:32.9±0.6, 56°.79S×150°.84W, h0km, mb4.6/8, mb1 4.8/8, mb1mx4.5/13, mbtmp4.6/8, MS3.8/5, Ms1 3.8/5, ms1mx3.6/16, Error ellipse: s-maj=32.8km s-min=16.7km az=9.0*
*ISCJB **26** 03:18:32.8±0.7, 56°.8S±0°.1×150°.9W±0°.2, h10km, mb4.6/9, MS3.9/5, Error ellipse: s-maj=16.8km s-min=16.3km az=154.1*
*NEIC **26** 03:18:34.2±0.3, 56°.70S×150°.78W, h10km, mb4.7/4, Error ellipse: s-maj=13.2km s-min=9.6km az=184.0*
ISC 26 03:18:35.0±0.6, 56°.8S±0°.1×150°.9W±0°.2, h10km, n36, σ0§80/15, mb4.6/9, MS3.9/5, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	28.12	298	LR	LR	03 33 37.4	
	comp=Z,228nm,20.4s,MS3.8,baz=314,slow=32						
QSPA	South Pole Qui	33.31	180	P	P	03 25 12.6	+0.4
	9.6nm,0.9s,mb4.7,baz=78,slow=3.5,SNR=18						
QSPA	South Pole Qui	33.31	180	*e*P	P	03 25 12.8	+0.7
	9.1nm,0.9s,mb4.7						
RKT	Rikitea	35.62	26	*e*LR	LR	03 34 59.7	
	389nm,31.0s						
RKT				*e*T		04 02 56.9	
	10.0nm,0.3s						
PPT	Papeete	39.21	2	*e*S	S	03 32 02.6	-0.6
	92nm,25.5s						
PPT				*e*LR	LR	03 36 29.3	
	460nm,29.2s						
PPT	Papeete	39.21	2	LR	LR	03 37 23.4	
	comp=Z,135nm,21.3s,MS3.8,baz=172,slow=29						
CASY	Casey	43.06	216	*e*P	P	03 26 35.4	+1.1
	4.1nm,0.8s,mb4.2						
TAOE	Nuku Hiva Isla	48.59	14	*e*S	S	03 34 22.4	+2.4
	202nm,25.5s						
TAOE				*e*LR	LR	03 40 57.1	
	250nm,29.2s						
STKA	Stephens Creek	51.86	269	P	P	03 27 43.1	0.0
	8.1nm,0.7s,mb4.8,baz=133,slow=8.8,SNR=14						
PLCA	Paso Flores	52.16	108	P	P	03 27 44.8	-0.5
	5.2nm,1.0s,mb4.4,baz=240,slow=8.7,SNR=5.9						
MAW	Mawson	53.39	195	P	P	03 27 53.6	-0.4
	4.5nm,0.9s,mb4.4,baz=213,slow=6.2,SNR=3.6						
MAW				LR	LR	03 47 53.7	
	comp=Z,140nm,21.0s,MS4.0,baz=2.1,slow=33						
ASAR	Alice Springs	62.50	268	P	P	03 28 58.0	-0.5
	20nm,1.2s,mb5.1,baz=138,slow=6.5,SNR=52						
WRA	Warramunga Arr	65.25	271	P	P	03 29 16.1	-0.5
	2.5nm,0.6s,mb4.4,baz=149,slow=5.8,SNR=9.9						
WRA				PcP	PcP	03 29 48.0	-1.0
	1.9nm,0.8s,baz=147,slow=4.2,SNR=4.1						
WRA	Warramunga Arr	65.25	271	P	P	03 29 16.1	-0.5
WRA				PcP	PcP	03 29 48.0	-1.0
CPUP	Villa Florida	70.23	108	P	P	03 29 47.1	-0.9
	5.6nm,0.8s,mb4.5,baz=216,slow=6.2,SNR=14						
CPUP	Villa Florida	70.23	108	*e*P	P	03 29 46.9	-1.1
	19nm,0.9s,mb5.0						
LPAZ	La Paz	72.56	93	P	P	03 30 03.1	+1.0
	6.7nm,1.0s,mb4.5,baz=238,slow=1.8,SNR=18						
LPAZ	La Paz	72.56	93	*e*P	P	03 30 02.7	+0.6
	8.7nm,1.0s,mb4.6						
TXAR	Lajitas Array	94.64	40	LR	LR	04 07 16.1	
	comp=Z,26nm,22.0s,MS3.7,baz=0.0,slow=31						
BOSA	Boshof	94.83	177	LR	LR	04 09 02.0	
	comp=Z,82nm,20.9s,MS4.2,baz=325,slow=32						
EGAK	Eagle	121.51	5	*e*PKPdf	PKPdf	03 37 26.4	-0.6
YKA	Yellowknife Ar	122.28	19	PKP	PKPdf	03 37 27.6	-0.8
	0.9nm,0.9s,baz=212,slow=2.5,SNR=3.9						
KBL	Kabul	145.05	248	*e*PKPbc	PKPbc	03 38 11.2	0.0
MK31	Makanchi Array	146.46	276	*e*PKPbc	PKPbc	03 38 14.9	-0.3
MKAR	Makanchi Array	146.46	276	PKPbc	PKPbc	03 38 14.5	-0.7
	12nm,0.7s,baz=90,slow=8.5,SNR=98						
TKM2	Tokmak 2	147.68	265	*e*PKPbc	PKPbc	03 38 18.4	-0.3
UCH	Uchtor	147.80	263	*e*PKPbc	PKPbc	03 38 19.4	+0.3
AAK	Ala-Archa	148.09	263	PKPbc	PKPbc	03 38 19.0	-0.9
	1.0nm,0.3s,baz=180,slow=5.2,SNR=6.5						
EKS2	Erkin-Say	148.50	263	*e*PKPbc	PKPbc	03 38 21.2	+0.3
ZAA0	Zalesovo Array	148.99	289	*e*PKPbc	PKPbc	03 38 20.6	-1.2
ZALV	Zalesovo Beam	148.99	289	PKPbc	PKPbc	03 38 20.6	-1.2
	5.5nm,0.7s,baz=114,slow=3.9,SNR=15						
SUMG	Summit	149.28	33	*e*PKPdf	PKPdf	03 38 16.4	-1.3
SUMG				*e*PKPbc	PKPbc	03 38 22.4	+0.4
SUMG	Summit	149.28	33	*i* P	PKPbc	03 38 22.2	+0.2
	10nm,0.9s						
KURK	Kurchatov	150.68	279	*e*PKPdf	PKPdf	03 38 19.3	-1.2
KURK				*e*PKPbc	PKPbc	03 38 25.5	-0.6
ESDC	Sonseca Array	152.44	114	PKPbc	PKPbc	03 38 30.2	-0.2
	1.3nm,0.8s,baz=254,slow=1.6,SNR=9.2						
BVAR	Borovoye Array	156.27	278	PKPbc	PKPdf	03 38 36.8	+8.4
	1.0nm,0.7s,baz=150,slow=3.3,SNR=3.8						
BVAR				PKPab	PKPab	03 38 56.0	-0.7
	0.8nm,0.6s,baz=94,slow=4.9,SNR=4.4						

*NIED **26** 03:20:00, 39°.00N×140°.90E, h8km, Mw3.7 Best double couple: M0:3.64000×10^14 NP1:φ=223.00000°, δ=79.00000°, λ=96.00000°. NP2:φ=12.00000°, δ=13.00000°, λ=60.00000°.*
*IDC **26** 03:20:00.3±1.0, 38°.94N×141°.10E, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.7/24, mbtmp3.8/8, Error ellipse: s-maj=27.1km s-min=22.2km az=72.0*
*ISCJB **26** 03:20:01.6±0.6, 39°.04N±0°.03×140°.91E±0°.04, h13km±4km, mb3.9/8, Error ellipse: s-maj=5.8km s-min=5.1km az=141.1*
*NEIC **26** 03:20:02.2, 39°.04N×140°.89E, h11km, MG3.5(JMA), After JMA.*
*JMA **26** 03:20:02.1, 39°.04N×140°.89E, h11km±1km, M3.5 Broadband fault plane solution: P waves. NP1: φ=21.00000°, δ=25.00000°, λ=73.00000°. NP2:φ=220.00000°, δ=66.00000°, λ=98.00000°. Principal axes: T Plg=68.0000°, Azm=145.0000°; N Plg=7.0000°, Azm=37.0000°; P Plg=21.0000°, Azm=304.0000°;*
JMA Felt II J1.
ISC 26 03:20:02.3±0.5, 39°.03N±0°.03×140°.92E±0°.04, h6km±4km, n21, σ0§86/25, mb3.9/8, 1C-3D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	Ichinoseki	0.25	109	⇓P	Pg	03 20 07.4	+0.2
JMK				S	Sg	03 20 11.2	+0.7
JRG	Rokugo	0.42	329	P	Pg	03 20 10.1	-0.4
JRG				S	Sg	03 20 16.3	+0.2
JYK	Kaneyama	0.45	255	⇓P	Pg	03 20 10.7	-0.3
JYK				S	Sg	03 20 16.1	-0.8
JOM	Ohasama	0.53	34	P	Pg	03 20 12.4	-0.1
JOM				S	Sg	03 20 19.6	+0.2
OFUJ	Ofunato	0.59	85	⇓P	Pg	03 20 13.7	+0.1
JOU	Okura	0.69	197	⇑P	Pg	03 20 15.2	-0.5
JOU				S	Sg	03 20 24.9	+0.2
MAJO	Matsushiro	3.28	222	*e*Pn	Pn	03 20 55.0	+0.8
MJAR	Matsushiro Arr	3.28	222	Pn	Pn	03 20 54.3	+0.1
	0.8nm,0.3s,baz=32,slow=12,SNR=11						
MAT	Matsushiro	3.29	222	P	Pn	03 20 53.8	-0.5
MAT

MKAR	Makanchi Array	59.18	314	P	P	03 50 31.8	-0.2
	0.3nm,0.4s,baz=78,slow=14,SNR=3.1						
BVAR	Borovoye Array	67.28	321	P	P	03 51 25.2	+0.1
	0.5nm,0.4s,baz=106,slow=11,SNR=4.8						
YKA	Yellowknife Ar	78.99	28	P	P	03 52 33.3	-0.2
	0.6nm,0.5s,baz=293,slow=3.8,SNR=5.2						
ARCES	ARCESS Array B	83.52	342	P	P	03 52 57.0	-0.2
	1.8nm,0.8s,baz=75,slow=9.9,SNR=6.3						
NVAR	Mina Array Bea	83.87	52	P	P	03 53 00.7	+1.0
	1.0nm,0.5s,baz=245,slow=11,SNR=8.9						
FINES	FINESS Array B	87.86	335	P	P	03 53 16.8	-1.9
	1.1nm,0.6s,baz=84,slow=5.9,SNR=4.2						
PDAR	Pinedale Array	88.64	45	P	P	03 53 21.8	-1.0
	0.3nm,0.4s,baz=208,slow=1.7,SNR=3.6						
LPAZ	La Paz	147.70	93	PKPbc	PKPbc	04 00 15.1	+1.0
	1.2nm,0.4s,baz=11,slow=5.2,SNR=12						

NIED ***26*** *03:46:00, 43.°80N×147.°80E, h44km, Mw4.0 Best double couple: M₀1.23000×10¹⁵ NP1:φ₀=339.00000°, δ87.00000°, λ-38.00000°. NP2:φ₀=71.00000°, δ52.00000°, λ-176.00000°.*

IDC ***26*** *03:46:27.5±0.9, 44.°21N×148.°15E, h0km, mb3.9/12, mb1 4.1/16, mb1mx4.0/26, mbtmp3.9/16, ML3.9/4, MS3.1/3, Ms1 3.1/3, ms1mx2.7/31, Error ellipse: s-maj=26.8km s-min=15.8km az=156.0*

ISCJB ***26*** *03:46:31.5±0.8, 44.°13N±0.°06×148.°13E±0.°07, h41km±7km, mb4.1/21, Error ellipse: s-maj=11.9km s-min=5.4km az=139.0*

MOS ***26*** *03:46:31.3±0.9, 44.°20N×148.°15E, h39km, mb4.5/4, Error ellipse: s-maj=12.2km s-min=9.2km az=52.1*

NEIC ***26*** *03:46:31.8±2.2, 44.°24N×148.°13E, h26km±16km, mb4.4/7, Error ellipse: s-maj=11.6km s-min=6.0km az=148.0*

JMA ***26*** *03:46:32.1±0.3, 43.°82N×147.°80E, h0km, M4.7*

SKHL ***26*** *03:46:32.2±0.9, 44.°16N×148.°18E, h57km±1km, mb5.1/3*

ISC 26 03:46:33.1±0.7, 44.°17N±0.°06×148.°10E±0.°07, h36km±7km, n63, σ0°92/72, mb4.1/21, 1C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.07**	**351**	⇑*i*P	**Pn**	**03 46 50.5**	**-1.1**
KUR				AMB	AMB	03 46 51.3	
	380nm,0.6s						
KUR				AMB	AMB	03 46 51.3	
	420nm,0.6s						
KUR				AMB	AMB	03 46 51.3	
	610nm,0.6s						
KUR				*i* S	**Sn**	**03 47 04.9**	**-0.3**
KUR				A		03 47 05.4	
	3μm,2.0s						
KUR				A		03 47 05.4	
	6μm,2.0s						
KUR				A		03 47 09.5	
	2μm,0.5s						
KUR				A		03 47 09.5	
	2μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.62**	**266**	*i* PN	**Pn**	**03 46 58.6**	**-0.5**
YUK				*i* S	**Sn**	**03 47 17.8**	**-0.9**
YUK				pmax	pmax		
	comp=Z,1μm,2.2s						
YUK				pmax	pmax		
	comp=N,421nm,0.2s						
YUK				pmax	pmax		
	comp=E,610nm,0.2s						
YUK				pmax	pmax		
	comp=Z,1μm,0.2s						
YUK				smax			
	comp=E,3μm,0.7s						
YUK				smax			
	comp=N,365nm,0.3s						
YUK				smax			
	comp=E,3μm,0.2s						
YUK				smax			
	comp=N,5μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.62**	**266**	⇓*i* P	**Pn**	**03 46 58.6**	**-0.5**
YUK				AMB	AMB	03 47 03.8	
	comp=N,728nm,0.5s						
YUK				AMB	AMB	03 47 03.8	
	comp=N,1μm,0.5s						
YUK				*i* S	**Sn**	**03 47 17.8**	**-0.9**
YUK				A		03 47 25.5	
	comp=N,6μm,0.5s						
YUK				A		03 47 25.5	
	comp=N,5μm,0.5s						
NEM2	**Nemuro 2**	**1.89**	**246**	P	**Pn**	**03 47 01.2**	**-1.6**
NEM2				*e*S	**Sn**	**03 47 22.3**	**-3.1**
JRA	**Rausu**	**2.16**	**265**	P	**Pn**	**03 47 06.6**	**+0.1**
JNK	**Nakash**	**2.52**	**258**	P	**Pn**	**03 47 11.3**	**-0.1**
JNK				*e*S	**Sn**	**03 47 39.8**	**-1.0**
JAK	**Akkeshi**	**2.74**	**246**	P	**Pn**	**03 47 13.4**	**-1.1**
JTKR	**Abashiri--Toko**	**3.03**	**268**	P	**Pn**	**03 47 19.4**	**+0.9**
JAR	**Ashorobuto**	**3.26**	**256**	P	**Pn**	**03 47 22.1**	**+0.5**
JAR				*e*S	**Sn**	**03 47 59.0**	**-0.2**
JOB	**Onbets**	**3.35**	**249**	P	**Pn**	**03 47 22.6**	**-0.3**
JOB				*e*S	**Sn**	**03 47 59.8**	**-1.6**
JMP	**Maruseppu**	**3.42**	**269**	P	**Pn**	**03 47 25.1**	**+1.3**
JCH	**Churui**	**3.79**	**247**	P	**Pn**	**03 47 28.3**	**-0.6**
JKK2	**Kamakawa 2**	**3.87**	**267**	P	**Pn**	**03 47 32.1**	**+2.1**
ASAJ	**Asahikawa**	**3.96**	**271**	Pn	**Pn**	**03 47 33.0**	**+1.7**
	comp=N,8.1nm,0.3s,baz=86,slow=18,SNR=27						
ASAJ				Sn	**Sn**	**03 48 26.6**	**+10**
	comp=N,5.0nm,0.3s,baz=189,slow=31,SNR=3.2						
ASAJ				LR	LR	03 49 15.7	
	comp=N,273nm,19.3s,baz=141,slow=42						
ASAJ	**Asahikawa**	**3.96**	**271**	PN	**Pn**	**03 47 33.0**	**+1.7**
ASAJ						03 48 26.6	
ASAJ				pmax	pmax		
	comp=Z,8.0nm,0.3s						
ASAJ				smax			
	comp=N,5.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,273nm,19.3s						
JSE	**Soyaes**	**4.02**	**283**	P	**Pn**	**03 47 34.7**	**+2.6**
JFR	**Furan**	**4.12**	**258**	P	**Pn**	**03 47 34.8**	**+1.3**
ERM	**Erimo**	**4.21**	**241**	*e*Pn	**Pn**	**03 47 36.6**	**+1.8**
ERM				*e*Sn	**Sn**	**03 48 15.5**	**-7.2**
JNBK	**Urakawa-nobuka**	**4.34**	**246**	P	**Pn**	**03 47 36.5**	**0.0**
JWK2	**Keihoku**	**4.57**	**287**	P	**Pn**	**03 47 43.8**	**+4.2**
YSS	**Yuzh-Sakhalins**	**4.67**	**308**	*e*PN	**Pn**	**03 47 40.2**	**-0.8**
YSS	**Yuzh-Sakhalins**	**4.67**	**308**	*e*P	**Pn**	**03 47 41.5**	**+0.5**
SKR	**Severo-Kuril's**	**8.48**	**37**	*e*PN	**Pn**	**03 48 33.0**	**-0.2**
SKR				*e*		03 50 20.8	
SKR				pmax	pmax		
	comp=N,40nm,0.5s						
SKR				pmax	pmax		
	comp=Z,70nm,0.5s						
SKR	**Severo-Kuril's**	**8.48**	**37**	*e*P	**Pn**	**03 48 33.0**	**-0.2**
SKR				AMB	AMB	03 48 34.0	
	comp=Z,40nm,0.5s						
SKR				AMB	AMB	03 48 34.0	
	comp=Z,70nm,0.5s						
MJAR	**Matsushiro Arr**	**10.72**	**228**	Pn	**Pn**	**03 49 03.6**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=29,slow=14,SNR=2.1						
PETK	**Petropavlovsk-**	**10.96**	**32**	Pn	**Pn**	**03 49 04.2**	**-2.9**
	comp=Z,2.0nm,0.3s,baz=199,slow=11,SNR=23						
PETK				LR	LR	03 53 10.4	
	comp=Z,75nm,21.3s,baz=235,slow=37						
PETK	**Petropavlovsk-**	**10.96**	**32**	*e*PN	**Pn**	**03 49 07.6**	**+0.5**
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KSRS	**Korea Array**	**16.67**	**253**	Pn	**Pn**	**03 50 23.6**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=65,slow=11,SNR=5.9						
KSRS				LR	LR	03 57 33.5	
	comp=Z,62nm,18.7s,baz=338,slow=40						
KSRS	**Korea Array**	**16.67**	**253**	*e*P	**Pn**	**03 50 25.5**	**+1.8**
FX1	**Attu Island--F**	**18.67**	**53**	P	**Pn**	**03 50 47.4**	**-0.9**
	comp=Z,1.4nm,0.3s,baz=262,slow=4.5,SNR=12						
SONM	**Songino Array**	**28.95**	**292**	P	**P**	**03 52 29.2**	**+0.6**
	comp=Z,0.7nm,0.5s,mb3.6,baz=88,slow=8.4,SNR=4.8						
LZH	**Lanzhou**	**34.45**	**272**	*e*P	**P**	**03 53 18.0**	**+0.9**
LZH				pP	pP	03 53 24.0	-3.4
LZH				sP	sP	03 53 26.5	-5.3
LZH				pmax	pmax		
	comp=Z,31nm,1.2s,mb5.1						
LZH				pmax	pmax		
	comp=Z,86nm,4.0s						
BPAW	**Bear Paw Mtn.**	**38.97**	**38**	*e*P	**P**	**03 53 55.7**	**+0.5**
	comp=Z,3.1nm,0.6s,mb4.2						
COLD	**Coldfoot**	**39.42**	**33**	*e*P	**P**	**03 53 59.2**	**+0.3**
	comp=Z,4.8nm,0.4s,mb4.6						
COLA	**College**	**40.32**	**36**	*e*P	**P**	**03 54 07.2**	**+0.7**
COLA				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
COLA	**College**	**40.32**	**36**	*e*P	**P**	**03 54 07.2**	**+0.7**
	comp=Z,3.2nm,0.6s,mb4.2						
ZALV	**Zalesovo Beam**	**41.29**	**307**	P	**P**	**03 54 14.7**	**+0.1**
	comp=Z,0.6nm,0.5s,mb3.5,baz=95,slow=6.7,SNR=3.1						
EGAK	**Eagle**	**43.19**	**36**	*e*P	**P**	**03 54 29.7**	**-0.2**
	comp=Z,7.7nm,0.6s,mb4.6						
DAWY	**Dawson**	**44.05**	**37**	*e*P	**P**	**03 54 37.1**	**+0.3**
MK31	**Makanchi Array**	**45.00**	**298**	*e*P	**P**	**03 54 44.9**	**+0.3**
MKAR	**Makanchi Array**	**45.00**	**298**	P	**P**	**03 54 44.8**	**+0.2**
	comp=Z,1.2nm,0.5s,mb4.0,baz=74,slow=13,SNR=7.2						
MKAR	**Makanchi Array**	**45.00**	**298**	*e*P	**P**	**03 54 45.1**	**+0.5**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
INK	**Inuvik**	**45.69**	**31**	*e*P	**P**	**03 54 49.9**	**+0.1**
INK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
INK	**Inuvik**	**45.69**	**31**	*e*P	**P**	**03 54 49.9**	**+0.1**
	comp=Z,2.2nm,0.4s,mb4.4						
KURK	**Kurchatov**	**45.86**	**304**	*e*P	**P**	**03 54 50.5**	**-0.9**
KURK				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.6						
CMAR	**Chiang Mai Arr**	**48.30**	**254**	P	**P**	**03 55 10.7**	**-0.2**
	comp=Z,1.2nm,0.6s,mb4.1,baz=44,slow=7.0,SNR=5.2						
TKM2	**Tokmak 2**	**50.95**	**296**	*e*P	**P**	**03 55 31.3**	**+0.6**
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
TKM2	**Tokmak 2**	**50.95**	**296**	*e*P	**P**	**03 55 31.3**	**+0.6**
	comp=Z,1.7nm,0.6s,mb4.2						
RES	**Resolute Bay**	**54.36**	**17**	*e*P	**P**	**03 55 54.6**	**-0.9**
RES				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
RES	**Resolute Bay**	**54.36**	**17**	*e*P	**P**	**03 55 54.6**	**-0.9**
	comp=Z,1.7nm,0.5s,mb4.2						
YKA	**Yellowknife Ar**	**55.07**	**34**	P	**P**	**03 56 00.7**	**0.0**
	comp=Z,1.7nm,0.6s,mb4.2,baz=300,slow=6.9,SNR=8.6						
YKA	**Yellowknife Ar**	**55.07**	**34**	P	**P**	**03 56 00.7**	**-0.1**
FINES	**FINESS Array B**	**64.81**	**333**	P	**P**	**03 57 06.3**	**-1.2**
	comp=Z,1.0nm,0.5s,mb4.1,baz=18,slow=8.6,SNR=4.4						
FFC	**Flin Flon**	**64.95**	**37**	*i* P	**P**	**03 57 09.3**	**+0.7**
WRA	**Warramunga Arr**	**65.03**	**194**	P	**P**	**03 57 09.4**	**0.0**
	comp=Z,0.4nm,0.5s,mb3.7,baz=13,slow=7.0,SNR=4.2						
NVAR	**Mina Array Bea**	**66.77**	**59**	P	**P**	**03 57 21.2**	**+0.6**
	comp=Z,1.1nm,0.8s,mb3.9,baz=272,slow=8.6,SNR=4.5						
PDAR	**Pinedale Array**	**69.11**	**50**	P	**P**	**03 57 35.0**	**-0.3**
	comp=Z,0.5nm,0.6s,mb3.6,baz=308,slow=5.5,SNR=4.7						
AKASG	**Malin Array Be**	**71.64**	**324**	P	**P**	**03 57 50.1**	**-0.5**
	comp=Z,0.3nm,0.3s,mb3.7,baz=35,slow=5.3,SNR=3.2						
SCHQ	**Schefferville**	**76.99**	**20**	P	**P**	**03 58 20.9**	**-0.7**
	comp=Z,2.5nm,0.8s,mb4.2,baz=306,slow=8.7,SNR=5.1						
CLL	**Collm**	**77.25**	**333**	*e*P	**P**	**03 58 23.0**	**-0.2**
CLL	**Collm**	**77.25**	**333**	*e*P	**P**	**03 58 23.0**	**-0.2**
TXAR	**Lajitas Array**	**81.84**	**57**	P	**P**	**03 58 48.2**	**-0.3**
	comp=Z,1.0nm,0.7s,mb3.9,baz=291,slow=3.4,SNR=13						
TXAR	**Lajitas Array**	**81.84**	**57**	P	**P**	**03 58 48.2**	**-0.3**

ISCJB ***26*** *04:04:01.4±0.4, 32.°33N±0.°02×115.°29W±0.°03, h11km±3km, Error ellipse: s-maj=4.3km s-min=3.6km az=12.3*

NEIC ***26*** *04:04:03.4, 32.°31N×115.°32W, h5km, ML3.8(ECX), ML3.7(PAS), After ECX.*

ECX ***26*** *04:04:03.4±0.6, 32.°31N×115.°32W, h5km, MD3.7, ML3.8*

ISC 26 04:04:01.9±0.3, 32.°32N±0.°02×115.°31W±0.°03, h12km±3km, n32, σ0°90/57, 9C-10D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.10**	**1**	⇓*e*P	**Pg**	**04 04 04.3**	**-0.5**
CPBX				*e*S	**Sg**	**04 04 06.5**	**-0.4**
EMX	**El Mayor**	**0.33**	**171**	⇓*e*P	**Pg**	**04 04 09.0**	**+0.4**
EMX				*e*S	**Sg**	**04 04 13.8**	**+0.8**
EMX				⇑*e*		04 04 14.6	
	comp=E,8μm,0.5s						
EMX	**El Mayor**	**0.33**	**171**	⇓*e*P	**Pg**	**04 04 09.0**	**+0.4**
EMX				*e*S	**Sg**	**04 04 13.8**	**+0.8**
SGL	**Mount Signal**	**0.49**	**313**	⇓*i*P	**Pg**	**04 04 11.8**	**+0.4**
EMSC	**East Mesa**	**0.50**	**33**	⇑*e*P	**Pg**	**04 04 12.7**	**+1.0**
ERPC	**Ernies Place**	**0.52**	**325**	⇓*i*P	**Pg**	**04 04 13.2**	**+1.0**
COA	**Coachella**	**0.57**	**16**	⇓*e*P	**Pg**	**04 04 13.6**	**+0.6**
WESC	**Westside Schoo**	**0.57**	**321**	⇓*i*P	**Pg**	**04 04 13.6**	**+0.6**
YUH	**Yuha Desert**	**0.62**	**303**	⇓*i*P	**Pg**	**04 04 14.0**	**0.0**
COOK	**Cook Ranch**	**0.64**	**326**	⇓*e*P	**Pg**	**04 04 14.6**	**+0.2**
RDX	**Rancho Dawling**	**0.66**	**235**	⇑*e*P	**Pg**	**04 04 14.9**	**+0.1**
RDX				*e*S	**Sg**	**04 04 23.9**	**+0.4**
RDX				⇓*e*		04 04 25.8	
	comp=N,3μm,0.3s						
RDX	**Rancho Dawling**	**0.66**	**235**	⇑*e*P	**Pg**	**04 04 14.9**	**+0.1**
RDX				*e*S	**Sg**	**04 04 23.9**	**+0.4**
YMD	**Yuma Desert**	**0.69**	**69**	*e*P	**Pg**	**04 04 15.2**	**-0.1**
RMX	**La Rumorosa**	**0.71**	**294**	⇑*e*P	**Pg**	**04 04 15.8**	**0.0**
RMX				*e*S	**Sg**	**04 04 25.1**	**-0.1**
GLA	**Glamis**	**0.84**	**29**	*e*Pg	**Pg**	**04 04 17.4**	**-0.7**
GLA				*e*Sg	**Sg**	**04 04 29.2**	**+0.1**
ECBX	**El Chinero**	**0.87**	**166**	*e*P	**Pg**	**04 04 18.4**	**-0.2**
ECBX				*e*S	**Sg**	**04 04 30.6**	**+0.7**
CBX	**Cerro Bola**	**1.15**	**270**	⇑*e*P	**Pb**	**04 04 23.4**	**-0.3**
CBX				*e*S	**Sb**	**04 04 38.4**	**-0.2**
BAR	**Barrett**	**1.21**	**288**	*e*Pg	**Pg**	**04 04 23.8**	**-1.4**
BAR				*e*S	**Sb**	**04 04 40.3**	**-0.1**
SPX	**San Pedro Mart**	**1.27**	**186**	*e*P	**Pn**	**04 04 25.1**	**-0.4**
ECNX	**Esteban Cantu**	**1.28**	**239**	⇑*e*P	**Pn**	**04 04 25.3**	**-0.3**
ECNX				⇑*e*P		04 04 24.7	
ECNX				*e*S	**Sb**	**04 04 40.7**	**-1.6**
ECNX				*e*S	**Sb**	**04 04 42.4**	**+0.2**
PBX	**Punta Banda**	**1.33**	**245**	⇑*e*P	**Pn**	**04 04 26.1**	**-0.2**
PBX				*e*S	**Sb**	**04 04 44.2**	**+0.3**
PFO	**Pinyon Flat Ob**	**1.61**	**323**	*e*Pn	**Pn**	**04 04 28.6**	**-1.5**
LDFC	**Landfair**	**2.76**	**3**	*e*Pn	**Pn**	**04 04 46.3**	**+0.4**
MWC	**Mount Wilson**	**2.99**	**310**	*e*Pn	**Pn**	**04 04 48.6**	**-0.5**
MWC				*e*Pg	**Pg**	**04 04 57.8**	**-1.4**
MWC				*e*S	**Sn**	**04 05 28.8**	**+3.9**
PASC	**Pasadena Art C**	**3.04**	**308**	*e*Pn	**Pn**	**04 04 49.4**	**-0.4**
PASC				*e*Pg	**Pg**	**04 05 00.6**	**+0.4**
PASC				*e*S	**Sn**	**04 05 29.6**	**+3.5**
GSC	**Goldstone**	**3.23**	**338**	*e*Pn	**Pn**	**04 04 53.4**	**+1.0**
GSC				*e*Pg	**Pg**	**04 05 04.2**	**+0.3**
TUC	**Tucson**	**3.83**	**89**	*e*Pn	**Pn**	**04 04 58.8**	**-1.8**
TUC				*e*Pg	**Pg**	**04 05 11.9**	**-3.3**
TUC				*e*S	**Sn**	**04 05 52.1**	**+6.6**
ISA	**Isabella**	**4.25**	**323**	*e*Pn	**Pn**	**04 05 07.0**	**+0.6**
ISA				*e*Pg	**Pg**	**04 05 23.5**	**+0.2**
ISA				*e*S	**Sg**	**04 06 13.9**	**-4.5**
WUAZ	**Wupatki**	**4.57**	**45**	*e*Pn	**Pn**	**04 05 09.4**	**-1.4**
CCUT	**Cedar City**	**5.46**	**16**	*e*Pn	**Pn**	**04 05 23.8**	**+0.8**
CCUT				*e*Pg	**Pg**	**04 05 45.9**	**-0.6**
CCUT				*e*S	**Sg**	**04 07 05.3**	**+8.1**
MSU	**Marysvale**	**6.69**	**22**	*e*Pn	**Pn**	**04 05 36.2**	**-3.7**
MSU				*e*Pg	**Pg**	**04 06 07.4**	**-2.6**
MVCO	**Mesa Verde**	**7.43**	**47**	*e*Pn	**Pn**	**04 05 52.6**	**+2.5**
MVCO				*e*Sg		04 08 01.0	

CASC 26 04:08:13.1±1.1, 12.°80N×88.°92W, h34km±9km, MD3.7, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNVI	**San Vicente**	**0.82**	**5**	*e*P	Pn	04 08 28.3	+0.1
SNVI				*e*S	Sn	04 08 40.7	+1.6
LFRS	**El Faro**	**0.83**	**350**	*e*P	Pn	04 08 28.4	-0.1
LFRS				*e*S	Sn	04 08 40.9	+1.3
VSM	**San Miguel**	**0.89**	**45**	*e*P	Pn	04 08 29.6	+0.4
VSM				*e*P		04 08 29.7	
BLLM	**Bellamira**	**0.92**	**46**	*e*P	Pn	04 08 29.9	+0.2
BLLM				*e*S	Sn	04 08 42.0	+0.2
SNET	**Serv Nac Est T**	**0.94**	**341**	*e*P	Pn	04 08 29.8	-0.1
SNET				*e*S	Sn	04 08 42.7	+0.5
LBRS	**Las Brisas**	**0.95**	**353**	*e*P	Pn	04 08 30.3	+0.3
LBRS				*e*S	Sn	04 08 42.8	+0.5
LFU	**La Fuente**	**0.97**	**349**	*e*P	Pn	04 08 30.6	+0.3
LFU				*e*S	Sn	04 08 43.3	+0.4
BOQS	**Boqueron**	**1.00**	**339**	*e*P	Pn	04 08 31.2	+0.4
BOQS				*e*S	Sn	04 08 44.9	+1.2
CNCH	**Conchagua**	**1.16**	**66**	*e*P	Pn	04 08 32.7	-0.2
CNCH				*e*S	Sn	04 08 48.8	+1.2
CAHU	**Cacacuatique**	**1.19**	**35**	*e*P	Pn	04 08 34.3	+1.0
CAHU				*e*S	Sn	04 08 49.6	+1.3
SBLS	**San Blas**	**1.25**	**327**	*e*P	Pn	04 08 34.6	+0.5
SBLS				*e*S	Sn	04 08 51.6	+1.9
SNJE	**San Jose**	**1.26**	**328**	*e*P	Pn	04 08 34.5	+0.2
SNJE				*e*S	Sn	04 08 51.3	+1.2
RTR	**El Retiro**	**1.30**	**327**	*e*P	Pn	04 08 35.4	+0.5
RTR				*e*S	Sn	04 08 52.7	+1.5
RBDL	**Robledal**	**1.51**	**330**	*e*P	Pn	04 08 38.4	+0.7
MTO2	**Montecristo 2**	**1.65**	**345**	*e*P	Pn	04 08 39.9	+0.1
CRIN	**San Cristobal**	**1.82**	**93**	*e*P	Pn	04 08 41.9	-0.2
TGUH	**Tegucigalpa,Un**	**2.03**	**52**	*i* P	Pn	04 08 45.7	+0.7
COPN	**Copaltepe**	**2.35**	**105**	*e*P	Pn	04 08 48.3	-1.1
COPN				*e*S	Sn	04 09 16.7	-0.3
MOMN	**Momotombo**	**2.35**	**99**	*e*P	Pn	04 08 48.9	-0.4
XAVN	**Gruta Xavier**	**2.61**	**104**	*e*P	Pn	04 08 51.8	-1.1

IDC 26 04:21:47.0±4.4, 2.°38S×139.°47E, h0km, mb3.6/3, mb1 3.6/4, mb1mx3.5/14, mbtmp3.5/4, ML3.6/1, MS3.3/1, Ms1 3.3/1, ms1mx2.6/17, Error ellipse: s-maj=186.4km s-min=27.3km az=88.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.16**	**196**	P	Pn	04 26 00.4	-0.4
	0.2nm,0.3s,baz=17,slow=12,SNR=5.1						
FITZ	**Fitzroy Crossi**	**20.69**	**220**	LR	LR	04 35 03.9	
	comp=Z,81nm,20.4s,baz=225,slow=38						
ASAR	**Alice Springs**	**21.84**	**194**	P	P	04 26 41.1	-0.1
	0.6nm,0.6s,baz=15,slow=12,SNR=6.8						
MKAR	**Makanchi Array**	**69.99**	**322**	P	P	04 33 00.0	-0.4
	0.6nm,0.8s,baz=112,slow=11,SNR=4.8						
BVAR	**Borovoye Array**	**79.48**	**325**	P	P	04 33 56.4	+1.1
	0.6nm,0.5s,baz=112,slow=6.7,SNR=2.7						

IDC 26 04:55:02.5±4.4, 2.°51S×139.°83E, h0km, mb3.6/3, mb1 3.7/4, mb1mx3.5/14, mbtmp3.6/4, ML3.4/1, MS3.3/2, Ms1 3.3/2, ms1mx2.9/15, Error ellipse: s-maj=183.7km s-min=26.0km az=89.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.14**	**197**	P	Pn	04 59 15.3	-0.7
	0.1nm,0.3s,baz=18,slow=12,SNR=4.7						
CTA	**Charters Tower**	**18.56**	**161**	LR	LR	05 06 47.0	
	comp=Z,167nm,19.0s,baz=51,slow=38						
ASAR	**Alice Springs**	**21.80**	**195**	P	P	04 59 56.7	+0.4
	1.5nm,0.9s,baz=22,slow=10,SNR=8.9						
KSRS	**Korea Array**	**41.27**	**346**	LR	LR	05 18 30.8	
	comp=Z,18nm,18.2s,baz=225,slow=34						
MKAR	**Makanchi Array**	**70.32**	**322**	P	P	05 06 18.2	+0.2
	0.3nm,0.7s,baz=109,slow=7.8,SNR=3.2						
BVAR	**Borovoye Array**	**79.79**	**325**	P	P	05 07 12.7	+0.1
	0.6nm,0.5s,baz=114,slow=7.0,SNR=3.3						

DJA ***26*** *05:28:56, 3.°03S×99.°98E, h31km, MLv4.1/3*

IDC ***26*** *05:28:56.5±3.3, 2.°51S×100.°60E, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.7/21, mbtmp3.9/5, Error ellipse: s-maj=152.1km s-min=21.0km az=56.0*

ISCJB ***26*** *05:28:56.7±1.1, 3.°07S±0.°06×99.°95E±0.°07, h33km±9km, mb3.8/7, Error ellipse: s-maj=14.5km s-min=6.0km az=139.1*

NEIC ***26*** *05:29:02.0±1.2, 2.°43S×100.°73E, h35km, mb4.1/2, Error ellipse: s-maj=59.9km s-min=10.8km az=55.0*

ISC 26 05:28:58.1±1.1, 3.°02S±0.°06×99.°99E±0.°06, h30km±6km, n18, σ1°11/23, mb3.8/7, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.26**	**5**	P	**Pb**	**05 29 03.7**	**-1.4**
PPSI				S	**Sb**	**05 29 12.4**	**+2.6**
SISI	**Saibi**	**1.91**	**332**	P	**Pn**	**05 29 28.1**	**-0.6**
SISI				S	**Sn**	**05 29 51.0**	**-0.7**
PDSI	**Padang**	**2.15**	**13**	P	**Pn**	**05 29 30.3**	**-1.7**
PDSI				S	**Sn**	**05 29 59.1**	**+1.4**
SDSI	**Sungai Dareh**	**2.53**	**35**	P	**Pn**	**05 29 36.6**	**-0.6**
SDSI				S	**Sn**	**05 30 07.0**	**0.0**
PPI	**Padang Panjang**	**2.58**	**9**	P	**Pn**	**05 29 37.1**	**-0.8**
KSI	**Kapahiang**	**2.68**	**104**	P	**Pn**	**05 29 38.4**	**-0.8**
KSI				S	**Sn**	**05 30 11.0**	**+0.3**
MNAI	**Manna**	**3.25**	**114**	P	**Pn**	**05 29 45.8**	**-1.3**
MNAI				S	**Sn**	**05 30 24.7**	**-0.1**
BKNI	**Bangkinang**	**3.49**	**18**	P	**Pn**	**05 29 57.9**	**+7.5**
MDSI	**Maura Dua**	**4.43**	**109**	P	**Pn**	**05 30 04.1**	**+0.8**
CMAR	**Chiang Mai Arr**	**21.37**	**357**	P	**P**	**05 33 40.7**	**-2.6**
	0.8nm,0.5s,mb3.3,baz=185,slow=10.0,SNR=4.0						
WRA	**Warramunga Arr**	**37.50**	**119**	P	**P**	**05 36 10.1**	**+0.5**
	1.1nm,1.0s,mb3.6,baz=278,slow=7.6,SNR=5.6						

s-min=11.7km az=137.9
*IDC **26** 06:40:22.3±0.8, 32°.53N×137°.68E, h400km±11km, mb3.1/7, mb1 3.2/9, mb1mx3.0/26, mbtmp3.0/9, Error ellipse: s-maj=29.0km s-min=12.6km az=73.0*

ISC 26 06:40:22.8±0.6, 32°.63N±0°.08×137°.84E±0°.09, h406km±5km, n29, σ0°72/39, mb3.3/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TK02	**Tokai 2**	**1.31**	**357**	P	**Pn**	**06 41 16.4**	**+0.8**
JHJ	**Hachijo jima 2**	**1.71**	**73**	P	**Pn**	**06 41 18.8**	**+1.3**
	11nm,0.3s,baz=323,slow=20,SNR=2.8						
JHJ				S	**S**	**06 42 02.6**	**+0.7**
	28nm,0.3s,baz=252,slow=19,SNR=6.5						
JIE	**Ise**	**1.99**	**332**	P	**Pn**	**06 41 19.4**	**+0.3**
JWZ	**Kozaga**	**1.99**	**297**	P	**Pn**	**06 41 18.3**	**-0.9**
JKN2	**Miekihoku**	**2.07**	**321**	P	**Pn**	**06 41 19.5**	**-0.1**
HMMJ	**Hamamatsu 2**	**2.22**	**358**	P	**Pn**	**06 41 21.3**	**+0.7**
JOD2	**Odawara 2**	**2.82**	**21**	P	**Pn**	**06 41 25.3**	**+0.4**
JOD2				S	**S**	**06 42 15.9**	**+0.6**
JAI	**Aioi**	**3.06**	**293**	P	**Pn**	**06 41 26.2**	**-0.7**
BSO3	**Boso 3**	**3.11**	**45**	P	**Pn**	**06 41 27.0**	**-0.2**
BSO3				S	**S**	**06 42 18.4**	**-1.1**
BSO4	**Boso 4**	**3.14**	**41**	P	**Pn**	**06 41 27.7**	**+0.2**
BSO4				S	**S**	**06 42 19.8**	**-0.2**
JGM	**Miyama**	**3.19**	**343**	P	**Pn**	**06 41 28.7**	**+0.8**
BSO1	**Boso 1**	**3.31**	**52**	P	**Pn**	**06 41 27.9**	**-1.0**
JWT	**Wachi**	**3.33**	**323**	P	**Pn**	**06 41 29.1**	**0.0**
JHU	**Hanno**	**3.43**	**20**	P	**Pn**	**06 41 30.0**	**+0.1**
JHU				S	**S**	**06 42 24.3**	**-0.1**
JRY	**Ryogami san**	**3.49**	**14**	P	**Pn**	**06 41 31.1**	**+0.7**
JRY				eS	**S**	**06 42 25.6**	**+0.2**
MJAR	**Matsushiro Arr**	**3.91**	**4**	P	**Pn**	**06 41 34.5**	**+0.3**
	5.3nm,0.3s,baz=172,slow=9.9,SNR=28						
MJAR				S	**S**	**06 42 31.9**	**-0.4**
	0.7nm,0.3s,baz=191,slow=19,SNR=4.9						
MAJO	**Matsushiro**	**3.91**	**4**	ePn	**Pn**	**06 41 34.6**	**+0.4**
MAT	**Matsushiro**	**3.91**	**4**	P	**Pn**	**06 41 34.6**	**+0.3**
MAT				S	**S**	**06 42 31.4**	**-1.0**
MAT	**Matsushiro**	**3.91**	**4**	P	**Pn**	**06 41 34.6**	**+0.3**
MAT				eS	**S**	**06 42 31.4**	**-1.0**
JHO	**Hitachi**	**4.56**	**29**	P	**Pn**	**06 41 39.7**	**-0.8**
JHO				eS	**S**	**06 42 40.6**	**-3.2**
CBIJ	**Chichi jima**	**6.69**	**145**	S	**S**	**06 43 15.8**	**-9.4**
	27nm,0.3s,baz=287,slow=22,SNR=9.1						
KSRS	**Korea Array**	**9.44**	**303**	P	**P**	**06 42 33.3**	**-0.5**
	0.3nm,0.3s,baz=128,slow=12,SNR=3.9						
MKAR	**Makanchi Array**	**44.12**	**306**	P	**P**	**06 47 52.6**	**-0.3**
	0.5nm,0.5s,mb3.1,baz=87,slow=6.5,SNR=6.0						
BVAR	**Borovoye Array**	**51.45**	**314**	P	**P**	**06 48 48.5**	**+0.3**
	0.6nm,0.5s,mb3.1,baz=77,slow=7.6,SNR=4.2						
WRA	**Warramunga Arr**	**52.38**	**184**	P	**P**	**06 48 53.8**	**-1.6**
	0.6nm,0.3s,mb3.3,baz=358,slow=7.6,SNR=10						
ASAR	**Alice Springs**	**56.11**	**184**	P	**P**	**06 49 21.5**	**-0.3**
	0.5nm,0.5s,mb3.1,baz=12,slow=9.5,SNR=7.2						
ARCES	**ARCESS Array B**	**67.07**	**339**	P	**P**	**06 50 34.4**	**+0.9**
	0.8nm,0.5s,mb3.6,baz=54,slow=6.4,SNR=6.5						
YKA	**Yellowknife Ar**	**69.08**	**28**	P	**P**	**06 50 46.9**	**+1.0**
	0.3nm,0.5s,mb3.2,baz=301,slow=6.0,SNR=3.6						
FINES	**FINESS Array B**	**71.31**	**332**	P	**P**	**06 50 59.6**	**+0.2**
	1.4nm,0.5s,mb3.8,baz=83,slow=7.9,SNR=5.6						

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*IPEC **26** 06:40:55.7±0.2, 50°.03N×18°.52E, h0km, ML1.8/4, Error ellipse: s-maj=2.2km s-min=1.1km az=160.0*
*CSEM **26** 06:40:55.8±0.3, 50°.12N×18°.41E, h2km, ML2.5/6, Error ellipse: s-maj=5.6km s-min=3.2km az=175.0*
*PRU **26** 06:40:57.3, 50°.10N×18°.35E, h0km*

WAR 26 06:40:56.7, 50°.05N×18°.44E, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.28**	**222**	ePG	Pg	06 41 02.7	+0.7
OKC				eSG	Sg	06 41 06.5	+0.9
	comp=Z,50nm,0.6s						
OKC	**Ostrava-Krasne**	**0.28**	**222**	ePg	Pg	06 41 02.1	+0.1
	baz=50						
OKC				Sg	Sg	06 41 06.5	+0.9
	comp=Z,50nm,0.6s						
MORC	**Moravsky Berou**	**0.64**	**245**	ePg	Pg	06 41 08.8	-0.1
MORC				eSg	Sg	06 41 16.6	-0.5
	comp=Z,19nm,0.2s,baz=67						
OJC	**Ojcow**	**0.90**	**78**	ePg	Pg	06 41 11.9	-1.9
OJC				eSg	Sg	06 41 24.5	-0.9
OJC	**Ojcow**	**0.90**	**78**	ePg	Pg	06 41 11.8	-2.0
	baz=258						
OJC				eSg	Sg	06 41 24.5	-0.9
JAVC	**Velka Javorina**	**1.29**	**203**	ePg	Pg	06 41 22.0	+0.6
JAVC				eSg	Sg	06 41 39.9	+1.9
	comp=Z,8.5nm,0.5s						
NIE	**Niedzica**	**1.37**	**117**	ePg	Pg	06 41 23.4	+0.5
NIE				eSg	Sg	06 41 43.3	+2.6
NIE	**Niedzica**	**1.37**	**117**	ePg	Pg	06 41 23.4	+0.5
NIE				eSg	Sg	06 41 43.3	+2.6
DPC	**Dobruska-Polom**	**1.39**	**283**	ePG	Pg	06 41 22.5	-0.9
DPC				eSG	Sg	06 41 41.2	-0.2
	comp=Z,21nm,0.6s						
DPC	**Dobruska-Polom**	**1.39**	**283**	Pg	Pg	06 41 22.5	-0.9
DPC				eSg	Sg	06 41 41.0	-0.4
	baz=102						
VRAC	**Vranov**	**1.41**	**239**	ePg	Pg	06 41 22.0	-1.6
	baz=59						
VRAC				eSg	Sg	06 41 41.0	-0.8
	comp=Z,19nm,0.3s,baz=59						
KOLL	**Kolacno**	**1.47**	**181**	eSN	Sn	06 41 44.8	+0.5
KOLL	**Kolacno**	**1.47**	**181**	eSn	Sn	06 41 44.8	+0.5
VYHS	**Vyhne**	**1.58**	**170**	ePN	Pn	06 41 27.0	+1.1
VYHS				eSN	Sn	06 41 47.1	+0.2
VYHS	**Vyhne**	**1.58**	**170**	ePn	Pn	06 41 27.0	+1.1
VYHS				eSn	Sn	06 41 47.1	+0.2
UPC	**Upice**	**1.62**	**287**	eSG	Sg	06 41 48.5	-0.3
UPC	**Upice**	**1.62**	**287**	Sg	Sg	06 41 48.5	-0.3
KRUC	**Moravsky**	**1.65**	**234**	eSg	Sg	06 41 48.5	-1.3
	comp=Z,5.7nm,0.2s,baz=54						
STHS	**Stebnicka Huta**	**1.93**	**108**	ePN	Pn	06 41 34.2	+3.5
STHS				eSN	Sn	06 42 00.5	+4.9
STHS	**Stebnicka Huta**	**1.93**	**108**	ePn	Pn	06 41 34.2	+3.5
STHS				eSn	Sn	06 42 00.5	+4.9
PRU	**Pruhonice**	**2.51**	**270**	eSG	Sg	06 42 13.8	-3.5
	comp=Z,3.1nm,0.6s						
KHC	**Kasperske Hory**	**3.29**	**256**	eSG	Sg	06 42 39.9	-2.4
	comp=Z,2.9nm,0.4s						
KHC	**Kasperske Hory**	**3.29**	**256**	Sg	Sg	06 42 39.9	-2.4
	comp=Z,2.9nm,0.4s						

MEX 26 06:50:18.9±0.7, 16°.18N×92°.26W, h64km±14km, MD3.7, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCX	**San Cristobal**	**0.66**	**327**	*i* P	Pn	06 50 31.5	-1.5
SCX				*i* S	Sn	06 50 42.3	-1.0
TGIG		**1.02**	**306**	*i* P	Pn	06 50 36.5	-0.9
TGIG				*i* S	Sn	06 50 50.1	-1.0
PCIG		**1.04**	**243**	*i* P	Pn	06 50 36.0	-1.5
PCIG				*i* S	Sn	06 50 49.2	-2.3
THIG		**1.26**	**180**	eP	Pn	06 50 39.5	-1.0
THIG				*i* S	Sn	06 50 56.1	-0.7
VHO	**Vista Hermosa**	**4.38**	**282**	*i* P	Pn	06 51 22.4	-0.5
VHO				*i* S	Sn	06 52 10.8	-1.9
UTMO	**Huajuapan**	**5.55**	**288**	eP	Pn	06 51 39.9	+0.9
UTMO				*i* S	Sn	06 52 41.0	-0.5

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*NIED **26** 06:51:00, 39°.10N×141°.00E, h5km, Mw4.4 Best double couple: M0=4.39000×10^15 NP1:φs=14.00000°, δ52.00000°, λ90.00000°. NP2:φs=193.00000°, δ38.00000°, λ90.00000°.*
*BJI **26** 06:51:07.5, 38°.91N×141°.41E, h18km, mB4.8/24, mb4.6/36, Ms4.2/30, Ms7 4.0/28*
*ISCJB **26** 06:51:10.5±0.5, 39°.10N±0°.02×140°.88E±0°.02, h8km±3km, mb4.7/100, MS3.9/26, Error ellipse: s-maj=3.6km s-min=2.8km az=160.6*
*IDC **26** 06:51:10.3±0.5, 39°.12N×140°.87E, h0km, mb4.4/20, mb1 4.6/23, mb1mx4.5/26, mbtmp4.4/23, ML3.7/2, MS3.7/14, Ms1 3.7/14, ms1mx3.6/31, Error ellipse: s-maj=15.4km s-min=10.7km az=115.0*
*NEIC **26** 06:51:11.1, 39°.08N×140°.97E, h7km, mb4.8/41, MW4.4(NIED), After JMA.*
NEIC Recorded [3 JMA] in Iwate and [2 JMA] in Akita and Miyagi.

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*JMA **26** 06:51:11.1, 39°.08N×140°.97E, h7km±1km, M4.6 Broadband fault plane solution: P waves. NP1: φs=242.00000°, δ47.00000°, λ-126.00000°. NP2: φs=109.00000°, δ54.00000°, λ-58.00000°. Principal axes: T Plg4.0000°, Azm177.0000°; N Plg26.0000°, Azm269.0000°; P Plg64.0000°, Azm79.0000°;*
JMA Felt III J1.
*MOS **26** 06:51:14.8±0.8, 39°.28N×140°.77E, h33km, mb5.0/36 Error ellipse: s-maj=8.9km s-min=5.1km az=100.9*
*SZGRF **26** 06:51:16.0, 38°.79N×140°.49E, h33km, mb4.8, Eastern Honshu, Japan*

ISC 26 06:51:11.3±0.5, 39°.10N±0°.02×140°.89E±0°.02, h4km±2km, h18km±4.3km: pP-P, n501, σ0°67/510, mb4.7/100, MS3.9/26, 122C-119D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.30**	**120**	⇑P	**Pg**	**06 51 15.8**	**-1.2**
JMK				S	**Sg**	**06 51 19.2**	**-1.7**
JRG	**Rokugo**	**0.35**	**326**	⇑P	**Pg**	**06 51 19.2**	**+1.0**
JRG				eS	**Sg**	**06 51 24.9**	**+2.1**
JYK	**Kaneyama**	**0.45**	**246**	⇑P	**Pg**	**06 51 21.0**	**+1.0**
JYK				eS	**Sg**	**06 51 27.8**	**+1.9**
JOM	**Ohasama**	**0.48**	**40**	⇑P	**Pg**	**06 51 20.0**	**-0.6**
JOM				eS	**Sg**	**06 51 26.5**	**-0.4**
OFUJ	**Ofunato**	**0.60**	**92**	⇓P	**Pg**	**06 51 21.6**	**-1.3**
JIO	**Ouri**	**0.74**	**151**	⇑P	**Pg**	**06 51 24.1**	**-1.4**
JIO				eS	**Sg**	**06 51 33.2**	**-1.8**
JOU	**Okura**	**0.76**	**194**	⇑P	**Pg**	**06 51 25.6**	**-0.2**
JOU				S	**Sg**	**06 51 35.7**	**+0.1**
MAJO	**Matsushiro**	**3.32**	**221**	eP	**Pn**	**06 52 05.4**	**+1.4**
MAT	**Matsushiro**	**3.32**	**221**	P	**Pn**	**06 52 05.3**	**+1.3**
MAT				S	**Sn**	**06 52 45.3**	**+1.3**
MJAR	**Matsushiro Arr**	**3.32**	**221**	Pn	**Pn**	**06 52 05.4**	**+1.4**
	3.6nm,0.3s,baz=27,slow=13,SNR=29						
MJAR				Pg	**Pg**	**06 52 10.2**	**-4.8**
	8.2nm,0.3s,baz=30,slow=12,SNR=54						
MJAR				Lg		06 52 54.1	
	4.4nm,0.3s,baz=34,slow=14,SNR=4.4						
MJAR				LR	LR	06 53 32.2	
	comp=Z,527nm,20.7s,baz=100,slow=43						
ERM	**Erimo**	**3.38**	**30**	*i* P	**Pn**	**06 52 04.4**	**-0.4**
ERM	**Erimo**	**3.38**	**30**	ePn	**Pn**	**06 52 06.1**	**+1.3**
ASAJ	**Asahikawa**	**5.17**	**14**	Pn	**Pn**	**06 52 29.9**	**+0.4**
	baz=220,slow=14,SNR=1.4						
JHJ	**Hachijo jima 2**	**6.04**	**189**	Pn	**Pn**	**06 52 42.1**	**+0.8**
	15nm,0.3s,baz=49,slow=11,SNR=3.4						
JHJ				Sn	**Sn**	**06 53 51.8**	**+0.9**
	5.6nm,0.3s,baz=54,slow=19,SNR=2.5						
YSS	**Yuzh-Sakhalins**	**7.96**	**9**	eP	**Pn**	**06 53 08.5**	**+0.7**
YSS				MLR	MLR		
	comp=Z,500nm,14.0s						
YSS	**Yuzh-Sakhalins**	**7.96**	**9**	ePn	**Pn**	**06 53 08.6**	**+0.9**
MDJ	**Mudanjiang**	**10.07**	**307**	P	**Pn**	**06 53 43.8**	**+7.2**
MDJ				pmax	pmax		
	comp=Z,15nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,76nm,3.5s						
MDJ				LR	LR		
	comp=N,200nm,13.5s						
MDJ				LR	LR		
	comp=E,360nm,11.0s						
MDJ				LR	LR		
	comp=Z,650nm,15.2s						
KSRS	**Korea Array**	**10.33**	**265**	Pn	**Pn**	**06 53 44.0**	**+3.8**
	comp=Z,3.7nm,0.3s,baz=80,slow=14,SNR=136						
KSRS				Sn	**Sn**	**06 55 42.2**	**+5.9**
	comp=Z,1.8nm,0.3s,baz=75,slow=24,SNR=12						
KSRS				LR	LR	06 57 25.7	
	comp=Z,420nm,18.1s,baz=163,slow=36						
KSRS	**Korea Array**	**10.33**	**265**	P	**Pn**	**06 53 44.1**	**+3.9**
KSRS						06 55 42.3	
KSRS				pmax	pmax		
	comp=Z,4.0nm,0.3s						
KSRS				smax			
	comp=N,2.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,420nm,18.1s						
CBIJ	**Chichi jima**	**12.02**	**174**	LR	LR	06 58 27.5	
	comp=Z,137nm,20.0s,baz=343,slow=36						
KLR	**Kul'dur**	**12.05**	**330**	eP	**Pn**	**06 54 03.8**	**0.0**
KLR				pmax	pmax		
	comp=E,130nm,2.0s						
KLR				pmax	pmax		
	comp=Z,120nm,2.0s						
CN2	**Changchun**	**12.50**	**297**	eP	**Pn**	**06 54 14.8**	**+5.0**
CN2				ePP		06 54 18.0	
CN2				eSP		06 54 21.3	
CN2				eS	**Sn**	**06 56 30.5**	**+1.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,500nm,12.0s						
CN2				LR	LR		
	comp=E,300nm,12.0s						
CN2				LR	LR		
	comp=Z,300nm,15.0s						
PETK	**Petropavlovsk-**	**18.16**	**34**	LR	LR	07 01 30.7	
	comp=Z,113nm,21.0s,baz=60,slow=34						
BJI	**Beijing**	**19.07**	**281**	P	**Pn**	**06 55 32.8**	**-2.5**
BJI				S	**Sn**	**06 59 05.5**	**-3.7**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.4s						
BJI				LR	LR		
	comp=N,240nm,11.2s						
BJI				LR	LR		
	comp=E,520nm,11.8s						
BJI				LR	LR		
	comp=Z,190nm,14.3s						
NJ2	**Nanjing**	**19.23**	**255**	eP	**Pn**	**06 55 37.3**	**0.0**
NJ2				pP	pP	06 55 41.0	+3.4
NJ2				sP	sP	06 55 44.8	+6.7
NJ2				PP		06 55 55.0	
NJ2				S	**Sn**	**06 59 07.5**	**-5.7**
NJ2				pmax	pmax		
	comp=Z,20nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,240nm,3.9s						
NJ2				LR	LR		
	comp=N,100nm,14.3s						
NJ2				LR	LR		
	comp=E,190nm,9.8s						
NJ2				LR	LR		
	comp=Z,140nm,16.3s						
CLNS	**Chul'man**	**20.63**	**335**	eP	**P**	**06 55 51.7**	**+0.2**
CLNS				pmax	pmax		
	comp=Z,17nm,0.9s						
CLNS				pmax	pmax		
	comp=N,13nm,0.8s						
CLNS				MLR	MLR		
	comp=Z,161nm,16.0s,MS3.5						
CLNS				MLR	MLR		
	comp=N,139nm,13.0s,MS3.7						
CLNS				MLR	MLR		
	comp=E,204nm,16.0s,MS3.7						
HHC	**Hu-ho-hao-te**	**22.50**	**284**	eP	**P**	**06 56 11.8**	**+0.1**
HHC				pP		06 56 16.0	
HHC				PP		06 56 38.3	
HHC				S	**S**	**07 00 12.0**	**-7.3**
HHC				pmax	pmax		
	comp=Z,20nm,0.7s,mb4.7						
HHC				pmax	pmax		
	comp=Z,78nm,5.2s						
HHC				LR	LR		
	comp=N,230nm,12.8s,MS4.2						
HHC				LR	LR		
	comp=E,540nm,14.6s,MS4.2						
HHC				LR	LR		
	comp=Z,570nm,14.6s,MS4.1						
WHN	**Wuhan**	**23.34**	**257**	P	**P**	**06 56 24.0**	**+3.3**
WHN				S	**S**	**07 00 26.0**	**-7.8**
WHN				LR	LR		
	comp=N,540nm,14.4s,MS4.4						
WHN				LR	LR		
	comp=E,680nm,13.6s,MS4.4						
WHN				LR	LR		
	comp=Z,830nm,15.1s,MS4.3						
YAK	**Yakutsk**	**23.96**	**347**	eP	**P**	**06 56 24.3**	**-2.1**
YAK				e*PP		06 56 30.9	
YAK				ePPP		06 57 02.6	
YAK				e		07 00 02.6	
YAK				eS	**S**	**07 00 42.5**	**-0.8**
YAK				eSSS		07 01 37.9	
YAK				pmax	pmax		
	comp=Z,53nm,1.1s,mb4.9						
YAK				pmax	pmax		
	comp=N,24nm,1.0s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.0s						
YAK				smax			
	comp=N,61nm,2.0s						
YAK				smax			
	comp=E,52nm,1.8s						
YAK				MLR	MLR		
	comp=Z,133nm,14.0s,MS3.6						
YAK				MLR	MLR		
	comp=E,38nm,13.0s,MS3.6						
YAK				MLR	MLR		
	comp=N,120nm,12.0s,MS3.6						
ULN	**Ulaanbaatar**	**25.90**	**301**	eP	**P**	**06 56 43.8**	**-0.3**
ULN				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.1						
ULN	**Ulaanbaatar**	**25.90**	**301**	eP	**P**	**06 56 43.8**	**-0.3**
	comp=Z,8.9nm,1.3s,mb4.1						
FX1	**Attu Island--F**	**26.06**	**47**	P	**P**	**06 56 45.5**	**0.0**
	comp=Z,15nm,0.8s,mb4.6,baz=315,slow=2.9,SNR=9.1						
FX1				LR	LR	07 06 34.5	
	comp=Z,62nm,18.3s,MS3.2,baz=108,slow=36						
SONM	**Songino Array**	**26.33**	**301**	P	**P**	**06 56 47.8**	**-0.3**
	comp=Z,1.4nm,0.6s,mb3.6,baz=110,slow=9.3,SNR=6.3						
SONM				LR	LR	07 07 26.5	
	comp=Z,172nm,20.4s,MS3.6,baz=296,slow=37						
ENH	**Enshi**	**27.18**	**261**	eP	**P**	**06 56 55.7**	**-0.1**
	comp=Z,17nm,0.8s,mb4.6						
ENH				ePcP	PcP	07 00 14.9	-1.3
LZH	**Lanzhou**	**29.38**	**276**	eP	**P**	**06 57 07.0**	**-8.5**
LZH				pP	pP	06 57 10.0	-6.7
LZH				sP	sP	06 57 13.5	-3.7
LZH				PP	PP	06 58 01.3	-20
LZH				eS	**S**	**07 01 58.0**	**-12**
LZH				sS	sS	07 03 04.5	+53
LZH				SS	SS	07 03 28.0	-46
LZH				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.7						
LZH				pmax	pmax		
	comp=Z,73nm,4.0s						
LZH				LR	LR		
	comp=E,620nm,12.0s						
LZH				LR	LR		
	comp=Z,770nm,13.0s,MS4.5						
GYA	**Guiyang**	**31.23**	**257**	P	**P**	**06 57 32.5**	**+0.6**
GYA				pP	pP	06 57 41.8	+8.7
GYA				PP	PP	06 58 36.0	-6.3
GYA				PcP	PcP	07 00 28.0	+1.5
GYA				S	**S**	**07 02 36.5**	**-2.4**
GYA				ScP	ScP	07 04 07.5	-2.7
GYA				SS	SS	07 04 22.0	-30
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
GYA				pmax	pmax		
	comp=Z,110nm,4.8s						
GYA				LR	LR		
	comp=N,480nm,15.3s,MS4.4						
GYA				LR	LR		
	comp=E,430nm,16.4s,MS4.4						
GYA				LR	LR		
	comp=Z,440nm,15.8s,MS4.2						
CD2	**Chengdu**	**31.32**	**266**	eP	**P**	**06 57 33.3**	**+0.6**
CD2				pP	pP	06 57 40.5	+6.6
CD2				sP	sP	06 57 44.5	+10
CD2				PP	PP	06 58 37.0	-6.3
CD2				S	**S**	**07 02 36.8**	**-3.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
CD2				pmax	pmax		
	comp=Z,30nm,4.8s						
CD2				LR	LR		
	comp=N,160nm,14.2s,MS4.0						
CD2				LR	LR		
	comp=E,180nm,16.2s,MS4.0						
CD2				LR	LR		
	comp=Z,150nm,13.8s,MS3.8						
BILL	**Bilibino**	**32.17**	**18**	eP	**P**	**06 57 38.5**	**-1.2**
BILL				pmax	pmax		
	comp=Z,14nm,2.1s,mb4.4						
BILL				MLR	MLR		
	comp=Z,100nm,18.0s,MS3.5						
TIXI	**Tiksi**	**33.19**	**353**	eP	**P**	**06 57 46.5**	**-2.1**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
TIXI				MLR	MLR		
	comp=Z,106nm,14.0s,MS3.7						
TIXI	**Tiksi**	**33.19**	**353**	eP	**P**	**06 57 47.5**	**-1.1**
	comp=Z,3.8nm,0.9s,mb4.3						
QIZ	**Qiongzhong**	**33.47**	**242**	P	**P**	**06 57 48.3**	**-3.2**
QIZ				S	**S**	**07 03 07.0**	**-6.8**
QIZ				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.5						
QIZ				pmax	pmax		
	comp=Z,87nm,3.5s						
QIZ				LR	LR		
	comp=N,260nm,3.4s						
QIZ				LR	LR		
	comp=Z,190nm,18.3s,MS3.9						
KMI	**Kunming**	**34.93**	**258**	P	**P**	**06 58 05.0**	**+0.8**
KMI				pP	pP	06 58 07.5	+2.1
KMI				PP	PP	06 59 22.3	-1.0
KMI				S	**S**	**07 03 34.5**	**-1.8**
KMI				SS	SS	07 05 47.3	-20
KMI				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
KMI				pmax	pmax		
	comp=Z,68nm,3.5s						
KMI				LR	LR		
	comp=N,210nm,13.8s,MS4.2						
KMI				LR	LR		
	comp=E,220nm,16.1s,MS4.2						
KMI				LR	LR		
	comp=Z,190nm,17.8s,MS3.9						
WMQ	**Urumqi**	**39.57**	**295**	P	**P**	**06 58 44.0**	**+0.6**
FALS	**False Pass**	**40.00**	**48**	eP	**P**	**06 58 46.5**	**-0.3**
ZAA0	**Zalesovo Array**	**40.24**	**311**	eP	**P**	**06 58 48.2**	**-0.6**
ZAA0				ePcP	PcP	07 00 52.0	-0.6
ZALV	**Zalesovo Beam**	**40.24**	**311**	P	**P**	**06 58 48.2**	**-0.6**
	comp=Z,11nm,0.9s,mb4.6,baz=85,slow=7.6,SNR=32						
ZALV				PcP	PcP	07 00 52.0	-0.6
	comp=Z,2.0nm,0.5s,baz=94,slow=2.9,SNR=4.9						
ZALV				LR	LR	07 16 01.8	
	comp=Z,94nm,20.4s,MS3.6,baz=70,slow=37						
ZALV	**Zalesovo Beam**	**40.24**	**311**	P	**P**	**06 58 48.3**	**-0.5**
ZALV						07 00 52.0	
NVS	**Novosibirsk**	**41.13**	**312**	*i* P	**P**	**06 58 55.3**	**-0.9**
CHTO	**Chiang Mai**	**41.45**	**253**	eP	**P**	**06 58 58.7**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.3						
CHTO	**Chiang Mai**	**41.45**	**253**	eP	**P**	**06 58 58.7**	**-0.5**
	comp=Z,7.3nm,0.9s,mb4.3						
CMAR	**Chiang Mai Arr**	**41.67**	**253**	P	**P**	**06 59 02.1**	**+1.1**
	comp=Z,2.1nm,0.7s,mb3.9,baz=45,slow=6.0,SNR=6.6						
CMAR				PcP	PcP	07 00 58.1	+0.3
	comp=Z,0.6nm,0.3s,baz=18,slow=3.1,SNR=4.0						
CMAR				LR	LR	07 18 35.7	
	comp=Z,64nm,18.4s,MS3.5,baz=180,slow=40						
CMAR	**Chiang Mai Arr**	**41.67**	**253**	P	**P**	**06 59 02.1**	**+1.1**
CMAR						07 00 58.2	
MK31	**Makanchi Array**	**42.70**	**300**	eP	**P**	**06 59 08.3**	**-0.8**
MKAR	**Makanchi Array**	**42.70**	**300**	P	**P**	**06 59 08.7**	**-0.4**
	comp=Z,5.8nm,0.8s,mb4.3,baz=80,slow=14,SNR=37						
MKAR				LR	LR	07 17 33.4	
	comp=Z,99nm,18.2s,MS3.7,baz=352,sl

comp=Z,45nm,0.7s,mb5.5
PKI Pulchoki 47.11 273 *e*P P 06 59 44.9 +0.4
comp=Z,9.3nm,0.6s,mb4.9
PKIN Phulchoki 47.12 273 *e*P P 06 59 45.1 +0.5
comp=Z,15nm,0.6s,mb5.1
DMN Daman 47.33 274 *e*P P 06 59 46.2 0.0
comp=Z,30nm,0.9s,mb5.2
TKM2 Tokmak 2 48.31 297 *e*P P 06 59 54.2 +0.6
TKM2 pmax pmax
comp=Z,39nm,0.8s,mb5.5
TKM2 Tokmak 2 48.31 297 *e*P P 06 59 54.1 +0.5
comp=Z,38nm,0.8s,mb5.5
BVAR Borovoye Array 48.89 311 P P 06 59 57.5 -0.5
comp=Z,2.8nm,0.6s,mb4.5,baz=76,slow=8.4,SNR=16
BVAR PcP PcP 07 01 22.1 -0.2
comp=Z,2.5nm,0.7s,baz=90,slow=3.2,SNR=5.5
BRVK Borovoye 48.95 311 *e*P P 06 59 57.8 -0.6
BRVK pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
BRVK Borovoye 48.95 311 *e*P P 06 59 57.8 -0.6
comp=Z,8.6nm,1.0s,mb4.7
KSH Kashi 49.22 292 *e*P P 07 00 05.0 +4.4
KSH pP pP 07 00 09.5 +7.6
KSH sP sP 07 00 12.0 +10
KSH PcP PcP 07 01 26.8 +3.1
KSH PP PP 07 02 00.0 +5.8
KSH ScP ScP 07 05 20.3 +0.7
KSH PcS PcS 07 05 22.0 +1.9
KSH S **S 07 07 11.5 +4.6**
KSH ScS ScS 07 09 53.3 -0.2
KSH SS SS 07 10 39.8 +1.9
KSH pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
KSH pmax pmax
comp=Z,73nm,3.0s
KSH LR LR
comp=N,190nm,8.8s
KSH LR LR
comp=E,120nm,7.7s
KSH LR LR
comp=Z,76nm,4.6s
UCH Uchtor 49.30 296 *e*P P 07 00 02.3 +1.1
comp=Z,582nm,0.7s
MENT Mentasta 49.58 36 *e*P P 07 00 03.9 +0.8
EKS2 Erkin-Say 49.66 297 *e*P P 07 00 04.1 +0.1
comp=Z,8.5nm,0.9s,mb4.8
KAKA Kakadu 52.14 190 *e*P P 07 00 22.1 -0.7
INK Inuvik 52.74 28 *e*P P 07 00 27.1 +0.3
INK pmax pmax
comp=Z,8.0nm,0.9s
INK Inuvik 52.74 28 *e*P P 07 00 27.1 +0.4
comp=Z,7.5nm,0.9s,mb4.6
HYT Haines Junctio 52.90 37 *e*P P 07 00 29.1 +1.1
SVE Sverdlovsk 53.34 318⇑*e*P P 07 00 31.7 +0.4
SVE pmax pmax
comp=Z,19nm,0.9s,mb5.0
ARU Arti 54.55 317 *d i*P P 07 00 39.8 -0.4
ARU 07 02 39.8
ARU S **S 07 08 17.8 -2.0**
ARU SS SS 07 11 51.3 -10
ARU pmax pmax
comp=Z,12nm,0.8s,mb5.0
ARU Arti 54.55 317 *e*P P 07 00 39.7 -0.4
comp=Z,15nm,1.0s,mb5.0
KBL Kabul 56.31 289 *e*P P 07 00 53.0 -0.2
KBL pmax pmax
comp=Z,23nm,0.9s,mb5.2
KBL Kabul 56.31 289 *e*P P 07 00 53.0 -0.3
comp=Z,23nm,0.9s,mb5.2
WRAB Tennant Creek 59.04 187 *e*P P 07 01 10.9 -1.5
WRAB pmax pmax
comp=Z,12nm,0.8s,mb5.0
WRAB Tennant Creek 59.04 187 *e*P P 07 01 10.9 -1.4
comp=Z,12nm,0.8s,mb5.0
WRA Warramunga Arr 59.05 187 P P 07 01 11.2 -1.3
comp=Z,12nm,0.8s,mb5.0,baz=4.6,slow=7.3,SNR=131
RES Resolute Bay 60.70 15 *e*P P 07 01 22.7 -0.5
RES pmax pmax
comp=Z,11nm,0.9s,mb5.0
RES Resolute Bay 60.70 15 *e*P P 07 01 22.7 -0.6
comp=Z,11nm,0.9s,mb5.0
ARCES ARCESS Array B 61.92 339 P P 07 01 31.0 -0.5
comp=Z,2.2nm,0.8s,mb4.4,baz=41,slow=8.0,SNR=4.5
ARCES LR LR 07 33 06.6
comp=Z,68nm,18.1s,MS3.9,baz=26,slow=41
ARCES ARCESS Array B 61.92 339 P P 07 01 31.0 -0.5
ARCES LR LR 07 33 06.6
YKA Yellowknife Ar 62.23 31 P P 07 01 33.0 -0.7
comp=Z,0.6nm,0.8s,mb3.8,baz=300,slow=6.8,SNR=4.0
YKA Yellowknife Ar 62.23 31 P P 07 01 33.0 -0.7
ASAR Alice Springs 62.78 187 P P 07 01 37.0 -0.8
comp=Z,6.5nm,0.8s,mb4.8,baz=11,slow=6.9,SNR=53
DAG Danmarks Havn 63.68 355⇓*i*P P 07 01 42.4 -0.8
comp=Z,8.2nm,0.8s,mb4.8
JOF Joensuu 63.95 331 *e*P P 07 01 43.7 -1.4
JOF pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
JOF Joensuu 63.95 331 *e*p P 07 01 43.7 -1.4
comp=Z,9.2nm,0.9s,mb4.8
JOF Joensuu 63.95 331 *e*p P 07 01 43.7 -1.4
comp=Z,9.2nm,0.9s,mb4.8
NLWA Neilton Lookou 65.63 48 ⇓P P 07 01 56.7 +0.3
baz=65
NLWA Neilton Lookou 65.63 48 *e*P P 07 01 56.6 +0.3
comp=Z,12nm,1.0s,mb4.9
OBN Obninsk 66.20 323 *e*P P 07 02 00.4 +0.5
OBN pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
KAF Kangasniemi 66.29 332 *e*P P 07 01 59.2 -1.1
KAF pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
KAF Kangasniemi 66.29 332 *e*p P 07 01 59.2 -1.1
comp=Z,6.8nm,0.8s,mb4.7
KAF Kangasniemi 66.29 332 *e*p P 07 01 59.2 -1.1
comp=Z,6.8nm,0.8s,mb4.7
JCW Jim Creek 66.31 46 *e*P P 07 02 02.0 +1.3
FINES FINESS Array B 66.80 332 P P 07 02 03.0 -0.6
comp=Z,11nm,0.8s,mb4.9,baz=40,slow=7.4,SNR=16
FINES LR LR 07 33 15.0
comp=Z,77nm,18.8s,MS3.9,baz=349,slow=38
FINES FINESS Array B 66.80 332 P P 07 02 03.0 -0.6
FINES LR LR 07 33 15.1
EDM Edmonton 67.99 39 *e*P P 07 02 10.5 -0.7
SUMG Summit 68.62 360 *e*P P 07 02 14.7 -0.2
SUMG Summit 68.62 360⇑*i*P P 07 02 15.2 +0.3
comp=Z,14nm,0.8s,mb4.9
KIV Kislovodsk 69.25 310 *e*P P 07 02 20.2 +0.9
KIV pmax pmax
comp=Z,39nm,0.9s,mb5.3
KIV MLR MLR
comp=Z,41nm,18.0s,MS3.7
KIV Kislovodsk 69.25 310 *e*P P 07 02 20.1 +0.7
K05A Summer Lake 69.96 51 ⇑P P 07 02 24.3 +0.6
baz=70
SCO Scoresbysund 70.02 354 *i*P P 07 02 23.3 -0.3
comp=Z,3.9nm,0.9s,mb4.3
WDC Whiskeytown Da 70.17 54 *e*P P 07 02 25.9 +0.9
WDC pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
WDC Whiskeytown Da 70.17 54 *e*P P 07 02 25.9 +0.9
comp=Z,3.2nm,0.9s,mb4.2
B13A Whitefish 70.31 43 ⇑P P 07 02 26.1 +0.4
baz=70
G09A Cove 70.31 47 ⇓P P 07 02 26.1 +0.3
baz=70
A14A Double T Ranch 70.50 42 ⇓P P 07 02 27.1 +0.2
baz=70
STKA Stephens Creek 70.62 179 P P 07 02 28.8 +1.2
comp=Z,5.0nm,0.9s,mb4.5,baz=30,slow=7.6,SNR=6.7
C13A Hot Springs 70.67 44 ⇓P P 07 02 28.2 +0.2
baz=70
G10A Bishop Farm, J 70.68 47 ⇓P P 07 02 28.0 -0.1
baz=70
BMO Blue Mountains 70.83 47 *e*P P 07 02 29.0 0.0
A15A Johnson Ranch, 70.85 42 ⇓P P 07 02 28.5 -0.5
baz=71
F11A Grangeville 70.87 46 ⇓P P 07 02 28.9 -0.4
baz=71
B14A Marquette Ranc 70.95 43 ⇓P P 07 02 29.7 +0.1
baz=71,SNR=5.6
J08A Circle Bar Ran 71.03 49 ⇓P P 07 02 30.3 +0.1
baz=71
SWMT Swartz Lake 71.08 44 *e*P P 07 02 30.8 +0.4
D13A Huson 71.08 44 ⇓P P 07 02 30.1 -0.4
baz=71
G11A Walters Elk Ra 71.10 47 ⇓P P 07 02 30.3 -0.3
baz=71,SNR=6.6
I09A Lost Marbles R 71.10 48 ⇓P P 07 02 30.6 -0.1
baz=71
H10A Noah's Angus R 71.31 47 ⇓P P 07 02 31.7 -0.2
baz=71
B15A Bradely Ranch, 71.35 42 ⇓P P 07 02 31.8 -0.3
baz=71,SNR=8.7
F12A Elk City 71.45 46 ⇑P P 07 02 32.6 -0.1
baz=71
SLMT Seeley Lake 71.52 44 *e*P P 07 02 33.3 +0.2
D14A Greenough 71.61 44 ⇑P P 07 02 33.5 -0.1
baz=71
C15A Salmond Ranch, 71.66 43 ⇑P P 07 02 34.3 +0.3
baz=71,SNR=8.0
H11A Donnelly 71.66 47 ⇑P P 07 02 33.9 -0.1
baz=72
B16A M & M Farms, S 71.74 42 ⇑P P 07 02 33.4 -1.0
baz=72
BEKR Beckworth 71.94 53 ⇓P P 07 02 35.9 +0.1
baz=72
F13A Darby 71.95 45 ⇓P P 07 02 35.2 -0.5
baz=72
NB2 NORSAR Subarra 72.12 337 P P 07 02 35.5 -1.0
comp=Z,13nm,1.1s,mb4.8,baz=39,slow=6.2
NOA NORSAR Array B 72.12 337 P P 07 02 35.9 -0.6
comp=Z,7.4nm,0.9s,mb4.6,baz=39,slow=6.0,SNR=23
NOA LR LR 07 37 24.9
comp=Z,53nm,18.8s,MS3.8,baz=35,slow=38
I11A Placerville 72.17 48 ⇓P P 07 02 37.2 +0.1
baz=72
FFC Flin Flon 72.19 33 *e*P P 07 02 36.5 -0.5
K10A MacKenzie Ranc 72.33 49 ⇓P P 07 02 37.8 -0.2
baz=72
A18A Metzger Ranch, 72.38 41 ⇓P P 07 02 37.8 -0.4
baz=72
H12A Diamond D Ranc 72.41 47 ⇑P P 07 02 38.5 0.0
baz=72
AKASG Malin Array Be 72.42 322 P P 07 02 37.5 -0.9
comp=Z,2.4nm,0.5s,mb4.4,baz=46,slow=6.0,SNR=10
AKBB Malin Array Si 72.42 322 *e*P P 07 02 37.5 -0.9
G13A Cobalt 72.43 46 ⇑P P 07 02 38.1 -0.5
baz=72
KIEV Kiev 72.43 322 *e*P P 07 02 37.4 -1.1
KIEV pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
KIEV Kiev 72.43 322 *e*P P 07 02 37.4 -1.1
comp=Z,6.5nm,0.8s,mb4.6
E15A Deer Lodge 72.48 44 ⇓P P 07 02 38.8 -0.1
baz=72,SNR=6.7
MFID Camas Ranch 72.55 48 ⇓P P 07 02 39.1 -0.2
baz=72
PAHR Pah Rah Range 72.64 53 *e*P P 07 02 40.2 +0.2
WCN Washoe City 72.65 53 ⇑P P 07 02 40.3 +0.2
baz=72
D16A Dana Ranch, Ca 72.69 43 ⇑P P 07 02 39.3 -0.8
baz=72
I12A Atlanta 72.72 47 ⇑P P 07 02 40.6 +0.2
baz=72,SNR=5.8
H13A Challis 72.74 46 ⇑P P 07 02 40.5 0.0
baz=72
B18A Beardsley Farm 72.75 41 ⇑P P 07 02 40.4 0.0
baz=72
K11A Parker Ranch, 72.82 49 ⇑P P 07 02 41.2 +0.2
baz=73
F15A Butte 72.92 44 ⇑P P 07 02 41.7 +0.1
baz=73,SNR=9.6
E16A East Helena 72.93 44 ⇓P P 07 02 41.6 0.0
baz=73
LRM Limekiln Ridge 72.96 44 *e*P P 07 02 42.0 +0.3
L10A Juniper Basin 72.98 49 ⇓P P 07 02 42.2 +0.2
baz=73
EGMT Eagleton 73.00 41 ⇑P P 07 02 41.9 0.0
baz=73
EGMT Eagleton 73.00 41 *e*P P 07 02 42.1 +0.1
CMB Columbia Colle 73.01 55 *e*P P 07 02 42.7 +0.5
DLMT Dillon 73.17 45 *e*P P 07 02 43.6 +0.6
H14A Leadore 73.21 46 ⇓P P 07 02 43.5 +0.2
baz=73
I13A Wildhorse Cree 73.22 47 ⇑P P 07 02 43.2 -0.1
baz=73
HLID Hailey 73.27 47 ⇑P P 07 02 43.4 -0.2
baz=73
HLID Hailey 73.27 47 *e*P P 07 02 44.4 +0.8
M10A I.L. Ranch, Tu 73.28 50 ⇓P P 07 02 43.6 -0.2
baz=73
G15A Dillon 73.35 45 ⇓P P 07 02 44.1 0.0
baz=73,SNR=9.4
L11A Cat Creek Ranc 73.35 49 ⇓P P 07 02 44.7 +0.5
baz=73,SNR=6.6
E17A Martinsdale 73.42 43 ⇑P P 07 02 44.9 +0.5
baz=73,SNR=5.5
F16A Kennard Place, 73.43 44 ⇓P P 07 02 44.4 -0.1
baz=73,SNR=5.9
J13A Cove Ranch, Pi 73.51 47 ⇑P P 07 02 45.3 +0.3
baz=73
BOZ Bozeman (W) 73.52 44 ⇑P P 07 02 45.2 +0.2
baz=73
BOZ Bozeman (W) 73.52 44 *e*P P 07 02 45.7 +0.6
K12A Draper Farm, C 73.56 48 ⇑P P 07 02 45.5 +0.2
baz=73
I14A Mackay 73.59 46 ⇓P P 07 02 45.1 -0.4
baz=73
G16A Moss Hill, Enn 73.69 45 ⇑P P 07 02 45.9 -0.1
baz=74
M11A Holland Ranch, 73.78 50 ⇑P P 07 02 47.6 +0.9
baz=74,SNR=6.5
L12A House Creek Ra 73.80 49 ⇑P P 07 02 46.9 +0.2
baz=74
E18A Harlowton 73.85 43 ⇓P P 07 02 47.0 0.0
baz=74
SFJD Kangerlussuaq 73.86 5 *i*P P 07 02 45.3 -1.4
comp=Z,9.4nm,0.8s,mb4.8
F17A Fitzpatrick Pl 73.88 44 ⇑P P 07 02 47.3 +0.1
baz=74
J14A Carey 73.93 47 ⇓P P 07 02 47.9 +0.4
baz=74
O10A Cortez Mining, 74.06 51 ⇓P P 07 02 48.6 +0.3
baz=74
NVAR Mina Array Bea 74.08 53 P P 07 02 49.0 +0.5
comp=Z,3.7nm,0.8s,mb4.3,baz=280,slow=5.4,SNR=18
M12A Wells 74.31 49 ⇓P P 07 02 49.8 0.0
baz=74
H16A Russell Place, 74.33 45 ⇓P P 07 02 50.2 +0.4
baz=74
F18A Big Timber 74.38 43 ⇓P P 07 02 50.2 +0.1
baz=74,SNR=6.4
MIB Mutribah 74.41 296 *e*P P 07 02 49.3 -1.3
MIB AMb AMB 07 02 51.9
comp=Z,29nm,0.8s,mb5.3
L13A Double Diamond 74.46 48 ⇑P P 07 02 51.0 +0.4
baz=74
P10A Eureka 74.49 51 ⇓P P 07 02 51.4 +0.6
baz=74
J15A Blackfoot 74.50 46 ⇑P P 07 02 51.2 +0.4
baz=74
N12A Clover Valley, 74.59 50 ⇑P P 07 02 51.8 +0.4
baz=74
N12A Clover Valley, 74.59 50 *e*P P 07 02 52.6 +1.2
K14A Jones Ranch, D 74.61 47 ⇓P P 07 02 51.7 +0.1
baz=74
I16A Newdale 74.72 46 ⇑P P 07 02 52.8 +0.6
baz=74,SNR=8.2
RDF Al-Radifah 74.78 295 *e*P P 07 02 52.0 -0.7
RDF AMb AMB 07 02 55.1
comp=Z,57nm,1.0s,mb5.5
M13A Montello 74.78 49 ⇑P P 07 02 52.9 +0.4
baz=75
M13A Montello 74.78 49 *e*P P 07 02 53.7 +1.2
NAY Al-Naaiem 74.81 295 *e*P P 07 02 51.4 -1.5
NAY AMb AMB 07 02 52.9
comp=Z,13nm,1.2s,mb4.7
H17A Grant Village 74.89 45 ⇑P P 07 02 54.8 +1.7
baz=75,SNR=7.9
L14A Malta 74.90 48 ⇓P P 07 02 53.3 +0.1
baz=75
IMW Indian Meadow 75.01 45 *e*P P 07 02 55.0 +1.2
J16A Bone 75.04 46 ⇓P P 07 02 54.1 +0.1
baz=75
O12A Currie 75.12 50 ⇑P P 07 02 54.9 +0.3
baz=75,SNR=6.5
RLMT Red Lodge 75.13 44 ⇓P P 07 02 54.6 +0.1
baz=75
M14A Sheep Mountain 75.17 48 ⇑P P 07 02 55.1 +0.3
baz=75
TPAW Teton Pass 75.27 46 *e*P P 07 02 58.2 +3.0
SNOW Snow King Moun 75.39 46 *e*P P 07 02 57.3 +1.3
R10A Warm Springs 75.41 52 ⇓P P 07 02 56.7 +0.4
baz=75
BSD Bornholm Skovb 75.43 331 *i*P P 07 02 54.9 -1.1
comp=Z,6.1nm,0.9s,mb4.5
S10A Tonopah Range, 75.46 53 ⇓P P 07 02 56.5 +0.1
baz=75,SNR=6.9
Q11A Duckwater 75.46 52 ⇑P P 07 02 56.6 +0.1
baz=75
P12A McGill 75.52 51 ⇓P P 07 02 57.2 +0.3
baz=75,SNR=6.0
GRAC Grapevine Rang 75.54 54 ⇓P P 07 02 57.3 +0.3
baz=75
O13A Hicks Ranch, I 75.67 50 ⇓P P 07 02 58.0 +0.3
baz=76
N14A Grayback Hills 75.68 49 ⇓P P 07 02 57.5 -0.2
baz=76
R11A Troy Canyon, C 75.81 52 ⇓P P 07 02 58.8 +0.3
baz=76,SNR=8.9
Q12A Willow Creek R 75.84 51 ⇑P P 07 02 59.2 +0.5
baz=76
L16A Fish Haven 75.95 47 ⇓P P 07 02 59.6 +0.4
baz=76
MPMC Manual Prospec 76.05 55 ⇓P P 07 03 00.1 +0.2
baz=76
S11A Rachel 76.16 53 ⇑P P 07 02 59.8 -0.7
baz=76
FURC Furnace Creek, 76.19 54 ⇑P P 07 03 00.3 -0.4
baz=76
KWP Kalwaria Pacla 76.22 324 *e*P P 07 03 00.8 +0.2
KWP pmax pmax
comp=Z,21nm,1.1s,mb5.0
KWP Kalwaria Pacla 76.22 324 *e*P P 07 03 00.8 +0.2
comp=Z,21nm,1.1s,mb5.0
KWP Kalwaria Pacla 76.22 324 *i*P P 07 03 01.2 +0.6
DUG Dugway 76.32 49 ⇑P P 07 03 01.7 +0.3
baz=76
DUG Dugway 76.32 49 *e*P P 07 03 02.2 +0.9
K18A Toltan Ranch, 76.33 46 ⇓P P 07 03 01.2 -0.1
baz=76
Q13A Wheeler Ranch, 76.39 51 ⇑P P 07 03 02.0 +0.2
baz=76,SNR=9.7
MUD Monsted U'grnd 76.41 335 *i*P P 07 03 01.4 -0.2
comp=Z,9.6nm,0.7s,mb4.8
R12A Pony Springs, 76.43 52 ⇓P P 07 03 02.2 +0.2
baz=76,SNR=6.2
BUR08 Bucovina Ar. S 76.43 321 *e*P P 07 03 01.7 -0.2
BURAR Bucovina Array 76.44 321⇓*i*P P 07 03 01.6 -0.3
SNCC San Nicolas Is 76.45 58 ⇓P P 07 03 02.3 +0.1
baz=76
BW06 Boulder Array 76.51 46 ⇑P P 07 03 02.3 -0.1
baz=76
BW06 Boulder Array 76.51 46 *e*P P 07 03 02.6 +0.2
PDAR Pinedale Array 76.51 46 P P 07 03 02.5 0.0
comp=Z,2.6nm,0.7s,mb4.3,baz=300,slow=2.4,SNR=22
P14A Drum Mountains 76.55 50 ⇑P P 07 03 03.0 +0.3
baz=76,SNR=5.7
U10A Ash Meadows, A 76.56 54 ⇓P P 07 03 03.0 +0.2
baz=76
S12A Delamar Landin 76.73 52 ⇓P P 07 03 03.8 +0.1
baz=76
T11A Corn Creek, Al 76.73 53 ⇑P P 07 03 04.2 +0.4
baz=77,SNR=7.8
L18A Fontenelle, Gr 76.80 46 ⇑P P 07 03 04.3 +0.2
baz=77
Q14A Sevier Lake (B 76.81 50 ⇑P P 07 03 04.5 +0.4
baz=77,SNR=10
R13A O'Grain Ranch, 76.91 51 ⇓P P 07 03 05.3 +0.6
baz=77
P15A Leamington 77.03 49 ⇓P P 07 03 05.9 +0.5
baz=77
STHS Stebnicka Huta 77.04 324 *e*P P 07 03 06.2 +0.9
STHS pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
STHS Stebnicka Huta 77.04 324 *e*P P 07 03 06.2 +0.9
comp=Z,3.7nm,0.8s,mb4.4
STHS Stebnicka Huta 77.04 324 *e*P P 07 03 06.2 +0.9
L19A Farson 77.06 46 ⇑P P 07 03 05.9 +0.4
baz=77
O16A Springville 77.08 49 ⇓P P 07 03 06.2 +0.5
baz=77
OJC Ojcow 77.10 326 *e*P P 07 03 03.7 -1.9
K20A Yellowstone Ra 77.26 45 ⇓P P 07 03 06.5 -0.2
baz=77
CRVS Cervenica-Dubn 77.31 324 *e*P P 07 03 08.4 +1.6
CRVS pmax pmax
comp=Z,23nm,2.3s,mb4.7
CRVS Cervenica-Dubn 77.31 324 *e*P P 07 03 08.4 +1.6
comp=Z,23nm,2.3s,mb4.7
CRVS Cervenica-Dubn 77.31 324 *e*P P 07 03 08.4 +1.6
Q15A Fillmore 77.34 50 ⇑P P 07 03 07.8 +0.7
baz=77
S13A Holt Ranch, En 77.36 52 ⇓P P 07 03 07.7 +0.4
baz=77,SNR=11
TUQ Turquoise Moun 77.43 55 ⇑P P 07 03 08.0 +0.2
baz=77
NIE Niedzica 77.45 325 *e*P P 07 03 08.3 +0.7
ARUT Antelope Range 77.48 51 *e*P P 07 03 08.1 +0.1
ARUT pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
ARUT Antelope Range 77.48 51 *e*P P 07 03 08.1 +0.1
comp=Z,2.0nm,0.7s,mb4.2
O17A Robinson Place 77.53 48 ⇑P P 07 03 08.5 +0.3
baz=77
MLR Muntele Rosu 77.55 319⇓*i*P P 07 03 04.3 -3.9
CCUT Cedar City 77.68 52 *e*P P 07 03 10.1 +1.0
T13A Saint George 77.69 52 ⇑P P 07 03 09.7 +0.5
baz=78,SNR=7.9
L20A Wamsutter 77.69 46 ⇑P P 07 03 08.9 -0.2
baz=78
MSU Marysvale 77.78 50 *e*P P 07 03 10.9 +1.3
O18A Roosevelt 77.90 48 ⇑P P 07 03 10.5 +0.2
baz=78
R15A Junction 77.91 50 ⇓P P 07 03 10.8 +0.4
baz=78
V12A Nelson 77.92 54 ⇓P P 07 03 10.1 -0.3
baz=78
P17A Butcher Ranch, 78.00 49 ⇑P P 07 03 10.6 -0.2
baz=78
ULM Lac du Bonnet 78.00 33 P P 07 03 09.5 -1.1
comp=Z,3.6nm,0.6s,mb4.5,baz=44,slow=4.0,SNR=3.5
GMRC Granite Mounta 78.01 55 ⇑P P 07 03 11.3 +0.3
baz=78
BSEG Bad Segeberg 78.03 333 *e*P P 07 03 10.4 -0.3
comp=Z,12nm,1.2s,mb4.7
BSEG Bad Segeberg 78.03 333 *e*P P 07 03 10.4 -0.3
BSEG pmax pmax
comp=Z,12nm,1.2s,mb4.7
U13A Pakoon Wash 78.04 53 ⇑P P 07 03 11.6 +0.5
baz=78,SNR=7.8
M20A Sweetwater, Wa 78.12 46 ⇓P P 07 03 11.7 +0.2
baz=78
P18A Preston Nutter 78.19 48 ⇑P P 07 03 12.4 +0.5
baz=78
S15A Panguitch 78.20 51 ⇑P P 07 03 12.8 +0.8
baz=78
L21A Rawlins 78.26 45 ⇑P P 07 03 12.3 +0.1
baz=78
BELC Belle Mtn. Jos 78.29 56 ⇓P P 07 03 12.8 +0.2
baz=78
R16A Teasdale 78.34 50 ⇑P P 07 03 13.6 +0.9
baz=78,SNR=12
SRU San Rafael 78.36 49 ⇑P P 07 03 13.0 +0.1
baz=78
V13A Grand Canyon W 78.39 53 ⇑P P 07 03 13.0 0.0
baz=78
O19A Miners Draw (B 78.39 47 ⇑P P 07 03 12.5 -0.4
baz=78
MORC Moravsky Berou 78.41 326 *e*P P 07 03 13.2 +0.3
MORC Moravsky Berou 78.41 326⇓*i*P P 07 03 13.6 +0.7
DPC Dobruska-Polom 78.49 327 *e*P P 07 03 13.6 +0.2
DPC Dobruska-Polom 78.49 327 *e*P P 07 03 13.6 +0.2
M21A Separation Pea 78.50 45 ⇑P P 07 03 13.4 -0.2
baz=78
UPC Upice 78.50 328 *e*P P 07 03 13.7 +0.3
UPC Upice 78.50 328 *e*P P 07 03 13.7 +0.3
N20A Spence Gulch, 78.52 46 ⇑P P 07 03 14.0 +0.3
baz=78,SNR=5.3
U14A Mt Trumbull 78.52 52 ⇑P P 07 03 14.2 +0.4
baz=78
S16A Weppner Ranch, 78.64 50 ⇓P P 07 03 14.8 +0.4
baz=78,SNR=5.9
R17A Hanksville Air 78.71 49 ⇓P P 07 03 15.0 +0.3
baz=78
IRM Iron Mountain 78.73 55 ⇑P P 07 03 14.9 -0.1
baz=79
PSZ Piszkesteto 78.74 324⇓*i*P P 07 03 14.6 -0.2
VYHS Vyhne 78.80 325 *e*P P 07 03 15.3 +0.2
VYHS pmax pmax

comp=Z,2.0nm,0.9s,mb4.0
VYHS Vyhne 78.80 325 *e*P **P 07 03 15.3 +0.2**
comp=Z,2.1nm,0.9s,mb4.1
VYHS Vyhne 78.80 325 *e*P **P 07 03 15.3 +0.2**
BC3 Big Chuckawall 78.86 56 ⇓P **P 07 03 15.5 -0.1**
baz=79
P19A Cripple Cowboy 78.91 48 ⇑P **P 07 03 15.7 -0.1**
baz=79
W13A Hualapai Mount 78.93 54 ⇑P **P 07 03 16.4 +0.3**
baz=79
N21A Black Mountain 78.99 46 ⇓P **P 07 03 16.1 -0.2**
baz=79
O20A White River Ci 79.00 47 ⇓P **P 07 03 16.2 -0.1**
baz=79
U15A North Rim 79.06 52 ⇓P **P 07 03 17.2 +0.5**
baz=79,SNR=6.8
BRG Berggiesshubel 79.07 329 *e*(P) **P 07 03 16.3 -0.2**
comp=Z,3.3nm,0.8s,mb4.3
V14A Boquillas Ranc 79.07 53 ⇑P **P 07 03 17.4 +0.6**
baz=79,SNR=8.0
CLL Collm 79.10 330 *e*P **P 07 03 15.9 -0.8**
comp=Z,8.0nm,0.9s,mb4.7
CLL Collm 79.10 330 ⇓*i*P **P 07 03 16.4 -0.3**
CLL pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
CLL Collm 79.10 330 ⇓*i*P **P 07 03 16.4 -0.3**
comp=Z,8.0nm,0.9s,mb4.7
VRAC Vranov 79.17 327 ⇑*i*P **P 07 03 18.2 +1.1**
S17A Black Ridge (B 79.17 50 ⇓P **P 07 03 17.2 -0.1**
baz=79,SNR=6.3
Q19A Hogan Spring (79.20 48 ⇓P **P 07 03 17.5 0.0**
baz=79
R18A Canyonlands Na 79.21 49 ⇑P **P 07 03 17.3 -0.2**
baz=79
PDMCI Parker Dam,Lak 79.28 54 ⇓P **P 07 03 17.8 -0.2**
baz=79
W14A Seligman 79.36 53 ⇑P **P 07 03 18.6 +0.3**
baz=79,SNR=5.9
Y12C Blythe 79.39 55 ⇓P **P 07 03 19.0 +0.4**
baz=79
PRU Pruhonice 79.51 328 *e*P **P 07 03 19.5 +0.6**
PRU Pruhonice 79.51 328 *e*P **P 07 03 19.5 +0.6**
V15A Kaibab Nationa 79.53 52 ⇑P **P 07 03 19.6 +0.3**
baz=79
N22A Wattenberg Ran 79.55 45 ⇑P **P 07 03 19.5 +0.2**
baz=79
T17A Navajo Res., N 79.59 51 ⇓P **P 07 03 19.6 0.0**
baz=79
S18A Hurst Farm, Bl 79.61 50 ⇑P **P 07 03 19.6 -0.2**
baz=79,SNR=8.1
PHWY Pilot Hill 79.76 45 *e*P **P 07 03 13.5 -7.0**
Q20A Ridgley Place, 79.76 48 ⇓P **P 07 03 20.1 -0.4**
baz=80
P21A Newcastle 79.86 47 ⇓P **P 07 03 21.1 +0.1**
baz=80
U17A Shonto 79.94 51 ⇑P **P 07 03 21.4 -0.1**
baz=80
X14A Yava 79.96 54 ⇑P **P 07 03 21.8 +0.1**
baz=80
T18A Mexican Hat 80.05 50 ⇑P **P 07 03 22.0 -0.2**
baz=80
S19A Harvey Farm, M 80.08 49 ⇑P **P 07 03 22.4 +0.1**
baz=80
R20A Redvale 80.23 48 ⇓P **P 07 03 23.1 0.0**
baz=80
Y14A Wickenburg 80.23 54 ⇑P **P 07 03 23.1 0.0**
baz=80
Z13A Yuma Proving G 80.30 55 ⇑P **P 07 03 23.4 -0.1**
baz=80
X15A Humboldt 80.36 53 ⇓P **P 07 03 23.7 -0.1**
baz=80
SMCO Snowmass 80.37 47 *e*P **P 07 03 20.7 -3.1**
MMAI Mount Meron Ar 80.44 305 P **P 07 03 24.1 -0.2**
comp=Z,1.3nm,0.4s,mb4.3,baz=1.9,slow=8.7,SNR=3.8
MMAI LR LR 07 41 26.1
comp=Z,51nm,20.6s,MS3.9,baz=120,slow=38
V17A Tonalea, Kykot 80.50 52 ⇑P **P 07 03 25.2 +0.6**
baz=80,SNR=9.7
U18A Rough Rock, Ch 80.53 51 ⇑P **P 07 03 24.6 -0.2**
baz=80
KHC Kasperske Hory 80.57 328 *e*P **P 07 03 24.4 -0.3**
comp=Z,5.7nm,0.8s,mb4.5
KHC Kasperske Hory 80.57 328 *e*P **P 07 03 24.6 -0.1**
R21A Cimarron 80.59 48 ⇓P **P 07 03 25.1 +0.1**
baz=80
Q22A Crested Butte, 80.62 47 ⇑P **P 07 03 25.5 +0.3**
baz=80
Y15A Casa Rosa Ranc 80.65 54 ⇓P **P 07 03 25.5 +0.1**
baz=80,SNR=5.4
GEC2 GERESS Array S 80.74 328 *e*P **P 07 03 25.5 -0.1**
comp=Z,3.0nm,0.7s,mb4.3
GEC2 GERESS Array S 80.74 328 *e*P **P 07 03 25.5 -0.1**
GEC2 pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
T19A Beclabito 80.76 50 ⇑P **P 07 03 25.6 -0.4**
baz=81
MVCO Mesa Verde 80.82 49 ⇓P **P 07 03 26.4 +0.1**
baz=81
MVCO Mesa Verde 80.82 49 *e*P **P 07 03 26.6 +0.4**
comp=Z,3.4nm,0.8s,mb4.3
X16A Lo Mia Camp, P 80.90 53 ⇑P **P 07 03 26.8 +0.1**
baz=81
V18A Ganado 80.97 51 ⇑P **P 07 03 27.0 -0.1**
baz=81
U19A Dine' College, 81.01 50 ⇑P **P 07 03 27.6 +0.3**
baz=81
GRA1 Grafenberg Arr 81.08 330 *e*P **P 07 03 27.2 -0.2**
comp=Z,22nm,1.1s,mb5.0
GRF Grafenberg Arr 81.08 330 *e*P **P 07 03 27.2 -0.2**
comp=Z,22nm,1.1s,mb5.0
GRF Grafenberg Arr 81.08 330 *e*P **P 07 03 27.2 -0.2**
GRF pmax pmax
comp=Z,22nm,1.1s,mb5.0
GRF Grafenberg Arr 81.08 330 *e*P **P 07 03 27.2 -0.2**
GRF pmax pmax
comp=Z,22nm,1.1s,mb5.0
114A Black Gap (USA 81.08 55 ⇑P **P 07 03 27.5 -0.2**
baz=81
Y16A Circle Bar Ran 81.23 53 ⇑P **P 07 03 28.9 +0.4**
baz=81
X17A Forest Lakes 81.34 53 ⇓P **P 07 03 29.4 +0.3**
baz=81
T21A Navajo Lake 81.53 49 ⇓P **P 07 03 29.8 -0.3**
baz=81
V20A Brimhall 81.79 50 ⇑P **P 07 03 32.1 +0.6**
baz=82
U21A Nageezi 81.84 49 ⇓P **P 07 03 31.9 +0.2**
baz=82
SOKA Soboth 81.86 326 ⇑*i*P **P 07 03 31.5 0.0**
comp=Z,9.3nm,1.1s,mb4.6
RJOB Jochberg 81.99 328 *e*P **P 07 03 32.3 +0.1**
comp=Z,11nm,1.3s,mb4.6
SDCO Great Sand Dun 82.19 47 *e*P **P 07 03 33.6 +0.1**
comp=Z,2.2nm,1.1s,mb4.0
Y18A Canyon Day Jun 82.19 53 ⇑P **P 07 03 33.8 +0.2**
baz=82
X19A St. Johns 82.22 52 ⇓P **P 07 03 34.0 +0.3**
baz=82
W20A Ramah 82.22 51 ⇑P **P 07 03 33.6 -0.1**
baz=82
KBA Koelnbreinsper 82.27 327 ⇑*i*P **P 07 03 34.5 +0.7**
comp=Z,8.8nm,0.8s,mb4.7
MEM Membach 82.28 333 P **P 07 03 34.4 +0.6**
ECSD EROS Data Cent 82.55 38 *e*P **P 07 03 34.4 -0.8**
X20A Quemado 82.62 51 ⇑P **P 07 03 36.1 +0.3**
baz=82
V22A San Miguel Ran 82.64 49 ⇓P **P 07 03 35.8 0.0**
baz=82
U23A El Rito 82.77 49 ⇑P **P 07 03 37.1 +0.6**
baz=83
SNF Seneffe 82.97 334 P **P 07 03 36.7 -0.6**
MOTA Moosalm 83.00 328 ⇓*i*P **P 07 03 37.6 0.0**
comp=Z,11nm,1.0s,mb4.9
RETA Reutte 83.02 329 ⇓*i*P **P 07 03 38.0 +0.3**
comp=Z,8.1nm,0.7s,mb4.8
X21A Alamocita Cree 83.12 51 ⇑P **P 07 03 38.2 -0.2**
baz=83
Y20A Horse Springs, 83.12 52 ⇑P **P 07 03 39.0 +0.6**
baz=83
GIVF Givet 83.12 333 *e*P **P 07 03 37.0 -1.1**
V23A Ortiz Mt. (NFS 83.18 49 ⇓P **P 07 03 39.4 +0.7**
baz=83
T25A Trinidad 83.23 47 ⇑P **P 07 03 39.6 +0.7**
baz=83
BAIF Baives 83.38 334 *e*P **P 07 03 38.5 -0.9**
FETA Feichten 83.41 328 ⇓*i*P **P 07 03 39.7 0.0**
comp=Z,6.3nm,0.9s,mb4.7
SCHQ Schefferville 83.46 16 P **P 07 03 39.7 -0.1**
comp=Z,3.5nm,1.0s,mb4.3,baz=324,slow=13,SNR=3.5
Z20A Nine Sixteen R 83.53 52 ⇓P **P 07 03 41.0 +0.4**
baz=83
ANMO Albuquerque 83.56 50 *e*P **P 07 03 41.7 +1.0**
W23A Werner Place, 83.60 49 ⇑P **P 07 03 41.2 +0.3**
baz=83
CDF Champ du Feu 83.64 331 *e*P **P 07 03 40.2 -0.6**
comp=Z,9.4nm,0.9s,mb4.6
CDF Champ du Feu 83.64 331 *e*P **P 07 03 40.2 -0.6**
CDF pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
CDF Champ du Feu 83.64 331 *e*P **P 07 03 40.2 -0.6**
comp=Z,4.7nm,0.9s,mb4.6
U25A Circle Dot Ran 83.75 48 ⇑P **P 07 03 41.7 +0.1**
baz=84
318A Bisbee 83.79 54 ⇓P **P 07 03 42.1 +0.2**
baz=84
ECH Echery 83.84 331 *e*P **P 07 03 41.1 -0.8**
ECH pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
ECH Echery 83.84 331 *e*P **P 07 03 41.0 -0.8**
comp=Z,4.7nm,0.9s,mb4.6
219A White Tail Can 83.87 53 ⇓P **P 07 03 42.7 +0.4**
baz=84
120A U Bar Ranch, L 83.89 53 ⇓P **P 07 03 42.6 +0.2**
baz=84
Z21A St. Cloud Mine 83.96 52 ⇓P **P 07 03 43.5 +0.8**
baz=84
W24A Lazy 6 Ranch, 84.00 49 ⇑P **P 07 03 43.5 +0.6**
baz=84
V25A Rancho No Teng 84.03 48 ⇑P **P 07 03 43.4 +0.3**
baz=84
U26A Atchley Ranch, 84.14 47 ⇑P **P 07 03 43.8 +0.2**
baz=84
319A Douglas 84.28 54 ⇓P **P 07 03 44.9 +0.5**
baz=84
HINF Hinteralfeld 84.29 331 *e*P **P 07 03 43.0 -1.1**
HAU Haudompre 84.32 331 *e*P **P 07 03 43.3 -1.0**
HAU eMLR MLR
comp=Z,50nm,22.0s,MS3.5
HAU Haudompre 84.32 331 *e*P **P 07 03 43.3 -1.0**
HAU LR LR
comp=Z,50nm,22.0s,MS3.9
220A Playas Peak, P 84.39 53 ⇓P **P 07 03 45.1 +0.2**
baz=84
121A Cookes Peak, D 84.42 52 ⇓P **P 07 03 45.4 +0.3**
baz=84
Z22A Elephant Butte 84.43 51 ⇓P **P 07 03 45.4 +0.2**
baz=84
Y23A Lovelace Mesa, 84.51 50 ⇓P **P 07 03 45.6 0.0**
baz=84
V26A Tequesquite Ra 84.54 48 ⇑P **P 07 03 45.3 -0.3**
baz=84
W25A X Bar L Ranch, 84.55 48 ⇓P **P 07 03 45.9 +0.1**
baz=84
Y24A Capitan 84.88 50 ⇓P **P 07 03 47.4 0.0**
baz=85
W26A Owens Ranch, T 85.05 48 ⇓P **P 07 03 48.6 +0.4**
baz=85
Y25A Mesa, Roswell 85.33 49 ⇑P **P 07 03 49.6 0.0**
baz=85
PMOR Pomariorio Ree 85.38 113 *e*T 08 37 20.3
comp=Z,9.2nm,0.2s
X26A CR and CF Fran 85.40 48 ⇓P **P 07 03 50.2 +0.2**
baz=85
W27A Bowe Ranch, En 85.47 48 ⇑P **P 07 03 50.3 -0.1**
baz=85
CABF La Chapelle 85.58 331 *e*P **P 07 03 50.0 -0.7**
comp=Z,10nm,0.8s,mb4.8
CABF La Chapelle 85.58 331 *e*P **P 07 03 50.0 -0.7**
CABF pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
CABF La Chapelle 85.58 331 *e*P **P 07 03 50.0 -0.7**
comp=Z,5.1nm,0.8s,mb4.8
124A Stringfield Ra 85.73 51 ⇑P **P 07 03 51.6 0.0**
baz=86
X27A F and S Farms, 85.75 48 ⇓P **P 07 03 51.8 +0.1**
baz=86
Z25A Roswell 85.76 50 ⇓P **P 07 03 52.2 +0.3**
baz=86
LOR Lormes 85.86 332 *e*P **P 07 03 51.2 -0.8**
comp=Z,28nm,1.0s,mb5.2
LOR Lormes 85.86 332 *e*P **P 07 03 51.2 -0.8**
LOR pmax pmax
comp=Z,14nm,1.0s,mb5.2
LOR Lormes 85.86 332 *e*P **P 07 03 51.2 -0.8**
comp=Z,14nm,1.0s,mb5.2
PPT Papeete 85.92 116 *e*LR LR 07 30 58.9
comp=Z,95nm,24.8s
PPT *e*T 08 38 01.8
comp=Z,4.7nm,0.3s
PPT Papeete 85.92 116 LR LR 07 33 13.2
comp=Z,174nm,21.3s,MS4.4,baz=284,slow=29
FLN La Foliniere 86.06 336 *e*P **P 07 03 52.1 -0.9**
FLN eMLR MLR
comp=Z,83nm,18.5s,MS3.9
FLN La Foliniere 86.06 336 *e*P **P 07 03 52.1 -0.9**
FLN LR LR
comp=Z,80nm,18.5s,MS4.2
LDF La Druitiere 86.09 335 *e*P **P 07 03 52.9 -0.2**
224A Cornudas Mount 86.12 51 ⇑P **P 07 03 53.9 +0.2**
baz=86
SSF Saint Saulge 86.16 332 *e*P **P 07 03 52.7 -0.8**
comp=Z,20nm,0.9s,mb5.0
SSF Saint Saulge 86.16 332 *e*P **P 07 03 52.7 -0.8**
SSF pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
SSF Saint Saulge 86.16 332 *e*P **P 07 03 52.7 -0.8**
comp=Z,9.9nm,0.9s,mb5.0
Z26A Caprock 86.21 49 ⇓P **P 07 03 54.2 +0.2**
baz=86
125A Gardner Draw, 86.23 50 ⇓P **P 07 03 54.1 0.0**
baz=86
LPL La Plagne 86.24 330 *e*P **P 07 03 53.5 -0.5**
comp=Z,22nm,1.1s,mb5.0
LPL La Plagne 86.24 330 *e*P **P 07 03 53.5 -0.5**
LPL pmax pmax
comp=Z,11nm,1.1s,mb5.0
LPL La Plagne 86.24 330 *e*P **P 07 03 53.5 -0.5**
comp=Z,11nm,1.1s,mb5.0
LPG La Plagne 86.25 330 *e*P **P 07 03 53.6 -0.4**
comp=Z,11nm,0.8s,mb4.8
LPG La Plagne 86.25 330 *e*P **P 07 03 53.6 -0.4**
LPG pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
LPG La Plagne 86.25 330 *e*P **P 07 03 53.6 -0.4**
comp=Z,5.3nm,0.8s,mb4.8
Y27A Causey 86.25 49 ⇓P **P 07 03 54.0 -0.2**
baz=86
SMF Signal de Mont 86.39 332 *e*P **P 07 03 54.1 -0.6**
AVF Avril sur Loir 86.45 332 *e*P **P 07 03 54.3 -0.6**
comp=Z,36nm,0.9s,mb5.3
AVF Avril sur Loir 86.45 332 *e*P **P 07 03 54.3 -0.6**
AVF pmax pmax
comp=Z,18nm,0.9s,mb5.3
AVF Avril sur Loir 86.45 332 *e*P **P 07 03 54.3 -0.6**
comp=Z,18nm,0.9s,mb5.3
GRR Gorron 86.51 336 *e*P **P 07 03 54.6 -0.6**
comp=Z,40nm,1.1s,mb5.3
GRR Gorron 86.51 336 *e*P **P 07 03 54.6 -0.6**
GRR pmax pmax
comp=Z,20nm,1.1s,mb5.3
GRR Gorron 86.51 336 *e*P **P 07 03 54.6 -0.6**
comp=Z,20nm,1.1s,mb5.3
324A Moseley Ranch, 86.59 52 ⇑P **P 07 03 55.2 -0.8**
baz=86
GDL2 Guadalupe Moun 86.73 50 *e*P **P 07 03 56.5 -0.2**
comp=Z,2.2nm,0.8s,mb4.4
BGF Bois d'Agland 86.83 332 *e*P **P 07 03 56.2 -0.6**
MBDF Montbardon 86.88 329 *e*P **P 07 03 55.6 -1.5**
TAOE Nuku Hiva Isla 87.07 104 *e*LR LR 07 31 12.6
comp=Z,126nm,24.4s
ORIF Oris-en-Rattie 87.08 330 *e*P **P 07 03 57.2 -0.8**
ORIF eMLR MLR
comp=Z,63nm,17.8s,MS3.8
MEH Mehetia 87.19 116 *e*T 08 39 36.2
comp=Z,77nm,0.3s
TCF Toulx Ste Croi 87.29 333 *e*P **P 07 03 58.7 -0.4**
comp=Z,9.1nm,0.9s,mb4.7
TCF Toulx Ste Croi 87.29 333 *e*P **P 07 03 58.7 -0.4**
TCF pmax pmax
comp=Z,5.0nm,0.9s,mb4.7
TCF Toulx Ste Croi 87.29 333 *e*P **P 07 03 58.7 -0.4**
comp=Z,4.6nm,0.9s,mb4.7
ROSF Rostrenen 87.31 337 *e*P **P 07 03 58.7 -0.4**
VIVF Saint-Julien-l 87.59 330 *e*P **P 07 03 59.8 -0.8**
QUIF Quistinic 87.65 337 *e*P **P 07 04 00.1 -0.7**
PGF Pioggiola 87.75 327 *e*P **P 07 03 59.7 -1.7**
MFF Saint Martin d 87.83 334 *e*P **P 07 04 01.3 -0.4**
comp=Z,25nm,1.2s,mb5.0
MFF Saint Martin d 87.83 334 *e*P **P 07 04 01.3 -0.4**
MFF pmax pmax
comp=Z,12nm,1.2s,mb5.0
MFF Saint Martin d 87.83 334 *e*P **P 07 04 01.3 -0.4**
comp=Z,12nm,1.2s,mb5.0
SMRF Simiane la Rot 87.98 329 *e*P **P 07 04 01.5 -0.9**
LMR La Mourre 88.14 329 *e*P **P 07 04 01.6 -1.6**
RJF Les Rejaudoux 88.38 333 *e*P **P 07 04 04.0 -0.3**
RJF *e*MLR MLR
comp=Z,72nm,21.8s,MS3.8
RJF Les Rejaudoux 88.38 333 *e*P **P 07 04 04.0 -0.3**
RJF LR LR
comp=Z,70nm,21.8s,MS4.0
526A Mary Lane Ranc 88.41 52 ⇑P **P 07 04 04.4 -0.3**
baz=88
CAF Calviac 88.51 332 *e*P **P 07 04 04.9 0.0**
LFF La Frestale 88.97 333 *e*P **P 07 04 06.9 -0.2**
TXAR Lajitas Array 89.18 52 P **P 07 04 08.6 +0.2**
comp=Z,0.9nm,0.7s,mb4.2,baz=305,slow=3.2,SNR=14
CCM Cathedral Cave 89.51 39 *e*P **P 07 04 09.2 -0.6**
CCM pmax pmax
comp=Z,6.0nm,0.8s,mb5.0
CCM Cathedral Cave 89.51 39 *e*P **P 07 04 09.2 -0.5**
comp=Z,5.7nm,0.8s,mb5.0
MTLF Montolieu 89.81 331 *e*P **P 07 04 10.8 -0.3**
TBI Tubuai 89.93 120 *e*LR LR 07 32 26.8
comp=Z,47nm,28.5s
JCT Junction City 90.67 49 *e*P **P 07 04 15.1 -0.2**
EPF Esparros 90.77 332 *e*P **P 07 04 14.7 -0.8**
MIAR Mount Ida 91.07 42 *e*P **P 07 04 16.9 -0.2**
ETSF Etsaut 91.21 333 *e*P **P 07 04 17.6 0.0**
TORD Torodi Ar. Bea 115.58 315 PKP PKPdf 07 09 53.3 -1.8
comp=Z,0.5nm,0.8s,baz=24,slow=1.7,SNR=5.8
DBIC Dimbokro 124.50 317 PKP PKPdf 07 10 10.5 -1.8
comp=Z,4.2nm,0.9s,baz=89,slow=15,SNR=3.5
DBIC Dimbokro 124.50 317 PKP PKPdf 07 10 10.5 -1.8
LPAZ La Paz 145.95 56 *e*PKPbc PKPbc 07 10 52.4 0.0
comp=Z,5.2nm,0.7s,baz=333,slow=4.5,SNR=23
LPAZ La Paz 145.95 56 *e*PKPbc PKPbc 07 10 52.4 -0.1
LCO Las Campanas 152.08 79 *e*PKPbc PKPbc 07 11 08.3 +0.4

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*IDC **26** 07:21:03.7±3.0, 5.40S×151.66E, h30km±19km, mb4.5/10, mb1 4.7/10, mb1mx4.4/16, mbtmp4.5/10, MS3.7/7, Ms1 3.7/7, ms1mx3.5/14, Error ellipse: s-maj=30.0km s-min=13.9km az=122.0*
*NEIC **26** 07:21:04.4±0.5, 5.35S×151.63E, h35km, mb4.9/8, Error ellipse: s-maj=13.9km s-min=8.4km az=116.0*
*ISCJB **26** 07:21:05.5±3.4, 5.4S±0.1×151.5E±0.1, h57km±27km, mb4.7/17, MS3.7/6, Error ellipse: s-maj=23.1km s-min=16.5km az=169.3*
ISC 26 07:21:04.9±1.9, 5.40S±0.09×151.66E±0.10, h40km±15km, n35, σ0.83/30, mb4.7/17, MS3.7/6, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby** 135nm,0.9s	**5.98**	**228**	Pn	**Pn**	**07 22 30.6**	**-0.3**
PMG				*e*Sn	**Sn**	**07 23 37.9**	**-0.3**
COEN	**Coen**	**11.93**	**224**	Pn	**Pn**	**07 23 54.2**	**+1.8**
CTA	**Charters Tower** 0.4nm,0.3s,baz=6.4,slow=12,SNR=3.9	**15.52**	**199**	Pn	**Pn**	**07 24 46.9**	**+5.9**
CTA				LR	LR	07 29 52.9	
	comp=Z,304nm,18.3s,baz=32,slow=34						
EIDS	**Eidsvold** 13nm,0.8s	**19.87**	**182**	*e*P	**Pn**	**07 25 33.7**	**-0.8**
KAKA	**Kakadu** 21nm,0.4s	**20.31**	**248**	*e*P	**P**	**07 25 37.8**	**+0.2**
KAKA	**Kakadu** 60nm,0.5s	**20.31**	**248**	*e*P	**P**	**07 25 37.3**	**-0.4**
KAKA				*e*S	**S**	**07 29 24.3**	**+0.9**
WRAB	**Tennant Creek** 65nm,0.6s,mb5.2	**22.19**	**228**	*e*P	**P**	**07 25 57.4**	**-0.4**
WRA	**Warramunga Arr** 75nm,0.7s,mb5.2,baz=52,slow=10.0,SNR=176	**22.20**	**228**	P	**P**	**07 25 57.6**	**-0.3**
WRA				S	**S**	**07 30 01.9**	**+1.6**
	1.4nm,0.8s,baz=51,slow=18,SNR=3.6						
WRA				ScP	ScP	07 33 28.8	+0.6
	1.0nm,0.8s,baz=53,slow=2.9,SNR=6.9						
WRA				LR	LR	07 34 44.7	
	comp=Z,124nm,21.2s,MS3.3,baz=90,slow=37						
ARMA	**Armidale**	**24.89**	**180**	*e*P	**P**	**07 26 25.3**	**+1.3**
ASAR	**Alice Springs** 54nm,0.7s,mb5.2,baz=54,slow=9.3,SNR=208	**24.95**	**222**	P	**P**	**07 26 24.8**	**+0.2**
ASAR				ScP	ScP	07 33 36.2	+0.7
	0.6nm,0.6s,baz=44,slow=2.8,SNR=5.3						
STKA	**Stephens Creek** 10nm,1.8s,mb4.2	**27.98**	**198**	*e*P	**P**	**07 26 51.8**	**0.0**
STKA	**Stephens Creek** 6.5nm,0.9s,mb4.3,baz=355,slow=9.7,SNR=7.5	**27.98**	**198**	P	**P**	**07 26 51.4**	**-0.4**
FITZ	**Fitzroy Crossi** 38nm,0.6s,mb5.2	**28.38**	**241**	*e*P	**P**	**07 26 55.3**	**-0.3**
FITZ	**Fitzroy Crossi** 22nm,0.6s,mb5.0,baz=73,slow=7.7,SNR=50	**28.38**	**241**	P	**P**	**07 26 55.3**	**-0.3**
FITZ	**Fitzroy Crossi** 19nm,0.6s,mb4.9	**28.38**	**241**	*e*P	**P**	**07 26 55.1**	**-0.5**
FORT	**Forrest** 26nm,0.7s,mb5.3	**33.61**	**218**	*e*P	**P**	**07 27 40.7**	**-0.9**
MBWA	**Marble Bar** 7.3nm,0.5s,mb4.9	**34.69**	**240**	*e*P	**P**	**07 27 50.1**	**-0.9**
KLBR	**Kellerberrin** 18nm,0.9s,mb4.7	**41.07**	**226**	*e*P	**P**	**07 28 43.7**	**-1.1**
MJAR	**Matsushiro Arr**	**43.58**	**344**	LR	LR	07 45 38.2	
	comp=Z,40nm,20.8s,MS3.3,baz=210,slow=34						
CMAR	**Chiang Mai Arr** 2.3nm,0.7s,mb4.3,baz=126,slow=6.0,SNR=4.4	**57.11**	**296**	P	**P**	**07 30 48.6**	**+0.8**
PETK	**Petropavlovsk-** comp=Z,55nm,21.9s,MS3.6,baz=90,slow=30	**58.51**	**4**	LR	LR	07 50 15.0	
SONM	**Songino Array** 1.9nm,0.5s,mb4.4,baz=142,slow=5.2,SNR=13	**66.23**	**328**	P	**P**	**07 31 50.0**	**+1.4**
SONM				LR	LR	07 59 10.3	
	comp=Z,60nm,18.5s,MS3.8,baz=112,slow=34						
CASY	**Casey** 6.0nm,1.0s,mb4.6	**67.12**	**197**	*e*P	**P**	**07 31 54.1**	**+0.1**
MKAR	**Makanchi Array** 0.6nm,0.5s,mb3.8,baz=87,slow=9.8,SNR=7.0	**80.03**	**319**	P	**P**	**07 33 10.4**	**+0.2**
ZALV	**Zalesovo Beam** 1.8nm,0.4s,mb4.3,baz=111,slow=6.3,SNR=8.4	**81.02**	**327**	P	**P**	**07 33 14.5**	**-0.9**
ZALV				LR	LR	08 08 21.4	
	comp=Z,26nm,18.7s,MS3.6,baz=69,slow=35						
KURK	**Kurchatov** 6.5nm,1.3s,mb4.6	**83.54**	**322**	*e*P	**P**	**07 33 28.1**	**-0.5**
QSPA	**South Pole Qui** 8.7nm,0.8s,mb4.9	**84.57**	**180**	*e*P	**P**	**07 33 33.7**	**+0.3**
MAW	**Mawson** comp=Z,114nm,20.1s,MS4.2,baz=164,slow=33	**84.59**	**203**	LR	LR	08 07 33.6	
BVAR	**Borovoye Array** 1.1nm,0.6s,mb4.4,baz=99,slow=7.7,SNR=6.2	**89.04**	**323**	P	**P**	**07 33 54.4**	**-1.2**
NVAR	**Mina Array Bea** 2.2nm,0.7s,mb4.7,baz=251,slow=7.0,SNR=12	**93.34**	**52**	P	**P**	**07 34 16.9**	**+0.9**
PDAR	**Pinedale Array** 0.5nm,0.6s,baz=186,slow=1.5,SNR=4.7	**100.09**	**48**	P	Pdif	07 34 46.7	+0.6
LPAZ	**La Paz** 1.3nm,0.8s,baz=225,slow=20,SNR=7.0	**135.13**	**119**	PKP	PKPdf	07 40 22.2	+1.3
CPUP	**Villa Florida** 0.9nm,0.6s,baz=175,slow=1.1,SNR=5.1	**137.76**	**140**	PKP	PKPdf	07 40 26.4	+0.7
TORD	**Torodi Ar. Bea** 2.7nm,0.6s,baz=60,slow=2.0,SNR=16	**149.40**	**287**	PKP	PKPdf	07 40 46.5	+0.3
TORD				PKPbc	PKPbc	07 40 50.1	-0.5
	2.8nm,0.6s,baz=102,slow=2.7,SNR=33						
TORD	**Torodi Ar. Bea**	**149.40**	**287**	PKP	PKPdf	07 40 46.5	+0.3
TORD				PKPbc	PKPbc	07 40 50.1	-0.5

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*IDC **26** 07:46:53.1±2.0, 22.85S×114.16W, h0km, mb3.8/6, mb1 4.1/6, mb1mx4.0/15, mbtmp3.8/6, Error ellipse: s-maj=65.7km s-min=30.1km az=38.0*
*NEIC **26** 07:46:54.3±1.1, 22.90S×114.18W, h10km, mb4.2/1, Error ellipse: s-maj=38.0km s-min=19.4km az=218.0*
ISC 26 07:46:53.0±5.1, 23.1S±0.7×114.4W±0.7, h10km, n12, σ0.66/8, mb3.8/7, Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz** 2.1nm,1.0s,mb3.8,baz=277,slow=4.1,SNR=6.0	**43.97**	**90**	P	**P**	**07 55 00.7**	**0.0**
SIV	**San Ignacio** 0.5nm,0.6s,mb3.7,baz=254,slow=13,SNR=3.9	**50.55**	**92**	P	**P**	**07 55 52.1**	**+0.1**
TXAR	**Lajitas Array** 0.3nm,0.8s,mb3.3,baz=185,slow=9.1,SNR=4.4	**53.17**	**12**	P	**P**	**07 56 12.1**	**+0.9**
SDCO	**Great Sand Dun** 1.7nm,0.8s,mb4.2	**61.13**	**8**	*e*P	**P**	**07 57 06.6**	**-0.7**

NVAR	**Mina Array Bea**	**61.34 357**	P	**P**		**07 57 09.3**	**+0.6**
	0.3nm,0.3s,mb3.9,baz=174,slow=9.7,SNR=3.3						
NVAR	**Mina Array Bea**	**61.34 357**	P	**P**		**07 57 09.3**	**+0.6**
PDAR	**Pinedale Array**	**65.72 4**	P	**P**		**07 57 36.5**	**-1.2**
	1.0nm,0.7s,mb4.0,baz=160,slow=8.5,SNR=7.9						
YKA	**Yellowknife Ar**	**85.32 360**	P	**P**		**07 59 30.0**	**+0.4**
	0.6nm,0.8s,mb3.8,baz=171,slow=4.4,SNR=3.5						
ARU	**Arti**	**146.34 7**	*e*PKPbc	PKPbc		08 06 33.5	0.0
BVAR	**Borovoye Array**	**149.92 354**	PKPbc	PKPbc		08 06 44.2	+1.0
	1.4nm,0.6s,baz=358,slow=4.5,SNR=8.4						
KURK	**Kurchatov**	**150.64 343**	*e*PKPbc	PKPbc		08 06 46.0	+1.0
MKAR	**Makanchi Array**	**152.81 334**	PKPbc	PKPbc		08 06 51.8	+1.7
	1.9nm,0.7s,baz=52,slow=4.6,SNR=14						

KRSC 26 07:53:32.3±1.1, 52°.64N×160°.64E, h5km±5km, ML3.9, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLC	**Nalytchevo**	**0.95**	**305**	*e*P	Pg	07 53 51.3	+0.8
NLC				*i* S	Sg	07 54 04.6	+1.9
PET	**Petropavlovsk**	**1.27**	**288**	*e*P	Pg	07 53 56.6	+0.1
PET				*i* S	Sg	07 54 14.0	+1.1
AVH	**Avacha**	**1.31**	**299**	*e*P	Pn	07 53 57.5	+0.3
GRL	**Gorelyy**	**1.57**	**268**	*e*P	Pn	07 54 02.1	+1.4
KII	**Karymskiy**	**1.57**	**333**	*e*P	Pn	07 54 02.3	+1.5
KII				*i* S	Sn	07 54 24.3	+2.8
GNL	**Ganaly**	**1.94**	**304**	*e*P	Pn	07 54 07.2	+1.4
MKZ	**Mys Kozlova**	**2.03**	**18**	*e*P	Pn	07 54 07.5	+0.4
MKZ				*i* S	Sn	07 54 33.3	+0.6
MIPR	**Malaya Ipel'ka**	**2.40**	**263**	*e*P	Pn	07 54 12.8	+0.6
KMNR	**Kamenistaya**	**3.13**	**356**	*e*P	Pn	07 54 24.6	+2.4
KPT	**Kopyto**	**3.34**	**356**	*e*P	Pn	07 54 26.8	+1.7
KBTR	**Krutoberegovo**	**3.79**	**19**	*e*P	Pn	07 54 33.4	+2.1

*NEIC **26** 08:01:38.2, 19°.75N×66°.43W, h40km, MD3.5(RSPR), After RSPR.*

RSPR 26 08:01:38.2, 19°.75N×66°.43W, h40km±21km, MD3.5/9, MD3.5/9, 7C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOPR	**Arecibo Observ**	**1.42**	**193**	⇓*e*P	Pn	08 02 00.1	-1.5
AOPR				*e*S	Sn	08 02 17.3	-1.8
AGPR	**Aguadilla, PR**	**1.43**	**207**	⇑*e*P	Pn	08 02 00.1	-1.5
CBYP	**Canovanas**	**1.56**	**160**	⇑*e*P	Pn	08 02 02.4	-1.0
CBYP				*e*S	Sn	08 02 21.5	-1.0
SJG	**San Juan**	**1.65**	**171**	⇑*e*P	Pn	08 02 03.8	-0.8
CELP	**Cerrillos**	**1.67**	**185**	⇓*e*P	Pn	08 02 04.0	-0.9
LSP	**Las Mesas**	**1.68**	**202**	⇑*e*P	Pn	08 02 04.3	-0.8
HUMP	**Col San Antoni**	**1.69**	**161**	⇑*e*P	Pn	08 02 04.1	-1.1
HUMP				*e*S	Sn	08 02 24.0	-1.5
OBIP	**Obispado Ponce**	**1.70**	**186**	⇑*e*P	Pn	08 02 04.6	-0.8
OBIP				*e*S	Sn	08 02 24.9	-1.0
MTP	**Monte Pirata**	**1.84**	**153**	⇓*e*P	Pn	08 02 06.4	-0.8
MTP				*e*S	Sn	08 02 28.6	-0.6
CRPR	**Cabo Rojo, PR**	**1.85**	**201**	⇑*e*P	Pn	08 02 06.8	-0.6
CRPR				*e*S	Sn	08 02 28.8	-0.7
STVI	**Saint Thomas**	**1.97**	**135**	⇓*e*P	Pn	08 02 07.7	-1.3
STVI				*e*S	Sn	08 02 31.3	-1.2

*CSEM **26** 08:04:31.1±0.4, 29°.40N×51°.42E, h2km, ML3.0, Error ellipse: s-maj=18.0km s-min=7.2km az=10.0*
*ISCJB **26** 08:04:31.0±2.6, 29°.40N±0°.05×51°.37E±0°.05, h9km±20km, Error ellipse: s-maj=9.7km s-min=6.9km az=152.9*
*TEH **26** 08:04:32.6, 29°.35N×51°.34E, h18km*
*KISR **26** 08:04:32.1±0.9, 29°.54N×51°.40E, h34km±581km, ML3.0*
*SGS **26** 08:04:37.4, 29°.26N×51°.66E, h17km*

ISC 26 08:04:32.2±3.3, 29°.42N±0°.06×51°.38E±0°.05, h8km±25km, n25, σ0§49/29, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPAR	**Pars**	**1.51**	**74**	*e*Pn	**Pn**	**08 04 59.6**	**0.0**
IPAR				*e*Lg		08 05 21.6	
IPAR				*e*		08 05 22.7	
	comp=Z,6μm,0.3s						
ISRV	**Sarvestan**	**1.52**	**91**	*e*Lg		08 05 21.5	
GHIR	**Ghir-Karzin**	**1.81**	**128**	*e*Pg	**Pn**	**08 05 03.3**	**-0.4**
IGAR	**Gharneh**	**3.02**	**11**	*e*Pn	**Pn**	**08 05 20.1**	**-0.3**
IGAR				*e*		08 05 29.5	
	comp=Z,468nm,0.2s						
QRN	**Al-Qurain**	**3.10**	**258**	*e*P	**Pn**	**08 05 21.8**	**+0.4**
QRN				*e*S	**Sn**	**08 05 58.8**	**+0.1**
QRN				AML	AML	08 05 59.8	
	comp=Z,39nm,0.3s						
ISAD	**Sadrabad**	**3.18**	**38**	*e*Pn	**Pn**	**08 05 23.1**	**+0.6**
ISAD				*e*		08 06 02.8	
	comp=Z,653nm,0.2s						
IPIR	**Pirpir**	**3.28**	**353**	*e*Pn	**Pn**	**08 05 23.8**	**0.0**
IPIR				*e*		08 06 07.4	
	comp=Z,524nm,0.2s						
RDF	**Al-Radifah**	**3.38**	**262**	*e*P	**Pn**	**08 05 25.8**	**+0.5**
RDF	**Al-Radifah**	**3.38**	**262**	*e*P	**Pn**	**08 05 25.8**	**+0.5**
IMEH	**Mehriz**	**3.41**	**54**	*e*Pn	**Pn**	**08 05 26.0**	**+0.3**
IMEH				*e*		08 05 27.8	
	comp=Z,598nm,0.1s						
MIB	**Mutribah**	**3.54**	**277**	*e*P	**Pn**	**08 05 27.1**	**-0.3**
MIB				*e*S	**Sn**	**08 06 08.8**	**-0.6**
MIB				AML	AML	08 06 13.5	
	comp=Z,30nm,0.7s						
MIB	**Mutribah**	**3.54**	**277**	*e*P	**Pn**	**08 05 27.1**	**-0.3**
MIB				*e*S	**Sn**	**08 06 08.8**	**-0.6**
IZEF	**Zefreh**	**3.56**	**13**	*e*Pn	**Pn**	**08 05 27.7**	**0.0**
IZEF				*e*		08 05 28.4	
	comp=Z,411nm,0.1s						
NAY	**Al-Naaiem**	**3.62**	**268**	*e*P	**Pn**	**08 05 29.1**	**+0.6**
NAY				*e*S	**Sn**	**08 06 11.9**	**+0.5**
NAY				AML	AML	08 06 16.0	
	comp=Z,20nm,0.5s						
NAY	**Al-Naaiem**	**3.62**	**268**	*e*P	**Pn**	**08 05 29.1**	**+0.6**
NAY				*e*S	**Sn**	**08 06 11.9**	**+0.6**
ICHK	**Chekchek**	**3.83**	**42**	*e*Pn	**Pn**	**08 05 31.5**	**0.0**
ICHK				*e*		08 05 32.4	
	comp=Z,446nm,0.1s						
IBAF	**Bafgh**	**4.21**	**58**	*e*Pn	**Pn**	**08 05 36.1**	**-0.6**
IBAF				*e*		08 05 49.7	
	comp=Z,317nm,0.2s						
BNDS	**Bandar-Abbas**	**4.68**	**114**	*e*Pn	**Pn**	**08 05 42.9**	**-0.2**
KRBR	**Kerman**	**4.72**	**82**	*e*Pn	**Pn**	**08 05 43.8**	**+0.2**
BTHS		**5.38**	**185**	P	**Pn**	**08 05 53.4**	**+0.7**
BTHS		**5.38**	**185**	P	**Pn**	**08 05 53.4**	**+0.7**
ASYS		**6.48**	**255**	P	**Pn**	**08 06 06.5**	**-1.4**
ASYS		**6.48**	**255**	P	**Pn**	**08 06 06.5**	**-1.4**
LYLS		**8.24**	**208**	P	**Pn**	**08 06 31.8**	**-0.3**
LYLS		**8.24**	**208**	P	**Pn**	**08 06 31.8**	**-0.3**

*MOS **26** 08:18:15.7±2.0, 53°.62N×163°.70E, h55km, mb4.1/1, Error ellipse: s-maj=22.6km s-min=18.5km az=44.4*

KRSC 26 08:18:31.1±0.2, 54°.18N×161°.61E, h42km±32km, ML4.2, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.38**	**11**	*e*P	Pn	08 18 40.5	+0.1
MKZ				*i* S	Sn	08 18 47.7	+0.7
KII	**Karymskiy**	**1.28**	**264**	*e*P	Pn	08 18 53.1	+0.6
KII				*i* S	Sn	08 19 09.3	+0.9
SPN	**Mys Shipunski**	**1.44**	**222**	*e*P	Pn	08 18 54.3	-0.3
SPN				*i* S	Sn	08 19 11.5	-0.8
NLC	**Nalytchevo**	**1.68**	**234**	*e*P	Pn	08 18 58.2	+0.2
NLC				*i* S	Sn	08 19 18.6	+0.3
BZMR	**Bezymyannaya**	**1.87**	**340**	*e*P	Pn	08 19 01.8	+1.2
ZLN	**Zelenaya**	**1.90**	**346**	*e*P	Pn	08 19 02.3	+1.4
KIRR	**Kirishev**	**1.92**	**338**	*e*P	Pn	08 19 02.8	+1.6
AVH	**Avacha**	**1.94**	**243**	*e*P	Pn	08 19 03.2	+1.7
AVH				*i* S	Sn	08 19 26.5	+2.0
KPT	**Kopyto**	**1.96**	**337**	*e*P	Pn	08 19 03.1	+1.3
CIRR	**Tsirk**	**2.00**	**346**	*e*P	Pn	08 19 03.8	+1.5
PET	**Petropavlovsk**	**2.11**	**238**	*e*PN	Pn	08 19 04.7	+0.9
PET				pmax	pmax		
	comp=Z,35nm,0.2s						
PET	**Petropavlovsk**	**2.11**	**238**	*e*P	Pn	08 19 04.9	+1.1
PET				*i* S	Sn	08 19 29.7	+0.9
KRSR	**Krestovskiy**	**2.13**	**344**	*e*P	Pn	08 19 04.7	+0.6
KOZ	**Kozyrevsk**	**2.13**	**333**	*e*P	Pn	08 19 05.6	+1.5
KOZ				*i* S	Sn	08 19 30.7	+1.4
KOZR	**Kozyr**	**2.13**	**333**	PN	Pn	08 19 05.6	+1.5
KLY	**Klyuchi**	**2.21**	**346**	*e*P	Pn	08 19 05.8	+0.6
GNL	**Ganaly**	**2.22**	**259**	*e*P	Pn	08 19 07.0	+1.6
GNL				*i* S	Sn	08 19 32.6	+1.0
SRDR	**Sredinnyy**	**2.40**	**334**	*e*P	Pn	08 19 08.6	+0.8
BDR	**Baidarnaya**	**2.41**	**355**	*e*P	Pn	08 19 09.8	+1.9
SMKR	**Semkarok**	**2.41**	**358**	*e*P	Pn	08 19 09.4	+1.5
SRKR	**Sorokina**	**2.49**	**354**	*e*P	Pn	08 19 10.4	+1.3
BKI	**Bering**	**2.73**	**66**	*e*P	Pn	08 19 12.1	-0.3
BKI				*i* S	Sn	08 19 41.0	-3.1
MIPR	**Malaya Ipel'ka**	**3.48**	**239**	*e*P	Pn	08 19 25.3	+2.6
SKR	**Severo-Kuril's**	**4.85**	**226**	*e*PN	Pn	08 19 35.4	-6.1

*CSEM **26** 08:19:58.8±0.2, 38°.13N×21°.60E, h0km, MD3.6, Error ellipse: s-maj=4.6km s-min=4.4km az=146.0*
*ATH **26** 08:19:58.7, 38°.13N×21°.59E, h18km±1km, MD3.6/7*
*NEIC **26** 08:19:58.7, 38°.13N×21°.59E, h18km, MD3.6(ATH), After ATH.*
*ISCJB **26** 08:19:58.9±0.3, 38°.14N±0°.02×21°.61E±0°.02, h9km±3km, Error ellipse: s-maj=3.3km s-min=2.9km az=153.8*
*THE **26** 08:19:59.2, 38°.14N×21°.61E, h0km±3km, ML3.3/10, Error ellipse: s-maj=3.1km s-min=0.9km az=208.0*

ISC 26 08:19:59.5±0.3, 38°.14N±0°.02×21°.61E±0°.02, h9km±3km, n68, σ1§12/123, 3C, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.14**	**234**	*e*Pb	**Pg**	**08 20 02.9**	**+0.3**
RLS				*e*Sb	**Sg**	**08 20 06.1**	**+1.4**
RLS	**Riolos of Patr**	**0.14**	**234**	*e*PB	**Pg**	**08 20 02.9**	**+0.3**
RLS				*e*SB	**Sg**	**08 20 06.1**	**+1.4**
RLS	**Riolos of Patr**	**0.14**	**234**	*e*Pb	**Pg**	**08 20 02.9**	**+0.3**
RLS				*e*Sb	**Sg**	**08 20 06.1**	**+1.4**
UPR	**University Cam**	**0.20**	**44**	P	**Pg**	**08 20 03.4**	**-0.2**
UPR				S	**Sg**	**08 20 07.8**	**+1.4**
UPR	**University Cam**	**0.20**	**44**	*e*PB	**Pg**	**08 20 03.9**	**+0.3**
UPR				*e*SB	**Sg**	**08 20 07.8**	**+1.4**
UPR	**University Cam**	**0.20**	**44**	P	**Pg**	**08 20 03.4**	**-0.2**
UPR	**University Cam**	**0.20**	**44**	*e*Pb	**Pg**	**08 20 03.9**	**+0.3**
UPR				S	**Sg**	**08 20 07.8**	**+1.4**
LAKA	**Lakka**	**0.30**	**71**	P	**Pg**	**08 20 05.3**	**-0.3**
LAKA				S	**Sg**	**08 20 10.4**	**+0.7**
LAKA	**Lakka**	**0.30**	**71**	P	**Pg**	**08 20 05.3**	**-0.3**
LAKA				S	**Sg**	**08 20 10.4**	**+0.7**
EFP	**Efpalio**	**0.37**	**39**	P	**Pg**	**08 20 06.4**	**-0.4**
EFP				S	**Sg**	**08 20 12.3**	**+0.7**
EFP	**Efpalio**	**0.37**	**39**	*e*PB	**Pg**	**08 20 06.3**	**-0.5**
EFP				*e*SB	**Sg**	**08 20 12.4**	**+0.8**
EFP	**Efpalio**	**0.37**	**39**	P	**Pg**	**08 20 06.4**	**-0.4**
EFP				S	**Sg**	**08 20 12.3**	**+0.7**
TRIZ	**Trizonia**	**0.43**	**58**	P	**Pg**	**08 20 07.2**	**-0.7**
TRIZ				S	**Sg**	**08 20 13.2**	**-0.3**
TRIZ	**Trizonia**	**0.43**	**58**	P	**Pg**	**08 20 07.2**	**-0.7**
TRIZ				S	**Sg**	**08 20 13.2**	**-0.3**
KALE	**Kalithea**	**0.48**	**59**	P	**Pg**	**08 20 08.2**	**-0.8**
KALE				S	**Sg**	**08 20 16.3**	**+1.0**
KALE	**Kalithea**	**0.48**	**59**	P	**Pg**	**08 20 08.2**	**-0.8**
KALE				S	**Sg**	**08 20 16.3**	**+1.0**
GUR	**Goura**	**0.61**	**109**	P	**Pg**	**08 20 10.4**	**-0.9**
GUR				S	**Sg**	**08 20 19.7**	**+0.4**
GUR	**Goura**	**0.61**	**109**	*e*PB	**Pg**	**08 20 10.1**	**-1.2**
GUR				*e*SN	**Sg**	**08 20 19.4**	**+0.1**
GUR	**Goura**	**0.61**	**109**	*e*Pb	**Pg**	**08 20 10.1**	**-1.2**
GUR	**Goura**	**0.61**	**109**	P	**Pg**	**08 20 10.4**	**-0.9**
GUR				S	**Sg**	**08 20 19.7**	**+0.4**
KFL	**Anninata**	**0.65**	**268**	P	**Pg**	**08 20 11.2**	**-0.9**
KFL				S	**Sg**	**08 20 23.0**	**+2.4**
DSF	**Desfina**	**0.77**	**69**	P	**Pg**	**08 20 12.8**	**-1.5**
DSF				S	**Sg**	**08 20 25.2**	**+0.8**
DSF	**Desfina**	**0.77**	**69**	P	**Pg**	**08 20 12.8**	**-1.5**
DSF				S	**Sg**	**08 20 25.2**	**+0.8**
EVR	**Evrytania**	**0.79**	**11**	*e*Pn	**Pg**	**08 20 14.7**	**-0.1**
EVR				*e*Sn	**Sg**	**08 20 25.1**	**0.0**
EVR	**Evrytania**	**0.79**	**11**	*e*PN	**Pg**	**08 20 14.7**	**-0.1**
EVR				*e*SN	**Sg**	**08 20 25.1**	**0.0**
EVR	**Evrytania**	**0.79**	**11**	*e*Pn	**Pg**	**08 20 14.7**	**-0.1**
EVR				*e*Sn	**Sg**	**08 20 25.1**	**0.0**
VLS	**Valsamata**	**0.81**	**273**	⇑*i*Pb	**Pg**	**08 20 13.5**	**-1.6**
VLS				*e*Sn	**Sg**	**08 20 25.7**	**+0.1**
VLS	**Valsamata**	**0.81**	**273**	P	**Pg**	**08 20 13.3**	**-1.8**
VLS				S	**Sg**	**08 20 26.7**	**+1.1**
VLS	**Valsamata**	**0.81**	**273**	⇑*i*PB	**Pg**	**08 20 13.5**	**-1.6**
VLS				*e*SN	**Sg**	**08 20 25.7**	**+0.1**
VLS	**Valsamata**	**0.81**	**273**	⇑*i*Pb	**Pg**	**08 20 13.5**	**-1.6**
VLS				*e*Sn	**Sg**	**08 20 25.7**	**+0.1**
VLS				S	**Sg**	**08 20 26.7**	**+1.1**
VLX	**Vlachokerasia**	**0.98**	**141**	P	**Pg**	**08 20 17.1**	**-1.3**
VLX				S	**Sg**	**08 20 32.5**	**+1.4**
VLX	**Vlachokerasia**	**0.98**	**141**	*e*PN	**Pg**	**08 20 17.1**	**-1.3**
VLX				*e*SN	**Sg**	**08 20 31.8**	**+0.7**
VLX	**Vlachokerasia**	**0.98**	**141**	P	**Pg**	**08 20 17.1**	**-1.3**
VLX				*e*Sn	**Sg**	**08 20 31.8**	**+0.7**
VLX				S	**Sg**	**08 20 32.5**	**+1.4**
ITM	**Ithomi**	**0.99**	**165**	*e*Pn	**Pg**	**08 20 17.2**	**-1.4**
ITM				*e*Sn	**Sg**	**08 20 31.4**	**0.0**
ITM	**Ithomi**	**0.99**	**165**	P	**Pg**	**08 20 17.0**	**-1.6**
ITM				S	**Sg**	**08 20 33.6**	**+2.2**
ITM	**Ithomi**	**0.99**	**165**	*e*PN	**Pg**	**08 20 17.2**	**-1.4**
ITM				*e*SN	**Sg**	**08 20 31.4**	**0.0**
ITM	**Ithomi**	**0.99**	**165**	P	**Pg**	**08 20 17.0**	**-1.6**
ITM				*e*Sn	**Sg**	**08 20 31.4**	**0.0**
ITM				S	**Sg**	**08 20 33.6**	**+2.2**
LKD2	**Lefkada island**	**0.99**	**311**	P	**Pg**	**08 20 16.6**	**-2.0**
LKD2				S	**Sg**	**08 20 32.0**	**+0.5**
LKD2	**Lefkada island**	**0.99**	**311**	P	**Pg**	**08 20 16.6**	**-2.0**
LKD2				S	**Sg**	**08 20 32.0**	**+0.5**
AGG	**Agios Georgios**	**1.04**	**32**	*e*Pn	**Pg**	**08 20 18.5**	**-1.1**
AGG				*e*Sb	**Sg**	**08 20 33.0**	**-0.2**
AGG	**Agios Georgios**	**1.04**	**32**	P	**Pg**	**08 20 18.6**	**-1.0**
AGG				S	**Sg**	**08 20 33.1**	**-0.1**
AGG	**Agios Georgios**	**1.04**	**32**	*e*PN	**Pg**	**08 20 18.5**	**-1.1**
AGG				*e*SB	**Sg**	**08 20 33.0**	**-0.2**
AGG	**Agios Georgios**	**1.04**	**32**	P	**Pg**	**08 20 18.6**	**-1.0**
AGG				S	**Sg**	**08 20 33.1**	**-0.1**
LTK	**Loutraki**	**1.07**	**96**	*e*PN	**Pg**	**08 20 19.1**	**-1.1**
LTK				*e*SN	**Sg**	**08 20 34.4**	**+0.3**
LTK	**Loutraki**	**1.07**	**96**	*e*Pn	**Pg**	**08 20 19.1**	**-1.1**
LTK				*e*Sn	**Sg**	**08 20 34.4**	**+0.3**
LKR	**Lokris**	**1.20**	**65**	*e*Pn	**Pn**	**08 20 21.2**	**-1.4**
LKR				*e*Sn	**Sn**	**08 20 38.8**	**-0.2**
LKR	**Lokris**	**1.20**	**65**	*e*PN	**Pn**	**08 20 21.2**	**-1.4**
LKR				*e*SN	**Sn**	**08 20 38.8**	**-0.2**
LKR	**Lokris**	**1.20**	**65**	*e*Pn	**Pn**	**08 20 21.2**	**-1.4**
LKR				*e*Sn	**Sn**	**08 20 38.8**	**-0.2**
PYL	**PYLOS**	**1.25**	**175**	P	**Pn**	**08 20 21.6**	**-1.6**
PYL				S	**Sb**	**08 20 41.9**	**+2.5**
PYL	**PYLOS**	**1.25**	**175**	*e*PN	**Pn**	**08 20 21.8**	**-1.4**
PYL				*e*SN	**Sn**	**08 20 39.0**	**-1.1**
PYL	**PYLOS**	**1.25**	**175**	*e*Pn	**Pn**	**08 20 21.8**	**-1.4**
PYL				*e*Sn	**Sn**	**08 20 39.0**	**-1.1**
PYL				S	**Sb**	**08 20 41.9**	**+2.5**
THL	**Klokotos Trika**	**1.46**	**12**	P	**Pn**	**08 20 26.4**	**+0.3**
THL				S	**Sn**	**08 20 47.5**	**+2.2**
THL	**Klokotos Trika**	**1.46**	**12**	*e*PN	**Pn**	**08 20 26.4**	**+0.3**
THL	**Klokotos Trika**	**1.46**	**12**	P	**Pn**	**08 20 26.4**	**+0.3**
THL				S	**Sn**	**08 20 47.5**	**+2.2**
JAN	**Janina**	**1.63**	**339**	*e*Pn	**Pn**	**08 20 28.8**	**+0.4**
JAN	**Janina**	**1.63**	**339**	*e*PN	**Pn**	**08 20 28.8**	**+0.4**
JAN	**Janina**	**1.63**	**339**	*e*Pn	**Pn**	**08 20 28.8**	**+0.4**
NEO	**Neokhori**	**1.72**	**47**	*e*Pn	**Pn**	**08 20 30.8**	**+1.2**
NEO	**Neokhori**	**1.72**	**47**	*e*PN	**Pn**	**08 20 30.8**	**+1.2**
NEO	**Neokhori**	**1.72**	**47**	*e*Pn	**Pn**	**08 20 30.8**	**+1.2**
VLI	**Veliai**	**1.77**	**143**	*e*Pn	**Pn**	**08 20 31.5**	**+1.2**
VLI	**Veliai**	**1.77**	**143**	*e*PN	**Pn**	**08 20 31.5**	**+1.2**
VLI	**Veliai**	**1.77**	**143**	*e*Pn	**Pn**	**08 20 31.5**	**+1.2**
KEK	**Kerkira**	**2.11**	**319**	*e*Pb	**Pb**	**08 20 34.8**	**-3.2**
KEK	**Kerkira**	**2.11**	**319**	*e*PB	**Pb**	**08 20 34.8**	**-3.2**
KYTH	**Kithira**	**2.18**	**148**	*e*Pn	**Pn**	**08 20 37.2**	**+1.3**
KYTH	**Kithira**	**2.18**	**148**	*e*PN	**Pn**	**08 20 37.2**	**+1.3**
KYTH	**Kithira**	**2.18**	**148**	*e*Pn	**Pn**	**08 20 37.2**	**+1.3**

IDC 26 08:38:27.3±1.5, 32°.17N×105°.00E, h0km, mb3.3/3, mb1 3.5/5, mb1mx3.4/25, mbtmp3.3/5, ML3.5/2, Error ellipse: s-maj=46.6km s-min=27.2km az=61.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**15.68**	**3**	P	Pn	08 42 11.6	+2.2
	0.1nm,0.3s,baz=178,slow=8.7,SNR=2.3						
KSRS	**Korea Array**	**19.53**	**68**	P	Pn	08 42 55.4	-2.1
	0.2nm,0.3s,baz=275,slow=11,SNR=4.1						
MKAR	**Makanchi Array**	**22.70**	**317**	P	P	08 43 30.0	-0.4
	0.4nm,0.8s,baz=120,slow=9.6,SNR=3.2						
WRA	**Warramunga Arr**	**58.95**	**147**	P	P	08 48 28.5	0.0
	0.5nm,0.8s,baz=340,slow=7.6,SNR=5.6						
ASAR	**Alice Springs**	**62.02**	**150**	P	P	08 48 49.6	+0.2
	0.2nm,0.4s,baz=341,slow=7.9,SNR=4.8						

*IDC **26** 09:03:38.9±3.7, 1°.90S×100°.26E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.6/21, mbtmp3.7/5, Error ellipse: s-maj=165.7km s-min=22.6km az=56.0*
*ISCJB **26** 09:03:47.8±0.6, 1°.75S±0°.06×100°.5E±0°.1, h80km±7km, mb3.7/5, Error ellipse: s-maj=18.2km s-min=9.0km az=12.0*
*DJA **26** 09:03:49, 1°.77S×100°.45E, h10km, MLv3.3/3*

ISC 26 09:03:48.7±0.7, 1°.76S±0°.06×100°.5E±0°.1, h70km±8km, n11, σ0§61/12, mb3.7/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**0.84**	**358**	P	**Pn**	**09 04 04.3**	**-1.0**
PDSI				S	**Sn**	**09 04 17.0**	**-0.5**
PPSI	**Pulau Pagai**	**1.11**	**206**	P	**Pn**	**09 04 08.1**	**-0.5**
PPSI				S	**Sn**	**09 04 23.7**	**+0.3**
SDSI	**Sungai Dareh**	**1.25**	**49**	P	**Pn**	**09 04 11.5**	**+1.2**
PPI	**Padang Panjang**	**1.29**	**356**	P	**Pn**	**09 04 11.3**	**+0.3**
SISI	**Saibi**	**1.46**	**287**	P	**Pn**	**09 04 13.8**	**+0.6**
WRA	**Warramunga Arr**	**37.70**	**121**	P	**P**	**09 10 56.9**	**-0.8**
	0.1nm,0.3s,mb3.1,baz=302,slow=9.6,SNR=3.3						
ASAR	**Alice Springs**	**39.00**	**127**	P	**P**	**09 11 08.7**	**+0.2**
	0.4nm,0.6s,mb3.4,baz=303,slow=7.8,SNR=9.7						
SONM	**Songino Array**	**49.66**	**5**	P	**P**	**09 12 33.8**	**+0.6**
	0.5nm,0.4s,mb3.8,baz=183,slow=5.8,SNR=3.9						
MKAR	**Makanchi Array**	**50.93**	**344**	P	**P**	**09 12 42.9**	**+0.1**
	1.0nm,0.6s,mb4.0,baz=153,slow=9.7,SNR=7.6						
ZALV	**Zalesovo Beam**	**57.02**	**349**	P	**P**	**09 13 26.7**	**-0.4**
	0.5nm,0.3s,mb4.0,baz=176,slow=4.5,SNR=4.2						
TXAR	**Lajitas Array**	**144.21**	**38**	PKP	PKPdf	09 23 16.8	-0.5
	0.2nm,0.5s,baz=233,slow=1.1,SNR=5.2						

*IDC **26** 09:18:29.4±1.1, 2°.60S×138°.52E, h0km, mb3.9/6, mb1 4.1/9, mb1mx4.0/15, mbtmp4.0/9, ML4.0/3, MS3.5/2, Ms1 3.5/2, ms1mx2.5/19, Error ellipse: s-maj=42.9km s-min=18.0km az=81.0*
*NEIC **26** 09:18:34.6±0.6, 2°.63S×138°.49E, h35km, mb4.2/1, Error ellipse: s-maj=16.6km s-min=8.3km az=79.0*

ISC 26 09:18:30.7±3.8, 2°.57S±0°.06×138°.6E±0°.1, h9km±25km, n18, σ1§07/20, mb3.8/6, MS3.5/2, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**11.77**	**211**	*e*Pn	**Pn**	**09 21 19.1**	**+0.2**
	44nm,0.6s						
KAKA				*e*Sn	**Sn**	**09 23 32.4**	**+2.0**
COEN	**Coen**	**12.20**	**158**	*e*Pn	**Pn**	**09 21 26.2**	**+1.4**
	69nm,0.7s						
WRAB	**Tennant Creek**	**17.75**	**193**	*e*P	**Pn**	**09 22 38.7**	**+0.5**
	15nm,0.8s						
WRAB				*e*S	**Sn**	**09 26 00.9**	**+4.8**
WRA	**Warramunga Arr**	**17.76**	**193**	P	**Pn**	**09 22 36.6**	**-1.6**
	0.9nm,0.3s,baz=16,slow=13,SNR=13						
WRA				S	**Sn**	**09 25 50.7**	**-5.7**
	0.2nm,0.3s,baz=11,slow=22,SNR=4.4						
CTA	**Charters Tower**	**18.96**	**157**	P	**Pn**	**09 22 52.7**	**-0.3**
	0.1nm,0.3s,baz=322,slow=15,SNR=2.4						
CTA	**Charters Tower**	**18.96**	**157**	P	**Pn**

baz=24,slow=20,SNR=3.4
CFAA Coronel Fontan 10.91 175 P **Pn 10 15 34.7 +3.1**
comp=N,0.1nm,0.3s,baz=350,slow=12,SNR=4.2
CPUP Villa Florida 12.31 119 P **Pn 10 15 51.8 +1.1**
comp=N,0.2nm,0.3s,baz=288,slow=16,SNR=5.0
TXAR Lajitas Array 59.77 325 P **P 10 22 53.5 -1.2**
comp=N,0.5nm,0.8s,mb3.6,baz=148,slow=8.0,SNR=5.3
SDCO Great Sand Dun 67.38 330 *eP* **P 10 23 45.0 +0.5**
comp=N,0.6nm,0.5s,mb3.7
SRU San Rafael 70.91 327 *eP* **P 10 24 07.1 +0.7**
comp=N,2.3nm,0.8s,mb4.1
PDAR Pinedale Array 73.24 330 P **P 10 24 19.8 -0.4**
comp=N,0.3nm,0.6s,mb3.3,baz=126,slow=7.5,SNR=3.6
NVAR Mina Array Bea 74.64 322 P **P 10 24 29.5 +1.0**
comp=N,0.2nm,0.3s,mb3.3,baz=162,slow=6.4,SNR=3.2
TORD Torodi Ar. Bea 77.41 71 P **P 10 24 43.1 -1.6**
comp=N,0.4nm,0.5s,mb3.4,baz=253,slow=5.0,SNR=7.7
TORD pP pP 10 25 06.7 -0.4
comp=N,1.8nm,0.6s,baz=254,slow=5.7,SNR=7.7
TORD Torodi Ar. Bea 77.41 71 P **P 10 24 43.1 -1.6**
TORD pP pP 10 25 06.7 -0.4
YKA Yellowknife Ar 90.31 341 P **P 10 25 48.3 -1.1**
comp=N,0.4nm,0.7s,mb3.7,baz=129,slow=4.9,SNR=3.7
YKA Yellowknife Ar 90.31 341 P **P 10 25 48.3 -1.1**
ASAR Alice Springs 130.47 208 PKP PKPdf 10 31 59.0 -0.8
comp=N,1.0nm,1.1s,baz=151,slow=2.1,SNR=3.5
ZALV Zalesovo Beam 141.37 24 PKP PKPdf 10 32 19.4 +0.4
comp=N,0.7nm,0.4s,baz=270,slow=4.3,SNR=2.9
MKAR Makanchi Array 145.18 35 PKPbc PKPbc 10 32 25.4 -0.4
comp=N,0.9nm,0.6s,baz=0.5,slow=4.7,SNR=7.0
MKAR pPKPbc pPKPbc 10 32 50.4 +1.1
comp=N,0.6nm,0.8s,baz=356,slow=5.0,SNR=4.2

*IDC **26** 10:23:09.3±10.0, 16.°93N×94.°06W, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.6/20, mbtmp3.5/3, MS3.8/1, Ms1 3.8/1, ms1mx2.8/20, Error ellipse: s-maj=202.0km s-min=105.8km az=7.0*
*ISCJB **26** 10:23:28.1±0.4, 17.°33N±0.°05×94.°89W±0.°03, h146km±6km, mb3.4/2, Error ellipse: s-maj=9.4km s-min=3.6km az=18.6*
*MEX **26** 10:23:29.8±0.8, 17.°38N×94.°89W, h152km±13km, MD4.2*
*NEIC **26** 10:23:29.0, 17.°35N×94.°90W, h155km, mb3.9/1, MD4.2(MEX), After MEX.*
ISC 26 10:23:29.0±0.4, 17.°32N±0.°05×94.°89W±0.°03, h144km±7km, n28, σ0.°95/49, mb3.4/2, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OXX	**Oaxaca**	**1.77**	**263**	*i* P	**Pn**	**10 24 01.7**	**+0.6**
OXX				*i* S	**Sn**	**10 24 25.7**	**+0.1**
TGIG		**1.78**	**107**	*i* P	**Pn**	**10 24 02.1**	**+1.0**
TGIG				*i* S	**Sn**	**10 24 25.8**	**+0.1**
VHO	**Vista Hermosa**	**1.78**	**262**	*i* P	**Pn**	**10 24 01.8**	**+0.7**
VHO				*i* S	**Sn**	**10 24 26.5**	**+0.8**
HUIG	**Huatulco**	**1.93**	**217**	*i* P	**Pn**	**10 24 03.3**	**+0.3**
HUIG				*i* S	**Sn**	**10 24 28.9**	**-0.2**
SCX	**San Cristobal**	**2.24**	**105**	*i* P	**Pn**	**10 24 06.0**	**-0.5**
SCX				*i* S	**Sn**	**10 24 36.2**	**+0.8**
PCIG		**2.27**	**135**	*i* P	**Pn**	**10 24 06.8**	**-0.2**
PCIG				*i* S	**Sn**	**10 24 36.8**	**+0.6**
TPIG	**Tehuac#an**	**2.59**	**295**	*i* P	**Pn**	**10 24 11.4**	**+0.5**
TPIG				*i* S	**Sn**	**10 24 42.3**	**-1.1**
LVIG	**Laguna Verde**	**2.80**	**329**	*i* P	**Pn**	**10 24 10.8**	**-2.7**
LVIG				*i* S	**Sn**	**10 24 43.6**	**-4.4**
UTMO	**Huajuapan**	**2.82**	**281**	*i* P	**Pn**	**10 24 14.0**	**+0.1**
UTMO				*i* S	**Sn**	**10 24 47.7**	**-0.8**
PNIG	**Pinotepa**	**3.23**	**254**	*i* P	**Pn**	**10 24 17.9**	**-1.3**
PNIG				*i* S	**Sn**	**10 24 57.1**	**-0.8**
THIG		**3.48**	**133**	*eP*	**Pn**	**10 24 22.4**	**0.0**
THIG				*i* S	**Sn**	**10 25 03.2**	**-0.4**
PPM	**Popocatepetl**	**3.95**	**297**	*eP*	**Pn**	**10 24 28.5**	**0.0**
PPM				*i* P		10 24 28.8	
PPM				*i* S	**Sn**	**10 25 15.6**	**+0.9**
PPM				*i* S	**Sn**	**10 25 17.8**	**+3.2**
YAIG	**Yautepec**	**4.26**	**292**	*i* P	**Pn**	**10 24 32.4**	**-0.1**
YAIG				*i* S	**Sn**	**10 25 23.0**	**+1.2**
IIO	**Organos**	**4.28**	**302**	*i* P	**Pn**	**10 24 33.4**	**+0.6**
IIO				*i* S	**Sn**	**10 25 23.5**	**+1.1**
PBVM	**Pinon**	**4.51**	**299**	*eP*	**Pn**	**10 24 35.2**	**-0.6**
PBVM				*i* S	**Sn**	**10 25 27.5**	**-0.2**
PLIG	**Platanillo**	**4.52**	**284**	*i* P	**Pn**	**10 24 36.9**	**+1.0**
PLIG				*i* S	**Sn**	**10 25 26.8**	**-1.2**
MZVM		**4.52**	**295**	*i* P	**Pn**	**10 24 34.7**	**-1.2**
MZVM				*i* S	**Sn**	**10 25 27.2**	**-0.9**
MEIG	**Mezcala**	**4.55**	**278**	*i* P	**Pn**	**10 24 35.9**	**-0.4**
MEIG				*i* S	**Sn**	**10 25 28.2**	**-0.5**
ACX	**Acapulco**	**4.77**	**265**	*eP*	**Pn**	**10 24 38.7**	**-0.6**
ACX				*i* S	**Sn**	**10 25 29.9**	**-4.2**
CAIG	**El Cayaco**	**5.15**	**268**	*i* P	**Pn**	**10 24 48.0**	**+3.7**
CAIG				*i* S	**Sn**	**10 25 47.5**	**+4.6**
ZIIG	**Zihuatanejo**	**6.28**	**274**	*i* P	**Pn**	**10 24 59.7**	**+0.3**
ZIIG				*i* S	**Sn**	**10 26 11.2**	**+1.1**
TEIG	**Tepich**	**6.90**	**64**	*e*Pn	**Pn**	**10 25 06.0**	**-1.8**
22nm,0.4s							
TXAR	**Lajitas Array**	**14.41**	**328**	Pn	**Pn**	**10 26 48.4**	**+2.0**
0.1nm,0.3s,baz=150,slow=12,SNR=9.6							
MIAR	**Mount Ida**	**17.20**	**4**	*eP*	**Pn**	**10 27 20.6**	**+0.1**
4.3nm,0.6s							
NVAR	**Mina Array Bea**	**29.35**	**320**	P	**P**	**10 29 21.7**	**+3.4**
0.6nm,0.7s,mb3.5,baz=134,slow=9.4,SNR=6.0							
YKA	**Yellowknife Ar**	**47.19**	**348**	P	**P**	**10 31 47.6**	**+0.8**
0.5nm,0.5s,mb3.4,baz=154,slow=7.1,SNR=3.9							
CPUP	**Villa Florida**	**56.70**	**139**	LR	LR	10 55 50.2	
comp=Z,94nm,20.1s,baz=0.1,slow=35							
KEST	**Kesra**	**91.10**	**52**	*eP*	**P**	**10 36 16.1**	**-1.5**

*IDC **26** 10:36:38.5±0.8, 31.°20N×103.°65E, h0km, mb4.2/9, mb1 4.3/11, mb1mx4.1/24, mbtmp4.2/11, ML3.9/2, MS3.0/1, Ms1 3.0/1, ms1mx2.3/33, Error ellipse: s-maj=32.5km s-min=15.6km az=61.0*
*NEIC **26** 10:36:41.0±0.6, 31.°17N×103.°57E, h10km, mb4.2/4, Error ellipse: s-maj=16.2km s-min=10.2km az=64.0*
*BJI **26** 10:36:41.2, 31.°16N×103.°74E, h14km, mB4.5/5, mb4.1/6, ML3.9/17, Ms3.8/5, Ms7 3.3/4*
ISC 26 10:36:41.4±0.7, 31.°23N±0.°03×103.°74E±0.°05, h16km±4km, n39, σ0.°95/48, mb4.2/13, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.32**	**178**	⇑*i* Pg	**Pg**	**10 36 47.8**	**-0.3**
CD2				Sg	**Sg**	**10 36 53.5**	**+0.9**
CD2				smax			
comp=N,14μm,0.7s							
CD2				smax			
comp=E,27μm,0.8s							
LZH	**Lanzhou**	**4.84**	**1**	Pg	**Pg**	**10 38 15.0**	**+0.8**
LZH				Sg	**Sg**	**10 39 15.5**	**-1.4**
LZH				smax			
comp=N,120nm,0.8s							
LZH				smax			
comp=E,140nm,1.0s							
LZH				LR	LR		
comp=N,1μm,5.2s							
LZH				LR	LR		
comp=Z,2μm,6.5s							
ENH	**Enshi**	**5.04**	**99**	*e*Pn	**Pn**	**10 38 00.2**	**+3.9**
comp=Z,74nm,0.7s							
XAN	**Xi'an**	**5.19**	**56**	Pn	**Pn**	**10 37 58.0**	**-0.4**
XAN				Pg	**Pg**	**10 38 16.5**	**-4.3**
XAN				Sn	**Sn**	**10 38 54.3**	**-3.7**
XAN				Sg	**Sg**	**10 39 21.5**	**-6.5**
XAN				smax			
comp=N,140nm,0.8s							
XAN				smax			
comp=E,73nm,1.0s							
GYA	**Guiyang**	**5.40**	**151**	Pn	**Pn**	**10 38 01.8**	**+0.5**
GYA				Sn	**Sn**	**10 39 04.5**	**+1.3**
GYA				Sg	**Sg**	**10 39 33.0**	**-1.8**
GYA				smax			
comp=N,190nm,0.8s							
GYA				smax			
comp=E,190nm,1.0s							
KMI	**Kunming**	**6.15**	**189**	Pn	**Pn**	**10 38 11.8**	**+0.2**
KMI				Sn	**Sn**	**10 39 20.8**	**-0.8**
KMI				smax			
comp=N,42nm,1.2s							
KMI				smax			
comp=E,35nm,1.4s							
KMI				LR	LR		
comp=N,340nm,9.4s							
KMI				LR	LR		
comp=E,700nm,10.3s							
KMI				LR	LR		
comp=Z,240nm,9.4s							
GTA	**Gaotai**	**8.77**	**340**	*e*P	**Pn**	**10 38 53.5**	**+6.0**
GTA				pP		10 39 02.8	
GTA				S	**Sn**	**10 40 32.0**	**+6.0**
GTA				sS		10 40 36.5	
GTA				pmax	pmax		
comp=Z,3.0nm,1.3s							
GTA				pmax	pmax		
comp=Z,32nm,5.4s							
GTA				LR	LR		
comp=N,170nm,11.6s							
GTA				LR	LR		
comp=E,220nm,12.5s							
GTA				LR	LR		
comp=Z,110nm,12.2s							
WHN	**Wuhan**	**9.14**	**92**	P	**Pn**	**10 38 55.3**	**+2.6**
WHN				S	**Sn**	**10 40 31.8**	**-3.5**
WHN				LR	LR		
comp=N,1μm,4.8s							
WHN				LR	LR		
comp=E,930nm,5.1s							
WHN				LR	LR		
comp=Z,720nm,7.7s							
CMAR	**Chiang Mai Arr**	**13.44**	**200**	Pn	**Pn**	**10 39 51.8**	**+0.2**
comp=Z,0.4nm,0.3s,baz=17,slow=11,SNR=4.4							
JIRN	**Jiri**	**15.70**	**261**	*eP*	**Pn**	**10 40 21.2**	**-0.8**
comp=Z,17nm,0.7s							
GUN	**Gumba**	**15.89**	**263**	*eP*	**Pn**	**10 40 24.3**	**-0.1**
comp=Z,12nm,0.5s							
PKI	**Pulchoki**	**16.39**	**262**	*eP*	**Pn**	**10 40 30.6**	**-0.2**
comp=Z,14nm,0.6s							
PKIN	**Phulchoki**	**16.40**	**262**	*eP*	**Pn**	**10 40 30.4**	**-0.5**
comp=Z,12nm,0.5s							
KKN	**Kakani**	**16.43**	**263**	*eP*	**Pn**	**10 40 31.5**	**+0.1**
comp=Z,14nm,0.6s							
DMN	**Daman**	**16.63**	**262**	*eP*	**Pn**	**10 40 33.8**	**-0.2**
comp=Z,22nm,0.9s							
SONM	**Songino Array**	**16.71**	**6**	Pn	**Pn**	**10 40 35.5**	**+0.7**
comp=Z,0.2nm,0.3s,baz=187,slow=8.0,SNR=11							
ULN	**Ulaanbaatar**	**16.80**	**8**	*eP*	**Pn**	**10 40 39.9**	**+3.9**
comp=Z,4.1nm,0.9s							
KSRS	**Korea Array**	**20.88**	**66**	P	**P**	**10 41 23.8**	**+0.9**
comp=Z,4.3nm,0.6s,baz=260,slow=10,SNR=28							
KSRS				LR	LR	10 49 31.9	
comp=Z,42nm,18.2s,baz=215,slow=37							
CN2	**Changchun**	**21.23**	**48**	*eP*	**P**	**10 41 28.3**	**+1.7**
CN2				pmax	pmax		
comp=Z,20nm,0.7s,mb4.6							
MK31	**Makanchi Array**	**22.68**	**319**	*eP*	**P**	**10 41 42.9**	**+0.9**
MKAR	**Makanchi Array**	**22.68**	**319**	P	**P**	**10 41 42.5**	**+0.4**
comp=Z,4.5nm,0.9s,mb3.9,baz=109,slow=13,SNR=16							
MKAR	**Makanchi Array**	**22.68**	**319**	P	**P**	**10 41 42.5**	**+0.4**
UCH	**Uchtor**	**25.75**	**303**	*eP*	**P**	**10 42 13.0**	**+1.8**
comp=Z,2.5nm,0.8s,mb3.8							
ZAA0	**Zalesovo Array**	**26.47**	**335**	*eP*	**P**	**10 42 17.7**	**0.0**
ZALV	**Zalesovo Beam**	**26.47**	**335**	P	**P**	**10 42 17.4**	**-0.3**
comp=Z,3.0nm,0.8s,mb3.9,baz=134,slow=8.5,SNR=10							
KURK	**Kurchatov**	**26.96**	**323**	P	**P**	**10 42 21.7**	**-0.4**
comp=Z,1.6nm,0.7s,mb3.7,baz=129,slow=9.3,SNR=4.3							
KURK	**Kurchatov**	**26.96**	**323**	*eP*	**P**	**10 42 22.1**	**+0.1**
comp=Z,1.6nm,0.6s,mb3.7							
BVAR	**Borovoye Array**	**32.50**	**322**	PcP	PcP	10 45 57.0	-0.7
comp=Z,1.1nm,0.7s,baz=186,slow=1.4,SNR=6.3							
ARU	**Arti**	**40.14**	**322**	*eP*	**P**	**10 44 16.7**	**+0.3**
comp=Z,2.4nm,0.3s,mb4.4							
ARCES	**ARCESS Array B**	**57.02**	**336**	P	**P**	**10 46 24.2**	**-1.8**
comp=Z,2.3nm,0.8s,mb4.2,baz=81,slow=6.8,SNR=4.3							
ARCES				PcP	PcP	10 47 19.9	-1.0
comp=Z,1.2nm,0.6s,baz=101,slow=3.8,SNR=5.5							
WRAB	**Tennant Creek**	**58.75**	**146**	*eP*	**P**	**10 46 38.9**	**+0.1**
comp=Z,9.0nm,0.8s,mb4.8							
WRA	**Warramunga Arr**	**58.75**	**146**	P	**P**	**10 46 38.5**	**-0.3**
comp=Z,6.5nm,0.8s,mb4.7,baz=338,slow=7.9,SNR=17							
ASAR	**Alice Springs**	**61.76**	**148**	P	**P**	**10 46 59.3**	**0.0**
comp=Z,1.7nm,0.7s,mb4.3,baz=342,slow=6.7,SNR=17							
ASAR	**Alice Springs**	**61.76**	**148**	P	**P**	**10 46 59.3**	**0.0**
STKA	**Stephens Creek**	**72.28**	**147**	P	**P**	**10 48 05.7**	**-0.4**
comp=Z,3.9nm,1.0s,mb4.3,baz=297,slow=6.8,SNR=3.9							
LPG	**La Plagne**	**72.94**	**313**	*eP*	**P**	**10 48 09.4**	**-0.6**
comp=Z,2.2nm,0.4s,mb4.2							
LPL	**La Plagne**	**72.94**	**313**	*eP*	**P**	**10 48 09.4**	**-0.6**
YKA	**Yellowknife Ar**	**81.66**	**17**	P	**P**	**10 48 58.4**	**-0.1**
comp=Z,1.2nm,0.6s,mb4.0,baz=330,slow=5.4,SNR=6.2							
YKA	**Yellowknife Ar**	**81.66**	**17**	P	**P**	**10 48 58.4**	**-0.1**

IDC 26 10:41:34.2±35.0, 7.°06N×125.°87E, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.6/20, mbtmp4.0/3, Error ellipse: s-maj=594.2km s-min=213.4km az=157.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**28.09**	**163**	P	P	10 47 26.9	-0.9
0.7nm,0.3s,baz=343,slow=9.1,SNR=6.3							
ASAR	**Alice Springs**	**31.53**	**166**	P	P	10 47 58.1	-0.1
1.0nm,0.4s,baz=353,slow=7.6,SNR=12							
STKA	**Stephens Creek**	**41.52**	**160**	P	P	10 49 24.4	+1.0
1.7nm,0.4s,baz=338,slow=9.4,SNR=4.9							

*NIED **26** 10:49:00.44°.40N×149.°20E, h20km, Mw4.0 Best double couple: M0=9.82000×10^14 NP1:φ=56.00000°, δ=74.00000°, λ=102.00000°. NP2:φ=198.00000°, δ=21.00000°, λ=54.00000°.*
*MOS **26** 10:49:02.5±2.2, 43.°89N×149.°62E, h63km, mb3.9/1, Error ellipse: s-maj=17.7km s-min=14.0km az=17.6*
*JMA **26** 10:49:03.7±0.6, 44.°40N×149.°22E, h30km, M4.0*
*NEIC **26** 10:49:05.8±1.1, 44.°24N×149.°30E, Error ellipse: s-maj=26.3km s-min=9.6km az=146.0*
*ISCJB **26** 10:49:05.4±1.1, 43.°8N±0.°1×149.°15E±0.°09, h79km±10km, mb3.7/8, Error ellipse: s-maj=17.6km s-min=9.2km az=157.6*
*IDC **26** 10:49:06.9±1.6, 44.°41N×149.°18E, h51km±7km, mb3.6/8, mb1 3.7/11, mb1mx3.5/26, mbtmp3.5/11, MS3.2/5, Ms1 3.3/5, ms1mx2.8/32, Error ellipse: s-maj=49.7km s-min=16.8km az=173.0*
ISC 26 10:49:06.1±1.1, 43.°9N±0.°1×149.°22E±0.°09, h62km±10km, h51km±2.8km: pP-P, n40, σ1.°03/54, mb3.8/8, 1C, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**2.42**	**274**	⇑*i* PN	**Pn**	**10 49 42.8**	**-0.5**
YUK				*i* S	**Sn**	**10 50 11.4**	**-0.4**
YUK				pmax	pmax		
comp=Z,142nm,0.4s							
YUK				pmax	pmax		
comp=N,68nm,0.4s							
YUK				pmax	pmax		
comp=E,70nm,0.4s							
YUK				smax			
comp=E,308nm,0.6s							
YUK				smax			
comp=N,575nm,0.6s							
YUK				MLR	MLR		
comp=E,378μm,12.7s							
YUK				MLR	MLR		
comp=Z,316μm,12.7s							
NEM2	**Nemuro 2**	**2.58**	**259**	P	**Pn**	**10 49 44.2**	**-1.2**
NEM2				*e*S	**Sn**	**10 50 12.1**	**-3.6**
JRA	**Rausu**	**2.96**	**272**	P	**Pn**	**10 49 50.7**	**+0.1**
JNK	**Nakash**	**3.28**	**266**	P	**Pn**	**10 49 54.0**	**-0.9**
JNK				*e*S	**Sn**	**10 50 33.0**	**+0.3**
JAK	**Akkeshi**	**3.42**	**256**	P	**Pn**	**10 49 55.9**	**-1.0**
JAK				*e*S	**Sn**	**10 50 35.7**	**-0.5**
JTKR	**Abashiri--Toko**	**3.83**	**273**	P	**Pn**	**10 50 01.9**	**-0.6**
JAR	**Ashorobuto**	**4.00**	**263**	P	**Pn**	**10 50 03.8**	**-1.1**
JAR				*e*S	**Sn**	**10 50 52.9**	**+2.4**
JOB	**Onbets**	**4.05**	**257**	P	**Pn**	**10 50 05.5**	**0.0**
JOB				*e*S	**Sn**	**10 50 52.1**	**+0.4**
JMP	**Maruseppu**	**4.23**	**273**	P	**Pn**	**10 50 08.2**	**+0.3**
JCH	**Churui**	**4.47**	**255**	P	**Pn**	**10 50 11.9**	**+0.6**
JCH				*e*S	**Sn**	**10 51 02.1**	**+0.1**
JKK2	**Kamakawa 2**	**4.67**	**272**	P	**Pn**	**10 50 14.8**	**+0.8**
ASAJ	**Asahikawa**	**4.78**	**275**	P	**Pn**	**10 50 16.9**	**+1.5**
comp=Z,0.9nm,0.3s,baz=123,slow=13,SNR=8.1							
ASAJ				S	**Sn**	**10 51 23.6**	**+14**
comp=Z,0.2nm,0.3s,baz=270,slow=20,SNR=1.9							
ASAJ				LR	LR	10 52 20.4	
comp=Z,239nm,19.9s,baz=180,slow=41							
JEM	**Erimo**	**4.84**	**249**	P	**Pn**	**10 50 17.4**	**+1.1**
ERM	**Erimo**	**4.84**	**249**	*e*PN	**Pn**	**10 50 18.2**	**+1.9**
ERM				*e*		10 51 14.7	
ERM				pmax	pmax		
comp=Z,17nm,0.6s							
ERM	**Erimo**	**4.84**	**249**	*e*Pn	**Pn**	**10 50 18.2**	**+1.9**
comp=Z,17nm,0.6s							
ERM				*e*Sn	**Sn**	**10 51 14.7**	**+3.7**
JFR	**Furan**	**4.88**	**263**	P	**Pn**	**10 50 17.8**	**+1.0**
JNBK	**Urakawa-nobuka**	**5.01**	**253**	P	**Pn**	**10 50 18.3**	**-0.3**
JNBK				*e*S	**Sn**	**10 51 16.4**	**+1.2**
JBT2	**Biratori 2**	**5.13**	**259**	P	**Pn**	**10 50 20.1**	**-0.1**
YSS	**Yuzh-Sakhalins**	**5.46**	**306**	*e*PN	**Pn**	**10 50 32.0**	**+7.2**
JNB	**Noboribetsu**	**6.15**	**259**	P	**Pn**	**10 50 34.7**	**+0.4**
JNB				*e*S	**Sn**	**10 51 43.7**	**+0.5**
JKB	**Kayabe**	**6.35**	**254**	P	**Pn**	**10 50 36.6**	**-0.3**
JKB				*e*S	**Sn**	**10 51 45.7**	**-2.2**
JYM2	**Yakumo 2**	**6.73**	**257**	P	**Pn**	**10 50 41.6**	**-0.6**
JANG	**Nango**	**6.73**	**241**	P	**Pn**	**10 50 41.6**	**-0.6**
JANG				*e*S	**Sn**	**10 51 53.9**	**-3.6**
JTM	**Tenmabayashi**	**6.80**	**245**	P	**Pn**	**10 50 43.3**	**+0.1**
JTM				*e*S	**Sn**	**10 51 56.8**	**-2.3**
JSR	**Shiriuchi**	**6.91**	**253**	P	**Pn**	**10 50 44.2**	**-0.4**
JSR				*e*S	**Sn**	**10 52 00.1**	**-1.6**
PETK	**Petropavlovsk-**	**10.77**	**28**	P	**Pn**	**10 51 32.7**	**-4.5**
comp=Z,0.2nm,0.3s,baz=208,slow=11,SNR=6.1							
PETK				LR	LR	10 55 48.0	
comp=Z,46nm,20.7s,baz=216,slow=39							
KSRS	**Korea Array**	**17.37**	**255**	P	**Pn**	**10 53 06.9**	**+2.8**
baz=68,slow=12,SNR=4.6							
SONM	**Songino Array**	**29.78**	**293**	P	**P**	**10 55 06.8**	**+0.2**
comp=Z,0.8nm,0.7s,mb3.6,baz=80,slow=8.5,SNR=5.6							
SONM	**Songino Array**	**29.78**	**293**	P	**P**	**10 55 06.8**	**+0.1**
SONM				pmax	pmax		
comp=Z,1.0nm,0.1s							
MK31	**Makanchi Array**	**45.83**	**298**	*eP*	**P**	**10 57 21.8**	**+0.2**
MK31				*e*	pP	10 57 34.5	-2.9
MKAR	**Makanchi Array**	**45.83**	**298**	P	**P**	**10 57 21.8**	**+0.2**
comp=Z,1.4nm,0.8s,mb4.0,baz=73,slow=14,SNR=7.7							
MKAR				pP	pP	10 57 34.6	-2.8
comp=Z,0.4nm,0.5s,baz=77,slow=12,SNR=2.3							
MKAR				LR	LR	11 17 57.7	
comp=Z,50nm,18.3s,baz=177,slow=38							
MKAR	**Makanchi Array**	**45.83**	**298**	P	**P**	**10 57 21.8**	**+0.2**
MKAR				*PP	pP	10 57 34.6	-2.8
KURK	**Kurchatov**	**46.67**	**304**	P	**P**	**10 57 27.7**	**-0.4**
comp=Z,0.5nm,0.6s,mb3.6,baz=72,slow=7.8,SNR=3.6							
KURK				LR	LR	11 18 17.9	
comp=Z,30nm,19.9s,baz=215,slow=38							
CMAR	**Chiang Mai Arr**	**49.01**	**255**	LR	LR	11 19 35.3	
comp=Z,34nm,18.1s,baz=180,slow=37							
FINES	**FINESS Array B**	**65.39**	**334**	P	**P**	**10 59 40.3**	**-1.2**
comp=Z,3.2nm,0.7s,mb4.4,baz=46,slow=14,SNR=6.6							
PDAR	**Pinedale Array**	**68.65**	**51**	P	**P**	**11 00 04.0**	**+1.5**
comp=Z,0.2nm,0.4s,mb3.4,baz=318,slow=2.4,SNR=2.9							
PDAR				pP	pP	11 00 17.0	-2.3
comp=Z,0.5nm,0.7s,baz=318,slow=2.0,SNR=3.4							
NB2	**NORSAR Subarra**	**69.97**	**340**	P	**P**	**11 00 09.9**	**-0.5**
comp=Z,1.5nm,0.6s,mb4.1,baz=30,slow=6.5							
NOA	**NORSAR Array B**	**69.97**	**340**	P	**P**	**11 00 09.9**	**-0.5**
comp=Z,3.3nm,0.8s,mb4.3,baz=31,slow=6.2,SNR=9.9							
AKASG	**Malin Array Be**	**72.31**	**325**	P	**P**	**11 00 24.2**	**-0.5**
comp=Z,1.4nm,0.7s,mb4.0,baz=32,slow=4.6,SNR=6.0							
TXAR	**Lajitas Array**	**81.30**	**58**	P	**P**	**11 01 15.6**	**-0.1**
comp=Z,0.2nm,0.5s,mb3.3,baz=320,slow=4.4,SNR=7.2							
TXAR				pP	pP	11 01 31.8	-1.0
comp=Z,0.6nm,0.8s,baz=295,slow=4.0,SNR=5.3							

*ISCJB **26** 10:52:55.1±1.2, 31.°59N±0.°04×104.°14E±0.°09, h5km±9km, mb3.6/7, Error ellipse: s-maj=12.3km s-min=6.3km az=7.8*
*IDC **26** 10:52:56.0±1.0, 31.°48N×104.°18E, h0km, mb3.6/7, mb1 3.8/9, mb1mx3.6/27, mbtmp3.6/9, ML3.8/2, Error ellipse: s-maj=35.5km s-min=18.2km az=59.0*
*NEIC **26** 10:52:58.1±0.6, 31.°48N×104.°07E, h10km, mb4.2/1, Error ellipse: s-maj=17.9km s-min=10.8km az=65.0*
*BJI **26** 10:52:59.3, 31.°46N×104.°17E, h11km, mB4.5/1, mb4.3/1, ML3.4/12, Ms3.4/1, Ms7 3.4/2*
ISC 26 10:52:58.1±1.0, 31.°52N±0.°04×104.°07E±0.°07, h11km±8km, n16, σ1.°26/21, mb3.6/7, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.67**	**204**	⇑*i* Pg	**Pg**	**10 53 10.0**	**-1.0**
CD2				Sg	**Sg**	**10 53 20.5**	**+0.8**
CD2				smax			
comp=N,4μm,0.9s							
CD2				smax			
comp=E,2μm,0.8s							
LZH	**Lanzhou**	**4.56**	**358**	Pn	**Pn**	**10 54 13.0**	**+6.0**
LZH				Sg	**Sg**	**10 55 24.0**	**-0.4**
LZH				smax			
comp=N,130nm,0.7s							
LZH				smax			
comp=E,59nm,0.6s							
LZH				LR	LR		
comp=N,300nm,5.9s							
LZH				LR	LR		
comp=Z,560nm,7.1s							
XAN	**Xi'an**	**4.80**	**57**	Pn	**Pn**	**10 54 07.8**	**-2.5**
XAN				Pg	**Pg**	**10 54 23.5**	**-6.5**
XAN				Sg	**Sb**	**10 55 21.0**	**+1.1**
XAN				smax			
comp=N,65nm,0.8s							
XAN				smax			
comp=E,38nm,0.8s							
ENH	**Enshi**	**4.82**	**104**	*e*Pn	**Pn**	**10 54 11.9**	**+1.3**
ENH				*e*Sn	**Sn**	**10 55 09.0**	**+2.5**
CMAR	**Chiang Mai Arr**	**13.81**	**201**	Pn	**Pn**	**10 56 15.0**	**+1.1**
comp=E,0.2nm,0.3s,baz=29,slow=13,SNR=3.4							
CMAR	**Chiang

of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**1.27**	**30**	P	**Pn**	**11 16 18.6**	**-2.7**
KASI				S	**Sn**	**11 16 35.1**	**-2.1**
LWLI	**Liwa**	**1.62**	**7**	P	**Pn**	**11 16 25.7**	**-0.3**
LWLI				S	**Sn**	**11 16 45.9**	**+0.2**
CGJI	**Cibinong**	**1.82**	**89**	P	**Pn**	**11 16 27.4**	**-1.4**
CGJI				S	**Sn**	**11 16 51.0**	**+0.3**
KLI	**Kotabumi**	**2.02**	**30**	P	**Pn**	**11 16 31.9**	**+0.3**
KLI				S	**Sn**	**11 16 56.5**	**+0.9**
RBSI	**Rajabasa**	**2.03**	**67**	P	**Pn**	**11 16 30.4**	**-1.3**
RBSI				S	**Sn**	**11 16 56.2**	**+0.3**
KLSI		**2.12**	**24**	P	**Pn**	**11 16 32.4**	**-0.5**
KLSI				S	**Sn**	**11 16 58.7**	**+0.7**
MDSI	**Maura Dua**	**2.16**	**9**	P	**Pn**	**11 16 33.1**	**-0.3**
MDSI				S	**Sn**	**11 17 00.4**	**+1.4**
SBJI	**Serang**	**2.32**	**77**	P	**Pn**	**11 16 34.9**	**-0.7**
SBJI				S	**Sn**	**11 17 03.7**	**+0.8**
MNAI	**Manna**	**2.43**	**338**	P	**Pn**	**11 16 37.9**	**+0.7**
SKJI	**Sukabumi**	**2.71**	**98**	P	**Pn**	**11 16 42.0**	**+1.1**
CBJI	**Citeko**	**2.98**	**86**	P	**Pn**	**11 16 45.6**	**+0.9**
KSI	**Kapahiang**	**3.22**	**337**	P	**Pn**	**11 16 48.5**	**+0.5**
LEM	**Lembang**	**3.74**	**93**	P	**Pn**	**11 16 55.3**	**+0.1**
PPBI	**Pangkal Pinang**	**4.99**	**27**	P	**Pn**	**11 17 12.4**	**0.0**
FITZ	**Fitzroy Crossi**	**24.10**	**120**	P	**P**	**11 21 12.2**	**+0.4**
	3.9nm,1.1s,mb3.8,baz=294,slow=12,SNR=2.6						
CMAR	**Chiang Mai Arr**	**25.40**	**349**	P	**P**	**11 21 21.6**	**-2.0**
	1.7nm,0.7s,mb3.7,baz=178,slow=9.3,SNR=7.4						
KAKA	**Kakadu**	**28.80**	**104**	*e*P	**P**	**11 21 54.1**	**-0.2**
WRA	**Warramunga Arr**	**32.40**	**117**	P	**P**	**11 22 25.9**	**-0.2**
	1.3nm,0.7s,mb3.8,baz=289,slow=8.0,SNR=5.2						
WRA				PcP	PcP	11 25 13.8	+0.8
	1.1nm,0.9s,baz=312,slow=2.0,SNR=4.4						
WRA	**Warramunga Arr**	**32.40**	**117**	P	**P**	**11 22 25.9**	**-0.2**
WRA				PcP	PcP	11 25 13.8	+0.8
WRAB	**Tennant Creek**	**32.41**	**117**	*e*P	**P**	**11 22 25.7**	**-0.4**
ASAR	**Alice Springs**	**33.46**	**124**	P	**P**	**11 22 35.6**	**+0.3**
	1.0nm,0.8s,mb3.8,baz=304,slow=7.5,SNR=10						
ASAR				PcP	PcP	11 25 17.1	+1.2
	0.4nm,0.5s,baz=314,slow=2.0,SNR=5.0						
STKA	**Stephens Creek**	**43.22**	**131**	P	**P**	**11 23 57.8**	**+0.5**
	1.5nm,0.4s,mb4.0,baz=310,slow=14,SNR=5.4						
KSRS	**Korea Array**	**49.28**	**25**	P	**P**	**11 24 43.9**	**-0.7**
	2.4nm,0.6s,mb4.4,baz=222,slow=7.7,SNR=13						
SONM	**Songino Array**	**54.28**	**2**	P	**P**	**11 25 21.8**	**+0.1**
	4.2nm,0.6s,mb4.5,baz=176,slow=9.0,SNR=35						
SONM				pP	pP	11 25 34.7	+0.9
	1.3nm,0.8s,baz=175,slow=7.8,SNR=5.4						
EKS2	**Erkin-Say**	**56.18**	**334**	*e*P	**P**	**11 25 36.4**	**+0.9**
	3.3nm,0.6s,mb4.5						
MKAR	**Makanchi Array**	**56.54**	**342**	P	**P**	**11 25 37.7**	**-0.3**
	1.9nm,0.6s,mb4.3,baz=133,slow=9.4,SNR=15						
MKAR				pP	pP	11 25 51.1	+1.0
	1.9nm,0.6s,baz=113,slow=9.3,SNR=4.7						
MKAR	**Makanchi Array**	**56.54**	**342**	P	**P**	**11 25 37.7**	**-0.3**
MKAR				pP	pP	11 25 51.1	+1.0
ZALV	**Zalesovo Beam**	**62.45**	**347**	P	**P**	**11 26 17.9**	**-0.8**
	1.2nm,0.3s,mb4.5,baz=162,slow=6.8,SNR=7.3						
BVAR	**Borovoye Array**	**65.85**	**339**	P	**P**	**11 26 40.8**	**-0.2**
	2.1nm,0.5s,mb4.4,baz=144,slow=9.5,SNR=11						
BVAR				pP	pP	11 26 53.5	+0.2
	1.4nm,0.6s,baz=134,slow=11,SNR=4.5						
AKASG	**Malin Array Be**	**85.48**	**322**	P	**P**	**11 28 34.0**	**+0.7**
	1.2nm,0.5s,mb4.3,baz=88,slow=4.9,SNR=4.3						
AKASG	**Malin Array Be**	**85.48**	**322**	P	**P**	**11 28 34.0**	**+0.7**
BUR08	**Bucovina Ar. S**	**87.27**	**318**	P	**P**	**11 28 43.3**	**+1.1**
TXAR	**Lajitas Array**	**145.61**	**46**	PKPbc	PKPbc	11 35 35.4	+0.8
	1.0nm,0.6s,baz=264,slow=0.8,SNR=19						
TXAR				pPKPbc	pPKPbc	11 35 46.7	-1.0
	0.7nm,0.8s,baz=280,slow=2.8,SNR=3.7						
TXAR	**Lajitas Array**	**145.61**	**46**	PKPbc	PKPbc	11 35 35.4	+0.8
TXAR				pPKPbc	pPKPbc	11 35 46.7	-1.0
WVT	**Waverly**	**148.75**	**18**	*e*PKPbc	PKPbc	11 35 42.9	-0.4

NEIC ***26*** *11:16:15.0, 37.°02N×29.°17E, h2km, ML3.0(ISK), After ISK.*
CSEM ***26*** *11:16:16.9±0.2, 37.°02N×29.°21E, h2km, ML3.0, Error ellipse: s-maj=4.3km s-min=3.1km az=172.0*
DDA ***26*** *11:16:16.6, 36.°97N×29.°18E, h3km, Md3.4*
THE ***26*** *11:16:17.9, 36.°98N×29.°22E, h0km±2km, ML4.6/1, Error ellipse: s-maj=5.9km s-min=2.2km az=148.0*
ISCJB ***26*** *11:16:17.4±0.3, 36.°99N±0.°03×29.°21E±0.°03, h10km, Error ellipse: s-maj=4.5km s-min=2.8km az=151.9*

ISC 26 11:16:17.2±0.5, 37.°00N±0.°03×29.°20E±0.°03, h1km±4km, n71, σ1§07/97, 2C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.29**	**56**	Pg	**Pg**	**11 16 22.5**	**-0.3**
GLHS	**Glhisar (BURDU**	**0.29**	**56**	Pg	**Pg**	**11 16 22.5**	**-0.3**
GOLH	**Golhisar**	**0.38**	**50**	↑*i*P	**Pg**	**11 16 24.6**	**+0.1**
GOLH				*i* S	**Sg**	**11 16 32.0**	**+2.5**
GOLH	**Golhisar**	**0.38**	**50**	*i* P	**Pg**	**11 16 24.6**	**+0.1**
GOLH				*i* S	**Sg**	**11 16 32.0**	**+2.6**
TURN	**Turunc**	**0.49**	**256**	↑*i*P	**Pg**	**11 16 30.9**	**+4.2**
TURN				*i* S	**Sg**	**11 16 43.0**	**+10**
ELL	**Elmali**	**0.62**	**113**	Pg	**Pg**	**11 16 29.0**	**-0.2**
ELL	**Elmali**	**0.62**	**113**	Pg	**Pg**	**11 16 29.0**	**-0.2**
DNZL	**Cakiroluk**	**0.70**	**350**	*i* P	**Pg**	**11 16 30.1**	**-0.6**
DNZL				*i* S	**Sg**	**11 16 39.6**	**-0.3**
DNZL	**Cakiroluk**	**0.70**	**350**	*i* P	**Pg**	**11 16 30.1**	**-0.6**
DNZL				*i* S	**Sg**	**11 16 39.6**	**-0.3**
YER	**Yerkesik**	**0.74**	**281**	Pg	**Pg**	**11 16 30.8**	**-0.7**
YER	**Yerkesik**	**0.74**	**281**	Pg	**Pg**	**11 16 30.8**	**-0.7**
DENT	**Denizli**	**0.77**	**350**	Pg	**Pg**	**11 16 30.8**	**-1.2**
DENT	**Denizli**	**0.77**	**350**	Pg	**Pg**	**11 16 30.8**	**-1.2**
AKAS	**Kas**	**0.83**	**156**	*i* P	**Pg**	**11 16 32.7**	**-0.4**
AKAS				*i* S	**Sg**	**11 16 53.6**	**+10**
AKAS	**Kas**	**0.83**	**156**	*i* P	**Pg**	**11 16 32.7**	**-0.4**
KORT	**Korkueli**	**0.93**	**89**	*i* P	**Pg**	**11 16 34.0**	**-1.0**
KORT				*i* S	**Sg**	**11 16 51.8**	**+4.8**
KORT	**Korkueli**	**0.93**	**89**	*i* P	**Pg**	**11 16 34.0**	**-1.0**
ARG	**Arkhangelos**	**1.16**	**228**	P	**Pg**	**11 16 37.7**	**-1.8**
ARG				S	**Sg**	**11 16 57.1**	**+2.6**
ARG	**Arkhangelos**	**1.16**	**228**	P	**Pg**	**11 16 37.7**	**-1.8**
ARG				S	**Sg**	**11 16 57.1**	**+2.6**
ARG	**Arkhangelos**	**1.16**	**228**	*e*P	**Pg**	**11 16 37.7**	**-1.8**
MLSB	**Milas**	**1.17**	**285**	Pn	**Pn**	**11 16 38.6**	**-2.1**
MLSB	**Milas**	**1.17**	**285**	Pn	**Pn**	**11 16 38.6**	**-2.1**
BCK	**Bucak**	**1.21**	**67**	Pn	**Pn**	**11 16 40.0**	**-1.2**
BCK	**Bucak**	**1.21**	**67**	Pn	**Pn**	**11 16 40.0**	**-1.2**
AYDN	**Tasoluk**	**1.24**	**303**	*i* P	**Pg**	**11 16 40.2**	**-0.9**
AYDN				*i* S	**Sg**	**11 16 59.0**	**+1.9**
AYDN	**Tasoluk**	**1.24**	**303**	*i* P	**Pg**	**11 16 40.2**	**-0.8**
AYDN				*i* S	**Sg**	**11 16 59.0**	**+1.9**
ISP	**Isparta**	**1.34**	**52**	P	**Pg**	**11 16 42.2**	**-0.8**
ISP				S	**Sg**	**11 17 01.9**	**+1.6**
ISP	**Isparta**	**1.34**	**52**	P	**Pg**	**11 16 42.2**	**-0.8**
ISP				S	**Sg**	**11 17 01.9**	**+1.6**
ISP	**Isparta**	**1.34**	**52**	*e*P	**Pg**	**11 16 43.5**	**+0.5**
ISP	**Isparta**	**1.34**	**52**	P	**Pg**	**11 16 42.2**	**-0.8**
ISP				S	**Sg**	**11 17 01.9**	**+1.6**
KHL	**Karahalli**	**1.35**	**11**	Pn	**Pn**	**11 16 42.3**	**-0.9**
KHL	**Karahalli**	**1.35**	**11**	Pn	**Pn**	**11 16 42.3**	**-0.9**
KHAL	**Karahalli**	**1.39**	**10**	*i* P	**Pn**	**11 16 43.4**	**-0.3**
KHAL				*i* S	**Sg**	**11 17 04.0**	**+2.0**
KHAL	**Karahalli**	**1.39**	**10**	*i* P	**Pn**	**11 16 43.4**	**-0.4**
KHAL				*i* S	**Sg**	**11 17 04.0**	**+2.0**
BDRM	**Kayabasi**	**1.40**	**273**	*i* P	**Pn**	**11 16 43.6**	**-0.3**
BDRM				*i* S	**Sg**	**11 17 02.8**	**+0.5**
BDRM	**Kayabasi**	**1.40**	**273**	*i* P	**Pn**	**11 16 43.6**	**-0.3**
BDRM				*i* S	**Sg**	**11 17 02.8**	**+0.5**
BODT	**Bodrum**	**1.51**	**273**	Pn	**Pn**	**11 16 44.2**	**-1.2**
BODT	**Bodrum**	**1.51**	**273**	Pn	**Pn**	**11 16 44.2**	**-1.2**
NIS1	**Nisyros Isl.**	**1.67**	**257**	P	**Pn**	**11 16 47.6**	**+0.1**
NIS1				S	**Sn**	**11 17 11.0**	**+1.5**
NIS1	**Nisyros Isl.**	**1.67**	**257**	P	**Pn**	**11 16 47.6**	**+0.1**
NIS1				S	**Sn**	**11 17 11.0**	**+1.5**
SMG	**Samos**	**2.01**	**291**	*e*P	**Pn**	**11 16 51.5**	**-0.7**
IZM	**Izmir**	**2.08**	**313**	Pn	**Pn**	**11 16 53.4**	**+0.2**
IZM	**Izmir**	**2.08**	**313**	Pn	**Pn**	**11 16 53.4**	**+0.2**
DEMI	**Demirci**	**2.08**	**350**	*i* P	**Pn**	**11 16 52.6**	**-0.6**
DEMI				*i* S	**Sn**	**11 17 20.4**	**+0.7**
DEMI	**Demirci**	**2.08**	**350**	*i* P	**Pn**	**11 16 52.6**	**-0.6**
DEMI				*i* S	**Sn**	**11 17 20.4**	**+0.7**
AKS	**Akhisar**	**2.17**	**330**	Pn	**Pn**	**11 16 53.4**	**-1.1**
AKS	**Akhisar**	**2.17**	**330**	Pn	**Pn**	**11 16 53.4**	**-1.1**
ALT	**Altintas**	**2.18**	**19**	Pn	**Pn**	**11 16 52.9**	**-1.7**
ALT	**Altintas**	**2.18**	**19**	Pn	**Pn**	**11 16 52.9**	**-1.7**
KARP	**Karpathos**	**2.19**	**229**	*e*P	**Pn**	**11 16 55.2**	**+0.5**
BLCB	**Balcova**	**2.20**	**310**	Pn	**Pn**	**11 16 54.3**	**-0.6**
BLCB	**Balcova**	**2.20**	**310**	Pn	**Pn**	**11 16 54.3**	**-0.6**
KIZT	**Kizilcal**	**2.84**	**48**	Pn	**Pn**	**11 17 04.0**	**+0.4**
KIZT	**Kizilcal**	**2.84**	**48**	Pn	**Pn**	**11 17 04.0**	**+0.4**
CHOS	**Chios island**	**2.85**	**300**	P	**Pn**	**11 17 03.4**	**-0.4**
CHOS	**Chios island**	**2.85**	**300**	P	**Pn**	**11 17 03.4**	**-0.4**
APE	**Apeiranthos**	**2.93**	**273**	P	**Pn**	**11 17 04.6**	**-0.3**
APE				S	**Sn**	**11 17 40.6**	**-0.2**
APE	**Apeiranthos**	**2.93**	**273**	P	**Pn**	**11 17 04.6**	**-0.3**
APE				S	**Sn**	**11 17 40.6**	**-0.2**
APE	**Apeiranthos**	**2.93**	**273**	*e*P	**Pn**	**11 17 04.5**	**-0.4**
APE	**Apeiranthos**	**2.93**	**273**	P	**Pn**	**11 17 04.6**	**-0.3**
APE				S	**Sn**	**11 17 40.6**	**-0.2**
ZKR	**Zakros**	**3.06**	**233**	P	**Pn**	**11 17 07.6**	**+1.0**
ZKR	**Zakros**	**3.06**	**233**	P	**Pn**	**11 17 07.6**	**+1.0**
ZKR	**Zakros**	**3.06**	**233**	*e*P	**Pn**	**11 17 07.9**	**+1.3**
ZKR	**Zakros**	**3.06**	**233**	P	**Pn**	**11 17 07.6**	**+1.0**
NPS	**Neapolis**	**3.38**	**240**	*e*P	**Pn**	**11 17 11.3**	**+0.3**
LAST	**Lasithi**	**3.52**	**240**	*e*P	**Pn**	**11 17 13.6**	**+0.6**
IDI	**Anoyia**	**3.88**	**245**	*e*P	**Pn**	**11 17 17.9**	**0.0**
SIVA	**Sivas**	**4.07**	**242**	*e*P	**Pn**	**11 17 21.9**	**+1.4**
BR131	**Keskin Array S**	**4.43**	**51**	*e*Pn	**Pn**	**11 17 26.3**	**+0.8**
BR131				*e*Sn	**Sn**	**11 18 20.3**	**+2.6**
BR131	**Keskin Array S**	**4.43**	**51**	*e*Pn	**Pn**	**11 17 26.3**	**+0.8**
KARN	**Karanos**	**4.55**	**251**	*e*P	**Pn**	**11 17 28.0**	**+0.8**

CASC 26 11:20:45.7±1.4, 12.°45N×87.°78W, h54km±22km, MD3.8, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.76**	**70**	*e*P	Pn	11 21 01.2	+0.8
CNCH	**Conchagua**	**0.83**	**356**	*e*P	Pn	11 21 01.7	+0.4
CNCH				*e*S	Sn	11 21 13.8	+1.1
TELN	**Telica**	**0.94**	**80**	*e*P	Pn	11 21 02.9	+0.1
CNGN	**Cerro Negro**	**1.06**	**87**	*e*P	Pn	11 21 03.9	-0.5
CNGN				*e*S	Sn	11 21 19.0	+0.9
BLLM	**Bellamira**	**1.09**	**336**	*e*P	Pn	11 21 05.1	+0.4
BLLM				*e*S	Sn	11 21 19.1	+0.3
VSM	**San Miguel**	**1.09**	**334**	*e*P	Pn	11 21 05.6	+0.9
COPN	**Copaltepe**	**1.19**	**103**	*e*P	Pn	11 21 05.5	-0.6
COPN				*e*S	Sn	11 21 21.8	+0.5
MOMN	**Momotombo**	**1.21**	**92**	*e*P	Pn	11 21 06.5	+0.1
CSAN		**1.35**	**101**	*e*P	Pn	11 21 08.1	-0.2
CAHU	**Cacacuatique**	**1.38**	**342**	*e*P	Pn	11 21 09.4	+0.7
CAHU				*e*S	Sn	11 21 26.8	+0.9
XAVN	**Gruta Xavier**	**1.45**	**102**	*e*P	Pn	11 21 09.3	-0.3
MGAN	**Managua**	**1.53**	**101**	*e*P	Pn	11 21 10.1	-0.6
SNVI	**San Vicente**	**1.55**	**318**	*e*P	Pn	11 21 11.8	+0.8
TICN	**Ticuantepe**	**1.57**	**105**	*e*P	Pn	11 21 11.0	-0.2
HUEN		**1.57**	**94**	*e*P	Pn	11 21 11.1	-0.2
TGUH	**Tegucigalpa,Un**	**1.68**	**17**	*i* P	Pn	11 21 13.6	+0.9
LFRS	**El Faro**	**1.71**	**313**	*e*P	Pn	11 21 13.1	0.0
LFRS				*e*S	Sn	11 21 34.1	+0.2
BOQS	**Boqueron**	**1.94**	**311**	*e*P	Pn	11 21 16.7	+0.4
BOQS				*e*S	Sn	11 21 41.2	+1.6
BOAB	**BOACO BROADBAN**	**2.07**	**90**	*e*P	Pn	11 21 17.5	-0.5
SBLS	**San Blas**	**2.27**	**308**	*e*P	Pn	11 21 22.5	+1.7

BJI ***26*** *11:20:50.2, 26.°62N×97.°28E, h22km, ML3.4/5*
ISCJB ***26*** *11:20:53.0±1.1, 28.°7N±0.°2×96.°2E±0.°1, h33km, Error ellipse: s-maj=27.5km s-min=10.3km az=153.4*

ISC 26 11:20:55.9±1.1, 28.°7N±0.°2×96.°2E±0.°1, h35km, n7, σ1§50/8, Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**4.95**	**232**	*e*PN	**Pn**	**11 22 06.0**	**-1.7**
SHL				*e*SN	**Sn**	**11 23 05.0**	**+1.3**
CD2	**Chengdu**	**6.94**	**70**	*e*Pn	**Pn**	**11 22 35.5**	**+0.5**
TAPN	**Taplejung**	**7.61**	**262**	*e*P	**Pn**	**11 22 46.9**	**+2.6**
	11nm,0.5s						
ODAN	**Odare**	**8.00**	**259**	*e*P	**Pn**	**11 22 48.2**	**-1.5**
	14nm,0.6s						
RAMN	**Ramite**	**8.66**	**261**	*e*P	**Pn**	**11 22 56.3**	**-2.5**
JIRN	**Jiri**	**8.88**	**266**	*e*P	**Pn**	**11 23 02.4**	**+0.7**
	9.6nm,0.3s						
GUN	**Gumba**	**9.12**	**267**	*e*P	**Pn**	**11 23 05.7**	**+0.7**
	11nm,0.3s						

CSEM ***26*** *11:43:12.8±0.1, 38.°33N×22.°03E, h2km, ML4.0/18, Error ellipse: s-maj=3.4km s-min=3.0km az=38.0*
ATH ***26*** *11:43:12.2, 38.°37N×22.°01E, h15km±1km, MD3.7/13, ML3.3*
THE ***26*** *11:43:12.9, 38.°35N×22.°02E, h0km±1km, ML4.0/18, Error ellipse: s-maj=1.8km s-min=0.7km az=126.0*
ISCJB ***26*** *11:43:12.7±0.3, 38.°34N±0.°02×22.°01E±0.°02, h5km±2km, Error ellipse: s-maj=2.6km s-min=2.3km az=179.5*
NEIC ***26*** *11:43:13.0, 38.°35N×21.°92E, h5km, ML3.5(ATH), After ATH.*

ISC 26 11:43:13.2±0.3, 38.°34N±0.°01×22.°02E±0.°02, h3km±2km, n132, σ1§15/188, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRIZ	**Trizonia**	**0.05**	**62**	P	**Pg**	**11 43 14.5**	**+0.2**
TRIZ				S	**Sg**	**11 43 16.0**	**+1.0**
TRIZ	**Trizonia**	**0.05**	**62**	P	**Pg**	**11 43 14.5**	**+0.2**
TRIZ				S	**Sg**	**11 43 16.0**	**+1.0**
KALE	**Kalithea**	**0.11**	**63**	P	**Pg**	**11 43 15.3**	**-0.1**
KALE				S	**Sg**	**11 43 17.6**	**+0.8**
KALE	**Kalithea**	**0.11**	**63**	P	**Pg**	**11 43 15.3**	**-0.1**
KALE				S	**Sg**	**11 43 17.6**	**+0.8**
LAKA	**Lakka**	**0.11**	**197**	P	**Pg**	**11 43 15.6**	**+0.3**
LAKA				S	**Sg**	**11 43 17.9**	**+1.1**
LAKA	**Lakka**	**0.11**	**197**	P	**Pg**	**11 43 15.6**	**+0.3**
LAKA				S	**Sg**	**11 43 17.9**	**+1.1**
EFP	**Efpalio**	**0.12**	**313**	P	**Pg**	**11 43 15.0**	**-0.6**
EFP				S	**Sg**	**11 43 17.1**	**-0.2**
EFP	**Efpalio**	**0.12**	**313**	*e*PB	**Pg**	**11 43 15.1**	**-0.5**
EFP				*e*SB	**Sg**	**11 43 17.3**	**0.0**
EFP	**Efpalio**	**0.12**	**313**	*e*Pb	**Pg**	**11 43 15.1**	**-0.5**
EFP				*e*Sb	**Sg**	**11 43 17.3**	**0.0**
UPR	**University Cam**	**0.19**	**252**	P	**Pg**	**11 43 16.8**	**-0.1**
UPR				S	**Sg**	**11 43 20.1**	**+0.6**
UPR	**University Cam**	**0.19**	**252**	*e*PB	**Pg**	**11 43 16.8**	**-0.1**
UPR				*e*SB	**Sg**	**11 43 20.2**	**+0.7**
UPR	**University Cam**	**0.19**	**252**	P	**Pg**	**11 43 16.8**	**-0.1**
UPR				S	**Sg**	**11 43 20.1**	**+0.6**
DSF	**Desfina**	**0.41**	**80**	P	**Pg**	**11 43 20.2**	**-0.8**
DSF				S	**Sg**	**11 43 26.5**	**+0.2**
DSF	**Desfina**	**0.41**	**80**	P	**Pg**	**11 43 20.2**	**-0.8**
DSF				S	**Sg**	**11 43 26.5**	**+0.2**
GUR	**Goura**	**0.48**	**148**	P	**Pg**	**11 43 21.9**	**-0.5**
GUR				S	**Sg**	**11 43 30.0**	**+1.4**
GUR	**Goura**	**0.48**	**148**	*e*PN	**Pg**	**11 43 22.0**	**-0.4**
GUR				*e*SN	**Sg**	**11 43 29.7**	**+1.1**
GUR	**Goura**	**0.48**	**148**	*e*Pn	**Pg**	**11 43 22.0**	**-0.4**
GUR				S	**Sg**	**11 43 30.0**	**+1.4**
RLS	**Riolos of Patr**	**0.52**	**237**	P	**Pg**	**11 43 22.2**	**-1.0**
RLS	**Riolos of Patr**	**0.52**	**237**	*e*PN	**Pg**	**11 43 22.7**	**-0.5**
RLS				*e*SN	**Sg**	**11 43 30.6**	**+0.7**
EVR	**Evrytania**	**0.60**	**344**	P	**Pg**	**11 43 23.4**	**-1.3**
EVR	**Evrytania**	**0.60**	**344**	*e*PN	**Pg**	**11 43 23.5**	**-1.2**
EVR				*e*SN	**Sg**	**11 43 32.1**	**-0.3**
AGG	**Agios Georgios**	**0.72**	**20**	P	**Pg**	**11 43 25.1**	**-2.0**
AGG	**Agios Georgios**	**0.72**	**20**	P	**Pg**	**11 43 25.3**	**-1.8**
AGG				S	**Sg**	**11 43 36.8**	**+0.4**
AGG	**Agios Georgios**	**0.72**	**20**	*e*PN	**Pg**	**11 43 25.5**	**-1.6**
AGG				*e*SN	**Sg**	**11 43 34.9**	**-1.5**
AGG	**Agios Georgios**	**0.72**	**20**	P	**Pg**	**11 43 25.3**	**-1.8**
AGG				S	**Sg**	**11 43 36.8**	**+0.4**
LTK	**Loutraki**	**0.81**	**113**	P	**Pg**	**11 43 28.9**	**+0.1**
LTK				S	**Sg**	**11 43 41.6**	**+2.2**
LTK	**Loutraki**	**0.81**	**113**	*e*PN	**Pg**	**11 43 28.6**	**-0.2**
LTK	**Loutraki**	**0.81**	**113**	*e*Pn	**Pg**	**11 43 28.6**	**-0.2**
LTK	**Loutraki**	**0.81**	**113**	P	**Pg**	**11 43 28.9**	**+0.1**
LKR	**Lokris**	**0.83**	**68**	P	**Pg**	**11 43 28.0**	**-1.1**
LKR	**Lokris**	**0.83**	**68**	P	**Pg**	**11 43 27.7**	**-1.4**
LKR				S	**Sg**	**11 43 41.0**	**+1.1**
LKR	**Lokris**	**0.83**	**68**	*e*PN	**Pn**	**11 43 27.9**	**-3.9**
LKR	**Lokris**	**0.83**	**68**	P	**Pg**	**11 43 28.0**	**-1.1**
LKR				S	**Sg**	**11 43 41.0**	**+1.1**
ATAL	**Atalanti**	**0.86**	**66**	P	**Pg**	**11 43 28.5**	**-1.2**
ATAL				S	**Sg**	**11 43 41.5**	**+0.6**
ATAL	**Atalanti**	**0.86**	**66**	P	**Pg**	**11 43 28.5**	**-1.2**
ATAL				S	**Sg**	**11 43 41.5**	**+0.6**
KFL	**Anninata**	**1.00**	**257**	P	**Pg**	**11 43 31.0**	**-1.3**
VLX	**Vlachokerasia**	**1.01**	**164**	P	**Pg**	**11 43 31.4**	**-1.2**
VLX				S	**Sg**	**11 43 47.2**	**+1.5**
VLX	**Vlachokerasia**	**1.01**	**164**	*e*PN	**Pg**	**11 43 31.6**	**-1.0**
VLX	**Vlachokerasia**	**1.01**	**164**	P	**Pg**	**11 43 31.4**	**-1.2**
VLS	**Valsamata**	**1.14**	**262**	P	**Pg**	**11 43 32.8**	**-2.2**
VLS	**Valsamata**	**1.14**	**262**	P	**Pg**	**11 43 33.2**	**-1.8**
VLS				S	**Sg**	**11 43 50.7**	**+0.9**
VLS	**Valsamata**	**1.14**	**262**	*e*PB	**Pg**	**11 43 33.1**	**-1.9**
VLS				*e*SN	**Sg**	**11 43 50.2**	**+0.4**
VLS	**Valsamata**	**1.14**	**262**	P	**Pg**	**11 43 33.2**	**-1.8**
VLS				*e*Sn	**Sg**	**11 43 50.2**	**+0.4**
VLS				S	**Sg**	**11 43 50.7**	**+0.9**
LKD2	**Lefkada island**	**1.16**	**293**	P	**Pg**	**11 43 33.9**	**-1.5**
LKD2				S	**Sg**	**11 43 51.1**	**+0.7**
LKD2	**Lefkada island**	**1.16**	**293**	P	**Pg**	**11 43 33.9**	**-1.5**
LKD2				S	**Sg**	**11 43 51.1**	**+0.7**
ITM	**Ithomi**	**1.16**	**184**	P	**Pg**	**11 43 33.9**	**-1.6**
ITM	**Ithomi**	**1.16**	**184**	P	**Pg**	**11 43 34.0**	**-1.5**
ITM				S	**Sg**	**11 43 51.7**	**+1.1**
ITM	**Ithomi**	**1.16**	**184**	*e*PN	**Pn**	**11 43 34.1**	**-2.3**
ITM	**Ithomi**	**1.16**	**184**	P	**Pg**	**11 43 34.0**	**-1.5**
ITM				S	**Sg**	**11 43 51.7**	**+1.1**
THL	**Klokotos Trika**	**1.22**	**360**	P	**Pg**	**11 43 35.8**	**-0.8**
THL				S	**Sg**	**11 43 54.1**	**+1.6**
THL	**Klokotos Trika**	**1.22**	**360**	*e*PN	**Pn**	**11 43 34.8**	**-2.4**
THL	**Klokotos Trika**	**1.22**	**360**	*e*Pn	**Pn**	**11 43 34.8**	**-2.4**
THL	**Klokotos Trika**	**1.22**	**360**	P	**Pg**	**11 43 35.8**	**-0.8**
THL				S	**Sg**	**11 43 54.1**	**+1.6**
NAIG	**Nisos Aigina**	**1.30**	**116**	*e*Pn	**Pn**	**11 43 37.3**	**-1.0**
NAIG	**Nisos Aigina**	**1.30**	**116**	*e*PN	**Pn**	**11 43 37.3**	**-1.0**
NAIG	**Nisos Aigina**	**1.30**	**116**	*e*Pn	**Pn**	**11 43 37.3**	**-1.0**
NEO	**Neokhori**	**1.35**	**44**	P	**Pn**	**11 43 37.3**	**-1.6**
NEO	**Neokhori**	**1.35**	**44**	*e*PN	**Pn**	**11 43 37.5**	**-1.4**
NEO	**Neokhori**	**1.35**	**44**	*e*Pn	**Pn**	**11 43 37.5**	**-1.4**
XOR	**Xorichti**	**1.37**	**42**	P	**Pn**	**11 43 37.8**	**-1.5**
XOR	**Xorichti**	**1.37**	**42**	P	**Pn**	**11 43 37.8**	**-1.5**
XOR				S	**Sg**	**11 43 58.1**	**+0.8**
XOR	**Xorichti**	**1.37**	**42**	P	**Pn**	**11 43 37.8**	**-1.5**
XOR				S	**Sg**	**11 43 58.1**	**+0.8**
ATH	**Athens Observa**	**1.39**	**105**	*e*Pn	**Pn**	**11 43 39.2**	**-0.3**
ATH	**Athens Observa**

3μm,28.2s,baz=171
URZ Urewera 35.08 278 LR LR 12 30 49.8
comp=Z,1μm,19.7s,MS4.6,baz=138,slow=30
RPZ Rata Peaks 35.18 265 LR LR 12 30 31.2
comp=Z,1μm,18.1s,MS4.7,baz=294,slow=30
QSPA South Pole Qui 35.90 180 P **P 12 20 03.4 +0.7**
4.0nm,1.0s,mb4.3,baz=61,slow=2.4,SNR=8.1
QSPA South Pole Qui 35.90 180 P **P 12 20 03.4 +0.7**
PAE Paea 37.90 340 *e*T 13 00 22.1
2.7nm,0.3s
TIAR Tiarei 37.95 340 *e*T 13 00 26.3
16nm,0.3s
PPT Papeete 37.99 340 *e*S **S 12 26 09.7 -1.9**
147nm,27.2s
PPT *e*LR LR 12 30 40.7
2μm,26.0s,baz=173
PPT *e*T 13 00 28.9
11nm,0.3s
PPT Papeete 37.99 340 LR LR 12 31 21.0
comp=Z,1μm,20.3s,MS4.7,baz=144,slow=29
RAO Raoul Island 38.88 293 LR LR 12 32 25.7
comp=Z,367nm,18.0s,MS4.2,baz=238,slow=30
PMOR Pomariorio Ree 40.17 343 *e*T 13 03 12.3
4.3nm,0.4s
TAOE Nuku Hiva Isla 45.38 355 *e*S **S 12 28 02.7 +1.6**
1μm,27.3s
TAOE *e*LQ 12 32 11.8
2μm,25.8s
TAOE *e*LR LR 12 34 02.5
1μm,24.9s,baz=192
DZM Mont Dzumac 53.20 284 *e*S **S 12 29 50.9 +0.2**
479nm,28.4s
DZM *e*LQ 12 35 22.9
394nm,30.1s
DZM *e*LR LR 12 38 03.0
636nm,22.4s
MAW Mawson 57.58 189 LR LR 12 47 02.4
comp=Z,319nm,20.5s,MS4.4,baz=147,slow=36
STKA Stephens Creek 60.23 256 P **P 12 23 12.6 +1.4**
5.8nm,1.1s,mb4.5,baz=146,slow=3.6,SNR=2.9
STKA LR LR 12 45 27.2
comp=Z,263nm,20.4s,MS4.4,baz=83,slow=32
CPUP Villa Florida 62.90 98 P **P 12 23 27.6 -1.6**
0.4nm,0.3s,mb4.0,baz=257,slow=6.4,SNR=3.3
LPAZ La Paz 64.36 82 *e*P **P 12 23 38.5 -0.4**
4.9nm,1.0s,mb4.5,baz=231,slow=3.5,SNR=16
LPAZ La Paz 64.36 82 *e*P **P 12 23 38.1 -0.8**
19nm,1.2s,mb5.0
ASAR Alice Springs 70.87 256 P **P 12 24 19.1 -0.9**
10nm,1.1s,mb4.7,baz=139,slow=6.1,SNR=21
WRA Warramunga Arr 73.54 259 P **P 12 24 35.7 -0.3**
7.9nm,1.1s,mb4.5,baz=142,slow=5.1,SNR=14
WRA Warramunga Arr 73.54 259 P **P 12 24 35.7 -0.3**
WRAB Tennant Creek 73.54 259 *e*P **P 12 24 35.3 -0.8**
17nm,1.2s,mb4.8
ROSC El Rosal 78.22 64 P **P 12 25 04.2 +1.5**
2.5nm,0.4s,mb4.5,baz=78,slow=21,SNR=4.0
FITZ Fitzroy Crossi 79.95 253 LR LR 12 58 02.4
comp=Z,426nm,19.7s,MS4.8,baz=151,slow=34
TXAR Lajitas Array 87.98 28 P **P 12 25 53.7 +1.0**
0.6nm,0.8s,mb3.9,baz=184,slow=5.7,SNR=5.3
TXAR Lajitas Array 87.98 28 P **P 12 25 53.7 +1.0**
SUR Sutherland 91.52 161 LR LR 13 02 09.8
comp=Z,384nm,18.7s,MS4.9,baz=193,slow=32
ANMO Albuquerque 92.58 24 *e*P **P 12 26 13.7 -0.3**
1.0nm,1.3s,mb4.1
NVAR Mina Array Bea 93.66 14 P **P 12 26 18.7 -0.2**
0.2nm,0.5s,mb3.8,baz=205,slow=4.0,SNR=3.0
NVAR Mina Array Bea 93.66 14 P **P 12 26 18.7 -0.2**
LBTB Lobatse 99.56 164 LR LR 13 05 13.9
comp=Z,312nm,21.1s,MS4.8,baz=245,slow=32
TORD Torodi Ar. Bea 127.55 125 PKP PKPdf 12 32 06.5 -1.6
1.4nm,1.0s,baz=214,slow=1.1,SNR=4.5
ESDC Sonseca Array 145.23 95 PKPbc PKPbc 12 32 40.0 +0.3
4.9nm,0.9s,baz=233,slow=3.8,SNR=11
ESLA Sonseca Array 145.23 95 *e*PKPdf PKPdf 12 32 39.5 -0.5
DDI Dehra Dun 145.51 240 *e*PKP PKPdf 12 32 41.0 +0.3
KEST Kesra 150.01 114 PKPbc PKPbc 12 32 50.2 -2.8
1.4nm,1.0s,baz=207,slow=9.0,SNR=2.2
ZALV Zalesovo Beam 155.98 286 PKPab PKPab 12 33 23.3 -0.1
0.3nm,0.3s,baz=116,slow=5.0,SNR=3.7

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*ISCJB **26** 12:14:40.9±0.4, 32°.49N±0°.03×105°.36E±0°.05, h10km, mb4.1/9, Error ellipse: s-maj=6.4km s-min=4.9km az=15.8*
*IDC **26** 12:14:41.9±1.2, 32°.54N×105°.34E, h0km, mb3.9/6, mb1 3.8/9, mb1mx3.7/28, mbtmp3.8/9, ML3.3/3, MS2.7/2, Ms1 2.7/2, ms1mx2.2/34, Error ellipse: s-maj=36.0km s-min=21.6km az=49.0*
*NEIC **26** 12:14:43.1±0.6, 32°.57N×105°.37E, h10km, Error ellipse: s-maj=18.9km s-min=10.6km az=61.0*
*BJI **26** 12:14:44.2, 32°.55N×105°.39E, h12km, mB4.3/4, mb4.1/4, ML3.7/18, Ms3.8/8, Ms7 3.3/7*
ISC 26 12:14:42.5±0.4, 32°.56N±0°.03×105°.35E±0°.04, h10km, n34, σ19°24/44, mb4.1/9, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.13**	**220**	⇑*i*Pn	**Pn**	**12 15 19.3**	**+1.1**
CD2				Pg	**Pg**	**12 15 23.0**	**-0.4**
CD2				Sg	**Sg**	**12 15 51.0**	**-0.1**
CD2				smax			
	comp=N,3μm,0.6s						
CD2				smax			
	comp=E,2μm,0.8s						
XAN	**Xi'an**	**3.33**	**63**	Pn	**Pn**	**12 15 37.0**	**+2.3**
XAN				Pg	**Pg**	**12 15 45.0**	**-1.4**
XAN				Sn	**Sn**	**12 16 19.5**	**+5.2**
XAN				Sg	**Sg**	**12 16 27.0**	**-2.6**
XAN				smax			
	comp=N,310nm,0.8s						
XAN				smax			
	comp=E,250nm,0.7s						
XAN				LR	LR		
	comp=N,410nm,7.0s						
XAN				LR	LR		
	comp=E,160nm,10.3s						
XAN				LR	LR		
	comp=Z,150nm,9.2s						
LZH	**Lanzhou**	**3.73**	**341**	Pg	**Pg**	**12 15 49.0**	**-5.0**
LZH				Sg	**Sg**	**12 16 40.0**	**-2.3**
LZH				smax			
	comp=N,620nm,0.5s						
LZH				smax			
	comp=E,2μm,0.6s						
LZH				LR	LR		
	comp=E,2μm,4.4s						
LZH				LR	LR		
	comp=Z,2μm,4.9s						
ENH	**Enshi**	**4.21**	**122**	Pn	**Pn**	**12 15 47.9**	**+1.1**
GYA	**Guiyang**	**6.19**	**169**	Pn	**Pn**	**12 16 16.0**	**+2.0**
GYA				Sn	**Sn**	**12 17 23.5**	**-1.3**
GYA				Sg	**Sg**	**12 17 54.5**	**-6.7**
GYA				smax			
	comp=N,100nm,0.8s						
GYA				smax			
	comp=E,100nm,0.8s						
WHN	**Wuhan**	**7.94**	**102**	P	**Pn**	**12 16 30.0**	**-8.0**
WHN				S	**Sn**	**12 18 03.0**	**-4.8**
WHN				LR	LR		
	comp=N,990nm,3.6s						
WHN				LR	LR		
	comp=E,600nm,4.4s						
WHN				LR	LR		
	comp=Z,500nm,11.9s						
GTA	**Gaotai**	**8.17**	**328**	*e*P	**Pn**	**12 16 46.0**	**+4.8**
GTA				pP		12 16 50.0	
GTA				sP		12 16 52.0	
GTA				S	**Sn**	**12 18 18.5**	**+4.9**
GTA				sS		12 18 23.3	
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,60nm,6.0s						
GTA				LR	LR		
	comp=N,190nm,11.1s						
GTA				LR	LR		
	comp=E,170nm,11.1s						
GTA				LR	LR		
	comp=Z,230nm,12.0s						
CMAR	**Chiang Mai Arr**	**15.18**	**204**	Pn	**Pn**	**12 18 17.1**	**0.0**
	comp=Z,0.1nm,0.3s,baz=4.8,slow=12,SNR=4.4						
SONM	**Songino Array**	**15.28**	**3**	Pn	**Pn**	**12 18 17.4**	**-0.8**
	comp=Z,0.0nm,0.3s,baz=172,slow=15,SNR=3.3						
SONM				LR	LR	12 24 16.6	
	comp=Z,36nm,18.4s,baz=267,slow=38						
ODAN	**Odare**	**16.60**	**255**	*e*P	**Pn**	**12 18 33.8**	**-1.6**
	comp=Z,15nm,0.6s						
RAMN	**Ramite**	**17.21**	**256**	*e*P	**Pn**	**12 18 41.3**	**-1.7**
	comp=Z,14nm,0.8s						
GUN	**Gumba**	**17.45**	**260**	*e*P	**Pn**	**12 18 45.6**	**-0.4**
	comp=Z,35nm,0.7s						
PKI	**Pulchoki**	**17.96**	**259**	*e*P	**Pn**	**12 18 51.0**	**-1.3**
	comp=Z,15nm,0.6s						
KKN	**Kakani**	**17.99**	**260**	*e*P	**Pn**	**12 18 51.3**	**-1.4**
	comp=Z,20nm,0.7s						
DMN	**Daman**	**18.20**	**260**	*e*P	**Pn**	**12 18 53.4**	**-1.9**
	comp=Z,17nm,0.7s						
KSRS	**Korea Array**	**19.11**	**69**	P	**Pn**	**12 19 06.3**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=252,slow=9.7,SNR=3.6						
KSRS				LR	LR	12 26 20.7	
	comp=Z,16nm,20.5s,baz=245,slow=37						
MK31	**Makanchi Array**	**22.63**	**316**	*e*P	**P**	**12 19 45.1**	**+1.7**
MKAR	**Makanchi Array**	**22.63**	**316**	P	**P**	**12 19 43.7**	**+0.3**
	comp=Z,1.1nm,0.6s,mb3.5,baz=110,slow=13,SNR=13						
MKAR	**Makanchi Array**	**22.63**	**316**	P	**P**	**12 19 43.7**	**+0.3**
TKM2	**Tokmak 2**	**25.58**	**302**	*e*P	**P**	**12 20 16.8**	**+5.1**
ZALV	**Zalesovo Beam**	**25.91**	**332**	P	**P**	**12 20 15.8**	**+1.3**
	comp=Z,1.4nm,0.3s,mb4.0,baz=130,slow=7.7,SNR=6.4						
KURK	**Kurchatov**	**26.76**	**321**	P	**P**	**12 20 25.1**	**+2.9**
	comp=Z,1.6nm,0.5s,mb3.8,baz=126,slow=10,SNR=5.1						
AKTK	**Aktyubinsk**	**38.94**	**312**	P	**P**	**12 22 09.6**	**+1.2**
AKTO	**Aktyubinsk**	**38.94**	**312**	P	**P**	**12 22 09.6**	**+1.2**
	comp=Z,1.0nm,0.5s,mb3.8,baz=107,slow=13,SNR=5.2						
AKASG	**Malin Array Be**	**57.17**	**313**	P	**P**	**12 24 29.3**	**-0.1**
	comp=Z,2.7nm,0.5s,mb4.5,baz=66,slow=7.5,SNR=3.9						
WRAB	**Tennant Creek**	**59.11**	**148**	*e*P	**P**	**12 24 36.5**	**-6.8**
ASAR	**Alice Springs**	**62.20**	**150**	P	**P**	**12 25 05.3**	**+1.0**
	comp=Z,0.6nm,0.8s,mb3.8,baz=331,slow=6.5,SNR=4.2						
LPG	**La Plagne**	**73.03**	**313**	*e*P	**P**	**12 26 13.3**	**+0.8**
	comp=Z,8.2nm,0.7s,mb4.5						
LPL	**La Plagne**	**73.03**	**313**	*e*P	**P**	**12 26 13.2**	**+0.7**
	comp=Z,8.2nm,0.7s,mb4.4						
PGF	**Pioggiola**	**73.03**	**310**	*e*P	**P**	**12 26 13.0**	**+0.4**
	comp=Z,5.5nm,0.8s,mb4.3						
ORIF	**Oris-en-Rattie**	**73.85**	**313**	*e*P	**P**	**12 26 17.5**	**+0.1**
SMF	**Signal de Mont**	**74.21**	**315**	*e*P	**P**	**12 26 19.3**	**-0.1**
AVF	**Avril sur Loir**	**74.42**	**316**	*e*P	**P**	**12 26 20.0**	**-0.7**
SMRF	**Simiane la Rot**	**74.51**	**312**	*e*P	**P**	**12 26 21.4**	**+0.2**

IDC 26 12:25:52.3±27.0, 30°.06N×104°.56E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.3/22, mbtmp3.4/3, Error ellipse: s-maj=643.7km s-min=44.8km az=119.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.75**	**63**	P	P	12 30 34.2	-0.4
	0.6nm,0.5s,baz=246,slow=9.2,SNR=4.0						
WRA	**Warramunga Arr**	**57.39**	**146**	P	P	12 35 42.9	+0.2
	0.3nm,0.4s,baz=337,slow=7.6,SNR=6.0						
ASAR	**Alice Springs**	**60.40**	**149**	P	P	12 36 03.4	-0.1
	0.2nm,0.5s,baz=328,slow=6.3,SNR=5.4						

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*IDC **26** 12:33:55.8±0.5, 8°.89S×75°.55W, h0km, mb4.8/15, mb1 4.9/19, mb1mx4.9/23, mbtmp4.8/19, ML4.2/3, MS5.0/16, Ms1 4.9/16, ms1mx4.8/24, Error ellipse: s-maj=15.3km s-min=10.4km az=66.0*
*ISCJB **26** 12:33:59.3±1.0, 8°.89S±0°.04×75°.65W±0°.04, h33km±8km, mb5.1/128, MS4.9/27, Error ellipse: s-maj=8.6km s-min=4.8km az=139.6*
*MOS **26** 12:34:00.4±0.8, 8°.67S×75°.68W, h33km, mb5.3/49, MS4.8/5, Error ellipse: s-maj=10.5km s-min=6.0km az=100.1*
*NEIC **26** 12:34:01.6±0.6, 8°.92S×75°.58W, h40km±5km, mb5.2/111, MS4.7/2, Error ellipse: s-maj=4.9km s-min=3.2km az=57.0*
NEIC Felt [III] at Aguaytia.
*GCMT **26** 12:34:01.9±0.2, 9°.00S×75°.65W, h12km, MW5.2, Moment Tensor Solution. s57,c91; s79,c144; Moment tensor: Scale 10^16Nm; Mrr7.40±.23; Mθθ-6.59±.16; Mφφ-0.81±.27; Mrθ1.90±.52; Mθφ-5.62±.16; Mφr-0.10±.68; Best double couple: M0 9.00000×10^16 NP1:φ226.00000°, δ41.00000°, λ72.00000°. NP2:φ70.00000°, δ51.00000°, λ105.00000°. Principal axes: T 7.8000, Plg77.0000°, Azm36.0000°; N 2.4000, Plg12.0000°, Azm240.0000°; P -10.2000, Plg5.0000°, Azm149.0000°; Data Used: II IU IC CN G.*
*BJI **26** 12:34:01.9, 9°.51S×76°.31W, h55km, mB5.3/18, Ms5.3/21, Ms7 5.1/21*
ISC 26 12:34:02.0±0.8, 8°.90S±0°.04×75°.57W±0°.04, h41km±7km, n369, σ0°77/312, mb5.1/128, MS4.9/27, 6C-8D, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**3.30**	**302**	Pn	**Pn**	**12 34 51.0**	**-0.2**
	11nm,0.3s,baz=120,slow=10,SNR=30						
ATAH				Lg		12 35 40.9	
	189nm,0.3s,baz=272,slow=5.9,SNR=6.9						
NNA	**Nana**	**3.31**	**202**	Pn	**Pn**	**12 34 53.0**	**+1.6**
	14μm,1.0s,SNR=13						
NNA	**Nana**	**3.31**	**202**	Pn	**Pn**	**12 34 51.0**	**-0.5**
	43nm,0.3s,baz=0.4,slow=11,SNR=32						
NNA				Lg		12 35 41.2	
	176nm,0.3s,baz=333,slow=22,SNR=6.3						
NNA				LR	LR	12 36 18.8	
	comp=Z,22μm,20.5s,baz=12,slow=43						
NNA	**Nana**	**3.31**	**202**	*e*Pn	**Pn**	**12 34 52.0**	**+0.6**
NNA				*e*Sn	**Sn**	**12 35 33.6**	**+4.0**
OTAV	**Otavalo**	**9.52**	**342**	*e*Pn	**Pn**	**12 36 16.5**	**-0.2**
LPAZ	**La Paz**	**10.32**	**136**	Pn	**Pn**	**12 36 27.7**	**0.0**
	1.2nm,0.3s,baz=319,slow=10,SNR=28						
LPAZ				Lg		12 39 25.9	
	4.5nm,0.3s,baz=248,slow=19,SNR=4.4						
LPAZ				LR	LR	12 40 57.8	
	comp=Z,15μm,19.5s,baz=306,slow=41						
LPAZ	**La Paz**	**10.32**	**136**	*e*Pn	**Pn**	**12 36 28.2**	**+0.6**
LPAZ				*e*Sn	**Sn**	**12 38 25.7**	**+3.6**
ROSC	**El Rosal**	**13.72**	**5**	Pn	**Pn**	**12 37 14.5**	**+0.3**
	1.8nm,0.3s,baz=106,slow=12,SNR=10.0						
ROSC				Sn	**Sn**	**12 40 02.8**	**+18**
	1.2nm,0.3s,baz=270,slow=20,SNR=1.8						
ROSC				Lg		12 41 18.2	
	3.4nm,0.3s,baz=270,slow=20,SNR=3.2						
ROSC				LR	LR	12 43 23.1	
	comp=Z,4μm,18.1s,baz=195,slow=41						
ROSC	**El Rosal**	**13.72**	**5**	*e*Pn	**Pn**	**12 37 16.3**	**+2.2**
SIV	**San Ignacio**	**15.81**	**118**	Pn	**Pn**	**12 37 39.1**	**-2.8**
	9.9nm,0.3s,baz=288,slow=12,SNR=338						
SIV				Lg		12 42 13.0	
	2.2nm,0.3s,baz=35,slow=20,SNR=5.1						
BCIP	**Isla Barro Col**	**18.44**	**347**	*e*P	**Pn**	**12 38 14.4**	**-0.3**
LCO	**Las Campanas**	**20.52**	**168**	*e*P	**P**	**12 38 36.2**	**-0.8**
	97nm,1.2s						
JTS	**JuntasAbangare**	**21.23**	**334**	P	**P**	**12 38 44.8**	**+0.2**
	497nm,1.2s,mb5.7,SNR=6.7						
PCRV	**Puerto La Cruz**	**21.85**	**30**	P	**P**	**12 38 50.1**	**-1.2**
	18nm,1.0s,mb4.4,baz=243,slow=4.5,SNR=1.8						
PCRV				Lg		12 45 25.1	
	16nm,0.8s,baz=30,slow=20,SNR=2.7						
PCRV				LR	LR	12 48 33.4	
	comp=Z,3μm,19.8s,MS4.7,baz=12,slow=40						
CFAA	**Coronel Fontan**	**23.60**	**164**	P	**P**	**12 39 08.2**	**-1.1**
	1.7nm,0.7s,baz=344,slow=9.7,SNR=25						
CFAA				LR	LR	12 48 23.7	
	comp=Z,116nm,20.3s,baz=358,slow=37						
CPUP	**Villa Florida**	**24.49**	**137**	P	**P**	**12 39 16.4**	**-1.1**
	4.2nm,0.6s,mb4.1,baz=302,slow=9.4,SNR=12						
CPUP				LR	LR	12 51 01.6	
	comp=Z,6μm,18.4s,MS5.1,baz=302,slow=42						
GRGR	**Grenville**	**25.06**	**34**	*e*P	**P**	**12 39 23.3**	**+0.5**
TGUH	**Tegucigalpa,Un**	**25.59**	**333**	*e*P	**P**	**12 39 28.4**	**+0.8**
	64nm,1.1s,mb5.1						
APG	**El Apazote**	**27.96**	**328**	P	**P**	**12 39 50.2**	**+1.3**
	18nm,0.9s,mb4.7,baz=176,slow=5.9,SNR=12						
MPR	**Mayaguez**	**28.20**	**17**	*e*P	**P**	**12 39 51.2**	**+0.2**
OBIP	**Obispado Ponce**	**28.20**	**18**	*e*P	**P**	**12 39 51.2**	**+0.2**
	62nm,1.1s,mb5.2						
CELP	**Cerrillos**	**28.23**	**18**	*e*P	**P**	**12 39 51.6**	**+0.2**
LRS	**Lares**	**28.36**	**18**	*e*P	**P**	**12 39 53.3**	**+0.9**
SJG	**San Juan**	**28.41**	**19**	P	**P**	**12 39 53.0**	**+0.2**
	44nm,0.7s,mb5.2,baz=163,slow=23,SNR=12						
SJG	**San Juan**	**28.41**	**19**	*e*P	**P**	**12 39 52.0**	**-0.9**
SJG				pmax	pmax		
	comp=Z,36nm,0.8s						
SJG	**San Juan**	**28.41**	**19**	*e*P	**P**	**12 39 52.0**	**-0.9**
	comp=Z,36nm,0.8s,mb5.0						
AOPR	**Arecibo Observ**	**28.44**	**18**	*e*P	**P**	**12 39 53.4**	**+0.2**
	comp=Z,35nm,0.8s,mb5.0						
MTP	**Monte Pirata**	**28.59**	**20**	*e*P	**P**	**12 39 53.8**	**-0.7**
	comp=Z,44nm,1.0s,mb5.1						
TRQA	**Tornquist**	**31.51**	**159**	*e*P	**P**	**12 40 20.6**	**+0.4**
	comp=Z,13nm,1.1s,mb4.7						
TEIG	**Tepich**	**31.53**	**337**	*e*P	**P**	**12 40 20.6**	**+0.2**
	comp=Z,238nm,1.8s,mb5.7						
PLCA	**Paso Flores**	**32.01**	**173**	P	**P**	**12 40 23.6**	**-0.9**
	comp=Z,6.3nm,0.8s,mb4.5,baz=348,slow=9.3,SNR=6.6						
PLCA				PcP	PcP	12 43 12.9	-0.8
	comp=Z,2.7nm,0.8s,baz=343,slow=4.2,SNR=3.0						
NHSC	**New Hope**	**42.00**	**354**	*e*P	**P**	**12 41 48.8**	**-0.6**
	comp=Z,88nm,1.1s,mb5.3						
GOGA	**Godfrey**	**42.74**	**350**	*e*P	**P**	**12 41 54.6**	**-0.8**
GOGA				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.7						
GOGA	**Godfrey**	**42.74**	**350**	*e*P	**P**	**12 41 54.6**	**-0.8**
	comp=Z,16nm,1.0s,mb4.7						
LRAL	**Lakeview Retre**	**43.10**	**346**	*e*P	**P**	**12 41 57.1**	**-1.2**
	comp=Z,22nm,1.4s,mb4.7						
HKT	**Hockley**	**43.27**	**334**	*e*P	**P**	**12 42 00.2**	**+0.5**
HKT				pmax	pmax		
	comp=Z,78nm,1.8s,mb5.1						
HKT	**Hockley**	**43.27**	**334**	*e*P	**P**	**12 42 00.2**	**+0.5**
	comp=Z,78nm,1.8s,mb5.1						
NATX	**Nacogdoches**	**44.36**	**337**	*e*P	**P**	**12 42 08.5**	**0.0**
	comp=Z,452nm,1.9s,mb5.9						
JCT	**Junction City**	**45.55**	**330**	*e*P	**P**	**12 42 17.5**	**-0.5**
JCT				pmax	pmax		
	comp=Z,32nm,1.3s,mb5.1						
JCT	**Junction City**	**45.55**	**330**	*e*P	**P**	**12 42 17.5**	**-0.4**
	comp=Z,32nm,1.3s,mb5.1						
ELN	**Prospectdale**	**46.14**	**354**	*e*P	**P**	**12 42 23.3**	**+0.8**
UALR	**University of**	**46.25**	**341**	*e*P	**P**	**12 42 22.8**	**-0.6**
	comp=Z,31nm,1.0s,mb5.2						
WVT	**Waverly**	**46.25**	**346**	*e*P	**P**	**12 42 21.4**	**-2.0**
MIAR	**Mount Ida**	**46.45**	**339**	*e*P	**P**	**12 42 24.6**	**-0.4**
MIAR				pmax	pmax		
	comp=Z,24nm,1.3s,mb5.0						
MIAR	**Mount Ida**	**46.45**	**339**	*e*P	**P**	**12 42 24.6**	**-0.4**
	comp=Z,24nm,1.3s,mb5.0						
TXAR	**Lajitas Array**	**46.67**	**326**	P	**P**	**12 42 26.5**	**-0.3**
	comp=Z,7.7nm,0.8s,mb4.7,baz=148,slow=8.2,SNR=55						
TXAR				PcP	PcP	12 43 59.7	-0.4
	comp=Z,1.5nm,0.7s,baz=148,slow=5.3,SNR=2.8						
TXAR				LR	LR	13 01 49.0	
	comp=Z,873nm,19.1s,MS4.7,baz=270,slow=36						
TXAR	**Lajitas Array**	**46.67**	**326**	P	**P**	**12 42 26.5**	**-0.3**
TXAR						12 43 59.7	
CBN	**Corbin**	**46.89**	**358**	*e*P	**P**	**12 42 29.3**	**+0.9**
PARMO	**Parma**	**47.24**	**344**	*e*P	**P**	**12 42 30.0**	**-1.1**
526A	**Mary Lane Ranc**	**47.46**	**326**	⇓P	**P**	**12 42 33.3**	**+0.3**
	baz=48						
USIN	**University of**	**47.97**	**347**	P	**P**	**12 42 35.7**	**-1.1**
SIUC	**Southern Illin**	**48.10**	**345**	*e*P	**P**	**12 42 36.5**	**-1.3**
	comp=Z,28nm,0.8s,mb5.3						
WMOK	**Wichita Mounta**	**48.65**	**334**	*e*P	**P**	**12 42 41.3**	**-0.7**
WMOK				*e*		12 44 06.4	
WMOK				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.0						
WMOK	**Wichita Mounta**	**48.65**	**334**	*e*P	**P**	**12 42 41.3**	**-0.8**
	comp=Z,16nm,1.1s,mb5.0						
WMOK				*e*PcP	PcP	12 44 06.4	-0.6
MVL	**Millersville**	**48.66**	**359**	*e*P	**P**	**12 42 43.0**	**+1.0**
FVM	**French Village**	**48.66**	**344**	*e*P	**P**	**12 42 40.9**	**-1.2**
CCM	**Cathedral Cave**	**48.95**	**344**	*e*P	**P**	**12 42 42.8**	**-1.5**
CCM				*e*		12 44 07.9	
CCM				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
CCM	**Cathedral Cave**	**48.95**	**344**	*e*P	**P**	**12 42 42.8**	**-1.5**
	comp=Z,11nm,0.8s,mb5.0						
CCM				*e*PcP	PcP	12 44 07.9	-0.2
CLNB	**Carlsbad**	**49.05**	**328**	*e*P	**P**	**12 42 45.3**	**+0.1**
	comp=Z,9.0nm,1.1s,mb4.7						
SLM	**Saint Louis**	**49.23**	**345**	*e*P	**P**	**12 42 45.5**	**-0.9**
GDL2	**Guadalupe Moun**	**49.26**	**327**	*e*P	**P**	**12 42 47.3**	**+0.5**
SSPA	**Standing Stone**	**49.33**	**358**	*e*P	**P**	**12 42 47.6**	**+0.4**
	comp=Z,39nm,1.3s,mb5.3						
ACSO	**Alum Creek Sta**	**49.36**	**353**	*e*P	**P**	**12 42 46.8**	**-0.6**
MNTX	**Cornudas Mount**	**49.42**	**326**	*e*P	**P**	**12 42 47.3**	**-0.8**
	comp=Z,32nm,1.4s,mb5.2						
CPRX	**Cap Rock**	**49.65**	**328**	*e*P	**P**	**12 42 50.4**	**+0.7**
	comp=Z,39nm,1.0s,mb5.4						
PAL	**Palisades**	**49.68**	**2**	*e*P	**P**	**12 42 49.9**	**+0.1**
AMTX	**Amarillo**	**50.06**	**332**	*e*P	**P**	**12 42 52.7**	**-0.2**
	comp=Z,37nm,1.3s,mb5.3						
HDIL	**Hopedale**	**50.81**	**347**	*e*P	**P**	**12 42 56.7**	**-1.8**
	comp=Z,44nm,0.5s,mb5.7						
BINY	**Binghamton**	**50.85**	**360**	*e*P	**P**	**12 42 58.8**	**+0.1**
	comp=Z,68nm,1.4s,mb5.4						
ERPA	**Erie**	**50.93**	**356**	*e*P	**P**	**12 42 58.8**	**-0.4**
	comp=Z,49nm,0.9s,mb5.4						
TRY	**Troy**	**51.41**	**2**	*e*P	**P**	**12 43 04.0**	**+1.2**
KSU1	**Kansas State U**	**51.61**	**339**	*e*P	**P**	**12 43 03.9**	**-0.5**
318A	**Bisbee**	**51.91**	**322**	⇑P	**P**	**12 43 07.1**	**+0.3**
	baz=52						
BNM	**Barren Site**	**51.97**	**327**	*e*P	**P**	**12 43 07.2**	**0.0**
	comp=Z,19nm,1.4s,mb4.8						
ACCN	**Adirondack Com**	**52.06**	**2**	*e*P	**P**	**12 43 08.6**	**+0.9**
LPM	**Los Pinos Moun**	**52.09**	**327**	*e*P	**P**	**12 43 08.9**	**+0.7**
LAZ	**Ladron**	**52.43**	**327**	*e*P	**P**	**12 43 11.4**	**+0.8**
	comp=Z,18nm,1.5s,mb4.8						
ANMO	**Albuquerque**	**52.49**	**328**	*e*P	**P**	**12 43 11.0**	**-0.1**
ANMO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ANMO	**Albuquerque**	**52.49**	**328**	*e*P	**P**	**12 43 11.0**	**-0.1**
	comp=Z,3.2nm,0.8s,mb4.3						
CBKS	**Cedar Bluff**	**52.53**	**336**	*e*P	**P**	**12 43 10.8**	**-0.5**
NCB	**Newcomb**	**52.63**	**1**	*e*P	**P**	**12 43 12.0**	**+0.1**
	comp=Z,39nm,1.3s,mb5.2						
X21A	**Alamocita Cree**	**52.82**	**326**	⇓P	**P**	**12 43 14.1**	**+0.6**
	baz=53						
LBNH	**Lisbon**	**52.99**	**3**	*e*P	**P**	**12 43 15.0**	**+0.4**
LBNH				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
LBNH	**Lisbon**	**52.99**	**3**	*e*P	**P**

comp=Z,43nm,1.4s,mb5.3
MSU Marysvale 58.20 327 *e*P P **12 43 52.2 +0.1**
TMUT Trail Mountain 58.25 328 *e*P P **12 43 53.0 +0.5**
comp=Z,8.3nm,1.0s,mb4.7
EYMN Ely 58.33 347 *e*P P **12 43 51.1 -1.7**
comp=Z,20nm,0.9s,mb5.2
ARUT Antelope Range 58.38 325 *e*P P **12 43 54.2 +0.8**
ARUT pmax pmax
comp=Z,34nm,1.1s,mb5.3
ARUT Antelope Range 58.38 325 *e*P P **12 43 54.2 +0.7**
comp=Z,34nm,1.1s,mb5.3
RKT Rikitea 58.46 248 *e*LR LR 13 01 12.4
comp=Z,363nm,30.2s
GSC Goldstone 58.71 321 *e*P P **12 43 56.7 +1.0**
RSSD Black Hills 58.74 336 *e*P P **12 43 55.7 0.0**
RSSD pmax pmax
comp=Z,14nm,1.0s,mb5.0
RSSD Black Hills 58.74 336 *e*P P **12 43 55.7 0.0**
comp=Z,14nm,1.0s,mb5.0
MWC Mount Wilson 58.82 319 *e*P P **12 43 57.6 +1.1**
PASC Pasadena Art C 58.87 319 *e*P P **12 43 58.4 +1.5**
MPU Maple Canyon 59.00 328 *e*P P **12 43 58.3 +0.7**
DAU Daniels Canyon 59.10 329 *e*P P **12 43 58.8 +0.5**
DAU pmax pmax
comp=Z,73nm,1.4s,mb5.5
DAU Daniels Canyon 59.10 329 *e*P P **12 43 58.8 +0.4**
comp=Z,73nm,1.4s,mb5.5
NLU North Lily Min 59.19 328 *e*P P **12 43 59.8 +0.8**
JLU Jordanelle 59.34 329 *e*P P **12 44 00.9 +0.9**
CTU Camp Tracy 59.56 329 *e*P P **12 44 02.2 +0.7**
AGMN Agassiz Nation 59.70 344 *e*P P **12 44 01.5 -0.8**
DUG Dugway 59.75 328 *e*P P **12 44 03.1 +0.2**
DUG pmax pmax
comp=Z,85nm,1.4s,mb5.6
DUG Dugway 59.75 328 *e*P P **12 44 03.1 +0.2**
comp=Z,85nm,1.4s,mb5.6
M16A Huntsville 59.96 329 ⇓P P **12 44 03.7 -0.6**
baz=60
ISA Isabella 59.99 320 *e*P P **12 44 05.3 +0.7**
PDAR Pinedale Array 60.04 332 P P **12 44 04.0 -0.8**
comp=Z,4.9nm,0.9s,mb4.5,baz=142,slow=7.5,SNR=27
PDAR LR LR 13 10 26.8
comp=Z,1μm,20.7s,MS5.0,baz=144,slow=36
HWUT Hardware Ranch 60.14 329 *e*P P **12 44 04.8 -0.7**
comp=Z,36nm,0.9s,mb5.4
BGU Big Grassy Mou 60.39 328 *e*P P **12 44 06.8 -0.5**
comp=Z,33nm,1.4s,mb5.2
HVU Hansel Valley 60.88 329 *e*P P **12 44 10.7 +0.2**
REDW Red Top Meadow 61.11 331 *e*P P **12 44 11.2 -0.9**
MTUM Tungsten Hills 61.11 322 *e*P P **12 44 12.8 +0.5**
SNOW Snow King Moun 61.14 331 *e*P P **12 44 12.8 +0.5**
comp=Z,9.9nm,0.8s,mb5.0
LOHW Long Hollow 61.18 332 *e*P P **12 44 12.6 +0.1**
TPAW Teton Pass 61.25 331 *e*P P **12 44 12.7 -0.3**
comp=Z,19nm,1.3s,mb5.1
M13A Montello 61.30 328 *e*P P **12 44 12.8 -0.6**
comp=Z,9.5nm,0.8s,mb5.0
RRI2 Red Ridge 61.32 331 *e*P P **12 44 14.0 +0.5**
ELK Elko 61.45 326 *e*P P **12 44 13.9 -0.5**
ELK pmax pmax
comp=Z,11nm,0.9s
ELK Elko 61.45 326 *e*P P **12 44 13.9 -0.5**
comp=Z,11nm,0.9s,mb5.0
ULM Lac du Bonnet 61.50 345 P P **12 44 13.3 -1.3**
comp=Z,30nm,0.6s,mb5.6,baz=158,slow=6.7,SNR=22
ULM LR LR 13 11 55.6
comp=Z,846nm,21.8s,MS4.9,baz=144,slow=37
IMW Indian Meadow 61.56 332 *e*P P **12 44 15.5 +0.4**
NVAR Mina Array Bea 61.65 323 P P **12 44 16.1 +0.3**
comp=Z,4.8nm,0.8s,mb4.7,baz=133,slow=5.9,SNR=34
RLMT Red Lodge 61.74 334 *e*P P **12 44 15.3 -0.9**
comp=Z,15nm,1.2s,mb5.0
YFT Old Faithful 61.93 332 *e*P P **12 44 18.7 +1.1**
YMR Madison River 62.16 332 *e*P P **12 44 19.7 +0.6**
comp=Z,21nm,1.0s,mb5.2
BMN Battle Mountai 62.34 325 *e*P P **12 44 20.7 +0.3**
BMN pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
BMN Battle Mountai 62.34 325 *e*P P **12 44 20.7 +0.3**
comp=Z,9.8nm,0.8s,mb5.0
WAKR Walker 62.38 322 *e*P P **12 44 21.4 +0.7**
GCMT Greycliff 62.44 334 *e*P P **12 44 20.7 -0.3**
comp=Z,59nm,1.4s,mb5.5
DGMT Dagmar 62.45 339 *e*P P **12 44 21.4 +0.4**
comp=Z,73nm,1.4s,mb5.6
QLMT Earthquake Lak 62.49 332 *e*P P **12 44 22.8 +1.5**
CMB Columbia Colle 62.66 321 *e*P P **12 44 22.3 -0.3**
CMB pmax pmax
comp=Z,12nm,1.2s,mb4.9
CMB Columbia Colle 62.66 321 *e*P P **12 44 22.3 -0.4**
comp=Z,12nm,1.2s,mb4.9
HLID Hailey 63.01 329 *e*P P **12 44 24.6 -0.2**
comp=Z,22nm,1.3s,mb5.1
MCMT McKenzie Canyo 63.16 331 *e*P P **12 44 26.3 +0.5**
comp=Z,17nm,1.5s,mb4.9
BOZ Bozeman (W) 63.20 332 *e*P P **12 44 25.5 -0.6**
BOZ pmax pmax
comp=Z,37nm,1.5s,mb5.3
BOZ Bozeman (W) 63.20 332 *e*P P **12 44 25.5 -0.5**
comp=Z,37nm,1.5s,mb5.3
DLMT Dillon 63.44 332 *e*P P **12 44 27.5 -0.1**
comp=Z,33nm,1.4s,mb5.3
LRM Limekiln Ridge 63.71 332 *e*P P **12 44 29.8 +0.4**
TAOE Nuku Hiva Isla 63.72 265 *e*LQ 13 00 56.9
comp=Z,1μm,26.6s
TAOE *e*LR LR 13 03 33.4
comp=Z,273nm,25.7s
SCHQ Schefferville 63.91 6 P P **12 44 30.4 -0.1**
comp=Z,11nm,0.8s,mb4.9,baz=200,slow=6.5,SNR=7.7
SCHQ LR LR 13 13 41.5
comp=Z,611nm,20.5s,MS4.8,baz=4.2,slow=37
EGMT Eagleton 64.23 335 *e*P P **12 44 32.2 -0.5**
comp=Z,40nm,1.5s,mb5.2
WVOR Wild Horse Val 64.46 326 *e*P P **12 44 34.1 -0.3**
WVOR pmax pmax
comp=Z,36nm,1.4s,mb5.2
WVOR Wild Horse Val 64.46 326 *e*P P **12 44 34.1 -0.3**
comp=Z,36nm,1.4s,mb5.2
G12A Big Creek, Yel 64.58 330 ⇑P P **12 44 34.7 -0.4**
baz=65
CHMT Chamberlain Mo 64.90 332 *e*P P **12 44 36.5 -0.7**
comp=Z,2.8nm,1.0s,mb4.2
MOD Modoc 65.05 325 *e*P P **12 44 38.5 +0.2**
comp=Z,68nm,1.5s,mb5.5
MSO Missoula 65.15 332 *e*P P **12 44 39.0 +0.2**
comp=Z,44nm,1.4s,mb5.3
SLMT Seeley Lake 65.25 333 *e*P P **12 44 38.7 -0.7**
comp=Z,25nm,1.5s,mb5.0
LTIM Timbered Crate 65.28 323 P P **12 44 40.1 +0.3**
BMO Blue Mountains 65.39 329 *e*P P **12 44 39.5 -0.9**
BMO pmax pmax
comp=Z,11nm,1.4s,mb4.7
BMO Blue Mountains 65.39 329 *e*P P **12 44 39.5 -0.8**
comp=Z,11nm,1.4s,mb4.7
SWMT Swartz Lake 65.68 332 *e*P P **12 44 42.5 +0.3**
comp=Z,8.2nm,1.1s,mb4.7
A16A West Butte Ran 65.72 335 ⇓P P **12 44 42.1 -0.3**
baz=66
YBMT Yellow Bay 65.95 333 *e*P P **12 44 44.4 +0.4**
comp=Z,21nm,1.3s,mb5.0
BSMT Bassoo Peak 66.30 332 P P **12 44 46.5 +0.4**
YBH Yreka Blue Hor 66.35 323 LR LR 13 13 00.0
comp=Z,868nm,21.6s,MS4.9,baz=149,slow=35
YBH Yreka Blue Hor 66.35 323 *e*P P **12 44 44.8 -1.8**
YBH pmax pmax
comp=Z,10.0nm,1.1s
YBH Yreka Blue Hor 66.35 323 *e*P P **12 44 44.8 -1.9**
comp=Z,9.6nm,1.1s,mb4.7
WALA Waterton Lakes 66.79 334 *e*P P **12 44 48.9 -0.4**
comp=Z,0.5nm,0.8s
A13A Flathead Natio 66.92 333 ⇓P P **12 44 50.3 +0.1**
baz=67
FFC Flin Flon 67.16 344 P P **12 44 50.8 -0.7**
comp=Z,92nm,0.8s,mb5.9,SNR=7.0
FFC Flin Flon 67.16 344 *i* P P **12 44 51.2 -0.3**
FFC Flin Flon 67.16 344 *e*P P **12 44 50.7 -0.8**
comp=Z,18nm,1.0s,mb5.1
VTHM Trough 67.32 327 P P **12 44 53.7 +1.0**
G06A Carlson Farm, 67.39 327 ⇓P P **12 44 53.7 +0.5**
baz=68
CROR Criterion Ridg 67.42 327 P P **12 44 54.6 +1.2**
F07A Phinny Hill Vi 67.45 328 ⇓P P **12 44 54.3 +0.7**
baz=68
OD2 Odessa Site #2 67.84 330 P P **12 44 56.1 +0.1**
HOOD Mount Hood Mea 68.00 327 *e*P P **12 44 57.0 0.0**
comp=Z,54nm,1.0s,mb5.5
MTMW Mount Mitchell 68.75 327 P P **12 45 02.4 +0.7**
ETW Entiat 68.80 329 *e*P P **12 45 02.7 +0.7**
comp=Z,18nm,0.8s,mb5.1
FCC Fort Churchill 69.08 350 *e*P P **12 45 01.9 -1.6**
comp=Z,1.3nm,1.0s
EDM Edmonton 69.71 337 *e*P P **12 45 06.3 -1.2**
RPW Rockport 69.95 329 *e*P P **12 45 08.9 -0.2**
comp=Z,1.8nm,0.6s,mb4.2
JCW Jim Creek 70.00 329 *e*P P **12 45 08.7 -0.7**
comp=Z,22nm,1.2s,mb5.0
GNW Green Mountain 70.06 328 *e*P P **12 45 09.1 -0.6**
comp=Z,3.8nm,1.0s,mb4.3
NLWA Neilton Lookou 70.50 327 *e*P P **12 45 12.8 +0.4**
comp=Z,50nm,1.5s,mb5.2
TBI Tubuai 71.79 248 *e*LR LR 13 07 21.5
comp=Z,215nm,27.5s
DBIC Dimbokro 72.16 80 P P **12 45 23.1 -0.1**
comp=Z,10nm,0.8s,mb4.8,baz=213,slow=5.5,SNR=7.6
DBIC Dimbokro 72.16 80 *e*P P **12 45 22.4 -0.8**
DBIC pmax pmax
comp=Z,37nm,1.2s
DBIC Dimbokro 72.16 80 *e*P P **12 45 22.4 -0.8**
comp=Z,37nm,1.2s,mb5.2
PPT Papeete 72.19 254 *e*LR LR 13 07 33.0
comp=Z,340nm,23.2s
YKA Yellowknife Ar 77.28 343 P P **12 45 51.0 -0.8**
comp=Z,8.9nm,0.9s,mb4.7,baz=137,slow=6.1,SNR=30
YKA Yellowknife Ar 77.28 343 P P **12 45 51.0 -0.8**
EVO Evora 78.43 48 *e*P P **12 45 59.6 +0.8**
comp=Z,28nm,1.2s,mb4.8
EVO *e*MLR MLR
comp=Z,421nm,19.5s,MS4.5
TORD Torodi Ar. Bea 79.78 75 P P **12 46 06.0 -0.6**
comp=Z,11nm,0.8s,mb4.8,baz=234,slow=3.8,SNR=27
DLBC Dease Lake 80.13 334 *e*P P **12 46 08.0 +0.4**
MAIT Maitri 80.77 160 *e*P P **12 46 11.5 +0.6**
NVL N'lazarevskaya 80.80 160 *e*P P **12 46 09.1 -2.0**
NVL pmax pmax
comp=Z,40nm,0.9s,mb5.3
NVL MLR MLR
comp=Z,1μm,19.0s,MS5.2
QSPA South Pole Qui 81.21 180 LR LR 13 18 55.1
comp=Z,408nm,19.0s,MS4.8,baz=168,slow=33
QSPA South Pole Qui 81.21 180 *e*P P **12 46 13.5 +0.4**
comp=Z,16nm,0.8s,mb5.0
ESDC Sonseca Array 81.78 48 P P **12 46 17.3 +0.4**
comp=Z,2.9nm,0.8s,mb4.3,baz=269,slow=4.8,SNR=11
ESDC Sonseca Array 81.78 48 P P **12 46 17.3 +0.4**
SKAG Skagway 82.99 334 *e*P P **12 46 22.8 +0.1**
comp=Z,14nm,0.9s,mb5.0
BORG Borgarnes 83.75 20 *e*P P **12 46 28.2 +1.7**
BORG pmax pmax
comp=Z,26nm,0.8s
BORG Borgarnes 83.75 20 *e*P P **12 46 28.2 +1.7**
comp=Z,26nm,0.8s,mb5.4
RES Resolute Bay 84.28 355 *e*P P **12 46 28.8 -0.2**
RES pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
RES Resolute Bay 84.28 355 *e*P P **12 46 28.8 -0.3**
comp=Z,9.7nm,0.9s,mb4.9
SUMG Summit 84.79 11 *e*P P **12 46 31.6 0.0**
SUMG pmax pmax
comp=Z,47nm,1.2s
SUMG Summit 84.79 11 *e*P P **12 46 31.6 0.0**
comp=Z,47nm,1.2s,mb5.5
SJPF Ste Jean 84.80 45 *e*P P **12 46 32.6 +0.3**
comp=Z,42nm,1.1s,mb5.2
SJPF Ste Jean 84.80 45 *e*P P **12 46 32.6 +0.3**
SJPF pmax pmax
comp=Z,21nm,1.1s,mb5.2
SJPF Ste Jean 84.80 45 *e*P P **12 46 32.6 +0.3**
comp=Z,21nm,1.1s,mb5.2
QUIF Quistinic 85.00 40 *e*P P **12 46 33.4 +0.2**
ETSF Etsaut 85.21 45 *e*P P **12 46 34.0 -0.3**
comp=Z,38nm,1.3s,mb5.1
ETSF Etsaut 85.21 45 *e*P P **12 46 34.0 -0.3**
ETSF pmax pmax
comp=Z,19nm,1.3s,mb5.1
ETSF Etsaut 85.21 45 *e*P P **12 46 34.0 -0.3**
comp=Z,19nm,1.3s,mb5.1
TAM Tamanrasset 85.30 66 *e*P P **12 46 35.8 +0.6**
TAM pmax pmax
comp=Z,37nm,1.6s,mb5.3
TAM Tamanrasset 85.30 66 *e*P P **12 46 35.8 +0.6**
comp=Z,37nm,1.6s,mb5.3
MFF Saint Martin d 86.55 42 *e*P P **12 46 40.3 -0.6**
GRR Gorron 86.61 40 *e*P P **12 46 41.0 -0.2**
LFF La Frestale 86.68 44 *e*P P **12 46 41.9 +0.3**
DAWY Dawson 86.92 337 *e*P P **12 46 41.8 -0.6**
FLN La Foliniere 86.96 40 *e*P P **12 46 42.9 0.0**
FLN *e*MLR MLR
comp=Z,267nm,19.8s,MS4.3
FLN La Foliniere 86.96 40 *e*P P **12 46 42.9 0.0**
FLN LR LR
comp=Z,270nm,19.8s,MS4.7
INK Inuvik 87.00 342 *e*P P **12 46 41.5 -1.1**
INK pmax pmax
comp=Z,58nm,1.4s
INK Inuvik 87.00 342 *e*P P **12 46 41.5 -1.1**
comp=Z,58nm,1.4s,mb5.6
LDF La Druitiere 87.14 40 *e*P P **12 46 43.7 0.0**
comp=Z,34nm,1.1s,mb5.2
LDF La Druitiere 87.14 40 *e*P P **12 46 43.7 0.0**
LDF pmax pmax
comp=Z,17nm,1.1s,mb5.2
LDF La Druitiere 87.14 40 *e*P P **12 46 43.7 0.0**
comp=Z,17nm,1.1s,mb5.2
MTLF Montolieu 87.28 46 *e*P P **12 46 44.6 0.0**
comp=Z,9.7nm,0.9s,mb4.8
MTLF Montolieu 87.28 46 *e*P P **12 46 44.6 0.0**
MTLF pmax pmax
comp=Z,5.0nm,0.9s,mb4.7
MTLF Montolieu 87.28 46 *e*P P **12 46 44.6 0.0**
comp=Z,4.8nm,0.9s,mb4.7
RJF Les Rejaudoux 87.31 44 *e*P P **12 46 44.6 0.0**
comp=Z,27nm,1.0s,mb5.2
RJF *e*MLR MLR
comp=Z,416nm,22.5s,MS4.5
RJF Les Rejaudoux 87.31 44 *e*P P **12 46 44.6 0.0**
RJF pmax pmax
comp=Z,14nm,1.0s,mb5.2
RJF MLR MLR
comp=Z,420nm,22.5s,MS4.8
RJF Les Rejaudoux 87.31 44 *e*P P **12 46 44.6 0.0**
comp=Z,14nm,1.0s,mb5.1
RJF LR LR
comp=Z,420nm,22.5s,MS4.8
CAF Calviac 87.58 44 *e*P P **12 46 46.1 +0.1**
comp=Z,12nm,0.7s,mb5.0
CAF Calviac 87.58 44 *e*P P **12 46 46.1 +0.1**
CAF pmax pmax
comp=Z,6.0nm,0.7s,mb4.9
CAF Calviac 87.58 44 *e*P P **12 46 46.1 +0.1**
comp=Z,6.2nm,0.7s,mb5.0
EGAK Eagle 87.93 337 *e*P P **12 46 45.7 -1.4**
comp=Z,76nm,1.5s,mb5.7
TCF Toulx Ste Croi 88.03 43 *e*P P **12 46 47.8 -0.3**
comp=Z,12nm,0.7s,mb4.9
TCF Toulx Ste Croi 88.03 43 *e*P P **12 46 47.8 -0.3**
TCF pmax pmax
comp=Z,6.0nm,0.7s,mb4.9
TCF Toulx Ste Croi 88.03 43 *e*P P **12 46 47.8 -0.3**
comp=Z,5.8nm,0.7s,mb4.9
MENT Mentasta 88.19 335 *e*P P **12 46 46.9 -1.5**
LASF Ste Croix 88.62 45 *e*P P **12 46 51.3 +0.4**
comp=Z,16nm,0.9s,mb5.0
AVF Avril sur Loir 88.92 42 *e*P P **12 46 51.8 -0.5**
comp=Z,9.6nm,0.8s,mb4.9
AVF Avril sur Loir 88.92 42 *e*P P **12 46 51.8 -0.5**
AVF pmax pmax
comp=Z,5.0nm,0.8s,mb4.9
AVF Avril sur Loir 88.92 42 *e*P P **12 46 51.8 -0.5**
comp=Z,4.8nm,0.8s,mb4.9
PAX Paxson 88.94 335 *e*P P **12 46 50.9 -1.1**
comp=Z,86nm,1.6s,mb5.8
SSF Saint Saulge 89.09 42 *e*P P **12 46 52.6 -0.4**
SMF Signal de Mont 89.22 43 *e*P P **12 46 53.5 -0.1**
comp=Z,39nm,1.1s,mb5.3
SMF Signal de Mont 89.22 43 *e*P P **12 46 53.5 -0.1**
SMF pmax pmax
comp=Z,19nm,1.1s,mb5.3
SMF Signal de Mont 89.22 43 *e*P P **12 46 53.5 -0.1**
comp=Z,19nm,1.1s,mb5.3
VIVF Saint-Julien-l 89.37 45 *e*P P **12 46 54.9 +0.5**
comp=Z,22nm,1.0s,mb5.1
VIVF Saint-Julien-l 89.37 45 *e*P P **12 46 54.9 +0.5**
VIVF pmax pmax
comp=Z,11nm,1.0s,mb5.1
VIVF Saint-Julien-l 89.37 45 *e*P P **12 46 54.9 +0.5**
comp=Z,11nm,1.0s,mb5.2
SSB Saint Sauveur 89.37 44 *e*P P **12 46 54.3 -0.1**
SSB pmax pmax
comp=Z,9.0nm,0.9s,mb5.1
SSB Saint Sauveur 89.37 44 *e*P P **12 46 54.2 -0.2**
comp=Z,8.6nm,0.9s,mb5.1
LOR Lormes 89.38 42 *e*P P **12 46 54.1 -0.3**
comp=Z,12nm,0.8s,mb5.0
LOR *e*MLR MLR
comp=Z,361nm,21.8s,MS4.5
LOR Lormes 89.38 42 *e*P P **12 46 54.1 -0.3**
LOR pmax pmax
comp=Z,6.0nm,0.8s,mb5.0
LOR MLR MLR
comp=Z,360nm,21.8s,MS4.8
LOR Lormes 89.38 42 *e*P P **12 46 54.1 -0.3**
comp=Z,6.2nm,0.8s,mb5.0
LOR LR LR
comp=Z,360nm,21.8s,MS4.8
TSUM Tsumeb 90.06 109 LR LR 13 23 26.9
comp=Z,2μm,20.3s,MS5.4,baz=145,slow=33
TSUM Tsumeb 90.06 109 *e*P P **12 46 58.8 +0.5**
comp=Z,11nm,0.8s,mb5.2
RC01 Rabbit Creek A 90.19 332 *e*P P **12 46 57.1 -0.7**
ORIF Oris-en-Rattie 90.22 45 *e*P P **12 46 59.2 +0.8**
comp=Z,32nm,0.8s,mb5.4
ORIF *e*MLR MLR
comp=Z,527nm,21.5s,MS4.6
ORIF Oris-en-Rattie 90.22 45 *e*P P **12 46 59.2 +0.8**
ORIF pmax pmax
comp=Z,16nm,0.8s,mb5.4
ORIF Oris-en-Rattie 90.22 45 *e*P P **12 46 59.2 +0.8**
comp=Z,16nm,0.8s,mb5.4
BAIF Baives 90.26 39 *e*P P **12 46 58.4 0.0**
FRF La Foret Royal 90.47 46 *e*P P **12 46 59.9 +0.3**
COLA College 90.61 336 *e*P P **12 46 59.3 -0.4**
COLA pmax pmax
comp=Z,16nm,0.9s,mb5.3
COLA College 90.61 336 *e*P P **12 46 59.3 -0.4**
comp=Z,16nm,0.9s,mb5.3
KDAK Kodiak Island 90.62 329 LR LR 13 26 43.9
comp=Z,342nm,18.8s,MS4.8,baz=88,slow=35
GIVF Givet 90.65 39 *e*P P **12 47 00.5 +0.2**
comp=Z,54nm,0.8s,mb5.6
GIVF Givet 90.65 39 *e*P P **12 47 00.5 +0.2**
GIVF pmax pmax
comp=Z,27nm,0.8s,mb5.6
GIVF Givet 90.65 39 *e*P P **12 47 00.5 +0.2**
comp=Z,27nm,0.8s,mb5.6
CABF La Chapelle 90.72 43 *e*P P **12 47 00.9 +0.3**
comp=Z,15nm,0.8s,mb5.1
CABF La Chapelle 90.72 43 *e*P P **12 47 00.9 +0.3**
CABF pmax pmax
comp=Z,7.0nm,0.8s,mb5.0
CABF La Chapelle 90.72 43 *e*P P **12 47 00.9 +0.3**
comp=Z,7.4nm,0.8s,mb5.1
MBDF Montbardon 90.80 45 *e*P P **12 47 01.0 -0.1**
LPL La Plagne 90.93 44 *e*P P **12 47 02.8 +1.1**
comp=Z,30nm,1.0s,mb5.3
LPL La Plagne 90.93 44 *e*P P **12 47 02.8 +1.1**
LPL pmax pmax
comp=Z,15nm,1.0s,mb5.3
LPL La Plagne 90.93 44 *e*P P **12 47 02.8 +1.1**
comp=Z,15nm,1.0s,mb5.3
LPG La Plagne 90.94 44 *e*P P **12 47 02.9 +1.2**
comp=Z,30nm,1.0s,mb5.3
LPG La Plagne 90.94 44 *e*P P **12 47 02.9 +1.2**
LPG pmax pmax
comp=Z,15nm,1.0s,mb5.3
LPG La Plagne 90.94 44 *e*P P **12 47 02.9 +1.2**
comp=Z,15nm,1.0s,mb5.3
BPAW Bear Paw Mtn. 91.65 335 *e*P P **12 47 03.8 -0.7**
comp=Z,43nm,1.5s,mb5.5
CDF Champ du Feu 91.87 41 *e*P P **12 47 05.7 -0.3**
COLD Coldfoot 92.27 338 *e*P P **12 47 07.5 +0.1**
comp=Z,6.3nm,1.0s,mb4.9
BOSA Boshof 95.16 120 LR LR 13 26 31.4
comp=Z,1μm,21.7s,MS5.3,baz=270,slow=33
CLL Collm 95.98 39 *i* P P **12 47 26.5 +1.7**
CLL *e* 12 57 57.0
CLL pmax pmax
comp=Z,4.0nm,0.6s,mb5.0
CLL MLR MLR
comp=Z,400nm,20.8s,MS4.9
KHC Kasperske Hory 96.10 41 *e*P P **12 47 25.6 +0.2**
KHC Kasperske Hory 96.10 41 *e*P P **12 47 25.6 +0.2**
NB2 NORSAR Subarra 96.16 29 P P **12 47 26.0 +0.6**
comp=Z,4.7nm,1.1s,mb4.8,baz=261,slow=4.6
NOA NORSAR Array B 96.16 29 P P **12 47 25.8 +0.4**
comp=Z,1.4nm,0.8s,mb4.4,baz=265,slow=4.9,SNR=4.3
CEY Cerknica 96.30 45 *i* P P **12 47 28.5 +2.1**
BOJS Bojanci 96.85 45 *i* P P **12 47 31.0 +2.1**
URZ Urewera 97.86 229 LR LR 13 26 07.9
comp=Z,438nm,18.2s,MS5.0,baz=256,slow=32
DPC Dobruska-Polom 97.99 40 *e*P P **12 47 34.5 +0.6**
DPC Dobruska-Polom 97.99 40 *e*P P **12 47 34.5 +0.6**
MAW Mawson 98.13 165 LR LR 13 28 45.9
comp=Z,966nm,21.7s,MS5.3,baz=233,slow=34
STKA Stephens Creek 126.10 220 PKP PKPdf 12 53 01.1 +0.6
comp=Z,5.4nm,0.6s,baz=124,slow=6.9,SNR=7.5
BVAR Borovoye Array 128.10 25 PKP PKPdf 12 53 04.0 +0.3
comp=Z,2.3nm,0.8s,baz=351,slow=2.0,SNR=8.9
NVS Novosibirsk 131.17 16 *e*PKIKP PKPdf 12 53 07.5 -2.0
NVS *e* 12 55 27.7
NVS pmax pmax
comp=Z,17nm,1.9s
NVS pmax pmax
comp=N,6.0nm,1.7s
NVS pmax pmax
comp=E,7.0nm,1.5s
ASAJ Asahikawa 131.77 323 PKP PKPdf 12 53 11.1 +0.1
comp=E,4.6nm,1.0s,baz=27,slow=4.5,SNR=3.5
ZAA0 Zalesovo Array 132.39 16 *e*PKPdf PKPdf 12 53 11.7 -0.1
ZALV Zalesovo Beam 132.39 16 PKP PKPdf 12 53 11.7 -0.2
comp=E,6.2nm,0.7s,baz=252,slow=2.4,SNR=16
HABR Khabarovsk 132.89 332 P Pdif 12 50 08.7 -0.3
HABR *i* 12 53 14.4
HABR *e* 12 53 24.9
HABR *e* 13 00 21.3
HABR *e*PS PS 13 05 54.6 -1.4
HABR *e*SS SS 13 13 16.1 -0.2
HABR *e*SSS 13 18 10.8
HABR pmax pmax
comp=N,32nm,3.1s
HABR pmax pmax
comp=E,33nm,2.7s
HABR pmax pmax
comp=Z,33nm,2.3s
HABR pmax pmax
comp=Z,27nm,1.9s
KLR Kul'dur 133.75 335 *e*PKIKP PKPdf 12 53 10.2 -4.3
KLR *e* 12 55 39.3
ASAR Alice Springs 136.67 221 PKhKP 12 53 13.5
comp=Z,0.4nm,0.6s,baz=120,slow=3.1,SNR=5.4
ASAR PKP PKPdf 12 53 20.6 -0.2
comp=Z,9.2nm,0.7s,baz=128,slow=2.1,SNR=45
ASAR Alice Springs 136.67 221 PKP PKPdf 12 53 20.6 -0.2
EKS2 Erkin-Say 136.96 33 *e*PKIKP PKPdf 12 53 21.8 +1.1
UCH Uchtor 137.65 33 *e*PKIKP PKPdf 12 53 23.7 +1.7
TKM2 Tokmak 2 137.75 32 *e*PKIKP PKPdf 12 53 23.4 +1.2
MKAR Makanchi Array 137.78 23 PKP PKPdf 12 53 21.8 -0.3
comp=Z,3.3nm,0.9s,baz=33,slow=4.6,SNR=11
MKAR Makanchi Array 137.78 23 PKP PKPdf 12 53 21.8 -0.3
MDJ Mudanjiang 138.27 333 PKP PKPdf 12 53 23.8 +0.7
MDJ LR LR
comp=N,280nm,20.8s,MS5.0
MDJ LR LR
comp=E,120nm,19.1s,MS5.0
MDJ LR LR
comp=Z,360nm,20.8s,MS5.1
ZAK Zakamensk 138.64 1 *e*PKIKP PKPdf 12 53 17.9 -5.7
ZAK *e* 12 56 09.4
ZAK pmax pmax
comp=Z,2.0nm,1.6s
MJAR Matsushiro Arr 138.81 317 PKhKP 12 53 17.6
comp=Z,1.4nm,0.8s,baz=88,slow=2.6,SNR=5.2
MJAR PKP PKPdf 12 53 24.9 +0.5
comp=Z,3.2nm,0.8s,baz=92,slow=2.1,SNR=9.0
MJAR Matsushiro Arr 138.81 317 PKP PKPdf 12 53 24.9 +0.5
WRAB Tennant Creek 138.91 226 *e*PKIKP PKPdf 12 53 24.2 -0.8
WRA Warramunga Arr 138.91 226 PKP PKPdf 12 53 24.4 -0.6
comp=Z,11nm,0.6s,baz=126,slow=1.9,SNR=48
WRA Warramunga Arr 138.91 226 PKP PKPdf 12 53 24.4 -0.6
KSH Kashi 140.30 35 *e*PKP PKPdf 12 53 27.0 +0.1

KSH PKS 12 57 01.8
KSH SKS SKSdf 13 00 32.3 -1.9
KSH AMB AMB
comp=Z,160nm,4.7s
KSH LR LR
comp=N,46nm,4.6s
KSH LR LR
comp=E,96nm,5.1s
KSH LR LR
comp=Z,130nm,4.9s
CN2 Changchun 140.70 336 *e*PKP PKPdf 12 53 29.0 +1.5
CN2 PP PP 12 56 32.8 +6.2
CN2 AMB AMB
comp=Z,200nm,8.0s
CN2 LR LR
comp=N,200nm,24.0s,MS4.9
CN2 LR LR
comp=E,200nm,24.0s,MS4.9
CN2 LR LR
comp=Z,300nm,21.0s,MS5.0
ULN Ulaanbaatar 141.10 357 *e*PKIKP PKPdf 12 53 27.2 -0.9
SONM Songino Array 141.16 358 PKhKP 12 53 22.7
comp=Z,1.1nm,0.6s,baz=324,slow=2.4,SNR=9.5
SONM PP PP 12 56 28.0 -1.0
comp=Z,1.3nm,0.9s,baz=343,slow=3.1,SNR=3.7
WMQ Urumqi 142.28 20 *e*PKP PKPdf 12 53 31.0 +0.6
KSRS Korea Array 144.51 327 PKP PKPdf 12 53 32.6 -1.8
comp=Z,12nm,0.8s,baz=52,slow=3.2,SNR=35
KAKA Kakadu 144.85 233 *e*P PKPdf 12 53 34.0 -1.7
comp=Z,22nm,0.9s
KAKA Kakadu 144.85 233 *e*PKPdf PKPdf 12 53 34.0 -1.8
FITZ Fitzroy Crossi 145.96 218 *e*P PKPdf 12 53 37.4 -0.1
comp=Z,33nm,1.5s
FITZ Fitzroy Crossi 145.96 218 PKPbc PKPbc 12 53 37.7 -0.6
baz=132,slow=4.8
FITZ Fitzroy Crossi 145.96 218 *e*PKPdf PKPdf 12 53 37.8 +0.3
MBWA Marble Bar 146.56 207 *e*PKPbc PKPbc 12 53 39.5 -0.5
BJI Beijing 147.27 343 PKPbc PKPbc 12 53 39.5 -1.9
BJI pPKP pPKPdf 12 53 50.5 -1.5
BJI sPKP 12 53 55.5
BJI AMB AMB
comp=Z,110nm,6.1s
BJI LR LR
comp=N,340nm,27.2s,MS5.1
BJI LR LR
comp=E,270nm,22.3s,MS5.1
BJI LR LR
comp=Z,470nm,25.6s,MS5.2
HHC Hu-ho-hao-te 147.56 350 *e*PKPbc PKPbc 12 53 40.5 -1.7
HHC pPKP pPKPdf 12 53 51.3 -1.2
HHC PP PP 12 57 13.5 +6.2
HHC PKS 12 57 14.5
HHC SKKS SKKSac 13 03 57.3 +0.3
HHC SS SS 13 16 08.8 +1.6
HHC AMB AMB
comp=Z,110nm,6.6s
HHC LR LR
comp=N,160nm,20.4s,MS5.0
HHC LR LR
comp=E,170nm,19.2s,MS5.0
HHC LR LR
comp=Z,220nm,28.8s
BTO Baotou 148.04 352 *e*PKPbc PKPbc 12 53 42.0 -1.5
GTA Gaotai 149.34 7 PKPbc PKPdf 12 53 43.8 +1.3
GTA pPKP pPKPdf 12 53 54.8 -0.7
GTA PKS 12 57 17.3
GTA PP PP 12 57 24.3 +6.6
GTA SKKS SKKSac 13 04 08.8 +1.9
GTA SS SS 13 16 32.3 +5.2
GTA AMB AMB
comp=Z,110nm,7.5s
GTA LR LR
comp=N,270nm,21.6s,MS5.1
GTA LR LR
comp=E,230nm,21.6s,MS5.1
GTA LR LR
comp=Z,350nm,19.5s,MS5.2
LZH Lanzhou 152.93 1 *e*PKPbc PKPdf 12 53 50.0 +1.9
LZH pPKP pPKPdf 12 54 01.3 +0.2
LZH sPKP 12 54 09.0
LZH PKPab PKPab 12 54 14.0 +7.5
LZH PP PP 12 57 44.0 +5.8
LZH SKKS SKKSac 13 04 29.3 +2.6
LZH SS SS 13 17 11.0 +4.2
LZH AMB AMB
comp=Z,100nm,4.6s
LZH LR LR
comp=N,820nm,17.1s
LZH LR LR
comp=Z,920nm,19.4s,MS5.6
KKN Kakani 153.93 41 *e*P PKPab 12 54 09.5 -1.5
comp=Z,17nm,0.7s
PKI Pulchoki 154.16 42 *e*P PKPab 12 54 10.7 -1.3
comp=Z,2.8nm,0.3s
GUN Gumba 154.24 40 *e*P PKPab 12 54 12.3 0.0
comp=Z,54nm,0.9s
JIRN Jiri 154.61 40 *e*P PKPab 12 54 14.6 +0.7
XAN Xi'an 154.64 351 PKP PKPdf 12 53 50.5 -0.1
CD2 Chengdu 158.09 2 *e*PKP PKPdf 12 53 54.8 -0.4
CD2 PKPab PKPab 12 54 31.0 +2.4
CD2 PP PP 12 58 12.5 +5.5
CD2 SKS SKSdf 13 00 55.0 -3.1
CD2 SKKS SKKSac 13 04 56.0 +1.6
CD2 SS SS 13 18 08.5 +6.0
CD2 AMB AMB
comp=Z,150nm,10.2s
CD2 LR LR
comp=N,160nm,21.0s
CD2 LR LR
comp=Z,130nm,18.8s,MS4.8
GYA Guiyang 162.41 353 PKP PKPdf 12 53 57.8 -2.3
GYA pPKP pPKPdf 12 54 12.0 -1.1
GYA sPKP 12 54 16.3
GYA PKPab PKPab 12 54 49.0 +1.5
GYA PKS 12 57 30.0
GYA PP PP 12 58 32.3 +2.0
GYA SKKS SKKSac 13 05 14.3 -2.6
GYA SS SS 13 18 48.0 0.0
GYA AMB AMB
comp=Z,120nm,8.0s
GYA LR LR
comp=N,180nm,25.3s
GYA LR LR
comp=E,130nm,26.4s
GYA LR LR
comp=Z,140nm,24.8s
KMI Kunming 163.79 5 PKP PKPdf 12 54 00.5 -1.0
KMI pPKP pPKPdf 12 54 13.0 -1.5
KMI sPKP 12 54 18.3
KMI PP PP 12 58 39.8 +2.2
KMI SKKS SKKSac 13 05 22.0 -2.0
KMI SS SS 13 19 02.0 -0.2
KMI AMB AMB
comp=Z,170nm,5.6s
KMI LR LR
comp=N,210nm,20.8s
KMI LR LR
comp=E,170nm,19.5s
KMI LR LR
comp=Z,320nm,22.1s
QIZ Qiongzhong 168.65 333 PKP PKPdf 12 54 04.0 -1.5
QIZ PP PP 12 58 59.8 -3.4
QIZ SS SS 13 19 51.0 -1.5
QIZ LR LR
comp=N,360nm,21.2s
QIZ LR LR
comp=Z,590nm,15.0s
CMAR Chiang Mai Arr 169.11 29 PKP PKPdf 12 54 05.7 -0.1
comp=Z,2.1nm,0.8s,baz=270,slow=1.7,SNR=13
CMAR PKPab PKPab 12 55 16.5 -0.8
comp=Z,3.6nm,1.1s,baz=328,slow=5.3,SNR=7.1

IGQ 26 12:43:43.9,1°.04S×78°.31W,h8km±2km,Mb4.2,Ms4.0, 14C-26D,Error ellipse: s-maj=1.4km s-min=0.3km az=2.4,Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PISA	**Pisayambo**	**0.08**	**253**	⇓P	Pg	12 43 47.3	+1.3
BMOR	**Cotopaxi Volca**	**0.34**	**334**	⇓P	Pg	12 43 51.5	+0.9
TAMB	**Tambo**	**0.34**	**351**	⇑P	Pg	12 43 51.4	+0.7
MOV1	**Cotopaxi Vol s**	**0.34**	**338**	⇓P	Pg	12 43 51.5	+0.8
BTAM	**Cotopaxi Volca**	**0.37**	**347**	⇑P	Pg	12 43 52.0	+0.9
COV1	**Cotopaxi Volc**	**0.37**	**355**	⇑P	Pg	12 43 52.5	+1.3
BREF	**Cotopaxi Volca**	**0.39**	**341**	⇓P	Pg	12 43 52.6	+1.1
BVC2	**Cotopaxi Volca**	**0.39**	**345**	⇑P	Pg	12 43 52.4	+0.9
RUN5	**Runtun**	**0.39**	**197**	⇓P	Pg	12 43 52.1	+0.5
BRUN	**Tungurahua Vol**	**0.40**	**195**	⇓S	Sg	12 43 57.3	+0.4
BRUN	**Tungurahua Vol**	**0.40**	**195**	⇓P	Pg	12 43 52.1	+0.4
BNAS	**Cotopaxi Volca**	**0.40**	**335**	⇓P	Pg	12 43 52.6	+0.9
VC1	**Cotopaxi 1**	**0.40**	**347**	⇑P	Pg	12 43 52.6	+0.8
CAMI	**Rancho Maria**	**0.41**	**332**	⇓P	Pg	12 43 52.8	+0.9
JUI6	**Juive**	**0.42**	**202**	⇓S	Sg	12 43 57.4	-0.2
JUI6	**Juive**	**0.42**	**202**	⇓P	Pg	12 43 52.3	+0.2
ULBA	**Ulba**	**0.42**	**193**	P	Pg	12 43 52.4	+0.2
RETU	**Refugio**	**0.43**	**198**	⇓P	Pg	12 43 52.9	+0.5
RETU	**Refugio**	**0.43**	**198**	⇓S	Sg	12 43 59.1	+1.0
BIL2	**Estacion Bilba**	**0.46**	**205**	⇑S	Sg	12 43 59.6	+0.7
BIL2	**Estacion Bilba**	**0.46**	**205**	⇑P	Pg	12 43 53.4	+0.6
ARRY	**Arrayan**	**0.49**	**197**	⇓P	Pg	12 43 53.5	+0.1
PITA	**Cotopaxi Volc**	**0.49**	**346**	⇑P	Pg	12 43 54.2	+0.8
BMAS	**Trigal station**	**0.49**	**200**	⇓P	Pg	12 43 53.6	+0.1
BMAS	**Trigal station**	**0.49**	**200**	⇓S	Sg	12 43 59.7	-0.3
IGUA	**Igualata**	**0.56**	**216**	⇓P	Pg	12 43 55.3	+0.6
ANTI	**Antisana**	**0.60**	**14**	⇑P	Pg	12 43 55.7	+0.1
JUA2	**San Juan 2**	**0.87**	**340**	⇑S	Sg	12 44 13.2	+1.2
JUA2	**San Juan 2**	**0.87**	**340**	⇑P	Pg	12 44 01.3	+0.7
GGP	**Refugio Guagua**	**0.90**	**342**	⇓P	Pg	12 44 01.9	+0.6
TERV	**Terraza Guagua**	**0.90**	**341**	P	Pg	12 44 02.0	+0.7
PINO	**Pino**	**0.92**	**341**	⇑P	Pg	12 44 02.2	+0.6
YANA	**Yana**	**0.95**	**344**	⇓S	Sg	12 44 15.8	+1.2
YANA	**Yana**	**0.95**	**344**	⇓P	Pg	12 44 02.8	+0.6
CAYR	**Refugio Cayamb**	**1.09**	**16**	⇑P	Pg	12 44 05.3	+0.5
CHAR	**Charly**	**1.14**	**34**	⇓S	Sg	12 44 21.6	+1.0
CHAR	**Charly**	**1.14**	**34**	⇓P	Pg	12 44 06.5	+0.7
CAYA	**Cayambe**	**1.15**	**16**	⇓P	Pg	12 44 06.2	+0.3
CAYA	**Cayambe**	**1.15**	**16**	⇓S	Sg	12 44 21.4	+0.6
LAV3	**Lava3-Reventad**	**1.15**	**36**	⇑P	Pb	12 44 06.2	+0.1
CONE	**Cono NE Rev Vo**	**1.17**	**35**	⇓S	Sg	12 44 21.7	+0.1
CONE	**Cono NE Rev Vo**	**1.17**	**35**	⇓P	Pb	12 44 06.8	+0.4
MACE	**Macas**	**1.22**	**175**	S	Sb	12 44 24.8	+1.8
MACE	**Macas**	**1.22**	**175**	P	Pb	12 44 07.7	+0.5
OTAV	**Otavalo**	**1.27**	**354**	P	Pn	12 44 07.9	-0.1
COTA	**Cotacachi**	**1.36**	**359**	P	Pn	12 44 10.3	+1.1
MAG1	**Magdalena**	**1.75**	**303**	P	Pn	12 44 16.3	+1.8
PECV	**Mancha de Ca P**	**1.76**	**278**	P	Pn	12 44 22.0	+7.4
PECV	**Mancha de Ca P**	**1.76**	**278**	S	Sn	12 44 47.7	+11

*ISCJB **26** 12:55:32.9±0.5,22°.68S±0°.08×38°.17E±0°.07,h10km, mb4.2/14,Error ellipse: s-maj=13.7km s-min=6.2km az=143.8*
*IDC **26** 12:55:33.9±0.7,22°.58S×38°.30E,h0km,mb4.2/12, mb1 4.3/15,mb1mx4.1/28,mbtmp4.3/15,ML4.3/2,Error ellipse: s-maj=21.8km s-min=18.1km az=147.0*
*NEIC **26** 12:55:34.5±0.5,22°.67S×38°.28E,h10km,mb4.4/2,Error ellipse: s-maj=15.0km s-min=8.5km az=157.0*
*PRE **26** 12:55:44.7±1.9,23°.22S×37°.47E,h10km,ML5.1*
ISC 26 12:55:34.5±0.5,22°.70S±0°.08×38°.26E±0°.06,h10km,n52, σ1$02/52,mb4.2/14,Mozambique Channel

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOPA	**Mopani**	**6.37**	**261**	*e*P	**Pn**	**12 57 08.4**	**-0.1**
MOPA				*e*S	**Sn**	**12 58 09.6**	**-12**
MOPA				AML	AML	12 58 21.3	
	comp=Z,2μm,0.4s						
POGA	**Pongola**	**7.62**	**231**	*e*P	**Pn**	**12 57 23.6**	**-1.9**
POGA				*e*S	Sx	12 58 35.0	
POGA				AML	AML	12 58 53.1	
	comp=Z,96nm,0.5s						
MSNA	**Messina**	**7.62**	**271**	*e*P	**Pn**	**12 57 27.3**	**+1.6**
MSNA				*e*S	**Sn**	**12 58 41.6**	**-11**
MSNA				AML	AML	12 59 08.6	
	comp=Z,105nm,0.4s						
ABPO	**Ambohimpanom**	**9.15**	**68**	*e*Pn	**Pn**	**12 57 44.6**	**-2.0**
	comp=Z,22nm,0.4s						
ABPO				*e*Sn	**Sn**	**12 59 22.9**	**-6.8**
OPO	**Ambohidratompo**	**9.31**	**65**	Pn	**Pn**	**12 57 47.4**	**-1.4**
	comp=Z,3.7nm,0.3s,baz=240,slow=14,SNR=25						
OPO				Sn	**Sn**	**12 59 23.8**	**-10**
	comp=Z,14nm,0.3s,baz=150,slow=21,SNR=9.1						
SLR	**Silverton**	**9.60**	**250**	*e*P	**Pn**	**12 57 52.5**	**-0.3**
SLR				*e*S	Sx	12 59 26.2	
SLR				AML	AML	12 59 36.7	
	comp=Z,103nm,0.4s						
ERPM	**east rand prop**	**9.82**	**246**	*e*P	**Pn**	**12 57 55.5**	**-0.3**
ERPM				*e*S	Sx	12 59 29.0	
ERPM				AML	AML	12 59 43.0	
	comp=Z,43nm,0.4s						
PRYS	**Parys**	**10.76**	**245**	*e*P	**Pn**	**12 58 08.3**	**-0.4**
PRYS				*e*S	Sx	12 59 52.7	
PRYS				AML	AML	13 00 46.8	
	comp=Z,33nm,0.6s						
KSR	**Koster**	**10.83**	**251**	*e*P	**Pn**	**12 58 09.7**	**0.0**
KSR				*e*S	Sx	12 59 55.9	
KSR				AML	AML	13 00 06.4	
	comp=Z,75nm,0.5s						
SEK	**Senekal**	**11.12**	**238**	*e*P	**Pn**	**12 58 12.6**	**-1.0**
SEK				*e*S	Sx	13 00 01.6	
SEK				AML	AML	13 01 28.7	
	comp=Z,29nm,0.8s						
LBTB	**Lobatse**	**11.82**	**256**	Pn	**Pn**	**12 58 22.8**	**-0.4**
	comp=Z,23nm,0.3s,baz=84,slow=13,SNR=119						
LBTB				Sn	**Sn**	**13 00 26.7**	**-8.4**
	comp=Z,3.4nm,0.3s,baz=180,slow=20,SNR=4.6						
LBTB	**Lobatse**	**11.82**	**256**	*e*P	**Pn**	**12 58 23.8**	**+0.7**
LBTB				*e*S	Sx	13 00 20.0	
LBTB				AML	AML	13 00 46.5	
	comp=Z,34nm,0.6s						
LSZ	**Lusaka**	**12.04**	**306**	*e*Pn	**Pn**	**12 58 25.5**	**-0.9**
	comp=Z,22nm,0.3s						
LSZ				*e*Sn	**Sn**	**13 00 30.5**	**-10**
BOSA	**Boshof**	**13.12**	**241**	Pn	**Pn**	**12 58 39.0**	**-2.0**
	comp=Z,2.2nm,0.3s,baz=60,slow=14,SNR=17						
BOSA				Sn	Sx	13 00 54.3	
	comp=Z,1.9nm,0.3s,baz=90,slow=15,SNR=2.8						
BOSA	**Boshof**	**13.12**	**241**	Pn	**Pn**	**12 58 39.0**	**-2.0**
BOSA				Sn	Sx	13 00 54.3	
BOSA	**Boshof**	**13.12**	**241**	*e*P	**Pn**	**12 58 40.9**	**-0.1**
BOSA				*e*S	Sx	13 00 48.5	
BOSA				AML	AML	13 01 06.3	
	comp=Z,11nm,0.5s						
PKA	**Prieska**	**15.55**	**240**	*e*P	**Pn**	**12 59 13.9**	**0.0**
PKA				*e*S	Sx	13 01 47.7	
PKA				AML	AML	13 02 00.6	
	comp=Z,12nm,0.3s						
UPI	**Upington**	**16.35**	**246**	*e*P	**Pn**	**12 59 24.6**	**+0.4**
UPI				*e*S	Sx	13 02 07.4	
UPI				AML	AML	13 02 18.7	
	comp=Z,14nm,0.5s						
SUR	**Sutherland**	**18.21**	**234**	P	**Pn**	**12 59 48.2**	**+0.7**
	comp=Z,1.1nm,0.3s,baz=80,slow=12,SNR=13						
SUR				S	**Sn**	**13 03 00.6**	**-10**
	comp=Z,0.6nm,0.3s,baz=120,slow=20,SNR=3.8						
SUR	**Sutherland**	**18.21**	**234**	*e*P	**Pn**	**12 59 50.8**	**+3.3**
TSUM	**Tsumeb**	**19.62**	**276**	P	**Pn**	**13 00 05.0**	**+0.4**
	comp=Z,1.3nm,0.3s,baz=105,slow=11,SNR=25						
TSUM				S	Sx	13 03 30.4	
	comp=Z,0.3nm,0.3s,baz=53,slow=20,SNR=3.5						
TSUM	**Tsumeb**	**19.62**	**276**	P	**Pn**	**13 00 05.0**	**+0.4**
TSUM				S	Sx	13 03 30.4	
KOMG	**Komaggas**	**19.92**	**245**	*e*P	**Pn**	**13 00 07.6**	**-0.4**
KMBO	**Kilima Mbogo**	**21.46**	**357**	P	**P**	**13 00 21.7**	**-1.5**
	comp=Z,3.5nm,1.0s,mb3.6,baz=0.0,slow=20,SNR=2.8						
KMBO				S	**S**	**13 04 11.0**	**-10**
	comp=Z,2.0nm,0.8s,baz=0.0,slow=20,SNR=2.3						
KMBO	**Kilima Mbogo**	**21.46**	**357**	P	**P**	**13 00 21.7**	**-1.5**
KMBO				S	**S**	**13 04 11.0**	**-10**
TORD	**Torodi Ar. Bea**	**50.52**	**311**	P	**P**	**13 04 33.2**	**0.0**
	comp=Z,5.4nm,0.7s,mb4.6,baz=130,slow=6.9,SNR=37						
DBIC	**Dimbokro**	**51.29**	**300**	P	**P**	**13 04 38.9**	**-0.2**
	comp=Z,2.0nm,0.8s,mb4.1,baz=104,slow=12,SNR=3.7						
DBIC	**Dimbokro**	**51.29**	**300**	P	**P**	**13 04 38.9**	**-0.2**
TAM	**Tamanrasset**	**55.31**	**323**	*e*P	**P**	**13 05 10.1**	**+1.6**
	comp=Z,2.6nm,0.8s,mb4.3						
QSPA	**South Pole Qui**	**67.46**	**180**	P	**P**	**13 06 31.5**	**+1.5**
	comp=Z,1.3nm,1.1s,mb3.9,baz=283,slow=4.1,SNR=2.5						
AKASG	**Malin Array Be**	**73.51**	**354**	P	**P**	**13 07 06.8**	**-0.3**
	comp=Z,1.7nm,0.4s,mb4.3,baz=175,slow=5.7,SNR=5.2						
AKASG	**Malin Array Be**	**73.51**	**354**	P	**P**	**13 07 06.8**	**-0.3**
ESDC	**Sonseca Array**	**73.51**	**327**	P	**P**	**13 07 09.6**	**+2.2**
	comp=Z,1.9nm,0.6s,mb4.2,baz=143,slow=6.0,SNR=8.2						
TKM2	**Tokmak 2**	**73.80**	**28**	*e*P	**P**	**13 07 10.1**	**+1.1**
	comp=Z,4.2nm,1.1s,mb4.3						
AKTK	**Aktyubinsk**	**74.88**	**13**	P	**P**	**13 07 14.6**	**-0.5**
AKTO	**Aktyubinsk**	**74.88**	**13**	P	**P**	**13 07 14.6**	**-0.5**
	comp=Z,2.6nm,0.9s,mb4.2,baz=117,slow=3.0,SNR=5.8						
MKAR	**Makanchi Array**	**79.78**	**29**	P	**P**	**13 07 43.0**	**+0.4**
	comp=Z,1.4nm,0.9s,mb3.9,baz=116,slow=2.8,SNR=7.1						
BVAR	**Borovoye Array**	**80.41**	**19**	P	**P**	**13 07 46.5**	**+0.6**
	comp=Z,4.3nm,0.9s,mb4.4,baz=205,slow=6.4,SNR=19						
KURK	**Kurchatov**	**81.30**	**25**	P	**P**	**13 07 50.9**	**+0.2**
	comp=Z,2.8nm,0.8s,mb4.2,baz=222,slow=6.2,SNR=11						
KURK	**Kurchatov**	**81.30**	**25**	P	**P**	**13 07 50.9**	**+0.2**
ASAR	**Alice Springs**	**86.00**	**114**	P	**P**	**13 08 17.4**	**+1.8**
	comp=Z,0.5nm,0.8s,mb3.8,baz=243,slow=4.2,SNR=4.2						
ZAA0	**Zalesovo Array**	**86.22**	**25**	*e*P	**P**	**13 08 15.3**	**-0.6**
ZALV	**Zalesovo Beam**	**86.22**	**25**	P	**P**	**13 08 16.2**	**+0.4**
	comp=Z,2.9nm,0.6s,mb4.7,baz=237,slow=4.7,SNR=13						
TXAR	**Lajitas Array**	**145.26**	**289**	PKPbc	PKPbc	13 15 14.7	+2.0
	comp=Z,5.1nm,0.8s,baz=114,slow=5.3,SNR=39						
PDAR	**Pinedale Array**	**146.63**	**315**	PKPbc	PKPbc	13 15 17.1	+0.6
	comp=Z,2.6nm,0.9s,baz=78,slow=5.8,SNR=18						
SWMT	**Swartz Lake**	**146.73**	**325**	*e*PKPdf	PKPdf	13 15 13.3	-1.6
IMW	**Indian Meadow**	**146.98**	**317**	*e*PKPbc	PKPbc	13 15 16.7	-0.7
DLMT	**Dillon**	**147.22**	**321**	*e*PKPdf	PKPdf	13 15 14.8	-1.0
BNM	**Barren Site**	**147.23**	**298**	*e*PKPbc	PKPbc	13 15 18.9	+0.5
RRI2	**Red Ridge**	**147.49**	**317**	*e*PKPdf	PKPdf	13 15 16.1	-0.3
BMO	**Blue Mountains**	**150.19**	**324**	*e*PKPbc	PKPbc	13 15 26.4	+0.7
NVAR	**Mina Array Bea**	**154.55**	**313**	PKPab	PKPab	13 15 52.7	+2.4
	comp=Z,0.7nm,0.8s,baz=90,slow=3.6,SNR=3.5						

IDC 26 12:58:39.9±4.2,19°.09S×174°.88W,h72km±41km,mb3.7/7, mb1 3.9/8,mb1mx3.7/20,mbtmp3.8/8,ML1.6/1,Error ellipse: s-maj=37.7km s-min=19.2km az=149.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.95**	**30**	P	Pn	13 00 05.7	+0.2
	1.0nm,0.3s,baz=66,slow=20,SNR=6.1						
AFI				S	Sn	13 01 13.1	+0.8
	27nm,0.3s,baz=78,slow=21,SNR=10						
STKA	**Stephens Creek**	**41.04**	**243**	P	P	13 06 15.3	-1.1
	1.5nm,0.5s,baz=95,slow=11,SNR=4.0						
ASAR	**Alice Springs**	**47.71**	**255**	P	P	13 07 09.6	-0.2
	1.3nm,0.8s,baz=86,slow=8.7,SNR=32						
WRA	**Warramunga Arr**	**47.72**	**260**	P	P	13 07 10.2	+0.4
	0.8nm,0.9s,baz=80,slow=12,SNR=4.2						
FITZ	**Fitzroy Crossi**	**56.14**	**261**	P	P	13 08 12.7	+0.2
	1.8nm,0.9s,baz=80,slow=12,SNR=4.2						
QSPA	**South Pole Qui**	**70.97**	**180**	P	P	13 09 49.5	+0.2
	2.0nm,1.0s,baz=28,slow=1.7,SNR=4.1						
NVAR	**Mina Array Bea**	**78.00**	**42**	P	P	13 10 30.9	+0.3
	0.2nm,0.5s,baz=213,slow=6.5,SNR=2.3						
MAW	**Mawson**	**83.86**	**199**	P	P	13 11 02.4	+1.0
	2.0nm,0.2s,baz=101,slow=13,SNR=4.5						
AKASG	**Malin Array Be**	**143.12**	**334**	PKP	PKPdf	13 18 03.3	-2.2
	1.0nm,0.4s,baz=36,slow=4.2,SNR=4.5						

*CSEM **26** 13:03:32.4,36°.98N×29°.16E,h8km,MD3.1,After DDA*
*DDA **26** 13:03:32.4,36°.98N×29°.16E,h8km±4km,Md3.1*
*ISCJB **26** 13:03:33.1±0.7,36°.99N±0°.03×29°.21E±0°.04,h10km,Error ellipse: s-maj=5.2km s-min=4.3km az=44.4*
ISC 26 13:03:33.1±0.7,36°.99N±0°.03×29°.19E±0°.06,h6km±9km, n22,σ0$91/38,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.39**	**50**	*i* P	**Pg**	**13 03 40.1**	**-0.6**
GOLH				*i* S	**Sg**	**13 03 47.6**	**+1.8**
GOLH	**Golhisar**	**0.39**	**50**	*i* P	**Pg**	**13 03 40.1**	**-0.6**
GOLH				*i* S	**Sg**	**13 03 47.6**	**+1.8**
TURN	**Turunc**	**0.48**	**257**	*i* P	**Pg**	**13 03 46.4**	**+3.9**
TURN				*i* S	**Sg**	**13 03 58.7**	**+10**
TURN	**Turunc**	**0.48**	**257**	*i* P	**Pg**	**13 03 46.4**	**+4.0**
TURN				*i* S	**Sg**	**13 03 58.7**	**+10**
DNZL	**Cakiroluk**	**0.71**	**351**	*i* P	**Pg**	**13 03 46.0**	**-0.8**
DNZL				*i* S	**Sg**	**13 03 55.9**	**-0.2**
DNZL	**Cakiroluk**	**0.71**	**351**	*i* P	**Pg**	**13 03 46.0**	**-0.8**
DNZL				*i* S	**Sg**	**13 03 55.9**	**-0.2**
AKAS	**Kas**	**0.82**	**156**	*i* P	**Pg**	**13 03 48.5**	**-0.4**
AKAS				*i* S	**Sg**	**13 04 09.1**	**+10**
AKAS	**Kas**	**0.82**	**156**	*i* P	**Pg**	**13 03 48.5**	**-0.4**
AKAS				*i* S	**Sg**	**13 04 09.1**	**+9.5**
KSL	**Kastellorizon**	**0.89**	**159**	*e*P	**Pg**	**13 03 50.8**	**+0.5**
KORT	**Korkueli**	**0.93**	**89**	*i* P	**Pg**	**13 03 50.3**	**-0.7**
KORT				*i* S	**Sg**	**13 04 07.6**	**+4.5**
KORT	**Korkueli**	**0.93**	**89**	*i* P	**Pg**	**13 03 50.3**	**-0.7**
KORT				*i* S	**Sg**	**13 04 07.6**	**+4.5**
ARG	**Arkhangelos**	**1.15**	**228**	*e*P	**Pb**	**13 03 53.4**	**-1.9**
AYDN	**Tasoluk**	**1.24**	**303**	*i* P	**Pn**	**13 03 56.1**	**-0.9**
AYDN				*i* S	**Sb**	**13 04 13.6**	**+0.5**
AYDN	**Tasoluk**	**1.24**	**303**	*i* P	**Pn**	**13 03 56.1**	**-0.9**
AYDN				*i* S	**Sb**	**13 04 13.6**	**+0.4**
BDRM	**Kayabasi**	**1.40**	**274**	*i* P	**Pn**	**13 03 58.2**	**-0.9**
BDRM				*i* S	**Sb**	**13 04 18.4**	**+0.8**
BDRM	**Kayabasi**	**1.40**	**274**	*i* P	**Pn**	**13 03 58.2**	**-0.9**
BDRM				*i* S	**Sb**	**13 04 18.4**	**+0.8**
KHAL	**Karahalli**	**1.40**	**10**	*i* P	**Pn**	**13 03 59.3**	**+0.1**
KHAL				*i* S	**Sb**	**13 04 17.9**	**+0.1**
KHAL	**Karahalli**	**1.40**	**10**	*i* P	**Pn**	**13 03 59.3**	**+0.1**
KHAL				*i* S	**Sb**	**13 04 18.0**	**+0.2**
SMG	**Samos**	**2.01**	**292**	*e*P	**Pn**	**13 04 06.6**	**-0.9**
KARP	**Karpathos**	**2.18**	**229**	*e*P	**Pn**	**13 04 10.4**	**+0.6**
NPS	**Neapolis**	**3.37**	**240**	*e*P	**Pn**	**13 04 27.2**	**+1.0**
LAST	**Lasithi**	**3.51**	**240**	*e*P	**Pn**	**13 04 29.2**	**+1.0**

*ATH **26** 13:14:26.6,36°.09N×21°.79E,h7km±1km,MD3.6/5*
*THE **26** 13:14:26.9,36°.11N×21°.74E,h0km±2km,Error ellipse: s-maj=3.7km s-min=1.1km az=241.0*
*NEIC **26** 13:14:26.6,36°.09N×21°.79E,h7km,MD3.6(ATH),After ATH.*
*CSEM **26** 13:14:27.7±0.7,36°.13N×21°.83E,h0km±1km,MD3.6,Error ellipse: s-maj=14.8km s-min=6.6km az=57.0*
*ISCJB **26** 13:14:27.6±0.9,36°.12N±0°.04×21°.90E±0°.05,h10km,Error ellipse: s-maj=7.5km s-min=4.2km az=140.1*
ISC 26 13:14:26.3±1.5,36°.07N±0°.05×21°.81E±0°.07,h2km±8km, n48,σ0$91/69,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.82**	**356**	P	**Pg**	**13 14 41.7**	**-0.4**
PYL				S	**Sg**	**13 14 54.2**	**+1.5**
PYL	**PYLOS**	**0.82**	**356**	*e*PG	**Pg**	**13 14 41.7**	**-0.4**
PYL				*e*SB	**Sg**	**13 14 53.0**	**+0.3**
PYL	**PYLOS**	**0.82**	**356**	P	**Pg**	**13 14 41.7**	**-0.4**
PYL				*e*Sb	**Sg**	**13 14 53.0**	**+0.3**
PYL				S	**Sg**	**13 14 54.2**	**+1.5**
KYTH	**Kithira**	**1.01**	**78**	*e*Pb	**Pg**	**13 14 46.1**	**+0.4**
KYTH	**Kithira**	**1.01**	**78**	*e*PB	**Pg**	**13 14 46.1**	**+0.4**
KYTH	**Kithira**	**

GUR				*e*SN		**Sg**	**13 15 26.6**	**-1.0**
GUR	**Goura**	**1.91**	**13**	*e*Pg		**Pb**	**13 15 01.7**	**-0.1**
GUR				*e*Sn		**Sg**	**13 15 26.6**	**-1.0**
RLS	**Riolos of Patr**	**2.00**	**352**	*e*Pg		**Pb**	**13 15 03.4**	**0.0**
RLS	**Riolos of Patr**	**2.00**	**352**	*e*PG		**Pb**	**13 15 03.4**	**0.0**
RLS	**Riolos of Patr**	**2.00**	**352**	*e*Pg		**Pb**	**13 15 03.4**	**0.0**
VAM	**Vamos**	**2.06**	**108**	*e*Pn		**Pb**	**13 15 03.7**	**-0.6**
VAM	**Vamos**	**2.06**	**108**	*e*PN		**Pb**	**13 15 03.7**	**-0.6**
VAM	**Vamos**	**2.06**	**108**	*e*Pn		**Pb**	**13 15 03.7**	**-0.6**
LTK	**Loutraki**	**2.15**	**25**	*e*PN		**Pb**	**13 15 05.7**	**-0.3**
LTK	**Loutraki**	**2.15**	**25**	*e*Pn		**Pb**	**13 15 05.7**	**-0.3**
VLS	**Valsamata**	**2.31**	**335**	*e*Pn		**Pn**	**13 15 06.5**	**+1.1**
VLS	**Valsamata**	**2.31**	**335**	*e*PN		**Pn**	**13 15 06.5**	**+1.1**
VLS	**Valsamata**	**2.31**	**335**	*e*Pn		**Pn**	**13 15 06.5**	**+1.1**
VLS				S		**Sn**	**13 15 34.5**	**0.0**
EFP	**Efpalio**	**2.35**	**2**	*e*PN		**Pb**	**13 15 08.6**	**-0.8**
EFP	**Efpalio**	**2.35**	**2**	*e*Pn		**Pb**	**13 15 08.6**	**-0.8**
VLY	**Voula,Athens**	**2.38**	**41**	*e*Pn		**Pb**	**13 15 08.6**	**-1.3**
VLY	**Voula,Athens**	**2.38**	**41**	*e*PN		**Pb**	**13 15 08.6**	**-1.3**
VLY	**Voula,Athens**	**2.38**	**41**	*e*Pn		**Pb**	**13 15 08.6**	**-1.3**
LKR	**Lokris**	**2.74**	**20**	*e*Pn		**Pb**	**13 15 13.7**	**-2.3**
LKR	**Lokris**	**2.74**	**20**	*e*PN		**Pb**	**13 15 13.7**	**-2.3**
LKR	**Lokris**	**2.74**	**20**	*e*Pn		**Pb**	**13 15 13.7**	**-2.3**
AGG	**Agios Georgios**	**2.97**	**8**	*e*Pb		**Pn**	**13 15 16.4**	**+1.9**
AGG	**Agios Georgios**	**2.97**	**8**	*e*PB		**Pn**	**13 15 16.4**	**+1.9**
AGG	**Agios Georgios**	**2.97**	**8**	*e*Pb		**Pn**	**13 15 16.4**	**+1.9**
THL	**Klokotos Trika**	**3.49**	**3**	*e*PN		**Pn**	**13 15 23.7**	**+2.1**
THL	**Klokotos Trika**	**3.49**	**3**	*e*Pn		**Pn**	**13 15 23.7**	**+2.1**

MEX 26 13:23:09.1±0.6, 16°.15N×98°.33W, h8km±4km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.31**	**38**	*i* P	Pg	13 23 14.7	-0.6
PNIG				*i* S	Sg	13 23 19.7	+0.3
UTMO	**Huajuapan**	**1.75**	**17**	*i* P	Pn	13 23 37.0	-2.6
UTMO				*i* S	Sn	13 23 57.6	-4.5
VHO	**Vista Hermosa**	**1.78**	**59**	*i* P	Pn	13 23 37.0	-3.2
VHO				*i* S	Sn	13 23 58.0	-5.0
CAIG	**El Cayaco**	**2.06**	**296**	*i* P	Pn	13 23 40.3	-3.7
CAIG				*i* S	Sn	13 24 04.6	-5.3
MEIG	**Mezcala**	**2.16**	**325**	*e*P	Pn	13 23 42.3	-3.0
MEIG				*i* S	Sn	13 24 07.4	-4.9
HUIG	**Huatulco**	**2.17**	**100**	*i* P	Pn	13 23 42.3	-3.2
HUIG				*i* S	Sn	13 24 08.5	-4.0
PPM	**Popocatepetl**	**2.92**	**354**	*e*P	Pn	13 23 54.1	-1.7
PPM				*i* S	Sn	13 24 27.2	-3.7
MZVM		**3.14**	**344**	*e*P	Pn	13 24 01.2	+2.3
MZVM				*i* S	Sn	13 24 39.5	+2.9
IIO	**Organos**	**3.44**	**354**	*e*P	Pn	13 24 01.4	-1.7
IIO				*i* S	Sn	13 24 42.6	-1.4

NNC 26 13:23:18.6±1.4, 51°.08N×79°.49E, h0km, mb3.5, mpv3.1, 8C-3D, Error ellipse: s-maj=12.1km s-min=6.0km az=121.0, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**0.66**	**237**	⇑P	Pg	13 23 31.4	+0.2
KURK	14nm,0.4s			⇑S	Sg	13 23 40.7	+1.0
	30nm,0.5s						
VOSK	**Vostochnaya**	**5.52**	**291**	⇑Pn	Pn	13 24 42.8	+0.9
VOSK	0.4nm,0.3s			⇓Sn	Sn	13 25 48.3	+2.3
	0.8nm,0.5s						
VOSK				⇑Lg		13 26 10.7	
	2.3nm,0.6s						
BRVK	**Borovoye**	**6.01**	**293**	⇓Pn	Pn	13 24 49.2	+0.5
BRVK	6.1nm,1.2s			⇑Sn	Sn	13 26 00.3	+2.2
	4.9nm,0.6s						
BRVK				⇓Lg		13 26 30.6	
	4.0nm,0.6s						
ZRNK	**Zerenda**	**6.74**	**290**	⇑Pn	Pn	13 24 58.2	-0.4
ZRNK	0.5nm,0.3s			⇑Sn	Sn	13 26 14.6	-1.4
	1.6nm,0.6s						
ZRNK				⇑Lg		13 26 51.8	
	1.5nm,0.6s						

ISCJB ***26*** *13:43:52.2±1.5, 13°.70S±0°.10×76°.3W±0°.1, h47km±15km, mb3.8/7, Error ellipse: s-maj=25.5km s-min=9.2km az=146.5*
NEIC ***26*** *13:43:53.0±0.8, 13°.68S×76°.35W, h35km, ML4.0(LIM), Error ellipse: s-maj=21.8km s-min=10.0km az=59.0*
NEIC Felt [III] at Pisco.
IDC ***26*** *13:43:53.0±0.7, 13°.70S×76°.19W, h34km±5km, mb3.7/7, mb1 3.9/10, mb1mx3.8/18, mbtmp3.7/10, ML3.7/3, MS3.1/3, Ms1 3.1/3, ms1mx2.9/20, Error ellipse: s-maj=31.7km s-min=14.2km az=62.0*
ISC 26 13:43:53.2±1.4, 13°.68S±0°.10×76°.3W±0°.1, h37km±14km, h35km±1.5km: pP-P, n19, σ0°.92/21, mb3.8/7, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**1.77**	**341**	Pn	**Pn**	**13 44 21.4**	**0.0**
NNA	53nm,0.3s,baz=180,slow=13,SNR=74			Sn	**Sn**	**13 44 41.4**	**-1.3**
	189nm,0.3s,baz=261,slow=18,SNR=11						
NNA				LR	LR	13 44 50.8	
	comp=Z,549nm,20.2s,baz=138,slow=32						
NNA	**Nana**	**1.77**	**341**	*e*Pn	**Pn**	**13 44 20.2**	**-1.2**
NNA				*e*Sn	**Sn**	**13 44 41.6**	**-1.1**
ATAH	**Atahualpa**	**6.83**	**342**	Pn	**Pn**	**13 45 33.9**	**+3.0**
	2.9nm,0.3s,baz=121,slow=1.4,SNR=21						
ATAH				Sn	**Sn**	**13 46 53.4**	**+5.9**
	2.7nm,0.3s,baz=332,slow=17,SNR=2.1						
LPAZ	**La Paz**	**8.27**	**109**	Pn	**Pn**	**13 45 55.1**	**+4.4**
	1.9nm,0.3s,baz=290,slow=9.8,SNR=40						
LPAZ				Sn	**Sn**	**13 47 34.0**	**+11**
	baz=180,slow=20,SNR=3.7						
LPAZ				LR	LR	13 48 40.1	
	comp=Z,41nm,19.5s,baz=294,slow=35						
LPAZ	**La Paz**	**8.27**	**109**	*e*Pn	**Pn**	**13 45 54.4**	**+3.7**
	13nm,0.8s						
OTAV	**Otavalo**	**13.99**	**351**	*e*P	**Pn**	**13 47 08.7**	**-0.4**
	0.9nm,0.5s						
SIV	**San Ignacio**	**14.86**	**101**	Pn	**Pn**	**13 47 20.5**	**-0.3**
	0.3nm,0.3s,baz=289,slow=12,SNR=5.2						
CFAA	**Coronel Fontan**	**19.30**	**159**	P	**Pn**	**13 48 16.1**	**-0.2**
	0.1nm,0.3s,baz=335,slow=12,SNR=9.3						
CFAA				LR	LR	13 54 35.3	
	comp=Z,22nm,19.5s,baz=338,slow=33						
CPUP	**Villa Florida**	**21.75**	**128**	P	**P**	**13 48 41.3**	**-0.4**
	1.6nm,0.7s,mb3.6,baz=286,slow=13,SNR=4.4						
PLCA	**Paso Flores**	**27.41**	**171**	P	**P**	**13 49 35.2**	**0.0**
	2.6nm,0.9s,mb3.8,baz=324,slow=8.1,SNR=4.1						
PLCA	**Paso Flores**	**27.41**	**171**	P	**P**	**13 49 35.2**	**0.0**
TXAR	**Lajitas Array**	**50.29**	**328**	P	**P**	**13 52 46.6**	**+0.5**
	0.2nm,0.5s,mb3.4,baz=134,slow=6.4,SNR=3.4						
TXAR				pP	pP	13 52 56.8	-0.2
	0.9nm,0.7s,baz=141,slow=9.7,SNR=8.0						
PMSA	**Palmer Station**	**51.73**	**173**	P	**P**	**13 52 55.7**	**-0.8**
	37nm,1.0s,baz=333,slow=6.8,SNR=3.1						
PDAR	**Pinedale Array**	**63.94**	**333**	P	**P**	**13 54 24.3**	**+1.9**
	0.2nm,0.5s,mb3.4,baz=135,slow=13,SNR=2.4						
PDAR				pP	pP	13 54 33.8	+0.1
	0.8nm,0.9s,baz=132,slow=4.4,SNR=4.6						
DBIC	**Dimbokro**	**73.69**	**79**	P	**P**	**13 55 23.5**	**-0.3**
	4.1nm,0.6s,mb4.6,baz=226,slow=8.0,SNR=7.9						
DBIC				LR	LR	14 24 24.8	
	comp=Z,69nm,19.8s,baz=186,slow=33						
YKA	**Yellowknife Ar**	**81.61**	**343**	P	**P**	**13 56 06.3**	**-0.5**
	0.2nm,0.5s,mb3.3,baz=170,slow=4.6,SNR=2.9						
YKA				pP	pP	13 56 17.3	-1.1
	0.6nm,0.7s,baz=148,slow=5.9,SNR=3.8						
TORD	**Torodi Ar. Bea**	**81.69**	**74**	P	**P**	**13 56 08.2**	**-0.2**
	4.8nm,0.8s,mb4.5,baz=262,slow=4.9,SNR=36						
WRA	**Warramunga Arr**	**135.03**	**223**	PKP	PKPdf	14 03 10.2	+0.8
	0.4nm,0.8s,baz=120,slow=2.1,SNR=3.3						
SONM	**Songino Array**	**145.88**	**357**	PKPbc	PKPbc	14 03 29.0	+0.4
	0.8nm,0.6s,baz=326,slow=2.6,SNR=11						
SONM				pPKPbc	pPKPbc	14 03 39.9	-0.7
	2.3nm,1.0s,baz=325,slow=2.2,SNR=8.5						

ISCJB ***26*** *13:51:30.4±6.1, 56°.38S±0°.09×26°.9W±0°.2, h87km±57km, mb4.4/18, Error ellipse: s-maj=16.5km s-min=13.8km az=33.2*
NEIC ***26*** *13:51:33.1±2.5, 56°.37S×26°.96W, h97km±21km, mb4.5/11, Error ellipse: s-maj=10.3km s-min=8.4km az=207.0*
IDC ***26*** *13:51:33.4±2.9, 56°.40S×26°.94W, h98km±25km, mb4.2/13, mb1 4.3/14, mb1mx4.1/22, mbtmp4.2/14, MS3.7/2, Ms1 3.6/2, ms1mx3.3/22, Error ellipse: s-maj=16.5km s-min=13.4km az=12.0*
ISC 26 13:51:31.9±4.6, 56°.42S±0°.10×27°.0W±0°.2, h86km±44km, n48, σ0°.90/28, mb4.4/18, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**19.75**	**230**	P	**Pn**	**13 55 56.6**	**-0.1**
	1.1nm,0.3s,baz=52,slow=9.4,SNR=3.4						
PMSA	**Palmer Station**	**19.75**	**230**	*e*P	**Pn**	**13 55 56.4**	**-0.3**
	49nm,1.0s						
PLCA	**Paso Flores**	**32.18**	**280**	*e*P	**P**	**13 57 50.6**	**-0.6**
	1.2nm,0.8s,mb3.7						
QSPA	**South Pole Qui**	**33.84**	**180**	P	**P**	**13 58 06.3**	**+1.0**
	12nm,0.5s,mb4.9,baz=205,slow=3.3,SNR=116						
QSPA				PcP	PcP	14 00 42.4	+0.5
	5.6nm,0.7s,baz=188,slow=0.7,SNR=8.5						
QSPA				ScP	ScP	14 04 16.5	-2.1
	4.1nm,0.7s,baz=201,slow=2.2,SNR=15						
QSPA	**South Pole Qui**	**33.84**	**180**	P	**P**	**13 58 06.3**	**+1.0**
QSPA				PcP	PcP	14 00 42.4	+0.4
QSPA				ScP	ScP	14 04 16.5	-2.1
CPUP	**Villa Florida**	**37.14**	**311**	P	**P**	**13 58 34.0**	**-0.1**
	2.0nm,0.6s,mb4.2,baz=132,slow=9.6,SNR=7.3						
CPUP				PcP	PcP	14 00 52.8	+0.3
	0.3nm,0.4s,baz=114,slow=0.9,SNR=4.8						
CPUP	**Villa Florida**	**37.14**	**311**	*e*P	**P**	**13 58 33.8**	**-0.3**
	9.9nm,0.6s,mb4.9						
CFAA	**Coronel Fontan**	**37.81**	**293**	P	**P**	**13 58 38.2**	**-1.5**
	0.3nm,0.5s,mb3.4,baz=154,slow=5.9,SNR=6.4						
CFAA				PcP	PcP	14 00 54.4	-0.1
	0.6nm,0.5s,baz=143,slow=3.1,SNR=7.9						
CFAA	**Coronel Fontan**	**37.81**	**293**	P	**P**	**13 58 38.2**	**-1.6**
CFAA				PcP	PcP	14 00 54.4	-0.1
SBA	**Scott Base**	**45.72**	**184**	*e*P	**P**	**13 59 44.7**	**+1.0**
	7.0nm,0.9s,mb4.4						
BOSA	**Boshof**	**45.95**	**75**	P	**P**	**13 59 46.2**	**+0.2**
	1.5nm,0.5s,mb4.0,baz=194,slow=8.3,SNR=5.3						
BOSA				LR	LR	14 16 02.7	
	comp=Z,78nm,18.9s,baz=341,slow=32						
SIV	**San Ignacio**	**47.91**	**313**	P	**P**	**14 00 00.8**	**-0.5**
	1.7nm,0.7s,mb4.0,baz=168,slow=9.3,SNR=7.2						
SIV				PcP	PcP	14 01 29.1	+0.6
	1.2nm,0.6s,baz=269,slow=12,SNR=4.5						
LBTB	**Lobatse**	**49.01**	**73**	P	**P**	**14 00 10.2**	**+0.5**
	3.8nm,0.7s,mb4.4,baz=240,slow=7.4,SNR=6.4						
LBTB	**Lobatse**	**49.01**	**73**	*e*P	**P**	**14 00 09.3**	**-0.4**
	4.8nm,0.8s,mb4.5						
TSUM	**Tsumeb**	**49.76**	**60**	P	**P**	**14 00 15.1**	**-0.4**
	1.5nm,0.8s,mb4.0,baz=209,slow=7.7,SNR=3.2						
TSUM				LR	LR	14 19 19.2	
	comp=Z,75nm,18.6s,baz=326,slow=34						
TSUM	**Tsumeb**	**49.76**	**60**	*e*P	**P**	**14 00 14.8**	**-0.7**
	1.6nm,0.8s,mb4.0						
LPAZ	**La Paz**	**50.68**	**305**	P	**P**	**14 00 24.1**	**+1.7**
	11nm,0.6s,mb5.1,baz=139,slow=5.5,SNR=47						
LPAZ				PcP	PcP	14 01 40.0	+1.4
	3.5nm,0.6s,baz=140,slow=4.3,SNR=6.3						
LPAZ	**La Paz**	**50.68**	**305**	*e*P	**P**	**14 00 23.8**	**+1.3**
	19nm,0.8s,mb5.2						
CASY	**Casey**	**53.53**	**160**	*e*P	**P**	**14 00 42.8**	**-0.1**
	17nm,0.5s,mb5.3						
LSZ	**Lusaka**	**58.40**	**68**	P	**P**	**14 01 17.7**	**-0.7**
	3.1nm,0.8s,mb4.4,baz=207,slow=7.8,SNR=6.1						
LSZ	**Lusaka**	**58.40**	**68**	*e*P	**P**	**14 01 18.2**	**-0.1**
	2.9nm,0.8s,mb4.4						
OTAV	**Otavalo**	**69.95**	**304**	*e*P	**P**	**14 02 35.8**	**+1.9**
	6.2nm,0.9s,mb4.4						
PCRV	**Puerto La Cruz**	**73.31**	**321**	P	**P**	**14 02 54.7**	**+0.8**
	18nm,0.5s,mb5.2,baz=158,slow=6.7,SNR=8.2						
TORD	**Torodi Ar. Bea**	**73.32**	**29**	P	**P**	**14 02 54.5**	**+0.6**
	1.7nm,0.7s,mb4.0,baz=201,slow=6.1,SNR=27						
STKA	**Stephens Creek**	**91.52**	**170**	P	**P**	**14 04 27.1**	**-1.5**
	2.7nm,0.5s,mb4.7,baz=232,slow=3.3,SNR=6.4						
STKA	**Stephens Creek**	**91.52**	**170**	*e*P	**P**	**14 04 27.3**	**-1.4**
	0.6nm,0.6s,mb4.0						
CMIG	**Matias Romero**	**92.46**	**298**	P	**P**	**14 04 32.4**	**-0.6**
	2.7nm,0.7s,mb4.6,baz=97,slow=12,SNR=3.7						
ASAR	**Alice Springs**	**98.61**	**162**	P	**P**	**14 05 00.3**	**-0.7**
	1.3nm,0.6s,mb4.6,baz=186,slow=3.6,SNR=23						
WRA	**Warramunga Arr**	**102.32**	**162**	P	Pdif	14 05 19.2	+1.5
	1.1nm,0.7s,baz=192,slow=4.0,SNR=7.9						
PDAR	**Pinedale Array**	**120.64**	**302**	PKP	PKPdf	14 10 12.3	-0.4
	0.3nm,0.4s,baz=98,slow=5.3,SNR=5.5						
HWUT	**Hardware Ranch**	**120.70**	**300**	*e*PKPdf	PKPdf	14 10 12.3	-0.5
NVAR	**Mina Array Bea**	**121.64**	**293**	PKP	PKPdf	14 10 15.9	+1.1
	0.7nm,0.7s,baz=158,slow=3.2,SNR=6.1						
FINES	**FINESS Array B**	**124.65**	**28**	PKP	PKPdf	14 10 19.4	-0.4
	2.4nm,0.5s,baz=122,slow=2.5,SNR=12						
CMAR	**Chiang Mai Arr**	**124.83**	**111**	PKP	PKPdf	14 10 21.4	-0.1
	0.3nm,0.4s,baz=220,slow=5.2,SNR=4.3						
BMO	**Blue Mountains**	**125.92**	**299**	*e*PKPdf	PKPdf	14 10 22.4	-0.3
ARCES	**ARCESS Array B**	**131.24**	**22**	PKP	PKPdf	14 10 31.6	-0.5
	1.0nm,0.5s,baz=222,slow=1.5,SNR=9.1						
BVAR	**Borovoye Array**	**134.88**	**58**	PKP	PKPdf	14 10 41.4	+1.9
	0.5nm,0.4s,baz=151,slow=3.3,SNR=3.7						
YKA	**Yellowknife Ar**	**136.52**	**318**	PKP	PKPdf	14 10 42.0	-0.1
	1.2nm,0.5s,baz=124,slow=2.5,SNR=13						
YKA	**Yellowknife Ar**	**136.52**	**318**	PKP	PKPdf	14 10 42.0	-0.2
MKAR	**Makanchi Array**	**136.89**	**72**	PKP	PKPdf	14 10 43.8	+0.4
	0.3nm,0.7s,baz=205,slow=2.2,SNR=3.3						
KURK	**Kurchatov**	**137.46**	**65**	PKP	PKPdf	14 10 44.2	-0.1
	0.2nm,0.4s,baz=235,slow=3.2,SNR=3.0						
ZALV	**Zalesovo Beam**	**142.43**	**64**	PKP	PKPdf	14 10 53.4	+0.1
	1.0nm,0.5s,baz=265,slow=2.5,SNR=5.3						
INK	**Inuvik**	**146.16**	**320**	*e*PKPbc	PKPbc	14 11 00.0	-0.5
DAWY	**Dawson**	**147.12**	**312**	*e*PKPbc	PKPbc	14 11 02.6	-0.7
BMRM	**Bremner River**	**148.37**	**305**	*e*PKPbc	PKPbc	14 11 06.4	-0.4
SONM	**Songino Array**	**150.63**	**87**	PKPbc	PKPbc	14 11 12.5	-0.3
	4.9nm,0.6s,baz=222,slow=3.8,SNR=36						
MCK	**McKinley**	**151.09**	**309**	*e*PKPbc	PKPbc	14 11 13.1	-0.2
COLD	**Coldfoot**	**152.16**	**316**	*e*PKPbc	PKPbc	14 11 15.9	+0.2

IDC ***26*** *14:04:45.5±0.8, 20°.44N×120°.29E, h0km, mb3.9/11, mb1 4.1/12, mb1mx4.0/23, mbtmp3.9/12, ML3.3/1, MS3.6/2, Ms1 3.7/2, ms1mx2.8/28, Error ellipse: s-maj=27.3km s-min=15.7km az=67.0*
BJI ***26*** *14:04:47.1, 20°.19N×120°.22E, h23km, mB4.6/4, mb3.8/7*
ISCJB ***26*** *14:04:48.2±0.4, 20°.51N±0°.03×120°.19E±0°.05, h33km, mb4.2/17, MS3.4/2, Error ellipse: s-maj=7.3km s-min=4.1km az=168.1*
NEIC ***26*** *14:04:49.7±0.5, 20°.46N×120°.25E, h35km, mb4.5/6, Error ellipse: s-maj=12.0km s-min=8.1km az=105.0*
MAN ***26*** *14:04:50, 20°.45N×120°.28E, h32km, mb5.3, ML4.3, MS4.5*
ISC 26 14:04:50.2±0.4, 20°.51N±0°.03×120°.24E±0°.05, h35km, n34, σ1°.07/40, mb4.2/17, MS3.4/2, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBP	**Basco**	**1.62**	**92**	*e*P	**Pn**	**14 05 16.6**	**+0.4**
BBP				*e*S	**Sn**	**14 05 35.8**	**0.0**
TWG	**Pinlang**	**2.42**	**18**	*e*Pn	**Pn**	**14 05 27.2**	**-0.1**
TWG				*e*Sn	**Sn**	**14 05 55.0**	**-0.8**
TPUB	**Ta-pu**	**2.80**	**7**	*e*Pn	**Pn**	**14 05 27.9**	**-4.6**
TPUB				*e*Sn	**Sn**	**14 06 03.8**	**-1.2**
APYP	**Conner**	**2.80**	**160**	*e*P	**Pn**	**14 05 31.9**	**-0.6**
APYP				*e*S	**Sn**	**14 06 05.3**	**+0.2**
SGCP	**Mt. Cagua**	**2.83**	**143**	*e*P	**Pn**	**14 05 32.6**	**-0.3**
SGCP				*e*S	**Sn**	**14 06 05.8**	**+0.1**
YULB	**Yu-li**	**3.03**	**19**	*e*Pn	**Pn**	**14 05 35.9**	**+0.2**
SSLB	**Suanglung**	**3.33**	**11**	*e*Pn	**Pn**	**14 05 38.7**	**-1.0**
CAUP	**Cauayan**	**3.85**	**157**	*e*P	**Pn**	**14 05 50.2**	**+3.2**
PALP	**Palanan**	**4.01**	**149**	*e*P	**Pn**	**14 05 50.5**	**+1.4**
YHNB	**Yeheng**	**4.27**	**14**	*e*Pn	**Pn**	**14 05 52.7**	**0.0**
TATO	**Taipei**	**4.59**	**14**	Pn	**Pn**	**14 05 57.2**	**+0.1**
QIZ	**Qiongzhong**	**9.90**	**263**	*e*P	**Pn**	**14 07 07.2**	**-2.9**
	11nm,1.0s						
QIZ				*e*Sn	**Sn**	**14 08 49.2**	**-11**
KS15	**Wonju Array Si**	**18.13**	**20**	*e*P	**Pn**	**14 08 59.1**	**-0.1**
KSRS	**Korea Array**	**18.16**	**20**	P	**Pn**	**14 09 00.8**	**+1.4**
	0.1nm,0.3s,baz=204,slow=11,SNR=8.1						
CMAR	**Chiang Mai Arr**	**20.18**	**268**	P	**P**	**14 09 22.0**	**+0.1**
	0.4nm,0.6s,baz=62,slow=11,SNR=3.3						
CMAR				LR	LR	14 17 25.3	
	comp=Z,92nm,19.8s,MS3.1,baz=245,slow=38						
MAJO	**Matsushiro**	**22.39**	**41**	P	**P**	**14 09 44.2**	**-1.3**
	13nm,1.3s,mb4.2						
MJAR	**Matsushiro Arr**	**22.39**	**41**	P	**P**	**14 09 46.5**	**+1.0**
	2.7nm,1.1s,mb3.6,baz=238,slow=7.1,SNR=5.5						
MDJ	**Mudanjiang**	**25.26**	**16**	*e*P	**P**	**14 10 14.1**	**+1.1**
	12nm,1.1s,mb4.4						
GTA	**Gaotai**	**25.74**	**321**	*e*P	**P**	**14 10 22.3**	**+4.9**
GTA				pP	pP	14 10 27.0	-0.4
GTA				sP	sP	14 10 30.3	-1.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.8						
SONM	**Songino Array**	**29.47**	**341**	P	**P**	**14 10 52.2**	**+1.5**
	comp=Z,0.5nm,0.7s,mb3.3,baz=160,slow=8.6,SNR=3.7						
SONM				LR	LR	14 24 20.8	
	comp=Z,179nm,18.6s,MS3.7,baz=189,slow=40						
MKAR	**Makanchi Array**	**40.45**	**319**	P	**P**	**14 12 26.5**	**+1.2**
	comp=Z,1.3nm,0.9s,mb3.7,baz=98,slow=14,SNR=7.6						
WRAB	**Tennant Creek**	**42.50**	**160**	*e*P	**P**	**14 12 41.5**	**-0.8**
	comp=Z,15nm,1.0s,mb4.7						
WRA	**Warramunga Arr**	**42.51**	**160**	P	**P**	**14 12 41.9**	**-0.4**
	comp=Z,9.2nm,0.8s,mb4.5,baz=342,slow=9.0,SNR=30						
WRA				PcP	PcP	14 14 35.7	+1.0
	comp=Z,0.6nm,0.8s,baz=346,slow=3.6,SNR=7.4						
WRA	**Warramunga Arr**	**42.51**	**160**	P	**P**	**14 12 41.9**	**-0.4**
WRA				PcP	PcP	14 14 35.7	+1.0
ZAA0	**Zalesovo Array**	**42.90**	**330**	*e*P	**P**	**14 12 42.3**	**-2.9**
ZALV	**Zalesovo Beam**	**42.90**	**330**	P	**P**	**14 12 45.9**	**+0.7**
	comp=Z,1.6nm,0.7s,mb3.8,baz=131,slow=8.3,SNR=8.0						
KURK	**Kurchatov**	**44.41**	**323**	P	**P**	**14 12 58.6**	**+1.2**
	comp=Z,2.7nm,0.9s,mb4.0,baz=128,slow=7.4,SNR=17						
ASAR	**Alice Springs**	**45.89**	**162**	P	**P**	**14 13 09.3**	**0.0**
	comp=Z,3.7nm,0.9s,mb4.3,baz=345,slow=7.1,SNR=27						
CTAO	**Charters Tower**	**47.71**	**146**	*e*P	**P**	**14 13 22.7**	**-1.0**
	comp=Z,16nm,1.0s,mb5.0						
BVAR	**Borovoye Array**	**50.01**	**323**	P	**P**	**14 13 43.4**	**+2.5**
	comp=Z,0.5nm,0.4s,mb3.9,baz=116,slow=6.0,SNR=2.3						
TIXI	**Tiksi**	**51.39**	**3**	*e*P	**P**	**14 13 50.5**	**-0.6**
	comp=Z,3.5nm,1.1s,mb4.2						
NWAO	**Narrogin (SRO)**	**53.22**	**183**	*e*P	**P**	**14 14 03.1**	**-1.9**
	comp=Z,11nm,1.1s,mb4.7						
FINES	**FINESS Array B**	**74.17**	**330**	P	**P**	**14 16 23.4**	**+0.5**
	comp=Z,2.1nm,0.8s,mb4.1,baz=99,slow=8.6,SNR=3.5						
YKA	**Yellowknife Ar**	**86.68**	**22**	P	**P**	**14 17 29.6**	**-0.4**
	comp=Z,2.0nm,0.9s,mb4.3,baz=304,slow=4.3,SNR=7.2						

IDC ***26*** *14:21:21.9±0.8, 8°.67S×75°.33W, h0km, mb3.9/6, mb1 4.2/10, mb1mx4.1/19, mbtmp4.0/10, ML4.1/4, MS3.5/6, Ms1 3.5/6, ms1mx3.3/20, Error ellipse: s-maj=29.9km s-min=16.3km az=56.0*
ISCJB ***26*** *14:21:25.3±1.3, 8°.74S±0°.06×75°.33W±0°.09, h38km±13km, mb4.3/18, MS3.3/5, Error ellipse: s-maj=15.1km s-min=9.3km az=156.3*
NEIC ***26*** *14:21:26.9±0.3, 8°.77S×75°.35W, h35km, mb4.7/12, Error ellipse: s-maj=13.6km s-min=6.2km az=62.0*
ISC 26 14:21:27.5±1.0, 8°.77S±0°.06×75°.34W±0°.08, h39km±11km, n37, σ0°.77/31, mb4.3/18, MS3.3/5, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**3.43**	**298**	Pn	**Pn**	**14 22 17.8**	**-0.7**
	22nm,0.3s,baz=141,slow=14,SNR=34						
ATAH				Sn	**Sn**	**14 23 06.4**	**+8.4**
	20nm,0.3s,baz=89,slow=23,SNR=4.6						
NNA	**Nana**	**3.53**	**205**	Pn

LWLI	**Liwa**	**1.89 105**	P	**Pn**	**14 31 19.7**	**-0.1**
LWLI			S	**Sn**	**14 31 42.0**	**-0.5**
MDSI	**Maura Dua**	**1.95 89**	P	**Pn**	**14 31 20.8**	**+0.3**
KASI	**Kota Agung**	**2.47 114**	P	**Pn**	**14 31 27.5**	**-0.1**
KLSI		**2.50 94**	P	**Pn**	**14 31 28.8**	**+0.7**
CMAR	**Chiang Mai Arr**	**23.07 352**	P	**P**	**14 35 52.0**	**+1.4**
	0.7nm,0.8s,mb3.2,baz=186,slow=8.3,SNR=6.9					
WRAB	**Tennant Creek**	**34.82 119**	*e*P	**P**	**14 37 34.9**	**-0.6**
	0.7nm,0.5s,mb3.9					
ASAR	**Alice Springs**	**35.98 125**	P	**P**	**14 37 45.0**	**-0.4**
	0.2nm,0.4s,mb3.4,baz=299,slow=8.1,SNR=13					
SONM	**Songino Array**	**52.27 4**	P	**P**	**14 39 56.4**	**+1.2**
	1.0nm,0.6s,mb3.9,baz=179,slow=9.2,SNR=6.4					
MKAR	**Makanchi Array**	**54.06 343**	P	**P**	**14 40 08.6**	**+0.1**
	0.9nm,0.4s,mb4.1,baz=120,slow=11,SNR=6.7					
MKAR	**Makanchi Array**	**54.06 343**	P	**P**	**14 40 08.6**	**+0.1**
ZALV	**Zalesovo Beam**	**60.06 348**	P	**P**	**14 40 50.2**	**-0.5**
	1.2nm,0.4s,mb4.3,baz=168,slow=4.4,SNR=4.2					
BVAR	**Borovoye Array**	**63.32 339**	P	**P**	**14 41 11.5**	**-1.1**
	0.5nm,0.3s,mb4.0,baz=140,slow=8.0,SNR=4.7					
TXAR	**Lajitas Array**	**145.22 42**	PKPbc	PKPbc	14 50 22.1	+0.7
	0.8nm,0.5s,baz=314,slow=0.8,SNR=11					

JMA 26 14:32:54.3,39°.03N×140°.90E,h10km±1km,M2.0,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.26**	**107**	P	Pg	14 32 59.5	-0.1
JMK				S	Sg	14 33 03.2	+0.1
JRG	**Rokugo**	**0.42**	**331**	P	Pg	14 33 02.8	+0.3
JRG				S	Sg	14 33 08.8	+0.7
JYK	**Kaneyama**	**0.44**	**255**	P	Pg	14 33 03.1	+0.3
JYK				*e*S	Sg	14 33 08.7	+0.1
JOM	**Ohasama**	**0.54**	**34**	P	Pg	14 33 04.6	-0.1
JOM				S	Sg	14 33 11.8	0.0
OFUJ	**Ofunato**	**0.60**	**85**	P	Pg	14 33 06.0	+0.1
OFUJ				S	Sg	14 33 13.9	+0.1
JIO	**Ouri**	**0.67**	**148**	P	Pg	14 33 07.1	-0.2
JIO				S	Sg	14 33 16.2	+0.1
JOU	**Okura**	**0.69**	**196**	P	Pg	14 33 07.8	+0.2
JOU				S	Sg	14 33 16.8	+0.2

NIED ***26*** *14:33:00,38°.80N×140°.80E,h5km,Mw4.5 Best double couple: M0 6.02000×10^15 NP1:*ϕ_s*189.00000°,*δ*52.00000°,* λ*100.00000°. NP2:*ϕ_s*354.00000°,*δ*39.00000°,*λ*78.00000°.*
JMA ***26*** *14:33:59.9,38°.76N×140°.78E,h3km±1km,M4.6 Broadband fault plane solution: P waves. NP1:* ϕ_s*185.00000°,*δ*37.00000°,*λ*92.00000°. NP2:*ϕ_s*3.00000°,* δ*53.00000°,*λ*89.00000°. Principal axes: T Plg82.0000°, Azm267.0000°; N Plg1.0000°, Azm4.0000°; P Plg8.0000°, Azm94.0000°;*
JMA Felt III J1.
ISCJB ***26*** *14:33:59.8±0.5,38°.75N±0°.02×140°.73E±0°.03,h14km±3km, mb4.6/78,MS4.0/24 Error ellipse: s-maj=3.8km s-min=3.1km az=145.7*
IDC ***26*** *14:34:02.3±4.7,38°.72N×140°.62E,h20km±30km,mb4.1/17, mb1 4.3/20,mb1mx4.2/27,mbtmp4.2/20,ML4.1/3,MS3.8/11, Ms1 3.8/11,ms1mx3.5/31,Error ellipse: s-maj=17.1km s-min=12.3km az=93.0*
MOS ***26*** *14:34:03.2±0.9,38°.79N×140°.57E,h33km,mb4.9/29,Error ellipse: s-maj=9.4km s-min=5.5km az=103.4*
BJI ***26*** *14:34:03.2,38°.75N×140°.67E,h39km,mB4.7/24,mb4.6/33, Ms4.2/32,Ms7 4.1/29*
NEIC ***26*** *14:34:04.5±0.2,38°.74N×140°.60E,h35km,mb4.7/42, MS4.2/1,MW4.5(NIED),Error ellipse: s-maj=6.3km s-min=4.5km az=147.0*
NEIC Recorded [3 JMA] in Iwate and Miyagi; [2 JMA] in Yamagata; [1 JMA] in Fukushima.
SZGRF ***26*** *14:34:05.2,38°.62N×140°.53E,h33km,mb4.8,Eastern Honshu, Japan*

ISC 26 14:34:00.2±0.4,38°.74N±0°.02×140°.75E±0°.03,h6km±2km, h36km±1.0km:pP-P,n214,σ1°.02/234,mb4.6/78,MS4.0/24, 14C-25D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.35**	**300**	⇓P	**Pg**	**14 34 07.3**	**+0.2**
JYK				*e*S	**Sg**	**14 34 12.4**	**+0.6**
JOU	**Okura**	**0.38**	**190**	⇑P	**Pg**	**14 34 07.8**	**+0.2**
JOU				S	**Sg**	**14 34 13.5**	**+0.8**
JMK	**Ichinoseki**	**0.42**	**60**	⇓P	**Pg**	**14 34 07.5**	**-0.9**
JMK				*e*S	**Sg**	**14 34 13.0**	**-0.9**
JIO	**Ouri**	**0.55**	**121**	⇑P	**Pg**	**14 34 09.9**	**-0.9**
JIO				S	**Sg**	**14 34 17.3**	**-0.6**
JRG	**Rokugo**	**0.66**	**352**	⇑P	**Pg**	**14 34 12.7**	**-0.2**
JYS	**Shiratake**	**0.75**	**226**	⇓P	**Pg**	**14 34 14.8**	**+0.2**
JYS				S	**Sg**	**14 34 25.1**	**+0.7**
JYA	**Atsumi**	**0.83**	**260**	⇓P	**Pg**	**14 34 16.1**	**0.0**
JYA				S	**Sg**	**14 34 27.7**	**+0.9**
JOM	**Ohasama**	**0.84**	**30**	⇓P	**Pg**	**14 34 15.3**	**-1.1**
JOM				*e*S	**Sg**	**14 34 26.2**	**-1.1**
JMM	**Marumori**	**0.88**	**178**	⇑P	**Pg**	**14 34 16.0**	**-1.0**
JMM				S	**Sg**	**14 34 28.0**	**-0.4**
MAJO	**Matsushiro**	**2.98**	**223**	*e*P	**Pn**	**14 34 49.0**	**+1.0**
MAT	**Matsushiro**	**2.98**	**223**	P	**Pn**	**14 34 48.9**	**+0.9**
MAT				S	**Sn**	**14 35 33.0**	**+8.9**
MJAR	**Matsushiro Arr**	**2.98**	**223**	Pn	**Pn**	**14 34 48.5**	**+0.5**
	6.6nm,0.3s,baz=247,slow=20,SNR=52						
MJAR				Lg		14 35 33.0	
	13nm,0.3s,baz=25,slow=26,SNR=7.0						
MJAR				LR	LR	14 36 09.7	
	comp=Z,1μm,19.4s,baz=160,slow=44						
ERM	**Erimo**	**3.75**	**29**	*e*P	**Pn**	**14 34 59.6**	**+1.1**
ASAJ	**Asahikawa**	**5.54**	**14**	Pn	**Pn**	**14 35 24.5**	**+1.3**
	7.2nm,0.3s,baz=225,slow=8.8,SNR=47						
ASAJ	**Asahikawa**	**5.54**	**14**	P	**Pn**	**14 35 24.5**	**+1.3**
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.3s						
JHJ	**Hachijo jima 2**	**5.67**	**188**	Pn	**Pn**	**14 35 25.8**	**+0.9**
	comp=Z,39nm,0.3s,baz=74,slow=22,SNR=7.8						
JHJ				Sn	**Sn**	**14 36 28.0**	**-2.3**
	baz=59,slow=19,SNR=1.9						
VLA	**Vladivostok**	**8.00**	**306**	*e*P	**Pn**	**14 35 57.3**	**+0.3**
VLA				pmax	pmax		
	comp=Z,41nm,1.6s						
VLA				MLR	MLR		
	comp=Z,500nm,12.3s						
YSS	**Yuzh-Sakhalins**	**8.34**	**10**	*e*P	**Pn**	**14 36 03.0**	**+1.5**
YSS				*e*		14 37 38.0	
YSS				MLR	MLR		
	comp=Z,500nm,14.0s						
YSS	**Yuzh-Sakhalins**	**8.34**	**10**	*e*Pn	**Pn**	**14 36 02.7**	**+1.2**
KSRS	**Korea Array**	**10.20**	**267**	Pn	**Pn**	**14 36 29.9**	**+2.9**
	comp=Z,1.7nm,0.3s,baz=80,slow=14,SNR=58						
KSRS				Sn	**Sn**	**14 38 26.9**	**+5.3**
	comp=Z,2.0nm,0.3s,baz=75,slow=24,SNR=18						
KSRS				LR	LR	14 40 09.6	
	comp=Z,669nm,18.1s,baz=150,slow=36						
KSRS	**Korea Array**	**10.20**	**267**	P	**Pn**	**14 36 29.9**	**+2.9**
KSRS						14 38 26.9	
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KSRS				smax			
	comp=N,2.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,669nm,18.1s						
MDJ	**Mudanjiang**	**10.20**	**309**	*e*Pn	**Pn**	**14 36 25.6**	**-1.5**
	comp=Z,12nm,1.0s						
KS15	**Wonju Array Si**	**10.23**	**267**	*e*Pn	**Pn**	**14 36 29.8**	**+2.4**
HABR	**Khabarovsk**	**10.56**	**339**	*de*P	**Pn**	**14 36 35.7**	**+3.7**
HABR				*e*		14 38 34.6	
HABR				pmax	pmax		
	comp=Z,75nm,2.1s						
HABR				pmax	pmax		
	comp=E,55nm,2.0s						
HABR				pmax	pmax		
	comp=N,45nm,1.7s						
HABR				MLR	MLR		
	comp=Z,296nm,15.0s						
KLR	**Kul'dur**	**12.31**	**331**	*e*P	**Pn**	**14 36 56.8**	**+0.9**
KLR				pmax	pmax		
	comp=Z,130nm,2.0s						
KLR				pmax	pmax		
	comp=E,130nm,2.2s						
CN2	**Changchun**	**12.57**	**299**	*e*P	**Pn**	**14 36 59.0**	**-0.5**
CN2				*ep*P		14 37 13.3	
CN2				*es*P		14 37 18.0	
CN2				*e*S	**Sn**	**14 39 20.5**	**+0.8**
CN2				pmax	pmax		
	comp=Z,20nm,1.3s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,600nm,12.0s						
CN2				LR	LR		
	comp=E,600nm,12.0s						
CN2				LR	LR		
	comp=Z,500nm,15.0s						
SNY	**Shenyang**	**13.47**	**289**	⇓P	**Pn**	**14 37 13.0**	**+1.2**
SNY				S	**Sn**	**14 39 40.5**	**-1.2**
SNY				pmax	pmax		
	comp=Z,12nm,1.8s						
SNY				LR	LR		
	comp=N,350nm,13.2s						
SNY				LR	LR		
	comp=E,770nm,16.2s						
SNY				LR	LR		
	comp=Z,760nm,15.9s						
PETK	**Petropavlovsk-**	**18.51**	**34**	P	**Pn**	**14 38 21.0**	**+3.9**
	comp=Z,0.1nm,0.3s,baz=226,slow=15,SNR=3.3						
PETK				LR	LR	14 45 02.6	
	comp=Z,84nm,21.9s,baz=225,slow=36						
PETK	**Petropavlovsk-**	**18.51**	**34**	P	**Pn**	**14 38 21.0**	**+3.9**
PETK				LR	LR	14 45 02.6	
BJI	**Beijing**	**19.03**	**282**	P	**Pn**	**14 38 22.5**	**-1.0**
BJI				pP	pP	14 38 30.3	+5.7
BJI				sP	sP	14 38 34.3	+8.9
BJI				S	**Sn**	**14 41 52.0**	**-4.7**
BJI				sS	sS	14 42 08.0	+6.1
BJI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BJI				pmax	pmax		
	comp=Z,100nm,4.1s						
BJI				LR	LR		
	comp=N,660nm,16.3s						
BJI				LR	LR		
	comp=E,240nm,16.7s						
BJI				LR	LR		
	comp=Z,210nm,14.7s						
NJ2	**Nanjing**	**19.04**	**256**	*e*P	**Pn**	**14 38 25.0**	**+1.4**
NJ2				pP	pP	14 38 34.5	+10
NJ2				sP	sP	14 38 41.3	+16
NJ2				PP		14 38 43.5	
NJ2				S	**Sn**	**14 41 50.0**	**-7.0**
NJ2				pmax	pmax		
	comp=Z,30nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,140nm,7.0s						
NJ2				LR	LR		
	comp=N,420nm,12.8s						
NJ2				LR	LR		
	comp=E,340nm,12.5s						
NJ2				LR	LR		
	comp=Z,440nm,11.4s						
CLNS	**Chul'man**	**20.91**	**335**	*e*P	**P**	**14 38 37.4**	**-5.7**
CLNS				pmax	pmax		
	comp=Z,17nm,1.4s						
CLNS				pmax	pmax		
	comp=N,16nm,1.1s						
CLNS				pmax	pmax		
	comp=E,9.0nm,1.3s						
CLNS				MLR	MLR		
	comp=E,115nm,19.0s						
CLNS				MLR	MLR		
	comp=N,92nm,12.0s						
CLNS				MLR	MLR		
	comp=Z,111nm,14.0s,MS3.4						
TATO	**Taipei**	**21.30**	**236**	*e*P	**P**	**14 38 45.9**	**-1.7**
	comp=Z,21nm,0.8s,mb4.5						
HHC	**Hu-ho-hao-te**	**22.48**	**285**	*e*P	**P**	**14 38 58.0**	**-2.1**
HHC				pP		14 39 07.3	
HHC				sP	sP	14 39 11.5	+8.7
HHC				PP		14 39 25.8	
HHC				PcP	PcP	14 42 53.5	-0.7
HHC				S	**S**	**14 42 56.8**	**-11**
HHC				sS	sS	14 43 12.3	+2.0
HHC				SS		14 43 36.3	
HHC				ScS	ScS	14 50 12.5	-4.8
HHC				pmax	pmax		
	comp=Z,16nm,0.7s,mb4.6						
HHC				pmax	pmax		
	comp=Z,58nm,5.6s						
HHC				LR	LR		
	comp=N,430nm,16.3s,MS4.3						
HHC				LR	LR		
	comp=E,670nm,12.6s,MS4.3						
HHC				LR	LR		
	comp=Z,700nm,13.2s,MS4.3						
YAK	**Yakutsk**	**24.29**	**347**	*e*P	**P**	**14 39 16.4**	**-1.5**
YAK				*e*'PP		14 39 26.5	
YAK				*e*PPP		14 39 55.7	
YAK				*e*S	**S**	**14 43 35.5**	**-1.5**
YAK				*e*SSS		14 44 47.2	
YAK				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.3						
YAK				pmax	pmax		
	comp=E,3.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.1s						
YAK				smax			
	comp=N,85nm,2.5s						
YAK				smax			
	comp=E,26nm,1.5s						
YAK				MLR	MLR		
	comp=Z,116nm,14.0s,MS3.5						
YAK				MLR	MLR		
	comp=N,71nm,13.0s,MS3.5						
YAK				MLR	MLR		
	comp=E,53nm,12.0s,MS3.5						
YAK	**Yakutsk**	**24.29**	**347**	*e*P	**P**	**14 39 17.4**	**-0.6**
	comp=E,17nm,1.0s,mb4.4						
ULN	**Ulaanbaatar**	**25.99**	**302**	*e*P	**P**	**14 39 33.3**	**-0.2**
ULN				pmax	pmax		
	comp=Z,12nm,1.5s,mb4.2						
ULN	**Ulaanbaatar**	**25.99**	**302**	*e*P	**P**	**14 39 33.3**	**-0.2**
	comp=Z,12nm,1.5s,mb4.2						
FX1	**Attu Island--F**	**26.38**	**47**	P	**P**	**14 39 39.1**	**+2.1**
	comp=Z,5.8nm,0.6s,mb4.3,baz=3.4,slow=3.6,SNR=6.2						
FX1				LR	LR	14 51 30.8	
	comp=Z,105nm,18.2s,MS3.4,baz=85,slow=40						
SONM	**Songino Array**	**26.42**	**301**	P	**P**	**14 39 37.2**	**-0.3**
	comp=Z,1.4nm,0.8s,mb3.5,baz=73,slow=7.3,SNR=8.1						
SONM				LR	LR	14 50 25.6	
	comp=Z,216nm,18.5s,MS3.7,baz=101,slow=37						
ENH	**Enshi**	**27.01**	**261**	*e*P	**P**	**14 39 42.2**	**-0.8**
	comp=Z,20nm,1.1s,mb4.5						
ZAK	**Zakamensk**	**28.82**	**306**	*e*P	**P**	**14 39 57.3**	**-1.6**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.8						
LZH	**Lanzhou**	**29.31**	**276**	*e*P	**P**	**14 40 06.0**	**+2.6**
LZH				pP	pP	14 40 16.0	+11
LZH				sP	sP	14 40 19.8	+14
LZH				PP	PP	14 41 00.5	-8.9
LZH				S	**S**	**14 44 55.0**	**-1.9**
LZH				sS	sS	14 45 10.8	+11
LZH				SS	SS	14 46 26.0	-35
LZH				pmax	pmax		
	comp=Z,28nm,1.5s,mb4.8						
LZH				pmax	pmax		
	comp=Z,110nm,4.4s						
LZH				LR	LR		
	comp=E,570nm,13.0s						
LZH				LR	LR		
	comp=Z,810nm,15.2s,MS4.5						
GYA	**Guiyang**	**31.04**	**257**	P	**P**	**14 40 19.5**	**+0.7**
GYA				pP	pP	14 40 29.5	+8.7
GYA				sP	sP	14 40 35.8	+14
GYA				PcP	PcP	14 43 16.0	+1.4
GYA				SS	SS	14 47 04.5	-32
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
GYA				pmax	pmax		
	comp=Z,110nm,4.8s						
GYA				LR	LR		
	comp=N,480nm,15.8s,MS4.4						
GYA				LR	LR		
	comp=E,430nm,16.0s,MS4.4						
GYA				LR	LR		
	comp=Z,440nm,15.5s,MS4.2						
CD2	**Chengdu**	**31.20**	**267**	*e*P	**P**	**14 40 21.3**	**+1.2**
CD2				pP	pP	14 40 30.8	+8.7
CD2				sP	sP	14 40 34.3	+11
CD2				PP	PP	14 41 24.0	-6.4
CD2				S	**S**	**14 45 23.0**	**-3.6**
CD2				sS	sS	14 45 38.5	+8.7
CD2				SS	SS	14 47 07.8	-32
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
CD2				pmax	pmax		
	comp=Z,20nm,4.2s						
CD2				LR	LR		
	comp=N,180nm,12.8s						
CD2				LR	LR		
	comp=Z,150nm,13.2s,MS3.8						
BILL	**Bilibino**	**32.55**	**18**	⇓*i*P	**P**	**14 40 33.4**	**+1.8**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.7s,mb4.2						
BILL				MLR	MLR		
	comp=Z,100nm,16.0s,MS3.6						
BILL	**Bilibino**	**32.55**	**18**	*e*P	**P**	**14 40 30.8**	**-0.8**
	comp=Z,15nm,1.4s,mb4.7						
QIZ	**Qiongzhong**	**33.20**	**243**	P	**P**	**14 40 35.8**	**-2.0**
QIZ				S	**S**	**14 45 54.8**	**-3.2**
QIZ				pmax	pmax		
	comp=Z,87nm,4.0s						
QIZ				LR	LR		
	comp=N,280nm,16.6s						
QIZ				LR	LR		
	comp=Z,350nm,17.6s,MS4.1						
TIXI	**Tiksi**	**33.53**	**353**	*e*P	**P**	**14 40 37.8**	**-2.4**
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.8s,mb4.3						
TIXI	**Tiksi**	**33.53**	**353**	*e*P	**P**	**14 40 38.9**	**-1.3**
	comp=Z,2.9nm,0.8s,mb4.3						
KMI	**Kunming**	**34.75**	**258**	P	**P**	**14 40 51.5**	**+0.3**
KMI				pP	pP	14 41 02.5	+9.3
KMI				sP	sP	14 41 06.5	+13
KMI				PP	PP	14 42 09.5	-0.4
KMI				S	**S**	**14 46 18.0**	**-3.9**
KMI				sS	sS	14 46 35.3	+10
KMI				SS	SS	14 48 30.5	-22
KMI				pmax	pmax		
	comp=Z,12nm,1.7s,mb4.5						
KMI				pmax	pmax		
	comp=Z,110nm,3.7s						
KMI				LR	LR		
	comp=N,250nm,15.6s,MS4.3						
KMI				LR	LR		
	comp=E,340nm,17.5s,MS4.3						
KMI				LR	LR		
	comp=Z,280nm,17.5s,MS4.1						
WMQ	**Urumqi**	**39.62**	**295**	*e*P	**P**	**14 41 33.0**	**+0.6**
ZAA0	**Zalesovo Array**	**40.39**	**311**	*e*P	**P**	**14 41 36.5**	**-2.1**
ZALV	**Zalesovo Beam**	**40.39**	**311**	P	**P**	**14 41 37.9**	**-0.8**
	comp=Z,13nm,1.1s,mb4.6,baz=86,slow=7.6,SNR=12						
ZALV				PcP	PcP	14 43 40.8	-0.8
	comp=Z,2.4nm,0.4s,baz=85,slow=3.3,SNR=8.3						
ZALV				LR	LR	14 58 55.4	
	comp=Z,143nm,18.1s,MS3.9,baz=246,slow=37						
ZALV	**Zalesovo Beam**	**40.39**	**311**	P	**P**	**14 41 37.9**	**-0.8**
ZALV						14 43 40.8	
NVS	**Novosibirsk**	**41.29**	**312**	*e*P	**P**	**14 41 41.8**	**-4.3**
NVS				*e*		14 44 00.7	
NVS				pmax	pmax		
	comp=N,7.0nm,1.8s						
NVS				pmax	pmax		
	comp=E,16nm,1.8s						
NVS				pmax	pmax		
	comp=Z,14nm,1.8s,mb4.3						
CMAR	**Chiang Mai Arr**	**41.46**	**253**	P	**P**	**14 41 46.9**	**-1.0**
	comp=Z,0.8nm,0.8s,baz=46,slow=4.7,SNR=5.6						
CMAR				PcP	PcP	14 43 45.6	-0.1
	comp=Z,0.7nm,0.8s,baz=0.5,slow=3.1,SNR=4.8						
CMAR				LR	LR	14 58 31.6	
	comp=Z,73nm,21.6s,MS3.5,baz=274,slow=36						
CMAR	**Chiang Mai Arr**	**41.46**	**253**	P	**P**	**14 41 46.9**	**-1.0**
CMAR						14 43 45.6	
MKAR	**Makanchi Array**	**42.79**	**300**	P	**P**	**14 41 58.7**	**+0.3**
	comp=Z,1.7nm,0.7s,mb3.9,baz=76,slow=12,SNR=10						
MKAR				LR	LR	14 59 24.9	
	comp=Z,88nm,19.1s,MS3.7,baz=264,slow=36						
MKAR	**Makanchi Array**	**42.79**	**300**	*i* P	**P**	**14 42 06.0**	**+7.6**
MKAR	**Makanchi Array**	**42.79**	**300**	P	**P**	**14 41 58.7**	**+0.3**
MKAR				LR	LR	14 59 24.9	
KURK	**Kurchatov**	**44.48**	**307**	*d i* P	**P**	**14 42 11.3**	**-0.7**
KURK				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.7						
KURK	**Kurchatov**	**44.48**	**307**	*e*P	**P**	**14 42 11.0**	**-1.0**
	comp=Z,14nm,1.0s,mb4.7						
TRF	**Thorofare Moun**	**46.93**	**35**	*e*P	**P**	**14 42 31.7**	**+0.6**
SEW	**Seward**	**47.57**	**40**	*e*P	**P**	**14 42 35.5**	**-0.7**
	comp=Z,23nm,1.0s,mb5.2						
BVAR	**Borovoye Array**	**49.05**	**311**	P	**P**	**14 42 47.7**	**0.0**
	comp=Z,1.3nm,0.5s,mb4.3,baz=78,slow=8.2,SNR=8.2						
BVAR				PcP	PcP	14 44 11.4	0.0
	comp=Z,1.0nm,0.5s,baz=70,slow=6.3,SNR=3.3						
BRVK	**Borovoye**	**49.10**	**311**	⇑*i*P	**P**	**14 42 47.5**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,12nm,2.5s,mb4.5						
KSH	**Kashi**	**49.25**	**293**	*e*P	**P**	**14 42 54.0**	**+4.5**
KSH				pP	pP	14 43 04.0	+13
KSH				sP	sP	14 43 08.0	+16
KSH				PcP	PcP	14 44 16.5	+4.1
KSH				PP	PP	14 44 48.5	+5.4
KSH				ScP	ScP	14 48 07.8	-0.3
KSH				PcS	PcS	14 48 11.5	+2.7
KSH				S	**S**	**14 49 57.5**	**+1.8**
KSH				sS	sS	14 50 14.0	+15
KSH				ScS	ScS	14 52 40.3	-1.7
KSH				SS	SS	14 53 25.5	-1.3
KSH				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.7						
KSH				pmax	pmax		
	comp=Z,45nm,7.0s						
KSH				LR	LR		
	comp=N,180nm,10.7s						
KSH				LR	LR		
	comp=E,120nm,8.0s						
KSH				LR	LR		
	comp=Z,160nm,4.7s						
AML	**Almayashu**	**49.96**	**297**	*e*P	**P**	**14 42 55.3**	**+0.5**
	comp=Z,286nm,1.2s						
SVE	**Sverdlovsk**	**53.53**	**318**	⇑*e*P	**P**	**14 43 21.4**	**+0.1**
SVE				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.0						
SVE				MLR	MLR		
	comp=Z,334nm,15.0s,MS4.5						
ARU	**Arti**	**54.74**	**318**	*c i* P	**P**	**14 43 29.5**	**-0.6**
ARU				*e*		14 45 29.4	
ARU				*e*PPP		14 46 39.8	
ARU				S	**S**	**14 51 07.6**	**-3.1**
ARU				SS	SS	14 54 48.2	-4.9
ARU				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
ARU				MLR	MLR		
	comp=Z,274nm,16.0s,MS4.4						
ARU	**Arti**	**54.74**	**318**	*e*P	**P**	**14 43 29.0**	**-1.1**
	comp=Z,35nm,1.3s,mb5.2						
KBL	**Kabul**	**56.33**	**290**	*e*P	**P**	**14 43 42.1**	**+0.2**
KBL				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
KBL	**Kabul**	**56.33**	**290**	*e*P	**P**	**14 43 42.1**	**+0.2**
	comp=Z,5.6nm,0.8s,mb4.7						
FITZ	**Fitzroy Crossi**	**58.29**	**197**	P	**P**	**14 43 55.8**	**+0.1**
	comp=Z,4.6nm,0.9s,mb4.5,baz=24,slow=10,SNR=4.4						
WRAB	**Tennant Creek**	**58.67**	**187**	*e*P	**P**	**14 43 55.9**	**-2.5**
WRAB				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.9						
WRAB	**Tennant Creek**	**58.67**	**187**	*e*P	**P**	**14 43 55.9**	**-2.5**
	comp=Z,16nm,1.3s,mb4.9						
WRA	**Warramunga Arr**	**58.68**	**187**	P	**P**	**14 43 57.4**	**-1.0**
	comp=Z,2.8nm,0.5s,mb4.6,baz=4.4,slow=7.4,SNR=53						
ARCES	**ARCESS Array B**	**62.22**	**339**	P	**P**	**14 44 21.6**	**-0.5**
	comp=Z,2.2nm,0.7s,mb4.4,baz=57,slow=8.8,SNR=9.1						
ASAR	**Alice Springs**	**62.41**	**187**	P	**P**	**14 44 23.1**	**-0.7**
	comp=Z,2.7nm,0.9s,mb4.4,baz=356,slow=4.6,SNR=23						
MOS	**Moscow**	**65.57**	**323**	*e*P	**P**	**14 44 38.9**	**-5.5**
NLWA	**

comp=Z,6.9nm,0.8s,mb4.7,baz=92,slow=9.5,SNR=11
FINES LR LR 15 19 16.8
comp=Z,83nm,18.1s,MS4.0,baz=89,slow=40
FINES FINESS Array B 67.06 332 P **P** **14 44 52.7 -1.1**
FINES LR LR 15 19 16.8
VSR Storozhevoye 67.31 318 *e*P **P** **14 44 54.6 -1.0**
VSR *e* 14 47 22.6
VSR pmax pmax
comp=N,10.0nm,1.2s
VSR pmax pmax
comp=E,20nm,1.2s
VSR pmax pmax
comp=Z,20nm,1.2s,mb5.0
VSR pmax pmax
comp=N,130nm,4.3s
VSR pmax pmax
comp=Z,130nm,4.3s
VSR pmax pmax
comp=E,6.0nm,0.4s
VSR MLR MLR
comp=N,290nm,17.0s,MS4.6
VSR MLR MLR
comp=E,180nm,17.0s,MS4.6
VSR MLR MLR
comp=Z,370nm,17.0s,MS4.7
SUMG Summit 68.98 360 *e*P **P** **14 45 08.4 +2.7**
comp=Z,98nm,2.7s,mb5.3
ZEI Tsey 69.33 309 *e*P **P** **14 45 06.6 -1.8**
ZEI pmax pmax
comp=Z,7.0nm,0.4s,mb4.9
KIV Kislovodsk 69.40 310 *e*P **P** **14 45 09.4 +0.6**
KIV pmax pmax
comp=Z,23nm,0.9s,mb5.1
KIV MLR MLR
comp=Z,80nm,18.0s,MS4.0
KIV Kislovodsk 69.40 310 *e*P **P** **14 45 08.8 +0.1**
comp=Z,39nm,1.2s,mb5.2
STKA Stephens Creek 70.26 179 P **P** **14 45 15.1 +1.1**
comp=Z,2.7nm,0.8s,mb4.2,baz=348,slow=9.3,SNR=3.0
GNI Garni 70.28 306 ⇓*i*P **P** **14 45 15.1 +0.9**
GNI pmax pmax
comp=Z,18nm,1.7s
WALA Waterton Lakes 70.53 42 *e*P **P** **14 45 16.2 +0.6**
comp=Z,0.3nm,0.9s
BMO Blue Mountains 71.16 47 *e*P **P** **14 45 20.3 +0.8**
comp=Z,5.8nm,1.5s,mb4.3
SWMT Swartz Lake 71.41 44 *e*P **P** **14 45 21.7 +0.7**
WVOR Wild Horse Val 71.80 50 *e*P **P** **14 45 22.9 -0.5**
WVOR pmax pmax
comp=Z,8.0nm,1.4s,mb4.5
WVOR Wild Horse Val 71.80 50 *e*P **P** **14 45 22.9 -0.6**
comp=Z,7.6nm,1.4s,mb4.4
SLMT Seeley Lake 71.85 44 *e*P **P** **14 45 24.0 +0.4**
NB2 NORSAR Subarra 72.41 337 P **P** **14 45 25.9 -0.9**
comp=Z,2.2nm,0.8s,mb4.1,baz=38,slow=6.2
NOA NORSAR Array B 72.41 337 P **P** **14 45 26.2 -0.6**
comp=Z,5.3nm,1.0s,mb4.4,baz=38,slow=5.8,SNR=9.3
FFC Flin Flon 72.55 33 *i*P **P** **14 45 28.0 +0.3**
FFC Flin Flon 72.55 33 *e*P **P** **14 45 27.4 -0.4**
comp=Z,7.5nm,1.2s,mb4.5
AKASG Malin Array Be 72.63 322 P **P** **14 45 27.6 -0.7**
comp=Z,2.1nm,0.3s,mb4.5,baz=44,slow=6.4,SNR=18
AKASG Malin Array Be 72.63 322 *i*P **P** **14 45 24.8 -3.5**
AKASG pmax pmax
comp=Z,2.0nm,0.3s
AKBB Malin Array Si 72.63 322 *e*P **P** **14 45 26.7 -1.6**
KIEV Kiev 72.64 322 *e*P **P** **14 45 26.7 -1.6**
KIEV pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
KIEV Kiev 72.64 322 *e*P **P** **14 45 26.7 -1.6**
comp=Z,8.5nm,0.8s,mb4.7
PAHR Pah Rah Range 72.95 53 *e*P **P** **14 45 31.7 +1.4**
comp=Z,17nm,1.3s,mb4.8
LRM Limekiln Ridge 73.29 44 *e*P **P** **14 45 33.0 +0.7**
DLMT Dillon 73.50 45 *e*P **P** **14 45 34.3 +0.8**
comp=Z,11nm,1.2s,mb4.7
HLID Hailey 73.59 47 *e*P **P** **14 45 35.1 +1.0**
comp=Z,2.2nm,0.9s,mb4.1
BOZ Bozeman (W) 73.85 44 *e*P **P** **14 45 36.5 +0.9**
BOZ pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
BOZ Bozeman (W) 73.85 44 *e*P **P** **14 45 36.5 +0.9**
comp=Z,10nm,1.4s,mb4.6
NVAR Mina Array Bea 74.39 53 P **P** **14 45 39.5 +0.7**
comp=Z,2.1nm,0.9s,mb4.1,baz=285,slow=5.8,SNR=14
RDF Al-Radifah 74.83 295 *e*P **P** **14 45 40.8 -0.8**
RDF AMb AMB 14 45 42.2
comp=Z,36nm,1.1s,mb5.2
NAY Al-Naaiem 74.86 295 *e*P **P** **14 45 40.4 -1.3**
NAY AMb AMB 14 45 42.3
comp=Z,8.8nm,0.8s,mb4.7
M13A Montello 75.10 49 *e*P **P** **14 45 44.0 +1.1**
comp=Z,21nm,0.3s,mb5.5
IMW Indian Meadow 75.34 45 *e*P **P** **14 45 45.9 +1.6**
comp=Z,7.7nm,1.3s,mb4.5
KWP Kalwaria Pacla 76.44 324 *e*P **P** **14 45 50.6 +0.2**
KWP pmax pmax
comp=Z,13nm,0.9s,mb4.9
KWP Kalwaria Pacla 76.44 324 *e*P **P** **14 45 50.5 +0.1**
comp=Z,13nm,0.9s,mb4.9
HWUT Hardware Ranch 76.46 47 *e*P **P** **14 45 51.8 +1.1**
comp=Z,20nm,1.5s,mb4.8
DUG Dugway 76.63 49 *e*P **P** **14 45 52.8 +1.1**
DUG pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
DUG Dugway 76.63 49 *e*P **P** **14 45 52.8 +1.1**
comp=Z,10nm,1.3s,mb4.6
BUR08 Bucovina Ar. S 76.64 321 *e*P **P** **14 45 51.5 0.0**
BURAR Bucovina Array 76.65 321 ⇑P **P** **14 45 51.6 -0.1**
BURAR Bucovina Array 76.65 321 ⇑*i*P **P** **14 45 51.6 -0.1**
BW06 Boulder Array 76.84 45 *e*P **P** **14 45 53.2 +0.3**
comp=Z,3.8nm,1.0s,mb4.3
PDAR Pinedale Array 76.84 45 P **P** **14 45 53.1 +0.3**
comp=Z,2.3nm,0.8s,mb4.2,baz=302,slow=2.8,SNR=12
VRI Vrincioaia 77.09 319 ⇓P **P** **14 45 55.3 +1.1**
VRI Vrincioaia 77.09 319 ⇓*i*P **P** **14 45 55.3 +1.1**
STHS Stebnicka Huta 77.27 324 *e*P **P** **14 45 56.2 +1.1**
STHS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
STHS Stebnicka Huta 77.27 324 *e*P **P** **14 45 56.2 +1.1**
comp=Z,2.8nm,0.9s,mb4.2
STHS Stebnicka Huta 77.27 324 *e*P **P** **14 45 56.2 +1.1**
OJC Ojcow 77.33 326 *e*P **P** **14 45 53.6 -1.9**
CRVS Cervenica-Dubn 77.53 324 *e*P **P** **14 45 57.5 +0.9**
CRVS pmax pmax
comp=Z,49nm,2.6s,mb5.0
CRVS Cervenica-Dubn 77.53 324 *e*P **P** **14 45 57.5 +0.9**
comp=Z,49nm,2.6s,mb5.0
CRVS Cervenica-Dubn 77.53 324 *e*P **P** **14 45 57.5 +0.9**
TRPA Tarpa 77.58 323 ⇑*i*P **P** **14 45 57.3 +0.4**
NIE Niedzica 77.69 325 *e*P **P** **14 45 58.2 +0.8**
MLR Muntele Rosu 77.75 319 ⇓P **P** **14 45 58.6 +0.7**
MLR Muntele Rosu 77.75 319 ⇓*i*P **P** **14 45 58.5 +0.6**
MSU Marysvale 78.09 50 *e*P **P** **14 46 01.6 +1.7**
KECS Kecovo 78.29 324 *e*P **P** **14 46 01.3 +0.5**
KECS pmax pmax
comp=Z,3.0nm,1.3s,mb4.1
KECS Kecovo 78.29 324 *e*P **P** **14 46 01.3 +0.5**
comp=Z,2.8nm,1.3s,mb4.0
KECS Kecovo 78.29 324 *e*P **P** **14 46 01.3 +0.5**
MORC Moravsky Berou 78.65 326 *e*P **P** **14 46 02.6 -0.2**
MORC pmax pmax
comp=Z,14nm,1.3s,mb4.7
MORC Moravsky Berou 78.65 326 *e*P **P** **14 46 02.6 -0.2**
comp=Z,14nm,1.3s,mb4.7
SRU San Rafael 78.68 49 *e*P **P** **14 46 04.0 +0.8**
SRU pmax pmax
comp=Z,8.0nm,1.3s,mb4.5
SRU San Rafael 78.68 49 *e*P **P** **14 46 04.0 +0.8**
comp=Z,8.2nm,1.3s,mb4.5
PSZ Piszkesteto 78.97 324 ⇓P **P** **14 46 05.1 +0.5**
PSZ Piszkesteto 78.97 324 ⇓*i*P **P** **14 46 05.1 +0.5**
VYHS Vyhne 79.03 325 *e*P **P** **14 46 04.7 -0.2**
VYHS pmax pmax
comp=Z,5.0nm,1.5s,mb4.2
VYHS Vyhne 79.03 325 *e*P **P** **14 46 04.7 -0.2**
comp=Z,4.7nm,1.5s,mb4.2
VYHS Vyhne 79.03 325 *e*P **P** **14 46 04.7 -0.2**
KOLL Kolacno 79.16 325 *e*P **P** **14 46 07.3 +1.7**
KOLL Kolacno 79.16 325 *e*P **P** **14 46 07.3 +1.7**
BRG Berggiesshubel 79.32 329 *e*(P) **P** **14 46 06.1 -0.4**
comp=Z,6.5nm,1.3s,mb4.4
CLL Collm 79.36 330 *i*P **P** **14 46 05.7 -0.9**
CLL pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
CLL Collm 79.36 330 *i*P **P** **14 46 05.7 -0.9**
comp=Z,6.0nm,1.0s,mb4.5
VRAC Vranov 79.41 327 ⇓⇓P **P** **14 46 08.1 +1.2**
VRAC Vranov 79.41 327 ⇓⇓*i*P **P** **14 46 08.1 +1.2**
GZR Gura Zlata 79.41 321 ⇓⇓P **P** **14 46 07.2 +0.2**
GZR Gura Zlata 79.41 321 ⇓⇓*i*P **P** **14 46 07.2 +0.2**
BZS Buzias 79.82 321 ⇓⇓P **P** **14 46 09.1 -0.2**
BZS Buzias 79.82 321 ⇓⇓*i*P **P** **14 46 09.1 -0.2**
MOX Moxa 80.42 330 *e*P **P** **14 46 11.5 -0.9**
WUAZ Wupatki 80.52 52 *e*P **P** **14 46 14.5 +1.2**
comp=Z,4.4nm,0.8s,mb4.4
MMAI Mount Meron Ar 80.56 305 LR LR 15 25 32.7
comp=Z,69nm,19.1s,MS4.0,baz=30,slow=38
CONA Conrad Observa 80.77 326 ⇑⇑*i*P **P** **14 46 15.5 +1.2**
comp=Z,7.5nm,1.2s,mb4.5
VTS Vitosha 81.19 319 ⇓⇓P **P** **14 46 17.0 +0.3**
VTS Vitosha 81.19 319 ⇓⇓*i*P **P** **14 46 17.0 +0.3**
GRA1 Grafenberg Arr 81.33 330 *e*P **P** **14 46 17.2 -0.1**
comp=Z,12nm,1.4s,mb4.6
GRF Grafenberg Arr 81.33 330 *e*P **P** **14 46 17.2 -0.1**
comp=Z,12nm,1.4s,mb4.6
GRF Grafenberg Arr 81.33 330 *e*P **P** **14 46 17.2 -0.1**
GRF pmax pmax
comp=Z,12nm,1.4s,mb4.6
GRF Grafenberg Arr 81.33 330 *e*P **P** **14 46 17.2 -0.1**
GRF pmax pmax
comp=Z,12nm,1.4s,mb4.6
SOKA Soboth 82.09 326 ⇑⇑*i*P **P** **14 46 21.1 -0.3**
comp=Z,12nm,1.2s,mb4.7
KBA Koelnbreinsper 82.51 327 ⇑⇑*i*P **P** **14 46 24.7 +1.2**
comp=Z,5.9nm,1.1s,mb4.5
SDCO Great Sand Dun 82.51 47 *e*P **P** **14 46 24.5 +0.7**
comp=Z,20nm,2.3s,mb4.7
ECSD EROS Data Cent 82.90 38 *e*P **P** **14 46 25.8 +0.2**
comp=Z,8.3nm,0.9s,mb4.8
GIVF Givet 83.40 333 *e*P **P** **14 46 27.4 -0.7**
BAIF Baives 83.65 334 *e*P **P** **14 46 28.7 -0.7**
FETA Feichten 83.66 328 ⇑⇑*i*P **P** **14 46 29.3 -0.2**
comp=Z,6.8nm,1.1s,mb4.7
CDF Champ du Feu 83.90 331 *e*P **P** **14 46 30.3 -0.4**
comp=Z,7.7nm,0.8s,mb4.6
CDF Champ du Feu 83.90 331 *e*P **P** **14 46 30.3 -0.4**
CDF pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
CDF Champ du Feu 83.90 331 *e*P **P** **14 46 30.3 -0.4**
comp=Z,3.8nm,0.8s,mb4.6
HINF Hinteralfeld 84.55 331 *e*P **P** **14 46 33.1 -0.9**
CABF La Chapelle 85.84 331 *e*P **P** **14 46 39.8 -0.7**
LOR Lormes 86.13 332 *e*P **P** **14 46 41.2 -0.7**
LOR *e*MLR MLR
comp=Z,75nm,22.5s,MS3.7
LOR Lormes 86.13 332 *e*P **P** **14 46 41.2 -0.7**
LOR LR LR
comp=Z,70nm,22.5s,MS4.0
LDF La Druitiere 86.37 335 *e*P **P** **14 46 42.2 -0.9**
SSF Saint Saulge 86.43 332 *e*P **P** **14 46 43.0 -0.4**
LPL La Plagne 86.50 330 *e*P **P** **14 46 43.4 -0.4**
LPG La Plagne 86.50 330 *e*P **P** **14 46 43.5 -0.3**
SMF Signal de Mont 86.66 332 *e*P **P** **14 46 44.0 -0.5**
AVF Avril sur Loir 86.72 332 *e*P **P** **14 46 44.2 -0.6**
comp=Z,18nm,1.0s,mb5.0
AVF Avril sur Loir 86.72 332 *e*P **P** **14 46 44.2 -0.6**
AVF pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
AVF Avril sur Loir 86.72 332 *e*P **P** **14 46 44.2 -0.6**
comp=Z,9.3nm,1.0s,mb5.0
GRR Gorron 86.79 336 *e*P **P** **14 46 44.6 -0.5**
comp=Z,27nm,1.1s,mb5.1
GRR Gorron 86.79 336 *e*P **P** **14 46 44.6 -0.5**
GRR pmax pmax
comp=Z,14nm,1.1s,mb5.1
GRR Gorron 86.79 336 *e*P **P** **14 46 44.6 -0.5**
comp=Z,14nm,1.1s,mb5.1
TCF Toulx Ste Croi 87.56 333 *e*P **P** **14 46 48.7 -0.2**
ROSF Rostrenen 87.60 337 *e*P **P** **14 46 48.8 -0.2**
MFF Saint Martin d 88.11 334 *e*P **P** **14 46 51.3 -0.2**
FRF La Foret Royal 88.15 329 *e*P **P** **14 46 51.8 0.0**
LMR La Mourre 88.39 328 *e*P **P** **14 46 52.1 -0.8**
RJF Les Rejaudoux 88.65 333 *e*P **P** **14 46 54.0 -0.1**
RJF *e*MLR MLR
comp=Z,94nm,20.2s,MS3.9
RJF Les Rejaudoux 88.65 333 *e*P **P** **14 46 54.0 -0.1**
RJF LR LR
comp=Z,90nm,20.3s,MS4.2
CAF Calviac 88.78 332 *e*P **P** **14 46 54.9 +0.2**
LASF Ste Croix 88.83 330 *e*P **P** **14 46 54.3 -0.7**
TXAR Lajitas Array 89.49 52 P **P** **14 46 58.5 +0.2**
comp=Z,0.7nm,0.7s,mb4.1,baz=313,slow=2.8,SNR=7.5
ESDC Sonseca Array 95.53 333 LR LR 15 37 43.2
comp=Z,67nm,19.2s,MS4.1,baz=105,slow=40
LHS Liberty Hill 97.60 34 *e*P **P** **14 47 31.8 -3.8**
LPAZ La Paz 146.24 57 PKPbc PKPbc 14 53 41.8 -0.1
comp=Z,3.4nm,0.5s,baz=0.3,slow=4.2,SNR=15

*ISCJB **26** 15:00:37.8±0.8, 38°.84N±0°.03×25°.62E±0°.06, h6km±14km, Error ellipse: s-maj=7.5km s-min=4.7km az=159.6*
*CSEM **26** 15:00:38.1±0.2, 38°.82N×25°.59E, h2km, MD3.0, Error ellipse: s-maj=4.6km s-min=3.4km az=55.0*
*DDA **26** 15:00:38.2, 38°.87N×25°.70E, h7km±4km, Md3.0*
*THE **26** 15:00:38.6, 38°.83N×25°.63E, h7km±5km, Error ellipse: s-maj=5.6km s-min=0.7km az=80.0*

ISC 26 15:00:38.4±0.8, 38°.83N±0°.03×25°.61E±0°.06, h10km±11km, n17, σ0s59/32, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.42**	**27**	P	**Pg**	**15 00 46.9**	**+0.1**
SIGR				S	**Sg**	**15 00 53.6**	**+1.2**
SIGR	**SIGRI**	**0.42**	**27**	P	**Pg**	**15 00 46.9**	**+0.1**
SIGR				S	**Sg**	**15 00 53.6**	**+1.2**
CHOS	**Chios island**	**0.56**	**142**	P	**Pg**	**15 00 49.1**	**-0.3**
CHOS				S	**Sg**	**15 00 57.2**	**+0.4**
CHOS	**Chios island**	**0.56**	**142**	P	**Pg**	**15 00 49.1**	**-0.3**
CHOS				S	**Sg**	**15 00 57.2**	**+0.4**
PRK	**Paraskevi**	**0.66**	**51**	P	**Pg**	**15 00 50.9**	**-0.3**
PRK				S	**Sg**	**15 01 00.3**	**+0.4**
PRK	**Paraskevi**	**0.66**	**51**	P	**Pg**	**15 00 50.9**	**-0.3**
PRK				S	**Sg**	**15 01 00.3**	**+0.4**
URLA	**Izmir**	**0.91**	**121**	*e*P	**Pg**	**15 00 55.8**	**0.0**
URLA				*e*S	**Sg**	**15 01 08.1**	**+0.5**
URLA	**Izmir**	**0.91**	**121**	*e*P	**Pg**	**15 00 55.8**	**-0.1**
URLA				*e*S	**Sg**	**15 01 08.1**	**+0.5**
AYVA	**Ayvalik**	**0.97**	**60**	*e*P	**Pg**	**15 00 55.8**	**-1.3**
AYVA				*e*S	**Sg**	**15 01 09.9**	**+0.2**
AYVA	**Ayvalik**	**0.97**	**60**	*e*P	**Pg**	**15 00 55.8**	**-1.2**
AYVA				*e*S	**Sg**	**15 01 09.9**	**+0.3**
BOZC	**Bozcaada**	**1.07**	**19**	*e*P	**Pg**	**15 00 58.0**	**-0.9**
BOZC				*e*S	**Sg**	**15 01 12.7**	**-0.2**
LIA	**Limnos Island**	**1.11**	**343**	P	**Pg**	**15 00 59.7**	**-0.2**
LIA				S	**Sg**	**15 01 14.9**	**+0.5**
LIA	**Limnos Island**	**1.11**	**343**	P	**Pg**	**15 00 59.7**	**-0.2**
LIA				S	**Sg**	**15 01 14.9**	**+0.5**
AOS	**Alonnisos**	**1.39**	**285**	P	**Pn**	**15 01 03.9**	**0.0**
AOS	**Alonnisos**	**1.39**	**285**	P	**Pn**	**15 01 03.9**	**0.0**
BALY	**Balya**	**1.81**	**59**	*e*P	**Pn**	**15 01 10.2**	**+0.5**
BALY				*e*S	**Sg**	**15 01 35.7**	**-0.8**
BALY	**Balya**	**1.81**	**59**	*e*P	**Pn**	**15 01 10.2**	**+0.6**
BALY				*e*S	**Sg**	**15 01 35.7**	**-0.8**

*ISCJB **26** 15:02:15.0±0.6, 16°.96N±0°.03×43°.8E±0°.1, h10km, Error ellipse: s-maj=17.2km s-min=3.4km az=167.8*
*SGS **26** 15:02:17.0, 16°.89N×43°.67E, h14km*
*CSEM **26** 15:02:17.0±0.3, 16°.90N×43°.31E, h2km, ML3.9, Error ellipse: s-maj=12.7km s-min=5.8km az=72.0*
*DHMR **26** 15:02:18.9±1.6, 16°.38N×42°.65E, h16km±9km, ML3.6*

ISC 26 15:02:14.6±0.7, 16°.98N±0°.03×43°.82E±0°.09, h2km±7km, n16, σ0s93/26, 2D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJNS	**Zahran al Janu**	**0.77**	**340**	S	**Sg**	**15 02 39.3**	**+0.1**
DJNS	**Zahran al Janu**	**0.77**	**340**	P	**Pg**	**15 02 29.7**	**+0.5**
HAJJ	**Hajjah**	**1.29**	**190**	⇓*i*P	**Pg**	**15 02 39.8**	**+0.4**
HAJJ				*i*S	**Sg**	**15 02 56.2**	**+0.1**
HAJJ				AML	AML	15 03 01.4	
comp=N,2μm,0.3s							
HAJJ	**Hajjah**	**1.29**	**190**	⇓*i*P	**Pg**	**15 02 39.8**	**+0.4**
HAJJ				*i*S	**Sg**	**15 02 56.2**	**+0.1**
FRSS	**Farasan al Kab**	**1.65**	**262**	P	**Pn**	**15 02 39.6**	**-4.9**
FRSS	**Farasan al Kab**	**1.65**	**262**	P	**Pn**	**15 02 39.6**	**-5.0**
WBHS	**Wadi 'Ibn Hash**	**1.92**	**327**	P	**Pn**	**15 02 48.4**	**+0.1**
WBHS	**Wadi 'Ibn Hash**	**1.92**	**327**	P	**Pn**	**15 02 48.4**	**+0.1**
WBHS				S	**Sn**	**15 03 11.9**	**-1.2**
DHBB	**Dhamar BB**	**2.46**	**167**	*i*P	**Pg**	**15 03 01.5**	**-0.2**
DHBB				*i*S	**Sg**	**15 03 34.5**	**+0.9**
DHBB	**Dhamar BB**	**2.46**	**167**	*i*P	**Pg**	**15 03 01.5**	**-0.2**
DHBB				*i*S	**Sg**	**15 03 34.5**	**+0.9**
TATS	**Tathlith**	**2.57**	**353**	P	**Pb**	**15 03 00.9**	**-0.4**
TATS	**Tathlith**	**2.57**	**353**	P	**Pb**	**15 03 00.9**	**-0.5**
TATS				S	**Sb**	**15 03 34.0**	**+0.6**
UDYN	**Al 'Udayn**	**3.00**	**177**	*i*P	**Pb**	**15 03 05.8**	**-3.0**
UDYN				*i*S	**Sn**	**15 03 40.2**	**+0.6**
UDYN				AML	AML	15 03 53.5	
comp=Z,153nm,0.3s							
UDYN	**Al 'Udayn**	**3.00**	**177**	*i*P	**Pb**	**15 03 05.8**	**-2.9**
UDYN				*i*S	**Sn**	**15 03 40.2**	**+0.6**
LBOS		**3.38**	**156**	*i*P	**Pb**	**15 03 16.4**	**+1.1**
LBOS				*i*S	**Sg**	**15 04 01.7**	**-1.6**
BDHA	**Al Bayda'**	**3.43**	**150**	*i*P	**Pb**	**15 03 17.3**	**+1.3**
BDHA				*i*S	**Sg**	**15 04 04.1**	**-0.7**
BDHA				AML	AML	15 04 14.5	
comp=E,304nm,0.5s							

*ISCJB **26** 15:09:31.8±4.7, 29°.2S±0°.1×175°.8W±0°.1, h15km±38km, mb4.4/8, Error ellipse: s-maj=21.7km s-min=14.1km az=138.4*
*NEIC **26** 15:09:34.9±1.0, 29°.08S×175°.96W, h10km, mb4.7/4, Error ellipse: s-maj=27.7km s-min=11.5km az=118.0*
*IDC **26** 15:09:34.4±1.3, 28°.94S×176°.22W, h0km, mb4.2/5, mb1 4.4/8, mb1mx4.1/20, mbtmp4.3/8, ML3.5/3, MS3.4/1, Ms1 3.4/1, ms1mx2.7/23, Error ellipse: s-maj=32.3km s-min=27.4km az=116.0*

ISC 26 15:09:36.6±1.7, 29°.19S±0°.10×175°.8W±0°.1, h35km±15km, n20, σ1s01/21, mb4.4/8, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.89**	**268**	Pn	**Pn**	**15 10 08.8**	**+2.4**
591nm,0.3s,baz=101,slow=22,SNR=48							
RAO				Sn	**Sn**	**15 10 28.2**	**-0.8**
7μm,0.3s,baz=81,slow=19,SNR=46							
URZ	**Urewera**	**10.82**	**211**	Pn	**Pn**	**15 12 08.8**	**-0.1**
0.4nm,0.3s,baz=316,slow=23,SNR=7.3							
URZ				Sn	**Sn**	**15 14 05.3**	**-3.4**
2.5nm,0.3s,baz=249,slow=22,SNR=13							
URZ	**Urewera**	**10.82**	**211**	Pn	**Pn**	**15 12 08.8**	**-0.1**
URZ				Sn	**Sn**	**15 14 05.3**	**-3.4**
URZ				*e*Sn	**Sn**	**15 14 05.6**	**-3.1**
AFI	**Afiamalu**	**15.64**	**14**	Pn	**Pn**	**15 13 13.8**	**-0.6**
2.5nm,0.3s,baz=355,slow=14,SNR=7.2							
AFI				Sn	Sx	15 15 54.2	
2.9nm,0.3s,baz=73,slow=19,SNR=4.2							
AFI				LR	LR	15 18 03.6	
comp=Z,132nm,18.8s,baz=158,slow=33							
AFI	**Afiamalu**	**15.64**	**14**	P	**Pn**	**15 13 13.3**	**-1.1**
58nm,1.0s							
AFI				Sn	Sx	15 15 54.2	
AFI				LR	LR	15 18 03.6	
RPZ	**Rata Peaks**	**17.93**	**213**	Pn	**Pn**	**15 13 43.4**	**+0.3**
0.7nm,0.3s,baz=28,slow=17,SNR=4.2							
RPZ				Sn	Sx	15 16 47.3	
0.5nm,0.3s,baz=123,slow=17,SNR=4.8							
CTA	**Charters Tower**	**35.58**	**276**	P	**P**	**15 16 31.2**	**+0.5**
1.8nm,0.3s,mb4.4,baz=52,slow=6.1,SNR=4.3							
CTA	**Charters Tower**	**35.58**	**276**	P	**P**	**15 16 31.2**	**+0.4**
STKA	**Stephens Creek**	**36.67**	**255**	P	**P**	**15 16 39.8**	**-0.2**
1.3nm,0.6s,mb4.0,baz=97,slow=8.1,SNR=3.6							
ASAR	**Alice Springs**	**45.15**	**265**	P	**P**	**15 17 49.6**	**-0.2**
2.5nm,0.5s,mb4.3,baz=106,slow=7.5,SNR=57							
WRAB	**Tennant Creek**	**46.02**	**270**	*e*P	**P**	**15 17 55.9**	**-1.0**
4.8nm,0.9s,mb4.4							
WRA	**Warramunga Arr**	**46.03**	**270**	P	**P**	**15 17 56.2**	**-0.7**
1.4nm,0.4s,mb4.2,baz=109,slow=6.4,SNR=20							
WRA	**Warramunga Arr**	**46.03**	**270**	P	**P**	**15 17 56.2**	**-0.7**
CASY	**Casey**	**57.12**	**208**	*e*P	**P**	**15 19 23.9**	**+4.8**
7.9nm,1.0s,mb4.7							
MBWA	**Marble Bar**	**58.31**	**262**	*e*P	**P**	**15 19 29.0**	**+0.7**
QSPA	**South Pole Qui**	**60.92**	**180**	P	**P**	**15 19 51.5**	**+6.2**
2.7nm,1.0s,mb4.3,baz=319,slow=2.6,SNR=5.7							
KKM	**Kota Kinabalu**	**74.06**	**286**	*e*P	**P**	**15 21 10.4**	**+1.1**
8.8nm,0.7s,mb4.8							
FINES	**FINESS Array B**	**144.64**	**342**	PKP	PKPdf	15 29 09.9	+1.2
1.2nm,0.5s,baz=67,slow=5.0,SNR=4.7							
NOA	**NORSAR Array B**	**147.81**	**354**	PKPbc	PKPbc	15 29 18.5	+1.5
1.9nm,0.7s,baz=12,slow=4.5,SNR=5.4							
AKASG	**Malin Array Be**	**151.46**	**326**	PKPbc	PKPbc	15 29 28.9	+2.6
1.4nm,0.5s,baz=39,slow=3.1,SNR=4.8							

IDC 26 15:10:00.7±1.3, 31°.31N×104°.18E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/22, mbtmp3.6/4, Error ellipse: s-maj=48.3km s-min=26.4km az=56.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.51**	**66**	P	P	15 14 40.3	-0.1
0.7nm,0.8s,baz=256,slow=11,SNR=4.7							
KURK	**Kurchatov**	**27.12**	**323**	P	P	15 15 45.1	-0.1
0.3nm,0.3s,baz=129,slow=8.8,SNR=2.9							
WRA	**Warramunga Arr**	**58.61**	**146**	P	P	15 19 59.6	0.0
0.8nm,0.5s,baz=340,slow=7.9,SNR=7.8							
ASAR	**Alice Springs**	**61.63**	**149**	P	P	15 20 20.3	0.0
0.3nm,0.8s,baz=352,slow=6.0,SNR=3.7							

*ISCJB **26** 15:20:39.9±0.8, 31°.87N±0°.03×104°.41E±0°.05, h2km±5km, mb4.0/17, Error ellipse: s-maj=6.9km s-min=4.6km az=5.7*
*IDC **26** 15:20:41.4±0.8, 31°.78N×104°.23E, h0km, mb3.9/13, mb1 4.0/13, mb1mx3.9/25, mbtmp3.9/13, MS2.7/1, Ms1 2.7/1, ms1mx2.1/36, Error ellipse: s-maj=37.4km s-min=15.1km az=50.0*
*NEIC **26** 15:20:44.0±0.6, 32°.17N×104°.56E, h10km, mb4.2/7, Error ellipse: s-maj=17.5km s-min=9.6km az=53.0*
*BJI **26** 15:20:44.1, 31°.85N×104°.25E, h12km, mB4.5/2, mb4.0/3, ML3.7/19, Ms3.6/5, Ms7 3.3/5*

ISC 26 15:20:42.6±0.8, 31°.82N±0°.03×104°.34E±0°.05, h7km±5km, n38, σ1s08/48, mb4.0/17, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.04**	**209**	⇓*i*Pg	**Pg**	**15 21 02.0**	**-0.5**
CD2				Sg	**Sg**	**15 21 16.3**	**+0.3**
CD2				smax			
comp=N,6μm,0.6s							
CD2				smax			
comp=E,2μm,0.7s							
LZH	**Lanzhou**	**4.28**	**355**	Pg	**Pb**	**15 21 54.8**	**-3.3**
LZH				Sn	**Sn**	**15 22 43.5**	**+5.3**
LZH				Sg	**Sg**	**15 23 00.5**	**+0.6**
LZH				smax			
comp=N,130nm,0.5s							
LZH				smax			
comp=E,170nm,0.7s							
LZH				LR	LR		
comp=N,460nm,5.6s							
LZH				LR	LR		
comp=Z,550nm,7.6s							
XAN	**Xi'an**	**4.44**	**59**	Pg	**Pg**	**15 22 06.0**	**-1.7**
XAN				Sn	**Sn**	**15 22 48.5**	**+6.2**
XAN				Sg	**Sg**	**15 23 05.8**	**+0.6**
XAN				smax			
comp=N,200nm,0.9s							
XAN				smax			
comp=E,82nm,0.9s							
XAN				LR	LR		
comp=N,140nm,8.2s							
XAN				LR	LR		
comp=E,110nm,9.2s							
XAN				LR	LR		
comp=Z,100nm,9.0s							
ENH	**Enshi**	**4.68**	**108**	*e*Pn	**Pn**	**15 21 57.8**	**+4.2**
GYA	**Guiyang**	**5.72**	**159**	Pn	**Pn**	**15 22 10.0**	**+2.1**
GYA				Pg	**Pg**	**15 22 31

KMI smax
comp=E,31nm,0.8s
GTA Gaotai 8.42 335 *e*P **Pn 15 22 50.0 +5.0**
GTA pP 15 22 54.0
GTA sP 15 22 56.0
GTA S **Sn 15 24 20.0 -0.3**
GTA pmax pmax
comp=Z,2.0nm,1.1s
GTA pmax pmax
comp=Z,71nm,5.4s
GTA LR LR
comp=N,170nm,10.8s
GTA LR LR
comp=E,160nm,12.2s
GTA LR LR
comp=Z,150nm,10.8s
CHTO Chiang Mai 13.84 202 *e*Pn **Pn 15 24 06.8 +7.5**
CM31 Chiang Mai Arr 14.17 201 *e*Pn **Pn 15 24 12.0 +8.2**
comp=Z,5.1nm,0.5s
CMAR Chiang Mai Arr 14.17 201 Pn **Pn 15 24 05.8 +2.1**
comp=Z,0.0nm,0.3s,baz=28,slow=12,SNR=3.5
SONM Songino Array 16.07 5 Pn **Pn 15 24 32.1 +3.2**
comp=Z,0.1nm,0.3s,baz=184,slow=12,SNR=11
ULN Ulaanbaatar 16.16 7 *e*P **Pn 15 24 36.2 +6.1**
comp=Z,2.4nm,0.9s
YHNB Yeheng 16.60 111 P **Pn 15 24 34.9 -1.0**
KSRS Korea Array 20.18 67 P **P 15 25 18.9 +1.2**
comp=Z,1.6nm,0.7s,baz=256,slow=10,SNR=9.5
KSRS LR LR 15 34 21.7
comp=Z,21nm,18.6s,baz=160,slow=40
MK31 Makanchi Array 22.58 318 *e*P **P 15 25 43.4 -0.1**
MKAR Makanchi Array 22.58 318 P **P 15 25 43.7 +0.3**
comp=Z,1.5nm,0.7s,mb3.5,baz=118,slow=12,SNR=12
MKAR Makanchi Array 22.58 318 P **P 15 25 43.7 +0.3**
UCH Uchtor 25.86 302 *e*P **P 15 26 16.9 +2.1**
comp=Z,3.9nm,0.9s,mb3.9
ZAA0 Zalesovo Array 26.17 333 *e*P **P 15 26 16.4 -1.0**
ZALV Zalesovo Beam 26.17 333 P **P 15 26 17.9 +0.5**
comp=Z,2.4nm,0.7s,mb3.8,baz=143,slow=9.8,SNR=6.9
AML Almayashu 26.43 302 *e*P **P 15 26 19.8 -0.2**
comp=Z,2.7nm,0.8s,mb3.8
KURK Kurchatov 26.80 322 P **P 15 26 23.0 -0.1**
comp=Z,0.5nm,0.3s,mb3.5,baz=130,slow=8.7,SNR=5.7
KURK Kurchatov 26.80 322 P **P 15 26 22.3 -0.9**
comp=Z,5.2nm,1.2s,mb3.9
BVAR Borovoye Array 32.36 321 P **P 15 27 13.0 +0.5**
comp=Z,0.3nm,0.4s,mb3.5,baz=116,slow=6.6,SNR=2.7
BVAR PcP PcP 15 29 58.5 -1.5
comp=Z,0.4nm,0.5s,baz=144,slow=5.2,SNR=4.3
AKTK Aktyubinsk 38.80 312 P **P 15 28 07.8 0.0**
AKTO Aktyubinsk 38.80 312 P **P 15 28 07.8 0.0**
comp=Z,0.9nm,0.6s,mb3.7,baz=117,slow=15,SNR=3.7
ARU Arti 39.99 322 *e*P **P 15 28 17.9 +0.2**
comp=Z,3.7nm,0.7s,mb4.2
KIV Kislovodsk 49.09 303 P **P 15 29 29.3 -1.3**
comp=Z,5.6nm,0.6s,mb4.8
ARCES ARCESS Array B 56.69 336 P **P 15 30 26.2 -0.1**
comp=Z,2.4nm,0.9s,mb4.2,baz=72,slow=8.7,SNR=8.2
ARCES ARCESS Array B 56.64 316 P **P 15 30 26.2 -0.1**
AKASG Malin Array Be 57.05 313 P **P 15 30 28.1 -1.0**
comp=Z,0.6nm,0.4s,mb4.0,baz=70,slow=7.1,SNR=3.5
FINES FINESS Array B 57.09 326 P **P 15 30 28.6 -0.6**
comp=Z,1.8nm,0.6s,mb4.3,baz=76,slow=8.0,SNR=6.2
WRAB Tennant Creek 58.95 147 *e*P **P 15 30 42.9 +0.2**
comp=Z,7.3nm,1.0s,mb4.7
WRA Warramunga Arr 58.96 147 P **P 15 30 43.1 +0.4**
comp=Z,1.5nm,0.5s,mb4.2,baz=340,slow=7.6,SNR=11
ASAR Alice Springs 62.00 149 P **P 15 31 03.8 +0.3**
comp=Z,0.6nm,0.5s,mb4.0,baz=335,slow=6.5,SNR=25
NB2 NORSAR Subarra 64.17 327 P **P 15 31 16.3 -1.2**
comp=Z,0.6nm,0.5s,mb3.9,baz=73,slow=6.9
NOA NORSAR Array B 64.17 327 P **P 15 31 16.4 -1.1**
comp=Z,0.6nm,0.5s,mb3.9,baz=74,slow=6.8,SNR=4.5
YKA Yellowknife Ar 80.95 17 P **P 15 32 57.3 -0.1**
comp=Z,0.8nm,0.7s,mb3.8,baz=328,slow=4.8,SNR=4.3

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*IDC **26** 15:28:06.6±0.8, 11°.95N×125°.70E, h0km, mb4.3/16, mb1 4.4/16, mb1mx4.3/22, mbtmp4.3/16, MS3.4/4, Ms1 3.5/4, ms1mx2.9/25, Error ellipse: s-maj=45.6km s-min=12.1km az=69.0*
*MAN **26** 15:28:09, 12°.13N×125°.85E, h12km, mb5.3, ML4.3, MS4.5*
*ISCJB **26** 15:28:10.9±1.1, 12°.07N±0°.04×125°.91E±0°.09, h46km±8km, mb4.4/34, MS3.4/4, Error ellipse: s-maj=15.8km s-min=6.2km az=165.2*
*NEIC **26** 15:28:11.5±0.4, 12°.02N×125°.90E, h35km, mb4.4/10, Error ellipse: s-maj=13.7km s-min=5.8km az=79.0*
*BJI **26** 15:28:14.8, 12°.62N×125°.71E, h35km, mB4.7/3, mb4.3/8, Ms4.0/1, Ms7 3.8/1*
ISC 26 15:28:13.0±1.1, 12°.04N±0°.04×125°.88E±0°.10, h48km±8km, h23km±3.5km:pP-P,n77,σ1.9±05/77, mb4.4/34, MS3.4/4, 1C, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BESP	**Borongan**	**0.61**	**224**	*e*P	**Pn**	**15 28 22.3**	**-3.3**
CNP	**Catarman**	**1.27**	**292**	*e*P	**Pn**	**15 28 31.7**	**-2.8**
OCLP	**Ormoc**	**1.58**	**232**	*e*P	**Pn**	**15 28 37.7**	**-1.0**
MSLP	**Maasin**	**2.14**	**208**	*e*P	**Pn**	**15 28 46.1**	**-0.3**
PVCP	**Virac**	**2.28**	**313**	*e*P	**Pn**	**15 28 45.6**	**-2.6**
LLP	**Lapu-Lapu**	**2.54**	**228**	⇑*e*P	**Pn**	**15 28 50.2**	**-1.6**
LLP				*e*S	**Sn**	**15 29 24.6**	**+3.1**
TBP	**Tagbilaran**	**3.06**	**220**	*e*P	**Pn**	**15 28 57.8**	**-1.2**
BUTP	**Butuan**	**3.06**	**185**	*e*P	**Pn**	**15 29 00.7**	**+1.7**
AUQP	**San Andres**	**3.37**	**293**	*e*P	**Pn**	**15 29 05.1**	**+1.8**
GUIM	**Jordan**	**3.52**	**247**	*e*P	**Pn**	**15 29 04.3**	**-0.9**
SNPH	**Sibulan**	**3.73**	**224**	*e*P	**Pn**	**15 29 10.4**	**+2.3**
CGP	**Cagayan de Oro**	**3.75**	**198**	*e*P	**Sn**	**15 29 45.0**	**-6.3**
BUKP	**Musuan**	**4.21**	**191**	*e*P	**Pn**	**15 29 16.5**	**+1.7**
SJMP	**San Jose**	**4.67**	**276**	*e*P	**Pn**	**15 29 23.0**	**+2.0**
POLP	**Polillo Island**	**4.67**	**305**	*e*P	**Pn**	**15 29 25.8**	**+4.7**
PAGZ	**Pagadian**	**4.91**	**257**	*e*P	**Pn**	**15 29 23.7**	**+0.3**
CUYO	**Cuyo Island**	**4.91**	**257**	*e*P	**Pn**	**15 29 24.6**	**+0.3**
IPIL	**Ipil**	**5.33**	**218**	*e*P	**Pn**	**15 29 30.9**	**+0.7**
BUSP	**Coron**	**5.55**	**270**	*e*P	**Pn**	**15 29 33.0**	**-0.2**
BALP	**Baler**	**5.56**	**312**	*e*P	**Pn**	**15 29 32.9**	**-0.4**
LUBP	**Lubang**	**5.74**	**288**	*e*P	**Pn**	**15 29 38.4**	**+2.7**
PALP	**Palanan**	**6.01**	**327**	*e*P	**Pn**	**15 29 44.2**	**+4.8**
CAUP	**Cauayan**	**6.26**	**322**	*e*P	**Pn**	**15 29 41.3**	**-1.5**
APYP	**Conner**	**7.32**	**323**	*e*P	**Pn**	**15 29 57.4**	**0.0**
KAPI	**Kappang**	**18.00**	**200**	P	**Pn**	**15 32 19.4**	**-0.5**
	0.3nm,0.3s,baz=79,slow=17,SNR=2.4						
KSM	**Kuching**	**18.67**	**237**	*e*P	**Pn**	**15 32 27.4**	**-0.6**
	6.0nm,0.6s						
ENH	**Enshi**	**23.66**	**323**	*e*P	**P**	**15 33 20.1**	**-0.1**
	9.2nm,0.8s,mb4.3						
CMAR	**Chiang Mai Arr**	**26.73**	**287**	P	**P**	**15 33 46.9**	**-1.4**
	2.5nm,0.8s,mb3.8,baz=95,slow=7.5,SNR=15						
CMAR				LR	LR	15 44 49.2	
	comp=Z,46nm,21.5s,MS3.0,baz=80,slow=38						
MJAR	**Matsushiro Arr**	**26.80**	**22**	LR	LR	15 42 39.7	
	comp=Z,103nm,18.8s,MS3.4,baz=215,slow=32						
XAN	**Xi'an**	**26.80**	**328**	P	**P**	**15 33 49.3**	**+0.6**
XAN				pP	pP	15 33 56.5	-4.7
XAN				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.6						
FITZ	**Fitzroy Crossi**	**29.95**	**180**	P	**P**	**15 34 16.2**	**-0.6**
	comp=Z,6.5nm,1.1s,mb4.3,baz=9.5,slow=6.1,SNR=4.5						
WRA	**Warramunga Arr**	**32.86**	**165**	P	**P**	**15 34 42.2**	**-0.2**
	comp=Z,1.3nm,0.8s,mb3.9,baz=347,slow=11,SNR=3.2						
WRA				PcP	PcP	15 37 27.2	+0.7
	comp=Z,0.6nm,0.6s,baz=340,slow=3.0,SNR=5.6						
WRA	**Warramunga Arr**	**32.86**	**165**	P	**P**	**15 34 42.2**	**-0.2**
WRA				PcP	PcP	15 37 27.2	+0.7
GTA	**Gaotai**	**35.72**	**324**	*e*P	**P**	**15 35 07.5**	**+0.5**
GTA				pP	pP	15 35 12.8	-7.0
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
ASAR	**Alice Springs**	**36.35**	**168**	P	**P**	**15 35 11.7**	**-0.9**
	comp=Z,0.4nm,0.4s,mb3.8,baz=353,slow=7.4,SNR=20						
ASAR				PcP	PcP	15 37 36.7	+0.2
	comp=Z,0.9nm,0.6s,baz=350,slow=2.7,SNR=10						
YSS	**Yuzh-Sakhalins**	**37.60**	**19**	P	**P**	**15 35 22.5**	**-0.4**
ULN	**Ulaanbaatar**	**39.04**	**340**	*e*P	**P**	**15 35 35.8**	**+0.8**
	comp=Z,2.4nm,0.7s,mb4.0						
SONM	**Songino Array**	**39.23**	**339**	P	**P**	**15 35 37.2**	**+0.6**
	comp=Z,1.0nm,0.7s,mb3.7,baz=162,slow=8.7,SNR=8.8						
JIRN	**Jiri**	**40.23**	**299**	*e*P	**P**	**15 35 45.4**	**+0.2**
	comp=Z,14nm,0.6s,mb4.9						
GUN	**Gumba**	**40.56**	**299**	*e*P	**P**	**15 35 48.1**	**+0.1**
	comp=Z,37nm,0.9s,mb5.0						
PKIN	**Phulchoki**	**40.89**	**298**	*e*P	**P**	**15 35 49.8**	**-0.9**
	comp=Z,20nm,0.8s,mb4.8						
KKN	**Kakani**	**41.04**	**299**	*e*P	**P**	**15 35 51.5**	**-0.5**
	comp=Z,19nm,0.7s,mb4.8						
DMN	**Daman**	**41.15**	**298**	*e*P	**P**	**15 35 51.6**	**-1.2**
	comp=Z,39nm,1.2s,mb4.9						
NWAO	**Narrogin (SRO)**	**45.47**	**190**	P	**P**	**15 36 26.5**	**-1.0**
	comp=Z,6.3nm,0.7s,mb4.6,baz=90,slow=7.1						
NWAO	**Narrogin (SRO)**	**45.47**	**190**	P	**P**	**15 36 26.5**	**-1.0**
STKA	**Stephens Creek**	**46.19**	**161**	P	**P**	**15 36 33.6**	**+0.4**
	comp=Z,4.1nm,0.7s,mb4.5,baz=355,slow=8.0,SNR=7.3						
STKA	**Stephens Creek**	**46.19**	**161**	*e*P	**P**	**15 36 33.0**	**-0.2**
	comp=Z,1.9nm,0.8s,mb4.1						
PETK	**Petropavlovsk-**	**48.20**	**25**	P	**P**	**15 36 54.3**	**+5.7**
	comp=Z,2.3nm,0.8s,mb4.3,baz=180,slow=4.7,SNR=4.3						
PETK				LR	LR	15 58 17.8	
	comp=Z,31nm,18.8s,MS3.3,baz=66,slow=38						
MK31	**Makanchi Array**	**50.40**	**322**	*e*P	**P**	**15 37 06.4**	**+0.9**
MK31				*e*	pP	15 37 14.7	-4.0
MKAR	**Makanchi Array**	**50.40**	**322**	P	**P**	**15 37 06.5**	**+1.0**
	comp=Z,5.9nm,0.7s,mb4.7,baz=98,slow=12,SNR=56						
ZAA0	**Zalesovo Array**	**52.90**	**331**	P	**P**	**15 37 23.7**	**-0.3**
ZALV	**Zalesovo Beam**	**52.90**	**331**	P	**P**	**15 37 22.9**	**-1.1**
	comp=Z,1.7nm,0.6s,mb4.2,baz=120,slow=7.7,SNR=9.6						
ZALV	**Zalesovo Beam**	**52.90**	**331**	P	**P**	**15 37 22.9**	**-1.1**
TKM2	**Tokmak 2**	**53.14**	**315**	*e*P	**P**	**15 37 25.4**	**-0.6**
UCH	**Uchtor**	**53.67**	**314**	*e*P	**P**	**15 37 31.4**	**+1.5**
	comp=Z,13nm,1.2s,mb4.7						
AML	**Almayashu**	**54.22**	**314**	*e*P	**P**	**15 37 35.1**	**+1.2**
	comp=Z,9.5nm,1.1s,mb4.6						
EKS2	**Erkin-Say**	**54.32**	**314**	*e*P	**P**	**15 37 35.4**	**+0.8**
	comp=Z,3.8nm,0.9s,mb4.3						
KURK	**Kurchatov**	**54.40**	**325**	P	**P**	**15 37 35.9**	**+0.8**
	comp=Z,10.0nm,0.7s,mb4.9,baz=125,slow=7.3,SNR=39						
KURK	**Kurchatov**	**54.40**	**325**	*e*P	**P**	**15 37 35.7**	**+0.6**
KURK				*e*	pP	15 37 43.8	-4.7
BVAR	**Borovoye Array**	**60.00**	**325**	P	**P**	**15 38 15.4**	**+0.8**
	comp=Z,3.6nm,0.8s,mb4.5,baz=125,slow=7.8,SNR=20						
BRVK	**Borovoye**	**60.07**	**325**	*e*P	**P**	**15 38 15.3**	**+0.2**
	comp=Z,8.2nm,0.8s,mb4.8						
AKTK	**Aktyubinsk**	**66.72**	**320**	P	**P**	**15 38 58.8**	**-0.4**
AKTO	**Aktyubinsk**	**66.72**	**320**	P	**P**	**15 38 58.8**	**-0.4**
	baz=86,slow=9.4						
ARU	**Arti**	**67.55**	**326**	*e*P	**P**	**15 39 03.2**	**-1.0**
	comp=Z,4.7nm,0.6s,mb4.7						
JOF	**Joensuu**	**81.45**	**333**	*e*p	**P**	**15 40 24.5**	**-0.3**
	comp=Z,4.4nm,0.5s,mb4.6						
JOF	**Joensuu**	**81.45**	**333**	*e*p	**P**	**15 40 24.5**	**-0.3**
	comp=Z,4.4nm,0.5s,mb4.6						
ARCES	**ARCESS Array B**	**82.41**	**340**	P	**P**	**15 40 30.7**	**+1.0**
	comp=Z,4.8nm,0.7s,mb4.5,baz=75,slow=6.4,SNR=11						
ARCES	**ARCESS Array B**	**82.41**	**340**	P	**P**	**15 40 30.7**	**+1.0**
KAF	**Kangasniemi**	**83.89**	**332**	*e*p	**P**	**15 40 37.0**	**-0.5**
	comp=Z,4.6nm,0.7s,mb4.7						
KAF	**Kangasniemi**	**83.89**	**332**	*e*p	**P**	**15 40 37.0**	**-0.5**
	comp=Z,4.6nm,0.7s,mb4.7						
MMAI	**Mount Meron Ar**	**83.94**	**302**	P	**P**	**15 40 38.6**	**+0.2**
	comp=Z,2.0nm,0.6s,mb4.4,baz=36,slow=3.1,SNR=3.7						
BR131	**Keskin Array S**	**84.12**	**309**	P	**P**	**15 40 38.5**	**-0.7**
	comp=Z,0.5nm,0.3s,mb4.1						
FINES	**FINESS Array B**	**84.16**	**332**	P	**P**	**15 40 39.3**	**+0.5**
	comp=Z,5.3nm,0.8s,mb4.7,baz=73,slow=6.4,SNR=9.9						
AKASG	**Malin Array Be**	**84.96**	**321**	P	**P**	**15 40 42.7**	**-0.5**
	comp=Z,1.3nm,0.6s,mb4.2,baz=66,slow=4.3,SNR=9.3						
AKASG	**Malin Array Be**	**84.96**	**321**	P	**P**	**15 40 42.7**	**-0.5**
NOA	**NORSAR Array B**	**91.01**	**334**	P	**P**	**15 41 12.6**	**+0.7**
	comp=Z,0.6nm,0.8s,mb4.0,baz=66,slow=5.0,SNR=4.5						
NOA				LR	LR	16 24 14.0	
	comp=Z,26nm,18.7s,MS3.7,baz=115,slow=37						
NOA	**NORSAR Array B**	**91.01**	**334**	P	**P**	**15 41 12.6**	**+0.7**
NOA				LR	LR	16 24 14.0	

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*UPA **26** 15:38:08.2, 8°.93N×83°.34W, h10km, MW4.0*
CASC 26 15:38:09.3±1.9, 8°.92N×83°.35W, h25km±7km, MD3.7, 4D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ACR	**Cerro Adams**	**0.32**	**145**	⇓*i*P	Pb	15 38 16.5	-0.1
ACR				*e*S	Sb	15 38 22.6	+1.0
BAR1		**0.33**	**7**	⇓*i*P	Pb	15 38 17.7	+1.0
CTCR	**Cotoan**	**0.59**	**92**	*e*P	Pb	15 38 20.7	-0.2
BRU2	**Volcan**	**0.67**	**101**	*e*P	Pb	15 38 21.9	-0.3
BRU2				*e*S	Sb	15 38 32.1	+1.0
BUS	**Buena Vista**	**0.75**	**328**	*e*P	Pb	15 38 23.5	-0.3
QCR	**Quepos**	**0.95**	**302**	*e*P	Pn	15 38 25.9	-1.1
QCR				*e*S	Sb	15 38 39.5	+0.3
CNI	**Changuinola**	**0.96**	**59**	*e*S	Sb	15 38 39.3	-0.4
URSC	**Urasca**	**1.00**	**335**	*e*P	Pn	15 38 27.2	-0.6
URSC				*e*S	Sb	15 38 40.8	0.0
LAJ	**Bijagual**	**1.21**	**321**	*e*P	Pn	15 38 33.3	+2.7
LAJ				*e*S	Sn	15 38 54.1	+7.9
PRS1	**Puriscal**	**1.42**	**318**	⇓*e*P	Pn	15 38 32.8	-0.7
CGA2	**Cerro Gallo 2**	**1.55**	**315**	⇓*e*P	Pn	15 38 36.2	+0.9
JCR	**Jicaral**	**1.97**	**298**	*e*P	Pn	15 38 41.1	0.0

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*NEIC **26** 15:53:09.4, 35°.92N×21°.66E, h7km, MD3.5(ATH), After ATH.*
*CSEM **26** 15:53:09.4, 35°.92N×21°.66E, h7km, MD3.5, After ATH*
ATH 26 15:53:09.4, 35°.92N×21°.66E, h7km±2km, MD3.5/7, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PYL	**PYLOS**	**0.98**	**4**	*e*PN	Pn	15 53 28.3	-1.2
PYL				*e*SB	Sb	15 53 41.4	-0.3
PYL	**PYLOS**	**0.98**	**4**	*e*Pn	Pn	15 53 28.3	-1.2
PYL				*e*Sb	Sb	15 53 41.4	-0.3
KYTH	**Kithira**	**1.17**	**72**	*e*Pb	Pb	15 53 31.4	-0.6
KYTH	**Kithira**	**1.17**	**72**	*e*PB	Pb	15 53 31.4	-0.6
KYTH	**Kithira**	**1.17**	**72**	*e*Pb	Pb	15 53 31.4	-0.6
ITM	**Ithomi**	**1.27**	**10**	*e*Pb	Pb	15 53 33.7	0.0
ITM				*e*Sb	Sb	15 53 51.0	+0.7
ITM	**Ithomi**	**1.27**	**10**	*e*PB	Pb	15 53 33.7	0.0
ITM				*e*SB	Sb	15 53 51.0	+0.7
ITM	**Ithomi**	**1.27**	**10**	*e*Pb	Pb	15 53 33.7	0.0
ITM				*e*Sb	Sb	15 53 51.0	+0.7
VLI	**Veliai**	**1.30**	**52**	*e*Pg	Pg	15 53 33.6	-0.8
VLI				*e*Sb	Sb	15 53 52.5	+1.4
VLI	**Veliai**	**1.30**	**52**	*e*PG	Pg	15 53 33.6	-0.8
VLI				*e*SB	Sb	15 53 52.5	+1.4
VLI	**Veliai**	**1.30**	**52**	*e*Pg	Pg	15 53 33.6	-0.8
VLI				*e*Sb	Sb	15 53 52.5	+1.4
VLX	**Vlachokerasia**	**1.56**	**22**	*e*PG	Pg	15 53 38.2	-1.1
VLX	**Vlachokerasia**	**1.56**	**22**	*e*Pg	Pg	15 53 38.2	-1.1
KARN	**Karanos**	**1.91**	**105**	*e*PG	Pg	15 53 44.7	-1.3
KARN	**Karanos**	**1.91**	**105**	*e*Pg	Pg	15 53 44.7	-1.3
DID	**Didima**	**2.03**	**38**	*e*PN	Pn	15 53 46.1	+2.1
DID	**Didima**	**2.03**	**38**	*e*Pn	Pn	15 53 46.1	+2.1
GUR	**Goura**	**2.08**	**15**	*e*PN	Pn	15 53 47.2	+2.4
GUR	**Goura**	**2.08**	**15**	*e*Pn	Pn	15 53 47.2	+2.4
VAM	**Vamos**	**2.13**	**103**	*e*Pn	Pn	15 53 47.4	+2.0
VAM	**Vamos**	**2.13**	**103**	*e*PN	Pn	15 53 47.4	+2.0
VAM	**Vamos**	**2.13**	**103**	*e*Pn	Pn	15 53 47.4	+2.0

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*IDC **26** 16:18:41.4±2.4, 7°.58S×67°.96E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.6/22, mbtmp3.7/6, Error ellipse: s-maj=72.6km s-min=27.2km az=64.0*
*NEIC **26** 16:18:45.3±1.7, 7°.38S×68°.52E, h10km, mb4.7/1, Error ellipse: s-maj=43.9km s-min=23.3km az=224.0*
ISC 26 16:18:46.4±4.4, 7°.2S±0°.2×68°.7E±0°.2, h7km±26km, n11, σ1.9±01/11, mb4.0/8, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DGAR	**Diego Garcia**	**3.71**	**93**	*e*Pn	**Pn**	**16 19 43.5**	**-0.6**
CMAR	**Chiang Mai Arr**	**39.24**	**49**	P	**P**	**16 26 18.4**	**+2.7**
	0.7nm,0.7s,mb3.5,baz=246,slow=9.2,SNR=6.7						
MK31	**Makanchi Array**	**55.10**	**11**	P	**P**	**16 28 15.6**	**-3.4**
MKAR	**Makanchi Array**	**55.10**	**11**	P	**P**	**16 28 18.1**	**-1.0**
	0.2nm,0.7s,mb3.2,baz=152,slow=6.5,SNR=2.8						
HHC	**Hu-ho-hao-te**	**61.92**	**36**	*e*P	**P**	**16 29 06.5**	**-0.3**
HHC				pP	pP	16 29 11.0	+1.9
HHC				sP	sP	16 29 13.5	+3.5
HHC				PcP	PcP	16 29 45.8	-1.7
HHC				PP	PP	16 31 25.5	+2.3
HHC				ScP	ScP	16 33 45.5	-4.5
HHC				PcS	PcS	16 33 47.5	-3.0
HHC				S	**S**	**16 37 30.8**	**-0.4**
HHC				sS	sS	16 37 39.3	+4.3
HHC				ScS	ScS	16 38 55.3	-3.9
HHC				SS	SS	16 41 36.8	+3.1
HHC				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.2						
HHC				pmax	pmax		
	comp=Z,78nm,5.6s						
HHC				LR	LR		
	comp=N,61nm,16.7s						
HHC				LR	LR		
	comp=E,91nm,16.6s						
HHC				LR	LR		
	comp=Z,89nm,16.7s						
ZALV	**Zalesovo Beam**	**62.42**	**11**	P	**P**	**16 29 09.9**	**+0.1**
	comp=Z,0.2nm,0.2s,mb3.8,baz=208,slow=4.9,SNR=2.5						
SONM	**Songino Array**	**64.09**	**27**	P	**P**	**16 29 22.2**	**+1.2**
	comp=Z,0.6nm,0.8s,mb3.7,baz=222,slow=5.8,SNR=5.5						
ASAR	**Alice Springs**	**64.44**	**113**	P	**P**	**16 29 23.6**	**-0.3**
	comp=Z,0.8nm,0.7s,mb3.9,baz=275,slow=6.4,SNR=12						
WRA	**Warramunga Arr**	**64.69**	**109**	P	**P**	**16 29 25.8**	**+0.2**
	comp=Z,2.1nm,0.8s,mb4.2,baz=283,slow=6.2,SNR=7.9						
WRAB	**Tennant Creek**	**64.70**	**109**	P	**P**	**16 29 25.9**	**+0.2**
	comp=Z,4.5nm,0.9s,mb4.5						
WRAB				*e*		16 29 32.2	
NVAR	**Mina Array Bea**	**148.28**	**11**	PKPbc	PKPbc	16 38 30.9	-2.8
	comp=Z,0.1nm,0.3s,baz=318,slow=1.2,SNR=2.6						

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*ISCJB **26** 17:09:37.2±0.8, 17°.02N±0°.05×44°.10E±0°.09, h10km, Error ellipse: s-maj=14.1km s-min=3.9km az=155.9*
*CSEM **26** 17:09:41.0±0.5, 16°.97N×43°.38E, h2km, ML3.1, Error ellipse: s-maj=17.8km s-min=8.9km az=84.0*
*SGS **26** 17:09:41.4, 16°.89N×43°.66E, h14km*
*DHMR **26** 17:09:45.8±2.0, 16°.07N×42°.56E, h9km±21km, ML3.5*
ISC 26 17:09:38.7±0.8, 17°.00N±0°.05×43°.9E±0°.1, h6km±11km, n12, σ0.9±60/18, 2D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DJNS	**Zahran al Janu**	**0.78**	**333**	P	**Pg**	**17 09 54.1**	**+0.3**
DJNS	**Zahran al Janu**	**0.78**	**333**	P	**Pg**	**17 09 54.1**	**+0.3**
DJNS				S	**Sg**	**17 10 03.8**	**-0.2**
HAJJ	**Hajjah**	**1.33**	**193**	⇓*i*P	**Pn**	**17 10 04.5**	**+0.7**
HAJJ				*e*		17 10 04.6	
	baz=288,slow=9.3						
HAJJ				*i* S	**Sb**	**17 10 21.4**	**+0.1**
HAJJ				AML	AML	17 10 24.0	
	comp=Z,2μm,0.3s						
HAJJ	**Hajjah**	**1.33**	**193**	⇓*i*P	**Pn**	**17 10 04.5**	**+0.7**
	comp=Z,768nm,0.3s						
HAJJ				*i* S	**Sb**	**17 10 21.4**	**+0.1**
FRSS	**Farasan al Kab**	**1.74**	**262**	P	**Pn**	**17 10 04.0**	**-5.5**
FRSS	**Farasan al Kab**	**1.74**	**262**	P	**Pn**	**17 10 04.0**	**-5.5**
WBHS	**Wadi 'Ibn Hash**	**1.96**	**325**	P	**Pn**	**17 10 13.0**	**+0.6**
WBHS	**Wadi 'Ibn Hash**	**1.96**	**325**	P	**Pn**	**17 10 13.0**	**+0.6**
WBHS				S	**Sn**	**17 10 36.3**	**-1.0**
TATS	**Tathlith**	**2.56**	**351**	P	**Pb**	**17 10 25.4**	**+0.3**
TATS	**Tathlith**	**2.56**	**351**	P	**Pb**	**17 10 25.4**	**+0.3**
LBOS		**3.37**	**157**	*i* P	**Pg**	**17 10 42.6**	**-0.6**
LBOS				*i* S	**Sg**	**17 11 25.9**	**-1.1**
BDHA	**Al Bayda'**	**3.40**	**152**	*i* P	**Pg**	**17 10 44.2**	**+0.2**
BDHA				*i* S	**Sg**	**17 11 28.7**	**+0.6**
BDHA				AML	AML	17 11 38.0	
	comp=E,116nm,0.6s						

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*IDC **26** 17:44:10.6±1.5, 21°.86S×66°.92W, h163km±16km, mb4.2/6, mb1 4.1/10, mb1mx3.8/20, mbtmp4.1/10, Error ellipse: s-maj=18.5km s-min=11.9km az=95.0*
*ISCJB **26** 17:44:10.3±0.5, 21°.86S±0°.04×67°.12W±0°.07, h175km±7km, mb4.3/8, Error ellipse: s-maj=10.1km s-min=6.5km az=0.5*
*NEIC **26** 17:44:11.8±0.9, 21°.88S×67°.07W, h174km±10km, mb4.6/5, Error ellipse: s-maj=13.2km s-min=9.1km az=91.0*
*GUC **26** 17:44:13.2±0.7, 21°.67S×67°.88W, h236km±19km, ML5.2*
ISC 26 17:44:11.3±0.5, 21°.84S±0°.04×67°.10W±0°.07, h167km±7km, n28, σ1.9±24/35, mb4.3/8, 4C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB01	**Plate Boundary**	**2.36**	**289**	⇑*i*P	**Pn**	**17 44 52.5**	**+0.8**
PB01				*i* S	**Sn**	**17 45 22.6**	**-0.2**
PB01				AML	AML	17 45 24.0	
	comp=N,9μm,0.3s						
MACH	**Maria Elena**	**2.49**	**261**	*e*P	**Pn**	**17 44 55.2**

ASAR	**Alice Springs**	**45.36 259**	P	**P**	**18 01 43.3**	**-0.1**
	3.5nm,0.8s,mb4.1,baz=95,slow=6.9,SNR=61					
WRAB	**Tennant Creek**	**45.69 264**	*e*P	**P**	**18 01 45.3**	**-0.8**
	7.2nm,0.9s,mb4.4					
WRA	**Warramunga Arr**	**45.70 264**	P	**P**	**18 01 45.3**	**-0.8**
	2.2nm,0.3s,mb4.3,baz=89,slow=5.9,SNR=71					
MBWA	**Marble Bar**	**58.70 259**	*e*P	**P**	**18 03 21.8**	**-0.5**
	3.0nm,0.7s,mb4.4					
HHC	**Hu-ho-hao-te**	**92.21 314**	*e*P	**P**	**18 06 33.3**	**0.0**
HHC			pP	pP	18 07 02.5	+2.1
HHC			sP	sP	18 07 14.3	+3.0
HHC			PP	PP	18 10 18.5	+3.2
HHC			SKS		18 16 54.3	
HHC			S	S	18 17 24.5	-2.9
HHC			sS	sS	18 18 15.5	+1.3
HHC			SS	SS	18 23 42.0	+1.6
HHC			pmax	pmax		
	comp=Z,12nm,0.8s,mb5.2					
HHC			pmax	pmax		
	comp=Z,68nm,5.6s					
HHC			LR	LR		
	comp=N,69nm,20.4s					
HHC			LR	LR		
	comp=E,130nm,19.2s					
HHC			LR	LR		
	comp=Z,87nm,20.4s					
CMAR	**Chiang Mai Arr**	**92.33 289**	P	**P**	**18 06 34.8**	**+0.4**
	comp=Z,0.9nm,1.0s,mb4.0,baz=141,slow=4.0,SNR=5.7					
AKASG	**Malin Array Be**	**146.01 330**	PKPbc	PKPbc	18 13 00.6	-2.2
	comp=Z,1.4nm,0.5s,baz=42,slow=4.2,SNR=11					
KIEV	**Kiev**	**146.02 330**	*e*PKPdf	PKPdf	18 13 00.9	-0.9
MMAI	**Mount Meron Ar**	**150.31 296**	PKPbc	PKPbc	18 13 16.2	+1.5
	comp=Z,2.4nm,0.7s,baz=93,slow=6.2,SNR=3.5					
CLL	**Collm**	**150.95 348**	*i* PKPbc	PKPbc	18 13 14.1	-1.5
	comp=Z,7.0nm,1.1s					
CLL			*e*PKPab	PKPab	18 13 20.0	-3.2

*IDC **26** 18:03:02.2±0.7, 16°.97S×173°.58W, h0km, mb4.3/9, mb1 4.5/9, mb1mx4.3/19, mbtmp4.3/9, MS3.7/11, Ms1 3.7/11, ms1mx3.6/26, Error ellipse: s-maj=33.3km s-min=18.6km az=144.0*

*ISCJB **26** 18:03:06.3±0.7, 16°.8S±0°.1×173°.8W±0°.1, h33km, mb4.5/11, MS3.9/11, Error ellipse: s-maj=24.3km s-min=13.5km az=40.8*

*NEIC **26** 18:03:08.0±0.5, 16°.98S×173°.66W, h35km, mb4.3/2, Error ellipse: s-maj=24.9km s-min=10.9km az=137.0*

*SZGRF **26** 18:03:08.5, 17°.15S×176°.86W, h33km, Fiji Islands region*

*VIE **26** 18:03:56.3, 17°.66S×174°.94W, h437km, mb3.6 390 km N of Nuku'alofa*

ISC 26 18:03:08.2±0.7, 16°.8S±0°.1×173°.8W±0°.1, h35km, n84, σ1§09/17, mb4.5/11, MS3.9/11, 1C-1D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.46**	**34**	Pn	**Pn**	**18 03 52.6**	**-6.9**
	20nm,0.3s,baz=289,slow=16,SNR=24						
AFI				Sn	**Sn**	**18 04 29.0**	**-10**
	189nm,0.3s,baz=201,slow=23,SNR=9.4						
AFI				LR	LR	18 05 12.5	
	comp=Z,641nm,18.9s,baz=314,slow=37						
DZM	**Mont Dzumac**	**19.38**	**251**	*e*LR	LR	18 12 49.5	
	649nm,24.4s						
URZ	**Urewera**	**22.83**	**199**	P	**P**	**18 08 06.8**	**-1.4**
	9.3nm,0.5s,mb4.5,baz=84,slow=5.2,SNR=11						
PPT	**Papeete**	**23.12**	**95**	*e*LR	LR	18 13 23.7	
	280nm,26.2s						
TBI	**Tubuai**	**23.72**	**110**	*e*LR	LR	18 13 48.5	
	264nm,26.0s,baz=295						
HNR	**Honiara**	**26.61**	**283**	LR	LR	18 17 43.1	
	comp=Z,318nm,19.6s,MS3.9,baz=87,slow=33						
RPZ	**Rata Peaks**	**29.76**	**202**	P	**P**	**18 09 13.8**	**+2.5**
	5.1nm,0.6s,mb4.4,baz=348,slow=19,SNR=4.3						
TAOE	**Nuku Hiva Isla**	**33.67**	**81**	*e*LR	LR	18 18 12.6	
	124nm,23.6s						
RKT	**Rikitea**	**36.92**	**106**	*e*LR	LR	18 19 54.2	
	543nm,37.8s						
STKA	**Stephens Creek**	**43.05**	**241**	P	**P**	**18 11 04.5**	**-0.3**
	12nm,0.9s,mb4.6,baz=64,slow=9.0,SNR=9.8						
STKA	**Stephens Creek**	**43.05**	**241**	*e*P	**P**	**18 11 04.8**	**+0.1**
	3.2nm,1.0s,mb4.0						
WRAB	**Tennant Creek**	**49.19**	**258**	*e*P	**P**	**18 11 53.3**	**0.0**
WRA	**Warramunga Arr**	**49.20**	**258**	P	**P**	**18 11 52.9**	**-0.4**
	2.9nm,0.5s,mb4.5,baz=95,slow=7.1,SNR=69						
ASAR	**Alice Springs**	**49.35**	**253**	P	**P**	**18 11 54.4**	**-0.1**
	29nm,0.6s,mb5.5,baz=87,slow=8.7,SNR=530						
FITZ	**Fitzroy Crossi**	**57.59**	**259**	LR	LR	18 32 56.8	
	comp=Z,125nm,22.0s,MS4.0,baz=349,slow=31						
MBWA	**Marble Bar**	**62.64**	**255**	*e*P	**P**	**18 13 29.0**	**-0.6**
MJAR	**Matsushiro Arr**	**69.78**	**320**	LR	LR	18 40 21.1	
	comp=Z,57nm,18.9s,MS3.8,baz=130,slow=32						
ASAJ	**Asahikawa**	**72.54**	**329**	P	**P**	**18 14 32.0**	**+0.5**
	4.0nm,0.7s,mb4.5,baz=42,slow=17,SNR=6.3						
YBH	**Yreka Blue Hor**	**74.92**	**37**	LR	LR	18 40 31.2	
	comp=Z,62nm,18.9s,MS3.9,baz=185,slow=30						
NVAR	**Mina Array Bea**	**75.60**	**42**	P	**P**	**18 14 50.6**	**+1.1**
	0.6nm,0.8s,mb3.6,baz=229,slow=6.6,SNR=3.6						
KDAK	**Kodiak Island**	**76.36**	**11**	LR	LR	18 40 43.6	
	comp=Z,81nm,20.1s,MS4.0,baz=275,slow=30						
KSRS	**Korea Array**	**76.91**	**316**	LR	LR	18 45 15.8	
	comp=Z,26nm,19.8s,MS3.5,baz=85,slow=33						
TXAR	**Lajitas Array**	**81.68**	**56**	P	**P**	**18 15 22.7**	**-0.5**
	0.1nm,0.4s,baz=219,slow=7.0,SNR=3.4						
TXAR				LR	LR	18 43 51.9	
	comp=Z,63nm,18.5s,MS4.0,baz=10.0,slow=30						
ANMO	**Albuquerque**	**81.97**	**50**	LR	LR	18 43 09.7	
	comp=Z,64nm,21.4s,MS4.0,baz=206,slow=29						
PDAR	**Pinedale Array**	**83.54**	**42**	P	**P**	**18 15 31.6**	**-1.0**
	0.8nm,0.9s,mb3.9,baz=208,slow=4.7,SNR=4.9						
BILL	**Bilibino**	**85.84**	**353**	*e*P	**P**	**18 15 43.8**	**+0.2**
	2.7nm,0.8s,mb4.5						
HHC	**Hu-ho-hao-te**	**89.72**	**313**	*e*P	**P**	**18 16 01.3**	**-1.5**
HHC				pP	pP	18 16 06.0	-8.0
HHC				sP	sP	18 16 08.3	-10
HHC				PP	PP	18 19 36.3	+0.8
HHC				SKS		18 26 29.3	
HHC				S	S	18 26 51.3	-0.7
HHC				sS	sS	18 26 59.3	-11
HHC				SS	SS	18 32 53.3	+3.6
HHC				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.5						
HHC				pmax	pmax		
	comp=Z,120nm,4.8s						
HHC				LR	LR		
	comp=N,99nm,19.2s,MS4.4						
HHC				LR	LR		
	comp=E,100nm,20.4s,MS4.4						
HHC				LR	LR		
	comp=Z,110nm,19.2s,MS4.3						
CMAR	**Chiang Mai Arr**	**92.72**	**288**	P	**P**	**18 16 19.6**	**+2.4**
	comp=Z,1.3nm,0.8s,mb4.4,baz=101,slow=2.6,SNR=11						
CFAA	**Coronel Fontan**	**93.96**	**125**	LR	LR	18 47 28.8	
	comp=Z,6.1nm,21.3s,MS3.0,baz=210,slow=28						
ULM	**Lac du Bonnet**	**95.24**	**39**	LR	LR	18 52 58.6	
	comp=Z,80nm,21.0s,MS4.2,baz=205,slow=32						
BVAR	**Borovoye Array**	**118.76**	**322**	PKP	PKPdf	18 21 52.3	-0.2
	comp=Z,1.3nm,0.6s,baz=236,slow=1.6,SNR=8.7						
CLZ	**Clausthal**	**144.89**	**356**	*e*PKPbc	PKPdf	18 22 41.0	-0.4
CLL	**Collm**	**145.15**	**353**	*e*PKPbc	PKPbc	18 22 41.4	0.0
CLL	**Collm**	**145.15**	**353**	*i*,*e*PKPbc	PKPbc	18 22 41.5	+0.1
	comp=Z,11nm,1.3s						
CLL				*i* pPKPbc	pPKPbc	18 22 53.0	+0.2
	comp=Z,11nm,1.4s						
CLL				*i* sPKPbc		18 22 55.8	
STHS	**Stebnicka Huta**	**145.26**	**343**	*e*P	PKPbc	18 22 43.4	+1.5
STHS	**Stebnicka Huta**	**145.26**	**343**	*e*PKP	PKPdf	18 22 43.4	+1.3
BRG	**Berggiesshubel**	**145.45**	**351**	*e*PKPbc	PKPbc	18 22 42.2	-0.2
BRG	**Berggiesshubel**	**145.45**	**351**	*e*PKP	PKPdf	18 22 42.3	-0.1
	comp=Z,5.8nm,0.9s						
BRG				*e*		19 12 32.1	
	comp=Z,2.5nm,0.9s						
UPC	**Upice**	**145.47**	**349**	*e*PKP	PKPdf	18 22 43.1	+0.7
UPC				*ep*PKP	pPKPdf	18 22 54.5	+0.6
BUR08	**Bucovina Ar. S**	**145.50**	**337**	*e*P	PKPdf	18 22 44.0	+1.4
NIE	**Niedzica**	**145.52**	**344**	*e*P	PKPdf	18 22 43.8	+1.2
DPC	**Dobruska-Polom**	**145.56**	**349**	*e*PKP	PKPdf	18 22 43.7	+1.1
DPC				*ep*PKP	pPKPdf	18 22 54.8	+0.7
CRVS	**Cervenica-Dubn**	**145.66**	**342**	*e*P	PKPdf	18 22 36.0	-6.8
CRVS				*e*		18 22 44.5	
CRVS	**Cervenica-Dubn**	**145.66**	**342**	*e*	PKPdf	18 22 36.0	-6.8
CRVS	**Cervenica-Dubn**	**145.66**	**342**	*e*PKP	PKPdf	18 22 44.5	+1.7
OKC	**Ostrava-Krasne**	**145.67**	**346**	*e*PKP	PKPdf	18 22 43.8	+1.0
OKC				*ep*PKP	pPKPdf	18 22 58.4	+4.1
PVCC	**Panska Ves**	**145.69**	**351**	*e*PKP	PKPdf	18 22 44.0	+1.2
PVCC				*ep*PKP	pPKPdf	18 22 58.5	+4.2
MOX	**Moxa**	**145.96**	**354**	*e*PKP	PKPdf	18 22 44.2	+0.9
	comp=Z,15nm,1.2s						
MOX				*e*		18 22 53.8	
MOX	**Moxa**	**145.96**	**354**	*e*PKPbc	PKPbc	18 22 44.0	0.0
TANN	**Tannenbergstha**	**146.10**	**353**	*e*PKPbc	PKPbc	18 22 44.6	+0.2
PRU	**Pruhonice**	**146.22**	**350**	*e*PKP	PKPdf	18 22 45.7	+2.0
PRU				*ep*PKP	pPKPdf	18 23 00.8	+5.6
NKC	**Novy Kostel**	**146.28**	**353**	*e*PKP	PKPab	18 22 46.3	+0.6
KECS	**Kecovo**	**146.32**	**343**	*e*P	PKPab	18 22 47.3	+1.3
KECS	**Kecovo**	**146.32**	**343**	*e*PKP	PKPab	18 22 47.3	+1.3
VYHS	**Vyhne**	**146.75**	**345**	*e*P	PKPbc	18 22 46.7	+0.3
VYHS	**Vyhne**	**146.75**	**345**	*e*PKP	PKPbc	18 22 46.7	+0.3
GIVF	**Givet**	**146.76**	**2**	*e*PKP1	PKPbc	18 22 46.3	-0.1
ROTZ	**Rotzenmuhle**	**146.76**	**353**	*e*PKPbc	PKPbc	18 22 46.9	+0.5
BAIF	**Baives**	**146.78**	**2**	*e*PKP1	PKPbc	18 22 46.6	+0.1
	comp=Z,22nm,1.1s						
GRA1	**Grafenberg Arr**	**146.94**	**354**	*e*PKPbc	PKPbc	18 22 47.8	+0.9
GRF	**Grafenberg Arr**	**146.94**	**354**	*e*PKPbc	PKPbc	18 22 47.8	+0.9
BR131	**Keskin Array S**	**147.00**	**319**	*e*P	PKPab	18 22 48.1	-0.8
KHC	**Kasperske Hory**	**147.20**	**351**	*e*P	PKPbc	18 22 47.5	-0.2
KHC	**Kasperske Hory**	**147.20**	**351**	*e*PKP	PKPbc	18 22 47.8	+0.1
KHC				*ep*PKP	pPKPdf	18 23 00.9	+4.0
WLF	**Walferdange**	**147.22**	**0**	*e*PKPbc	PKPab	18 22 49.9	+0.5
GEC2	**GERESS Array S**	**147.46**	**351**	*e*PKPbc	PKPbc	18 22 48.4	0.0
FLN	**La Foliniere**	**147.66**	**8**	*e*PKP1	PKPbc	18 22 48.3	-0.6
GRR	**Gorron**	**147.97**	**9**	*e*PKP1	PKPbc	18 22 49.5	-0.3
CDF	**Champ du Feu**	**148.46**	**359**	*e*PKP1	PKPbc	18 22 51.2	+0.1
	comp=Z,18nm,1.1s						
BFO	**Black Forest**	**148.51**	**357**	*e*PKPbc	PKPbc	18 22 51.3	+0.1
HAU	**Haudompre**	**148.88**	**360**	*e*PKP1	PKPbc	18 22 52.2	0.0
MMAI	**Mount Meron Ar**	**149.15**	**307**	PKPbc	PKPbc	18 22 53.5	+0.1
	comp=Z,3.9nm,0.8s,baz=88,slow=7.6,SNR=4.1						
FETA	**Feichten**	**149.64**	**354**	*i*,*e*PKPbc	PKPbc	18 22 54.4	+0.4
	comp=Z,6.8nm,1.0s						
SSF	**Saint Saulge**	**149.74**	**4**	*e*PKP1	PKPbc	18 22 54.5	+0.2
AVF	**Avril sur Loir**	**150.00**	**4**	*e*PKP1	PKPbc	18 22 53.8	-1.2
	comp=Z,6.3nm,0.8s						
CABF	**La Chapelle**	**150.28**	**0**	*e*PKP1	PKPbc	18 22 54.9	-0.8
	comp=Z,17nm,0.9s						
TCF	**Toulx Ste Croi**	**150.41**	**6**	*e*PKP1	PKPbc	18 22 55.5	-0.5
	comp=Z,26nm,1.3s						
LPL	**La Plagne**	**151.37**	**359**	*e*PKP1	PKPbc	18 22 59.2	+0.9
	comp=Z,7.2nm,0.8s						
LPG	**La Plagne**	**151.39**	**359**	*e*PKP1	PKPbc	18 22 59.3	+1.0
	comp=Z,6.6nm,0.8s						
BNI	**Bardonecchia**	**151.83**	**359**	*e*PKPab	PKPab	18 23 09.7	+1.4
VIVF	**Saint-Julien-l**	**152.00**	**2**	*e*PKP1	PKPbc	18 22 59.9	+0.2
MBDF	**Montbardon**	**152.16**	**359**	*e*PKP1	PKPbc	18 23 00.3	+0.2
LASF	**Ste Croix**	**152.74**	**4**	*e*PKP1	PKPbc	18 23 00.9	-0.5
	comp=Z,7.5nm,1.0s						
TORD	**Torodi Ar. Bea**	**174.31**	**129**	PKP	PKPdf	18 23 13.1	-2.0
	comp=Z,0.8nm,0.8s,baz=173,slow=2.3,SNR=4.7						
TORD				PKPab	PKPab	18 24 44.5	-2.8
	comp=Z,0.6nm,0.9s,baz=251,slow=4.4,SNR=4.4						

*FUNV **26** 18:03:40.6, 10°.65N×62°.39W, h60km, MW2.4*

*TRN **26** 18:03:40.9, 10°.56N×62°.29W, h71km, MD2.7*

*ISCJB **26** 18:03:40.1±1.2, 10°.63N±0°.07×62°.41W±0°.04, h61km±12km, Error ellipse: s-maj=11.1km s-min=6.2km az=176.5*

ISC 26 18:03:40.4±1.2, 10°.62N±0°.07×62°.41W±0°.04, h61km±12km, n9, σ0§67/15, 1C-1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.19**	**83**	*i*,*i*P	**Pn**	**18 03 49.7**	**-0.1**
GUIV				*e*S	**Sn**	**18 03 56.6**	**-0.1**
TCE	**Chacachacare**	**0.65**	**83**	*e*P	**Pn**	**18 03 54.4**	**+0.4**
TCE				*e*S	**Sn**	**18 04 04.4**	**+0.3**
GUNV	**Guanoco**	**0.69**	**229**	*i*,*e*P	**Pn**	**18 03 54.9**	**+0.3**
GUNV				*e*S	**Sn**	**18 04 06.3**	**+1.3**
CRUV	**Carupano**	**0.81**	**274**	*e*P	**Pn**	**18 03 55.6**	**-0.4**
CRUV				*e*S	**Sn**	**18 04 06.4**	**-1.1**
TPP	**Pointe-a-Pierr**	**0.99**	**108**	*e*P	**Pn**	**18 03 57.5**	**-0.9**
TRN	**Trinidad (W)**	**0.99**	**88**	*e*P	**Pn**	**18 03 58.9**	**+0.5**
TRN				*e*S	**Sn**	**18 04 10.7**	**-1.0**
ITEV	**Isla Los Testi**	**1.01**	**316**	*e*P	**Pn**	**18 03 58.7**	**+0.1**
ITEV				*e*S	**Sn**	**18 04 12.0**	**-0.1**
GRW	**Mount Saint Ca**	**1.70**	**26**	*e*S	**Sn**	**18 04 29.4**	**+0.9**
BOT	**Bacolet**	**1.75**	**72**	*e*P	**Pn**	**18 03 59.2**	**-9.3**

IDC 26 18:14:30.8±0.7, 28°.82S×178°.40W, h235km±9km, mb2.8/2, mb1 3.2/3, mb1mx3.1/15, mbtmp3.1/3, Error ellipse: s-maj=42.2km s-min=23.9km az=128.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.60**	**136**	P	Pn	18 15 02.7	+0.4
	874nm,0.3s,baz=95,slow=4.4,SNR=73						
RAO				S	S	18 15 27.8	+0.8
	249nm,0.3s,baz=270,slow=20,SNR=3.3						
URZ	**Urewera**	**10.13**	**201**	P	Pn	18 16 50.9	-0.2
	0.3nm,0.3s,baz=104,slow=17,SNR=4.2						
URZ				S	S	18 18 43.2	-1.6
	1.5nm,0.3s,baz=180,slow=20,SNR=9.7						
ASAR	**Alice Springs**	**42.87**	**265**	P	P	18 22 06.4	+0.2
	0.2nm,0.7s,baz=96,slow=7.2,SNR=4.3						
WRA	**Warramunga Arr**	**43.71**	**271**	P	P	18 22 12.8	-0.2
	0.4nm,0.4s,baz=107,slow=7.9,SNR=6.1						
NOA	**NORSAR Array B**	**147.14**	**351**	PKPbc	PKPbc	18 33 44.5	-0.9
	0.6nm,0.4s,baz=14,slow=4.6,SNR=4.0						
AKASG	**Malin Array Be**	**149.83**	**324**	PKPbc	PKPbc	18 33 51.5	-1.0
	0.5nm,0.3s,baz=40,slow=3.7,SNR=5.7						
MMAI	**Mount Meron Ar**	**150.78**	**287**	PKPbc	PKPbc	18 33 56.3	+0.9
	2.7nm,0.6s,baz=69,slow=7.2,SNR=5.2						

IDC 26 18:33:58.1±9.6, 31°.49S×178°.63W, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.6/15, mbtmp3.5/2, Error ellipse: s-maj=424.6km s-min=60.8km az=158.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.52**	**268**	P	P	18 41 55.5	0.0
	0.3nm,0.9s,baz=109,slow=7.2,SNR=4.9						
WRA	**Warramunga Arr**	**43.61**	**274**	P	P	18 42 04.3	-0.1
	0.6nm,0.4s,baz=114,slow=7.8,SNR=3.7						
FINES	**FINESS Array B**	**145.97**	**339**	PKPbc	PKPbc	18 53 38.1	-0.8
	1.2nm,0.7s,baz=33,slow=4.5,SNR=4.7						

IDC 26 18:43:38.8±3.1, 19°.90S×176°.46W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/16, mbtmp3.9/3, Error ellipse: s-maj=165.9km s-min=51.8km az=149.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.35**	**244**	P	P	18 51 09.6	-0.4
	1.5nm,0.7s,baz=96,slow=10,SNR=2.8						
ASAR	**Alice Springs**	**46.06**	**256**	P	P	18 52 04.7	-0.1
	1.5nm,0.8s,baz=92,slow=8.6,SNR=15						
ASAR				PcP	PcP	18 53 39.9	-1.4
	0.4nm,0.6s,baz=100,slow=3.6,SNR=6.1						
WRA	**Warramunga Arr**	**46.12**	**261**	P	P	18 52 05.6	+0.4
	1.0nm,0.7s,baz=93,slow=7.9,SNR=11						
AKASG	**Malin Array Be**	**143.17**	**333**	PKP	PKPdf	19 03 12.1	-2.6
	0.7nm,0.4s,baz=42,slow=4.6,SNR=6.9						
MMAI	**Mount Meron Ar**	**148.75**	**301**	PKPbc	PKPbc	19 03 29.4	+0.7
	1.9nm,0.6s,baz=64,slow=6.6,SNR=7.1						

*CSEM **26** 18:43:48.8±0.3, 30°.54N×50°.56E, h2km, ML3.1, Error ellipse: s-maj=8.1km s-min=5.2km az=118.0*

*SGS **26** 18:43:50.9, 30°.64N×50°.59E, h15km*

*KISR **26** 18:43:50.1±1.0, 30°.56N×50°.49E, h32km±336km, ML3.0*

*TEH **26** 18:43:55.1, 30°.68N×50°.78E, h20km*

ISC 26 18:43:50.7±1.5, 30°.55N±0°.03×50°.54E±0°.04, h11km±11km, n39, σ1§01/52, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**2.15**	**317**	*e*Pn	**Pn**	**18 44 24.9**	**-1.5**
IPIR	**Pirpir**	**2.15**	**8**	*e*Pn	**Pn**	**18 44 28.2**	**+1.8**
IPIR				*e*Sg	**Sg**	**18 44 58.4**	**-1.4**
IPIR				*e*		18 45 00.4	
	comp=Z,2μm,0.1s						
IGAR	**Gharneh**	**2.25**	**34**	*e*Pn	**Pn**	**18 44 28.6**	**+0.8**
IGAR				*e*Sn	**Sn**	**18 44 53.1**	**-2.5**
IGAR				*e*Sg	**Sb**	**18 44 58.1**	**-1.1**
IGAR				*e*		18 44 59.2	
	comp=Z,2μm,0.1s						
IPAR	**Pars**	**2.29**	**107**	*e*Pn	**Pn**	**18 44 30.3**	**+2.0**
IPAR				*e*		18 45 12.2	
	comp=N,3μm,0.2s						
ISRV	**Sarvestan**	**2.52**	**117**	*e*Pn	**Pn**	**18 44 33.1**	**+1.5**
ISRV				*e*		18 45 22.3	
	comp=Z,1μm,0.3s						
UMR	**Umm Al-Rimmam**	**2.64**	**249**	*e*P	**Pn**	**18 44 32.7**	**-0.5**
UMR	**Umm Al-Rimmam**	**2.64**	**249**	*e*P	**Pn**	**18 44 32.7**	**-0.5**
IZEF	**Zefreh**	**2.79**	**33**	*e*Pn	**Pn**	**18 44 36.2**	**+0.9**
IZEF				*e*		18 44 38.2	
	comp=Z,650nm,0.1s						
KBD	**Kabd**	**2.82**	**242**	*e*P	**Pn**	**18 44 35.9**	**+0.2**
KBD				*e*S	**Sn**	**18 45 10.1**	**+0.4**
KBD				AML	AML	18 45 11.5	
	comp=Z,45nm,0.2s						
KBD	**Kabd**	**2.82**	**242**	*e*P	**Pn**	**18 44 35.9**	**+0.2**
KBD				*e*S	**Sn**	**18 45 10.1**	**+0.4**
MIB	**Mutribah**	**2.87**	**256**	*e*P	**Pn**	**18 44 36.5**	**+0.2**
MIB	**Mutribah**	**2.87**	**256**	*e*P	**Pn**	**18 44 36.5**	**+0.2**
IKLH	**Kolahrood**	**2.90**	**18**	*e*Pn	**Pn**	**18 44 37.4**	**+0.7**
IKLH				*e*		18 45 27.4	
	comp=Z,666nm,0.2s						
QRN	**Al-Qurain**	**2.90**	**232**	*e*P	**Pn**	**18 44 36.8**	**0.0**
QRN				*e*S	**Sn**	**18 45 11.8**	**+0.2**
QRN				AML	AML	18 45 13.1	
	comp=Z,80nm,0.2s						
ISAD	**Sadrabad**	**3.02**	**62**	*e*Pn	**Pn**	**18 44 39.3**	**+0.9**
ISAD				*e*Sn	**Sn**	**18 45 10.5**	**-4.1**
ISAD				*e*		18 45 18.0	
	comp=Z,1μm,0.1s						
RDF	**Al-Radifah**	**3.06**	**239**	*e*P	**Pn**	**18 44 39.6**	**+0.7**
RDF				*e*S	**Sn**	**18 45 15.8**	**+0.3**
RDF				AML	AML	18 45 20.4	
	comp=Z,68nm,0.3s						
RDF	**Al-Radifah**	**3.06**	**239**	*e*P	**Pn**	**18 44 39.6**	**+0.6**
RDF				*e*S	**Sn**	**18 45 15.8**	**+0.3**
GHIR	**Ghir-Karzin**	**3.11**	**136**	*e*Pn	**Pn**	**18 44 38.8**	**-0.8**
NAY	**Al-Naaiem**	**3.14**	**246**	*e*P	**Pn**	**18 44 39.6**	**-0.5**
NAY				*e*S	**Sn**	**18 45 17.7**	**+0.2**
NAY				AML	AML	18 45 18.5	
	comp=Z,18nm,0.3s						
NAY	**Al-Naaiem**	**3.14**	**246**	*e*P	**Pn**	**18 44 39.6**	**-0.5**
NAY				*e*S	**Sn**	**18 45 17.7**	**+0.2**
KFJS		**3.27**	**224**	P	**Pn**	**18 44 41.0**	**-0.8**
KFJS		**3.27**	**224**	P	**Pn**	**18 44 41.0**	**-0.8**
IMEH	**Mehriz**	**3.60**	**76**	*e*Pn	**Pn**	**18 44 46.5**	**+0.1**
IMEH				*e*		18 44 55.5	
	comp=Z,308nm,0.2s						
IMEH				*e*Sn	**Sn**	**18 45 25.0**	**-3.9**
GHVR	**GHOM**	**3.97**	**9**	*e*Pn	**Pn**	**18 44 51.6**	**+0.1**
ASAO	**Ashtian**	**4.01**	**354**	*e*Pn	**Pn**	**18 44 51.8**	**-0.2**
ISFB	**Sefidab**	**4.05**	**20**	*e*Pn	**Pn**	**18 44 52.6**	**0.0**
IKOM	**Komasi**	**4.43**	**325**	*e*Pn	**Pn**	**18 45 01.1**	**+3.3**
IKOM				*e*		18 45 55.1	
	comp=N,566nm,0.1s						
IVRN	**Varamin**	**4.54**	**12**	*e*Pn	**Pn**	**18 45 00.1**	**+0.7**
IVRN				*e*		18 45 57.2	
	comp=E,679nm,0.1s						
BOQSS		**4.78**	**193**	P	**Pn**	**18 45 02.1**	**-0.5**
IRAZ	**Razeghan**	**4.87**	**354**	*e*	**Pg**	**18 45 31.0**	**+7.1**
	comp=Z,124nm,0.2s						
IRAZ				*e*Pn	**Pn**	**18 45 05.2**	**+1.4**
DAMV	**Damavand**	**5.21**	**13**	*e*Pn	**Pn**	**18 45 08.5**	**0.0**
ILAS	**Lasjerd**	**5.23**	**22**	*e*Pn	**Pn**	**18 45 09.5**	**+0.7**
ILAS				*e*		18 46 12.0	
	comp=E,280nm,0.1s						
SNGE	**Sanandaj**	**5.26**	**330**	*e*Pn	**Pn**	**18 45 08.9**	**-0.3**
IFIR	**Firoozkooh**	**5.41**	**20**	*e*Pn	**Pn**	**18 45 11.3**	**+0.1**
IFIR				*e*		18 45 16.1	
	comp=Z,343nm,0.1s						
ISHM	**Shahmirzad**	**5.73**	**23**	*e*Pn	**Pn**	**18 45 15.8**	**+0.2**
ASYS		**6.21**	**242**	P	**Pn**	**18 45 20.2**	**-2.2**
ASYS		**6.21**	**242**	P	**

MWZ	**Matawai**	**2.52 35**	P	Pn	19 09 18.0	-3.4
KHZ	**Kahutara**	**2.57 218**	P	Pn	19 09 19.7	-2.3
MQZ	**McQueen's Vall**	**3.99 213**	P	Pn	19 09 37.6	-3.9

*IDC **26** 19:22:22.4±1.6, 27°.89N×127°.63E, h0km, mb3.3/4, mb1 3.4/5, mb1mx3.3/25, mbtmp3.3/5, ML2.6/1, Error ellipse: s-maj=82.4km s-min=21.5km az=71.0*
*ISCJB **26** 19:22:34.5±0.5, 28°.47N±0°.06×128°.52E±0°.09, h135km±7km, mb3.1/4, Error ellipse: s-maj=15.8km s-min=4.7km az=33.5*
*JMA **26** 19:22:35.9±0.1, 28°.56N×128°.43E, h115km, M3.0*
ISC 26 19:22:35.5±0.5, 28°.47N±0°.06×128°.52E±0°.09, h132km±7km, n18, σ0°71/27, mb3.1/4, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**0.78**	**151**	P	**Pn**	**19 22 56.7**	**0.0**
JTK				S	**Sn**	**19 23 12.6**	**-0.1**
JAM	**Amami Oshima**	**0.95**	**93**	P	**Pn**	**19 22 57.7**	**-0.4**
JAM				S	**Sn**	**19 23 14.5**	**-0.8**
JZK	**Kikaishima**	**1.29**	**97**	P	**Pn**	**19 23 02.4**	**+1.1**
JZK				*e*S	**Sn**	**19 23 21.9**	**+0.9**
JIH	**Iheya**	**1.52**	**199**	P	**Pn**	**19 23 04.4**	**+0.5**
JIH				S	**Sn**	**19 23 25.6**	**+0.1**
JOW	**Kunigami**	**1.65**	**188**	P	**Pn**	**19 23 05.6**	**+0.2**
JOW				*e*S	**Sn**	**19 23 27.8**	**-0.4**
JNN	**Nakanoshima**	**1.80**	**41**	P	**Pn**	**19 23 07.3**	**+0.1**
JNN				*e*S	**Sn**	**19 23 31.4**	**0.0**
JAGN	**Aguni-jima**	**2.19**	**212**	P	**Pn**	**19 23 12.6**	**+0.7**
JAGN				*e*S	**Sn**	**19 23 39.7**	**-0.2**
NAH1	**Naha**	**2.38**	**198**	*e*S	**Sn**	**19 23 43.4**	**-0.6**
JJT2	**Tamagusuku 2**	**2.43**	**197**	P	**Pn**	**19 23 15.5**	**+0.7**
JJT2				*e*S	**Sn**	**19 23 45.2**	**+0.2**
JKC	**Kuchinoerabu**	**2.46**	**36**	*e*S	**Sn**	**19 23 44.7**	**-1.1**
JKE	**Kume jima 2**	**2.64**	**216**	P	**Pn**	**19 23 17.7**	**+0.2**
JKE				*e*S	**Sn**	**19 23 49.2**	**-0.6**
JTN	**Tanegashima 3**	**3.05**	**44**	P	**Pn**	**19 23 23.3**	**+0.5**
JTSR	**Tashiro 2**	**3.40**	**37**	P	**Pn**	**19 23 27.0**	**-0.3**
KSRS	**Korea Array**	**8.97**	**357**	Pn	**Pn**	**19 24 41.6**	**-0.2**
	0.1nm,0.3s,baz=176,slow=14,SNR=6.1						
SONM	**Songino Array**	**25.85**	**324**	P	**P**	**19 27 56.1**	**+1.5**
	0.4nm,0.7s,mb3.2,baz=128,slow=9.7,SNR=4.5						
MKAR	**Makanchi Array**	**40.27**	**310**	P	**P**	**19 29 58.6**	**-0.8**
	0.8nm,1.0s,mb3.3,baz=84,slow=14,SNR=3.5						
WRA	**Warramunga Arr**	**48.46**	**173**	P	**P**	**19 31 01.7**	**-2.9**
	0.5nm,0.7s,mb3.3,baz=354,slow=8.7,SNR=6.2						
ASAR	**Alice Springs**	**52.09**	**174**	P	**P**	**19 31 32.1**	**+0.1**
	0.2nm,0.7s,mb2.9,baz=356,slow=6.6,SNR=3.6						

*MOS **26** 19:54:12.4±1.4, 47°.51N×154°.16E, h65km, mb4.3/4, Error ellipse: s-maj=16.5km s-min=11.0km az=71.2*
*ISCJB **26** 19:54:12.4±1.2, 47°.57N±0°.09×154°.2E±0°.1, h62km±10km, mb3.8/4, Error ellipse: s-maj=19.1km s-min=8.5km az=137.4*
*NEIC **26** 19:54:15.0±1.2, 47°.58N×154°.18E, h70km±10km, mb3.9/1, Error ellipse: s-maj=15.3km s-min=9.3km az=156.0*
*IDC **26** 19:54:15.4±2.6, 47°.61N×154°.13E, h74km±23km, mb3.4/12, mb1 3.6/15, mb1mx3.5/27, mbtmp3.4/15, MS2.4/1, Ms1 2.4/1, ms1mx2.0/22, Error ellipse: s-maj=20.1km s-min=15.7km az=129.0*
ISC 26 19:54:14.6±1.0, 47°.59N±0°.09×154°.2E±0°.1, h66km±8km, n33, σ0°96/35, mb3.6/14, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.34**	**22**	*e*P	**Pn**	**19 55 04.9**	**+0.5**
SKR				*e*S	**Sn**	**19 55 41.5**	**-1.4**
SKR				pmax	pmax		
	comp=Z,120nm,0.5s						
SKR				pmax	pmax		
	comp=N,50nm,0.4s						
SKR				smax			
	comp=E,140nm,0.3s						
SKR				smax			
	comp=N,50nm,0.5s						
PEA0B	**Petropavlovsk-**	**5.96**	**21**	*e*P	**Pn**	**19 55 40.9**	**+0.8**
PETK	**Petropavlovsk-**	**5.96**	**21**	P	**Pn**	**19 55 41.0**	**+0.9**
	comp=N,1.3nm,0.3s,baz=199,slow=12,SNR=31						
PETK	**Petropavlovsk-**	**5.96**	**21**	*e*PN	**Pn**	**19 55 41.0**	**+0.8**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
YSS	**Yuzh-Sakhalins**	**7.80**	**270**	*e*PN	**Pn**	**19 56 05.5**	**+0.2**
YSS				pmax	pmax		
	comp=Z,9.0nm,0.6s						
YSS	**Yuzh-Sakhalins**	**7.80**	**270**	*e*P	**Pn**	**19 56 05.5**	**+0.2**
	comp=Z,9.1nm,0.6s						
ASAJ	**Asahikawa**	**8.80**	**251**	P	**Pn**	**19 56 19.8**	**+0.8**
	comp=Z,0.6nm,0.3s,baz=77,slow=13,SNR=6.8						
ASAJ	**Asahikawa**	**8.80**	**251**	PN	**Pn**	**19 56 19.8**	**+0.8**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ERM	**Erimo**	**9.61**	**239**	*i* PN	**Pn**	**19 56 27.8**	**-2.3**
FX1	**Attu Island--F**	**13.24**	**59**	P	**Pn**	**19 57 19.2**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=304,slow=19,SNR=8.9						
FX1				S	**Sn**	**19 59 35.8**	**-9.0**
	comp=Z,2.9nm,0.3s,baz=23,slow=22,SNR=6.4						
KSRS	**Korea Array**	**21.75**	**252**	P	**P**	**19 59 00.8**	**+0.3**
	comp=Z,0.6nm,0.5s,mb3.1,baz=53,slow=9.4,SNR=5.5						
KSRS				LR	LR	20 07 44.7	
	comp=Z,11nm,19.9s,baz=220,slow=37						
KSRS	**Korea Array**	**21.75**	**252**	*e*P	**P**	**19 59 03.8**	**+3.3**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.4						
ZALV	**Zalesovo Beam**	**42.71**	**305**	P	**P**	**20 02 05.1**	**+0.3**
	comp=Z,0.2nm,0.2s,mb3.4,baz=57,slow=5.3,SNR=2.6						
MKAR	**Makanchi Array**	**47.20**	**297**	P	**P**	**20 02 40.2**	**-0.3**
	comp=Z,0.3nm,0.8s,mb3.1,baz=69,slow=14,SNR=2.9						
MKAR	**Makanchi Array**	**47.20**	**297**	P	**P**	**20 02 40.2**	**-0.3**
KURK	**Kurchatov**	**47.50**	**303**	*e*P	**P**	**20 02 43.4**	**+0.6**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.7						
KURK	**Kurchatov**	**47.50**	**303**	*e*P	**P**	**20 02 43.4**	**+0.7**
	comp=Z,1.4nm,0.8s,mb3.8						
YKA	**Yellowknife Ar**	**49.81**	**37**	P	**P**	**20 03 00.4**	**+0.1**
	comp=Z,0.7nm,0.7s,mb3.7,baz=296,slow=6.9,SNR=3.4						
BVAR	**Borovoye Array**	**50.88**	**309**	P	**P**	**20 03 09.4**	**+0.9**
	comp=Z,0.6nm,0.5s,mb3.9,baz=67,slow=11,SNR=4.5						
BVAR	**Borovoye Array**	**50.88**	**309**	*e*P	**P**	**20 03 11.8**	**+3.3**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	**FINESS Array B**	**63.59**	**335**	P	**P**	**20 04 36.7**	**-1.1**
	comp=Z,1.0nm,0.6s,mb3.9,baz=32,slow=7.9,SNR=9.5						
FINES	**FINESS Array B**	**63.59**	**335**	P	**P**	**20 04 36.7**	**-1.1**
NOA	**NORSAR Array B**	**67.66**	**342**	P	**P**	**20 05 03.5**	**-0.6**
	comp=Z,0.3nm,0.5s,mb3.4,baz=27,slow=6.5,SNR=2.8						
WRA	**Warramunga Arr**	**69.55**	**200**	P	**P**	**20 05 15.6**	**-0.7**
	comp=Z,2.3nm,1.1s,mb3.9,baz=20,slow=6.8,SNR=3.0						
AKASG	**Malin Array Be**	**71.25**	**327**	P	**P**	**20 05 24.7**	**-1.7**
	comp=Z,0.4nm,0.3s,mb3.8,baz=37,slow=6.5,SNR=2.5						
ASAR	**Alice Springs**	**73.24**	**199**	P	**P**	**20 05 38.5**	**+0.1**
	comp=Z,0.9nm,0.6s,mb3.8,baz=9.1,slow=6.0,SNR=12						
ASAR	**Alice Springs**	**73.24**	**199**	*e*P	**P**	**20 05 38.5**	**0.0**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CLL	**Collm**	**75.99**	**336**	*i* P	**P**	**20 05 53.0**	**-1.2**
CLL				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
CLL	**Collm**	**75.99**	**336**	*i* P	**P**	**20 05 54.0**	**-0.2**
	comp=Z,4.0nm,1.0s,mb4.1						
TXAR	**Lajitas Array**	**76.45**	**61**	P	**P**	**20 05 58.4**	**+1.2**
	comp=Z,0.7nm,0.5s,mb3.7,baz=288,slow=4.0,SNR=7.1						
KHC	**Kasperske Hory**	**77.79**	**335**	*e*P	**P**	**20 06 04.9**	**+0.5**
KHC	**Kasperske Hory**	**77.79**	**335**	*e*P	**P**	**20 06 04.9**	**+0.5**
BRTR	**Keskin Array B**	**78.27**	**317**	P	**P**	**20 06 08.1**	**+0.9**
	comp=Z,0.8nm,0.9s,mb3.4,baz=41,slow=4.6,SNR=4.1						

*TAP **26** 19:54:34.1, 24°.33N×120°.98E, h9km, ML3.9, C*
*ISCJB **26** 19:54:35.1±0.2, 24°.33N±0°.01×121°.01E±0°.02, h5km±2km, Error ellipse: s-maj=2.6km s-min=1.7km az=35.9*
ISC 26 19:54:35.5±0.2, 24°.33N±0°.01×121°.00E±0°.02, h6km±2km, n59, σ0°85/115, 13C-15D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWT	**Tachien**	**0.17**	**116**	⇑*i*P	**Pg**	**19 54 38.6**	**-0.4**
	baz=115						
TWT				*i* S	**Sg**	**19 54 41.4**	**0.0**
	baz=115						
TWQ1	**Liyutan**	**0.21**	**275**	⇑P	**Pg**	**19 54 39.0**	**-0.7**
	baz=276						
TWQ1				*i* S	**Sg**	**19 54 42.3**	**-0.2**
	baz=276						
NSY	**Sanyi**	**0.24**	**291**	⇑*i*P	**Pg**	**19 54 39.9**	**-0.3**
	baz=294						
NSY				*i* S	**Sg**	**19 54 43.9**	**+0.6**
	baz=294						
NSTT	**Nanjuang**	**0.30**	**359**	⇑*i*P	**Pg**	**19 54 41.0**	**-0.3**
	baz=4.0						
NSTT				*i* S	**Sg**	**19 54 45.4**	**+0.1**
	baz=4.0						
WHF	**Hehuan Shan**	**0.30**	**128**	⇑*i*P	**Pg**	**19 54 41.8**	**+0.4**
	baz=125						
WHF				*e*S	**Sg**	**19 54 46.3**	**+0.9**
	baz=125						
TCU	**Taichung**	**0.35**	**239**	⇓*i*P	**Pg**	**19 54 42.4**	**+0.1**
	baz=237						
TCU				*e*S	**Sg**	**19 54 47.9**	**+1.0**
	baz=237						
NNS	**Nan Shan**	**0.35**	**72**	⇓*i*P	**Pg**	**19 54 42.2**	**-0.1**
	baz=83						
NNS				*e*S	**Sg**	**19 54 46.7**	**-0.3**
	baz=83						
TYC	**Yuchr**	**0.45**	**198**	⇑*i*P	**Pg**	**19 54 43.5**	**-0.6**
	baz=186						
TYC				S	**Sg**	**19 54 50.0**	**+0.1**
	baz=186						
SMLT	**Sun Moon Lake**	**0.46**	**192**	⇑*i*P	**Pg**	**19 54 43.8**	**-0.5**
	baz=181						
SMLT				*e*S	**Sg**	**19 54 50.5**	**+0.2**
	baz=181						
HSN	**Hsinchu**	**0.47**	**356**	P	**Pg**	**19 54 45.6**	**+1.0**
	baz=2.0						
HSN				*e*S	**Sg**	**19 54 53.2**	**+2.4**
	baz=2.0						
NSK	**Sanguang**	**0.47**	**43**	⇓*i*P	**Pg**	**19 54 44.0**	**-0.6**
	baz=56						
NSK				S	**Sg**	**19 54 50.7**	**0.0**
	baz=56						
WNT	**Mingjian**	**0.54**	**213**	⇓*i*P	**Pg**	**19 54 46.3**	**+0.4**
	baz=211						
WNT				S	**Sg**	**19 54 54.8**	**+1.9**
	baz=211						
TWD	**Chiawan**	**0.59**	**115**	⇑*i*P	**Pg**	**19 54 47.0**	**0.0**
	baz=106						
TWD				*i* S	**Sg**	**19 54 54.9**	**+0.2**
	baz=106						
ENTT	**Nioudou**	**0.60**	**59**	⇓*i*P	**Pg**	**19 54 46.5**	**-0.5**
	baz=60						
ENTT				*e*S	**Sg**	**19 54 54.4**	**-0.4**
	baz=60						
ESL	**Shilin**	**0.65**	**143**	⇑*i*P	**Pg**	**19 54 47.7**	**-0.3**
	baz=141						
ESL				*e*S	**Sg**	**19 54 56.1**	**-0.3**
	baz=141						
HWA	**Hwalien**	**0.65**	**123**	⇑*i*P	**Pg**	**19 54 48.2**	**+0.1**
	baz=108						
HWA				*e*S	**Sg**	**19 54 57.0**	**+0.5**
	baz=108						
NCU	**National Centr**	**0.66**	**15**	P	**Pg**	**19 54 48.9**	**+0.7**
	baz=16						
NCU				*e*S	**Sg**	**19 54 58.5**	**+1.8**
	baz=16						
ENA	**Nanau**	**0.68**	**82**	⇓*i*P	**Pg**	**19 54 48.2**	**-0.4**
	baz=93						
ENA				*e*S	**Sg**	**19 54 56.7**	**-0.7**
	baz=93						
TWE	**Neicheng**	**0.72**	**57**	⇓*i*P	**Pg**	**19 54 48.9**	**-0.5**
	baz=58						
TWE				*e*S	**Sg**	**19 54 58.4**	**-0.3**
	baz=58						
WGK	**Gukeng**	**0.76**	**212**	⇓*i*P	**Pg**	**19 54 50.1**	**0.0**
	baz=211						
WGK				*e*S	**Sg**	**19 55 01.2**	**+1.3**
	baz=211						
CHN5	**Tsauling**	**0.79**	**202**	⇓*i*P	**Pg**	**19 54 50.6**	**-0.1**
	baz=216						
CHN5				S	**Sg**	**19 55 01.9**	**+1.0**
	baz=216						
WTCT	**Ta-ch'eng**	**0.81**	**235**	⇓*i*P	**Pg**	**19 54 50.6**	**-0.5**
	baz=234						
WTCT				*e*S	**Sg**	**19 55 02.4**	**+0.9**
	baz=234						
TWC	**Suao**	**0.82**	**70**	*e*P	**Pg**	**19 54 50.5**	**-0.7**
	baz=59						
TWC				*e*S	**Sg**	**19 55 01.9**	**0.0**
	baz=59						
TWA	**Mucha**	**0.83**	**39**	⇓P	**Pg**	**19 54 51.3**	**-0.3**
	baz=47						
TWA				*e*S	**Sg**	**19 55 03.7**	**+1.3**
	baz=47						
ALS	**Alishan**	**0.84**	**193**	*e*P	**Pg**	**19 54 50.9**	**-0.7**
	baz=192						
ALS				*e*S	**Sg**	**19 55 04.2**	**+1.7**
	baz=192						
TAP1	**Taipei**	**0.85**	**34**	*e*P	**Pg**	**19 54 51.4**	**-0.4**
	baz=50						
TAP1				*e*S	**Sg**	**19 55 04.0**	**+1.2**
	baz=50						
TWS1	**Kuangyinshan**	**0.85**	**26**	P	**Pg**	**19 54 52.4**	**+0.5**
	baz=27						
TWS1				*e*S	**Sg**	**19 55 05.5**	**+2.5**
	baz=27						
EHY	**Hungye**	**0.87**	**160**	⇑*i*P	**Pg**	**19 54 51.3**	**-1.0**
	baz=160						
EHY				*e*S	**Sg**	**19 55 03.0**	**-0.6**
	baz=160						
CHN2	**Minshiung**	**0.93**	**211**	*i* P	**Pg**	**19 54 53.1**	**-0.3**
	baz=211						
CHN2				S	**Sg**	**19 55 06.5**	**+0.9**
	baz=211						
CHY	**Chiayi**	**0.98**	**213**	P	**Pg**	**19 54 53.6**	**-0.9**
	baz=212						
CHY				*e*S	**Sg**	**19 55 07.4**	**+0.2**
	baz=212						
TWF1	**Yuli**	**1.01**	**165**	⇑P	**Pg**	**19 54 53.7**	**-1.2**
	baz=158						
TWF1				*e*S	**Sg**	**19 55 08.5**	**+0.5**
	baz=158						
NWF	**Wu-fen Shan**	**1.02**	**44**	*e*P	**Pg**	**19 54 54.6**	**-0.5**
	baz=58						
NWF				*e*S	**Sg**	**19 55 08.8**	**+0.4**
	baz=58						
CHN4	**Tsaushan**	**1.05**	**201**	⇓*e*P	**Pg**	**19 54 54.8**	**-0.8**
	baz=211						
CHN4				*e*S	**Sg**	**19 55 09.9**	**+0.7**
	baz=211						
TWY	**Chenhua**	**1.08**	**30**	*e*P	**Pg**	**19 54 56.0**	**-0.3**
	baz=31						
TWY				*e*S	**Sg**	**19 55 11.1**	**+0.7**
	baz=31						
TWB1	**Santiao Chiao**	**1.12**	**53**	P	**Pg**	**19 54 55.8**	**-1.2**
	baz=60						
TWB1				*e*S	**Sg**	**19 55 11.7**	**+0.1**
	baz=60						
ELDTW	**Lidau**	**1.14**	**179**	*e*P	**Pg**	**19 54 55.7**	**-1.7**
	baz=179						
ELDTW				*e*S	**Sg**	**19 55 12.2**	**+0.1**
	baz=179						
WTP	**Ta-pu**	**1.14**	**198**	⇓*i*P	**Pg**	**19 54 56.2**	**-1.2**
	baz=211						
WTP				*e*S	**Sg**	**19 55 12.5**	**+0.3**
	baz=211						
TWK	**Hsinying**	**1.16**	**204**	⇓*i*P	**Pg**	**19 54 56.7**	**-1.1**
	baz=204						
TWK				*e*S	**Sg**	**19 55 13.2**	**+0.3**
	baz=204						
STYT	**Tauyuan**	**1.19**	**191**	*e*S	**Sg**	**19 55 13.8**	**+0.2**
	baz=191						
CHN8	**Yiju**	**1.22**	**217**	*e*P	**Pg**	**19 54 57.3**	**-1.7**
	baz=216						
CHN8				*e*S	**Sg**	**19 55 15.0**	**+0.2**
	baz=216						
CHN1	**Nanshi**	**1.22**	**201**	⇓*i*P	**Pg**	**19 54 57.5**	**-1.4**
	baz=201						
CHN1				S	**Sg**	**19 55 15.1**	**+0.2**
	baz=201						
SGST	**Jiashian**	**1.30**	**197**	*e*P	**Pn**	**19 54 59.0**	**-1.3**
	baz=197						
SGST				S	**Sb**	**19 55 17.8**	**+0.4**
	baz=197						
SCLT	**Jiali**	**1.37**	**213**	*e*P	**Pn**	**19 55 00.1**	**-1.1**
	baz=212						
SCLT				*e*S	**Sb**	**19 55 19.4**	**+0.1**
	baz=212						
CHN3	**Shinhua**	**1.38**	**205**	*e*P	**Pn**	**19 55 00.8**	**-0.6**
	baz=215						
CHN3				*e*S	**Sb**	**19 55 19.9**	**+0.2**
	baz=215						
TAI1	**Yung-k'ang**	**1.47**	**209**	P	**Pn**	**19 55 01.6**	**-1.0**
	baz=208						
TAI1				*e*S	**Sn**	**19 55 22.1**	**-0.1**
	baz=208						
TWG	**Pinlang**	**1.50**	**178**	*e*P	**Pn**	**19 55 03.0**	**-0.1**
	baz=169						
TWG				*e*S	**Sn**	**19 55 23.9**	**+0.8**
	baz=169						
PNG	**Penghu**	**1.53**	**240**	*e*P	**Pn**	**19 55 00.3**	**-3.1**
	baz=250						
PNG				*e*S	**Sn**	**19 55 22.6**	**-1.1**
	baz=250						
TTN	**Taitung**	**1.58**	**175**	*e*P	**Pn**	**19 55 04.8**	**+0.7**
	baz=174						
SSD	**Sandimen**	**1.61**	**192**	P	**Pn**	**19 55 04.2**	**-0.4**
	baz=193						
SSD				*e*S	**Sn**	**19 55 26.6**	**+0.9**
	baz=193						
WDGT	**Dungji**	**1.63**	**229**	*e*P	**Pn**	**19 55 01.8**	**-3.0**
	baz=227						
WDGT				*e*S	**Sn**	**19 55 25.2**	**-0.9**
	baz=227						
ECL	**Taimali**	**1.73**	**182**	P	**Pn**	**19 55 06.3**	**+0.2**
	baz=183						
ECL				*e*S	**Sn**	**19 55 30.2**	**+1.6**
	baz=183						
EAST	**Anshuo**	**1.94**	**184**	*e*P	**Pn**	**19 55 08.7**	**-0.4**
	baz=186						
EAST				*e*S	**Sn**	**19 55 35.0**	**+1.1**
	baz=186						
TAW	**Tawu**	**1.97**	**183**	*e*P	**Pn**	**19 55 09.4**	**0.0**
	baz=204						
TAW				*e*S	**Sn**	**19 55 35.7**	**+1.2**
	baz=204						
SCZT	**Fangliau**	**1.98**	**190**	⇑P	**Pn**	**19 55 09.3**	**-0.3**
	baz=207						
SCZT				*e*S	**Sn**	**19 55 35.4**	**+0.6**
	baz=207						
QZH	**Quanzhou**	**2.28**	**286**	Pn	**Pn**	**19 55 10.0**	**-3.7**
QZH				Sn	**Sn**	**19 55 36.3**	**-5.8**
QZH				smax			
	comp=N,890nm,1.1s						
QZH				smax			
	comp=E,490nm,0.3s						
HEN	**Hengchun**	**2.33**	**186**	*e*P	**Pn**	**19 55 14.4**	**0.0**
	baz=188						
HEN				*e*S	**Sn**	**19 55 44.1**	**+0.7**
	baz=188						
LAY	**Lan-yu**	**2.34**	**167**	*e*P	**Pn**	**19 55 14.1**	**-0.5**
	baz=156						
LAY				*e*S	**Sn**	**19 55 44.1**	**+0.5**
	baz=156						
KNM	**Kinmen**	**2.35**	**273**	*e*P	**Pn**	**19 55 13.8**	**-0.9**
	baz=273						
TWK1	**Hengchun**	**2.38**	**184**	*e*P	**Pn**	**19 55 14.6**	**-0.6**
	baz=187						
TWK1				*e*S	**Sn**	**19 55 46.5**	**+1.8**
	baz=187						

*IDC **26** 20:22:52.0±1.9, 34°.62N×23°.49E, h0km, mb3.9/4, mb1 3.7/7, mb1mx3.6/26, mbtmp3.8/7, ML3.6/3, MS2.9/2, Ms1 2.9/2, ms1mx2.2/39, Error ellipse: s-maj=30.9km s-min=20.6km az=170.0*
*ISCJB **26** 20:22:57.7±0.5, 34°.68N±0°.03×23°.74E±0°.04, h32km±4km, mb3.9/4, Error ellipse: s-maj=5.4km s-min=4.5km az=12.3*
*THE **26** 20:22:58.7, 34°.76N×23°.64E, h16km±1km, Error ellipse: s-maj=3.0km s-min=1.7km az=203.0*
*CSEM **26** 20:23:00.4±0.2, 34°.72N×23°.89E, h30km, ML3.2, Error ellipse: s-maj=6.7km s-min=5.0km az=85.0*
*NEIC **26** 20:23:01.1, 34°.89N×23°.95E, h31km, ML3.2(ATH), After ATH.*
*ATH **26** 20:23:01.1, 34°.89N×23°.95E, h31km, MD3.8/8, ML3.2*
*HLW **26** 20:23:02.1, 34°.62N×24°.12E, h31km±36km, Md3.5, Ml3.3*
ISC 26 20:22:58.8±0.6, 34°.74N±0°.03×23°.75E±0°.04, h24km±4km, n121, σ1°31/163, mb3.9/4, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.30**	**70**	*e*Pb	**Pb**	**20 23 06.3**	**+0.7**
GVD				*e*Sb	**Sb**	**20 23 11.4**	**+1.1**
GVD	**Gavdhos**	**0.30**	**70**	P	**Pb**	**20 23 06.3**	**+0.7**
GVD				S	**Sb**	**20 23 11.8**	**+1.5**
GVD	**Gavdhos**	**0.30**	**70**	*e*PB	**Pb**	**20 23 06.3**	**+0.7**
GVD				*e*SB	**Sb**	**20 23 11.4**	**+1.1**
GVD	**Gavdhos**	**0.30**	**70**	P	**Pb**	**20 23 06.3**	**+0.7**
GVD				*e*Sb	**Sb**	**20 23 11.4**	**+1.1**
GVD				S	**Sb**	**20 23 11.8**	**+1.5**
KARN	**Karanos**	**0.68**	**12**	P	**Pb**	**20 23 11.6**	**-0.4**
KARN				S	**Sb**	**20 23 23.0**	**+2.1**
KARN	**Karanos**	**0.68**	**12**	*e*PN	**Pb**	**20 23 11.5**	**-0.5**
KARN				*e*SN	**Sb**	**20 23 20.6**	**-0.3**
KARN	**Karanos**	**0.68**	**12**	P	**Pb**	**20 23 11.6**	**-0.4**
KARN				S	**Sb**	**20 23 23.0**	**+2.1**
VAM	**Vamos**	**0.76**	**29**	*e*Pn	**Pb**	**20 23 12.5**	**-0.9**
VAM				*e*Sn	**Sb**	**20 23 21.8**	**-1.6**
VAM	**Vamos**	**0.76**	**29**	*e*PN	**Pb**	**20 23 12.5**	**-0.9**
VAM				*e*SN	**Sb**	**20 23 21.8**	**-1.6**
VAM	**Vamos**	**0.76**	**29**	*e*Pn	**Pb**	**20 23 12.5**	**-0.9**
SIVA	**Sivas**	**0.92**	**72**	*e*Pn	**Pb**	**20 23 16.2**	**+0.2**
SIVA				*e*Sn	**Sb**	**20 23 26.2**	**-1.5**
SIVA	**Sivas**	**0.92**	**72**	P	**Pb**	**20 23 16.2**	**+0.2**
SIVA				S	**Sb**	**20 23 31.5**	**+3.8**
SIVA	**Sivas**	**0.92**	**72**	*e*PN	**Pb**	**20 23 16.2**	**+0.2**
SIVA				*e*SN	**Sb**	**20 23 26.2**	**-1.5**
SIVA	**Sivas**	**0.92**	**72**	P	**Pb**	**20 23 16.2**	**+0.2**
SIVA				*e*Sn	**Sb**	**20 23 26.2**	**-1.5**
SIVA				S	**Sb**	**20 23 31.5**	**+3.8**
IDI	**Anoyia**	**1.08**	**59**	Pg	**Pn**	**20 23 18.4**	**-0.2**
	138nm,0.3s,baz=245,slow=17,SNR=672						
IDI				Lg		20 23 34.4	
	197nm,0.3s,baz=219,slow=13,SNR=17						
IDI	**Anoyia**	**1.08**	**59**	*e*Pn	**Pn**	**20 23 18.2**	**-0.3**
IDI				*e*Sn	**Sn**	**20 23 30.8**	**-2.0**
IDI	**Anoyia**	**1.08**	**59**	*e*PN	**Pn**	**20 23 18.2**	**-0.3**
IDI				*e*SN	**Sn**	**20 23 30.8**	**-2.0**
IDI	**Anoyia**	**1.08**	**59**	*e*Pn	**Pn**	**20 23 18.2**	**-0.3**
IDI				*e*Sn	**Sn**	**20 23 30.8**	**-2.0**
LAST	**Lasithi**	**1.48**	**73**	*e*Pn	**Pn**	**20 23 25.5**	**+1.5**
LAST				*e*Sn	**Sn**	**20 23 41.8**	**-0.8**
LAST	**Lasithi**	**1.48**	**73**	P	**Pn**	**20 23 25.4**	**+1.4**
LAST				S	**Sn**	**20 23 46.4**	**+3.8**
LAST

PYL	PYLOS	2.70	323	*e*PN	Pb	20 23 44.8	-1.6
PYL	PYLOS	2.70	323	*e*Pn	Pb	20 23 44.8	-1.6
APE	Apeiranthos	2.74	31	*e*Pn	Pn	20 23 43.0	+1.7
APE	Apeiranthos	2.74	31	*e*PN	Pn	20 23 43.0	+1.7
APE	Apeiranthos	2.74	31	*e*Pn	Pn	20 23 43.0	+1.7
DID	Didima	2.79	352	P	Pn	20 23 41.8	-0.2
DID	Didima	2.79	352	*e*PN	Pn	20 23 43.4	+1.4
DID	Didima	2.79	352	P	Pn	20 23 41.8	-0.2
DID	Didima	2.79	352	*e*Pn	Pn	20 23 43.4	+1.4
ITM	Ithomi	2.85	329	*e*Pn	Pb	20 23 46.9	-2.1
ITM	Ithomi	2.85	329	*e*PN	Pb	20 23 46.9	-2.1
ITM	Ithomi	2.85	329	*e*Pn	Pb	20 23 46.9	-2.1
VLX	Vlachokerasia	2.85	337	*e*PN	Pb	20 23 46.2	-2.8
VLX	Vlachokerasia	2.85	337	*e*Pn	Pb	20 23 46.2	-2.8
KARP	Karpathos	2.91	73	*e*Pn	Pn	20 23 44.6	+1.0
KARP	Karpathos	2.91	73	*e*PN	Pn	20 23 44.6	+1.0
KARP	Karpathos	2.91	73	*e*Pn	Pn	20 23 44.6	+1.0
NAIG	Nisos Aigina	3.02	356	*e*Pn	Pn	20 23 48.3	+3.1
NAIG	Nisos Aigina	3.02	356	*e*PN	Pn	20 23 48.3	+3.1
NAIG	Nisos Aigina	3.02	356	*e*Pn	Pn	20 23 48.3	+3.1
VLY	Voula,Athens	3.11	1	*e*Pn	Pn	20 23 46.6	+0.3
VLY	Voula,Athens	3.11	1	*e*PN	Pn	20 23 46.6	+0.3
VLY	Voula,Athens	3.11	1	*e*Pn	Pn	20 23 46.6	+0.3
ATH	Athens Observa	3.23	360	*e*Pn	Pn	20 23 49.3	+1.3
ATH	Athens Observa	3.23	360	*e*PN	Pn	20 23 49.3	+1.3
ATH	Athens Observa	3.23	360	*e*Pn	Pn	20 23 49.3	+1.3
PTL	Penteli	3.31	2	*e*Pn	Pn	20 23 50.3	+1.2
PTL	Penteli	3.31	2	*e*PN	Pn	20 23 50.3	+1.2
PTL	Penteli	3.31	2	*e*Pn	Pn	20 23 50.3	+1.2
NIS1	Nisyros Isl.	3.35	55	P	Pn	20 23 50.5	+0.8
NIS1	Nisyros Isl.	3.35	55	P	Pn	20 23 50.5	+0.8
SLUM		3.46	159	P	Pn	20 23 51.5	+0.3
	baz=163						
SLUM				AMP		20 24 00.0	
	comp=N,50μm,0.3s,logA/T=5.2,baz=163						
SLUM		3.46	159	P	Pn	20 23 51.5	+0.3
ARG	Arkhangelos	3.86	66	*e*Pn	Pn	20 23 57.5	+0.8
ARG	Arkhangelos	3.86	66	P	Pn	20 23 57.2	+0.5
ARG				S	Sn	20 24 39.6	-1.8
ARG	Arkhangelos	3.86	66	*e*PN	Pn	20 23 57.5	+0.8
ARG	Arkhangelos	3.86	66	P	Pn	20 23 57.2	+0.5
ARG	Arkhangelos	3.86	66	*e*Pn	Pn	20 23 57.5	+0.8
ARG				S	Sn	20 24 39.6	-1.8
LKR	Lokris	3.95	351	P	Pn	20 23 58.2	+0.3
LKR	Lokris	3.95	351	P	Pn	20 23 58.0	+0.1
LKR	Lokris	3.95	351	P	Pn	20 23 58.2	+0.3
AGG	Agios Georgios	4.43	346	P	Pn	20 24 08.7	+4.3
AGG	Agios Georgios	4.43	346	P	Pn	20 24 08.7	+4.3
NEO	Neokhori	4.58	355	P	Pn	20 24 07.9	+1.3
NEO	Neokhori	4.58	355	P	Pn	20 24 07.9	+1.3
HMAT	Matruh	4.59	141	P	Pn	20 24 06.7	-0.1
	baz=143						
HMAT				S	Sn	20 24 53.4	-6.0
	baz=143						
HMAT	Matruh	4.59	141	P	Pn	20 24 06.7	-0.1
HMAT				S	Sn	20 24 53.4	-6.0
LJBD	Adjabya	4.85	219	*e*P	Pn	20 24 12.5	+2.3
	SNR=76						
SWA2		5.67	165	P	Pn	20 24 21.4	-0.1
	baz=167						
SWA2				AMP		20 25 00.0	
	comp=N,50μm,0.3s,logA/T=5.2,baz=167						
SWA2		5.67	165	P	Pn	20 24 21.4	-0.1
LUJL	Ujela	5.97	201	*e*P	Pn	20 24 27.9	+2.1
	SNR=70						
CEL	Celeste	7.24	301	P	Pb	20 24 54.3	-9.4
HSAF	As Saff	8.35	126	P	Pn	20 24 57.3	-1.0
	baz=126						
HSAF	As Saff	8.35	126	P	Pn	20 24 57.3	-1.1
GLL	Jalalah	8.48	125	P	Pn	20 24 59.5	-0.7
	baz=126						
GLL	Jalalah	8.48	125	P	Pn	20 24 59.5	-0.7
HFRF	Wahat Farafira	8.52	151	P	Pn	20 25 00.7	0.0
	baz=153						
HFRF	Wahat Farafira	8.52	151	P	Pn	20 25 00.7	+0.1
BR131	Keskin Array S	9.32	55	*e*P	Pn	20 25 12.2	+0.5
	comp=N,1.0nm,0.4s						
BR131	Keskin Array S	9.32	55	*e*P	Pn	20 25 12.2	+0.5
	comp=N,1.0nm,0.4s						
BRTR	Keskin Array B	9.32	55	Pn	Pn	20 25 11.9	+0.3
	comp=N,0.3nm,0.3s,baz=243,slow=13,SNR=8.8						
BRTR	Keskin Array B	9.32	55	Pn	Pn	20 25 11.9	+0.2
MMAI	Mount Meron Ar	9.84	97	Pn	Pn	20 25 16.0	-2.7
	comp=N,1.4nm,0.3s,baz=276,slow=12,SNR=7.9						
MMAI				Sn	Sn	20 26 59.8	-8.6
	comp=N,1.5nm,0.3s,baz=301,slow=23,SNR=4.5						
HDK1	Dakhla	10.38	150	P	Pn	20 25 26.4	+0.1
	baz=151						
HDK1	Dakhla	10.38	150	P	Pn	20 25 26.4	+0.1
EIL	Elat	10.75	115	Pn	Pn	20 25 29.0	-2.2
	comp=N,0.3nm,0.3s,baz=0.5,slow=12,SNR=9.7						
EIL				Sn	Sn	20 27 19.9	-11
	comp=N,0.6nm,0.3s,baz=292,slow=19,SNR=5.7						
EIL				LR	LR	20 30 55.5	
	comp=N,32nm,20.3s,baz=333,slow=44						
EIL	Elat	10.75	115	Pn	Pn	20 25 29.0	-2.2
EIL				Sn	Sn	20 27 19.9	-11
EIL				LR	LR	20 30 55.5	
EIL	Elat	10.75	115	Pn	Pn	20 25 29.0	-2.2
GNI	Garni	17.51	66	LR	LR	20 35 03.6	
	comp=N,62nm,18.0s,baz=97,slow=41						
MIB	Mutribah	20.53	97	*e*P	P	20 27 34.4	-1.0
MIB				AMb	AMB	20 27 35.3	
	comp=Z,17nm,0.6s						
NAY	Al-Naaiem	20.64	99	*e*P	P	20 27 36.1	-0.5
HFS	Hagfors	26.24	349	P	P	20 28 29.4	-2.4
	comp=Z,1.1nm,0.5s,mb3.6,baz=156,slow=11,SNR=4.6						
MK31	Makanchi Array	44.97	56	*e*P	P	20 31 10.4	-1.5
MK31	Makanchi Array	44.97	56	*e*P	P	20 31 10.4	-1.5
MKAR	Makanchi Array	44.97	56	P	P	20 31 10.7	-1.2
	comp=Z,1.2nm,0.4s,mb4.0,baz=282,slow=6.4,SNR=26						
ZALV	Zalesovo Beam	46.13	46	P	P	20 31 19.1	-1.9
	comp=Z,1.2nm,0.3s,mb4.2,baz=265,slow=8.6,SNR=6.7						
ZALV	Zalesovo Beam	46.13	46	P	P	20 31 19.1	-1.9
SONM	Songino Array	60.65	50	P	P	20 33 06.0	-1.7
	comp=Z,0.2nm,0.5s,mb3.5,baz=284,slow=5.8,SNR=3.1						
SONM	Songino Array	60.65	50	P	P	20 33 06.0	-1.7

NEIC 26 20:25:30.6,38°.28S×175°.88E,h166km,MG3.8(WEL), After WEL.,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	0.97	89	P	Pn	20 25 56.3	-0.3
BKZ	Black Stump Fm	1.01	152	P	Pn	20 25 56.8	-0.1
BKZ				S	Sn	20 26 15.8	-1.4
FWVZ	Far West T-bar	1.01	195	P	Pn	20 25 57.3	+0.4
WNVZ	Wahianoa	1.07	192	P	Pn	20 25 57.8	+0.4
MOVZ	Moawhango	1.13	185	P	Pn	20 25 57.7	-0.2
MWZ	Matawai	1.30	93	P	Pn	20 25 59.5	+0.1
MWZ				S	Sn	20 26 20.1	-1.4
KNZ	Kokohu	1.59	118	P	Pn	20 26 02.1	-0.1
TSZ	Takapari Road	1.78	178	P	Pn	20 26 03.7	-0.5
MXZ	Matakaoa Point	2.05	70	P	Pn	20 26 07.0	-0.2
MRZ	Mangatainoka R	2.39	185	P	Pn	20 26 09.7	-1.4
BFZ	Birch Farm	2.42	173	P	Pn	20 26 09.6	-1.8
KIW	Kapiti Island	2.69	196	P	Pn	20 26 12.7	-2.0
MTW	Mount Morrison	2.89	186	P	Pn	20 26 14.8	-2.4
CAW	Cannon Point	2.89	192	P	Pn	20 26 15.1	-2.1
MSWZ	Moikau Station	3.17	189	P	Pn	20 26 18.0	-2.6
TCW	Tory Channel	3.18	202	P	Pn	20 26 18.4	-2.4
NNZ	Nelson	3.51	213	P	Pn	20 26 22.3	-2.6
LTZ	Lake Taylor	5.27	210	P	Pn	20 26 44.1	-3.6

*ISCJB **26** 20:35:07.5±2.1,28°.70S±0°.05×71°.58W±0°.09,h10km±13km, mb4.2/7,MS3.7/2,Error ellipse: s-maj=14.3km s-min=6.7km az=161.3*
*GUC **26** 20:35:11.5±0.6,28°.72S×71°.43W,h50km,ML5.0*
*NEIC **26** 20:35:11.5,28°.72S×71°.43W,h50km,mb4.8/1, MG5.0(GUC),After GUC.*
*IDC **26** 20:35:14.9±3.1,28°.74S×71°.49W,h51km±28km,mb4.1/7, mb1 4.2/10,mb1mx4.1/16,mbtmp4.0/10,ML4.0/3,MS3.8/4, Ms1 3.8/4,ms1mx3.3/18,Error ellipse: s-maj=28.3km s-min=19.2km az=64.0*

ISC 26 20:35:08.8±1.8,28.74S±0°.05×71°.6W±0°.1,h7km±11km,n41, σ1°.09/30,mb4.2/7,MS3.7/2,2D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	Las Campanas	0.82	110	*e*P	Pg	20 35 24.5	0.0
TLL	Tololo Astrono	1.58	155	⇓*i*P	Pn	20 35 37.8	+0.5
TLL				*i* S	Sn	20 35 57.5	-0.4
TLL	Tololo Astrono	1.58	155	⇓*i*P	Pn	20 35 37.8	+0.5
TLL				*i* S	Sn	20 35 57.5	-0.4
TLL				AML	AML	20 36 01.1	
	comp=N,33μm,0.6s						
OVCH	Ovalle	1.90	170	*e*P	Pn	20 35 41.9	+0.3
OVCH				*i* S	Sn	20 36 04.7	-1.0
OVCH	Ovalle	1.90	170	*e*P	Pn	20 35 41.9	+0.3
OVCH				*i* S	Sn	20 36 04.7	-1.0
OVCH				AML	AML	20 36 18.5	
	comp=N,6μm,0.4s						
CMCH	Combarbala	2.48	169	*i* P	Pn	20 35 49.6	-0.1
CMCH				*i* S	Sn	20 36 19.2	-1.0
CMCH	Combarbala	2.48	169	*i* P	Pn	20 35 49.6	-0.1
CMCH				*i* S	Sn	20 36 19.2	-1.0
CMCH				AML	AML	20 36 31.4	
	comp=E,29μm,0.7s						
CFAA	Coronel Fontan	4.07	136	P	Pn	20 36 12.9	+1.4
	comp=E,3.1nm,0.3s,baz=317,slow=12,SNR=124						
CFAA				S	Sn	20 37 01.5	+2.1
	comp=E,5.7nm,0.3s,baz=262,slow=14,SNR=6.7						
PEL	Peldehue	4.46	170	*e*P	Pn	20 36 15.2	-1.6
PLCA	Paso Flores	12.00	176	P	Pn	20 38 02.2	+2.0
	comp=E,0.1nm,0.3s,baz=352,slow=12,SNR=2.5						
PLCA				LR	LR	20 43 10.5	
	comp=E,445nm,21.0s,baz=334,slow=40						
TRQA	Tornquist	12.27	142	*e*P	Pn	20 38 03.0	-0.9
	comp=E,13nm,0.6s						
LPAZ	La Paz	12.79	15	P	Pn	20 38 09.0	-2.1
	comp=E,0.7nm,0.3s,baz=207,slow=6.3,SNR=13						
CPUP	Villa Florida	12.87	83	P	Pn	20 38 12.1	-0.2
	comp=E,1.0nm,0.3s,baz=252,slow=11,SNR=5.9						
CPUP				LR	LR	20 43 49.1	
	comp=E,416nm,20.1s,baz=230,slow=40						
SIV	San Ignacio	15.96	40	P	Pn	20 38 47.4	-6.6
	comp=E,0.5nm,0.3s,baz=235,slow=9.6,SNR=12						
USHA	Ushuaia	26.18	176	P	P	20 40 43.7	0.0
	comp=E,9.1nm,1.0s,mb4.3,baz=345,slow=9.7,SNR=3.0						
USHA				LR	LR	20 51 19.1	
	comp=E,410nm,19.3s,MS4.0,baz=350,slow=37						
ROSC	El Rosal	33.50	355	LR	LR	20 54 27.5	
	comp=E,64nm,18.2s,MS3.4,baz=6.7,slow=34						
TXAR	Lajitas Array	65.38	329	P	P	20 45 52.7	+0.7
	comp=E,0.9nm,0.6s,mb4.0,baz=151,slow=8.9,SNR=13						
TXAR	Lajitas Array	65.38	329	P	P	20 45 52.7	+0.7
DBIC	Dimbokro	73.17	72	P	P	20 46 39.5	-1.1
	comp=E,8.1nm,0.8s,mb4.7,baz=222,slow=2.6,SNR=9.1						
DBIC	Dimbokro	73.17	72	*e*P	P	20 46 36.1	-4.6
	comp=E,10.0nm,0.8s,mb4.8						
PDAR	Pinedale Array	79.27	333	P	P	20 47 15.3	+0.6
	comp=E,1.2nm,0.6s,mb4.0,baz=138,slow=5.1,SNR=9.1						
NVAR	Mina Array Bea	79.82	324	P	P	20 47 19.3	+1.5
	comp=E,1.0nm,0.8s,mb3.8,baz=159,slow=6.6,SNR=5.3						
ULM	Lac du Bonnet	81.54	345	P	P	20 47 26.8	+0.1
	comp=E,12nm,1.0s,mb4.8,baz=147,slow=0.6,SNR=5.4						
YKA	Yellowknife Ar	97.21	341	P	P	20 48 40.6	-0.9
	comp=E,0.3nm,0.4s,mb4.1,baz=144,slow=3.8,SNR=5.5						
ASAR	Alice Springs	122.41	208	PKP	PKPdf	20 54 04.2	-1.2
	comp=E,0.9nm,0.6s,baz=154,slow=1.9,SNR=15						
WRA	Warramunga Arr	125.52	210	PKP	PKPdf	20 54 10.6	-0.9
	comp=E,2.6nm,0.6s,baz=156,slow=1.6,SNR=16						
WRA	Warramunga Arr	125.52	210	PKP	PKPdf	20 54 10.6	-0.9
BVAR	Borovoye Array	143.03	38	PKhKP		20 54 39.3	
	comp=E,0.6nm,0.6s,baz=259,slow=0.7,SNR=5.1						
KURK	Kurchatov	148.61	37	*e*PKPbc	PKPdf	20 54 52.8	+0.3
EKS2	Erkin-Say	148.86	54	*e*PKPbc	PKPdf	20 54 53.8	+0.6
AML	Almayashu	148.93	55	*e*PKPbc	PKPdf	20 54 53.8	+0.4
ZAA0	Zalesovo Array	149.48	28	*e*PKPbc	PKPdf	20 54 54.0	+0.1
ZALV	Zalesovo Beam	149.48	28	PKP	PKPdf	20 54 53.5	-0.3
	comp=E,14nm,0.6s,baz=318,slow=2.0,SNR=43						
ZALV				PKPbc	PKPbc	20 54 58.1	-0.2
	comp=E,15nm,0.6s,baz=306,slow=3.8,SNR=56						
UCH	Uchtor	149.50	55	*e*PKPab	PKPbc	20 54 59.2	+0.5
TKM2	Tokmak 2	150.07	53	*e*PKPab	PKPbc	20 54 59.9	-0.2
MK31	Makanchi Array	152.78	41	*e*PKPbc	PKPbc	20 55 05.0	-1.2
MKAR	Makanchi Array	152.78	41	PKP	PKPdf	20 54 58.0	-1.2
	comp=E,0.5nm,0.8s,baz=2.9,slow=2.9,SNR=4.1						
MKAR				PKPbc	PKPbc	20 55 05.4	-0.8
	comp=E,4.3nm,0.7s,baz=353,slow=3.3,SNR=35						
MKAR	Makanchi Array	152.78	41	PKP	PKPdf	20 54 58.0	-1.2
MKAR				PKPbc	PKPbc	20 55 05.4	-0.8
SONM	Songino Array	160.87	4	PKP	PKPdf	20 55 08.8	-0.7
	comp=E,0.4nm,0.8s,baz=325,slow=2.3,SNR=4.3						
SONM				PKPab	PKPab	20 55 52.1	+0.4
	comp=E,0.9nm,0.9s,baz=324,slow=4.9,SNR=5.0						
CMAR	Chiang Mai Arr	166.59	138	PKP	PKPdf	20 55 15.2	-0.4
	comp=E,0.7nm,0.9s,baz=246,slow=2.2,SNR=3.9						
HHC	Hu-ho-hao-te	167.64	349	*e*PKP	PKPdf	20 55 16.8	+1.0
HHC				pPKP	pPKPdf	20 55 27.5	+9.4
HHC				sP		20 55 31.0	
HHC				PKS		20 58 47.8	
HHC				PP	PP	21 00 15.0	+5.6
HHC				SKS	SKSdf	21 02 16.0	-4.0
HHC				SKKS	SKKSac	21 06 56.8	-1.1
HHC				SS	SS	21 20 57.3	+0.5
HHC				AMB	AMB		
	comp=Z,30nm,4.8s						
HHC				LR	LR		
	comp=N,720nm,19.3s						
HHC				LR	LR		
	comp=E,400nm,24.3s						
HHC				LR	LR		
	comp=Z,940nm,23.7s						

*CSEM **26** 20:39:13.8,68°.76N×16°.45W,h10km,ML3.8,After REY*

REY 26 20:39:13.8,68°.76N×16°.45W,h10km,ML3.8,ML3.7, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGRI	Grimsey	2.30	196	P	Pn	20 39 50.9	-0.8
ILEI	Leirhofn	2.36	180	P	Pn	20 39 52.2	-0.3
ILEI				S	Sn	20 40 20.9	-0.6
IFLA	Flatey	2.66	192	P	Pn	20 39 56.2	-0.4
IFLA				S	Sn	20 40 29.3	+0.4
IGIL	Gilhagi	2.69	179	P	Pn	20 39 56.6	-0.5
IGIL				S	Sn	20 40 29.7	+0.1
IHED	Heoinshofoi	2.71	187	P	Pn	20 39 56.7	-0.6
IHED				S	Sn	20 40 30.3	+0.3
ISIG	Siglufjorour	2.80	201	P	Pn	20 39 58.0	-0.6
IGRA	Granastaoir	2.88	189	P	Pn	20 39 59.2	-0.5
IGRA				S	Sn	20 40 34.7	+0.3
IHLA	Hella	2.92	196	P	Pn	20 39 59.9	-0.3
IHRN	Hraun	3.01	210	P	Pn	20 40 01.7	+0.3
IKVO	Krokottuvotn	3.06	183	P	Pn	20 40 02.0	-0.1
IKVO				S	Sn	20 40 40.2	+1.5
IREN	Reynihlio	3.13	183	P	Pn	20 40 03.2	+0.1
IREN				S	Sn	20 40 41.8	+1.4
IGRS	Grimsstaoir	3.13	178	P	Pn	20 40 02.8	-0.3
IGRS				S	Sn	20 40 41.7	+1.2
ISVA	Svartarkot	3.45	186	P	Pn	20 40 08.0	+0.5
ISVA				S	Sn	20 40 50.0	+1.7
IADA	Aoalbol	3.77	174	P	Pn	20 40 11.4	-0.5
IADA				S	Sn	20 40 57.1	+0.9
IMKO	Mokollar	3.80	179	P	Pn	20 40 13.0	+0.8
IHVA	Hvannstoosfjol	3.83	176	P	Pn	20 40 12.2	-0.4
IGLU	Glumsstadir	3.83	171	P	Pn	20 40 12.4	-0.3
IGLU				S	Sn	20 40 58.4	+0.7
IBRU	Bruarjokull	3.95	178	P	Pn	20 40 14.1	-0.2
IVSH	V-Sauoahnukur	3.98	176	P	Pn	20 40 14.6	-0.1
IKRE	Kreppuhraun	3.99	180	P	Pn	20 40 14.8	-0.1
SUMG	Summit	8.21	308	*i* P	Pn	20 41 10.2	-2.5
SUMG				*i* S	Sn	20 42 30.2	-15

NEIC 26 20:49:08.5,38°.35S×175°.67E,h180km,MG4.1(WEL), After WEL.,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWVZ	Taurewa	0.74	194	P	Pn	20 49 34.5	+0.1
FWVZ	Far West T-bar	0.91	186	P	Pn	20 49 35.7	+0.2
FWVZ				S	Sn	20 49 55.8	-0.7
BKZ	Black Stump Fm	1.04	142	P	Pn	20 49 36.2	-0.2
BKZ				S	Sn	20 49 54.6	-3.5
VRZ	Vera Road	1.05	222	P	Pn	20 49 36.5	0.0
MOVZ	Moawhango	1.06	177	P	Pn	20 49 36.2	-0.4
URZ	Urewera	1.14	86	P	Pn	20 49 36.8	-0.4
MWZ	Matawai	1.46	90	P	Pn	20 49 39.9	-0.1
WAZ	Wanganui	1.50	201	P	Pn	20 49 40.3	-0.1
PKE	Pukeiti	1.56	237	P	Pn	20 49 41.2	+0.2
KNZ	Kokohu	1.71	114	P	Pn	20 49 42.5	+0.1
TSZ	Takapari Road	1.72	173	P	Pn	20 49 42.1	-0.5
DVHZ	Dannevirke	1.99	169	P	Pn	20 49 44.4	-0.9
PUZ	Puketiti	2.06	83	P	Pn	20 49 45.8	-0.3
MXZ	Matakaoa Point	2.23	70	P	Pn	20 49 48.3	+0.3
MRZ	Mangatainoka R	2.31	182	P	Pn	20 49 47.4	-1.5
BFZ	Birch Farm	2.37	169	P	Pn	20 49 48.4	-1.2
KIW	Kapiti Island	2.58	193	P	Pn	20 49 50.1	-1.9
CAW	Cannon Point	2.79	189	P	Pn	20 49 52.6	-2.0
MTW	Mount Morrison	2.81	183	P	Pn	20 49 52.5	-2.2
WEL	Wellington	3.01	193	P	Pn	20 49 54.9	-2.3
PAWZ	Paruwai Farm	3.04	183	P	Pn	20 49 55.0	-2.5
SNZO	South Karori	3.05	194	P	Pn	20 49 55.2	-2.4
TCW	Tory Channel	3.06	200	P	Pn	20 49 55.3	-2.4
MSWZ	Moikau Station	3.08	186	P	Pn	20 49 55.5	-2.5
BHW	Baring Head	3.12	191	P	Pn	20 49 55.9	-2.6
NNZ	Nelson	3.37	211	P	Pn	20 49 58.5	-3.0
QRZ	Quartz Range	3.47	223	P	Pn	20 49 59.7	-3.1
BSWZ	Blackbirch Sta	3.63	202	P	Pn	20 50 02.2	-2.7
THZ	Tophouse	4.02	211	P	Pn	20 50 06.5	-3.2
KHZ	Kahutara	4.38	201	P	Pn	20 50 11.2	-3.1
DSZ	Denniston Nort	4.51	220	P	Pn	20 50 12.6	-3.4
MQZ	McQueen's Vall	5.82	202	P	Pn	20 50 28.1	-4.9
RPZ	Rata Peaks	6.40	212	P	Pn	20 50 36.0	-4.5
ODZ	Otahua Downs	7.67	208	P	Pn	20 50 52.9	-4.4

MEX 26 20:53:32.3±0.3,15°.95N×96°.81W,h9km±5km,MD3.5,Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.69	105	*i* P	Pg	20 53 44.2	-1.5
HUIG				*i* S	Sg	20 53 53.7	-1.1
VHO	Vista Hermosa	1.11	4	*i* P	Pg	20 53 50.6	-3.2
VHO				*i* S	Sg	20 54 04.6	-3.6
PNIG	Pinotepa	1.34	289	*i* P	Pn	20 53 53.7	-3.5
PNIG				*i* S	Sb	20 54 10.5	-4.5
UTMO	Huajuapan	2.10	333	*i* P	Pn	20 54 03.8	-3.8
UTMO				*i* S	Sn	20 54 29.6	-4.2
PPM	Popocatepetl	3.55	331	*e*P	Pn	20 54 26.5	-1.1

*ISCJB **26** 21:00:51.8±1.0,17°.85N±0°.06×65°.68W±0°.02,h13km±5km, Error ellipse: s-maj=10.3km s-min=3.7km az=0.1*
*NEIC **26** 21:00:52.5,17°.88N×65°.68W,h5km,MD2.6(RSPR),After RSPR.*
*RSPR **26** 21:00:54.5,18°.10N×65°.75W,h40km±11km*

ISC 26 21:00:51.7±0.9,17°.84N±0°.06×65°.68W±0°.02,h16km±5km, n42,σ0°.78/54,21C-4D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTP	Monte Pirata	0.28	25⇑	*e*P	Pg	21 00 57.9	+0.2
MTP	Monte Pirata	0.28	25	*e*S	Sg	21 01 02.5	+0.7
MTP	Monte Pirata	0.28	25⇑	*e*P	Pg	21 00 57.8	+0.1
MTP	Monte Pirata	0.28	25	*e*S	Sg	21 01 02.3	+0.4
CPD	Cerro la Pandu	0.30	311⇑	*e*P	Pg	21 00 57.6	-0.4
CPD	Cerro la Pandu	0.30	311	*e*S	Sg	21 01 02.2	-0.1
CPD	Cerro la Pandu	0.30	311⇑	*e*P	Pg	21 00 57.6	-0.4
CPD				*e*S	Sg	21 01 02.2	-0.1
HUMP	Col San Antoni	0.34	332⇑	*e*P	Pg	21 00 58.5	-0.3
HUMP	Col San Antoni	0.34	332	*e*S	Sg	21 01 03.7	+0.1
HUMP	Col San Antoni	0.34	332⇑	*e*P	Pg	21 00 58.5	-0.3
HUMP	Col San Antoni	0.34	332	*e*S	Sg	21 01 03.6	0.0
HUMP	Col San Antoni	0.34	332⇑	*e*P	Pg	21 00 58.5	-0.3
HUMP				*e*S	Sg	21 01 03.7	+0.1
CBYP	Canovanas	0.46	338⇓	*e*P	Pg	21 01 01.2	+0.3
CBYP	Canovanas	0.46	338	*e*S	Sg	21 01 08.3	+1.1
CBYP	Canovanas	0.46	338⇓	*e*P	Pg	21 01 01.2	+0.3
CBYP				*e*S	Sg	21 01 08.0	+0.8
CBYP				*e*S	Sg	21 01 08.3	+1.1
SJG	San Juan	0.53	301	*e*P	Pg	21 01 01.5	-0.6
SJG				*e*S	Sg	21 01 08.6	-0.5
ICM	Isla Caja Muer	0.81	274	*e*S	Sg	21 01 18.6	+0.7
ICM	Isla Caja Muer	0.81	274⇑	*e*P	Pg	21 01 07.5	+0.1
ICM	Isla Caja Muer	0.81	274	*e*S	Sg	21 01 18.6	+0.7
ICM	Isla Caja Muer	0.81	274⇑	*e*P	Pg	21 01 07.5	+0.1
ICM				*e

FINES	**FINES Array B**	**62.55 334**	P	**P**	**21 12 13.2**	**-0.1**
FINES			pmax	pmax		
comp=Z,1.0nm,0.4s						
NOA	**NORSAR Array B**	**66.67 341**	P	**P**	**21 12 40.3**	**+0.2**
comp=Z,0.7nm,0.7s,mb3.6,baz=31,slow=4.9,SNR=3.2						
NOA	**NORSAR Array B**	**66.67 341**	P	**P**	**21 12 40.3**	**+0.3**
NOA			pmax	pmax		
comp=Z,1.0nm,0.7s						
CLL	**Collm**	**74.96 335**	*i* P	**P**	**21 13 30.3**	**+0.1**
CLL			pmax	pmax		
comp=Z,3.0nm,0.7s,mb4.0						
CLL	**Collm**	**74.96 335**	*i* P	**P**	**21 13 30.3**	**+0.1**
comp=Z,3.0nm,0.7s,mb4.0						
MMAI	**Mount Meron Ar**	**81.69 311**	P	**P**	**21 14 08.1**	**+0.6**
comp=Z,1.2nm,0.5s,mb3.8,baz=38,slow=8.4,SNR=3.6						

DDA ***26*** *21:03:50.1,36.°96N×29.°19E, h25km±1km, Md3.2*
ISK ***26*** *21:03:50.6,37.°03N×29.°15E, h8km, MD3.5*
CSEM ***26*** *21:03:51.0±0.1,37.°03N×29.°15E, h2km, MD3.5, Error ellipse: s-maj=3.4km s-min=2.4km az=7.0*
ISCJB ***26*** *21:03:51.2±0.5,37.°02N±0.°02×29.°16E±0.°02, h7km±4km, Error ellipse: s-maj=3.8km s-min=3.0km az=179.6*
THE ***26*** *21:03:54.4,37.°10N×29.°10E, h7km±2km, ML4.6/1, Error ellipse: s-maj=2.1km s-min=0.6km az=92.0*
ISC 26 21:03:51.8±0.4,37.°05N±0.°02×29.°17E±0.°02, h6km±3km, n110, σ0.98/141, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.29**	**68**	PG	**Pg**	**21 03 56.5**	**-1.0**
GLHS				*e*SG	**Sg**	**21 04 02.4**	**+1.1**
GLHS	**Glhisar (BURDU**	**0.29**	**68**	*i* Pg	**Pg**	**21 03 56.5**	**-1.0**
GLHS				*e*Sg	**Sg**	**21 04 02.4**	**+1.1**
GOLH	**Golhisar**	**0.37**	**59**	*i* P	**Pg**	**21 03 58.5**	**-0.5**
GOLH				*i* S	**Sg**	**21 04 05.9**	**+2.1**
GOLH	**Golhisar**	**0.37**	**59**	*i* P	**Pg**	**21 03 58.5**	**-0.5**
GOLH				*i* S	**Sg**	**21 04 05.9**	**+2.1**
TURN	**Turunc**	**0.48**	**249**	*i* P	**Pg**	**21 04 04.8**	**+3.7**
TURN				*i* S	**Sg**	**21 04 17.0**	**+10**
TURN	**Turunc**	**0.48**	**249**	*i* P	**Pg**	**21 04 04.8**	**+3.6**
DNZL	**Cakiroluk**	**0.65**	**352**	*i* P	**Pg**	**21 04 04.0**	**-0.3**
DNZL				*i* S	**Sg**	**21 04 15.5**	**+2.7**
DNZL	**Cakiroluk**	**0.65**	**352**	*i* P	**Pg**	**21 04 04.1**	**-0.2**
DNZL				*i* S	**Sg**	**21 04 15.5**	**+2.7**
ELL	**Elmali**	**0.67**	**116**	*e*PG	**Pg**	**21 04 03.7**	**-0.9**
ELL				*e*SG	**Sg**	**21 04 13.2**	**-0.1**
ELL	**Elmali**	**0.67**	**116**	*e*Pg	**Pg**	**21 04 03.7**	**-0.9**
ELL				*e*Sg	**Sg**	**21 04 13.2**	**-0.1**
YER	**Yerkesik**	**0.71**	**277**	PG	**Pg**	**21 04 05.1**	**-0.4**
YER				*e*SG	**Sg**	**21 04 15.0**	**+0.2**
YER	**Yerkesik**	**0.71**	**277**	*i* Pg	**Pg**	**21 04 05.1**	**-0.4**
YER				*e*Sg	**Sg**	**21 04 15.0**	**+0.2**
DENT	**Denizli**	**0.71**	**352**	PG	**Pg**	**21 04 04.9**	**-0.6**
DENT	**Denizli**	**0.71**	**352**	*i* Pg	**Pg**	**21 04 04.9**	**-0.7**
AKAS	**Kas**	**0.89**	**156**	*i* P	**Pg**	**21 04 06.8**	**-2.0**
AKAS				*i* S	**Sg**	**21 04 26.1**	**+5.8**
AKAS	**Kas**	**0.89**	**156**	*i* P	**Pg**	**21 04 06.8**	**-2.0**
KORT	**Korkueli**	**0.95**	**92**	*i* P	**Pg**	**21 04 07.7**	**-2.3**
KORT				*i* S	**Sg**	**21 04 27.7**	**+5.3**
KORT	**Korkueli**	**0.95**	**92**	*i* P	**Pg**	**21 04 07.7**	**-2.4**
MLSB	**Milas**	**1.14**	**283**	*e*PN	**Pn**	**21 04 12.8**	**-1.5**
MLSB	**Milas**	**1.14**	**283**	*e*Pn	**Pn**	**21 04 12.8**	**-1.5**
ARG	**Arkhangelos**	**1.18**	**226**	P	**Pg**	**21 04 11.4**	**-3.0**
ARG				S	**Sg**	**21 04 32.2**	**+2.5**
ARG	**Arkhangelos**	**1.18**	**226**	*e*P	**Pg**	**21 04 11.3**	**-3.1**
ARG	**Arkhangelos**	**1.18**	**226**	P	**Pg**	**21 04 11.4**	**-3.0**
ARG				S	**Sg**	**21 04 32.2**	**+2.5**
AYDN	**Tasoluk**	**1.19**	**301**	*i* P	**Pg**	**21 04 13.5**	**-1.3**
AYDN				*i* S	**Sg**	**21 04 30.6**	**+0.3**
AYDN	**Tasoluk**	**1.19**	**301**	*i* P	**Pg**	**21 04 13.5**	**-1.3**
AYDN				*i* S	**Sg**	**21 04 30.6**	**+0.3**
ANTB	**Antalya**	**1.20**	**97**	*e*PN	**Pn**	**21 04 14.5**	**-0.7**
ANTB	**Antalya**	**1.20**	**97**	*e*Pn	**Pn**	**21 04 14.5**	**-0.7**
BCK	**Bucak**	**1.21**	**70**	*e*PN	**Pn**	**21 04 14.7**	**-0.6**
BCK	**Bucak**	**1.21**	**70**	*e*Pn	**Pn**	**21 04 14.7**	**-0.6**
KHL	**Karahalli**	**1.30**	**12**	*e*PN	**Pn**	**21 04 15.6**	**-1.0**
KHL	**Karahalli**	**1.30**	**12**	*e*Pn	**Pn**	**21 04 15.6**	**-1.0**
DAT	**Datca**	**1.31**	**256**	*e*PN	**Pn**	**21 04 14.9**	**-1.8**
DAT	**Datca**	**1.31**	**256**	*e*Pn	**Pn**	**21 04 15.0**	**-1.7**
ISP	**Isparta**	**1.33**	**53**	*e*PN	**Pn**	**21 04 17.1**	**+0.1**
ISP	**Isparta**	**1.33**	**53**	P	**Pn**	**21 04 18.0**	**+1.0**
ISP	**Isparta**	**1.33**	**53**	*e*P	**Pn**	**21 04 18.1**	**+1.1**
ISP	**Isparta**	**1.33**	**53**	*e*Pn	**Pn**	**21 04 17.1**	**+0.1**
ISP	**Isparta**	**1.33**	**53**	P	**Pn**	**21 04 18.0**	**+1.0**
KHAL	**Karahalli**	**1.35**	**11**	*i* P	**Pn**	**21 04 17.3**	**+0.1**
KHAL				*i* S	**Sb**	**21 04 36.5**	**+1.5**
KHAL	**Karahalli**	**1.35**	**11**	*i* P	**Pn**	**21 04 17.3**	**+0.1**
KHAL				*i* S	**Sb**	**21 04 36.5**	**+1.5**
BDRM	**Kayabasi**	**1.38**	**271**	*i* P	**Pn**	**21 04 17.4**	**-0.2**
BDRM				*i* S	**Sb**	**21 04 36.2**	**+0.3**
BDRM	**Kayabasi**	**1.38**	**271**	*i* P	**Pn**	**21 04 17.4**	**-0.2**
BDRM				*i* S	**Sb**	**21 04 36.2**	**+0.4**
BODT	**Bodrum**	**1.48**	**271**	*e*PN	**Pn**	**21 04 18.3**	**-0.8**
BODT	**Bodrum**	**1.48**	**271**	*e*Pn	**Pn**	**21 04 18.3**	**-0.8**
KULA	**Kula-Manisa**	**1.52**	**345**	*e*PN	**Pn**	**21 04 18.9**	**-0.6**
KULA	**Kula-Manisa**	**1.52**	**345**	*e*Pn	**Pn**	**21 04 18.9**	**-0.7**
SUTC	**Sutluce-Ispart**	**1.52**	**73**	*e*PN	**Pn**	**21 04 19.7**	**+0.1**
SUTC	**Sutluce-Ispart**	**1.52**	**73**	*e*Pn	**Pn**	**21 04 19.7**	**+0.1**
NIS1	**Nisyros Isl.**	**1.66**	**255**	P	**Pn**	**21 04 21.6**	**+0.2**
NIS1				S	**Sn**	**21 04 42.9**	**-0.1**
NIS1	**Nisyros Isl.**	**1.66**	**255**	P	**Pn**	**21 04 21.6**	**+0.2**
NIS1				S	**Sn**	**21 04 42.9**	**-0.1**
GCAM	**G?zelcaml?**	**1.67**	**294**	*i* P	**Pn**	**21 04 21.7**	**+0.1**
GCAM				*i* S	**Sn**	**21 04 43.7**	**+0.3**
GCAM	**G?zelcaml?**	**1.67**	**294**	*i* P	**Pn**	**21 04 21.7**	**0.0**
GCAM				*i* S	**Sn**	**21 04 43.7**	**+0.3**
SHUT	**Suhut-Afyon**	**1.86**	**36**	*e*PN	**Pn**	**21 04 24.4**	**+0.1**
SHUT	**Suhut-Afyon**	**1.86**	**36**	*e*Pn	**Pn**	**21 04 24.4**	**+0.1**
SMG	**Samos**	**1.97**	**290**	*e*P	**Pn**	**21 04 25.2**	**-0.5**
DEMI	**Demirci**	**2.02**	**350**	*i* P	**Pn**	**21 04 25.5**	**-1.0**
DEMI	**Demirci**	**2.02**	**350**	*i* P	**Pn**	**21 04 25.5**	**-1.0**
IZM	**Izmir**	**2.02**	**312**	*e*PN	**Pn**	**21 04 26.7**	**+0.2**
AKHS	**Akhisar**	**2.12**	**330**	*i* P	**Pn**	**21 04 27.4**	**-0.3**
AKHS				*i* S	**Sn**	**21 04 53.1**	**-1.3**
AKHS	**Akhisar**	**2.12**	**330**	*i* P	**Pn**	**21 04 27.5**	**-0.3**
AKHS				*i* S	**Sn**	**21 04 53.2**	**-1.2**
AKS	**Akhisar**	**2.12**	**330**	*e*PN	**Pn**	**21 04 27.0**	**-0.8**
AKS	**Akhisar**	**2.12**	**330**	*e*Pn	**Pn**	**21 04 27.0**	**-0.8**
ALT	**Altintas**	**2.14**	**20**	*e*PN	**Pn**	**21 04 28.0**	**0.0**
ALT	**Altintas**	**2.14**	**20**	*e*Pn	**Pn**	**21 04 28.0**	**-0.1**
BLCB	**Balcova**	**2.15**	**309**	*e*PN	**Pn**	**21 04 28.0**	**-0.3**
BLCB	**Balcova**	**2.15**	**309**	P	**Pn**	**21 04 28.2**	**0.0**
BLCB				S	**Sn**	**21 04 54.2**	**-1.0**
BLCB	**Balcova**	**2.15**	**309**	*e*Pn	**Pn**	**21 04 28.0**	**-0.2**
BLCB				S	**Sn**	**21 04 54.2**	**-1.0**
KARP	**Karpathos**	**2.21**	**228**	*e*P	**Pn**	**21 04 28.6**	**-0.4**
HDMB	**Hadim**	**2.66**	**91**	*e*PN	**Pn**	**21 04 35.4**	**+0.2**
HDMB	**Hadim**	**2.66**	**91**	*e*Pn	**Pn**	**21 04 35.4**	**+0.2**
KONT	**Konya--Tatoy**	**2.69**	**70**	*e*PN	**Pn**	**21 04 35.4**	**-0.3**
KONT	**Konya--Tatoy**	**2.69**	**70**	*e*Pn	**Pn**	**21 04 35.4**	**-0.3**
LADK	**Ladik-KONYA**	**2.79**	**65**	*e*PN	**Pn**	**21 04 36.8**	**-0.2**
LADK	**Ladik-KONYA**	**2.79**	**65**	*e*Pn	**Pn**	**21 04 36.8**	**-0.2**
ESKT	**Eskisehir**	**2.80**	**28**	*e*PN	**Pn**	**21 04 37.7**	**+0.5**
ESKT	**Eskisehir**	**2.80**	**28**	*e*Pn	**Pn**	**21 04 37.7**	**+0.5**
KIZT	**Kizilcal**	**2.82**	**49**	*e*PN	**Pn**	**21 04 38.1**	**+0.7**
KIZT	**Kizilcal**	**2.82**	**49**	*e*Pn	**Pn**	**21 04 38.1**	**+0.7**
APE	**Apeiranthos**	**2.91**	**272**	*e*P	**Pn**	**21 04 38.5**	**-0.1**
BALY	**Balya**	**2.95**	**336**	*i* P	**Pn**	**21 04 39.4**	**+0.1**
BALY				*i* S	**Sn**	**21 05 16.1**	**+1.1**
BALY	**Balya**	**2.95**	**336**	*i* P	**Pn**	**21 04 39.4**	**+0.2**
BALY				*i* S	**Sn**	**21 05 16.1**	**+1.1**
ZKR	**Zakros**	**3.07**	**232**	P	**Pn**	**21 04 41.6**	**+0.7**
ZKR	**Zakros**	**3.07**	**232**	*e*P	**Pn**	**21 04 41.6**	**+0.7**
ZKR	**Zakros**	**3.07**	**232**	P	**Pn**	**21 04 41.6**	**+0.7**
NPS	**Neapolis**	**3.38**	**239**	*e*P	**Pn**	**21 04 45.1**	**-0.1**
LAST	**Lasithi**	**3.53**	**239**	P	**Pn**	**21 04 47.2**	**0.0**
LAST	**Lasithi**	**3.53**	**239**	*e*P	**Pn**	**21 04 47.3**	**+0.1**
LAST	**Lasithi**	**3.53**	**239**	P	**Pn**	**21 04 47.2**	**0.0**
GULT	**Gulveren**	**3.54**	**17**	*e*PN	**Pn**	**21 04 47.8**	**+0.5**
GULT	**Gulveren**	**3.54**	**17**	*e*Pn	**Pn**	**21 04 47.8**	**+0.4**
EZN	**Ezine**	**3.56**	**322**	*e*PN	**Pn**	**21 04 47.3**	**-0.3**
EZN	**Ezine**	**3.56**	**322**	*e*Pn	**Pn**	**21 04 47.3**	**-0.3**
LEF	**Lefka**	**3.58**	**121**	*e*PN	**Pn**	**21 04 47.8**	**-0.1**
LEF	**Lefka**	**3.58**	**121**	*e*Pn	**Pn**	**21 04 47.8**	**-0.1**
IKL	**Isikli**	**3.72**	**101**	*e*PN	**Pn**	**21 04 50.6**	**+0.7**
IKL	**Isikli**	**3.72**	**101**	*e*Pn	**Pn**	**21 04 50.6**	**+0.7**
LPK	**Lapseki**	**3.82**	**331**	*e*PN	**Pn**	**21 04 50.8**	**-0.3**
LPK	**Lapseki**	**3.82**	**331**	*e*Pn	**Pn**	**21 04 50.8**	**-0.3**
IDI	**Anoyia**	**3.88**	**244**	*e*P	**Pn**	**21 04 52.1**	**+0.1**
LFK	**Lefkose**	**3.95**	**115**	*e*PN	**Pn**	**21 04 53.8**	**+0.8**
LFK	**Lefkose**	**3.95**	**115**	*e*Pn	**Pn**	**21 04 53.8**	**+0.8**
CSS	**Prodhromos**	**3.97**	**120**	*e*PN	**Pn**	**21 04 54.1**	**+0.9**
CSS	**Prodhromos**	**3.97**	**120**	*e*Pn	**Pn**	**21 04 54.1**	**+0.9**
GADA	**Gvkgeada**	**4.05**	**322**	*e*PN	**Pn**	**21 04 54.1**	**-0.3**
GADA	**Gvkgeada**	**4.05**	**322**	*e*Pn	**Pn**	**21 04 54.1**	**-0.2**
SIVA	**Sivas**	**4.07**	**241**	*e*P	**Pn**	**21 04 56.3**	**+1.7**
VAM	**Vamos**	**4.33**	**249**	*e*P	**Pn**	**21 05 01.0**	**+2.7**
KARN	**Karanos**	**4.55**	**250**	*e*P	**Pn**	**21 05 03.3**	**+2.1**
GVD	**Gavdhos**	**4.67**	**243**	*e*P	**Pn**	**21 05 03.9**	**+1.0**
VLI	**Veliai**	**5.00**	**268**	*e*P	**Pn**	**21 05 03.5**	**-4.0**

BJI ***26*** *21:19:13.4,20.°44S×172.°95W, h27km, mB6.1/46, mb5.5/39, Ms5.7/53, Ms7 5.6/46*
DJA ***26*** *21:19:13,20.°83S×173.°48W, h5km, Mw6.4/58*
MOS ***26*** *21:19:13.5±0.8,20.°80S×173.°34W, h33km, mb6.0/62, MS5.7/91, Error ellipse: s-maj=9.6km s-min=6.4km az=57.4*
ISCJB ***26*** *21:19:14.2±0.1,20.°78S±0.°03×173.°31W±0.°02, h36km, mb5.9/213, MS5.7/270, Error ellipse: s-maj=4.3km s-min=2.9km az=149.9*
BGS ***26*** *21:19:14.9±5.1,20.°77S×173.°34W, h40km, MS6.0*
IDC ***26*** *21:19:15.7±0.5,20.°83S×173.°29W, h38km±3km, mb5.5/21, mb1 5.7/22, mb1mx5.7/22, mbtmp5.5/22, ML6.2/2, MS5.5/18, Ms1 5.5/18, ms1mx5.4/20, Error ellipse: s-maj=13.2km s-min=11.7km az=130.0*
NEIC ***26*** *21:19:15.6±0.1,20.°77S×173.°34W, h38km, mb6.0/175, ME5.6, MS5.8/197, MW6.2, MW6.1, Error ellipse: s-maj=4.2km s-min=2.5km az=134.0 Broadband fault plane solution: P waves. NP1:φs175.00000°, δ65.00000°, λ70.00000°. NP2:φs36.00000°, δ32.00000°, λ126.00000°. Principal axes: T Plg64.0000°, Azm51.0000°; N Plg0.0000°, Azm0.0000°; P Plg18.0000°, Azm280.0000°; Moment Tensor Solution. s74 Moment tensor: Scale 10^18 Nm; Mrr1.98; Mθθ0.35; Mφφ-2.33; Mrθ0.44; Mrφ-0.68; Mθφ-0.91; Best double couple: M0 2.50000×10^18 NP1: φs33.00000°, δ39.00000°, λ121.00000°. NP2: φs176.00000°, δ58.00000°, λ68.00000°. Principal axes: T 2.3300, Plg68.0000°, Azm38.0000°; N 0.3000, Plg18.0000°, Azm188.0000°; P -2.6300, Plg9.0000°, Azm281.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt at Nuku'alofa.
SZGRF ***26*** *21:19:15.8,21.°03S×173.°86W, h44km, mb6.2, Tonga Islands*
CASC ***26*** *21:19:16.1±2.6,20.°71S×173.°92W, h53km±999km, mb6.8, mb6.0(NEIC)*
GCMT ***26*** *21:19:18.5±0.1,21.°03S×172.°94W, h57km, MW6.1, Moment Tensor Solution. s116,c280; s83,c121; Moment tensor: Scale 10^18Nm; Mrr1.24±.01; Mθθ0.21±.01; Mφφ-1.44±.01; Mrθ0.38±.01; Mθφ-0.11±.01; Mφr-0.73±.01; Best double couple: M0 1.60000×10^18 NP1: φs21.00000°, δ34.00000°, λ120.00000°. NP2:φs167.00000°, δ61.00000°, λ72.00000°. Principal axes: T 1.5400, Plg68.0000°, Azm40.0000°; N 0.0900, Plg16.0000°, Azm176.0000°; P -1.6300, Plg14.0000°, Azm270.0000°; Data Used: II IU IC G CN. Surface waves: sta=121, comp=276, per= 50.*
ISC 26 21:19:16.0±0.1,20.°79S±0.°03×173.°29W±0.°02, h38km, h38km±1.1km:pP-P, n1272, σ0.87/492, mb5.9/212, MS5.7/270, 209C-55D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.99**	**12**	Pn	**Pn**	**21 20 52.1**	**-3.8**
88nm,0.3s,baz=249,slow=1.2,SNR=46							
AFI				Sn	**Sn**	**21 22 07.5**	**-6.7**
464nm,0.3s,baz=195,slow=18,SNR=11							
AFI	**Afiamalu**	**6.99**	**12**	*e*P	**Pn**	**21 20 52.4**	**-3.5**
AFI				*e*		21 22 08.8	
AFI				pmax	pmax		
comp=Z,723nm,0.4s							
AFI	**Afiamalu**	**6.99**	**12**	*e*Pn	**Pn**	**21 20 52.4**	**-3.6**
comp=Z,723nm,0.4s							
AFI				*e*Sn	**Sn**	**21 22 08.8**	**-5.4**
MSVF	**Nonsavu**	**8.72**	**289**	Pn	**Pn**	**21 21 25.0**	**+5.3**
comp=Z,21μm,0.9s							
MSVF	**Nonsavu**	**8.72**	**289**	Pn	**Pn**	**21 21 23.7**	**+4.0**
comp=Z,4μm,1.0s							
MSVF				Sn	**Sn**	**21 22 55.2**	**-1.6**
RAO	**Raoul Island**	**9.41**	**206**	Pn	**Pn**	**21 21 27.7**	**-1.5**
comp=Z,961nm,0.3s,baz=53,slow=1.1,SNR=32							
RAO				Sn	**Sn**	**21 23 08.5**	**-5.2**
comp=Z,3μm,0.3s,baz=30,slow=20,SNR=19							
RAR	**Rarotonga**	**12.63**	**94**	*e*Pn	**Pn**	**21 22 06.4**	**-6.9**
RAR				*e*Sn	**Sn**	**21 24 37.6**	**+4.9**
FUNA	**Funafuti**	**14.18**	**328**	Pn	**Pn**	**21 22 33.8**	**-0.7**
OUZ	**Omahuta**	**18.43**	**216**	P	**Pn**	**21 23 30.1**	**+1.5**
WCZ	**Waipu Caves**	**18.58**	**213**	*e*P	**Pn**	**21 23 31.2**	**+0.8**
PUZ	**Puketiti**	**18.72**	**201**	*e*P	**Pn**	**21 23 28.3**	**-3.7**
DZM	**Mont Dzumac**	**18.91**	**262**	*e*P	**Pn**	**21 23 34.5**	**+0.1**
comp=Z,3μm,1.1s							
DZM				*e*LR	LR	21 27 53.4	
comp=Z,71μm,26.2s							
DZM	**Mont Dzumac**	**18.91**	**262**	*e*P	**Pn**	**21 23 35.5**	**+1.0**
NOUC	**Port Laguerre**	**19.04**	**262**	*e*P	**Pn**	**21 23 35.6**	**-0.4**
URZ	**Urewera**	**19.29**	**203**	P	**Pn**	**21 23 37.6**	**-1.3**
comp=Z,21nm,0.3s,baz=17,slow=4.0,SNR=122							
URZ				S	**S**	**21 26 59.4**	**-15**
comp=Z,21nm,0.3s,baz=114,slow=20,SNR=12							
URZ	**Urewera**	**19.29**	**203**	*e*P	**Pn**	**21 23 38.4**	**-0.5**
KNZ	**Kokohu**	**19.77**	**201**	*e*P	**Pn**	**21 23 44.0**	**-0.5**
HIZ	**Hauiti**	**20.42**	**208**	P	**P**	**21 23 52.0**	**+2.1**
BFZ	**Birch Farm**	**21.74**	**202**	P	**P**	**21 24 05.0**	**+0.9**
TBI	**Tubuai**	**22.23**	**101**	*e*P	**P**	**21 24 08.5**	**-1.0**
comp=Z,2μm,1.4s,mb6.4							
TBI				*e*LQ		21 28 19.0	
comp=Z,26μm,28.8s							
TBI				*e*LR	LR	21 29 11.1	
comp=Z,69μm,27.5s,baz=270							
PAE	**Paea**	**22.60**	**86**	*e*P	**P**	**21 24 12.3**	**-1.2**
comp=Z,100nm,1.2s,mb5.1							
PPT	**Papeete**	**22.62**	**86**	*e*P	**P**	**21 24 12.8**	**-0.9**
comp=Z,510nm,1.2s,mb5.8							
PPT				*e*LR	LR	21 29 19.6	
comp=Z,85μm,26.2s,baz=256							
PPT	**Papeete**	**22.62**	**86**	P	**P**	**21 24 13.5**	**-0.2**
comp=Z,103nm,0.3s,mb5.8,baz=186,slow=18,SNR=18							
PPT				LR	LR	21 30 32.6	
comp=Z,22μm,18.8s,MS5.6,baz=186,slow=30							
PPT	**Papeete**	**22.62**	**86**	*e*P	**P**	**21 24 14.0**	**+0.3**
PPT				*e*S	**S**	**21 28 20.6**	**+1.0**
TIAR	**Tiarei**	**22.84**	**86**	*e*P	**P**	**21 24 14.7**	**-1.3**
comp=Z,654nm,1.1s,mb6.0							
SNZO	**South Karori**	**22.85**	**204**	*e*P	**P**	**21 24 16.1**	**+0.2**
comp=Z,239nm,0.8s,mb5.7							
SNZO				*e*S	**S**	**21 28 23.0**	**0.0**
SNZO				LR	LR		
comp=Z,15μm,20.0s,MS5.4							
MEH	**Mehetia**	**23.97**	**87**	*e*P	**P**	**21 24 26.0**	**-1.1**
comp=Z,372nm,1.1s,mb5.8							
KHZ	**Kahutara**	**24.25**	**204**	*e*P	**P**	**21 24 28.6**	**-0.8**
comp=Z,473nm,1.0s,mb5.9							
KHZ				*e*		21 24 40.6	
KHZ				*e*S	**S**	**21 28 47.2**	**+1.6**
PMOR	**Pomariorio Ree**	**24.83**	**81**	*e*P	**P**	**21 24 33.6**	**-1.3**
comp=Z,574nm,1.2s,mb6.0							
RPZ	**Rata Peaks**	**26.33**	**206**	P	**P**	**21 24 47.7**	**-0.6**
comp=Z,64nm,0.9s,mb5.1,baz=32,slow=4.7,SNR=12							
RPZ				S	**S**	**21 29 29.7**	**+11**
comp=Z,92nm,1.0s,baz=322,slow=10,SNR=3.0							
RPZ	**Rata Peaks**	**26.33**	**206**	*e*P	**P**	**21 24 48.6**	**+0.3**
comp=Z,222nm,0.7s,mb5.8							
RPZ				*e*	pP	21 24 57.4	-1.3
RPZ				S	**S**	**21 29 19.6**	**+0.9**
XMAS	**Kiritimati**	**27.49**	**36**	*e*P	**P**	**21 24 58.4**	**-0.6**
comp=Z,113nm,0.9s,mb5.4							
XMAS				*e*S	**S**	**21 29 37.6**	**+0.2**
XMAS				LR	LR		
comp=Z,12μm,19.0s,MS5.5							
ODZ	**Otahua Downs**	**27.59**	**205**	*e*P	**P**	**21 24 59.9**	**+0.3**
comp=Z,124nm,0.8s,mb5.6							
ODZ				*e*	pP	21 25 08.6	-1.5
HNR	**Honiara**	**28.14**	**290**	P	**P**	**21 25 04.1**	**-0.8**
comp=Z,367nm,0.9s,mb6.0,baz=193,slow=1.0,SNR=9.3							
HNR				LR	LR	21 33 00.3	
comp=Z,3μm,21.7s,MS4.8,baz=134,slow=29							
HNR	**Honiara**	**28.14**	**290**	P	**P**	**21 25 04.1**	**-0.8**
HNR				pmax	pmax		
comp=Z,367nm,0.9s,mb6.0							
HNR				MLR	MLR		
comp=Z,3μm,21.7s,MS4.8							
HNR	**Honiara**	**28.14**	**290⇑**	*e*P	**P**	**21 25 03.9**	**-1.0**
comp=Z,536nm,1.0s,mb6.1							
HNR				*e*S	**S**	**21 29 46.9**	**-0.9**
HNR				LR	LR		
comp=Z,11μm,22.0s,MS5.4							
ARMA	**Armidale**	**32.94**	**246**	*e*P	**P**	**21 25 46.9**	**-0.2**
ARMA				*e*S	**S**	**21 31 07.9**	**+5.1**
ARMA	**Armidale**	**32.94**	**246**	*e*P	**P**	**21 25 46.8**	**-0.3**
comp=Z,166nm,1.0s,mb5.9							
EIDS	**Eidsvold**	**33.03**	**255**	*e*P	**P**	**21 25 46.7**	**-1.2**
comp=Z,273nm,1.0s,mb6.1							
EIDS				*e*PP	PP	21 27 01.6	-1.4
RIV	**Riverview**	**33.98**	**240**	*e*P	**P**	**21 25 57.0**	**+0.9**
TAOE	**Nuku Hiva Isla**	**34.09**	**75**	*e*P	**P**	**21 25 55.8**	**-1.4**
comp=Z,523nm,1.4s,mb6.3							
TAOE				*e*S	**S**	**21 31 16.8**	**-3.9**
comp=Z,5μm,27.9s							
TAOE				*e*LR	LR	21 34 35.3	
comp=Z,50μm,28.6s,baz=250							
TAOE	**Nuku Hiva Isla**	**34.09**	**75**	*e*P	**P**	**21 25 55.4**	**-1.8**
comp=Z,101nm,0.8s,mb5.8							
RKT	**Rikitea**	**35.55**	**101**	*e*P	**P**	**21 26 09.2**	**-0.6**
comp=Z,224nm,1.3s,mb5.9							
RKT				*e*S	**S**	**21 31 41.3**	**-1.9**
comp=Z,3μm,31.8s							
RKT				*e*LQ		21 34 27.1	
comp=Z,6μm,29.0s							
RKT				*e*LR	LR	21 35 20.3	
comp=Z,48μm,28.2s,baz=268							
CNB	**Canberra Magne**	**35.77**	**238**	*e*P	**P**	**21 26 11.9**	**+0.4**
CAN	**Canberra**	**36.06**	**238⇓**	*e*P	**P**	**21 26 14.3**	**+0.3**
CAN						21 28 39.3	
CAN				*e*S	**S**	**21 31 50.9**	**+0.2**
CAN				pmax	pmax		
comp=Z,735nm,1.3s,mb6.5							
CAN				MLR	MLR		
comp=Z,10μm,20.0s,MS5.6							
CAN	**Canberra**	**36.06**	**238⇓**	*e*P	**P**	**21 26 14.3**	**+0.3**
comp=Z,735nm,1.3s,mb6.5							
CAN				PcP	PcP	21 28 39.2	-0.5
CAN				*e*S	**S**	**21 31 50.9**	**+0.2**
CAN				LR	LR		
comp=Z,10μm,20.0s,MS5.6							
JOHN	**Johnston Islan**	**37.47**	**6**	*e*P	**P**	**21 26 25.5**	**-0.5**
JOHN				*e*S	**S**	**21 32 11.7**	**-0.5**
JOHN				LR	LR		
comp=Z,8μm,22.0s,MS5.5							
CTA	**Charters Tower**	**37.85**	**264**	*e*P	**P**	**21 26 28.1**	**-1.3**
comp=Z,192nm,0.6s,mb6.0							
CTA				*e*S	S	21 31 57.5	-21
CTA	**Charters Tower**	**37.85**	**264**	P	**P**	**21 26 28.1**	**-1.3**
comp=Z,218nm,0.7s,mb6.0,baz=100,slow=11,SNR=105							
CTAO	**Charters Tower**	**37.85**	**264**	*e*P	**P**	**21 26 28.6**	**-0.8**
CTAO				*e*		21 27 56.0	
CTAO				*e*S	**S**	**21 32 17.6**	**-0.6**
CTAO				pmax	pmax		
comp=Z,206nm,0.7s,mb6.0							
CTAO				MLR	MLR		
comp=Z,9μm,20.0s,MS5.5							
CTAO	**Charters Tower**	**37.85**	**264**	*e*P	**P**	**21 26 28.6**	**-0.8**

FITZ eS S 21 36 54.0 -1.1
FITZ Fitzroy Crossi 57.35 261⇓eP P 21 28 59.7 -1.2
comp=Z,43nm,0.8s,mb5.5
FITZ e pP 21 29 11.2 -0.8
FITZ ePP PP 21 31 08.1 -0.3
FITZ S S 21 36 54.3 -0.8
SBA Scott Base 57.92 185⇑eP P 21 29 05.4 +1.5
comp=Z,3μm,2.6s,mb6.8
SBA e pP 21 29 16.6 +1.5
SBA LR LR
comp=Z,6μm,20.0s,MS5.7
RPN Rapa Nui 58.26 110 eP **P 21 29 07.3 +0.2**
RPN eS S 21 37 07.3 +0.6
RPN MLR MLR
comp=Z,9μm,19.0s,MS5.9
KLBR Kellerberrin 61.92 245 eP **P 21 29 32.2 +0.1**
comp=Z,435nm,0.9s,mb6.6
MEEK Meekatharra 61.98 250 eP **P 21 29 32.1 -0.5**
MBWA Marble Bar 62.08 256 eP **P 21 29 32.6 -0.8**
MBWA Marble Bar 62.08 256 eP **P 21 29 32.9 -0.5**
comp=Z,249nm,0.9s,mb6.3
MBWA ePcP PcP 21 30 11.8 -1.7
MBWA ePP PP 21 31 50.5 +0.3
MBWA LR LR
comp=Z,6μm,19.0s,MS5.8
NWAO Narrogin (SRO) 62.17 243⇓eP P 21 29 34.2 +0.4
NWAO e pP 21 29 44.9 -0.2
NWAO e 21 31 50.6
NWAO eS S 21 37 56.7 -0.2
NWAO MLR MLR
comp=Z,4μm,19.0s
CBIJ Chichi jima 64.22 316 LR LR 21 57 04.3
comp=Z,3μm,18.6s,MS5.5,baz=314,slow=35
CASY Casey 65.60 206 eP **P 21 29 56.0 +0.3**
CASY epP pP 21 30 07.5 +0.4
CASY eS S 21 38 39.8 +1.5
CASY Casey 65.60 206⇑eP P 21 29 56.0 +0.2
comp=Z,215nm,1.1s,mb6.1
CASY e pP 21 30 07.4 +0.3
CASY eS S 21 38 38.3 0.0
CASY LR LR
comp=Z,2μm,21.0s,MS5.3
DAV Davao City (W) 66.09 288 eP **P 21 29 59.2 -0.5**
DAV eS S 21 38 45.1 -0.7
DAV LR LR
comp=Z,4μm,22.0s,MS5.5
DAV Davao City (W) 66.09 288⇓eP P 21 29 57.7 -2.0
KAPI Kappang 66.70 274 P **P 21 30 02.5 -1.2**
comp=Z,306nm,1.2s,mb6.2,SNR=9.0
KAPI Kappang 66.70 274 eP **P 21 30 02.3 -1.4**
comp=Z,45nm,0.9s,mb5.5
QSPA South Pole Qui 69.29 180 P **P 21 30 19.0 +0.2**
comp=Z,163nm,1.1s,mb5.9,baz=51,slow=2.1,SNR=92
QSPA pP pP 21 30 30.9 +0.7
comp=Z,186nm,1.0s,baz=44,slow=4.9,SNR=22
QSPA South Pole Qui 69.29 180 eP **P 21 30 19.3 +0.5**
comp=Z,428nm,1.3s,mb6.2
QSPA e pP 21 30 30.8 +0.5
QSPA LR LR
comp=Z,6μm,20.0s,MS5.8
JHJ Hachijo jima 2 69.85 319 LR LR 22 01 33.1
comp=Z,2μm,18.0s,MS5.5,baz=125,slow=36
MYLDM Lahad Datu 71.68 283 P **P 21 30 37.5 +3.0**
MYLDM Lahad Datu 71.68 283 P **P 21 30 37.5 +3.0**
MYLDM Lahad Datu 71.68 283 P **P 21 30 37.5 +3.0**
ADK Adak 72.42 358⇑eP P 21 30 37.7 -0.3
ADK e 21 33 19.0
ADK eS S 21 39 58.7 -0.2
ADK pmax pmax
comp=Z,224nm,1.2s,mb6.0
ADK MLR MLR
comp=Z,3μm,22.0s,MS5.5
ADK Adak 72.42 358⇑eP P 21 30 37.7 -0.3
comp=Z,224nm,1.2s,mb6.0
ADK ePP PP 21 33 19.0 -0.7
ADK eS S 21 39 58.7 -0.2
ADK LR LR
comp=Z,3μm,22.0s,MS5.5
MIR Mirnyy 72.59 205⇑iP P 21 30 39.8 +0.7
MIR i pP 21 30 51.0 +0.5
MIR e pP 21 30 51.0 +0.5
MIR eS S 21 40 02.0 +1.1
MIR eS S 21 40 02.0 +1.1
MIR pmax pmax
comp=Z,1μm,5.0s
MIR pmax pmax
comp=N,600nm,6.0s
MIR pmax pmax
comp=E,1μm,6.0s
MIR pmax pmax
comp=Z,405nm,2.0s,mb6.0
MIR smax
comp=N,2μm,10.0s
MIR smax
comp=E,3μm,10.0s
MIR MLR MLR
comp=N,900nm,20.0s,MS5.4
MIR MLR MLR
comp=E,2μm,20.0s,MS5.4
MIR MLR MLR
comp=Z,2μm,20.0s,MS5.4
ATKA Atka Island 72.68 359 eP **P 21 30 39.4 -0.2**
SDKM Sandakan 73.05 283 P **P 21 30 44.3 +1.6**
SDKM Sandakan 73.05 283 P **P 21 30 44.3 +1.6**
SDKM Sandakan 73.05 283 P **P 21 30 44.3 +1.6**
MJAR Matsushiro Arr 73.13 321 P **P 21 30 42.9 +0.2**
comp=Z,19nm,0.9s,mb5.0,baz=160,slow=6.0,SNR=47
MJAR LR LR 22 03 48.9
comp=Z,979nm,18.1s,MS5.1,baz=140,slow=37
MAJO Matsushiro 73.13 321⇑eP P 21 30 42.6 -0.1
MAJO 21 33 25.9
MAJO eS S 21 40 07.4 -0.4
MAJO MLR MLR
comp=Z,2μm,19.0s,MS5.3
MAT Matsushiro 73.13 321 P **P 21 30 42.5 -0.2**
MAT S S 21 40 07.0 -0.8
KDM Kudat 73.89 284 P **P 21 30 50.4 +2.7**
KDM Kudat 73.89 284 P **P 21 30 50.4 +2.7**
KDM Kudat 73.89 284 P **P 21 30 50.4 +2.7**
SMY Shemya 74.02 352⇑eP P 21 30 47.1 -0.4
KKM Kota Kinabalu 74.11 283 P **P 21 30 49.7 +0.7**
KKM Kota Kinabalu 74.11 283 P **P 21 30 51.3 +2.3**
KKM Kota Kinabalu 74.11 283 eP **P 21 30 49.0 +0.1**
comp=Z,251nm,1.4s,mb6.0
KKM eS S 21 40 19.4 -0.3
KKM LR LR
comp=Z,1μm,21.0s,MS5.2
SNCC San Nicolas Is 74.28 45 eP **P 21 30 49.7 +0.2**
comp=Z,246nm,1.1s,mb6.0
ERM Erimo 74.33 328 eP **P 21 30 50.8 +1.2**
ERM eS S 21 40 20.0 -1.0
ERM MLR MLR
comp=Z,4μm,22.0s,MS5.6
UNV Unalaska Valle 74.55 4 eP **P 21 30 49.8 -0.8**
UNV e pP 21 31 01.0 -1.1
YUK Yuzh-Kuril'sk 74.56 331⇑iP P 21 30 51.4 +0.5
YUK i 21 31 10.0
YUK i S S 21 40 25.5 +1.9
YUK i SS SS 21 45 15.1 +3.5
YUK smax
comp=E,2μm,14.0s
YUK smax
comp=E,500nm,7.0s
AKUT Akutan 74.89 5 P **P 21 30 51.9 -0.7**
SAC San Andreas 75.24 40 eP **P 21 30 55.8 +0.9**
MCCM Marconi Confer 75.33 39 eP **P 21 30 55.4 0.0**
MCCM ePP PP 21 33 44.9 0.0
MCCM eS S 21 40 32.7 +0.3
MCCM LR LR
comp=Z,4μm,21.0s,MS5.7
OSI Osito Adit 75.64 44 eP **P 21 30 58.4 +1.0**
PASC Pasadena Art C 75.72 45 eP **P 21 30 57.8 0.0**
HOPS Hopland 75.79 38⇑eP P 21 30 58.3 +0.3
comp=Z,484nm,1.1s,mb6.3
HOPS S S 21 40 38.0 +0.6
HOPS LR LR
comp=Z,4μm,20.0s,MS5.7
MWC Mount Wilson 75.84 45⇑eP P 21 30 58.4 -0.1
BAR Barrett 75.84 47⇑eP P 21 30 58.5 0.0
BTM Bintulu 75.89 279 P **P 21 31 01.6 +2.3**
BTM Bintulu 75.89 279 P **P 21 31 01.6 +2.3**
BTM Bintulu 75.89 279 P **P 21 31 01.6 +2.3**
KCPM Cahto Peak 75.96 37 eP **P 21 31 00.7 +1.6**
SKR Severo-Kuril's 76.10 341 eP **P 21 30 55.5 -4.0**

SKR e pP 21 31 07.9 -3.2
SKR e 21 31 12.0
SKR ePPP 21 35 46.0
SKR eS S 21 40 41.0 +0.7
SKR e 21 41 07.0
SKR ePS 21 41 16.0
SKR eSS SS 21 45 31.0 -3.7
SKR eSSS 21 48 44.0
SKR pmax pmax
comp=Z,290nm,1.4s,mb6.0
SKR pmax pmax
comp=E,1μm,4.0s
SKR pmax pmax
comp=Z,2μm,4.0s
SKR smax
comp=N,2μm,12.0s
SKR smax
comp=E,3μm,12.0s
SKR MLR MLR
comp=N,1μm,18.0s,MS5.4
SKR MLR MLR
comp=E,1μm,18.0s,MS5.4
SKR MLR MLR
comp=Z,2μm,18.0s,MS5.5
ASAJ Asahikawa 76.16 329 LR LR 22 04 55.7
comp=Z,1μm,19.1s,MS5.3,baz=188,slow=36
SBUM Sibu 76.41 278 P **P 21 31 04.0 +1.8**
SBUM Sibu 76.41 278 P **P 21 31 04.0 +1.8**
SBUM Sibu 76.41 278 P **P 21 31 04.0 +1.8**
ISA Isabella 76.45 43⇑iP P 21 31 02.2 +0.3
ISA e 21 33 54.0
PFO Pinyon Flat Ob 76.54 46 P **P 21 31 02.0 -0.4**
comp=Z,825nm,1.3s,mb6.5,SNR=51
PFO Pinyon Flat Ob 76.54 46⇑iP P 21 31 02.5 +0.1
PFO e 21 31 17.4
PFO eS S 21 40 46.6 +0.7
PFO pmax pmax
comp=Z,198nm,1.2s,mb5.9
PFO MLR MLR
comp=Z,3μm,21.0s,MS5.6
PFO Pinyon Flat Ob 76.54 46⇑iP P 21 31 02.5 +0.1
comp=Z,198nm,1.2s,mb5.9
PFO e 21 31 17.4
PFO eS S 21 40 46.6 +0.7
PFO LR LR
comp=Z,3μm,21.0s,MS5.6
SDPT Sand Point 76.61 7 eP **P 21 31 01.3 -1.0**
KHMM Horse Mountain 76.69 36 eP **P 21 31 04.9 +1.8**
CMB Columbia Colle 76.75 40⇑iP P 21 31 03.7 +0.2
CMB e 21 33 55.0
CMB eS S 21 40 48.4 +0.4
CMB pmax pmax
comp=Z,262nm,0.9s,mb6.2
CMB MLR MLR
comp=Z,6μm,20.0s,MS5.9
CMB Columbia Colle 76.75 40⇑iP P 21 31 03.7 +0.1
comp=Z,262nm,0.9s,mb6.2
CMB ePP PP 21 33 55.0 -1.8
CMB eS S 21 40 48.4 +0.4
CMB LR LR
comp=Z,6μm,20.0s,MS5.9
OHCM Honcut 76.94 39 eP **P 21 31 05.0 +0.5**
WDC Whiskeytown Da 77.16 37⇑iP P 21 31 05.8 +0.1
WDC eS S 21 40 52.5 +0.2
WDC pmax pmax
comp=Z,275nm,1.0s,mb6.1
WDC MLR MLR
comp=Z,4μm,20.0s,MS5.7
WDC Whiskeytown Da 77.16 37⇑iP P 21 31 05.8 +0.1
comp=Z,275nm,1.0s,mb6.1
WDC eS S 21 40 52.5 +0.2
WDC LR LR
comp=Z,4μm,20.0s,MS5.7
TWG Pinlang 77.28 301 eP **P 21 31 06.4 -0.5**
comp=Z,50nm,0.6s,mb5.6
GSC Goldstone 77.31 44⇓iP P 21 31 06.9 +0.1
GSC e 21 34 01.8
GLA Glamis 77.32 47 eP **P 21 31 07.3 +0.4**
YULB Yu-li 77.38 301 eP **P 21 31 06.9 -0.5**
comp=Z,30nm,0.8s,mb5.3
YULB eS S 21 40 54.9 -0.6
DAC Darwin (Calif) 77.39 43 PFAKE 21 31 20.0 +13
DAC LR LR
comp=Z,5μm,20.0s,MS5.8
PET Petropavlovsk 77.43 343 eP **P 21 31 06.7 -0.3**
PET eS S 21 40 54.2 -0.5
PET MLR MLR
comp=Z,1μm,21.0s,MS5.3
MTUM Tungsten Hills 77.44 42 eP **P 21 31 08.3 +0.9**
NACB Ninganchiao 77.53 302 eP **P 21 31 07.8 -0.4**
comp=Z,131nm,1.1s,mb5.8
WAKR Walker 77.62 40 eP **P 21 31 09.1 +0.6**
KEBM Edson Butte 77.73 35 eP **P 21 31 10.4 +1.5**
PEA0B Petropavlovsk- 77.77 343 eP **P 21 31 08.8 -0.1**
PEA0B eS S 21 40 57.6 -0.8
PETK Petropavlovsk- 77.77 343 P **P 21 31 09.1 +0.2**
comp=Z,54nm,0.8s,mb5.5,baz=122,slow=8.5,SNR=53
PETK pP pP 21 31 20.9 +0.4
comp=Z,20nm,0.8s,baz=123,slow=13,SNR=6.9
PETK LR LR 21 59 36.5
comp=Z,1μm,20.7s,MS5.2,baz=156,slow=31
PETK Petropavlovsk- 77.77 343 P **P 21 31 09.1 +0.2**
PETK *PP pP 21 31 20.9 +0.5
PETK Petropavlovsk- 77.77 343 P **P 21 31 09.1 +0.2**
PETK pP pP 21 31 20.9 +0.4
PETK LR LR 21 59 36.5
CHGN Chignik 77.81 8 eP **P 21 31 08.4 -0.6**
KSM Kuching 77.82 276 P **P 21 31 11.6 +1.5**
KSM Kuching 77.82 276⇑eP P 21 31 10.8 +0.7
comp=Z,125nm,0.8s,mb5.9
KSM e pP 21 31 20.5 -1.2
KSM eS S 21 41 00.6 -0.1
KSM LR LR
comp=Z,2μm,21.0s,MS5.3
YBH Yreka Blue Hor 77.83 36⇑iP P 21 31 10.1 +0.6
YBH e 21 34 05.6
YBH eS S 21 40 59.7 +0.1
YBH pmax pmax
comp=Z,246nm,1.0s
YBH MLR MLR
comp=Z,4μm,20.0s
YBH Yreka Blue Hor 77.83 36⇑iP P 21 31 10.1 +0.6
comp=Z,246nm,1.0s,mb6.1
YBH ePP PP 21 34 05.6 -0.2
YBH eS S 21 40 59.7 +0.1
YBH LR LR
comp=Z,4μm,20.0s,MS5.7
SSLB Suanglung 77.85 301 eP **P 21 31 08.7 -1.3**
TPUB Ta-pu 77.87 301 eP **P 21 31 08.9 -1.2**
comp=Z,170nm,0.8s,mb6.0
YHNB Yeheng 77.94 302 eP **P 21 31 09.4 -1.2**
comp=Z,74nm,1.1s,mb5.5
YHNB eS S 21 41 01.5 0.0
YHNB LR LR
comp=Z,3μm,22.0s,MS5.5
TATO Taipei 78.01 303 eP **P 21 31 10.8 -0.1**
comp=Z,38nm,0.8s,mb5.4
TATO PcP PcP 21 31 20.2 -0.3
TATO ePP PP 21 34 06.6 -1.0
TATO eS S 21 41 01.6 -0.6
TATO LR LR
comp=Z,3μm,22.0s,MS5.5
YSS Yuzh-Sakhalins 78.20 331α iP P 21 31 12.3 +0.9
YSS e pP 21 31 22.0 -1.0
YSS i S S 21 41 04.0 +0.7
YSS e 21 41 20.0
YSS eSS SS 21 46 08.0 +1.4
YSS eSSS 21 49 28.0
YSS pmax pmax
comp=Z,150nm,1.0s,mb5.9
YSS pmax pmax
comp=Z,2μm,4.0s
YSS smax
comp=N,2μm,12.0s
YSS MLR MLR
comp=Z,1μm,20.0s,MS5.3
YSS MLR MLR
comp=N,1μm,18.0s,MS5.5
YSS MLR MLR
comp=E,1μm,18.0s,MS5.5
YSS Yuzh-Sakhalins 78.20 331⇑eP P 21 31 11.5 +0.1
comp=E,121nm,0.9s,mb5.8
YSS eS S 21 41 03.2 -0.1
YSS LR LR
comp=Z,1μm,22.0s,MS5.2

NVAR Mina Array Bea 78.27 41 P **P 21 31 12.6 +0.6**
comp=Z,272nm,0.9s,mb6.2,baz=222,slow=9.2,SNR=562
NVAR Mina Array Bea 78.27 41 P **P 21 31 12.6 +0.5**
HUMO Hull Mountain 78.29 35⇑iP P 21 31 11.9 -0.1
comp=Z,236nm,1.1s,mb6.0
HUMO ePP PP 21 34 09.6 0.0
HUMO eS S 21 41 04.4 0.0
HUMO LR LR
comp=Z,4μm,20.0s,MS5.7
LDFC Landfair 78.30 45 eP **P 21 31 13.3 +1.1**
PAHR Pah Rah Range 78.42 40 eP **P 21 31 13.4 +0.6**
RNO Roman Nose 78.76 34 P **P 21 31 15.6 +1.0**
PMSA Palmer Station 79.25 156 P **P 21 31 17.1 +0.1**
PMSA LR LR
comp=Z,4μm,20.0s,MS5.8
MPOR Mary's Peak 79.27 34 P **P 21 31 18.1 +0.8**
MOD Modoc 79.30 37⇓iP P 21 31 17.7 +0.2
comp=Z,344nm,0.9s,mb6.3
MOD ePP PP 21 34 16.6 -1.4
MOD LR LR
comp=Z,4μm,20.0s,MS5.8
COR Corvallis 79.45 34⇑iP P 21 31 18.9 +0.6
COR eS S 21 41 16.8 0.0
COR pmax pmax
comp=Z,166nm,1.1s,mb5.9
COR MLR MLR
comp=Z,2μm,20.0s,MS5.5
COR Corvallis 79.45 34⇑iP P 21 31 18.9 +0.6
comp=Z,166nm,1.1s,mb5.9
COR eS S 21 41 16.8 +0.1
COR LR LR
comp=Z,2μm,20.0s,MS5.5
OHAK Old Harbor 79.50 11 eP **P 21 31 17.8 -0.5**
HEBO Mount Hebo 79.65 33 eP **P 21 31 20.4 +1.0**
TUC Tucson 79.74 50⇑iP P 21 31 20.6 +0.4
TUC e 21 34 22.0
TUC eS S 21 41 20.6 +0.2
TUC pmax pmax
comp=Z,210nm,1.1s,mb6.0
TUC MLR MLR
comp=Z,6μm,20.0s,MS6.0
TUC Tucson 79.74 50⇑iP P 21 31 20.6 +0.4
comp=Z,210nm,1.1s,mb6.0
TUC ePP PP 21 34 22.0 0.0
TUC eS S 21 41 20.6 +0.2
TUC LR LR
comp=Z,6μm,20.0s,MS6.0
KSRS Korea Array 80.08 316 P **P 21 31 23.6 +1.7**
comp=Z,16nm,0.8s,mb5.0,baz=132,slow=5.9,SNR=89
KSRS LR LR 22 01 05.5
comp=Z,2μm,21.2s,MS5.4,baz=119,slow=31
KSRS Korea Array 80.08 316 P **P 21 31 23.6 +1.7**
KSRS pmax pmax
comp=Z,16nm,0.8s,mb5.0
KSRS MLR MLR
comp=Z,2μm,21.2s,MS5.4
BKCOR Black Crater 80.11 35 P **P 21 31 22.6 +0.7**
KDAK Kodiak Island 80.16 11 eP **P 21 31 21.5 -0.3**
KDAK e 21 34 24.4
KDAK eS S 21 41 23.4 -0.2
KDAK pmax pmax
comp=Z,480nm,1.9s,mb6.1
KDAK MLR MLR
comp=Z,5μm,22.0s,MS5.8
KDAK Kodiak Island 80.16 11 eP **P 21 31 21.5 -0.3**
comp=Z,480nm,1.9s,mb6.1
KDAK ePP PP 21 34 24.4 -0.4
KDAK eS S 21 41 23.4 -0.3
KDAK LR LR
comp=Z,5μm,22.0s,MS5.8
BMN Battle Mountai 80.17 40⇑iP P 21 31 22.6 +0.3
BMN 21 34 25.4
BMN eS S 21 41 25.1 +0.6
BMN pmax pmax
comp=Z,255nm,1.2s,mb6.0
BMN MLR MLR
comp=Z,5μm,20.0s,MS5.8
BMN Battle Mountai 80.17 40⇑iP P 21 31 22.6 +0.2
comp=Z,255nm,1.2s,mb6.0
BMN PP PP 21 34 25.4 +0.1
BMN eS S 21 41 25.1 +0.6
BMN LR LR
comp=Z,5μm,20.0s,MS5.8
QZH Quanzhou 80.29 301⇑iP P 21 31 24.5 +1.1
QZH S S 21 41 28.5 +2.0
QZH pmax pmax
comp=Z,80nm,1.0s,mb5.6
QZH LR LR
comp=N,3μm,18.8s,MS5.8
QZH LR LR
comp=E,2μm,14.4s,MS5.8
QZH LR LR
comp=Z,5μm,24.2s
WVOR Wild Horse Val 80.58 38⇑iP P 21 31 24.8 +0.3
WVOR e 21 34 29.0
WVOR eS S 21 41 29.5 +0.7
WVOR pmax pmax
comp=Z,337nm,1.1s,mb6.2
WVOR MLR MLR
comp=Z,4μm,20.0s,MS5.7
WVOR Wild Horse Val 80.58 38⇑iP P 21 31 24.8 +0.2
comp=Z,337nm,1.1s,mb6.2
WVOR ePP PP 21 34 29.0 +0.2
WVOR eS S 21 41 29.5 +0.6
WVOR LR LR
comp=Z,4μm,20.0s,MS5.7
HOOD Mount Hood Mea 80.81 34⇑eP P 21 31 26.2 +0.6
CCUT Cedar City 80.88 44⇑iP P 21 31 27.1 +0.9
comp=Z,81nm,0.9s,mb5.7
VLL Laurance Lake 80.89 34 P **P 21 31 27.2 +1.1**
VFP Flag Point 80.91 34 P **P 21 31 26.4 +0.2**
INCN Inchon 80.94 316 eP **P 21 31 26.1 -0.4**
INCN eS S 21 41 31.9 -0.8
INCN LR LR
comp=Z,2μm,22.0s,MS5.5
INCN Inchon 80.94 316 P **P 21 31 28.2 +1.6**
SNR=6.6
INCN P 21 31 28.2
SNR=6.6
ARUT Antelope Range 80.96 44 eP **P 21 31 27.3 +0.6**
ARUT pmax pmax
comp=Z,93nm,0.9s,mb5.7
ARUT Antelope Range 80.96 44 eP **P 21 31 27.3 +0.7**
comp=Z,93nm,0.9s,mb5.7
WUAZ Wupatki 81.07 47⇑iP P 21 31 27.9 +0.7
comp=Z,192nm,1.1s,mb5.9
WUAZ ePP PP 21 34 33.1 +0.2
WUAZ eS S 21 41 35.1 +1.0
WUAZ LR LR
comp=Z,2μm,20.0s,MS5.5
NLWA Neilton Lookou 81.10 31⇑iP P 21 31 27.4 +0.2
comp=Z,175nm,1.2s,mb5.9
NLWA PP PP 21 34 26.2 -6.7
NLWA eS S 21 41 34.3 +0.3
NLWA LR LR
comp=Z,6μm,20.0s,MS5.9
SSE Sheshan 81.30 308 P **P 21 31 27.8 -0.8**
SSE S S 21 41 38.0 +1.2
SSE SS SS 21 46 55.8 +2.2
SSE pmax pmax
comp=Z,21nm,0.8s,mb5.1
SSE pmax pmax
comp=Z,330nm,5.7s
SSE LR LR
comp=N,1μm,26.4s,MS5.4
SSE LR LR
comp=E,2μm,26.8s,MS5.4
SSE LR LR
comp=Z,2μm,31.5s,MS5.3
USHA Ushuaia 81.44 146 P **P 21 31 28.3 -0.7**
comp=Z,34nm,0.8s,mb5.3,baz=226,slow=4.8,SNR=12
OSD Olympics--Snow 81.48 31 P **P 21 31 30.0 +0.8**
ELK Elko 81.56 41⇑iP P 21 31 30.0 +0.2
ELK e 21 34 36.4
ELK eS S 21 41 39.4 +0.4
ELK pmax pmax
comp=Z,90nm,0.9s
ELK MLR MLR
comp=Z,6μm,20.0s
ELK Elko 81.56 41⇑iP P 21 31 30.0 +0.2
comp=Z,90nm,0.9s,mb5.7
ELK ePP PP 21 34 36.4 -0.5
ELK eS S 21 41 39.4 +0.4
ELK LR LR
comp=Z,6μm,20.0s,MS5.9

LON	**Longmire**	**81.69**	**33⇑**	*iP*	**P**	**21 31 30.1**	**-0.2**
GNW	**Green Mountain**	**81.73**	**32⇑**	*iP*	**P**	**21 31 30.4**	**-0.1**
	comp=Z,103nm,1.1s,mb5.7						
GNW				*e*PP	PP	21 34 38.1	0.0
N12A	**Clover Valley,**	**81.74**	**41⇑**	*iP*	**P**	**21 31 30.8**	**0.0**
	comp=Z,217nm,1.1s,mb6.0						
N12A				*e*PP	PP	21 34 38.5	+0.2
WPW	**White Pass**	**81.79**	**33**	P	**P**	**21 31 31.5**	**+0.7**
JBO	**Jordan Butte**	**81.86**	**35**	P	**P**	**21 31 31.7**	**+0.4**
RMW	**Rattlesnake Mo**	**82.17**	**32**	P	**P**	**21 31 33.4**	**+0.6**
PGC	**Sidney**	**82.18**	**31⇑**	*eP*	**P**	**21 31 32.7**	**-0.1**
	comp=Z,12nm,0.9s,mb4.8						
PGC				*e*PP	PP	21 34 40.2	-1.5
MSU	**Marysvale**	**82.19**	**44⇑**	*iP*	**P**	**21 31 34.2**	**+1.0**
N13A	**Wendover, West**	**82.26**	**41⇑**	*iP*	**P**	**21 31 33.5**	**+0.1**
	comp=Z,380nm,1.0s,mb6.3						
N13A				PP	PP	21 34 40.4	-2.2
M13A	**Montello**	**82.58**	**41⇑**	*iP*	**P**	**21 31 35.4**	**+0.3**
	comp=Z,242nm,1.1s,mb6.1						
M13A				S	S	21 41 48.3	-1.2
JCW	**Jim Creek**	**82.60**	**32**	*eP*	**P**	**21 31 35.2**	**+0.2**
RSW	**Rattlesnake Hi**	**82.60**	**34**	*eP*	**P**	**21 31 35.8**	**+0.7**
HAWA	**Hanford**	**82.63**	**34⇑**	*iP*	**P**	**21 31 35.3**	**0.0**
	comp=Z,604nm,1.3s,mb6.5						
HAWA				PP	PP	21 34 44.6	-1.0
HAWA				LR	LR		
	comp=Z,8μm,20.0s,MS6.1						
RSO	**Redoubt South**	**82.66**	**10**	*eP*	**P**	**21 31 34.9**	**-0.1**
HKC	**Hong Kong Obse**	**82.70**	**297**	P	**P**	**21 31 32.0**	**-4.2**
DUG	**Dugway**	**82.74**	**42⇑**	*iP*	**P**	**21 31 35.9**	**-0.1**
DUG				*e*		21 34 46.9	
DUG				*e*S	S	21 41 51.8	+0.6
DUG				pmax	pmax		
	comp=Z,150nm,1.3s,mb5.9						
DUG				MLR	MLR		
	comp=Z,4μm,22.0s,MS5.8						
DUG	**Dugway**	**82.74**	**42⇑**	*iP*	**P**	**21 31 35.9**	**0.0**
	comp=Z,150nm,1.3s,mb5.9						
DUG				*e*PP	PP	21 34 46.9	+0.3
DUG				*e*S	S	21 41 51.8	+0.6
DUG				LR	LR		
	comp=Z,4μm,22.0s,MS5.8						
MAW	**Mawson**	**82.75**	**199**	*eP*	**P**	**21 31 35.7**	**0.0**
	comp=Z,38nm,1.5s,mb5.2						
MAW				*e*pP	pP	21 31 47.9	+0.6
MAW				*e*S	S	21 41 50.0	-0.6
MAW	**Mawson**	**82.75**	**199**	P	**P**	**21 31 35.4**	**-0.2**
	comp=Z,27nm,0.7s,mb5.4,baz=125,slow=7.9,SNR=35						
MAW				LR	LR	22 06 49.9	
	comp=Z,5μm,19.2s,MS5.9,baz=127,slow=34						
MAW	**Mawson**	**82.75**	**199⇑**	*eP*	**P**	**21 31 35.8**	**+0.1**
MAW				*e*	pP	21 31 47.2	-0.1
MAW				*e*S	S	21 41 50.4	-0.2
MAW				pmax	pmax		
	comp=Z,80nm,1.4s						
MAW				MLR	MLR		
	comp=Z,8μm,19.0s						
MAW	**Mawson**	**82.75**	**199⇑**	*eP*	**P**	**21 31 35.8**	**+0.1**
	comp=Z,80nm,1.4s,mb5.5						
MAW				*e*	pP	21 31 47.2	-0.1
MAW				*e*S	S	21 41 50.4	-0.2
MAW				LR	LR		
	comp=Z,8μm,19.0s,MS6.1						
SVW2	**Sparrevohn**	**82.84**	**9**	*eP*	**P**	**21 31 35.1**	**-0.9**
BMO	**Blue Mountains**	**82.86**	**36⇑**	*iP*	**P**	**21 31 36.2**	**-0.3**
	comp=Z,110nm,1.0s,mb5.8						
BMO				*e*PP	PP	21 34 47.6	+0.2
BMO				*e*S	S	21 41 52.6	+0.5
BMO				LR	LR		
	comp=Z,3μm,20.0s,MS5.7						
HABR	**Khabarovsk**	**82.94**	**328**	*ceP*	**P**	**21 31 37.1**	**+0.3**
HABR				*e**SP	sP	21 31 50.2	-2.5
HABR				*e*S	S	21 41 54.4	+1.6
HABR				SS	SS	21 47 18.8	+1.5
HABR				pmax	pmax		
	comp=N,11nm,0.7s						
HABR				pmax	pmax		
	comp=E,44nm,1.1s						
HABR				pmax	pmax		
	comp=Z,80nm,1.2s,mb5.6						
HABR				MLR	MLR		
	comp=Z,1μm,19.0s,MS5.2						
LNOR	**Lincton Mounta**	**82.96**	**35**	*eP*	**P**	**21 31 37.1**	**+0.1**
LNOR				pmax	pmax		
	comp=Z,60nm,0.9s,mb5.6						
LNOR	**Lincton Mounta**	**82.96**	**35**	*eP*	**P**	**21 31 37.1**	**+0.1**
	comp=Z,60nm,0.9s,mb5.6						
RPW	**Rockport**	**82.98**	**32**	*eP*	**P**	**21 31 36.8**	**-0.2**
	comp=Z,35nm,0.8s,mb5.4						
ETW	**Entiat**	**83.01**	**33**	P	**P**	**21 31 37.8**	**+0.6**
	comp=Z,329nm,0.8s,mb6.4						
BGU	**Big Grassy Mou**	**83.02**	**42⇑**	*iP*	**P**	**21 31 37.2**	**-0.2**
	comp=Z,802nm,2.4s,mb6.3						
BGU				*e*PP	PP	21 34 46.3	-2.5
NLU	**North Lily Min**	**83.07**	**43⇑**	*iP*	**P**	**21 31 37.8**	**+0.1**
	comp=Z,440nm,2.0s,mb6.1						
PAYG	**Puerto Ayora**	**83.22**	**88**	*eP*	**P**	**21 31 39.4**	**+0.2**
PAYG				*e*S	S	21 41 57.9	+0.7
PAYG				LR	LR		
	comp=Z,8μm,22.0s,MS6.1						
PAYG	**Puerto Ayora**	**83.22**	**88**	*eP*	**P**	**21 31 40.1**	**+1.0**
PAYG				AMb	AMB	21 31 42.9	
	comp=Z,3μm,1.6s,mb7.0						
TMUT	**Trail Mountain**	**83.26**	**44⇑**	*iP*	**P**	**21 31 40.0**	**+1.3**
	comp=Z,386nm,0.9s,mb6.4						
TMUT				*e*PP	PP	21 34 49.9	-1.0
WTV	**Waterville**	**83.27**	**33**	P	**P**	**21 31 38.8**	**+0.3**
CRAG	**Craig**	**83.27**	**22**	*eP*	**P**	**21 31 38.9**	**+0.6**
	comp=Z,158nm,1.2s,mb5.9						
MDJ	**Mudanjiang**	**83.34**	**323**	P	**P**	**21 31 40.5**	**+1.5**
MDJ				pP	pP	21 31 49.5	-1.1
MDJ				sP	sP	21 31 53.0	-1.9
MDJ				PP	PP	21 34 53.5	+2.0
MDJ				S	S	21 41 59.8	+2.7
MDJ				sS	sS	21 42 17.0	+0.5
MDJ				pmax	pmax		
	comp=Z,45nm,1.2s,mb5.4						
MDJ				pmax	pmax		
	comp=Z,1μm,6.6s						
MDJ				LR	LR		
	comp=N,2μm,24.9s,MS5.5						
MDJ				LR	LR		
	comp=E,2μm,26.8s,MS5.5						
MDJ				LR	LR		
	comp=Z,3μm,27.4s,MS5.6						
MDJ	**Mudanjiang**	**83.34**	**323⇑**	*iP*	**P**	**21 31 39.9**	**+0.9**
	comp=Z,56nm,1.1s,mb5.5						
MDJ				*e*S	S	21 41 56.7	-0.4
MDJ				LR	LR		
	comp=Z,3μm,22.0s,MS5.6						
MNTX	**Cornudas Mount**	**83.37**	**53⇑**	*iP*	**P**	**21 31 39.3**	**-0.1**
	comp=Z,75nm,0.9s,mb5.7						
MNTX				*e*PP	PP	21 34 50.3	-1.7
MNTX				S	S	21 41 57.4	-0.5
MNTX				LR	LR		
	comp=Z,4μm,22.0s,MS5.7						
MPU	**Maple Canyon**	**83.38**	**43⇑**	*iP*	**P**	**21 31 39.7**	**+0.4**
	comp=Z,160nm,1.1s,mb6.0						
LENM	**Lemitar**	**83.43**	**50**	*eP*	**P**	**21 31 40.3**	**+0.6**
	comp=Z,135nm,1.1s,mb5.9						
LAZ	**Ladron**	**83.43**	**50**	*eP*	**P**	**21 31 40.3**	**+0.6**
	comp=Z,83nm,1.1s,mb5.7						
NOQ	**North Oquirrh**	**83.43**	**42⇑**	*iP*	**P**	**21 31 39.6**	**+0.1**
	comp=Z,155nm,1.0s,mb6.0						
NJ2	**Nanjing**	**83.50**	**308**	*eP*	**P**	**21 31 42.0**	**+1.9**
NJ2				pP	pP	21 31 51.0	-0.8
NJ2				sP	sP	21 31 54.5	-1.6
NJ2				PP	PP	21 34 55.3	+2.3
NJ2				S	S	21 42 01.5	+2.3
NJ2				sS	sS	21 42 17.0	-1.6
NJ2				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.2						
NJ2				pmax	pmax		
	comp=Z,760nm,6.9s						
NJ2				LR	LR		
	comp=N,1μm,25.2s,MS5.6						
NJ2				LR	LR		
	comp=E,3μm,27.6s,MS5.6						
NJ2				LR	LR		
	comp=Z,3μm,24.9s,MS5.5						
TXAR	**Lajitas Array**	**83.54**	**55**	P	**P**	**21 31 40.3**	**0.0**
	comp=Z,62nm,0.9s,mb5.7,baz=215,slow=7.1,SNR=324						
TXAR				LR	LR	22 01 23.1	
	comp=Z,5μm,20.4s,MS5.9,baz=60,slow=30						
SRU	**San Rafael**	**83.60**	**44⇑**	*iP*	**P**	**21 31 41.1**	**+0.7**
SRU				*e*		21 34 52.8	
SRU				pmax	pmax		
	comp=Z,259nm,1.0s,mb6.3						
SRU	**San Rafael**	**83.60**	**44⇑**	*iP*	**P**	**21 31 41.0**	**+0.6**
	comp=Z,259nm,1.0s,mb6.3						
SRU				*e*PP	PP	21 34 52.8	-0.9
SPUT	**South Promonto**	**83.60**	**41⇑**	*iP*	**P**	**21 31 40.6**	**+0.2**
	comp=Z,174nm,1.1s,mb6.1						
SPUT				*e*PP	PP	21 34 51.5	-2.1
BNM	**Barren Site**	**83.67**	**50**	*eP*	**P**	**21 31 41.0**	**+0.1**
	comp=Z,144nm,1.1s,mb6.0						
HVU	**Hansel Valley**	**83.67**	**41⇑**	*eP*	**P**	**21 31 40.8**	**+0.1**
HVU				pmax	pmax		
	comp=Z,117nm,0.9s,mb6.0						
HVU	**Hansel Valley**	**83.67**	**41⇑**	*eP*	**P**	**21 31 40.8**	**0.0**
	comp=Z,117nm,0.9s,mb6.0						
CTU	**Camp Tracy**	**83.69**	**42⇑**	*eP*	**P**	**21 31 41.3**	**+0.5**
	comp=Z,166nm,1.1s,mb6.1						
OD2	**Odessa Site #2**	**83.71**	**34**	*eP*	**P**	**21 31 40.9**	**+0.1**
	comp=Z,233nm,1.0s,mb6.3						
HLID	**Hailey**	**83.72**	**39⇑**	*iP*	**P**	**21 31 41.4**	**+0.4**
	comp=Z,196nm,0.9s,mb6.2						
HLID				*e*PP	PP	21 34 52.6	-1.9
HLID				*e*S	S	21 42 01.4	+0.4
HLID				LR	LR		
	comp=Z,2μm,19.0s,MS5.5						
GZH	**Guangzhou**	**83.73**	**297**	P	**P**	**21 31 41.0**	**-0.5**
GZH				S	S	21 42 01.8	-0.2
GZH				LR	LR		
	comp=N,1μm,22.7s,MS5.5						
GZH				LR	LR		
	comp=E,2μm,22.2s,MS5.5						
GZH				LR	LR		
	comp=Z,4μm,25.5s,MS5.6						
RC01	**Rabbit Creek A**	**83.77**	**11**	*eP*	**P**	**21 31 40.6**	**-0.2**
	comp=Z,78nm,1.0s,mb5.8						
SIT	**Sitka**	**83.82**	**20**	*eP*	**P**	**21 31 41.2**	**+0.1**
SIT				pmax	pmax		
	comp=Z,208nm,1.6s,mb6.0						
SIT	**Sitka**	**83.82**	**20**	*eP*	**P**	**21 31 41.1**	**0.0**
	comp=Z,208nm,1.6s,mb6.0						
JLU	**Jordanelle**	**83.83**	**42⇑**	*iP*	**P**	**21 31 41.9**	**+0.4**
	comp=Z,73nm,1.0s,mb5.8						
JLU				PP	PP	21 34 54.1	-1.4
DAU	**Daniels Canyon**	**83.84**	**43**	*eP*	**P**	**21 31 41.8**	**+0.1**
DAU				pmax	pmax		
	comp=Z,259nm,1.5s,mb6.1						
DAU	**Daniels Canyon**	**83.84**	**43**	*eP*	**P**	**21 31 41.8**	**+0.1**
	comp=Z,259nm,1.5s,mb6.1						
MVCO	**Mesa Verde**	**83.93**	**47⇑**	*iP*	**P**	**21 31 42.6**	**+0.4**
	comp=Z,147nm,1.3s,mb6.0						
MVCO				*e*S	S	21 42 04.1	+0.7
MVCO				LR	LR		
	comp=Z,3μm,20.0s,MS5.7						
MYKOM	**Kota Tinggi**	**83.95**	**274**	P	**P**	**21 31 44.6**	**+1.7**
ANMO	**Albuquerque**	**84.19**	**49⇑**	*iP*	**P**	**21 31 44.0**	**+0.4**
ANMO				*e*		21 34 56.7	
ANMO				*e*S	S	21 42 06.3	+0.2
ANMO				pmax	pmax		
	comp=Z,82nm,1.1s						
ANMO				MLR	MLR		
	comp=Z,5μm,20.0s						
ANMO	**Albuquerque**	**84.19**	**49⇑**	*iP*	**P**	**21 31 44.0**	**+0.4**
	comp=Z,82nm,1.1s,mb5.8						
ANMO				*e*PP	PP	21 34 56.7	-1.9
ANMO				*e*S	S	21 42 06.3	+0.3
ANMO				LR	LR		
	comp=Z,5μm,20.0s,MS5.9						
PV04	**Paradox Valley**	**84.28**	**45⇑**	*iP*	**P**	**21 31 44.5**	**+0.5**
PV04				*e*PP	PP	21 34 58.0	-1.3
GAMB	**Gambell**	**84.29**	**1⇑**	*eP*	**P**	**21 31 43.9**	**+0.5**
	comp=Z,214nm,1.0s,mb6.2						
HWUT	**Hardware Ranch**	**84.32**	**42⇑**	*iP*	**P**	**21 31 43.6**	**-0.5**
	comp=Z,58nm,0.8s,mb5.8						
HWUT				*e*PP	PP	21 34 57.3	-2.2
HWUT				*e*S	S	21 42 07.6	+0.5
HWUT				LR	LR		
	comp=Z,5μm,20.0s,MS5.9						
PMR	**Palmer**	**84.35**	**11⇑**	*eP*	**P**	**21 31 43.1**	**-0.6**
PMR						21 34 59.1	
PMR				pmax	pmax		
	comp=Z,270nm,1.7s,mb6.1						
PMR	**Palmer**	**84.35**	**11⇑**	*eP*	**P**	**21 31 43.1**	**-0.6**
	comp=Z,270nm,1.7s,mb6.1						
PMR				PP	PP	21 34 59.1	-0.2
PV01	**Paradox Valley**	**84.37**	**46**	*eP*	**P**	**21 31 45.1**	**+0.7**
	comp=Z,10μm,0.9s						
GDL2	**Guadalupe Moun**	**84.37**	**53**	*eP*	**P**	**21 31 44.9**	**+0.4**
	comp=Z,250nm,1.2s,mb6.2						
KGM	**Kluang**	**84.53**	**274**	P	**P**	**21 31 48.7**	**+2.9**
KGM	**Kluang**	**84.53**	**274**	P	**P**	**21 31 48.7**	**+2.9**
KGM	**Kluang**	**84.53**	**274**	P	**P**	**21 31 48.7**	**+2.9**
TTA	**Tatalina**	**84.54**	**8**	*eP*	**P**	**21 31 44.8**	**+0.1**
TTA				pmax	pmax		
	comp=Z,225nm,1.4s,mb6.1						
TTA	**Tatalina**	**84.54**	**8**	*eP*	**P**	**21 31 44.8**	**+0.2**
	comp=Z,224nm,1.4s,mb6.1						
DIV	**Divide**	**84.59**	**13**	*eP*	**P**	**21 31 44.9**	**0.0**
	comp=Z,95nm,0.9s,mb5.9						
BMRM	**Bremner River**	**84.70**	**14⇑**	*iP*	**P**	**21 31 45.2**	**-0.3**
	comp=Z,155nm,1.1s,mb6.0						
CLNB	**Carlsbad**	**84.76**	**53**	*eP*	**P**	**21 31 46.0**	**-0.5**
	comp=Z,23nm,0.9s,mb5.3						
PNL	**Peninsula**	**84.82**	**17⇑**	*eP*	**P**	**21 31 46.4**	**+0.2**
	comp=Z,147nm,0.9s,mb6.1						
DL2	**Dalian**	**85.01**	**315⇑**	*iP*	**P**	**21 31 48.5**	**+0.9**
DL2				sP	sP	21 32 02.5	-1.1
DL2				SKS		21 42 06.8	
DL2				S	S	21 42 18.0	+3.9
DL2				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.4						
DL2				pmax	pmax		
	comp=Z,420nm,5.4s						
DL2				LR	LR		
	comp=N,590nm,22.8s,MS5.1						
DL2				LR	LR		
	comp=E,580nm,23.5s,MS5.1						
DL2				LR	LR		
	comp=Z,990nm,25.8s,MS5.1						
PPLA	**Purkeypile**	**85.05**	**10**	*eP*	**P**	**21 31 45.8**	**-1.4**
	comp=Z,44nm,1.2s,mb5.5						
KLR	**Kul'dur**	**85.08**	**327**	*eP*	**P**	**21 31 44.7**	**-3.0**
KLR				*e*		21 35 06.5	
KLR				*e*S	S	21 42 06.0	-8.3
KLR				pmax	pmax		
	comp=E,160nm,2.8s						
KLR				pmax	pmax		
	comp=Z,370nm,2.8s,mb6.0						
KLR				pmax	pmax		
	comp=Z,2μm,8.0s						
KLR				smax			
	comp=N,1μm,10.0s						
KLR				smax			
	comp=E,2μm,10.0s						
NEW	**Newport**	**85.09**	**34⇑**	*iP*	**P**	**21 31 47.1**	**-0.6**
NEW				*e*		21 35 01.5	
NEW				*e*S	S	21 42 14.6	+0.2
NEW				pmax	pmax		
	comp=Z,53nm,0.9s						
NEW				MLR	MLR		
	comp=Z,8μm,19.0s						
NEW	**Newport**	**85.09**	**34⇑**	*iP*	**P**	**21 31 47.1**	**-0.6**
	comp=Z,53nm,0.9s,mb5.7						
NEW				*e*PP	PP	21 35 01.4	-4.1
NEW				*e*S	S	21 42 14.6	+0.2
NEW				LR	LR		
	comp=Z,8μm,19.0s,MS6.2						
CPRX	**Cap Rock**	**85.13**	**52**	*eP*	**P**	**21 31 47.9**	**-0.4**
	comp=Z,152nm,1.0s,mb6.1						
AHID	**Auburn Hatcher**	**85.25**	**41⇑**	*eP*	**P**	**21 31 48.6**	**-0.1**
	comp=Z,985nm,2.1s,mb6.6						
AHID				*e*S	S	21 42 16.9	+0.6
AHID				LR	LR		
	comp=Z,4μm,20.0s,MS5.8						
CN2	**Changchun**	**85.27**	**320**	*eP*	**P**	**21 31 49.3**	**+0.5**
CN2				*e*pP	pP	21 31 59.8	-0.7
CN2				*e*sP	sP	21 32 03.8	-1.0
CN2				*e*S	S	21 42 11.5	-4.9
CN2				pmax	pmax		
	comp=Z,40nm,1.3s,mb5.4						
CN2				pmax	pmax		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=N,200nm,16.0s,MS4.8						
CN2				LR	LR		
	comp=E,200nm,16.0s,MS4.8						
SNY	**Shenyang**	**85.31**	**318**	⇑P	**P**	**21 31 50.0**	**+1.0**
SNY				pP	pP	21 31 55.3	-5.4
SNY				sP	sP	21 31 57.3	-7.7
SNY				PP	PP	21 35 08.0	+0.4
SNY				SKS		21 42 10.0	
SNY				S	S	21 42 24.3	+7.4
SNY				sS	sS	21 42 32.3	-4.1
SNY				pmax	pmax		
	comp=Z,56nm,2.5s,mb5.2						
SNY				pmax	pmax		
	comp=Z,970nm,4.6s						
SNY				LR	LR		
	comp=N,970nm,19.2s,MS5.3						
SNY				LR	LR		
	comp=E,750nm,17.4s,MS5.3						
SNY				LR	LR		
	comp=Z,1μm,18.6s,MS5.4						
MCMT	**McKenzie Canyo**	**85.38**	**38**	*eP*	**P**	**21 31 49.6**	**+0.3**
	comp=Z,37nm,1.0s,mb5.5						
RRI2	**Red Ridge**	**85.44**	**40⇑**	*iP*	**P**	**21 31 50.0**	**+0.3**
	comp=Z,196nm,1.4s,mb6.0						
RRI2				*e*PP	PP	21 35 13.1	+4.5
RRI2				*e*S	S	21 42 27.8	+10
COCO	**West Island**	**85.64**	**259**	PFAKE		21 32 00.0	+8.6
COCO				LR	LR		
	comp=Z,4μm,22.0s,MS5.8						
DCID1	**Drake Creek**	**85.66**	**40**	*eP*	**P**	**21 31 51.9**	**+1.1**
	comp=Z,77nm,1.0s,mb5.9						
REDW	**Red Top Meadow**	**85.73**	**40⇑**	*iP*	**P**	**21 31 51.0**	**-0.1**
	comp=Z,394nm,2.0s,mb6.3						
TPAW	**Teton Pass**	**85.75**	**40⇑**	*eP*	**P**	**21 31 51.3**	**+0.2**
	comp=Z,378nm,1.8s,mb6.3						
SKAG	**Skagway**	**85.79**	**18**	*eP*	**P**	**21 31 51.9**	**+1.0**
	comp=Z,366nm,1.5s,mb6.4						
DLMT	**Dillon**	**85.83**	**38**	*eP*	**P**	**21 31 51.7**	**+0.2**
	comp=Z,45nm,1.0s,mb5.7						
DLMT				*e*PP	PP	21 35 07.1	-4.6
PLCA	**Paso Flores**	**85.84**	**132**	P	**P**	**21 31 51.2**	**-0.7**
	comp=Z,48nm,1.1s,mb5.7,baz=230,slow=4.9,SNR=28						
PLCA				LR	LR	22 05 50.2	
	comp=Z,6μm,18.1s,MS6.0,baz=77,slow=33						
PLCA	**Paso Flores**	**85.84**	**132**	*eP*	**P**	**21 31 51.2**	**-0.7**
PLCA				pmax	pmax		
	comp=Z,142nm,1.4s						
PLCA				MLR	MLR		
	comp=Z,6μm,20.0s						
PLCA	**Paso Flores**	**85.84**	**132**	*eP*	**P**	**21 31 51.2**	**-0.7**
	comp=Z,142nm,1.4s,mb6.0						
PLCA				LR	LR		
	comp=Z,6μm,20.0s,MS6.0						
SNOW	**Snow King Moun**	**85.85**	**40**	*eP*	**P**	**21 31 52.1**	**+0.5**
	comp=Z,60nm,0.8s,mb5.9						
TRF	**Thorofare Moun**	**85.88**	**10⇑**	*iP*	**P**	**21 31 50.5**	**-0.8**
	comp=Z,105nm,0.8s,mb6.1						
KTGM	**Kuala Trenggan**	**85.89**	**277**	P	**P**	**21 31 54.1**	**+1.6**
MSO	**Missoula**	**85.93**	**36⇑**	*iP*	**P**	**21 31 51.3**	**-0.6**
	comp=Z,42nm,1.2s,mb5.5						
MSO				*e*PP	PP	21 35 09.8	-2.6
MSO				*e*S	S	21 42 23.2	+0.5
MSO				LR	LR		
	comp=Z,3μm,20.0s,MS5.7						
CHUM	**Lake Minchumin**	**85.97**	**9⇑**	*eP*	**P**	**21 31 50.6**	**-1.2**
	comp=Z,92nm,1.1s,mb5.9						
SMCO	**Snowmass**	**85.98**	**46**	*eP*	**P**	**21 31 52.6**	**+0.2**
	comp=Z,126nm,1.4s,mb6.0						
IMW	**Indian Meadow**	**85.98**	**40**	*eP*	**P**	**21 31 52.3**	**0.0**
	comp=Z,112nm,1.4s,mb5.9						
LOHW	**Long Hollow**	**86.02**	**40**	*eP*	**P**	**21 31 52.7**	**+0.2**
	comp=Z,197nm,1.8s,mb6.0						
BSMT	**Bassoo Peak**	**86.07**	**35**	*eP*	**P**	**21 31 52.1**	**-0.6**
	comp=Z,234nm,1.8s,mb6.1						
TNA	**Tin City**	**86.17**	**2**	*eP*	**P**	**21 31 53.1**	**+0.4**
	comp=Z,102nm,0.9s,mb6.0						
TNA				*e*	pP	21 32 05.6	+1.2
LRM	**Limekiln Ridge**	**86.18**	**38**	*eP*	**P**	**21 31 53.0**	**-0.2**
	comp=Z,1μm,1.9s,mb6.9						
BW06	**Boulder Array**	**86.20**	**41**	*eP*	**P**	**21 31 52.4**	**-1.0**
	comp=Z,85nm,1.0s,mb5.9						
BW06				*e*PP	PP	21 35 15.1	+0.4
BW06				*e*S	S	21 42 26.5	+0.9
BW06				LR	LR		
	comp=Z,4μm,20.0s,MS5.8						
PDAR	**Pinedale Array**	**86.20**	**41**	P	**P**	**21 31 53.2**	**-0.2**
	comp=Z,73nm,0.9s,mb5.9,baz=204,slow=3.3,SNR=243						
PDAR				LR	LR	22 04 44.2	
	comp=Z,3μm,19.1s,MS5.7,baz=232,slow=32						
WHN	**Wuhan**	**86.20**	**305**	⇑P	**P**	**21 31 55.0**	**+1.3**
WHN				pP	pP	21 32 07.8	+2.4
WHN				S	S	21 42 29.5	+3.4
WHN				pmax	pmax		
	comp=Z,3μm,4.2s						
WHN				LR	LR		
	comp=N,3μm,19.7s,MS5.7						
WHN				LR	LR		
	comp=E,2μm,21.2s,MS5.7						
WHN				LR	LR		
	comp=Z,4μm,18.8s,MS5.8						
QLMT	**Earthquake Lak**	**86.21**	**39**	*eP*	**P**	**21 31 53.8**	**+0.4**
	comp=Z,27nm,0.8s,mb5.5						
SDCO	**Great Sand Dun**	**86.25**	**47⇑**	*iP*	**P**	**21 31 53.6**	**-0.2**
	comp=Z,145nm,1.7s,mb5.9						
SDCO				*e*PP	PP	21 35 14.6	-0.7
SDCO				*e*S	S	21 42 27.4	+1.0
SDCO				LR	LR		
	comp=Z,2μm,20.0s,MS5.6						
JTMT	**Jette**	**86.28**	**35**	*eP*	**P**	**21 31 52.6**	**-1.1**
SWMT	**Swartz Lake**	**86.30**	**36**	*eP*	**P**	**21 31 52.3**	**-1.5**
	comp=Z,15nm,1.0s,mb5.2						
PAX	**Paxson**	**86.31**	**12**	*eP*	**P**	**21 31 52.8**	**-0.7**
YFT	**Old Faithful**	**86.35**	**40**	*eP*	**P**	**21 31 56.1**	**+2.0**
	comp=Z,68nm,1.0s,mb5.8						
CHMT	**Chamberlain Mo**	**86.36**	**37**	*eP*	**P**	**21 31 53.6**	**-0.4**
	comp=Z,183nm,1.8s,mb6.0						
MCK	**McKinley**	**86.37**	**11⇑**	*iP*	**P**	**21 31 53.3**	**-0.4**
MCK				pmax	pmax		
	comp=Z,231nm,1.0s,mb6.4						
MCK	**McKinley**	**86.37**	**11⇑**	*iP*	**P**	**21 31 53.3**	**-0.5**
	comp=Z,231nm,1.0s,mb6.4						
BPAW	**Bear Paw Mtn.**	**86.37**	**10**	*eP*	**P**	**21 31 52.3**	**-1.5**
	comp=Z,29nm,1.0s,mb5.5						
YMR	**Madison River**	**86.39**	**39**	*eP

ISCO *e*S S 21 42 34.9 -0.5
ISCO pmax pmax
comp=Z,27nm,1.0s,mb5.4
ISCO MLR MLR
comp=Z,2μm,20.0s,MS5.5
ISCO Idaho Springs 87.20 46 *e*P **P 21 31 58.5 +0.2**
comp=Z,26nm,1.0s,mb5.4
ISCO *e*PP PP 21 35 22.8 -0.1
ISCO *e*S S 21 42 34.9 -0.5
ISCO LR LR
comp=Z,2μm,20.0s,MS5.5
WALA Waterton Lakes 87.26 35⇑ *i*P **P 21 31 58.0 -0.4**
comp=Z,2.2nm,1.0s
KVTX Kingsville 87.30 59 *e*P **P 21 31 58.9 -0.2**
comp=Z,1μm,1.8s,mb6.8
KVTX LR LR
comp=Z,3μm,19.0s,MS5.7
SYO Syowa Base 87.37 191⇓ *i*P **P 21 31 56.0 -2.8**
SYO Syowa Base 87.37 191⇓ *i*pP pP 21 32 08.8 -1.7
IPM Ipoh 87.54 276 P **P 21 32 02.2 +1.5**
AMTX Amarillo 87.60 51⇑ *i*P **P 21 31 59.9 -0.5**
comp=Z,137nm,1.1s,mb6.1
AMTX *e*PP PP 21 35 24.1 -2.1
AMTX LR LR
comp=Z,9μm,20.0s,MS6.2
COLA College 87.61 11⇑ *i*P **P 21 31 58.9 -0.8**
COLA *e*S S 21 42 38.3 +0.1
COLA pmax pmax
comp=Z,178nm,1.0s,mb6.2
COLA MLR MLR
comp=Z,4μm,21.0s,MS5.8
COLA College 87.61 11⇑ *i*P **P 21 31 58.9 -0.8**
comp=Z,178nm,1.0s,mb6.2
COLA *e*S S 21 42 38.3 +0.1
COLA LR LR
comp=Z,4μm,21.0s,MS5.8
RLMT Red Lodge 87.65 40 *e*P **P 21 31 59.8 -0.6**
comp=Z,25nm,1.0s,mb5.4
RLMT *e*PP PP 21 35 26.5 +0.1
RLMT *e*S S 21 42 39.7 +0.2
RLMT LR LR
comp=Z,4μm,21.0s,MS5.8
GCMT Greycliff 87.78 39 *e*P **P 21 32 00.8 -0.2**
comp=Z,103nm,1.7s,mb5.8
KULM Kulim 88.18 276 P **P 21 32 06.0 +2.3**
KULM Kulim 88.18 276⇑ *e*P **P 21 32 04.6 +0.9**
comp=Z,30nm,0.8s,mb5.6
KULM LR LR
comp=Z,4μm,22.0s,MS5.8
VNA1 Neumayer--Stat 88.21 175 *e*P **P 21 32 01.5 -1.3**
VNA1 *e* pP 21 32 14.0 -0.5
DAWY Dawson 88.59 14⇑ *i*P **P 21 32 04.3 -0.1**
MAIT Maitri 88.62 182 *e*P **P 21 32 03.4 -1.3**
MAIT *e*E pP 21 32 16.1 -0.4
NVL N'lazarevskaya 88.62 182 *e*P **P 21 32 00.7 -4.0**
EGAK Eagle 88.81 13 *e*P **P 21 32 05.5 +0.1**
comp=Z,128nm,0.9s,mb6.2
EGAK LR LR
comp=Z,3μm,20.0s,MS5.8
EGMT Eagleton 88.94 37 *e*P **P 21 32 05.9 -0.6**
comp=Z,42nm,1.0s,mb5.7
EGMT *e*PP PP 21 35 36.6 -0.1
EGMT LR LR
comp=Z,4μm,20.0s,MS5.9
BJT Baijiatuau 89.23 314 *e*P **P 21 32 08.1 +0.1**
BJT *e*S S 21 42 54.2 -0.5
BJT pmax pmax
comp=Z,308nm,1.8s
BJT MLR MLR
comp=Z,2μm,19.0s
BJT Baijiatuau 89.23 314 *e*P **P 21 32 08.1 0.0**
comp=Z,308nm,1.8s,mb6.3
BJT *e*S S 21 42 54.2 -0.5
BJT LR LR
comp=Z,2μm,19.0s,MS5.6
BJI Beijing 89.24 314 P **P 21 32 08.8 +0.8**
BJI pP pP 21 32 19.0 -0.8
BJI sP sP 21 32 22.3 -1.8
BJI PP PP 21 35 38.8 -0.4
BJI S S 21 42 57.8 +3.1
BJI sS sS 21 43 13.8 -0.5
BJI SS SS 21 48 53.3 +3.2
BJI pmax pmax
comp=Z,53nm,1.8s,mb5.6
BJI pmax pmax
comp=Z,1μm,4.7s
BJI LR LR
comp=N,1μm,22.0s,MS5.4
BJI LR LR
comp=E,1μm,22.0s,MS5.4
BJI LR LR
comp=Z,2μm,26.3s,MS5.4
COLD Coldfoot 89.42 9 *e*P **P 21 32 08.3 +0.1**
comp=Z,42nm,1.2s,mb5.6
WMOK Wichita Mounta 89.67 53 *e*P **P 21 32 09.0 -1.2**
WMOK pmax pmax
comp=Z,112nm,1.8s,mb5.9
WMOK MLR MLR
comp=Z,5μm,22.0s,MS5.9
WMOK Wichita Mounta 89.67 53 *e*P **P 21 32 09.0 -1.2**
comp=Z,112nm,1.8s,mb5.9
WMOK LR LR
comp=Z,5μm,22.0s,MS5.9
BILL Bilibino 89.83 352 *c i*P **P 21 32 10.2 0.0**
BILL *i*S S 21 42 50.5 -8.6
BILL *i*PS PS 21 44 06.9 -3.0
BILL pmax pmax
comp=Z,49nm,1.0s,mb5.8
BILL MLR MLR
comp=Z,1μm,18.0s,MS5.3
BILL Bilibino 89.83 352 *e*P **P 21 32 09.7 -0.4**
comp=Z,38nm,0.9s,mb5.7
BILL LR LR
comp=Z,7μm,22.0s,MS6.1
ENH Enshi 89.88 302 *e*P **P 21 32 10.1 -1.2**
comp=Z,108nm,1.0s,mb6.1
ENH LR LR
comp=Z,1μm,19.0s,MS5.4
HKT Hockley 89.94 58 *e*P **P 21 32 11.3 -0.3**
HKT pmax pmax
comp=Z,296nm,1.6s,mb6.4
HKT MLR MLR
comp=Z,1μm,20.0s,MS5.4
HKT Hockley 89.94 58 *e*P **P 21 32 11.3 -0.3**
comp=Z,296nm,1.6s,mb6.4
HKT LR LR
comp=Z,1μm,20.0s,MS5.4
EDM Edmonton 90.00 31 *e*P **P 21 32 10.8 -0.5**
OGNE Ogallala 90.15 46⇑ *e*P **P 21 32 11.0 -1.2**
comp=Z,15nm,0.6s,mb5.5
OGNE *e*PP PP 21 35 44.6 -1.9
OGNE LR LR
comp=Z,3μm,20.0s,MS5.7
LAO LASA Array 90.28 39 *e*P **P 21 32 13.1 +0.4**
comp=Z,514nm,2.0s,mb6.5
LAO LR LR
comp=Z,2μm,20.0s,MS5.6
RSSD Black Hills 90.35 42⇑ *e*P **P 21 32 12.3 -0.8**
RSSD 21 35 44.7
RSSD *e*S S 21 43 05.5 +0.6
RSSD pmax pmax
comp=Z,77nm,1.1s,mb6.0
RSSD MLR MLR
comp=Z,911nm,20.0s,MS5.2
RSSD Black Hills 90.35 42⇑ *e*P **P 21 32 12.3 -0.8**
comp=Z,77nm,1.1s,mb5.9
RSSD PP PP 21 35 44.7 -3.3
RSSD *e*S S 21 43 05.5 +0.6
RSSD LR LR
comp=Z,911nm,20.0s,MS5.2
PAF Port-aux-Franc 90.35 216 PFAKE 21 32 20.0 +6.8
PAF LR LR
comp=Z,8μm,20.0s,MS6.1
LCO Las Campanas 90.48 121 *e*P **P 21 32 14.2 0.0**
comp=Z,449nm,1.7s,mb6.5
LCO LR LR
comp=Z,6μm,19.0s,MS6.1
GYA Guiyang 90.65 298⇑ *i*P **P 21 32 16.0 +1.0**
GYA pP pP 21 32 28.0 +1.3
GYA sP sP 21 32 32.8 +1.8
GYA PP PP 21 35 53.5 +2.7
GYA SKS 21 42 43.5
GYA S S 21 43 07.5 -0.9
GYA SS SS 21 49 12.5 +1.4
GYA pmax pmax
comp=Z,80nm,1.0s,mb6.0
GYA pmax pmax
comp=Z,320nm,5.9s
GYA LR LR
comp=N,4μm,19.8s,MS6.0
GYA LR LR
comp=E,3μm,20.0s,MS6.0
GYA LR LR
comp=Z,4μm,19.5s,MS5.9
CBKS Cedar Bluff 90.76 49 *e*P **P 21 32 14.3 -0.9**
CBKS pmax pmax
comp=Z,164nm,1.4s,mb6.2
CBKS MLR MLR
comp=Z,6μm,20.0s,MS6.0
CBKS Cedar Bluff 90.76 49 *e*P **P 21 32 14.3 -0.9**
comp=Z,164nm,1.4s,mb6.2
CBKS LR LR
comp=Z,6μm,20.0s,MS6.0
TIY Taiyuan 90.79 310 *e*P **P 21 32 16.5 +1.1**
TIY pP pP 21 32 27.0 -0.1
TIY SKS 21 42 46.0
TIY S S 21 43 08.3 -0.9
TIY pmax pmax
comp=Z,740nm,5.9s
TIY LR LR
comp=N,810nm,17.2s,MS5.3
TIY LR LR
comp=E,370nm,12.8s,MS5.3
COPN Copaltepe 91.22 78 *e*P **P 21 32 19.4 +1.6**
CNGN Cerro Negro 91.23 77 *e*P **P 21 32 17.5 -0.5**
TGUH Tegucigalpa,Un 91.27 76 *e*P **P 21 32 17.9 -0.1**
comp=E,255nm,0.9s,mb6.5
TGUH LR LR
comp=Z,4μm,21.0s,MS5.8
TGUH Tegucigalpa,Un 91.27 76 *e*P **P 21 32 18.7 +0.7**
CSAN 91.38 78 *e*P **P 21 32 20.1 +1.5**
HIA Hailar 91.53 323 *e*P **P 21 32 19.1 +0.6**
HIA *e* 21 35 56.8
HIA *e*S S 21 43 14.9 -0.5
HIA pmax pmax
comp=Z,72nm,1.8s
HIA MLR MLR
comp=Z,4μm,22.0s
HIA Hailar 91.53 323 *e*P **P 21 32 19.1 +0.6**
comp=Z,72nm,1.8s,mb5.7
HIA *e*PP PP 21 35 56.8 -0.5
HIA *e*S S 21 43 14.9 -0.5
HIA LR LR
comp=Z,4μm,22.0s,MS5.8
NATX Nacogdoches 91.58 57 *e*P **P 21 32 18.7 -0.5**
comp=Z,186nm,1.3s,mb6.2
NATX LR LR
comp=Z,6μm,20.0s,MS6.1
SSN San Juan del S 91.58 79 *e*P **P 21 32 20.6 +1.0**
HUEN 91.66 78 *e*P **P 21 32 20.4 +0.5**
NNA Nana 91.72 103 PFAKE 21 32 30.0 +10
NNA LR LR
comp=Z,4μm,22.0s,MS5.8
CONN Concepcion 91.89 78 *e*P **P 21 32 22.5 +1.5**
JTS JuntasAbangare 92.06 80 P **P 21 32 20.1 -1.7**
comp=Z,2μm,1.0s,mb7.3,SNR=33
BOAB BOACO BROADBAND 92.16 78 *e*P **P 21 32 22.2 0.0**
DGMT Dagmar 92.36 38⇑ *i*P **P 21 32 22.4 0.0**
comp=Z,299nm,1.0s,mb6.6
DGMT LR LR
comp=Z,2μm,20.0s,MS5.6
TEIG Tepich 92.57 69 *e*P **P 21 32 23.8 -0.2**
comp=Z,98nm,1.1s,mb6.2
TEIG *e*PP PP 21 36 06.8 +0.7
TEIG *e*S S 21 43 26.7 +0.6
TEIG LR LR
comp=Z,3μm,21.0s,MS5.8
TEIG Tepich 92.57 69 *e*P **P 21 32 24.3 +0.3**
HHC Hu-ho-hao-te 92.74 313 *e*P **P 21 32 25.0 +0.7**
HHC pP pP 21 32 35.5 -0.6
HHC sP sP 21 32 39.5 -0.9
HHC PP PP 21 36 10.0 +3.0
HHC SKS 21 42 54.3
HHC S S 21 43 25.5 -1.2
HHC sS sS 21 43 43.5 -2.9
HHC SS SS 21 49 43.3 +2.6
HHC pmax pmax
comp=Z,26nm,1.1s,mb5.6
HHC pmax pmax
comp=Z,540nm,4.7s
HHC LR LR
comp=N,1μm,24.1s,MS5.4
HHC LR LR
comp=E,1μm,26.2s,MS5.4
HHC LR LR
comp=Z,3μm,26.0s,MS5.6
CLNS Chul'man 92.97 331 *e*P **P 21 32 24.7 -0.3**
CLNS *e* 21 32 31.6
CLNS *e**PP pP 21 32 37.9 +1.2
CLNS *e*S SKSac 21 42 52.6 -3.0
CLNS *e* 21 43 19.4
CLNS pmax pmax
comp=Z,77nm,1.4s,mb5.9
CLNS pmax pmax
comp=E,23nm,1.1s
CLNS pmax pmax
comp=N,29nm,1.3s
CLNS smax
comp=N,512nm,13.8s
CLNS smax
comp=E,180nm,13.3s
TRQA Tornquist 92.97 133 *e*P **P 21 32 25.1 -0.5**
comp=E,31nm,1.4s,mb5.5
TRQA LR LR
comp=Z,6μm,20.0s,MS6.0
KSU1 Kansas State U 93.09 49 *e*P **P 21 32 26.1 +0.2**
comp=Z,161nm,0.8s,mb6.5
KSU1 LR LR
comp=Z,6μm,20.0s,MS6.1
KMI Kunming 93.43 295 P **P 21 32 29.3 +1.4**
KMI pP pP 21 32 41.3 +1.6
KMI sP sP 21 32 45.3 +1.4
KMI PP PP 21 36 18.0 +5.3
KMI SKS 21 42 59.5
KMI S S 21 43 33.3 -0.2
KMI sS sS 21 43 52.0 -1.1
KMI SS SS 21 49 56.0 +4.8
KMI pmax pmax
comp=Z,46nm,0.9s,mb5.9
KMI pmax pmax
comp=Z,340nm,5.6s
KMI LR LR
comp=N,920nm,25.9s,MS5.6
KMI LR LR
comp=E,2μm,22.5s,MS5.6
KMI LR LR
comp=Z,4μm,24.7s,MS5.8
INK Inuvik 93.45 14 *e*P **P 21 32 26.5 -0.4**
INK *e* 21 36 11.8
INK pmax pmax
comp=Z,41nm,0.9s
INK Inuvik 93.45 14 *e*P **P 21 32 26.5 -0.4**
comp=Z,41nm,0.9s,mb5.9
INK *e*PP PP 21 36 11.8 0.0
MIAR Mount Ida 93.51 54 *e*P **P 21 32 26.9 -1.1**
MIAR pmax pmax
comp=Z,40nm,1.0s,mb5.8
MIAR MLR MLR
comp=Z,6μm,20.0s,MS6.0
MIAR Mount Ida 93.51 54 *e*P **P 21 32 26.9 -1.2**
comp=Z,40nm,1.0s,mb5.8
MIAR LR LR
comp=Z,6μm,20.0s,MS6.0
BTO Baotou 93.71 312 *e*P **P 21 32 28.5 -0.3**
YAK Yakutsk 94.07 337 *i*P **P 21 32 28.4 -1.5**
YAK *e*S SKSac 21 43 00.7 -0.8
YAK *e* 21 43 31.7
YAK *e*SSS 21 53 33.9
YAK pmax pmax
comp=E,7.0nm,1.0s
YAK pmax pmax
comp=Z,42nm,0.9s,mb5.9
YAK pmax pmax
comp=N,7.0nm,1.1s
YAK smax
comp=N,236nm,4.1s
YAK Yakutsk 94.07 337 *e*P **P 21 32 29.1 -0.8**
comp=N,74nm,1.0s,mb6.1
YAK LR LR
comp=Z,2μm,22.0s,MS5.4
CM31 Chiang Mai Arr 94.38 288 *e*P **P 21 32 33.1 +0.7**
comp=Z,29nm,1.0s,mb5.7
CM31 LR LR
comp=Z,2μm,22.0s,MS5.5
CMAR Chiang Mai Arr 94.38 288 P **P 21 32 33.9 +1.5**
comp=Z,26nm,0.9s,mb5.7,baz=109,slow=2.8,SNR=36
CMAR PP PP 21 36 20.0 -0.2
comp=Z,7.6nm,0.9s,baz=125,slow=6.1,SNR=7.1
CMAR PKKPbc PKKPbc 21 49 30.1 -1.7
comp=Z,2.9nm,0.7s,baz=284,slow=5.0,SNR=12
CMAR LR LR 22 16 03.9
comp=Z,824nm,19.4s,MS5.2,baz=285,slow=36
CMAR Chiang Mai Arr 94.38 288 P **P 21 32 33.9 +1.5**
CMAR 21 36 20.0
CHTO Chiang Mai 94.50 288 *e*P **P 21 32 34.3 +1.4**
CHTO *e* 21 36 20.6
CHTO pmax pmax
comp=Z,29nm,0.9s,mb5.7
CHTO MLR MLR
comp=Z,1μm,22.0s,MS5.2
CHTO Chiang Mai 94.50 288 *e*P **P 21 32 34.3 +1.3**
comp=Z,28nm,0.9s,mb5.7
CHTO *e*PP PP 21 36 20.6 -0.6
CHTO LR LR
comp=Z,1μm,22.0s,MS5.2
UALR University of 94.54 55 *e*P **P 21 32 31.6 -1.2**
comp=Z,42nm,1.0s,mb5.8
OTAV Otavalo 94.61 91 *e*P **P 21 32 34.3 +0.7**
comp=Z,24nm,1.4s,mb5.4
OTAV LR LR
comp=Z,5μm,21.0s,MS5.9
OTAV Otavalo 94.61 91 *e*P **P 21 32 35.3 +1.6**
CD2 Chengdu 94.68 301 *e*P **P 21 32 33.8 +0.3**
CD2 pP pP 21 32 40.3 -5.0
CD2 sP sP 21 32 43.0 -6.6
CD2 PP PP 21 36 24.8 +2.4
CD2 SKS 21 43 06.8
CD2 S S 21 43 43.3 -0.9
CD2 SS SS 21 50 11.5 +2.6
CD2 pmax pmax
comp=Z,60nm,0.7s,mb6.1
CD2 pmax pmax
comp=Z,300nm,8.3s
CD2 LR LR
comp=N,2μm,23.8s,MS5.6
CD2 LR LR
comp=E,2μm,23.8s,MS5.6
CD2 LR LR
comp=Z,2μm,28.4s,MS5.5
YKA Yellowknife Ar 94.97 23 P **P 21 32 33.7 -0.3**
comp=Z,22nm,0.8s,mb5.6,baz=236,slow=4.2,SNR=113
YKA PP PP 21 36 18.7 -5.1
comp=Z,2.5nm,1.0s,baz=233,slow=7.9,SNR=5.1
YKA PKKPbc PKKPbc 21 49 28.3 -3.7
comp=Z,1.9nm,0.7s,baz=45,slow=2.5,SNR=11
YKA Yellowknife Ar 94.97 23 P **P 21 32 33.7 -0.3**
YKA 21 36 18.8
YKA Yellowknife Ar 94.97 23 P **P 21 32 33.7 -0.3**
YKA PP PP 21 36 18.8 -5.1
YKA PKKPbc PKKPbc 21 49 28.3 -3.7
ECSD EROS Data Cent 94.97 45 *e*P **P 21 32 33.5 -1.0**
comp=Z,202nm,1.0s,mb6.5
ECSD LR LR
comp=Z,2μm,20.0s,MS5.6
VBMS Vicksburg 95.02 58 PFAKE 21 32 50.0 +15
VBMS LR LR
comp=Z,4μm,21.0s,MS5.9
BCIP Isla Barro Col 96.40 83 P **P 21 32 41.9 +0.2**
BCIP LR LR
comp=Z,2μm,20.0s,MS5.5
LZH Lanzhou 96.47 306 *e*P **P 21 32 44.3 +2.8**
LZH pP pP 21 32 54.0 +0.7
LZH sP sP 21 33 01.0 +3.4
LZH PP PP 21 36 39.0 +2.8
LZH SKS 21 43 15.3
LZH S S 21 44 04.0 +4.5
LZH SS SS 21 50 37.0 +2.9
LZH pmax pmax
comp=Z,29nm,1.0s,mb5.7
LZH pmax pmax
comp=Z,180nm,4.0s
LZH LR LR
comp=E,2μm,17.6s
LZH LR LR
comp=Z,2μm,18.6s,MS5.5
FFC Flin Flon 96.52 34 P **P 21 32 40.5 -0.7**
comp=Z,110nm,1.5s,mb6.1,SNR=6.6
FFC Flin Flon 96.52 34 *i*P **P 21 32 40.7 -0.5**
FFC Flin Flon 96.52 34 *e*P **P 21 32 40.0 -1.2**
comp=Z,90nm,1.8s,mb5.9
FFC LR LR
comp=Z,6μm,20.0s,MS6.0
CCM Cathedral Cave 96.57 52 *e*P **P 21 32 40.1 -1.8**
CCM MLR MLR
comp=Z,2μm,20.0s,MS5.5
SCIA State Center 96.57 48 P **P 21 32 40.9 -0.9**
comp=Z,14nm,0.6s,mb5.6
SCIA LR LR
comp=Z,4μm,20.0s,MS5.9
OXF Oxford 96.70 56 PFAKE 21 32 50.0 +7.4
OXF LR LR
comp=Z,7μm,20.0s,MS6.2
FVM French Village 97.14 52 *e*P **P 21 32 43.5 -1.0**
AGMN Agassiz Nation 97.27 41 *e*P **P 21 32 43.6 -1.2**
comp=Z,96nm,1.4s,mb6.0
AGMN LR LR
comp=Z,2μm,21.0s,MS5.5
BRAL Brewton 97.36 60 PFAKE 21 33 00.0 +14
BRAL LR LR
comp=Z,3μm,20.0s,MS5.8
LPAZ La Paz 97.86 111 P **P 21 32 48.8 +0.5**
comp=Z,12nm,1.0s,mb5.4,baz=271,slow=3.0,SNR=27
LPAZ LR LR 22 06 59.4
comp=Z,4μm,21.9s,MS5.9,baz=298,slow=29
LPAZ La Paz 97.86 111 P **P 21 32 48.8 +0.5**
LPAZ pmax pmax
comp=Z,12nm,1.0s
LPAZ MLR MLR
comp=Z,4μm,21.9s
LPAZ La Paz 97.86 111 *e*P **P 21 32 48.7 +0.4**
comp=Z,22nm,1.1s,mb5.6
LPAZ *e*PP PP 21 36 47.2 +0.3
LPAZ LR LR
comp=Z,4μm,21.0s,MS5.9
LPAZ La Paz 97.86 111 *e*P **P 21 32 49.7 +1.4**
SIUC Southern Illin 97.95 53 *e*P **P 21 32 47.3 -0.9**
ULM Lac du Bonnet 98.03 39 P **P 21 32 46.4 -1.8**
comp=Z,29nm,1.2s,mb5.7,baz=235,slow=5.0,SNR=14
ULM LR LR 22 12 13.6
comp=Z,3μm,20.4s,MS5.7,baz=251,slow=32
ULM Lac du Bonnet 98.03 39 *e*P **P 21 32 46.4 -1.7**
comp=Z,89nm,1.7s,mb6.0
ULM LR LR
comp=Z,3μm,20.0s,MS5.8
LRAL Lakeview Retre 98.08 58 PFAKE 21 33 00.0 +11
LRAL LR LR
comp=Z,5μm,20.0s,MS6.0
WVT Waverly 98.46 55 *e*P **P 21 32 49.0 -1.5**
WVT MLR MLR
comp=Z,6μm,20.0s,MS6.1
ULN Ulaanbaatar 98.49 318⇑ *i*P **P 21 32 50.5 +0.2**
ULN Ulaanbaatar 98.49 318 *e*P **P 21 32 50.3 -0.1**
comp=Z,6.8nm,0.9s,mb5.2
ULN LR LR
comp=Z,1μm,19.0s,MS5.4
HDIL Hopedale 98.86 50 *e*P **P 21 32 52.0 -0.2**
HDIL LR LR
comp=Z,7μm,20.0s,MS6.2
SONM Songino Array 98.89 318 P **P 21 32 50.7 -1.4**
comp=Z,1.2nm,0.9s,mb4.4,baz=113,slow=3.7,SNR=8.4
SONM PP PP 21 36 59.3 +4.9
comp=Z,1.4nm,0.9s,baz=120,slow=6.0,SNR=4.5
SONM LR LR 22 14 11.4
comp=Z,1μm,22.0s,MS5.4,baz=118,slow=33
SONM Songino Array 98.89 318 P **P 21 32 50.7 -1.4**
SONM 21 36 59.3
JFWS Jewell Farm 98.98 48 *e*P **P 21 32 52.2 -0.5**
JFWS pmax pmax
comp=Z,31nm,1.1s,mb5.8
JFWS MLR MLR
comp=Z,4μm,20.0s,MS5.9
JFWS Jewell Farm 98.98 48 *e*P **P 21 32 52.2 -0.5**
comp=Z,31nm,1.1s,mb5.8
JFWS LR LR
comp=Z,4μm,20.0s,MS5.9
EYMN Ely 99.87 42 *e*P Pdif 21 32 55.3 -1.3
comp=Z,68nm,1.6s

EYMN LR LR
comp=Z,4μm,20.0s,MS5.9
ROSC El Rosal 100.07 89 P Pdif 21 32 58.6 +1.1
comp=Z,6.2nm,0.4s,baz=292,slow=7.6,SNR=4.7
ROSC El Rosal 100.07 89 *e*Pdif Pdif 21 32 58.3 +0.8
TIXI Tiksi 100.19 344 *e*P Pdif 21 32 56.3 -1.7
TIXI *e* 21 36 59.6
TIXI *e*S SKSac 21 43 32.7 0.0
TIXI pmax pmax
comp=Z,11nm,1.4s
TIXI MLR MLR
comp=Z,479nm,18.0s,MS5.0
TIXI Tiksi 100.19 344 *e*Pdif Pdif 21 32 56.1 -1.9
comp=Z,6.7nm,0.9s
TIXI *e*PP PP 21 36 59.5 -4.2
TIXI LR LR
comp=Z,1μm,22.0s,MS5.4
WCI Wyandotte Cave 100.30 53 PFAKE 21 33 10.0 +12
WCI LR LR
comp=Z,1μm,20.0s,MS5.4
GTA Gaotai 100.59 308 *e*P Pdif 21 33 00.8 +1.0
GTA pP 21 33 11.8
GTA sP 21 33 15.5
GTA PP PP 21 37 11.0 +3.4
GTA SKS 21 43 36.0
GTA S Sdif 21 44 31.0 -2.9
GTA sS 21 44 49.3
GTA SS SS 21 51 30.5 -1.2
GTA pmax pmax
comp=Z,3.0nm,1.9s
GTA pmax pmax
comp=Z,190nm,7.8s
GTA LR LR
comp=N,670nm,23.4s,MS5.4
GTA LR LR
comp=E,1μm,25.8s,MS5.4
GTA LR LR
comp=Z,3μm,24.9s,MS5.7
COWI Conover 100.78 45 *e*Pdif Pdif 21 32 60.0 -0.7
comp=Z,20nm,0.9s
COWI LR LR
comp=Z,2μm,20.0s,MS5.7
GOGA Godfrey 101.01 58 *e*P Pdif 21 33 00.7 -0.9
GOGA MLR MLR
comp=Z,5μm,22.0s,MS6.0
DWPF Disney 101.08 64 PFAKE 21 33 10.0 +8.0
DWPF LR LR
comp=Z,587nm,20.0s,MS5.1
MTDJ Mount Denham 101.47 75 PFAKE 21 33 20.0 +16
MTDJ LR LR
comp=Z,3μm,20.0s,MS5.8
ZAK Zakamensk 101.68 319 *e*P Pdif 21 33 02.6 -2.0
ZAK pmax pmax
comp=Z,2.0nm,1.3s
TLY Talaya 101.87 321 *e* SKSac 21 43 41.9 +0.3
TLY *e*S Sdif 21 44 39.9 -4.7
TLY *e*PS PS 21 46 19.5 -2.6
TLY *e*PPS 21 47 13.2
TLY pmax pmax
comp=Z,4.0nm,0.8s
TLY MLR MLR
comp=Z,2μm,23.0s,MS5.5
TLY Talaya 101.87 321 ⇑*i*P Pdif 21 33 05.8 +0.3
TLY LR LR
comp=Z,2μm,22.0s,MS5.5
FCC Fort Churchill 102.11 32 *e*P Pdif 21 33 05.7 -0.8
CPUP Villa Florida 102.24 124 PFAKE 21 33 20.0 +13
CPUP LR LR
comp=Z,402nm,19.0s,MS5.0
ACSO Alum Creek Sta 103.35 52 PFAKE 21 33 20.0 +8.0
ACSO LR LR
comp=Z,5μm,20.0s,MS6.0
AAM Ann Arbor 103.42 50 PFAKE 21 33 20.0 +7.6
AAM LR LR
comp=Z,7μm,20.0s,MS6.2
NHSC New Hope 103.56 60 PFAKE 21 33 20.0 +7.0
NHSC LR LR
comp=Z,4μm,20.0s,MS5.9
GTBY Guantanamo Bay 104.17 74 PFAKE 21 33 30.0 +14
GTBY LR LR
comp=Z,2μm,20.0s,MS5.6
BLA Blacksburg 104.47 55 PFAKE 21 33 30.0 +13
BLA LR LR
comp=Z,4μm,20.0s,MS5.9
LSA Lhasa 104.64 296 P PKiKP 21 37 38.5 +4.6
LSA S SKSac 21 43 57.0 +1.4
LSA LR LR
comp=N,4μm,4.0s
LSA LR LR
comp=E,12μm,4.0s
LSA LR LR
comp=Z,3μm,3.0s
CNNC Cliffs of the 105.95 58 PFAKE 21 37 50.0 +14
CNNC LR LR
comp=Z,3μm,20.0s,MS5.8
ERPA Erie 106.01 51 PFAKE 21 37 50.0 +14
ERPA LR LR
comp=Z,5μm,20.0s,MS6.1
RES Resolute Bay 106.86 16 *e*P Pdif 21 33 27.5 -0.2
RES pmax pmax
comp=Z,83nm,2.5s
RES Resolute Bay 106.86 16 *e*Pdif Pdif 21 33 27.5 -0.2
comp=Z,83nm,2.5s
CBN Corbin 107.06 55 PFAKE 21 37 50.0 +12
CBN LR LR
comp=Z,6μm,20.0s,MS6.1
SSPA Standing Stone 107.21 52 PFAKE 21 37 50.0 +12
SSPA LR LR
comp=Z,2μm,20.0s,MS5.5
SDDR Presa de Saban 107.35 76 PFAKE 21 37 50.0 +11
SDDR LR LR
comp=Z,5μm,22.0s,MS6.0
GRTK Grand Turk 108.19 73 PFAKE 21 37 50.0 +9.3
GRTK LR LR
comp=Z,2μm,21.0s,MS5.7
BINY Binghamton 108.94 51 PFAKE 21 37 50.0 +8.5
BINY LR LR
comp=Z,6μm,20.0s,MS6.1
DGAR Diego Garcia 109.64 254 PFAKE 21 37 50.0 +6.3
DGAR LR LR
comp=Z,3μm,19.0s,MS5.9
LONY Lake Ozonia 110.37 49 PFAKE 21 38 00.0 +16
LONY LR LR
comp=Z,3μm,20.0s,MS5.9
WMQ Urumqi 110.46 310 *e*Pdif Pdif 21 33 42.0 -1.7
WMQ PP PP 21 38 22.0 +1.6
WMQ S Sdif 21 45 52.0 -4.2
WMQ SS SS 21 53 44.0 -2.2
WMQ AMB AMB
comp=Z,180nm,10.0s
WMQ LR LR
comp=N,2μm,20.0s,MS5.7
WMQ LR LR
comp=E,1μm,20.0s,MS5.7
WMQ LR LR
comp=Z,2μm,20.0s,MS5.7
NCB Newcomb 110.52 50 *e*PKiKP PKiKP 21 37 44.5 +0.1
NCB LR LR
comp=Z,5μm,20.0s,MS6.1
SPB Sao Paulo 111.25 127 PFAKE 21 38 00.0 +13
SPB LR LR
comp=Z,4μm,19.0s,MS6.0
LBNH Lisbon 112.20 50 PFAKE 21 38 00.0 +12
LBNH LR LR
comp=Z,4μm,19.0s,MS6.0
HYB Hyderabad 112.54 281 *i* PKP PKiKP 21 37 48.0 -1.0
HYB *e*PP PP 21 38 40.0 +4.0
HYB *e*PKKP PKKPbc 21 48 46.0 +8.3
ZAA0 Zalesovo Array 113.48 321 *e*PKiKP PKiKP 21 37 48.0 -1.7
ZAA0 *e* 21 38 01.1
ZALV Zalesovo Beam 113.48 321 PKiKP PKiKP 21 37 48.2 -1.5
comp=Z,8.7nm,0.7s,baz=157,slow=1.0,SNR=33
ZALV PKKPbc PKKPbc 21 48 33.1 -2.4
comp=Z,1.7nm,0.8s,baz=273,slow=5.6,SNR=5.7
PKME Peaks-Kenny Pk 114.18 49 PFAKE 21 38 00.0 +8.7
PKME LR LR
comp=Z,4μm,20.0s,MS6.0
GRGR Grenville 114.27 86 PFAKE 21 38 00.0 +7.6
GRGR LR LR
comp=Z,2μm,20.0s,MS5.6
NVS Novosibirsk 114.45 322 *e*PKIKP PKiKP 21 37 49.4 -2.1
NVS *e* 21 38 54.8
NVS pmax pmax
comp=Z,17nm,1.4s
NVS pmax pmax
comp=N,6.0nm,1.4s
NVS pmax pmax
comp=E,12nm,1.8s
MK31 Makanchi Array 114.61 313 *e*PKIKP PKiKP 21 37 50.7 -1.4
MKAR Makanchi Array 114.61 313 Pdiff Pdif 21 34 09.9 +7.8
comp=E,0.7nm,0.8s,baz=90,slow=10,SNR=4.0
MKAR PKP PKiKP 21 37 50.5 -1.7
comp=E,10nm,0.8s,baz=96,slow=1.5,SNR=47
MKAR pPKP 21 38 02.3
comp=E,6.7nm,0.7s,baz=69,slow=4.0,SNR=13
MKAR PKKPbc PKKPbc 21 48 29.7 -1.7
comp=E,2.6nm,0.8s,baz=348,slow=2.1,SNR=16
MKAR Makanchi Array 114.61 313 *c i*PKIKP PKiKP 21 37 50.5 -1.6
MKAR *e* 21 37 50.6
MKAR 21 38 02.3
MKAR 21 48 29.7
MKAR pmax pmax
comp=Z,11nm,0.8s
MKAR pmax pmax
comp=Z,2.0nm,1.1s
MKAR Makanchi Array 114.61 313 Pdif Pdif 21 34 09.9 +7.8
MKAR PKP PKiKP 21 37 50.5 -1.7
MKAR ⇑*e*PKP PKiKP 21 37 50.6 -1.5
MKAR pPKP 21 38 02.3
MKAR PKKPbc PKKPbc 21 48 29.7 -1.7
FDF Fort de France 115.49 83 PFAKE 21 38 10.0 +15
FDF LR LR
comp=Z,2μm,21.0s,MS5.7
ANWB Willy Bob 115.69 80 PFAKE 21 38 10.0 +15
ANWB LR LR
comp=Z,2μm,20.0s,MS5.7
BBSR BB Station 116.13 63 PFAKE 21 38 10.0 +14
BBSR LR LR
comp=Z,2μm,22.0s,MS5.8
SCHQ Schefferville 116.17 38 PKP PKPdf 21 37 53.0 -1.9
comp=Z,6.7nm,1.0s,baz=284,slow=4.8,SNR=4.8
SCHQ Schefferville 116.17 38 PKP PKPdf 21 37 53.0 -1.9
SCHQ LR LR
comp=Z,5μm,20.0s,MS6.1
RER Riviere de l'E 116.48 232 PFAKE 21 38 10.0 +13
RER LR LR
comp=Z,2μm,21.0s,MS5.8
BBGH Gun Hill 116.52 85 PFAKE 21 38 10.0 +13
BBGH LR LR
comp=Z,4μm,20.0s,MS6.0
KURK Kurchatov 117.19 317 PKP PKPdf 21 37 55.5 -1.5
comp=Z,16nm,0.9s,baz=88,slow=1.8,SNR=80
KURK pPKP pPKPdf 21 38 07.9 -1.2
comp=Z,15nm,0.9s,baz=97,slow=1.7,SNR=15
KURK PKKPbc PKKPbc 21 48 20.1 -2.4
comp=Z,5.0nm,0.8s,baz=269,slow=4.4,SNR=19
KURK Kurchatov 117.19 317 *c i*PKIKP PKPdf 21 37 55.3 -1.7
KURK pmax pmax
comp=Z,24nm,1.0s
KURK Kurchatov 117.19 317 *e*PKPdf PKPdf 21 37 54.9 -2.0
KURK *e* 21 38 07.7
KURK LR LR
comp=Z,1μm,19.0s,MS5.5
KSH Kashi 118.67 304 PKP PKPdf 21 38 00.8 +0.6
KSH sPKP 21 38 15.3
KSH PKS 21 41 36.3
KSH SKS SKSdf 21 45 08.0 -1.4
KSH AMB AMB
comp=Z,780nm,7.2s
KSH LR LR
comp=N,780nm,12.3s,MS5.6
KSH LR LR
comp=E,410nm,11.0s,MS5.6
KSH LR LR
comp=Z,360nm,10.3s,MS5.3
TKM2 Tokmak 2 119.14 308 P PKPdf 21 38 00.1 -0.9
SNR=23
TKM2 Tokmak 2 119.14 308 *e*PKIKP PKPdf 21 38 00.0 -1.0
TKM2 *e* 21 38 12.2
TKM2 MLR MLR
comp=Z,1μm,21.0s,MS5.5
TKM2 Tokmak 2 119.14 308 *e*PKPdf PKPdf 21 37 60.0 -1.0
TKM2 *e* 21 38 12.2
TKM2 *e*PKKP PKKPbc 21 48 13.0 -2.3
TKM2 LR LR
comp=Z,1μm,21.0s,MS5.5
KZA Kyzart 119.37 307 P PKPdf 21 38 01.6 +0.2
SNR=10
KBK Karagaybulak 119.61 308 P PKPdf 21 38 01.2 -0.6
SNR=16
TRIS Tristan da Cun 119.72 163 PFAKE 21 38 10.0 +7.6
TRIS LR LR
comp=Z,3μm,20.0s,MS5.9
CHMS Chumysh 119.76 308 P PKPdf 21 38 01.0 -1.2
SNR=16
FRU Bishkek 119.86 308 *e*PKIKP PKPdf 21 38 00.0 -2.3
FRU *e* 21 38 13.0
UCH Uchtor 119.92 307 P PKPdf 21 38 02.8 +0.3
SNR=25
UCH Uchtor 119.92 307 *e*PKPdf PKPdf 21 38 02.5 0.0
UCH *e* 21 38 15.2
USP Ospenovka 119.95 309 P PKPdf 21 38 01.6 -0.9
SNR=16
EKS2 Erkin-Say 120.47 308 P PKPdf 21 38 03.0 -0.5
SNR=16
EKS2 Erkin-Say 120.47 308 *e*PKPdf PKPdf 21 38 02.9 -0.7
EKS2 *e* 21 38 16.0
EKS2 *e*PKKP PKKPbc 21 48 08.6 -1.7
EKS2 LR LR
comp=Z,2μm,22.0s,MS5.6
AML Almayashu 120.52 307 P PKPdf 21 38 03.4 -0.3
SNR=20
AML Almayashu 120.52 307 *e*PKPdf PKPdf 21 38 03.1 -0.6
AML *e* 21 38 16.5
AML *e*PKKP PKKPbc 21 48 09.1 -1.1
AML LR LR
comp=Z,1μm,21.0s,MS5.5
SFJD Kangerlussuaq 121.53 23 PFAKE 21 38 20.0 +15
SFJD LR LR
comp=Z,3μm,22.0s,MS5.9
KBS Kingsbay 121.75 359 *e*PP PP 21 39 36.0 -2.4
KBS *e*SS SS 21 56 14.2 +2.5
KBS AMS AMS 22 23 13.9
comp=Z,854nm,26.3s,MS5.3
KBS Kingsbay 121.75 359 *d i*PKIKP PKPdf 21 38 04.8 -0.2
KBS pmax pmax
comp=Z,59nm,1.7s
KBS Kingsbay 121.75 359 *e*PKPdf PKPdf 21 38 04.4 -0.6
KBS LR LR
comp=Z,960nm,22.0s,MS5.4
BVAR Borovoye Array 122.12 320 PKP PKPdf 21 38 05.1 -1.3
comp=Z,21nm,0.7s,baz=80,slow=1.7,SNR=92
BVAR pPKP pPKPdf 21 38 17.2 -1.3
comp=Z,14nm,0.7s,baz=98,slow=3.0,SNR=14
BVAR PKKPbc PKKPbc 21 48 01.6 -2.7
comp=Z,1.1nm,0.7s,baz=262,slow=4.2,SNR=5.4
BVAR Borovoye Array 122.12 320 PKIKP PKPdf 21 38 05.1 -1.3
BVAR 21 38 17.2
BRVK Borovoye 122.18 320 *c i*PKIKP PKPdf 21 38 05.4 -1.1
BRVK pmax pmax
comp=Z,29nm,1.0s
BRVK Borovoye 122.18 320 *e*PKPdf PKPdf 21 38 05.2 -1.3
BRVK *e* 21 38 18.4
BRVK LR LR
comp=Z,2μm,22.0s,MS5.6
SUMG Summit 122.36 15 *e*PKPdf PKPdf 21 38 05.6 -0.6
SUMG Summit 122.36 15 ⇑*i*P PKPdf 21 38 05.6 -0.7
comp=Z,24nm,1.1s
DAG Danmarks Havn 122.55 7 ⇓*i*P PKPdf 21 38 04.6 -2.0
comp=Z,6.7nm,0.9s
GRM Grahamstown 122.98 200 ⇓*i*P PKPdf 21 38 07.8 -1.0
GRM AMS AMS 22 26 58.5
comp=Z,3μm,18.8s,MS6.0
SOE Somerset East 123.83 199 ⇑*i*P PKPdf 21 38 10.0 -0.4
KBL Kabul 123.90 298 PKIKP PKPdf 21 38 10.2 -0.2
ABPO Ambohimpanom 123.97 228 *e*PKIKP PKPdf 21 38 11.0 0.0
ABPO MLR MLR
comp=Z,2μm,19.0s,MS5.8
SUR Sutherland 125.44 195 *e*PKPdf PKPdf 21 38 14.1 +0.6
SUR *e*PP PP 21 40 01.5 -1.5
SUR LR LR
comp=Z,2μm,20.0s,MS5.8
SUR Sutherland 125.44 195 ⇑*i*P PKPdf 21 38 13.5 -0.1
SUR AMS AMS 22 31 04.3
comp=Z,1μm,19.9s,MS5.6
MSEY Mahe Island 125.88 248 PFAKE 21 38 30.0 +15
MSEY LR LR
comp=Z,2μm,19.0s,MS5.8
POGA Pongola 126.40 208 *e*P PKPdf 21 38 09.2 -6.3
SVE Sverdlovsk 126.70 326 ⇑*i*PKIKP PKPdf 21 38 14.6 -0.4
SVE *e*SP SP 21 50 14.9 +4.1
SVE pmax pmax
comp=Z,34nm,1.0s
SEK Senekal 127.16 203 *e*P PKPdf 21 38 10.9 -6.0
SEK AMS AMS 22 29 34.6
comp=Z,2μm,19.4s,MS5.8
SCO Scoresbysund 127.46 12 ⇑*i*P PKPdf 21 38 14.6 -1.5
comp=Z,22nm,1.0s
SCO
comp=Z,2μm,21.0s
PKA Prieska 127.51 198 *e*P PKPdf 21 38 12.8 -4.8
PKA AMS AMS 22 30 36.9
comp=Z,937nm,20.0s,MS5.5
SOKR Solikamsk 127.54 331 *c i*PKIKP PKPdf 21 38 15.5 -1.0
SOKR pmax pmax
comp=Z,60nm,1.0s
ARU Arti 127.91 326 *i* PKIKP PKPdf 21 38 16.1 -1.2
ARU 21 45 15.7
ARU MLR MLR
comp=Z,3μm,22.0s,MS5.9
ARU Arti 127.91 326 *e*PKPdf PKPdf 21 38 16.3 -1.0
ARU *e* 21 38 28.6
ARU LR LR
comp=Z,2μm,22.0s,MS5.8
PRYS Parys 128.52 204 ⇑*i*P PKPdf 21 38 18.9 -0.6
PRYS AMS AMS 22 33 57.5
comp=Z,2μm,19.3s,MS5.9
ERPM east rand prop 128.71 205 ⇑*i*P PKPdf 21 38 19.7 -0.3
ERPM AMS AMS 22 31 25.8
comp=Z,2μm,22.1s,MS5.8
SWZ Schweizer 129.02 201 ⇓*i*P PKPdf 21 38 19.2 -1.3
SWZ AMS AMS 22 31 16.3
comp=Z,2μm,21.2s,MS5.8
UPI Upington 129.16 197 *e*P PKPdf 21 38 20.1 -0.7
UPI AMS AMS 22 30 36.1
comp=Z,9μm,20.6s,MS6.5
SLR Silverton 129.23 205 *e*P PKPdf 21 38 20.8 -0.1
KEV Kevo 129.51 351 *e*PKIKP PKPdf 21 38 18.9 -1.1
KEV MLR MLR
comp=Z,1μm,21.0s,MS5.6
LVZ Lovozero 129.75 347 ⇓*i*PKIKP PKPdf 21 38 20.4 -0.1
LVZ pmax pmax
comp=Z,98nm,2.5s
LVZ Lovozero 129.75 347 ⇓*i*PKP PKPdf 21 38 20.5 0.0
LVZ LR LR
comp=Z,1μm,21.0s,MS5.6
ARCES ARCESS Array B 129.93 352 PKP PKPdf 21 38 19.8 -1.0
comp=Z,18nm,0.8s,baz=5.7,slow=0.9,SNR=26
ARCES pPKP pPKPdf 21 38 32.8 -0.1
comp=Z,10nm,0.6s,baz=13,slow=1.0,SNR=8.2
ARE0 ARCESS Array S 129.93 352 *e*PKPdf PKPdf 21 38 19.5 -1.3
ARE0 *e* 21 38 32.2
AKTK Aktyubinsk 130.19 319 PKP PKPdf 21 38 21.0 -0.9
AKTO Aktyubinsk 130.19 319 PKP PKPdf 21 38 21.0 -0.9
comp=Z,6.7nm,0.8s,baz=54,slow=1.9,SNR=19
APA Apatity 130.28 347 ⇑*i*PKIKP PKPdf 21 38 21.4 -0.1
APA *i* 21 40 32.0
APA *e* 21 45 20.0
APA *i* PS PS 21 50 38.0 -9.2
APA pmax pmax
comp=Z,54nm,1.4s
APA MLR MLR
comp=Z,2μm,27.0s,MS5.7
RCBR Riachuelo 130.51 118 PFAKE 21 38 30.0 +6.4
RCBR LR LR
comp=Z,3μm,19.0s,MS6.0
TRO Tromso 130.59 354 *e*PP PP 21 40 35.1 -1.9
TRO *e*SS SS 21 58 02.9 +0.8
TRO AMS AMS 22 25 09.8
comp=Z,1μm,30.4s,MS5.5
TRO Tromso 130.59 354 *e*PKIKP PKPdf 21 38 21.4 -0.7
TRO MLR MLR
comp=Z,1μm,30.4s,MS5.5
LBTB Lobatse 130.91 203 *e*PKIKP PKPdf 21 38 24.2 +0.1
LBTB *e* 21 38 35.7
LBTB MLR MLR
comp=Z,3μm,20.0s,MS6.0
LBTB Lobatse 130.91 203 *e*PKPdf PKPdf 21 38 24.2 +0.1
LBTB *e* 21 38 35.7
LBTB LR LR
comp=Z,3μm,20.0s,MS6.0
LBTB Lobatse 130.91 203 ⇓*i*P PKPdf 21 38 24.2 0.0
LBTB AMS AMS 22 32 32.5
comp=Z,3μm,19.7s,MS6.0
BORG Borgarnes 132.30 16 PKP PKPdf 21 38 25.3 -0.1
comp=Z,12nm,0.9s,baz=290,slow=3.1,SNR=4.3
BORG Borgarnes 132.30 16 PKP PKPdf 21 38 25.3 -0.1
BORG LR LR
comp=Z,2μm,20.0s,MS5.7
BSY Bisya 133.25 282 ⇑P PKPdf 21 38 28.2 -0.3
SNR=5.5
JOF Joensuu 134.67 344 *e*PKIKP PKPdf 21 38 27.5 -2.4
JOF pmax pmax
comp=Z,25nm,0.9s
JOF Joensuu 134.67 344 *e*p PKPdf 21 38 27.5 -2.4
comp=Z,25nm,0.9s
JOF Joensuu 134.67 344 *e*p PKPdf 21 38 27.5 -2.4
comp=Z,25nm,0.9s
NSS Namsos 136.14 357 *e*PP PP 21 41 03.4 -9.0
KAF Kangasniemi 136.54 347 *e*PKHKP 21 38 19.9
KAF pmax pmax
comp=Z,11nm,0.8s
KAF Kangasniemi 136.54 347 *e*p 21 38 19.9
comp=Z,11nm,0.8s
KAF Kangasniemi 136.54 347 *e*p 21 38 19.9
comp=Z,11nm,0.8s
FINES FINESS Array B 137.19 346 PKhKP 21 38 24.0
comp=Z,3.7nm,0.8s,baz=107,slow=2.0,SNR=7.4
FINES PKP PKPdf 21 38 34.4 -0.3
comp=Z,12nm,0.7s,baz=48,slow=2.1,SNR=16
FINES FINESS Array B 137.19 346 PKP 21 38 24.0
FINES PKP PKPdf 21 38 34.4 -0.3
PUL Pulkovo 137.58 343 ⇑*i*PKIKP PKPdf 21 38 36.8 +1.4
PUL pmax pmax
comp=Z,47nm,0.4s
PUL Pulkovo 137.58 343 ⇑*i*PKP PKPdf 21 38 36.9 +1.5
MOS Moscow 138.16 334 *e*PKIKP PKPdf 21 38 33.1 -3.5
MOS *e* 21 38 44.7
MOS pmax pmax
comp=Z,500μm,4.0s
MOS MLR MLR
comp=Z,1μm,21.0s,MS5.6
LSZ Lusaka 138.41 212 *e*PKIKP PKPdf 21 38 37.7 -0.7
LSZ *e* 21 41 30.7
LSZ MLR MLR
comp=Z,3μm,21.0s,MS6.1
TSUM Tsumeb 138.86 196 *e*PKPdf PKPdf 21 38 40.0 +0.8
OBN Obninsk 139.02 334 *c i*PKIKP PKPdf 21 38 37.0 -1.2
OBN *i* 21 41 30.7
OBN *i* SS SS 21 59 43.7 -0.4
OBN pmax pmax
comp=Z,46nm,1.6s
OBN MLR MLR
comp=Z,900nm,21.0s,MS5.5
FOO Floro 139.21 1 *e*P PKPdf 21 38 28.3 -10
FOO *e*PP PP 21 41 31.4 0.0
FOO *e*SS SS 21 59 46.7 +1.2
MAK Makhachkala 139.43 312 *e*PKIKP PKPdf 21 38 37.7 -1.7
MAK *e* 21 41 38.0
MAK *e* 21 45 45.7
NOA NORSAR Array B 139.66 357 PKhKP 21 38 28.6
comp=Z,9.9nm,0.8s,baz=16,slow=4.5,SNR=26
NOA PKP PKPdf 21 38 38.0 -1.2
comp=Z,2.2nm,0.8s,baz=18,slow=2.6,SNR=8.5
NAO01 NORSAR Array S 139.87 357 PFAKE 21 38 50.0 +10
NAO01 LR LR
comp=Z,1μm,19.0s,MS5.6
BER Bergen 140.43 1 *e*P 21 38 31.8
BER *e*PP PP 21 41 38.7 -0.2
BER *e*SS SS 22 00 01.9 +2.0
BER AMS AMS 22 40 45.9
comp=Z,1μm,17.4s,MS5.7
VSR Storozhevoye 140.43 328 *e*PKHKP 21 38 32.4
VSR *e*SS SS 21 59 58.6 -2.4
VSR pmax pmax
comp=N,90nm,3.8s
VSR pmax pmax
comp=Z,320nm,3.8s
VSR pmax pmax
comp=E,20nm,0.9s
VORD Divnogorie 140.52 328 *e*PKHKP 21 38 32.3
VORD *e* 21 41 36.7
VORD *e*PPP 21 44 44.4
VORD pmax pmax
comp=E,2.0nm,4.2s

VORD pmax pmax
comp=Z,5.0nm,4.2s
VORD pmax pmax
comp=N,1.0nm,0.8s
VORD pmax pmax
comp=Z,6.0nm,4.5s
VORD pmax pmax
comp=N,1.0nm,0.9s
VORD pmax pmax
comp=E,1.0nm,0.7s
VORD MLR MLR
comp=N,10.0nm,24.0s
VORD MLR MLR
comp=E,20nm,24.0s
VORD MLR MLR
comp=Z,40nm,24.0s
KONO Kongsberg 141.12 358 *e*P PKPdf 21 38 34.3 -7.6
KONO *e*PP PP 21 41 41.6 -1.5
KONO *e*SS SS 22 00 09.1 +1.2
KONO AMS AMS 22 32 07.1
comp=Z,1µm,23.6s,MS5.6
DGRG David-gareji 141.43 311 P 21 38 33.0
SHEL Horse Pasture 141.49 161 PFAKE 21 39 00.0 +16
SHEL LR LR
comp=Z,2µm,21.0s,MS5.8
MTA Mtatsminda 141.75 312 P 21 38 33.9
TBLG Delisi 141.78 312 P 21 38 34.1
ZEI Tsey 141.96 314 *e*PKHKP 21 38 38.3
ZEI pmax pmax
comp=Z,21nm,0.9s
GOR Gori 142.12 312 P 21 38 34.9
RDF Al-Radifah 142.21 291 *e*P PKPdf 21 38 38.6 -6.3
RDF AMb AMB 21 38 48.2
comp=Z,121nm,1.1s
KIV Kislovodsk 142.27 316 *e*PKHKP 21 38 38.9
KIV *i* 21 38 44.3
KIV *e* 21 41 48.5
KIV *e* 21 45 47.7
KIV *e*SS SS 22 00 21.3 -1.8
KIV *e*SSS 22 05 40.7
KIV pmax pmax
comp=Z,13nm,1.1s
KIV Kislovodsk 142.27 316 *e*PKPdf PKPdf 21 38 45.0 +0.5
KIV LR LR
comp=Z,2µm,21.0s,MS5.8
KIV Kislovodsk 142.27 316 ⇓P 21 38 37.9
SNR=8.0
KIV ⇓P 21 38 37.9
SNR=8.0
KAC Achnashellach 142.29 11 *e*P PKPdf 21 38 38.6 -5.5
KAC Achnashellach 142.29 11 P PKPdf 21 38 38.6 -5.5
GNI Garni 142.33 309 PKhKP 21 38 40.3
comp=Z,4.3nm,0.6s,baz=34,slow=5.3,SNR=11
GNI Garni 142.33 309 *o i* PKIKP 21 38 41.1
GNI Garni 142.33 309 PKPdf 21 38 41.2
GNI LR LR
comp=Z,1µm,22.0s,MS5.6
GNI Garni 142.33 309 ⇑P 21 38 37.9
SNR=10
GNI ⇑P 21 38 37.9
SNR=10
ONI Oni 142.33 314 P PKPdf 21 38 37.9 -6.8
MIB Mutribah 142.34 292 *e*P PKPdf 21 38 39.0 -6.0
MIB AMb AMB 21 38 48.6
comp=Z,94nm,0.9s
NAY Al-Naaiem 142.46 291 *e*P PKPdf 21 38 38.8 -6.5
NAY AMb AMB 21 38 48.1
comp=Z,37nm,1.3s
MCD Coleburn Disti 142.53 9 *e*P PKPdf 21 38 38.1 -6.4
MCD Coleburn Disti 142.53 9 P PKPdf 21 38 38.1 -6.4
MICGM Minsk 142.70 340 *e* 21 38 37.0
NACGM Naroch 142.72 341 *e*PKHK 21 38 36.0
MNK Minsk 142.72 340 *e*PKHKP 21 38 37.0
KAR1 Arisaig 142.74 11 *e*P PKPdf 21 38 40.3 -4.6
KAR1 Arisaig 142.74 11 P PKPdf 21 38 40.3 -4.6
MME1 Meikle Cairn 142.83 9 *e*P PKPdf 21 38 39.4 -5.6
MME1 Meikle Cairn 142.83 9 P PKPdf 21 38 39.4 -5.6
KMBO Kilima Mbogo 143.02 238 PKhKP 21 38 43.4
comp=Z,9.8nm,0.8s,baz=0.6,slow=24,SNR=19
KMBO Kilima Mbogo 143.02 238 PKIKP 21 38 43.4
KMBO pmax pmax
comp=Z,10.0nm,0.8s
KMBO Kilima Mbogo 143.02 238 *e*PKPdf 21 38 43.5
KMBO LR LR
comp=Z,1µm,20.0s,MS5.7
DIGO Kars 143.22 310 *i* P PKPdf 21 38 46.0 -0.3
CLDR Caldiran 143.26 308 *e*P PKPdf 21 38 41.1 -5.3
DYDN Diyadin 143.29 309 *i* P PKPdf 21 38 43.8 -2.6
KARS Kars 143.35 311 *e*P PKPdf 21 38 41.8 -4.7
EAB Aberfoyle 143.70 10⇑*e*P PKPdf 21 38 42.8 -3.8
EAB *e* 21 38 56.1
EAB Aberfoyle 143.70 10 P PKPdf 21 38 42.8 -3.8
EAB 21 38 56.1
EBH Black Hill 143.78 10⇑*e*P PKPdf 21 38 43.5 -3.2
EBH *e* 21 38 56.2
EBH Black Hill 143.78 10 P PKPdf 21 38 43.5 -3.2
EBH 21 38 56.2
AGRB Hanur-Agry 143.79 309 *e*P PKPdf 21 38 45.4 -1.9
VANB Van 143.82 308 *e*P PKPdf 21 38 43.2 -4.2
TVAN Van 143.83 307 *i* P PKPdf 21 38 48.2 +0.8
HKR Hakkari 143.87 306 *e*P PKPdf 21 38 45.1 -2.4
ARTV Artvin 143.94 312 *i* P PKPdf 21 38 43.8 -3.7
TUTA Tutak 143.98 309 *i* P PKPdf 21 38 47.1 -0.5
PGBU Glenifferbraes 144.03 11⇑*e*P PKPdf 21 38 44.1 -3.1
PGBU Glenifferbraes 144.03 11 P PKPdf 21 38 44.1 -3.1
BCA Borcka 144.04 313 *e*P PKPdf 21 38 45.4 -2.3
CUKT Cukurca 144.07 305 *e*P PKPdf 21 38 45.4 -2.5
EDI Edinburgh 144.14 10⇑*e*P PKPdf 21 38 44.4 -3.0
EDI Edinburgh 144.14 10 P PKPdf 21 38 44.4 -3.0
EAU Auchinoon 144.18 10⇑*e*P PKPdf 21 38 45.0 -2.4
EAU *e* 21 38 57.8
EAU Auchinoon 144.18 10 P PKPdf 21 38 45.0 -2.4
EAU 21 38 57.8
DDEM Demirkent 144.18 312 *i* P PKPdf 21 38 46.0 -1.9
ESY Stoneypath 144.23 9⇑*e*P PKPdf 21 38 44.8 -2.7
ESY *e* 21 38 56.0
ESY Stoneypath 144.23 9 P PKPdf 21 38 44.8 -2.7
ESY 21 38 56.0
EBL Broad Law 144.31 9⇑*e*P PKPdf 21 38 45.3 -2.4
EBL *e* 21 38 58.0
EBL Broad Law 144.31 9 P PKPdf 21 38 45.3 -2.4
EBL 21 38 58.0
MUD Monsted U'grnd 144.33 358⇑*i* P PKPdf 21 38 45.3 -2.4
comp=Z,163nm,1.0s
MUD *i* 21 38 59.8
MUD
comp=Z,1µm,20.0s
SOC Sochi 144.35 317 *c i* PKIKP PKPdf 21 38 45.8 -2.3
SOC *e* 21 38 55.8
SOC *e* 21 41 57.9
SOC *e*SSS 22 06 07.9
SOC pmax pmax
comp=Z,59nm,0.9s
SOC MLR MLR
comp=Z,1µm,21.0s,MS5.7
HOMI Horasan 144.40 311 *i* P PKPdf 21 38 47.1 -1.2
BHD Baghdad 144.40 298 *i* PKP 21 38 36.5
BHD *i* SKS SKKSac 21 48 35.0 -19
SUW Suwalki 144.53 343 *i* PKPdfc PKPdf 21 38 45.8 -2.3
SUW *e* 21 39 00.3
SUW *e*SS SS 22 00 48.8 +1.2
SUW Suwalki 144.53 343 *e*PKPdf PKPdf 21 38 46.5 -1.6
SUW *e* 21 38 59.0
PZAR Pazar-Rize 144.65 313 *e*P PKPdf 21 38 47.3 -1.4
EKA Eskdalemuir Ar 144.71 10 PKP PKPdf 21 38 46.4 -2.0
comp=Z,78nm,0.8s,baz=336,slow=3.3,SNR=119
EKA pPKP pPKPdf 21 38 59.1 -1.4
comp=Z,62nm,1.0s,baz=335,slow=3.7,SNR=11
ESK Eskdalemuir 144.72 10⇑*e*P PKPdf 21 38 46.1 -2.3
ESK *e* 21 38 58.1
ESK AMS AMS 22 44 29.1
comp=Z,2µm,22.2s,MS5.8
ESK Eskdalemuir 144.72 10 P PKPdf 21 38 46.1 -2.3
ESK 21 38 58.1
ESK AMS AMS 22 44 29.1
comp=Z,2µm,22.2s
ESK Eskdalemuir 144.72 10 *i* PKIKP PKPdf 21 38 46.6 -1.8
ESK Eskdalemuir 144.72 10 *e*PKPdf PKPdf 21 38 46.7 -1.7
ESK *e* 21 39 01.0
ESK LR LR
comp=Z,2µm,21.0s,MS5.9
EZM Erzurum 144.84 311 *e*P PKPdf 21 38 49.0 -0.1
ECK Cauldkaine Hil 144.87 10⇑*e*P PKPdf 21 38 46.0 -2.7
ECK Cauldkaine Hil 144.87 10 P PKPdf 21 38 46.0 -2.7
COP Copenhagen 144.89 354⇑*i* P PKPdf 21 38 46.8 -1.9
comp=Z,73nm,0.9s
COP *i* 21 39 00.9
COP
comp=Z,720nm,21.0s
GAL1 Galloway 144.89 11⇑*e*P PKPdf 21 38 47.0 -1.7
GAL1 *e* 21 38 59.0
GAL1 AMS AMS 22 44 05.1
comp=Z,2µm,16.4s,MS6.0
GAL1 Galloway 144.89 11 P PKPdf 21 38 47.0 -1.7
GAL1 21 38 59.0
GAL1 AMS AMS 22 44 05.1
comp=Z,2µm,16.4s
GCD Castle Douglas 145.03 11⇑*e*P PKPbc 21 38 47.3 -1.0
GCD *e* 21 39 00.2
GCD Castle Douglas 145.03 11 P PKPbc 21 38 47.3 -1.0
GCD 21 39 00.2
ANN Anapa 145.12 320 *i* PKIKP PKPdf 21 38 47.6 -1.8
ANN *e* 21 39 02.4
ANN *e* 21 42 08.4
ANN pmax pmax
comp=Z,510nm,1.0s
ANN MLR MLR
comp=N,1µm,22.0s,MS5.9
ANN MLR MLR
comp=E,2µm,22.0s,MS5.9
ANN MLR MLR
comp=Z,1µm,22.0s,MS5.6
BSD Bornholm Skovb 145.17 352⇑*i* P PKPbc 21 38 47.5 -1.3
comp=Z,206nm,0.9s
BSD *i* 21 39 00.7
BSD
comp=Z,970nm,18.0s
GMM Mts of Mourne 145.24 13⇑*e*P PKPbc 21 38 48.0 -1.0
GMM *e* 21 39 01.1
GMM Mts of Mourne 145.24 13 P PKPbc 21 38 48.0 -1.0
GMM 21 39 01.1
AKASG Malin Array Be 145.28 335 PKPbc PKPbc 21 38 48.0 -1.4
comp=Z,143nm,0.8s,baz=38,slow=4.3,SNR=241
AKASG pPKPbc pPKPbc 21 39 01.1 -0.2
comp=Z,169nm,1.0s,baz=40,slow=4.1,SNR=12
AKBB Malin Array Si 145.28 335 *e*PKIKP PKPdf 21 38 48.6 -0.9
AKBB *e* 21 39 01.0
KIEV Kiev 145.29 335 *e*PKIKP PKPdf 21 38 48.8 -0.7
KIEV MLR MLR
comp=Z,1µm,20.0s,MS5.7
XAL Allendale 145.31 9⇑*e*P PKPbc 21 38 47.7 -1.5
XAL *e* 21 39 01.2
XAL Allendale 145.31 9 P PKPbc 21 38 47.7 -1.5
XAL 21 39 01.2
DMUB Kingscourt 145.34 14 *e*P PKPbc 21 38 49.9 +0.5
BNGL BINGOL 145.34 309 *i* P PKPbc 21 38 50.4 +0.5
BTMT Batman 145.37 308 *e*P PKPbc 21 38 50.9 +0.9
KOPT Kop Dagi 145.40 311 *i* P PKPbc 21 38 49.3 -0.8
XDE Dent Fell 145.45 10⇑*e*P PKPdf 21 38 48.3 -1.4
XDE Dent Fell 145.45 10 P PKPdf 21 38 48.3 -1.4
GIM North Isle of 145.48 12⇑*e*P PKPdf 21 38 48.7 -1.0
GIM North Isle of 145.48 12 P PKPdf 21 38 48.7 -1.0
KTUT Trabzon 145.51 313 *e*P PKPdf 21 38 48.9 -1.3
MACK Trabzon 145.53 313 *i* P PKPdf 21 38 46.0 -4.3
BINT Bingol 145.85 309 *e*P PKPdf 21 38 54.3 +3.5
GUMT Gumushane 145.93 313 *e*P PKPdf 21 38 52.9 +1.9
DSB Dublin 146.07 14 *e*PKPdf PKPdf 21 38 51.1 +0.3
MARD Mardin 146.19 307 *i* P PKPdf 21 38 50.4 -1.1
ESPY Espiye-Giresun 146.24 314 *e*P PKPdf 21 38 49.6 -1.9
WNDE Wendo Genet 146.25 251 *e*P PKPdf 21 38 54.0 +1.7
HPK Haverah Park 146.28 9⇑*e*P PKPdf 21 38 51.4 +0.3
HPK *e* 21 39 04.1
HPK AMS AMS 22 46 10.8
comp=Z,2µm,18.7s,MS6.0
HPK Haverah Park 146.28 9 P PKPdf 21 38 51.4 +0.3
HPK 21 39 04.1
HPK AMS AMS 22 46 10.8
comp=Z,2µm,18.7s
EZC Erzincan 146.32 311 *e*P PKPdf 21 38 52.0 +0.4
DIYA Diyarbakir 146.47 308 *i* P PKPdf 21 38 52.6 +0.6
GRSN GIRESUNGRSN 146.55 314 *i* P PKPdf 21 38 51.5 -0.5
GKP Gorka Klasztor 146.58 349 *e*PKPdf PKPdf 21 38 51.3 -0.3
GKP *e* 21 39 06.9
PTK Pertek 146.64 310 *e*P PKPdf 21 38 52.7 +0.5
LHO Holmfirth 146.64 9⇑*e*P PKPdf 21 38 51.8 0.0
LHO Holmfirth 146.64 9 P PKPdf 21 38 51.8 0.0
WAR Warsaw 146.69 344 *e*PKPdf PKPdf 21 38 53.8 +1.9
WAR *e* 21 39 08.0
BSEG Bad Segeberg 146.79 356 *e*PKPdf PKPdf 21 38 51.2 -0.8
BSEG *e*PKPbc PKPbc 21 38 53.6 -0.2
BSEG *e*pPKPbc pPKPbc 21 39 06.7 +0.9
SVRC Sivrice-ELAZID 146.90 309 *e*P PKPdf 21 38 51.0 -1.6
SIM Simferopol' 146.96 323 *c i* PKP2 PKPbc 21 38 53.4 -1.1
SIM pmax pmax
comp=Z,155nm,0.8s
SIM pmax pmax
comp=Z,800nm,9.5s
KBI1 Birley Grange 146.97 9⇑*e*P PKPdf 21 38 52.3 0.0
KBI1 Birley Grange 146.97 9 P PKPdf 21 38 52.3 0.0
DESE Dese 146.98 258 *e*P PKPdf 21 38 54.9 +1.4
STNC Stoke 147.03 10 *e*P PKPdf 21 38 53.2 +0.8
STNC Stoke 147.03 10 P PKPdf 21 38 53.2 +0.8
ELZG Elazig 147.08 310 *i* P PKPdf 21 38 53.7 +0.7
KEMA Kemaliye 147.12 311 *i* P PKPdf 21 38 49.3 -3.7
CMLA Cha da Macela 147.40 52 *e*PKP2 PKPbc 21 38 55.1 -0.9
CMLA MLR MLR
comp=Z,3µm,20.0s,MS6.0
CMLA Cha da Macela 147.40 52 *e*PKPbc PKPbc 21 38 55.1 -1.0
CMLA LR LR
comp=Z,3µm,20.0s,MS6.0
HLM1 Long Mynd 147.47 11 *e*P PKPdf 21 38 52.4 -0.8
HLM1 Long Mynd 147.47 11 P PKPdf 21 38 52.4 -0.8
CWF Charnwood Fore 147.51 9⇑*e*P PKPdf 21 38 52.9 -0.3
CWF *e* 21 39 07.7
CWF Charnwood Fore 147.51 9 P PKPdf 21 38 52.9 -0.3
CWF 21 39 07.7
MYA Malataya 147.56 310 *e*P PKPdf 21 38 57.3 +3.5
URFA Urfa 147.61 308 *e*P PKPdf 21 38 53.5 -0.4
ERBA Erbaa 147.68 315 *i* P PKPdf 21 38 50.4 -3.5
DARE Darende-Malaty 147.74 311 *e*P PKPdf 21 38 54.6 +0.5
SCER sogukcermik 147.81 313 *i* P PKPdf 21 38 53.7 -0.5
HTR Trewern Hill 147.81 12 *e*P PKPdf 21 38 51.2 -2.5
HTR Trewern Hill 147.81 12 P PKPdf 21 38 51.2 -2.5
SVSK Karacayir 147.88 313 *e*P PKPdf 21 38 53.9 -0.4
RUE Ruedersdorf 147.89 352 *e*PKPbc PKPbc 21 38 56.3 -0.6
LVV L'vov 147.93 339 *e*PKP2 PKPbc 21 38 56.7 -0.3
LVV MLR MLR
comp=Z,1µm,24.0s,MS5.7
LVV MLR MLR
comp=N,1µm,21.0s
AKCD Akcadag 147.93 310 *i* P PKPdf 21 38 53.6 -0.8
KVT Kavak 147.95 316 *e*P PKPdf 21 38 52.5 -1.9
ATAB Bozova 147.98 308 *i* P PKPdf 21 38 54.8 +0.2
WIT Witteveen 148.03 0 *e*PKP PKPdf 21 38 52.1 -2.0
comp=N,909nm,1.4s
WIT Witteveen 148.03 0 *ex* pPKPdf 21 39 10.0 +3.8
DIKM Dikmen 148.16 317 *e*P PKPdf 21 38 53.2 -1.5
NRDL Niedersach Rie 148.24 356 *e*PKPdf PKPdf 21 38 53.3 -1.1
NRDL *e*PKPbc PKPbc 21 38 57.3 -0.5
NRDL *e*pPKPbc pPKPbc 21 39 10.3 +0.5
KIS Kishinev 148.27 331⇑*i* PKIKP PKPdf 21 38 52.0 -2.7
KIS M 21 38 57.0
comp=N,2µm,3.0s
KIS *e*SKS SKSdf 21 45 48.0 -12
KIS LRM 22 43 50.0
comp=N,3µm,22.0s
KIS Kishinev 148.27 331α *i* PKHKP PKPdf 21 38 52.0 -2.7
KIS *e* 21 45 48.0
KIS pmax pmax
comp=Z,2µm,3.0s
KIS pmax pmax
comp=Z,2µm,6.0s
KIS MLR MLR
comp=Z,3µm,22.0s,MS6.0
KIS MLR MLR
comp=N,2µm,20.0s,MS5.9
KIS MLR MLR
comp=E,2µm,20.0s,MS5.9
KIS MLR MLR
comp=Z,29µm,22.0s
KIS Kishinev 148.27 331 P PKPbc 21 38 57.9 -0.1
HGH Gray Hill 148.32 11 *e*P PKPdf 21 38 54.2 -0.4
HGH Gray Hill 148.32 11 P PKPdf 21 38 54.2 -0.4
IBBN Ibbenburen 148.53 359 *e*PKPdf PKPdf 21 38 54.2 -0.7
IBBN *e*PKPbc PKPbc 21 38 58.2 -0.3
IBBN *e*PKPab PKPab 21 39 02.3 +0.3
IBBN *e*pPKPbc pPKPbc 21 39 11.3 +0.7
KWP Kalwaria Pacla 148.53 340 *e*PKPdf PKPdf 21 38 54.4 -0.6
KWP *e*PKPab PKPbc 21 38 58.4 -0.2
KWP *e* 21 39 13.3
KWP *e*SS SS 22 01 33.6 +0.5
KWP Kalwaria Pacla 148.53 340 *e*PKP2 PKPbc 21 38 58.4 -0.2
KWP *e*SS SS 22 01 33.6 +0.5
KWP Kalwaria Pacla 148.53 340 *e*PKPdf PKPdf 21 38 54.0 -1.0
KWP *e*PKPbc PKPbc 21 38 58.6 0.0
KWP PKPab PKPab 21 39 02.3 +0.2
KWP LR LR
comp=Z,1µm,20.0s,MS5.8
KWP Kalwaria Pacla 148.53 340⇓*i* P PKPdf 21 38 54.5 -0.5
BYBT Boyabat 148.57 317 *e*P PKPdf 21 38 58.9 +3.6
HTL Hartland 148.59 14 AMS AMS 22 42 01.6
comp=Z,3µm,21.2s,MS6.1
HEX Exmoor 148.67 13 *e*P PKPdf 21 38 53.7 -1.5
HEX Exmoor 148.67 13 P PKPdf 21 38 53.7 -1.5
IAS Iasi 148.69 332 PKP2 PKPbc 21 38 59.2 +0.1
IAS Iasi 148.69 332⇓P PKPdf 21 38 57.2 +1.8
IAS P 21 38 59.2
IAS Iasi 148.69 332⇓*i* P PKPdf 21 38 57.2 +1.9
PINB Pinarbasi 148.85 311 *i* P PKPdf 21 38 55.8 0.0
OJC Ojcow 148.85 344 *e*PKPdf PKPdf 21 38 52.8 -2.7
OJC *e*PKPab PKPbc 21 38 58.6 -0.8
OJC *e*pPKPdf pPKPdf 21 39 07.6 0.0
OJC *e*sPKPab 21 39 19.9
OJC *e*PP PP 21 42 24.8 -4.6
OJC *e*SS SS 22 01 33.8 -2.8
OJC L 22 55 14.2
comp=Z,1.9nm,20.3s
OJC Ojcow 148.85 344 *e*PKP2 PKPbc 21 38 58.6 -0.8
OJC *e* 21 42 24.8
OJC *e*SS SS 22 01 33.8 -2.8
OJC MLR MLR
comp=Z,2µm,20.3s,MS5.9
CLZ Clausthal 148.87 356 *e*PKPdf PKPdf 21 38 54.8 -0.7
CLZ *e*PKPbc PKPbc 21 38 59.1 -0.3
CLZ *e*PKPab PKPab 21 39 04.0 +0.6
CLZ *e*pPKPbc pPKPbc 21 39 11.8 +0.3
WTSB Winterswijk 148.88 360 *e*PKP PKPdf 21 38 54.4 -1.1
comp=Z,242nm,2.5s
WTSB Winterswijk 148.88 360 *ex* pPKPbc 21 39 11.8 +0.3
GAZ Gaziantep 148.90 308 *e*P PKPdf 21 38 53.9 -2.1
WOL Wolverton 148.91 10 *e*P PKPbc 21 38 58.4 -1.1
WOL Wolverton 148.91 10 P PKPbc 21 38 58.4 -1.1
LEOM Leova 148.93 331 PKP2 PKPbc 21 38 59.8 0.0
LEOM Leova 148.93 331⇑*i* P PKPbc 21 38 59.5 -0.3
KMRS Kahramanmaras 148.99 309 *e*P PKPdf 21 38 51.8 -4.4
KSP Ksiaz 149.07 348 *e*PKPdf PKPdf 21 38 55.6 -0.2
KSP *e*PKPab PKPbc 21 39 00.0 +0.1
KSP *e* 21 39 14.4
KSP Ksiaz 149.07 348 *i* PKP2 PKPbc 21 38 59.7 -0.3
KSP *e* 21 42 28.0
KSP *e*SS SS 22 01 34.0 -4.8
KSP *e*SSS 22 07 16.0
KSP MLR MLR
comp=Z,4µm,26.2s,MS6.1
CLL Collm 149.14 352 *e*PKPdf PKPdf 21 38 54.9 -1.0
CLL *e*PKPbc PKPbc 21 38 59.5 -0.6
CLL *e*pPKPbc pPKPbc 21 39 12.6 +0.4
CLL Collm 149.14 352⇑*e*PKIKP PKPdf 21 38 55.0 -0.9
CLL *i* 21 38 59.8
CLL *e* 21 39 04.0
CLL pmax pmax
comp=Z,99nm,0.9s
CLL MLR MLR
comp=Z,2µm,21.0s,MS5.8
CLL Collm 149.14 352 *e*PKPdf PKPdf 21 38 55.0 -0.9
CLL ⇑*i*PKPbc PKPbc 21 38 59.8 -0.3
comp=Z,99nm,0.9s
CLL *e*PKPlp 21 39 00.0
comp=Z,2µm,23.5s
CLL *e*PKPab PKPab 21 39 04.0 -0.5
comp=Z,55nm,0.9s
CLL *i* pPKPbc pPKPbc 21 39 12.9 +0.7
CLL *i* pPKPab pPKPab 21 39 16.9 +0.6
CLL *i* 21 39 37.9
CLL *e* 21 40 21.0
CLL *e*PP PP 21 42 24.0 -6.9
comp=Z,700nm,23.9s
CLL *e*PPP 21 45 46.0
CLL *e*SKKSac SKKSac 21 49 30.0 +10
CLL *e* 21 50 10.0
CLL *e*PSKS 21 52 45.0
CLL *e*PPS 21 55 21.0
CLL *e*SS SS 22 01 29.0 -11
CLL *e* 22 03 18.0
CLL *e* 22 06 06.0
CLL *e*SSS 22 07 32.0
CLL *e*SSSS 22 11 26.0
CLL *e* 22 15 30.0
CLL Lm 22 52 00.0
comp=N,700nm,20.8s
CLL Lm 22 52 00.0
comp=E,2µm,21.6s
CLL Lm 22 52 00.0
comp=Z,2µm,21.0s
KUZU Kuzuini 149.15 308 *i* P PKPdf 21 38 53.7 -2.8
STHS Stebnicka Huta 149.17 341 *e*PKHKP PKPdf 21 38 56.6 +0.6
STHS *e* 21 39 00.7
STHS Stebnicka Huta 149.17 341 *e*PKP PKPdf 21 38 56.6 +0.6
STHS *e* 21 39 00.7
STHS *e* 21 39 05.9
STHS *e* 21 39 14.4
STHS Stebnicka Huta 149.17 341 *e*PKP PKPdf 21 38 56.6 +0.6
STHS *e* 21 39 00.6
STHS *e* 21 39 05.9
STHS *e* 21 39 14.4
DYA Yadsworthy 149.24 13 AMS AMS 22 37 34.8
comp=Z,3µm,23.4s,MS5.9
TOS Tosya 149.28 317 *e*P PKPbc 21 39 00.7 -0.1
BUR08 Bucovina Ar. S 149.31 335 *e*PKPdf PKPdf 21 38 56.3 -0.1
BUR08 *e*PKPbc PKPbc 21 39 01.1 +0.4
BUR01 Bucovina Ar. S 149.33 335 P PKPbc 21 39 01.5 +0.8
BURAR Bucovina Array 149.33 335⇓PKHKP PKPdf 21 38 56.0 -0.4
BURAR 21 39 01.2
BURAR Bucovina Array 149.33 335⇓*i* P PKPdf 21 38 56.0 -0.4
CORM Corum 149.34 315 *e*P PKPdf 21 38 54.6 -2.0
RAC Raciborz 149.38 345 *e*PKHKP PKPdf 21 38 56.0 -0.4
BALT Daday 149.40 319 *i* P PKPdf 21 38 58.0 +1.4
BUG Bochum--Univer 149.40 359 *e*PKPdf PKPdf 21 38 55.4 -0.9
BUG *e*PKPbc PKPbc 21 39 00.5 -0.3
BRG Berggiesshubel 149.44 351 *e*PKPdf PKPdf 21 38 55.5 -0.9
BRG *e*PKPbc PKPbc 21 39 00.8 -0.1
BRG *e*pPKPbc pPKPbc 21 39 13.3 +0.3
BRG Berggiesshubel 149.44 351 *i* PKP PKPdf 21 38 56.7 +0.2
comp=Z,28nm,1.4s
BRG *i* 21 39 00.8
comp=Z,82nm,0.9s
BRG *i* 21 39 02.7
comp=Z,44nm,2.0s
BRG *e* 21 42 30.0
BRG *i* 21 42 31.0
comp=Z,11nm,1.0s
BRG *e* 21 52 48.0
BRG *e* 21 55 25.0
BRG SS SS 22 01 41.0 -1.9
BRG
comp=N,2µm,24.2s
BRG
comp=E,1µm,24.7s
BRG
comp=Z,2µm,23.2s
NIE Niedzica 149.44 342 *e*PKPdf PKPdf 21 38 56.1 -0.4
NIE *e*PKPab PKPbc 21 39 01.6 +0.7
UPC Upice 149.44 348 *e*PKHKP PKPdf 21 38 55.8 -0.6
UPC *e* 21 39 01.0
UPC Upice 149.44 348 *e*PKPDF PKPdf 21 38 55.8 -0.6
UPC ⇑*e*PKP PKPbc 21 39 01.0 +0.1
UZH Uzhgorod 149.53 339 *i* PKP2 PKPab 21 39 08.0 +1.8
UZH *i* SSS 22 07 19.0
DPC Dobruska-Polom 149.53 348 *e*PKHKP PKPdf 21 38 56.7 +0.1
DPC *e* 21 39 01.4
DPC *e*SS SS 22 01 44.4 +0.4
DPC *e* 22 07 22.9
DPC MLR MLR
comp=Z,2µm,23.7s,MS5.8
DPC Dobruska-Polom 149.53 348 *e*PKPDF PKPdf 21 38 56.7 +0.1
DPC ⇑*e*PKP PKPbc 21 39 01.4 +0.3
DPC *e*PKPAB PKPab 21 39 06.9 +0.8

DPC			*e*SKP		21 42 25.8		
DPC			*e*x	x	21 49 43.1		
DPC			*e*x	x	21 52 46.7		
DPC			*e*SS	SS	22 01 44.4	+0.4	
DPC			*e*x	x	22 07 22.9		
DPC			AMS	AMS	22 44 50.0		
	comp=Z,2µm,23.7s						
CRVS	**Cervenica-Dubn**	**149.56 341**	*e*PKHKP	PKPdf	21 38 56.2	-0.5	
CRVS			*e*		21 39 01.1		
CRVS			*e*		22 01 41.4		
CRVS	**Cervenica-Dubn**	**149.56 341**	*e*PKP	PKPdf	21 38 56.2	-0.5	
CRVS			*e*		21 39 01.1		
CRVS			*e*		21 39 09.2		
CRVS			*e*		22 01 41.4		
CRVS			LR	LR			
	comp=Z,2µm,27.2s,MS5.8						
CRVS	**Cervenica-Dubn**	**149.56 341**	*e*PKP	PKPdf	21 38 56.2	-0.5	
CRVS			*e*		21 39 01.1		
CRVS			*e*		21 39 09.2		
CRVS			*e*SS	SS	22 01 41.4	-3.2	
TLCR		**149.60 328**	⇑PKP2	PKPbc	21 39 01.4	-0.1	
TLCR		**149.60 328**	⇑*i*P	PKPbc	21 39 01.4	-0.1	
OKC	**Ostrava-Krasne**	**149.62 345**	*e*PKHKP	PKPdf	21 38 56.7	0.0	
OKC			*e*		21 39 01.2		
OKC			*e*SS	SS	22 01 46.5	+1.4	
OKC			*e*		22 07 22.4		
OKC			MLR	MLR			
	comp=Z,2µm,22.6s,MS5.9						
OKC	**Ostrava-Krasne**	**149.62 345**	*e*PKPDF	PKPdf	21 38 56.7	0.0	
OKC			⇑*e*PKP	PKPbc	21 39 01.2	-0.2	
OKC			*e*PKPAB	PKPab	21 39 06.9	+0.4	
OKC			*e*PP	PP	21 42 27.6	-6.2	
OKC			*e*x	x	21 52 45.9		
OKC			*e*SS	SS	22 01 46.5	+1.4	
OKC			*e*x	x	22 07 22.4		
OKC			AMS	AMS	22 40 40.0		
	comp=Z,2µm,22.6s						
PVCC	**Panska Ves**	**149.68 350**	*e*PKHKP	PKPdf	21 38 56.9	+0.1	
PVCC			*e*		21 39 01.6		
PVCC			*e*		21 42 31.9		
PVCC			*e*SS	SS	22 01 43.0	-2.6	
PVCC			*e*		22 07 27.5		
PVCC			MLR	MLR			
	comp=Z,2µm,24.5s,MS5.9						
PVCC	**Panska Ves**	**149.68 350**	*e*PKPDF	PKPdf	21 38 56.9	+0.1	
PVCC			⇑*e*PKP	PKPbc	21 39 01.6	+0.1	
PVCC			*e*PP	PP	21 42 31.9	-2.1	
PVCC			*e*x	x	21 52 45.8		
PVCC			*e*SS	SS	22 01 43.0	-2.6	
PVCC			*e*x	x	22 07 27.5		
PVCC			AMS	AMS	22 41 40.0		
	comp=Z,2µm,24.5s						
CANT	**Cankiri**	**149.77 317**	*e*P	PKPdf	21 38 56.2	-1.1	
KOZT	**Kozan**	**149.78 310**	*e*P	PKPdf	21 38 55.8	-1.6	
CDAG	**Cicekdag**	**149.79 315**	*i*P	PKPdf	21 38 55.8	-1.5	
MORC	**Moravsky Berou**	**149.82 346**	*e*PKHKP	PKPdf	21 38 56.4	-0.7	
MORC			*e*		21 39 02.1		
TRPA	**Tarpa**	**149.88 339**	⇓*i*P	PKPdf	21 38 56.1	-1.1	
UBBA	**Unterbreizbach**	**149.92 356**	*e*PKPdf	PKPdf	21 38 56.5	-0.7	
UBBA			*e*PKPbc	PKPbc	21 39 01.4	-0.7	
UBBA			*e*PKPab	PKPab	21 39 06.9	-0.8	
BMR	**Baia Mare**	**149.94 337**	⇓PKP2	PKPbc	21 39 02.3	+0.1	
BMR	**Baia Mare**	**149.94 337**	⇓*i*P	PKPbc	21 39 02.3	+0.1	
CFR	**Carcaliu**	**149.94 329**	PKP2	PKPbc	21 39 02.4	+0.1	
MOX	**Moxa**	**149.95 354**	*e*PKP	PKPdf	21 38 56.9	-0.3	
MOX			*e*		21 39 01.8		
	comp=Z,283nm,1.9s						
MOX	**Moxa**	**149.95 354**	*e*PKPdf	PKPdf	21 38 56.4	-0.8	
MOX			*e*PKPbc	PKPbc	21 39 01.9	-0.2	
ELDT	**Eldivan**	**149.95 317**	*i*P	PKPbc	21 39 01.3	-1.2	
SAFT	**Safranbolu**	**150.00 319**	*e*P	PKPdf	21 39 01.6	+4.0	
CEYT	**Ceyhan**	**150.03 309**	*e*P	PKPdf	21 38 56.0	-1.8	
BEBN	**Eben Emael**	**150.04 1**	PKPdf	PKPdf	21 38 56.5	-0.9	
BEBN			PKPbc	PKPbc	21 39 01.8	-0.5	
BEBN			PKPab	PKPab	21 39 08.2	0.0	
HGN	**Heimansgroeve**	**150.08 1**	*e*PKP	PKPdf	21 38 56.0	-1.5	
	comp=Z,167nm,2.6s						
HGN	**Heimansgroeve**	**150.08 1**	*e*x	pPKPab	21 39 15.4	-4.8	
HGN	**Heimansgroeve**	**150.08 1**	*e*PP	PP	21 42 41.4	+5.1	
TANN	**Tannenbergstha**	**150.09 353**	*e*PKPdf	PKPdf	21 38 56.5	-1.0	
TANN			*e*PKPbc	PKPbc	21 39 01.9	-0.6	
TANN			*e*PKPab	PKPab	21 39 09.3	+0.9	
TANN			*ep*PKPbc	pPKPbc	21 39 15.4	+0.8	
LIKS	**Likavka**	**150.10 344**	*e*PKIKP	PKPbc	21 39 03.9	+1.3	
LIKS			*e*		21 39 17.0		
LIKS	**Likavka**	**150.10 344**	*e*PKP	PKPbc	21 39 03.9	+1.3	
LIKS			*e*		21 39 17.0		
PRA	**Prague**	**150.14 350**	PKPDF	PKPdf	21 38 57.0	-0.6	
PRA			⇑PKP	PKPbc	21 39 01.0	-1.6	
PRA			PKPAB	PKPab	21 39 07.0	-1.6	
YAYL	**Yayladag**	**150.16 307**	*i*P	PKPdf	21 38 55.8	-2.2	
YURE	**YUREGIR**	**150.19 309**	*i*P	PKPdf	21 38 55.8	-2.2	
PRU	**Pruhonice**	**150.20 350**	*e*PKIKP	PKPdf	21 38 57.7	0.0	
PRU			*e*		21 39 03.1		
PRU			*e*		21 39 11.7		
PRU			*e*		21 42 35.0		
PRU			*e*		21 45 59.4		
PRU			*e*SS	SS	22 01 54.4	+3.0	
PRU			*e*		22 07 35.1		
PRU			MLR	MLR			
	comp=Z,2µm,24.4s,MS5.9						
PRU	**Pruhonice**	**150.20 350**	*e*PKPDF	PKPdf	21 38 57.7	0.0	
PRU			⇑*e*PKP	PKPbc	21 39 03.1	+0.3	
PRU			*e*PKPAB	PKPab	21 39 11.7	+2.8	
PRU			*e*PP	PP	21 42 35.0	-2.1	
PRU			*e*SKS	SKSdf	21 45 59.4	-3.1	
PRU			*e*x	x	21 49 47.4		
PRU			*e*x	x	21 52 54.0		
PRU			*e*SS	SS	22 01 54.4	+3.0	
PRU			*e*x	x	22 07 35.1		
PRU			AMS	AMS	22 45 10.0		
	comp=Z,2µm,24.4s						
BR131	**Keskin Array S**	**150.22 315**	*e*PKPdf	PKPdf	21 38 57.8	-0.3	
BR131			*e*PKPbc	PKPbc	21 39 02.8	-0.4	
BR131			LR	LR			
	comp=Z,1µm,20.0s,MS5.7						
BRTR	**Keskin Array B**	**150.22 315**	PKP	PKPdf	21 38 56.8	-1.3	
	comp=Z,3.0nm,0.8s,baz=68,slow=0.8,SNR=18						
BRTR			PKPbc	PKPbc	21 39 03.0	-0.2	
	comp=Z,60nm,0.8s,baz=76,slow=2.0,SNR=159						
KECS	**Kecovo**	**150.23 341**	*e*PKIKP	PKPdf	21 38 57.9	+0.1	
KECS			*e*		21 39 02.8		
KECS			*e*		21 39 09.8		
KECS	**Kecovo**	**150.23 341**	*e*PKP	PKPdf	21 38 57.9	+0.1	
KECS			*e*		21 39 02.8		
KECS			*e*		21 39 09.8		
KECS			*e*		21 39 15.6		
KECS	**Kecovo**	**150.23 341**	*e*PKP	PKPdf	21 38 57.9	+0.1	
KECS			*e*		21 39 02.8		
KECS			*e*		21 39 09.8		
KECS			*e*		21 39 15.6		
MEM	**Membach**	**150.23 1**	PKPdf	PKPdf	21 38 57.4	-0.3	
MEM			PKPbc	PKPbc	21 39 02.4	-0.5	
NKC	**Novy Kostel**	**150.26 353**	*e*PKIKP	PKPdf	21 38 57.6	-0.2	
NKC			*e*		21 39 02.9		
NKC			*e*		21 39 09.3		
NKC			*e*		21 42 35.2		
NKC			*e*		21 45 59.0		
NKC			*e*SS	SS	22 01 50.2	-1.9	
NKC			*e*		22 07 38.1		
NKC			MLR	MLR			
	comp=Z,2µm,20.6s,MS6.0						
NKC	**Novy Kostel**	**150.26 353**	*e*PKPDF	PKPdf	21 38 57.6	-0.2	
NKC			⇑*e*PKP	PKPbc	21 39 02.9	0.0	
NKC			*e*PKPAB	PKPab	21 39 09.3	+0.2	
NKC			*e*PP	PP	21 42 35.2	-2.2	
NKC			*e*SKS	SKSdf	21 45 59.0	-3.6	
NKC			*e*x	x	21 49 49.7		
NKC			*e*x	x	21 52 46.2		
NKC			*e*SS	SS	22 01 50.2	-1.9	
NKC			*e*x	x	22 07 38.1		
NKC			AMS	AMS	22 50 50.0		
	comp=Z,2µm,20.6s						
SNF	**Seneffe**	**150.28 3**	PKPdf	PKPdf	21 38 58.7	+0.9	
SNF			PKPbc	PKPbc	21 39 02.5	-0.4	
TIRR	**Tirgusor**	**150.32 328**	*e*PKPdf	PKPdf	21 38 58.4	+0.4	
TIRR			*e*PKPbc	PKPbc	21 39 02.6	-0.6	
TIRR			P		21 39 03.4		
TIRR			PKPab	PKPab	21 39 09.7	+0.1	
TIRR	**Tirgusor**	**150.32 328**	⇑*i*P	PKPdf	21 38 57.1	-0.9	
BCLA	**Clavier**	**150.41 2**	PKPdf	PKPdf	21 38 57.0	-0.9	
BCLA			PKPbc	PKPbc	21 39 03.0	-0.3	
BCLA			PKPab	PKPab	21 39 08.8	-0.8	
KARA	**Karaisali**	**150.43 310**	*e*P	PKPdf	21 38 57.6	-0.9	
VRAC	**Vranov**	**150.47 347**	PKP	PKPdf	21 38 57.3	-0.8	
	comp=Z,1.6nm,0.6s,baz=11,slow=1.1,SNR=14						
VRAC			PKPbc	PKPbc	21 39 03.6	+0.2	
	comp=Z,42nm,1.0s,baz=15,slow=1.5,SNR=39						
VRAC			PKPab	PKPab	21 39 10.3	+0.3	
	comp=Z,38nm,0.9s,baz=35,slow=4.3,SNR=15						
VRAC	**Vranov**	**150.47 347**	PKIKP	PKPdf	21 38 57.3	-0.8	
VRAC					21 39 03.6		
VRAC					21 39 10.3		
VRAC			pmax	pmax			
	comp=Z,2.0nm,0.6s						
VRAC	**Vranov**	**150.47 347**	⇑P	PKPdf	21 38 56.8	-1.3	
VRAC			P		21 39 03.4		
VRAC	**Vranov**	**150.47 347**	⇑*i*P	PKPdf	21 38 56.8	-1.3	
TNS	**Taunus Mts**	**150.59 358**	*e*PKPdf	PKPdf	21 38 57.9	-0.4	
TNS			*e*PKPbc	PKPbc	21 39 03.0	-0.7	
TNS			*e*PKPab	PKPab	21 39 10.2	-0.3	
TNS			*ep*PKPbc	pPKPbc	21 39 16.5	+0.7	
TNS			*ep*PKPab	pPKPab	21 39 23.3	+1.0	
SACV	**Santiago Islan**	**150.60 96**	*e*PKPbc	PKPbc	21 39 03.6	-1.2	
SACV			LR	LR			
	comp=Z,2µm,19.0s,MS5.9						
GULE	**Gulek**	**150.62 310**	*i*P	PKPdf	21 39 00.2	+1.5	
BBAL	**Bala**	**150.66 315**	*i*P	PKPdf	21 38 55.8	-2.9	
VYHS	**Vyhne**	**150.69 343**	*e*PKIKP	PKPdf	21 38 57.8	-0.7	
VYHS			*e*		21 39 04.1		
VYHS			*e*		22 01 58.1		
VYHS	**Vyhne**	**150.69 343**	*e*PKP	PKPdf	21 38 57.8	-0.7	
VYHS			*e*		21 39 04.1		
VYHS			*e*		21 39 17.1		
VYHS			*e*		22 01 58.1		
VYHS			LR	LR			
	comp=Z,2µm,24.8s,MS5.7						
VYHS	**Vyhne**	**150.69 343**	*e*PKP	PKPdf	21 38 57.8	-0.7	
VYHS			*e*		21 39 04.1		
VYHS			*e*		21 39 17.1		
VYHS			*e*SS	SS	22 01 58.0	+1.0	
TREC	**Trest**	**150.70 348**	*e*PKIKP	PKPdf	21 38 58.1	-0.4	
TREC			*e*		21 39 03.7		
TREC			*e*		21 39 10.8		
TREC			*e*		21 42 37.1		
TREC			*e*SS	SS	22 01 58.5	+1.5	
TREC			*e*		22 07 40.1		
TREC			MLR	MLR			
	comp=Z,3µm,22.3s,MS6.0						
TREC	**Trest**	**150.70 348**	*e*PKPDF	PKPdf	21 38 58.1	-0.4	
TREC			⇑*e*PKP	PKPbc	21 39 03.7	-0.3	
TREC			*e*PKPAB	PKPab	21 39 10.8	-0.1	
TREC			*e*PP	PP	21 42 37.1	-2.9	
TREC			*e*x	x	21 52 32.1		
TREC			*e*SS	SS	22 01 58.5	+1.5	
TREC			*e*x	x	22 07 40.1		
TREC			AMS	AMS	22 52 20.0		
	comp=Z,3µm,22.3s						
DOU	**Dourbes**	**150.70 3**	PKPdf	PKPdf	21 38 58.0	-0.4	
DOU			PKPbc	PKPbc	21 39 03.7	-0.3	
DOU			APKPbc		21 39 16.3		
LOD	**Lodumlu**	**150.71 316**	*e*P	PKPdf	21 38 57.4	-1.3	
GIVF	**Givet**	**150.71 2**	*e*PKIKP	PKPdf	21 38 57.6	-0.8	
MLR	**Muntele Rosu**	**150.72 332**	PKP	PKPdf	21 38 57.5	-1.2	
	comp=Z,9.1nm,1.0s,baz=0.4,slow=1.4,SNR=14						
MLR			PKPbc	PKPbc	21 39 03.9	-0.2	
	comp=Z,71nm,0.9s,baz=40,slow=4.5,SNR=64						
MLR	**Muntele Rosu**	**150.72 332**	PKIKP	PKPdf	21 38 57.5	-1.1	
MLR					21 39 03.9		
MLR			pmax	pmax			
	comp=Z,9.0nm,1.0s						
MLR			pmax	pmax			
	comp=Z,71nm,0.9s						
MLR	**Muntele Rosu**	**150.72 332**	⇑P	PKPdf	21 38 56.8	-1.8	
MLR	**Muntele Rosu**	**150.72 332**	⇑*i*P	PKPdf	21 38 56.8	-1.8	
KDZE	**Karadeniz Ereo**	**150.72 320**	*e*P	PKPdf	21 38 54.6	-4.2	
BAIF	**Baives**	**150.72 3**	*e*PKIKP	PKPdf	21 38 57.7	-0.8	
	comp=Z,155nm,1.6s						
KOLL	**Kolacno**	**150.72 344**	*e*PKIKP	PKPdf	21 38 58.4	-0.1	
KOLL			*e*		21 39 04.3		
KOLL	**Kolacno**	**150.72 344**	*e*PKP	PKPdf	21 38 58.4	-0.1	
KOLL			*e*		21 39 04.3		
KOLL			*e*		21 39 16.2		
KOLL	**Kolacno**	**150.72 344**	*e*PKP	PKPdf	21 38 58.4	-0.1	
KOLL			*e*		21 39 04.3		
KOLL			*e*		21 39 16.1		
AMRR	**Amara**	**150.74 329**	⇑P	PKPbc	21 39 04.7	+0.5	
AMRR			P		21 39 04.9		
AMRR	**Amara**	**150.74 329**	⇑*i*P	PKPbc	21 39 04.7	+0.5	
ROTZ	**Rotzenmuhle**	**150.75 353**	*e*PKPdf	PKPdf	21 38 57.8	-0.7	
ROTZ			*e*PKPbc	PKPbc	21 39 03.4	-0.7	
SGKT	**Sivrigoynuk**	**150.78 318**	*i*P	PKPbc	21 39 02.4	-2.1	
PSZ	**Piszkesteto**	**150.91 342**	*e*PKPdf	PKPdf	21 38 58.2	-0.6	
PSZ			*e*PKPbc	PKPbc	21 39 03.9	-0.6	
PSZ			P		21 39 04.1		
PSZ			LR	LR			
	comp=Z,2µm,20.0s,MS5.9						
PSZ	**Piszkesteto**	**150.91 342**	⇑*e*PKP	PKPdf	21 38 57.6	-1.2	
PSZ	**Piszkesteto**	**150.91 342**	⇓*i*P	PKPdf	21 38 57.3	-1.5	
HWQ	**Hawqa**	**150.91 304**	*e*P	PKPdf	21 38 58.1	-1.2	
GRA1	**Grafenberg Arr**	**150.93 354**	*e*PKPdf	PKPdf	21 38 57.8	-1.0	
GRA1			*e*PKPbc	PKPbc	21 39 03.7	-0.8	
GRA1			*e*PKPab	PKPab	21 39 12.0	+0.1	
GRA1			*ep*PKPab	pPKPab	21 39 25.0	+1.3	
GRA1			*e*PP	PP	21 42 46.2	+5.0	
GRA1			*e*SS	SS	22 01 47.9	-12	
GRA1			*e*SSS		22 07 54.9		
GRA1			LR	LR			
	comp=Z,4µm,21.2s,MS6.2						
GRF	**Grafenberg Arr**	**150.93 354**	*e*PKPdf	PKPdf	21 38 57.8	-1.0	
GRF			*e*PKPbc	PKPbc	21 39 03.7	-0.8	
GRF			*e*PKPab	PKPab	21 39 12.0	+0.1	
GRF			*ep*PKPab	pPKPab	21 39 25.0	+1.3	
GRF			*e*PP	PP	21 42 46.2	+5.0	
GRF			*e*SS	SS	22 01 47.9	-12	
GRF			*e*SSS		22 07 54.9		
GRF			*e*L		22 48 43.2		
	comp=Z,4µm,21.2s						
GRF	**Grafenberg Arr**	**150.93 354**	*e*PKIKP	PKPdf	21 38 57.8	-1.0	
GRF			*e*		21 39 03.7		
GRF			*e*		21 39 12.0		
GRF			*e*		21 42 46.2		
GRF			MLR	MLR			
	comp=Z,4µm,21.2s,MS6.2						
ABH	**Alteburg**	**150.96 359**	PKP	PKPdf	21 38 57.9	-0.9	
DRGR		**150.97 337**	⇓PKIKP	PKPdf	21 38 58.2	-0.8	
DRGR		**150.97 337**	⇓*i*P	PKPdf	21 38 58.2	-0.8	
MERS	**Mersin**	**150.98 310**	*e*P	PKPdf	21 38 55.3	-4.0	
PSN	**Preselentsi**	**150.99 327**	P	PKPdf	21 38 58.2	-0.9	
SMOL	**Smolenice**	**151.02 345**	*e*PKIKP	PKPdf	21 38 59.5	+0.5	
SMOL			*e*		21 39 05.3		
SMOL			*e*		21 39 13.8		
SMOL	**Smolenice**	**151.02 345**	*e*PKP	PKPdf	21 38 59.5	+0.5	
SMOL			*e*		21 39 05.3		
SMOL			*e*		21 39 13.8		
SMOL			*e*		21 39 18.3		
SMOL	**Smolenice**	**151.02 345**	*e*PKP	PKPdf	21 38 59.5	+0.5	
SMOL			*e*		21 39 05.3		
SMOL			*e*		21 39 13.8		
SMOL			*e*		21 39 18.2		
SULT	**Sultanhani-AKS**	**151.07 313**	*e*P	PKPdf	21 38 56.7	-2.7	
WLF	**Walferdange**	**151.18 1**	PKPdf	PKPdf	21 38 59.5	+0.3	
WLF			PKPbc	PKPbc	21 39 05.3	+0.2	
WLF			PKPab	PKPab	21 39 13.3	+0.4	
WLF	**Walferdange**	**151.18 1**	*e*PKPdf	PKPdf	21 38 58.6	-0.6	
WLF			*e*PKPbc	PKPbc	21 39 05.0	-0.1	
WLF			*e*PKPab	PKPab	21 39 13.8	+0.9	
WLF			*ep*PKPab	pPKPab	21 39 26.0	+1.2	
WLF	**Walferdange**	**151.18 1**	*e*PKIKP	PKPdf	21 38 59.5	+0.3	
WLF			*e*		21 39 04.9		
WLF			MLR	MLR			
	comp=Z,3µm,20.0s,MS6.1						
WLF	**Walferdange**	**151.18 1**	*e*PKPdf	PKPdf	21 38 59.5	+0.3	
WLF			*e*PKPbc	PKPbc	21 39 04.9	-0.2	
WLF			LR	LR			
	comp=Z,3µm,20.0s,MS6.1						
KHC	**Kasperske Hory**	**151.19 351**	*e*PKIKP	PKPdf	21 38 58.3	-0.9	
KHC			*e*		21 39 05.1		
KHC			*e*		21 39 13.3		
KHC			*e*		21 42 40.0		
KHC			*e*		21 46 07.8		
KHC			*e*SS	SS	22 02 03.1	+0.8	
KHC			*e*		22 07 51.1		
KHC			MLR	MLR			
	comp=Z,3µm,20.7s,MS6.1						
KHC	**Kasperske Hory**	**151.19 351**	*e*PKPdf	PKPdf	21 38 58.5	-0.7	
KHC			*e*PKPbc	PKPbc	21 39 05.1	0.0	
KHC	**Kasperske Hory**	**151.19 351**	*e*PKPDF	PKPdf	21 38 58.3	-0.9	
KHC			⇑*e*PKP	PKPbc	21 39 05.1	0.0	
KHC			*e*PKPAB	PKPab	21 39 13.3	+0.3	
KHC			*e*PP	PP	21 42 40.0	-2.7	
KHC			*e*SKS	SKSdf	21 46 07.8	+4.0	
KHC			*e*x	x	21 49 53.1		
KHC			*e*x	x	21 53 01.1		
KHC			*e*SS	SS	22 02 03.1	+0.8	
KHC			*e*x	x	22 07 51.1		
KHC			AMS	AMS	22 50 40.0		
	comp=Z,3µm,20.7s						
TOD	**Tromm**	**151.19 357**	PKP	PKPdf	21 38 58.4	-0.8	
BST	**Brest**	**151.21 15**	PKP	PKPdf	21 38 59.6	+0.3	
BHL	**Bhannes**	**151.27 303**	*e*P	PKPdf	21 38 58.5	-1.3	
RCY	**Rachaya**	**151.28 302**	*e*P	PKPdf	21 38 59.3	-0.6	
WET	**Wettzell**	**151.28 352**	*e*PKPdf	PKPdf	21 38 58.2	-1.2	
WET			*e*PKPbc	PKPbc	21 39 04.6	-0.7	
WET			*e*PKPab	PKPab	21 39 13.7	+0.4	
HENT	**Hendek**	**151.34 320**	*i*P	PKPbc	21 39 05.0	-0.8	
MDU	**Mudurnu**	**151.36 319**	*e*P	PKPdf	21 38 54.6	-5.2	
ROSF	**Rostrenen**	**151.36 14**	*e*PKIKP	PKPdf	21 38 58.2	-1.3	
	comp=Z,115nm,1.2s						
GEC2	**GERESS Array S**	**151.45 350**	*e*PKPdf	PKPdf	21 38 58.3	-1.3	
GEC2			*e*PKPbc	PKPbc	21 39 05.1	-0.6	
GEC2			*e*PKPab	PKPab	21 39 14.2	+0.2	
GEC2			*ep*PKPbc	pPKPbc	21 39 18.7	+0.9	
KSDI	**Kefar Szold**	**151.50 302**	*e*P	PKPbc	21 39 07.0	+0.6	
FLN	**La Foliniere**	**151.50 10**	*e*PKIKP	PKPdf	21 38 58.7	-1.0	
	comp=Z,112nm,1.1s						
FLN			*e*MLR	MLR			
	comp=Z,3µm,20.2s,MS5.8						
FLN	**La Foliniere**	**151.50 10**	*e*PKPdf	PKPdf	21 38 58.7	-1.0	
FLN			LR	LR			
	comp=Z,3µm,20.3s,MS6.0						
KTD	**Kalmit**	**151.51 358**	PKIKP	PKPdf	21 38 58.7	-1.0	
DEV	**Deva**	**151.66 336**	⇑PKIKP	PKPbc	21 39 06.5	+0.2	
DEV	**Deva**	**151.66 336**	⇑*i*P	PKPbc	21 39 06.5	+0.2	
LDF	**La Druitiere**	**151.72 10**	*e*PKIKP	PKPdf	21 38 58.9	-1.1	
	comp=Z,62nm,0.9s						
PRD	**Provadia**	**151.73 327**	P	PKPdf	21 38 58.7	-1.5	
SVRH	**Sivrihisar-ESK**	**151.75 317**	*e*P	PKPdf	21 38 58.1	-2.3	
MMAI	**Mount Meron Ar**	**151.76 302**	PKP	PKPdf	21 38 59.8	-0.8	
	comp=Z,1.4nm,0.7s,baz=57,slow=5.3,SNR=6.2						
MMAI			PKPbc	PKPbc	21 39 07.0	0.0	
	comp=Z,66nm,0.8s,baz=59,slow=3.9,SNR=89						
MMAI			PKPab	PKPab	21 39 15.4	-0.6	
	comp=Z,56nm,1.0s,baz=72,slow=4.7,SNR=10						
QUIF	**Quistinic**	**151.78 14**	*e*PKIKP	PKPdf	21 38 59.0	-1.2	
	comp=Z,118nm,1.3s						
GRR	**Gorron**	**151.80 11**	*e*PKIKP	PKPdf	21 38 59.2	-1.0	
	comp=Z,73nm,1.1s						
EREN	**Erenkoy**	**151.80 307**	*e*P	PKPdf	21 38 57.4	-3.2	
GULT	**Gulveren**	**151.81 319**	*e*P	PKPdf	21 38 56.7	-3.7	
KIZT	**Kizilcal**	**151.83 315**	*e*P	PKPdf	21 38 58.9	-1.7	
LANF	**Langenberg**	**151.85 358**	PKP	PKPdf	21 38 59.6	-0.6	
IKL	**Isikli**	**151.86 309**	*e*P	PKPdf	21 38 57.4	-3.2	
KDHN	**Kadinhani**	**151.86 314**	*i*P	PKPdf	21 39 00.2	-0.4	
LADK	**Ladik-KONYA**	**151.86 314**	*e*P	PKPdf	21 38 58.2	-2.4	
SILT	**Silе**	**151.89 321**	*e*P	PKPdf	21 38 58.2	-2.4	
CONA	**Conrad Observa**	**151.93 347**	⇑*i*PKPdf	PKPdf	21 38 59.4	-1.0	
	comp=Z,36nm,1.4s,SNR=15						
KONT	**Konya--Tatoy**	**151.99 313**	*e*P	PKPdf	21 38 56.7	-4.1	
STU	**Stuttgart**	**152.01 356**	*e*PKPdf	PKPdf	21 38 59.5	-1.0	
STU			*e*PKPbc	PKPbc	21 39 06.2	-0.8	
STU			*e*PKPab	PKPab	21 39 15.9	-0.5	
STU	**Stuttgart**	**152.01 356**	*e*PKPdf	PKPdf	21 39 01.1	+0.6	
STU			*e*PKPbc	PKPbc	21 39 06.9	-0.2	
HRT	**Hereke**	**152.08 321**	*e*P	PKPdf	21 38 56.0	-4.8	
GZR	**Gura Zlata**	**152.12 335**	PKIKP	PKPbc	21 39 07.0	-0.4	
GZR	**Gura Zlata**	**152.12 335**	⇓*i*P	PKPbc	21 39 07.1	-0.3	
ESKT	**Eskisehir**	**152.14 317**	*i*P	PKPbc	21 39 05.7	-1.9	
KLYT	**Kilyos**	**152.17 322**	*e*P	PKPdf	21 38 56.7	-4.2	
BORA	**Eskisehir**	**152.18 318**	*i*P	PKPdf	21 39 00.2	-0.8	
ADVT	**Abdulvahap**	**152.28 320**	*e*P	PKPdf	21 38 57.4	-3.7	
ISK	**Istanbul-Kandi**	**152.28 322**	*e*P	PKPdf	21 38 58.2	-3.0	
MEZF	**Maizieres J'vi**	**152.32 2**	*e*PKIKP	PKPdf	21 39 00.3	-0.6	
	comp=Z,105nm,1.0s						
MOA	**Molln**	**152.32 349**	⇑*i*PKPdf	PKPdf	21 38 59.7	-1.3	
	comp=Z,19nm,1.4s,SNR=7.8						
CAVI	**Cavuskoy**	**152.36 320**	*

SOKA Soboth 153.29 347 ⇑ *i* PKPdf PKPdf 21 39 00.7 -1.8
comp=Z,32nm,1.6s
ISP Isparta 153.29 315 *e*P PKPdf 21 38 59.0 -3.7
ISP Isparta 153.29 315 PKIKP PKPbc 21 39 09.3 -1.0
ISP Isparta 153.29 315 *e*PKPbc PKPbc 21 39 09.4 -0.9
ISP LR LR
comp=Z,2μm,22.0s,MS5.9
BBS Basel-Blauen 153.38 359 PKIKP PKPdf 21 38 58.4 -4.1
DAVA Damuels 153.44 355 ⇑ *i* PKPdf PKPdf 21 39 00.9 -1.7
comp=Z,25nm,1.9s,SNR=13
BCK Bucak 153.44 314 *e*P PKPdf 21 38 58.9 -4.1
LOR Lormes 153.48 4 *e*PKIKP PKPdf 21 39 01.9 -0.8
comp=Z,75nm,1.3s
LOR *e*MLR MLR
comp=Z,3μm,22.5s,MS5.8
LOR Lormes 153.48 4 *e*PKPdf PKPdf 21 39 01.9 -0.8
LOR LR LR
comp=Z,3μm,22.5s,MS6.1
LOMF Lomont 153.50 360 PKP PKPdf 21 39 01.9 -0.8
OBKA Obir 153.55 348 ⇑ *i* PKPdf PKPdf 21 39 01.1 -1.7
comp=Z,18nm,1.6s
DURS Dursunbey 153.56 320 *i* P PKPdf 21 39 01.3 -1.7
MYKA Terra Mystica 153.61 349 ⇑ *i* PKPdf PKPdf 21 39 01.1 -1.8
comp=Z,30nm,1.8s
FETA Feichten 153.63 354 ⇑ *i* PKPdf PKPdf 21 39 01.9 -1.0
comp=Z,19nm,1.4s,SNR=10
MFF Saint Martin d 153.65 11 *e*PKIKP PKPdf 21 39 02.0 -0.9
comp=Z,58nm,1.1s
SSF Saint Saulge 153.66 5 *e*PKIKP PKPdf 21 39 02.0 -0.9
comp=Z,61nm,1.3s
KHAL Karahalli 153.66 317 *i* P PKPdf 21 38 59.1 -4.1
ABTA Abfaltersbach 153.67 351 ⇑ *i* PKPdf PKPdf 21 39 01.0 -2.0
comp=Z,22nm,1.1s,SNR=14
ANTB Antalya 153.69 313 *e*P PKPdf 21 38 58.2 -5.2
DOBS Dobrina 153.70 346 *i* PKPdf PKPdf 21 39 01.5 -1.5
DEMI Demirci 153.75 319 *i* P PKPdf 21 39 02.4 -0.9
PGB Panagyurishte 153.80 330 P PKPdf 21 39 01.6 -1.7
KORT Korkueli 153.85 313 *i* P PKPdf 21 38 59.1 -4.4
KDZ Kurdzhali 153.87 327 P PKPdf 21 39 01.2 -2.2
PLD Plovdiv 153.89 329 P PKPdf 21 39 00.6 -2.8
BALB Balikesir 153.89 321 *e*P PKPdf 21 39 01.7 -1.8
AVF Avril sur Loir 153.92 5 *e*PKIKP PKPdf 21 39 01.9 -1.4
comp=Z,26nm,1.1s
DAVOX Davos/Dischmat 153.94 355 PKP PKPdf 21 39 02.8 -0.6
comp=Z,6.6nm,0.9s,baz=358,slow=6.6,SNR=14
DAVOX PKPbc PKPbc 21 39 11.3 -0.1
comp=Z,21nm,0.9s,baz=340,slow=2.9,SNR=15
BALY Balya 153.98 321 *i* P PKPdf 21 39 01.3 -2.3
BGF Bois d'Agland 154.10 6 *e*PKIKP PKPdf 21 39 02.8 -0.8
SMF Signal de Mont 154.10 5 *e*PKIKP PKPdf 21 39 02.3 -1.3
comp=Z,49nm,1.3s
KULA Kula-Manisa 154.11 318 *e*P PKPdf 21 39 01.0 -2.8
SISC Sisak 154.12 344 P PKPdf 21 39 02.5 -1.1
SISC Sisak 154.12 344 *i* P PKPdf 21 39 02.5 -1.1
ENEZ Enez 154.13 325 *e*P PKPdf 21 39 00.3 -3.5
VOY Vojsko 154.14 348 *e*PKPdf PKPdf 21 39 02.9 -0.8
VOY *e* 21 39 23.7
VOY *e* 21 39 43.1
CABF La Chapelle 154.24 1 *e*PKIKP PKPdf 21 39 03.5 -0.3
comp=Z,290nm,1.7s
JAVS Javornik 154.24 348 *e*PKPdf PKPdf 21 39 02.2 -1.6
JAVS *e* 21 39 11.9
JAVS *e* 21 39 26.0
JAVS *e*PKPdf PP 21 42 57.5 -2.5
GOLH Golhisar 154.25 314 *i* P PKPdf 21 39 00.2 -3.9
ELL Elmali 154.28 313 *e*P PKPdf 21 38 59.6 -4.6
EMAZ Mazaricos 154.28 27 PKP PKPdf 21 39 02.4 -1.5
TUE Stuetta 154.29 356 *e*PKPdf PKPdf 21 39 03.5 -0.3
TUE *e*PKPbc PKPbc 21 39 12.2 +0.1
TUE LR LR
comp=Z,2μm,20.0s,MS5.9
TCF Toulx Ste Croi 154.30 7 *e*PKIKP PKPdf 21 39 02.9 -1.0
comp=Z,165nm,1.8s
CEY Cerknica 154.32 347 *e*PKPdf PKPdf 21 39 02.5 -1.4
CEY *e* 21 39 13.2
CEY *e* 21 39 25.7
CEY *e*PKPdf PP 21 42 57.5 -3.0
DNZL Cakiroluk 154.34 316 *i* P PKPdf 21 39 02.4 -1.8
BOJS Bojanci 154.36 346 *e*PKPdf PKPdf 21 39 03.0 -1.0
BOJS *e* 21 39 13.4
BOJS *e* 21 39 26.0
BOJS *e*PKPdf PP 21 42 57.2 -3.5
AKHS Akhisar 154.41 319 *i* P PKPdf 21 39 01.3 -3.0
TRI Trieste 154.47 348 *e*PKIKP PKPdf 21 39 03.8 -0.3
TRI *e* 21 39 12.0
TRI MLR MLR
comp=Z,2μm,22.0s,MS5.9
STS Santiago 154.52 27 PKIKP PKPdf 21 39 04.2 -0.1
SKDS Skadanscina 154.58 348 *e*PKPdf PKPdf 21 39 02.5 -1.8
SKDS *e* 21 39 13.8
SKDS *e* 21 39 25.9
SKDS *e*PKPdf PP 21 42 58.4 -3.6
AGO Saint Agoulin 154.63 6 PKP PKPdf 21 39 04.8 +0.5
MMB Musomiste 154.75 329 P PKPdf 21 39 02.5 -2.2
AKAS Kas 154.76 312 *i* P PKPdf 21 39 02.3 -2.6
BOZC Bozcaada 154.81 323 *i* P PKPdf 21 38 59.1 -5.7
KKB Krupnik 154.84 330 P PKPdf 21 39 02.7 -2.1
NVR Nevrokopi 154.87 328 *e*P PKPbc 21 39 12.4 -1.1
PYM Petit Puy Mans 154.91 6 PKP PKPdf 21 39 04.9 +0.2
KDAG Bornova 155.04 319 *e*P PKPdf 21 38 58.2 -7.0
TURN Turunc 155.09 315 *i* P PKPdf 21 38 59.1 -6.2
AYDN Tasoluk 155.11 317 *i* P PKPdf 21 39 03.5 -1.8
PLE Pljevlja 155.14 338 ‖ *i* PKP PKPdf 21 39 04.7 -0.4
PLE Pljevlja 155.14 338 ‖ *i* PKP PKPdf 21 39 04.7 -0.4
YER Yerkesik 155.16 316 *e*P PKPdf 21 39 03.3 -2.1
RJF Les Rejaudoux 155.18 9 *e*PKIKP PKPdf 21 39 04.4 -0.7
comp=Z,78nm,1.2s
RJF *e*MLR MLR
comp=Z,5μm,23.0s,MS6.0
RJF Les Rejaudoux 155.18 9 *e*PKPdf PKPdf 21 39 04.4 -0.7
RJF LR LR
comp=Z,5μm,23.0s,MS6.3
BLCB Balcova 155.19 319 *e*P PKPdf 21 39 02.4 -2.9
LPL La Plagne 155.34 360 *e*PKIKP PKPdf 21 39 05.2 -0.1
comp=Z,75nm,1.5s
NVLJ Novalja 155.34 346 P PKPdf 21 39 03.9 -1.5
NVLJ Novalja 155.34 346 *i* P PKPdf 21 39 03.9 -1.5
IVA Berane 155.35 336 ‖ *i* PKP PKPdf 21 39 04.8 -0.6
IVA Berane 155.35 336 ‖ *i* PKP PKPdf 21 39 04.9 -0.6
LPG La Plagne 155.35 360 *e*PKIKP PKPdf 21 39 05.2 -0.2
comp=Z,87nm,1.4s
MLSB Milas 155.39 316 *e*P PKPdf 21 39 01.7 -4.0
LFF La Frestale 155.41 10 *e*PKIKP PKPdf 21 39 04.6 -0.9
comp=Z,108nm,1.5s
UPM Unac-Piva 155.42 338 ‖ *i* PKP PKPdf 21 39 04.2 -1.3
UPM Unac-Piva 155.42 338 ‖ *i* PKP PKPdf 21 39 04.2 -1.3
LBL Lubilhac 155.45 6 PKP PKPdf 21 39 07.4 +1.9
SKO Skopje 155.49 333 ⇑ *i* PKP PKPdf 21 39 04.3 -1.4
GCAM G?zelcaml? 155.50 318 *i* P PKPdf 21 39 04.6 -1.2
SSB Saint Sauveur 155.51 4 *e*PKIKP PKPdf 21 39 05.0 -0.6
SSB MLR MLR
comp=Z,2μm,22.0s,MS5.8
VAY Valandovo 155.51 330 ⇑ *i* PKP PKPdf 21 39 03.1 -2.6
PVY Plav 155.56 336 ‖ *i* PKP PKPdf 21 39 04.2 -1.5
PVY Plav 155.56 336 ‖ *i* PKP PKPdf 21 39 04.2 -1.5
CAF Calviac 155.62 8 *e*PKIKP PKPdf 21 39 05.2 -0.5
comp=Z,99nm,1.5s
PCAB Cabril 155.70 28 *e*PKPdf PKPdf 21 39 05.9 -0.1
PCAB Cabril 155.70 28 *e*PKPab PKPab 21 39 32.4 +0.1
BCI Bajram Curri 155.72 335 PN PKPdf 21 39 04.9 -1.1
BCI SN PKPab 21 39 30.1 -2.2
NKY Niksic 155.74 338 ‖ *i* PKP PKPdf 21 39 04.8 -1.2
NKY Niksic 155.74 338 ‖ *i* PKP PKPdf 21 39 04.9 -1.1
BNI Bardonecchia 155.80 0 *e*PKIKP PKPdf 21 39 06.1 +0.1
BNI MLR MLR
comp=Z,2μm,19.0s,MS5.9
PLG Polygyros 155.81 328 *e*P PKPab 21 39 32.6 -0.2
BRY Bratogost 155.82 338 ‖ *i* PKP PKPdf 21 39 04.2 -1.9
BRY Bratogost 155.82 338 ‖ *i* PKP PKPdf 21 39 04.3 -1.8
BODT Bodrum 155.83 317 *e*P PKPdf 21 39 04.0 -2.2
DAT Datca 155.85 316 *e*P PKPdf 21 39 02.8 -3.5
PTO Porto 155.91 29 *e*PKPab PKPab 21 39 33.0 -0.2
ORIF Oris-en-Rattie 155.92 1 *e*PKIKP PKPdf 21 39 05.6 -0.5
comp=Z,42nm,1.2s
ORIF *e*MLR MLR
comp=Z,3μm,21.5s,MS5.8
VIVF Saint-Julien-l 155.94 4 *e*PKIKP PKPdf 21 39 05.6 -0.6
comp=Z,117nm,1.8s
TTG Podgorica 155.97 337 ‖ *i* PKP PKPdf 21 39 05.1 -1.2
KRUS Krusevo 156.06 332 ⇑ *i* PKP PKPdf 21 39 03.7 -2.7
PUK Puka 156.06 335 PN PKPdf 21 39 04.6 -1.8
PUK SN PKPab 21 39 35.5 +1.7
MBDF Montbardon 156.12 360 *e*PKIKP PKPdf 21 39 05.9 -0.5
comp=Z,34nm,0.9s
STON Ston 156.12 340 P PKPdf 21 39 04.6 -1.9
STON Ston 156.12 340 *i* P PKPdf 21 39 04.6 -1.9
PVRL Vila Real 156.19 28 *e*PKPdf PKPdf 21 39 06.8 +0.2
PVRL Vila Real 156.19 28 *e*PKPab PKPab 21 39 34.7 +0.3
BUM Brajici-Budva 156.22 337 ‖ *i* PKP PKPdf 21 39 05.4 -1.2
BUM Brajici-Budva 156.22 337 ‖ *i* PKP PKPdf 21 39 05.4 -1.2
HCY Herceg Novi 156.23 338 ‖ *i* PKP PKPdf 21 39 05.1 -1.5
HCY Herceg Novi 156.23 338 ‖ *i* PKP PKPdf 21 39 05.2 -1.4
ULC Ulcinj 156.38 336 ‖ *i* PKP PKPdf 21 39 06.0 -0.8
ULC Ulcinj 156.38 336 ‖ *i* PKP PKPdf 21 39 06.1 -0.7
OHR Ohrid 156.47 333 ⇑ *i* PKP PKPdf 21 39 04.8 -2.2
OG25 Le Caire 156.47 1 PKP PKPdf 21 39 06.2 -0.7
VLC Villacollemand 156.49 353 PFAKE 21 39 20.0 +13
VLC LR LR
comp=Z,2μm,20.0s,MS5.9
PVIS Viseu 156.56 29 *e*PKPdf PKPdf 21 39 07.1 0.0
PVIS Viseu 156.56 29 *e*PKPab PKPab 21 39 36.1 +0.1
MVO Moncorvo 156.58 27 PKP PKPdf 21 39 07.0 -0.1
MVO Moncorvo 156.58 27 *e*PKPdf PKPdf 21 39 07.3 +0.2
MVO Moncorvo 156.58 27 *e*PKPab PKPab 21 39 36.3 +0.2
MVO Moncorvo 156.58 27 *e*PP PP 21 43 14.7 +1.3
MVO Moncorvo 156.58 27 *e*LR LR 22 34 53.7
comp=Z,4μm,22.0s
EALK Alkurruntz 156.60 15 PKP PKPdf 21 39 07.0 -0.1
LASF Ste Croix 156.65 5 *e*PKIKP PKPdf 21 39 06.8 -0.3
comp=Z,204nm,1.9s
TIR Tirane 156.66 334 *e*PKPdf PKPdf 21 39 06.2 -1.1
TIR *e*PKPab PKPab 21 39 36.5 +0.1
TIR LR LR
comp=Z,3μm,22.0s,MS6.1
TIR Tirane 156.66 334 *e*P PKPab 21 39 33.8 -2.6
NEO Neokhori 156.72 326 *e*P PKPab 21 39 35.6 -1.2
SJPF Ste Jean 156.77 15 *e*PKIKP PKPdf 21 39 06.9 -0.4
comp=Z,66nm,1.3s
TOUF Mont Tournerai 156.83 359 PKP PKPdf 21 39 06.7 -0.7
AUTN L'Aution 156.85 359 PKP PKPdf 21 39 06.7 -0.7
SAOF Saorge 156.85 358 PKP PKPdf 21 39 06.4 -1.0
SMRF Simiane la Rot 156.86 2 *e*PKIKP PKPdf 21 39 07.1 -0.3
comp=Z,185nm,1.8s
KBN Korca 156.87 332 PN PKPdf 21 39 05.8 -1.7
KBN SN PKPab 21 39 34.0 -3.4
ECRI Cripan 156.90 18 PKIKP PKPdf 21 39 07.4 -0.1
LUCF Luceram 156.95 359 PKP PKPdf 21 39 06.2 -1.3
MVIF Mont Vial 156.95 359 PKP PKPdf 21 39 08.9 +1.4
MTE Manteigas 156.98 29 *e*PKPdf PKPdf 21 39 07.2 -0.5
MTE LR LR
comp=Z,3μm,21.0s,MS6.1
MTE Manteigas 156.98 29 *e*PKPdf PKPdf 21 39 07.8 +0.1
MTE Manteigas 156.98 29 *e*PKPab PKPab 21 39 37.9 +0.1
MTE Manteigas 156.98 29 *e*PP PP 21 43 16.3 +0.6
MTE Manteigas 156.98 29 *e*LR LR 22 32 29.9
comp=Z,3μm,22.0s
SBF Sospel 156.98 359 *e*PKIKP PKPdf 21 39 06.4 -1.1
comp=Z,111nm,1.3s
EGOM La Gomera 157.05 67 PKP PKPdf 21 39 08.8 +0.6
REVF Revere 157.10 359 PKP PKPdf 21 39 06.6 -1.1
ETSF Etsaut 157.12 14 *e*PKIKP PKPdf 21 39 07.6 -0.2
comp=Z,65nm,1.1s
EPF Esparros 157.19 12 *e*PKIKP PKPdf 21 39 07.3 -0.5
comp=Z,55nm,1.0s
PTOM Tomar 157.19 31 *e*PKPdf PKPdf 21 39 08.9 +0.9
PTOM Tomar 157.19 31 *e*PKPab PKPab 21 39 38.7 -0.1
MTLF Montolieu 157.20 8 *e*PKIKP PKPdf 21 39 07.2 -0.6
comp=Z,88nm,1.5s
PMAFR Mafra 157.25 34 *e*PKPdf PKPdf 21 39 09.0 +0.9
PMAFR Mafra 157.25 34 *e*PP PP 21 43 17.6 +0.2
PMAFR Mafra 157.25 34 *e*LR LR 22 32 24.2
comp=Z,3μm,22.0s
FRF La Foret Royal 157.29 0 *e*PKIKP PKPdf 21 39 07.0 -1.0
comp=Z,135nm,1.7s
LKR Lokris 157.32 325 *e*P PKPab 21 39 38.4 -1.0
MLS Moulis 157.40 11 PKP PKPdf 21 39 07.4 -0.7
PCBR Castelo Branco 157.46 29 *e*PKPdf PKPdf 21 39 08.1 -0.2
PCBR Castelo Branco 157.46 29 *e*PKPab PKPab 21 39 39.5 -0.4
EBIE Bielsa 157.48 13 PKP PKPdf 21 39 06.2 -2.1
LIS Lisbon 157.50 34 *e*P PKPdf 21 39 07.8 -0.6
LIS *e*PP PP 21 43 18.6 -0.2
LIS AMS AMS 22 44 00.7
comp=Z,3μm,16.7s,MS6.1
LMR La Mourre 157.52 0 *e*PKIKP PKPdf 21 39 07.2 -1.0
comp=Z,134nm,1.7s
CCAN Las Canadas 157.56 66 PKP PKPdf 21 39 10.2 +1.4
JAN Janina 157.62 330 *e*P PKPab 21 39 40.5 -0.1
ZKR Zakros 157.68 314 *e*P PKPab 21 39 41.0 -0.1
AQU L'Aquila 157.77 347 PFAKE 21 39 20.0 +11
AQU LR LR
comp=Z,3μm,22.0s,MS6.0
AQU L'Aquila 157.77 347 *e*P PKPab 21 39 38.8 -2.3
LTK Loutraki 157.79 324 *e*P PKPab 21 39 34.2 -7.2
PMRV Marv??o 157.83 30 *e*PKPdf PKPdf 21 39 08.9 +0.1
PMRV Marv??o 157.83 30 *e*PKPab PKPab 21 39 41.2 -0.3
PMRV Marv??o 157.83 30 *e*PP PP 21 43 22.4 +2.0
PMRV Marv??o 157.83 30 *e*LR LR 22 33 04.1
comp=Z,2μm,22.0s
SRN Sarande 157.83 332 PN PKPdf 21 39 04.0 -4.7
SRN SN PKPab 21 39 34.6 -6.9
EPLA Plasencia 157.89 27 PKIKP PKPdf 21 39 08.3 -0.5
CSOR Sort 157.97 11 PKP PKPdf 21 39 07.2 -1.7
NPS Neapolis 158.00 315 *e*P PKPab 21 39 42.4 -0.1
CLLI Llivia 158.01 9 PKP PKPdf 21 39 03.6 -5.2
DID Didima 158.01 323 *e*P PKPab 21 39 32.1 -10
KEK Kerkira 158.05 332 *e*P PKPab 21 39 41.7 -0.8
VALF Valcebollere 158.09 9 PKP PKPdf 21 39 08.2 -0.8
LAST Lasithi 158.15 315 *e*P PKPab 21 39 43.7 +0.6
EJON La Jonquera 158.16 8 PKP PKPdf 21 39 09.1 0.0
EVOP Sao Brissos 158.17 33 *e*P PKPdf 21 39 08.1 -1.1
EVOP *e*PP PP 21 43 23.1 +0.6
EVOP *e*SS SS 22 03 19.6 +0.4
EVOP AMS AMS 22 43 19.8
comp=Z,2μm,20.8s,MS5.9
EVOP Sao Brissos 158.17 33 *e*PKIKP PKPdf 21 39 08.1 -1.1
EVOP *e*SS SS 22 03 19.7 +0.5
PESTR Estremoz 158.17 31 *e*PKPdf PKPdf 21 39 09.3 +0.1
PESTR Estremoz 158.17 31 *e*PKPab PKPab 21 39 42.8 -0.2
PESTR Estremoz 158.17 31 *e*PP PP 21 43 22.9 +0.5
PESTR Estremoz 158.17 31 *e*LR LR 22 33 12.7
comp=Z,2μm,22.0s
NOCI Noci 158.20 338 *e*P PKPab 21 39 42.4 -0.6
PGF Pioggiola 158.22 355 *e*PKIKP PKPdf 21 39 07.0 -2.1
comp=Z,169nm,1.5s
EVO Evora 158.22 32 *e*PKIKP PKPdf 21 39 09.0 -0.3
comp=Z,250nm,1.8s
EVO *e*MLR MLR
comp=Z,3μm,22.8s,MS5.8
EVO Evora 158.22 32 *e*PKPdf PKPdf 21 39 09.1 -0.2
EVO Evora 158.22 32 *e*PKPab PKPab 21 39 43.0 -0.3
ESAC San Caprasio 158.26 15 PKP PKPdf 21 39 08.8 -0.4
SCTE Santa Cesarea 158.31 335 *e*P PKPab 21 39 43.1 -0.4
RLS Riolos of Patr 158.57 327 *e*P PKPab 21 39 44.9 +0.1
SIVA Sivas 158.67 315 *e*P PKPab 21 39 45.6 +0.2
ETOR Torete 158.68 19 PKIKP PKPdf 21 39 09.0 -0.8
PBEJ Beja 158.69 33 *e*PKPdf PKPdf 21 39 10.9 +1.1
PBEJ Beja 158.69 33 *e*PKPab PKPab 21 39 45.1 -0.2
VLI Veliai 158.73 322 *e*P PKPab 21 39 44.0 -1.6
CFON Fontmartina 158.78 9 PKP PKPdf 21 39 08.7 -1.1
VAM Vamos 158.83 317 *e*P PKPab 21 39 47.0 +1.0
PFVI Vila Bisbo 158.83 36 *e*PKPdf PKPdf 21 39 10.8 +0.7
PFVI Vila Bisbo 158.83 36 *e*PP PP 21 43 28.9 +2.7
PFVI Vila Bisbo 158.83 36 *e*LR LR 22 33 21.6
comp=Z,3μm,20.0s
PCVE Castro Verde 158.89 34 *e*PKPdf PKPdf 21 39 11.5 +1.4
PCVE Castro Verde 158.89 34 *e*PKPab PKPab 21 39 47.2 +1.0
PCVE Castro Verde 158.89 34 *e*PP PP 21 43 32.1 +5.7
PCVE Castro Verde 158.89 34 *e*LR LR 22 34 12.2
comp=Z,2μm,22.0s
VLS Valsamata 158.92 328 *e*P PKPab 21 39 45.9 -0.4
EPOB Poblet 158.95 12 PKP PKPdf 21 39 07.6 -2.4
ITM Ithomi 158.97 324 *e*P PKPab 21 39 46.0 -0.6
PBAR Barrancos 158.98 31 *e*PKPdf PKPdf 21 39 10.3 +0.1
PBAR Barrancos 158.98 31 *e*PKPab PKPab 21 39 46.8 +0.2
PBAR Barrancos 158.98 31 *e*PP PP 21 43 29.4 +2.6
PBAR Barrancos 158.98 31 *e*LR LR 22 33 50.2
comp=Z,2μm,22.0s
KARN Karanos 159.01 318 *e*P PKPab 21 39 46.7 -0.1
PAB San Pablo 159.03 24 PFAKE 21 39 20.0 +10
PAB LR LR
comp=Z,4μm,21.0s,MS6.2
ESDC Sonseca Array 159.07 24 PKP PKPdf 21 39 09.8 -0.4
comp=Z,3.5nm,0.8s,baz=340,slow=2.3,SNR=13
ESDC PKPab PKPab 21 39 46.8 -0.1
comp=Z,9.2nm,0.7s,baz=315,slow=4.1,SNR=4.7
ESDC Sonseca Array 159.07 24 PKP PKPdf 21 39 09.2 -1.1
ESLA Sonseca Array 159.07 24 *e*PKPdf PKPdf 21 39 09.8 -0.5
ESLA *e*PKPab PKPab 21 39 46.8 -0.1
ESLA LR LR
comp=Z,14μm,20.0s,MS6.8
ERTA Horta de San J 159.17 14 PKP PKPdf 21 39 10.1 -0.2
PVAQ Vaqueiros 159.23 34 *e*PKPdf PKPdf 21 39 11.7 +1.2
PVAQ Vaqueiros 159.23 34 *e*PKPab PKPab 21 39 47.7 0.0
PVAQ Vaqueiros 159.23 34 *e*PP PP 21 43 31.4 +3.1
PVAQ Vaqueiros 159.23 34 *e*LR LR 22 33 18.9
comp=Z,2μm,20.0s
PBDV Barranco-do-Ve 159.24 35 *e*PKPdf PKPdf 21 39 10.9 +0.4
PBDV Barranco-do-Ve 159.24 35 *e*PP PP 21 43 32.8 +4.5
PBDV Barranco-do-Ve 159.24 35 *e*LR LR 22 34 35.6
comp=Z,2μm,20.0s
GVD Gavdhos 159.25 316 *e*P PKPab 21 39 48.3 +0.4
PYL PYLOS 159.28 324 *e*P PKPab 21 39 46.0 -1.9
CUC Castrocucco 159.33 340 *e*P PKPab 21 39 46.9 -1.1
EMIN Mina Concepcio 159.48 32 PKP PKPdf 21 39 10.6 -0.2
EMOS Mosqueruela 159.54 16 PKP PKPdf 21 39 10.7 -0.1
TIP Timpagrande 159.73 337 *e*PKPdf PKPdf 21 39 09.4 -1.7
TIP LR LR
comp=Z,3μm,22.0s,MS6.1
EADA Adamuz 160.12 27 PKP PKPdf 21 39 10.5 -1.0
EBAN Banos Encina 160.45 25 PKIKP PKPdf 21 39 12.1 +0.2
EVIA Vianos 160.51 22 PKIKP PKPdf 21 39 12.5 +0.6
ESPR Espera 160.59 32 PKP PKPdf 21 39 12.6 +0.5
SFS San Fernando 160.73 33 PFAKE 21 39 20.0 +7.8
SFS LR LR
comp=Z,4μm,20.0s
ELUQ Luque 160.76 27 PKIKP PKPdf 21 39 12.6 +0.4
ETOS Mallorca 160.79 9 PKP PKPdf 21 39 11.8 -0.4
ETOB Tobarra 160.83 20 PKP PKPdf 21 39 12.5 +0.2
CEL Celeste 160.86 337 *e*PKPdf PKPdf 21 39 10.5 -1.9
CEL LR LR
comp=Z,2μm,21.0s
EQES Quesada 161.04 24 PKP PKPdf 21 39 12.0 -0.5
EJIF Jimena Fronter 161.11 32 PKIKP PKPdf 21 39 13.8 +1.2
ELOJ Sierra Loja 161.16 28 PKIKP PKPdf 21 39 11.8 -0.9
EBEN Beniarda 161.17 17 PKP PKPdf 21 39 11.3 -1.3
VSL Villasalto 161.21 354 *e*PKPdf PKPdf 21 39 11.8 -0.9
VSL *e*PKPab PKPab 21 39 56.4 +0.2
VSL LR LR
comp=Z,2μm,21.0s
EHUE Huescar 161.21 23 PKIKP PKPdf 21 39 11.3 -1.4
EIBI Ibiza 161.24 13 PKP PKPdf 21 39 12.7 0.0
ECOG Cogollos-Vega 161.29 26 PKIKP PKPdf 21 39 12.2 -0.6
EMIJ Mijas 161.35 30 PKP PKPdf 21 39 13.2 +0.3
ERON Agron 161.41 27 PKP PKPdf 21 39 12.1 -0.9
LIC Lamto 161.59 140 *e*PKIKP PKPdf 21 39 11.9 -1.9
comp=Z,166nm,1.6s
LIC Lamto 161.59 140 *e*PKIKP PKPdf 21 39 12.0 -1.8
comp=Z,179nm,1.5s
LIC *e*MLR MLR
comp=Z,4μm,22.5s
LIC Lamto 161.59 140 *e*PKPdf PKPdf 21 39 12.0 -1.8
LIC LR LR
comp=Z,2μm,22.5s
EGUA Guajares 161.67 27 PKIKP PKPdf 21 39 11.6 -1.6
KIC Kosan Boka 161.87 141 *e*PKIKP PKPdf 21 39 12.2 -1.9
comp=Z,94nm,1.3s
TIC Toumodi 161.92 139 *e*PKIKP PKPdf 21 39 12.3 -1.9
comp=Z,159nm,1.4s
DBIC Dimbokro 162.04 140 PKP PKPdf 21 39 12.8 -1.5
comp=Z,15nm,1.0s,baz=204,slow=1.3,SNR=9.9
DBIC Dimbokro 162.04 140 PKIKP PKPdf 21 39 12.8 -1.5
DBIC pmax pmax
comp=Z,15nm,1.0s
DBIC Dimbokro 162.04 140 *e*PKPdf PKPdf 21 39 12.3 -2.0
DBIC LR LR
comp=Z,2μm,20.0s
ENIJ Nijar 162.10 24 PKIKP PKPdf 21 39 14.1 +0.5
WDD Wield Dalam 163.49 337 PFAKE 21 39 30.0 +15
WDD LR LR
comp=Z,2μm,22.0s
CMAH Djebel Manchou 164.21 358 P PKPdf 21 39 14.9 -0.8
DFRA Djebel Bou Aff 164.28 2 P PKPdf 21 39 15.9 +0.2
CKFL Kef-Lekhel 164.44 360 P PKPdf 21 39 16.7 +0.8
ABSA Djebel Ababsia 164.55 358 P PKPdf 21 39 16.0 0.0
CASM Ain Smara 164.58 1 P PKPdf 21 39 15.1 -0.9
SET Setif 164.60 4 P PKPdf 21 39 17.0 +1.0
KEST Kesra 164.93 352 PKP PKPdf 21 39 15.4 -0.9
comp=Z,3.6nm,0.9s,baz=0.0,slow=2.0,SNR=11
KEST PKPab PKPab 21 40 12.2 -0.3
comp=Z,3.6nm,0.9s,baz=326,slow=3.6,SNR=4.2
KEST Kesra 164.93 352 *e*PKPdf PKPdf 21 39 15.8 -0.6
KEST *e*PKPab PKPab 21 40 12.4 -0.2
TAM Tamanrasset 177.72 29 *e*PKIKP PKPdf 21 39 22.8 -0.3
TAM *e* 21 41 10.4
TAM MLR MLR
comp=Z,2μm,21.0s

MAN 26 21:35:59.5 ±38N×124 ±38E, h59km, mb5.3, ML4.2, MS4.5, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.90**	**39**	*e*P	Pn	21 36 20.3	+4.6
GSPH				*i* S	Sn	21 36 32.4	+4.3
BUKP	**Musuan**	**2.57**	**15**	*e*P	Pn	21 36 40.6	+2.4
PAGZ	**Pagadian**	**2.64**	**338**	*e*P	Pn	21 36 41.2	+1.9
PAGZ				*e*S	Sn	21 36 56.7	-13
IPIL	**Ipil**	**2.99**	**323**	*e*P	Pn	21 36 46.6	+2.6
IPIL				*e*S	Sn	21 37 08.1	-11

NEIC ***26*** *21:42:57.9, 36.98N×23.86E, h48km, MD2.9(ATH), After ATH.*
CSEM ***26*** *21:42:57.9, 36.98N×23.86E, h48km, MD2.9, After ATH*
ATH 26 21:42:57.9, 36.98N×23.86E, h48km±28km, MD2.9/5, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLI	**Veliai**	**0.79**	**251**	*e*P	Pn	21 43 13.7	+1.0
VLI				*e*S	Sn	21 43 24.5	+1.1
VLI	**Veliai**	**0.79**	**251**	*e*P	Pn	21 43 13.7	+1.0
VLI				*e*S	Sn	21 43 24.5	+1.1
VLI	**Veliai**	**0.79**	**251**	*e*P	Pn	21 43 13.7	+1.0
VLI				*e*S	Sn	21 43 24.5	+1.1
KYTH	**Kithira**	**0.96**	**224**	*e*P	Pn	21 43 16.1	+1.1
KYTH	**Kithira**	**0.96**	**224**	*e*P	Pn	21 43 16.1	+1.1
KYTH	**Kithira**	**0.96**	**224**	*e*P	Pn	21 43 16.1	+1.1
ITM	**Ithomi**	**1.56**	**278**	*e*P	Pn	21 43 24.2	+1.0
ITM				*e*S	Sn	21 43 43.7	+1.5
ITM	**Ithomi**	**1.56**	**278**	*e*P	Pn	21 43 24.2	+1.0
ITM				*e*S	Sn	21 43 43.7	+1.5
ITM	**Ithomi**	**1.56**	**278**	*e*P	Pn	21 43 24.2	+1.0
ITM				*e*S	Sn	21 43 43.7	+1.5
KARN	**Karanos**	**1.58**	**178**	*e*P	Pn	21 43 24.4	+1.0
KARN	**Karanos**	**1.58**	**178**	*e*P	Pn	21 43 24.4	+1.0
VAM	**Vamos**	**1.59**	**170**	*e*P	Pn	21 43 25.0	+1.4
VAM	**Vamos**	**1.59**	**170**	*e*P	Pn	21 43 25.0	+1.4
VAM	**Vamos**	**1.59**	**170**	*e*P	Pn	21 43 25.0	+1.4

CSEM ***26*** *21:46:08.7±0.1, 45.99N×14.99E, h16km±1km, ML1.2, Error ellipse: s-maj=2.7km s-min=1.6km az=8.0*
VIE ***26*** *21:46:09.2±0.2, 46.01N×14.99E, h6km, ML1.4/1, Error ellipse: s-maj=1.3km s-min=1.2km az=165.0 33 km SW of Celje*
LJU ***26*** *21:46:09.1, 46.00N×14.98E, h8km, ML1.2*
ISCJB ***26*** *21:46:09.1±0.3, 46.01N±0.03×14.98E±0.03, h10km, Error ellipse: s-maj=3.8km s-min=2.4km az=12.8*
ISC 26 21:46:09.5±0.3, 46.01N±0.03×14.99E±0.03, h10km, n34, σ0.59/53, 5C-2D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDKS	**Podkum**	**0.05**	**6**	‖ *i* Pg	**Pg**	**21 46 11.1**	**-0.4**
PDKS				*i* Sg	**Sg**	**21 46 12.4**	**-0.6**
PDKS							
comp=Z,121nm,0.1s							
VNDS	**Vrh nad Dolski**	**0.22**	**295**	⇑ *i* Pg	**Pg**	**21 46 14.0**	**-0.1**
VNDS				*i* Sg	**Sg**	**21 46 17.3**	**+0.1**
VNDS							
comp=Z,8.0nm,0.1s							

VISS	**Visnje**	**0.23 207**	*i* Pg	**Pg**	**21 46 13.8**	**-0.4**
VISS			*i* Sg	**Sg**	**21 46 16.9**	**-0.4**
comp=Z,26nm,0.1s						
LEGS	**Legarje**	**0.24 104**	*i* Pg	**Pg**	**21 46 14.1**	**-0.3**
LEGS			*i* Sg	**Sg**	**21 46 17.6**	**+0.1**
LEGS	**Legarje**	**0.24 104**	*i* Pg	**Pg**	**21 46 14.1**	**-0.2**
LEGS			*i* Sg	**Sg**	**21 46 17.6**	**0.0**
LJU	**Ljubljana**	**0.32 277**	*i* Pg	**Pg**	**21 46 15.9**	**-0.1**
LJU	**Ljubljana**	**0.32 277**	*i* Pg	**Pg**	**21 46 15.9**	**0.0**
DOBS	**Dobrina**	**0.36 67**	*i* Sg	**Sg**	**21 46 21.9**	**+0.4**
DOBS	**Dobrina**	**0.36 67**	*i* Sg	**Sg**	**21 46 21.9**	**+0.4**
CRES	**Cresnjev**	**0.37 119**	*i* Pg	**Pg**	**21 46 16.4**	**-0.5**
CRES	**Cresnjev**	**0.37 119**	*i* Pg	**Pg**	**21 46 16.4**	**-0.4**
GOLS	**Golise**	**0.44 89** ⇑	*i* Pg	**Pg**	**21 46 18.1**	**0.0**
GOLS			*i* Sg	**Sg**	**21 46 24.6**	**+0.6**
GOLS						
comp=Z,6.0nm,0.1s						
GOLS	**Golise**	**0.44 89** ⇑	*i* Pg	**Pg**	**21 46 18.1**	**0.0**
GOLS			*i* Sg	**Sg**	**21 46 24.6**	**+0.6**
comp=Z,6.0nm,0.1s						
GCIS	**Gornji Cirnik**	**0.47 107**	*i* Pg	**Pg**	**21 46 18.3**	**-0.3**
GCIS			*i* Sg	**Sg**	**21 46 25.2**	**+0.4**
CEY	**Cerknica**	**0.48 236**	*i* Pg	**Pg**	**21 46 18.3**	**-0.5**
CEY			*e*Sg	**Sg**	**21 46 25.1**	**+0.1**
CEY	**Cerknica**	**0.48 236**	*i* Pg	**Pg**	**21 46 18.3**	**-0.5**
CEY			*e*Sg	**Sg**	**21 46 25.1**	**+0.1**
CRNS	**Crni Vrh**	**0.51 278**	⇓ *i* Pg	**Pg**	**21 46 19.4**	**0.0**
CRNS			*e*Sg	**Sg**	**21 46 26.3**	**+0.1**
BOJS	**Bojanci**	**0.54 160**	*i* Sg	**Sg**	**21 46 26.3**	**-0.6**
BOJS	**Bojanci**	**0.54 160**	*i* Sg	**Sg**	**21 46 26.3**	**-0.6**
GROS	**Grobnik**	**0.58 38**	*i* Pg	**Pg**	**21 46 20.6**	**-0.1**
GROS	**Grobnik**	**0.58 38**	*i* Pg	**Pg**	**21 46 20.6**	**-0.1**
OBKA	**Obir**	**0.59 329**	⇑ *i* Pg	**Pg**	**21 46 20.9**	**0.0**
OBKA			⇑ *i* Sg	**Sg**	**21 46 28.7**	**+0.1**
comp=Z,5.2nm,0.2s						
OBKA	**Obir**	**0.59 329**	Pg	**Pg**	**21 46 20.9**	**0.0**
OBKA			Sg	**Sg**	**21 46 28.7**	**+0.1**
comp=Z,5.2nm,0.2s						
JAVS	**Javornik**	**0.66 260**	*e*Pg	**Pg**	**21 46 21.7**	**-0.5**
JAVS	**Javornik**	**0.66 260**	*e*Pg	**Pg**	**21 46 21.7**	**-0.5**
GORS	**Gorjuse**	**0.76 295**	*e*Pg	**Pg**	**21 46 23.8**	**-0.3**
GORS			*i* Sg	**Sg**	**21 46 35.0**	**+1.0**
GORS	**Gorjuse**	**0.76 295**	*e*Pg	**Pg**	**21 46 23.8**	**-0.3**
GORS			*i* Sg	**Sg**	**21 46 35.0**	**+1.0**
VOJS	**Vojsko**	**0.77 272**	*i* Pg	**Pg**	**21 46 23.8**	**-0.6**
VOJS	**Vojsko**	**0.77 272**	*i* Pg	**Pg**	**21 46 23.8**	**-0.5**
CADS	**Cadrg**	**0.90 285**	*i* Pg	**Pg**	**21 46 26.1**	**-0.7**
CADS			*i* Sg	**Sg**	**21 46 39.4**	**+0.9**
CADS	**Cadrg**	**0.90 285**	*i* Pg	**Pg**	**21 46 26.1**	**-0.7**
CADS			*i* Sg	**Sg**	**21 46 39.4**	**+0.9**
NVLJ	**Novalja**	**1.45 183**	*i* Pn	**Pn**	**21 46 36.5**	**+0.8**
NVLJ			Sn	**Sn**	**21 46 57.2**	**+2.6**
NVLJ	**Novalja**	**1.45 183**	*i* Pn	**Pn**	**21 46 36.5**	**+0.8**

*IDC **26** 21:46:23.0±4.0, 45°.12N×27°.69E, h34km±42km, mb3.4/4, mb1 3.5/6, mb1mx3.3/21, mbtmp3.4/6, ML3.4/2, MS3.3/1, Ms1 3.3/1, ms1mx2.7/38, Error ellipse: s-maj=39.1km s-min=31.6km az=116.0*
*ISCJB **26** 21:46:27.8±0.4, 45°.69N±0°.03×26°.63E±0°.04, h137km±3km, mb3.4/4, Error ellipse: s-maj=4.9km s-min=4.2km az=20.0*
*BUC **26** 21:46:28.1±1.0, 45°.70N×26°.63E, h141km±9km, MD4.4/2, Error ellipse: s-maj=8.7km s-min=7.2km az=129.0*
*NEIC **26** 21:46:28.7, 45°.69N×26°.66E, h135km, mb3.8/1, MD3.8(BUC), After BUC.*
*CSEM **26** 21:46:28.3±0.2, 45°.69N×26°.64E, h138km±2km, MD4.4/2, Error ellipse: s-maj=3.9km s-min=3.3km az=84.0*
*BEO **26** 21:46:40.9±1.2, 45°.31N×24°.98E, h0km, ML2.8/1*
ISC 26 21:46:28.7±0.4, **45°.69N**±0°.03×**26°.63E**±0°.04, **h136**km±3km, **n132**, σ0°**78**/181, **mb3.4**/4, **51C-27D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLOR	**Plostina**	**0.16**	**5**	⇑ *i*P	**Pn**	**21 46 47.3**	**+0.2**
PLOR				*i* S	**Sn**	**21 47 01.1**	**0.0**
PLOR	**Plostina**	**0.16**	**5**	⇑ *i*P	**Pn**	**21 46 47.3**	**+0.2**
PLOR	**Plostina**	**0.16**	**5**	S	**Sn**	**21 47 01.1**	**0.0**
PLOR	**Plostina**	**0.16**	**5**	⇑ *i*P	**Pn**	**21 46 47.3**	**+0.2**
PLOR				*i* S	**Sn**	**21 47 01.1**	**0.0**
VRI	**Vrincioaia**	**0.19**	**21**	⇓ *i*P	**Pn**	**21 46 47.5**	**+0.3**
VRI				*i* S	**Sn**	**21 47 01.1**	**-0.1**
VRI	**Vrincioaia**	**0.19**	**21**	⇓ *i*P	**Pn**	**21 46 47.5**	**+0.3**
VRI	**Vrincioaia**	**0.19**	**21**	S	**Sn**	**21 47 01.1**	**-0.1**
VRI	**Vrincioaia**	**0.19**	**21**	⇓ *i*P	**Pn**	**21 46 47.5**	**+0.3**
VRI				*i* S	**Sn**	**21 47 01.1**	**-0.1**
ODB	**Odobesti**	**0.31**	**74**	⇓ *i*P	**Pn**	**21 46 48.7**	**+1.2**
ODB	**Odobesti**	**0.31**	**74**	⇓ *i*P	**Pn**	**21 46 48.7**	**+1.2**
ODB	**Odobesti**	**0.31**	**74**	⇓ *i*P	**Pn**	**21 46 48.7**	**+1.2**
PETR		**0.42**	**85**	⇓ P	**Pn**	**21 46 48.7**	**+0.7**
PETR				S	**Sn**	**21 47 03.8**	**+1.2**
PETR		**0.42**	**85**	⇑ *i*P	**Pn**	**21 46 48.7**	**+0.7**
PETR				*i* S	**Sn**	**21 47 03.8**	**+1.2**
PETR		**0.42**	**85**	⇑ *i*P	**Pn**	**21 46 48.7**	**+0.7**
PETR		**0.42**	**85**	S	**Sn**	**21 47 03.8**	**+1.2**
PETR		**0.42**	**85**	⇑ *i*P	**Pn**	**21 46 48.7**	**+0.7**
PETR				*i* S	**Sn**	**21 47 03.8**	**+1.2**
MLR	**Muntele Rosu**	**0.52 248**		Pg	**Pn**	**21 46 48.9**	**+0.4**
100nm,0.3s,baz=90,slow=4.0,SNR=1096							
MLR				Lg		21 47 04.0	
69nm,0.3s,baz=49,slow=20,SNR=17							
MLR	**Muntele Rosu**	**0.52 248**		⇑ P	**Pn**	**21 46 48.9**	**+0.4**
MLR				S	**Sn**	**21 47 04.0**	**+0.6**
MLR	**Muntele Rosu**	**0.52 248**		⇑ *i*P	**Pn**	**21 46 48.9**	**+0.4**
MLR				*i* S	**Sn**	**21 47 04.0**	**+0.6**
MLR	**Muntele Rosu**	**0.52 248**		⇑ *i*P	**Pn**	**21 46 48.9**	**+0.4**
MLR	**Muntele Rosu**	**0.52 248**		S	**Sn**	**21 47 04.0**	**+0.6**
MLR	**Muntele Rosu**	**0.52 248**		⇑ *i*P	**Pn**	**21 46 48.9**	**+0.4**
MLR				*i* S	**Sn**	**21 47 04.0**	**+0.6**
ISR	**Istrita**	**0.57 186**		⇑ *i*P	**Pn**	**21 46 49.3**	**+0.5**
ISR	**Istrita**	**0.57 186**		⇑ *i*P	**Pn**	**21 46 49.3**	**+0.5**
ISR	**Istrita**	**0.57 186**		⇑ *i*P	**Pn**	**21 46 49.3**	**+0.5**
SULR		**1.04 195**		⇓ P	**Pn**	**21 46 53.2**	**+0.6**
SULR				S	**Sn**	**21 47 11.5**	**+0.9**
SULR		**1.04 195**		⇑ *i*P	**Pn**	**21 46 53.2**	**+0.7**
SULR				*i* S	**Sn**	**21 47 11.5**	**+0.9**
SULR		**1.04 195**		⇑ *i*P	**Pn**	**21 46 53.2**	**+0.7**
SULR		**1.04 195**		S	**Sn**	**21 47 11.5**	**+0.9**
SULR		**1.04 195**		⇑ *i*P	**Pn**	**21 46 53.2**	**+0.7**
SULR				*i* S	**Sn**	**21 47 11.5**	**+0.9**
CFR	**Carcaliu**	**1.18 115**		⇑ P	**Pn**	**21 46 53.8**	**+0.1**
CFR				S	**Sn**	**21 47 12.1**	**-0.8**
CFR	**Carcaliu**	**1.18 115**		⇑ *i*P	**Pn**	**21 46 53.8**	**0.0**
CFR				*i* S	**Sn**	**21 47 12.1**	**-0.7**
CFR	**Carcaliu**	**1.18 115**		⇑ *i*P	**Pn**	**21 46 53.8**	**0.0**
CFR	**Carcaliu**	**1.18 115**		S	**Sn**	**21 47 12.1**	**-0.7**
CFR	**Carcaliu**	**1.18 115**		⇑ *i*P	**Pn**	**21 46 53.8**	**0.0**
CFR				*i* S	**Sn**	**21 47 12.1**	**-0.7**
AMRR	**Amara**	**1.19 155**		⇑ P	**Pn**	**21 46 54.4**	**+0.4**
AMRR				S	**Sn**	**21 47 13.4**	**+0.4**
AMRR	**Amara**	**1.19 155**		⇑ *i*P	**Pn**	**21 46 54.3**	**+0.4**
AMRR				*i* S	**Sn**	**21 47 13.4**	**+0.4**
AMRR	**Amara**	**1.19 155**		⇑ *i*P	**Pn**	**21 46 54.3**	**+0.4**
AMRR	**Amara**	**1.19 155**		S	**Sn**	**21 47 13.4**	**+0.4**
AMRR	**Amara**	**1.19 155**		⇑ *i*P	**Pn**	**21 46 54.3**	**+0.4**
AMRR				*i* S	**Sn**	**21 47 13.4**	**+0.4**
LEOM	**Leova**	**1.37**	**55**	⇓ *i*P	**Pn**	**21 46 56.1**	**+0.3**
LEOM				*i* S	**Sn**	**21 47 16.4**	**0.0**
LEOM	**Leova**	**1.37**	**55**	⇓ *i*P	**Pn**	**21 46 56.1**	**+0.3**
LEOM	**Leova**	**1.37**	**55**	S	**Sn**	**21 47 16.4**	**0.0**
LEOM	**Leova**	**1.37**	**55**	⇓ *i*P	**Pn**	**21 46 56.1**	**+0.3**
LEOM				*i* S	**Sn**	**21 47 16.4**	**0.0**
BUC1	**Bucharest**	**1.41 198**		⇑ P	**Pn**	**21 46 56.4**	**+0.2**
BUC1				S	**Sn**	**21 47 17.0**	**-0.1**
BUC1	**Bucharest**	**1.41 198**		⇑ *i*P	**Pn**	**21 46 56.4**	**+0.2**
BUC1				*i* S	**Sn**	**21 47 17.0**	**-0.1**
BUC1	**Bucharest**	**1.41 198**		⇑ *i*P	**Pn**	**21 46 56.4**	**+0.2**
BUC1	**Bucharest**	**1.41 198**		S	**Sn**	**21 47 17.0**	**-0.1**
BUC1	**Bucharest**	**1.41 198**		⇑ *i*P	**Pn**	**21 46 56.4**	**+0.2**
BUC1				*i* S	**Sn**	**21 47 17.0**	**-0.1**
TLCR		**1.62 107**		⇑ P	**Pn**	**21 46 58.5**	**0.0**
TLCR				S	**Sn**	**21 47 21.1**	**-0.1**
TLCR		**1.62 107**		⇓ *i*P	**Pn**	**21 46 58.5**	**0.0**
TLCR				*i* S	**Sn**	**21 47 21.1**	**-0.1**
TLCR		**1.62 107**		⇓ *i*P	**Pn**	**21 46 58.5**	**0.0**
TLCR		**1.62 107**		S	**Sn**	**21 47 21.1**	**-0.1**
TLCR		**1.62 107**		⇓ *i*P	**Pn**	**21 46 58.5**	**0.0**
TLCR				*i* S	**Sn**	**21 47 21.1**	**-0.1**
IAS	**Iasi**	**1.64**	**23**	⇑ P	**Pn**	**21 46 58.5**	**-0.2**
IAS	**Iasi**	**1.64**	**23**	⇑ *i*P	**Pn**	**21 46 58.5**	**-0.2**
IAS				*i* S	**Sn**	**21 47 20.6**	**-1.0**
IAS	**Iasi**	**1.64**	**23**	⇑ *i*P	**Pn**	**21 46 58.5**	**-0.2**
IAS	**Iasi**	**1.64**	**23**	S	**Sn**	**21 47 20.6**	**-1.0**
IAS	**Iasi**	**1.64**	**23**	⇑ *i*P	**Pn**	**21 46 58.5**	**-0.2**
IAS				*i* S	**Sn**	**21 47 20.6**	**-1.0**
CVD	**Cernavoda**	**1.70 144**		⇑ P	**Pn**	**21 46 59.5**	**+0.1**
CVD				S	**Sn**	**21 47 21.4**	**-1.4**
CVD	**Cernavoda**	**1.70 144**		⇑ *i*P	**Pn**	**21 46 59.5**	**+0.1**
CVD	**Cernavoda**	**1.70 144**		⇑ *i*P	**Pn**	**21 46 59.5**	**+0.1**
CVD	**Cernavoda**	**1.70 144**		⇑ *i*P	**Pn**	**21 46 59.5**	**+0.1**
CVD				S	**Sn**	**21 47 21.4**	**-1.4**
TIRR	**Tirgusor**	**1.76 134**		⇑ P	**Pn**	**21 47 00.3**	**+0.1**
TIRR				S	**Sn**	**21 47 22.8**	**-1.4**
TIRR	**Tirgusor**	**1.76 134**		⇑ *i*P	**Pn**	**21 47 00.3**	**+0.1**
TIRR	**Tirgusor**	**1.76 134**		⇑ *i*P	**Pn**	**21 47 00.3**	**+0.1**
TIRR	**Tirgusor**	**1.76 134**		⇑ *i*P	**Pn**	**21 47 00.3**	**+0.1**
TIRR				S	**Sn**	**21 47 22.8**	**-1.4**
KIS	**Kishinev**	**2.00**	**48**	⇓ *i*P	**Pn**	**21 47 02.0**	**-1.0**
500nm,0.5s							
KIS				*i* S	**Sn**	**21 47 27.0**	**-2.2**
1μm,0.5s							
KIS	**Kishinev**	**2.00**	**48**	⇓ P	**Pn**	**21 47 03.0**	**0.0**
KIS				S	**Sn**	**21 47 28.0**	**-1.2**
KIS	**Kishinev**	**2.00**	**48**	⇓ *i*P	**Pn**	**21 47 03.0**	**0.0**
KIS				*i* S	**Sn**	**21 47 28.0**	**-1.2**
KIS	**Kishinev**	**2.00**	**48**	⇓ *i*P	**Pn**	**21 47 03.0**	**0.0**
KIS	**Kishinev**	**2.00**	**48**	S	**Sn**	**21 47 28.0**	**-1.2**
KIS	**Kishinev**	**2.00**	**48**	⇓ *i*P	**Pn**	**21 47 03.0**	**0.0**
KIS				*i* S	**Sn**	**21 47 28.0**	**-1.2**
BURAR	**Bucovina Array**	**2.16 334**		⇓ P	**Pn**	**21 47 06.1**	**+1.3**
BURAR	**Bucovina Array**	**2.16 334**		⇑ *i*P	**Pn**	**21 47 06.1**	**+1.3**
BURAR	**Bucovina Array**	**2.16 334**		⇑ *i*P	**Pn**	**21 47 06.1**	**+1.3**
BURAR	**Bucovina Array**	**2.16 334**		⇑ *i*P	**Pn**	**21 47 06.1**	**+1.3**
BUR08	**Bucovina Ar. S**	**2.19 334**		*e*Pn	**Pn**	**21 47 06.0**	**+0.8**
BUR08				Sn	**Sn**	**21 47 41.6**	**+8.3**
BUR08	**Bucovina Ar. S**	**2.19 334**		*e*Pn	**Pn**	**21 47 06.0**	**+0.8**
ZIMR		**2.22 204**		⇑ *i*P	**Pn**	**21 47 05.4**	**-0.3**
ZIMR		**2.22 204**		⇑ *i*P	**Pn**	**21 47 05.4**	**-0.3**
PSN	**Preselentsi**	**2.29 151**		Pn	**Pn**	**21 47 06.3**	**-0.3**
PSN				Sn	**Sn**	**21 47 35.2**	**-0.3**
PSN	**Preselentsi**	**2.29 151**		Pn	**Pn**	**21 47 06.3**	**-0.2**
PSN				Sn	**Sn**	**21 47 35.2**	**-0.4**
NEF	**NEVSHA**	**2.47 169**		Pn	**Pn**	**21 47 08.6**	**-0.1**
NEF				Sn	**Sn**	**21 47 39.0**	**-0.4**
NEF	**NEVSHA**	**2.47 169**		Pn	**Pn**	**21 47 08.6**	**-0.1**
NEF				Sn	**Sn**	**21 47 39.0**	**-0.5**
PVL	**Pavlikeni**	**2.64 201**		Pn	**Pn**	**21 47 11.6**	**+0.7**
PVL	**Pavlikeni**	**2.64 201**		Pn	**Pn**	**21 47 11.6**	**+0.7**
AVR	**AVREN**	**2.67 163**		Pn	**Pn**	**21 47 12.2**	**+0.8**
AVR	**AVREN**	**2.67 163**		Pn	**Pn**	**21 47 12.2**	**+0.8**
GZR	**Gura Zlata**	**2.72 265**		⇑ P	**Pn**	**21 47 12.2**	**+0.3**
GZR				S	**Sn**	**21 47 45.2**	**0.0**
GZR	**Gura Zlata**	**2.72 265**		⇓ *i*P	**Pn**	**21 47 12.2**	**+0.3**
GZR				*i* S	**Sn**	**21 47 45.2**	**0.0**
GZR	**Gura Zlata**	**2.72 265**		⇓ *i*P	**Pn**	**21 47 12.2**	**+0.3**
GZR	**Gura Zlata**	**2.72 265**		S	**Sn**	**21 47 45.2**	**0.0**
GZR	**Gura Zlata**	**2.72 265**		⇓ *i*P	**Pn**	**21 47 12.2**	**+0.3**
GZR				*i* S	**Sn**	**21 47 45.2**	**0.0**
DRGR		**2.93 293**		⇑ P	**Pn**	**21 47 13.8**	**-0.8**
DRGR		**2.93 293**		⇓ *i*P	**Pn**	**21 47 13.8**	**-0.8**
DRGR		**2.93 293**		⇓ *i*P	**Pn**	**21 47 13.8**	**-0.8**
DRGR		**2.93 293**		⇓ *i*P	**Pn**	**21 47 13.8**	**-0.8**
JMB	**Yambol**	**3.22 181**		Pn	**Pn**	**21 47 18.0**	**-0.4**
JMB	**Yambol**	**3.22 181**		Pn	**Pn**	**21 47 18.0**	**-0.4**
BZS	**Buzias**	**3.52 271**		*e*Pn	**Pn**	**21 47 21.7**	**-0.5**
BZS	**Buzias**	**3.52 271**		⇓ P	**Pn**	**21 47 22.4**	**+0.2**
BZS	**Buzias**	**3.52 271**		⇑ *i*P	**Pn**	**21 47 22.4**	**+0.2**
BZS	**Buzias**	**3.52 271**		⇑ *i*P	**Pn**	**21 47 22.4**	**+0.2**
BZS	**Buzias**	**3.52 271**		*e*Pn	**Pn**	**21 47 21.7**	**-0.5**
BZS	**Buzias**	**3.52 271**		⇑ *i*P	**Pn**	**21 47 22.4**	**+0.2**
ZAPS	**Zavoj**	**3.74 231**		*e*Pn	**Pn**	**21 47 24.5**	**-0.7**
ZAPS				*e*Sn	**Sn**	**21 47 58.1**	**-11**
NISS		**4.05 237**		*e*Pn	**Pn**	**21 47 28.7**	**-0.5**
NISS				*e*Sn	**Sn**	**21 48 03.2**	**-13**
NISS		**4.05 237**		*e*Pn	**Pn**	**21 47 28.7**	**-0.5**
KDZ	**Kurdzhali**	**4.13 193**		Pn	**Pn**	**21 47 30.9**	**+0.6**
KDZ	**Kurdzhali**	**4.13 193**		Pn	**Pn**	**21 47 31.0**	**+0.7**
RZN	**Rozhen**	**4.23 200**		Pn	**Pn**	**21 47 32.1**	**+0.4**
RZN	**Rozhen**	**4.23 200**		Pn	**Pn**	**21 47 32.1**	**+0.4**
BARS	**Barje**	**4.49 232**		*e*Pn	**Pn**	**21 47 34.0**	**-1.1**
BARS	**Barje**	**4.49 232**		*e*Pn	**Pn**	**21 47 34.0**	**-1.1**
TRUS	**Trudelj**	**4.65 254**		*e*Pn	**Pn**	**21 47 35.0**	**-2.2**
TRUS	**Trudelj**	**4.65 254**		*e*Pn	**Pn**	**21 47 35.0**	**-2.2**
DIVS	**Divibare**	**4.98 254**		*e*Pn	**Pn**	**21 47 40.1**	**-1.4**
DIVS				*e*Sn	**Sn**	**21 48 23.7**	**-14**
DIVS	**Divibare**	**4.98 254**		*e*Pn	**Pn**	**21 47 40.1**	**-1.4**
AKASG	**Malin Array Be**	**5.31**	**18**	Pn	**Pn**	**21 47 45.0**	**-0.8**
1.7nm,0.3s,baz=203,slow=11,SNR=4.3							
AKASG				Sn	**Sn**	**21 48 42.2**	**-3.8**
4.1nm,0.3s,baz=202,slow=21,SNR=16							
AKASG	**Malin Array Be**	**5.31**	**18**	Pn	**Pn**	**21 47 45.0**	**-0.8**
AKASG				Sn	**Sn**	**21 48 42.2**	**-3.8**
AKASG	**Malin Array Be**	**5.31**	**18**	Pn	**Pn**	**21 47 45.0**	**-0.9**
AKASG				Sn	**Sn**	**21 48 42.2**	**-3.8**
GNI	**Garni**	**14.37 106**		LR	LR	21 55 50.8	
comp=Z,118nm,19.2s,baz=341,slow=42							
HGN	**Heimansgroeve**	**14.68 298**		*e*SS		22 01 47.7	
FINES	**FINESS Array B**	**15.79 359**		Pn	**Pn**	**21 50 02.9**	**-0.3**
0.4nm,0.3s,baz=165,slow=12,SNR=11							
FINES	**FINESS Array B**	**15.79 359**		Pn	**Pn**	**21 50 02.9**	**-0.3**
KAF	**Kangasniemi**	**16.46 359**		*ep*	**Pn**	**21 50 10.4**	**-1.0**
2.8nm,0.5s							
KAF	**Kangasniemi**	**16.46 359**		*ep*	**Pn**	**21 50 10.4**	**-1.0**
2.8nm,0.5s							
ARCES	**ARCESS Array B**	**23.92 359**		P	**P**	**21 51 39.2**	**+10**
1.7nm,0.8s,mb3.6,baz=175,slow=13,SNR=5.2							
ZALV	**Zalesovo Beam**	**37.47**	**56**	P	**P**	**21 53 29.7**	**+1.0**
0.9nm,0.5s,mb3.6,baz=286,slow=10,SNR=3.0							
MKAR	**Makanchi Array**	**37.83**	**68**	P	**P**	**21 53 33.0**	**+1.2**
0.3nm,0.5s,mb3.2,baz=299,slow=5.8,SNR=6.2							
SONM	**Songino Array**	**52.34**	**57**	P	**P**	**21 55 27.9**	**+1.6**
0.4nm,0.7s,mb3.2,baz=296,slow=6.5,SNR=3.8							

IDC 26 21:54:14.8±5.0, 21°.50N×144°.48E, h0km, mb3.8/6, mb1 3.8/6, mb1mx3.6/23, mbtmp3.8/6, Error ellipse: s-maj=228.4km s-min=88.4km az=38.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**21.40**	**322**	P	P	21 59 04.9	+0.7
1.1nm,0.5s,baz=146,slow=9.5,SNR=7.1							
SONM	**Songino Array**	**40.26**	**320**	P	P	22 01 53.1	-0.3
0.3nm,0.4s,baz=125,slow=6.7,SNR=4.1							
ZALV	**Zalesovo Beam**	**55.11**	**322**	P	P	22 03 48.0	-0.6
0.4nm,0.4s,baz=100,slow=7.5,SNR=2.9							
MKAR	**Makanchi Array**	**55.72**	**313**	P	P	22 03 53.5	+0.3
0.2nm,0.5s,baz=78,slow=16,SNR=5.8							
BVAR	**Borovoye Array**	**63.60**	**320**	P	P	22 04 47.5	+0.1
1.7nm,0.4s,baz=91,slow=7.5,SNR=15							
FINES	**FINESS Array B**	**83.87**	**335**	P	P	22 06 46.5	+0.3
0.8nm,0.3s,baz=62,slow=5.0,SNR=7.8							

*JMA **26** 22:23:41.7±0.3, 23°.93N×122°.70E, h42km, M2.6*
*ISCJB **26** 22:23:42.2±0.3, 23°.86N±0°.03×122°.74E±0°.02, h33km, Error ellipse: s-maj=3.9km s-min=2.4km az=160.8*
*TAP **26** 22:23:43.6, 23°.90N×122°.63E, h51km±1km, ML3.3, C*
ISC 26 22:23:42.7±0.3, **23°.87N**±0°.03×**122°.75E**±0°.02, **h35**km, **n41**, σ**19**°**07**/74, **1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.64**	**22**	P	**Pn**	**22 23 53.9**	**-1.4**
YOJ				S	**Sn**	**22 24 02.2**	**-2.0**
HATJ	**Hateruma jima**	**0.99**	**79**	P	**Pn**	**22 23 59.7**	**-0.4**
HATJ				S	**Sn**	**22 24 13.1**	**+0.3**
IRIF	**Iriomote-Funau**	**1.01**	**63**	P	**Pn**	**22 23 59.8**	**-0.6**
IRIF				S	**Sn**	**22 24 13.9**	**+0.5**
HWA	**Hwalien**	**1.05 276**		*e*P	**Pn**	**22 24 00.6**	**-0.4**
baz=265							
ENA	**Nanau**	**1.07 301**		*e*P	**Pn**	**22 24 01.0**	**-0.3**
baz=301							
ENA				*e*S	**Sn**	**22 24 14.5**	**-0.5**
baz=301							
TWD	**Chiawan**	**1.07 281**		*e*P	**Pn**	**22 24 00.9**	**-0.3**
baz=279							
TWD				S	**Sn**	**22 24 13.3**	**-1.6**
baz=279							
TWC	**Suao**	**1.10 312**		*e*P	**Pn**	**22 24 01.9**	**+0.2**
baz=313							
TWC				*e*S	**Sn**	**22 24 14.6**	**-1.0**
baz=313							
ESL	**Shilin**	**1.20 268**		*e*P	**Pn**	**22 24 02.0**	**-1.1**
baz=256							
ESL				*e*S	**Sn**	**22 24 15.3**	**-2.9**
baz=256							
JKRS	**Kuro-shima**	**1.21**	**72**	P	**Pn**	**22 24 03.1**	**-0.1**
JKRS				*e*S	**Sn**	**22 24 19.7**	**+1.3**
TWE	**Neicheng**	**1.30 311**		*e*P	**Pn**	**22 24 05.1**	**+0.7**
baz=311							
TWE				*e*S	**Sn**	**22 24 21.1**	**+0.6**
baz=311							
ENTT	**Nioudou**	**1.32 306**		P	**Pn**	**22 24 05.1**	**+0.4**
baz=295							
ENTT				*e*S	**Sn**	**22 24 21.1**	**-0.1**
baz=295							
TWB1	**Santiao Chiao**	**1.33 329**		*e*P	**Pn**	**22 24 04.6**	**-0.1**
baz=331							
EHY	**Hungye**	**1.35 255**		P	**Pn**	**22 24 04.7**	**-0.5**
baz=250							
EHY				*e*S	**Sn**	**22 24 20.4**	**-1.5**
baz=250							
JIJ	**Ishigaki jima**	**1.37**	**69**	P	**Pn**	**22 24 04.5**	**-0.8**
JIJ				S	**Sn**	**22 24 21.3**	**-0.9**
NNS	**Nan Shan**	**1.38 295**		*e*P	**Pn**	**22 24 05.8**	**+0.4**
baz=293							
NNS				*e*S	**Sn**	**22 24 21.8**	**-0.7**
baz=293							
WHF	**Hehuan Shan**	**1.38 282**		⇓ *i*P	**Pn**	**22 24 05.7**	**+0.2**
baz=279							
WHF				*e*S	**Sn**	**22 24 22.0**	**-0.6**
baz=279							
TWF1	**Yuli**	**1.43 249**		P	**Pn**	**22 24 05.8**	**-0.3**
baz=244							
TWF1				*e*S	**Sn**	**22 24 22.9**	**-0.7**
baz=244							
NWF	**Wu-fen Shan**	**1.48 324**		*e*P	**Pn**	**22 24 07.0**	**+0.1**
baz=325							
TWT	**Tachien**	**1.48 285**		*e*P	**Pn**	**22 24 07.8**	**+0.8**
baz=282							
TWT				*e*S	**Sn**	**22 24 24.1**	**-1.0**
baz=282							
NSK	**Sanguang**	**1.50 303**		*e*P	**Pn**	**22 24 06.9**	**-0.2**
baz=301							
NSK				*e*S	**Sn**	**22 24 24.8**	**-0.7**
baz=301							
SMLT	**Sun Moon Lake**	**1.69 271**		*e*P	**Pn**	**22 24 10.3**	**+0.5**
baz=267	

LLP	Lapu-Lapu	2.55 228	eP	Pn	22 40 33.2 +1.4
LLP			eS	Sn	22 41 02.4 -1.0
TBP	Tagbilaran	3.08 220	eP	Pn	22 40 41.0 +2.0
OTRP	Odiongan	3.78 275	eP	Pn	22 40 50.6 +1.8
BUKP	Musuan	4.23 191	eP	Pn	22 40 59.0 +4.2
CUYO	Cuyo Island	4.91 256	eP	Pn	22 41 07.0 +2.7
DAV	Davao City (W)	4.96 183	Pn	Pn	22 41 03.2 -1.9
BALP	Baler	5.55 312	eP	Pn	22 41 12.8 -0.3
CAUP	Cauayan	6.25 322	eP	Pn	22 41 23.2 +0.6
KKM	Kota Kinabalu	11.26 239	Pn	Pn	22 42 30.0 -1.4
NACB	Ninganchiao	12.72 342	ePn	Pn	22 42 50.8 -0.5
KSM	Kuching	18.68 237	P	Pn	22 44 08.3 -1.0
KSRS	Korea Array	25.35 4	P	P	22 45 18.9 +1.1
	0.4nm,0.3s,mb3.4,baz=178,slow=11,SNR=4.7				
KULM	Kulim	25.81 257	eP	P	22 45 22.5 +0.2
CMAR	Chiang Mai Arr	26.73 287	P	P	22 45 30.7 +0.2
	0.8nm,0.4s,mb3.6,baz=97,slow=7.4,SNR=6.7				
CHTO	Chiang Mai	26.80 288	eP	P	22 45 30.9 -0.2
FITZ	Fitzroy Crossi	29.97 180	P	P	22 45 59.0 -0.4
	1.2nm,0.7s,mb3.8,baz=25,slow=14,SNR=3.8				
FITZ	Fitzroy Crossi	29.97 180	eP	P	22 45 59.0 -0.4
WRAB	Tennant Creek	32.87 165	eP	P	22 46 24.4 -0.5
	2.2nm,0.8s,mb4.1				
WRA	Warramunga Arr	32.87 165	P	P	22 46 23.2 -1.7
	0.5nm,0.9s,mb3.4,baz=346,slow=9.1,SNR=2.9				
ASAR	Alice Springs	36.36 168	P	P	22 46 55.9 +0.8
	0.5nm,0.4s,mb3.8,baz=344,slow=7.3,SNR=7.8				
ULN	Ulaanbaatar	39.02 340	P	P	22 47 17.6 +0.3
SONM	Songino Array	39.22 339	P	P	22 47 19.2 +0.2
	0.4nm,0.7s,mb3.2,baz=154,slow=8.0,SNR=3.4				
PALK	Pallekele	44.75 268	P	P	22 48 04.0 -0.7
STKA	Stephens Creek	46.21 161	P	P	22 48 16.6 +0.7
	2.2nm,0.9s,mb4.1,baz=330,slow=9.1,SNR=3.9				
STKA	Stephens Creek	46.21 161	eP	P	22 48 16.6 +0.7
	0.5nm,0.7s,mb3.5				
YAK	Yakutsk	49.97 2	P	P	22 48 45.0 +0.4
MK31	Makanchi Array	50.38 322	eP	P	22 48 48.1 +0.1
MKAR	Makanchi Array	50.38 322	P	P	22 48 48.5 +0.5
	2.4nm,0.7s,mb4.3,baz=96,slow=12,SNR=26				
ZALV	Zalesovo Beam	52.88 331	P	P	22 49 06.5 -0.1
	0.6nm,0.6s,mb3.7,baz=128,slow=2.4,SNR=4.4				
UCH	Uchtor	53.66 314	eP	P	22 49 13.0 +0.5
	3.4nm,0.9s,mb4.3				
AML	Almayashu	54.21 314	eP	P	22 49 16.2 -0.3
	1.3nm,0.4s,mb4.2				
EKS2	Erkin-Say	54.31 314	eP	P	22 49 16.7 -0.6
	1.8nm,0.8s,mb4.0				
KURK	Kurchatov	54.39 325	eP	P	22 49 17.9 +0.2
	10nm,0.9s,mb4.8				
BVAR	Borovoye Array	59.99 325	P	P	22 49 57.5 +0.2
	2.4nm,0.8s,mb4.2,baz=119,slow=8.6,SNR=16				
BRVK	Borovoye	60.06 325	eP	P	22 49 57.5 -0.3
	5.0nm,0.9s,mb4.5				
ARU	Arti	67.53 326	eP	P	22 50 46.4 -0.6
	1.9nm,0.5s,mb4.4				
KIV	Kislovodsk	76.86 313	P	P	22 51 42.4 -0.7
PMR	Palmer	77.11 29	eP	P	22 51 44.3 +0.2
ARCES	ARCESS Array B	82.39 340	P	P	22 52 12.7 0.0
	5.3nm,1.0s,mb4.4,baz=74,slow=5.6,SNR=9.9				
FINES	FINESS Array B	84.14 332	P	P	22 52 21.6 -0.2
	2.1nm,0.6s,mb4.4,baz=90,slow=7.6,SNR=7.6				
AKASG	Malin Array Be	84.94 321	P	P	22 52 25.1 -1.1
	0.7nm,0.5s,mb4.1,baz=64,slow=4.3,SNR=4.7				
RES	Resolute Bay	89.81 10	eP	P	22 52 48.9 -0.3
SUMG	Summit	94.92 355	eP	P	22 53 12.8 -0.1
	13nm,1.8s,mb5.1				
NEW	Newport	98.18 37	eP	P	22 53 27.9 -0.2

*ROM **26** 22:40:31.5±0.1, 41.71N×15.76E, h4km, Md2.7/32, Ml2.3/23, Error ellipse: s-maj=2.0km s-min=1.5km az=24.0*
*CSEM **26** 22:40:31.7±0.2, 41.71N×15.76E, h5km, ML3.4/7, Error ellipse: s-maj=3.5km s-min=2.6km az=18.0*
*ISCJB **26** 22:40:31.1±0.4, 41.74N±0.02×15.77E±0.02, h10km±2km, Error ellipse: s-maj=3.9km s-min=2.8km az=29.8*

ISC 26 22:40:31.6±0.4, 41.75N±0.02×15.77E±0.03, h9km±2km, n71, σ1.902/103, 2C, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGRT	San Giovanni R	0.02	277	⇑iPg	Pg	22 40 33.2	-0.1
SGRT				Sg	Sg	22 40 34.4	0.0
SGRT	San Giovanni R	0.02	277	⇑iPg	Pg	22 40 33.2	-0.1
SGRT				Sg	Sg	22 40 34.4	0.0
MSAG	Monte S. Angel	0.11	111	Pg	Pg	22 40 34.3	0.0
MSAG				Sg	Sg	22 40 36.5	+0.3
	900nm,0.5s						
MSAG	Monte S. Angel	0.11	111	Pg	Pg	22 40 34.3	0.0
MSAG				Sg	Sg	22 40 36.5	+0.3
	900nm,0.5s						
MS1	Monte Sant'Ang	0.14	110	ePg	Pg	22 40 34.8	+0.1
MS1				eSg	Sg	22 40 37.8	+1.0
RGNG	Rignano Grg	0.16	240	Pg	Pg	22 40 34.3	-0.7
RGNG				Sg	Sg	22 40 36.3	-1.0
RGNG	Rignano Grg	0.16	240	Pg	Pg	22 40 34.3	-0.7
RGNG				Sg	Sg	22 40 36.3	-1.0
FG2	Serracapriola	0.46	277	Pg	Pg	22 40 40.4	-0.1
FG2	Serracapriola	0.46	277	Pg	Pg	22 40 40.4	-0.1
MOCO	Biccari - m.te	0.60	230	Pg	Pg	22 40 42.9	-0.3
	54nm,0.8s						
FG5	Orsara di Pugl	0.60	219	Pg	Pg	22 40 43.5	+0.2
	24nm,0.3s						
FG5	Orsara di Pugl	0.60	219	Pg	Pg	22 40 43.5	+0.2
	24nm,0.3s						
CIGN	Sant'Elia a Pi	0.65	262	Pg	Pg	22 40 44.1	-0.2
	26nm,0.4s						
CIGN	Sant'Elia a Pi	0.65	262	Pg	Pg	22 40 44.1	-0.2
	26nm,0.4s						
SGTA	Sant Agata di	0.69	206	Pg	Pg	22 40 44.2	-0.7
	116nm,0.3s						
SGTA	Sant Agata di	0.69	206	Pg	Pg	22 40 44.2	-0.7
	116nm,0.3s						
MRVN	Minervino Murg	0.76	155	Pg	Pg	22 40 44.4	-1.9
MRVN				Sg	Sg	22 40 56.5	+0.3
	143nm,0.3s						
MRVN	Minervino Murg	0.76	155	Pg	Pg	22 40 44.4	-1.9
MRVN				Sg	Sg	22 40 56.5	+0.3
	143nm,0.3s						
VULT	Monte Vulture	0.81	188	Pg	Pg	22 40 46.5	-0.6
VULT				Sg	Sg	22 40 59.2	+1.6
	186nm,0.4s						
VULT	Monte Vulture	0.81	188	Pg	Pg	22 40 46.5	-0.6
PALZ	Palazzo San Ge	0.82	170	Pg	Pg	22 40 46.3	-1.1
PALZ				Sg	Sg	22 40 59.9	+1.8
	146nm,0.5s						
PALZ	Palazzo San Ge	0.82	170	Pg	Pg	22 40 46.3	-1.1
CAFE	Carife	0.83	209	Pg	Pg	22 40 47.0	-0.5
	25nm,0.4s						
CAFE	Carife	0.83	209	Pg	Pg	22 40 47.0	-0.5
	25nm,0.4s						
MRB1	Monte Rocchett	0.86	224	Pg	Pg	22 40 48.6	+0.3
	68nm,0.6s						
MRB1	Monte Rocchett	0.86	224	Pg	Pg	22 40 48.6	+0.3
	68nm,0.6s						
SACR	S. Croce Del S	0.87	246	Pg	Pg	22 40 48.6	+0.2
SACR				Sg	Sg	22 41 02.6	+2.8
SACR	S. Croce Del S	0.87	246	Pg	Pg	22 40 48.6	+0.2
BSSO	Busso	0.90	257	Pg	Pg	22 40 50.2	+1.2
	37nm,0.4s						
BSSO	Busso	0.90	257	Pg	Pg	22 40 50.2	+1.2
	37nm,0.4s						
SNAL	S. Angelo Dei	0.93	207	Pg	Pg	22 40 48.5	-1.0
SNAL				Sg	Sg	22 41 03.4	+1.9
	76nm,0.5s						
SNAL	S. Angelo Dei	0.93	207	Pg	Pg	22 40 48.5	-1.0
ACER	Acerenza	0.97	172	Pg	Pg	22 40 49.7	-0.6
ACER				Sg	Sg	22 41 03.9	+0.9
	144nm,0.4s						
ACER	Acerenza	0.97	172	Pg	Pg	22 40 49.7	-0.6
ACER				Sg	Sg	22 41 03.9	+0.9
	144nm,0.4s						
MRLC	Muro Lucano	1.02	192	Pg	Pg	22 40 50.1	-1.1
MRLC				Sg	Sg	22 41 05.3	+0.9
	114nm,0.6s						
MRLC	Muro Lucano	1.02	192	Pg	Pg	22 40 50.1	-1.1
MRLC				Sg	Sg	22 41 05.3	+0.9
	114nm,0.6s						
AMUR	Altamura	1.05	143	Pg	Pg	22 40 50.7	-1.2
AMUR				Sg	Sg	22 41 05.8	+0.3
	112nm,0.5s						
AMUR	Altamura	1.05	143	Pg	Pg	22 40 50.7	-1.2
AMUR				Sg	Sg	22 41 05.8	+0.3
	112nm,0.5s						
CSSN	Cassano Irpino	1.05	212	Pg	Pg	22 40 51.4	-0.4
	17nm,0.4s						
CSSN	Cassano Irpino	1.05	212	Pg	Pg	22 40 51.4	-0.4
	17nm,0.4s						
BAI	Bari	1.05	127	ePg	Pg	22 40 51.2	-0.7
BAI				eSg	Sg	22 41 06.4	+0.8
MCRV	Calabrutti - M	1.07	205	Pg	Pg	22 40 51.1	-1.1
	218nm,0.9s						
MCRV	Calabrutti - M	1.07	205	Pg	Pg	22 40 51.1	-1.1
	218nm,0.9s						
SGG	Gregorio Mates	1.10	251	Pg	Pg	22 40 53.6	+0.8
SGG	Gregorio Mates	1.10	251	Pg	Pg	22 40 53.6	+0.8
MIDA	Miranda	1.14	265	Pg	Pg	22 40 53.1	-0.4
MIDA	Miranda	1.14	265	Pg	Pg	22 40 53.1	-0.4
SG1	Sgolgore (BA)	1.14	143	ePg	Pg	22 40 52.8	-0.7
SG1				eSg	Sg	22 41 08.5	+0.2
LPEL	Lama dei Pelig	1.22	284	Pg	Pg	22 40 55.2	+0.2
LPEL				Sg	Sg	22 41 13.6	+2.7
LPEL	Lama dei Pelig	1.22	284	Pg	Pg	22 40 55.2	+0.2
PTRP	Pietrapertosa	1.25	170	Pg	Pg	22 40 55.4	-0.2
	125nm,0.6s						
PTRP	Pietrapertosa	1.25	170	Pg	Pg	22 40 55.4	-0.2
	125nm,0.6s						
MIGL	Miglionico	1.25	156	Pg	Pn	22 40 54.1	-1.2
MIGL				Sg	Sg	22 41 12.2	+0.2
	271nm,0.4s						
MIGL	Miglionico	1.25	156	Pg	Pn	22 40 54.1	-1.2
MIGL				Sg	Sg	22 41 12.2	+0.2
	271nm,0.4s						
CDRU	Civita di Ruta	1.31	196	Pg	Pn	22 40 54.7	-1.3
	26nm,0.5s						
CDRU	Civita di Ruta	1.31	196	Pg	Pn	22 40 54.7	-1.3
	26nm,0.5s						
MATE	Matera	1.31	147	Pg	Pg	22 40 55.8	-0.9
MATE	Matera	1.31	147	Pg	Pg	22 40 55.8	-0.9
NOCI	Noci	1.37	134	Pg	Pn	22 40 55.3	-1.6
	77nm,0.3s						
LTRZ	Laterza	1.40	145	Pg	Pn	22 40 56.8	-0.4
LTRZ				Sg	Sg	22 41 16.5	0.0
	91nm,0.4s						
LTRZ	Laterza	1.40	145	Pg	Pn	22 40 56.8	-0.4
LTRZ				Sg	Sg	22 41 16.5	0.0
	91nm,0.4s						
MCEL	Monticello	1.43	179	Pg	Pn	22 40 57.1	-0.5
	26nm,0.5s						
MCEL	Monticello	1.43	179	Pg	Pn	22 40 57.1	-0.5
	26nm,0.5s						
MTSN	Montesano sull	1.48	180	Pg	Pn	22 40 57.1	-1.4
	28nm,0.6s						
PE1	Pezze di Greco	1.57	127	ePn	Pn	22 41 00.4	+0.8
PE1				eSn	Sn	22 41 22.1	+2.2
SIRI	Monte Sirino -	1.57	177	Pg	Pn	22 40 58.5	-1.1
	25nm,0.3s						
TAR1	Taranto	1.68	136	ePn	Pn	22 41 03.0	+1.9
TAR1				eSn	Sn	22 41 26.0	+3.3
STON	Ston	1.82	51	ePn	Pn	22 41 06.0	+3.0
STON				Sn	Sn	22 41 26.0	-0.2
STON	Ston	1.82	51	ePn	Pn	22 41 05.9	+2.9
STON				Sn	Sn	22 41 25.9	-0.3
NVLJ	Novalja	2.88	347	ePn	Pn	22 41 17.9	+0.2
NVLJ				Sn	Sn	22 41 53.0	+0.5
NVLJ	Novalja	2.88	347	ePn	Pn	22 41 17.9	+0.2
NVLJ				Sn	Sn	22 41 52.9	+0.4

*CSEM **26** 22:45:10.7, 38.55N×21.66E, h14km, ML1.9/5, After THE*

THE 26 22:45:10.7, 38.55N×21.66E, h14km±4km, ML1.9/5, Error ellipse: s-maj=4.4km s-min=0.7km az=116.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	Efpalio	0.23	121	P	Pg	22 45 15.3	-0.4
EFP				S	Sg	22 45 19.4	+0.2
EFP	Efpalio	0.23	121	ePN	Pg	22 45 15.3	-0.4
EFP	Efpalio	0.23	121	ePn	Pg	22 45 15.3	-0.4
EFP	Efpalio	0.23	121	P	Pg	22 45 15.3	-0.4
EFP				S	Sg	22 45 19.4	+0.2
UPR	University Cam	0.28	159	P	Pg	22 45 16.3	-0.3
UPR				S	Sg	22 45 21.9	+1.3
UPR	University Cam	0.28	159	P	Pg	22 45 16.3	-0.3
UPR				S	Sg	22 45 21.9	+1.3
TRIZ	Trizonia	0.37	119	P	Pg	22 45 17.6	-0.7
TRIZ				S	Sg	22 45 23.6	+0.2
TRIZ	Trizonia	0.37	119	P	Pg	22 45 17.6	-0.7
TRIZ				S	Sg	22 45 23.6	+0.2
LAKA	Lakka	0.40	140	P	Pg	22 45 18.9	+0.2
LAKA				S	Sg	22 45 24.8	+0.7
LAKA	Lakka	0.40	140	P	Pg	22 45 18.9	+0.2
LAKA				S	Sg	22 45 24.8	+0.7
KALE	Kalithea	0.41	112	P	Pg	22 45 18.7	-0.2
KALE				S	Sg	22 45 25.8	+1.3
KALE	Kalithea	0.41	112	P	Pg	22 45 18.7	-0.2
KALE				S	Sg	22 45 25.8	+1.3
DSF	Desfina	0.70	101	P	Pg	22 45 23.5	-0.8
DSF				S	Sg	22 45 34.4	+0.9
DSF	Desfina	0.70	101	P	Pg	22 45 23.5	-0.8
DSF				S	Sg	22 45 34.4	+0.9
AGG	Agios Georgios	0.71	48	P	Pg	22 45 24.3	-0.2
AGG				S	Sg	22 45 34.3	+0.4
AGG	Agios Georgios	0.71	48	P	Pg	22 45 24.3	-0.2
AGG				S	Sg	22 45 34.3	+0.4
LKD2	Lefkada island	0.82	287	P	Pg	22 45 26.6	0.0
LKD2	Lefkada island	0.82	287	P	Pg	22 45 26.6	0.0
VLS	Valsamata	0.92	247	P	Pb	22 45 27.6	-0.7
VLS	Valsamata	0.92	247	P	Pb	22 45 27.6	-0.7

KRSC 26 22:46:23.4±1.2, 49.23N×158.44E, h36km±35km, ML4.1, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	Alaid	2.48	312	P	Pn	22 47 03.2	+1.9
ALID				*i* S	Sn	22 47 32.5	+2.2
MIPR	Malaya Ipel'ka	3.23	341	eP	Pn	22 47 13.5	+2.0
SPN	Mys Shipunski	4.00	14	eP	Pn	22 47 26.1	+4.0
SPN				*i* S	Sn	22 48 10.8	+3.1
AVH	Avacha	4.04	3	eP	Pn	22 47 26.9	+4.2
AVH				eS	Sn	22 48 13.6	+4.8
GNL	Ganaly	4.48	356	eP	Pn	22 47 32.5	+3.8
MKZ	Mys Kozlova	5.71	20	eP	Pn	22 47 49.0	+3.4
MKZ				*i* S	Sn	22 48 51.4	+1.6
KBTR	Krutoberegovo	7.48	19	eP	Pn	22 48 14.5	+4.7

*ATH **26** 23:18:13.4, 38.10N×21.61E, h23km±1km, MD3.0/8*
*THE **26** 23:18:13.8, 38.12N×21.61E, h21km±1km, ML2.4/6, Error ellipse: s-maj=1.7km s-min=0.4km az=3.0*
*NEIC **26** 23:18:13.4, 38.10N×21.61E, h23km, MD3.0(ATH), After ATH.*
*CSEM **26** 23:18:13.7±0.1, 38.13N×21.61E, h20km, MD3.0, Error ellipse: s-maj=4.7km s-min=2.7km az=165.0*
*ISCJB **26** 23:18:13.9±0.5, 38.11N±0.05×21.61E±0.03, h22km±5km, Error ellipse: s-maj=7.9km s-min=3.9km az=165.9*

ISC 26 23:18:13.9±0.5, 38.12N±0.05×21.61E±0.03, h22km±5km, n35, σ0.960/55, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.12	242	ePb	Pb	23 18 18.1	-0.2
RLS				eSb	Sb	23 18 21.5	+0.2
RLS	Riolos of Patr	0.12	242	ePB	Pb	23 18 18.1	-0.2
RLS				eSB	Sb	23 18 21.5	+0.2
RLS	Riolos of Patr	0.12	242	ePb	Pb	23 18 18.1	-0.2
RLS				eSb	Sb	23 18 21.5	+0.2
UPR	University Cam	0.22	40	P	Pb	23 18 19.4	-0.1
UPR				S	Sb	23 18 23.2	-0.1
UPR	University Cam	0.22	40	ePB	Pb	23 18 19.4	-0.1
UPR	University Cam	0.22	40	P	Pb	23 18 19.4	-0.1
LAKA	Lakka	0.32	67	P	Pb	23 18 20.6	-0.4
LAKA				S	Sb	23 18 25.8	0.0
LAKA	Lakka	0.32	67	P	Pb	23 18 20.6	-0.4
LAKA				S	Sb	23 18 25.8	0.0
EFP	Efpalio	0.39	37	P	Pb	23 18 21.8	-0.3
EFP				S	Sb	23 18 28.3	+0.5
EFP	Efpalio	0.39	37	ePB	Pb	23 18 21.6	-0.5
EFP	Efpalio	0.39	37	ePb	Pb	23 18 21.6	-0.5
TRIZ	Trizonia	0.45	56	P	Pb	23 18 22.6	-0.4
TRIZ				S	Sb	23 18 29.8	+0.5
TRIZ	Trizonia	0.45	56	P	Pb	23 18 22.6	-0.4
TRIZ				S	Sb	23 18 29.8	+0.5
KALE	Kalithea	0.50	57	P	Pb	23 18 23.6	-0.4
KALE				S	Sb	23 18 31.2	+0.3
KALE	Kalithea	0.50	57	P	Pb	23 18 23.6	-0.4
KALE				S	Sb	23 18 31.2	+0.3
GUR	Goura	0.61	107	P	Pb	23 18 25.6	-0.2
GUR				S	Sb	23 18 34.9	+1.0
GUR	Goura	0.61	107	ePN	Pn	23 18 25.4	-1.8
GUR	Goura	0.61	107	P	Pb	23 18 25.6	-0.2
GUR				S	Sb	23 18 34.9	+1.0
KFL	Anninata	0.65	270	P	Pb	23 18 26.5	+0.1
DSF	Desfina	0.78	68	P	Pb	23 18 28.3	-0.5
DSF				S	Sb	23 18 39.1	+0.1
DSF	Desfina	0.78	68	P	Pb	23 18 28.3	-0.5
DSF				S	Sb	23 18 39.1	+0.1
VLS	Valsamata	0.80	275	ePb	Pb	23 18 28.6	-0.5
VLS				eSn	Sn	23 18 41.3	+0.2
VLS	Valsamata	0.80	275	P	Pb	23 18 28.8	-0.3
VLS				S	Sb	23 18 40.1	+0.6
VLS	Valsamata	0.80	275	ePB	Pb	23 18 28.6	-0.5
VLS				eSN	Sn	23 18 41.3	+0.2
VLS	Valsamata	0.80	275	P	Pb	23 18 28.8	-0.3
VLS				S	Sb	23 18 40.1	+0.6
VLS				eSn	Sn	23 18 41.3	+0.2
EVR	Evrytania	0.82	11	ePn	Pn	23 18 29.7	-0.3
EVR	Evrytania	0.82	11	ePN	Pn	23 18 29.7	-0.3
EVR	Evrytania	0.82	11	ePn	Pn	23 18 29.7	-0.3
LKD2	Lefkada island	1.00	312	P	Pb	23 18 32.0	-0.5
LKD2	Lefkada island	1.00	312	P	Pb	23 18 32.0	-0.5
AGG	Agios Georgios	1.07	32	ePn	Pn	23 18 35.0	+1.5
AGG	Agios Georgios	1.07	32	ePN	Pn	23 18 35.0	+1.5
AGG	Agios Georgios	1.07	32	ePn	Pn	23 18 35.0	+1.5
PYL	PYLOS	1.22	175	ePN	Pn	23 18 36.3	+0.7
PYL	PYLOS	1.22	175	ePn	Pn	23 18 36.3	+0.7

*CSEM **26** 23:25:21.4±11.0, 27.82N×33.66E, h12km, ML3.4, Error ellipse: s-maj=281.8km s-min=24.3km az=47.0*
*GII **26** 23:25:23.2±0.0, 27.83N×33.93E, h10km±1km, Md2.9/3*
*SGS **26** 23:25:26.3, 27.96N×33.79E, h20km*

ISC 26 23:25:22.9±1.3, 27.87N±0.08×33.86E±0.09, h10km, n21, σ0.964/27, Egypt

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDAS	Al Bad'	1.23	63	S	Sb	23 26 02.4	+0.1
BDAS	Al Bad'	1.23	63	P	Pn	23 25 46.9	+0.7
BDAS	Al Bad'	1.23	63	P	Pn	23 25 46.9	+0.7
HAQS	Haql	1.50	38	S	Sn	23 26 07.8	-1.9
HAQS	Haql	1.50	38	P	Pn	23 25 50.0	0.0
HAQS	Haql	1.50	38	P	Pn	23 25 50.0	0.0
JLOS		1.68	59	P	Pn	23 25 53.0	+0.7
JLOS		1.68	59	P	Pn	23 25 53.0	+0.6
EIL	Elat	2.04	28	Pn	Pn	23 25 56.8	-0.5
EIL				Sn	Sn	23 26 22.2	-0.6
AQBJ	Aqaba	2.13	29	Pn	Pn	23 25 58.6	0.0
MBRI	Mt Berech	2.13	26	Pn	Pn	23 25 58.3	-0.3
MBRI				Sn	Sn	23 26 24.7	-0.5
KRMI	Paran Flat	2.37	19	Pn	Pn	23 26 01.7	-0.2
KRMI				Sn	Sn	23 26 31.0	0.0
HRFI	Mount Harif	2.40	25	Pn	Pn	23 26 02.0	-0.2
HRFI				Sn	Sn	23 26 31.7	0.0
PRNI	Paran	2.67	22	Pn	Pn	23 26 06.0	0.0
PRNI				Sn	Sn	23 26 39.7	+1.2
RMNI	Mount Ramon	2.83	16	Pn	Pn	23 26 08.2	0.0
ZFRI	Zfri	2.92	23	Pn	Pn	23 26 09.4	0.0
ZFRI				Sn	Sn	23 26 46.3	+1.8
KZIT	Kziot	3.07	9	Pn	Pn	23 26 11.1	-0.3
RTMI	Retamim	3.26	13	Pn	Pn	23 26 13.8	-0.3
MZDA	Masada	3.67	21	Pn	Pn	23 26 19.7	-0.1
DSI	Dead Sea	3.92	19	Pn	Pn	23 26 23.5	+0.3
MMLI	Mount Malkishu	4.75	16	Pn	Pn	23 26 34.9	+0.3

IDC 26 23:26:22.5±5.5, 2.28N×95.99E, h0km, mb3.6/5, mb1 3.7/7, mb1mx3.5/23, mbtmp3.6/7, ML3.8/2, Error ellipse: s-maj=114.7km s-min=36.2km az=17.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	2.98	80	Pn	Pn	23 27 11.2	+0.2
	3.0nm,0.3s,baz=262,slow=7.1,SNR=9.7						
CMAR	Chiang Mai Arr	16.34	10	Pn	Pn	23 30 14.8	+1.4
	0.3nm,0.3s,baz=205,slow=12,SNR=5.4						
MKAR	Makanchi Array	45.91	347	P	P	23 34 47.2	+0.3
	1.0nm,0.6s,baz=172,slow=9.1,SNR=19						
SONM	Songino Array	46.26	10	P	P	23 34 48.3	-1.4
	0.4nm,0.4s,baz=194,slow=8.4,SNR=3.6						
KURK	Kurchatov	50.45	346	P	P	23 35 21.0	-0.8
	0.4nm,0.7s,baz=156,slow=7.1,SNR=2.4						
ZALV	Zalesovo Beam	52.31	352	P	P	23 35 35.7	-0.1
	0.8nm,0.4s,baz=177,slow=5.2,SNR=5.5						
BVAR	Borovoye Array	54.84	341	P	P	23 35 55.0	+0.6
	0.3nm,0.6s,baz=155,slow=4.4,SNR=3.1						

*CSEM **26** 23:37:09.8±0.2, 42.20N×15.08E, h10km, ML3.0/11, Error ellipse: s-maj=4.3km s-min=2.7km az=33.0*
*ISCJB **26** 23:37:09.8±0.5, 42.20N±0.03×15.09E±0.02, h10km±4km, Error ellipse: s-maj=5.0km s-min=2.5km az=22.6*
*ROM **26** 23:37:10.5±0.2, 42.19N×15.12E, h12km, Md2.7/38, Ml2.3/24, Error ellipse: s-maj=1.9km s-min=1.0km az=25.0*

ISC 26 23:37:10.8±0.4, 42.18N±0.03×15.08E±0.02, h15km±4km, n83, σ0.996/118, Adriatic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRES	Fresagrandinar	0.37	236	Pg	Pg	23 37 18.1	-0.2
FRES				Sg	Sg	23 37 24.0	+0.6
	150nm,0.3s						
FRES	Fresagrandinar	0.37	236	Pg	Pg	23 37 18.1	-0.2
FRES				Sg

	38nm,0.4s						
SACR	**S. Croce Del S**	**0.83 200**	Pg	**Pg**	**23 37 26.2**	**-0.8**	
SACR	**S. Croce Del S**	**0.83 200**	Pg	**Pg**	**23 37 26.2**	**-0.8**	
RNI2	**Rionero Sannit**	**0.84 236**	Pg	**Pg**	**23 37 26.0**	**-1.1**	
RNI2			Sg	**Sg**	**23 37 39.3**	**+1.1**	
RNI2	**Rionero Sannit**	**0.84 236**	Pg	**Pg**	**23 37 26.0**	**-1.1**	
RNI2			Sg	**Sg**	**23 37 39.3**	**+1.1**	
INTR	**Introdacqua**	**0.89 259**	Pg	**Pg**	**23 37 26.4**	**-1.7**	
INTR			Sg	**Sg**	**23 37 40.1**	**+0.3**	
	101nm,0.4s						
INTR	**Introdacqua**	**0.89 259**	Pg	**Pg**	**23 37 26.4**	**-1.7**	
INTR			Sg	**Sg**	**23 37 40.1**	**+0.3**	
	101nm,0.4s						
FG5	**Orsara di Pugl**	**0.91 171**	Pg	**Pg**	**23 37 27.5**	**-0.9**	
	50nm,0.6s						
FG5	**Orsara di Pugl**	**0.91 171**	Pg	**Pg**	**23 37 27.5**	**-0.9**	
	50nm,0.6s						
VCEL	**Villa Celiera**	**0.94 283**	Pg	**Pg**	**23 37 28.2**	**-0.8**	
	64nm,0.5s						
VCEL	**Villa Celiera**	**0.94 283**	Pg	**Pg**	**23 37 28.2**	**-0.8**	
	64nm,0.5s						
SGG	**Gregorio Mates**	**0.95 214**	Pg	**Pg**	**23 37 28.8**	**-0.4**	
	33nm,0.4s						
SGG	**Gregorio Mates**	**0.95 214**	Pg	**Pg**	**23 37 28.8**	**-0.4**	
	33nm,0.4s						
VAGA	**Valle Agricola**	**0.99 220**	Pg	**Pg**	**23 37 30.6**	**+0.6**	
VAGA	**Valle Agricola**	**0.99 220**	Pg	**Pg**	**23 37 30.6**	**+0.6**	
MRB1	**Monte Rocchett**	**1.06 184**	Pg	**Pg**	**23 37 30.5**	**-0.7**	
MRB1	**Monte Rocchett**	**1.06 184**	Pg	**Pg**	**23 37 30.5**	**-0.7**	
SDI	**San Donato**	**1.06 244**	Pg	**Pg**	**23 37 28.8**	**-2.4**	
	14nm,0.2s						
SDI	**San Donato**	**1.06 244**	Pg	**Pg**	**23 37 28.8**	**-2.4**	
	14nm,0.2s						
SGTA	**Sant Agata di**	**1.07 168**	Pg	**Pg**	**23 37 29.6**	**-1.8**	
SGTA			Sg	**Sg**	**23 37 46.0**	**+0.6**	
	64nm,0.5s						
SGTA	**Sant Agata di**	**1.07 168**	Pg	**Pg**	**23 37 29.6**	**-1.8**	
SGTA			Sg	**Sg**	**23 37 46.0**	**+0.6**	
	64nm,0.5s						
FAGN	**Fagnano**	**1.11 275**	Pg	**Pg**	**23 37 31.8**	**-0.5**	
FAGN			Sg	**Sg**	**23 37 48.4**	**+1.6**	
	80nm,0.6s						
FAGN	**Fagnano**	**1.11 275**	Pg	**Pg**	**23 37 31.8**	**-0.5**	
FAGN			Sg	**Sg**	**23 37 48.4**	**+1.6**	
	80nm,0.6s						
POFI	**Posta Fibreno**	**1.12 246**	Pg	**Pn**	**23 37 30.0**	**-1.9**	
POFI			Sg	**Sg**	**23 37 47.4**	**+0.3**	
POFI	**Posta Fibreno**	**1.12 246**	Pg	**Pn**	**23 37 30.0**	**-1.9**	
POFI			Sg	**Sg**	**23 37 47.4**	**+0.3**	
VVLD	**Villa Vallelon**	**1.13 254**	Pg	**Pn**	**23 37 30.4**	**-1.6**	
VVLD			Sg	**Sg**	**23 37 47.7**	**+0.4**	
	45nm,0.6s						
VVLD	**Villa Vallelon**	**1.13 254**	Pg	**Pn**	**23 37 30.4**	**-1.6**	
VVLD			Sg	**Sg**	**23 37 47.7**	**+0.4**	
	45nm,0.6s						
CAFE	**Carife**	**1.16 174**	Pg	**Pn**	**23 37 31.1**	**-1.3**	
CAFE	**Carife**	**1.16 174**	Pg	**Pn**	**23 37 31.1**	**-1.3**	
TERO	**Teramo**	**1.18 292**	Pg	**Pn**	**23 37 32.7**	**0.0**	
	21nm,0.3s						
TERO	**Teramo**	**1.18 292**	Pg	**Pn**	**23 37 32.7**	**0.0**	
	21nm,0.3s						
SNAL	**S. Angelo Dei**	**1.26 176**	Pg	**Pn**	**23 37 32.7**	**-1.1**	
SNAL	**S. Angelo Dei**	**1.26 176**	Pg	**Pn**	**23 37 32.7**	**-1.1**	
OFFI	**Offida**	**1.27 307**	Pg	**Pg**	**23 37 35.5**	**+0.2**	
OFFI	**Offida**	**1.27 307**	Pg	**Pg**	**23 37 35.5**	**+0.2**	
CAMP	**Campotosto**	**1.29 286**	Pg	**Pn**	**23 37 35.0**	**+0.8**	
CAMP	**Campotosto**	**1.29 286**	Pg	**Pn**	**23 37 35.0**	**+0.8**	
VULT	**Monte Vulture**	**1.29 162**	Pg	**Pn**	**23 37 34.3**	**+0.1**	
	82nm,0.4s						
VULT	**Monte Vulture**	**1.29 162**	Pg	**Pn**	**23 37 34.3**	**+0.1**	
	82nm,0.4s						
MRVN	**Minervino Murg**	**1.40 143**	Pg	**Pn**	**23 37 36.6**	**+0.9**	
	27nm,0.2s						
MRVN	**Minervino Murg**	**1.40 143**	Pg	**Pn**	**23 37 36.6**	**+0.9**	
	27nm,0.2s						
PALZ	**Palazzo San Ge**	**1.40 152**	Pg	**Pn**	**23 37 36.4**	**+0.6**	
PALZ	**Palazzo San Ge**	**1.40 152**	Pg	**Pn**	**23 37 36.4**	**+0.6**	
MRLC	**Muro Lucano**	**1.46 168**	Pg	**Pg**	**23 37 38.3**	**-0.5**	
	22nm,0.5s						
MRLC	**Muro Lucano**	**1.46 168**	Pg	**Pg**	**23 37 38.3**	**-0.5**	
	22nm,0.5s						
FIAM	**Fiamignano**	**1.46 274**	Pg	**Pn**	**23 37 37.5**	**+0.9**	
FIAM	**Fiamignano**	**1.46 274**	Pg	**Pn**	**23 37 37.5**	**+0.9**	
NRCA	**Norcia**	**1.59 295**	Pg	**Pn**	**23 37 39.1**	**+0.7**	
	8.0nm,0.5s						
NRCA	**Norcia**	**1.59 295**	Pg	**Pn**	**23 37 39.1**	**+0.7**	
	8.0nm,0.5s						
FDMO	**Fiordimonte**	**1.70 301**	Pg	**Pn**	**23 37 40.8**	**+0.9**	
	22nm,0.8s						
FDMO	**Fiordimonte**	**1.70 301**	Pg	**Pn**	**23 37 40.8**	**+0.9**	
	22nm,0.8s						
AMUR	**Altamura**	**1.71 138**	Pg	**Pn**	**23 37 40.0**	**0.0**	
	28nm,0.5s						
BAI	**Bari**	**1.73 128**	*e*Pn	**Pg**	**23 37 44.2**	**+0.3**	
SG1	**Sgolgore (BA)**	**1.80 138**	*e*Pn	**Pg**	**23 37 45.3**	**0.0**	
SG1			*e*Sn	**Sg**	**23 38 08.9**	**+0.2**	
CESI	**CESI - Serrava**	**1.80 298**	Pg	**Pg**	**23 37 43.7**	**-1.7**	
	16nm,0.9s						
CESI	**CESI - Serrava**	**1.80 298**	Pg	**Pg**	**23 37 43.7**	**-1.7**	
	16nm,0.9s						
MIGL	**Miglionico**	**1.88 147**	Pg	**Pn**	**23 37 42.2**	**-0.1**	
	53nm,0.2s						
LTRZ	**Laterza**	**2.05 140**	Pg	**Pn**	**23 37 46.7**	**+2.0**	
	40nm,0.9s						
STON	**Ston**	**2.05 70**	*e*Pn	**Pn**	**23 37 44.9**	**+0.2**	
STON			Sn	**Sn**	**23 38 10.4**	**+0.3**	
STON	**Ston**	**2.05 70**	*e*Pn	**Pn**	**23 37 44.9**	**+0.2**	
STON			Sn	**Sn**	**23 38 10.3**	**+0.2**	
NVLJ	**Novalja**	**2.38 356**	*e*Pn	**Pn**	**23 37 49.3**	**+0.1**	
NVLJ			Sn	**Sn**	**23 38 18.8**	**+0.6**	
NVLJ	**Novalja**	**2.38 356**	*e*Pn	**Pn**	**23 37 49.3**	**+0.1**	
NVLJ			Sn	**Sn**	**23 38 18.7**	**+0.5**	

*MOS **27** 00:09:05.8±0.9, 53°.22N×108°.59E, h13km, mb4.3/1, Error ellipse: s-maj=24.3km s-min=13.5km az=52.1*

BYKL 27 00:09:07.3±0.2, 53°.31N×108°.51E, h13km±3km, 10C-13D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MXMB	**Maximikha**	**0.15**	**108**	⇓*i*Pg		Pg	00 09 10.6	-0.3
	190nm,0.3s							
MXMB				⇑*i*Pg		Pg	00 09 10.6	-0.3
	1μm,0.3s							
MXMB				⇑*i*Pg		Pg	00 09 10.6	-0.3
	4μm,0.3s							
MXMB				*e*Sg		Sg	00 09 12.9	-0.6
MXMB				Pmax				
	4μm,0.2s							
MXMB				Smax				
	26μm,0.5s							
KELR	**Kotokel**	**0.61**	**205**	⇑*i*Pg		Pg	00 09 18.6	-0.6
KELR				*e*Sg		Sg	00 09 26.7	-0.5
KELR				Pmax				
	435nm,0.3s							
KELR				Smax				
	3μm,0.3s							
OGRR	**Ongureny**	**0.64**	**302**	⇑*i*PG		Pg	00 09 19.8	0.0
OGRR				*e*			00 09 28.5	
OGRR				pmax		pmax		
	comp=Z,474nm,0.2s							
OGRR				smax				
	comp=N,944nm,0.3s							
OGRR	**Ongureny**	**0.64**	**302**	⇑*i*Pg		Pg	00 09 19.8	0.0
	comp=N,412nm,0.2s							
OGRR				⇓*i*Pg		Pg	00 09 19.8	0.0
	comp=N,392nm,0.2s							
OGRR				⇑*i*Pg		Pg	00 09 19.8	0.0
	comp=N,703nm,0.2s							
OGRR				*e*Sg		Sg	00 09 28.6	+0.4
OGRR				Pmax				
	comp=N,466nm,0.2s							
OGRR				Smax				
	comp=N,954nm,0.3s							
SYVR	**Suvo**	**0.96**	**68**	*e*PG		Pg	00 09 24.3	-1.4
SYVR				*e*			00 09 37.5	
SYVR				pmax		pmax		
	comp=Z,117nm,0.1s							
SYVR				smax				
	comp=N,448nm,0.1s							
SYVR	**Suvo**	**0.96**	**68**	⇓*i*Pg		Pg	00 09 24.6	-1.1
	comp=N,24nm,0.4s							
SYVR				⇓*i*Pg		Pg	00 09 24.6	-1.1
	comp=N,47nm,0.4s							
SYVR				⇓*i*Pg		Pg	00 09 24.6	-1.1
	comp=N,69nm,0.4s							
SYVR				*e*Sg		Sg	00 09 37.5	-0.7
SYVR				Pmax				
	comp=N,117nm,0.1s							
SYVR				Smax				
	comp=N,444nm,0.1s							
ZRHB	**Zarechye**	**1.12**	**228**	*e*Pg		Pg	00 09 27.9	-0.9
ZRHB				*e*Sg		Sg	00 09 43.0	-0.3
ZRHB				Pmax				
	comp=N,120nm,0.4s							
ZRHB				Smax				
	comp=N,772nm,0.8s							
TRG	**Tyrgan**	**1.42**	**248**	*e*PG		Pg	00 09 32.5	-2.0
TRG				*e*			00 09 51.4	
TRG				pmax		pmax		
	comp=Z,58nm,0.1s							
TRG				smax				
	comp=E,712nm,0.2s							
TRG	**Tyrgan**	**1.42**	**248**	⇑*i*Pg		Pg	00 09 32.6	-1.9
TRG				*e*Sg		Sg	00 09 51.8	-1.1
TRG				Pmax				
	comp=E,56nm,0.1s							
TRG				Smax				
	comp=E,708nm,0.3s							
UUDB	**Ulan-Yde**	**1.54**	**200**	⇓*i*Pg		Pg	00 09 35.0	-1.7
UUDB				*e*Sg		Sg	00 09 55.1	-1.6
UUDB				Pmax				
	comp=E,141nm,0.4s							
UUDB				Smax				
	comp=E,569nm,0.4s							
FFNB	**Fofonovo**	**1.65**	**221**	*e*Pg		Pg	00 09 37.6	-1.4
FFNB				*e*Sg		Sg	00 09 59.3	-1.1
FFNB				Pmax				
	comp=E,244nm,0.1s							
FFNB				Smax				
	comp=E,1μm,0.4s							
KAB	**Kabansk**	**1.69**	**223**	*e*Sg		Sg	00 10 00.5	-1.2
KAB				Smax				
	comp=E,895nm,0.8s							
HRMR	**Khuramsha**	**1.94**	**210**	⇑*i*Pg		Pg	00 09 41.8	-2.6
	comp=E,69nm,0.4s							
HRMR				⇑*i*Pg		Pg	00 09 41.8	-2.6
	comp=E,51nm,0.4s							
HRMR				⇓*i*Pg		Pg	00 09 41.8	-2.6
	comp=E,75nm,0.4s							
HRMR				*e*Sg		Sg	00 10 07.7	-1.7
HRMR				Pmax				
	comp=E,272nm,0.4s							
HRMR				Smax				
	comp=E,2μm,0.4s							
YLYR	**Ulyunkhan**	**2.21**	**44**	*e*PN		Pn	00 09 44.5	+0.8
YLYR				*e*			00 09 46.5	
YLYR				*e*			00 10 15.9	
YLYR				pmax		pmax		
	comp=Z,100nm,0.3s							
YLYR				smax				
	comp=N,171nm,0.5s							
YLYR	**Ulyunkhan**	**2.21**	**44**	⇓*i*Pn		Pn	00 09 44.5	+0.8
	comp=N,22nm,0.3s							
YLYR				⇓*i*Pn		Pn	00 09 44.5	+0.8
	comp=N,23nm,0.3s							
YLYR				⇓*i*Pn		Pn	00 09 44.5	+0.8
	comp=N,39nm,0.3s							
YLYR				⇓*i*Pg		Pg	00 09 46.5	-3.2
	comp=N,57nm,0.4s							
YLYR				⇓*i*Pg		Pg	00 09 46.5	-3.2
	comp=N,66nm,0.4s							
YLYR				⇓*i*Pg		Pg	00 09 46.5	-3.2
	comp=N,87nm,0.4s							
YLYR				*e*Sg		Sg	00 10 16.2	-2.2
YLYR				Pmax				
	comp=N,100nm,0.3s							
YLYR				Smax				
	comp=N,171nm,0.7s							
NIZ	**Nizh Angarsk**	**2.54**	**13**	*e*PN		Pn	00 09 49.7	+1.5
NIZ				*e*			00 09 53.5	
NIZ				*e*			00 10 26.4	
NIZ				pmax		pmax		
	comp=Z,37nm,0.4s							
NIZ				smax				
	comp=N,230nm,0.5s							
NIZ	**Nizh Angarsk**	**2.54**	**13**	⇑*i*Pn		Pn	00 09 49.7	+1.5
NIZ				*e*Pg		Pg	00 09 53.2	-2.8
NIZ				*e*			00 10 22.6	
NIZ				*e*Sg		Sg	00 10 26.5	-2.4
NIZ				Pmax				
	comp=N,38nm,0.3s							
NIZ				Smax				
	comp=N,226nm,0.5s							
LSTR	**Listvyanka**	**2.67**	**239**	*e*Pn		Pn	00 09 50.4	+0.5
LSTR				*e*Pg		Pg	00 09 54.8	-3.6
LSTR				*e*			00 10 27.2	
LSTR				*e*Sg		Sg	00 10 29.1	-3.8
LSTR				Pmax				
	comp=N,20nm,0.3s							
LSTR				Smax				
	comp=N,104nm,1.0s							
IRK	**Irkutsk**	**2.79**	**249**	*e*Sg		Sg	00 10 32.3	-4.5
IRK				Smax				
	comp=N,447nm,0.4s							
KMO	**Kumora**	**3.02**	**30**	*e*PN		Pn	00 10 00.5	+5.8
KMO				*e*			00 10 38.8	
KMO				pmax		pmax		
	comp=Z,76nm,0.5s							
KMO				smax				
	comp=N,188nm,0.9s							
KMO	**Kumora**	**3.02**	**30**	*e*Pn		Pn	00 09 55.9	+1.2
KMO				*e*Pg		Pg	00 10 00.9	-4.2
KMO				*e*Sg		Sg	00 10 40.5	-3.7
KMO				Pmax				
	comp=N,77nm,0.7s							
KMO				Smax				
	comp=N,207nm,0.8s							
CIT	**Chita**	**3.33**	**111**	*e*PN		Pn	00 10 06.1	+7.1
CIT				*e*			00 10 49.0	
CIT				pmax		pmax		
	comp=Z,82nm,0.2s							
CIT				smax				
	comp=E,521nm,0.2s							
CIT	**Chita**	**3.33**	**111**	*e*		Pg	00 10 08.2	-2.9
CIT				*e*Sg		Sg	00 10 50.3	-3.9
CIT				max				
	comp=E,67nm,0.2s							
CIT				Smax				
	comp=E,519nm,0.2s							
TLY	**Talaya**	**3.39**	**243**	*e*PN		Pn	00 10 00.8	+0.9
TLY				*e*			00 10 07.9	
TLY				*e*			00 10 50.4	
TLY				pmax		pmax		
	comp=Z,10.0nm,0.3s							
TLY				smax				
	comp=E,81nm,0.5s							
TLY	**Talaya**	**3.39**	**243**	*e*Pg		Pg	00 10 08.0	-4.2
TLY				*e*Sg		Sg	00 10 51.6	-4.6
TLY				Pmax				
	comp=E,10.0nm,0.7s							
TLY				Smax				
	comp=E,80nm,0.4s							
ARS	**Arshan**	**3.96**	**252**	*e*PN		Pn	00 10 06.9	-0.8
ARS				*e*			00 10 19.2	
ARS				*e*			00 11 07.2	
ARS				pmax		pmax		
	comp=Z,19nm,0.3s							
ARS				smax				
	comp=N,288nm,0.4s							
ARS	**Arshan**	**3.96**	**252**	*e*Pg		Pg	00 10 17.7	-5.4
ARS				*e*Sg		Sg	00 11 08.2	-6.2
ARS				Pmax				
	comp=N,19nm,0.6s							
ARS				Smax				
	comp=N,312nm,0.9s							
KPC	**Khapcheranga**	**4.34**	**145**	*e*Pn		Pn	00 10 12.4	-0.5
KPC				*e*Pg		Pg	00 10 25.3	-5.2
KPC				*e*Sn		Sn	00 11 02.0	-1.4
KPC				*e*Sg		Sg	00 11 21.0	-5.7
KPC				Pmax				
	comp=N,16nm,0.4s							
KPC				Smax				
	comp=N,53nm,1.0s							
ZAK	**Zakamensk**	**4.37**	**230**	*e*Pg		Pg	00 10 26.4	-4.6
ZAK				*e*Sg		Sg	00 11 23.2	-4.3
ZAK				Pmax				
	comp=N,5.0nm,0.3s							
ZAK				Smax				
	comp=N,38nm,1.0s							
MOY	**Mondy**	**4.88**	**253**	*e*Pn		Pn	00 10 21.0	+0.7
MOY				*e*Pg		Pg	00 10 34.9	-5.8
MOY				*e*			00 11 22.0	
MOY				*e*Sg		Sg	00 11 36.9	-6.9
MOY				Pmax				
	comp=N,15nm,1.0s							
MOY				Smax				
	comp=N,84nm,1.1s							
NLYR	**Nelyaty**	**5.23**	**50**	*e*PN		Pn	00 10 25.6	+0.5
NLYR				*e*			00 10 39.0	
NLYR				*e*			00 11 49.8	
NLYR				pmax		pmax		
	comp=Z,16nm,0.3s							
NLYR				smax				
	comp=N,110nm,1.2s							
NLYR	**Nelyaty**	**5.23**	**50**	*e*		Pg	00 10 40.5	-6.9
NLYR				*e*Sg		Sg	00 11 49.8	-5.3
NLYR				max				
	comp=N,13nm,0.5s							
NLYR				Smax				
	comp=N,110nm,1.3s							
ORL	**Orlik**	**5.32**	**265**	*e*PN		Pg	00 10 44.5	-4.6
ORL				*e*			00 11 51.1	
ORL				pmax		pmax		
	comp=Z,3.0nm,0.5s							
ORL				smax				
	comp=N,74nm,0.6s							
ORL	**Orlik**	**5.32**	**265**	*e*		Pn	00 10 31.0	+4.7
ORL				*e*			00 11 30.8	
ORL				*e*Sg		Sg	00 11 51.0	-6.9
ORL				max				
	comp=N,6.0nm,0.8s							
ORL				Smax				
	comp=N,114nm,1.2s							
TUP	**Tupik**	**6.86**	**76**	*e*PN		Pn	00 10 47.5	0.0
TUP				*e*			00 11 09.5	
TUP				*e*S		Sn	00 12 04.3	-1.0
TUP				*e*			00 12 37.9	
TUP				pmax		pmax		
	comp=Z,2.0nm,0.4s							
TUP				smax				
	comp=N,108nm,1.0s							
TUP	**Tupik**	**6.86**	**76**	*e*		Sb	00 12 24.2	-3.8
TUP				*e*Sg		Sg	00 12 39.1	-8.2
TUP				Smax				
	comp=N,135nm,1.3s							
TDJR	**Todzha**	**7.57**	**268**	*e*		Sn	00 12 23.7	+0.9
TDJR				*e*Sg		Sn	00 13 01.9	+39

MAN 27 00:15:49, 17°.45N×120°.27E, h28km, mb3.9, ML2.6, MS2.3, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ABRA	**Dolores**	**0.47**	**65**	*e*P		Pb	00 16 00.8	+2.0
ABRA				*e*S		Sb	00 16 07.5	+2.1
PIP	**Pasuquin**	**0.93**	**21**	⇑*i*P		Pn	00 16 06.7	+0.5
PIP				*e*S		Sb	00 16 13.4	-5.1
APYP	**Conner**	**1.02**	**66**	*e*P		Pn	00 16 08.8	+1.4
BOLP	**Bolinao**	**1.12**	**198**	*e*P		Pn	00 16 09.3	+0.5

IDC 27 00:25:14.7±4.6, 2°.22S×139°.28E, h0km, mb3.9/4, mb1 3.9/5, mb1mx3.7/14, mbtmp3.8/5, ML4.0/1, Error ellipse: s-maj=208.1km s-min=24.0km az=88.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.27**	**195**	P		Pn	00 29 28.2	-1.5
	0.5nm,0.3s,baz=18,slow=12,SNR=10							
WRA				S		Sn	00 32 39.5	-15
	0.1nm,0.3s,baz=17,slow=23,SNR=2.7							
ASAR	**Alice Springs**	**21.95**	**193**	P		P	00 30 10.9	+0.9
	1.3nm,0.6s,baz=17,slow=12,SNR=16							
ASAR				S		S	00 34 09.2	-4.2
	1.6nm,0.8s,baz=11,slow=25,SNR=6.3							
MKAR	**Makanchi Array**	**69.75**	**322**	P		P	00 36 26.6	0.0
	0.7nm,0.5s,baz=94,slow=12,SNR=11							
ZALV	**Zalesovo Beam**	**71.80**	**330**	P		P	00 36 38.8	-0.2
	0.3nm,0.3s,baz=141,slow=7.1,SNR=2.9							
BVAR	**Borovoye Array**	**79.24**	**325**	P		P	00 37 22.1	+0.4
	1.5nm,0.6s,baz=120,slow=8.1,SNR=12							

*ISCJB **27** 00:35:53.4±0.5, 39°.97N±0°.02×21°.31E±0°.03, h3km±4km, Error ellipse: s-maj=3.6km s-min=2.7km az=171.9*
*CSEM **27** 00:35:54.8±0.1, 39°.99N×21°.32E, h15km, ML3.1/5, Error ellipse: s-maj=4.0km s-min=3.5km az=102.0*
*ATH **27** 00:35:54.2, 39°.94N×21°.36E, h20km, MD3.5/4*
*THE **27** 00:35:54.1, 39°.98N×21°.32E, h1km±2km, ML3.1/5, Error ellipse: s-maj=2.7km s-min=0.6km az=240.0*
*NEIC **27** 00:35:54.2, 39°.94N×21°.36E, h20km, MD3.5(ATH), ML3.1(THE), After ATH.*

ISC 27 00:35:54.3±0.4, 39°.97N±0°.02×21°.33E±0°.03, h8km±3km, n90, σ0.98/131, Greece

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.48**	**230**	*e*Pb		**Pg**	**00 36 03.4**	**-0.2**
JAN				*e*Sb		**Sg**	**00 36 10.8**	**+0.9**
JAN	**Janina**	**0.48**	**230**	*e*PB		**Pg**	**00 36 03.4**	**-0.2**
JAN				*e*SB		**Sg**	**00 36 10.8**	**+0.9**
JAN	**Janina**	**0.48**	**230**	*e*Pb		**Pg**	**00 36 03.4**	**-0.2**
JAN				*e*Sb		**Sg**	**00 36 10.8**	**+0.9**
KZN	**Kozani**	**0.48**	**45**	*e*Pb		**Pg**	**00 36 03.8**	**+0.1**
KZN				*e*Sb		**Sg**	**00 36 11.8**	**+1.8**
KZN	**Kozani**	**0.48**	**45**	P		**Pg**	**00 36 03.5**	**-0.2**
KZN				S		**Sg**	**00 36 10.6**	**+0.6**
KZN	**Kozani**	**0.48**	**45**	*e*PB		**Pg**	**00 36 03.8**	**+0.1**
KZN				*e*SB		**Sg**	**00 36 11.8**	**+1.8**
KZN	**Kozani**	**0.48**	**45**	P		**Pg**	**00 36 03.5**	**-0.2**
KZN	**Kozani**	**0.48**	**45**	*e*Pb		**Pg**	**00 36 03.8**	**+0.1**
KZN				S		**Sg**	**00 36 10.6**	**+0.6**
KZN				*e*Sb		**Sg**	**00 36 11.8**	**+1.8**
THL	**Klokotos Trika**	**0.67**	**127**	P		**Pg**	**00 36 06.3**	**-0.9**
THL				S		**Sg**	**00 36 16.8**	**+0.9**
THL	**Klokotos Trika**	**0.67**	**127**	*e*PB		**Pg**	**00 36 06.3**	**-0.9**
THL				*e*SN		**Sg**	**00 36 15.5**	**-0.4**
THL	**Klokotos Trika**	**0.67**	**127**	P		**Pg**	**00 36 06.3**	**-0.9**
THL				S		**Sg**	**00 36 16.8**	**+0.9**
FNA	**Florina**	**0.81**	**3**	P		**Pg**	**00 36 09.0**	**-1.0**
FNA				S		**Sg**	**00 36 21.3**	**+0.6**
FNA	**Florina**	**0.81**	**3**	P		**Pg**	**00 36 09.3**	**-0.7**
FNA				S		**Sg**	**00 36 21.3**	**+0.6**
FNA	**Florina**	**0.81**	**3**	P		**Pg**	**00 36 09.3**	**-0.7**
FNA				S		**Sg**	**00 36 21.3**	**+0.6**
IGT	**Igoumenitsa**	**0.88**	**241**	P		**Pg**	**00 36 10.8**	**-0.5**
IGT				S		**Sg**	**00 36 23.1**	**+0.4**
IGT	**Igoumenitsa**	**0.88**	**241**	P		**Pg**	**00 36 10.8**	**-0.5**
IGT				S		**Sg**	**00 36 23.1**	**+0.4**
IGT	**Igoumenitsa**	**0.88**	**241**	P		**Pg**	**00 36 10.8**	**-0.5**
IGT				S		**Sg**	**00 36 23.1**	**+0.4**
BIA	**Bitola**	**1.05**	**360**	P		**Pg**	**00 36 13.2**	**-1.3**
BIA				S		**Sg**	**00 36 28.9**	**+0.8**
BIA	**Bitola**	**1.05**	**360**	*i* Pg		**Pg**	**00 36 13.3**	**-1.2**
BIA				*i* Sg		**Sg**	**00 36 29.4**	**+1.2**
BIA	**Bitola**	**1.05**	**360**	P		**Pg**	**00 36 13.2**	**-1.3**
BIA				S		**Sg**	**00 36 28.9**	**+0.8**
BIA	**Bitola**	**1.05**	**360**	P		**Pg**	**00 36 13.2**	**-1.3**

OHR			S	Sb	00 36 34.0	+0.8
OHR	**Ohrid**	**1.21 341**	P	Pb	00 36 16.1	-1.4
OHR			S	Sb	00 36 34.0	+0.8
AGG	**Agios Georgios**	**1.22 140**	*e*Pn	Pn	00 36 17.0	-0.7
AGG			*e*Sn	Sn	00 36 32.9	-1.5
AGG	**Agios Georgios**	**1.22 140**	P	Pb	00 36 17.2	-0.5
AGG			S	Sb	00 36 34.8	+1.2
AGG	**Agios Georgios**	**1.22 140**	*e*PN	Pn	00 36 17.0	-0.7
AGG			*e*SN	Sn	00 36 32.9	-1.5
AGG	**Agios Georgios**	**1.22 140**	P	Pb	00 36 17.2	-0.5
AGG			*e*Sn	Sn	00 36 32.9	-1.5
AGG			S	Sb	00 36 34.8	+1.2
LKD2	**Lefkada island**	**1.29 204**	P	Pn	00 36 18.3	-0.2
LKD2	**Lefkada island**	**1.29 204**	P	Pn	00 36 18.3	-0.2
KRUS	**Krusevo**	**1.40 358**	*i* Pg	Pg	00 36 19.1	-2.1
KRUS			*i* Sg	Sg	00 36 40.2	+0.8
HORT	**Hortiatis**	**1.50 65**	P	Pn	00 36 20.9	-0.5
HORT	**Hortiatis**	**1.50 65**	P	Pn	00 36 20.9	-0.5
HORT	**Hortiatis**	**1.50 65**	P	Pn	00 36 20.9	-0.5
XOR	**Xorichti**	**1.56 112**	P	Pn	00 36 24.9	+2.6
XOR	**Xorichti**	**1.56 112**	P	Pn	00 36 22.3	0.0
XOR	**Xorichti**	**1.56 112**	P	Pn	00 36 22.3	0.0
EFP	**Efpalio**	**1.60 163**	P	Pn	00 36 23.7	+0.8
EFP	**Efpalio**	**1.60 163**	*e*PN	Pn	00 36 23.4	+0.5
EFP	**Efpalio**	**1.60 163**	*e*Pn	Pn	00 36 23.4	+0.5
EFP	**Efpalio**	**1.60 163**	P	Pn	00 36 23.7	+0.8
NEO	**Neokhori**	**1.61 114**	*e*Pn	Pn	00 36 23.3	+0.3
NEO	**Neokhori**	**1.61 114**	*e*PN	Pn	00 36 23.3	+0.3
NEO	**Neokhori**	**1.61 114**	*e*Pn	Pn	00 36 23.3	+0.3
VAY	**Valandovo**	**1.65 35**	*e*Pn	Pn	00 36 21.4	-2.2
PLG	**Polygyros**	**1.68 75**	*e*Pn	Pn	00 36 24.0	+0.1
PLG	**Polygyros**	**1.68 75**	P	Pn	00 36 24.3	+0.4
PLG	**Polygyros**	**1.68 75**	*e*PN	Pn	00 36 24.0	+0.1
PLG	**Polygyros**	**1.68 75**	*e*Pn	Pn	00 36 24.0	+0.1
PLG	**Polygyros**	**1.68 75**	P	Pn	00 36 24.3	+0.4
PAIG	**Paliouri**	**1.81 91**	P	Pn	00 36 25.1	-0.6
PAIG	**Paliouri**	**1.81 91**	P	Pn	00 36 25.1	-0.6
PAIG	**Paliouri**	**1.81 91**	P	Pn	00 36 25.1	-0.6
LKR	**Lokris**	**1.85 135**	*e*Pn	Pn	00 36 26.7	+0.4
LKR	**Lokris**	**1.85 135**	*e*PN	Pn	00 36 26.7	+0.4
LKR	**Lokris**	**1.85 135**	*e*Pn	Pn	00 36 26.7	+0.4
VLS	**Valsamata**	**1.88 198**	*e*Pn	Pn	00 36 27.1	+0.4
VLS	**Valsamata**	**1.88 198**	P	Pn	00 36 27.5	+0.8
VLS	**Valsamata**	**1.88 198**	*e*PN	Pn	00 36 27.1	+0.4
VLS	**Valsamata**	**1.88 198**	*e*Pn	Pn	00 36 27.1	+0.4
VLS	**Valsamata**	**1.88 198**	P	Pn	00 36 27.5	+0.8
RLS	**Riolos of Patr**	**1.91 177**	*e*Pn	Pn	00 36 28.3	+1.2
RLS	**Riolos of Patr**	**1.91 177**	*e*PN	Pn	00 36 28.3	+1.2
RLS	**Riolos of Patr**	**1.91 177**	*e*Pn	Pn	00 36 28.3	+1.2
SRS	**Serrai**	**2.07 56**	P	Pn	00 36 32.8	+3.4
SRS	**Serrai**	**2.07 56**	P	Pn	00 36 29.5	+0.1
SRS	**Serrai**	**2.07 56**	P	Pn	00 36 29.5	+0.1
GUR	**Goura**	**2.18 158**	*e*PN	Pn	00 36 31.6	+0.8
GUR	**Goura**	**2.18 158**	*e*Pn	Pn	00 36 31.6	+0.8
DID	**Didima**	**2.88 148**	*e*PN	Pn	00 36 41.0	+0.6
DID	**Didima**	**2.88 148**	*e*Pn	Pn	00 36 41.0	+0.6
STON	**Ston**	**3.98 318**	*i* Pn	Pn	00 36 57.0	+1.5
STON			Sn	Sn	00 37 42.5	+0.1
STON	**Ston**	**3.98 318**	*i* Pn	Pn	00 36 57.0	+1.4
STON			Sn	Sn	00 37 42.4	0.0
NVLJ	**Novalja**	**6.63 316**	*e*Pn	Pn	00 37 32.2	+0.2
NVLJ			Sn	Sn	00 38 45.5	-2.2
NVLJ	**Novalja**	**6.63 316**	*e*Pn	Pn	00 37 32.1	+0.1
NVLJ			Sn	Sn	00 38 45.5	-2.2

IDC 27 00:38:21.8±2.3, 17°.19S×179°.11W, h501km±32km, mb3.2/6, mb1 3.6/7, mb1mx3.4/17, mbtmp3.3/7, Error ellipse: s-maj=129.3km s-min=15.5km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.78**	**66**	P	P	00 40 16.1	+0.1
	6.4nm,0.3s,baz=67,slow=21,SNR=6.4						
STKA	**Stephens Creek**	**38.40**	**240**	P	P	00 44 59.4	-0.3
	3.0nm,0.7s,baz=91,slow=12,SNR=4.6						
WRA	**Warramunga Arr**	**44.11**	**259**	P	P	00 45 45.0	-0.3
	1.3nm,0.7s,baz=91,slow=7.5,SNR=6.4						
ASAR	**Alice Springs**	**44.35**	**254**	P	P	00 45 47.3	+0.2
	10nm,0.7s,baz=88,slow=8.2,SNR=80						
NVAR	**Mina Array Bea**	**79.37**	**44**	P	P	00 49 36.2	+0.9
	0.9nm,0.7s,baz=214,slow=8.4,SNR=4.2						
TXAR	**Lajitas Array**	**86.18**	**58**	P	P	00 50 10.2	+0.4
	0.7nm,0.7s,baz=211,slow=7.1,SNR=4.7						
PDAR	**Pinedale Array**	**87.29**	**44**	P	P	00 50 14.2	-0.6
	0.6nm,0.6s,baz=260,slow=4.2,SNR=4.5						
BRTR	**Keskin Array B**	**143.80**	**315**	PKP	PKPdf	00 56 59.5	-0.3
	0.7nm,0.8s,baz=125,slow=4.9,SNR=4.4						
CLL	**Collm**	**144.62**	**347**	*i* P	PKPdf	00 57 01.2	+0.4
BRG	**Berggiesshubel**	**144.81**	**346**	*e*P	PKPdf	00 57 02.5	+1.4
	2.8nm,0.8s						

*ISCJB **27** 00:51:30.9±0.5, 50°.10N±0°.03×18°.41E±0°.03, h0km, Error ellipse: s-maj=4.4km s-min=2.7km az=7.2*
*IPEC **27** 00:51:31.4±0.2, 50°.07N×18°.49E, h2km±2km, ML1.8/4, Error ellipse: s-maj=2.1km s-min=1.1km az=160.0*
*CSEM **27** 00:51:31.5±0.2, 50°.12N×18°.42E, h1km, ML2.5/6, Error ellipse: s-maj=4.8km s-min=2.6km az=3.0*
*PRU **27** 00:51:32.6, 50°.10N×18°.37E, h0km*
ISC 27 00:51:31.9±0.5, 50°.09N±0°.03×18°.40E±0°.03, h0km, n31, σ1§05/51, 1D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.13**	**268**	⇓*i* Pg	Pg	00 51 36.0	+1.6
RAC				*e*Sg	Sg	00 51 39.1	+2.9
OKC	**Ostrava-Krasne**	**0.30**	**213**	*e*PG	Pg	00 51 38.4	+0.8
OKC				*e*SG	Sg	00 51 42.4	+0.9
	comp=Z,55nm,0.6s						
OKC	**Ostrava-Krasne**	**0.30**	**213**	*e*Pg	Pg	00 51 38.0	+0.4
	baz=43						
OKC				Sg	Sg	00 51 42.4	+0.9
	comp=Z,55nm,0.6s						
MORC	**Moravsky Berou**	**0.64**	**241**	*e*Pg	Pg	00 51 44.5	+0.4
	baz=64						
MORC				*e*Sg	Sg	00 51 52.6	+0.3
	comp=Z,17nm,0.2s,baz=64						
OJC	**Ojcow**	**0.91**	**81**	*e*Pg	Pg	00 51 47.9	-1.4
OJC				*e*Sg	Sg	00 52 00.1	-0.9
OJC	**Ojcow**	**0.91**	**81**	*e*Pg	Pg	00 51 47.6	-1.7
	baz=260						
OJC				*e*Sg	Sg	00 52 00.1	-0.9
JAVC	**Velka Javorina**	**1.32**	**201**	*e*Pg	Pg	00 51 57.6	+0.5
JAVC				*e*Sg	Sg	00 52 15.5	+1.3
	comp=Z,9.4nm,0.3s						
DPC	**Dobruska-Polom**	**1.36**	**282**	*e*PG	Pg	00 51 57.8	-0.2
DPC				*e*SG	Sg	00 52 16.2	+0.6
	comp=Z,20nm,0.5s						
DPC	**Dobruska-Polom**	**1.36**	**282**	Pg	Pg	00 51 57.8	-0.2
DPC				*e*Sg	Sg	00 52 15.9	+0.3
	baz=101						
NIE	**Niedzica**	**1.41**	**118**	*e*Pg	Pg	00 51 59.1	+0.2
NIE				*e*Sg	Sg	00 52 18.4	+1.3
NIE	**Niedzica**	**1.41**	**118**	*e*Pg	Pg	00 51 59.1	+0.2
NIE				*e*Sg	Sg	00 52 18.2	+1.1
VRAC	**Vranov**	**1.41**	**237**	*e*Pg	Pg	00 51 57.8	-1.1
	baz=58						
VRAC				*e*Sg	Sg	00 52 16.6	-0.5
	comp=Z,13nm,0.3s,baz=58						
KOLL	**Kolacno**	**1.51**	**180**	*e*SN	Sn	00 52 20.4	-0.1
KOLL	**Kolacno**	**1.51**	**180**	*e*Sn	Sn	00 52 20.4	-0.1
KSP	**Ksiaz**	**1.54**	**300**	*e*Pg	Pg	00 52 02.0	+0.5
KSP				*e*Sg	Sg	00 52 22.7	+1.2
UPC	**Upice**	**1.59**	**286**	*e*PG	Pg	00 52 02.2	-0.1
UPC	**Upice**	**1.59**	**286**	Pg	Pg	00 52 02.2	-0.1
VYHS	**Vyhne**	**1.62**	**170**	*e*PN	Pn	00 52 01.3	-0.4
VYHS				*e*SN	Sn	00 52 22.6	-0.6
VYHS	**Vyhne**	**1.62**	**170**	*e*Pn	Pn	00 52 01.3	-0.4
VYHS				*e*Sn	Sn	00 52 22.6	-0.6
KRUC	**Moravsky**	**1.66**	**233**	*e*Pn	Pn	00 52 01.9	-0.3
	baz=53						
KRUC				*e*Sg	Sg	00 52 24.1	-1.1
	comp=Z,6.7nm,0.2s,baz=53						
SMOL	**Smolenice**	**1.70**	**202**	*e*SN	Sn	00 52 24.9	-0.3
SMOL	**Smolenice**	**1.70**	**202**	*e*Sn	Sn	00 52 24.9	-0.3
STHS	**Stebnicka Huta**	**1.96**	**109**	*e*PN	Pn	00 52 09.9	+3.6
STHS				*e*SG	Sg	00 52 38.3	+3.4
STHS	**Stebnicka Huta**	**1.96**	**109**	*e*Pn	Pn	00 52 09.9	+3.6
STHS				*e*Sg	Sg	00 52 38.3	+3.4
KECS	**Kecovo**	**2.11**	**139**	*e*PN	Pn	00 52 08.0	-0.3
KECS				*e*SN	Sn	00 52 34.7	-0.5
CRVS	**Cervenica-Dubn**	**2.32**	**120**	*e*	Pn	00 52 15.5	+4.2
CRVS	**Cervenica-Dubn**	**2.32**	**120**	*e*SG	Sg	00 52 46.4	0.0
CRVS	**Cervenica-Dubn**	**2.32**	**120**	*e*Sg	Sg	00 52 46.4	0.0
PRU	**Pruhonice**	**2.49**	**269**	*e*SG	Sg	00 52 50.0	-1.9
	comp=Z,3.5nm,0.3s						
PRU	**Pruhonice**	**2.49**	**269**	Sg	Sg	00 52 50.0	-1.9
	comp=Z,3.5nm,0.3s						
KHC	**Kasperske Hory**	**3.28**	**255**	*e*PG	Pg	00 52 31.0	-3.7
KHC				*e*SG	Sg	00 53 15.0	-2.2
	comp=Z,3.4nm,0.4s						

*IDC **27** 00:55:40.6±1.0, 30°.88N×103°.33E, h0km, mb3.7/8, mb1 3.9/9, mb1mx3.6/23, mbtmp3.8/9, ML3.4/1, MS3.1/5, Ms1 3.1/5, ms1mx2.8/22, Error ellipse: s-maj=39.8km s-min=18.2km az=53.0*
*ISCJB **27** 00:55:40.9±0.4, 31°.02N±0°.03×103°.44E±0°.06, h10km, mb3.9/10, MS2.9/4, Error ellipse: s-maj=7.3km s-min=4.4km az=175.5*
*BJI **27** 00:55:42.9, 30°.93N×103°.64E, h15km, mB4.4/2, mb4.5/5, ML4.0/20, Ms4.0/9, Ms7 3.7/8*
*NEIC **27** 00:55:43.2±0.5, 31°.01N×103°.36E, h10km, mb3.8/4, Error ellipse: s-maj=9.9km s-min=7.8km az=88.0*
ISC 27 00:55:43.2±0.4, 31°.00N±0°.03×103°.38E±0°.05, h10km, n31, σ1§11/40, mb3.9/10, MS2.9/4, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**5.09**	**4**	*e*Pn	Pn	00 57 03.3	+3.8
LZH				Sn	Sn	00 58 03.5	+5.2
LZH				Sg	Sg	00 58 28.0	+1.4
LZH				smax			
	comp=N,170nm,0.9s						
LZH				smax			
	comp=E,170nm,1.0s						
LZH				LR	LR		
	comp=E,770nm,8.2s						
LZH				LR	LR		
	comp=Z,890nm,9.0s						
ENH	**Enshi**	**5.31**	**96**	*e*Pn	Pn	00 57 03.0	+0.4
	comp=Z,74nm,0.6s						
ENH				S	Sg	00 58 26.3	-7.5
GYA	**Guiyang**	**5.36**	**147**	Pn	Pn	00 57 02.8	-0.6
GYA				Sn	Sn	00 58 05.5	+0.3
GYA				Sg	Sg	00 58 29.3	-6.2
GYA				smax			
	comp=N,380nm,0.9s						
GYA				smax			
	comp=E,360nm,0.9s						
XAN	**Xi'an**	**5.57**	**56**	Pn	Pn	00 57 04.5	-1.7
XAN				Pg	Pb	00 57 23.5	+2.9
XAN				Sg	Sb	00 58 28.8	+1.3
XAN				smax			
	comp=N,360nm,0.9s						
XAN				smax			
	comp=E,180nm,0.9s						
XAN				LR	LR		
	comp=N,400nm,4.6s						
XAN				LR	LR		
	comp=E,130nm,5.5s						
XAN				LR	LR		
	comp=Z,110nm,6.2s						
KMI	**Kunming**	**5.88**	**186**	Pn	Pn	00 57 11.5	+1.0
KMI				Sn	Sn	00 58 18.3	+0.3
KMI				smax			
	comp=N,77nm,1.0s						
KMI				smax			
	comp=E,64nm,1.2s						
KMI				LR	LR		
	comp=N,680nm,11.5s						
KMI				LR	LR		
	comp=E,2μm,11.1s						
KMI				LR	LR		
	comp=Z,370nm,12.6s						
WHN	**Wuhan**	**9.45**	**90**	⇓P	Pn	00 58 00.3	+0.9
WHN				S	Sn	00 59 38.0	-7.7
WHN				LR	LR		
	comp=N,3μm,14.7s						
WHN				LR	LR		
	comp=E,3μm,16.6s						
WHN				LR	LR		
	comp=Z,700nm,9.4s						
HHC	**Hu-ho-hao-te**	**11.85**	**32**	*e*P	Pn	00 58 31.0	-1.2
HHC				S	Sn	01 00 42.0	-2.5
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,62nm,6.0s						
HHC				LR	LR		
	comp=N,260nm,7.7s						
HHC				LR	LR		
	comp=E,190nm,5.2s						
HHC				LR	LR		
	comp=Z,96nm,8.9s						
CHTO	**Chiang Mai**	**12.78**	**199**	*e*Pn	Pn	00 58 45.8	+0.7
	comp=Z,2.9nm,0.6s						
CMAR	**Chiang Mai Arr**	**13.12**	**199**	Pn	Pn	00 58 50.2	+0.5
	comp=Z,0.2nm,0.3s,baz=6.9,slow=12,SNR=8.6						
BJT	**Baijiatuau**	**13.75**	**46**	Pn	Pn	00 58 58.2	0.0
SONM	**Songino Array**	**16.97**	**7**	Pn	Pn	00 59 41.9	+1.3
	comp=Z,0.1nm,0.3s,baz=188,slow=10,SNR=9.9						
SONM				LR	LR	01 06 48.2	
	comp=Z,86nm,20.9s,baz=192,slow=39						
ULN	**Ulaanbaatar**	**17.08**	**8**	*e*Pn	Pn	00 59 42.5	+0.5
	comp=Z,2.8nm,0.8s						
KSRS	**Korea Array**	**21.26**	**66**	P	P	01 00 29.0	-0.6
	comp=Z,3.9nm,0.6s,mb3.9,baz=262,slow=10,SNR=12						
KSRS				LR	LR	01 08 32.5	
	comp=Z,27nm,21.3s,MS2.6,baz=235,slow=36						
MK31	**Makanchi Array**	**22.66**	**320**	*e*P	P	01 00 45.7	+1.3
MKAR	**Makanchi Array**	**22.66**	**320**	P	P	01 00 45.6	+1.2
	comp=Z,1.9nm,0.9s,mb3.5,baz=110,slow=14,SNR=10						
MKAR				LR	LR	01 10 16.0	
	comp=Z,43nm,18.6s,MS2.9,baz=135,slow=38						
UCH	**Uchtor**	**25.62**	**304**	*e*P	P	01 01 12.1	-0.7
	comp=Z,3.3nm,1.0s,mb3.8						
AAK	**Ala-Archa**	**25.75**	**305**	LR	LR	01 13 24.9	
	comp=Z,66nm,19.0s,MS3.2,baz=271,slow=41						
ZALV	**Zalesovo Beam**	**26.55**	**335**	P	P	01 01 20.8	-0.2
	comp=Z,1.6nm,0.7s,mb3.7,baz=136,slow=9.9,SNR=9.4						
KURK	**Kurchatov**	**26.96**	**324**	P	P	01 01 24.8	-0.1
	comp=Z,1.1nm,0.8s,mb3.5,baz=126,slow=9.9,SNR=7.7						
KURK				LR	LR	01 12 37.5	
	comp=Z,26nm,18.7s,MS2.8,baz=120,slow=38						
KURK	**Kurchatov**	**26.96**	**324**	*e*P	P	01 01 23.8	-1.0
	comp=Z,1.1nm,0.6s,mb3.6						
KURK				LR	LR	01 12 37.5	
BRVK	**Borovoye**	**32.56**	**322**	P	P	01 02 15.6	+1.2
KEV	**Kevo**	**56.58**	**336**	P	P	01 05 25.2	-0.4
FINES	**FINESS Array B**	**57.31**	**326**	P	P	01 05 29.2	-1.7
	comp=Z,1.1nm,0.7s,mb4.0,baz=90,slow=7.6,SNR=4.2						
FINES	**FINESS Array B**	**57.31**	**326**	P	P	01 05 29.2	-1.8
WRA	**Warramunga Arr**	**58.73**	**146**	P	P	01 05 41.1	-0.3
	comp=Z,1.1nm,0.5s,mb4.1,baz=339,slow=7.8,SNR=4.6						
KWP	**Kalwaria Pacla**	**61.33**	**313**	*e*P	P	01 05 58.5	-0.4
	comp=Z,2.4nm,0.7s,mb4.4						
ASAR	**Alice Springs**	**61.73**	**148**	P	P	01 05 59.5	-2.3
	comp=Z,0.5nm,0.6s,mb3.8,baz=334,slow=7.0,SNR=4.9						
NB2	**NORSAR Subarra**	**64.41**	**327**	P	P	01 06 17.5	-1.8
	comp=Z,0.8nm,0.8s,mb3.8,baz=73,slow=6.5						
NOA	**NORSAR Array B**	**64.41**	**327**	P	P	01 06 17.9	-1.3
	comp=Z,0.4nm,0.6s,mb3.6,baz=77,slow=7.8,SNR=3.1						
MORC	**Moravsky Berou**	**64.50**	**314**	P	P	01 06 19.7	-0.3
GVD	**Gavdhos**	**65.00**	**297**	*e*P	P	01 06 23.6	0.0
	comp=Z,31nm,0.6s						

*IDC **27** 01:07:29.1±0.9, 51°.23N×173°.07E, h0km, mb3.9/12, mb1 4.1/13, mb1mx3.9/28, mbtmp4.0/13, ML3.8/1, Error ellipse: s-maj=16.8km s-min=14.5km az=77.0*
*NEIC **27** 01:07:31.3, 51°.38N×173°.32E, h8km, ML3.6(AEIC), After AEIC.*
*ISCJB **27** 01:07:31.8±0.6, 51°.29N±0°.05×173°.12E±0°.10, h33km, mb3.9/12, Error ellipse: s-maj=8.8km s-min=7.4km az=1.9*
ISC 27 01:07:34.4±0.6, 51°.36N±0°.06×173°.16E±0°.10, h35km, n23, σ1§14/28, mb3.9/12, Near Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMY	**Shemya**	**1.49**	**23**	P	Pn	01 07 57.1	-1.5
SMY				S	Sn	01 08 16.5	-0.2
FX1	**Attu Island--F**	**1.52**	**0**	Pn	Pn	01 07 58.0	-1.1
	38nm,0.3s,baz=184,slow=7.0,SNR=410						
FX1				Sn	Sn	01 08 17.8	+0.2
	158nm,0.3s,baz=276,slow=20,SNR=41						
FX1	**Attu Island--F**	**1.52**	**0**	P	Pn	01 07 57.9	-1.1
FX1				S	Sn	01 08 18.5	+0.9
AMKA	**Amchitka**	**3.85**	**87**	P	Pn	01 08 29.3	-1.7
ADK	**Adak**	**6.35**	**81**	P	Pn	01 09 04.3	-1.0
PETK	**Petropavlovsk-**	**9.65**	**286**	Pn	Pn	01 09 49.7	-0.9
	0.8nm,0.3s,baz=102,slow=18,SNR=14						
PETK				Sn	Sn	01 11 32.5	-5.1
	0.2nm,0.3s,baz=178,slow=20,SNR=2.7						
PETK	**Petropavlovsk-**	**9.65**	**286**	Pn	Pn	01 09 49.7	-0.9
PETK				Sn	Sn	01 11 32.5	-5.1
KDAK	**Kodiak Island**	**20.70**	**59**	P	P	01 12 09.9	-1.2
	11nm,0.7s,baz=277,slow=6.7,SNR=4.2						
YKA	**Yellowknife Ar**	**38.85**	**45**	P	P	01 14 56.8	+1.3
	1.0nm,0.5s,mb3.8,baz=285,slow=7.6,SNR=4.8						
YBH	**Yreka Blue Hor**	**43.83**	**77**	P	P	01 15 38.5	+1.8
	2.3nm,0.8s,mb4.0,baz=259,slow=2.8,SNR=4.1						
NVAR	**Mina Array Bea**	**48.52**	**77**	P	P	01 16 15.2	+1.6
	0.5nm,0.6s,mb3.8,baz=298,slow=8.7,SNR=4.4						
PDAR	**Pinedale Array**	**51.04**	**67**	P	P	01 16 33.6	+0.9
	2.0nm,0.8s,mb4.1,baz=315,slow=4.4,SNR=13						
KURK	**Kurchatov**	**55.26**	**310**	P	P	01 17 06.3	+2.6
	1.1nm,0.4s,mb4.2,baz=50,slow=7.1,SNR=5.5						
MK31	**Makanchi Array**	**55.98**	**304**	*e*P	P	01 17 08.4	-0.4
MKAR	**Makanchi Array**	**55.98**	**304**	P	P	01 17 08.2	-0.7
	0.5nm,0.5s,mb3.9,baz=62,slow=15,SNR=5.8						
BVAR	**Borovoye Array**	**57.51**	**316**	P	P	01 17 19.1	-0.5
	1.1nm,0.7s,mb4.0,baz=74,slow=11,SNR=6.9						
SCHQ	**Schefferville**	**63.00**	**34**	P	P	01 17 58.1	+1.0
	3.6nm,1.0s,mb4.5,baz=327,slow=5.8,SNR=4.7						
TXAR	**Lajitas Array**	**63.59**	**75**	P	P	01 18 01.4	0.0
	0.6nm,0.8s,mb3.7,baz=355,slow=4.1,SNR=4.5						
FINES	**FINESS Array B**	**64.51**	**343**	P	P	01 18 08.0	+1.0
	1.5nm,0.8s,mb4.1,baz=328,slow=6.8,SNR=3.6						
FINES	**FINESS Array B**	**64.51**	**343**	P	P	01 18 08.0	+1.0
NB2	**NORSAR Subarra**	**67.02**	**351**	P	P	01 18 23.9	+0.8
	comp=Z,0.6nm,0.6s,mb3.8,baz=12,slow=6.5						
NOA	**NORSAR Array B**	**67.02**	**351**	P	P	01 18 23.9	+0.8
	comp=Z,0.8nm,0.7s,mb3.9,baz=12,slow=6.4,SNR=3.8						
ASAR	**Alice Springs**	**82.29**	**216**	P	P	01 19 50.8	-1.1
	comp=Z,0.7nm,1.0s,mb3.5,baz=50,slow=2.1,SNR=4.2						

*IDC **27** 01:09:14.6±3.0, 14°.10N×93°.13W, h0km, mb3.7/2, mb1 4.0/5, mb1mx3.8/20, mbtmp3.7/5, ML3.6/3, MS3.2/3, Ms1 3.2/3, ms1mx2.8/25, Error ellipse: s-maj=66.9km s-min=29.5km az=24.0*
*ISCJB **27** 01:09:16.7±0.9, 14°.12N±0°.07×93°.21W±0°.04, h33km, mb4.0/7, MS3.3/2, Error ellipse: s-maj=10.5km s-min=5.6km az=1.0*
*MEX **27** 01:09:17.1±0.9, 14°.00N×93°.18W, h18km±54km, MD4.0*
*NEIC **27** 01:09:20.0±2.0, 14°.22N×93°.08W, h35km, mb3.9/6, Error ellipse: s-maj=33.6km s-min=19.9km az=179.0*
ISC 27 01:09:18.9±1.0, 14°.16N±0°.08×93°.16W±0°.04, h35km, n24, σ1§35/28, mb4.0/7, MS3.3/2, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.15**	**49**	*e*P	Pn	01 09 36.9	-1.6
THIG				*i* S	Sn	01 09 51.1	-1.8
PCIG		**1.54**	**358**	*e*P	Pn	01 09 42.1	-1.7
PCIG				*i* S	Sn	01 10 02.3	-0.3
TGIG		**2.61**	**1**	*e*P	Pn	01 09 59.0	+0.4
TGIG				*i* S	Sn	01 10 29.7	+0.7
APG	**El Apazote**	**2.75**	**72**	Pn	Pn	01 10 00.8	+0.4
	5.3nm,0.3s,baz=166,slow=4.3,SNR=39						
HUIG	**Huatulco**	**3.27**	**300**	*e*P	Pn	01 10 05.4	-2.2
HUIG				*i* S	Sn	01 10 44.0	-1.2
CMIG	**Matias Romero**	**3.36**	**331**	Pn	Pn	01 10 08.5	-0.4
	4.9nm,0.3s,baz=128,slow=9.8,SNR=26						
CMIG				Sn	Sn	01 10 52.0	+4.5
	17nm,0.3s,baz=290,slow=2.6,SNR=10						
CMIG				LR	LR	01 11 33.1	
	comp=Z,139nm,20.1s,baz=150,slow=40						
VHO	**Vista Hermosa**	**4.50**	**311**	*i* P	Pn	01 10 22.7	-1.9
VHO				*i* S	Sn	01 11 16.9	+1.2
PNIG	**Pinotepa**	**5.28**	**296**	*i* P	Pn	01 10 33.8	-1.6
PNIG				*i* S	Sn	01 11 33.0	-2.0
TPIG	**Tehuac#an**	**5.85**	**317**	*i* S	Sn	01 11 50.0	+0.9
TEIG	**Tepich**	**7.63**	**37**	*e*Pn	Pn	01 11 07.7	+0.2
	14nm,0.4s						
TXAR	**Lajitas Array**	**17.96**	**329**	P	Pn	01 13 27.6	+1.8
	0.1nm,0.3s,baz=167,slow=11,SNR=7.8						
MNTX	**Cornudas Mount**	**20.74**	**329**	*e*P	P	01 13 58.2	+1.7
	1.8nm,0.9s						
WMOK	**Wichita Mounta**	**21.11**	**347**	*e*P	P	01 14 00.8	+0.4
	0.9nm,0.4s,mb3.5						
TKL	**Tuckaleechee C**	**23.01**	**20**	LR	LR	01 23 34.0	
	comp=Z,67nm,20.1s,MS3.1,baz=93,slow=37						
SDCO	**Great Sand Dun**	**25.93**	**337**	*e*P	P	01 14 49.5

CHCH				*i* S	Sn	01 43 18.9	+0.6
TACH	**Talagante**	**0.83**	**5**⇑	*i*P	Pn	01 43 10.4	+0.3
TACH				*i* S	Sn	01 43 23.2	+0.9
TACH	**Talagante**	**0.83**	**5**⇑	*i*P	Pn	01 43 10.4	+0.3
TACH				*i* S	Sn	01 43 23.2	+0.9
LMEL	**Las Melosas**	**0.93**	**47**⇓	*i*P	Pn	01 43 12.4	+1.0
LMEL				*i* S	Sn	01 43 26.2	+1.8
LMEL	**Las Melosas**	**0.93**	**47**⇓	*i*P	Pn	01 43 12.4	+1.0
LMEL				*i* S	Sn	01 43 26.2	+1.8
LMEL				AML	AML	01 43 27.8	
	comp=N,3μm,0.2s						
PCH	**Pirque**	**0.96**	**26**⇑	*i*P	Pn	01 43 12.0	+0.2
PCH				*i* S	Sn	01 43 26.1	+1.0
PCH	**Pirque**	**0.96**	**26**⇑	*i*P	Pn	01 43 12.0	+0.2
PCH				*i* S	Sn	01 43 26.1	+1.0
ANTU	**Antumapu**	**0.97**	**20**⇑	*i*P	Pn	01 43 12.2	+0.4
ANTU				*i* S	Sn	01 43 26.4	+1.1
ANTU	**Antumapu**	**0.97**	**20**⇑	*i*P	Pn	01 43 12.2	+0.4
ANTU				*i* S	Sn	01 43 26.4	+1.1
ANTU				AML	AML	01 43 30.0	
	comp=N,1μm,0.2s						
RCDM	**Rinconada Maip**	**1.01**	**11**	*e*P	Pn	01 43 12.5	+0.1
RCDM				*i* S	Sn	01 43 26.8	+0.7
RCDM	**Rinconada Maip**	**1.01**	**11**	*e*P	Pn	01 43 12.5	+0.1
RCDM				*i* S	Sn	01 43 26.8	+0.7
RCDM				AML	AML	01 43 28.0	
	comp=N,3μm,0.1s						
SJCH	**San Jose de Ma**	**1.01**	**34**	*e*P	Pn	01 43 12.9	+0.6
SJCH				*e*S	Sn	01 43 27.9	+1.7
SJCH	**San Jose de Ma**	**1.01**	**34**	*e*P	Pn	01 43 12.9	+0.6
SJCH				*e*S	Sn	01 43 27.9	+1.7
SJCH				AML	AML	01 43 29.4	
	comp=N,1μm,0.2s						
TALC	**Talca**	**1.04**	**208**⇑	*i*P	Pn	01 43 12.8	+0.1
TALC	**Talca**	**1.04**	**208**⇑	*i*P	Pn	01 43 12.8	+0.1
FSR	**Penalolen**	**1.09**	**23**⇑	*i*P	Pn	01 43 13.7	+0.4
FSR				*i* S	Sn	01 43 29.0	+1.1
FSR	**Penalolen**	**1.09**	**23**⇑	*i*P	Pn	01 43 13.7	+0.4
FSR				*i* S	Sn	01 43 29.0	+1.1
FSR				AML	AML	01 43 30.9	
	comp=E,223nm,0.1s						
CLCH	**Cerro Calan**	**1.16**	**21**⇓	*i*P	Pn	01 43 14.6	+0.4
CLCH				*i* S	Sn	01 43 30.8	+1.3
CLCH				AML	AML	01 43 32.6	
	comp=N,872nm,0.8s						
FCH	**Farellones**	**1.31**	**28**⇓	*i*P	Pn	01 43 17.0	+0.9
FCH				*i* S	Sn	01 43 35.0	+2.1
FCH	**Farellones**	**1.31**	**28**⇓	*i*P	Pn	01 43 17.0	+0.9
FCH				*i* S	Sn	01 43 35.0	+2.1
PEL	**Peldehue**	**1.37**	**12**⇑	*i*P	Pn	01 43 17.4	+0.5
PEL				*i* S	Sn	01 43 35.5	+1.1
PEL				AML	AML	01 43 37.4	
	comp=E,1μm,0.3s						
IHA	**Instituto Hidr**	**1.54**	**340**	*e*P	Pn	01 43 20.0	+0.7
IHA	**Instituto Hidr**	**1.54**	**340**	*e*P	Pn	01 43 20.0	+0.7

*NEIC **27** 01:56:23.0, 39°.21N×27°.74E, h6km, MD3.4(ATH), MD3.1(ISK), After ISK.*
*ISCJB **27** 01:56:23.7±0.4, 39°.23N±0°.02×27°.73E±0°.03, h2km±4km, Error ellipse: s-maj=3.7km s-min=2.7km az=23.5*
*ISK **27** 01:56:23.4, 39°.22N×27°.72E, h5km, MD3.2*
*DDA **27** 01:56:23.5, 39°.22N×27°.77E, h7km±3km, Md3.0*
*CSEM **27** 01:56:24.2±0.1, 39°.23N×27°.72E, h5km, MD3.2, Error ellipse: s-maj=2.9km s-min=2.3km az=111.0*
*ATH **27** 01:56:25.2, 39°.25N×27°.67E, h28km±5km, MD3.4/5*
ISC 27 01:56:24.3±0.4, 39°.23N±0°.02×27°.73E±0°.03, h4km±3km, n96, σ0°66/120, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.35**	**169**	*i* P	**Pg**	**01 56 30.8**	**-0.4**
AKHS				*i* S	**Sg**	**01 56 36.6**	**+0.9**
AKHS	**Akhisar**	**0.35**	**169**	*i* P	**Pg**	**01 56 30.8**	**-0.3**
AKHS				*i* S	**Sg**	**01 56 36.6**	**+0.9**
AKS	**Akhisar**	**0.35**	**169**	PG	**Pg**	**01 56 30.6**	**-0.5**
AKS				*e*SG	**Sg**	**01 56 35.1**	**-0.6**
AKS	**Akhisar**	**0.35**	**169**	*i* Pg	**Pg**	**01 56 30.6**	**-0.5**
AKS				*e*Sg	**Sg**	**01 56 35.1**	**-0.6**
BALB	**Balikesir**	**0.43**	**16**	PG	**Pg**	**01 56 32.8**	**+0.1**
BALB				*e*SG	**Sg**	**01 56 39.3**	**+1.1**
BALB	**Balikesir**	**0.43**	**16**	*i* Pg	**Pg**	**01 56 32.8**	**+0.2**
BALB				*e*Sg	**Sg**	**01 56 39.3**	**+1.1**
BALY	**Balya**	**0.52**	**351**	*i* P	**Pg**	**01 56 34.6**	**+0.2**
BALY				*i* S	**Sg**	**01 56 41.3**	**+0.2**
BALY	**Balya**	**0.52**	**351**	*i* P	**Pg**	**01 56 34.6**	**+0.3**
BALY				*i* S	**Sg**	**01 56 41.3**	**+0.2**
DURS	**Dursunbey**	**0.69**	**57**	*i* P	**Pg**	**01 56 36.6**	**-0.9**
DURS				*i* S	**Sg**	**01 56 46.2**	**-0.3**
DURS	**Dursunbey**	**0.69**	**57**	*i* P	**Pg**	**01 56 36.6**	**-0.9**
DURS				*i* S	**Sg**	**01 56 46.2**	**-0.3**
AYVA	**Ayvalik**	**0.81**	**276**	*i* P	**Pg**	**01 56 40.4**	**+0.5**
AYVA				*i* S	**Sg**	**01 56 51.7**	**+1.3**
AYVA	**Ayvalik**	**0.81**	**276**	*i* P	**Pg**	**01 56 40.4**	**+0.5**
AYVA				*i* S	**Sg**	**01 56 51.7**	**+1.3**
IZM	**Izmir**	**0.90**	**204**	*e*PG	**Pg**	**01 56 41.9**	**+0.3**
IZM				*e*SG	**Sg**	**01 56 54.7**	**+1.3**
IZM	**Izmir**	**0.90**	**204**	*e*Pg	**Pg**	**01 56 41.9**	**+0.3**
IZM				*e*Sg	**Sg**	**01 56 54.7**	**+1.3**
BLCB	**Balcova**	**1.00**	**213**	*e*PG	**Pg**	**01 56 42.8**	**-0.6**
BLCB				*e*SG	**Sg**	**01 56 56.0**	**-0.3**
BLCB	**Balcova**	**1.00**	**213**	*e*Pg	**Pg**	**01 56 42.8**	**-0.6**
BLCB				*e*Sg	**Sg**	**01 56 56.0**	**-0.3**
KULA	**Kula-Manisa**	**1.02**	**134**	*e*PG	**Pg**	**01 56 42.7**	**-1.1**
KULA	**Kula-Manisa**	**1.02**	**134**	*e*Pg	**Pg**	**01 56 42.7**	**-1.1**
PRK	**Paraskevi**	**1.13**	**271**	*e*Pn	**Pg**	**01 56 45.6**	**-0.4**
PRK				*e*Sn	**Sg**	**01 57 01.1**	**+0.4**
PRK	**Paraskevi**	**1.13**	**271**	*e*PN	**Pg**	**01 56 45.6**	**-0.4**
PRK				*e*SN	**Sg**	**01 57 01.1**	**+0.4**
PRK	**Paraskevi**	**1.13**	**271**	*e*Pn	**Pg**	**01 56 45.6**	**-0.4**
PRK				*e*Sn	**Sg**	**01 57 01.1**	**+0.4**
BNT	**Bandirma**	**1.14**	**7**	*e*PN	**Pg**	**01 56 45.2**	**-1.0**
BNT	**Bandirma**	**1.14**	**7**	*e*Pn	**Pg**	**01 56 45.2**	**-1.0**
KCT	**Karacabey**	**1.15**	**25**	*e*PN	**Pg**	**01 56 45.2**	**-1.1**
KCT	**Karacabey**	**1.15**	**25**	*e*Pn	**Pg**	**01 56 45.2**	**-1.1**
EZN	**Ezine**	**1.24**	**299**	*e*PN	**Pn**	**01 56 47.3**	**-1.1**
EZN	**Ezine**	**1.24**	**299**	*e*Pn	**Pn**	**01 56 47.3**	**-1.1**
LPK	**Lapseki**	**1.37**	**327**	*e*PN	**Pn**	**01 56 48.8**	**-1.4**
LPK	**Lapseki**	**1.37**	**327**	*e*Pn	**Pn**	**01 56 48.8**	**-1.4**
RKY	**Sarkoy-Tekirda**	**1.52**	**344**	*e*PN	**Pn**	**01 56 51.2**	**-1.1**
RKY	**Sarkoy-Tekirda**	**1.52**	**344**	*e*Pn	**Pn**	**01 56 51.2**	**-1.1**
CHOS	**Chios island**	**1.55**	**238**	*e*PN	**Pn**	**01 56 53.0**	**+0.3**
CHOS				*e*SN	**Sn**	**01 57 12.6**	**-0.7**
CHOS	**Chios island**	**1.55**	**238**	*e*Pn	**Pn**	**01 56 53.0**	**+0.3**
CHOS				*e*Sn	**Sn**	**01 57 12.6**	**-0.7**
ARMT	**Armutlu**	**1.60**	**33**	*e*PN	**Pn**	**01 56 52.7**	**-0.7**
ARMT	**Armutlu**	**1.60**	**33**	*e*Pn	**Pn**	**01 56 52.7**	**-0.6**
GEMT	**Gemlik**	**1.65**	**43**	*e*PN	**Pn**	**01 56 53.7**	**-0.4**
GEMT	**Gemlik**	**1.65**	**43**	*e*Pn	**Pn**	**01 56 53.7**	**-0.4**
KHL	**Karahalli**	**1.67**	**122**	*e*PN	**Pn**	**01 56 53.9**	**-0.5**
KHL	**Karahalli**	**1.67**	**122**	*e*Pn	**Pn**	**01 56 53.9**	**-0.4**
SMG	**Samos**	**1.67**	**205**	*e*Pn	**Pn**	**01 56 54.7**	**+0.4**
SMG				*e*SN	**Sn**	**01 57 15.8**	**-0.4**
SMG	**Samos**	**1.67**	**205**	*e*PN	**Pn**	**01 56 54.7**	**+0.4**
SMG				*e*SN	**Sn**	**01 57 15.8**	**-0.4**
SMG	**Samos**	**1.67**	**205**	*e*Pn	**Pn**	**01 56 54.7**	**+0.4**
SMG				*e*Sn	**Sn**	**01 57 15.8**	**-0.4**
GADA	**Gvkgeada**	**1.71**	**305**	*e*PN	**Pn**	**01 56 54.0**	**-0.9**
GADA	**Gvkgeada**	**1.71**	**305**	*e*Pn	**Pn**	**01 56 54.0**	**-0.9**
YLV	**Yalova**	**1.84**	**43**	*e*PN	**Pn**	**01 56 57.2**	**+0.5**
YLV	**Yalova**	**1.84**	**43**	*e*Pn	**Pn**	**01 56 57.2**	**+0.5**
ALT	**Altintas**	**1.86**	**95**	*e*PN	**Pn**	**01 56 56.7**	**-0.3**
ALT	**Altintas**	**1.86**	**95**	*e*Pn	**Pn**	**01 56 56.7**	**-0.3**
CAVI	**Cavuskoy**	**1.90**	**58**	*e*PN	**Pn**	**01 56 57.2**	**-0.3**
CAVI	**Cavuskoy**	**1.90**	**58**	*e*Pn	**Pn**	**01 56 57.2**	**-0.3**
MLSB	**Milas**	**1.93**	**179**	*e*PN	**Pn**	**01 56 57.6**	**-0.2**
MLSB	**Milas**	**1.93**	**179**	*e*Pn	**Pn**	**01 56 57.7**	**-0.2**
ENEZ	**Enez**	**1.93**	**322**	*e*PN	**Pn**	**01 56 58.3**	**+0.3**
ENEZ	**Enez**	**1.93**	**322**	*e*Pn	**Pn**	**01 56 58.3**	**+0.3**
ADVT	**Abdulvahap**	**1.96**	**51**	*e*PN	**Pn**	**01 56 58.3**	**0.0**
ADVT	**Abdulvahap**	**1.96**	**51**	*e*Pn	**Pn**	**01 56 58.3**	**-0.1**
SLVT	**Silivri**	**2.04**	**10**	*e*PN	**Pn**	**01 56 59.7**	**+0.3**
SLVT	**Silivri**	**2.04**	**10**	*e*Pn	**Pn**	**01 56 59.7**	**+0.3**
LIA	**Limnos Island**	**2.08**	**290**	*e*Pn	**Pn**	**01 56 59.4**	**-0.6**
LIA	**Limnos Island**	**2.08**	**290**	*e*PN	**Pn**	**01 56 59.4**	**-0.6**
LIA	**Limnos Island**	**2.08**	**290**	*e*Pn	**Pn**	**01 56 59.4**	**-0.6**
CTKS	**Kestanelik-??a**	**2.09**	**16**	*e*PN	**Pn**	**01 57 00.1**	**0.0**
CTKS	**Kestanelik-??a**	**2.09**	**16**	*e*Pn	**Pn**	**01 57 00.1**	**-0.1**
ISK	**Istanbul-Kandi**	**2.10**	**29**	*e*PN	**Pn**	**01 57 01.1**	**+0.8**
ISK	**Istanbul-Kandi**	**2.10**	**29**	*e*Pn	**Pn**	**01 57 01.1**	**+0.8**
ALN	**Alexandroupoli**	**2.11**	**323**	*e*Pn	**Pn**	**01 57 00.1**	**-0.3**
ALN	**Alexandroupoli**	**2.11**	**323**	*e*PN	**Pn**	**01 57 00.1**	**-0.3**
ALN	**Alexandroupoli**	**2.11**	**323**	*e*Pn	**Pn**	**01 57 00.1**	**-0.3**
BGKT	**Bogazkoy**	**2.11**	**22**	*e*PN	**Pn**	**01 57 00.9**	**+0.5**
BGKT	**Bogazkoy**	**2.11**	**22**	*e*Pn	**Pn**	**01 57 00.9**	**+0.5**
HRT	**Hereke**	**2.18**	**42**	*e*PN	**Pn**	**01 57 01.6**	**+0.3**
HRT	**Hereke**	**2.18**	**42**	*e*Pn	**Pn**	**01 57 01.7**	**+0.3**
BODT	**Bodrum**	**2.19**	**189**	*e*PN	**Pn**	**01 57 01.5**	**+0.1**
BODT	**Bodrum**	**2.19**	**189**	*e*Pn	**Pn**	**01 57 01.5**	**+0.1**
GPA	**Golpazari**	**2.25**	**61**	*e*PN	**Pn**	**01 57 02.9**	**+0.5**
GPA	**Golpazari**	**2.25**	**61**	*e*Pn	**Pn**	**01 57 02.9**	**+0.5**
KLYT	**Kilyos**	**2.26**	**26**	*e*PN	**Pn**	**01 57 03.4**	**+0.9**
KLYT	**Kilyos**	**2.26**	**26**	*e*Pn	**Pn**	**01 57 03.4**	**+0.9**
CTYL	**Yal??k??y-??at**	**2.29**	**11**	*e*PN	**Pn**	**01 57 02.9**	**+0.1**
CTYL	**Yal??k??y-??at**	**2.29**	**11**	*e*Pn	**Pn**	**01 57 02.9**	**+0.1**
SHUT	**Suhut-Afyon**	**2.30**	**106**	*e*PN	**Pn**	**01 57 02.9**	**-0.1**
SHUT	**Suhut-Afyon**	**2.30**	**106**	*e*Pn	**Pn**	**01 57 02.9**	**-0.1**
ESKT	**Eskisehir**	**2.44**	**82**	*e*PN	**Pn**	**01 57 05.7**	**+0.8**
ESKT	**Eskisehir**	**2.44**	**82**	*e*Pn	**Pn**	**01 57 05.7**	**+0.8**
GULT	**Gulveren**	**2.46**	**60**	*e*PN	**Pn**	**01 57 05.7**	**+0.4**
GULT	**Gulveren**	**2.46**	**60**	*e*Pn	**Pn**	**01 57 05.7**	**+0.5**
DAT	**Datca**	**2.50**	**183**	*e*PN	**Pn**	**01 57 06.6**	**+0.9**
DAT	**Datca**	**2.50**	**183**	*e*Pn	**Pn**	**01 57 06.6**	**+0.9**
EDRB	**Edirne**	**2.72**	**344**	*e*PN	**Pn**	**01 57 09.3**	**+0.5**
EDRB	**Edirne**	**2.72**	**344**	*e*Pn	**Pn**	**01 57 09.3**	**+0.5**
SVRH	**Sivrihisar-ESK**	**2.95**	**85**	*e*PN	**Pn**	**01 57 12.5**	**+0.6**
SVRH	**Sivrihisar-ESK**	**2.95**	**85**	*e*Pn	**Pn**	**01 57 12.5**	**+0.5**
MDU	**Mudurnu**	**2.96**	**64**	*e*PN	**Pn**	**01 57 12.5**	**+0.5**
MDU	**Mudurnu**	**2.96**	**64**	*e*Pn	**Pn**	**01 57 12.5**	**+0.5**
KIZT	**Kizilcal**	**3.25**	**95**	*e*PN	**Pn**	**01 57 17.1**	**+1.0**
KIZT	**Kizilcal**	**3.25**	**95**	*e*Pn	**Pn**	**01 57 17.1**	**+1.0**

*KRSC **27** 01:57:10.2±0.6, 53°.13N×158°.36E, h188km±32km, ML3.8*
*MOS **27** 01:57:11.0±0.9, 53°.04N×157°.91E, h177km, mb4.1/1, Error ellipse: s-maj=72.0km s-min=36.3km az=136.8*
*ISCJB **27** 01:57:11.6±0.6, 53°.17N±0°.06×158°.1E±0°.1, h180km±4km, mb3.4/3, Error ellipse: s-maj=12.5km s-min=7.6km az=37.7*
*IDC **27** 01:57:12.2±0.8, 53°.20N×157°.97E, h172km±8km, mb3.2/3, mb1 3.5/4, mb1mx3.0/26, mbtmp3.2/4, Error ellipse: s-maj=27.0km s-min=24.6km az=134.0*
ISC 27 01:57:12.7±0.6, 53°.17N±0°.06×158°.2E±0°.1, h176km±4km, n27, σ0°86/38, mb3.4/3, 1C, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**0.29**	**258**	P	**Pn**	**01 57 35.5**	**-0.7**
	11nm,0.3s,baz=61,slow=6.4,SNR=89						
PETK	**Petropavlovsk-**	**0.29**	**258**	PN	**Pn**	**01 57 35.5**	**-0.8**
PETK				pmax	pmax		
	comp=Z,11nm,0.3s						
PET	**Petropavlovsk**	**0.33**	**117**⇑	*i*PN	**Pn**	**01 57 36.3**	**-0.1**
PET				*i* S	**Sn**	**01 57 55.4**	**+1.0**
PET				pmax	pmax		
	comp=Z,89nm,0.5s						
PET				smax			
	comp=N,181nm,0.6s						
PET				smax			
	comp=E,126nm,0.8s						
PET	**Petropavlovsk**	**0.33**	**117**	*e*P	**Pn**	**01 57 36.3**	**-0.1**
PET				*i* S	**Sn**	**01 57 55.6**	**+1.2**
AVH	**Avacha**	**0.35**	**74**	*e*P	**Pn**	**01 57 36.7**	**+0.3**
AVH				*i* S	**Sn**	**01 57 56.4**	**+1.8**
GNL	**Ganaly**	**0.54**	**345**	*i* P	**Pn**	**01 57 36.5**	**-0.6**
GNL				*i* S	**Sn**	**01 57 55.8**	**-0.2**
KII	**Karymskiy**	**1.15**	**41**	*e*P	**Pn**	**01 57 41.2**	**+0.1**
MIPR	**Malaya Ipel'ka**	**1.24**	**224**	*e*P	**Pn**	**01 57 41.3**	**-0.6**
MIPR				*i* S	**Sn**	**01 58 03.9**	**-0.5**
MKZ	**Mys Kozlova**	**2.52**	**55**	*e*P	**Pn**	**01 57 54.5**	**-0.8**
MKZ				*i* S	**Sn**	**01 58 26.0**	**-2.4**
KMNR	**Kamenistaya**	**2.86**	**24**	*e*P	**Pn**	**01 57 59.7**	**+0.4**
KMNR				*i* S	**Sn**	**01 58 36.5**	**+0.9**
KPT	**Kopyto**	**3.04**	**22**	*e*P	**Pn**	**01 58 01.3**	**-0.3**
KIRR	**Kirishev**	**3.06**	**24**	*e*P	**Pn**	**01 58 01.5**	**-0.3**
BZMR	**Bezymyannaya**	**3.08**	**25**	*e*P	**Pn**	**01 58 02.6**	**+0.6**
ZLN	**Zelenaya**	**3.24**	**27**	*e*P	**Pn**	**01 58 04.6**	**+0.7**
SRDR	**Sredinnyy**	**3.28**	**15**	*e*P	**Pn**	**01 58 04.0**	**-0.4**
CIRR	**Tsirk**	**3.31**	**26**	*e*P	**Pn**	**01 58 05.2**	**+0.4**
KLY	**Klyuchi**	**3.46**	**24**	P	**Pn**	**01 58 07.4**	**+0.7**
BDR	**Baidarnaya**	**3.83**	**26**	*e*P	**Pn**	**01 58 11.3**	**-0.1**
KBTR	**Krutoberegovo**	**4.07**	**40**	*e*P	**Pn**	**01 58 12.9**	**-1.5**
KBTR				*i* S	**Sn**	**01 58 58.9**	**-3.7**
BKI	**Bering**	**5.01**	**63**	*e*P	**Pn**	**01 58 25.8**	**-0.8**
BKI				*i* S	**Sn**	**01 59 20.1**	**-4.4**
FX1	**Attu Island--F**	**9.04**	**86**	P	**Pn**	**01 59 20.9**	**+1.4**
	comp=E,1.1nm,0.3s,baz=311,slow=5.7,SNR=14						
FX1				S	**Sn**	**02 00 59.9**	**-0.4**
	comp=E,1.5nm,0.3s,baz=96,slow=20,SNR=8.0						
FX1	**Attu Island--F**	**9.04**	**86**	PN	**Pn**	**01 59 21.0**	**+1.4**
FX1				S	**Sn**	**02 00 59.9**	**-0.4**
FX1				pmax	pmax		
	comp=Z,1.0nm,0.3s						
FX1				smax			
	comp=N,2.0nm,0.3s						
ERM	**Erimo**	**15.04**	**228**	*i* P	**Pn**	**02 00 32.1**	**-4.2**
PDAR	**Pinedale Array**	**58.49**	**60**	P	**P**	**02 06 50.8**	**+0.8**
	comp=N,0.4nm,0.5s,mb3.5,baz=321,slow=7.1,SNR=3.0						
TXAR	**Lajitas Array**	**71.67**	**66**	P	**P**	**02 08 15.6**	**+0.5**
	comp=N,0.4nm,0.5s,mb3.4,baz=292,slow=5.3,SNR=4.2						
ASAR	**Alice Springs**	**79.37**	**203**	P	**P**	**02 08 58.8**	**0.0**
	comp=N,0.3nm,0.5s,mb3.2,baz=19,slow=5.4,SNR=4.7						
ASAR	**Alice Springs**	**79.37**	**203**	*e*P	**P**	**02 08 58.7**	**0.0**

MAN 27 02:06:35, 12°.29N×123°.76E, h10km, mb4.1, ML2.9, MS2.7, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.15**	**297**⇓	*i*P	Pg	02 06 39.6	+1.2
MMPH				*i* S	Sg	02 06 42.9	+2.2
CNP	**Catarman**	**0.91**	**76**	*e*P	Pg	02 06 52.1	-0.3
CNP				*e*S	Sg	02 07 01.6	-2.7
PVCP	**Virac**	**1.35**	**16**	*e*P	Pn	02 06 59.3	-0.7
PVCP				*e*S	Sb	02 07 09.9	-8.0
GUIM	**Jordan**	**2.01**	**215**	*e*P	Pn	02 07 10.8	+1.7
GUIM				*e*S	Sn	02 07 34.3	0.0

*IDC **27** 02:15:55.1±0.8, 22°.28S×174°.78W, h0km, mb4.6/13, mb1 4.8/13, mb1mx4.7/17, mbtmp4.6/13, MS4.1/8, Ms1 4.1/8, ms1mx3.8/18, Error ellipse: s-maj=33.1km s-min=18.5km az=149.0*
*SZGRF **27** 02:15:58.5, 22°.98S×175°.25W, h33km, Tonga Islands region*
*ISCJB **27** 02:15:59.0±0.4, 22°.3S±0°.1×174°.90W±0°.09, h33km, mb4.9/44, MS4.3/13, Error ellipse: s-maj=16.3km s-min=8.9km az=149.1*
*NEIC **27** 02:16:00.8±0.3, 22°.17S×174°.90W, h35km, mb5.0/21, Error ellipse: s-maj=13.9km s-min=7.2km az=151.0*
*BJI **27** 02:16:07.8, 22°.10S×174°.95W, h100km, mB5.2/18, mb5.2/28*
ISC 27 02:16:00.9±0.4, 22°.3S±0°.1×174°.87W±0°.09, h35km, (h95km±2.2km:pP-P), n165, σ1°02/58, mb4.9/44, MS4.3/13, 28C-3D, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**8.03**	**303**	Pn	**Pn**	**02 18 02.2**	**+7.1**
	532nm,0.7s,SNR=11						
MSVF	**Nonsavu**	**8.03**	**303**	*e*Pn	**Pn**	**02 18 01.5**	**+6.4**
	124nm,0.9s						
AFI	**Afiamalu**	**8.80**	**20**	Pn	**Pn**	**02 17 56.4**	**-9.3**
	4.4nm,0.3s,baz=233,slow=15,SNR=3.4						
AFI				Sn	**Sn**	**02 19 27.3**	**-16**
	15nm,0.3s,baz=119,slow=19,SNR=4.0						
URZ	**Urewera**	**17.38**	**202**	LR	LR	02 25 35.2	
	comp=Z,427nm,18.6s,baz=104,slow=33						
TBI	**Tubuai**	**23.45**	**98**	*e*LR	LR	02 26 48.2	
	281nm,22.0s,baz=266						
PPT	**Papeete**	**24.22**	**83**	*e*LQ		02 25 59.4	
	452nm,24.2s						
PPT				*e*LR	LR	02 27 16.3	
	274nm,21.5s						
PPT	**Papeete**	**24.22**	**83**	LR	LR	02 28 58.7	
	comp=Z,520nm,18.7s,MS4.0,baz=286,slow=32						
ARMA	**Armidale**	**31.02**	**248**	*e*P	**P**	**02 22 16.5**	**+1.1**
EIDS	**Eidsvold**	**31.25**	**257**	*e*P	**P**	**02 22 16.2**	**-1.3**
EIDS	**Eidsvold**	**31.25**	**257**	*e*P	**P**	**02 22 17.1**	**-0.4**
	26nm,1.4s,mb4.9						
TAOE	**Nuku Hiva Isla**	**35.90**	**74**	*e*LR	LR	02 32 33.0	
	219nm,22.6s						
CMSA	**Cobar Meteorol**	**36.20**	**247**	*e*P	**P**	**02 22 59.4**	**-1.1**
CTA	**Charters Tower**	**36.25**	**266**	*e*P	**P**	**02 23 00.9**	**-0.1**
	11nm,0.6s,mb5.0						
CTA	**Charters Tower**	**36.25**	**266**	P	**P**	**02 23 01.2**	**+0.3**
	13nm,0.6s,mb5.0,baz=97,slow=10,SNR=19						
CTAO	**Charters Tower**	**36.25**	**266**	*e*P	**P**	**02 23 00.8**	**-0.2**
	13nm,0.6s,mb5.0						
RKT	**Rikitea**	**36.75**	**99**	*e*LR	LR	02 33 00.8	
	208nm,22.8s						
STKA	**Stephens Creek**	**39.71**	**247**	P	**P**	**02 23 29.3**	**-0.7**
	3.6nm,0.8s,mb4.1,baz=84,slow=12,SNR=4.9						
STKA				LR	LR	02 38 56.6	
	comp=Z,351nm,18.1s,MS4.2,baz=24,slow=35						
STKA	**Stephens Creek**	**39.71**	**247**	*e*P	**P**	**02 23 30.0**	**0.0**
COEN	**Coen**	**40.61**	**274**	*e*P	**P**	**02 23 37.5**	**-0.2**
	122nm,1.1s,mb5.4						
ASAR	**Alice Springs**	**46.98**	**258**	P	**P**	**02 24 28.0**	**-0.8**
	18nm,0.9s,mb5.0,baz=91,slow=8.4,SNR=110						
ASAR				PcP	PcP	02 26 01.4	+0.4
	2.2nm,0.8s,baz=106,slow=3.6,SNR=4.8						
WRAB	**Tennant Creek**	**47.25**	**263**	*e*P	**P**	**02 24 29.0**	**-2.0**
	10nm,0.8s,mb4.8						
WRA	**Warramunga Arr**	**47.26**	**263**	P	**P**	**02 24 29.5**	**-1.6**
	9.0nm,0.8s,mb4.8,baz=99,slow=8.2,SNR=42						
FORT	**Forrest**	**51.31**	**248**	*e*P	**P**	**02 25 00.3**	**-1.6**
	29nm,0.7s,mb5.3						
FITZ	**Fitzroy Crossi**	**55.69**	**263**	*e*P	**P**	**02 25 33.3**	**-0.9**
	21nm,1.4s,mb5.0						
MBWA	**Marble Bar**	**60.32**	**258**	*e*P	**P**	**02 26 06.8**	**+0.2**
	16nm,0.7s,mb5.2						
CASY	**Casey**	**63.65**	**206**	*e*P	**P**	**02 26 28.5**	**+0.3**
	4.8nm,0.8s,mb4.6						
QSPA	**South Pole Qui**	**67.83**	**180**	*e*P	**P**	**02 26 56.9**	**+1.9**
	15nm,1.0s,mb5.0						
KKM	**Kota Kinabalu**	**73.01**	**284**	*e*P	**P**	**02 27 27.2**	**-0.5**
	14nm,0.8s,mb5.0						
MJAR	**Matsushiro Arr**	**73.35**	**322**	P	**P**	**02 27 28.7**	**-0.5**
	1.7nm,0.5s,mb4.3,baz=156,slow=5.8,SNR=8.7						
MAJO	**Matsushiro**	**73.36**	**322**	*e*P	**P**	**02 27 28.9**	**-0.3**
	8.0nm,0.7s,mb4.8						
MAT	**Matsushiro**	**73.36**	**322**	P	**P**	**02 27 28.9**	**-0.3**
KSM	**Kuching**	**76.53**	**277**	*e*P	**P**	**02 27 47.8**	**-0.3**
	18nm,0.8s,mb5.0						
PETK	**Petropavlovsk-**	**78.73**	**344**	P	**P**	**02 27 59.1**	**-0.2**
	8.2nm,0.8s,mb4.7,baz=125,slow=9.2,SNR=11						
KSRS	**Korea Array**	**80.13**	**317**	P	**P**	**02 28 08.8**	**+1.4**
	3.5nm,0.7s,mb4.4,baz=134,slow=5.7,SNR=16						
KSRS				LR	LR	03 02 15.1	
	comp

KMI			S	S	02 40 04.5	-8.2
KMI			sS	sS	02 40 50.3	+19
KMI			SS	SS	02 46 23.5	-3.0
KMI			pmax	pmax		
	comp=Z,16nm,0.8s,mb5.5					
KMI			pmax	pmax		
	comp=Z,32nm,3.3s					
KMI			LR	LR		
	comp=N,120nm,18.1s,MS4.5					
KMI			LR	LR		
	comp=E,96nm,17.0s,MS4.5					
KMI			LR	LR		
	comp=Z,110nm,16.7s,MS4.4					
CMAR	**Chiang Mai Arr**	**93.44 288**	P	**P**	**02 29 14.8**	**+1.6**
	comp=Z,12nm,0.8s,mb5.3,baz=129,slow=3.1,SNR=39					
CHTO	**Chiang Mai**	**93.57 289**	*e*P	**P**	**02 29 15.3**	**+1.4**
	comp=Z,12nm,0.6s,mb5.5					
CD2	**Chengdu**	**94.18 302**	*e*P	**P**	**02 29 15.8**	**-0.6**
CD2			pP	pP	02 29 41.8	+14
CD2			sP	sP	02 29 52.3	+21
CD2			PP	PP	02 33 06.5	+2.8
CD2			SKS		02 39 40.3	
CD2			S	S	02 40 15.5	-10
CD2			sS	sS	02 41 00.8	+17
CD2			SS	SS	02 46 42.5	-4.6
CD2			pmax	pmax		
	comp=Z,10.0nm,0.8s,mb5.3					
CD2			pmax	pmax		
	comp=Z,40nm,5.8s					
CD2			LR	LR		
	comp=N,180nm,16.2s					
CD2			LR	LR		
	comp=Z,160nm,18.4s,MS4.5					
LZH	**Lanzhou**	**96.14 306**	*e*P	**P**	**02 29 23.0**	**-2.2**
LZH			pP	pP	02 29 49.0	+13
LZH			sP	sP	02 29 59.5	+19
LZH			*e*PP	PP	02 33 19.5	+0.7
LZH			SKS		02 39 49.3	
LZH			*e*S	S	02 40 30.8	-11
LZH			sS	sS	02 41 20.0	+19
LZH			pmax	pmax		
	comp=Z,19nm,1.3s,mb5.4					
LZH			pmax	pmax		
	comp=Z,93nm,8.7s					
LZH			LR	LR		
	comp=N,270nm,18.5s					
LZH			LR	LR		
	comp=Z,330nm,19.7s,MS4.8					
LPAZ	**La Paz**	**98.71 112**	LR	LR	03 05 20.6	
	comp=Z,66nm,21.3s,MS4.1,baz=57,slow=30					
SONM	**Songino Array**	**98.99 318**	P	**P**	**02 29 39.8**	**+2.1**
	comp=Z,0.7nm,0.7s,mb4.3,baz=108,slow=4.7,SNR=3.1					
MKAR	**Makanchi Array**	**114.52 313**	PKP	PKiKP	02 34 35.9	-1.2
	comp=Z,0.5nm,0.6s,baz=69,slow=7.9,SNR=5.9					
MKAR	**Makanchi Array**	**114.52 313**	PKP	PKiKP	02 34 35.9	-1.2
KSH	**Kashi**	**118.27 304**	*e*PKPbc	PKPdf	02 34 50.0	+5.4
KSH			sPKP		02 35 27.5	
KSH			PP	PP	02 36 00.0	-1.0
KSH			PKS		02 38 25.5	
KSH			SKS	SKSdf	02 41 51.0	-3.1
KSH			SKKS	SKKSac	02 42 41.5	-17
KSH			SS	SS	02 51 48.5	-26
KSH			AMB	AMB		
	comp=Z,110nm,4.9s					
KSH			LR	LR		
	comp=N,55nm,4.6s					
KSH			LR	LR		
	comp=E,45nm,4.4s					
KSH			LR	LR		
	comp=Z,110nm,5.0s					
BVAR	**Borovoye Array**	**122.29 320**	PKP	PKPdf	02 34 51.3	-0.5
	comp=Z,1.2nm,0.7s,baz=52,slow=2.4,SNR=6.9					
ARCES	**ARCESS Array B**	**131.13 351**	PKP	PKPdf	02 35 08.2	-0.2
	comp=Z,4.2nm,0.8s,baz=355,slow=1.5,SNR=8.8					
FINES	**FINESS Array B**	**138.23 345**	PKP	PKPdf	02 35 22.1	+0.2
	comp=Z,2.5nm,0.8s,baz=22,slow=6.2,SNR=6.3					
SUW	**Suwalki**	**145.46 341**	*e*PKP	PKPdf	02 35 34.4	-0.6
SUW	**Suwalki**	**145.46 341**	*e*PKPbc	PKPbc	02 35 34.5	-0.5
MUD	**Monsted U'grnd**	**145.71 356**	*i* P	PKPdf	02 35 35.0	-0.3
	comp=Z,17nm,0.9s					
AKASG	**Malin Array Be**	**145.93 332**	PKPbc	PKPbc	02 35 35.6	-0.9
	comp=Z,11nm,0.7s,baz=41,slow=4.1,SNR=66					
AKBB	**Malin Array Si**	**145.93 332**	*e*PKPbc	PKPbc	02 35 35.4	-1.1
KIEV	**Kiev**	**145.94 332**	*e*PKPbc	PKPbc	02 35 35.5	-1.0
BSD	**Bornholm Skovb**	**146.37 350**	*i* P	PKPdf	02 35 37.0	+0.6
	comp=Z,7.5nm,0.8s					
GKP	**Gorka Klasztor**	**147.68 346**	*e*PKP	PKPbc	02 35 41.1	-0.3
BSEG	**Bad Segeberg**	**148.12 354**	*e*PKPbc	PKPbc	02 35 42.4	-0.2
KWP	**Kalwaria Pacla**	**149.35 337**	*e*PKP	PKPbc	02 35 45.9	0.0
KWP			*e*		02 35 50.8	
KWP	**Kalwaria Pacla**	**149.35 337**	*e*PKPbc	PKPbc	02 35 45.2	-0.7
KWP			*e*PKPab	PKPab	02 35 50.1	-0.5
KWP	**Kalwaria Pacla**	**149.35 337** ⇑	*i*P	PKPbc	02 35 45.8	-0.1
NRDL	**Niedersach Rie**	**149.56 354**	*e*PKPbc	PKPbc	02 35 46.0	-0.3
OJC	**Ojcow**	**149.79 341**	*e*PKP	PKPbc	02 35 45.2	-1.8
IBBN	**Ibbenburen**	**149.93 357**	*e*PKPbc	PKPbc	02 35 47.1	-0.1
BUR08	**Bucovina Ar. S**	**149.97 332**	*e*PKPbc	PKPbc	02 35 48.0	+0.5
BURAR	**Bucovina Array**	**149.98 332** ⇑⇑	P	PKPbc	02 35 48.7	+1.1
BURAR	**Bucovina Array**	**149.98 332** ⇑	*i*P	PKPbc	02 35 48.7	+1.2
STHS	**Stebnicka Huta**	**150.03 339**	*e*PKP	PKPdf	02 35 42.9	+0.3
STHS			*e*		02 35 46.0	
STHS			*e*		02 35 48.2	
STHS			*e*		02 35 55.0	
STHS	**Stebnicka Huta**	**150.03 339**	*e*PKP	PKPdf	02 35 42.9	+0.3
STHS			*e*		02 35 46.0	
STHS			*e*		02 35 48.2	
STHS			*e*		02 35 55.0	
KSP	**Ksiaz**	**150.15 346**	*e*PKP	PKPbc	02 35 48.0	+0.1
BR131	**Keskin Array S**	**150.16 312**	*e*PKPbc	PKPbc	02 35 47.8	-0.4
BRTR	**Keskin Array B**	**150.16 312**	PKPbc	PKPbc	02 35 48.6	+0.3
	comp=Z,5.0nm,0.7s,baz=121,slow=3.3,SNR=36					
CLZ	**Clausthal**	**150.18 353**	*e*PKPbc	PKPbc	02 35 47.9	0.0
NIE	**Niedzica**	**150.34 340**	*e*PKP	PKPbc	02 35 49.2	+0.9
CLL	**Collm**	**150.35 350**	*e*PKPbc	PKPbc	02 35 48.1	-0.2
CLL	**Collm**	**150.35 350** ⇑	*i*PKPbc	PKPbc	02 35 48.1	-0.2
	comp=Z,21nm,0.9s					
CLL			*e*pPKPbc	pPKPbc	02 35 57.0	-2.7
CRVS	**Cervenica-Dubn**	**150.40 338**	*e*PKP	PKPdf	02 35 45.2	+2.0
CRVS			*e*		02 35 49.1	
CRVS	**Cervenica-Dubn**	**150.40 338**	*e*PKP	PKPdf	02 35 45.2	+2.0
CRVS			*e*		02 35 49.1	
UPC	**Upice**	**150.53 346** ⇑	*e*PKP	PKPbc	02 35 48.8	0.0
UPC			*e*PKPAB	PKPab	02 36 01.0	+5.6
VRI	**Vrincioaia**	**150.60 328** ⇑⇑	P	PKPbc	02 35 49.1	0.0
VRI	**Vrincioaia**	**150.60 328** ⇑	*i*P	PKPbc	02 35 49.1	0.0
DPC	**Dobruska-Polom**	**150.61 345** ⇑	*e*PKP	PKPbc	02 35 49.4	+0.5
DPC			*e*PKPAB	PKPab	02 35 56.1	+0.4
BRG	**Berggiesshubel**	**150.61 349**	*e*PKPbc	PKPbc	02 35 48.9	0.0
BRG	**Berggiesshubel**	**150.61 349**	*e*PKP	PKPbc	02 35 49.1	+0.1
	comp=Z,9.9nm,0.9s					
OKC	**Ostrava-Krasne**	**150.61 343** ⇑	*e*PKP	PKPbc	02 35 48.0	-1.0
PLOR	**Plostina**	**150.64 328** ⇓⇓	*i*P	PKPbc	02 35 49.0	-0.2
TIRR	**Tirgusor**	**150.71 325** ⇑⇑	P	PKPbc	02 35 48.2	-1.2
TIRR	**Tirgusor**	**150.71 325** ⇑	*i*P	PKPbc	02 35 48.2	-1.2
BUG	**Bochum--Univer**	**150.81 357**	*e*PKPbc	PKPbc	02 35 49.0	-0.4
PVCC	**Panska Ves**	**150.82 348** ⇑	*e*PKP	PKPbc	02 35 49.6	+0.2
MORC	**Moravsky Berou**	**150.83 343**	*e*PKPbc	PKPbc	02 35 49.0	-0.5
MORC	**Moravsky Berou**	**150.83 343** ⇑	*i*P	PKPbc	02 35 49.5	0.0
KECS	**Kecovo**	**151.09 339**	*e*PKP	PKPdf	02 35 45.8	+1.5
KECS			*e*		02 35 50.5	
KECS			*e*		02 35 58.4	
KECS	**Kecovo**	**151.09 339**	*e*PKP	PKPdf	02 35 45.8	+1.5
KECS			*e*		02 35 50.5	
KECS			*e*		02 35 58.4	
MOX	**Moxa**	**151.21 351**	*e*PKP	PKPbc	02 35 50.3	0.0
	comp=Z,10.0nm,1.4s					
MOX	**Moxa**	**151.21 351**	*e*PKPbc	PKPbc	02 35 50.1	-0.2
MMAI	**Mount Meron Ar**	**151.21 298**	PKPbc	PKPbc	02 35 51.9	+0.9
	comp=Z,7.9nm,0.7s,baz=64,slow=7.5,SNR=16					
MLR	**Muntele Rosu**	**151.25 329** ⇑⇑	P	PKPbc	02 35 51.0	+0.4
MLR	**Muntele Rosu**	**151.25 329** ⇑	*i*P	PKPbc	02 35 51.0	+0.4
WERD	**Werda**	**151.30 350**	*e*PKPbc	PKPbc	02 35 50.3	-0.3
TANN	**Tannenbergstha**	**151.30 350**	*e*PKPbc	PKPbc	02 35 50.5	-0.1
PRU	**Pruhonice**	**151.34 347** ⇑	*e*PKP	PKPbc	02 35 51.3	+0.6
GUNZ	**Gunzen**	**151.37 350**	*e*PKPbc	PKPbc	02 35 50.3	-0.4
WERN	**Wernitzgruen**	**151.44 350**	*e*PKPbc	PKPbc	02 35 50.8	-0.1
NKC	**Novy Kostel**	**151.48 350** ⇑	*e*PKP	PKPbc	02 35 51.2	+0.2
VYHS	**Vyhne**	**151.62 341**	*e*PKP	PKPdf	02 35 48.7	+3.6
VYHS			*e*		02 35 51.3	
VYHS			*e*		02 36 01.0	
VYHS	**Vyhne**	**151.62 341**	*e*PKP	PKPdf	02 35 48.7	+3.6
VYHS			*e*		02 35 51.3	
VYHS			*e*		02 36 01.0	
KOLL	**Kolacno**	**151.67 341**	*e*PKP	PKPbc	02 35 51.6	+0.1
KOLL	**Kolacno**	**151.67 341**	*e*PKP	PKPbc	02 35 51.6	+0.1
DRGR		**151.68 334** ⇑⇑	P	PKPbc	02 35 51.6	0.0
DRGR		**151.68 334** ⇑	*i*P	PKPbc	02 35 51.6	0.0
MEM	**Membach**	**151.69 359**	PKPbc	PKPbc	02 35 51.1	-0.4
VOIR		**151.71 330** ⇑⇑	P	PKPbc	02 35 52.2	+0.5
VOIR		**151.71 330** ⇑	*i*P	PKPbc	02 35 52.2	+0.5
VOIR		**151.71 330** ⇑⇑	P	PKPbc	02 35 52.2	+0.5
PSZ	**Piszkesteto**	**151.78 339**	*e*PKPbc	PKPbc	02 35 51.1	-0.6
PSZ	**Piszkesteto**	**151.78 339** ⇓⇓	*i*P	PKPbc	02 35 51.8	0.0
TREC	**Trest**	**151.79 346** ⇑	*e*PKP	PKPbc	02 35 51.6	-0.1
BCLA	**Clavier**	**151.88 360**	PKP	PKPbc	02 35 53.4	+1.5
TNS	**Taunus Mts**	**151.96 355**	*e*PKPbc	PKPbc	02 35 52.0	-0.1
TNS			*e*PKPab	PKPab	02 36 00.8	-0.5
GRFO	**Grafenberg**	**152.19 352**	*e*PKPbc	PKPbc	02 35 52.8	+0.2
GIVF	**Givet**	**152.20 0**	*e*PKIKP	PKPbc	02 35 52.3	-0.3
	comp=Z,28nm,0.8s					
DOU	**Dourbes**	**152.21 1**	PKPbc	PKPbc	02 35 52.4	-0.3
BAIF	**Baives**	**152.24 1**	*e*PKIKP	PKPbc	02 35 52.5	-0.2
	comp=Z,26nm,0.9s					
KHC	**Kasperske Hory**	**152.35 348**	*e*PKPdf	PKPdf	02 35 45.5	-0.7
KHC			*e*PKPbc	PKPbc	02 35 52.3	-0.7
KHC	**Kasperske Hory**	**152.35 348** ⇑	*e*PKP	PKPbc	02 35 52.4	-0.6
KHC			*e*PKPAB	PKPab	02 35 59.8	-3.2
GEC2	**GERESS Array S**	**152.60 348**	*e*PKPbc	PKPbc	02 35 53.2	-0.4
GEC2			*e*PKPab	PKPab	02 36 03.5	-0.6
WLF	**Walferdange**	**152.63 359**	*e*PKPbc	PKPbc	02 35 53.8	+0.2
WLF			*e*PKPab	PKPab	02 36 04.6	+0.4
GZR	**Gura Zlata**	**152.77 332** ⇑⇑	P	PKPbc	02 35 54.0	0.0
GZR	**Gura Zlata**	**152.77 332** ⇑	*i*P	PKPbc	02 35 54.0	-0.1
CONA	**Conrad Observa**	**152.97 344** ⇓	*i*PKiKP	PKiKP	02 35 54.8	+0.2
	comp=Z,4.4nm,0.9s					
BZS	**Buzias**	**153.08 334** ⇑⇑	P	PKPbc	02 35 54.3	-0.4
BZS	**Buzias**	**153.08 334** ⇑	*i*P	PKPbc	02 35 54.3	-0.4
FLN	**La Foliniere**	**153.17 8**	*e*PKIKP	PKPbc	02 35 53.9	-0.9
GRR	**Gorron**	**153.48 9**	*e*PKIKP	PKPbc	02 35 54.6	-0.9
	comp=Z,18nm,0.9s					
RJOB	**Jochberg**	**153.83 348**	*e*PKPbc	PKPbc	02 35 55.9	-0.4
LEGS	**Legarje**	**154.94 343**	*e*PKPab	PKPab	02 36 13.6	-0.5
VISS	**Visnje**	**155.20 344**	*e*PKPbc	PKPdf	02 35 58.5	+8.2
VISS			*i*PKPab	PKPab	02 36 14.4	-0.8
CEY	**Cerknica**	**155.37 344**	*i*PKPab	PKPab	02 36 15.4	-0.5
LPL	**La Plagne**	**156.75 357**	*e*PKIKP	PKPdf	02 35 57.7	+5.3
LPG	**La Plagne**	**156.77 357**	*e*PKIKP	PKPdf	02 35 58.4	+6.0
BNI	**Bardonecchia**	**157.22 357**	*e*PKPab	PKPab	02 36 23.7	-0.1
ORIF	**Oris-en-Rattie**	**157.38 359**	*e*PKIKP	PKPdf	02 35 56.8	+3.6
TIP	**Timpagrande**	**160.41 332**	*e*PKPab	PKPab	02 36 37.2	-0.7

MEX 27 02:33:03.1±0.9, 19°.40N×95°.90W, h22km±29km, MD4.0, Veracruz

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVIG	**Laguna Verde**	**0.58**	**304**	*i* P	Pb	02 33 12.4	-2.2
LVIG				*i* S	Sb	02 33 19.8	-2.7
TPIG	**Tehuac#an**	**1.69**	**235**	*i* P	Pn	02 33 29.1	-2.2
TPIG				*i* S	Sn	02 33 48.3	-4.0
UTMO	**Huajuapan**	**2.38**	**229**	*i* P	Pn	02 33 39.5	-1.4
UTMO				*i* S	Sn	02 34 07.2	-2.2
OXX	**Oaxaca**	**2.43**	**199**	*e*P	Pn	02 33 39.6	-1.9
OXX				*i* S	Sn	02 34 06.2	-4.4
VHO	**Vista Hermosa**	**2.44**	**199**	*i* P	Pn	02 33 39.8	-1.9
VHO				*i* S	Sn	02 34 07.7	-3.2
PPM	**Popocatepetl**	**2.59**	**263**	*i* P	Pn	02 33 43.5	-0.3
PPM				*i* S	Sn	02 34 12.4	-2.2
HUIG	**Huatulco**	**3.61**	**183**	*i* P	Pn	02 33 56.0	-1.8
HUIG				*i* S	Sn	02 34 35.6	-4.2
PNIG	**Pinotepa**	**3.66**	**216**	*i* P	Pn	02 33 54.9	-3.6
PNIG				*i* S	Sn	02 34 37.3	-3.7
TGIG		**3.71**	**134**	*i* P	Pn	02 33 58.0	-1.1
TGIG				*i* S	Sn	02 34 38.4	-3.9
PCIG		**4.48**	**145**	*i* P	Pn	02 34 08.1	-1.6
PCIG				*i* S	Sn	02 34 57.3	-3.9
CAIG	**El Cayaco**	**4.76**	**241**	*e*P	Pn	02 34 09.5	-4.0
CAIG				*i* S	Sn	02 35 07.9	-0.2

*CSEM **27** 02:33:55.8±0.2, 37°.85N×21°.44E, h20km, MD3.3, Error ellipse: s-maj=4.7km s-min=4.3km az=174.0*
*ATH **27** 02:33:55.2, 37°.91N×21°.44E, h29km±1km, MD3.3/7*
*THE **27** 02:33:55.8, 37°.83N×21°.46E, h17km±1km, ML2.6/6, Error ellipse: s-maj=1.6km s-min=0.5km az=170.0*
*NEIC **27** 02:33:55.3, 37°.91N×21°.44E, h29km, MD3.3(ATH), After ATH.*
*ISCJB **27** 02:33:56.1±0.6, 37°.85N±0°.04×21°.46E±0°.03, h27km±4km, Error ellipse: s-maj=7.3km s-min=4.3km az=177.8*

ISC 27 02:33:56.1±0.6, 37°.85N±0°.04×21°.46E±0°.03, h27km±5km, n33, σ0°89/56, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.21**	**2**	*e*Pb	**Pb**	**02 34 01.3**	**-0.8**
RLS				*e*Sb	**Sb**	**02 34 05.3**	**-0.9**
RLS	**Riolos of Patr**	**0.21**	**2**	*e*PB	**Pb**	**02 34 01.3**	**-0.8**
RLS				*e*SB	**Sb**	**02 34 05.3**	**-0.9**
RLS	**Riolos of Patr**	**0.21**	**2**	*e*Pb	**Pb**	**02 34 01.3**	**-0.8**
RLS				*e*Sb	**Sb**	**02 34 05.3**	**-0.9**
LAKA	**Lakka**	**0.57**	**46**	P	**Pb**	**02 34 07.0**	**-0.5**
LAKA				S	**Sb**	**02 34 15.7**	**+0.5**
LAKA	**Lakka**	**0.57**	**46**	P	**Pb**	**02 34 07.0**	**-0.5**
LAKA				S	**Sb**	**02 34 15.7**	**+0.5**
KFL	**Anninata**	**0.59**	**296**	P	**Pb**	**02 34 07.4**	**-0.5**
KFL				S	**Sb**	**02 34 17.1**	**+1.2**
EFP	**Efpalio**	**0.68**	**31**	P	**Pb**	**02 34 08.9**	**-0.4**
EFP				S	**Sb**	**02 34 19.0**	**+0.7**
EFP	**Efpalio**	**0.68**	**31**	*e*PN	**Pn**	**02 34 08.5**	**-1.3**
EFP				*e*SN	**Sn**	**02 34 17.7**	**-1.8**
EFP	**Efpalio**	**0.68**	**31**	*e*Pn	**Pn**	**02 34 08.5**	**-1.3**
EFP	**Efpalio**	**0.68**	**31**	P	**Pb**	**02 34 08.9**	**-0.4**
EFP				*e*Sn	**Sn**	**02 34 17.7**	**-1.8**
EFP				S	**Sb**	**02 34 19.0**	**+0.7**
GUR	**Goura**	**0.70**	**83**	P	**Pb**	**02 34 09.5**	**-0.3**
GUR				S	**Sb**	**02 34 19.5**	**+0.4**
GUR	**Goura**	**0.70**	**83**	*e*PN	**Pn**	**02 34 09.6**	**-0.6**
GUR				*e*SN	**Sn**	**02 34 19.7**	**-0.5**
GUR	**Goura**	**0.70**	**83**	P	**Pb**	**02 34 09.5**	**-0.3**
GUR				S	**Sb**	**02 34 19.5**	**+0.4**
TRIZ	**Trizonia**	**0.71**	**43**	P	**Pb**	**02 34 09.3**	**-0.5**
TRIZ				S	**Sb**	**02 34 20.2**	**+1.0**
TRIZ	**Trizonia**	**0.71**	**43**	P	**Pb**	**02 34 09.3**	**-0.5**
TRIZ				S	**Sb**	**02 34 20.2**	**+1.0**
VLS	**Valsamata**	**0.76**	**296**	*e*Pn	**Pn**	**02 34 09.8**	**-1.2**
VLS	**Valsamata**	**0.76**	**296**	P	**Pb**	**02 34 09.7**	**-1.0**
VLS				S	**Sb**	**02 34 21.1**	**+0.4**
VLS	**Valsamata**	**0.76**	**296**	*e*PN	**Pn**	**02 34 09.8**	**-1.2**
VLS	**Valsamata**	**0.76**	**296**	P	**Pb**	**02 34 09.7**	**-1.0**
VLS				S	**Sb**	**02 34 21.1**	**+0.4**
KALE	**Kalithea**	**0.76**	**45**	P	**Pb**	**02 34 10.2**	**-0.6**
KALE				S	**Sb**	**02 34 21.2**	**+0.4**
KALE	**Kalithea**	**0.76**	**45**	P	**Pb**	**02 34 10.2**	**-0.6**
KALE				S	**Sb**	**02 34 21.2**	**+0.4**
ITM	**Ithomi**	**0.77**	**151**	*e*Pn	**Pn**	**02 34 11.9**	**+0.8**
ITM	**Ithomi**	**0.77**	**151**	*e*PN	**Pn**	**02 34 11.9**	**+0.8**
ITM	**Ithomi**	**0.77**	**151**	*e*Pn	**Pn**	**02 34 11.9**	**+0.8**
PYL	**PYLOS**	**0.98**	**167**	*e*PN	**Pn**	**02 34 15.1**	**+1.1**
PYL	**PYLOS**	**0.98**	**167**	*e*Pn	**Pn**	**02 34 15.1**	**+1.1**
DSF	**Desfina**	**1.01**	**56**	P	**Pn**	**02 34 14.7**	**+0.2**
DSF				S	**Sb**	**02 34 29.7**	**+1.8**
DSF	**Desfina**	**1.01**	**56**	P	**Pn**	**02 34 14.7**	**+0.2**
DSF				S	**Sb**	**02 34 29.7**	**+1.8**
EVR	**Evrytania**	**1.10**	**14**	*e*Pn	**Pn**	**02 34 15.7**	**0.0**
EVR	**Evrytania**	**1.10**	**14**	*e*PN	**Pn**	**02 34 15.7**	**0.0**
EVR	**Evrytania**	**1.10**	**14**	*e*Pn	**Pn**	**02 34 15.7**	**0.0**
LKD2	**Lefkada island**	**1.13**	**326**	P	**Pn**	**02 34 16.3**	**+0.2**
LKD2				S	**Sn**	**02 34 32.5**	**+1.9**
LKD2	**Lefkada island**	**1.13**	**326**	P	**Pn**	**02 34 16.3**	**+0.2**
LKD2				S	**Sn**	**02 34 32.5**	**+1.9**

KRSC 27 03:14:03.7±0.3, 52°.77N×160°.72E, h14km±15km, ML3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.54**	**308**	*i* P	Pg	03 14 15.0	+0.8
SPN				*i* S	Sg	03 14 22.4	+1.1
PET	**Petropavlovsk**	**1.28**	**282**	*e*P	Pn	03 14 26.6	-0.5
PET				*i* S	Sb	03 14 43.8	+0.1
AVH	**Avacha**	**1.30**	**293**	*e*P	Pn	03 14 27.2	-0.1
KII	**Karymskiy**	**1.48**	**330**	*e*P	Pn	03 14 30.4	+0.5
GRL	**Gorelyy**	**1.63**	**263**	*e*P	Pn	03 14 32.9	+1.0
GRL				*i* S	Sn	03 14 54.9	+2.3
MKZ	**Mys Kozlova**	**1.89**	**18**	*e*P	Pn	03 14 34.1	-1.4
MKZ				*i* S	Sn	03 14 56.8	-2.2
GNL	**Ganaly**	**1.91**	**300**	*e*P	Pn	03 14 37.2	+1.4
GNL				*i* S	Sn	03 15 01.7	+2.1
MIPR	**Malaya Ipel'ka**	**2.47**	**260**	*e*P	Pn	03 14 45.9	+2.4
KMNR	**Kamenistaya**	**3.01**	**355**	*e*P	Pn	03 14 53.7	+2.9
KMNR				*i* S	Sn	03 15 29.5	+2.9
BZMR	**Bezymyannaya**	**3.17**	**358**	*e*P	Pn	03 14 55.6	+2.5
KIRR	**Kirishev**	**3.20**	**356**	*e*P	Pn	03 14 55.4	+1.9
KPT	**Kopyto**	**3.22**	**355**	*e*P	Pn	03 14 56.4	+2.7
ZLN	**Zelenaya**	**3.25**	**1**	*e*P	Pn	03 14 57.1	+2.9
ZLN				*i* S	Sn	03 15 35.8	+3.1
SRDR	**Sredinnyy**	**3.60**	**351**	*e*P	Pn	03 15 00.0	+1.0
KBTR	**Krutoberegovo**	**3.66**	**19**	*e*P	Pn	03 15 01.9	+2.1
KBTR				*i* S	Sn	03 15 44.7	+2.1

IDC 27 03:33:21.2±8.6, 0°.32N×98°.18E, h0km, mb3.4/5, mb1 3.5/5, mb1mx3.3/21, mbtmp3.4/5, Error ellipse: s-maj=438.1km s-min=21.0km az=54.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.74**	**122**	P	P	03 41 03.9	-0.3
	0.3nm,0.7s,baz=304,slow=8.7,SNR=2.6						
ASAR	**Alice Springs**	**42.08**	**127**	P	P	03 41 15.4	+0.2
	0.2nm,0.7s,baz=307,slow=8.0,SNR=3.0						
MKAR	**Makanchi Array**	**48.33**	**345**	P	P	03 42 04.3	-0.1
	0.4nm,0.6s,baz=138,slow=7.0,SNR=5.5						
KURK	**Kurchatov**	**52.89**	**345**	P	P	03 42 37.9	-1.0
	0.2nm,0.4s,baz=169,slow=6.0,SNR=2.2						
ZALV	**Zalesovo Beam**	**54.58**	**350**	P	P	03 42 51.8	+0.6
	0.7nm,0.5s,baz=170,slow=9.7,SNR=3.8						

*NEIC **27** 03:39:53.0±2.5, 18°.66N×108°.65W, h10km, mb3.7/12, Error ellipse: s-maj=36.7km s-min=19.7km az=153.0*
*IDC **27** 03:39:55.4±8.3, 19°.07N×108°.67W, h0km, mb3.2/3, mb1 3.7/5, mb1mx3.6/20, mbtmp3.4/5, ML3.3/2, MS3.1/4, Ms1 3.1/4, ms1mx2.9/12, Error ellipse: s-maj=143.9km s-min=20.8km az=138.0*

ISC 27 03:39:58.3±3.3, 18°.8N±0°.3×108°.6W±0°.2, h35km, n22, σ0°75/19, mb3.6/10, Revilla Gigedo Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**11.38**	**22**	Pn	**Pn**	**03 42 38.4**	**0.0**
	0.1nm,0.3s,baz=198,slow=14,SNR=9.2						
MNTX	**Cornudas Mount**	**13.13**	**12**	*e*Pn	**Pn**	**03 43 03.0**	**+0.7**
CMIG	**Matias Romero**	**13.19**	**95**	LR	LR	03 48 02.6	
	comp=Z,100nm,21.4s,baz=270,slow=37						
TUC	**Tucson**	**13.55**	**352**	*e*Pn	**Pn**	**03 43 06.9**	**-1.1**
	10.0nm,1.8s						
BNM	**Barren Site**	**15.35**	**6**	*e*Pn	**Pn**	**03 43 31.9**	**-0.4**
	4.9nm,1.2s						
ANMO	**Albuquerque**	**16.16**	**6**	Pn	**Pn**	**03 43 43.3**	**+0.6**
	0.1nm,0.3s,baz=213,slow=9.2,SNR=5.3						
ANMO				LR	LR	03 51 06.9	
	comp=Z,38nm,18.9s,baz=196,slow=42						
ANMO	**Albuquerque**	**16.16**	**6**	*e*Pn	**Pn**	**03 43 42.5**	**-0.2**
	0.8nm,1.2s						
ANMO				LR	LR	03 51 06.9	
AMTX	**Amarillo**	**17.12**	**20**	*e*P	**Pn**	**03 43 54.6**	**-0.3**
	2.1nm,0.5s						
LDFC	**Landfair**	**17.17**	**342**	*e*P	**Pn**	**03 43 55.5**	**+0.1**
	5.9nm,1.0s						
APG

ZLN	Zelenaya	2.33	356	*e*P		Pn	03 59 31.9	+1.8
ZLN				*i* S		Sn	03 59 59.1	+1.7
CIRR	Tsirk	2.43	356	*e*P		Pn	03 59 33.5	+2.0
CIRR				*i* S		Sn	04 00 02.2	+2.3
KOZ	Kozyrevsk	2.46	344	*e*P		Pn	03 59 33.4	+1.5
KBTR	Krutoberegovo	2.71	21	*e*P		Pn	03 59 36.5	+1.1
KBTR				*i* S		Sn	04 00 07.4	+0.5
SRDR	Sredinnyy	2.73	344	*e*P		Pn	03 59 36.4	+0.7
BDR	Baidarnaya	2.88	2	*e*P		Pn	03 59 39.9	+2.3
SMKR	Semkarok	2.90	4	*e*P		Pn	03 59 39.4	+1.4
SMKR				*i* S		Sn	04 00 11.4	-0.1
SRKR	Sorokina	2.96	1	*e*P		Pn	03 59 40.0	+1.2
BKI	Bering	3.24	60	*e*P		Pn	03 59 43.8	+1.2
BKI				*i* S		Sn	04 00 19.0	-0.9

JMA 27 04:09:56.3, 26°.66N×141°.98E, h73km±1km, M3.8, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	Haha-jima-NKT	0.18	100	P		04 10 07.2	+0.1
JHHJ				S		04 10 15.2	+0.1
CBIJ	Chichi jima	0.47	23	P		04 10 09.1	0.0
CBIJ				*e*S		04 10 18.5	-0.1
BSO4	Boso 4	8.42	351	*e*S		04 13 26.9	-2.1
JAG	Ashikaga	9.97	348	*e*S		04 13 58.6	-8.2
JHO	Hitachi	9.99	353	*e*S		04 14 00.3	-7.1

*CSEM **27** 04:12:50.7±0.2, 38°.13N×21°.57E, h15km, MD3.6, Error ellipse: s-maj=3.5km s-min=3.3km az=27.0*
*ISCJB **27** 04:12:50.7±0.3, 38°.13N±0°.02×21°.56E±0°.02, h14km±3km, Error ellipse: s-maj=3.8km s-min=3.1km az=1.4*
*THE **27** 04:12:51.2, 38°.14N×21°.59E, h18km, ML3.9/8, Error ellipse: s-maj=1.0km s-min=0.5km az=7.0*
*ATH **27** 04:12:51.8, 38°.14N×21°.56E, h3km, MD3.6/6*
ISC 27 04:12:51.2±0.3, 38°.13N±0°.02×21°.57E±0°.02, h19km±3km, n62, σ0s84/92, 1C, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.11	231	*e*PG		Pg	04 12 55.1	0.0
RLS	Riolos of Patr	0.11	231	*e*Pg		Pg	04 12 55.1	0.0
UPR	University Cam	0.23	47	P		Pg	04 12 56.5	-0.2
UPR				S		Sg	04 13 01.1	+0.7
UPR	University Cam	0.23	47	⇑*i*PG		Pg	04 12 56.3	-0.4
UPR	University Cam	0.23	47	P		Pg	04 12 56.5	-0.2
UPR				S		Sg	04 13 01.1	+0.7
LAKA	Lakka	0.34	70	P		Pg	04 12 58.2	-0.2
LAKA				S		Sg	04 13 03.6	+0.2
LAKA	Lakka	0.34	70	P		Pg	04 12 58.2	-0.2
LAKA				S		Sg	04 13 03.6	+0.2
EFP	Efpalio	0.40	41	P		Pg	04 12 58.7	-0.8
EFP				S		Sg	04 13 04.9	-0.2
EFP	Efpalio	0.40	41	*e*PG		Pg	04 12 58.8	-0.7
EFP				*e*SG		Sg	04 13 04.9	-0.2
EFP	Efpalio	0.40	41	*e*Pg		Pg	04 12 58.8	-0.7
EFP				S		Sg	04 13 04.9	-0.2
TRIZ	Trizonia	0.46	59	P		Pg	04 12 59.9	-0.7
TRIZ				S		Sg	04 13 07.0	+0.1
TRIZ	Trizonia	0.46	59	P		Pg	04 12 59.9	-0.7
TRIZ				S		Sg	04 13 07.0	+0.1
KALE	Kalithea	0.52	59	P		Pg	04 13 00.8	-0.8
KALE				S		Sg	04 13 08.5	-0.2
KALE	Kalithea	0.52	59	P		Pg	04 13 00.8	-0.8
KALE				S		Sg	04 13 08.5	-0.2
KFL	Anninata	0.62	269	P		Pb	04 13 03.0	-0.3
KFL				S		Sb	04 13 13.2	+1.6
GUR	Goura	0.64	107	P		Pb	04 13 03.4	-0.2
GUR				S		Sb	04 13 12.2	+0.1
GUR	Goura	0.64	107	*e*PG		Pg	04 13 03.6	-0.2
GUR				*e*SG		Sg	04 13 13.9	+1.6
GUR	Goura	0.64	107	*e*Pg		Pg	04 13 03.6	-0.2
GUR				S		Sb	04 13 12.2	+0.1
GUR				*e*Sg		Sg	04 13 13.9	+1.6
VLS	Valsamata	0.78	274	P		Pb	04 13 05.0	-1.0
VLS				S		Sg	04 13 17.7	+1.0
VLS	Valsamata	0.78	274	*e*PG		Pg	04 13 05.2	-1.2
VLS				*e*SG		Sg	04 13 17.7	+1.0
VLS	Valsamata	0.78	274	*e*Pg		Pg	04 13 05.2	-1.2
VLS				*e*Sg		Sg	04 13 17.7	+1.0
DSF	Desfina	0.80	69	P		Pb	04 13 05.5	-1.0
DSF				S		Sb	04 13 17.2	+0.3
DSF	Desfina	0.80	69	P		Pb	04 13 05.5	-1.0
DSF				S		Sb	04 13 17.2	+0.3
EVR	Evrytania	0.81	13	*e*PG		Pg	04 13 06.0	-1.0
EVR				*e*SG		Sg	04 13 18.5	+0.7
EVR	Evrytania	0.81	13	*e*Pg		Pg	04 13 06.0	-1.0
EVR				*e*Sg		Sg	04 13 18.5	+0.7
LKD2	Lefkada island	0.98	313	P		Pb	04 13 08.3	-1.1
LKD2				S		Sb	04 13 22.8	+0.9
LKD2	Lefkada island	0.98	313	P		Pb	04 13 08.3	-1.1
LKD2				S		Sb	04 13 22.8	+0.9
ITM	Ithomi	0.99	163	P		Pb	04 13 10.1	+0.5
ITM	Ithomi	0.99	163	*e*PG		Pg	04 13 10.3	0.0
ITM	Ithomi	0.99	163	*e*Pg		Pg	04 13 10.3	0.0
VLX	Vlachokerasia	0.99	140	P		Pb	04 13 09.3	-0.3
VLX	Vlachokerasia	0.99	140	*e*PG		Pg	04 13 09.8	-0.6
VLX	Vlachokerasia	0.99	140	P		Pb	04 13 09.3	-0.3
VLX	Vlachokerasia	0.99	140	*e*Pg		Pg	04 13 09.8	-0.6
AGG	Agios Georgios	1.07	33	P		Pb	04 13 10.0	-1.1
AGG				S		Sb	04 13 25.4	+0.7
AGG	Agios Georgios	1.07	33	P		Pb	04 13 10.0	-1.1
AGG				S		Sb	04 13 25.4	+0.7
LTK	Loutraki	1.10	95	P		Pn	04 13 10.7	-0.9
LTK	Loutraki	1.10	95	*e*PB		Pg	04 13 12.3	-0.3
LTK				*e*SB		Sg	04 13 28.7	+1.6
LTK	Loutraki	1.10	95	P		Pn	04 13 10.7	-0.9
LTK	Loutraki	1.10	95	*e*Pb		Pg	04 13 12.3	-0.3
LTK				*e*Sb		Sg	04 13 28.7	+1.6
PYL	PYLOS	1.24	174	P		Pn	04 13 12.5	-0.9
PYL	PYLOS	1.24	174	*e*PG		Pg	04 13 15.1	0.0
PYL	PYLOS	1.24	174	P		Pn	04 13 12.5	-0.9
PYL	PYLOS	1.24	174	*e*Pg		Pg	04 13 15.1	0.0
LKR	Lokris	1.24	65	P		Pn	04 13 13.0	-0.4
LKR	Lokris	1.24	65	P		Pn	04 13 13.0	-0.4
ATAL	Atalanti	1.27	63	P		Pn	04 13 13.6	-0.2
ATAL	Atalanti	1.27	63	P		Pn	04 13 13.6	-0.2
DID	Didima	1.46	115	*e*PG		Pg	04 13 19.1	-0.1
DID	Didima	1.46	115	*e*Pg		Pg	04 13 19.1	-0.1
JAN	Janina	1.63	340	*e*PB		Pg	04 13 23.0	+0.5
JAN	Janina	1.63	340	*e*Pb		Pg	04 13 23.0	+0.5
XOR	Xorichti	1.77	45	P		Pn	04 13 20.6	-0.1
XOR	Xorichti	1.77	45	P		Pn	04 13 20.6	-0.1
VLI	Veliai	1.78	142	*e*PB		Pg	04 13 27.0	+1.7
VLI	Veliai	1.78	142	*e*Pb		Pg	04 13 27.0	+1.7
KEK	Kerkira	2.10	319	*e*PG		Pg	04 13 30.5	-1.1
KEK	Kerkira	2.10	319	*e*Pg		Pg	04 13 30.5	-1.1
OHR	Ohrid	3.04	349	*e*Pn		Pg	04 13 50.1	+0.7
KRUS	Krusevo	3.25	356	*e*Pn		Pn	04 13 43.0	+2.0
VAY	Valandovo	3.28	13	*e*Pn		Pn	04 13 46.4	+4.9
NVLJ	Novalja	8.17	324	*e*Pn		Pn	04 14 50.1	+1.5
NVLJ				Sn		Sn	04 16 16.4	-3.9

*CSEM **27** 04:22:35.5±0.2, 37°.24N×27°.05E, h20km, MD2.7, Error ellipse: s-maj=4.6km s-min=2.4km az=70.0*
*ISK **27** 04:22:35.0, 37°.30N×27°.06E, h4km, MD2.9*
*ISCJB **27** 04:22:35.1±1.2, 37°.28N±0°.03×27°.01E±0°.08, h10km, Error ellipse: s-maj=9.5km s-min=4.6km az=165.9*
*DDA **27** 04:22:37.7, 37°.29N×27°.22E, h7km±6km, Md2.7*
ISC 27 04:22:35.6±1.3, 37°.27N±0°.04×27°.01E±0°.09, h10km, n16, σ0s79/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BODT	Bodrum	0.32	131	*e*PG		Pg	04 22 41.7	-0.2
BODT				*e*SG		Sg	04 22 46.1	-0.1
BODT	Bodrum	0.32	131	*e*Pg		Pg	04 22 41.7	-0.2
BODT				*e*Sg		Sg	04 22 46.1	-0.1
BDRM	Kayabasi	0.41	120	*i* P		Pg	04 22 42.6	-1.0
BDRM				*i* S		Sg	04 22 49.2	+0.3
BDRM	Kayabasi	0.41	120	*i* P		Pg	04 22 42.6	-0.9
BDRM				*i* S		Sg	04 22 49.2	+0.3
GCAM	G?zelcaml?	0.47	23	*i* P		Pg	04 22 45.3	+0.6
GCAM				*i* S		Sg	04 22 52.6	+1.7
GCAM	G?zelcaml?	0.47	23	*i* P		Pg	04 22 45.3	+0.6
GCAM				*i* S		Sg	04 22 52.6	+1.7
MLSB	Milas	0.61	87	*e*PG		Pg	04 22 46.8	-0.7
MLSB				*e*SG		Sg	04 22 55.3	-0.3
MLSB	Milas	0.61	87	*e*Pg		Pg	04 22 46.8	-0.7
MLSB				*e*Sg		Sg	04 22 55.3	-0.3
DAT	Datca	0.71	140	*e*PG		Pg	04 22 49.3	+0.1
DAT				*e*SG		Sg	04 23 00.3	+1.8
DAT	Datca	0.71	140	*e*Pg		Pg	04 22 49.3	0.0
DAT				*e*Sg		Sg	04 23 00.3	+1.8
AYDN	Tasoluk	0.80	60	*i* P		Pg	04 22 50.4	-0.6
AYDN				*i* S		Sg	04 23 01.0	-0.3
AYDN	Tasoluk	0.80	60	*i* P		Pg	04 22 50.4	-0.6
AYDN				*i* S		Sg	04 23 01.0	-0.3
YER	Yerkesik	1.03	97	*e*PG		Pg	04 22 55.2	-0.2
YER	Yerkesik	1.03	97	*e*Pg		Pg	04 22 55.2	-0.2
BLCB	Balcova	1.11	1	*e*PN		Pg	04 22 56.2	-0.8
BLCB	Balcova	1.11	1	*e*Pn		Pg	04 22 56.2	-0.8

*SZGRF **27** 04:41:24.9, 21°.40S×177°.01W, h33km, Fiji Islands region*
*IDC **27** 04:42:28.6±2.1, 20°.13S×178°.07W, h562km±23km, mb4.0/16, mb1 4.2/16, mb1mx4.2/19, mbtmp4.0/16, Error ellipse: s-maj=15.3km s-min=12.6km az=125.0*
*ISCJB **27** 04:42:28.0±0.9, 20°.15S±0°.07×178°.17W±0°.05, h565km±11km, mb4.5/92, Error ellipse: s-maj=10.8km s-min=5.6km az=158.5*
*NEIC **27** 04:42:29.5±0.6, 20°.09S×178°.18W, h572km±6km, mb4.6/70, Error ellipse: s-maj=8.2km s-min=4.2km az=148.0*
ISC 27 04:42:29.5±0.9, 20°.11S±0°.07×178°.15W±0°.05, h568km±10km, h565km±4.5km: pP-P, n644, σ0s52/491, mb4.5/92, 201C-190D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.30	303	*e*Pn		P	04 43 54.2	-0.8
AFI	Afiamalu	8.67	46	P		P	04 44 27.5	-7.0
	7.1nm,0.3s,baz=41,slow=19,SNR=6.2							
AFI				S		S	04 46 05.0	-12
	21nm,0.3s,baz=55,slow=17,SNR=10							
AFI	Afiamalu	8.67	46	*e*Pn		P	04 44 28.1	-6.3
	104nm,1.0s							
AFI				*e*Sn		S	04 46 05.1	-12
DZM	Mont Dzumac	14.51	260	*i* P		P	04 45 35.8	+2.0
URZ	Urewera	18.55	192	P		P	04 46 07.4	-4.0
	13nm,0.3s,baz=292,slow=3.8,SNR=60							
URZ				S		S	04 49 03.7	-7.9
	0.3nm,0.3s,baz=240,slow=20,SNR=4.8							
URZ	Urewera	18.55	192	*e*P		P	04 46 08.2	-3.2
	26nm,0.3s							
RPZ	Rata Peaks	25.22	199	P		P	04 47 09.5	-1.5
	13nm,0.7s,mb4.7,baz=59,slow=17,SNR=6.2							
RPZ	Rata Peaks	25.22	199	P		P	04 47 09.5	-1.5
ARMA	Armidale	29.11	243	*e*P		P	04 47 45.9	+0.6
CNB	Canberra Magne	32.33	235	*e*P		P	04 48 13.3	+0.5
CTA	Charters Tower	33.39	264	⇓*i*P		P	04 48 22.0	+0.1
	10nm,0.5s,mb4.6							
CTA	Charters Tower	33.39	264	P		P	04 48 22.3	+0.4
	13nm,0.5s,mb4.8,baz=89,slow=11,SNR=20							
CTAO	Charters Tower	33.39	264	*e*P		P	04 48 22.0	+0.1
	68nm,1.4s,mb5.0							
COEN	Coen	37.42	273	*e*P		P	04 48 55.4	+0.1
	197nm,1.0s,mb5.6							
STKA	Stephens Creek	37.83	244	*e*P		P	04 48 58.9	+0.4
	6.8nm,1.1s,mb4.1							
STKA	Stephens Creek	37.83	244	P		P	04 48 59.2	+0.7
	5.7nm,0.7s,mb4.2,baz=77,slow=9.1,SNR=8.8							
STKA				PcP	PcP		04 51 00.4	+0.5
	1.9nm,0.6s,baz=312,slow=12,SNR=3.9							
STKA	Stephens Creek	37.83	244	*e*P		P	04 48 59.2	+0.7
	3.2nm,1.1s,mb3.8							
ASAR	Alice Springs	44.47	256	P		P	04 49 51.1	0.0
	32nm,0.9s,mb4.8,baz=86,slow=8.6,SNR=138							
ASAR				PcP	PcP		04 51 22.3	+0.1
	6.0nm,0.8s,baz=97,slow=4.4,SNR=13							
ASAR				S		S	04 55 45.5	-0.2
	3.6nm,0.9s,baz=92,slow=16,SNR=14							
WRAB	Tennant Creek	44.51	262	*e*P		P	04 49 50.7	-0.7
	22nm,0.7s,mb4.8							
WRA	Warramunga Arr	44.52	262	P		P	04 49 50.8	-0.7
	9.2nm,0.3s,mb4.7,baz=96,slow=7.8,SNR=123							
WRA				PcP	PcP		04 51 22.1	-0.2
	4.4nm,0.9s,baz=92,slow=4.1,SNR=6.9							
WRA				S		S	04 55 44.8	-1.6
	2.9nm,1.0s,baz=98,slow=12,SNR=5.5							
FORT	Forrest	49.32	246	*e*P		P	04 50 27.0	-0.5
	23nm,0.6s,mb4.9							
FORT	Forrest	49.32	246	*e*P		P	04 50 26.9	-0.6
	36nm,0.8s,mb5.0							
MBWA	Marble Bar	57.80	257	*e*P		P	04 51 26.8	-0.7
	6.3nm,0.6s,mb4.0							
SBA	Scott Base	58.25	184	⇑*i*P		P	04 51 30.7	+1.1
	84nm,1.5s,mb4.8							
CASY	Casey	64.26	205	*e*P		P	04 52 07.9	-1.1
	15nm,0.9s,mb4.4							
KKM	Kota Kinabalu	69.52	285	*e*P		P	04 52 41.5	-0.8
	32nm,1.3s,mb4.7							
MJAR	Matsushiro Arr	69.81	324	P		P	04 52 42.9	-0.6
	9.7nm,0.5s,mb4.6,baz=160,slow=6.1,SNR=22							
MAJO	Matsushiro	69.81	324	*e*P		P	04 52 43.3	-0.2
	16nm,0.5s,mb4.8							
MAT	Matsushiro	69.81	324	P		P	04 52 43.5	0.0
QSPA	South Pole Qui	69.96	180	P		P	04 52 43.6	-0.1
	31nm,0.9s,mb4.9,baz=36,slow=1.7,SNR=88							
QSPA	South Pole Qui	69.96	180	⇑*i*P		P	04 52 43.8	0.0
	42nm,1.0s,mb4.9							
KSM	Kuching	73.22	278	*e*P		P	04 53 04.6	+0.7
	8.1nm,0.7s,mb4.3							
YSS	Yuzh-Sakhalins	75.48	333	*e*P		P	04 53 16.3	+0.5
	52nm,0.9s,mb5.0							
PETK	Petropavlovsk-	75.85	345	P		P	04 53 17.5	-0.2
	24nm,0.7s,mb4.7,baz=129,slow=7.9,SNR=35							
PETK	Petropavlovsk-	75.85	345	P		P	04 53 17.5	-0.2
KSRS	Korea Array	76.50	319	P		P	04 53 21.9	+0.3
	3.7nm,0.6s,mb4.0,baz=132,slow=6.2,SNR=20							
PKM	Peak Mountain	77.82	46	⇑P		P	04 53 29.2	+0.3
	baz=78							
SAO	San Andreas Ge	77.84	43	⇓*e*P		P	04 53 28.8	-0.2
	19nm,0.9s,mb4.4							
CHGN	Chignik	77.91	11	*e*P		P	04 53 27.6	-1.3
SMMC	Simmler	77.94	45	⇑P		P	04 53 30.0	+0.5
	baz=78							
CIS	Catalina Islan	77.95	48	⇓P		P	04 53 29.1	-0.5
	baz=78							
109C	Camp Elliot, M	78.57	49	⇑P		P	04 53 32.6	-0.4
	baz=79							
MWC	Mount Wilson	78.64	47	*e*P		P	04 53 33.2	-0.2
	8.0nm,0.9s,mb4.0							
MURC	Murrieta	78.89	48	⇓P		P	04 53 34.6	-0.1
	baz=79							
BFSC	Mount Baldy Ra	78.92	47	⇑P		P	04 53 34.5	-0.4
	baz=79							
EDW2	Edwards Air Fo	79.05	47	⇓P		P	04 53 35.3	-0.2
	baz=79,SNR=8.4							
MONP	Monument Peak	79.06	49	⇓P		P	04 53 35.7	+0.1
	baz=79,SNR=10							
DVTC	Desert V Tower	79.16	49	⇑P		P	04 53 36.4	+0.3
	baz=79							
ISA	Isabella	79.16	46	⇑P		P	04 53 36.1	+0.1
	baz=79,SNR=6.0							
ISA	Isabella	79.16	46	*e*P		P	04 53 35.9	-0.2
	5.9nm,0.9s,mb3.9							
CMB	Columbia Colle	79.27	43	*e*P		P	04 53 36.3	-0.3
	12nm,0.9s,mb4.2							
PFO	Pinyon Flat Ob	79.42	48	⇓P		P	04 53 37.3	-0.2
	baz=80							
PFO	Pinyon Flat Ob	79.42	48	*e*P		P	04 53 37.3	-0.2
	13nm,1.1s,mb4.2							
WDC	Whiskeytown Da	79.46	40	*e*P		P	04 53 37.1	-0.4
	30nm,1.5s,mb4.4							
NJ2	Nanjing	79.52	310	*e*P		P	04 53 39.0	+1.0
NJ2				pmax	pmax			
	comp=Z,10.0nm,0.6s,mb4.3							
SWSC	Sam W. Stewart	79.53	49	⇑P		P	04 53 37.8	-0.2
	baz=80							
CWC	Cottonwood Cre	79.86	45	⇓P		P	04 53 39.5	-0.2
	baz=80							
BELC	Belle Mtn. Jos	79.95	48	⇓P		P	04 53 40.5	+0.2
	baz=80,SNR=8.1							
MPMC	Manual Prospec	80.05	46	⇑P		P	04 53 41.0	+0.3
	baz=80,SNR=12							
MTUM	Tungsten Hills	80.06	44	*e*P		P	04 53 41.4	+0.7
YBH	Yreka Blue Hor	80.07	39	P		P	04 53 41.2	+0.5
	comp=Z,14nm,0.8s,mb4.4,baz=178,slow=1.7,SNR=25							
YBH	Yreka Blue Hor	80.07	39	*e*P		P	04 53 41.0	+0.3
	comp=Z,13nm,0.8s,mb4.3							
GSC	Goldstone	80.09	47	⇓P		P	04 53 40.6	-0.4
	baz=80							
GSC	Goldstone	80.09	47	*e*P		P	04 53 40.8	-0.2
	comp=Z,6.2nm,1.1s,mb3.9							
TIN	Tinemaha	80.11	45	⇑P		P	04 53 41.0	+0.1
	baz=80							
MDJ	Mudanjiang	80.11	325	P		P	04 53 41.8	+1.0
MDJ				pmax	pmax			
	comp=Z,35nm,1.0s,mb4.6							
MDJ				pmax	pmax			
	comp=Z,36nm,3.7s							
BC3	Big Chuckawall	80.15	49	⇑P		P	04 53 41.6	+0.3
	baz=80,SNR=5.3							
WAKR	Walker	80.15	43	*e*P		P	04 53 41.6	+0.4
HEC	Hector,Ludlow	80.17	47	⇑P		P	04 53 40.9	-0.4
	baz=80							
112A	Yuma	80.19	50	⇑P		P	04 53 41.5	0.0
	baz=80							
GLA	Glamis	80.28	50	⇑P		P	04 53 42.1	+0.1
	baz=80							
GLA	Glamis	80.28	50	*e*P		P	04 53 42.7	+0.8
	comp=Z,20nm,1.2s,mb4.3							
BEKR	Beckworth	80.37	41	⇓P		P	04 53 42.3	0.0
	baz=80,SNR=6.5							
WCN	Washoe City	80.41	42	⇑P		P	04 53 42.7	+0.2
	baz=81,SNR=11							
HUMO	Hull Mountain	80.47	38	*e*P		P	04 53 43.0	+0.3
GMRC	Granite Mounta	80.60	48	⇓P		P	04 53 43.8	+0.2
	baz=81							
IRM	Iron Mountain	80.63	48	⇓P		P	04 53 43.9	+0.2
	baz=81,SNR=8.3							
GRAC	Grapevine Rang	80.65	45	⇑P		P	04 53 44.0	+0.2
	baz=81							
FURC	Furnace Creek,	80.70	46	⇑P		P	04 53 43.7	-0.4
	baz=81							
TUQ	Turquoise Moun	80.77	47	⇓P		P	04 53 44.5	+0.1
	baz=81,SNR=7.2							
NVAR	Mina Array Bea	80.84	43	P		P	04 53 44.8	0.0
	comp=Z,7.7nm,0.8s,mb4.2,baz=224,slow=9.6,SNR=42							
Y12C	Blythe	80.86	49	⇓P		P	04 53 45.0	+0.1
	baz=81,SNR=5.2							
113A	Mohawk Valley,	80.89	50	⇓P		P	04 53 45.3	+0.1
	baz=81,SNR=13							
U10A	Ash Meadows, A	81.03	46	⇓P		P	04 53 46.0	+0.2
	baz=81							
LDFC	Landfair	81.14	48	⇓*i*P		P	04 53 46.5	+0.1
	comp=Z,27nm,0.9s,mb4.7							
214A	Organ Pipe Nat	81.18	51	⇑P		P	04 53 47.0	+0.3
	baz=81,SNR=6.2							
Z13A	Yuma Proving G	81.19	50	⇑P		P	04 53 46.9	+0.2
	baz=81,SNR=17							
V11A	Goodsprings	81.33	47	⇓P		P	04 53 47.4	+0.1
	baz=82							
TPNV	Topopah Spring	81.37	46	⇑P		P	04 53 47.4	-0.1
	baz=82							
Y13A	Salome	81.39	49	⇑P		P	04 53 48.1	+0.4
	baz=82							
PDMCI	Parker Dam,Lak	81.42	49	⇓P		P	04 53 48.0	+0.2
	baz=82							
114A	Black Gap (USA	81.53	51	⇓P		P	04 53 48.6	+0.2
	baz=82,SNR=6.9							
MOD	Modoc	81.61	40	⇑*i*P		P	04 53 48.5	-0.1
	comp=Z,17nm,0.8s,mb4.5							
V12A	Nelson	81.67	47	⇑P		P	04 53 49.1	+0.1
	baz=82							
S10A	Tonopah Range,	81.67	45	⇑P		P	04 53 49.0	0.0
	baz=82,SNR=43							
IRO	Indian Ridge	81.74	37	P		P	04 53 49.4	+0.1
K05A	Summer Lake	81.75	39	⇓P		P	04 53 50.0	+0.7
	baz=82,SNR=13							
Z14A	Wintersburg	81.79	50	⇓P		P	04 53 50.0	+0.2
	baz=82,SNR=6.2							
MAW	Mawson	81.89	200	P		P	04 53 49.3	-0.4
	comp=Z,3.5nm,0.9s,mb3.8,baz=360,slow=2.6,SNR=4.7							
CN2	Changchun	81.90	322	*e*P		P	04 53 50.8	+0.8
CN2				*e*S		S	05 03 20.0	+2.8
CN2				pmax	pmax			
	comp=Z,20nm,0.9s,mb4.5							
CN2				pmax	pmax			
	comp=Z,200nm,3.0s							
115A	Sonoran Desert	81.98	51	⇓P		P	04 53 50.9	+0.2
	baz=82							
W13A	Hualapai Mount	82.01	48	⇓P		P	04 53 51.1	+0.3
	baz=82							
Y14A	Wickenburg	82.04	50	⇑P		P	04 53 51.0	0.0
	baz=82,SNR=11							
R10A	Warm Springs	82.06	44	⇓P		P	04 53 51.3	+0.3
	baz=82,SNR=18							
S11A	Rachel	82.08	45	⇓P		P	04 53 51.0	-0.1
	baz=82,SNR=9.0							
WHN	Wuhan	82.09	306	P		P	04 53 50.0	-1.4
H04A	Detroit Lake	82.20	37	⇑P		P	04 53 51.1	-0.4
	baz=82,SNR=8.0							
216A	Three Points,	82.20	52	⇑P		P	04 53 52.3	+0.5
	baz=82							
T11A	Corn Creek, Al	82

218A	Dragoon baz=83	83.24	53	⇓P	P	04 53 57.5	+0.5
S13A	Holt Ranch, En baz=84,SNR=11	83.32	46	⇑P	P	04 53 57.6	+0.2
X16A	Lo Mia Camp, P baz=84,SNR=16	83.40	50	⇓P	P	04 53 58.3	+0.5
G06A	Carlson Farm, baz=84	83.41	37	⇓P	P	04 53 57.6	0.0
Q12A	Willow Creek R baz=84,SNR=8.4	83.44	44	⇑P	P	04 53 57.7	-0.1
Y17A	Roosevelt baz=84	83.48	51	⇑P	P	04 53 58.4	+0.2
O11A	Cowboy Ranch, baz=84,SNR=11	83.49	43	⇑P	P	04 53 58.1	0.0
319A	Douglas baz=84,SNR=7.3	83.53	53	⇓P	P	04 53 59.2	+0.7
J08A	Circle Bar Ran baz=84,SNR=7.7	83.55	39	⇑P	P	04 53 58.2	-0.2
R13A	O'Grain Ranch, baz=84	83.56	46	⇓P	P	04 53 58.6	+0.1
KULM	Kulim comp=Z,21nm,0.8s,mb4.7	83.57	278	⇓/P	P	04 53 59.8	+0.7
T14A	Hurricane baz=84,SNR=7.0	83.58	47	⇓P	P	04 53 58.7	+0.1
V15A	Kaibab Nationa baz=84,SNR=12	83.58	48	⇓P	P	04 53 59.2	+0.5
118A	Homack Ranch, baz=84	83.61	52	⇓P	P	04 53 59.5	+0.6
P12A	McGill baz=84,SNR=6.6	83.62	44	⇑P	P	04 53 58.6	-0.1
CCUT	Cedar City comp=Z,9.8nm,1.0s,mb4.3	83.64	46	eP	P	04 53 59.5	+0.5
GNW	Green Mountain comp=Z,2.3nm,0.8s,mb3.8	83.65	34	eP	P	04 53 58.3	-0.4
W16A	Flagstaff baz=84	83.67	49	⇑P	P	04 53 59.6	+0.5
M10A	I.L. Ranch, Tu baz=84,SNR=7.3	83.69	42	⇓P	P	04 53 59.3	+0.2
ARUT	Antelope Range comp=Z,4.6nm,0.6s,mb4.2	83.71	46	eP	P	04 53 59.3	0.0
GAMB	Gambell comp=Z,28nm,1.3s,mb4.6	83.76	3	eP	P	04 53 58.5	-0.3
Z18A	Geronimo baz=84	83.78	52	⇑P	P	04 54 00.1	+0.4
U15A	North Rim baz=84,SNR=19	83.80	48	⇑P	P	04 54 00.3	+0.5
N11A	Elko Archery C baz=84	83.81	43	⇓P	P	04 53 60.0	+0.3
X17A	Forest Lakes baz=84,SNR=6.1	83.82	50	⇑P	P	04 54 00.5	+0.6
219A	White Tail Can baz=84,SNR=6.9	83.84	53	⇓P	P	04 54 00.5	+0.5
D05A	Enumclaw baz=84,SNR=8.3	83.86	35	⇓P	P	04 54 00.1	+0.3
S14A	Cedar City baz=84	83.88	46	⇑P	P	04 54 00.2	+0.1
Q13A	Wheeler Ranch, baz=84,SNR=7.6	83.93	45	⇓P	P	04 54 00.1	-0.2
WUAZ	Wupatki baz=84	83.99	49	⇓P	P	04 54 00.9	+0.2
WUAZ	Wupatki comp=Z,12nm,1.0s,mb4.4	83.99	49	eP	P	04 54 01.3	+0.6
T15A	Red Dirt Ranch baz=84	84.04	47	⇓P	P	04 54 01.2	+0.3
L10A	Juniper Basin baz=84,SNR=15	84.04	41	⇑P	P	04 54 00.7	-0.1
H08A	Prairie City baz=84,SNR=5.6	84.11	38	⇓P	P	04 54 00.7	-0.3
Y18A	Canyon Day Jun baz=84,SNR=12	84.11	51	⇑P	P	04 54 01.9	+0.6
M11A	Holland Ranch, baz=84,SNR=6.3	84.11	42	⇓P	P	04 54 01.3	+0.1
RMW	Rattlesnake Mo	84.12	35	P	P	04 54 01.1	0.0
119A	Ashpeak Ranch, baz=84	84.17	52	⇑P	P	04 54 02.0	+0.4
K10A	MacKenzie Ranc baz=84,SNR=8.6	84.19	40	⇑P	P	04 54 01.5	0.0
P13A	Bates Ranch, G baz=84,SNR=8.5	84.19	44	⇑P	P	04 54 01.6	0.0
N12A	Clover Valley, baz=84,SNR=6.3	84.28	43	⇑P	P	04 54 01.9	0.0
N12A	Clover Valley, comp=Z,6.4nm,0.8s,mb4.2	84.28	43	eP	P	04 54 01.9	0.0
I09A	Lost Marbles R baz=84	84.34	39	⇓P	P	04 54 02.1	-0.1
220A	Playas Peak, P baz=84,SNR=9.3	84.34	53	⇓P	P	04 54 03.2	+0.7
S15A	Panguitch baz=84	84.39	47	⇑P	P	04 54 03.4	+0.8
G08A	Pilot Rock baz=85,SNR=13	84.39	38	⇑P	P	04 54 02.3	-0.1
Q14A	Sevier Lake (B baz=85,SNR=9.6	84.44	45	⇓P	P	04 54 02.9	+0.1
V17A	Tonalea, Kykot baz=85,SNR=12	84.45	49	⇑P	P	04 54 03.0	+0.1
X18A	Snowflake baz=85,SNR=5.2	84.53	50	⇑P	P	04 54 03.5	+0.1
L11A	Cat Creek Ranc baz=85,SNR=9.1	84.54	41	⇑P	P	04 54 03.4	+0.2
CMW	Cultus Mountai	84.55	34	P	P	04 54 03.6	+0.4
120A	U Bar Ranch, L baz=85	84.56	53	⇑P	P	04 54 03.9	+0.3
TTA	Tatalina comp=Z,20nm,1.0s,mb4.6	84.58	10	eP	P	04 54 02.3	-0.6
T16A	Glen Canyon Da baz=85	84.63	48	⇑P	P	04 54 04.0	+0.3
M12A	Wells baz=85,SNR=5.5	84.66	42	⇑P	P	04 54 03.7	-0.2
PMR	Palmer comp=Z,26nm,1.2s,mb4.6	84.67	13	eP	P	04 54 02.6	-0.8
K11A	Parker Ranch, baz=85,SNR=7.5	84.70	41	⇑P	P	04 54 03.9	-0.1
R15A	Junction baz=85	84.72	46	⇓P	P	04 54 04.6	+0.4
HAWA	Hanford	84.72	36	eP	P	04 54 04.4	+0.4
Y19A	Nutrioso baz=85,SNR=16	84.76	51	⇑P	P	04 54 05.3	+0.8
H09A	Durkee baz=85,SNR=6.5	84.78	39	⇑P	P	04 54 04.1	-0.2
N13A	Wendover, West baz=85	84.81	43	⇓P	P	04 54 04.7	+0.1
N13A	Wendover, West comp=Z,13nm,0.8s,mb4.5	84.81	43	eP	P	04 54 05.0	+0.4
Z20A	Nine Sixteen R baz=85,SNR=7.6	84.86	52	⇑P	P	04 54 05.6	+0.6
RPW	Rockport	84.89	34	eP	P	04 54 04.5	-0.3
S16A	Weppner Ranch, baz=85	84.93	47	⇓P	P	04 54 05.4	+0.1
MSU	Marysvale	84.94	46	eP	P	04 54 05.5	+0.3
221A	Mesquite Ranch baz=85	84.96	53	⇑P	P	04 54 05.9	+0.4
X19A	St. Johns baz=85	84.96	51	⇑P	P	04 54 06.2	+0.8
I10A	Payette baz=85	84.96	39	⇓P	P	04 54 05.6	+0.4
L12A	House Creek Ra baz=85	84.99	42	⇓P	P	04 54 05.7	+0.3
U17A	Shonto baz=85	85.03	48	⇑P	P	04 54 06.3	+0.6
DIV	Divide comp=Z,25nm,0.8s,mb4.8	85.04	15	eP	P	04 54 04.5	-0.7
Q15A	Fillmore baz=85	85.05	46	⇓P	P	04 54 06.0	+0.2
G09A	Cove baz=85,SNR=7.7	85.06	38	⇓P	P	04 54 05.5	-0.2
BMO	Blue Mountains comp=Z,5.2nm,0.8s,mb4.1	85.10	39	eP	P	04 54 05.6	-0.3
M13A	Montello baz=85,SNR=9.8	85.10	43	⇑P	P	04 54 05.8	-0.2
M13A	Montello comp=Z,8.5nm,0.9s,mb4.3	85.10	43	eP	P	04 54 05.9	-0.1
V18A	Ganado baz=85,SNR=6.0	85.11	49	⇓P	P	04 54 06.3	+0.2
T17A	Navajo Res., N baz=85,SNR=7.5	85.12	48	⇓P	P	04 54 06.5	+0.3
121A	Cookes Peak, D baz=85,SNR=9.8	85.19	53	⇓P	P	04 54 07.3	+0.7
H10A	Noah's Angus R baz=85,SNR=22	85.28	39	⇓P	P	04 54 06.1	-0.6
R16A	Teasdale baz=85	85.29	46	⇓P	P	04 54 07.4	+0.4
I11A	Placerville baz=86,SNR=12	85.37	40	⇑P	P	04 54 07.1	-0.1
Y20A	Horse Springs, baz=86,SNR=9.1	85.39	52	⇑P	P	04 54 08.2	+0.7
S17A	Black Ridge (B baz=86,SNR=6.2	85.44	47	⇓P	P	04 54 07.0	-0.7
D08A	Wollman Farm, baz=86	85.45	36	⇑P	P	04 54 07.6	+0.1
G10A	Bishop Farm, J baz=86,SNR=13	85.45	38	⇓P	P	04 54 07.1	-0.4
U18A	Rough Rock, Ch baz=86	85.50	49	⇑P	P	04 54 08.0	-0.1
BJI	Beijing	85.51	315	P	P	04 54 08.5	+0.5
BJI	comp=Z,23nm,0.7s,mb4.9			pmax	pmax		
E09A	Wood Farm, Sta baz=86	85.56	37	⇑P	P	04 54 08.4	+0.3
X20A	Quemado baz=86,SNR=5.2	85.59	51	⇓P	P	04 54 09.1	+0.6
Z21A	St. Cloud Mine baz=86,SNR=7.9	85.63	52	⇓P	P	04 54 09.3	+0.6
M14A	Sheep Mountain baz=86	85.70	43	⇓P	P	04 54 08.4	-0.5
OD2	Odessa Site #2	85.76	36	eP	P	04 54 08.6	-0.4
H11A	Donnelly baz=86,SNR=24	85.78	39	⇑P	P	04 54 08.9	-0.2
F10A	Beach Ranch, E baz=86,SNR=22	85.78	38	⇑P	P	04 54 08.5	-0.6
I12A	Atlanta baz=86,SNR=13	85.81	40	⇓P	P	04 54 09.5	+0.2
Q16A	Castle Valley baz=86	85.82	46	⇓P	P	04 54 09.9	+0.4
K13A	Stover Farm, H baz=86	85.84	42	⇓P	P	04 54 09.5	0.0
T18A	Mexican Hat baz=86,SNR=22	85.84	48	⇓P	P	04 54 09.7	0.0
W20A	Ramah baz=86,SNR=8.7	85.86	50	⇑P	P	04 54 10.1	+0.3
R17A	Hanksville Air baz=86	85.89	47	⇓P	P	04 54 10.1	+0.3
U19A	Dine' College, baz=86,SNR=7.8	85.91	49	⇓P	P	04 54 10.0	0.0
Y21A	Point of Rocks baz=86,SNR=12	85.95	52	⇓P	P	04 54 10.8	+0.6
B08A	Colville Reser baz=86,SNR=6.1	85.99	35	⇓P	P	04 54 09.3	-0.8
G11A	Walters Elk Ra baz=86,SNR=30	86.01	39	⇓P	P	04 54 09.8	-0.4
X21A	Alamocita Cree baz=86	86.07	51	⇑P	P	04 54 10.7	0.0
TRF	Thorofare Moun comp=Z,41nm,0.9s,mb5.0	86.09	12	eP	P	04 54 08.6	-1.5
CHUM	Lake Minchumin comp=Z,32nm,1.3s,mb4.8	86.10	11	eP	P	04 54 07.9	-2.3
HLID	Hailey baz=86	86.12	41	⇓P	P	04 54 11.2	+0.4
HLID	Hailey comp=Z,8.9nm,0.9s,mb4.4	86.12	41	eP	P	04 54 11.1	+0.3
Z22A	Elephant Butte baz=86,SNR=7.3	86.13	53	⇓P	P	04 54 11.4	+0.3
J13A	Cove Ranch, Pi baz=86,SNR=8.7	86.18	41	⇑P	P	04 54 11.2	+0.1
V20A	Brimhall baz=86	86.20	50	⇑P	P	04 54 11.3	-0.1
O16A	Springville baz=86	86.24	45	⇓P	P	04 54 12.1	+0.7
T19A	Beclabito baz=86	86.29	49	⇑P	P	04 54 12.6	+0.8
GYA	Guiyang	86.33	300	P	P	04 54 13.5	+1.3
GYA				pP	pP	04 56 17.3	+2.3
GYA				sP	sP	04 57 14.0	+1.8
GYA				PP	PP	04 57 47.8	+3.5
GYA				SKS		05 03 44.3	
GYA				S	S	05 04 01.0	0.0
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
F11A	Grangeville baz=86,SNR=9.7	86.35	38	⇑P	P	04 54 10.3	-1.5
SRU	San Rafael baz=86	86.35	46	⇓P	P	04 54 12.1	+0.1
K14A	Jones Ranch, D baz=86	86.36	42	⇑P	P	04 54 12.1	+0.1
H12A	Diamond D Ranc baz=86,SNR=28	86.38	40	⇑P	P	04 54 11.9	-0.1
R18A	Canyonlands Na baz=87,SNR=5.8	86.43	47	⇓P	P	04 54 12.1	-0.2
U20A	Newcomb baz=87	86.43	49	⇓P	P	04 54 12.4	-0.1
Y22A	Socorro baz=87	86.44	52	⇑P	P	04 54 12.5	-0.1
324A	Moseley Ranch, baz=87,SNR=11	86.45	55	⇑P	P	04 54 12.7	0.0
W21A	San Fidel baz=87	86.48	51	⇓P	P	04 54 13.7	+1.0
I13A	Wildhorse Cree baz=87,SNR=7.9	86.49	41	⇑P	P	04 54 12.9	+0.3
LENM	Lemitar	86.54	52	eP	P	04 54 13.0	0.0
BPAW	Bear Paw Mtn. comp=Z,7.3nm,1.2s,mb4.2	86.55	12	eP	P	04 54 10.5	-1.8
J14A	Carey baz=87,SNR=8.4	86.55	41	⇑P	P	04 54 13.2	+0.4
425A	Indio Mountain baz=87,SNR=18	86.55	56	⇓P	P	04 54 13.3	+0.2
L15A	Malad City baz=87	86.58	43	⇑P	P	04 54 13.1	+0.1
Q18A	Rafter H Ranch baz=87,SNR=5.4	86.61	46	⇑P	P	04 54 12.8	-0.5
MCK	McKinley comp=Z,33nm,0.9s,mb5.0	86.62	13	eP	P	04 54 11.7	-1.0
N16A	Rees Ranch, Co baz=87	86.62	44	⇓P	P	04 54 13.4	+0.2
MNTX	Cornudas Mount comp=Z,8.5nm,1.1s,mb4.3	86.64	55	eP	P	04 54 13.4	-0.1
626A	Big Bend Ranch baz=87,SNR=14	86.69	57	⇓P	P	04 54 14.1	+0.3
M16A	Huntsville baz=87	86.72	44	⇑P	P	04 54 14.0	+0.3
O17A	Robinson Place baz=87,SNR=7.4	86.74	45	⇑P	P	04 54 14.1	+0.3
H13A	Challis baz=87,SNR=8.9	86.75	40	⇑P	P	04 54 13.7	0.0
BNM	Barren Site comp=Z,2.0nm,0.6s,mb3.9	86.79	52	eP	P	04 54 14.1	-0.1
P18A	Preston Nutter baz=87	86.79	46	⇑P	P	04 54 13.8	-0.2
F12A	Elk City baz=87,SNR=52	86.80	39	⇓P	P	04 54 13.5	-0.5
325A	Bean Ranch, Si baz=87,SNR=17	86.81	55	⇑P	P	04 54 13.9	-0.4
R19A	Curley Farm, L baz=87,SNR=7.2	86.82	47	⇑P	P	04 54 13.9	-0.3
K15A	Arbon baz=87	86.83	42	⇑P	P	04 54 14.4	+0.2
HWUT	Hardware Ranch comp=Z,2.0nm,0.7s,mb3.9	86.90	44	eP	P	04 54 13.8	-0.7
I14A	Mackay baz=87,SNR=17	86.91	41	⇓P	P	04 54 15.0	+0.5
526A	Mary Lane Ranc baz=87,SNR=13	86.94	57	⇓P	P	04 54 15.0	+0.1
TXAR	Lajitas Array comp=Z,5.7nm,0.7s,mb4.3,baz=218,slow=6.7,SNR=59	86.96	57	P	P	04 54 15.4	+0.3
E12A	Beaver Dam Sad baz=87,SNR=9.1	86.98	38	⇓P	P	04 54 14.6	-0.2
124A	Stringfield Ra baz=87	87.02	54	⇓P	P	04 54 14.6	-0.8
W22A	Albuquerque baz=87	87.03	51	⇑P	P	04 54 15.5	+0.2
HYT	Haines Junctio	87.05	19	eP	P	04 54 14.9	+0.2
G13A	Cobalt baz=87,SNR=16	87.05	40	⇑P	P	04 54 14.9	-0.3
U21A	Nageezi baz=87,SNR=18	87.07	50	⇑P	P	04 54 15.3	-0.1
SYO	Syowa Base	87.08	193	⇑eP	P	04 54 12.3	-2.6
SYO	Syowa Base	87.08	193	⇓epP	pP	04 56 17.0	-1.0
Q19A	Hogan Spring (baz=87	87.14	47	⇑P	P	04 54 15.8	+0.1
NEW	Newport	87.14	36	eP	P	04 54 15.1	-0.3
L16A	Fish Haven baz=87	87.19	43	⇑P	P	04 54 16.2	+0.3
PV01	Paradox Valley comp=Z,1μm,1.4s	87.22	48	eP	P	04 54 15.8	-0.4
426A	McDonald Obser baz=87,SNR=20	87.24	56	⇑P	P	04 54 16.5	+0.1
225A	Deer Hill, Car baz=87,SNR=8.6	87.25	54	⇓P	P	04 54 16.4	0.0
J15A	Blackfoot baz=87,SNR=16	87.26	42	⇑P	P	04 54 16.7	+0.5
O18A	Roosevelt baz=87	87.26	45	⇓P	P	04 54 16.5	+0.3
ANMO	Albuquerque comp=Z,1.3nm,0.9s,mb3.6	87.27	51	eP	P	04 54 16.2	-0.3
H14A	Leadore baz=88,SNR=13	87.32	40	⇓P	P	04 54 16.6	+0.2
527A	Woodward Ranch baz=88,SNR=12	87.35	57	⇓P	P	04 54 17.0	+0.1
F13A	Darby baz=88,SNR=18	87.36	39	⇓P	P	04 54 16.1	-0.5
Z24A	Sheeppen Canyo baz=88	87.36	53	⇑P	P	04 54 16.9	0.0
V22A	San Miguel Ran baz=88	87.38	50	⇑P	P	04 54 16.8	-0.1
C11A	Tepee Creek (N baz=88,SNR=21	87.38	37	⇑P	P	04 54 16.3	-0.3
R20A	Redvale baz=88	87.38	48	⇓P	P	04 54 16.6	-0.3
M17A	Scullys Gap (B baz=88	87.42	44	⇓P	P	04 54 16.7	-0.3
T21A	Navajo Lake baz=88	87.42	49	⇑P	P	04 54 16.4	-0.7
D12A	Red Ives Fores baz=88,SNR=7.6	87.45	38	⇑P	P	04 54 16.5	-0.5
K16A	Soda Springs baz=88,SNR=5.6	87.51	42	⇓P	P	04 54 17.3	0.0
I15A	Monteview baz=88	87.54	41	⇑P	P	04 54 17.8	+0.4
S21A	Coal Bank Pass baz=88	87.55	48	⇓P	P	04 54 17.8	+0.2
326A	Caldwell Ranch baz=88	87.56	56	⇓P	P	04 54 17.7	-0.2
Y24A	Capitan baz=88	87.57	53	⇑P	P	04 54 17.9	+0.1
W23A	Werner Place, baz=88	87.59	51	⇓P	P	04 54 18.4	+0.5
G14A	Jackson baz=88	87.59	40	⇑P	P	04 54 17.9	+0.2
L17A	Cokeville baz=88	87.60	43	⇑P	P	04 54 17.4	-0.4
125A	Gardner Draw, baz=88	87.61	54	⇓P	P	04 54 18.1	0.0
U22A	Llaves baz=88	87.63	50	⇓P	P	04 54 18.3	+0.2
GDL2	Guadalupe Moun	87.64	55	eP	P	04 54 18.8	+0.6
628A	Black Gap, Mar baz=88,SNR=7.4	87.64	58	⇓P	P	04 54 18.1	-0.2
P19A	Cripple Cowboy baz=88	87.65	46	⇓P	P	04 54 17.8	-0.3
J16A	Bone baz=88,SNR=12	87.72	42	⇑P	P	04 54 18.4	+0.1
DLBC	Dease Lake	87.74	23	eP	P	04 54 18.3	+0.3
C12B	Naegeli Ranch, baz=88	87.75	37	⇑P	P	04 54 18.3	0.0
MCMT	McKenzie Canyo comp=Z,10nm,1.1s,mb4.5	87.75	40	eP	P	04 54 18.9	+0.6
H15A	Lima baz=88,SNR=14	87.76	41	⇓P	P	04 54 18.8	+0.3
226A	Malaga, Loving baz=88,SNR=9.1	87.78	55	⇓P	P	04 54 18.7	-0.2
XAN	Xi'an	87.78	307	P	P	04 54 19.8	+1.0
XAN				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.7						
XAN				pmax	pmax		
	comp=Z,27nm,6.3s						
M18A	Lyman baz=88	87.79	44	⇑P	P	04 54 18.7	+0.1
E13A	Victor baz=88	87.80	38	⇑P	P	04 54 17.9	-0.6
Q20A	Ridgley Place, baz=88,SNR=5.5	87.80	47	⇑P	P	04 54 18.4	-0.4
427A	Hayter Ranch, baz=88,SNR=19	87.81	56	⇓P	P	04 54 19.3	+0.3
V23A	Ortiz Mt. (NFS baz=88	87.83	51	⇑P	P	04 54 19.4	+0.3
N18A	Larsen Ranch, baz=88	87.83	45	⇓P	P	04 54 18.9	0.0
Z25A	Roswell baz=88,SNR=5.7	87.83	53	⇑P	P	04 54 19.2	+0.1
COLA	College comp=Z,34nm,0.8s,mb5.1	87.85	12	eP	P	04 54 16.8	-1.7
X24A	Lazy VL Ranch, baz=88	87.85	52	⇑P	P	04 54 19.2	+0.1
O19A	Miners Draw (B baz=88	87.87	46	⇓P	P	04 54 19.1	0.0
K17A	Gardner Place, baz=88,SNR=5.5	87.89	43	⇑P	P	04 54 19.1	0.0
RRI2	Red Ridge comp=Z,17nm,0.9s,mb4.8	87.94	42	eP	P	04 54 20.0	+0.7
F14A	Wisdom baz=88	87.95	39	⇑P	P	04 54 19.2	-0.1
D13A	Huson baz=88,SNR=8.8	87.99	38	⇑P	P	04 54 18.9	-0.5
P20A	De Beque baz=88,SNR=7.4	87.99	47	⇑P	P	04 54 19.4	-0.2
528A	Cox Ranch, San baz=88,SNR=9.3	88.00	57	⇑P	P	04 54 19.9	-0.1
R21A	Cimarron baz=88,SNR=6.7	88.04	48	⇓P	P	04 54 19.9	-0.1
L18A	Fontenelle, Gr baz=88	88.05	44	⇓P	P	04 54 19.8	-0.1
U23A	El Rito baz=88	88.08	50	⇑P	P	04 54 20.3	+0.1
126A	Clayton Basin, baz=88	88.09	54	⇓P	P	04 54 20.2	-0.1
I16A	Newdale baz=88,SNR=12	88.10	42	⇓P	P	04 54 20.3	+0.3
N19A	John Jarvie Ra baz=88	88.12	45	⇓P	P	04 54 20.0	-0.2
Y25A	Mesa, Roswell baz=88,SNR=8.2	88.13	53	⇓P	P	04 54 19.9	-0.6
G15A	Dillon baz=88,SNR=27	88.14	40	⇑P	P	04 54 20.1	-0.2
MSO	Missoula comp=Z,3.8nm,1.0s,mb4.1	88.15	38	eP	P	04 54 19.5	-0.7
W24A	Lazy 6 Ranch, baz=88,SNR=7.0	88.16	51	⇑P	P	04 54 20.0	-0.6
DLMT	Dillon comp=Z,15nm,1.0s,mb4.7	88.17	40	eP	P	04 54 20.9	+0.6
E14A	Clinton baz=88,SNR=8.4	88.19	39	⇑P	P	04 54 20.1	-0.3
BSMT	Bassoo Peak	88.21	37	P	P	04 54 20.2	-0.3
REDW	Red Top Meadow comp=Z,17nm,1.1s,mb4.7	88.24	42	⇓/P	P	04 54 20.4	-0.3
C13A	Hot Springs baz=88	88.24	37	⇓P	P	04 54 19.9	-0.7
TPAW	Teton Pass comp=Z,12nm,1.0s,mb4.6	88.24	42	eP	P	04 54 21.4	+0.6
Q21A	Lamborn Mesa, baz=88	88.24	47	⇓P	P	04 54 20.8	-0.1
428A	Kincaid Ranch, baz=88	88.32	57	⇓P	P	04 54 21.2	-0.2
A12A	Yaak River Ran baz=88	88.32	36	⇓P	P	04 54 21.0	0.0
J17A	Brown Place, J baz=88,SNR=6.3	88.33	42	⇓P	P	04 54 21.2	+0.1
SNOW	Snow King Moun comp=Z,17nm,1.0s,mb4.7	88.35	42	eP	P	04 54 21.7	+0.4
Z26A	Caprock baz=88,SNR=8.5	88.39	54	⇑P	P	04 54 21.1	-0.6
O20A	White River Ci baz=88	88.39	46	⇓P	P	04 54 21.8	+0.2
K18A	Toltan Ranch, baz=88,SNR=21	88.40	43	⇓P	P	04 54 21.7	+0.2
M19A	Rock Springs baz=89	88.43	45	⇓P	P	04 54 21.3	-0.3
IMW	Indian Meadow comp=Z,14nm,0.9s,mb4.7	88.45	42	eP	P	04 54 22.0	+0.3
F15A	Butte baz=89,SNR=6.4	88.48	40	⇓P	P	04 54 21.7	-0.1
328A	Wristen Ranch, baz=89,SNR=5.3	88.49	56	⇓P	P	04 54 21.7	-0.5
LRM	Limekiln Ridge	88.50	40	eP	P	04 54 22.1	+0.2
LOHW	Long Hollow comp=Z,5.3nm,0.7s,mb4.5	88.52	42	eP	P	04 54 21.4	-0.6
D14A	Greenough baz=89,SNR=8.7	88.53	38	⇑P	P	04 54 21.2	-0.9
R22A	Saguache, Gunn baz=89	88.53	48	⇑P	P	04 54 22.3	0.0
L19A	Farson baz=89,SNR=11	88.58	44	⇑P	P	04 54 22.1	-0.3
G16A	Moss Hill, Enn baz=89,SNR=11	88.59	40	⇓P	P	04 54 22.1	-0.2
CHMT	Chamberlain Mo	88.59	38	eP	P	04 54 21.8	-0.5
127A	Arkansas Junct baz=89	88.61	54	⇑P	P	04 54 22.4	-0.3
QLMT	Earthquake Lak	88.61	41	eP	P	04 54 23.6	+1.2
SLMT	Seeley Lake comp=Z,5.5nm,1.0s,mb4.3	88.63	38	eP	P	04 54 21.3	-1.2
BILL	Bilibino comp=Z,8.8nm,0.9s,mb4.6	88.63	354	eP	P	04 54 21.4	-0.6
P21A	Newcastle baz=89	88.65	47	⇑P	P	04 54 23.2	+0.5
H16A	Russell Place, baz=89,SNR=12	88.66	41	⇑P	P	04 54 23.3	+0.7
B13A	Whitefish	88.67	37	⇑P	P	04 54 22.1	-0.5

baz=89
J18A Kendall Valley 88.69 43 ⇓P P 04 54 22.7 -0.1
baz=89,SNR=24
E15A Deer Lodge 88.70 39 ⇑P P 04 54 22.3 -0.5
baz=89,SNR=5.4
N20A Spence Gulch, 88.70 45 ⇓P P 04 54 22.9 -0.1
baz=89,SNR=10
Q22A Crested Butte, 88.72 48 ⇓P P 04 54 23.1 +0.1
baz=89
C14A Swan Lake 88.76 37 ⇑P P 04 54 23.2 +0.1
baz=89
BW06 Boulder Array 88.77 43 ⇑P P 04 54 23.2 -0.1
baz=89
BW06 Boulder Array 88.77 43 eP P 04 54 23.0 -0.2
PDAR Pinedale Array 88.77 43 P P 04 54 22.7 -0.5
comp=Z,7.4nm,0.9s,mb4.5,baz=216,slow=2.9,SNR=50
Y26A Elida 88.78 53 ⇓P P 04 54 23.3 -0.2
baz=89
LCCM Lewis and Clar 88.85 40 P P 04 54 23.7 +0.1
W25A X Bar L Ranch, 88.86 52 ⇑P P 04 54 23.0 -0.8
baz=89,SNR=10
BOZ Bozeman (W) 88.91 40 ⇑P P 04 54 24.1 +0.3
baz=89
BOZ Bozeman (W) 88.91 40 eP P 04 54 24.1 +0.3
comp=Z,9.0nm,0.9s,mb4.6
H17A Grant Village 88.92 42 ⇑P P 04 54 25.6 +1.7
baz=89
HHC Hu-ho-hao-te 88.97 314 eP P 04 54 24.5 +0.3
HHC pP pP 04 56 25.3 -2.7
HHC PP PP 04 58 06.5 +1.6
HHC SKS 05 04 01.5
HHC S S 05 04 19.5 -5.4
HHC SS SS 05 10 39.3 +3.4
HHC pmax pmax
comp=Z,22nm,0.6s,mb5.2
HHC pmax pmax
comp=Z,79nm,5.3s
F16A Kennard Place, 88.98 40 ⇑P P 04 54 24.1 0.0
baz=89,SNR=5.9
Z27A Tatum 88.98 54 ⇑P P 04 54 23.7 -0.8
baz=89
A13A Flathead Natio 89.01 36 ⇓P P 04 54 23.7 -0.4
baz=89
V25A Rancho No Teng 89.01 51 ⇑P P 04 54 23.9 -0.6
baz=89,SNR=6.9
KMI Kunming 89.04 297 P P 04 54 26.5 +1.6
KMI pP pP 04 56 30.8 +2.2
KMI PP PP 04 58 08.5 +2.8
KMI S S 05 04 26.5 +0.3
KMI sS sS 05 08 07.0 +0.2
KMI SS SS 05 10 40.0 +2.5
KMI pmax pmax
comp=Z,22nm,0.9s,mb5.0
KMI pmax pmax
comp=Z,150nm,4.3s
I18A Diamond G Ranc 89.06 42 ⇓P P 04 54 24.5 0.0
baz=89
M20A Sweetwater, Wa 89.06 45 ⇑P P 04 54 24.5 -0.1
baz=89,SNR=5.8
D15A Lincoln 89.09 39 ⇓P P 04 54 24.5 0.0
baz=89
DAWY Dawson 89.12 16 ⇓iP P 04 54 23.8 -0.5
N21A Black Mountain 89.17 46 ⇑P P 04 54 25.1 0.0
baz=89,SNR=6.4
L20A Wamsutter 89.20 44 ⇓P P 04 54 25.3 0.0
baz=89,SNR=13
SDCO Great Sand Dun 89.21 49 eP P 04 54 25.3 -0.1
K19A Absolon Red Bu 89.26 43 ⇑P P 04 54 24.9 -0.6
baz=89
EGAK Eagle 89.26 15 ⇓iP P 04 54 24.1 -0.9
comp=Z,22nm,0.9s,mb5.0
Y27A Causey 89.26 53 ⇓P P 04 54 25.4 -0.4
baz=89
G17A Pierce Place, 89.28 41 ⇑P P 04 54 26.0 +0.5
baz=89
W26A Owens Ranch, T 89.32 52 ⇓P P 04 54 25.8 -0.2
baz=89
B14A Marquette Ranc 89.34 37 ⇓P P 04 54 25.1 -0.7
baz=90,SNR=11
WALA Waterton Lakes 89.35 36 eP P 04 54 25.8 +0.1
U25A Circle Dot Ran 89.41 51 ⇓P P 04 54 25.9 -0.4
baz=90
C15A Salmond Ranch, 89.42 38 ⇓P P 04 54 25.5 -0.6
baz=90,SNR=5.9
K20A Yellowstone Ra 89.51 44 ⇓P P 04 54 25.7 -0.9
baz=90,SNR=6.2
COLD Coldfoot 89.52 11 eP P 04 54 25.5 -0.6
comp=Z,18nm,1.0s,mb4.9
A14A Double T Ranch 89.58 37 ⇓P P 04 54 26.4 -0.4
baz=90,SNR=18
MSTX Muleshoe 89.59 54 ⇓P P 04 54 26.7 -0.6
baz=90,SNR=5.7
V26A Tequesquite Ra 89.60 52 ⇑P P 04 54 26.8 -0.4
baz=90
F17A Fitzpatrick Pl 89.62 40 ⇓P P 04 54 27.5 +0.4
baz=90,SNR=9.2
X27A F and S Farms, 89.63 53 ⇑P P 04 54 26.8 -0.6
baz=90
D16A Dana Ranch, Ca 89.65 39 ⇑P P 04 54 27.1 -0.2
baz=90,SNR=8.2
M21A Separation Pea 89.66 45 ⇓P P 04 54 26.9 -0.5
baz=90,SNR=13
B15A Bradely Ranch, 89.72 37 ⇓P P 04 54 27.6 +0.1
baz=90,SNR=5.9
T25A Trinidad 89.72 50 ⇓P P 04 54 27.6 -0.2
baz=90
E17A Martinsdale 89.78 40 ⇑P P 04 54 27.8 0.0
baz=90
RWWY Rawlins 89.80 45 eP P 04 54 27.5 -0.5
L21A Rawlins 89.82 45 ⇓P P 04 54 27.9 -0.2
baz=90
W27A Bowe Ranch, En 89.83 52 ⇑P P 04 54 27.7 -0.6
baz=90
CM31 Chiang Mai Arr 89.85 290 eP P 04 54 30.1 +1.3
comp=Z,12nm,0.7s,mb4.8
CMAR Chiang Mai Arr 89.85 290 P P 04 54 30.4 +1.6
comp=Z,14nm,0.9s,mb4.8,baz=122,slow=2.8,SNR=63
U26A Atchley Ranch, 89.89 51 ⇑P P 04 54 28.1 -0.4
baz=90
N22A Wattenberg Ran 89.91 46 ⇑P P 04 54 28.8 +0.2
baz=90,SNR=7.7
C16A Fuhringer Ranc 89.93 38 ⇓P P 04 54 27.7 -0.8
baz=90,SNR=6.4
A15A Johnson Ranch, 89.97 37 ⇑P P 04 54 27.7 -1.0
baz=90,SNR=8.2
CHTO Chiang Mai 89.97 290 eP P 04 54 30.3 +0.9
comp=Z,16nm,0.7s,mb5.0
G18A Lazy EL Ranch, 90.00 41 ⇑P P 04 54 28.7 -0.2
baz=90,SNR=5.3
RLMT Red Lodge 90.09 41 ⇓P P 04 54 29.4 +0.1
baz=90
RLMT Red Lodge 90.09 41 eP P 04 54 30.0 +0.7
comp=Z,6.7nm,1.0s,mb4.4
GCMT Greycliff 90.17 41 eP P 04 54 29.8 +0.2
comp=Z,0.9nm,0.7s,mb3.7
F18A Big Timber 90.20 40 ⇓P P 04 54 29.7 0.0
baz=90
D17A Six Diamond Ra 90.22 39 ⇑P P 04 54 29.9 0.0
baz=90,SNR=12
B16A M & M Farms, S 90.26 38 ⇓P P 04 54 29.6 -0.4
baz=90
E18A Harlowton 90.40 40 ⇑P P 04 54 30.8 +0.1
baz=90,SNR=5.3
C17A Wharram Farm, 90.42 39 ⇑P P 04 54 30.2 -0.5
baz=91,SNR=12
CD2 Chengdu 90.46 303 eP P 04 54 34.3 +3.0
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
CD2 pmax pmax
comp=Z,30nm,4.8s
L22A Ellis Ranch, M 90.47 45 ⇓P P 04 54 31.1 0.0
baz=91,SNR=9.9
JCT Junction City 90.49 58 eP P 04 54 30.8 -0.7
A16A West Butte Ran 90.60 37 ⇓P P 04 54 31.5 0.0
baz=91
B17A L&G Farms, Che 90.73 38 ⇑P P 04 54 31.8 -0.3
baz=91
D18A Linhart Farms, 90.77 39 ⇓P P 04 54 32.6 +0.3
baz=91
PHWY Pilot Hill 90.80 46 eP P 04 54 32.7 0.0
B18A Beardsley Farm 91.37 38 ⇑P P 04 54 34.7 -0.4
baz=92,SNR=5.1
A18A Metzger Ranch, 91.59 38 ⇓P P 04 54 35.8 -0.3
baz=92
EDM Edmonton 91.86 33 eP P 04 54 36.5 -0.7
LZH Lanzhou 92.42 308 P P 04 54 40.5 +0.3
LZH pP pP 04 56 45.0 +0.6

LZH sP sP 04 57 41.0 -0.2
LZH PP PP 04 58 33.8 +2.1
LZH pmax pmax
comp=Z,18nm,1.3s,mb4.9
LZH pmax pmax
comp=Z,76nm,6.3s
RSSD Black Hills 92.97 44 eP P 04 54 42.1 -0.4
INK Inuvik 93.93 15 eP P 04 54 43.5 -2.8
comp=Z,9.7nm,1.1s,mb4.8
ULN Ulaanbaatar 94.97 319 eP P 04 54 51.6 0.0
SONM Songino Array 95.36 319 P P 04 54 52.9 -0.4
comp=Z,0.8nm,0.5s,mb4.1,baz=148,slow=4.7,SNR=5.3
SONM PP PP 04 58 50.8 -3.3
comp=Z,0.8nm,0.9s,baz=95,slow=6.7,SNR=4.2
GTA Gaotai 96.61 309 eP P 04 54 59.5 +0.3
GTA sP sP 04 57 56.8 -3.6
GTA pmax pmax
comp=Z,4.0nm,1.4s,mb4.5
ZALV Zalesovo Beam 110.10 321 PKiKP PKiKP 04 59 55.2 -1.5
comp=Z,1.8nm,0.6s,baz=172,slow=0.7,SNR=11
MKAR Makanchi Array 110.82 314 PKiKP PKiKP 04 59 56.8 -1.6
comp=Z,2.0nm,0.6s,baz=66,slow=5.9,SNR=14
TKM2 Tokmak 2 115.15 309 ePKPdf PKPdf 05 00 05.6 -1.2
UCH Uchtor 115.90 308 ePKPdf PKPdf 05 00 08.0 -0.2
EKS2 Erkin-Say 116.47 308 ePKPdf PKPdf 05 00 08.8 -0.5
BVAR Borovoye Array 118.69 320 PKP PKPdf 05 00 12.3 -0.9
comp=Z,5.1nm,0.6s,baz=99,slow=1.5,SNR=29
KBL Kabul 119.58 299 ePKPdf PKPdf 05 00 14.8 -0.7
SUMG Summit 122.80 13 iP PKPdf 05 00 19.0 -1.6
comp=Z,4.0nm,0.9s
ARU Arti 124.80 326 ePKPdf PKPdf 05 00 24.2 -0.6
BOSA Boshof 126.55 206 PKP PKPdf 05 00 29.1 -0.1
comp=Z,1.6nm,0.7s,baz=128,slow=9.5,SNR=4.4
ARCES ARCESS Array B 128.51 350 PKP PKPdf 05 00 30.2 -1.4
comp=Z,2.9nm,0.6s,baz=13,slow=1.2,SNR=21
JOF Joensuu 132.71 342 ep PKPdf 05 00 38.3 -1.4
comp=Z,8.3nm,0.6s
JOF Joensuu 132.71 342 ep PKPdf 05 00 38.3 -1.4
comp=Z,8.3nm,0.6s
KAF Kangasniemi 134.73 344 ep PKPdf 05 00 42.6 -0.9
comp=Z,3.9nm,0.6s
KAF Kangasniemi 134.73 344 ep PKPdf 05 00 42.6 -0.9
comp=Z,3.9nm,0.6s
FINES FINESS Array B 135.36 344 PKP PKPdf 05 00 42.3 -2.4
comp=Z,1.6nm,0.4s,baz=81,slow=1.1,SNR=7.9
LSZ Lusaka 136.33 218 ePKPdf PKPdf 05 00 48.5 +0.6
NOA NORSAR Array B 138.57 353 PKhKP 05 00 40.4
comp=Z,2.1nm,0.7s,baz=17,slow=5.1,SNR=9.1
NOA PKP PKPdf 05 00 52.0 +1.4
comp=Z,1.1nm,0.7s,baz=13,slow=4.0,SNR=4.1
NOA SKKPbc SKPbc 05 03 31.3 -0.9
comp=Z,1.3nm,0.9s,baz=14,slow=4.3,SNR=3.3
SUW Suwalki 142.42 339 ePKP PKPdf 05 00 54.4 -3.4
AKASG Malin Array Be 142.60 331 PKhKP 05 00 54.2
comp=Z,23nm,0.6s,baz=43,slow=4.3,SNR=81
AKASG SKPbc SKPbc 05 03 44.5 +1.5
comp=Z,1.0nm,0.6s,baz=38,slow=2.0,SNR=6.0
AKBB Malin Array Si 142.60 331 ePKPdf 05 00 54.2
KIEV Kiev 142.61 331 ePKPdf 05 00 53.8
MUD Monsted U'grnd 143.29 353 ⇑iP PKPdf 05 00 57.0 -2.2
comp=Z,34nm,0.8s
COP Copenhagen 143.59 350 iP PKPdf 05 00 57.1 -2.6
comp=Z,16nm,0.7s
BSD Bornholm Skovb 143.67 347 ⇓iP PKPdf 05 00 57.7 -2.2
comp=Z,46nm,0.8s
GZT Gaziantep 144.54 307 iP PKPdf 05 01 02.1 +0.1
ESK Eskdalemuir 144.64 5 ePKPdf PKPdf 05 01 00.8 -0.7
GKP Gorka Klasztor 144.83 344 ePKP PKPdf 05 01 02.1 +0.2
BOYT Boyabat 144.85 315 iP PKPdf 05 01 03.3 +0.9
PINB Pinarbasi 144.94 309 iP PKPdf 05 01 01.9 -0.7
CTKT Corum 145.28 313 iP PKPdf 05 01 04.7 +1.5
KIS Kishinev 145.33 327 ⇑iUNK PKPdf 05 01 02.6 -0.4
KIS XM PKPbc 05 01 03.5 -0.7
comp=Z,100nm,1.4s
BSEG Bad Segeberg 145.61 351 ePKPbc PKPbc 05 01 03.1 -1.7
BALT Daday 145.80 316 iP PKPbc 05 01 06.1 +0.3
COBT Iskenderun 145.80 306 iP PKPdf 05 01 03.5 -0.7
KWP Kalwaria Pacla 146.16 335 ePKP PKPdf 05 01 06.1 +1.8
KWP e 05 01 09.1
KWP Kalwaria Pacla 146.16 335 ePKPbc PKPbc 05 01 05.8 -0.7
KWP Kalwaria Pacla 146.16 335 ⇓iP PKPbc 05 01 06.3 -0.2
ELDT Eldivan 146.27 314 iP PKPbc 05 01 06.4 -0.7
BR131 Keskin Array S 146.47 313 ePKPbc PKPbc 05 01 07.1 -0.6
BRTR Keskin Array B 146.47 313 PKPbc PKPbc 05 01 07.5 -0.2
comp=Z,8.6nm,0.6s,baz=135,slow=4.4,SNR=39
TLCR 146.51 324 ⇑iP PKPbc 05 01 07.5 -0.1
BUR08 Bucovina Ar. S 146.64 331 ePKPbc PKPbc 05 01 07.9 0.0
BURAR Bucovina Array 146.65 331 ⇑iP PKPbc 05 01 08.4 +0.5
OJC Ojcow 146.74 339 ePKP PKPdf 05 01 05.8 +0.5
CFR Carcaliu 146.88 325 ⇑iP PKPbc 05 01 09.2 +0.6
STHS Stebnicka Huta 146.90 337 ePKP PKPbc 05 01 08.9 +0.4
STHS e 05 01 13.1
STHS Stebnicka Huta 146.90 337 ePKP PKPbc 05 01 08.9 +0.4
STHS e 05 01 13.1
NRDL Niedersach Rie 147.04 351 ePKPbc PKPbc 05 01 07.2 -1.6
VRI Vrincioaia 147.16 327 ⇑iP PKPbc 05 01 09.0 -0.3
TIRR Tirgusor 147.19 324 ePKPbc PKPbc 05 01 08.7 -0.7
TIRR Tirgusor 147.19 324 ⇑iP PKPbc 05 01 09.1 -0.3
CRVS Cervenica-Dubn 147.24 336 ePKP PKPdf 05 01 05.8 -0.4
CRVS e 05 01 09.7
CRVS e 05 01 13.5
CRVS Cervenica-Dubn 147.24 336 ePKP PKPdf 05 01 05.8 -0.4
CRVS e 05 01 09.7
CRVS e 05 01 13.5
NIE Niedzica 147.24 338 ePKP PKPbc 05 01 09.7 +0.3
KSP Ksiaz 147.27 343 ePKP PKPbc 05 01 09.5 +0.1
TRPA Tarpa 147.43 334 ⇓iP PKPbc 05 01 09.7 -0.2
MMAI Mount Meron Ar 147.49 300 PKPbc PKPbc 05 01 10.8 +0.2
comp=Z,30nm,0.8s,baz=56,slow=5.1,SNR=30
MMAI PKPab PKPab 05 01 15.4 +0.7
comp=Z,20nm,0.8s,baz=75,slow=3.5,SNR=11
IBBN Ibbenburen 147.53 353 ePKPbc PKPbc 05 01 09.8 -0.3
OKC Ostrava-Krasne 147.62 340 ⇑ePKP PKPbc 05 01 10.2 -0.2
OKC ePKPAB PKPab 05 01 14.5 -0.1
CLZ Clausthal 147.63 350 ePKPbc PKPbc 05 01 09.2 -1.1
CLL Collm 147.65 347 ePKPbc PKPbc 05 01 10.0 -0.4
CLL ePKPab PKPab 05 01 13.9 -0.8
CLL Collm 147.65 347 ⇓iPKPbc PKPbc 05 01 10.1 -0.3
comp=Z,57nm,0.9s
CLL ⇑iPKPab PKPab 05 01 14.0 -0.7
comp=Z,29nm,0.8s
UPC Upice 147.65 343 ⇑ePKP PKPbc 05 01 10.4 0.0
UPC ePKPAB PKPab 05 01 14.8 +0.1
DPC Dobruska-Polom 147.71 343 ⇑ePKP PKPbc 05 01 10.7 +0.1
DPC ePKPAB PKPab 05 01 15.2 +0.3
MLR Muntele Rosu 147.82 327 ⇓iP PKPbc 05 01 11.1 +0.1
BRG Berggiesshubel 147.84 346 ePKPbc PKPbc 05 01 10.3 -0.6
BRG ePKPab PKPab 05 01 14.8 -0.7
BRG Berggiesshubel 147.84 346 iPKP PKPbc 05 01 10.7 -0.2
comp=Z,20nm,1.0s
BRG i 05 01 15.3
comp=Z,15nm,0.8s
MORC Moravsky Berou 147.86 341 ePKPbc PKPbc 05 01 10.5 -0.4
MORC Moravsky Berou 147.86 341 ⇑iP PKPbc 05 01 11.1 +0.1
KECS Kecovo 147.95 336 ePKP PKPbc 05 01 11.4 +0.1
KECS e 05 01 16.4
KECS Kecovo 147.95 336 ePKP PKPbc 05 01 11.4 +0.1
KECS e 05 01 16.4
PVCC Panska Ves 148.01 345 ⇑ePKP PKPbc 05 01 11.4 +0.1
KDHN Kadinhani 148.06 312 iP PKPbc 05 01 10.1 -1.7
VOIR 148.30 328 ⇓iP PKPbc 05 01 12.4 +0.2
DRGR 148.39 332 ⇑iP PKPbc 05 01 13.2 +0.8
BUG Bochum--Univer 148.44 354 ePKPbc PKPbc 05 01 11.8 -0.6
BUG ePKPab PKPab 05 01 16.8 -1.1
PRU Pruhonice 148.52 344 ⇑ePKP PKPbc 05 01 12.7 +0.1
PRU ePKPAB PKPab 05 01 18.7 +0.4
VYHS Vyhne 148.54 338 ePKP PKPbc 05 01 12.7 0.0
VYHS e 05 01 19.0
VYHS Vyhne 148.54 338 ePKP PKPbc 05 01 12.7 0.0
VYHS e 05 01 19.0
MOX Moxa 148.56 348 ePKP PKPbc 05 01 12.4 -0.3
comp=Z,45nm,1.4s
MOX Moxa 148.56 348 ePKPbc PKPbc 05 01 12.1 -0.6
MOX ePKPab PKPab 05 01 17.6 -0.8
VRAC Vranov 148.56 341 ⇑iP PKPbc 05 01 12.9 +0.2
TANN Tannenbergstha 148.60 347 ePKPbc PKPbc 05 01 12.3 -0.5
TANN ePKPab PKPab 05 01 17.9 -0.7
KOLL Kolacno 148.62 339 ePKP PKPbc 05 01 13.3 +0.4
KOLL Kolacno 148.62 339 ePKP PKPbc 05 01 13.3 +0.4
PSZ Piszkesteto 148.64 336 ePKPbc PKPbc 05 01 12.3 -0.6
PSZ Piszkesteto 148.64 336 ⇓ePKP PKPbc 05 01 12.4 -0.6
PSZ Piszkesteto 148.64 336 ⇓iP PKPbc 05 01 12.8 -0.2
UBBA Unterbreizbach 148.68 350 ePKPbc PKPbc 05 01 12.1 -0.9

NKC Novy Kostel 148.78 347 ⇑ePKP PKPbc 05 01 13.3 +0.1
NKC ePKPAB PKPab 05 01 18.8 -0.5
TREC Trest 148.90 343 ⇑ePKP PKPbc 05 01 13.1 -0.5
TREC ePKPAB PKPab 05 01 20.0 +0.1
SMOL Smolenice 149.00 340 ePKP PKPbc 05 01 14.9 +1.1
SMOL e 05 01 21.7
SMOL Smolenice 149.00 340 ePKP PKPbc 05 01 14.9 +1.1
SMOL e 05 01 21.7
MEM Membach 149.38 355 PKPbc PKPbc 05 01 14.2 -0.5
MEM PKPab PKPab 05 01 20.9 -0.9
GZR Gura Zlata 149.43 330 ⇑iP PKPbc 05 01 14.6 -0.4
TNS Taunus Mts 149.49 352 ePKPbc PKPbc 05 01 14.4 -0.6
TNS ePKPab PKPab 05 01 21.0 -1.3
GRF Grafenberg Arr 149.54 348 ePKPbc PKPbc 05 01 14.6 -0.5
GRF ePKPab PKPab 05 01 22.3 -0.2
GRF Grafenberg Arr 149.54 348 ePKP PKPbc 05 01 14.6 -0.5
GRF ePKP PKPab 05 01 22.3 -0.2
KHC Kasperske Hory 149.55 345 ePKPdf PKPdf 05 01 09.6 -0.2
KHC ePKPbc PKPbc 05 01 14.8 -0.3
KHC ePKPab PKPab 05 01 22.7 +0.1
KHC Kasperske Hory 149.55 345 ⇑ePKP PKPbc 05 01 14.8 -0.3
KHC ePKPAB PKPab 05 01 22.3 -0.3
SNF Seneffe 149.60 357 PKPbc PKPbc 05 01 14.8 -0.4
GDZ Gediz 149.60 314 iP PKPbc 05 01 13.3 -2.3
BCLA Clavier 149.63 356 PKPbc PKPbc 05 01 14.6 -0.7
BCLA PKPab PKPab 05 01 21.7 -1.1
WET Wettzell 149.71 346 ePKPbc PKPbc 05 01 15.1 -0.4
WET ePKPab PKPab 05 01 23.0 -0.2
GEC2 GERESS Array S 149.78 344 ePKPbc PKPbc 05 01 15.3 -0.4
GEC2 ePKPab PKPab 05 01 23.0 -0.6
BZS Buzias 149.78 332 ⇓iP PKPbc 05 01 15.3 -0.5
GIVF Givet 149.97 356 ePKP1 PKPbc 05 01 15.5 -0.6
comp=Z,68nm,0.8s
DOU Dourbes 150.00 356 PKPbc PKPbc 05 01 15.9 -0.3
DOU PKPab PKPab 05 01 23.7 -0.7
DURS Dursunbey 150.00 316 iP PKPbc 05 01 15.6 -0.9
CONA Conrad Observa 150.01 341 ⇓iPKiKP PKiKP 05 01 16.1 -0.8
comp=Z,16nm,0.7s
BAIF Baives 150.05 357 ePKP1 PKPbc 05 01 15.8 -0.5
comp=Z,69nm,1.0s
WLF Walferdange 150.31 354 PKPbc PKPbc 05 01 17.3 +0.4
WLF PKPab PKPab 05 01 25.5 -0.2
WLF Walferdange 150.31 354 ePKPbc PKPbc 05 01 16.5 -0.4
WLF ePKPab PKPab 05 01 25.4 -0.3
WLF Walferdange 150.31 354 ePKPbc PKPbc 05 01 16.9 0.0
WLF ePKPab PKPab 05 01 25.2 -0.5
BALY Balya 150.48 317 iP PKPbc 05 01 16.0 -1.7
PKSM Moragy 150.54 336 ⇓iP PKPbc 05 01 16.9 -0.6
MOA Molln 150.55 343 ⇓iPKPbc PKPbc 05 01 16.8 -0.7
comp=Z,6.0nm,0.5s
STU Stuttgart 150.79 350 ePKPbc PKPbc 05 01 17.9 -0.1
STU ePKPab PKPab 05 01 27.0 -0.8
STU Stuttgart 150.79 350 ePKPbc PKPbc 05 01 17.8 -0.3
FUR Furstenfeldbru 150.99 347 ePKPbc PKPbc 05 01 17.7 -0.8
FUR ePKPab PKPab 05 01 28.3 -0.3
RJOB Jochberg 151.04 345 ePKPbc PKPbc 05 01 18.0 -0.6
RJOB ePKPab PKPab 05 01 28.8 -0.1
FLN La Foliniere 151.35 3 ePKP1 PKPbc 05 01 18.1 -1.2
comp=Z,39nm,0.8s
BFO Black Forest 151.36 351 ePKPbc PKPbc 05 01 17.8 -1.5
BFO ePKPab PKPab 05 01 28.9 -1.3
BFO Black Forest 151.36 351 ePKPbc PKPbc 05 01 18.1 -1.2
BFO ePKPab PKPab 05 01 29.2 -1.0
SOKA Soboth 151.38 341 ⇓iPKPbc PKPbc 05 01 18.4 -1.1
comp=Z,5.9nm,0.7s
SOKA ⇑iPKPab PKPab 05 01 30.1 -0.2
comp=Z,11nm,0.9s
CDF Champ du Feu 151.42 352 ePKP1 PKPbc 05 01 18.7 -0.8
comp=Z,17nm,0.8s
KBA Koelnbreinsper 151.51 343 ⇑iPKPbc PKPbc 05 01 18.7 -1.0
comp=Z,7.6nm,0.6s
ROSF Rostrenen 151.53 7 ePKP1 PKPbc 05 01 18.2 -1.5
comp=Z,41nm,1.0s
LDF La Druitiere 151.53 3 ePKP1 PKPbc 05 01 18.4 -1.3
comp=Z,7.7nm,0.4s
MEZF Maizieres J'vi 151.55 356 ePKP1 PKPbc 05 01 19.2 -0.6
comp=Z,54nm,0.9s
GRR Gorron 151.70 4 ePKP1 PKPbc 05 01 19.0 -1.1
comp=Z,35nm,0.7s
WTTA Wattenberg 151.76 346 ⇑iPKPbc PKPbc 05 01 19.6 -0.7
comp=Z,17nm,0.8s
WTTA ⇑iPKPab PKPab 05 01 32.2 +0.3
comp=Z,20nm,1.0s
MOTA Moosalm 151.80 347 ⇑iPKiKP PKiKP 05 01 19.9 -0.6
comp=Z,8.8nm,0.9s
MOTA ⇑iPKPab PKPab 05 01 31.8 -0.2
comp=Z,7.6nm,0.7s
HAU Haudompre 151.93 354 ePKP1 PKPbc 05 01 19.7 -0.9
comp=Z,8.5nm,0.5s
QUIF Quistinic 151.96 7 ePKP1 PKPbc 05 01 19.4 -1.3
HINF Hinteralfeld 152.06 353 ePKP1 PKPbc 05 01 19.8 -1.1
comp=Z,8.1nm,0.7s
LJU Ljubljana 152.11 341 iPKPbc PKPbc 05 01 20.4 -0.7
CRNS Crni Vrh 152.16 341 iPKPbc PKPbc 05 01 20.1 -1.0
CRNS iPKPab PKPab 05 01 32.7 -0.9
FETA Feichten 152.19 347 ⇑iPKiKP PKiKP 05 01 21.2 -0.2
comp=Z,6.6nm,0.9s
BOJS Bojanci 152.36 339 iPKPbc PKPbc 05 01 21.3 -0.4
JAVS Javornik 152.38 341 iPKPbc PKPbc 05 01 20.6 -1.0
JAVS iPKPab PKPab 05 01 33.7 -0.9
LOR Lormes 152.86 357 ePKP1 PKPbc 05 01 21.8 -0.9
comp=Z,5.3nm,0.5s
SSF Saint Saulge 153.08 357 ePKP1 PKPbc 05 01 22.3 -0.8
comp=Z,4.6nm,0.5s
CABF La Chapelle 153.34 353 ePKP1 PKPbc 05 01 23.5 -0.2
AVF Avril sur Loir 153.35 358 ePKP1 PKPbc 05 01 23.5 -0.3
SMF Signal de Mont 153.48 357 ePKP1 PKPbc 05 01 24.0 0.0
MFF Saint Martin d 153.52 3 ePKP1 PKPbc 05 01 23.0 -1.1
BGF Bois d'Agland 153.60 358 ePKP1 PKPbc 05 01 24.0 -0.3
TCF Toulx Ste Croi 153.88 359 ePKP1 PKPbc 05 01 23.9 -1.0
LPG La Plagne 154.35 352 ePKP1 PKPbc 05 01 26.5 +0.6
BNI Bardonecchia 154.80 352 ePKPab PKPab 05 01 44.9 -0.1
ESDC Sonseca Array 159.87 13 PKPab PKPab 05 02 06.5 -0.6
comp=Z,1.8nm,0.7s,baz=342,slow=4.3,SNR=10
CART Cartagena 162.41 8 ePKPdf PKPdf 05 01 26.0 -0.8
KEST Kesra 163.09 339 PKPab PKPab 05 02 20.4 -1.0
comp=Z,1.1nm,0.6s,baz=196,slow=2.8,SNR=4.3
LIC Lamto 164.67 153 ePKIKP PKPdf 05 01 27.1 -2.5
comp=Z,59nm,1.5s
TAM Tamanrasset 175.66 309 ePKPdf PKPdf 05 01 35.7 +0.3

*NEIC **27** 04:43:37.2, 31°.47S×69°.49W, h140km, MG3.5(GUC), After GUC.*

GUC 27 04:43:37.2±0.7, 31°.47S×69°.49W, h140km±17km, ML3.5, 5C-5D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CMCH	Combarbala	1.33	282	⇓iP		Pn	04 44 04.7	+0.5
CMCH				i	S	Sn	04 44 25.6	+0.9
CMCH	Combarbala	1.33	282	⇓iP		Pn	04 44 04.7	+0.5
CMCH				i	S	Sn	04 44 25.6	+0.9
CMCH					AML	AML	04 44 26.8	
comp=N,2μm,0.5s								
TLL	Tololo Astrono	1.72	319	⇑iP		Pn	04 44 09.6	+1.1
TLL				i	S	Sn	04 44 33.8	+1.4
TLL	Tololo Astrono	1.72	319	⇑iP		Pn	04 44 09.6	+1.1
TLL				i	S	Sn	04 44 33.8	+1.4
PEL	Peldehue	1.96	211	⇑iP		Pn	04 44 11.6	+0.4
PEL				i	S	Sn	04 44 37.5	+0.3
PEL					AML	AML	04 44 40.3	
comp=E,220nm,0.4s								
FCH	Farellones	1.98	200	eP		Pn	04 44 13.9	+2.5
FCH				i	S	Sn	04 44 40.2	+2.5
FCH					AML	AML	04 44 41.2	
comp=E,191nm,0.3s								
CLCH	Cerro Calan	2.12	204	⇓iP		Pn	04 44 13.9	+0.8
CLCH				i	S	Sn	04 44 41.6	+0.9
CLCH					AML	AML	04 44 43.2	
comp=E,318nm,0.5s								
RCDM	Rinconada Maip	2.30	209	⇑iP		Pn	04 44 15.8	+0.4
RCDM				i	S	Sn	04 44 45.9	+1.1
RCDM	Rinconada Maip	2.30	209	⇑iP		Pn	04 44 15.8	+0.4
RCDM				i	S	Sn	04 44 45.9	+1.1
RCDM					AML	AML	04 44 47.3	
comp=E,278nm,0.6s								
ANTU	Antumapu	2.31	204	eP		Pn	04 44 15.8	+0.4
ANTU				eS		Sn	04 44 45.4	+0.5
ANTU	Antumapu	2.31	204	eP		Pn	04 44 15.8	+0.4
ANTU				eS		Sn	04 44 45.4	+0.5
ANTU					AML	AML	04 44 47.4	
comp=N,178nm,0.3s								

PCH	Pirque	2.32 202	eP	Pn	04 44 16.5	+1.0
PCH			i S	Sn	04 44 46.2	+1.1
PCH	Pirque	2.32 202	eP	Pn	04 44 16.5	+1.0
PCH			i S	Sn	04 44 46.2	+1.1
LMEL	Las Melosas	2.45 194	eP	Pn	04 44 18.4	+1.2
LMEL			eS	Sn	04 44 48.9	+0.9
LMEL	Las Melosas	2.45 194	eP	Pn	04 44 18.4	+1.2
LMEL			eS	Sn	04 44 48.9	+0.9
LMEL			AML	AML	04 44 59.9	
	comp=N,114nm,0.1s					
TACH	Talagante	2.50 209	⇓iP	Pn	04 44 18.1	+0.3
TACH			eS	Sn	04 44 49.6	+0.5
TACH	Talagante	2.50 209	⇓iP	Pn	04 44 18.1	+0.3
TACH			eS	Sn	04 44 49.6	+0.5
CHCH	Chadas Angostu	2.65 201	eP	Pn	04 44 20.3	+0.6
CHCH			i S	Sn	04 44 53.0	+0.6
CHCH	Chadas Angostu	2.65 201	eP	Pn	04 44 20.3	+0.6
CHCH			i S	Sn	04 44 53.0	+0.6
LCO	Las Campanas	2.66 336	ePn	Pn	04 44 20.2	+0.3
LCO			eSn	Sn	04 44 52.5	-0.3
CACH	El Canelo	2.80 199	eP	Pn	04 44 22.8	+1.1
CACH			i S	Sn	04 44 58.0	+2.0
CACH	El Canelo	2.80 199	eP	Pn	04 44 22.8	+1.1
CACH			i S	Sn	04 44 58.0	+2.0

ROM ***27*** *04:45:59.8±0.9, 40.′26N×14.′04E, h10km, Md3.1/3, Ml2.7/4, Error ellipse: s-maj=11.1km s-min=10.1km az=117.0*
CSEM ***27*** *04:46:01.6±0.2, 42.°67N×17.°87E, h2km, ML2.5, Error ellipse: s-maj=5.6km s-min=3.5km az=13.0*
BEO ***27*** *04:46:01.0±1.3, 42.°57N×17.°70E, h9km±5km, ML2.8/3*
ISCJB ***27*** *04:46:01.6±0.3, 42.°65N±0.′02×17.°85E±0.′02, h10km, Error ellipse: s-maj=3.6km s-min=2.5km az=9.5*
PDG ***27*** *04:46:02.8±0.4, 42.°73N×17.°96E, h0km±11km, MD2.7/3, ML2.5/10, Error ellipse: s-maj=0.8km s-min=1.4km az=0.0*
NEIC ***27*** *04:46:02.8, 42.°73N×17.°96E, h0km, ML2.5(PDG), After PDG.*

ISC 27 04:46:02.6±0.4, 42.°63N±0.′03×17.°86E±0.′03, h10km, n52, σ19.37/88, 4C-16D, Adriatic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STON	**Ston**	**0.27**	**335**	*i* Pg	**Pg**	**04 46 04.8**	**-3.3**
STON				Sg	**Sg**	**04 46 08.1**	**-3.7**
STON	**Ston**	**0.27**	**335**	*i* Pg	**Pg**	**04 46 04.8**	**-3.3**
STON				Sg	**Sg**	**04 46 08.1**	**-3.7**
TREB	**Trebinje**	**0.37**	**76**	*e*Pg	**Pg**	**04 46 10.2**	**+0.2**
TREB				*e*Sg	**Sg**	**04 46 17.8**	**+2.8**
TREB	**Trebinje**	**0.37**	**76**	*e*Pg	**Pg**	**04 46 10.2**	**+0.2**
TREB				*e*Sg	**Sg**	**04 46 17.8**	**+2.8**
HCY	**Herceg Novi**	**0.51**	**111**	⇑*i*Pg	**Pg**	**04 46 11.3**	**-1.2**
HCY				*e*Sg	**Sg**	**04 46 19.8**	**+0.6**
HCY	**Herceg Novi**	**0.51**	**111**	⇑*i*Pg	**Pg**	**04 46 11.3**	**-1.2**
HCY				*e*Sg	**Sg**	**04 46 19.8**	**+0.6**
BRY	**Bratogost**	**0.57**	**61**	⇓*i*Pg	**Pg**	**04 46 10.8**	**-3.0**
BRY				*e*Sg	**Sg**	**04 46 19.3**	**-2.0**
BRY	**Bratogost**	**0.57**	**61**	⇓*i*Pg	**Pg**	**04 46 10.8**	**-3.0**
BRY				*e*Sg	**Sg**	**04 46 19.3**	**-2.0**
BUM	**Brajici-Budva**	**0.84**	**113**	⇓*i*Pg	**Pg**	**04 46 17.5**	**-1.2**
BUM				*e*Sg	**Sg**	**04 46 30.9**	**+1.3**
BUM	**Brajici-Budva**	**0.84**	**113**	⇓*i*Pg	**Pg**	**04 46 17.5**	**-1.2**
BUM				*e*Sg	**Sg**	**04 46 30.9**	**+1.3**
NKY	**Niksic**	**0.86**	**77**	⇓*i*Pg	**Pg**	**04 46 16.6**	**-2.6**
NKY				*e*Sg	**Sg**	**04 46 29.4**	**-1.0**
NKY	**Niksic**	**0.86**	**77**	⇓*i*Pg	**Pg**	**04 46 16.6**	**-2.6**
NKY				*e*Sg	**Sg**	**04 46 29.4**	**-1.0**
UPM	**Unac-Piva**	**0.96**	**53**	⇓*i*Pg	**Pg**	**04 46 17.4**	**-3.8**
UPM				*e*Sg	**Sg**	**04 46 31.8**	**-1.9**
UPM	**Unac-Piva**	**0.96**	**53**	⇓*i*Pg	**Pg**	**04 46 17.4**	**-3.8**
UPM				*e*Sg	**Sg**	**04 46 31.8**	**-1.9**
PDG	**Podgorica**	**1.06**	**100**	*e*Sg	**Sg**	**04 46 37.1**	**+0.4**
TTG	**Podgorica**	**1.06**	**100**	⇓*i*Pg	**Pg**	**04 46 21.1**	**-1.8**
TTG				*e*Sg	**Sg**	**04 46 37.1**	**+0.4**
TTG	**Podgorica**	**1.06**	**100**	⇓*i*Pg	**Pg**	**04 46 21.1**	**-1.8**
TTG				*e*Sg	**Sg**	**04 46 37.1**	**+0.4**
ULC	**Ulcinj**	**1.23**	**122**	⇓*i*Pg	**Pg**	**04 46 25.1**	**-1.1**
ULC				*e*Sg	**Sg**	**04 46 44.6**	**+2.5**
ULC	**Ulcinj**	**1.23**	**122**	⇓*i*Pg	**Pg**	**04 46 25.1**	**-1.1**
ULC				*e*Sg	**Sg**	**04 46 44.6**	**+2.5**
PLE	**Pljevlja**	**1.33**	**58**	⇓*i*Pg	**Pn**	**04 46 24.9**	**-2.3**
PLE				*e*Sg	**Sn**	**04 46 44.0**	**-1.0**
BEY	**Berane**	**1.52**	**80**	⇓*i*Pg	**Pn**	**04 46 29.4**	**-0.5**
BEY				*e*Sg	**Sn**	**04 46 51.6**	**+1.9**
IVA	**Berane**	**1.52**	**80**	⇓*i*Pg	**Pn**	**04 46 29.4**	**-0.5**
IVA				*e*Sg	**Sn**	**04 46 51.6**	**+1.9**
IVA	**Berane**	**1.52**	**80**	⇓*i*Pg	**Pn**	**04 46 29.4**	**-0.5**
IVA				*e*Sg	**Sn**	**04 46 51.6**	**+1.9**
PVY	**Plav**	**1.56**	**90**	⇑*i*Pg	**Pn**	**04 46 30.5**	**+0.1**
PVY				*e*Sg	**Sg**	**04 46 53.7**	**+0.8**
PVY	**Plav**	**1.56**	**90**	⇑*i*Pg	**Pn**	**04 46 30.5**	**+0.1**
PVY				*e*Sg	**Sg**	**04 46 53.7**	**+0.8**
BBLS	**Lazići**	**1.68**	**42**	*e*Pn	**Pn**	**04 46 31.5**	**-0.5**
BBLS				*e*Sg	**Sg**	**04 46 58.6**	**+2.1**
BBLS	**Lazići**	**1.68**	**42**	*e*Pn	**Pn**	**04 46 31.5**	**-0.5**
BBLS				*e*Sg	**Sg**	**04 46 58.6**	**+2.1**
SJES	**Sjenica**	**1.68**	**67**	*e*Pn	**Pn**	**04 46 32.0**	**0.0**
SJES				*e*Sg	**Sg**	**04 46 58.2**	**+1.6**
MSAG	**Monte S. Angel**	**1.71**	**238**	Pn	**Pg**	**04 46 34.5**	**-1.0**
MSAG				Sn	**Sg**	**04 47 00.1**	**+2.4**
	102nm,0.5s						
MSAG	**Monte S. Angel**	**1.71**	**238**	Pn	**Pg**	**04 46 34.5**	**-1.0**
SGRT	**San Giovanni R**	**1.80**	**242**	Pn	**Pn**	**04 46 33.8**	**+0.2**
	39nm,0.6s						
SGRT	**San Giovanni R**	**1.80**	**242**	Pn	**Pn**	**04 46 33.8**	**+0.2**
	39nm,0.6s						
NOCI	**Noci**	**1.93**	**198**	Pn	**Pg**	**04 46 38.6**	**-1.0**
	46nm,0.5s						
NOCI	**Noci**	**1.93**	**198**	Pn	**Pg**	**04 46 38.6**	**-1.0**
	46nm,0.5s						
AMUR	**Altamura**	**1.96**	**209**	Pn	**Pn**	**04 46 35.8**	**-0.1**
AMUR				Sn	**Sg**	**04 47 00.7**	**-4.8**
	35nm,0.7s						
AMUR	**Altamura**	**1.96**	**209**	Pn	**Pn**	**04 46 35.8**	**-0.1**
AMUR				Sn	**Sg**	**04 47 00.7**	**-4.8**
	35nm,0.7s						
DIVS	**Divibare**	**2.14**	**46**	*e*Pn	**Pn**	**04 46 38.0**	**-0.4**
DIVS	**Divibare**	**2.14**	**46**	*e*Pn	**Pn**	**04 46 38.0**	**-0.4**
BLY	**Banja Luka**	**2.18**	**347**	*e*Pn	**Pn**	**04 46 38.9**	**0.0**
BLY	**Banja Luka**	**2.18**	**347**	*e*Pn	**Pn**	**04 46 38.9**	**0.0**
GRUS	**Gruza**	**2.44**	**58**	*e*Pn	**Pn**	**04 46 42.7**	**+0.2**
GRUS	**Gruza**	**2.44**	**58**	*e*Pn	**Pn**	**04 46 42.7**	**+0.2**
KRUS	**Krusevo**	**2.82**	**115**	*e*Pn	**Pn**	**04 46 49.4**	**+1.7**
NVLJ	**Novalja**	**2.91**	**313**	*e*Pn	**Pn**	**04 46 48.1**	**-0.8**
NVLJ				Sn	**Sn**	**04 47 23.9**	**0.0**
NVLJ	**Novalja**	**2.91**	**313**	*e*Pn	**Pn**	**04 46 48.1**	**-0.8**
NVLJ				Sn	**Sn**	**04 47 23.9**	**0.0**
BARS	**Barje**	**2.92**	**85**	*e*Pn	**Pn**	**04 46 50.1**	**+1.0**
NISS		**3.10**	**74**	*e*Pn	**Pn**	**04 46 51.2**	**-0.3**
ZAPS	**Zavoj**	**3.57**	**78**	*e*Pn	**Pn**	**04 46 58.7**	**+0.7**
CRES	**Cresnjev**	**3.63**	**332**	*i* Pn	**Pn**	**04 46 58.9**	**0.0**
CRES				*i* Sn	**Sn**	**04 47 44.2**	**+2.5**
CRES	**Cresnjev**	**3.63**	**332**	*i* Pn	**Pn**	**04 46 58.9**	**0.0**
CRES				*i* Sn	**Sn**	**04 47 44.2**	**+2.4**
VOY	**Vojsko**	**4.43**	**321**	*e*Pn	**Pn**	**04 47 11.2**	**+1.3**
VOY				*e*Sn	**Sn**	**04 48 03.4**	**+1.9**
VOY				*e*		04 48 21.5	
VOY	**Vojsko**	**4.43**	**321**	*e*Pn	**Pn**	**04 47 11.2**	**+1.3**
VOY				*e*Sn	**Sn**	**04 48 03.4**	**+1.9**

CASC ***27*** *05:07:30.2±2.6, 9.°49N×59.′54W, h0km±999km, mb5.8, mb4.9(NEIC)*
LDG ***27*** *05:08:08.6±0.4, 11.°34N×62.°84W, h141km, Mb4.6/20, Ms3.4/1, Error ellipse: s-maj=30.3km s-min=11.5km az=104.0*
ISCJB ***27*** *05:08:10.0±0.2, 11.°22N±0.′02×62.°38W±0.′01, h147km±1km, mb4.8/198, Error ellipse: s-maj=2.9km s-min=2.1km az=146.2*
BJI ***27*** *05:08:10.6, 11.°10N×62.°40W, h147km, mB5.0/11*
IDC ***27*** *05:08:11.9±0.4, 11.°29N×62.°49W, h146km±3km, mb4.3/27, mb1 4.5/30, mb1mx4.4/33, mbtmp4.3/30, MS3.8/14, Ms1 3.8/14, ms1mx3.6/27, Error ellipse: s-maj=9.2km s-min=6.2km az=133.0*
NEIC ***27*** *05:08:11.6±0.2, 11.°15N×62.°41W, h148km±2km, mb4.9/157, MW5.1(CAR), Error ellipse: s-maj=3.4km s-min=2.9km az=209.0*
NEIC Felt at Puerto Ordaz. Also felt on Grenada and at Arima,

2008 JUN

Chaguanas, Marabella, Port-of-Spain, Saint Augustine, Saint Joseph, San Fernando and San Juan, Trinidad.
FUNV ***27*** *05:08:12.7, 11.°12N×62.°24W, h128km, MW5.2*
TRN ***27*** *05:08:12.7, 11.°21N×62.°08W, h135km, MD4.6*
TRN Felt III-IV Trinidad. Felt Grenada.
GCMT ***27*** *05:08:15.2±0.2, 11.°18N×62.°28W, h137km±1km, MW5.2, Moment Tensor Solution. s57,c75; s85,c141; Moment tensor: Scale 10^{16}Nm; M_{rr}-0.52±.20; $M_{\theta\theta}$-3.84±.22; $M_{\phi\phi}$4.36±.23; $M_{r\theta}$2.67±.15; $M_{\theta\phi}$-3.64±.22; $M_{r\phi}$5.83±.15; Best double couple: $M_0$8.50000×10^{16} NP1:ϕ_s295.00000°, δ40.00000°, λ-176.00000°. NP2:ϕ_s203.00000°, δ88.00000°, λ-50.00000°. Principal axes: T 8.4600, Plg31.0000°, Azm261.0000°; N -0.0200, Plg40.0000°, Azm21.0000°; P -8.4400, Plg34.0000°, Azm147.0000°; Data Used: II IU G IC CN.*
SZGRF ***27*** *05:08:51.5, 13.°05N×60.°16W, h33km, mb5.3, Windward Islands*

ISC 27 05:08:11.0±0.1, 11.°22N±0.′02×62.°37W±0.′01, h138km±1km, h149km±1.1km; pP-P, n946, c0s90/921, mb4.8/198, 250C-223D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.59**	**165**	*e*P	**Pn**	**05 08 30.5**	**-1.0**
GUIV				*e*S	**Sn**	**05 08 43.4**	**-3.6**
GUIV	**Guiria**	**0.59**	**165**	⇑*e*P	**Pn**	**05 08 30.7**	**-0.8**
GUIV				*e*S	**Sn**	**05 08 43.4**	**-3.6**
ITEV	**Isla Los Testi**	**0.76**	**280**	*e*P	**Pn**	**05 08 33.1**	**+0.5**
ITEV				*e*S	**Sn**	**05 08 49.6**	**+0.7**
ITEV	**Isla Los Testi**	**0.76**	**280**	⇓*i*P	**Pn**	**05 08 33.1**	**+0.5**
ITEV				*e*S	**Sn**	**05 08 49.6**	**+0.7**
TCE	**Chacachacare**	**0.80**	**130**	⇓*i*P	**Pn**	**05 08 32.6**	**-0.3**
CRUV	**Carupano**	**1.00**	**238**	*e*P	**Pn**	**05 08 35.2**	**+0.5**
CRUV				*e*S	**Sn**	**05 08 52.6**	**0.0**
CRUV	**Carupano**	**1.00**	**238**	⇓*i*P	**Pn**	**05 08 35.4**	**+0.7**
CRUV				*e*S	**Sn**	**05 08 52.6**	**0.0**
TRN	**Trinidad (W)**	**1.11**	**121**	⇑*i*P	**Pn**	**05 08 35.2**	**-0.4**
TRN				*e*S	**Sn**	**05 08 50.7**	**-3.7**
TRN	**Trinidad (W)**	**1.11**	**121**	⇑*i*P	**Pn**	**05 08 35.2**	**-0.4**
GRGR	**Grenville**	**1.15**	**38**	⇑*i*Pn	**Pn**	**05 08 35.3**	**-0.7**
GRGR				*e*Sn	**Sn**	**05 08 52.5**	**-2.6**
GRGR	**Grenville**	**1.15**	**38**	*e*P	**Pn**	**05 08 35.4**	**-0.6**
GRGR				*e*S	**Sn**	**05 08 53.1**	**-2.0**
GRW	**Mount Saint Ca**	**1.17**	**37**	⇑*i*P	**Pn**	**05 08 36.7**	**+0.5**
GRW	**Mount Saint Ca**	**1.17**	**37**	⇑*i*P	**Pn**	**05 08 36.7**	**+0.5**
GUNV	**Guanoco**	**1.19**	**208**	*e*P	**Pn**	**05 08 37.2**	**+0.7**
GUNV				*e*S	**Sn**	**05 08 54.1**	**-1.7**
GUNV	**Guanoco**	**1.19**	**208**	⇓*i*P	**Pn**	**05 08 37.1**	**+0.7**
GUNV				*e*S	**Sn**	**05 08 54.1**	**-1.7**
GRHS	**Sauteurs**	**1.23**	**36**	⇓*i*P	**Pn**	**05 08 37.1**	**+0.3**
GRHS				*e*S	**Sn**	**05 08 55.5**	**-1.0**
GRHS	**Sauteurs**	**1.23**	**36**	⇓*i*P	**Pn**	**05 08 37.1**	**+0.3**
ALNG	**Atlantic LNG**	**1.23**	**147**	⇓*i*P	**Pn**	**05 08 37.0**	**+0.2**
ALNG				*e*S	**Sn**	**05 08 54.6**	**-1.9**
TPP	**Pointe-a-Pierr**	**1.27**	**135**	⇑*i*P	**Pn**	**05 08 37.5**	**+0.2**
TPP	**Pointe-a-Pierr**	**1.27**	**135**	⇑*i*P	**Pn**	**05 08 37.5**	**+0.2**
BUAY	**Buenos Aires**	**1.29**	**148**	*e*P	**Pn**	**05 08 38.1**	**+0.6**
GRSS	**Sisters**	**1.31**	**35**	⇓*i*P	**Pn**	**05 08 38.0**	**+0.4**
GRSS				*e*S	**Sn**	**05 08 56.7**	**-1.1**
GRSS	**Sisters**	**1.31**	**35**	⇓*i*P	**Pn**	**05 08 38.0**	**+0.4**
GRIC	**Isle de Caille**	**1.31**	**36**	⇑*i*P	**Pn**	**05 08 38.0**	**+0.4**
GRIC				*e*S	**Sn**	**05 08 56.3**	**-1.7**
TBH	**Brigand Hill**	**1.48**	**120**	⇑*i*P	**Pn**	**05 08 38.9**	**-0.5**
TBH				*e*S	**Sn**	**05 08 57.2**	**-3.8**
TBH	**Brigand Hill**	**1.48**	**120**	⇑*i*P	**Pn**	**05 08 38.9**	**-0.5**
TPR	**Prospect**	**1.57**	**91**	⇑*i*P	**Pn**	**05 08 39.3**	**-1.0**
TPR				*e*S	**Sn**	**05 08 58.5**	**-4.3**
TPR	**Prospect**	**1.57**	**91**	⇑*i*P	**Pn**	**05 08 39.3**	**-1.0**
BOT	**Bacolet**	**1.63**	**92**	⇑*i*P	**Pn**	**05 08 39.9**	**-1.2**
BOT				*e*S	**Sn**	**05 08 58.4**	**-5.6**
BOT	**Bacolet**	**1.63**	**92**	⇑*i*P	**Pn**	**05 08 39.9**	**-1.2**
TOSP	**Speyside**	**1.81**	**87**	*e*P	**Pn**	**05 08 40.7**	**-2.4**
TOSP				*e*S	**Sn**	**05 09 02.3**	**-5.3**
FCV	**Fort Charlotte**	**2.22**	**30**	*e*P	**Pn**	**05 08 49.3**	**+1.2**
SVB	**Belmont**	**2.32**	**28**	*e*P	**Pn**	**05 08 48.7**	**-0.6**
SVB				*e*S	**Sn**	**05 09 16.8**	**-1.9**
ORIV	**Oritupano**	**2.37**	**206**	*e*P	**Pn**	**05 08 50.6**	**+0.7**
ORIV				*e*S	**Sn**	**05 09 18.1**	**-1.7**
ORIV	**Oritupano**	**2.37**	**206**	⇑*e*P	**Pn**	**05 08 50.5**	**+0.6**
ORIV				*e*S	**Sn**	**05 09 18.1**	**-1.7**
SVV	**Soufriere Volc**	**2.37**	**28**	*e*P	**Pn**	**05 08 49.7**	**-0.2**
BHS	**Barnard House**	**2.40**	**30**	*e*P	**Pn**	**05 08 50.5**	**+0.2**
PCRV	**Puerto La Cruz**	**2.45**	**245**	P	**Pn**	**05 08 52.4**	**+1.4**
	baz=29,slow=6.0						
PCRV				S	**Sn**	**05 09 21.1**	**-0.6**
	baz=192,slow=19						
PCRV				LR	LR	05 09 40.3	
	comp=Z,5μm,18.6s,baz=336,slow=38						
PCRV	**Puerto La Cruz**	**2.45**	**245**	*e*P	**Pn**	**05 08 52.2**	**+1.2**
PCRV				*e*S	**Sn**	**05 09 21.4**	**-0.3**
PCRV	**Puerto La Cruz**	**2.45**	**245**	⇑*i*P	**Pn**	**05 08 52.5**	**+1.5**
PCRV				*e*S	**Sn**	**05 09 21.4**	**-0.3**
MCLT	**Moule a Chique**	**2.84**	**29**	*e*P	**Pn**	**05 08 55.1**	**-0.8**
MCLT				*e*S	**Sn**	**05 09 27.6**	**-2.9**
SLB	**Belfond**	**2.90**	**27**	*e*P	**Pn**	**05 08 56.4**	**-0.2**
SLB				*e*S	**Sn**	**05 09 29.0**	**-2.9**
SLW	**Petit Monier**	**3.12**	**27**	*e*P	**Pn**	**05 08 59.2**	**-0.2**
SLW				*e*S	**Sn**	**05 09 35.1**	**-1.7**
RIOV	**Rio Grande**	**3.18**	**170**	*e*P	**Pn**	**05 08 58.6**	**-1.7**
RIOV	**Rio Grande**	**3.18**	**170**	⇓*e*P	**Pn**	**05 08 58.8**	**-1.5**
RIOV				*e*S	**Sn**	**05 09 33.1**	**-5.1**
PRGV	**PARIAGUAN**	**3.31**	**223**	*e*P	**Pn**	**05 09 02.1**	**+0.1**
PRGV				*e*S	**Sn**	**05 09 39.7**	**-1.7**
BBGH	**Gun Hill**	**3.35**	**55**	*e*Pn	**Pn**	**05 09 02.5**	**0.0**
GURV	**El Guri**	**3.51**	**192**	*e*P	**Pn**	**05 09 03.0**	**-1.6**
GURV				*e*S	**Sn**	**05 09 41.8**	**-4.2**
GURV	**El Guri**	**3.51**	**192**	⇓*e*P	**Pn**	**05 09 03.7**	**-0.9**
GURV				*e*S	**Sn**	**05 09 41.8**	**-4.2**
BIM	**Bigot**	**3.52**	**21**	⇑*e*P	**Pn**	**05 09 04.7**	**0.0**
BIM				⇑*e*S	**Sn**	**05 09 46.7**	**+0.6**
CUPV	**Cœpira**	**3.55**	**251**	*e*P	**Pn**	**05 09 06.5**	**+1.4**
CUPV				*e*S	**Sn**	**05 09 46.5**	**-0.3**
CUPV	**Cœpira**	**3.55**	**251**	⇑*e*P	**Pn**	**05 09 06.5**	**+1.4**
CUPV				*e*S	**Sn**	**05 09 46.5**	**-0.3**
MVM	**Montagne Vaucl**	**3.62**	**23**	*e*P	**Pn**	**05 09 06.1**	**+0.2**
FDF	**Fort de France**	**3.69**	**19**	*e*Pn	**Pn**	**05 09 07.2**	**+0.3**
FDF				*e*Sn	**Sn**	**05 09 49.1**	**-1.2**
FDF	**Fort de France**	**3.69**	**19**	⇑*e*P	**Pn**	**05 09 07.2**	**+0.3**
FDF				⇑*e*S	**Sn**	**05 09 48.1**	**-2.1**
ORCV	**Isla La Orchil**	**3.79**	**279**	*e*P	**Pn**	**05 09 09.6**	**+1.3**
ORCV				*e*S	**Sn**	**05 09 52.0**	**-0.6**
ORCV	**Isla La Orchil**	**3.79**	**279**	*e*P	**Pn**	**05 09 09.6**	**+1.4**
ORCV				*e*S	**Sn**	**05 09 52.0**	**-0.6**
BIRV	**Birongo**	**3.90**	**259**	*e*P	**Pn**	**05 09 11.2**	**+1.6**
BIRV	**Birongo**	**3.90**	**259**	⇑*i*P	**Pn**	**05 09 11.6**	**+2.0**
BIRV				*e*S	**Sn**	**05 09 55.0**	**-0.1**
DSHT	**Scott's Head**	**4.09**	**14**	*e*P	**Pn**	**05 09 13.9**	**+1.8**
DSHT				*e*S	**Sn**	**05 09 57.4**	**-2.2**
DFBT	**Forest Bistro**	**4.12**	**14**	*e*P	**Pn**	**05 09 14.2**	**+1.7**
DFBT				*e*S	**Sn**	**05 09 57.5**	**-2.9**
DPMT	**Pointe Michel**	**4.13**	**13**	*e*P	**Pn**	**05 09 14.5**	**+1.7**
DPMT				*e*S	**Sn**	**05 09 59.0**	**-1.7**
DSTT	**Stowe**	**4.14**	**14**	*e*P	**Pn**	**05 09 14.1**	**+1.3**
DSTT				*e*S	**Sn**	**05 09 58.7**	**-2.1**
MDN	**Morne-Daniel**	**4.18**	**13**	*e*P	**Pn**	**05 09 15.2**	**+1.8**
MDN				*e*S	**Sn**	**05 09 60.0**	**-1.9**
DLPL	**La Plaine**	**4.23**	**15**	*e*P	**Pn**	**05 09 14.8**	**+0.7**
DLPL				*e*S	**Sn**	**05 10 00.7**	**-2.3**
MERV	**Las Mercedes**	**4.33**	**243**	*e*P	**Pn**	**05 09 15.2**	**-0.1**
MERV				*e*S	**Sn**	**05 10 03.7**	**-1.5**
MERV	**Las Mercedes**	**4.33**	**243**	⇑*i*P	**Pn**	**05 09 15.3**	**0.0**
MERV				*e*S	**Sn**	**05 10 03.7**	**-1.5**
FUNV	**FUNVISIS**	**4.42**	**261**	⇑*i*P	**Pn**	**05 09 18.6**	**+2.0**
LLAV	**El Llanito**	**4.42**	**261**	*e*P	**Pn**	**05 09 18.4**	**+1.9**
DWS	**Wesley**	**4.45**	**13**	*e*P	**Pn**	**05 09 19.0**	**+2.1**
DWS				*e*S	**Sn**	**05 10 05.4**	**-2.6**
TBG	**Guadaloupe-3**	**4.66**	**9**	⇓*i*P	**Pn**	**05 09 20.4**	**+0.7**
HMG	**Houelmont**	**4.78**	**8**	⇓*i*P	**Pn**	**05 09 22.5**	**+1.2**
MGG	**Marie-Galante**	**4.78**	**12**	⇓*i*P	**Pn**	**05 09 22.8**	**+1.4**
PHG	**Guadalaupe-2**	**4.82**	**8**	⇓*i*P	**Pn**	**05 09 23.2**	**+1.3**
SCG	**Saint Claude**	**4.83**	**8**	*e*P	**Pn**	**05 09 23.2**	**+1.2**
BCG	**Bois Riant Cap**	**4.89**	**9**	*e*P	**Pn**	**05 09 24.0**	**+1.2**
LZG	**Guadaloupe-1**	**4.93**	**7**	⇓*i*P	**Pn**	**05 09 24.3**	**+1.0**
SFG	**Saint Francois**	**5.13**	**13**	*e*P	**Pn**	**05 09 27.2**	**+1.1**
SEG	**Port Louis**	**5.22**	**9**	⇓*i*P	**Pn**	**05 09 28.9**	**+1.7**
DEG	**La Desirade**	**5.22**	**14**	*e*P	**Pn**	**05 09 27.3**	**+0.1**
LUEV	**Luepa**	**5.42**	**170**	⇓*i*P	**Pn**	**05 09 27.1**	**-2.8**
LUEV	**Luepa**	**5.42**	**170**	⇓*i*P	**Pn**	**05 09 27.1**	**-2.8**
TURV	**Turiamo**	**5.42**	**262**	⇑*i*P	**Pn**	**05 09 31.0**	**+1.1**
CAOV	**Caicara del Or**	**5.49**	**226**	*e*P	**Pn**	**05 09 30.1**	**-0.8**
CAOV	**Caicara del Or**	**5.49**	**226**	⇑*e*P	**Pn**	**05 09 30.0**	**-0.8**
CAOV				*e*S	**Sn**	**05 10 28.2**	**-4.8**
BPA	**Boggy Peak**	**5.81**	**5**	*e*P	**Pn**	**05 09 36.0**	**+0.9**
BAUV	**El Baul**	**6.02**	**248**	⇑*i*P	**Pn**	**05 09 37.4**	**-0.6**
SKI	**Saint Kitts**	**6.09**	**357**	*e*P	**Pn**	**05 09 40.5**	**+1.7**
SKI				*e*S	**Sn**	**05 10 44.0**	**-3.4**
MAPV	**Macapo**	**6.14**	**258**	⇑*e*P	**Pn**	**05 09 40.1**	**+0.6**
JACV	**Jacura**	**6.34**	**269**	*e*P	**Pn**	**05 09 43.2**	**+1.0**
JACV	**Jacura**	**6.34**	**269**	⇑*i*P	**Pn**	**05 09 43.9**	**+1.7**
ANWB	**Willy Bob**	**6.44**	**5**	*e*Pn	**Pn**	**05 09 44.5**	**+1.0**
	922nm,1.0s						
TEPV	**Terepaima**	**6.82**	**260**	⇑*i*P	**Pn**	**05 09 49.3**	**+0.7**
CDVI	**St. Croix**	**6.89**	**341**	*e*Pn	**Pn**	**05 09 51.4**	**+1.8**
SANV	**Sanarito**	**7.25**	**257**	⇑*i*P	**Pn**	**05 09 54.6**	**+0.2**
SIQV	**Siquisique**	**7.32**	**266**	⇑*i*P	**Pn**	**05 09 56.5**	**+1.1**
MONV	**Montecano**	**7.48**	**276**	*e*P	**Pn**	**05 09 57.3**	**-0.2**
MONV	**Montecano**	**7.48**	**276**	⇑*i*P	**Pn**	**05 09 58.7**	**+1.1**
MTP	**Monte Pirata**	**7.50**	**336**	*e*Pn	**Pn**	**05 09 59.1**	**+1.4**
	146nm,0.9s						
STVI	**Saint Thomas**	**7.52**	**341**	*e*Pn	**Pn**	**05 10 00.4**	**+2.4**
CURV	**Curarigua**	**7.55**	**262**	*e*P	**Pn**	**05 09 57.9**	**-0.6**
CURV	**Curarigua**	**7.55**	**262**	⇑*i*P	**Pn**	**05 09 59.4**	**+0.9**
HUMP	**Col San Antoni**	**7.66**	**334**	*e*Pn	**Pn**	**05 10 01.7**	**+1.8**
ICM	**Isla Caja Muer**	**7.75**	**329**	*e*Pn	**Pn**	**05 10 02.6**	**+1.4**
SJG	**San Juan**	**7.76**	**332**	P	**Pn**	**05 10 01.2**	**-0.2**
	7.1nm,0.3s,baz=154,slow=13,SNR=14						
SJG				LR	LR	05 12 06.4	
	comp=Z,329nm,20.1s,baz=155,slow=31						
SJG	**San Juan**	**7.76**	**332**	*e*Pn	**Pn**	**05 10 01.0**	**-0.3**
CBYP	**Canovanas**	**7.78**	**335**	*e*Pn	**Pn**	**05 10 03.8**	**+2.3**
	70nm,0.7s						
PAYV	**Puerto Ayacuch**	**7.78**	**223**	⇑*i*P	**Pn**	**05 10 00.6**	**-1.0**
OBIP	**Obispado Ponce**	**7.92**	**329**	*e*Pn	**Pn**	**05 10 05.1**	**+1.6**
CELP	**Cerrillos**	**7.94**	**330**	*e*Pn	**Pn**	**05 10 05.4**	**+1.7**
QARV	**Quebrada Arrib**	**8.07**	**264**	⇑*i*P	**

LRAL eP cP P 05 17 06.8 -2.4
CPCT Cooper Cave 31.40 324 eP **P** **05 14 19.3 +0.3**
CPCT eP cP P 05 17 08.0 -1.4
TZTN Tazewell 31.64 326 eP **P** **05 14 22.1 +1.0**
comp=Z,72nm,1.4s,mb5.2
CMIG Matias Romero 32.03 284 P **P** **05 14 21.2 -3.5**
comp=Z,3.5nm,0.6s,mb4.3,baz=104,slow=6.1,SNR=8.8
CMIG P cP P 05 17 09.6 -1.8
comp=Z,2.6nm,0.8s,baz=30,slow=4.4,SNR=5.3
CMIG Matias Romero 32.03 284 P **P** **05 14 21.2 -3.5**
CMIG P cP P 05 17 09.6 -1.9
SWET Sewanee 32.07 322 eP **P** **05 14 25.8 +0.9**
SWET eP cP P 05 17 10.0 -1.2
SSPA Standing Stone 32.34 338 eP **P** **05 14 28.1 +1.0**
comp=Z,25nm,1.0s,mb4.9
SSPA eP pP 05 15 03.6 +6.8
SSPA eP cP P 05 17 10.0 -1.8
BINY Binghamton 33.08 341 eP **P** **05 14 33.6 0.0**
comp=Z,15nm,1.2s,mb4.6
BINY eP pP 05 15 09.8 +6.6
BINY eS sP 05 15 29.6 +11
BINY eP cP P 05 17 12.4 -1.5
VBMS Vicksburg 33.29 313 eP **P** **05 14 36.5 +0.9**
comp=Z,233nm,1.6s,mb5.7
OXF Oxford 33.83 318 eP **P** **05 14 39.5 -0.7**
comp=Z,21nm,0.4s,mb5.2
WVT Waverly 33.83 321 eP **P** **05 14 40.1 -0.1**
comp=Z,36nm,0.6s,mb5.3
WVT eP pP 05 15 15.4 +5.4
WVT eS sP 05 15 28.0 +2.2
WVT eP cP P 05 17 14.2 -1.9
WVT eS cP S 05 20 43.4 -4.8
ACSO Alum Creek Sta 34.16 331 eP **P** **05 14 43.8 +0.8**
comp=Z,33nm,1.1s,mb5.0
WCI Wyandotte Cave 34.36 326 eP **P** **05 14 45.8 +1.0**
comp=Z,39nm,1.1s,mb5.0
WCI eP cP P 05 17 16.1 -1.5
WCI eS cP S 05 20 46.4 -3.7
USIN University of 34.96 324 eP **P** **05 14 50.4 +0.6**
comp=Z,64nm,1.3s,mb5.1
BLO Bloomington 35.16 326 eP **P** **05 14 52.5 +0.9**
comp=Z,54nm,0.7s,mb5.3
BLO eP pP 05 15 27.5 +6.0
BLO eP cP P 05 17 18.3 -1.6
BLO eS cP S 05 20 48.8 -4.1
SIUC Southern Illin 35.71 322 eP **P** **05 14 56.4 +0.1**
comp=Z,68nm,0.6s,mb5.5
SIUC eP pP 05 15 29.3 +3.0
SIUC eP cP P 05 17 20.0 -1.5
OLIL Olney 35.73 324 eP **P** **05 14 57.2 +0.8**
comp=Z,80nm,0.7s,mb5.5
OLIL e 05 15 12.7
OLIL eP pP 05 15 31.6 +5.1
OLIL eP cP P 05 17 20.8 -0.8
OLIL eS cP S 05 20 51.4 -3.6
UALR University of 35.96 316 eP **P** **05 14 58.5 +0.1**
comp=Z,11nm,0.6s,mb4.7
NATX Nacogdoches 36.12 309 eP **P** **05 14 59.9 0.0**
comp=Z,255nm,1.6s,mb5.6
HKT Hockley 36.25 306 eP **P** **05 15 00.8 -0.2**
comp=Z,40nm,1.0s,mb5.0
HKT e 05 15 16.9
HKT eP pP 05 15 33.8 +2.7
HKT eP cP P 05 17 21.9 -1.4
FVM French Village 36.61 321 eP **P** **05 15 04.0 0.0**
comp=Z,26nm,0.6s,mb5.0
FVM eP pP 05 15 40.1 +6.0
FVM eP cP P 05 17 23.5 -0.8
FVM eS cP S 05 20 54.7 -3.6
MIAR Mount Ida 36.69 314 eP **P** **05 15 04.2 -0.5**
comp=Z,9.2nm,1.1s,mb4.3
MIAR eP cP P 05 17 23.5 -1.1
MIAR eS cP S 05 20 54.7 -4.0
CCM Cathedral Cave 37.16 321 eP **P** **05 15 08.2 -0.4**
comp=Z,19nm,0.7s,mb4.8
CCM eP pP 05 15 43.8 +5.0
CCM eP cP P 05 17 24.6 -1.3
CCM eS cP S 05 20 56.2 -4.1
SPB Sao Paulo 37.56 157 eP **P** **05 15 12.4 +0.3**
comp=Z,10nm,0.5s,mb4.7
HDIL Hopedale 37.65 326 eP **P** **05 15 12.8 +0.1**
comp=Z,93nm,1.2s,mb5.3
HDIL eP pP 05 15 44.5 +1.6
HDIL eP cP P 05 17 26.2 -1.2
HDIL eS cP S 05 20 58.8 -3.3
CAM4 Nova Friburgo 38.61 150 ⇑P **P** **05 15 20.8 -0.1**
CAM4 i 05 15 23.2
CAM4 i 05 15 27.8
CAM4 i 05 15 31.7
CAM4 i pP 05 15 48.9 -2.4
CAM4 i pP 05 15 52.5 +1.2
CAM4 i 05 16 35.3
CAM4 i 05 16 50.9
CAM4 i 05 16 57.8
CAM4 i 05 17 04.6
CAM4 i 05 17 28.9
JCT Junction City 39.63 305 eP **P** **05 15 29.1 -0.3**
comp=Z,140nm,1.3s,mb5.4
JCT eP cP P 05 17 33.1 -0.7
JCT eS cP S 05 21 07.3 -2.6
JFWS Jewell Farm 39.80 328 eP **P** **05 15 30.4 -0.2**
comp=Z,104nm,1.4s,mb5.3
JFWS eP pP 05 16 02.7 +1.7
JFWS eP cP P 05 17 33.1 -0.9
JFWS eS cP S 05 21 06.3 -4.0
WMOK Wichita Mounta 40.54 311 eP **P** **05 15 34.2 -2.7**
comp=Z,13nm,0.8s,mb4.6
WMOK eP PP PP 05 17 14.0 +1.0
WMOK eS cP S 05 21 10.0 -3.4
SCIA State Center 40.76 324 eP **P** **05 15 38.6 +0.1**
comp=Z,51nm,0.8s,mb5.2
SCIA eS cP S 05 21 11.2 -2.9
LCO Las Campanas 40.79 191 eP **P** **05 15 41.8 +2.9**
comp=Z,26nm,1.1s,mb4.8
COWI Conover 41.55 332 eP **P** **05 15 44.9 0.0**
comp=Z,17nm,1.2s,mb4.6
COWI eP pP 05 16 20.9 +5.3
COWI e 05 17 29.6
628A Black Gap, Mar 41.84 302 ⇑P **P** **05 15 47.7 +0.2**
baz=42,SNR=88
528A Cox Ranch, San 41.96 303 ⇑P **P** **05 15 48.7 +0.2**
baz=42,SNR=119
428A Kincaid Ranch, 42.05 304 ⇑P **P** **05 15 49.9 +0.6**
baz=42
328A Wristen Ranch, 42.37 305 ⇓P **P** **05 15 51.1 -0.7**
baz=42
TXAR Lajitas Array 42.45 301 P **P** **05 15 52.1 -0.4**
comp=Z,10nm,0.8s,mb4.5,baz=122,slow=8.9,SNR=60
TXAR P cP P 05 17 42.7 -0.3
comp=Z,8.8nm,0.6s,baz=122,slow=5.6,SNR=12
TXAR S cP S 05 21 18.2 -2.9
comp=Z,3.1nm,0.9s,baz=116,slow=5.8,SNR=8.1
TXAR L R L R 05 35 47.6
comp=Z,86nm,19.3s,baz=185,slow=39
TXAR Lajitas Array 42.45 301 P **P** **05 15 52.1 -0.4**
TXAR P cP P 05 17 42.7 -0.3
TXAR S cP S 05 21 18.2 -2.9
TXAR L R L R 05 35 47.6
527A Woodward Ranch 42.64 303 ⇑P **P** **05 15 53.7 -0.3**
baz=43,SNR=13
427A Hayter Ranch, 42.68 304 ⇑P **P** **05 15 54.2 -0.1**
baz=43
AMTX Amarillo 42.76 310 eP **P** **05 15 54.0 -1.0**
comp=Z,32nm,1.1s,mb4.9
626A Big Bend Ranch 42.90 302 ⇑P **P** **05 15 56.2 +0.1**
baz=43,SNR=32
327A Balmorhea Ranc 42.91 304 ⇓P **P** **05 15 56.3 +0.1**
baz=43
CFAA Coronel Fontan 42.95 187 P **P** **05 15 56.2 -0.1**
comp=Z,2.4nm,0.8s,mb3.9,baz=352,slow=7.5,SNR=25
CFAA S cP S 05 21 21.1 -1.8
comp=Z,0.3nm,0.9s,baz=356,slow=2.6,SNR=3.6
CFAA S **S** **05 22 07.5 -3.7**
comp=Z,0.4nm,1.1s,baz=242,slow=15,SNR=5.5
CFAA Coronel Fontan 42.95 187 P **P** **05 15 56.2 -0.1**
CFAA S cP S 05 21 21.1 -1.8
CFAA S **S** **05 22 07.5 -3.7**
227A Bennet, Jal 42.96 305 ⇑P **P** **05 15 56.1 -0.5**
baz=43
526A Mary Lane Ranc 43.01 302 ⇓P **P** **05 15 57.3 +0.3**
baz=43
426A McDonald Obser 43.14 303 ⇓P **P** **05 15 58.2 +0.2**
baz=43,SNR=73
127A Arkansas Junct 43.24 306 ⇑P **P** **05 15 58.1 -0.7**
baz=43,SNR=88
127A ⇑S **S** **05 22 14.8 -0.8**
baz=43
MSTX Muleshoe 43.24 308 ⇓P **P** **05 15 58.2 -0.6**
baz=43,SNR=62
326A Caldwell Ranch 43.29 304 ⇓P **P** **05 15 58.9 -0.4**
baz=43
Z27A Tatum 43.35 307 ⇓P **P** **05 15 58.6 -1.1**
baz=43,SNR=48
Y27A Causey 43.51 308 ⇑P **P** **05 16 00.4 -0.6**
baz=44
CLNB Carlsbad 43.52 305 eP **P** **05 16 00.2 -0.8**
comp=Z,4.7nm,0.6s,mb4.3
226A Malaga, Loving 43.63 305 ⇓P **P** **05 16 01.6 -0.3**
baz=44
SCHQ Schefferville 43.65 356 P **P** **05 16 01.5 -0.2**
comp=Z,7.1nm,0.6s,mb4.5,baz=175,slow=6.3,SNR=13
SCHQ P cP P 05 17 44.9 -1.6
comp=Z,6.0nm,0.7s,baz=147,slow=5.8,SNR=3.1
SCHQ S cP S cP 05 21 21.7 -3.7
comp=Z,4.3nm,0.7s,baz=156,slow=4.1,SNR=5.4
SCHQ L R L R 05 32 27.7
comp=Z,68nm,20.2s,baz=179,slow=33
SCHQ Schefferville 43.65 356 eP **P** **05 16 02.2 +0.6**
comp=Z,23nm,0.9s,mb4.8
SCHQ eP pP 05 16 35.8 +3.2
SCHQ eP cP P 05 17 44.7 -1.8
SCHQ eS cP S 05 21 22.2 -3.1
X27A F and S Farms, 43.74 309 ⇓P **P** **05 16 02.4 -0.5**
baz=44,SNR=62
126A Clayton Basin, 43.75 306 ⇑P **P** **05 16 02.3 -0.6**
baz=44,SNR=35
ECSD EROS Data Cent 43.85 324 eP **P** **05 16 02.6 -1.0**
comp=Z,45nm,1.2s,mb5.0
ECSD eP cP P 05 17 46.9 -0.6
ECSD eS cP S 05 21 22.8 -3.7
W27A Bowe Ranch, En 43.88 310 ⇑P **P** **05 16 03.2 -0.6**
baz=44,SNR=44
GDL2 Guadalupe Moun 43.88 305 eP **P** **05 16 04.1 +0.1**
Z26A Caprock 43.93 307 ⇑P **P** **05 16 03.7 -0.7**
baz=44,SNR=55
425A Indio Mountain 43.96 303 ⇑P **P** **05 16 04.8 +0.2**
baz=44,SNR=46
EYMN Ely 44.00 332 eP **P** **05 16 03.7 -0.9**
comp=Z,8.6nm,0.8s,mb4.4
EYMN eP pP 05 16 39.4 +3.8
EYMN eP cP P 05 17 45.8 -2.1
Y26A Elida 44.04 308 ⇑P **P** **05 16 04.7 -0.5**
baz=44
325A Bean Ranch, Si 44.12 304 ⇑P **P** **05 16 06.1 +0.3**
baz=44,SNR=108
225A Deer Hill, Car 44.22 305 ⇓P **P** **05 16 07.2 +0.5**
baz=44,SNR=118
X26A CR and CF Fran 44.25 308 ⇑P **P** **05 16 06.4 -0.5**
baz=44,SNR=19
125A Gardner Draw, 44.27 306 ⇓P **P** **05 16 06.6 -0.4**
baz=44,SNR=54
W26A Owens Ranch, T 44.42 309 ⇑P **P** **05 16 07.9 -0.3**
baz=44,SNR=31
Z25A Roswell 44.52 306 ⇑P **P** **05 16 09.0 -0.1**
baz=45,SNR=68
MNTX Cornudas Mount 44.55 304 eP **P** **05 16 09.0 -0.3**
comp=Z,35nm,1.0s,mb4.9
324A Moseley Ranch, 44.56 304 ⇑P **P** **05 16 09.2 -0.1**
baz=45,SNR=42
V26A Tequesquite Ra 44.70 310 ⇑P **P** **05 16 10.1 -0.4**
baz=45,SNR=74
Y25A Mesa, Roswell 44.72 307 ⇓P **P** **05 16 10.7 +0.2**
baz=45,SNR=55
X25A Clemmons Ranch 44.90 308 ⇓P **P** **05 16 12.3 +0.2**
baz=45,SNR=25
U26A Atchley Ranch, 44.91 311 ⇑P **P** **05 16 11.4 -0.6**
baz=45,SNR=28
124A Stringfield Ra 44.91 305 ⇓P **P** **05 16 12.4 +0.3**
baz=45,SNR=42
FCH Farellones 44.94 189 eP **P** **05 16 09.4 -2.8**
W25A X Bar L Ranch, 45.00 309 ⇓P **P** **05 16 12.8 0.0**
baz=45,SNR=62
Z24A Sheeppen Canyo 45.05 306 ⇓P **P** **05 16 14.0 +0.8**
baz=45,SNR=141
Y24A Capitan 45.30 307 ⇑P **P** **05 16 16.0 +0.8**
baz=45
V25A Rancho No Teng 45.34 310 ⇑P **P** **05 16 15.8 +0.3**
baz=45,SNR=85
U25A Circle Dot Ran 45.40 311 ⇓P **P** **05 16 15.7 -0.2**
baz=46,SNR=49
223A Chaparral, Ant 45.49 304 ⇓P **P** **05 16 16.6 -0.2**
baz=46
X24A Lazy VL Ranch, 45.51 308 ⇓P **P** **05 16 17.5 +0.7**
baz=46,SNR=106
123A Bell Site, Whi 45.54 305 ⇑P **P** **05 16 17.7 +0.6**
baz=46
T25A Trinidad 45.69 312 ⇓P **P** **05 16 17.9 -0.3**
baz=46,SNR=18
Z23A Rita Site, Whi 45.71 306 ⇑P **P** **05 16 18.8 +0.4**
baz=46,SNR=10
W24A Lazy 6 Ranch, 45.72 309 ⇓P **P** **05 16 19.3 +0.9**
baz=46,SNR=71
Y23A Lovelace Mesa, 45.78 307 ⇓P **P** **05 16 19.7 +0.7**
baz=46,SNR=131
U24A Moreno Valley 46.05 310 ⇓P **P** **05 16 21.4 +0.3**
baz=46
222A Williams Famil 46.07 304 ⇑P **P** **05 16 21.3 +0.1**
baz=46,SNR=6.0
X23A Hourglass Bar 46.10 308 ⇑P **P** **05 16 21.9 +0.4**
baz=46,SNR=6.0
122A Conniff Cattle 46.16 305 ⇓P **P** **05 16 22.7 +0.7**
baz=46
W23A Werner Place, 46.27 308 ⇓P **P** **05 16 23.4 +0.6**
baz=46,SNR=32
Z22A Elephant Butte 46.29 306 ⇑P **P** **05 16 23.4 +0.4**
baz=46,SNR=25
BNM Barren Site 46.31 307 eP **P** **05 16 23.6 +0.5**
comp=Z,108nm,1.4s,mb5.3
BNM eP pP 05 16 56.0 +1.7
BNM eS cP S cP 05 21 34.2 -2.6
BNM eS **S** **05 23 01.9 +2.0**
AGMN Agassiz Nation 46.35 329 eP **P** **05 16 21.9 -1.2**
comp=Z,27nm,1.1s,mb4.8
LPM Los Pinos Moun 46.36 307 eP **P** **05 16 24.1 +0.6**
ANMO Albuquerque 46.44 308 eP **P** **05 16 24.4 +0.3**
comp=Z,11nm,1.2s,mb4.4
ANMO eP pP 05 17 00.3 +5.0
ANMO eS cP S cP 05 21 34.6 -2.8
V23A Ortiz Mt. (NFS 46.50 309 ⇑P **P** **05 16 25.8 +1.3**
baz=47,SNR=46
Y22A Socorro 46.50 306 ⇓P **P** **05 16 24.9 +0.3**
baz=47,SNR=25
Y22D IRIS PASSCAL I 46.51 307 ⇓P **P** **05 16 25.5 +0.8**
baz=47
LENM Lemitar 46.58 307 eP **P** **05 16 26.3 +1.1**
221A Mesquite Ranch 46.59 304 ⇑P **P** **05 16 26.0 +0.7**
baz=47,SNR=6.8
U23A El Rito 46.71 310 ⇓P **P** **05 16 27.0 +0.8**
baz=47,SNR=35
X22A Bernardo 46.72 307 ⇑P **P** **05 16 27.2 +0.9**
baz=47
SDCO Great Sand Dun 46.73 312 eP **P** **05 16 26.0 -0.3**
comp=Z,31nm,1.4s,mb4.7
SDCO eP cP P 05 17 57.0 -0.6
SDCO eS cP S 05 21 36.3 -2.2
121A Cookes Peak, D 46.74 304 ⇓P **P** **05 16 27.4 +0.9**
baz=47,SNR=22
LAZ Ladron 46.79 307 eP **P** **05 16 27.2 +0.3**
comp=Z,17nm,0.9s,mb4.7
LAZ eP pP 05 17 03.5 +5.4
LAZ eS cP S cP 05 21 36.8 -2.1
W22A Albuquerque 46.79 308 ⇓P **P** **05 16 27.5 +0.7**
baz=47,SNR=8.5
Z21A St. Cloud Mine 46.87 305 ⇑P **P** **05 16 28.6 +1.0**
baz=47,SNR=56
Y21A Point of Rocks 47.09 306 ⇑P **P** **05 16 30.3 +1.1**
baz=47,SNR=95
V22A San Miguel Ran 47.11 309 ⇓P **P** **05 16 30.4 +1.1**
baz=47,SNR=69
220A Playas Peak, P 47.18 303 ⇓P **P** **05 16 30.4 +0.5**
baz=47,SNR=26
U22A Llaves 47.23 310 ⇑P **P** **05 16 31.2 +1.0**
baz=47,SNR=29
X21A Alamocita Cree 47.31 307 ⇓P **P** **05 16 31.7 +0.8**
baz=47,SNR=50
W21A San Fidel 47.41 308 ⇓P **P** **05 16 32.3 +0.6**
baz=48,SNR=16
120A U Bar Ranch, L 47.44 304 ⇑P **P** **05 16 32.7 +0.9**
baz=48
T22A Edith 47.49 310 ⇑P **P** **05 16 32.7 +0.4**
baz=48,SNR=19
Z20A Nine Sixteen R 47.56 305 ⇑P **P** **05 16 33.8 +0.9**
baz=48,SNR=31
Y20A Horse Springs, 47.61 306 ⇑P **P** **05 16 34.1 +0.8**
baz=48,SNR=22
V21A Milan 47.63 309 ⇓P **P** **05 16 34.4 +1.1**
baz=48,SNR=18
ISCO Idaho Springs 47.63 314 eP **P** **05 16 32.8 -0.5**
comp=Z,31nm,1.5s,mb4.7
319A Douglas 47.66 302 ⇓P **P** **05 16 34.1 +0.4**
baz=48,SNR=11
ULM Lac du Bonnet 47.67 331 P **P** **05 16 31.3 -2.1**
comp=Z,8.2nm,0.6s,mb4.5,baz=130,slow=7.7,SNR=8.3
ULM pP pP 05 17 05.1 +0.3
comp=Z,10nm,0.7s,baz=107,slow=6.4,SNR=3.0
ULM P cP P cP 05 17 58.8 -1.9
comp=Z,10nm,0.5s,baz=115,slow=1.9,SNR=4.3
ULM L R L R 05 36 03.0
comp=Z,168nm,19.3s,baz=186,slow=35
ULM Lac du Bonnet 47.67 331 eP **P** **05 16 31.8 -1.5**
comp=Z,11nm,0.8s,mb4.5
ULM eP pP 05 17 05.5 +0.8
ULM eP cP P cP 05 17 58.6 -2.1
219A White Tail Can 47.80 303 ⇑P **P** **05 16 35.2 +0.5**
baz=48,SNR=15
R22A Saguache, Gunn 47.83 312 ⇓P **P** **05 16 34.8 0.0**
baz=48,SNR=9.2
U21A Nageezi 47.85 309 ⇑P **P** **05 16 35.9 +0.9**
baz=48,SNR=65
X20A Quemado 47.90 307 ⇑P **P** **05 16 36.3 +0.9**
baz=48,SNR=38
T21A Navajo Lake 47.95 310 ⇓P **P** **05 16 36.5 +0.7**
baz=48
119A Ashpeak Ranch, 48.04 304 ⇑P **P** **05 16 37.3 +0.7**
baz=48,SNR=12
W20A Ramah 48.08 307 ⇓P **P** **05 16 37.3 +0.5**
baz=48,SNR=18
Z19A T-Link Ranch, 48.15 305 ⇑P **P** **05 16 38.1 +0.8**
baz=48,SNR=5.9
PHWY Pilot Hill 48.16 316 eP **P** **05 16 36.9 -0.5**
comp=Z,59nm,2.2s,mb4.8
PHWY eP pP 05 17 11.7 +2.9
PHWY eP cP P cP 05 18 02.1 -0.6
PHWY eP P P 05 18 32.4 +1.5
PHWY eS cP S cP 05 21 40.3 -4.2
Q22A Crested Butte, 48.18 313 ⇓P **P** **05 16 37.2 -0.3**
baz=48,SNR=7.7
V20A Brimhall 48.26 308 ⇓P **P** **05 16 38.9 +0.7**
baz=48,SNR=20
318A Bisbee 48.27 302 ⇓P **P** **05 16 38.7 +0.3**
baz=48,SNR=32
Y19A Nutrioso 48.33 306 ⇓P **P** **05 16 40.0 +1.3**
baz=48,SNR=52
SMCO Snowmass 48.35 313 eP **P** **05 16 38.3 -0.5**
comp=Z,10nm,1.0s,mb4.4
SMCO eP cP P cP 05 18 02.8 -0.6
S21A Coal Bank Pass 48.38 311 ⇑P **P** **05 16 39.0 -0.1**
baz=48,SNR=7.4
218A Dragoon 48.44 303 ⇓P **P** **05 16 40.1 +0.5**
baz=48,SNR=18
R21A Cimarron 48.46 312 ⇑P **P** **05 16 39.8 +0.2**
baz=48,SNR=16
X19A St. Johns 48.49 306 ⇑P **P** **05 16 40.8 +0.8**
baz=49,SNR=24
U20A Newcomb 48.49 309 ⇑P **P** **05 16 40.1 +0.2**
baz=49,SNR=16
RSSD Black Hills 48.55 320 eP **P** **05 16 39.6 -0.7**
comp=Z,9.0nm,0.9s,mb4.4
RSSD eP cP P cP 05 18 03.6 -0.3
118A Homack Ranch, 48.55 304 ⇑P **P** **05 16 41.1 +0.6**
baz=49
N22A Wattenberg Ran 48.63 315 ⇓P **P** **05 16 40.8 -0.2**
baz=49,SNR=7.2
Q21A Lamborn Mesa, 48.65 312 ⇓P **P** **05 16 41.3 +0.2**
baz=49,SNR=6.6
V19A Window Rock 48.68 308 ⇓P **P** **05 16 41.9 +0.4**
baz=49,SNR=6.1
Z18A Geronimo 48.72 304 ⇓P **P** **05 16 42.3 +0.6**
baz=49
MVCO Mesa Verde 48.75 310 ⇑P **P** **05 16 41.9 0.0**
baz=49
MVCO Mesa Verde 48.75 310 eP **P** **05 16 42.0 +0.1**
comp=Z,86nm,2.0s,mb5.0
MVCO eS cP S cP 05 21 44.6 -2.6
W19A Sanders 48.77 307 ⇓P **P** **05 16 42.5 +0.4**
baz=49,SNR=12
P21A Newcastle 48.82 313 ⇓P **P** **05 16 42.3 -0.1**
baz=49,SNR=12
Y18A Canyon Day Jun 48.90 305 ⇓P **P** **05 16 43.6 +0.5**
baz=49,SNR=12
U19A Dine' College, 48.99 309 ⇓P **P** **05 16 43.6 -0.2**
baz=49,SNR=19
R20A Redvale 49.00 311 ⇓P **P** **05 16 44.2 +0.4**
baz=49,SNR=41
TRQA Tornquist 49.02 180 eP **P** **05 16 41.5 -2.3**
comp=Z,10nm,1.1s,mb4.4
T19A Beclabito 49.02 309 ⇑P **P** **05 16 44.0 0.0**
baz=49,SNR=38
X18A Snowflake 49.04 306 ⇑P **P** **05 16 45.0 +0.8**
baz=49,SNR=23
W18A Petrified Fore 49.04 307 ⇓P **P** **05 16 44.5 +0.4**
baz=49,SNR=8.0
O21A Pagoda 49.10 314 ⇓P **P** **05 16 44.6 0.0**
baz=49
PV01 Paradox Valley 49.12 311 eP **P** **05 16 45.4 +0.6**
comp=Z,4μm,1.0s
PV01 eP cP P cP 05 18 06.3 +0.1
PV01 eS cP S cP 05 21 46.1 -2.6
Z17A San Carlos Hig 49.12 304 ⇓P **P** **05 16 45.4 +0.6**
baz=49,SNR=9.9
TUC Tucson 49.13 303 eP **P** **05 16 44.8 -0.2**
comp=Z,17nm,1.1s,mb4.6
TUC eS cP S cP 05 21 46.5 -2.4
L22A Ellis Ranch, M 49.14 317 ⇑P **P** **05 16 44.6 -0.2**
baz=49,SNR=9.1
117A Oracle 49.16 303 ⇑P **P** **05 16 45.2 +0.1**
baz=49,SNR=24
Q20A Ridgley Place, 49.22 312 ⇓P **P** **05 16 45.3 -0.1**
baz=49,SNR=28
N21A Black Mountain 49.35 315 ⇑P **P** **05 16 46.3 -0.1**
baz=49,SNR=8.2
V18A Ganado 49.37 308 ⇑P **P** **05 16 46.4 -0.3**
baz=49,SNR=8.4
S19A Harvey Farm, M 49.41 310 ⇓P **P** **05 16 47.0 0.0**
baz=50,SNR=39
PV04 Paradox Valley 49.46 311 eP **P** **05 16 47.4 +0.1**
PV04 eP cP P cP 05 18 07.2 -0.3
PV04 eS cP S cP 05 21 48.0 -2.1
P20A De Beque 49.49 313 ⇓P **P** **05 16 47.1 -0.3**
baz=50,SNR=12
RWWY Rawlins 49.52 316 eP **P** **05 16 47.0 -0.7**
comp=Z,42nm,1.6s,mb4.8
RWWY eP pP 05 17 21.2 +1.9
Y17A Roosevelt 49.53 305 ⇓P **P** **05 16 48.5 +0.6**
baz=50,SNR=22
U18A Rough Rock, Ch 49.54 309 ⇓P **P** **05 16 48.0 +0.1**
baz=50,SNR=15
PV10 Paradox Valley 49.55 311 eP **P** **05 16 47.8 -0.2**
comp=Z,127nm,0.6s,mb5.7
M21A Separation Pea 49.59 316 ⇑P **P** **05 16 47.7 -0.5**
baz=50
216A Three Points, 49.62 303 ⇓P **P** **05 16 48.3 -0.3**
baz=50
O20A White River Ci 49.62 314 ⇑P **P** **05 16 48.9 +0.5**
baz=50
X17A Forest Lakes 49.67 306 ⇓P **P** **05 16 49.7 +0.8**
baz=50,SNR=16
R19A Curley Farm, L 49.69 311 ⇓P **P** **05 16 48.9 -0.1**
baz=50
L21A Rawlins 49.74 316 ⇑P **P** **05 16 48.4 -0.9**
baz=50,SNR=8.6
T18A Mexican Hat 49.77 309 ⇑P **P** **05 16 49.6 0.0**
baz=50,SNR=48
W17A Winslow 49.80 307 ⇑P **P** **05 16 50.0 +0.1**
baz=50
N20A Spence Gulch, 49.90 315 ⇑P **P** **05 16 50.0 -0.6**
baz=50,SNR=7.9
Z16A Peralta Trail, 49.91 304 ⇑P **P** **05 16 51.0 +0.2**
baz=50,SNR=16
Q19A Hogan Spring (49.92 312 ⇑P **P** **05 16 50.3 -0.5**
baz=50,SNR=16
116A Eloy 49.95 303 ⇑P **P** **05 16 50.7 -0.4**
baz=50
P19A Cripple Cowboy 49.96 313 ⇓P **P** **05 16 50.3 -0.8**
baz=50,SNR=7.7
V17A Tonalea, Kykot 50.02 307 ⇑P **P** **05 16 51.9 +0.4**
baz=50,SNR=45
S18A Hurst Farm, Bl 50.03 310 ⇓P **P** **05 16 51.6 0.0**
baz=50,SNR=26

Y16A Circle Bar Ran 50.09 305 ⇓P P 05 16 52.6 +0.5
baz=50,SNR=13
M20A Sweetwater, Wa 50.11 315 ⇑P P 05 16 51.9 -0.3
baz=50,SNR=12
R18A Canyonlands Na 50.19 311 ⇓P P 05 16 52.5 -0.4
baz=50,SNR=37
X16A Lo Mia Camp, P 50.20 306 ⇑P P 05 16 53.5 +0.5
baz=50,SNR=13
U17A Shonto 50.20 309 ⇓P P 05 16 52.9 -0.1
baz=50,SNR=5.1
O19A Miners Draw (B 50.30 314 ⇓P P 05 16 52.8 -0.9
baz=50,SNR=22
115A Sonoran Desert 50.41 303 ⇑P P 05 16 54.6 0.0
baz=50
L20A Wamsutter 50.42 316 ⇓P P 05 16 54.0 -0.5
baz=50,SNR=20
T17A Navajo Res., N 50.43 309 ⇓P P 05 16 55.1 +0.4
baz=50,SNR=20
WUAZ Wupatki 50.44 307 ⇑P P 05 16 55.3 +0.6
baz=50
WUAZ Wupatki 50.44 307 eP P 05 16 55.4 +0.7
comp=Z,40nm,0.9s,mb5.0
WUAZ ePcP PcP 05 18 07.6 -3.5
WUAZ eScP ScP 05 21 51.2 -3.1
W16A Flagstaff 50.45 306 ⇓P P 05 16 55.7 +0.9
baz=50,SNR=16
Z15A Gila River Ind 50.49 304 ⇑P P 05 16 55.1 0.0
baz=50
N19A John Jarvie Ra 50.56 314 ⇓P P 05 16 54.4 -1.2
baz=51,SNR=13
Q18A Rafter H Ranch 50.61 312 ⇓P P 05 16 55.8 -0.2
baz=51,SNR=19
S17A Black Ridge (B 50.62 310 ⇓P P 05 16 56.6 +0.5
baz=51,SNR=69
K20A Yellowstone Ra 50.69 317 ⇓P P 05 16 55.7 -0.8
baz=51,SNR=21
214A Organ Pipe Nat 50.73 302 ⇓P P 05 16 56.7 -0.3
baz=51,SNR=6.7
M19A Rock Springs 50.78 315 ⇑P P 05 16 56.0 -1.3
baz=51
Y15A Casa Rosa Ranc 50.79 305 ⇓P P 05 16 57.4 0.0
baz=51,SNR=14
R17A Hanksville Air 50.81 311 ⇑P P 05 16 57.2 -0.3
baz=51,SNR=9.0
X15A Humboldt 50.85 305 ⇑P P 05 16 58.2 +0.3
baz=51,SNR=13
P18A Preston Nutter 50.87 312 ⇑P P 05 16 58.0 +0.1
baz=51,SNR=48
DGMT Dagmar 50.88 325 ⇑P P 05 16 58.1 +0.3
baz=51
DGMT Dagmar 50.88 325 eP P 05 16 58.2 +0.4
comp=Z,93nm,0.9s,mb5.4
DGMT epP pP 05 17 32.9 +3.3
SRU San Rafael 50.90 312 ⇑P P 05 16 57.9 -0.2
baz=51,SNR=39
SRU San Rafael 50.90 312 eP P 05 16 58.0 -0.1
comp=Z,28nm,0.8s,mb5.0
SRU ePcP PcP 05 18 12.3 -0.4
SRU eScP ScP 05 21 53.6 -2.7
O18A Roosevelt 50.92 313 ⇓P P 05 16 57.9 -0.4
baz=51,SNR=8.3
N18A Larsen Ranch, 50.95 314 ⇑P P 05 16 57.4 -1.0
baz=51
114A Black Gap (USA 50.96 303 ⇑P P 05 16 58.6 -0.1
baz=51
T16A Glen Canyon Da 50.96 309 ⇑P P 05 16 59.0 +0.3
baz=51
W15A Williams 51.05 306 ⇓P P 05 17 00.2 +0.9
baz=51,SNR=8.3
K19A Absolon Red Bu 51.09 317 ⇑P P 05 16 58.3 -1.3
baz=51,SNR=13
V15A Kaibab Nationa 51.15 307 ⇓P P 05 17 00.9 +0.8
baz=51,SNR=27
Z14A Wintersburg 51.15 304 ⇓P P 05 17 00.0 -0.1
baz=51,SNR=5.8
L19A Farson 51.15 316 ⇑P P 05 16 59.3 -0.7
baz=51,SNR=29
P17A Butcher Ranch, 51.18 312 ⇓P P 05 17 00.1 -0.1
baz=51,SNR=11
S16A Weppner Ranch, 51.25 310 ⇓P P 05 17 00.7 -0.1
baz=51,SNR=22
Q16A Castle Valley 51.31 311 ⇓P P 05 17 01.1 -0.1
baz=51
Y14A Wickenburg 51.33 305 ⇑P P 05 17 01.2 -0.2
baz=51,SNR=7.9
R16A Teasdale 51.34 310 ⇓P P 05 17 01.6 +0.2
baz=51,SNR=27
X14A Yava 51.37 305 ⇓P P 05 17 02.1 +0.4
baz=51,SNR=15
M18A Lyman 51.39 315 ⇑P P 05 17 00.8 -0.9
baz=52,SNR=8.1
U15A North Rim 51.41 308 ⇓P P 05 17 02.8 +0.8
baz=52,SNR=26
O17A Robinson Place 51.42 313 ⇓P P 05 17 02.0 0.0
baz=52,SNR=43
TMUT Trail Mountain 51.46 312 eP P 05 17 02.4 +0.1
comp=Z,27nm,0.8s,mb4.9
TMUT epP pP 05 17 36.1 +2.0
BW06 Boulder Array 51.55 316 ⇑P P 05 17 02.0 -0.9
baz=52
BW06 Boulder Array 51.55 316 eP P 05 17 01.6 -1.3
comp=Z,24nm,1.0s,mb4.8
BW06 ePcP PcP 05 18 14.0 -1.0
PDAR Pinedale Array 51.55 316 P P 05 17 01.9 -1.0
comp=Z,15nm,0.9s,mb4.7,baz=117,slow=9.8,SNR=108
PDAR pP pP 05 17 35.0 +0.3
comp=Z,3.8nm,0.7s,baz=117,slow=9.9,SNR=2.7
PDAR ScP ScP 05 21 54.9 -4.1
comp=Z,2.5nm,0.9s,baz=102,slow=6.2,SNR=6.3
PDAR LR LR 05 41 00.7
comp=Z,96nm,19.5s,baz=119,slow=38
L18A Fontenelle, Gr 51.55 315 ⇑P P 05 17 02.2 -0.7
baz=52,SNR=23
T15A Red Dirt Ranch 51.64 309 ⇑P P 05 17 04.3 +0.6
baz=52,SNR=69
113A Mohawk Valley, 51.69 303 ⇓P P 05 17 03.5 -0.6
baz=52
Z13A Yuma Proving G 51.69 304 ⇓P P 05 17 04.2 0.0
baz=52,SNR=15
W14A Seligman 51.70 306 ⇓P P 05 17 04.8 +0.6
baz=52,SNR=16
N17A Moffit Pass 51.75 314 ⇓P P 05 17 03.9 -0.6
baz=52
S15A Panguitch 51.82 309 ⇓P P 05 17 05.2 +0.2
baz=52,SNR=17
M17A Scullys Gap (B 51.82 314 ⇑P P 05 17 03.9 -1.1
baz=52,SNR=6.1
K18A Toltan Ranch, 51.83 316 ⇑P P 05 17 04.7 -0.3
baz=52,SNR=25
V14A Boquillas Ranc 51.83 307 ⇓P P 05 17 05.9 +0.8
baz=52,SNR=18
DAU Daniels Canyon 51.87 313 eP P 05 17 05.4 +0.1
DAU epP pP 05 17 41.0 +3.8
DAU ePcP PcP 05 18 16.1 -0.2
DAU eScP ScP 05 21 54.2 -6.3
P16A Fountain Green 51.89 312 ⇓P P 05 17 05.4 -0.1
baz=52,SNR=8.1
R15A Junction 51.91 310 ⇑P P 05 17 05.9 +0.2
baz=52,SNR=8.5
MSU Marysvale 51.93 310 eP P 05 17 06.0 +0.2
MSU epP pP 05 17 43.5 +5.8
MSU ePcP PcP 05 18 16.9 +0.3
MSU eScP ScP 05 21 58.8 -1.9
Y13A Salome 51.97 304 ⇑P P 05 17 06.2 0.0
baz=52
O16A Springville 51.98 313 ⇑P P 05 17 05.6 -0.5
baz=52,SNR=8.4
MPU Maple Canyon 52.01 312 eP P 05 17 06.5 +0.1
comp=Z,28nm,1.4s,mb4.7
MPU epP pP 05 17 42.8 +4.6
MPU ePcP PcP 05 18 15.9 -0.9
J18A Kendall Valley 52.04 317 ⇓P P 05 17 05.5 -1.0
baz=52,SNR=6.9
JLU Jordanelle 52.07 313 eP P 05 17 07.2 +0.3
comp=Z,40nm,1.1s,mb5.0
JLU epP pP 05 17 42.9 +4.2
U14A Mt Trumbull 52.09 308 ⇑P P 05 17 07.8 +0.8
baz=52,SNR=22
I18A Diamond G Ranc 52.10 317 ⇑P P 05 17 06.3 -0.7
baz=52,SNR=16
N16A Rees Ranch, Co 52.16 314 ⇓P P 05 17 07.2 -0.2
baz=52,SNR=14
T14A Hurricane 52.19 308 ⇑P P 05 17 07.5 -0.3
baz=52,SNR=12
L17A Cokeville 52.20 315 ⇓P P 05 17 06.5 -1.2
baz=52
Q15A Fillmore 52.23 311 ⇓P P 05 17 07.9 -0.2
baz=52,SNR=8.7
PLCA Paso Flores 52.24 188 P P 05 17 08.6 +0.7
comp=Z,13nm,0.9s,mb4.6,baz=3.0,slow=7.5,SNR=14
PLCA pP pP 05 17 41.0 +1.2
comp=Z,14nm,0.8s,baz=20,slow=8.9,SNR=4.8
PLCA LR LR 05 43 30.2
comp=Z,115nm,19.3s,baz=285,slow=40
PLCA Paso Flores 52.24 188 eP P 05 17 09.0 +1.1
comp=Z,18nm,0.8s,mb4.7
PLCA epP pP 05 17 44.2 +4.4
NLU North Lily Min 52.31 312 eP P 05 17 08.2 -0.4
comp=Z,14nm,0.9s,mb4.6
NLU epP pP 05 17 41.8 +1.3
112A Yuma 52.31 302 ⇑P P 05 17 08.4 -0.4
baz=52
W13A Hualapai Mount 52.31 306 ⇑P P 05 17 09.3 +0.6
baz=52,SNR=11
CTU Camp Tracy 52.32 313 eP P 05 17 08.4 -0.3
comp=Z,28nm,0.9s,mb4.9
CTU epP pP 05 17 43.3 +2.7
RLMT Red Lodge 52.32 319 ⇑P P 05 17 08.1 -0.5
baz=52
RLMT Red Lodge 52.32 319 eP P 05 17 08.1 -0.5
comp=Z,17nm,0.9s,mb4.7
RLMT epP pP 05 17 45.0 +4.5
PDMCI Parker Dam,Lak 52.33 305 ⇑P P 05 17 08.6 -0.3
baz=52
P15A Leamington 52.33 312 ⇓P P 05 17 08.2 -0.5
baz=52,SNR=6.1
M16A Huntsville 52.45 314 ⇑P P 05 17 08.5 -1.0
baz=52
S14A Cedar City 52.45 309 ⇓P P 05 17 09.5 -0.2
baz=52,SNR=17
K17A Gardner Place, 52.47 316 ⇑P P 05 17 08.6 -1.1
baz=53,SNR=9.7
HWUT Hardware Ranch 52.50 314 eP P 05 17 09.0 -1.0
comp=Z,24nm,0.9s,mb4.9
HWUT epP pP 05 17 43.6 +1.7
HWUT ePcP PcP 05 18 17.3 -1.4
HWUT eScP ScP 05 21 59.4 -3.8
Y12C Blythe 52.52 304 ⇑P P 05 17 10.0 -0.3
baz=53
CCUT Cedar City 52.54 309 eP P 05 17 10.5 +0.1
comp=Z,9.4nm,1.0s,mb4.5
CCUT ePcP PcP 05 18 19.0 +0.1
CCUT eScP ScP 05 22 02.2 -1.2
L16A Fish Haven 52.55 315 ⇑P P 05 17 09.6 -0.8
baz=53,SNR=5.7
J17A Brown Place, J 52.56 317 ⇑P P 05 17 09.8 -0.6
baz=53,SNR=16
V13A Grand Canyon W 52.58 307 ⇑P P 05 17 11.3 +0.6
baz=53,SNR=29
LOHW Long Hollow 52.59 317 eP P 05 17 09.8 -0.7
comp=Z,15nm,1.0s,mb4.7
LOHW epP pP 05 17 46.1 +3.6
LOHW eScP ScP 05 22 00.2 -3.3
G18A Lazy EL Ranch, 52.60 319 ⇑P P 05 17 09.7 -0.9
baz=53,SNR=7.7
GLA Glamis 52.62 303 ⇓P P 05 17 10.8 -0.2
baz=53
GLA Glamis 52.62 303 eP P 05 17 10.8 -0.2
comp=Z,13nm,1.0s,mb4.6
SNOW Snow King Moun 52.63 317 eP P 05 17 10.8 -0.1
comp=Z,20nm,1.0s,mb4.8
SNOW eScP ScP 05 22 00.7 -3.0
REDW Red Top Meadow 52.66 317 eP P 05 17 10.3 -0.7
comp=Z,36nm,1.2s,mb5.0
ARUT Antelope Range 52.67 309 eP P 05 17 11.3 +0.1
O15A The Old Anders 52.70 312 ⇑P P 05 17 11.3 -0.2
baz=53
U13A Pakoon Wash 52.70 307 ⇑P P 05 17 12.2 +0.6
baz=53,SNR=16
TPAW Teton Pass 52.77 317 eP P 05 17 11.2 -0.7
comp=Z,26nm,1.4s,mb4.8
TPAW epP pP 05 17 48.9 +5.1
TPAW ePP PP 05 19 11.8 -0.9
TPAW eScP ScP 05 22 01.1 -3.2
T13A Saint George 52.82 308 ⇑P P 05 17 13.1 +0.7
baz=53,SNR=24
GCMT Greycliff 52.86 320 eP P 05 17 12.3 -0.3
comp=Z,24nm,1.3s,mb4.8
GCMT epP pP 05 17 49.8 +5.3
H17A Grant Village 52.88 318 ⇑P P 05 17 14.2 +1.5
baz=53
Q14A Sevier Lake (B 52.89 311 ⇓P P 05 17 13.3 +0.4
baz=53,SNR=32
IMW Indian Meadow 52.92 317 eP P 05 17 12.7 -0.3
comp=Z,12nm,1.3s,mb4.5
P14A Drum Mountains 52.92 311 ⇑P P 05 17 13.0 -0.1
baz=53,SNR=14
DUG Dugway 52.92 312 ⇑P P 05 17 12.8 -0.3
baz=53
DUG Dugway 52.92 312 eP P 05 17 12.7 -0.4
comp=Z,27nm,0.8s,mb5.0
S13A Holt Ranch, En 52.93 309 ⇓P P 05 17 13.8 +0.5
baz=53,SNR=25
F18A Big Timber 52.94 320 ⇓P P 05 17 12.7 -0.4
baz=53,SNR=26
K16A Soda Springs 52.96 316 ⇑P P 05 17 12.8 -0.5
baz=53,SNR=9.9
RRI2 Red Ridge 52.97 316 eP P 05 17 12.9 -0.5
comp=Z,27nm,1.4s,mb4.8
RRI2 ePP PP 05 19 15.3 +0.9
DCID1 Drake Creek 52.97 317 eP P 05 17 13.1 -0.3
comp=Z,30nm,0.9s,mb5.0
YFT Old Faithful 53.07 318 eP P 05 17 15.2 +1.2
comp=Z,20nm,1.1s,mb4.8
M15A Larsen Ranch, 53.07 314 ⇓P P 05 17 13.2 -1.0
baz=53
IRM Iron Mountain 53.12 304 ⇓P P 05 17 14.8 +0.2
baz=53,SNR=22
FCC Fort Churchill 53.13 340 eP P 05 17 12.7 -1.6
comp=Z,0.3nm,0.7s
J16A Bone 53.14 316 ⇑P P 05 17 13.9 -0.7
baz=53,SNR=11
W12A Cal Nev Ari 53.15 306 ⇑P P 05 17 15.0 +0.2
baz=53
U12A Valley of Fire 53.16 307 ⇓P P 05 17 15.3 +0.4
baz=53
R13A O'Grain Ranch, 53.18 310 ⇑P P 05 17 15.5 +0.5
baz=53,SNR=15
L15A Malad City 53.22 315 ⇓P P 05 17 14.2 -1.0
baz=53,SNR=39
V12A Nelson 53.23 306 ⇓P P 05 17 15.6 +0.1
baz=53,SNR=18
BC3 Big Chuckawall 53.26 304 ⇑P P 05 17 15.4 -0.3
baz=53,SNR=12
I16A Newdale 53.28 317 ⇑P P 05 17 15.2 -0.4
baz=53,SNR=23
LDFC Landfair 53.28 305 eP P 05 17 16.7 +0.9
comp=Z,31nm,1.1s,mb5.0
LDFC eScP ScP 05 22 05.2 -1.5
BGU Big Grassy Mou 53.31 313 eP P 05 17 15.0 -0.9
comp=Z,72nm,1.2s,mb5.3
E18A Harlowton 53.35 321 ⇓P P 05 17 15.7 -0.4
baz=53,SNR=16
G17A Pierce Place, 53.35 319 ⇑P P 05 17 15.9 -0.2
baz=53
T12A Moapa 53.37 308 ⇑P P 05 17 16.6 +0.2
baz=53,SNR=5.7
SWSC Sam W. Stewart 53.40 303 ⇑P P 05 17 16.4 -0.3
baz=53
N14A Grayback Hills 53.40 313 ⇓P P 05 17 16.0 -0.6
baz=54,SNR=7.6
HVU Hansel Valley 53.41 314 eP P 05 17 15.8 -0.9
comp=Z,23nm,0.9s,mb4.9
FFC Flin Flon 53.42 333 eP P 05 17 14.3 -2.2
comp=Z,20nm,1.0s,mb4.8
FFC epP pP 05 17 53.9 +5.4
FFC ePcP PcP 05 18 20.9 -0.9
Q13A Wheeler Ranch, 53.44 310 ⇓P P 05 17 17.2 +0.3
baz=54,SNR=38
H16A Russell Place, 53.44 318 ⇑P P 05 17 16.8 0.0
baz=54,SNR=6.6
F17A Fitzpatrick Pl 53.54 320 ⇑P P 05 17 17.2 -0.3
baz=54,SNR=13
K15A Arbon 53.55 315 ⇑P P 05 17 16.9 -0.7
baz=54,SNR=15
D18A Linhart Farms, 53.56 321 ⇓P P 05 17 17.3 -0.3
baz=54,SNR=11
P13A Bates Ranch, G 53.58 311 ⇓P P 05 17 18.0 +0.1
baz=54,SNR=26
QLMT Earthquake Lak 53.61 318 eP P 05 17 18.7 +0.7
QLMT epP pP 05 17 56.7 +6.7
QLMT ePcP PcP 05 18 22.4 -0.3
GMRC Granite Mounta 53.66 305 ⇑P P 05 17 18.6 0.0
baz=54,SNR=5.9
S12A Delamar Landin 53.70 309 ⇓P P 05 17 19.3 +0.5
baz=54,SNR=6.6
R12A Pony Springs, 53.70 310 ⇑P P 05 17 19.2 +0.4
baz=54,SNR=38
V11A Goodsprings 53.71 306 ⇑P P 05 17 19.1 +0.1
baz=54,SNR=7.3
M14A Sheep Mountain 53.73 314 ⇑P P 05 17 18.0 -1.0
baz=54,SNR=24
J15A Blackfoot 53.74 316 ⇓P P 05 17 18.6 -0.4
baz=54,SNR=23
O13A Hicks Ranch, I 53.75 312 ⇑P P 05 17 18.8 -0.4
baz=54
BELC Belle Mtn. Jos 53.77 304 ⇑P P 05 17 19.2 -0.2
baz=54
L14A Malta 53.82 314 ⇑P P 05 17 18.5 -1.2
baz=54,SNR=21
T11A Corn Creek, Al 53.89 308 ⇓P P 05 17 20.5 +0.3
baz=54,SNR=11
E17A Martinsdale 53.90 320 ⇓P P 05 17 19.5 -0.6
baz=54,SNR=6.8
MONP Monument Peak 53.90 303 ⇑P P 05 17 20.6 +0.2
baz=54,SNR=9.3
K14A Jones Ranch, D 53.95 315 ⇑P P 05 17 19.7 -0.9
baz=54,SNR=40
I15A Monteview 53.99 317 ⇓P P 05 17 20.9 +0.1
baz=54,SNR=5.7
G16A Moss Hill, Enn 54.01 318 ⇓P P 05 17 20.3 -0.6
baz=54,SNR=6.0
TUQ Turquoise Moun 54.01 306 ⇑P P 05 17 21.1 -0.1
baz=54,SNR=18
BOZ Bozeman (W) 54.06 319 ⇓P P 05 17 20.7 -0.6
baz=54
BOZ Bozeman (W) 54.06 319 eP P 05 17 20.8 -0.5
comp=Z,23nm,1.4s,mb4.7
Q12A Willow Creek R 54.06 310 ⇓P P 05 17 21.5 +0.1
baz=54,SNR=11
PFO Pinyon Flat Ob 54.07 303 ⇑P P 05 17 21.5 -0.1
baz=54
PFO Pinyon Flat Ob 54.07 303 eP P 05 17 21.8 +0.2
comp=Z,4.8nm,1.3s,mb4.1
B18A Beardsley Farm 54.08 323 ⇓P P 05 17 21.3 -0.1
baz=54,SNR=17
D17A Six Diamond Ra 54.08 321 ⇑P P 05 17 20.8 -0.6
baz=54,SNR=20
F16A Kennard Place, 54.11 319 ⇑P P 05 17 21.1 -0.5
baz=54,SNR=7.5
N13A Wendover, West 54.13 313 ⇓P P 05 17 21.4 -0.5
baz=54
N13A Wendover, West 54.13 313 eP P 05 17 22.1 +0.2
comp=Z,22nm,1.0s,mb4.8
HEC Hector,Ludlow 54.21 305 ⇓P P 05 17 22.8 +0.3
baz=54,SNR=6.8
P12A McGill 54.24 311 ⇓P P 05 17 22.8 0.0
baz=54,SNR=8.1
M13A Montello 54.26 313 ⇑P P 05 17 22.2 -0.7
baz=54,SNR=21
M13A Montello 54.26 313 eP P 05 17 22.3 -0.6
comp=Z,23nm,0.9s,mb4.9
M13A ePcP PcP 05 18 25.8 +0.4
H15A Lima 54.33 317 ⇑P P 05 17 23.3 +0.1
baz=54,SNR=24
C17A Wharram Farm, 54.33 322 ⇓P P 05 17 22.3 -0.9
baz=54,SNR=20
L13A Double Diamond 54.34 314 ⇑P P 05 17 22.4 -1.0
baz=54,SNR=11
O12A Currie 54.35 312 ⇓P P 05 17 22.9 -0.6
baz=54,SNR=8.6
A18A Metzger Ranch, 54.36 323 ⇓P P 05 17 22.9 -0.5
baz=54,SNR=15
S11A Rachel 54.39 308 ⇓P P 05 17 24.7 +0.9
baz=54
SHOC Shoshone 54.40 306 ⇑P P 05 17 23.8 -0.2
baz=54
G15A Dillon 54.43 318 ⇓P P 05 17 23.4 -0.6
baz=54,SNR=12
E16A East Helena 54.44 320 ⇑P P 05 17 23.4 -0.6
baz=54
R11A Troy Canyon, C 54.45 309 ⇑P P 05 17 24.3 0.0
baz=54,SNR=25
J14A Carey 54.45 316 ⇑P P 05 17 24.0 -0.2
baz=54,SNR=21
109C Camp Elliot, M 54.47 302 ⇑P P 05 17 24.3 -0.2
baz=54
MCMT McKenzie Canyo 54.54 318 eP P 05 17 24.7 -0.1
comp=Z,6.7nm,1.1s,mb4.3
U10A Ash Meadows, A 54.55 307 ⇑P P 05 17 25.5 +0.4
baz=55,SNR=6.1
D16A Dana Ranch, Ca 54.57 321 ⇑P P 05 17 24.1 -0.8
baz=55,SNR=14
BBRC Big Bear Solar 54.57 304 ⇓P P 05 17 25.5 +0.3
baz=55
DLMT Dillon 54.57 318 eP P 05 17 24.6 -0.4
comp=Z,25nm,1.1s,mb4.8
DLMT ePcP PcP 05 18 26.3 -0.1
DLMT eScP ScP 05 22 09.6 -2.5
K13A Stover Farm, H 54.62 315 ⇑P P 05 17 24.6 -0.7
baz=55,SNR=14
I14A Mackay 54.62 316 ⇓P P 05 17 25.2 -0.2
baz=55,SNR=16
Q11A Duckwater 54.63 310 ⇓P P 05 17 25.2 -0.3
baz=55,SNR=23
B17A L&G Farms, Che 54.64 322 ⇑P P 05 17 24.8 -0.6
baz=55
LRM Limekiln Ridge 54.66 319 eP P 05 17 25.0 -0.6
MURC Murrieta 54.68 303 ⇑P P 05 17 26.0 0.0
baz=55
F15A Butte 54.69 319 ⇓P P 05 17 25.5 -0.4
baz=55,SNR=7.9
GSC Goldstone 54.69 305 ⇑P P 05 17 25.9 -0.1
baz=55,SNR=6.4
GSC Goldstone 54.69 305 eP P 05 17 26.1 0.0
comp=Z,25nm,1.4s,mb4.8
N12A Clover Valley, 54.74 312 ⇓P P 05 17 25.9 -0.4
baz=55,SNR=22
N12A Clover Valley, 54.74 312 eP P 05 17 25.6 -0.7
comp=Z,34nm,1.1s,mb5.0
RRX Edison Barstow 54.76 305 ⇓P P 05 17 26.8 +0.2
baz=55
H14A Leadore 54.81 317 ⇑P P 05 17 26.4 -0.3
baz=55,SNR=16
M12A Wells 54.82 313 ⇓P P 05 17 26.1 -0.7
baz=55,SNR=19
P11A Circle Ranch, 54.90 311 ⇓P P 05 17 27.1 -0.4
baz=55
J13A Cove Ranch, Pi 54.93 316 ⇑P P 05 17 27.0 -0.6
baz=55,SNR=6.3
R10A Warm Springs 54.98 309 ⇓P P 05 17 28.8 +0.8
baz=55,SNR=12
O11A Cowboy Ranch, 54.98 311 ⇓P P 05 17 27.8 -0.2
baz=55,SNR=19
FURC Furnace Creek, 54.98 307 ⇑P P 05 17 28.4 +0.3
baz=55,SNR=17
C16A Fuhringer Ranc 55.01 321 ⇓P P 05 17 27.2 -0.9
baz=55,SNR=12
E15A Deer Lodge 55.01 320 ⇓P P 05 17 27.7 -0.5
baz=55,SNR=8.3
I13A Wildhorse Cree 55.06 316 ⇓P P 05 17 28.3 -0.3
baz=55,SNR=41
L12A House Creek Ra 55.11 314 ⇓P P 05 17 28.3 -0.7
baz=55
S10A Tonopah Range, 55.11 309 ⇑P P 05 17 29.5 +0.4
baz=55,SNR=33
PBDV Barranco-do-Ve 55.12 52 eP P 05 17 30.9 +1.8
comp=Z,70nm,1.9s,mb5.1
PCVE Castro Verde 55.13 52 eP P 05 17 31.4 +2.2
comp=Z,38nm,2.4s,mb4.7
HLID Hailey 55.15 316 ⇓P P 05 17 28.8 -0.4
baz=55
HLID Hailey 55.15 316 eP P 05 17 28.7 -0.4
comp=Z,24nm,1.0s,mb4.9
HLID epP pP 05 18 05.9 +4.5
BFSC Mount Baldy Ra 55.17 304 ⇑P P 05 17 29.1 -0.4
baz=55
D15A Lincoln 55.18 320 ⇑P P 05 17 28.7 -0.6
baz=55,SNR=16
K12A Draper Farm, C 55.19 314 ⇑P P 05 17 29.6 +0.1
baz=55
Q10A Clear Creek Ra 55.19 310 ⇑P P 05 17 29.7 +0.2
baz=55,SNR=9.2
N11A Elko Archery C 55.23 312 ⇓P P 05 17 29.3 -0.5
baz=55
B16A M & M Farms, S 55.24 322 ⇓P P 05 17 29.0 -0.8
baz=55,SNR=8.8
F14A Wisdom 55.25 319 ⇓P P 05 17 29.4 -0.5
baz=55
PVAQ Vaqueiros 55.33 52 eP P 05 17 32.3 +1.7
comp=Z,58nm,2.3s,mb4.9
PTOM Tomar 55.35 49 eP P 05 17 31.8 +1.1

comp=Z,58nm,1.8s,mb5.0
PTOM *e*pP pP 05 18 05.9 +3.0
PBEJ Beja 55.36 51 *e*P **P 05 17 32.7 +1.9**
comp=Z,30nm,1.8s,mb4.7
EVO Evora 55.37 51 *e*P **P 05 17 30.6 -0.3**
comp=Z,22nm,1.0s,mb4.5
EVO Evora 55.37 51 *e*P **P 05 17 31.9 +1.0**
comp=Z,31nm,1.7s,mb4.8
H13A Challis 55.38 317 ⇓P **P 05 17 29.9 -0.9**
baz=56,SNR=10
MPMC Manual Prospec 55.39 306 ⇑P **P 05 17 30.9 -0.2**
baz=55,SNR=9.0
A16A West Butte Ran 55.40 323 ⇑P **P 05 17 30.5 -0.5**
baz=56,SNR=22
LRMC Laurel Mountai 55.43 305 ⇑P **P 05 17 31.2 -0.1**
baz=56,SNR=7.7
P10A Eureka 55.44 311 ⇓P **P 05 17 31.1 -0.3**
baz=56,SNR=5.6
M11A Holland Ranch, 55.45 313 ⇓P **P 05 17 31.1 -0.3**
baz=56,SNR=23
GRAC Grapevine Rang 55.50 307 ⇑P **P 05 17 32.0 +0.2**
baz=56,SNR=8.4
J12A Stokes Ranch, 55.52 315 ⇑P **P 05 17 31.0 -0.8**
baz=56,SNR=11
C15A Salmond Ranch, 55.53 321 ⇓P **P 05 17 31.2 -0.6**
baz=56,SNR=24
E14A Clinton 55.55 319 ⇑P **P 05 17 31.6 -0.4**
baz=56,SNR=7.7
G13A Cobalt 55.55 318 ⇓P **P 05 17 30.9 -1.1**
baz=56,SNR=6.0
EDW2 Edwards Air Fo 55.56 305 ⇓P **P 05 17 32.1 -0.2**
baz=56,SNR=5.8
CHMT Chamberlain Mo 55.59 320 *e*P **P 05 17 31.8 -0.5**
CIS Catalina Islan 55.63 303 ⇓P **P 05 17 32.7 -0.1**
baz=56
L11A Cat Creek Ranc 55.64 314 ⇓P **P 05 17 32.1 -0.6**
baz=56,SNR=16
O10A Cortez Mining, 55.65 311 ⇑P **P 05 17 32.3 -0.5**
baz=56
SCI San Clemente I 55.68 302 ⇑P **P 05 17 32.8 -0.4**
baz=56
B15A Bradely Ranch, 55.72 322 ⇑P **P 05 17 32.2 -1.0**
baz=56,SNR=22
I12A Atlanta 55.72 316 ⇓P **P 05 17 32.7 -0.6**
baz=56,SNR=27
N10A Dunphy 55.77 312 ⇓P **P 05 17 32.8 -0.9**
baz=56
PESTR Estremoz 55.77 50 *e*P **P 05 17 35.4 +1.7**
comp=Z,37nm,1.4s,mb5.0
PESTR *e*pP pP 05 18 09.7 +3.7
H12A Diamond D Ranc 55.78 317 ⇓P **P 05 17 32.8 -0.9**
baz=56,SNR=8.4
D14A Greenough 55.81 320 ⇓P **P 05 17 33.2 -0.7**
baz=56,SNR=16
F13A Darby 55.86 318 ⇑P **P 05 17 33.4 -0.8**
baz=56,SNR=6.5
SLMT Seeley Lake 55.87 320 *e*P **P 05 17 33.7 -0.6**
MSO Missoula 55.99 320 *e*P **P 05 17 34.5 -0.7**
comp=Z,8.5nm,1.2s,mb4.5
E13A Victor 56.01 319 ⇓P **P 05 17 34.7 -0.6**
baz=56,SNR=9.4
M10A I.L. Ranch, Tu 56.02 313 ⇑P **P 05 17 34.9 -0.5**
baz=56
K11A Parker Ranch, 56.02 314 ⇓P **P 05 17 34.7 -0.7**
baz=56,SNR=8.5
PVIS Viseu 56.02 48 *e*P **P 05 17 36.6 +1.1**
comp=Z,40nm,1.5s,mb5.0
PBAR Barrancos 56.03 51 *e*P **P 05 17 37.2 +1.6**
comp=Z,27nm,1.7s,mb4.8
PBAR *e*pP pP 05 18 11.2 +3.3
MFID Camas Ranch 56.08 315 ⇑P **P 05 17 35.0 -0.8**
baz=56
A15A Johnson Ranch, 56.09 322 ⇑P **P 05 17 35.2 -0.7**
baz=56,SNR=38
ISA Isabella 56.10 305 ⇓P **P 05 17 36.0 -0.1**
baz=56
ISA Isabella 56.10 305 *e*P **P 05 17 35.8 -0.3**
comp=Z,3.5nm,0.9s,mb4.2
PCBR Castelo Branco 56.10 49 *e*P **P 05 17 37.1 +1.1**
comp=Z,36nm,1.2s,mb5.1
PCBR *e*pP pP 05 18 11.5 +3.1
L10A Juniper Basin 56.12 313 ⇑P **P 05 17 35.8 -0.4**
baz=56,SNR=23
BMN Battle Mountai 56.22 311 *e*P **P 05 17 36.4 -0.5**
comp=Z,59nm,1.7s,mb5.1
C14A Swan Lake 56.23 321 ⇑P **P 05 17 36.2 -0.7**
baz=56
SFJD Kangerlussuaq 56.27 6 P **P 05 17 36.2 -0.5**
comp=Z,7.9nm,0.7s,mb4.6,baz=208,slow=7.0,SNR=4.0
ARVC Arvin 56.28 305 ⇑P **P 05 17 37.2 -0.2**
baz=56
SWMT Swartz Lake 56.29 320 *e*P **P 05 17 36.9 -0.4**
SWMT *e*PcP PcP 05 18 32.6 -0.4
BLG Laguna Peak 56.29 304 ⇓P **P 05 17 36.8 -0.7**
baz=56
PVRL Vila Real 56.30 48 *e*P **P 05 17 38.8 +1.3**
comp=Z,40nm,1.3s,mb5.1
PVRL *e*pP pP 05 18 12.9 +3.1
I11A Placerville 56.32 316 ⇓P **P 05 17 36.7 -0.9**
baz=56,SNR=38
D13A Huson 56.42 320 ⇓P **P 05 17 37.4 -0.8**
baz=56,SNR=23
YBMT Yellow Bay 56.43 321 *e*P **P 05 17 38.2 0.0**
YBMT *e*pP pP 05 18 16.6 +6.0
YBMT *e*PP PP 05 19 43.8 -1.5
F12A Elk City 56.46 318 ⇑P **P 05 17 37.5 -0.9**
baz=56,SNR=12
A14A Double T Ranch 56.51 322 ⇓P **P 05 17 37.7 -1.0**
baz=57,SNR=18
MTUM Tungsten Hills 56.51 307 *e*P **P 05 17 39.5 +0.5**
NVAR Mina Array Bea 56.54 309 P **P 05 17 39.0 -0.2**
comp=Z,4.4nm,0.7s,mb4.4,baz=110,slow=6.6,SNR=24
H11A Donnelly 56.61 317 ⇑P **P 05 17 38.3 -1.3**
baz=57,SNR=8.0
K10A MacKenzie Ranc 56.61 314 ⇓P **P 05 17 38.9 -0.7**
baz=57,SNR=17
C13A Hot Springs 56.71 320 ⇓P **P 05 17 39.5 -0.7**
baz=57,SNR=15
MVO Moncorvo 56.77 48 *e*P **P 05 17 42.2 +1.4**
comp=Z,45nm,1.5s,mb5.1
MVO *e*pP pP 05 18 16.6 +3.4
TIC Toumodi 56.77 89 *e*P **P 05 17 40.9 -0.3**
comp=Z,114nm,1.6s,mb5.4
MLAC Mammoth Lakes 56.78 308 ⇑P **P 05 17 41.0 +0.1**
baz=57
LIC Lamto 56.83 90 *e*P **P 05 17 41.3 -0.4**
comp=Z,35nm,0.8s,mb5.0,baz=274
LIC Lamto 56.83 90 *e*P **P 05 17 41.3 -0.4**
comp=Z,124nm,1.3s,mb5.6
WALA Waterton Lakes 56.84 322 *e*P **P 05 17 40.5 -0.6**
comp=Z,0.5nm,1.2s
WALA *e*pP pP 05 18 19.9 +6.4
WALA *e*PcP PcP 05 18 35.0 -0.2
E12A Beaver Dam Sad 56.89 319 ⇓P **P 05 17 40.6 -0.9**
baz=57
B13A Whitefish 56.91 321 ⇓P **P 05 17 40.7 -0.9**
baz=57,SNR=6.1
BSMT Bassoo Peak 56.91 320 *e*P **P 05 17 41.1 -0.5**
DBIC Dimbokro 56.93 89 P **P 05 17 42.1 -0.2**
comp=Z,17nm,0.7s,mb5.0,baz=271,slow=7.1,SNR=28
DBIC LR LR 05 36 54.4
comp=Z,60nm,20.4s,baz=12,slow=30
DBIC Dimbokro 56.93 89 *e*P **P 05 17 42.6 +0.2**
comp=Z,25nm,0.8s,mb5.1
DBIC *e*pP pP 05 18 14.9 +0.1
I10A Payette 56.95 316 ⇓P **P 05 17 40.8 -1.2**
baz=57
MDT Midelt 56.98 58 P **P 05 17 43.6 +1.2**
baz=296,slow=6.1
MDT LR LR 05 38 50.5
comp=Z,76nm,19.0s,baz=166,slow=32
D12A Red Ives Fores 56.98 319 ⇓P **P 05 17 41.1 -1.0**
baz=57
G11A Walters Elk Ra 57.01 317 ⇑P **P 05 17 40.9 -1.4**
baz=57
PKM Peak Mountain 57.04 304 ⇓P **P 05 17 42.5 -0.3**
baz=57
H10A Noah's Angus R 57.07 316 ⇑P **P 05 17 41.1 -1.7**
baz=57,SNR=19
KIC Kosan Boka 57.09 90 *e*P **P 05 17 43.4 -0.1**
comp=Z,87nm,1.0s,mb5.5
A13A Flathead Natio 57.09 322 ⇓P **P 05 17 42.1 -0.8**
baz=57
F11A Grangeville 57.09 318 ⇓P **P 05 17 41.7 -1.3**
baz=57,SNR=15
WAKR Walker 57.43 309 *e*P **P 05 17 45.6 +0.2**
BMO Blue Mountains 57.53 316 *e*P **P 05 17 44.4 -1.6**
comp=Z,16nm,1.1s,mb4.8
G10A Bishop Farm, J 57.54 317 ⇓P **P 05 17 44.6 -1.5**
baz=58,SNR=6.4
B12A Libby 57.64 321 ⇓P **P 05 17 46.2 -0.5**
baz=58,SNR=9.1
H09A Durkee 57.72 316 ⇓P **P 05 17 46.2 -1.2**
baz=58,SNR=6.6
WVOR Wild Horse Val 57.77 313 *e*P **P 05 17 46.3 -1.4**
comp=Z,22nm,1.4s,mb4.8
C11A Tepee Creek (N 57.83 320 ⇑P **P 05 17 47.2 -0.9**
baz=58,SNR=13
F10A Beach Ranch, E 57.83 318 ⇑P **P 05 17 46.7 -1.5**
baz=58
WCN Washoe City 57.84 309 ⇑P **P 05 17 48.2 -0.2**
baz=58
A12A Yaak River Ran 57.85 321 ⇓P **P 05 17 48.0 -0.2**
baz=58
J08A Circle Bar Ran 57.90 314 ⇑P **P 05 17 47.7 -1.0**
baz=58,SNR=8.5
G09A Cove 57.98 317 ⇑P **P 05 17 48.3 -0.9**
baz=58,SNR=11
CMB Columbia Colle 58.06 308 *e*P **P 05 17 48.3 -1.6**
comp=Z,14nm,1.4s,mb4.6
EDM Edmonton 58.27 327 *e*P **P 05 17 49.7 -1.3**
EDM *e*pP pP 05 18 23.5 -0.1
H08A Prairie City 58.36 316 ⇑P **P 05 17 51.2 -0.6**
baz=58,SNR=15
PAB San Pablo 58.38 50 *e*P **P 05 17 53.2 +1.1**
comp=Z,27nm,1.4s,mb4.9
PAB *e*pP pP 05 18 26.8 +2.2
BEKR Beckworth 58.42 310 ⇓P **P 05 17 51.4 -0.9**
baz=58,SNR=6.5
LNOR Lincton Mounta 58.50 317 *e*P **P 05 17 51.4 -1.4**
LNOR *e*pP pP 05 18 28.5 +3.2
LNOR *e*PcP PcP 05 18 41.8 0.0
NEW Newport 58.52 320 *e*P **P 05 17 51.6 -1.3**
comp=Z,27nm,0.8s,mb5.1
E09A Wood Farm, Sta 58.60 318 ⇓P **P 05 17 52.1 -1.4**
baz=59
ESDC Sonseca Array 58.70 50 P **P 05 17 55.5 +1.2**
comp=Z,5.5nm,0.6s,mb4.5,baz=258,slow=7.1,SNR=26
ESDC pP pP 05 18 29.2 +2.4
comp=Z,19nm,0.8s,baz=260,slow=7.1,SNR=12
ESLA Sonseca Array 58.70 50 *e*P **P 05 17 55.7 +1.4**
comp=Z,5.7nm,1.0s,mb4.4
ESLA *e*pP pP 05 18 29.6 +2.7
G08A Pilot Rock 58.78 316 ⇓P **P 05 17 53.5 -1.2**
baz=59,SNR=5.3
MOD Modoc 58.83 312 *e*P **P 05 17 54.4 -0.8**
comp=Z,5.9nm,0.8s,mb4.5
MOD *e*PcP PcP 05 18 43.0 -0.2
OHCM Honcut 59.16 309 *e*P **P 05 17 57.6 +0.1**
E08A Dider Farm, El 59.20 318 ⇑P **P 05 17 56.3 -1.3**
baz=59
OD2 Odessa Site #2 59.25 319 *e*P **P 05 17 57.2 -0.7**
D08A Wollman Farm, 59.28 318 ⇓P **P 05 17 57.0 -1.2**
baz=59
K05A Summer Lake 59.45 313 ⇑P **P 05 17 59.2 -0.2**
baz=60,SNR=26
HAWA Hanford 59.48 318 *e*P **P 05 17 58.4 -1.2**
comp=Z,5.5nm,0.8s,mb4.4
LASM Arnica Sink 59.69 312 P **P 05 18 01.2 +0.1**
G06A Carlson Farm, 59.90 316 ⇑P **P 05 18 02.1 -0.3**
baz=60
B08A Colville Reser 59.95 320 ⇓P **P 05 18 01.3 -1.3**
baz=60,SNR=10
TBM Table Mountain 60.41 318 P **P 05 18 05.8 -0.1**
NLW Nelson Butte 60.50 319 P **P 05 18 07.8 +1.3**
YBH Yreka Blue Hor 60.55 312 *e*P **P 05 18 04.4 -2.5**
comp=Z,4.9nm,0.9s,mb4.3
HOOD Mount Hood Mea 60.62 316 *e*P **P 05 18 07.1 -0.2**
comp=Z,58nm,0.8s,mb5.5
BBOR Butler Butte 60.77 313 P **P 05 18 07.1 -1.3**
H04A Detroit Lake 60.83 315 ⇓P **P 05 18 07.9 -0.8**
baz=61,SNR=12
LON Longmire 61.09 317 *e*P **P 05 18 09.7 -0.8**
comp=Z,7.4nm,0.9s,mb4.5
G04A Mulino 61.16 316 ⇑P **P 05 18 09.6 -1.4**
baz=61
QUIF Quistinic 61.26 41 *e*P **P 05 18 12.1 +0.5**
F04A Amboy 61.29 316 ⇑P **P 05 18 10.4 -1.4**
baz=61
ROSF Rostrenen 61.30 41 *e*P **P 05 18 12.5 +0.6**
LVP Lakeview Peak 61.32 317 P **P 05 18 11.3 -0.8**
D05A Enumclaw 61.33 318 ⇑P **P 05 18 10.7 -1.3**
baz=61,SNR=5.0
RPW Rockport 61.36 319 *e*P **P 05 18 10.5 -1.8**
SJPF Ste Jean 61.42 47 *e*P **P 05 18 14.0 +1.2**
comp=Z,13nm,0.8s,mb4.5
SJPF *e*pP pP 05 18 47.7 +2.1
SJPF Ste Jean 61.42 47 *e*P **P 05 18 14.0 +1.2**
comp=Z,6.6nm,0.8s,mb4.5
SJPF *e*pP pP 05 18 47.7 +2.1
JCW Jim Creek 61.56 319 *e*P **P 05 18 11.3 -2.3**
ETSF Etsaut 61.86 47 *e*P **P 05 18 16.9 +1.2**
comp=Z,11nm,0.9s,mb4.4
ETSF Etsaut 61.86 47 *e*P **P 05 18 16.9 +1.2**
comp=Z,5.3nm,0.9s,mb4.4
A05A Maple Falls 61.88 320 ⇓P **P 05 18 14.0 -1.7**
baz=62
EANR 'Ain N'Sour 62.06 55 P PcP 05 18 53.0 -3.4
F03A Seaside 62.06 316 ⇓P **P 05 18 16.2 -0.9**
baz=62,SNR=5.8
ETRT Tiaret 62.16 56 P PcP 05 18 56.0 -0.8
EBNR Beni Rached 62.45 55 P PcP 05 18 58.7 +0.8
EPF Esparros 62.53 47 *e*P **P 05 18 21.5 +1.3**
comp=Z,22nm,0.8s,mb4.8
EPF *e*pP pP 05 18 55.2 +2.0
EPF Esparros 62.53 47 *e*P **P 05 18 21.5 +1.3**
comp=Z,11nm,0.8s,mb4.7
EPF *e*pP pP 05 18 55.2 +2.0
NLWA Neilton Lookou 62.62 318 ⇑P **P 05 18 20.3 -0.4**
baz=63
NLWA Neilton Lookou 62.62 318 *e*P **P 05 18 20.4 -0.3**
comp=Z,40nm,1.1s,mb5.2
PGC Sidney 62.65 319 *e*P **P 05 18 20.1 -0.8**
comp=Z,2.2nm,0.9s,mb4.0
GRR Gorron 62.87 41 *e*P **P 05 18 22.8 +0.5**
comp=Z,13nm,0.8s,mb4.5
GRR *e*pP pP 05 18 56.3 +1.0
GRR Gorron 62.87 41 *e*P **P 05 18 22.8 +0.5**
comp=Z,6.6nm,0.8s,mb4.5
GRR *e*pP pP 05 18 56.3 +1.0
SUMG Summit 62.97 8 *e*P **P 05 18 23.2 +0.7**
comp=Z,58nm,1.0s,mb5.4
SUMG Summit 62.97 8 *i*P **P 05 18 22.2 -0.3**
comp=Z,36nm,1.0s,mb5.2
FLN La Foliniere 63.20 41 *e*P **P 05 18 25.0 +0.5**
comp=Z,64nm,1.2s,mb5.0
FLN *e*pP pP 05 18 58.8 +1.2
FLN La Foliniere 63.20 41 *e*P **P 05 18 25.0 +0.5**
comp=Z,32nm,1.2s,mb5.0
FLN *e*pP pP 05 18 58.8 +1.2
YKA Yellowknife Ar 63.24 336 P **P 05 18 22.2 -2.3**
comp=Z,4.0nm,0.6s,mb4.4,baz=110,slow=7.3,SNR=9.8
YKA *e*pP pP 05 18 57.9 +0.4
comp=Z,2.3nm,0.5s,baz=111,slow=7.5,SNR=2.7
YKA Yellowknife Ar 63.24 336 P **P 05 18 22.2 -2.3**
YKA *e*pP pP 05 18 57.9 +0.4
EKA Eskdalemuir Ar 63.54 33 P **P 05 18 26.3 -0.3**
comp=Z,1.8nm,1.0s,mb3.9,baz=278,slow=4.9,SNR=2.1
EMHD Djebel Mahouad 63.58 55 P PcP 05 19 03.3 +0.7
RJF Les Rejaudoux 63.79 45 *e*P **P 05 18 28.9 +0.5**
MTLF Montolieu 63.94 47 *e*P **P 05 18 29.8 +0.3**
comp=Z,16nm,0.8s,mb4.6
MTLF *e*pP pP 05 19 03.5 +0.9
MTLF Montolieu 63.94 47 *e*P **P 05 18 29.8 +0.3**
comp=Z,8.2nm,0.8s,mb4.6
MTLF *e*pP pP 05 19 03.5 +0.9
CAF Calviac 64.10 45 *e*P **P 05 18 30.9 +0.4**
comp=Z,13nm,0.8s,mb4.5
CAF *e*pP pP 05 19 04.8 +1.2
CAF Calviac 64.10 45 *e*P **P 05 18 30.9 +0.4**
comp=Z,6.6nm,0.8s,mb4.5
CAF *e*pP pP 05 19 04.8 +1.2
SCO Scoresbysund 64.34 14 *i*P **P 05 18 31.5 -0.1**
comp=Z,3.7nm,0.9s,mb4.2
TCF Toulx Ste Croi 64.45 44 *e*P **P 05 18 32.9 +0.1**
comp=Z,8.1nm,0.8s,mb4.3
TCF *e*pP pP 05 19 06.8 +0.9
TCF Toulx Ste Croi 64.45 44 *e*P **P 05 18 32.9 +0.1**
comp=Z,4.1nm,0.8s,mb4.3
TCF *e*pP pP 05 19 06.8 +0.9
PYM Petit Puy Mans 64.90 45 *e*P pP 05 19 10.8 +1.9
LBL Lubilhac 64.98 45 *e*P pP 05 19 11.3 +1.9
AVF Avril sur Loir 65.32 44 *e*P **P 05 18 38.3 -0.1**
AVF *e*pP pP 05 19 12.2 +0.6
PLDF La Plantade 65.36 45 *e*P pP 05 19 13.8 +1.9
SSF Saint Saulge 65.47 43 *e*P **P 05 18 39.1 -0.2**
TAM Tamanrasset 65.47 70 *e*P **P 05 18 41.7 +1.9**
comp=Z,30nm,1.1s,mb5.0
TAM *e*pP pP 05 19 14.7 +1.7
SMF Signal de Mont 65.62 44 *e*P **P 05 18 41.2 +0.9**
LOR Lormes 65.74 43 *e*P **P 05 18 40.9 -0.2**
comp=Z,6.5nm,0.6s,mb4.3
LOR *e*pP pP 05 19 14.9 +0.6
LOR Lormes 65.74 43 *e*P **P 05 18 40.9 -0.2**
comp=Z,3.3nm,0.6s,mb4.3
LOR *e*pP pP 05 19 14.9 +0.6
VIVF Saint-Julien-l 65.92 46 *e*P **P 05 18 43.3 +1.0**
VIVF *e*pP pP 05 19 17.3 +1.8
DFRA Djebel Bou Aff 65.96 55 P pP 05 19 19.0 +3.0
RES Resolute Bay 66.03 351 *e*P **P 05 18 41.0 -1.5**
comp=Z,3.4nm,0.8s,mb4.2
RES *e*PcP PcP 05 19 11.1 -0.8
RES *e*pP pP 05 19 19.3 +3.6
CASM Ain Smara 66.44 55 P pP 05 19 22.0 +3.0
SNF Seneffe 66.61 40 P **P 05 18 46.1 -0.4**
comp=Z,25nm,2.8s,mb4.5
SNF AP pP 05 19 21.7 +1.8
CKFL Kef-Lekhel 66.63 55 P pP 05 19 22.9 +2.6
DOU Dourbes 66.73 40 P **P 05 18 46.8 -0.5**
comp=Z,15nm,2.4s,mb4.4
DOU AP pP 05 19 23.2 +2.5
MEZF Maizieres J'vi 66.74 42 *e*P **P 05 18 47.5 +0.1**
MEZF *e*pP pP 05 19 21.5 +0.7
CAEH 'Ain El Ouahch 66.75 55 P pP 05 19 24.7 +3.6
ORIF Oris-en-Rattie 66.78 46 *e*P **P 05 18 48.8 +1.1**
GIVF Givet 66.87 40 *e*P **P 05 18 48.2 0.0**
GIVF *e*pP pP 05 19 22.1 +0.5
LMR La Mourre 67.04 48 *e*P **P 05 18 49.4 0.0**
CABF La Chapelle 67.15 44 *e*P **P 05 18 50.3 +0.3**
comp=Z,10nm,0.9s,mb4.4
CABF *e*pP pP 05 19 24.4 +1.0
CABF La Chapelle 67.15 44 *e*P **P 05 18 50.3 +0.3**
comp=Z,5.1nm,0.9s,mb4.3
CABF *e*pP pP 05 19 24.4 +1.0
CMAH Djebel Manchou 67.20 55 P pP 05 19 25.9 +1.9
ABSA Djebel Ababsia 67.23 55 P pP 05 19 26.3 +2.1
BCLA Clavier 67.23 40 P **P 05 18 50.1 -0.4**
BCLA AP pP 05 19 26.1 +2.2
CALN Calern 67.36 47 *e*P pP 05 19 27.0 +2.2
MBDF Montbardon 67.38 46 *e*P **P 05 18 52.4 +0.8**
comp=Z,8.7nm,0.7s,mb4.4
MBDF Montbardon 67.38 46 *e*P **P 05 18 52.4 +0.8**
comp=Z,4.3nm,0.7s,mb4.4
RSL Roselend 67.40 45 *e*P pP 05 19 26.6 +1.6
LPL La Plagne 67.45 45 *e*P **P 05 18 53.1 +1.1**
comp=Z,17nm,0.8s,mb4.6
LPL *e*pP pP 05 19 27.1 +1.7
LPL La Plagne 67.45 45 *e*P **P 05 18 53.1 +1.1**
comp=Z,8.6nm,0.8s,mb4.6
LPL *e*pP pP 05 19 27.1 +1.7
LPG La Plagne 67.46 45 *e*P **P 05 18 53.3 +1.3**
comp=Z,18nm,0.9s,mb4.6
LPG La Plagne 67.46 45 *e*P **P 05 18 53.3 +1.3**
comp=Z,8.9nm,0.9s,mb4.6
HAU Haudompre 67.52 43 *e*P **P 05 18 51.9 -0.5**
MVIF Mont Vial 67.56 47 *e*P pP 05 19 27.8 +1.7
TOUF Mont Tournerai 67.64 47 *e*P pP 05 19 28.7 +2.1
WLF Walferdange 67.65 41 AP pP 05 19 27.9 +1.4
WLF Walferdange 67.65 41 *e*P pP 05 19 28.0 +1.5
comp=Z,28nm,1.0s
LUCF Luceram 67.70 47 *e*P pP 05 19 29.1 +2.1
REVF Revere 67.70 47 *e*P pP 05 19 28.9 +1.9
MEM Membach 67.71 40 P **P 05 18 53.0 -0.5**
comp=Z,18nm,1.9s,mb4.5
MEM AP pP 05 19 28.3 +1.4
LOMF Lomont 67.75 43 *e*P pP 05 19 29.1 +1.9
SBF Sospel 67.76 47 *e*P **P 05 18 54.1 +0.1**
SBF *e*pP pP 05 19 28.3 +0.9
HINF Hinteralfeld 67.83 43 *e*P **P 05 18 53.7 -0.6**
comp=Z,8.9nm,0.6s,mb4.4
HINF *e*pP pP 05 19 27.8 +0.1
HINF Hinteralfeld 67.83 43 *e*P **P 05 18 53.7 -0.6**
comp=Z,4.4nm,0.6s,mb4.4
HINF *e*pP pP 05 19 27.8 +0.1
SAOF Saorge 67.86 47 *e*P pP 05 19 30.0 +2.0
ECH Echery 68.09 42 *e*P pP 05 19 30.7 +1.3
ECH Echery 68.09 42 *e*P **P 05 18 55.5 -0.4**
comp=Z,20nm,0.9s,mb4.8
ECH *e*pP pP 05 19 30.8 +1.4
CDF Champ du Feu 68.19 42 *e*P **P 05 18 56.3 -0.2**
comp=Z,4.9nm,0.5s,mb4.2
CDF Champ du Feu 68.19 42 *e*P **P 05 18 56.3 -0.2**
comp=Z,2.5nm,0.5s,mb4.2
LANF Langenberg 68.62 42 *e*P pP 05 19 34.3 +1.6
BUG Bochum--Univer 68.63 39 *e*P pP 05 19 33.9 +1.2
comp=Z,26nm,1.0s
KEST Kesra 68.73 56 P **P 05 19 01.2 +1.1**
comp=Z,2.6nm,0.5s,mb4.2,baz=173,slow=1.7,SNR=14
KEST Kesra 68.73 56 *e*P **P 05 19 01.1 +1.0**
PGF Pioggiola 68.79 49 *e*P **P 05 19 00.5 +0.1**
comp=Z,15nm,0.8s,mb4.5
PGF Pioggiola 68.79 49 *e*P **P 05 19 00.5 +0.1**
comp=Z,7.7nm,0.8s,mb4.5
DLBC Dease Lake 68.86 329 *e*P **P 05 19 00.3 -0.2**
BFO Black Forest 68.88 42 *e*P pP 05 19 35.3 +1.0
comp=Z,10.0nm,1.2s
VSL Villasalto 68.89 52 *e*P **P 05 19 01.5 +0.4**
comp=Z,34nm,1.1s,mb5.0
VSL *e*pP pP 05 19 35.2 +0.6
IBBN Ibbenburen 69.06 38 *e*P pP 05 19 37.6 +2.2
comp=Z,37nm,0.8s
TNS Taunus Mts 69.19 40 *e*P pP 05 19 37.5 +1.2
comp=Z,50nm,0.9s
DAG Danmarks Havn 69.43 10 ⇓*i*P **P 05 19 03.1 -0.6**
comp=Z,13nm,1.1s,mb4.6
STU Stuttgart 69.50 42 *e*P pP 05 19 39.1 +0.9
comp=Z,19nm,0.6s
DAVOX Davos/Dischmat 69.76 44 P **P 05 19 07.0 +0.8**
comp=Z,5.0nm,0.7s,mb4.3,baz=293,slow=7.9,SNR=6.7
DAVOX pP pP 05 19 41.7 +1.8
comp=Z,20nm,0.8s,baz=241,slow=5.5,SNR=11
DAVA Damuels 69.81 44 ⇑*i*P **P 05 19 07.7 +1.1**
comp=Z,9.2nm,0.8s,mb4.6,SNR=6.4
FETA Feichten 70.36 44 ⇑*i*P **P 05 19 11.0 +1.1**
comp=Z,18nm,1.3s,mb4.6,SNR=7.5
NRDL Niedersach Rie 70.52 38 *e*P pP 05 19 46.2 +1.8
comp=Z,16nm,0.9s
CLZ Clausthal 70.60 39 *e*P pP 05 19 47.0 +2.0
comp=Z,19nm,1.1s
BSEG Bad Segeberg 70.82 37 *e*P pP 05 19 47.7 +1.4
comp=Z,18nm,1.0s
FUR Furstenfeldbru 70.82 43 *e*P pP 05 19 48.4 +2.0
comp=Z,22nm,0.5s
GRF Grafenberg Arr 70.92 41 *e*P pP 05 19 49.0 +2.1
comp=Z,33nm,1.4s
MOX Moxa 71.25 40 *e*(P) pP 05 19 50.6 +1.6
TANN Tannenbergstha 71.77 41 *e*P pP 05 19 54.3 +2.2
comp=Z,10.0nm,1.0s
WET Wettzell 71.95 42 *e*P pP 05 19 55.3 +2.0
comp=Z,15nm,1.4s
KBA Koelnbreinsper 72.15 44 ⇑*i*P **P 05 19 21.3 +0.6**
comp=Z,15nm,1.1s,mb4.6,SNR=6.8
CLL Collm 72.18 40 *e*P pP 05 19 56.7 +2.1
comp=Z,10.0nm,0.8s
CLL Collm 72.18 40 ⇓*i*pP pP 05 19 56.8 +2.2
comp=Z,20nm,1.2s
CLL *e* 05 20 00.0
CLL *e* 05 20 24.0
CLL LmV 05 29 00.0
comp=Z,100nm,21.8s
NB2 NORSAR Subarra 72.31 29 P **P 05 19 22.4 +1.0**
comp=Z,0.5nm,0.7s,baz=261,slow=6.2
NOA NORSAR Array B 72.31 29 P **P 05 19 21.9 +0.5**
comp=Z,4.2nm,0.7s,mb4.3,baz=262,slow=6.1,SNR=15
NOA pP pP 05 19 57.4 +2.2
comp=Z,4.0nm,0.8s,baz=262,slow=6.1,SNR=3.9
NOA LR LR 05 48 23.3
comp=Z,33nm,19.2s,baz=270,slow=33
KHC Kasperske Hory 72.41 42 *e*P **P 05 19 22.7 +0.5**
comp=Z,19nm,1.4s,mb4.6
KHC *e*pP pP 05 19 57.3 +1.3
KHC Kasperske Hory 72.41 42 *e*P **P 05 19 23.2 +1.0**
KHC *e*pP pP 05 19 56.9 +0.9
GEC2 GERESS Array S 72.48 42 *e*P pP 05 19 58.4 +2.0
comp=Z,21nm,1.2s
JAVS Javornik 72.60 45 *i*P **P 05 19 23.9 +0.5**
JAVS *e* pP 05 19 58.2 +1.0
INK Inuvik 72.70 338 *e*P **P 05 19 21.7 -1.8**

comp=Z,12nm,1.0s,mb4.6
INK *e*pP pP 05 20 02.8 +5.4
CRNS Crni Vrh 72.74 45 *i* P **P 05 19 24.6 +0.4**
BRG Berggiesshubel 72.75 40 *e*P pP 05 19 59.8 +1.8
comp=Z,6.0nm,0.9s
BRG Berggiesshubel 72.75 40 *e*P pP 05 20 00.1 +2.1
comp=Z,8.3nm,1.0s
LJU Ljubljana 72.93 45 *i* P **P 05 19 26.0 +0.7**
LJU *e* pP 05 20 01.2 +2.0
HYT Haines Junctio 73.03 330 *e*P **P 05 19 25.9 +0.3**
PRU Pruhonice 73.08 41 *e*P **P 05 19 27.3 +1.2**
PRU *e*pP pP 05 20 01.3 +1.3
HFS Hagfors 73.41 30 P **P 05 19 28.7 +0.9**
comp=Z,4.6nm,0.6s,mb4.4,baz=232,slow=1.7,SNR=17
UPC Upice 74.05 41 *e*P **P 05 19 32.3 +0.5**
UPC *e*pP pP 05 20 08.0 +2.3
DPC Dobruska-Polom 74.24 41 *e*P **P 05 19 33.5 +0.6**
DPC *e*pP pP 05 20 07.8 +0.9
DAWY Dawson 74.30 334 *e*P **P 05 19 32.3 -0.7**
VRAC Vranov 74.39 42 P **P 05 19 34.4 +0.6**
comp=Z,2.4nm,0.4s,mb4.3,baz=223,slow=10,SNR=4.5
VRAC pP pP 05 20 09.4 +1.6
comp=Z,14nm,0.8s,baz=255,slow=7.1,SNR=5.2
TIP Timpagrande 74.61 52 *e*P **P 05 19 34.0 -1.2**
comp=Z,6.8nm,1.2s,mb4.2
EGAK Eagle 75.14 334 *e*P **P 05 19 37.0 -0.8**
comp=Z,17nm,0.8s,mb4.7
EGAK *e*pP pP 05 20 16.0 +4.1
VYHS Vyhne 75.87 43 *e*P **P 05 19 43.2 +0.9**
comp=Z,36nm,3.2s
VYHS *e*PcP PcP 05 19 53.5 -0.7
VYHS *e*PP pP 05 20 18.4 +2.0
VYHS Vyhne 75.87 43 *e*P **P 05 19 43.2 +0.9**
VYHS *e*PCP PcP 05 19 53.5 -0.7
VYHS *e*pP pP 05 20 18.4 +2.0
OJC Ojcow 76.47 41 *e*P pP 05 20 20.5 +0.7
PSZ Piszkesteto 76.59 43⇑*e*pP pP 05 20 22.7 +2.1
PSZ Piszkesteto 76.59 43‖*i*P pP 05 20 22.5 +1.9
KECS Kecovo 76.97 43 *e*P **P 05 19 49.8 +1.3**
comp=Z,2.2nm,0.9s,mb3.8
KECS *e*PcP PcP 05 19 59.7 +0.8
KECS *e*PP pP 05 20 24.8 +2.1
KECS Kecovo 76.97 43 *e*P **P 05 19 49.8 +1.3**
KECS *e*PCP PcP 05 19 59.7 +0.8
KECS *e*pP pP 05 20 24.8 +2.1
STHS Stebnicka Huta 77.43 42 *e*P **P 05 19 54.5 +3.5**
comp=Z,2.7nm,0.9s,mb3.9
STHS *e*PP pP 05 20 27.8 +2.5
STHS Stebnicka Huta 77.43 42 *e*P **P 05 19 54.5 +3.5**
STHS *e*pP pP 05 20 27.8 +2.5
CRVS Cervenica-Dubn 77.60 42 *e*P **P 05 19 53.6 +1.6**
comp=Z,4.7nm,1.1s,mb4.0
CRVS *e*PP pP 05 20 28.4 +2.2
CRVS Cervenica-Dubn 77.60 42 *e*P **P 05 19 53.6 +1.6**
CRVS *e*pP pP 05 20 28.4 +2.2
KWP Kalwaria Pacla 78.37 41 *e*pP pP 05 20 33.2 +2.7
KWP Kalwaria Pacla 78.37 41⇑*i*P **P 05 19 58.3 +2.1**
GZR Gura Zlata 78.72 46⇑P **P 05 19 59.4 +1.1**
GZR Gura Zlata 78.72 46⇑*i*P **P 05 19 59.4 +1.2**
ARCES ARCESS Array B 78.83 21 P **P 05 19 58.4 0.0**
comp=Z,16nm,0.8s,mb4.7,baz=273,slow=6.9,SNR=35
ARE0 ARCESS Array S 78.83 21 *e*P **P 05 19 58.8 +0.4**
TRF Thorofare Moun 79.12 333 *e*P **P 05 19 59.1 -0.9**
comp=Z,10nm,0.7s,mb4.6
BPAW Bear Paw Mtn. 79.39 333 *e*P **P 05 19 60.0 -1.5**
comp=Z,21nm,1.4s,mb4.6
FINES FINESS Array B 79.50 29 P **P 05 20 02.5 +0.4**
comp=Z,10nm,0.6s,mb4.6,baz=272,slow=3.3,SNR=42
FINES pP pP 05 20 37.8 +1.3
comp=Z,8.4nm,0.7s,baz=273,slow=3.2,SNR=5.0
KAF Kangasniemi 79.56 29 *e*p **P 05 20 02.1 -0.3**
comp=Z,9.0nm,0.6s,mb4.6
KAF Kangasniemi 79.56 29 *e*p **P 05 20 02.1 -0.3**
comp=Z,9.0nm,0.6s,mb4.6
BUR08 Bucovina Ar. S 80.18 43 *e*P **P 05 20 07.5 +1.4**
BUR08 *e*pP pP 05 20 42.9 +2.4
BURAR Bucovina Array 80.20 43⇑P **P 05 20 08.0 +1.8**
BURAR Bucovina Array 80.20 43⇑*i*P **P 05 20 08.0 +1.8**
MLR Muntele Rosu 80.93 45 P **P 05 20 11.1 +0.9**
comp=Z,5.1nm,0.8s,mb4.2,baz=271,slow=3.6,SNR=9.1
MLR Muntele Rosu 80.93 45⇑P **P 05 20 11.2 +1.1**
MLR Muntele Rosu 80.93 45⇑*i*P **P 05 20 11.3 +1.2**
VRI Vrincioaia 81.43 45‖P **P 05 20 14.1 +1.3**
VRI Vrincioaia 81.43 45‖*i*P **P 05 20 14.1 +1.3**
TTA Tatalina 81.75 333 *e*P **P 05 20 12.4 -1.7**
comp=Z,6.0nm,1.0s,mb4.2
JOF Joensuu 81.78 27 *e*p **P 05 20 13.3 -0.9**
comp=Z,24nm,1.0s,mb4.8
JOF Joensuu 81.78 27 *e*p **P 05 20 13.3 -0.9**
comp=Z,24nm,1.0s,mb4.8
SVW2 Sparrevohn 81.82 331 *e*P **P 05 20 13.2 -1.2**
AKASG Malin Array Be 82.43 40 P **P 05 20 17.4 -0.5**
comp=Z,0.7nm,0.4s,mb3.6,baz=259,slow=5.1,SNR=6.5
AKASG pP pP 05 20 53.5 +1.0
comp=Z,2.6nm,0.7s,baz=258,slow=5.0,SNR=3.4
TSUM Tsumeb 84.35 111 *e*P **P 05 20 29.5 +1.2**
comp=Z,35nm,0.9s,mb5.1
TSUM *e*pP pP 05 21 04.3 +1.3
BR131 Keskin Array S 87.49 50 *e*P **P 05 20 44.4 +1.0**
comp=Z,3.7nm,0.7s,mb4.3
BRTR Keskin Array B 87.49 50 P **P 05 20 44.1 +0.7**
comp=Z,4.4nm,0.7s,mb4.4,baz=265,slow=4.9,SNR=20
UNV Unalaska Valle 89.21 325 *e*P **P 05 20 50.4 -0.8**
comp=Z,118nm,1.4s,mb5.6
PPT Papeete 90.70 252 LR LR 05 52 52.5
comp=Z,69nm,18.7s,baz=112,slow=30
BOSA Boshof 93.23 118 P **P 05 21 10.9 +0.5**
comp=Z,6.6nm,0.9s,mb4.8,baz=263,slow=3.7,SNR=8.0
BOSA LR LR 06 01 17.1
comp=Z,75nm,18.3s,baz=158,slow=34
LSZ Lusaka 93.43 105 *e*P **P 05 21 12.8 +1.3**
comp=Z,18nm,1.6s,mb5.0
TIXI Tiksi 96.98 356 *e*P **P 05 21 24.7 -1.9**
TIXI *e*pP pP 05 22 04.0 +2.2
QSPA South Pole Qui 101.21 180 *e*Pdif Pdif 05 21 45.8 0.0
BVAR Borovoye Array 104.38 27 PKKPbc PKKPbc 05 37 44.0 -4.0
comp=Z,0.5nm,0.4s,baz=131,slow=4.4,SNR=4.3
MKAR Makanchi Array 114.17 26 PKKPbc PKKPbc 05 37 13.6 -3.1
comp=Z,0.8nm,0.5s,baz=99,slow=7.9,SNR=8.0
WMQ Urumqi 118.82 24 *e*PKP PKPdf 05 26 40.0 -3.3
SONM Songino Array 120.37 9 PKKPbc PKKPbc 05 36 51.7 -3.2
comp=Z,2.0nm,0.9s,baz=168,slow=5.0,SNR=7.1
CN2 Changchun 124.78 353 *e*PKP PKPdf 05 26 53.3 -1.5
GTA Gaotai 126.97 17 *e*PKP PKPdf 05 26 58.0 -1.1
GTA sPKP 05 27 57.0
HHC Hu-ho-hao-te 127.89 6 *e*PKP PKPdf 05 26 57.5 -3.3
HHC sPKP 05 27 56.8
HHC PP PP 05 29 04.8 +1.6
HHC PKS 05 30 33.0
HHC SKS SKSdf 05 33 51.8 -8.1
HHC SKKS SKKSac 05 35 39.8 -8.8
HHC AMB AMB
comp=Z,64nm,5.5s
HHC LR LR
comp=N,62nm,19.2s
HHC LR LR
comp=E,91nm,19.2s
HHC LR LR
comp=Z,64nm,19.2s
MAJO Matsushiro 128.69 339 *e*PKPdf PKPdf 05 27 00.7 -1.8
MJAR Matsushiro Arr 128.69 339 PKP PKPdf 05 27 00.9 -1.6
comp=Z,3.6nm,0.9s,baz=38,slow=1.4,SNR=15
BJI Beijing 128.99 1 PKP PKPdf 05 27 02.0 -0.9
BJI LR LR
comp=Z,36nm,24.1s
KSRS Korea Array 130.63 349 PKP PKPdf 05 27 04.3 -1.8
comp=Z,4.3nm,0.8s,baz=36,slow=1.1,SNR=22
KSRS SKPbc SKPbc 05 30 12.9 -4.4
comp=Z,2.4nm,1.0s,baz=4.9,slow=3.8,SNR=7.8
LZH Lanzhou 131.19 15 *e*PKP PKPdf 05 27 04.0 -3.2
LZH sPKP 05 28 03.3
LZH *e*PP PP 05 29 27.5 +2.7
LZH SKKS SKKSac 05 36 00.5 -8.7
LZH AMB AMB
comp=Z,97nm,8.6s
LZH LR LR
comp=E,110nm,18.1s
LZH LR LR
comp=Z,160nm,20.3s
CD2 Chengdu 136.05 17 *e*PKP PKPdf 05 27 12.5 -4.0
CD2 sPKP 05 28 11.8
CD2 PP PP 05 29 57.0 +1.2
CD2 PKS 05 30 47.5
CD2 SKS SKSdf 05 34 05.5 -9.5
CD2 SKKS SKKSac 05 36 31.0 -7.9
CD2 SS SS 05 47 41.0 -2.7
CD2 AMB AMB
comp=Z,120nm,10.2s
CD2 LR LR
comp=N,120nm,18.2s
CD2 LR LR
comp=Z,100nm,16.2s
GYA Guiyang 141.06 16 PKP PKPdf 05 27 22.8 -3.0
GYA sPKP 05 28 18.0
GYA PP PP 05 30 29.0 +2.3
GYA PKS 05 30 57.5
GYA SKKS SKKSac 05 37 02.3 -6.3
GYA SS SS 05 48 41.0 -1.8
GYA AMB AMB
comp=Z,120nm,8.5s
GYA LR LR
comp=N,180nm,24.8s
GYA LR LR
comp=E,130nm,22.0s
GYA LR LR
comp=Z,140nm,25.5s
KMI Kunming 141.07 22 PKP PKPdf 05 27 22.5 -3.3
KMI sPKP 05 28 21.8
KMI PP PP 05 30 29.8 +2.9
KMI SS SS 05 48 40.3 -2.8
KMI AMB AMB
comp=Z,94nm,5.9s
KMI LR LR
comp=N,140nm,16.6s
KMI LR LR
comp=E,79nm,15.4s
KMI LR LR
comp=Z,100nm,19.7s
CNB Canberra Magne 142.53 225 *e*PKP PKPdf 05 27 24.2 -3.9
ARMA Armidale 143.13 234 *e*P PKPdf 05 27 25.7 -3.6
ARMA Armidale 143.13 234 *e*PKPdf PKPdf 05 27 25.1 -4.2
TOO Toolangi 143.76 219 *e*PKP PKPdf 05 27 26.9 -3.3
CHTO Chiang Mai 144.93 32 *e*PKPdf PKPdf 05 27 31.3 -1.5
SSLB Suanglung 145.06 355 *e*PKPdf PKPdf 05 27 30.6 -2.3
CM31 Chiang Mai Arr 145.22 32 *e*PKPdf PKPdf 05 27 33.1 -0.1
CMAR Chiang Mai Arr 145.22 32 PKPbc PKPbc 05 27 32.6 -0.6
comp=Z,20nm,0.9s,baz=318,slow=5.0,SNR=77
CMAR pPKPbc 05 28 10.8
comp=Z,11nm,0.8s,baz=312,slow=5.5,SNR=4.8
CMAR SKPbc SKPbc 05 30 56.9 -3.4
comp=Z,2.3nm,0.7s,baz=302,slow=3.1,SNR=4.3
EIDS Eidsvold 145.38 241 *e*PKPdf PKPdf 05 27 31.7 -1.6
STKA Stephens Creek 149.81 223 PKP PKPdf 05 27 40.0 -0.5
comp=Z,49nm,0.9s,baz=107,slow=2.1,SNR=29
STKA PKPbc PKPbc 05 27 44.4 -1.0
comp=Z,49nm,0.9s,baz=110,slow=4.9,SNR=36
STKA PKPab PKPab 05 27 50.4 -0.7
comp=Z,19nm,0.6s,baz=106,slow=3.6,SNR=15
STKA Stephens Creek 149.81 223 *e*PKPdf PKPdf 05 27 39.8 -0.7
STKA *e*PKPbc PKPbc 05 27 44.5 -0.8
STKA *e*PKPab PKPab 05 27 50.4 -0.8
CTAO Charters Tower 151.10 249 *e*PKPdf PKPdf 05 27 42.1 -0.7
CTAO *e*PKPbc PKPbc 05 27 47.6 -1.2
COEN Coen 154.92 261 *e*PKPbc PKPbc 05 27 55.7 -1.6
FORT Forrest 158.26 205 *e*PKP PKPab 05 28 26.2 -0.8
comp=Z,29nm,0.6s
FORT Forrest 158.26 205 *e*PKPdf PKPdf 05 27 51.1 -1.2
FORT *e*PKPab PKPab 05 28 25.8 -1.1
ASAR Alice Springs 160.17 229 PKP PKPdf 05 27 53.5 -1.2
comp=Z,3.7nm,0.9s,baz=114,slow=1.4,SNR=24
ASAR PKPab PKPab 05 28 33.1 -2.4
comp=Z,3.4nm,0.6s,baz=125,slow=3.9,SNR=9.4
WRA Warramunga Arr 161.73 240 PKP PKPdf 05 27 55.1 -1.4
comp=Z,12nm,0.9s,baz=93,slow=0.9,SNR=52
WRA PKPab PKPab 05 28 40.2 -2.3
comp=Z,15nm,1.0s,baz=116,slow=4.7,SNR=23

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*IDC **27** 05:18:53.8±1.2,38°.15N×21°.57E,h0km,mb3.8/10, mb1 3.8/11,mb1mx3.8/25,mbtmp3.8/11,ML3.5/1,MS3.0/6, Ms1 3.0/6,ms1mx2.6/33,Error ellipse: s-maj=24.9km s-min=19.9km az=60.0*
*ISCJB **27** 05:18:54.6±0.4,38°.02N±0°.02×21°.47E±0°.02,h5km±2km, mb3.8/10,MS3.1/3,Error ellipse: s-maj=2.9km s-min=2.4km az=36.0*
*THE **27** 05:18:55.5,38°.01N×21°.52E,h6km±1km,ML4.7/10,Error ellipse: s-maj=1.0km s-min=0.6km az=95.0*
*CSEM **27** 05:18:55.3±0.2,38°.02N×21°.50E,h6km±1km,ML4.2,Error ellipse: s-maj=3.5km s-min=2.9km az=47.0*
*NEIC **27** 05:18:56.1,38°.02N×21°.55E,h14km,ML4.2(ATH),After ATH.*
*ATH **27** 05:18:56.1,38°.02N×21°.55E,h14km±1km,MD4.0/18, ML4.2*
*HLW **27** 05:19:15.9,36°.50N×22°.00E,h28km±13km,Md3.9,Ml3.8*
ISC 27 05:18:55.8±0.4,38°.03N±0°.02×21°.50E±0°.02,h6km±2km, n241,σ1§19/299,mb3.8/10,MS3.1/3,1D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.04**	**319**	*e*Pg	**Pg**	**05 18 59.1**	**+2.0**
RLS	**Riolos of Patr**	**0.04**	**319**	*e*PG	**Pg**	**05 18 59.1**	**+2.0**
RLS	**Riolos of Patr**	**0.04**	**319**	*e*Pg	**Pg**	**05 18 59.1**	**+2.0**
UPR	**University Cam**	**0.34**	**41**	P	**Pg**	**05 19 02.7**	**+0.3**
UPR	**University Cam**	**0.34**	**41**	*e*PG	**Pg**	**05 19 02.4**	**0.0**
UPR	**University Cam**	**0.34**	**41**	*e*Pg	**Pg**	**05 19 02.4**	**0.0**
UPR	**University Cam**	**0.34**	**41**	P	**Pg**	**05 19 02.7**	**+0.3**
LAKA	**Lakka**	**0.43**	**60**	P	**Pg**	**05 19 03.8**	**-0.4**
LAKA				S	**Sg**	**05 19 10.4**	**+0.6**
LAKA	**Lakka**	**0.43**	**60**	P	**Pg**	**05 19 03.8**	**-0.4**
LAKA				S	**Sg**	**05 19 10.4**	**+0.6**
EFP	**Efpalio**	**0.51**	**39**	P	**Pg**	**05 19 05.3**	**-0.4**
EFP				S	**Sg**	**05 19 13.3**	**+1.0**
EFP	**Efpalio**	**0.51**	**39**	*e*PB	**Pg**	**05 19 05.3**	**-0.4**
EFP				*e*SB	**Sg**	**05 19 13.6**	**+1.3**
EFP	**Efpalio**	**0.51**	**39**	P	**Pg**	**05 19 05.3**	**-0.4**
EFP				S	**Sg**	**05 19 13.3**	**+1.0**
EFP				*e*Sb	**Sg**	**05 19 13.6**	**+1.3**
TRIZ	**Trizonia**	**0.56**	**53**	P	**Pg**	**05 19 06.2**	**-0.5**
TRIZ				S	**Sg**	**05 19 14.3**	**+0.3**
TRIZ	**Trizonia**	**0.56**	**53**	P	**Pg**	**05 19 06.2**	**-0.5**
TRIZ				S	**Sg**	**05 19 14.3**	**+0.3**
KFL	**Anninata**	**0.57**	**279**	P	**Pg**	**05 19 07.5**	**+0.8**
KALE	**Kalithea**	**0.62**	**54**	P	**Pg**	**05 19 07.0**	**-0.8**
KALE				S	**Sg**	**05 19 16.4**	**+0.6**
KALE	**Kalithea**	**0.62**	**54**	P	**Pg**	**05 19 07.0**	**-0.8**
KALE				S	**Sg**	**05 19 16.4**	**+0.6**
GUR	**Goura**	**0.67**	**98**	P	**Pg**	**05 19 07.5**	**-1.2**
GUR				S	**Sg**	**05 19 17.5**	**+0.1**
GUR	**Goura**	**0.67**	**98**	*e*PB	**Pg**	**05 19 07.6**	**-1.1**
GUR				*e*SB	**Sg**	**05 19 17.6**	**+0.2**
GUR	**Goura**	**0.67**	**98**	*e*Pb	**Pg**	**05 19 07.6**	**-1.1**
GUR				S	**Sg**	**05 19 17.5**	**+0.1**
VLS	**Valsamata**	**0.73**	**282**	*e*Pb	**Pg**	**05 19 10.1**	**+0.2**
VLS				*e*Sb	**Sg**	**05 19 23.1**	**+3.6**
VLS	**Valsamata**	**0.73**	**282**	P	**Pg**	**05 19 09.8**	**-0.1**
VLS	**Valsamata**	**0.73**	**282**	*e*PB	**Pg**	**05 19 10.1**	**+0.2**
VLS				*e*SB	**Sg**	**05 19 23.1**	**+3.6**
VLS	**Valsamata**	**0.73**	**282**	P	**Pg**	**05 19 09.8**	**-0.1**
VLS	**Valsamata**	**0.73**	**282**	*e*Pb	**Pg**	**05 19 10.1**	**+0.2**
DSF	**Desfina**	**0.90**	**64**	P	**Pg**	**05 19 11.3**	**-1.7**
DSF				S	**Sg**	**05 19 25.2**	**+0.6**
DSF	**Desfina**	**0.90**	**64**	P	**Pg**	**05 19 11.3**	**-1.7**
DSF				S	**Sg**	**05 19 25.2**	**+0.6**
ITM	**Ithomi**	**0.91**	**158**	*e*Pb	**Pg**	**05 19 13.2**	**-0.1**
ITM	**Ithomi**	**0.91**	**158**	P	**Pg**	**05 19 12.3**	**-1.0**
ITM	**Ithomi**	**0.91**	**158**	*e*PB	**Pg**	**05 19 13.2**	**-0.1**
ITM	**Ithomi**	**0.91**	**158**	P	**Pg**	**05 19 12.3**	**-1.0**
ITM	**Ithomi**	**0.91**	**158**	*e*Pb	**Pg**	**05 19 13.2**	**-0.1**
EVR	**Evrytania**	**0.92**	**15**	*e*Pn	**Pg**	**05 19 14.9**	**+1.4**
EVR	**Evrytania**	**0.92**	**15**	*e*PN	**Pg**	**05 19 14.9**	**+1.4**
EVR	**Evrytania**	**0.92**	**15**	*e*Pn	**Pg**	**05 19 14.9**	**+1.4**
VLX	**Vlachokerasia**	**0.96**	**133**	P	**Pg**	**05 19 13.4**	**-0.8**
VLX				S	**Sg**	**05 19 26.5**	**-0.1**
VLX	**Vlachokerasia**	**0.96**	**133**	*e*PG	**Pg**	**05 19 13.1**	**-1.1**
VLX				*e*SB	**Sb**	**05 19 27.9**	**+0.2**
VLX	**Vlachokerasia**	**0.96**	**133**	*e*Pg	**Pg**	**05 19 13.1**	**-1.1**
VLX	**Vlachokerasia**	**0.96**	**133**	P	**Pg**	**05 19 13.4**	**-0.8**
VLX				S	**Sg**	**05 19 26.5**	**-0.1**
VLX				*e*Sb	**Sb**	**05 19 27.9**	**+0.2**
LKD2	**Lefkada island**	**1.01**	**319**	P	**Pg**	**05 19 14.3**	**-0.9**
LKD2				S	**Sg**	**05 19 29.4**	**+1.1**
LKD2	**Lefkada island**	**1.01**	**319**	P	**Pg**	**05 19 14.3**	**-0.9**
LKD2				S	**Sg**	**05 19 29.4**	**+1.1**
PYL	**PYLOS**	**1.15**	**170**	P	**Pg**	**05 19 15.9**	**-1.9**
PYL	**PYLOS**	**1.15**	**170**	*e*PG	**Pg**	**05 19 17.3**	**-0.5**
PYL	**PYLOS**	**1.15**	**170**	P	**Pg**	**05 19 15.9**	**-1.9**
PYL	**PYLOS**	**1.15**	**170**	*e*Pg	**Pg**	**05 19 17.3**	**-0.5**
LTK	**Loutraki**	**1.16**	**90**	P	**Pg**	**05 19 16.2**	**-1.8**
LTK				S	**Sg**	**05 19 32.9**	**-0.1**
LTK	**Loutraki**	**1.16**	**90**	*e*PB	**Pg**	**05 19 16.3**	**-1.7**
LTK				*e*SB	**Sg**	**05 19 32.6**	**-0.4**
LTK	**Loutraki**	**1.16**	**90**	P	**Pg**	**05 19 16.2**	**-1.8**
LTK				*e*Sb	**Sg**	**05 19 32.6**	**-0.4**
LTK				S	**Sg**	**05 19 32.9**	**-0.1**
AGG	**Agios Georgios**	**1.19**	**33**	*e*Pg	**Pg**	**05 19 18.2**	**-0.4**
AGG				*e*Sb	**Sb**	**05 19 35.7**	**+1.4**
AGG	**Agios Georgios**	**1.19**	**33**	P	**Pg**	**05 19 17.4**	**-1.2**
AGG				S	**Sg**	**05 19 35.6**	**+1.6**
AGG	**Agios Georgios**	**1.19**	**33**	*e*PG	**Pg**	**05 19 18.2**	**-0.4**
AGG				*e*SB	**Sb**	**05 19 35.7**	**+1.4**
AGG	**Agios Georgios**	**1.19**	**33**	P	**Pg**	**05 19 17.4**	**-1.2**
AGG	**Agios Georgios**	**1.19**	**33**	*e*Pg	**Pg**	**05 19 18.2**	**-0.4**
AGG				*e*Sb	**Sb**	**05 19 35.7**	**+1.4**
LKR	**Lokris**	**1.33**	**62**	*e*Pb	**Pb**	**05 19 18.6**	**-2.6**
LKR				*e*Sb	**Sb**	**05 19 39.0**	**+0.5**
LKR	**Lokris**	**1.33**	**62**	P	**Pn**	**05 19 18.9**	**-2.0**
LKR				S	**Sb**	**05 19 38.6**	**+0.1**
LKR	**Lokris**	**1.33**	**62**	*e*PB	**Pb**	**05 19 18.6**	**-2.6**
LKR				*e*SB	**Sb**	**05 19 39.0**	**+0.5**
LKR	**Lokris**	**1.33**	**62**	P	**Pn**	**05 19 18.9**	**-2.0**
LKR				S	**Sb**	**05 19 38.6**	**+0.1**
LKR				*e*Sb	**Sb**	**05 19 39.0**	**+0.5**
ATAL	**Atalanti**	**1.37**	**60**	P	**Pn**	**05 19 19.3**	**-2.1**
ATAL				S	**Sb**	**05 19 39.2**	**-0.3**
ATAL	**Atalanti**	**1.37**	**60**	P	**Pn**	**05 19 19.3**	**-2.1**
ATAL				S	**Sb**	**05 19 39.2**	**-0.3**
DID	**Didima**	**1.47**	**110**	P	**Pn**	**05 19 22.0**	**-0.8**
DID				S	**Sn**	**05 19 41.6**	**-0.7**
DID	**Didima**	**1.47**	**110**	*e*PB	**Pb**	**05 19 23.6**	**+0.1**
DID				*e*SB	**Sb**	**05 19 42.9**	**+0.4**
DID	**Didima**	**1.47**	**110**	P	**Pn**	**05 19 22.0**	**-0.8**
DID	**Didima**	**1.47**	**110**	*e*Pb	**Pb**	**05 19 23.6**	**+0.1**
DID				S	**Sn**	**05 19 41.6**	**-0.7**
DID				*e*Sb	**Sb**	**05 19 42.9**	**+0.4**
THL	**Klokotos Trika**	**1.59**	**14**	*e*PB	**Pb**	**05 19 25.9**	**+0.4**
THL	**Klokotos Trika**	**1.59**	**14**	*e*Pb	**Pb**	**05 19 25.9**	**+0.4**
NAIG	**Nisos Aigina**	**1.60**	**99**	*e*Pg	**Pn**	**05 19 24.5**	**0.0**
NAIG				*e*Sn	**Sn**	**05 19 47.0**	**+1.6**
NAIG	**Nisos Aigina**	**1.60**	**99**	*e*PG	**Pn**	**05 19 24.5**	**0.0**
NAIG				*e*SN	**Sn**	**05 19 47.0**	**+1.6**
NAIG	**Nisos Aigina**	**1.60**	**99**	*e*Pg	**Pn**	**05 19 24.5**	**0.0**
JAN	**Janina**	**1.70**	**343**	*e*Pn	**Pn**	**05 19 27.5**	**+1.5**
JAN	**Janina**	**1.70**	**343**	*e*PN	**Pn**	**05 19 27.5**	**+1.5**
JAN	**Janina**	**1.70**	**343**	*e*Pn	**Pn**	**05 19 27.5**	**+1.5**
VLI	**Veliai**	**1.74**	**138**	*e*Pn	**Pn**	**05 19 27.3**	**+0.8**
VLI	**Veliai**	**1.74**	**138**	*e*PN	**Pn**	**05 19 27.3**	**+0.8**
VLI	**Veliai**	**1.74**	**138**	*e*Pn	**Pn**	**05 19 27.3**	**+0.8**
ATH	**Athens Observa**	**1.75**	**91**	*e*Pg	**Pb**	**05 19 27.8**	**-0.5**
ATH	**Athens Observa**	**1.75**	**91**	*e*PG	**Pb**	**05 19 27.8**	**-0.5**
ATH	**Athens Observa**	**1.75**	**91**	*e*Pg	**Pb**	**05 19 27.8**	**-0.5**
ATHU	**Athens Univers**	**1.81**	**91**	P	**Pn**	**05 19 26.9**	**-0.5**
ATHU	**Athens Univers**	**1.81**	**91**	P	**Pn**	**05 19 26.9**	**-0.5**
VLY	**Voula,Athens**	**1.82**	**95**	*e*Pn	**Pn**	**05 19 27.9**	**+0.3**
VLY				*e*Sb	**Sb**	**05 19 52.8**	**+0.2**
VLY	**Voula,Athens**	**1.82**	**95**	*e*PN	**Pn**	**05 19 27.9**	**+0.3**
VLY				*e*SB	**Sb**	**05 19 52.8**	**+0.2**
VLY	**Voula,Athens**	**1.82**	**95**	*e*Pn	**Pn**	**05 19 27.9**	**+0.3**
VLY				*e*Sb	**Sb**	**05 19 52.8**	**+0.2**
NEO	**Neokhori**	**1.86**	**46**	*e*Pb	**Pn**	**05 19 27.5**	**-0.6**
NEO	**Neokhori**	**1.86**	**46**	*e*PB	**Pn**	**05 19 27.5**	**-0.6**
PTL	**Penteli**	**1.87**	**89**	*e*Pn	**Pn**	**05 19 29.4**	**+1.1**
PTL				*e*Sb	**Sb**	**05 19 54.2**	**+0.3**
PTL	**Penteli**	**1.87**	**89**	*e*PN	**Pn**	**05 19 29.4**	**+1.1**
PTL				*e*SB	**Sb**	**05 19 54.2**	**+0.3**
PTL	**Penteli**	**1.87**	**89**	*e*Pn	**Pn**	**05 19 29.4**	**+1.1**
PTL				*e*Sb	**Sb**	**05 19 54.2**	**+0.3**
XOR	**Xorichti**	**1.88**	**44**	P	**Pn**	**05 19 27.6**	**-0.9**
XOR	**Xorichti**	**1.88**	**44**	P	**Pn**	**05 19 27.4**	**-1.1**
XOR	**Xorichti**	**1.88**	**44**	P	**Pn**	**05 19 27.6**	**-0.9**
KYTH	**Kithira**	**2.13**	**144**	*e*Pg	**Pg**	**05 19 35.5**	**-1.2**
KYTH	**Kithira**	**2.13**	**144**	*e*PG	**Pg**	**05 19 35.5**	**-1.2**
KYTH	**Kithira**	**2.13**	**144**	*e*Pg	**Pg**	**05 19 35.5**	**-1.2**
KEK	**Kerkira**	**2.14**	**322**	*e*Pb	**Pn**	**05 19 32.8**	**+0.7**
KEK	**Kerkira**	**2.14**	**322**	*e*PB	**Pn**	**05 19 32.8**	**+0.7**
AOS	**Alonnisos**	**2.19**	**58**	P	**Pn**	**05 19 32.1**	**-0.5**
AOS	**Alonnisos**	**2.19**	**58**	P	**Pn**	**05 19 31.0**	**-1.6**
AOS	**Alonnisos**	**2.19**	**58**	P	**Pn**	**05 19 32.1**	**-0.5**
SRN	**Sarande**	**2.19**	**328**	*e*Pn	**Pn**	**05 19 33.4**	**+0.7**
LSK	**Leskovik**	**2.23**	**342**	PN	**Pb**	**05 19 35.9**	**-0.6**
LSK	**Leskovik**	**2.23**	**342**	*e*Pn	**Pb**	**05 19 35.9**	**-0.6**
KZN	**Kozani**	**2.29**	**5**	*e*Pn	**Pb**	**05 19 36.5**	**-0.9**
KZN	**Kozani**	**2.29**	**5**	P	**Pn**	**05 19 32.9**	**-1.1**
KZN				S	**Sn**	**05 20 02.6**	**+0.1**
KZN	**Kozani**	**2.29**	**5**	*e*PN	**Pb**	**05 19 36.5**	**-0.9**
KZN	**Kozani**	**2.29**	**5**	P	**Pn**	**05 19 32.9**	**-1.1**
KZN				S	**Sn**	**05 20 02.6**	**+0.1**
PAIG	**Paliouri**	**2.55**	**41**	P	**Pn**	**05 19 38.2**	**+0.6**
PAIG	**Paliouri**	**2.55**	**41**	P	**Pn**	**05 19 36.8**	**-0.8**
PAIG	**Paliouri**	**2.55**	**41**	P	**Pn**	**05 19 36.8**	**-0.8**
FNA	**Florina**	**2.75**	**358**	P	**Pn**	**05 19 41.6**	**+1.1**
FNA	**Florina**	**2.75**	**358**	P	**Pn**	**05 19 41.6**	**+1.1**
PLG	**Polygyros**	**2.79**	**32**	*e*Pn	**Pn**	**05 19 42.3**	**+1.4**
PLG	**Polygyros**	**2.79**	**32**	P	**Pn**	**05 19 40.8**	**-0.1**
PLG	**Polygyros**	**2.79**	**32**	*e*PN	**Pn**	**05 19 42.3**	**+1.4**
PLG	**Polygyros**	**2.79**	**32**	P	**Pn**	**05 19 40.8**	**-0.1**
PLG	**Polygyros**	**2.79**	**32**	*e*Pn	**Pn**	**05 19 42.3**	**+1.4**
BIA	**Bitola**	**2.99**	**357**	*e*Pn	**Pn**	**05 19 45.0**	**+1.3**
OUR	**Ouranopolis**	**3.00**	**39**	P	**Pn**	**05 19 43.0**	**-0.9**
OUR	**Ouranopolis**	**3.00**	**39**	P	**Pn**	**05 19 43.0**	**-0.9**
OHR	**Ohrid**	**3.13**	**350**	*i* Pn	**Pn**	**05 19 46.3**	**+0.7**
SOH	**Sokhos**	**3.14**	**27**	*e*Pn	**Pn**	**05 19 47.3**	**+1.6**
SOH				*e*Sn	**Sn**	**05 20 25.9**	**+2.4**

SMG	**Samos**	**4.24**	**93**	*e*PN	**Pn**	**05 20 01.1**	**+0.3**
SMG	**Samos**	**4.24**	**93**	*e*Pn	**Pn**	**05 20 01.1**	**+0.3**
LAST	**Lasithi**	**4.29**	**131**	*e*PN	**Pn**	**05 20 03.0**	**+1.4**
LAST				*e*Sn	**Sn**	**05 20 54.0**	**+2.0**
LAST	**Lasithi**	**4.29**	**131**	*e*PN	**Pn**	**05 20 03.0**	**+1.4**
LAST				*e*SN	**Sn**	**05 20 54.0**	**+2.0**
LAST	**Lasithi**	**4.29**	**131**	*e*Pn	**Pn**	**05 20 03.0**	**+1.4**
NPS	**Neapolis**	**4.31**	**129**	*e*Pb	**Pn**	**05 20 05.5**	**+3.7**
NPS	**Neapolis**	**4.31**	**129**	*e*PB	**Pn**	**05 20 05.5**	**+3.7**
CEL	**Celeste**	**4.43**	**275**	*e*Pn	**Pn**	**05 20 03.9**	**+0.5**
CEL	**Celeste**	**4.43**	**275**	*e*Pn	**Pn**	**05 20 03.9**	**+0.5**
KDAG	**Bornova**	**4.56**	**84**	*i* P	**Pn**	**05 20 04.9**	**-0.3**
KDAG	**Bornova**	**4.56**	**84**	*i* P	**Pn**	**05 20 04.9**	**-0.3**
SG1	**Sgolgore (BA)**	**4.67**	**308**	*e*Pn	**Pn**	**05 20 07.4**	**+0.6**
BAI	**Bari**	**4.71**	**312**	*e*Pn	**Pn**	**05 20 07.9**	**+0.5**
ZKR	**Zakros**	**4.78**	**126**	*e*Pn	**Pn**	**05 20 10.9**	**+2.6**
ZKR	**Zakros**	**4.78**	**126**	*e*PN	**Pn**	**05 20 10.9**	**+2.6**
BARS	**Barje**	**4.79**	**3**	*e*Pn	**Pn**	**05 20 08.7**	**+0.3**
AYDN	**Tasoluk**	**5.06**	**92**	*i* P	**Pn**	**05 20 06.9**	**-5.3**
AYDN	**Tasoluk**	**5.06**	**92**	*i* P	**Pn**	**05 20 06.9**	**-5.3**
KARP	**Karpathos**	**5.17**	**117**	*e*Pn	**Pn**	**05 20 17.3**	**+3.6**
KARP	**Karpathos**	**5.17**	**117**	*e*PN	**Pn**	**05 20 17.3**	**+3.6**
TREB	**Trebinje**	**5.27**	**334**	*e*Pn	**Pn**	**05 20 12.3**	**-2.7**
NISS		**5.38**	**3**	*e*Pn	**Pn**	**05 20 16.4**	**-0.2**
STON	**Ston**	**5.64**	**330**	*e*Pn	**Pn**	**05 20 18.6**	**-1.5**
STON				Sn	**Sn**	**05 21 22.6**	**-2.6**
STON	**Ston**	**5.64**	**330**	*e*Pn	**Pn**	**05 20 18.6**	**-1.5**
STON				Sn	**Sn**	**05 21 22.6**	**-2.6**
VAE	**Valguarnera**	**5.64**	**267**	Sn	**Sn**	**05 21 26.7**	**+1.4**
	1.4nm,0.3s,baz=99,slow=3.3,SNR=4.5						
DURS	**Dursunbey**	**5.67**	**72**	*i* P	**Pn**	**05 20 19.6**	**-1.0**
DURS	**Dursunbey**	**5.67**	**72**	*i* P	**Pn**	**05 20 19.5**	**-1.0**
WDD	**Wield Dalam**	**5.99**	**251**	*e*Pn	**Pn**	**05 20 23.9**	**-1.0**
WDD	**Wield Dalam**	**5.99**	**251**	*e*Pn	**Pn**	**05 20 23.9**	**-1.0**
DIVS	**Divibare**	**6.17**	**350**	*e*Pn	**Pn**	**05 20 26.4**	**-1.0**
LTBQ	**Tobruq**	**6.28**	**161**	*e*P	**Pn**	**05 20 29.0**	**+0.1**
	SNR=90						
KHAL	**Karahalli**	**6.30**	**84**	*i* P	**Pn**	**05 20 26.0**	**-3.3**
SLUM		**7.20**	**154**	P	**Pn**	**05 20 38.6**	**-2.9**
	baz=150						
SLUM				AMP		05 22 00.0	
	comp=E,60μm,0.7s,logA/T=5.0,baz=150						
SLUM		**7.20**	**154**	P	**Pn**	**05 20 38.6**	**-3.0**
MLR	**Muntele Rosu**	**8.16**	**23**	LR	LR	05 24 05.9	
	comp=E,46nm,19.4s,baz=18,slow=39						
NVLJ	**Novalja**	**8.22**	**325**	*e*Pn	**Pn**	**05 20 54.5**	**-0.9**
NVLJ				Sn	**Sn**	**05 22 23.0**	**-5.5**
NVLJ	**Novalja**	**8.22**	**325**	*e*Pn	**Pn**	**05 20 54.5**	**-1.0**
HMAT	**Matruh**	**8.31**	**145**	P	**Pn**	**05 20 55.0**	**-1.8**
	baz=140						
HMAT	**Matruh**	**8.31**	**145**	P	**Pn**	**05 20 55.0**	**-1.8**
SWA2		**9.36**	**158**	P	**Pn**	**05 21 08.0**	**-3.2**
	baz=157						
SWA2				AMP		05 22 00.0	
	comp=N,70μm,0.7s,logA/T=5.0,baz=157						
SWA2		**9.36**	**158**	P	**Pn**	**05 21 08.0**	**-3.2**
JAVS	**Javornik**	**9.61**	**327**	*e*Pn	**Pn**	**05 21 13.4**	**-1.1**
JAVS				*i* Sn	**Sn**	**05 22 58.1**	**-4.7**
JAVS	**Javornik**	**9.61**	**327**	*e*Pn	**Pn**	**05 21 13.4**	**-1.2**
BRTR	**Keskin Array B**	**9.62**	**76**	Pn	**Pn**	**05 21 16.1**	**+1.4**
	comp=N,0.1nm,0.3s,baz=263,slow=8.3,SNR=2.1						
BRTR	**Keskin Array B**	**9.62**	**76**	Pn	**Pn**	**05 21 16.1**	**+1.4**
VOY	**Vojsko**	**9.79**	**327**	*e*Pn	**Pn**	**05 21 16.8**	**-0.3**
VOY				*e*		05 21 30.1	
VOY				*e*		05 23 03.2	
VOY				*e*		05 23 15.8	
VOY	**Vojsko**	**9.79**	**327**	*e*Pn	**Pn**	**05 21 16.8**	**-0.3**
DAVOX	**Davos/Dischmat**	**12.25**	**319**	LR	LR	05 26 46.6	
	comp=N,42nm,19.4s,baz=274,slow=39						
MMAI	**Mount Meron Ar**	**12.38**	**110**	LR	LR	05 27 46.4	
	comp=N,48nm,18.1s,baz=335,slow=43						
TAM	**Tamanrasset**	**20.46**	**227**	*e*P	**P**	**05 23 35.1**	**+1.1**
TAM	**Tamanrasset**	**20.46**	**227**	*e*P	**P**	**05 23 35.1**	**+1.0**
HFS	**Hagfors**	**22.68**	**350**	P	**P**	**05 23 55.6**	**-2.0**
	comp=N,2.4nm,0.5s,mb3.9,baz=159,slow=8.9,SNR=11						
HFS	**Hagfors**	**22.68**	**350**	P	**P**	**05 23 55.6**	**-2.0**
FINES	**FINESS Array B**	**23.61**	**5**	P	**P**	**05 24 03.2**	**-4.2**
	comp=N,2.0nm,0.7s,mb3.6,baz=167,slow=9.2,SNR=3.5						
FINES				LR	LR	05 34 19.3	
	comp=N,61nm,20.9s,MS3.0,baz=170,slow=39						
FINES	**FINESS Array B**	**23.61**	**5**	P	**P**	**05 24 03.2**	**-4.2**
FINES				LR	LR	05 34 19.3	
NB2	**NORSAR Subarra**	**23.92**	**348**	P	**P**	**05 24 08.1**	**-2.1**
	comp=Z,1.2nm,0.6s,mb3.5,baz=154,slow=11						
NB2	**NORSAR Subarra**	**23.92**	**348**	P	**P**	**05 24 08.1**	**-2.1**
	comp=Z,1.2nm,0.6s,mb3.5,baz=154,slow=11,SNR=6.3						
NOA	**NORSAR Array B**	**23.92**	**348**	P	**P**	**05 24 07.6**	**-2.6**
	comp=Z,0.6nm,0.4s,mb3.3,baz=152,slow=8.6,SNR=4.9						
NOA				LR	LR	05 33 32.9	
	comp=Z,19nm,21.8s,MS2.5,baz=315,slow=37						
NOA	**NORSAR Array B**	**23.92**	**348**	P	**P**	**05 24 07.6**	**-2.6**
EKA	**Eskdalemuir Ar**	**24.00**	**324**	P	**P**	**05 24 10.3**	**-0.6**
	comp=Z,2.6nm,0.7s,mb3.8,baz=126,slow=8.0,SNR=4.7						
EKA	**Eskdalemuir Ar**	**24.00**	**324**	P	**P**	**05 24 10.4**	**-0.6**
ARCES	**ARCESS Array B**	**31.64**	**3**	P	**P**	**05 25 17.6**	**-1.6**
	comp=Z,1.1nm,0.7s,mb3.8,baz=175,slow=8.4,SNR=5.2						
ARCES	**ARCESS Array B**	**31.64**	**3**	P	**P**	**05 25 17.6**	**-1.6**
BVAR	**Borovoye Array**	**36.62**	**50**	P	**P**	**05 26 01.0**	**-1.7**
	comp=Z,0.5nm,0.5s,mb3.6,baz=291,slow=5.9,SNR=4.1						
BVAR	**Borovoye Array**	**36.62**	**50**	P	**P**	**05 26 01.0**	**-1.6**
DBIC	**Dimbokro**	**39.31**	**224**	P	**P**	**05 26 25.2**	**-0.5**
	comp=Z,3.5nm,0.8s,mb4.1,baz=0.5,slow=13,SNR=3.6						
DBIC	**Dimbokro**	**39.31**	**224**	P	**P**	**05 26 25.2**	**-0.5**
MK31	**Makanchi Array**	**44.72**	**58**	*e*P	**P**	**05 27 08.9**	**-0.6**
MK31	**Makanchi Array**	**44.72**	**58**	*e*P	**P**	**05 27 08.9**	**-0.7**
MKAR	**Makanchi Array**	**44.72**	**58**	P	**P**	**05 27 07.5**	**-2.1**
	comp=Z,1.4nm,0.5s,mb4.0,baz=287,slow=7.6,SNR=9.9						
ZALV	**Zalesovo Beam**	**45.22**	**48**	P	**P**	**05 27 10.5**	**-2.9**
	comp=Z,2.2nm,0.4s,mb4.3,baz=271,slow=8.5,SNR=7.3						
ZALV	**Zalesovo Beam**	**45.22**	**48**	P	**P**	**05 27 10.5**	**-2.9**
SONM	**Songino Array**	**59.96**	**51**	P	**P**	**05 29 02.1**	**-0.6**
	comp=Z,0.3nm,0.4s,mb3.7,baz=301,slow=6.1,SNR=3.3						
SONM	**Songino Array**	**59.96**	**51**	P	**P**	**05 29 02.1**	**-0.6**
PETK	**Petropavlovsk-**	**81.62**	**25**	LR	LR	06 08 23.5	
	comp=Z,45nm,20.0s,MS3.8,baz=242,slow=36						

NIED ***27*** *05:33:00,38.°70N×140.°80E,h5km,Mw3.6 Best double couple: M0 3.26000×10^14 NP1:φ0=211.00000°,δ59.00000°, λ93.00000°. NP2:φ0=24.00000°,δ31.00000°,λ84.00000°.*
IDC ***27*** *05:33:33.9±2.4,39.°00N×140.°76E,h0km,mb3.4/2, mb1 3.4/4,mb1mx3.3/25,mbtmp3.3/4,ML3.2/2,Error ellipse: s-maj=40.0km s-min=33.8km az=58.0*
JMA ***27*** *05:33:33.2,38.°77N×140.°77E,h3km±1km,M3.4 Broadband fault plane solution: P waves. NP1: φ0=165.00000°,δ42.00000°,λ24.00000°. NP2:φ0=56.00000°, δ74.00000°,λ130.00000°. Principal axes: T Plg46.0000°, Azm7.0000°; N Plg38.0000°, Azm224.0000°; P Plg19.0000°, Azm118.0000°;*
JMA Felt III J1.
ISCJB ***27*** *05:33:33.2±0.4,38.°77N±0.°03×140.°81E±0.°03,h10km, mb3.5/2 Error ellipse: s-maj=4.2km s-min=3.6km az=44.9*

ISC 27 05:33:33.6±0.5,38.°76N±0.°03×140.°80E±0.°04,h10km,n14, σ0°96/24,mb3.5/2,4C-4D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.38**	**60**	⇓P	**Pg**	**05 33 40.9**	**-0.1**
JMK				S	**Sg**	**05 33 46.4**	**+0.4**
JYK	**Kaneyama**	**0.38**	**294**	⇓P	**Pg**	**05 33 40.4**	**-0.7**
JYK				*e*S	**Sg**	**05 33 45.5**	**-0.6**
JOU	**Okura**	**0.41**	**195**	⇑P	**Pg**	**05 33 41.3**	**-0.3**
JOU				S	**Sg**	**05 33 47.1**	**0.0**
JIO	**Ouri**	**0.53**	**126**	⇓P	**Pg**	**05 33 43.5**	**-0.3**
JIO				S	**Sg**	**05 33 51.0**	**+0.3**
JRG	**Rokugo**	**0.65**	**348**	⇑P	**Pg**	**05 33 45.7**	**-0.4**
JYS	**Shirataka**	**0.79**	**227**	⇑P	**Pg**	**05 33 48.3**	**-0.5**
JYS				S	**Sg**	**05 33 59.0**	**-0.2**
JOM	**Ohasama**	**0.81**	**28**	⇑P	**Pg**	**05 33 48.5**	**-0.6**
JOM				S	**Sg**	**05 33 59.5**	**-0.1**
JYA	**Atsumi**	**0.87**	**259**	⇓P	**Pg**	**05 33 49.4**	**-0.9**
JMM	**Marumori**	**0.90**	**181**	P	**Pg**	**05 33 49.7**	**-1.1**
JMM				S	**Sg**	**05 34 01.4**	**-1.1**
MAT	**Matsushiro**	**3.03**	**224**	P	**Pn**	**05 34 23.4**	**+1.9**
MAT				S	**Sn**	**05 35 01.2**	**+3.4**
MJAR	**Matsushiro Arr**	**3.03**	**224**	Pn	**Pn**	**05 34 24.7**	**+3.2**
	1.7nm,0.3s,baz=28,slow=16,SNR=7.3						
MJAR				Sn	**Sn**	**05 35 04.9**	**+7.1**
	1.2nm,0.3s,baz=175,slow=27,SNR=4.5						
KSRS	**Korea Array**	**10.24**	**267**	Pn	**Pn**	**05 36 02.0**	**+1.6**
	0.3nm,0.3s,baz=83,slow=15,SNR=5.4						
KSRS				Sn	**Sn**	**05 38 00.5**	**+5.2**
	0.5nm,0.3s,baz=76,slow=24,SNR=4.7						
MKAR	**Makanchi Array**	**42.81**	**300**	P	**P**	**05 41 31.9**	**+0.6**
	0.2nm,0.4s,mb3.2,baz=91,slow=8.9,SNR=3.0						
ASAR	**Alice Springs**	**62.44**	**187**	P	**P**	**05 44 00.5**	**+3.7**
	0.5nm,0.8s,mb3.7,baz=19,slow=5.9,SNR=2.9						

NEIC ***27*** *05:34:11.0,29.°27S×71.°66W,h42km,MG3.5(GUC),After GUC.*

GUC 27 05:34:11.0±0.8,29.°27S×71.°66W,h42km±6km,ML3.5,3C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLL	**Tololo Astrono**	**1.16**	**140**	⇑*i*P	Pn	05 34 32.2	+1.5
TLL				*i* S	Sn	05 34 48.6	+3.2
TLL	**Tololo Astrono**	**1.16**	**140**	⇑*i*P	Pn	05 34 32.2	+1.5
TLL				*i* S	Sn	05 34 48.6	+3.2
TLL				AML	AML	05 34 51.1	
	comp=N,1μm,0.5s						
OVCH	**Ovalle**	**1.39**	**163**	*e*P	Pn	05 34 34.5	+0.6
OVCH				*e*S	Sn	05 34 52.5	+1.4
OVCH	**Ovalle**	**1.39**	**163**	*e*P	Pn	05 34 34.5	+0.6
OVCH				*e*S	Sn	05 34 52.5	+1.4
OVCH				AML	AML	05 34 54.8	
	comp=N,829nm,0.5s						
CMCH	**Combarbala**	**1.98**	**163**	*e*P	Pn	05 34 42.7	+0.7
CMCH				*i* S	Sn	05 35 07.0	+1.5
CMCH	**Combarbala**	**1.98**	**163**	*e*P	Pn	05 34 42.7	+0.7
CMCH				*i* S	Sn	05 35 07.0	+1.5
CMCH				AML	AML	05 35 08.7	
	comp=N,1μm,0.4s						
PEL	**Peldehue**	**3.95**	**168**	⇑*i*P	Pn	05 35 10.4	+1.4
PEL				*i* S	Sn	05 35 55.4	+1.3
CLCH	**Cerro Calan**	**4.22**	**167**	*e*P	Pn	05 35 14.1	+1.3
RCDM	**Rinconada Maip**	**4.27**	**170**	*e*P	Pn	05 35 14.3	+0.9
RCDM	**Rinconada Maip**	**4.27**	**170**	*e*P	Pn	05 35 14.3	+0.9
LMEL	**Las Melosas**	**4.73**	**165**	*e*P	Pn	05 35 21.2	+1.5
LMEL	**Las Melosas**	**4.73**	**165**	*e*P	Pn	05 35 21.2	+1.5

IDC ***27*** *06:26:44.8±3.5,24.°28N×125.°33E,h0km,mb3.6/5, mb1 3.8/5,mb1mx3.6/23,mbtmp3.6/5,Error ellipse: s-maj=240.3km s-min=19.8km az=64.0*
ISCJB ***27*** *06:26:47.5±0.9,23.°89N±0.°07×125.°20E±0.°05, h49km±10km,mb3.6/5,Error ellipse: s-maj=13.3km s-min=5.0km az=156.5*
NEIC ***27*** *06:26:50.5±1.1,24.°10N×125.°05E,h35km,MG3.3(JMA), Error ellipse: s-maj=19.3km s-min=15.4km az=206.0*
JMA ***27*** *06:26:50.0±0.1,24.°00N×125.°12E,h41km,M3.3*

ISC 27 06:26:48.7±0.8,23.°91N±0.°06×125.°17E±0.°04,h36km±11km, n23,σ1°07/35,mb3.6/5,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTJ	**Tarama**	**0.84**	**329**	P	**Pn**	**06 27 04.0**	**-0.1**
JTJ				S	**Sn**	**06 27 14.1**	**-1.2**
JOGS	**Gusukube**	**0.87**	**14**	P	**Pn**	**06 27 04.9**	**+0.4**
JOGS				S	**Sn**	**06 27 16.1**	**+0.2**
JMJ	**Miyako jima 2**	**0.91**	**7**	P	**Pn**	**06 27 05.4**	**+0.5**
JMJ				S	**Sn**	**06 27 16.6**	**-0.2**
JIJ	**Ishigaki jima**	**1.04**	**296**	P	**Pn**	**06 27 07.3**	**+0.5**
JIJ				S	**Sn**	**06 27 19.9**	**-0.3**
JKRS	**Kuro-shima**	**1.11**	**287**	P	**Pn**	**06 27 08.8**	**+1.0**
JKRS				S	**Sn**	**06 27 22.9**	**+1.0**
HATJ	**Hateruma jima**	**1.26**	**277**	P	**Pn**	**06 27 10.8**	**+1.0**
HATJ				S	**Sn**	**06 27 26.1**	**+0.6**
IRIF	**Iriomote-Funau**	**1.38**	**288**	P	**Pn**	**06 27 12.3**	**+0.8**
IRIF				*e*S	**Sn**	**06 27 29.5**	**+0.9**
YOJ	**Yonaguni jima**	**2.05**	**286**	P	**Pn**	**06 27 21.4**	**+0.7**
YOJ				S	**Sn**	**06 27 44.3**	**-0.7**
JKE	**Kume jima 2**	**2.81**	**31**	P	**Pn**	**06 27 31.0**	**-0.2**
YHNB	**Yeheng**	**3.55**	**283**	*e*Pn	**Pn**	**06 27 42.9**	**+1.7**
YULB	**Yu-li**	**3.59**	**262**	*e*Pn	**Pn**	**06 27 41.4**	**-0.5**
YULB				*e*Sn	**Sn**	**06 28 21.1**	**-2.0**
SSLB	**Suanglung**	**3.87**	**269**	*e*Pn	**Pn**	**06 27 46.7**	**+1.1**
SSLB				*e*Sn	**Sn**	**06 28 27.1**	**-2.7**
TWG	**Pinlang**	**3.92**	**255**	*e*Pn	**Pn**	**06 27 46.0**	**-0.4**
TWG				*e*Sn	**Sn**	**06 28 29.2**	**-2.1**
JOW	**Kunigami**	**4.04**	**43**	P	**Pn**	**06 27 48.7**	**+0.6**
TPUB	**Ta-pu**	**4.21**	**263**	*e*Pn	**Pn**	**06 27 51.9**	**+1.4**
TPUB				*e*Sn	**Sn**	**06 28 37.5**	**-0.9**
JTK	**Tokunoshima**	**5.14**	**41**	P	**Pn**	**06 28 02.3**	**-0.9**
JMZ	**Minamidaito 2**	**5.81**	**70**	P	**Pn**	**06 28 11.0**	**-1.4**
JAM	**Amami Oshima**	**5.99**	**41**	P	**Pn**	**06 28 13.6**	**-1.3**
MKAR	**Makanchi Array**	**41.10**	**315**	P	**P**	**06 34 30.1**	**+1.1**
	0.5nm,0.6s,mb3.4,baz=88,slow=14,SNR=4.8						
ZALV	**Zalesovo Beam**	**42.49**	**325**	P	**P**	**06 34 39.1**	**-1.2**
	0.4nm,0.3s,mb3.5,baz=119,slow=9.8,SNR=2.1						
WRA	**Warramunga Arr**	**44.49**	**168**	P	**P**	**06 34 59.8**	**+3.0**
	1.4nm,0.8s,mb3.8,baz=348,slow=8.8,SNR=8.2						
KURK	**Kurchatov**	**44.67**	**319**	P	**P**	**06 34 57.6**	**-0.2**
	0.4nm,0.5s,mb3.5,baz=110,slow=8.3,SNR=3.7						
ASAR	**Alice Springs**	**48.05**	**169**	P	**P**	**06 35 29.4**	**+4.7**
	0.5nm,0.6s,mb3.8,baz=353,slow=6.9,SNR=12						

MEX 27 06:38:38.9±0.6,16.°09N×94.°85W,h85km±17km,MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.25**	**256**	*i* P	Pn	06 38 59.9	-1.3
HUIG				*i* S	Sn	06 39 16.6	-1.4
PCIG		**1.62**	**103**	*e*P	Pn	06 39 05.0	-1.0
PCIG				*i* S	Sn	06 39 24.2	-2.2
TGIG		**1.80**	**67**	*e*P	Pn	06 39 07.4	-0.9
TGIG				*i* S	Sn	06 39 29.1	-1.6
VHO	**Vista Hermosa**	**2.05**	**299**	*i* P	Pn	06 39 10.3	-1.3
VHO				*i* S	Sn	06 39 35.6	-1.0
SCX	**San Cristobal**	**2.23**	**73**	*e*P	Pn	06 39 13.5	-0.5
SCX				*i* S	Sn	06 39 38.6	-2.2
PNIG	**Pinotepa**	**3.16**	**276**	*e*P	Pn	06 39 24.6	-1.9
PNIG				*i* S	Sn	06 40 00.6	-2.6
TPIG	**Tehuac#an**	**3.34**	**314**	*e*P	Pn	06 39 28.0	-0.9
TPIG				*i* S	Sn	06 40 06.5	-1.0
PPM	**Popocatepetl**	**4.66**	**310**	*e*P	Pn	06 39 46.1	-0.8
PPM				*i* S	Sn	06 40 38.3	-1.5
IIO	**Organos**	**5.07**	**314**	*e*P	Pn	06 39 54.2	+1.7
MZVM		**5.19**	**307**	*e*P	Pn	06 39 59.6	+5.5
MZVM				*i* S	Sn	06 40 51.2	-1.5

IDC 27 07:03:27.4±4.3,2.°49S×139.°38E,h0km,mb3.8/4, mb1 3.9/5,mb1mx3.7/14,mbtmp3.8/5,ML3.8/1,Error ellipse: s-maj=189.2km s-min=24.5km az=89.0,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.03**	**195**	P	Pn	07 07 38.9	-0.7
	0.3nm,0.3s,baz=16,slow=12,SNR=7.6						
WRA				S	Sn	07 10 48.1	-13
	0.0nm,0.3s,baz=22,slow=23,SNR=2.7						
ASAR	**Alice Springs**	**21.71**	**194**	P	P	07 08 20.6	+0.3
	1.5nm,0.7s,baz=21,slow=11,SNR=20						
ASAR				S	S	07 12 20.1	-1.4
	0.4nm,0.7s,baz=9.3,slow=25,SNR=4.2						
MKAR	**Makanchi Array**	**70.03**	**322**	P	P	07 14 41.2	+0.1
	0.7nm,0.5s,baz=96,slow=7.4,SNR=7.9						
ZALV	**Zalesovo Beam**	**72.08**	**330**	P	P	07 14 53.0	-0.4
	0.4nm,0.4s,baz=108,slow=4.7,SNR=3.2						
BVAR	**Borovoye Array**	**79.52**	**325**	P	P	07 15 36.9	+0.9
	0.6nm,0.5s,baz=86,slow=7.5,SNR=3.8						

NIED ***27*** *07:23:00,38.°70N×140.°80E,h5km,Mw3.9 Best double couple: M0 9.07000×10^14 NP1:φ0=191.00000°,δ50.00000°, λ89.00000°. NP2:φ0=12.00000°,δ40.00000°,λ91.00000°.*
IDC ***27*** *07:23:45.8±0.7,38.°74N×140.°66E,h0km,mb3.8/11, mb1 4.1/12,mb1mx3.9/24,mbtmp3.8/12,ML3.2/1,MS3.0/2, Ms1 3.0/2,ms1mx2.5/37,Error ellipse: s-maj=21.7km s-min=14.9km az=114.0*
ISCJB ***27*** *07:23:46.7±0.5,38.°75N±0.°03×140.°78E±0.°03,h13km±3km, mb3.9/14,Error ellipse: s-maj=5.0km s-min=3.9km az=38.7*
NEIC ***27*** *07:23:47.0,38.°75N×140.°77E,h3km,mb4.1/3,After JMA.*
NEIC Recorded [3 JMA] in Miyagi and [2 JMA] in Iwate and Yamagata.

JMA ***27*** *07:23:47.0,38.°75N×140.°77E,h3km±1km,M3.8*
JMA Felt III J1.

ISC 27 07:23:47.1±0.4,38.°75N±0.°02×140.°79E±0.°03,h5km±3km, n31,σ0°88/39,mb3.9/14,3C-4D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.37**	**297**	⇓P	**Pg**	**07 23 54.2**	**-0.2**
JYK				S	**Sg**	**07 23 59.3**	**0.0**
JMK	**Ichinoseki**	**0.39**	**59**	⇓P	**Pg**	**07 23 54.7**	**-0.1**
JMK				S	**Sg**	**07 24 00.8**	**+0.9**
JOU	**Okura**	**0.40**	**194**	⇑P	**Pg**	**07 23 54.7**	**-0.1**
JOU				S	**Sg**	**07 24 00.3**	**+0.4**
JIO	**Ouri**	**0.53**	**124**	⇓P	**Pg**	**07 23 57.1**	**-0.2**
JIO				S	**Sg**	**07 24 04.7**	**+0.5**
JRG	**Rokugo**	**0.66**	**350**	P	**Pg**	**07 23 59.9**	**+0.1**
JYS	**Shirataka**	**0.77**	**227**	⇑P	**Pg**	**07 24 01.7**	**-0.3**
JYS				S	**Sg**	**07 24 12.1**	**+0.1**
JOM	**Ohasama**	**0.82**	**28**	P	**Pg**	**07 24 02.7**	**-0.2**
JOM				S	**Sg**	**07 24 14.0**	**+0.4**
JYA	**Atsumi**	**0.85**	**260**	⇓P	**Pg**	**07 24 03.0**	**-0.5**
JMM	**Marumori**	**0.88**	**180**	⇑P	**Pg**	**07 24 03.2**	**-0.9**
JMM				S	**Sg**	**07 24 14.9**	**-0.6**
MAJO	**Matsushiro**	**3.01**	**224**	*e*Pn	**Pn**	**07 24 36.2**	**+0.8**
MAT	**Matsushiro**	**3.01**	**224**	P	**Pn**	**07 24 36.3**	**+0.9**
MAT				S	**Sn**	**07 25 13.5**	**+1.7**
MJAR	**Matsushiro Arr**	**3.01**	**224**	Pn	**Pn**	**07 24 34.9**	**-0.5**
	3.6nm,0.3s,baz=156,slow=4.9,SNR=11						
MJAR				Lg		07 25 18.4	
	3.9nm,0.3s,baz=76,slow=18,SNR=5.9						
ERM	**Erimo**	**3.73**	**28**	*e*Pn	**Pn**	**07 24 46.6**	**+1.3**
ASAJ	**Asahikawa**	**5.53**	**14**	LR	LR	07 27 34.1	
	comp=Z,85nm,18.6s,baz=196,slow=41						
KSRS	**Korea Array**	**10.22**	**267**	Pn	**Pn**	**07 26 17.2**	**+2.7**
	0.9nm,0.3s,baz=80,slow=14,SNR=12						
KSRS				Sn	**Sn**	**07 28 11.9**	**+2.5**
	0.3nm,0.3s,baz=75,slow=24,SNR=6.1						
KSRS				LR	LR	07 29 46.3	
	comp=Z,101nm,18.9s,baz=162,slow=36						
ZALV	**Zalesovo Beam**	**40.41**	**311**	P	**P**	**07 31 24.5**	**-1.4**
	0.8nm,0.4s,mb3.8,baz=69,slow=8.4,SNR=5.6						
ZALV	**Zalesovo Beam**	**40.41**	**311**	P	**P**	**07 31 24.5**	**-1.4**
MKAR	**Makanchi Array**	**42.81**	**300**	P	**P**	**07 31 44.7**	**-0.9**
	0.5nm,0.7s,mb3.4,baz=80,slow=14,SNR=4.2						
KURK	**Kurchatov**	**44.50**	**307**	*e*P	**P**	**07 31 58.0**	**-1.2**
	2.1nm,0.7s,mb4.0						
BVAR	**Borovoye Array**	**49.06**	**311**	P	**P**	**07 32 34.1**	**-0.8**
	0.3nm,0.5s,mb3.6,baz=54,slow=7.3,SNR=2.8						
WRA	**Warramunga Arr**	**58.69**	**187**	P	**P**	**07 33 44.5**	**-1.1**
	1.1nm,0.6s,mb4.1,baz=4.0,slow=7.0,SNR=11						
ASAR	**Alice Springs**	**62.42**	**187**	P	**P**	**07 34 10.4**	**-0.6**
	0.6nm,0.7s,mb3.8,baz=8.9,slow=4.3,SNR=8.9						
FINES	**FINESS Array B**	**67.07**	**332**	P	**P**	**07 34 40.3**	**-0.7**
	1.6nm,0.8s,mb4.1,baz=46,slow=5.5,SNR=5.9						
NB2	**NORSAR Subarra**	**72.42**	**337**	P	**P**	**07 35 13.1**	**-0.8**
	comp=Z,0.7nm,0.7s,mb3.7,baz=38,slow=6.2						
NOA	**NORSAR Array B**	**72.42**	**337**	P	**P**	**07 35 13.1**	**-0.9**
	comp=Z,1.0nm,0.8s,mb3.8,baz=39,slow=5.9,SNR=5.7						
AKASG	**Malin Array Be**	**72.64**	**322**	P	**P**	**07 35 14.4**	**-1.1**
	comp=Z,1.5nm,0.5s,mb4.2,baz=42,slow=7.9,SNR

s-maj=90.3km s-min=44.0km az=113.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.96**	**229**	P	P	08 56 46.6	-0.6
	5.2nm,0.5s,baz=53,slow=9.9,SNR=74						
ASAR	**Alice Springs**	**25.63**	**223**	P	P	08 57 12.7	+0.2
	4.2nm,0.7s,baz=59,slow=8.8,SNR=83						
STKA	**Stephens Creek**	**28.33**	**200**	P	P	08 57 36.8	+0.2
	2.1nm,0.8s,baz=18,slow=13,SNR=3.7						
TORD	**Torodi Ar. Bea**	**150.34**	**287**	PKPbc	PKPbc	09 11 35.3	-0.1
	0.8nm,0.9s,baz=93,slow=2.6,SNR=5.3						

IDC 27 09:01:32.8±3.3, 8°.96S×67°.49E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.5/24, mbtmp3.7/4, MS3.7/8, Ms1 3.7/8, ms1mx3.4/26, Error ellipse: s-maj=114.0km s-min=34.1km az=60.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**33.45**	**71**	LR	LR	09 18 17.6	
	comp=Z,264nm,20.0s,baz=112,slow=30						
AAK	**Ala-Archa**	**51.74**	**7**	LR	LR	09 31 21.1	
	comp=Z,29nm,18.1s,baz=195,slow=35						
MKAR	**Makanchi Array**	**57.06**	**12**	P	P	09 11 20.0	-0.5
	0.3nm,0.5s,baz=213,slow=10,SNR=2.5						
MKAR				LR	LR	09 33 45.4	
	comp=Z,37nm,20.4s,baz=352,slow=34						
MAW	**Mawson**	**58.65**	**182**	LR	LR	09 31 59.9	
	comp=Z,84nm,21.1s,baz=217,slow=31						
ASAR	**Alice Springs**	**64.90**	**112**	P	P	09 12 14.7	+0.2
	0.4nm,0.6s,baz=279,slow=6.5,SNR=9.1						
WRA	**Warramunga Arr**	**65.30**	**108**	P	P	09 12 17.1	-0.1
	1.0nm,0.8s,baz=277,slow=6.8,SNR=5.2						
SONM	**Songino Array**	**66.20**	**28**	P	P	09 12 23.1	+0.8
	0.6nm,0.5s,baz=234,slow=6.4,SNR=4.0						
SONM				LR	LR	09 38 58.3	
	comp=Z,40nm,18.2s,baz=75,slow=34						
STKA	**Stephens Creek**	**71.85**	**121**	LR	LR	09 38 44.8	
	comp=Z,137nm,21.9s,baz=25,slow=31						
FINES	**FINESS Array B**	**77.27**	**341**	LR	LR	09 47 29.7	
	comp=Z,37nm,20.6s,baz=332,slow=36						
QSPA	**South Pole Qui**	**81.08**	**180**	LR	LR	09 43 55.9	
	comp=Z,98nm,21.8s,baz=253,slow=31						
NVAR	**Mina Array Bea**	**150.20**	**9**	PKPbc	PKPbc	09 21 26.2	0.0
	0.4nm,0.7s,baz=270,slow=1.8,SNR=2.5						

IDC 27 09:05:17.2±1.5, 30°.84N×103°.60E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/23, mbtmp3.5/4, Error ellipse: s-maj=48.3km s-min=24.7km az=48.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**21.15**	**65**	P	P	09 10 04.0	+0.2
	1.4nm,0.6s,baz=260,slow=10,SNR=8.1						
MKAR	**Makanchi Array**	**22.90**	**320**	P	P	09 10 23.7	+1.3
	0.3nm,0.4s,baz=113,slow=14,SNR=3.5						
ZALV	**Zalesovo Beam**	**26.77**	**335**	P	P	09 10 57.4	-1.1
	0.3nm,0.4s,baz=126,slow=7.3,SNR=2.2						
WRA	**Warramunga Arr**	**58.50**	**146**	P	P	09 15 15.2	-0.1
	0.4nm,0.6s,baz=338,slow=7.6,SNR=6.1						

*NNC **27** 09:18:39.6±2.8, 40°.83N×73°.86E, h0km±15km, mb3.2, mpv2.9, Error ellipse: s-maj=21.3km s-min=12.1km az=156.0*

ISC 27 09:18:37.0±2.7, 40°.5N±0°.2×73°.9E±0°.1, h10km, n13, σ1°34/15, 4C-2D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**1.59**	**355**	P	**Pn**	**09 19 03.1**	**-2.1**
	SNR=19						
UCH	**Uchtor**	**1.75**	**16**	P	**Pn**	**09 19 05.2**	**-2.2**
	SNR=58						
KZA	**Kyzart**	**1.85**	**34**	P	**Pn**	**09 19 06.7**	**-2.0**
	SNR=38						
EKS2	**Erkin-Say**	**2.12**	**358**	P	**Pn**	**09 19 12.4**	**-0.1**
	SNR=39						
AAK	**Ala-Archa**	**2.14**	**12**	P	**Pn**	**09 19 14.3**	**+1.6**
	SNR=18						
KBK	**Karagaybulak**	**2.26**	**20**	P	**Pn**	**09 19 14.8**	**+0.5**
	SNR=50						
ULHL	**Ulahol**	**2.46**	**46**	P	**Pn**	**09 19 17.0**	**-0.2**
	SNR=169						
CHMS	**Chumysh**	**2.54**	**15**	P	**Pn**	**09 19 19.6**	**+1.4**
	SNR=15						
TKM2	**Tokmak 2**	**2.70**	**28**	⇑Pn	**Pn**	**09 19 21.2**	**+0.8**
	9.7nm,0.5s						
TKM2				⇓Sn	**Sn**	**09 19 53.0**	**-0.2**
	39nm,0.7s						
TKM2	**Tokmak 2**	**2.70**	**28**	P	**Pn**	**09 19 21.6**	**+1.1**
	SNR=22						
USP	**Ospenovka**	**2.76**	**10**	P	**Pn**	**09 19 23.0**	**+1.8**
	SNR=11						
KK31	**Karatay Array**	**3.59**	**317**	⇓Pn	**Pn**	**09 19 34.0**	**+1.3**
	0.2nm,0.2s,baz=134,slow=12,SNR=19						
KK31				⇑Pg	**Pg**	**09 19 41.0**	**-4.7**
	1.9nm,0.3s,baz=142,slow=19,SNR=27						
KK31				⇑Lg		09 20 27.3	
	12nm,0.5s,baz=129,slow=27,SNR=9.5						
AB31	**Akbulak array**	**13.15**	**316**	⇑P	**Pn**	**09 21 42.6**	**-1.0**
	0.2nm,0.4s,baz=121,slow=14,SNR=4.1						

MEX 27 09:24:55.9±1.0, 16°.07N×97°.58W, h16km±12km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.62**	**302**	*i* P	Pg	09 25 05.5	-2.6
PNIG				*i* S	Sg	09 25 14.0	-2.4
VHO	**Vista Hermosa**	**1.29**	**39**	*i* P	Pn	09 25 15.1	-4.2
VHO				*i* S	Sb	09 25 30.5	-5.5
OXX	**Oaxaca**	**1.30**	**39**	*i* P	Pn	09 25 16.7	-2.7
OXX				*i* S	Sb	09 25 31.9	-4.6
HUIG	**Huatulco**	**1.44**	**102**	*i* P	Pn	09 25 18.5	-2.8
HUIG				*i* S	Sn	09 25 33.5	-6.4
TPIG	**Tehuac#an**	**2.35**	**5**	*e*P	Pn	09 25 31.3	-2.5
TPIG				*i* S	Sn	09 25 58.7	-3.7
MEIG	**Mezcala**	**2.69**	**314**	*e*P	Pn	09 25 36.4	-2.2
MEIG				*i* S	Sn	09 26 06.7	-4.1
CAIG	**El Cayaco**	**2.76**	**291**	*e*P	Pn	09 25 36.9	-2.6
CAIG				*i* S	Sn	09 26 09.4	-3.1
PPM	**Popocatepetl**	**3.15**	**342**	*e*P	Pn	09 25 42.3	-2.6
PPM				*i* S	Sn	09 26 20.0	-2.2
TGIG		**4.33**	**80**	*i* P	Pn	09 25 57.4	-3.7
TGIG				*i* S	Sn	09 26 48.2	-3.2

IDC 27 09:30:15.7±4.7, 5°.19S×152°.65E, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.8/17, mbtmp3.9/4, Error ellipse: s-maj=134.2km s-min=33.7km az=109.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.08**	**229**	P	P	09 35 23.6	+0.4
	1.8nm,0.5s,baz=53,slow=9.9,SNR=18						
ASAR	**Alice Springs**	**25.76**	**223**	P	P	09 35 48.8	+0.4
	1.6nm,0.6s,baz=59,slow=8.9,SNR=25						
FITZ	**Fitzroy Crossi**	**29.35**	**242**	P	P	09 36 19.2	-1.4
	2.3nm,0.8s,baz=87,slow=9.3,SNR=3.6						
MKAR	**Makanchi Array**	**80.52**	**319**	P	P	09 42 30.2	+0.4
	0.3nm,0.7s,baz=94,slow=10,SNR=2.8						

*NEIC **27** 09:30:20.3±1.8, 9°.63S×108°.49E, h35km, mb4.3/3, Error ellipse: s-maj=85.6km s-min=10.0km az=45.0*
*IDC **27** 09:30:21.2±1.1, 9°.46S×108°.68E, h36km±6km, mb3.9/6, mb1 3.9/7, mb1mx3.7/21, mbtmp3.8/7, ML3.5/1, Error ellipse: s-maj=48.7km s-min=18.7km az=56.0*
*ISCJB **27** 09:30:22.0±1.2, 9°.45S±0°.08×108°.73E±0°.06, h63km±11km, mb4.1/9, Error ellipse: s-maj=14.3km s-min=9.0km az=16.9*
*DJA **27** 09:30:22, 9°.48S×108°.75E, h30km, MLv4.3/10*

ISC 27 09:30:23.4±1.2, 9°.44S±0°.08×108°.73E±0°.06, h55km±11km, h38km±1.0km: pP-P, n27, σ0°.85/28, mb4.1/9, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOGI	**Yogyakarta**	**2.23**	**44**	S	**Sn**	**09 31 22.8**	**-1.6**
UGM	**Wanagama**	**2.33**	**50**	P	**Pn**	**09 30 58.8**	**-0.5**
UGM				S	**Sn**	**09 31 27.9**	**+1.1**
PCJI	**Pacitan**	**2.71**	**63**	P	**Pn**	**09 31 04.0**	**-0.5**
PCJI				S	**Sn**	**09 31 35.6**	**-0.6**
LEM	**Lembang**	**2.82**	**337**	P	**Pn**	**09 31 06.4**	**+0.4**
SMRI	**Semarang**	**2.92**	**36**	P	**Pn**	**09 31 08.7**	**+1.4**
SMRI				S	**Sn**	**09 31 46.2**	**+5.1**
PWJI	**Pagerwojo**	**3.35**	**65**	P	**Pn**	**09 31 13.7**	**+0.5**
PWJI				S	**Sn**	**09 31 51.1**	**-0.6**
NGJI	**Ngawi**	**3.40**	**53**	P	**Pn**	**09 31 17.0**	**+3.1**
SJI	**Sawahan**	**3.45**	**61**	P	**Pn**	**09 31 15.9**	**+1.3**
KRKI	**Karangkates**	**3.89**	**71**	P	**Pn**	**09 31 19.8**	**-0.9**
CGJI	**Cibinong**	**4.12**	**313**	P	**Pn**	**09 31 22.6**	**-1.2**
GMJI	**Gumukmas**	**4.80**	**76**	P	**Pn**	**09 31 33.1**	**0.0**
SRBI	**Singaraja**	**6.54**	**79**	P	**Pn**	**09 31 57.6**	**+0.5**
	0.3nm64nm,0.8s						
KHKI	**Kahang-Kahang**	**6.88**	**82**	P	**Pn**	**09 32 01.7**	**+0.1**
FITZ	**Fitzroy Crossi**	**18.53**	**119**	P	**Pn**	**09 34 35.0**	**-1.2**
	0.1nm,0.3s,baz=293,slow=7.7,SNR=4.5						
WRA	**Warramunga Arr**	**26.84**	**116**	P	**P**	**09 35 58.9**	**0.0**
	2.4nm,0.8s,mb3.8,baz=288,slow=11,SNR=7.4						
WRA				PcP	PcP	09 39 20.3	-0.3
	0.3nm,0.8s,baz=290,slow=2.0,SNR=4.1						
WRAB	**Tennant Creek**	**26.84**	**116**	P	**P**	**09 35 59.3**	**+0.3**
	5.4nm,0.9s,mb4.1						
ASAR	**Alice Springs**	**27.90**	**124**	PcP	PcP	09 39 24.2	+1.1
	0.6nm,0.8s,baz=299,slow=1.3,SNR=5.6						
STKA	**Stephens Creek**	**37.75**	**131**	*e*P	**P**	**09 37 26.0**	**-8.1**
	1.4nm,0.3s,mb4.2						
SONM	**Songino Array**	**57.06**	**358**	P	**P**	**09 40 04.3**	**+0.6**
	1.0nm,0.5s,mb4.1,baz=174,slow=6.5,SNR=4.7						
SONM				pP	pP	09 40 15.1	-3.5
	1.3nm,0.5s,baz=182,slow=8.5,SNR=5.8						
MKAR	**Makanchi Array**	**60.75**	**339**	P	**P**	**09 40 29.4**	**+0.1**
	1.7nm,0.5s,mb4.4,baz=116,slow=9.0,SNR=21						
MKAR				pP	pP	09 40 40.0	-4.3
	1.3nm,0.5s,baz=116,slow=9.4,SNR=6.4						
MKAR	**Makanchi Array**	**60.75**	**339**	P	**P**	**09 40 29.4**	**+0.1**
MKAR				pP	pP	09 40 40.0	-4.3
KURK	**Kurchatov**	**65.37**	**339**	*e*P	**P**	**09 40 59.6**	**-0.3**
	2.7nm,0.9s,mb4.3						
ZALV	**Zalesovo Beam**	**66.31**	**345**	P	**P**	**09 41 05.2**	**-0.7**
	1.7nm,0.7s,mb4.2,baz=121,slow=5.7,SNR=6.8						
ZALV				pP	pP	09 41 16.1	-4.9
	1.0nm,0.4s,baz=169,slow=3.8,SNR=3.6						
BVAR	**Borovoye Array**	**70.27**	**337**	P	**P**	**09 41 30.7**	**0.0**
	1.6nm,0.6s,mb4.1,baz=141,slow=8.3,SNR=9.4						
BVAR				pP	pP	09 41 42.5	-3.5
	2.6nm,0.6s,baz=146,slow=9.5,SNR=7.9						
QSPA	**South Pole Qui**	**80.56**	**180**	P	**P**	**09 42 29.9**	**+0.5**
	1.0nm,0.8s,mb3.8,baz=289,slow=0.2,SNR=6.0						
TXAR	**Lajitas Array**	**143.79**	**52**	PKP	PKPdf	09 49 52.9	-0.1
	0.3nm,0.8s,baz=90,slow=2.5,SNR=4.1						
TXAR	**Lajitas Array**	**143.79**	**52**	PKP	PKPdf	09 49 52.9	-0.1

*NEIC **27** 09:56:06.3, 34°.48S×71°.97W, h33km, ML3.0(GUC), After GUC.*

GUC 27 09:56:06.3±0.6, 34°.48S×71°.97W, h33km±2km, MD3.6, ML3.0, 5C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNV	**Longovilo**	**0.70**	**41**	⇑*i*P	Pn	09 56 19.6	-0.2
LNV				*i* S	Sn	09 56 29.2	-0.2
LNV	**Longovilo**	**0.70**	**41**	⇑*i*P	Pn	09 56 19.6	-0.2
LNV				*i* S	Sn	09 56 29.2	-0.2
NICH	**Los Niches**	**0.80**	**131**	*e*P	Pn	09 56 21.2	0.0
NICH				*i* S	Sn	09 56 32.5	+0.6
TALC	**Talca**	**0.95**	**163**	⇑*i*P	Pn	09 56 23.3	-0.1
TALC				*i* S	Sn	09 56 36.4	+0.6
TALC	**Talca**	**0.95**	**163**	⇑*i*P	Pn	09 56 23.3	-0.1
TALC				*i* S	Sn	09 56 36.4	+0.6
TALC				AML	AML	09 56 37.6	
	comp=E,2μm,0.1s						
CACH	**El Canelo**	**1.19**	**73**	*e*P	Pn	09 56 28.2	+1.6
CACH	**El Canelo**	**1.19**	**73**	*e*P	Pn	09 56 28.2	+1.6
CHCH	**Chadas Angostu**	**1.22**	**64**	*e*P	Pn	09 56 27.9	+0.9
CHCH				*i* S	Sn	09 56 43.8	+1.5
CHCH	**Chadas Angostu**	**1.22**	**64**	*e*P	Pn	09 56 27.9	+0.9
CHCH				*i* S	Sn	09 56 43.8	+1.5
ANTU	**Antumapu**	**1.43**	**51**	*e*P	Pn	09 56 31.0	+1.0
ANTU				*i* S	Sn	09 56 50.0	+2.4
ANTU	**Antumapu**	**1.43**	**51**	*e*P	Pn	09 56 31.0	+1.0
ANTU				*i* S	Sn	09 56 50.0	+2.4
ANTU				AML	AML	09 56 51.0	
	comp=E,358nm,0.4s						
SJCH	**San Jose de Ma**	**1.58**	**58**	*e*P	Pn	09 56 33.5	+1.5
SJCH				*e*S	Sn	09 56 54.3	+3.1
SJCH	**San Jose de Ma**	**1.58**	**58**	*e*P	Pn	09 56 33.5	+1.5
SJCH				*e*S	Sn	09 56 54.3	+3.1
SJCH				AML	AML	09 56 55.1	
	comp=N,255nm,0.7s						
LMEL	**Las Melosas**	**1.59**	**67**	*e*P	Pn	09 56 33.6	+1.5
LMEL				*i* S	Sn	09 56 54.8	+3.2
LMEL	**Las Melosas**	**1.59**	**67**	*e*P	Pn	09 56 33.6	+1.5
LMEL				*i* S	Sn	09 56 54.8	+3.2
LMEL				AML	AML	09 56 56.8	
	comp=N,492nm,0.2s						
CLCH	**Cerro Calan**	**1.61**	**48**	*e*P	Pn	09 56 33.9	+1.5
CLCH				*i* S	Sn	09 56 54.9	+3.0
CLCH				AML	AML	09 56 56.9	
	comp=E,266nm,0.5s						
PEL	**Peldehue**	**1.71**	**39**	⇑*i*P	Pn	09 56 35.5	+1.8
PEL				*i* S	Sn	09 56 57.1	+2.7
PEL				AML	AML	09 56 59.6	
	comp=N,334nm,0.4s						
FCH	**Farellones**	**1.81**	**51**	*e*P	Pn	09 56 36.7	+1.6
FCH				*i* S	Sn	09 56 60.0	+3.1
FCH				AML	AML	09 57 03.4	
	comp=N,169nm,0.3s						

*ISCJB **27** 10:04:49.7±0.9, 32°.64N±0°.07×140°.2E±0°.1, h115km±7km, mb3.4/2, Error ellipse: s-maj=18.8km s-min=10.2km az=14.7*
*IDC **27** 10:04:50.5±1.5, 32°.44N×139°.90E, h92km±40km, mb3.0/2, mb1 3.1/3, mb1mx2.9/24, mbtmp2.8/3, Error ellipse: s-maj=211.5km s-min=50.0km az=73.0*
*NEIC **27** 10:04:51.6, 32°.74N×140°.28E, h107km, MG3.0(JMA), After JMA.*
*JMA **27** 10:04:51.5±0.1, 32°.74N×140°.28E, h107km±1km, M3.0*

ISC 27 10:04:51.0±0.9, 32°.65N±0°.07×140°.2E±0°.1, h109km±8km, n16, σ0°.71/22, mb3.4/2, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.56**	**325**	P	**Pn**	**10 05 08.6**	**+0.5**
JHJ2				S	**Sn**	**10 05 21.0**	**+0.1**
JHJ	**Hachijo jima 2**	**0.58**	**323**	P	**Pn**	**10 05 08.3**	**+0.1**
	baz=114,slow=17						
JHJ				S	**Sn**	**10 05 20.5**	**-0.8**
	baz=49,slow=19						
JMY	**Miyakejima3**	**1.53**	**338**	P	**Pn**	**10 05 18.1**	**+0.1**
JKO	**Kozu shima**	**1.77**	**330**	P	**Pn**	**10 05 21.2**	**+0.2**
BSO1	**Boso 1**	**2.10**	**18**	P	**Pn**	**10 05 24.5**	**-0.6**
BSO1				S	**Sn**	**10 05 50.6**	**-0.7**
BSO2	**Boso 2**	**2.14**	**12**	S	**Sn**	**10 05 53.4**	**+1.1**
JIM2	**Oshima 3**	**2.16**	**343**	P	**Pn**	**10 05 25.9**	**0.0**
JIM2				S	**Sn**	**10 05 51.5**	**-1.1**
BSO3	**Boso 3**	**2.16**	**7**	P	**Pn**	**10 05 25.7**	**-0.2**
BSO4	**Boso 4**	**2.33**	**3**	P	**Pn**	**10 05 28.5**	**+0.3**
BSO4				S	**Sn**	**10 05 56.8**	**+0.1**
JOD2	**Odawara 2**	**2.76**	**341**	P	**Pn**	**10 05 34.1**	**+0.3**
JOD2				S	**Sn**	**10 06 05.5**	**-1.2**
JYN	**Shimob**	**3.15**	**335**	P	**Pn**	**10 05 41.0**	**+2.1**
JHU	**Hanno**	**3.28**	**347**	P	**Pn**	**10 05 40.3**	**-0.3**
JRY	**Ryogami san**	**3.52**	**343**	P	**Pn**	**10 05 44.5**	**+0.6**
MJAR	**Matsushiro Arr**	**4.21**	**338**	P	**Pn**	**10 05 53.8**	**+0.7**
	0.3nm,0.3s,baz=158,slow=11,SNR=4.3						
WRA	**Warramunga Arr**	**52.60**	**187**	P	**P**	**10 13 53.1**	**-0.5**
	0.2nm,0.3s,mb3.6,baz=5.3,slow=7.5,SNR=10						
ASAR	**Alice Springs**	**56.32**	**187**	P	**P**	**10 14 19.9**	**-0.6**
	0.1nm,0.5s,mb3.1,baz=1.1,slow=5.5,SNR=5.8						

*BJI **27** 10:05:51.9, 56°.00N×137°.90E, h10km, ML4.6/1, Ms4.0/1, Ms7 3.8/1*
*ISCJB **27** 10:05:52.3±0.5, 55°.78N±0°.03×137°.51E±0°.06, h10km, mb3.7/10, Error ellipse: s-maj=5.3km s-min=3.9km az=141.6*
*SKHL **27** 10:05:53.4±0.5, 56°.03N×137°.65E, h18km±3km, mb4.9/6, Ms4.1/2, msh4.7/2*
*MOS **27** 10:05:54.0±2.3, 56°.17N×137°.99E, h18km, mb4.3/5, Error ellipse: s-maj=23.0km s-min=9.9km az=100.5*
*IDC **27** 10:05:54.2±0.9, 55°.98N×137°.95E, h0km, mb3.7/9, mb1 3.9/12, mb1mx3.8/28, mbtmp3.8/12, MS3.2/1, Ms1 3.2/1, ms1mx2.4/39, Error ellipse: s-maj=24.8km s-min=18.7km az=56.0*
*NEIC **27** 10:05:56.0±0.6, 55°.99N×137°.91E, h10km, mb3.8/2, Error ellipse: s-maj=14.6km s-min=8.9km az=60.0*

ISC 27 10:05:54.6±0.4, 55°.83N±0°.03×137°.59E±0°.06, h10km, n42, σ1°.71/63, mb3.7/10, 2C-2D, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NKL	**Nikolayevsk**	**3.23**	**145**	⇑*i*Pn	**Pn**	**10 06 43.0**	**-2.3**
NKL				pP		10 06 48.0	
NKL				*e*Pg	**Pg**	**10 06 54.2**	**-2.3**
NKL				AMB	AMB	10 06 55.0	
	260nm,0.5s						
NKL				*e*Sn	**Sn**	**10 07 24.0**	**+0.2**
NKL				*e*Sg	**Sg**	**10 07 39.0**	**+0.7**
NKL				A		10 07 43.0	
	420nm,0.5s						
NKL				A		10 07 43.0	
	700nm,0.5s						
NKL				A		10 07 46.0	
	1μm,3.5s						
NKL				AMS	AMS	10 08 39.0	
	500nm,5.0s						
NKL				AMS	AMS	10 08 39.0	
	800nm,5.0s						
OKH	**Okha**	**3.85**	**124**	*e*Pn	**Pn**	**10 06 53.9**	**+0.1**
OKH				sP		10 07 02.0	
OKH				*e*Pg	**Pg**	**10 07 03.5**	**-4.8**
OKH				AMB	AMB	10 07 06.9	
	400nm,0.9s						
OKH				*e*Sg	**Sg**	**10 07 55.9**	**-2.3**
OKH				A		10 07 57.2	
	700nm,0.5s						
OKH				AMS	AMS	10 09 00.0	
	4μm,12.0s						
OKH				AMS	AMS	10 09 00.0	
	2μm,11.0s						
EKMR	**Ekimchan**	**3.87**	**226**	⇓*i*Pn	**Pn**	**10 06 55.3**	**+1.3**
EKMR				pP		10 07 01.9	
EKMR				*e*Pg	**Pg**	**10 07 06.5**	**-2.1**
EKMR				AMB	AMB	10 07 11.5	
	100nm,0.5s						
EKMR				AMB	AMB	10 07 11.5	
	89nm,0.5s						
EKMR				AMB	AMB	10 07 11.5	
	110nm,0.5s						
EKMR				*e*Sg	**Sg**	**10 07 59.5**	**+0.9**
EKMR				A		10 08 09.7	
	460nm,0.5s						
EKMR				A		10 08 09.7	
	320nm,0.5s						
GRNR	**Gornyy**	**5.12**	**188**	*e*Pn	**Pn**	**10 07 10.0**	**-1.2**
GRNR				*e*Pg	**Pg**	**10 07 30.0**	**-2.5**
GRNR				*e*Sg	**Sg**	**10 08 42.0**	**+3.3**
GRNR				A		10 08 49.8	
	494nm,0.5s						
BMKR	**Bomnak**	**5.12**	**261**	⇓*i*Pn	**Pn**	**10 07 09.5**	**-1.8**
BMKR				*e*Pg	**Pg**	**10 07 26.0**	**-6.6**
BMKR				AMB	AMB	10 07 27.5	
	38nm,0.5s						
BMKR				AMB	AMB	10 07 27.5	
	158nm,0.5s						
BMKR				*e*Sn	**Sn**	**10 08 09.0**	**-1.4**
BMKR				*e*Sg	**Sg**	**10 08 34.2**	**-4.7**
BMKR				A		10 08 36.5	
	684nm,0.7s						
KROS	**Kirovskiy**	**6.25**	**261**	*e*Pn	**Pn**	**10 07 24.1**	**-2.6**
KROS				*e*Pg	**Pg**	**10 07 45.9**	**-8.2**
KROS				AMB	AMB	10 07 50.9	
	46nm,0.5s						
KROS				AMB	AMB	10 07 50.9	
	37nm,0.5s						
KROS				*e*Sn	**Sn**	**10 08 34.2**	**-3.8**
KROS				*i* Sg	**Sg**	**10 09 09.8**	**-5.1**
KROS				A		10 09 15.3	
	500nm,0.6s						
KROS				A		10 09 15.3	
	220nm,0.6s						
KROS				A		10 09 15.3	
	470nm,0.6s						
ZEA	**Zeya**	**6.34**	**255**	*e*Pn	**Pn**	**10 07 27.6**	**-0.3**
ZEA				*e*Pg	**Pg**	**10 07 49.5**	**-6.3**
ZEA				AMB	AMB	10 07 51.1	
	42nm,0.8s						
ZEA				AMB	AMB	10 07 51.1	
	61nm,0.8s						
ZEA				*e*Sg	**Sg**	**10 09 12.5**	**-5.2**
ZEA				A		10 09 17.0	
	1μm,1.5s						
ZEA				A		10 09 17.0	
	400nm,1.5s						
ZEA				A		10 09 17.5	
	740nm,1.0s						
ZEA				A		10 09 17.5	
	350nm,1.0s						
ZEA				AMS	AMS	10 09 51.0	
	700nm,8.0s						
CLNS	**Chul'man**	**7.13**	**283**	*e*rx	rx	10 08 05.1	
CLNS				*e*Sg	**Sg**	**10 09 35.7**	**-7.5**
UGL	**Uglegorsk**	**7.29**	**156**	P	**Pn**	**10 07 49.0**	**+8.0**
UGL				*e*		10 09 08.7	
UGL				pmax	pmax		
	comp=Z,82nm,0.9s						
UGL				smax			
	comp=N,500nm,8.0s						
UGL				smax			
	comp=E,600nm,8.0s						
UGL	**Uglegorsk**	**7.29**	**156**	*e*Pn	**Pn**	**10 07 42.5**	**+1.5**
UGL				sP		10 07 49.0	
UGL				*e*Pg	**Pg**	**10 08 08.5**	**-5.6**
UGL				*e*Sg	**Sg**	**10 09 50.0**	**+1.6**
UGL				A		10 10 03.0	
	comp=E,500nm,8.0s						
UGL				A		10 10 03.0	
	comp=E,600nm,8.0s						
YAK	**Yakutsk**	**7.44**	**330**	*e*P	**Pn**	**10 07 42.8**	**-0.2**
YAK				*e*		10 09 09.5	
YAK				pmax	pmax		
	comp=Z,18nm,0.4s						
YAK				pmax	pmax		
	comp=N,4.0nm,0.4s						
YAK				pmax	pmax		
	comp=E,5.0nm,0.4s						
YAK				smax			
	comp=N,27nm,0.5s						
YAK				smax			
	comp=E,67nm,0.5s						
YAK	**Yakutsk**	**7.44**	**330**	*e*P	**Pn**	**10 07 42.9**	**-0.1**
YAK				*i* S	**Sn**	**10 09 09.0**	**+1.7**
KLR	**Kul'dur**	**7.50**	**211**	*e*rx	rx	10 09 48.5	
KLR				AMS	AMS	10 10 10.0	
	comp=E,900

ZAK	**Zakamensk**	**21.15**	**270**	*e*P	**P**	**10 10 38.4**	**-1.1**
ZAK				pmax	pmax		
comp=Z,1.0nm,1.1s,mb3.1							
KURK	**Kurchatov**	**34.69**	**287**	P	**P**	**10 12 45.6**	**+1.5**
comp=Z,0.6nm,0.5s,mb3.8,baz=64,slow=8.9,SNR=5.8							
KURK	**Kurchatov**	**34.69**	**287**	P	**P**	**10 12 46.2**	**+2.2**
KURK				pmax	pmax		
comp=Z,1.0nm,0.6s,mb3.9							
KURK	**Kurchatov**	**34.69**	**287**	P	**P**	**10 12 46.2**	**+2.1**
comp=Z,1.0nm,0.6s,mb3.9							
MKAR	**Makanchi Array**	**34.85**	**279**	P	**P**	**10 12 46.6**	**+1.1**
comp=Z,0.2nm,0.3s,mb3.5,baz=58,slow=15,SNR=2.3							
MKAR				LR	LR	10 27 04.5	
comp=Z,37nm,18.6s,baz=1.3,slow=36							
ARU	**Arti**	**41.74**	**305***c*	*i*P	**P**	**10 13 44.8**	**+1.5**
ARU			*e*			10 15 21.0	
ARU				S	**S**	**10 20 07.5**	**+7.5**
ARU				pmax	pmax		
comp=Z,10.0nm,2.5s,mb4.0							
ARCES	**ARCESS Array B**	**45.71**	**333**	P	**P**	**10 14 16.1**	**+1.0**
comp=Z,2.0nm,0.8s,mb4.1,baz=33,slow=9.2,SNR=4.0							
ARCES	**ARCESS Array B**	**45.71**	**333**	P	**P**	**10 14 16.1**	**+1.0**
ARCES				pmax	pmax		
comp=Z,2.0nm,0.8s							
FINES	**FINESS Array B**	**51.34**	**325**	P	**P**	**10 15 01.2**	**+2.7**
comp=Z,2.3nm,0.7s,mb4.2,baz=27,slow=8.8,SNR=6.2							
FINES	**FINESS Array B**	**51.34**	**325**	P	**P**	**10 15 01.2**	**+2.7**
FINES				pmax	pmax		
comp=Z,2.0nm,0.7s							
NB2	**NORSAR Subarra**	**56.06**	**332**	P	**P**	**10 15 35.6**	**+2.6**
comp=Z,1.8nm,0.6s,mb4.3,baz=34,slow=7.4							
NOA	**NORSAR Array B**	**56.06**	**332**	P	**P**	**10 15 35.6**	**+2.6**
comp=Z,1.4nm,0.6s,mb4.2,baz=32,slow=7.2,SNR=5.5							
NOA	**NORSAR Array B**	**56.06**	**332**	P	**P**	**10 15 35.6**	**+2.6**
NOA				pmax	pmax		
comp=Z,1.0nm,0.6s							
NVAR	**Mina Array Bea**	**66.24**	**56**	P	**P**	**10 16 40.5**	**-1.9**
comp=Z,0.3nm,0.6s,mb3.5,baz=316,slow=4.1,SNR=3.5							
NVAR	**Mina Array Bea**	**66.24**	**56**	P	**P**	**10 16 40.5**	**-1.9**
WRA	**Warramunga Arr**	**75.52**	**183**	P	**P**	**10 17 42.5**	**+3.8**
comp=Z,0.2nm,0.8s,mb3.1,baz=345,slow=6.8,SNR=2.7							
ASAR	**Alice Springs**	**79.23**	**183**	P	**P**	**10 18 01.0**	**+1.5**
comp=Z,0.3nm,0.7s,mb3.3,baz=358,slow=5.1,SNR=4.0							

NIED ***27*** *10:06:00,23°.60N×123°.00E,h32km,Mw4.0 Best double couple: M₀1.30000×10¹⁵ NP1:φs138.00000°,δ68.00000°, λ26.00000°. NP2:φs38.00000°,δ66.00000°,λ156.00000°.*
NEIC ***27*** *10:06:52.5±0.7,23°.61N×123°.13E,h10km,MG4.3(JMA), Error ellipse: s-maj=12.6km s-min=9.2km az=157.0*
JMA ***27*** *10:06:56.5±0.2,23°.65N×123°.04E,h58km±4km,M4.3*
ISCJB ***27*** *10:06:56.1±0.3,23°.62N±0°.02×123°.06E±0°.02,h55km±4km, mb4.0/14,MS3.6/3,Error ellipse: s-maj=3.6km s-min=2.1km az=157.4*
IDC ***27*** *10:06:57.5±5.8,23°.65N×122°.98E,h52km±55km,mb3.8/13, mb1 3.9/15,mb1mx3.7/28,mbtmp3.8/15,ML3.9/2,MS3.4/5, Ms1 3.4/5,ms1mx2.8/38,Error ellipse: s-maj=25.4km s-min=16.3km az=67.0*
TAP ***27*** *10:06:57.4,23°.66N×122°.96E,h48km±1km,ML4.7,D*
ISC 27 10:06:56.9±0.2,23°.63N±0°.02×123°.07E±0°.02,h45km±4km, n106,σ1$15/179,mb4.0/14,MS3.6/3,18C-1D, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.80**	**58**	P	**Pn**	**10 07 12.1**	**+0.3**
HATJ				S	**Sn**	**10 07 23.5**	**+0.8**
YOJ	**Yonaguni jima**	**0.83**	**357**	P	**Pn**	**10 07 12.2**	**0.0**
YOJ				S	**Sn**	**10 07 23.2**	**-0.2**
IRIF	**Iriomote-Funau**	**0.93**	**41**	P	**Pn**	**10 07 13.9**	**+0.3**
IRIF				S	**Sn**	**10 07 26.7**	**+0.9**
JKRS	**Kuro-shima**	**1.06**	**55**	P	**Pn**	**10 07 15.8**	**+0.5**
JKRS				S	**Sn**	**10 07 30.1**	**+1.3**
JIJ	**Ishigaki jima**	**1.23**	**53**	P	**Pn**	**10 07 17.5**	**-0.1**
JIJ				S	**Sn**	**10 07 33.3**	**+0.2**
HWA	**Hwalien**	**1.38**	**285**	P	**Pn**	**10 07 19.0**	**-0.7**
HWA				*e*S	**Sn**	**10 07 35.5**	**-1.3**
baz=275							
TEGC	**Jichi Village**	**1.40**	**274**	*e*P	**Pn**	**10 07 19.2**	**-0.7**
baz=272							
TEGC				*e*S	**Sn**	**10 07 35.4**	**-1.9**
baz=272							
TWD	**Chiawan**	**1.42**	**289**	*i* P	**Pn**	**10 07 19.1**	**-1.1**
baz=279							
TWD				S	**Sn**	**10 07 34.9**	**-2.8**
baz=279							
ESF	**Shoufeng Towns**	**1.45**	**280**	*e*P	**Pn**	**10 07 19.8**	**-0.9**
baz=278							
ENA	**Nanau**	**1.45**	**304**	*i* P	**Pn**	**10 07 20.6**	**-0.1**
baz=304							
ENA				S	**Sn**	**10 07 37.5**	**-0.9**
baz=304							
NACB	**Ninganchiao**	**1.45**	**292**	*e*Pn	**Pn**	**10 07 19.5**	**-1.1**
NACB				*e*Sn	**Sn**	**10 07 34.4**	**-4.1**
TWC	**Suao**	**1.48**	**312**	⇑*i*P	**Pn**	**10 07 20.7**	**-0.3**
baz=302							
TWC				S	**Sn**	**10 07 37.0**	**-2.2**
baz=302							
ESL	**Shilin**	**1.51**	**277**	⇑*i*P	**Pn**	**10 07 20.0**	**-1.4**
baz=276							
ESL				S	**Sn**	**10 07 36.0**	**-3.8**
baz=276							
EHY	**Hungye**	**1.60**	**266**	⇑*i*P	**Pn**	**10 07 21.8**	**-0.9**
baz=263							
EHY				S	**Sn**	**10 07 40.1**	**-2.1**
baz=263							
YULB	**Yu-li**	**1.64**	**262**	*e*Pn	**Pn**	**10 07 21.9**	**-1.3**
YULB				*e*Sn	**Sn**	**10 07 42.1**	**-1.0**
TWF1	**Yuli**	**1.65**	**261**	⇑*i*P	**Pn**	**10 07 22.2**	**-1.1**
baz=258							
TWF1				*i* S	**Sn**	**10 07 41.7**	**-1.6**
baz=258							
ILA	**Ilan**	**1.65**	**314**	*e*S	**Sn**	**10 07 44.0**	**+0.6**
baz=304							
TWE	**Neicheng**	**1.68**	**311**	*i* P	**Pn**	**10 07 24.2**	**+0.4**
baz=301							
TWE				*e*S	**Sn**	**10 07 43.0**	**-1.1**
baz=301							
TWB1	**Santiao Chiao**	**1.69**	**325**	⇓*i*P	**Pn**	**10 07 23.9**	**-0.1**
baz=326							
TWB1				S	**Sn**	**10 07 43.2**	**-1.2**
baz=326							
ENTT	**Nioudou**	**1.70**	**307**	⇑*i*P	**Pn**	**10 07 24.4**	**+0.4**
baz=296							
ENTT				*e*S	**Sn**	**10 07 44.0**	**-0.6**
baz=296							
WHF	**Hehuan Shan**	**1.73**	**288**	⇑*i*P	**Pn**	**10 07 24.0**	**-0.4**
baz=278							
WHF				*e*S	**Sn**	**10 07 43.5**	**-1.8**
baz=278							
NNS	**Nan Shan**	**1.75**	**298**	⇑*i*P	**Pn**	**10 07 24.7**	**0.0**
baz=298							
NNS				*i* S	**Sn**	**10 07 44.9**	**-0.8**
baz=298							
JTJ	**Tarama**	**1.81**	**56**	P	**Pn**	**10 07 25.8**	**+0.3**
JTJ				S	**Sn**	**10 07 48.0**	**+0.8**
TWT	**Tachien**	**1.84**	**290**	⇑*i*P	**Pn**	**10 07 26.4**	**+0.4**
baz=289							
TWT				S	**Sn**	**10 07 47.0**	**-1.0**
baz=289							
NWF	**Wu-fen Shan**	**1.85**	**321**	P	**Pn**	**10 07 26.6**	**+0.4**
baz=322							
NWF				S	**Sn**	**10 07 47.7**	**-0.7**
baz=322							
YHNB	**Yeheng**	**1.86**	**304**	*e*Pn	**Pn**	**10 07 26.4**	**+0.1**
YHNB				*e*Sn	**Sn**	**10 07 49.0**	**+0.4**
NSK	**Sanguang**	**1.88**	**304**	⇑*i*P	**Pn**	**10 07 26.9**	**+0.4**
baz=294							
NSK				*i* S	**Sn**	**10 07 47.5**	**-1.4**
baz=294							
TWA	**Mucha**	**1.91**	**315**	*e*P	**Pn**	**10 07 27.6**	**+0.7**
baz=330							
TWA				*e*S	**Sn**	**10 07 49.3**	**-0.4**
baz=330							
ELDTW	**Lidau**	**1.93**	**257**	⇑*i*P	**Pn**	**10 07 26.1**	**-1.1**
baz=254							
SSLB	**Suanglung**	**1.94**	**275**	*e*Pn	**Pn**	**10 07 26.9**	**-0.5**
SSLB				*e*Sn	**Sn**	**10 07 54.7**	**+4.1**
TTN	**Taitung**	**1.97**	**244**	*e*P	**Pn**	**10 07 26.8**	**-1.0**
baz=241							
TTN				S	**Sn**	**10 07 48.6**	**-2.6**
baz=241							
TATO	**Taipei**	**1.97**	**313**	*e*Pn	**Pn**	**10 07 28.8**	**+1.0**
TATO				*e*Sn	**Sn**	**10 07 52.4**	**+1.1**
TAP1	**Taipei**	**1.99**	**315**	*e*P	**Pn**	**10 07 28.9**	**+0.9**
baz=329							
TAP1				*e*S	**Sn**	**10 07 52.2**	**+0.5**
baz=329							
SMLT	**Sun Moon Lake**	**2.00**	**278**	*i* P	**Pn**	**10 07 28.3**	**+0.1**
baz=276							
SMLT				*e*S	**Sn**	**10 07 52.2**	**+0.2**
baz=276							
TWG	**Pinlang**	**2.00**	**247**	*e*Pn	**Pn**	**10 07 26.7**	**-1.5**
TWG				*e*Sn	**Sn**	**10 07 49.3**	**-2.7**
TWG	**Pinlang**	**2.00**	**247**	*i* P	**Pn**	**10 07 27.0**	**-1.2**
baz=243							
TWG				*e*S	**Sn**	**10 07 48.8**	**-3.2**
baz=243							
TYC	**Yuchr**	**2.04**	**278**	⇑*i*P	**Pn**	**10 07 28.7**	**0.0**
baz=270							
ALS	**Alishan**	**2.08**	**267**	P	**Pn**	**10 07 29.8**	**+0.6**
baz=265							
TWS1	**Kuangyinshan**	**2.10**	**315**	P	**Pn**	**10 07 30.0**	**+0.4**
baz=328							
TWS1				S	**Sn**	**10 07 54.7**	**+0.2**
baz=328							
LAY	**Lan-yu**	**2.11**	**222**	P	**Pn**	**10 07 27.9**	**-1.8**
baz=225							
LAY				*e*S	**Sn**	**10 07 49.7**	**-5.0**
baz=225							
TWY	**Chenhua**	**2.12**	**321**	P	**Pn**	**10 07 30.2**	**+0.4**
baz=322							
TWY				S	**Sn**	**10 07 53.8**	**-1.1**
baz=322							
NSTT	**Nanjuang**	**2.13**	**298**	*i* P	**Pn**	**10 07 31.4**	**+1.4**
baz=298							
NSTT				S	**Sn**	**10 07 55.4**	**+0.1**
baz=298							
STYT	**Tauyuan**	**2.17**	**258**	P	**Pn**	**10 07 30.3**	**-0.2**
baz=249							
STYT				S	**Sn**	**10 07 54.7**	**-1.5**
baz=249							
NCU	**National Centr**	**2.17**	**308**	*e*P	**Pn**	**10 07 29.9**	**-0.7**
baz=298							
NCU				*e*S	**Sn**	**10 07 56.3**	**0.0**
baz=298							
CHN5	**Tsauling**	**2.19**	**270**	⇑*i*P	**Pn**	**10 07 31.8**	**+1.0**
baz=267							
WNT	**Mingjian**	**2.20**	**277**	P	**Pn**	**10 07 32.1**	**+1.2**
baz=275							
WNT				*e*S	**Sn**	**10 07 58.1**	**+1.3**
baz=275							
ECL	**Taimali**	**2.20**	**243**	P	**Pn**	**10 07 29.4**	**-1.4**
baz=249							
ECL				*e*S	**Sn**	**10 07 52.7**	**-4.2**
baz=249							
TWQ1	**Liyutan**	**2.22**	**289**	⇑*i*P	**Pn**	**10 07 32.7**	**+1.5**
baz=288							
TWQ1				*e*S	**Sn**	**10 07 58.3**	**+1.0**
baz=288							
HSN	**Hsinchu**	**2.24**	**302**	*e*P	**Pn**	**10 07 33.1**	**+1.6**
baz=318							
HSN				*e*S	**Sn**	**10 07 58.0**	**0.0**
baz=318							
TCU	**Taichung**	**2.25**	**284**	P	**Pn**	**10 07 33.3**	**+1.7**
baz=282							
TCU				*e*S	**Sn**	**10 07 59.4**	**+1.3**
baz=282							
NSY	**Sanyi**	**2.25**	**291**	P	**Pn**	**10 07 33.1**	**+1.6**
baz=290							
NSY				*e*S	**Sn**	**10 08 00.3**	**+2.2**
baz=290							
TPUB	**Ta-pu**	**2.26**	**262**	*e*Pn	**Pn**	**10 07 32.4**	**+0.7**
TPUB				*e*Sn	**Sn**	**10 07 59.1**	**+0.7**
WTP	**Ta-pu**	**2.28**	**261**	⇑*i*P	**Pn**	**10 07 32.8**	**+0.8**
baz=252							
WTP				*e*S	**Sn**	**10 07 59.6**	**+0.7**
baz=252							
CHN4	**Tsaushan**	**2.29**	**264**	⇑*i*P	**Pn**	**10 07 33.3**	**+1.2**
baz=255							
CHN4				*e*S	**Sn**	**10 08 00.3**	**+1.3**
baz=255							
WGK	**Gukeng**	**2.30**	**272**	*e*P	**Pn**	**10 07 33.6**	**+1.3**
baz=270							
WGK				*e*S	**Sn**	**10 08 00.2**	**+0.9**
baz=270							
SGST	**Jiashian**	**2.34**	**257**	P	**Pn**	**10 07 33.9**	**+1.0**
baz=254							
SGST				*e*S	**Sn**	**10 08 01.0**	**+0.5**
baz=254							
JMJ	**Miyako jima 2**	**2.35**	**59**	P	**Pn**	**10 07 33.5**	**+0.5**
JMJ				*e*S	**Sn**	**10 08 01.7**	**+1.0**
TAW	**Tawu**	**2.36**	**238**	*e*P	**Pn**	**10 07 32.1**	**-1.1**
baz=244							
TAW				*e*S	**Sn**	**10 07 57.1**	**-3.8**
baz=244							
CHN1	**Nanshi**	**2.37**	**260**	⇑*i*P	**Pn**	**10 07 34.5**	**+1.3**
baz=257							
CHN1				*e*S	**Sn**	**10 08 02.0**	**+0.9**
baz=257							
EAST	**Anshuo**	**2.39**	**239**	⇑*i*P	**Pn**	**10 07 32.6**	**-0.9**
baz=244							
EAST				*e*S	**Sn**	**10 07 56.9**	**-4.6**
baz=244							
TWK	**Hsinying**	**2.39**	**262**	*i* P	**Pn**	**10 07 34.7**	**+1.1**
baz=252							
TWK				*e*S	**Sn**	**10 08 02.7**	**+1.0**
baz=252							
SSD	**Sandimen**	**2.40**	**249**	⇑*i*P	**Pn**	**10 07 33.3**	**-0.4**
baz=243							
SSD				*i* S	**Sn**	**10 07 59.0**	**-2.9**
baz=243							
JOGS	**Gusukube**	**2.42**	**62**	P	**Pn**	**10 07 34.6**	**+0.7**
JOGS				*e*S	**Sn**	**10 08 03.1**	**+0.8**
CHY	**Chiayi**	**2.43**	**268**	P	**Pn**	**10 07 35.4**	**+1.4**
baz=265							
CHY				*e*S	**Sn**	**10 08 04.0**	**+1.4**
baz=265							
TWM1	**Shoushan**	**2.56**	**252**	P	**Pn**	**10 07 38.2**	**+2.4**
baz=256							
TWM1				*e*S	**Sn**	**10 08 08.2**	**+2.4**
baz=256							
WTCT	**Ta-ch'eng**	**2.56**	**276**	P	**Pn**	**10 07 37.3**	**+1.4**
baz=274							
WTCT				*e*S	**Sn**	**10 08 08.0**	**+2.1**
baz=274							
SCZT	**Fangliau**	**2.58**	**241**	P	**Pn**	**10 07 37.0**	**+0.9**
baz=243							
SCZT				*i* S	**Sn**	**10 08 04.1**	**-2.1**
baz=243							
CHN8	**Yiju**	**2.63**	**264**	*e*P	**Pn**	**10 07 38.1**	**+1.2**
baz=262							
CHN8				S	**Sn**	**10 08 08.9**	**+1.3**
baz=262							
TSEB	**Hengchuen, Pin**	**2.63**	**230**	*e*P	**Pn**	**10 07 38.6**	**+1.7**
baz=235							
TSEB				S	**Sn**	**10 08 06.8**	**-0.8**
baz=235							
TAI1	**Yung-k'ang**	**2.67**	**258**	*e*P	**Pn**	**10 07 38.2**	**+0.8**
baz=267							
TWK1	**Hengchun**	**2.67**	**232**	*e*P	**Pn**	**10 07 38.7**	**+1.2**
baz=218							
TWK1				S	**Sn**	**10 08 06.7**	**-1.9**
baz=218							
SCLT	**Jiali**	**2.67**	**261**	*e*P	**Pn**	**10 07 38.9**	**+1.4**
baz=258							
SCLT				*e*S	**Sn**	**10 08 10.0**	**+1.4**
baz=258							
HEN	**Hengchun**	**2.69**	**234**	*e*P	**Pn**	**10 07 36.8**	**-0.8**
baz=240							
HEN				S	**Sn**	**10 08 07.7**	**-1.2**
baz=240							
KAU	**Kaohsiung**	**2.75**	**248**	*e*P	**Pn**	**10 07 41.5**	**+3.0**
baz=245							
KAU				*e*S	**Sn**	**10 08 15.6**	**+5.2**
baz=245							
TWP	**Hsiaoliuchiu**	**2.80**	**243**	*e*P	**Pn**	**10 07 42.4**	**+3.2**
baz=239							
PNG	**Penghu**	**3.22**	**270**	P	**Pn**	**10 07 45.3**	**+0.4**
baz=267							
PNG				*e*S	**Sn**	**10 08 21.4**	**-0.7**
baz=267							
KNM	**Kinmen**	**4.31**	**281**	*e*P	**Pn**	**10 08 00.4**	**+0.5**
baz=279							
JKE	**Kume jima 2**	**4.32**	**51**	P	**Pn**	**10 07 59.0**	**-1.0**
JKE				*e*S	**Sn**	**10 08 46.8**	**-2.3**
JAGN	**Aguni-jima**	**4.80**	**51**	P	**Pn**	**10 08 06.0**	**-0.6**
JAGN				*e*S	**Sn**	**10 08 59.9**	**-1.1**
JIH	**Iheya**	**5.58**	**52**	P	**Pn**	**10 08 10.7**	**-6.7**
JIH				*e*S	**Sn**	**10 09 17.0**	**-3.3**
JOW	**Kunigami**	**5.70**	**55**	P	**Pn**	**10 08 17.5**	**-1.4**
JOW				*e*S	**Sn**	**10 09 20.0**	**-3.0**
JTK	**Tokunoshima**	**6.73**	**51**	P	**Pn**	**10 08 31.1**	**-2.1**
JTK				*e*S	**Sn**	**10 09 43.2**	**-5.3**
JAM	**Amami Oshima**	**7.57**	**50**	P	**Pn**	**10 08 41.9**	**-2.7**
JAM				*e*S	**Sn**	**10 10 02.3**	**-6.8**
JMZ	**Minamidaito 2**	**7.73**	**72**	P	**Pn**	**10 08 43.4**	**-3.5**
JMZ				*e*S	**Sn**	**10 10 04.4**	**-8.7**
INCN	**Inchon**	**14.15**	**12**	*e*Pn	**Pn**	**10 10 14.3**	**-0.2**
48nm,0.8s							
KSRS	**Korea Array**	**14.40**	**16**	P	**Pn**	**10 10 18.3**	**+0.3**
0.4nm,0.3s,baz=197,slow=12,SNR=25							
KSRS				LR	LR	10 16 15.2	
comp=Z,57nm,20.7s,baz=154,slow=39							
JHJ	**Hachijo jima 2**	**17.47**	**54**	LR	LR	10 17 32.1	
comp=Z,50nm,18.9s,baz=122,slow=36							
MJAR	**Matsushiro Arr**	**18.34**	**42**	P	**Pn**	**10 11 08.2**	**+0.3**
0.4nm,0.3s,baz=226,slow=9.7,SNR=6.3							
ASAJ	**Asahikawa**	**25.97**	**33**	P	**P**	**10 12 25.1**	**-0.1**
4.7nm,0.5s,mb4.3,baz=220,slow=11,SNR=8.2							
SONM	**Songino Array**	**27.57**	**335**	P	**P**	**10 12 39.0**	**-0.5**
2.3nm,0.7s,mb4.0,baz=153,slow=10,SNR=9.1							
SONM				LR	LR	10 25 07.4	
comp=Z,60nm,18.9s,MS3.2,baz=122,slow=40							
PETK	**Petropavlovsk-**	**39.38**	**33**	P	**P**	**10 14 21.4**	**-0.6**
1.3nm,0.4s,mb4.0,baz=193,slow=4.4,SNR=5.3							
PETK				LR	LR	10 34 04.9	
comp=Z,33nm,18.6s,MS3.2,baz=52,slow=41							
MKAR	**Makanchi Array**	**39.94**	**316**	P	**P**	**10 14 26.2**	**-0.4**
0.5nm,0.6s,mb3.4,baz=96,slow=17,SNR=4.4							
MKAR				PcP	PcP	10 16 29.6	-1.8
0.6nm,0.8s,baz=72,slow=4.7,SNR=3.2							
ZALV	**Zalesovo Beam**	**41.65**	**327**	P	**P**	**10 14 39.5**	**-1.1**
2.1nm,0.6s,mb4.0,baz=108,slow=8.7,SNR=8.0							
KURK	**Kurchatov**	**43.62**	**320**	P	**P**	**10 14 56.1**	**-0.7**
0.8nm,0.6s,mb3.6,baz=117,slow=7.7,SNR=4.4							
WRA	**Warramunga Arr**	**44.68**	**165**	P	**P**	**10 15 05.3**	**-0.1**
0.3nm,0.9s,mb3.1,baz=344,slow=8.8,SNR=3.3							
FX1	**Attu Island--F**	**47.66**	**39**	P	**P**	**10 15 29.9**	**+1.4**
8.8nm,0.7s,mb4.9,baz=288,slow=3.2,SNR=7.5							
ASAR	**Alice Springs**	**48.17**	**167**	P	**P**	**10 15 33.5**	**+0.6**
0.5nm,0.9s,mb3.5,baz=346,slow=7.3,SNR=3.1							
BVAR	**Borovoye Array**	**49.19**	**321**	P	**P**	**10 15 40.4**	**0.0**
0.7nm,0.5s,mb3.9,baz=117,slow=12,SNR=2.5							
ARCES	**ARCESS Array B**	**70.69**	**338**	P	**P**	**10 18 06.3**	**-1.3**
4.6nm,1.0s,mb4.3,baz=60,slow=12,SNR=3.8							
ARCES	**ARCESS Array B**	**70.69**	**338**	P	**P**	**10 18 06.3**	**-1.3**
FINES	**FINESS Array B**	**72.79**	**330**	P	**P**	**10 18 20.6**	**+0.3**
5.7nm,0.7s,mb4.6,baz=81,slow=6.4,SNR=13							
INK	**Inuvik**	**73.09**	**22**	*e*P	**P**	**10 18 22.7**	**+0.7**
12nm,1.5s,mb4.6							
BRTR	**Keskin Array B**	**74.89**	**307**	LR	LR	10 54 32.6	
comp=Z,147nm,18.1s,MS4.3,baz=258,slow=38							
CSS	**Prodhromos**	**76.66**	**302**	*e*P	**P**	**10 18 46.2**	**+2.9**
21nm,0.4s							
NB2	**NORSAR Subarra**	**79.52**	**333**	P	**P**	**10 18 58.3**	**-0.3**
comp=Z,0.6nm,0.5s,mb3.8,baz=54,slow=5.6							
NOA	**NORSAR Array B**	**79.52**	**333**	P	**P**	**10 18 58.6**	**0.0**
comp=Z,1.1nm,0.6s,mb3.9,baz=57,slow=5.5,SNR=5.3							

ISCJB ***27*** *10:31:41.6±0.7,33°.75N±0°.04×135°.72E±0°.05,h56km±6km, Error ellipse: s-maj=7.5km s-min=7.3km az=31.4*
JMA ***27*** *10:31:42.7,33°.75N×135°.68E,h50km±1km,M3.3 Broadband fault plane solution: P waves. NP1: φs289.00000°,δ45.00000°,λ-166.00000°. NP2: φs189.00000°,δ80.00000°,λ-45.00000°. Principal axes: T Plg22.0000°, Azm247.0000°; N Plg44.0000°, Azm360.0000°; P Plg38.0000°, Azm138.0000°;*
JMA Felt I J1.
IDC ***27*** *10:31:43.9±2.8,33°.74N×135°.84E,h63km±40km,mb3.0/1, mb1 3.5/4,mb1mx3.1/28,mbtmp3.4/4,ML3.4/3 Error ellipse: s-maj=24.7km s-min=15.0km az=50.0*
ISC 27 10:31:42.9±0.7,33°.76N±0°.04×135°.70E±0°.05,h47km±7km, n11,σ0$62/20,2C-4D,Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWZ	**Kozaga**	**0.23**	**177**	⇑P	**Pn**	**10 31 50.9**	**-0.2**
JWZ				S	**Sn**	**10 31 56.9**	**+0.1**
JWM	**Minabe**	**0.30**	**288**	⇓P	**Pn**	**10 31 51.6**	**-0.1**
JWM				S	**Sn**	**10 31 57.9**	**-0.1**
JWY	**Kouya**	**0.47**	**349**	⇓P	**Pn**	**10 31 53.7**	**+0.1**
JWY				S	**Sn**	**10 32 01.1**	**-0.1**
JKN2	**Miekihoku**	**0.68**	**44**	⇑P	**Pn**	**10 31 56.2**	**0.0**
JKN2				S	**Sn**	**10 32 05.8**	**0.0**
JHE	**Heguri**	**0.90**	**359**	⇓P	**Pn**	**10 31 59.0**	**-0.1**
JHE				S	**Sn**	**10 32 10.8**	**-0.2**
JAJ2	**Tsuna**	**0.95**	**315**	⇓P	**Pn**	**10 31 59.5**	**-0.3**
JAJ2				S	**Sn**	**10 32 11.5**	**-0.8**
MAT	**Matsushiro**	**3.46**	**36**	P	**Pn**	**10 32 34.3**	**+0.1**
MAT				S	**Sn**	**10 33 13.0**	**-0.8**
MJAR	**Matsushiro Arr**	**3.46**	**36**	P	**Pn**	**10 32 35.0**	**+0.8**
4.1nm,0.3s,baz=206,slow=15,SNR=41							
MJAR				S	**Sn**	**10 33 14.4**	**+0.6**
2.5nm,0.3s,baz=272,slow=20,SNR=8.9							
JHJ	**Hachijo jima 2**	**3.47**	**99**	P	**Pn**	**10 32 35.2**	**+0.8**
14nm,0.3s,baz=65,slow=19,SNR=4.9							
JHJ				S	**Sn**	**10 33 13.6**	**-0.6**
22nm,0.3s,baz=112,slow=22,SNR=8.3							
KSRS	**Korea Array**	**7.33**	**302**	P	**Pn**	**10 33 29.4**	**+2.0**
0.5nm,0.3s,baz=118,slow=14,SNR=7.4							
WRA	**Warramunga Arr**	**53.41**	**182**	P	**P**	**10 40 57.1**	**-0.9**
0.6nm,1.0s,baz=358,slow=7.8,SNR=3.8							

MOS ***27*** *10:50:04.8±1.4,39°.60N×41°.81E,h10km,mb4.3/16,Error ellipse: s-maj=9.5km s-min=5.4km az=85.1*
IDC ***27*** *10:50:04.8±0.8,39°.54N×41°.89E,h0km,mb4.0/13, mb1 4.0/18,mb1mx3.9/28,mbtmp3.9/18,ML3.0/3,MS3.1/11, Ms1 3.1/11,ms1mx2.9/36,Error ellipse: s-maj=19.6km s-min=11.7km az=176.0*
ISK ***27*** *10:50:05.7,39°.89N×41°.83E,h5km,ML4.0*
NEIC ***27*** *10:50:05.0,39°.93N×41°.84E,h5km,mb4.0/1,ML4.1(ISK), After ISK.*
ISCJB ***27*** *10:50:06.2±

ARTV	**Artvin**	**1.36**	**3**	⇓*i*P	**Pn**	**10 50 31.0**	**-2.2**
ARTV				*i* S	**Sg**	**10 50 51.7**	**+0.7**
BINT	**Bingol**	**1.40**	**228**	*e*PN	**Pg**	**10 50 34.5**	**+0.5**
BINT	**Bingol**	**1.40**	**228**	*e*Pn	**Pg**	**10 50 34.5**	**+0.5**
DYDN	**Diyadin**	**1.46**	**100**	⇑*i*P	**Pn**	**10 50 33.5**	**-1.0**
DYDN				*i* S	**Sg**	**10 50 55.7**	**+1.7**
DYDN	**Diyadin**	**1.46**	**100**	*i* P	**Pn**	**10 50 33.5**	**-1.0**
DYDN				*i* S	**Sg**	**10 50 55.7**	**+1.7**
PZAR	**Pazar-Rize**	**1.53**	**333**	*e*PN	**Pn**	**10 50 34.1**	**-1.4**
PZAR	**Pazar-Rize**	**1.53**	**333**	*e*Pn	**Pn**	**10 50 34.1**	**-1.4**
BCA	**Borcka**	**1.63**	**355**	*e*PN	**Pn**	**10 50 35.1**	**-1.8**
BCA	**Borcka**	**1.63**	**355**	*e*Pn	**Pn**	**10 50 35.1**	**-1.8**
BTMT	**Batman**	**1.65**	**189**	*e*PN	**Pg**	**10 50 38.3**	**-0.4**
VANB	**Van**	**1.72**	**135**	*e*PN	**Pn**	**10 50 38.7**	**+0.5**
VANB	**Van**	**1.72**	**135**	*e*Pn	**Pn**	**10 50 38.7**	**+0.6**
CLDR	**Caldiran**	**1.75**	**112**	*e*PN	**Pn**	**10 50 38.5**	**0.0**
CLDR	**Caldiran**	**1.75**	**112**	*e*Pn	**Pn**	**10 50 38.6**	**+0.1**
TVAN	**Van**	**1.78**	**136**	⇓*i*P	**Pg**	**10 50 39.9**	**-1.3**
TVAN				*i* S	**Sg**	**10 51 04.7**	**+0.5**
TVAN	**Van**	**1.78**	**136**	*i* P	**Pg**	**10 50 39.9**	**-1.3**
TVAN				*i* S	**Sg**	**10 51 04.7**	**+0.4**
VANT	**Van**	**1.79**	**141**	*e*PN	**Pg**	**10 50 40.2**	**-1.2**
GUMT	**Gumushane**	**1.91**	**290**	*e*PN	**Pn**	**10 50 40.2**	**-0.6**
GUMT	**Gumushane**	**1.91**	**290**	*e*Pn	**Pn**	**10 50 40.2**	**-0.5**
MACK	**Trabzon**	**1.93**	**306**	⇓*i*P	**Pn**	**10 50 40.5**	**-0.6**
MACK				*i* S	**Sg**	**10 51 08.9**	**-0.3**
MACK	**Trabzon**	**1.93**	**306**	*i* P	**Pn**	**10 50 40.5**	**-0.5**
MACK				*i* S	**Sg**	**10 51 08.9**	**-0.3**
KTUT	**Trabzon**	**1.96**	**307**	*e*PN	**Pn**	**10 50 40.4**	**-1.0**
KTUT	**Trabzon**	**1.96**	**307**	*e*Pn	**Pn**	**10 50 40.4**	**-1.0**
BEST	**Besiri**	**1.98**	**193**	*i* P	**Pn**	**10 50 41.9**	**+0.3**
BEST				*i* S	**Sg**	**10 51 11.0**	**+0.5**
PTK	**Pertek**	**2.10**	**245**	*e*PN	**Pn**	**10 50 43.7**	**+0.3**
PTK	**Pertek**	**2.10**	**245**	*e*Pn	**Pn**	**10 50 43.7**	**+0.3**
GNI	**Garni**	**2.26**	**81**	*e*PN	**Pn**	**10 50 45.3**	**-0.3**
GNI	**Garni**	**2.26**	**81**	Pn	**Pn**	**10 50 45.8**	**+0.2**
	19nm,0.3s,baz=294,slow=2.4,SNR=45						
GNI	**Garni**	**2.26**	**81c**	*i* P	**Pn**	**10 50 45.9**	**+0.4**
GNI				pmax	pmax		
	comp=Z,1μm,1.0s						
GNI	**Garni**	**2.26**	**81**	P	**Pn**	**10 50 46.0**	**+0.5**
	SNR=89						
DIYA	**Diyarbakir**	**2.32**	**216**	⇑*i*P	**Pn**	**10 50 46.1**	**-0.2**
DIYA				*i* S	**Sg**	**10 51 18.0**	**-3.5**
DIYA	**Diyarbakir**	**2.32**	**216**	*i* P	**Pn**	**10 50 46.1**	**-0.2**
SVRC	**Sivrice-ELAZID**	**2.44**	**235**	*e*PN	**Pn**	**10 50 48.6**	**+0.7**
SVRC	**Sivrice-ELAZID**	**2.44**	**235**	*e*Pn	**Pn**	**10 50 48.6**	**+0.7**
ESPY	**Espiye-Giresun**	**2.61**	**296**	*e*PN	**Pn**	**10 50 50.4**	**+0.1**
ESPY	**Espiye-Giresun**	**2.61**	**296**	*e*Pn	**Pn**	**10 50 50.4**	**0.0**
KEMA	**Kemaliye**	**2.64**	**259**	*i* P	**Pn**	**10 50 50.5**	**-0.2**
KEMA				*i* S	**Sg**	**10 51 32.3**	**+0.5**
KEMA	**Kemaliye**	**2.64**	**259**	*i* P	**Pn**	**10 50 50.5**	**-0.2**
HKR	**Hakkari**	**2.69**	**146**	*e*PN	**Pn**	**10 50 53.2**	**+1.8**
HKR	**Hakkari**	**2.69**	**146**	*e*Pn	**Pn**	**10 50 53.3**	**+1.8**
HAKT	**HAKKARI**	**2.69**	**146**	⇑*i*P	**Pn**	**10 50 51.3**	**-0.2**
HAKT				*i* S	**Sg**	**10 51 33.8**	**+0.2**
HAKT	**HAKKARI**	**2.69**	**146**	*i* P	**Pn**	**10 50 51.3**	**-0.2**
GOR	**Gori**	**2.77**	**38**	P	**Pn**	**10 50 53.7**	**+1.2**
TBLG	**Delisi**	**2.92**	**48**	P	**Pn**	**10 50 54.7**	**+0.1**
TBLG	**Delisi**	**2.92**	**48**	P	**Pn**	**10 50 54.7**	**+0.1**
CUKT	**Cukurca**	**2.92**	**151**	*e*PN	**Pn**	**10 50 55.9**	**+1.3**
CUKT	**Cukurca**	**2.92**	**151**	*e*Pn	**Pn**	**10 50 55.9**	**+1.3**
MTA	**Mtatsminda**	**2.93**	**49**	P	**Pn**	**10 50 54.8**	**+0.1**
MTA				S	**Sg**	**10 51 52.0**	**+11**
GRSN	**GIRESUNGRSN**	**2.94**	**293**	*i* P	**Pb**	**10 50 57.9**	**-2.2**
GRSN				*i* S	**Sb**	**10 51 36.2**	**-0.3**
MYA	**Malataya**	**3.04**	**242**	*e*PN	**Pn**	**10 50 56.2**	**-0.1**
MYA	**Malataya**	**3.04**	**242**	*e*Pn	**Pn**	**10 50 56.2**	**-0.1**
DGRG	**David-gareji**	**3.15**	**58**	P	**Pn**	**10 50 58.7**	**+0.9**
DARE	**Darende-Malaty**	**3.24**	**256**	*e*PN	**Pb**	**10 51 05.0**	**-0.3**
ZEI	**Tsey**	**3.33**	**27**	*e*P	**Pn**	**10 51 01.7**	**+1.4**
ZEI				pmax	pmax		
	comp=Z,157nm,0.7s						
ZEI	**Tsey**	**3.33**	**27**	*e*P	**Pn**	**10 51 01.7**	**+1.4**
	comp=Z,157nm,0.7s						
URFA	**Urfa**	**3.35**	**226**	*e*PN	**Pn**	**10 51 02.1**	**+1.6**
URFA	**Urfa**	**3.35**	**226**	*e*Pn	**Pn**	**10 51 02.1**	**+1.6**
SVSK	**Karacayir**	**3.72**	**273**	*e*PN	**Pn**	**10 51 07.2**	**+1.6**
SVSK	**Karacayir**	**3.72**	**273**	*e*Pn	**Pn**	**10 51 07.2**	**+1.6**
IAZR	**Azarshahr**	**3.89**	**122**	*e*P	**Pg**	**10 51 19.5**	**-2.1**
IAZR	**Azarshahr**	**3.89**	**122**	*e*P	**Pg**	**10 51 19.5**	**-2.1**
ERBA	**Erbaa**	**3.98**	**284**	⇓*i*P	**Pb**	**10 51 18.6**	**+0.7**
ERBA				*i* S	**Sg**	**10 52 14.0**	**-0.9**
SOC	**Sochi**	**4.08**	**338**	*e*P	**Pn**	**10 51 09.7**	**-0.8**
SOC				*e*		10 51 59.0	
SOC				pmax	pmax		
	comp=Z,94nm,0.9s						
SOC				MLR	MLR		
	comp=Z,789nm,15.0s						
SOC	**Sochi**	**4.08**	**338**	*e*P	**Pn**	**10 51 09.7**	**-0.8**
	comp=Z,94nm,0.9s						
SOC				*e*S	**Sn**	**10 51 59.0**	**+0.1**
	comp=Z,789nm,15.0s						
BTKR	**Batakoyurt**	**4.09**	**29**	*e*P	**Pn**	**10 51 14.3**	**+3.6**
BTKR	**Batakoyurt**	**4.09**	**29**	*e*P	**Pn**	**10 51 14.3**	**+3.6**
SARI	**SarD1z-Kayseri**	**4.14**	**256**	*e*PN	**Pn**	**10 51 16.8**	**+5.3**
KIV	**Kislovodsk**	**4.18**	**9**	*e*P	**Pn**	**10 51 12.9**	**+1.0**
KIV				*i* S	**Sn**	**10 52 04.7**	**+3.3**
KIV				pmax	pmax		
	comp=Z,57nm,1.6s						
KIV	**Kislovodsk**	**4.18**	**9**	*e*P	**Pn**	**10 51 12.9**	**+1.0**
	comp=Z,57nm,1.6s						
KIV				*i* S	**Sn**	**10 52 04.7**	**+3.3**
BEYR	**Belyy Ugol+**	**4.25**	**10**	*e*P	**Pn**	**10 51 14.4**	**+1.5**
BEYR	**Belyy Ugol+**	**4.25**	**10**	*e*P	**Pn**	**10 51 14.4**	**+1.5**
PYA	**Pyatigorsk**	**4.31**	**12**	*e*P	**Pn**	**10 51 16.8**	**+3.1**
PYA	**Pyatigorsk**	**4.31**	**12**	*e*P	**Pn**	**10 51 16.8**	**+3.1**
TRKR	**Terskaya**	**4.46**	**28**	*e*P	**Pn**	**10 51 19.4**	**+3.6**
TRKR	**Terskaya**	**4.46**	**28**	*e*P	**Pn**	**10 51 19.4**	**+3.6**
GAZ	**Gaziantep**	**4.49**	**235**	*e*PN	**Pn**	**10 51 17.9**	**+1.8**
GAZ	**Gaziantep**	**4.49**	**235**	*e*Pn	**Pn**	**10 51 18.0**	**+1.9**
KMRS	**Kahramanmaras**	**4.50**	**241**	*e*PN	**Pn**	**10 51 18.6**	**+2.3**
KMRS	**Kahramanmaras**	**4.50**	**241**	*e*Pn	**Pn**	**10 51 18.6**	**+2.3**
KVT	**Kavak**	**4.59**	**288**	*e*PN	**Pn**	**10 51 19.1**	**+1.6**
KVT	**Kavak**	**4.59**	**288**	*e*Pn	**Pn**	**10 51 19.2**	**+1.7**
YOZ	**Yozgat**	**5.02**	**270**	*e*PN	**Pn**	**10 51 25.1**	**+1.6**
YOZ	**Yozgat**	**5.02**	**270**	*e*Pn	**Pn**	**10 51 25.1**	**+1.6**
GOF	**Gofitskoye**	**5.31**	**9**	*e*P	**Pb**	**10 51 41.0**	**+0.4**
GOF				pmax	pmax		
	comp=Z,110nm,1.3s						
DIKM	**Dikmen**	**5.32**	**292**	*e*PN	**Pn**	**10 51 28.7**	**+1.2**
DIKM	**Dikmen**	**5.32**	**292**	*e*Pn	**Pn**	**10 51 28.7**	**+1.2**
BYBT	**Boyabat**	**5.62**	**289**	*e*PN	**Pn**	**10 51 33.5**	**+1.9**
BYBT	**Boyabat**	**5.62**	**289**	*e*Pn	**Pn**	**10 51 33.5**	**+1.8**
ANN	**Anapa**	**5.95**	**328**	*e*P	**Pn**	**10 51 37.6**	**+1.4**
ANN				*e*S	**Sn**	**10 52 50.9**	**+6.0**
ANN				pmax	pmax		
	comp=Z,17nm,0.7s						
ANN	**Anapa**	**5.95**	**328**	*e*P	**Pn**	**10 51 37.6**	**+1.4**
	comp=Z,17nm,0.7s						
BRTR	**Keskin Array B**	**6.31**	**272**	Pn	**Pn**	**10 51 41.4**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=89,slow=13,SNR=4.0						
BRTR	**Keskin Array B**	**6.31**	**272**	P	**Pn**	**10 51 41.4**	**+0.2**
MMAI	**Mount Meron Ar**	**8.54**	**219**	LR	LR	10 55 33.0	
	comp=Z,84nm,18.6s,baz=85,slow=39						
ASF	**Jabal al Asfar**	**8.61**	**209**	Pn	**Pn**	**10 52 08.6**	**-4.2**
	comp=Z,0.2nm,0.3s,baz=90,slow=13,SNR=2.7						
VSR	**Storozhevoye**	**11.55**	**352**	*e*P	**Pn**	**10 52 52.9**	**0.0**
VSR				pmax	pmax		
	comp=N,2.0nm,0.5s						
VSR				pmax	pmax		
	comp=E,3.0nm,0.5s						
VSR				pmax	pmax		
	comp=Z,9.0nm,0.5s						
VSR	**Storozhevoye**	**11.55**	**352**	*e*P	**Pn**	**10 52 52.9**	**0.0**
EIL	**Elat**	**11.59**	**211**	LR	LR	10 57 11.1	
	comp=Z,61nm,18.6s,baz=25,slow=38						
MLR	**Muntele Rosu**	**12.99**	**301**	Pn	**Pn**	**10 53 18.3**	**+5.7**
	comp=Z,0.4nm,0.3s,baz=22,slow=19,SNR=3.0						
MLR				LR	LR	10 59 01.2	
	comp=Z,48nm,19.1s,baz=113,slow=41						
AKASG	**Malin Array Be**	**14.02**	**325**	Pn	**Pn**	**10 53 28.1**	**+1.4**
	comp=Z,1.0nm,0.3s,baz=134,slow=12,SNR=10						
AKASG	**Malin Array Be**	**14.02**	**325**	P	**Pn**	**10 53 28.1**	**+1.4**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	**Malin Array Be**	**14.02**	**325**	P	**Pn**	**10 53 28.1**	**+1.4**
	comp=Z,1.0nm,0.3s						
AKTK	**Aktyubinsk**	**15.56**	**42**	Pn	**Pn**	**10 53 44.4**	**-3.0**
AKTO	**Aktyubinsk**	**15.56**	**42**	Pn	**Pn**	**10 53 44.4**	**-3.0**
	comp=Z,0.2nm,0.3s,baz=234,slow=16,SNR=4.7						
OBN	**Obninsk**	**15.70**	**349**	*e*P	**Pn**	**10 53 49.5**	**+0.2**
OBN				pmax	pmax		
	comp=Z,9.0nm,0.5s						
MOS	**Moscow**	**16.17**	**351**	*e*P	**Pn**	**10 53 51.3**	**-4.0**
BANOM	**Banah**	**18.40**	**135**	P	**Pn**	**10 54 23.6**	**+0.2**
NAZ	**Nazwa, Dubai**	**18.81**	**138**	P	**Pn**	**10 54 28.1**	**-0.3**
ASUD	**Al Ashush, Dub**	**18.94**	**139**	P	**Pn**	**10 54 29.3**	**-0.7**
FAQ	**Al Faqa, Dubai**	**18.97**	**138**	P	**Pn**	**10 54 29.9**	**-0.5**
HATD	**Hatta, Dubai**	**19.19**	**137**	P	**Pn**	**10 54 32.3**	**-0.7**
ASHO	**Ashiyiah**	**19.26**	**137**	P	**Pn**	**10 54 32.8**	**-1.1**
	SNR=8.9						
ARU	**Arti**	**19.93**	**28c**	*i*P	**Pn**	**10 54 41.2**	**-0.5**
ARU				S	**Sn**	**10 58 28.3**	**+2.2**
ARU				SS		10 58 45.1	
ARU				pmax	pmax		
	comp=Z,14nm,1.7s						
ARU	**Arti**	**19.93**	**28**	*i* P	**Pn**	**10 54 41.2**	**-0.5**
	comp=Z,14nm,1.7s						
VRAC	**Vranov**	**20.25**	**306**	LR	LR	11 04 09.5	
	comp=Z,25nm,20.0s,MS2.6,baz=73,slow=41						
CONA	**Conrad Observa**	**20.33**	**302**	⇓*i*P	**P**	**10 54 45.3**	**+0.9**
	comp=Z,10nm,1.1s						
CONA	**Conrad Observa**	**20.33**	**302**	P	**P**	**10 54 45.3**	**+0.8**
	comp=Z,10nm,1.1s						
SOKA	**Soboth**	**20.62**	**298**	⇑*i*P	**P**	**10 54 48.7**	**+1.1**
	comp=Z,9.3nm,1.3s						
SOKA	**Soboth**	**20.62**	**298**	P	**P**	**10 54 48.7**	**+1.0**
	comp=Z,9.3nm,1.3s						
DPC	**Dobruska-Polom**	**20.76**	**309**	*e*P	**P**	**10 54 51.5**	**+2.4**
DPC	**Dobruska-Polom**	**20.76**	**309**	*e*P	**P**	**10 54 51.5**	**+2.4**
DPC	**Dobruska-Polom**	**20.76**	**309**	*e*P	**P**	**10 54 51.5**	**+2.4**
TREC	**Trest**	**20.93**	**306**	*e*P	**P**	**10 54 51.6**	**+0.6**
TREC	**Trest**	**20.93**	**306**	*e*P	**P**	**10 54 51.6**	**+0.6**
TREC	**Trest**	**20.93**	**306**	*e*P	**P**	**10 54 51.6**	**+0.6**
SVE	**Sverdlovsk**	**21.00**	**30**	*e*P	**P**	**10 54 51.5**	**-0.1**
SVE				pmax	pmax		
	comp=Z,36nm,1.4s						
SVE	**Sverdlovsk**	**21.00**	**30**	*e*P	**P**	**10 54 51.5**	**-0.1**
	comp=Z,36nm,1.4s						
UPC	**Upice**	**21.00**	**309**	*e*P	**P**	**10 54 55.0**	**+3.3**
UPC	**Upice**	**21.00**	**309**	*e*P	**P**	**10 54 55.0**	**+3.3**
VSU	**Vasula**	**21.02**	**338**	*e*P	**P**	**10 54 53.2**	**+1.4**
VSU				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.4						
VSU	**Vasula**	**21.02**	**338**	*e*P	**P**	**10 54 53.2**	**+1.4**
	comp=Z,20nm,1.0s,mb4.4						
MOA	**Molln**	**21.36**	**301**	⇓*i*P	**P**	**10 54 56.1**	**+0.5**
	comp=Z,7.6nm,1.1s,mb3.9						
MOA	**Molln**	**21.36**	**301**	P	**P**	**10 54 56.1**	**+0.5**
	comp=Z,7.6nm,1.1s,mb3.9						
KBA	**Koelnbreinsper**	**21.83**	**299**	⇑*i*P	**P**	**10 55 01.7**	**+1.0**
	comp=Z,15nm,1.1s,mb4.3						
KBA	**Koelnbreinsper**	**21.83**	**299**	P	**P**	**10 55 01.7**	**+1.0**
	comp=Z,15nm,1.1s,mb4.3						
KHC	**Kasperske Hory**	**22.09**	**304**	*e*P	**P**	**10 55 03.2**	**-0.3**
KHC	**Kasperske Hory**	**22.09**	**304**	*e*P	**P**	**10 55 03.2**	**-0.3**
KHC	**Kasperske Hory**	**22.09**	**304**	*e*P	**P**	**10 55 03.2**	**-0.3**
CLL	**Collm**	**23.07**	**309**	*e*P	**P**	**10 55 13.0**	**-0.8**
CLL				*e*		10 55 15.0	
CLL	**Collm**	**23.07**	**309**	*e*sP	sP	10 55 13.0	-1.3
CLL	**Collm**	**23.07**	**309**	*e*P	**P**	**10 55 13.0**	**-0.8**
BRVK	**Borovoye**	**23.47**	**46**	⇑*i*P	**P**	**10 55 17.4**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.8						
BRVK	**Borovoye**	**23.47**	**46**	*e*P	**P**	**10 55 17.3**	**-0.7**
	comp=Z,3.9nm,0.8s,mb3.9						
BVAR	**Borovoye Array**	**23.52**	**46**	P	**P**	**10 55 18.0**	**-0.5**
	comp=Z,1.3nm,0.5s,mb3.6,baz=245,slow=7.6,SNR=11						
BVAR	**Borovoye Array**	**23.52**	**46**	P	**P**	**10 55 18.0**	**-0.5**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FETA	**Feichten**	**23.60**	**298**	⇑*i*P	**P**	**10 55 18.9**	**-0.5**
	comp=Z,11nm,1.2s,mb4.2						
FETA	**Feichten**	**23.60**	**298**	P	**P**	**10 55 18.9**	**-0.5**
	comp=Z,11nm,1.2s,mb4.2						
FINES	**FINESS Array B**	**23.72**	**341**	P	**P**	**10 55 19.7**	**-0.6**
	comp=Z,5.9nm,0.8s,mb4.1,baz=141,slow=12,SNR=7.4						
FINES				LR	LR	11 05 26.2	
	comp=Z,95nm,20.8s,MS3.2,baz=183,slow=38						
FINES	**FINESS Array B**	**23.72**	**341**	P	**P**	**10 55 19.7**	**-0.6**
FINES				pmax	pmax		
	comp=Z,6.0nm,0.8s						
FINES				MLR	MLR		
	comp=Z,95nm,20.8s						
JOF	**Joensuu**	**23.98**	**348**	*e*P	**P**	**10 55 20.4**	**-2.3**
JOF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.0						
JOF	**Joensuu**	**23.98**	**348**	*e*p	**P**	**10 55 20.4**	**-2.3**
	comp=Z,3.8nm,0.6s,mb4.0						
JOF	**Joensuu**	**23.98**	**348**	*e*p	**P**	**10 55 20.4**	**-2.3**
	comp=Z,3.8nm,0.6s,mb4.0						
DAVOX	**Davos/Dischmat**	**24.15**	**297**	P	**P**	**10 55 22.9**	**-1.5**
	comp=Z,1.5nm,0.5s,mb3.7,baz=151,slow=19,SNR=3.0						
DAVOX				LR	LR	11 05 38.6	
	comp=Z,21nm,18.3s,MS2.7,baz=280,slow=38						
DAVA	**Damuels**	**24.20**	**299**	⇑*i*P	**P**	**10 55 24.6**	**-0.3**
	comp=Z,12nm,1.0s,mb4.2						
DAVA	**Damuels**	**24.20**	**299**	P	**P**	**10 55 24.6**	**-0.3**
	comp=Z,12nm,1.0s,mb4.2						
KEST	**Kesra**	**25.92**	**271**	P	**P**	**10 55 39.3**	**-1.3**
	comp=Z,2.6nm,0.9s,mb3.8,baz=333,slow=2.3,SNR=2.1						
HFS	**Hagfors**	**26.86**	**329**	P	**P**	**10 55 48.5**	**-0.3**
	comp=Z,1.9nm,0.6s,mb3.8,baz=134,slow=13,SNR=4.1						
HFS				LR	LR	11 06 48.8	
	comp=Z,75nm,19.4s,MS3.3,baz=249,slow=37						
HFS	**Hagfors**	**26.86**	**329**	P	**P**	**10 55 48.5**	**-0.4**
HFS				pmax	pmax		
	comp=Z,2.0nm,0.6s						
HFS				MLR	MLR		
	comp=Z,75nm,19.4s						
KURK	**Kurchatov**	**27.82**	**55**	P	**P**	**10 55 56.7**	**-0.9**
	comp=Z,3.3nm,0.7s,mb4.1,baz=266,slow=9.1,SNR=16						
KURK	**Kurchatov**	**27.82**	**55c**	*i* P	**P**	**10 55 57.5**	**-0.1**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.2						
KURK	**Kurchatov**	**27.82**	**55**	P	**P**	**10 55 56.7**	**-0.9**
NOA	**NORSAR Array B**	**28.38**	**329**	LR	LR	11 08 30.5	
	comp=Z,51nm,18.0s,MS3.2,baz=95,slow=39						
MKAR	**Makanchi Array**	**30.00**	**63**	P	**P**	**10 56 17.5**	**+0.5**
	comp=Z,1.8nm,0.8s,mb3.8,baz=322,slow=3.7,SNR=11						
MKAR	**Makanchi Array**	**30.00**	**63**	P	**P**	**10 56 17.5**	**+0.5**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	**ARCESS Array B**	**31.01**	**349**	LR	LR	11 09 28.2	
	comp=Z,46nm,21.4s,MS3.1,baz=17,slow=37						
ZALV	**Zalesovo Beam**	**32.06**	**49**	P	**P**	**10 56 34.5**	**-0.6**
	comp=Z,1.1nm,0.6s,mb3.9,baz=260,slow=8.4,SNR=5.8						
ZALV				LR	LR	11 10 45.6	
	comp=Z,32nm,19.7s,MS3.0,baz=212,slow=38						
ZALV	**Zalesovo Beam**	**32.06**	**49**	P	**P**	**10 56 34.5**	**-0.6**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.8						
ZALV				MLR	MLR		
	comp=Z,32nm,19.7s,MS3.0						
JMIC	**Jan Mayen**	**40.21**	**337**	LR	LR	11 14 50.1	
	comp=Z,52nm,21.8s,MS3.3,baz=65,slow=37						
SONM	**Songinu Array**	**46.04**	**58**	P	**P**	**10 58 31.8**	**-0.3**
	comp=Z,0.4nm,0.6s,mb3.5,baz=308,slow=7.1,SNR=2.2						
TIXI	**Tiksi**	**51.86**	**24**	*e*P	**P**	**10 59 14.7**	**-1.7**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.4s,mb4.2						
CMAR	**Chiang Mai Arr**	**53.30**	**96**	P	**P**	**10 59 23.7**	**-4.0**
	comp=Z,0.5nm,0.3s,mb3.9,baz=302,slow=8.4,SNR=3.6						
CMAR	**Chiang Mai Arr**	**53.30**	**96**	P	**P**	**10 59 23.7**	**-4.0**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS	**Korea Array**	**64.66**	**61**	P	**P**	**11 00 44.0**	**-2.4**
	comp=Z,1.2nm,0.7s,mb4.0,baz=300,slow=5.7,SNR=6.0						
KSRS	**Korea Array**	**64.66**	**61**	P	**P**	**11 00 44.1**	**-2.3**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
KSRS	**Korea Array**	**64.66**	**61**	P	**P**	**11 00 44.1**	**-2.3**
	comp=Z,1.0nm,0.7s,mb4.0						
BOSA	**Boshof**	**69.81**	**195**	P	**P**	**11 01 16.3**	**-2.7**
	comp=Z,3.6nm,0.9s,mb4.3,baz=13,slow=4.6,SNR=3.3						
BOSA	**Boshof**	**69.81**	**195**	P	**P**	**11 01 16.3**	**-2.7**
BOSA				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
MJAR	**Matsushiro Arr**	**71.99**	**57**	P	**P**	**11 01 30.1**	**-2.3**
	comp=Z,0.5nm,0.6s,mb3.6,baz=309,slow=8.4,SNR=4.8						
MJAR	**Matsushiro Arr**	**71.99**	**57**	P	**P**	**11 01 30.1**	**-2.3**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MJAR	**Matsushiro Arr**	**71.99**	**57**	P	**P**	**11 01 30.1**	**-2.3**
	comp=Z,1.0nm,0.6s,mb3.9						

BEO ***27*** *11:24:33.2±2.2, 45°.26N×23°.45E, h0km*
CSEM ***27*** *11:24:36.6±0.2, 45°.16N×23°.10E, h2km, ML3.3, Error ellipse: s-maj=4.9km s-min=4.0km az=149.0*
BUC ***27*** *11:24:36.9±1.6, 45°.23N×23°.09E, h6km±9km, MD2.8/4, Error ellipse: s-maj=9.6km s-min=5.6km az=1.0*
NEIC ***27*** *11:24:36.9, 45°.03N×23°.14E, h21km, ML3.3(BUC), After BUC.*
ISCJB ***27*** *11:24:36.4±1.0, 45°.18N±0°.03×23°.06E±0°.04, h5km±7km, Error ellipse: s-maj=5.1km s-min=4.3km az=145.5*

ISC 27 11:24:37.2±0.9, 45°.17N±0°.03×23°.08E±0°.04, h6km±6km, n72, σ1°.902/89, 29C-17D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEV	**Deva**	**0.72**	**350**	⇑*i*P	**Pg**	**11 24 50.7**	**-0.4**
DEV				*i* S	**Sg**	**11 24 59.5**	**-1.0**
DEV	**Deva**	**0.72**	**350**	⇑*i*P	**Pg**	**11 24 50.7**	**-0.4**
DEV	**Deva**	**0.72**	**350**	S	**Sg**	**11 24 59.5**	**-1.0**
DEV	**Deva**	**0.72**	**350**	⇑*i*P	**Pg**	**11 24 50.7**	**-0.4**
DEV				S	**Sg**	**11 24 59.5**	**-1.0**
BZS	**Buzias**	**1.12**	**294**	*i* Pn	**Pn**	**11 24 58.4**	**-1.0**
BZS	**Buzias**	**1.12**	**294**	⇑P	**Pg**	**11 24 58.5**	**-0.2**
BZS				S	**Sg**	**11 25 15.2**	**+1.8**
BZS	**Buzias**	**1.12**	**294**	⇓*i*P	**Pg**	**11 24 58.5**	**-0.2**
BZS				*i* S	**Sg**	**11 25 14.8**	**+1.5**
BZS	**Buzias**	**1.12**	**294**	⇓*i*P	**Pg**	**11 24 58.5**	**-0.2**
BZS	**Buzias**	**1.12**	**294**	S	**Sg**	**11 25 14.8**	**+1.5**
BZS	**Buzias**	**1.12**	**294**	⇑P	**Pg**	**11 24 58.5**	**-0.2**
BZS				S	**Sg**	**11 25 14.8**	**+1.5**
MDB	**Medias**	**1.33**	**43**	⇑*i*P	**Pn**	**11 25 00.9**	**-1.4**
MDB				*i* S	**Sb**	**11 25 19.6**	**-0.2**
MDB	**Medias**	**1.33**	**43**	⇑*i*P	**Pn**	**11 25 00.9**	**-1.4**
MDB	**Medias**	**1.33**	**43**	S	**Sb**	**11 25 19.6**	**-0.2**
MDB	**Medias**	**1.33**	**43**	⇑*i*P	**Pn**	**11 25 00.9**	**-1.4**
MDB				S	**Sb**	**11 25 19.6**	**-0.2**
VOIR		**1.41**	**78**	⇑P	**Pn**	**11 25 01.1**	**-2.3**
VOIR		**1.41**	**78**	⇑P	**Pn**	**11 25 01.1**	**-2.3**
BOLS	**Boljevac**	**1.57**	**211**	*i* Pn	**Pn**	**11 25 04.5**	**-1.0**
BOLS	**Boljevac**	**1.57**	**211**	*i* Pn	**Pn**	**11 25 04.5**	**-1.0**
DRGR		**1.64**	**351**	⇑P	**Pn**	**

IRIF	**Iriomote-Funau**	**1.19**	**95**	P	**Pn**	**11 40 35.1**	**-0.3**
IRIF				*e*S	**Sn**	**11 40 51.3**	**-0.1**
HATJ	**Hateruma jima**	**1.31**	**107**	P	**Pn**	**11 40 37.9**	**+0.9**
HATJ				*e*S	**Sn**	**11 40 55.6**	**+1.4**
NSTT	**Nanjuang**	**1.32**	**278**	*e*P	**Pn**	**11 40 37.5**	**+0.4**
	baz=279						
NSTT				S	**Sn**	**11 40 54.2**	**-0.1**
	baz=279						
EHY	**Hungye**	**1.39**	**227**	*i* P	**Pn**	**11 40 36.9**	**-1.1**
	baz=227						
EHY				*i* S	**Sn**	**11 40 55.0**	**-0.9**
	baz=227						
JKRS	**Kuro-shima**	**1.45**	**98**	P	**Pn**	**11 40 39.1**	**+0.3**
JKRS				*e*S	**Sn**	**11 40 57.6**	**+0.2**
TWF1	**Yuli**	**1.51**	**224**	P	**Pn**	**11 40 38.9**	**-0.7**
	baz=230						
SMLT	**Sun Moon Lake**	**1.51**	**248**	*e*P	**Pn**	**11 40 40.1**	**+0.5**
	baz=242						
TWQ1	**Liyutan**	**1.52**	**266**	*e*P	**Pn**	**11 40 39.1**	**-0.6**
	baz=267						
TYC	**Yuchr**	**1.54**	**250**	P	**Pn**	**11 40 40.8**	**+0.8**
	baz=246						
TYC				*e*S	**Sn**	**11 41 01.3**	**+1.8**
	baz=246						
JIJ	**Ishigaki jima**	**1.56**	**93**	P	**Pn**	**11 40 39.9**	**-0.3**
JIJ				*e*S	**Sn**	**11 40 58.8**	**-1.1**
JTJ	**Tarama**	**2.07**	**84**	P	**Pn**	**11 40 47.1**	**+0.1**
JTJ				*e*S	**Sn**	**11 41 12.2**	**+0.1**

IDC ***27*** *11:40:11.4±0.3, 11°.02N×91°.93E, h0km, mb6.1/26, mb1 6.2/28, mb1mx6.2/28, mbtmp6.1/28, ML5.1/2, MS6.5/39, Ms1 6.5/39, ms1mx6.4/45, Error ellipse: s-maj=12.8km s-min=10.4km az=46.0*

ISCJB ***27*** *11:40:11.2±0.6, 11°.02N±0°.02×91°.85E±0°.01, h9km±3km, mb6.4/389, MS6.7/320, Error ellipse: s-maj=3.6km s-min=2.3km az=12.8*

BJI ***27*** *11:40:12.2, 10°.98N×91°.81E, h18km, mB6.7/47, mb6.3/63, Ms6.8/81, Ms7 6.7/68*

NEIC ***27*** *11:40:14.0±0.1, 11°.01N×91°.82E, h17km, mb6.4/220, ME6.9, MS6.7/203, MW6.6, MW6.4, Error ellipse: s-maj=3.7km s-min=2.3km az=203.0, Moment Tensor Solution. s90 Moment tensor: Scale 10^{18}Nm; M_{rr}-3.54; $M_{\theta\theta}$-1.49; $M_{\phi\phi}$5.04; $M_{r\theta}$-1.69; $M_{r\phi}$1.78; $M_{\theta\phi}$-1.72; Best double couple: $M_0$5.40000×10^{18} NP1:ϕ_s169.00000°, δ38.00000°, λ-130.00000°. NP2:ϕ_s35.00000°, δ62.00000°, λ-63.00000°. Principal axes: T 5.9600, Plg12.0000°, Azm106.0000°; N -1.4100, Plg23.0000°, Azm201.0000°; P -4.5400, Plg62.0000°, Azm350.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*

NEIC Felt [IV] at Port Blair and [II] at Chennai. Also felt at Bhubaneshwar and Tambaram.

MOS ***27*** *11:40:14.4±0.9, 11°.00N×91°.89E, h33km, mb6.7/142, MS6.6/121 Error ellipse: s-maj=6.5km s-min=3.9km az=120.2*

DJA ***27*** *11:40:15, 10°.73N×91°.97E, h14km, Mw7.0/85*

CASC ***27*** *11:40:16.9±2.1, 11°.03N×90°.87E, h20km±999km, mb6.6(NEIC)*

GCMT ***27*** *11:40:19.2±0.1, 10°.92N×91°.82E, h17km, MW6.6, Moment Tensor Solution. s117,c273; s99,c197; Moment tensor: Scale 10^{18}Nm; M_{rr}-5.63±.04; $M_{\theta\theta}$-4.12±.04; $M_{\phi\phi}$9.75±.04; $M_{r\theta}$-1.95±.12; $M_{r\phi}$2.36±.03; $M_{\theta\phi}$1.57±.12; Best double couple: $M_0$8.80000×10^{18} NP1:ϕ_s42.00000°, δ52.00000°, λ-40.00000°. NP2:ϕ_s159.00000°, δ60.00000°, λ-134.00000°. Principal axes: T 10.2000, Plg5.0000°, Azm279.0000°; N -2.9000, Plg37.0000°, Azm185.0000°; P -7.4000, Plg53.0000°, Azm15.0000°; Data Used: II IU G CN IC. LP body wave period 50 sec. Mantle waves from 101 sta. Surface waves: sta=113, comp=250, per= 50.*

BGS ***27*** *11:40:20.8±1.4, 11°.75N×90°.47E, h15km, mb6.2, MS6.7*

SZGRF ***27*** *11:40:21.5, 12°.10N×91°.71E, h33km, mb6.5, MS6.7, Andaman Islands, India, region*

ISC 27 11:40:15.7±0.6, 11°.00N±0°.02×91°.84E±0°.01, h28km±4km, h28km±1.9km: pP-P, n2058, σ0s97/1386, mb6.4/389, MS6.7/320, 251C-446D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**1.10**	**53**	*e*PKP	x	11 41 43.9	
PBA				*e*S	x	11 42 03.0	
CM31	**Chiang Mai Arr**	**10.11**	**42**	*e*Pn	**Pn**	**11 42 38.8**	**-0.4**
CMAR	**Chiang Mai Arr**	**10.11**	**42**	Pn	**Pn**	**11 42 38.0**	**-1.1**
	7.6nm,0.3s,baz=236,slow=15,SNR=150						
CMAR				P3KPbc		12 19 27.2	
	0.3nm,0.3s,baz=284,slow=4.3,SNR=4.8						
CMAR				P3KP		12 19 50.2	
	0.2nm,0.3s,baz=359,slow=3.2,SNR=11						
KULM	**Kulim**	**10.40**	**122**	P	**Pn**	**11 42 43.0**	**-0.1**
KULM	**Kulim**	**10.40**	**122**	P	**Pn**	**11 42 43.3**	**+0.1**
KULM	**Kulim**	**10.40**	**122**	P	**Pn**	**11 42 43.5**	**+0.3**
KULM	**Kulim**	**10.40**	**122**	*e*Pn	**Pn**	**11 42 42.4**	**-0.7**
	1μm,1.1s						
VIS	**Vishakhapatnam**	**10.61**	**310**	*i* P	**Pn**	**11 42 43.0**	**-3.1**
VIS				*i* x	x	11 44 33.5	
PSI	**Prapat**	**10.75**	**139**	Pn	**Pn**	**11 42 45.6**	**-2.4**
	5.2nm,0.3s,baz=318,slow=9.4,SNR=41						
PSI	**Prapat**	**10.75**	**139**	P	**Pn**	**11 42 45.6**	**-2.4**
PSI				pmax	pmax		
	comp=Z,5.0nm,0.3s						
IPM	**Ipoh**	**11.16**	**125**	P	**Pn**	**11 42 53.6**	**-0.1**
IPM	**Ipoh**	**11.16**	**125**	P	**Pn**	**11 42 52.2**	**-1.4**
MDRS	**Chennai**	**11.53**	**281**	⇑*i*P	Pn	11 43 23.1	+25
MDRS				*e*S	**Sn**	**11 45 19.2**	**+13**
PALK	**Pallekele**	**11.60**	**252**	Pn	**Pn**	**11 43 00.2**	**+0.6**
	comp=Z,11μm,0.5s,SNR=26						
PALK	**Pallekele**	**11.60**	**252**	*e*P	**Pn**	**11 42 57.6**	**-2.0**
PALK				pmax	pmax		
	comp=Z,22nm,2.3s						
PALK	**Pallekele**	**11.60**	**252**	*e*Pn	**Pn**	**11 42 57.6**	**-2.0**
	comp=Z,22nm,2.3s						
CAL	**Calcutta**	**11.96**	**344**	*e*PKP	**Pn**	**11 43 05.5**	**+1.0**
CAL				*e*S	**Sn**	**11 45 09.7**	**-7.3**
FRIM	**Kepong**	**12.39**	**128**	P	**Pn**	**11 43 09.3**	**-1.2**
KTGM	**Kuala Trenggan**	**12.51**	**116**	P	**Pn**	**11 43 13.0**	**+0.9**
HYB	**Hyderabad**	**14.37**	**298**	*i* P	**Pn**	**11 43 36.0**	**-1.5**
	comp=Z,200nm,1.0s						
HYB				*e*PP		11 44 26.0	
HYB				*e*S	**Sn**	**11 46 16.0**	**0.0**
HYB				LR	LR	11 59 12.0	
	comp=Z,70nm,24.0s						
KGM	**Kluang**	**14.47**	**127**	P	**Pn**	**11 43 37.0**	**-1.8**
SHL	**Shillong**	**14.49**	**0**	*i* P	**Pn**	**11 43 33.0**	**-6.1**
SHL				*e*S	**Sn**	**11 46 13.5**	**-5.4**
TRD	**Trivandrum**	**14.88**	**262**	⇑*i*x	pP	11 43 58.0	+0.8
TRD				*i* x	x	11 46 32.0	
MYKOM	**Kota Tinggi**	**15.03**	**127**	P	**Pn**	**11 43 44.1**	**-2.2**
NGP	**Nagpur**	**15.89**	**311**	⇑*i*P	**Pn**	**11 43 53.9**	**-3.7**
NGP				*e*x	x	11 44 10.2	
	comp=Z,4μm,1.4s						
NGP				*e*x	x	11 46 40.2	
SLGI	**Shiliguri**	**15.95**	**349**	*e*x	**Pn**	**11 43 59.0**	**+0.7**
ODAN	**Odare**	**16.33**	**346**	*e*P	**Pn**	**11 43 58.8**	**-4.3**
	comp=Z,1μm,0.6s						
GTK	**Gangtok**	**16.53**	**350**	*e*x	**Pn**	**11 44 01.5**	**-4.2**
GTK				*e*x	x	11 46 59.5	
RAMN	**Ramite**	**16.62**	**343**	*e*P	**Pn**	**11 44 02.7**	**-4.1**
	comp=Z,2μm,0.7s						
TAPN	**Taplejung**	**16.73**	**347**	*e*P	**Pn**	**11 44 03.6**	**-4.6**
	comp=Z,1μm,0.7s						
AKL	**Akola**	**17.21**	**306**	*e*PKP	**Pn**	**11 44 12.6**	**-1.6**
JIRN	**Jiri**	**17.41**	**343**	*e*P	**Pn**	**11 44 12.9**	**-3.8**
	comp=Z,3μm,1.1s						
KMI	**Kunming**	**17.44**	**35**	P	**Pn**	**11 44 18.8**	**+1.7**
KMI				pP	pP	11 44 23.0	-2.6
KMI				sP	sP	11 44 24.8	-4.4
KMI				PP		11 44 33.8	
KMI				S	**Sn**	**11 47 32.5**	**+1.9**
KMI				sS	sS	11 47 45.5	-4.5
KMI				SS		11 47 54.0	
KMI				pmax	pmax		
	comp=Z,490nm,0.9s						
KMI				pmax	pmax		
	comp=Z,25μm,8.3s						
KMI				LR	LR		
	comp=N,216μm,18.4s						
KMI				LR	LR		
	comp=E,194μm,16.0s						
KMI				LR	LR		
	comp=Z,136μm,16.6s						
PKI	**Pulchoki**	**17.56**	**341**	*e*P	**Pn**	**11 44 15.0**	**-3.6**
	comp=Z,2μm,0.8s						
PKIN	**Phulchoki**	**17.57**	**341**	*e*P	**Pn**	**11 44 15.3**	**-3.4**
	comp=Z,2μm,0.6s						
DMN	**Daman**	**17.70**	**340**	*e*P	**Pn**	**11 44 17.0**	**-3.3**
	comp=Z,2μm,0.7s						
GUN	**Gumba**	**17.73**	**342**	*e*P	**Pn**	**11 44 17.2**	**-3.5**
	comp=Z,2μm,0.9s						
KKN	**Kakani**	**17.81**	**341**	*e*P	**Pn**	**11 44 18.1**	**-3.5**
	comp=Z,970nm,0.7s						
GOA	**Goa**	**18.09**	**286**	⇓*e*PKP	**Pn**	**11 44 24.0**	**-1.2**
GOA				*ex*	x	11 47 28.4	
KAD	**Karad**	**18.23**	**292**	*e*PKP	**Pn**	**11 44 25.3**	**-1.6**
KAD				AMb	AMB	11 44 35.2	
	comp=Z,1μm,1.1s						
BHPL	**Bhopal**	**18.37**	**313**	*e*PKP	**Pn**	**11 44 27.8**	**-0.8**
BHPL				AMb	AMB	11 44 45.2	
	comp=Z,3μm,0.9s						
LSA	**Lhasa**	**18.62**	**358**	P	**Pn**	**11 44 31.3**	**-0.3**
LSA				S	**Sn**	**11 47 51.5**	**-7.5**
LSA				LR	LR		
	comp=N,100μm,18.1s						
LSA				LR	LR		
	comp=E,100μm,16.3s						
LSA				LR	LR		
	comp=Z,200μm,18.0s						
MNCY	**Minicoy**	**18.74**	**263**	*e*PKP	**Pn**	**11 44 32.0**	**-1.1**
MNCY				*ex*	x	11 51 55.0	
POO	**Poona**	**18.93**	**295**	*e*PKP	**Pn**	**11 44 34.1**	**-1.3**
POO				AMb	AMB	11 44 44.2	
	comp=Z,3μm,1.0s						
QIZ	**Qiongzhong**	**19.12**	**63**	P	**Pn**	**11 44 38.5**	**+0.8**
QIZ				pP	pP	11 44 41.0	-3.2
QIZ				S	**Sn**	**11 48 11.5**	**+0.2**
QIZ				pmax	pmax		
	comp=Z,1μm,1.7s						
QIZ				pmax	pmax		
	comp=Z,18μm,7.4s						
QIZ				LR	LR		
	comp=N,208μm,18.7s						
QIZ				LR	LR		
	comp=Z,218μm,19.7s						
KSM	**Kuching**	**20.63**	**116**	P	**P**	**11 44 52.7**	**-0.5**
KSM	**Kuching**	**20.63**	**116**	*e*P	**P**	**11 44 52.0**	**-1.2**
	comp=Z,4μm,1.3s						
KSM				LR	LR		
	comp=Z,132μm,21.0s,MS6.3						
AGRA	**Agra**	**20.78**	**323**	*e*PKP	**P**	**11 44 54.2**	**-0.5**
GYA	**Guiyang**	**20.79**	**40**	⇓*i*P	**P**	**11 44 55.8**	**+1.0**
GYA				PP		11 45 18.3	
GYA				S	**S**	**11 48 44.0**	**-1.6**
GYA				PcP	PcP	11 49 03.3	-0.2
GYA				SS		11 49 17.3	
GYA				ScP	ScP	11 52 40.0	+1.5
GYA				pmax	pmax		
	comp=Z,790nm,0.9s						
GYA				pmax	pmax		
	comp=Z,16μm,10.2s						
GYA				LR	LR		
	comp=N,119μm,15.2s,MS6.5						
GYA				LR	LR		
	comp=E,144μm,18.9s,MS6.5						
GYA				LR	LR		
	comp=Z,253μm,16.8s,MS6.7						
PTH	**Pithoragarh**	**21.41**	**331**	*e*PKP	**P**	**11 45 02.4**	**+0.9**
PTH				*ex*	x	11 48 50.2	
BHV	**Bhavnagar**	**21.69**	**302**	*ex*	**P**	**11 45 06.5**	**+1.9**
SBUM	**Sibu**	**21.93**	**111**	P	**P**	**11 45 06.5**	**-0.7**
SONA	**Sohna**	**22.05**	**323**	*e*PKP	**P**	**11 45 09.7**	**+1.4**
SONA				AMb	AMB	11 45 18.4	
	comp=Z,5μm,0.7s,mb7.0						
AYAN	**Aya Nagar**	**22.19**	**324**	*e*PKP	**P**	**11 45 11.0**	**+1.1**
AYAN				AMb	AMB	11 45 20.7	
	comp=Z,4μm,1.3s,mb6.7						
NDI	**New Delhi**	**22.29**	**324**	*ex*	**P**	**11 45 09.0**	**-2.0**
NDI				*ex*	**S**	**11 49 20.0**	**+5.0**
AJM	**Ajmer**	**22.37**	**316**	*e*PKP	**P**	**11 45 13.1**	**+1.3**
AJM				AMb	AMB	11 45 22.1	
	comp=Z,6μm,1.4s,mb6.8						
BTM	**Bintulu**	**22.44**	**109**	P	**P**	**11 45 12.5**	**-0.2**
CD2	**Chengdu**	**22.69**	**27**	⇓*i*P	**P**	**11 45 15.0**	**-0.2**
CD2				pP		11 45 24.3	
CD2				sP	sP	11 45 28.3	+2.0
CD2				PcP	PcP	11 49 07.0	-0.1
CD2				S	**S**	**11 49 17.3**	**-4.9**
CD2				sS	sS	11 49 32.3	-2.5
CD2				SS		11 50 01.3	
CD2				PcS	PcS	11 52 44.8	-1.3
CD2				pmax	pmax		
	comp=Z,4μm,1.2s,mb6.7						
CD2				pmax	pmax		
	comp=Z,47μm,7.1s						
CD2				LR	LR		
	comp=N,322μm,19.0s,MS6.8						
CD2				LR	LR		
	comp=E,177μm,21.4s,MS6.8						
CD2				LR	LR		
	comp=Z,137μm,22.4s,MS6.3						
KHET	**Khetri**	**22.69**	**321**	*e*PKP	**P**	**11 45 14.7**	**-0.5**
KHET				AMb	AMB	11 45 25.5	
	comp=Z,5μm,1.1s,mb6.8						
DDI	**Dehra Dun**	**23.11**	**328**	≡⇓*i*P	**P**	**11 45 20.0**	**+0.4**
DDI				*ex*	x	11 49 35.0	
COCO	**West Island**	**23.56**	**168**	P	**P**	**11 45 27.1**	**+2.8**
	comp=Z,10μm,1.0s,mb7.2,SNR=14						
COCO	**West Island**	**23.56**	**168**	*e*P	**P**	**11 45 25.1**	**+0.8**
COCO				pmax	pmax		
	comp=Z,3μm,1.2s,mb6.6						
COCO				MLR	MLR		
	comp=Z,171μm,20.0s,MS6.5						
COCO	**West Island**	**23.56**	**168**	*e*P	**P**	**11 45 25.1**	**+0.8**
	comp=Z,3μm,1.2s,mb6.6						
COCO				LR	LR		
	comp=Z,171μm,20.0s,MS6.5						
GZH	**Guangzhou**	**23.78**	**57**	P	**P**	**11 45 30.3**	**+4.1**
GZH				S	**S**	**11 49 45.5**	**+5.4**
GZH				LR	LR		
	comp=N,132μm,20.5s,MS6.6						
GZH				LR	LR		
	comp=E,153μm,17.8s,MS6.6						
GZH				LR	LR		
	comp=Z,177μm,16.9s,MS6.6						
KLP	**Kalpa**	**24.00**	**330**	*e*PKP	**P**	**11 45 29.4**	**+1.3**
KLP				AMb	AMB	11 45 38.4	
	comp=Z,3μm,0.5s,mb6.9						
HKC	**Hong Kong Obse**	**24.13**	**59**	⇓*i*P	**P**	**11 45 30.0**	**+0.5**
HKC				*i* S	**S**	**11 49 46.0**	**+0.1**
BHJ	**Bhuj**	**24.41**	**303**	*ex*	**P**	**11 45 35.3**	**+3.2**
BHJ				AMb	AMB	11 45 42.5	
	comp=Z,2μm,1.3s,mb6.3						
KKM	**Kota Kinabalu**	**24.59**	**100**	P	**P**	**11 45 34.2**	**+0.4**
KKM	**Kota Kinabalu**	**24.59**	**100**	*e*P	**P**	**11 45 33.8**	**0.0**
	comp=Z,4μm,1.7s,mb6.6						
KKM				LR	LR		
	comp=Z,154μm,20.0s,MS6.5						
SDNR	**Sundarnagar**	**24.61**	**328**	*e*PKP	**P**	**11 45 35.5**	**+1.8**
SDNR				*ex*	x	11 50 05.5	
BHK	**Bhakra**	**24.83**	**327**	*e*PKP	**P**	**11 45 35.0**	**-0.8**
BHK				*ex*	x	11 50 01.2	
KDM	**Kudat**	**25.01**	**97**	P	**P**	**11 45 37.5**	**-0.1**
SDKM	**Sandakan**	**25.64**	**100**	P	**P**	**11 45 42.4**	**-0.8**
BATP	**Bataraza**	**25.66**	**93**	*e*P	**P**	**11 45 44.0**	**+0.5**
DLH	**Dalhousie**	**25.95**	**328**	*e*PKP	**P**	**11 45 49.0**	**+3.1**
DLH				*ex*	x	11 50 14.0	
THN	**Thein Dam**	**26.00**	**328**	*e*PKP	**P**	**11 45 45.7**	**-0.7**
THN				*ex*	x	11 49 12.3	
PPR	**Puerto Princes**	**26.47**	**90**	⇑*i*P	**P**	**11 45 51.1**	**+0.2**
DGAR	**Diego Garcia**	**26.59**	**227**	*e*P	**P**	**11 45 53.3**	**+1.5**
DGAR				pmax	pmax		
	comp=Z,2μm,1.5s,mb6.4						
DGAR				MLR	MLR		
	comp=Z,124μm,20.0s,MS6.5						
DGAR	**Diego Garcia**	**26.59**	**227**	*e*P	**P**	**11 45 53.3**	**+1.5**
	comp=Z,2μm,1.5s,mb6.4						
DGAR				LR	LR		
	comp=Z,124μm,20.0s,MS6.5						
TSM	**Tawau**	**26.63**	**102**	P	**P**	**11 45 51.5**	**-0.8**
JMU	**Jammu**	**26.65**	**327**	*ex*	pP	11 46 00.0	-0.3
MYLDM	**Lahad Datu**	**27.01**	**100**	P	**P**	**11 45 55.7**	**0.0**
ENPP	**El Nido**	**27.07**	**87**	*e*P	**P**	**11 45 56.4**	**+0.2**
LZH	**Lanzhou**	**27.24**	**22**	⇓P	**P**	**11 45 58.5**	**+1.0**
LZH				pP	pP	11 46 02.8	-2.8
LZH				sP	sP	11 46 05.5	-3.5
LZH				PP		11 46 45.5	
LZH				S	**S**	**11 50 35.5**	**+0.5**
LZH				sS	sS	11 50 42.8	-5.6
LZH				SS		11 51 51.5	
LZH				pmax	pmax		
	comp=Z,1μm,1.2s,mb6.4						
LZH				pmax	pmax		
	comp=Z,10μm,5.8s						
LZH				LR	LR		
	comp=N,196μm,17.6s						
LZH				LR	LR		
	comp=Z,204μm,20.0s,MS6.7						
SCZP	**Santa Cruz**	**27.70**	**77**	*e*P	**P**	**11 46 02.6**	**+0.7**
XAN	**Xi'an**	**27.75**	**32**	P	**P**	**11 46 01.0**	**-1.1**
XAN				pP	pP	11 46 09.5	-0.7
XAN				sP	sP	11 46 13.5	-0.1
XAN				PP		11 46 51.8	
XAN				PcP	PcP	11 49 18.8	+0.4
XAN				S	**S**	**11 50 40.0**	**-3.1**
XAN				SS		11 52 04.5	
XAN				ScP	ScP	11 52 52.3	-5.1
XAN				PcS	PcS	11 52 56.5	-3.9
XAN				pmax	pmax		
	comp=Z,110nm,1.0s,mb5.4						
XAN				pmax	pmax		
	comp=Z,3μm,14.3s						
XAN				LR	LR		
	comp=N,114μm,22.8s,MS6.5						
XAN				LR	LR		
	comp=E,50μm,19.8s,MS6.5						
XAN				LR	LR		
	comp=Z,28μm,17.7s,MS5.9						
BOLP	**Bolinao**	**27.78**	**76**	*e*P	**P**	**11 46 03.5**	**+0.9**
BUSP	**Coron**	**27.80**	**85**	*e*P	**P**	**11 46 02.6**	**-0.2**
LUBP	**Lubang**	**27.87**	**81**	*e*P	**P**	**11 46 03.8**	**+0.4**
WHN	**Wuhan**	**28.55**	**44**	⇓*i*P	**P**	**11 46 09.3**	**0.0**
WHN				S	**S**	**11 50 55.0**	**-0.8**
WHN				LR	LR		
	comp=N,127μm,14.5s,MS7.1						
WHN				LR	LR		
	comp=E,352μm,14.7s,MS7.1						
WHN				LR	LR		
	comp=Z,562μm,16.8s,MS7.2						
TGY	**Tagaytay City**	**28.56**	**81**	P	**P**	**11 46 08.8**	**-0.7**
	comp=Z,1μm,0.8s,mb6.6,baz=207,slow=4.5,SNR=16						
TGY				LR	LR	11 58 07.6	
	comp=Z,556nm,18.1s,baz=296,slow=38						
CUYO	**Cuyo Island**	**28.64**	**87**	*e*P	**P**	**11 46 10.7**	**+0.4**
SJMP	**San Jose**	**28.70**	**84**	*e*P	**P**	**11 46 11.6**	**+0.8**
PIP	**Pasuquin**	**28.75**	**72**	⇓*e*P	**P**	**11 46 10.9**	**-0.3**
PCPH	**Palayan**	**28.82**	**78**	*e*P	**P**	**11 46 10.9**	**-0.9**
QZH	**Quanzhou**	**28.90**	**58**	⇓*i*P	**P**	**11 46 13.0**	**+0.5**
QZH				S	**S**	**11 51 01.0**	**-0.5**
QZH				pmax	pmax		
	comp=Z,760nm,0.8s,mb6.5						
QZH				pmax	pmax		
	comp=Z,13μm,8.2s						
QZH				LR	LR		
	comp=N,47μm,12.1s,MS6.9						
QZH				LR	LR		
	comp=E,178μm,14.8s,MS6.9						
QZH				LR	LR		
	comp=Z,282μm,15.9s,MS7.0						
GTA	**Gaotai**	**29.17**	**13**	⇓P	**P**	**11 46 15.5**	**+0.8**
GTA				pP	pP	11 46 20.5	-2.3
GTA				sP	sP	11 46 22.5	-3.7
GTA				PcP	PcP	11 49 23.3	+1.5
GTA				S	**S**	**11 51 08.5**	**+3.2**
GTA				sS	sS	11 51 15.8	-3.0
GTA				pmax	pmax		
	comp=Z,550nm,1.4s,mb6.1						
GTA				pmax	pmax		
	comp=Z,16μm,7.5s						
GTA				LR	LR		
	comp=N,45μm,19.7s,MS6.4						
GTA				LR	LR		
	comp=E,98μm,22.4s,MS6.4						
GTA				LR	LR		
	comp=Z,62μm,22.7s,MS6.2						
APYP	**Conner**	**29.25**	**73**	*e*P	**P**	**11 46 16.5**	**+0.8**
BALP	**Baler**	**29.30**	**77**	*e*P	**P**	**11 46 17.2**	**+1.2**
BOAC	**Boac**	**29.41**	**82**	*e*P	**P**	**11 46 21.2**	**+4.1**
POLP	**Polilio Island**	**29.56**	**80**	*e*P	**P**	**11 46 23.4**	**+5.0**
OTRP	**Odiongan**	**29.58**	**84**	*e*P	**P**	**11 46 19.1**	**+0.5**
CAUP	**Cauayan**	**29.67**	**75**	*e*P	**P**	**11 46 23.2**	**+3.8**
GQP	**Guinayangan**	**30.01**	**81**	*e*P	**P**	**11 46 22.2**	**-0.2**
TPUB	**Ta-pu**	**30.04**	**62**	*e*P	**P**	**11 46 23.1**	**+0.6**
	comp=Z,1μm,1.5s,mb6.3						
SGCP	**Mt. Cagua**	**30.07**	**73**	*e*P	**P**	**11 46 23.4**	**+0.5**
AUQP	**San Andres**	**30.22**	**82**	*e*P	**P**	**11 46 29.0**	**+4.7**
PALP	**Palanan**	**30.25**	**75**	*e*P	**P**	**11 46 23.1**	**-1.5**
TWG	**Pinlang**	**30.27**	**63**	*e*P	**P**	**11 46 25.2**	**+0.5**
	comp=Z,251nm,0.6s,mb6.1						
BBP	**Basco**	**30.43**	**68**	*e*P	**P**	**11 46 23.6**	**-2.5**
IPIL	**Ipil**	**30.48**	**93**	*e*P	**P**	**11 46 26.5**	**-0.1**
SSLB	**Suanglung**	**30.48**	**61**	*e*P	**P**	**11 46 26.6**	**+0.1**
	comp=Z,273nm,0.6s,mb6.2						
YULB	**Yu-li**	**30.65**	**62**	*e*P	**P**	**11 46 29.4**	**+1.5**
	comp=Z,552nm,0.9s,mb6.4						
SNPH	**Sibulan**	**30.94**	**90**	⇑*e*P	**P**	**11 46 31.5**	**+0.8**
YHNB	**Yeheng**	**31.14**	**60**	*e*P	**P**	**11 46 32.4**	**+0.1**
	comp=Z,1μm,1.3s,mb6.6						
NACB	**Ninganchiao**	**31.16**	**61**	*e*P	**P**	**11 46 33.4**	**+0.9**
	comp=Z,549nm,1.4s,mb6.2						
PAGZ	**Pagadian**	**31.26**	**93**	*e*P	**P**	**11 46 35.6**	**+2.1**
KBL	**Kabul**	**31.33**	**322**	*e*P	**P**	**11 46 34.2**	**+0.3**
KBL				pmax	pmax		
	comp=Z,428nm,1.0s,mb6.2						
KBL	**Kabul**	**31.33**	**322**	*e*P	**P**	**11 46 34.2**	**+0.4**
	comp=Z,428nm,1.0s,mb6.2						
TATO	**Taipei**	**31.35**	**60**	*e*P	**P**	**11 46 35.9**	**+1.7**
	comp=Z,612nm,1.1s,mb6.3						
TATO				LR	LR		
	comp=Z,115μm,19.0s,MS6.6						
TBP	**Tagbilaran**	**31.52**	**89**	*e*P	**P**	**11 46 35.8**	**0.0**
LLP	**Lapu-Lapu**	**31.57**	**88**	⇑*e*P	**P**	**11 46 39.3**	**+3.1**
PVCP	**Virac**	**31.66**	**82**	*e*P	**P**	**11 46 36.3**	**-0.8**
KSH	**Kashi**	**31.71**	**336**	⇓*i*P	**P**	**11 46 36.8**	**-0.4**
KSH				pP	pP	11 46 41.3	-4.0
KSH				sP	sP	11 46 43.8	-4.9
KSH				PP	PP	11 47 40.5	-8.6
KSH				PcP	PcP	11 49 30.5	+2.0
KSH				S	**S**	**11 51 42.5**	**-2.7**
KSH				ScP	ScP	11 53 11.8	+1.7
KSH				PcS	PcS	11 53 13.5	+0.6
KSH				SS	SS	11 53 30.0	-32
KSH				ScS	ScS	11 57 08.0	-0.1
KSH

NJ2 LR LR
comp=Z,25μm,14.5s
WMQ Urumqi 32.90 354⇓*i*P P 11 46 49.0 +1.5
WMQ pP pP 11 46 59.0 +3.3
WMQ sP sP 11 47 03.0 +4.0
WMQ PP PP 11 47 59.0 -3.2
WMQ S **S 11 52 05.0 +1.5**
WMQ sS sS 11 52 20.0 +3.0
WMQ ScP ScP 11 53 13.0 -1.0
WMQ SS SS 11 54 04.0 -22
WMQ pmax pmax
comp=Z,760nm,1.0s,mb6.6
WMQ pmax pmax
comp=Z,5μm,3.0s
WMQ LR LR
comp=N,91μm,14.0s,MS7.1
WMQ LR LR
comp=E,259μm,14.0s,MS7.1
WMQ LR LR
comp=Z,97μm,14.0s,MS6.7
BUKP Musuan 32.91 92 *e*P P 11 46 49.1 +1.1
WBK Wadi Bani Khal 33.44 294⇑P P 11 46 56.0 +3.6
SNR=40
DMPH Davao City--Mi 33.46 94⇑*e*P P 11 46 53.7 +0.9
DAV Davao City (W) 33.53 94 PFAKE 11 47 10.0 +17
DAV LR LR
comp=Z,48μm,19.0s,MS6.2
DAV Davao City (W) 33.53 94⇑*e*P P 11 46 53.6 +0.2
BTO Baotou 33.58 25 *e*P P 11 46 53.3 -0.2
BTO LR LR
comp=N,34μm,21.6s,MS6.1
BTO LR LR
comp=E,22μm,21.6s,MS6.1
SSE Sheshan 33.74 49 P **P 11 46 55.5 +0.5**
SSE pP pP 11 47 04.3 +1.1
SSE sP sP 11 47 08.0 +1.5
SSE PcP PcP 11 49 34.5 +0.2
SSE S **S 11 52 15.3 -1.6**
SSE sS sS 11 52 31.5 +1.1
SSE pmax pmax
comp=Z,340nm,0.9s,mb6.3
SSE pmax pmax
comp=Z,6μm,5.9s
SSE LR LR
comp=N,67μm,20.4s,MS6.4
SSE LR LR
comp=E,45μm,20.4s,MS6.4
SSE LR LR
comp=Z,106μm,13.9s
TIA Tai'an 33.95 38 ⇑P **P 11 46 56.0 -0.8**
TIA pP pP 11 47 05.0 0.0
TIA PP PP 11 48 08.3 -5.7
TIA S **S 11 52 20.0 -0.1**
TIA sS sS 11 52 37.5 +3.9
TIA LR LR
comp=N,149μm,19.4s,MS6.8
TIA LR LR
comp=E,114μm,21.2s,MS6.8
ULHL Ulahol 33.99 339 P **P 11 46 58.7 +1.7**
SNR=57
JMDO Jabal Madar 34.16 294 P **P 11 47 01.5 +2.8**
SNR=25
KZA Kyzart 34.20 338 P **P 11 47 01.1 +2.2**
SNR=403
SMDO Samad 34.37 295 P **P 11 47 03.7 +3.0**
SNR=52
HHC Hu-ho-hao-te 34.45 27 *e*P P 11 47 01.3 +0.3
HHC pP pP 11 47 05.8 -3.4
HHC sP sP 11 47 08.3 -4.3
HHC PP PP 11 48 17.8 -1.6
HHC PcP PcP 11 49 36.5 +0.4
HHC S **S 11 52 29.5 +1.9**
HHC sS sS 11 52 37.3 -3.8
HHC ScP ScP 11 53 19.8 +0.2
HHC SS SS 11 54 42.0 -16
HHC ScS ScS 11 57 22.0 -0.2
HHC pmax pmax
comp=Z,240nm,1.1s,mb6.0
HHC LR LR
comp=N,79μm,15.6s,MS6.7
HHC LR LR
comp=E,90μm,15.0s,MS6.7
HHC LR LR
comp=Z,85μm,18.4s,MS6.5
UCH Uchtor 34.61 337 P **P 11 47 04.5 +2.1**
SNR=418
UCH Uchtor 34.61 337 *e*P P 11 47 03.7 +1.3
comp=Z,4.4nm,0.6s
UCH LR LR
comp=Z,184μm,20.0s,MS6.8
AAA Alma-Ata 34.66 341 *i*P P 11 47 04.9 +2.1
AAA *e*S **S 11 52 34.2 +3.3**
AAA pmax pmax
comp=Z,9μm,2.8s,mb7.2
AAA smax
comp=E,29μm,12.6s
AAA MLR MLR
comp=Z,153μm,18.0s,MS6.8
TKM2 Tokmak 2 34.81 339 P **P 11 47 05.8 +1.7**
SNR=275
TKM2 Tokmak 2 34.81 339 *e*P P 11 47 05.1 +1.0
TKM2 pmax pmax
comp=Z,788nm,0.6s,mb6.8
TKM2 MLR MLR
comp=Z,148μm,20.0s,MS6.7
TKM2 Tokmak 2 34.81 339 *e*P P 11 47 05.1 +1.0
comp=Z,788nm,0.6s,mb6.8
TKM2 LR LR
comp=Z,148μm,20.0s,MS6.7
KBK Karagaybulak 34.81 338 P **P 11 47 06.6 +2.5**
SNR=263
AML Almayashu 34.84 336 P **P 11 47 06.6 +2.2**
SNR=74
AML Almayashu 34.84 336 *e*P P 11 47 06.5 +2.1
comp=Z,2μm,1.0s,mb6.9
AML LR LR
comp=Z,69μm,20.0s,MS6.4
AAK Ala-Archa 34.96 337 P **P 11 47 07.0 +1.6**
comp=Z,4μm,1.5s,mb7.2
AAK Ala-Archa 34.96 337 P **P 11 47 07.7 +2.3**
SNR=312
AAK Ala-Archa 34.96 337 LR LR 12 04 03.5
comp=Z,245μm,19.6s,MS7.0,baz=144,slow=41
AAK Ala-Archa 34.96 337 *e*P P 11 47 07.7 +2.3
AAK pmax pmax
comp=Z,854nm,1.1s,mb6.6
AAK Ala-Archa 34.96 337 *e*P P 11 47 07.7 +2.2
comp=Z,854nm,1.1s,mb6.6
BSY Bisya 35.06 294 P **P 11 47 09.8 +3.2**
SNR=70
FRU Bishkek 35.09 338⇓*i*P P 11 47 07.8 +1.3
FRU *e* 11 48 24.0
FRU *e*S **S 11 52 40.0 +2.6**
FRU *e*SS SS 11 54 55.0 -15
FRU pmax pmax
comp=Z,3μm,1.9s,mb6.9
FRU smax
comp=E,920nm,2.4s
FRU MLR MLR
comp=Z,360μm,19.0s,MS7.1
HOQ Hoqain 35.16 295 P **P 11 47 10.4 +3.0**
SNR=60
CHMS Chumysh 35.18 338 P **P 11 47 08.7 +1.4**
SNR=198
EKS2 Erkin-Say 35.26 337 P **P 11 47 09.8 +1.8**
SNR=358
EKS2 Erkin-Say 35.26 337 *e*P P 11 47 09.7 +1.6
comp=Z,227nm,1.6s,mb5.8
EKS2 LR LR
comp=Z,116μm,20.0s,MS6.6
USP Ospenovka 35.51 338 P **P 11 47 11.1 +1.0**
SNR=439
ARQ Araqi 35.80 295 P **P 11 47 16.0 +3.1**
SNR=65
BJI Beijing 36.07 32 P **P 11 47 16.3 +1.3**
BJI pP pP 11 47 17.8 -5.4
BJI PP PP 11 48 39.5 +2.2
BJI S **S 11 52 53.0 +0.4**
BJI pmax pmax
comp=Z,940nm,1.2s,mb6.6
BJI pmax pmax
comp=Z,14μm,9.4s
BJI LR LR
comp=N,98μm,18.7s,MS6.9
BJI LR LR
comp=E,148μm,17.5s,MS6.9
BJI LR LR
comp=Z,78μm,16.8s,MS6.5
HATD Hatta, Dubai 36.53 297 P **P 11 47 22.5 +3.4**
SNR=111
ASHO Ashiyiah 36.55 297 ⇓P **P 11 47 22.4 +3.0**
SNR=86
MK31 Makanchi Array 36.59 349 *e*P P 11 47 19.2 -0.1
MKAR Makanchi Array 36.59 349 P **P 11 47 19.2 -0.1**
comp=Z,920nm,0.9s,mb6.6,baz=133,slow=7.1,SNR=958
MKAR PcP PcP 11 49 43.1 +0.9
comp=Z,100nm,0.8s,baz=105,slow=4.0,SNR=5.9
MKAR S **S 11 53 00.9 +0.7**
comp=Z,5.5nm,0.8s,baz=328,slow=19,SNR=2.4
MKAR LR LR 12 05 53.9
comp=Z,72μm,20.3s,MS6.5,baz=166,slow=42
MKAR P3KPbc 12 17 50.4
comp=Z,0.5nm,0.4s,baz=52,slow=7.9,SNR=4.5
MKAR Makanchi Array 36.59 349 P **P 11 47 19.2 -0.1**
MKAR 11 49 43.1
MKAR S **S 11 53 01.0 +0.7**
MKAR pmax pmax
comp=Z,920nm,0.9s
MKAR smax
comp=N,6.0nm,0.8s
MKAR MLR MLR
comp=Z,72μm,20.3s
MKAR Makanchi Array 36.59 349 P **P 11 47 19.2 -0.1**
MKAR PcP PcP 11 49 43.1 +0.9
MKAR S **S 11 53 00.9 +0.7**
MKAR LR LR 12 05 53.9
MKAR *e* 12 17 50.4
BANOM Banah 36.69 299 ⇑P **P 11 47 23.1 +2.6**
SNR=37
NAZ Nazwa, Dubai 36.98 297 P **P 11 47 25.4 +2.4**
SNR=66
RBK Rabkut 37.00 284 P **P 11 47 26.0 +2.8**
SNR=8.5
ASUD Al Ashush, Dub 37.18 296 P **P 11 47 27.8 +3.2**
SNR=73
WHFO Wadi Hawf 37.45 285 ⇑P **P 11 47 29.0 +2.0**
SNR=47
JOW Kunigami 37.73 60 P **P 11 47 29.7 +0.4**
ABTO Aybut 37.85 284 ⇓P **P 11 47 33.3 +2.8**
SNR=14
DL2 Dalian 38.43 39⇓*i*P P 11 47 36.0 +1.0
DL2 PP PP 11 49 03.8 +0.6
DL2 PcP PcP 11 49 48.8 +0.7
DL2 S **S 11 53 28.0 -0.5**
DL2 ScS ScS 11 57 41.8 -2.5
DL2 pmax pmax
comp=Z,280nm,1.0s,mb6.0
DL2 pmax pmax
comp=Z,6μm,6.6s
DL2 LR LR
comp=N,57μm,16.2s,MS6.5
DL2 LR LR
comp=E,32μm,18.1s,MS6.5
DL2 LR LR
comp=Z,76μm,17.4s,MS6.6
SONM Songino Array 38.71 16 P **P 11 47 37.6 +0.4**
comp=Z,630nm,1.1s,mb6.2,baz=198,slow=7.9,SNR=681
SONM PcP PcP 11 49 49.5 +0.8
comp=Z,74nm,0.9s,baz=226,slow=4.7,SNR=4.5
SONM S **S 11 53 33.5 +1.1**
comp=Z,9.5nm,1.0s,baz=186,slow=13,SNR=2.5
SONM LR LR 12 06 25.3
comp=Z,81μm,20.0s,MS6.5,baz=197,slow=41
SONM P3KP 12 19 28.0
comp=Z,1.3nm,0.8s,baz=184,slow=2.4,SNR=4.0
SONM Songino Array 38.71 16 P **P 11 47 37.6 +0.4**
SONM 11 49 49.5
SONM S **S 11 53 33.5 +1.1**
SONM pmax pmax
comp=Z,630nm,1.1s
SONM smax
comp=N,10.0nm,1.0s
SONM MLR MLR
comp=Z,81μm,20.0s
ULN Ulaanbaatar 38.91 16 *e*P P 11 47 38.9 -0.1
ULN pmax pmax
comp=Z,551nm,1.2s,mb6.2
ULN MLR MLR
comp=Z,100μm,19.0s,MS6.7
ULN Ulaanbaatar 38.91 16 *e*P P 11 47 38.9 -0.1
comp=Z,551nm,1.2s,mb6.2
ULN LR LR
comp=Z,100μm,19.0s,MS6.7
ULN Ulaanbaatar 38.91 16 P **P 11 47 39.8 +0.8**
SNR=410
ULN P 11 47 39.8
SNR=410
MSEY Mahe Island 39.40 249 *e*P P 11 47 46.5 +3.0
MSEY pmax pmax
comp=Z,758nm,1.7s,mb6.2
MSEY MLR MLR
comp=Z,55μm,22.0s,MS6.3
MSEY Mahe Island 39.40 249 *e*P P 11 47 46.5 +3.0
comp=Z,758nm,1.7s,mb6.2
MSEY LR LR
comp=Z,55μm,22.0s,MS6.3
MSEY Mahe Island 39.40 249 P **P 11 47 46.9 +3.4**
SNR=9.4
MSEY P 11 47 46.9
SNR=9.4
ABKT Ailbek 40.38 317 P **P 11 47 53.9 +2.6**
comp=Z,4μm,1.0s,mb7.1
ZAK Zakamensk 40.38 11⇑*i*P P 11 47 52.2 +1.0
ZAK pmax pmax
comp=Z,204nm,1.4s,mb5.7
INCN Inchon 40.86 44 *e*P P 11 47 55.1 -0.2
comp=Z,2μm,1.5s,mb6.5
INCN LR LR
comp=Z,198μm,19.0s,MS7.0
INCN Inchon 40.86 44 ⇑P **P 11 47 55.4 0.0**
SNR=84
INCN ⇑P 11 47 55.4
SNR=84
KURK Kurchatov 41.07 347 P **P 11 47 57.2 +0.4**
comp=Z,6μm,1.1s,mb7.2
KURK Kurchatov 41.07 347 LR LR 12 08 08.1
comp=Z,91μm,20.5s,MS6.6,baz=150,slow=41
KURK P3KPbc 12 17 30.7
comp=Z,1.3nm,0.8s,baz=333,slow=4.7,SNR=4.6
KURK P3KP 12 19 20.6
comp=Z,1.5nm,0.9s,baz=312,slow=1.6,SNR=4.4
KURK Kurchatov 41.07 347*d*i*P P 11 47 57.4 +0.6
KURK pmax pmax
comp=Z,2μm,1.2s,mb6.5
KURK MLR MLR
comp=Z,172μm,25.0s,MS6.8
KURK Kurchatov 41.07 347 *e*P P 11 47 57.0 +0.2
comp=Z,1μm,1.1s,mb6.5
KURK LR LR
comp=Z,136μm,20.0s,MS6.8
KURK Kurchatov 41.07 347 ⇑P **P 11 47 58.0 +1.2**
SNR=1004
KURK ⇑P 11 47 58.0
SNR=1004
MOY Mondy 41.24 9 *e*P P 11 47 59.6 +1.4
MOY pmax pmax
comp=Z,767nm,2.0s,mb6.0
SNY Shenyang 41.41 36 ⇓P **P 11 48 00.0 +0.2**
SNY S **S 11 54 09.8 -3.2**
SNY SS SS 11 57 16.3 -1.4
SNY pmax pmax
comp=Z,680nm,1.4s,mb6.1
SNY pmax pmax
comp=Z,13μm,12.0s
SNY LR LR
comp=N,119μm,18.8s,MS6.8
SNY LR LR
comp=E,45μm,19.6s,MS6.8
SNY LR LR
comp=Z,112μm,15.9s,MS6.8
TLY Talaya 41.70 11 P **P 11 48 04.8 +2.9**
comp=Z,1μm,1.7s,mb6.3,SNR=95
TLY Talaya 41.70 11*d*i*P P 11 48 03.2 +1.3
TLY *e*S **S 11 54 19.4 +2.4**
TLY pmax pmax
comp=Z,548nm,1.5s,mb6.0
TLY MLR MLR
comp=Z,58μm,22.0s,MS6.4
TLY Talaya 41.70 11 *e*P P 11 48 01.8 -0.1
comp=Z,306nm,1.0s,mb5.9
TLY LR LR
comp=Z,52μm,21.0s,MS6.4
TLY Talaya 41.70 11 ⇓P **P 11 48 04.2 +2.3**
SNR=135
TLY ⇓P 11 48 04.2
SNR=135
KSRS Korea Array 41.73 45 P **P 11 48 01.9 -0.5**
comp=Z,195nm,1.0s,mb5.7,baz=245,slow=8.5,SNR=350
KSRS S **S 11 54 17.7 -0.3**
comp=Z,7.4nm,0.9s,baz=251,slow=3.7,SNR=3.9
KSRS LR LR 12 07 47.4
comp=Z,123μm,18.9s,MS6.8,baz=239,slow=40
KSRS P3KP 12 19 03.1
comp=Z,1.0nm,0.9s,baz=343,slow=1.5,SNR=4.1
KSRS PKPPKP 12 19 42.1
comp=Z,1.6nm,0.9s,baz=12,slow=2.9,SNR=4.9
MUKL Al Mukalla 41.85 279 *e*P P 11 48 05.8 +2.1
JNU Nakatsue 42.01 52 P **P 11 48 05.1 +0.3**
MBWA Marble Bar 42.10 139 *e*P P 11 48 03.9 -1.7
comp=Z,289nm,0.8s,mb6.0
MBWA Marble Bar 42.10 139 ⇑P **P 11 48 04.4 -1.2**
SNR=36
MBWA ⇑P 11 48 04.4
SNR=36
IZEF Zefreh 42.29 307 *e*P P 11 48 07.4 +0.3
IRK Irkutsk 42.35 11⇓*i*P P 11 48 08.6 +1.3
IRK *e* 11 49 50.2
IRK pmax pmax
comp=Z,998nm,1.2s,mb6.3
ZAA0 Zalesovo Array 43.21 354 *e*P P 11 48 13.8 -0.4
ZALV Zalesovo Beam 43.21 354 P **P 11 48 13.7 -0.5**
comp=Z,622nm,0.8s,mb6.4,baz=177,slow=6.4,SNR=847
ZALV LR LR 12 10 30.4
comp=Z,51μm,18.7s,MS6.5,baz=176,slow=42
ZALV P3KP 12 19 01.0
comp=Z,1.6nm,0.9s,baz=0.0,slow=0.1,SNR=3.6
ZALV PKPPKP 12 19 50.4
comp=Z,7.0nm,1.0s,baz=298,slow=3.2,SNR=9.5
CN2 Changchun 43.71 35 ⇓P **P 11 48 18.0 -0.4**
CN2 *e*sP sP 11 48 25.0 -5.1
CN2 PP PP 11 49 57.8 -2.6
CN2 SS SS 11 57 53.5 -9.5
CN2 LR LR
comp=N,70μm,16.0s,MS6.8
CN2 LR LR
comp=E,79μm,16.0s,MS6.8
CN2 LR LR
comp=Z,83μm,23.0s
FITZ Fitzroy Crossi 44.15 131⇓*i*P P 11 48 20.1 -2.2
comp=Z,2μm,0.9s,mb6.9
FITZ *e*PCP PcP 11 50 05.3 -1.8
FITZ *e*S **S 11 54 47.4 -6.4**
FITZ Fitzroy Crossi 44.15 131 P **P 11 48 20.9 -1.3**
comp=Z,647nm,0.8s,mb6.4,baz=316,slow=6.3,SNR=536
FITZ S **S 11 54 46.9 -6.9**
comp=Z,36nm,0.9s,baz=229,slow=19,SNR=6.1
FITZ LR LR 12 11 29.2
comp=Z,80μm,18.2s,MS6.7,baz=302,slow=43
FITZ Fitzroy Crossi 44.15 131 *e*P P 11 48 20.4 -1.9
comp=Z,2μm,1.0s,mb6.7
NVS Novosibirsk 44.26 353⇓*i*P P 11 48 22.7 0.0
NVS *i*S **S 11 54 51.7 -2.9**
NVS pmax pmax
comp=E,920nm,2.3s
NVS pmax pmax
comp=Z,2μm,2.3s,mb6.5
NVS pmax pmax
comp=N,2μm,2.1s
NVS smax
comp=N,488nm,2.1s
NVS smax
comp=E,185nm,2.5s
CIT Chita 44.55 19 *e*P P 11 48 25.8 +0.8
CIT *e* pP 11 48 32.6 -0.7
CIT *e* 11 50 11.4
CIT *e* 11 54 57.9
CIT pmax pmax
comp=Z,2μm,2.0s,mb6.6
QRN Al-Qurain 44.63 300 *e*P P 11 48 26.3 +0.3
QRN AMb AMB 11 48 32.8
comp=Z,2μm,1.9s,mb6.7
KBD Kabd 44.92 300 *e*P P 11 48 28.6 +0.2
KBD AMb AMB 11 48 35.3
comp=Z,1μm,1.6s,mb6.5
RDF Al-Radifah 44.98 300 *e*P P 11 48 29.6 +0.8
RDF AMb AMB 11 48 36.0
comp=Z,2μm,1.5s,mb6.8
UMR Umm Al-Rimmam 45.00 301 *e*P P 11 48 29.2 +0.2
UMR AMb AMB 11 48 31.1
comp=Z,433nm,1.0s,mb6.2
KNA Kununurra 45.19 125 P **P 11 48 28.7 -1.9**
BDHA Al Bayda' 45.23 279⇓*e*P P 11 48 33.4 +2.4
BDHA AMb AMB 11 48 34.8
comp=Z,994nm,1.2s,mb6.5
NAY Al-Naaiem 45.32 300 *e*P P 11 48 31.6 +0.1
NAY AMb AMB 11 48 38.3
comp=Z,1μm,1.5s,mb6.4
BVAR Borovoye Array 45.33 342 P **P 11 48 31.4 +0.2**
comp=Z,279nm,0.9s,mb6.1,baz=146,slow=8.2,SNR=534
BVAR PKPPKP 12 19 41.8
comp=Z,0.5nm,0.5s,baz=250,slow=4.4,SNR=4.2
MIB Mutribah 45.38 301 *e*P P 11 48 32.3 +0.3
MIB AMb AMB 11 48 38.8
comp=Z,2μm,1.7s,mb6.6
BRVK Borovoye 45.39 342*d*i*P P 11 48 32.0 +0.3
BRVK pmax pmax
comp=Z,555nm,1.2s,mb6.3
BRVK MLR MLR
comp=Z,78μm,16.0s,MS6.7
BRVK Borovoye 45.39 342 *e*P P 11 48 31.4 -0.2
comp=Z,447nm,1.0s,mb6.2
BRVK LR LR
comp=Z,93μm,19.0s,MS6.7
BRVK Borovoye 45.39 342 ⇑P **P 11 48 32.5 +0.8**
SNR=320
BRVK ⇑P 11 48 32.5
SNR=320
LBOS 45.54 279⇓*e*P P 11 48 35.8 +2.4
LBOS AMb AMB 11 48 36.8
comp=Z,384nm,0.8s,mb6.4
DHBB Dhamar BB 46.35 280 *e*P P 11 48 42.3 +2.4
DHBB AMb AMB 11 48 44.5
comp=Z,4μm,1.4s,mb7.2
MDJ Mudanjiang 46.60 37 P **P 11 48 41.8 +0.4**
MDJ pP pP 11 48 45.5 -4.3
MDJ sP sP 11 48 46.8 -6.3
MDJ PP PP 11 50 31.5 +0.4
MDJ S **S 11 55 32.3 +3.7**
MDJ sS sS 11 55 37.5 -4.9
MDJ pmax pmax
comp=Z,180nm,1.5s,mb5.8
MDJ pmax pmax
comp=Z,9μm,10.4s
MDJ LR LR
comp=N,44μm,15.3s,MS6.9
MDJ LR LR
comp=E,90μm,16.4s,MS6.9
MDJ LR LR
comp=Z,100μm,18.6s,MS6.8
KAKA Kakadu 46.68 119⇓*i*P P 11 48 40.6 -1.8
comp=Z,193nm,0.6s,mb6.2
KAKA Kakadu 46.68 119 *e*P P 11 48 40.8 -1.6
comp=Z,573nm,0.7s,mb6.6
VLA Vladivostok 47.20 40*d*i*P P 11 48 46.5 +0.4
VLA *e* 11 50 14.3
VLA *e* 11 50 38.8
VLA pmax pmax
comp=Z,835nm,2.7s,mb6.2
VLA MLR MLR
comp=Z,152μm,19.0s,MS7.0
RER Riviere de l'E 47.73 228 *e*P P 11 48 52.9 +2.4
comp=Z,760nm,1.2s,mb6.6
RER LR LR
comp=Z,46μm,20.0s,MS6.5
ATD Arta Tunnel 48.01 276 LR LR 12 07 05.0
comp=Z,50μm,18.4s,MS6.5,baz=90,slow=34
AKTO Aktyubinsk 48.14 331 S **S 11 55 48.5 -1.9**
comp=Z,7.7nm,0.9s,baz=77,slow=18,SNR=2.0
MAJO Matsushiro 48.85 51 *e*P P 11 48 58.9 -0.1
MAJO pmax pmax
comp=Z,2μm,1.9s,mb6.9
MAJO MLR MLR
comp=Z,67μm,19.0s,MS6.7
MAJO Matsushiro 48.85 51 *e*P P 11 48 58.9 -0.1
comp=Z,2μm,1.9s,mb6.9
MAJO LR LR
comp=Z,67μm,19.0s,MS6.7
MAT Matsushiro 48.85 51 P **P 11 48 59.0 0.0**
MAT S **S 11 56 01.0 +0.1**

MJAR Matsushiro Arr 48.85 51 P **P** **11 48 59.3 +0.2**
comp=Z,60nm,0.9s,mb5.6,baz=227,slow=6.7,SNR=121
MJAR PcP PcP 11 50 24.2 +0.8
comp=Z,94nm,0.9s,baz=245,slow=2.1,SNR=12
MJAR LR LR 12 11 32.5
comp=Z,60μm,19.4s,MS6.6,baz=260,slow=38
MJAR PKPPKP 12 19 37.1
comp=Z,1.5nm,0.9s,baz=20,slow=2.5,SNR=5.2
MJAR PKP2ab 12 20 56.4
comp=Z,4.1nm,1.0s,baz=86,slow=2.6,SNR=6.0
MJAR P4KPbc 12 26 37.9
comp=Z,1.2nm,0.9s,baz=249,slow=4.7,SNR=5.0
MJAR Matsushiro Arr 48.85 51 P **P** **11 48 59.3 +0.3**
MJAR 11 50 24.2
MJAR pmax pmax
comp=Z,60nm,0.9s
MJAR MLR MLR
comp=Z,60μm,19.4s
MJAR Matsushiro Arr 48.85 51 P **P** **11 48 59.3 +0.2**
MJAR PcP PcP 11 50 24.2 +0.8
MJAR LR LR 12 11 32.5
MJAR P'P' 12 19 37.1
MJAR P'P'ab 12 20 56.4
JHJ Hachijo jima 2 49.08 56 LR LR 12 09 55.7
comp=Z,32μm,21.8s,MS6.3,baz=257,slow=36
KLBR Kellerberrin 49.09 150⇓ *i*P **P** **11 49 00.0 -0.8**
comp=Z,514nm,0.8s,mb6.6
KLBR *e*sP sP 11 49 12.6 +0.1
KLBR *e*PCP PcP 11 50 23.6 -0.6
KLBR *e* 11 50 36.4
KLBR *e*S **S** **11 56 01.5 -2.7**
CBIJ Chichi jima 49.87 64 S **S** **11 56 12.2 -3.3**
comp=Z,87nm,0.9s,baz=73,slow=19,SNR=2.8
CBIJ LR LR 12 10 55.7
comp=Z,19μm,20.4s,MS6.1,baz=360,slow=37
MAK Makhachkala 49.89 318 *e*P **P** **11 49 07.9 +1.1**
MAK *e* 11 50 25.6
MAK *e* 11 51 07.4
MAK *i* S **S** **11 56 17.8 +2.5**
MAK pmax pmax
comp=Z,1μm,1.3s,mb6.8
MAK pmax pmax
comp=Z,873nm,1.8s,mb6.5
MAK pmax pmax
comp=E,892nm,1.6s
MAK pmax pmax
comp=N,667nm,1.4s
MAK smax
comp=N,19μm,6.8s
MAK smax
comp=E,13μm,8.2s
MAK MLR MLR
comp=Z,51μm,17.0s,MS6.6
MAK MLR MLR
comp=N,59μm,15.0s
NWAO Narrogin (SRO) 49.95 152 S **S** **11 56 12.3 -3.8**
baz=335,slow=19
NWAO LR LR 12 13 16.1
comp=N,475nm,18.1s,baz=327,slow=40
NWAO Narrogin (SRO) 49.95 152 *e*P **P** **11 49 06.7 -0.6**
NWAO pmax pmax
comp=Z,1μm,1.1s
NWAO MLR MLR
comp=Z,77μm,21.0s
NWAO Narrogin (SRO) 49.95 152 *e*P **P** **11 49 06.7 -0.7**
comp=Z,1μm,1.1s,mb6.9
NWAO LR LR
comp=Z,77μm,21.0s,MS6.7
NWAO Narrogin (SRO) 49.95 152 P **P** **11 49 07.2 -0.2**
SNR=33
NWAO P 11 49 07.2
SNR=33
KLR Kul'dur 50.44 33⇑ *i*P **P** **11 49 07.2 -3.7**
KLR *e* 11 51 03.5
KLR *e*S **S** **11 56 19.0 -3.7**
KLR pmax pmax
comp=E,730nm,1.8s
KLR pmax pmax
comp=Z,800nm,1.8s,mb6.5
KLR pmax pmax
comp=N,4μm,9.0s
KLR pmax pmax
comp=E,5μm,9.0s
KLR pmax pmax
comp=Z,12μm,9.0s
KLR smax
comp=N,14μm,13.0s
KLR smax
comp=E,4μm,13.0s
GNI Garni 50.65 313 LR LR 12 13 24.5
comp=E,28μm,20.0s,MS6.3,baz=329,slow=39
GNI Garni 50.65 313 *d i*P **P** **11 49 14.4 +1.8**
GNI pmax pmax
comp=Z,1μm,1.0s
GNI Garni 50.65 313 *e*P **P** **11 49 14.2 +1.6**
comp=Z,3μm,1.4s,mb7.0
GNI LR LR
comp=Z,32μm,19.0s,MS6.3
GNI Garni 50.65 313 ⇓P **P** **11 49 14.9 +2.3**
SNR=470
GNI ⇓P 11 49 14.9
SNR=470
DGRG David-gareji 50.70 315 P **P** **11 49 15.3 +2.3**
DGRG S **S** **11 56 32.0 +5.4**
DESE Dese 51.18 275 *e*P **P** **11 49 20.9 +3.9**
DESE *e*S **S** **11 56 35.0 +1.0**
MTA Mtatsminda 51.20 315 P **P** **11 49 27.9 +11**
MTA S **S** **11 56 36.6 +3.1**
TBLG Delisi 51.25 315 *i* P **P** **11 49 18.6 +1.5**
TBLG Delisi 51.25 315 P **P** **11 49 18.6 +1.5**
SVE Sverdlovsk 51.68 339⇑ *e*P **P** **11 49 21.3 +1.2**
SVE *e* 11 50 26.6
SVE *e*S **S** **11 56 40.5 +0.9**
SVE *e*SSS 12 01 53.7
SVE pmax pmax
comp=Z,1μm,1.3s,mb6.7
SVE pmax pmax
comp=Z,11μm,14.4s
SVE MLR MLR
comp=Z,145μm,21.0s,MS7.0
GOR Gori 51.78 315 P **P** **11 49 22.9 +1.8**
GUMO Guam 51.80 81 LR LR 12 10 58.6
comp=Z,22μm,18.5s,MS6.2,baz=179,slow=36
GUMO Guam 51.80 81 *e*P **P** **11 49 21.0 -0.6**
GUMO pmax pmax
comp=Z,338nm,0.8s,mb6.3
GUMO MLR MLR
comp=Z,25μm,20.0s,MS6.2
GUMO Guam 51.80 81 *e*P **P** **11 49 21.0 -0.6**
comp=Z,338nm,0.8s,mb6.3
GUMO LR LR
comp=Z,25μm,20.0s,MS6.2
HABR Khabarovsk 51.85 35 *d i*P **P** **11 49 21.4 -0.1**
HABR *e**PP pP 11 49 31.3 +1.3
HABR *e**SP sP 11 49 35.4 +2.1
HABR *e* 11 50 33.5
HABR *e* 11 51 19.6
HABR PPP 11 52 22.8
HABR *e*S **S** **11 56 42.8 +0.6**
HABR *e**SS sS 11 56 59.5 +3.3
HABR *e* 11 59 08.7
HABR *e*SS SS 12 00 21.3 +2.2
HABR pmax pmax
comp=N,113nm,1.2s
HABR pmax pmax
comp=Z,751nm,1.2s,mb6.5
HABR pmax pmax
comp=E,332nm,0.8s
HABR pmax pmax
comp=Z,14μm,9.1s
HABR MLR MLR
comp=Z,132μm,20.0s,MS7.0
HABR MLR MLR
comp=E,87μm,20.0s,MS6.9
HABR MLR MLR
comp=N,52μm,16.0s,MS6.9
WRA Warramunga Arr 51.92 126 P **P** **11 49 21.1 -1.2**
comp=N,163nm,0.5s,mb6.2,baz=305,slow=8.4,SNR=467
WRA PcP PcP 11 50 34.7 -0.2
comp=N,67nm,0.6s,baz=319,slow=3.0,SNR=5.9
WRA S **S** **11 56 38.4 -5.5**
comp=N,98nm,1.1s,baz=298,slow=15,SNR=13
WRA LR LR 12 12 38.4
comp=N,44μm,21.9s,MS6.5,baz=295,slow=38
WRA PKPPKP 12 19 39.1
comp=N,5.0nm,1.0s,baz=129,slow=1.5,SNR=7.1

WRA Warramunga Arr 51.92 126 P **P** **11 49 21.1 -1.3**
WRA 11 50 34.7
WRA S **S** **11 56 38.4 -5.5**
WRA pmax pmax
comp=Z,163nm,0.5s
WRA smax
comp=N,98nm,1.1s
WRA MLR MLR
comp=Z,44μm,21.9s
WRAB Tennant Creek 51.92 126 *e*P **P** **11 49 21.2 -1.2**
WRAB pmax pmax
comp=Z,730nm,0.8s,mb6.7
WRAB MLR MLR
comp=Z,53μm,19.0s,MS6.6
WRAB Tennant Creek 51.92 126 *e*P **P** **11 49 21.2 -1.2**
comp=Z,730nm,0.8s,mb6.7
WRAB LR LR
comp=Z,53μm,19.0s,MS6.6
ARU Arti 52.15 337 P **P** **11 49 24.6 +1.0**
comp=Z,3μm,1.1s,mb7.2
ARU Arti 52.15 337 *d i*P **P** **11 49 24.0 +0.4**
ARU *e* 11 50 34.0
ARU *e* 11 51 26.4
ARU *e*PPP 11 52 26.0
ARU S **S** **11 56 48.9 +2.8**
ARU 11 59 10.4
ARU SS SS 12 00 26.4 +2.8
ARU pmax pmax
comp=Z,550nm,1.0s,mb6.4
ARU pmax pmax
comp=Z,10μm,14.9s
ARU smax
comp=N,9μm,12.1s
ARU MLR MLR
comp=Z,110μm,20.0s,MS6.9
ARU Arti 52.15 337 *e*P **P** **11 49 24.1 +0.5**
comp=Z,4μm,2.1s,mb7.0
ARU LR LR
comp=Z,111μm,21.0s,MS6.9
ZEI Tsey 52.23 316 *e*P **P** **11 49 26.0 +1.6**
ZEI *e* 11 51 24.0
ZEI *e*PPP 11 52 31.3
ZEI *e*S **S** **11 56 52.9 +5.3**
ZEI *e* 11 59 09.6
ZEI pmax pmax
comp=Z,572nm,0.9s,mb6.5
ZEI pmax pmax
comp=N,741nm,1.2s
ZEI pmax pmax
comp=E,569nm,1.5s
ZEI MLR MLR
comp=Z,23μm,19.0s,MS6.2
ZEI MLR MLR
comp=N,12μm,17.0s,MS6.1
ZEI MLR MLR
comp=E,7μm,16.0s,MS6.1
CLNS Chul'man 52.36 22 *e*P **P** **11 49 26.0 +0.9**
CLNS *e* 11 50 34.5
CLNS *e* 11 51 17.7
CLNS *e*PPP 11 52 31.1
CLNS *e*S **S** **11 56 53.7 +4.7**
CLNS pmax pmax
comp=Z,549nm,1.0s,mb6.4
CLNS pmax pmax
comp=E,263nm,0.9s
CLNS pmax pmax
comp=N,291nm,1.0s
CLNS pmax pmax
comp=E,81nm,1.2s
CLNS pmax pmax
comp=N,106nm,1.2s
CLNS pmax pmax
comp=Z,90nm,1.3s,mb5.5
CLNS smax
comp=N,6μm,13.5s
CLNS smax
comp=E,6μm,14.3s
CLNS MLR MLR
comp=N,32μm,19.0s,MS6.6
CLNS MLR MLR
comp=E,47μm,19.0s,MS6.6
CLNS MLR MLR
comp=Z,34μm,21.0s,MS6.4
ONI Oni 52.46 316 P **P** **11 49 27.9 +1.8**
ONI S **S** **11 56 52.4 +1.7**
WNDE Wendo Genet 52.63 271 *e*P **P** **11 49 30.7 +2.9**
ABPO Ambohimpanom 53.14 236 *e*P **P** **11 49 32.9 +1.5**
ABPO pmax pmax
comp=Z,1μm,1.5s,mb6.5
ABPO MLR MLR
comp=Z,109μm,19.0s,MS6.9
ABPO Ambohimpanom 53.14 236 *e*P **P** **11 49 32.9 +1.4**
comp=Z,1μm,1.5s,mb6.5
ABPO LR LR
comp=Z,109μm,19.0s,MS6.9
KIV Kislovodsk 53.50 317 P **P** **11 49 35.7 +2.0**
comp=Z,7μm,0.9s,mb7.6
KIV Kislovodsk 53.50 317 *e*P **P** **11 49 34.9 +1.2**
KIV pmax pmax
comp=Z,1μm,1.0s,mb6.8
KIV MLR MLR
comp=Z,30μm,17.0s,MS6.4
KIV Kislovodsk 53.50 317 *e*P **P** **11 49 34.2 +0.5**
comp=Z,1μm,0.9s,mb6.8
KIV LR LR
comp=Z,29μm,21.0s,MS6.3
KIV Kislovodsk 53.50 317 P **P** **11 49 35.3 +1.6**
SNR=592
KIV P 11 49 35.3
SNR=592
ASAR Alice Springs 53.65 130 P **P** **11 49 34.3 -0.8**
comp=Z,370nm,0.9s,mb6.3,baz=307,slow=7.0,SNR=800
ASAR PcP PcP 11 50 41.6 +0.3
comp=Z,200nm,0.9s,baz=312,slow=3.8,SNR=6.3
ASAR S **S** **11 57 01.9 -5.5**
comp=Z,11nm,0.8s,baz=300,slow=14,SNR=5.7
ASAR PKPPKP 12 19 27.9
comp=Z,6.5nm,1.0s,baz=164,slow=2.9,SNR=6.3
ASAR P4KPbc 12 26 59.0
comp=Z,3.5nm,1.0s,baz=306,slow=4.6,SNR=13
ASAR Alice Springs 53.65 130 P **P** **11 49 34.3 -0.8**
ASAR PcP PcP 11 50 41.6 +0.3
ASAR S **S** **11 57 01.9 -5.5**
ASAR P'P' 12 19 27.9
GOF Gofitskoye 53.70 319 *e*P **P** **11 49 33.3 -1.9**
GOF *e*S **S** **11 57 07.8 +0.2**
GOF pmax pmax
comp=Z,790nm,1.2s,mb6.5
FORT Forrest 54.18 141⇓ *i*P **P** **11 49 38.4 -0.5**
comp=Z,870nm,1.1s,mb6.6
FORT *e*S **S** **11 57 11.0 -3.3**
FORT Forrest 54.18 141 *e*P **P** **11 49 37.0 -1.9**
comp=Z,1μm,1.0s,mb6.7
ERM Erimo 54.29 46 *c i*P **P** **11 49 39.6 0.0**
ERM Erimo 54.29 46 *e*P **P** **11 49 39.9 +0.3**
comp=Z,477nm,1.4s,mb6.2
ERM LR LR
comp=Z,42μm,19.0s,MS6.5
SOKR Solikamsk 55.09 339 *d i*P **P** **11 49 45.9 +0.9**
SOKR 11 51 53.0
SOKR S **S** **11 57 26.3 +0.5**
SOKR SSS 12 03 17.7
SOKR pmax pmax
comp=Z,920nm,1.2s,mb6.7
SOKR MLR MLR
comp=Z,126μm,19.0s,MS7.0
SOC Sochi 55.37 316 *d i*P **P** **11 49 47.5 +0.1**
SOC *e* pP 11 49 55.1 -0.8
SOC *e* 11 51 56.9
SOC *e*PPP 11 53 09.6
SOC *e*S **S** **11 57 29.5 -0.6**
SOC *e**SS sS 11 57 45.2 +1.0
SOC pmax pmax
comp=Z,3μm,2.4s,mb7.0
SOC pmax pmax
comp=Z,816nm,1.2s,mb6.6
SOC MLR MLR
comp=Z,39μm,22.0s,MS6.4
KMBO Kilima Mbogo 55.59 261 P **P** **11 49 51.5 +2.1**
comp=Z,120nm,1.1s,mb5.9,baz=0.1,slow=24,SNR=98
KMBO LR LR 12 10 55.8
comp=Z,65μm,20.3s,MS6.7,baz=78,slow=33
KMBO Kilima Mbogo 55.59 261 *e*P **P** **11 49 51.5 +2.0**
KMBO LR LR
comp=Z,60μm,20.0s,MS6.7
KMBO Kilima Mbogo 55.59 261 P **P** **11 49 51.8 +2.4**
SNR=74
KMBO P 11 49 51.8
SNR=74
KMBO Kilima Mbogo 55.59 261⇓ *i*P **P** **11 49 51.5 +2.1**
RCY Rachaya 55.76 303 *e*P **P** **11 49 51.5 +1.1**
HWQ Hawqa 55.80 304 *e*P **P** **11 49 51.8 +1.2**
YSS Yuzh-Sakhalins 55.80 40κ *i*P **P** **11 49 50.3 -0.1**
YSS *i* *SP sP 11 50 06.0 +3.8
YSS *e* 11 51 56.0
YSS *e*PPP 11 53 10.0
YSS *i* S **S** **11 57 36.0 +0.3**
YSS pmax pmax
comp=N,150nm,1.0s
YSS pmax pmax
comp=E,370nm,1.0s
YSS pmax pmax
comp=Z,590nm,1.0s,mb6.6
YSS pmax pmax
comp=N,3μm,14.0s
YSS pmax pmax
comp=Z,8μm,14.0s
YSS pmax pmax
comp=E,4μm,13.0s
YSS pmax pmax
comp=N,1μm,14.0s
YSS pmax pmax
comp=E,1μm,14.0s
YSS pmax pmax
comp=Z,3μm,14.0s
YSS smax
comp=N,14μm,16.0s
YSS MLR MLR
comp=Z,59μm,18.0s,MS6.7
YSS MLR MLR
comp=N,52μm,17.0s,MS6.8
YSS MLR MLR
comp=E,56μm,17.0s,MS6.8
YSS Yuzh-Sakhalins 55.80 40 *e*P **P** **11 49 50.4 0.0**
YSS LR LR
comp=Z,20μm,19.0s,MS6.2
EIL Elat 55.94 298 S **S** **11 57 37.9 -0.2**
comp=Z,3.9nm,0.8s,baz=4.9,slow=18,SNR=2.0
EIL LR LR 12 15 45.3
comp=Z,32μm,18.9s,MS6.4,baz=250,slow=38
BHL Bhannes 55.97 304 *e*P **P** **11 49 53.1 +1.3**
MMAI Mount Meron Ar 56.02 302 P **P** **11 49 53.6 +1.3**
comp=Z,79nm,1.0s,mb5.7,baz=86,slow=11,SNR=46
MMAI PcP PcP 11 50 52.4 +1.9
comp=Z,86nm,1.0s,baz=78,slow=4.5,SNR=5.0
MMAI S **S** **11 57 40.5 +1.2**
comp=Z,0.8nm,0.4s,baz=263,slow=36,SNR=2.5
MMAI LR LR 12 17 54.0
comp=Z,56μm,18.3s,MS6.7,baz=100,slow=40
UGL Uglegorsk 56.23 37κ *i*P **P** **11 49 54.0 +0.6**
UGL *e* 11 50 06.5
UGL pmax pmax
comp=E,449nm,1.0s
UGL pmax pmax
comp=Z,661nm,1.0s,mb6.6
UGL pmax pmax
comp=E,8μm,13.0s
COEN Coen 56.62 115 *e*P **P** **11 49 55.9 -0.9**
comp=E,2μm,1.1s,mb7.1
YUK Yuzh-Kuril'sk 56.82 44 *e*P **P** **11 49 57.9 +0.2**
YUK *i* S **S** **11 57 50.9 +1.6**
YUK *i* 11 59 44.5
YUK pmax pmax
comp=Z,3μm,1.3s,mb7.2
YUK pmax pmax
comp=E,2μm,1.4s
YUK smax
comp=N,5μm,3.1s
YUK smax
comp=E,2μm,3.1s
YUK MLR MLR
comp=N,29μm,19.0s,MS6.7
YUK MLR MLR
comp=E,51μm,19.0s,MS6.7
YUK MLR MLR
comp=Z,61μm,19.0s,MS6.7
ANN Anapa 57.32 317 *d i*P **P** **11 50 00.0 -1.3**
ANN *e*S **S** **11 57 57.1 +1.1**
ANN pmax pmax
comp=Z,297nm,1.2s,mb6.2
YAK Yakutsk 57.81 20 *d i*P **P** **11 50 04.2 -0.2**
YAK *e**PP pP 11 50 16.1 +3.1
YAK *e* 11 50 57.7
YAK *e* 11 52 11.1
YAK *e*PPP 11 53 30.7
YAK *e*S **S** **11 58 00.2 -1.6**
YAK *e**SS sS 11 58 16.8 +0.9
YAK *e* 11 59 46.9
YAK pmax pmax
comp=Z,781nm,0.9s,mb6.7
YAK pmax pmax
comp=N,247nm,1.0s
YAK pmax pmax
comp=E,318nm,1.0s
YAK pmax pmax
comp=Z,196nm,1.2s,mb6.0
YAK pmax pmax
comp=N,96nm,1.1s
YAK pmax pmax
comp=E,88nm,1.3s
YAK smax
comp=N,1μm,2.3s
YAK smax
comp=E,2μm,2.2s
YAK MLR MLR
comp=Z,64μm,17.0s,MS6.8
YAK MLR MLR
comp=N,20μm,15.0s,MS6.7
YAK MLR MLR
comp=E,37μm,17.0s,MS6.7
CSS Prodhromos 58.04 304⇓ P **P** **11 50 06.3 -0.2**
comp=E,8.1nm,1.2s
CSS Prodhromos 58.04 304 P **P** **11 50 05.1 -1.4**
VORD Divnogorie 58.37 324 *e*P **P** **11 50 08.3 -0.2**
VORD *e*S **S** **11 58 08.3 -1.2**
VORD smax
comp=N,160nm,6.4s
VORD smax
comp=E,10.0nm,3.2s
VORD smax
comp=Z,20nm,3.2s
VSR Storozhevoye 58.55 324 *d i*P **P** **11 50 09.5 -0.2**
VSR *e*S **S** **11 58 10.0 -1.8**
VSR *e*SS SS 12 02 11.8 +7.2
VSR pmax pmax
comp=N,170nm,1.0s
VSR pmax pmax
comp=E,470nm,1.0s
VSR pmax pmax
comp=Z,490nm,1.0s,mb6.5
VSR pmax pmax
comp=E,870nm,1.1s
VSR pmax pmax
comp=Z,920nm,1.1s,mb6.7
VSR smax
comp=N,11μm,6.6s
VSR smax
comp=Z,5μm,6.6s
VSR smax
comp=E,860nm,3.3s
VSR MLR MLR
comp=N,58μm,23.0s,MS6.8
VSR MLR MLR
comp=E,49μm,23.0s,MS6.8
VSR MLR MLR
comp=Z,68μm,23.0s,MS6.7
ALFC Alevga 58.66 304⇓ P **P** **11 50 10.6 -0.3**
comp=Z,9.6nm,0.9s
BR131 Keskin Array S 58.69 310 *e*P **P** **11 50 10.0 -1.0**
BR131 LR LR
comp=Z,20μm,19.0s,MS6.3
BRTR Keskin Array B 58.69 310 P **P** **11 50 10.1 -0.9**
comp=Z,195nm,0.9s,mb6.1,baz=124,slow=6.2,SNR=514
BRTR LR LR 12 19 33.4
comp=Z,18μm,18.6s,MS6.2,baz=91,slow=40
BRTR PKPPKP 12 19 51.1
comp=Z,4.4nm,1.0s,baz=204,slow=2.7,SNR=6.9
VOR Voronezh 58.74 325⇑ *i*P **P** **11 50 12.0 +0.9**
VOR *e*S **S** **11 58 15.0 +0.8**
VOR pmax pmax
comp=Z,3μm,2.0s,mb6.9
PPCY Paphos 58.83 304 P **P** **11 50 11.3 -0.7**

SIM	**Simferopol'**	**59.62 316**	*de*P	**P**	**11 50 19.2**	**+1.9**
SIM			*e*S	**S**	**11 58 26.7**	**+0.8**
SIM			pmax	pmax		
	comp=Z,542nm,1.1s,mb6.5					
SIM			pmax	pmax		
	comp=Z,5μm,11.6s					
SIM			MLR	MLR		
	comp=Z,38μm,24.0s,MS6.5					
ISP	**Isparta**	**60.73 307**	*e*P	**P**	**11 50 24.4**	**-0.7**
ISP			pmax	pmax		
	comp=Z,1μm,1.3s,mb6.8					
ISP			MLR	MLR		
	comp=Z,27μm,19.0s,MS6.4					
ISP	**Isparta**	**60.73 307**	*e*P	**P**	**11 50 24.4**	**-0.6**
	comp=Z,1μm,1.3s,mb6.8					
ISP			LR	LR		
	comp=Z,27μm,19.0s,MS6.4					
ISP	**Isparta**	**60.73 307**	P	**P**	**11 50 24.0**	**-1.1**
KSL	**Kastellorizon**	**61.23 305**	*e*P	**P**	**11 50 27.5**	**-1.0**
MOS	**Moscow**	**61.25 328***k*	*i*P	**P**	**11 50 28.6**	**+0.4**
MOS			*e*		11 51 07.5	
MOS			*i*S	**S**	**11 58 46.0**	**-0.4**
MOS			*i*		11 59 00.3	
MOS			*e*		12 00 15.6	
MOS			pmax	pmax		
	comp=Z,6μm,1.8s,mb7.4					
MOS			pmax	pmax		
	comp=Z,3μm,1.5s,mb7.2					
MOS			smax			
	comp=N,6μm,4.1s					
MOS			smax			
	comp=E,3μm,4.1s					
MOS			MLR	MLR		
	comp=E,36μm,18.0s,MS6.9					
MOS			MLR	MLR		
	comp=Z,70μm,18.0s,MS6.9					
MOS			MLR	MLR		
	comp=N,62μm,19.0s,MS6.9					
OBN	**Obninsk**	**61.54 328**	P	**P**	**11 50 30.6**	**+0.4**
	comp=N,7μm,1.4s,mb7.6					
OBN	**Obninsk**	**61.54 328**	⇓*i*P	**P**	**11 50 30.6**	**+0.4**
OBN			*e*		11 51 09.8	
OBN			*e*		11 53 01.7	
OBN			*e*PPP		11 54 28.8	
OBN			*i*S	**S**	**11 58 49.8**	**-0.4**
OBN			*e*PS		11 59 03.9	
OBN			*i*		12 00 34.9	
OBN			*e*SS	SS	12 02 57.4	+6.0
OBN			pmax	pmax		
	comp=Z,3μm,2.5s,mb7.0					
OBN			pmax	pmax		
	comp=Z,8μm,2.7s,mb7.4					
OBN			MLR	MLR		
	comp=Z,49μm,17.0s,MS6.7					
OBN	**Obninsk**	**61.54 328**	*e*P	**P**	**11 50 30.6**	**+0.4**
	comp=Z,2μm,1.3s,mb7.1					
OBN			LR	LR		
	comp=Z,56μm,19.0s,MS6.7					
MBAR	**Mbarara**	**61.80 263**	P	**P**	**11 50 34.4**	**+1.7**
	comp=Z,457nm,1.2s,mb6.5,SNR=14					
MBAR	**Mbarara**	**61.80 263**	⇓*i*P	**P**	**11 50 33.5**	**+0.7**
CTA	**Charters Tower**	**61.81 120**	*e*P	**P**	**11 50 32.7**	**+0.1**
	comp=Z,227nm,1.4s,mb6.1					
CTA			*e*		11 50 45.2	
CTA			*e*S	**S**	**11 58 51.3**	**-3.3**
CTA	**Charters Tower**	**61.81 120**	S	**S**	**11 58 52.8**	**-1.8**
	comp=Z,7.7nm,1.0s,baz=198,slow=19,SNR=2.2					
CTA			LR	LR	12 19 43.8	
	comp=Z,28μm,21.7s,MS6.4,baz=289,slow=38					
CTA			PKPPKP		12 19 44.5	
	comp=Z,25nm,1.0s,baz=46,slow=1.8,SNR=7.5					
CTAO	**Charters Tower**	**61.81 120**	*e*P	**P**	**11 50 32.3**	**-0.3**
CTAO			MLR	MLR		
	comp=Z,45μm,20.0s,MS6.6					
ARG	**Arkhangelos**	**62.41 305**	P	**P**	**11 50 35.6**	**-0.8**
ARG	**Arkhangelos**	**62.41 305**	*e*P	**P**	**11 50 37.0**	**+0.6**
PAF	**Port-aux-Franc**	**63.03 196**	*e*P	**P**	**11 50 41.9**	**+1.8**
PAF			pmax	pmax		
	comp=Z,517nm,1.0s,mb6.6					
PAF			MLR	MLR		
	comp=Z,89μm,22.0s,MS6.9					
PAF	**Port-aux-Franc**	**63.03 196**	*e*P	**P**	**11 50 41.9**	**+1.8**
	comp=Z,517nm,1.0s,mb6.6					
PAF			LR	LR		
	comp=Z,89μm,22.0s,MS6.9					
KARP	**Karpathos**	**63.12 304**	*e*P	**P**	**11 50 41.0**	**-0.2**
NIS1	**Nisyros Isl.**	**63.22 305**	P	**P**	**11 50 41.2**	**-0.6**
TLCR		**63.32 315**	⇑P	**P**	**11 50 43.0**	**+0.7**
TLCR		**63.32 315**	⇑*i*P	**P**	**11 50 43.0**	**+0.7**
TIRR	**Tirgusor**	**63.46 314**	P	**P**	**11 50 43.3**	**0.0**
TIRR	**Tirgusor**	**63.46 314**	*e*P	**P**	**11 50 42.5**	**-0.7**
	comp=Z,629nm,1.4s,mb6.5					
TIRR	**Tirgusor**	**63.46 314**	⇓*i*P	**P**	**11 50 43.0**	**-0.3**
PSN	**Preselentsi**	**63.48 313**	*i*P	**P**	**11 50 42.5**	**-0.9**
BLCB	**Balcova**	**63.53 307**	P	**P**	**11 50 43.8**	**0.0**
SMG	**Samos**	**63.61 307**	*e*P	**P**	**11 50 44.0**	**-0.4**
KIS	**Kishinev**	**63.70 317**	*i*P	**P**	**11 50 43.0**	**-1.8**
	comp=Z,2μm,2.1s,mb6.9					
KIS	**Kishinev**	**63.70 317**	*i*PcP	PcP	11 51 08.0	-13
KIS	**Kishinev**	**63.70 317**	*e*PP	PP	11 53 14.0	+9.0
KIS	**Kishinev**	**63.70 317**	*e*PPP		11 54 32.0	
KIS	**Kishinev**	**63.70 317**	*e*UNK		12 19 40.0	
KIS	**Kishinev**	**63.70 317**	⇓*i*P	**P**	**11 50 43.0**	**-1.8**
KIS			*i*	pP	11 50 52.0	-1.4
KIS			*i*		11 50 56.0	
KIS			*e*		11 53 14.0	
KIS			*e*PPP		11 54 32.0	
KIS			*i*S	**S**	**11 59 14.0**	**-3.6**
KIS			*e*PS		11 59 33.0	
KIS			*i*		12 00 30.0	
KIS			*e*SS	SS	12 03 26.0	+0.5
KIS			pmax	pmax		
	comp=E,2μm,2.1s					
KIS			pmax	pmax		
	comp=Z,2μm,2.1s,mb6.9					
KIS			pmax	pmax		
	comp=Z,10μm,15.0s					
KIS			pmax	pmax		
	comp=E,5μm,13.0s					
KIS			pmax	pmax		
	comp=Z,10μm,15.0s					
KIS			smax			
	comp=E,7μm,15.0s					
KIS			smax			
	comp=N,10μm,14.0s					
KIS			MLR	MLR		
	comp=Z,24μm,19.0s,MS6.4					
KIS			MLR	MLR		
	comp=N,18μm,20.0s,MS6.5					
KIS			MLR	MLR		
	comp=E,23μm,20.0s,MS6.5					
KIS			MLR	MLR		
	comp=Z,36μm,20.0s					
KIS	**Kishinev**	**63.70 317**	P	**P**	**11 50 44.9**	**+0.1**
CFR	**Carcaliu**	**63.79 315**	P	**P**	**11 50 45.4**	**0.0**
CFR			⇓P		11 50 46.0	
CFR	**Carcaliu**	**63.79 315**	⇓*i*P	**P**	**11 50 46.0**	**+0.6**
HARR	**Harsova**	**63.84 314**	⇓P	pP	11 50 54.4	0.0
HARR	**Harsova**	**63.84 314**	⇓*i*P	pP	11 50 54.4	0.0
ZKR	**Zakros**	**63.85 304**	P	**P**	**11 50 45.8**	**-0.2**
STKA	**Stephens Creek**	**63.89 134**	*e*P	**P**	**11 50 46.2**	**0.0**
	comp=Z,222nm,0.8s,mb6.2					
STKA			*e*		11 50 59.2	
STKA			*e*S	**S**	**11 59 18.8**	**-1.5**
STKA	**Stephens Creek**	**63.89 134**	P	**P**	**11 50 46.2**	**0.0**
	comp=Z,175nm,0.7s,mb6.2,baz=307,slow=6.7,SNR=202					
STKA			S	**S**	**11 59 18.1**	**-2.1**
	comp=Z,13nm,1.1s,baz=218,slow=19,SNR=2.5					
STKA			PKP2bc		12 19 41.2	
	comp=Z,8.3nm,1.0s,baz=91,slow=7.4,SNR=4.4					
STKA			LR	LR	12 20 29.6	
	comp=Z,40μm,18.5s,MS6.6,baz=296,slow=38					
STKA	**Stephens Creek**	**63.89 134**	*e*P	**P**	**11 50 45.8**	**-0.5**
	comp=Z,169nm,0.9s,mb6.1					
PRD	**Provadia**	**63.96 313**	*i*P	**P**	**11 50 45.7**	**-0.8**
LEOM	**Leova**	**63.98 316**	P	**P**	**11 50 46.8**	**+0.2**
LEOM	**Leova**	**63.98 316**	⇑*i*P	**P**	**11 50 47.4**	**+0.8**
PRK	**Paraskevi**	**64.23 308**	P	**P**	**11 50 48.0**	**-0.4**
PRK	**Paraskevi**	**64.23 308**	*e*P	**P**	**11 50 48.5**	**+0.1**
AMRR	**Amara**	**64.25 314**	P	**P**	**11 50 49.1**	**+0.7**
AMRR			⇑P		11 50 49.7	
AMRR	**Amara**	**64.25 314**	⇑*i*P	**P**	**11 50 49.7**	**+1.3**
CHOS	**Chios island**	**64.30 307**	P	**P**	**11 50 49.3**	**+0.4**
AKASG	**Malin Array Be**	**64.31 321**	P	**P**	**11 50 48.0**	**-0.8**
	comp=Z,228nm,0.9s,mb6.2,baz=88,slow=5.0,SNR=186					
AKASG			PP	PP	11 53 10.9	+0.6
	comp=Z,29nm,0.9s,baz=95,slow=7.4,SNR=4.5					
AKASG			PKP2bc		12 19 40.6	
	comp=Z,5.4nm,0.9s,baz=280,slow=3.3,SNR=8.3					
AKASG			LR	LR	12 23 43.5	
	comp=Z,35μm,18.1s,MS6.6,baz=95,slow=41					
AKASG	**Malin Array Be**	**64.31 321**	P	**P**	**11 50 48.0**	**-0.7**
AKASG					11 53 10.9	
AKASG			pmax	pmax		
	comp=Z,228nm,0.9s					
AKASG			pmax	pmax		
	comp=Z,29nm,0.9s					
AKASG			MLR	MLR		
	comp=Z,35μm,18.1s					
AKASG	**Malin Array Be**	**64.31 321**	P	**P**	**11 50 48.0**	**-0.8**
AKASG			PP	PP	11 53 10.9	+0.6
AKASG			⇑*e*		12 19 40.6	
AKASG			LR	LR	12 23 43.5	
AKBB	**Malin Array Si**	**64.31 321**	*e*P	**P**	**11 50 47.9**	**-0.9**
KIEV	**Kiev**	**64.32 321**	*e*P	**P**	**11 50 47.7**	**-1.1**
KIEV			MLR	MLR		
	comp=Z,35μm,22.0s,MS6.5					
NPS	**Neapolis**	**64.35 304**	*e*P	**P**	**11 50 49.0**	**-0.3**
JMB	**Yambol**	**64.43 312**	P	**P**	**11 50 50.2**	**+0.5**
JMB	**Yambol**	**64.43 312**	*i*P	**P**	**11 50 49.5**	**-0.2**
LAST	**Lasithi**	**64.46 304**	P	**P**	**11 50 50.0**	**0.0**
PETR		**64.52 315**	⇑P	**P**	**11 50 51.5**	**+1.3**
PETR		**64.52 315**	⇑*i*P	**P**	**11 50 51.5**	**+1.3**
SIGR	**SIGRI**	**64.55 308**	P	**P**	**11 50 50.4**	**-0.1**
THR1	**Thera Island**	**64.57 305**	P	**P**	**11 50 49.7**	**-1.0**
APE	**Apeiranthos**	**64.58 306**	P	**P**	**11 50 48.7**	**-2.0**
APE	**Apeiranthos**	**64.58 306**	⇓*i*P	**P**	**11 50 45.0**	**-5.7**
APE	**Apeiranthos**	**64.58 306**	*e*P	**P**	**11 50 50.0**	**-0.7**
ALN	**Alexandroupoli**	**64.61 310**	P	**P**	**11 50 49.1**	**-1.8**
THR3	**Thira Island,**	**64.62 305**	P	**P**	**11 50 49.8**	**-1.2**
TIXI	**Tiksi**	**64.66 12***d*	*i*P	**P**	**11 50 49.6**	**-1.0**
TIXI			*e*		11 53 11.7	
TIXI			*e*S	**S**	**11 59 27.8**	**-0.8**
TIXI			*i*SS	SS	12 03 41.6	+2.2
TIXI			pmax	pmax		
	comp=Z,850nm,1.1s,mb6.7					
TIXI			pmax	pmax		
	comp=E,161nm,1.2s					
TIXI			pmax	pmax		
	comp=N,195nm,1.4s					
TIXI			pmax	pmax		
	comp=Z,9μm,14.4s					
TIXI			MLR	MLR		
	comp=Z,41μm,18.0s,MS6.7					
TIXI			MLR	MLR		
	comp=N,31μm,19.0s,MS6.6					
TIXI			MLR	MLR		
	comp=E,16μm,15.0s,MS6.6					
TIXI	**Tiksi**	**64.66 12**	*e*P	**P**	**11 50 49.1**	**-1.5**
	comp=E,1μm,1.4s,mb6.8					
TIXI			LR	LR		
	comp=Z,38μm,19.0s,MS6.6					
THR5	**Thira Island,**	**64.67 305**	P	**P**	**11 50 50.4**	**-0.9**
VRI	**Vrincioaia**	**64.89 316**	⇓P	**P**	**11 50 53.5**	**+0.9**
VRI	**Vrincioaia**	**64.89 316**	⇓*i*P	**P**	**11 50 53.5**	**+0.9**
PLOR	**Plostina**	**64.94 316**	⇓P	**P**	**11 50 53.8**	**+0.8**
PLOR	**Plostina**	**64.94 316**	⇓*i*P	**P**	**11 50 53.8**	**+0.8**
IDI	**Anoyia**	**64.95 304**	S	**S**	**11 59 30.3**	**-3.1**
	comp=Z,6.8nm,1.1s,baz=18,slow=20,SNR=3.2					
IDI			PKP2bc		12 19 43.6	
	comp=Z,64nm,1.0s,baz=278,slow=5.1,SNR=9.3					
IDI			LR	LR	12 21 49.5	
	comp=Z,22μm,21.9s,MS6.3,baz=304,slow=38					
SIVA	**Sivas**	**64.99 303**	P	**P**	**11 50 53.2**	**-0.3**
RDO	**Rodhopi**	**65.02 310**	*e*P	**P**	**11 50 53.0**	**-0.6**
SZH	**Strazhica**	**65.03 313**	*i*P	**P**	**11 50 52.1**	**-1.4**
LIA	**Limnos Island**	**65.14 309**	P	**P**	**11 50 54.0**	**-0.4**
SKR	**Severo-Kuril's**	**65.33 39**	⇓*i*P	**P**	**11 50 55.0**	**-0.4**
SKR			*i*		11 51 11.5	
SKR			*e*		11 53 14.0	
SKR			*i*S	S	11 59 36.0	-1.6
SKR			*e*PS		12 00 10.0	
SKR			*e*		12 00 42.0	
SKR			pmax	pmax		
	comp=N,190nm,1.0s					
SKR			pmax	pmax		
	comp=E,110nm,1.0s					
SKR			pmax	pmax		
	comp=Z,470nm,1.0s,mb6.5					
SKR			pmax	pmax		
	comp=N,10μm,14.0s					
SKR			pmax	pmax		
	comp=N,3μm,12.0s					
SKR			pmax	pmax		
	comp=E,5μm,12.0s					
SKR			pmax	pmax		
	comp=Z,3μm,14.0s					
SKR			smax			
	comp=N,11μm,12.0s					
SKR			smax			
	comp=E,8μm,12.0s					
SKR			MLR	MLR		
	comp=N,30μm,18.0s,MS6.6					
SKR			MLR	MLR		
	comp=E,20μm,18.0s,MS6.6					
SKR			MLR	MLR		
	comp=Z,39μm,18.0s,MS6.7					
MLR	**Muntele Rosu**	**65.37 315**	LR	LR	12 26 42.4	
	comp=Z,30μm,18.5s,MS6.5,baz=79,slow=43					
MLR	**Muntele Rosu**	**65.37 315**	P	**P**	**11 50 56.5**	**+0.8**
MLR			⇓P		11 50 56.7	
MLR	**Muntele Rosu**	**65.37 315**	⇓*i*P	**P**	**11 50 56.7**	**+1.0**
PVL	**Pavlikeni**	**65.45 313**	*i*P	**P**	**11 50 56.2**	**-0.1**
VAM	**Vamos**	**65.52 304**	*e*P	**P**	**11 50 57.0**	**+0.1**
GVD	**Gavdhos**	**65.57 303**	*e*P	**P**	**11 50 56.8**	**-0.5**
GVD	**Gavdhos**	**65.57 303**	P	**P**	**11 50 56.5**	**-0.8**
KARN	**Karanos**	**65.75 304**	P	**P**	**11 50 58.3**	**-0.1**
PLD	**Plovdiv**	**65.77 311**	P	**P**	**11 50 58.0**	**-0.4**
PLD	**Plovdiv**	**65.77 311**	*i*P	**P**	**11 50 57.6**	**-0.8**
KAVA	**Kavala**	**65.78 310**	P	**P**	**11 50 57.7**	**-0.7**
VOIR		**65.98 315**	⇓*i*P	**P**	**11 50 59.4**	**-0.3**
ATHU	**Athens Univers**	**66.04 307**	P	**P**	**11 50 59.3**	**-0.9**
AOS	**Alonnisos**	**66.07 308**	P	**P**	**11 50 59.3**	**-1.1**
MICGM	**Minsk**	**66.09 325**	⇑*i*P	**P**	**11 50 57.0**	**-3.2**
MICGM	**Minsk**	**66.09 325**	*e*P		12 19 31.0	
ATH	**Athens Observa**	**66.09 307**	*e*P	**P**	**11 50 59.5**	**-1.1**
OUR	**Ouranopolis**	**66.11 309**	P	**P**	**11 50 59.8**	**-0.8**
MNK	**Minsk**	**66.11 325***d*	*i*P	**P**	**11 50 57.0**	**-3.3**
MNK			*e*PPP		11 55 08.0	
MNK			*e*S	S	11 59 40.0	-6.9
MNK			pmax	pmax		
	comp=Z,2μm,1.0s,mb7.0					
MNK			pmax	pmax		
	comp=N,260nm,1.0s					
MNK			pmax	pmax		
	comp=E,1μm,1.0s					
MNK			pmax	pmax		
	comp=Z,26μm,12.0s					
MNK			smax			
	comp=N,15μm,15.0s					
MNK			smax			
	comp=E,20μm,12.0s					
MNK			MLR	MLR		
	comp=Z,130μm,20.0s,MS7.1					
MNK			MLR	MLR		
	comp=E,95μm,20.0s,MS7.0					
MNK			MLR	MLR		
	comp=N,49μm,20.0s,MS7.0					
PGB	**Panagyurishte**	**66.22 312**	*i*P	**P**	**11 51 00.8**	**-0.4**
BUR01	**Bucovina Ar. S**	**66.23 317**	P	**P**	**11 51 01.8**	**+0.6**
BURAR	**Bucovina Array**	**66.23 317**	⇓P	**P**	**11 51 01.8**	**+0.6**
BURAR	**Bucovina Array**	**66.23 317**	⇓*i*P	**P**	**11 51 01.8**	**+0.6**
NAIG	**Nisos Aigina**	**66.26 306**	*e*P	**P**	**11 50 59.5**	**-2.1**
PAIG	**Paliouri**	**66.30 309**	P	**P**	**11 51 01.3**	**-0.5**
PUL	**Pulkovo**	**66.40 331***d*	*i*P	**P**	**11 51 03.1**	**+1.0**
PUL			pmax	pmax		
	comp=Z,2μm,1.0s,mb7.0					
MMB	**Musomiste**	**66.43 311**	*i*P	**P**	**11 51 01.4**	**-1.2**
DID	**Didima**	**66.44 306**	P	**P**	**11 51 00.5**	**-2.3**
KYTH	**Kithira**	**66.52 305**	*e*P	**P**	**11 51 02.5**	**-0.8**
PLG	**Polygyros**	**66.52 309**	P	**P**	**11 51 02.3**	**-0.9**
PLG	**Polygyros**	**66.52 309**	*e*P	**P**	**11 51 03.4**	**+0.2**
MDB	**Medias**	**66.55 316**	P	**P**	**11 51 04.3**	**+1.0**
MDB			⇑P		11 51 04.8	
MDB	**Medias**	**66.55 316**	⇑*i*P	**P**	**11 51 04.8**	**+1.5**
NEO	**Neokhori**	**66.59 308**	*e*P	**P**	**11 51 03.0**	**-0.7**
XOR	**Xorichti**	**66.62 308**	P	**P**	**11 51 02.2**	**-1.7**
VLI	**Veliai**	**66.62 305**	*e*P	**P**	**11 51 01.5**	**-2.5**
SOH	**Sokhos**	**66.63 310**	P	**P**	**11 51 03.2**	**-0.7**
LTK	**Loutraki**	**66.69 307**	P	**P**	**11 51 01.9**	**-2.5**
ATAL	**Atalanti**	**66.70 307**	P	**P**	**11 51 01.3**	**-3.1**
LKR	**Lokris**	**66.71 307**	P	**P**	**11 51 02.3**	**-2.2**
HORT	**Hortiatis**	**66.80 309**	P	**P**	**11 51 04.6**	**-0.4**
NACGM	**Naroch**	**66.81 325**	*e*P	**P**	**11 51 03.0**	**-1.8**
PEA0B	**Petropavlovsk-**	**66.84 37**	*e*P	**P**	**11 51 04.1**	**-0.9**
PETK	**Petropavlovsk-**	**66.84 37**	P	**P**	**11 51 03.9**	**-1.1**
	comp=Z,48nm,1.0s,mb5.5,baz=204,slow=3.3,SNR=34					
PETK			PKPPKP		12 19 31.7	
	comp=Z,5.4nm,0.9s,baz=93,slow=5.0,SNR=4.7					
PETK			PKP2ab		12 19 39.2	
	comp=Z,23nm,1.0s,baz=89,slow=11,SNR=13					
PETK			LR	LR	12 23 45.2	
	comp=Z,30μm,18.0s,MS6.5,baz=244,slow=39					
PETK	**Petropavlovsk-**	**66.84 37**	P	**P**	**11 51 03.9**	**-1.1**
PETK			P'P'		12 19 31.7	
PETK			P'P'ab		12 19 39.2	
PETK			LR	LR	12 23 45.2	
THE	**Thessaloniki**	**66.91 309**	P	**P**	**11 51 04.5**	**-1.2**
KKB	**Krupnik**	**66.94 311**	*i*P	**P**	**11 51 04.3**	**-1.6**
DSF	**Desfina**	**67.06 307**	P	**P**	**11 51 04.3**	**-2.4**
JOF	**Joensuu**	**67.07 334**	*e*P	**P**	**11 51 05.3**	**-1.0**
JOF			pmax	pmax		
	comp=Z,742nm,0.9s,mb6.7					
JOF	**Joensuu**	**67.07 334**	*e*p	**P**	**11 51 05.3**	**-1.0**
	comp=Z,742nm,0.9s,mb6.7					
JOF	**Joensuu**	**67.07 334**	*e*p	**P**	**11 51 05.3**	**-1.0**
	comp=Z,742nm,0.9s,mb6.7					
VLX	**Vlachokerasia**	**67.11 306**	P	**P**	**11 51 05.7**	**-1.4**
GUR	**Goura**	**67.17 307**	P	**P**	**11 51 05.2**	**-2.3**
AGG	**Agios Georgios**	**67.26 308**	P	**P**	**11 51 04.4**	**-3.6**
VAY	**Valandovo**	**67.27 310**	⇓*i*P	**P**	**11 51 06.5**	**-1.5**
VAY	**Valandovo**	**67.27 310**	P	**P**	**11 51 06.5**	**-1.5**
KALE	**Kalithea**	**67.36 307**	P	**P**	**11 51 06.7**	**-1.9**
LVV	**L'vov**	**67.38 319**	*i*P	**P**	**11 51 07.5**	**-1.0**
LVV			*e*S	S	12 00 00.8	-1.7
LVV			*e*PS		12 00 30.6	
LVV			pmax	pmax		
	comp=Z,2μm,2.0s,mb6.7					
PET	**Petropavlovsk**	**67.38 37***d*	*i*P	**P**	**11 51 07.5**	**-1.0**
PET			*e*		11 51 34.4	
PET			*i*S	S	11 59 59.1	-3.3
PET			*e*PS		12 00 25.5	
PET			pmax	pmax		
	comp=Z,191nm,1.0s,mb6.1					
PET			pmax	pmax		
	comp=Z,7μm,13.7s					
PET			pmax	pmax		
	comp=Z,8μm,18.0s					
PET			MLR	MLR		
	comp=Z,61μm,20.0s,MS6.8					
PET			MLR	MLR		
	comp=Z,50μm,20.0s					
PET	**Petropavlovsk**	**67.38 37**	*e*P	**P**	**11 51 07.8**	**-0.7**
PET			LR	LR		
	comp=Z,55μm,20.0s,MS6.8					
BMR	**Baia Mare**	**67.38 317**	P	**P**	**11 51 09.4**	**+0.8**
BMR			⇑P		11 51 09.9	
BMR	**Baia Mare**	**67.38 317**	⇑*i*P	**P**	**11 51 09.9**	**+1.3**
TRIZ	**Trizonia**	**67.42 307**	P	**P**	**11 51 07.0**	**-2.0**
ITM	**Ithomi**	**67.46 306**	P	**P**	**11 51 07.8**	**-1.5**
ITM	**Ithomi**	**67.46 306**	*e*P	**P**	**11 51 08.5**	**-0.8**
LAKA	**Lakka**	**67.48 307**	P	**P**	**11 51 08.0**	**-1.4**
DEV	**Deva**	**67.54 315**	⇓P	**P**	**11 51 10.9**	**+1.3**
DEV	**Deva**	**67.54 315**	⇓*i*P	**P**	**11 51 10.9**	**+1.3**
THL	**Klokotos Trika**	**67.54 308**	P	**P**	**11 51 07.2**	**-2.6**
EFP	**Efpalio**	**67.55 307**	P	**P**	**11 51 08.0**	**-1.8**
PYL	**PYLOS**	**67.59 305**	P	**P**	**11 51 08.1**	**-2.0**
UPR	**University Cam**	**67.63 307**	P	**P**	**11 51 08.6**	**-1.8**
EVR	**Evrytania**	**67.66 308**	*e*P	**P**	**11 51 09.5**	**-1.0**
VSU	**Vasula**	**67.76 329***d*	*i*P	**P**	**11 51 10.8**	**+0.1**
VSU			pmax	pmax		
	comp=Z,579nm,1.0s,mb6.6					
VSU			MLR	MLR		
	comp=Z,52μm,21.0s,MS6.7					
KZN	**Kozani**	**67.79 309**	P	**P**	**11 51 09.7**	**-1.6**
KZN	**Kozani**	**67.79 309**	*e*P	**P**	**11 51 10.0**	**-1.3**
DRGR		**67.79 316**	P	**P**	**11 51 11.7**	**+0.5**
DRGR		**67.79 316**	⇓*i*P	**P**	**11 51 11.7**	**+0.6**
LVZ	**Lovozero**	**67.87 340**	P	**P**	**11 51 11.9**	**+0.7**
	comp=Z,3μm,1.2s,mb7.2,SNR=77					
LVZ	**Lovozero**	**67.87 340***d*	*i*P	**P**	**11 51 11.5**	**+0.3**
LVZ			pmax	pmax		
	comp=Z,689nm,1.0s,mb6.6					
LVZ			MLR	MLR		
	comp=Z,100μm,18.0s,MS7.1					
LVZ	**Lovozero**	**67.87 340**	PFAKE		11 51 20.0	+8.8
LVZ			LR	LR		
	comp=Z,111μm,20.0s,MS7.1					
EIDS	**Eidsvold**	**68.06 123**	*e*P	**P**	**11 51 12.8**	**-0.4**
	comp=Z,130nm,1.0s,mb5.9					
FNA	**Florina**	**68.12 310**	P	**P**	**11 51 11.6**	**-1.8**
APA	**Apatity**	**68.15 339**	⇓*i*P	**P**	**11 51 14.0**	**+1.0**
APA			*i*		11 53 50.0	
APA			*i*S	S	12 00 10.0	-1.0
APA			*i*PS		12 00 32.0	
APA			*i*		12 00 50.0	
APA			pmax	pmax		
	comp=Z,500nm,0.8s,mb6.6					
APA			MLR	MLR		
	comp=Z,100μm,19.0s,MS7.1					
SKO	**Skopje**	**68.17 311**	⇓*i*P	**P**	**11 51 12.9**	**-0.7**
SKO	**Skopje**	**68.17 311**	P	**P**	**11 51 12.2**	**-1.4**
BIA	**Bitola**	**68.18 310**	*e*P	**P**	**11 51 12.0**	**-1.7**
KWP	**Kalwaria Pacla**	**68.20 319**	*e*P	**P**	**11 51 13.9**	**+0.3**
KWP			*e*pP	pP	11 51 23.5	+1.1
KWP			*e*S	S	12 00 10.4	-1.8
KWP			*e*sS	sS	12 00 28.6	+2.0
KWP			*e*SKS		12 01 26.1	
KWP			*e*SS	SS	12 04 51.4	+16
KWP			*e*SSS		12 07 46.1	
KWP			LMZ		12 26 19.3	
	comp=Z,29μm,20.9s					
KWP	**Kalwaria Pacla**	**68.20 319**	⇓*e*P	**P**	**11 51 13.9**	**+0.2**
KWP			*e**PP	pP	11 51 23.5	+1.1
KWP			*e*S	S	12 00 10.4	-1.9
KWP			*e*SS	sS	12 00 28.6	+2.0
KWP			MLR	MLR		
	comp=Z,29μm,20.9s,MS6.5					
KWP	**Kalwaria Pacla**	**68.20 319**	*e*P	**P**	**11 51 13.8**	**+0.1**
	comp=Z,1μm,1.4s,mb6.8					
KWP			LR	LR		
	comp=Z,28μm,20.0s,MS6.5					
KWP	**Kalwaria Pacla**	**68.20 319**	⇓*i*P	**P**	**11 51 13.8**	**+0.1**
KWP	**Kalwaria Pacla**	**68.20 319**	⇑*i*P		12 19 34.8	
LSZ	**Lusaka**	**68.23 249**	S	S	12 00 15.3	+1.7
	comp=Z,1.8nm,0.6s,baz=275,slow=18,SNR=3.

JAN Janina 68.45 308 *eP* **P 11 51 14.5 -0.9**
LKD2 Lefkada island 68.55 307 P **P 11 51 14.9 -1.2**
KBN Korca 68.56 309 PN **P 11 51 14.8 -1.3**
VLS Valsamata 68.57 307 P **P 11 51 14.8 -1.4**
VLS Valsamata 68.57 307 *eP* **P 11 51 14.5 -1.7**
OHR Ohrid 68.58 310⇓*iP* **P 11 51 14.2 -2.1**
OHR Ohrid 68.58 310 P **P 11 51 14.0 -2.3**
SUW Suwalki 68.66 324 *eP* **P 11 51 16.1 -0.4**
SUW *eS* S 12 00 14.9 -2.7
SUW *esS* sS 12 00 33.4 +1.4
SUW *eSKS* 12 01 30.8
SUW *eSSS* 12 07 42.5
SUW LMZ 12 25 51.1
comp=Z,46μm,18.0s
SUW Suwalki 68.66 324⇓*eP* **P 11 51 16.1 -0.4**
SUW *eS* S 12 00 15.0 -2.6
SUW *eSSS* 12 07 42.5
SUW MLR MLR
comp=Z,46μm,18.0s,MS6.8
SUW Suwalki 68.66 324 *eP* **P 11 51 16.2 -0.3**
comp=Z,2μm,1.1s,mb6.9
TIM Timisoara 68.69 315 P **P 11 51 17.7 +0.9**
IGT Igoumenitsa 68.84 308 P **P 11 51 16.4 -1.5**
CRVS Cervenica-Dubn 68.90 318 *eP* **P 11 51 18.8 +0.7**
CRVS pmax pmax
comp=Z,209nm,1.1s,mb6.0
CRVS Cervenica-Dubn 68.90 318 *eP* **P 11 51 18.8 +0.7**
comp=Z,209nm,1.1s,mb6.0
CRVS *eS* S 12 00 15.9 -4.8
CRVS *eSS* SS 12 05 18.0 +32
CRVS *e* 12 19 33.7
CRVS Cervenica-Dubn 68.90 318 *eP* **P 11 51 18.8 +0.7**
CRVS *eS* S 12 00 15.9 -4.8
CRVS *eSS* SS 12 05 18.0 +32
CRVS *e* 12 19 33.6
FINES FINESS Array B 68.91 332 P **P 11 51 17.6 -0.3**
comp=Z,386nm,0.9s,mb6.3,baz=105,slow=6.7,SNR=386
FINES S S 12 00 19.4 -0.8
comp=Z,3.6nm,1.0s,baz=294,slow=18,SNR=2.3
FINES PKPPKP 12 19 26.3
comp=Z,11nm,1.0s,baz=281,slow=1.0,SNR=11
FINES LR LR 12 27 06.8
comp=Z,72μm,19.0s,MS6.9,baz=106,slow=41
FINES FINESS Array B 68.91 332 P **P 11 51 17.6 -0.3**
FINES S S 12 00 19.4 -0.8
FINES P'P' 12 19 26.3
FINES LR LR 12 27 06.8
KAF Kangasniemi 69.00 333 *eP* **P 11 51 17.2 -1.2**
KAF pmax pmax
comp=Z,649nm,1.1s,mb6.5
KAF Kangasniemi 69.00 333 *ep* **P 11 51 17.2 -1.2**
comp=Z,649nm,1.1s,mb6.5
KAF Kangasniemi 69.00 333 *ep* **P 11 51 17.2 -1.2**
comp=Z,649nm,1.1s,mb6.5
MSNA Messina 69.04 241⇓*iP* **P 11 51 20.8 +1.4**
MSNA AMS AMS 12 17 59.9
comp=Z,74μm,19.8s,MS6.9
STHS Stebnicka Huta 69.11 319 *eP* **P 11 51 20.0 +0.6**
STHS pmax pmax
comp=Z,100nm,1.0s,mb5.7
STHS Stebnicka Huta 69.11 319 *eP* **P 11 51 20.0 +0.6**
comp=Z,100nm,1.0s,mb5.7
STHS *e* 12 19 31.7
STHS Stebnicka Huta 69.11 319 *eP* **P 11 51 20.0 +0.6**
STHS *e* 12 19 31.7
SRN Sarande 69.11 308 PN **P 11 51 17.9 -1.7**
BCI Bajram Curri 69.22 311 PN **P 11 51 19.0 -1.2**
KEK Kerkira 69.26 308 P **P 11 51 18.7 -1.8**
KEK Kerkira 69.26 308 *eP* **P 11 51 18.5 -2.0**
TIR Tirane 69.30 310 *eP* **P 11 51 19.2 -1.5**
TIR pmax pmax
comp=Z,237nm,0.9s,mb6.1
TIR MLR MLR
comp=Z,24μm,22.0s,MS6.4
TIR Tirane 69.30 310 *eP* **P 11 51 19.2 -1.5**
comp=Z,237nm,0.9s,mb6.1
TIR LR LR
comp=Z,24μm,22.0s,MS6.4
TIR Tirane 69.30 310 P **P 11 51 19.1 -1.6**
PVY Plav 69.30 311⇓*iP* **P 11 51 19.4 -1.3**
PVY Plav 69.30 311⇓*iP* **P 11 51 19.5 -1.2**
PUK Puka 69.32 311 PN **P 11 51 19.8 -1.0**
IVA Berane 69.38 312⇓*iP* **P 11 51 20.4 -0.8**
IVA Berane 69.38 312⇓*iP* **P 11 51 20.5 -0.7**
DIVS Divibare 69.40 313 P **P 11 51 20.8 -0.5**
KECS Kecovo 69.49 318 *eP* **P 11 51 22.0 +0.3**
KECS pmax pmax
comp=Z,84nm,0.9s,mb5.7
KECS Kecovo 69.49 318 *eP* **P 11 51 22.0 +0.3**
comp=Z,84nm,0.9s,mb5.7
KECS *e* 12 19 30.8
KECS Kecovo 69.49 318 *eP* **P 11 51 22.0 +0.3**
KECS *e* 12 19 30.8
WAR Warsaw 69.64 322 *eP* **P 11 51 22.9 +0.3**
WAR *eS* S 12 00 27.6 -1.7
WAR *eSKS* 12 01 23.5
WAR *eSSS* 12 08 28.3
WAR LMZ 12 23 23.4
comp=Z,40μm,23.8s
WAR Warsaw 69.64 322⇓*eP* **P 11 51 23.0 +0.4**
WAR *eS* S 12 00 27.6 -1.7
WAR *e* 12 01 23.5
WAR MLR MLR
comp=Z,40μm,23.8s,MS6.6
TOO Toolangi 69.67 137 *eP* **P 11 51 23.8 +0.8**
TOO *e* 11 51 36.9
TOO *eS* S 12 00 36.3 +6.3
POGA Pongola 69.70 235⇓*iP* **P 11 51 23.5 +0.2**
POGA AMS AMS 12 17 54.1
comp=Z,63μm,19.9s,MS6.9
NIE Niedzica 69.72 319 *i* P **P 11 51 23.8 +0.7**
NIE *e* 11 53 53.7
NIE Niedzica 69.72 319⇓*iP* **P 11 51 23.8 +0.7**
NIE *e* 11 53 53.7
PLE Pljevlja 69.78 312⇓*iP* **P 11 51 23.6 0.0**
PLE Pljevlja 69.78 312⇓*iP* **P 11 51 23.6 0.0**
ULC Ulcinj 69.80 311⇓*iP* **P 11 51 22.8 -1.0**
TTG Podgorica 69.82 311⇓*iP* **P 11 51 22.9 -1.0**
TTG Podgorica 69.82 311⇓*iP* **P 11 51 23.0 -0.9**
PSZ Piszkesteto 69.82 317 P **P 11 51 23.8 0.0**
PSZ Piszkesteto 69.82 317 PFAKE 11 51 40.0 +16
PSZ LR LR
comp=Z,28μm,20.0s,MS6.5
PSZ Piszkesteto 69.82 317⇓*eP* **P 11 51 23.8 0.0**
PSZ Piszkesteto 69.82 317⇓*iP* **P 11 51 23.7 -0.1**
NKY Niksic 70.03 312⇓*iP* **P 11 51 23.6 -1.6**
NKY Niksic 70.03 312⇓*iP* **P 11 51 23.7 -1.5**
BUM Brajici-Budva 70.08 311⇓*iP* **P 11 51 24.1 -1.4**
BUM Brajici-Budva 70.08 311⇓*iP* **P 11 51 24.2 -1.3**
UPM Unac-Piva 70.12 312⇓*iP* **P 11 51 24.9 -0.8**
UPM Unac-Piva 70.12 312⇓*iP* **P 11 51 24.9 -0.8**
OJC Ojcow 70.14 319 *i* P **P 11 51 23.9 -1.8**
OJC *epP* pP 11 51 37.7 +3.3
OJC *ePP* PP 11 53 57.6 -3.4
OJC *i* S S 12 00 30.6 -4.6
OJC *eSS* SS 12 05 11.7 +6.6
OJC L 12 27 01.6
comp=Z,35nm,18.3s
OJC Ojcow 70.14 319 *eP* 12 19 25.8
BRY Bratogost 70.37 312⇓*iP* **P 11 51 25.7 -1.6**
BRY Bratogost 70.37 312⇓*iP* **P 11 51 25.8 -1.5**
HCY Herceg Novi 70.38 311⇓*iP* **P 11 51 26.1 -1.2**
HCY Herceg Novi 70.38 311⇓*iP* **P 11 51 26.2 -1.2**
LIKS Likavka 70.46 318 *eP* **P 11 51 27.5 -0.2**
LIKS pmax pmax
comp=Z,73nm,1.1s,mb5.5
LIKS Likavka 70.46 318 *eP* **P 11 51 27.5 -0.2**
comp=Z,73nm,1.1s,mb5.5
LIKS Likavka 70.46 318 *eP* **P 11 51 27.5 -0.2**
TREB Trebinje 70.50 311 P **P 11 51 27.0 -1.1**
PKSM Moragy 70.52 315⇓*iP* **P 11 51 27.7 -0.4**
VYHS Vyhne 70.58 318 *eP* **P 11 51 28.5 0.0**
VYHS pmax pmax
comp=Z,1μm,3.2s
VYHS Vyhne 70.58 318 *eP* **P 11 51 28.5 0.0**
comp=Z,1μm,3.2s
VYHS *eS* S 12 00 35.5 -4.9
VYHS *eSS* SS 12 05 35.5 +23
VYHS *e* 12 19 24.8
VYHS Vyhne 70.58 318 *eP* **P 11 51 28.5 0.0**
VYHS *eS* S 12 00 35.5 -4.9
VYHS *eSS* SS 12 05 35.5 +23
VYHS *e* 12 19 24.8
ARMA Armidale 70.65 128 *eP* **P 11 51 30.6 +1.5**
ARMA *e* 11 51 43.7
ARMA *eS* S 12 00 45.7 +4.0
ARMA Armidale 70.65 128 *eP* **P 11 51 30.6 +1.4**
comp=Z,185nm,0.9s,mb6.0
HNR Honiara 70.71 104 *eP* **P 11 51 29.6 -0.2**
HNR pmax pmax
comp=Z,1μm,0.9s,mb6.8
HNR MLR MLR
comp=Z,11μm,22.0s,MS6.1
HNR Honiara 70.71 104 *eP* **P 11 51 29.6 -0.2**
comp=Z,1μm,0.9s,mb6.8
HNR LR LR
comp=Z,11μm,22.0s,MS6.1
CAN Canberra 70.95 133 *eP* **P 11 51 31.0 +0.1**
CAN pmax pmax
comp=Z,553nm,1.0s,mb6.4
CAN MLR MLR
comp=Z,51μm,19.0s,MS6.8
CAN Canberra 70.95 133 *eP* **P 11 51 31.0 +0.1**
comp=Z,553nm,1.0s,mb6.4
CAN LR LR
comp=Z,51μm,19.0s,MS6.8
RAC Raciborz 71.15 319 *eP* **P 11 51 32.4 +0.5**
RAC *eS* S 12 00 45.7 -1.3
RAC MLR MLR
comp=E,26μm,18.0s,MS6.7
RAC MLR MLR
comp=N,33μm,18.0s,MS6.7
RAC MLR MLR
comp=Z,23μm,18.0s,MS6.5
KEV Kevo 71.16 341 *eP* **P 11 51 30.9 -0.6**
KEV pmax pmax
comp=Z,422nm,1.1s,mb6.3
KEV Kevo 71.16 341 *eP* **P 11 51 31.6 +0.1**
comp=Z,864nm,1.4s,mb6.5
KEV LR LR
comp=Z,75μm,21.0s,MS6.9
KEV Kevo 71.16 341 *ep* **P 11 51 30.9 -0.6**
comp=Z,422nm,1.1s,mb6.3
KEV Kevo 71.16 341 *ep* **P 11 51 30.9 -0.6**
comp=Z,422nm,1.1s,mb6.3
OKC Ostrava-Krasne 71.16 319⇓*iP* **P 11 51 32.2 +0.3**
OKC *e* 11 51 45.7
OKC *eS* S 12 00 45.5 -1.6
OKC MLR MLR
comp=Z,18μm,18.0s,MS6.4
OKC Ostrava-Krasne 71.16 319⇓*iP* **P 11 51 32.2 +0.3**
OKC *epP* pP 11 51 45.7 +5.0
OKC *eS* S 12 00 45.5 -1.6
OKC *ePKPPKP* 12 19 24.9
OKC *ex* x 12 19 33.5
OKC AMS AMS 12 27 30.0
comp=Z,18μm,18.0s
CNB Canberra Magne 71.21 133⇓*iP* **P 11 51 32.3 -0.1**
CNB *e* 11 51 45.5
CNB *eS* S 12 00 47.0 -1.0
BLY Banja Luka 71.45 314 P **P 11 51 33.0 -0.8**
MORC Moravsky Berou 71.55 319⇑P **P 11 51 34.5 +0.2**
MORC Moravsky Berou 71.55 319⇑*iP* **P 11 51 34.5 +0.2**
ARCES ARCESS Array B 71.58 340 P **P 11 51 34.2 +0.1**
comp=Z,346nm,0.9s,mb6.3,baz=96,slow=5.4,SNR=283
ARCES PKPPKP 12 19 21.4
comp=Z,4.0nm,0.9s,baz=276,slow=4.5,SNR=5.2
ARCES LR LR 12 25 37.0
comp=Z,94μm,20.0s,MS7.0,baz=295,slow=38
ARE0 ARCESS Array S 71.58 340 *eP* **P 11 51 34.0 -0.1**
TIP Timpagrande 71.60 308 *eP* **P 11 51 34.1 -0.7**
comp=Z,699nm,1.4s,mb6.4
TIP LR LR
comp=Z,16μm,20.0s,MS6.3
SLR Silverton 71.79 238⇓*iP* **P 11 51 37.4 +1.3**
SLR AMS AMS 12 21 14.3
comp=Z,78μm,17.5s,MS7.0
RIV Riverview 71.82 131 *eP* **P 11 51 36.6 +0.5**
RIV *e* 11 51 47.4
ERPM east rand prop 72.05 238⇓*iP* **P 11 51 39.2 +1.5**
ERPM AMS AMS 12 20 05.3
comp=Z,43μm,19.1s,MS6.7
GKP Gorka Klasztor 72.06 323 *eP* **P 11 51 37.2 -0.1**
GKP *epP* pP 11 51 47.1 +1.1
GKP *ePPP* 11 56 16.5
GKP *eS* S 12 00 55.2 -2.1
GKP *eSKS* 12 01 54.8
GKP *eSSS* 12 09 20.4
GKP LMZ 12 25 02.3
comp=Z,41μm,23.3s
GKP Gorka Klasztor 72.06 323⇓*eP* **P 11 51 37.2 0.0**
GKP *e*PP pP 11 51 47.1 +1.1
GKP *eS* S 12 00 55.2 -2.1
GKP MLR MLR
comp=Z,41μm,23.3s,MS6.6
VRAC Vranov 72.13 318 LR LR 12 29 36.8
comp=Z,20μm,18.6s,MS6.4,baz=95,slow=41
VRAC Vranov 72.13 318⇑P **P 11 51 37.5 -0.2**
VRAC Vranov 72.13 318⇑*iP* **P 11 51 37.5 -0.2**
KOGS Kog 72.19 315⇓*iP* **P 11 51 38.1 -0.1**
KOGS *ePP* PP 11 54 17.1 -1.6
KOGS *eS* S 12 00 57.0 -2.0
KTK1 Kautokeino 72.19 339⇓*iP* **P 11 51 38.3 +0.5**
KTK1 AMB AMB 11 51 41.1
comp=Z,734nm,2.7s,mb6.1
KTK1 *eS* S 12 00 58.7 +0.4
KTK1 AMS AMS 12 25 54.6
comp=Z,102μm,18.6s,MS7.1
WAKE Wake Island 72.23 73 *eP* **P 11 51 39.1 +0.2**
WAKE LR LR
comp=Z,17μm,20.0s,MS6.3
CEL Celeste 72.27 307 *eP* **P 11 51 39.0 +0.1**
comp=Z,2μm,1.1s,mb6.9
CEL LR LR
comp=Z,15μm,19.0s,MS6.3
CUC Castrocucco 72.33 309 P **P 11 51 38.0 -1.2**
DPC Dobruska-Polom 72.37 319 *eP* **P 11 51 39.8 +0.6**
DPC *e* 11 51 53.8
DPC *eS* S 12 00 59.8 -1.2
DPC MLR MLR
comp=Z,32μm,18.1s,MS6.6
DPC Dobruska-Polom 72.37 319 *eP* **P 11 51 39.8 +0.6**
DPC *esP* sP 11 51 53.8 +2.6
DPC *eS* S 12 00 59.8 -1.2
DPC *ex* x 12 06 14.9
DPC *ex* x 12 19 08.0
DPC *ePKPPKP* 12 19 18.8
DPC AMS AMS 12 28 00.0
comp=Z,32μm,18.1s
SGRT San Giovanni R 72.41 310 P **P 11 51 38.0 -1.6**
SCLL Scilla 72.41 307 P **P 11 51 39.9 +0.2**
KSP Ksiaz 72.43 320 *eP* **P 11 51 40.1 +0.6**
KSP *epP* pP 11 51 50.2 +1.9
KSP *ePPP* 11 56 20.0
KSP *eS* S 12 00 59.2 -2.5
KSP *eSKS* 12 01 40.8
KSP *eSSS* 12 09 03.8
KSP LMZ 12 27 33.6
comp=Z,51μm,20.6s
KSP Ksiaz 72.43 320⇑*eP* **P 11 51 39.7 +0.2**
KSP *e* 11 51 54.5
KSP *e* 11 54 26.7
KSP *eS* S 12 00 59.0 -2.6
KSP *e* 12 01 40.0
KSP *eSS* SS 12 05 40.0 -0.2
KSP *eSSS* 12 08 56.0
KSP MLR MLR
comp=Z,59μm,20.6s,MS6.8
MTTG Motta San Giov 72.43 306 P **P 11 51 40.4 +0.6**
RGNG Rignano Grg 72.52 310 P **P 11 51 39.4 -0.9**
CONA Conrad Observa 72.53 317 *i* P **P 11 51 40.1 -0.1**
comp=Z,254nm,1.2s,mb6.0,SNR=66
KLOF Kloof 72.58 238⇓*iP* **P 11 51 43.3 +2.4**
KLOF AML AML 12 20 21.2
comp=Z,35μm,19.3s
UPC Upice 72.58 320⇓*iP* **P 11 51 41.0 +0.6**
UPC *e* 11 51 55.9
UPC Upice 72.58 320⇓*iP* **P 11 51 41.0 +0.6**
UPC *esP* sP 11 51 55.9 +3.4
UPC *ex* x 12 19 10.9
MRLC Muro Lucano 72.59 309 P **P 11 51 40.5 -0.2**
ARSA Arzberg 72.73 316 *i* P **P 11 51 41.6 +0.2**
comp=Z,562nm,1.6s,mb6.2,SNR=163
FG5 Orsara di Pugl 72.76 310 P **P 11 51 41.5 -0.2**
FG2 Serracapriola 72.84 310 P **P 11 51 41.7 -0.5**
TREC Trest 72.85 318⇓*iP* **P 11 51 42.2 +0.1**
TREC *e* 11 52 00.8
TREC *eS* S 12 01 06.0 -0.5
TREC *e* 12 05 51.7
TREC MLR MLR
comp=Z,20μm,18.4s,MS6.4
TREC Trest 72.85 318⇓*iP* **P 11 51 42.2 +0.1**
TREC *esP* sP 11 52 00.8 +6.7
TREC *eS* S 12 01 06.0 -0.5
TREC *eSS* SS 12 05 51.7 +5.0
TREC AMS AMS 12 28 50.0
comp=Z,20μm,18.4s
BOJS Bojanci 72.85 314⇓*iP* **P 11 51 41.9 -0.2**
HAVL Avola 72.89 305 P **P 11 51 42.5 -0.1**
SSY Sortino 72.93 306 P **P 11 51 42.7 -0.1**
CSSN Cassano Irpino 72.94 309 P **P 11 51 39.4 -3.4**
BISS Bistriski jare 72.97 315⇓*iP* **P 11 51 43.0 +0.1**
PERS Pernice 72.98 315⇓*iP* **P 11 51 43.1 +0.2**
MRB1 Monte Rocchett 72.98 310 P **P 11 51 42.5 -0.5**
KSR Koster 72.99 239⇓*iP* **P 11 51 45.3 +2.0**
KSR AMS AMS 12 13 33.0
comp=Z,25μm,22.0s,MS6.5
PRYS Parys 73.00 237⇓*iP* **P 11 51 44.5 +1.1**
PRYS AMS AMS 12 18 58.5
comp=Z,38μm,20.1s,MS6.7
SOKA Soboth 73.04 316⇓*iP* **P 11 51 43.4 +0.1**
comp=Z,651nm,1.3s,mb6.4
SLNA Salina 73.10 307 P **P 11 51 43.2 -0.6**
PSB1 Pescosannita 73.10 310 P **P 11 51 42.8 -0.9**
HMDC Modica 73.17 305 P **P 11 51 44.3 +0.1**
HVZN Vizzini 73.22 306 P **P 11 51 44.3 -0.2**
SEK Senekal 73.32 236⇓*iP* **P 11 51 46.2 +1.0**
SEK AMS AMS 12 21 26.5
comp=Z,68μm,18.0s,MS7.0
OBKA Obir 73.37 315 *i* P **P 11 51 45.3 +0.1**
comp=Z,618nm,1.3s,mb6.4,SNR=106
LJU Ljubljana 73.37 315⇓*iP* **P 11 51 45.3 0.0**
LJU *ePP* PP 11 54 29.3 +0.5
LJU *e* 11 56 17.9
LJU *eS* S 12 01 09.3 -3.2
LJU *e* 12 01 52.5
LJU Ljubljana 73.37 315⇓*iP* **P 11 51 45.3 0.0**
LJU *ePP* PP 11 54 29.3 +0.5
LJU *e* 11 56 17.9
LJU *eS* S 12 01 09.3 -3.2
MOO Moorlands 73.39 141 *eP* **P 11 51 46.3 +1.0**
MOO *eS* S 12 01 09.9 -2.8
WDD Wield Dalam 73.40 304 *eP* **P 11 51 45.3 -0.3**
comp=Z,871nm,1.5s,mb6.5
WDD LR LR
comp=Z,24μm,19.0s,MS6.5
CEY Cerknica 73.44 315 P **P 11 51 45.0 -0.6**
KNDS Knezji Dol 73.46 314⇓*iP* **P 11 51 44.8 -1.0**
PRU Pruhonice 73.50 319⇓*iP* **P 11 51 46.7 +0.8**
PRU *e* pP 11 51 56.2 +1.6
PRU *eS* S 12 01 13.9 +0.1
PRU MLR MLR
comp=Z,31μm,18.4s,MS6.6
PRU Pruhonice 73.50 319⇓*iP* **P 11 51 46.7 +0.8**
PRU *epP* pP 11 51 56.2 +1.6
PRU *ex* x 11 54 44.8
PRU *eS* S 12 01 13.9 +0.1
PRU *ex* x 12 06 28.0
PRU *ePKPPKP* 12 19 26.3
PRU AMS AMS 12 28 50.0
comp=Z,31μm,18.4s
RAFF Raffo Rosso 73.50 306 P **P 11 51 46.7 +0.6**
MIDA Miranda 73.52 310 P **P 11 51 45.7 -0.5**
PRA Prague 73.57 319 ⇓P **P 11 51 47.0 +0.7**
PRA *ex* x 12 01 32.0
PRA AMS AMS 12 29 10.0
BSD Bornholm Skovb 73.58 324⇓*iP* **P 11 51 45.5 -0.7**
comp=Z,303nm,0.9s,mb6.2
BSD *eS* S 12 01 09.9 -4.6
BSD
comp=Z,37μm,17.0s
MOA Molln 73.60 317 *i* P **P 11 51 46.2 -0.3**
comp=Z,274nm,1.3s,mb6.0,SNR=32
RFI Roccamonfina 73.73 310 P **P 11 51 46.5 -0.9**
GORS Gorjuse 73.75 315⇓*iP* **P 11 51 47.1 -0.3**
INTR Introdacqua 73.78 311 P **P 11 51 46.6 -1.1**
LBTB Lobatse 73.79 240 S S 12 01 18.8 +0.8
comp=Z,2.4nm,0.9s,baz=288,slow=16,SNR=3.6
LBTB Lobatse 73.79 240 *eP* **P 11 51 49.0 +1.0**
LBTB MLR MLR
comp=Z,68μm,19.0s,MS7.0
LBTB Lobatse 73.79 240 *eP* **P 11 51 49.0 +1.0**
LBTB LR LR
comp=Z,68μm,19.0s,MS7.0
LBTB Lobatse 73.79 240⇓*iP* **P 11 51 49.2 +1.2**
LBTB AMS AMS 12 21 33.0
comp=Z,61μm,18.5s,MS6.9
VOY Vojsko 73.81 315⇓*iP* **P 11 51 47.4 -0.4**
TRO Tromso 73.83 340⇓*iP* **P 11 51 47.6 +0.2**
TRO AMb AMB 11 51 53.2
comp=Z,580nm,1.3s,mb6.4
TRO *eS* S 12 01 17.0 +0.1
TRO AMS AMS 12 26 48.0
comp=Z,99μm,17.7s,MS7.2
TRO Tromso 73.83 340⇓*iP* **P 11 51 47.6 +0.2**
TRO pmax pmax
comp=Z,580nm,1.3s,mb6.3
TRO MLR MLR
comp=Z,99μm,17.7s,MS7.2
TRO Tromso 73.83 340⇓*iP* **P 11 51 47.6 +0.2**
comp=Z,580nm,1.3s,mb6.3
TRO LR LR
comp=Z,99μm,17.7s,MS7.2
TRI Trieste 73.90 314 *eP* **P 11 51 47.1 -1.2**
TRI pmax pmax
comp=Z,164nm,0.9s,mb6.0
TRI MLR MLR
comp=Z,19μm,22.0s,MS6.3
TRI Trieste 73.90 314 *eP* **P 11 51 47.1 -1.2**
comp=Z,164nm,0.9s,mb6.0
TRI LR LR
comp=Z,19μm,22.0s,MS6.3
BRG Berggiesshubel 73.92 320 *eP* **P 11 51 48.7 +0.4**
comp=Z,689nm,1.6s,mb6.3
BRG *ePP* PP 11 54 32.6 -0.7
BRG *eS* S 12 01 13.9 -4.6
BRG Berggiesshubel 73.92 320 *i* P **P 11 51 48.8 +0.5**
comp=Z,204nm,1.1s,mb6.0
BRG *i* 11 52 03.3
comp=Z,97nm,0.8s
BRG *i* 11 54 37.1
comp=Z,129nm,1.7s
BRG S S 12 01 12.0 -6.5
BRG *ePKPPKP* 12 19 45.5
comp=Z,9.5nm,1.5s
BRG
comp=N,24μm,18.3s
BRG
comp=E,31μm,19.3s
BRG
comp=Z,30μm,18.3s
CADS Cadrg 73.92 315⇓*iP* **P 11 51 48.0 -0.5**
CADS *ePP* PP 11 54 32.9 -0.6
CADS *e* 11 56 31.3
CADS *eS* S 12 01 16.0 -2.8
CADS *e* 12 06 02.8
CADS *e* 12 10 39.3
OFFI Offida 73.94 312 P **P 11 51 48.0 -0.6**
VVLD Villa Vallelon 73.99 310 P **P 11 51 48.0 -1.0**
MYKA Terra Mystica 74.00 315⇓*iP* **P 11 51 48.5 -0.4**
comp=Z,442nm,1.7s,mb6.1
AOI Ancona 74.00 312 P **P 11 51 48.8 -0.2**
TERO Teramo 74.00 311 P **P 11 51 47.9 -1.1**
HOPEN Hopen 74.04 347⇓*iP* **P 11 51 48.5 -0.1**
HOPEN AMb AMB 11 51 51.7
comp=Z,700nm,1.4s,mb6.4
BILL Bilibino 74.06 22 *eP* **P 11 51 47.1 -1.7**
BILL *i* 11 52 00.1
BILL *e* 11 54 32.2
BILL *i* S S 12 01 15.6 -3.9
BILL *eSS* SS 12 06 05.3 +1.0
BILL pmax pmax
comp=Z,242nm,1.3s,mb6.0
BILL MLR MLR
comp=Z,62μm,20.0s,MS6.9
BILL Bilibino 74.06 22 *eP* **P 11 51 48.6 -0.2**
comp=Z,796nm,1.5s,mb6.4
BILL LR LR
comp=Z,54μm,20.0s,MS6.8
RUE Ruedersdorf 74.09 322 *eP* **P 11 51 49.5 +0.2**

comp=Z,1μm,1.4s,mb6.7
RUE eS S 12 01 13.7 -6.7
RUE Ruedersdorf 74.09 322 eP P 11 51 49.5 +0.2
comp=Z,762nm,1.1s,mb6.5
KHC Kasperske Hory 74.09 318⇓iP P 11 51 49.4 0.0
KHC e pP 11 51 59.0 +0.8
KHC e 11 52 03.1
KHC eS S 12 01 19.6 -1.0
KHC MLR MLR
comp=Z,23μm,17.4s,MS6.5
KHC Kasperske Hory 74.09 318 eP P 11 51 49.2 -0.1
comp=Z,224nm,1.2s,mb6.0
KHC Kasperske Hory 74.09 318⇓iP P 11 51 49.4 0.0
KHC epP pP 11 51 59.0 +0.8
KHC esP sP 11 52 03.1 +1.7
KHC eS S 12 01 19.6 -1.0
KHC ex x 12 06 40.3
KHC ex x 12 19 15.3
KHC ePKPPKP 12 19 25.9
KHC AMS AMS 12 29 30.0
comp=Z,23μm,17.4s
AQU L'Aquila 74.15 311⇑P P 11 51 49.1 -0.8
AQU L'Aquila 74.15 311 eP P 11 51 49.3 -0.5
comp=Z,384nm,1.4s,mb6.1
AQU LR LR
comp=Z,25μm,20.0s,MS6.5
AQU L'Aquila 74.15 311⇑iP P 11 51 49.1 -0.8
VENT Ventotene 74.16 309 P P 11 51 49.3 -0.6
PTCC Patocco-Chiusa 74.19 315 P P 11 51 49.7 -0.3
KBA Koelnbreinsper 74.21 316 iP P 11 51 49.6 -0.5
comp=Z,378nm,1.1s,mb6.2,SNR=86
CING Cingoli 74.30 312 P P 11 51 50.4 -0.3
NRCA Norcia 74.36 311 P P 11 51 50.3 -0.8
FIAM Fiamignano 74.36 311 P P 11 51 50.6 -0.5
USI Ustica 74.39 307 P P 11 51 50.8 -0.6
RGN Rugen 74.46 324 eP P 11 51 51.9 +0.5
comp=Z,950nm,1.4s,mb6.5
RGN eS S 12 01 18.9 -5.6
RGN Rugen 74.46 324 eP P 11 51 52.0 +0.6
comp=Z,2μm,1.6s,mb6.7
CERT Cerreto 74.47 311 P P 11 51 50.4 -1.3
SNTG Esanatoglia 74.48 312 P P 11 51 51.3 -0.5
KWAJ Kwajalein Atol 74.50 84 eP P 11 51 53.8 +1.4
comp=Z,246nm,1.0s,mb6.1
CLL Collm 74.52 320 eP P 11 51 51.7 -0.2
comp=Z,519nm,1.4s,mb6.3
CLL ePP PP 11 54 38.2 -0.2
CLL eS S 12 01 19.2 -6.1
CLL Collm 74.52 320⇓iP P 11 51 51.9 0.0
CLL i 11 52 10.1
CLL eS S 12 01 23.0 -2.3
CLL pmax pmax
comp=Z,332nm,1.2s,mb6.1
CLL MLR MLR
comp=Z,29μm,18.5s,MS6.6
CLL Collm 74.52 320⇓iP P 11 51 51.9 0.0
comp=Z,332nm,1.2s,mb6.1
CLL iP pP 11 51 55.4 -5.2
comp=Z,521nm,1.4s
CLL iPPcP 11 52 10.1
CLL ePP PP 11 54 43.0 +4.6
CLL ePPP 11 56 28.0
CLL eS S 12 01 23.0 -2.3
CLL eSKSac SKSac 12 01 53.0 -5.2
CLL ePPS 12 02 14.0
CLL eSS SS 12 06 30.0 +18
CLL e 12 07 16.0
CLL eSSS 12 09 36.0
CLL e 12 10 36.0
CLL eSSSS 12 11 42.0
CLL ePKPPKPdf 12 19 19.0
CLL esP tx 12 19 26.0
CLL LmV 12 31 00.0
comp=Z,29μm,18.5s
WET Wettzell 74.55 318 eP P 11 51 52.3 +0.2
comp=Z,535nm,1.4s,mb6.3
WET ePP PP 11 54 37.7 -1.0
WET eS S 12 01 21.6 -4.1
RJOB Jochberg 74.59 317 eP P 11 51 51.7 -0.6
comp=Z,312nm,1.1s,mb6.2
RJOB ePP PP 11 54 37.9 -1.2
RJOB eS S 12 01 19.6 -6.6
FSSB Fossombrone 74.60 312 P P 11 51 52.2 -0.3
HFA0 Hagfors New Ar 74.64 329 P P 11 51 51.0 -1.3
MTCE Montecelio 74.65 311 P P 11 51 53.0 +0.2
ABTA Abfaltersbach 74.78 316 iP P 11 51 52.7 -0.7
comp=Z,196nm,1.2s,mb5.9,SNR=103
SWZ Schweizer 74.78 238⇓iP P 11 51 55.0 +1.3
SWZ AMS AMS 12 21 26.5
comp=Z,49μm,19.4s,MS6.8
MURB Monte Urbino 74.79 312 P P 11 51 52.9 -0.7
ROM9 Roma 74.82 310 P P 11 51 53.1 -0.7
TANN Tannenbergstha 74.84 319 eP P 11 51 54.0 +0.3
comp=Z,465nm,1.4s,mb6.2
TANN ePP PP 11 54 40.6 -0.6
TANN eS S 12 01 24.6 -4.4
NKC Novy Kostel 74.85 319⇓iP P 11 51 54.2 +0.4
NKC e 11 52 08.3
NKC eS S 12 01 29.4 +0.4
NKC MLR MLR
comp=Z,37μm,17.8s,MS6.7
NKC Novy Kostel 74.85 319⇓iP P 11 51 54.2 +0.4
NKC esP sP 11 52 08.3 +2.5
NKC ex x 11 54 55.4
NKC eS S 12 01 29.4 +0.4
NKC ePKPPKP 12 19 18.1
NKC ex x 12 19 28.1
NKC AMS AMS 12 29 40.0
comp=Z,37μm,17.8s
BJO Bjornoya 74.86 345⇓iP P 11 51 53.5 +0.2
BJO AMb AMB 11 51 57.9
comp=Z,815nm,2.1s,mb6.3
BJO eS S 12 01 28.9 +0.6
BJO AMS AMS 12 28 44.3
comp=Z,42μm,17.2s,MS6.8
ERC Erice 74.88 307 P P 11 51 54.5 +0.3
WERN Wernitzgruen 74.90 319 eP P 11 51 54.4 +0.4
comp=Z,232nm,1.1s,mb6.0
BJO1 Bjornoya 74.91 345⇓iP P 11 51 53.5 -0.1
comp=Z,815nm,2.1s,mb6.3
BJO1 LR LR
comp=Z,42μm,17.2s,MS6.8
MOR8 Moi Rana 74.92 336⇓iP P 11 51 53.4 -0.4
MOR8 AMb AMB 11 51 56.9
comp=Z,575nm,2.4s,mb6.1
MOR8 Moi Rana 74.92 336⇓iP P 11 51 53.4 -0.4
comp=Z,575nm,2.4s,mb6.1
GUNZ Gunzen 74.93 319 eP P 11 51 54.5 +0.3
comp=Z,776nm,1.7s,mb6.4
WERD Werda 74.94 319 eP P 11 51 54.4 +0.1
comp=Z,538nm,1.5s,mb6.2
BADI Badiali 74.99 312 P P 11 51 54.4 -0.3
COP Copenhagen 75.03 325⇓iP P 11 51 55.1 +0.4
comp=Z,98nm,1.1s,mb5.7
COP
comp=Z,13μm,17.0s
MGAB Montegabbione 75.10 312 P P 11 51 54.3 -1.0
TOLF Tolfa 75.20 311 P P 11 51 54.7 -1.3
LATE Laterza 75.33 311 P P 11 51 55.4 -1.3
BOSA Boshof 75.36 237 P P 11 51 58.2 +1.2
comp=Z,447nm,0.9s,mb6.4,baz=73,slow=5.6,SNR=369
BOSA S S 12 01 36.2 +0.9
comp=Z,4.6nm,1.0s,baz=333,slow=18,SNR=1.7
BOSA LR LR 12 22 22.3
comp=Z,61μm,18.1s,MS6.9,baz=162,slow=34
BOSA Boshof 75.36 237 eP P 11 51 57.7 +0.6
BOSA pmax pmax
comp=Z,559nm,1.0s,mb6.5
BOSA MLR MLR
comp=Z,58μm,19.0s,MS6.9
BOSA Boshof 75.36 237 eP P 11 51 57.7 +0.6
comp=Z,559nm,1.0s,mb6.5
BOSA LR LR
comp=Z,58μm,19.0s,MS6.9
BOSA Boshof 75.36 237⇓iP P 11 51 57.6 +0.5
BOSA AMS AMS 12 22 49.4
comp=Z,58μm,17.7s,MS6.9
FLOS Flostrand 75.37 336 eP P 11 51 56.5 0.0
FLOS AMb AMB 11 52 01.9
comp=Z,799nm,1.2s,mb6.5
WTTA Wattenberg 75.37 316 iP P 11 51 56.3 -0.6
comp=Z,681nm,1.8s,mb6.3,SNR=141
MOX Moxa 75.39 320⇓iP P 11 51 57.0 +0.1
comp=Z,1μm,1.9s,mb6.5
MOX eS S 12 01 36.0 +1.0
MOX eSS SS 12 06 36.0 +11
MOX
comp=Z,31μm,18.0s
MOX Moxa 75.39 320 eP P 11 51 57.1 +0.2
comp=Z,535nm,1.4s,mb6.3
MOX ePP PP 11 54 45.3 -0.5
MOX eS S 12 01 30.0 -5.0
WATA Walderalm 75.41 316⇓iP P 11 51 56.2 -0.9
comp=Z,570nm,1.5s,mb6.3,SNR=15
KONS Konsvik 75.49 336 eP P 11 51 57.2 +0.1
STOK Stokkvaagen 75.51 336 eP P 11 51 57.4 +0.2
STOK eS S 12 01 35.2 -0.5
FUR Furstenfeldbru 75.61 317 eP P 11 51 57.9 -0.3
comp=Z,593nm,1.3s,mb6.4
FUR ePP PP 11 54 46.0 -1.7
FUR eS S 12 01 31.3 -6.2
SEI Scarperia 75.62 313 P P 11 51 58.8 +0.5
GRF Grafenberg Arr 75.64 319 eP P 11 51 58.9 +0.6
comp=Z,1μm,1.3s,mb6.7
GRF ePP PP 11 54 46.8 -1.1
GRF eS S 12 01 34.5 -3.3
GRF eL 12 30 32.5
comp=Z,41μm,19.4s
GRF Grafenberg Arr 75.64 319 eP P 11 51 58.9 +0.6
GRF e 11 54 46.8
GRF eS S 12 01 34.5 -3.3
GRF eS S 12 01 38.7 +0.9
GRF eSS SS 12 06 30.8 +1.7
GRF pmax pmax
comp=Z,1μm,1.3s,mb6.7
GRF Grafenberg Arr 75.64 319 eP P 11 51 58.9 +0.6
comp=Z,1μm,1.3s,mb6.7
GRF ePP PP 11 54 46.8 -1.1
GRF eS S 12 01 34.5 -3.3
GRF eS S 12 01 38.7 +0.9
GRF eSS SS 12 06 30.8 +1.7
GRFO Grafenberg 75.64 319 eS S 12 01 34.5 -3.3
APPI Appiano 75.66 315 P P 11 51 57.7 -0.8
MOTA Moosalm 75.73 316⇓iP P 11 51 57.9 -1.0
comp=Z,341nm,0.9s,mb6.3,SNR=45
FNVD Fontana Vidola 75.79 313 P P 11 52 00.0 +0.7
NSS Namsos 75.79 334⇓iP P 11 51 56.4 -2.5
NSS AMb AMB 11 52 03.4
comp=Z,668nm,1.7s,mb6.3
NSS eS S 12 01 38.5 -0.4
NSS AMS AMS 12 30 39.8
comp=Z,52μm,16.9s,MS6.9
NSS Namsos 75.79 334⇓iP P 11 51 56.4 -2.5
comp=Z,668nm,1.7s,mb6.3
NSS LR LR
comp=Z,52μm,16.9s,MS6.9
MAON Monte Argentar 75.83 311 P P 11 51 58.6 -1.0
HVD Gariep Dam 75.90 235⇓iP P 11 52 01.6 +1.5
HVD AMb AMB 12 22 03.5
comp=Z,60μm,18.6s
NB2 NORSAR Subarra 75.91 330 P P 11 51 59.1 -0.5
comp=Z,1μm,1.7s,mb6.5,baz=94,slow=5.6
NB2 NORSAR Subarra 75.91 330 P P 11 52 00.0 +0.4
NOA NORSAR Array B 75.91 330 P P 11 51 58.7 -0.9
comp=Z,188nm,1.0s,mb6.0,baz=92,slow=6.0,SNR=318
NOA PP PP 11 54 51.7 +1.8
comp=Z,14nm,0.9s,baz=114,slow=8.5,SNR=3.8
NOA PKKPbc PKKPbc 12 11 16.4 -1.9
comp=Z,3.2nm,1.0s,baz=284,slow=2.2,SNR=4.8
NOA LR LR 12 29 35.6
comp=Z,33μm,21.9s,MS6.6,baz=90,slow=39
NOA NORSAR Array B 75.91 330 P P 11 51 58.7 -0.9
NOA 11 54 51.7
NOA pmax pmax
comp=Z,188nm,1.0s
NOA pmax pmax
comp=Z,14nm,0.9s
NOA MLR MLR
comp=Z,33μm,21.9s
RETA Reutte 75.96 316 iP P 11 51 59.8 -0.4
comp=Z,783nm,1.2s,mb6.5,SNR=228
FETA Feichten 76.00 316 iP P 11 51 59.9 -0.5
comp=Z,500nm,1.1s,mb6.4,SNR=166
NAO01 NORSAR Array S 76.06 330 eP P 11 52 00.2 -0.3
comp=Z,178nm,0.9s,mb6.0
NAO01 LR LR
comp=Z,23μm,20.0s,MS6.5
MAGA Magasa 76.09 315 P P 11 52 01.7 +0.7
OSL Oslo 76.11 329 eP P 11 52 00.8 +0.1
OSL AMb AMB 11 52 06.1
comp=Z,838nm,1.7s,mb6.4
OSL Oslo 76.11 329 eP P 11 52 00.8 +0.1
comp=Z,838nm,1.7s,mb6.4
GRM Grahamstown 76.14 232⇓iP P 11 52 02.9 +1.4
GRM AMS AMS 12 23 49.0
comp=Z,32μm,18.2s,MS6.7
MABI Malga Bissina 76.17 315 P P 11 52 00.7 -0.7
CLZ Clausthal 76.17 321 eP P 11 52 01.5 +0.2
comp=Z,730nm,1.4s,mb6.4
CLZ ePP PP 11 54 50.5 -1.9
CLZ eS S 12 01 37.1 -6.5
BSEG Bad Segeberg 76.21 323 eP P 11 52 02.0 +0.5
comp=Z,978nm,1.3s,mb6.6
BSEG eS S 12 01 38.9 -5.0
BRMO Bormio 76.25 315 P P 11 51 59.9 -2.0
HSP Hornsund 76.28 347 eP P 11 52 02.3 +0.8
ERBM Eremo 76.29 313 P P 11 52 02.7 +0.6
VLC Villacollemand 76.32 313 eP P 11 52 01.0 -1.3
comp=Z,268nm,1.0s,mb6.1
VLC LR LR
comp=Z,19μm,22.0s,MS6.4
FUORN Ofenpass-Fuorn 76.32 315⇓iP P 11 52 02.4 +0.1
BERNI Berninapass 76.50 315⇓iP P 11 52 03.6 +0.3
DAVA Damuels 76.57 316⇓iP P 11 52 03.6 0.0
comp=Z,715nm,1.2s,mb6.5,SNR=130
DAVOX Davos/Dischmat 76.58 316⇓iP P 11 52 03.9 +0.1
DAVOX Davos/Dischmat 76.58 316 LR LR 12 31 30.2
comp=Z,32μm,21.6s,MS6.6,baz=75,slow=40
SOE Somerset East 76.64 232⇓iP P 11 52 06.1 +1.8
SOE AMS AMS 12 20 44.3
comp=Z,33μm,20.3s,MS6.6
SMY Shemya 76.65 38 eP P 11 52 03.5 -0.5
SMY pmax pmax
comp=Z,1μm,0.9s,mb6.9
SMY Shemya 76.65 38 eP P 11 52 03.5 -0.5
comp=Z,1μm,0.9s,mb6.9
KONO Kongsberg 76.67 329⇓iP P 11 52 03.2 -0.8
KONO AMb AMB 11 52 07.7
comp=Z,500nm,2.5s,mb6.0
KONO eS S 12 01 48.1 -0.7
KONO eSS SS 12 06 47.8 +3.6
KONO AMS AMS 12 29 43.5
comp=Z,50μm,20.8s,MS6.8
KONO Kongsberg 76.67 329⇓iP P 11 52 03.2 -0.8
KONO pmax pmax
comp=Z,500nm,2.5s,mb6.0
KONO MLR MLR
comp=Z,50μm,20.8s,MS6.8
KONO Kongsberg 76.67 329⇓iP P 11 52 03.2 -0.8
comp=Z,500nm,2.5s,mb6.0
KONO eP 11 52 03.7
KONO LR LR
comp=Z,50μm,20.8s,MS6.8
LIENZ Kamor/St.Gall 76.83 316⇓iP P 11 52 05.1 0.0
MUD Monsted U'grnd 76.87 326⇓iP P 11 52 05.9 +0.7
comp=Z,291nm,1.0s,mb6.2
MUD eS S 12 01 50.3 -0.7
MUD
comp=Z,27μm,20.0s
PLONS Plons/SG 76.92 316⇓iP P 11 52 05.6 0.0
TUE Stuetta 76.96 315 eP P 11 52 05.9 0.0
comp=Z,749nm,1.4s,mb6.4
TUE LR LR
comp=Z,36μm,21.0s,MS6.7
STU Stuttgart 76.98 318 eP P 11 52 05.9 -0.1
comp=Z,616nm,1.6s,mb6.3
STU ePP PP 11 54 57.0 -2.3
STU eS S 12 01 47.9 -4.7
STU Stuttgart 76.98 318 eP P 11 52 06.0 0.0
STU pmax pmax
comp=Z,426nm,1.2s,mb6.2
STU Stuttgart 76.98 318 eP P 11 52 06.0 0.0
comp=Z,426nm,1.2s,mb6.2
LLS Linth-Limmern 77.18 316⇓iP P 11 52 06.2 -0.9
MUGIO Muggio 77.20 315⇓iP P 11 52 07.0 -0.2
TOD Tromm 77.21 319 eP P 11 52 07.0 -0.2
WILA Wila 77.22 316⇓iP P 11 52 07.2 -0.2
STEIN Stein am Rhein 77.24 317⇓iP P 11 52 07.2 -0.2
SPAK Spaichingen-Ko 77.28 317 eP P 11 52 07.4 -0.2
VSL Villasalto 77.31 308 eP P 11 52 07.3 -0.7
comp=Z,334nm,1.3s,mb6.1
VSL LR LR
comp=Z,9μm,19.0s,MS6.1
OSPF L'Ospedale 77.31 310 eP P 11 52 07.4 -0.6
KBS Kingsbay 77.34 349⇓iP P 11 52 07.5 +0.1
KBS AMb AMB 11 52 11.2
comp=Z,499nm,1.0s,mb6.4
KBS eS S 12 01 57.6 +2.2
KBS AMS AMS 12 32 05.5
comp=Z,48μm,22.8s,MS6.8
KBS Kingsbay 77.34 349d iP P 11 52 07.5 +0.1
KBS pmax pmax
comp=Z,400nm,1.0s,mb6.3
KBS Kingsbay 77.34 349 eP P 11 52 07.7 +0.3
KBS LR LR
comp=Z,56μm,19.0s,MS6.9
MIR Mirnyy 77.34 180⇓iP P 11 52 08.0 +0.6
MIR e 11 55 02.0
MIR eS S 12 01 55.0 -0.5
MIR pmax pmax
comp=Z,280nm,1.2s,mb6.1
MIR pmax pmax
comp=Z,6μm,10.0s
MIR pmax pmax
comp=N,4μm,12.0s
MIR pmax pmax
comp=E,1μm,6.0s
MIR smax
comp=N,5μm,14.0s
MIR smax
comp=E,4μm,15.0s
TRULL Truellikon 77.37 317⇓iP P 11 52 07.8 -0.3
PGF Pioggiola 77.40 311 eP P 11 52 07.3 -1.2
comp=E,824nm,1.4s,mb6.2
PGF Pioggiola 77.40 311 eP P 11 52 07.3 -1.2
PGF pmax pmax
comp=Z,412nm,1.4s,mb6.2
PGF Pioggiola 77.40 311 eP P 11 52 07.3 -1.2
comp=Z,412nm,1.4s,mb6.2
TNS Taunus Mts 77.42 319 eP P 11 52 08.6 +0.2
comp=Z,703nm,1.4s,mb6.4
TNS ePP PP 11 55 01.7 -1.2
TNS eS S 12 01 53.5 -3.8
MUO Muotathal 77.43 316⇓iP P 11 52 08.1 -0.4
FUSIO Fusio 77.43 315⇓iP P 11 52 08.4 -0.2
FLACH Flaach 77.45 316⇓iP P 11 52 08.3 -0.3
ZUR Degenried 77.45 316⇓iP P 11 52 08.4 -0.2
SLE Schleitheim 77.49 317⇓iP P 11 52 08.8 0.0
BFO Black Forest 77.57 317 P P 11 52 09.3 0.0
comp=Z,1μm,1.2s,mb6.8,SNR=100
BFO Black Forest 77.57 317 eP P 11 52 08.9 -0.4
comp=Z,464nm,1.3s,mb6.2
BFO ePP PP 11 55 01.8 -2.4
BFO eS S 12 01 53.9 -5.1
BFO Black Forest 77.57 317 eP P 11 52 08.8 -0.5
BFO pmax pmax
comp=Z,458nm,1.3s,mb6.2
BFO MLR MLR
comp=Z,18μm,20.0s,MS6.4
BFO Black Forest 77.57 317 eP P 11 52 08.8 -0.5
comp=Z,458nm,1.3s,mb6.2
BFO LR LR
comp=Z,18μm,20.0s,MS6.4
BNALP Bannalp 77.58 316⇓iP P 11 52 09.5 +0.2
KEST Kesra 77.61 304 P P 11 52 10.1 +0.3
comp=Z,200nm,1.0s,mb6.0,baz=32,slow=0.8,SNR=236
KEST PKKPbc PKKPbc 12 11 12.4 -1.2
comp=Z,3.4nm,0.9s,baz=116,slow=0.8,SNR=3.5
KEST LR LR 12 30 42.2
comp=Z,11μm,18.1s,MS6.2,baz=216,slow=39
KEST Kesra 77.61 304 eP P 11 52 09.8 0.0
HLG Helgoland 77.64 323 eP P 11 52 10.0 +0.5
comp=Z,638nm,1.3s,mb6.4
HLG ePP PP 11 55 03.5 -1.1
HLG eS S 12 01 54.4 -5.1
MOL Molde 77.69 332⇓iP P 11 52 10.4 +0.8
MOL AMb AMB 11 52 13.7
comp=Z,403nm,1.2s,mb6.2
MOL eS S 12 01 59.0 -0.8
MOL eSS SS 12 07 01.9 +2.5
MOL AMS AMS 12 31 21.9
comp=Z,47μm,18.4s,MS6.8
MOL Molde 77.69 332⇓iP P 11 52 10.4 +0.8
comp=Z,403nm,1.2s,mb6.2
MOL LR LR
comp=Z,47μm,18.4s,MS6.8
KTD Kalmit 77.69 318 eP P 11 52 09.8 -0.1
SULZ Cheisacher 77.76 316⇓iP P 11 52 10.0 -0.3
HASLI Hasliberg/Brie 77.77 316⇓iP P 11 52 10.5 +0.1
QLNO Quiliano 77.77 313 P P 11 52 09.5 -1.0
PKA Prieska 77.78 236⇑iP P 11 52 11.1 +0.4
PKA AMS AMS 12 22 27.8
comp=Z,15μm,20.3s,MS6.3
IBBN Ibbenburen 77.78 321 eP P 11 52 10.6 +0.3
comp=Z,972nm,1.4s,mb6.5
IBBN epS 12 02 10.7
FELD Feldberg im Sc 77.81 317 eP P 11 52 10.4 -0.2
LANF Langenberg 77.89 318 eP P 11 52 11.3 +0.3
SNART Snartemo 77.91 328⇓iP P 11 52 11.2 +0.2
ABH Alteburg 78.01 319 eP P 11 52 11.8 +0.1
BALST Balsthal 78.05 316⇓iP P 11 52 11.8 -0.2
LIBD Limburg 78.07 317 eP P 11 52 12.1 +0.1
BUG Bochum--Univer 78.12 320 eP P 11 52 12.4 +0.2
comp=Z,734nm,1.5s,mb6.4
BUG ePP PP 11 55 08.0 -0.7
BUG eS S 12 01 59.9 -4.8
IMI Imperia 78.12 313 P P 11 52 12.3 -0.2
WIMIS Wimmis 78.14 316⇓iP P 11 52 12.5 0.0
LKBD Leukerbad 78.15 315⇓iP P 11 52 12.7 +0.1
BBS Basel-Blauen 78.17 316 eP P 11 52 12.4 -0.2
CDF Champ du Feu 78.27 317 eP P 11 52 12.2 -1.0
comp=Z,859nm,1.2s,mb6.2
CDF Champ du Feu 78.27 317 eP P 11 52 12.2 -1.0
CDF pmax pmax
comp=Z,430nm,1.2s,mb6.2
CDF Champ du Feu 78.27 317 eP P 11 52 12.2 -1.0
comp=Z,430nm,1.2s,mb6.2
BLS5 Blasjo 78.27 329⇓iP P 11 52 13.4 +0.4
BLS5 AMb AMB 11 52 18.7
comp=Z,193nm,1.6s,mb5.8
BLS5 Blasjo 78.27 329⇓iP P 11 52 13.4 +0.4
comp=Z,193nm,1.6s,mb5.8
CASY Casey 78.29 172 eP P 11 52 12.6 -0.1
CASY eS S 12 02 01.5 -4.3
CASY Casey 78.29 172 eP P 11 52 12.7 -0.1
comp=Z,258nm,1.0s,mb6.1
CASY LR LR
comp=Z,81μm,20.0s,MS7.0
DIX Grande Dixence 78.33 315⇓iP P 11 52 13.4 -0.1
ECH Echery 78.36 317 eP P 11 52 13.2 -0.5
ECH pmax pmax
comp=Z,179nm,1.1s,mb5.9
ECH MLR MLR
comp=Z,15μm,19.0s,MS6.3
ECH Echery 78.36 317 eP P 11 52 13.2 -0.5
comp=Z,178nm,1.1s,mb5.9
ECH LR LR
comp=Z,15μm,19.0s,MS6.3
SAOF Saorge 78.36 313 eP P 11 52 13.5 -0.3
BOURR Bourrignon 78.36 316⇓iP P 11 52 14.2 +0.5
SENIN Lac Senin/Sane 78.38 315⇓iP P 11 52 14.2 +0.4
WTSB Winterswijk 78.38 321⇓iP P 11 52 13.1 -0.6
comp=Z,644nm,3.2s
MOF Molkenrain 78.40 317 eP P 11 52 13.6 -0.3
WIT Witteveen 78.42 322 eP P 11 52 14.3 +0.4
comp=Z,2μm,0.9s,mb7.1
AUTN L'Aution 78.45 313 eP P 11 52 14.4 +0.1
SBF Sospel 78.46 313 eP P 11 52 13.3 -1.0
comp=Z,836nm,1.1s,mb6.3
SBF Sospel 78.46 313 eP P 11 52 13.3 -1.0
SBF pmax pmax
comp=Z,418nm,1.1s,mb6.3
SBF Sospel 78.46 313 eP P 11 52 13.3 -1.0
comp=Z,418nm,1.1s,mb6.3
MON Monaco 78.47 313 P P 11 52 16.0 +1.6
REVF Revere 78.52 313 eP P 11 52 14.2 -0.4
GRYON Gryon 78.52 315⇓iP P 11 52 14.8 +0.2
LUCF Luceram 78.52 313 eP P 11 52 14.7 +0.1
UPI Upington 78.58 238⇓iP P 11 52 16.5 +1.3
UPI AMS AMS 12 23 28.9
comp=Z,49μm,19.2s,MS6.8
TOUF Mont Tournerai 78.58 313 eP P 11 52 15.1 +0.1
TORNY Torny/Romont 78.59 316⇓iP P 11 52 15.1 +0.1
HINF Hinteralfeld 78.59 317 eP P 11 52 13.7 -1.2

comp=Z,435nm,1.2s,mb6.0
HINF Hinteralfeld 78.59 317 *eP* **P 11 52 13.7 -1.2**
HINF pmax pmax
comp=Z,217nm,1.2s,mb6.0
HINF Hinteralfeld 78.59 317 *eP* **P 11 52 13.7 -1.2**
comp=Z,217nm,1.2s,mb6.0
AIGLE Aigle 78.62 315 ⇓*iP* **P 11 52 15.2 0.0**
SALAN Lac Salanfe 78.62 315 ⇓*iP* **P 11 52 15.4 +0.2**
LOMF Lomont 78.64 316 *eP* **P 11 52 14.9 -0.3**
MVIF Mont Vial 78.66 313 *eP* **P 11 52 15.1 -0.3**
STAV Stavanger 78.68 328 *eP* **P 11 52 15.3 +0.1**
STAV AMb AMB 11 52 18.4
comp=Z,250nm,1.7s,mb5.9
STAV Stavanger 78.68 328 *eP* **P 11 52 15.3 +0.1**
comp=Z,250nm,1.7s,mb5.9
EMV Vieux Emosson 78.68 315 ⇓*iP* **P 11 52 15.9 +0.4**
OG22 Abries 78.74 314 *eP* **P 11 52 15.1 -0.7**
BER Bergen 78.80 330 ⇓*iP* **P 11 52 15.8 0.0**
BER AMb AMB 11 52 20.2
comp=Z,295nm,1.8s,mb5.9
BER *eS* S 12 02 12.2 +0.4
BER AMS AMS 12 30 29.5
comp=Z,35µm,22.7s,MS6.6
BER Bergen 78.80 330 ⇓*iP* **P 11 52 15.8 0.0**
BER pmax pmax
comp=Z,295nm,1.8s,mb5.9
BER MLR MLR
comp=Z,35µm,22.7s,MS6.6
BER Bergen 78.80 330 ⇓*iP* **P 11 52 15.8 0.0**
comp=Z,295nm,1.8s,mb5.9
BER LR LR
comp=Z,35µm,22.7s,MS6.6
OG01 Vacheresse 78.81 315 *eP* **P 11 52 16.5 +0.3**
LPG La Plagne 78.82 314 *eP* **P 11 52 16.0 -0.3**
comp=Z,1µm,1.2s,mb6.4
LPG La Plagne 78.82 314 *eP* **P 11 52 16.0 -0.3**
LPG pmax pmax
comp=Z,565nm,1.2s,mb6.4
LPG La Plagne 78.82 314 *eP* **P 11 52 16.0 -0.3**
comp=Z,565nm,1.2s,mb6.4
LPL La Plagne 78.84 314 *eP* **P 11 52 16.0 -0.3**
comp=Z,2µm,1.1s,mb6.6
LPL La Plagne 78.84 314 *eP* **P 11 52 16.0 -0.3**
LPL pmax pmax
comp=Z,921nm,1.1s,mb6.6
LPL La Plagne 78.84 314 *eP* **P 11 52 16.0 -0.3**
comp=Z,921nm,1.1s,mb6.6
SURF Saint Ours 78.86 313 *eP* **P 11 52 16.7 +0.2**
CALN Calern 78.86 313 *eP* **P 11 52 16.7 +0.2**
EGD Espegrend 78.86 330 *eP* **P 11 52 16.4 +0.3**
ASK Askoy 78.87 330 *eP* **P 11 52 15.8 -0.4**
MBDF Montbardon 78.87 314 *eP* **P 11 52 15.2 -1.3**
comp=Z,478nm,1.0s,mb6.1
MBDF Montbardon 78.87 314 *eP* **P 11 52 15.2 -1.3**
MBDF pmax pmax
comp=Z,239nm,1.0s,mb6.1
MBDF Montbardon 78.87 314 *eP* **P 11 52 15.2 -1.3**
comp=Z,239nm,1.0s,mb6.1
FOO Floro 78.89 331 ⇓*iP* **P 11 52 15.4 -0.9**
FOO AMb AMB 11 52 19.5
comp=Z,342nm,3.2s
FOO *eS* S 12 02 13.8 +1.1
FOO AMS AMS 12 30 19.2
comp=Z,33µm,19.0s,MS6.7
FOO Floro 78.89 331 ⇓*iP* **P 11 52 15.4 -0.9**
comp=Z,342nm,3.2s
FOO LR LR
comp=Z,33µm,19.0s,MS6.7
RSL Roselend 78.90 315 *eP* **P 11 52 16.6 -0.1**
KMY Karmoy 78.90 328 *eP* **P 11 52 16.6 +0.2**
KMY AMb AMB 11 52 21.9
comp=Z,297nm,1.5s,mb6.0
KMY Karmoy 78.90 328 *eP* **P 11 52 16.6 +0.2**
comp=Z,297nm,1.5s,mb6.0
BNI Bardonecchia 78.91 314 *eP* **P 11 52 15.6 -1.2**
BNI pmax pmax
comp=Z,542nm,1.1s,mb6.4
BNI MLR MLR
comp=Z,26µm,21.0s,MS6.5
BNI Bardonecchia 78.91 314 *eP* **P 11 52 15.6 -1.1**
comp=Z,542nm,1.1s,mb6.4
BNI LR LR
comp=Z,26µm,21.0s,MS6.5
BRANT Les Verrieres 78.91 316 ⇓*iP* **P 11 52 16.9 +0.2**
HAU Haudompre 78.92 317 *eP* **P 11 52 15.7 -1.0**
comp=Z,2µm,1.3s,mb6.5
HAU *e*MLR MLR
comp=Z,19µm,21.0s,MS6.1
HAU Haudompre 78.92 317 *eP* **P 11 52 15.7 -1.0**
HAU pmax pmax
comp=Z,788nm,1.3s,mb6.5
HAU MLR MLR
comp=Z,19µm,21.0s,MS6.4
HAU Haudompre 78.92 317 *eP* **P 11 52 15.7 -1.0**
comp=Z,788nm,1.3s,mb6.5
HAU LR LR
comp=Z,19µm,21.0s,MS6.4
WLF Walferdange 78.93 319 P **P 11 52 17.0 +0.2**
comp=Z,452nm,1.8s,mb6.1
WLF Walferdange 78.93 319 *eP* **P 11 52 17.4 +0.6**
comp=Z,1µm,1.6s,mb6.5
WLF *e*PP PP 11 55 14.0 -1.5
WLF *eS* S 12 02 08.8 -4.7
WLF Walferdange 78.93 319 *eP* **P 11 52 17.2 +0.4**
WLF LR LR
comp=Z,28µm,20.0s,MS6.6
MEM Membach 78.96 320 P **P 11 52 17.0 +0.1**
comp=Z,198nm,1.8s,mb5.7
HGN Heimansgroeve 79.00 320 ⇓*iP* **P 11 52 16.5 -0.6**
comp=Z,354nm,2.0s,mb5.9
HGN Heimansgroeve 79.00 320 *e*PP PP 11 55 28.4 +12
FRF La Foret Royal 79.05 312 *eP* **P 11 52 16.7 -0.9**
comp=Z,2µm,1.5s,mb6.5
FRF La Foret Royal 79.05 312 *eP* **P 11 52 16.7 -0.9**
FRF pmax pmax
comp=Z,843nm,1.5s,mb6.5
FRF La Foret Royal 79.05 312 *eP* **P 11 52 16.7 -0.9**
comp=Z,843nm,1.5s,mb6.5
TSUM Tsumeb 79.06 248 S S 12 02 16.2 +0.3
comp=Z,1.0nm,0.4s,baz=338,slow=5.4,SNR=2.1
TSUM PKKPbc PKKPbc 12 11 09.5 -0.8
comp=Z,6.3nm,1.1s,baz=188,slow=4.2,SNR=3.1
TSUM Tsumeb 79.06 248 *eP* **P 11 52 19.4 +1.4**
comp=Z,289nm,1.3s,mb6.0
TSUM LR LR
comp=Z,45µm,20.0s,MS6.8
ABSA Djebel Ababsia 79.07 305 P **P 11 52 18.2 +0.4**
GIMEL St. Georges / 79.08 315 ⇓*iP* **P 11 52 18.0 +0.3**
CMAH Djebel Manchou 79.08 305 P **P 11 52 18.0 +0.1**
BEBN Eben Emael 79.16 320 P **P 11 52 18.1 +0.1**
comp=Z,96nm,1.8s,mb5.4
LMR La Mourre 79.17 312 *eP* **P 11 52 17.3 -0.9**
comp=Z,972nm,1.5s,mb6.2
LMR La Mourre 79.17 312 *eP* **P 11 52 17.3 -0.9**
LMR pmax pmax
comp=Z,486nm,1.5s,mb6.2
LMR La Mourre 79.17 312 *eP* **P 11 52 17.3 -0.9**
comp=Z,486nm,1.5s,mb6.2
CABF La Chapelle 79.20 316 *eP* **P 11 52 17.9 -0.4**
comp=Z,2µm,1.3s,mb6.5
CABF La Chapelle 79.20 316 *eP* **P 11 52 17.9 -0.4**
CABF pmax pmax
comp=Z,797nm,1.3s,mb6.5
CABF La Chapelle 79.20 316 *eP* **P 11 52 17.9 -0.4**
comp=Z,797nm,1.3s,mb6.5
GDM Grand'Maison 79.29 314 *eP* **P 11 52 18.6 -0.3**
OG25 Le Caire 79.39 313 *eP* **P 11 52 19.2 -0.2**
BCLA Clavier 79.42 319 P **P 11 52 19.5 +0.1**
comp=Z,185nm,1.4s,mb5.8
ORIF Oris-en-Rattie 79.48 314 *eP* **P 11 52 19.5 -0.4**
comp=Z,426nm,1.0s,mb6.0
ORIF *e*MLR MLR
comp=Z,35µm,22.0s,MS6.4
ORIF Oris-en-Rattie 79.48 314 *eP* **P 11 52 19.5 -0.4**
ORIF pmax pmax
comp=Z,213nm,1.0s,mb6.0
ORIF Oris-en-Rattie 79.48 314 *eP* **P 11 52 19.5 -0.4**
comp=Z,213nm,1.0s,mb6.0
CAEH 'Ain El Ouahch 79.53 306 P **P 11 52 19.8 -0.5**
CKFL Kef-Lekhel 79.67 305 P **P 11 52 21.5 +0.4**
MEZF Maizieres J'vi 79.74 318 *eP* **P 11 52 20.5 -0.7**
comp=Z,2µm,1.5s,mb6.5,baz=91
MEZF Maizieres J'vi 79.74 318 *eP* **P 11 52 20.5 -0.7**
comp=Z,2µm,1.5s,mb6.8
GIVF Givet 79.75 319 *eP* **P 11 52 20.5 -0.8**
comp=Z,1µm,1.5s,mb6.3
GIVF Givet 79.75 319 *eP* **P 11 52 20.5 -0.8**
GIVF pmax pmax
comp=Z,537nm,1.5s,mb6.2
GIVF Givet 79.75 319 *eP* **P 11 52 20.5 -0.8**
comp=Z,537nm,1.5s,mb6.2
SMRF Simiane la Rot 79.79 313 *eP* **P 11 52 21.4 -0.2**
comp=Z,1µm,1.4s,mb6.3
SMRF Simiane la Rot 79.79 313 *eP* **P 11 52 21.4 -0.2**
comp=Z,1µm,1.4s,mb6.6
CASM Ain Smara 79.87 305 P **P 11 52 22.6 +0.4**
AMKA Amchitka 79.92 39 *eP* **P 11 52 21.1 -1.1**
comp=Z,265nm,1.0s,mb6.1
OCF Saint Nazaire 79.93 314 *eP* **P 11 52 22.7 +0.4**
OG26 St.-Nazaire-De 79.93 314 *eP* **P 11 52 22.7 +0.4**
CTEI Djebel Teioual 79.96 305 P **P 11 52 23.4 +0.7**
NOUC Port Laguerre 80.03 115 *eP* **P 11 52 22.8 -0.5**
SNF Seneffe 80.06 320 P **P 11 52 23.1 +0.1**
comp=Z,218nm,1.6s,mb5.8
BAIF Baives 80.15 319 *eP* **P 11 52 22.9 -0.5**
comp=Z,1µm,1.5s,mb6.3
BAIF Baives 80.15 319 *eP* **P 11 52 22.9 -0.5**
BAIF pmax pmax
comp=Z,661nm,1.5s,mb6.3
BAIF Baives 80.15 319 *eP* **P 11 52 22.9 -0.5**
comp=Z,661nm,1.5s,mb6.3
DZM Mont Dzumac 80.15 115 *eP* **P 11 52 24.5 +0.6**
comp=Z,960nm,1.1s,mb6.6
DZM *e*S S 12 02 24.3 -3.1
comp=Z,8µm,23.5s
DZM *e*SS SS 12 07 34.7 -4.0
comp=Z,34µm,30.4s
DZM *e*LR LR 12 17 19.0
comp=Z,44µm,23.1s
DZM Mont Dzumac 80.15 115 *eP* **P 11 52 23.9 0.0**
DZM Mont Dzumac 80.15 115 *eP* **P 11 52 24.5 +0.5**
comp=Z,381nm,1.0s,mb6.3
SUR Sutherland 80.27 234 *eP* **P 11 52 25.9 +1.6**
comp=Z,483nm,1.0s,mb6.4
SUR LR LR
comp=Z,63µm,21.0s,MS6.9
SUR Sutherland 80.27 234 P **P 11 52 26.5 +2.2**
comp=Z,3µm,0.8s,mb7.2,SNR=74
SUR Sutherland 80.27 234 ⇓*iP* **P 11 52 26.2 +1.9**
SUR AMS AMS 12 23 14.5
comp=Z,41µm,20.5s,MS6.8
DFRA Djebel Bou Aff 80.33 305 P **P 11 52 25.4 +0.7**
VIVF Saint-Julien-l 80.34 314 *eP* **P 11 52 23.9 -0.7**
comp=Z,1µm,1.2s,mb6.5
VIVF Saint-Julien-l 80.34 314 *eP* **P 11 52 23.9 -0.7**
VIVF pmax pmax
comp=Z,715nm,1.2s,mb6.5
VIVF Saint-Julien-l 80.34 314 *eP* **P 11 52 23.9 -0.7**
comp=Z,715nm,1.2s,mb6.5
SSB Saint Sauveur 80.39 314 *eP* **P 11 52 24.7 -0.1**
SSB Saint Sauveur 80.39 314 *eP* **P 11 52 24.8 0.0**
SSB pmax pmax
comp=Z,505nm,1.1s,mb6.4
SSB MLR MLR
comp=Z,12µm,20.0s,MS6.2
SSB Saint Sauveur 80.39 314 *eP* **P 11 52 24.8 -0.1**
comp=Z,505nm,1.1s,mb6.4
SSB LR LR
comp=Z,12µm,20.0s,MS6.2
LOR Lormes 80.66 316 *eP* **P 11 52 25.3 -0.9**
comp=Z,3µm,1.5s,mb6.6,baz=84
LOR *e*MLR MLR
comp=Z,23µm,22.5s,MS6.2
LOR Lormes 80.66 316 *eP* **P 11 52 25.3 -0.9**
LOR pmax pmax
comp=Z,1µm,1.5s,mb6.6
LOR MLR MLR
comp=Z,23µm,22.5s,MS6.5
LOR Lormes 80.66 316 *eP* **P 11 52 25.3 -0.9**
comp=Z,1µm,1.5s,mb6.6
LOR LR LR
comp=Z,23µm,22.5s,MS6.5
CKHR Kef el Ahmar 80.68 305 P **P 11 52 26.9 +0.3**
SMF Signal de Mont 80.74 316 *eP* **P 11 52 25.7 -0.9**
comp=Z,2µm,1.6s,mb6.5
SMF Signal de Mont 80.74 316 *eP* **P 11 52 25.7 -0.9**
SMF pmax pmax
comp=Z,1µm,1.6s,mb6.5
SMF Signal de Mont 80.74 316 *eP* **P 11 52 25.7 -0.9**
comp=Z,1µm,1.6s,mb6.5
SET Setif 80.75 305 P **P 11 52 27.0 +0.1**
SSF Saint Saulge 80.92 316 *eP* **P 11 52 26.8 -0.8**
comp=Z,1µm,1.4s,mb6.4
SSF Saint Saulge 80.92 316 *eP* **P 11 52 26.8 -0.8**
SSF pmax pmax
comp=Z,715nm,1.4s,mb6.4
SSF Saint Saulge 80.92 316 *eP* **P 11 52 26.8 -0.8**
comp=Z,715nm,1.4s,mb6.4
COLF Collangettes 80.96 315 *eP* **P 11 52 28.0 +0.1**
PLDF La Plantade 80.96 315 *eP* **P 11 52 29.1 +1.2**
LASF Ste Croix 81.01 313 *eP* **P 11 52 27.9 -0.2**
comp=Z,2µm,1.3s,mb6.6
AVF Avril sur Loir 81.06 316 *eP* **P 11 52 27.4 -0.9**
comp=Z,2µm,1.6s,mb6.5
AVF Avril sur Loir 81.06 316 *eP* **P 11 52 27.4 -0.9**
AVF pmax pmax
comp=Z,966nm,1.6s,mb6.5
AVF Avril sur Loir 81.06 316 *eP* **P 11 52 27.4 -0.9**
comp=Z,966nm,1.6s,mb6.5
MAW Mawson 81.13 191 *eP* **P 11 52 28.8 +0.6**
comp=Z,183nm,1.4s,mb5.8
MAW *e*PP PP 11 55 43.4 +10
MAW *e*S S 12 02 35.5 -0.3
MAW Mawson 81.13 191 P **P 11 52 28.9 +0.8**
comp=Z,213nm,1.1s,mb6.0,baz=24,slow=6.7,SNR=144
MAW S S 12 02 34.9 -0.9
comp=Z,2.9nm,1.0s,baz=266,slow=14,SNR=2.1
MAW PKKPbc PKKPbc 12 11 04.5 -3.5
comp=Z,17nm,1.0s,baz=218,slow=2.0,SNR=15
MAW PKPPKP 12 19 09.2
comp=Z,13nm,1.2s,baz=180,slow=5.5,SNR=4.4
MAW LR LR 12 24 35.0
comp=Z,31µm,19.2s,MS6.7,baz=22,slow=33
MAW Mawson 81.13 191 *eP* **P 11 52 28.4 +0.2**
MAW pmax pmax
comp=Z,106nm,1.3s
MAW MLR MLR
comp=Z,49µm,20.0s
MAW Mawson 81.13 191 *eP* **P 11 52 28.4 +0.3**
comp=Z,106nm,1.3s,mb5.6
MAW LR LR
comp=Z,49µm,20.0s,MS6.9
AGO Saint Agoulin 81.29 315 *eP* **P 11 52 30.8 +1.2**
LBL Lubilhac 81.31 314 *eP* **P 11 52 31.0 +1.3**
AKF Akfadou 81.36 306 P **P 11 52 31.1 +0.9**
MENF Mencas 81.41 320 *eP* **P 11 52 30.4 +0.3**
PYM Petit Puy Mans 81.41 315 *eP* **P 11 52 31.4 +1.1**
BGF Bois d'Agland 81.43 316 *eP* **P 11 52 29.8 -0.5**
comp=Z,2µm,1.4s,mb6.5
BGF Bois d'Agland 81.43 316 *eP* **P 11 52 29.8 -0.5**
BGF pmax pmax
comp=Z,868nm,1.4s,mb6.5
BGF Bois d'Agland 81.43 316 *eP* **P 11 52 29.8 -0.5**
comp=Z,868nm,1.4s,mb6.5
HYF Humbligny 81.48 316 *eP* **P 11 52 30.3 -0.3**
ATAF Djebel Tarf 81.69 305 P **P 11 52 35.0 +3.0**
FRNF Fournols 81.77 315 *eP* **P 11 52 32.8 +0.7**
VERF Verneugheol 81.78 315 *eP* **P 11 52 32.5 +0.3**
ELIM Elim 81.84 232 ⇓*iP* **P 11 52 34.2 +1.5**
TCF Toulx Ste Croi 81.90 316 *eP* **P 11 52 32.4 -0.4**
comp=Z,2µm,1.4s,mb6.4
TCF Toulx Ste Croi 81.90 316 *eP* **P 11 52 32.4 -0.4**
TCF pmax pmax
comp=Z,797nm,1.4s,mb6.5
TCF Toulx Ste Croi 81.90 316 *eP* **P 11 52 32.4 -0.4**
comp=Z,797nm,1.4s,mb6.5
EJON La Jonquera 81.91 312 P **P 11 52 33.3 +0.3**
comp=Z,107nm,0.9s,mb5.8
SJAF Saint Jean de 81.91 312 *eP* **P 11 52 32.3 -0.7**
TFO1 Folkestone 81.98 320 *eP* **P 11 52 32.5 -0.6**
TFO1 AMb AMB 11 52 37.5
comp=Z,731nm,1.3s,mb6.4
TFO1 AMS AMS 12 37 06.8
comp=Z,27µm,17.2s,MS6.7
TFO1 Folkestone 81.98 320 P **P 11 52 32.5 -0.6**
TFO1 AMb AMB 11 52 37.5
comp=Z,731nm,1.3s,mb6.4
TFO1 AMS AMS 12 37 06.8
comp=Z,27µm,17.2s
AKET Djebel Ketaf 81.99 305 P **P 11 52 34.8 +1.3**
LRW Lerwick 82.06 330 *eP* **P 11 52 33.5 +0.2**
LRW AMb AMB 11 52 36.8
comp=Z,426nm,2.6s,mb5.9
LRW AMS AMS 12 33 16.4
comp=Z,39µm,19.3s,MS6.8
LRW Lerwick 82.06 330 P **P 11 52 33.5 +0.2**
LRW AMb AMB 11 52 36.8
comp=Z,426nm,2.6s,mb5.9
LRW AMS AMS 12 33 16.4
comp=Z,39µm,19.3s
LRDF Laroque-de-Fa 82.10 312 *eP* **P 11 52 34.2 +0.2**
FILF Fillols 82.14 312 *eP* **P 11 52 34.5 +0.4**
KOMG Komaggas 82.16 238 ⇓*iP* **P 11 52 36.2 +1.8**
KOMG AMS AMS 12 27 10.3
comp=Z,45µm,18.0s,MS6.9
CAF Calviac 82.18 314 *eP* **P 11 52 34.0 -0.3**
comp=Z,1µm,1.4s,mb6.3
CAF Calviac 82.18 314 *eP* **P 11 52 34.0 -0.3**
CAF pmax pmax
comp=Z,612nm,1.4s,mb6.3
CAF Calviac 82.18 314 *eP* **P 11 52 34.0 -0.3**
comp=Z,612nm,1.4s,mb6.3
WAL1 Walls 82.26 330 *eP* **P 11 52 35.0 +0.6**
WAL1 Walls 82.26 330 P **P 11 52 35.0 +0.6**
MTLF Montolieu 82.28 313 *eP* **P 11 52 34.4 -0.5**
comp=Z,2µm,1.5s,mb6.5
MTLF Montolieu 82.28 313 *eP* **P 11 52 34.4 -0.5**
MTLF pmax pmax
comp=Z,1µm,1.5s,mb6.5
MTLF Montolieu 82.28 313 *eP* **P 11 52 34.4 -0.5**
comp=Z,1µm,1.5s,mb6.5
ETOS Mallorca 82.32 309 P **P 11 52 36.2 +1.0**
comp=Z,343nm,1.0s,mb6.2
ADJB Djebel Djouab 82.33 305 P **P 11 52 36.4 +1.1**
CFON Fontmartina 82.34 311 P **P 11 52 35.5 +0.3**
comp=Z,276nm,1.0s,mb6.1
CARF Carcanieres 82.45 312 *eP* **P 11 52 35.7 -0.1**
TAM Tamanrasset 82.46 292 *eP* **P 11 52 37.0 +0.8**
TAM pmax pmax
comp=Z,808nm,1.5s,mb6.4
TAM MLR MLR
comp=Z,33µm,21.0s,MS6.7
TAM Tamanrasset 82.46 292 *eP* **P 11 52 37.0 +0.8**
comp=Z,808nm,1.5s,mb6.4
TAM LR LR
comp=Z,33µm,21.0s,MS6.7
RJF Les Rejaudoux 82.51 315 *eP* **P 11 52 35.9 -0.1**
comp=Z,2µm,1.4s,mb6.7
RJF *e*MLR MLR
comp=Z,16µm,20.5s,MS6.1
RJF Les Rejaudoux 82.51 315 *eP* **P 11 52 35.9 -0.1**
RJF pmax pmax
comp=Z,1µm,1.4s,mb6.7
RJF MLR MLR
comp=Z,16µm,20.5s,MS6.4
RJF Les Rejaudoux 82.51 315 *eP* **P 11 52 35.9 -0.1**
comp=Z,1µm,1.4s,mb6.7
RJF LR LR
comp=Z,16µm,20.5s,MS6.4
VALF Valcebollere 82.56 312 *eP* **P 11 52 37.0 +0.7**
ABA Alger-Bouzarea 82.56 306 P **P 11 52 37.4 +0.9**
CLLI Llivia 82.58 312 P **P 11 52 37.3 +0.8**
EMHD Djebel Mahouad 82.71 305 P **P 11 52 38.4 +1.1**
JMIC Jan Mayen 83.04 341 *eP* **P 11 52 38.8 +0.6**
JMIC AMB AMB 11 52 43.0
comp=Z,622nm,1.6s,mb6.4
JMIC *e*SKS 12 02 58.3
JMIC AMS AMS 12 32 20.2
comp=Z,26µm,21.5s,MS6.6
JMIC Jan Mayen 83.04 341 LR LR 12 30 53.0
comp=Z,23µm,21.2s,MS6.5,baz=276,slow=37
GAMB Gambell 83.07 26 *eP* **P 11 52 38.7 +0.2**
comp=Z,460nm,1.2s,mb6.4
LFF La Frestale 83.11 314 *eP* **P 11 52 39.0 -0.1**
comp=Z,2µm,1.5s,mb6.6
LFF La Frestale 83.11 314 *eP* **P 11 52 39.0 -0.1**
LFF pmax pmax
comp=Z,868nm,1.5s,mb6.6
LFF La Frestale 83.11 314 *eP* **P 11 52 39.0 -0.1**
comp=Z,868nm,1.5s,mb6.6
SALF Salau 83.11 312 *eP* **P 11 52 38.5 -0.7**
LDF La Druitiere 83.14 318 *eP* **P 11 52 38.4 -0.8**
comp=Z,2µm,1.5s,mb6.6
LDF La Druitiere 83.14 318 *eP* **P 11 52 38.4 -0.8**
LDF pmax pmax
comp=Z,973nm,1.5s,mb6.6
LDF La Druitiere 83.14 318 *eP* **P 11 52 38.4 -0.8**
comp=Z,973nm,1.5s,mb6.6
CSOR Sort 83.21 312 P **P 11 52 40.2 +0.5**
comp=Z,360nm,0.9s,mb6.4
LDU Leeds Universi 83.22 323 *eP* **P 11 52 39.6 +0.1**
LDU Leeds Universi 83.22 323 P **P 11 52 39.6 +0.1**
HPK Haverah Park 83.23 324 AMS AMS 12 39 04.3
comp=Z,89µm,16.7s,MS7.2
CWF Charnwood Fore 83.24 322 *eP* **P 11 52 39.2 -0.4**
CWF AMb AMB 11 52 42.9
comp=Z,377nm,2.4s,mb6.0
CWF AMS AMS 12 35 38.2
comp=Z,23µm,17.5s,MS6.6
CWF Charnwood Fore 83.24 322 P **P 11 52 39.2 -0.4**
CWF AMb AMB 11 52 42.9
comp=Z,377nm,2.4s,mb6.0
CWF AMS AMS 12 35 38.2
comp=Z,23µm,17.5s
KBI1 Birley Grange 83.29 323 *eP* **P 11 52 39.0 -1.0**
KBI1 Birley Grange 83.29 323 P **P 11 52 39.0 -1.0**
FLN La Foliniere 83.35 318 *eP* **P 11 52 39.5 -0.8**
comp=Z,1µm,1.3s,mb6.5,baz=80
FLN *e*MLR MLR
comp=Z,18µm,17.8s,MS6.2
FLN La Foliniere 83.35 318 *eP* **P 11 52 39.5 -0.8**
FLN pmax pmax
comp=Z,715nm,1.3s,mb6.5
FLN MLR MLR
comp=Z,18µm,17.8s,MS6.5
FLN La Foliniere 83.35 318 *eP* **P 11 52 39.5 -0.8**
comp=Z,714nm,1.3s,mb6.5
FLN LR LR
comp=Z,18µm,17.8s,MS6.5
EPOB Poblet 83.40 311 P **P 11 52 41.0 +0.3**
comp=Z,296nm,0.8s,mb6.4
MELF Melles 83.41 312 *eP* **P 11 52 40.3 -0.4**
WOL Wolverton 83.42 321 *eP* **P 11 52 40.5 -0.1**
WOL AMb AMB 11 52 45.4
comp=Z,1µm,1.6s,mb6.7
WOL AMS AMS 12 36 31.4
comp=Z,29µm,17.2s,MS6.7
WOL Wolverton 83.42 321 P **P 11 52 40.5 -0.1**
WOL AMb AMB 11 52 45.4
comp=Z,1µm,1.6s,mb6.7
WOL AMS AMS 12 36 31.4
comp=Z,29µm,17.2s
MME1 Meikle Cairn 83.42 327 *eP* **P 11 52 39.7 -0.8**
MME1 Meikle Cairn 83.42 327 P **P 11 52 39.7 -0.8**
XAL Allendale 83.43 325 *eP* **P 11 52 40.3 -0.3**
XAL Allendale 83.43 325 P **P 11 52 40.3 -0.3**
LHO Holmfirth 83.44 323 *eP* **P 11 52 40.3 -0.4**
LHO Holmfirth 83.44 323 P **P 11 52 40.3 -0.4**
MFF Saint Martin d 83.47 316 *eP* **P 11 52 40.2 -0.8**
comp=Z,1µm,1.2s,mb6.5
MFF Saint Martin d 83.47 316 *eP* **P 11 52 40.2 -0.8**
MFF pmax pmax
comp=Z,559nm,1.2s,mb6.5
MFF Saint Martin d 83.47 316 *eP* **P 11 52 40.2 -0.8**
comp=Z,560nm,1.2s,mb6.5
ESY Stoneypath 83.47 326 *eP* **P 11 52 40.0 -0.8**
ESY Stoneypath 83.47 326 P **P 11 52 40.0 -0.8**
KWE Weaver Farm 83.52 323 *eP* **P 11 52 41.2 +0.1**
KWE Weaver Farm 83.52 323 P **P 11 52 41.2 +0.1**
MCD Coleburn Disti 83.53 327 *eP* **P 11 52 40.2 -0.8**
MCD Coleburn Disti 83.53 327 P **P 11 52 40.2 -0.8**
EIBI Ibiza 83.56 308 P **P 11 52 42.5 +0.9**
comp=Z,164nm,0.9s,mb6.2
ORE Reay 83.62 328 *eP* **P 11 52 41.9 +0.4**
ORE Reay 83.62 328 P **P 11 52 41.9 +0.4**
GRR Gorron 83.66 318 *eP* **P 11 52 41.1 -0.8**
comp=Z,1µm,1.6s,mb6.5
GRR Gorron 83.66 318 *eP* **P 11 52 41.1 -0.8**
GRR pmax pmax
comp=Z,623nm,1.6s,mb6.5
GRR Gorron 83.66 318 *eP* **P 11 52 41.1 -0.8**
comp=Z,623nm,1.6s,mb6.5
EPF Esparros 83.69 312 *eP* **P 11 52 41.0 -1.2**
comp=Z,603nm,1.5s,mb6.2
EPF Esparros 83.69 312 *eP* **P 11 52 41.0 -1.2**
EPF pmax pmax
comp=Z,301nm,1.5s,mb6.2
EPF Esparros 83.69 312 *eP* **P 11 52 41.0 -1.2**

comp=Z,301nm,1.5s,mb6.2
RESF Ens 83.72 312 *e*P **P 11 52 42.9 +0.6**
STNC Stoke 83.72 323 *e*P **P 11 52 41.8 -0.3**
STNC Stoke 83.72 323 P **P 11 52 41.8 -0.3**
EBL Broad Law 83.74 326 *e*P **P 11 52 42.0 -0.1**
EBL Broad Law 83.74 326 P **P 11 52 42.0 -0.1**
EDI Edinburgh 83.79 326 *e*P **P 11 52 42.0 -0.4**
EDI AMb AMB 11 52 47.2
comp=Z,524nm,1.7s,mb6.4
EDI AMS AMS 12 39 41.7
comp=Z,33µm,16.5s,MS6.8
EDI Edinburgh 83.79 326 P **P 11 52 42.0 -0.4**
EDI AMb AMB 11 52 47.2
comp=Z,524nm,1.7s,mb6.4
EDI AMS AMS 12 39 41.7
comp=Z,33µm,16.5s
ATKA Atka Island 83.82 38 *e*P **P 11 52 40.4 -2.3**
EBNR Beni Rached 83.84 306 P **P 11 52 44.5 +1.4**
LABF Labassere 83.88 313 *e*P **P 11 52 42.8 -0.3**
EKA Eskdalemuir Ar 83.88 325 PKKPbc PKKPbc 12 10 58.0 -2.3
comp=Z,3.7nm,0.6s,baz=260,slow=2.3,SNR=14
EBIE Bielsa 83.88 312 P **P 11 52 43.9 +0.7**
comp=Z,117nm,0.9s,mb6.0
ECK Cauldkaine Hil 83.89 325 *e*P **P 11 52 42.7 -0.2**
ECK Cauldkaine Hil 83.89 325 P **P 11 52 42.7 -0.2**
EBH Black Hill 83.91 326 *e*P **P 11 52 42.9 -0.1**
EBH Black Hill 83.91 326 P **P 11 52 42.9 -0.1**
ESK Eskdalemuir 83.91 325 *e*P **P 11 52 42.9 -0.1**
ESK AMb AMB 11 52 46.7
comp=Z,464nm,2.3s,mb6.2
ESK AMS AMS 12 38 25.1
comp=Z,30µm,16.6s,MS6.8
ESK Eskdalemuir 83.91 325 P **P 11 52 42.9 -0.1**
ESK AMb AMB 11 52 46.7
comp=Z,464nm,2.3s,mb6.2
ESK AMS AMS 12 38 25.1
comp=Z,30µm,16.6s
ESK Eskdalemuir 83.91 325 *e*P **P 11 52 43.3 +0.3**
ESK pmax pmax
comp=Z,776nm,1.6s,mb6.6
ESK MLR MLR
comp=Z,28µm,21.0s,MS6.6
ESK Eskdalemuir 83.91 325 *e*P **P 11 52 43.3 +0.3**
comp=Z,776nm,1.6s,mb6.6
ESK LR LR
comp=Z,28µm,21.0s,MS6.6
VIEF Viey 83.94 312 *e*P **P 11 52 43.9 +0.4**
EAU Auchinoon 83.95 326 *e*P **P 11 52 43.1 -0.1**
EAU Auchinoon 83.95 326 P **P 11 52 43.1 -0.1**
MVH1 Achvaich 83.96 328 *e*P **P 11 52 42.6 -0.6**
MVH1 Achvaich 83.96 328 P **P 11 52 42.6 -0.6**
DAG Danmarks Havn 83.96 347⇑ *i*P **P 11 52 42.7 -0.2**
comp=Z,727nm,1.5s,mb6.6
DAG
comp=Z,57µm,21.0s
ECHA Ech Chlef 83.99 306 P **P 11 52 44.8 +0.9**
ERTA Horta de San J 84.02 310 P **P 11 52 44.4 +0.5**
comp=Z,197nm,0.8s,mb6.3
MDO Dochfour 84.14 327 *e*P **P 11 52 43.8 -0.4**
MDO Dochfour 84.14 327 P **P 11 52 43.8 -0.4**
ETRT Tiaret 84.16 305 P **P 11 52 46.0 +1.2**
REYF Montagne du Re 84.21 313 *e*P **P 11 52 44.7 -0.1**
EANR 'Ain N'Sour 84.23 305 P **P 11 52 46.4 +1.3**
TNA Tin City 84.28 24 *e*P **P 11 52 45.1 +0.4**
comp=Z,334nm,1.2s,mb6.3
HGH Gray Hill 84.34 321 *e*P **P 11 52 44.9 -0.4**
HGH Gray Hill 84.34 321 P **P 11 52 44.9 -0.4**
ETSF Etsaut 84.36 312 *e*P **P 11 52 45.5 -0.1**
comp=Z,619nm,1.1s,mb6.4
ETSF Etsaut 84.36 312 *e*P **P 11 52 45.5 -0.1**
ETSF pmax pmax
comp=Z,309nm,1.1s,mb6.3
ETSF Etsaut 84.36 312 *e*P **P 11 52 45.5 -0.1**
comp=Z,309nm,1.1s,mb6.3
EAB Aberfoyle 84.38 326 *e*P **P 11 52 45.2 -0.1**
EAB Aberfoyle 84.38 326 P **P 11 52 45.2 -0.1**
JSA Saint Aubin 84.38 319 *e*P **P 11 52 45.3 -0.2**
JSA AMb AMB 11 52 48.5
comp=Z,440nm,2.8s,mb6.1
JSA AMS AMS 12 38 25.2
comp=Z,23µm,17.5s,MS6.6
JSA Saint Aubin 84.38 319 P **P 11 52 45.3 -0.2**
JSA AMb AMB 11 52 48.5
comp=Z,440nm,2.8s,mb6.1
JSA AMS AMS 12 38 25.2
comp=Z,23µm,17.5s
RSC Scourie 84.39 328 *e*P **P 11 52 45.7 +0.3**
RSC Scourie 84.39 328 P **P 11 52 45.7 +0.3**
GCD Castle Douglas 84.41 325 *e*P **P 11 52 45.5 -0.1**
GCD Castle Douglas 84.41 325 P **P 11 52 45.5 -0.1**
PCA1 Carrot 84.42 326 *e*P **P 11 52 45.4 -0.2**
PCA1 Carrot 84.42 326 P **P 11 52 45.4 -0.2**
SOFL Sornfelli, Far 84.47 332 AMS AMS 12 32 15.2
comp=Z,42µm,21.8s,MS6.8
ESAC San Caprasio 84.49 311 P **P 11 52 46.9 +0.6**
comp=Z,413nm,0.9s,mb6.6
PGBU Glenifferbraes 84.53 326 *e*P **P 11 52 45.3 -0.9**
PGBU AMb AMB 11 52 50.0
comp=Z,708nm,2.7s,mb6.3
PGBU AMS AMS 12 34 40.6
comp=Z,18µm,19.7s,MS6.5
PGBU Glenifferbraes 84.53 326 P **P 11 52 45.3 -0.9**
PGBU AMb AMB 11 52 50.0
comp=Z,708nm,2.7s,mb6.3
PGBU AMS AMS 12 34 40.6
comp=Z,18µm,19.7s
HTR Trewern Hill 84.54 322 *e*P **P 11 52 45.8 -0.5**
HTR Trewern Hill 84.54 322 P **P 11 52 45.8 -0.5**
ORDF Ordiarp 84.58 313 *e*P **P 11 52 45.9 -0.8**
KAC Achnashellach 84.63 327 *e*P **P 11 52 46.7 0.0**
KAC Achnashellach 84.63 327 P **P 11 52 46.7 0.0**
EMOS Mosqueruela 84.72 310 P **P 11 52 48.9 +1.4**
comp=Z,549nm,1.0s,mb6.6
KSB Sheil Bridge 84.75 327 *e*P **P 11 52 47.5 +0.2**
KSB Sheil Bridge 84.75 327 P **P 11 52 47.5 +0.2**
SJPF Ste Jean 84.80 313 *e*P **P 11 52 47.7 -0.1**
comp=Z,646nm,1.2s,mb6.3
SJPF Ste Jean 84.80 313 *e*P **P 11 52 47.7 -0.1**
SJPF pmax pmax
comp=Z,323nm,1.2s,mb6.3
SJPF Ste Jean 84.80 313 *e*P **P 11 52 47.7 -0.1**
comp=Z,323nm,1.2s,mb6.3
OSSF Osses 84.80 313 *e*P **P 11 52 47.6 -0.2**
EBEN Beniarda 84.82 308 P **P 11 52 48.0 0.0**
comp=Z,83nm,0.9s,mb5.9
RRR Rubha Reidh 84.82 328 *e*P **P 11 52 47.9 +0.4**
RRR Rubha Reidh 84.82 328 P **P 11 52 47.9 +0.4**
GIM North Isle of 84.82 324 *e*P **P 11 52 47.4 -0.3**
GIM North Isle of 84.82 324 P **P 11 52 47.4 -0.3**
GAL1 Galloway 84.84 325 *e*P **P 11 52 47.8 0.0**
GAL1 AMb AMB 11 52 51.5
comp=Z,521nm,2.6s,mb6.2
GAL1 AMS AMS 12 39 08.0
comp=Z,27µm,16.4s,MS6.7
GAL1 Galloway 84.84 325 P **P 11 52 47.8 0.0**
GAL1 AMb AMB 11 52 51.5
comp=Z,521nm,2.6s,mb6.2
GAL1 AMS AMS 12 39 08.0
comp=Z,27µm,16.4s
KPL Plockton 84.85 327 *e*P **P 11 52 47.9 +0.2**
KPL AMb AMB 11 52 51.4
comp=Z,585nm,2.9s,mb6.2
KPL AMS AMS 12 35 55.9
comp=Z,32µm,19.3s,MS6.7
KPL Plockton 84.85 327 P **P 11 52 47.9 +0.2**
KPL AMb AMB 11 52 51.4
comp=Z,585nm,2.9s,mb6.2
KPL AMS AMS 12 35 55.9
comp=Z,32µm,19.3s
EALK Alkurruntz 84.99 313 P **P 11 52 49.1 +0.4**
comp=Z,241nm,1.0s,mb6.3
DRV Dumont d'Urvil 85.01 163 P **P 11 52 51.0 +2.8**
DRV S S 12 03 12.0 -3.2
DRV R 12 21 00.0
ELIZ Elizondo 85.01 313 P **P 11 52 48.7 -0.2**
ELIZ pmax pmax
comp=Z,155nm,1.1s,mb6.0
ELIZ Elizondo 85.01 313 P **P 11 52 48.7 -0.2**
comp=Z,154nm,1.1s,mb6.0
KAR1 Arisaig 85.03 327 *e*P **P 11 52 49.1 +0.4**
KAR1 Arisaig 85.03 327 P **P 11 52 49.1 +0.4**
ECHE Chera 85.23 309 P **P 11 52 51.3 +1.2**
ECHE pmax pmax
comp=Z,147nm,0.8s,mb6.2
ECHE Chera 85.23 309 P **P 11 52 51.3 +1.2**
comp=Z,146nm,0.8s,mb6.2
ROSF Rostrenen 85.25 318 *e*P **P 11 52 49.3 -0.7**
comp=Z,1µm,1.5s,mb6.5
ROSF Rostrenen 85.25 318 *e*P **P 11 52 49.3 -0.7**
ROSF pmax pmax
comp=Z,599nm,1.5s,mb6.5
ROSF Rostrenen 85.25 318 *e*P **P 11 52 49.3 -0.7**
comp=Z,599nm,1.5s,mb6.5
QUIF Quistinic 85.26 318 *e*P **P 11 52 48.9 -1.1**
comp=Z,934nm,1.5s,mb6.4
QUIF Quistinic 85.26 318 *e*P **P 11 52 48.9 -1.1**
QUIF pmax pmax
comp=Z,467nm,1.5s,mb6.4
QUIF Quistinic 85.26 318 *e*P **P 11 52 48.9 -1.1**
comp=Z,467nm,1.5s,mb6.4
DYA Yadsworthy 85.27 320 *e*P **P 11 52 49.7 -0.3**
DYA AMb AMB 11 52 56.1
comp=Z,606nm,1.3s,mb6.6
DYA AMS AMS 12 37 52.5
comp=Z,30µm,17.3s,MS6.7
DYA Yadsworthy 85.27 320 P **P 11 52 49.7 -0.3**
DYA AMb AMB 11 52 56.1
comp=Z,606nm,1.3s,mb6.6
DYA AMS AMS 12 37 52.5
comp=Z,30µm,17.3s
RRH Rhenigidale 85.27 328 *e*P **P 11 52 50.4 +0.6**
RRH Rhenigidale 85.27 328 P **P 11 52 50.4 +0.6**
KSK Scoval 85.38 328 *e*P **P 11 52 51.0 +0.6**
KSK Scoval 85.38 328 P **P 11 52 51.0 +0.6**
HTL Hartland 85.50 321 *e*P **P 11 52 50.2 -1.0**
HTL AMb AMB 11 52 56.2
comp=Z,648nm,1.4s,mb6.6
HTL AMS AMS 12 37 52.6
comp=Z,26µm,19.1s,MS6.7
HTL Hartland 85.50 321 P **P 11 52 50.2 -1.0**
HTL AMb AMB 11 52 56.2
comp=Z,648nm,1.4s,mb6.6
HTL AMS AMS 12 37 52.6
comp=Z,26µm,19.1s
MIDW Midway 85.57 62 PFAKE 11 53 00.0 +8.0
MIDW LR LR
comp=Z,9µm,21.0s,MS6.1
CART Cartagena 85.62 307 *e*P **P 11 52 51.9 -0.2**
comp=Z,1µm,1.5s,mb6.9
GMM Mts of Mourne 85.68 324 *e*P **P 11 52 52.0 0.0**
GMM Mts of Mourne 85.68 324 P **P 11 52 52.0 0.0**
BST Brest 85.78 318 *e*P **P 11 52 52.6 0.0**
ECRI Cripan 85.82 312 P **P 11 52 53.4 +0.5**
ECRI pmax pmax
comp=Z,88nm,0.9s,mb6.0
ECRI Cripan 85.82 312 P **P 11 52 53.4 +0.5**
comp=Z,88nm,0.9s,mb6.0
ETOR Torete 85.83 311 P **P 11 52 53.5 +0.5**
ETOR pmax pmax
comp=Z,69nm,1.2s,mb5.8
ETOR Torete 85.83 311 P **P 11 52 53.5 +0.5**
comp=Z,68nm,1.2s,mb5.8
ETOB Tobarra 85.85 308 P **P 11 52 53.9 +0.8**
comp=Z,88nm,0.9s,mb6.0
ALE Alert 85.88 357 P **P 11 52 52.9 +0.4**
comp=Z,764nm,1.0s,mb6.9,SNR=44
MCQ Macquarie Isla 86.05 147 *e*P **P 11 52 54.2 +0.5**
MCQ *e* 11 53 06.6
MCQ *e*S S 12 03 27.3 +1.3
MCQ Macquarie Isla 86.05 147 *e*P **P 11 52 54.6 +1.0**
comp=Z,69µm,1.1s
CCA1 Carnmenellis 86.13 320 *e*P **P 11 52 53.8 -0.5**
CCA1 AMb AMB 11 52 57.6
comp=Z,319nm,2.7s,mb6.1
CCA1 AMS AMS 12 38 27.4
comp=Z,30µm,17.0s,MS6.8
CCA1 Carnmenellis 86.13 320 P **P 11 52 53.8 -0.5**
CCA1 AMb AMB 11 52 57.6
comp=Z,319nm,2.7s,mb6.1
CCA1 AMS AMS 12 38 27.4
comp=Z,30µm,17.0s
DSB Dublin 86.15 323 *e*P **P 11 52 55.1 +0.8**
comp=Z,206nm,1.1s,mb6.3
DMUB Kingscourt 86.31 324 *e*P **P 11 52 56.0 +0.9**
ELAN Lanestosa 86.37 313 P **P 11 52 56.1 +0.5**
comp=Z,135nm,0.9s,mb6.2
EVIA Vianos 86.58 309 P **P 11 52 57.6 +0.8**
EVIA pmax pmax
comp=Z,175nm,1.0s,mb6.2
EVIA Vianos 86.58 309 P **P 11 52 57.6 +0.8**
comp=Z,175nm,1.0s,mb6.2
ENIJ Nijar 86.68 307 P **P 11 52 57.7 +0.4**
ENIJ pmax pmax
comp=Z,102nm,1.0s,mb6.0
ENIJ Nijar 86.68 307 P **P 11 52 57.7 +0.5**
comp=Z,102nm,1.0s,mb6.0
EHUE Huescar 86.81 308 P **P 11 52 57.8 -0.1**
EHUE pmax pmax
comp=Z,189nm,1.2s,mb6.2
EHUE Huescar 86.81 308 P **P 11 52 57.8 -0.1**
comp=Z,189nm,1.2s,mb6.2
EQES Quesada 87.19 308 P **P 11 52 59.9 +0.2**
comp=Z,55nm,0.9s,mb5.8
EBER Berja 87.23 307 P **P 11 53 00.5 +0.5**
comp=Z,94nm,0.8s,mb6.1
SCO Scoresbysund 87.40 342⇓ *i*P **P 11 53 01.4 +1.3**
comp=Z,95nm,1.1s,mb5.9
SCO *i* 11 56 21.3
SCO
comp=Z,36µm,19.0s
ESDC Sonseca Array 87.49 310 P **P 11 53 01.4 +0.2**
comp=Z,98nm,1.0s,mb6.0,baz=60,slow=4.6,SNR=130
ESDC PKKPbc PKKPbc 12 10 49.8 -1.4
comp=Z,2.9nm,0.7s,baz=292,slow=2.3,SNR=6.6
ESDC PKPPKP 12 18 56.2
comp=Z,0.2nm,0.3s,baz=270,slow=3.0,SNR=5.1
ESDC LR LR 12 38 49.3
comp=Z,13µm,19.4s,MS6.4,baz=85,slow=40
ESDC Sonseca Array 87.49 310 P **P 11 53 01.4 +0.2**
comp=Z,77nm,0.9s,mb5.9
ESLA Sonseca Array 87.49 310 *e*P **P 11 53 01.4 +0.3**
comp=Z,46nm,1.1s,mb5.6
ESLA LR LR
comp=Z,96µm,20.0s,MS7.2
EALB Alboran 87.53 306 P **P 11 53 01.3 -0.2**
comp=Z,120nm,1.1s,mb6.0
EARI Arriondas 87.62 314 P **P 11 53 02.2 +0.5**
comp=Z,161nm,1.0s,mb6.2
EBAN Banos Encina 87.67 308 P **P 11 53 02.4 +0.3**
EBAN pmax pmax
comp=Z,103nm,0.9s,mb6.1
EBAN Banos Encina 87.67 308 P **P 11 53 02.4 +0.3**
comp=Z,103nm,0.9s,mb6.1
ECOG Cogollos-Vega 87.68 307 P **P 11 53 01.9 -0.2**
ECOG pmax pmax
comp=Z,91nm,1.0s,mb6.0
ECOG Cogollos-Vega 87.68 307 P **P 11 53 01.9 -0.2**
comp=Z,91nm,1.0s,mb6.0
TORD Torodi Ar. Bea 87.69 283 P **P 11 53 03.1 +0.6**
comp=Z,109nm,1.0s,mb6.0,baz=78,slow=4.2
SYO Syowa Base 87.72 197⇑ *i*P **P 11 53 01.0 -0.5**
SYO Syowa Base 87.72 197⇓ *i*PcP PcP 11 53 04.0 +0.7
EGUA Guajares 87.77 307 P **P 11 53 02.5 -0.1**
EGUA pmax pmax
comp=Z,988nm,0.6s,mb7.2
EGUA Guajares 87.77 307 P **P 11 53 02.5 -0.1**
comp=Z,988nm,0.6s,mb7.2
PAB San Pablo 87.80 310 *e*P **P 11 53 02.9 +0.2**
PAB pmax pmax
comp=Z,136nm,1.0s,mb6.1
PAB MLR MLR
comp=Z,14µm,19.0s,MS6.4
PAB San Pablo 87.80 310 *e*P **P 11 53 02.9 +0.2**
comp=Z,136nm,1.0s,mb6.1
PAB LR LR
comp=Z,14µm,19.0s,MS6.4
ERON Agron 87.92 307 P **P 11 53 02.9 -0.4**
comp=Z,67nm,0.8s,mb5.9
UNV Unalaska Valle 87.99 35 *e*P **P 11 53 01.7 -1.5**
comp=Z,185nm,1.1s,mb6.2
ELOJ Sierra Loja 88.17 307 P **P 11 53 04.2 -0.3**
comp=Z,23nm,0.8s,mb5.5
ELUQ Luque 88.17 308 P **P 11 53 03.5 -0.9**
ELUQ pmax pmax
comp=Z,58nm,0.8s,mb5.9
ELUQ Luque 88.17 308 P **P 11 53 03.5 -1.0**
comp=Z,58nm,0.8s,mb5.9
EADA Adamuz 88.28 308 P **P 11 53 04.7 -0.2**
comp=Z,207nm,1.0s,mb6.3
AKUT Akutan 88.32 35 *e*P **P 11 53 03.8 -1.0**
comp=Z,434nm,0.8s,mb6.7
VAL Valentia 88.77 323 *e*P **P 11 52 53.1 -14**
EMIJ Mijas 88.78 307 P **P 11 53 06.3 -1.0**
comp=Z,63nm,0.8s,mb6.0
EPLA Plasencia 88.99 311 P **P 11 53 09.1 +0.8**
EPLA pmax pmax
comp=Z,93nm,1.1s,mb6.0
EPLA Plasencia 88.99 311 P **P 11 53 09.1 +0.9**
comp=Z,93nm,1.1s,mb6.0
EPON Pontenova 88.99 314 P **P 11 53 07.7 -0.5**
comp=Z,655nm,2.5s,mb6.5
ECAL Calabor 89.03 312 P **P 11 53 08.8 +0.4**
comp=Z,99nm,1.1s,mb6.1
FUNA Funafuti 89.03 99 PFAKE 11 53 20.0 +11
FUNA LR LR
comp=Z,30µm,20.0s,MS6.7
PBRG Braganca 89.07 312 *i*P **P 11 53 08.8 +0.2**
comp=Z,370nm,1.8s,mb6.4
ERUA La Rua 89.21 313 P **P 11 53 08.9 -0.4**
ERUA pmax pmax
comp=Z,87nm,1.2s,mb6.0
ERUA La Rua 89.21 313 P **P 11 53 08.9 -0.4**
comp=Z,87nm,1.2s,mb6.0
EJIF Jimena Fronter 89.35 307 P **P 11 53 09.3 -0.7**
EJIF pmax pmax
comp=Z,311nm,1.2s,mb6.5
EJIF Jimena Fronter 89.35 307 P **P 11 53 09.3 -0.7**
comp=Z,311nm,1.2s,mb6.5
FALS False Pass 89.42 34 *e*P **P 11 53 08.8 -1.2**
comp=Z,227nm,1.0s,mb6.5
MVO Moncorvo 89.43 312 P **P 11 53 11.2 +0.8**
MVO Moncorvo 89.43 312 *i*P **P 11 53 11.2 +0.9**
comp=Z,471nm,1.6s,mb6.6
MVO Moncorvo 89.43 312 *e*PP PP 11 56 26.6 -15
MVO *e*S S 12 03 58.6 -0.5
MVO *e*SS SS 12 10 11.3 +17
MVO Moncorvo 89.43 312 *e*LR LR 12 31 56.9
comp=Z,19µm,18.0s
ESPR Espera 89.56 307 P **P 11 53 11.1 +0.1**
comp=Z,126nm,0.9s,mb6.2
BORG Borgarnes 89.69 337 P **P 11 53 14.9 +3.9**
comp=Z,2µm,1.1s,mb7.4,SNR=26
BORG Borgarnes 89.69 337 LR LR 12 34 56.2
comp=Z,31µm,20.7s,MS6.7,baz=70,slow=37
BORG Borgarnes 89.69 337 *e*P **P 11 53 11.3 +0.3**
BORG pmax pmax
comp=Z,517nm,1.2s
BORG MLR MLR
comp=Z,33µm,21.0s
BORG Borgarnes 89.69 337 *e*P **P 11 53 11.3 +0.3**
comp=Z,517nm,1.2s,mb6.7
BORG LR LR
comp=Z,33µm,21.0s,MS6.7
MSVF Nonsavu 89.74 108 P **P 11 53 13.0 +0.8**
comp=Z,980nm,0.9s,mb7.1,SNR=23
MSVF Nonsavu 89.74 108 *e*P **P 11 53 13.5 +1.3**
comp=Z,170nm,0.9s,mb6.4
MSVF LR LR
comp=Z,15µm,22.0s,MS6.4
MSVF Nonsavu 89.74 108 P **P 11 53 13.0 +0.8**
comp=Z,21µm,0.9s,SNR=23
RPZ Rata Peaks 89.84 135 P **P 11 53 12.1 +0.1**
comp=Z,246nm,1.1s,mb6.5,baz=201,slow=0.8,SNR=15
RPZ LR LR 12 33 40.5
comp=Z,50µm,21.0s,MS6.9,baz=188,slow=36
RPZ Rata Peaks 89.84 135 *e*P **P 11 53 12.5 +0.4**
comp=Z,484nm,1.3s,mb6.7
PVRL Vila Real 89.91 312 *i*P **P 11 53 13.3 +0.8**
comp=Z,490nm,1.8s,mb6.5
SFS San Fernando 89.92 307 *e*P **P 11 53 10.8 -1.9**
comp=Z,2µm,1.1s,mb7.2
SFS *e*P 11 53 12.7
SFS LR LR
comp=Z,31µm,19.0s,MS6.8
EMIN Mina Concepcio 89.98 308 P **P 11 53 13.3 +0.3**
comp=Z,192nm,1.0s,mb6.4
MTE Manteigas 90.00 311 *e*P **P 11 53 13.5 +0.5**
comp=Z,534nm,1.4s,mb6.7
MTE LR LR
comp=Z,12µm,21.0s,MS6.3
MTE Manteigas 90.00 311 *i*P **P 11 53 14.2 +1.2**
comp=Z,738nm,1.7s,mb6.7
MTE Manteigas 90.00 311 *e*PP PP 11 56 30.8 -15
MTE *e*S S 12 04 07.8 +3.4
MTE *e*SS SS 12 10 09.9 +7.5
MTE Manteigas 90.00 311 *e*LR LR 12 32 56.2
comp=Z,12µm,18.0s
EBAD Badajoz 90.00 309 P **P 11 53 13.6 +0.5**
comp=Z,117nm,0.9s,mb6.2
ELOB Lobios 90.01 313 P **P 11 53 13.8 +0.8**
comp=Z,120nm,0.9s,mb6.2
PCAB Cabril 90.02 312 *i*P **P 11 53 13.8 +0.7**
comp=Z,633nm,1.6s,mb6.7
TTA Tatalina 90.05 25 *e*P **P 11 53 13.7 +1.0**
PCBR Castelo Branco 90.08 311 *i*P **P 11 53 14.3 +0.9**
comp=Z,578nm,1.4s,mb6.7
STS Santiago 90.10 314 P **P 11 53 14.5 +1.1**
STS pmax pmax
comp=Z,273nm,1.0s,mb6.5
STS Santiago 90.10 314 P **P 11 53 14.5 +1.1**
comp=Z,273nm,1.0s,mb6.5
PMRV Marv??o 90.12 310 *i*P **P 11 53 14.2 +0.6**
comp=Z,437nm,1.7s,mb6.5
PMRV Marv??o 90.12 310 *e*PP PP 11 56 41.5 -5.5
PMRV *e*S S 12 04 02.5 -3.1
PMRV *e*SS SS 12 10 14.4 +10
PMRV Marv??o 90.12 310 *e*LR LR 12 31 22.3
comp=Z,11µm,22.0s
PBAR Barrancos 90.16 309 *i*P **P 11 53 14.7 +0.9**
comp=Z,1µm,1.6s,mb7.0
PBAR Barrancos 90.16 309 *e*PP PP 11 56 35.4 -12
PBAR *e*S S 12 04 02.7 -3.3
PBAR *e*SS SS 12 10 20.9 +16
PBAR Barrancos 90.16 309 *e*LR LR 12 24 39.0
comp=Z,11µm,18.0s
PVIS Viseu 90.18 311 *i*P **P 11 53 14.7 +0.9**
comp=Z,657nm,1.6s,mb6.7
COLD Coldfoot 90.27 20 *e*P **P 11 53 14.0 +0.3**
comp=Z,297nm,1.5s,mb6.4
EMAZ Mazaricos 90.38 314 P **P 11 53 15.4 +0.7**
comp=Z,232nm,0.9s,mb6.5
EZAM Zamans 90.39 313 P **P 11 53 14.6 -0.2**
EZAM pmax pmax
comp=Z,486nm,1.4s,mb6.6
EZAM Zamans 90.39 313 P **P 11 53 14.6 -0.2**
comp=Z,486nm,1.4s,mb6.6
PESTR Estremoz 90.41 310 *i*P **P 11 53 15.4 +0.4**
comp=Z,314nm,1.5s,mb6.4
PESTR Estremoz 90.41 310 *e*PP PP 11 56 54.8 +5.5
PESTR *e*S S 12 04 04.7 -3.5
PESTR *e*SS SS 12 10 14.7 +6.2
PESTR Estremoz 90.41 310 *e*LR LR 12 30 56.0
comp=Z,8µm,20.0s
PTO Porto 90.59 312 *e*P **P 11 53 17.5 +1.8**
comp=Z,808nm,1.5s,mb6.8
SUMG Summit 90.61 347 *e*P **P 11 53 15.8 +0.7**
comp=Z,551nm,1.1s,mb6.8
SUMG Summit 90.61 347⇓ *i*P **P 11 53 16.2 +1.0**
comp=Z,319nm,1.0s,mb6.6
SUMG
comp=Z,22µm,19.0s
EGRO El Granado 90.66 308 P **P 11 53 16.9 +0.8**
comp=Z,310nm,1.0s,mb6.6
EVO Evora 90.81 309⇓ *i*P **P 11 53 18.1 +1.3**
comp=Z,713nm,1.3s,mb6.5
EVO *e*MLR MLR
comp=Z,18µm,20.5s,MS6.2
EVO Evora 90.81 309 *i*P **P 11 53 17.8 +1.0**
comp=Z,421nm,1.6s,mb6.5
EVO Evora 90.81 309 *e*PP PP 11 56 41.3 -11
PBEJ Beja 90.83 309 *i*P **P 11 53 17.9 +1.0**
comp=Z,591nm,1.6s,mb6.7
PBEJ Beja 90.83 309 *e*PP PP 11 56 57.6 +5.0
PTOM Tomar 90.84 311 *i*P **P 11 53 17.9 +1.0**
comp=Z,1µm,1.6s,mb7.0
SDPT Sand Point 90.85 33 *e*P **P 11 53 15.3 -1.3**
comp=Z,540nm,0.9s,mb6.9
PVAQ Vaqueiros 90.87 308 *i*P **P 11 53 17.9 +0.8**
comp=Z,1µm,1.5s,mb6.9
PVAQ Vaqueiros 90.87 308 *e*PP PP 11 57 01.0 +8.0
PVAQ *e*S S 12 04 07.0 -5.5
PVAQ Vaqueiros 90.87 308 *e*LR LR 12 29 47.4
comp=Z,13µm,18.0s
EVOP Sao Brissos 90.90 309 *e*P **P 11 53 17.0 -0.3**
EVOP *e*SS SS 12 10 16.5 +0.9
EVOP *e*SS SS 12 10 17.1 +1.5
EVOP AMS AMS 12 42 16.6
comp=Z,11µm,22.1s,MS6.3
EVOP Sao Brissos 90.90 309 *e*P **P 11 53 17.0 -0.2**

EVOP eSS SS 12 10 16.5 +0.9
SVW2 Sparrevohn 91.00 27 eP **P 11 53 18.4 +1.2**
PCVE Castro Verde 91.06 309 i P **P 11 53 19.9 +1.9**
comp=Z,449nm,1.6s,mb6.5
PCVE Castro Verde 91.06 309 ePP PP 11 56 48.9 -5.6
PCVE eS S 12 04 10.5 -3.8
PCVE eSS SS 12 10 24.6 +6.6
PCVE Castro Verde 91.06 309 eLR LR 12 30 27.3
comp=Z,13μm,18.0s
PBDV Barranco-do-Ve 91.08 308 i P **P 11 53 19.4 +1.3**
comp=Z,1μm,1.5s,mb7.0
PBDV Barranco-do-Ve 91.08 308 ePP PP 11 56 58.8 +4.2
PBDV eS S 12 04 09.1 -5.3
PBDV eSS SS 12 10 28.9 +11
PBDV Barranco-do-Ve 91.08 308 eLR LR 12 28 47.0
comp=Z,13μm,20.0s
ALMR Almeirim 91.08 310 eP **P 11 53 17.6 -0.5**
CHUM Lake Minchumin 91.12 23 eP **P 11 53 18.6 +0.9**
KHZ Kahutara 91.28 133 eP **P 11 53 18.6 -0.2**
comp=Z,554nm,1.6s,mb6.6
PLML Palmela 91.48 310 eP **P 11 53 22.2 +2.3**
BPAW Bear Paw Mtn. 91.53 23 eP **P 11 53 19.6 0.0**
comp=Z,7.5nm,1.0s
CHGN Chignik 91.58 32 eP **P 11 53 19.0 -1.0**
LIS Lisbon 91.63 310 eP **P 11 53 20.2 -0.4**
LIS eSS SS 12 10 27.6 +1.6
LIS eSS SS 12 10 27.8 +1.8
LIS AMS AMS 12 42 18.1
comp=N,18μm,21.2s
LIS Lisbon 91.63 310 eP **P 11 53 20.3 -0.3**
LIS eSS SS 12 10 27.8 +1.8
PPLA Purkeypile 91.63 24 eP **P 11 53 20.9 +0.8**
comp=N,337nm,1.1s,mb6.6
PMAFR Mafra 91.66 310 i P **P 11 53 21.5 +0.7**
comp=N,760nm,1.7s,mb6.8
PMAFR Mafra 91.66 310 ePP PP 11 57 04.1 +4.9
PMAFR eS S 12 04 12.3 -7.4
PMAFR eSS SS 12 10 23.7 -2.8
PMAFR Mafra 91.66 310 eLR LR 12 32 11.7
comp=N,11μm,18.0s
PFVI Vila Bisbo 91.80 308 P **P 11 53 22.4 +1.0**
PFVI Vila Bisbo 91.80 308 i P **P 11 53 22.6 +1.2**
comp=N,699nm,1.5s,mb6.8
PFVI Vila Bisbo 91.80 308 ePP PP 11 57 05.5 +5.2
PFVI eS S 12 04 12.9 -8.0
PFVI Vila Bisbo 91.80 308 eLR LR 12 31 06.3
comp=N,12μm,20.0s
SNZO South Karori 91.88 132 PFAKE 11 53 30.0 +8.4
SNZO LR LR
comp=Z,35μm,19.0s,MS6.8
TRF Thorofare Moun 92.12 23 eP **P 11 53 22.1 -0.2**
comp=Z,84nm,1.1s,mb6.0
COLA College 92.30 22 eP **P 11 53 22.6 -0.6**
COLA pmax pmax
comp=Z,142nm,1.3s,mb6.1
COLA MLR MLR
comp=Z,23μm,20.0s,MS6.6
COLA College 92.30 22 eP **P 11 53 22.6 -0.6**
comp=Z,142nm,1.3s,mb6.1
COLA LR LR
comp=Z,23μm,20.0s,MS6.6
MCK McKinley 92.50 23 eP **P 11 53 23.6 -0.5**
MCK pmax pmax
comp=Z,421nm,1.1s,mb6.7
MCK McKinley 92.50 23 eP **P 11 53 23.6 -0.5**
comp=Z,421nm,1.1s,mb6.7
RSO Redoubt South 92.53 27 eP **P 11 53 24.0 -0.3**
URZ Urewera 93.04 128 LR LR 12 40 05.5
comp=Z,29μm,19.6s,MS6.7,baz=278,slow=39
URZ Urewera 93.04 128 eP **P 11 53 25.9 -1.2**
comp=Z,287nm,1.3s,mb6.5
PMR Palmer 93.52 25 eP **P 11 53 29.0 +0.2**
PMR pmax pmax
comp=Z,331nm,1.1s,mb6.7
PMR Palmer 93.52 25 eP **P 11 53 29.0 +0.2**
comp=Z,331nm,1.1s,mb6.7
RC01 Rabbit Creek A 93.53 25 eP **P 11 53 29.0 +0.1**
comp=Z,319nm,1.0s,mb6.7
OHAK Old Harbor 93.76 30 eP **P 11 53 30.2 +0.2**
comp=Z,399nm,0.8s,mb6.9
KDAK Kodiak Island 93.84 29 P **P 11 53 31.6 +1.2**
comp=Z,2μm,1.0s,mb7.5,SNR=23
KDAK Kodiak Island 93.84 29 i P **P 11 53 30.8 +0.4**
KDAK Kodiak Island 93.84 29 eP **P 11 53 30.7 +0.3**
comp=Z,427nm,1.0s,mb6.8
KDAK LR LR
comp=Z,37μm,20.0s,MS6.8
PAX Paxson 94.23 23 eP **P 11 53 31.9 -0.1**
PAX pmax pmax
comp=Z,227nm,1.3s,mb6.4
PAX Paxson 94.23 23 eP **P 11 53 31.9 -0.1**
comp=Z,227nm,1.3s,mb6.4
RES Resolute Bay 94.39 2 eP **P 11 53 32.5 -0.1**
RES pmax pmax
comp=Z,241nm,1.0s,mb6.6
RES Resolute Bay 94.39 2 eP **P 11 53 32.5 -0.1**
comp=Z,241nm,1.0s,mb6.6
INK Inuvik 94.62 15 eP **P 11 53 33.5 -0.3**
INK pmax pmax
comp=Z,221nm,1.2s
INK Inuvik 94.62 15 eP **P 11 53 33.5 -0.2**
comp=Z,221nm,1.2s,mb6.5
EGAK Eagle 94.70 20 eP **P 11 53 34.1 -0.1**
comp=Z,106nm,1.2s,mb6.2
EGAK LR LR
comp=Z,35μm,21.0s,MS6.8
MENT Mentasta 94.90 22 eP **P 11 53 36.2 +1.1**
JOHN Johnston Islan 94.99 72 PFAKE 11 53 50.0 +14
JOHN LR LR
comp=Z,11μm,20.0s,MS6.3
DIV Divide 95.14 24 eP **P 11 53 37.0 +0.7**
comp=Z,132nm,1.1s,mb6.3
KIC Kosan Boka 95.22 277 eP **P 11 53 37.9 +0.2**
comp=Z,522nm,1.5s,mb6.8
DBIC Dimbokro 95.27 278 P **P 11 53 38.6 +0.7**
comp=Z,50nm,1.0s,mb5.9,baz=68,slow=5.9,SNR=27
DBIC PKKP PKKPbc 12 10 30.6 -0.2
comp=Z,7.1nm,0.8s,baz=184,slow=1.9,SNR=6.3
DBIC LR LR 12 38 36.1
comp=Z,27μm,18.4s,MS6.8,baz=49,slow=37
DBIC Dimbokro 95.27 278 eP **P 11 53 37.1 -0.8**
DBIC pmax pmax
comp=Z,528nm,1.7s
DBIC MLR MLR
comp=Z,23μm,19.0s
DBIC Dimbokro 95.27 278 eP **P 11 53 37.1 -0.8**
comp=Z,528nm,1.7s,mb6.7
DBIC LR LR
comp=Z,23μm,19.0s,MS6.7
DBIC Dimbokro 95.27 278 ⇑i P **P 11 53 38.2 +0.3**
TIC Toumodi 95.44 278 eP **P 11 53 38.9 +0.3**
comp=Z,1μm,1.9s,mb7.0
TIC Toumodi 95.44 278 eP **P 11 53 38.9 +0.3**
TIC pmax pmax
comp=Z,1μm,1.9s,mb7.0
RAO Raoul Island 95.49 119 LR LR 12 39 46.8
comp=Z,12μm,19.8s,MS6.4,baz=274,slow=38
RAO Raoul Island 95.49 119 PFAKE 11 53 50.0 +11
RAO LR LR
comp=Z,15μm,19.0s,MS6.5
LIC Lamto 95.53 277 eP **P 11 53 39.3 +0.2**
comp=Z,691nm,1.6s,mb6.5,baz=80
LIC eMLR MLR
comp=Z,25μm,19.2s,MS6.4
LIC Lamto 95.53 277 eP **P 11 53 39.4 +0.3**
comp=Z,523nm,1.6s,mb6.7
LIC Lamto 95.53 277 eP **P 11 53 39.3 +0.2**
comp=Z,345nm,1.6s,mb6.5
LIC LR LR
comp=Z,12μm,19.3s,MS6.4
BMRM Bremner River 95.70 24 eP **P 11 53 38.9 +0.1**
comp=Z,235nm,1.1s,mb6.5
DAWY Dawson 95.75 20 eP **P 11 53 39.2 +0.2**
NVL N'lazarevskaya 97.03 199 eP **P 11 53 42.6 -1.9**
NVL e*PP pP 11 53 51.1 -2.4
NVL e*SP sP 11 53 57.0 +0.3
NVL e 11 57 37.6
NVL pmax pmax
comp=Z,43nm,1.0s,mb5.8
MAIT Maitri 97.06 199 eP **P 11 53 41.8 -2.9**
MAIT ePP PP 11 57 40.2 -0.5
MAIT eS SKSac 12 04 14.9 -4.6
MAIT eSS 12 09 57.7
MAIT eE SS 12 11 17.5 -25
SBA Scott Base 97.53 168 eP **P 11 53 47.1 +0.4**
SBA pmax pmax
comp=Z,1μm,2.3s,mb7.0
SBA MLR MLR
comp=Z,32μm,19.0s,MS6.8
SBA Scott Base 97.53 168 eP **P 11 53 47.1 +0.4**
comp=Z,1μm,2.3s,mb7.0
SBA LR LR
comp=Z,32μm,19.0s,MS6.8
SFJD Kangerlussuaq 97.57 346 eP **P 11 53 46.7 -0.5**
SFJD pmax pmax
comp=Z,143nm,1.4s,mb6.3
SFJD MLR MLR
comp=Z,25μm,20.0s,MS6.7
SFJD Kangerlussuaq 97.57 346 eP **P 11 53 46.7 -0.5**
comp=Z,143nm,1.4s,mb6.3
SFJD LR LR
comp=Z,25μm,20.0s,MS6.7
SFJD Kangerlussuaq 97.57 346 ⇓i P **P 11 53 46.8 -0.4**
comp=Z,31nm,1.0s,mb5.8
SFJD
comp=Z,22μm,20.0s
PNL Peninsula 98.55 24 eP **P 11 53 53.3 +1.5**
comp=Z,70nm,1.1s,mb6.1
AFI Afiamalu 98.70 103 PFAKE 11 54 00.0 +6.7
AFI LR LR
comp=Z,10μm,22.0s,MS6.2
SHEL Horse Pasture 100.17 256 PFAKE 11 54 10.0 +11
SHEL LR LR
comp=Z,18μm,19.0s,MS6.6
SKAG Skagway 100.25 22 eP Pdif 11 53 59.7 +0.3
comp=Z,85nm,1.2s
DLBC Dease Lake 102.91 21 eP Pdif 11 54 12.9 +1.7
VNA1 Neumayer--Stat 103.66 200 ePdiff Pdif 11 54 16.0 +1.5
VNA1 e 11 58 29.3
BART Pico Bartolome 103.75 313 eP Pdif 11 54 13.5 -1.5
comp=Z,62nm,1.2s
YKA Yellowknife Ar 103.91 12 Pdiff Pdif 11 54 15.0 -0.7
comp=Z,7.8nm,0.9s,baz=330,slow=4.9,SNR=14
YKA PP PP 11 58 30.8 -1.2
comp=Z,38nm,1.1s,baz=334,slow=7.2,SNR=8.1
YKA PKKPbc PKKPbc 12 10 04.4 -3.4
comp=Z,14nm,1.0s,baz=149,slow=2.5,SNR=15
YKA Yellowknife Ar 103.91 12 P Pdif 11 54 15.0 -0.7
YKA 11 58 30.8
YKA pmax pmax
comp=Z,8.0nm,0.9s
YKA pmax pmax
comp=Z,38nm,1.1s
YKA Yellowknife Ar 103.91 12 Pdif Pdif 11 54 15.0 -0.7
YKA PP PP 11 58 30.8 -1.2
YKA PKKPbc PKKPbc 12 10 04.5 -3.4
CMLA Cha da Macela 104.01 313 eP Pdif 11 54 09.8 -6.3
comp=Z,38nm,0.7s
CMLA eLR LR 12 29 17.6
CMLA Cha da Macela 104.01 313 PFAKE 11 54 30.0 +14
CMLA LR LR
comp=Z,10μm,19.0s,MS6.4
PSMN Pico do Norte, 104.01 313 eP Pdif 11 54 11.3 -4.8
PSMA Santa Maria 104.06 313 eP Pdif 11 54 06.4 -10
comp=Z,55nm,1.1s
KIP Kipapa 104.26 64 PFAKE 11 54 30.0 +13
KIP LR LR
comp=Z,8μm,22.0s,MS6.2
PCAN Candelaria 105.77 315 eP Pdif 11 54 22.2 -1.7
comp=Z,581nm,1.9s
PCED Cedros 105.84 315 eP Pdif 11 54 17.0 -7.3
comp=Z,21nm,0.3s
CALA Caldeira 105.87 315 eP Pdif 11 54 16.4 -8.0
POHA Pohakuloa 106.98 65 PFAKE 11 58 50.0 +10
POHA LR LR
comp=Z,8μm,21.0s,MS6.3
TRIS Tristan da Cun 107.81 235 PFAKE 11 58 50.0 +9.1
TRIS LR LR
comp=Z,15μm,19.0s,MS6.6
XMAS Kiritimati 109.90 84 PFAKE 11 59 00.0 +14
XMAS LR LR
comp=Z,11μm,21.0s,MS6.4
FCC Fort Churchill 110.32 3 ePKIKP PKiKP 11 58 46.0 +1.0
RAR Rarotonga 110.92 109 PFAKE 11 59 00.0 +13
RAR LR LR
comp=Z,10μm,22.0s,MS6.4
SACV Santiago Islan 111.05 291 PFAKE 11 59 00.0 +12
SACV LR LR
comp=Z,12μm,20.0s,MS6.5
SCHQ Schefferville 112.00 347 PKiKP PKiKP 11 58 47.5 -0.9
comp=Z,23nm,1.0s,baz=60,slow=1.5,SNR=9.9
SCHQ PP PP 11 59 29.7 -1.4
comp=Z,84nm,1.1s,baz=13,slow=8.1,SNR=5.3
SCHQ PKKPbc PKKPbc 12 09 39.5 -2.7
comp=Z,22nm,0.8s,baz=216,slow=3.0,SNR=21
A05A Maple Falls 113.20 24 ⇓P PKiKP 11 58 52.2 +1.4
baz=113
OOW Octopus West 113.34 26 P PKiKP 11 58 52.5 +1.4
FFC Flin Flon 113.50 9 i PKIKP PKiKP 11 58 47.4 -3.8
FFC Flin Flon 113.50 9 ePdif Pdif 11 55 00.3 +2.0
FFC LR LR
comp=Z,33μm,19.0s,MS7.0
NLWA Neilton Lookou 113.75 26 ⇓P PKiKP 11 58 52.2 +0.4
baz=114
NLWA Neilton Lookou 113.75 26 PFAKE 11 59 00.0 +8.1
NLWA LR LR
comp=Z,16μm,20.0s,MS6.6
B06A Marblemount 113.83 24 ⇑P PKiKP 11 58 51.8 -0.2
baz=114
JCW Jim Creek 113.91 24 ePKPdf PKiKP 11 58 53.0 +0.8
GNW Green Mountain 114.05 25 ePKPdf PKiKP 11 58 50.4 -2.1
B08A Colville Reser 114.78 22 ⇓P PKiKP 11 58 53.9 +0.1
baz=114
F03A Seaside 115.02 26 ⇑P PKiKP 11 58 54.4 +0.1
baz=115
ETW Entiat 115.02 23 ePKPdf PKiKP 11 58 54.7 +0.4
WTV Waterville 115.09 23 P PKiKP 11 58 54.5 0.0
LON Longmire 115.11 25 ePKIKP PKiKP 11 58 56.2 +1.7
HEBO Mount Hebo 115.49 27 ePKPdf PKPdf 11 58 54.9 -0.4
NAC Naches 115.53 24 P PKiKP 11 58 55.8 +0.5
A12A Yaak River Ran 115.59 20 ⇑P PKiKP 11 58 55.7 +0.3
baz=115,SNR=5.6
NEW Newport 115.66 21 ePKIKP PKPdf 11 58 55.5 -0.1
NEW MLR MLR
comp=Z,22μm,20.0s
OD2 Odessa Site #2 115.82 23 ePKPdf PKPdf 11 58 56.2 +0.3
A13A Flathead Natio 115.99 19 ⇓P PKiKP 11 58 56.3 +0.1
baz=116
B12A Libby 116.01 20 ⇓P PKiKP 11 58 56.5 +0.2
baz=116
D08A Wollman Farm, 116.01 23 ⇑P PKiKP 11 58 56.3 0.0
baz=116
WALA Waterton Lakes 116.04 19 ePKPdf PKPdf 11 58 56.5 +0.2
G04A Mulino 116.06 26 ⇓P PKiKP 11 58 56.5 +0.1
baz=116
E07A Sunnyside 116.06 24 ⇓P PKiKP 11 58 55.8 -0.6
baz=116
WRD Warden 116.14 23 P PKiKP 11 58 56.9 +0.4
COR Corvallis 116.18 27 ePKIKP PKPdf 11 58 58.2 +1.5
COR MLR MLR
comp=Z,15μm,22.0s,MS6.6
A14A Double T Ranch 116.27 18 ⇑P PKiKP 11 58 56.4 -0.3
baz=116
RSW Rattlesnake Hi 116.30 24 ePKPdf PKPdf 11 58 58.0 +1.1
HOOD Mount Hood Mea 116.32 26 ePKPdf PKPdf 11 58 58.5 +1.6
HAWA Hanford 116.33 24 ePKPdf PKPdf 11 58 57.8 +0.9
HAWA LR LR
comp=Z,14μm,20.0s,MS6.6
C11A Tepee Creek (N 116.33 21 ⇓P PKiKP 11 58 56.6 -0.2
baz=116
E08A Dider Farm, El 116.43 23 ⇑P PKiKP 11 58 57.3 +0.2
baz=116,SNR=7.5
B13A Whitefish 116.46 19 ⇓P PKiKP 11 58 56.9 -0.2
baz=116,SNR=17
A15A Johnson Ranch, 116.47 18 ⇓P PKiKP 11 58 56.7 -0.4
baz=116,SNR=9.1
F07A Phinny Hill Vi 116.58 24 ⇑P PKPdf 11 58 57.2 -0.2
baz=116
H04A Detroit Lake 116.60 27 ⇓P PKPdf 11 58 57.2 -0.3
baz=116
C12B Naegeli Ranch, 116.71 20 ⇑P PKPdf 11 58 57.4 -0.2
baz=116
E09A Wood Farm, Sta 116.76 23 ⇑P PKPdf 11 58 57.6 -0.1
baz=116
G06A Carlson Farm, 116.82 25 ⇑P PKPdf 11 58 58.0 +0.1
baz=117
A16A West Butte Ran 116.83 17 ⇑P PKPdf 11 58 57.3 -0.5
baz=117,SNR=11
B14A Marquette Ranc 116.86 18 ⇓P PKPdf 11 58 57.6 -0.2
baz=117,SNR=7.5
CROR Criterion Ridg 116.88 26 P PKPdf 11 58 58.3 +0.3
C13A Hot Springs 117.04 20 ⇑P PKPdf 11 58 57.5 -0.7
baz=117
YBMT Yellow Bay 117.06 19 ePKPdf PKPdf 11 58 59.0 +0.7
JTMT Jette 117.07 19 ePKPdf PKPdf 11 58 59.1 +0.9
IRO Indian Ridge 117.10 27 P PKPdf 11 58 58.6 +0.2
BKCOR Black Crater 117.11 26 P PKPdf 11 58 59.2 +0.7
B15A Bradely Ranch, 117.12 18 ⇑P PKPdf 11 58 57.8 -0.5
baz=117,SNR=31
C14A Swan Lake 117.23 19 ⇑P PKPdf 11 58 57.9 -0.7
baz=117
LNOR Lincton Mounta 117.24 23 ePKIKP PKPdf 11 58 58.9 +0.2
B16A M & M Farms, S 117.28 17 ⇑P PKPdf 11 58 58.1 -0.6
baz=117,SNR=21
D12A Red Ives Fores 117.32 21 ⇓P PKPdf 11 58 57.6 -1.2
baz=117
A18A Metzger Ranch, 117.35 16 ⇓P PKPdf 11 58 58.3 -0.5
baz=117
SWMT Swartz Lake 117.37 19 ePKPdf PKPdf 11 58 58.7 -0.2
G08A Pilot Rock 117.46 24 ⇑P PKPdf 11 58 58.5 -0.6
baz=117,SNR=19
F10A Beach Ranch, E 117.56 22 ⇑P PKPdf 11 58 59.3 0.0
baz=117,SNR=24
C15A Salmond Ranch, 117.58 18 ⇑P PKPdf 11 58 58.6 -0.6
baz=117,SNR=28
D13A Huson 117.58 20 ⇑P PKPdf 11 58 58.6 -0.7
baz=117,SNR=18
B17A L&G Farms, Che 117.66 17 ⇓P PKPdf 11 58 59.1 -0.3
baz=117,SNR=20
SLMT Seeley Lake 117.77 19 ePKPdf PKPdf 11 58 59.6 -0.1
E12A Beaver Dam Sad 117.79 21 ⇑P PKPdf 11 58 59.0 -0.7
baz=118
C16A Fuhringer Ranc 117.82 18 ⇓P PKPdf 11 58 59.2 -0.6
baz=118,SNR=15
B18A Beardsley Farm 117.85 16 ⇓P PKPdf 11 58 59.4 -0.4
baz=118
HUMO Hull Mountain 117.87 28 ePKPdf PKPdf 11 58 59.8 -0.2
HUMO LR LR
comp=Z,14μm,20.0s,MS6.6
D14A Greenough 117.91 19 ⇑P PKPdf 11 58 59.3 -0.6
baz=118,SNR=16
G09A Cove 117.94 23 ⇓P PKPdf 11 58 59.2 -0.9
baz=118,SNR=9.0
MSO Missoula 117.99 20 ePKPdf PKPdf 11 58 59.6 -0.4
MSO LR LR
comp=Z,18μm,22.0s,MS6.6
F11A Grangeville 118.03 22 ⇑P PKPdf 11 58 59.4 -0.8
baz=118,SNR=40
CHMT Chamberlain Mo 118.14 19 ePKPdf PKPdf 11 58 60.0 -0.4
G10A Bishop Farm, J 118.18 23 ⇑P PKPdf 11 58 59.7 -0.8
baz=118,SNR=9.3
EGMT Eagleton 118.19 16 ⇓P PKPdf 11 59 00.5 +0.1
baz=118
EGMT Eagleton 118.19 16 ePKPdf PKPdf 11 59 00.6 +0.2
EGMT LR LR
comp=Z,23μm,21.0s,MS6.8
H08A Prairie City 118.21 24 ⇓P PKPdf 11 59 00.9 +0.3
baz=118,SNR=32
E13A Victor 118.24 20 ⇑P PKPdf 11 59 00.1 -0.4
baz=118,SNR=31
D15A Lincoln 118.26 19 ⇓P PKPdf 11 59 00.5 -0.1
baz=118,SNR=14
C17A Wharram Farm, 118.26 17 ⇓P PKPdf 11 59 00.2 -0.4
baz=118,SNR=24
G11A Walters Elk Ra 118.41 22 ⇓P PKPdf 11 59 00.5 -0.4
baz=118,SNR=34
F12A Elk City 118.47 21 ⇓P PKPdf 11 59 00.9 -0.1
baz=118,SNR=7.3
BMO Blue Mountains 118.47 23 ePKIKP PKPdf 11 59 00.2 -0.9
BMO MLR MLR
comp=Z,17μm,22.0s,MS6.6
H09A Durkee 118.49 24 ⇑P PKPdf 11 59 00.7 -0.4
baz=118
E14A Clinton 118.50 20 ⇑P PKPdf 11 59 01.1 0.0
baz=118,SNR=14
D16A Dana Ranch, Ca 118.57 18 ⇑P PKPdf 11 59 01.1 -0.1
baz=118,SNR=30
ULM Lac du Bonnet 118.64 6 PKP PKPdf 11 59 00.3 -0.9
comp=Z,27nm,0.7s,baz=16,slow=2.1,SNR=21
ULM PKKPbc PKKPbc 12 09 16.1 -3.0
comp=Z,45nm,1.0s,baz=191,slow=3.8,SNR=12
ULM SKKP 12 13 17.8
comp=Z,12nm,1.0s,baz=155,slow=1.7,SNR=4.5
ULM Lac du Bonnet 118.64 6 PKP PKPdf 11 59 00.3 -0.9
ULM PKKPbc PKKPbc 12 09 16.1 -3.0
ULM SKKP 12 13 17.8
YBH Yreka Blue Hor 118.66 29 PKKPbc PKKPbc 12 09 17.6 -1.2
comp=Z,4.1nm,1.1s,baz=306,slow=8.5,SNR=3.9
YBH Yreka Blue Hor 118.66 29 ePKIKP PKPdf 11 59 02.0 +0.5
YBH MLR MLR
comp=Z,14μm,22.0s
D17A Six Diamond Ra 118.72 17 ⇓P PKPdf 11 59 01.2 -0.2
baz=118,SNR=24
K05A Summer Lake 118.72 27 ⇓P PKPdf 11 59 01.6 0.0
baz=118
F13A Darby 118.76 21 ⇓P PKPdf 11 59 01.1 -0.5
baz=118,SNR=19
E15A Deer Lodge 118.77 19 ⇑P PKPdf 11 59 01.3 -0.3
baz=118,SNR=9.8
HRY Holter Researc 118.77 18 ePKPdf PKPdf 11 59 01.9 +0.3
H10A Noah's Angus R 118.91 23 ⇓P PKPdf 11 59 01.5 -0.4
baz=119,SNR=24
D18A Linhart Farms, 118.93 17 ⇓P PKPdf 11 59 01.8 -0.1
baz=119
E16A East Helena 118.98 18 ⇑P PKPdf 11 59 01.8 -0.1
baz=119,SNR=13
I09A Lost Marbles R 119.04 24 ⇓P PKPdf 11 59 02.1 -0.1
baz=119,SNR=10
F14A Wisdom 119.07 20 ⇓P PKPdf 11 59 02.4 +0.2
baz=119
H11A Donnelly 119.09 22 ⇑P PKPdf 11 59 02.5 +0.2
baz=119,SNR=53
DGMT Dagmar 119.12 12 ⇑P PKPdf 11 59 02.4 +0.2
baz=119
DGMT Dagmar 119.12 12 ePKPdf PKPdf 11 59 02.3 +0.1
DGMT LR LR
comp=Z,32μm,19.0s,MS7.0
J08A Circle Bar Ran 119.25 25 ⇑P PKPdf 11 59 02.9 +0.3
baz=119,SNR=25
E17A Martinsdale 119.29 18 ⇑P PKPdf 11 59 02.6 0.0
baz=119,SNR=13
LASM Arnica Sink 119.30 28 P PKPdf 11 59 03.4 +0.7
I10A Payette 119.31 23 ⇑P PKPdf 11 59 03.1 +0.4
baz=119,SNR=8.5
F15A Butte 119.33 19 ⇓P PKPdf 11 59 02.4 -0.3
baz=119,SNR=8.1
LRM Limekiln Ridge 119.36 19 ePKPdf PKPdf 11 59 03.0 +0.3
G13A Cobalt 119.40 21 ⇓P PKPdf 11 59 02.4 -0.5
baz=119,SNR=7.5
E18A Harlowton 119.47 17 ⇑P PKPdf 11 59 03.1 +0.1
baz=119
G14A Jackson 119.54 20 ⇑P PKPdf 11 59 03.1 0.0
baz=119,SNR=23
WDC Whiskeytown Da 119.63 30 ePKIKP PKPdf 11 59 03.6 +0.2
WDC MLR MLR
comp=Z,13μm,22.0s,MS6.5
MOD Modoc 119.64 27 ePKPdf PKPdf 11 59 04.3 +0.9
MOD LR LR
comp=Z,24μm,22.0s,MS6.8
H12A Diamond D Ranc 119.65 22 ⇓P PKPdf 11 59 03.1 -0.2
baz=119,SNR=40
F16A Kennard Place, 119.66 19 ⇓P PKPdf 11 59 03.3 0.0
baz=119,SNR=7.9
DLMT Dillon 119.72 20 ePKPdf PKPdf 11 59 04.2 +0.7
BOZ Bozeman (W) 119.78 19 ⇓P PKPdf 11 59 03.7 +0.2
baz=120,SNR=22
BOZ Bozeman (W) 119.78 19 ePKIKP PKPdf 11 59 03.9 +0.3
BOZ MLR MLR
comp=Z,17μm,20.0s,MS6.7
BOZ Bozeman (W) 119.78 19 ePKPdf PKPdf 11 59 03.9 +0.3
BOZ LR LR
comp=Z,17μm,20.0s,MS6.7
I11A Placerville 119.79 23 ⇑P PKPdf 11 59 03.6 0.0
baz=120,SNR=38
F17A Fitzpatrick Pl 119.85 18 ⇑P PKPdf 11 59 03.9 +0.2
baz=120,SNR=21
H13A Challis 119.86 21 ⇑P PKPdf 11 59 03.6 -0.1
baz=120,SNR=28
J10A Berg Farm, Mel 119.88 24 ⇑P PKPdf 11 59 04.0 +0.2
baz=120,SNR=13
G15A Dillon 119.93 20 ⇓P PKPdf 11 59 04.2 +0.3
baz=120,SNR=18
WVOR Wild Horse Val 119.94 26 ePKIKP PKPdf 11 59 04.5 +0.5
WVOR MLR MLR
comp=Z,12μm,21.0s,MS6.5
G16A Moss Hill, Enn 120.10 19 ⇑P PKPdf 11 59 04.6 +0.4
baz=120,SNR=29
MCMT McKenzie Canyo 120.11 20 ePKPdf PKPdf 11 59 04.8 +0.6
H14A Leadore 120.12 21 ⇑P PKPdf 11 59 04.7 +0.4

baz=120,SNR=24
F18A Big Timber 120.13 17 ⇓P PKPdf 11 59 04.7 +0.5
baz=120
I12A Atlanta 120.20 22 ⇑P PKPdf 11 59 05.0 +0.6
baz=120,SNR=49
GCMT Greycliff 120.25 17 ePKPdf PKPdf 11 59 04.9 +0.4
MFID Camas Ranch 120.26 23 ⇓P PKPdf 11 59 05.1 +0.6
baz=120,SNR=62
PAE Paea 120.33 104 ePKiKP PKiKP 11 59 04.9 -0.5
comp=Z,25nm,1.4s
PPT Papeete 120.33 104 ePKiKP PKiKP 11 59 04.6 -0.8
comp=Z,54nm,1.2s
PPT Papeete 120.33 104 ePP PP 12 00 30.9 -0.8
comp=Z,2μm,24.5s
PPT Papeete 120.33 104 ePS PS 12 10 16.7 -6.0
comp=Z,4μm,27.5s
PPT eSS SS 12 16 54.5 -4.5
comp=Z,14μm,34.8s
PPT eLR LR 12 35 59.7
comp=Z,17μm,22.2s
LAO LASA Array 120.34 14 ePKPdf PKPdf 11 59 05.5 +0.9
LAO LR LR
comp=Z,23μm,21.0s,MS6.8
G17A Pierce Place, 120.35 18 ⇑P PKPdf 11 59 05.6 +0.9
baz=120,SNR=22
H15A Lima 120.37 20 ⇓P PKPdf 11 59 05.3 +0.6
baz=120,SNR=12
K10A MacKenzie Ranc 120.39 24 ⇑P PKPdf 11 59 05.5 +0.7
baz=120,SNR=19
I13A Wildhorse Cree 120.47 22 ⇑P PKPdf 11 59 05.4 +0.5
baz=120,SNR=33
TBI Tubuai 120.53 111 ePP PP 12 00 23.1 -10
comp=Z,1μm,27.5s
TBI eSKSac SKSac 12 05 59.2 -2.5
comp=Z,3μm,25.2s
TBI Tubuai 120.53 111 ePS PS 12 10 20.4 -4.0
comp=Z,6μm,27.0s
TBI eSS SS 12 17 04.4 +3.1
comp=Z,10μm,34.5s
TBI eLR LR 12 36 09.4
comp=Z,31μm,23.5s
AGMN Agassiz Nation 120.58 6 ePKPdf PKPdf 11 59 04.0 -1.0
AGMN LR LR
comp=Z,30μm,21.0s,MS6.9
HOPS Hopland 120.58 31 ePKPdf PKPdf 11 59 06.5 +1.2
HOPS LR LR
comp=Z,13μm,20.0s,MS6.5
HLID Hailey 120.66 22 ⇓P PKPdf 11 59 06.0 +0.7
baz=120,SNR=58
HLID Hailey 120.66 22 ePKPdf PKPdf 11 59 06.1 +0.8
HLID LR LR
comp=Z,27μm,21.0s,MS6.9
J12A Stokes Ranch, 120.68 23 ⇑P PKPdf 11 59 06.0 +0.6
baz=120,SNR=69
I14A Mackay 120.69 21 ⇑P PKPdf 11 59 05.8 +0.4
baz=120,SNR=21
G18A Lazy El Ranch, 120.71 17 ⇑P PKPdf 11 59 05.4 +0.1
baz=120
K11A Parker Ranch, 120.72 24 ⇓P PKPdf 11 59 05.9 +0.4
baz=120,SNR=16
H16A Russell Place, 120.75 19 ⇓P PKPdf 11 59 06.2 +0.8
baz=120,SNR=31
YMR Madison River 120.87 19 ePKPdf PKPdf 11 59 07.1 +1.4
J13A Cove Ranch, Pi 120.89 22 ⇓P PKPdf 11 59 06.4 +0.7
baz=121,SNR=118
I15A Monteview 120.97 20 ⇓P PKPdf 11 59 06.5 +0.6
baz=121
RLMT Red Lodge 120.98 17 ⇓P PKPdf 11 59 06.4 +0.5
baz=121
RLMT Red Lodge 120.98 17 ePKPdf PKPdf 11 59 06.7 +0.8
RLMT LR LR
comp=Z,16μm,20.0s,MS6.7
YFT Old Faithful 121.11 19 ePKPdf PKPdf 11 59 08.5 +2.4
L10A Juniper Basin 121.13 24 ⇓P PKPdf 11 59 07.0 +0.7
baz=121,SNR=29
LKWY Lake 121.14 18 ePKIKP PKPdf 11 59 08.4 +2.2
LKWY MLR MLR
comp=Z,36μm,19.0s,MS7.0
J14A Carey 121.20 21 ⇑P PKPdf 11 59 07.2 +0.8
baz=121,SNR=26
BEKR Beckworth 121.23 29 ⇑P PKPdf 11 59 07.1 +0.6
baz=121
H17A Grant Village 121.24 19 ⇑P PKPdf 11 59 08.3 +1.9
baz=121,SNR=22
EYMN Ely 121.25 3 ePKPdf PKPdf 11 59 05.1 -1.2
EYMN LR LR
comp=Z,23μm,20.0s,MS6.8
K12A Draper Farm, C 121.28 23 ⇓P PKPdf 11 59 07.0 +0.5
baz=121,SNR=24
MCCM Marconi Confer 121.32 32 ePKPdf PKPdf 11 59 07.5 +0.7
MCCM LR LR
comp=Z,11μm,22.0s,MS6.5
L11A Cat Creek Ranc 121.34 24 ⇓P PKPdf 11 59 07.4 +0.7
baz=121,SNR=28
I16A Newdale 121.41 20 ⇓P PKPdf 11 59 07.4 +0.7
baz=121,SNR=29
PKME Peaks-Kenny Pk 121.47 344 ePKPdf PKPdf 11 59 06.3 -0.5
PKME LR LR
comp=Z,25μm,20.0s,MS6.8
J15A Blackfoot 121.51 21 ⇑P PKPdf 11 59 07.8 +0.9
baz=121,SNR=34
IMW Indian Meadow 121.57 19 ePKPdf PKPdf 11 59 08.1 +1.0
M10A I.L. Ranch, Tu 121.57 25 ⇑P PKPdf 11 59 08.3 +1.1
baz=121,SNR=33
K13A Stover Farm, H 121.57 22 ⇑P PKPdf 11 59 08.0 +0.9
baz=121,SNR=35
L12A House Creek Ra 121.65 23 ⇑P PKPdf 11 59 08.1 +0.8
baz=121,SNR=25
I17A Pilgrim Ck. 121.66 19 ⇑P PKPdf 11 59 07.9 +0.7
baz=121
MEH Mehetia 121.78 104 ePKiKP PKiKP 11 59 07.8 -0.5
comp=Z,189nm,1.1s
PMOR Pomariorio Ree 121.80 101 ePKiKP PKiKP 11 59 07.9 -0.4
comp=Z,243nm,1.1s
J16A Bone 121.90 20 ⇓P PKPdf 11 59 08.3 +0.6
baz=122,SNR=20
TPAW Teton Pass 121.93 19 ePKPdf PKPdf 11 59 07.6 -0.2
LOHW Long Hollow 121.93 19 ePKPdf PKPdf 11 59 08.3 +0.5
RRI2 Red Ridge 121.93 20 ePKPdf PKPdf 11 59 07.7 0.0
M11A Holland Ranch, 121.95 24 ⇑P PKPdf 11 59 09.1 +1.2
baz=122,SNR=64
WCN Washoe City 121.96 29 ⇓P PKPdf 11 59 08.8 +0.8
baz=122
K14A Jones Ranch, D 122.00 22 ⇓P PKPdf 11 59 08.6 +0.7
baz=122,SNR=33
SNOW Snow Kingsmoun 122.02 19 ePKPdf PKPdf 11 59 08.6 +0.6
REDW Red Top Meadow 122.08 19 ePKPdf PKPdf 11 59 08.5 +0.4
I18A Diamond G Ranc 122.10 18 ⇑P PKPdf 11 59 08.5 +0.4
baz=122
K15A Arbon 122.11 21 ⇑P PKPdf 11 59 08.9 +0.7
baz=122,SNR=40
L13A Double Diamond 122.11 22 ⇑P PKPdf 11 59 09.0 +0.9
baz=122,SNR=24
J17A Brown Place, J 122.12 19 ⇓P PKPdf 11 59 08.9 +0.8
baz=122,SNR=64
BMN Battle Mountai 122.19 26 ePKIKP PKPdf 11 59 09.6 +1.2
BMN MLR MLR
comp=Z,14μm,21.0s,MS6.6
N10A Dunphy 122.25 25 ⇓P PKPdf 11 59 09.4 +1.0
baz=122,SNR=5.9
K16A Soda Springs 122.30 20 ⇓P PKPdf 11 59 09.1 +0.6
baz=122,SNR=37
M12A Wells 122.31 24 ⇓P PKPdf 11 59 09.4 +0.9
baz=122,SNR=53
L14A Malta 122.42 22 ⇓P PKPdf 11 59 09.1 +0.3
baz=122,SNR=26
J18A Kendall Valley 122.48 19 ⇓P PKPdf 11 59 09.1 +0.3
baz=122,SNR=22
N11A Elko Archery C 122.49 25 ⇑P PKPdf 11 59 09.8 +0.9
baz=122
AHID Auburn Hatcher 122.53 20 ePKPdf PKPdf 11 59 09.7 +0.8
AHID LR LR
comp=Z,11μm,20.0s,MS6.5
K17A Gardner Place, 122.60 20 ⇑P PKPdf 11 59 09.3 +0.3
baz=122,SNR=5.9
O10A Cortez Mining, 122.61 26 ⇑P PKPdf 11 59 10.0 +0.8
baz=122,SNR=16
M13A Montello 122.65 23 ⇓P PKPdf 11 59 09.9 +0.6
baz=122,SNR=41
M13A Montello 122.65 23 ePKPdf PKPdf 11 59 09.9 +0.7
CMB Columbia Colle 122.66 30 ePKIKP PKPdf 11 59 09.3 0.0
CMB MLR MLR
comp=Z,12μm,20.0s,MS6.5
N12A Clover Valley, 122.74 24 ⇑P PKPdf 11 59 10.1 +0.7
baz=122,SNR=84
N12A Clover Valley, 122.74 24 ePKPdf PKPdf 11 59 10.4 +1.0
ELK Elko 122.75 24 ePKIKP PKPdf 11 59 10.9 +1.5
ELK MLR MLR
comp=Z,18μm,20.0s
L15A Malad City 122.75 21 ⇑P PKPdf 11 59 09.6 +0.2
baz=122,SNR=35
HVU Hansel Valley 122.81 22 ePKIKP PKPdf 11 59 09.8 +0.3
M14A Sheep Mountain 122.84 22 ⇓P PKPdf 11 59 10.0 +0.5
baz=123,SNR=39
K18A Toltan Ranch, 122.99 19 ⇑P PKPdf 11 59 10.2 +0.4
baz=123,SNR=29
BW06 Boulder Array 123.03 19 ⇑P PKPdf 11 59 09.7 -0.1
baz=123,SNR=59
BW06 Boulder Array 123.03 19 ePKPdf PKPdf 11 59 09.7 -0.2
BW06 LR LR
comp=Z,28μm,22.0s,MS6.9
PDAR Pinedale Array 123.03 19 PKP PKPdf 11 59 09.8 -0.1
comp=Z,57nm,1.0s,baz=51,slow=1.0,SNR=86
PDAR PKKPbc PKKPbc 12 09 00.3 -2.2
comp=Z,5.8nm,1.0s,baz=148,slow=5.4,SNR=9.8
PDAR SKKPbc 12 12 41.1
comp=Z,4.3nm,1.0s,baz=151,slow=3.4,SNR=3.9
N13A Wendover, West 123.07 23 ⇑P PKPdf 11 59 10.5 +0.5
baz=123,SNR=33
N13A Wendover, West 123.07 23 ePKPdf PKPdf 11 59 10.1 0.0
L16A Fish Haven 123.08 21 ⇑P PKPdf 11 59 10.4 +0.4
baz=123,SNR=16
LBNH Lisbon 123.08 346 ePKIKP PKPdf 11 59 10.1 +0.1
LBNH e 12 00 50.2
LBNH MLR MLR
comp=Z,34μm,22.0s,MS7.0
O11A Cowboy Ranch, 123.10 25 ⇓P PKPdf 11 59 11.0 +0.9
baz=123
SAO San Andreas Ge 123.11 32 ePKIKP PKPdf 11 59 11.1 +0.9
SAO MLR MLR
comp=Z,10μm,22.0s,MS6.4
COWI Conover 123.16 1 ePKPdf PKPdf 11 59 09.3 -0.8
COWI LR LR
comp=Z,38μm,22.0s,MS7.0
P10A Eureka 123.19 26 ⇓P PKPdf 11 59 11.2 +0.9
baz=123
K19A Absolon Red Bu 123.19 18 ⇑P PKPdf 11 59 10.0 -0.2
baz=123,SNR=38
L17A Cokeville 123.19 20 ⇑P PKPdf 11 59 10.3 +0.1
baz=123,SNR=56
M15A Larsen Ranch, 123.21 22 ⇑P PKPdf 11 59 10.2 -0.1
baz=123,SNR=16
RSSD Black Hills 123.28 14 ePKIKP PKPdf 11 59 10.4 +0.1
RSSD MLR MLR
comp=Z,22μm,22.0s,MS6.8
LONY Lake Ozonia 123.30 348 ePKPdf PKPdf 11 59 09.6 -0.8
LONY LR LR
comp=Z,25μm,22.0s,MS6.8
NVAR Mina Array Bea 123.34 28 PKP PKPdf 11 59 11.9 +1.3
comp=Z,64nm,0.7s,baz=305,slow=1.8,SNR=119
NVAR PKKPbc PKKPbc 12 09 00.6 -0.6
comp=Z,7.2nm,1.0s,baz=181,slow=7.4,SNR=8.8
SPUT South Promonto 123.34 22 ePKPdf PKPdf 11 59 11.1 +0.6
O12A Currie 123.36 24 ⇓P PKPdf 11 59 11.3 +0.7
baz=123,SNR=115
HWUT Hardware Ranch 123.39 21 ePKPdf PKPdf 11 59 10.6 -0.1
HWUT LR LR
comp=Z,20μm,21.0s,MS6.7
BGU Big Grassy Mou 123.46 22 ePKPdf PKPdf 11 59 11.2 +0.4
N14A Grayback Hills 123.47 23 ⇑P PKPdf 11 59 11.3 +0.5
baz=123,SNR=49
K20A Yellowstone Ra 123.50 18 ⇓P PKPdf 11 59 10.5 -0.3
baz=123
P11A Circle Ranch, 123.55 25 ⇓P PKPdf 11 59 11.7 +0.7
baz=123,SNR=13
L18A Fontenelle, Gr 123.63 20 ⇑P PKPdf 11 59 11.2 +0.2
baz=123,SNR=32
M16A Huntsville 123.63 21 ⇓P PKPdf 11 59 11.0 -0.1
baz=123
N15A Stansbury Isla 123.68 22 ⇓P PKPdf 11 59 11.5 +0.3
baz=123,SNR=8.3
L19A Farson 123.69 19 ⇑P PKPdf 11 59 11.3 +0.1
baz=123,SNR=30
MLAC Mammoth Lakes 123.73 29 ⇓P PKPdf 11 59 12.7 +1.3
baz=124
PMSA Palmer Station 123.73 192 PFAKE 11 59 20.0 +10
PMSA LR LR
comp=Z,47μm,21.0s,MS7.1
O13A Hicks Ranch, I 123.78 24 ⇑P PKPdf 11 59 12.1 +0.6
baz=124,SNR=14
M17A Scullys Gap (B 123.82 20 ⇑P PKPdf 11 59 11.5 0.0
baz=124,SNR=27
NCB Newcomb 123.85 348 ePKPdf PKPdf 11 59 11.1 -0.3
NCB LR LR
comp=Z,25μm,22.0s,MS6.8
Q10A Clear Creek Ra 123.87 26 ⇑P PKPdf 11 59 12.4 +0.7
baz=124,SNR=9.0
P12A McGill 123.97 25 ⇑P PKPdf 11 59 12.8 +1.0
baz=124,SNR=57
NOQ North Oquirrh 124.03 22 ePKPdf PKPdf 11 59 12.6 +0.7
M18A Lyman 124.07 20 ⇓P PKPdf 11 59 12.1 +0.2
baz=124,SNR=11
N16A Rees Ranch, Co 124.08 21 ⇑P PKPdf 11 59 12.3 +0.3
baz=124,SNR=16
L20A Wamsutter 124.09 18 ⇓P PKPdf 11 59 12.2 +0.2
baz=124,SNR=23
TPH Tonopah 124.12 28 PFAKE 11 59 20.0 +7.9
TPH LR LR
comp=Z,16μm,22.0s,MS6.7
CTU Camp Tracy 124.13 22 ePKPdf PKPdf 11 59 12.3 +0.3
DUG Dugway 124.18 23 ⇓P PKPdf 11 59 12.8 +0.6
baz=124,SNR=52
DUG Dugway 124.18 23 ePKIKP PKPdf 11 59 12.7 +0.5
DUG MLR MLR
comp=Z,18μm,22.0s,MS6.7
DUG Dugway 124.18 23 ePKPdf PKPdf 11 59 12.7 +0.6
DUG LR LR
comp=Z,18μm,22.0s,MS6.7
Q11A Duckwater 124.18 26 ⇓P PKPdf 11 59 13.1 +0.8
baz=124,SNR=22
O15A The Old Anders 124.23 22 ⇓P PKPdf 11 59 13.0 +0.8
baz=124,SNR=11
N17A Moffit Pass 124.24 21 ⇑P PKPdf 11 59 12.7 +0.4
baz=124,SNR=22
M19A Rock Springs 124.29 19 ⇑P PKPdf 11 59 12.5 +0.1
baz=124,SNR=24
JLU Jordanelle 124.32 21 ePKPdf PKPdf 11 59 12.8 +0.3
P13A Bates Ranch, G 124.34 24 ⇓P PKPdf 11 59 13.1 +0.6
baz=124,SNR=32
R10A Warm Springs 124.36 27 ⇑P PKPdf 11 59 13.6 +1.0
baz=124,SNR=23
Q12A Willow Creek R 124.36 25 ⇓P PKPdf 11 59 13.0 +0.4
baz=124,SNR=21
L21A Rawlins 124.42 17 ⇓P PKPdf 11 59 12.7 +0.1
baz=124
TIN Tinemaha 124.48 29 ⇓P PKPdf 11 59 13.9 +1.1
baz=124
S10A Tonopah Range, 124.53 27 ⇑P PKPdf 11 59 13.8 +0.9
baz=124,SNR=66
DAU Daniels Canyon 124.56 21 ePKIKP PKPdf 11 59 13.8 +0.9
RCTC Rector, Farmer 124.58 30 ⇓P PKPdf 11 59 12.9 -0.2
baz=124
N18A Larsen Ranch, 124.60 20 ⇑P PKPdf 11 59 12.9 -0.1
baz=124,SNR=18
P14A Drum Mountains 124.60 23 ⇑P PKPdf 11 59 13.8 +0.8
baz=124,SNR=83
R11A Troy Canyon, C 124.62 26 ⇑P PKPdf 11 59 14.1 +1.0
baz=124,SNR=84
L22A Ellis Ranch, M 124.63 16 ⇑P PKPdf 11 59 13.1 +0.1
baz=124
O16A Springville 124.65 22 ⇓P PKPdf 11 59 13.2 +0.1
baz=124,SNR=13
NLU North Lily Min 124.66 22 ePKPdf PKPdf 11 59 13.0 -0.1
RWWY Rawlins 124.72 17 ePKPdf PKPdf 11 59 13.2 0.0
M21A Separation Pea 124.75 17 ⇓P PKPdf 11 59 13.2 0.0
baz=124
Q13A Wheeler Ranch, 124.77 24 ⇓P PKPdf 11 59 14.2 +0.9
baz=124,SNR=82
MPU Maple Canyon 124.77 22 ePKPdf PKPdf 11 59 14.2 +0.8
N19A John Jarvie Ra 124.84 19 ⇓P PKPdf 11 59 13.2 -0.2
baz=125,SNR=34
P15A Leamington 124.92 23 ⇓P PKPdf 11 59 14.1 +0.4
baz=125,SNR=17
GRAC Grapevine Rang 124.93 28 ⇓P PKPdf 11 59 14.6 +0.9
baz=125
O17A Robinson Place 124.94 21 ⇓P PKPdf 11 59 14.5 +0.9
baz=125
SMMC Simmler 124.97 32 ⇓P PKPdf 11 59 14.6 +0.8
baz=125
ECSD EROS Data Cent 124.99 7 ePKPdf PKPdf 11 59 12.8 -0.8
ECSD LR LR
comp=Z,20μm,22.0s,MS6.7
Q14A Sevier Lake (B 125.04 24 ⇓P PKPdf 11 59 14.9 +1.1
baz=125,SNR=53
CWC Cottonwood Cre 125.04 29 ⇑P PKPdf 11 59 14.3 +0.3
baz=125
R12A Pony Springs, 125.06 25 ⇑P PKPdf 11 59 14.5 +0.6
baz=125,SNR=15
P16A Fountain Green 125.12 22 ⇓P PKPdf 11 59 15.0 +1.0
baz=125,SNR=17
O18A Roosevelt 125.12 20 ⇓P PKPdf 11 59 14.5 +0.5
baz=125,SNR=41
S11A Rachel 125.14 27 ⇓P PKPdf 11 59 15.3 +1.2
baz=125,SNR=58
N20A Spence Gulch, 125.19 19 ⇑P PKPdf 11 59 14.6 +0.5
baz=125,SNR=48
Q15A Fillmore 125.38 23 ⇑P PKPdf 11 59 15.5 +0.9
baz=125,SNR=27
PKM Peak Mountain 125.39 32 ⇓P PKPdf 11 59 15.1 +0.4
baz=125
O19A Miners Draw (B 125.39 20 ⇓P PKPdf 11 59 14.2 -0.3
baz=125,SNR=27
DAC Darwin (Calif) 125.41 29 PFAKE 11 59 30.0 +15
DAC LR LR
comp=Z,15μm,20.0s,MS6.6
R13A O'Grain Ranch, 125.45 25 ⇑P PKPdf 11 59 15.7 +1.0
baz=125,SNR=43
ISA Isabella 125.47 30 ⇓P PKPdf 11 59 15.0 +0.3
baz=125
ISA Isabella 125.47 30 ePKPdf PKPdf 11 59 14.9 +0.1
N21A Black Mountain 125.48 18 ⇓P PKPdf 11 59 14.9 +0.3
baz=125,SNR=39
S12A Delamar Landin 125.56 26 ⇑P PKPdf 11 59 16.3 +1.4
baz=125,SNR=25
TMUT Trail Mountain 125.56 22 ePKPdf PKPdf 11 59 16.2 +1.3
PHWY Pilot Hill 125.57 16 ePKPdf PKPdf 11 59 14.6 -0.3
P17A Butcher Ranch, 125.57 21 ⇓P PKPdf 11 59 15.5 +0.6
baz=125,SNR=17
FURC Furnace Creek, 125.60 28 ⇑P PKPdf 11 59 15.9 +0.9
baz=125,SNR=29
P18A Preston Nutter 125.61 21 ⇓P PKPdf 11 59 15.6 +0.7
baz=125,SNR=62
MPMC Manual Prospec 125.63 29 ⇓P PKPdf 11 59 16.2 +1.1
baz=125,SNR=67
ARVC Arvin 125.71 31 ⇑P PKPdf 11 59 16.0 +0.8
baz=126
R14A James Farms, M 125.73 24 ⇓P PKPdf 11 59 16.2 +1.0
baz=126
N22A Wattenberg Ran 125.76 17 ⇓P PKPdf 11 59 15.5 +0.3
baz=126
SBC Santa Barbara 125.79 32 ⇓P PKPdf 11 59 16.1 +0.6
baz=126
O20A White River Ci 125.83 19 ⇑P PKPdf 11 59 15.5 +0.1
baz=126,SNR=43
MVU Marysvale 125.87 23 PFAKE 11 59 30.0 +15
MVU LR LR
comp=Z,13μm,19.0s,MS6.6
MSU Marysvale 125.88 23 ePKIKP PKPdf 11 59 16.9 +1.4
U10A Ash Meadows, A 125.89 28 ⇓P PKPdf 11 59 17.0 +1.4
baz=126,SNR=25
BINY Binghamton 125.90 349 ePKPdf PKPdf 11 59 15.4 0.0
BINY LR LR
comp=Z,30μm,22.0s,MS6.9
Q16A Castle Valley 125.91 22 ⇑P PKPdf 11 59 16.6 +1.0
baz=126,SNR=26
SRU San Rafael 125.97 21 ⇑P PKPdf 11 59 16.0 +0.3
baz=126,SNR=27
SRU San Rafael 125.97 21 ePKPdf PKPdf 11 59 14.8 -0.9
O21A Pagoda 126.00 18 ⇓P PKPdf 11 59 15.6 -0.1
baz=126,SNR=16
ARUT Antelope Range 126.00 25 ePKIKP PKPdf 11 59 16.5 +0.8
LRMC Laurel Mountai 126.00 30 ⇓P PKPdf 11 59 16.8 +1.0
baz=126,SNR=29
S13A Holt Ranch, En 126.00 25 ⇓P PKPdf 11 59 17.0 +1.2
baz=126,SNR=48
P19A Cripple Cowboy 126.04 20 ⇓P PKPdf 11 59 16.2 +0.4
baz=126,SNR=44
R15A Junction 126.10 23 ⇓P PKPdf 11 59 17.5 +1.5
baz=126,SNR=33
Q18A Rafter H Ranch 126.12 21 ⇓P PKPdf 11 59 16.2 +0.3
baz=126,SNR=49
S14A Cedar City 126.14 25 ⇓P PKPdf 11 59 17.2 +1.2
baz=126,SNR=36
OSI Osito Adit 126.17 31 ⇑P PKPdf 11 59 16.8 +0.6
baz=126
BSC Santa Cruz Isl 126.18 33 ⇓P PKPdf 11 59 16.7 +0.5
baz=126
CCUT Cedar City 126.23 25 ePKPdf PKPdf 11 59 17.4 +1.2
U11A Corn Creek 126.31 27 ⇓P PKPdf 11 59 17.7 +1.3
baz=126,SNR=12
JFWS Jewell Farm 126.32 2 ePKIKP PKPdf 11 59 15.3 -0.9
JFWS MLR MLR
comp=Z,27μm,20.0s,MS6.9
EDW2 Edwards Air Fo 126.33 31 ⇓P PKPdf 11 59 17.4 +0.9
baz=126,SNR=17
SHOC Shoshone 126.33 28 ⇓P PKPdf 11 59 17.5 +1.0
baz=126,SNR=10
R16A Teasdale 126.34 23 ⇑P PKPdf 11 59 17.5 +1.1
baz=126,SNR=71
P20A De Beque 126.35 19 ⇑P PKPdf 11 59 16.4 0.0
baz=126,SNR=29
BLG Laguna Peak 126.39 32 ⇓P PKPdf 11 59 16.9 +0.3
baz=126
T13A Saint George 126.46 26 ⇓P PKPdf 11 59 17.8 +1.2
baz=126,SNR=28
R17A Hanksville Air 126.52 22 ⇓P PKPdf 11 59 17.2 +0.5
baz=126,SNR=53
S15A Panguitch 126.53 24 ⇓P PKPdf 11 59 18.3 +1.6
baz=126,SNR=25
Q19A Hogan Spring (126.55 20 ⇑P PKPdf 11 59 17.2 +0.4
baz=126,SNR=52
GSC Goldstone 126.57 29 ⇑P PKPdf 11 59 17.6 +0.6
baz=126,SNR=35
GSC Goldstone 126.57 29 ePKPdf PKPdf 11 59 17.8 +0.9
ERPA Erie 126.62 352 ePKPdf PKPdf 11 59 16.2 -0.6
ERPA LR LR
comp=Z,50μm,22.0s,MS7.2
P21A Newcastle 126.63 19 ⇑P PKPdf 11 59 17.1 +0.2
baz=126,SNR=21
DECC Green Verdugo 126.66 31 ⇑P PKPdf 11 59 17.3 +0.2
baz=126
U12A Valley of Fire 126.68 27 ⇑P PKPdf 11 59 18.0 +1.0
baz=126,SNR=24
OGNE Ogallala 126.75 13 ePKPdf PKPdf 11 59 16.7 -0.4
OGNE LR LR
comp=Z,29μm,22.0s,MS6.9
T14A Hurricane 126.77 25 ⇓P PKPdf 11 59 18.7 +1.5
baz=126,SNR=42
V11A Goodsprings 126.78 28 ⇑P PKPdf 11 59 18.2 +0.9
baz=126,SNR=19
PASC Pasadena Art C 126.79 31 ePKPdf PKPdf 11 59 18.4 +1.1
S16A Weppner Ranch, 126.79 23 ⇓P PKPdf 11 59 18.0 +0.7
baz=126,SNR=61
AAM Ann Arbor 126.81 356 ePKIKP PKPdf 11 59 17.0 -0.1
AAM MLR MLR
comp=Z,36μm,21.0s,MS7.0
SNCC San Nicolas Is 126.81 33 ⇓P PKPdf 11 59 18.1 +0.6
baz=127
SNCC San Nicolas Is 126.81 33 ePKPdf PKPdf 11 59 19.0 +1.5
MWC Mount Wilson 126.81 31 ePKIKP PKPdf 11 59 14.9 -2.5
RRX Edison Barstow 126.82 30 ⇑P PKPdf 11 59 18.3 +0.9
baz=127
R18A Canyonlands Na 126.84 21 ⇑P PKPdf 11 59 17.8 +0.5
baz=127
TUQ Turquoise Moun 126.88 28 ⇓P PKPdf 11 59 18.7 +1.2
baz=127,SNR=35
Q20A Ridgley Place, 126.88 20 ⇓P PKPdf 11 59 17.5 +0.2
baz=127,SNR=30
ISCO Idaho Springs 126.93 17 ePKIKP PKPdf 11 59 16.8 -0.7
ISCO MLR MLR
comp=Z,26μm,22.0s,MS6.9
U13A Pakoon Wash 126.94 26 ⇓P PKPdf 11 59 18.6 +1.0
baz=127,SNR=26
BFSC Mount Baldy Ra 127.00 31 ⇑P PKPdf 11 59 18.3 +0.5
baz=127,SNR=24
T15A Red Dirt Ranch 127.09 24 ⇓P PKPdf 11 59 18.3 +0.4
baz=127,SNR=33
FMP Fort Macarthur 127.09 32 ⇓P PKPdf 11 59 18.5 +0.5
baz=127
SMCO Snowmass 127.10 18 ePKPdf PKPdf 11 59 18.5 +0.7
V12A Nelson 127.13 27 ⇑P PKPdf 11 59 19.3 +1.3
baz=127,SNR=22
R19A Curley Farm, L 127.15 21 ⇑P PKPdf 11 59 18.6 +0.7
baz=127,SNR=30
SCIA State Center 127.16 5 ePKPdf PKPdf 11 59 17.6 -0.2
SCIA LR LR
comp=Z,31μm,19.0s,MS7.0
S17A Black Ridge (B 127.17 23 ⇑P PKPdf 11 59 18.5 +0.5
baz=127,SNR=36
HEC Hector,Ludlow 127.18 29 ⇓P PKPdf 11 59 19.6 +1.5
baz=127,SNR=13

PV04 Paradox Valley 127.18 20 ePKPdf PKPdf 11 59 16.9 -1.1
Q21A Lamborn Mesa, 127.22 19 ⇓P PKPdf 11 59 18.5 +0.5
baz=127
U14A Mt Trumbull 127.28 25 ⇓P PKPdf 11 59 19.6 +1.4
baz=127,SNR=19
CIS Catalina Islan 127.28 32 ⇑P PKPdf 11 59 18.7 +0.4
baz=127
BBRC Big Bear Solar 127.35 30 ⇑P PKPdf 11 59 19.6 +1.1
baz=127,SNR=22
Q22A Crested Butte, 127.41 18 ⇓P PKPdf 11 59 19.1 +0.7
baz=127,SNR=22
V13A Grand Canyon W 127.41 26 ⇑P PKPdf 11 59 19.8 +1.3
baz=127,SNR=62
S18A Hurst Farm, Bl 127.42 22 ⇑P PKPdf 11 59 19.0 +0.6
baz=127,SNR=29
T16A Glen Canyon Da 127.47 24 ⇑P PKPdf 11 59 19.3 +0.7
baz=127,SNR=36
W12A Cal Nev Ari 127.47 28 ⇓P PKPdf 11 59 19.4 +0.8
baz=127
SCI San Clemente I 127.54 32 ⇑P PKPdf 11 59 19.4 +0.6
baz=127
GMRC Granite Mounta 127.54 29 ⇓P PKPdf 11 59 20.2 +1.4
baz=127,SNR=25
R20A Redvale 127.54 20 ⇓P PKPdf 11 59 19.4 +0.7
baz=127,SNR=9.1
LDFC Landfair 127.55 28 ePKPdf PKPdf 11 59 19.9 +1.2
U15A North Rim 127.64 25 ⇓P PKPdf 11 59 20.6 +1.7
baz=127,SNR=14
R21A Cimarron 127.66 19 ⇓P PKPdf 11 59 19.5 +0.7
baz=127,SNR=21
S19A Harvey Farm, M 127.68 21 ⇓P PKPdf 11 59 19.2 +0.2
baz=127,SNR=27
T17A Navajo Res., N 127.73 23 ⇓P PKPdf 11 59 19.9 +0.8
baz=128,SNR=66
MURC Murrieta 127.74 31 ⇑P PKPdf 11 59 20.0 +0.8
baz=128,SNR=23
SSPA Standing Stone 127.76 350 ePKPdf PKPdf 11 59 18.4 -0.6
SSPA LR LR
comp=Z,19μm,19.0s,MS6.8
T18A Mexican Hat 127.96 22 ⇓P PKPdf 11 59 20.1 +0.6
baz=128,SNR=41
V14A Boquillas Ranc 127.97 26 ⇑P PKPdf 11 59 21.1 +1.5
baz=128,SNR=22
BELC Belle Mtn. Jos 128.01 29 ⇑P PKPdf 11 59 20.9 +1.2
baz=128,SNR=18
NEE2 Needles Airpor 128.03 28 ⇓P PKPdf 11 59 20.4 +0.7
baz=128
R22A Saguache, Gunn 128.03 19 ⇑P PKPdf 11 59 20.7 +1.1
baz=128,SNR=35
W13A Hualapai Mount 128.09 27 ⇓P PKPdf 11 59 21.5 +1.7
baz=128,SNR=36
RCBR Riachuelo 128.10 271 ePKPdf PKPdf 11 59 21.1 +0.7
RCBR LR LR
comp=Z,16μm,19.0s,MS6.7
PFO Pinyon Flat Ob 128.10 30 ⇓P PKPdf 11 59 21.0 +1.1
baz=128,SNR=10
PFO Pinyon Flat Ob 128.10 30 PFAKE 11 59 30.0 +10
PFO LR LR
comp=Z,10μm,20.0s,MS6.5
U17A Shonto 128.13 23 ⇓P PKPdf 11 59 21.7 +1.8
baz=128,SNR=62
V15A Kaibab Nationa 128.21 25 ⇑P PKPdf 11 59 21.7 +1.7
baz=128,SNR=16
S21A Coal Bank Pass 128.22 20 ⇓P PKPdf 11 59 21.2 +1.2
baz=128,SNR=23
IRM Iron Mountain 128.29 29 ⇓P PKPdf 11 59 21.7 +1.5
baz=128,SNR=28
W14A Seligman 128.34 26 ⇑P PKPdf 11 59 22.1 +1.8
baz=128,SNR=32
109C Camp Elliot, M 128.35 31 ⇓P PKPdf 11 59 21.1 +0.7
baz=128
MVCO Mesa Verde 128.38 21 ⇓P PKPdf 11 59 21.2 +0.9
baz=128,SNR=18
MVCO Mesa Verde 128.38 21 ePKPdf PKPdf 11 59 21.5 +1.2
MVCO LR LR
comp=Z,17μm,19.0s,MS6.8
T19A Beclabito 128.54 21 ⇑P PKPdf 11 59 21.3 +0.7
baz=128,SNR=36
BC3 Big Chuckawall 128.56 29 ⇑P PKPdf 11 59 22.2 +1.5
baz=128,SNR=16
U18A Rough Rock, Ch 128.59 22 ⇓P PKPdf 11 59 22.4 +1.7
baz=128,SNR=52
PDMCI Parker Dam,Lak 128.64 28 ⇓P PKPdf 11 59 22.1 +1.2
baz=128,SNR=23
HDIL Hopedale 128.70 1 ePKPdf PKPdf 11 59 20.6 -0.2
HDIL LR LR
comp=Z,34μm,20.0s,MS7.0
MONP Monument Peak 128.70 31 ⇑P PKPdf 11 59 22.8 +1.8
baz=128,SNR=16
W15A Williams 128.72 25 ⇑P PKPdf 11 59 22.7 +1.7
baz=128,SNR=21
BAR Barrett 128.74 31 ePKPdf PKPdf 11 59 21.8 +0.7
TAOE Nuku Hiva Isla 128.79 93 ePKiKP PKiKP 11 59 21.2 -1.1
comp=Z,310nm,1.3s
TAOE Nuku Hiva Isla 128.79 93 ePP PP 12 01 28.4 -0.1
TAOE comp=Z,3μm,24.2s eSS SS 12 18 39.5 -6.5
TAOE comp=Z,8μm,28.3s eLQ 12 34 20.0
TAOE comp=Z,9μm,27.6s eLR LR 12 39 52.5
comp=Z,24μm,37.6s
WUAZ Wupatki 128.80 24 ⇓P PKPdf 11 59 22.3 +1.1
baz=129,SNR=14
WUAZ Wupatki 128.80 24 PFAKE 11 59 30.0 +8.8
WUAZ LR LR
comp=Z,11μm,20.0s,MS6.6
ACSO Alum Creek Sta 128.81 355 ePKPdf PKPdf 11 59 21.2 +0.1
ACSO LR LR
comp=Z,27μm,21.0s,MS6.9
SDCO Great Sand Dun 128.86 18 ePKPdf PKPdf 11 59 21.9 +0.7
SDCO LR LR
comp=Z,29μm,19.0s,MS7.0
T21A Navajo Lake 128.91 20 ⇑P PKPdf 11 59 22.4 +1.1
baz=129,SNR=26
Y12C Blythe 128.92 28 ⇑P PKPdf 11 59 22.8 +1.3
baz=129,SNR=14
V17A Tonalea, Kykot 128.94 24 ⇑P PKPdf 11 59 22.6 +1.2
baz=129,SNR=14
U19A Dine' College, 128.95 22 ⇑P PKPdf 11 59 22.2 +0.8
baz=129,SNR=36
SWSC Sam W. Stewart 128.97 30 ⇑P PKPdf 11 59 22.9 +1.3
baz=129,SNR=12
MCWV Mont Chateau 129.02 352 ePKPdf PKPdf 11 59 21.5 +0.1
MCWV LR LR
comp=Z,68μm,22.0s,MS7.3
DVTC Desert V Tower 129.04 31 ⇓P PKPdf 11 59 22.8 +1.1
baz=129,SNR=8.3
X14A Yava 129.06 26 ⇑P PKPdf 11 59 23.3 +1.6
baz=129,SNR=38
W16A Flagstaff 129.10 25 ⇑P PKPdf 11 59 22.9 +1.2
baz=129,SNR=20
T22A Edith 129.10 19 ⇓P PKPdf 11 59 22.7 +1.0
baz=129,SNR=20
U20A Newcomb 129.12 21 ⇓P PKPdf 11 59 22.7 +1.0
baz=129,SNR=29
Y13A Salome 129.19 28 ⇑P PKPdf 11 59 23.5 +1.6
baz=129,SNR=25
V18A Ganado 129.19 23 ⇓P PKPdf 11 59 23.3 +1.4
baz=129,SNR=22
CBKS Cedar Bluff 129.28 12 ePKIKP PKPdf 11 59 22.2 +0.2
CBKS MLR MLR
comp=Z,22μm,19.0s,MS6.9
GLA Glamis 129.35 29 ⇑P PKPdf 11 59 23.5 +1.2
baz=129,SNR=23
GLA Glamis 129.35 29 ePKPdf PKPdf 11 59 22.3 0.0
U21A Nageezi 129.38 20 ⇑P PKPdf 11 59 23.3 +1.0
baz=129,SNR=37
W17A Winslow 129.44 24 ⇑P PKPdf 11 59 23.4 +1.0
baz=129,SNR=9.6
Y14A Wickenburg 129.45 27 ⇓P PKPdf 11 59 23.6 +1.1
baz=129,SNR=29
V19A Window Rock 129.53 22 ⇓P PKPdf 11 59 24.0 +1.5
baz=129,SNR=37
KSU1 Kansas State U 129.54 9 ePKPdf PKPdf 11 59 22.5 0.0
KSU1 LR LR
comp=Z,34μm,19.0s,MS7.1
V20A Brimhall 129.66 21 ⇑P PKPdf 11 59 23.6 +0.8
baz=129,SNR=44
U22A Llaves 129.69 20 ⇓P PKPdf 11 59 24.2 +1.3
baz=129,SNR=29
X16A Lo Mia Camp, P 129.72 25 ⇓P PKPdf 11 59 24.5 +1.6
baz=130,SNR=8.2
Y15A Casa Rosa Ranc 129.74 26 ⇓P PKPdf 11 59 24.3 +1.3
baz=130,SNR=65
T25A Trinidad 129.75 17 ⇑P PKPdf 11 59 23.4 +0.5
baz=130,SNR=28
Z13A Yuma Proving G 129.78 28 ⇓P PKPdf 11 59 24.5 +1.4
baz=130,SNR=20
W18A Petrified Fore 129.79 23 ⇑P PKPdf 11 59 24.5 +1.5
baz=130,SNR=12
112A Yuma 129.89 29 ⇓P PKPdf 11 59 23.9 +0.6
baz=130
W19A Sanders 129.93 23 ⇓P PKPdf 11 59 24.1 +0.8
baz=130,SNR=18
V21A Milan 129.95 21 ⇑P PKPdf 11 59 24.3 +1.0
baz=130,SNR=17
U23A El Rito 129.95 19 ⇓P PKPdf 11 59 24.5 +1.2
baz=130,SNR=16
Z14A Wintersburg 129.96 27 ⇓P PKPdf 11 59 24.8 +1.4
baz=130,SNR=34
CBN Corbin 130.03 349 ePKPdf PKPdf 11 59 25.0 +1.6
CBN LR LR
comp=Z,37μm,22.0s,MS7.0
X17A Forest Lakes 130.05 25 ⇓P PKPdf 11 59 25.3 +1.7
baz=130,SNR=16
BLO Bloomington 130.07 358 ePKIKP PKPdf 11 59 23.0 -0.5
113A Mohawk Valley, 130.09 28 ⇑P PKPdf 11 59 24.5 +0.8
baz=130,SNR=16
Y16A Circle Bar Ran 130.16 26 ⇑P PKPdf 11 59 25.1 +1.2
baz=130
U24A Moreno Valley 130.17 18 ⇓P PKPdf 11 59 24.8 +1.1
baz=130,SNR=7.4
X18A Snowflake 130.23 24 ⇑P PKPdf 11 59 25.1 +1.2
baz=130,SNR=14
W20A Ramah 130.25 22 ⇑P PKPdf 11 59 25.1 +1.2
baz=130,SNR=22
Z15A Gila River Ind 130.38 27 ⇑P PKPdf 11 59 25.0 +0.8
baz=130
U25A Circle Dot Ran 130.43 17 ⇓P PKPdf 11 59 25.1 +0.8
baz=130,SNR=24
V23A Ortiz Mt. (NFS 130.49 19 ⇑P PKPdf 11 59 26.0 +1.6
baz=130,SNR=22
114A Black Gap (USA 130.51 28 ⇓P PKPdf 11 59 25.9 +1.4
baz=130,SNR=15
OLIL Olney 130.53 360 ePKPdf PKPdf 11 59 24.4 +0.1
W21A San Fidel 130.56 21 ⇓P PKPdf 11 59 26.0 +1.5
baz=130,SNR=20
X19A St. Johns 130.57 23 ⇓P PKPdf 11 59 25.9 +1.3
baz=130,SNR=13
SLM Saint Louis 130.59 2 ePKIKP PKPdf 11 59 24.5 0.0
Y17A Roosevelt 130.59 25 ⇑P PKPdf 11 59 26.0 +1.4
baz=130,SNR=27
U26A Atchley Ranch, 130.63 17 ⇑P PKPdf 11 59 24.6 0.0
baz=130
Z16A Peralta Trail, 130.65 26 ⇑P PKPdf 11 59 25.7 +0.9
baz=130
X20A Quemado 130.77 22 ⇓P PKPdf 11 59 26.4 +1.4
baz=130,SNR=18
Y18A Canyon Day Jun 130.85 24 ⇓P PKPdf 11 59 26.3 +1.2
baz=131,SNR=13
W22A Albuquerque 130.88 20 ⇓P PKPdf 11 59 26.3 +1.2
baz=131
V25A Rancho No Teng 130.90 18 ⇑P PKPdf 11 59 25.6 +0.5
baz=131,SNR=18
Y19A Nutrioso 131.00 23 ⇓P PKPdf 11 59 26.7 +1.3
baz=131,SNR=7.1
WCI Wyandotte Cave 131.00 358 ePKIKP PKPdf 11 59 25.1 -0.2
WCI MLR MLR
comp=Z,23μm,22.0s,MS6.8
W23A Werner Place, 131.04 20 ⇓P PKPdf 11 59 26.3 +0.9
baz=131,SNR=12
Z17A San Carlos Hig 131.09 25 ⇓P PKPdf 11 59 27.3 +1.7
baz=131,SNR=15
X21A Alamocita Cree 131.12 22 ⇓P PKPdf 11 59 26.9 +1.3
baz=131,SNR=17
CCM Cathedral Cave 131.12 3 PFAKE 11 59 40.0 +15
CCM LR LR
comp=Z,30μm,20.0s,MS7.0
ANMO Albuquerque 131.12 20 PFAKE 11 59 40.0 +14
ANMO LR LR
comp=Z,22μm,20.0s,MS6.9
V26A Tequesquite Ra 131.18 17 ⇑P PKPdf 11 59 25.4 -0.3
baz=131,SNR=6.5
116A Eloy 131.19 27 ⇓P PKPdf 11 59 26.7 +0.9
baz=131
214A Organ Pipe Nat 131.21 28 ⇓P PKPdf 11 59 26.9 +1.1
baz=131,SNR=11
W24A Lazy 6 Ranch, 131.23 19 ⇑P PKPdf 11 59 26.9 +1.1
baz=131,SNR=24
FVM French Village 131.23 2 ePKIKP PKPdf 11 59 24.2 -1.5
USIN University of 131.30 359 ePKPdf PKPdf 11 59 26.6 +0.8
X22A Bernardo 131.34 21 ⇓P PKPdf 11 59 27.6 +1.6
baz=131,SNR=8.3
Y20A Horse Springs, 131.38 23 ⇑P PKPdf 11 59 27.3 +1.2
baz=131,SNR=11
BBSR BB Station 131.39 333 ePKPdf PKPdf 11 59 26.5 +0.4
BBSR LR LR
comp=Z,9μm,20.0s,MS6.5
Z18A Geronimo 131.45 25 ⇓P PKPdf 11 59 27.6 +1.3
baz=131,SNR=6.6
BLA Blacksburg 131.50 352 ePKIKP PKPdf 11 59 27.3 +1.1
BLA MLR MLR
comp=Z,58μm,22.0s,MS7.2
W25A X Bar L Ranch, 131.52 18 ⇑P PKPdf 11 59 26.8 +0.4
baz=131,SNR=12
ELN Prospectdale 131.53 352 ePKPdf PKPdf 11 59 25.7 -0.6
SIUC Southern Illin 131.54 1 ePKPdf PKPdf 11 59 26.0 -0.3
Y21A Point of Rocks 131.55 22 ⇑P PKPdf 11 59 27.7 +1.2
baz=131,SNR=5.9
X23A Hourglass Bar 131.55 20 ⇑P PKPdf 11 59 27.5 +1.1
baz=131,SNR=14
Z19A T-Link Ranch, 131.58 24 ⇑P PKPdf 11 59 27.7 +1.2
baz=131
117A Oracle 131.60 26 ⇓P PKPdf 11 59 27.8 +1.2
baz=131,SNR=24
Y22D IRIS PASSCAL I 131.76 21 ⇓P PKPdf 11 59 28.2 +1.4
baz=132,SNR=8.3
216A Three Points, 131.78 27 ⇑P PKPdf 11 59 28.0 +1.1
baz=132
TUC Tucson 131.81 26 PFAKE 11 59 40.0 +13
TUC LR LR
comp=Z,11μm,21.0s,MS6.5
X24A Lazy VL Ranch, 131.82 19 ⇓P PKPdf 11 59 27.6 +0.7
baz=132,SNR=23
W26A Owens Ranch, T 131.84 17 ⇑P PKPdf 11 59 27.4 +0.4
baz=132,SNR=10
118A Homack Ranch, 131.87 25 ⇓P PKPdf 11 59 28.1 +1.1
baz=132
Y22A Socorro 131.87 21 ⇓P PKPdf 11 59 28.0 +0.9
baz=132,SNR=27
Z20A Nine Sixteen R 132.00 23 ⇓P PKPdf 11 59 28.8 +1.5
baz=132,SNR=8.5
119A Ashpeak Ranch, 132.03 24 ⇓P PKPdf 11 59 28.3 +1.0
baz=132
W27A Bowe Ranch, En 132.07 17 ⇓P PKPdf 11 59 27.6 +0.3
baz=132,SNR=18
X25A Clemmons Ranch 132.09 18 ⇑P PKPdf 11 59 27.6 +0.2
baz=132,SNR=20
Z21A St. Cloud Mine 132.18 22 ⇑P PKPdf 11 59 28.7 +1.0
baz=132,SNR=9.1
Y23A Lovelace Mesa, 132.19 20 ⇓P PKPdf 11 59 28.3 +0.7
baz=132,SNR=30
X26A CR and CF Fran 132.33 18 ⇓P PKPdf 11 59 28.2 +0.3
baz=132,SNR=25
Y24A Capitan 132.40 20 ⇑P PKPdf 11 59 28.7 +0.6
baz=132,SNR=13
218A Dragoon 132.41 25 ⇑P PKPdf 11 59 29.0 +0.9
baz=132
X27A F and S Farms, 132.45 17 ⇑P PKPdf 11 59 28.4 +0.3
baz=132,SNR=7.5
Z22A Elephant Butte 132.49 21 ⇑P PKPdf 11 59 28.6 +0.4
baz=132,SNR=24
120A U Bar Ranch, L 132.49 24 ⇓P PKPdf 11 59 29.5 +1.2
baz=132,SNR=13
PARMO Parma 132.57 2 ePKPdf PKPdf 11 59 28.8 +0.5
AMTX Amarillo 132.61 15 ePKPdf PKPdf 11 59 22.9 -5.5
AMTX LR LR
comp=Z,28μm,21.0s,MS6.9
Y25A Mesa, Roswell 132.64 19 ⇑P PKPdf 11 59 28.8 +0.3
baz=132,SNR=36
219A White Tail Can 132.72 25 ⇑P PKPdf 11 59 29.6 +0.9
baz=132,SNR=18
Z23A Rita Site, Whi 132.74 21 ⇑P PKPdf 11 59 29.6 +0.9
baz=132,SNR=14
121A Cookes Peak, D 132.83 23 ⇑P PKPdf 11 59 29.9 +1.1
baz=133,SNR=20
318A Bisbee 132.90 26 ⇑P PKPdf 11 59 30.0 +0.9
baz=133
Y26A Elida 132.91 18 ⇑P PKPdf 11 59 29.4 +0.5
baz=133,SNR=18
UTMT University of 132.91 1 ePKPdf PKPdf 11 59 28.1 -0.9
Z24A Sheeppen Canyo 132.97 20 ⇑P PKPdf 11 59 30.1 +1.0
baz=133
122A Conniff Cattle 132.97 22 ⇓P PKPdf 11 59 30.2 +1.1
baz=133,SNR=9.2
GLAT Glass 132.98 1 ePKPdf PKPdf 11 59 29.6 +0.5
CNNC Cliffs of the 133.00 348 PFAKE 11 59 40.0 +11
CNNC LR LR
comp=Z,25μm,22.0s,MS6.9
220A Playas Peak, P 133.10 24 ⇑P PKPdf 11 59 30.4 +1.0
baz=133
WVT Waverly 133.13 360 PFAKE 11 59 40.0 +11
WVT LR LR
comp=Z,29μm,19.0s,MS7.0
Y27A Causey 133.14 17 ⇓P PKPdf 11 59 29.7 +0.2
baz=133,SNR=9.2
MSTX Muleshoe 133.18 17 ⇑P PKPdf 11 59 29.5 0.0
baz=133,SNR=17
Z25A Roswell 133.23 19 ⇓P PKPdf 11 59 30.5 +0.8
baz=133,SNR=26
319A Douglas 133.25 25 ⇓P PKPdf 11 59 30.9 +1.1
baz=133
GNAR Gosnell 133.26 2 ePKPdf PKPdf 11 59 29.3 -0.3
123A Bell Site, Whi 133.30 21 ⇓P PKPdf 11 59 30.7 +0.9
baz=133
221A Mesquite Ranch 133.30 23 ⇑P PKPdf 11 59 31.0 +1.2
baz=133,SNR=11
WMOK Wichita Mounta 133.42 12 PFAKE 11 59 40.0 +10
WMOK LR LR
comp=Z,20μm,21.0s,MS6.8
222A Williams Famil 133.47 22 ⇓P PKPdf 11 59 30.9 +0.8
baz=133
Z26A Caprock 133.47 18 ⇓P PKPdf 11 59 30.1 0.0
baz=133,SNR=31
124A Stringfield Ra 133.52 20 ⇓P PKPdf 11 59 31.2 +1.0
baz=133,SNR=22
HBAR Harrisburg 133.64 3 ePKPdf PKPdf 11 59 30.8 +0.5
Z27A Tatum 133.66 17 ⇓P PKPdf 11 59 30.8 +0.4
baz=133,SNR=27
CPRX Cap Rock 133.73 18 ePKPdf PKPdf 11 59 31.2 +0.6
223A Chaparral, Ant 133.80 22 ⇓P PKPdf 11 59 31.4 +0.7
baz=134
125A Gardner Draw, 133.82 19 ⇓P PKPdf 11 59 31.2 +0.5
baz=134,SNR=21
RKT Rikitea 133.84 111 ePKiKP PKiKP 11 59 30.7 -1.6
comp=Z,36nm,0.9s
RKT Rikitea 133.84 111 ePP PP 12 01 55.2 -5.6
RKT comp=Z,5μm,27.5s eSS SS 12 19 40.1 -7.0
RKT comp=Z,9μm,35.2s eLR LR 12 42 12.9
comp=Z,18μm,29.2s
SWET Sewanee 133.99 357 ePKPdf PKPdf 11 59 30.6 -0.4
126A Clayton Basin, 134.03 19 ⇑P PKPdf 11 59 31.2 +0.1
baz=134,SNR=16
127A Arkansas Junct 134.21 18 ⇓P PKPdf 11 59 31.8 +0.3
baz=134,SNR=21
225A Deer Hill, Car 134.27 20 ⇑P PKPdf 11 59 32.0 +0.4
baz=134
UALR University of 134.31 5 ePKPdf PKPdf 11 59 32.0 +0.4
MIAR Mount Ida 134.42 6 PFAKE 11 59 40.0 +8.2
MIAR LR LR
comp=Z,30μm,20.0s,MS7.0
CLNB Carlsbad 134.43 19 ePKPdf PKPdf 11 59 32.4 +0.5
MNTX Cornudas Mount 134.45 21 PFAKE 11 59 40.0 +8.0
MNTX LR LR
comp=Z,15μm,19.0s,MS6.7
JSC Jenkinsville 134.50 352 ePKIKP PKPdf 11 59 32.0 0.0
226A Malaga, Loving 134.55 19 ⇑P PKPdf 11 59 32.3 +0.2
baz=134,SNR=14
324A Moseley Ranch, 134.65 21 ⇑P PKPdf 11 59 32.8 +0.5
baz=134,SNR=14
OXF Oxford 134.73 1 ePKIKP PKPdf 11 59 32.8 +0.4
OXF MLR MLR
comp=Z,36μm,20.0s,MS7.1
227A Bennet, Jal 134.85 18 ⇓P PKPdf 11 59 32.9 +0.2
baz=135,SNR=15
325A Bean Ranch, Si 134.90 20 ⇑P PKPdf 11 59 33.0 +0.2
baz=135,SNR=11
326A Caldwell Ranch 135.28 19 ⇓P PKPdf 11 59 33.6 +0.1
baz=135,SNR=6.3
327A Balmorhea Ranc 135.38 19 ⇑P PKPdf 11 59 33.9 +0.2
baz=135
425A Indio Mountain 135.42 21 ⇑P PKPdf 11 59 33.8 0.0
baz=135,SNR=13
NHSC New Hope 135.49 350 ePKPdf PKPdf 11 59 33.2 -0.7
NHSC LR LR
comp=Z,29μm,20.0s,MS7.0
328A Wristen Ranch, 135.58 18 ⇓P PKPdf 11 59 34.0 -0.1
baz=135,SNR=7.0
GOGA Godfrey 135.62 354 PFAKE 11 59 50.0 +16
GOGA LR LR
comp=Z,38μm,22.0s,MS7.1
426A McDonald Obser 135.86 20 ⇑P PKPdf 11 59 35.2 +0.6
baz=136,SNR=9.8
427A Hayter Ranch, 135.89 19 ⇑P PKPdf 11 59 35.4 +0.7
baz=136,SNR=18
LRAL Lakeview Retre 136.20 359 PFAKE 11 59 50.0 +15
LRAL LR LR
comp=Z,29μm,19.0s,MS7.0
428A Kincaid Ranch, 136.23 18 ⇑P PKPdf 11 59 36.3 +1.0
baz=136,SNR=15
526A Mary Lane Ranc 136.39 20 ⇓P PKPdf 11 59 36.1 +0.5
baz=136,SNR=11
527A Woodward Ranch 136.48 20 ⇓P PKPdf 11 59 36.1 +0.4
baz=136,SNR=13
528A Cox Ranch, San 136.73 19 ⇑P PKPdf 11 59 36.8 +0.6
baz=136,SNR=12
626A Big Bend Ranch 136.84 21 ⇑P PKPdf 11 59 36.3 -0.2
baz=137,SNR=14
VBMS Vicksburg 136.97 3 ePKPdf PKPdf 11 59 31.3 -5.3
VBMS LR LR
comp=Z,33μm,21.0s,MS7.0
NATX Nacogdoches 137.03 8 ePKPdf PKPdf 11 59 36.9 +0.2
NATX LR LR
comp=Z,28μm,22.0s,MS7.0
TXAR Lajitas Array 137.21 20 PKhKP PKPpre 11 59 28.4
comp=Z,5.2nm,0.5s,baz=320,slow=1.8,SNR=21
TXAR PKP PKPdf 11 59 37.3 +0.2
comp=Z,40nm,0.9s,baz=270,slow=0.7,SNR=38
TXAR Lajitas Array 137.21 20 PKP PKPdf 11 59 37.3 +0.2
JCT Junction City 137.27 15 PFAKE 11 59 50.0 +13
JCT LR LR
comp=Z,25μm,20.0s,MS6.9
628A Black Gap, Mar 137.32 19 ⇑P PKPdf 11 59 37.8 +0.4
baz=137,SNR=12
BRAL Brewton 138.22 359 ePKPdf PKPdf 11 59 34.5 -4.5
BRAL LR LR
comp=Z,35μm,20.0s,MS7.1
HKT Hockley 138.63 10 ePKIKP PKPdf 11 59 37.9 -1.9
HKT MLR MLR
comp=Z,24μm,20.0s,MS6.9
SPB Sao Paulo 139.29 247 PFAKE 11 59 50.0 +8.9
SPB LR LR
comp=Z,24μm,19.0s,MS7.0
KVTX Kingsville 140.54 14 ePKPdf PKPdf 11 59 41.8 -1.5
KVTX LR LR
comp=Z,17μm,20.0s,MS6.8
DWPF Disney 140.58 351 ePKPdf PKPdf 11 59 44.5 +1.2
DWPF LR LR
comp=Z,21μm,22.0s,MS6.8
ANWB Willy Bob 141.40 317 ePKPdf PKPdf 11 59 45.1 0.0
ANWB LR LR
comp=Z,9μm,20.0s,MS6.5
ANWB Willy Bob 141.40 317 eP PKPdf 11 59 40.5 -4.6
BBGH Gun Hill 142.84 309 PFAKE 12 00 00.0 +12
BBGH LR LR
comp=Z,15μm,20.0s,MS6.8
FDF Fort de France 142.99 313 ePKIKP PKPdf 11 59 45.0 -2.9
FDF MLR MLR
comp=Z,10μm,20.0s,MS6.6
MTP Monte Pirata 143.48 322 eP PKPdf 11 59 45.5 -3.3
CBYP Canovanas 143.53 323 eP PKPdf 11 59 45.2 -3.6
GRTK Grand Turk 143.62 333 ePKPdf PKPdf 11 59 46.6 -2.4
GRTK LR LR
comp=Z,15μm,21.0s,MS6.8
GRTK Grand Turk 143.62 333 eP PKPdf 11 59 46.1 -2.9
SJG San Juan 143.83 323 ePKIKP PKPdf 11 59 46.5 -2.9
SJG MLR MLR
comp=Z,12μm,22.0s
AGPR Aguadilla, PR 144.11 324 ePKPdf PKPdf 11 59 47.5 -2.3
ICM Isla Caja Muer 144.22 323 ePKPdf PKPdf 11 59 48.1 -1.9
TRQA Tornquist 144.28 217 ePKPdf PKPdf 11 59 47.5 -2.1
TRQA LR LR
comp=Z,27μm,19.0s,MS7.0
CRPR Cabo Rojo, PR 144.47 324 ePKPdf PKPdf 11 59 48.8 -1.7
GRGR Grenville 145.06 310 ePKPbc PKPbc 11 59 50.4 -0.5
GRGR LR LR
comp=Z,9μm,20.0s,MS6.5
GRGR Grenville 145.06 310 eP PKPbc 11 59 50.9 0.0
SDDR Presa de Saban 145.88 331 ePKPdf PKPdf 11 59 53.1 +0.2

SDDR				LR	LR		
	comp=Z,18μm,20.0s,MS6.8						
SDDR	**Presa de Saban**	**145.88**	**331**	*e*P	PKPdf	11 59 53.6	+0.7
PLCA	**Paso Flores**	**146.55**	**205**	PKPbc	PKPbc	11 59 54.6	-0.2
	comp=Z,246nm,0.9s,baz=141,slow=3.1,SNR=125						
PLCA	**Paso Flores**	**146.55**	**205**	*e*PKPdf	PKPdf	11 59 54.2	+0.8
PLCA				LR	LR		
	comp=Z,25μm,21.0s,MS7.0						
GTBY	**Guantanamo Bay**	**146.69**	**337**	*e*PKPbc	PKPbc	11 59 56.5	+0.7
GTBY				LR	LR		
	comp=Z,16μm,21.0s,MS6.8						
GTBY	**Guantanamo Bay**	**146.69**	**337**	*e*P	PKPdf	11 59 54.2	-0.1
BNJ	**Bonny Gate**	**148.84**	**339**⇑	*e*P	PKPbc	12 00 01.6	-0.1
BNJ	**Bonny Gate**	**148.84**	**339**	*i* P	PKPbc	12 00 02.7	+1.0
BBJ	**Bamboo Saint A**	**148.89**	**340**	*i* P	PKPbc	12 00 02.6	+0.7
TEIG	**Tepich**	**148.97**	**0**	*e*PKPdf	PKPdf	11 59 58.4	+0.4
TEIG				*e*PKPbc	PKPbc	12 00 02.2	+0.2
TEIG				*e*PKPab	PKPab	12 00 05.8	-0.1
TEIG				LR	LR		
	comp=Z,23μm,21.0s,MS6.9						
GWJ	**Greenwich**	**148.99**	**339**	*i* P	PKPbc	12 00 01.1	-1.0
STH	**Stony Hill**	**149.02**	**339**⇑	*e*P	PKPdf	11 59 59.0	+0.9
STH	**Stony Hill**	**149.02**	**339**	*i* P	PKPbc	12 00 03.0	+0.9
STH				*e*P		12 00 03.2	
HOJ	**Hope**	**149.06**	**339**⇑	*e*P	PKPdf	11 59 59.2	+1.0
HOJ	**Hope**	**149.06**	**339**	*i* P	PKPbc	12 00 02.8	+0.5
YHJ	**Yallahs**	**149.07**	**338**⇑	*e*P	PKPbc	12 00 02.1	-0.2
YHJ	**Yallahs**	**149.07**	**338**	*i* P	PKPbc	12 00 02.1	-0.2
MTDJ	**Mount Denham**	**149.13**	**340**	*e*PKPdf	PKPdf	11 59 58.8	+0.5
MTDJ				*e*PKPbc	PKPbc	12 00 03.4	+1.0
MTDJ				LR	LR		
	comp=Z,15μm,19.0s,MS6.8						
MTDJ	**Mount Denham**	**149.13**	**340**	*e*P	PKPdf	11 59 59.3	+1.0
NEJ	**Negril**	**149.36**	**341**⇑	*e*P	PKPbc	12 00 01.2	-1.8
NEJ	**Negril**	**149.36**	**341**	*i* P	PKPbc	12 00 03.4	+0.3
CCHI	**Chillan**	**150.66**	**207**	*e*P	PKPdf	12 00 01.3	+1.1
CMIG	**Matias Romero**	**151.31**	**13**	PKP	PKPdf	12 00 01.6	-0.1
	comp=Z,28nm,1.0s,baz=353,slow=1.7						
CMIG				PKPbc	PKPbc	12 00 07.7	-0.1
	baz=322,slow=2.8						
LMEL	**Las Melosas**	**151.94**	**213**	*e*P	PKPdf	12 00 02.7	+0.4
CFAA	**Coronel Fontan**	**152.44**	**219**	PKP	PKPdf	12 00 03.5	+0.4
	comp=Z,15nm,1.0s,baz=154,slow=0.7,SNR=72						
CFAA				PKPbc	PKPbc	12 00 10.6	+0.6
	comp=Z,56nm,1.1s,baz=165,slow=1.9,SNR=40						
CFAA	**Coronel Fontan**	**152.44**	**219**	PKP	PKPdf	12 00 03.5	+0.4
CFAA				PKPbc	PKPbc	12 00 10.6	+0.6
SIV	**San Ignacio**	**153.21**	**256**	PKP	PKPdf	12 00 04.3	-0.3
	comp=Z,67nm,1.3s,baz=115,slow=2.8,SNR=50						
SIV				PKPbc	PKPbc	12 00 11.7	-0.3
	comp=Z,71nm,0.9s,baz=115,slow=4.0,SNR=31						
SIV				PKPab	PKPab	12 00 23.2	-0.6
	comp=Z,158nm,0.9s,baz=95,slow=5.3,SNR=15						
APG	**El Apazote**	**154.07**	**5**	PKP	PKPdf	12 00 05.4	-0.4
	comp=Z,31nm,1.0s,baz=311,slow=3.2						
APG				PKPab	PKPab	12 00 27.0	-0.1
	comp=Z,311nm,1.0s,baz=347,slow=3.3,SNR=3.9						
RPN	**Rapa Nui**	**154.42**	**132**	PFAKE		12 00 20.0	+14
RPN				LR	LR		
	comp=Z,11μm,22.0s,MS6.7						
TGUH	**Tegucigalpa,Un**	**155.09**	**358**	*e*PKPdf	PKPdf	12 00 08.4	+1.1
TGUH				LR	LR		
	comp=Z,15μm,21.0s,MS6.8						
TGUH	**Tegucigalpa,Un**	**155.09**	**358**	*e*P	PKPdf	12 00 08.1	+0.8
LCO	**Las Campanas**	**155.76**	**220**	*e*PKPdf	PKPdf	12 00 08.8	+1.0
LCO				LR	LR		
	comp=Z,21μm,19.0s,MS7.0						
BOAB	**BOACO BROADBAND**	**156.58**	**354**	*e*P	PKPdf	12 00 09.4	+0.1
CNGN	**Cerro Negro**	**156.61**	**356**	*e*P	PKPdf	12 00 07.4	-1.9
BCIP	**Isla Barro Col**	**158.33**	**337**	*e*PKPdf	PKPdf	12 00 11.4	-0.1
BCIP				LR	LR		
	comp=Z,14μm,21.0s,MS6.8						
BCIP	**Isla Barro Col**	**158.33**	**337**	*e*P	PKPdf	12 00 10.8	-0.7
URSC	**Urasca**	**158.85**	**348**	*e*P	PKPdf	12 00 12.5	+0.4
VCR	**Vista de Mar**	**158.87**	**353**	*e*P	PKPdf	12 00 12.0	-0.1
LAJ	**Bijagual**	**158.89**	**349**	*e*P	PKPdf	12 00 13.0	+0.9
JCR	**Jicaral**	**159.07**	**352**	*e*P	PKPdf	12 00 13.0	+0.6
ROSC	**El Rosal**	**159.08**	**318**	PKP	PKPdf	12 00 13.5	+1.1
	comp=Z,138nm,0.9s,baz=113,slow=3.3,SNR=54						
ROSC				PKPab	PKPab	12 00 51.3	+2.3
	comp=Z,171nm,0.9s,baz=139,slow=5.5,SNR=7.1						
ROSC	**El Rosal**	**159.08**	**318**	*e*PKPdf	PKPdf	12 00 13.3	+0.9
BUS	**Buena Vista**	**159.12**	**348**	*e*P	PKPdf	12 00 13.3	+0.9
BAR1		**159.32**	**346**	*e*P	PKPdf	12 00 12.8	+0.1
QCR	**Quepos**	**159.33**	**349**	*e*P	PKPdf	12 00 13.2	+0.5
LPAZ	**La Paz**	**159.84**	**253**	PKP	PKPdf	12 00 13.9	+0.8
	comp=Z,63nm,1.0s,baz=48,slow=2.7,SNR=111						
LPAZ				PKPab	PKPab	12 00 52.8	+0.5
	comp=Z,129nm,1.0s,baz=85,slow=7.7,SNR=4.0						
LPAZ	**La Paz**	**159.84**	**253**	PKIKP	PKPdf	12 00 13.9	+0.8
LPAZ						12 00 52.8	
LPAZ				pmax	pmax		
	comp=Z,63nm,1.0s						
LPAZ				pmax	pmax		
	comp=Z,129nm,1.0s						
LPAZ	**La Paz**	**159.84**	**253**	*e*PKPdf	PKPdf	12 00 13.9	+0.8
LPAZ				*e*PKPab	PKPab	12 00 53.5	+1.2
LPAZ				LR	LR		
	comp=Z,24μm,19.0s,MS7.1						
LPAZ	**La Paz**	**159.84**	**253**	*e*P	PKPdf	12 00 13.9	+0.8
ACR	**Cerro Adams**	**159.86**	**346**	*e*P	PKPdf	12 00 13.9	+0.6
OTAV	**Otavalo**	**165.25**	**319**	*e*PKPdf	PKPdf	12 00 19.3	+0.6
OTAV				*e*PKPab	PKPab	12 01 18.0	+2.1
OTAV				LR	LR		
	comp=Z,18μm,20.0s						
NNA	**Nana**	**168.86**	**264**	PKP	PKPdf	12 00 21.2	0.0
	comp=Z,58nm,0.8s,baz=345,slow=3.0,SNR=15						
NNA				PKPab	PKPab	12 01 32.8	+0.7
	comp=Z,104nm,1.1s,baz=129,slow=3.5,SNR=6.5						
NNA	**Nana**	**168.86**	**264**	*e*PKPdf	PKPdf	12 00 21.4	+0.2
NNA				LR	LR		
	comp=Z,23μm,19.0s						
PAYG	**Puerto Ayora**	**169.53**	**12**	PFAKE		12 00 30.0	+8.3
PAYG				LR	LR		
	comp=Z,18μm,21.0s						
ATAH	**Atahualpa**	**169.62**	**291**	PKP	PKPdf	12 00 22.4	+0.7
	comp=Z,71nm,1.0s,baz=58,slow=2.7,SNR=27						
ATAH				PKPab	PKPab	12 01 37.0	+1.6
	comp=Z,47nm,1.0s,baz=26,slow=4.0,SNR=3.8						

*NEIC **27** 11:53:14.2±0.8, 5°.36N×94°.08E, h35km, mb4.5/1, Error ellipse: s-maj=25.2km s-min=9.2km az=55.0*
*ISCJB **27** 11:53:15.8±4.4, 5°.5N±0°.2×94°.3E±0°.3, h62km±35km, mb4.2/9, Error ellipse: s-maj=56.7km s-min=13.3km az=149.1*
*IDC **27** 11:53:17.4±6.2, 5°.51N×94°.39E, h57km±48km, mb3.8/8, mb1 3.9/10, mb1mx3.6/26, mbtmp3.8/10, ML4.4/2, Error ellipse: s-maj=81.2km s-min=15.2km az=58.0*

ISC 27 11:53:17.6±4.1, 5°.5N±0°.2×94°.3E±0°.3, h61km±32km, n14, σ0°52/16, mb4.2/9, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**5.33**	**120**	P	**Pn**	11 54 34.5	**-0.1**
	6.5nm,0.3s,baz=307,slow=8.4,SNR=20						
PSI				S	**Sn**	11 55 35.0	**+0.2**
	2.4nm,0.3s,baz=197,slow=22,SNR=4.1						
PSI	**Prapat**	**5.33**	**120**	P	**Pn**	11 54 34.5	**-0.1**
PSI				S	**Sn**	11 55 35.0	**+0.2**
CMAR	**Chiang Mai Arr**	**13.67**	**19**	P	**Pn**	11 56 28.5	**-0.1**
	0.8nm,0.3s,baz=208,slow=14,SNR=7.0						
MK31	**Makanchi Array**	**42.44**	**348**	*e*P	**P**	12 01 07.2	**+0.8**
MKAR	**Makanchi Array**	**42.44**	**348**	P	**P**	12 01 06.0	**-0.4**
	2.2nm,0.6s,mb4.0,baz=200,slow=10,SNR=8.8						
SONM	**Songino Array**	**43.45**	**12**	P	**P**	12 01 14.2	**-0.3**
	1.5nm,0.8s,mb3.8,baz=181,slow=8.6,SNR=2.6						
WRA	**Warramunga Arr**	**46.78**	**124**	P	**P**	12 01 40.9	**-0.4**
	1.4nm,0.5s,mb4.2,baz=302,slow=10,SNR=17						
WRA	**Warramunga Arr**	**46.78**	**124**	P	**P**	12 01 40.9	**-0.4**
KURK	**Kurchatov**	**46.95**	**346**	P	**P**	12 01 42.8	**+0.6**
	3.2nm,0.5s,mb4.5,baz=166,slow=7.2,SNR=11						
ASAR	**Alice Springs**	**48.29**	**128**	P	**P**	12 01 53.1	**+0.1**
	0.7nm,0.4s,mb4.0,baz=300,slow=7.8,SNR=17						
ZALV	**Zalesovo Beam**	**48.93**	**353**	P	**P**	12 01 57.6	**+0.2**
	1.6nm,0.4s,mb4.4,baz=189,slow=8.2,SNR=3.1						
BVAR	**Borovoye Array**	**51.29**	**342**	P	**P**	12 02 14.1	**-1.2**
	1.0nm,0.5s,mb4.0,baz=130,slow=12,SNR=5.9						
BRVK	**Borovoye**	**51.35**	**342**	*e*P	**P**	12 02 15.5	**-0.3**
	4.6nm,0.8s,mb4.5						
ARCES	**ARCESS Array B**	**77.55**	**340**	P	**P**	12 05 07.3	**+0.7**
	5.1nm,1.1s,mb4.4,baz=57,slow=4.5,SNR=3.6						

*IDC **27** 11:59:04.4±2.0, 10°.86N×91°.74E, h0km, mb4.0/8, mb1 4.0/8, mb1mx3.8/25, mbtmp4.0/8, Error ellipse: s-maj=88.8km s-min=17.4km az=60.0*
*NEIC **27** 11:59:06.0±0.5, 10°.90N×91°.79E, h10km, mb4.4/1, Error ellipse: s-maj=20.2km s-min=8.1km az=61.0*
*ISCJB **27** 11:59:07.6±0.7, 10°.9N±0°.1×91°.8E±0°.2, h33km, mb4.0/9, Error ellipse: s-maj=31.4km s-min=12.2km az=149.1*

ISC 27 11:59:09.9±0.7, 10°.9N±0°.1×91°.8E±0°.2, h35km, n14, σ0°23/13, mb4.0/9, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**36.65**	**349**	*e*P	**P**	12 06 13.4	**+0.5**
MKAR	**Makanchi Array**	**36.65**	**349**	P	**P**	12 06 12.8	**-0.2**
	2.3nm,0.5s,mb4.2,baz=137,slow=8.1,SNR=12						
MKAR	**Makanchi Array**	**36.65**	**349**	P	**P**	12 06 12.8	**-0.2**
SONM	**Songino Array**	**38.78**	**16**	P	**P**	12 06 31.1	**+0.1**
	0.8nm,0.5s,mb3.7,baz=194,slow=5.9,SNR=3.4						
KURK	**Kurchatov**	**41.13**	**347**	P	**P**	12 06 50.1	**-0.4**
	1.4nm,0.6s,mb3.8,baz=173,slow=7.5,SNR=4.4						
ZALV	**Zalesovo Beam**	**43.27**	**354**	P	**P**	12 07 07.9	**0.0**
	2.5nm,0.5s,mb4.2,baz=165,slow=9.4,SNR=5.8						
FITZ	**Fitzroy Crossi**	**44.12**	**130**	P	**P**	12 07 15.0	**-0.1**
	1.8nm,0.8s,mb3.9,baz=280,slow=18,SNR=4.5						
AKTK	**Aktyubinsk**	**48.19**	**331**	P	**P**	12 07 46.7	**0.0**
AKTO	**Aktyubinsk**	**48.19**	**331**	P	**P**	12 07 46.7	**0.0**
	0.9nm,0.5s,mb4.0,baz=113,slow=7.7,SNR=4.4						
WRA	**Warramunga Arr**	**51.90**	**126**	P	**P**	12 08 15.0	**-0.3**
	0.4nm,0.3s,mb3.8,baz=300,slow=10.0,SNR=15						
WRAB	**Tennant Creek**	**51.90**	**126**	*e*P	**P**	12 08 15.6	**+0.3**
	4.3nm,0.9s,mb4.4						
ASAR	**Alice Springs**	**53.62**	**130**	P	**P**	12 08 28.2	**+0.2**
	0.6nm,0.8s,mb3.6,baz=309,slow=7.3,SNR=4.8						
TSUM	**Tsumeb**	**79.01**	**248**	*e*P	**P**	12 11 10.9	**+0.1**
EGMT	**Eagleton**	**118.27**	**16**	*e*PKPdf	PKPdf	12 17 53.8	+0.2

*ISCJB **27** 12:03:07.6±0.9, 38°.32N±0°.09×22°.21E±0°.08, h10km, Error ellipse: s-maj=12.7km s-min=8.8km az=164.0*
*CSEM **27** 12:03:08.4, 38°.35N×22°.22E, h9km, ML3.0, After ATH*
*ATH **27** 12:03:08.4, 38°.35N×22°.22E, h9km±5km, MD3.1/4, ML3.0*
*NEIC **27** 12:03:08.4, 38°.35N×22°.22E, h9km, ML3.0(ATH), After ATH.*

ISC 27 12:03:08.0±1.2, 38°.35N±0°.08×22°.24E±0°.08, h5km±11km, n23, σ0°77/23, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EVR	**Evrytania**	**0.66**	**330**	*e*Pg	**Pg**	12 03 20.6	**-0.2**
EVR	**Evrytania**	**0.66**	**330**	*e*PG	**Pg**	12 03 20.6	**-0.2**
EVR	**Evrytania**	**0.66**	**330**	*e*Pg	**Pg**	12 03 20.6	**-0.2**
LKR	**Lokris**	**0.67**	**63**	*e*Pg	**Pg**	12 03 21.0	**+0.1**
LKR	**Lokris**	**0.67**	**63**	*e*PG	**Pg**	12 03 21.0	**+0.1**
LKR	**Lokris**	**0.67**	**63**	*e*Pg	**Pg**	12 03 21.0	**+0.1**
RLS	**Riolos of Patr**	**0.67**	**245**	*e*Pb	**Pg**	12 03 21.0	**0.0**
RLS	**Riolos of Patr**	**0.67**	**245**	*e*PB	**Pg**	12 03 21.0	**0.0**
RLS	**Riolos of Patr**	**0.67**	**245**	*e*Pb	**Pg**	12 03 21.0	**0.0**
ATH	**Athens Observa**	**1.22**	**107**	*e*Pb	**Pn**	12 03 31.8	**+0.1**
ATH	**Athens Observa**	**1.22**	**107**	*e*PB	**Pn**	12 03 31.8	**+0.1**
ATH	**Athens Observa**	**1.22**	**107**	*e*Pb	**Pn**	12 03 31.8	**+0.1**
NEO	**Neokhori**	**1.23**	**38**	*e*Pb	**Pn**	12 03 30.3	**-1.5**
NEO	**Neokhori**	**1.23**	**38**	*e*PB	**Pn**	12 03 30.3	**-1.5**
NEO	**Neokhori**	**1.23**	**38**	*e*Pb	**Pn**	12 03 30.3	**-1.5**
THL	**Klokotos Trika**	**1.23**	**352**	*e*PB	**Pn**	12 03 31.8	**-0.1**
THL	**Klokotos Trika**	**1.23**	**352**	*e*Pb	**Pn**	12 03 31.8	**-0.1**
VLS	**Valsamata**	**1.31**	**263**	*e*Pb	**Pn**	12 03 32.9	**0.0**
VLS	**Valsamata**	**1.31**	**263**	*e*PB	**Pn**	12 03 32.9	**0.0**
VLS	**Valsamata**	**1.31**	**263**	*e*Pb	**Pn**	12 03 32.9	**0.0**
PLG	**Polygyros**	**2.23**	**24**	*e*Pn	**Pn**	12 03 47.2	**+1.6**
PLG	**Polygyros**	**2.23**	**24**	*e*PN	**Pn**	12 03 47.2	**+1.6**
PLG	**Polygyros**	**2.23**	**24**	*e*Pn	**Pn**	12 03 47.2	**+1.6**

*THE **27** 12:03:18.2, 38°.02N×21°.55E, h17km±1km, ML3.2/3, Error ellipse: s-maj=2.0km s-min=0.5km az=65.0*
*ISCJB **27** 12:03:18.3±0.9, 38°.03N±0°.07×21°.52E±0°.05, h17km, Error ellipse: s-maj=10.5km s-min=5.4km az=173.8*

ISC 27 12:03:18.1±0.9, 38°.02N±0°.07×21°.52E±0°.05, h17km, n11, σ0°70/15, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.34**	**39**	P	**Pg**	12 03 25.1	**0.0**
LAKA	**Lakka**	**0.42**	**59**	P	**Pg**	12 03 26.2	**-0.5**
LAKA				S	**Sg**	12 03 32.3	**-0.1**
EFP	**Efpalio**	**0.51**	**37**	P	**Pg**	12 03 27.8	**-0.4**
EFP				S	**Sg**	12 03 35.7	**+0.7**
TRIZ	**Trizonia**	**0.56**	**52**	P	**Pg**	12 03 28.4	**-0.7**
KFL	**Anninata**	**0.58**	**279**	P	**Pg**	12 03 30.0	**+0.4**
KALE	**Kalithea**	**0.61**	**53**	P	**Pg**	12 03 29.4	**-0.7**
KALE				S	**Sg**	12 03 38.7	**+0.4**
GUR	**Goura**	**0.66**	**97**	P	**Pg**	12 03 30.2	**-0.7**
GUR				S	**Sg**	12 03 40.2	**+0.5**
VLS	**Valsamata**	**0.75**	**282**	P	**Pb**	12 03 32.7	**0.0**
LKD2	**Lefkada island**	**1.02**	**319**	P	**Pb**	12 03 37.3	**-0.1**
KEMA	**Kemaliye**	**13.33**	**79**	*i* P	**Pn**	12 06 44.8	**+18**
KELT	**Kelkit**	**13.94**	**76**	*i* P	**Pn**	12 06 37.9	**+3.1**

*CSEM **27** 12:25:30.4±0.2, 38°.51N×22°.00E, h10km, ML3.7/6, Error ellipse: s-maj=4.3km s-min=3.7km az=142.0*
*ATH **27** 12:25:30.5, 38°.54N×21°.99E, h25km±1km, MD3.3/6*
*THE **27** 12:25:30.8, 38°.51N×22°.03E, h11km±1km, ML3.7/6, Error ellipse: s-maj=1.3km s-min=0.6km az=153.0*
*NEIC **27** 12:25:30.5, 38°.54N×21°.99E, h25km, MD3.3(ATH), After ATH.*
*ISCJB **27** 12:25:30.5±0.4, 38°.53N±0°.02×22°.01E±0°.03, h7km±4km, Error ellipse: s-maj=4.6km s-min=3.0km az=146.0*

ISC 27 12:25:30.9±0.3, 38°.52N±0°.02×22°.01E±0°.03, h9km±3km, n64, σ0°84/96, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	**Efpalio**	**0.12**	**222**	P	**Pg**	12 25 33.6	**-0.1**
EFP				S	**Sg**	12 25 35.8	**+0.1**
EFP	**Efpalio**	**0.12**	**222**	P	**Pg**	12 25 33.6	**-0.1**
EFP				S	**Sg**	12 25 35.8	**+0.1**
TRIZ	**Trizonia**	**0.16**	**162**	P	**Pg**	12 25 34.0	**-0.3**
TRIZ				S	**Sg**	12 25 36.9	**+0.2**
TRIZ	**Trizonia**	**0.16**	**162**	P	**Pg**	12 25 34.0	**-0.3**
TRIZ				S	**Sg**	12 25 36.9	**+0.2**
KALE	**Kalithea**	**0.16**	**142**	P	**Pg**	12 25 34.2	**-0.2**
KALE				S	**Sg**	12 25 37.0	**+0.3**
KALE	**Kalithea**	**0.16**	**142**	P	**Pg**	12 25 34.2	**-0.2**
KALE				S	**Sg**	12 25 37.0	**+0.3**
LAKA	**Lakka**	**0.28**	**185**	P	**Pg**	12 25 36.0	**-0.5**
LAKA				S	**Sg**	12 25 40.9	**+0.7**
LAKA	**Lakka**	**0.28**	**185**	P	**Pg**	12 25 36.0	**-0.5**
LAKA				S	**Sg**	12 25 40.9	**+0.7**
UPR	**University Cam**	**0.29**	**217**	P	**Pg**	12 25 36.4	**-0.3**
UPR	**University Cam**	**0.29**	**217**	P	**Pg**	12 25 36.4	**-0.3**
DSF	**Desfina**	**0.42**	**105**	P	**Pg**	12 25 38.3	**-0.8**
DSF				S	**Sg**	12 25 45.4	**+0.8**
DSF	**Desfina**	**0.42**	**105**	P	**Pg**	12 25 38.3	**-0.8**
DSF				S	**Sg**	12 25 45.4	**+0.8**
EVR	**Evrytania**	**0.43**	**338**	*e*Pb	**Pg**	12 25 39.6	**+0.3**
EVR	**Evrytania**	**0.43**	**338**	*e*PB	**Pg**	12 25 39.6	**+0.3**
EVR	**Evrytania**	**0.43**	**338**	*e*Pb	**Pg**	12 25 39.6	**+0.3**
AGG	**Agios Georgios**	**0.56**	**26**	P	**Pg**	12 25 41.1	**-0.7**
AGG	**Agios Georgios**	**0.56**	**26**	P	**Pg**	12 25 41.3	**-0.5**
AGG				S	**Sg**	12 25 50.4	**+1.3**
AGG	**Agios Georgios**	**0.56**	**26**	P	**Pg**	12 25 41.3	**-0.5**
AGG				S	**Sg**	12 25 50.4	**+1.3**
RLS	**Riolos of Patr**	**0.63**	**223**	*e*Pn	**Pg**	12 25 42.9	**-0.1**
RLS				*e*Sn	**Sg**	12 25 52.7	**+1.5**
RLS	**Riolos of Patr**	**0.63**	**223**	*e*PN	**Pg**	12 25 42.9	**-0.1**
RLS				*e*SN	**Sg**	12 25 52.7	**+1.5**
RLS	**Riolos of Patr**	**0.63**	**223**	*e*Pn	**Pg**	12 25 42.9	**-0.1**
GUR	**Goura**	**0.64**	**156**	P	**Pg**	12 25 42.2	**-1.0**
GUR	**Goura**	**0.64**	**156**	P	**Pg**	12 25 42.2	**-1.0**
LKR	**Lokris**	**0.79**	**80**	*e*Pn	**Pg**	12 25 45.2	**-0.8**
LKR				*e*Sn	**Sg**	12 25 57.6	**+1.3**
LKR	**Lokris**	**0.79**	**80**	P	**Pg**	12 25 44.8	**-1.2**
LKR				S	**Sg**	12 25 57.2	**+0.9**
LKR	**Lokris**	**0.79**	**80**	*e*PN	**Pg**	12 25 45.2	**-0.8**
LKR				*e*SN	**Sg**	12 25 57.6	**+1.3**
LKR	**Lokris**	**0.79**	**80**	P	**Pg**	12 25 44.8	**-1.2**
LKR	**Lokris**	**0.79**	**80**	*e*Pn	**Pg**	12 25 45.2	**-0.8**
LKR				S	**Sg**	12 25 57.2	**+0.9**
LKR				*e*Sn	**Sg**	12 25 57.6	**+1.3**
ATAL	**Atalanti**	**0.81**	**77**	P	**Pg**	12 25 45.4	**-1.1**
ATAL				S	**Sg**	12 25 57.7	**+0.7**
ATAL	**Atalanti**	**0.81**	**77**	P	**Pg**	12 25 45.4	**-1.1**
ATAL				S	**Sg**	12 25 57.7	**+0.7**
LTK	**Loutraki**	**0.90**	**123**	P	**Pg**	12 25 48.1	**-0.1**
LTK				S	**Sg**	12 25 59.9	**0.0**
LTK	**Loutraki**	**0.90**	**123**	P	**Pg**	12 25 48.1	**-0.1**
LTK				S	**Sg**	12 25 59.9	**0.0**
KFL	**Anninata**	**1.04**	**247**	P	**Pg**	12 25 50.1	**-0.9**
THL	**Klokotos Trika**	**1.04**	**0**	P	**Pg**	12 25 50.6	**-0.4**
THL	**Klokotos Trika**	**1.04**	**0**	*e*PN	**Pg**	12 25 50.4	**-0.6**
THL	**Klokotos Trika**	**1.04**	**0**	*e*Pn	**Pg**	12 25 50.4	**-0.6**
VLS	**Valsamata**	**1.17**	**253**	*e*Pb	**Pb**	12 25 51.8	**-1.4**
VLS				*e*Sn	**Sn**	12 26 09.6	**+0.2**
VLS	**Valsamata**	**1.17**	**253**	P	**Pb**	12 25 52.2	**-1.0**
VLS				S	**Sb**	12 26 09.8	**+1.3**
VLS	**Valsamata**	**1.17**	**253**	*e*PB	**Pb**	12 25 51.8	**-1.4**
VLS				*e*SN	**Sn**	12 26 09.6	**+0.2**
VLS	**Valsamata**	**1.17**	**253**	*e*Pb	**Pb**	12 25 51.8	**-1.4**
VLS	**Valsamata**	**1.17**	**253**	P	**Pb**	12 25 52.2	**-1.0**
VLS				*e*Sn	**Sn**	12 26 09.6	**+0.2**
NEO	**Neokhori**	**1.23**	**50**	*e*Pn	**Pn**	12 25 54.5	**+0.3**
NEO				*e*Sn	**Sn**	12 26 10.3	**-0.7**
NEO	**Neokhori**	**1.23**	**50**	*e*PN	**Pn**	12 25 54.5	**+0.3**
NEO				*e*SN	**Sn**	12 26 10.3	**-0.7**
NEO	**Neokhori**	**1.23**	**50**	*e*Pn	**Pn**	12 25 54.5	**+0.3**
NEO				*e*Sn	**Sn**	12 26 10.3	**-0.7**
XOR	**Xorichti**	**1.25**	**47**	P	**Pn**	12 25 54.2	**-0.3**
XOR				S	**Sb**	12 26 10.3	**-0.5**
XOR	**Xorichti**	**1.25**	**47**	P	**Pn**	12 25 54.2	**-0.3**
XOR				S	**Sb**	12 26 10.3	**-0.5**
ITM	**Ithomi**	**1.34**	**183**	*e*Pn	**Pn**	12 25 55.9	**+0.2**
ITM	**Ithomi**	**1.34**	**183**	*e*PN	**Pn**	12 25 55.9	**+0.2**
ITM	**Ithomi**	**1.34**	**183**	*e*Pn	**Pn**	12 25 55.9	**+0.2**
JAN	**Janina**	**1.45**	**322**	*e*Pn	**Pn**	12 25 56.2	**-1.1**
JAN	**Janina**	**1.45**	**322**	*e*PN	**Pn**	12 25 56.2	**-1.1**
JAN	**Janina**	**1.45**	**322**	*e*Pn	**Pn**	12 25 56.2	**-1.1**
VLY	**Voula,Athens**	**1.55**	**115**	P	**Pn**	12 26 00.4	**+1.7**
VLY	**Voula,Athens**	**1.55**	**115**	P	**Pn**	12 26 00.4	**+1.7**
VLI	**Veliai**	**1.94**	**157**	*e*Pn	**Pn**	12 26 04.5	**+0.5**
VLI	**Veliai**	**1.94**	**157**	*e*PN	**Pn**	12 26 04.5	**+0.5**
VLI	**Veliai**	**1.94**	**157**	*e*Pn	**Pn**	12 26 04.5	**+0.5**
FNA	**Florina**	**2.31**	**348**	P	**Pn**	12 26 10.3	**+1.1**
FNA	**Florina**	**2.31**	**348**	P	**Pn**	12 26 10.3	**+1.1**
KYTH	**Kithira**	**2.38**	**160**	*e*Pb	**Pb**	12 26 11.5	**-2.4**
KYTH	**Kithira**	**2.38**	**160**	*e*PB	**Pb**	12 26 11.5	**-2.4**
KYTH	**Kithira**	**2.38**	**160**	*e*Pb	**Pb**	12 26 11.5	**-2.4**
SOH	**Sokhos**	**2.52**	**24**	P	**Pn**

comp=Z,2.2nm,0.5s,mb4.4,baz=12,slow=2.1,SNR=8.9
AKASG Malin Array Be 64.36 321 P **P 12 39 47.3 -0.7**
comp=Z,0.9nm,0.4s,mb4.2,baz=77,slow=38,SNR=1.7
TIXI Tiksi 64.72 12 *eP* **P 12 39 49.0 -1.0**
TIXI pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
TIXI Tiksi 64.72 12 *eP* **P 12 39 49.0 -1.0**
comp=Z,2.7nm,0.7s,mb4.4
JOF Joensuu 67.12 334 *eP* **P 12 40 04.7 -0.9**
JOF pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
JOF Joensuu 67.12 334 *ep* **P 12 40 04.7 -0.9**
comp=Z,9.0nm,0.6s,mb5.0
JOF Joensuu 67.12 334 *ep* **P 12 40 04.7 -0.9**
comp=Z,9.0nm,0.6s,mb5.0
FINES FINESS Array B 68.96 332 P **P 12 40 16.7 -0.5**
comp=Z,4.7nm,0.8s,mb4.5,baz=90,slow=9.5,SNR=11
FINES FINESS Array B 68.96 332 P **P 12 40 16.7 -0.5**
ARCES ARCESS Array B 71.63 340 P **P 12 40 33.8 +0.4**
comp=Z,3.3nm,0.6s,mb4.4,baz=86,slow=5.2,SNR=18
BILL Bilibino 74.12 22 *eP* **P 12 40 47.3 -0.8**
BILL pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
BOSA Boshof 75.31 237 P **P 12 40 57.5 +1.7**
comp=Z,2.7nm,0.7s,mb4.3,baz=86,slow=12,SNR=4.8
NB2 NORSAR Subarra 75.96 330 P **P 12 40 57.9 -1.0**
comp=Z,0.2nm,0.6s,mb3.2,baz=96,slow=5.9
NOA NORSAR Array B 75.96 330 P **P 12 40 58.2 -0.7**
comp=Z,1.5nm,0.7s,mb4.0,baz=93,slow=5.8,SNR=6.5
NOA NORSAR Array B 75.96 330 P **P 12 40 58.2 -0.7**
KEST Kesra 77.64 304 P **P 12 41 10.0 +1.1**
comp=Z,0.9nm,0.8s,mb3.8,baz=2.6,slow=3.5,SNR=4.3
LPG La Plagne 78.86 314 *eP* **P 12 41 15.1 -0.4**
comp=Z,4.8nm,0.5s,mb4.4
LPG La Plagne 78.86 314 *eP* **P 12 41 15.1 -0.4**
LPG pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
LPG La Plagne 78.86 314 *eP* **P 12 41 15.1 -0.4**
comp=Z,2.4nm,0.5s,mb4.4
LPL La Plagne 78.87 314 *eP* **P 12 41 15.2 -0.3**
comp=Z,7.5nm,0.6s,mb4.5
LPL La Plagne 78.87 314 *eP* **P 12 41 15.2 -0.3**
LPL pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
LPL La Plagne 78.87 314 *eP* **P 12 41 15.2 -0.3**
comp=Z,3.8nm,0.6s,mb4.5
VIVF Saint-Julien-I 80.38 314 *eP* **P 12 41 23.1 -0.7**
comp=Z,7.8nm,0.7s,mb4.5
VIVF Saint-Julien-I 80.38 314 *eP* **P 12 41 23.1 -0.7**
VIVF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
VIVF Saint-Julien-I 80.38 314 *eP* **P 12 41 23.1 -0.7**
comp=Z,3.9nm,0.7s,mb4.5
SMF Signal de Mont 80.77 316 *eP* **P 12 41 24.8 -1.0**
AVF Avril sur Loir 81.09 316 *eP* **P 12 41 26.5 -1.0**
PDAR Pinedale Array 123.09 19 PKP PKPdf 12 48 08.8 -0.3
comp=Z,0.5nm,0.6s,baz=90,slow=3.0,SNR=4.6
NVAR Mina Array Bea 123.40 28 PKP PKPdf 12 48 10.7 +0.8
comp=Z,0.6nm,0.5s,baz=298,slow=1.9,SNR=7.9
TXAR Lajitas Array 137.27 20 PKP PKPdf 12 48 38.2 +1.9
comp=Z,0.4nm,0.5s,baz=357,slow=1.1,SNR=7.7

*IDC **27** 12:50:28.9±3.4, 10°.57N×91°.34E, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.7/24, mbtmp3.9/6, Error ellipse: s-maj=178.2km s-min=19.3km az=59.0*
*NEIC **27** 12:50:31.8±2.2, 10°.85N×91°.79E, h10km, mb4.3/2, Error ellipse: s-maj=117.0km s-min=10.2km az=59.0*
*ISCJB **27** 12:50:33.5±3.1, 10°.9N±0°.6×91°.2E±°, h33km, mb3.9/7, Error ellipse: s-maj=164.5km s-min=14.5km az=149.0*
ISC 27 12:50:35.8±3.1, 10°.9N±0°.6×91°.2E±°, h35km, n9, σ0§21/9, mb3.9/7, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**36.68 349**		*eP*	**P**	**12 57 39.3**	**+0.1**
MKAR	**Makanchi Array**	**36.68 349**		P	**P**	**12 57 39.4**	**+0.1**
	1.2nm,0.6s,mb3.9,baz=133,slow=8.5,SNR=11						
ZALV	**Zalesovo Beam**	**43.30 354**		P	**P**	**12 58 33.9**	**-0.2**
	0.9nm,0.5s,mb3.8,baz=172,slow=12,SNR=6.2						
FITZ	**Fitzroy Crossi**	**44.06 131**		P	**P**	**12 58 40.3**	**-0.4**
	2.1nm,0.8s,mb3.9,baz=292,slow=6.3,SNR=6.2						
FITZ	**Fitzroy Crossi**	**44.06 131**		*eP*	**P**	**12 58 40.3**	**-0.4**
	5.7nm,1.1s,mb4.2						
WRA	**Warramunga Arr**	**51.83 126**		P	**P**	**12 59 40.8**	**-0.1**
	0.5nm,0.5s,mb3.7,baz=301,slow=10.0,SNR=13						
WRAB	**Tennant Creek**	**51.84 126**		*eP*	**P**	**12 59 41.0**	**+0.1**
	2.2nm,0.7s,mb4.2						
ASAR	**Alice Springs**	**53.56 130**		P	**P**	**12 59 53.9**	**+0.3**
	0.8nm,0.9s,mb3.7,baz=306,slow=7.1,SNR=5.4						
ARCES	**ARCESS Array B**	**71.68 340**		P	**P**	**13 01 53.6**	**-0.1**
	2.8nm,0.9s,mb4.2,baz=81,slow=6.6,SNR=3.6						

*ISCJB **27** 13:01:02.4±1.2, 3°.42N±0°.08×128°.20E±0°.09, h189km±11km, mb3.7/12, Error ellipse: s-maj=17.1km s-min=9.7km az=146.0*
*NEIC **27** 13:01:03.5±3.9, 3°.42N×128°.25E, h185km±41km, mb3.9/7, Error ellipse: s-maj=24.2km s-min=11.7km az=61.0*
*IDC **27** 13:01:08.5±12.0, 3°.34N×128°.06E, h233km±135km, mb3.2/8, mb1 3.3/8, mb1mx3.1/22, mbtmp3.2/8, Error ellipse: s-maj=42.7km s-min=17.6km az=78.0*
*DJA **27** 13:01:35, 0°.92N×126°.62E, h20km, MLv4.0/9*
ISC 27 13:01:03.8±1.2, 3°.38N±0°.08×128°.16E±0°.10, h185km±11km, n25, σ0§81/25, mb3.7/12, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**2.64 277**		P	**Sn**	**13 02 22.7**	**-0.4**
TNTI	**Ternate**	**2.71 197**		P	**Pn**	**13 01 49.1**	**-0.2**
MNI	**Manado**	**3.83 240**		P	**Sn**	**13 02 49.4**	**+0.1**
LBMI	**Labuha**	**4.05 189**		P	**Pn**	**13 02 06.5**	**+0.8**
KMSI	**Cibinong**	**5.02 236**		P	**Pn**	**13 02 17.9**	**-0.3**
NLAI	**Namlea**	**6.66 189**		P	**Pn**	**13 02 38.8**	**-0.8**
MRSI	**Marisa**	**6.85 245**		P	**Pn**	**13 02 43.6**	**+1.5**
LUWI	**Luwuk**	**6.95 231**		P	**Pn**	**13 02 39.0**	**-4.4**
APSI	**Ampana**	**7.78 237**		P	**Pn**	**13 02 53.9**	**-0.3**
	0.1nm25nm,0.6s						
TTSI	**Tana Toraja**	**10.50 233**		P	**Pn**	**13 03 29.6**	**-0.2**
KKM	**Kota Kinabalu**	**12.19 283**		Pn	**Pn**	**13 03 52.2**	**+0.6**
	5.2nm,0.9s						
KSM	**Kuching**	**17.93 264**		*eP*	**Pn**	**13 05 01.9**	**-0.1**
	2.7nm,0.4s						
FITZ	**Fitzroy Crossi**	**21.49 187**		P	**P**	**13 05 39.4**	**+1.2**
	0.6nm,0.4s,mb3.3,baz=81,slow=23,SNR=1.3						
PMG	**Port Moresby**	**22.80 124**		*eP*	**P**	**13 05 47.9**	**-2.9**
	13nm,0.9s,mb4.4						
WRAB	**Tennant Creek**	**23.96 166**		*eP*	**P**	**13 06 00.6**	**-0.6**
	1.5nm,0.4s,mb3.9						
WRA	**Warramunga Arr**	**23.96 166**		P	**P**	**13 06 01.2**	**-0.1**
	1.3nm,0.4s,mb3.8,baz=344,slow=10,SNR=26						
MBWA	**Marble Bar**	**25.75 198**		*eP*	**P**	**13 06 17.5**	**0.0**
	2.7nm,0.7s,mb4.0						
ASAR	**Alice Springs**	**27.46 169**		P	**P**	**13 06 32.9**	**+0.2**
	0.5nm,0.5s,mb3.4,baz=355,slow=8.2,SNR=12						
KULM	**Kulim**	**27.49 275**		*eP*	**P**	**13 06 31.7**	**-1.5**
	0.7nm,0.4s,mb3.6						
KSRS	**Korea Array**	**33.91 360**		P	**P**	**13 07 29.4**	**+0.2**
	1.0nm,0.6s,mb3.7,baz=173,slow=9.8,SNR=5.4						
STKA	**Stephens Creek**	**37.32 161**		P	**P**	**13 07 59.0**	**+0.7**
	0.8nm,0.3s,mb3.8,baz=339,slow=11,SNR=4.9						
STKA	**Stephens Creek**	**37.32 161**		*eP*	**P**	**13 07 59.4**	**+1.1**
	0.2nm,0.4s,mb3.1						
SONM	**Songino Array**	**48.09 340**		P	**P**	**13 09 25.3**	**+0.7**
	0.6nm,0.7s,mb3.4,baz=134,slow=8.3,SNR=2.3						
PETK	**Petropavlovsk-**	**55.22 21**		P	**P**	**13 10 17.9**	**+0.6**
	2.4nm,0.7s,mb4.0,baz=180,slow=7.0,SNR=5.8						
MKAR	**Makanchi Array**	**58.65 325**		P	**P**	**13 10 41.0**	**-0.6**
	0.2nm,0.3s,mb3.5,baz=101,slow=13,SNR=4.3						

*NNC **27** 13:03:20.0±0.9, 50°.04N×78°.53E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=9.5km s-min=4.7km az=99.0*
*ISCJB **27** 13:03:19.9±0.7, 50°.05N±0°.05×78°.55E±0°.08, h10km, Error ellipse: s-maj=8.1km s-min=6.1km az=38.6*
*IDC **27** 13:03:21.6±0.9, 50°.07N×78°.80E, h0km, mb1 3.0/3, mb1mx3.0/27, mbtmp3.0/3, ML3.1/3, Error ellipse: s-maj=13.3km s-min=6.2km az=59.0*
*NEIC **27** 13:03:21.4±0.7, 50°.06N×78°.54E, h10km, Error ellipse: s-maj=13.1km s-min=8.9km az=55.0*
ISC 27 13:03:21.7±0.7, 50°.07N±0°.05×78°.64E±0°.08, h10km, n15, σ1§14/21, 9C-2D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**0.65 359**		⇑P	**Pg**	**13 03 33.1**	**-1.2**
	11nm,0.3s						
KURK				⇑S	**Sg**	**13 03 42.7**	**-0.1**
	28nm,0.4s						
KURK	**Kurchatov**	**0.65 359**		Pg	**Pg**	**13 03 32.2**	**-2.2**
	4.0nm,0.3s,baz=167,slow=17,SNR=78						
KURK				Lg		13 03 41.2	
	8.5nm,0.3s,baz=177,slow=32,SNR=17						
KURK	**Kurchatov**	**0.65 359**		*eP*	**Pg**	**13 03 33.1**	**-1.2**
KURK				Lg		13 03 41.2	
KURK				*eS*	**Sg**	**13 03 42.8**	**-0.1**
MK31	**Makanchi Array**	**4.08 142**		⇑Pn	**Pn**	**13 04 24.1**	**0.0**
	0.2nm,0.2s,baz=316,slow=10,SNR=45						
MK31				⇑Lg		13 05 29.7	
	11nm,0.6s,baz=302,slow=29,SNR=19						
MK31	**Makanchi Array**	**4.08 142**		*ePn*	**Pn**	**13 04 24.1**	**0.0**
MK31				*eSn*	**Sn**	**13 05 05.0**	**-6.8**
MKAR	**Makanchi Array**	**4.08 142**		Pn	**Pn**	**13 04 24.1**	**+0.1**
	0.6nm,0.3s,baz=314,slow=10,SNR=66						
MKAR				Pg	**Pg**	**13 04 32.2**	**-7.6**
	1.4nm,0.3s,baz=323,slow=17,SNR=20						
MKAR				Lg		13 05 28.1	
	3.9nm,0.3s,baz=310,slow=28,SNR=5.5						
ZALV	**Zalesovo Beam**	**5.45 42**		Pn	**Pn**	**13 04 44.5**	**+1.6**
	1.6nm,0.3s,baz=232,slow=14,SNR=18						
ZALV				Lg		13 06 14.0	
	0.6nm,0.3s,baz=62,slow=14,SNR=4.2						
ZALV	**Zalesovo Beam**	**5.45 42**		Pn	**Pn**	**13 04 44.5**	**+1.6**
ZALV				Lg		13 06 14.0	
VOSK	**Vostochnaya**	**5.49 302**		⇑Pn	**Pn**	**13 04 42.7**	**-0.7**
	1.0nm,0.7s						
VOSK				⇓Sn	**Sn**	**13 05 45.5**	**-0.9**
	1.8nm,0.7s						
VOSK				⇑Lg		13 06 11.7	
	2.7nm,0.7s						
BVAR	**Borovoye Array**	**5.94 303**		Pn	**Pn**	**13 04 52.0**	**+2.3**
	0.3nm,0.3s,baz=101,slow=13,SNR=4.1						
BVAR				Sn	**Sn**	**13 05 59.8**	**+2.1**
	1.0nm,0.3s,baz=108,slow=21,SNR=7.6						
BVAR				Lg		13 06 35.3	
	0.7nm,0.3s,baz=109,slow=22,SNR=3.7						
BRVK	**Borovoye**	**6.01 303**		Pn	**Pn**	**13 04 50.8**	**+0.2**
	1.1nm,0.5s						
ZRNK	**Zerenda**	**6.67 299**		⇑Pn	**Pn**	**13 04 59.2**	**-0.5**
	0.2nm,0.2s						
ZRNK				⇑Sn	**Sn**	**13 06 16.4**	**+0.6**
	2.3nm,0.7s						
ZRNK				⇓Lg		13 06 54.1	
	2.0nm,0.6s						
TKM2	**Tokmak 2**	**7.45 198**		⇑Lg		13 07 15.5	
	3.8nm,0.7s						
ARU	**Arti**	**13.58 306**		*ePn*	**Pn**	**13 06 32.8**	**-1.4**
	2.1nm,0.3s						
KIV	**Kislovodsk**	**25.09 270**		*eP*	**P**	**13 08 45.2**	**-1.0**

*ISCJB **27** 13:07:05.9±0.7, 10°.92N±0°.02×91°.82E±0°.02, h12km±4km, mb5.5/291, MS5.7/179, Error ellipse: s-maj=4.2km s-min=3.1km az=16.6*
*IDC **27** 13:07:06.2±0.3, 10°.92N×91°.82E, h0km, mb5.2/34, mb1 5.2/36, mb1mx5.2/36, mbtmp5.2/36, ML4.5/2, MS5.5/24, Ms1 5.5/24, ms1mx5.3/37, Error ellipse: s-maj=12.2km s-min=9.4km az=55.0*
*NEIC **27** 13:07:08.2±1.9, 10°.89N×91°.78E, h17km±11km, mb5.7/156, MS5.8/117, MW5.7, Error ellipse: s-maj=4.7km s-min=3.3km az=209.0*
NEIC Felt at Port Blair.
*BJI **27** 13:07:08.8, 11°.00N×91°.73E, h27km, mB5.8/35, mb5.3/60, Ms6.0/71, Ms7 5.7/59*
*MOS **27** 13:07:09.6±0.9, 11°.01N×91°.76E, h33km, mb5.8/100, MS5.6/47, Error ellipse: s-maj=7.0km s-min=3.7km az=121.6*
*DJA **27** 13:07:10, 10°.92N×91°.89E, h17km, mb5.7/67*
*SZGRF **27** 13:07:11.9, 10°.41N×90°.98E, h33km, mb5.6, MS5.6, Andaman Islands, India, region*
*GCMT **27** 13:07:14.7±0.2, 11°.09N×91°.95E, h12km, MW5.9, Moment Tensor Solution. s68,c99; s28,c35; Moment tensor: Scale 10^17^Nm; M_{rr}-4.98±.17; $M_{\theta\theta}$-0.60±.10; $M_{\phi\phi}$5.58±.13; $M_{r\theta}$3.12±.41; $M_{\theta\phi}$1.50±.08; $M_{\phi r}$-5.82±.54; Best double couple: $M_0$8.60000×10^17^ NP1:ϕ_s216.00000°, δ28.00000°, λ-41.00000°. NP2:ϕ_s344.00000°, δ72.00000°, λ-112.00000°. Principal axes: T 8.1600, Plg24.0000°, Azm91.0000°; N 0.8200, Plg21.0000°, Azm351.0000°; P -8.9900, Plg58.0000°, Azm225.0000°; Data Used: II IU G CN IC. Surface waves: sta=101, comp=186, per= 50.*
ISC 27 13:07:09.5±0.7, 10°.91N±0°.02×91°.80E±0°.02, h23km±4km, h30km±2.2km: pP-P, n880, σ1§02/794, mb5.5/291, MS5.7/179, 44C-53D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**10.20 42**		*ePn*	**Pn**	**13 09 34.8**	**+0.3**
CMAR	**Chiang Mai Arr**	**10.20 42**		Pn	**Pn**	**13 09 35.3**	**+0.8**
	2.4nm,0.3s,baz=232,slow=14,SNR=27						
CMAR				LR	LR	13 14 02.2	
	comp=Z,23μm,18.9s,baz=225,slow=41						
KULM	**Kulim**	**10.39 122**		P	**Pn**	**13 09 38.4**	**+1.3**
KULM	**Kulim**	**10.39 122**		*ePn*	**Pn**	**13 09 36.8**	**-0.3**
	230nm,1.1s						
CHTO	**Chiang Mai**	**10.46 40**		*eP*	**Pn**	**13 09 37.4**	**-0.6**
CHTO	**Chiang Mai**	**10.46 40**		P	**Pn**	**13 09 39.0**	**+0.9**
	SNR=28						
CHTO				P		13 09 39.0	
	SNR=28						
VIS	**Vishakhapatnam**	**10.64 310**		*i* P	**Pn**	**13 09 39.1**	**-1.5**
VIS				*i* S	**Sn**	**13 11 28.1**	**-11**
PSI	**Prapat**	**10.72 138**		Pn	**Pn**	**13 09 41.6**	**-0.1**
	0.9nm,0.3s,baz=335,slow=6.3,SNR=6.7						
IPM	**Ipoh**	**11.15 124**		P	**Pn**	**13 09 47.2**	**-0.4**
PALK	**Pallekele**	**11.54 253**		*eP*	**Pn**	**13 09 50.4**	**-2.5**
PALK				pmax	pmax		
	comp=Z,442nm,0.8s						
PALK	**Pallekele**	**11.54 253**		*ePn*	**Pn**	**13 09 50.4**	**-2.5**
	comp=Z,442nm,0.8s						
FRIM	**Kepong**	**12.37 127**		P	**Pn**	**13 10 03.7**	**-0.6**
KTGM	**Kuala Trenggan**	**12.51 115**		P	**Pn**	**13 10 07.5**	**+1.3**
AGT	**Agartala**	**12.91 358**		*ePKP*	**Pn**	**13 10 09.0**	**-2.6**
AGT				*ex*	x	13 10 52.0	
HYB	**Hyderabad**	**14.38 298**		*i* P	**Pn**	**13 10 31.0**	**-0.7**
HYB				*eS*	**Sn**	**13 13 30.0**	**+20**
HYB				LR	LR	13 20 00.0	
	comp=Z,28nm,24.0s						
KGM	**Kluang**	**14.45 127**		P	**Pn**	**13 10 31.5**	**-1.3**
SHL	**Shillong**	**14.58 0**		*ex*	**Pn**	**13 10 29.5**	**-4.9**
SHL				*ex*	x	13 13 03.5	
TRD	**Trivandrum**	**14.82 262**	⇑	*ex*	x	13 10 47.0	
TRD				*eS*	**Sn**	**13 13 21.0**	**-0.4**
MYKOM	**Kota Tinggi**	**15.01 126**		P	**Pn**	**13 10 39.0**	**-1.2**
NGP	**Nagpur**	**15.92 311**		*i* P	**Pn**	**13 10 50.9**	**-1.2**
NGP				*ex*	x	13 11 09.9	
	comp=Z,532nm,1.4s						
NGP				*ex*	x	13 13 43.2	
ODAN	**Odare**	**16.40 346**		*eP*	**Pn**	**13 10 57.2**	**-1.0**
	comp=Z,162nm,0.5s						
JBP	**Jabalpur**	**16.60 319**	⇓	*iP*	**Pn**	**13 11 00.9**	**+0.1**
JBP				*ex*	x	13 13 51.9	
RAMN	**Ramite**	**16.69 344**		*eP*	**Pn**	**13 11 01.2**	**-0.7**
	comp=Z,333nm,0.5s						
TAPN	**Taplejung**	**16.80 347**		*eP*	**Pn**	**13 11 01.7**	**-1.6**
JIRN	**Jiri**	**17.48 343**		*eP*	**Pn**	**13 11 10.3**	**-1.4**
	comp=Z,573nm,0.8s						
KMI	**Kunming**	**17.53 35**		P	**Pn**	**13 11 13.5**	**+1.0**
KMI				pP	pP	13 11 21.3	+1.4
KMI				sP	sP	13 11 26.0	+3.1
KMI				PP		13 11 31.0	
KMI				S	**Sn**	**13 14 29.0**	**+1.9**
KMI				sS	sS	13 14 39.0	-5.9
KMI				SS		13 14 51.5	
KMI				pmax	pmax		
	comp=Z,76nm,1.5s						
KMI				pmax	pmax		
	comp=Z,3μm,10.3s						
KMI				LR	LR		
	comp=N,48μm,16.9s						
KMI				LR	LR		
	comp=E,33μm,16.9s						
PKI	**Pulchoki**	**17.63 341**		*eP*	**Pn**	**13 11 12.6**	**-1.0**
	comp=E,197nm,0.6s						
PKIN	**Phulchoki**	**17.64 341**		*eP*	**Pn**	**13 11 12.2**	**-1.6**
	comp=E,296nm,0.7s						
DMN	**Daman**	**17.76 340**		*eP*	**Pn**	**13 11 13.1**	**-2.2**
	comp=E,836nm,1.0s						
GUN	**Gumba**	**17.80 343**		*eP*	**Pn**	**13 11 14.1**	**-1.7**
	comp=E,2μm,1.6s						
KKN	**Kakani**	**17.87 341**		*eP*	**Pn**	**13 11 14.7**	**-2.0**
	comp=E,74nm,0.4s						
GOA	**Goa**	**18.08 287**	⇓	*ePKP*	**Pn**	**13 11 19.3**	**0.0**
GOA				AMb	AMB	13 11 20.2	
	comp=Z,23nm,0.5s						
GOA				*ex*	x	13 14 15.3	
KAD	**Karad**	**18.22 292**		*ePKP*	**Pn**	**13 11 20.3**	**-0.7**
KAD				AMb	AMB	13 11 26.4	
	comp=Z,302nm,0.9s						
BHPL	**Bhopal**	**18.40 314**		*ePKP*	**Pn**	**13 11 24.4**	**+1.3**
BHPL				AMb	AMB	13 11 30.1	
	comp=Z,159nm,1.3s						
MNCY	**Minicoy**	**18.69 264**		*ex*	**Pn**	**13 11 28.0**	**+1.3**
LSA	**Lhasa**	**18.70 358**		P	**Pn**	**13 11 27.0**	**+0.2**
LSA				S	**Sn**	**13 14 58.3**	**+2.9**
LSA				LR	LR		
	comp=N,12μm,14.5s						
LSA				LR	LR		
	comp=E,38μm,15.0s						
LSA				LR	LR		
	comp=Z,24μm,17.0s						
POO	**Poona**	**18.93 296**		*ePKP*	**Pn**	**13 11 29.9**	**+0.3**
POO				AMb	AMB	13 11 37.0	
	comp=Z,281nm,1.4s						
QIZ	**Qiongzhong**	**19.20 63**		P	**Pn**	**13 11 33.3**	**+0.5**
QIZ				sP	sP	13 11 44.8	+3.5
QIZ				S	**Sn**	**13 15 07.0**	**-0.4**
QIZ				pmax	pmax		
	comp=Z,35nm,1.8s						
QIZ				LR	LR		
	comp=N,29μm,17.4s						
QIZ				LR	LR		
	comp=Z,27μm,18.1s						
QIZ	**Qiongzhong**	**19.20 63**		*eP*	**Pn**	**13 11 25.2**	**-7.6**
	comp=Z,28nm,0.8s						
KSM	**Kuching**	**20.63 116**		P	**P**	**13 11 46.8**	**-0.7**
KSM	**Kuching**	**20.63 116**		*eP*	**P**	**13 11 46.6**	**-0.9**
	comp=Z,1μm,1.9s						
KSM				LR	LR		
	comp=Z,13μm,21.0s,MS5.3						
GYA	**Guiyang**	**20.88 40**		P	**P**	**13 11 49.8**	**-0.3**
GYA				pP		13 12 01.5	
GYA				PP		13 12 12.3	
GYA				S	**S**	**13 15 40.5**	**-1.4**
GYA				sS	sS	13 15 53.3	+1.0
GYA				PcP	PcP	13 15 59.3	+1.2
GYA				SS		13 16 11.3	
GYA				pmax	pmax		
	comp=Z,90nm,1.0s						
GYA				pmax	pmax		
	comp=Z,1μm,12.0s						
GYA				LR	LR		
	comp=N,19μm,15.1s,MS5.7						
GYA				LR	LR		
	comp=E,16μm,16.3s,MS5.7						
GYA				LR	LR		
	comp=Z,26μm,19.8s,MS5.6						
PTH	**Pithoragarh**	**21.46 331**		*ePKP*	**P**	**13 11 57.0**	**+0.7**
PTH				*ex*	x	13 15 50.0	
BHV	**Bhavnagar**	**21.70 302**		*ex*	**P**	**13 12 01.0**	**+2.1**
SBUM	**Sibu**	**21.94 111**		P	**P**	**13 12 00.9**	**-0.7**
SONA	**Sohna**	**22.09 323**		*ePKP*	**P**	**13 12 03.8**	**+0.7**
SONA				AMb	AMB	13 12 07.4	
	comp=Z,470nm,1.0s,mb5.9						
AYAN	**Aya Nagar**	**22.24 324**		*ePKP*	**P**	**13 12 05.1**	**+0.4**
AYAN				AMb	AMB	13 12 11.9	
	comp=Z,424nm,0.9s,mb5.9						
NDI	**New Delhi**	**22.34 324**		*ex*	**P**	**13 12 10.9**	**+5.2**
NDI				*eS*	**S**	**13 16 12.6**	**+2.2**
AJM	**Ajmer**	**22.40 316**		*ePKP*	**P**	**13 12 06.0**	**-0.4**
AJM				AMb	AMB	13 12 13.3	
	comp=Z,434nm,1.4s,mb5.7						
BTM	**Bintulu**	**22.45 108**		P	**P**	**13 12 07.6**	**+0.5**
JOSI	**Joshimath**	**22.62 332**		*ePKP*	**P**	**13 12 10.5**	**+1.8**
JOSI				AMb	AMB	13 12 20.5	
	comp=Z,4μm,0.8s						
KHET	**Khetri**	**22.73 321**		*ePKP*	**P**	**13 12 10.6**	**+0.8**
KHET				AMb	AMB	13 12 16.8	
	comp=Z,425nm,1.1s,mb5.8						
CD2	**Chengdu**	**22.79 27**	⇓	*iP*	**P**	**13 12 08.5**	**-1.9**
CD2				pP		13 12 17.5	
CD2				sP	sP	13 12 21.8	+1.8
CD2				PP		13 12 38.5	
CD2				PcP	PcP	13 15 59.0	-2.7
CD2				S	**S**	**13 16 12.5**	**-5.9**
CD2				sS	sS	13 16 27.5	-2.1
CD2				SS		13 16 57.5	
CD2				PcS	PcS	13 19 36.8	-3.9
CD2				pmax	pmax		
	comp=Z,330nm,1.3s,mb5.6						
CD2				pmax	pmax		
	comp=Z,1μm,5.8s						
CD2				LR	LR		
	comp=N,29μm,16.6s,MS6.0						
CD2				LR	LR		
	comp=E,33μm,16.6s,MS6.0						
CD2				LR	LR		
	comp=Z,20μm,14.2s,MS5.7						
DDI	**Dehra Dun**	**23.16 329**	⇓	*iP*	**P**	**13 12 13.0**	**-1.4**
DDI				*eS*	**S**	**13 16 26.5**	**+1.9**
COCO	**West Island**	**23.49 168**		*eP*	pP	13 12 26.6	+2.1
COCO				pmax	pmax		
	comp=Z,720nm,1.3s,mb5.9						
COCO				MLR	MLR		
	comp=Z,9μm,19.0s,MS5.2						
COCO	**West Island**	**23.49 168**		*eP*	pP	13 12 26.6	+2.0
	comp=Z,720nm,1.3s						
COCO				LR	LR		
	comp=Z,9μm,19.0s,MS5.2						
GZH	**Guangzhou**	**23.86 57**		P	**P**	**13 12 26.0**	**+4.7**
GZH				LR	LR		
	comp=N,31μm,18.1s,MS5.8						
GZH				LR	LR		
	comp=E,8μm,17.6s,MS5.8						
GZH				LR	LR		
	comp=Z,19μm,15.4s,MS5.7						
KLP	**Kalpa**	**24.05 331**		*ePKP*	**P**	**13 12 24.5**	**+1.5**
KLP				AMb	AMB	13 12 31.6	
	comp=Z,227nm,0.7s,mb5.7						
BHJ	**Bhuj**	**24.43 303**		*ex*	**P**	**13 12 30.6**	**+4.1**
KKM	**Kota Kinabalu**	**24.62 99**		P	**P**	**13 12 26.4**	**-1.9**
KKM	**Kota Kinabalu**	**24.62 99**		*eP*	**P**	**13 12 27.6**	**-0.7**
	comp=Z,368nm,1.5s,mb5.7						
KKM				LR	LR		
	comp=Z,12μm,19.0s,MS5.4						
SDNR	**Sundarnagar**	**24.66 328**		*ePKP*	**P**	**13 12

comp=Z,4μm,19.9s,MS5.0
WHN Wuhan 28.64 44 ⇓P **P 13 13 08.0 +3.6**
WHN sP sP 13 13 22.8 +8.5
WHN LR LR
comp=N,33μm,14.0s,MS6.2
WHN LR LR
comp=E,26μm,15.1s,MS6.2
WHN LR LR
comp=Z,52μm,16.0s,MS6.2
QZH Quanzhou 28.98 58 P **P 13 13 11.3 +3.8**
QZH S **S 13 17 57.0 -0.4**
QZH pmax pmax
comp=Z,160nm,0.7s,mb5.9
QZH LR LR
comp=N,24μm,16.2s,MS6.1
QZH LR LR
comp=E,28μm,17.6s,MS6.1
QZH LR LR
comp=Z,29μm,16.8s,MS6.0
GTA Gaotai 29.27 13 ⇓P **P 13 13 11.0 +1.2**
GTA pP pP 13 13 20.8 +4.0
GTA sP sP 13 13 24.8 +5.1
GTA S **S 13 18 01.5 0.0**
GTA sS sS 13 18 17.5 +4.5
GTA SS SS 13 19 33.8 -32
GTA pmax pmax
comp=Z,30nm,1.1s,mb4.9
GTA pmax pmax
comp=Z,2μm,7.5s
GTA LR LR
comp=N,12μm,17.3s,MS5.8
GTA LR LR
comp=E,14μm,15.2s,MS5.8
GTA LR LR
comp=Z,9μm,17.9s,MS5.5
TPUB Ta-pu 30.11 62 *e*P **P 13 13 18.3 +0.8**
comp=Z,67nm,1.0s,mb5.3
TWG Pinlang 30.34 63 *e*P **P 13 13 20.7 +1.1**
comp=Z,75nm,0.7s,mb5.5
SSLB Suanglung 30.55 61 *e*P **P 13 13 22.2 +0.7**
comp=Z,112nm,0.8s,mb5.7
SSLB *e*PcP PcP 13 16 26.5 +6.4
YULB Yu-li 30.72 62 *e*P **P 13 13 24.2 +1.3**
comp=Z,90nm,0.8s,mb5.7
YHNB Yeheng 31.22 60 *e*P **P 13 13 28.2 +0.9**
comp=Z,194nm,1.1s,mb5.8
NACB Ninganchiao 31.24 61 *e*P **P 13 13 30.2 +2.8**
comp=Z,46nm,0.8s,mb5.3
KBL Kabul 31.37 322 *e*P **P 13 13 29.1 +0.6**
KBL pmax pmax
comp=Z,74nm,1.0s,mb5.5
KBL Kabul 31.37 322 *e*P **P 13 13 29.1 +0.5**
comp=Z,74nm,1.0s,mb5.5
TATO Taipei 31.42 60 *e*P **P 13 13 28.9 -0.2**
comp=Z,142nm,1.1s,mb5.7
KSH Kashi 31.78 336 ⇑*i*P **P 13 13 31.5 -0.5**
KSH pP pP 13 13 40.8 +1.8
KSH sP sP 13 13 45.0 +3.1
KSH PP PP 13 14 35.5 -8.5
KSH PcP PcP 13 16 24.5 +1.5
KSH S **S 13 18 35.3 -5.5**
KSH sS sS 13 18 51.5 -0.9
KSH ScP ScP 13 20 03.8 -1.3
KSH PcS PcS 13 20 07.5 0.0
KSH SS SS 13 20 24.0 -34
KSH ScS ScS 13 24 00.0 -3.2
KSH pmax pmax
comp=Z,70nm,0.7s,mb5.6
KSH pmax pmax
comp=Z,760nm,5.0s
KSH LR LR
comp=N,6μm,13.7s,MS5.6
KSH LR LR
comp=E,7μm,12.7s,MS5.6
KSH LR LR
comp=Z,5μm,11.9s,MS5.4
NJ2 Nanjing 32.64 46 *e*P **P 13 13 41.5 +1.8**
NJ2 pP pP 13 13 51.0 +4.3
NJ2 sP sP 13 13 54.3 +4.7
NJ2 PP PP 13 14 50.0 -3.7
NJ2 pmax pmax
comp=Z,60nm,1.0s,mb5.5
NJ2 pmax pmax
comp=Z,2μm,10.0s
NJ2 LR LR
comp=N,19μm,16.5s,MS6.1
NJ2 LR LR
comp=E,19μm,14.4s,MS6.1
NJ2 LR LR
comp=Z,18μm,16.2s,MS5.8
WMQ Urumqi 32.98 355 P **P 13 13 43.0 +0.5**
WMQ pP pP 13 13 53.0 +3.4
WMQ sP sP 13 13 57.0 +4.6
WMQ PP PP 13 14 53.0 -4.3
WMQ S **S 13 18 59.0 -0.5**
WMQ sS sS 13 19 14.0 +2.9
WMQ ScP ScP 13 20 07.0 -2.2
WMQ SS SS 13 20 59.0 -23
WMQ pmax pmax
comp=Z,98nm,1.0s,mb5.7
WMQ pmax pmax
comp=Z,180nm,3.0s
WMQ LR LR
comp=N,11μm,14.0s,MS6.2
WMQ LR LR
comp=E,28μm,14.0s,MS6.2
WMQ LR LR
comp=Z,8μm,14.0s,MS5.6
WBK Wadi Bani Khal 33.44 295 ⇑P **P 13 13 50.9 +4.1**
SNR=7.3
WBK ⇑P 13 13 50.9
SNR=7.3
DAV Davao City (W) 33.57 94 PFAKE 13 14 00.0 +12
DAV LR LR
comp=Z,6μm,19.0s,MS5.3
BTO Baotou 33.67 25 *e*P **P 13 13 46.3 -2.3**
BTO LR LR
comp=N,6μm,13.3s,MS5.5
BTO LR LR
comp=E,4μm,15.3s,MS5.5
SSE Sheshan 33.82 49 P **P 13 13 50.8 +0.7**
SSE pmax pmax
comp=Z,53nm,0.8s,mb5.5
SSE LR LR
comp=N,9μm,19.5s,MS5.8
SSE LR LR
comp=E,16μm,18.6s,MS5.8
SSE LR LR
comp=Z,11μm,13.4s
TIA Tai'an 34.05 38 *e*P **P 13 13 52.5 +0.6**
JMDO Jabal Madar 34.15 294 ⇓P **P 13 13 56.0 +2.9**
SNR=5.8
JMDO ⇓P 13 13 56.0
SNR=5.8
KZA Kyzart 34.26 338 P **P 13 13 55.3 +1.6**
SNR=33
SMDO Samad 34.37 295 P **P 13 13 58.0 +3.0**
SNR=8.9
SMDO P 13 13 58.0
SNR=8.9
HHC Hu-ho-hao-te 34.54 27 *e*P **P 13 13 57.0 +0.9**
HHC pP pP 13 14 06.8 +3.6
HHC sP sP 13 14 10.5 +4.4
HHC PP PP 13 15 14.0 -0.7
HHC PcP PcP 13 16 31.0 +0.3
HHC S **S 13 19 23.3 -0.5**
HHC sS sS 13 19 39.3 +3.9
HHC ScP ScP 13 20 11.8 -2.9
HHC PcS PcS 13 20 16.5 -0.6
HHC SS SS 13 21 36.5 -17
HHC ScS ScS 13 24 14.8 -2.7
HHC pmax pmax
comp=Z,16nm,0.9s,mb5.0
HHC pmax pmax
comp=Z,1μm,4.9s
HHC LR LR
comp=N,10μm,15.9s,MS6.0
HHC LR LR
comp=E,20μm,17.3s,MS6.0
HHC LR LR
comp=Z,11μm,15.9s,MS5.7
UCH Uchtor 34.67 337 P **P 13 13 58.9 +1.6**
SNR=49
UCH Uchtor 34.67 337 *e*P **P 13 13 58.5 +1.3**
comp=Z,33nm,0.7s,mb5.4
TKM2 Tokmak 2 34.87 339 P **P 13 13 60.0 +1.0**
SNR=26
TKM2 Tokmak 2 34.87 339 *e*P **P 13 13 57.7 -1.3**
TKM2 pmax pmax
comp=Z,49nm,1.0s,mb5.4
TKM2 Tokmak 2 34.87 339 *e*P **P 13 13 57.7 -1.3**
comp=Z,49nm,1.0s,mb5.4
KBK Karagaybulak 34.88 338 P **P 13 14 01.3 +2.3**
SNR=21
AML Almayashu 34.91 336 P **P 13 14 01.7 +2.4**
SNR=11
AML Almayashu 34.91 336 *e*P **P 13 14 00.4 +1.2**
comp=Z,290nm,1.2s,mb6.1
AML LR LR
comp=Z,5μm,21.0s,MS5.2
AAK Ala-Archa 35.02 338 P **P 13 14 02.2 +1.9**
SNR=37
AAK Ala-Archa 35.02 338 P **P 13 14 02.4 +2.1**
comp=Z,54nm,1.0s,mb5.4,baz=194,slow=6.7,SNR=75
AAK ScP ScP 13 20 22.3 +5.8
comp=Z,7.0nm,0.7s,baz=232,slow=5.1,SNR=5.4
AAK LR LR 13 31 05.9
comp=Z,16μm,21.0s,MS5.8,baz=145,slow=41
BSY Bisya 35.05 294 ⇑P **P 13 14 03.9 +3.1**
SNR=19
BSY ⇑P 13 14 03.9
SNR=19
FRU Bishkek 35.15 338 *e*P **P 13 14 01.0 -0.4**
FRU pmax pmax
comp=Z,590nm,2.4s,mb6.1
HOQ Hoqain 35.16 296 P **P 13 14 04.6 +2.9**
SNR=14
HOQ P 13 14 04.6
SNR=14
CHMS Chumysh 35.24 338 P **P 13 14 03.2 +1.0**
SNR=25
EKS2 Erkin-Say 35.32 337 P **P 13 14 04.8 +1.9**
SNR=75
EKS2 Erkin-Say 35.32 337 *e*P **P 13 14 03.8 +0.9**
comp=Z,103nm,1.0s,mb5.7
EKS2 LR LR
comp=Z,11μm,20.0s,MS5.6
USP Ospenovka 35.57 338 P **P 13 14 05.5 +0.6**
SNR=70
ARQ Araqi 35.80 295 ⇑P **P 13 14 10.2 +2.9**
SNR=10
ARQ ⇑P 13 14 10.2
SNR=10
BJI Beijing 36.16 32 P **P 13 14 11.0 +0.9**
BJI sP sP 13 14 23.5 +3.4
BJI S **S 13 19 50.0 +1.3**
BJI pmax pmax
comp=Z,55nm,1.3s,mb5.3
BJI pmax pmax
comp=Z,4μm,14.7s
BJI LR LR
comp=N,17μm,16.4s,MS6.1
BJI LR LR
comp=E,21μm,17.1s,MS6.1
BJI LR LR
comp=Z,16μm,18.9s,MS5.8
HATD Hatta, Dubai 36.53 297 ⇓P **P 13 14 16.3 +2.9**
SNR=20
HATD ⇓P 13 14 16.3
SNR=20
HATD mb 13 14 20.8
baz=0.0,slow=0.0,SNR=28
HATD mb 13 14 20.8
baz=0.0,slow=0.0,SNR=28
ASHO Ashiyiah 36.56 297 ⇑P **P 13 14 17.0 +3.3**
SNR=15
ASHO ⇑P 13 14 17.0
SNR=15
ASHO mb pP 13 14 22.9 +2.1
SNR=20
ASHO mb pP 13 14 22.9 +2.1
SNR=20
MK31 Makanchi Array 36.66 349 *e*P **P 13 14 14.0 -0.3**
MKAR Makanchi Array 36.66 349 P **P 13 14 14.0 -0.3**
comp=Z,66nm,0.8s,mb5.5,baz=133,slow=8.6,SNR=78
MKAR LR LR 13 33 36.4
comp=Z,8μm,18.1s,MS5.6,baz=167,slow=43
BANOM Banah 36.70 299 ⇑P **P 13 14 18.7 +3.9**
SNR=7.5
BANOM ⇑P 13 14 18.7
SNR=7.5
BANOM mb 13 14 30.6
baz=0.0,slow=0.0,SNR=13
BANOM mb 13 14 30.6
baz=0.0,slow=0.0,SNR=13
NAZ Nazwa, Dubai 36.98 297 mb 13 14 25.0
SNR=9.4
ASUD Al Ashush, Dub 37.18 296 P **P 13 14 22.2 +3.2**
SNR=13
ASUD P 13 14 22.2
SNR=13
ASUD mb 13 14 37.9
SNR=21
ASUD mb 13 14 37.9
SNR=21
WHFO Wadi Hawf 37.43 285 ⇑P **P 13 14 23.2 +2.0**
SNR=9.9
WHFO ⇑P 13 14 23.2
SNR=9.9
WHFO mb 13 14 27.0
SNR=20
WHFO mb 13 14 27.0
SNR=20
DL2 Dalian 38.52 39 P **P 13 14 31.3 +1.2**
DL2 S **S 13 20 24.5 0.0**
DL2 ScS ScS 13 24 38.3 -1.4
DL2 pmax pmax
comp=Z,40nm,1.1s,mb5.1
DL2 pmax pmax
comp=Z,1μm,8.8s
DL2 LR LR
comp=N,6μm,19.0s,MS5.6
DL2 LR LR
comp=E,6μm,19.7s,MS5.6
DL2 LR LR
comp=Z,8μm,17.1s,MS5.6
SONM Songino Array 38.80 16 P **P 13 14 33.1 +0.7**
comp=Z,53nm,1.1s,mb5.2,baz=197,slow=7.5,SNR=88
SONM ScP ScP 13 20 34.4 +4.0
comp=Z,2.1nm,1.0s,baz=184,slow=8.6,SNR=3.5
ULN Ulaanbaatar 39.01 16 *e*P **P 13 14 33.8 -0.2**
ULN pmax pmax
comp=Z,135nm,1.4s,mb5.5
ULN Ulaanbaatar 39.01 16 *e*P **P 13 14 33.8 -0.3**
comp=Z,135nm,1.4s,mb5.5
ULN Ulaanbaatar 39.01 16 ⇓P **P 13 14 34.8 +0.8**
SNR=59
ULN ⇓P 13 14 34.8
SNR=59
ULN mb 13 14 49.4
SNR=71
ULN mb 13 14 49.4
SNR=71
MSEY Mahe Island 39.33 249 PFAKE 13 14 50.0 +13
MSEY LR LR
comp=Z,5μm,19.0s,MS5.3
ABKT Ailbek 40.41 317 P **P 13 14 47.6 +1.7**
comp=Z,574nm,1.1s,mb6.2,SNR=32
ZAK Zakamensk 40.48 11 ⇓*i*P **P 13 14 47.1 +0.9**
ZAK pmax pmax
comp=Z,21nm,1.8s,mb4.6
INCN Inchon 40.95 44 *e*P **P 13 14 50.6 +0.2**
comp=Z,374nm,1.7s,mb5.7
INCN LR LR
comp=Z,14μm,20.0s,MS5.8
INCN Inchon 40.95 44 ⇑P **P 13 14 51.6 +1.2**
INCN ⇑P 13 14 51.6
INCN mb pP 13 14 56.9 -0.6
SNR=11
INCN mb pP 13 14 56.9 -0.6
SNR=11
KURK Kurchatov 41.14 347 P **P 13 14 52.0 +0.3**
comp=Z,107nm,1.1s,mb5.4,baz=176,slow=7.4,SNR=54
KURK ScP ScP 13 20 41.4 +1.9
comp=Z,6.6nm,0.9s,baz=146,slow=3.8,SNR=4.6
KURK LR LR 13 36 06.0
comp=Z,7μm,18.6s,MS5.5,baz=180,slow=42
KURK Kurchatov 41.14 347 *d*i P **P 13 14 51.4 -0.3**
KURK pmax pmax
comp=Z,135nm,1.2s,mb5.5
KURK Kurchatov 41.14 347 *e*P **P 13 14 51.5 -0.3**
comp=Z,116nm,1.1s,mb5.4
KURK LR LR
comp=Z,8μm,20.0s,MS5.6
KURK Kurchatov 41.14 347 ⇑P **P 13 14 52.1 +0.4**
SNR=71
KURK ⇑P 13 14 52.1
SNR=71
MOY Mondy 41.33 9 *e*P **P 13 14 54.8 +1.6**
MOY pmax pmax
comp=Z,192nm,3.0s
SNY Shenyang 41.50 36 ⇑P **P 13 14 55.0 +0.2**
SNY S **S 13 21 15.5 +6.4**
SNY pmax pmax
comp=Z,65nm,2.0s,mb4.9
SNY pmax pmax
comp=Z,3μm,12.0s
SNY LR LR
comp=N,14μm,17.8s,MS5.9
SNY LR LR
comp=E,5μm,20.8s,MS5.9
SNY LR LR
comp=Z,12μm,14.7s
TLY Talaya 41.78 11 ⇑*i*P **P 13 14 59.0 +2.0**
TLY *e* 13 16 47.5
TLY *e*SS SS 13 24 17.3 -2.1
TLY pmax pmax
comp=Z,45nm,1.0s,mb5.0
TLY MLR MLR
comp=Z,9μm,18.0s,MS5.7
TLY Talaya 41.78 11 *e*P **P 13 14 58.6 +1.7**
comp=Z,41nm,1.0s,mb5.0
KSRS Korea Array 41.82 45 P **P 13 14 57.5 -0.1**
comp=Z,58nm,1.2s,mb5.1,baz=246,slow=8.6,SNR=46
KSRS ScP ScP 13 20 44.6 +2.2
comp=Z,1.7nm,1.0s,baz=243,slow=4.1,SNR=4.2
KSRS LR LR 13 35 40.8
comp=Z,15μm,18.1s,MS5.9,baz=239,slow=41
MBWA Marble Bar 42.06 139 *e*P **P 13 14 57.4 -2.2**
comp=Z,107nm,1.3s,mb5.3
MBWA LR LR
comp=Z,4μm,20.0s,MS5.3
IRK Irkutsk 42.44 11 ⇑*i*P **P 13 15 03.3 +1.0**
IRK *e*S **S 13 21 27.6 +4.9**
IRK pmax pmax
comp=Z,143nm,2.4s,mb5.2
ZAA0 Zalesovo Array 43.29 354 *e*P **P 13 15 08.7 -0.5**
ZALV Zalesovo Beam 43.29 354 P **P 13 15 09.1 -0.1**
comp=Z,21nm,0.4s,mb5.2,baz=175,slow=7.4,SNR=90
ZALV LR LR 13 37 41.0
comp=Z,6μm,19.0s,MS5.5,baz=344,slow=42
IVRN Varamin 43.58 310 *e*P **P 13 15 12.1 +0.2**
CN2 Changchun 43.80 35 *e*P **P 13 15 13.5 0.0**
CN2 *e*S **S 13 21 35.5 -7.5**
CN2 pmax pmax
comp=Z,20nm,0.7s,mb5.0
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,11μm,18.0s,MS5.9
CN2 LR LR
comp=E,10μm,18.0s,MS5.9
CN2 LR LR
comp=Z,11μm,16.0s,MS5.9
FITZ Fitzroy Crossi 44.12 130 *e*P **P 13 15 14.4 -2.0**
comp=Z,389nm,1.0s,mb6.1
FITZ Fitzroy Crossi 44.12 130 P **P 13 15 15.4 -1.0**
comp=Z,49nm,0.8s,mb5.3,baz=300,slow=4.6,SNR=94
FITZ LR LR 13 35 34.1
comp=Z,4μm,20.2s,MS5.3,baz=315,slow=39
NVS Novosibirsk 44.34 353 ⇓*i*P **P 13 15 17.2 -0.4**
NVS *e* 13 17 04.9
NVS *i* S **S 13 21 48.6 -1.8**
NVS pmax pmax
comp=N,234nm,2.5s
NVS pmax pmax
comp=E,100nm,2.5s
NVS pmax pmax
comp=Z,282nm,2.5s,mb5.5
NVS smax
comp=N,106nm,2.5s
NVS smax
comp=E,168nm,2.3s
QRN Al-Qurain 44.63 300 *e*P **P 13 15 20.3 -0.1**
QRN AMb AMB 13 15 25.6
comp=Z,191nm,2.0s,mb5.6
CIT Chita 44.64 19 *e*P **P 13 15 21.0 +1.0**
CIT *e* 13 15 33.1
CIT *e* 13 21 55.0
RDF Al-Radifah 44.99 300 *e*P **P 13 15 23.2 -0.1**
RDF AMb AMB 13 15 28.6
comp=Z,256nm,1.6s,mb5.8
UMR Umm Al-Rimmam 45.01 301 *e*P **P 13 15 22.8 -0.6**
UMR AMb AMB 13 15 27.9
comp=Z,222nm,1.0s,mb5.9
NAY Al-Naaiem 45.33 300 *e*P **P 13 15 25.4 -0.6**
NAY AMb AMB 13 15 30.9
comp=Z,135nm,1.4s,mb5.6
MIB Mutribah 45.39 301 *e*P **P 13 15 26.1 -0.3**
MIB AMb AMB 13 15 31.7
comp=Z,262nm,1.2s,mb6.0
BVAR Borovoye Array 45.40 342 P **P 13 15 26.1 +0.1**
comp=Z,24nm,0.8s,mb5.1,baz=142,slow=7.5,SNR=51
BVAR ScP ScP 13 20 59.9 +3.3
comp=Z,8.8nm,1.1s,baz=160,slow=4.7,SNR=3.5
BRVK Borovoye 45.46 342 *d*i P **P 13 15 26.3 -0.2**
BRVK pmax pmax
comp=Z,50nm,1.2s,mb5.2
BRVK Borovoye 45.46 342 *e*P **P 13 15 26.2 -0.3**
comp=Z,49nm,1.1s,mb5.2
BRVK LR LR
comp=Z,9μm,19.0s,MS5.7
BRVK Borovoye 45.46 342 mb 13 13 17.7
SNR=26
BRVK mb 13 13 17.7
SNR=26
KAKA Kakadu 46.67 119 *e*P **P 13 15 35.3 -1.4**
comp=Z,42nm,0.8s,mb5.4
KAKA Kakadu 46.67 119 *e*P **P 13 15 34.3 -2.4**
comp=Z,86nm,0.6s,mb5.8
MDJ Mudanjiang 46.69 37 P **P 13 15 37.3 +0.9**
MDJ pP pP 13 15 46.0 +2.4
MDJ sP sP 13 15 49.8 +3.3
MDJ PP PP 13 17 26.5 +0.2
MDJ S **S 13 22 23.8 -0.9**
MDJ pmax pmax
comp=Z,13nm,1.6s,mb4.6
MDJ pmax pmax
comp=Z,890nm,11.0s
MDJ LR LR
comp=N,9μm,19.6s,MS5.9
MDJ LR LR
comp=E,9μm,19.1s,MS5.9
MDJ LR LR
comp=Z,12μm,18.0s,MS5.9
VLA Vladivostok 47.30 40 *e*P **P 13 15 42.5 +1.3**
VLA pmax pmax
comp=Z,96nm,1.6s,mb5.5
VLA MLR MLR
comp=Z,18μm,19.0s,MS6.0
ATD Arta Tunnel 47.98 276 P **P 13 15 49.7 +2.8**
comp=Z,45nm,0.9s,mb5.5,baz=91,slow=10,SNR=12
ATD LR LR 13 35 38.9
comp=Z,3μm,18.1s,MS5.3,baz=0.1,slow=36
ATD Arta Tunnel 47.98 276 P **P 13 15 49.7 +2.8**
ATD LR LR 13 35 38.9
AKTK Aktyubinsk 48.19 332 P **P 13 15 48.1 +0.1**
AKTO Aktyubinsk 48.19 332 P **P 13 15 48.1 +0.1**
comp=Z,23nm,0.5s,mb5.4,baz=130,slow=8.7,SNR=46
MAJO Matsushiro 48.94 51 *e*P **P 13 15 53.2 -0.8**
MAJO pmax pmax
comp=Z,68nm,1.1s,mb5.6
MAJO MLR MLR
comp=Z,7μm,20.0s,MS5.7
MAJO Matsushiro 48.94 51 *e*P **P 13 15 53.2 -0.8**
comp=Z,68nm,1.1s,mb5.6
MAJO LR LR
comp=Z,7μm,20.0s,MS5.7
MAT Matsushiro 48.94 51 P **P 13 15 54.0 0.0**
MAT S **S 13 22 55.0 -1.8**
MJAR Matsushiro Arr 48.94 51 P **P 13 15 54.7 +0.7**
comp=Z,12nm,1.2s,mb4.8,baz=241,slow=6.2,SNR=18
MJAR PcP PcP 13 17 18.8 +0.7
comp=Z,8.6nm,0.9s,baz=243,slow=2.8,SNR=2.8
MJAR ScP ScP 13 21 14.2 +2.3
comp=Z,0.9nm,0.7s,baz=105,slow=28,SNR=3.2
MJAR LR LR 13 38 31.1
comp=Z,4μm,18.0s,MS5.5,baz=255,slow=38
MJAR Matsushiro Arr 48.94 51 P **P 13 15 54.7 +0.7**
MJAR 13 17 18.8

KLBR Kellerberrin 49.04 150 *e*P **P 13 15 53.7 -1.0**
comp=Z,91nm,0.9s,mb5.8
NWAO Narrogin (SRO) 49.89 152 P **P 13 16 01.4 +0.2**
comp=Z,64nm,1.0s,mb5.6,baz=319,slow=9.2,SNR=12
NWAO LR LR 13 36 04.3
comp=Z,20nm,21.2s,baz=313,slow=35
NWAO Narrogin (SRO) 49.89 152 *e*P **P 13 16 00.5 -0.7**
NWAO pmax pmax
comp=Z,144nm,1.1s
NWAO MLR MLR
comp=Z,4μm,20.0s
NWAO Narrogin (SRO) 49.89 152 *e*P **P 13 16 00.5 -0.7**
comp=Z,144nm,1.1s,mb5.9
NWAO LR LR
comp=Z,4μm,20.0s,MS5.4
MAK Makhachkala 49.93 318 *e*P **P 13 15 57.7 -3.7**
MAK *i* 13 17 25.9
MAK *i* 13 17 53.6
MAK *i* S **S 13 23 06.8 -3.7**
MAK *e* 13 25 52.4
MAK pmax pmax
comp=Z,89nm,0.9s,mb5.8
CBIJ Chichi jima 49.95 64 P **P 13 16 03.4 +1.5**
comp=Z,141nm,0.5s,mb6.2,baz=314,slow=16,SNR=8.2
CBIJ LR LR 13 38 11.6
comp=Z,2μm,18.7s,MS5.2,baz=304,slow=37
KLR Kul'dur 50.54 33 *e*P **P 13 16 03.2 -2.7**
KLR pmax pmax
comp=E,140nm,2.0s
KLR pmax pmax
comp=Z,140nm,2.0s,mb5.5
GNI Garni 50.68 314 P **P 13 16 09.1 +1.9**
comp=Z,55nm,0.9s,mb5.5,baz=122,slow=1.8,SNR=36
GNI Garni 50.68 314*d i*P **P 13 16 06.2 -1.0**
GNI pmax pmax
comp=Z,294nm,1.7s
GNI Garni 50.68 314 P **P 13 16 09.1 +1.9**
GNI LR LR
comp=Z,3μm,19.0s,MS5.3
DGRG David-gareji 50.73 315 P **P 13 16 09.1 +1.5**
MTA Mtatsminda 51.23 315 P **P 13 16 12.0 +0.7**
TBLG Delisi 51.28 315 P **P 13 16 13.1 +1.4**
SVE Sverdlovsk 51.75 339⇑*e*P **P 13 16 15.4 +0.5**
SVE *e*S **S 13 23 38.3 +3.0**
SVE pmax pmax
comp=Z,116nm,0.9s,mb5.8
SVE MLR MLR
comp=Z,10μm,17.0s,MS5.9
GOR Gori 51.81 315 P **P 13 16 18.1 +2.4**
GUMO Guam 51.85 81 PFAKE 13 16 30.0 +14
GUMO LR LR
comp=Z,2μm,20.0s,MS5.2
WRA Warramunga Arr 51.90 126 P **P 13 16 15.4 -1.2**
comp=Z,8.1nm,0.3s,mb5.1,baz=301,slow=10.0,SNR=300
WRA ScP ScP 13 21 27.6 +2.7
comp=Z,1.5nm,0.8s,baz=211,slow=8.8,SNR=2.4
WRA S **S 13 23 36.0 -2.4**
comp=Z,9.8nm,1.1s,baz=299,slow=16,SNR=6.7
WRA LR LR 13 43 03.5
comp=Z,3μm,18.9s,MS5.3,baz=300,slow=42
WRA Warramunga Arr 51.90 126 P **P 13 16 15.4 -1.2**
WRA S **S 13 23 36.0 -2.3**
WRAB Tennant Creek 51.90 126 *e*P **P 13 16 15.3 -1.3**
WRAB pmax pmax
comp=Z,100nm,0.8s,mb5.8
WRAB Tennant Creek 51.90 126 *e*P **P 13 16 15.3 -1.3**
comp=Z,100nm,0.8s,mb5.8
HABR Khabarovsk 51.94 35*de*P **P 13 16 16.4 -0.1**
HABR *e**PP pP 13 16 25.2 +1.4
HABR *e**SP sP 13 16 29.3 +2.7
HABR 13 17 28.0
HABR PPP 13 19 15.4
HABR *e*S **S 13 23 37.9 -0.3**
HABR *e**SS sS 13 23 52.9 +2.7
HABR *e* 13 26 02.5
HABR SS SS 13 27 15.7 +0.4
HABR *e*SSS 13 28 56.1
HABR pmax pmax
comp=E,63nm,1.6s
HABR pmax pmax
comp=Z,105nm,1.6s,mb5.5
HABR pmax pmax
comp=N,33nm,1.6s
HABR pmax pmax
comp=Z,1μm,8.4s
HABR MLR MLR
comp=Z,7μm,21.0s,MS5.7
ARU Arti 52.21 337 *e*P **P 13 16 18.2 -0.2**
ARU pmax pmax
comp=Z,626nm,2.5s,mb6.1
ARU MLR MLR
comp=Z,15μm,20.0s,MS6.0
ARU Arti 52.21 337 *e*P **P 13 16 18.2 -0.1**
comp=Z,626nm,2.5s,mb6.1
ARU LR LR
comp=Z,15μm,20.0s,MS6.0
ZEI Tsey 52.26 316 *e*P **P 13 16 19.5 +0.5**
ZEI *e*S **S 13 23 47.5 +4.7**
ZEI pmax pmax
comp=Z,62nm,0.9s,mb5.5
CLNS Chul'man 52.46 22 *e*P **P 13 16 21.0 +0.8**
CLNS *e* 13 17 31.8
CLNS *e* 13 18 19.8
CLNS *e*PPP 13 19 24.6
CLNS *e*S **S 13 23 46.8 +1.8**
CLNS pmax pmax
comp=E,20nm,1.2s
CLNS pmax pmax
comp=Z,37nm,1.3s,mb5.2
CLNS pmax pmax
comp=N,21nm,1.3s
CLNS pmax pmax
comp=N,23nm,1.2s
CLNS pmax pmax
comp=E,10.0nm,1.1s
CLNS pmax pmax
comp=Z,13nm,1.1s,mb4.8
CLNS smax
comp=N,2μm,14.1s
CLNS smax
comp=E,1μm,14.6s
CLNS MLR MLR
comp=Z,966nm,20.0s,MS4.8
CLNS MLR MLR
comp=N,9μm,19.0s,MS5.9
CLNS MLR MLR
comp=E,7μm,17.0s,MS5.9
ONI Oni 52.49 316 P **P 13 16 21.8 +1.1**
OPO Ambohidratompo 52.87 237 P **P 13 16 26.0 +2.2**
comp=E,8.8nm,0.8s,mb4.8,baz=54,slow=5.7,SNR=17
ABPO Ambohimpanom 53.06 236 *e*P **P 13 16 26.4 +1.2**
ABPO pmax pmax
comp=Z,117nm,1.2s,mb5.7
ABPO MLR MLR
comp=Z,5μm,19.0s,MS5.6
ABPO Ambohimpanom 53.06 236 *e*P **P 13 16 26.4 +1.2**
comp=Z,116nm,1.2s,mb5.7
ABPO LR LR
comp=Z,5μm,19.0s,MS5.6
KIV Kislovodsk 53.53 317⇓*i*P **P 13 16 29.2 +0.9**
KIV *i* 13 16 38.4
KIV *e* 13 17 39.7
KIV *i* S **S 13 24 01.0 +0.9**
KIV pmax pmax
comp=Z,125nm,1.2s,mb5.7
KIV Kislovodsk 53.53 317 *e*P **P 13 16 28.1 -0.2**
comp=Z,194nm,1.0s,mb6.0
KIV LR LR
comp=Z,3μm,19.0s,MS5.3
KIV Kislovodsk 53.53 317 ⇓P **P 13 16 29.6 +1.3**
SNR=62
KIV ⇓P 13 16 29.6
SNR=62
ASAR Alice Springs 53.62 130 P **P 13 16 29.3 0.0**
comp=Z,30nm,0.8s,mb5.3,baz=307,slow=7.0,SNR=200
ASAR PcP PcP 13 17 37.3 +1.6
comp=Z,20nm,0.8s,baz=306,slow=4.8,SNR=1.5
ASAR S **S 13 23 57.6 -4.2**
comp=Z,2.2nm,0.8s,baz=295,slow=14,SNR=5.7
ASAR PKPPKP 13 46 54.0
comp=Z,0.7nm,0.9s,baz=177,slow=3.1,SNR=2.2
ASAR PKP2bc 13 47 07.7
comp=Z,3.5nm,1.2s,baz=114,slow=2.7,SNR=5.5
ASAR Alice Springs 53.62 130 P **P 13 16 29.3 0.0**
ASAR 13 17 37.3
ASAR S **S 13 23 57.7 -4.1**
ASAR Alice Springs 53.62 130 P **P 13 16 29.3 0.0**
ASAR PcP PcP 13 17 37.3 +1.6
ASAR S **S 13 23 57.6 -4.2**
ASAR ⇑*e* 13 47 07.7
FORT Forrest 54.14 141 *e*P **P 13 16 32.9 0.0**
comp=Z,53nm,0.7s,mb5.6
FORT Forrest 54.14 141 *e*P **P 13 16 33.1 +0.2**
comp=Z,72nm,0.8s,mb5.7
ERM Erimo 54.38 46 *e*P **P 13 16 35.7 +1.1**
ERM Erimo 54.38 46 *e*P **P 13 16 35.8 +1.2**
comp=Z,122nm,1.7s,mb5.6
ERM LR LR
comp=Z,7μm,20.0s,MS5.7
ASAJ Asahikawa 54.72 43 P **P 13 16 39.0 +2.0**
comp=Z,7.8nm,0.7s,mb4.9,baz=244,slow=12,SNR=11
SOKR Solikamsk 55.16 339*d i*P **P 13 16 40.2 +0.3**
SOKR pmax pmax
comp=Z,80nm,1.0s,mb5.7
SOKR MLR MLR
comp=Z,7μm,16.0s,MS5.8
SOC Sochi 55.41 316*d i*P **P 13 16 41.1 -0.9**
SOC *e**PP pP 13 16 50.3 +1.0
SOC *e* 13 17 41.8
SOC *e*PPP 13 19 54.1
SOC *e*S **S 13 24 25.7 +0.4**
SOC *e**SS sS 13 24 38.8 +1.4
SOC *e* 13 26 22.0
SOC pmax pmax
comp=Z,650nm,3.6s
SOC pmax pmax
comp=Z,87nm,1.1s,mb5.7
KMBO Kilima Mbogo 55.54 261 P **P 13 16 45.4 +1.9**
comp=Z,34nm,1.1s,mb5.3,baz=182,slow=24,SNR=20
KMBO LR LR 13 36 18.8
comp=Z,5μm,20.5s,MS5.6,baz=182,slow=32
KMBO Kilima Mbogo 55.54 261 *e*P **P 13 16 45.4 +2.0**
KMBO pmax pmax
comp=Z,64nm,1.2s
KMBO MLR MLR
comp=Z,5μm,20.0s
KMBO Kilima Mbogo 55.54 261 *e*P **P 13 16 45.4 +2.0**
comp=Z,64nm,1.2s,mb5.5
KMBO LR LR
comp=Z,5μm,20.0s,MS5.6
YSS Yuzh-Sakhalins 55.89 40⇓*e*P **P 13 16 46.0 +0.6**
YSS *e**SP sP 13 17 02.0 +6.5
YSS *e*S **S 13 24 32.0 +0.4**
YSS pmax pmax
comp=Z,40nm,1.0s,mb5.4
YSS MLR MLR
comp=Z,7μm,14.0s,MS5.9
YSS MLR MLR
comp=N,9μm,15.0s,MS6.0
YSS MLR MLR
comp=E,5μm,15.0s,MS6.0
YSS Yuzh-Sakhalins 55.89 40 *e*P **P 13 16 45.6 +0.3**
comp=E,94nm,0.8s,mb5.9
MMAI Mount Meron Ar 56.04 302 P **P 13 16 48.0 +1.4**
comp=E,16nm,1.1s,mb5.0,baz=110,slow=17,SNR=10.0
MMAI PcP PcP 13 17 47.5 +2.6
comp=E,15nm,1.0s,baz=128,slow=6.7,SNR=6.1
MMAI LR LR 13 42 59.7
comp=E,5μm,19.8s,MS5.6,baz=75,slow=38
COEN Coen 56.62 115 *e*P **P 13 16 51.1 0.0**
comp=E,361nm,1.4s,mb6.2
ANN Anapa 57.35 317 *e*P **P 13 16 53.7 -2.2**
ANN *e*S **S 13 24 49.2 -1.9**
ANN pmax pmax
comp=Z,51nm,1.4s,mb5.4
YAK Yakutsk 57.91 20 *e*P **P 13 16 58.8 -0.6**
YAK *e**PP pP 13 17 10.5 +3.7
YAK *e* 13 17 52.6
YAK *e* 13 19 06.1
YAK *e*S **S 13 24 55.1 -2.7**
YAK *e* 13 26 41.3
YAK *e*SS SS 13 28 42.4 -6.3
YAK pmax pmax
comp=Z,127nm,1.4s,mb5.8
YAK pmax pmax
comp=E,24nm,1.5s
YAK pmax pmax
comp=N,31nm,1.1s
YAK pmax pmax
comp=Z,49nm,1.8s,mb5.2
YAK pmax pmax
comp=N,41nm,1.5s
YAK pmax pmax
comp=E,34nm,1.4s
YAK smax
comp=N,515nm,3.2s
YAK smax
comp=E,753nm,3.8s
YAK MLR MLR
comp=Z,6μm,19.0s,MS5.7
YAK MLR MLR
comp=N,6μm,15.0s,MS6.0
YAK MLR MLR
comp=E,6μm,16.0s,MS6.0
YAK Yakutsk 57.91 20 *e*P **P 13 16 59.0 -0.4**
comp=E,98nm,0.9s,mb5.8
CSS Prodhromos 58.05 304 *e*P **P 13 16 59.6 -1.4**
comp=E,61nm,1.1s,mb5.5
CSS LR LR
comp=Z,5μm,20.0s,MS5.6
VORD Divnogorie 58.42 324 *e*P **P 13 17 02.9 -0.3**
VORD *e*S **S 13 25 02.4 -2.5**
VORD pmax pmax
comp=N,1.0nm,1.0s
VORD pmax pmax
comp=E,1.0nm,1.0s
VORD pmax pmax
comp=Z,1.0nm,1.0s
VORD smax
comp=N,7.0nm,3.8s
VORD smax
comp=E,9.0nm,3.8s
VORD smax
comp=Z,3.0nm,3.8s
VORD MLR MLR
comp=N,70nm,19.0s
VORD MLR MLR
comp=E,50nm,19.0s
VORD MLR MLR
comp=Z,100nm,19.0s
VSR Storozhevoye 58.59 324 *e*P **P 13 17 03.6 -0.8**
VSR *e*S **S 13 25 04.4 -2.7**
VSR pmax pmax
comp=N,20nm,1.3s
VSR pmax pmax
comp=E,60nm,1.3s
VSR pmax pmax
comp=Z,70nm,1.3s,mb5.5
VSR smax
comp=N,780nm,5.4s
VSR smax
comp=E,780nm,5.4s
VSR smax
comp=Z,490nm,5.4s
PMG Port Moresby 58.64 108 *e*P **P 13 17 05.1 -0.3**
PMG pmax pmax
comp=Z,67nm,0.6s
PMG Port Moresby 58.64 108 *e*P **P 13 17 05.1 -0.3**
comp=Z,67nm,0.6s,mb5.8
BR131 Keskin Array S 58.72 310 *e*P **P 13 17 04.4 -1.1**
BR131 LR LR
comp=Z,2μm,19.0s,MS5.2
BRTR Keskin Array B 58.72 310 P **P 13 17 04.4 -1.1**
comp=Z,25nm,0.8s,mb5.3,baz=122,slow=6.8,SNR=66
BRTR LR LR 13 45 18.1
comp=Z,2μm,21.0s,MS5.2,baz=265,slow=39
VOR Voronezh 58.78 325 *e*P **P 13 17 06.0 +0.3**
VOR pmax pmax
comp=Z,400nm,1.8s,mb6.2
SIM Simferopol' 59.65 316*de*P **P 13 17 13.0 +1.1**
SIM *e*S **S 13 25 22.0 +0.9**
ISP Isparta 60.75 307 *e*P **P 13 17 18.3 -1.2**
ISP pmax pmax
comp=Z,154nm,1.5s,mb5.9
ISP MLR MLR
comp=Z,3μm,21.0s,MS5.4
ISP Isparta 60.75 307 *e*P **P 13 17 18.3 -1.2**
comp=Z,154nm,1.5s,mb5.9
ISP LR LR
comp=Z,3μm,21.0s,MS5.4
MOS Moscow 61.30 328 *e*P **P 13 17 22.1 -0.8**
MOS *e* 13 17 40.0
MOS *e* 13 18 04.8
MOS *e*S **S 13 25 38.5 -3.3**
MOS *i* 13 27 09.8
MOS pmax pmax
comp=Z,1μm,2.2s,mb6.6
MOS pmax pmax
comp=Z,321nm,1.5s,mb6.2
OBN Obninsk 61.59 328 *i*P **P 13 17 24.7 -0.2**
OBN *i* 13 18 06.8
OBN pmax pmax
comp=Z,134nm,1.4s,mb5.9
OBN Obninsk 61.59 328 *e*P **P 13 17 25.2 +0.3**
comp=Z,649nm,1.9s,mb6.4
MBAR Mbarara 61.76 263 P **P 13 17 29.5 +2.7**
comp=Z,141nm,1.2s,mb6.0,SNR=5.2
MBAR Mbarara 61.76 263 PFAKE 13 17 40.0 +13
MBAR LR LR
comp=Z,762nm,20.0s,MS4.8
CTA Charters Tower 61.80 120 *e*P **P 13 17 26.8 -0.1**
comp=Z,40nm,1.1s,mb5.5
CTA Charters Tower 61.80 120 P **P 13 17 27.6 +0.6**
comp=Z,19nm,0.9s,mb5.2,baz=259,slow=5.0,SNR=4.9
CTA LR LR 13 43 45.0
comp=Z,4μm,20.1s,MS5.6,baz=293,slow=36
CTAO Charters Tower 61.80 120 *e*P **P 13 17 27.8 +0.9**
CTAO MLR MLR
comp=Z,4μm,20.0s,MS5.6
KARP Karpathos 63.13 304 *e*P **P 13 17 36.0 +0.4**
TIRR Tirgusor 63.49 314 P **P 13 17 37.8 0.0**
TIRR Tirgusor 63.49 314 *e*P **P 13 17 36.0 -1.8**
comp=Z,30nm,1.0s,mb5.4
TIRR Tirgusor 63.49 314⇑*i*P **P 13 17 36.5 -1.3**
PSN Preselentsi 63.51 313 *i*P **P 13 17 37.1 -0.8**
KIS Kishinev 63.74 317 *e*P **P 13 17 38.0 -1.4**
KIS *e* 13 18 17.0
KIS pmax pmax
comp=Z,180nm,1.5s,mb5.9
STKA Stephens Creek 63.86 134 *e*P **P 13 17 39.7 -0.7**
comp=Z,39nm,0.6s,mb5.6
STKA Stephens Creek 63.86 134 P **P 13 17 40.7 +0.3**
comp=Z,24nm,0.9s,mb5.2,baz=315,slow=5.7,SNR=21
STKA LR LR 13 48 32.4
comp=Z,3μm,19.2s,MS5.5,baz=293,slow=39
STKA Stephens Creek 63.86 134 *e*P **P 13 17 40.3 -0.1**
comp=Z,13nm,0.8s,mb5.0
PRD Provadia 63.98 313 *i*P **P 13 17 39.7 -1.4**
LEOM Leova 64.01 316 P **P 13 17 41.5 +0.3**
PRK Paraskevi 64.25 308 *e*P **P 13 17 43.0 +0.1**
AKASG Malin Array Be 64.36 321 P **P 13 17 42.2 -1.2**
comp=Z,37nm,1.1s,mb5.3,baz=91,slow=4.8,SNR=55
AKASG LR LR 13 51 23.7
comp=Z,3μm,19.1s,MS5.5,baz=90,slow=41
AKBB Malin Array Si 64.36 321 *e*P **P 13 17 42.4 -1.0**
KIEV Kiev 64.36 321 *e*P **P 13 17 42.2 -1.2**
KIEV pmax pmax
comp=Z,36nm,1.0s,mb5.4
KIEV MLR MLR
comp=Z,3μm,20.0s,MS5.5
KIEV Kiev 64.36 321 *e*P **P 13 17 42.2 -1.2**
comp=Z,36nm,1.0s,mb5.4
KIEV LR LR
comp=Z,3μm,20.0s,MS5.5
NPS Neapolis 64.37 304 *e*P **P 13 17 44.0 +0.2**
JMB Yambol 64.46 312 *i*P **P 13 17 44.3 +0.1**
TIXI Tiksi 64.75 12 *e*P **P 13 17 44.5 -1.1**
VRI Vrincioaia 64.93 316⇑P **P 13 17 47.1 -0.1**
VRI Vrincioaia 64.93 316 P **P 13 17 47.7 +0.5**
VRI Vrincioaia 64.93 316⇑*i*P **P 13 17 47.1 -0.1**
PLOR Plostina 64.98 316 P **P 13 17 47.9 +0.4**
PLOR Plostina 64.98 316⇓*i*P **P 13 17 48.2 +0.7**
RDO Rodhopi 65.05 310 *e*P **P 13 17 48.5 +0.4**
SZH Strazhica 65.05 313 *i*P **P 13 17 46.4 -1.7**
MLR Muntele Rosu 65.40 315 ⇓P **P 13 17 50.0 -0.3**
MLR Muntele Rosu 65.40 315 P **P 13 17 50.8 +0.5**
MLR Muntele Rosu 65.40 315⇓*i*P **P 13 17 50.0 -0.3**
PVL Pavlikeni 65.48 313 *i*P **P 13 17 51.0 +0.2**
VAM Vamos 65.53 304 *e*P **P 13 17 51.0 -0.3**
GVD Gavdhos 65.59 303 *e*P **P 13 17 51.4 -0.3**
comp=Z,196nm,1.2s,mb6.0
RZN Rozhen 65.73 311 *i*P **P 13 17 50.7 -1.8**
PLD Plovdiv 65.79 311 *i*P **P 13 17 51.8 -1.1**
VOIR 66.01 315⇑P **P 13 17 53.2 -1.0**
VOIR 66.01 315 P **P 13 17 54.2 -0.1**
VOIR 66.01 315⇑*i*P **P 13 17 53.2 -1.0**
MICGM Minsk 66.13 325⇑*e*P **P 13 17 53.0 -1.8**
MNK Minsk 66.16 325⇑*e*P **P 13 17 53.0 -2.0**
MNK *e*S S 13 26 40.0 -2.3
MNK pmax pmax
comp=Z,240nm,1.5s,mb6.0
PGB Panagyurishte 66.24 312 *i*P **P 13 17 55.4 -0.4**
BURAR Bucovina Array 66.26 317 P **P 13 17 56.1 +0.3**
BURAR Bucovina Array 66.26 317⇓*i*P **P 13 17 55.9 +0.1**
BUR01 Bucovina Ar. S 66.26 317 P **P 13 17 56.3 +0.5**
BUR08 Bucovina Ar. S 66.28 317 *e*P **P 13 17 55.5 -0.4**
MMB Musomiste 66.45 311 *i*P **P 13 17 54.8 -2.3**
PUL Pulkovo 66.45 331 *e*P **P 13 17 56.9 +0.1**
PUL pmax pmax
comp=Z,200nm,1.1s,mb6.1
PLG Polygyros 66.54 309 *e*P **P 13 17 57.0 -0.7**
NACGM Naroch 66.85 325 *e*P **P 13 17 56.0 -3.4**
PETK Petropavlovsk- 66.93 37 P **P 13 18 01.1 +1.2**
comp=Z,12nm,1.1s,mb4.8,baz=185,slow=6.8,SNR=6.5
PETK LR LR 13 52 44.3
comp=Z,4μm,18.0s,MS5.6,baz=30,slow=41
KKB Krupnik 66.96 311 *i*P **P 13 17 59.2 -1.2**
JOF Joensuu 67.13 334 *e*P **P 13 18 00.4 -0.6**
JOF pmax pmax
comp=Z,102nm,0.9s,mb5.8
JOF Joensuu 67.13 334 *e*p **P 13 18 00.4 -0.6**
comp=Z,102nm,0.9s,mb5.8
JOF Joensuu 67.13 334 *e*p **P 13 18 00.4 -0.6**
comp=Z,102nm,0.9s,mb5.8
VAY Valandovo 67.29 310 *e*P **P 13 18 01.0 -1.5**
BMR Baia Mare 67.42 317 P **P 13 18 04.1 +0.9**
LVV L'vov 67.42 320 *e*P **P 13 18 02.8 -0.3**
ITM Ithomi 67.47 306 *e*P **P 13 18 02.0 -1.7**
EVR Evrytania 67.68 308 *e*P **P 13 18 04.5 -0.5**
VSU Vasula 67.81 329*d i*P **P 13 18 04.7 -0.7**
VSU pmax pmax
comp=Z,101nm,1.3s,mb5.7
DRGR 67.82 316 P **P 13 18 05.8 +0.1**
DRGR 67.82 316⇓*i*P **P 13 18 06.1 +0.4**
LVZ Lovozero 67.93 340 P **P 13 18 06.2 +0.2**
comp=Z,365nm,1.0s,mb6.4,SNR=7.8
LVZ Lovozero 67.93 340*d i*P **P 13 18 06.1 +0.1**
LVZ pmax pmax
comp=Z,80nm,1.0s,mb5.7
LVZ Lovozero 67.93 340 PFAKE 13 18 20.0 +14
LVZ LR LR
comp=Z,9μm,20.0s,MS6.0
EIDS Eidsvold 68.05 123 *e*P **P 13 18 13.3 +5.8**
LSZ Lusaka 68.16 249 *e*P **P 13 18 08.1 -0.2**
LSZ MLR MLR
comp=Z,5μm,19.0s,MS5.8
APA Apatity 68.21 339⇓*i*P **P 13 18 08.0 +0.2**
APA *i* 13 18 22.0
APA *i* PPP 13 22 12.0
APA *i* S S 13 27 00.0 -6.5
APA *i* SS SS 13 31 28.0 -1.4
APA pmax pmax
comp=Z,72nm,1.2s,mb5.6
APA MLR MLR
comp=Z,8μm,17.0s,MS6.0
KWP Kalwaria Pacla 68.24 319 *e*P **P 13 18 07.5 -0.8**
KWP Kalwaria Pacla 68.24 319 *e*P **P 13 18 07.5 -0.8**
comp=Z,139nm,1.1s,mb5.9
KWP LR LR
comp=Z,3μm,20.0s,MS5.5
KWP Kalwaria Pacla 68.24 319⇓*i*P **P 13 18 08.1 -0.2**
KRUS Krusevo 68.29 310 *e*P **P 13 18 06.8 -2.0**
UZH Uzhgorod 68.36 318⇓*i*P **P 13 18 08.6 -0.4**
UZH *i* pP 13 18 15.4 -1.1
UZH *e* 13 18 39.4
UZH *e* 13 20 38.2
UZH *e*PPP 13 22 20.2
UZH *e*S S 13 27 07.0 -1.9
UZH *e*PS 13 27 28.6
UZH *e* 13 28 02.0
UZH *e*SS SS 13 31 28.9 -3.5
UZH *e*SSS 13 34 27.0
BZS Buzias 68.43 315⇑P **P 13 18 09.2 -0.4**
BZS Buzias 68.43 315⇑*i*P **P 13 18 09.2 -0.4**

JAN Janina 68.47 308 *eP* **P 13 18 08.5 -1.4**
KBN Korca 68.58 309 PN **P 13 18 05.6 -5.0**
VLS Valsamata 68.59 307 *eP* **P 13 18 10.0 -0.7**
OHR Ohrid 68.61 310 *eP* **P 13 18 08.3 -2.5**
SUW Suwalki 68.71 324 *eP* **P 13 18 10.7 -0.4**
SUW Suwalki 68.71 324 *eP* **P 13 18 10.6 -0.5**
CRVS Cervenica-Dubn 68.94 318 *eP* **P 13 18 12.9 +0.2**
CRVS pmax pmax
comp=Z,74nm,1.7s,mb5.3
CRVS Cervenica-Dubn 68.94 318 *eP* **P 13 18 12.9 +0.2**
comp=Z,74nm,1.7s,mb5.3
CRVS Cervenica-Dubn 68.94 318 *eP* **P 13 18 12.9 +0.2**
FINES FINESS Array B 68.96 332 P **P 13 18 12.3 -0.2**
comp=Z,42nm,0.8s,mb5.4,baz=108,slow=6.2,SNR=33
FINES LR LR 13 54 00.7
comp=Z,4µm,18.4s,MS5.7,baz=108,slow=41
FINES FINESS Array B 68.96 332 P **P 13 18 12.3 -0.2**
FINES LR LR 13 54 00.7
KAF Kangasniemi 69.05 333 *eP* **P 13 18 12.2 -0.9**
KAF pmax pmax
comp=Z,81nm,1.0s,mb5.6
KAF Kangasniemi 69.05 333 *ep* **P 13 18 12.2 -0.9**
comp=Z,81nm,1.0s,mb5.6
KAF Kangasniemi 69.05 333 *ep* **P 13 18 12.2 -0.9**
comp=Z,81nm,1.0s,mb5.6
SRN Sarande 69.14 309 PN **P 13 18 10.5 -3.6**
STHS Stebnicka Huta 69.15 319 *eP* **P 13 18 14.4 +0.4**
STHS pmax pmax
comp=Z,13nm,1.0s,mb4.8
STHS Stebnicka Huta 69.15 319 *eP* **P 13 18 14.4 +0.4**
comp=Z,13nm,1.0s,mb4.8
STHS Stebnicka Huta 69.15 319 *eP* **P 13 18 14.3 +0.3**
BCI Bajram Curri 69.24 311 PN **P 13 18 13.5 -1.2**
KEK Kerkira 69.28 308 *eP* **P 13 18 14.5 -0.5**
PUK Puka 69.35 311 PN **P 13 18 14.1 -1.3**
KECS Kecovo 69.53 318 *eP* **P 13 18 16.5 +0.2**
KECS pmax pmax
comp=Z,14nm,1.0s,mb4.8
KECS Kecovo 69.53 318 *eP* **P 13 18 16.5 +0.2**
comp=Z,14nm,1.0s,mb4.8
KECS Kecovo 69.53 318 *eP* **P 13 18 16.5 +0.2**
TOO Toolangi 69.64 137 *eP* **P 13 18 18.0 +0.9**
NIE Niedzica 69.75 319 *eP* **P 13 18 18.3 +0.6**
PSZ Piszkesteto 69.86 317 P **P 13 18 18.2 -0.2**
PSZ Piszkesteto 69.86 317⇓ *eP* **P 13 18 18.0 -0.4**
OJC Ojcow 70.18 320 *eP* **P 13 18 18.0 -2.3**
OJC *eS* S 13 27 30.5 +0.1
OJC L 13 53 56.0
comp=Z,3.7nm,18.5s
PKSM Moragy 70.55 315 ⇑P **P 13 18 22.3 -0.4**
PKSM Moragy 70.55 315 ⇑*iP* **P 13 18 22.3 -0.4**
VYHS Vyhne 70.62 318 *eP* **P 13 18 22.6 -0.4**
VYHS pmax pmax
comp=Z,16nm,1.2s,mb4.8
VYHS Vyhne 70.62 318 *eP* **P 13 18 22.6 -0.4**
comp=Z,16nm,1.2s,mb4.8
VYHS Vyhne 70.62 318 *eP* **P 13 18 22.6 -0.4**
ARMA Armidale 70.63 128 *eP* **P 13 18 25.0 +1.6**
ARMA Armidale 70.63 128 *eP* **P 13 18 26.1 +2.8**
HNR Honiara 70.72 104 PFAKE 13 18 40.0 +16
HNR LR LR
comp=Z,2µm,21.0s,MS5.4
CAN Canberra 70.92 133 *eP* **P 13 18 25.5 +0.5**
CAN pmax pmax
comp=Z,220nm,1.6s,mb5.8
CAN MLR MLR
comp=Z,4µm,22.0s,MS5.6
CAN Canberra 70.92 133 *eP* **P 13 18 25.5 +0.5**
comp=Z,220nm,1.6s,mb5.8
CAN LR LR
comp=Z,4µm,22.0s,MS5.6
CNB Canberra Magne 71.18 133 *eP* **P 13 18 26.2 -0.4**
OKC Ostrava-Krasne 71.20 319 *eP* **P 13 18 26.2 -0.3**
OKC MLR MLR
comp=Z,2µm,17.4s,MS5.5
OKC Ostrava-Krasne 71.20 319 *eP* **P 13 18 26.2 -0.3**
OKC *ex* x 13 18 30.2
OKC AMS AMS 13 54 30.0
comp=Z,2µm,17.4s
KEV Kevo 71.22 341 *eP* **P 13 18 26.6 +0.3**
KEV pmax pmax
comp=Z,91nm,1.3s,mb5.5
KEV MLR MLR
comp=Z,6µm,22.0s,MS5.8
KEV Kevo 71.22 341 *eP* **P 13 18 26.6 +0.3**
comp=Z,91nm,1.3s,mb5.5
KEV LR LR
comp=Z,6µm,22.0s,MS5.8
MORC Moravsky Berou 71.58 319 P **P 13 18 29.2 +0.4**
TIP Timpagrande 71.62 308 *eP* **P 13 18 28.5 -0.8**
ARCES ARCESS Array B 71.64 340 P **P 13 18 29.3 +0.5**
comp=Z,22nm,0.8s,mb5.1,baz=86,slow=5.1,SNR=40
ARCES LR LR 13 53 15.0
comp=Z,9µm,20.6s,MS6.0,baz=295,slow=39
ARE0 ARCESS Array S 71.64 340 *eP* **P 13 18 26.7 -2.1**
GKP Gorka Klasztor 72.10 323 *eP* **P 13 18 31.3 -0.6**
VRAC Vranov 72.16 318 P **P 13 18 32.8 +0.5**
KOGS Kog 72.22 315⇓ *eP* **P 13 18 32.2 -0.5**
KTK1 Kautokeino 72.26 339 *eP* **P 13 18 29.6 -2.9**
KTK1 *eS* S 13 27 58.2 +4.4
CEL Celeste 72.29 307 *eP* **P 13 18 33.3 0.0**
comp=Z,226nm,1.1s,mb6.0
CEL LR LR
comp=Z,2µm,21.0s,MS5.3
DPC Dobruska-Polom 72.41 319 *eP* **P 13 18 34.2 +0.4**
DPC MLR MLR
comp=Z,3µm,15.2s,MS5.7
DPC Dobruska-Polom 72.41 319 *eP* **P 13 18 34.2 +0.4**
DPC *ep*P pP 13 18 37.7 -3.6
DPC AMS AMS 13 59 10.0
comp=Z,3µm,15.2s
KSP Ksiaz 72.47 320 *eP* **P 13 18 34.2 0.0**
KSP Ksiaz 72.47 320⇓ *eP* **P 13 18 34.1 0.0**
KSP *eS* S 13 27 54.0 -2.8
CONA Conrad Observa 72.56 317 *iP* **P 13 18 34.3 -0.4**
comp=Z,28nm,1.2s,mb5.1,SNR=15
UPC Upice 72.62 320 *eP* **P 13 18 35.6 +0.6**
UPC Upice 72.62 320 *eP* **P 13 18 35.6 +0.6**
UPC *ep*P pP 13 18 39.0 -3.6
DOBS Dobrina 72.75 315 *iP* **P 13 18 35.0 -0.9**
ARSA Arzberg 72.76 316 ⇑*iP* **P 13 18 36.2 +0.3**
comp=Z,78nm,1.7s,mb5.4,SNR=24
BOJS Bojanci 72.88 314 ⇓*iP* **P 13 18 35.9 -0.8**
TREC Trest 72.89 318 *eP* **P 13 18 36.0 -0.6**
TREC MLR MLR
comp=Z,4µm,16.5s,MS5.8
TREC Trest 72.89 318 *eP* **P 13 18 36.0 -0.6**
TREC AMS AMS 13 59 30.0
comp=Z,4µm,16.5s
PERS Pernice 73.01 315⇓ *eP* **P 13 18 37.0 -0.4**
SOKA Soboth 73.07 316 ⇓*iP* **P 13 18 37.7 -0.1**
comp=Z,73nm,1.2s,mb5.5
OBKA Obir 73.40 315 *i* P **P 13 18 39.5 -0.2**
comp=Z,69nm,1.3s,mb5.4,SNR=27
LJU Ljubljana 73.40 315⇓ *eP* **P 13 18 39.4 -0.3**
PRU Pruhonice 73.53 319 *eP* **P 13 18 40.7 +0.2**
PRU MLR MLR
comp=Z,3µm,18.8s,MS5.6
PRU Pruhonice 73.53 319 *eP* **P 13 18 40.7 +0.2**
PRU *ex* x 13 18 44.8
PRU AMS AMS 13 55 40.0
comp=Z,3µm,18.8s
PRA Prague 73.61 319 ⇓P **P 13 18 41.0 +0.1**
BSD Bornholm Skovb 73.62 324 *iP* **P 13 18 41.5 +0.6**
comp=Z,57nm,0.9s,mb5.5
MOA Molln 73.63 317 ⇑*iP* **P 13 18 40.8 -0.3**
comp=Z,51nm,1.2s,mb5.3,SNR=9.3
LBTB Lobatse 73.71 240 *eP* **P 13 18 43.3 +1.4**
LBTB MLR MLR
comp=Z,3µm,20.0s,MS5.6
VOY Vojsko 73.84 315 *eP* **P 13 18 41.5 -0.9**
VOY *e* pP 13 18 50.3 +0.4
VOY *e* 13 19 05.2
VOY *e* 13 19 19.5
VOY *e* 13 19 24.1
TRO Tromso 73.89 340 *eP* **P 13 18 42.0 -0.2**
TRO *eS* S 13 28 14.8 +2.4
TRO AMS AMS 13 54 26.7
comp=Z,8µm,15.6s,MS6.1
BRG Berggiesshubel 73.95 320 *eP* **P 13 18 43.0 +0.1**
comp=Z,54nm,1.2s,mb5.3
BRG Berggiesshubel 73.95 320 *iP* **P 13 18 43.0 +0.1**
comp=Z,62nm,1.4s,mb5.3
BRG *i* 13 18 47.0
comp=Z,54nm,1.2s
BRG
comp=N,3µm,14.6s
BRG
comp=E,2µm,14.8s
BRG
comp=Z,4µm,14.8s
CADS Cadrg 73.96 315⇓ *eP* **P 13 18 42.1 -0.9**
MYKA Terra Mystica 74.03 315 ⇑*iP* **P 13 18 43.3 -0.2**
comp=Z,43nm,1.5s,mb5.2
GEC2 GERESS Array S 74.04 318 *eP* **P 13 18 43.4 0.0**
comp=Z,76nm,1.2s,mb5.5
KHC Kasperske Hory 74.13 318 *eP* **P 13 18 43.6 -0.4**
KHC MLR MLR
comp=Z,3µm,19.1s,MS5.6
KHC Kasperske Hory 74.13 318 *eP* **P 13 18 43.6 -0.4**
comp=Z,27nm,1.0s,mb5.1
KHC Kasperske Hory 74.13 318 *eP* **P 13 18 43.6 -0.4**
KHC *ex* x 13 18 47.1
KHC AMS AMS 13 56 00.0
comp=Z,3µm,19.1s
RUE Ruedersdorf 74.13 322 *eP* **P 13 18 43.8 -0.1**
comp=Z,186nm,1.3s,mb5.9
BILL Bilibino 74.15 22 ⇓*iP* **P 13 18 43.5 -0.2**
BILL *i* 13 18 54.6
BILL pmax pmax
comp=Z,37nm,1.5s,mb5.1
BILL Bilibino 74.15 22 *eP* **P 13 18 43.0 -0.7**
comp=Z,26nm,1.0s,mb5.1
AQU L'Aquila 74.18 311 *eP* **P 13 18 45.3 +0.9**
AQU MLR MLR
comp=Z,3µm,21.0s,MS5.5
KBA Koelnbreinsper 74.24 316 *i* P **P 13 18 44.0 -0.6**
comp=Z,42nm,1.1s,mb5.3,SNR=17
CLL Collm 74.56 320 *eP* **P 13 18 46.1 -0.3**
comp=Z,48nm,1.2s,mb5.3
CLL Collm 74.56 320 ⇓*iP* **P 13 18 46.1 -0.3**
CLL *i* pP 13 18 54.6 +0.6
CLL pmax pmax
comp=Z,63nm,1.4s,mb5.3
CLL MLR MLR
comp=Z,4µm,19.5s,MS5.7
CLL Collm 74.56 320 ⇓*iP* **P 13 18 46.1 -0.3**
comp=Z,63nm,1.4s,mb5.3
CLL *i* (pP) pP 13 18 49.5 -4.5
comp=Z,47nm,1.2s
CLL *i* sP sP 13 18 54.6 -2.2
CLL *i* PcP PcP 13 18 59.7 -1.1
CLL Lm 14 01 00.0
comp=N,3µm,18.8s
CLL Lm 14 01 00.0
comp=E,2µm,18.2s
CLL Lm 14 01 00.0
comp=Z,4µm,19.5s
WET Wettzell 74.59 318 *eP* **P 13 18 46.7 +0.1**
comp=Z,66nm,1.2s,mb5.4
RJOB Jochberg 74.62 317 *eP* **P 13 18 46.1 -0.8**
comp=Z,33nm,1.0s,mb5.2
ABTA Abfaltersbach 74.81 316 *iP* **P 13 18 47.0 -0.9**
comp=Z,30nm,1.2s,mb5.1,SNR=12
TANN Tannenbergstha 74.88 319 *eP* **P 13 18 48.3 0.0**
comp=Z,44nm,1.3s,mb5.2
NKC Novy Kostel 74.89 319 *eP* **P 13 18 48.2 -0.2**
NKC MLR MLR
comp=Z,4µm,13.8s,MS5.8
NKC Novy Kostel 74.89 319 *eP* **P 13 18 48.2 -0.2**
NKC AMS AMS 14 00 50.0
comp=Z,4µm,13.8s
COP Copenhagen 75.07 325 *iP* **P 13 18 52.7 +3.4**
comp=Z,17nm,0.9s,mb5.0
BOSA Boshof 75.28 237 P **P 13 18 52.0 +1.0**
comp=Z,105nm,1.1s,mb5.7,baz=75,slow=6.4,SNR=24
BOSA LR LR 13 48 25.1
comp=Z,4µm,18.4s,MS5.8,baz=37,slow=33
BOSA Boshof 75.28 237 *eP* **P 13 18 52.1 +1.1**
WTTA Wattenberg 75.41 316 *iP* **P 13 18 50.9 -0.5**
comp=Z,68nm,1.2s,mb5.5,SNR=19
MOX Moxa 75.43 320 *eP* **P 13 18 51.3 -0.1**
comp=Z,105nm,1.6s,mb5.5
MOX *e* 13 19 06.0
MOX *e* 13 19 49.3
MOX Moxa 75.43 320 *eP* **P 13 18 51.5 +0.1**
comp=Z,62nm,1.4s,mb5.3
FUR Furstenfeldbru 75.64 317 *eP* **P 13 18 52.3 -0.4**
comp=Z,64nm,1.2s,mb5.4
GRF Grafenberg Arr 75.68 319 *eP* **P 13 18 53.3 +0.4**
comp=Z,125nm,1.2s,mb5.7
GRF *e*L 14 01 56.1
comp=Z,3µm,20.5s
GRF Grafenberg Arr 75.68 319 *eP* **P 13 18 53.3 +0.4**
GRF pmax pmax
comp=Z,125nm,1.2s,mb5.7
GRF MLR MLR
comp=Z,4µm,20.5s,MS5.7
MOTA Moosalm 75.77 316 ⇓*iP* **P 13 18 52.4 -1.1**
comp=Z,47nm,1.1s,mb5.3,SNR=12
NSS Namsos 75.85 334 *eP* **P 13 18 52.5 -1.0**
NSS *e*S S 13 28 35.4 +1.1
NSS AMS AMS 13 58 23.3
comp=Z,6µm,15.3s,MS6.0
NB2 NORSAR Subarra 75.97 330 P **P 13 18 53.6 -0.7**
comp=Z,52nm,1.1s,mb5.4,baz=93,slow=5.9
NOA NORSAR Array B 75.97 330 P **P 13 18 53.6 -0.7**
comp=Z,17nm,0.9s,mb5.0,baz=93,slow=5.8,SNR=34
NOA LR LR 13 55 40.8
comp=Z,4µm,19.2s,MS5.7,baz=95,slow=38
RETA Reutte 76.00 316 *iP* **P 13 18 54.1 -0.7**
comp=Z,87nm,1.4s,mb5.5,SNR=21
FETA Feichten 76.03 316 *iP* **P 13 18 54.8 -0.2**
comp=Z,51nm,1.2s,mb5.3,SNR=8.4
NAO01 NORSAR Array S 76.12 330 *eP* **P 13 18 54.0 -1.2**
comp=Z,33nm,1.0s,mb5.2
NAO01 LR LR
comp=Z,4µm,19.0s,MS5.7
CLZ Clausthal 76.21 321 *eP* **P 13 18 55.9 0.0**
comp=Z,59nm,1.0s,mb5.5
BSEG Bad Segeberg 76.25 323 *eP* **P 13 18 56.4 +0.3**
comp=Z,106nm,1.2s,mb5.7
NRDL Niedersach Rie 76.38 321 *eP* **P 13 18 57.2 +0.4**
comp=Z,112nm,1.6s,mb5.5
SPITS Spitsbergen Ar 76.41 348 P **P 13 18 57.0 +0.4**
comp=Z,58nm,1.0s,mb5.5,baz=119,slow=17,SNR=13
UBBA Unterbreizbach 76.45 320 *eP* **P 13 18 57.2 -0.1**
comp=Z,110nm,2.0s,mb5.4
DAVA Damuels 76.60 316 *iP* **P 13 18 57.9 -0.3**
comp=Z,98nm,1.2s,mb5.6,SNR=20
KONO Kongsberg 76.72 329 *eP* **P 13 18 59.3 +0.6**
KONO AMS AMS 13 58 03.1
comp=Z,4µm,14.3s,MS5.9
KONO Kongsberg 76.72 329 *eP* **P 13 18 58.3 -0.3**
KONO pmax pmax
comp=Z,71nm,1.3s,mb5.4
KONO MLR MLR
comp=Z,5µm,20.0s,MS5.9
KONO Kongsberg 76.72 329 *eP* **P 13 18 58.3 -0.4**
comp=Z,71nm,1.3s,mb5.4
KONO LR LR
comp=Z,5µm,20.0s,MS5.9
SMY Shemya 76.74 38 *eP* **P 13 19 00.9 +2.0**
MUD Monsted U'grnd 76.92 326 ⇓*iP* **P 13 19 00.3 +0.5**
comp=Z,41nm,1.0s,mb5.3
TUE Stuetta 76.99 315 *eP* **P 13 18 59.6 -0.8**
comp=Z,66nm,1.1s,mb5.5
STU Stuttgart 77.02 318 *eP* **P 13 19 00.2 -0.3**
comp=Z,43nm,0.9s,mb5.4
TOD Tromm 77.25 319 *eP* **P 13 19 01.2 -0.6**
MIR Mirnyy 77.25 180 ⇑*iP* **P 13 19 02.0 +0.7**
MIR pmax pmax
comp=Z,90nm,2.0s,mb5.3
SPAK Spaichingen-Ko 77.31 317 *eP* **P 13 19 01.6 -0.6**
VSL Villasalto 77.33 308 *eP* **P 13 18 58.9 -3.6**
comp=Z,33nm,1.1s,mb5.2
OSPF L'Ospedale 77.34 310 *eP* **P 13 19 01.6 -0.9**
KBS Kingsbay 77.41 349 *e*S S 13 28 54.9 +3.8
KBS AMS AMS 14 02 41.1
comp=Z,6µm,19.1s,MS5.9
KBS Kingsbay 77.41 349 *eP* **P 13 19 03.1 +0.9**
KBS Kingsbay 77.41 349 PFAKE 13 19 10.0 +7.8
KBS LR LR
comp=Z,7µm,19.0s,MS6.0
PGF Pioggiola 77.43 311 *eP* **P 13 19 02.1 -0.9**
comp=Z,104nm,1.3s,mb5.3
PGF Pioggiola 77.43 311 *eP* **P 13 19 02.1 -0.9**
PGF pmax pmax
comp=Z,52nm,1.3s,mb5.3
PGF Pioggiola 77.43 311 *eP* **P 13 19 02.1 -0.9**
comp=Z,52nm,1.3s,mb5.3
TNS Taunus Mts 77.46 319 *eP* **P 13 19 03.0 0.0**
comp=Z,86nm,1.3s,mb5.5
BFO Black Forest 77.61 317 *eP* **P 13 19 03.3 -0.6**
comp=Z,55nm,1.1s,mb5.4
BFO Black Forest 77.61 317 *eP* **P 13 19 02.3 -1.6**
BFO pmax pmax
comp=Z,50nm,1.1s,mb5.4
BFO MLR MLR
comp=Z,3µm,20.0s,MS5.6
BFO Black Forest 77.61 317 *eP* **P 13 19 02.3 -1.5**
comp=Z,50nm,1.1s,mb5.4
BFO LR LR
comp=Z,3µm,20.0s,MS5.6
KEST Kesra 77.63 304 P **P 13 19 04.2 0.0**
comp=Z,24nm,1.1s,mb5.1,baz=127,slow=0.2,SNR=32
KEST LR LR 13 55 55.0
comp=Z,1µm,18.9s,MS5.3,baz=281,slow=38
KEST Kesra 77.63 304 P **P 13 19 04.2 0.0**
KEST LR LR 13 55 55.0
MOL Molde 77.75 332 *eP* **P 13 19 04.7 +0.4**
MOL AMS AMS 13 57 57.5
comp=Z,5µm,14.9s,MS6.0
IBBN Ibbenburen 77.82 321 *eP* **P 13 19 05.0 +0.1**
comp=Z,76nm,1.1s,mb5.5
FELD Feldberg im Sc 77.85 317 *eP* **P 13 19 04.4 -0.8**
LANF Langenberg 77.93 318 *eP* **P 13 19 05.5 -0.1**
ABH Alteburg 78.05 319 *eP* **P 13 19 05.7 -0.6**
LIBD Limburg 78.10 317 *eP* **P 13 19 06.1 -0.5**
BUG Bochum--Univer 78.16 320 *eP* **P 13 19 06.8 0.0**
comp=Z,68nm,1.1s,mb5.5
BBS Basel-Blauen 78.20 316 *eP* **P 13 19 06.3 -0.9**
CASY Casey 78.21 172 *eP* **P 13 19 05.9 -0.8**
CASY Casey 78.21 172 PFAKE 13 19 20.0 +13
CASY LR LR
comp=Z,3µm,19.0s,MS5.6
CDF Champ du Feu 78.31 317 *eP* **P 13 19 06.9 -0.8**
comp=Z,80nm,1.1s,mb5.3
CDF Champ du Feu 78.31 317 *eP* **P 13 19 06.9 -0.8**
CDF pmax pmax
comp=Z,40nm,1.1s,mb5.3
CDF Champ du Feu 78.31 317 *eP* **P 13 19 06.9 -0.8**
comp=Z,40nm,1.1s,mb5.3
SAOF Saorge 78.39 313 *eP* **P 13 19 07.6 -0.7**
ECH Echery 78.40 317 *eP* **P 13 19 07.0 -1.2**
ECH Echery 78.40 317 *eP* **P 13 19 06.9 -1.3**
ECH MLR MLR
comp=Z,2µm,19.0s,MS5.5
ECH Echery 78.40 317 *eP* **P 13 19 06.9 -1.4**
ECH LR LR
comp=Z,2µm,19.0s,MS5.5
MOF Molkenrain 78.44 317 *eP* **P 13 19 07.9 -0.6**
AUTN L'Aution 78.48 313 *eP* **P 13 19 07.9 -0.9**
SBF Sospel 78.49 313 *eP* **P 13 19 07.9 -0.9**
comp=Z,100nm,1.2s,mb5.3
SBF Sospel 78.49 313 *eP* **P 13 19 07.9 -0.9**
SBF pmax pmax
comp=Z,50nm,1.2s,mb5.3
SBF Sospel 78.49 313 *eP* **P 13 19 07.9 -0.9**
comp=Z,50nm,1.2s,mb5.3
LUCF Luceram 78.55 313 *eP* **P 13 19 08.7 -0.5**
TOUF Mont Tournerai 78.61 313 *eP* **P 13 19 08.9 -0.6**
HINF Hinteralfeld 78.62 317 *eP* **P 13 19 08.6 -0.9**
comp=Z,206nm,1.8s,mb5.5
HINF Hinteralfeld 78.62 317 *eP* **P 13 19 08.6 -0.9**
HINF pmax pmax
comp=Z,103nm,1.8s,mb5.5
HINF Hinteralfeld 78.62 317 *eP* **P 13 19 08.6 -0.9**
comp=Z,103nm,1.8s,mb5.5
LOMF Lomont 78.67 316 *eP* **P 13 19 08.9 -0.9**
OG01 Vacheresse 78.84 315 *eP* **P 13 19 10.3 -0.4**
LPG La Plagne 78.86 314 *eP* **P 13 19 10.6 -0.2**
comp=Z,230nm,1.2s,mb5.7
LPG La Plagne 78.86 314 *eP* **P 13 19 10.6 -0.2**
LPG pmax pmax
comp=Z,115nm,1.2s,mb5.7
LPG La Plagne 78.86 314 *eP* **P 13 19 10.6 -0.2**
comp=Z,115nm,1.2s,mb5.7
BER Bergen 78.86 330 AMS AMS 14 01 38.5
comp=Z,4µm,19.4s,MS5.8
LPL La Plagne 78.87 314 *eP* **P 13 19 10.7 -0.2**
comp=Z,175nm,1.0s,mb5.6
LPL La Plagne 78.87 314 *eP* **P 13 19 10.7 -0.2**
LPL pmax pmax
comp=Z,88nm,1.0s,mb5.6
LPL La Plagne 78.87 314 *eP* **P 13 19 10.7 -0.2**
comp=Z,88nm,1.0s,mb5.6
SURF Saint Ours 78.89 313 *eP* **P 13 19 10.5 -0.5**
CALN Calern 78.89 313 *eP* **P 13 19 10.5 -0.5**
MBDF Montbardon 78.90 314 *eP* **P 13 19 09.9 -1.2**
comp=Z,77nm,0.9s,mb5.3
MBDF Montbardon 78.90 314 *eP* **P 13 19 09.9 -1.2**
MBDF pmax pmax
comp=Z,39nm,0.9s,mb5.3
MBDF Montbardon 78.90 314 *eP* **P 13 19 09.9 -1.2**
comp=Z,39nm,0.9s,mb5.3
RSL Roselend 78.93 315 *eP* **P 13 19 10.8 -0.4**
BNI Bardonecchia 78.94 314 *eP* **P 13 19 10.7 -0.6**
BNI MLR MLR
comp=Z,4µm,21.0s,MS5.7
FOO Floro 78.95 331 AMS AMS 13 58 38.1
comp=Z,5µm,13.2s,MS6.1
HAU Haudompre 78.95 317 *eP* **P 13 19 10.4 -0.9**
comp=Z,175nm,1.2s,mb5.6
HAU *e*MLR MLR
comp=Z,3µm,20.0s,MS5.4
HAU Haudompre 78.95 317 *eP* **P 13 19 10.4 -0.9**
HAU pmax pmax
comp=Z,88nm,1.2s,mb5.6
HAU MLR MLR
comp=Z,3µm,20.0s,MS5.7
HAU Haudompre 78.95 317 *eP* **P 13 19 10.4 -0.9**
comp=Z,88nm,1.2s,mb5.6
HAU LR LR
comp=Z,3µm,20.0s,MS5.7
WLF Walferdange 78.97 319 P **P 13 19 12.1 +0.8**
WLF Walferdange 78.97 319 *eP* **P 13 19 11.8 +0.5**
comp=Z,356nm,2.4s,mb5.9
WLF Walferdange 78.97 319 *eP* **P 13 19 12.1 +0.8**
TSUM Tsumeb 78.99 248 *eP* **P 13 19 13.2 +1.2**
comp=Z,76nm,1.6s,mb5.4
MEM Membach 79.00 320 P **P 13 19 11.5 0.0**
comp=Z,20nm,1.6s,mb4.8
FRF La Foret Royal 79.08 312 *eP* **P 13 19 11.4 -0.7**
comp=Z,157nm,1.3s,mb5.5
FRF La Foret Royal 79.08 312 *eP* **P 13 19 11.4 -0.7**
FRF pmax pmax
comp=Z,78nm,1.3s,mb5.5
FRF La Foret Royal 79.08 312 *eP* **P 13 19 11.4 -0.7**
comp=Z,78nm,1.3s,mb5.5
ABSA Djebel Ababsia 79.09 305 P **P 13 19 13.1 +0.8**
LMR La Mourre 79.20 312 *eP* **P 13 19 12.0 -0.7**
comp=Z,76nm,1.2s,mb5.2
LMR La Mourre 79.20 312 *eP* **P 13 19 12.0 -0.7**
LMR pmax pmax
comp=Z,38nm,1.2s,mb5.2
LMR La Mourre 79.20 312 *eP* **P 13 19 12.0 -0.7**
comp=Z,38nm,1.2s,mb5.2
CABF La Chapelle 79.23 316 *eP* **P 13 19 12.7 -0.2**
comp=Z,180nm,1.2s,mb5.6
CABF La Chapelle 79.23 316 *eP* **P 13 19 12.7 -0.2**
CABF pmax pmax
comp=Z,90nm,1.2s,mb5.6
CABF La Chapelle 79.23 316 *eP* **P 13 19 12.7 -0.2**
comp=Z,90nm,1.2s,mb5.6
GDM Grand'Maison 79.32 314 *eP* **P 13 19 12.6 -0.8**
OG25 Le Caire 79.42 313 *eP* **P 13 19 13.4 -0.6**
BCLA Clavier 79.46 319 P **P 13 19 14.1 +0.1**
ORIF Oris-en-Rattie 79.52 314 *eP* **P 13 19 14.2 -0.2**
comp=Z,37nm,0.7s,mb5.1
ORIF *e*MLR MLR
comp=Z,6µm,21.2s,MS5.6
ORIF Oris-en-Rattie 79.52 314 *eP* **P 13 19 14.2 -0.2**
ORIF pmax pmax
comp=Z,19nm,0.7s,mb5.1
ORIF Oris-en-Rattie 79.52 314 *eP* **P 13 19 14.2 -0.2**
comp=Z,18nm,0.7s,mb5.1
CAEH 'Ain El Ouahch 79.54 306 P **P 13 19 15.2 +0.4**
CKFL Kef-Lekhel 79.69 305 P **P 13 19 15.6 0.0**
MEZF Maizieres J'vi 79.78 318 *eP* **P 13 19 15.2 -0.6**
comp=Z,171nm,1.3s,mb5.5
MEZF Maizieres J'vi 79.78 318 *eP* **P 13 19 15.2 -0.6**
comp=Z,171nm,1.3s,mb5.8
GIVF Givet 79.79 319 *eP* **P 13 19 15.3 -0.5**
comp=Z,109nm,1.4s,mb5.3
GIVF Givet 79.79 319 *eP* **P 13 19 15.3 -0.5**
GIVF pmax pmax

comp=Z,54nm,1.4s,mb5.3
GIVF Givet 79.79 319 *e*P **P 13 19 15.3 -0.5**
comp=Z,54nm,1.4s,mb5.3
SMRF Simiane la Rot 79.82 313 *e*P **P 13 19 16.1 0.0**
comp=Z,93nm,1.1s,mb5.3
SMRF Simiane la Rot 79.82 313 *e*P **P 13 19 16.1 0.0**
comp=Z,93nm,1.1s,mb5.6
CASM Ain Smara 79.88 305 P **P 13 19 18.0 +1.4**
DOU Dourbes 79.94 319 P **P 13 19 16.6 -0.1**
OG26 St.-Nazaire-De 79.95 314 *e*P **P 13 19 17.1 +0.3**
OCF Saint Nazaire 79.96 314 *e*P **P 13 19 17.1 +0.3**
CTEI Djebel Teioual 79.97 305 P **P 13 19 17.8 +0.7**
AMKA Amchitka 80.02 39 *e*P **P 13 19 15.4 -1.6**
comp=Z,13nm,0.7s,mb5.0
SNF Seneffe 80.10 320 P **P 13 19 17.6 +0.1**
comp=Z,31nm,1.9s,mb4.9
SUR Sutherland 80.18 234 *e*P **P 13 19 18.3 +0.1**
comp=Z,89nm,0.9s,mb5.7
SUR Sutherland 80.18 234 P **P 13 19 20.9 +2.7**
comp=Z,537nm,0.9s,mb6.5,SNR=9.7
BAIF Baives 80.19 319 *e*P **P 13 19 17.6 -0.4**
comp=Z,127nm,1.2s,mb5.4
BAIF Baives 80.19 319 *e*P **P 13 19 17.6 -0.4**
BAIF pmax pmax
comp=Z,63nm,1.2s,mb5.4
BAIF Baives 80.19 319 *e*P **P 13 19 17.6 -0.4**
comp=Z,63nm,1.2s,mb5.4
DFRA Djebel Bou Aff 80.34 305 P **P 13 19 19.6 +0.5**
VIVF Saint-Julien-l 80.38 314 *e*P **P 13 19 18.7 -0.4**
comp=Z,107nm,0.9s,mb5.5
VIVF Saint-Julien-l 80.38 314 *e*P **P 13 19 18.7 -0.4**
VIVF pmax pmax
comp=Z,54nm,0.9s,mb5.5
VIVF Saint-Julien-l 80.38 314 *e*P **P 13 19 18.7 -0.4**
comp=Z,54nm,0.9s,mb5.5
SSB Saint Sauveur 80.42 314 *e*P **P 13 19 19.1 -0.3**
LOR Lormes 80.69 316 *e*P **P 13 19 20.0 -0.8**
comp=Z,156nm,1.1s,mb5.6
LOR *e*MLR MLR
comp=Z,3μm,18.5s,MS5.4
LOR Lormes 80.69 316 *e*P **P 13 19 20.0 -0.8**
LOR pmax pmax
comp=Z,78nm,1.1s,mb5.5
LOR MLR MLR
comp=Z,3μm,18.5s,MS5.7
LOR Lormes 80.69 316 *e*P **P 13 19 20.0 -0.8**
comp=Z,78nm,1.1s,mb5.5
LOR LR LR
comp=Z,3μm,18.5s,MS5.7
CKHR Kef el Ahmar 80.70 305 P **P 13 19 22.1 +1.1**
SET Setif 80.77 305 P **P 13 19 22.0 +0.6**
SMF Signal de Mont 80.77 316 *e*P **P 13 19 20.4 -0.8**
comp=Z,142nm,1.2s,mb5.5
SMF Signal de Mont 80.77 316 *e*P **P 13 19 20.4 -0.8**
SMF pmax pmax
comp=Z,71nm,1.2s,mb5.5
SMF Signal de Mont 80.77 316 *e*P **P 13 19 20.4 -0.8**
comp=Z,71nm,1.2s,mb5.5
SSF Saint Saulge 80.95 316 *e*P **P 13 19 21.5 -0.7**
comp=Z,204nm,1.4s,mb5.6
SSF Saint Saulge 80.95 316 *e*P **P 13 19 21.5 -0.7**
SSF pmax pmax
comp=Z,102nm,1.4s,mb5.6
SSF Saint Saulge 80.95 316 *e*P **P 13 19 21.5 -0.7**
comp=Z,102nm,1.4s,mb5.6
COLF Collangettes 80.99 315 *e*P **P 13 19 22.3 -0.1**
PLDF La Plantade 80.99 315 *e*P **P 13 19 23.0 +0.6**
LASF Ste Croix 81.04 313 *e*P **P 13 19 22.6 -0.1**
comp=Z,236nm,1.2s,mb5.7
MAW Mawson 81.04 191 *e*P **P 13 19 22.5 +0.5**
comp=Z,14nm,0.9s,mb4.9
MAW Mawson 81.04 191 P **P 13 19 22.8 +0.7**
comp=Z,20nm,0.9s,mb5.0,baz=6.2,slow=5.1,SNR=19
AVF Avril sur Loir 81.09 316 *e*P **P 13 19 22.2 -0.7**
comp=Z,153nm,1.3s,mb5.5
AVF Avril sur Loir 81.09 316 *e*P **P 13 19 22.2 -0.7**
AVF pmax pmax
comp=Z,77nm,1.3s,mb5.5
AVF Avril sur Loir 81.09 316 *e*P **P 13 19 22.2 -0.7**
comp=Z,77nm,1.3s,mb5.5
AGO Saint Agoulin 81.32 315 *e*P **P 13 19 24.7 +0.6**
LBL Lubilhac 81.34 314 *e*P **P 13 19 26.0 +1.8**
AKF Akfadou 81.38 306 P **P 13 19 25.4 +0.7**
PYM Petit Puy Mans 81.44 315 *e*P **P 13 19 25.6 +0.8**
MENF Mencas 81.45 320 *e*P **P 13 19 24.2 -0.5**
BGF Bois d'Agland 81.46 316 *e*P **P 13 19 24.5 -0.4**
comp=Z,240nm,1.3s,mb5.7
BGF Bois d'Agland 81.46 316 *e*P **P 13 19 24.5 -0.4**
BGF pmax pmax
comp=Z,120nm,1.3s,mb5.7
BGF Bois d'Agland 81.46 316 *e*P **P 13 19 24.5 -0.4**
comp=Z,120nm,1.3s,mb5.7
HYF Humbligny 81.52 316 *e*P **P 13 19 25.0 -0.1**
ATAF Djebel Tarf 81.71 305 P **P 13 19 29.4 +3.0**
FRNF Fournols 81.80 315 *e*P **P 13 19 26.7 0.0**
TCF Toulx Ste Croi 81.93 316 *e*P **P 13 19 27.1 -0.2**
comp=Z,140nm,1.3s,mb5.4
TCF Toulx Ste Croi 81.93 316 *e*P **P 13 19 27.1 -0.2**
TCF pmax pmax
comp=Z,70nm,1.3s,mb5.4
TCF Toulx Ste Croi 81.93 316 *e*P **P 13 19 27.1 -0.2**
comp=Z,70nm,1.3s,mb5.4
EJON La Jonquera 81.94 312 P **P 13 19 29.4 +2.0**
comp=Z,88nm,1.5s,mb5.5
AKET Djebel Ketaf 82.00 305 P **P 13 19 29.2 +1.2**
LRDF Laroque-de-Fa 82.13 312 *e*P **P 13 19 28.4 -0.1**
FILF Fillols 82.16 312 *e*P **P 13 19 28.9 +0.2**
CAF Calviac 82.21 314 *e*P **P 13 19 28.7 -0.1**
comp=Z,120nm,1.3s,mb5.4
CAF Calviac 82.21 314 *e*P **P 13 19 28.7 -0.1**
CAF pmax pmax
comp=Z,60nm,1.3s,mb5.4
CAF Calviac 82.21 314 *e*P **P 13 19 28.7 -0.1**
comp=Z,60nm,1.3s,mb5.4
MTLF Montolieu 82.31 313 *e*P **P 13 19 29.2 -0.2**
comp=Z,127nm,1.0s,mb5.5
MTLF Montolieu 82.31 313 *e*P **P 13 19 29.2 -0.2**
MTLF pmax pmax
comp=Z,64nm,1.0s,mb5.5
MTLF Montolieu 82.31 313 *e*P **P 13 19 29.2 -0.2**
comp=Z,64nm,1.0s,mb5.5
ETOS Mallorca 82.34 309 P **P 13 19 31.6 +1.9**
comp=Z,269nm,1.6s,mb5.9
ADJB Djebel Djouab 82.35 305 P **P 13 19 30.8 +1.0**
CFON Fontmartina 82.36 311 P **P 13 19 29.5 -0.2**
comp=Z,98nm,1.5s,mb5.5
TAM Tamanrasset 82.46 292 *e*P **P 13 19 31.0 +0.4**
TAM pmax pmax
comp=Z,63nm,1.0s,mb5.5
TAM Tamanrasset 82.46 292 *e*P **P 13 19 31.0 +0.4**
comp=Z,63nm,1.0s,mb5.5
CARF Carcanieres 82.47 312 *e*P **P 13 19 30.3 0.0**
RJF Les Rejaudoux 82.54 315 *e*P **P 13 19 30.6 0.0**
comp=Z,266nm,1.4s,mb5.8
RJF *e*MLR MLR
comp=Z,5μm,19.0s,MS5.6
RJF Les Rejaudoux 82.54 315 *e*P **P 13 19 30.6 0.0**
RJF pmax pmax
comp=Z,133nm,1.4s,mb5.8
RJF MLR MLR
comp=Z,5μm,19.0s,MS5.9
RJF Les Rejaudoux 82.54 315 *e*P **P 13 19 30.6 0.0**
comp=Z,133nm,1.4s,mb5.8
RJF LR LR
comp=Z,5μm,19.0s,MS5.9
VALF Valcebollere 82.58 312 *e*P **P 13 19 31.5 +0.7**
CLLI Llivia 82.60 312 P **P 13 19 31.8 +0.8**
EMHD Djebel Mahouad 82.73 305 P **P 13 19 32.5 +0.8**
LFF La Frestale 83.14 314 *e*P **P 13 19 33.7 0.0**
comp=Z,142nm,1.2s,mb5.6
LFF La Frestale 83.14 314 *e*P **P 13 19 33.7 0.0**
LFF pmax pmax
comp=Z,71nm,1.2s,mb5.6
LFF La Frestale 83.14 314 *e*P **P 13 19 33.7 0.0**
comp=Z,71nm,1.2s,mb5.6
GAMB Gambell 83.16 26 *e*P **P 13 19 30.7 -2.7**
comp=Z,55nm,1.3s,mb5.4
LDF La Druitiere 83.18 318 *e*P **P 13 19 33.1 -0.7**
comp=Z,150nm,1.3s,mb5.6
LDF La Druitiere 83.18 318 *e*P **P 13 19 33.1 -0.7**
LDF pmax pmax
comp=Z,75nm,1.3s,mb5.6
LDF La Druitiere 83.18 318 *e*P **P 13 19 33.1 -0.7**
comp=Z,75nm,1.3s,mb5.6
CSOR Sort 83.23 312 P **P 13 19 33.4 -0.8**
comp=Z,270nm,2.3s,mb5.9
FLN La Foliniere 83.39 318 *e*P **P 13 19 34.2 -0.7**
comp=Z,81nm,0.9s,mb5.4
FLN *e*MLR MLR
comp=Z,5μm,23.0s,MS5.5
FLN La Foliniere 83.39 318 *e*P **P 13 19 34.2 -0.7**
FLN pmax pmax
comp=Z,40nm,0.9s,mb5.5
FLN MLR MLR
comp=Z,5μm,23.0s,MS5.8
FLN La Foliniere 83.39 318 *e*P **P 13 19 34.2 -0.7**
comp=Z,40nm,0.9s,mb5.5
FLN LR LR
comp=Z,5μm,23.0s,MS5.8
EPOB Poblet 83.43 311 ⇓P **P 13 19 34.7 -0.6**
comp=Z,214nm,1.8s,mb5.9
MFF Saint Martin d 83.50 316 *e*P **P 13 19 34.9 -0.6**
comp=Z,118nm,1.0s,mb5.6
MFF Saint Martin d 83.50 316 *e*P **P 13 19 34.9 -0.6**
MFF pmax pmax
comp=Z,59nm,1.0s,mb5.6
MFF Saint Martin d 83.50 316 *e*P **P 13 19 34.9 -0.6**
comp=Z,59nm,1.0s,mb5.6
EIBI Ibiza 83.58 308 P **P 13 19 37.1 +1.0**
comp=Z,138nm,2.6s,mb5.6
GRR Gorron 83.69 318 *e*P **P 13 19 35.8 -0.7**
comp=Z,133nm,1.5s,mb5.6
GRR Gorron 83.69 318 *e*P **P 13 19 35.8 -0.7**
GRR pmax pmax
comp=Z,66nm,1.5s,mb5.5
GRR Gorron 83.69 318 *e*P **P 13 19 35.8 -0.7**
comp=Z,66nm,1.5s,mb5.5
EPF Esparros 83.71 312 *e*P **P 13 19 35.8 -0.9**
comp=Z,30nm,1.0s,mb5.1
EPF Esparros 83.71 312 *e*P **P 13 19 35.8 -0.9**
EPF pmax pmax
comp=Z,15nm,1.0s,mb5.1
EPF Esparros 83.71 312 *e*P **P 13 19 35.8 -0.9**
comp=Z,15nm,1.0s,mb5.1
RESF Ens 83.75 312 *e*P **P 13 19 37.0 +0.1**
EBNR Beni Rached 83.85 306 P **P 13 19 39.1 +1.6**
EBIE Bielsa 83.91 312 P **P 13 19 38.6 +0.9**
comp=Z,239nm,2.6s,mb5.9
ESK Eskdalemuir 83.95 325 *e*P **P 13 19 37.0 -0.6**
ESK pmax pmax
comp=Z,57nm,1.3s,mb5.5
ESK MLR MLR
comp=Z,4μm,19.0s,MS5.8
ESK Eskdalemuir 83.95 325 *e*P **P 13 19 37.0 -0.7**
comp=Z,57nm,1.3s,mb5.5
ESK LR LR
comp=Z,4μm,19.0s,MS5.8
VIEF Viey 83.97 312 *e*P **P 13 19 38.0 0.0**
DAG Danmarks Havn 84.03 347 ⇑*i*P **P 13 19 37.1 -0.6**
comp=Z,16nm,0.9s,mb5.2
ERTA Horta de San J 84.05 310 P **P 13 19 37.2 -1.2**
comp=Z,470nm,2.8s,mb6.1
ETRT Tiaret 84.18 305 P **P 13 19 40.5 +1.3**
REYF Montagne du Re 84.24 313 *e*P **P 13 19 39.1 -0.2**
EANR 'Ain N'Sour 84.25 305 P **P 13 19 41.0 +1.4**
ETSF Etsaut 84.39 312 *e*P **P 13 19 40.3 +0.2**
comp=Z,79nm,1.0s,mb5.5
ETSF Etsaut 84.39 312 *e*P **P 13 19 40.3 +0.2**
ETSF pmax pmax
comp=Z,40nm,1.0s,mb5.5
ETSF Etsaut 84.39 312 *e*P **P 13 19 40.3 +0.2**
comp=Z,40nm,1.0s,mb5.5
ESAC San Caprasio 84.52 311 P **P 13 19 39.9 -0.9**
comp=Z,334nm,1.8s,mb6.2
EMOS Mosqueruela 84.75 310 P **P 13 19 43.1 +1.1**
comp=Z,337nm,1.6s,mb6.2
SJPF Ste Jean 84.83 313 *e*P **P 13 19 42.4 0.0**
comp=Z,103nm,1.3s,mb5.5
SJPF Ste Jean 84.83 313 *e*P **P 13 19 42.4 0.0**
SJPF pmax pmax
comp=Z,51nm,1.3s,mb5.5
SJPF Ste Jean 84.83 313 *e*P **P 13 19 42.4 0.0**
comp=Z,51nm,1.3s,mb5.5
SGMF Saint Gilles 84.83 318 *e*P **P 13 19 41.7 -0.6**
comp=Z,236nm,1.8s,mb5.7
SGMF Saint Gilles 84.83 318 *e*P **P 13 19 41.7 -0.6**
SGMF pmax pmax
comp=Z,118nm,1.8s,mb5.7
SGMF Saint Gilles 84.83 318 *e*P **P 13 19 41.7 -0.6**
comp=Z,118nm,1.8s,mb5.7
EALK Alkurruntz 85.02 313 P **P 13 19 44.6 +1.3**
comp=Z,80nm,1.5s,mb5.6
ELIZ Elizondo 85.04 313 P **P 13 19 44.5 +1.1**
comp=Z,2.5nm,0.5s,mb4.6
ECHE Chera 85.25 309 P **P 13 19 45.2 +0.6**
ECHE pmax pmax
comp=Z,4.0nm,0.5s,mb4.8
ECHE Chera 85.25 309 P **P 13 19 45.1 +0.6**
comp=Z,4.3nm,0.5s,mb4.8
ROSF Rostrenen 85.29 318 *e*P **P 13 19 44.0 -0.5**
comp=Z,189nm,1.4s,mb5.7
ROSF Rostrenen 85.29 318 *e*P **P 13 19 44.0 -0.5**
ROSF pmax pmax
comp=Z,94nm,1.4s,mb5.7
ROSF Rostrenen 85.29 318 *e*P **P 13 19 44.0 -0.5**
comp=Z,94nm,1.4s,mb5.7
QUIF Quistinic 85.30 318 *e*P **P 13 19 43.6 -1.0**
comp=Z,119nm,1.4s,mb5.5
QUIF Quistinic 85.30 318 *e*P **P 13 19 43.6 -1.0**
QUIF pmax pmax
comp=Z,60nm,1.4s,mb5.5
QUIF Quistinic 85.30 318 *e*P **P 13 19 43.6 -1.0**
comp=Z,60nm,1.4s,mb5.5
CART Cartagena 85.64 307 *e*P **P 13 19 45.6 -0.9**
comp=Z,205nm,1.5s,mb6.1
MIDW Midway 85.65 62 PFAKE 13 20 00.0 +13
MIDW LR LR
comp=Z,3μm,20.0s,MS5.7
ECRI Cripan 85.85 312 P **P 13 19 48.1 +0.6**
ECRI pmax pmax
comp=Z,23nm,1.3s,mb5.2
ECRI Cripan 85.85 312 P **P 13 19 48.1 +0.7**
comp=Z,22nm,1.3s,mb5.2
ETOR Torete 85.85 311 P **P 13 19 46.7 -0.8**
ETOR pmax pmax
comp=Z,14nm,1.9s,mb4.9
ETOR Torete 85.85 311 P **P 13 19 46.7 -0.8**
comp=Z,14nm,1.9s,mb4.8
ETOB Tobarra 85.87 308 P **P 13 19 47.2 -0.4**
comp=Z,290nm,4.4s
ELAN Lanestosa 86.40 313 P **P 13 19 49.7 -0.4**
comp=Z,142nm,2.1s,mb5.8
EVIA Vianos 86.60 309 P **P 13 19 51.3 0.0**
EVIA pmax pmax
comp=Z,7.0nm,0.8s,mb4.9
EVIA Vianos 86.60 309 P **P 13 19 51.3 +0.1**
comp=Z,6.8nm,0.8s,mb4.9
ENIJ Nijar 86.69 307 P **P 13 19 52.6 +0.8**
ENIJ pmax pmax
comp=Z,6.0nm,0.4s,mb5.2
ENIJ Nijar 86.69 307 P **P 13 19 52.6 +0.8**
comp=Z,6.0nm,0.4s,mb5.2
EHUE Huescar 86.83 308 P **P 13 19 52.6 +0.2**
EHUE pmax pmax
comp=Z,47nm,1.3s,mb5.6
EHUE Huescar 86.83 308 P **P 13 19 52.5 +0.1**
comp=Z,47nm,1.3s,mb5.6
EQES Quesada 87.21 308 P **P 13 19 54.0 -0.2**
comp=Z,246nm,4.4s
EBER Berja 87.25 307 P **P 13 19 55.0 +0.6**
comp=Z,78nm,1.4s,mb5.8
SCO Scoresbysund 87.47 342 *i*P **P 13 19 58.8 +4.0**
comp=Z,19nm,1.0s,mb5.3
ESDC Sonseca Array 87.51 310 P **P 13 19 57.0 +1.4**
comp=Z,4.8nm,0.6s,mb4.9,baz=61,slow=4.5,SNR=16
ESDC LR LR 14 06 22.9
comp=Z,2μm,18.4s,MS5.5,baz=220,slow=41
ESDC Sonseca Array 87.51 310 P **P 13 19 54.2 -1.5**
comp=Z,5.1nm,0.6s,mb4.9
ESLA Sonseca Array 87.51 310 PFAKE 13 20 10.0 +14
ESLA LR LR
comp=Z,11μm,19.0s,MS6.3
SYO Syowa Base 87.62 197 ⇑*e*P **P 13 19 54.8 -0.6**
SYO Syowa Base 87.62 197 ⇓*i*P **P 13 20 00.6 +5.2**
EARI Arriondas 87.65 314 P **P 13 19 54.5 -1.8**
comp=Z,500nm,5.2s
EBAN Banos Encina 87.69 308 P **P 13 19 56.0 -0.5**
EBAN pmax pmax
comp=Z,14nm,0.9s,mb5.2
EBAN Banos Encina 87.69 308 P **P 13 19 56.0 -0.6**
comp=Z,14nm,0.9s,mb5.2
ECOG Cogollos-Vega 87.70 307 P **P 13 19 57.0 +0.4**
ECOG pmax pmax
comp=Z,4.0nm,1.1s,mb4.6
ECOG Cogollos-Vega 87.70 307 P **P 13 19 57.0 +0.3**
comp=Z,4.0nm,1.1s,mb4.6
EGUA Guajares 87.79 307 P **P 13 19 57.6 +0.5**
comp=Z,327nm,1.0s,mb6.5
PAB San Pablo 87.83 310 *e*P **P 13 19 56.1 -1.1**
PAB pmax pmax
comp=Z,24nm,1.2s,mb5.3
PAB San Pablo 87.83 310 *e*P **P 13 19 56.1 -1.1**
comp=Z,24nm,1.2s,mb5.3
EADA Adamuz 88.30 308 P **P 13 19 59.9 +0.4**
comp=Z,315nm,3.2s
EMIJ Mijas 88.80 307 P **P 13 20 03.0 +1.1**
comp=Z,140nm,2.8s,mb5.8
ECAB El Cabril 88.96 308 P **P 13 20 02.4 -0.2**
comp=Z,116nm,2.0s,mb5.9
EPLA Plasencia 89.01 311 P **P 13 20 03.3 +0.5**
EPLA pmax pmax
comp=Z,904nm,5.4s
EPLA Plasencia 89.01 311 P **P 13 20 03.2 +0.5**
comp=Z,904nm,5.4s
FUNA Funafuti 89.06 99 PFAKE 13 20 10.0 +6.5
FUNA LR LR
comp=Z,27μm,21.0s,MS6.7
PBRG Braganca 89.09 312 *e*P **P 13 20 04.0 +0.9**
comp=Z,46nm,1.5s,mb5.6
ERUA La Rua 89.24 313 P **P 13 20 04.1 +0.3**
EJIF Jimena Fronter 89.37 307 P **P 13 20 04.2 -0.3**
EJIF pmax pmax
comp=Z,139nm,1.4s,mb6.1
EJIF Jimena Fronter 89.37 307 P **P 13 20 04.2 -0.3**
comp=Z,139nm,1.4s,mb6.1
MVO Moncorvo 89.46 312 P **P 13 20 05.7 +0.9**
MVO Moncorvo 89.46 312 *e*P **P 13 20 05.5 +0.7**
comp=Z,53nm,1.5s,mb5.7
ESPR Espera 89.58 307 P **P 13 20 06.5 +1.0**
comp=Z,70nm,1.5s,mb5.8
BORG Borgarnes 89.75 337 *e*P **P 13 20 07.6 +1.9**
BORG pmax pmax
comp=Z,103nm,1.4s
BORG MLR MLR
comp=Z,3μm,19.0s
BORG Borgarnes 89.75 337 *e*P **P 13 20 07.6 +1.9**
comp=Z,103nm,1.4s,mb6.0
BORG LR LR
comp=Z,3μm,19.0s,MS5.8
MSVF Nonsavu 89.75 108 PFAKE 13 20 20.0 +13
MSVF LR LR
comp=Z,2μm,20.0s,MS5.5
PVRL Vila Real 89.93 312 *e*P **P 13 20 08.5 +1.5**
comp=Z,68nm,2.0s,mb5.6
EMIN Mina Concepcio 90.00 308 P **P 13 20 07.9 +0.5**
comp=Z,516nm,3.8s
MTE Manteigas 90.02 311 *e*P **P 13 20 08.1 +0.6**
comp=Z,55nm,1.2s,mb5.8
MTE LR LR
comp=Z,3μm,19.0s,MS5.8
MTE Manteigas 90.02 311 *e*P **P 13 20 08.4 +0.9**
comp=Z,89nm,1.4s,mb5.9
EBAD Badajoz 90.02 309 P **P 13 20 07.5 0.0**
comp=Z,111nm,1.7s,mb5.9
ELOB Lobios 90.03 313 P **P 13 20 08.4 +0.9**
comp=Z,121nm,2.4s,mb5.8
PCAB Cabril 90.05 312 *e*P **P 13 20 08.1 +0.5**
comp=Z,64nm,1.3s,mb5.8
PCBR Castelo Branco 90.11 311 *e*P **P 13 20 09.8 +1.9**
comp=Z,76nm,1.3s,mb5.9
STS Santiago 90.13 314 P **P 13 20 08.7 +0.8**
STS pmax pmax
comp=Z,38nm,0.9s,mb5.7
STS Santiago 90.13 314 P **P 13 20 08.7 +0.8**
comp=Z,38nm,0.9s,mb5.7
TTA Tatalina 90.14 25 *e*P **P 13 20 08.5 +1.0**
PMRV Marv??o 90.15 310 *e*P **P 13 20 09.9 +1.8**
comp=Z,57nm,1.3s,mb5.7
PBAR Barrancos 90.18 309 *e*P **P 13 20 09.0 +0.7**
comp=Z,171nm,1.5s,mb6.2
PVIS Viseu 90.20 311 *e*P **P 13 20 09.7 +1.4**
comp=Z,75nm,1.4s,mb5.8
COLD Coldfoot 90.36 20 *e*P **P 13 20 07.8 -0.7**
comp=Z,36nm,1.6s,mb5.5
EMAZ Mazaricos 90.41 314 P **P 13 20 09.9 +0.7**
comp=Z,98nm,1.9s,mb5.8
EZAM Zamans 90.42 313 P **P 13 20 08.7 -0.6**
EZAM pmax pmax
comp=Z,103nm,1.2s,mb6.0
EZAM Zamans 90.42 313 P **P 13 20 08.7 -0.6**
comp=Z,103nm,1.2s,mb6.0
PESTR Estremoz 90.43 310 *e*P **P 13 20 11.0 +1.6**
comp=Z,55nm,1.7s,mb5.6
EGRO El Granado 90.68 308 P **P 13 20 11.4 +0.8**
comp=Z,397nm,2.8s,mb6.2
SUMG Summit 90.68 347 *e*P **P 13 20 09.7 -0.2**
comp=Z,70nm,1.0s,mb5.9
SUMG Summit 90.68 347 *i*P **P 13 20 10.7 +0.8**
comp=Z,44nm,1.0s,mb5.7
EVO Evora 90.84 309 ⇑*i*P **P 13 20 12.9 +1.6**
comp=Z,55nm,1.1s,mb5.5
EVO *e*MLR MLR
comp=Z,3μm,23.0s,MS5.4
EVO Evora 90.84 309 *e*P **P 13 20 12.2 +0.9**
comp=Z,50nm,1.2s,mb5.7
PBEJ Beja 90.85 309 *e*P **P 13 20 12.3 +0.9**
comp=Z,77nm,1.6s,mb5.8
PVAQ Vaqueiros 90.89 308 *e*P **P 13 20 12.3 +0.7**
comp=Z,124nm,1.4s,mb6.0
SDPT Sand Point 90.94 33 *e*P **P 13 20 08.3 -3.1**
comp=Z,106nm,1.2s,mb6.0
PCVE Castro Verde 91.08 309 *e*P **P 13 20 14.2 +1.7**
comp=Z,39nm,1.3s,mb5.6
SVW2 Sparrevohn 91.10 27 *e*P **P 13 20 12.9 +0.9**
PBDV Barranco-do-Ve 91.10 308 *e*P **P 13 20 13.8 +1.2**
comp=Z,146nm,1.4s,mb6.1
CHUM Lake Minchumin 91.21 23 *e*P **P 13 20 12.7 +0.2**
comp=Z,74nm,1.1s,mb5.9
BPAW Bear Paw Mtn. 91.62 23 *e*P **P 13 20 13.8 -0.6**
comp=Z,63nm,1.1s,mb5.9
CHGN Chignik 91.67 32 *e*P **P 13 20 13.8 -1.0**
PPLA Purkeypile 91.73 24 *e*P **P 13 20 15.3 +0.4**
comp=Z,63nm,1.2s,mb5.8
TRF Thorofare Moun 92.21 23 *e*P **P 13 20 17.1 -0.1**
comp=Z,22nm,0.9s,mb5.5
COLA College 92.40 22 *e*P **P 13 20 16.7 -1.3**
COLA pmax pmax
comp=Z,15nm,1.1s,mb5.2
COLA MLR MLR
comp=Z,4μm,19.0s,MS5.9
COLA College 92.40 22 *e*P **P 13 20 16.7 -1.3**
comp=Z,15nm,1.1s,mb5.2
COLA LR LR
comp=Z,4μm,19.0s,MS5.9
MCK McKinley 92.59 23 *e*P **P 13 20 18.8 -0.1**
MCK pmax pmax
comp=Z,55nm,1.2s,mb5.9
MCK McKinley 92.59 23 *e*P **P 13 20 18.8 0.0**
comp=Z,55nm,1.2s,mb5.9
RSO Redoubt South 92.62 27 *e*P pP 13 20 26.6 -0.1
PMR Palmer 93.61 25 *e*P **P 13 20 23.7 +0.1**
PMR pmax pmax
comp=Z,5.0nm,0.9s,mb4.9
PMR Palmer 93.61 25 *e*P **P 13 20 23.7 +0.1**
comp=Z,4.5nm,0.9s,mb4.9
RC01 Rabbit Creek A 93.62 25 *e*P **P 13 20 22.7 -1.0**
comp=Z,83nm,1.1s,mb6.1
OHAK Old Harbor 93.86 30 *e*P **P 13 20 25.4 +0.6**
comp=Z,34nm,1.0s,mb5.7
KDAK Kodiak Island 93.94 29 P **P 13 20 26.5 +1.3**
comp=Z,12nm,0.9s,mb5.3,baz=174,slow=9.4,SNR=4.1
KDAK Kodiak Island 93.94 29 *e*P **P 13 20 26.1 +0.9**
KDAK pmax pmax
comp=Z,69nm,1.2s,mb6.0
KDAK MLR MLR
comp=Z,6μm,19.0s,MS6.1
KDAK Kodiak Island 93.94 29 *e*P **P 13 20 26.1 +0.9**
comp=Z,69nm,1.2s,mb6.0
KDAK LR LR
comp=Z,6μm,19.0s,MS6.1
RES Resolute Bay 94.47 2 *e*P **P 13 20 27.9 +0.5**
INK Inuvik 94.71 15 *e*P **P 13 20 28.0 -0.6**
INK pmax pmax
comp=Z,39nm,1.4s
INK Inuvik 94.71 15 *e*P **P 13 20 28.0 -0.6**
comp=Z,39nm,1.4s,mb5.7
MENT Mentasta 95.00 22 *e*P **P 13 20 30.4 +0.4**
JOHN Johnston Islan 95.05 72 PFAKE 13 20 40.0 +8.8
JOHN LR LR
comp=Z,3μm,20.0s,MS5.8

KIC Kosan Boka 95.19 277 *eP* **P 13 20 33.5 +1.6**
comp=Z,88nm,1.5s,mb6.0

DBIC Dimbokro 95.24 278 P **P 13 20 33.2 +1.0**
comp=Z,12nm,1.0s,mb5.3,baz=88,slow=3.5,SNR=8.1

DBIC Dimbokro 95.24 278 P **P 13 20 33.2 +1.0**
DBIC LR LR
comp=Z,3μm,20.0s,MS5.7

TIC Toumodi 95.41 278 *eP* **P 13 20 34.2 +1.3**
comp=Z,45nm,1.0s,mb5.9

TIC Toumodi 95.41 278 *eP* **P 13 20 34.2 +1.3**
TIC pmax pmax
comp=Z,45nm,1.0s,mb5.8

LIC Lamto 95.50 277 *eP* **P 13 20 34.1 +0.8**
comp=Z,52nm,1.2s,mb5.5

LIC *e*MLR MLR
comp=Z,3μm,20.8s,MS5.5

LIC Lamto 95.50 277 *eP* **P 13 20 35.5 +2.2**
comp=Z,58nm,1.2s,mb5.9

LIC Lamto 95.50 277 *eP* **P 13 20 34.1 +0.8**
comp=Z,26nm,1.2s,mb5.5

LIC LR LR
comp=Z,2μm,20.8s,MS5.5

DAWY Dawson 95.84 20 *eP* **P 13 20 33.4 -0.4**
SFJD Kangerlussuaq 97.64 346 *i* P **P 13 20 43.9 +2.0**
comp=Z,7.2nm,1.1s,mb5.1

AFI Afiamalu 98.72 103 PFAKE 13 21 00.0 +12
AFI LR LR
comp=Z,3μm,20.0s,MS5.7

YKA Yellowknife Ar 104.00 12 PP PP 13 25 27.5 +0.5
comp=Z,2.4nm,1.0s,baz=350,slow=6.6,SNR=4.3

YKA PKKPbc PKKPbc 13 37 02.8 +0.9
comp=Z,1.4nm,0.9s,baz=144,slow=3.0,SNR=3.8

CMLA Cha da Macela 104.04 313 PFAKE 13 21 20.0 +9.4
CMLA LR LR
comp=Z,3μm,19.0s,MS5.8

KIP Kipapa 104.33 65 PFAKE 13 21 20.0 +8.1
KIP LR LR
comp=Z,4μm,19.0s,MS6.0

SCHQ Schefferville 112.08 347 PP PP 13 26 28.8 +2.8
comp=Z,7.4nm,0.9s,baz=37,slow=10,SNR=5.7

FFC Flin Flon 113.59 9 PFAKE 13 26 00.0 +14
FFC LR LR
comp=Z,3μm,20.0s,MS5.9

COR Corvallis 116.27 27 PFAKE 13 26 00.0 +8.8
COR LR LR
comp=Z,3μm,21.0s,MS5.8

BSMT Bassoo Peak 116.91 20 *e*PKPdf PKPdf 13 25 52.5 +0.2
SLMT Seeley Lake 117.87 19 *e*PKPdf PKPdf 13 25 52.8 -1.4
HUMO Hull Mountain 117.96 28 PFAKE 13 26 10.0 +15
HUMO LR LR
comp=Z,2μm,22.0s,MS5.8

MSO Missoula 118.08 20 *e*PKPdf PKPdf 13 25 55.6 +0.9
MSO LR LR
comp=Z,3μm,21.0s,MS5.8

CHMT Chamberlain Mo 118.23 19 *e*PKPdf PKPdf 13 25 55.6 +0.6
BMO Blue Mountains 118.57 23 PFAKE 13 26 10.0 +14
BMO LR LR
comp=Z,2μm,20.0s,MS5.8

DGMT Dagmar 119.21 12 PFAKE 13 26 10.0 +13
DGMT LR LR
comp=Z,4μm,19.0s,MS6.1

MOD Modoc 119.73 27 PFAKE 13 26 10.0 +12
MOD LR LR
comp=Z,2μm,19.0s,MS5.8

DLMT Dillon 119.82 20 *e*PKPdf PKPdf 13 25 57.9 -0.2
BOZ Bozeman (W) 119.88 19 PFAKE 13 26 10.0 +12
BOZ LR LR
comp=Z,2μm,19.0s,MS5.8

MCMT McKenzie Canyo 120.20 20 *e*PKPdf PKPdf 13 25 59.9 +1.1
GCMT Greycliff 120.34 17 *e*PKPdf PKPdf 13 25 59.3 +0.3
LAO LASA Array 120.44 14 PFAKE 13 26 10.0 +11
LAO LR LR
comp=Z,4μm,19.0s,MS6.1

HOPS Hopland 120.67 31 PFAKE 13 26 10.0 +10
HOPS LR LR
comp=Z,2μm,20.0s,MS5.7

RLMT Red Lodge 121.07 17 *e*PKPdf PKPdf 13 25 59.9 -0.5
LKWY Lake 121.23 18 PFAKE 13 26 10.0 +9.2
LKWY LR LR
comp=Z,6μm,19.0s,MS6.3

EYMN Ely 121.33 3 *e*PKPdf PKPdf 13 25 59.5 -1.3
MCCM Marconi Confer 121.41 32 PFAKE 13 26 10.0 +8.7
MCCM LR LR
comp=Z,2μm,21.0s,MS5.7

SNOW Snow King Moun 122.11 19 *e*PKPdf PKPdf 13 26 03.0 +0.5
BMN Battle Mountai 122.28 26 PFAKE 13 26 10.0 +7.1
BMN LR LR
comp=Z,2μm,19.0s,MS5.8

AHID Auburn Hatcher 122.62 20 PFAKE 13 26 20.0 +16
AHID LR LR
comp=Z,3μm,20.0s,MS6.0

CMB Columbia Colle 122.75 30 PFAKE 13 26 20.0 +16
CMB LR LR
comp=Z,2μm,19.0s,MS5.8

N12A Clover Valley, 122.84 24 *e*PKPdf PKPdf 13 26 04.6 +0.7
ELK Elko 122.85 24 PFAKE 13 26 20.0 +16
ELK LR LR
comp=Z,3μm,19.0s,MS5.9

BW06 Boulder Array 123.12 19 PFAKE 13 26 20.0 +16
BW06 LR LR
comp=Z,2μm,19.0s,MS5.9

PDAR Pinedale Array 123.12 19 PKP PKPdf 13 26 04.5 0.0
comp=Z,3.7nm,0.9s,baz=158,slow=0.2,SNR=19

PDAR PKKPbc PKKPbc 13 35 59.1 +2.5
comp=Z,0.5nm,0.8s,baz=193,slow=6.1,SNR=4.2

LBNH Lisbon 123.16 346 PFAKE 13 26 20.0 +16
LBNH LR LR
comp=Z,3μm,20.0s,MS6.0

COWI Conover 123.25 1 PFAKE 13 26 20.0 +15
COWI LR LR
comp=Z,3μm,19.0s,MS6.0

LONY Lake Ozonia 123.37 348 PFAKE 13 26 20.0 +15
LONY LR LR
comp=Z,3μm,22.0s,MS5.9

NVAR Mina Array Bea 123.43 28 PKP PKPdf 13 26 06.3 +1.1
comp=Z,1.7nm,0.5s,baz=8.2,slow=28,SNR=21

NVAR PKKPbc PKKPbc 13 35 58.0 +2.8
comp=Z,1.1nm,1.0s,baz=151,slow=6.3,SNR=5.3

NVAR Mina Array Bea 123.43 28 PKP PKPdf 13 26 06.3 +1.1
NVAR PKKPbc PKKPbc 13 35 58.0 +2.8
HWUT Hardware Ranch 123.49 21 *e*PKPdf PKPdf 13 26 04.7 -0.5
HWUT LR LR
comp=Z,3μm,19.0s,MS5.9

NCB Newcomb 123.92 348 PFAKE 13 26 20.0 +14
NCB LR LR
comp=Z,3μm,22.0s,MS5.9

DAU Daniels Canyon 124.65 21 *e*PKIKP PKPdf 13 26 07.5 0.0
DAU *e* 13 27 53.3
ECSD EROS Data Cent 125.08 7 *e*PKPdf PKPdf 13 26 07.8 -0.4
ECSD LR LR
comp=Z,3μm,20.0s,MS5.9

DAC Darwin (Calif) 125.50 29 PFAKE 13 26 20.0 +11
DAC LR LR
comp=Z,2μm,21.0s,MS5.8

MVU Marysvale 125.97 23 PFAKE 13 26 20.0 +10
MVU LR LR
comp=Z,2μm,19.0s,MS5.7

MSU Marysvale 125.97 23 *e*PKIKP PKPdf 13 26 11.3 +1.2
BINY Binghamton 125.97 349 PFAKE 13 26 20.0 +10
BINY LR LR
comp=Z,3μm,22.0s,MS5.9

ARUT Antelope Range 126.09 25 *e*PKIKP PKPdf 13 26 09.3 -1.0
GSC Goldstone 126.66 29 *e*PKIKP PKPdf 13 26 12.5 +1.0
ERPA Erie 126.70 352 PFAKE 13 26 20.0 +8.6
ERPA LR LR
comp=Z,3μm,19.0s,MS6.0

OGNE Ogallala 126.85 13 PFAKE 13 26 20.0 +8.3
OGNE LR LR
comp=Z,3μm,20.0s,MS6.0

AAM Ann Arbor 126.89 356 PFAKE 13 26 20.0 +8.3
AAM LR LR
comp=Z,3μm,20.0s,MS6.0

PV01 Paradox Valley 127.62 20 *e*PKPdf PKPdf 13 26 12.9 -0.3
HDIL Hopedale 128.79 1 PFAKE 13 26 30.0 +15
HDIL LR LR
comp=Z,3μm,21.0s,MS5.9

ACSO Alum Creek Sta 128.89 355 PFAKE 13 26 30.0 +14
ACSO LR LR
comp=Z,2μm,21.0s,MS5.8

MCWV Mont Chateau 129.10 352 PFAKE 13 26 30.0 +14
MCWV LR LR
comp=Z,5μm,22.0s,MS6.1

CBKS Cedar Bluff 129.38 12 PFAKE 13 26 30.0 +13
CBKS LR LR
comp=Z,3μm,20.0s,MS6.0

CBN Corbin 130.10 349 PFAKE 13 26 30.0 +12
CBN LR LR
comp=Z,3μm,20.0s,MS6.0

CCM Cathedral Cave 131.21 3 PFAKE 13 26 30.0 +10
CCM LR LR
comp=Z,3μm,20.0s,MS6.0

ANMO Albuquerque 131.22 20 PFAKE 13 26 30.0 +10
ANMO LR LR
comp=Z,4μm,20.0s,MS6.1

BBSR BB Station 131.45 333 PFAKE 13 26 30.0 +9.3
BBSR LR LR
comp=Z,1μm,22.0s,MS5.6

LAZ Ladron 131.48 21 *e*PKPdf PKPdf 13 26 22.5 +1.8
BNM Barren Site 131.89 21 *e*PKPdf PKPdf 13 26 23.1 +1.6
AMTX Amarillo 132.70 15 PFAKE 13 26 30.0 +7.0
AMTX LR LR
comp=Z,4μm,19.0s,MS6.2

WMOK Wichita Mounta 133.51 12 *e*PKIKP PKPdf 13 26 21.7 -2.8
GDL2 Guadalupe Moun 134.43 19 *e*PKPdf PKPdf 13 26 26.4 0.0
MNTX Cornudas Mount 134.55 21 PFAKE 13 26 40.0 +13
MNTX LR LR
comp=Z,2μm,20.0s,MS5.9

JSC Jenkinsville 134.58 352 *e*PKIKP PKPdf 13 26 26.2 -0.3
GOGA Godfrey 135.70 354 PFAKE 13 26 40.0 +11
GOGA LR LR
comp=Z,3μm,21.0s,MS6.0

LRAL Lakeview Retre 136.29 359 PFAKE 13 26 40.0 +10
LRAL LR LR
comp=Z,2μm,20.0s,MS5.9

NATX Nacogdoches 137.12 8 PFAKE 13 26 40.0 +8.7
NATX LR LR
comp=Z,4μm,19.0s,MS6.1

TXAR Lajitas Array 137.30 20 PKhKP PKPpre 13 26 23.4
comp=Z,0.3nm,0.5s,baz=303,slow=1.1,SNR=5.3

TXAR PKP PKPdf 13 26 33.0 +1.3
comp=Z,4.2nm,0.8s,baz=150,slow=0.4,SNR=17

TXAR PP PP 13 29 16.2 +1.1
comp=Z,1.4nm,1.0s,baz=6.3,slow=2.3,SNR=2.6

JCT Junction City 137.36 15 *e*PKIKP PKPdf 13 26 31.9 +0.1
BRAL Brewton 138.31 359 PFAKE 13 26 50.0 +16
BRAL LR LR
comp=Z,3μm,20.0s,MS6.1

HKT Hockley 138.72 10 PFAKE 13 26 50.0 +16
HKT LR LR
comp=Z,4μm,20.0s,MS6.2

KVTX Kingsville 140.63 14 PFAKE 13 26 50.0 +12
KVTX LR LR
comp=Z,2μm,21.0s,MS5.9

DWPF Disney 140.66 351 PFAKE 13 26 50.0 +12
DWPF LR LR
comp=Z,3μm,22.0s,MS6.0

ANWB Willy Bob 141.44 317 PFAKE 13 26 50.0 +10
ANWB LR LR
comp=Z,1μm,22.0s,MS5.7

FDF Fort de France 143.02 313 PFAKE 13 26 50.0 +7.6
FDF LR LR
comp=Z,1μm,21.0s,MS5.7

MTP Monte Pirata 143.52 322 *e*PKPdf PKPdf 13 26 40.4 -2.8
GRTK Grand Turk 143.68 333 PFAKE 13 26 50.0 +6.6
GRTK LR LR
comp=Z,2μm,19.0s,MS5.8

SJG San Juan 143.87 323 PKP PKPdf 13 26 44.7 +0.9
comp=Z,14nm,0.4s,baz=346,slow=21,SNR=5.3

TRQA Tornquist 144.19 217 *e*PKPdf PKPdf 13 26 41.2 -2.6
CRPR Cabo Rojo, PR 144.51 324 *e*PKPdf PKPdf 13 26 43.3 -1.7
GRGR Grenville 145.08 310 PFAKE 13 27 00.0 +15
GRGR LR LR
comp=Z,1μm,20.0s,MS5.6

SDDR Presa de Saban 145.94 331 *e*PKPdf PKPdf 13 26 48.4 +1.0
PLCA Paso Flores 146.46 205 PKPbc PKPbc 13 26 50.1 +1.2
comp=Z,24nm,0.9s,baz=161,slow=2.1,SNR=9.1

GTBY Guantanamo Bay 146.76 337 PFAKE 13 27 00.0 +11
GTBY LR LR
comp=Z,2μm,20.0s,MS5.8

PCRV Puerto La Cruz 148.57 311 PKPbc PKPbc 13 26 54.2 -1.4
comp=Z,35nm,0.7s,baz=357,slow=2.2,SNR=9.0

BBJ Bamboo Saint A 148.96 340 *j* P PKPab 13 26 57.9 -2.4
GWJ Greenwich 149.05 338 ‖ *eP* PKPbc 13 26 54.9 -1.8
GWJ Greenwich 149.05 338 *i* P PKPbc 13 26 56.2 -0.5
TEIG Tepich 149.06 0 *e*PKPdf PKPbc 13 26 55.5 -1.1
STH Stony Hill 149.08 339 ‖ *iP* PKPbc 13 26 57.2 +0.5
STH Stony Hill 149.08 339 *i* P PKPbc 13 26 57.2 +0.5
HOJ Hope 149.12 338 ‖ *iP* PKPbc 13 26 57.4 +0.6
MTDJ Mount Denham 149.19 340 PFAKE 13 27 00.0 +7.2
MTDJ LR LR
comp=Z,1μm,19.0s,MS5.7

CMIG Matias Romero 151.40 13 PKPbc PKPbc 13 27 00.6 -1.8
comp=Z,14nm,0.9s,baz=12,slow=3.7,SNR=3.3

SIV San Ignacio 153.15 256 PKP PKPdf 13 26 59.8 +0.9
comp=Z,2.8nm,1.0s,baz=50,slow=1.6,SNR=2.0

APG El Apazote 154.16 5 PKP PKPdf 13 27 01.7 +1.3
comp=Z,4.4nm,1.0s,baz=145,slow=12,SNR=2.7

APG PKPbc PKPbc 13 27 09.6 +1.1
comp=Z,15nm,1.2s,baz=335,slow=7.2,SNR=5.0

LCO Las Campanas 155.67 220 *e*PKPdf PKPdf 13 27 02.8 +0.7
LCO *e*PKPab PKPab 13 27 29.0 +0.8
LCO LR LR
comp=Z,2μm,20.0s,MS5.8

BCIP Isla Barro Col 158.39 337 PFAKE 13 27 20.0 +14
BCIP LR LR
comp=Z,1μm,19.0s,MS5.7

ROSC El Rosal 159.12 318 PKP PKPdf 13 27 06.8 0.0
comp=Z,7.9nm,0.4s,baz=116,slow=22,SNR=7.0

LPAZ La Paz 159.78 252 PKP PKPdf 13 27 08.2 +0.7
comp=Z,8.2nm,1.1s,baz=23,slow=3.9,SNR=18

LPAZ PKPab PKPab 13 27 48.1 +1.7
comp=Z,23nm,1.1s,baz=74,slow=5.5,SNR=14

LPAZ La Paz 159.78 252 PKP PKPdf 13 27 08.2 +0.7
LPAZ PKPab PKPab 13 27 48.1 +1.7
LPAZ LR LR
comp=Z,2μm,20.0s,MS6.0

OTAV Otavalo 165.28 318 *e*PKPdf PKPdf 13 27 13.2 +0.2
OTAV LR LR
comp=Z,1μm,20.0s

ATAH Atahualpa 169.62 290 PKP PKPdf 13 27 17.9 +1.8
comp=Z,23nm,1.2s,baz=347,slow=8.4,SNR=5.1

ATAH PKPab PKPab 13 28 34.0 +4.2
comp=Z,13nm,1.1s,baz=40,slow=5.5,SNR=3.8

*BJI **27** 13:10:11.0, 10°.90N×92°.00E, h10km, mb5.5/7*
*IDC **27** 13:10:11.3±0.5, 10°.94N×92°.03E, h0km, mb4.8/23, mb1 4.9/23, mb1mx4.7/29, mbtmp4.8/23, Error ellipse: s-maj=21.6km s-min=12.9km az=65.0*
*NEIC **27** 13:10:12.4±0.3, 10°.89N×92°.00E, h10km, mb5.2/8, Error ellipse: s-maj=12.9km s-min=7.9km az=52.0*
*ISCJB **27** 13:10:14.3±0.4, 10°.86N±0°.07×92°.05E±0°.08, h33km, mb4.9/33, Error ellipse: s-maj=13.0km s-min=7.7km az=149.2*
ISC 27 13:10:14.9±7.7, 10°.87N±0°.07×92°.02E±0°.10, h24km±54km, n62, σ0=95/53, mb4.9/33, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSM	**Kuching**	**20.42**	**116**	*eP*	**P**	**13 14 49.1**	**-1.3**
	105nm,1.1s						
KKM	**Kota Kinabalu**	**24.40**	**99**	*eP*	**P**	**13 15 31.4**	**-0.2**
	18nm,0.9s,mb4.5						
GTA	**Gaotai**	**29.26**	**12**	*eP*	**P**	**13 16 15.5**	**+0.4**
GTA				pP	pP	13 16 19.0	-3.3
GTA				sP	sP	13 16 20.5	-4.8
GTA				pmax	pmax		
	comp=Z,44nm,1.1s,mb5.1						
NACB	**Ninganchiao**	**31.07**	**61**	*eP*	**P**	**13 16 32.4**	**+1.1**
	comp=Z,65nm,1.3s,mb5.3						
BJI	**Beijing**	**36.09**	**32**	P	**P**	**13 17 15.5**	**+0.8**
BJI				pmax	pmax		
	comp=Z,69nm,0.7s,mb5.7						
MKAR	**Makanchi Array**	**36.74**	**349**	P	**P**	**13 17 19.7**	**-0.6**
	comp=Z,24nm,0.9s,mb5.0,baz=134,slow=8.8,SNR=4.1						
MKAR				PcP	PcP	13 19 42.3	-0.1
	comp=Z,3.1nm,0.7s,baz=106,slow=3.8,SNR=2.5						
MKAR	**Makanchi Array**	**36.74**	**349**	P	**P**	**13 17 19.7**	**-0.6**
MKAR				PcP	PcP	13 19 42.3	-0.1
SONM	**Songino Array**	**38.78**	**15**	P	**P**	**13 17 37.8**	**+0.4**
	comp=Z,16nm,0.9s,mb4.7,baz=206,slow=7.0,SNR=3.7						
SONM				PcP	PcP	13 19 50.0	+1.3
	comp=Z,3.3nm,0.8s,baz=204,slow=3.3,SNR=3.6						
KURK	**Kurchatov**	**41.23**	**347**	P	**P**	**13 17 57.1**	**-0.6**
	comp=Z,8.7nm,0.9s,mb4.4,baz=21,slow=20,SNR=5.4						
KSRS	**Korea Array**	**41.70**	**45**	P	**P**	**13 18 01.6**	**-0.2**
	comp=Z,12nm,1.0s,mb4.5,baz=244,slow=9.0,SNR=5.2						
MBWA	**Marble Bar**	**41.88**	**139**	*eP*	**P**	**13 18 02.7**	**-0.8**
	comp=Z,42nm,1.2s,mb4.9						

ZALV Zalesovo Beam 43.35 354 P **P 13 18 14.3 -0.6**
comp=Z,27nm,0.8s,mb5.0,baz=172,slow=9.0,SNR=7.0

ZALV Zalesovo Beam 43.35 354 P **P 13 18 14.3 -0.6**
FITZ Fitzroy Crossi 43.93 131 *eP* **P 13 18 19.7 -0.4**
comp=Z,80nm,1.0s,mb5.4

FITZ Fitzroy Crossi 43.93 131 P **P 13 18 19.9 -0.2**
comp=Z,32nm,0.6s,mb5.2,baz=316,slow=5.1,SNR=7.9

BVAR Borovoye Array 45.51 342 P **P 13 18 32.2 0.0**
comp=Z,8.8nm,0.9s,mb4.7,baz=123,slow=16,SNR=2.5

AKTK Aktyubinsk 48.34 331 P **P 13 18 56.2 +1.8**
AKTO Aktyubinsk 48.34 331 P **P 13 18 56.2 +1.8**
comp=Z,5.2nm,0.5s,mb4.8,baz=122,slow=15,SNR=1.6

MJAR Matsushiro Arr 48.80 51 P **P 13 18 59.0 +0.9**
comp=Z,6.8nm,1.0s,mb4.6,baz=222,slow=7.0,SNR=4.4

MJAR PcP PcP 13 20 23.2 +0.4
comp=Z,5.8nm,0.8s,baz=250,slow=3.3,SNR=5.2

KLBR Kellerberrin 48.89 151 *eP* **P 13 18 58.1 -0.8**
comp=Z,40nm,1.2s,mb5.3

NWAO Narrogin (SRO) 49.75 152 P **P 13 19 05.7 +0.2**
comp=Z,17nm,0.6s,mb5.3,baz=313,slow=7.6,SNR=7.9

WRA Warramunga Arr 51.70 126 P **P 13 19 20.3 0.0**
comp=Z,12nm,0.7s,mb5.0,baz=307,slow=8.2,SNR=6.2

WRAB Tennant Creek 51.70 126 *eP* **P 13 19 16.2 -4.2**
comp=Z,20nm,0.7s,mb5.2

ASAR Alice Springs 53.43 130 P **P 13 19 33.8 +0.7**
comp=Z,29nm,0.8s,mb5.3,baz=308,slow=7.4,SNR=9.1

ASAR PcP PcP 13 20 40.6 +0.4
comp=Z,10.0nm,0.8s,baz=306,slow=4.2,SNR=4.7

ASAJ Asahikawa 54.60 43 P **P 13 19 42.2 +0.8**
comp=Z,5.9nm,0.7s,mb4.7,baz=239,slow=32,SNR=2.1

YSS Yuzh-Sakhalins 55.78 40 *eP* **P 13 19 49.7 -0.2**
YSS *e*pP pP 13 19 58.9 +1.4
PMG Port Moresby 58.42 108 *eP* **P 13 20 09.5 +0.4**
comp=Z,71nm,1.2s,mb5.6

BR131 Keskin Array S 58.91 310 *eP* **P 13 20 09.8 -2.3**
BRTR Keskin Array B 58.91 310 P **P 13 20 13.0 +0.9**
comp=Z,5.8nm,0.8s,mb4.7,baz=124,slow=6.9,SNR=4.3

STKA Stephens Creek 63.67 134 *eP* **P 13 20 45.0 +0.6**
comp=Z,7.8nm,0.5s,mb5.0

STKA Stephens Creek 63.67 134 P **P 13 20 45.1 +0.7**
comp=Z,14nm,0.6s,mb5.1,baz=330,slow=4.4,SNR=3.5

STKA Stephens Creek 63.67 134 *eP* **P 13 20 44.0 -0.4**
comp=Z,2.9nm,0.7s,mb4.4

CMSA Cobar Meteorol 66.46 131 *eP* **P 13 21 03.5 +1.0**
PETK Petropavlovsk- 66.83 37 P **P 13 21 04.1 -0.5**
comp=Z,2.6nm,0.8s,mb4.3,baz=193,slow=4.4,SNR=2.4

FINES FINESS Array B 69.10 332 P **P 13 21 17.2 -1.5**
comp=Z,8.6nm,0.8s,mb4.7,baz=86,slow=29,SNR=3.9

FINES FINESS Array B 69.10 332 P **P 13 21 17.2 -1.5**
ARCES ARCESS Array B 71.76 340 P **P 13 21 34.7 -0.1**
comp=Z,11nm,0.9s,mb4.8,baz=86,slow=5.0,SNR=3.2

ARCES ARCESS Array B 71.76 340 P **P 13 21 34.7 -0.1**
CLL Collm 74.74 320 *es*P pP 13 21 58.0 -2.6
BOSA Boshof 75.44 237 P **P 13 21 59.4 +2.2**
comp=Z,6.0nm,0.9s,mb4.5,baz=81,slow=7.5,SNR=4.7

NOA NORSAR Array B 76.11 330 P **P 13 21 59.3 -1.1**
comp=Z,5.8nm,1.0s,mb4.5,baz=95,slow=5.4,SNR=3.3

SPITS Spitsbergen Ar 76.50 348 P **P 13 22 01.5 -0.8**
comp=Z,18nm,0.9s,mb5.0,baz=130,slow=13,SNR=3.6

SMY Shemya 76.64 38 *eP* **P 13 22 02.7 -0.9**
comp=Z,55nm,0.9s,mb5.5

MAW Mawson 81.04 191 *eP* **P 13 22 27.5 +0.2**
comp=Z,3.5nm,1.2s,mb4.2

MAW Mawson 81.04 191 P **P 13 22 27.9 +0.6**
comp=Z,3.0nm,0.8s,mb4.3,baz=358,slow=12,SNR=2.5

TAM Tamanrasset 82.67 292 *eP* **P 13 22 35.2 -1.8**
ESDC Sonseca Array 87.70 310 P **P 13 23 03.7 +1.8**
comp=Z,0.3nm,0.3s,mb4.0,baz=32,slow=40,SNR=1.7

SUMG Summit 90.77 347 *eP* **P 13 23 09.8 -5.7**
SVW2 Sparrevohn 91.04 27 *eP* **P 13 23 17.5 +0.5**
BPAW Bear Paw Mtn. 91.58 23 *eP* **P 13 23 18.5 -1.0**
MCK McKinley 92.55 23 *eP* **P 13 23 23.8 -0.1**
KDAK Kodiak Island 93.87 29 P **P 13 23 31.1 +0.9**
comp=Z,9.6nm,0.8s,mb5.3,baz=147,slow=6.3,SNR=3.6

RES Resolute Bay 94.51 2 *eP* **P 13 23 31.5 -1.3**
MENT Mentasta 94.95 22 *eP* **P 13 23 34.9 -0.2**
PDAR Pinedale Array 123.09 19 PKP PKPdf 13 29 08.9 -0.7
comp=Z,1.6nm,0.7s,baz=37,slow=2.5,SNR=3.6

PDAR PKKP PKKPdf 13 39 41.3 +2.0
comp=Z,1.8nm,1.2s,baz=132,slow=2.2,SNR=4.7

NVAR Mina Array Bea 123.37 28 PKP PKPdf 13 29 10.8 +0.5
comp=Z,3.0nm,0.7s,baz=296,slow=1.5,SNR=6.0

MSU Marysvale 125.93 23 *e*PKPdf PKPdf 13 29 16.3 +1.0
CLNB Carlsbad 134.50 19 *eP* Pdif 13 26 31.1 -0.2
CRPR Cabo Rojo, PR 144.68 324 *e*PKPdf PKPdf 13 29 48.1 -2.4
PLCA Paso Flores 146.51 204 PKPbc PKPbc 13 29 55.0 +0.7
comp=Z,2.1nm,0.8s,baz=106,slow=4.4,SNR=3.0

CMIG Matias Romero 151.39 14 PKPbc PKPbc 13 30 05.8 -1.7
comp=Z,12nm,0.8s,baz=338,slow=1.9,SNR=5.4

APG El Apazote 154.18 6 PKPab PKPab 13 30 25.8 -1.5
comp=Z,7.5nm,0.8s,baz=342,slow=4.2,SNR=3.7

*NEIC **27** 13:20:50.1±0.8, 10°.48N×92°.24E, h10km, Error ellipse: s-maj=38.2km s-min=15.9km az=54.0*
IDC 27 13:20:48.8±1.0, 10°.52N×92°.28E, h0km, mb3.7/8, mb1 3.8/8, mb1mx3.6/24, mbtmp3.7/8, Error ellipse: s-maj=45.9km s-min=19.4km az=53.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**37.14**	**349**	P	P	13 28 00.9	-0.2
	1.6nm,0.8s,baz=121,slow=9.5,SNR=6.3						
SONM	**Songino Array**	**39.05**	**15**	P	P	13 28 19.0	+1.7
	0.3nm,0.4s,baz=232,slow=7.1,SNR=2.3						
FITZ	**Fitzroy Crossi**	**43.51**	**131**	P	P	13 28 53.3	-1.0
	4.6nm,1.0s,baz=252,slow=7.4,SNR=3.9						
BVAR	**Borovoye Array**	**45.92**	**342**	P	P	13 29 12.2	-0.9
	0.6nm,0.7s,baz=148,slow=8.5,SNR=3.4						
BVAR	**Borovoye Array**	**45.92**	**342**	P	P	13 29 12.2	-0.9
WRA	**Warramunga Arr**	**51.28**	**126**	P	P	13 29 54.7	-0.2
	0.3nm,0.5s,baz=307,slow=8.3,SNR=5.3						
ASAR	**Alice Springs**	**53.01**	**130**	P	P	13 30 08.2	+0.5
	0.2nm,0.7s,baz=307,slow=6.9,SNR=1.7						
BRTR	**Keskin Array B**	**59.33**	**310**	P	P	13 30 51.4	-1.4
	1.0nm,0.8s,baz=54,slow=8.3,SNR=3.7						
TORD	**Torodi Ar. Bea**	**88.22**	**283**	P	P	13 33 44.4	+1.8
	0.9nm,1.0s,baz=46,slow=6.2,SNR=3.2						

*ATH **27** 13:22:00.9, 38°.69N×22°.86E, h23km±1km, MD3.4/11, ML3.2*
*NEIC **27** 13:22:00.9, 38°.69N×22°.86E, h23km, ML3.2(ATH), After ATH.*
*CSEM **27** 13:22:01.4±0.2, 38°.69N×22°.86E, h18km, ML4.1/4, Error ellipse: s-maj=4.7km s-min=4.1km az=125.0*
*ISCJB **27** 13:22:01.3±0.3, 38°.69N±0°.02×22°.84E±0°.02, h10km±3km, Error ellipse: s-maj=3.5km s-min=3.0km az=147.8*
*THE **27** 13:22:02.0, 38°.71N×22°.83E, h10km±1km, ML4.1/4, Error ellipse: s-maj=1.2km s-min=0.4km az=119.0*
ISC 27 13:22:01.6±0.3, 38°.69N±0°.02×22°.85E±0°.03, h13km±3km, n82, σ0=76/112, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKR	**Lokris**	**0.12**	**110**	P	**Pg**	**13 22 05.3**	**+0.4**
LKR				S	**Sg**	**13 22 07.8**	**+0.5**
LKR	**Lokris**	**0.12**	**110**	P	**Pg**	**13 22 05.3**	**+0.4**
LKR				S	**Sg**	**13 22 07.8**	**+0.5**
ATAL	**Atalanti**	**0.13**	**91**	P	**Pg**	**13 22 05.5**	**+0.5**
ATAL				S	**Sg**	**13 22 08.1**	**+0.6**
ATAL	**Atalanti**	**0.13**	**91**	P	**Pg**	**13 22 05.5**	**+0.5**
ATAL				S	**Sg**	**13 22 08.1**	**+0.6**
DSF	**Desfina**	**0.38**	**222**	P	**Pg**	**13 22 08.9**	**-0.3**
DSF				S	**Sg**	**13 22 14.5**	**+0.2**
DSF	**Desfina**	**0.38**	**222**	P	**Pg**	**13 22 08.9**	**-0.3**
DSF				S	**Sg**	**13 22 14.5**	**+0.2**
AGG	**Agios Georgios**	**0.52**	**309**	P	**Pg**	**13 22 11.7**	**-0.2**
AGG				S	**Sg**	**13 22 19.0**	**+0.2**
AGG	**Agios Georgios**	**0.52**	**309**	P	**Pg**	**13 22 11.7**	**-0.2**
AGG				S	**Sg**	**13 22 19.0**	**+0.2**
KALE	**Kalithea**	**0.63**	**242**	P	**Pg**	**13 22 13.5**	**-0.5**
KALE				S	**Sg**	**13 22 23.1**	**+0.8**
KALE	**Kalithea**	**0.63**	**242**	P	**Pg**	**13 22 13.5**	**-0.5**
KALE				S	**Sg**	**13 22 23.1**	**+0.8**
LTK	**Loutraki**	**0.68**	**172**	P	**Pg**	**13 22 14.7**	**-0.1**
LTK	**Loutraki**	**0.68**	**172**	*e*PB	**Pg**	**13 22 13.6**	**-1.2**
LTK				*e*SN	**Sg**	**13 22 24.6**	**+0.9**
LTK	**Loutraki**	**0.68**	**172**	*e*Pb	**Pg**	**13 22 13.6**	**-1.2**
LTK	**Loutraki**	**0.68**	**172**	P	**Pg**	**13 22 14.7**	**-0.1**
LTK				*e*Sn	**Sg**	**13 22 24.6**	**+0.9**
NEO	**Neokhori**	**0.68**	**25**	*e*Pn	**Pg**	**13 22 14.2**	**-0.6**
NEO				*e*Sn	**Sg**	**13 22 23.8**	**+0.1**

NEO	Neokhori	0.68	25	ePN		Pg	13 22 14.2	-0.6
NEO				eSN		Sg	13 22 23.8	+0.1
NEO	Neokhori	0.68	25	ePn		Pg	13 22 14.2	-0.6
NEO				eSn		Sg	13 22 23.8	+0.1
TRIZ	Trizonia	0.69 242		P		Pg	13 22 14.4	-0.7
TRIZ				S		Sg	13 22 25.4	+1.2
TRIZ	Trizonia	0.69 242		P		Pg	13 22 14.4	-0.7
TRIZ				S		Sg	13 22 25.4	+1.2
XOR	Xorichti	0.72	22	P		Pg	13 22 15.5	-0.2
XOR				S		Sg	13 22 25.8	+0.6
XOR	Xorichti	0.72	22	P		Pg	13 22 15.5	-0.2
XOR				S		Sg	13 22 25.8	+0.6
EFP	Efpalio	0.79 250		P		Pg	13 22 16.7	-0.2
EFP				S		Sg	13 22 28.4	+1.2
EFP	Efpalio	0.79 250		ePN		Pg	13 22 16.5	-0.4
EFP				eSN		Sg	13 22 28.1	+0.9
EFP	Efpalio	0.79 250		P		Pg	13 22 16.7	-0.2
EFP				eSn		Sg	13 22 28.1	+0.9
EFP				S		Sg	13 22 28.4	+1.2
LAKA	Lakka	0.82 237		P		Pg	13 22 17.5	0.0
LAKA	Lakka	0.82 237		P		Pg	13 22 17.5	0.0
EVR	Evrytania	0.84 286		ePn		Pg	13 22 17.4	-0.5
EVR	Evrytania	0.84 286		ePN		Pg	13 22 17.4	-0.5
EVR	Evrytania	0.84 286		ePn		Pg	13 22 17.4	-0.5
GUR	Goura	0.86 208		ePN		Pg	13 22 17.8	-0.4
GUR	Goura	0.86 208		ePn		Pg	13 22 17.8	-0.4
UPR	University Cam	0.93 244		ePN		Pg	13 22 17.8	-1.8
UPR	University Cam	0.93 244		ePn		Pg	13 22 17.8	-1.8
AOS	Alonnisos	0.93	59	P		Pb	13 22 19.3	-0.3
AOS				S		Sb	13 22 33.0	+1.1
AOS	Alonnisos	0.93	59	P		Pb	13 22 19.3	-0.3
AOS				S		Sb	13 22 33.0	+1.1
ATH	Athens Observa	0.99 136		ePn		Pg	13 22 20.1	-0.7
ATH				eSn		Sg	13 22 33.3	-0.4
ATH	Athens Observa	0.99 136		ePN		Pg	13 22 20.1	-0.7
ATH				eSN		Sg	13 22 33.3	-0.4
ATH	Athens Observa	0.99 136		ePn		Pg	13 22 20.1	-0.7
ATH				eSn		Sg	13 22 33.3	-0.4
PTL	Penteli	1.02 129		ePn		Pg	13 22 20.1	-1.3
PTL	Penteli	1.02 129		ePN		Pg	13 22 20.1	-1.3
PTL	Penteli	1.02 129		ePn		Pg	13 22 20.1	-1.3
NAIG	Nisos Aigina	1.06 152		ePn		Pg	13 22 21.3	-0.8
NAIG	Nisos Aigina	1.06 152		ePN		Pg	13 22 21.3	-0.8
NAIG	Nisos Aigina	1.06 152		ePn		Pg	13 22 21.3	-0.8
THL	Klokotos Trika	1.08 323		P		Pb	13 22 21.6	-0.6
THL	Klokotos Trika	1.08 323		P		Pb	13 22 21.6	-0.6
DID	Didima	1.23 165		P		Pn	13 22 25.1	+0.7
DID	Didima	1.23 165		ePN		Pn	13 22 25.0	+0.6
DID				eSN		Sn	13 22 40.5	-0.3
DID	Didima	1.23 165		ePn		Pn	13 22 25.0	+0.6
DID				eSn		Sn	13 22 40.5	-0.3
RLS	Riolos of Patr	1.26 240		ePn		Pn	13 22 25.2	+0.3
RLS	Riolos of Patr	1.26 240		ePN		Pn	13 22 25.2	+0.3
RLS	Riolos of Patr	1.26 240		ePn		Pn	13 22 25.2	+0.3
VLX	Vlachokerasia	1.37 196		P		Pn	13 22 26.6	+0.2
VLX	Vlachokerasia	1.37 196		ePB		Pn	13 22 25.4	-1.0
VLX	Vlachokerasia	1.37 196		ePb		Pn	13 22 25.4	-1.0
VLX	Vlachokerasia	1.37 196		P		Pn	13 22 26.6	+0.2
ITM	Ithomi	1.68 206		ePn		Pn	13 22 31.0	+0.3
ITM	Ithomi	1.68 206		ePN		Pn	13 22 31.0	+0.3
ITM	Ithomi	1.68 206		ePn		Pn	13 22 31.0	+0.3
PLG	Polygyros	1.74	15	ePn		Pn	13 22 31.6	+0.1
PLG	Polygyros	1.74	15	ePN		Pn	13 22 31.6	+0.1
PLG	Polygyros	1.74	15	ePn		Pn	13 22 31.6	+0.1
KZN	Kozani	1.81 333		ePn		Pn	13 22 33.5	+1.0
KZN	Kozani	1.81 333		ePN		Pn	13 22 33.5	+1.0
KZN	Kozani	1.81 333		ePn		Pn	13 22 33.5	+1.0
JAN	Janina	1.83 302		ePb		Pb	13 22 32.3	-0.4
JAN	Janina	1.83 302		ePB		Pn	13 22 32.2	-0.5
JAN	Janina	1.83 302		ePb		Pn	13 22 32.3	-0.4
VLS	Valsamata	1.85 254		ePn		Pn	13 22 34.2	+1.2
VLS	Valsamata	1.85 254		ePN		Pn	13 22 34.2	+1.2
VLS	Valsamata	1.85 254		ePn		Pn	13 22 34.2	+1.2
VLI	Veliai	1.97 178		ePn		Pn	13 22 35.3	+0.6
VLI	Veliai	1.97 178		ePN		Pn	13 22 35.2	+0.5
VLI	Veliai	1.97 178		ePn		Pn	13 22 35.3	+0.6
PYL	PYLOS	2.00 206		ePN		Pn	13 22 36.6	+1.5
PYL	PYLOS	2.00 206		ePn		Pn	13 22 36.6	+1.5
KYTH	Kithira	2.41 176		ePn		Pn	13 22 40.1	-0.7
KYTH	Kithira	2.41 176		ePN		Pn	13 22 40.1	-0.7
KYTH	Kithira	2.41 176		ePn		Pn	13 22 40.1	-0.7
KEK	Kerkira	2.58 294		ePb		Pb	13 22 45.7	-2.0
KEK	Kerkira	2.58 294		ePB		Pb	13 22 45.7	-2.0
KEK	Kerkira	2.58 294		ePb		Pb	13 22 45.7	-2.0

*IDC **27** 13:24:45.1±1.8, 38°.50N×141°.16E, h0km, mb3.5/2, mb1 3.5/5, mb1mx3.3/26, mbtmp3.3/5, ML2.9/3, MS4.2/2, Ms1 4.2/2, ms1mx3.6/35, Error ellipse: s-maj=40.3km s-min=28.2km az=129.0*
*JMA **27** 13:24:45.8, 38°.75N×140°.76E, h4km±1km, M3.2*
JMA Felt II J1.
*ISCJB **27** 13:24:45.5±0.5, 38°.74N±0°.02×140°.79E±0°.03, h9km±4km, mb3.6/2, Error ellipse: s-maj=4.9km s-min=3.7km az=34.8*

ISC 27 13:24:45.8±0.4, **38°.73N**±0°.02×**140°.78E**±0°.03, **h1**km±6km, **n17**, σ0s**90**/27, **mb3.7**/2, **4C-5D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYK	Kaneyama	0.38 300		↓P		Pg	13 24 52.8	-0.2
JYK				S		Sg	13 24 57.8	-0.1
JOU	Okura	0.38 194		↑P		Pg	13 24 53.4	+0.4
JOU				S		Sg	13 24 59.0	+1.1
JMK	Ichinoseki	0.41	57	↓P		Pg	13 24 53.6	-0.1
JMK				S		Sg	13 24 59.3	+0.3
JIO	Ouri	0.53 121		↓P		Pg	13 24 56.0	+0.1
JIO				S		Sg	13 25 03.4	+0.7
JRG	Rokugo	0.67 351		P		Pg	13 24 58.5	-0.2
JRG				eS		Sg	13 25 08.3	+0.8
JYS	Shiratake	0.76 228		↑P		Pg	13 25 00.4	+0.1
JYS				S		Sg	13 25 10.6	+0.5
OFUJ	Ofunato	0.78	63	↓P		Pg	13 25 00.3	-0.5
OFUJ				S		Sg	13 25 10.9	0.0
JOM	Ohasama	0.84	28	↑P		Pg	13 25 01.3	-0.7
JOM				S		Sg	13 25 12.6	-0.3
JYA	Atsumi	0.84 261		↓P		Pg	13 25 01.7	-0.3
JMM	Marumori	0.86 179		↑P		Pg	13 25 01.8	-0.6
JMM				S		Sg	13 25 13.5	-0.1
MJAR	Matsushiro Arr	2.99 224		Pn		Pn	13 25 34.9	+0.5
	0.6nm,0.3s,baz=32,slow=10.0,SNR=6.2							
MJAR				Pg		Pg	13 25 40.9	-2.2
	1.4nm,0.3s,baz=65,slow=15,SNR=13							
MAT	Matsushiro	2.99 224		P		Pn	13 25 34.3	0.0
MAT				S		Sn	13 26 11.1	+0.3
ASAJ	Asahikawa	5.55	14	Pn		Pn	13 26 11.6	+2.0
	0.3nm,0.3s,baz=267,slow=25,SNR=1.6							
ASAJ				LR		LR	13 29 01.8	
	comp=Z,2μm,20.2s,baz=5.3,slow=45							
JHJ	Hachijo jima 2	5.66 188		LR		LR	13 28 31.2	
	comp=Z,2μm,19.4s,baz=254,slow=41							
KSRS	Korea Array	10.21 267		Pn		Pn	13 27 16.6	+3.1
	0.2nm,0.3s,baz=74,slow=14,SNR=5.3							
WRA	Warramunga Arr	58.67 187		P		P	13 34 42.0	-2.8
	0.6nm,0.8s,mb3.6,baz=4.0,slow=7.0,SNR=5.1							
ASAR	Alice Springs	62.40 187		P		P	13 35 09.2	-1.1
	0.4nm,0.8s,mb3.7,baz=24,slow=9.3,SNR=3.4							

*IDC **27** 13:31:21.7±0.9, 10°.77N×91°.62E, h0km, mb4.0/13, mb1 4.0/14, mb1mx3.9/27, mbtmp3.9/14, ML3.7/1, MS4.7/1, Ms1 4.7/1, ms1mx3.9/39, Error ellipse: s-maj=30.5km s-min=15.4km az=54.0*
*NEIC **27** 13:31:23.3±0.5, 10°.82N×91°.70E, h10km, mb4.4/2, Error ellipse: s-maj=15.2km s-min=7.9km az=56.0*
*ISCJB **27** 13:31:24.4±0.6, 10°.73N±0°.08×91°.60E±0°.09, h33km, mb4.0/14, Error ellipse: s-maj=12.6km s-min=11.3km az=164.5*

ISC 27 13:31:26.6±0.6, **10°.70N**±0°.08×**91°.55E**±0°.09, **h35**km, **n19**, σ0s**80**/19, **mb4.0**/14, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	10.52	42	Pn		Pn	13 33 51.8	-3.1
	0.2nm,0.3s,baz=238,slow=15,SNR=4.2							
CMAR				Sn		Sn	13 35 53.0	+1.5
	0.1nm,0.3s,baz=232,slow=32,SNR=5.2							
AAK	Ala-Archa	35.12 338		LR		LR	13 55 22.6	
	comp=Z,1μm,19.3s,baz=58,slow=41							
MK31	Makanchi Array	36.82 349		eP		P	13 38 30.7	-0.5
MKAR	Makanchi Array	36.82 349		P		P	13 38 31.1	0.0
	2.2nm,0.5s,mb4.2,baz=131,slow=8.9,SNR=16							
SONM	Songino Array	39.07	16	P		P	13 38 49.1	-0.9
	0.4nm,0.5s,mb3.4,baz=186,slow=13,SNR=4.6							
KURK	Kurchatov	41.29 348		P		P	13 39 08.6	+0.1
	0.8nm,0.3s,mb3.8,baz=167,slow=7.3,SNR=7.6							
KURK	Kurchatov	41.29 348		eP		P	13 39 07.2	-1.2
	5.6nm,1.1s,mb4.1							
KSRS	Korea Array	42.14	45	P		P	13 39 15.2	-0.5
	0.3nm,0.4s,mb3.2,baz=243,slow=8.3,SNR=4.1							
ZALV	Zalesovo Beam	43.47 354		P		P	13 39 25.6	-0.5
	1.8nm,0.4s,mb4.2,baz=177,slow=7.4,SNR=10							
FITZ	Fitzroy Crossi	44.18 130		P		P	13 39 33.5	+1.1
	1.6nm,0.6s,mb3.9,baz=32,slow=8.6,SNR=5.9							
BVAR	Borovoye Array	45.52 342		P		P	13 39 43.2	+0.6
	1.0nm,0.8s,mb3.8,baz=148,slow=8.7,SNR=4.8							
AKTK	Aktyubinsk	48.26 332		P		P	13 40 04.5	+0.5
AKTO	Aktyubinsk	48.26 332		P		P	13 40 04.5	+0.5
	1.6nm,0.6s,mb4.2,baz=139,slow=8.0,SNR=5.1							
WRA	Warramunga Arr	51.98 126		P		P	13 40 32.5	-0.1
	1.2nm,0.3s,mb4.3,baz=300,slow=10.0,SNR=18							
WRAB	Tennant Creek	51.98 126		eP		P	13 40 32.2	-0.5
	5.6nm,0.8s,mb4.5							
ASAR	Alice Springs	53.68 130		P		P	13 40 45.1	-0.1
	0.6nm,0.5s,mb3.8,baz=304,slow=6.7,SNR=6.6							
BRTR	Keskin Array B	58.66 310		P		P	13 41 21.2	+0.7
	1.4nm,0.8s,mb4.1,baz=128,slow=8.0,SNR=6.6							
FINES	FINESS Array B	69.03 332		P		P	13 42 28.6	+0.2
	1.9nm,0.7s,mb4.1,baz=127,slow=8.3,SNR=5.0							
ARCES	ARCESS Array B	71.76 340		P		P	13 42 44.9	0.0
	1.2nm,0.7s,mb4.0,baz=90,slow=6.1,SNR=4.6							

IDC 27 13:39:23.3±3.3, **10°.77N**×**91°.68E**, **h0**km, **mb3.6**/4, **mb1 3.8**/4, **mb1mx3.4**/23, **mbtmp3.6**/4, **Error ellipse: s-maj=188.9km s-min=27.5km az=60.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	36.78 349		P	P	13 46 32.4	-0.3
	0.6nm,0.7s,baz=145,slow=8.3,SNR=4.9						
FITZ	Fitzroy Crossi	44.12 130		P	P	13 47 33.3	-0.5
	0.7nm,0.5s,baz=326,slow=7.3,SNR=1.3						
WRA	Warramunga Arr	51.91 126		P	P	13 48 33.6	-0.5
	0.2nm,0.3s,baz=300,slow=10.0,SNR=8.3						
WRA				PcP	PcP	13 49 47.1	+0.2
	0.9nm,1.1s,baz=320,slow=3.1,SNR=2.8						
ASAR	Alice Springs	53.62 130		P	P	13 48 47.0	+0.3
	0.8nm,0.7s,baz=303,slow=7.3,SNR=11						
ASAR				PcP	PcP	13 49 53.5	+0.2
	0.4nm,0.8s,baz=326,slow=2.9,SNR=4.9						

*IDC **27** 13:44:59.0±0.7, 33°.10N×91°.97E, h0km, mb4.1/13, mb1 4.3/16, mb1mx4.1/28, mbtmp4.2/16, ML3.8/3, Error ellipse: s-maj=27.3km s-min=14.1km az=48.0*
*ISCJB **27** 13:44:59.0±0.4, 33°.29N±0°.04×92°.14E±0°.06, h10km, mb4.2/16, Error ellipse: s-maj=7.7km s-min=5.2km az=14.6*
*BJI **27** 13:45:00.5, 33°.17N×92°.04E, h14km, mb4.5/12, ML4.6/4, Ms4.4/2, Ms7 4.4/1*
*NEIC **27** 13:45:00.1±0.5, 33°.21N×92°.13E, h10km, mb4.4/9, Error ellipse: s-maj=13.2km s-min=7.6km az=60.0*

ISC 27 13:45:01.3±0.4, **33°.37N**±0°.03×**92°.15E**±0°.07, **h10**km, **n44**, σ1s**14**/46, **mb4.2**/16, **Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	Lhasa	3.76 193		Pg	Pn	13 46 01.5	+2.2
LSA				Sg	Sb	13 46 54.3	+1.0
LSA				smax			
	comp=N,310nm,1.1s						
LSA				smax			
	comp=E,490nm,0.9s						
TAPN	Taplejung	7.12 214		eP	Pn	13 46 45.1	-0.4
	comp=E,113nm,1.1s						
GUN	Gumba	7.66 226		eP	Pn	13 46 54.0	+1.0
	comp=E,52nm,0.6s						
JIRN	Jiri	7.67 224		eP	Pn	13 46 53.2	+0.2
	comp=E,46nm,0.5s						
ODAN	Odare	7.68 214		eP	Pn	13 46 51.9	-1.4
	comp=E,127nm,1.0s						
SHL	Shillong	7.78 182		ePKP	Pn	13 46 53.5	-1.1
SHL				eS	Sn	13 48 13.5	-9.3
RAMN	Ramite	8.00 218		eP	Pn	13 46 56.1	-1.5
	comp=E,188nm,0.9s						
KKN	Kakani	8.12 229		eP	Pn	13 47 00.4	+1.1
	comp=E,64nm,0.8s						
PKI	Pulchoki	8.20 227		eP	Pn	13 47 00.8	+0.5
	comp=E,64nm,0.5s						
PKIN	Phulchoki	8.20 227		eP	Pn	13 47 01.4	+1.1
	comp=E,49nm,0.6s						
DMN	Daman	8.36 228		eP	Pn	13 47 03.3	+0.8
	comp=E,25nm,0.5s						
GTA	Gaotai	8.63	44	P	Pn	13 47 09.3	+3.1
GTA				pP		13 47 17.5	
GTA				sP		13 47 21.5	
GTA				pmax	pmax		
	comp=Z,17nm,1.3s						
KMI	Kunming	12.37 129		P	Pn	13 47 57.0	-0.4
KMI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ENH	Enshi	15.06	97	ePn	Pn	13 48 41.7	+7.4
MK31	Makanchi Array	15.36 334		ePn	Pn	13 48 37.3	-0.7
MKAR	Makanchi Array	15.36 334		Pn	Pn	13 48 38.3	+0.2
	comp=Z,0.2nm,0.3s,baz=127,slow=15,SNR=20						
CM31	Chiang Mai Arr	16.05 156		ePn	Pn	13 48 46.4	-0.8
CMAR	Chiang Mai Arr	16.05 156		Pn	Pn	13 48 43.0	-4.2
	comp=Z,0.2nm,0.3s,baz=328,slow=13,SNR=11						
UCH	Uchtor	16.48 308		eP	Pn	13 48 56.9	+4.3
	comp=Z,15nm,0.8s						
AAK	Ala-Archa	16.68 309		Pn	Pn	13 49 01.9	+6.9
	comp=Z,0.0nm,0.3s,baz=178,slow=2.5,SNR=14						
SONM	Songino Array	18.01	32	Pn	Pn	13 49 14.1	+2.6
	comp=Z,0.5nm,0.3s,baz=216,slow=12,SNR=48						
ULN	Ulaanbaatar	18.33	33	eP	Pn	13 49 14.9	-0.6
	comp=Z,17nm,1.1s						
KBL	Kabul	19.20 280		eP	Pn	13 49 23.8	-2.3
	comp=Z,38nm,0.9s						
KURK	Kurchatov	19.98 334		P	Pn	13 49 33.0	-2.3
	comp=Z,4.4nm,0.6s,baz=143,slow=11,SNR=13						
KURK	Kurchatov	19.98 334		eP	Pn	13 49 33.7	-1.6
	comp=Z,10nm,0.9s						
ZALV	Zalesovo Beam	21.22 348		P	P	13 49 48.1	+1.0
	comp=Z,5.3nm,0.8s,mb3.9,baz=160,slow=11,SNR=13						
BVAR	Borovoye Array	25.07 328		P	P	13 50 26.6	+0.9
	comp=Z,2.2nm,0.5s,mb3.9,baz=133,slow=10,SNR=15						
BRVK	Borovoye	25.14 328		eP	P	13 50 26.9	+0.5
	comp=Z,5.1nm,0.6s,mb4.2						
KSRS	Korea Array	29.33	72	P	P	13 51 07.0	+2.8
	comp=Z,0.9nm,0.6s,mb3.7,baz=282,slow=9.4,SNR=6.2						
AKTK	Aktyubinsk	30.25 315		P	P	13 51 11.9	-0.1
AKTO	Aktyubinsk	30.25 315		P	P	13 51 11.9	-0.1
	comp=Z,3.1nm,0.8s,mb4.1,baz=81,slow=7.9,SNR=4.7						
ARU	Arti	32.59 325		eP	P	13 51 32.2	-0.5
	comp=Z,6.7nm,1.0s,mb4.5						
TIXI	Tiksi	42.97 16		eP	P	13 52 59.5	-0.6
	comp=Z,7.5nm,1.6s,mb4.2						
BR131	Keskin Array S	46.71 295		eP	P	13 53 30.2	-0.2
	comp=Z,4.5nm,0.8s,mb4.5						
BRTR	Keskin Array B	46.71 295		P	P	13 53 30.3	-0.1
	comp=Z,4.6nm,0.8s,mb4.5,baz=86,slow=7.6,SNR=9.4						
EIL	Elat	48.38 282		P	P	13 53 42.8	-0.6
	comp=Z,12nm,0.9s,mb4.9,baz=8.0,slow=5.9,SNR=10.0						
FINES	FINESS Array B	49.97 325		P	P	13 53 56.0	+0.8
	comp=Z,0.8nm,0.5s,mb4.0,baz=110,slow=10,SNR=5.4						
ARCES	ARCESS Array B	51.01 335		P	P	13 54 03.6	+0.7
	comp=Z,1.0nm,0.4s,mb4.1,baz=96,slow=8.2,SNR=14						
NB2	NORSAR Subarra	57.15 325		P	P	13 54 47.4	-0.4
	comp=Z,1.1nm,0.7s,mb4.0,baz=80,slow=7.4						
NOA	NORSAR Array B	57.15 325		P	P	13 54 47.3	-0.5
	comp=Z,1.3nm,0.8s,mb4.0,baz=81,slow=7.1,SNR=7.6						
WRAB	Tennant Creek	66.57 136		eP	P	13 55 47.0	-4.7
	comp=Z,4.2nm,0.8s,mb4.5						
WRA	Warramunga Arr	66.57 136		P	P	13 55 50.1	-1.6
	comp=Z,2.7nm,0.9s,mb4.3,baz=331,slow=6.7,SNR=14						
ASAR	Alice Springs	69.28 139		P	P	13 56 07.5	-1.3
	comp=Z,3.4nm,0.5s,mb4.5,baz=323,slow=6.1,SNR=24						
YKA	Yellowknife Ar	82.07	12	P	P	13 57 21.5	0.0
	comp=Z,2.3nm,1.1s,mb4.0,baz=341,slow=4.3,SNR=4.3						

*NEIC **27** 13:47:22.8, 36°.38N×22°.62E, h37km, MD3.4(ATH), After ATH.*
*ATH **27** 13:47:22.8, 36°.38N×22°.62E, h37km±2km, MD3.4/7*
*CSEM **27** 13:47:23.4±0.4, 36°.33N×22°.55E, h20km, MD3.4, Error ellipse: s-maj=8.9km s-min=5.5km az=27.0*
*ISCJB **27** 13:47:23.4±1.0, 36°.32N±0°.06×22°.58E±0°.06, h24km±7km, Error ellipse: s-maj=10.0km s-min=7.3km az=30.0*
*THE **27** 13:47:25.0, 36°.45N×22°.58E, h6km±1km, ML3.5/2, Error ellipse: s-maj=3.2km s-min=1.2km az=165.0*

ISC 27 13:47:23.3±1.0, **36°.34N**±0°.05×**22°.55E**±0°.05, **h15**km±5km, **n39**, σ0s**79**/51, **6D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	Kithira	0.40	99	↓iPb	Pg	13 47 32.6	+1.3
KYTH	Kithira	0.40	99	↓iPB	Pg	13 47 32.6	+1.3
KYTH	Kithira	0.40	99	↓iPb	Pg	13 47 32.6	+1.3
VLI	Veliai	0.48	39	↓iPb	Pg	13 47 32.8	-0.1
VLI				eSb	Sg	13 47 39.8	+0.4
VLI	Veliai	0.48	39	↓iPB	Pg	13 47 32.8	-0.1
VLI				eSB	Sg	13 47 39.8	+0.4
VLI	Veliai	0.48	39	↓iPb	Pg	13 47 32.8	-0.1
VLI				eSb	Sg	13 47 39.8	+0.4
PYL	PYLOS	0.85 310		P	Pg	13 47 39.7	-0.2
PYL				S	Sg	13 47 52.6	+1.5
PYL	PYLOS	0.85 310		ePB	Pg	13 47 39.0	-0.9
PYL				eSN	Sg	13 47 52.5	+1.4
PYL	PYLOS	0.85 310		ePb	Pg	13 47 39.0	-0.9
PYL	PYLOS	0.85 310		P	Pg	13 47 39.7	-0.2
PYL				eSn	Sg	13 47 52.5	+1.4
ITM	Ithomi	0.97 329		ePn	Pg	13 47 41.8	-0.3
ITM	Ithomi	0.97 329		P	Pb	13 47 41.6	-0.3
ITM	Ithomi	0.97 329		ePN	Pg	13 47 41.8	-0.3
ITM	Ithomi	0.97 329		ePn	Pg	13 47 41.8	-0.3
VLX	Vlachokerasia	1.03 352		P	Pb	13 47 42.0	-0.9
VLX	Vlachokerasia	1.03 352		ePN	Pg	13 47 41.8	-1.5
VLX				eSN	Sg	13 47 56.1	-0.7
VLX	Vlachokerasia	1.03 352		P	Pb	13 47 42.0	-0.9
VLX				eSn	Sg	13 47 56.1	-0.7
DID	Didima	1.28	25	P	Pn	13 47 47.0	+0.3
DID				S	Sb	13 48 04.1	+0.7
DID	Didima	1.28	25	ePN	Pn	13 47 45.3	-1.4
DID	Didima	1.28	25	ePn	Pn	13 47 45.3	-1.4
DID	Didima	1.28	25	P	Pn	13 47 47.0	+0.3
DID				S	Sb	13 48 04.1	+0.7
GUR	Goura	1.60 354		P	Pn	13 47 51.8	+0.8
GUR				S	Sn	13 48 11.7	+0.3
GUR	Goura	1.60 354		ePB	Pn	13 47 50.5	-0.5
GUR	Goura	1.60 354		P	Pn	13 47 51.8	+0.8
GUR				S	Sn	13 48 11.7	+0.3
VAM	Vamos	1.63 124		ePn	Pn	13 47 50.5	-0.9
VAM	Vamos	1.63 124		ePN	Pn	13 47 50.5	-0.9
VAM	Vamos	1.63 124		ePn	Pn	13 47 50.5	-0.9
LTK	Loutraki	1.71	11	ePB	Pn	13 47 51.8	-0.7
RLS	Riolos of Patr	1.92 333		ePb	Pn	13 47 55.8	+0.4
RLS	Riolos of Patr	1.92 333		ePB	Pn	13 47 55.8	+0.4
LAKA	Lakka	1.95 347		P	Pn	13 47 56.8	+1.0
LAKA	Lakka	1.95 347		P	Pn	13 47 56.8	+1.0
EFP	Efpalio	2.14 346		ePB	Pn	13 47 59.2	+0.7
VLS	Valsamata	2.41 320		ePn	Pn	13 48 02.4	+0.3
VLS	Valsamata	2.41 320		ePN	Pn	13 48 02.4	+0.3
VLS	Valsamata	2.41 320		ePn	Pn	13 48 02.4	+0.3
EVR	Evrytania	2.63 347		ePn	Pn	13 48 04.8	-0.5
EVR	Evrytania	2.63 347		ePN	Pn	13 48 04.8	-0.5
EVR	Evrytania	2.63 347		ePn	Pn	13 48 04.8	-0.5

*IDC **27** 13:53:01.0±1.9, 10°.67N×91°.34E, h0km, mb3.6/6, mb1 3.6/7, mb1mx3.5/25, mbtmp3.5/7, ML3.6/1, Error ellipse: s-maj=63.5km s-min=21.3km az=64.0*
*NEIC **27** 13:53:06.4±0.9, 11°.35N×92°.54E, h10km, mb4.4/1, Error ellipse: s-maj=18.9km s-min=18.1km az=82.0*
*ISCJB **27** 13:53:09.3±2.4, 11°.4N±0°.1×92°.5E±0°.1, h54km±25km, mb3.6/7, Error ellipse: s-maj=18.6km s-min=17.6km az=3.0*

ISC 27 13:53:11.9±1.7, **11°.4N**±0°.1×**92°.5E**±0°.1, **h60**km±18km, **n14**, σ0s**51**/13, **mb3.6**/7, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	9.41	41	ePn	Pn	13 55 24.9	0.0
	0.8nm,0.3s						
CMAR	Chiang Mai Arr	9.41	41	Pn	Px	13 55 34.4	
	0.1nm,0.3s,baz=252,slow=15,SNR=2.9						
PALK	Pallekele	12.31 252		eP	Pn	13 56 04.5	0.0
	13nm,0.7s						
MK31	Makanchi Array	36.34 348		eP	P	14 00 09.1	-0.9
MKAR	Makanchi Array	36.34 348		P	P	14 00 10.3	+0.3
	0.9

JMA Felt III J1.
*SZGRF **27** 13:57:27.8, 37°.32N×139°.46E, h33km, mb4.8, Eastern Honshu, Japan*
*MOS **27** 13:57:28.8±0.9, 38°.79N×140°.63E, h33km, mb4.8/51, Error ellipse: s-maj=8.7km s-min=5.0km az=100.1*
ISC 27 13:57:26.4±0.4, 38.76N±0.02×140.67E±0.02, h5km±2km, h36km±2.5km: pP-P, n478, σ0.972/495, mb4.6/85, MS4.5/6, 122C-116D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.29**	**304**	⇓P	**Pg**	**13 57 33.4**	**+1.3**
JYK				S	**Sg**	**13 57 38.5**	**+2.6**
JOU	**Okura**	**0.39**	**181**	⇑P	**Pg**	**13 57 34.1**	**+0.2**
JOU				*i* S	**Sg**	**13 57 39.5**	**+0.5**
JMK	**Ichinoseki**	**0.47**	**65**	⇓P	**Pg**	**13 57 34.1**	**-1.4**
JMK				*i* S	**Sg**	**13 57 40.0**	**-1.6**
JIO	**Ouri**	**0.61**	**119**	⇓P	**Pg**	**13 57 36.5**	**-1.7**
JIO				S	**Sg**	**13 57 43.8**	**-2.3**
JRG	**Rokugo**	**0.64**	**357**	P	**Pg**	**13 57 38.9**	**+0.2**
JYS	**Shirataka**	**0.71**	**222**	⇑P	**Pg**	**13 57 40.9**	**+0.8**
JYS				S	**Sg**	**13 57 51.0**	**+1.6**
JYA	**Atsumi**	**0.77**	**258**	⇓P	**Pg**	**13 57 41.8**	**+0.7**
JYA				S	**Sg**	**13 57 53.6**	**+2.5**
JOM	**Ohasama**	**0.86**	**34**	P	**Pg**	**13 57 41.8**	**-1.2**
JOM				S	**Sg**	**13 57 53.1**	**-1.1**
JMM	**Marumori**	**0.89**	**174**	⇑P	**Pg**	**13 57 42.3**	**-1.3**
JMM				S	**Sg**	**13 57 54.0**	**-1.2**
MAJO	**Matsushiro**	**2.95**	**222**	*e*P	**Pn**	**13 58 15.3**	**+1.3**
MJAR	**Matsushiro Arr**	**2.95**	**222**	Pn	**Pn**	**13 58 15.3**	**+1.4**
	9.4nm,0.3s,baz=199,slow=20,SNR=64						
MJAR				Pg	**Pg**	**13 58 20.5**	**-2.5**
	19nm,0.3s,baz=25,slow=16,SNR=92						
MJAR				Lg		13 58 59.4	
	19nm,0.3s,baz=33,slow=32,SNR=5.6						
MJAR	**Matsushiro Arr**	**2.95**	**222**	Pn	**Pn**	**13 58 15.3**	**+1.4**
MJAR				Pg	**Pg**	**13 58 20.5**	**-2.5**
MJAR				Lg		13 58 59.4	
MAT	**Matsushiro**	**2.95**	**222**	P	**Pn**	**13 58 15.2**	**+1.2**
MAT				S	**Sn**	**13 58 53.5**	**+3.7**
ERM	**Erimo**	**3.77**	**29**	*e*P	**Pn**	**13 58 26.8**	**+1.6**
ASAJ	**Asahikawa**	**5.55**	**15**	Pn	**Pn**	**13 58 51.4**	**+1.7**
	1.5nm,0.3s,baz=222,slow=13,SNR=14						
ASAJ	**Asahikawa**	**5.55**	**15**	P	**Pn**	**13 58 51.4**	**+1.7**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
JHJ	**Hachijo jima 2**	**5.67**	**188**	Pn	**Pn**	**13 58 54.0**	**+2.6**
	comp=Z,29nm,0.3s,baz=236,slow=13,SNR=11						
JHJ				Sn	**Sn**	**13 59 57.6**	**+0.7**
	comp=Z,14nm,0.3s,baz=274,slow=19,SNR=4.6						
YSS	**Yuzh-Sakhalins**	**8.34**	**10**	⇑*i*P	**Pn**	**13 59 29.0**	**+1.1**
YSS				pmax	pmax		
	comp=N,30nm,0.8s						
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS	**Yuzh-Sakhalins**	**8.34**	**10**	*e*Pn	**Pn**	**13 59 29.0**	**+1.1**
KUR	**Kuril'sk**	**8.40**	**37**	P	**Pn**	**13 59 30.0**	**+1.2**
KUR				pmax	pmax		
	comp=Z,140nm,0.9s						
KSRS	**Korea Array**	**10.13**	**267**	Pn	**Pn**	**13 59 56.5**	**+3.9**
	comp=Z,2.7nm,0.3s,baz=81,slow=14,SNR=114						
KSRS				Sn	**Sn**	**14 01 52.4**	**+5.8**
	comp=Z,1.1nm,0.3s,baz=74,slow=24,SNR=12						
KSRS	**Korea Array**	**10.13**	**267**	P	**Pn**	**13 59 56.5**	**+3.9**
KSRS						14 01 52.4	
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.3s						
KSRS				smax			
	comp=N,1.0nm,0.3s						
MDJ	**Mudanjiang**	**10.14**	**309**	P	**Pn**	**13 59 54.5**	**+1.8**
MDJ				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MDJ				pmax	pmax		
	comp=Z,640nm,13.9s						
KS15	**Wonju Array Si**	**10.16**	**267**	*e*Pn	**Pn**	**13 59 56.7**	**+3.7**
HABR	**Khabarovsk**	**10.53**	**339**	*e*P	**Pn**	**14 00 01.0**	**+3.1**
HABR						14 01 55.1	
HABR				pmax	pmax		
	comp=Z,48nm,1.7s						
HABR				MLR	MLR		
	comp=Z,922nm,17.0s						
KLR	**Kul'dur**	**12.27**	**331**	*e*P	**Pn**	**14 00 21.6**	**-0.2**
KLR				pmax	pmax		
	comp=E,140nm,1.8s						
KLR				pmax	pmax		
	comp=Z,120nm,1.8s						
CN2	**Changchun**	**12.51**	**299**	*e*P	**Pn**	**14 00 31.0**	**+6.0**
CN2				*e*S	**Sn**	**14 02 49.0**	**+4.3**
CN2				pmax	pmax		
	comp=Z,20nm,1.3s						
CN2				pmax	pmax		
	comp=Z,600nm,7.0s						
CN2				LR	LR		
	comp=N,300nm,12.0s						
CN2				LR	LR		
	comp=E,200nm,12.0s						
CN2				LR	LR		
	comp=Z,200nm,13.0s						
DL2	**Dalian**	**14.85**	**277**	P	**Pn**	**14 01 05.0**	**+8.0**
DL2				pmax	pmax		
	comp=Z,30nm,1.1s						
PETK	**Petropavlovsk-**	**18.54**	**34**	P	**Pn**	**14 01 44.8**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=231,slow=6.9,SNR=4.1						
BJI	**Beijing**	**18.96**	**282**	P	**Pn**	**14 01 48.5**	**-0.6**
BJI				pmax	pmax		
	comp=Z,11nm,1.0s						
NJ2	**Nanjing**	**18.98**	**256**	*e*P	**Pn**	**14 01 50.0**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CLNS	**Chul'man**	**20.87**	**335**	*e*P	**P**	**14 02 10.0**	**+0.8**
CLNS				pmax	pmax		
	comp=Z,29nm,1.4s						
CLNS				pmax	pmax		
	comp=N,26nm,1.1s						
CLNS				pmax	pmax		
	comp=E,11nm,1.0s						
TATO	**Taipei**	**21.25**	**235**	*e*P	**P**	**14 02 12.1**	**-1.5**
	comp=E,15nm,0.6s,mb4.5						
YHNB	**Yeheng**	**21.54**	**235**	*e*P	**P**	**14 02 09.5**	**-7.1**
	comp=E,52nm,1.2s,mb4.8						
HHC	**Hu-ho-hao-te**	**22.42**	**285**	*e*P	**P**	**14 02 24.8**	**-1.1**
HHC				pP		14 02 34.0	
HHC				sP	sP	14 02 38.0	+10
HHC				PP		14 02 52.5	
HHC				PcP	PcP	14 06 20.3	-0.3
HHC				S	**S**	**14 06 23.0**	**-10**
HHC				sS	sS	14 06 39.0	+4.2
HHC				ScP	ScP	14 09 54.3	-4.4
HHC				PcS	PcS	14 09 58.0	-1.2
HHC				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.4						
HHC				pmax	pmax		
	comp=Z,560nm,7.1s						
HHC				LR	LR		
	comp=N,880nm,14.8s,MS4.5						
HHC				LR	LR		
	comp=E,960nm,13.0s,MS4.5						
HHC				LR	LR		
	comp=Z,710nm,12.3s,MS4.3						
YAK	**Yakutsk**	**24.26**	**347**	*e*P	**P**	**14 02 42.4**	**-1.8**
YAK				*e**PP		14 02 51.1	
YAK				*e*		14 03 11.6	
YAK				*e*		14 06 20.8	
YAK				*e*S	**S**	**14 06 59.9**	**-3.3**
YAK				*e*		14 13 48.1	
YAK				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.4						
YAK				pmax	pmax		
	comp=N,11nm,1.2s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.3						
YAK				smax			
	comp=N,161nm,3.5s						
YAK	**Yakutsk**	**24.26**	**347**	*e*P	**P**	**14 02 43.1**	**-1.1**
	comp=N,196nm,2.2s,mb5.2						
GUMO	**Guam**	**25.34**	**170**	*e*P	**P**	**14 02 53.5**	**-0.9**
GUMO				pmax	pmax		
	comp=Z,51nm,1.0s,mb5.0						
GUMO	**Guam**	**25.34**	**170**	*e*P	**P**	**14 02 53.5**	**-0.8**
	comp=Z,50nm,1.0s,mb5.0						
ULN	**Ulaanbaatar**	**25.93**	**302**	*e*P	**P**	**14 02 59.1**	**-0.4**
ULN				pmax	pmax		
	comp=Z,37nm,1.9s,mb4.6						
ULN	**Ulaanbaatar**	**25.93**	**302**	*e*P	**P**	**14 02 59.1**	**-0.3**
	comp=Z,37nm,1.9s,mb4.6						
SONM	**Songino Array**	**26.36**	**301**	P	**P**	**14 03 03.7**	**+0.3**
	comp=Z,1.8nm,0.7s,mb3.7,baz=84,slow=9.3,SNR=11						
SONM	**Songino Array**	**26.36**	**301**	P	**P**	**14 03 03.7**	**+0.3**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FX1	**Attu Island--F**	**26.42**	**47**	P	**P**	**14 03 05.0**	**+1.1**
	comp=Z,15nm,0.9s,mb4.5,baz=32,slow=16,SNR=5.9						
FX1	**Attu Island--F**	**26.42**	**47**	P	**P**	**14 03 05.0**	**+1.2**
FX1				pmax	pmax		
	comp=Z,15nm,0.9s						
FX1	**Attu Island--F**	**26.42**	**47**	P	**P**	**14 03 05.0**	**+1.1**
ZAK	**Zakamensk**	**28.76**	**306**	*e*P	**P**	**14 03 23.3**	**-1.6**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.6s,mb3.6						
LZH	**Lanzhou**	**29.25**	**276**	*e*P	**P**	**14 03 29.5**	**+0.2**
LZH				pP	pP	14 03 39.3	+8.6
LZH				sP	sP	14 03 44.0	+13
LZH				PP	PP	14 04 24.5	-11
LZH				pmax	pmax		
	comp=Z,21nm,1.3s,mb4.7						
LZH				pmax	pmax		
	comp=Z,76nm,5.2s						
LZH				LR	LR		
	comp=E,450nm,13.5s						
LZH				LR	LR		
	comp=Z,570nm,17.2s,MS4.2						
GYA	**Guiyang**	**30.98**	**257**	⇓*i*P	**P**	**14 03 44.0**	**-0.8**
GYA				pP	pP	14 03 56.3	+10
GYA				PP	PP	14 04 47.8	-6.8
GYA				PcP	PcP	14 06 41.8	+0.9
GYA				S	**S**	**14 08 45.3**	**-4.7**
GYA				sS	sS	14 09 03.8	+12
GYA				SS	SS	14 10 31.5	-31
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
GYA				pmax	pmax		
	comp=Z,120nm,9.4s						
GYA				LR	LR		
	comp=N,470nm,16.3s,MS4.4						
GYA				LR	LR		
	comp=E,450nm,14.9s,MS4.4						
GYA				LR	LR		
	comp=Z,810nm,13.7s,MS4.5						
CD2	**Chengdu**	**31.13**	**267**	*e*P	**P**	**14 03 46.3**	**+0.2**
CD2				pP	pP	14 03 55.8	+8.4
CD2				sP	sP	14 03 59.8	+12
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
CD2				pmax	pmax		
	comp=Z,30nm,5.2s						
GTA	**Gaotai**	**31.53**	**284**	*e*P	**P**	**14 03 50.3**	**+0.8**
GTA				pP	pP	14 03 59.5	+8.6
GTA				sP	sP	14 04 03.8	+12
GTA				S	**S**	**14 08 55.3**	**-3.0**
GTA				sS	sS	14 09 11.3	+11
GTA				SS	SS	14 10 45.8	-27
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.2						
GTA				pmax	pmax		
	comp=Z,360nm,6.3s						
GTA				LR	LR		
	comp=N,900nm,14.0s,MS4.7						
GTA				LR	LR		
	comp=E,890nm,14.0s,MS4.7						
GTA				LR	LR		
	comp=Z,790nm,16.4s,MS4.5						
BILL	**Bilibino**	**32.55**	**18**	⇓*i*P	**P**	**14 03 57.2**	**-0.9**
BILL				*e*		14 05 01.2	
BILL				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
TIXI	**Tiksi**	**33.51**	**353**	*e*P	**P**	**14 04 05.4**	**-1.1**
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.5s,mb4.5						
TIXI	**Tiksi**	**33.51**	**353**	*e*P	**P**	**14 04 05.5**	**-1.0**
	comp=Z,11nm,1.6s,mb4.5						
KMI	**Kunming**	**34.69**	**258**	P	**P**	**14 04 16.5**	**-0.7**
KMI				pP	pP	14 04 28.8	+10
KMI				sP	sP	14 04 32.3	+13
KMI				PP	PP	14 05 35.5	-0.2
KMI				S	**S**	**14 09 44.3**	**-3.3**
KMI				sS	sS	14 10 01.5	+12
KMI				SS	SS	14 11 56.8	-21
KMI				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
KMI				pmax	pmax		
	comp=Z,610nm,8.6s						
KMI				LR	LR		
	comp=N,590nm,19.3s,MS4.5						
KMI				LR	LR		
	comp=E,560nm,19.9s,MS4.5						
KMI				LR	LR		
	comp=Z,640nm,16.3s,MS4.5						
WMQ	**Urumqi**	**39.56**	**295**	*e*P	**P**	**14 04 59.0**	**+0.6**
ZALV	**Zalesovo Beam**	**40.33**	**311**	P	**P**	**14 05 04.2**	**-0.4**
	comp=Z,5.2nm,0.7s,mb4.4,baz=80,slow=7.8,SNR=27						
ZALV				PcP	PcP	14 07 07.3	-0.6
	comp=Z,1.5nm,0.4s,baz=80,slow=2.9,SNR=4.4						
ZALV	**Zalesovo Beam**	**40.33**	**311**	P	**P**	**14 05 04.2**	**-0.5**
ZALV						14 07 07.3	
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
ZALV	**Zalesovo Beam**	**40.33**	**311**	P	**P**	**14 05 04.2**	**-0.4**
ZALV				PcP	PcP	14 07 07.3	-0.7
NVS	**Novosibirsk**	**41.24**	**312**	⇑*i*P	**P**	**14 05 11.3**	**-0.8**
NVS				pmax	pmax		
	comp=Z,26nm,1.9s,mb4.5						
NVS				pmax	pmax		
	comp=N,7.0nm,1.8s						
NVS				pmax	pmax		
	comp=E,27nm,1.8s						
CMAR	**Chiang Mai Arr**	**41.40**	**253**	P	**P**	**14 05 14.3**	**+0.4**
	comp=E,0.6nm,0.4s,mb3.6,baz=48,slow=4.3,SNR=5.5						
CMAR				PcP	PcP	14 07 11.4	-0.6
	comp=E,0.6nm,0.5s,baz=11,slow=1.6,SNR=5.9						
CMAR	**Chiang Mai Arr**	**41.40**	**253**	P	**P**	**14 05 14.3**	**+0.4**
CMAR						14 07 11.5	
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MK31	**Makanchi Array**	**42.72**	**300**	*e*P	**P**	**14 05 24.4**	**0.0**
MKAR	**Makanchi Array**	**42.72**	**300**	P	**P**	**14 05 23.8**	**-0.6**
	comp=Z,2.7nm,0.7s,mb4.1,baz=79,slow=13,SNR=22						
MKAR	**Makanchi Array**	**42.72**	**300**	P	**P**	**14 05 23.8**	**-0.6**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CHGN	**Chignik**	**43.16**	**45**	*e*pP	pP	14 05 37.7	+8.5
KURK	**Kurchatov**	**44.42**	**307**	*c i*P	**P**	**14 05 37.3**	**-0.7**
	comp=Z,9.8nm,0.7s,mb4.6,baz=82,slow=8.3,SNR=32						
KURK	**Kurchatov**	**44.42**	**307**	*c i*P	**P**	**14 05 37.3**	**-0.7**
KURK				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.7						
KURK	**Kurchatov**	**44.42**	**307**	*e*P	**P**	**14 05 36.6**	**-1.4**
	comp=Z,9.6nm,0.7s,mb4.6						
SVW2	**Sparrevohn**	**44.53**	**38**	*e*P	**P**	**14 05 39.1**	**+0.4**
IMA2	**Indian Mountai**	**45.51**	**31**	*e*pP	pP	14 05 58.6	+11
RSO	**Redoubt South**	**45.93**	**39**	*e*P	**P**	**14 05 50.7**	**+0.9**
COLA	**College**	**47.95**	**33**	*e*P	**P**	**14 06 01.1**	**-4.5**
COLA				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
COLA	**College**	**47.95**	**33**	*e*P	**P**	**14 06 01.1**	**-4.4**
	comp=Z,2.2nm,0.5s,mb4.4						
TKM2	**Tokmak 2**	**48.31**	**297**	*e*P	**P**	**14 06 08.8**	**+0.1**
TKM2				pmax	pmax		
	comp=Z,74nm,1.8s,mb5.4						
TKM2	**Tokmak 2**	**48.31**	**297**	*e*P	**P**	**14 06 08.8**	**+0.1**
	comp=Z,74nm,1.8s,mb5.4						
BVAR	**Borovoye Array**	**48.99**	**311**	P	**P**	**14 06 13.8**	**0.0**
	comp=Z,1.7nm,0.7s,mb4.2,baz=70,slow=8.7,SNR=7.5						
BVAR				PcP	PcP	14 07 37.3	-0.4
	comp=Z,2.0nm,0.7s,baz=95,slow=3.4,SNR=5.2						
BVAR	**Borovoye Array**	**48.99**	**311**	P	**P**	**14 06 13.8**	**0.0**
BVAR						14 07 37.3	
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRVK	**Borovoye**	**49.05**	**311**	*e*P	**P**	**14 06 10.6**	**-3.6**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
BRVK	**Borovoye**	**49.05**	**311**	*e*P	**P**	**14 06 10.6**	**-3.5**
	comp=Z,5.7nm,1.0s,mb4.6						
AAK	**Ala-Archa**	**49.17**	**297**	P	**P**	**14 06 15.5**	**+0.2**
	comp=Z,1.3nm,0.3s,mb4.5,baz=130,slow=3.2,SNR=5.0						
AAK	**Ala-Archa**	**49.17**	**297**	P	**P**	**14 06 15.5**	**+0.2**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
KSH	**Kashi**	**49.19**	**292**	*e*P	**P**	**14 06 19.8**	**+4.3**
KSH				pP	pP	14 06 29.5	+13
KSH				sP	sP	14 06 33.5	+16
KSH				PcP	PcP	14 07 42.0	+3.3
KSH				PP	PP	14 08 14.3	+5.3
KSH				ScP	ScP	14 11 33.5	-1.0
KSH				PcS	PcS	14 11 37.3	+2.3
KSH				S	**S**	**14 13 22.5**	**+1.0**
KSH				sS	sS	14 13 39.8	+16
KSH				ScS	ScS	14 16 06.0	-2.3
KSH				SS	SS	14 16 51.0	-1.4
KSH				pmax	pmax		
	comp=Z,19nm,1.5s,mb4.9						
KSH				pmax	pmax		
	comp=Z,510nm,8.5s						
KSH				LR	LR		
	comp=N,160nm,8.1s						
KSH				LR	LR		
	comp=E,220nm,6.6s						
KSH				LR	LR		
	comp=Z,170nm,7.5s						
INK	**Inuvik**	**53.13**	**28**	*e*P	**P**	**14 06 44.5**	**-0.2**
INK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
INK	**Inuvik**	**53.13**	**28**	*e*P	**P**	**14 06 44.5**	**-0.2**
	comp=Z,4.2nm,0.9s,mb4.4						
HYT	**Haines Junctio**	**53.28**	**37**	*e*P	**P**	**14 06 47.3**	**+1.4**
SVE	**Sverdlovsk**	**53.48**	**318**	⇑*e*P	**P**	**14 06 47.9**	**+0.5**
SVE				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.2						
ARU	**Arti**	**54.69**	**318**	*c i*P	**P**	**14 06 55.9**	**-0.3**
ARU				*e*		14 08 55.3	
ARU				S	**S**	**14 14 35.6**	**-1.0**
ARU				SS	SS	14 18 12.9	-6.0
ARU				pmax	pmax		
	comp=Z,49nm,1.7s,mb5.3						
ARU	**Arti**	**54.69**	**318**	*e*P	**P**	**14 06 55.7**	**-0.5**
KBL	**Kabul**	**56.27**	**290**	*e*P	**P**	**14 07 07.3**	**-0.6**
KBL				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
KBL	**Kabul**	**56.27**	**290**	*e*P	**P**	**14 07 07.3**	**-0.7**
	comp=Z,5.7nm,0.7s,mb4.7						
AKTK	**Aktyubinsk**	**57.10**	**311**	P	**P**	**14 07 13.4**	**-0.2**
AKTO	**Aktyubinsk**	**57.10**	**311**	P	**P**	**14 07 13.4**	**-0.2**
	comp=Z,4.8nm,1.0s,mb4.5,baz=73,slow=11,SNR=11						
AKTO	**Aktyubinsk**	**57.10**	**311**	P	**P**	**14 07 13.4**	**-0.2**
AKTO				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
DLBC	**Dease Lake**	**57.64**	**39**	*e*P	**P**	**14 07 18.1**	**+0.8**
WRAB	**Tennant Creek**	**58.68**	**187**	*e*P	**P**	**14 07 23.0**	**-1.9**
WRA	**Warramunga Arr**	**58.69**	**187**	P	**P**	**14 07 23.7**	**-1.3**
	comp=Z,6.3nm,0.6s,mb4.8,baz=3.2,slow=7.3,SNR=94						
WRA	**Warramunga Arr**	**58.69**	**187**	P	**P**	**14 07 23.7**	**-1.3**
WRA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
WRA	**Warramunga Arr**	**58.69**	**187**	P	**P**	**14 07 23.7**	**-1.3**
APA	**Apatity**	**60.88**	**335**	⇑*e*P	**P**	**14 07 38.0**	**-1.6**
APA				MLR	MLR		
	comp=Z,800nm,16.0s,MS5.0						
ARCES	**ARCESS Array B**	**62.18**	**339**	P	**P**	**14 07 47.0**	**-1.4**
	comp=Z,1.7nm,0.6s,mb4.3,baz=34,slow=8.8,SNR=8.1						
ARCES	**ARCESS Array B**	**62.18**	**339**	P	**P**	**14 07 47.0**	**-1.3**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ARCES	**ARCESS Array B**	**62.18**	**339**	P	**P**	**14 07 47.0**	**-1.4**
ASAR	**Alice Springs**	**62.42**	**187**	P	**P**	**14 07 49.5**	**-0.9**
	comp=Z,4.4nm,0.7s,mb4.7,baz=8.5,slow=4.5,SNR=50						
ASAR	**Alice Springs**	**62.42**	**187**	P	**P**	**14 07 49.5**	**-0.9**
ASAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
YKA	**Yellowknife Ar**	**62.62**	**30**	P	**P**	**14 07 51.3**	**-0.1**
	comp=Z,1.0nm,0.8s,mb4.0,baz=299,slow=6.3,SNR=4.3						
YKA				PcP	PcP	14 08 29.4	-0.8
	comp=Z,1.3nm,0.8s,baz=302,slow=4.0,SNR=4.7						
YKA	**Yellowknife Ar**	**62.62**	**30**	P	**P**	**14 07 51.3**	**-0.1**
YKA				PcP	PcP	14 08 29.4	-0.8
JOF	**Joensuu**	**64.17**	**331**	*e*P	**P**	**14 08 00.2**	**-1.4**
JOF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
JOF	**Joensuu**	**64.17**	**331**	*e*p	**P**	**14 08 00.2**	**-1.4**
	comp=Z,3.7nm,0.6s,mb4.6						
JOF	**Joensuu**	**64.17**	**331**	*e*p	**P**	**14 08 00.2**	**-1.4**
	comp=Z,3.7nm,0.6s,mb4.6						
MOS	**Moscow**	**65.52**	**323**	*e*P	**P**	**14 08 08.6**	**-1.9**
NLWA	**Neilton Lookou**	**65.99**	**48**	⇑P	**P**	**14 08 14.6**	**+0.9**
	baz=66						
KAF	**Kangasniemi**	**66.51**	**332**	*e*P	**P**	**14 08 15.1**	**-1.7**
KAF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
KAF	**Kangasniemi**	**66.51**	**332**	*e*p	**P**	**14 08 15.1**	**-1.7**
	comp=Z,4.8nm,0.6s,mb4.7						
KAF	**Kangasniemi**	**66.51**	**332**	*e*p	**P**	**14 08 15.1**	**-1.7**
	comp=Z,4.8nm,0.6s,mb4.7						
JCW	**Jim Creek**	**66.67**	**46**	*e*P	**P**	**14 08 18.1**	**+0.1**
RPW	**Rockport**	**66.77**	**46**	*e*P	**P**	**14 08 18.4**	**-0.3**
FINES	**FINESS Array B**	**67.02**	**332**	P	**P**	**14 08 19.6**	**-0.5**
	comp=Z,9.8nm,0.7s,mb5.0,baz=46,slow=8.2,SNR=34						
FINES	**FINESS Array B**	**67.02**	**332**	P	**P**	**14 08 19.6**	**-0.5**
FINES				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VSR	**Storozhevoye**	**67.26**	**318**	*e*P	**P**	**14 08 20.8**	**-0.9**
VSR				pmax	pmax		
	comp=N,6.0nm,0.6s						
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
VSR				pmax	pmax		
	comp=E,3.0nm,0.3s						
VORD	**Divnogorie**	**67.33**	**318**	*e*P	**P**	**14 08 21.8**	**-0.4**
EDM	**Edmonton**	**68.36**	**38**	*e*P	**P**	**14 08 28.5**	**-0.2**
H04A	**Detroit Lake**	**68.44**	**50**	⇓P	**P**	**14 08 29.3**	**0.0**
	baz=68						
D08A	**Wollman Farm,**	**69.00**	**46**	⇑P	**P**	**14 08 32.6**	**-0.2**
	baz=69						
NEW	**Newport**	**69.31**	**44**	*e*P	**P**	**14 08 34.1**	**-0.5**
NEW				pmax	pmax		
	comp=Z,7.0nm,1.0s						
NEW	**Newport**	**69.31**	**44**	*e*P	**P**	**14 08 34.1**	**-0.5**
	comp=Z,7.2nm,1.0s,mb4.6						
KIV	**Kislovodsk**	**69.34**	**310**	*e*P	**P**	**14 08 35.5**	**+0.6**
E09A	**Wood Farm, Sta**	**69.75**	**46**	⇓P	**P**	**14 08 37.3**	**-0.1**
	baz=70						
C11A	**Tepee Creek (N**	**70.03**	**44**	⇓P	**P**	**14 08 39.1**	**0.0**
	baz=70,SNR=6.9						
STKA	**Stephens Creek**	**70.28**	**179**	P	**P**	**14 08 39.7**	**-0.9**
	comp=Z,2.2nm,0.8s,mb4.1,baz=270,slow=11,SNR=3.8						
STKA	**Stephens Creek**	**70.28**	**179**	*e*P	**P**	**14 08 40.0**	**-0.6**
	comp=

G11A **Walters Elk Ra** 71.46 46 ⇑P P 14 08 48.0 +0.2
baz=71,SNR=17
H10A **Noah's Angus R** 71.67 47 ⇑P P 14 08 48.6 -0.6
baz=72,SNR=5.8
B15A **Bradely Ranch,** 71.72 42 ⇑P P 14 08 49.3 -0.1
baz=72,SNR=14
F12A **Elk City** 71.82 46 ⇓P P 14 08 50.0 0.0
baz=72,SNR=12
A16A **West Butte Ran** 71.83 41 ⇑P P 14 08 49.7 -0.4
baz=72
SLMT **Seeley Lake** 71.88 44 eP P 14 08 50.3 -0.1
ANN **Anapa** 71.92 313 eP P 14 08 48.1 -2.5
ANN pmax pmax
comp=Z,30nm,1.5s,mb5.0
D14A **Greenough** 71.97 44 ⇓P P 14 08 50.7 -0.2
baz=72,SNR=9.7
H11A **Donnelly** 72.02 47 ⇑P P 14 08 50.9 -0.3
baz=72
C15A **Salmond Ranch,** 72.03 43 ⇓P P 14 08 51.5 +0.3
baz=72,SNR=16
B16A **M & M Farms, S** 72.11 42 ⇓P P 14 08 51.3 -0.4
baz=72
CHMT **Chamberlain Mo** 72.22 44 eP P 14 08 50.7 -1.7
comp=Z,1.2nm,0.8s,mb3.9
BEKR **Beckworth** 72.29 53 ⇓P P 14 08 53.2 +0.2
baz=72
F13A **Darby** 72.31 45 ⇓P P 14 08 52.6 -0.4
baz=72
NB2 **NORSAR Subarra** 72.38 337 P P 14 08 52.2 -0.9
comp=Z,8.2nm,0.8s,mb4.7,baz=39,slow=6.2
NOA **NORSAR Array B** 72.38 337 P P 14 08 52.4 -0.6
comp=Z,5.3nm,0.7s,mb4.6,baz=39,slow=6.0,SNR=30
NOA **NORSAR Array B** 72.38 337 P P 14 08 52.4 -0.7
NOA pmax pmax
comp=Z,5.0nm,0.7s
NOA **NORSAR Array B** 72.38 337 P P 14 08 52.4 -0.6
E14A **Clinton** 72.39 44 ⇓P P 14 08 53.1 -0.4
baz=72
C16A **Fuhringer Ranc** 72.47 42 ⇓P P 14 08 53.5 -0.4
baz=72,SNR=6.1
FFC **Flin Flon** 72.58 33 i P P 14 08 53.9 -0.5
AKASG **Malin Array Be** 72.58 322 P P 14 08 53.7 -0.8
comp=Z,11nm,0.6s,mb5.0,baz=46,slow=5.9,SNR=33
AKASG **Malin Array Be** 72.58 322 P P 14 08 53.7 -0.8
AKASG pmax pmax
comp=Z,11nm,0.6s
AKASG **Malin Array Be** 72.58 322 P P 14 08 53.7 -0.8
AKBB **Malin Array Si** 72.58 322 eP P 14 08 53.2 -1.3
KIEV **Kiev** 72.59 322 eP P 14 08 53.2 -1.4
KIEV pmax pmax
comp=Z,12nm,0.8s,mb4.9
KIEV **Kiev** 72.59 322 eP P 14 08 53.2 -1.3
comp=Z,12nm,0.8s,mb4.9
B17A **L&G Farms, Che** 72.66 42 ⇑P P 14 08 55.1 +0.1
baz=72
K10A **MacKenzie Ranc** 72.68 49 ⇓P P 14 08 55.6 +0.4
baz=72
A18A **Metzger Ranch,** 72.75 41 ⇑P P 14 08 54.9 -0.6
baz=72
H12A **Diamond D Ranc** 72.78 46 ⇓P P 14 08 55.5 -0.2
baz=73,SNR=5.7
G13A **Cobalt** 72.79 46 ⇓P P 14 08 55.2 -0.6
baz=73
E15A **Deer Lodge** 72.85 44 ⇓P P 14 08 56.0 -0.1
baz=73,SNR=12
MFID **Camas Ranch** 72.91 48 ⇑P P 14 08 56.5 -0.1
baz=73
WCN **Washoe City** 73.00 53 ⇑P P 14 08 57.3 +0.1
baz=73
D16A **Dana Ranch, Ca** 73.06 43 ⇑P P 14 08 57.5 +0.1
baz=73,SNR=6.2
I12A **Atlanta** 73.08 47 ⇑P P 14 08 57.6 0.0
baz=73,SNR=10
C17A **Wharram Farm,** 73.09 42 ⇑P P 14 08 56.9 -0.6
baz=73
H13A **Challis** 73.11 46 ⇓P P 14 08 57.7 0.0
baz=73,SNR=12
HRY **Holter Researc** 73.11 43 eP P 14 08 57.6 -0.1
B18A **Beardsley Farm** 73.12 41 ⇓P P 14 08 57.4 -0.3
baz=73
K11A **Parker Ranch,** 73.18 48 ⇓P P 14 08 57.8 -0.3
baz=73
F15A **Butte** 73.29 44 ⇑P P 14 08 58.9 +0.1
baz=73,SNR=16
E16A **East Helena** 73.30 43 ⇑P P 14 08 58.9 +0.1
baz=73,SNR=6.8
LRM **Limekiln Ridge** 73.33 44 eP P 14 08 59.3 +0.3
L10A **Juniper Basin** 73.34 49 ⇑P P 14 08 59.6 +0.4
baz=73
EGMT **Eagleton** 73.37 41 ⇑P P 14 08 59.0 -0.1
baz=73,SNR=7.5
EGMT **Eagleton** 73.37 41 eP P 14 08 58.3 -0.9
comp=Z,14nm,0.9s,mb4.9
J12A **Stokes Ranch,** 73.43 48 ⇑P P 14 08 59.7 0.0
baz=73
D17A **Six Diamond Ra** 73.44 42 ⇓P P 14 08 59.6 0.0
baz=73
DLMT **Dillon** 73.53 45 eP P 14 09 00.8 +0.5
I13A **Wildhorse Cree** 73.58 47 ⇓P P 14 09 00.7 +0.1
baz=73
HLID **Hailey** 73.63 47 ⇑P P 14 09 01.0 +0.1
baz=73,SNR=6.0
M10A **I.L. Ranch, Tu** 73.64 50 ⇑P P 14 09 00.9 0.0
baz=73
L11A **Cat Creek Ranc** 73.71 49 ⇑P P 14 09 01.7 +0.4
baz=74,SNR=13
G15A **Dillon** 73.72 45 ⇑P P 14 09 01.5 +0.2
baz=74,SNR=8.8
E17A **Martinsdale** 73.78 43 ⇑P P 14 09 01.9 +0.2
baz=74,SNR=10
F16A **Kennard Place,** 73.80 44 ⇓P P 14 09 01.6 -0.1
baz=74
J13A **Cove Ranch, Pi** 73.87 47 ⇑P P 14 09 02.2 0.0
baz=74,SNR=6.3
D18A **Linhart Farms,** 73.87 42 ⇑P P 14 09 02.2 0.0
baz=74
BOZ **Bozeman (W)** 73.89 44 ⇑P P 14 09 02.6 +0.4
baz=74,SNR=17
BOZ **Bozeman (W)** 73.89 44 eP P 14 09 02.2 -0.1
BOZ pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
BOZ **Bozeman (W)** 73.89 44 eP P 14 09 02.1 -0.1
comp=Z,5.8nm,0.7s,mb4.6
K12A **Draper Farm, C** 73.92 48 ⇓P P 14 09 02.7 +0.1
baz=74
I14A **Mackay** 73.95 46 ⇑P P 14 09 02.8 +0.1
baz=74,SNR=9.6
G16A **Moss Hill, Enn** 74.05 44 ⇓P P 14 09 02.9 -0.4
baz=74,SNR=6.7
M11A **Holland Ranch,** 74.14 49 ⇑P P 14 09 04.4 +0.5
baz=74
L12A **House Creek Ra** 74.16 49 ⇓P P 14 09 04.2 +0.3
baz=74,SNR=6.7
E18A **Harlowton** 74.22 43 ⇓P P 14 09 04.2 0.0
baz=74,SNR=8.2
F17A **Fitzpatrick Pl** 74.25 43 ⇑P P 14 09 04.2 -0.1
baz=74,SNR=6.3
J14A **Carey** 74.29 47 ⇓P P 14 09 04.8 +0.1
baz=74,SNR=7.7
MIB **Mutribah** 74.41 296 eP P 14 09 04.1 -1.5
MIB AMb AMB 14 09 05.7
comp=Z,22nm,0.9s,mb5.1
O10A **Cortez Mining,** 74.41 51 ⇑P P 14 09 06.0 +0.5
baz=74
NVAR **Mina Array Bea** 74.43 53 P P 14 09 06.1 +0.5
comp=Z,4.6nm,0.9s,mb4.4,baz=279,slow=6.0,SNR=25
NVAR **Mina Array Bea** 74.43 53 P P 14 09 06.1 +0.5
G17A **Pierce Place,** 74.58 44 ⇑P P 14 09 06.7 +0.4
baz=74
M12A **Wells** 74.67 49 ⇓P P 14 09 07.6 +0.6
baz=74,SNR=7.6
H16A **Russell Place,** 74.69 45 ⇓P P 14 09 07.2 +0.2
baz=74,SNR=6.4
F18A **Big Timber** 74.75 43 ⇑P P 14 09 07.5 +0.2
baz=74,SNR=20
RDF **Al-Radifah** 74.77 295 eP P 14 09 06.1 -1.7
RDF AMb AMB 14 09 08.4
comp=Z,34nm,1.0s,mb5.2
NAY **Al-Naaiem** 74.80 295 eP P 14 09 06.5 -1.4
NAY AMb AMB 14 09 09.6
comp=Z,12nm,1.3s,mb4.7
L13A **Double Diamond** 74.82 48 ⇑P P 14 09 08.3 +0.5
baz=75
GCMT **Greycliff** 74.85 43 eP P 14 09 08.2 +0.3
comp=Z,6.2nm,0.9s,mb4.5
N12A **Clover Valley,** 74.94 50 ⇓P P 14 09 09.2 +0.6
baz=75

O11A **Cowboy Ranch,** 75.02 50 ⇑P P 14 09 09.5 +0.5
baz=75
I16A **Newdale** 75.09 45 ⇓P P 14 09 10.2 +0.9
baz=75
M13A **Montello** 75.14 49 ⇓P P 14 09 10.1 +0.4
baz=75
M13A **Montello** 75.14 49 eP P 14 09 09.7 0.0
comp=Z,6.3nm,1.1s,mb4.5
H17A **Grant Village** 75.26 45 ⇑P P 14 09 11.5 +1.2
baz=75
L14A **Malta** 75.26 48 ⇑P P 14 09 11.2 +0.9
baz=75
Q10A **Clear Creek Ra** 75.37 52 ⇓P P 14 09 11.1 0.0
baz=75
IMW **Indian Meadow** 75.38 45 eP P 14 09 12.2 +1.2
J16A **Bone** 75.40 46 ⇑P P 14 09 11.6 +0.5
baz=75
N13A **Wendover, West** 75.43 49 ⇑P P 14 09 11.6 +0.3
baz=75
O12A **Currie** 75.48 50 ⇑P P 14 09 11.8 +0.1
baz=75,SNR=12
RLMT **Red Lodge** 75.50 43 ⇑P P 14 09 12.0 +0.3
baz=75
RLMT **Red Lodge** 75.50 43 eP P 14 09 11.5 -0.1
comp=Z,6.8nm,0.8s,mb4.6
M14A **Sheep Mountain** 75.53 48 ⇓P P 14 09 12.4 +0.5
baz=75
HVU **Hansel Valley** 75.69 48 eP P 14 09 12.9 +0.1
R10A **Warm Springs** 75.76 52 ⇑P P 14 09 13.6 +0.3
baz=76
L15A **Malad City** 75.77 47 ⇓P P 14 09 13.5 +0.2
baz=76
S10A **Tonopah Range,** 75.80 53 ⇓P P 14 09 13.6 +0.1
baz=76,SNR=8.2
GRAC **Grapevine Rang** 75.89 54 ⇑P P 14 09 14.4 +0.3
baz=76
N14A **Grayback Hills** 76.04 49 ⇑P P 14 09 15.1 +0.3
baz=76
R11A **Troy Canyon, C** 76.16 52 ⇓P P 14 09 15.6 0.0
baz=76,SNR=10
Q12A **Willow Creek R** 76.19 51 ⇑P P 14 09 15.8 0.0
baz=76
MPMC **Manual Prospec** 76.39 55 ⇑P P 14 09 16.8 0.0
baz=76,SNR=5.6
KWP **Kalwaria Pacla** 76.39 324 eP P 14 09 16.9 +0.3
KWP **Kalwaria Pacla** 76.39 324 eP P 14 09 16.4 -0.3
KWP pmax pmax
comp=Z,26nm,1.0s,mb5.1
KWP **Kalwaria Pacla** 76.39 324 eP P 14 09 16.4 -0.2
comp=Z,26nm,1.0s,mb5.1
P13A **Bates Ranch, G** 76.43 50 ⇑P P 14 09 17.7 +0.6
baz=76
S11A **Rachel** 76.50 53 ⇓P P 14 09 18.2 +0.7
baz=76,SNR=7.5
FURC **Furnace Creek,** 76.53 54 ⇓P P 14 09 18.0 +0.3
baz=76
L17A **Cokeville** 76.57 47 ⇓P P 14 09 18.2 +0.4
baz=76
BUR08 **Bucovina Ar. S** 76.59 321 eP P 14 09 17.7 -0.1
M16A **Huntsville** 76.65 48 ⇓P P 14 09 18.5 +0.2
baz=76
DUG **Dugway** 76.67 49 ⇑P P 14 09 19.2 +0.7
baz=76
K18A **Toltan Ranch,** 76.69 46 ⇓P P 14 09 19.1 +0.6
baz=76
R12A **Pony Springs,** 76.78 51 ⇓P P 14 09 19.5 +0.4
baz=77
EDW2 **Edwards Air Fo** 76.79 56 ⇑P P 14 09 19.4 +0.2
baz=77
BW06 **Boulder Array** 76.88 45 ⇑P P 14 09 19.4 -0.2
baz=77,SNR=6.4
PDAR **Pinedale Array** 76.88 45 P P 14 09 19.6 0.0
comp=Z,3.6nm,0.6s,mb4.5,baz=293,slow=2.3,SNR=35
U10A **Ash Meadows, A** 76.90 54 ⇓P P 14 09 20.1 +0.3
baz=77
P14A **Drum Mountains** 76.91 50 ⇓P P 14 09 20.3 +0.5
baz=77,SNR=7.7
M17A **Scullys Gap (B** 77.10 47 ⇓P P 14 09 20.8 0.0
baz=77
Q14A **Sevier Lake (B** 77.17 50 ⇓P P 14 09 21.4 +0.1
baz=77,SNR=12
R13A **O'Grain Ranch,** 77.26 51 ⇓P P 14 09 22.2 +0.4
baz=77,SNR=5.6
BRTR **Keskin Array B** 77.28 311 P P 14 09 21.8 -0.1
comp=Z,1.2nm,0.4s,mb4.2,baz=86,slow=5.3,SNR=12
BRTR **Keskin Array B** 77.28 311 P P 14 09 21.8 0.0
BRTR pmax pmax
comp=Z,1.0nm,0.4s
OJC **Ojcow** 77.29 326 eP P 14 09 20.0 -1.7
GSC **Goldstone** 77.29 55 ⇓P P 14 09 21.7 -0.3
baz=77
P15A **Leamington** 77.39 49 ⇓P P 14 09 22.6 +0.1
baz=77
L19A **Farson** 77.43 46 ⇓P P 14 09 22.7 +0.1
baz=77
CRVS **Cervenica-Dubn** 77.49 324 eP P 14 09 23.1 +0.3
CRVS **Cervenica-Dubn** 77.49 324 eP P 14 09 23.1 +0.3
SCI **San Clemente I** 77.60 58 ⇑P P 14 09 23.2 -0.5
baz=77
K20A **Yellowstone Ra** 77.62 45 ⇓P P 14 09 23.6 -0.2
baz=77
NIE **Niedzica** 77.64 325 eP P 14 09 24.5 +0.8
S13A **Holt Ranch, En** 77.71 52 ⇓P P 14 09 24.9 +0.6
baz=78
TUQ **Turquoise Moun** 77.77 54 ⇑P P 14 09 24.7 +0.1
baz=78
ARUT **Antelope Range** 77.83 51 eP P 14 09 24.9 -0.1
ARUT pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
ARUT **Antelope Range** 77.83 51 eP P 14 09 24.9 0.0
comp=Z,5.9nm,1.1s,mb4.4
O17A **Robinson Place** 77.89 48 ⇑P P 14 09 25.4 +0.1
baz=78
N18A **Larsen Ranch,** 77.99 47 ⇑P P 14 09 25.8 0.0
baz=78
T13A **Saint George** 78.03 52 ⇓P P 14 09 26.0 -0.1
baz=78
MSU **Marysvale** 78.13 50 eP P 14 09 27.3 +0.7
MSU pmax pmax
comp=Z,15nm,1.6s,mb4.7
MSU **Marysvale** 78.13 50 eP P 14 09 27.3 +0.6
comp=Z,15nm,1.6s,mb4.7
KECS **Kecovo** 78.24 324 eP P 14 09 25.1 -1.9
KECS pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
KECS **Kecovo** 78.24 324 eP P 14 09 25.1 -1.9
comp=Z,2.4nm,0.6s,mb4.3
KECS **Kecovo** 78.24 324 eP P 14 09 25.1 -1.9
V12A **Nelson** 78.27 54 ⇓P P 14 09 27.6 +0.2
baz=78
KSP **Ksiaz** 78.33 328 eP P 14 09 27.5 0.0
GMRC **Granite Mounta** 78.35 55 ⇑P P 14 09 28.2 +0.3
baz=78
P17A **Butcher Ranch,** 78.36 49 ⇑P P 14 09 28.0 +0.1
baz=78
U13A **Pakoon Wash** 78.38 53 ⇓P P 14 09 28.8 +0.8
baz=78,SNR=8.0
Q16A **Castle Valley** 78.47 49 ⇓P P 14 09 28.7 +0.2
baz=78
LDFC **Landfair** 78.51 54 eP P 14 09 28.6 -0.2
comp=Z,3.9nm,0.8s,mb4.4
P18A **Preston Nutter** 78.54 48 ⇑P P 14 09 29.7 +0.8
baz=78,SNR=5.1
PFO **Pinyon Flat Ob** 78.58 56 ⇓P P 14 09 29.1 -0.1
baz=78
MORC **Moravsky Berou** 78.60 326 eP P 14 09 27.8 -1.2
MORC pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
MORC **Moravsky Berou** 78.60 326 eP P 14 09 27.8 -1.2
comp=Z,6.7nm,0.9s,mb4.6
L21A **Rawlins** 78.62 45 ⇓P P 14 09 29.1 -0.2
baz=78
BELC **Belle Mtn. Jos** 78.62 56 ⇓P P 14 09 29.4 -0.1
baz=78
DPC **Dobruska-Polom** 78.69 327 eP P 14 09 29.7 +0.2
DPC **Dobruska-Polom** 78.69 327 eP P 14 09 29.7 +0.2
R16A **Teasdale** 78.69 50 ⇓P P 14 09 30.6 +0.9
baz=78,SNR=8.2
UPC **Upice** 78.70 328 eP P 14 09 30.0 +0.4
UPC **Upice** 78.70 328 eP P 14 09 30.0 +0.4
SRU **San Rafael** 78.72 49 ⇓P P 14 09 29.7 -0.1
baz=78,SNR=11
V13A **Grand Canyon W** 78.73 53 ⇑P P 14 09 30.0 0.0
baz=78
M21A **Separation Pea** 78.87 45 ⇓P P 14 09 30.5 -0.2
baz=79
U14A **Mt Trumbull** 78.87 52 ⇓P P 14 09 30.7 0.0
baz=79

N20A **Spence Gulch,** 78.88 46 ⇑P P 14 09 30.6 -0.2
baz=79
PSZ **Piszkesteto** 78.92 324 eP P 14 09 30.0 -0.8
PSZ pmax pmax
comp=Z,12nm,1.1s,mb4.7
PSZ **Piszkesteto** 78.92 324 eP P 14 09 30.0 -0.8
comp=Z,12nm,1.1s,mb4.8
PSZ **Piszkesteto** 78.92 324 eP P 14 09 31.5 +0.7
T15A **Red Dirt Ranch** 78.97 51 ⇑P P 14 09 31.4 +0.1
baz=79
VYHS **Vyhne** 78.98 325 eP P 14 09 31.1 0.0
VYHS pmax pmax
comp=Z,21nm,2.3s,mb4.7
VYHS **Vyhne** 78.98 325 eP P 14 09 31.1 0.0
comp=Z,21nm,2.3s,mb4.7
VYHS **Vyhne** 78.98 325 eP P 14 09 31.0 -0.1
VYHS e 14 28 22.5
S16A **Weppner Ranch,** 78.99 50 ⇑P P 14 09 31.9 +0.5
baz=79,SNR=7.2
R17A **Hanksville Air** 79.06 49 ⇑P P 14 09 31.8 0.0
baz=79,SNR=6.3
IRM **Iron Mountain** 79.07 55 ⇓P P 14 09 31.8 -0.1
baz=79
L22A **Ellis Ranch, M** 79.09 44 ⇓P P 14 09 32.2 +0.3
baz=79
BC3 **Big Chuckawall** 79.19 56 ⇓P P 14 09 32.5 -0.1
baz=79
P19A **Cripple Cowboy** 79.27 47 ⇑P P 14 09 33.1 +0.2
baz=79,SNR=6.4
BRG **Berggiesshubel** 79.28 329 eP P 14 09 32.4 -0.3
comp=Z,3.8nm,0.8s,mb4.3
CLL **Collm** 79.31 330 i P P 14 09 32.6 -0.3
CLL e 14 09 37.0
CLL pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
CLL **Collm** 79.31 330 i P P 14 09 32.6 -0.3
comp=Z,9.0nm,0.9s,mb4.7
CLL e(sP) sP 14 09 37.0 +2.1
N21A **Black Mountain** 79.35 46 ⇑P P 14 09 33.1 -0.2
baz=79
U15A **North Rim** 79.41 52 ⇓P P 14 09 34.2 +0.5
baz=79,SNR=6.2
V14A **Boquillas Ranc** 79.42 53 ⇑P P 14 09 34.4 +0.6
baz=79,SNR=7.7
S17A **Black Ridge (B** 79.52 50 ⇑P P 14 09 34.4 +0.1
baz=79,SNR=5.8
Q19A **Hogan Spring (** 79.56 48 ⇓P P 14 09 34.2 -0.3
baz=79
R18A **Canyonlands Na** 79.57 49 ⇑P P 14 09 34.2 -0.3
baz=79,SNR=5.9
W14A **Seligman** 79.70 53 ⇓P P 14 09 35.6 +0.3
baz=80
PRU **Pruhonice** 79.71 328 eP P 14 09 35.9 +0.8
PRU e 14 09 43.6
PRU **Pruhonice** 79.71 328 eP P 14 09 35.9 +0.8
PRU epP pP 14 09 43.6 +7.0
TREC **Trest** 79.84 327 eP P 14 09 36.1 +0.3
TREC **Trest** 79.84 327 eP P 14 09 36.1 +0.3
V15A **Kaibab Nationa** 79.88 52 ⇑P P 14 09 37.1 +0.9
baz=80,SNR=6.8
N22A **Wattenberg Ran** 79.92 45 ⇑P P 14 09 36.2 -0.2
baz=80
S18A **Hurst Farm, Bl** 79.97 49 ⇓P P 14 09 36.8 +0.1
baz=80,SNR=11
R19A **Curley Farm, L** 80.00 49 ⇑P P 14 09 37.1 +0.2
baz=80
P21A **Newcastle** 80.22 47 ⇓P P 14 09 38.2 +0.2
baz=80
X14A **Yava** 80.30 54 ⇓P P 14 09 38.9 +0.3
baz=80
T18A **Mexican Hat** 80.41 50 ⇑P P 14 09 38.7 -0.4
baz=80,SNR=8.7
S19A **Harvey Farm, M** 80.44 49 ⇓P P 14 09 39.3 +0.1
baz=80,SNR=7.4
MMAI **Mount Meron Ar** 80.50 305 P P 14 09 39.8 +0.1
comp=Z,2.8nm,0.7s,mb4.3,baz=12,slow=9.4,SNR=4.7
PV01 **Paradox Valley** 80.51 48 eP P 14 09 30.0 -10
comp=Z,153nm,0.5s
WUAZ **Wupatki** 80.56 52 ⇑P P 14 09 40.6 +0.6
baz=80
Y14A **Wickenburg** 80.58 54 ⇓P P 14 09 40.3 +0.3
baz=80
R20A **Redvale** 80.59 48 ⇓P P 14 09 40.2 +0.2
baz=80
Q21A **Lamborn Mesa,** 80.62 47 ⇑P P 14 09 40.6 +0.4
baz=80
Z13A **Yuma Proving G** 80.64 55 ⇓P P 14 09 40.6 +0.2
baz=80
KHC **Kasperske Hory** 80.77 328 eP P 14 09 38.6 -2.2
KHC pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
KHC **Kasperske Hory** 80.77 328 eP P 14 09 38.6 -2.2
comp=Z,3.7nm,0.8s,mb4.4
KHC **Kasperske Hory** 80.77 328 eP P 14 09 40.8 0.0
V17A **Tonalea, Kykot** 80.85 51 ⇓P P 14 09 42.0 +0.5
baz=81
U18A **Rough Rock, Ch** 80.89 50 ⇑P P 14 09 42.4 +0.7
baz=81
R21A **Cimarron** 80.95 48 ⇓P P 14 09 42.9 +0.9
baz=81
Q22A **Crested Butte,** 80.98 47 ⇓P P 14 09 42.7 +0.5
baz=81
Y15A **Casa Rosa Ranc** 80.99 54 ⇓P P 14 09 42.4 +0.1
baz=81,SNR=5.7
T19A **Beclabito** 81.12 50 ⇑P P 14 09 43.4 +0.5
baz=81
X16A **Lo Mia Camp, P** 81.24 53 ⇓P P 14 09 44.0 +0.4
baz=81
GRF **Grafenberg Arr** 81.29 330 eP P 14 09 43.5 -0.1
comp=Z,7.0nm,0.8s,mb4.6
GRF **Grafenberg Arr** 81.29 330 eP P 14 09 43.5 -0.1
GRF pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
V18A **Ganado** 81.32 51 ⇓P P 14 09 44.3 +0.3
baz=81
U19A **Dine' College,** 81.37 50 ⇓P P 14 09 44.7 +0.5
baz=81
R22A **Saguache, Gunn** 81.50 47 ⇑P P 14 09 45.8 +0.9
baz=81
Y16A **Circle Bar Ran** 81.58 53 ⇑P P 14 09 46.0 +0.6
baz=81
X17A **Forest Lakes** 81.69 52 ⇓P P 14 09 46.6 +0.6
baz=82
T21A **Navajo Lake** 81.89 49 ⇓P P 14 09 47.2 +0.2
baz=82
GROS **Grobnik** 82.00 325 eP P 14 09 46.8 -0.6
Y17A **Roosevelt** 82.09 53 ⇑P P 14 09 48.3 +0.2
baz=82
V20A **Brimhall** 82.14 50 ⇑P P 14 09 48.7 +0.3
baz=82
U21A **Nageezi** 82.20 49 ⇑P P 14 09 49.2 +0.6
baz=82
T22A **Edith** 82.25 48 ⇓P P 14 09 49.1 +0.3
baz=82
Y18A **Canyon Day Jun** 82.54 52 ⇓P P 14 09 50.9 +0.5
baz=82
X19A **St. Johns** 82.57 52 ⇑P P 14 09 51.2 +0.6
baz=82,SNR=7.3
V21A **Milan** 82.63 50 ⇓P P 14 09 51.5 +0.6
baz=82
U22A **Llaves** 82.71 49 ⇑P P 14 09 51.8 +0.5
baz=82
BOJS **Bojanci** 82.84 325 i P P 14 09 49.1 -2.7
117A **Oracle** 82.90 54 ⇓P P 14 09 52.7 +0.4
baz=83
X20A **Quemado** 82.97 51 ⇓P P 14 09 53.6 +0.9
baz=83
JAVS **Javornik** 83.08 326 eP P 14 09 51.6 -1.4
U23A **El Rito** 83.13 48 ⇑P P 14 09 54.0 +0.5
baz=83
118A **Homack Ranch,** 83.34 53 ⇑P P 14 09 55.1 +0.5
baz=83
GIVF **Givet** 83.36 333 eP P 14 09 53.3 -1.1
X21A **Alamocita Cree** 83.47 51 ⇓P P 14 09 55.8 +0.6
baz=83
Y20A **Horse Springs,** 83.47 51 ⇓P P 14 09 56.1 +0.8
baz=83,SNR=8.9
T25A **Trinidad** 83.60 47 ⇓P P 14 09 56.1 +0.3
baz=83
218A **Dragoon** 83.74 54 ⇑P P 14 09 57.3 +0.6
baz=84,SNR=6.8
Y21A **Point of Rocks** 83.83 51 ⇓P P 14 09 57.4 +0.3
baz=84
SCHQ **Schefferville** 83.84 16 P P 14 09 56.2 -0.5
comp=Z,2.8nm,0.9s,mb4.4,baz=49,slow=10,SNR=3.7
SCHQ **Schefferville** 83.84 16 P P 14 09 56.2 -0.6

CDF	Champ du Feu	83.86	331	*e*P		P	14 09 56.3	-0.7
Z20A	Nine Sixteen R	83.88	52	⇑P		P	14 09 57.7	+0.3
	baz=84							
U25A	Circle Dot Ran	84.11	47	⇓P		P	14 09 58.9	+0.4
	baz=84							
318A	Bisbee	84.13	54	⇓P		P	14 09 59.0	+0.3
	baz=84							
219A	White Tail Can	84.22	53	⇓P		P	14 09 59.5	+0.3
	baz=84							
Y22A	Socorro	84.31	51	⇑P		P	14 10 00.1	+0.5
	baz=84							
Z21A	St. Cloud Mine	84.31	51	⇑P		P	14 10 00.1	+0.6
	baz=84							
W24A	Lazy 6 Ranch,	84.36	49	⇓P		P	14 10 00.2	+0.4
	baz=84							
V25A	Rancho No Teng	84.39	48	⇑P		P	14 10 00.3	+0.4
	baz=84							
U26A	Atchley Ranch,	84.50	47	⇑P		P	14 10 01.2	+0.7
	baz=84							
HINF	Hinteralfeld	84.51	331	*e*P		P	14 09 59.3	-1.0
HAU	Haudompre	84.54	331	*e*P		P	14 09 59.5	-1.0
	comp=Z,9.2nm,0.7s,mb4.7							
HAU	Haudompre	84.54	331	*e*P		P	14 09 59.5	-1.0
HAU					pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.8							
HAU	Haudompre	84.54	331	*e*P		P	14 09 59.5	-1.0
	comp=Z,4.6nm,0.7s,mb4.7							
MEZF	Maizieres J'vi	84.61	332	*e*P		P	14 10 00.3	-0.5
319A	Douglas	84.62	54	⇑P		P	14 10 01.3	+0.1
	baz=84							
121A	Cookes Peak, D	84.77	52	⇑P		P	14 10 02.4	+0.4
	baz=85							
Z22A	Elephant Butte	84.78	51	⇓P		P	14 10 02.4	+0.4
	baz=85							
Y23A	Lovelace Mesa,	84.86	50	⇑P		P	14 10 02.5	+0.2
	baz=85							
W25A	X Bar L Ranch,	84.91	48	⇑P		P	14 10 02.6	0.0
	baz=85							
Y25A	Mesa, Roswell	85.68	49	⇓P		P	14 10 06.2	-0.2
	baz=86							
X26A	CR and CF Fran	85.76	48	⇓P		P	14 10 06.7	-0.1
	baz=86							
CABF	La Chapelle	85.80	331	*e*P		P	14 10 06.0	-0.8
	comp=Z,6.9nm,0.6s,mb4.8							
CABF	La Chapelle	85.80	331	*e*P		P	14 10 06.0	-0.8
CABF					pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.7							
CABF	La Chapelle	85.80	331	*e*P		P	14 10 06.0	-0.8
	comp=Z,3.5nm,0.6s,mb4.8							
W27A	Bowe Ranch, En	85.83	48	⇓P		P	14 10 07.5	+0.4
	baz=86							
124A	Stringfield Ra	86.08	51	⇑P		P	14 10 08.2	-0.2
	baz=86							
LOR	Lormes	86.08	332	*e*P		P	14 10 07.3	-0.9
	comp=Z,13nm,0.8s,mb4.9							
LOR	Lormes	86.08	332	*e*P		P	14 10 07.3	-0.9
LOR					pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.9							
LOR	Lormes	86.08	332	*e*P		P	14 10 07.3	-0.9
	comp=Z,6.6nm,0.8s,mb4.9							
Z25A	Roswell	86.12	50	⇑P		P	14 10 08.9	+0.3
	baz=86							
Y26A	Elida	86.19	49	⇑P		P	14 10 09.0	0.0
	baz=86							
LDF	La Druitiere	86.33	335	*e*P		P	14 10 08.2	-1.2
SSF	Saint Saulge	86.39	332	*e*P		P	14 10 08.8	-0.9
	comp=Z,15nm,0.9s,mb4.9							
SSF	Saint Saulge	86.39	332	*e*P		P	14 10 08.8	-0.9
SSF					pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.9							
SSF	Saint Saulge	86.39	332	*e*P		P	14 10 08.8	-0.9
	comp=Z,7.3nm,0.9s,mb4.9							
LPL	La Plagne	86.45	330	*e*P		P	14 10 09.5	-0.5
	comp=Z,10nm,0.8s,mb4.8							
LPL	La Plagne	86.45	330	*e*P		P	14 10 09.5	-0.5
LPL					pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.8							
LPL	La Plagne	86.45	330	*e*P		P	14 10 09.5	-0.5
	comp=Z,5.1nm,0.8s,mb4.8							
LPG	La Plagne	86.46	329	*e*P		P	14 10 09.7	-0.4
	comp=Z,10nm,0.9s,mb4.8							
LPG	La Plagne	86.46	329	*e*P		P	14 10 09.7	-0.4
LPG					pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.7							
LPG	La Plagne	86.46	329	*e*P		P	14 10 09.7	-0.4
	comp=Z,5.1nm,0.9s,mb4.8							
Z26A	Caprock	86.56	49	⇑P		P	14 10 10.7	-0.1
	baz=86							
125A	Gardner Draw,	86.59	50	⇓P		P	14 10 10.8	-0.1
	baz=86							
Y27A	Causey	86.61	48	⇑P		P	14 10 11.0	0.0
	baz=86							
SMF	Signal de Mont	86.62	332	*e*P		P	14 10 09.9	-0.9
AVF	Avril sur Loir	86.67	332	*e*P		P	14 10 10.4	-0.7
	comp=Z,31nm,0.9s,mb5.2							
AVF	Avril sur Loir	86.67	332	*e*P		P	14 10 10.4	-0.7
AVF					pmax	pmax		
	comp=Z,16nm,0.9s,mb5.2							
AVF	Avril sur Loir	86.67	332	*e*P		P	14 10 10.4	-0.7
	comp=Z,16nm,0.9s,mb5.2							
GRR	Gorron	86.75	335	*e*P		P	14 10 10.7	-0.7
	comp=Z,15nm,0.8s,mb5.0							
GRR	Gorron	86.75	335	*e*P		P	14 10 10.7	-0.7
GRR					pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.9							
GRR	Gorron	86.75	335	*e*P		P	14 10 10.7	-0.7
	comp=Z,7.3nm,0.8s,mb5.0							
Z27A	Tatum	86.98	49	⇑P		P	14 10 13.1	+0.2
	baz=87							
GDL2	Guadalupe Moun	87.09	50	*e*P		P	14 10 12.9	-0.5
	comp=Z,1.3nm,0.5s,mb4.4							
226A	Malaga, Loving	87.34	50	⇑P		P	14 10 14.5	-0.1
	baz=87							
TCF	Toulx Ste Croi	87.52	333	*e*P		P	14 10 14.6	-0.6
	comp=Z,15nm,1.0s,mb4.9							
TCF	Toulx Ste Croi	87.52	333	*e*P		P	14 10 14.6	-0.6
TCF					pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.9							
TCF	Toulx Ste Croi	87.52	333	*e*P		P	14 10 14.6	-0.6
	comp=Z,7.6nm,1.0s,mb4.9							
ROSF	Rostrenen	87.56	337	*e*P		P	14 10 14.9	-0.5
MFF	Saint Martin d	88.07	334	*e*P		P	14 10 17.3	-0.6
	comp=Z,12nm,0.8s,mb4.9							
MFF	Saint Martin d	88.07	334	*e*P		P	14 10 17.3	-0.6
MFF					pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.9							
MFF	Saint Martin d	88.07	334	*e*P		P	14 10 17.3	-0.6
	comp=Z,6.2nm,0.8s,mb4.9							
CAF	Calviac	88.73	332	*e*P		P	14 10 20.9	-0.1
	comp=Z,4.6nm,0.6s,mb4.7							
CAF	Calviac	88.73	332	*e*P		P	14 10 20.9	-0.1
CAF					pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.6							
CAF	Calviac	88.73	332	*e*P		P	14 10 20.9	-0.1
	comp=Z,2.3nm,0.6s,mb4.7							
TXAR	Lajitas Array	89.53	52	P		P	14 10 25.0	-0.1
	comp=Z,1.3nm,0.7s,mb4.3,baz=297,slow=3.7,SNR=21							
TXAR	Lajitas Array	89.53	52	P		P	14 10 25.0	-0.1
TXAR					pmax	pmax		
	comp=Z,1.0nm,0.7s							
ETSF	Etsaut	91.44	333	*e*P		P	14 10 33.6	-0.1
QSPA	South Pole Qui	128.50	180	PKP		PKPdf	14 16 31.9	-1.1
	comp=Z,1.5nm,0.9s,baz=306,slow=10,SNR=4.5							
LPAZ	La Paz	146.28	56	PKPbc		PKPbc	14 17 08.4	-0.1
	comp=Z,6.7nm,0.9s,baz=333,slow=3.5,SNR=17							

*IDC **27** 14:02:11.3±2.3, 10°.66N×91°.36E, h0km, mb3.5/4, mb1 3.6/5, mb1mx3.4/24, mbtmp3.4/5, ML4.0/1, Error ellipse: s-maj=72.1km s-min=24.3km az=69.0*
*NEIC **27** 14:02:13.1±1.2, 10°.73N×91°.53E, h10km, mb4.1/1, Error ellipse: s-maj=27.8km s-min=16.3km az=80.0*
*ISCJB **27** 14:02:14.9±1.3, 10°.8N±0°.1×91°.7E±0°.2, h33km, mb3.6/5, Error ellipse: s-maj=30.1km s-min=16.3km az=165.3*
ISC 27 14:02:17.0±1.3, 10°.8N±0°.1×91°.6E±0°.2, h35km, n8, σ1§06/8, mb3.6/5, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	10.44	42	*e*Pn	Pn	14 04 42.0	-2.3
	0.8nm,0.3s						
CMAR	Chiang Mai Arr	10.44	42	Pn	Pn	14 04 46.0	+1.7
	0.3nm,0.3s,baz=234,slow=16,SNR=3.2						
MK31	Makanchi Array	36.76	349	*e*P	P	14 09 20.7	-0.4
MKAR	Makanchi Array	36.76	349	P	P	14 09 21.4	+0.3
	0.5nm,0.6s,mb3.5,baz=163,slow=8.5,SNR=4.7						
SONM	Songino Array	38.99	16	P	P	14 09 40.0	+0.1
	0.2nm,0.4s,mb3.2,baz=197,slow=1.5,SNR=3.5						
WRA	Warramunga Arr	51.98	126	P	P	14 11 23.2	+0.1
	0.2nm,0.3s,mb3.5,baz=301,slow=9.9,SNR=12						
WRAB	Tennant Creek	51.98	126	*e*P	P	14 11 22.2	-1.0
	0.7nm,0.3s,mb4.1						
ASAR	Alice Springs	53.69	130	P	P	14 11 36.5	+0.8
	0.6nm,0.8s,mb3.5,baz=303,slow=7.4,SNR=8.3						

*NEIC **27** 14:07:43.3±1.0, 23°.67S×179°.70W, h535km±16km, mb4.8/11, Error ellipse: s-maj=19.7km s-min=15.0km az=93.0*
*ISCJB **27** 14:07:43.3±1.0, 23°.6S±0°.1×179°.7W±0°.1, h547km±16km, mb4.4/15, Error ellipse: s-maj=19.7km s-min=15.2km az=14.3*
*IDC **27** 14:07:46.2±3.0, 23°.63S×179°.83W, h554km±34km, mb3.6/7, mb1 3.8/7, mb1mx3.4/16, mbtmp3.6/7, Error ellipse: s-maj=20.9km s-min=18.5km az=36.0*
ISC 27 14:07:43.8±1.0, 23°.6S±0°.1×179.7W±0°.1, h538km±15km, n32, σ1§07/29, mb4.4/15, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.24	340	*e*P	P	14 09 25.1	+0.9
	43nm,0.6s						
AFI	Afiamalu	12.25	39	P	P	14 10 24.3	-0.8
	3.0nm,0.3s,baz=58,slow=22,SNR=5.9						
AFI	Afiamalu	12.25	39	*e*P	P	14 10 24.1	-0.9
	49nm,0.9s						
URZ	Urewera	14.83	190	P	P	14 10 49.8	-1.6
	5.5nm,0.3s,baz=275,slow=4.3,SNR=27						
URZ	Urewera	14.83	190	*e*P	P	14 10 49.0	-2.4
	16nm,0.3s						
RPZ	Rata Peaks	21.42	199	P	P	14 11 53.7	+0.7
	18nm,0.5s,mb5.0,baz=272,slow=1.0,SNR=14						
RPZ	Rata Peaks	21.42	199	*e*P	P	14 11 53.2	+0.1
	22nm,0.6s,mb5.0						
ARMA	Armidale	26.36	249	*e*P	P	14 12 39.3	+2.1
CTA	Charters Tower	31.74	270	*e*P	P	14 13 25.1	+1.1
	23nm,0.3s,mb5.2						
CTAO	Charters Tower	31.74	270	*e*P	P	14 13 24.7	+0.7
	32nm,0.4s,mb5.2						
PMG	Port Moresby	34.66	289	*e*P	P	14 13 46.8	-1.9
	21nm,0.7s,mb4.8						
STKA	Stephens Creek	35.06	248	*e*P	P	14 13 52.7	+0.8
	4.8nm,0.7s,mb4.1						
STKA	Stephens Creek	35.06	248	P	P	14 13 53.2	+1.4
	4.7nm,0.4s,mb4.4,baz=81,slow=9.9,SNR=27						
STKA	Stephens Creek	35.06	248	*e*P	P	14 13 52.9	+1.0
	1.0nm,0.5s,mb3.6						
ASAR	Alice Springs	42.34	260	P	P	14 14 51.4	+0.5
	8.0nm,0.4s,mb4.6,baz=96,slow=7.4,SNR=390						
ASAR				S	S	14 20 31.9	-1.3
	0.4nm,0.7s,baz=95,slow=15,SNR=4.6						
WRAB	Tennant Creek	42.68	266	*e*P	P	14 14 53.3	-0.3
	12nm,0.8s,mb4.5						
WRA	Warramunga Arr	42.69	266	P	P	14 14 53.5	-0.1
	11nm,0.4s,mb4.8,baz=92,slow=8.5,SNR=508						
KAKA	Kakadu	46.55	275	*e*P	P	14 15 22.8	-0.6
	7.9nm,0.3s,mb4.7						
KAKA	Kakadu	46.55	275	*e*P	P	14 15 22.3	-1.1
	17nm,0.4s,mb4.9						
FORT	Forrest	46.65	249	*e*P	P	14 15 23.7	-0.3
	34nm,0.6s,mb5.0						
FITZ	Fitzroy Crossi	51.11	265	*e*P	P	14 15 57.7	+0.5
	16nm,0.6s,mb4.5						
FITZ	Fitzroy Crossi	51.11	265	*e*P	P	14 15 57.5	+0.4
	10nm,0.8s,mb4.2						
NWAO	Narrogin (SRO)	55.58	245	*e*P	P	14 16 27.3	-1.4
	38nm,1.3s,mb4.5						
MBWA	Marble Bar	55.68	260	*e*P	P	14 16 29.0	-0.5
	15nm,0.7s,mb4.3						
QSPA	South Pole Qui	66.44	180	P	P	14 17 40.9	+1.7
	2.1nm,0.6s,mb3.9,baz=330,slow=1.1,SNR=19						
QSPA	South Pole Qui	66.44	180	P	P	14 17 40.9	+1.7
KSRS	Korea Array	78.22	320	P	P	14 18 48.5	+0.6
	1.1nm,0.8s,mb3.2,baz=139,slow=6.7,SNR=6.7						
PETK	Petropavlovsk-	78.91	346	P	P	14 18 51.2	+0.1
	1.1nm,0.6s,mb3.4,baz=122,slow=5.2,SNR=3.3						
AKASG	Malin Array Be	144.89	328	PKP	PKPdf	14 26 19.5	+0.1
	1.5nm,0.5s,baz=42,slow=3.9,SNR=4.6						
BRTR	Keskin Array B	147.63	308	PKPbc	PKPbc	14 26 27.3	-0.7
	0.9nm,0.7s,baz=128,slow=4.5,SNR=2.8						
BRTR				PKPab	PKPab	14 26 33.1	+1.1
	2.1nm,0.8s,baz=122,slow=3.8,SNR=6.0						
BRTR	Keskin Array B	147.63	308	PKPbc	PKPbc	14 26 27.2	-0.7
BRTR				PKPab	PKPab	14 26 33.1	+1.1
MMAI	Mount Meron Ar	147.83	295	PKPbc	PKPbc	14 26 29.9	+1.3
	3.9nm,0.5s,baz=70,slow=8.2,SNR=8.9						

*ISCJB **27** 14:14:06.6±2.3, 10°.81N±0°.04×91°.80E±0°.04, h4km±14km, mb4.5/51, MS4.3/2, Error ellipse: s-maj=8.7km s-min=5.3km az=137.9*
*IDC **27** 14:14:07.8±0.5, 10°.87N×91°.77E, h0km, mb4.3/26, mb1 4.3/28, mb1mx4.3/31, mbtmp4.3/28, ML3.9/2, Error ellipse: s-maj=17.6km s-min=10.6km az=60.0*
*BJI **27** 14:14:08.1, 10°.78N×91°.91E, h15km, mB5.2/9, mb4.7/21, Ms4.7/6, Ms7 4.6/6*
*NEIC **27** 14:14:09.3±0.2, 10°.85N×91°.78E, h10km, mb4.7/21, Error ellipse: s-maj=5.8km s-min=4.2km az=50.0*
*MOS **27** 14:14:10.9±0.8, 10°.87N×91°.92E, h33km, mb4.9/19, Error ellipse: s-maj=11.3km s-min=6.6km az=107.5*
ISC 27 14:14:09.9±2.1, 10°.83N±0°.04×91°.77E±0°.04, h12km±13km, n140, σ0§89/136, mb4.5/51, MS4.3/2, 6C-2D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	Banda Aceh	6.35	146	P	Sn	14 16 55.2	-0.5
CM31	Chiang Mai Arr	10.28	42	*e*P	Pn	14 16 35.9	-1.3
	12nm,0.7s						
CMAR	Chiang Mai Arr	10.28	42	Pn	Pn	14 16 36.9	-0.3
	0.4nm,0.3s,baz=234,slow=15,SNR=9.0						
KULM	Kulim	10.37	121	*e*Pn	Pn	14 16 40.5	+1.9
	58nm,1.4s						
CHTO	Chiang Mai	10.54	40	*e*P	Pn	14 16 41.0	+0.2
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CHTO	Chiang Mai	10.54	40	*e*P	Pn	14 16 41.0	+0.2
	comp=Z,9.7nm,0.8s						
VIS	Vishakhapatnam	10.67	311	*e*PKP	Pn	14 16 41.0	-1.5
VIS				*ex*	x	14 18 29.3	
PSI	Prapat	10.68	138	Pn	Pn	14 16 43.7	+0.9
	comp=Z,0.6nm,0.3s,baz=328,slow=19,SNR=2.9						
PSI	Prapat	10.68	138	Pn	Pn	14 16 43.7	+0.9
PALK	Pallekele	11.49	253	*e*P	Pn	14 16 54.2	+0.4
PALK				pmax	pmax		
	comp=Z,28nm,0.5s						
PALK	Pallekele	11.49	253	*e*Pn	Pn	14 16 54.2	+0.3
	comp=Z,28nm,0.5s						
MDRS	Chennai	11.49	282	*e*PKP	Pn	14 16 52.0	-1.9
SHL	Shillong	14.66	0	*e*PKP	Pn	14 17 37.0	-0.1
ODAN	Odare	16.47	346	*e*P	Pn	14 18 00.2	-0.7
	comp=Z,44nm,0.7s						
RAMN	Ramite	16.76	344	*e*P	Pn	14 18 04.0	-0.5
	comp=Z,49nm,0.6s						
TAPN	Taplejung	16.87	347	*e*P	Pn	14 18 06.5	+0.6
	comp=Z,88nm,0.8s						
AKL	Akola	17.25	306	*e*PKP	Pn	14 18 11.2	+0.5
AKL				AMb	AMB	14 18 18.3	
	comp=Z,38nm,1.9s						
JIRN	Jiri	17.54	343	*e*P	Pn	14 18 14.7	+0.3
	comp=Z,52nm,0.6s						
KMI	Kunming	17.62	35	P	Pn	14 18 15.5	+0.2
KMI				pmax	pmax		
	comp=Z,9.0nm,1.4s						
PKI	Pulchoki	17.70	341	*e*P	Pn	14 18 16.3	+0.1
	comp=Z,28nm,0.5s						
PKIN	Phulchoki	17.70	341	*e*P	Pn	14 18 16.5	+0.2
	comp=Z,33nm,0.5s						
DMN	Daman	17.83	340	*e*P	Pn	14 18 18.3	+0.4
	comp=Z,123nm,0.9s						
GUN	Gumba	17.87	343	*e*P	Pn	14 18 19.1	+0.7
	comp=Z,101nm,1.1s						
KKN	Kakani	17.94	341	*e*P	Pn	14 18 20.3	+1.1
	comp=Z,26nm,0.6s						
LSA	Lhasa	18.78	358	P	Pn	14 18 29.5	0.0
LSA				S	Sn	14 22 00.3	+0.6
KSM	Kuching	20.63	116	*e*P	P	14 18 49.5	+0.1
	comp=Z,117nm,1.5s						
KSM	Kuching	20.63	116	P	P	14 18 53.1	+3.8
STKI	Sintang	22.32	117	P	P	14 19 14.7	+7.1
NDI	New Delhi	22.39	325	*e*PKP	P	14 19 06.0	-2.1
NDI				*ex*	x	14 23 12.0	
DDI	Dehra Dun	23.21	329	*e*PKP	P	14 19 17.0	+0.1
DDI				*ex*	x	14 23 17.0	
KKM	Kota Kinabalu	24.64	99	*e*P	P	14 19 29.7	-0.8
	comp=Z,32nm,1.3s,mb4.7						
BATP	Bataraza	25.73	92	*e*P	P	14 19 42.3	+1.9
MYLDM	Lahad Datu	27.05	100	P	P	14 19 56.4	+4.0
LZH	Lanzhou	27.42	22	*e*P	P	14 19 52.5	-3.0
LZH				pP	pP	14 19 57.3	-1.9
LZH				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.5						
LZH				pmax	pmax		
	comp=Z,53nm,6.3s						
LZH				LR	LR		
	comp=N,240nm,12.5s						
LZH				LR	LR		
	comp=Z,290nm,15.8s,MS4.0						
GTA	Gaotai	29.35	13	*e*P	P	14 20 13.3	+0.7
GTA				pP	pP	14 20 17.3	+0.9
GTA				sP	sP	14 20 19.5	+1.6
GTA				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.3						
GTA				pmax	pmax		
	comp=Z,310nm,5.4s						
GTA				LR	LR		
	comp=N,1μm,20.4s,MS4.6						
GTA				LR	LR		
	comp=E,880nm,21.6s,MS4.6						
GTA				LR	LR		
	comp=Z,2μm,21.0s,MS4.7						
KSH	Kashi	31.84	336	P	P	14 20 33.8	-0.8
KSH				pmax	pmax		
	comp=Z,88nm,4.6s						
UCH	Uchtor	34.73	337	*e*P	P	14 21 00.8	+1.0
UCH				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
UCH	Uchtor	34.73	337	*e*P	P	14 21 00.8	+1.0
	comp=Z,6.1nm,1.0s,mb4.5						
AML	Almayashu	34.97	336	*e*P	P	14 21 03.6	+1.8
AML				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
AML	Almayashu	34.97	336	*e*P	P	14 21 03.6	+1.7
	comp=Z,13nm,0.8s,mb4.9						
AAK	Ala-Archa	35.09	338	P	P	14 21 03.2	+0.3
	comp=Z,1.5nm,0.3s,mb4.4,baz=93,slow=19,SNR=9.8						
AAK	Ala-Archa	35.09	338	P	P	14 21 03.2	+0.3
FRU	Bishkek	35.21	338	*e*P	P	14 21 06.0	+2.0
EKS2	Erkin-Say	35.38	337	*e*P	P	14 21 04.2	-1.2
EKS2				pmax	pmax		
	comp=Z,19nm,1.2s,mb4.9						
EKS2	Erkin-Say	35.38	337	*e*P	P	14 21 04.2	-1.2
	comp=Z,19nm,1.2s,mb4.9						
MK31	Makanchi Array	36.73	349	*e*P	P	14 21 16.5	-0.4
MKAR	Makanchi Array	36.73	349	P	P	14 21 16.9	0.0
	comp=Z,5.3nm,0.6s,mb4.6,baz=134,slow=8.4,SNR=55						
MKAR	Makanchi Array	36.73	349	P	P	14 21 16.9	0.0
SONM	Songino Array	38.88	16	P	P	14 21 35.1	0.0
	comp=Z,3.6nm,0.9s,mb4.1,baz=199,slow=7.9,SNR=18						
ULN	Ulaanbaatar	39.09	16	*e*P	P	14 21 36.7	-0.1
ULN				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
ULN	Ulaanbaatar	39.09	16	*e*P	P	14 21 36.7	-0.1
	comp=Z,3.6nm,0.8s,mb4.2						
KURK	Kurchatov	41.21	347	P	P	14 21 53.8	-0.6
	comp=Z,3.7nm,0.8s,mb4.1,baz=172,slow=7.5,SNR=30						
KURK				PcP	PcP	14 23 53.2	0.0
	comp=Z,1.2nm,0.7s,baz=160,slow=2.2,SNR=4.1						
TLY	Talaya	41.87	11	*e*P	P	14 22 01.7	+2.0
TLY				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.5						
KSRS	Korea Array	41.90	45	P	P	14 21 59.4	-0.9
	comp=Z,2.0nm,0.8s,mb3.8,baz=238,slow=9.3,SNR=10						
MBWA	Marble Bar	42.02	139	*e*P	P	14 22 00.1	-1.2
ZAA0	Zalesovo Array	43.36	354	*e*P	P	14 22 11.4	-0.4
ZALV	Zalesovo Beam	43.36	354	P	P	14 22 12.2	+0.4
	comp=Z,3.2nm,0.4s,mb4.4,baz=174,slow=9.3,SNR=19						
FITZ	Fitzroy Crossi	44.09	130	*e*P	P	14 22 17.8	-0.4
	comp=Z,32nm,0.7s,mb5.2						
FITZ	Fitzroy Crossi	44.09	130	P	P	14 22 17.1	-1.1
	comp=Z,6.2nm,0.6s,mb4.5,baz=326,slow=5.0,SNR=24						
NVS	Novosibirsk	44.42	353	*i* P	P	14 22 20.1	-0.2
NVS				pmax	pmax		
	comp=N,16nm,1.9s						
NVS				pmax	pmax		
	comp=E,11nm,1.9s						
NVS				pmax	pmax		
	comp=Z,18nm,1.9s,mb4.5						
RDF	Al-Radifah	45.01	300	*e*P	P	14 22 28.3	+2.9
NAY	Al-Naaiem	45.35	301	*e*P	P	14 22 28.0	-0.2
NAY				AMb	AMB	14 22 32.2	
	comp=Z,9.9nm,1.4s,mb4.4						
MIB	Mutribah	45.41	301	*e*P	P	14 22 29.0	+0.4
BVAR	Borovoye Array	45.46	342	P	P	14 22 28.7	0.0
	comp=Z,1.3nm,0.6s,mb3.9,baz=147,slow=8.9,SNR=8.6						
BRVK	Borovoye	45.52	342	*e*P	P	14 22 29.0	-0.1
BRVK				*e*		14 22 38.5	
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
BRVK	Borovoye	45.52	342	*e*P	P	14 22 29.0	-0.1
	comp=Z,3.3nm,0.6s,mb4.4						
BRVK				*e*		14 22 38.5	
MJAR	Matsushiro Arr	49.01	51	P	P	14 22 57.1	+0.4
	comp=Z,1.6nm,0.7s,mb4.1,baz=216,slow=7.3,SNR=3.1						
NWAO	Narrogin (SRO)	49.84	152	P	P	14 23 03.4	+0.5
	comp=Z,13nm,1.0s,mb4.9,baz=352,slow=6.8,SNR=7.6						
NWAO	Narrogin (SRO)	49.84	152	*e*P	P	14 23 02.7	-0.2
NWAO				p

VOIR		66.05	315	⇑P	P	14 24 57.4	+0.8
VOIR		66.05	315	⇑*i*P	P	14 24 57.4	+0.8
BUR08	Bucovina Ar. S	66.32	317	*e*P	P	14 24 58.5	+0.2
PETK	Petropavlovsk-	67.01	37	P	P	14 25 01.8	-0.8
	comp=Z,2.4nm,0.9s,mb4.2,baz=133,slow=16,SNR=3.4						
JOF	Joensuu	67.19	334	*e*P	P	14 25 03.4	-0.1
JOF				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
JOF	Joensuu	67.19	334	*e*p	P	14 25 03.4	-0.1
	comp=Z,10nm,0.8s,mb4.9						
JOF	Joensuu	67.19	334	*e*p	P	14 25 03.4	-0.1
	comp=Z,10nm,0.8s,mb4.9						
FINES	FINESS Array B	69.02	332	P	P	14 25 14.9	-0.2
	comp=Z,3.2nm,0.8s,mb4.3,baz=96,slow=9.8,SNR=10						
ARCES	ARCESS Array B	71.71	340	P	P	14 25 30.2	-1.2
	comp=Z,1.7nm,0.6s,mb4.2,baz=96,slow=5.4,SNR=8.5						
ARCES	ARCESS Array B	71.71	340	P	P	14 25 30.2	-1.2
BILL	Bilibino	74.23	22	*e*P	P	14 25 46.3	-0.1
BILL				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
BILL	Bilibino	74.23	22	*e*P	P	14 25 46.3	0.0
	comp=Z,1.9nm,0.6s,mb4.2						
BOSA	Boshof	75.21	237	P	P	14 25 54.8	+2.0
	comp=Z,5.8nm,0.9s,mb4.5,baz=74,slow=4.5,SNR=7.4						
GRF	Grafenberg Arr	75.72	319	*e*P	P	14 25 56.1	+0.8
GRF				pmax	pmax		
	comp=Z,31nm,2.2s,mb4.8						
GRF	Grafenberg Arr	75.72	319	*e*P	P	14 25 56.1	+0.8
	comp=Z,31nm,2.2s,mb4.8						
NB2	NORSAR Subarra	76.02	330	P	P	14 25 56.2	-0.6
	comp=Z,2.2nm,0.8s,mb4.1,baz=93,slow=6.2						
NOA	NORSAR Array B	76.02	330	P	P	14 25 55.8	-1.0
	comp=Z,1.5nm,0.7s,mb4.0,baz=94,slow=5.7,SNR=9.7						
FX1	Attu Island--F	76.26	38	P	P	14 25 57.7	-0.6
	comp=Z,6.0nm,0.8s,mb4.6,baz=254,slow=7.4,SNR=2.7						
KEST	Kesra	77.65	304	P	P	14 26 05.9	-0.6
	comp=Z,1.7nm,0.9s,mb4.0,baz=218,slow=5.9,SNR=4.9						
LPG	La Plagne	78.89	314	*e*P	P	14 26 13.5	+0.3
	comp=Z,8.5nm,0.7s,mb4.5						
LPG	La Plagne	78.89	314	*e*P	P	14 26 13.5	+0.3
LPG				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
LPG	La Plagne	78.89	314	*e*P	P	14 26 13.5	+0.3
	comp=Z,4.3nm,0.7s,mb4.5						
LPL	La Plagne	78.90	314	*e*P	P	14 26 13.5	+0.3
	comp=Z,10.0nm,0.7s,mb4.5						
LPL	La Plagne	78.90	314	*e*P	P	14 26 13.5	+0.3
LPL				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
LPL	La Plagne	78.90	314	*e*P	P	14 26 13.5	+0.3
	comp=Z,5.0nm,0.7s,mb4.5						
SMF	Signal de Mont	80.81	316	*e*P	P	14 26 23.2	-0.3
	comp=Z,13nm,0.8s,mb4.6						
SMF	Signal de Mont	80.81	316	*e*P	P	14 26 23.2	-0.3
SMF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
SMF	Signal de Mont	80.81	316	*e*P	P	14 26 23.2	-0.3
	comp=Z,6.6nm,0.8s,mb4.6						
MAW	Mawson	80.96	191	P	P	14 26 23.4	-0.4
	comp=Z,1.4nm,0.7s,mb4.0,baz=35,slow=16,SNR=6.8						
AVF	Avril sur Loir	81.12	316	*e*P	P	14 26 25.0	-0.2
MTLF	Montolieu	82.34	313	*e*P	P	14 26 32.0	+0.3
	comp=Z,8.9nm,0.8s,mb4.4						
MTLF	Montolieu	82.34	313	*e*P	P	14 26 32.0	+0.3
MTLF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
MTLF	Montolieu	82.34	313	*e*P	P	14 26 32.0	+0.3
	comp=Z,4.4nm,0.8s,mb4.4						
TAM	Tamanrasset	82.46	292	*e*P	P	14 26 32.9	+0.1
TAM				pmax	pmax		
	comp=Z,14nm,1.5s,mb4.7						
TAM	Tamanrasset	82.46	292	*e*P	P	14 26 32.9	+0.1
	comp=Z,14nm,1.5s,mb4.7						
ESDC	Sonseca Array	87.54	310	P	P	14 26 58.1	+0.1
	comp=Z,2.5nm,0.3s,mb4.9,baz=23,slow=27,SNR=11						
PDAR	Pinedale Array	123.20	19	PKP	PKPdf	14 33 05.7	-1.2
	comp=Z,0.6nm,0.5s,baz=108,slow=4.8,SNR=5.4						
NVAR	Mina Array Bea	123.52	28	PKP	PKPdf	14 33 07.9	+0.3
	comp=Z,0.8nm,0.7s,baz=298,slow=1.9,SNR=5.9						
TXAR	Lajitas Array	137.38	20	PKP	PKPdf	14 33 34.7	+0.5
	comp=Z,0.2nm,0.5s,baz=149,slow=1.7,SNR=4.2						
TXAR	Lajitas Array	137.38	20	PKP	PKPdf	14 33 34.7	+0.5
PLCA	Paso Flores	146.37	205	PKPbc	PKPbc	14 33 51.8	+0.9
	comp=Z,2.1nm,0.7s,baz=194,slow=19,SNR=2.9						

*CSEM **27** 14:15:05.5±0.1,38.°16N×21.°56E,h10km,ML2.8, Error ellipse: s-maj=2.8km s-min=2.6km az=78.0*
*THE **27** 14:15:05.9,38.°19N×21.°55E,h11km±1km,ML3.6/8, Error ellipse: s-maj=1.4km s-min=0.5km az=2.0*
*ISCJB **27** 14:15:05.1±0.4,38.°16N±0.°02×21.°54E±0.°02,h7km±4km, Error ellipse: s-maj=4.1km s-min=3.2km az=6.7*
*NEIC **27** 14:15:06.0,38.°16N×21.°57E,h9km,ML2.8(ATH),After ATH.*
*ATH **27** 14:15:06.0,38.°16N×21.°57E,h9km±3km,MD3.5/7,ML2.8*
ISC 27 14:15:05.6±0.4,38.°17N±0.°02×21.°54E±0.°02,h12km±3km, n94,σ0.°92/121,1C-13D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.13	206	⇓*i*Pg	Pg	14 15 10.0	+1.1
RLS	Riolos of Patr	0.13	206	⇓*i*PG	Pg	14 15 10.0	+1.1
RLS	Riolos of Patr	0.13	206	⇓*i*Pg	Pg	14 15 10.0	+1.1
UPR	University Cam	0.22	61	P	Pg	14 15 10.9	+0.5
UPR				S	Sg	14 15 14.2	+0.6
UPR	University Cam	0.22	61	⇑*i*PG	Pg	14 15 10.9	+0.5
UPR	University Cam	0.22	61	P	Pg	14 15 10.9	+0.5
UPR				S	Sg	14 15 14.2	+0.6
LAKA	Lakka	0.35	79	P	Pg	14 15 12.6	-0.1
LAKA				S	Sg	14 15 18.2	+0.7
LAKA	Lakka	0.35	79	P	Pg	14 15 12.6	-0.1
LAKA				S	Sg	14 15 18.2	+0.7
EFP	Efpalio	0.38	49	P	Pg	14 15 13.1	-0.2
EFP				S	Sg	14 15 18.6	+0.2
EFP	Efpalio	0.38	49	*e*PG	Pg	14 15 13.2	-0.1
EFP				*e*SB	Sg	14 15 18.8	+0.4
EFP	Efpalio	0.38	49	P	Pg	14 15 13.1	-0.2
EFP				S	Sg	14 15 18.6	+0.2
TRIZ	Trizonia	0.46	65	P	Pg	14 15 14.4	-0.3
TRIZ				S	Sg	14 15 21.6	+0.7
TRIZ	Trizonia	0.46	65	P	Pg	14 15 14.4	-0.3
TRIZ				S	Sg	14 15 21.6	+0.7
KALE	Kalithea	0.52	65	P	Pg	14 15 15.4	-0.4
KALE				S	Sg	14 15 23.1	+0.4
KALE	Kalithea	0.52	65	P	Pg	14 15 15.4	-0.4
KALE				S	Sg	14 15 23.1	+0.4
KFL	Anninata	0.60	264	P	Pg	14 15 17.5	+0.3
GUR	Goura	0.68	110	P	Pg	14 15 18.1	-0.7
GUR				S	Sg	14 15 28.7	+1.0
GUR	Goura	0.68	110	*e*PB	Pg	14 15 18.0	-0.8
GUR	Goura	0.68	110	P	Pg	14 15 18.1	-0.7
GUR				S	Sg	14 15 28.7	+1.0
VLS	Valsamata	0.75	271	⇓*i*Pb	Pg	14 15 19.6	-0.5
VLS				*e*Sb	Sg	14 15 32.4	+2.5
VLS	Valsamata	0.75	271	P	Pg	14 15 19.7	-0.4
VLS				S	Sg	14 15 32.2	+2.3
VLS	Valsamata	0.75	271	⇓*i*PB	Pg	14 15 19.6	-0.5
VLS				*e*SB	Sg	14 15 32.4	+2.5
VLS	Valsamata	0.75	271	P	Pg	14 15 19.7	-0.4
VLS				S	Sg	14 15 32.2	+2.3
EVR	Evrytania	0.77	16	*e*Pb	Pg	14 15 20.1	-0.5
EVR	Evrytania	0.77	16	*e*PB	Pg	14 15 20.1	-0.5
EVR	Evrytania	0.77	16	*e*Pb	Pg	14 15 20.1	-0.5
DSF	Desfina	0.81	73	P	Pg	14 15 20.4	-0.9
DSF				S	Sg	14 15 31.8	-0.2
DSF	Desfina	0.81	73	P	Pg	14 15 20.4	-0.9
DSF				S	Sg	14 15 31.8	-0.2
LKD2	Lefkada island	0.93	312	P	Pg	14 15 22.6	-0.9
LKD2				S	Sg	14 15 36.0	+0.5
LKD2	Lefkada island	0.93	312	P	Pg	14 15 22.6	-0.9
LKD2				S	Sg	14 15 36.0	+0.5
ITM	Ithomi	1.04	163	*e*Pg	Pg	14 15 24.8	-0.8
ITM	Ithomi	1.04	163	P	Pg	14 15 25.1	-0.5
ITM	Ithomi	1.04	163	*e*PG	Pg	14 15 24.8	-0.8
ITM	Ithomi	1.04	163	*e*Pg	Pg	14 15 24.8	-0.8
ITM	Ithomi	1.04	163	P	Pg	14 15 25.1	-0.5
VLX	Vlachokerasia	1.04	140	P	Pg	14 15 25.7	0.0
VLX				S	Sg	14 15 41.0	+1.7
VLX	Vlachokerasia	1.04	140	P	Pg	14 15 25.7	0.0
VLX				S	Sg	14 15 41.0	+1.7
AGG	Agios Georgios	1.05	36	*e*Pn	Pg	14 15 26.8	+1.0
AGG	Agios Georgios	1.05	36	P	Pg	14 15 24.9	-0.9
AGG	Agios Georgios	1.05	36	*e*PN	Pg	14 15 26.8	+1.0
AGG	Agios Georgios	1.05	36	*e*Pg	Pg	14 15 24.9	-0.9
AGG	Agios Georgios	1.05	36	*e*Pn	Pg	14 15 26.8	+1.0
LTK	Loutraki	1.14	97	P	Pb	14 15 26.6	-0.6
LTK				S	Sg	14 15 43.3	+1.0
LTK	Loutraki	1.14	97	*e*PG	Pg	14 15 26.4	-1.1
LTK	Loutraki	1.14	97	P	Pb	14 15 26.6	-0.6
LTK				S	Sg	14 15 43.3	+1.0
LKR	Lokris	1.24	67	*e*Pb	Pb	14 15 29.1	+0.1
LKR	Lokris	1.24	67	P	Pn	14 15 28.3	-0.5
LKR	Lokris	1.24	67	*e*PB	Pb	14 15 29.1	+0.1
LKR	Lokris	1.24	67	P	Pn	14 15 28.3	-0.5
LKR	Lokris	1.24	67	*e*Pb	Pb	14 15 29.1	+0.1
ATAL	Atalanti	1.27	66	P	Pn	14 15 29.0	-0.2
ATAL	Atalanti	1.27	66	P	Pn	14 15 29.0	-0.2
PYL	PYLOS	1.29	173	P	Pn	14 15 28.9	-0.5
PYL	PYLOS	1.29	173	*e*PB	Pb	14 15 30.0	+0.3
PYL	PYLOS	1.29	173	P	Pn	14 15 28.9	-0.5
PYL	PYLOS	1.29	173	*e*Pb	Pb	14 15 30.0	+0.3
THL	Klokotos Trika	1.44	15	P	Pn	14 15 32.0	+0.6
THL	Klokotos Trika	1.44	15	⇓*i*PB	Pb	14 15 33.4	+1.1
THL	Klokotos Trika	1.44	15	P	Pn	14 15 32.0	+0.6
THL	Klokotos Trika	1.44	15	⇓*i*Pb	Pb	14 15 33.4	+1.1
DID	Didima	1.50	116	P	Pn	14 15 32.0	-0.3
DID	Didima	1.50	116	*e*PB	Pb	14 15 34.0	+0.6
DID				*e*SB	Sb	14 15 53.7	+1.4
DID	Didima	1.50	116	P	Pn	14 15 32.0	-0.3
DID	Didima	1.50	116	*e*Pb	Pb	14 15 34.0	+0.6
DID				*e*Sb	Sb	14 15 53.7	+1.4
JAN	Janina	1.57	340	*e*Pb	Pb	14 15 36.0	+1.4
JAN	Janina	1.57	340	*e*PB	Pb	14 15 36.0	+1.4
JAN	Janina	1.57	340	*e*Pb	Pb	14 15 36.0	+1.4
NAIG	Nisos Aigina	1.60	104	*e*Pg	Pg	14 15 35.0	-1.2
NAIG	Nisos Aigina	1.60	104	*e*PG	Pg	14 15 35.0	-1.2
NAIG	Nisos Aigina	1.60	104	*e*Pg	Pg	14 15 35.0	-1.2
ATH	Athens Observa	1.73	96	*e*Pn	Pn	14 15 35.1	-0.4
ATH	Athens Observa	1.73	96	*e*PN	Pn	14 15 35.1	-0.4
ATH	Athens Observa	1.73	96	*e*Pn	Pn	14 15 35.1	-0.4
NEO	Neokhori	1.74	49	P	Pn	14 15 36.2	+0.7
NEO	Neokhori	1.74	49	P	Pn	14 15 36.2	+0.7
XOR	Xorichti	1.76	47	P	Pn	14 15 37.7	+1.9
XOR	Xorichti	1.76	47	P	Pn	14 15 35.9	+0.1
XOR	Xorichti	1.76	47	P	Pn	14 15 35.9	+0.1
VLY	Voula,Athens	1.81	100	⇓*i*Pg	Pg	14 15 39.6	-0.7
VLY	Voula,Athens	1.81	100	⇓*i*PG	Pg	14 15 39.6	-0.7
VLY	Voula,Athens	1.81	100	⇓*i*Pg	Pg	14 15 39.6	-0.7
VLI	Veliai	1.83	142	⇓*i*Pg	Pg	14 15 39.6	-1.1
VLI	Veliai	1.83	142	⇓*i*PG	Pg	14 15 39.6	-1.1
VLI	Veliai	1.83	142	⇓*i*Pg	Pg	14 15 39.6	-1.1
KEK	Kerkira	2.05	319	*e*Pn	Pg	14 15 43.5	-1.4
KEK	Kerkira	2.05	319	*e*PN	Pg	14 15 43.5	-1.4
AOS	Alonnisos	2.08	61	P	Pg	14 15 43.2	-2.4
AOS	Alonnisos	2.08	61	P	Pg	14 15 43.2	-2.4
KYTH	Kithira	2.24	147	*e*Pg	Pg	14 15 47.0	-1.5
KYTH	Kithira	2.24	147	*e*PG	Pg	14 15 47.0	-1.5
KYTH	Kithira	2.24	147	*e*Pg	Pg	14 15 47.0	-1.5
FNA	Florina	2.61	357	P	Pg	14 15 52.4	-3.2
FNA	Florina	2.61	357	P	Pg	14 15 52.4	-3.2
TIP	Timpagrande	3.87	286	P	Pn	14 16 09.7	+4.8

*BJI **27** 14:16:15.8,0.°39S×96.°63E,h40km,mB5.3/25,mb5.2/46, Ms5.0/33,Ms7 4.9/32*
*DJA **27** 14:16:17,0.°20N×96.°41E,h30km,Mw5.4/10*
*ISCJB **27** 14:16:18.9±0.2,0.°21N±0.°03×96.°72E±0.°03,h31km, mb5.0/92,MS4.8/16,Error ellipse: s-maj=4.5km s-min=3.1km az=36.2*
*MOS **27** 14:16:19.2±0.9,0.°23N×96.°71E,h33km,mb5.3/31,Error ellipse: s-maj=10.0km s-min=6.0km az=109.2*
*IDC **27** 14:16:20.7±6.9,0.°21N×96.°62E,h31km±49km,mb4.6/27, mb1 4.6/29,mb1mx4.6/32,mbtmp4.6/29,ML4.4/2,Error ellipse: s-maj=16.2km s-min=10.7km az=55.0*
*NEIC **27** 14:16:21.1±0.2,0.°21N×96.°67E,h35km,mb5.1/33,Error ellipse: s-maj=5.3km s-min=4.2km az=223.0*
*SZGRF **27** 14:16:32.1,2.°34N×95.°55E,h32km,mb5.1,Off west coast of northern Sumatera, Indonesia*
ISC 27 14:16:21.1±0.2,0.°21N±0.°03×96.°68E±0.°03,h33km, h33km±.7km:pP-P,n236,σ0.°92/245,mb5.0/92,MS4.8/16, 6C-5D,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	Saibi	2.85	122	P	Pn	14 17 03.0	-1.3
TPTI		3.07	9	P	Pn	14 17 04.6	-2.8
TPTI				S	Sn	14 17 34.8	-8.2
PSI	Prapat	3.41	41	Pn	Pn	14 17 10.4	-1.7
	13nm,0.3s,baz=200,slow=9.8,SNR=46						
PSI				Sn	Sn	14 17 49.1	-2.3
	18nm,0.3s,baz=166,slow=6.4,SNR=7.3						
PPI	Padang Panjang	3.77	100	P	Pn	14 17 17.0	0.0
TSI	Tuntungan	3.77	30	P	Pn	14 17 15.0	-2.0
PDSI	Padang	3.94	106	P	Pn	14 17 18.4	-0.9
BKNI	Bangkinang	4.36	88	P	Pn	14 17 24.5	-0.6
PPSI	Pulau Pagai	4.45	132	P	Pn	14 17 24.5	-1.8
SDSI	Sungai Dareh	4.88	103	P	Pn	14 17 31.8	-0.4
	1.1nm4μm312nm,0.8s						
KRJI	Kerinci	5.29	116	P	Pn	14 17 38.2	+0.2
	10nm2μm,0.8s						
RGRI	Rengat	5.68	96	P	Pn	14 17 44.0	+0.8
IPM	Ipoh	6.07	46	P	Pn	14 17 48.9	+0.4
IPM	Ipoh	6.07	46	P	Pn	14 17 49.0	+0.4
	1.0nm2μm331nm,0.9s						
KULM	Kulim	6.42	38	P	Pn	14 17 52.6	-0.8
KULM	Kulim	6.42	38	*e*Pn	Pn	14 17 52.1	-1.2
	112nm,0.9s						
KULM	Kulim	6.42	38	P	Pn	14 17 52.5	-0.9
	0.8nm2μm287nm,1.0s						
KGM	Kluang	6.87	75	P	Pn	14 17 59.4	-0.2
KSI	Kapahiang	7.04	123	P	Pn	14 18 01.5	-0.5
	2.7nm9μm984nm,1.0s						
MYKOM	Kota Tinggi	7.33	78	P	Pn	14 18 05.8	-0.2
MYKOM	Kota Tinggi	7.33	78	P	Pn	14 18 05.1	-0.9
	0.7nm96nm,0.8s						
MNAI	Manna	7.74	126	P	Pn	14 18 10.6	-0.9
	2.2nm697nm,1.1s						
KTGM	Kuala Trenggan	8.21	52	P	Pn	14 18 16.6	-1.3
MDSI	Maura Dua	8.82	122	P	Pn	14 18 25.8	-0.6
	2μm221nm,0.8s						
LWLI	Liwa	9.01	125	P	Pn	14 18 29.9	+0.9
KLSI		9.39	121	P	Pn	14 18 33.8	-0.5
	3μm287nm,0.8s						
KLI	Kotabumi	9.59	122	P	Pn	14 18 39.2	+2.2
	250nm,0.8s						
TPI	Tanjungpandan	11.35	105	P	Pn	14 19 02.5	+1.4
	95nm,0.8s						
CBJI	Citeko	12.09	123	P	Pn	14 19 13.0	+1.7
	166nm,1.0s						
KSM	Kuching	13.68	85	*e*P	Pn	14 19 32.5	-0.4
SBUM	Sibu	15.69	82	P	Pn	14 20 00.6	+0.7
BTM	Bintulu	16.66	80	P	Pn	14 20 13.4	+1.2
PWJI	Pagerwojo	17.15	119	P	Pn	14 20 14.4	-4.0
	104nm,0.8s						
CM31	Chiang Mai Arr	18.27	7	*e*Pn	Pn	14 20 32.4	+0.2
CMAR	Chiang Mai Arr	18.27	7	P	Pn	14 20 32.6	+0.4
	1.0nm,0.3s,baz=196,slow=10,SNR=29						
CHTO	Chiang Mai	18.62	7	*e*P	Pn	14 20 35.6	-0.9
KKM	Kota Kinabalu	20.34	73	P	P	14 20 55.8	+1.0
KKM	Kota Kinabalu	20.34	73	*e*P	P	14 20 55.2	+0.4
	269nm,1.2s						
KKM	Kota Kinabalu	20.34	73	P	P	14 20 55.5	+0.7
KDM	Kudat	21.17	71	P	P	14 21 04.2	+0.3
SDKM	Sandakan	21.18	75	P	P	14 21 04.7	+0.8
TSM	Tawau	21.55	79	P	P	14 21 09.0	+1.0
MYLDM	Lahad Datu	22.34	77	P	P	14 21 18.4	+2.0
HYB	Hyderabad	24.72	315	*i* P	P	14 21 40.0	+0.4
HYB				*e*pP		14 21 50.0	
KMI	Kunming	25.45	13	P	P	14 21 47.8	+1.6
KMI				pP	pP	14 21 59.0	+3.5
KMI				sP	sP	14 22 03.0	+3.5
KMI				PP		14 22 30.0	
KMI				S	S	14 26 12.5	+1.3
KMI				pmax	pmax		
	comp=Z,59nm,1.1s,mb5.0						
KMI				pmax	pmax		
	comp=Z,120nm,3.1s						
KMI				LR	LR		
	comp=N,500nm,17.5s						
KMI				LR	LR		
	comp=E,1μm,12.4s						
KMI				LR	LR		
	comp=Z,1μm,20.4s,MS4.4						
GYA	Guiyang	27.81	19	P	P	14 22 08.8	+1.4
GYA				pP	pP	14 22 20.8	+3.9
GYA				sP	sP	14 22 24.0	+3.2
GYA				PP		14 23 01.3	
GYA				PcP	PcP	14 25 24.8	+1.5
GYA				S	S	14 26 49.8	+1.3
GYA				SS		14 28 12.0	
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.5						
GYA				pmax	pmax		
	comp=Z,380nm,13.7s						
GYA				LR	LR		
	comp=N,1μm,12.9s,MS4.8						
GYA				LR	LR		
	comp=E,1μm,13.1s,MS4.8						
GYA				LR	LR		
	comp=Z,1μm,12.7s,MS4.7						
MBWA	Marble Bar	30.95	135	*e*P	P	14 22 35.6	+0.2
	comp=Z,18nm,0.9s,mb4.9						
CD2	Chengdu	31.26	12	*e*P	P	14 22 40.8	+2.8
CD2				pP	pP	14 22 50.3	+2.9
CD2				sP	sP	14 22 54.8	+3.4
CD2				PP	PP	14 23 43.3	-5.7
CD2				S	S	14 27 42.0	-0.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
CD2				pmax	pmax		
	comp=Z,40nm,5.8s						
TPUB	Ta-pu	32.68	44	*e*P	P	14 22 50.8	+0.3
	comp=Z,65nm,1.0s,mb5.5						
YULB	Yu-li	33.20	44	*e*P	P	14 22 55.5	+0.3
	comp=Z,35nm,0.9s,mb5.3						
SSLB	Suanglung	33.23	43	*e*P	P	14 22 55.5	+0.1
	comp=Z,48nm,0.9s,mb5.4						
FITZ	Fitzroy Crossi	33.79	124	*e*P	P	14 22 59.3	-1.0
	comp=Z,36nm,0.6s,mb5.5						
FITZ	Fitzroy Crossi	33.79	124	P	P	14 23 00.5	+0.2
	comp=Z,23nm,0.7s,mb5.2,baz=306,slow=5.8,SNR=10.0						
NACB	Ninganchiao	33.92	44	P	P	14 23 01.1	-0.2
	comp=Z,30nm,1.0s,mb5.2						
WHN	Wuhan	34.53	28	P	P	14 23 07.5	+1.0
WHN				pmax	pmax		
	comp=Z,100nm,1.1s,mb5.7						
WHN				LR	LR		
	comp=Z,4μm,17.5s,MS5.2						
KNA	Kununurra	35.42	118	*e*P	P	14 23 13.0	-1.5
	comp=Z,51nm,1.0s,mb5.4						
LZH	Lanzhou	36.31	10	*e*P	P	14 23 22.0	+0.2
LZH				pP	pP	14 23 32.0	+0.7
LZH				PP	PP	14 24 46.0	+1.2
LZH				*e*S	S	14 29 01.0	+0.4
LZH				pmax	pmax		
	comp=Z,48nm,1.3s,mb5.3						
LZH				pmax	pmax		
	comp=Z,130nm,5.6s						
LZH				LR	LR		
	comp=E,1μm,13.1s						
LZH				LR	LR		
	comp=Z,2μm,17.5s,MS4.9						
KAKA	Kakadu	37.71	111	*e*P	P	14 23 32.2	-1.8
	comp=Z,15nm,0.7s,mb4.8						
NJ2	Nanjing	37.97	31	*e*P	P	14 23 37.0	+1.0
NJ2				pP	pP	14 23 47.0	+1.4
NJ2				sP	sP	14 23 51.0	+1.5
NJ2				PP	PP	14 25 07.5	+4.3
NJ2				S	S	14 29 29.5	+3.5
NJ2				sS	sS	14 29 44.0	+2.2
NJ2				pmax	pmax		
	comp=Z,50nm,1.3s,mb5.1						
NJ2				pmax	pmax		
	comp=Z,230nm,8.0s						
NJ2				LR	LR		
	comp=N,820nm,19.6s,MS4.8						
NJ2				LR	LR		
	comp=E,1μm,18.8s,MS4.8						
NJ2				LR	LR		
	comp=Z,1μm,15.7s,MS4.8						
NWAO	Narrogin (SRO)	38.23	152	*e*P	P	14 23 36.6	-1.5
NWAO				pmax	pmax		
	comp=Z,12nm,0.8s						
NWAO	Narrogin (SRO)	38.23	152	*e*P	P	14 23 36.6	-1.5
	comp=Z,12nm,0.8s,mb4.7						
GTA	Gaotai	39.12	4	P	P	14 23 46.0	+0.5
GTA				pP	pP	14 23 55.5	+0.4
GTA				sP	sP	14 23 59.5	+0.5
GTA				PP	PP	14 25 20.0	+4.4
GTA				S	S	14 29 42.5	-0.6
GTA				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.8						
GTA				pmax	pmax		
	comp=Z,170nm,5.7s						
GTA				LR	LR		
	comp=N,1μm,21.6s,MS4.8						
GTA				LR	LR		
	comp=E,910nm,21.9s,MS4.8						
GTA				LR	LR		
	comp=Z,2μm,21.3s,MS4.9						
WRA	Warramunga Arr	41.96	121	P	P	14 24 09.3	0.0
	comp=Z,15nm,0.7s,mb4.7,baz=300,slow=9.2,SNR=14						
WRAB	Tennant Creek	41.97	121	*e*P	P	14 24 08.7	-0.7
WRAB				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.0						
WRAB	Tennant Creek	41.97	121

comp=Z,48nm,1.0s,mb5.2
WMQ pmax pmax
comp=Z,97nm,4.0s
WMQ LR LR
comp=N,950nm,15.0s,MS5.0
WMQ LR LR
comp=E,890nm,15.0s,MS5.0
WMQ LR LR
comp=Z,1μm,15.0s,MS4.9
DL2 Dalian 44.79 28 P P 14 24 32.5 +0.7
DL2 *e*S **S 14 31 07.8 +0.9**
DL2 pmax pmax
comp=Z,50nm,0.7s,mb5.5
DL2 pmax pmax
comp=Z,370nm,4.3s
DL2 LR LR
comp=N,580nm,18.3s,MS4.6
DL2 LR LR
comp=E,280nm,17.2s,MS4.6
DL2 LR LR
comp=Z,930nm,17.8s,MS4.8
UCH Uchtor 46.35 337 P **P 14 24 45.0 +0.9**
SNR=16
UCH Uchtor 46.35 337 *e*P **P 14 24 44.6 +0.5**
TKM2 Tokmak 2 46.54 339 P **P 14 24 46.7 +1.1**
SNR=16
TKM2 Tokmak 2 46.54 339 *e*P **P 14 24 44.9 -0.7**
TKM2 pmax pmax
comp=Z,33nm,1.1s,mb5.2
TKM2 Tokmak 2 46.54 339 *e*P **P 14 24 44.9 -0.7**
comp=Z,33nm,1.1s,mb5.2
KBK Karagaybulak 46.55 338 P **P 14 24 47.3 +1.6**
SNR=10
AAK Ala-Archa 46.71 337 P **P 14 24 47.0 +0.1**
comp=Z,2.6nm,0.5s,mb4.4,baz=146,slow=6.0,SNR=4.4
FRU Bishkek 46.83 338 *e*P **P 14 24 48.0 +0.1**
KSRS Korea Array 46.95 34 P **P 14 24 49.0 +0.1**
comp=Z,12nm,0.9s,mb4.8,baz=225,slow=8.7,SNR=29
EKS2 Erkin-Say 47.01 337 P **P 14 24 50.7 +1.5**
SNR=12
EKS2 Erkin-Say 47.01 337 *e*P **P 14 24 50.2 +1.0**
comp=Z,12nm,0.8s,mb4.9
USP Ospenovka 47.25 338 P **P 14 24 52.1 +1.0**
SNR=22
MK31 Makanchi Array 48.08 347 *e*P **P 14 24 58.1 +0.6**
MKAR Makanchi Array 48.08 347 P **P 14 24 58.0 +0.6**
comp=Z,18nm,0.7s,mb5.2,baz=135,slow=9.5,SNR=41
MKAR Makanchi Array 48.08 347 *e*P **P 14 24 58.0 +0.5**
MKAR pmax pmax
comp=Z,18nm,0.7s
SONM Songino Array 48.18 9 P **P 14 24 59.2 +0.9**
comp=Z,14nm,0.9s,mb5.0,baz=191,slow=9.5
SONM PcP PcP 14 26 25.8 +0.5
comp=Z,4.6nm,0.7s,baz=191,slow=5.1,SNR=4.8
ULN Ulaanbaatar 48.32 9 *e*P **P 14 24 59.7 +0.4**
ULN pmax pmax
comp=Z,12nm,1.1s,mb4.8
ULN Ulaanbaatar 48.32 9 *e*P **P 14 24 59.7 +0.4**
comp=Z,12nm,1.1s,mb4.8
CN2 Changchun 50.42 27 *e*P **P 14 25 15.5 +0.1**
CN2 *e*S **S 14 32 25.5 -1.2**
CN2 pmax pmax
comp=Z,50nm,0.6s,mb5.7
CN2 pmax pmax
comp=Z,500nm,7.0s
CN2 LR LR
comp=N,300nm,15.0s,MS4.5
CN2 LR LR
comp=E,200nm,15.0s,MS4.5
CN2 LR LR
comp=Z,400nm,16.0s,MS4.5
PMG Port Moresby 51.14 102 *e*P **P 14 25 21.7 +0.2**
comp=Z,94nm,0.8s,mb5.8
CBIJ Chichi jima 51.21 55 P **P 14 25 21.6 -0.2**
comp=Z,47nm,0.7s,mb5.5,baz=302,slow=18,SNR=2.6
TLY Talaya 51.62 6 P **P 14 25 25.5 +1.2**
comp=Z,86nm,0.8s,mb5.7,SNR=5.3
TLY Talaya 51.62 6 *e*P **P 14 25 25.3 +1.0**
TLY pmax pmax
comp=Z,11nm,0.8s,mb4.8
TLY Talaya 51.62 6 *e*P **P 14 25 25.3 +1.0**
comp=Z,11nm,0.8s,mb4.8
OPO Ambohidratompo 52.05 246 P **P 14 25 27.5 -0.6**
comp=Z,7.2nm,1.1s,mb4.5,baz=72,slow=9.9,SNR=4.8
IRK Irkutsk 52.24 6 *e*P **P 14 25 29.2 +0.3**
IRK pmax pmax
comp=Z,29nm,1.6s,mb5.0
CTA Charters Tower 52.53 116 *e*P **P 14 25 32.0 +0.3**
comp=Z,23nm,1.0s,mb5.1
CTA Charters Tower 52.53 116 P **P 14 25 32.2 +0.5**
comp=Z,26nm,0.9s,mb5.2,baz=275,slow=9.7,SNR=11
CTA Charters Tower 52.53 116 P **P 14 25 32.2 +0.5**
CTAO Charters Tower 52.53 116 *e*P **P 14 25 30.6 -1.1**
CTAO pmax pmax
comp=Z,41nm,1.0s,mb5.3
CTAO Charters Tower 52.53 116 *e*P **P 14 25 30.6 -1.1**
comp=Z,41nm,1.0s,mb5.3
KURK Kurchatov 52.62 346 P **P 14 25 32.8 +1.1**
comp=Z,130nm,1.3s,mb5.7,SNR=9.7
KURK Kurchatov 52.62 346 P **P 14 25 31.5 -0.2**
comp=Z,8.0nm,0.6s,mb4.9,baz=167,slow=6.7,SNR=38
KURK PcP PcP 14 26 41.5 0.0
comp=Z,3.6nm,0.8s,baz=150,slow=2.8,SNR=3.7
KURK Kurchatov 52.62 346 *e*P **P 14 25 32.0 +0.3**
KURK pmax pmax
comp=Z,40nm,1.2s,mb5.2
KURK Kurchatov 52.62 346 *e*P **P 14 25 31.9 +0.2**
comp=Z,40nm,1.2s,mb5.2
MAJO Matsushiro 52.77 42 *e*P **P 14 25 32.6 -0.5**
MAJO pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
MAJO Matsushiro 52.77 42 *e*P **P 14 25 32.6 -0.5**
comp=Z,10.0nm,1.0s,mb4.7
MAT Matsushiro 52.77 42 P **P 14 25 32.9 -0.2**
MJAR Matsushiro Arr 52.77 42 P **P 14 25 33.1 0.0**
comp=Z,6.5nm,1.0s,mb4.5,baz=224,slow=7.4,SNR=13
MDJ Mudanjiang 52.98 29 P **P 14 25 35.3 +0.7**
MDJ pP pP 14 25 44.5 +0.1
MDJ sP sP 14 25 48.3 0.0
MDJ PP PP 14 27 35.5 +1.0
MDJ S **S 14 32 58.5 -3.5**
MDJ SS SS 14 36 42.8 +1.3
MDJ pmax pmax
comp=Z,11nm,1.1s,mb4.7
MDJ LR LR
comp=N,630nm,20.8s,MS4.8
MDJ LR LR
comp=E,600nm,20.8s,MS4.8
MDJ LR LR
comp=Z,2μm,19.4s,MS5.1
STKA Stephens Creek 53.09 131 *e*P **P 14 25 36.2 +0.6**
comp=Z,12nm,0.7s,mb5.0
STKA Stephens Creek 53.09 131 P **P 14 25 36.5 +1.0**
comp=Z,17nm,0.8s,mb5.0,baz=312,slow=6.8,SNR=11
STKA Stephens Creek 53.09 131 *e*P **P 14 25 34.8 -0.8**
CIT Chita 53.55 13 *e*P **P 14 25 39.8 +1.2**
CIT *e* 14 26 45.8
ZAA0 Zalesovo Array 54.45 351 *e*P **P 14 25 45.3 +0.2**
ZAA0 *e* pP 14 25 54.3 -0.8
ZALV Zalesovo Beam 54.45 351 P **P 14 25 45.5 +0.4**
comp=Z,46nm,0.5s,mb5.7,baz=174,slow=7.0,SNR=107
RDF Al-Radifah 54.88 306 *e*P **P 14 25 48.5 -0.3**
RDF AMb AMB 14 25 52.0
comp=Z,53nm,1.1s,mb5.5
NAY Al-Naaiem 55.25 306 *e*P **P 14 25 51.2 -0.3**
NAY AMb AMB 14 25 54.4
comp=Z,20nm,1.2s,mb5.0
MIB Mutribah 55.39 307 *e*P **P 14 25 52.4 0.0**
MIB AMb AMB 14 26 02.5
comp=Z,55nm,0.9s,mb5.6
NVS Novosibirsk 55.56 351 ⇓*i*P **P 14 25 52.8 -0.4**
NVS *i* pP 14 26 01.8 -1.3
NVS *e*PPP 14 29 11.8
NVS *i* S **S 14 33 34.2 -2.2**
NVS *e* 14 35 34.8
NVS *e*SS SS 14 37 21.3 -0.6
NVS pmax pmax
comp=Z,33nm,1.1s,mb5.3
NVS pmax pmax
comp=N,30nm,1.2s
NVS pmax pmax
comp=E,23nm,1.2s
NVS smax
comp=N,25nm,1.8s
NVS smax
comp=E,22nm,1.8s

BVAR Borovoye Array 57.02 341 P **P 14 26 02.9 -0.7**
comp=E,5.8nm,0.5s,mb4.8,baz=142,slow=8.9,SNR=20
BRVK Borovoye 57.08 341 *e*P **P 14 26 03.2 -0.8**
KLR Kul'dur 57.37 27 ⇑*i*P **P 14 26 03.1 -3.0**
KLR *e* pP 14 26 12.4 -3.7
KLR pmax pmax
comp=E,30nm,1.2s
KLR pmax pmax
comp=Z,47nm,1.2s,mb5.4
EIDS Eidsvold 58.32 120 *e*P **P 14 26 13.9 +0.6**
comp=Z,22nm,0.8s,mb5.2
HABR Khabarovsk 58.37 29 *e*P **P 14 26 11.5 -1.7**
HABR *e**PP pP 14 26 21.5 -1.6
HABR *e**SP sP 14 26 25.7 -1.3
HABR *e* 14 27 01.7
HABR *e*PPP 14 29 40.4
HABR *e*S **S 14 34 13.5 -0.2**
HABR *e**SS sS 14 34 30.5 +0.4
HABR *e* 14 35 58.5
HABR pmax pmax
comp=Z,32nm,1.2s,mb5.2
HABR pmax pmax
comp=N,29nm,2.4s
HABR pmax pmax
comp=E,32nm,1.6s
HABR MLR MLR
comp=Z,684nm,16.0s,MS4.9
KMBO Kilima Mbogo 59.44 269 P **P 14 26 20.9 -0.5**
comp=Z,4.7nm,1.1s,mb4.5,baz=1.0,slow=23,SNR=4.4
ASAJ Asahikawa 59.76 37 P **P 14 26 23.1 +0.1**
comp=Z,3.4nm,0.6s,mb4.5,baz=286,slow=5.7,SNR=5.5
ARMA Armidale 60.37 126 *e*P **P 14 26 29.6 +2.2**
ARMA Armidale 60.37 126 *e*P **P 14 26 29.4 +2.0**
YSS Yuzh-Sakhalins 61.45 34 ⇑*i*P **P 14 26 35.0 +0.6**
YSS *e* 14 26 42.0
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.4
YSS MLR MLR
comp=N,500nm,16.0s,MS4.9
YSS MLR MLR
comp=E,500nm,16.0s,MS4.9
YSS MLR MLR
comp=Z,1μm,16.0s,MS5.1
YSS Yuzh-Sakhalins 61.45 34 *e*P **P 14 26 35.4 +1.0**
ZEI Tsey 63.40 319 *e*P **P 14 26 47.1 -0.4**
ZEI pmax pmax
comp=Z,9.0nm,0.5s,mb5.2
SVE Sverdlovsk 63.42 339 ⇑*e*P **P 14 26 46.8 -0.5**
SVE pmax pmax
comp=Z,22nm,0.9s,mb5.3
HNR Honiara 63.69 101 P **P 14 26 49.7 -0.2**
comp=Z,152nm,0.8s,mb6.1,baz=310,slow=3.6,SNR=5.8
ARU Arti 63.89 338 *d i*P **P 14 26 49.4 -1.1**
ARU 14 29 06.6
ARU S **S 14 35 24.4 +0.7**
ARU pmax pmax
comp=Z,26nm,1.7s,mb5.0
ARU Arti 63.89 338 *e*P **P 14 26 49.3 -1.1**
comp=Z,7.9nm,0.8s,mb4.8
ARU *e* pP 14 26 58.0 -2.6
MMAI Mount Meron Ar 66.07 306 P **P 14 27 06.1 +1.0**
comp=Z,1.2nm,0.5s,mb4.2,baz=82,slow=12,SNR=2.6
YAK Yakutsk 66.51 16 *d i*P **P 14 27 06.8 -0.5**
YAK *e**PP pP 14 27 16.0 -1.5
YAK *e* 14 27 40.0
YAK *e*S S 14 35 54.5 -1.1
YAK pmax pmax
comp=Z,53nm,0.9s,mb5.6
YAK pmax pmax
comp=N,27nm,1.4s
YAK pmax pmax
comp=E,18nm,1.1s
YAK smax
comp=E,48nm,2.3s
YAK smax
comp=N,19nm,2.0s
YAK MLR MLR
comp=Z,573nm,18.0s,MS4.8
YAK MLR MLR
comp=N,324nm,18.0s,MS4.7
YAK MLR MLR
comp=E,271nm,16.0s,MS4.7
YAK Yakutsk 66.51 16 *e*P **P 14 27 05.6 -1.8**
comp=E,82nm,0.9s,mb5.8
SOKR Solikamsk 66.82 339 *d i*P **P 14 27 09.0 -0.4**
SOKR pmax pmax
comp=Z,20nm,0.9s,mb5.2
CASY Casey 67.08 174 *e*P **P 14 27 10.8 -0.1**
BR131 Keskin Array S 69.40 313 *e*P **P 14 27 24.8 -1.2**
comp=Z,4.8nm,0.8s,mb4.5
BRTR Keskin Array B 69.40 313 P **P 14 27 25.1 -0.9**
comp=Z,3.3nm,0.8s,mb4.3,baz=135,slow=6.5,SNR=11
VSR Storozhevoye 70.09 326 *e*P **P 14 27 28.6 -1.4**
VSR *e**PP pP 14 27 36.9 -3.2
VSR pmax pmax
comp=N,2.0nm,0.5s
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
VSR pmax pmax
comp=E,2.0nm,0.3s
MAW Mawson 71.64 193 *e*P **P 14 27 41.6 +2.5**
comp=E,5.4nm,1.2s,mb4.3
MAW Mawson 71.64 193 P **P 14 27 38.5 -0.5**
comp=E,6.8nm,1.1s,mb4.5,baz=27,slow=12,SNR=6.4
PETK Petropavlovsk- 72.84 34 P **P 14 27 45.8 -0.8**
comp=E,2.3nm,0.8s,mb4.1,baz=177,slow=3.0,SNR=3.7
TIXI Tiksi 74.25 10 *e*P **P 14 27 53.5 -1.0**
TIXI pmax pmax
comp=Z,21nm,0.9s,mb5.1
TIXI Tiksi 74.25 10 *e*P **P 14 27 53.7 -0.8**
AKASG Malin Array Be 75.73 323 P **P 14 28 02.4 -1.0**
comp=Z,8.1nm,0.5s,mb4.9,baz=88,slow=5.4,SNR=27
AKBB Malin Array Si 75.73 323 *e*P **P 14 28 02.2 -1.2**
NACGM Naroch 78.38 326 *e* **P 14 28 15.0 -3.2**
LVV L'vov 78.70 321 *e*P **P 14 28 29.4 +9.3**
SYO Syowa Base 78.91 198 ⇓*e*P **P 14 28 21.0 +1.0**
KWP Kalwaria Pacla 79.50 321 *e*P **P 14 28 24.6 +0.1**
KWP pmax pmax
comp=Z,49nm,0.6s,mb5.6
KWP Kalwaria Pacla 79.50 321 *e*P **P 14 28 24.6 0.0**
comp=Z,49nm,0.6s,mb5.6
CRVS Cervenica-Dubn 80.15 320 *e*P **P 14 28 23.1 -5.0**
CRVS Cervenica-Dubn 80.15 320 *e*P **P 14 28 23.0 -5.1**
SUW Suwalki 80.18 325 *e*P **P 14 28 27.8 -0.4**
SUW Suwalki 80.18 325 *e*P **P 14 28 27.7 -0.4**
STHS Stebnicka Huta 80.39 320 *e*P **P 14 28 30.1 +0.8**
STHS pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
STHS Stebnicka Huta 80.39 320 *e*P **P 14 28 30.1 +0.8**
comp=Z,5.8nm,0.9s,mb4.5
STHS Stebnicka Huta 80.39 320 *e*P **P 14 28 30.1 +0.8**
FINES FINESS Array B 80.64 333 P **P 14 28 30.2 -0.2**
comp=Z,6.7nm,0.5s,mb4.8,baz=96,slow=5.8,SNR=30
PSZ Piszkesteto 81.00 318 *e*P **P 14 28 32.5 -0.1**
PSZ pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
PSZ Piszkesteto 81.00 318 *e*P **P 14 28 32.5 -0.1**
comp=Z,8.1nm,0.9s,mb4.7
PSZ Piszkesteto 81.00 318 ⇑*e*P **P 14 28 33.0 +0.4**
TIP Timpagrande 82.06 309 *e*P **P 14 28 38.4 0.0**
comp=Z,7.7nm,1.1s,mb4.5
BILL Bilibino 82.27 21 ⇑*i*P **P 14 28 38.3 -0.6**
ARCES ARCESS Array B 83.29 340 P **P 14 28 43.5 -0.7**
comp=Z,4.4nm,0.4s,mb4.8,baz=97,slow=5.1,SNR=38
ARCES ARCESS Array B 83.29 340 P **P 14 28 43.5 -0.7**
GOLS Golise 83.63 316 *e*P **P 14 28 46.4 0.0**
GOLS *e*pP pP 14 28 55.6 -1.2
KSP Ksiaz 83.77 321 *e*P **P 14 28 47.3 +0.3**
KSP *e**PP pP 14 28 56.5 -0.9
LEGS Legarje 83.84 316 *e*P **P 14 28 47.8 +0.3**
LEGS *i* pP pP 14 28 56.5 -1.3
VNDS Vrh nad Dolski 84.28 316 *e*P **P 14 28 50.1 +0.4**
VNDS *i* pP pP 14 28 59.2 -1.0
LJU Ljubljana 84.40 316 *e*P **P 14 28 51.0 +0.7**
GEC2 GERESS Array S 85.22 319 *e*P **P 14 28 54.5 +0.1**
comp=Z,16nm,1.4s,mb5.0
BRG Berggiesshubel 85.25 321 *e*P **P 14 28 54.7 +0.2**
comp=Z,18nm,1.8s,mb4.9
BRG *e*pP pP 14 29 03.3 -1.6

BRG Berggiesshubel 85.25 321 *e*P **P 14 28 54.6 +0.1**
comp=Z,18nm,1.8s,mb4.9
BRG *i* pP 14 29 03.5 -1.4
comp=Z,9.4nm,1.3s
WET Wettzell 85.78 319 *e*P **P 14 28 56.9 -0.3**
comp=Z,5.0nm,0.9s,mb4.7
WET *e*pP pP 14 29 06.3 -1.3
CLL Collm 85.88 321 *e*P **P 14 28 57.0 -0.6**
comp=Z,17nm,1.9s,mb5.0
CLL Collm 85.88 321 *e*P **P 14 28 55.0 -2.6**
CLL *i* pP 14 29 06.5 -1.5
CLL Collm 85.88 321 *i* P **P 14 28 57.6 0.0**
CLL *i* pP pP 14 29 06.5 -1.5
GRF Grafenberg Arr 86.90 320 *e*P **P 14 29 02.7 0.0**
comp=Z,46nm,1.8s,mb5.4
GRF Grafenberg Arr 86.90 320 *e*P **P 14 29 02.7 0.0**
GRF pmax pmax
comp=Z,46nm,1.8s,mb5.4
GRF Grafenberg Arr 86.90 320 *e*P **P 14 29 02.7 0.0**
comp=Z,46nm,1.8s,mb5.4
NOA NORSAR Array B 87.62 331 P **P 14 29 05.6 -0.3**
comp=Z,5.3nm,0.8s,mb4.8,baz=94,slow=4.9,SNR=15
NOA NORSAR Array B 87.62 331 P **P 14 29 05.6 -0.3**
BSEG Bad Segeberg 87.69 324 *e*P **P 14 29 06.6 +0.2**
comp=Z,15nm,1.2s,mb5.1
BSEG *e*pP pP 14 29 15.9 -0.9
KEST Kesra 87.72 306 P **P 14 29 06.9 0.0**
comp=Z,2.3nm,0.9s,mb4.4,baz=327,slow=10,SNR=6.9
NRDL Niedersach Rie 87.74 322 *e*P **P 14 29 07.2 +0.5**
comp=Z,33nm,1.5s,mb5.3
NRDL *e*pP pP 14 29 16.5 -0.6
IBBN Ibbenburen 89.18 322 *e*pP pP 14 29 23.4 -0.5
SBF Sospel 89.31 314 *e*P **P 14 29 14.2 -0.1**
CDF Champ du Feu 89.45 318 *e*P **P 14 29 15.2 +0.3**
HINF Hinteralfeld 89.73 318 *e*P **P 14 29 15.6 -0.6**
LPG La Plagne 89.81 315 *e*P **P 14 29 17.0 +0.4**
comp=Z,17nm,1.0s,mb5.0
LPG La Plagne 89.81 315 *e*P **P 14 29 17.0 +0.4**
LPG pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
LPG La Plagne 89.81 315 *e*P **P 14 29 17.0 +0.4**
comp=Z,8.7nm,1.0s,mb5.0
LPL La Plagne 89.82 315 *e*P **P 14 29 16.9 +0.2**
comp=Z,14nm,0.9s,mb5.0
LPL La Plagne 89.82 315 *e*P **P 14 29 16.9 +0.2**
LPL pmax pmax
comp=Z,7.0nm,0.9s,mb5.0
LPL La Plagne 89.82 315 *e*P **P 14 29 16.9 +0.2**
comp=Z,7.2nm,0.9s,mb5.0
HAU Haudompre 90.07 318 *e*P **P 14 29 17.6 -0.2**
QSPA South Pole Qui 90.16 180 P **P 14 29 18.9 +1.4**
comp=Z,5.3nm,1.1s,mb4.8,baz=300,slow=1.4,SNR=15
CABF La Chapelle 90.26 316 *e*P **P 14 29 19.1 +0.4**
TAM Tamanrasset 90.99 293 *e*P **P 14 29 24.0 +1.4**
TAM *e* pP 14 29 33.7 +0.6
TAM pmax pmax
comp=Z,3.0nm,1.0s,mb4.6
TAM Tamanrasset 90.99 293 *e*P **P 14 29 24.0 +1.4**
comp=Z,3.5nm,1.0s,mb4.6
TAM *e* pP 14 29 33.7 +0.6
GIVF Givet 91.04 320 *e*P **P 14 29 21.7 -0.5**
BAIF Baives 91.44 320 *e*P **P 14 29 24.6 +0.5**
comp=Z,24nm,0.9s,mb5.2
BAIF Baives 91.44 320 *e*P **P 14 29 24.6 +0.5**
BAIF pmax pmax
comp=Z,12nm,0.9s,mb5.2
BAIF Baives 91.44 320 *e*P **P 14 29 24.6 +0.5**
comp=Z,12nm,0.9s,mb5.2
LOR Lormes 91.77 317 *e*P **P 14 29 25.8 +0.1**
comp=Z,28nm,1.1s,mb5.2
LOR Lormes 91.77 317 *e*P **P 14 29 25.8 +0.1**
LOR pmax pmax
comp=Z,14nm,1.1s,mb5.2
LOR Lormes 91.77 317 *e*P **P 14 29 25.8 +0.1**
comp=Z,14nm,1.1s,mb5.2
SMF Signal de Mont 91.81 316 *e*P **P 14 29 25.9 0.0**
comp=Z,33nm,1.3s,mb5.2
SMF Signal de Mont 91.81 316 *e*P **P 14 29 25.9 0.0**
SMF pmax pmax
comp=Z,17nm,1.3s,mb5.2
SMF Signal de Mont 91.81 316 *e*P **P 14 29 25.9 0.0**
comp=Z,17nm,1.3s,mb5.2
SSF Saint Saulge 92.02 317 *e*P **P 14 29 27.2 +0.3**
AVF Avril sur Loir 92.14 317 *e*P **P 14 29 27.5 +0.1**
comp=Z,24nm,1.3s,mb5.1
AVF Avril sur Loir 92.14 317 *e*P **P 14 29 27.5 +0.1**
AVF pmax pmax
comp=Z,12nm,1.3s,mb5.1
AVF Avril sur Loir 92.14 317 *e*P **P 14 29 27.5 +0.1**
comp=Z,12nm,1.3s,mb5.1
TCF Toulx Ste Croi 92.95 316 *e*P **P 14 29 30.5 -0.7**
CAF Calviac 93.14 315 *e*P **P 14 29 31.7 -0.3**
RJF Les Rejaudoux 93.50 315 *e*P **P 14 29 33.0 -0.7**
EPF Esparros 94.51 313 *e*P **P 14 29 36.9 -1.5**
SJPF Ste Jean 95.64 313 *e*P **P 14 29 43.3 -0.3**
SCHQ Schefferville 123.50 349 PKP PKPdf 14 35 12.4 -2.7
comp=Z,2.7nm,0.8s,baz=59,slow=3.5,SNR=2.8
NVAR Mina Array Bea 129.88 36 PKP PKPdf 14 35 28.2 +0.4
comp=Z,1.2nm,0.7s,baz=282,slow=1.2,SNR=7.7
PDAR Pinedale Array 131.15 26 PKP PKPdf 14 35 29.8 -0.2
comp=Z,0.5nm,0.6s,baz=271,slow=4.2,SNR=3.5
MIAR Mount Ida 144.12 15 *e*PKIKP PKPdf 14 35 51.8 -2.3
TXAR Lajitas Array 144.78 32 PKP PKPdf 14 35 54.8 -0.6
comp=Z,6.4nm,0.7s,baz=279,slow=1.8,SNR=58
JSC Jenkinsville 145.64 357 *e*PKP2 PKPab 14 35 56.4 -0.8
JCT Junction City 145.69 26 *e*PKP2 PKPab 14 35 57.0 -0.5
LRAL Lakeview Retre 146.75 6 *e*PKPbc PKPbc 14 35 59.7 -0.7

IDC ***27*** *14:16:48.7±3.1, 10°.14N×91°.40E, h0km, mb4.3/6, mb1 4.4/6, mb1mx4.0/24, mbtmp4.3/6, Error ellipse: s-maj=124.4km s-min=20.9km az=67.0*
NEIC ***27*** *14:16:50.2±1.6, 10°.15N×91°.47E, h10km, mb4.4/2, Error ellipse: s-maj=57.9km s-min=14.4km az=63.0*
ISCJB ***27*** *14:16:52.0±2.0, 10°.2N±0°.3×91°.6E±0°.5, h33km, mb4.3/7, Error ellipse: s-maj=71.7km s-min=17.1km az=153.0*
ISC 27 14:16:54.2±2.0, 10°.2N±0°.2×91°.5E±0°.4, h35km, n9, σ0s72/9, mb4.3/7, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSM	**Kuching**	**20.56**	**114**	*e*P	**P**	**14 21 30.0**	**-0.1**
	7.3nm,0.8s						
MKAR	**Makanchi Array**	**37.33**	**350**	P	**P**	**14 24 02.5**	**-0.6**
	1.7nm,0.7s,mb4.0,baz=131,slow=8.4,SNR=4.9						
SONM	**Songino Array**	**39.57**	**16**	P	**P**	**14 24 22.6**	**+0.6**
	1.3nm,0.8s,mb3.7,baz=199,slow=8.8,SNR=3.3						
FITZ	**Fitzroy Crossi**	**43.85**	**130**	P	**P**	**14 24 57.6**	**+0.2**
	3.5nm,0.4s,mb4.4,baz=331,slow=5.8,SNR=8.8						
WRA	**Warramunga Arr**	**51.68**	**125**	P	**P**	**14 25 57.7**	**-0.3**
	1.3nm,0.4s,mb4.3,baz=300,slow=10.0,SNR=6.7						
WRA	**Warramunga Arr**	**51.68**	**125**	P	**P**	**14 25 57.7**	**-0.4**
WRAB	**Tennant Creek**	**51.69**	**125**	*e*P	**P**	**14 25 56.8**	**-1.3**
	9.9nm,0.8s,mb4.8						
ASAR	**Alice Springs**	**53.35**	**130**	P	**P**	**14 26 10.7**	**+0.3**
	4.2nm,0.6s,mb4.6,baz=306,slow=7.6,SNR=7.2						
STKA	**Stephens Creek**	**63.55**	**133**	P	**P**	**14 27 22.6**	**+1.2**
	2.6nm,0.4s,mb4.6,baz=299,slow=10,SNR=3.5						

CSEM ***27*** *14:18:00.5±0.3, 37°.86N×21°.39E, h20km, MD3.3, Error ellipse: s-maj=5.5km s-min=4.4km az=75.0*
ATH ***27*** *14:18:00.0, 37°.84N×21°.37E, h20km±2km, MD3.3/5*
THE ***27*** *14:18:00.9, 37°.87N×21°.41E, h14km±1km, ML3.3/7, Error ellipse: s-maj=1.8km s-min=0.6km az=352.0*
NEIC ***27*** *14:18:00.0, 37°.84N×21°.37E, h20km, MD3.3(ATH), After ATH.*
ISCJB ***27*** *14:18:00.2±0.7, 37°.87N±0°.03×21°.37E±0°.03, h11km±5km, Error ellipse: s-maj=4.6km s-min=4.3km az=0.6*
ISC 27 14:18:00.6±0.6, 37°.88N±0°.03×21°.36E±0°.04, h19km±4km**, n56**, σ1s13/81**, 3C, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.20**	**25**	⇑*i*Pb	**Pg**	**14 18 05.8**	**+0.2**
RLS				*e*Sb	**Sg**	**14 18 09.8**	**+0.7**
RLS	**Riolos of Patr**	**0.20**	**25**	⇑*i*PB	**Pg**	**14 18 05.8**	**+0.2**
RLS				*e*SB	**Sg**	**14 18 09.8**	**+0.7**
RLS	**Riolos of Patr**	**0.20**	**25**	⇑*i*Pb	**Pg**	**14 18 05.8**	**+0.2**
RLS				*e*Sb	**Sg**	**14 18 09.8**	**+0.7**
KFL	**Anninata**	**0.51**	**297**	P	**Pb**	**14 18 11.7**	**+0.7**
UPR	**University Cam**	**0.53**	**39**	P	**Pb**	**14 18 10.8**	**-0.5**
UPR				S	**Sg**	**14 18 18.1**	**-0.3**

UPR	University Cam	0.53	39	*e*PN	Pb	14 18 11.8	+0.5
UPR	University Cam	0.53	39	P	Pb	14 18 10.8	-0.5
UPR	University Cam	0.53	39	*e*Pn	Pb	14 18 11.8	+0.5
UPR				S	Sg	14 18 18.1	-0.3
LAKA	Lakka	0.61	53	P	Pb	14 18 11.9	-0.7
LAKA				S	Sb	14 18 20.8	0.0
LAKA	Lakka	0.61	53	P	Pb	14 18 11.9	-0.7
LAKA				S	Sb	14 18 20.8	0.0
VLS	Valsamata	0.68	296	*e*Pn	Pn	14 18 13.9	-1.3
VLS	Valsamata	0.68	296	P	Pb	14 18 14.0	+0.1
VLS				S	Sb	14 18 25.6	+2.7
VLS	Valsamata	0.68	296	*e*PN	Pn	14 18 13.9	-1.3
VLS	Valsamata	0.68	296	P	Pb	14 18 14.0	+0.1
VLS				S	Sb	14 18 25.6	+2.7
EFP	Efpalio	0.70	38	P	Pb	14 18 13.7	-0.5
EFP				S	Sb	14 18 24.1	+0.7
EFP	Efpalio	0.70	38	*e*PB	Pb	14 18 13.4	-0.8
EFP				*e*SN	Sn	14 18 24.2	-1.5
EFP	Efpalio	0.70	38	*e*Pb	Pb	14 18 13.4	-0.8
EFP	Efpalio	0.70	38	P	Pb	14 18 13.7	-0.5
EFP				*e*Sn	Sn	14 18 24.2	-1.5
TRIZ	Trizonia	0.74	49	P	Pb	14 18 14.3	-0.6
TRIZ	Trizonia	0.74	49	P	Pb	14 18 14.3	-0.6
GUR	Goura	0.78	85	P	Pb	14 18 14.4	-1.1
GUR				S	Sb	14 18 26.4	+0.7
GUR	Goura	0.78	85	*e*PB	Pb	14 18 14.4	-1.1
GUR				*e*SN	Sn	14 18 26.6	-1.1
GUR	Goura	0.78	85	P	Pb	14 18 14.4	-1.1
GUR				*e*Sn	Sn	14 18 26.6	-1.1
KALE	Kalithea	0.80	50	P	Pb	14 18 15.4	-0.5
KALE				S	Sb	14 18 26.9	+0.6
KALE	Kalithea	0.80	50	P	Pb	14 18 15.4	-0.5
KALE				S	Sb	14 18 26.9	+0.6
ITM	Ithomi	0.83	147	*e*Pn	Pn	14 18 15.6	-1.6
ITM	Ithomi	0.83	147	P	Pb	14 18 16.1	-0.3
ITM				S	Sb	14 18 28.7	+1.6
ITM	Ithomi	0.83	147	*e*PN	Pn	14 18 15.6	-1.6
ITM	Ithomi	0.83	147	*e*Pn	Pn	14 18 15.6	-1.6
ITM	Ithomi	0.83	147	P	Pb	14 18 16.1	-0.3
ITM				S	Sb	14 18 28.7	+1.6
VLX	Vlachokerasia	0.95	122	P	Pb	14 18 17.9	-0.6
VLX				S	Sb	14 18 31.7	+1.0
VLX	Vlachokerasia	0.95	122	*e*PN	Pn	14 18 16.5	-2.5
VLX	Vlachokerasia	0.95	122	*e*Pn	Pn	14 18 16.5	-2.5
VLX	Vlachokerasia	0.95	122	P	Pb	14 18 17.9	-0.6
VLX				S	Sb	14 18 31.7	+1.0
PYL	PYLOS	1.02	163	P	Pb	14 18 18.9	-0.8
PYL	PYLOS	1.02	163	*e*PN	Pn	14 18 18.8	-1.1
PYL	PYLOS	1.02	163	P	Pb	14 18 18.9	-0.8
DSF	Desfina	1.06	59	P	Pb	14 18 19.2	-1.2
DSF				S	Sb	14 18 35.3	+1.4
DSF	Desfina	1.06	59	P	Pb	14 18 19.2	-1.2
DSF				S	Sb	14 18 35.3	+1.4
LKD2	Lefkada island	1.07	329	P	Pb	14 18 20.9	+0.5
LKD2	Lefkada island	1.07	329	P	Pb	14 18 20.9	+0.5
EVR	Evrytania	1.10	19	*e*Pn	Pn	14 18 21.1	+0.2
EVR	Evrytania	1.10	19	*e*PN	Pn	14 18 21.1	+0.2
EVR	Evrytania	1.10	19	*e*Pn	Pn	14 18 21.1	+0.2
LTK	Loutraki	1.28	83	P	Pn	14 18 23.1	-0.3
LTK	Loutraki	1.28	83	*e*PN	Pn	14 18 23.5	+0.1
LTK	Loutraki	1.28	83	P	Pn	14 18 23.1	-0.3
LTK	Loutraki	1.28	83	*e*Pn	Pn	14 18 23.5	+0.1
DID	Didima	1.53	103	P	Pn	14 18 28.4	+1.5
DID				S	Sn	14 18 48.8	+2.5
DID	Didima	1.53	103	*e*PN	Pn	14 18 28.0	+1.1
DID	Didima	1.53	103	*e*Pn	Pn	14 18 28.0	+1.1
DID	Didima	1.53	103	P	Pn	14 18 28.4	+1.5
DID				S	Sn	14 18 48.8	+2.5
VLI	Veliai	1.71	132	*e*Pn	Pn	14 18 31.6	+2.3
VLI	Veliai	1.71	132	*e*PN	Pn	14 18 31.6	+2.3
KYTH	Kithira	2.08	139	*e*Pn	Pn	14 18 38.0	+3.5
KYTH	Kithira	2.08	139	*e*PN	Pn	14 18 38.0	+3.5

MAN 27 14:18:43, 14°.54N×119°.42E, h45km, mb4.8, ML3.7, MS3.8, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	Lubang	1.13	135	*e*P	Pn	14 19 05.0	+2.6
SCZP	Santa Cruz	1.32	21	*e*P	Pn	14 19 05.5	+0.5
TGY	Tagaytay City	1.53	106	⇓*e*P	Pn	14 19 09.2	+1.3
TGY				*e*S	Sn	14 19 29.2	+2.5
BOLP	Bolinao	1.90	15	*e*P	Pn	14 19 14.5	+1.6
PCPH	Palayan	1.92	58	*e*P	Pn	14 19 11.9	-1.3
PCPH				*e*S	Sn	14 19 29.9	-6.1
BALP	Baler	2.40	60	*e*P	Pn	14 19 19.8	-0.1
POLP	Polilio Island	2.45	85	*e*P	Pn	14 19 21.1	+0.7
BOAC	Boac	2.59	114	*e*P	Pn	14 19 23.9	+1.6
BUSP	Coron	2.63	163	*e*P	Pn	14 19 29.2	+6.3
SJMP	San Jose	2.64	141	*e*P	Pn	14 19 28.7	+5.5
CAUP	Cauayan	3.33	44	*e*P	Pn	14 19 34.8	+2.2
ABRA	Dolores	3.34	22	*e*P	Pn	14 19 36.9	+4.2
AUQP	San Andres	3.38	110	*e*P	Pn	14 19 34.8	+1.5
APYP	Conner	3.74	28	*e*P	Pn	14 19 41.2	+2.9
PALP	Palanan	3.83	49	*e*P	Pn	14 19 42.0	+2.5
CUYO	Cuyo Island	3.98	157	*e*P	Pn	14 19 45.1	+3.5
PVCP	Virac	4.69	101	*e*P	Pn	14 19 54.3	+3.0

*IDC **27** 14:19:13.7±0.8, 38°.73N×140°.87E, h0km, mb3.8/8, mb1 4.0/10, mb1mx3.8/25, mbtmp3.8/10, ML3.3/3, MS3.9/1, Ms1 3.9/1, ms1mx3.0/43, Error ellipse: s-maj=28.1km s-min=13.7km az=125.0*
*ISCJB **27** 14:19:14.9±0.6, 38°.75N±0°.03×140°.80E±0°.04, h14km±4km, mb3.8/8, Error ellipse: s-maj=5.2km s-min=4.0km az=42.2*
*JMA **27** 14:19:15.4, 38°.75N×140°.77E, h4km±1km, M3.5*
Broadband fault plane solution: P waves. NP1: ϕ_s=215.00000°, δ=28.00000°, λ=108.00000°. NP2: ϕ_s=15.00000°, δ=64.00000°, λ=81.00000°. Principal axes: T Plg=70.0000°, Azm=266.0000°; N Plg=8.0000°, Azm=19.0000°; P Plg=18.0000°, Azm=112.0000°;
JMA Felt II J1.

ISC 27 14:19:15.3±0.4, 38°.74N±0°.03×140°.79E±0°.03, h7km±4km, n21, σ0s82/31, mb3.8/8, 2C-5D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYK	Kaneyama	0.38	298	⇓P	Pg	14 19 22.7	0.0
JYK				S	Sg	14 19 27.7	0.0
JOU	Okura	0.39	195	⇑P	Pg	14 19 23.0	+0.1
JOU				S	Sg	14 19 28.5	+0.6
JMK	Ichinoseki	0.40	58	⇓P	Pg	14 19 23.2	+0.1
JMK				S	Sg	14 19 28.9	+0.6
JIO	Ouri	0.53	123	⇓P	Pg	14 19 25.4	-0.1
JIO				S	Sg	14 19 32.9	+0.6
JRG	Rokugo	0.67	350	P	Pg	14 19 28.3	+0.2
JYS	Shirataka	0.77	228	⇑P	Pg	14 19 29.9	-0.2
JYS				S	Sg	14 19 40.1	0.0
JOM	Ohasama	0.83	28	⇓P	Pg	14 19 31.0	-0.3
JOM				S	Sg	14 19 42.2	+0.1
JYA	Atsumi	0.85	260	⇓P	Pg	14 19 31.4	-0.3
JYA				*e*S	Sg	14 19 42.9	+0.1
JMM	Marumori	0.87	180	P	Pg	14 19 31.2	-0.9
JMM				S	Sg	14 19 43.1	-0.4
MAT	Matsushiro	3.00	224	P	Pn	14 20 04.1	+0.8
MAT				S	Sn	14 20 40.5	+1.0
MJAR	Matsushiro Arr	3.00	224	Pn	Pn	14 20 04.7	+1.4
1.4nm,0.3s,baz=321,slow=25,SNR=11							
MJAR				Pg	Pg	14 20 10.1	-2.7
2.1nm,0.3s,baz=24,slow=16,SNR=23							
MJAR				Lg		14 20 48.0	
2.0nm,0.3s,baz=350,slow=27,SNR=6.4							
ASAJ	Asahikawa	5.54	14	Pn	Pn	14 20 38.0	-0.1
0.8nm,0.3s,baz=218,slow=4.9,SNR=8.5							
ASAJ				LR	LR	14 22 35.0	
comp=Z,1μm,19.3s,baz=102,slow=36							
KSRS	Korea Array	10.22	267	Pn	Pn	14 21 45.0	+2.5
0.4nm,0.3s,baz=77,slow=14,SNR=12							
WRA	Warramunga Arr	58.69	187	P	P	14 29 12.8	-0.7
0.8nm,0.6s,mb3.9,baz=5.7,slow=7.3,SNR=7.4							
ASAR	Alice Springs	62.41	187	P	P	14 29 37.9	-0.9
0.4nm,0.7s,mb3.7,baz=1.0,slow=5.6,SNR=4.1							
FINES	FINESS Array B	67.08	332	P	P	14 30 08.4	-0.5
2.2nm,0.8s,mb4.2,baz=53,slow=9.2,SNR=2.6							
NOA	NORSAR Array B	72.42	337	P	P	14 30 41.2	-0.7
0.7nm,0.8s,mb3.6,baz=38,slow=6.0,SNR=2.7							
AKASG	Malin Array Be	72.65	322	P	P	14 30 43.0	-0.4
0.7nm,0.3s,mb4.0,baz=46,slow=6.1,SNR=5.3							
NVAR	Mina Array Bea	74.36	53	P	P	14 30 54.9	+1.2
0.4nm,0.7s,mb3.5,baz=287,slow=6.5,SNR=4.2							
PDAR	Pinedale Array	76.82	45	P	P	14 31 06.2	-1.5
0.5nm,0.6s,mb3.6,baz=318,slow=2.0,SNR=4.5							
TXAR	Lajitas Array	89.47	52	P	P	14 32 13.3	0.0
0.2nm,0.7s,mb3.5,baz=334,slow=7.5,SNR=3.3							

IDC 27 14:28:47.1±3.7, 10°.92N×91°.67E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.2/23, mbtmp3.3/4, Error ellipse: s-maj=137.1km s-min=25.5km az=67.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	36.63	349	P	P	14 35 55.6	+0.4
0.5nm,0.7s,baz=157,slow=8.4,SNR=3.6							
SONM	Songino Array	38.83	16	P	P	14 36 13.3	-0.4
0.3nm,0.6s,baz=191,slow=2.9,SNR=2.4							
WRA	Warramunga Arr	52.01	126	P	P	14 37 58.3	-0.3
0.2nm,0.3s,baz=299,slow=10.0,SNR=7.5							
ASAR	Alice Springs	53.73	130	P	P	14 38 11.8	+0.5
0.2nm,0.7s,baz=301,slow=7.0,SNR=4.4							

*CSEM **27** 14:29:13.9±0.2, 37°.92N×21°.45E, h10km, ML3.5/6, Error ellipse: s-maj=3.6km s-min=2.7km az=83.0*
*ISCJB **27** 14:29:13.6±0.5, 37°.90N±0°.02×21°.46E±0°.03, h4km±4km, Error ellipse: s-maj=4.2km s-min=4.0km az=4.2*
*ATH **27** 14:29:14.1, 37°.94N×21°.44E, h5km±4km, MD3.3/5*
*THE **27** 14:29:14.6, 37°.92N×21°.48E, h7km±2km, ML3.5/6, Error ellipse: s-maj=2.0km s-min=0.8km az=32.0*
*NEIC **27** 14:29:14.9, 37°.93N×21°.47E, h5km, ML2.9(ATH), After ATH.*

ISC 27 14:29:14.2±0.5, 37°.91N±0°.02×21°.45E±0°.03, h12km±4km, n61, σ0s88/87, 6C, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.15	5	P	Pg	14 29 18.5	+0.8
RLS	Riolos of Patr	0.15	5	P	Pg	14 29 18.5	+0.8
UPR	University Cam	0.46	35	P	Pg	14 29 23.4	+0.2
UPR				S	Sg	14 29 29.9	+0.5
UPR	University Cam	0.46	35	*e*PB	Pg	14 29 23.2	0.0
UPR				*e*SB	Sg	14 29 30.1	+0.7
UPR	University Cam	0.46	35	*e*Pb	Pg	14 29 23.2	0.0
UPR				S	Sg	14 29 29.9	+0.5
LAKA	Lakka	0.53	52	P	Pg	14 29 24.2	-0.4
LAKA				S	Sg	14 29 31.2	-0.5
LAKA	Lakka	0.53	52	P	Pg	14 29 24.2	-0.4
LAKA				S	Sg	14 29 31.2	-0.5
KFL	Anninata	0.56	291	P	Pg	14 29 25.8	+0.7
EFP	Efpalio	0.63	35	P	Pg	14 29 25.9	-0.6
EFP				S	Sg	14 29 35.5	+0.7
EFP	Efpalio	0.63	35	*e*PG	Pg	14 29 25.8	-0.7
EFP				*e*SB	Sb	14 29 34.6	-1.3
EFP	Efpalio	0.63	35	P	Pg	14 29 25.9	-0.6
EFP				*e*Sb	Sb	14 29 34.6	-1.3
EFP				S	Sg	14 29 35.5	+0.7
GUR	Goura	0.71	88	P	Pg	14 29 27.0	-0.9
GUR				S	Sg	14 29 37.6	+0.4
GUR	Goura	0.71	88	*e*PB	Pb	14 29 26.8	-1.7
GUR				*e*SB	Sb	14 29 37.3	-0.8
GUR	Goura	0.71	88	P	Pg	14 29 27.0	-0.9
GUR				*e*Sb	Sb	14 29 37.3	-0.8
GUR				S	Sg	14 29 37.6	+0.4
KALE	Kalithea	0.73	48	P	Pg	14 29 27.4	-0.9
KALE				S	Sg	14 29 38.2	+0.4
KALE	Kalithea	0.73	48	P	Pg	14 29 27.4	-0.9
KALE				S	Sg	14 29 38.2	+0.4
VLS	Valsamata	0.73	292	P	Pg	14 29 27.8	-0.6
VLS	Valsamata	0.73	292	P	Pg	14 29 28.1	-0.3
VLS	Valsamata	0.73	292	⇑*i*PB	Pb	14 29 28.2	-0.7
VLS	Valsamata	0.73	292	P	Pg	14 29 28.1	-0.3
ITM	Ithomi	0.82	152	P	Pg	14 29 30.4	+0.3
ITM	Ithomi	0.82	152	P	Pg	14 29 30.6	+0.5
ITM	Ithomi	0.82	152	⇑*i*PB	Pb	14 29 30.5	+0.1
ITM	Ithomi	0.82	152	P	Pg	14 29 30.6	+0.5
VLX	Vlachokerasia	0.91	126	P	Pg	14 29 31.9	+0.1
VLX				S	Sg	14 29 44.6	+0.8
VLX	Vlachokerasia	0.91	126	*e*PB	Pb	14 29 32.4	+0.4
VLX				*e*SB	Sb	14 29 45.2	+1.1
VLX	Vlachokerasia	0.91	126	P	Pg	14 29 31.9	+0.1
VLX	Vlachokerasia	0.91	126	*e*Pb	Pb	14 29 32.4	+0.4
VLX				S	Sg	14 29 44.6	+0.8
VLX				*e*Sb	Sb	14 29 45.2	+1.1
DSF	Desfina	0.99	59	P	Pg	14 29 31.7	-1.5
DSF				S	Sg	14 29 46.0	-0.1
DSF	Desfina	0.99	59	P	Pg	14 29 31.7	-1.5
DSF				S	Sg	14 29 46.0	-0.1
PYL	PYLOS	1.04	167	P	Pg	14 29 34.1	-0.1
PYL	PYLOS	1.04	167	*e*PN	Pn	14 29 34.4	-0.2
PYL	PYLOS	1.04	167	P	Pg	14 29 34.1	-0.1
PYL	PYLOS	1.04	167	*e*Pn	Pn	14 29 34.4	-0.2
EVR	Evrytania	1.04	16	P	Pn	14 29 34.4	+0.1
EVR	Evrytania	1.04	16	⇑*i*PG	Pg	14 29 32.7	-1.6
EVR	Evrytania	1.04	16	⇑*i*Pg	Pg	14 29 32.7	-1.6
EVR	Evrytania	1.04	16	P	Pg	14 29 34.4	+0.1
LKD2	Lefkada island	1.08	325	P	Pb	14 29 34.1	-0.7
LKD2				S	Sg	14 29 51.1	+2.1
LKD2	Lefkada island	1.08	325	P	Pb	14 29 34.1	-0.7
LTK	Loutraki	1.20	84	P	Pn	14 29 35.9	-1.0
LTK	Loutraki	1.20	84	*e*PN	Pn	14 29 36.0	-0.9
LTK				*e*SB	Sb	14 29 54.8	+2.3
LTK	Loutraki	1.20	84	*e*Pn	Pn	14 29 36.0	-0.9
LTK				*e*Sb	Sb	14 29 54.8	+2.3
AGG	Agios Georgios	1.31	32	P	Pn	14 29 38.4	+0.1
AGG	Agios Georgios	1.31	32	*e*PB	Pb	14 29 39.0	+0.3
AGG				*e*SB	Sb	14 29 57.0	+1.5
AGG	Agios Georgios	1.31	32	P	Pn	14 29 38.4	+0.1
AGG	Agios Georgios	1.31	32	*e*Pb	Pb	14 29 39.0	+0.3
AGG				*e*Sb	Sb	14 29 57.0	+1.5
LKR	Lokris	1.43	58	P	Pb	14 29 41.1	+0.4
LKR	Lokris	1.43	58	P	Pn	14 29 39.3	-0.6
LKR	Lokris	1.43	58	⇑*i*PB	Pb	14 29 41.1	+0.4
LKR	Lokris	1.43	58	P	Pn	14 29 39.3	-0.6
LKR	Lokris	1.43	58	⇑*i*Pb	Pb	14 29 41.1	+0.4
DID	Didima	1.47	105	P	Pn	14 29 41.0	+0.4
DID	Didima	1.47	105	*e*PN	Pn	14 29 40.9	+0.3
DID	Didima	1.47	105	*e*Pn	Pn	14 29 40.9	+0.3
VLI	Veliai	1.68	135	*e*PN	Pn	14 29 47.0	+3.6
VLI	Veliai	1.68	135	*e*Pn	Pn	14 29 47.0	+3.6
THL	Klokotos Trika	1.71	15	P	Pn	14 29 44.2	+0.4
THL	Klokotos Trika	1.71	15	P	Pn	14 29 44.2	+0.4
KYTH	Kithira	2.06	142	*e*PG	Pg	14 29 53.0	-0.8
KYTH	Kithira	2.06	142	*e*Pg	Pg	14 29 53.0	-0.8

*IDC **27** 14:31:33.2±0.5, 28°.78S×71°.33W, h0km, mb4.6/10, mb1 4.7/11, mb1mx4.6/15, mbtmp4.5/11, MS3.0/1, Ms1 3.0/1, ms1mx3.0/23, Error ellipse: s-maj=27.0km s-min=17.5km az=69.0*
*ISCJB **27** 14:31:35.6±2.0, 28°.37S±0°.06×70°.98W±0°.09, h15km±15km, mb4.7/48, Error ellipse: s-maj=13.7km s-min=9.7km az=154.5*
*NEIC **27** 14:31:38.9±0.2, 28°.73S×71°.29W, h35km, mb4.8/38, Error ellipse: s-maj=10.9km s-min=5.8km az=57.0*
NEIC Felt at Copiapo.
*BJI **27** 14:31:39.8, 28°.70S×71°.30W, h35km, mB5.1/4, Ms4.9/4, Ms7 4.7/4*

ISC 27 14:31:39.3±1.3, 28°.55S±0°.06×70°.95W±0°.09, h30km±10km, n336, σ0s64/305, mb4.7/48, 118C-119D, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	Las Campanas	0.51	155	*e*Pn	Pn	14 31 51.3	+0.8
LCO				*e*Sb	Sb	14 31 57.0	0.0
CFAA	Coronel Fontan	3.85	143	Pn	Pn	14 32 40.1	+3.7
3.2nm,0.3s,baz=315,slow=13,SNR=318							
CFAA				Sn	Sn	14 33 28.9	+8.3
2.3nm,0.3s,baz=107,slow=19,SNR=5.9							
CFAA				LR	LR	14 33 46.0	
comp=Z,176nm,19.0s,baz=150,slow=34							
CFAA	Coronel Fontan	3.85	143	Pn	Pn	14 32 40.1	+3.7
CFAA				Sn	Sn	14 33 28.9	+8.3
CFAA				LR	LR	14 33 46.0	
TRQA	Tornquist	12.08	144	*e*Pn	Pn	14 34 29.3	-0.1
LPAZ	La Paz	12.48	13	Pn	Pn	14 34 35.2	+0.3
0.7nm,0.3s,baz=194,slow=6.5,SNR=17							
LPAZ	La Paz	12.48	13	*e*Pn	Pn	14 34 35.3	+0.4
SIV	San Ignacio	15.47	38	Pn	Pn	14 35 13.5	-2.0
0.4nm,0.3s,baz=244,slow=6.7,SNR=11							
SPB	Sao Paulo	21.68	82	*e*P	P	14 36 32.2	+4.5
17nm,0.8s,mb4.5							
USHA	Ushuaia	26.32	177	P	P	14 37 09.0	-3.2
14nm,0.9s,mb4.5,baz=300,slow=4.1,SNR=6.2							
SDV	Santo Domingo	37.22	1	*e*P	P	14 38 47.7	-0.4
6.5nm,0.2s,mb5.1							
SJG	San Juan	46.62	6	*e*P	P	14 40 04.3	-0.6
15nm,0.7s,mb5.0							
TEIG	Tepich	51.30	339	*e*P	P	14 40 39.7	-1.0
19nm,0.6s,mb5.2							
QSPA	South Pole Qui	61.67	180	*e*P	P	14 41 51.5	-2.4
9.7nm,0.9s,mb4.9							
LHS	Liberty Hill	63.37	351	*e*P	P	14 42 01.1	-4.6
JCT	Junction City	64.83	333	*e*P	P	14 42 12.9	-2.5
32nm,1.8s,mb5.0							
CPCT	Cooper Cave	64.93	348	*e*P	P	14 42 14.7	-1.3
SWET	Sewanee	64.98	346	*e*P	P	14 42 15.2	-1.1
628A	Black Gap, Mar	65.29	329	⇓P	P	14 42 18.1	-0.2
baz=66							
TXAR	Lajitas Array	65.51	329	P	P	14 42 19.3	-0.5
1.9nm,0.8s,mb4.2,baz=150,slow=8.9,SNR=16							
TXAR	Lajitas Array	65.51	329	P	P	14 42 19.3	-0.5
528A	Cox Ranch, San	65.82	330	⇓P	P	14 42 21.6	-0.2
baz=66							
626A	Big Bend Ranch	65.91	329	⇑P	P	14 42 22.0	-0.4
baz=66							
527A	Woodward Ranch	66.17	329	⇓P	P	14 42 23.7	-0.4
baz=66							
428A	Kincaid Ranch,	66.26	330	⇑P	P	14 42 24.1	-0.6
baz=66							
MIAR	Mount Ida	66.30	340	*e*P	P	14 42 22.8	-2.0
5.5nm,0.9s,mb4.6							
526A	Mary Lane Ranc	66.32	329	⇑P	P	14 42 24.6	-0.4
baz=66							
427A	Hayter Ranch,	66.68	330	⇓P	P	14 42 26.9	-0.5
baz=67							
426A	McDonald Obser	66.81	329	⇓P	P	14 42 27.9	-0.2
baz=67							
328A	Wristen Ranch,	66.88	331	⇑P	P	14 42 28.4	-0.2
baz=67							
326A	Caldwell Ranch	67.33	330	⇓P	P	14 42 31.9	+0.4
baz=68							
425A	Indio Mountain	67.34	329	⇓P	P	14 42 30.7	-0.8
baz=68							
325A	Bean Ranch, Si	67.83	329	⇓P	P	14 42 33.8	-0.7
baz=68							
226A	Malaga, Loving	68.02	330	⇑P	P	14 42 35.4	-0.4
baz=68							
SIUC	Southern Illin	68.11	344	*e*P	P	14 42 35.5	-0.6
20nm,0.8s,mb5.2							
324A	Moseley Ranch,	68.12	329	⇓P	P	14 42 35.0	-1.4
baz=68							
126A	Clayton Basin,	68.49	330	⇑P	P	14 42 38.3	-0.4
baz=69							
FVM	French Village	68.65	344	*e*P	P	14 42 38.6	-1.0
18nm,0.8s,mb5.1							
Z27A	Tatum	68.72	331	⇓P	P	14 42 39.6	-0.5
baz=69							
CPRX	Cap Rock	68.75	331	*e*P	P	14 42 39.7	-0.6
1.7nm,0.5s,mb4.2							
125A	Gardner Draw,	68.78	330	⇑P	P	14 42 39.4	-1.0
baz=69							
CCM	Cathedral Cave	68.93	343	*e*P	P	14 42 39.8	-1.6
17nm,1.0s,mb4.9							
Z26A	Caprock	69.00	331	⇑P	P	14 42 41.3	-0.6
baz=69							
MSTX	Muleshoe	69.10	332	⇑P	P	14 42 41.9	-0.5
baz=69							
SSPA	Standing Stone	69.13	354	*e*P	P	14 42 42.6	+0.1
12nm,1.2s,mb4.7							
124A	Stringfield Ra	69.17	329	⇑P	P	14 42 42.5	-0.5
baz=69							
Y27A	Causey	69.18	332	⇑P	P	14 42 42.7	-0.3
baz=69							
Z25A	Roswell	69.33	330	⇑P	P	14 42 43.3	-0.6
baz=70							
ACSO	Alum Creek Sta	69.34	350	*e*P	P	14 42 42.8	-1.0
19nm,1.1s,mb4.9							
Z24A	Sheeppen Canyo	69.66	330	⇓P	P	14 42 45.6	-0.3
baz=70							
Y25A	Mesa, Roswell	69.87	331	⇓P	P	14 42 46.6	-0.6
baz=70							
122A	Conniff Cattle	69.87	328	⇓P	P	14 42 46.8	-0.5
baz=70							
319A	Douglas	69.88	326	⇑P	P	14 42 47.4	+0.1
baz=70							
220A	Playas Peak, P	69.94	326	⇑P	P	14 42 47.4	-0.4
baz=70							
X26A	CR and CF Fran	70.03	332	⇓P	P	14 42 47.8	-0.4
baz=70							
121A	Cookes Peak, D	70.10	327	⇓P	P	14 42 48.5	-0.2
baz=70							
W27A	Bowe Ranch, En	70.16	332	⇓P	P	14 42 49.0	0.0
baz=70							
Y24A	Capitan	70.19	330	⇑P	P	14 42 49.4	+0.2
baz=70							
318A	Bisbee	70.29	325	⇓P	P	14 42 49.7	-0.2
baz=70							
Z22A	Elephant Butte	70.32	328	⇑P	P	14 42 50.3	+0.3
baz=70							
219A	White Tail Can	70.38	326

X17A	Forest Lakes baz=73	73.03 326	⇓P	P	14 43 07.1 +0.8
FRNY	Flat Rock 9.0nm,0.9s,mb4.7	73.07 358	eP	P	14 43 07.1 +0.8
S24A	Houchin Ranch, baz=74	73.26 332	⇓P	P	14 43 08.4 +0.9
U21A	Nageezi baz=74	73.28 330	⇓P	P	14 43 08.3 +0.6
JFWS	Jewell Farm 10nm,0.7s,mb4.9	73.30 345	eP	P	14 43 07.2 -0.4
V19A	Window Rock baz=74	73.31 328	⇑P	P	14 43 09.0 +1.0
X16A	Lo Mia Camp, P baz=74	73.41 326	⇓P	P	14 43 08.9 +0.4
T22A	Edith baz=74	73.44 331	⇓P	P	14 43 09.4 +0.8
SDCO	Great Sand Dun 2.6nm,0.8s,mb4.2	73.47 332	eP	P	14 43 09.0 +0.2
Y15A	Casa Rosa Ranc baz=74	73.48 325	⇑P	P	14 43 09.2 +0.2
Z13A	Yuma Proving G baz=74	73.57 324	⇓P	P	14 43 09.7 +0.2
R24A	Sanders Place, baz=74	73.72 333	⇑P	P	14 43 11.0 +0.8
W16A	Flagstaff baz=74	73.99 326	⇓P	P	14 43 12.5 +0.5
S22A	4UR Ranch, Cre baz=74	74.02 331	⇑P	P	14 43 12.7 +0.7
V17A	Tonalea, Kykot baz=74	74.06 327	⇑P	P	14 43 12.9 +0.6
X14A	Yava baz=74	74.17 325	⇓P	P	14 43 13.1 +0.1
T19A	Beclabito baz=74	74.22 329	⇓P	P	14 43 13.9 +0.7
WUAZ	Wupatki baz=74	74.25 327	⇓P	P	14 43 14.0 +0.5
WUAZ	Wupatki 4.9nm,1.0s,mb4.4	74.25 327	eP	P	14 43 13.4 -0.1
U18A	Rough Rock, Ch baz=74	74.27 328	⇑P	P	14 43 14.1 +0.5
MVCO	Mesa Verde baz=74	74.30 330	⇑P	P	14 43 14.2 +0.5
R22A	Saguache, Gunn baz=75	74.40 331	⇑P	P	14 43 14.9 +0.7
P25A	Willow Gulch B baz=75	74.45 334	⇑P	P	14 43 15.5 +1.0
W14A	Seligman baz=75	74.85 325	⇑P	P	14 43 17.0 +0.1
T18A	Mexican Hat baz=75	74.86 329	⇑P	P	14 43 17.4 +0.4
BC3	Big Chuckawall baz=75	74.86 323	⇑P	P	14 43 16.7 -0.3
V15A	Kaibab Nationa baz=75	74.88 326	⇑P	P	14 43 17.5 +0.4
S19A	Harvey Farm, M baz=75	75.03 330	⇑P	P	14 43 18.2 +0.3
R20A	Redvale baz=75	75.06 330	⇓P	P	14 43 18.8 +0.8
W13A	Hualapai Mount baz=75	75.17 325	⇓P	P	14 43 19.4 +0.7
T17A	Navajo Res., N baz=75	75.18 328	⇓P	P	14 43 20.0 +1.2
V14A	Boquillas Ranc baz=75	75.20 326	⇑P	P	14 43 19.3 +0.4
SMCO	Snowmass 7.9nm,0.8s,mb4.7	75.29 332	eP	P	14 43 19.9 +0.6
PFO	Pinyon Flat Ob baz=76	75.37 322	⇑P	P	14 43 20.2 +0.3
S18A	Hurst Farm, Bl baz=76	75.37 329	⇑P	P	14 43 20.7 +0.8
U15A	North Rim baz=76	75.43 327	⇓P	P	14 43 21.0 +0.8
P21A	Newcastle baz=76	75.78 332	⇓P	P	14 43 23.6 +1.5
V13A	Grand Canyon W baz=76	75.81 325	⇑P	P	14 43 22.4 0.0
GMRC	Granite Mounta baz=76	75.84 323	⇓P	P	14 43 23.2 +0.6
U14A	Mt Trumbull baz=76	75.85 326	⇑P	P	14 43 23.4 +0.8
R18A	Canyonlands Na baz=76	75.89 329	⇓P	P	14 43 22.9 +0.1
T15A	Red Dirt Ranch baz=76	75.94 327	⇑P	P	14 43 24.0 +0.8
Q19A	Hogan Spring (baz=76	76.08 330	⇓P	P	14 43 24.8 +0.9
COWI	Conover 8.1nm,1.0s,mb4.6	76.11 347	eP	P	14 43 23.4 -0.4
V12A	Nelson baz=76	76.15 324	⇓P	P	14 43 24.4 +0.1
P20A	De Beque baz=76	76.16 331	⇑P	P	14 43 24.7 +0.4
HEC	Hector,Ludlow baz=76	76.23 323	⇓P	P	14 43 25.4 +0.6
U13A	Pakoon Wash baz=76	76.24 325	⇑P	P	14 43 25.2 +0.4
R17A	Hanksville Air baz=76	76.29 329	⇑P	P	14 43 25.5 +0.4
T14A	Hurricane baz=76	76.32 326	⇑P	P	14 43 25.7 +0.4
O21A	Pagoda baz=77	76.37 332	⇑P	P	14 43 26.2 +0.7
N22A	Wattenberg Ran baz=77	76.46 333	⇑P	P	14 43 26.8 +0.8
TUQ	Turquoise Moun baz=77	76.48 324	⇑P	P	14 43 26.4 +0.1
BFSC	Mount Baldy Ra baz=77	76.50 322	⇑P	P	14 43 26.3 -0.1
P19A	Cripple Cowboy baz=77	76.52 331	⇓P	P	14 43 27.3 +0.9
R16A	Teasdale baz=77	76.53 328	⇑P	P	14 43 27.0 +0.5
U12A	Valley of Fire baz=77	76.54 325	⇑P	P	14 43 26.4 -0.2
Q18A	Rafter H Ranch baz=77	76.59 330	⇓P	P	14 43 27.1 +0.3
O20A	White River Ci baz=77	76.62 331	⇓P	P	14 43 27.4 +0.4
T13A	Saint George baz=77	76.69 326	⇑P	P	14 43 27.9 +0.5
SRU	San Rafael baz=77	76.77 329	⇓P	P	14 43 28.0 +0.2
SRU	San Rafael 4.2nm,0.9s,mb4.4	76.77 329	eP	P	14 43 27.6 -0.2
CCUT	Cedar City 5.0nm,0.9s,mb4.4	76.84 327	eP	P	14 43 28.9 +0.7
GSC	Goldstone baz=77	76.84 323	⇓P	P	14 43 28.1 -0.2
N21A	Black Mountain baz=77	76.85 332	⇓P	P	14 43 29.0 +0.8
MSU	Marysvale	77.04 328	eP	P	14 43 30.0 +0.7
P18A	Preston Nutter baz=77	77.07 330	⇓P	P	14 43 30.3 +0.9
S13A	Holt Ranch, En baz=77	77.10 326	⇓P	P	14 43 30.5 +0.8
O19A	Miners Draw (B baz=77	77.13 331	⇓P	P	14 43 30.4 +0.5
N20A	Spence Gulch, baz=78	77.22 332	⇓P	P	14 43 31.0 +0.7
U10A	Ash Meadows, A baz=78	77.44 324	⇓P	P	14 43 32.2 +0.5
LRMC	Laurel Mountai baz=78	77.44 322	⇑P	P	14 43 31.5 -0.2
M21A	Separation Pea baz=78	77.50 333	⇑P	P	14 43 32.6 +0.8
RWWY	Rawlins 11nm,0.8s,mb4.8	77.51 333	eP	P	14 43 32.2 +0.3
T11A	Corn Creek, Al baz=78	77.51 325	⇑P	P	14 43 32.5 +0.5
S12A	Delamar Landin baz=78	77.61 326	⇓P	P	14 43 33.1 +0.5
R13A	O'Grain Ranch, baz=78	77.63 327	⇑P	P	14 43 33.4 +0.8
O17A	Robinson Place baz=78	77.75 330	⇓P	P	14 43 34.1 +0.9
MPMC	Manual Prospec baz=78	77.78 323	⇓P	P	14 43 33.1 -0.4
L21A	Rawlins baz=78	77.81 333	⇓P	P	14 43 33.7 +0.2
N18A	Larsen Ranch, baz=78	77.93 331	⇑P	P	14 43 34.7 +0.4
Q14A	Sevier Lake (B baz=78	77.94 328	⇑P	P	14 43 34.7 +0.3
ISA	Isabella baz=78	78.01 322	⇓P	P	14 43 34.7 -0.1
ISA	Isabella 3.6nm,0.9s,mb4.3	78.01 322	eP	P	14 43 34.8 0.0
R12A	Pony Springs, baz=78	78.06 326	⇓P	P	14 43 35.3 +0.3
MAW	Mawson 4.0nm,0.7s,mb4.5,baz=205,slow=8.3,SNR=10	78.13 164	P	P	14 43 33.0 -2.1
DAU	Daniels Canyon	78.16 330	eP	P	14 43 35.9 +0.4
PKM	Peak Mountain baz=78	78.18 321	⇓P	P	14 43 35.6 -0.2
L20A	Wamsutter baz=78	78.23 332	⇓P	P	14 43 36.2 +0.3
P14A	Drum Mountains baz=78	78.32 328	⇓P	P	14 43 36.8 +0.4
EYMN	Ely 5.3nm,0.8s,mb4.5	78.35 346	eP	P	14 43 35.6 -0.8
CWC	Cottonwood Cre baz=79	78.38 323	⇑P	P	14 43 36.8 0.0
JLU	Jordanelle 6.1nm,0.8s,mb4.6	78.40 330	eP	P	14 43 36.4 -0.5
N17A	Moffit Pass baz=79	78.40 330	⇑P	P	14 43 37.5 +0.6
RSSD	Black Hills 6.4nm,0.9s,mb4.5	78.40 336	eP	P	14 43 36.8 0.0
GRAC	Grapevine Rang baz=79	78.43 324	⇑P	P	14 43 37.1 0.0
R11A	Troy Canyon, C baz=79	78.55 326	⇑P	P	14 43 38.1 +0.4
N16A	Rees Ranch, Co baz=79	78.62 330	⇑P	P	14 43 38.7 +0.6
P13A	Bates Ranch, G baz=79	78.66 327	⇓P	P	14 43 38.8 +0.5
DUG	Dugway baz=79	78.68 329	⇓P	P	14 43 38.7 +0.3
L19A	Farson baz=79	78.73 332	⇑P	P	14 43 39.1 +0.5
S10A	Tonopah Range, baz=79	78.73 325	⇑P	P	14 43 38.9 +0.2
K20A	Yellowstone Ra baz=79	78.78 333	⇑P	P	14 43 39.0 +0.1
L18A	Fontenelle, Gr baz=79	78.87 331	⇑P	P	14 43 39.7 +0.3
TIN	Tinemaha baz=79	78.92 323	⇑P	P	14 43 40.0 +0.2
Q11A	Duckwater baz=79	78.97 326	⇑P	P	14 43 40.2 +0.1
M16A	Huntsville baz=79	79.05 330	⇓P	P	14 43 40.7 +0.2
P12A	McGill baz=79	79.10 327	⇓P	P	14 43 41.6 +0.9
N15A	Stansbury Isla baz=79	79.11 329	⇓P	P	14 43 41.8 +1.1
K19A	Absolon Red Bu baz=79	79.12 333	⇑P	P	14 43 40.7 -0.1
BW06	Boulder Array baz=80	79.36 332	⇑P	P	14 43 42.0 -0.1
BW06	Boulder Array 4.1nm,1.0s,mb4.3	79.36 332	eP	P	14 43 42.0 -0.1
PDAR	Pinedale Array 2.8nm,0.9s,mb4.2,baz=135,slow=5.5,SNR=13	79.36 332	P	P	14 43 41.5 -0.6
L17A	Cokeville baz=80	79.36 331	⇑P	P	14 43 41.8 -0.3
N14A	Grayback Hills baz=80	79.38 329	⇓P	P	14 43 41.9 -0.3
K18A	Toltan Ranch, baz=80	79.46 332	⇓P	P	14 43 43.1 +0.5
L16A	Fish Haven baz=80	79.54 331	⇓P	P	14 43 43.0 -0.1
AGMN	Agassiz Nation 11nm,0.9s,mb4.8	79.69 343	eP	P	14 43 43.3 -0.4
J18A	Kendall Valley baz=80	79.92 332	⇓P	P	14 43 45.0 -0.2
HVU	Hansel Valley 5.9nm,0.7s,mb4.6	79.94 330	eP	P	14 43 44.6 -0.7
L15A	Malad City baz=80	79.94 330	⇓P	P	14 43 45.0 -0.3
O11A	Cowboy Ranch, baz=80	79.97 327	⇓P	P	14 43 45.5 0.0
M14A	Sheep Mountain baz=80	79.97 329	⇓P	P	14 43 45.0 -0.4
NVAR	Mina Array Bea 1.4nm,0.8s,mb3.9,baz=157,slow=6.8,SNR=7.4	79.99 324	P	P	14 43 45.5 -0.1
M13A	Montello baz=80	80.23 328	⇑P	P	14 43 46.7 -0.1
N12A	Clover Valley, baz=80	80.24 328	⇑P	P	14 43 46.9 0.0
I18A	Diamond G Ranc baz=80	80.24 332	⇓P	P	14 43 47.1 +0.2
K16A	Soda Springs baz=80	80.27 331	⇓P	P	14 43 47.5 +0.5
L14A	Malta baz=81	80.35 329	⇑P	P	14 43 47.6 +0.2
RRI2	Red Ridge 6.4nm,0.9s,mb4.5	80.57 331	eP	P	14 43 47.9 -0.8
M12A	Wells baz=81	80.62 328	⇑P	P	14 43 48.7 -0.3
J16A	Bone baz=81	80.64 331	⇑P	P	14 43 49.1 +0.2
L13A	Double Diamond baz=81	80.71 329	⇓P	P	14 43 49.3 -0.1
M11A	Holland Ranch, baz=81	81.05 328	⇑P	P	14 43 51.0 -0.2
RLMT	Red Lodge baz=82	81.20 334	⇓P	P	14 43 52.0 0.0
L12A	House Creek Ra baz=82	81.24 328	⇓P	P	14 43 52.5 +0.3
M10A	I.L. Ranch, Tu baz=82	81.47 327	⇓P	P	14 43 53.6 +0.2
TORD	Torodi Ar. Bea baz=265,slow=5.0	81.48 70	P	P	14 43 54.9 +0.8
G18A	Lazy EL Ranch, baz=82	81.48 334	⇓P	P	14 43 53.3 -0.1
J14A	Carey baz=82	81.50 330	⇓P	P	14 43 53.8 +0.2
ULM	Lac du Bonnet 15nm,1.0s,mb4.9,baz=149,slow=6.4,SNR=7.4	81.51 344	P	P	14 43 52.0 -1.5
ULM	Lac du Bonnet	81.51 344	P	P	14 43 52.0 -1.5
K12A	Draper Farm, C baz=82	81.58 329	⇓P	P	14 43 53.9 -0.1
L11A	Cat Creek Ranc baz=82	81.60 328	⇑P	P	14 43 53.9 -0.3
H16A	Russell Place, baz=82	81.65 332	⇓P	P	14 43 54.4 +0.1
BOSA	Boshof 6.5nm,0.8s,mb4.6,baz=148,slow=3.5,SNR=8.7	81.78 118	P	P	14 43 55.3 -0.4
J13A	Cove Ranch, Pi baz=82	81.85 330	⇓P	P	14 43 55.4 -0.1
L10A	Juniper Basin baz=82	81.87 328	⇓P	P	14 43 55.2 -0.3
GCMT	Greycliff 2.6nm,1.0s,mb4.1	81.92 334	eP	P	14 43 54.5 -1.2
I14A	Mackay baz=82	81.96 330	⇓P	P	14 43 56.2 +0.2
F18A	Big Timber baz=82	82.03 334	⇑P	P	14 43 56.0 -0.3
HLID	Hailey baz=82	82.09 330	⇓P	P	14 43 57.0 +0.3
HLID	Hailey 5.3nm,1.0s,mb4.4	82.09 330	eP	P	14 43 56.9 +0.3
BEKR	Beckworth baz=82	82.12 324	⇑P	P	14 43 56.7 -0.3
J12A	Stokes Ranch, baz=82	82.15 329	⇑P	P	14 43 56.8 -0.2
K11A	Parker Ranch, baz=82	82.20 328	⇑P	P	14 43 56.8 -0.5
I13A	Wildhorse Cree baz=82	82.23 330	⇓P	P	14 43 57.4 0.0
DGMT	Dagmar baz=83	82.25 338	⇑P	P	14 43 58.0 +0.6
F17A	Fitzpatrick Pl baz=83	82.40 333	⇓P	P	14 43 58.5 +0.2
MCMT	McKenzie Canyo 1.7nm,0.7s,mb4.1	82.42 331	eP	P	14 43 58.6 +0.2
H14A	Leadore baz=83	82.47 331	⇓P	P	14 43 58.9 +0.2
G15A	Dillon baz=83	82.54 332	⇑P	P	14 43 59.0 0.0
BOZ	Bozeman (W) baz=83	82.58 333	⇓P	P	14 43 59.1 0.0
I12A	Atlanta baz=83	82.59 329	⇑P	P	14 43 59.1 -0.2
K10A	MacKenzie Ranc baz=83	82.60 328	⇓P	P	14 43 59.0 -0.3
MFID	Camas Ranch baz=83	82.61 329	⇑P	P	14 43 59.6 +0.3
E18A	Harlowton baz=83	82.66 334	⇑P	P	14 43 59.6 0.0
H13A	Challis baz=83	82.81 330	⇑P	P	14 44 00.1 -0.3
LRM	Limekiln Ridge	83.06 332	eP	P	14 44 01.7 +0.1
H12A	Diamond D Ranc baz=83	83.06 330	⇑P	P	14 44 01.4 -0.3
F15A	Butte baz=83	83.09 332	⇓P	P	14 44 01.7 -0.1
SCHQ	Schefferville 1.6nm,0.6s,mb4.2,baz=203,slow=4.3,SNR=3.6	83.11 2	P	P	14 44 01.6 -0.2
G13A	Cobalt baz=84	83.22 331	⇑P	P	14 44 02.2 -0.3
E16A	East Helena baz=84	83.32 333	⇓P	P	14 44 03.3 +0.3
D17A	Six Diamond Ra baz=84	83.44 334	⇓P	P	14 44 03.5 -0.1
D16A	Dana Ranch, Ca baz=84	83.68 333	⇓P	P	14 44 05.2 +0.4
H11A	Donnelly baz=84	83.69 329	⇓P	P	14 44 04.6 -0.3
LBTB	Lobatse 8.3nm,0.8s,mb4.9	83.75 115	eP	P	14 44 06.3 +0.4
J08A	Circle Bar Ran baz=84	83.80 327	⇓P	P	14 44 05.3 -0.2
F13A	Darby baz=84	83.82 331	⇑P	P	14 44 05.3 -0.3
C17A	Wharram Farm, baz=84	83.87 334	⇑P	P	14 44 05.3 -0.5
I09A	Lost Marbles R baz=84	83.92 328	⇓P	P	14 44 05.8 -0.3
H10A	Noah's Angus R baz=84	83.94 329	⇑P	P	14 44 05.9 -0.3
D15A	Lincoln baz=84	84.07 333	⇓P	P	14 44 06.4 -0.4
B18A	Beardsley Farm baz=84	84.13 335	⇑P	P	14 44 06.4 -0.7
F12A	Elk City baz=84	84.19 331	⇓P	P	14 44 06.4 -1.0
G11A	Walters Elk Ra baz=85	84.35 330	⇓P	P	14 44 07.8 -0.5
C16A	Fuhringer Ranc baz=85	84.38 334	⇓P	P	14 44 08.1 -0.3
G10A	Bishop Farm, J baz=85	84.65 329	⇓P	P	14 44 09.5 -0.3
C15A	Salmond Ranch, baz=85	84.70 333	⇑P	P	14 44 09.6 -0.4
H08A	Prairie City baz=85	84.77 328	⇓P	P	14 44 09.8 -0.6
E12A	Beaver Dam Sad baz=85	84.84 331	⇓P	P	14 44 10.6 -0.2
D13A	Huson baz=85	84.91 332	⇑P	P	14 44 10.3 -0.7
G09A	Cove baz=85	84.94 329	⇓P	P	14 44 10.3 -0.9
B15A	Bradely Ranch, baz=85	85.12 334	⇑P	P	14 44 11.4 -0.7
C14A	Swan Lake baz=85	85.15 333	⇓P	P	14 44 11.7 -0.6
F10A	Beach Ranch, E baz=86	85.22 330	⇑P	P	14 44 11.9 -0.7
D12A	Red Ives Fores baz=86	85.25 331	⇓P	P	14 44 12.1 -0.7
A16A	West Butte Ran baz=86	85.27 334	⇑P	P	14 44 12.3 -0.5
C13A	Hot Springs baz=86	85.42 332	⇑P	P	14 44 13.2 -0.4
B14A	Marquette Ranc baz=86	85.44 333	⇑P	P	14 44 13.1 -0.6
CASY	Casey 96nm,2.3s,mb5.5	85.47 181	eP	P	14 44 10.9 -2.9
BSMT	Bassoo Peak	85.64 332	eP	P	14 44 14.6 -0.1
A15A	Johnson Ranch, baz=86	85.72 334	⇓P	P	14 44 14.0 -1.0
A14A	Double T Ranch baz=86	85.99 334	⇑P	P	14 44 15.8 -0.6
C11A	Tepee Creek (N baz=86	86.25 331	⇑P	P	14 44 16.8 -0.9
A13A	Flathead Natio baz=87	86.35 333	⇑P	P	14 44 17.5 -0.7
H04A	Detroit Lake baz=87	86.58 326	⇓P	P	14 44 18.3 -1.1
B06A	Marblemount baz=89	89.05 329	⇓P	P	14 44 29.8 -1.3
YKA	Yellowknife Ar 1.2nm,0.8s,mb4.4,baz=133,slow=3.9,SNR=7.5	97.21 341	P	P	14 45 06.1 -2.3
AKASG	Malin Array Be 0.4nm,0.3s,baz=270,slow=2.6,SNR=4.6	117.76 45	PKP	PKPdf	14 50 19.9 -2.3
BR131	Keskin Array S	118.26 58	eP	Pdif	14 46 40.9 -1.9
BRTR	Keskin Array B 1.0nm,0.8s,baz=222,slow=1.7,SNR=5.1	118.26 58	PKP	PKPdf	14 50 23.6 0.0
BRTR	Keskin Array B	118.26 58	PKP	PKPdf	14 50 23.6 0.0
ASAR	Alice Springs 1.0nm,0.5s,baz=137,slow=1.4,SNR=18	122.83 207	PKP	PKPdf	14 50 30.5 -2.5
ASAR			PKKPbc	PKKPbc	15 00 26.4 +1.3
WRA	Warramunga Arr 0.5nm,1.1s,baz=340,slow=3.7,SNR=4.3	125.95 210	PKP	PKPdf	14 50 37.0 -2.1
AKTK	Aktyubinsk 3.8nm,0.6s,baz=158,slow=1.6,SNR=29	136.00 46	PKP	PKPdf	14 50 56.0 -1.0
AKTO	Aktyubinsk 0.6nm,0.4s,baz=48,slow=1.2,SNR=5.6	136.00 46	PKP	PKPdf	14 50 56.0 -1.0
BVAR	Borovoye Array 0.8nm,0.7s,baz=325,slow=1.8,SNR=5.3	142.55 38	PKP	PKPdf	14 51 05.5 -3.4
KURK	Kurchatov 9.0nm,0.7s,baz=304,slow=3.1,SNR=15	148.13 38	PKP	PKPdf	14 51 18.3 -0.2
KURK			PKPbc	PKPbc	14 51 22.2 +0.4
EKS2	Erkin-Say 9.0nm,0.7s,baz=302,slow=3.3,SNR=40	148.30 54	ePKPdf	PKPdf	14 51 19.8 +0.8
AAK	Ala-Archa 6.7nm,0.6s,baz=229,slow=2.4,SNR=16	148.82 54	PKPbc	PKPbc	14 51 24.1 +0.3
UCH	Uchtor	148.94 55	ePKPdf	PKPdf	14 51 21.4 +1.3
UCH			ePKPbc	PKPbc	14 51 25.5 +1.3
ZAA0	Zalesovo Array	149.06 28	ePKPdf	PKPdf	14 51 19.8 -0.1
ZAA0			ePKPbc	PKPbc	14 51 24.1 0.0
ZALV	Zalesovo Beam 22nm,0.6s,baz=284,slow=1.9,SNR=49	149.06 28	PKP	PKPdf	14 51 20.1 +0.2
ZALV			PKPbc	PKPbc	14 51 24.1 +0.1
TKM2	Tokmak 2 23nm,0.6s,baz=305,slow=3.5,SNR=63	149.52 53	ePKPdf	PKPdf	14 51 21.1 +0.1
TKM2			ePKPbc	PKPbc	14 51 26.6 +1.0
KSH	Kashi	150.64 59	PKPbc	PKPbc	14 51 28.8 +0.4
KSH			pPKP	pPKPdf	14 51 39.5 +6.8
KSH			sPKP		14 51 43.3
KSH			PKPab	PKPab	14 51 44.0 +8.7
KSH			PKS		14 55 02.3
KSH			PP	PP	14 55 15.3 +10
KSH			SKS	SKSdf	14 58 31.3 +2.8
KSH			SKKS	SKKSac	15 01 59.3 +5.4
KSH			SS	SS	15 14 30.5 +6.6
KSH			AMB	AMB	
	comp=Z,390nm,12.2s				
KSH			LR	LR	
	comp=N,43nm,4.0s				
KSH			LR	LR	
	comp=E,40nm,4.4s				
KSH			LR	LR	
	comp=Z,27nm,3.2s				
MK31	Makanchi Array	152.27 42	ePKPdf	PKPdf	14 51 24.3 -0.8
MK31			ePKPbc	PKPbc	14 51 31.9 0.0
MKAR	Makanchi Array comp=Z,0.7nm,0.8s,baz=60,slow=4.8,SNR=6.6	152.27 42	PKP	PKPdf	14 51 24.4 -0.8
MKAR			PKPbc	PKPbc	14 51 32.0 +0.1
	comp=Z,6.8nm,0.8s,baz=47,slow=5.7,SNR=46				
MKAR			PKPab	PKPab	14 51 40.0 -1.9
	comp=Z,3.9nm,0.8s,baz=47,slow=5.3,SNR=10				
PSI	Prapat comp=Z,2.4nm,0.4s,baz=277,slow=6.7,SNR=3.8	152.63 158	PKPbc	PKPbc	14 51 31.8 -2.0
PSI	Prapat	152.63 158	PKPbc	PKPbc	14 51 31.8 -2.0
KSM	Kuching	153.05 183	ePKPbc	PKPbc	14 51 31.6 -3.1
MJAR	Matsushiro Arr comp=Z,1.3nm,0.7s,baz=133,slow=1.5,SNR=4.9	154.23 295	PKPab	PKPab	14 51 46.6 -3.9
WMQ	Urumqi	157.09 43	ePKP	PKPdf	14 51 31.0 -0.9
SONM	Songino Array comp=Z,0.5nm,0.7s,baz=129,slow=3.9,SNR=5.0	160.64 5	PKP	PKPdf	14 51 35.1 -0.8
SONM			PKPab	PKPab	14 52 18.6 +1.0
	comp=Z,1.3nm,1.0s,baz=338,slow=3.6,SNR=6.4				
KSRS	Korea Array comp=Z,1.2nm,0.9s,baz=64,slow=2.9,SNR=4.9	161.88 304	PKP	PKPdf	14 51 33.6 -4.0
CMAR	Chiang Mai Arr comp=Z,0.5nm,0.4s,baz=243,slow=3.2,SNR=4.7	166.34 135	PKP	PKPdf	14 51 41.5 -0.6
GTA	Gaotai	166.74 33	ePKP	PKPdf	14 51 44.0 +2.1
GTA			pPKP	pPKPdf	14 51 49.8 -1.9
GTA			sPKP		14 51 57.0
HHC	Hu-ho-hao-te	167.56 351	ePKP	PKPdf	14 51 42.3 -0.1
HHC			pPKP	pPKPdf	14 51 53.0 +0.7
HHC			sP		14 51 56.5
HHC			PKS		14 55 13.3
HHC			PP	PP	14 56 40.3 +4.4
HHC			SKS	SKSdf	14 58 41.8 -2.4
HHC			SKKS	SKKSac	15 03 22.3 +0.6
HHC			SS	SS	15 17 22.5 +2.1
HHC			AMB	AMB	
	comp=Z,310nm,7.7s				

HHC					LR	LR		
	comp=N,140nm,22.6s							
HHC					LR	LR		
	comp=E,110nm,21.4s							
HHC					LR	LR		
	comp=Z,130nm,21.4s							
NJ2	**Nanjing**	**170.84**	**295**	*e*PKP		PKPdf	14 51 44.3	-0.5
LZH	**Lanzhou**	**171.29**	**29**	*e*PKP		PKPdf	14 51 42.5	-2.4
LZH				pPKP		pPKPdf	14 51 53.3	-1.4
LZH				sPKP			14 51 57.0	
LZH				PKPab		PKPab	14 53 06.0	+1.1
LZH				LR		LR		
	comp=E,130nm,18.5s							
LZH				LR		LR		
	comp=Z,200nm,20.3s							
KMI	**Kunming**	**173.41**	**120**	PKP		PKPdf	14 51 45.5	-0.6
KMI				sPKP			14 51 58.5	
CD2	**Chengdu**	**174.83**	**62**	*e*PKP		PKPdf	14 51 44.8	-1.7
GYA	**Guiyang**	**177.03**	**134**	PKP		PKPdf	14 51 46.0	-1.1
GYA				sPKP			14 52 01.0	
GYA				PKPab		PKPab	14 53 32.5	+1.7
GYA				PKS			14 55 16.8	
GYA				PP		PP	14 57 25.8	+2.3
GYA				AMB		AMB		
	comp=Z,90nm,8.0s							

ISK ***27*** *14:36:04.5, 39.°34N×27.°78E, h9km, MD2.7*
CSEM ***27*** *14:36:05.3±0.1, 39.°32N×27.°80E, h10km, MD2.7, Error ellipse: s-maj=2.2km s-min=1.1km az=83.0*
ISCJB ***27*** *14:36:05.5±0.7, 39.°34N±0.°03×27.°85E±0.°05, h5km±9km, Error ellipse: s-maj=7.2km s-min=5.1km az=158.9*
DDA ***27*** *14:36:07.7, 39.°48N×27.°89E, h7km±3km, Md3.0*

ISC 27 14:36:06.0±0.6, 39.°35N±0.°03×27.°85E±0.°05, h9km±6km, n22, σ0.°78/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.29**	**4**	*e*PG	**Pg**	**14 36 11.6**	**-0.3**
BALB				*e*SG	**Sg**	**14 36 15.8**	**0.0**
BALB	**Balikesir**	**0.29**	**4**	*e*Pg	**Pg**	**14 36 11.6**	**-0.2**
BALB				*e*Sg	**Sg**	**14 36 15.8**	**0.0**
BALY	**Balya**	**0.43**	**335**	*i* P	**Pg**	**14 36 14.3**	**-0.1**
BALY				*i* S	**Sg**	**14 36 20.2**	**+0.1**
BALY	**Balya**	**0.43**	**335**	*i* P	**Pg**	**14 36 14.3**	**-0.1**
BALY				*i* S	**Sg**	**14 36 20.2**	**+0.1**
AKS	**Akhisar**	**0.47**	**184**	*e*PG	**Pg**	**14 36 13.8**	**-1.4**
AKS	**Akhisar**	**0.47**	**184**	*e*Pg	**Pg**	**14 36 13.8**	**-1.4**
DURS	**Dursunbey**	**0.54**	**62**	*i* P	**Pg**	**14 36 17.0**	**+0.5**
DURS				*i* S	**Sg**	**14 36 23.6**	**-0.1**
DURS	**Dursunbey**	**0.54**	**62**	*i* P	**Pg**	**14 36 17.0**	**+0.4**
DURS				*i* S	**Sg**	**14 36 23.6**	**-0.1**
AYVA	**Ayvalik**	**0.90**	**268**	*i* P	**Pg**	**14 36 25.5**	**+2.2**
AYVA				*i* S	**Sg**	**14 36 39.9**	**+4.8**
AYVA	**Ayvalik**	**0.90**	**268**	*i* P	**Pg**	**14 36 25.5**	**+2.2**
KCT	**Karacabey**	**0.99**	**23**	*e*PG	**Pg**	**14 36 24.4**	**-0.8**
KCT	**Karacabey**	**0.99**	**23**	*e*Pg	**Pg**	**14 36 24.4**	**-0.7**
KULA	**Kula-Manisa**	**1.05**	**143**	*e*PG	**Pg**	**14 36 25.5**	**-0.6**
KULA				*e*SG	**Sg**	**14 36 40.5**	**+0.8**
KULA	**Kula-Manisa**	**1.05**	**143**	*e*Pg	**Pg**	**14 36 25.5**	**-0.6**
KULA				*e*Sg	**Sg**	**14 36 40.5**	**+0.8**
ULDT	**Uludag**	**1.27**	**51**	*i* P	**Pn**	**14 36 30.0**	**+0.2**
ULDT				*i* S	**Sb**	**14 36 47.3**	**+0.9**
ULDT	**Uludag**	**1.27**	**51**	*i* P	**Pn**	**14 36 30.0**	**+0.1**
ULDT				*i* S	**Sb**	**14 36 47.3**	**+0.9**
RKY	**Sarkoy-Tekirda**	**1.43**	**339**	*e*PN	**Pn**	**14 36 31.0**	**-1.1**
RKY	**Sarkoy-Tekirda**	**1.43**	**339**	*e*Pn	**Pn**	**14 36 31.0**	**-1.1**
ARMT	**Armutlu**	**1.44**	**32**	*e*PN	**Pn**	**14 36 32.3**	**0.0**
ARMT	**Armutlu**	**1.44**	**32**	*e*Pn	**Pn**	**14 36 32.3**	**+0.1**
YLV	**Yalova**	**1.69**	**43**	*e*PN	**Pn**	**14 36 35.5**	**-0.1**
YLV	**Yalova**	**1.69**	**43**	*e*Pn	**Pn**	**14 36 35.5**	**-0.1**

BJI ***27*** *14:36:32.1, 9.°73N×91.°65E, h10km, mb4.3/10*
IDC ***27*** *14:36:40.9±0.7, 10.°64N×91.°42E, h0km, mb4.1/17, mb1 4.2/17, mb1mx4.0/26, mbtmp4.1/17, Error ellipse: s-maj=31.7km s-min=12.9km az=53.0*
NEIC ***27*** *14:36:42.8±0.3, 10.°74N×91.°54E, h10km, mb4.5/5, Error ellipse: s-maj=17.3km s-min=6.4km az=50.0*
MOS ***27*** *14:36:44.5±0.8, 10.°83N×91.°78E, h33km, mb4.8/11, Error ellipse: s-maj=28.7km s-min=9.0km az=114.9*
ISCJB ***27*** *14:36:44.4±0.5, 10.°71N±0.°07×91.°54E±0.°09, h33km, mb4.2/29, Error ellipse: s-maj=14.5km s-min=7.7km az=145.7*

ISC 27 14:36:46.7±0.5, 10.°76N±0.°07×91.°57E±0.°09, h35km, n65, σ0.°83/63, mb4.2/29, 3C-1D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHTO	**Chiang Mai**	**10.72**	**41**	*e*P	**Pn**	**14 39 23.2**	**+5.4**
CHTO				pmax	pmax		
	comp=Z,11nm,1.4s						
CHTO	**Chiang Mai**	**10.72**	**41**	*e*P	**Pn**	**14 39 23.2**	**+5.4**
	comp=Z,11nm,1.4s						
PALK	**Pallekele**	**11.28**	**253**	*e*P	Px	14 39 35.5	
ODAN	**Odare**	**16.49**	**347**	*e*P	**Pn**	**14 40 34.4**	**-1.1**
	comp=Z,13nm,0.5s						
RAMN	**Ramite**	**16.77**	**344**	*e*P	**Pn**	**14 40 38.8**	**-0.2**
	comp=Z,21nm,0.5s						
TAPN	**Taplejung**	**16.90**	**348**	*e*P	**Pn**	**14 40 38.9**	**-1.7**
	comp=Z,36nm,0.8s						
JIRN	**Jiri**	**17.55**	**344**	*e*P	**Pn**	**14 40 48.6**	**-0.1**
	comp=Z,14nm,0.5s						
PKI	**Pulchoki**	**17.70**	**342**	*e*P	**Pn**	**14 40 50.9**	**+0.4**
	comp=Z,33nm,0.9s						
PKIN	**Phulchoki**	**17.71**	**342**	*e*P	**Pn**	**14 40 49.5**	**-1.1**
	comp=Z,14nm,0.7s						
KMI	**Kunming**	**17.79**	**35**	P	**Pn**	**14 40 53.5**	**+1.9**
KMI				pmax	pmax		
	comp=Z,6.0nm,1.2s						
DMN	**Daman**	**17.83**	**341**	*e*P	**Pn**	**14 40 51.6**	**-0.5**
	comp=Z,33nm,0.7s						
KKN	**Kakani**	**17.94**	**342**	*e*P	**Pn**	**14 40 53.3**	**-0.2**
	comp=Z,19nm,0.8s						
KSM	**Kuching**	**20.78**	**115**	*e*P	**P**	**14 41 25.1**	**+0.2**
	comp=Z,11nm,0.9s						
GTA	**Gaotai**	**29.46**	**13**	*e*P	**P**	**14 42 47.8**	**+0.5**
GTA				pP	pP	14 42 52.5	-4.9
GTA				sP	sP	14 42 54.8	-6.8
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.2						
MK31	**Makanchi Array**	**36.77**	**349**	*e*P	**P**	**14 43 50.8**	**0.0**
MKAR	**Makanchi Array**	**36.77**	**349**	P	**P**	**14 43 51.0**	**+0.2**
	comp=Z,5.6nm,0.7s,mb4.5,baz=133,slow=8.8,SNR=29						
MKAR				PcP	PcP	14 46 12.5	-0.1
	comp=Z,0.5nm,0.6s,baz=93,slow=3.2,SNR=4.2						
SONM	**Songino Array**	**39.01**	**16**	P	**P**	**14 44 09.3**	**-0.4**
	comp=Z,2.1nm,1.0s,mb3.8,baz=199,slow=8.6,SNR=12						
KURK	**Kurchatov**	**41.24**	**348**	P	**P**	**14 44 28.0**	**-0.2**
	comp=Z,5.1nm,0.9s,mb4.2,baz=171,slow=7.9,SNR=22						
KURK				PcP	PcP	14 46 26.2	-0.4
	comp=Z,0.4nm,0.6s,baz=144,slow=2.3,SNR=3.9						
KURK	**Kurchatov**	**41.24**	**348**	*d* P	**P**	**14 44 28.4**	**+0.2**
KURK				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.3						
KURK	**Kurchatov**	**41.24**	**348**	*e*P	**P**	**14 44 27.7**	**-0.5**
KSRS	**Korea Array**	**42.09**	**45**	P	**P**	**14 44 36.6**	**+1.2**
	comp=Z,2.1nm,1.0s,mb3.7,baz=237,slow=7.4,SNR=5.7						
ZAA0	**Zalesovo Array**	**43.41**	**354**	*e*P	**P**	**14 44 45.5**	**-0.3**
ZALV	**Zalesovo Beam**	**43.41**	**354**	P	**P**	**14 44 45.4**	**-0.5**
	comp=Z,3.6nm,0.7s,mb4.2,baz=173,slow=8.9,SNR=16						
FITZ	**Fitzroy Crossi**	**44.20**	**130**	P	**P**	**14 44 51.7**	**-1.0**
	comp=Z,3.6nm,0.9s,mb4.1,baz=278,slow=15,SNR=8.6						
BVAR	**Borovoye Array**	**45.47**	**342**	P	**P**	**14 45 02.5**	**+0.2**
	comp=Z,1.2nm,0.8s,mb3.8,baz=160,slow=9.1,SNR=7.6						
BVAR				PcP	PcP	14 46 41.0	+0.2
	comp=Z,0.6nm,0.6s,baz=160,slow=5.8,SNR=2.9						
BRVK	**Borovoye**	**45.53**	**342**	*e*P	**P**	**14 45 02.9**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
AKTK	**Aktyubinsk**	**48.22**	**332**	P	**P**	**14 45 23.8**	**0.0**
AKTO	**Aktyubinsk**	**48.22**	**332**	P	**P**	**14 45 23.8**	**0.0**
	comp=Z,1.3nm,0.5s,mb4.2,baz=130,slow=7.7,SNR=8.7						
SVE	**Sverdlovsk**	**51.80**	**339**	*e*P	**P**	**14 45 52.3**	**+1.3**
WRA	**Warramunga Arr**	**52.00**	**126**	P	**P**	**14 45 52.5**	**-0.4**
	comp=Z,0.9nm,0.6s,mb3.9,baz=307,slow=8.1,SNR=15						
WRAB	**Tennant Creek**	**52.00**	**126**	*e*P	**P**	**14 45 48.0**	**-5.0**
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
WRAB	**Tennant Creek**	**52.00**	**126**	*e*P	**P**	**14 45 48.0**	**-5.0**
	comp=Z,5.3nm,0.8s,mb4.5						
ARU	**Arti**	**52.26**	**338**	*c i*P	**P**	**14 45 55.4**	**+1.0**
ARU				*e*		14 47 48.1	
ARU				S	**S**	**14 53 21.5**	**+4.6**
ARU				SS	SS	14 56 53.8	-1.0
ARU				pmax	pmax		
	comp=Z,8.0nm,1.7s,mb4.4						
KIV	**Kislovodsk**	**53.49**	**317**	*e*P	**P**	**14 46 05.9**	**+2.2**
KIV				*e*		14 46 12.3	
KIV				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
ASAR	**Alice Springs**	**53.70**	**130**	P	**P**	**14 46 05.0**	**-0.5**
	comp=Z,1.9nm,0.8s,mb4.1,baz=306,slow=6.5,SNR=20						
ASAR				PcP	PcP	14 47 11.8	+0.3
	comp=Z,0.6nm,0.6s,baz=309,slow=4.4,SNR=2.6						
YSS	**Yuzh-Sakhalins**	**56.15**	**40**	*e*P	**P**	**14 46 28.0**	**+5.1**
VSR	**Storozhevoye**	**58.58**	**324**	*e*P	**P**	**14 46 40.4**	**+0.5**
VSR				pmax	pmax		
	comp=E,9.0nm,0.8s						
VSR				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
VSR				pmax	pmax		
	comp=N,4.0nm,0.4s						
BRTR	**Keskin Array B**	**58.63**	**310**	P	**P**	**14 46 40.4**	**-0.2**
	comp=N,2.2nm,0.7s,mb4.3,baz=116,slow=8.4,SNR=12						
BRTR	**Keskin Array B**	**58.63**	**310**	P	**P**	**14 46 40.4**	**-0.2**
OBN	**Obninsk**	**61.60**	**328**	P	**P**	**14 47 02.2**	**+1.6**
OBN				*e*		14 47 08.9	
OBN						14 47 45.3	
OBN				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb5.2						
STKA	**Stephens Creek**	**63.92**	**133**	P	**P**	**14 47 16.3**	**-0.1**
	comp=Z,1.8nm,0.7s,mb4.2,baz=98,slow=10,SNR=2.9						
AKASG	**Malin Array Be**	**64.33**	**321**	P	**P**	**14 47 17.9**	**-0.9**
	comp=Z,0.5nm,0.4s,mb3.9,baz=80,slow=6.4,SNR=5.6						
AKASG	**Malin Array Be**	**64.33**	**321**	*e*P	**P**	**14 47 17.8**	**-1.0**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TIXI	**Tiksi**	**64.94**	**12**	*e*P	**P**	**14 47 20.2**	**-2.2**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.9s,mb4.3						
JOF	**Joensuu**	**67.17**	**334**	*e*P	**P**	**14 47 36.8**	**-0.1**
JOF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
JOF	**Joensuu**	**67.17**	**334**	*e*p	**P**	**14 47 36.8**	**-0.1**
	comp=Z,6.9nm,0.8s,mb4.7						
FINES	**FINESS Array B**	**68.99**	**332**	P	**P**	**14 47 48.1**	**-0.2**
	comp=Z,3.1nm,0.8s,mb4.3,baz=95,slow=8.0,SNR=8.8						
ARCES	**ARCESS Array B**	**71.71**	**340**	P	**P**	**14 48 05.1**	**+0.3**
	comp=Z,1.5nm,0.6s,mb4.1,baz=94,slow=7.5,SNR=6.8						
NB2	**NORSAR Subarra**	**75.98**	**330**	P	**P**	**14 48 30.0**	**0.0**
	comp=Z,1.2nm,0.8s,mb3.9,baz=98,slow=5.1						
NOA	**NORSAR Array B**	**75.98**	**330**	P	**P**	**14 48 29.4**	**-0.6**
	comp=Z,1.4nm,0.8s,mb4.0,baz=95,slow=5.1,SNR=6.2						
NOA	**NORSAR Array B**	**75.98**	**330**	P	**P**	**14 48 29.4**	**-0.6**
KEST	**Kesra**	**77.52**	**304**	P	**P**	**14 48 38.1**	**-1.1**
	comp=Z,1.0nm,0.8s,mb3.8,baz=5.6,slow=15,SNR=3.8						
LPG	**La Plagne**	**78.80**	**314**	*e*P	**P**	**14 48 46.7**	**+0.6**
	comp=Z,4.8nm,0.6s,mb4.3						
LPG	**La Plagne**	**78.80**	**314**	*e*P	**P**	**14 48 46.7**	**+0.6**
LPG				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
LPG	**La Plagne**	**78.80**	**314**	*e*P	**P**	**14 48 46.7**	**+0.6**
	comp=Z,2.4nm,0.6s,mb4.3						
LPL	**La Plagne**	**78.81**	**314**	*e*P	**P**	**14 48 46.8**	**+0.7**
	comp=Z,12nm,0.8s,mb4.6						
LPL	**La Plagne**	**78.81**	**314**	*e*P	**P**	**14 48 46.8**	**+0.7**
LPL				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
LPL	**La Plagne**	**78.81**	**314**	*e*P	**P**	**14 48 46.8**	**+0.7**
	comp=Z,5.9nm,0.8s,mb4.6						
SMF	**Signal de Mont**	**80.72**	**316**	*e*P	**P**	**14 48 56.6**	**+0.1**
AVF	**Avril sur Loir**	**81.04**	**316**	*e*P	**P**	**14 48 58.3**	**+0.1**
MTLF	**Montolieu**	**82.24**	**313**	*e*P	**P**	**14 49 05.2**	**+0.6**
	comp=Z,8.3nm,0.8s,mb4.4						
MTLF	**Montolieu**	**82.24**	**313**	*e*P	**P**	**14 49 05.2**	**+0.6**
MTLF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
MTLF	**Montolieu**	**82.24**	**313**	*e*P	**P**	**14 49 05.2**	**+0.6**
	comp=Z,4.2nm,0.8s,mb4.4						
NVAR	**Mina Array Bea**	**123.67**	**28**	PKP	PKPdf	14 55 42.5	+1.3
	comp=Z,0.3nm,0.7s,baz=320,slow=3.9,SNR=2.6						
TXAR	**Lajitas Array**	**137.52**	**20**	PKP	PKPdf	14 56 09.3	+1.7
	comp=Z,0.1nm,0.4s,baz=100,slow=3.0,SNR=2.5						

IDC ***27*** *14:40:39.5±2.5, 11.°01N×92.°04E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.6/23, mbtmp3.7/7, Error ellipse: s-maj=111.2km s-min=19.5km az=61.0*
NEIC ***27*** *14:40:40.9±1.4, 11.°01N×92.°03E, h10km, mb3.5/1, Error ellipse: s-maj=63.7km s-min=10.7km az=60.0*
ISCJB ***27*** *14:40:42.0±2.0, 11.°0N±0.°3×92.°0E±0.°5, h33km, mb3.6/8, Error ellipse: s-maj=87.2km s-min=14.3km az=150.3*

ISC 27 14:40:44.5±1.9, 11.°0N±0.°3×92.°0E±0.°5, h35km, n10, σ0.°47/10, mb3.6/8, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**36.61**	**349**	*e*P	**P**	**14 47 47.3**	**0.0**
MKAR	**Makanchi Array**	**36.61**	**349**	P	**P**	**14 47 46.7**	**-0.6**
	1.2nm,0.7s,mb3.8,baz=138,slow=8.7,SNR=6.2						
SONM	**Songino Array**	**38.66**	**16**	P	**P**	**14 48 05.0**	**+0.4**
	0.6nm,0.7s,mb3.4,baz=189,slow=8.6,SNR=4.2						
KURK	**Kurchatov**	**41.10**	**347**	P	**P**	**14 48 24.2**	**-0.6**
	1.1nm,0.9s,mb3.5,baz=171,slow=7.2,SNR=4.5						
ZALV	**Zalesovo Beam**	**43.22**	**354**	P	**P**	**14 48 41.9**	**-0.1**
	0.8nm,0.3s,mb3.9,baz=161,slow=9.4,SNR=4.5						
ZALV	**Zalesovo Beam**	**43.22**	**354**	P	**P**	**14 48 41.9**	**-0.1**
BVAR	**Borovoye Array**	**45.37**	**342**	P	**P**	**14 49 00.3**	**+1.0**
	0.2nm,0.3s,mb3.4,baz=145,slow=8.5,SNR=2.6						
WRA	**Warramunga Arr**	**51.80**	**126**	P	**P**	**14 49 49.0**	**-0.2**
	0.2nm,0.3s,mb3.5,baz=300,slow=10,SNR=9.1						
WRAB	**Tennant Creek**	**51.80**	**126**	*e*P	**P**	**14 49 49.1**	**-0.1**
	0.3nm,0.4s,mb3.6						
ASAR	**Alice Springs**	**53.53**	**130**	P	**P**	**14 50 02.2**	**+0.2**
	0.6nm,0.6s,mb3.7,baz=305,slow=7.6,SNR=9.9						

IDC ***27*** *14:54:19.9±1.9, 41.°16S×87.°98W, h0km, mb3.7/4, mb1 4.0/6, mb1mx3.9/16, mbtmp3.8/6, ML3.2/2, MS3.2/1, Ms1 3.2/1, ms1mx3.2/21, Error ellipse: s-maj=43.2km s-min=33.1km az=32.0*
ISCJB ***27*** *14:54:19.7±1.3, 41.°1S±0.°1×87.°9W±0.°2, h10km, mb3.8/5, Error ellipse: s-maj=23.8km s-min=19.1km az=160.5*
NEIC ***27*** *14:54:21.6±1.3, 41.°08S×87.°88W, h10km, mb3.9/3, Error ellipse: s-maj=26.2km s-min=20.6km az=69.0*

ISC 27 14:54:21.6±1.3, 41.°1S±0.°1×87.°9W±0.°2, h10km, n9, σ1.°13/9, mb3.8/5, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**18.41**	**65**	P	**Pn**	**14 58 38.5**	**+1.7**
	0.0nm,0.3s,baz=243,slow=10,SNR=7.7						
CFAA				LR	LR	15 05 03.3	
	comp=Z,75nm,18.6s,baz=36,slow=35						
LCO	**Las Campanas**	**18.49**	**55**	*e*P	**Pn**	**14 58 36.4**	**-1.5**
	3.5nm,0.7s						
USHA	**Ushuaia**	**18.81**	**143**	P	**Pn**	**14 58 41.2**	**-0.3**
	0.2nm,0.3s,baz=279,slow=13,SNR=4.1						
LPAZ	**La Paz**	**30.06**	**40**	P	**P**	**15 00 32.2**	**+1.3**
	1.2nm,0.8s,mb3.7,baz=190,slow=14,SNR=4.1						
LPAZ	**La Paz**	**30.06**	**40**	*e*P	**P**	**15 00 32.1**	**+1.2**
	1.3nm,0.8s,mb3.7						
NNA	**Nana**	**30.60**	**22**	*e*P	**P**	**15 00 34.1**	**-1.6**
	3.5nm,0.3s,mb4.7						
SIV	**San Ignacio**	**34.11**	**51**	P	**P**	**15 01 06.2**	**-0.3**
	0.4nm,0.3s,mb3.8,baz=226,slow=11,SNR=3.8						
TXAR	**Lajitas Array**	**71.61**	**345**	P	**P**	**15 05 44.0**	**+1.0**
	0.8nm,0.8s,mb3.7,baz=174,slow=6.9,SNR=6.6						
NVAR	**Mina Array Bea**	**83.91**	**336**	P	**P**	**15 06 51.0**	**-0.3**
	0.1nm,0.4s,mb3.3,baz=159,slow=5.3,SNR=3.0						

BJI ***27*** *14:54:43.9, 10.°54N×91.°76E, h23km, mB5.3/2, mb4.2/9*
IDC ***27*** *14:54:45.3±0.8, 10.°83N×91.°64E, h0km, mb4.1/14, mb1 4.2/15, mb1mx4.0/26, mbtmp4.1/15, ML3.7/1, Error ellipse: s-maj=36.4km s-min=13.7km az=55.0*
NEIC ***27*** *14:54:47.0±0.5, 10.°85N×91.°71E, h10km, mb4.5/11, Error ellipse: s-maj=16.3km s-min=8.4km az=52.0*
ISCJB ***27*** *14:54:47.5±4.2, 10.°89N±0.°09×91.°80E±0.°08, h25km±29km, mb4.3/28, MS4.4/2, Error ellipse: s-maj=18.1km s-min=9.1km az=38.9*
MOS ***27*** *14:54:48.7±1.1, 10.°95N×91.°82E, h33km, mb4.7/9, Error ellipse: s-maj=16.1km s-min=8.8km az=108.9*

ISC 27 14:54:51.2±1.7, 10.°91N±0.°09×91.°79E±0.°08, h37km±15km, h28km±1.5km: pP-P, n60, σ1.°05/58, mb4.3/28, MS4.4/2, 1D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.20**	**42**	Pn	**Pn**	**14 57 15.9**	**+0.7**
	0.2nm,0.3s,baz=236,slow=15,SNR=4.1						
VIS	**Vishakhapatnam**	**10.63**	**311**	*i* P	**Pn**	**14 57 19.3**	**-1.9**
VIS				*i* S	**Sn**	**14 59 06.3**	**-13**
KMI	**Kunming**	**17.54**	**35**	P	**Pn**	**14 58 53.8**	**+0.8**
KMI				pmax	pmax		
	comp=Z,8.0nm,1.2s						
LSA	**Lhasa**	**18.71**	**358**	P	**Pn**	**14 59 06.0**	**-1.2**
KSM	**Kuching**	**20.64**	**116**	*e*P	**P**	**14 59 29.5**	**+1.7**
	comp=Z,28nm,1.1s						
AGRA	**Agra**	**20.82**	**323**	*e*PKP	**P**	**14 59 30.7**	**+1.1**
SONA	**Sohna**	**22.09**	**323**	*e*PKP	**P**	**14 59 43.1**	**-0.1**
SONA				AMb	AMB	14 59 46.5	
	comp=Z,31nm,1.1s,mb4.6						
AYAN	**Aya Nagar**	**22.23**	**324**	*e*PKP	**P**	**14 59 46.2**	**+1.4**
AYAN				AMb	AMB	14 59 47.7	
	comp=Z,19nm,1.3s,mb4.3						
JOSI	**Joshimath**	**22.61**	**332**	*e*PKP	**P**	**14 59 50.5**	**+1.7**
KHET	**Khetri**	**22.73**	**321**	*e*PKP	**P**	**14 59 51.2**	**+1.2**
KHET				AMb	AMB	14 59 53.7	
	comp=Z,17nm,0.9s,mb4.5						
DDI	**Dehra Dun**	**23.16**	**329**	*ex*	**P**	**14 59 53.0**	**-1.6**
GTA	**Gaotai**	**29.27**	**13**	*e*P	**P**	**15 00 51.0**	**+1.1**
GTA				pP	pP	15 00 58.5	-1.8
GTA				sP	sP	15 01 02.3	-2.5
GTA				pmax	pmax		
	comp=Z,6.0nm,1.5s,mb4.1						
NJ2	**Nanjing**	**32.65**	**46**	*e*P	**P**	**15 01 17.5**	**-2.3**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
UCH	**Uchtor**	**34.67**	**337**	*e*P	**P**	**15 01 37.7**	**+0.5**
UCH				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
UCH	**Uchtor**	**34.67**	**337**	*e*P	**P**	**15 01 37.7**	**+0.5**
	comp=Z,6.2nm,0.9s,mb4.5						
AAK	**Ala-Archa**	**35.02**	**338**	P	**P**	**15 01 40.1**	**-0.2**
	comp=Z,1.1nm,0.3s,mb4.3,baz=52,slow=3.3,SNR=7.9						
AAK	**Ala-Archa**	**35.02**	**338**	P	**P**	**15 01 40.1**	**-0.2**
AAK				*e*P		15 01 41.6	
FRU	**Bishkek**	**35.15**	**338**	*e*P	pP	15 01 52.0	+0.1
MK31	**Makanchi Array**	**36.66**	**349**	*e*P	**P**	**15 01 54.5**	**+0.2**
MKAR	**Makanchi Array**	**36.66**	**349**	P	**P**	**15 01 53.6**	**-0.6**
	comp=Z,5.0nm,0.8s,mb4.4,baz=129,slow=9.6,SNR=34						
SONM	**Songino Array**	**38.80**	**16**	P	**P**	**15 02 13.1**	**+0.8**
	comp=Z,2.1nm,0.9s,mb3.9,baz=198,slow=9.2,SNR=12						
ULN	**Ulaanbaatar**	**39.01**	**16**	*e*P	**P**	**15 02 13.4**	**-0.7**
KURK	**Kurchatov**	**41.14**	**347**	P	**P**	**15 02 31.5**	**-0.2**
	comp=Z,4.8nm,0.9s,mb4.1,baz=162,slow=7.4,SNR=18						
KURK	**Kurchatov**	**41.14**	**347**	*d i*P	**P**	**15 02 31.4**	**-0.3**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.2						
KURK	**Kurchatov**	**41.14**	**347**	*e*P	**P**	**15 02 31.1**	**-0.6**
	comp=Z,4.6nm,1.0s,mb4.1						
ZALV	**Zalesovo Beam**	**43.29**	**354**	P	**P**	**15 02 47.9**	**-1.3**
	comp=Z,2.5nm,0.6s,mb4.1,baz=174,slow=9.7,SNR=17						
FITZ	**Fitzroy Crossi**	**44.13**	**130**	P	**P**	**15 02 54.3**	**-2.1**
	comp=Z,4.3nm,1.0s,mb4.1,baz=319,slow=12,SNR=6.3						
FITZ	**Fitzroy Crossi**	**44.13**	**130**	*e*P	**P**	**15 02 54.0**	**-2.4**
	comp=Z,23nm,1.0s,mb4.9						
BVAR	**Borovoye Array**	**45.40**	**342**	P	**P**	**15 03 05.0**	**-1.0**
	comp=Z,8.7nm,0.9s,mb4.6,baz=188,slow=9.0,SNR=21						
BVAR	**Borovoye Array**	**45.40**	**342**	P	**P**	**15 03 05.0**	**-1.0**
BVAR	**Borovoye Array**	**45.40**	**342**	P	**P**	**15 03 05.0**	**-1.0**
WRA	**Warramunga Arr**	**51.91**	**126**	P	**P**	**15 03 56.2**	**-0.3**
	comp=Z,0.7nm,0.3s,mb4.1,baz=300,slow=10.0,SNR=32						
WRA	**Warramunga Arr**	**51.91**	**126**	P	**P**	**15 03 56.2**	**-0.3**
WRAB	**Tennant Creek**	**51.91**	**126**	*e*P	**P**	**15 03

IDAH				*e*Sg		**Sg**	**14 58 42.8**	**-0.1**
IKOO	**Kooshah**	**0.88**	**187**[1]	*e*Pg		**Pg**	**14 58 32.5**	**-0.6**
IKOO	**Kooshah**	**0.88**	**187**[1]	*e*Pg		**Pg**	**14 58 32.5**	**-0.6**
IMOG	**Moghan**	**2.81**	**3**	Pn		**Pn**	**14 59 02.4**	**+1.2**
IMOG	**Moghan**	**2.81**	**3**	*e*		**Pb**	**14 59 04.0**	**-2.5**
	comp=Z,4μm,0.3s							
IMOG				*e*Pn		**Pn**	**14 59 02.5**	**+1.3**
ISRO	**Mashad**	**3.02**	**5**	*e*Pn		**Pn**	**14 59 05.2**	**+1.1**
ISRO				*e*			15 00 02.7	
	comp=Z,9μm,0.6s							
IMYA	**Miami**	**3.14**	**14**	Pn		**Pn**	**14 59 06.3**	**+0.6**
IMYA				Sg		**Sg**	**14 59 53.7**	**-3.4**
IMYA	**Miami**	**3.14**	**14**	*e*Pn		**Pn**	**14 59 06.3**	**+0.6**
IMYA				*e*			15 00 08.0	
	comp=Z,9μm,0.5s							
IMYA	**Miami**	**3.14**	**14**	*e*Pn		**Pn**	**14 59 06.3**	**+0.6**
IMYA				Sg		**Sg**	**14 59 53.7**	**-3.4**
IPAY	**Payeh**	**3.15**	**358**	Pn		**Pn**	**14 59 07.1**	**+1.2**
IPAY	**Payeh**	**3.15**	**358**	*e*		**Pb**	**14 59 10.3**	**-2.0**
	comp=Z,4μm,0.2s							
IPAY				*e*Pn		**Pn**	**14 59 07.0**	**+1.1**
IBAF	**Bafgh**	**3.46**	**242**	Pn		**Pn**	**14 59 11.2**	**+1.0**
IBAF	**Bafgh**	**3.46**	**242**	*e*Pn		**Pn**	**14 59 11.3**	**+1.1**
IBAF				*e*Sg		**Sg**	**15 00 06.1**	**-1.4**
IBAF				*e*			15 00 12.9	
	comp=N,10μm,0.2s							
IBAF				*e*			15 00 21.3	
	comp=Z,6μm,0.5s							
IBAF	**Bafgh**	**3.46**	**242**	*e*Pn		**Pn**	**14 59 11.3**	**+1.1**
IBAF				*e*Sg		**Sg**	**15 00 06.1**	**-1.4**
IKRD	**Kardeh**	**3.51**	**352**	Pn		**Pn**	**14 59 11.3**	**+0.5**
IKRD	**Kardeh**	**3.51**	**352**	*e*Pn		**Pn**	**14 59 10.8**	**0.0**
IKRD				*e*		**Pg**	**14 59 23.9**	**+0.5**
	comp=Z,5μm,0.5s							
ICHK	**Chekchek**	**4.12**	**257**	*e*Pn		**Pn**	**14 59 19.0**	**-0.2**
ICHK				*e*			15 00 43.0	
	comp=Z,5μm,0.3s							
ICHK	**Chekchek**	**4.12**	**257**	*e*Pn		**Pn**	**14 59 19.0**	**-0.2**
AML	**Almayashu**	**14.49**	**48**	*e*Pn		**Pn**	**15 01 40.0**	**-1.3**
	comp=Z,21nm,0.9s							
AML	**Almayashu**	**14.49**	**48**	*e*Pn		**Pn**	**15 01 40.0**	**-1.3**
	comp=Z,21nm,0.9s							
EKS2	**Erkin-Say**	**14.84**	**47**	*e*Pn		**Pn**	**15 01 44.6**	**-1.4**
	comp=Z,4.9nm,0.6s							
EKS2	**Erkin-Say**	**14.84**	**47**	*e*Pn		**Pn**	**15 01 44.6**	**-1.4**
	comp=Z,4.9nm,0.6s							
UCH	**Uchtor**	**15.06**	**49**	*e*Pn		**Pn**	**15 01 50.3**	**+1.3**
UCH	**Uchtor**	**15.06**	**49**	*e*Pn		**Pn**	**15 01 50.3**	**+1.3**
AAK	**Ala-Archa**	**15.26**	**48**	Pn		**Pn**	**15 01 51.2**	**-0.5**
	comp=Z,0.0nm,0.3s,baz=237,slow=13,SNR=3.7							
AAK	**Ala-Archa**	**15.26**	**48**	*e*Pn		**Pn**	**15 01 51.0**	**-0.7**
	comp=Z,35nm,1.4s							
AAK	**Ala-Archa**	**15.26**	**48**	*e*Pn		**Pn**	**15 01 51.0**	**-0.7**
	comp=Z,35nm,1.4s							
TKM2	**Tokmak 2**	**16.10**	**49**	*e*Pn		**Pn**	**15 02 00.7**	**-1.9**
	comp=Z,4.9nm,1.0s							
AKTK	**Aktyubinsk**	**17.15**	**358**	Pn		**Pn**	**15 02 14.6**	**-1.2**
AKTK	**Aktyubinsk**	**17.15**	**358**	Pn		**Pn**	**15 02 14.6**	**-1.2**
AKTO	**Aktyubinsk**	**17.15**	**358**	Pn		**Pn**	**15 02 14.6**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=191,slow=15,SNR=8.6							
ASF	**Jabal al Asfar**	**18.74**	**273**	P		**Pn**	**15 02 40.2**	**+4.6**
	comp=Z,0.2nm,0.3s,baz=32,slow=14,SNR=6.5							
BRVK	**Borovoye**	**21.31**	**19**	*e*P		**P**	**15 03 03.7**	**+0.7**
BRVK				pmax		pmax		
	comp=Z,7.0nm,0.9s,mb4.0							
BRVK	**Borovoye**	**21.31**	**19**	*e*P		**P**	**15 03 03.7**	**+0.7**
	comp=Z,6.7nm,0.9s,mb4.0							
BRVK	**Borovoye**	**21.31**	**19**	*e*P		**P**	**15 03 03.7**	**+0.7**
	comp=Z,6.7nm,0.9s,mb4.0							
BRTR	**Keskin Array B**	**21.44**	**295**	P		**P**	**15 03 04.8**	**+0.4**
	comp=Z,1.3nm,0.8s,mb3.3,baz=107,slow=12,SNR=5.8							
BRTR	**Keskin Array B**	**21.44**	**295**	P		**P**	**15 03 04.8**	**+0.3**
MK31	**Makanchi Array**	**22.16**	**46**	*e*P		**P**	**15 03 13.9**	**+1.7**
MK31	**Makanchi Array**	**22.16**	**46**	*e*P		**P**	**15 03 13.9**	**+1.7**
MKAR	**Makanchi Array**	**22.16**	**46**	P		**P**	**15 03 14.5**	**+2.3**
	comp=Z,1.8nm,0.7s,mb3.6,baz=205,slow=4.1,SNR=5.8							
KURK	**Kurchatov**	**22.52**	**34**	P		**P**	**15 03 16.6**	**+0.6**
	comp=Z,1.2nm,0.6s,mb3.5,baz=235,slow=9.8,SNR=4.9							
KURK	**Kurchatov**	**22.52**	**34**	*e*P		**P**	**15 03 17.1**	**+1.1**
	comp=Z,8.6nm,1.3s,mb4.0							
KURK	**Kurchatov**	**22.52**	**34**	*e*P		**P**	**15 03 17.1**	**+1.1**
	comp=Z,8.6nm,1.3s,mb4.0							
FINES	**FINESS Array B**	**35.27**	**333**	P		**P**	**15 05 11.0**	**+0.2**
	comp=Z,2.9nm,0.9s,mb4.2,baz=116,slow=13,SNR=4.4							
FINES	**FINESS Array B**	**35.27**	**333**	P		**P**	**15 05 11.0**	**+0.2**
SONM	**Songino Array**	**38.12**	**53**	P		**P**	**15 05 38.0**	**+2.8**
	comp=Z,0.1nm,0.3s,mb3.0,baz=281,slow=9.3,SNR=3.6							
SONM	**Songino Array**	**38.12**	**53**	P		**P**	**15 05 38.0**	**+2.8**

*IDC **27** 14:58:22.1±11.0, 10°.95N×91°.98E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.5/24, mbtmp3.7/5, Error ellipse: s-maj=612.2km s-min=20.7km az=59.0*
*NEIC **27** 14:58:24.9±0.6, 11°.26N×92°.44E, h10km, mb3.9/1, Error ellipse: s-maj=12.2km s-min=11.2km az=59.0*
*ISCJB **27** 14:58:25.9±0.7, 11°.3N±0°.1×92°.4E±0°.1, h33km, mb3.7/6, Error ellipse: s-maj=15.6km s-min=14.3km az=149.0*
ISC 27 14:58:27.3±5.2, 11°.3N±0°.1×92°.4E±0°.1, h26km±41km, n10, σ0s52/10, mb3.7/6, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**9.52**	**41**	Pn	**Pn**	**15 00 42.8**	**+0.1**
	1.4nm,0.5s						
PALK	**Pallekele**	**12.24**	**252**	*e*Pn	**Pn**	**15 01 20.0**	**0.0**
	46nm,1.1s						
MK31	**Makanchi Array**	**36.43**	**348**	*e*P	**P**	**15 05 28.9**	**-0.8**
MKAR	**Makanchi Array**	**36.43**	**348**	P	**P**	**15 05 29.8**	**+0.1**
	0.5nm,0.7s,mb3.6,baz=181,slow=9.8,SNR=2.9						
MKAR	**Makanchi Array**	**36.43**	**348**	P	**P**	**15 05 29.8**	**+0.1**
KURK	**Kurchatov**	**40.93**	**347**	P	**P**	**15 06 08.0**	**+0.6**
	0.4nm,0.6s,mb3.2,baz=152,slow=8.0,SNR=2.3						
FITZ	**Fitzroy Crossi**	**43.89**	**131**	P	**P**	**15 06 30.9**	**-1.0**
	2.8nm,0.9s,mb4.0,baz=289,slow=18,SNR=4.4						
WRA	**Warramunga Arr**	**51.61**	**127**	P	**P**	**15 07 32.2**	**+0.4**
	0.3nm,0.3s,mb3.7,baz=300,slow=10.0,SNR=5.2						
WRAB	**Tennant Creek**	**51.62**	**127**	*e*P	**P**	**15 07 32.0**	**+0.1**
	0.6nm,0.4s,mb3.9						
ASAR	**Alice Springs**	**53.39**	**131**	P	**P**	**15 07 45.4**	**+0.5**
	1.3nm,0.9s,mb3.9,baz=307,slow=6.9,SNR=4.4						

*ISCJB **27** 15:00:12.1±3.6, 10°.83N±0°.06×91°.78E±0°.06, h7km±23km, mb4.3/31, MS4.3/2, Error ellipse: s-maj=10.2km s-min=9.5km az=43.3*
*IDC **27** 15:00:13.5±0.6, 10°.90N×91°.88E, h0km, mb4.1/16, mb1 4.1/17, mb1mx4.0/27, mbtmp4.0/17, Error ellipse: s-maj=24.3km s-min=13.1km az=60.0*
*NEIC **27** 15:00:14.4±0.3, 10°.84N×91°.72E, h10km, mb4.5/7, Error ellipse: s-maj=8.7km s-min=7.4km az=53.0*
*BJI **27** 15:00:14.0, 10°.55N×91°.98E, h11km, mB5.0/3, mb4.2/11*
*MOS **27** 15:00:15.9±1.2, 10°.83N×91°.76E, h33km, mb4.9/13, Error ellipse: s-maj=14.4km s-min=10.1km az=110.0*
ISC 27 15:00:16.8±3.1, 10°.80N±0°.06×91°.71E±0°.06, h26km±22km, n59, σ0s98/55, mb4.3/31, MS4.3/2, 2C-1D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**10.34**	**42**	*e*Pn	**Pn**	**15 02 43.2**	**-0.4**
	2.3nm,0.5s						
CMAR	**Chiang Mai Arr**	**10.34**	**42**	Pn	**Pn**	**15 02 42.2**	**-1.4**
	baz=234,slow=16,SNR=3.0						
CMAR				Sn	**Sn**	**15 04 38.6**	**0.0**
	0.3nm,0.3s,baz=104,slow=39,SNR=3.0						
PALK	**Pallekele**	**11.42**	**253**	*e*P	**Pn**	**15 02 58.1**	**-0.3**
PALK				*e*		15 05 00.8	
PALK				pmax	pmax		
	comp=Z,10.0nm,0.3s						
PALK	**Pallekele**	**11.42**	**253**	*e*Pn	**Pn**	**15 02 58.1**	**-0.4**
	comp=Z,9.9nm,0.3s						
PALK				*e*Sn	**Sn**	**15 05 00.8**	**-4.5**
KMI	**Kunming**	**17.68**	**35**	P	**Pn**	**15 04 23.8**	**+2.5**
KMI				pmax	pmax		
	comp=Z,9.0nm,1.2s						
KSM	**Kuching**	**20.66**	**115**	*e*P	**P**	**15 04 55.3**	**+0.4**
	comp=Z,20nm,1.2s						
LZH	**Lanzhou**	**27.47**	**22**	*e*P	**P**	**15 06 05.0**	**+4.1**
LZH				pP	pP	15 06 09.8	+1.2
LZH				sP	sP	15 06 12.0	+0.2
LZH				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.5						
GTA	**Gaotai**	**29.39**	**13**	*e*P	**P**	**15 06 18.5**	**+0.5**
GTA				pP	pP	15 06 24.0	-1.7
GTA				sP	sP	15 06 27.5	-1.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb3.9						
KSH	**Kashi**	**31.84**	**337**	P	**P**	**15 06 44.5**	**+4.9**
KSH				pmax	pmax		
	comp=Z,76nm,4.7s						
NJ2	**Nanjing**	**32.78**	**46**	*e*P	**P**	**15 06 48.8**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
AAK	**Ala-Archa**	**35.10**	**338**	P	**P**	**15 07 12.0**	**+4.0**
	comp=Z,1.6nm,0.3s,mb4.5,baz=183,slow=6.4,SNR=4.9						
AAK	**Ala-Archa**	**35.10**	**338**	P	**P**	**15 07 11.9**	**+4.0**
MK31	**Makanchi Array**	**36.76**	**349**	*e*P	**P**	**15 07 21.8**	**-0.3**
MKAR	**Makanchi Array**	**36.76**	**349**	P	**P**	**15 07 22.2**	**+0.2**
	comp=Z,2.1nm,0.7s,mb4.1,baz=133,slow=8.5,SNR=13						
SONM	**Songino Array**	**38.93**	**16**	P	**P**	**15 07 40.3**	**-0.1**
	comp=Z,6.3nm,0.9s,mb4.3,baz=199,slow=8.2,SNR=12						
KURK	**Kurchatov**	**41.23**	**347**	P	**P**	**15 07 59.2**	**-0.3**
	comp=Z,6.8nm,1.0s,mb4.2,baz=168,slow=7.1,SNR=9.8						
KURK				PcP	PcP	15 09 59.2	+1.2
	comp=Z,0.3nm,0.5s,baz=144,slow=2.4,SNR=2.6						
KURK	**Kurchatov**	**41.23**	**347**	*e*P	**P**	**15 07 58.9**	**-0.6**
KURK				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4						
KURK	**Kurchatov**	**41.23**	**347**	*e*P	**P**	**15 07 58.9**	**-0.6**
	comp=Z,9.9nm,1.0s,mb4.4						
TLY	**Talaya**	**41.91**	**11**	*e*P	pP	15 08 12.2	-0.7
TLY				*e*		15 08 24.0	
TLY				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.1						
KSRS	**Korea Array**	**41.96**	**45**	P	**P**	**15 08 03.5**	**-2.2**
	comp=Z,0.4nm,0.3s,mb3.5,baz=252,slow=37,SNR=3.6						
ZAA0	**Zalesovo Array**	**43.39**	**354**	*e*P	**P**	**15 08 16.0**	**-1.0**
ZALV	**Zalesovo Beam**	**43.39**	**354**	P	**P**	**15 08 16.9**	**-0.2**
	comp=Z,1.3nm,0.6s,mb3.9,baz=183,slow=8.9,SNR=6.6						
FITZ	**Fitzroy Crossi**	**44.12**	**130**	P	**P**	**15 08 23.4**	**+0.1**
	comp=Z,4.3nm,0.5s,mb4.4,baz=324,slow=6.4,SNR=10						
NVS	**Novosibirsk**	**44.44**	**353**	*e*P	**P**	**15 08 27.9**	**+2.5**
BVAR	**Borovoye Array**	**45.48**	**342**	P	**P**	**15 08 34.1**	**+0.4**
	comp=Z,1.6nm,0.8s,mb3.9,baz=260,slow=8.6,SNR=3.4						
AKTK	**Aktyubinsk**	**48.25**	**332**	P	**P**	**15 08 56.1**	**+0.7**
AKTO	**Aktyubinsk**	**48.25**	**332**	P	**P**	**15 08 56.1**	**+0.7**
	comp=Z,2.3nm,0.8s,mb4.3,baz=95,slow=12,SNR=4.1						
GNI	**Garni**	**50.70**	**314**	*ce*P	pP	15 09 20.6	-1.7
GNI				pmax	pmax		
	comp=Z,20nm,1.2s						
SVE	**Sverdlovsk**	**51.82**	**339**[1]	*e*P	pP	15 09 28.7	-1.8
SVE				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
WRA	**Warramunga Arr**	**51.90**	**126**	P	**P**	**15 09 23.7**	**+0.1**
	comp=Z,1.6nm,0.3s,mb4.4,baz=300,slow=10,SNR=40						
WRA	**Warramunga Arr**	**51.90**	**126**	P	**P**	**15 09 23.7**	**+0.1**
WRAB	**Tennant Creek**	**51.91**	**126**	*e*P	**P**	**15 09 23.5**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
WRAB	**Tennant Creek**	**51.91**	**126**	*e*P	**P**	**15 09 23.5**	**-0.1**
	comp=Z,11nm,1.0s,mb4.8						
ARU	**Arti**	**52.28**	**337**	*d*P	**P**	**15 09 31.8**	**+5.9**
ARU						15 11 27.7	
ARU				S	**S**	**15 16 55.4**	**+6.0**
ARU				SS	SS	15 20 27.8	+0.6
ARU				pmax	pmax		
	comp=Z,10.0nm,1.7s,mb4.5						
KIV	**Kislovodsk**	**53.56**	**317**	*e*P	pP	15 09 42.9	-0.7
KIV				*e*	sP	15 09 50.7	+4.0
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
KIV				MLR	MLR		
	comp=Z,200nm,17.0s,MS4.2						
ASAR	**Alice Springs**	**53.62**	**130**	P	**P**	**15 09 36.0**	**-0.2**
	comp=Z,2.5nm,0.6s,mb4.3,baz=303,slow=6.9,SNR=19						
ASAR				PcP	PcP	15 10 42.8	+0.2
	comp=Z,1.8nm,0.7s,baz=308,slow=3.7,SNR=7.0						
VSR	**Storozhevoye**	**58.63**	**324**	*e*P	**P**	**15 10 17.2**	**+5.5**
VSR				pmax	pmax		
	comp=N,3.0nm,0.6s						
VSR				pmax	pmax		
	comp=E,5.0nm,0.6s						
VSR				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.9						
BRTR	**Keskin Array B**	**58.72**	**310**	P	**P**	**15 10 13.9**	**+1.4**
	comp=Z,1.2nm,0.9s,mb3.9,baz=105,slow=7.8,SNR=5.0						
OBN	**Obninsk**	**61.64**	**328**	*e*P	pP	15 10 38.9	-1.5
OBN				*e*	sP	15 10 44.9	+1.4
OBN				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.1						
OBN				MLR	MLR		
	comp=Z,200nm,18.0s,MS4.3						
STKA	**Stephens Creek**	**63.84**	**134**	P	**P**	**15 10 48.3**	**+1.0**
	comp=Z,1.7nm,0.6s,mb4.3,baz=315,slow=9.6,SNR=7.1						
STKA	**Stephens Creek**	**63.84**	**134**	*e*P	**P**	**15 10 47.8**	**+0.5**
	comp=Z,0.3nm,0.4s,mb3.7						
STKA				P		15 10 48.3	
TIXI	**Tiksi**	**64.88**	**12**	*e*P	**P**	**15 10 57.2**	**+3.8**
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.6s,mb4.5						
TIXI	**Tiksi**	**64.88**	**12**	*e*P	**P**	**15 10 52.3**	**-1.1**
	comp=Z,2.5nm,0.7s,mb4.3						
JOF	**Joensuu**	**67.19**	**334**	*e*P	**P**	**15 11 08.2**	**-0.2**
JOF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
JOF	**Joensuu**	**67.19**	**334**	*ep*	**P**	**15 11 08.2**	**-0.2**
	comp=Z,8.2nm,0.9s,mb4.8						
JOF	**Joensuu**	**67.19**	**334**	*ep*	**P**	**15 11 08.2**	**-0.2**
	comp=Z,8.2nm,0.9s,mb4.8						
FINES	**FINESS Array B**	**69.02**	**332**	P	**P**	**15 11 20.7**	**+0.8**
	comp=Z,1.1nm,0.7s,mb3.9,baz=127,slow=5.0,SNR=3.7						
ARCES	**ARCESS Array B**	**71.72**	**340**	P	**P**	**15 11 35.3**	**-1.0**
	comp=Z,1.8nm,0.7s,mb4.1,baz=91,slow=4.9,SNR=6.1						
BOSA	**Boshof**	**75.14**	**237**	P	**P**	**15 12 00.2**	**+3.0**
	comp=Z,2.2nm,0.8s,mb4.1,baz=101,slow=7.9,SNR=4.0						
NOA	**NORSAR Array B**	**76.02**	**330**	P	**P**	**15 12 01.9**	**+0.2**
	comp=Z,0.6nm,0.7s,mb3.6,baz=92,slow=5.8,SNR=2.2						
CASY	**Casey**	**78.11**	**172**	P	**P**	**15 12 12.5**	**-0.6**
	comp=Z,3.9nm,1.2s,mb4.2						
LPG	**La Plagne**	**78.87**	**314**	*e*P	**P**	**15 12 16.9**	**-1.0**
LPL	**La Plagne**	**78.88**	**314**	*e*P	**P**	**15 12 17.2**	**-0.8**
	comp=Z,11nm,0.9s,mb4.5						
LPL	**La Plagne**	**78.88**	**314**	*e*P	**P**	**15 12 17.2**	**-0.8**
LPL				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
LPL	**La Plagne**	**78.88**	**314**	*e*P	**P**	**15 12 17.2**	**-0.8**
	comp=Z,5.5nm,0.9s,mb4.5						
CABF	**La Chapelle**	**79.25**	**316**	*e*P	**P**	**15 12 18.8**	**-1.2**
TCF	**Toulx Ste Croi**	**81.95**	**316**	*e*P	**P**	**15 12 33.5**	**-0.9**
NVAR	**Mina Array Bea**	**123.57**	**28**	PKP	PKPdf	15 19 13.6	+1.2
	comp=Z,0.9nm,0.8s,baz=292,slow=3.2,SNR=3.6						
TXAR	**Lajitas Array**	**137.43**	**20**	PKP	PKPdf	15 19 39.1	+0.1
	comp=Z,0.2nm,0.6s,baz=94,slow=1.6,SNR=3.5						

*IDC **27** 15:01:49.1±6.5, 6°.11S×148°.08E, h0km, mb4.2/3, mb1 4.3/4, mb1mx3.7/16, mbtmp4.1/4, ML4.0/1, Error ellipse: s-maj=99.4km s-min=59.5km az=34.0*
*NEIC **27** 15:01:56.5±4.5, 6°.25S×147°.70E, h35km, mb3.9/2, Error ellipse: s-maj=74.0km s-min=27.3km az=57.0*
ISC 27 15:01:57.8±3.7, 6°.4S±0°.3×147°.6E±0°.3, h35km, n10, σ0s80/10, mb4.1/4, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTAO	**Charters Tower**	**13.72**	**185**	Pn	**Pn**	**15 05 09.8**	**-0.2**
	16nm,1.1s						
WRAB	**Tennant Creek**	**18.67**	**222**	*e*P	**Pn**	**15 06 13.3**	**-0.3**
	2.1nm,0.6s						
WRA	**Warramunga Arr**	**18.68**	**222**	P	**Pn**	**15 06 13.8**	**+0.1**
	0.5nm,0.3s,baz=51,slow=11,SNR=17						
WRA	**Warramunga Arr**	**18.68**	**222**	P	**Pn**	**15 06 13.8**	**+0.1**
ASAR	**Alice Springs**	**21.69**	**216**	P	**P**	**15 06 46.6**	**+0.8**
	1.9nm,0.5s,mb3.8,baz=49,slow=9.3,SNR=74						
FITZ	**Fitzroy Crossi**	**24.42**	**239**	P	**P**	**15 07 13.8**	**+0.5**
	6.7nm,0.6s,mb4.3,baz=67,slow=7.6,SNR=16						
STKA	**Stephens Creek**	**26.02**	**192**	P	**P**	**15 07 27.7**	**0.0**
	5.3nm,0.9s,mb4.1,baz=7.9,slow=9.9,SNR=7.1						
STKA	**Stephens Creek**	**26.02**	**192**	P	**P**	**15 07 27.7**	**0.0**
MBWA	**Marble Bar**	**30.75**	**239**	*e*P	**P**	**15 08 07.0**	**-3.0**
	3.5nm,0.8s,mb4.2						
COCO	**West Island**	**50.40**	**259**	*e*P	**P**	**15 10 52.5**	**+0.3**
	37nm,0.4s						

*IDC **27** 15:01:57.0±4.2, 9°.93N×90°.26E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.5/24, mbtmp3.7/5, Error ellipse: s-maj=154.5km s-min=22.9km az=67.0*

*NEIC **27** 15:01:58.0±1.0, 9°.85N×90°.18E, h10km, mb4.0/2, Error ellipse: s-maj=27.0km s-min=13.5km az=64.0*
*ISCJB **27** 15:01:59.7±1.1, 9°.9N±0°.1×90°.3E±0°.2, h33km, mb3.8/7, Error ellipse: s-maj=28.8km s-min=14.3km az=153.9*
ISC 27 15:02:02.3±7.1, 9°.9N±0°.3×90°.3E±0°.4, h38km±58km, n9, σ0s92/9, mb3.8/7, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**11.96**	**44**	*e*Pn	**Pn**	**15 04 50.3**	**+0.1**
	7.2nm,0.8s						
NIL	**Nilore**	**28.33**	**329**	*e*P	**P**	**15 07 52.8**	**+0.2**
	3.9nm,1.1s,mb4.0						
MK31	**Makanchi Array**	**37.38**	**351**	*e*P	**P**	**15 09 11.3**	**0.0**
SONM	**Songino Array**	**40.18**	**17**	P	**P**	**15 09 35.0**	**+0.2**
	0.6nm,0.6s,mb3.5,baz=199,slow=9.0,SNR=3.1						
ZALV	**Zalesovo Beam**	**44.14**	**355**	P	**P**	**15 10 06.3**	**-0.6**
	0.5nm,0.4s,mb3.6,baz=187,slow=10,SNR=2.9						
FITZ	**Fitzroy Crossi**	**44.66**	**128**	P	**P**	**15 10 09.9**	**-1.7**
	0.8nm,0.5s,mb3.8,baz=311,slow=9.3,SNR=3.2						
WRA	**Warramunga Arr**	**52.56**	**124**	P	**P**	**15 11 12.9**	**+0.6**
	0.5nm,0.3s,mb3.9,baz=301,slow=10.0,SNR=117						
WRAB	**Tennant Creek**	**52.56**	**124**	*e*P	**P**	**15 11 11.7**	**-0.7**
	0.6nm,0.4s,mb3.9						
ASAR	**Alice Springs**	**54.16**	**129**	P	**P**	**15 11 26.1**	**+2.0**
	1.2nm,0.7s,mb3.9,baz=305,slow=7.2,SNR=4.5						

*NEIC **27** 15:06:09.4, 19°.39N×69°.37W, h70km, MD3.4(RSPR), After RSPR.*
RSPR 27 15:06:09.4, 19°.39N×69°.37W, h70km±8km, MD3.4/6, MD3.4/6, 5C, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**1.28**	**133**[1]	*e*P	Pn	15 06 27.0	-4.4
PCDR	**Punta Cana, DR**	**1.28**	**133**	*e*S	Sn	15 06 40.4	-7.6
SDDR	**Presa de Saban**	**1.86**	**258**	*e*Pn	Pn	15 06 52.0	+13
SDDR				*e*Sn	Sn	15 07 24.8	+23
AGPR	**Aguadilla, PR**	**2.33**	**113**	*e*S	Sn	15 07 09.2	-3.9
LSP	**Las Mesas**	**2.48**	**119**[1]	*e*P	Pn	15 06 45.0	-2.5
CRPR	**Cabo Rojo, PR**	**2.55**	**122**[1]	*e*P	Pn	15 06 47.8	-0.7
CRPR				*e*S	Sn	15 07 20.9	+2.6
AOPR	**Arecibo Observ**	**2.69**	**112**	*e*S	Sn	15 07 20.8	-1.0
CELP	**Cerrillos**	**2.95**	**116**[1]	*e*P	Pn	15 06 53.9	0.0
CELP				*e*S	Sn	15 07 29.4	+1.2
MTP	**Monte Pirata**	**3.84**	**109**[1]	*e*P	Pn	15 07 07.1	+1.1
MTP				*e*S	Sn	15 07 49.7	-0.3

*IDC **27** 15:07:17.3±0.6, 0°.18N×96°.59E, h0km, mb4.3/22, mb1 4.3/24, mb1mx4.2/30, mbtmp4.2/24, ML3.9/2, Error ellipse: s-maj=19.3km s-min=12.7km az=61.0*
*ISCJB **27** 15:07:19.5±1.8, 0°.22N±0°.04×96°.67E±0°.04, h28km±12km, mb4.4/39, Error ellipse: s-maj=7.8km s-min=5.5km az=137.8*
*MOS **27** 15:07:20.2±0.8, 0°.20N×96°.65E, h33km, mb4.8/15, Error ellipse: s-maj=16.2km s-min=7.9km az=108.1*
*BJI **27** 15:07:21.3, 0°.50N×96°.83E, h16km, mB5.1/4, mb4.4/9*
*NEIC **27** 15:07:22.4±0.3, 0°.21N×96°.73E, h35km, mb4.6/10, Error ellipse: s-maj=8.1km s-min=5.8km az=225.0*
*DJA **27** 15:07:23, 0°.38N×96°.76E, h87km, MLv4.3/10*
ISC 27 15:07:22.0±1.8, 0°.24N±0°.04×96°.68E±0°.04, h31km±13km, h30km±1.1km: pP-P, n75, σ0s84/81, mb4.4/39, 3C-1D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**2.86**	**123**	P	**Pn**	**15 08 07.0**	**+1.4**
MNSI	**Mandailing Nat**	**2.95**	**79**	P	**Pn**	**15 08 06.1**	**-0.7**
MNSI				S	**Sn**	**15 08 41.1**	**-0.1**

comp=Z,2.7nm,1.0s,mb4.2,baz=103,slow=16,SNR=3.5
KURK Kurchatov 52.59 346 P **P 15 16 32.8 +0.1**
comp=Z,2.8nm,0.7s,mb4.3,baz=166,slow=7.0,SNR=14
KURK Kurchatov 52.59 346*c i P* **P 15 16 33.5 +0.8**
KURK pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
STKA Stephens Creek 53.11 131 P **P 15 16 36.5 -0.4**
comp=Z,8.6nm,1.2s,mb4.6,baz=311,slow=6.7,SNR=4.4
STKA Stephens Creek 53.11 131 *eP* **P 15 16 36.0 -0.9**
STKA pmax pmax
comp=Z,2.0nm,1.1s
STKA Stephens Creek 53.11 131 *eP* **P 15 16 36.0 -0.9**
comp=Z,1.7nm,1.1s,mb3.9
ZAA0 Zalesovo Array 54.42 351 *eP* **P 15 16 46.6 +0.4**
ZAA0 *e* pP 15 16 55.3 -0.2
ZALV Zalesovo Beam 54.42 351 P **P 15 16 46.3 +0.2**
comp=Z,12nm,0.7s,mb4.9,baz=181,slow=5.8,SNR=46
NVS Novosibirsk 55.53 351 *i P* **P 15 16 54.4 +0.3**
NVS pmax pmax
comp=Z,10.0nm,1.3s,mb4.7
NVS pmax pmax
comp=N,6.0nm,1.4s
NVS pmax pmax
comp=E,6.0nm,1.2s
BVAR Borovoye Array 56.99 341 P **P 15 17 04.3 -0.2**
comp=E,1.8nm,0.7s,mb4.2,baz=140,slow=9.5,SNR=13
BRVK Borovoye 57.05 341*c i P* **P 15 17 04.5 -0.5**
BRVK pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
AKTK Aktyubinsk 59.84 332 P **P 15 17 23.5 -1.0**
AKTO Aktyubinsk 59.84 332 P **P 15 17 23.5 -1.0**
comp=Z,1.6nm,0.8s,mb4.1,baz=156,slow=8.6,SNR=5.0
GNI Garni 61.63 317 P **P 15 17 37.6 +0.7**
comp=Z,3.1nm,0.4s,mb4.8,baz=54,slow=3.7,SNR=3.0
SVE Sverdlovsk 63.39 339 *eP* **P 15 17 48.2 -0.1**
SVE pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
ARU Arti 63.87 338*d i P* **P 15 17 50.8 -0.7**
ARU 15 20 08.1
ARU S **S 15 26 24.4 -0.4**
ARU SS SS 15 30 29.6 -3.9
ARU pmax pmax
comp=Z,7.0nm,1.2s,mb4.6
KIV Kislovodsk 64.70 320 *eP* **P 15 17 57.4 +0.2**
KIV pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
YAK Yakutsk 66.48 16 *eP* **P 15 18 07.5 -0.9**
YAK *e* pP 15 18 15.5 -2.4
YAK pmax pmax
comp=Z,18nm,1.1s,mb5.0
YAK pmax pmax
comp=N,4.0nm,1.1s
YAK pmax pmax
comp=E,4.0nm,1.4s
CASY Casey 67.11 174 *eP* **P 15 18 07.4 -4.9**
comp=E,4.3nm,0.6s,mb4.7
BRTR Keskin Array B 69.38 313 P **P 15 18 26.5 -0.6**
comp=E,1.8nm,0.8s,mb4.1,baz=122,slow=6.7,SNR=9.9
MAW Mawson 71.67 193 P **P 15 18 40.9 +0.4**
comp=E,1.8nm,0.8s,mb4.1,baz=101,slow=4.3,SNR=4.2
OBN Obninsk 73.16 329 P **P 15 18 50.2 +0.6**
OBN *e* 15 19 05.3
TIXI Tiksi 74.22 10 *eP* **P 15 18 54.6 -0.9**
TIXI pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
AKASG Malin Array Be 75.70 323 P **P 15 19 03.9 -0.6**
comp=Z,5.4nm,0.7s,mb4.6,baz=92,slow=4.9,SNR=17
AKBB Malin Array Si 75.70 323 *eP* **P 15 19 03.5 -1.0**
KIEV Kiev 75.71 323 *eP* **P 15 19 03.7 -0.8**
KIEV pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
KIEV Kiev 75.71 323 *eP* **P 15 19 03.7 -0.8**
comp=Z,4.8nm,0.6s,mb4.6
BUR08 Bucovina Ar. S 77.42 319 *eP* **P 15 19 14.7 +0.4**
FINES FINESS Array B 80.61 333 P **P 15 19 31.4 0.0**
comp=Z,2.5nm,0.7s,mb4.3,baz=101,slow=3.9,SNR=8.0
ARCES ARCESS Array B 83.26 340 P **P 15 19 45.8 +0.5**
comp=Z,1.2nm,0.4s,mb4.3,baz=102,slow=4.3,SNR=12
NB2 NORSAR Subarra 87.59 331 P **P 15 20 06.7 -0.3**
comp=Z,4.9nm,1.0s,mb4.7,baz=95,slow=5.1
NOA NORSAR Array B 87.59 331 P **P 15 20 07.2 +0.2**
comp=Z,2.2nm,0.8s,mb4.4,baz=96,slow=4.9,SNR=7.0
KEST Kesra 87.70 306 P **P 15 20 08.7 +0.6**
comp=Z,1.3nm,0.8s,mb4.2,baz=256,slow=6.0,SNR=5.1
QSPA South Pole Qui 90.19 180 P **P 15 20 19.5 +0.6**
comp=Z,2.2nm,1.0s,mb4.4,baz=296,slow=3.3,SNR=5.0
QSPA South Pole Qui 90.19 180 P **P 15 20 19.5 +0.6**
TXAR Lajitas Array 144.75 32 PKP PKPdf 15 26 56.4 -0.2
comp=Z,1.6nm,0.8s,baz=241,slow=1.9,SNR=18

*ISCJB **27** 15:13:16.7±0.9, 10°.39N±0°.04×62°.35W±0°.02, h13km±7km, Error ellipse: s-maj=6.6km s-min=3.9km az=178.3*
*FUNV **27** 15:13:17.6, 10°.41N×62°.31W, h7km, MW3.2*
*TRN **27** 15:13:21.0, 10°.56N×62°.14W, h10km, MD3.0*
ISC 27 15:13:16.9±0.6, 10°.41N±0°.04×62°.33W±0°.02, h9km±5km, n23, σ1°.00/34, 2C-4D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.26**	**24**	⇑*iP*	**Pg**	**15 13 22.4**	**+0.2**
GUIV				*e*S	**Sg**	15 13 26.9	+1.2
TCE	**Chacachacare**	**0.64**	**63**	*eP*	**Pg**	**15 13 29.1**	**-0.1**
TCE				*e*S	**Sg**	15 13 35.7	-2.0
GUNV	**Guanoco**	**0.65**	**248**	*e*S	**Sg**	**15 13 39.9**	**+1.9**
TPP	**Pointe-a-Pierr**	**0.87**	**96**	*eP*	**Pg**	**15 13 35.5**	**+1.8**
CRUV	**Carupano**	**0.93**	**287**	⇓*iP*	**Pg**	**15 13 33.4**	**-1.4**
CRUV				*e*S	**Sg**	15 13 46.3	-0.6
TRN	**Trinidad (W)**	**0.94**	**75**	*eP*	**Pg**	**15 13 34.6**	**-0.5**
TRN				*e*S	**Sg**	15 13 44.9	-2.5
ITEV	**Isla Los Testi**	**1.23**	**320**	*eP*	**Pn**	**15 13 39.8**	**-0.5**
ITEV				*e*S	**Sb**	15 13 57.4	+1.1
TBH	**Brigand Hill**	**1.25**	**86**	*eP*	**Pn**	15 13 41.6	+1.1
TBH				*e*S	**Sb**	15 13 57.2	+0.4
ORIV	**Oritupano**	**1.70**	**219**	⇓*iP*	**Pn**	15 13 47.6	+0.8
ORIV				*e*S	**Sn**	15 14 09.8	+1.1
TPR	**Prospect**	**1.71**	**63**	*eP*	**Pn**	15 13 47.9	+1.0
TOSP	**Speyside**	**1.97**	**63**	⇓*eP*	**Pn**	15 13 51.6	+1.1
TOSP				⇓*e*S	**Sn**	15 14 23.2	+7.7
PCRV	**Puerto La Cruz**	**2.28**	**264**	*eP*	**Pn**	15 13 54.6	-0.1
PCRV				*e*S	**Sn**	15 14 22.0	-1.0
RIOV	**Rio Grande**	**2.38**	**168**	⇑*iP*	**Pn**	15 13 55.7	-0.4
RIOV				*e*S	**Sn**	15 14 24.8	-0.7
IBAV	**Isla La Blanqu**	**2.62**	**303**	*eP*	**Pn**	15 13 59.7	+0.3
GURV	**El Guri**	**2.73**	**196**	*eP*	**Pn**	15 14 01.6	+0.6
PRGV	**PARIAGUAN**	**2.81**	**235**	*eP*	**Pn**	15 14 02.7	+0.7
CUPV	**Cœpira**	**3.42**	**264**	*eP*	**Pn**	15 14 10.7	+0.3
CUPV				*e*S	**Sn**	15 14 49.5	-1.7
BIRV	**Birongo**	**3.87**	**271**	*eP*	**Pn**	15 14 17.1	+0.4
LUEV	**Luepa**	**4.62**	**169**	*eP*	**Pn**	15 14 25.9	-1.0
CAOV	**Caicara del Or**	**4.99**	**233**	*eP*	**Pn**	15 14 31.4	-0.7
TURV	**Turiamo**	**5.42**	**271**	*eP*	**Pn**	15 14 37.5	-0.4
BAUV	**El Baul**	**5.81**	**256**	*eP*	**Pn**	15 14 43.1	-0.4
MAPV	**Macapo**	**6.06**	**265**	*eP*	**Pn**	15 14 46.3	-0.5

*NEIC **27** 15:13:21.8±0.9, 10°.52N×91°.20E, h10km, mb3.7/2, Error ellipse: s-maj=24.0km s-min=10.4km az=73.0*
*IDC **27** 15:13:21.5±2.6, 10°.61N×91°.40E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.6/24, mbtmp3.8/6, Error ellipse: s-maj=111.3km s-min=22.5km az=67.0*
*ISCJB **27** 15:13:24.0±1.2, 10°.6N±0°.1×91°.4E±0°.2, h33km, mb3.8/7, Error ellipse: s-maj=32.1km s-min=13.9km az=163.4*
ISC 27 15:13:25.9±1.2, 10°.6N±0°.1×91°.3E±0°.2, h35km, n11, σ0°.50/11, mb3.8/7, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**10.78**	**42**	*e*Pn	**Pn**	**15 15 57.7**	**-0.1**
	0.8nm,0.4s						
MK31	**Makanchi Array**	**36.90**	**350**	*eP*	**P**	**15 20 30.8**	**-0.4**
MKAR	**Makanchi Array**	**36.90**	**350**	P	**P**	**15 20 31.1**	**-0.1**
	0.5nm,0.8s,mb3.4,baz=141,slow=8.6,SNR=3.5						
SONM	**Songino Array**	**39.26**	**16**	P	**P**	**15 20 51.8**	**+0.7**
	0.5nm,0.5s,mb3.5,baz=210,slow=9.5,SNR=4.1						
FITZ	**Fitzroy Crossi**	**44.29**	**130**	P	**P**	**15 21 32.5**	**0.0**
	3.1nm,1.0s,mb4.0,baz=301,slow=7.4,SNR=12						
WRA	**Warramunga Arr**	**52.10**	**126**	P	**P**	**15 22 32.5**	**-0.5**
	0.4nm,0.3s,mb3.8,baz=300,slow=10.0,SNR=12						
WRA				PcP	PcP	15 23 45.9	+1.2
	0.4nm,0.6s,baz=318,slow=2.9,SNR=5.6						
WRA	**Warramunga Arr**	**52.10**	**126**	P	**P**	**15 22 32.5**	**-0.5**
WRA				PcP	PcP	15 23 45.9	+1.2

WRAB Tennant Creek 52.11 126 *eP* **P 15 22 32.4 -0.6**
1.2nm,0.6s,mb4.0
ASAR Alice Springs 53.79 130 P **P 15 22 46.1 +0.8**
1.4nm,0.7s,mb4.0,baz=303,slow=6.8,SNR=24
ASAR PcP PcP 15 23 52.3 +1.3
0.8nm,0.7s,baz=305,slow=3.7,SNR=7.6
STKA Stephens Creek 63.99 133 P **P 15 23 56.8 +0.8**
1.7nm,0.8s,mb4.1,baz=319,slow=9.3,SNR=5.2
STKA Stephens Creek 63.99 133 *eP* **P 15 23 55.7 -0.3**
0.3nm,0.8s,mb3.4

*IDC **27** 15:31:52.4±1.7, 7°.78S×124°.74E, h0km, mb3.6/1, mb1 3.6/4, mb1mx3.4/19, mbtmp3.4/4, ML3.3/3, Error ellipse: s-maj=124.0km s-min=26.4km az=66.0*
*ISCJB **27** 15:31:54.2±1.0, 7°.9S±0°.2×124°.7E±0°.3, h33km, mb3.5/2, Error ellipse: s-maj=48.0km s-min=13.4km az=152.0*
*NEIC **27** 15:31:56.6±1.0, 7°.78S×124°.87E, h35km, mb3.3/2, Error ellipse: s-maj=47.7km s-min=13.2km az=62.0*
ISC 27 15:31:56.7±1.0, 7°.8S±0°.2×124°.9E±0°.3, h35km, n7, σ0°.96/7, mb3.5/2, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.28**	**176**	Pn	**Pn**	**15 34 21.3**	**-0.4**
	0.3nm,0.3s,baz=323,slow=10,SNR=7.9						
FITZ				Sn	Sx	15 36 05.4	
	0.2nm,0.3s,baz=360,slow=13,SNR=3.0						
WRA	**Warramunga Arr**	**15.17**	**144**	Pn	**Pn**	**15 35 27.2**	**-1.2**
	0.1nm,0.3s,baz=319,slow=15,SNR=5.7						
WRA				Sn	Sx	15 38 04.5	
	0.1nm,0.3s,baz=311,slow=19,SNR=5.0						
WRAB	**Tennant Creek**	**15.17**	**144**	*e*Pn	**Pn**	**15 35 28.5**	**+0.1**
	1.6nm,0.8s						
ASAR	**Alice Springs**	**18.01**	**152**	P	**Pn**	**15 36 06.3**	**+2.0**
	0.1nm,0.3s,baz=330,slow=10,SNR=5.3						
ASAR				S	Sx	15 39 12.9	
	0.1nm,0.3s,baz=314,slow=20,SNR=5.1						
STKA	**Stephens Creek**	**28.58**	**149**	P	**P**	**15 37 49.3**	**-0.2**
	0.7nm,0.9s,mb3.4						
MK31	**Makanchi Array**	**66.20**	**329**	*eP*	**P**	**15 42 40.1**	**-0.8**
MKAR	**Makanchi Array**	**66.20**	**329**	P	**P**	**15 42 41.6**	**+0.8**
	0.5nm,0.7s,mb3.7,baz=125,slow=9.2,SNR=5.3						

*NEIC **27** 15:37:46.6±5.6, 4°.16S×145°.79E, h35km, mb3.7/2, Error ellipse: s-maj=83.7km s-min=47.5km az=51.0*
*IDC **27** 15:37:48.0±8.6, 4°.76S×145°.50E, h0km, mb4.1/3, mb1 4.3/4, mb1mx3.7/16, mbtmp4.1/4, ML3.9/1, MS3.9/1, Ms1 3.9/1, ms1mx2.8/22, Error ellipse: s-maj=131.1km s-min=64.5km az=19.0*
ISC 27 15:37:48.6±4.2, 4°.3S±0°.4×145°.7E±0°.3, h35km, n13, σ1°.21/12, mb4.0/3, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**9.87**	**194**	*eP*	**Pn**	**15 40 10.6**	**+2.5**
COEN	**Coen**	**9.87**	**194**	*e*Pn	**Pn**	**15 40 10.1**	**+2.0**
	52nm,0.4s						
KAKA	**Kakadu**	**15.49**	**237**	*eP*	**Pn**	**15 41 29.6**	**+5.0**
	10nm,0.5s						
WRAB	**Tennant Creek**	**19.02**	**214**	*eP*	**Pn**	**15 42 08.3**	**-0.3**
	4.9nm,0.9s						
WRA	**Warramunga Arr**	**19.04**	**214**	P	**Pn**	**15 42 06.9**	**-1.8**
	0.4nm,0.3s,baz=39,slow=12,SNR=29						
ASAR	**Alice Springs**	**22.32**	**209**	P	**P**	**15 42 42.5**	**-0.8**
	1.7nm,0.6s,mb3.6,baz=33,slow=9.8,SNR=27						
FITZ	**Fitzroy Crossi**	**23.89**	**234**	*eP*	**P**	**15 43 00.7**	**+1.4**
	9.6nm,0.8s,mb4.3						
FITZ	**Fitzroy Crossi**	**23.89**	**234**	P	**P**	**15 43 00.6**	**+1.3**
	5.0nm,0.7s,mb4.0,baz=75,slow=11,SNR=9.9						
CMSA	**Cobar Meteorol**	**27.06**	**180**	*eP*	**P**	**15 43 27.5**	**-0.4**
STKA	**Stephens Creek**	**27.66**	**187**	*eP*	**P**	**15 43 33.3**	**0.0**
	5.6nm,0.9s,mb4.2						
STKA	**Stephens Creek**	**27.66**	**187**	P	**P**	**15 43 33.4**	**+0.1**
	5.5nm,0.7s,mb4.3,baz=32,slow=11,SNR=15						
STKA	**Stephens Creek**	**27.66**	**187**	*eP*	**P**	**15 43 32.9**	**-0.4**
	1.4nm,0.8s,mb3.6						
AFI	**Afiamalu**	**43.02**	**106**	LR	LR	15 59 48.2	
	comp=Z,146nm,18.3s,baz=73,slow=31						

*IDC **27** 15:42:45.8±1.2, 34°.79N×24°.08E, h0km, mb4.0/9, mb1 4.0/10, mb1mx3.8/26, mbtmp4.0/10, ML3.3/1, Error ellipse: s-maj=26.4km s-min=17.1km az=152.0*
*ISCJB **27** 15:42:48.6±0.9, 34°.65N±0°.06×24°.04E±0°.05, h31km±4km, mb3.9/9, Error ellipse: s-maj=9.7km s-min=6.3km az=6.9*
*THE **27** 15:42:49.6, 34°.67N×24°.04E, h18km±1km, Error ellipse: s-maj=2.8km s-min=1.1km az=26.0*
*NEIC **27** 15:42:49.9, 34°.78N×24°.12E, h25km, MD3.6(ATH), After ATH.*
*ATH **27** 15:42:49.9, 34°.78N×24°.12E, h25km, MD3.6/10*
*CSEM **27** 15:42:51.4±0.5, 34°.82N×24°.18E, h15km, MD3.6, Error ellipse: s-maj=12.2km s-min=5.4km az=16.0*
ISC 27 15:42:49.7±0.9, 34°.68N±0°.06×24°.10E±0°.05, h25km±4km, n77, σ1°.35/100, mb3.9/9, 3D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.16**	**356**	⇓*i*Pb	**Pb**	**15 42 54.3**	**-0.6**
GVD				*e*Sb	**Sb**	15 42 57.5	-0.8
GVD	**Gavdhos**	**0.16**	**356**	P	**Pb**	15 42 54.1	-0.8
GVD				S	**Sb**	15 42 57.8	-0.5
GVD	**Gavdhos**	**0.16**	**356**	P	**Pb**	15 42 54.1	-0.8
GVD				S	**Sb**	15 42 57.8	-0.5
GVD	**Gavdhos**	**0.16**	**356**	⇓*i*PB	**Pb**	15 42 54.3	-0.6
GVD				*e*SB	**Sb**	15 42 57.5	-0.8
GVD	**Gavdhos**	**0.16**	**356**	⇓*i*Pb	**Pb**	15 42 54.3	-0.6
GVD				*e*Sb	**Sb**	15 42 57.5	-0.8
GVD				S	**Sb**	15 42 57.8	-0.5
SIVA	**Sivas**	**0.67**	**60**	*eP*n	**Pn**	15 43 02.6	-1.0
SIVA				*e*SN	**Sn**	15 43 11.3	-2.0
SIVA	**Sivas**	**0.67**	**60**	P	**Pb**	15 43 02.5	-0.3
SIVA				S	**Sb**	15 43 13.7	+2.0
SIVA	**Sivas**	**0.67**	**60**	P	**Pb**	15 43 02.5	-0.3
SIVA				S	**Sb**	15 43 13.7	+2.0
SIVA	**Sivas**	**0.67**	**60**	*eP*N	**Pn**	15 43 02.6	-1.0
SIVA				*e*SN	**Sn**	15 43 11.3	-2.0
SIVA	**Sivas**	**0.67**	**60**	P	**Pb**	15 43 02.5	-0.3
SIVA				*e*Sn	**Sn**	15 43 11.3	-2.0
SIVA				S	**Sb**	15 43 13.7	+2.0
VAM	**Vamos**	**0.73**	**6**	*e*Pn	**Pn**	15 43 02.9	-1.5
VAM				*e*Sn	**Sn**	15 43 12.1	-2.6
VAM	**Vamos**	**0.73**	**6**	*e*PN	**Pn**	15 43 02.9	-1.5
VAM				*e*SN	**Sn**	15 43 12.1	-2.6
VAM	**Vamos**	**0.73**	**6**	*e*Pn	**Pn**	15 43 02.9	-1.5
KARN	**Karanos**	**0.73**	**348**	P	**Pb**	15 43 03.0	-0.8
KARN				S	**Sb**	15 43 14.1	+0.6
KARN	**Karanos**	**0.73**	**348**	P	**Pb**	15 43 03.0	-0.8
KARN				S	**Sb**	15 43 14.1	+0.6
KARN	**Karanos**	**0.73**	**348**	*e*PN	**Pn**	15 43 02.8	-1.7
KARN	**Karanos**	**0.73**	**348**	P	**Pb**	15 43 03.0	-0.8
KARN				S	**Sb**	15 43 14.1	+0.6
IDI	**Anoyia**	**0.89**	**47**	Pn	**Pn**	15 43 05.3	-1.2
	28nm,0.3s,baz=224,slow=16,SNR=149						
IDI				Sn	**Sn**	15 43 18.1	-0.5
	86nm,0.3s,baz=312,slow=22,SNR=15						
IDI	**Anoyia**	**0.89**	**47**	*e*Pn	**Pn**	15 43 05.3	-1.3
IDI	**Anoyia**	**0.89**	**47**	*e*PN	**Pn**	15 43 05.3	-1.3
IDI	**Anoyia**	**0.89**	**47**	*e*Pn	**Pn**	15 43 05.3	-1.3
LAST	**Lasithi**	**1.23**	**67**	*e*Pn	**Pn**	15 43 12.1	+0.8
LAST	**Lasithi**	**1.23**	**67**	P	**Pn**	15 43 12.2	+0.9
LAST				S	**Sn**	15 43 28.2	+1.1
LAST	**Lasithi**	**1.23**	**67**	P	**Pn**	15 43 12.2	+0.9
LAST				S	**Sn**	15 43 28.2	+1.1
LAST	**Lasithi**	**1.23**	**67**	*e*PN	**Pn**	15 43 12.1	+0.8
LAST	**Lasithi**	**1.23**	**67**	*e*Pn	**Pn**	15 43 12.1	+0.8
LAST				S	**Sn**	15 43 28.2	+1.1
NPS	**Neapolis**	**1.37**	**65**	*e*Pn	**Pn**	15 43 14.8	+1.6
NPS	**Neapolis**	**1.37**	**65**	*e*PN	**Pn**	15 43 14.8	+1.6
NPS	**Neapolis**	**1.37**	**65**	*e*Pn	**Pn**	15 43 14.8	+1.6
ZKR	**Zakros**	**1.79**	**75**	*e*Pn	**Pn**	15 43 20.8	+1.8
ZKR	**Zakros**	**1.79**	**75**	*e*PN	**Pn**	15 43 20.8	+1.8
ZKR	**Zakros**	**1.79**	**75**	*e*Pn	**Pn**	15 43 20.8	+1.8
KYTH	**Kithira**	**1.82**	**332**	*e*Pn	**Pn**	15 43 22.0	+2.7
KYTH	**Kithira**	**1.82**	**332**	*e*PN	**Pn**	15 43 22.0	+2.7
KYTH	**Kithira**	**1.82**	**332**	*e*Pn	**Pn**	15 43 22.0	+2.7
THR6	**Thira Island,**	**1.98**	**32**	P	**Pn**	15 43 21.9	+0.3
THR6	**Thira Island,**	**1.98**	**32**	P	**Pn**	15 43 21.9	+0.3
THR6	**Thira Island,**	**1.98**	**32**	P	**Pn**	15 43 21.9	+0.3
THR5	**Thira Island,**	**2.01**	**30**	P	**Pn**	**15 43 22.0**	**0.0**
THR5	**Thira Island,**	**2.01**	**30**	P	**Pn**	**15 43 22.0**	**0.0**
THR5	**Thira Island,**	**2.01**	**30**	P	**Pn**	**15 43 22.0**	**0.0**
THR1	**Thera Island**	**2.02**	**33**	P	**Pn**	**15 43 22.1**	**0.0**
THR1	**Thera Island**	**2.02**	**33**	P	**Pn**	**15 43 22.1**	**0.0**
THR1	**Thera Island**	**2.02**	**33**	P	**Pn**	**15 43 22.1**	**0.0**
VLI	**Veliai**	**2.24**	**335**	*e*Pb	**Pb**	**15 43 26.9**	**-2.6**
VLI	**Veliai**	**2.24**	**335**	*e*PB	**Pb**	**15 43 26.9**	**-2.6**
APE	**Apeiranthos**	**2.65**	**26**	*e*Pn	**Pn**	**15 43 31.8**	**+1.0**
APE	**Apeiranthos**	**2.65**	**26**	*e*PN	**Pn**	**15 43 31.8**	**+1.0**
APE	**Apeiranthos**	**2.65**	**26**	*e*Pn	**Pn**	**15 43 31.8**	**+1.0**
DID	**Didima**	**2.90**	**346**	*e*PN	**Pn**	**15 43 35.3**	**+1.0**
DID	**Didima**	**2.90**	**346**	*e*Pn	**Pn**	**15 43 35.3**	**+1.0**
PYL	**PYLOS**	**2.92**	**320**	*e*PN	**Pn**	**15 43 36.6**	**+2.0**
PYL	**PYLOS**	**2.92**	**320**	*e*Pn	**Pn**	**15 43 36.6**	**+2.0**
VLX	**Vlachokerasia**	**3.02**	**333**	*e*PN	**Pn**	**15 43 38.3**	**+2.4**
VLX	**Vlachokerasia**	**3.02**	**333**	*e*Pn	**Pn**	**15 43 38.3**	**+2.4**
LTK	**Loutraki**	**3.46**	**345**	*e*PN	**Pn**	**15 43 42.8**	**+0.9**
LTK	**Loutraki**	**3.46**	**345**	*e*Pn	**Pn**	**15 43 42.8**	**+0.9**
GUR	**Goura**	**3.54**	**337**	*e*PN	**Pn**	**15 43 44.2**	**+1.1**
GUR	**Goura**	**3.54**	**337**	*e*Pn	**Pn**	**15 43 44.2**	**+1.1**
ARG	**Arkhangelos**	**3.63**	**64**	*e*Pn	**Pn**	**15 43 46.4**	**+2.2**
ARG	**Arkhangelos**	**3.63**	**64**	*e*PN	**Pn**	**15 43 46.4**	**+2.2**
ARG	**Arkhangelos**	**3.63**	**64**	*e*Pn	**Pn**	**15 43 46.4**	**+2.2**
BRTR	**Keskin Array B**	**9.12**	**54**	Pn	**Pn**	**15 45 02.1**	**+2.4**
	0.1nm,0.3s,baz=234,slow=9.8,SNR=4.4						
BRTR	**Keskin Array B**	**9.12**	**54**	Pn	**Pn**	**15 45 02.1**	**+2.4**
MMAI	**Mount Meron Ar**	**9.55**	**97**	Pn	**Pn**	**15 45 02.7**	**-2.8**
	1.0nm,0.3s,baz=202,slow=20,SNR=3.4						
MMAI				Sn	**Sn**	15 46 46.5	-5.6
	0.7nm,0.3s,baz=309,slow=50,SNR=2.6						
EIL	**Elat**	**10.46**	**116**	Pn	**Pn**	**15 45 16.8**	**-1.3**
	0.2nm,0.3s,baz=50,slow=19,SNR=8.3						
EIL				Sn	**Sn**	15 47 08.1	-6.4
	0.3nm,0.3s,baz=288,slow=18,SNR=2.7						
AKASG	**Malin Array Be**	**16.44**	**12**	Pn	**Pn**	**15 46 38.5**	**-0.1**
	0.8nm,0.3s,baz=206,slow=11,SNR=4.2						
HFS	**Hagfors**	**26.35**	**348**	P	**P**	**15 48 22.6**	**-0.8**
	1.4nm,0.5s,mb3.7,baz=163,slow=10,SNR=5.9						
FINES	**FINESS Array B**	**26.81**	**2**	P	**P**	**15 48 27.3**	**-0.2**
	2.5nm,0.9s,mb3.8,baz=134,slow=16,SNR=3.9						
NB2	**NORSAR Subarra**	**27.65**	**346**	P	**P**	**15 48 34.3**	**-0.8**
	comp=Z,1.0nm,0.8s,mb3.5,baz=152,slow=11						
NOA	**NORSAR Array B**	**27.65**	**346**	P	**P**	**15 48 33.8**	**-1.3**
	comp=Z,0.4nm,0.6s,mb3.2,baz=140,slow=6.9,SNR=3.7						
AKTO	**Aktyubinsk**	**29.21**	**47**	P	**P**	**15 48 48.3**	**-0.9**
	comp=Z,1.2nm,0.6s,mb3.8,baz=238,slow=9.3,SNR=6.1						
TORD	**Torodi Ar. Bea**	**29.52**	**229**	P	**P**	**15 48 52.6**	**+0.4**
	comp=Z,1.3nm,0.5s,mb3.9,baz=35,slow=8.8						
ARCES	**ARCESS Array B**	**34.91**	**1**	P	**P**	**15 49 36.4**	**-2.5**
	comp=Z,1.4nm,0.9s,mb3.9,baz=190,slow=9.2,SNR=4.3						
MKAR	**Makanchi Array**	**44.76**	**56**	P	**P**	**15 51 01.3**	**+0.3**
	comp=Z,1.5nm,0.6s,mb4.0,baz=315,slow=4.3,SNR=21						
ZALV	**Zalesovo Beam**	**45.96**	**46**	P	**P**	**15 51 09.6**	**-0.8**
	comp=Z,2.4nm,0.4s,mb4.5,baz=269,slow=8.7,SNR=11						
SONM	**Songino Array**	**60.46**	**50**	P	**P**	**15 52 57.0**	**-0.2**
	comp=Z,0.6nm,0.4s,mb4.0,baz=280,slow=7.5,SNR=5.2						

*NEIC **27** 15:48:12.7±4.1, 29°.22N×143°.33E, h35km, MG3.9(JMA), Error ellipse: s-maj=165.0km s-min=11.6km az=74.0*
*ISCJB **27** 15:48:13.3±2.2, 29°.1N±0°.1×142°.3E±0°.7, h33km, mb3.9/7, Error ellipse: s-maj=83.8km s-min=5.9km az=167.6*
*IDC **27** 15:48:14.8±7.7, 28°.99N×142°.64E, h33km±49km, mb3.6/7, mb1 3.7/8, mb1mx3.5/24, mbtmp3.6/8, ML3.8/1, Error ellipse: s-maj=111.3km s-min=15.8km az=77.0*
ISC 27 15:48:15.7±2.1, 29°.0N±0°.1×142°.3E±0°.6, h35km, n12, σ1°.16/16, mb3.9/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.93**	**184**	Pn	**Pn**	**15 48 46.2**	**+0.3**
	9.3nm,0.3s,baz=259,slow=23,SNR=5.0						
CBIJ				Sn	**Sn**	15 49 07.0	-1.8
	39nm,0.3s,baz=106,slow=22,SNR=7.9						
MJAR	**Matsushiro Ar**	**8.26**	**336**	Pn	**Pn**	**15 50 12.6**	**-0.3**
	1.3nm,0.3s,baz=161,slow=12,SNR=11						
MJAR				Sn	**Sn**	15 51 43.7	-1.3
	0.4nm,0.3s,baz=19,slow=29,SNR=3.3						
MJAR	**Matsushiro Arr**	**8.26**	**336**	Pn	**Pn**	**15 50 12.6**	**-0.3**
MJAR				Sn	**Sn**	15 51 43.7	-1.3
MAJO	**Matsushiro**	**8.26**	**336**	*e*Pn	**Pn**	**15 50 12.4**	**-0.6**
	2.8nm,0.3s						
MAT	**Matsushiro**

0.2nm,0.3s,baz=234,slow=16,SNR=5.1
MK31 Makanchi Array 37.17 351 *e*P **P 16 11 48.9 +0.4**
MKAR Makanchi Array 37.17 351 P **P 16 11 49.7 +1.2**
0.7nm,0.4s,mb3.8,baz=141,slow=7.8,SNR=8.2
KURK Kurchatov 41.60 349 P **P 16 12 25.9 +0.5**
0.4nm,0.4s,mb3.4,baz=162,slow=7.2,SNR=4.0
KURK Kurchatov 41.60 349 *e*P **P 16 12 26.9 +1.5**
1.2nm,0.7s,mb3.6
ZALV Zalesovo Beam 43.91 355 P **P 16 12 44.5 +0.5**
0.8nm,0.3s,mb4.0,baz=163,slow=12,SNR=4.7
FITZ Fitzroy Crossi 44.67 129 P **P 16 12 50.7 +0.1**
1.2nm,0.6s,mb3.9,baz=244,slow=17,SNR=4.3
WRA Warramunga Arr 52.55 125 P **P 16 13 51.0 -0.3**
0.4nm,0.3s,mb3.9,baz=300,slow=10.0,SNR=18
WRA Warramunga Arr 52.55 125 P **P 16 13 51.0 -0.3**
ASAR Alice Springs 54.17 129 P **P 16 14 04.2 +1.1**
0.5nm,0.7s,mb3.6,baz=307,slow=7.3,SNR=8.1
ARCES ARCESS Array B 71.91 340 P **P 16 15 59.2 -1.0**
3.0nm,1.1s,mb4.2,baz=81,slow=5.6,SNR=2.4
ARCES ARCESS Array B 71.91 340 P **P 16 15 59.2 -1.0**

NEIC ***27*** *16:08:33.7±1.0, 10°.79N×91°.63E, h10km, mb3.9/2, Error ellipse: s-maj=23.2km s-min=14.8km az=66.0*
IDC ***27*** *16:08:33.4±1.3, 10°.83N×91°.66E, h0km, mb3.9/9, mb1 3.9/10, mb1mx3.7/25, mbtmp3.8/10, Error ellipse: s-maj=50.2km s-min=18.9km az=60.0*
ISCJB ***27*** *16:08:34.1±5.4, 10°.85N±0°.09×91°.9E±0°.1, h19km±38km, mb3.8/10, Error ellipse: s-maj=18.1km s-min=15.4km az=11.1*
ISC 27 16:08:36.1±5.5, 10°.82N±0°.09×91°.8E±0°.1, h20km±39km, n14, σ0°.99/15, mb3.8/10, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**10.30**	**42**	Pn	**Pn**	**16 11 01.7**	**-1.1**
	0.7nm,0.4s						
CMAR	**Chiang Mai Arr**	**10.30**	**42**	Pn	**Pn**	**16 11 04.2**	**+1.4**
	baz=236,slow=15,SNR=2.6						
CMAR				Sn	**Sn**	**16 12 57.7**	**-0.1**
	0.1nm,0.3s,baz=50,slow=45,SNR=3.2						
MK31	**Makanchi Array**	**36.74**	**349**	*e*P	**P**	**16 15 41.6**	**-0.3**
MKAR	**Makanchi Array**	**36.74**	**349**	P	**P**	**16 15 41.8**	**-0.1**
	1.5nm,0.5s,mb4.0,baz=133,slow=8.8,SNR=13						
SONM	**Songino Array**	**38.90**	**16**	P	**P**	**16 16 00.9**	**+0.7**
	0.5nm,0.5s,mb3.5,baz=208,slow=8.4,SNR=4.5						
KURK	**Kurchatov**	**41.22**	**347**	P	**P**	**16 16 18.9**	**-0.5**
	1.4nm,0.8s,mb3.6,baz=172,slow=7.6,SNR=8.3						
KURK	**Kurchatov**	**41.22**	**347**	*e*P	**P**	**16 16 16.7**	**-2.7**
	2.0nm,1.0s,mb3.7						
ZALV	**Zalesovo Beam**	**43.37**	**354**	P	**P**	**16 16 37.1**	**+0.2**
	1.3nm,0.4s,mb4.0,baz=180,slow=8.5,SNR=7.7						
BVAR	**Borovoye Array**	**45.47**	**342**	P	**P**	**16 16 52.9**	**-0.7**
	0.6nm,0.6s,mb3.6,baz=180,slow=8.9,SNR=5.4						
WRA	**Warramunga Arr**	**51.89**	**126**	P	**P**	**16 17 43.2**	**-0.3**
	0.2nm,0.3s,mb3.5,baz=302,slow=9.9,SNR=3.1						
WRAB	**Tennant Creek**	**51.89**	**126**	*e*P	**P**	**16 17 41.8**	**-1.8**
	1.1nm,0.6s,mb4.0						
ASAR	**Alice Springs**	**53.60**	**130**	P	**P**	**16 17 57.8**	**+1.6**
	0.5nm,0.7s,mb3.5,baz=300,slow=6.7,SNR=6.5						
ASAR				PcP	PcP	16 19 04.1	+1.5
	0.5nm,0.7s,baz=308,slow=4.2,SNR=4.1						
FINES	**FINESS Array B**	**69.02**	**332**	P	**P**	**16 19 41.0**	**+1.1**
	2.3nm,0.8s,mb4.2,baz=130,slow=18,SNR=4.9						
ARCES	**ARCESS Array B**	**71.72**	**340**	P	**P**	**16 19 56.8**	**+0.5**
	2.2nm,0.9s,mb4.1,baz=82,slow=7.5,SNR=5.6						

IDC ***27*** *16:12:40.5±0.7, 0°.21N×96°.56E, h0km, mb4.4/16, mb1 4.4/18, mb1mx4.3/26, mbtmp4.3/18, ML3.9/2, MS3.9/2, Ms1 3.9/2, ms1mx3.1/29, Error ellipse: s-maj=24.3km s-min=13.0km az=53.0*
ISCJB ***27*** *16:12:42.2±1.6, 0°.24N±0°.04×96°.69E±0°.04, h23km±11km, mb4.6/43, MS3.9/2, Error ellipse: s-maj=7.9km s-min=5.1km az=135.7*
MOS ***27*** *16:12:43.8±0.8, 0°.27N×96°.62E, h33km, mb4.9/10, Error ellipse: s-maj=13.9km s-min=7.8km az=103.7*
DJA ***27*** *16:12:44, 0°.28N×96°.81E, h19km, MLv4.5/7*
NEIC ***27*** *16:12:45.8±0.3, 0°.29N×96°.70E, h35km, mb4.4/12, Error ellipse: s-maj=7.4km s-min=5.3km az=222.0*
BJI ***27*** *16:12:45.1, 0°.49N×96°.76E, h24km, mB5.1/11, mb4.7/21, Ms5.2/2, Ms7 4.6/3*
ISC 27 16:12:44.5±1.7, 0°.23N±0°.04×96°.70E±0°.04, h25km±11km, h27km±2.0km: pP-P, n99, σ0°.88/102, mb4.6/43, MS3.9/2, 2C-2D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**2.85**	**123**	P	**Pn**	**16 13 27.9**	**-0.5**
MNSI	**Mandailing Nat**	**2.93**	**79**	P	**Pn**	**16 13 29.1**	**-0.5**
MNSI				S	**Sn**	**16 14 04.2**	**+0.2**
TPTI		**3.04**	**9**	P	**Pn**	**16 13 31.2**	**+0.1**
TPTI				S	**Sn**	**16 14 03.6**	**-3.2**
PSI	**Prapat**	**3.38**	**41**	Pn	**Pn**	**16 13 35.1**	**-0.6**
	2.7nm,0.3s,baz=208,slow=9.9,SNR=10						
PSI				Sn	**Sn**	**16 14 16.3**	**+1.1**
	5.2nm,0.3s,baz=137,slow=18,SNR=4.2						
PSI	**Prapat**	**3.38**	**41**	Pn	**Pn**	**16 13 35.1**	**-0.6**
PSI				Sn	**Sn**	**16 14 16.3**	**+1.1**
TSI	**Tuntungan**	**3.74**	**30**	P	**Pn**	**16 13 41.1**	**+0.4**
PPI	**Padang Panjang**	**3.76**	**101**	P	**Pn**	**16 13 41.3**	**+0.3**
PPI				S	**Sn**	**16 14 22.8**	**-1.7**
PDSI	**Padang**	**3.93**	**107**	P	**Pn**	**16 13 42.9**	**-0.4**
PDSI				S	**Sn**	**16 14 27.8**	**-0.9**
BKNI	**Bangkinang**	**4.34**	**89**	P	**Pn**	**16 13 57.8**	**+8.9**
PPSI	**Pulau Pagai**	**4.45**	**132**	P	**Pn**	**16 13 50.0**	**-0.5**
SDSI	**Sungai Dareh**	**4.87**	**104**	P	**Pn**	**16 13 57.4**	**+1.2**
BSI	**Banda Aceh**	**5.41**	**345**	P	**Pn**	**16 14 00.8**	**-2.9**
	0.7nm2μm52nm,0.9s						
IPM	**Ipoh**	**6.04**	**46**	P	**Pn**	**16 14 12.8**	**+0.5**
IPM	**Ipoh**	**6.04**	**46**	P	**Pn**	**16 14 13.0**	**+0.7**
	0.1nm38nm,0.8s						
KULM	**Kulim**	**6.39**	**38**	P	**Pn**	**16 14 17.1**	**0.0**
KULM	**Kulim**	**6.39**	**38**	*e*Pn	**Pn**	**16 14 16.1**	**-1.0**
	50nm,0.9s						
KULM	**Kulim**	**6.39**	**38**	P	**Pn**	**16 14 16.8**	**-0.3**
	732nm55nm,0.9s						
KGM	**Kluang**	**6.85**	**75**	P	**Pn**	**16 14 24.5**	**+1.0**
KTGM	**Kuala Trenggan**	**8.18**	**52**	P	**Pn**	**16 14 41.6**	**-0.1**
KLSI		**9.40**	**121**	P	**Pn**	**16 14 58.1**	**-0.3**
	45nm,0.7s						
KSM	**Kuching**	**13.66**	**85**	*e*Pn	**Pn**	**16 15 56.5**	**-0.3**
SMRI	**Semarang**	**15.50**	**118**	P	**Pn**	**16 16 22.0**	**+0.4**
SBUM	**Sibu**	**15.67**	**82**	P	**Pn**	**16 16 24.8**	**+1.0**
CM31	**Chiang Mai Arr**	**18.24**	**7**	*e*P	**Pn**	**16 16 54.8**	**-1.3**
	3.3nm,0.6s						
CMAR	**Chiang Mai Arr**	**18.24**	**7**	P	**Pn**	**16 16 55.6**	**-0.5**
	0.5nm,0.3s,baz=196,slow=11,SNR=34						
CHTO	**Chiang Mai**	**18.59**	**7**	*e*P	**Pn**	**16 16 59.8**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CHTO	**Chiang Mai**	**18.59**	**7**	*e*P	**Pn**	**16 16 59.8**	**-0.6**
	comp=Z,4.8nm,0.8s						
KKM	**Kota Kinabalu**	**20.32**	**73**	P	**P**	**16 17 19.8**	**+0.9**
KKM	**Kota Kinabalu**	**20.32**	**73**	*e*P	**P**	**16 17 19.1**	**+0.2**
	comp=Z,40nm,1.1s						
KMI	**Kunming**	**25.42**	**13**	P	**P**	**16 18 12.5**	**+2.2**
KMI				pP	pP	16 18 19.8	+2.0
KMI				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.3						
ODAN	**Odare**	**27.95**	**342**	*e*P	**P**	**16 18 33.9**	**+0.9**
	comp=Z,29nm,0.9s,mb4.9						
RAMN	**Ramite**	**28.28**	**341**	*e*P	**P**	**16 18 37.6**	**+1.6**
	comp=Z,29nm,0.6s,mb5.1						
TAPN	**Taplejung**	**28.31**	**343**	*e*P	**P**	**16 18 36.4**	**+0.1**
	comp=Z,13nm,0.7s,mb4.7						
JIRN	**Jiri**	**29.07**	**341**	*e*P	**P**	**16 18 44.2**	**+1.1**
	comp=Z,29nm,0.7s,mb5.1						
DMN	**Daman**	**29.41**	**339**	*e*P	**P**	**16 18 47.5**	**+1.5**
	comp=Z,14nm,0.7s,mb4.8						
GUN	**Gumba**	**29.41**	**340**	*e*P	**P**	**16 18 46.9**	**+0.9**
	comp=Z,39nm,0.8s,mb5.2						
KKN	**Kakani**	**29.51**	**339**	*e*P	**P**	**16 18 47.8**	**+0.9**
	comp=Z,17nm,0.7s,mb4.9						
MBWA	**Marble Bar**	**30.96**	**135**	*e*P	**P**	**16 19 00.0**	**+0.2**
	comp=Z,6.6nm,1.0s,mb4.4						
FITZ	**Fitzroy Crossi**	**33.79**	**124**	P	**P**	**16 19 24.7**	**0.0**
	comp=Z,5.4nm,0.8s,mb4.5,baz=245,slow=3.8,SNR=11						
NACB	**Ninganchiao**	**33.89**	**44**	P	**P**	**16 19 23.5**	**-2.0**
	comp=Z,14nm,0.8s,mb4.9						
XAN	**Xi'an**	**35.53**	**18**	P	**P**	**16 19 39.3**	**-0.2**
XAN				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
NJ2	**Nanjing**	**37.95**	**31**	*e*P	**P**	**16 20 00.0**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.5						
GTA	**Gaotai**	**39.09**	**4**	*e*P	**P**	**16 20 10.0**	**+0.3**
GTA				pP	pP	16 20 16.5	-0.8
GTA				sP	sP	16 20 19.0	-1.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.9						
WRA	**Warramunga Arr**	**41.96**	**121**	P	**P**	**16 20 34.2**	**+0.5**
	comp=Z,3.4nm,0.7s,mb4.1,baz=301,slow=9.1,SNR=17						
WRA				PcP	PcP	16 22 28.9	0.0
	comp=Z,0.8nm,1.1s,baz=299,slow=2.8,SNR=4.7						
WRA	**Warramunga Arr**	**41.96**	**121**	P	**P**	**16 20 34.2**	**+0.5**
WRA				PcP	PcP	16 22 28.9	0.0
WRAB	**Tennant Creek**	**41.97**	**121**	*e*P	**P**	**16 20 34.8**	**+1.0**
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.0						
WRAB	**Tennant Creek**	**41.97**	**121**	*e*P	**P**	**16 20 34.8**	**+1.0**
	comp=Z,3.3nm,0.7s,mb4.1						
ASAR	**Alice Springs**	**43.23**	**126**	P	**P**	**16 20 44.6**	**+0.7**
	comp=Z,2.4nm,0.7s,mb4.0,baz=300,slow=8.0,SNR=26						
ASAR				PcP	PcP	16 22 33.6	+0.6
	comp=Z,1.6nm,0.9s,baz=270,slow=2.1,SNR=6.5						
TKM2	**Tokmak 2**	**46.52**	**339**	*e*P	**P**	**16 21 10.4**	**+0.5**
TKM2				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.8						
TKM2	**Tokmak 2**	**46.52**	**339**	*e*P	**P**	**16 21 10.4**	**+0.6**
	comp=Z,18nm,1.4s,mb4.8						
KSRS	**Korea Array**	**46.92**	**34**	P	**P**	**16 21 12.7**	**-0.4**
	comp=Z,2.1nm,0.8s,mb4.1,baz=224,slow=8.8,SNR=10						
MK31	**Makanchi Array**	**48.06**	**347**	*e*P	**P**	**16 21 22.1**	**+0.3**
MKAR	**Makanchi Array**	**48.06**	**347**	P	**P**	**16 21 22.4**	**+0.6**
	comp=Z,7.9nm,0.8s,mb4.8,baz=122,slow=9.3,SNR=41						
SONM	**Songino Array**	**48.16**	**9**	P	**P**	**16 21 23.6**	**+1.1**
	comp=Z,3.6nm,0.9s,mb4.4,baz=190,slow=8.8,SNR=18						
SONM				PcP	PcP	16 22 50.1	+0.4
	comp=Z,1.6nm,0.7s,baz=182,slow=4.6,SNR=5.5						
ZAK	**Zakamensk**	**50.27**	**5**	*e*P	**P**	**16 21 39.2**	**+0.5**
PMG	**Port Moresby**	**51.13**	**102**	*e*P	**P**	**16 21 46.7**	**+0.9**
PMG				pmax	pmax		
	comp=Z,21nm,0.8s						
PMG	**Port Moresby**	**51.13**	**102**	*e*P	**P**	**16 21 46.7**	**+0.9**
	comp=Z,21nm,0.8s,mb5.1						
TLY	**Talaya**	**51.59**	**6**	*e*P	**P**	**16 21 50.1**	**+1.5**
TLY				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
KURK	**Kurchatov**	**52.59**	**346**	P	**P**	**16 21 55.9**	**-0.2**
	comp=Z,2.6nm,0.6s,mb4.4,baz=165,slow=7.0,SNR=16						
KURK				PcP	PcP	16 23 05.4	-0.6
	comp=Z,0.8nm,0.8s,baz=160,slow=7.7,SNR=3.7						
MJAR	**Matsuhiro Arr**	**52.74**	**42**	P	**P**	**16 21 57.8**	**+0.4**
	comp=Z,0.4nm,0.3s,mb3.8,baz=216,slow=5.6,SNR=6.0						
MJAR				LR	LR	16 41 50.1	
	comp=Z,72nm,21.9s,MS3.7,baz=245,slow=33						
STKA	**Stephens Creek**	**53.09**	**131**	P	**P**	**16 22 01.4**	**+1.3**
	comp=Z,5.1nm,0.7s,mb4.6,baz=179,slow=3.1,SNR=6.7						
STKA	**Stephens Creek**	**53.09**	**131**	*e*P	**P**	**16 21 59.5**	**-0.6**
STKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
STKA	**Stephens Creek**	**53.09**	**131**	*e*P	**P**	**16 21 59.5**	**-0.6**
	comp=Z,1.3nm,0.9s,mb3.9						
ZALV	**Zalesovo Beam**	**54.43**	**351**	P	**P**	**16 22 09.8**	**+0.3**
	comp=Z,20nm,0.7s,mb5.2,baz=181,slow=6.8,SNR=93						
ZALV	**Zalesovo Beam**	**54.43**	**351**	P	**P**	**16 22 09.8**	**+0.3**
RDF	**Al-Radifah**	**54.88**	**306**	*e*P	**P**	**16 22 13.5**	**+0.3**
RDF				AMb	AMB	16 22 14.1	
	comp=Z,16nm,0.8s,mb5.1						
NAY	**Al-Naaiem**	**55.25**	**306**	*e*P	**P**	**16 22 15.7**	**-0.2**
NAY				AMb	AMB	16 22 18.1	
	comp=Z,7.5nm,1.4s,mb4.5						
MIB	**Mutribah**	**55.38**	**307**	*e*P	**P**	**16 22 16.6**	**-0.2**
MIB				AMb	AMB	16 22 27.0	
	comp=Z,23nm,0.8s,mb5.3						
NVS	**Novosibirsk**	**55.54**	**351**	*i* P	**P**	**16 22 17.0**	**-0.5**
NVS				pmax	pmax		
	comp=E,5.0nm,1.0s						
NVS				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
NVS				pmax	pmax		
	comp=N,8.0nm,1.2s						
BVAR	**Borovoye Array**	**57.00**	**341**	P	**P**	**16 22 27.1**	**-0.8**
	comp=N,2.1nm,0.6s,mb4.3,baz=142,slow=9.2,SNR=18						
BRVK	**Borovoye**	**57.06**	**341**	*c i* P	**P**	**16 22 27.4**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
YSS	**Yuzh-Sakhalins**	**61.42**	**34**	*e*P	**P**	**16 23 06.0**	**+7.3**
SVE	**Sverdlovsk**	**63.40**	**339**	‖*e*P	**P**	**16 23 11.3**	**-0.4**
SVE				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.8						
HNR	**Honiara**	**63.67**	**101**	LR	LR	16 53 18.4	
	comp=Z,120nm,18.1s,MS4.1,baz=121,slow=38						
ARU	**Arti**	**63.88**	**338**	*d i* P	**P**	**16 23 13.7**	**-1.1**
ARU						16 25 33.9	
ARU				S	**S**	**16 31 49.3**	**+0.6**
ARU				SS	SS	16 35 54.7	-2.6
ARU				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
YAK	**Yakutsk**	**66.48**	**16**	*e*P	**P**	**16 23 29.1**	**-2.5**
YAK				pmax	pmax		
	comp=Z,17nm,1.0s,mb5.0						
YAK				pmax	pmax		
	comp=E,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.3s						
BR131	**Keskin Array S**	**69.39**	**313**	*e*P	**P**	**16 23 49.7**	**-0.7**
	comp=N,0.7nm,0.4s,mb3.9						
BRTR	**Keskin Array B**	**69.39**	**313**	P	**P**	**16 23 49.8**	**-0.7**
	comp=N,1.4nm,0.7s,mb4.0,baz=134,slow=7.9,SNR=9.7						
TIXI	**Tiksi**	**74.22**	**10**	*e*P	**P**	**16 24 17.4**	**-1.4**
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
TIXI	**Tiksi**	**74.22**	**10**	*e*P	**P**	**16 24 18.3**	**-0.5**
	comp=Z,4.8nm,0.8s,mb4.5						
TIXI				*e*	pP	16 24 27.5	+0.6
AKASG	**Malin Array Be**	**75.72**	**323**	P	**P**	**16 24 26.9**	**-1.0**
	comp=Z,3.7nm,0.5s,mb4.6,baz=97,slow=4.8,SNR=14						
AKASG	**Malin Array Be**	**75.72**	**323**	*ce*P	**P**	**16 24 26.8**	**-1.1**
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.5s						
AKBB	**Malin Array Si**	**75.72**	**323**	*e*P	**P**	**16 24 25.9**	**-1.9**
BUR08	**Bucovina Ar. S**	**77.43**	**319**	*e*P	**P**	**16 24 38.3**	**+0.7**
FINES	**FINESS Array B**	**80.62**	**333**	P	**P**	**16 24 54.5**	**-0.3**
	comp=Z,3.2nm,0.6s,mb4.5,baz=99,slow=5.4,SNR=15						
ARCES	**ARCESS Array B**	**83.27**	**340**	P	**P**	**16 25 08.9**	**+0.4**
	comp=Z,1.0nm,0.4s,mb4.2,baz=96,slow=4.6,SNR=21						
NB2	**NORSAR Subarra**	**87.60**	**331**	P	**P**	**16 25 29.8**	**-0.6**
	comp=Z,1.0nm,0.7s,mb4.2,baz=95,slow=4.8						
NOA	**NORSAR Array B**	**87.60**	**331**	P	**P**	**16 25 30.1**	**-0.2**
	comp=Z,1.5nm,0.8s,mb4.3,baz=94,slow=4.8,SNR=5.4						
CDF	**Champ du Feu**	**89.44**	**318**	*e*P	**P**	**16 25 39.2**	**-0.1**
LPG	**La Plagne**	**89.80**	**315**	*e*P	**P**	**16 25 41.0**	**-0.1**
LPL	**La Plagne**	**89.81**	**315**	*e*P	**P**	**16 25 41.0**	**-0.1**
HAU	**Haudompre**	**90.06**	**318**	*e*P	**P**	**16 25 41.5**	**-0.8**
	comp=Z,8.2nm,0.7s,mb4.8						
HAU	**Haudompre**	**90.06**	**318**	*e*P	**P**	**16 25 41.5**	**-0.8**
HAU				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.9						
HAU	**Haudompre**	**90.06**	**318**	*e*P	**P**	**16 25 41.5**	**-0.8**
	comp=Z,4.1nm,0.7s,mb4.9						
BAIF	**Baives**	**91.43**	**320**	*e*P	**P**	**16 25 48.6**	**0.0**
SMF	**Signal de Mont**	**91.80**	**316**	*e*P	**P**	**16 25 49.8**	**-0.6**
AHID	**Auburn Hatcher**	**130.44**	**27**	*e*PKPdf	PKPdf	16 31 53.3	+0.1
TXAR	**Lajitas Array**	**144.75**	**32**	PKP	PKPdf	16 32 19.6	-0.3
	comp=Z,1.6nm,0.7s,baz=267,slow=1.9,SNR=26						
JCT	**Junction City**	**145.66**	**26**	*e*PKP2	PKPab	16 32 21.0	-1.0

ATH ***27*** *16:18:14.9, 38°.26N×21°.55E, h13km±2km, MD3.3/9*
CSEM ***27*** *16:18:15.1±0.2, 38°.22N×21°.55E, h12km, MD3.3, Error ellipse: s-maj=3.9km s-min=3.1km az=148.0*
THE ***27*** *16:18:15.7, 38°.17N×21°.57E, h0km±2km, ML3.2/5, Error ellipse: s-maj=2.1km s-min=0.6km az=301.0*
ISCJB ***27*** *16:18:15.2±0.5, 38°.25N±0°.03×21°.54E±0°.03, h11km±3km, Error ellipse: s-maj=5.0km s-min=3.4km az=148.4*
ISC 27 16:18:15.6±0.4, 38°.22N±0°.03×21°.56E±0°.03, h10km±4km, n51, σ0°.96/83, 2D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.18**	**204**	‖*i*PG	**Pg**	**16 18 19.6**	**+0.2**
RLS				*e*SG	**Sg**	**16 18 23.2**	**+1.2**
RLS	**Riolos of Patr**	**0.18**	**204**	‖*i*Pg	**Pg**	**16 18 19.6**	**+0.2**
RLS				*e*Sg	**Sg**	**16 18 23.2**	**+1.2**
UPR	**University Cam**	**0.19**	**71**	P	**Pg**	**16 18 20.2**	**+0.5**
UPR				S	**Sg**	**16 18 23.5**	**+1.1**
UPR	**University Cam**	**0.19**	**71**	*e*PG	**Pg**	**16 18 19.5**	**-0.2**
UPR	**University Cam**	**0.19**	**71**	*e*Pg	**Pg**	**16 18 19.5**	**-0.2**
UPR	**University Cam**	**0.19**	**71**	P	**Pg**	**16 18 20.2**	**+0.5**
UPR				S	**Sg**	**16 18 23.5**	**+1.1**
LAKA	**Lakka**	**0.33**	**86**	P	**Pg**	**16 18 22.1**	**-0.1**
LAKA				S	**Sg**	**16 18 27.1**	**+0.4**
LAKA	**Lakka**	**0.33**	**86**	P	**Pg**	**16 18 22.1**	**-0.1**
LAKA				S	**Sg**	**16 18 27.1**	**+0.4**
EFP	**Efpalio**	**0.34**	**53**	P	**Pg**	**16 18 22.7**	**+0.3**
EFP				S	**Sg**	**16 18 28.9**	**+1.9**
EFP	**Efpalio**	**0.34**	**53**	*e*PB	**Pg**	**16 18 22.0**	**-0.4**
EFP				*e*SB	**Sg**	**16 18 26.7**	**-0.3**
EFP	**Efpalio**	**0.34**	**53**	*e*Pb	**Pg**	**16 18 22.0**	**-0.4**
EFP	**Efpalio**	**0.34**	**53**	P	**Pg**	**16 18 22.7**	**+0.3**
EFP				*e*Sb	**Sg**	**16 18 26.7**	**-0.3**
EFP				S	**Sg**	**16 18 28.9**	**+1.9**
TRIZ	**Trizonia**	**0.43**	**70**	P	**Pg**	**16 18 23.9**	**-0.2**
TRIZ				S	**Sg**	**16 18 30.4**	**+0.6**
TRIZ	**Trizonia**	**0.43**	**70**	P	**Pg**	**16 18 23.9**	**-0.2**
TRIZ				S	**Sg**	**16 18 30.4**	**+0.6**
KALE	**Kalithea**	**0.49**	**69**	P	**Pg**	**16 18 24.8**	**-0.4**
KALE				S	**Sg**	**16 18 32.6**	**+1.0**
KALE	**Kalithea**	**0.49**	**69**	P	**Pg**	**16 18 24.8**	**-0.4**
KALE				S	**Sg**	**16 18 32.6**	**+1.0**
KFL	**Anninata**	**0.62**	**260**	P	**Pg**	**16 18 27.1**	**-0.4**
GUR	**Goura**	**0.68**	**114**	P	**Pg**	**16 18 27.6**	**-1.2**
GUR				S	**Sg**	**16 18 37.9**	**+0.2**
GUR	**Goura**	**0.68**	**114**	*e*PB	**Pg**	**16 18 27.6**	**-1.2**
GUR				*e*SB	**Sb**	**16 18 38.3**	**-0.8**
GUR	**Goura**	**0.68**	**114**	P	**Pg**	**16 18 27.6**	**-1.2**
GUR				S	**Sg**	**16 18 37.9**	**+0.2**
GUR				*e*Sb	**Sb**	**16 18 38.3**	**-0.8**
EVR	**Evrytania**	**0.72**	**16**	*e*PB	**Pb**	**16 18 28.0**	**-2.3**
EVR	**Evrytania**	**0.72**	**16**	*e*Pb	**Pb**	**16 18 28.0**	**-2.3**
VLS	**Valsamata**	**0.76**	**267**	P	**Pg**	**16 18 29.7**	**-0.6**
VLS				S	**Sg**	**16 18 41.9**	**+1.6**
VLS	**Valsamata**	**0.76**	**267**	*e*PG	**Pg**	**16 18 29.1**	**-1.2**
VLS				*e*SB	**Sb**	**16 18 41.0**	**-0.4**
VLS	**Valsamata**	**0.76**	**267**	*e*Pg	**Pg**	**16 18 29.1**	**-1.2**
VLS	**Valsamata**	**0.76**	**267**	P	**Pg**	**16 18 29.7**	**-0.6**
VLS				*e*Sb	**Sb**	**16 18 41.0**	**-0.4**
VLS				S	**Sg**	**16 18 41.9**	**+1.6**
DSF	**Desfina**	**0.79**	**76**	P	**Pg**	**16 18 30.2**	**-0.6**
DSF				S	**Sg**	**16 18 41.6**	**+0.5**
DSF	**Desfina**	**0.79**	**76**	P	**Pg**	**16 18 30.2**	**-0.6**
DSF				S	**Sg**	**16 18 41.6**	**+0.5**
AGG	**Agios Georgios**	**1.00**	**37**	P	**Pg**	**16 18 35.3**	**+0.3**
AGG	**Agios Georgios**	**1.00**	**37**	P	**Pg**	**16 18 35.3**	**+0.3**
VLX	**Vlachokerasia**	**1.07**	**142**	P	**Pg**	**16 18 34.8**	**-1.4**
VLX				S	**Sg**	**16 18 49.9**	**-0.2**
VLX	**Vlachokerasia**	**1.07**	**142**	*e*PN	**Pn**	**16 18 36.4**	**-0.3**
VLX	**Vlachokerasia**	**1.07**	**142**	P	**Pg**	**16 18 34.8**	**-1.4**
VLX	**Vlachokerasia**	**1.07**	**142**	*e*Pn	**Pn**	**16 18 36.4**	**-0.3**
VLX				S	**Sg**	**16 18 49.9**	**-0.2**
ITM	**Ithomi**	**1.08**	**164**	P	**Pg**	**16 18 35.0**	**-1.4**
ITM				S	**Sg**	**16 18 50.1**	**-0.3**
ITM	**Ithomi**	**1.08**	**164**	*e*PG	**Pg**	**16 18 35.3**	**-1.1**
ITM	**Ithomi**	**1.08**	**164**	P	**Pg**	**16 18 35.0**	**-1.4**
ITM	**Ithomi**	**1.08**	**164**	*e*Pg	**Pg**	**16 18 35.3**	**-1.1**
ITM				S	**Sg**	**16 18 50.1**	**-0.3**
LTK	**Loutraki**	**1.13**	**100**	P	**Pb**	**16 18 36.5**	**-0.7**
LTK	**Loutraki**	**1.13**	**100**	*e*PB	**Pb**	**16 18 36.5**	**-0.7**
**LTK

IGT	**Igoumenitsa**	**0.23**	**16**	P	**Pg**	**16 41 40.7**	**-0.7**
IGT				S	**Sg**	**16 41 44.5**	**0.0**
IGT	**Igoumenitsa**	**0.23**	**16**	P	**Pg**	**16 41 40.7**	**-0.7**
IGT				S	**Sg**	**16 41 44.5**	**0.0**
KEK	**Kerkira**	**0.53**	**319**	*e*Pn	**Pg**	**16 41 46.5**	**-0.5**
KEK				*e*Sn	**Sg**	**16 41 54.9**	**+0.9**
KEK	**Kerkira**	**0.53**	**319**	P	**Pg**	**16 41 46.6**	**-0.4**
KEK				S	**Sg**	**16 41 55.1**	**+1.1**
KEK	**Kerkira**	**0.53**	**319**	*e*PN	**Pg**	**16 41 46.5**	**-0.5**
KEK				*e*SN	**Sg**	**16 41 54.9**	**+0.9**
KEK	**Kerkira**	**0.53**	**319**	*e*Pn	**Pg**	**16 41 46.5**	**-0.5**
KEK				S	**Sg**	**16 41 55.1**	**+1.1**
JAN	**Janina**	**0.58**	**53**	*e*Pn	**Pg**	**16 41 47.2**	**-0.7**
JAN	**Janina**	**0.58**	**53**	*e*PN	**Pg**	**16 41 47.2**	**-0.7**
JAN	**Janina**	**0.58**	**53**	*e*Pn	**Pg**	**16 41 47.2**	**-0.7**
LKD2	**Lefkada island**	**0.61**	**149**	P	**Pg**	**16 41 48.2**	**-0.3**
LKD2				S	**Sg**	**16 41 57.2**	**+0.8**
LKD2	**Lefkada island**	**0.61**	**149**	P	**Pg**	**16 41 48.2**	**-0.3**
LKD2				S	**Sg**	**16 41 57.2**	**+0.8**
VLS	**Valsamata**	**1.16**	**167**	*e*Pn	**Pn**	**16 41 57.5**	**-1.7**
VLS				*e*Sn	**Sn**	**16 42 14.5**	**-0.7**
VLS	**Valsamata**	**1.16**	**167**	*e*PN	**Pn**	**16 41 57.5**	**-1.7**
VLS				*e*SN	**Sn**	**16 42 14.5**	**-0.7**
VLS	**Valsamata**	**1.16**	**167**	*e*Pn	**Pn**	**16 41 57.5**	**-1.7**
VLS				*e*Sn	**Sn**	**16 42 14.5**	**-0.7**
EVR	**Evrytania**	**1.27**	**108**	*e*Pn	**Pn**	**16 42 00.5**	**-0.2**
EVR	**Evrytania**	**1.27**	**108**	*e*PN	**Pn**	**16 42 00.5**	**-0.2**
EVR	**Evrytania**	**1.27**	**108**	*e*Pn	**Pn**	**16 42 00.5**	**-0.2**
THL	**Klokotos Trika**	**1.39**	**79**	*e*PN	**Pn**	**16 42 02.9**	**+0.6**
THL	**Klokotos Trika**	**1.39**	**79**	*e*Pn	**Pn**	**16 42 02.9**	**+0.6**
AGG	**Agios Georgios**	**1.64**	**99**	*e*Pn	**Pn**	**16 42 06.2**	**+0.4**
AGG	**Agios Georgios**	**1.64**	**99**	*e*PN	**Pn**	**16 42 06.2**	**+0.4**
AGG	**Agios Georgios**	**1.64**	**99**	*e*Pn	**Pn**	**16 42 06.2**	**+0.4**
KYTH	**Kithira**	**3.74**	**143**	*e*Pn	**Pn**	**16 42 36.6**	**+1.9**
KYTH	**Kithira**	**3.74**	**143**	*e*PN	**Pn**	**16 42 36.6**	**+1.9**
KYTH	**Kithira**	**3.74**	**143**	*e*Pn	**Pn**	**16 42 36.6**	**+1.9**

*IDC **27** 16:44:58.8±19.0, 12.°77N×145.°84E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/23, mbtmp3.3/3, Error ellipse: s-maj=472.2km s-min=39.1km az=63.0*
*NEIC **27** 16:45:03.0±1.0, 12.°80N×145.°97E, h35km, mb3.9/1, Error ellipse: s-maj=23.9km s-min=14.0km az=74.0*
*ISCJB **27** 16:45:03.4±3.6, 12.°8N±0.°2×145.°8E±0.°3, h54km±32km, mb3.4/4, Error ellipse: s-maj=42.9km s-min=25.9km az=2.5*

ISC 27 16:45:04.3±3.9,**12.°8N**±0.°1×**145.°8E**±0.°3,**h44**km±36km,**n6,** σ1°**03**/7,**mb3.4**/4,**South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.18**	**310**	*e*Pn	**Pn**	**16 45 25.3**	**+0.9**
GUMO				*e*Sn	**Sn**	**16 45 38.4**	**-0.8**
WRAB	**Tennant Creek** 1.4nm,1.0s,mb3.9	**34.46**	**199**	*e*P	**P**	**16 51 47.5**	**-0.6**
WRA	**Warramunga Arr** 0.3nm,0.6s,mb3.4,baz=22,slow=10,SNR=4.3	**34.47**	**199**	P	**P**	**16 51 47.4**	**-0.8**
ASAR	**Alice Springs** 0.2nm,0.7s,mb2.9,baz=17,slow=9.7,SNR=3.4	**38.10**	**198**	P	**P**	**16 52 19.8**	**+0.7**
CMAR	**Chiang Mai Arr** 0.3nm,0.7s,mb3.2,baz=75,slow=5.8,SNR=2.8	**45.37**	**283**	P	**P**	**16 53 19.7**	**+0.9**
RSO	**Redoubt South**	**64.99**	**29**	*e*P	**P**	**16 55 39.2**	**-0.3**

*CSEM **27** 16:49:05.0±0.3, 39.°66N×41.°71E, h20km, MD3.2, Error ellipse: s-maj=9.5km s-min=4.3km az=30.0*
*ISCJB **27** 16:49:05.8±1.0, 39.°72N±0.°06×41.°83E±0.°07, h13km±7km, Error ellipse: s-maj=10.3km s-min=7.5km az=39.8*
*DDA **27** 16:49:06.7, 39.°82N×41.°84E, h2km, Md3.2*

ISC 27 16:49:06.0±0.9,**39.°72N**±0.°06×**41.°83E**±0.°07,**h18**km±5km, **n14,** σ0°**93**/21,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOMI	**Horasan**	**0.33**	**11**	*i* P	**Pg**	**16 49 10.9**	**-2.1**
HOMI				*i* S	**Sg**	**16 49 18.2**	**+0.4**
ERZM	**Erzurum**	**0.40**	**297**	*i* P	**Pg**	**16 49 13.6**	**-0.6**
ERZM	**Erzurum**	**0.40**	**297**	*i* P	**Pg**	**16 49 13.6**	**-0.7**
EZM	**Erzurum**	**0.40**	**297**	PG	**Pg**	**16 49 13.8**	**-0.5**
EZM				SG	**Sg**	**16 49 21.4**	**+1.5**
TUTA	**Tutak**	**0.83**	**112**	*i* P	**Pb**	**16 49 22.6**	**+0.7**
TUTA				*i* S	**Sb**	**16 49 39.3**	**+6.7**
TUTA	**Tutak**	**0.83**	**112**	*i* P	**Pb**	**16 49 22.5**	**+0.6**
AGRB	**Hanur-Agry**	**0.91**	**99**	*e*PG	**Pg**	**16 49 24.4**	**+0.6**
AGRB	**Hanur-Agry**	**0.91**	**99**	*e*Pg	**Pg**	**16 49 24.4**	**+0.6**
DDEM	**Demirkent**	**1.17**	**357**	*i* P	**Pn**	**16 49 26.6**	**-0.9**
DDEM				*i* S	**Sb**	**16 49 43.8**	**+1.3**
DDEM	**Demirkent**	**1.17**	**357**	*i* P	**Pn**	**16 49 26.6**	**-0.9**
DDEM				*i* S	**Sb**	**16 49 43.8**	**+1.3**
DBAD	**Bademkaya**	**1.30**	**356**	*i* P	**Pn**	**16 49 28.8**	**-0.5**
DBAD				*i* S	**Sn**	**16 49 46.0**	**-0.1**
DBAD	**Bademkaya**	**1.30**	**356**	*i* P	**Pn**	**16 49 28.8**	**-0.5**
DBAD				*i* S	**Sn**	**16 49 46.0**	**-0.1**
BCA	**Borcka**	**1.73**	**355**	*e*PN	**Pn**	**16 49 35.2**	**0.0**
BCA	**Borcka**	**1.73**	**355**	*e*Pn	**Pn**	**16 49 35.2**	**0.0**

*OMAN **27** 16:50:54.9±93.0, 31.°28N×57.°95E, h164km±1km, Error ellipse: s-maj=21.8km s-min=1.8km az=8.0*
*ISCJB **27** 16:51:31.4±0.2, 28.°30N±0.°02×57.°18E±0.°03, h10km, mb4.3/49, MS3.5/7, Error ellipse: s-maj=4.1km s-min=3.1km az=22.9*
*IDC **27** 16:51:31.1±0.7, 28.°18N×57.°28E, h0km, mb4.1/18, mb1 4.2/21, mb1mx4.0/32, mbtmp4.1/21, ML4.1/3, MS3.6/9, Ms1 3.6/9, ms1mx3.2/37, Error ellipse: s-maj=16.8km s-min=14.4km az=153.0*
*BJI **27** 16:51:33.9, 28.°00N×57.°78E, h11km, mB4.8/5, mb4.2/6*
*CSEM **27** 16:51:33.7±0.1, 28.°28N×57.°22E, h15km, mb4.4/34, Error ellipse: s-maj=6.3km s-min=4.2km az=102.0*
*NEIC **27** 16:51:34.0, 28.°10N×57.°50E, h18km, mb4.4/28, ML4.4(THR), MN4.5(TEH), After TEH.*
*TEH **27** 16:51:34.4, 28.°11N×57.°47E, h18km*
*MOS **27** 16:51:34.1±1.2, 28.°20N×57.°22E, h33km, mb4.6/32, Error ellipse: s-maj=9.8km s-min=6.0km az=121.5*
*KISR **27** 16:51:35.5±0.6, 28.°75N×56.°44E, h0km±611km, ML4.5*
*THR **27** 16:51:36.3±1.1, 28.°29N×56.°99E, h18km±12km, ML4.4*
*SZGRF **27** 16:51:41.9, 28.°40N×56.°81E, h33km, mb4.2, Southern Iran*

ISC 27 16:51:33.1±0.2,**28.°28N**±0.°02×**57.°21E**±0.°03,**h10**km,**n245,** σ1°**05**/254,**mb4.3**/49,**MS3.5**/7,**6C-6D,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBND	**Bandar-abas**	**1.02**	**216**	*e*Pg	**Pg**	**16 51 53.3**	**+0.6**
IBND				*e*Pg	**Pg**	**16 51 53.4**	**+0.7**
IBND				*e*Sg	**Sg**	**16 52 08.1**	**+2.2**
IBND	comp=Z,66μm,0.1s			*e*		16 52 10.3	
IBND	comp=Z,92μm,0.2s			*e*		16 52 10.4	
IBND	**Bandar-abas**	**1.02**	**216**	*e*Pg	**Pg**	**16 51 53.4**	**+0.7**
BNDS	**Bandar-Abbas**	**1.27**	**227**	*e*Pg	**Pg**	**16 51 57.9**	**+0.3**
BNDS	comp=N,17μm,0.6s			AML	AML	16 52 16.9	
BNDS	**Bandar-Abbas**	**1.27**	**227**	*e*Pg	**Pg**	**16 51 57.8**	**+0.3**
BNDS				*e*Sg	**Sg**	**16 52 13.3**	**-0.7**
KRBR	**Kerman**	**1.74**	**347**	*e*Pg	**Pg**	**16 52 07.0**	**+0.4**
KRBR				*e*Sg	**Sg**	**16 52 30.6**	**+1.5**
KRBR	comp=N,3μm,0.3s			AML	AML	16 52 37.4	
KRBR	comp=E,3μm,0.8s			AML	AML	16 52 38.1	
KRBR	**Kerman**	**1.74**	**347**	*e*Pg	**Pg**	**16 52 07.0**	**+0.5**
KRBR				*e*Sg	**Sg**	**16 52 29.4**	**+0.3**
BANOM	**Banah**	**2.48**	**199**	⇓P	**Pn**	**16 52 16.5**	**+2.9**
BANOM	**Banah** SNR=130	**2.48**	**199**	Pn	**Pn**	**16 52 13.3**	**-0.3**
BANOM	**Banah**	**2.48**	**199**	P	**Pn**	**16 52 16.5**	**+2.9**
BANOM				Sn	**Sn**	**16 52 41.3**	**-2.6**
ZHSF	**Zahedan**	**3.39**	**66**	*e*Pn	**Pb**	**16 52 33.2**	**-0.1**
ZHSF	**Zahedan**	**3.39**	**66**	*e*Pn	**Pb**	**16 52 33.9**	**+0.6**
NAZ	**Nazwa, Dubai** SNR=16	**3.56**	**203**	Pn	**Pn**	**16 52 29.5**	**+1.1**
HATD	**Hatta, Dubai** SNR=23	**3.57**	**196**	Pn	**Pn**	**16 52 29.8**	**+1.2**
IBAF	**Bafgh**	**3.59**	**337**	Pn	**Pn**	**16 52 32.9**	**+4.0**
IBAF	**Bafgh**	**3.59**	**337**	*e*Pn	**Pn**	**16 52 33.0**	**+4.1**
IBAF	comp=Z,4μm,0.2s			*e*		16 52 52.7	
IBAF	**Bafgh**	**3.59**	**337**	*e*Pn	**Pn**	**16 52 33.0**	**+4.1**
GHIR		**3.73**	**271**	*e*Pn	**Pn**	**16 52 32.3**	**+1.6**
GHIR	comp=E,616nm,0.3s			AML	AML	16 53 17.4	
GHIR	comp=N,566nm,0.3s			AML	AML	16 53 20.9	
GHIR	**Ghir-Karzin**	**3.73**	**271**	*e*Pn	**Pn**	**16 52 32.3**	**+1.6**
ASHO	**Ashiyiah** SNR=24	**3.73**	**196**	P	**Pn**	**16 52 31.1**	**+0.4**
ASHO	SNR=23			⇓P		16 52 32.7	
ASHO	**Ashiyiah** SNR=25	**3.73**	**196**	Pn	**Pn**	**16 52 31.2**	**+0.5**
ISRV	**Sarvestan**	**3.76**	**288**	Pn	**Pn**	**16 52 34.6**	**+3.5**
ISRV	**Sarvestan**	**3.76**	**288**	*e*Pn	**Pn**	**16 52 34.6**	**+3.5**
ISRV	comp=Z,5μm,0.1s			*e*		16 53 26.4	
ISRV	**Sarvestan**	**3.76**	**288**	*e*Pn	**Pn**	**16 52 34.6**	**+3.5**
FAQ	**Al Faqa, Dubai** SNR=24	**3.81**	**203**	Pn	**Pn**	**16 52 31.9**	**+0.1**
IMEH	**Mehriz**	**3.83**	**325**	Pn	**Pn**	**16 52 36.0**	**+3.8**
IMEH	**Mehriz**	**3.83**	**325**	*e*Pn	**Pn**	**16 52 36.1**	**+3.9**
IMEH	comp=Z,4μm,0.3s			*e*		16 53 52.4	
IMEH	**Mehriz**	**3.83**	**325**	*e*Pn	**Pn**	**16 52 36.1**	**+3.9**
IPAR	**Pars**	**3.96**	**294**	Pn	**Pn**	**16 52 37.4**	**+3.5**
IPAR	**Pars**	**3.96**	**294**	*e*Pn	**Pn**	**16 52 37.4**	**+3.5**
IPAR	comp=Z,3μm,0.4s			*e*		16 53 59.6	
IPAR	**Pars**	**3.96**	**294**	*e*Pn	**Pn**	**16 52 37.4**	**+3.5**
ASUD	**Al Ashush, Dub** SNR=89	**4.01**	**205**	P	**Pn**	**16 52 35.4**	**+0.9**
ASUD				⇑P		16 52 36.0	
ASUD				⇑P		16 52 36.5	
ASUD	**Al Ashush, Dub** SNR=22	**4.01**	**205**	Pn	**Pn**	**16 52 35.1**	**+0.5**
ASUD	**Al Ashush, Dub** SNR=89	**4.01**	**205**	P	**Pn**	**16 52 35.4**	**+0.8**
ICHK	**Chekchek**	**4.64**	**329**	Pn	**Pn**	**16 52 47.1**	**+3.9**
ICHK	**Chekchek**	**4.64**	**329**	*e*Pn	**Pn**	**16 52 47.2**	**+4.0**
ICHK	comp=Z,3μm,0.3s			*e*		16 54 15.4	
ICHK	**Chekchek**	**4.64**	**329**	*e*Pn	**Pn**	**16 52 47.2**	**+4.0**
HOQ	**Hoqain** SNR=27	**4.68**	**179**	⇓P	**Pn**	**16 52 42.3**	**-1.5**
HOQ	**Hoqain** SNR=27	**4.68**	**179**	P	**Pn**	**16 52 42.3**	**-1.5**
ARQ	**Araqi** SNR=77	**4.96**	**187**	⇑P	**Pn**	**16 52 48.7**	**+1.0**
ARQ				⇑P		16 52 48.7	
ARQ				P		16 52 48.8	
ARQ	**Araqi** SNR=18	**4.96**	**187**	P	**Pn**	**16 52 48.7**	**+1.0**
SMDO	**Samad** SNR=21	**5.25**	**172**	⇑P	**Pn**	**16 52 51.0**	**-0.6**
SMDO				⇓P		16 52 51.1	
SMDO	**Samad**	**5.25**	**172**	P	**Pn**	**16 52 51.0**	**-0.7**
BSY	**Bisya** SNR=15	**5.51**	**180**	⇓P	**Pn**	**16 52 56.0**	**+0.8**
BSYO	**Bisya** SNR=15	**5.53**	**180**	P	**Pn**	**16 52 56.0**	**+0.6**
QRN	**Al-Qurain**	**8.19**	**275**	*e*P	**Pn**	**16 53 31.7**	**-0.3**
QRN				*e*S	**Sn**	**16 54 59.0**	**-5.6**
QRN	comp=Z,44nm,0.2s			AML	AML	16 54 59.4	
KBD	**Kabd**	**8.40**	**278**	*e*P	**Pn**	**16 53 34.4**	**-0.5**
KBD				*e*S	**Sn**	**16 55 03.5**	**-6.4**
KBD	comp=Z,42nm,0.3s			AML	AML	16 55 04.4	
RDF	**Al-Radifah**	**8.52**	**277**	*e*P	**Pn**	**16 53 36.7**	**+0.2**
RDF				*e*S	**Sn**	**16 55 07.0**	**-5.7**
RDF	comp=Z,102nm,0.3s			AML	AML	16 55 08.4	
RDF	**Al-Radifah**	**8.52**	**277**	*e*P	**Pn**	**16 53 36.7**	**+0.2**
MIB	**Mutribah**	**8.78**	**282**	*e*P	**Pn**	**16 53 39.3**	**-0.7**
MIB				*e*S	**Sn**	**16 55 12.5**	**-6.5**
MIB	comp=Z,42nm,0.4s			AML	AML	16 55 13.6	
NAY	**Al-Naaiem**	**8.80**	**279**	*e*P	**Pn**	**16 53 39.9**	**-0.5**
NAY				*e*S	**Sn**	**16 55 13.6**	**-6.1**
NAY	comp=Z,45nm,0.7s			AML	AML	16 55 16.6	
WHFO	**Wadi Hawf** SNR=15	**10.79**	**198**	⇓P	**Pn**	**16 54 04.7**	**-2.9**
GNI	**Garni** comp=Z,0.7nm,0.3s,baz=323,slow=21,SNR=2.1	**15.68**	**322**	Pn	**Pn**	**16 55 14.8**	**+0.7**
GNI	comp=Z,122nm,19.2s,baz=260,slow=39			LR	LR	17 01 43.5	
GNI	**Garni**	**15.68**	**322**	⇓*e*P	**Pn**	**16 55 22.1**	**+8.0**
GNI	comp=Z,16nm,1.2s			pmax	pmax		
GNI	**Garni** comp=Z,12nm,0.8s	**15.68**	**322**	*e*Pn	**Pn**	**16 55 19.6**	**+5.5**
GNI	**Garni** comp=Z,16nm,1.2s	**15.68**	**322**	*e*P	**Pn**	**16 55 22.1**	**+8.0**
ASF	**Jabal al Asfar** comp=Z,0.6nm,0.3s,baz=151,slow=7.3,SNR=5.3	**17.98**	**287**	P	**Pn**	**16 55 44.5**	**+1.3**
ASF	**Jabal al Asfar** comp=Z,1.0nm,0.3s	**17.98**	**287**	P	**Pn**	**16 55 44.5**	**+1.4**
ZEI	**Tsey** comp=Z,10.0nm,0.4s	**18.03**	**327**	*e*P	**Pn**	**16 55 47.1**	**+3.4**
ZEI	**Tsey** comp=Z,10.0nm,0.4s	**18.03**	**327**	*e*P	**Pn**	**16 55 47.1**	**+3.4**
AML	**Almayashu** comp=Z,12nm,0.7s	**19.25**	**40**	*e*P	**Pn**	**16 55 57.0**	**-1.6**
AML	**Almayashu** comp=Z,12nm,0.7s	**19.25**	**40**	*e*P	**Pn**	**16 55 57.0**	**-1.5**
MMAI	**Mount Meron Ar** comp=Z,0.8nm,0.3s,baz=100,slow=15,SNR=4.7	**19.34**	**290**	P	**Pn**	**16 56 00.2**	**+0.5**
KIV	**Kislovodsk** comp=Z,17nm,1.7s	**19.51**	**327**	*e*P	**Pn**	**16 56 03.8**	**+2.2**
KIV	**Kislovodsk** comp=Z,17nm,1.7s	**19.51**	**327**	*e*P	**Pn**	**16 56 03.8**	**+2.2**
EIL	**Elat** comp=Z,0.5nm,0.3s,baz=32,slow=23,SNR=5.1	**19.52**	**279**	P	**Pn**	**16 56 01.9**	**0.0**
EIL	comp=Z,135nm,19.4s,baz=282,slow=42			LR	LR	17 05 14.9	
EIL	**Elat**	**19.52**	**279**	P	**Pn**	**16 56 01.9**	**0.0**
EKS2	**Erkin-Say** comp=Z,20nm,0.9s	**19.64**	**39**	*e*P	**Pn**	**16 56 03.9**	**+0.6**
EKS2	**Erkin-Say** comp=Z,20nm,0.9s	**19.64**	**39**	*e*P	**Pn**	**16 56 03.8**	**+0.6**
UCH	**Uchtor** comp=Z,4.8nm,0.8s	**19.78**	**41**	*e*P	**Pn**	**16 56 04.8**	**-0.1**
UCH	**Uchtor** comp=Z,4.8nm,0.8s	**19.78**	**41**	*e*P	**Pn**	**16 56 04.8**	**0.0**
AAK	**Ala-Archa** comp=Z,9.6nm,0.7s,baz=188,slow=10,SNR=14	**20.03**	**40**	P	**P**	**16 56 07.8**	**+1.8**
AAK	comp=Z,241nm,18.6s,MS3.6,baz=102,slow=40			LR	LR	17 04 56.7	
AAK	**Ala-Archa**	**20.03**	**40**	P	**P**	**16 56 07.8**	**+1.8**
AAK	comp=Z,10.0nm,0.7s			pmax	pmax		
AAK	comp=Z,241nm,18.6s,MS3.6			MLR	MLR		
AAK	**Ala-Archa** comp=Z,241nm,18.6s	**20.03**	**40**	P	**P**	**16 56 07.8**	**+1.8**
TKM2	**Tokmak 2** comp=Z,8.0nm,0.8s	**20.84**	**41**	*e*P	**P**	**16 56 15.9**	**+1.1**
TKM2				pmax	pmax		
TKM2	**Tokmak 2** comp=Z,8.0nm,0.8s	**20.84**	**41**	*e*P	**P**	**16 56 15.9**	**+1.1**
TKM2	**Tokmak 2** comp=Z,8.0nm,0.8s	**20.84**	**41**	*e*P	**P**	**16 56 15.9**	**+1.1**
CSS	**Prodhromos** comp=Z,12nm,0.7s,mb4.3	**21.37**	**294**	*e*P	**P**	**16 56 20.0**	**-0.7**
CSS	**Prodhromos** comp=Z,12nm,0.7s,mb4.3	**21.37**	**294**	*e*P	**P**	**16 56 20.0**	**-0.7**
AKTK	**Aktyubinsk**	**22.14**	**1**	P	**P**	**16 56 30.1**	**+1.4**
AKTK				LR	LR	17 06 48.8	
AKTK	**Aktyubinsk**	**22.14**	**1**	P	**P**	**16 56 30.1**	**+1.4**
AKTO	**Aktyubinsk** comp=Z,14nm,0.5s,mb4.6,baz=176,slow=12,SNR=42	**22.14**	**1**	P	**P**	**16 56 30.1**	**+1.4**
AKTO	comp=Z,169nm,18.5s,MS3.5,baz=8.3,slow=41			LR	LR	17 06 48.8	
AKTO	**Aktyubinsk**	**22.14**	**1**	P	**P**	**16 56 30.1**	**+1.4**
AKTO	comp=Z,15nm,0.5s,mb4.7			pmax	pmax		
AKTO	comp=Z,169nm,18.5s,MS3.5			MLR	MLR		
BR131	**Keskin Array S** comp=Z,2.6nm,0.6s,mb3.8	**22.56**	**307**	*e*P	**P**	**16 56 32.9**	**-0.5**
BR131	**Keskin Array S** comp=Z,2.6nm,0.6s,mb3.8	**22.56**	**307**	*e*P	**P**	**16 56 32.9**	**-0.5**
BRTR	**Keskin Array B** comp=Z,3.6nm,0.7s,mb3.9,baz=115,slow=12,SNR=4.8	**22.56**	**307**	P	**P**	**16 56 34.6**	**+1.2**
BRTR	**Keskin Array B**	**22.56**	**307**	P	**P**	**16 56 34.6**	**+1.2**
BRTR	comp=Z,4.0nm,0.7s			pmax	pmax		
BRTR	**Keskin Array B** comp=Z,4.0nm,0.7s,mb4.0	**22.56**	**307**	P	**P**	**16 56 34.6**	**+1.2**
DMN	**Daman** comp=Z,7.3nm,0.5s,mb4.5	**24.63**	**85**	*e*P	**P**	**16 56 54.1**	**+0.3**
KKN	**Kakani** comp=Z,17nm,0.5s,mb4.8	**24.76**	**84**	*e*P	**P**	**16 56 55.8**	**+0.8**
PKIN	**Phulchoki** comp=Z,15nm,0.5s,mb4.8	**24.89**	**85**	*e*P	**P**	**16 56 56.5**	**+0.3**
PKI	**Pulchoki** comp=Z,16nm,0.5s,mb4.8	**24.90**	**85**	*e*P	**P**	**16 56 56.6**	**+0.3**
GUN	**Gumba** comp=Z,30nm,0.7s,mb4.9	**25.27**	**84**	*e*P	**P**	**16 57 00.8**	**+1.2**
JIRN	**Jiri** comp=Z,15nm,0.5s,mb4.8	**25.58**	**84**	*e*P	**P**	**16 57 02.8**	**+0.4**
RAMN	**Ramite** comp=Z,32nm,0.8s,mb4.9	**26.05**	**86**	*e*P	**P**	**16 57 05.1**	**-1.6**
BVAR	**Borovoye Array** comp=Z,3.1nm,0.6s,mb4.0,baz=198,slow=9.3,SNR=19	**26.58**	**18**	P	**P**	**16 57 11.9**	**+0.8**
BVAR	**Borovoye Array**	**26.58**	**18**	P	**P**	**16 57 11.9**	**+0.8**
BVAR	comp=Z,3.0nm,0.6s			pmax	pmax		
BVAR	**Borovoye Array** comp=Z,3.0nm,0.6s,mb4.0	**26.58**	**18**	P	**P**	**16 57 11.9**	**+0.8**
BRVK	**Borovoye**	**26.58**	**18**	*e*P	**P**	**16 57 11.4**	**+0.2**
BRVK	comp=Z,6.0nm,0.8s,mb4.2			pmax	pmax		
BRVK	**Borovoye** comp=Z,5.8nm,0.8s,mb4.2	**26.58**	**18**	*e*P	**P**	**16 57 11.4**	**+0.2**
BRVK	**Borovoye** comp=Z,5.8nm,0.8s,mb4.2	**26.58**	**18**	*e*P	**P**	**16 57 11.4**	**+0.2**
ODAN	**Odare** comp=Z,5.3nm,0.4s,mb4.4	**26.76**	**86**	*e*P	**P**	**16 57 11.2**	**-1.9**
MK31	**Makanchi Array**	**26.96**	**40**	*e*P	**P**	**16 57 14.8**	**+0.1**
MK31	**Makanchi Array**	**26.96**	**40**	*e*P	**P**	**16 57 14.8**	**+0.1**
MKAR	**Makanchi Array** comp=Z,1.3nm,0.6s,mb3.6,baz=198,slow=4.0,SNR=16	**26.96**	**40**	P	**P**	**16 57 15.2**	**+0.5**
MKAR	**Makanchi Array**	**26.96**	**40**	*i* P	**P**	**16 57 15.1**	**+0.4**
MKAR	comp=Z,1.0nm,0.6s			pmax	pmax		
MKAR	**Makanchi Array** comp=Z,1.0nm,0.6s,mb3.5	**26.96**	**40**	*i* P	**P**	**16 57 15.1**	**+0.4**
KURK	**Kurchatov** comp=Z,1.4nm,0.3s,mb4.1,baz=228,slow=8.5,SNR=3.6	**27.65**	**30**	P	**P**	**16 57 17.7**	**-3.1**
KURK	comp=Z,179nm,18.7s,MS3.7,baz=225,slow=40			LR	LR	17 09 57.5	
KURK	**Kurchatov**	**27.65**	**30**	*e*P	**P**	**16 57 21.2**	**+0.4**
KURK	**Kurchatov** comp=Z,1.9nm,0.7s,mb3.8	**27.65**	**30**	*e*P	**P**	**16 57 19.0**	**-1.8**
KURK	**Kurchatov**	**27.65**	**30**	*e*P	**P**	**16 57 21.2**	**+0.4**
IDI	**Anoyia** comp=Z,3.1nm,0.4s,mb4.3,baz=72,slow=11,SNR=7.0	**28.26**	**293**	P	**P**	**16 57 26.5**	**0.0**
IDI	**Anoyia**	**28.26**	**293**	P	**P**	**16 57 26.5**	**0.0**
GVD	**Gavdhos** comp=Z,18nm,0.5s,mb5.1	**28.89**	**291**	*e*P	**P**	**16 57 31.4**	**-0.6**
GVD	**Gavdhos** comp=Z,18nm,0.5s,mb5.1	**28.89**	**291**	*e*P	**P**	**16 57 31.4**	**-0.6**
AKASG	**Malin Array Be** comp=Z,0.7nm,0.4s,mb3.9,baz=132,slow=8.6,SNR=6.1	**30.80**	**324**	P	**P**	**16 57 48.1**	**-0.6**
AKASG	**Malin Array Be**	**30.80**	**324**	*i* P	**P**	**16 57 50.4**	**+1.6**
AKASG	comp=Z,1.0nm,0.4s			pmax	pmax		
AKASG	**Malin Array Be**	**30.80**	**324**	P	**P**	**16 57 48.1**	**-0.7**
AKBB	**Malin Array Si**	**30.80**	**324**	*e*P	**P**	**16 57 47.5**	**-1.3**
AKBB	**Malin Array Si**	**30.80**	**324**	*e*P	**P**	**16 57 47.5**	**-1.3**
KIEV	**Kiev**	**30.80**	**324**	*e*P	**P**	**16 57 46.7**	**-2.1**
KIEV	comp=Z,3.0nm,0.6s,mb4.3			pmax	pmax		
KIEV	**Kiev** comp=Z,3.3nm,0.6s,mb4.3	**30.80**	**324**	*e*P	**P**	**16 57 46.7**	**-2.1**
KIEV	**Kiev** comp=Z,3.3nm,0.6s,mb4.3	**30.80**	**324**	*e*P	**P**	**16 57 46.7**	**-2.1**
NVS	**Novosibirsk**	**32.55**	**28**	*e*P	**P**	**16 58 09.7**	**+5.6**
ZALV	**Zalesovo Beam** comp=Z,4.2nm,0.5s,mb4.6,baz=248,slow=9.2,SNR=26	**32.63**	**31**	P	**P**	**16 58 05.2**	**+0.3**
ZALV	comp=Z,54nm,19.6s,MS3.3,baz=60,slow=40			LR	LR	17 13 08.8	
ZALV	**Zalesovo Beam**	**32.63**	**31**	P	**P**	**16 58 05.2**	**+0.3**
ZALV	comp=Z,4.0nm,0.5s,mb4.6			pmax	pmax		
ZALV	comp=Z,54nm,19.6s,MS3.2			MLR	MLR		
KMBO	**Kilima Mbogo** comp=Z,2.0nm,0.7s,mb4.1,baz=360,slow=24,SNR=5.0	**34.95**	**217**	P	**P**	**16 58 26.1**	**+0.6**
KMBO	**Kilima Mbogo**	**34.95**	**217**	P	**P**	**16 58 26.1**	**+0.7**
KMBO	comp=Z,2.0nm,0.7s			pmax	pmax		
KMBO	**Kilima Mbogo**	**34.95**	**217**	P	**P**	**16 58 26.0**	**+0.6**
OJC	**Ojcow**	**35.79**	**318**	*e*P	**P**	**16 58 30.5**	**-1.8**
OJC	**Ojcow**	**35.79**	**318**	*e*P	**P**	**16 58 30.5**	**-1.8**
GTA	**Gaotai**	**36.78**	**61**	*e*P	**P**	**16 58 41.8**	**+0.9**
GTA				pP	pP	16 58 48.5	+4.5
GTA				sP	sP	16 58 52.0	+6.8
GTA	comp=Z,5.0nm,0.7s,mb4.5			pmax	pmax		
MORC	**Moravsky Berou** comp=Z,3.0nm,0.8s,mb4.2	**36.97**	**317**	*e*P	**P**	**16 58 40.0**	**-2.4**
MORC	**Moravsky Berou** comp=Z,3.1nm,0.8s,mb4.2	**36.97**	**317**	*e*P	**P**	**16 58 40.0**	**-2.4**
MORC	**

LPG	La Plagne	43.12	307	eP	P	16 59 33.9	+0.4
LPG				pmax	pmax		
comp=Z,5.0nm,0.6s,mb4.4							
LPG	La Plagne	43.12	307	eP	P	16 59 33.9	+0.4
comp=Z,5.2nm,0.6s,mb4.4							
LPG	La Plagne	43.12	307	eP	P	16 59 33.9	+0.4
comp=Z,5.2nm,0.6s,mb4.4							
BNI	Bardonecchia	43.13	307	eP	P	16 59 31.6	-2.0
BNI				pmax	pmax		
comp=Z,6.0nm,0.7s,mb4.4							
BNI	Bardonecchia	43.13	307	eP	P	16 59 31.6	-2.0
comp=Z,5.6nm,0.7s,mb4.4							
BNI	Bardonecchia	43.13	307	eP	P	16 59 31.6	-2.0
comp=Z,5.6nm,0.7s,mb4.4							
LPL	La Plagne	43.13	308	eP	P	16 59 34.0	+0.4
comp=Z,9.9nm,0.8s,mb4.3							
LPL	La Plagne	43.13	308	eP	P	16 59 34.0	+0.4
LPL				pmax	pmax		
comp=Z,5.0nm,0.8s,mb4.3							
LPL	La Plagne	43.13	308	eP	P	16 59 34.0	+0.4
comp=Z,4.9nm,0.8s,mb4.3							
LPL	La Plagne	43.13	308	eP	P	16 59 34.0	+0.4
comp=Z,4.9nm,0.8s,mb4.3							
CDF	Champ du Feu	43.14	312	eP	P	16 59 33.6	0.0
CDF	Champ du Feu	43.14	312	eP	P	16 59 33.6	0.0
CABF	La Chapelle	43.70	309	eP	P	16 59 37.7	-0.4
CABF	La Chapelle	43.70	309	eP	P	16 59 37.7	-0.4
VIVF	Saint-Julien-l	44.53	306	eP	P	16 59 44.8	-0.1
comp=Z,15nm,1.1s,mb4.5							
VIVF	Saint-Julien-l	44.53	306	eP	P	16 59 44.8	-0.1
VIVF				pmax	pmax		
comp=Z,8.0nm,1.1s,mb4.5							
VIVF	Saint-Julien-l	44.53	306	eP	P	16 59 44.8	-0.1
comp=Z,7.7nm,1.1s,mb4.5							
VIVF	Saint-Julien-l	44.53	306	eP	P	16 59 44.8	-0.1
comp=Z,7.7nm,1.1s,mb4.5							
MEZF	Maizieres J'vi	44.62	312	eP	P	16 59 44.8	-0.7
MEZF	Maizieres J'vi	44.62	312	eP	P	16 59 44.8	-0.7
NB2	NORSAR Subarra	44.77	330	P	P	16 59 46.3	-0.2
comp=Z,1.3nm,0.7s,mb3.9,baz=116,slow=7.9							
NB2	NORSAR Subarra	44.77	330	P	P	16 59 46.3	-0.2
comp=Z,1.3nm,0.7s,mb3.9,SNR=4.7							
NOA	NORSAR Array B	44.77	330	P	P	16 59 48.4	+1.9
comp=Z,0.4nm,0.6s,mb3.5,baz=108,slow=9.2,SNR=3.0							
NOA	NORSAR Array B	44.77	330	P	P	16 59 48.4	+1.9
ARCES	ARCESS Array B	45.16	345	P	P	16 59 49.1	-0.4
comp=Z,3.2nm,0.9s,mb4.1,baz=127,slow=7.7,SNR=8.6							
ARCES	ARCESS Array B	45.16	345	P	P	16 59 49.1	-0.4
ARCES				pmax	pmax		
comp=Z,3.0nm,1.0s							
ARCES	ARCESS Array B	45.16	345	P	P	16 59 49.1	-0.4
comp=Z,3.0nm,1.0s,mb4.1							
SMF	Signal de Mont	45.24	309	eP	P	16 59 49.9	-0.6
comp=Z,11nm,0.7s,mb4.5							
SMF	Signal de Mont	45.24	309	eP	P	16 59 49.9	-0.6
SMF				pmax	pmax		
comp=Z,6.0nm,0.7s,mb4.5							
SMF	Signal de Mont	45.24	309	eP	P	16 59 49.9	-0.6
comp=Z,5.6nm,0.7s,mb4.5							
SMF	Signal de Mont	45.24	309	eP	P	16 59 49.9	-0.6
comp=Z,5.6nm,0.7s,mb4.5							
LOR	Lormes	45.28	310	eP	P	16 59 50.7	-0.1
LOR	Lormes	45.28	310	eP	P	16 59 50.7	-0.1
SSF	Saint Saulge	45.50	309	eP	P	16 59 51.9	-0.7
comp=Z,12nm,0.8s,mb4.6							
SSF	Saint Saulge	45.50	309	eP	P	16 59 51.9	-0.7
SSF				pmax	pmax		
comp=Z,6.0nm,0.8s,mb4.6							
SSF	Saint Saulge	45.50	309	eP	P	16 59 51.9	-0.7
comp=Z,6.1nm,0.8s,mb4.6							
SSF	Saint Saulge	45.50	309	eP	P	16 59 51.9	-0.7
comp=Z,6.1nm,0.8s,mb4.6							
AVF	Avril sur Loir	45.59	309	eP	P	16 59 53.0	-0.2
AVF	Avril sur Loir	45.59	309	eP	P	16 59 53.0	-0.2
MTLF	Montolieu	46.26	304	eP	P	16 59 58.5	-0.1
comp=Z,10.0nm,0.9s,mb4.5							
MTLF	Montolieu	46.26	304	eP	P	16 59 58.5	-0.1
MTLF				pmax	pmax		
comp=Z,5.0nm,0.9s,mb4.4							
MTLF	Montolieu	46.26	304	eP	P	16 59 58.5	-0.1
comp=Z,5.0nm,0.9s,mb4.4							
MTLF	Montolieu	46.26	304	eP	P	16 59 58.5	-0.1
comp=Z,5.0nm,0.9s,mb4.5							
TCF	Toulx Ste Croi	46.34	308	eP	P	16 59 59.6	+0.4
TCF	Toulx Ste Croi	46.34	308	eP	P	16 59 59.6	+0.4
CAF	Calviac	46.39	306	eP	P	16 59 58.9	-0.7
comp=Z,10.0nm,0.8s,mb4.5							
CAF	Calviac	46.39	306	eP	P	16 59 58.9	-0.7
CAF				pmax	pmax		
comp=Z,5.0nm,0.8s,mb4.5							
CAF	Calviac	46.39	306	eP	P	16 59 58.9	-0.7
comp=Z,5.0nm,0.8s,mb4.5							
CAF	Calviac	46.39	306	eP	P	16 59 58.9	-0.7
comp=Z,5.0nm,0.8s,mb4.5							
RJF	Les Rejaudoux	46.79	307	eP	P	17 00 02.2	-0.5
comp=Z,14nm,0.7s,mb4.7							
RJF	Les Rejaudoux	46.79	307	eP	P	17 00 02.2	-0.5
RJF				pmax	pmax		
comp=Z,7.0nm,0.7s,mb4.7							
RJF	Les Rejaudoux	46.79	307	eP	P	17 00 02.2	-0.5
comp=Z,7.0nm,0.7s,mb4.7							
RJF	Les Rejaudoux	46.79	307	eP	P	17 00 02.2	-0.5
comp=Z,7.0nm,0.7s,mb4.7							
LFF	La Frestale	47.33	306	eP	P	17 00 06.4	-0.6
comp=Z,19nm,0.7s,mb4.8							
LFF	La Frestale	47.33	306	eP	P	17 00 06.4	-0.6
LFF				pmax	pmax		
comp=Z,10.0nm,0.7s,mb4.8							
LFF	La Frestale	47.33	306	eP	P	17 00 06.4	-0.6
comp=Z,9.6nm,0.7s,mb4.8							
LFF	La Frestale	47.33	306	eP	P	17 00 06.4	-0.6
comp=Z,9.6nm,0.7s,mb4.8							
MFF	Saint Martin d	47.98	309	eP	P	17 00 11.3	-0.7
MFF	Saint Martin d	47.98	309	eP	P	17 00 11.3	-0.7
LDF	La Druitiere	48.05	311	eP	P	17 00 11.8	-0.7
LDF	La Druitiere	48.05	311	eP	P	17 00 11.8	-0.7
ETSF	Etsaut	48.30	304	eP	P	17 00 14.5	0.0
comp=Z,17nm,1.1s,mb4.7							
ETSF	Etsaut	48.30	304	eP	P	17 00 14.5	0.0
ETSF				pmax	pmax		
comp=Z,8.0nm,1.1s,mb4.7							
ETSF	Etsaut	48.30	304	eP	P	17 00 14.5	0.0
comp=Z,8.4nm,1.1s,mb4.7							
ETSF	Etsaut	48.30	304	eP	P	17 00 14.5	0.0
comp=Z,8.4nm,1.1s,mb4.7							
SJPF	Ste Jean	48.77	304	eP	P	17 00 17.7	-0.5
SJPF	Ste Jean	48.77	304	eP	P	17 00 17.7	-0.5
TIXI	Tiksi	57.66	21	eP	P	17 01 22.0	-1.1
TIXI				pmax	pmax		
comp=Z,2.0nm,0.6s,mb4.3							
TIXI	Tiksi	57.66	21	eP	P	17 01 22.0	-1.1
comp=Z,2.3nm,0.6s,mb4.4							
TIXI	Tiksi	57.66	21	eP	P	17 01 22.0	-1.1
comp=Z,2.3nm,0.6s,mb4.4							
KSRS	Korea Array	58.85	61	P	P	17 01 30.0	-2.0
comp=Z,1.5nm,0.7s,mb4.2,baz=285,slow=6.6,SNR=6.6							
KSRS	Korea Array	58.85	61	P	P	17 01 30.0	-2.0
KSRS				pmax	pmax		
comp=Z,2.0nm,0.7s,mb4.3							
KSRS	Korea Array	58.85	61	P	P	17 01 30.0	-2.0
comp=Z,2.0nm,0.7s,mb4.3							
BOSA	Boshof	64.32	211	P	P	17 02 07.8	-1.0
comp=Z,2.6nm,0.6s,mb4.4,baz=51,slow=6.7,SNR=8.0							
BOSA	Boshof	64.32	211	P	P	17 02 07.8	-1.0
BOSA				pmax	pmax		
comp=Z,3.0nm,0.6s,mb4.5							
BOSA	Boshof	64.32	211	P	P	17 02 07.8	-1.0
BOSA	Boshof	64.32	211	P	P	17 02 07.8	-1.0
comp=Z,3.0nm,0.6s,mb4.5							
JHJ	Hachijo jima 2	69.39	63	LR	LR	17 38 27.3	
comp=Z,22nm,20.1s,MS3.4,baz=297,slow=41							
WRA	Warramunga Arr	88.56	113	P	P	17 04 25.9	-0.5
comp=Z,1.3nm,0.7s,mb4.4,baz=318,slow=4.1,SNR=16							
WRA	Warramunga Arr	88.56	113	P	P	17 04 25.9	-0.5
WRA				pmax	pmax		
comp=Z,1.0nm,0.7s							
WRA	Warramunga Arr	88.56	113	P	P	17 04 25.9	-0.5
WRA	Warramunga Arr	88.56	113	P	P	17 04 25.9	-0.5
comp=Z,1.0nm,0.7s,mb4.2							
YKA	Yellowknife Ar	89.31	356	P	P	17 04 29.0	-0.3
comp=Z,0.1nm,0.5s,mb3.5,baz=7.8,slow=5.0,SNR=3.2							
YKA	Yellowknife Ar	89.31	356	P	P	17 04 29.0	-0.3
ASAR	Alice Springs	90.11	117	P	P	17 04 33.0	-0.6
comp=Z,0.3nm,0.5s,mb3.9,baz=302,slow=4.6,SNR=9.0							
ASAR	Alice Springs	90.11	117	P	P	17 04 33.0	-0.6

IDC 27 16:53:12.6±2.3, 10°.72N×91°.47E, h0km, mb3.7/3, mb1 3.7/4, mb1mx3.4/24, mbtmp3.5/4, ML3.3/1, Error ellipse: s-maj=71.7km s-min=27.7km az=68.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	10.56	42	Pn	Pn	16 55 45.2	-0.1
0.1nm,0.3s,baz=236,slow=15,SNR=3.3							
MKAR	Makanchi Array	36.79	349	P	P	17 00 22.1	+0.1
0.3nm,0.6s,baz=148,slow=7.1,SNR=3.8							
WRA	Warramunga Arr	52.05	126	P	P	17 02 24.1	-0.4
0.2nm,0.3s,baz=300,slow=10.0,SNR=13							
ASAR	Alice Springs	53.75	130	P	P	17 02 37.3	+0.3
1.5nm,0.8s,baz=305,slow=7.2,SNR=16							

IDC 27 16:58:26.6±3.1, 35°.31N×81°.17E, h0km, mb3.1/2, mb1 3.4/6, mb1mx3.3/27, mbtmp3.4/6, ML3.4/3, Error ellipse: s-maj=67.6km s-min=24.9km az=64.0
BJI 27 16:58:29.2, 35°.60N×81°.68E, h11km, ML3.4/4
ISCJB 27 16:58:29.3±1.1, 35°.7N±0°.1×81°.8E±0°.2, h10km, mb3.2/3, Error ellipse: s-maj=22.5km s-min=9.6km az=140.0
NEIC 27 16:58:30.5±1.9, 35°.57N×81°.31E, h10km, mb3.6/2, Error ellipse: s-maj=43.3km s-min=15.3km az=64.0

ISC 27 16:58:30.9±1.1, 35°.6N±0°.1×81°.8E±0°.2, h10km, n12, σ0s98/12, mb3.2/3, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	6.04	312	ePn	Pn	17 00 06.3	+6.1
KSH				Sn	Sn	17 01 09.5	+0.2
KSH				smax			
comp=N,20nm,0.7s							
KSH				smax			
comp=E,21nm,0.6s							
AAK	Ala-Archa	9.00	323	Pg	Px	17 01 11.9	
comp=E,0.0nm,0.3s,baz=153,slow=9.0,SNR=4.8							
AAK				Lg		17 03 13.8	
comp=E,0.0nm,0.3s,baz=343,slow=18,SNR=3.1							
MK31	Makanchi Array	11.15	2	ePn	Pn	17 01 10.6	+0.3
MKAR	Makanchi Array	11.15	2	Pn	Pn	17 01 11.1	+0.8
comp=E,0.2nm,0.3s,baz=164,slow=11,SNR=5.5							
KURK	Kurchatov	15.25	352	Pn	Pn	17 02 02.2	-3.8
baz=170,slow=11,SNR=2.6							
KURK	Kurchatov	15.25	352	ePn	Pn	17 02 05.5	-0.6
comp=E,6.4nm,1.8s							
ZALV	Zalesovo Beam	18.43	6	P	Pn	17 02 45.7	-0.6
comp=E,0.2nm,0.3s,baz=186,slow=12,SNR=3.4							
ZALV	Zalesovo Beam	18.43	6	P	Pn	17 02 45.7	-0.6
BVAR	Borovoye Array	19.16	339	P	Pn	17 02 54.8	-0.4
comp=E,0.2nm,0.3s,baz=158,slow=9.3,SNR=4.5							
SONM	Songino Array	21.92	49	P	P	17 03 29.3	+5.1
comp=E,0.4nm,0.6s,mb3.0,baz=251,slow=7.5,SNR=3.0							
CM31	Chiang Mai Arr	22.87	134	eP	P	17 03 36.2	+1.7
comp=E,0.8nm,0.4s,mb3.5							
CMAR	Chiang Mai Arr	22.87	134	P	P	17 03 32.9	-1.7
comp=E,0.8nm,0.8s,mb3.2,baz=313,slow=12,SNR=5.4							

ISK 27 17:00:29.3, 35°.53N×32°.61E, h13km, MD3.0
CSEM 27 17:00:29.1±0.3, 35°.27N×32°.61E, h60km, Mw2.8, Error ellipse: s-maj=8.7km s-min=7.7km az=142.0
ISCJB 27 17:00:29.1±1.4, 35°.29N±0°.09×32°.61E±0°.09, h60km±12km, Error ellipse: s-maj=14.4km s-min=11.6km az=172.4
NEIC 27 17:00:30.0, 35°.19N×32°.70E, h56km, MG2.9(NIC), After NIC.
NIC 27 17:00:30.0±0.2, 35°.19N×32°.70E, h56km, ML2.9, MW2.8

ISC 27 17:00:29.3±1.4, 35°.27N±0°.08×32°.60E±0°.09, h60km±11km, n20, σ0s71/30, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALFC	Alevga	0.11	178	P	Pn	17 00 38.6	+0.3
64nm,0.2s							
ALFC				S	Sn	17 00 45.1	+0.3
ALFC	Alevga	0.11	178	P	Pn	17 00 38.6	+0.3
64nm,0.2s							
ALFC				S	Sn	17 00 45.1	+0.3
LEF	Lefka	0.28	122	PG	Pn	17 00 39.0	-0.3
LEF				SG	Sn	17 00 46.1	-0.4
LEF	Lefka	0.28	122	i Pg	Pn	17 00 39.0	-0.2
LEF				i Sg	Sn	17 00 46.1	-0.3
PPCY	Paphos	0.43	208	P	Pn	17 00 41.0	+0.4
PPCY	Paphos	0.43	208	P	Pn	17 00 41.0	+0.4
MAMC	Mammari	0.52	101	P	Pn	17 00 41.3	-0.1
MAMC	Mammari	0.52	101	P	Pn	17 00 41.3	-0.1
CSS	Prodhromos	0.68	117	P	Pn	17 00 42.2	-1.0
2.7nm,0.1s							
CSS				S	Sn	17 00 52.3	-1.1
CSS	Prodhromos	0.68	117	P	Pn	17 00 42.2	-1.0
2.7nm,0.1s							
CSS				S	Sn	17 00 52.3	-1.1
LFK	Lefkose	0.77	89	ePG	Pn	17 00 44.7	+0.4
LFK				eSG	Sn	17 00 56.7	+1.3
LFK	Lefkose	0.77	89	ePg	Pn	17 00 44.7	+0.4
LFK				eSg	Sn	17 00 56.7	+1.3
IKL	Isikli	1.31	42	ePN	Pn	17 00 51.2	-0.3
IKL				eSN	Sn	17 01 07.6	-0.4
IKL	Isikli	1.31	42	ePn	Pn	17 00 51.2	-0.2
IKL				eSn	Sn	17 01 07.6	-0.4
EREN	Erenkoy	1.31	78	ePN	Pn	17 00 53.0	+1.6
EREN	Erenkoy	1.31	78	ePn	Pn	17 00 53.0	+1.6
HDMB	Hadim	1.69	357	ePN	Pn	17 00 56.3	-0.3
HDMB	Hadim	1.69	357	ePn	Pn	17 00 56.3	-0.3
MERS	Mersin	2.23	44	ePN	Pn	17 01 03.5	-0.4
MERS	Mersin	2.23	44	ePn	Pn	17 01 03.5	-0.4

NEIC 27 17:03:13.5, 39°.28N×23°.65E, h5km, ML3.1(ATH), After ATH.
ISCJB 27 17:03:13.4±0.4, 39°.26N±0°.02×23°.68E±0°.02, h6km±3km, Error ellipse: s-maj=3.4km s-min=2.9km az=43.0
ATH 27 17:03:13.4, 39°.28N×23°.67E, h24km±1km, MD3.3/8, ML3.0
CSEM 27 17:03:16±0.1, 39°.26N×23°.67E, h5km, ML3.7/9, Error ellipse: s-maj=3.5km s-min=2.5km az=111.0
SKO 27 17:03:14.1, 39°.39N×23°.68E, h0km
THE 27 17:03:14.4, 39°.26N×23°.64E, h6km, ML3.7/9, Error ellipse: s-maj=0.9km s-min=0.6km az=81.0

ISC 27 17:03:14.0±0.4, 39°.27N±0°.02×23°.67E±0°.02, h9km±3km, n106, σ0s88/135, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOS	Alonnisos	0.19	120	P	Pg	17 03 17.9	0.0
AOS	Alonnisos	0.19	120	P	Pg	17 03 18.4	+0.5
AOS				S	Sg	17 03 21.3	+0.7
AOS	Alonnisos	0.19	120	P	Pg	17 03 17.9	0.0
AOS				S	Sg	17 03 21.3	+0.7
NEO	Neokhori	0.35	277	P	Pg	17 03 20.6	-0.2
NEO	Neokhori	0.35	277	ePB	Pg	17 03 21.0	+0.2
NEO				eSB	Sg	17 03 26.0	+0.5
NEO	Neokhori	0.35	277	P	Pg	17 03 20.6	-0.2
XOR	Xorichti	0.38	285	P	Pg	17 03 21.2	-0.3
XOR	Xorichti	0.38	285	P	Pg	17 03 21.7	+0.2
XOR				S	Sg	17 03 27.0	+0.4
XOR	Xorichti	0.38	285	P	Pg	17 03 21.2	-0.3
XOR				S	Sg	17 03 27.0	+0.4
PAIG	Paliouri	0.66	1	P	Pg	17 03 27.5	+0.7
PAIG	Paliouri	0.66	1	P	Pg	17 03 27.8	+1.0
PAIG	Paliouri	0.66	1	P	Pg	17 03 27.5	+0.7
ATAL	Atalanti	0.76	222	P	Pg	17 03 28.6	-0.1
ATAL				S	Sg	17 03 38.3	-0.3
ATAL	Atalanti	0.76	222	P	Pg	17 03 28.6	-0.1
ATAL				S	Sg	17 03 38.3	-0.3
LKR	Lokris	0.81	221	ePb	Pg	17 03 29.3	-0.2
LKR				eSb	Sb	17 03 40.9	-0.1
LKR	Lokris	0.81	221	P	Pg	17 03 29.3	-0.2
LKR				S	Sg	17 03 40.6	+0.6
LKR	Lokris	0.81	221	ePN	Pg	17 03 29.4	-0.1
LKR				eSN	Sg	17 03 40.8	+0.8
LKR	Lokris	0.81	221	P	Pg	17 03 29.3	-0.2
LKR				S	Sg	17 03 40.6	+0.6
LKR				eSb	Sb	17 03 40.9	-0.1
AGG	Agios Georgios	1.07	257	ePb	Pg	17 03 34.4	-0.1
AGG	Agios Georgios	1.07	257	P	Pg	17 03 33.8	-0.7
AGG	Agios Georgios	1.07	257	ePN	Pn	17 03 33.9	-1.2
AGG				eSN	Sn	17 03 49.7	-0.3
AGG	Agios Georgios	1.07	257	P	Pg	17 03 33.8	-0.7
AGG	Agios Georgios	1.07	257	ePb	Pg	17 03 34.4	-0.1
OUR	Ouranopolis	1.09	13	P	Pg	17 03 34.5	-0.5
OUR				S	Sg	17 03 49.7	+0.4
OUR	Ouranopolis	1.09	13	P	Pg	17 03 34.5	-0.5
OUR				S	Sg	17 03 49.7	+0.4
PLG	Polygyros	1.12	351	ePn	Pg	17 03 35.0	-0.5
PLG	Polygyros	1.12	351	P	Pg	17 03 35.0	-0.5
PLG	Polygyros	1.12	351	ePN	Pg	17 03 35.0	-0.5
PLG	Polygyros	1.12	351	P	Pg	17 03 35.0	-0.5
PTL	Penteli	1.22	173	ePb	Pb	17 03 37.3	+0.1
PTL	Penteli	1.22	173	ePN	Pn	17 03 37.1	-0.1
PTL	Penteli	1.22	173	ePb	Pb	17 03 37.3	+0.1
DSF	Desfina	1.23	227	P	Pn	17 03 36.7	-0.6
DSF				S	Sn	17 03 54.9	+0.9
DSF	Desfina	1.23	227	P	Pn	17 03 36.7	-0.6
DSF				S	Sn	17 03 54.9	+0.9
ATH	Athens Observa	1.29	178	ePb	Pn	17 03 38.4	+0.3
ATH	Athens Observa	1.29	178	ePN	Pn	17 03 38.1	0.0
ATH				eSN	Sn	17 03 54.8	-0.7
ATH	Athens Observa	1.29	178	ePb	Pn	17 03 38.4	+0.3
ATHU	Athens Univers	1.30	176	P	Pn	17 03 38.4	+0.2
ATHU	Athens Univers	1.30	176	P	Pn	17 03 38.4	+0.2
THL	Klokotos Trika	1.32	284	P	Pn	17 03 38.3	-0.2
THL				S	Sb	17 03 56.4	+0.6
THL	Klokotos Trika	1.32	284	ePN	Pn	17 03 38.2	-0.3
THL	Klokotos Trika	1.32	284	P	Pn	17 03 38.3	-0.2
THL				eSb	Sb	17 03 56.2	+0.4
LIA	Limnos Island	1.33	61	ePg	Pn	17 03 38.3	-0.3
LIA	Limnos Island	1.33	61	P	Pn	17 03 38.3	-0.3
LIA				S	Sb	17 03 58.5	+2.4
LIA	Limnos Island	1.33	61	ePN	Pn	17 03 38.1	-0.5
LIA	Limnos Island	1.33	61	P	Pn	17 03 38.3	-0.3
LTK	Loutraki	1.36	204	P	Pn	17 03 38.8	-0.2
LTK	Loutraki	1.36	204	ePN	Pn	17 03 38.7	-0.3
LTK	Loutraki	1.36	204	P	Pn	17 03 38.8	-0.2
LTK				eSb	Sg	17 03 58.4	+0.8
HORT	Hortiatis	1.40	342	P	Pn	17 03 39.3	-0.3
HORT	Hortiatis	1.40	342	P	Pn	17 03 39.3	-0.3
VLY	Voula,Athens	1.41	176	ePb	Pg	17 03 41.4	+0.3
VLY	Voula,Athens	1.41	176	ePN	Pn	17 03 39.7	-0.1
VLY	Voula,Athens	1.41	176	ePb	Pg	17 03 41.4	+0.3
KALE	Kalithea	1.48	234	P	Pn	17 03 40.4	-0.3
KALE				S	Sn	17 03 59.8	-0.3
KALE	Kalithea	1.48	234	P	Pn	17 03 40.4	-0.3
KALE				S	Sn	17 03 59.8	-0.3
EVR	Evrytania	1.49	257	ePb	Pb	17 03 41.9	+0.2
EVR	Evrytania	1.49	257	ePN	Pn	17 03 41.4	+0.6
EVR	Evrytania	1.49	257	ePb	Pb	17 03 41.9	+0.2
NAIG	Nisos Aigina	1.51	185	ePn	Pn	17 03 41.0	-0.1
NAIG	Nisos Aigina	1.51	185	ePN	Pn	17 03 41.1	0.0
TRIZ	Trizonia	1.54	235	P	Pn	17 03 41.5	0.0
TRIZ	Trizonia	1.54	235	P	Pn	17 03 41.5	0.0
SOH	Sokhos	1.57	351	ePg	Pn	17 03 41.7	-0.3
SOH	Sokhos	1.57	351	P	Pn	17 03 41.9	-0.1
SOH	Sokhos	1.57	351	ePN	Pn	17 03 41.7	-0.3
SOH	Sokhos	1.57	351	P	Pn	17 03 41.9	-0.1
EFP	Efpalio	1.61	239	ePN	Pn	17 03 43.2	+0.7
EFP	Efpalio	1.61	239	ePb	Pg	17 03 44.6	-0.3
EFP				eSb	Sg	17 04 06.6	+0.8
GUR	Goura	1.69	219	P	Pn	17 03 43.6	+0.1
GUR				S	Sn	17 04 05.8	+0.6
GUR	Goura	1.69	219	ePN	Pn	17 03 43.8	+0.3
GUR	Goura	1.69	219	P	Pn	17 03 43.6	+0.1
GUR	Goura	1.69	219	ePg	Pn	17 03 43.9	+0.4
GUR				S	Sn	17 04 05.8	+0.6
DID	Didima	1.79	191	P	Pn	17 03 44.7	-0.2
DID	Didima	1.79	191	ePN	Pn	17 03 44.9	0.0
DID	Didima	1.79	191	P	Pn	17 03 44.7	-0.2
DID	Didima	1.79	191	ePb	Pb	17 03 45.0	-1.8
KZN	Kozani	1.80	306	ePn	Pn	17 03 47.2	+2.2
KZN	Kozani	1.80	306	ePn	Pn	17 03 47.2	+2.2
KAVA	Kavala	1.85	20	P	Pn	17 03 44.7	-1.1
KAVA	Kavala	1.85	20	P	Pn	17 03 44.7	-1.1
PRK	Paraskevi	2.02	90	ePg	Pg	17 03 52.9	+0.2
PRK	Paraskevi	2.02	90	ePN	Pn	17 03 48.7	+0.6
PRK	Paraskevi	2.02	90	ePg	Pg	17 03 52.9	+0.2
CHOS	Chios island	2.06	114	ePB	Pb	17 03 49.0	-2.5
NVR	Nevrokopi	2.09	4	P	Pn	17 03 48.5	-0.6
NVR	Nevrokopi	2.09	4	ePN	Pn	17 03 48.2	-0.9
NVR	Nevrokopi	2.09	4	P	Pn	17 03 48.5	-0.6
VLX	Vlachokerasia	2.15	209	ePB	Pn	17 03 50.2	+0.3
VLX	Vlachokerasia	2.15	209	ePb	Pn	17 03 50.5	+0.6
JAN	Janina	2.22	281	ePg	Pg	17 03 54.9	-1.6
JAN				eSn	Sg	17 04 23.0	-2.2
JAN	Janina	2.22	281	ePg	Pg	17 03 54.9	-1.6
JAN				eSn	Sg	17 04 23.0	-2.2
FNA	Florina	2.33	311	P	Pn	17 03 54.3	+2.0
FNA	Florina	2.33	311	P	Pn	17 03 54.3	+2.0
ALN	Alexandroupoli	2.45	47	ePN	Pn	17 03 50.8	-3.2

WRAB Tennant Creek 14.81 137 *e*Pn **Pn 17 26 20.7 -0.8**
WRAB *e*Sn Sx 17 28 52.7
ASAR Alice Springs 17.35 147 P **Pn 17 26 55.2 +1.9**
0.3nm,0.3s,baz=317,slow=12,SNR=31
ASAR S Sx 17 29 56.9
0.8nm,0.3s,baz=320,slow=23,SNR=20
MEEK Meekatharra 17.90 195 *e*P **Pn 17 27 00.8 +0.8**
MJAR Matsushiro Arr 47.60 16 P **P 17 31 24.2 +0.1**
0.7nm,0.4s,mb3.8,baz=181,slow=10,SNR=5.1
SONM Songino Array 58.89 347 P **P 17 32 46.8 +0.1**
1.4nm,0.5s,mb4.2,baz=162,slow=8.2,SNR=12
MK31 Makanchi Array 66.88 330 *e*P **P 17 33 38.2 -1.5**
MKAR Makanchi Array 66.88 330 P **P 17 33 39.7 0.0**
1.5nm,0.6s,mb4.0,baz=103,slow=11,SNR=15
KBL Kabul 67.56 313 *e*P **P 17 33 46.7 +2.4**
6.0nm,0.3s,mb4.9
ZALV Zalesovo Beam 71.01 337 P **P 17 34 04.1 -1.1**
1.8nm,0.4s,mb4.2,baz=137,slow=5.4,SNR=9.4
KURK Kurchatov 71.34 332 P **P 17 34 06.1 -1.2**
1.0nm,0.6s,mb3.9,baz=148,slow=5.6,SNR=4.6
KURK Kurchatov 71.34 332 *e*P **P 17 34 04.6 -2.7**
2.6nm,0.9s,mb4.1
BVAR Borovoye Array 76.76 330 P **P 17 34 39.7 +0.9**
0.2nm,0.4s,mb3.2,baz=115,slow=6.8,SNR=2.7
BRVK Borovoye 76.83 330 P **P 17 34 40.0 +0.7**
0.8nm,0.6s,mb3.6
TORD Torodi Ar. Bea 123.02 280 PKP PKPdf 17 41 44.8 +0.4
0.2nm,0.5s,baz=73,slow=1.9

MAN ***27*** *17:31:30, 16°.32N×122°.10E, h1km, mb5.0, ML3.9, MS4.0*
NEIC ***27*** *17:31:33.2±0.8, 16°.45N×122°.58E, h35km, mb4.3/1, Error ellipse: s-maj=30.0km s-min=12.9km az=83.0*
ISCJB ***27*** *17:31:33.2±0.6, 16°.38N±0°.03×122°.32E±0°.07, h48km±8km, mb3.6/7, Error ellipse: s-maj=11.2km s-min=5.3km az=177.2*
IDC ***27*** *17:31:36.9±3.9, 16°.31N×122°.34E, h67km±39km, mb3.4/7, mb1 3.5/7, mb1mx3.3/23, mbtmp3.4/7, Error ellipse: s-maj=40.4km s-min=16.7km az=78.0*
ISC 27 17:31:34.2±0.6, 16°.39N±0°.03×122°.32E±0°.07, h38km±9km, n29, σ1§24/34, mb3.6/7, 2C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.68**	**9**	*e*P	**Pn**	**17 31 46.5**	**-0.8**
BALP	**Baler**	**0.96**	**228**	*e*P	**Pn**	**17 31 45.6**	**-5.6**
CVP	**Callao Caves**	**1.39**	**340**	⇓*e*P	**Pn**	**17 31 55.9**	**-1.2**
CVP				*i* S	**Sn**	**17 32 16.0**	**+1.8**
PCPH	**Palayan**	**1.43**	**235**	⇑*e*P	**Pn**	**17 31 53.7**	**-4.0**
PCPH				*e*S	**Sn**	**17 32 13.7**	**-1.6**
POLP	**Polilio Island**	**1.69**	**192**	*e*P	**Pn**	**17 31 58.8**	**-2.5**
APYP	**Conner**	**1.79**	**325**	*e*P	**Pn**	**17 32 01.1**	**-1.5**
SGCP	**Mt. Cagua**	**1.86**	**352**	*e*P	**Pn**	**17 32 05.2**	**+1.6**
ABRA	**Dolores**	**1.98**	**309**	*e*P	**Pn**	**17 32 03.9**	**-1.3**
BOLP	**Bolinao**	**2.31**	**270**	*e*P	**Pn**	**17 32 09.5**	**-0.2**
SCZP	**Santa Cruz**	**2.39**	**256**	*e*P	**Pn**	**17 32 11.5**	**+0.7**
GQP	**Guinayangan**	**2.48**	**177**	⇑*e*P	**Pn**	**17 32 19.8**	**+7.7**
GQP				*i* S	**Sn**	**17 32 42.4**	**+1.4**
PIP	**Pasuquin**	**2.52**	**320**	*i* P	**Pn**	**17 32 12.9**	**+0.4**
PIP				*e*S	**Sn**	**17 32 46.5**	**+4.5**
TGY	**Tagaytay City**	**2.64**	**210**	P	**Pn**	**17 32 16.1**	**+1.9**
56nm,0.3s,baz=26,slow=1.2,SNR=6.5							
TGY				S	**Sn**	**17 32 47.5**	**+2.5**
68nm,0.3s,baz=167,slow=18,SNR=4.6							
BOAC	**Boac**	**2.95**	**189**	*e*P	**Pn**	**17 32 19.3**	**+0.7**
AUQP	**San Andres**	**3.07**	**173**	*e*P	**Pn**	**17 32 20.4**	**+0.2**
PVCP	**Virac**	**3.30**	**147**	*e*P	**Pn**	**17 32 22.3**	**-1.1**
LUBP	**Lubang**	**3.31**	**217**	*e*P	**Pn**	**17 32 22.8**	**-0.7**
BBP	**Basco**	**4.04**	**355**	*e*P	**Pn**	**17 32 28.7**	**-4.9**
SJMP	**San Jose**	**4.08**	**197**	*e*P	**Pn**	**17 32 38.7**	**+4.7**
BUSP	**Coron**	**4.82**	**205**	*e*P	**Pn**	**17 32 49.2**	**+5.0**
KSRS	**Korea Array**	**21.56**	**12**	P	**P**	**17 36 21.6**	**+1.3**
0.7nm,0.4s,mb3.4,baz=193,slow=11,SNR=3.6							
SONM	**Songino Array**	**33.99**	**341**	P	**P**	**17 38 14.9**	**+0.8**
0.5nm,0.4s,mb3.8,baz=156,slow=9.2,SNR=3.9							
WRA	**Warramunga Arr**	**37.99**	**161**	P	**P**	**17 38 47.2**	**-1.4**
0.8nm,0.8s,mb3.5,baz=343,slow=9.0,SNR=6.5							
WRA	**Warramunga Arr**	**37.99**	**161**	P	**P**	**17 38 47.2**	**-1.4**
ASAR	**Alice Springs**	**41.39**	**164**	P	**P**	**17 39 16.5**	**-0.4**
0.3nm,0.5s,mb3.2,baz=346,slow=7.6,SNR=9.5							
KURK	**Kurchatov**	**48.88**	**324**	P	**P**	**17 40 16.1**	**+0.1**
1.6nm,0.8s,mb4.1,baz=121,slow=8.1,SNR=4.4							
KURK	**Kurchatov**	**48.88**	**324**	*e*P	**P**	**17 40 14.6**	**-1.4**
2.4nm,0.8s,mb4.3							
BVAR	**Borovoye Array**	**54.48**	**324**	P	**P**	**17 40 58.1**	**+0.3**
0.3nm,0.5s,mb3.5,baz=122,slow=5.4,SNR=2.7							
ARCES	**ARCESS Array B**	**77.14**	**339**	P	**P**	**17 43 23.6**	**+0.1**
0.9nm,0.8s,mb3.8,baz=57,slow=9.8,SNR=3.6							

ISCJB ***27*** *17:33:17.8±0.5, 25°.30N±0°.09×96°.52E±0°.06, h10km, mb3.9/12, Error ellipse: s-maj=13.5km s-min=7.1km az=19.3*
BJI ***27*** *17:33:20.7, 25°.38N×96°.70E, h29km, mB4.2/2, mb4.5/5, ML3.2/5, Ms3.6/2, Ms7 3.3/2*
NEIC ***27*** *17:33:23.8±0.5, 25°.38N×96°.59E, h35km, mb4.6/1, Error ellipse: s-maj=33.1km s-min=8.7km az=61.0*
IDC ***27*** *17:33:23.4±5.1, 25°.28N×96°.41E, h33km±43km, mb3.6/11, mb1 3.7/12, mb1mx3.5/28, mbtmp3.6/12, ML3.8/1, Error ellipse: s-maj=80.8km s-min=13.5km az=57.0*
ISC 27 17:33:20.0±0.4, 25°.35N±0°.07×96°.61E±0°.05, h10km, n28, σ1§14/30, mb3.9/12, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**4.28**	**274**	*e*PKP	**Pn**	**17 34 28.0**	**+2.9**
KMI	**Kunming**	**5.56**	**91**	Pg	**Pg**	**17 35 08.8**	**+2.3**
KMI				Sg	**Sg**	**17 36 16.3**	**-2.2**
KMI				smax			
comp=N,25nm,1.2s							
KMI				smax			
comp=E,25nm,1.0s							
CMAR	**Chiang Mai Arr**	**7.20**	**162**	Pn	**Pn**	**17 35 07.3**	**+2.0**
comp=E,0.5nm,0.3s,baz=337,slow=13,SNR=18							
CMAR				Pg	**Pg**	**17 35 36.0**	**-1.8**
comp=E,0.4nm,0.3s,baz=338,slow=16,SNR=9.8							
CMAR				Lg		17 37 10.3	
comp=E,0.0nm,0.3s,baz=340,slow=30,SNR=3.6							
TAPN	**Taplejung**	**8.22**	**286**	*e*P	**Pn**	**17 35 19.6**	**+0.2**
comp=E,22nm,0.3s							
CD2	**Chengdu**	**8.39**	**47**	*e*P	**Pn**	**17 35 17.8**	**-3.9**
CD2				pmax	pmax		
comp=Z,10.0nm,0.6s							
CD2				pmax	pmax		
comp=Z,40nm,6.2s							
ODAN	**Odare**	**8.42**	**282**	*e*P	**Pn**	**17 35 22.4**	**+0.3**
comp=Z,99nm,0.5s							
RAMN	**Ramite**	**9.13**	**282**	*e*P	**Pn**	**17 35 31.0**	**-0.8**
comp=Z,86nm,0.6s							
JIRN	**Jiri**	**9.61**	**286**	*e*P	**Pn**	**17 35 38.2**	**-0.2**
comp=Z,25nm,0.4s							
GUN	**Gumba**	**9.93**	**287**	*e*P	**Pn**	**17 35 43.1**	**+0.3**
comp=Z,36nm,0.5s							
PKI	**Pulchoki**	**10.27**	**285**	*e*P	**Pn**	**17 35 46.6**	**-0.9**
comp=Z,19nm,0.5s							
PKIN	**Phulchoki**	**10.29**	**285**	*e*P	**Pn**	**17 35 46.6**	**-1.0**
comp=Z,18nm,0.5s							
KKN	**Kakani**	**10.43**	**286**	*e*P	**Pn**	**17 35 49.5**	**-0.1**
comp=Z,20nm,0.5s							
DMN	**Daman**	**10.55**	**285**	*e*P	**Pn**	**17 35 50.1**	**-1.1**
comp=Z,13nm,0.4s							
MK31	**Makanchi Array**	**24.25**	**336**	*e*P	**P**	**17 38 37.0**	**0.0**
MKAR	**Makanchi Array**	**24.25**	**336**	P	**P**	**17 38 37.5**	**+0.5**
comp=Z,2.0nm,0.6s,mb3.7,baz=118,slow=12,SNR=14							
AAK	**Ala-Archa**	**25.05**	**319**	P	**P**	**17 38 45.7**	**+1.4**
comp=Z,2.3nm,0.5s,mb4.0,baz=150,slow=1.6,SNR=4.5							
KBL	**Kabul**	**25.51**	**298**	*e*P	**P**	**17 38 49.6**	**+0.9**
comp=Z,9.6nm,0.6s,mb4.5							
KURK	**Kurchatov**	**28.86**	**336**	P	**P**	**17 39 19.1**	**+0.6**
comp=Z,0.6nm,0.3s,mb3.8,baz=147,slow=9.9,SNR=3.0							
ZALV	**Zalesovo Beam**	**29.88**	**346**	P	**P**	**17 39 28.2**	**+0.6**
comp=Z,0.6nm,0.5s,mb3.6,baz=178,slow=8.5,SNR=4.0							
BVAR	**Borovoye Array**	**33.93**	**331**	P	**P**	**17 40 03.1**	**0.0**
comp=Z,1.0nm,0.5s,mb4.0,baz=132,slow=11,SNR=5.0							
AKTK	**Aktyubinsk**	**38.77**	**320**	P	**P**	**17 40 44.8**	**+0.3**
AKTO	**Aktyubinsk**	**38.77**	**320**	P	**P**	**17 40 44.8**	**+0.3**
comp=Z,0.9nm,0.5s,mb3.8,baz=141,slow=9.8,SNR=5.2							
AKASG	**Malin Array Be**	**56.64**	**315**	P	**P**	**17 43 01.1**	**-2.0**
comp=Z,0.3nm,0.3s,mb3.7,baz=87,slow=6.6,SNR=4.7							
WRA	**Warramunga Arr**	**58.07**	**137**	P	**P**	**17 43 13.8**	**+0.2**
comp=Z,0.5nm,0.5s,mb3.8,baz=323,slow=7.5,SNR=15							
FINES	**FINESS Array B**	**58.78**	**328**	P	**P**	**17 43 16.9**	**-1.1**
comp=Z,2.0nm,0.9s,mb4.1,baz=109,slow=12,SNR=2.7							

ASAR Alice Springs 60.66 140 P **P 17 43 32.2 +0.8**
comp=Z,0.6nm,0.4s,mb4.0,baz=322,slow=6.7,SNR=28
NOA NORSAR Array B 65.96 328 P **P 17 44 04.7 -1.4**
comp=Z,0.4nm,0.7s,mb3.6,baz=83,slow=6.8,SNR=3.0
NOA NORSAR Array B 65.96 328 P **P 17 44 04.7 -1.4**

KISR ***27*** *17:33:47.1±0.9, 32°.67N×48°.43E, h42km±246km, ML3.0*
CSEM ***27*** *17:33:50.6±0.2, 32°.47N×48°.03E, h2km, ML3.5, Error ellipse: s-maj=6.6km s-min=4.5km az=89.0*
ISCJB ***27*** *17:33:51.1±0.4, 32°.48N±0°.03×48°.12E±0°.05, h10km, Error ellipse: s-maj=6.0km s-min=3.7km az=172.0*
TEH ***27*** *17:33:53.0, 32°.61N×48°.12E, h7km*
ISC 27 17:33:52.1±0.4, 32°.48N±0°.03×48°.12E±0°.06, h10km, n26, σ1§11/39, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**0.69**	**123**	*e*Pg	**Pg**	**17 34 04.6**	**-0.8**
IKOM	**Komasi**	**1.76**	**343**	*e*	**Sg**	**17 34 48.8**	**-0.1**
comp=Z,12μm,0.4s							
IGHG	**Ghaleghazi**	**2.25**	**325**	*e*Pn	**Pn**	**17 34 29.1**	**-0.3**
IGHG				*e*Sg	**Sg**	**17 35 00.7**	**-3.9**
IGHG				*e*		17 35 17.6	
comp=Z,7μm,0.3s							
IGHG	**Ghaleghazi**	**2.25**	**325**	*e*Pn	**Pn**	**17 34 29.1**	**-0.3**
IGHG				*e*Sg	**Sg**	**17 35 00.7**	**-3.9**
IVIS	**Veis**	**2.30**	**333**	*e*Pn	**Pn**	**17 34 29.7**	**-0.3**
IVIS				*e*		17 35 04.3	
comp=Z,3μm,0.3s							
IVIS	**Veis**	**2.30**	**333**	*e*Pn	**Pn**	**17 34 29.7**	**-0.3**
IPIR	**Pirpir**	**2.35**	**84**	*e*Pn	**Pn**	**17 34 32.1**	**+1.4**
IPIR				*e*		17 35 16.9	
comp=Z,2μm,0.5s							
IPIR	**Pirpir**	**2.35**	**84**	*e*Pn	**Pn**	**17 34 32.1**	**+1.4**
ASAO	**Ashtian**	**2.60**	**37**	*e*Pn	**Pn**	**17 34 35.4**	**+1.2**
ASAO				*e*Sg	**Sg**	**17 35 12.1**	**-3.7**
ILIN	**Lien**	**2.62**	**339**	*e*	**Sg**	**17 35 16.6**	**+0.5**
comp=Z,883nm,0.4s							
IDHR	**Dehrash**	**2.64**	**327**	*e*Pn	**Pn**	**17 34 34.6**	**-0.2**
IDHR				*e*Sg	**Sg**	**17 35 11.3**	**-5.7**
IDHR	**Dehrash**	**2.64**	**327**	*e*Pn	**Pn**	**17 34 34.6**	**-0.2**
IDHR				*e*Sg	**Sg**	**17 35 11.3**	**-5.7**
SNGE	**Sanandaj**	**2.68**	**346**	*e*Pn	**Pn**	**17 34 37.9**	**+2.6**
MIB	**Mutribah**	**2.75**	**194**	*e*P	**Pn**	**17 34 35.3**	**-1.0**
MIB				*e*S	**Sn**	**17 35 10.7**	**+1.1**
MIB				AML	AML	17 35 14.1	
comp=Z,70nm,0.6s							
MIB	**Mutribah**	**2.75**	**194**	*e*P	**Pn**	**17 34 35.3**	**-1.0**
MIB				*e*S	**Sn**	**17 35 10.7**	**+1.1**
BHD	**Baghdad**	**3.25**	**285**	*e*Pn	**Pn**	**17 34 35.0**	**-8.0**
BHD				*e*Sn	**Sn**	**17 35 27.0**	**+5.3**
BHD				*i* Sb	**Sg**	**17 35 41.0**	**+4.7**
IRAZ	**Razeghan**	**3.28**	**27**	*e*Pn	**Pn**	**17 34 43.2**	**-0.3**
IRAZ				*e*		17 35 43.9	
comp=Z,1μm,0.4s							
IRAZ	**Razeghan**	**3.28**	**27**	*e*Pn	**Pn**	**17 34 43.2**	**-0.3**
NAY	**Al-Naaiem**	**3.31**	**193**	*e*P	**Pn**	**17 34 42.3**	**-1.6**
NAY				*e*S	**Sn**	**17 35 24.6**	**+1.3**
NAY				AML	AML	17 35 25.8	
comp=Z,22nm,0.6s							
NAY	**Al-Naaiem**	**3.31**	**193**	*e*P	**Pn**	**17 34 42.3**	**-1.6**
NAY				*e*S	**Sn**	**17 35 24.6**	**+1.3**
GHVR	**GHOM**	**3.32**	**52**	*e*Pn	**Pn**	**17 34 44.2**	**+0.2**
IZEF	**Zefreh**	**3.57**	**82**	*e*Pn	**Pn**	**17 34 48.2**	**+0.7**
IZEF				*e*		17 34 57.2	
comp=Z,396nm,0.3s							
IZEF	**Zefreh**	**3.57**	**82**	*e*Pn	**Pn**	**17 34 48.2**	**+0.7**
RDF	**Al-Radifah**	**3.58**	**188**	*e*P	**Pn**	**17 34 46.7**	**-0.9**
RDF				*e*S	**Sn**	**17 35 30.8**	**+0.9**
RDF				AML	AML	17 35 31.4	
comp=Z,22nm,0.6s							
RDF	**Al-Radifah**	**3.58**	**188**	*e*P	**Pn**	**17 34 46.7**	**-0.9**
RDF				*e*S	**Sn**	**17 35 30.8**	**+0.8**
QRN	**Al-Qurain**	**3.73**	**183**	*e*P	**Pn**	**17 34 47.9**	**-1.9**

NEIC ***27*** *17:44:19.9, 32°.69N×115°.81W, h13km, ML3.1(PAS), After PAS.*
ISCJB ***27*** *17:44:19.2±0.3, 32°.73N±0°.02×115°.78W±0°.02, h20km±4km, Error ellipse: s-maj=3.6km s-min=3.3km az=164.0*
ECX ***27*** *17:44:20.5±0.7, 32°.69N×115°.83W, h1km±3km, MD3.1, ML3.2*
ISC 27 17:44:19.1±0.3, 32°.74N±0°.02×115°.79W±0°.02, h18km±2km, n38, σ0§79/58, 15C-15D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGL	**Mount Signal**	**0.10**	**146**	⇑*i*P	**Pg**	**17 44 22.4**	**-0.3**
COK	**Cook Ranch**	**0.13**	**26**	⇓*i*P	**Pg**	**17 44 23.6**	**+0.7**
YUH	**Yuha Desert**	**0.14**	**231**	⇑*i*P	**Pg**	**17 44 22.8**	**-0.3**
SWSC	**Sam W. Stewart**	**0.20**	**359**	P	**Pg**	**17 44 24.6**	**+0.6**
baz=0.2,SNR=187							
SWSC				⇑S	**Sg**	**17 44 28.1**	**+0.6**
baz=0.2							
CRR	**Carrizo Plain**	**0.21**	**315**	⇓*i*P	**Pg**	**17 44 24.6**	**+0.4**
DVTC	**Desert V Tower**	**0.27**	**254**	P	**Pg**	**17 44 25.3**	**+0.2**
baz=0.2,SNR=153							
DVTC				⇓S	**Sg**	**17 44 29.3**	**+0.2**
baz=0.2							
RMX	**La Rumorosa**	**0.28**	**241**	⇑*e*P	**Pg**	**17 44 25.0**	**-0.2**
RMX				*e*S	**Sg**	**17 44 28.6**	**-0.7**
CPBX	**Cerro Prieto**	**0.52**	**127**	*e*P	**Pg**	**17 44 30.5**	**+1.0**
CPBX				*e*S	**Sg**	**17 44 38.0**	**+1.5**
MONP	**Monument Peak**	**0.55**	**286**	P	**Pg**	**17 44 30.4**	**+0.4**
baz=0.6,SNR=469							
MONP				⇑S	**Sg**	**17 44 37.5**	**+0.1**
baz=0.6							
BAR	**Barrett**	**0.74**	**266**	*e*Pg	**Pg**	**17 44 33.3**	**-0.4**
BAR				*e*Sg	**Sg**	**17 44 42.7**	**-0.8**
RDX	**Rancho Dawling**	**0.81**	**189**	⇓*e*P	**Pb**	**17 44 34.1**	**-0.7**
RDX				*e*S	**Sb**	**17 44 44.2**	**-1.2**
RDX				⇓*e*		17 44 44.5	
comp=N,556nm,0.3s							
CBX	**Cerro Bola**	**0.85**	**240**	⇑*e*P	**Pb**	**17 44 35.4**	**+0.1**
CBX				*e*S	**Sb**	**17 44 46.2**	**-0.1**
GLA	**Glamis**	**0.87**	**69**	P	**Pb**	**17 44 35.6**	**-0.1**
baz=0.9,SNR=148							
GLA				⇓S	**Sb**	**17 44 47.0**	**-0.1**
baz=0.9							
GLA	**Glamis**	**0.87**	**69**	*e*Pg	**Pg**	**17 44 35.4**	**-0.7**
GLA				*e*Sg	**Sg**	**17 44 46.9**	**-0.7**
EMX	**El Mayor**	**0.88**	**148**	⇓*e*P	**Pb**	**17 44 35.6**	**-0.2**
EMX				*e*S	**Sb**	**17 44 47.3**	**0.0**
BC3	**Big Chuckawall**	**0.96**	**17**	⇑P	**Pb**	**17 44 37.1**	**-0.1**
baz=1.0,SNR=60							
PFO	**Pinyon Flat Ob**	**1.03**	**328**	P	**Pb**	**17 44 38.1**	**-0.3**
baz=1.1,SNR=111							
PFO				⇓S	**Sb**	**17 44 51.7**	**0.0**
baz=1.1							
PFO	**Pinyon Flat Ob**	**1.03**	**328**	*e*P	**Pb**	**17 44 38.1**	**-0.4**
PFO				*e*S	**Sb**	**17 44 52.8**	**+1.1**
109C	**Camp Elliot, M**	**1.11**	**278**	⇑P	**Pn**	**17 44 39.7**	**-0.1**
baz=1.1,SNR=29							
109C				⇓S	**Sb**	**17 44 53.8**	**-0.2**
baz=1.1							
PBX	**Punta Banda**	**1.27**	**219**	*e*P	**Pn**	**17 44 42.3**	**+0.4**
PBX				*e*S	**Sb**	**17 44 58.6**	**+0.1**
PBX				⇑*e*		17 45 00.0	
comp=N,673nm,0.2s							
ECNX	**Esteban Cantu**	**1.27**	**213**	*e*P	**Pn**	**17 44 42.2**	**+0.2**
ECNX				*e*P		17 44 40.0	
ECNX				*e*S	**Sb**	**17 44 54.6**	**-4.0**
ECNX				*e*S	**Sb**	**17 44 58.6**	**0.0**
ECBX	**El Chinero**	**1.41**	**153**	*e*P	**Pn**	**17 44 44.8**	**+0.9**
ECBX				*e*S	**Sn**	**17 45 03.0**	**+1.1**
MURC	**Murrieta**	**1.46**	**307**	⇓Sb	**Sb**	**17 45 04.8**	**+0.8**
baz=1.5							
Y12C	**Blythe**	**1.47**	**46**	P	**Pn**	**17 44 44.5**	**-0.2**
baz=1.5,SNR=14							
Y12C				⇓S	**Sn**	**17 45 03.7**	**+0.2**
baz=1.5							
113A	**Mohawk Valley,**	**1.71**	**88**	⇑P	**Pn**	**17 44 47.5**	**-0.5**
baz=1.7,SNR=9.3							
113A				⇑S	**Sn**	**17 45 08.9**	**-0.4**
baz=1.7							
SPX	**San Pedro Mart**	**1.71**	**170**	*e*P	**Pn**	**17 44 49.7**	**+1.7**
Z13A	**Yuma Proving G**	**1.85**	**75**	⇓P	**Pn**	**17 44 49.6**	**-0.4**
baz=1.9,SNR=44							
Y13A	**Salome**	**1.97**	**56**	⇑P	**Pn**	**17 44 51.6**	**0.0**
baz=2.0,SNR=12							
LDFC	**Landfair**	**2.40**	**13**	*e*Pn	**Pn**	**17 45 04.6**	**+7.0**

MWC Mount Wilson 2.41 309 *e*Pn **Pn 17 45 02.8 +5.2**
114A Black Gap (USA 2.45 89 ⇓P **Pn 17 44 58.1 -0.2**
baz=2.5,SNR=11
214A Organ Pipe Nat 2.64 106 ⇓S **Sn 17 45 30.3 -2.1**
baz=2.6
GSC Goldstone 2.69 342 *e*Pg **Pg 17 45 08.8 -2.0**
EDW2 Edwards Air Fo 2.81 320 ⇑Sb **Sb 17 45 45.8 +2.8**
baz=2.8
115A Sonoran Desert 3.01 90 ⇑P **Pn 17 45 06.0 +0.1**
baz=3.0,SNR=6.6
Y15A Casa Rosa Ranc 3.14 66 ⇑P **Pn 17 45 08.0 +0.3**
baz=3.2,SNR=8.0
ISA Isabella 3.67 323 *e*Pg **Pg 17 45 26.8 -2.6**
Y17A Roosevelt 4.26 76 ⇓P **Pn 17 45 23.4 +0.4**
baz=4.3,SNR=13

NIED ***27*** *17:44:00, 46°.70N×141°.80E, h11km, Mw3.9 Best double couple: M0=9.38000×10^14 NP1:φ=166.00000°, δ70.00000°, λ95.00000°. NP2:φ=332.00000°, δ21.00000°, λ76.00000°.*
MOS ***27*** *17:44:31.8±1.5, 46°.70N×141°.82E, h15km, mb4.0/13, Error ellipse: s-maj=12.4km s-min=9.0km az=92.4*
MOS Felt (IV) at Nevel'sk, Gornozavodsk.
IDC ***27*** *17:44:31.1±0.6, 46°.53N×141°.90E, h0km, mb3.8/15, mb1 3.9/18, mb1mx3.9/28, mbtmp3.7/18, ML3.3/3, Error ellipse: s-maj=17.1km s-min=15.6km az=4.0*
JMA ***27*** *17:44:32.1±0.2, 46°.69N×141°.85E, h26km, M4.1*
SKHL ***27*** *17:44:32.2±0.3, 46°.46N×141°.93E, h10km, mb4.2/6, Ms3.6/1*
SKHL Felt (IV) at Nevel'sk, Gornozavodsk.
NEIC ***27*** *17:44:35.3±3.6, 46°.68N×141°.92E, h22km±27km, mb4.3/6, Error ellipse: s-maj=12.7km s-min=9.2km az=146.0*
ISC 27 17:44:34.5±0.8, 46°.52N±0°.02×141°.98E±0°.05, h17km±5km, n77, σ1§05/90, mb3.9/23, 1C-2D, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YSS	**Yuzh-Sakhalins**	**0.69**	**51**	⇓*i*PN	**Pg**	**17 44 46.8**	**-1.2**
YSS				*e*		17 44 56.9	
YSS				pmax	pmax		
comp=Z,140nm,0.6s							
YSS				smax			
comp=E,40nm,0.5s							
YSS	**Yuzh-Sakhalins**	**0.69**	**51**	*e*Pn	**Pg**	**17 44 46.8**	**-1.1**
YSS	**Yuzh-Sakhalins**	**0.69**	**51**	⇓*i*Pg	**Pg**	**17 44 46.6**	**-1.4**
YSS				AMB	AMB	17 44 47.3	
comp=E,140nm,0.6s							
YSS				*e*Sg	**Sg**	**17 44 56.9**	**-0.2**
YSS				A		17 44 59.5	
comp=E,4μm,0.5s							
YSS				AMS	AMS	17 45 20.5	
comp=E,2μm,7.0s							
YSS				AMS	AMS	17 45 20.5	
comp=E,3μm,7.0s							
JWK2	**Keihoku**	**1.21**	**183**	P	**Pn**	**17 44 56.0**	**-0.5**
JWK2				*e*S	**Sb**	**17 45 13.2**	**+1.2**
JRR	**Rishiri**	**1.46**	**199**	P	**Pn**	**17 44 59.5**	**-0.4**
JRR				*e*S	**Sn**	**17 45 19.6**	**+1.0**
JSE	**Soyaes**	**1.62**	**165**	P	**Pn**	**17 45 02.1**	**0.0**
JSE				*e*S	**Sn**	**17 45 23.5**	**+1.0**
JSS	**Shosan**	**2.12**	**182**	P	**Pn**	**17 45 09.0**	**-0.1**
JYG	**Yagishiri**	**2.13**	**191**	P	**Pn**	**17 45 09.9**	**+0.7**
JYG				*e*S	**Sn**	**17 45 37.3**	**+2.2**
ASAJ	**Asahikawa**	**2.44**	**169**	P	**Pn**	**17 45 13.9**	**+0.4**
ASAJ	**Asahikawa**	**2.44**	**169**	Pn	**Pn**	**17 45 14.3**	**+0.8**
comp=E,10nm,0.3s,baz=357,slow=11,SNR=62							
ASAJ				Sn	**Sn**	**17 45 47.5**	**+4.7**
comp=E,17nm,0.3s,baz=294,slow=19,SNR=6.8							
ASAJ	**Asahikawa**	**2.44**	**169**	PN	**Pn**	**17 45 14.3**	**+0.8**
ASAJ						17 45 47.6	
ASAJ				pmax	pmax		
comp=Z,11nm,0.3s							
ASAJ				smax			
comp=N,17nm,0.3s							
UGL	**Uglegorsk**	**2.56**	**1**	*e*PN	**Pg**	**17 45 19.5**	**-4.1**
UGL				pmax	pmax		
comp=Z,69nm,0.5s							
UGL	**Uglegorsk**	**2.56**	**1**	*e*P	**Pn**	**17 45 15.5**	**+0.4**
UGL				AMB	AMB	17 45 21.7	
comp=Z,69nm,0.5s							
UGL				*e*Pg	**Pg**	**17 45 24.0**	**+0.4**
UGL				AMB	AMB	17 45 25.0	
comp=Z,93nm,0.7s							
UGL				*e*S	**Sn**	**17 45 47.0**	**+1.2**
UGL				*e*Sg	**Sg**	**17 45 58.0**	**+1.3**
UGL				A		17 45 58.5	
comp=Z,223nm,0.6s							
UGL				A		17 45 58.5	
comp=Z,183nm,0.6s							
JMP	**Maruseppu**	**2.70**	**158**	P	**Pn**	**17 45 16.7**	**-0.2**
JKK2	**Kamakawa 2**	**2.70**	**168**	P	**Pn**	**17 45 17.5**	**+0.5**
JTKR	**Abashiri--Toko**	**2.89**	**151**	P	**Pn**	**17 45 19.2**	**-0.4**
JTKR			

comp=Z,9.0nm,1.0s
KSRS Korea Array 13.81 234 Pn **Pn 17 47 49.1 -0.3**
comp=Z,0.1nm,0.3s,baz=51,slow=14,SNR=2.3
FX1 Attu Island--F 21.04 61 P **P 17 49 18.3 +1.2**
comp=Z,8.1nm,0.8s,mb4.1,baz=338,slow=5.4,SNR=3.5
FX1 Attu Island--F 21.04 61 P **P 17 49 18.3 +1.2**
FX1 pmax pmax
comp=Z,8.0nm,0.8s
SONM Songino Array 24.10 286 P **P 17 49 48.6 -0.2**
comp=Z,1.2nm,0.6s,mb3.5,baz=84,slow=9.3,SNR=9.5
SONM Songino Array 24.10 286 P **P 17 49 48.6 -0.2**
SONM pmax pmax
comp=Z,1.0nm,0.6s
BILL Biiibino 24.92 22 *eP* **P 17 49 53.6 -2.5**
BILL pmax pmax
comp=Z,3.0nm,1.2s,mb3.7
BILL Biiibino 24.92 22 P **P 17 49 55.2 -0.9**
comp=Z,3.3nm,0.9s,mb3.9
TLY Talaya 25.41 296 *eP* **P 17 49 58.5 -2.3**
TLY Talaya 25.41 296 *eP* **P 17 49 58.4 -2.4**
ZAK Zakamensk 25.75 293 *eP* **P 17 50 03.4 -0.5**
ZAK pmax pmax
comp=Z,2.0nm,1.3s,mb3.5
TIXI Tiksi 25.96 351 *eP* **P 17 50 01.9 -3.7**
ZALV Zalesovo Beam 36.41 303 P **P 17 51 36.9 -0.8**
comp=Z,0.4nm,0.5s,mb3.6,baz=101,slow=4.6,SNR=3.0
ZALV PcP PcP 17 54 00.5 -1.0
comp=Z,0.4nm,0.4s,baz=72,slow=4.8,SNR=3.7
ZALV Zalesovo Beam 36.41 303 P **P 17 51 36.9 -0.8**
ZALV PcP PcP 17 54 00.5 -1.0
PPLA Purkeypile 39.43 41 *eP* **P 17 52 03.7 +0.7**
comp=Z,30nm,1.6s,mb4.8
BPAW Bear Paw Mtn. 39.81 39 *eP* **P 17 52 06.0 -0.2**
comp=Z,2.5nm,0.8s,mb4.0
MK31 Makanchi Array 40.09 293 *eP* **P 17 52 07.8 -0.9**
MKAR Makanchi Array 40.09 293 P **P 17 52 07.5 -1.2**
comp=Z,1.0nm,0.8s,mb3.6,baz=70,slow=14,SNR=8.7
MKAR Makanchi Array 40.09 293 P **P 17 52 07.5 -1.2**
MKAR pmax pmax
comp=Z,1.0nm,0.8s
KURK Kurchatov 40.96 300 P **P 17 52 15.2 -0.6**
comp=Z,0.6nm,0.4s,mb3.5,baz=72,slow=9.3,SNR=5.2
KURK Kurchatov 40.96 300 P **P 17 52 15.2 -0.6**
KURK pmax pmax
comp=Z,1.0nm,0.4s,mb3.8
COLA College 41.06 38 P **P 17 52 16.5 +0.1**
COLA pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
COLA College 41.06 38 P **P 17 52 16.5 +0.1**
comp=Z,10nm,1.0s,mb4.4
EGAK Eagle 43.88 37 *eP* **P 17 52 38.7 -0.7**
comp=Z,11nm,0.8s,mb4.6
BVAR Borovoye Array 44.91 306 P **P 17 52 46.8 -1.0**
comp=Z,0.2nm,0.4s,mb3.3,baz=95,slow=10,SNR=2.5
INK Inuvik 45.89 31 P **P 17 52 54.5 -0.8**
INK pmax pmax
comp=Z,2.0nm,0.6s
INK Inuvik 45.89 31 P **P 17 52 54.5 -0.8**
comp=Z,1.7nm,0.6s,mb4.2
YKA Yellowknife Ar 55.51 33 P **P 17 54 07.4 -0.6**
comp=Z,0.8nm,0.6s,mb3.9,baz=302,slow=6.4,SNR=6.0
YKA Yellowknife Ar 55.51 33 P **P 17 54 07.4 -0.6**
YKA pmax pmax
comp=Z,1.0nm,0.6s
YKA Yellowknife Ar 55.51 33 P **P 17 54 07.4 -0.6**
FINES FINESS Array B 60.70 330 P **P 17 54 43.4 -0.9**
comp=Z,1.3nm,0.6s,mb4.2,baz=47,slow=8.6,SNR=7.0
FINES FINESS Array B 60.70 330 P **P 17 54 43.4 -0.9**
FINES pmax pmax
comp=Z,1.0nm,0.6s
KIV Kislovodsk 65.18 308⇑ *eP* **P 17 55 14.0 -0.4**
KIV pmax pmax
comp=Z,9.0nm,1.5s,mb4.6
NOA NORSAR Array B 65.64 336 P **P 17 55 16.7 -0.4**
comp=Z,0.3nm,0.5s,mb3.6,baz=35,slow=6.4,SNR=3.5
WRA Warramunga Arr 66.51 188 P **P 17 55 21.5 -1.5**
comp=Z,0.5nm,0.8s,mb3.6,baz=6.7,slow=7.2,SNR=3.4
WRA Warramunga Arr 66.51 188 P **P 17 55 21.5 -1.5**
WRA pmax pmax
comp=Z,1.0nm,0.8s
AKASG Malin Array Be 67.15 320 P **P 17 55 25.8 -1.1**
AKASG pmax pmax
comp=Z,1.0nm,0.7s
NVAR Mina Array Bea 69.14 56 P **P 17 55 40.1 +0.5**
comp=Z,0.7nm,0.5s,mb3.9,baz=300,slow=5.9,SNR=8.4
ASAR Alice Springs 70.23 188 P **P 17 55 46.0 -0.3**
comp=Z,0.7nm,0.8s,mb3.6,baz=11,slow=6.9,SNR=6.0
ASAR Alice Springs 70.23 188 P **P 17 55 46.0 -0.2**
ASAR pmax pmax
comp=Z,1.0nm,0.8s
PDAR Pinedale Array 70.83 48 P **P 17 55 49.4 -0.5**
comp=Z,0.8nm,0.8s,mb3.7,baz=325,slow=1.4,SNR=4.6
CLL Collm 73.12 329 *eP* **P 17 56 06.0 +2.6**
CLL Collm 73.12 329 *e*(P) **P 17 56 06.0 +2.6**
TXAR Lajitas Array 84.04 53 P **P 17 57 04.0 0.0**
comp=Z,0.6nm,0.7s,mb3.8,baz=308,slow=3.0,SNR=8.3
TXAR Lajitas Array 84.04 53 P **P 17 57 04.0 0.0**
TXAR pmax pmax
comp=Z,1.0nm,0.7s
TXAR Lajitas Array 84.04 53 P **P 17 57 04.0 0.0**

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*NEIC **27** 17:55:14.1, 33.°67S×69.°98W, h7km, ML2.6(GUC), After GUC.*

GUC 27 17:55:14.1±0.7, 33.°67S×69.°98W, h7km±5km, MD3.6, ML2.6, 10C-5D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LMEL	**Las Melosas**	**0.25**	**226**	⇓*iP*		Pg	17 55 19.3	+0.2
LMEL				*i* S		Sg	17 55 23.2	+0.7
LMEL	**Las Melosas**	**0.25**	**226**	⇓*iP*		Pg	17 55 19.3	+0.2
LMEL				*i* S		Sg	17 55 23.2	+0.7
LMEL				AML		AML	17 55 24.0	
	comp=N,5μm,0.2s							
SJCH	**San Jose de Ma**	**0.31**	**276**	⇓*iP*		Pg	17 55 20.5	+0.4
SJCH				*i* S		Sg	17 55 25.2	+1.0
SJCH	**San Jose de Ma**	**0.31**	**276**	⇓*iP*		Pg	17 55 20.5	+0.4
SJCH				*i* S		Sg	17 55 25.2	+1.0
SJCH				AML		AML	17 55 25.9	
	comp=N,2μm,0.1s							
FCH	**Farellones**	**0.43**	**323**	⇓*iP*		Pg	17 55 23.4	+1.0
FCH				*i* S		Sg	17 55 29.6	+1.6
FCH				AML		AML	17 55 30.0	
	comp=N,1μm,0.2s							
PCH	**Pirque**	**0.45**	**277**	⇑*iP*		Pg	17 55 23.0	+0.3
PCH				*e*S		Sg	17 55 29.4	+0.9
PCH	**Pirque**	**0.45**	**277**	⇑*iP*		Pg	17 55 23.0	+0.3
PCH				*e*S		Sg	17 55 29.4	+0.9
FSR	**Penalolen**	**0.49**	**293**	*eP*		Pg	17 55 23.2	-0.4
FSR				*i* S		Sg	17 55 30.8	+0.8
FSR	**Penalolen**	**0.49**	**293**	*eP*		Pg	17 55 23.2	-0.4
FSR				*i* S		Sg	17 55 30.8	+0.8
CLCH	**Cerro Calan**	**0.54**	**301**	⇑*iP*		Pg	17 55 24.5	0.0
CLCH				*i* S		Sg	17 55 32.1	+0.7
CLCH				AML		AML	17 55 32.9	
	comp=E,586nm,0.4s							
ANTU	**Antumapu**	**0.55**	**281**	*eP*		Pg	17 55 24.6	-0.1
ANTU				*i* S		Sg	17 55 32.8	+0.9
ANTU	**Antumapu**	**0.55**	**281**	*eP*		Pg	17 55 24.6	-0.1
ANTU				*i* S		Sg	17 55 32.8	+0.9
ANTU				AML		AML	17 55 34.3	
	comp=N,417nm,0.4s							
CHCH	**Chadas Angostu**	**0.61**	**245**	*eP*		Pg	17 55 25.9	0.0
CHCH				*i* S		Sg	17 55 34.5	+0.5
CHCH	**Chadas Angostu**	**0.61**	**245**	*eP*		Pg	17 55 25.9	0.0
CHCH				*i* S		Sg	17 55 34.5	+0.5
CACH	**El Canelo**	**0.68**	**229**	⇑*iP*		Pg	17 55 27.2	+0.1
CACH				*i* S		Sg	17 55 36.9	+0.9
CACH	**El Canelo**	**0.68**	**229**	⇑*iP*		Pg	17 55 27.2	+0.1
CACH				*i* S		Sg	17 55 36.9	+0.9
RCDM	**Rinconada Maip**	**0.71**	**285**	⇑*iP*		Pg	17 55 27.6	-0.2
RCDM				*i* S		Sg	17 55 37.7	+0.7
RCDM	**Rinconada Maip**	**0.71**	**285**	⇑*iP*		Pg	17 55 27.6	-0.2
RCDM				*i* S		Sg	17 55 37.7	+0.7
RCDM				AML		AML	17 55 38.3	
	comp=E,502nm,0.1s							
PEL	**Peldehue**	**0.79**	**312**	⇑*iP*		Pg	17 55 28.8	-0.5
PEL				*i* S		Sg	17 55 39.6	+0.1
PEL				AML		AML	17 55 40.4	
	comp=N,289nm,1.1s							
TACH	**Talagante**	**0.80**	**271**	⇑*iP*		Pg	17 55 29.1	-0.3
TACH				*i* S		Sg	17 55 39.8	+0.1
TACH	**Talagante**	**0.80**	**271**	⇑*iP*		Pg	17 55 29.1	-0.3
TACH				*i* S		Sg	17 55 39.8	+0.1
JACH	**Jahuel**	**1.11**	**333**	*eP*		Pg	17 55 34.4	-1.0
JACH	**Jahuel**	**1.11**	**333**	*eP*		Pg	17 55 34.4	-1.0
LNV	**Longovilo**	**1.22**	**256**	*eP*		Pb	17 55 36.0	-1.5
LNV	**Longovilo**	**1.22**	**256**	*eP*		Pb	17 55 36.0	-1.5

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*IDC **27** 18:02:28.4±1.3, 46.°89N×155.°50E, h0km, mb3.8/8, mb1 3.9/11, mb1mx3.7/27, mbtmp3.7/11, ML3.3/3, Error ellipse: s-maj=38.4km s-min=19.9km az=165.0*
*ISCJB **27** 18:02:31.8±1.0, 46.°9N±0.°1×155.°5E±0.°2, h33km, mb3.8/11, Error ellipse: s-maj=23.3km s-min=11.0km az=137.0*
*NEIC **27** 18:02:33.2±4.4, 46.°88N×155.°63E, h30km±31km, mb4.2/2, Error ellipse: s-maj=25.1km s-min=13.6km az=142.0*

ISC 27 18:02:33.9±1.0, 46.°9N±0.°1×155.°5E±0.°2, h35km, n16, σ1°01/17, mb3.8/11, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PEA0B	**Petropavlovsk-**	**6.40**	**12**	*e*Pn		**Pn**	**18 04 04.9**	**-0.7**
PETK	**Petropavlovsk-**	**6.40**	**12**	Pn		**Pn**	**18 04 05.3**	**-0.2**
	0.5nm,0.3s,baz=167,slow=11,SNR=13							
PETK					Sn	**Sn**	**18 05 26.2**	**+8.9**
	0.1nm,0.3s,baz=185,slow=15,SNR=2.2							
ASAJ	**Asahikawa**	**9.45**	**258**	Pn		**Pn**	**18 04 46.1**	**-1.3**
	0.4nm,0.3s,baz=98,slow=7.5,SNR=6.3							
MJAR	**Matsushiro Arr**	**16.48**	**237**	Pn		**Pn**	**18 06 22.6**	**+0.3**
	0.2nm,0.3s,baz=45,slow=12,SNR=4.8							
KSRS	**Korea Array**	**22.39**	**255**	P		**P**	**18 07 28.3**	**-0.7**
	1.0nm,0.8s,mb3.3,baz=54,slow=13,SNR=4.2							
ULN	**Ulaanbaatar**	**32.38**	**290**	P		**P**	**18 09 03.1**	**+3.2**
	2.9nm,0.8s,mb4.2							
MKAR	**Makanchi Array**	**48.31**	**298**	P		**P**	**18 11 11.9**	**+0.4**
	0.2nm,0.5s,mb3.4,baz=82,slow=11,SNR=2.7							
KURK	**Kurchatov**	**48.63**	**304**	P		**P**	**18 11 14.4**	**+0.5**
	0.7nm,0.3s,mb4.2,baz=66,slow=8.2,SNR=1.8							
BVAR	**Borovoye Array**	**52.02**	**310**	P		**P**	**18 11 40.4**	**+1.0**
	1.1nm,0.6s,mb4.0,baz=57,slow=9.4,SNR=9.9							
BRVK	**Borovoye**	**52.06**	**310**	*eP*		**P**	**18 11 40.8**	**+1.0**
	1.9nm,0.7s,mb4.1							
NVAR	**Mina Array Bea**	**60.93**	**64**	P		**P**	**18 12 43.2**	**0.0**
	0.5nm,0.7s,mb3.8,baz=298,slow=7.7,SNR=3.7							
NVAR	**Mina Array Bea**	**60.93**	**64**	P		**P**	**18 12 43.2**	**0.0**
FINES	**FINESS Array B**	**64.60**	**336**	P		**P**	**18 13 06.4**	**-0.7**
	1.8nm,1.0s,mb4.1,baz=30,slow=9.6,SNR=3.8							
NOA	**NORSAR Array B**	**68.62**	**342**	P		**P**	**18 13 36.4**	**+3.6**
	0.4nm,0.6s,mb3.5,baz=26,slow=6.4,SNR=2.7							
AKASG	**Malin Array Be**	**72.33**	**327**	P		**P**	**18 13 53.7**	**-1.9**
	0.6nm,0.5s,mb3.8,baz=39,slow=7.7,SNR=3.8							
TXAR	**Lajitas Array**	**76.01**	**62**	P		**P**	**18 14 17.8**	**+0.3**
	0.9nm,0.5s,mb4.0,baz=301,slow=4.4,SNR=14							

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*IDC **27** 18:04:21.4±1.6, 10.°88N×91.°88E, h0km, mb3.9/8, mb1 4.0/9, mb1mx3.7/26, mbtmp3.8/9, ML3.6/1, MS3.7/2, Ms1 3.7/2, ms1mx3.1/22, Error ellipse: s-maj=63.1km s-min=16.4km az=65.0*
*NEIC **27** 18:04:22.8±0.7, 10.°90N×91.°87E, h10km, Error ellipse: s-maj=18.8km s-min=8.5km az=65.0*
*ISCJB **27** 18:04:24.7±1.0, 11.°0N±0.°1×92.°0E±0.°2, h33km, mb3.9/8, MS3.7/2, Error ellipse: s-maj=27.4km s-min=12.6km az=154.2*

ISC 27 18:04:26.8±1.0, 11.°0N±0.°1×92.°0E±0.°2, h35km, n13, σ0°42/11, mb3.9/8, MS3.7/2, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.07**	**41**	Pn		**Pn**	**18 06 48.7**	**-0.3**
	0.2nm,0.3s,baz=237,slow=15,SNR=4.1							
KKM	**Kota Kinabalu**	**24.48**	**99**	*eP*		**P**	**18 09 43.1**	**+0.2**
MK31	**Makanchi Array**	**36.65**	**349**	P		**P**	**18 11 29.6**	**-0.3**
MKAR	**Makanchi Array**	**36.65**	**349**	P		**P**	**18 11 30.1**	**+0.2**
	0.7nm,0.8s,mb3.5,baz=124,slow=11,SNR=6.1							
SONM	**Songino Array**	**38.73**	**16**	P		**P**	**18 11 48.4**	**+0.9**
	0.5nm,0.6s,mb3.4,baz=213,slow=8.3,SNR=3.8							
KURK	**Kurchatov**	**41.14**	**347**	P		**P**	**18 12 07.0**	**-0.4**
	0.9nm,0.3s,mb3.9,baz=156,slow=9.2,SNR=1.6							
ZALV	**Zalesovo Beam**	**43.26**	**354**	P		**P**	**18 12 24.6**	**-0.1**
	0.7nm,0.5s,mb3.6,baz=182,slow=9.8,SNR=4.5							
FITZ	**Fitzroy Crossi**	**44.04**	**131**	P		**P**	**18 12 30.9**	**-0.5**
	2.2nm,0.5s,mb4.2,baz=324,slow=7.6,SNR=17							
WRA	**Warramunga Arr**	**51.80**	**126**	P		**P**	**18 13 31.2**	**-0.3**
	1.0nm,0.3s,mb4.2,baz=300,slow=10.0,SNR=48							
ASAR	**Alice Springs**	**53.54**	**130**	P		**P**	**18 13 44.5**	**+0.1**
	1.5nm,0.7s,mb4.0,baz=304,slow=7.1,SNR=35							
BRTR	**Keskin Array B**	**58.80**	**310**	LR	LR		18 40 05.9	
	comp=Z,28nm,18.7s,MS3.4,baz=93,slow=36							
STKA	**Stephens Creek**	**63.78**	**134**	P		**P**	**18 14 56.0**	**+0.5**
	1.1nm,0.5s,mb4.1,baz=309,slow=8.4,SNR=4.2							
FINES	**FINESS Array B**	**69.00**	**332**	LR	LR		18 52 40.2	
	comp=Z,86nm,18.9s,MS4.0,baz=182,slow=42							

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*IDC **27** 18:05:10.2±0.3, 10.°93N×91.°87E, h0km, mb5.0/31, mb1 5.0/32, mb1mx5.0/34, mbtmp5.0/32, ML4.5/1, MS4.0/4, Ms1 4.0/4, ms1mx3.4/21, Error ellipse: s-maj=13.0km s-min=9.9km az=58.0*
*BJI **27** 18:05:10.0, 10.°63N×91.°82E, h28km, mB4.9/27, mb5.2/50, Ms4.7/46, Ms7 4.3/42*
*ISCJB **27** 18:05:11.8±0.1, 10.°90N±0.°03×91.°82E±0.°02, h24km, mb5.1/197, MS4.3/36, Error ellipse: s-maj=3.9km s-min=2.9km az=29.5*
*SZGRF **27** 18:05:12.5, 10.°21N×91.°26E, h28km, mb5.1, MS4.3, Andaman Islands, India, region*
*MOS **27** 18:05:13.1±0.8, 10.°93N×91.°82E, h33km, mb5.4/83, MS4.3/15, Error ellipse: s-maj=7.4km s-min=4.1km az=119.6*
*NEIC **27** 18:05:13.7±0.1, 10.°89N×91.°78E, mb5.1/97, MS4.3/3, Error ellipse: s-maj=4.4km s-min=3.3km az=207.0*
*GCMT **27** 18:05:16.5±0.4, 10.°80N×91.°84E, h17km±1km, MW5.0, Moment Tensor Solution. s17,c19; s65,c90; Moment tensor: Scale 10^{16}Nm; M_{rr}-3.15±.25; $M_{\theta\theta}$0.47±.13; $M_{\phi\phi}$2.68±.15; $M_{r\theta}$-1.78±.43; $M_{\theta\phi}$-0.33±.09; $M_{r\phi}$1.12±.29; Best double couple: $M_0$3.50000×10^{16} NP1:ϕ_s5.00000°, δ34.00000°, λ-59.00000°. NP2:ϕ_s149.00000°, δ61.00000°, λ-109.00000°. Principal axes: T 3.0800, Plg14.0000°, Azm253.0000°; N 0.9300, Plg17.0000°, Azm158.0000°; P -4.0100, Plg67.0000°, Azm21.0000°; Data Used: II IU IC G CN.*
*DJA **27** 18:05:18, 10.°94N×91.°76E, h55km, mb5.3/38*

ISC 27 18:05:13.9±0.1, 10.°91N±0.°02×91.°80E±0.°02, h26km, h26km±.6km: pP-P, n562, σ0°93/552, mb5.1/197, MS4.3/36, 33C-38D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**1.18**	**51**	*e*PKP		x	18 06 43.0	
PBA				*e*S		x	18 06 59.0	
CM31	**Chiang Mai Arr**	**10.20**	**42**	*e*Pn		**Pn**	**18 07 38.8**	**+0.1**
	28nm,0.6s							
CM31				*e*Sn		**Sn**	**18 09 29.0**	**-3.2**
CMAR	**Chiang Mai Arr**	**10.20**	**42**	Pn		**Pn**	**18 07 38.1**	**-0.5**
	1.0nm,0.3s,baz=232,slow=13,SNR=17							
CMAR				Sn		**Sn**	**18 09 36.5**	**+4.3**
	1.1nm,0.3s,baz=235,slow=28,SNR=3.4							
KULM	**Kulim**	**10.38**	**122**	P		**Pn**	**18 07 42.0**	**+0.7**
KULM	**Kulim**	**10.38**	**122**	*e*Pn		**Pn**	**18 07 40.8**	**-0.5**
	30nm,0.9s							
CHTO	**Chiang Mai**	**10.46**	**40**	*eP*		**Pn**	**18 07 42.5**	**+0.3**
CHTO				*e*			18 09 31.2	
CHTO				pmax	pmax			
	comp=Z,25nm,0.8s							
CHTO	**Chiang Mai**	**10.46**	**40**	*e*Pn		**Pn**	**18 07 42.5**	**+0.3**
	comp=Z,25nm,0.8s							
CHTO				*e*Sn		**Sn**	**18 09 31.2**	**-7.4**
VIS	**Vishakhapatnam**	**10.64**	**310**	*i* P		**Pn**	**18 07 43.5**	**-1.2**
VIS				AMb		AMB	18 07 50.2	
	comp=Z,286nm,0.8s							
VIS				*i* S		**Sn**	**18 09 31.4**	**-12**
PSI	**Prapat**	**10.71**	**138**	Pn		**Pn**	**18 07 43.2**	**-2.6**
	comp=Z,0.9nm,0.3s,baz=328,slow=5.4,SNR=8.2							
IPM	**Ipoh**	**11.15**	**124**	P		**Pn**	**18 07 51.8**	**+0.1**
PALK	**Pallekele**	**11.54**	**253**	Pn		**Pn**	**18 07 56.2**	**-0.9**
	comp=Z,742nm,0.7s,SNR=5.5							
PALK	**Pallekele**	**11.54**	**253**	*eP*		**Pn**	**18 07 54.2**	**-2.9**
PALK				pmax	pmax			
	comp=Z,165nm,0.9s							
PALK	**Pallekele**	**11.54**	**253**	*e*Pn		**Pn**	**18 07 54.2**	**-2.9**
	comp=Z,166nm,0.9s							
PALK				*e*Sn		**Sn**	**18 09 53.5**	**-12**
CAL	**Calcutta**	**12.03**	**344**	*ex*		x	18 08 59.0	
CAL				*ex*		x	18 12 04.3	
FRIM	**Kepong**	**12.37**	**127**	P		**Pn**	**18 08 08.0**	**-0.5**
KTGM	**Kuala Trenggan**	**12.51**	**115**	P		**Pn**	**18 08 11.6**	**+1.3**
AGT	**Agartala**	**12.91**	**358**	*e*PKP		**Pn**	**18 08 13.0**	**-2.8**
HYB	**Hyderabad**	**14.38**	**298**	*i* P		**Pn**	**18 08 35.0**	**-0.9**
HYB				*e*S		**Sn**	**18 11 34.0**	**+19**
KGM	**Kluang**	**14.45**	**127**	P		**Pn**	**18 08 36.1**	**-0.8**
SHL	**Shillong**	**14.58**	**0**	*e*PKP		**Pn**	**18 08 37.0**	**-1.6**
SHL				*ex*		x	18 17 10.0	
TRD	**Trivandrum**	**14.82**	**262**	⇑*ix*		**Pn**	**18 08 45.0**	**+3.0**
TRD				*i* x		**Sn**	**18 11 19.0**	**-6.5**
MYKOM	**Kota Tinggi**	**15.01**	**126**	P		**Pn**	**18 08 44.0**	**-0.4**
NGP	**Nagpur**	**15.92**	**311**	*e*PKP		**Pn**	**18 08 55.6**	**-0.7**
NGP				*ex*		x	18 09 03.7	
	comp=Z,86nm,1.2s							
NGP				*ex*		x	18 11 39.1	
ODAN	**Odare**	**16.40**	**346**	*eP*		**Pn**	**18 09 00.5**	**-1.9**
	comp=Z,69nm,0.4s							
JBP	**Jabalpur**	**16.61**	**319**	*e*PKP		**Pn**	**18 09 05.2**	**+0.2**
JBP				*i* x		x	18 11 55.0	
RAMN	**Ramite**	**16.69**	**344**	*eP*		**Pn**	**18 09 04.0**	**-2.1**
	comp=Z,153nm,0.5s							
TAPN	**Taplejung**	**16.80**	**347**	*eP*		**Pn**	**18 09 05.6**	**-1.9**
	comp=Z,147nm,0.9s							
AKL	**Akola**	**17.23**	**306**	*e*PKP		**Pn**	**18 09 12.5**	**-0.3**
JIRN	**Jiri**	**17.48**	**343**	*eP*		**Pn**	**18 09 14.6**	**-1.3**
	comp=Z,63nm,0.5s							
KMI	**Kunming**	**17.53**	**35**	P		**Pn**	**18 09 18.3**	**+1.7**
KMI				pP		pP	18 09 24.5	-0.1
KMI				sP		sP	18 09 28.5	+0.6
KMI				PP			18 09 34.3	
KMI				S		**Sn**	**18 12 32.3**	**+1.1**
KMI				sS		sS	18 12 42.0	-7.7
KMI				SS			18 12 54.8	
KMI				pmax	pmax			
	comp=Z,20nm,1.0s							
KMI				pmax	pmax			
	comp=Z,75nm,3.1s							
KMI				LR	LR			
	comp=N,440nm,17.3s							
KMI				LR	LR			
	comp=E,720nm,17.0s							
KMI				LR	LR			
	comp=Z,740nm,17.3s							
PKI	**Pulchoki**	**17.63**	**341**	*eP*		**Pn**	**18 09 16.1**	**-1.7**
	comp=Z,101nm,0.6s							
PKIN	**Phulchoki**	**17.64**	**341**	*eP*		**Pn**	**18 09 16.1**	**-1.8**
	comp=Z,79nm,0.5s							
DMN	**Daman**	**17.77**	**340**	*eP*		**Pn**	**18 09 17.6**	**-1.9**
	comp=Z,171nm,0.7s							
GUN	**Gumba**	**17.80**	**343**	*eP*		**Pn**	**18 09 17.7**	**-2.2**
	comp=Z,72nm,0.6s							
KKN	**Kakani**	**17.88**	**341**	*eP*		**Pn**	**18 09 19.0**	**-1.8**
	comp=Z,45nm,0.5s							
KAD	**Karad**	**18.23**	**292**	*e*PKP		**Pn**	**18 09 23.6**	**-1.6**
KAD				AMb		AMB	18 09 26.6	
	comp=Z,18nm,0.8s							
BHPL	**Bhopal**	**18.40**	**314**	*e*PKP		**Pn**	**18 09 26.1**	**-1.1**
BHPL				AMb		AMB	18 09 40.1	
	comp=Z,62nm,1.1s							
POO	**Poona**	**18.93**	**296**	*e*PKP		**Pn**	**18 09 34.5**	**+0.7**
POO				AMb		AMB	18 09 42.5	
	comp=Z,69nm,1.1s							
QIZ	**Qiongzhong**	**19.19**	**63**	P		**Pn**	**18 09 36.3**	**-0.6**
QIZ				S		**Sn**	**18 13 11.0**	**-0.5**
QIZ				sS		sS	18 13 18.5	-5.0
QIZ				pmax	pmax			
	comp=Z,15nm,1.1s							
QIZ				pmax	pmax			
	comp=Z,100nm,3.9s							
QIZ				LR	LR			
	comp=N,410nm,16.7s							
QIZ				LR	LR			
	comp=Z,860nm,13.2s							
KSM	**Kuching**	**20.63**	**116**	P		**P**	**18 09 51.1**	**-0.6**
KSM	**Kuching**	**20.63**	**116**	P		**P**	**18 09 51.1**	**-0.6**
KSM	**Kuching**	**20.63**	**116**	*e*Pn		**P**	**18 09 50.4**	**-1.2**
	comp=Z,62nm,0.9s							
GYA	**Guiyang**	**20.88**	**40**	⇓*iP*		**P**	**18 09 54.5**	**+0.3**
GYA				pP			18 10 03.3	
GYA				sP		sP	18 10 09.5	+4.9
GYA				PP			18 10 17.0	
GYA				S		**S**	**18 13 41.0**	**-4.9**
GYA				PcP		PcP	18 14 03.0	+0.9
GYA				SS			18 14 12.0	
GYA				pmax	pmax			
	comp=Z,30nm,1.0s							
GYA				pmax	pmax			
	comp=Z,90nm,3.1s							
GYA				LR	LR			
	comp=N,2μm,13.4s,MS4.8							
GYA				LR	LR			
	comp=E,2μm,15.8s,MS4.8							
GYA				LR	LR			
	comp=Z,3μm,16.8s,MS4.7							
PTH	**Pithoragarh**	**21.47**	**331**	*e*PKP		**P**	**18 10 02.0**	**+1.5**
SBUM	**Sibu**	**21.93**	**111**	P		**P**	**18 10 05.1**	**-0.5**
NDI	**New Delhi**	**22.34**	**324**	*e*PKP		**P**	**18 10 10.0**	**+0.2**
NDI				*e*S		**S**	**18 14 13.5**	**-0.9**
BTM	**Bintulu**	**22.45**	**108**	P		**P**	**18 10 12.0**	**+0.9**
CD2	**Chengdu**	**22.79**	**27**	⇓*iP*		**P**	**18 10 14.3**	**-0.2**
CD2				pP			18 10 21.3	
CD2				PP			18 10 43.5	
CD2				PcP		PcP	18 14 06.5	+0.7
CD2				S		**S**	**18 14 17.3**	**-5.0**
CD2				SS			18 15 01.0	
CD2				PcS		PcS	18 17 44.3	-0.5
CD2				pmax	pmax			
	comp=Z,140nm,0.9s,mb5.4							
CD2				pmax	pmax			
	comp=Z,250nm,10.2s							
CD2				LR	LR			
	comp=N,430nm,15.6s,MS4.1							
CD2				LR	LR			
	comp=E,410nm,15.6s,MS4.1							
CD2				LR	LR			
	comp=Z,360nm,15.6s,MS3.9							
DDI	**Dehra Dun**	**23.16**	**329**	*e*PKP		**P**	**18 10 18.7**	**+0.1**
DDI				*e*S		**S**

GTA S **S** **18 16 07.8 +2.5**
GTA sS sS 18 16 19.5 +1.5
GTA SS SS 18 17 41.8 -28
GTA pmax pmax
comp=Z,54nm,1.1s,mb5.2
GTA pmax pmax
comp=Z,140nm,5.1s
GTA LR LR
comp=N,1μm,18.8s,MS4.9
GTA LR LR
comp=E,2μm,20.6s,MS4.9
GTA LR LR
comp=Z,980nm,18.5s,MS4.5
SSLB Suanglung 30.55 61 *e*P **P** **18 11 26.3 +0.8**
comp=Z,12nm,0.6s,mb4.9
YHNB Yeheng 31.22 60 *e*P **P** **18 11 31.4 0.0**
comp=Z,42nm,0.9s,mb5.3
KBL Kabul 31.38 322 *e*P **P** **18 11 33.8 +1.1**
KBL *e* 18 14 26.8
KBL pmax pmax
comp=Z,14nm,0.9s,mb4.8
KBL Kabul 31.38 322 *e*P **P** **18 11 33.8 +1.1**
comp=Z,14nm,0.9s,mb4.8
KBL *e*PcP PcP 18 14 26.8 +0.7
KSH Kashi 31.78 336 P **P** **18 11 36.0 -0.1**
KSH pP pP 18 11 43.0 -0.8
KSH sP sP 18 11 46.5 -0.5
KSH PP PP 18 12 39.8 -8.4
KSH PcP PcP 18 14 29.3 +2.2
KSH S **S** **18 16 40.8 -3.9**
KSH ScP ScP 18 18 09.3 +0.4
KSH PcS PcS 18 18 12.3 +0.7
KSH ScS ScS 18 22 05.5 -1.5
KSH pmax pmax
comp=Z,24nm,0.7s,mb5.1
KSH pmax pmax
comp=Z,100nm,3.7s
KSH LR LR
comp=N,480nm,13.8s,MS4.5
KSH LR LR
comp=E,310nm,11.6s,MS4.5
KSH LR LR
comp=Z,270nm,12.9s,MS4.1
NJ2 Nanjing 32.64 46 *e*P **P** **18 11 44.8 +1.0**
NJ2 pP pP 18 11 51.8 +0.3
NJ2 sP sP 18 11 55.0 +0.3
NJ2 PP PP 18 12 54.0 -3.8
NJ2 S **S** **18 16 55.0 -3.4**
NJ2 pmax pmax
comp=Z,30nm,0.7s,mb5.3
NJ2 pmax pmax
comp=Z,190nm,4.4s
NJ2 LR LR
comp=N,2μm,17.5s
NJ2 LR LR
comp=E,780nm,10.8s
NJ2 LR LR
comp=Z,790nm,13.2s,MS4.6
WMQ Urumqi 32.98 355 P **P** **18 11 49.0 +2.4**
WMQ sP sP 18 12 00.0 +2.5
WMQ PP PP 18 13 00.0 -1.5
WMQ S **S** **18 17 05.0 +1.6**
WMQ sS sS 18 17 18.0 +1.9
WMQ SS SS 18 19 06.0 -20
WMQ pmax pmax
comp=Z,45nm,1.0s,mb5.3
WMQ pmax pmax
comp=Z,100nm,3.0s
WMQ LR LR
comp=N,310nm,14.0s,MS4.4
WMQ LR LR
comp=E,440nm,14.0s,MS4.4
WMQ LR LR
comp=Z,250nm,14.0s,MS4.1
ULHL Ulahol 34.06 339 P **P** **18 11 57.4 +1.4**
SNR=5.7
KZA Kyzart 34.27 338 P **P** **18 11 59.8 +2.0**
SNR=15
HHC Hu-ho-hao-te 34.54 27 *e*P **P** **18 12 00.0 -0.2**
HHC pP pP 18 12 07.3 -0.7
HHC sP sP 18 12 10.8 -0.3
HHC PP PP 18 13 16.5 -2.3
HHC PcP PcP 18 14 34.3 -0.5
HHC S **S** **18 17 27.0 -0.6**
HHC ScP ScP 18 18 17.0 -1.5
HHC PcS PcS 18 18 19.8 -1.3
HHC SS SS 18 19 39.3 -19
HHC ScS ScS 18 22 18.5 -2.8
HHC pmax pmax
comp=Z,26nm,0.9s,mb5.2
HHC pmax pmax
comp=Z,81nm,4.9s
HHC LR LR
comp=N,1μm,12.4s
HHC LR LR
comp=E,2μm,9.3s
HHC LR LR
comp=Z,580nm,10.4s,MS4.6
UCH Uchtor 34.67 337 P **P** **18 12 03.3 +1.9**
SNR=16
UCH Uchtor 34.67 337 *e*P **P** **18 12 02.7 +1.4**
comp=Z,12nm,0.8s,mb4.9
UCH *e*PcP PcP 18 14 35.5 +0.4
TKM2 Tokmak 2 34.88 339 P **P** **18 12 04.0 +0.9**
SNR=13
TKM2 Tokmak 2 34.88 339 *e*P **P** **18 12 03.8 +0.7**
TKM2 pmax pmax
comp=Z,12nm,0.8s,mb4.9
TKM2 Tokmak 2 34.88 339 *e*P **P** **18 12 03.8 +0.7**
comp=Z,12nm,0.8s,mb4.9
KBK Karagaybulak 34.88 338 P **P** **18 12 05.3 +2.2**
SNR=14
AML Almayashu 34.91 336 P **P** **18 12 05.6 +2.2**
SNR=12
AML Almayashu 34.91 336 *e*P **P** **18 12 05.1 +1.7**
comp=Z,38nm,0.8s,mb5.4
AAK Ala-Archa 35.03 338 P **P** **18 12 06.0 +1.6**
comp=Z,175nm,1.0s,mb5.9,SNR=8.0
AAK Ala-Archa 35.03 338 P **P** **18 12 06.4 +2.0**
SNR=12
AAK Ala-Archa 35.03 338 P **P** **18 12 05.3 +0.9**
comp=Z,15nm,0.8s,mb5.0,baz=140,slow=4.6,SNR=33
AAK PcP PcP 18 14 37.6 +1.4
comp=Z,3.6nm,0.5s,baz=198,slow=4.4,SNR=3.7
AAK LR LR 18 28 48.3
comp=Z,649nm,19.5s,MS4.4,baz=25,slow=40
AAK Ala-Archa 35.03 338 P **P** **18 12 05.3 +0.9**
AAK LR LR 18 28 48.3
FRU Bishkek 35.15 338 *i* P **P** **18 12 06.5 +1.0**
FRU pmax pmax
comp=Z,70nm,2.0s,mb5.2
CHMS Chumysh 35.25 338 P **P** **18 12 07.8 +1.6**
SNR=11
EKS2 Erkin-Say 35.33 337 P **P** **18 12 08.9 +2.0**
SNR=30
EKS2 Erkin-Say 35.33 337 *e*P **P** **18 12 08.6 +1.6**
comp=Z,28nm,0.8s,mb5.2
EKS2 *e*PcP PcP 18 14 37.7 +0.7
USP Ospenovka 35.57 338 P **P** **18 12 10.6 +1.5**
SNR=21
BJI Beijing 36.16 32 P **P** **18 12 15.0 +0.8**
BJI pP pP 18 12 21.5 -0.5
BJI sP sP 18 12 24.3 -0.8
BJI S **S** **18 17 55.3 +2.7**
BJI sS sS 18 18 06.5 +1.1
BJI pmax pmax
comp=Z,84nm,0.6s,mb5.8
BJI LR LR
comp=N,2μm,12.9s,MS5.0
BJI LR LR
comp=E,960nm,12.1s,MS5.0
BJI LR LR
comp=Z,400nm,18.2s
MK31 Makanchi Array 36.66 349 *e*P **P** **18 12 18.8 +0.5**
MK31 *e* 18 14 41.0
MKAR Makanchi Array 36.66 349 P **P** **18 12 19.0 +0.7**
comp=Z,53nm,0.8s,mb5.4,baz=133,slow=8.3,SNR=230
MKAR PcP PcP 18 14 41.4 +0.5
comp=Z,6.0nm,0.6s,baz=132,slow=2.3,SNR=9.1
MKAR LR LR 18 30 39.8
comp=Z,196nm,21.2s,MS3.9,baz=323,slow=42
MKAR Makanchi Array 36.66 349 P **P** **18 12 19.0 +0.7**
MKAR 18 14 41.4
DL2 Dalian 38.52 39 P **P** **18 12 35.0 +0.8**
DL2 S **S** **18 18 30.3 +1.9**

DL2 pmax pmax
comp=Z,20nm,1.0s,mb4.8
DL2 LR LR
comp=N,340nm,16.0s,MS4.3
DL2 LR LR
comp=E,230nm,16.1s,MS4.3
DL2 LR LR
comp=Z,320nm,12.1s,MS4.3
SONM Songino Array 38.80 16 P **P** **18 12 37.0 +0.6**
comp=Z,11nm,0.6s,mb4.8,baz=199,slow=8.7,SNR=86
SONM PcP PcP 18 14 47.7 +0.3
comp=Z,5.1nm,0.7s,baz=199,slow=2.9,SNR=5.2
ULN Ulaanbaatar 39.01 16 *e*P **P** **18 12 38.3 +0.2**
ULN *e* 18 14 48.4
ULN pmax pmax
comp=Z,21nm,1.1s,mb4.8
ULN Ulaanbaatar 39.01 16 *e*P **P** **18 12 38.3 +0.2**
comp=Z,21nm,1.1s,mb4.8
ULN *e*PcP PcP 18 14 48.4 +0.3
ULN Ulaanbaatar 39.01 16 ⇑P **P** **18 12 38.8 +0.7**
SNR=10
ULN ⇑P 18 12 38.8
SNR=10
ABKT Ailbek 40.42 317 P **P** **18 12 51.4 +1.4**
comp=Z,166nm,1.1s,mb5.7,SNR=8.1
ZAK Zakamensk 40.48 11 *e*P **P** **18 12 51.0 +0.7**
ZAK *e* 18 14 53.7
KURK Kurchatov 41.14 347 P **P** **18 12 56.6 +0.8**
comp=Z,264nm,1.1s,mb5.8,SNR=37
KURK Kurchatov 41.14 347 P **P** **18 12 55.7 -0.1**
comp=Z,38nm,0.9s,mb5.0,baz=165,slow=7.6,SNR=47
KURK PcP PcP 18 14 55.1 +0.3
comp=Z,10nm,0.8s,baz=164,slow=2.7,SNR=8.2
KURK Kurchatov 41.14 347 *d*/P **P** **18 12 56.4 +0.6**
KURK pmax pmax
comp=Z,56nm,1.0s,mb5.2
KURK Kurchatov 41.14 347 *e*P **P** **18 12 55.9 +0.1**
comp=Z,56nm,1.1s,mb5.1
KURK *e*PcP PcP 18 14 53.3 -1.5
KURK Kurchatov 41.14 347 ⇑P **P** **18 12 56.7 +0.9**
SNR=23
KURK ⇑P 18 12 56.7
SNR=23
MOY Mondy 41.33 9 *e*P **P** **18 12 58.7 +1.4**
MOY pmax pmax
comp=Z,16nm,2.0s,mb4.3
TLY Talaya 41.79 11 P **P** **18 13 02.4 +1.3**
comp=Z,106nm,0.9s,mb5.5,SNR=10.0
TLY Talaya 41.79 11 *e*P **P** **18 13 02.7 +1.6**
TLY *e* 18 14 38.6
TLY *e*PPP 18 15 02.8
TLY *e*S **S** **18 19 23.9 +7.0**
TLY *e*SS SS 18 22 15.4 -8.0
TLY pmax pmax
comp=Z,19nm,1.0s,mb4.7
TLY MLR MLR
comp=Z,335nm,11.0s,MS4.5
TLY Talaya 41.79 11 *e*P **P** **18 13 02.3 +1.2**
comp=Z,21nm,1.0s,mb4.7
TLY Talaya 41.79 11 ⇓P **P** **18 13 03.0 +1.9**
SNR=16
TLY ⇓P 18 13 03.0
SNR=16
KSRS Korea Array 41.82 45 P **P** **18 13 01.1 -0.6**
comp=Z,11nm,0.9s,mb4.5,baz=245,slow=8.8,SNR=34
MBWA Marble Bar 42.05 139 *e*P **P** **18 13 02.3 -1.4**
MBWA Marble Bar 42.05 139 *e*P **P** **18 13 02.0 -1.6**
comp=Z,33nm,1.0s,mb4.9
MBWA *e*PcP PcP 18 14 58.2 -0.2
IRK Irkutsk 42.44 11 ⇓*i*P **P** **18 13 07.7 +1.3**
IRK pmax pmax
comp=Z,38nm,1.5s,mb4.8
ZALV Zalesovo Beam 43.29 354 P **P** **18 13 13.6 +0.3**
comp=Z,35nm,0.6s,mb5.3,baz=175,slow=9.5,SNR=148
CN2 Changchun 43.80 35 ⇓P **P** **18 13 17.8 +0.2**
CN2 *e*S **S** **18 19 46.3 -0.5**
CN2 pmax pmax
comp=Z,20nm,0.7s,mb5.0
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,500nm,16.0s,MS4.6
CN2 LR LR
comp=E,400nm,16.0s,MS4.6
CN2 LR LR
comp=Z,300nm,14.0s,MS4.4
FITZ Fitzroy Crossi 44.12 130 *e*P **P** **18 13 19.3 -1.1**
comp=Z,68nm,0.5s,mb5.6
FITZ *e*PCP PcP 18 15 06.0 +0.6
FITZ Fitzroy Crossi 44.12 130 P **P** **18 13 19.7 -0.7**
comp=Z,46nm,0.6s,mb5.4,baz=319,slow=5.0,SNR=125
FITZ PcP PcP 18 15 05.8 +0.4
comp=Z,13nm,0.7s,baz=309,slow=3.1,SNR=3.6
FITZ Fitzroy Crossi 44.12 130 *e*P **P** **18 13 19.7 -0.8**
comp=Z,66nm,0.9s,mb5.4
FITZ *e*pP pP 18 13 27.2 -1.1
FITZ *e*PcP PcP 18 15 05.8 +0.4
NVS Novosibirsk 44.34 353 ⇓*i*P **P** **18 13 21.7 0.0**
NVS *e* 18 15 02.8
NVS *e*S **S** **18 19 55.0 +0.7**
NVS pmax pmax
comp=E,14nm,1.2s
NVS pmax pmax
comp=Z,31nm,1.2s,mb4.9
NVS pmax pmax
comp=N,30nm,1.4s
NVS smax
comp=N,9.0nm,1.7s
NVS smax
comp=E,8.0nm,2.0s
CIT Chita 44.64 19 *e*P **P** **18 13 18.6 -5.5**
RDF Al-Radifah 44.99 300 *e*P **P** **18 13 26.9 -0.4**
RDF AMb AMB 18 13 29.6
comp=Z,42nm,0.6s,mb5.5
KNA Kununurra 45.17 125 *e*P **P** **18 13 27.6 -1.3**
comp=Z,14nm,0.7s,mb4.9
NAY Al-Naaiem 45.34 300 *e*P **P** **18 13 30.0 0.0**
NAY AMb AMB 18 13 37.5
comp=Z,24nm,0.6s,mb5.2
MIB Mutribah 45.39 301 *e*P **P** **18 13 30.3 -0.3**
MIB AMb AMB 18 13 40.2
comp=Z,48nm,0.8s,mb5.4
BVAR Borovoye Array 45.40 342 P **P** **18 13 30.4 +0.2**
comp=Z,7.9nm,0.6s,mb4.7,baz=142,slow=7.5,SNR=62
BVAR PcP PcP 18 15 09.9 +0.7
comp=Z,5.5nm,0.6s,baz=164,slow=4.8,SNR=5.2
BRVK Borovoye 45.46 342 P **P** **18 13 30.3 -0.3**
comp=Z,107nm,0.7s,mb5.8,SNR=15
BRVK Borovoye 45.46 342 *d*/P **P** **18 13 30.8 +0.2**
BRVK pmax pmax
comp=Z,23nm,1.2s,mb4.9
BRVK Borovoye 45.46 342 *e*P **P** **18 13 30.7 0.0**
comp=Z,20nm,0.9s,mb5.0
BRVK Borovoye 45.46 342 ⇓P **P** **18 13 31.1 +0.5**
SNR=12
BRVK ⇓P 18 13 31.1
SNR=12
KAKA Kakadu 46.67 119 *e*P **P** **18 13 39.1 -1.6**
comp=Z,16nm,0.6s,mb5.1
KAKA Kakadu 46.67 119 *e*P **P** **18 13 38.5 -2.2**
comp=Z,42nm,0.6s,mb5.5
MDJ Mudanjiang 46.69 37 P **P** **18 13 41.5 +1.0**
MDJ pP pP 18 13 47.8 -0.6
MDJ sP sP 18 13 50.5 -1.0
MDJ PcP PcP 18 15 14.3 +0.4
MDJ PP PP 18 15 31.0 +0.6
MDJ S **S** **18 20 31.0 +2.5**
MDJ pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
MDJ pmax pmax
comp=Z,42nm,4.2s
MDJ LR LR
comp=N,290nm,16.8s,MS4.4
MDJ LR LR
comp=E,180nm,13.4s,MS4.4
MDJ LR LR
comp=Z,330nm,19.6s
AKTK Aktyubinsk 48.20 332 P **P** **18 13 52.6 +0.6**
AKTO Aktyubinsk 48.20 332 P **P** **18 13 52.6 +0.6**
comp=Z,9.4nm,0.5s,mb5.0,baz=123,slow=8.0,SNR=40
MAJO Matsushiro 48.94 51 *e*P **P** **18 13 58.1 0.0**
MAJO *e* 18 15 22.4
MAJO pmax pmax
comp=Z,55nm,1.5s,mb5.4
MAJO Matsushiro 48.94 51 *e*P **P** **18 13 58.0 0.0**
comp=Z,55nm,1.5s,mb5.4

MAJO *e*PcP PcP 18 15 22.4 +0.3
MAT Matsushiro 48.94 51 P **P** **18 13 58.1 0.0**
MJAR Matsushiro Arr 48.94 51 P **P** **18 13 58.5 +0.4**
comp=Z,4.4nm,0.8s,mb4.5,baz=223,slow=6.4,SNR=14
MJAR PcP PcP 18 15 22.6 +0.5
comp=Z,8.8nm,0.8s,baz=245,slow=3.1,SNR=11
KLBR Kellerberrin 49.03 150 *e*P **P** **18 13 58.2 -0.6**
comp=Z,18nm,0.5s,mb5.3
NWAO Narrogin (SRO) 49.89 152 *e*P **P** **18 14 05.1 -0.2**
comp=Z,241nm,0.6s,mb6.4
NWAO Narrogin (SRO) 49.89 152 P **P** **18 14 05.0 -0.2**
comp=Z,30nm,0.6s,mb5.5,baz=321,slow=8.3,SNR=37
NWAO Narrogin (SRO) 49.89 152 *e*P **P** **18 14 04.8 -0.5**
NWAO *e*pP pP 18 14 14.4 +1.1
MAK Makhachkala 49.93 318 *e*P **P** **18 14 04.4 -1.1**
MAK *i* 18 16 04.0
MAK *e*S **S** **18 21 15.3 +0.9**
MAK pmax pmax
comp=Z,24nm,0.3s,mb5.7
KLR Kul'dur 50.54 33 *e*P **P** **18 14 06.2 -3.8**
GNI Garni 50.68 314 *d*/P **P** **18 14 10.9 -0.4**
GNI pmax pmax
comp=Z,47nm,1.2s
GNI Garni 50.68 314 *e*P **P** **18 14 12.1 +0.8**
comp=Z,46nm,1.1s,mb5.3
GNI *e*pP pP 18 14 21.4 +2.2
GNI Garni 50.68 314 ⇓P **P** **18 14 13.3 +2.0**
GNI ⇓P 18 14 13.3
SVE Sverdlovsk 51.75 339 ⇑*e*P **P** **18 14 19.8 +0.8**
SVE *e* 18 15 28.5
SVE pmax pmax
comp=Z,38nm,0.9s,mb5.3
SVE MLR MLR
comp=Z,258nm,18.0s,MS4.3
GUMO Guam 51.85 81 *e*P **P** **18 14 19.4 -1.0**
GUMO pmax pmax
comp=Z,63nm,1.0s,mb5.5
GUMO Guam 51.85 81 *e*P **P** **18 14 19.4 -1.0**
comp=Z,63nm,1.0s,mb5.5
WRA Warramunga Arr 51.90 126 P **P** **18 14 19.9 -0.7**
comp=Z,10.0nm,0.5s,mb5.0,baz=306,slow=8.2,SNR=56
WRA PcP PcP 18 15 33.3 +0.1
comp=Z,11nm,0.8s,baz=318,slow=3.2,SNR=8.3
WRAB Tennant Creek 51.90 126 P **P** **18 14 20.0 -0.7**
comp=Z,219nm,0.5s,mb6.3,SNR=32
WRAB Tennant Creek 51.90 126 *e*P **P** **18 14 19.8 -0.9**
WRAB *e* 18 15 32.7
WRAB pmax pmax
comp=Z,20nm,0.6s,mb5.2
WRAB Tennant Creek 51.90 126 *e*P **P** **18 14 19.8 -0.9**
comp=Z,20nm,0.6s,mb5.2
WRAB *e*PcP PcP 18 15 32.7 -0.6
HABR Khabarovsk 51.94 35 *e*P **P** **18 14 20.0 -0.6**
HABR *e**PP pP 18 14 27.9 -0.7
HABR 18 15 30.3
HABR S **S** **18 21 41.2 -0.9**
HABR *SS sS 18 21 56.5 +1.3
HABR *e* 18 24 05.3
HABR SS SS 18 25 17.7 -1.4
HABR pmax pmax
comp=N,14nm,1.4s
HABR pmax pmax
comp=Z,72nm,1.8s,mb5.3
HABR pmax pmax
comp=E,40nm,1.5s
HABR MLR MLR
comp=Z,168nm,23.0s,MS4.0
ARU Arti 52.22 337 P **P** **18 14 22.9 +0.5**
comp=Z,135nm,0.7s,mb6.0,SNR=8.1
ARU Arti 52.22 337 *d*/P **P** **18 14 22.7 +0.3**
ARU *e* 18 15 32.3
ARU *e* 18 16 19.5
ARU S **S** **18 21 47.7 +2.2**
ARU SS SS 18 25 24.6 +1.5
ARU pmax pmax
comp=Z,28nm,1.0s,mb5.2
ARU Arti 52.22 337 *e*P **P** **18 14 22.4 -0.1**
comp=Z,20nm,0.9s,mb5.0
ZEI Tsey 52.26 316 *e*P **P** **18 14 23.6 +0.5**
ZEI pmax pmax
comp=Z,16nm,0.5s,mb5.2
CLNS Chul'man 52.46 22 *e*P **P** **18 14 25.0 +0.8**
CLNS pmax pmax
comp=Z,37nm,1.0s,mb5.3
CLNS pmax pmax
comp=E,19nm,1.0s
CLNS pmax pmax
comp=N,20nm,1.0s
OPO Ambohidratompo 52.87 237 P **P** **18 14 30.4 +2.6**
comp=N,1.0nm,0.6s,mb3.9,baz=43,slow=8.9,SNR=3.9
OPO PcP PcP 18 15 38.2 +1.3
comp=N,2.6nm,0.7s,baz=306,slow=7.3,SNR=5.2
ABPO Ambohimpanom 53.06 236 *e*P **P** **18 14 30.3 +1.0**
ABPO *e**PP pP 18 14 39.0 +1.7
ABPO *e* 18 15 38.8
ABPO pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
ABPO Ambohimpanom 53.06 236 *e*P **P** **18 14 30.3 +1.1**
comp=Z,10nm,0.9s,mb4.8
ABPO *e*pP pP 18 14 39.0 +1.8
ABPO *e*PcP PcP 18 15 38.8 +1.2
KIV Kislovodsk 53.53 317 P **P** **18 14 33.7 +1.3**
comp=Z,262nm,0.8s,mb6.2,SNR=7.0
KIV Kislovodsk 53.53 317 *e*P **P** **18 14 33.2 +0.8**
KIV *e**PP pP 18 14 40.9 +0.5
KIV pmax pmax
comp=Z,35nm,0.8s,mb5.3
KIV Kislovodsk 53.53 317 *e*P **P** **18 14 33.2 +0.8**
comp=Z,35nm,0.8s,mb5.3
KIV *e*pP pP 18 14 40.9 +0.5
KIV Kislovodsk 53.53 317 P **P** **18 14 33.5 +1.1**
SNR=11
KIV P 18 14 33.5
SNR=11
ASAR Alice Springs 53.62 130 P **P** **18 14 32.9 -0.5**
comp=Z,43nm,0.8s,mb5.5,baz=304,slow=6.9,SNR=196
ASAR PcP PcP 18 15 40.0 +0.3
comp=Z,15nm,0.7s,baz=313,slow=3.8,SNR=12
FORT Forrest 54.13 141 *e*P **P** **18 14 36.8 -0.1**
comp=Z,57nm,0.8s,mb5.6
FORT Forrest 54.13 141 *e*P **P** **18 14 36.6 -0.3**
comp=Z,68nm,0.8s,mb5.6
ASF Jabal al Asfar 54.65 302 LR LR 18 41 33.8
comp=Z,101nm,20.1s,MS3.9,baz=116,slow=40
ASAJ Asahikawa 54.72 43 P **P** **18 14 41.0 -0.1**
comp=Z,7.7nm,0.8s,mb4.8,baz=231,slow=7.0,SNR=10
SOKR Solikamsk 55.16 339 *d*/P **P** **18 14 44.7 +0.8**
SOKR pmax pmax
comp=Z,30nm,1.1s,mb5.2
SOKR MLR MLR
comp=Z,370nm,24.0s,MS4.4
SOC Sochi 55.41 316 *e*P **P** **18 14 44.3 -1.7**
SOC *e**PP pP 18 14 52.6 -1.5
SOC *e* 18 14 59.5
SOC *e* 18 16 44.1
SOC *e*PPP 18 18 08.7
SOC *e*S **S** **18 22 30.1 +0.9**
SOC pmax pmax
comp=Z,16nm,0.9s,mb5.0
SOC MLR MLR
comp=Z,759nm,23.0s,MS4.7
YSS Yuzh-Sakhalins 55.89 40 ⇓*e*P **P** **18 14 49.4 0.0**
YSS *i* pP 18 14 58.0 +0.5
YSS pmax pmax
comp=Z,50nm,0.9s,mb5.5
YSS Yuzh-Sakhalins 55.89 40 *e*P **P** **18 14 49.5 +0.1**
comp=Z,37nm,0.8s,mb5.5
YSS *e*pP pP 18 14 57.9 +0.4
MMAI Mount Meron Ar 56.04 302 P **P** **18 14 52.4 +1.6**
comp=Z,3.3nm,0.8s,mb4.4,baz=146,slow=6.3,SNR=5.1
MMAI PcP PcP 18 15 50.9 +2.0
comp=Z,3.5nm,0.8s,baz=101,slow=6.0,SNR=3.1
ANN Anapa 57.36 317 *e*P **P** **18 14 58.3 -1.6**
ANN *e*S **S** **18 22 53.8 -1.2**
ANN pmax pmax
comp=Z,16nm,1.4s,mb4.9
ANN MLR MLR
comp=Z,222nm,22.0s,MS4.2
YAK Yakutsk 57.91 20 *e*P **P** **18 15 02.7 -0.8**
YAK *e**PP pP 18 15 12.0 +0.5
YAK *e* 18 15 54.6
YAK *e*S **S** **18 23 00.2 -1.4**
YAK *e**SS sS 18 23 18.7 +3.8
YAK *e* 18 24 52.7
YAK *e*SS SS 18 26 58.9 +6.3

YAK pmax pmax
comp=Z,47nm,0.9s,mb5.5
YAK pmax pmax
comp=N,15nm,1.1s
YAK pmax pmax
comp=E,18nm,1.1s
YAK smax
comp=N,40nm,1.8s
YAK smax
comp=E,49nm,1.8s
YAK MLR MLR
comp=Z,202nm,17.0s,MS4.3
YAK Yakutsk 57.91 20 *e*P **P 18 15 02.6 -0.8**
comp=Z,58nm,0.8s,mb5.7
VORD Divnogorie 58.42 324 *e*P **P 18 15 07.2 -0.1**
VSR Storozhevoye 58.60 324 *e*P **P 18 15 07.9 -0.6**
VSR *e**PP pP 18 15 15.7 -0.9
VSR pmax pmax
comp=E,10.0nm,0.7s
VSR pmax pmax
comp=Z,20nm,0.7s,mb5.3
VSR pmax pmax
comp=N,7.0nm,0.6s
BR131 Keskin Array S 58.72 310 *e*P **P 18 15 08.6 -0.9**
comp=N,8.4nm,0.7s,mb4.9
BR131 *e*pP pP 18 15 16.8 -0.9
BRTR Keskin Array B 58.72 310 P **P 18 15 08.8 -0.7**
comp=N,8.1nm,0.7s,mb4.8,baz=122,slow=7.6,SNR=49
SIM Simferopol' 59.66 316 P **P 18 15 17.9 +1.9**
SIM pmax pmax
comp=Z,16nm,0.9s,mb5.0
SIM MLR MLR
comp=Z,50nm,17.0s,MS3.7
BBOO Buckleboo 60.59 138 *e*P **P 18 15 22.2 -0.3**
comp=Z,9.8nm,0.5s,mb5.2
MOS Moscow 61.30 328 *e*P **P 18 15 26.2 -0.8**
MOS *e* 18 16 02.7
MOS pmax pmax
comp=Z,70nm,0.8s,mb5.8
OBN Obninsk 61.60 328⇑*i*P **P 18 15 29.1 +0.1**
OBN *i* pP 18 15 35.6 -1.5
OBN *i* 18 16 05.1
OBN pmax pmax
comp=Z,75nm,1.6s,mb5.6
OBN Obninsk 61.60 328 *e*P **P 18 15 27.8 -1.2**
comp=Z,16nm,0.5s,mb5.4
CTA Charters Tower 61.80 120 *e*P **P 18 15 31.4 +0.4**
comp=Z,14nm,1.0s,mb5.0
CTAO Charters Tower 61.80 120 *e*P **P 18 15 31.1 +0.1**
CTAO *e* 18 16 12.7
CTAO pmax pmax
comp=Z,33nm,1.1s,mb5.4
CTAO Charters Tower 61.80 120 *e*P **P 18 15 31.1 +0.1**
comp=Z,33nm,1.1s,mb5.4
CTAO *e*PcP PcP 18 16 12.7 +0.7
TIRR Tirgusor 63.49 314⇓P **P 18 15 41.6 -0.3**
TIRR Tirgusor 63.49 314⇓*i*P **P 18 15 41.6 -0.3**
KIS Kishinev 63.74 317 *e*P **P 18 15 42.0 -1.5**
KIS *e* pP 18 15 50.0 -1.6
STKA Stephens Creek 63.86 134 *e*P **P 18 15 44.7 +0.3**
comp=Z,15nm,0.5s,mb5.3
STKA Stephens Creek 63.86 134 P **P 18 15 44.6 +0.1**
comp=Z,16nm,0.5s,mb5.3,baz=316,slow=5.8,SNR=57
LEOM Leova 64.01 316⇑P **P 18 15 45.6 +0.3**
LEOM Leova 64.01 316⇑*i*P **P 18 15 45.6 +0.3**
AKASG Malin Array Be 64.36 321 P **P 18 15 46.6 -0.9**
comp=Z,9.0nm,0.7s,mb4.9,baz=88,slow=5.1,SNR=35
KIEV Kiev 64.37 321 *e*P **P 18 15 45.6 -1.9**
KIEV pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
KIEV Kiev 64.37 321 *e*P **P 18 15 45.6 -1.9**
comp=Z,8.7nm,0.8s,mb4.8
TIXI Tiksi 64.75 12 *i* P **P 18 15 48.9 -0.7**
TIXI pmax pmax
comp=Z,27nm,1.0s,mb5.2
TIXI MLR MLR
comp=Z,199nm,14.0s,MS4.5
TIXI Tiksi 64.75 12 *e*P **P 18 15 48.3 -1.3**
comp=Z,12nm,0.4s,mb5.3
TIXI *e*pP pP 18 15 55.0 -2.8
VRI Vrincioaia 64.93 316⇑P **P 18 15 51.8 +0.5**
VRI Vrincioaia 64.93 316⇑*i*P **P 18 15 51.8 +0.5**
PLOR Plostina 64.98 316⇓P **P 18 15 52.5 +0.9**
PLOR Plostina 64.98 316⇓*i*P **P 18 15 52.5 +0.9**
MLR Muntele Rosu 65.40 315⇓P **P 18 15 54.9 +0.5**
MLR Muntele Rosu 65.40 315⇓*i*P **P 18 15 54.8 +0.4**
VOIR 66.02 315⇑P **P 18 15 57.9 -0.4**
VOIR 66.02 315⇑*i*P **P 18 15 57.9 -0.4**
BURAR Bucovina Array 66.26 317⇑P **P 18 16 00.4 +0.5**
BURAR Bucovina Array 66.26 317⇑*i*P **P 18 16 00.4 +0.5**
BUR08 Bucovina Ar. S 66.28 317 *e*P **P 18 15 60.0 0.0**
BUR08 *e*pP pP 18 16 08.2 +0.1
RMQ Roma 66.64 125 *e*P **P 18 16 03.8 +1.2**
comp=Z,30nm,0.8s,mb5.4
CMSA Cobar Meteorol 66.65 131 *e*P **P 18 16 03.1 +0.6**
NACGM Naroch 66.86 325 *e* **P 18 16 01.0 -2.5**
PETK Petropavlovsk- 66.93 37 P **P 18 16 03.4 -0.6**
comp=Z,2.6nm,0.7s,mb4.4,baz=9.0,slow=1.3,SNR=5.4
PETK Petropavlovsk- 66.93 37 P **P 18 16 03.4 -0.6**
JOF Joensuu 67.13 334 *e*P **P 18 16 04.6 -0.5**
JOF pmax pmax
comp=Z,43nm,0.7s,mb5.6
JOF Joensuu 67.13 334 *e*p **P 18 16 04.6 -0.5**
comp=Z,43nm,0.7s,mb5.6
JOF Joensuu 67.13 334 *e*p **P 18 16 04.6 -0.5**
comp=Z,43nm,0.7s,mb5.6
VSU Vasula 67.82 329*d i*P **P 18 16 09.4 -0.1**
VSU pmax pmax
comp=Z,36nm,1.2s,mb5.3
DRGR 67.82 316⇓P **P 18 16 10.0 +0.2**
DRGR 67.82 316⇓*i*P **P 18 16 10.0 +0.2**
LVZ Lovozero 67.94 340 P **P 18 16 10.0 -0.1**
comp=Z,250nm,0.6s,mb6.4,SNR=10
LVZ Lovozero 67.94 340⇑*e*P **P 18 16 10.0 -0.1**
LVZ pmax pmax
comp=Z,21nm,0.8s,mb5.2
LSZ Lusaka 68.16 249 *e*P **P 18 16 13.0 +0.6**
LSZ pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
LSZ Lusaka 68.16 249 *e*P **P 18 16 13.0 +0.6**
comp=Z,5.9nm,0.9s,mb4.6
APA Apatity 68.21 339⇑*i*P **P 18 16 13.0 +1.2**
APA *i* 18 16 30.0
APA *e* 18 18 44.0
APA pmax pmax
comp=Z,27nm,0.6s,mb5.5
APA MLR MLR
comp=Z,400nm,16.0s,MS4.7
KWP Kalwaria Pacla 68.24 319 *e*P **P 18 16 12.3 -0.1**
KWP Kalwaria Pacla 68.24 319⇑P **P 18 16 12.6 +0.3**
KWP Kalwaria Pacla 68.24 319 *e*P **P 18 16 12.0 -0.3**
comp=Z,46nm,1.2s,mb5.4
KWP Kalwaria Pacla 68.24 319⇑*i*P **P 18 16 12.6 +0.3**
UZH Uzhgorod 68.36 318 *e*P **P 18 16 15.0 +1.9**
UZH *e* 18 16 45.6
UZH *e* 18 18 45.0
UZH *e*PPP 18 20 27.6
UZH *e*S S 18 25 13.4 +0.6
UZH *e*PS 18 25 34.0
UZH *e* 18 26 07.0
BZS Buzias 68.43 315⇑P **P 18 16 13.8 +0.2**
BZS Buzias 68.43 315⇑*i*P **P 18 16 13.8 +0.2**
SUW Suwalki 68.71 324 *e*P **P 18 16 14.4 -0.7**
SUW Suwalki 68.71 324 *e*P **P 18 16 14.4 -0.8**
comp=Z,62nm,1.0s,mb5.5
CRVS Cervenica-Dubn 68.94 318 *e*P **P 18 16 17.1 +0.4**
CRVS pmax pmax
comp=Z,16nm,1.2s,mb4.8
CRVS Cervenica-Dubn 68.94 318 *e*P **P 18 16 17.1 +0.4**
comp=Z,16nm,1.2s,mb4.8
CRVS Cervenica-Dubn 68.94 318 *e*P **P 18 16 17.1 +0.4**
FINES FINESS Array B 68.97 332 P **P 18 16 16.8 +0.1**
comp=Z,24nm,0.7s,mb5.2,baz=104,slow=8.0,SNR=74
KAF Kangasniemi 69.05 333 *e*P **P 18 16 16.5 -0.7**
KAF pmax pmax
comp=Z,30nm,1.0s,mb5.2
KAF Kangasniemi 69.05 333 *e*p **P 18 16 16.5 -0.7**
comp=Z,30nm,1.0s,mb5.2
KAF Kangasniemi 69.05 333 *e*p **P 18 16 16.5 -0.7**
comp=Z,30nm,1.0s,mb5.2
STHS Stebnicka Huta 69.15 319 *e*P **P 18 16 18.2 +0.2**
STHS pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
STHS Stebnicka Huta 69.15 319 *e*P **P 18 16 18.2 +0.2**
comp=Z,5.4nm,0.9s,mb4.5
STHS Stebnicka Huta 69.15 319 *e*P **P 18 16 18.2 +0.2**
comp=Z,15nm,0.9s,mb4.9,baz=63,slow=5.8,SNR=23
BOSA Boshof 75.28 237 *e*P **P 18 16 56.3 +1.3**
BOSA pmax pmax
comp=Z,17nm,1.0s,mb4.9
BOSA Boshof 75.28 237 *e*P **P 18 16 56.3 +1.3**
comp=Z,17nm,1.0s,mb4.9
WTTA Wattenberg 75.41 316⇓*i*P **P 18 16 54.7 -0.8**
comp=Z,15nm,0.7s,mb5.0
MOX Moxa 75.43 320 *e*P **P 18 16 55.7 +0.2**
comp=Z,23nm,1.3s,mb5.0
MOX *e* pP 18 17 01.7 -2.1
MOX Moxa 75.43 320 *e*P **P 18 16 55.6 +0.1**
comp=Z,10.0nm,0.8s,mb4.8
GRF Grafenberg Arr 75.68 319 *e*P **P 18 16 57.5 +0.5**
comp=Z,32nm,1.2s,mb5.1
GRF *e*L 19 02 56.3
comp=Z,157nm,18.7s
GRF Grafenberg Arr 75.68 319 *e*P **P 18 16 57.5 +0.5**
GRF pmax pmax
comp=Z,32nm,1.2s,mb5.1
GRF MLR MLR
comp=Z,200nm,18.7s,MS4.5
MOTA Moosalm 75.77 316⇓*i*P **P 18 16 56.6 -0.9**
comp=Z,21nm,1.1s,mb5.0
NOA NORSAR Array B 75.97 330 P **P 18 16 58.0 -0.4**
comp=Z,9.4nm,0.8s,mb4.8,baz=93,slow=5.7,SNR=48
FETA Feichten 76.03 316⇓*i*P **P 18 16 58.6 -0.4**
comp=Z,15nm,1.0s,mb4.9
NAO01 NORSAR Array S 76.12 330 *e*P **P 18 16 58.6 -0.6**
comp=Z,10nm,0.8s,mb4.8
FX1 Attu Island--F 76.17 38 P **P 18 16 59.5 -0.2**
comp=Z,17nm,0.6s,mb5.1,baz=167,slow=1.6,SNR=15
CLZ Clausthal 76.22 321 *e*P **P 18 17 00.2 +0.2**
comp=Z,19nm,0.9s,mb5.0
BSEG Bad Segeberg 76.25 323 *e*P **P 18 17 00.6 +0.5**
comp=Z,30nm,1.1s,mb5.1
NRDL Niedersach Rie 76.38 321 *e*P **P 18 17 01.3 +0.4**
comp=Z,20nm,1.2s,mb4.9
NRDL *e*pP pP 18 17 09.1 -0.1
DAVA Damuels 76.60 316⇑*i*P **P 18 17 02.1 -0.2**
comp=Z,20nm,0.7s,mb5.2
SMY Shemya 76.74 38 *e*P **P 18 17 02.4 -0.5**
SMY pmax pmax
comp=Z,109nm,1.0s,mb5.7
SMY Shemya 76.74 38 *e*P **P 18 17 02.4 -0.6**
comp=Z,109nm,1.0s,mb5.7
TUE Stuetta 77.00 315 P **P 18 17 04.2 -0.4**
comp=Z,13nm,0.9s,mb4.8
KBS Kingsbay 77.41 349⇑*e*P **P 18 17 05.7 -0.6**
KBS pmax pmax
comp=Z,51nm,1.0s,mb5.4
PGF Pioggiola 77.43 311 *e*P **P 18 17 06.0 -1.0**
comp=Z,23nm,1.1s,mb4.7
PGF Pioggiola 77.43 311 *e*P **P 18 17 06.0 -1.0**
PGF pmax pmax
comp=Z,12nm,1.0s,mb4.8
PGF Pioggiola 77.43 311 *e*P **P 18 17 06.0 -1.0**
comp=Z,12nm,1.0s,mb4.8
TNS Taunus Mts 77.46 319 *e*P **P 18 17 07.2 +0.2**
comp=Z,22nm,1.1s,mb5.0
BFO Black Forest 77.61 317 *e*pP pP 18 17 15.3 -0.9
BFO Black Forest 77.61 317 *e*P **P 18 17 06.3 -1.6**
BFO pmax pmax
comp=Z,15nm,1.1s,mb4.8
BFO Black Forest 77.61 317 *e*P **P 18 17 06.3 -1.6**
comp=Z,15nm,1.1s,mb4.8
KEST Kesra 77.63 304 P **P 18 17 08.5 +0.2**
comp=Z,6.8nm,0.8s,mb4.6,baz=20,slow=0.7,SNR=21
KEST Kesra 77.63 304 *e*P **P 18 17 08.4 +0.1**
KEST *e*pP pP 18 17 16.7 +0.1
IBBN Ibbenburen 77.82 321 *e*P **P 18 17 09.3 +0.3**
comp=Z,53nm,1.6s,mb5.2
FELD Feldberg im Sc 77.85 317 *e*P **P 18 17 09.2 -0.1**
LANF Langenberg 77.93 318 *e*P **P 18 17 10.0 +0.3**
LANF Langenberg 77.93 318 *e*P **P 18 17 10.0 +0.3**
LANF Langenberg 77.93 318 *e*P **P 18 17 10.0 +0.3**
CASY Casey 78.21 172 *e*P **P 18 17 10.6 -0.1**
CASY Casey 78.21 172 *e*P **P 18 17 10.4 -0.3**
comp=Z,26nm,1.5s,mb5.0
CDF Champ du Feu 78.31 317 *e*P **P 18 17 11.0 -0.8**
comp=Z,22nm,1.0s,mb4.8
CDF Champ du Feu 78.31 317 *e*P **P 18 17 11.0 -0.8**
CDF pmax pmax
comp=Z,11nm,1.0s,mb4.7
CDF Champ du Feu 78.31 317 *e*P **P 18 17 11.0 -0.8**
comp=Z,11nm,1.0s,mb4.8
SBF Sospel 78.49 313 *e*P **P 18 17 11.9 -1.0**
comp=Z,28nm,0.8s,mb5.0
SBF Sospel 78.49 313 *e*P **P 18 17 11.9 -1.0**
SBF pmax pmax
comp=Z,14nm,0.8s,mb4.9
SBF Sospel 78.49 313 *e*P **P 18 17 11.9 -1.0**
comp=Z,14nm,0.8s,mb5.0
TOUF Mont Tournerai 78.61 313 *e*P **P 18 17 14.8 +1.2**
TOUF Mont Tournerai 78.61 313 *e*P **P 18 17 14.8 +1.2**
TOUF Mont Tournerai 78.61 313 *e*P **P 18 17 14.8 +1.2**
LOMF Lomont 78.68 316 *e*P **P 18 17 13.3 -0.5**
LOMF Lomont 78.68 316 *e*P **P 18 17 13.3 -0.5**
LOMF Lomont 78.68 316 *e*P **P 18 17 13.3 -0.5**
LPG La Plagne 78.86 314 *e*P **P 18 17 14.6 -0.3**
comp=Z,30nm,0.6s,mb5.1
LPG La Plagne 78.86 314 *e*P **P 18 17 14.6 -0.3**
LPG pmax pmax
comp=Z,15nm,0.6s,mb5.1
LPG La Plagne 78.86 314 *e*P **P 18 17 14.6 -0.3**
comp=Z,15nm,0.6s,mb5.1
LPL La Plagne 78.87 314 *e*P **P 18 17 14.6 -0.3**
comp=Z,42nm,0.7s,mb5.2
LPL La Plagne 78.87 314 *e*P **P 18 17 14.6 -0.3**
LPL pmax pmax
comp=Z,21nm,0.7s,mb5.2
LPL La Plagne 78.87 314 *e*P **P 18 17 14.6 -0.3**
comp=Z,21nm,0.7s,mb5.2
MBDF Montbardon 78.90 314 *e*P **P 18 17 13.9 -1.2**
comp=Z,17nm,0.7s,mb4.8
MBDF Montbardon 78.90 314 *e*P **P 18 17 13.9 -1.2**
MBDF pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
MBDF Montbardon 78.90 314 *e*P **P 18 17 13.9 -1.2**
comp=Z,8.6nm,0.7s,mb4.8
RSL Roselend 78.93 315 *e*P **P 18 17 15.4 +0.1**
RSL Roselend 78.93 315 *e*P **P 18 17 15.4 +0.1**
RSL Roselend 78.93 315 *e*P **P 18 17 15.4 +0.1**
BNI Bardonecchia 78.94 314 *e*P **P 18 17 14.8 -0.6**
BNI pmax pmax
comp=Z,20nm,1.0s,mb5.0
BNI Bardonecchia 78.94 314 *e*P **P 18 17 14.8 -0.5**
comp=Z,20nm,1.0s,mb5.0
HAU Haudompre 78.95 317 *e*P **P 18 17 14.5 -0.9**
comp=Z,45nm,0.9s,mb5.1
HAU *e*MLR MLR
comp=Z,126nm,17.8s,MS4.0
HAU Haudompre 78.95 317 *e*P **P 18 17 14.5 -0.9**
HAU pmax pmax
comp=Z,22nm,0.9s,mb5.1
HAU MLR MLR
comp=Z,130nm,17.8s,MS4.3
HAU Haudompre 78.95 317 *e*P **P 18 17 14.5 -0.9**
comp=Z,22nm,0.9s,mb5.1
HAU LR LR
comp=Z,130nm,17.8s,MS4.3
WLF Walferdange 78.97 319 P **P 18 17 15.9 +0.5**
WLF Walferdange 78.97 319 *e*P **P 18 17 15.6 +0.2**
comp=Z,16nm,1.0s,mb4.9
WLF *e*pP pP 18 17 24.2 +0.5
MEM Membach 79.00 320 P **P 18 17 15.6 0.0**
FRF La Foret Royal 79.08 312 *e*P **P 18 17 15.3 -0.9**
comp=Z,58nm,1.1s,mb5.1
FRF La Foret Royal 79.08 312 *e*P **P 18 17 15.3 -0.9**
FRF pmax pmax
comp=Z,29nm,1.1s,mb5.1
FRF La Foret Royal 79.08 312 *e*P **P 18 17 15.3 -0.9**
comp=Z,29nm,1.1s,mb5.1
LMR La Mourre 79.20 312 *e*P **P 18 17 15.8 -1.0**
comp=Z,38nm,1.2s,mb4.9
LMR La Mourre 79.20 312 *e*P **P 18 17 15.8 -1.0**
LMR pmax pmax
comp=Z,19nm,1.2s,mb4.9
LMR La Mourre 79.20 312 *e*P **P 18 17 15.8 -1.0**
comp=Z,19nm,1.2s,mb4.9
CABF La Chapelle 79.23 316 *e*P **P 18 17 16.7 -0.2**
comp=Z,57nm,1.1s,mb5.1
CABF La Chapelle 79.23 316 *e*P **P 18 17 16.7 -0.2**
CABF pmax pmax
comp=Z,29nm,1.1s,mb5.1
CABF La Chapelle 79.23 316 *e*P **P 18 17 16.7 -0.2**

comp=Z,29nm,1.1s,mb5.1
BCLA Clavier 79.46 319 P **P 18 17 18.4 +0.3**
MEZF Maizieres J'vi 79.78 318 *e*P **P 18 17 19.2 -0.6**
comp=Z,60nm,1.2s,mb5.1
MEZF Maizieres J'vi 79.78 318 *e*P **P 18 17 19.2 -0.6**
comp=Z,60nm,1.2s,mb5.4
GIVF Givet 79.79 319 *e*P **P 18 17 19.4 -0.5**
comp=Z,13nm,0.7s,mb4.7
GIVF Givet 79.79 319 *e*P **P 18 17 19.4 -0.5**
GIVF pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
GIVF Givet 79.79 319 *e*P **P 18 17 19.4 -0.5**
comp=Z,6.6nm,0.7s,mb4.7
SMRF Simiane la Rot 79.82 313 *e*P **P 18 17 19.9 -0.3**
DOU Dourbes 79.94 319 P **P 18 17 20.8 +0.1**
SNF Seneffe 80.11 320 P **P 18 17 21.4 -0.1**
SNF AP pP 18 17 29.7 -0.2
SUR Sutherland 80.19 234 *e*P **P 18 17 24.3 +2.0**
BAIF Baives 80.19 319 *e*P **P 18 17 21.7 -0.4**
comp=Z,38nm,1.1s,mb5.0
BAIF Baives 80.19 319 *e*P **P 18 17 21.7 -0.4**
BAIF pmax pmax
comp=Z,19nm,1.1s,mb4.9
BAIF Baives 80.19 319 *e*P **P 18 17 21.7 -0.4**
comp=Z,19nm,1.1s,mb4.9
VIVF Saint-Julien-l 80.38 314 *e*P **P 18 17 22.6 -0.6**
comp=Z,54nm,0.9s,mb5.2
VIVF Saint-Julien-l 80.38 314 *e*P **P 18 17 22.6 -0.6**
VIVF pmax pmax
comp=Z,27nm,0.9s,mb5.2
VIVF Saint-Julien-l 80.38 314 *e*P **P 18 17 22.6 -0.6**
comp=Z,27nm,0.9s,mb5.2
SSB Saint Sauveur 80.43 314 *e*P **P 18 17 23.4 0.0**
SSB Saint Sauveur 80.43 314 *e*P **P 18 17 23.1 -0.3**
SSB *e**PP pP 18 17 31.1 -0.7
SSB pmax pmax
comp=Z,15nm,0.6s,mb5.1
SSB Saint Sauveur 80.43 314 *e*P **P 18 17 23.1 -0.3**
comp=Z,15nm,0.6s,mb5.1
SSB *e*pP pP 18 17 31.1 -0.7
LOR Lormes 80.69 316 *e*P **P 18 17 24.0 -0.8**
comp=Z,31nm,0.8s,mb5.0
LOR *e*MLR MLR
comp=Z,103nm,17.5s,MS3.9
LOR Lormes 80.69 316 *e*P **P 18 17 24.0 -0.8**
LOR pmax pmax
comp=Z,15nm,0.8s,mb5.0
LOR MLR MLR
comp=Z,100nm,17.5s,MS4.2
LOR Lormes 80.69 316 *e*P **P 18 17 24.0 -0.8**
comp=Z,15nm,0.8s,mb5.0
LOR LR LR
comp=Z,100nm,17.5s,MS4.2
SMF Signal de Mont 80.77 316 *e*P **P 18 17 24.5 -0.7**
SSF Saint Saulge 80.96 316 *e*P **P 18 17 25.5 -0.7**
comp=Z,25nm,0.9s,mb4.8
SSF Saint Saulge 80.96 316 *e*P **P 18 17 25.5 -0.7**
SSF pmax pmax
comp=Z,13nm,0.9s,mb4.9
SSF Saint Saulge 80.96 316 *e*P **P 18 17 25.5 -0.7**
comp=Z,12nm,0.9s,mb4.8
PLDF La Plantade 81.00 315 *e*P **P 18 17 26.5 0.0**
PLDF La Plantade 81.00 315 *e*P **P 18 17 26.5 0.0**
PLDF La Plantade 81.00 315 *e*P **P 18 17 26.5 0.0**
MAW Mawson 81.04 191 *e*P **P 18 17 27.1 +1.0**
comp=Z,6.3nm,0.6s,mb4.7
MAW Mawson 81.04 191 P **P 18 17 27.0 +0.9**
comp=Z,6.5nm,0.6s,mb4.7,baz=9.6,slow=5.9,SNR=21
MAW Mawson 81.04 191 *e*P **P 18 17 26.8 +0.7**
MAW pmax pmax
comp=Z,2.0nm,1.0s
MAW Mawson 81.04 191 *e*P **P 18 17 26.8 +0.7**
comp=Z,2.3nm,1.0s,mb4.1
LASF Ste Croix 81.04 313 *e*P **P 18 17 26.5 -0.2**
comp=Z,37nm,0.8s,mb5.1
AVF Avril sur Loir 81.09 316 *e*P **P 18 17 26.2 -0.7**
comp=Z,24nm,0.7s,mb4.9
AVF Avril sur Loir 81.09 316 *e*P **P 18 17 26.2 -0.7**
AVF pmax pmax
comp=Z,12nm,0.7s,mb4.9
AVF Avril sur Loir 81.09 316 *e*P **P 18 17 26.2 -0.7**
comp=Z,12nm,0.7s,mb4.9
PYM Petit Puy Mans 81.45 315 *e*P **P 18 17 29.1 +0.2**
PYM Petit Puy Mans 81.45 315 *e*P **P 18 17 29.1 +0.2**
PYM Petit Puy Mans 81.45 315 *e*P **P 18 17 29.1 +0.2**
BGF Bois d'Agland 81.46 316 *e*P **P 18 17 28.6 -0.3**
comp=Z,30nm,0.7s,mb5.0
BGF Bois d'Agland 81.46 316 *e*P **P 18 17 28.6 -0.3**
BGF pmax pmax
comp=Z,15nm,0.7s,mb5.0
BGF Bois d'Agland 81.46 316 *e*P **P 18 17 28.6 -0.3**
comp=Z,15nm,0.7s,mb5.0
TCF Toulx Ste Croi 81.93 316 *e*P **P 18 17 31.1 -0.3**
comp=Z,37nm,1.1s,mb4.9
TCF Toulx Ste Croi 81.93 316 *e*P **P 18 17 31.1 -0.3**
TCF pmax pmax
comp=Z,19nm,1.1s,mb4.9
TCF Toulx Ste Croi 81.93 316 *e*P **P 18 17 31.1 -0.3**
comp=Z,19nm,1.1s,mb4.9
CAF Calviac 82.21 314 *e*P **P 18 17 32.8 -0.1**
comp=Z,21nm,0.8s,mb4.8
CAF Calviac 82.21 314 *e*P **P 18 17 32.8 -0.1**
CAF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
CAF Calviac 82.21 314 *e*P **P 18 17 32.8 -0.1**
comp=Z,10nm,0.8s,mb4.8
MTLF Montolieu 82.31 313 *e*P **P 18 17 33.2 -0.3**
comp=Z,34nm,0.8s,mb5.0
MTLF Montolieu 82.31 313 *e*P **P 18 17 33.2 -0.3**
MTLF pmax pmax
comp=Z,17nm,0.8s,mb5.0
MTLF Montolieu 82.31 313 *e*P **P 18 17 33.2 -0.3**
comp=Z,17nm,0.8s,mb5.0
TAM Tamanrasset 82.46 292 *e*P **P 18 17 35.8 +1.2**
TAM *e**PP pP 18 17 42.2 -0.8
TAM *e* 18 20 45.4
TAM pmax pmax
comp=Z,13nm,0.8s,mb4.9
TAM Tamanrasset 82.46 292 *e*P **P 18 17 35.8 +1.2**
comp=Z,13nm,0.8s,mb4.9
TAM *e*pP pP 18 17 42.2 -0.8
TAM *e*PP PP 18 20 45.4 +1.5
RJF Les Rejaudoux 82.55 315 *e*P **P 18 17 34.6 0.0**
comp=Z,34nm,0.8s,mb5.1
RJF *e*MLR MLR
comp=Z,61nm,21.2s,MS3.6
RJF Les Rejaudoux 82.55 315 *e*P **P 18 17 34.6 0.0**
RJF pmax pmax
comp=Z,17nm,0.8s,mb5.1
RJF MLR MLR
comp=Z,60nm,21.3s,MS3.9
RJF Les Rejaudoux 82.55 315 *e*P **P 18 17 34.6 0.0**
comp=Z,17nm,0.8s,mb5.1
RJF LR LR
comp=Z,60nm,21.3s,MS3.9
LFF La Frestale 83.14 314 *e*P **P 18 17 37.8 +0.1**
comp=Z,48nm,1.1s,mb5.1
LFF La Frestale 83.14 314 *e*P **P 18 17 37.8 +0.1**
LFF pmax pmax
comp=Z,24nm,1.1s,mb5.1
LFF La Frestale 83.14 314 *e*P **P 18 17 37.8 +0.1**
comp=Z,24nm,1.1s,mb5.1
LDF La Druitiere 83.18 318 *e*P **P 18 17 37.3 -0.6**
comp=Z,20nm,0.8s,mb4.9
LDF La Druitiere 83.18 318 *e*P **P 18 17 37.3 -0.6**
LDF pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
LDF La Druitiere 83.18 318 *e*P **P 18 17 37.3 -0.6**
comp=Z,10nm,0.8s,mb4.9
FLN La Foliniere 83.39 318 *e*P **P 18 17 38.2 -0.7**
comp=Z,43nm,1.0s,mb5.2
FLN *e*MLR MLR
comp=Z,134nm,20.2s,MS4.0
FLN La Foliniere 83.39 318 *e*P **P 18 17 38.2 -0.7**
FLN pmax pmax
comp=Z,22nm,1.0s,mb5.1
FLN MLR MLR
comp=Z,130nm,20.3s,MS4.3
FLN La Foliniere 83.39 318 *e*P **P 18 17 38.2 -0.7**
comp=Z,22nm,1.0s,mb5.1
FLN LR LR
comp=Z,130nm,20.3s,MS4.3
MFF Saint Martin d 83.50 316 *e*P **P 18 17 39.0 -0.6**
comp=Z,45nm,0.8s,mb5.4
MFF Saint Martin d 83.50 316 *e*P **P 18 17 39.0 -0.6**
MFF pmax pmax
comp=Z,22nm,0.8s,mb5.3
MFF Saint Martin d 83.50 316 *e*P **P 18 17 39.0 -0.6**
comp=Z,22nm,0.8s,mb5.3
GRR Gorron 83.70 318 *e*P **P 18 17 39.8 -0.7**
EPF Esparros 83.72 312 *e*P **P 18 17 39.6 -1.1**
comp=Z,8.1nm,0.8s,mb4.6
EPF Esparros 83.72 312 *e*P **P 18 17 39.6 -1.1**
EPF pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
EPF Esparros 83.72 312 *e*P **P 18 17 39.6 -1.1**
comp=Z,4.1nm,0.8s,mb4.6
ETSF Etsaut 84.39 312 *e*P **P 18 17 44.3 +0.1**
comp=Z,15nm,0.7s,mb4.9
ETSF Etsaut 84.39 312 *e*P **P 18 17 44.3 +0.1**
ETSF pmax pmax
comp=Z,8.0nm,0.7s,mb5.0
ETSF Etsaut 84.39 312 *e*P **P 18 17 44.3 +0.1**
comp=Z,7.6nm,0.7s,mb4.9
SJPF Ste Jean 84.83 313 *e*P **P 18 17 46.4 0.0**
comp=Z,60nm,1.4s,mb5.2
SJPF Ste Jean 84.83 313 *e*P **P 18 17 46.4 0.0**
SJPF pmax pmax
comp=Z,30nm,1.4s,mb5.2
SJPF Ste Jean 84.83 313 *e*P **P 18 17 46.4 0.0**
comp=Z,30nm,1.4s,mb5.2
SGMF Saint Gilles 84.84 318 *e*P **P 18 17 45.6 -0.7**
comp=Z,18nm,0.8s,mb5.0
SGMF Saint Gilles 84.84 318 *e*P **P 18 17 45.6 -0.7**
SGMF pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
SGMF Saint Gilles 84.84 318 *e*P **P 18 17 45.6 -0.7**
comp=Z,9.2nm,0.8s,mb5.0
ROSF Rostrenen 85.29 318 *e*P **P 18 17 47.9 -0.7**
comp=Z,55nm,1.2s,mb5.2
ROSF Rostrenen 85.29 318 *e*P **P 18 17 47.9 -0.7**
ROSF pmax pmax
comp=Z,27nm,1.2s,mb5.2
ROSF Rostrenen 85.29 318 *e*P **P 18 17 47.9 -0.7**
comp=Z,27nm,1.2s,mb5.3
QUIF Quistinic 85.30 318 *e*P **P 18 17 47.7 -0.9**
ESDC Sonseca Array 87.51 310 P **P 18 17 59.9 +0.2**
comp=Z,2.6nm,0.6s,mb4.6,baz=58,slow=4.4,SNR=8.6
ESLA Sonseca Array 87.51 310 *e*P **P 18 17 59.7 0.0**
SYO Syowa Base 87.62 197⇑ *e*P **P 18 18 00.0 +0.5**
TORD Torodi Ar. Bea 87.67 283 P **P 18 18 01.7 +0.8**
comp=Z,3.5nm,0.6s,mb4.7,baz=85,slow=4.6
TORD PKKPbc PKKPbc 18 35 49.1 +0.7
comp=Z,0.5nm,0.5s,baz=299,slow=2.6,SNR=5.6
MVO Moncorvo 89.46 312 *e*P **P 18 18 09.8 +0.9**
comp=Z,15nm,2.0s,mb5.0
PCAB Cabril 90.05 312 *e*P **P 18 18 12.5 +0.9**
comp=Z,40nm,2.0s,mb5.4
PCBR Castelo Branco 90.11 311 *e*P **P 18 18 13.1 +1.1**
comp=Z,23nm,1.3s,mb5.3
PBAR Barrancos 90.19 309 *e*P **P 18 18 13.0 +0.7**
comp=Z,46nm,1.4s,mb5.6
SUMG Summit 90.68 347 *e*P **P 18 18 14.5 +0.5**
comp=Z,16nm,0.9s,mb5.4
SUMG Summit 90.68 347 *i* P **P 18 18 14.8 +0.9**
comp=Z,17nm,0.9s,mb5.4
EVO Evora 90.84 309 *e*P **P 18 18 17.3 +1.9**
comp=Z,11nm,0.8s,mb4.9
EVO *e*MLR MLR
comp=Z,76nm,22.0s,MS3.8
EVO Evora 90.84 309 *e*P **P 18 18 16.3 +0.9**
comp=Z,16nm,1.4s,mb5.2
PBEJ Beja 90.86 309 *e*P **P 18 18 15.9 +0.4**
comp=Z,22nm,1.1s,mb5.4
PVAQ Vaqueiros 90.90 308 *e*P **P 18 18 16.6 +0.9**
comp=Z,35nm,1.5s,mb5.5
PCVE Castro Verde 91.09 309 *e*P **P 18 18 18.5 +2.0**
comp=Z,22nm,1.8s,mb5.2
SVW2 Sparrevohn 91.10 27 *e*P **P 18 18 16.6 +0.5**
PBDV Barranco-do-Ve 91.10 308 *e*P **P 18 18 18.1 +1.5**
comp=Z,83nm,1.7s,mb5.8
BPAW Bear Paw Mtn. 91.62 23 *e*P **P 18 18 18.5 +0.1**
comp=Z,26nm,0.8s,mb5.6
PPLA Pueypile 91.73 24 *e*P **P 18 18 19.4 +0.5**
comp=Z,22nm,1.2s,mb5.4
TRF Thorofare Moun 92.21 23 *e*P **P 18 18 22.1 +0.9**
comp=Z,9.5nm,0.8s,mb5.2
MCK McKinley 92.59 23 *e*P **P 18 18 22.8 -0.1**
MCK pmax pmax
comp=Z,20nm,0.9s,mb5.5
MCK McKinley 92.59 23 *e*P **P 18 18 22.8 -0.1**
comp=Z,20nm,0.9s,mb5.5
RSO Redoubt South 92.62 27 *e*P **P 18 18 21.5 -1.6**
RC01 Rabbit Creek A 93.62 25 *e*P **P 18 18 27.4 -0.3**
comp=Z,9.2nm,0.7s,mb5.3
OHAK Old Harbor 93.86 30 *e*P **P 18 18 29.4 +0.5**
comp=Z,17nm,0.6s,mb5.7
KDAK Kodiak Island 93.94 29 P **P 18 18 29.8 +0.5**
comp=Z,9.8nm,0.7s,mb5.4,baz=219,slow=3.7,SNR=9.5
PAX Paxson 94.32 23 *e*P **P 18 18 30.5 -0.4**
PAX pmax pmax
comp=Z,7.0nm,1.1s,mb5.0
PAX Paxson 94.32 23 *e*P **P 18 18 30.5 -0.4**
comp=Z,6.5nm,1.1s,mb5.0
RES Resolute Bay 94.47 2 *e*P **P 18 18 31.3 -0.1**
RES pmax pmax
comp=Z,12nm,0.8s,mb5.4
RES Resolute Bay 94.47 2 *e*P **P 18 18 31.3 -0.1**
comp=Z,12nm,0.8s,mb5.4
DBIC Dimbokro 95.25 278 LR LR 18 58 29.0
comp=Z,57nm,18.7s,MS4.1,baz=73,slow=34
DAWY Dawson 95.84 26 *e*P **P 18 18 37.7 -0.1**
YKA Yellowknife Ar 104.00 12 PP PP 18 23 29.1 -2.0
comp=Z,4.0nm,0.6s,baz=333,slow=7.0,SNR=3.5
MSO Missoula 118.08 20 *e*PKPdf PKPdf 18 23 58.3 -0.4
ULM Lac du Bonnet 118.73 6 PKP PKPdf 18 23 59.3 -0.6
comp=Z,3.5nm,0.6s,baz=337,slow=3.3,SNR=4.2
MOD Modoc 119.73 27 *e*PKPdf PKPdf 18 24 03.0 +1.0
HLID Hailey 120.76 22 *e*PKPdf PKPdf 18 24 04.8 +0.9
N12A Clover Valley, 122.84 24 *e*PKPdf PKPdf 18 24 08.9 +0.9
PDAR Pinedale Array 123.12 19 PKP PKPdf 18 24 08.8 +0.2
comp=Z,2.6nm,0.6s,baz=19,slow=1.5,SNR=25
RSSD Black Hills 123.37 14 *e*PKIKP PKPdf 18 24 08.4 -0.5
NVAR Mina Array Bea 123.43 28 PKP PKPdf 18 24 10.6 +1.4
comp=Z,5.0nm,0.6s,baz=316,slow=2.0,SNR=37
HWUT Hardware Ranch 123.49 21 *e*PKPdf PKPdf 18 24 09.3 +0.1
BGU Big Grassy Mou 123.55 22 *e*PKPdf PKPdf 18 24 10.1 +0.7
DUG Dugway 124.27 23 *e*PKIKP PKPdf 18 24 11.0 +0.2
DAU Daniels Canyon 124.65 21 *e*PKIKP PKPdf 18 24 12.2 +0.7
ECSD EROS Data Cent 125.08 7 *e*PKPdf PKPdf 18 24 12.2 -0.1
ECSD *e* 18 24 20.3
MSU Marysvale 125.97 23 *e*PKIKP PKPdf 18 24 15.8 +1.7
BINY Binghamton 125.98 349 *e*PKPdf PKPdf 18 24 13.9 -0.1
GSC Goldstone 126.66 29 *e*PKIKP PKPdf 18 24 17.0 +1.5
SMCO Snowmass 127.19 18 *e*PKPdf PKPdf 18 24 17.2 +0.7
ANMO Albuquerque 131.22 20 *e*PKIKP PKPdf 18 24 25.8 +1.6
BNM Barren Site 131.89 21 *e*PKPdf PKPdf 18 24 26.7 +1.2
TUC Tucson 131.90 26 *e*PKIKP PKPdf 18 24 27.5 +1.9
WVT Waverly 133.22 360 *e*PKIKP PKPdf 18 24 26.6 -1.3
TKL Tuckaleechee C 133.50 355 PKP PKPdf 18 24 27.8 -0.7
comp=Z,3.5nm,0.6s,baz=314,slow=5.1,SNR=5.1
TKL Tuckaleechee C 133.50 355 PKP PKPdf 18 24 27.8 -0.7
GDL2 Guadalupe Moun 134.43 19 *e*PKPdf PKPdf 18 24 31.4 +1.1
MIAR Mount Ida 134.51 6 *e*PKIKP PKPdf 18 24 29.9 -0.5
MNTX Cornudas Mount 134.55 21 *e*PKPdf PKPdf 18 24 30.2 -0.4
TXAR Lajitas Array 137.30 20 PKhKP 18 24 26.2
comp=Z,0.4nm,0.5s,baz=184,slow=0.5,SNR=6.8
TXAR PKP PKPdf 18 24 37.2 +1.5
comp=Z,2.0nm,0.5s,baz=144,slow=0.7,SNR=22
TXAR Lajitas Array 137.30 20 PKP 18 24 26.2
TXAR PKP PKPdf 18 24 37.2 +1.5
JCT Junction City 137.36 15 *e*PKIKP PKPdf 18 24 35.3 -0.5
CRPR Cabo Rojo, PR 144.52 324 *e*PKPdf PKPdf 18 24 47.8 -1.2
SDDR Presa de Saban 145.94 331 *e*PKPbc PKPbc 18 24 52.6 +0.5
PLCA Paso Flores 146.46 205 PKPbc PKPbc 18 24 53.8 +0.8
comp=Z,6.4nm,0.9s,baz=180,slow=8.0,SNR=7.8
TEIG Tepich 149.06 0 *e*PKPdf PKPdf 18 24 55.7 -0.9
TEIG *e*PKPbc PKPbc 18 25 01.1 +0.4
ROSC El Rosal 159.12 318 PKP PKPdf 18 25 12.4 +1.5
comp=Z,4.3nm,0.5s,baz=242,slow=23,SNR=4.2
ROSC PKPab PKPab 18 25 48.8 +1.3
comp=Z,9.9nm,0.8s,baz=90,slow=19,SNR=3.4
LPAZ La Paz 159.78 252 PKP PKPdf 18 25 12.7 +1.2
comp=Z,2.1nm,0.8s,baz=48,slow=2.9,SNR=7.5
LPAZ PKPab PKPab 18 25 51.5 +1.0
comp=Z,5.9nm,1.0s,baz=89,slow=6.7,SNR=8.1
LPAZ La Paz 159.78 252 *e*PKPdf PKPdf 18 25 12.4 +0.9
LPAZ *e*PKPab PKPab 18 25 51.4 +1.0

MAN 27 18:05:42.9±0.81N×122.°28E,h27km,mb4.7,ML3.6,MS3.5,

2C,Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**0.87**	**21**	*e*P	Pn	18 05 58.3	-0.1
GUIM				*e*S	Sb	18 06 08.9	-0.8
SNPH	**Sibulan**	**1.05**	**116⇑**	*i*P	Pn	18 06 00.9	-0.1
SNPH				*i* S	Sn	18 06 15.6	+0.8
TBP	**Tagbilaran**	**1.56**	**94**	*e*P	Pn	18 06 09.3	+1.3
TBP				*e*S	Sn	18 06 28.5	+1.1
CUYO	**Cuyo Island**	**1.62**	**310**	*e*P	Pn	18 06 10.1	+1.4
LLP	**Lapu-Lapu**	**1.73**	**73⇑**	*e*P	Pn	18 06 12.1	+1.7
LLP				*e*S	Sn	18 06 33.2	+1.5
IPIL	**Ipil**	**2.03**	**172**	*e*P	Pn	18 06 15.4	+0.9
IPIL				*e*S	Sn	18 06 35.2	-3.7
PAGZ	**Pagadian**	**2.23**	**151**	*e*P	Pn	18 06 19.2	+2.0
PAGZ				*e*S	Sn	18 06 33.0	-11
MSLP	**Maasin**	**2.56**	**83**	*e*P	Pn	18 06 24.9	+3.1
BUSP	**Coron**	**2.99**	**317**	*e*P	Pn	18 06 29.2	+1.6
ENPP	**El Nido**	**3.13**	**297**	*e*P	Pn	18 06 31.1	+1.5

NEIC ***27*** *18:18:54.4±1.1,36.°15N×71.°90E,h120km±11km,mb4.9/1, Error ellipse: s-maj=18.4km s-min=11.2km az=125.0*
ISCJB ***27*** *18:18:55.1±0.7,36.°51N±0.°06×71.°53E±0.°09,h96km±13km, mb3.5/2, Error ellipse: s-maj=14.2km s-min=6.6km az=32.5*
IDC ***27*** *18:18:58.7±8.8,36.°60N×71.°52E,h112km±65km,mb3.2/2, mb1 3.1/7,mb1mx3.0/28,mbtmp3.1/7, Error ellipse: s-maj=74.8km s-min=50.2km az=166.0*
ISC 27 18:18:56.4±0.6,36.°49N±0.°06×71.°53E±0.°09,h99km±11km, n18,σ0°99/23,mb3.5/2,1C,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.81**	**227**	*e*Pn	**Pn**	**18 19 39.6**	**+0.1**
KBL				*e*Sn	**Sn**	**18 20 12.4**	**-0.3**
KSH	**Kashi**	**4.63**	**48**	Pn	**Pn**	**18 20 02.5**	**-1.5**
KSH				Sn	Sx	18 20 48.8	
KSH				smax			
	comp=N,50nm,0.5s						
KSH				smax			
	comp=E,49nm,0.5s						
THN	**Thein Dam**	**5.32**	**138**	*e*PKP	**Pn**	**18 20 13.6**	**+0.2**
THN				*e*S	Sx	18 21 10.1	
UCH	**Uchtor**	**6.18**	**21**	*e*Pn	**Pn**	**18 20 26.0**	**+1.0**
UCH				*e*Sn	**Sn**	**18 21 34.6**	**+0.4**
EKS2	**Erkin-Say**	**6.41**	**15**	*e*Pn	**Pn**	**18 20 29.3**	**+1.2**
EKS2				*e*Sn	**Sn**	**18 21 38.3**	**-1.4**
AAK	**Ala-Archa**	**6.55**	**20**	P	**Pn**	**18 20 31.8**	**+1.7**
	comp=E,0.0nm,0.3s,baz=180,slow=9.1,SNR=3.3						
AAK				S	**Sn**	**18 21 44.1**	**+0.8**
	comp=E,0.0nm,0.3s,baz=142,slow=19,SNR=2.7						
KK31	**Karatay Array**	**6.65**	**354**	P	**Pn**	**18 20 31.1**	**-0.4**
	comp=E,4.1nm,0.5s,baz=178,slow=12,SNR=100						
KK31				⇑S	**Sn**	**18 21 42.1**	**-3.6**
	comp=E,2.1nm,0.5s,baz=184,slow=23,SNR=5.0						
TKM2	**Tokmak 2**	**7.15**	**25**	*e*Pn	**Pn**	**18 20 37.6**	**-0.6**
MK31	**Makanchi Array**	**13.06**	**35**	*e*Pn	**Pn**	**18 21 57.6**	**-0.2**
MKAR	**Makanchi Array**	**13.06**	**35**	P	**Pn**	**18 21 58.1**	**+0.3**
	comp=E,0.0nm,0.3s,baz=232,slow=11,SNR=2.5						
AB31	**Akbulak array**	**15.30**	**330**	P	**Pn**	**18 22 23.2**	**-3.5**
	comp=E,0.4nm,0.3s,baz=145,slow=12,SNR=30						
BVAR	**Borovoye Array**	**16.56**	**358**	P	**Pn**	**18 22 43.3**	**+1.1**
	comp=E,0.1nm,0.3s,baz=187,slow=10,SNR=3.6						
AKTK	**Aktyubinsk**	**17.01**	**329**	P	**Pn**	**18 22 48.0**	**+0.2**
AKTO	**Aktyubinsk**	**17.01**	**329**	P	**Pn**	**18 22 48.0**	**+0.2**
	comp=E,0.5nm,0.3s,baz=149,slow=9.2,SNR=6.6						
ZALV	**Zalesovo Beam**	**19.75**	**24**	P	**Pn**	**18 23 18.8**	**-1.8**
	comp=E,0.4nm,0.3s,baz=219,slow=8.9,SNR=6.2						
ZALV	**Zalesovo Beam**	**19.75**	**24**	P	**Pn**	**18 23 18.8**	**-1.8**
FINES	**FINESS Array B**	**37.73**	**326**	P	**P**	**18 26 02.9**	**+0.9**
	comp=E,0.6nm,0.7s,mb3.5,baz=112,slow=9.7,SNR=3.0						
NOA	**NORSAR Array B**	**44.65**	**323**	P	**P**	**18 26 58.2**	**-0.4**
	comp=E,0.4nm,0.5s,mb3.4,baz=98,slow=7.8,SNR=3.5						

IDC ***27*** *18:20:53.9±0.6,31.°49N×103.°33E,h0km,mb4.3/21, mb1 4.3/23,mb1mx4.3/31,mbtmp4.3/23,ML3.7/2,MS3.9/4, Ms1 3.9/4,ms1mx3.2/33, Error ellipse: s-maj=17.8km s-min=12.1km az=52.0*
BJI ***27*** *18:20:54.4,31.°43N×103.°45E,h13km,mB4.6/7,mb4.5/14, ML4.5/21,Ms4.5/21,Ms7 4.2/20*
ISCJB ***27*** *18:20:55.6±1.1,31.°43N±0.°03×103.°43E±0.°04,h27km±8km, mb4.5/54,MS4.0/6, Error ellipse: s-maj=6.3km s-min=4.3km az=165.8*
NEIC ***27*** *18:20:56.8±2.1,31.°49N×103.°39E,h20km±15km,mb4.7/25, Error ellipse: s-maj=7.2km s-min=5.1km az=77.0*
NEIC Felt at Chengdu.
MOS ***27*** *18:20:56.6±0.8,31.°47N×103.°34E,h33km,mb4.7/35,Error ellipse: s-maj=10.6km s-min=5.7km az=100.2*
ISC 27 18:20:56.3±0.8,31.°47N±0.°02×103.°42E±0.°04,h16km±5km, n130,σ1°06/144,mb4.5/54,MS4.0/6,4C-1D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.63**	**153**	Pg	**Pg**	**18 21 08.5**	**-0.2**
CD2				Sg	**Sg**	**18 21 19.0**	**+1.9**
CD2				smax			
	comp=N,62μm,0.6s						
LZH	**Lanzhou**	**4.62**	**4**	*e*Pn	**Pn**	**18 22 07.3**	**+1.9**
LZH				Pg	**Pg**	**18 22 21.5**	**-3.2**
LZH				Sn	**Sn**	**18 23 02.0**	**+3.3**
LZH				Sg	**Sg**	**18 23 23.0**	**-1.5**
LZH				smax			
	comp=N,550nm,1.0s						
LZH				smax			
	comp=E,730nm,1.0s						
LZH				LR	LR		
	comp=E,2μm,6.5s						
LZH				LR	LR		
	comp=Z,2μm,9.6s						
GYA	**Guiyang**	**5.75**	**150**	Pn	**Pn**	**18 22 21.3**	**+0.3**
GYA				Pg	**Pg**	**18 22 40.3**	**-6.1**
GYA				Sn	**Sn**	**18 23 26.5**	**-0.1**
GYA				Sg	**Sb**	**18 23 50.0**	**+5.1**
GYA				smax			
	comp=N,930nm,1.0s						
GYA				smax			
	comp=E,1μm,1.0s						
GYA				LR	LR		
	comp=N,3μm,6.1s						
GYA				LR	LR		
	comp=E,4μm,6.3s						
GYA				LR	LR		
	comp=Z,6μm,4.5s						
KMI	**Kunming**	**6.35**	**186**	Pn	**Pn**	**18 22 29.5**	**+0.2**
KMI				Sn	**Sn**	**18 23 41.5**	**-0.1**
KMI				smax			
	comp=N,170nm,1.8s						
KMI				smax			
	comp=E,120nm,1.7s						
KMI				LR	LR		
	comp=N,2μm,8.7s						
KMI				LR	LR		
	comp=E,2μm,7.0s						
KMI				LR	LR		
	comp=Z,1μm,9.6s						
GTA	**Gaotai**	**8.45**	**341**	*e*P	**Pn**	**18 23 02.0**	**+4.0**
GTA				pP		18 23 08.0	
GTA				sP		18 23 10.5	
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
WHN	**Wuhan**	**9.43**	**93**	P	**Pn**	**18 23 10.0**	**-1.5**
WHN				S	**Sn**	**18 24 54.8**	**-2.4**
WHN				LR	LR		
	comp=N,4μm,11.8s						
WHN				LR	LR		
	comp=E,3μm,10.5s						
WHN				LR	LR		
	comp=Z,3μm,8.4s						
LSA	**Lhasa**	**10.72**	**264**	P	**Pn**	**18 23 29.3**	**+0.1**
HHC	**Hu-ho-hao-te**	**11.43**	**33**	*e*P	**Pn**	**18 23 40.0**	**+1.1**
HHC				pP		18 23 43.5	
HHC				sP		18 23 46.3	
HHC				PP		18 23 49.5	
HHC				S	**Sn**	**18 25 49.0**	**+2.7**
HHC				PcS	PcS	18 33 05.3	0.0
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		

comp=Z,69nm,4.1s
HHC LR LR
comp=N,620nm,6.8s
HHC LR LR
comp=E,770nm,6.2s
HHC LR LR
comp=Z,380nm,5.7s
GZH Guangzhou 12.14 131 P Pn 18 23 45.0 -3.7
GZH S Sn 18 26 02.5 -1.4
GZH LR LR
comp=N,2μm,9.8s
GZH LR LR
comp=E,2μm,8.1s
GZH LR LR
comp=Z,1μm,8.8s
CHTO Chiang Mai 13.24 199 *e*P **Pn 18 24 04.5 +0.8**
CHTO pmax pmax
comp=Z,12nm,0.9s
CHTO Chiang Mai 13.24 199 *e*Pn **Pn 18 24 04.5 +0.8**
comp=Z,12nm,0.9s
CM31 Chiang Mai Arr 13.58 198 *e*Pn **Pn 18 24 06.9 -1.4**
comp=Z,7.5nm,0.8s
CMAR Chiang Mai Arr 13.58 198 Pn **Pn 18 24 09.4 +1.1**
comp=Z,0.2nm,0.3s,baz=12,slow=11,SNR=13
CMAR LR LR 18 29 41.8
comp=Z,148nm,20.2s,baz=5.0,slow=39
SONM Songino Array 16.50 7 Pn **Pn 18 24 47.4 +0.4**
comp=Z,0.2nm,0.3s,baz=189,slow=12,SNR=44
ULN Ulaanbaatar 16.61 9 *e*P **Pn 18 24 47.3 -1.1**
ULN pmax pmax
comp=Z,8.0nm,0.9s
ULN Ulaanbaatar 16.61 9 *e*P **Pn 18 24 47.3 -1.0**
comp=Z,8.1nm,0.9s
ULN *e*Sn **Sn 18 27 34.8 -18**
YHNB Yeheng 17.22 109 *e*Pn **Pn 18 25 01.3 +5.0**
comp=Z,29nm,0.9s
WMQ Urumqi 17.48 319 *e*P **Pn 18 25 00.0 +0.6**
WMQ pmax pmax
comp=Z,21nm,1.0s
ZAK Zakamensk 18.89 360 *e*P **Pn 18 25 15.8 -0.8**
ZAK pmax pmax
comp=Z,6.0nm,1.0s
TLY Talaya 20.19 0 *e*P **P 18 25 31.5 +1.3**
TLY *e*S **S 18 29 19.4 +3.3**
TLY pmax pmax
comp=Z,9.0nm,1.1s
TLY MLR MLR
comp=Z,335nm,11.0s,MS4.0
MOY Mondy 20.26 356 *e*P **P 18 25 32.0 +1.1**
MOY pmax pmax
comp=Z,28nm,2.0s
KSRS Korea Array 21.04 67 P **P 18 25 41.0 +1.5**
comp=Z,18nm,0.8s,mb4.4,baz=253,slow=9.9,SNR=28
KSRS Korea Array 21.04 67 P **P 18 25 41.0 +1.5**
KSRS pmax pmax
comp=Z,18nm,0.8s,mb4.5
CIT Chita 21.84 17 *e*P **P 18 25 48.5 +0.6**
MK31 Makanchi Array 22.32 319 *e*P **P 18 25 52.2 -0.9**
MKAR Makanchi Array 22.32 319 P **P 18 25 52.5 -0.6**
comp=Z,10nm,0.9s,mb4.3,baz=106,slow=15,SNR=69
MKAR Makanchi Array 22.32 319 P **P 18 25 52.5 -0.6**
MKAR pmax pmax
comp=Z,11nm,0.9s
KSH Kashi 23.68 297 *e*P **P 18 26 12.5 +5.2**
TKM2 Tokmak 2 24.82 305 *e*P **P 18 26 18.6 +0.9**
TKM2 pmax pmax
comp=Z,6.0nm,1.0s,mb4.1
TKM2 Tokmak 2 24.82 305 *e*P **P 18 26 18.6 +0.9**
comp=Z,6.2nm,1.0s,mb4.1
UCH Uchtor 25.39 303 *e*P **P 18 26 23.5 +0.7**
comp=Z,14nm,1.1s,mb4.4
AAK Ala-Archa 25.51 304 P **P 18 26 26.7 +2.7**
comp=Z,4.8nm,0.7s,mb4.1,baz=254,slow=14,SNR=9.0
AAK LR LR 18 37 22.1
comp=Z,372nm,18.8s,MS3.9,baz=86,slow=39
AAK Ala-Archa 25.51 304 P **P 18 26 26.7 +2.7**
AAK pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
AAK MLR MLR
comp=Z,372nm,18.8s,MS3.9
AML Almayashu 25.95 303 P **P 18 26 29.5 +1.5**
comp=Z,18nm,1.0s,mb4.6
EKS2 Erkin-Say 26.03 304 *e*P **P 18 26 29.8 +1.1**
comp=Z,7.4nm,1.0s,mb4.2
ZALV Zalesovo Beam 26.14 335 P **P 18 26 28.7 -0.8**
comp=Z,8.4nm,0.9s,mb4.3,baz=138,slow=8.9,SNR=29
ZALV Zalesovo Beam 26.14 335 P **P 18 26 28.7 -0.8**
ZALV pmax pmax
comp=Z,8.0nm,0.9s,mb4.2
KURK Kurchatov 26.60 323 P **P 18 26 33.3 -0.5**
comp=Z,7.4nm,0.7s,mb4.3,baz=129,slow=9.4,SNR=31
KURK Kurchatov 26.60 323 P **P 18 26 33.3 -0.5**
KURK pmax pmax
comp=Z,7.0nm,0.7s,mb4.3
KURK Kurchatov 26.60 323 *e*P **P 18 26 32.8 -1.0**
KURK P 18 26 33.3
NVS Novosibirsk 27.42 334 *e*P **P 18 26 40.6 -0.4**
NVS pmax pmax
comp=Z,11nm,1.7s,mb4.1
NVS pmax pmax
comp=N,4.0nm,1.6s
NVS pmax pmax
comp=E,7.0nm,1.6s
KKM Kota Kinabalu 27.99 152 *e*P **P 18 26 46.1 -0.4**
comp=E,8.1nm,0.9s,mb4.3
PSI Prapat 28.83 189 P **P 18 26 55.2 +1.2**
comp=E,1.3nm,0.3s,mb4.1,baz=37,slow=5.1,SNR=4.0
PSI Prapat 28.83 189 P **P 18 26 55.3 +1.3**
PSI pmax pmax
comp=Z,1.0nm,0.4s,mb3.9
KBL Kabul 28.91 285 P **P 18 26 52.8 -1.8**
HABR Khabarovsk 29.32 45 *e*P **P 18 26 59.6 +1.6**
HABR *e**SP sP 18 27 10.4 +5.6
HABR 18 30 03.1
HABR S **S 18 31 51.8 +1.2**
HABR *e**SS sS 18 32 05.7 +7.2
HABR *e*SS SS 18 33 16.2 -39
HABR *e* 18 33 48.2
HABR *e* 18 37 37.6
HABR pmax pmax
comp=E,30nm,1.6s
HABR pmax pmax
comp=Z,30nm,1.5s,mb4.8
HABR pmax pmax
comp=N,20nm,1.9s
HABR MLR MLR
comp=Z,256nm,16.0s,MS3.9
JHJ Hachijo jima 2 30.69 77 LR LR 18 40 38.7
comp=Z,214nm,19.2s,MS3.8,baz=241,slow=38
BVAR Borovoye Array 32.14 322 P **P 18 27 22.4 -0.5**
comp=Z,0.8nm,0.7s,mb3.7,baz=106,slow=9.4,SNR=8.5
BVAR Borovoye Array 32.14 322 P **P 18 27 22.4 -0.5**
BVAR pmax pmax
comp=Z,1.0nm,0.7s
BRVK Borovoye 32.21 322⇑ *e*P **P 18 27 23.6 +0.1**
BRVK pmax pmax
comp=Z,6.0nm,1.7s,mb4.2
BRVK Borovoye 32.21 322 *e*P **P 18 27 22.5 -1.0**
comp=Z,5.7nm,1.3s,mb4.2
ASAJ Asahikawa 33.12 56 P **P 18 27 31.9 +0.3**
comp=Z,2.4nm,0.7s,mb4.2,baz=304,slow=3.6,SNR=2.2
ASAJ Asahikawa 33.12 56 P **P 18 27 31.9 +0.3**
ASAJ pmax pmax
comp=Z,2.0nm,0.7s
YAK Yakutsk 34.97 21 *e*P **P 18 27 46.6 -0.8**
YAK pmax pmax
comp=Z,14nm,0.9s,mb4.9
YAK Yakutsk 34.97 21 *e*P **P 18 27 46.6 -0.8**
comp=Z,14nm,0.9s,mb4.9
AKTK Aktyubinsk 38.46 313 P **P 18 28 18.6 +1.3**
AKTO Aktyubinsk 38.46 313 P **P 18 28 18.6 +1.3**
comp=Z,0.3nm,0.3s,mb3.5,baz=105,slow=12,SNR=3.1
SVE Sverdlovsk 38.85 323⇑ *e*P **P 18 28 21.1 +0.6**
SVE *e*S **S 18 34 18.5 +0.9**
SVE pmax pmax
comp=Z,12nm,1.0s,mb4.6
ARU Arti 39.78 322*c i*P **P 18 28 27.8 -0.5**
ARU S **S 18 34 30.4 -1.2**
ARU SS SS 18 37 26.2 -1.2
ARU pmax pmax
comp=Z,19nm,1.7s,mb4.5
ARU Arti 39.78 322 *e*P **P 18 28 27.6 -0.7**
comp=Z,19nm,1.3s,mb4.7
SOKR Solikamsk 41.77 326*d i*P **P 18 28 44.0 -0.6**
SOKR pmax pmax
comp=Z,20nm,1.0s,mb4.7
TIXI Tiksi 42.51 12*c i*P **P 18 28 49.5 -1.0**
TIXI pmax pmax
comp=Z,12nm,1.1s,mb4.5
TIXI MLR MLR
comp=Z,267nm,19.0s,MS4.2
TIXI Tiksi 42.51 12 *e*P **P 18 28 49.1 -1.4**
comp=Z,5.0nm,0.8s,mb4.3
PETK Petropavlovsk- 44.34 44 P **P 18 29 06.5 +1.1**
comp=Z,1.9nm,0.8s,mb3.9,baz=269,slow=3.6,SNR=3.8
KIV Kislovodsk 48.62 303 P **P 18 29 38.3 -1.0**
KIV pmax pmax
comp=Z,12nm,1.0s,mb4.9
KIV Kislovodsk 48.62 303 P **P 18 29 38.3 -1.0**
comp=Z,12nm,1.0s,mb4.9
VSR Storozhevoye 50.41 313 *e*P **P 18 29 51.4 -1.4**
VSR pmax pmax
comp=Z,4.0nm,0.4s,mb4.8
VSR pmax pmax
comp=N,5.0nm,0.8s
VSR pmax pmax
comp=E,4.0nm,0.5s
BILL Biiibino 51.09 25 *e*P **P 18 29 57.1 -0.6**
BILL pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
BILL Biiibino 51.09 25 *e*P **P 18 29 57.1 -0.6**
comp=Z,4.9nm,0.8s,mb4.5
OBN Obninsk 51.81 318 *e*P **P 18 30 07.0 +3.7**
OBN pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
MBWA Marble Bar 54.62 161 P **P 18 30 23.6 -0.6**
comp=Z,20nm,1.2s,mb5.0
ASF Jabal al Asfar 55.67 290 P **P 18 30 32.3 +0.4**
comp=Z,2.5nm,0.9s,mb4.3,baz=350,slow=6.1,SNR=2.8
ASF Jabal al Asfar 55.67 290 P **P 18 30 32.3 +0.4**
ASF pmax pmax
comp=Z,3.0nm,0.9s
BRTR Keskin Array B 56.05 299 P **P 18 30 33.4 -1.1**
comp=Z,1.0nm,0.8s,mb3.9,baz=107,slow=5.0,SNR=3.7
BRTR Keskin Array B 56.05 299 P **P 18 30 33.4 -1.1**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
ARCES ARCESS Array B 56.68 336 P **P 18 30 37.9 -0.6**
comp=Z,2.8nm,0.7s,mb4.4,baz=76,slow=7.5,SNR=8.8
ARCES ARCESS Array B 56.68 336 P **P 18 30 37.9 -0.6**
ARCES pmax pmax
comp=Z,3.0nm,0.7s
ARCES ARCESS Array B 56.68 336 P **P 18 30 37.9 -0.6**
AKASG Malin Array Be 56.71 313 P **P 18 30 37.8 -1.2**
comp=Z,1.4nm,0.5s,mb4.2,baz=69,slow=6.6,SNR=4.8
AKASG Malin Array Be 56.71 313 P **P 18 30 37.8 -1.2**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
KAF Kangasniemi 56.76 327 *e*P **P 18 30 38.2 -1.0**
KAF pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
KAF Kangasniemi 56.76 327 *e*p **P 18 30 38.2 -1.0**
comp=Z,4.4nm,0.9s,mb4.5
FINES FINESS Array B 56.94 326 P **P 18 30 39.4 -1.1**
comp=Z,5.7nm,0.8s,mb4.7,baz=77,slow=8.6,SNR=12
FINES FINESS Array B 56.94 326 P **P 18 30 39.4 -1.0**
FINES pmax pmax
comp=Z,6.0nm,0.8s
EIL Elat 58.08 287 P **P 18 30 51.9 +2.9**
comp=Z,6.2nm,0.7s,mb4.7,baz=358,slow=5.8,SNR=6.3
EIL Elat 58.08 287 P **P 18 30 51.9 +2.9**
WRAB Tennant Creek 59.10 146 *e*P **P 18 30 55.9 -0.2**
WRAB pmax pmax
comp=Z,14nm,0.6s,mb5.2
WRAB Tennant Creek 59.10 146 *e*P **P 18 30 55.9 -0.2**
comp=Z,14nm,0.6s,mb5.2
WRA Warramunga Arr 59.10 146 P **P 18 30 56.3 +0.1**
comp=Z,12nm,0.7s,mb5.1,baz=338,slow=7.5,SNR=83
WRA Warramunga Arr 59.10 146 P **P 18 30 56.3 +0.2**
WRA pmax pmax
comp=Z,12nm,0.7s
WRA Warramunga Arr 59.10 146 P **P 18 30 56.3 +0.1**
COEN Coen 59.12 134 *e*P **P 18 30 56.5 +0.2**
comp=Z,110nm,0.9s
ASAR Alice Springs 62.11 148 P **P 18 31 17.1 +0.5**
comp=Z,4.3nm,0.9s,mb4.6,baz=333,slow=6.8,SNR=40
ASAR Alice Springs 62.11 148 P **P 18 31 17.1 +0.5**
ASAR pmax pmax
comp=Z,4.0nm,0.9s
NB2 NORSAR Subarra 64.03 327 P **P 18 31 27.3 -1.6**
comp=Z,4.8nm,1.1s,mb4.4,baz=72,slow=7.4
NOA NORSAR Array B 64.03 327 P **P 18 31 29.1 +0.1**
comp=Z,2.5nm,0.9s,mb4.2,baz=72,slow=6.5,SNR=6.6
NOA NORSAR Array B 64.03 327 P **P 18 31 29.1 +0.2**
NOA pmax pmax
comp=Z,3.0nm,0.9s
CTAO Charters Tower 65.70 135 *e*P **P 18 31 39.5 -0.8**
CTAO pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
CTAO Charters Tower 65.70 135 *e*P **P 18 31 39.5 -0.8**
comp=Z,6.7nm,0.9s,mb4.7
CLL Collm 66.39 317 *e*P **P 18 31 38.0 -6.4**
BPAW Bear Paw Mtn. 68.54 27 *e*P **P 18 31 58.1 +0.4**
comp=Z,4.5nm,0.8s,mb4.5
PPLA Purkeypile 68.62 28 *e*P **P 18 31 58.9 +0.6**
comp=Z,41nm,1.5s,mb5.1
TRF Thorofare Moun 69.12 27 *e*P **P 18 32 02.4 +1.0**
comp=Z,5.1nm,0.9s,mb4.5
COLA College 69.35 26 *e*P **P 18 32 02.7 -0.1**
COLA pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
COLA College 69.35 26 *e*P **P 18 32 02.7 0.0**
comp=Z,8.4nm,0.8s,mb4.7
MCK McKinley 69.51 27 *e*P **P 18 32 04.6 +0.8**
MCK pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
MCK McKinley 69.51 27 *e*P **P 18 32 04.6 +0.8**
comp=Z,4.7nm,0.6s,mb4.6
DAVOX Davos/Dischmat 70.05 313 P **P 18 32 07.2 -0.2**
comp=Z,2.1nm,0.7s,mb4.2,baz=94,slow=16,SNR=2.7
PMR Palmer 70.50 29 P **P 18 32 09.1 -0.8**
PMR pmax pmax
comp=Z,12nm,0.9s,mb4.8
PMR Palmer 70.50 29 P **P 18 32 09.1 -0.9**
comp=Z,12nm,0.9s,mb4.8
KDAK Kodiak Island 70.85 33 P **P 18 32 12.1 0.0**
comp=Z,5.8nm,0.5s,mb4.8,baz=327,slow=6.5,SNR=6.9
KDAK Kodiak Island 70.85 33 P **P 18 32 12.1 0.0**
KDAK pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
KDAK Kodiak Island 70.85 33 P **P 18 32 12.1 0.0**
INK Inuvik 72.00 19 *e*P **P 18 32 18.5 -0.4**
INK pmax pmax
comp=Z,6.0nm,0.7s
INK Inuvik 72.00 19 *e*P **P 18 32 18.5 -0.4**
comp=Z,5.7nm,0.7s,mb4.6
LPG La Plagne 72.57 313 *e*P **P 18 32 22.5 -0.2**
comp=Z,18nm,1.0s,mb4.6
LPG La Plagne 72.57 313 *e*P **P 18 32 22.5 -0.2**
LPG pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
LPG La Plagne 72.57 313 *e*P **P 18 32 22.5 -0.2**
comp=Z,9.1nm,1.0s,mb4.7
LPL La Plagne 72.58 313 *e*P **P 18 32 22.5 -0.2**
comp=Z,11nm,0.8s,mb4.5
LPL La Plagne 72.58 313 *e*P **P 18 32 22.5 -0.2**
LPL pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
LPL La Plagne 72.58 313 *e*P **P 18 32 22.5 -0.2**
comp=Z,5.4nm,0.8s,mb4.5
STKA Stephens Creek 72.64 147 P **P 18 32 23.3 +0.3**
comp=Z,1.9nm,0.5s,mb4.2,baz=245,slow=15,SNR=6.5
STKA Stephens Creek 72.64 147 *e*P **P 18 32 22.4 -0.6**
BMRM Bremner River 72.69 28 *e*P **P 18 32 23.4 +0.3**
comp=Z,15nm,0.9s,mb4.9
MBDF Montbardon 72.91 312 *e*P **P 18 32 23.9 -0.8**
AVF Avril sur Loir 74.05 315 *e*P **P 18 32 30.2 -1.2**
YKA Yellowknife Ar 81.51 17 P **P 18 33 12.7 +0.1**
comp=Z,1.1nm,0.7s,mb3.9,baz=329,slow=5.1,SNR=8.9
YKA Yellowknife Ar 81.51 17 P **P 18 33 12.7 +0.1**
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 81.51 17 P **P 18 33 12.7 +0.1**
ULM Lac du Bonnet 96.86 12 LR LR 19 25 37.0
comp=Z,104nm,19.4s,MS4.3,baz=233,slow=40

SZGRF ***27*** *18:20:46.8, 44°.86N×149°.59E, h33km, mb5.0, Kuril Islands, Russia*
ISCJB ***27*** *18:21:00.6±0.2, 45°.39N±0°.03×148°.41E±0°.04, h136km, mb4.4/78, Error ellipse: s-maj=5.6km s-min=2.5km az=139.8*
SKHL ***27*** *18:21:00.0±0.9, 45°.23N×148°.54E, h148km±8km, mb5.3/7, msh5.2/2*
NIED ***27*** *18:21:00, 45°.00N×148°.50E, h122km, Mw4.4 Best double couple: M0 3.87000×10^15 NP1:φ0=108.00000°, δ73.00000°, λ131.00000°. NP2:φ0=217.00000°, δ44.00000°, λ25.00000°.*
BJI ***27*** *18:21:01.4, 45°.60N×148°.45E, h151km, mB4.8/16, mb4.7/25*
NEIC ***27*** *18:21:01.8±0.3, 45°.58N×148°.23E, mb4.5/38, Error ellipse: s-maj=9.0km s-min=5.1km az=150.0*
MOS ***27*** *18:21:01.1±1.2, 45°.48N×148°.32E, h138km, mb4.4/41, Error ellipse: s-maj=8.4km s-min=5.9km az=94.2*
IDC ***27*** *18:21:02.1±0.6, 45°.60N×148°.20E, h128km±4km, mb4.0/22, mb1 4.1/26, mb1mx4.0/30, mbtmp3.9/26, MS2.6/1, Ms1 2.6/1, ms1mx2.1/33, Error ellipse: s-maj=16.1km s-min=10.7km az=160.0*
JMA ***27*** *18:21:03.3±0.6, 45°.03N×148°.51E, h136km, M4.0*
ISC 27 18:21:02.3±0.2, 45°.40N±0°.03×148°.36E±0°.04, h138km, h138km±2.7km: pP-P, n243, σ1§19/274, mb4.4/78, 10C-14D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.39**	**245⇑**	*i*PN		**Pn**	**18 21 20.3**	**-1.4**
KUR				*i*S		**Sn**	**18 21 35.5**	**-0.9**
KUR				pmax		pmax		
	comp=N,420nm,0.5s							
KUR				pmax		pmax		
	comp=E,330nm,0.5s							
KUR				pmax		pmax		
	comp=Z,2μm,0.5s							
KUR				pmax		pmax		
	comp=Z,6μm,1.4s							
KUR				smax				
	comp=N,45μm,2.0s							
KUR				smax				
	comp=E,50μm,2.0s							
KUR				smax				
	comp=N,14μm,1.0s							
KUR				smax				
	comp=E,23μm,1.0s							
KUR	**Kuril'sk**	**0.39**	**245⇑**	*i*P		**Pn**	**18 21 20.3**	**-1.4**
KUR				AMB		AMB	18 21 21.0	
	comp=E,420nm,0.5s							
KUR				AMB		AMB	18 21 21.0	
	comp=E,330nm,0.5s							
KUR				AMB		AMB	18 21 21.0	
	comp=E,2μm,0.5s							
KUR				AMB		AMB	18 21 21.8	
	comp=E,6μm,1.4s							
KUR				*i*S		**Sn**	**18 21 35.5**	**-0.9**
KUR				A			18 21 35.8	
	comp=E,32μm,2.0s							
KUR				A			18 21 35.8	
	comp=E,50μm,2.0s							
KUR				A			18 21 35.8	
	comp=E,45μm,2.0s							
KUR				A			18 21 35.8	
	comp=E,50μm,2.0s							
KUR				A			18 21 37.0	
	comp=E,14μm,1.0s							
KUR				A			18 21 37.0	
	comp=E,19μm,1.0s							
YUK	**Yuzh-Kuril'sk**	**2.24**	**234⇓**	*i*PN		**Pn**	**18 21 40.6**	**+1.0**
YUK				*i*S		**Sn**	**18 22 11.7**	**+3.4**
YUK				pmax		pmax		
	comp=N,192nm,0.2s							
YUK				pmax		pmax		
	comp=E,198nm,0.2s							
YUK				pmax		pmax		
	comp=Z,490nm,0.2s							
YUK				smax				
	comp=N,606nm,0.6s							
YUK	**Yuzh-Kuril'sk**	**2.24**	**234⇓**	*i*P		**Pn**	**18 21 40.6**	**+1.0**
YUK				AMB		AMB	18 21 48.1	
	comp=N,190nm,0.2s							
YUK				AMB		AMB	18 21 48.1	
	comp=N,200nm,0.2s							
YUK				AMB		AMB	18 21 48.1	
	comp=N,490nm,0.2s							
YUK				*i*S		**Sn**	**18 22 11.7**	**+3.4**
YUK				A			18 22 13.5	
	comp=N,520nm,0.4s							
YUK				A			18 22 13.5	
	comp=N,980nm,0.4s							
JRA	**Rausu**	**2.73**	**239**	P		**Pn**	**18 21 46.5**	**+0.8**
NEM2	**Nemuro 2**	**2.77**	**224**	P		**Pn**	**18 21 45.1**	**-1.1**
NEM2				*e*S		**Sn**	**18 22 17.8**	**-2.2**
JNK	**Nakash**	**3.17**	**237**	P		**Pn**	**18 21 52.4**	**+1.0**
JTKR	**Abashiri--Toko**	**3.48**	**247**	P		**Pn**	**18 21 56.5**	**+1.1**
JAK	**Akkeshi**	**3.56**	**229**	P		**Pn**	**18 21 55.9**	**-0.6**
JAK				*e*S		**Sn**	**18 22 36.5**	**-1.9**
JMP	**Maruseppu**	**3.83**	**250**	P		**Pn**	**18 22 01.2**	**+1.3**
JAR	**Ashorobuto**	**3.91**	**239**	P		**Pn**	**18 22 02.4**	**+1.5**
JOB	**Onbets**	**4.10**	**234**	P		**Pn**	**18 22 04.1**	**+0.6**
JOB				*e*S		**Sn**	**18 22 50.2**	**-0.8**
JSE	**Soyaes**	**4.11**	**266**	P		**Pn**	**18 22 05.3**	**+1.7**
YSS	**Yuzh-Sakhalins**	**4.20**	**294**κ	*i*PN		**Pn**	**18 22 06.0**	**+1.3**
YSS				*i*S		**Sn**	**18 22 54.8**	**+1.6**
YSS				pmax		pmax		
	comp=E,200nm,1.0s							
YSS				pmax		pmax		
	comp=Z,190nm,1.0s							
YSS				smax				
	comp=E,340nm,1.2s							
YSS				smax				
	comp=E,1μm,4.0s							
YSS	**Yuzh-Sakhalins**	**4.20**	**294**	*e*Pn		**Pn**	**18 22 05.8**	**+1.1**
YSS				*e*Sn		**Sn**	**18 22 55.8**	**+2.6**
YSS	**Yuzh-Sakhalins**	**4.20**	**294⇓**	*i*P		**Pn**	**18 22 06.0**	**+1.3**
YSS				AMB		AMB	18 22 07.6	
	comp=E,190nm,1.0s							
YSS				AMB		AMB	18 22 07.6	
	comp=E,200nm,1.0s							
YSS				*i*S		**Sn**	**18 22 54.8**	**+1.6**
YSS				A			18 22 58.0	
	comp=E,340nm,1.2s							
YSS				A			18 23 02.0	
	comp=E,1μm,4.0s							
JKK2	**Kamakawa 2**	**4.29**	**251**	P		**Pn**	**18 22 07.8**	**+1.9**
ASAJ	**Asahikawa**	**4.30**	**255**	P		**Pn**	**18 22 08.3**	**+2.2**
	comp=E,4.9nm,0.3s,baz=83,slow=13,SNR=120							
ASAJ				S		**Sn**	**18 22 58.6**	**+2.9**
	comp=E,1.7nm,0.3s,baz=114,slow=4.4,SNR=3.7							
ASAJ	**Asahikawa**	**4.30**	**255**	PN		**Pn**	**18 22 08.3**	**+2.2**
ASAJ				S		**Sn**	**18 22 58.7**	**+3.0**
ASAJ				pmax		pmax		
	comp=Z,5.0nm,0.3s							
ASAJ				smax				
	comp=N,2.0nm,0.3s							
JCH	**Churui**	**4.55**	**234**	P		**Pn**	**18 22 09.4**	**-0.1**
JCH				*e*S		**Sn**	**18 22 58.7**	**-3.1**
JWK2	**Keihoku**	**4.56**	**271**	P		**Pn**	**18 22 12.7**	**+3.2**
JFR	**Furan**	**4.71**	**244**	P		**Pn**	**18 22 13.5**	**+2.0**
JSS	**Shosan**	**4.73**	**260**	P		**Pn**	**18 22 14.7**	**+2.9**
JAB	**Ashibetsu**	**4.79**	**249**	P		**Pn**	**18 22 15.0**	**+2.4**
JBT2	**Biratori 2**	**5.05**	**241**	P		**Pn**	**18 22 16.6**	**+0.5**
JEM	**Erimo**	**5.06**	**230**	P		**Pn**	**18 22 16.0**	**-0.3**
ERM	**Erimo**	**5.07**	**230**	*e*PN		**Pn**	**18 22 16.0**	**-0.3**
ERM	**Erimo**	**5.07**	**230**	*e*Pn		**Pn**	**18 22 16.1**	**-0.2**
	comp=N,152nm,0.8s							
ERM				*e*Sn		**Sn**	**18 23 08.3**	**-5.6**
JNBK	**Urakawa-nobuka**	**5.12**	**234**	P		**Pn**	**18 22 15.8**	**-1.2**
JEW	**Eniwo**	**5.59**	**245**	P		**Pn**	**18 22 25.0**	**+1.6**
UGL	**Uglegorsk**	**5.65**	**313**κ	*i*PN		**Pn**	**18 22 26.0**	**+1.9**
UGL				pmax		pmax		
	comp=N,48nm,0.8s							
UGL				pmax		pmax		
	comp=E,120nm,0.8s							
UGL				pmax		pmax		
	comp=Z,264nm,0.8s							
UGL	**Uglegorsk**	**5.65**	**313⇓**	*i*P		**Pn**	**18 22 26.0**	**+1.9**
UGL				AMB		AMB	18 22 27.0	
	comp=Z,48nm,0.8s							
UGL				AMB		AMB	18 22 27.0	
	comp=Z,120nm,0.8s							
UGL				AMB		AMB	18 22 27.0	
	comp=Z,264nm,0.8s							
UGL				*e*S		**Sn**	**18 23 33.5**	**+5.6**
UGL				A			18 23 37.0	
	comp=Z,2μm,4.0s							
UGL				A			18 23 37.0	

comp=Z,1μm,5.0s
JNB Noboribetsu 6.04 244 P Pn 18 22 29.4 0.0
JNB eS Sn 18 23 35.0 -2.4
JKB Kayabe 6.37 239 P Pn 18 22 32.6 -1.2
JKB eS Sn 18 23 40.1 -5.1
JSH Shimam 6.60 248 P Pn 18 22 38.0 +1.2
JYM2 Yakumo 2 6.65 243 P Pn 18 22 37.3 -0.2
TYV Tymovskoe 6.67 327 eP **Pn 18 22 37.7 0.0**
TYV AMB AMB 18 22 43.5
comp=Z,88nm,1.0s
TYV AMB AMB 18 22 43.5
comp=Z,66nm,1.0s
TYV AMB AMB 18 22 43.5
comp=Z,149nm,1.0s
JSR Shiriuchi 6.95 239 P Pn 18 22 40.3 -1.3
JSR eS Sn 18 23 53.1 -6.2
JTM Tenmabayashi 7.05 232 P Pn 18 22 40.6 -2.3
JTM eS Sn 18 23 53.1 -8.5
JANG Nango 7.10 227 P Pn 18 22 40.3 -3.3
JOSM Okushiri--Mats 7.24 246 P Pn 18 22 45.1 -0.3
JTH Tanohata 7.26 224 eS **Sn 18 23 57.0 -10**
SKR Severo-Kuril's 7.41 42 ePN **Pn 18 22 47.9 +0.2**
SKR eS Sn 18 24 11.0 +0.8
SKR pmax pmax
comp=Z,50nm,0.7s
SKR smax
comp=E,80nm,0.9s
SKR smax
comp=E,50nm,0.5s
SKR Severo-Kuril's 7.41 42 eP **Pn 18 22 47.9 +0.2**
SKR AMB AMB 18 22 49.0
comp=E,50nm,0.7s
SKR eS Sn 18 24 11.0 +0.8
SKR A 18 24 13.5
comp=E,50nm,0.5s
SKR A 18 24 13.5
comp=E,80nm,0.9s
OFUJ Ofunato 8.03 221 eS **Sn 18 24 16.6 -8.6**
JRG Rokugo 8.28 226 P Pn 18 22 57.0 -2.4
JRG eS Sn 18 24 24.9 -6.5
JIO Ouri 8.68 219 eS **Sn 18 24 31.7 -9.4**
NKL Nikolayevsk 9.24 330 eP **Pn 18 23 09.0 -3.1**
NKL AMB AMB 18 23 11.6
comp=E,50nm,1.0s
NKL AMB AMB 18 23 11.6
comp=E,130nm,1.0s
HABR Khabarovsk 9.61 293 dePN **Pn 18 23 15.0 -2.1**
HABR eS Sn 18 25 04.3 +1.0
HABR pmax pmax
comp=N,14nm,1.5s
HABR pmax pmax
comp=Z,65nm,1.2s
HABR pmax pmax
comp=E,51nm,1.1s
HABR MLR MLR
comp=Z,62nm,15.0s
PETK Petropavlovsk- 9.83 35 P Pn 18 23 19.8 -0.2
comp=Z,1.1nm,0.3s,baz=186,slow=7.5,SNR=29
PETK LR LR 18 27 18.1
comp=Z,33nm,20.0s,baz=217,slow=39
PETK Petropavlovsk- 9.83 35 PN Pn 18 23 19.8 -0.2
PETK pmax pmax
comp=Z,1.0nm,0.3s
PETK MLR MLR
comp=Z,33nm,20.0s
MAJO Matsushiro 11.70 224 PN Pn 18 23 44.3 -0.6
MJAR Matsushiro Arr 11.70 224 P Pn 18 23 45.1 +0.2
comp=Z,0.2nm,0.3s,baz=29,slow=13,SNR=3.7
KLR Kul'dur 11.91 295 ePN **Pn 18 23 45.2 -2.2**
KLR pmax pmax
comp=E,96nm,1.4s
KLR pmax pmax
comp=Z,43nm,1.4s
MDJ Mudanjiang 13.31 273 P Pn 18 24 04.5 -1.1
MDJ pmax pmax
comp=Z,7.0nm,1.1s
MDJ pmax pmax
comp=Z,22nm,3.8s
MDJ LR LR
comp=N,290nm,16.2s
MDJ LR LR
comp=E,190nm,12.3s
MDJ LR LR
comp=Z,330nm,19.8s
ZEA Zeya 15.99 309 eP **Pn 18 24 36.7 -2.5**
ZEA AMB AMB 18 24 38.2
comp=Z,96nm,1.8s
ZEA AMB AMB 18 24 38.2
comp=Z,73nm,1.6s
KSRS Korea Array 17.23 250 P Pn 18 24 53.5 -0.9
comp=Z,0.4nm,0.3s,baz=57,slow=10,SNR=16
FX1 Attu Island--F 17.81 56 P Pn 18 25 00.8 -0.3
comp=Z,1.6nm,0.3s,baz=70,slow=6.8,SNR=6.9
FX1 S **S 18 28 10.3 -7.0**
comp=Z,1.8nm,0.3s,baz=45,slow=16,SNR=5.4
FX1 Attu Island--F 17.81 56 P Pn 18 25 00.9 -0.3
FX1 S **S 18 28 10.3 -7.0**
FX1 pmax pmax
comp=Z,2.0nm,0.3s
FX1 smax
comp=N,2.0nm,0.3s
FX1 Attu Island--F 17.81 56 P Pn 18 25 00.8 -0.3
FX1 S **S 18 28 10.3 -7.1**
YAK Yakutsk 19.87 334 eP **P 18 25 20.7 -1.5**
YAK eS **S 18 28 55.6 -2.4**
YAK pmax pmax
comp=Z,31nm,0.9s
YAK pmax pmax
comp=N,12nm,1.1s
YAK pmax pmax
comp=E,9.0nm,1.2s
YAK smax
comp=N,61nm,3.2s
YAK smax
comp=E,17nm,1.5s
YAK Yakutsk 19.87 334 ePn **P 18 25 20.7 -1.5**
comp=E,78nm,0.8s
BJI Beijing 24.15 269 P P 18 26 06.0 +0.7
BJI pmax pmax
comp=Z,17nm,0.9s,mb4.6
BJI LR LR
comp=N,2μm,10.4s
BJI LR LR
comp=E,960nm,13.0s
BJI LR LR
comp=Z,400nm,18.6s
BILL Bilibino 24.54 16⇓ iP **P 18 26 07.5 -1.0**
BILL i 18 26 40.5
BILL Bilibino 24.54 16 eP **P 18 26 06.3 -2.2**
comp=Z,5.3nm,0.8s,mb4.1
NJ2 Nanjing 26.43 250 eP **P 18 26 28.5 +2.5**
NJ2 pmax pmax
comp=Z,40nm,1.2s,mb4.9
HHC Hu-ho-hao-te 27.08 274 eP **P 18 26 30.5 -1.2**
HHC pP pP 18 27 00.0 -1.0
HHC PP PP 18 27 22.8 -13
HHC PcP PcP 18 29 48.5 -0.5
HHC S **S 18 30 55.5 -3.9**
HHC SS SS 18 32 23.0 -36
HHC ScP ScP 18 33 14.5 -1.7
HHC PcS PcS 18 33 29.8 -0.8
HHC ScS ScS 18 37 04.5 -3.0
HHC pmax pmax
comp=Z,23nm,0.8s,mb4.9
HHC pmax pmax
comp=Z,130nm,5.2s
HHC LR LR
comp=N,110nm,12.8s
HHC LR LR
comp=E,190nm,12.8s
HHC LR LR
comp=Z,200nm,15.5s
TIXI Tiksi 27.94 347 eP **P 18 26 35.5 -3.5**
TIXI pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
TIXI Tiksi 27.94 347 eP **P 18 26 36.1 -3.0**
comp=Z,4.1nm,0.5s,mb4.4
TIXI epP pP 18 27 09.9 +1.5
SONM Songino Array 28.68 290 P P 18 26 46.1 +0.3
comp=Z,1.6nm,0.7s,mb3.8,baz=83,slow=7.2,SNR=3.4
SONM pP pP 18 27 13.3 -2.0
comp=Z,1.7nm,1.0s,baz=95,slow=8.7,SNR=1.7
SONM Songino Array 28.68 290 P P 18 26 46.1 +0.3
SONM *PP pP 18 27 13.3 -2.0
SONM pmax pmax
comp=Z,2.0nm,0.7s
LZH Lanzhou 34.61 270⇑ P **P 18 27 41.0 +3.2**
LZH pP pP 18 28 11.8 +4.0
LZH sP sP 18 28 28.0 +4.4
LZH PP PP 18 29 04.5 +5.6
LZH pmax pmax
comp=Z,19nm,1.3s,mb4.6
LZH pmax pmax
comp=Z,55nm,4.6s
LZH LR LR
comp=N,110nm,13.0s
LZH LR LR
comp=Z,160nm,17.3s
CD2 Chengdu 37.45 263 eP **P 18 28 01.5 -0.6**
CD2 pP pP 18 28 32.5 +0.1
CD2 sP sP 18 28 48.8 +0.7
CD2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
CD2 pmax pmax
comp=Z,30nm,4.2s
BPAW Bear Paw Mtn. 37.89 39 eP **P 18 28 05.5 +0.1**
comp=Z,4.1nm,0.7s,mb4.2
GYA Guiyang 38.18 255 eP **P 18 28 09.0 +0.7**
GYA pP pP 18 28 41.0 +2.4
GYA sP sP 18 28 58.5 +4.2
GYA PP PP 18 29 42.0 +3.7
GYA PcP PcP 18 30 21.0 +1.0
GYA S **S 18 33 50.8 -0.5**
GYA ScP ScP 18 33 53.5 -1.1
GYA PcS PcS 18 34 09.8 +0.5
GYA ScS ScS 18 38 02.0 -2.8
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
TRF Thorofare Moun 38.21 40 eP **P 18 28 08.4 +0.3**
comp=Z,4.4nm,0.5s,mb4.3
MCK McKinley 38.81 39 eP **P 18 28 12.6 -0.4**
MCK pmax pmax
comp=Z,8.0nm,0.9s,mb4.3
MCK McKinley 38.81 39 eP **P 18 28 12.6 -0.4**
comp=Z,7.6nm,0.9s,mb4.3
PMR Palmer 38.85 43 P P 18 28 12.1 -1.3
COLA College 39.23 37 P P 18 28 16.9 +0.3
COLA pmax pmax
comp=Z,9.0nm,0.6s,mb4.6
COLA College 39.23 37 P P 18 28 16.9 +0.3
comp=Z,8.5nm,0.6s,mb4.5
ZALV Zalesovo Beam 40.72 306 P P 18 28 28.3 -0.6
comp=Z,1.0nm,0.6s,mb3.6,baz=95,slow=7.2,SNR=2.2
ZALV PcP PcP 18 30 28.4 +0.8
comp=Z,6.2nm,0.8s,baz=71,slow=2.8,SNR=13
ZALV ScP ScP 18 34 05.3 +1.3
comp=Z,0.7nm,0.6s,baz=74,slow=6.3,SNR=4.4
QIZ Qiongzhong 41.28 243 P P 18 28 33.0 -0.9
QIZ S **S 18 34 34.3 -3.3**
QIZ pmax pmax
comp=Z,33nm,1.2s,mb4.8
KMI Kunming 41.73 257 P P 18 28 38.3 +0.8
KMI pP pP 18 29 09.5 +1.2
KMI sP sP 18 29 28.0 +4.1
KMI PP PP 18 30 19.3 +2.6
KMI S **S 18 34 42.8 -1.4**
KMI SS SS 18 37 46.3 -8.9
KMI pmax pmax
comp=Z,14nm,1.2s,mb4.5
KMI pmax pmax
comp=Z,250nm,6.8s
KMI LR LR
comp=N,100nm,16.4s
KMI LR LR
comp=E,140nm,12.5s
KMI LR LR
comp=Z,130nm,12.0s
EGAK Eagle 42.09 37 eP **P 18 28 40.1 +0.1**
comp=Z,6.7nm,0.6s,mb4.5
WMQ Urumqi 42.31 290 eP **P 18 28 43.0 +0.9**
WMQ pmax pmax
comp=Z,24nm,1.0s,mb4.8
DAWY Dawson 42.96 38 eP **P 18 28 47.6 +0.6**
INK Inuvik 44.55 31 eP **P 18 28 59.2 -0.4**
INK e*PP pP 18 29 31.3 +0.6
INK pmax pmax
comp=Z,4.0nm,0.4s
INK Inuvik 44.55 31 eP **P 18 28 59.2 -0.4**
comp=Z,4.0nm,0.4s,mb4.4
INK epP pP 18 29 31.2 +0.5
MK31 Makanchi Array 44.61 297 eP **P 18 28 59.0 -1.4**
MK31 e 18 30 41.0
MK31 Makanchi Array 44.61 297 eP **P 18 28 59.0 -1.4**
MK31 ePcP PcP 18 30 41.0 +0.3
MK31 eScP ScP 18 34 11.4 -8.4
MKAR Makanchi Array 44.61 297 P P 18 28 59.4 -1.0
comp=Z,2.8nm,0.8s,mb3.9,baz=64,slow=13,SNR=9.9
MKAR PcP PcP 18 30 41.4 +0.7
comp=Z,0.4nm,0.4s,baz=84,slow=0.6,SNR=8.1
MKAR ScP ScP 18 34 20.4 +0.6
comp=Z,0.9nm,0.7s,baz=61,slow=9.9,SNR=8.2
MKAR Makanchi Array 44.61 297 P P 18 28 59.4 -1.0
MKAR PcP PcP 18 30 41.4 +0.7
MKAR ScP ScP 18 34 20.4 +0.6
KURK Kurchatov 45.34 303 P P 18 29 04.9 -1.2
comp=Z,2.4nm,0.3s,mb4.2,baz=74,slow=8.8,SNR=3.1
KURK PcP PcP 18 30 44.0 +0.8
comp=Z,3.7nm,0.6s,baz=72,slow=3.4,SNR=6.5
KURK Kurchatov 45.34 303 P P 18 29 04.9 -1.3
KURK 18 30 44.0
KURK pmax pmax
comp=Z,2.0nm,0.3s,mb4.2
KURK Kurchatov 45.34 303 eP **P 18 29 03.9 -2.3**
KURK ePcP PcP 18 30 43.5 +0.3
CM31 Chiang Mai Arr 48.82 253 eP **P 18 29 34.0 +0.5**
comp=Z,7.6nm,1.0s,mb4.3
CMAR Chiang Mai Arr 48.82 253 P P 18 29 34.5 +1.0
comp=Z,2.9nm,0.7s,mb4.0,baz=37,slow=7.2,SNR=13
CMAR Chiang Mai Arr 48.82 253 P P 18 29 34.5 +1.0
CMAR pmax pmax
comp=Z,3.0nm,0.7s
DLBC Dease Lake 48.88 44 eP **P 18 29 33.8 +0.4**
BVAR Borovoye Array 49.14 309 P P 18 29 34.0 -1.5
comp=Z,1.4nm,0.7s,mb3.7,baz=52,slow=9.6,SNR=3.8
BVAR PcP PcP 18 30 57.4 +0.6
comp=Z,6.2nm,0.8s,baz=77,slow=3.3,SNR=16
BVAR Borovoye Array 49.14 309 P P 18 29 34.0 -1.5
BVAR 18 30 57.4
BVAR pmax pmax
comp=Z,1.0nm,0.7s
BVAR pmax pmax
comp=Z,6.0nm,0.8s
BRVK Borovoye 49.19 309 eP **P 18 29 33.8 -2.0**
BRVK e 18 30 56.4
BRVK pmax pmax
comp=Z,5.0nm,1.1s,mb4.1
BRVK Borovoye 49.19 309 eP **P 18 29 33.8 -2.0**
comp=Z,5.4nm,1.1s,mb4.1
BRVK ePcP PcP 18 30 56.4 -0.5
TKM2 Tokmak 2 50.59 295 eP **P 18 29 46.6 0.0**
TKM2 pmax pmax
comp=Z,6.0nm,1.2s,mb4.1
TKM2 Tokmak 2 50.59 295 eP **P 18 29 46.6 0.0**
comp=Z,6.2nm,1.2s,mb4.1
TAPN Taplejung 50.84 271 eP **P 18 29 49.9 +1.2**
comp=Z,46nm,0.8s,mb5.2
ODAN Odare 51.37 271 eP **P 18 29 53.7 +1.1**
comp=Z,28nm,0.9s,mb4.9
UCH Uchtor 51.63 295 eP **P 18 29 55.1 +0.7**
UCH ePcP PcP 18 31 06.8 +0.6
JIRN Jiri 51.73 272 eP **P 18 29 56.5 +1.2**
comp=Z,82nm,0.7s,mb5.4
GUN Gumba 51.79 273 eP **P 18 29 56.7 +0.9**
comp=Z,38nm,0.5s,mb5.3
RAMN Ramite 51.87 271 eP **P 18 29 57.1 +0.7**
comp=Z,114nm,0.8s,mb5.5
EKS2 Erkin-Say 51.88 295 eP **P 18 29 54.6 -1.6**
KSH Kashi 52.08 291 P P 18 30 01.8 +4.1
KSH pP pP 18 30 34.3 +4.6
KSH sP sP 18 30 50.3 +5.3
KSH PcP PcP 18 31 11.5 +3.7
KSH PP PP 18 32 03.0 +6.0
KSH ScP ScP 18 34 53.8 +2.2
KSH PcS PcS 18 35 08.5 +2.3
KSH S **S 18 37 13.3 +2.5**
KSH ScS ScS 18 39 34.0 +0.5
KSH SS SS 18 40 51.8 +2.5
KSH pmax pmax
comp=Z,8.0nm,0.9s,mb4.3
KSH pmax pmax
comp=Z,180nm,5.7s
KSH LR LR
comp=N,46nm,3.7s
KSH LR LR
comp=E,72nm,4.9s
KSH LR LR
comp=Z,100nm,7.6s
KKN Kakani 52.29 273 eP **P 18 30 00.2 +0.8**
comp=Z,97nm,1.1s,mb5.3
PKI Pulchoki 52.33 273 eP **P 18 30 00.5 +0.7**
comp=Z,67nm,1.1s,mb5.2
DMN Daman 52.52 273 eP **P 18 30 02.0 +0.8**
comp=Z,89nm,1.1s,mb5.4
RES Resolute Bay 53.14 17 eP **P 18 30 03.4 -1.6**
RES pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
RES Resolute Bay 53.14 17 eP **P 18 30 03.4 -1.6**
comp=Z,3.0nm,0.6s,mb4.2
RES e 18 30 14.3
ARU Arti 53.74 316 *c iP* **P 18 30 06.8 -2.9**
ARU 18 31 11.6
ARU 18 32 07.6
ARU S **S 18 37 31.4 -1.5**
ARU SS SS 18 41 19.2 +4.4
ARU pmax pmax
comp=Z,5.0nm,1.0s,mb4.2
ARU Arti 53.74 316 eP **P 18 30 06.9 -2.8**
comp=Z,9.1nm,0.9s,mb4.5
ARU e 18 30 22.6
ARU ePcP PcP 18 31 12.5 -1.3
YKA Yellowknife Ar 53.95 35 P P 18 30 11.2 +0.1
comp=Z,1.8nm,0.5s,mb4.0,baz=302,slow=7.2,SNR=19
YKA pP pP 18 30 42.2 -1.0
comp=Z,3.8nm,1.0s,baz=303,slow=7.4,SNR=3.4
YKA PcP PcP 18 31 15.3 +0.8
comp=Z,0.8nm,0.8s,baz=296,slow=3.3,SNR=3.7
YKA Yellowknife Ar 53.95 35 P P 18 30 11.2 +0.1
YKA *PP pP 18 30 42.2 -1.1
YKA 18 31 15.3
YKA pmax pmax
comp=Z,2.0nm,0.5s
YKA Yellowknife Ar 53.95 35 P P 18 30 11.2 +0.1
YKA pP pP 18 30 42.2 -1.1
YKA PcP PcP 18 31 15.3 +0.8
KSM Kuching 55.06 229 eP **P 18 30 20.8 +1.1**
comp=Z,6.7nm,0.9s,mb4.4
AKTK Aktyubinsk 57.12 310 P P 18 30 32.6 -1.3
AKTK PcP PcP 18 31 27.2 +0.1
AKTO Aktyubinsk 57.12 310 P P 18 30 32.6 -1.3
comp=Z,0.8nm,0.5s,mb3.8,baz=73,slow=7.7,SNR=4.1
AKTO PcP PcP 18 31 27.2 +0.1
comp=Z,1.2nm,0.5s,baz=84,slow=3.7,SNR=3.8
AKTO Aktyubinsk 57.12 310 P P 18 30 32.7 -1.2
AKTO 18 31 27.2
AKTO pmax pmax
comp=Z,1.0nm,0.5s,mb3.9
ARCES ARCESS Array B 58.01 340 PcP PcP 18 31 29.8 -0.4
comp=Z,3.2nm,0.8s,baz=68,slow=5.2,SNR=3.2
ARE0 ARCESS Array S 58.01 340 P P 18 30 37.9 -1.9
KBL Kabul 59.45 290 eP **P 18 30 49.6 -0.7**
KBL pmax pmax
comp=Z,22nm,1.1s,mb4.9
KBL Kabul 59.45 290 eP **P 18 30 49.6 -0.7**
comp=Z,22nm,1.1s,mb4.9
WALA Waterton Lakes 61.83 48 eP **P 18 31 06.1 -0.1**
comp=Z,0.1nm,0.6s
HYB Hyderabad 63.69 268 *i* P **P 18 31 19.0 0.0**
FINES FINESS Array B 63.80 333 P P 18 31 16.9 -2.1
comp=Z,6.1nm,0.6s,mb4.6,baz=40,slow=8.3,SNR=12
FINES PcP PcP 18 31 53.1 -0.6
comp=Z,3.7nm,0.8s,baz=45,slow=2.6,SNR=3.8
FINES FINESS Array B 63.80 333 P P 18 31 16.9 -2.2
FINES pP 18 31 53.1 +0.9
FINES pmax pmax
comp=Z,6.0nm,0.6s
FINES FINESS Array B 63.80 333 P P 18 31 16.9 -2.1
FINES PcP PcP 18 31 53.1 -0.6
FFC Flin Flon 63.86 37 eP **P 18 31 18.7 -0.9**
FFC pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
FFC Flin Flon 63.86 37 eP **P 18 31 18.7 -0.8**
comp=Z,4.3nm,0.8s,mb4.3
FCC Fort Churchill 64.17 31 eP **P 18 31 20.4 -1.1**
comp=Z,0.2nm,0.6s
OBN Obninsk 64.50 324 eP **P 18 31 23.0 -0.7**
OBN e pP 18 31 56.5 -0.4
OBN pmax pmax
comp=Z,7.0nm,1.2s,mb4.4
BOZ Bozeman (W) 65.18 50 eP **P 18 31 28.5 +0.2**
BOZ pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
BOZ Bozeman (W) 65.18 50 eP **P 18 31 28.5 +0.2**
comp=Z,2.1nm,0.6s,mb4.1
NVAR Mina Array Bea 65.98 59 P P 18 31 34.7 +1.2
comp=Z,0.6nm,0.5s,mb3.7,baz=292,slow=7.3,SNR=5.9
NVAR pP pP 18 32 06.4 -0.5
comp=Z,1.0nm,0.6s,baz=286,slow=6.1,SNR=4.0
NVAR Mina Array Bea 65.98 59 P P 18 31 34.7 +1.2
NVAR pP pP 18 32 06.4 -0.5
VSR Storozhevoye 66.05 319 eP **P 18 31 32.0 -1.7**
VSR pmax pmax
comp=N,4.0nm,0.5s
VSR pmax pmax
comp=Z,5.0nm,0.5s,mb4.6
VSR pmax pmax
comp=E,3.0nm,0.4s
PDAR Pinedale Array 68.19 51 P P 18 31 48.2 +0.8
comp=E,1.3nm,0.4s,mb4.0,baz=305,slow=2.5,SNR=9.7
PDAR pP pP 18 32 19.4 -1.6
comp=E,1.1nm,0.8s,baz=298,slow=3.2,SNR=3.2
NB2 NORSAR Subarra 68.38 339 P P 18 31 46.3 -2.0
comp=Z,3.8nm,0.6s,mb4.3,baz=31,slow=6.5
NOA NORSAR Array B 68.38 339 P P 18 31 46.7 -1.6
comp=Z,3.4nm,0.7s,mb4.2,baz=31,slow=6.3,SNR=14
NOA NORSAR Array B 68.38 339 P P 18 31 46.7 -1.6
NOA pmax pmax
comp=Z,3.0nm,0.7s
KIV Kislovodsk 69.31 312⇑ *iP* **P 18 31 55.5 +1.2**
KIV *i* pP 18 32 27.4 -0.6
KIV pmax pmax
comp=Z,10.0nm,0.7s,mb4.7
KIV Kislovodsk 69.31 312 eP **P 18 31 54.6 +0.3**
comp=Z,11nm,0.7s,mb4.7
ASAR Alice Springs 69.98 194 P P 18 31 59.8 +1.3
comp=Z,2.4nm,0.7s,mb4.0,baz=9.9,slow=5.1,SNR=12
ASAR sP sP 18 32 45.8 -1.3
comp=Z,1.3nm,0.8s,baz=12,slow=5.9,SNR=3.7
ASAR Alice Springs 69.98 194 P P 18 31 59.8 +1.3
ASAR *SP sP 18 32 45.8 -1.3
ASAR pmax pmax
comp=Z,2.0nm,0.7s
RSSD Black Hills 70.19 47 eP **P 18 32 00.2 +0.5**
RSSD pmax pmax
comp=Z,1.0nm,0.6s,mb3.7
RSSD Black Hills 70.19 47 eP **P 18 32 00.2 +0.5**
comp=Z,1.3nm,0.6s,mb3.8
AKASG Malin Array Be 70.76 324 P P 18 32 01.3 -1.7
comp=Z,1.1nm,0.5s,mb3.9,baz=36,slow=5.5,SNR=7.9
AKASG Malin Array Be 70.76 324 P P 18 32 01.3 -1.8
AKASG pmax pmax
comp=Z,1.0nm,0.5s
BUR08 Bucovina Ar. S 74.80 324 eP **P 18 32 26.3 -0.7**
BURAR Bucovina Array 74.82 324⇓ P **P 18 32 26.7 -0.3**
STHS Stebnicka Huta 74.95 327 eP **P 18 32 27.1 -0.7**
STHS pmax pmax
comp=Z,3.0nm,1.0s,mb3.9
STHS Stebnicka Huta 74.95 327 eP **P 18 32 27.1 -0.7**
comp=Z,2.8nm,1.0s,mb3.9
TLCR 75.17 320⇑ P **P 18 32 30.5 +1.4**
VRI Vrincioaia 75.56 322⇓ P **P 18 32 33.1 +1.8**
SCHQ Schefferville 75.78 20 eP **P 18 32 32.6 +0.3**
comp=Z,6.5nm,0.6s,mb4.5,baz=12,slow=6.4,SNR=14
SCHQ Schefferville 75.78 20 eP **P 18 32 32.2 -0.2**
comp=Z,6.7nm,0.5s,mb4.5
MORC Moravsky Berou 76.01 330⇑ P **P 18 32 32.8 -1.0**
MORC Moravsky Berou 76.01 330 eP **P 18 32 32.4 -1.5**
comp=Z,4.7nm,0.9s,mb4.1
MLR Muntele Rosu 76.19 322⇑ P **P 18 32 35.5 +0.6**
CLL Collm 76.25 333 *i* P **P 18 32 33.8 -1.3**
CLL *i* 18 32 46.7
CLL pmax pmax
comp=Z,9.0nm,0.7s,mb4.5
DRGR 76.50 325⇓ P **P 18 32 37.1 +0.5**
VYHS Vyhne 76.61 328 eP **P 18 32 37.2 0.0**
VYHS pmax pmax
comp=Z,51nm,3.4s

VYHS	Vyhne	76.61	328	eP	P	18 32 37.2	0.0
	comp=Z,50nm,3.4s						
VOIR		76.62	323	⇑P	P	18 32 38.6	+1.3
PSZ	Piszkesteto	76.69	327	P	P	18 32 36.7	-1.0
PSZ				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.1						
PSZ	Piszkesteto	76.69	327	P	P	18 32 36.7	-0.9
	comp=Z,4.9nm,1.0s,mb4.1						
BR131	Keskin Array S	77.03	314	eP	P	18 32 39.4	-0.3
	comp=Z,0.9nm,0.6s,mb3.6						
BRTR	Keskin Array B	77.03	314	P	P	18 32 40.5	+0.7
	comp=Z,3.8nm,0.9s,mb4.0,baz=67,slow=4.2,SNR=12						
BRTR	Keskin Array B	77.03	314	P	P	18 32 40.5	+0.8
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GZR	Gura Zlata	77.61	324	⇓P	P	18 32 42.6	-0.2
BZS	Buzias	77.90	325	⇑P	P	18 32 42.8	-1.7
KHC	Kasperske Hory	77.93	332	eP	P	18 32 44.5	-0.1
KHC	Kasperske Hory	77.93	332	eP	P	18 32 44.5	-0.1
GRF	Grafenberg Arr	78.22	333	eP	P	18 32 46.7	+0.6
	comp=Z,11nm,0.8s,mb4.5						
GRF	Grafenberg Arr	78.22	333	eP	P	18 32 46.7	+0.6
GRF				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.5						
CDF	Champ du Feu	80.57	335	eP	P	18 33 00.6	+1.7
	comp=Z,11nm,0.9s,mb4.2						
CDF	Champ du Feu	80.57	335	eP	P	18 33 00.6	+1.7
CDF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.2						
CDF	Champ du Feu	80.57	335	eP	P	18 33 00.6	+1.7
	comp=Z,5.6nm,0.9s,mb4.2						
ASF	Jabal al Asfar	80.95	307	P	P	18 33 02.0	+0.8
	comp=Z,4.7nm,0.7s,mb4.2,baz=274,slow=3.9,SNR=9.5						
ASF	Jabal al Asfar	80.95	307	P	P	18 33 02.0	+0.8
ASF				pmax	pmax		
	comp=Z,5.0nm,0.7s						
TXAR	Lajitas Array	81.02	57	P	P	18 33 02.8	+1.1
	comp=Z,0.8nm,0.5s,mb3.6,baz=300,slow=3.6,SNR=16						
TXAR				pP	pP	18 33 34.2	-2.1
	comp=Z,0.9nm,0.7s,baz=294,slow=4.0,SNR=3.8						
TXAR	Lajitas Array	81.02	57	P	P	18 33 02.8	+1.1
TXAR				*PP	pP	18 33 34.2	-2.1
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MMAI	Mount Meron Ar	81.15	308	P	P	18 33 03.5	+1.2
	comp=Z,16nm,0.8s,mb4.7,baz=42,slow=7.9,SNR=20						
DAVOX	Davos/Dischmat	81.20	333	P	P	18 33 03.2	+1.0
	comp=Z,3.7nm,0.7s,mb4.2,baz=139,slow=17,SNR=3.7						
HINF	Hinteralfeld	81.23	335	eP	P	18 33 03.3	+0.9
FLN	La Foliniere	82.35	340	eP	P	18 33 07.9	-0.4
LDF	La Druitiere	82.42	340	eP	P	18 33 09.4	+0.8
LOR	Lormes	82.59	336	eP	P	18 33 10.1	+0.6
	comp=Z,22nm,1.1s,mb4.5						
LOR	Lormes	82.59	336	eP	P	18 33 10.1	+0.6
LOR				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.5						
LOR	Lormes	82.59	336	eP	P	18 33 10.1	+0.6
	comp=Z,11nm,1.1s,mb4.5						
GRR	Gorron	82.79	340	eP	P	18 33 10.3	-0.3
	comp=Z,50nm,1.1s,mb4.8						
GRR	Gorron	82.79	340	eP	P	18 33 10.3	-0.3
GRR				pmax	pmax		
	comp=Z,25nm,1.1s,mb4.9						
GRR	Gorron	82.79	340	eP	P	18 33 10.3	-0.3
	comp=Z,25nm,1.1s,mb4.9						
SSF	Saint Saulge	82.88	337	eP	P	18 33 11.5	+0.5
SMF	Signal de Mont	83.16	336	eP	P	18 33 13.0	+0.5
	comp=Z,43nm,1.2s,mb4.8						
SMF	Signal de Mont	83.16	336	eP	P	18 33 13.0	+0.5
	comp=Z,22nm,1.2s,mb4.8						
AVF	Avril sur Loir	83.17	337	eP	P	18 33 13.1	+0.6
	comp=Z,6.8nm,0.7s,mb4.2						
AVF	Avril sur Loir	83.17	337	eP	P	18 33 13.1	+0.6
AVF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
AVF	Avril sur Loir	83.17	337	eP	P	18 33 13.1	+0.6
	comp=Z,3.4nm,0.7s,mb4.2						
SGMF	Saint Gilles	83.32	341	eP	P	18 33 14.2	+0.9
LPL	La Plagne	83.33	334	eP	P	18 33 14.4	+1.0
LPG	La Plagne	83.34	334	eP	P	18 33 14.6	+1.2
ROSF	Rostrenen	83.41	341	eP	P	18 33 13.4	-0.3
	comp=Z,34nm,1.1s,mb4.7						
ROSF	Rostrenen	83.41	341	eP	P	18 33 13.4	-0.3
ROSF				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.7						
ROSF	Rostrenen	83.41	341	eP	P	18 33 13.4	-0.3
	comp=Z,17nm,1.1s,mb4.7						
EIL	Elat	83.93	307	P	P	18 33 17.8	+1.1
	comp=Z,28nm,0.7s,mb5.1,baz=7.7,slow=3.8,SNR=29						
EIL	Elat	83.93	307	P	P	18 33 17.8	+1.1
TCF	Toulx Ste Croi	83.95	337	eP	P	18 33 17.6	+1.1
	comp=Z,8.4nm,0.8s,mb4.2						
TCF	Toulx Ste Croi	83.95	337	eP	P	18 33 17.6	+1.1
TCF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
TCF	Toulx Ste Croi	83.95	337	eP	P	18 33 17.6	+1.1
	comp=Z,4.2nm,0.8s,mb4.2						
MBDF	Montbardon	84.03	334	eP	P	18 33 17.7	+0.8
ORIF	Oris-en-Rattie	84.13	334	eP	P	18 33 18.1	+0.7
	comp=Z,12nm,0.9s,mb4.4						
ORIF	Oris-en-Rattie	84.13	334	eP	P	18 33 18.1	+0.7
ORIF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.3						
ORIF	Oris-en-Rattie	84.13	334	eP	P	18 33 18.1	+0.7
	comp=Z,6.2nm,0.9s,mb4.3						
MFF	Saint Martin d	84.28	339	eP	P	18 33 18.1	-0.1
VIVF	Saint-Julien-l	84.55	335	eP	P	18 33 19.9	+0.3
	comp=Z,15nm,0.9s,mb4.4						
VIVF	Saint-Julien-l	84.55	335	eP	P	18 33 19.9	+0.3
VIVF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.4						
VIVF	Saint-Julien-l	84.55	335	eP	P	18 33 19.9	+0.3
	comp=Z,7.4nm,0.9s,mb4.4						
SBF	Sospel	84.59	333	eP	P	18 33 20.3	+0.5
	comp=Z,24nm,0.8s,mb4.7						
SBF	Sospel	84.59	333	eP	P	18 33 20.3	+0.5
SBF				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.7						
SBF	Sospel	84.59	333	eP	P	18 33 20.3	+0.5
	comp=Z,12nm,0.8s,mb4.7						
RJF	Les Rejaudoux	85.04	337	eP	P	18 33 22.1	+0.1
CAF	Calviac	85.24	337	eP	P	18 33 23.3	+0.3
LMR	La Mourre	85.36	333	eP	P	18 33 23.8	+0.2
SJPF	Ste Jean	87.81	338	eP	P	18 33 35.1	-0.4
ETSF	Etsaut	87.83	338	eP	P	18 33 35.7	0.0
	comp=Z,5.9nm,0.7s,mb4.2						
ETSF	Etsaut	87.83	338	eP	P	18 33 35.7	0.0
ETSF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
ETSF	Etsaut	87.83	338	eP	P	18 33 35.7	0.0
	comp=Z,3.0nm,0.7s,mb4.2						
KEST	Kesra	91.16	328	P	P	18 33 51.4	+0.1
	comp=Z,1.4nm,0.8s,mb4.1,baz=153,slow=0.7,SNR=4.3						
KEST	Kesra	91.16	328	P	P	18 33 51.4	+0.1
ESDC	Sonseca Array	91.74	339	P	P	18 33 53.3	-0.7
	comp=Z,5.5nm,0.6s,mb3.8,baz=25,slow=3.0,SNR=2.6						
ESDC	Sonseca Array	91.74	339	P	P	18 33 53.3	-0.7
PLCA	Paso Flores	151.39	95	PKPbc	PKPbc	18 40 40.6	+1.6
	comp=Z,2.0nm,0.7s,baz=221,slow=6.2,SNR=5.5						
PLCA				pPKPbc	pPKPbc	18 41 14.7	-1.1
	comp=Z,4.9nm,1.0s,baz=290,slow=5.0,SNR=3.6						

IDC 27 18:30:08.3±3.1, 32°.30S×178°.34W, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.7/15, mbtmp3.8/3, ML3.4/1, Error ellipse: s-maj=71.0km s-min=45.9km az=119.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	7.01	211	Pn	Pn	18 31 50.5	-1.7
	0.7nm,0.3s,baz=346,slow=8.3,SNR=4.6						
URZ				Sn	Sn	18 33 06.0	-6.6
	1.0nm,0.3s,baz=166,slow=23,SNR=8.9						
ASAR	Alice Springs	42.75	269	P	P	18 38 07.7	+0.1
	0.4nm,0.7s,baz=106,slow=7.1,SNR=9.4						
WRA	Warramunga Arr	43.91	274	P	P	18 38 17.1	+0.2
	0.9nm,0.5s,baz=112,slow=8.0,SNR=21						
FINES	FINESS Array B	146.82	339	PKPbc	PKPbc	18 49 50.9	-0.7
	1.1nm,0.6s,baz=33,slow=3.3,SNR=5.3						

IDC 27 18:31:57.2±7.1, 34°.62N×108°.75E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/22, mbtmp3.4/3, Error ellipse: s-maj=602.9km s-min=28.6km az=49.0, Southeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	23.33	309	P	P	18 37 06.9	0.0
	0.6nm,0.9s,baz=103,slow=12,SNR=5.2						
WRA	Warramunga Arr	59.47	152	P	P	18 42 02.2	+0.3
	0.4nm,0.6s,baz=341,slow=7.5,SNR=6.5						
ASAR	Alice Springs	62.70	154	P	P	18 42 23.8	-0.1
	0.5nm,0.9s,baz=332,slow=6.7,SNR=9.0						

*IDC **27** 18:33:58.6±1.2, 10°.75N×91°.55E, h0km, mb3.8/10, mb1 3.9/10, mb1mx3.6/26, mbtmp3.8/10, Error ellipse: s-maj=54.2km s-min=16.5km az=56.0*
*NEIC **27** 18:34:00.1±0.6, 10°.77N×91°.58E, h10km, mb4.0/2, Error ellipse: s-maj=30.3km s-min=8.3km az=56.0*
*ISCJB **27** 18:34:01.4±0.9, 10°.7N±0°.2×91°.5E±0°.2, h33km, mb3.8/12, Error ellipse: s-maj=42.1km s-min=11.6km az=145.1*
ISC 27 18:34:03.9±0.9, 10°.8N±0°.2×91°.6E±0°.2, h35km, n16, σ0s52/16, mb3.8/12, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKS2	Erkin-Say	35.36	337	eP	P	18 40 56.4	+0.4
	1.7nm,0.8s,mb4.0						
MK31	Makanchi Array	36.75	349	eP	P	18 41 07.6	-0.2
MKAR	Makanchi Array	36.75	349	P	P	18 41 07.8	0.0
	1.0nm,0.6s,mb3.8,baz=139,slow=8.2,SNR=11						
MKAR	Makanchi Array	36.75	349	P	P	18 41 07.8	0.0
SONM	Songino Array	38.98	16	P	P	18 41 27.1	+0.4
	0.3nm,0.6s,mb3.2,baz=193,slow=4.4,SNR=3.0						
KURK	Kurchatov	41.22	347	P	P	18 41 45.0	-0.2
	0.8nm,0.3s,mb3.9,baz=165,slow=7.3,SNR=2.3						
ZALV	Zalesovo Beam	43.39	354	P	P	18 42 02.3	-0.5
	0.9nm,0.6s,mb3.7,baz=184,slow=13,SNR=4.7						
FITZ	Fitzroy Crossi	44.20	130	P	P	18 42 09.0	-0.8
	2.8nm,1.1s,mb3.9,baz=271,slow=8.7,SNR=2.9						
AKTK	Aktyubinsk	48.21	332	P	P	18 42 40.6	-0.3
AKTO	Aktyubinsk	48.21	332	P	P	18 42 40.6	-0.3
	0.5nm,0.5s,mb3.9,baz=124,slow=8.1,SNR=3.1						
WRA	Warramunga Arr	51.99	126	P	P	18 43 09.8	-0.2
	0.3nm,0.5s,mb3.5,baz=301,slow=10.0,SNR=8.2						
WRA	Warramunga Arr	51.99	126	P	P	18 43 09.8	-0.3
WRAB	Tennant Creek	51.99	126	P	P	18 43 09.8	-0.3
	2.2nm,0.8s,mb4.1						
ASAR	Alice Springs	53.70	130	P	P	18 43 23.9	+1.3
	0.2nm,0.7s,mb3.2,baz=296,slow=7.0,SNR=4.3						
BRTR	Keskin Array B	58.64	310	P	P	18 43 57.8	+0.1
	0.4nm,0.5s,mb3.7,baz=140,slow=7.0,SNR=3.5						
ARCES	ARCESS Array B	71.69	340	P	P	18 45 22.6	+0.8
	3.6nm,1.0s,mb4.2,baz=64,slow=4.1,SNR=4.6						

*ISCJB **27** 18:53:46.8±0.4, 27°.03N±0°.03×55°.20E±0°.03, h10km, Error ellipse: s-maj=5.1km s-min=4.1km az=24.2*
*CSEM **27** 18:53:47.8±0.5, 27°.06N×55°.21E, h2km, ML3.2, Error ellipse: s-maj=14.5km s-min=10.9km az=39.0*
*TEH **27** 18:53:47.3, 26°.82N×55°.26E, h12km*
*KISR **27** 18:53:53.0±1.0, 26°.83N×54°.37E, h20km±999km, ML2.9*
*OMAN **27** 18:54:00.1±3.3, 26°.18N×55°.59E, h14km, Error ellipse: s-maj=2.8km s-min=0.0km az=246.0*
ISC 27 18:53:48.0±0.4, 26°.97N±0°.03×55°.24E±0°.03, h10km, n23, σ0s95/33, 4C-2D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	0.93	62	ePg	Pg	18 54 05.4	-0.6
BNDS				eSg	Sg	18 54 18.3	+0.2
IBND	Bandar-abas	1.25	67	ePg	Pg	18 54 10.7	-1.3
IBND				eSg	Sg	18 54 28.1	-0.2
IBND				e		18 54 40.2	
	comp=Z,13μm,0.1s						
BANOM	Banah	1.41	137	P	Pn	18 54 13.4	-0.3
	SNR=88						
BANOM				P		18 54 13.4	
	SNR=88						
BANOM				⇑P		18 54 13.8	
BANOM				⇑P		18 54 13.8	
BANOM	Banah	1.41	137	P	Pn	18 54 13.8	+0.1
BANOM				S	Sn	18 54 30.1	-2.2
NAZ	Nazwa, Dubai	2.01	169	P	Pb	18 54 25.9	+1.3
FAQ	Al Faqa, Dubai	2.24	172	P	Pb	18 54 28.5	0.0
HATD	Hatta, Dubai	2.28	159	P	Pn	18 54 25.5	-0.2
ASUD	Al Ashush, Dub	2.33	178	P	Pb	18 54 31.0	+0.8
	SNR=10						
GHIR	Ghir-Karzin	2.39	304	ePn	Pn	18 54 27.9	+0.7
GHIR				eSg	Sg	18 55 02.3	-2.5
ASHO	Ashiyiah	2.39	162	⇓P	Pn	18 54 27.4	+0.2
	SNR=32						
ASHO				⇓P		18 54 27.4	
	SNR=32						
ASHO				⇑P		18 54 27.5	
ASHO				⇑P		18 54 27.5	
ASHO	Ashiyiah	2.39	162	P	Pn	18 54 27.4	+0.2
	SNR=32						
ISRV	Sarvestan	3.05	322	ePn	Pn	18 54 37.5	+1.2
ISRV				e		18 55 38.4	
	comp=Z,672nm,0.3s						
KRBR	Kerman	3.29	24	ePn	Pn	18 54 40.8	+1.3
IMEH	Mehriz	4.44	353	ePn	Pn	18 54 56.6	+1.2
IMEH				e		18 54 57.6	
	comp=Z,353nm,0.2s						
IBAF	Bafgh	4.61	3	ePn	Pn	18 54 58.3	+0.5
IBAF				e		18 54 58.9	
	comp=Z,613nm,0.1s						
IGAR	Gharneh	6.09	334	ePn	Pn	18 55 18.5	+0.5
IGAR				e		18 55 19.5	
	comp=Z,146nm,0.1s						
IZEF	Zefreh	6.42	338	ePn	Pn	18 55 22.3	-0.3
IZEF				e		18 55 25.4	
	comp=Z,59nm,0.1s						
RDF	Al-Radifah	7.08	288	eP	Pn	18 55 31.0	-0.6
RDF				eS	Sn	18 56 43.6	-8.5
RDF				AML	AML	18 56 45.8	
	comp=Z,4.0nm,0.4s						
RDF	Al-Radifah	7.08	288	eP	Pn	18 55 31.0	-0.6
RDF				eS	Sn	18 56 43.6	-8.5
	comp=Z,4.0nm,0.4s						
UMR	Umm Al-Rimmam	7.12	293	eP	Pn	18 55 31.7	-0.4
UMR				eS	Sn	18 56 46.0	-7.1
UMR				AML	AML	18 56 47.5	
	comp=Z,4.8nm,0.3s						
UMR	Umm Al-Rimmam	7.12	293	eP	Pn	18 55 31.7	-0.5
UMR				eS	Sn	18 56 46.0	-7.1
NAY	Al-Naaiem	7.42	290	eP	Pn	18 55 35.7	-0.6
NAY				eS	Sn	18 56 53.5	-7.1
NAY				AML	AML	18 56 55.7	
	comp=Z,1.5nm,0.7s						
NAY	Al-Naaiem	7.42	290	eP	Pn	18 55 35.7	-0.6
NAY				eS	Sn	18 56 53.5	-7.1

*ISCJB **27** 19:04:13.2±0.3, 32°.73N±0°.02×115°.76W±0°.02, h19km±4km, Error ellipse: s-maj=3.4km s-min=3.0km az=11.0*
*NEIC **27** 19:04:14.2, 32°.71N×115°.81W, h6km, ML3.0(PAS), After PAS.*
*ECX **27** 19:04:14.5±0.6, 32°.72N×115°.82W, h4km±2km, MD3.0, ML3.1*
ISC 27 19:04:13.1±0.3, 32°.73N±0°.02×115°.77W±0°.02, h16km±2km, n38, σ0s78/61, 18C-19D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGL	Mount Signal	0.09	152	⇓iP	Pg	19 04 16.4	0.0
COK	Cook Ranch	0.13	18	⇓iP	Pg	19 04 17.6	+0.8
YUH	Yuha Desert	0.15	238	⇑iP	Pg	19 04 16.8	-0.3
SWSC	Sam W. Stewart	0.21	355	P	Pg	19 04 18.6	+0.5
	baz=0.2,SNR=279						
SWSC				⇓S	Sg	19 04 22.0	+0.6
	baz=0.2						
CRR	Carrizo Plain	0.23	314	⇓iP	Pg	19 04 18.6	+0.2
DVTC	Desert V Tower	0.28	256	P	Pg	19 04 19.3	0.0
	baz=0.2,SNR=139						
DVTC				⇑S	Sg	19 04 23.3	0.0
	baz=0.2						
RMX	La Rumorosa	0.29	244	⇑eP	Pg	19 04 19.0	-0.2
RMX				eS	Sg	19 04 23.0	-0.4
CPBX	Cerro Prieto	0.50	128	⇓eP	Pg	19 04 24.3	+1.3
CPBX				eS	Sg	19 04 31.0	+1.2
MONP	Monument Peak	0.57	287	P	Pg	19 04 24.4	+0.1
	baz=0.5,SNR=323						
MONP				⇓S	Sg	19 04 31.7	-0.2
	baz=0.5						
BAR	Barrett	0.76	267	ePg	Pg	19 04 27.4	-0.6
BAR				eSg	Sg	19 04 36.7	-1.2
RDX	Rancho Dawling	0.81	190	⇓eP	Pb	19 04 28.0	-0.7
RDX				eS	Sb	19 04 39.0	-0.4
RDX				e		19 04 39.8	
	comp=N,343nm,0.3s						
CBX	Cerro Bola	0.86	242	⇑eP	Pb	19 04 29.4	-0.2
CBX				eS	Sb	19 04 40.2	-0.7
GLA	Glamis	0.86	68	P	Pb	19 04 29.6	0.0
	baz=0.9,SNR=89						
GLA				⇓S	Sb	19 04 41.0	+0.1
	baz=0.9						
GLA	Glamis	0.86	68	ePg	Pg	19 04 29.3	-0.5
GLA				eSg	Sg	19 04 40.9	-0.2
EMX	El Mayor	0.86	148	⇑eP	Pb	19 04 29.8	+0.2
EMX				eS	Sb	19 04 41.4	+0.4
BC3	Big Chuckawall	0.96	16	⇑P	Pb	19 04 31.5	+0.1
	baz=1.0,SNR=22						
112A	Yuma	1.02	100	⇓S	Sb	19 04 44.9	-0.7
	baz=1.1						
PFO	Pinyon Flat Ob	1.05	327	P	Pb	19 04 32.0	-0.9
	baz=1.1,SNR=113						
PFO				⇑S	Sb	19 04 46.1	-0.3
	baz=1.1						
PFO	Pinyon Flat Ob	1.05	327	ePg	Pg	19 04 32.0	-1.4
PFO				eSg	Sg	19 04 46.7	-0.5
109C	Camp Elliot, M	1.13	279	⇓P	Pn	19 04 33.7	-0.6
	baz=1.1,SNR=12						
109C				⇑S	Sb	19 04 48.0	-0.8
	baz=1.1						
PBX	Punta Banda	1.27	220	⇑eP	Pn	19 04 36.3	+0.1
PBX				eS	Sb	19 04 52.6	-0.1
PBX				⇑e		19 04 54.0	
	comp=N,478nm,0.2s						
ECNX	Esteban Cantu	1.27	213	⇓eP	Pn	19 04 36.4	+0.1
ECNX				eP		19 04 34.1	
ECNX				eS	Sb	19 04 48.6	-4.3
ECNX				eS	Sb	19 04 52.9	0.0
BELC	Belle Mtn. Jos	1.28	352	⇑Pb	Pb	19 04 37.3	+0.4
	baz=1.3						
ECBX	El Chinero	1.39	154	eP	Pn	19 04 38.9	+1.0
ECBX				eS	Sn	19 04 57.2	+1.4
Y12C	Blythe	1.46	45	⇓P	Pn	19 04 38.4	-0.4
	baz=1.5						
Y12C				⇓S	Sn	19 04 57.7	+0.1
	baz=1.5						
MURC	Murrieta	1.48	306	⇓Pb	Pb	19 04 40.5	+0.3
	baz=1.5						
MURC				⇓Sb	Sb	19 04 59.5	+0.8
	baz=1.5						
113A	Mohawk Valley,	1.69	88	⇓P	Pn	19 04 41.3	-0.7
	baz=1.7,SNR=13						
113A				⇓S	Sn	19 05 02.6	-0.6
	baz=1.7						
SPX	San Pedro Mart	1.70	171	eP	Pn	19 04 44.1	+2.1
SPX				eS	Sn	19 05 07.0	+3.6
Z13A	Yuma Proving G	1.84	75	P	Pn	19 04 43.6	-0.4
	baz=1.9,SNR=61						
Y13A	Salome	1.96	56	⇑P	Pn	19 04 45.4	-0.2
	baz=2.0,SNR=12						
BFSC	Mount Baldy Ra	2.18	314	⇓Sb	Sb	19 05 20.3	+1.3
	baz=2.2						
CIS	Catalina Islan	2.31	288	⇑Sb	Sb	19 05 24.1	+1.4
	baz=2.3						
114A	Black Gap (USA	2.44	89	⇑P	Pn	19 04 51.8	-0.4
	baz=2.5,SNR=8.7						
Z14A	Wintersburg	2.46	74	⇑P	Pn	19 04 52.3	-0.2
	baz=2.5						
214A	Organ Pipe Nat	2.62	106	⇑P	Pn	19 04 54.0	-0.7
	baz=2.6						
214A				⇑S	Sn	19 05 24.4	-1.9
	baz=2.6						
GSC	Goldstone	2.71	342	ePn	Pn	19 05 02.1	+6.2
EDW2	Edwards Air Fo	2.83	320	⇑Sb	Sb	19 05 40.4	+2.8
	baz=2.8						
115A	Sonoran Desert	2.99	90	⇓P	Pn	19 04 59.8	0.0
	baz=3.0,SNR=7.4						

IDC 27 19:07:01.3±11.0, 10°.88N×91°.87E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.2/23, mbtmp3.4/3, Error ellipse: s-maj=575.3km s-min=28.5km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	36.70	349	P	P	19 14 10.0	0.0
	0.2nm,0.5s,baz=141,slow=8.6,SNR=5.4						
WRA	Warramunga Arr	51.82	126	P	P	19 16 11.3	-0.1
	0.2nm,0.3s,baz=308,slow=8.1,SNR=10.0						
ASAR	Alice Springs	53.55	130	P	P	19 16 24.4	+0.1
	0.3nm,0.5s,baz=304,slow=6.9,SNR=8.5						

CASC 27 19:11:08.9±1.8, 12°.44N×87°.88W, h61km±109km, MD3.7, ML3.3, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	Conchagua	0.83	3	eP	Pn	19 11 25.2	+0.3
CNCH				eS	Sn	19 11 38.1	+1.5
CRIN	San Cristobal	0.85	72	eP	Pn	19 11 25.1	0.0
CRIN				eS	Sn	19 11 38.1	+1.2
CRIN				AML	AML	19 11 40.1	
	comp=E,1μm,0.1s						
VSM	San Miguel	1.06	339	eP	Pn	19 11 29.4	+1.6
VSM				eS	Sn	19 11 42.2	+0.5
BLLM	Bellamira	1.06	341	eP	Pn	19 11 27.9	+0.2
COPN	Copaltepe	1.28	101	eP	Pn	19 11 29.7	-1.1
COPN				AML	AML	19 11 48.4	
	comp=Z,246nm,0.5s						
MOMN	Momotombo	1.31	91	eP	Pn	19 11 30.7	-0.3

MAN 27 19:15:08, 5°.58N×124°.93E, h3km, mb5.0, ML4.0, MS4.1, 1C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	General Santos	0.50	2	⇓iP	Pg	19 15 20.3	+2.7
GSPH				eS	Sg	19 15 27.6	+3.4
KCP	Kidapawan	1.43	6	⇓eP	Pn	19 15 36.0	+1.2
KCP				iS	Sb	19 15 54.4	+0.6
DMPH	Davao City--Mi	1.60	21	⇑eP	Pn	19 15 37.7	+0.5
DMPH				eS	Sn	19 15 58.4	0.0
CTBH	Cotabato--PC H	1.76	337	⇓eP	Pn	19 15

CM31	**Chiang Mai Arr**	**10.17**	**42**	*e*Pn	**Pn**	**19 22 14.3**	**+0.5**
	13nm,0.7s						
CM31				*e*Sn	**Sn**	**19 24 11.3**	**+4.3**
CMAR	**Chiang Mai Arr**	**10.17**	**42**	Pn	**Pn**	**19 22 14.2**	**+0.4**
	0.4nm,0.3s,baz=237,slow=15,SNR=15						
CMAR				Sn	**Sn**	**19 24 11.2**	**+4.2**
	0.2nm,0.3s,baz=28,slow=6.6,SNR=3.0						
KULM	**Kulim**	**10.41**	**122**	*e*Pn	**Pn**	**19 22 16.2**	**-0.8**
	22nm,0.9s						
CHTO	**Chiang Mai**	**10.43**	**41**	*e*P	**Pn**	**19 22 18.2**	**+0.9**
CHTO				pmax	pmax		
	comp=Z,16nm,0.9s						
CHTO	**Chiang Mai**	**10.43**	**41**	*e*Pn	**Pn**	**19 22 18.1**	**+0.8**
	comp=Z,16nm,0.9s						
CHTO				*e*Sn	**Sn**	**19 24 00.8**	**-13**
VIS	**Vishakhapatnam**	**10.61**	**310**	*e*PKP	**Pn**	**19 22 17.3**	**-2.5**
VIS				*e*S	**Sn**	**19 24 08.0**	**-10**
PSI	**Prapat**	**10.75**	**138**	Pn	**Pn**	**19 22 22.5**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=331,slow=18,SNR=3.6						
PSI	**Prapat**	**10.75**	**138**	Pn	**Pn**	**19 22 22.5**	**+0.8**
IPM	**Ipoh**	**11.17**	**124**	P	**Pn**	**19 22 27.1**	**-0.4**
FRIM	**Kepong**	**12.40**	**127**	P	**Pn**	**19 22 43.9**	**-0.3**
KTGM	**Kuala Trenggan**	**12.53**	**116**	P	**Pn**	**19 22 47.5**	**+1.4**
HYB	**Hyderabad**	**14.36**	**298**	*i* P	**Pn**	**19 23 10.0**	**-1.0**
HYB				*e*S	Sn	19 26 12.0	+23
KGM	**Kluang**	**14.47**	**127**	P	**Pn**	**19 23 11.5**	**-1.2**
SHL	**Shillong**	**14.54**	**0**	*ex*	**Pn**	**19 23 20.0**	**+6.5**
TRD	**Trivandrum**	**14.83**	**262**⇓	*ex*	**Pn**	**19 23 12.0**	**-5.4**
MYKOM	**Kota Tinggi**	**15.03**	**126**	P	**Pn**	**19 23 19.0**	**-1.2**
NGP	**Nagpur**	**15.89**	**311**	*ex*	**Pn**	**19 23 30.8**	**-0.6**
NGP				*ex*	x	19 23 42.6	
	comp=Z,60nm,1.1s						
NGP				*ex*	x	19 26 15.2	
ODAN	**Odare**	**16.36**	**346**	*e*P	**Pn**	**19 23 33.5**	**-3.9**
	comp=Z,57nm,0.7s						
RAMN	**Ramite**	**16.66**	**344**	*e*P	**Pn**	**19 23 36.9**	**-4.1**
	comp=Z,124nm,0.7s						
TAPN	**Taplejung**	**16.76**	**347**	*e*P	**Pn**	**19 23 38.9**	**-3.5**
	comp=Z,113nm,0.9s						
JIRN	**Jiri**	**17.44**	**343**	*e*P	**Pn**	**19 23 46.3**	**-4.6**
	comp=Z,42nm,0.6s						
KMI	**Kunming**	**17.50**	**35**	P	**Pn**	**19 23 53.0**	**+1.3**
KMI				pP	pP	19 24 03.5	+3.3
KMI				PP		19 24 09.0	
KMI				sP	sP	19 24 11.5	+7.7
KMI				S	**Sn**	**19 27 05.0**	**-0.9**
KMI				sS	sS	19 27 21.0	-4.2
KMI				SS		19 27 28.5	
KMI				pmax	pmax		
	comp=Z,14nm,1.1s						
KMI				pmax	pmax		
	comp=Z,71nm,3.1s						
KMI				LR	LR		
	comp=N,1μm,16.7s						
KMI				LR	LR		
	comp=E,630nm,21.1s						
KMI				LR	LR		
	comp=Z,1μm,19.5s						
PKI	**Pulchoki**	**17.59**	**341**	*e*P	**Pn**	**19 23 48.4**	**-4.4**
	comp=Z,178nm,1.2s						
PKIN	**Phulchoki**	**17.60**	**341**	*e*P	**Pn**	**19 23 48.4**	**-4.5**
	comp=Z,32nm,0.5s						
DMN	**Daman**	**17.73**	**340**	*e*P	**Pn**	**19 23 49.6**	**-4.8**
	comp=Z,120nm,0.9s						
GUN	**Gumba**	**17.77**	**343**	*e*P	**Pn**	**19 23 50.7**	**-4.2**
	comp=Z,66nm,0.8s						
KKN	**Kakani**	**17.84**	**341**	*e*P	**Pn**	**19 23 51.1**	**-4.7**
	comp=Z,30nm,0.6s						
KAD	**Karad**	**18.21**	**292**	*e*PKP	**Pn**	**19 23 58.9**	**-1.5**
KAD				AMb	AMB	19 24 08.1	
	comp=E,30nm,1.2s						
BHPL	**Bhopal**	**18.37**	**314**	*e*PKP	**Pn**	**19 24 00.8**	**-1.6**
BHPL				AMb	AMB	19 24 06.7	
	comp=Z,46nm,1.6s						
LSA	**Lhasa**	**18.67**	**358**	P	**Pn**	**19 24 06.0**	**+0.1**
LSA				S	**Sn**	**19 27 29.5**	**-4.4**
POO	**Poona**	**18.91**	**296**	*e*PKP	**Pn**	**19 24 05.1**	**-3.9**
POO				*ex*	x	19 24 09.0	
POO				*i* S	**Sn**	**19 27 39.0**	**-1.0**
KSM	**Kuching**	**20.65**	**116**	P	**P**	**19 24 26.6**	**-0.6**
KSM	**Kuching**	**20.65**	**116**	*e*P	**P**	**19 24 25.7**	**-1.5**
	comp=Z,55nm,1.0s						
GYA	**Guiyang**	**20.85**	**40**	P	**P**	**19 24 29.0**	**-0.3**
GYA				pP		19 24 40.0	
GYA				sP	sP	19 24 46.0	+5.5
GYA				PP		19 24 52.3	
GYA				S	**S**	**19 28 13.8**	**-6.8**
GYA				PcP	PcP	19 28 37.0	-0.4
GYA				SS		19 28 47.0	
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,110nm,3.2s						
GYA				LR	LR		
	comp=N,2μm,15.2s,MS4.6						
GYA				LR	LR		
	comp=E,1μm,16.7s,MS4.6						
GYA				LR	LR		
	comp=Z,2μm,18.5s,MS4.5						
PTH	**Pithoragarh**	**21.43**	**331**	*e*PKP	**P**	**19 24 36.5**	**+1.0**
SBUM	**Sibu**	**21.95**	**111**	P	**P**	**19 24 41.1**	**-0.2**
NDI	**New Delhi**	**22.31**	**324**	*e*PKP	**P**	**19 24 43.0**	**-1.9**
NDI				*ex*	x	19 28 48.0	
BTM	**Bintulu**	**22.47**	**108**	P	**P**	**19 24 46.4**	**-0.3**
CD2	**Chengdu**	**22.75**	**27**	*e*P	**P**	**19 24 50.0**	**+0.4**
CD2				pP		19 25 04.3	
CD2				sP	sP	19 25 11.5	+11
CD2				PP		19 25 21.8	
CD2				S	**S**	**19 28 50.5**	**-6.5**
CD2				sS	sS	19 29 14.3	+4.4
CD2				SS		19 29 37.5	
CD2				pmax	pmax		
	comp=Z,120nm,0.8s,mb5.4						
CD2				pmax	pmax		
	comp=Z,160nm,5.2s						
CD2				LR	LR		
	comp=N,670nm,16.8s,MS4.4						
CD2				LR	LR		
	comp=E,860nm,14.4s,MS4.4						
CD2				LR	LR		
	comp=Z,640nm,13.2s,MS4.2						
DDI	**Dehra Dun**	**23.13**	**328**	*e*PKP	**P**	**19 24 53.0**	**-0.6**
DDI				*e*S	**S**	**19 29 06.5**	**+3.3**
KKM	**Kota Kinabalu**	**24.63**	**99**	P	**P**	**19 25 08.6**	**+0.7**
KKM	**Kota Kinabalu**	**24.63**	**99**	*e*P	**P**	**19 25 08.1**	**+0.2**
	comp=Z,20nm,1.1s,mb4.6						
SDNR	**Sundarnagar**	**24.63**	**328**	*ex*	**P**	**19 25 09.5**	**+1.8**
KDM	**Kudat**	**25.05**	**97**	P	**P**	**19 25 11.4**	**-0.3**
SDKM	**Sandakan**	**25.67**	**100**	P	**P**	**19 25 17.3**	**0.0**
THN	**Thein Dam**	**26.02**	**328**	*e*PKP	**P**	**19 25 19.4**	**-0.9**
TSM	**Tawau**	**26.66**	**102**	P	**P**	**19 25 26.2**	**-0.1**
MYLDM	**Lahad Datu**	**27.04**	**100**	P	**P**	**19 25 28.9**	**-0.8**
LZH	**Lanzhou**	**27.30**	**22**	*e*P	**P**	**19 25 31.5**	**-0.3**
LZH				pP	pP	19 25 43.0	+3.0
LZH				sP	sP	19 25 48.8	+5.3
LZH				PP		19 26 20.0	
LZH				*e*S	**S**	**19 30 06.5**	**-3.2**
LZH				SS		19 31 26.3	
LZH				pmax	pmax		
	comp=Z,25nm,1.1s,mb4.7						
LZH				pmax	pmax		
	comp=Z,130nm,4.5s						
LZH				LR	LR		
	comp=E,600nm,12.0s						
LZH				LR	LR		
	comp=Z,990nm,15.2s,MS4.5						
WHN	**Wuhan**	**28.61**	**44**	P	**P**	**19 25 51.8**	**+8.2**
WHN				S	**S**	**19 30 30.3**	**-0.2**
WHN				LR	LR		
	comp=N,750nm,9.4s						
WHN				LR	LR		
	comp=E,1μm,9.9s						
WHN				LR	LR		
	comp=Z,1μm,19.3s,MS4.6						
GTA	**Gaotai**	**29.23**	**13**	⇓P	**P**	**19 25 50.0**	**+1.0**
GTA				pP	pP	19 26 04.3	+7.1
GTA				sP	sP	19 26 12.5	+12
GTA				PcP	PcP	19 28 57.0	+1.3
GTA				S	**S**	**19 30 40.5**	**+0.5**
GTA				sS	sS	19 31 05.8	+12
GTA				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.7						
GTA				pmax	pmax		
	comp=Z,110nm,8.4s						
GTA				LR	LR		
	comp=N,410nm,15.8s,MS4.2						
GTA				LR	LR		
	comp=E,290nm,17.9s,MS4.2						
GTA				LR	LR		
	comp=Z,400nm,17.9s,MS4.1						
KBL	**Kabul**	**31.34**	**322**	*e*P	**P**	**19 26 07.8**	**+0.1**
KBL				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.8						
KBL	**Kabul**	**31.34**	**322**	*e*P	**P**	**19 26 07.8**	**+0.1**
	comp=Z,16nm,0.9s,mb4.8						
KSH	**Kashi**	**31.74**	**336**	P	**P**	**19 26 10.5**	**-0.7**
KSH				pP	pP	19 26 25.3	+5.9
KSH				sP	sP	19 26 32.5	+10
KSH				PP	PP	19 27 16.8	-6.4
KSH				PcP	PcP	19 29 01.8	-0.5
KSH				S	**S**	**19 31 14.0**	**-5.3**
KSH				sS	sS	19 31 39.5	+6.6
KSH				ScP	ScP	19 32 38.5	-5.4
KSH				PcS	PcS	19 32 45.0	-1.8
KSH				SS	SS	19 33 06.3	-30
KSH				ScS	ScS	19 36 35.0	-7.0
KSH				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.0						
KSH				pmax	pmax		
	comp=Z,58nm,4.4s						
KSH				LR	LR		
	comp=N,150nm,7.4s						
KSH				LR	LR		
	comp=E,370nm,11.8s						
KSH				LR	LR		
	comp=Z,220nm,10.8s,MS4.1						
NJ2	**Nanjing**	**32.62**	**46**	*e*P	**P**	**19 26 20.0**	**+1.0**
NJ2				pP	pP	19 26 34.5	+7.3
NJ2				sP	sP	19 26 42.0	+11
NJ2				PP	PP	19 27 30.0	-3.0
NJ2				S	**S**	**19 31 34.5**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
NJ2				pmax	pmax		
	comp=Z,150nm,4.0s						
NJ2				LR	LR		
	comp=N,670nm,14.7s,MS4.6						
NJ2				LR	LR		
	comp=E,550nm,14.3s,MS4.6						
NJ2				LR	LR		
	comp=Z,580nm,11.4s,MS4.5						
WMQ	**Urumqi**	**32.95**	**355**	P	**P**	**19 26 23.0**	**+1.3**
WMQ				pP	pP	19 26 38.0	+8.1
WMQ				sP	sP	19 26 45.0	+12
WMQ				PP	PP	19 27 35.0	-1.4
WMQ				S	**S**	**19 31 36.0**	**-2.0**
WMQ				sS	sS	19 32 03.0	+11
WMQ				SS	SS	19 33 39.0	-22
WMQ				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.1						
WMQ				pmax	pmax		
	comp=Z,89nm,3.0s						
WMQ				LR	LR		
	comp=N,310nm,15.0s,MS4.6						
WMQ				LR	LR		
	comp=E,850nm,15.0s,MS4.6						
WMQ				LR	LR		
	comp=Z,250nm,15.0s,MS4.0						
SSE	**Sheshan**	**33.80**	**49**	P	**P**	**19 26 28.0**	**-1.3**
SSE				pmax	pmax		
	comp=Z,24nm,0.7s,mb5.2						
SSE				pmax	pmax		
	comp=Z,83nm,4.3s						
SSE				LR	LR		
	comp=N,300nm,23.7s,MS4.1						
SSE				LR	LR		
	comp=E,290nm,24.0s,MS4.1						
SSE				LR	LR		
	comp=Z,240nm,20.9s,MS3.9						
ULHL	**Ulahol**	**34.02**	**339**	P	**P**	**19 26 32.0**	**+1.0**
	SNR=5.9						
KZA	**Kyzart**	**34.23**	**338**	P	**P**	**19 26 35.0**	**+2.2**
	SNR=11						
HHC	**Hu-ho-hao-te**	**34.51**	**27**	*e*P	**P**	**19 26 36.0**	**+0.7**
HHC				pP	pP	19 26 51.3	+7.7
HHC				sP	sP	19 26 58.0	+11
HHC				PP	PP	19 27 54.3	+0.5
HHC				PcP	PcP	19 29 10.8	+0.8
HHC				S	**S**	**19 32 00.0**	**-2.3**
HHC				sS	sS	19 32 25.3	+9.3
HHC				ScP	ScP	19 32 48.3	-5.2
HHC				PcS	PcS	19 32 55.5	-0.9
HHC				SS	SS	19 34 15.3	-17
HHC				ScS	ScS	19 36 50.3	-5.9
HHC				pmax	pmax		
	comp=Z,17nm,0.6s,mb5.2						
HHC				pmax	pmax		
	comp=Z,150nm,7.4s						
HHC				LR	LR		
	comp=N,350nm,13.8s,MS4.5						
HHC				LR	LR		
	comp=E,510nm,15.9s,MS4.5						
HHC				LR	LR		
	comp=Z,210nm,17.6s,MS3.9						
UCH	**Uchtor**	**34.63**	**337**	P	**P**	**19 26 38.1**	**+1.7**
	SNR=11						
UCH	**Uchtor**	**34.63**	**337**	*e*P	**P**	**19 26 37.9**	**+1.5**
UCH				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
UCH	**Uchtor**	**34.63**	**337**	*e*P	**P**	**19 26 37.9**	**+1.5**
	comp=Z,8.3nm,0.9s,mb4.7						
TKM2	**Tokmak 2**	**34.84**	**339**	P	**P**	**19 26 38.3**	**+0.2**
	SNR=10						
TKM2	**Tokmak 2**	**34.84**	**339**	*e*P	**P**	**19 26 38.0**	**-0.1**
TKM2				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
TKM2	**Tokmak 2**	**34.84**	**339**	*e*P	**P**	**19 26 38.0**	**-0.1**
	comp=Z,12nm,1.0s,mb4.8						
KBK	**Karagaybulak**	**34.84**	**338**	P	**P**	**19 26 40.1**	**+1.9**
	SNR=9.8						
AAK	**Ala-Archa**	**34.99**	**337**	P	**P**	**19 26 41.4**	**+1.9**
	SNR=10						
FRU	**Bishkek**	**35.12**	**338**	*e*P	**P**	**19 26 40.5**	**0.0**
FRU				pmax	pmax		
	comp=Z,45nm,1.8s,mb5.1						
CHMS	**Chumysh**	**35.21**	**338**	P	**P**	**19 26 42.3**	**+0.9**
	SNR=7.3						
EKS2	**Erkin-Say**	**35.29**	**337**	P	**P**	**19 26 43.9**	**+1.9**
	SNR=26						
EKS2	**Erkin-Say**	**35.29**	**337**	*e*P	**P**	**19 26 43.5**	**+1.5**
EKS2				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.1						
EKS2	**Erkin-Say**	**35.29**	**337**	*e*P	**P**	**19 26 43.5**	**+1.5**
	comp=Z,21nm,0.9s,mb5.1						
EKS2				*e*		19 27 06.1	
USP	**Ospenovka**	**35.53**	**338**	P	**P**	**19 26 45.2**	**+1.1**
	SNR=18						
BJI	**Beijing**	**36.14**	**33**	P	**P**	**19 26 50.0**	**+0.7**
BJI				pP	pP	19 27 01.5	+3.9
BJI				sP	sP	19 27 09.0	+8.0
BJI				S	**S**	**19 32 26.3**	**-1.0**
BJI				sS	sS	19 32 49.3	+8.3
BJI				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.7						
BJI				LR	LR		
	comp=N,570nm,21.5s,MS4.6						
BJI				LR	LR		
	comp=E,770nm,19.5s,MS4.6						
BJI				LR	LR		
	comp=Z,500nm,18.8s,MS4.3						
MK31	**Makanchi Array**	**36.62**	**349**	*e*P	**P**	**19 26 53.5**	**+0.1**
MK31				*e*		19 27 16.7	
MKAR	**Makanchi Array**	**36.62**	**349**	P	**P**	**19 26 53.7**	**+0.3**
	comp=Z,19nm,0.8s,mb5.0,baz=132,slow=8.9,SNR=154						
MKAR	**Makanchi Array**	**36.62**	**349**	P	**P**	**19 26 53.7**	**+0.3**
SONM	**Songino Array**	**38.77**	**16**	P	**P**	**19 27 12.0**	**+0.5**
	comp=Z,8.7nm,1.0s,mb4.5,baz=198,slow=8.8,SNR=47						
SONM				PcP	PcP	19 29 22.4	-0.3
	comp=Z,2.2nm,0.9s,baz=201,slow=7.7,SNR=3.2						
SONM				LR	LR	19 46 23.8	
	comp=Z,318nm,18.5s,MS4.2,baz=196,slow=41						
SONM	**Songino Array**	**38.77**	**16**	P	**P**	**19 27 12.0**	**+0.5**
SONM						19 29 22.4	
ULN	**Ulaanbaatar**	**38.97**	**16**	*e*P	**P**	**19 27 13.1**	**-0.1**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.3						
ULN	**Ulaanbaatar**	**38.97**	**16**	*e*P	**P**	**19 27 13.1**	**-0.1**
	comp=Z,7.0nm,1.1s,mb4.3						
ZAK	**Zakamensk**	**40.44**	**11**	*e*P	**P**	**19 27 25.7**	**+0.3**
ZAK				*e*		19 29 28.5	
KURK	**Kurchatov**	**41.10**	**347**	*e*P	**P**	**19 27 31.1**	**+0.2**
KURK				pmax	pmax		
	comp=Z,34nm,1.1s,mb4.9						
KURK	**Kurchatov**	**41.10**	**347**	*d i*P	**P**	**19 27 31.2**	**+0.3**
KURK				pmax	pmax		
	comp=Z,33nm,1.0s,mb4.9						
KURK	**Kurchatov**	**41.10**	**347**	*e*P	**P**	**19 27 31.1**	**+0.2**
	comp=Z,34nm,1.1s,mb4.9						
KURK				*e*		19 27 54.0	
KURK				*e*		19 27 59.9	
TLY	**Talaya**	**41.75**	**11**	*e*P	**P**	**19 27 38.1**	**+2.0**
TLY				*e*PPP		19 29 52.2	
TLY				*e*S	**S**	**19 34 00.4**	**+8.9**
TLY				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.1						
TLY				MLR	MLR		
	comp=Z,199nm,16.0s,MS4.1						
TLY	**Talaya**	**41.75**	**11**	*e*P	**P**	**19 27 37.6**	**+1.5**
	comp=Z,6.1nm,0.9s,mb4.2						
KSRS	**Korea Array**	**41.80**	**45**	P	**P**	**19 27 36.1**	**-0.7**
	comp=Z,2.8nm,1.0s,mb3.8,baz=246,slow=9.5,SNR=7.2						
KSRS				S	**S**	**19 33 57.8**	**+5.1**
	comp=Z,0.4nm,0.6s,baz=266,slow=26,SNR=2.0						
KSRS				LR	LR	19 46 42.9	
	comp=Z,321nm,19.1s,MS4.2,baz=238,slow=39						
MBWA	**Marble Bar**	**42.09**	**139**	*e*P	**P**	**19 27 38.3**	**-1.0**
	comp=Z,13nm,1.0s,mb4.5						
IRK	**Irkutsk**	**42.41**	**11**	*e*P	**P**	**19 27 41.7**	**+0.2**
IRK				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.6						
ZAA0	**Zalesovo Array**	**43.25**	**354**	*e*P	**P**	**19 27 48.1**	**-0.2**
ZALV	**Zalesovo Beam**	**43.25**	**354**	P	**P**	**19 27 48.3**	**0.0**
	comp=Z,10.0nm,0.6s,mb4.7,baz=170,slow=9.0,SNR=64						
ZALV				LR	LR	19 49 09.2	
	comp=Z,190nm,20.9s,MS4.0,baz=352,slow=41						
CN2	**Changchun**	**43.78**	**35**	*e*P	**P**	**19 27 53.0**	**+0.3**
CN2				*e*S	**S**	**19 34 23.0**	**+1.4**
CN2				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.8						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,19.0s,MS4.3						
CN2				LR	LR		
	comp=E,300nm,19.0s,MS4.3						
CN2				LR	LR		
	comp=Z,400nm,20.0s,MS4.3						
FITZ	**Fitzroy Crossi**	**44.15**	**130**	P	**P**	**19 27 55.4**	**-0.7**
	comp=Z,11nm,0.8s,mb4.6,baz=304,slow=4.9,SNR=23						
FITZ	**Fitzroy Crossi**	**44.15**	**130**	*e*P	**P**	**19 27 54.4**	**-1.6**
	comp=Z,61nm,0.9s,mb5.3						
NVS	**Novosibirsk**	**44.30**	**353**⇓	*i*P	**P**	**19 27 56.0**	**-0.8**
NVS				*e*		19 28 12.4	
NVS				*e*S	**S**	**19 34 23.0**	**-5.9**
NVS				pmax	pmax		
	comp=N,17nm,1.5s						
NVS				pmax	pmax		
	comp=Z,21nm,1.5s,mb4.7						
NVS				pmax	pmax		
	comp=E,5.0nm,1.3s						
NVS				smax			
	comp=N,16nm,2.3s						
NVS				smax			
	comp=E,20nm,2.1s						
CIT	**Chita**	**44.60**	**19**	*e*P	**P**	**19 27 58.6**	**-0.6**
RDF	**Al-Radifah**	**44.97**	**300**	*e*P	**P**	**19 28 03.0**	**+0.4**
RDF				AMb	AMB	19 28 06.3	
	comp=Z,39nm,1.4s,mb5.0						
UMR	**Umm Al-Rimmam**	**44.99**	**301**	*e*P	**P**	**19 28 02.7**	**0.0**
UMR				AMb	AMB	19 28 04.3	
	comp=Z,32nm,1.2s,mb5.0						
NAY	**Al-Naaiem**	**45.31**	**300**	*e*P	**P**	**19 28 05.2**	**-0.1**
NAY				AMb	AMB	19 28 06.8	
	comp=Z,24nm,1.4s,mb4.8						
BVAR	**Borovoye Array**	**45.36**	**342**	P	**P**	**19 28 05.0**	**-0.3**
	comp=Z,7.7nm,0.8s,mb4.6,baz=149,slow=6.9,SNR=40						
BVAR				PcP	PcP	19 29 45.0	+0.6
	comp=Z,1.9nm,0.7s,baz=143,slow=5.0,SNR=2.4						
BVAR				ScP	ScP	19 33 36.3	+0.9
	comp=Z,1.7nm,1.0s,baz=138,slow=7.4,SNR=3.8						
BVAR	**Borovoye Array**	**45.36**	**342**	P	**P**	**19 28 05.0**	**-0.2**
BVAR						19 29 45.0	
MIB	**Mutribah**	**45.37**	**301**	*e*P	**P**	**19 28 05.8**	**+0.1**
MIB				AMb	AMB	19 28 07.4	
	comp=Z,40nm,1.0s,mb5.2						
BRVK	**Borovoye**	**45.42**	**342**	*e*P	**P**	**19 28 05.0**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.8						
BRVK	**Borovoye**	**45.42**	**342**	*e*P	**P**	**19 28 05.0**	**-0.7**
	comp=Z,14nm,0.9s,mb4.8						
MDJ	**Mudanjiang**	**46.66**	**37**	P	**P**	**19 28 15.3**	**-0.3**
MDJ				pP	pP	19 28 28.5	+4.4
MDJ				sP	sP	19 28 34.8	+7.3
MDJ				PcP	PcP	19 29 48.0	-1.1
MDJ				PP	PP	19 30 05.3	-0.2
MDJ				S	**S**	**19 35 02.0**	**-1.3**
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
MDJ				pmax	pmax		
	comp=Z,87nm,7.1s						
MDJ				LR	LR		
	comp=N,200nm,19.9s,MS4.4						
MDJ				LR	LR		
	comp=E,390nm,17.6s,MS4.4						
MDJ				LR	LR		
	comp=Z,350nm,20.4s,MS4.3						
MAJO	**Matsushiro**	**48.92**	**51**	P	**P**	**19 28 32.7**	**-0.6**
MAT	**Matsushiro**	**48.92**	**51**	P	**P**	**19 28 33.5**	**+0.2**
MJAR	**Matsushiro Arr**	**48.92**	**51**	P	**P**	**19 28 33.7**	**+0.4**
	comp=Z,1.4nm,0.8s,mb4.0,baz=216,slow=6.5,SNR=6.4						
MJAR				PcP	PcP	19 29 57.8	+0.4
	comp=Z,1.8nm,0.8s,baz=240,slow=3.2,SNR=4.4						
MJAR				LR	LR	19 49 31.4	
	comp=Z,193nm,21.1s,MS4.1,baz=275,slow=36						
MJAR	**Matsushiro Arr**	**48.92**	**51**	P	**P**	**19 28 33.7**	**+0.4**
MJAR						19 29 57.8	
MJAR	**Matsushiro Arr**	**48.92**	**51**	P	**P**	**19 28 33.7**	**+0.4**
MJAR				PcP	PcP	19 29 57.8	+0.4
MJAR				LR	LR	19 49 31.4	
MAK	**Makhachkala**	**49.90**	**318**	*e*P	**P**	**19 28 39.8**	**-0.8**
MAK				*e*		19 30 00.5	
MAK				*i*		19 30 39.3	
MAK				*e*S	**S**	**19 35 50.8**	**+1.7**
MAK				*e*		19 38 27.4	
MAK				*e*SS	SS	19 39 17.2	-4.9
MAK				pmax	pmax		
	comp=Z,114nm,1.2s,mb5.8						
MAK				MLR	MLR		
	comp=Z,210nm,12.0s,MS4.4						
NWAO	**Narrogin (SRO)**	**49.92**	**152**	*e*P	**P**	**19 28 40.4**	**-0.5**
CBIJ	**Chichi jima**	**49.93**	**64**	LR	LR	19 50 50.4	
	comp=Z,94nm,18.1s,MS3.8,baz=131,slow=37						
KLR	**Kul'dur**	**50.51**	**33**	*e*P	**P**	**19 28 41.2**	**-3.9**
GNI	**Garni**	**50.65**	**313**⇑	*e*P	**P**	**19 28 46.6**	**+0.2**
GNI				pmax	pmax		
	comp=Z,38nm,1.2s						
GNI	**Garni**	**50.65**	**313**	*e*P	**P**	**19 28 48.4**	**+2.0**
	comp=Z,30nm,1.1s,mb5.1						
SVE	**Sverdlovsk**	**51.71**	**339**⇓	*e*P	**P**	**19 28 55.0**	**+0.9**
SVE				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.2						
WRA	**Warramunga Arr**	**51.92**	**126**	P	**P**	**19 28 55.3**	**-0.9**
	comp=Z,1.7nm,

KIV *e* 19 30 12.9
KIV *i* S **S** **19 36 52.1 +13**
KIV pmax pmax
comp=Z,47nm,1.0s,mb5.4
KIV Kislovodsk 53.50 317 *e*P **P** **19 29 08.3 +0.7**
comp=Z,38nm,0.9s,mb5.3
KIV *e* 19 29 31.6
ASAR Alice Springs 53.65 130 P **P** **19 29 08.7 -0.2**
comp=Z,2.6nm,0.7s,mb4.3,baz=303,slow=7.4,SNR=44
ASAJ Asahikawa 54.69 43 P **P** **19 29 17.6 +1.4**
comp=Z,2.7nm,0.8s,mb4.3,baz=259,slow=10,SNR=2.6
SOKR Solikamsk 55.12 339*d* *i*P **P** **19 29 19.7 +0.7**
SOKR pmax pmax
comp=Z,30nm,0.9s,mb5.3
SOKR MLR MLR
comp=Z,440nm,27.0s,MS4.4
KMBO Kilima Mbogo 55.54 261 P **P** **19 29 24.7 +1.9**
comp=Z,4.7nm,1.1s,mb4.4,baz=4.9,slow=23,SNR=6.6
KMBO Kilima Mbogo 55.54 261 *e*P **P** **19 29 24.1 +1.3**
KMBO pmax pmax
comp=Z,10.0nm,1.1s
KMBO Kilima Mbogo 55.54 261 *e*P **P** **19 29 24.1 +1.2**
comp=Z,9.5nm,1.1s,mb4.7
YSS Yuzh-Sakhalins 55.86 40 *e*P **P** **19 29 24.5 -0.1**
YSS MLR MLR
comp=E,300nm,14.0s
YSS MLR MLR
comp=Z,300nm,14.0s,MS4.5
YSS Yuzh-Sakhalins 55.86 40 P **P** **19 29 23.2 -1.4**
comp=Z,5.6nm,0.7s,mb4.7
MMAI Mount Meron Ar 56.01 302 LR LR 19 55 36.8
comp=Z,107nm,19.6s,MS3.9,baz=170,slow=38
ANN Anapa 57.33 317 *e*P **P** **19 29 32.9 -2.2**
ANN pmax pmax
comp=Z,14nm,1.2s,mb4.9
YAK Yakutsk 57.87 20 *e*P **P** **19 29 37.9 -0.7**
YAK *e**PP pP 19 29 47.7 +0.5
YAK *e* 19 30 31.8
YAK *e* 19 31 44.5
YAK *e*S **S** **19 37 33.6 -2.7**
YAK *e**SS sS 19 37 51.6 +1.0
YAK *e* 19 39 24.8
YAK *e*SSS 19 43 51.7
YAK pmax pmax
comp=Z,14nm,0.9s,mb5.0
YAK pmax pmax
comp=N,6.0nm,1.1s
YAK pmax pmax
comp=E,7.0nm,1.2s
YAK pmax pmax
comp=Z,11nm,1.5s,mb4.7
YAK pmax pmax
comp=N,11nm,1.9s
YAK smax
comp=E,91nm,2.4s
YAK smax
comp=N,45nm,1.9s
YAK Yakutsk 57.87 20 *e*P **P** **19 29 38.0 -0.6**
comp=N,25nm,0.9s,mb5.2
VORD Divnogorie 58.39 324 *e*P **P** **19 29 41.8 -0.6**
VORD pmax pmax
comp=E,1.0nm,1.1s
VSR Storozhevoye 58.56 324 *e*P **P** **19 29 43.2 -0.4**
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
VSR pmax pmax
comp=N,9.0nm,0.7s
VSR pmax pmax
comp=E,10.0nm,0.6s
VSR MLR MLR
comp=Z,230nm,22.0s,MS4.2
VSR MLR MLR
comp=N,190nm,24.0s,MS4.2
VSR MLR MLR
comp=E,80nm,25.0s,MS4.2
BR131 Keskin Array S 58.69 310 *e*P **P** **19 29 43.9 -0.8**
comp=E,8.1nm,0.8s,mb4.8
BR131 *e* 19 30 05.2
BRTR Keskin Array B 58.69 310 P **P** **19 29 43.7 -1.0**
comp=E,8.7nm,0.8s,mb4.8,baz=119,slow=7.2,SNR=50
MOS Moscow 61.27 328 *e*P **P** **19 30 00.7 -1.4**
MOS *e* 19 33 55.9
MOS pmax pmax
comp=Z,65nm,1.4s,mb5.6
OBN Obninsk 61.56 328⇑ *i*P **P** **19 30 03.7 -0.4**
OBN *i* pP 19 30 12.2 -0.6
OBN *e*S **S** **19 38 21.8 -2.3**
OBN pmax pmax
comp=Z,66nm,1.6s,mb5.5
OBN Obninsk 61.56 328 *e*P **P** **19 30 04.1 0.0**
comp=Z,33nm,0.9s,mb5.5
CTA Charters Tower 61.83 120 P **P** **19 30 05.5 -1.0**
comp=Z,7.4nm,1.0s,mb4.8,baz=329,slow=5.9,SNR=3.6
CTAO Charters Tower 61.83 120 *e*P **P** **19 30 04.3 -2.2**
CTAO pmax pmax
comp=Z,13nm,1.0s,mb5.0
CTAO Charters Tower 61.83 120 *e*P **P** **19 30 04.3 -2.1**
comp=Z,13nm,1.0s,mb5.0
TIRR Tirgusor 63.47 314 ⇓P **P** **19 30 16.4 -0.6**
TIRR Tirgusor 63.47 314 ⇓*i*P **P** **19 30 16.4 -0.6**
STKA Stephens Creek 63.89 134 *e*P **P** **19 30 20.3 +0.3**
comp=Z,9.5nm,0.9s,mb4.8
STKA Stephens Creek 63.89 134 P **P** **19 30 20.3 +0.4**
comp=Z,3.9nm,0.8s,mb4.5,baz=358,slow=6.4,SNR=3.8
STKA LR LR 20 02 44.1
comp=Z,275nm,19.8s,MS4.4,baz=21,slow=40
STKA Stephens Creek 63.89 134 *e*P **P** **19 30 18.9 -1.1**
STKA pmax pmax
comp=Z,2.0nm,0.8s
STKA Stephens Creek 63.89 134 *e*P **P** **19 30 18.9 -1.0**
comp=Z,2.3nm,0.8s,mb4.3
AKASG Malin Array Be 64.33 321 P **P** **19 30 21.4 -1.2**
comp=E,6.1nm,0.8s,mb4.7,baz=93,slow=4.9,SNR=26
AKASG PcP PcP 19 30 56.4 -0.6
comp=Z,3.2nm,0.8s,baz=94,slow=4.4,SNR=5.0
TIXI Tiksi 64.71 12 *e*P **P** **19 30 23.4 -1.3**
TIXI *e*S **S** **19 39 01.6 -1.4**
TIXI pmax pmax
comp=Z,13nm,1.2s,mb4.8
TIXI MLR MLR
comp=Z,127nm,12.0s,MS4.3
TIXI Tiksi 64.71 12 *e*P **P** **19 30 23.9 -0.8**
comp=Z,21nm,1.1s,mb5.1
VRI Vrincioaia 64.90 316⇑P **P** **19 30 26.9 +0.5**
VRI Vrincioaia 64.90 316 P **P** **19 30 27.5 +1.1**
VRI Vrincioaia 64.90 316⇑*i*P **P** **19 30 26.9 +0.5**
PLOR Plostina 64.95 316⇑P **P** **19 30 27.7 +0.9**
PLOR Plostina 64.95 316⇑*i*P **P** **19 30 27.7 +0.9**
TESR 65.07 316 P **P** **19 30 27.6 +0.1**
MLR Muntele Rosu 65.37 315⇑P **P** **19 30 30.1 +0.6**
MLR Muntele Rosu 65.37 315 P **P** **19 30 30.5 +0.9**
MLR Muntele Rosu 65.37 315⇑*i*P **P** **19 30 30.1 +0.6**
VOIR 65.99 315⇑P **P** **19 30 32.8 -0.7**
VOIR 65.99 315 P **P** **19 30 34.7 +1.2**
VOIR 65.99 315⇑*i*P **P** **19 30 32.8 -0.7**
BUR01 Bucovina Ar. S 66.23 317 P **P** **19 30 35.2 +0.2**
BURAR Bucovina Array 66.23 317 ⇓P **P** **19 30 35.3 +0.3**
BURAR Bucovina Array 66.23 317 ⇓*i*P **P** **19 30 35.3 +0.3**
BUR08 Bucovina Ar. S 66.25 317 *e*P **P** **19 30 35.4 +0.2**
RMQ Roma 66.66 125 *e*P **P** **19 30 39.4 +1.3**
comp=Z,15nm,0.7s,mb5.1
CMSA Cobar Meteorol 66.68 131 *e*P **P** **19 30 38.4 +0.3**
JOF Joensuu 67.10 334 *e*P **P** **19 30 39.8 -0.4**
JOF pmax pmax
comp=Z,30nm,0.9s,mb5.3
JOF Joensuu 67.10 334 *e*p **P** **19 30 39.8 -0.4**
comp=Z,30nm,0.9s,mb5.3
JOF Joensuu 67.10 334 *e*p **P** **19 30 39.8 -0.4**
comp=Z,30nm,0.9s,mb5.3
LVV L'vov 67.39 319 *e*P **P** **19 30 41.8 -0.5**
DRGR 67.79 316 ⇓P **P** **19 30 45.1 +0.2**
DRGR 67.79 316 P **P** **19 30 45.3 +0.3**
DRGR 67.79 316⇓*i*P **P** **19 30 45.1 +0.2**
LVZ Lovozero 67.90 340⇑ *e*P **P** **19 30 45.6 +0.4**
LVZ pmax pmax
comp=Z,11nm,1.0s,mb4.8
LSZ Lusaka 68.17 249 *e*P **P** **19 30 49.1 +1.3**
LSZ pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
LSZ Lusaka 68.17 249 *e*P **P** **19 30 49.1 +1.3**
comp=Z,7.8nm,0.9s,mb4.7
APA Apatity 68.18 339⇑ *i*P **P** **19 30 47.6 +0.7**
APA *i* 19 31 04.0
APA *e* 19 33 16.0
APA *i* PPP 19 35 00.0
APA pmax pmax
comp=Z,42nm,1.0s,mb5.4
APA MLR MLR
comp=Z,400nm,18.0s,MS4.7
BZS Buzias 68.40 315 P **P** **19 30 48.9 +0.1**
CRVS Cervenica-Dubn 68.91 318 *e*P **P** **19 30 52.3 +0.4**
CRVS pmax pmax
comp=Z,14nm,1.2s,mb4.8
CRVS Cervenica-Dubn 68.91 318 *e*P **P** **19 30 52.3 +0.4**
comp=Z,14nm,1.2s,mb4.8
CRVS Cervenica-Dubn 68.91 318 *e*P **P** **19 30 52.3 +0.4**
FINES FINESS Array B 68.93 332 P **P** **19 30 51.7 -0.1**
comp=Z,13nm,0.8s,mb4.9,baz=98,slow=7.9,SNR=34
KAF Kangasniemi 69.02 333 *e*P **P** **19 30 50.9 -1.4**
KAF pmax pmax
comp=Z,23nm,1.1s,mb5.0
KAF Kangasniemi 69.02 333 *e*p **P** **19 30 50.9 -1.4**
comp=Z,23nm,1.1s,mb5.0
KAF Kangasniemi 69.02 333 *e*p **P** **19 30 50.9 -1.4**
comp=Z,23nm,1.1s,mb5.0
STHS Stebnicka Huta 69.12 319 *e*P **P** **19 30 53.1 -0.1**
STHS pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
STHS Stebnicka Huta 69.12 319 *e*P **P** **19 30 53.1 -0.1**
comp=Z,4.3nm,0.9s,mb4.4
STHS Stebnicka Huta 69.12 319 *e*P **P** **19 30 53.1 -0.1**
KECS Kecovo 69.50 318 *e*P **P** **19 30 55.1 -0.5**
KECS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
KECS Kecovo 69.50 318 *e*P **P** **19 30 55.1 -0.5**
comp=Z,2.9nm,0.9s,mb4.2
KECS Kecovo 69.50 318 *e*P **P** **19 30 55.1 -0.5**
PSZ Piszkesteto 69.83 317 *e*P **P** **19 30 57.1 -0.5**
PSZ *e* 19 31 20.1
PSZ pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
PSZ Piszkesteto 69.83 317 *e*P **P** **19 30 57.1 -0.5**
comp=Z,4.3nm,1.0s,mb4.3
PSZ *e* 19 31 20.1
OJC Ojcow 70.15 319 *e*P **P** **19 30 57.6 -1.9**
VYHS Vyhne 70.59 318 *e*P **P** **19 31 01.6 -0.7**
VYHS pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
VYHS Vyhne 70.59 318 *e*P **P** **19 31 01.6 -0.7**
comp=Z,3.2nm,1.0s,mb4.2
VYHS Vyhne 70.59 318 *e*P **P** **19 31 01.6 -0.7**
HNR Honiara 70.74 104 P **P** **19 31 05.6 +1.9**
comp=Z,11nm,0.3s,mb5.2,baz=270,slow=6.1,SNR=2.5
OKC Ostrava-Krasne 71.17 319 *e*P **P** **19 31 06.0 +0.3**
OKC Ostrava-Krasne 71.17 319 *e*P **P** **19 31 06.0 +0.3**
MORC Moravsky Berou 71.55 319 *e*P **P** **19 31 07.8 -0.3**
MORC pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
MORC Moravsky Berou 71.55 319 *e*P **P** **19 31 07.8 -0.3**
comp=Z,10nm,1.0s,mb4.7
ARCES ARCESS Array B 71.61 340 P **P** **19 31 07.4 -0.6**
comp=Z,9.1nm,0.9s,mb4.7,baz=90,slow=7.3,SNR=17
ARCES LR LR 20 06 23.5
comp=Z,226nm,20.3s,MS4.4,baz=121,slow=39
ZST Bratislava 71.72 317 *e*P **P** **19 31 09.4 +0.3**
ZST pmax pmax
comp=Z,11nm,1.0s,mb4.7
ZST Bratislava 71.72 317 *e*P **P** **19 31 09.4 +0.3**
comp=Z,11nm,1.0s,mb4.7
ZST Bratislava 71.72 317 *e*P **P** **19 31 09.4 +0.3**
KOGS Kog 72.19 315 *e*P **P** **19 31 11.8 -0.1**
CEL Celeste 72.26 307 *e*P **P** **19 31 12.1 -0.5**
comp=Z,32nm,1.0s,mb5.2
CEL *e* 19 31 27.4
DPC Dobruska-Polom 72.38 319 *e*P **P** **19 31 13.6 +0.6**
DPC *e* 19 31 31.2
DPC Dobruska-Polom 72.38 319 *e*P **P** **19 31 13.6 +0.6**
DPC *e*PCP PcP 19 31 31.2 +0.4
UPC Upice 72.59 320 *e*P **P** **19 31 14.8 +0.5**
UPC Upice 72.59 320 *e*P **P** **19 31 14.8 +0.5**
BOJS Bojanci 72.85 314 *e*P **P** **19 31 15.8 -0.2**
TREC Trest 72.86 318 *e*P **P** **19 31 16.0 +0.1**
TREC Trest 72.86 318 *e*P **P** **19 31 16.0 +0.1**
PERS Pernice 72.98 315 *e*P **P** **19 31 16.6 -0.1**
VNDS Vrh nad Dolski 73.25 315 *e*P **P** **19 31 18.0 -0.3**
LJU Ljubljana 73.38 315 *e*P **P** **19 31 19.1 +0.1**
PRU Pruhonice 73.50 319 *e*P **P** **19 31 20.2 +0.5**
PRU *e* 19 31 37.0
PRU Pruhonice 73.50 319 *e*P **P** **19 31 20.2 +0.5**
PRU *e*PCP PcP 19 31 37.0 +1.3
LBTB Lobatse 73.73 240 *e*P **P** **19 31 22.9 +1.5**
LBTB pmax pmax
comp=Z,15nm,1.0s,mb4.9
LBTB Lobatse 73.73 240 *e*P **P** **19 31 22.9 +1.5**
comp=Z,15nm,1.0s,mb4.9
BRG Berggiesshubel 73.93 320 *i* P **P** **19 31 22.8 +0.6**
comp=Z,11nm,1.1s,mb4.7
CADS Cadrg 73.93 315 *i* P **P** **19 31 21.8 -0.5**
KHC Kasperske Hory 74.10 318 *e*P **P** **19 31 22.9 -0.3**
KHC *e* 19 31 41.3
KHC Kasperske Hory 74.10 318 *e*P **P** **19 31 22.9 -0.3**
KHC *e*x x 19 31 41.3
BILL Bilibino 74.11 22⇑ *i*P **P** **19 31 23.0 +0.1**
BILL *e*S S 19 40 52.4 -1.5
BILL pmax pmax
comp=Z,6.0nm,1.6s,mb4.3
BILL Bilibino 74.11 22 *e*P **P** **19 31 22.7 -0.2**
comp=Z,5.5nm,0.9s,mb4.5
CLL Collm 74.53 320⇓ *i*P **P** **19 31 25.4 -0.3**
CLL *e* 19 31 41.0
CLL *e*S S 19 40 59.0 -0.2
CLL pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
CLL Collm 74.53 320 *i* (P) **P** **19 31 20.0 -5.7**
CLL Collm 74.53 320⇓ *i*P **P** **19 31 25.4 -0.3**
comp=Z,9.0nm,1.0s,mb4.7
CLL *i* pP pP 19 31 28.4 -6.2
CLL *e*PcP PcP 19 31 41.0 +1.0
CLL *e*PP PP 19 34 04.0 -8.3
CLL *e*S S 19 40 59.0 -0.2
CLL *e*SS SS 19 45 48.0 +2.0
CLL *e* 19 46 48.0
BOSA Boshof 75.30 236 P **P** **19 31 32.0 +1.5**
comp=Z,13nm,0.9s,mb4.9,baz=85,slow=7.2,SNR=16
BOSA LR LR 20 01 02.8
comp=Z,131nm,20.1s,MS4.2,baz=161,slow=33
BOSA Boshof 75.30 236 *e*P **P** **19 31 31.6 +1.1**
BOSA pmax pmax
comp=Z,45nm,1.5s,mb5.2
BOSA Boshof 75.30 236 *e*P **P** **19 31 31.6 +1.1**
comp=Z,45nm,1.5s,mb5.2
MOX Moxa 75.40 320 *e*P **P** **19 31 30.8 +0.1**
comp=Z,16nm,1.5s,mb4.7
GRF Grafenberg Arr 75.65 319 *e*P **P** **19 31 32.7 +0.6**
GRF pmax pmax
comp=Z,23nm,1.1s,mb5.0
GRF Grafenberg Arr 75.65 319 *e*P **P** **19 31 32.7 +0.6**
comp=Z,23nm,1.1s,mb5.0
NB2 NORSAR Subarra 75.94 330 P **P** **19 31 33.0 -0.5**
comp=Z,10nm,0.9s,mb4.8,baz=93,slow=5.9
NOA NORSAR Array B 75.94 330 P **P** **19 31 32.8 -0.8**
comp=Z,5.1nm,0.8s,mb4.5,baz=92,slow=5.8,SNR=20
NOA LR LR 20 13 00.0
comp=Z,99nm,19.0s,MS4.1,baz=95,slow=42
NAO01 NORSAR Array S 76.09 330 *e*P **P** **19 31 31.9 -2.5**
comp=Z,9.3nm,0.9s,mb4.7
KEST Kesra 77.61 304 P **P** **19 31 44.1 +0.6**
comp=Z,5.4nm,0.9s,mb4.5,baz=111,slow=1.0,SNR=13
KEST LR LR 20 10 32.7
comp=Z,26nm,21.3s,MS3.5,baz=254,slow=39
KEST Kesra 77.61 304 *e*P **P** **19 31 43.4 -0.1**
CASY Casey 78.25 172 *e*P **P** **19 31 43.0 -3.3**
CDF Champ du Feu 78.28 317 *e*P **P** **19 31 46.5 -0.5**
comp=Z,18nm,1.0s,mb4.7
CDF Champ du Feu 78.28 317 *e*P **P** **19 31 46.5 -0.5**
CDF pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
CDF Champ du Feu 78.28 317 *e*P **P** **19 31 46.5 -0.5**
comp=Z,9.1nm,1.0s,mb4.7
LPG La Plagne 78.83 314 *e*P **P** **19 31 50.2 +0.1**
comp=Z,28nm,0.9s,mb4.9
LPG La Plagne 78.83 314 *e*P **P** **19 31 50.2 +0.1**
LPG pmax pmax
comp=Z,14nm,0.9s,mb4.9
LPG La Plagne 78.83 314 *e*P **P** **19 31 50.2 +0.1**
comp=Z,14nm,0.9s,mb4.9
LPL La Plagne 78.84 314 *e*P **P** **19 31 50.2 +0.1**
comp=Z,43nm,1.0s,mb5.0
LPL La Plagne 78.84 314 *e*P **P** **19 31 50.2 +0.1**
LPL pmax pmax
comp=Z,22nm,1.0s,mb5.0
LPL La Plagne 78.84 314 *e*P **P** **19 31 50.2 +0.1**
comp=Z,22nm,1.0s,mb5.0
MBDF Montbardon 78.87 314 *e*P **P** **19 31 50.4 +0.1**
comp=Z,15nm,0.9s,mb4.6
MBDF Montbardon 78.87 314 *e*P **P** **19 31 50.4 +0.1**
MBDF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
MBDF Montbardon 78.87 314 *e*P **P** **19 31 50.4 +0.1**
comp=Z,7.5nm,0.9s,mb4.6
BNI Bardonecchia 78.91 314 *e*P **P** **19 31 49.1 -1.4**
BNI pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
BNI Bardonecchia 78.91 314 *e*P **P** **19 31 49.1 -1.5**
comp=Z,9.9nm,1.0s,mb4.7
HAU Haudompre 78.92 317 *e*P **P** **19 31 50.1 -0.4**
comp=Z,32nm,1.1s,mb4.9
HAU Haudompre 78.92 317 *e*P **P** **19 31 50.1 -0.4**
HAU pmax pmax
comp=Z,16nm,1.1s,mb4.9
HAU Haudompre 78.92 317 *e*P **P** **19 31 50.1 -0.4**
comp=Z,16nm,1.1s,mb4.9
WLF Walferdange 78.94 319 P **P** **19 31 50.9 +0.3**
comp=Z,17nm,2.1s,mb4.6
TSUM Tsumeb 79.00 248 *e*P **P** **19 31 47.8 -3.7**
comp=Z,5.7nm,0.9s,mb4.5
FRF La Foret Royal 79.05 312 *e*P **P** **19 31 52.1 +0.8**
comp=Z,25nm,1.0s,mb4.8
FRF La Foret Royal 79.05 312 *e*P **P** **19 31 52.1 +0.8**
FRF pmax pmax
comp=Z,13nm,1.0s,mb4.8
FRF La Foret Royal 79.05 312 *e*P **P** **19 31 52.1 +0.8**
comp=Z,13nm,1.0s,mb4.8
CABF La Chapelle 79.20 316 *e*P **P** **19 31 52.2 +0.1**
comp=Z,31nm,1.0s,mb4.9
CABF La Chapelle 79.20 316 *e*P **P** **19 31 52.2 +0.1**
CABF pmax pmax
comp=Z,16nm,1.0s,mb4.9
CABF La Chapelle 79.20 316 *e*P **P** **19 31 52.2 +0.1**
comp=Z,16nm,1.0s,mb4.9
ORIF Oris-en-Rattie 79.49 314 *e*P **P** **19 31 53.8 +0.1**
comp=Z,21nm,1.1s,mb4.7
ORIF Oris-en-Rattie 79.49 314 *e*P **P** **19 31 53.8 +0.1**
ORIF pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
ORIF Oris-en-Rattie 79.49 314 *e*P **P** **19 31 53.8 +0.1**
comp=Z,10nm,1.1s,mb4.7
MEZF Maizieres J'vi 79.75 318 *e*P **P** **19 31 54.8 -0.2**
comp=Z,25nm,1.0s,mb4.8
MEZF Maizieres J'vi 79.75 318 *e*P **P** **19 31 54.8 -0.2**
comp=Z,25nm,1.0s,mb5.1
GIVF Givet 79.76 319 *e*P **P** **19 31 54.8 -0.3**
SMRF Simiane la Rot 79.79 313 *e*P **P** **19 31 55.6 +0.3**
DOU Dourbes 79.91 319 P **P** **19 31 56.4 +0.6**
SNF Seneffe 80.07 320 P **P** **19 31 57.1 +0.3**
comp=Z,25nm,3.2s
BAIF Baives 80.16 319 *e*P **P** **19 31 57.2 0.0**
comp=Z,24nm,1.1s,mb4.8
BAIF Baives 80.16 319 *e*P **P** **19 31 57.2 0.0**
BAIF pmax pmax
comp=Z,12nm,1.1s,mb4.7
BAIF Baives 80.16 319 *e*P **P** **19 31 57.2 0.0**
comp=Z,12nm,1.1s,mb4.7
SUR Sutherland 80.20 234 *e*P **P** **19 32 00.1 +2.3**
comp=Z,36nm,1.1s,mb5.2
VIVF Saint-Julien-l 80.35 314 *e*P **P** **19 31 58.2 -0.1**
comp=Z,26nm,0.9s,mb4.9
VIVF Saint-Julien-l 80.35 314 *e*P **P** **19 31 58.2 -0.1**
VIVF pmax pmax
comp=Z,13nm,0.9s,mb4.9
VIVF Saint-Julien-l 80.35 314 *e*P **P** **19 31 58.2 -0.1**
comp=Z,13nm,0.9s,mb4.9
SSB Saint Sauveur 80.40 314 *e*P **P** **19 31 58.2 -0.4**
SSB pmax pmax
comp=Z,16nm,1.1s,mb4.9
SSB Saint Sauveur 80.40 314 *e*P **P** **19 31 58.2 -0.4**
comp=Z,16nm,1.1s,mb4.9
SSB *e* 19 32 19.0
LOR Lormes 80.67 316 *e*P **P** **19 31 59.6 -0.4**
comp=Z,46nm,1.1s,mb5.0
LOR Lormes 80.67 316 *e*P **P** **19 31 59.6 -0.4**
LOR pmax pmax
comp=Z,23nm,1.1s,mb5.0
LOR Lormes 80.67 316 *e*P **P** **19 31 59.6 -0.4**
comp=Z,23nm,1.1s,mb5.0
SMF Signal de Mont 80.74 316 *e*P **P** **19 32 00.0 -0.4**
comp=Z,21nm,0.9s,mb4.8
SMF Signal de Mont 80.74 316 *e*P **P** **19 32 00.0 -0.4**
SMF pmax pmax
comp=Z,11nm,0.9s,mb4.8
SMF Signal de Mont 80.74 316 *e*P **P** **19 32 00.0 -0.4**
comp=Z,11nm,0.9s,mb4.8
SSF Saint Saulge 80.93 316 *e*P **P** **19 32 01.1 -0.3**
comp=Z,34nm,1.4s,mb4.8
SSF Saint Saulge 80.93 316 *e*P **P** **19 32 01.1 -0.3**
SSF pmax pmax
comp=Z,17nm,1.4s,mb4.8
SSF Saint Saulge 80.93 316 *e*P **P** **19 32 01.1 -0.3**
comp=Z,17nm,1.4s,mb4.8
LASF Ste Croix 81.01 313 *e*P **P** **19 32 02.2 +0.3**
comp=Z,51nm,1.1s,mb5.1
AVF Avril sur Loir 81.06 316 *e*P **P** **19 32 01.5 -0.6**
comp=Z,25nm,1.1s,mb4.8
AVF Avril sur Loir 81.06 316 *e*P **P** **19 32 01.5 -0.6**
AVF pmax pmax
comp=Z,13nm,1.1s,mb4.8
AVF Avril sur Loir 81.06 316 *e*P **P** **19 32 01.5 -0.6**
comp=Z,12nm,1.1s,mb4.8
MAW Mawson 81.08 191 P **P** **19 32 02.8 +1.2**
comp=Z,2.2nm,0.8s,mb4.1,baz=330,slow=8.4,SNR=4.2
MAW LR LR 20 02 59.5
comp=Z,96nm,18.4s,MS4.2,baz=288,slow=32
MAW Mawson 81.08 191 *e*P **P** **19 32 02.6 +1.0**
MAW pmax pmax
comp=Z,1.0nm,0.9s
MAW Mawson 81.08 191 *e*P **P** **19 32 02.6 +1.0**
comp=Z,0.6nm,0.9s,mb3.5
BGF Bois d'Agland 81.43 316 *e*P **P** **19 32 04.1 0.0**
TCF Toulx Ste Croi 81.90 316 *e*P **P** **19 32 06.3 -0.3**
comp=Z,48nm,1.4s,mb4.9
TCF Toulx Ste Croi 81.90 316 *e*P **P** **19 32 06.3 -0.3**
TCF pmax pmax
comp=Z,24nm,1.4s,mb4.9
TCF Toulx Ste Croi 81.90 316 *e*P **P** **19 32 06.3 -0.3**
comp=Z,24nm,1.4s,mb4.9
CAF Calviac 82.18 314 *e*P **P** **19 32 08.4 +0.3**
comp=Z,11nm,0.8s,mb4.5
CAF Calviac 82.18 314 *e*P **P** **19 32 08.4 +0.3**
CAF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
CAF Calviac 82.18 314 *e*P **P** **19 32 08.4 +0.3**
comp=Z,5.6nm,0.8s,mb4.5
MTLF Montolieu 82.28 313 *e*P **P** **19 32 08.7 +0.1**
comp=Z,28nm,0.9s,mb4.9
MTLF Montolieu 82.28 313 *e*P **P** **19 32 08.7 +0.1**
MTLF pmax pmax
comp=Z,14nm,0.9s,mb4.9
MTLF Montolieu 82.28 313 *e*P **P** **19 32 08.7 +0.1**
comp=Z,14nm,0.9s,mb4.9
TAM Tamanrasset 82.44 292 *e*P **P** **19 32 11.0 +1.1**
TAM *e* 19 35 20.2
TAM pmax pmax
comp=Z,12nm,0.9s,mb4.8
TAM Tamanrasset 82.44 292 *e*P **P** **19 32 11.0 +1.1**
comp=Z,12nm,0.9s,mb4.8
TAM *e* 19 32 33.7
TAM *e*PP PP 19 35 20.1 +1.0
RJF Les Rejaudoux 82.52 315 *e*P **P** **19 32 10.2 +0.4**
comp=Z,27nm,1.1s,mb4.9
RJF Les Rejaudoux 82.52 315 *e*P **P** **19 32 10.2 +0.4**
RJF pmax pmax
comp=Z,14nm,1.1s,mb4.9
RJF Les Rejaudoux 82.52 315 *e*P **P** **19 32 10.2 +0.4**
comp=Z,14nm,1.1s,mb4.9
LFF La Frestale 83.11 314 *e*P **P** **19 32 13.3 +0.4**
LDF La Druitiere 83.15 318 *e*P **P** **19 32 12.7 -0.3**
FLN La Foliniere 83.36 318 *e*P **P** **19 32 14.6 +0.5**
comp=Z,112nm,1.6s,mb5.3
FLN La Foliniere 83.36 318 *e*P **P** **19 32 14.6 +0.5**
FLN pmax pmax
comp=Z,56nm,1.6s,mb5.3
FLN La Foliniere 83.36 318 *e*P **P** **19 32 14.6 +0.5**
comp=Z,56nm,1.6s,mb5.3
MFF Saint Martin d 83.47 316 *e*P **P** **19 32 14.5 -0.2**
comp=Z,26nm,0.9s,mb5.0
MFF Saint Martin d 83.47 316 *e*P **P** **19 32 14.5 -0.2**
MFF pmax pmax

comp=Z,13nm,0.9s,mb5.0
MFF Saint Martin d 83.47 316 *e*P **P 19 32 14.5 -0.2**
comp=Z,13nm,0.9s,mb5.0
ETSF Etsaut 84.36 312 *e*P **P 19 32 19.8 +0.4**
comp=Z,15nm,1.0s,mb4.8
ETSF Etsaut 84.36 312 *e*P **P 19 32 19.8 +0.4**
ETSF pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
ETSF Etsaut 84.36 312 *e*P **P 19 32 19.8 +0.4**
comp=Z,7.3nm,1.0s,mb4.8
SJPF Ste Jean 84.80 313 *e*P **P 19 32 22.0 +0.4**
comp=Z,39nm,1.2s,mb5.1
SJPF Ste Jean 84.80 313 *e*P **P 19 32 22.0 +0.4**
SJPF pmax pmax
comp=Z,19nm,1.2s,mb5.1
SJPF Ste Jean 84.80 313 *e*P **P 19 32 22.0 +0.4**
comp=Z,19nm,1.2s,mb5.1
ESDC Sonseca Array 87.48 310 P **P 19 32 34.7 -0.2**
comp=Z,3.0nm,0.9s,mb4.5,baz=60,slow=5.3,SNR=6.7
ESLA Sonseca Array 87.48 310 *e*P **P 19 32 34.2 -0.7**
comp=Z,1.0nm,0.8s,mb4.1
TORD Torodi Ar. Bea 87.66 283 P **P 19 32 36.8 +0.6**
comp=Z,4.3nm,0.9s,mb4.7,baz=90,slow=4.4,SNR=23
SUMG Summit 90.64 347 *e*P **P 19 32 50.0 +0.9**
SUMG pmax pmax
comp=Z,10.0nm,1.0s
SUMG Summit 90.64 347 *e*P **P 19 32 50.0 +0.9**
comp=Z,10nm,1.0s,mb5.1
SUMG Summit 90.64 347 *i* P **P 19 32 48.8 -0.3**
comp=Z,7.5nm,1.0s,mb5.0
SUMG *i* 19 33 13.9
EVO Evora 90.81 309 *e*P **P 19 32 52.2 +1.6**
comp=Z,13nm,0.9s,mb5.0
BPAW Bear Paw Mtn. 91.59 23 *e*P **P 19 32 53.6 0.0**
comp=Z,1.9nm,0.7s,mb4.5
BPAW *e* 19 33 05.1
URZ Urewera 93.05 128 LR LR 20 17 57.6
comp=Z,324nm,18.5s,MS4.8,baz=246,slow=38
KDAK Kodiak Island 93.91 29 P **P 19 33 06.6 +2.2**
comp=Z,6.3nm,0.8s,mb5.1,baz=315,slow=8.6,SNR=3.0
RES Resolute Bay 94.43 2 *e*P **P 19 33 06.8 +0.2**
RES pmax pmax
comp=Z,3.0nm,1.0s,mb4.7
RES Resolute Bay 94.43 2 *e*P **P 19 33 06.8 +0.3**
comp=Z,3.1nm,1.0s,mb4.7
DBIC Dimbokro 95.24 278 LR LR 20 17 19.1
comp=Z,45nm,20.4s,MS3.9,baz=86,slow=36
PDAR Pinedale Array 123.08 19 PKP PKPdf 19 38 43.8 0.0
comp=Z,1.0nm,0.8s,baz=354,slow=3.0,SNR=7.4
NVAR Mina Array Bea 123.40 28 PKP PKPdf 19 38 45.8 +1.3
comp=Z,1.6nm,0.8s,baz=236,slow=2.3,SNR=9.1
TXAR Lajitas Array 137.26 20 PKP PKPdf 19 39 11.6 +0.6
comp=Z,0.6nm,0.7s,baz=27,slow=0.8,SNR=6.9
TXAR SKPbc SKPbc 19 42 45.1 +2.5
comp=Z,0.7nm,0.9s,baz=338,slow=5.4,SNR=3.9
PLCA Paso Flores 146.49 205 PKPbc PKPbc 19 39 27.9 -0.5
comp=Z,4.7nm,0.9s,baz=181,slow=6.7,SNR=4.9
PLCA Paso Flores 146.49 205 PKPbc PKPbc 19 39 27.9 -0.5
ROSC El Rosal 159.09 318 PKPab PKPab 19 40 23.9 +1.2
comp=Z,4.0nm,0.3s,baz=95,slow=22,SNR=4.0
LPAZ La Paz 159.79 253 PKP PKPdf 19 39 48.3 +1.4
comp=Z,0.6nm,0.7s,baz=288,slow=7.4,SNR=3.7
LPAZ PKPab PKPab 19 40 26.6 +0.7
comp=Z,3.7nm,1.0s,baz=82,slow=6.1,SNR=8.4

*IDC **27** 19:21:36.4±2.7, 16°.82N×147°.56E, h0km, mb3.8/8, mb1 3.9/8, mb1mx3.8/23, mbtmp3.8/8, Error ellipse: s-maj=65.0km s-min=38.7km az=167.0*
*NEIC **27** 19:21:37.9±1.0, 16°.87N×147°.53E, h10km, mb4.3/5, Error ellipse: s-maj=26.1km s-min=10.8km az=109.0*
*ISCJB **27** 19:21:39.5±5.8, 16°.8N±0°.1×147°.3E±0°.3, h32km±41km, mb4.0/13, Error ellipse: s-maj=44.7km s-min=12.6km az=22.8*
ISC 27 19:21:40.6±5.8, 16°.8N±0°.1×147°.4E±0°.3, h29km±40km, n14, σ0s78/15, mb4.0/13, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.03**	**218**	*e*Pn	**Pn**	**19 22 41.1**	**+0.7**
GUMO				*e*Sn	**Sn**	**19 23 25.6**	**-1.0**
MJAR	**Matsushiro Arr**	**21.31**	**339**	P	**P**	**19 26 24.9**	**-0.2**
	1.3nm,0.7s,mb3.4,baz=166,slow=10,SNR=5.3						
MAJO	**Matsushiro**	**21.31**	**339**	*e*P	**P**	**19 26 24.0**	**-1.1**
	4.5nm,0.8s,mb3.9						
SONM	**Songino Array**	**45.66**	**322**	P	**P**	**19 29 59.7**	**+1.0**
	0.9nm,0.6s,mb3.9,baz=135,slow=7.5,SNR=3.0						
CMAR	**Chiang Mai Arr**	**46.14**	**280**	P	**P**	**19 30 04.2**	**+1.3**
	1.5nm,0.8s,mb4.0,baz=76,slow=6.6,SNR=7.3						
YAK	**Yakutsk**	**46.90**	**349**	*e*P	**P**	**19 30 07.0**	**-1.2**
	22nm,0.9s,mb5.1						
TLY	**Talaya**	**49.07**	**325**	P	**P**	**19 30 24.6**	**-0.6**
	2.8nm,0.8s,mb4.3						
ZALV	**Zalesovo Beam**	**60.53**	**323**	P	**P**	**19 31 48.4**	**+0.3**
	0.4nm,0.3s,mb4.0,baz=126,slow=9.1,SNR=2.4						
MKAR	**Makanchi Array**	**60.98**	**315**	P	**P**	**19 31 51.7**	**+0.4**
	0.3nm,0.6s,mb3.6,baz=78,slow=15,SNR=3.4						
KURK	**Kurchatov**	**63.79**	**319**	*e*P	**P**	**19 32 09.5**	**-0.5**
	2.2nm,1.0s,mb4.1						
TKM2	**Tokmak 2**	**65.54**	**310**	*e*P	**P**	**19 32 22.5**	**+0.9**
	1.2nm,0.7s,mb4.0						
BVAR	**Borovoye Array**	**69.00**	**321**	P	**P**	**19 32 43.8**	**+0.4**
	1.3nm,0.7s,mb4.0,baz=99,slow=8.0,SNR=4.6						
YKA	**Yellowknife Ar**	**78.90**	**28**	P	**P**	**19 33 41.4**	**+0.3**
	0.3nm,0.5s,mb3.5,baz=286,slow=5.9,SNR=3.2						
FINES	**FINESS Array B**	**89.30**	**336**	P	**P**	**19 34 33.4**	**-0.6**
	1.7nm,0.9s,mb4.4,baz=54,slow=3.3,SNR=3.7						

*ISCJB **27** 19:21:52.7±0.7, 17°.6S±0°.1×178°.84W±0°.09, h531km±9km, mb4.2/22, Error ellipse: s-maj=20.6km s-min=8.9km az=148.2*
*NEIC **27** 19:21:53.1±0.6, 17°.74S×178°.77W, h531km±7km, mb4.4/8, Error ellipse: s-maj=15.3km s-min=8.8km az=150.0*
*IDC **27** 19:21:53.4±1.5, 17°.77S×178°.71W, h532km±20km, mb3.5/12, mb1 3.6/13, mb1mx3.5/20, mbtmp3.5/13, Error ellipse: s-maj=20.5km s-min=11.0km az=142.0*
ISC 27 19:21:53.2±0.7, 17°.6S±0°.1×178°.77W±0°.09, h526km±9km, n75, σ0s82/45, mb4.2/22, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.03**	**268**	P	**P**	**19 23 06.3**	**-0.2**
AFI	**Afiamalu**	**7.68**	**62**	P	**P**	**19 23 49.4**	**+2.2**
	3.9nm,0.3s,baz=243,slow=11,SNR=3.9						
AFI				S	**S**	**19 25 19.2**	**-1.3**
	1.8nm,0.3s,baz=87,slow=22,SNR=1.7						
AFI	**Afiamalu**	**7.68**	**62**	*e*P	**P**	**19 23 48.2**	**+1.1**
AFI				S	**S**	**19 25 19.2**	**-1.3**
URZ	**Urewera**	**20.87**	**189**	P	**P**	**19 25 55.5**	**-2.7**
	14nm,0.5s,baz=97,slow=16,SNR=12						
URZ	**Urewera**	**20.87**	**189**	*e*P	**P**	**19 25 55.1**	**-3.1**
	41nm,1.0s						
EIDS	**Eidsvold**	**29.04**	**249**	*e*P	**P**	**19 27 10.8**	**0.0**
EIDS	**Eidsvold**	**29.04**	**249**	*e*P	**P**	**19 27 10.5**	**-0.3**
	13nm,0.8s,mb4.6						
ARMA	**Armidale**	**29.78**	**239**	*e*P	**P**	**19 27 18.5**	**+1.3**
RMQ	**Roma**	**31.29**	**248**	*e*P	**P**	**19 27 31.0**	**+0.8**
	16nm,0.7s,mb4.7						
CTA	**Charters Tower**	**33.15**	**260**	*e*P	**P**	**19 27 46.4**	**+0.2**
	6.7nm,0.7s,mb4.3						
CTA	**Charters Tower**	**33.15**	**260**	P	**P**	**19 27 46.4**	**+0.2**
	7.1nm,0.5s,mb4.4,baz=92,slow=10,SNR=11						
CTAO	**Charters Tower**	**33.15**	**260**	*e*P	**P**	**19 27 46.2**	**0.0**
	8.4nm,0.6s,mb4.5						
CNB	**Canberra Magne**	**33.33**	**232**	*e*P	**P**	**19 27 48.4**	**+1.0**
CMSA	**Cobar Meteorol**	**34.99**	**240**	*e*P	**P**	**19 28 01.8**	**+0.4**
MTSU	**Mount Surprise**	**35.10**	**263**	*e*P	**P**	**19 28 02.4**	**-0.1**
	13nm,0.4s,mb4.8						
COEN	**Coen**	**36.76**	**270**	*e*P	**P**	**19 28 17.2**	**+0.9**
TOO	**Toolangi**	**37.08**	**230**	*e*P	**P**	**19 28 19.3**	**+0.6**
STKA	**Stephens Creek**	**38.46**	**241**	*e*P	**P**	**19 28 30.7**	**+0.7**
	9.4nm,0.6s,mb4.5						
STKA	**Stephens Creek**	**38.46**	**241**	P	**P**	**19 28 30.9**	**+0.9**
	9.1nm,0.4s,mb4.6,baz=91,slow=9.2,SNR=38						
STKA	**Stephens Creek**	**38.46**	**241**	*e*P	**P**	**19 28 30.5**	**+0.5**
	2.1nm,0.5s,mb3.9						
BBOO	**Buckleboo**	**43.24**	**241**	*e*P	**P**	**19 29 08.2**	**+0.1**
	12nm,0.4s,mb4.8						
WRA	**Warramunga Arr**	**44.34**	**259**	P	**P**	**19 29 16.3**	**-0.6**
	7.8nm,0.5s,mb4.5,baz=95,slow=6.8,SNR=27						
ASAR	**Alice Springs**	**44.53**	**254**	P	**P**	**19 29 18.1**	**-0.2**
	69nm,0.6s,baz=86,slow=8.3,SNR=932						
KAKA	**Kakadu**	**47.24**	**269**	*e*P	**P**	**19 29 38.8**	**-0.2**
	18nm,0.5s,mb4.9						

FORT Forrest 49.81 244 *e*P **P 19 29 56.8 -1.1**
25nm,0.6s,mb4.8
KNA Kununurra 50.16 264 *e*P **P 19 30 00.3 -0.3**
15nm,0.5s,mb4.7
FITZ Fitzroy Crossi 52.73 260 *e*P **P 19 30 19.1 -0.2**
11nm,0.8s,mb4.2
FITZ Fitzroy Crossi 52.73 260 P **P 19 30 19.3 0.0**
4.4nm,0.5s,mb4.0,baz=110,slow=3.6,SNR=11
MBWA Marble Bar 57.81 256 *e*P **P 19 30 53.7 -0.9**
MBWA Marble Bar 57.81 256 *e*P **P 19 30 53.3 -1.4**
8.1nm,0.6s,mb4.1
MJAR Matsushiro Arr 67.48 324 P **P 19 31 56.2 -0.5**
3.0nm,0.7s,mb3.9,baz=158,slow=6.4,SNR=9.0
MAJO Matsushiro 67.48 324 *e*P **P 19 31 55.6 -1.1**
5.3nm,0.7s,mb4.2
KKM Kota Kinabalu 68.34 284 *e*P **P 19 32 02.0 -0.4**
8.2nm,0.7s,mb4.4
ASAJ Asahikawa 70.87 332 P **P 19 32 17.6 +0.8**
1.8nm,0.5s,mb3.9,baz=180,slow=10,SNR=3.9
KSM Kuching 72.31 277 *e*P **P 19 32 25.7 -0.3**
18nm,1.0s,mb4.5
QSPA South Pole Qui 72.42 180 *e*P **P 19 32 25.0 -0.5**
PETK Petropavlovsk- 73.32 345 P **P 19 32 30.8 -0.1**
1.8nm,0.7s,mb3.6,baz=112,slow=11,SNR=3.8
KSRS Korea Array 74.26 318 P **P 19 32 37.4 +0.7**
0.8nm,0.6s,mb3.3,baz=132,slow=6.4,SNR=3.8
NVAR Mina Array Bea 79.46 44 P **P 19 33 05.9 +0.9**
0.1nm,0.5s,baz=211,slow=6.9,SNR=2.5
PSI Prapat 83.52 275 P **P 19 33 25.2 -1.3**
3.4nm,0.4s,mb4.3,baz=162,slow=8.6,SNR=5.5
PSI Prapat 83.52 275 P **P 19 33 25.2 -1.3**
TXAR Lajitas Array 86.14 58 P **P 19 33 39.8 +1.0**
0.3nm,0.7s,mb3.1,baz=210,slow=7.2,SNR=4.8
PDAR Pinedale Array 87.39 44 P **P 19 33 44.7 +0.3**
0.4nm,0.5s,mb3.3,baz=199,slow=6.5,SNR=2.2
AKASG Malin Array Be 140.15 332 PKP PKPdf 19 40 21.1 -0.7
0.2nm,0.3s,baz=21,slow=1.6,SNR=2.6
BUR08 Bucovina Ar. S 144.19 332 *e*PKPdf PKPdf 19 40 28.4 -0.6
BR131 Keskin Array S 144.34 315 *e*PKPdf PKPdf 19 40 28.5 -1.1
BRTR Keskin Array B 144.34 315 PKP PKPdf 19 40 28.3 -1.3
4.3nm,0.9s,baz=113,slow=2.8,SNR=16
OKC Ostrava-Krasne 145.10 341 *e*PKP PKPdf 19 40 30.6 0.0
CLL Collm 145.12 347 *i* PKPbc PKPbc 19 40 30.5 -0.9
comp=Z,7.0nm,0.7s
UPC Upice 145.13 343 *e*PKP PKPdf 19 40 30.7 +0.1
DPC Dobruska-Polom 145.18 343 *e*PKP PKPdf 19 40 31.2 +0.5
BRG Berggiesshubel 145.31 346 *e*P PKPdf 19 40 31.1 +0.2
comp=Z,2.7nm,0.7s
MMAI Mount Meron Ar 145.70 303 PKPbc PKPbc 19 40 33.1 -0.6
comp=Z,4.2nm,0.5s,baz=66,slow=6.5,SNR=13
PRU Pruhonice 145.99 345 *e*PKP PKPbc 19 40 33.9 0.0
VYHS Vyhne 146.03 339 *e*P PKPbc 19 40 33.9 -0.2
VYHS Vyhne 146.03 339 *e*PKP PKPbc 19 40 33.9 -0.2
GRF Grafenberg Arr 147.01 348 *e*PKP PKPbc 19 40 35.9 -0.8
KHC Kasperske Hory 147.02 345 *e*PKP PKPbc 19 40 36.0 -0.8
KHC *ex* x 19 40 39.2
GIVF Givet 147.48 356 *e*PKP1 PKPbc 19 40 37.5 -0.4
BAIF Baives 147.56 356 *e*PKP1 PKPbc 19 40 37.3 -0.9
CDF Champ du Feu 148.90 352 *e*PKP1 PKPbc 19 40 40.6 -1.0
comp=Z,3.3nm,0.6s
FLN La Foliniere 148.92 2 *e*PKP1 PKPbc 19 40 40.3 -1.3
LDF La Druitiere 149.10 2 *e*PKP1 PKPbc 19 40 40.6 -1.4
GRR Gorron 149.27 3 *e*PKP1 PKPbc 19 40 41.3 -1.2
HAU Haudompre 149.41 353 *e*PKP1 PKPbc 19 40 41.7 -1.1
LEGS Legarje 149.43 340 *i* PKP PKPbc 19 40 42.0 -0.9
HINF Hinteralfeld 149.54 353 *e*PKP1 PKPbc 19 40 41.8 -1.3
VISS Visnje 149.71 341 *i* PKP PKPbc 19 40 42.4 -1.2
BOJS Bojanci 149.84 340 *i* PKP PKPbc 19 40 43.2 -0.7
LOR Lormes 150.36 356 *e*PKP1 PKPbc 19 40 44.1 -1.0
comp=Z,5.7nm,0.5s
SSF Saint Saulge 150.59 357 *e*PKP1 PKPbc 19 40 44.6 -1.0
comp=Z,3.3nm,0.5s
CABF La Chapelle 150.82 353 *e*PKP1 PKPbc 19 40 45.6 -0.6
AVF Avril sur Loir 150.87 357 *e*PKP1 PKPbc 19 40 44.8 -1.5
MFF Saint Martin d 151.09 2 *e*PKP1 PKPbc 19 40 45.4 -1.4
comp=Z,5.0nm,0.6s
TCF Toulx Ste Croi 151.41 359 *e*PKP1 PKPbc 19 40 46.1 -1.4

*IDC **27** 19:27:56.2±1.0, 10°.81N×91°.72E, h0km, mb3.8/8, mb1 3.8/9, mb1mx3.6/24, mbtmp3.7/9, ML3.3/1, Error ellipse: s-maj=43.3km s-min=17.5km az=58.0*
*NEIC **27** 19:27:57.6±0.6, 10°.79N×91°.73E, h10km, mb4.3/1, Error ellipse: s-maj=18.3km s-min=10.6km az=59.0*
ISC 27 19:28:02.7±6.0, 10°.9N±0°.2×91°.9E±0°.3, h45km±50km, n12, σ0s57/11, mb3.8/9, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.20**	**41**	Pn	**Pn**	**19 30 26.4**	**0.0**
	0.1nm,0.3s,baz=239,slow=15,SNR=3.1						
EKS2	**Erkin-Say**	**35.38**	**337**	P	**P**	**19 34 55.3**	**+1.3**
	4.9nm,1.2s,mb4.3						
MK31	**Makanchi Array**	**36.71**	**349**	*e*P	**P**	**19 35 05.1**	**-0.2**
MKAR	**Makanchi Array**	**36.71**	**349**	P	**P**	**19 35 05.3**	**0.0**
	0.8nm,0.6s,mb3.7,baz=129,slow=8.3,SNR=7.2						
MKAR				PcP	PcP	19 37 28.4	+1.2
	0.2nm,0.6s,baz=189,slow=3.6,SNR=3.4						
SONM	**Songino Array**	**38.83**	**16**	P	**P**	**19 35 22.6**	**-0.5**
	0.3nm,0.6s,mb3.2,baz=187,slow=8.7,SNR=2.6						
ZALV	**Zalesovo Beam**	**43.33**	**354**	P	**P**	**19 36 00.0**	**-0.1**
	1.0nm,0.5s,mb3.8,baz=182,slow=8.4,SNR=5.1						
FITZ	**Fitzroy Crossi**	**44.06**	**130**	P	**P**	**19 36 06.5**	**0.0**
	0.7nm,0.5s,mb3.7,baz=279,slow=19,SNR=5.1						
WRA	**Warramunga Arr**	**51.83**	**126**	P	**P**	**19 37 06.4**	**-0.2**
	0.2nm,0.3s,mb3.5,baz=300,slow=10.0,SNR=6.7						
ASAR	**Alice Springs**	**53.56**	**130**	P	**P**	**19 37 19.7**	**+0.4**
	0.9nm,0.7s,mb3.8,baz=303,slow=7.1,SNR=12						
ASAR				PcP	PcP	19 38 26.5	+0.9
	0.4nm,0.6s,baz=309,slow=3.7,SNR=4.6						
BRTR	**Keskin Array B**	**58.78**	**310**	P	**P**	**19 37 55.4**	**-1.1**
	0.8nm,0.7s,mb3.8,baz=124,slow=6.6,SNR=4.3						
ARCES	**ARCESS Array B**	**71.70**	**340**	P	**P**	**19 39 20.1**	**+0.5**
	2.0nm,0.9s,mb4.1,baz=81,slow=7.6,SNR=3.9						
NVAR	**Mina Array Bea**	**123.44**	**28**	PKP	PKPdf	19 46 56.8	+1.4
	0.3nm,0.6s,baz=328,slow=3.2,SNR=3.4						

*BJI **27** 19:30:54.5, 10°.18N×91°.68E, h24km, mb4.3/11*
*IDC **27** 19:30:57.9±0.7, 10°.78N×91°.63E, h0km, mb4.1/18, mb1 4.1/19, mb1mx4.1/25, mbtmp4.0/19, ML3.8/1, Error ellipse: s-maj=24.6km s-min=13.6km az=49.0*
*ISCJB **27** 19:30:60.0±0.4, 10°.85N±0°.07×91°.74E±0°.06, h24km, mb4.2/31, Error ellipse: s-maj=10.8km s-min=7.5km az=42.0*
*NEIC **27** 19:31:01.8±0.2, 10°.82N×91°.68E, mb4.4/13, Error ellipse: s-maj=6.8km s-min=4.9km az=223.0*
ISC 27 19:31:02.2±0.4, 10°.90N±0°.06×91°.78E±0°.05, h25km, h25km±.6km: pP-P, n57, σ0s86/57, mb4.1/31, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**10.22**	**42**	*e*Pn	**Pn**	**19 33 28.2**	**+0.8**
	6.1nm,0.8s						
CM31				*e*Sn	**Sn**	**19 35 19.1**	**-2.1**
CMAR	**Chiang Mai Arr**	**10.22**	**42**	Pn	**Pn**	**19 33 28.9**	**+1.5**
	0.2nm,0.3s,baz=236,slow=15,SNR=7.1						
CMAR				Sn	**Sn**	**19 35 19.1**	**-2.2**
	0.1nm,0.3s,baz=59,slow=43,SNR=1.2						
KULM	**Kulim**	**10.40**	**122**	Pn	**Pn**	**19 33 33.3**	**+3.5**
	10.0nm,1.0s						
CHTO	**Chiang Mai**	**10.48**	**41**	*e*Pn	**Pn**	**19 33 28.2**	**-2.7**
HYB	**Hyderabad**	**14.37**	**298**	*i* P	**Pn**	**19 34 30.0**	**+5.9**
KMI	**Kunming**	**17.56**	**35**	P	**Pn**	**19 35 10.5**	**+5.2**
KMI				pmax	pmax		
	comp=Z,7.0nm,1.5s						
KSM	**Kuching**	**20.65**	**116**	*e*P	**P**	**19 35 40.8**	**+0.6**
	comp=Z,25nm,1.2s						
GTA	**Gaotai**	**29.28**	**13**	*e*P	**P**	**19 37 04.3**	**+1.8**
GTA				pP	pP	19 37 10.5	+0.5
GTA				sP	sP	19 37 13.5	+0.4
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.1						
KBL	**Kabul**	**31.37**	**322**	*e*P	**P**	**19 37 21.7**	**+0.7**
	comp=Z,3.0nm,1.0s,mb4.1						
UCH	**Uchtor**	**34.67**	**337**	*e*P	**P**	**19 37 51.0**	**+1.2**
	comp=Z,3.7nm,1.0s,mb4.3						
TKM2	**Tokmak 2**	**34.88**	**339**	*e*P	**P**	**19 37 52.1**	**+0.6**
	comp=Z,4.4nm,1.2s,mb4.3						
EKS2	**Erkin-Say**	**35.33**	**337**	*e*P	**P**	**19 37 55.7**	**+0.3**
	comp=Z,3.9nm,0.8s,mb4.4						
MK31	**Makanchi Array**	**36.67**	**349**	*e*P	**P**	**19 38 07.1**	**+0.3**
MK31				*e*pP	pP	19 38 14.5	+0.1

MKAR Makanchi Array 36.67 349 P **P 19 38 07.2 +0.3**
comp=Z,6.1nm,0.6s,mb4.6,baz=133,slow=8.6,SNR=61
MKAR PcP PcP 19 40 29.4 0.0
comp=Z,0.4nm,0.6s,baz=131,slow=2.0,SNR=3.2
SONM Songino Array 38.82 16 P **P 19 38 25.9 +0.9**
comp=Z,2.3nm,1.0s,mb3.9,baz=202,slow=8.5,SNR=9.4
SONM PcP PcP 19 40 36.7 +0.8
comp=Z,0.6nm,0.7s,baz=224,slow=4.0,SNR=3.4
ULN Ulaanbaatar 39.02 16 P **P 19 38 27.3 +0.6**
comp=Z,1.9nm,0.8s,mb3.9
KURK Kurchatov 41.15 347 *e*P **P 19 38 44.3 +0.1**
comp=Z,8.0nm,1.1s,mb4.3
KURK *e*pP pP 19 38 51.6 -0.3
KSRS Korea Array 41.84 45 P **P 19 38 50.5 +0.2**
comp=Z,1.3nm,1.0s,mb3.5,baz=235,slow=9.5,SNR=4.3
ZAA0 Zalesovo Array 43.30 354 *e*P **P 19 39 02.2 +0.4**
ZAA0 *e*pP pP 19 39 09.1 -0.3
ZALV Zalesovo Beam 43.30 354 P **P 19 39 02.0 +0.2**
comp=Z,3.6nm,0.6s,mb4.3,baz=176,slow=9.2,SNR=25
FITZ Fitzroy Crossi 44.13 130 P **P 19 39 08.8 -0.1**
comp=Z,4.4nm,0.8s,mb4.2,baz=299,slow=1.7,SNR=8.4
BVAR Borovoye Array 45.40 342 P **P 19 39 18.4 -0.2**
comp=Z,1.0nm,0.6s,mb3.9,baz=137,slow=9.1,SNR=8.4
BRVK Borovoye 45.46 342 *e*P **P 19 39 19.1 0.0**
comp=Z,1.8nm,0.8s,mb4.0
MJAR Matsushiro Arr 48.96 51 P **P 19 39 48.0 +1.4**
comp=Z,0.2nm,0.3s,mb3.6,baz=248,slow=9.9,SNR=3.5
WRA Warramunga Arr 51.91 126 P **P 19 40 08.4 -0.7**
comp=Z,0.9nm,0.4s,mb4.0,baz=300,slow=9.9,SNR=18
WRAB Tennant Creek 51.91 126 *e*P **P 19 40 08.7 -0.5**
WRAB *e*pP pP 19 40 16.2 -0.8
ARU Arti 52.22 337 *e*P **P 19 40 10.2 -0.6**
ARU *e*pP pP 19 40 18.1 -0.6
KIV Kislovodsk 53.53 317 *e*P **P 19 40 21.2 +0.4**
comp=Z,5.6nm,0.7s,mb4.6
KIV *e*pP pP 19 40 28.3 -0.3
ASAR Alice Springs 53.63 130 P **P 19 40 21.2 -0.7**
comp=Z,2.2nm,0.7s,mb4.2,baz=305,slow=7.2,SNR=21
BRTR Keskin Array B 58.71 310 P **P 19 40 56.8 -1.2**
comp=Z,2.1nm,0.8s,mb4.2,baz=131,slow=7.1,SNR=7.1
STKA Stephens Creek 63.87 134 P **P 19 41 33.0 +0.1**
comp=Z,2.4nm,0.8s,mb4.3,baz=313,slow=11,SNR=3.7
AKASG Malin Array Be 64.35 321 P **P 19 41 34.9 -0.9**
comp=Z,2.2nm,0.8s,mb4.2,baz=99,slow=4.6,SNR=5.7
FINES FINESS Array B 68.97 332 P **P 19 42 04.9 -0.1**
comp=Z,3.9nm,0.8s,mb4.4,baz=75,slow=8.1,SNR=15
ARCES ARCESS Array B 71.65 340 P **P 19 42 22.1 +0.8**
comp=Z,2.0nm,0.7s,mb4.2,baz=84,slow=5.0,SNR=9.0
BOSA Boshof 75.25 237 P **P 19 42 43.0 -0.3**
GRF Grafenberg Arr 75.67 319 *e*P **P 19 42 44.9 -0.4**
NB2 NORSAR Subarra 75.97 330 P **P 19 42 46.1 -0.7**
comp=Z,0.2nm,0.7s,mb3.2,baz=95,slow=6.5
NOA NORSAR Array B 75.97 330 P **P 19 42 46.0 -0.8**
comp=Z,1.9nm,0.8s,mb4.1,baz=93,slow=5.7,SNR=7.5
KEST Kesra 77.62 304 P **P 19 42 55.7 -1.0**
comp=Z,1.1nm,0.9s,mb3.8,baz=104,slow=12,SNR=4.4
KEST Kesra 77.62 304 P **P 19 42 55.7 -1.0**
CDF Champ du Feu 78.30 317 *e*P **P 19 42 59.6 -0.6**
LPG La Plagne 78.85 314 *e*P **P 19 43 03.2 -0.1**
comp=Z,6.3nm,0.7s,mb4.4
LPG La Plagne 78.85 314 *e*P **P 19 43 03.2 -0.1**
comp=Z,3.2nm,0.7s,mb4.4
LPL La Plagne 78.86 314 *e*P **P 19 43 03.2 -0.1**
comp=Z,10nm,0.8s,mb4.5
LPL La Plagne 78.86 314 *e*P **P 19 43 03.2 -0.1**
comp=Z,5.1nm,0.8s,mb4.5
VIVF Saint-Julien-l 80.37 314 *e*P **P 19 43 11.2 -0.3**
LOR Lormes 80.69 316 *e*P **P 19 43 12.6 -0.6**
SMF Signal de Mont 80.77 316 *e*P **P 19 43 12.9 -0.7**
comp=Z,4.9nm,0.5s,mb4.4
SMF Signal de Mont 80.77 316 *e*P **P 19 43 12.9 -0.7**
comp=Z,2.5nm,0.5s,mb4.4
AVF Avril sur Loir 81.08 316 *e*P **P 19 43 14.7 -0.6**
MTLF Montolieu 82.30 313 *e*P **P 19 43 21.7 -0.1**
MFF Saint Martin d 83.50 316 *e*P **P 19 43 27.5 -0.4**
comp=Z,10nm,0.8s,mb4.6
MFF Saint Martin d 83.50 316 *e*P **P 19 43 27.5 -0.4**
comp=Z,5.2nm,0.8s,mb4.6
ESDC Sonseca Array 87.50 310 P **P 19 43 48.6 +0.5**
comp=Z,0.3nm,0.3s,mb4.0,baz=56,slow=4.2,SNR=3.7
TORD Torodi Ar. Bea 87.65 283 P **P 19 43 49.8 +0.6**
comp=Z,0.8nm,0.8s,mb4.0,baz=90,slow=4.9,SNR=5.0
NVAR Mina Array Bea 123.45 28 PKP PKPdf 19 49 59.2 +1.5
comp=Z,0.4nm,0.7s,baz=279,slow=1.7,SNR=3.5
TXAR Lajitas Array 137.32 20 PKP PKPdf 19 50 26.3 +2.0
comp=Z,0.2nm,0.7s,baz=193,slow=3.5,SNR=3.2

*IDC **27** 19:40:31.6±0.8, 2°.56S×138°.50E, h0km, mb4.2/11, mb1 4.3/14, mb1mx4.2/17, mbtmp4.2/14, ML4.0/3, Error ellipse: s-maj=28.0km s-min=14.4km az=79.0*
*NEIC **27** 19:40:34.0±5.5, 2°.59S×138°.43E, h15km±34km, mb4.4/10, Error ellipse: s-maj=13.5km s-min=8.2km az=56.0*
*ISCJB **27** 19:40:33.8±2.5, 2°.63S±0°.04×138°.36E±0°.08, h25km±18km, mb4.2/20, Error ellipse: s-maj=13.0km s-min=6.4km az=9.8*
ISC 27 19:40:37.7±1.5, 2°.66S±0°.06×138°.35E±0°.08, h41km±15km, n47, σ0s96/56, mb4.2/20, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**11.57**	**210**	*e*P	**Pn**	**19 43 21.0**	**+0.6**
	21nm,0.4s						
KAKA				*e*S	**Sn**	**19 45 33.0**	**+4.7**
KAKA	**Kakadu**	**11.57**	**210**	*e*Pn	**Pn**	**19 43 20.8**	**+0.4**
	82nm,0.6s						
KAKA				*e*Sn	**Sn**	**19 45 29.0**	**+0.7**
COEN	**Coen**	**12.19**	**157**	*e*P	**Pn**	**19 43 28.6**	**-0.3**
COEN	**Coen**	**12.19**	**157**	*e*Pn	**Pn**	**19 43 27.9**	**-1.0**
	100nm,0.7s						
KNA	**Kununurra**	**16.07**	**215**	*e*P	**Pn**	**19 44

comp=Z,0.7nm,0.8s,mb3.7,baz=145,slow=8.2,SNR=5.1
TLY Talaya 61.63 336 P **P 19 50 48.8 -2.2**
comp=Z,1.9nm,0.6s,mb4.4
MK31 Makanchi Array 69.53 323 *e*P **P 19 51 42.0 -0.2**
MKAR Makanchi Array 69.53 323 P **P 19 51 42.6 +0.4**
comp=Z,3.4nm,0.9s,mb4.3,baz=90,slow=13,SNR=24
ZAA0 Zalesovo Array 71.71 330 P **P 19 51 54.3 -1.0**
ZALV Zalesovo Beam 71.71 330 P **P 19 51 54.5 -0.9**
comp=Z,1.3nm,0.6s,mb4.0,baz=116,slow=6.5,SNR=7.7
ZALV Zalesovo Beam 71.71 330 P **P 19 51 54.5 -0.9**
TKM2 Tokmak 2 72.26 317 *e*P **P 19 51 59.7 +0.8**
comp=Z,1.8nm,0.7s,mb4.1
UCH Uchtor 72.77 316 *e*P **P 19 52 03.1 +1.2**
comp=Z,7.1nm,1.3s,mb4.4
EKS2 Erkin-Say 73.42 316 *e*P **P 19 52 06.6 +0.8**
KURK Kurchatov 73.47 325 *e*P **P 19 52 05.2 -0.6**
comp=Z,1.2nm,0.6s,mb4.0
TIXI Tiksi 74.44 357 *e*P **P 19 52 10.5 -0.6**
comp=Z,3.1nm,0.6s,mb4.4
BVAR Borovoye Array 79.07 325 P **P 19 52 37.5 0.0**
comp=Z,2.0nm,0.6s,mb4.2,baz=115,slow=5.7,SNR=20
BRVK Borovoye 79.14 325 *e*P **P 19 52 37.9 -0.1**
comp=Z,2.3nm,0.6s,mb4.3
KDAK Kodiak Island 81.25 30 P **P 19 52 48.1 -1.1**
comp=Z,5.6nm,0.8s,mb4.5,baz=217,slow=5.2,SNR=2.9
MAW Mawson 82.03 202 P **P 19 52 54.6 +1.4**
comp=Z,1.1nm,0.6s,mb4.0,baz=338,slow=5.4,SNR=3.6
MAW Mawson 82.03 202 *e*P **P 19 52 55.7 +2.5**
QSPA South Pole Qui 87.28 180 *e*P **P 19 53 19.2 -0.3**
comp=Z,4.2nm,0.8s,mb4.7
DAWY Dawson 88.98 26 *e*P **P 19 53 27.9 0.0**
LPAZ La Paz 147.76 127 PKPbc PKPbc 20 00 19.8 +0.7
comp=Z,2.0nm,0.7s,baz=2.2,slow=2.5,SNR=5.5

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*IDC **27** 19:47:45.3±1.2,0.14N×96.48E,h0km,mb3.8/9,*
mb1 3.8/11,mb1mx3.7/24,mbtmp3.7/11,ML3.5/2,Error ellipse: s-maj=40.2km s-min=19.3km az=55.0
*ISCJB **27** 19:47:49.3±0.6,0.31N±0.05×96.71E±0.05,h33km,*
mb3.8/11,Error ellipse: s-maj=8.6km s-min=7.1km az=43.7
*NEIC **27** 19:47:50.4±0.6,0.17N×96.66E,h35km,mb4.2/2,Error ellipse: s-maj=17.0km s-min=11.3km az=71.0*
*DJA **27** 19:48:11,0.52S×98.13E,h33km,MLv3.6/4*
ISC 27 19:47:51.5±0.6,0.31N±0.06×96.75E±0.06,h35km,n24,
σ0.65/27,mb3.8/11,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**2.87**	**80**	P	**Pn**	**19 49 34.9**	**0.0**
MNSI				S	**Sn**	**19 49 07.6**	**-0.6**
TPTI		**2.96**	**8**	P	**Sn**	**19 49 09.3**	**-1.2**
PSI	**Prapat**	**3.30**	**41**	Pn	**Pn**	**19 48 40.6**	**-0.1**
	1.6nm,0.3s,baz=292,slow=20,SNR=9.4						
PSI				Sn	**Sn**	**19 49 19.3**	**+0.6**
	2.5nm,0.3s,baz=309,slow=23,SNR=4.7						
PPI	**Padang Panjang**	**3.73**	**102**	P	**Pn**	**19 48 46.6**	**0.0**
PPI				S	**Sn**	**19 49 15.3**	**-14**
PDSI	**Padang**	**3.91**	**108**	P	**Pn**	**19 48 48.3**	**-0.8**
PDSI				S	**Sn**	**19 49 18.2**	**-16**
SDSI	**Sungai Dareh**	**4.84**	**105**	P	**Pn**	**19 49 02.7**	**+0.8**
IPM	**Ipoh**	**5.95**	**46**	P	**Pn**	**19 49 18.1**	**+0.9**
KULM	**Kulim**	**6.30**	**38**	*e*Pn	**Pn**	**19 49 21.3**	**-0.7**
	9.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**18.16**	**7**	P	**Pn**	**19 52 01.8**	**+0.8**
	0.1nm,0.3s,baz=195,slow=11,SNR=9.8						
WRA	**Warramunga Arr**	**41.96**	**121**	P	**P**	**19 55 39.4**	**0.0**
	1.1nm,0.7s,mb3.6,baz=301,slow=9.1,SNR=6.4						
WRAB	**Tennant Creek**	**41.97**	**121**	*e*P	**P**	**19 55 39.0**	**-0.4**
ASAR	**Alice Springs**	**43.23**	**126**	P	**P**	**19 55 49.7**	**+0.1**
	0.8nm,0.7s,mb3.5,baz=297,slow=7.5,SNR=11						
KSRS	**Korea Array**	**46.84**	**34**	P	**P**	**19 56 19.0**	**+0.9**
	0.3nm,0.5s,mb3.5,baz=213,slow=12,SNR=4.0						
MK31	**Makanchi Array**	**48.00**	**347**	*e*P	**P**	**19 56 27.4**	**+0.5**
MK31				*e*	pP	19 56 36.6	-0.8
MKAR	**Makanchi Array**	**48.00**	**347**	P	**P**	**19 56 27.4**	**+0.4**
	0.9nm,0.6s,mb4.0,baz=133,slow=9.1,SNR=11						
SONM	**Songino Array**	**48.08**	**9**	P	**P**	**19 56 28.6**	**+1.1**
	0.3nm,0.4s,mb3.6,baz=192,slow=9.6,SNR=3.7						
KURK	**Kurchatov**	**52.53**	**346**	P	**P**	**19 57 01.3**	**+0.1**
	1.2nm,0.8s,mb3.9						
ZAA0	**Zalesovo Array**	**54.36**	**351**	*e*P	**P**	**19 57 14.2**	**-0.4**
ZAA0				*e*	pP	19 57 23.8	-1.4
ZALV	**Zalesovo Beam**	**54.36**	**351**	P	**P**	**19 57 14.6**	**0.0**
	2.7nm,0.5s,mb4.4,baz=172,slow=7.0,SNR=15						
BVAR	**Borovoye Array**	**56.94**	**341**	P	**P**	**19 57 32.4**	**-0.7**
	0.2nm,0.5s,mb3.4,baz=132,slow=4.3,SNR=2.6						
CASY	**Casey**	**67.17**	**174**	*e*P	**P**	**19 58 36.8**	**-4.7**
	2.7nm,0.7s,mb4.4						
FINES	**FINESS Array B**	**80.58**	**333**	P	**P**	**19 59 58.8**	**-1.3**
	0.6nm,0.5s,mb3.8,baz=110,slow=4.5,SNR=5.3						
ARCES	**ARCESS Array B**	**83.22**	**340**	P	**P**	**20 00 14.0**	**+0.1**
	1.2nm,0.8s,mb4.0,baz=98,slow=5.5,SNR=6.9						
TXAR	**Lajitas Array**	**144.66**	**32**	PKP	PKPdf	20 07 24.6	-0.6
	0.2nm,0.6s,baz=307,slow=1.9,SNR=4.4						

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*NEIC **27** 19:53:54.3,32.70N×115.81W,h12km,ML2.8(PAS),After PAS.*
ECX 27 19:53:54.9±0.8,32.71N×115.82W,h5km±2km,MD2.6,
ML2.7,8C-7D,California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGL	**Mount Signal**	**0.10**	**130**	⇓*i*P	Pg	19 53 56.7	-0.2
YUH	**Yuha Desert**	**0.11**	**235**	⇑*i*P	Pg	19 53 57.2	0.0
COK	**Cook Ranch**	**0.16**	**28**	⇓*i*P	Pg	19 53 58.0	0.0
CRR	**Carrizo Plain**	**0.22**	**323**	⇓*i*P	Pg	19 53 58.9	-0.2
RMX	**La Rumorosa**	**0.25**	**244**	⇑*e*P	Pg	19 53 59.4	-0.3
RMX				*e*S	Sg	19 54 03.4	+0.4
CPBX	**Cerro Prieto**	**0.52**	**124**	*e*P	Pg	19 54 04.7	-0.2
BAR	**Barrett**	**0.72**	**268**	*e*Pg	Pg	19 54 07.7	-1.1
BAR				*e*Sg	Sg	19 54 17.0	-1.2
BAR				*e*Sg	Sg	19 54 17.1	-1.1
RDX	**Rancho Dawling**	**0.79**	**188**	⇑*e*P	Pg	19 54 08.5	-1.5
RDX				*e*S	Sg	19 54 18.6	-1.6
RDX				⇓*e*		19 54 18.9	
	comp=N,217nm,0.3s						
CBX	**Cerro Bola**	**0.82**	**241**	⇑*e*P	Pg	19 54 09.8	-0.8
CBX				*e*S	Sg	19 54 20.2	-1.0
EMX	**El Mayor**	**0.87**	**146**	⇓*e*P	Pg	19 54 10.1	-1.5
EMX				*e*S	Sg	19 54 21.4	-1.4
EMX				⇓*e*		19 54 22.9	
	comp=E,206nm,0.6s						
EMX				⇓*e*		19 54 22.9	
	comp=N,192nm,0.3s						
GLA	**Glamis**	**0.90**	**68**	*e*Pg	Pg	19 54 09.9	-2.3
GLA				*e*Sg	Sg	19 54 21.5	-2.3
PFO	**Pinyon Flat Ob**	**1.04**	**329**	*e*P	Pg	19 54 12.1	-2.8
PFO				*e*S	Sg	19 54 27.0	-1.5
PBX	**Punta Banda**	**1.24**	**219**	⇑*e*P	Pg	19 54 16.7	-1.9
PBX				*e*S	Sg	19 54 33.1	-1.5
ECNX	**Esteban Cantu**	**1.24**	**212**	*e*P	Pg	19 54 16.5	-2.3
ECNX				*e*S	Sg	19 54 29.1	-5.7
ECNX				*e*S	Sg	19 54 33.6	-1.3
ECBX	**El Chinero**	**1.40**	**152**	*e*P	Pn	19 54 19.1	-1.9
ECBX				*e*S	Sb	19 54 37.5	-2.1
ECBX				⇑*e*		19 54 39.6	
	comp=E,64nm,0.4s						
ECBX				*e*		19 54 39.9	
	comp=N,52nm,0.2s						
SPX	**San Pedro Mart**	**1.69**	**170**	*e*P	Pn	19 54 24.4	-0.6
SPX				*e*S	Sn	19 54 47.2	+0.2
SPX				⇑*e*		19 54 50.0	
	comp=E,39nm,0.3s						
SPX				⇑*e*		19 54 50.3	
	comp=N,51nm,0.2s						
GSC	**Goldstone**	**2.71**	**343**	Pn	Pn	19 54 38.3	-0.9

IDC 27 19:55:20.0±10.0,10.80N×91.63E,h0km,mb3.3/3,
mb1 3.5/3,mb1mx3.2/23,mbtmp3.3/3,Error ellipse: s-maj=546.4km s-min=29.3km az=60.0,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.74**	**349**	P	P	20 02 29.0	0.0
	0.3nm,0.5s,baz=142,slow=8.6,SNR=6.1						
WRA	**Warramunga Arr**	**51.97**	**126**	P	P	20 04 31.3	0.0
	0.2nm,0.7s,baz=306,slow=8.5,SNR=4.7						
ASAR	**Alice Springs**	**53.68**	**130**	P	P	20 04 43.9	-0.1
	0.2nm,0.7s,baz=307,slow=6.4,SNR=3.9						

IDC 27 20:12:01.8±1.2,16.25S×178.41W,h0km,mb4.0/7,
mb1 4.2/7,mb1mx4.0/18,mbtmp4.0/7,Error ellipse: s-maj=48.2km s-min=24.6km az=150.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**22.28**	**189**	P	P	20 17 00.6	+0.1
	9.8nm,1.0s,baz=343,slow=11,SNR=2.6						
STKA	**Stephens Creek**	**39.45**	**239**	P	P	20 19 34.0	+0.2
	1.7nm,0.5s,baz=100,slow=11,SNR=8.2						
WRA	**Warramunga Arr**	**44.96**	**258**	P	P	20 20 19.1	+0.2
	0.7nm,0.5s,baz=94,slow=6.9,SNR=30						
ASAR	**Alice Springs**	**45.26**	**253**	P	P	20 20 21.0	-0.3
	5.0nm,0.4s,baz=90,slow=7.7,SNR=181						
FITZ	**Fitzroy Crossi**	**53.32**	**259**	P	P	20 21 22.6	-0.5
	1.3nm,0.9s,baz=95,slow=19,SNR=1.4						
TXAR	**Lajitas Array**	**85.11**	**58**	P	P	20 24 40.5	+0.5
	0.3nm,0.7s,baz=224,slow=5.2,SNR=4.3						
PDAR	**Pinedale Array**	**86.15**	**43**	P	P	20 24 44.9	+0.1
	0.3nm,0.4s,baz=298,slow=1.9,SNR=2.3						

IDC 27 20:14:15.6±1.9,10.84N×91.67E,h0km,mb3.6/6,
mb1 3.7/7,mb1mx3.5/24,mbtmp3.5/7,ML3.0/1,Error ellipse: s-maj=67.2km s-min=20.2km az=68.0,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.34**	**42**	Pn	Pn	20 16 47.2	+2.0
	0.0nm,0.3s,baz=229,slow=16,SNR=2.7						
MKAR	**Makanchi Array**	**36.71**	**349**	P	P	20 21 24.5	+0.2
	0.3nm,0.6s,baz=124,slow=7.5,SNR=3.4						
SONM	**Songino Array**	**38.91**	**16**	P	P	20 21 41.3	-1.5
	0.6nm,1.0s,baz=199,slow=8.4,SNR=2.3						
ZALV	**Zalesovo Beam**	**43.34**	**354**	P	P	20 22 19.8	+0.5
	0.2nm,0.4s,baz=197,slow=4.5,SNR=2.8						
FITZ	**Fitzroy Crossi**	**44.18**	**130**	P	P	20 22 26.3	-0.2
	1.4nm,0.6s,baz=261,slow=13,SNR=7.1						
WRA	**Warramunga Arr**	**51.96**	**126**	P	P	20 23 26.4	-0.4
	0.3nm,0.3s,baz=300,slow=10.0,SNR=11						
ASAR	**Alice Springs**	**53.68**	**130**	P	P	20 23 39.6	+0.1
	0.8nm,0.7s,baz=305,slow=7.0,SNR=13						
ASAR				PcP	PcP	20 24 46.3	+0.5
	0.5nm,0.6s,baz=310,slow=4.0,SNR=4.7						

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*BJI **27** 20:20:52.5,9.97N×91.78E,h29km,mB4.3/1,mb4.1/4*
*IDC **27** 20:20:56.1±0.9,10.57N×91.36E,h0km,mb4.0/14,*
mb1 4.1/15,mb1mx3.9/26,mbtmp4.0/15,ML4.0/1,MS3.3/3,
Ms1 3.3/3,ms1mx2.8/29,Error ellipse: s-maj=39.3km s-min=13.5km az=56.0
*NEIC **27** 20:20:57.3±0.5,10.59N×91.35E,h10km,mb4.0/4,Error ellipse: s-maj=11.9km s-min=8.0km az=53.0*
*ISCJB **27** 20:20:58.9±3.4,10.68N±0.08×91.54E±0.08,h31km±25km,*
mb4.0/16,MS3.1/2,Error ellipse: s-maj=14.1km s-min=11.7km az=138.8
ISC 27 20:21:02.8±1.3,10.70N±0.08×91.53E±0.08,h47km±12km,
n27,σ0.89/26,mb4.0/16,MS3.1/2,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**10.53**	**42**	Pn	**Pn**	**20 23 31.1**	**-0.1**
CMAR	**Chiang Mai Arr**	**10.53**	**42**	Pn	**Pn**	**20 23 32.5**	**+1.3**
	0.3nm,0.3s,baz=236,slow=15,SNR=9.9						
PSI	**Prapat**	**10.74**	**136**	LR	LR	20 28 15.8	
	comp=Z,239nm,18.5s,baz=180,slow=40						
CHTO	**Chiang Mai**	**10.79**	**41**	*e*Pn	**Pn**	**20 23 33.9**	**-0.8**
PALK	**Pallekele**	**11.23**	**253**	*e*Pn	**Pn**	**20 23 40.9**	**+0.2**
KSM	**Kuching**	**20.78**	**115**	*e*P	**P**	**20 25 39.8**	**-0.3**
	5.8nm,0.8s						
AAK	**Ala-Archa**	**35.12**	**338**	P	**P**	**20 27 51.9**	**+0.1**
	1.3nm,0.3s,mb4.3,baz=200,slow=8.5,SNR=4.2						
EKS2	**Erkin-Say**	**35.41**	**337**	*e*P	**P**	**20 27 53.1**	**-1.2**
	1.8nm,0.7s,mb4.1						
MK31	**Makanchi Array**	**36.82**	**349**	*e*P	**P**	**20 28 06.5**	**+0.3**
MK31				*e*	pP	20 28 14.0	-4.7
MKAR	**Makanchi Array**	**36.82**	**349**	P	**P**	**20 28 06.3**	**+0.1**
	2.6nm,0.6s,mb4.2,baz=133,slow=8.1,SNR=26						
MKAR				PcP	PcP	20 30 28.6	+1.1
	0.2nm,0.5s,baz=107,slow=3.6,SNR=4.3						
MKAR				LR	LR	20 44 56.9	
	comp=Z,34nm,18.0s,MS3.2,baz=162,slow=39						
SONM	**Songino Array**	**39.07**	**16**	P	**P**	**20 28 25.5**	**+0.3**
	0.9nm,0.9s,mb3.5,baz=205,slow=7.0,SNR=4.7						
ULN	**Ulaanbaatar**	**39.28**	**17**	*e*P	**P**	**20 28 32.2**	**+5.3**
KURK	**Kurchatov**	**41.29**	**348**	P	**P**	**20 28 42.6**	**-0.9**
	0.8nm,0.3s,mb3.9,baz=169,slow=7.2,SNR=4.7						
KURK	**Kurchatov**	**41.29**	**348**	P	**P**	**20 28 42.6**	**-0.9**
ZAA0	**Zalesovo Array**	**43.47**	**354**	P	**P**	**20 28 59.3**	**-1.9**
ZALV	**Zalesovo Beam**	**43.47**	**354**	P	**P**	**20 29 01.3**	**+0.2**
	1.9nm,0.5s,mb4.0,baz=172,slow=11,SNR=7.8						
ZALV				LR	LR	20 51 39.4	
	comp=Z,21nm,18.3s,MS3.1,baz=237,slow=42						
FITZ	**Fitzroy Crossi**	**44.19**	**130**	P	**P**	**20 29 06.5**	**-1.0**
	4.3nm,0.9s,mb4.2,baz=321,slow=8.0,SNR=8.0						
BVAR	**Borovoye Array**	**45.52**	**342**	P	**P**	**20 29 17.9**	**+0.4**
	0.5nm,0.5s,mb3.7,baz=136,slow=8.9,SNR=7.9						
BVAR				PcP	PcP	20 30 58.4	+2.7
	0.3nm,0.7s,baz=45,slow=2.2,SNR=2.7						
BRVK	**Borovoye**	**45.58**	**342**	P	**P**	**20 29 18.3**	**+0.3**
	0.9nm,0.5s,mb4.0						
WRA	**Warramunga Arr**	**51.99**	**126**	P	**P**	**20 30 07.4**	**-0.3**
	1.0nm,0.4s,mb4.1,baz=301,slow=10.0,SNR=60						
ASAR	**Alice Springs**	**53.69**	**130**	P	**P**	**20 30 20.5**	**+0.2**
	1.8nm,0.6s,mb4.2,baz=303,slow=7.3,SNR=32						
BRTR	**Keskin Array B**	**58.65**	**310**	P	**P**	**20 30 53.8**	**-1.6**
	0.8nm,0.8s,mb3.8,baz=104,slow=6.1,SNR=4.8						
STKA	**Stephens Creek**	**63.91**	**133**	P	**P**	**20 31 32.3**	**+1.2**
	1.6nm,0.6s,mb4.2,baz=324,slow=9.3,SNR=8.3						
STKA	**Stephens Creek**	**63.91**	**133**	*e*P	**P**	**20 31 31.8**	**+0.7**
	0.6nm,0.7s,mb3.7						
FINES	**FINESS Array B**	**69.03**	**332**	P	**P**	**20 32 04.0**	**+0.7**
	1.8nm,0.9s,mb4.0,baz=101,slow=9.9,SNR=5.3						
ARCES	**ARCESS Array B**	**71.75**	**340**	P	**P**	**20 32 21.9**	**+2.1**
	1.0nm,0.6s,mb3.9,baz=108,slow=8.6,SNR=4.3						
NOA	**NORSAR Array B**	**76.02**	**330**	P	**P**	**20 32 45.8**	**+0.9**
	0.4nm,0.6s,mb3.5,baz=94,slow=5.7,SNR=2.7						

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*BJI **27** 20:37:31.9,10.68N×91.85E,h7km,mb4.1/5*
*IDC **27** 20:37:32.6±0.9,10.76N×91.65E,h0km,mb4.0/10,*
mb1 4.0/11,mb1mx3.8/24,mbtmp3.9/11,ML3.5/1,MS3.2/1,
Ms1 3.2/1,ms1mx2.4/34,Error ellipse: s-maj=39.7km s-min=15.0km az=57.0
*NEIC **27** 20:37:34.0±0.4,10.72N×91.58E,h10km,mb4.1/7,Error ellipse: s-maj=12.6km s-min=6.7km az=53.0*
*ISCJB **27** 20:37:36.0±5.4,10.8N±0.1×91.7E±0.2,h38km±48km,*
mb4.0/16,Error ellipse: s-maj=32.9km s-min=10.9km az=145.3
ISC 27 20:37:39.6±3.6,10.8N±0.1×91.7E±0.2,h52km±32km,n25,
σ0.49/23,mb4.0/16,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.36**	**42**	Pn	**Pn**	**20 40 05.3**	**-0.3**
	0.1nm,0.3s,baz=236,slow=14,SNR=3.0						
PSI	**Prapat**	**10.70**	**137**	LR	LR	20 45 26.6	
	comp=Z,113nm,18.2s,baz=279,slow=44						
KSM	**Kuching**	**20.67**	**115**	P	**P**	**20 42 16.1**	**+0.7**
	9.6nm,1.0s						
GTA	**Gaotai**	**29.41**	**13**	*e*P	**P**	**20 43 39.0**	**+0.9**
GTA				pP	pP	20 43 45.3	-6.1
GTA				sP	sP	20 43 48.0	-10
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.8						
KBL	**Kabul**	**31.41**	**322**	*e*P	**P**	**20 43 56.2**	**+0.4**
	comp=Z,2.1nm,0.8s,mb4.0						
EKS2	**Erkin-Say**	**35.40**	**337**	*e*P	**P**	**20 44 31.5**	**+1.0**
	comp=Z,1.9nm,0.8s,mb4.1						
EKS2				*e*		20 44 39.2	
MK31	**Makanchi Array**	**36.77**	**349**	*e*P	**P**	**20 44 42.3**	**+0.3**
MK31				*e*		20 44 49.0	
MKAR	**Makanchi Array**	**36.77**	**349**	P	**P**	**20 44 41.9**	**-0.2**
	comp=Z,2.9nm,0.7s,mb4.2,baz=133,slow=8.8,SNR=30						
MKAR				PcP	PcP	20 47 04.8	+1.4
	comp=Z,0.3nm,0.7s,baz=234,slow=4.8,SNR=2.8						
SONM	**Songino Array**	**38.95**	**16**	P	**P**	**20 44 59.5**	**-1.0**
	comp=Z,1.3nm,1.0s,mb3.6,baz=196,slow=8.8,SNR=7.0						
SONM				PcP	PcP	20 47 12.0	+1.9
	comp=Z,0.4nm,0.7s,baz=160,slow=4.6,SNR=3.3						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**41.24**	**347**	*e*P	**P**	**20 45 19.0**	**-0.4**
	comp=Z,2.1nm,1.1s,mb3.7						
KURK				*e*		20 45 26.0	
ZAA0	**Zalesovo Array**	**43.40**	**354**	*e*P	**P**	**20 45 36.4**	**-0.5**
ZAA0				*e*		20 45 44.0	
ZALV	**Zalesovo Beam**	**43.40**	**354**	P	**P**	**20 45 36.8**	**-0.1**
	comp=Z,1.8nm,0.6s,mb4.0,baz=172,slow=10.0,SNR=14						
FITZ	**Fitzroy Crossi**	**44.12**	**130**	P	**P**	**20 45 43.3**	**+0.1**
	comp=Z,2.3nm,0.8s,mb4.0,baz=315,slow=10.0,SNR=4.8						
BVAR	**Borovoye Array**	**45.48**	**342**	P	**P**	**20 45 53.3**	**-0.2**
	comp=Z,0.5nm,0.5s,mb3.6,baz=159,slow=8.9,SNR=4.8						
BVAR				PcP	PcP	20 47 32.2	+0.4
	comp=Z,0.4nm,0.6s,baz=139,slow=9.0,SNR=2.6						
WRA	**Warramunga Arr**	**51.91**	**126**	P	**P**	**20 46 43.0**	**-0.4**
	comp=Z,0.6nm,0.5s,mb3.8,baz=300,slow=9.9,SNR=13						
WRAB	**Tennant Creek**	**51.91**	**126**	*e*P	**P**	**20 46 43.0**	**-0.4**
ARU	**Arti**	**52.29**	**337**	*e*P	**P**	**20 46 46.1**	**+0.4**
KIV	**Kislovodsk**	**53.55**	**317**	*e*P	**P**	**20 46 54.7**	**-0.5**
	comp=Z,4.3nm,0.7s,mb4.5						
ASAR	**Alice Springs**	**53.62**	**130**	P	**P**	**20 46 56.1**	**+0.2**
	comp=Z,2.5nm,0.8s,mb4.2,baz=304,slow=6.9,SNR=31						
BRTR	**Keskin Array B**	**58.72**	**310**	P	**P**	**20 47 32.1**	**0.0**
	comp=Z,0.9nm,0.8s,mb3.9,baz=124,slow=6.2,SNR=6.1						
STKA	**Stephens Creek**	**63.85**	**134**	P	**P**	**20 48 07.3**	**+0.4**
	comp=Z,1.2nm,0.7s,mb4.1,baz=14,slow=1.5,SNR=4.2						
STKA	**Stephens Creek**	**63.85**	**134**	*e*P	**P**	**20 48 07.3**	**+0.4**
	comp=Z,0.8nm,1.0s,mb3.7						
FINES	**FINESS Array B**	**69.03**	**332**	P	**P**	**20 48 39.8**	**+0.3**
	comp=Z,2.2nm,0.8s,mb4.1,baz=116,slow=8.7,SNR=8.0						
LBTB	**Lobatse**	**73.56**	**240**	P	**P**	**20 49 07.1**	**-0.5**
	comp=Z,2.5nm,0.9s,mb4.1						
NVAR	**Mina Array Bea**	**123.59**	**28**	PKP	PKPdf	20 56 34.2	+2.4
	comp=Z,0.3nm,0.3s,baz=295,slow=2.8,SNR=4.1						

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*ATH **27** 20:44:38.8,36.36N×22.01E,h25km±1km,MD3.0/3*
*NEIC **27** 20:44:38.8,36.36N×22.01E,h25km,MD3.0(ATH),After ATH.*
*ISCJB **27** 20:44:38.7±1.4,36.35N±0.05×22.00E±0.07,h0km±7km,*
Error ellipse: s-maj=12.0km s-min=5.6km az=137.6
*CSEM **27** 20:44:40.5±0.5,36.41N×22.04E,h10km,ML2.8/2,Error ellipse: s-maj=12.8km s-min=5.9km az=50.0*
*THE **27** 20:44:40.1,36.40N×22.05E,h0km±1km,ML2.8/2,Error ellipse: s-maj=2.3km s-min=0.7km az=243.0*
ISC 27 20:44:39.0±1.5,36.34N±0.06×21.98E±0.08,h2km±7km,
n36,σ0.78/52,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.59**	**341**	P	**Pg**	**20 44 50.7**	**+0.4**
PYL				S	**Sg**	**20 44 59.7**	**+1.7**
PYL	**PYLOS**	**0.59**	**341**	*e*PN	**Pg**	**20 44 50.8**	**+0.5**
PYL				*e*SN	**Sg**	**20 44 59.1**	**+1.1**
PYL	**PYLOS**	**0.59**	**341**	P	**Pg**	**20 44 50.7**	**+0.4**
PYL				S	**Sg**	**20 44 59.7**	**+1.7**
ITM	**Ithomi**	**0.84**	**357**	*e*Pn	**Pg**	**20 44 54.6**	**-0.6**
ITM				*e*Sn	**Sg**	**20 45 06.5**	**+0.4**
ITM	**Ithomi**	**0.84**	**357**	P	**Pg**	**20 44 54.8**	**-0.4**
ITM				S	**Sg**	**20 45 06.4**	**+0.3**
ITM	**Ithomi**	**0.84**	**357**	*e*PN	**Pg**	**20 44 54.6**	**-0.6**
ITM				*e*SN	**Sg**	**20 45 06.5**	**+0.4**
ITM	**Ithomi**	**0.84**	**357**	P	**Pg**	**20 44 54.8**	**-0.4**
ITM				*e*Sn	**Sg**	**20 45 06.5**	**+0.4**
KYTH	**Kithira**	**0.86**	**94**	*e*Pn	**Pg**	**20 44 55.0**	**-0.4**
KYTH	**Kithira**	**0.86**	**94**	*e*PN	**Pg**	**20 44 55.0**	**-0.4**
KYTH	**Kithira**	**0.86**	**94**	*e*Pn	**Pg**	**20 44 55.0**	**-0.4**
VLI	**Veliai**	**0.86**	**64**	*e*Pn	**Pg**	**20 44 54.8**	**-0.7**
VLI				*e*Sn	**Sg**	**20 45 07.1**	**+0.4**
VLI	**Veliai**	**0.86**	**64**	*e*PN	**Pg**	**20 44 54.8**	**-0.7**
VLI				*e*SN	**Sg**	**20 45 07.1**	**+0.4**
VLI	**Veliai**	**0.86**	**64**	*e*Pn	**Pg**	**20 44 54.8**	**-0.7**
VLI				*e*Sn	**Sg**	**20 45 07.1**	**+0.4**
VLX	**Vlachokerasia**	**1.08**	**17**	P	**Pg**	**20 44 58.7**	**-1.0**
VLX				S	**Sg**	**20 45 14.3**	**+0.6**
VLX	**Vlachokerasia**	**1.08**	**17**	*e*PN	**Pg**	**20 44 58.9**	**-0.8**
VLX	**Vlachokerasia**	**1.08**	**17**	P	**Pg**	**20 44 58.7**	**-1.0**
VLX				S	**Sg**	**20 45 14.3**	**+0.6**
DID	**Didima**	**1.54**	**40**	P	**Pn**	**20 45 07.4**	**-0.1**
DID	**Didima**	**1.54**	**40**	*e

PALK *e*Sn **Sn** **21 02 12.5 -17**
HYB Hyderabad 14.36 299 *i* P **Pn** **21 01 02.0 +0.1**
HYB *e*S **Sn** **21 03 40.0 -0.5**
ODAN Odare 16.48 346 *e*P **Pn** **21 01 29.0 -0.7**
comp=Z,40nm,0.7s
RAMN Ramite 16.76 344 *e*P **Pn** **21 01 34.3 +1.0**
comp=Z,58nm,0.5s
TAPN Taplejung 16.88 348 *e*P **Pn** **21 01 31.3 -3.5**
comp=Z,53nm,0.9s
JIRN Jiri 17.55 344 *e*P **Pn** **21 01 41.4 -1.7**
comp=Z,30nm,0.5s
KMI Kunming 17.66 35 P **Pn** **21 01 45.5 +1.0**
KMI pP pP 21 01 52.5 +1.0
KMI sP sP 21 01 55.3 +0.8
KMI PP 21 02 00.0
KMI S **Sn** **21 05 00.5 -0.2**
KMI sS sS 21 05 10.0 -7.6
KMI SS 21 05 23.3
KMI pmax pmax
comp=Z,7.0nm,1.6s
KMI pmax pmax
comp=Z,76nm,4.6s
KMI LR LR
comp=N,580nm,15.9s
KMI LR LR
comp=E,470nm,15.5s
KMI LR LR
comp=Z,440nm,12.8s
PKI Pulchoki 17.70 341 *e*P **Pn** **21 01 44.7 -0.3**
comp=Z,94nm,1.0s
PKIN Phulchoki 17.71 341 *e*P **Pn** **21 01 45.4 +0.3**
comp=Z,68nm,0.8s
DMN Daman 17.83 340 *e*P **Pn** **21 01 46.6 0.0**
comp=Z,71nm,0.8s
GUN Gumba 17.87 343 *e*P **Pn** **21 01 44.9 -2.2**
KKN Kakani 17.94 341 *e*P **Pn** **21 01 47.2 -0.8**
comp=Z,123nm,1.2s
LSA Lhasa 18.80 358 P **Pn** **21 02 01.5 +3.1**
KSM Kuching 20.66 115 *e*P **P** **21 02 17.1 -1.2**
comp=Z,22nm,0.8s
GYA Guiyang 21.00 40⇑ *i*P **P** **21 02 21.5 -0.4**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.1
GYA pmax pmax
comp=Z,30nm,3.4s
GYA LR LR
comp=N,350nm,12.1s,MS4.0
GYA LR LR
comp=E,250nm,14.3s,MS4.0
GYA LR LR
comp=Z,470nm,12.7s,MS4.1
KKM Kota Kinabalu 24.68 99 *e*P **P** **21 02 58.9 -0.5**
comp=Z,27nm,1.4s,mb4.6
LZH Lanzhou 27.45 22 *e*P **P** **21 03 26.0 +1.7**
LZH pP pP 21 03 35.3 +4.3
LZH sP sP 21 03 39.5 +5.7
LZH *e*PP 21 04 10.0
LZH *e*S **S** **21 07 56.3 -7.3**
LZH pmax pmax
comp=Z,23nm,1.3s,mb4.5
LZH pmax pmax
comp=Z,100nm,4.6s
LZH LR LR
comp=E,790nm,11.5s
LZH LR LR
comp=Z,1μm,13.6s,MS4.6
GTA Gaotai 29.38 13 *e*P **P** **21 03 43.0 +1.7**
GTA PcP PcP 21 06 49.5 +2.2
GTA pmax pmax
comp=Z,6.0nm,1.3s,mb4.2
KBL Kabul 31.40 322 P **P** **21 03 56.4 -2.9**
KBL pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
KBL Kabul 31.40 322 P **P** **21 03 56.4 -3.0**
comp=Z,8.8nm,1.0s,mb4.5
KSH Kashi 31.84 337 P **P** **21 04 02.5 -0.5**
UCH Uchtor 34.73 337 *e*P **P** **21 04 26.1 -2.2**
UCH pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
UCH Uchtor 34.73 337 *e*P **P** **21 04 26.1 -2.2**
comp=Z,6.2nm,1.0s,mb4.5
TKM2 Tokmak 2 34.94 339 P **P** **21 04 27.6 -2.4**
TKM2 pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
TKM2 Tokmak 2 34.94 339 P **P** **21 04 27.6 -2.4**
comp=Z,6.8nm,1.0s,mb4.5
AML Almayashu 34.96 336 P **P** **21 04 32.4 +2.1**
AML pmax pmax
comp=Z,41nm,1.1s,mb5.3
AML Almayashu 34.96 336 P **P** **21 04 32.4 +2.1**
comp=Z,40nm,1.1s,mb5.3
AAK Ala-Archa 35.09 338 P **P** **21 04 33.4 +2.1**
comp=Z,1.3nm,0.3s,mb4.3,baz=196,slow=11,SNR=5.9
EKS2 Erkin-Say 35.38 337 *e*P **P** **21 04 35.5 +1.6**
EKS2 pmax pmax
comp=Z,17nm,1.0s,mb4.9
EKS2 Erkin-Say 35.38 337 *e*P **P** **21 04 35.5 +1.7**
comp=Z,17nm,1.0s,mb4.9
MK31 Makanchi Array 36.74 349 *e*P **P** **21 04 45.1 -0.4**
MKAR Makanchi Array 36.74 349 P **P** **21 04 45.1 -0.3**
comp=Z,3.3nm,0.7s,mb4.3,baz=134,slow=8.3,SNR=42
MKAR PcP PcP 21 07 07.7 +0.1
comp=Z,0.8nm,0.6s,baz=103,slow=4.6,SNR=4.0
MKAR LR LR 21 23 47.9
comp=Z,162nm,19.6s,MS3.8,baz=168,slow=43
MKAR Makanchi Array 36.74 349 *c e*P **P** **21 04 45.4 -0.1**
MKAR pmax pmax
comp=Z,3.0nm,0.6s
SONM Songino Array 38.91 16 P **P** **21 05 04.7 +0.9**
comp=Z,4.8nm,1.0s,mb4.2,baz=205,slow=9.0,SNR=14
SONM PcP PcP 21 07 14.9 +0.6
comp=Z,1.2nm,0.7s,baz=199,slow=2.4,SNR=4.7
ULN Ulaanbaatar 39.12 16 *e*P **P** **21 05 05.8 +0.3**
ULN pmax pmax
comp=Z,14nm,1.3s,mb4.5
ULN Ulaanbaatar 39.12 16 *e*P **P** **21 05 05.8 +0.3**
comp=Z,14nm,1.3s,mb4.5
ZAK Zakamensk 40.59 11 *e*P **P** **21 05 18.2 +0.5**
ZAK *e* 21 07 20.6
ZAK pmax pmax
comp=Z,3.0nm,1.6s,mb3.7
KURK Kurchatov 41.22 347 P **P** **21 05 22.9 0.0**
comp=Z,4.3nm,0.9s,mb4.1,baz=166,slow=7.2,SNR=7.5
KURK PcP PcP 21 07 20.2 -1.4
comp=Z,0.8nm,0.2s,baz=160,slow=2.9,SNR=3.5
KURK Kurchatov 41.22 347 *c i*P **P** **21 05 23.6 +0.7**
KURK pmax pmax
comp=Z,7.0nm,1.2s,mb4.2
KURK Kurchatov 41.22 347 *e*P **P** **21 05 22.4 -0.4**
KURK PcP PcP 21 07 20.2 -1.4
TLY Talaya 41.90 11 *e*P **P** **21 05 35.1 +6.7**
TLY pmax pmax
comp=Z,8.0nm,1.0s,mb4.3
TLY Talaya 41.90 11 P **P** **21 05 31.3 +2.9**
comp=Z,14nm,1.2s,mb4.5
KSRS Korea Array 41.94 45 P **P** **21 05 27.7 -1.3**
comp=Z,0.8nm,0.5s,mb3.6,baz=249,slow=8.5,SNR=5.4
KSRS LR LR 21 25 01.3
comp=Z,166nm,18.4s,MS4.0,baz=70,slow=39
MBWA Marble Bar 42.03 139 *e*P **P** **21 05 28.9 -1.0**
ZAA0 Zalesovo Array 43.38 354 *e*P **P** **21 05 40.4 0.0**
ZALV Zalesovo Beam 43.38 354 P **P** **21 05 40.5 +0.1**
comp=Z,3.4nm,0.6s,mb4.2,baz=176,slow=10.0,SNR=24
ZALV LR LR 21 27 52.1
comp=Z,122nm,19.3s,MS3.8,baz=220,slow=42
CN2 Changchun 43.93 35 *e*P **P** **21 05 45.0 0.0**
FITZ Fitzroy Crossi 44.12 130 P **P** **21 05 45.7 -1.1**
comp=Z,6.0nm,0.4s,mb4.7,baz=325,slow=6.1,SNR=17
FITZ LR LR 21 28 02.6
comp=Z,112nm,18.9s,MS3.8,baz=280,slow=41
NVS Novosibirsk 44.43 353 *e*P **P** **21 05 45.9 -2.9**
NVS *e* 21 07 37.6
NVS pmax pmax
comp=N,17nm,1.9s
NVS pmax pmax
comp=Z,27nm,1.9s,mb4.7
NVS pmax pmax
comp=E,10.0nm,1.6s
CIT Chita 44.76 19 *e*P **P** **21 05 52.0 +0.5**
BVAR Borovoye Array 45.47 342 P **P** **21 05 56.8 -0.4**
comp=E,0.5nm,0.3s,mb3.8,baz=141,slow=9.6,SNR=7.2
BVAR PcP PcP 21 07 36.6 +0.7
comp=E,0.6nm,0.5s,baz=103,slow=4.6,SNR=2.7
BRVK Borovoye 45.53 342 *e*P **P** **21 05 56.4 -1.2**
BRVK pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
BRVK Borovoye 45.53 342 *e*P **P** **21 05 56.4 -1.2**
comp=Z,4.3nm,1.0s,mb4.3
AKTK Aktyubinsk 48.24 332 P **P** **21 06 18.8 -0.1**
AKTO Aktyubinsk 48.24 332 P **P** **21 06 18.8 -0.1**
comp=Z,1.5nm,0.5s,mb4.2,baz=127,slow=9.2,SNR=5.0
MJAR Matsushiro Arr 49.06 51 P **P** **21 06 26.4 +1.0**
comp=Z,0.4nm,0.4s,mb3.8,baz=251,slow=7.5,SNR=4.1
MJAR PcP PcP 21 07 49.6 +0.5
comp=Z,1.5nm,0.8s,baz=254,slow=4.6,SNR=4.8
MJAR LR LR 21 31 48.0
comp=Z,128nm,18.1s,MS4.0,baz=235,slow=42
MJAR Matsushiro Arr 49.06 51 P **P** **21 06 26.4 +0.9**
MJAR 21 07 49.6
NWAO Narrogin (SRO) 49.84 152 P **P** **21 06 31.4 0.0**
comp=Z,8.7nm,0.6s,mb5.0,baz=93,slow=16,SNR=6.9
NWAO Narrogin (SRO) 49.84 152 *e*P **P** **21 06 30.9 -0.5**
NWAO pmax pmax
comp=Z,25nm,1.1s
NWAO Narrogin (SRO) 49.84 152 *e*P **P** **21 06 30.9 -0.5**
comp=Z,26nm,1.1s,mb5.2
KLR Kul'dur 50.66 33 *e*P **P** **21 06 33.6 -3.8**
GNI Garni 50.69 314 *e*P **P** **21 06 39.2 +1.4**
GNI pmax pmax
comp=Z,10.0nm,0.9s
GNI Garni 50.69 314 *e*P **P** **21 06 39.2 +1.4**
comp=Z,9.9nm,0.9s,mb4.7
WRA Warramunga Arr 51.90 126 P **P** **21 06 46.1 -1.1**
comp=Z,4.9nm,0.5s,mb4.7,baz=300,slow=10.0,SNR=108
WRA PcP PcP 21 08 00.4 +0.6
comp=Z,1.6nm,0.5s,baz=316,slow=3.5,SNR=3.3
WRAB Tennant Creek 51.91 126 *e*P **P** **21 06 46.2 -1.0**
WRAB pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
WRAB Tennant Creek 51.91 126 *e*P **P** **21 06 46.2 -1.0**
comp=Z,7.8nm,0.6s,mb4.8
ARU Arti 52.27 337 *e*P **P** **21 06 49.8 +0.5**
ARU pmax pmax
comp=Z,12nm,1.0s,mb4.8
ARU Arti 52.27 337 *e*P **P** **21 06 49.8 +0.4**
comp=Z,12nm,1.0s,mb4.8
ZEI Tsey 52.28 316 *e*P **P** **21 06 56.7 +7.1**
ZEI pmax pmax
comp=Z,6.0nm,0.4s,mb4.9
KIV Kislovodsk 53.55 317⇑ *i*P **P** **21 07 00.0 +1.0**
KIV *i* pP 21 07 06.8 +0.7
KIV *e*S **S** **21 14 50.4 +19**
KIV pmax pmax
comp=Z,13nm,1.7s,mb4.6
KIV Kislovodsk 53.55 317 *e*P **P** **21 06 58.6 -0.4**
comp=Z,15nm,0.9s,mb4.9
ASAR Alice Springs 53.62 130 P **P** **21 06 59.3 -0.5**
comp=Z,14nm,0.7s,mb5.0,baz=306,slow=6.9,SNR=163
ASAR PcP PcP 21 08 06.0 -0.2
comp=Z,3.1nm,0.7s,baz=305,slow=3.6,SNR=6.5
YSS Yuzh-Sakhalins 56.01 40 *e*P **P** **21 07 16.2 -0.6**
MMAI Mount Meron Ar 56.02 303 LR LR 21 35 18.6
comp=Z,97nm,18.5s,MS3.9,baz=100,slow=40
YAK Yakutsk 58.02 20 *e*P **P** **21 07 35.6 +4.9**
YAK pmax pmax
comp=Z,12nm,0.9s,mb4.9
YAK pmax pmax
comp=E,6.0nm,1.4s
YAK pmax pmax
comp=N,6.0nm,1.1s
VSR Storozhevoye 58.63 324 *e*P **P** **21 07 34.9 -0.3**
VSR pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
VSR pmax pmax
comp=N,4.0nm,0.8s
VSR pmax pmax
comp=E,2.0nm,0.5s
BR131 Keskin Array S 58.72 310 *e*P **P** **21 07 35.4 -0.7**
comp=E,3.8nm,0.8s,mb4.5
BRTR Keskin Array B 58.72 310 P **P** **21 07 35.1 -0.9**
comp=E,1.6nm,0.7s,mb4.2,baz=125,slow=7.8,SNR=12
BRTR LR LR 21 35 58.1
comp=E,45nm,21.4s,MS3.6,baz=99,slow=39
OBN Obninsk 61.64 328 *c i*P **P** **21 07 56.3 +0.6**
OBN *i* pP 21 08 03.0 +0.1
OBN *i* 21 08 41.7
OBN pmax pmax
comp=Z,11nm,1.5s,mb4.8
OBN MLR MLR
comp=Z,100nm,16.0s,MS4.1
OBN Obninsk 61.64 328 *e*P **P** **21 07 56.0 +0.3**
comp=Z,52nm,1.4s,mb5.5
STKA Stephens Creek 63.85 134 P **P** **21 08 10.9 +0.1**
comp=Z,3.5nm,0.4s,mb4.8,baz=310,slow=5.5,SNR=30
STKA LR LR 21 37 47.1
comp=Z,154nm,20.1s,MS4.2,baz=22,slow=38
STKA Stephens Creek 63.85 134 *e*P **P** **21 08 10.5 -0.3**
STKA pmax pmax
comp=Z,2.0nm,0.8s
STKA Stephens Creek 63.85 134 *e*P **P** **21 08 10.5 -0.3**
comp=Z,1.6nm,0.8s,mb4.1
STKA LR LR 21 37 47.1
AKASG Malin Array Be 64.38 321 P **P** **21 08 13.2 -0.8**
comp=Z,0.9nm,0.4s,mb4.1,baz=83,slow=6.0,SNR=5.8
AKASG Malin Array Be 64.38 321 *c e*P **P** **21 08 20.5 +6.4**
AKASG pmax pmax
comp=Z,2.0nm,0.7s
TIXI Tiksi 64.86 12 *e*P **P** **21 08 15.3 -1.5**
TIXI pmax pmax
comp=Z,15nm,1.2s,mb4.9
TIXI Tiksi 64.86 12 *e*P **P** **21 08 15.3 -1.5**
comp=Z,15nm,1.2s,mb4.9
VRI Vrincioaia 64.94 316 ⇑P **P** **21 08 19.0 +1.2**
VRI S pP 21 08 26.3 +1.3
PLOR Plostina 64.99 316 ⇑P **P** **21 08 18.9 +0.7**
PLOR S pP 21 08 26.6 +1.2
MLR Muntele Rosu 65.42 315 ⇓P **P** **21 08 22.0 +1.1**
MLR S pP 21 08 30.1 +2.0
PETK Petropavlovsk- 67.06 37 LR LR 21 40 31.5
comp=Z,58nm,18.8s,MS3.8,baz=247,slow=38
JOF Joensuu 67.19 334 *e*P **P** **21 08 31.6 -0.3**
JOF pmax pmax
comp=Z,15nm,0.8s,mb5.1
JOF Joensuu 67.19 334 *e*p **P** **21 08 31.6 -0.3**
comp=Z,15nm,0.8s,mb5.1
LSZ Lusaka 68.05 249 *e*P **P** **21 08 40.1 +1.9**
LSZ pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
LSZ Lusaka 68.05 249 *e*P **P** **21 08 40.1 +1.9**
comp=Z,5.6nm,1.1s,mb4.5
FINES FINESS Array B 69.01 332 P **P** **21 08 43.1 -0.3**
comp=Z,3.9nm,0.7s,mb4.4,baz=104,slow=8.0,SNR=16
FINES LR LR 21 46 22.4
comp=Z,87nm,18.2s,MS4.0,baz=354,slow=42
KAF Kangasniemi 69.10 333 *e*P **P** **21 08 40.8 -3.2**
KAF pmax pmax
comp=Z,12nm,1.0s,mb4.8
KAF Kangasniemi 69.10 333 *e*p **P** **21 08 40.8 -3.2**
comp=Z,12nm,1.0s,mb4.8
ARCES ARCESS Array B 71.71 340 P **P** **21 08 59.9 +0.1**
comp=Z,2.2nm,0.6s,mb4.2,baz=90,slow=6.1,SNR=10.0
ARCES LR LR 21 44 47.5
comp=Z,166nm,18.3s,MS4.3,baz=193,slow=40
LBTB Lobatse 73.60 240 *e*P **P** **21 09 13.1 +1.3**
LBTB pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
LBTB Lobatse 73.60 240 *e*P **P** **21 09 13.1 +1.3**
comp=Z,4.2nm,0.7s,mb4.5
BILL Bilibino 74.27 22 *d i*P pP 21 09 22.1 -0.1
BILL *i* sP 21 09 26.9 +2.0
BILL *e* 21 09 37.1
BILL pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
BILL MLR MLR
comp=Z,100nm,15.0s,MS4.2
BILL Bilibino 74.27 22 P **P** **21 09 12.6 -2.3**
BOSA Boshof 75.16 237 P **P** **21 09 22.2 +1.4**
comp=Z,5.3nm,0.7s,mb4.6,baz=92,slow=6.0,SNR=9.7
BOSA LR LR 21 38 28.6
comp=Z,99nm,19.6s,MS4.1,baz=166,slow=33
BOSA Boshof 75.16 237 P **P** **21 09 22.3 +1.5**
BOSA *e* pP 21 09 29.4 +1.3
BOSA Boshof 75.16 237 P **P** **21 09 22.2 +1.4**
BOSA *e* pP 21 09 29.4 +1.2
BOSA LR LR 21 38 28.6
GRF Grafenberg Arr 75.70 319 *e*P **P** **21 09 24.2 +0.7**
comp=Z,4.0nm,0.9s,mb4.3
GRF *e*pP pP 21 09 31.0 +0.1
GRF Grafenberg Arr 75.70 319 *e*P **P** **21 09 24.2 +0.7**
GRF *e**PP pP 21 09 31.0 +0.1
GRF pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
NB2 NORSAR Subarra 76.02 330 P **P** **21 09 24.3 -0.8**
comp=Z,5.6nm,0.9s,mb4.5,baz=93,slow=5.9
NOA NORSAR Array B 76.02 330 P **P** **21 09 24.0 -1.2**
comp=Z,1.4nm,0.7s,mb4.0,baz=93,slow=5.7,SNR=8.9
NOA LR LR 21 46 09.6
comp=Z,81nm,19.9s,MS4.0,baz=95,slow=38
KEST Kesra 77.62 304 P **P** **21 09 33.9 -0.8**
comp=Z,1.4nm,0.7s,mb4.0,baz=103,slow=1.1,SNR=4.8
KEST Kesra 77.62 304 P **P** **21 09 33.9 -0.8**
CASY Casey 78.12 172 P **P** **21 09 37.5 +0.7**
comp=Z,4.2nm,1.0s,mb4.3
LPG La Plagne 78.87 314 *e*P **P** **21 09 41.7 +0.3**
comp=Z,16nm,0.7s,mb4.7
LPG La Plagne 78.87 314 *e*P **P** **21 09 41.7 +0.3**
LPG pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
LPG La Plagne 78.87 314 *e*P **P** **21 09 41.7 +0.3**
comp=Z,8.1nm,0.7s,mb4.8
LPL La Plagne 78.88 314 *e*P **P** **21 09 41.8 +0.3**
comp=Z,15nm,0.8s,mb4.7
LPL La Plagne 78.88 314 *e*P **P** **21 09 41.8 +0.3**
LPL pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
LPL La Plagne 78.88 314 *e*P **P** **21 09 41.8 +0.3**
comp=Z,7.6nm,0.8s,mb4.7
MBDF Montbardon 78.91 314 *e*P **P** **21 09 41.0 -0.7**
CABF La Chapelle 79.25 316 *e*P **P** **21 09 43.7 +0.2**
comp=Z,14nm,0.8s,mb4.6
CABF La Chapelle 79.25 316 *e*P **P** **21 09 43.7 +0.2**
CABF pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
CABF La Chapelle 79.25 316 *e*P **P** **21 09 43.7 +0.2**
comp=Z,7.1nm,0.8s,mb4.7
SMF Signal de Mont 80.79 316 *e*P **P** **21 09 51.5 -0.3**
comp=Z,15nm,0.9s,mb4.7
SMF Signal de Mont 80.79 316 *e*P **P** **21 09 51.5 -0.3**
SMF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
SMF Signal de Mont 80.79 316 *e*P **P** **21 09 51.5 -0.3**
comp=Z,7.7nm,0.9s,mb4.6
MAW Mawson 80.93 191 P **P** **21 09 52.3 +0.3**
comp=Z,1.9nm,0.6s,mb4.2,baz=4.6,slow=4.9,SNR=5.8
MAW Mawson 80.93 191 *e*P **P** **21 09 51.7 -0.3**
MAW pmax pmax
comp=Z,1.0nm,1.2s
MAW Mawson 80.93 191 *e*P **P** **21 09 51.7 -0.3**
comp=Z,1.2nm,1.2s,mb3.7
TAM Tamanrasset 82.42 292 *e*P **P** **21 10 02.4 +1.5**
TAM pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
TAM Tamanrasset 82.42 292 *e*P **P** **21 10 02.4 +1.5**
comp=Z,3.6nm,0.8s,mb4.3
ESDC Sonseca Array 87.51 310 P **P** **21 10 26.6 +0.4**
comp=Z,0.8nm,0.7s,mb4.1,baz=2.7,slow=5.4,SNR=3.1
TTA Tatalina 90.26 25 *e*P **P** **21 10 41.4 +2.8**
TTA pmax pmax
comp=Z,8.0nm,1.2s,mb4.9
TTA Tatalina 90.26 25 *e*P **P** **21 10 41.4 +2.8**
comp=Z,8.2nm,1.2s,mb4.9
DBIC Dimbokro 95.18 278 LR LR 21 51 34.7
comp=Z,48nm,18.8s,MS4.0,baz=89,slow=34
PDAR Pinedale Array 123.23 19 PKP PKPdf 21 16 35.4 +0.1
comp=Z,0.7nm,0.7s,baz=37,slow=0.7,SNR=4.8
NVAR Mina Array Bea 123.55 28 PKP PKPdf 21 16 36.7 +0.7
comp=Z,1.1nm,0.7s,baz=293,slow=1.5,SNR=7.4
TXAR Lajitas Array 137.42 20 PKP PKPdf 21 17 03.9 +1.4
comp=Z,0.3nm,0.6s,baz=122,slow=1.3,SNR=4.7
TXAR PP PP 21 19 55.5 +9.1
comp=Z,0.4nm,0.9s,baz=42,slow=2.0,SNR=3.5
PLCA Paso Flores 146.34 205 PKPbc PKPbc 21 17 19.9 +0.7
comp=Z,2.8nm,0.7s,baz=114,slow=4.0,SNR=5.8
CMIG Matias Romero 151.52 13 PKPbc PKPbc 21 17 33.3 +0.1
comp=Z,3.4nm,0.7s,baz=304,slow=3.6,SNR=6.0
LPAZ La Paz 159.68 252 PKPab PKPab 21 18 18.1 +1.6
comp=Z,2.8nm,1.1s,baz=68,slow=6.9,SNR=3.9

IDC 27 21:00:41.8±8.4, 9°.93N×90°.42E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.5/23, mbtmp3.8/4, Error ellipse: s-maj=404.2km s-min=26.6km az=60.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**37.39**	**351**	P	P	21 07 56.2	-0.1
	0.4nm,0.7s,baz=145,slow=10,SNR=2.1						
FITZ	**Fitzroy Crossi**	**44.55**	**129**	P	P	21 08 55.9	+0.2
	1.2nm,0.5s,baz=297,slow=14,SNR=3.3						
WRA	**Warramunga Arr**	**52.44**	**125**	P	P	21 09 55.8	-0.8
	0.6nm,0.5s,baz=302,slow=9.7,SNR=5.6						
ASAR	**Alice Springs**	**54.05**	**129**	P	P	21 10 09.0	+0.6
	1.8nm,0.7s,baz=303,slow=6.7,SNR=5.4						

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*NOU **27** 21:06:32.1±0.4, 16°.71S×169°.35E, h30km, MD3.3, ML3.9*
*IDC **27** 21:06:39.8±13.0, 17°.42S×168°.50E, h230km±105km, mb3.4/4, mb1 3.8/5, mb1mx3.4/17, mbtmp3.6/5, Error ellipse: s-maj=121.1km s-min=27.0km az=140.0*
*NEIC **27** 21:06:41.9±1.4, 17°.32S×168°.40E, h248km±12km, mb3.9/1, Error ellipse: s-maj=19.2km s-min=16.2km az=71.0*
*ISCJB **27** 21:06:41.3±1.7, 17°.2S±0°.1×168°.4E±0°.2, h257km±16km, mb3.6/5, Error ellipse: s-maj=29.4km s-min=18.7km az=175.7*
ISC 27 21:06:41.8±1.7, 17°.2S±0°.1×168°.4E±0°.2, h248km±16km, n12, σ0°.85/12, mb3.7/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.18**	**201**	*e*P	**Pn**	**21 07 58.6**	**-1.1**
DZM				*e*S	**S**	**21 09 02.4**	**+0.6**
DZM				AMP		21 09 10.1	
	comp=Z,251nm,3.6s						
DZM	**Mont Dzumac**	**5.18**	**201**	*e*Pn	**Pn**	**21 07 58.6**	**-1.0**
	comp=Z,71nm,0.6s						
NOUC	**Port Laguerre**	**5.26**	**202**	*e*P	**Pn**	**21 07 59.7**	**-0.9**
NOUC				*e*S	**S**	**21 09 05.1**	**+1.5**
NOUC				AMP		21 09 25.9	
	comp=Z,11nm,7.7s						
ONTRN	**Noumea**	**5.39**	**200**	*e*P	**Pn**	**21 08 01.5**	**-0.9**
HNR	**Honiara**	**11.32**	**312**	P	**Pn**	**21 09 17.7**	**+0.6**
	comp=Z,16nm,0.3s,baz=194,slow=4.2,SNR=4.8						
WRA	**Warramunga Arr**	**32.41**	**260**	P	**P**	**21 12 47.6**	**-1.2**
	comp=Z,0.4nm,0.8s,mb3.0,baz=94,slow=7.9,SNR=4.4						
ASAR	**Alice Springs**	**32.94**	**253**	P	**P**	**21 12 53.1**	**-0.2**
	comp=Z,2.3nm,0.4s,mb4.0,baz=79,slow=9.0,SNR=34						
FITZ	**Fitzroy Crossi**	**40.73**	**262**	P	**P**	**21 13 59.1**	**+0.2**
	comp=Z,5.5nm,0.8s,mb4.0,baz=106,slow=6.8,SNR=10						
KULM	**Kulim**	**70.56**	**282**	*e*P	**P**	**21 17 31.0**	**+0.4**
	comp=Z,1.1nm,0.4s,mb3.8						
NVAR	**Mina Array Bea**	**88.04**	**49**	P	**P**	**21 19 05.0**	**+0.8**
	comp=Z,0.3nm,0.4s,mb3.5,baz=225,slow=7.6,SNR=3.9						
ARCES	**ARCESS Array B**	**122.93**	**345**	PKP	PKPdf	21 25 07.8	+0.1
	comp=Z,3.5nm,1.1s,baz=54,slow=2.2,SNR=11						
FINES	**FINESS Array B**	**128.44**	**338**	PKP	PKPdf	21 25 19.0	+0.5
	comp=Z,0.5nm,0.7s,baz=64,slow=3.2,SNR=3.3						

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*IDC **27** 21:12:58.5±2.1, 10°.68N×91°.51E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.5/23, mbtmp3.5/6, ML3.3/1, Error ellipse: s-maj=67.2km s-min=21.8km az=67.0*
*NEIC **27** 21:13:00.2±1.1, 10°.65N×91°.43E, h10km, mb3.8/1, Error ellipse: s-maj=28.4km s-min=12.5km az=58.0*
*ISCJB **27** 21:13:02.1±1.2, 10°.7N±0°.1×91°.6E±0°.2, h33km, mb3.6/6, Error ellipse: s-maj=29.8km s-min=13.0km az=148.0*
ISC 27 21:13:04.1±1.2, 10°.7N±0°.1×91°.5E±0°.2, h35km, n10, σ0°.73/10, mb3.6/6, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	**Kulim**	**10.50**	**120**	*e*Pn	**Pn**	**21 15 32.9**	**+0.6**
CMAR	**Chiang Mai Arr**	**10.54**	**42**	Pn	**Pn**	**21 15 33.0**	**+0.3**
	0.1nm,0.3s,baz=236,slow=14,SNR=2.7						
MK31	**Makanchi Array**	**36.83**	**349**	*e*P	**P**	**21 20 08.8**	**0.0**
MKAR	**Makanchi Array**	**36.83**	**349**	P	**P**	**21 20 08.9**	**+0.2**
	0.5nm,0.6s,mb3.5,baz=138,slow=8.4,SNR=5.5						
SONM	**Songino Array**	**39.08**	**16**	P	**P**	**21 20 26.1**	**-1.7**
	0.7nm,1.0s,mb3.4,baz=193,slow=5.9,SNR=3.1						
KURK	**Kurchatov**	**41.30**	**348**	*e*P	**P**	**21 20 47.2**	**+1.2**
	2.0nm,1.1s,mb3.7						
ZALV	**Zalesovo Beam**	**43.48**	**354**	P	**P**	**21 21 03.7**	**0.0**
	0.5nm,0.5s,mb3.5,baz=163,slow=11,SNR=3.6						
ZALV	**Zalesovo Beam**	**43.48**	**354**	P	**P**	**21 21 03.7**	**0.0**
WRA	**Warramunga Arr**	**51.98**	**126**	P	**P**	**21 22 09.6**	**-0.7**
	0.4nm,0.3s,mb3.8,baz=300,slow=10.0,SNR=8.4						
ASAR	**Alice Springs**	**53.69**	**130**	P	**P**	**21 22 22.8**	**0.0**

1.6nm,0.8s,mb4.0,baz=306,slow=6.6,SNR=9.0

CASC 27 21:14:52.0±1.1, 12°.93N×88°.79W, h52km±30km, MD3.6, ML3.1, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSM	San Miguel	0.70	45	eP	Pn	21 15 06.2	+0.4
VSM				eS	Sn	21 15 17.4	+1.5
BLLM	Bellamira	0.74	46	eP	Pn	21 15 06.4	0.0
BOQS	Boqueron	0.93	329	eP	Pn	21 15 09.4	+0.5
BOQS				eS	Sn	21 15 22.1	+0.8
BOQS				AML	AML	21 15 24.5	
	comp=Z,526nm,0.3s						
CNCH	Conchagua	0.99	70	eP	Pn	21 15 09.5	-0.2
CNCH				eS	Sn	21 15 23.3	+0.7
CNCH				AML	AML	21 15 29.9	
	comp=Z,379nm,0.5s						
CAHU	Cacacuatique	1.00	34	eP	Pn	21 15 10.2	+0.4
SBLS	San Blas	1.22	318	eP	Pn	21 15 13.8	+1.1
TGUH	Tegucigalpa,Un	1.85	53	eP	Pn	21 15 21.6	+0.4

IDC 27 21:15:28.8±2.4, 10°.72N×91°.73E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.2/23, mbtmp3.3/4, ML3.5/1, Error ellipse: s-maj=74.5km s-min=28.1km az=67.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	10.39	41	Pn	Pn	21 17 58.4	-0.8
	0.1nm,0.3s,baz=236,slow=14,SNR=3.0						
MKAR	Makanchi Array	36.84	349	P	P	21 22 38.7	+0.1
	0.4nm,0.6s,baz=127,slow=9.3,SNR=4.2						
WRA	Warramunga Arr	51.84	126	P	P	21 24 38.7	-0.4
	0.2nm,0.4s,baz=301,slow=9.9,SNR=3.4						
ASAR	Alice Springs	53.55	130	P	P	21 24 52.2	+0.5
	0.2nm,0.5s,baz=298,slow=6.9,SNR=3.2						

*IDC **27** 21:17:02.9±2.9, 24°.01S×179°.94E, h503km±31km, mb3.0/5, mb1 3.3/6, mb1mx3.1/16, mbtmp3.1/6, Error ellipse: s-maj=53.1km s-min=21.0km az=167.0*
*NEIC **27** 21:17:03.8±1.1, 24°.06S×179°.96E, h523km±12km, mb3.7/2, Error ellipse: s-maj=19.5km s-min=15.6km az=119.0*
*ISCJB **27** 21:17:03.5±1.5, 24°.1S±0°.1×179°.8E±0°.2, h520km±19km, mb3.5/6, Error ellipse: s-maj=26.1km s-min=20.3km az=42.6*
ISC 27 21:17:04.1±1.4, 24°.1S±0°.1×179°.9E±0°.2, h516km±17km, n15, σ0s46/10, mb3.5/6, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.54	345	ePn	P	21 18 46.4	0.0
URZ	Urewera	14.33	189	P	P	21 20 06.8	0.0
	1.0nm,0.3s,baz=357,slow=13,SNR=5.5						
CTA	Charters Tower	31.35	271	P	P	21 22 43.3	+1.1
	2.9nm,0.4s,mb4.1,baz=103,slow=13,SNR=8.1						
CTAO	Charters Tower	31.35	271	eP	P	21 22 42.6	+0.4
	1.3nm,0.3s,mb3.9						
ASAR	Alice Springs	41.88	261	P	P	21 24 09.5	+0.5
	0.4nm,0.6s,mb3.1,baz=109,slow=7.1,SNR=3.8						
WRAB	Tennant Creek	42.26	266	eP	P	21 24 11.3	-0.8
	0.7nm,0.4s,mb3.5						
WRA	Warramunga Arr	42.27	266	P	P	21 24 11.7	-0.4
	0.8nm,0.3s,mb3.7,baz=96,slow=8.4,SNR=20						
WRA				ScP	ScP	21 28 57.5	+1.8
	0.3nm,0.9s,baz=99,slow=3.8,SNR=4.5						
WRA	Warramunga Arr	42.27	266	P	P	21 24 11.7	-0.4
WRA				ScP	ScP	21 28 57.5	+1.8
NVAR	Mina Array Bea	84.97	44	P	P	21 28 44.6	-0.1
	0.5nm,0.7s,mb3.2,baz=224,slow=6.3,SNR=3.5						
TXAR	Lajitas Array	90.64	58	P	P	21 29 11.6	+0.1
	0.4nm,0.7s,mb3.5,baz=194,slow=7.1,SNR=6.0						
BVAR	Borovoye Array	120.49	319	PKP	PKPdf	21 34 55.0	-1.4
	0.3nm,0.3s,baz=304,slow=0.5,SNR=3.4						
ARCES	ARCESS Array B	132.04	348	PKP	PKPdf	21 35 16.5	-1.5
	2.4nm,0.9s,baz=57,slow=4.5,SNR=3.6						
ARCES	ARCESS Array B	132.04	348	PKP	PKPdf	21 35 16.5	-1.5
MMAI	Mount Meron Ar	147.66	294	PKPbc	PKPbc	21 35 50.9	+0.2
	1.1nm,0.5s,baz=76,slow=7.3,SNR=7.3						
CLL	Collm	150.99	343	i PKPbc	PKPbc	21 35 57.3	-0.8

IDC 27 21:22:26.5±2.2, 10°.48N×91°.26E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.5/23, mbtmp3.5/6, ML3.6/1, Error ellipse: s-maj=72.8km s-min=23.6km az=71.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	10.87	42	Pn	Pn	21 25 04.4	+0.9
	0.1nm,0.3s,baz=234,slow=12,SNR=3.9						
MKAR	Makanchi Array	36.98	350	P	P	21 29 37.7	+0.1
	0.4nm,0.8s,baz=119,slow=9.9,SNR=4.1						
SONM	Songino Array	39.36	16	P	P	21 29 57.3	-0.3
	0.2nm,0.6s,baz=202,slow=11,SNR=2.7						
WRA	Warramunga Arr	52.08	125	P	P	21 31 37.6	-1.1
	0.3nm,0.6s,baz=301,slow=10,SNR=7.1						
ASAR	Alice Springs	53.76	130	P	P	21 31 51.3	+0.3
	1.3nm,0.8s,baz=301,slow=7.0,SNR=9.9						
STKA	Stephens Creek	63.95	133	P	P	21 33 02.6	+0.8
	2.3nm,0.9s,baz=18,slow=3.2,SNR=3.0						

*IDC **27** 21:34:44.0±0.8, 10°.56N×91°.33E, h0km, mb3.9/14, mb1 4.0/15, mb1mx3.8/26, mbtmp3.8/15, ML3.7/1, Error ellipse: s-maj=37.1km s-min=13.6km az=55.0*
*NEIC **27** 21:34:45.5±0.4, 10°.58N×91°.34E, h10km, mb4.0/5, Error ellipse: s-maj=11.1km s-min=7.6km az=48.0*
*ISCJB **27** 21:34:46.7±0.5, 10°.56N±0°.08×91°.35E±0°.08, h33km, mb3.9/18, Error ellipse: s-maj=13.2km s-min=9.2km az=138.9*
ISC 27 21:34:48.9±0.5, 10°.53N±0°.07×91°.28E±0°.06, h35km, n27, σ0s85/28, mb3.9/18, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	10.82	42	Pn	Pn	21 37 21.3	0.0
	0.2nm,0.3s,baz=238,slow=15,SNR=6.4						
PALK	Pallekele	10.94	254	ePn	Pn	21 37 24.2	+1.1
PALK				eSn	Sn	21 39 22.8	-1.5
KSM	Kuching	20.93	114	eP	P	21 39 28.5	-0.3
	4.1nm,0.6s						
GTA	Gaotai	29.75	13	eP	P	21 40 51.0	-1.0
GTA				pP	pP	21 40 56.0	-6.1
GTA				sP	sP	21 40 58.3	-8.0
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.8						
EKS2	Erkin-Say	35.47	338	eP	P	21 41 41.8	-0.2
	comp=Z,2.2nm,0.9s,mb4.1						
MK31	Makanchi Array	36.94	350	eP	P	21 41 54.2	-0.2
MKAR	Makanchi Array	36.94	350	P	P	21 41 54.0	-0.5
	comp=Z,2.0nm,0.8s,mb4.0,baz=133,slow=8.8,SNR=16						
SONM	Songino Array	39.30	16	P	P	21 42 13.4	-1.0
	comp=Z,0.6nm,0.5s,mb3.6,baz=198,slow=8.6,SNR=6.4						
SONM				PcP	PcP	21 44 24.3	+1.7
	comp=Z,0.3nm,0.3s,baz=200,slow=3.8,SNR=2.9						
KURK	Kurchatov	41.40	348	P	P	21 42 31.1	-0.5
	comp=Z,1.5nm,0.9s,mb3.6,baz=165,slow=7.3,SNR=7.5						
KURK	Kurchatov	41.40	348	eP	P	21 42 31.4	-0.3
	comp=Z,2.5nm,0.9s,mb3.8						
ZALV	Zalesovo Beam	43.61	354	P	P	21 42 49.0	-0.6
	comp=Z,1.8nm,0.8s,mb3.8,baz=169,slow=8.9,SNR=8.5						
FITZ	Fitzroy Crossi	44.27	130	P	P	21 42 54.9	-0.5
	comp=Z,2.8nm,0.8s,mb4.0,baz=349,slow=4.7,SNR=5.9						
BVAR	Borovoye Array	45.60	342	P	P	21 43 05.4	-0.1
	comp=Z,0.6nm,0.8s,mb3.6,baz=190,slow=33,SNR=4.0						
BVAR	Borovoye Array	45.60	342	P	P	21 43 05.4	-0.1
BRVK	Borovoye	45.66	342	eP	P	21 43 05.5	-0.5
	comp=Z,1.1nm,0.8s,mb3.8						
AKTK	Aktyubinsk	48.29	332	P	P	21 43 28.1	+1.6
AKTO	Aktyubinsk	48.29	332	P	P	21 43 28.1	+1.6
	comp=Z,0.5nm,0.5s,mb3.8,baz=107,slow=12,SNR=2.8						
WRA	Warramunga Arr	52.09	126	P	P	21 43 55.0	-0.8
	comp=Z,1.3nm,0.4s,mb4.2,baz=300,slow=9.9,SNR=22						
WRAB	Tennant Creek	52.09	125	eP	P	21 43 55.9	0.0
	comp=Z,2.1nm,0.5s,mb4.3						
ASAR	Alice Springs	53.77	130	P	P	21 44 08.6	+0.4
	comp=Z,2.1nm,0.6s,mb4.3,baz=304,slow=6.9,SNR=30						
BRTR	Keskin Array B	58.57	310	P	P	21 44 41.4	-0.8
	comp=Z,0.5nm,0.7s,mb3.6,baz=137,slow=8.1,SNR=4.1						
STKA	Stephens Creek	63.97	133	P	P	21 45 20.0	+1.2
	comp=Z,2.0nm,0.7s,mb4.3,baz=113,slow=1.8,SNR=6.1						
STKA	Stephens Creek	63.97	133	P	P	21 45 20.0	+1.2
AKASG	Malin Array Be	64.33	321	P	P	21 45 21.3	+0.4
	comp=Z,0.2nm,0.3s,mb3.7,baz=102,slow=5.1,SNR=4.2						
FINES	FINESS Array B	69.06	332	P	P	21 45 51.9	+1.0
	comp=Z,2.0nm,0.8s,mb4.1,baz=116,slow=8.7,SNR=6.5						
FINES	FINESS Array B	69.06	332	P	P	21 45 51.9	+1.0
NOA	NORSAR Array B	76.04	330	P	P	21 46 33.9	+1.4
	comp=Z,1.0nm,0.9s,mb3.7,baz=93,slow=5.4,SNR=3.0						

IDC 27 21:37:53.0±3.1, 7°.18S×120°.79E, h547km±45km, mb2.5/3, mb1 2.7/5, mb1mx2.6/21, mbtmp2.5/5, Error ellipse: s-maj=164.1km s-min=17.0km az=51.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.84	157	P	P	21 40 28.4	-1.3
	0.1nm,0.3s,baz=270,slow=17,SNR=4.0						
WRA	Warramunga Arr	18.26	135	P	P	21 41 33.5	+0.1
	0.2nm,0.3s,baz=314,slow=9.6,SNR=15						
ASAR	Alice Springs	20.67	144	P	P	21 41 55.2	0.0
	0.2nm,0.3s,baz=323,slow=8.9,SNR=6.1						
ASAR				PcP	PcP	21 45 40.0	-1.0
	0.7nm,0.8s,baz=325,slow=3.1,SNR=5.8						
STKA	Stephens Creek	31.30	144	P	P	21 43 29.8	+1.1
	0.6nm,0.3s,baz=322,slow=7.8,SNR=2.9						
CMAR	Chiang Mai Arr	33.37	320	P	P	21 43 46.5	+0.1
	0.2nm,0.3s,baz=136,slow=8.2,SNR=2.9						

*ISCJB **27** 21:42:08.5±0.7, 32°.29N±0°.02×104°.95E±0°.02, h6km±4km, mb4.7/82, MS4.0/27, Error ellipse: s-maj=3.5km s-min=3.1km az=149.6*
*IDC **27** 21:42:09.2±0.5, 32°.29N×105°.02E, h0km, mb4.5/26, mb1 4.5/29, mb1mx4.5/35, mbtmp4.4/29, ML3.8/3, MS3.8/18, Ms1 3.8/18, ms1mx3.6/45, Error ellipse: s-maj=15.8km s-min=10.7km az=51.0*
*SZGRF **27** 21:42:09.4, 32°.13N×106°.27E, h29km, mb4.9, Sichuan, China*
*BJI **27** 21:42:09.8, 32°.26N×105°.01E, h12km, mB4.6/23, mb4.6/26, ML4.5/23, Ms4.5/38, Ms7 4.3/35*
*NEIC **27** 21:42:10.9±0.2, 32°.30N×105°.00E, h10km, mb4.8/44, Error ellipse: s-maj=4.9km s-min=4.1km az=55.0*
*MOS **27** 21:42:12.1±1.0, 32°.26N×105°.00E, h33km, mb5.0/47, Error ellipse: s-maj=8.8km s-min=4.9km az=113.5*
ISC 27 21:42:11.0±0.7, 32°.30N±0°.02×104°.95E±0°.02, h9km±4km, h22km±1.7km: pP-P, n250, σ1s10/272, mb4.7/82, MS4.0/27, 18C-13D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.72	217	Pn	Pn	21 42 42.5	+1.4
CD2				Pg	Pg	21 42 44.3	+0.3
CD2				Sn	Sn	21 43 06.0	+2.8
CD2				Sg	Sg	21 43 08.0	+1.7
CD2				smax			
	comp=N,18μm,0.6s						
CD2				smax			
	comp=E,53μm,0.7s						
XAN	Xi'an	3.75	61	Pn	Pn	21 43 09.8	+0.7
XAN				Pg	Pg	21 43 20.5	-2.5
XAN				Sn	Sn	21 43 55.8	+2.3
XAN				Sg	Sg	21 44 12.5	+0.9
XAN				smax			
	comp=N,2μm,0.9s						
XAN				smax			
	comp=E,700nm,0.9s						
LZH	Lanzhou	3.89	347	Pn	Pn	21 43 13.5	+2.5
LZH				Pg	Pg	21 43 24.5	-1.0
LZH				Sn	Sn	21 43 59.5	+2.8
LZH				Sg	Sg	21 44 15.0	-0.9
LZH				smax			
	comp=N,4μm,0.9s						
LZH				smax			
	comp=E,9μm,0.8s						
LZH				LR	LR		
	comp=N,8μm,6.6s						
LZH				LR	LR		
	comp=Z,8μm,9.0s						
GYA	Guiyang	6.01	165	Pn	Pn	21 43 40.8	+0.7
GYA				Pg	Pb	21 43 56.8	+0.9
GYA				Sn	Sn	21 44 55.0	+5.9
GYA				Sg	Sb	21 45 13.5	+5.5
GYA				smax			
	comp=N,820nm,0.8s						
GYA				smax			
	comp=E,2μm,0.8s						
KMI	Kunming	7.41	196	Pn	Pn	21 44 00.0	+0.6
KMI				Sn	Sn	21 45 24.0	+0.4
KMI				smax			
	comp=N,170nm,1.1s						
KMI				smax			
	comp=E,180nm,1.2s						
KMI				LR	LR		
	comp=N,1μm,10.4s						
KMI				LR	LR		
	comp=E,1μm,10.0s						
KMI				LR	LR		
	comp=Z,1μm,12.4s						
WHN	Wuhan	8.22	100	⇓P	Pn	21 44 10.5	0.0
WHN				S	Sn	21 45 44.8	+1.3
WHN				LR	LR		
	comp=N,5μm,6.2s						
WHN				LR	LR		
	comp=E,2μm,8.9s						
WHN				LR	LR		
	comp=Z,3μm,4.0s						
GTA	Gaotai	8.23	331	⇓P	Pn	21 44 11.0	+0.4
GTA				pP		21 44 14.8	
GTA				sP		21 44 17.0	
GTA				S	Sn	21 45 45.5	+1.8
GTA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,46nm,4.8s						
GTA				LR	LR		
	comp=N,3μm,9.3s						
GTA				LR	LR		
	comp=E,1μm,10.8s						
GTA				LR	LR		
	comp=Z,3μm,10.8s						
BTO	Baotou	9.24	25	eP	Pn	21 44 24.0	-0.4
HHC	Hu-ho-hao-te	10.05	30	eP	Pn	21 44 38.5	+3.0
HHC				pP		21 44 41.5	
HHC				sP		21 44 44.5	
HHC				PP		21 44 46.8	
HHC				S	Sn	21 46 31.5	+3.1
HHC				sS		21 46 37.3	
HHC				SS		21 46 45.0	
HHC				PcS	PcS	21 54 21.0	+1.6
HHC				ScS	ScS	21 57 52.5	-0.6
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,63nm,5.7s						
HHC				LR	LR		
	comp=N,430nm,5.4s						
HHC				LR	LR		
	comp=E,740nm,7.8s						
HHC				LR	LR		
	comp=Z,540nm,8.3s						
NJ2	Nanjing	11.79	87	eP	Pn	21 45 01.8	+2.5
NJ2				pP		21 45 05.0	
NJ2				sP		21 45 08.5	
NJ2				PP		21 45 11.5	
NJ2				S	Sn	21 47 14.8	+3.8
NJ2				sS		21 47 20.5	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,180nm,4.2s						
NJ2				LR	LR		
	comp=N,340nm,7.8s						
NJ2				LR	LR		
	comp=E,660nm,10.7s						
NJ2				LR	LR		
	comp=Z,620nm,7.5s						
GZH	Guangzhou	11.81	139	P	Pn	21 44 55.5	-4.2
GZH				S	Sn	21 47 09.3	-2.3
GZH				LR	LR		
	comp=N,2μm,10.2s						
GZH				LR	LR		
	comp=E,2μm,10.1s						
GZH				LR	LR		
	comp=Z,3μm,11.6s						
BJI	Beijing	11.91	46	P	Pn	21 45 00.5	-0.4
BJI				pmax	pmax		
	comp=Z,10.0nm,0.4s						
BJI				pmax	pmax		
	comp=Z,78nm,4.9s						
BJI				LR	LR		
	comp=N,920nm,8.0s						
BJI				LR	LR		
	comp=E,960nm,4.0s						
SHL	Shillong	13.26	243	ePKP	Pn	21 45 20.0	+0.5
QIZ	Qiongzhong	13.93	160	P	Pn	21 45 26.8	-1.9
QIZ				S	Sn	21 48 03.5	0.0
QIZ				pmax	pmax		
	comp=Z,20nm,1.2s						
QIZ				pmax	pmax		
	comp=Z,54nm,4.0s						
QIZ				LR	LR		
	comp=N,2μm,10.8s						
QIZ				LR	LR		
	comp=Z,3μm,11.3s						
CHTO	Chiang Mai	14.48	203	eP	Pn	21 45 35.0	-1.1
CM31	Chiang Mai Arr	14.81	203	ePn	Pn	21 45 42.2	+1.5
CMAR	Chiang Mai Arr	14.81	203	Pn	Pn	21 45 40.6	-0.1
	comp=Z,0.2nm,0.3s,baz=15,slow=12,SNR=20						
CMAR				Lg		21 50 08.7	
	comp=Z,0.0nm,0.3s,baz=13,slow=25,SNR=3.6						
CMAR				LR	LR	21 52 05.3	
	comp=Z,314nm,18.8s,baz=15,slow=40						
SONM	Songino Array	15.56	4	Pn	Pn	21 45 50.4	0.0
	comp=Z,0.3nm,0.3s,baz=186,slow=14,SNR=31						
SONM				Lg		21 50 25.5	
	comp=Z,0.3nm,0.3s,baz=166,slow=30,SNR=4.3						
SONM				LR	LR	21 52 32.2	
	comp=Z,562nm,21.1s,baz=182,slow=40						
ULN	Ulaanbaatar	15.63	5	eP	Pn	21 45 52.2	+0.8
ULN				pmax	pmax		
	comp=Z,21nm,1.1s						
ULN	Ulaanbaatar	15.63	5	ePn	Pn	21 45 52.2	+0.8
	comp=Z,21nm,1.1s						
TAPN	Taplejung	15.75	256	eP	Pn	21 45 53.5	+0.4
	comp=Z,49nm,1.0s						
ODAN	Odare	16.20	255	eP	Pn	21 45 58.6	-0.4
	comp=Z,27nm,0.5s						
SSLB	Suanglung	16.46	117	ePn	Pn	21 46 02.2	-0.1
TPUB	Ta-pu	16.50	119	ePn	Pn	21 46 02.9	0.0
NACB	Ninganchiao	16.74	115	ePn	Pn	21 46 05.4	-0.4
RAMN	Ramite	16.82	256	eP	Pn	21 46 06.0	-0.8
	comp=Z,66nm,0.9s						
JIRN	Jiri	16.90	259	eP	Pn	21 46 06.9	-0.9
	comp=Z,52nm,0.7s						
GUN	Gumba	17.07	260	eP	Pn	21 46 08.5	-1.5
	comp=Z,53nm,0.7s						
PKI	Pulchoki	17.58	260	eP	Pn	21 46 14.4	-1.9
	comp=Z,45nm,0.7s						
PKIN	Phulchoki	17.59	260	eP	Pn	21 46 14.1	-2.3
	comp=Z,34nm,0.6s						
KKN	Kakani	17.61	260	eP	Pn	21 46 14.2	-2.5
	comp=Z,44nm,0.8s						
SNY	Shenyang	17.62	52	⇑P	Pn	21 46 17.0	+0.3
SNY				S	Sn	21 49 31.8	-1.2
SNY				pmax	pmax		
	comp=Z,70nm,3.5s						
SNY				LR	LR		
	comp=N,360nm,19.2s						
SNY				LR	LR		
	comp=Z,230nm,16.8s						
WMQ	Urumqi	17.76	315	P	Pn	21 46 19.0	+0.5
WMQ				sP	sP	21 46 26.0	+3.1
WMQ				PP		21 46 34.0	
WMQ				S	Sn	21 49 35.0	-1.5
WMQ				SS		21 49 58.0	
WMQ				pmax	pmax		
	comp=Z,28nm,0.7s						
WMQ				LR	LR		
	comp=N,650nm,6.0s						
WMQ				LR	LR		
	comp=E,350nm,6.0s						
WMQ				LR	LR		
	comp=Z,440nm,6.0s						
DMN	Daman	17.82	260	eP	Pn	21 46 16.7	-2.6
	comp=Z,60nm,0.9s						
ZAK	Zakamensk	18.11	357	eP	Pn	21 46 22.8	+0.1
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.4s						
TLY	Talaya	19.39	358	eP	Pn	21 46 39.6	+1.4
TLY				eS	Sn	21 50 01.4	-14
TLY				pmax	pmax		
	comp=Z,13nm,1.2s						
TLY				MLR	MLR		
	comp=Z,688nm,18.0s						
TLY	Talaya	19.39	358	eP	Pn	21 46 39.6	+1.3
	comp=Z,9.8nm,1.0s						
KSRS	Korea Array	19.52	68	P	Pn	21 46 38.6	-1.3
	comp=Z,0.3nm,0.3s,baz=260,slow=10,SNR=14						
KSRS				LR	LR	21 54 50.0	
	comp=Z,102nm,22.0s,baz=234,slow=39						
MOY	Mondy	19.57	353	eP	Pn	21 46 41.6	+1.2
MOY				pmax	pmax		
	comp=Z,57nm,1.0s						
CN2	Changchun	19.75	49	eP	Pn	21 46 42.8	+0.2
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,300nm,15.0s						
CN2				LR	LR		
	comp=E,300nm,15.0s						
CN2				LR	LR		
	comp=Z,300nm,18.0s						
MK31	Makanchi Array	22.58	316	eP	P	21 47 12.3	+0.7
MKAR	Makanchi Array	22.58	316	P	P	21 47 12.0	+0.4
	comp=Z,29nm,0.9s,mb4.7,baz=98,slow=17,SNR=107						
MKAR				LR	LR	21 56 47.7	
	comp=Z,558nm,18.6s,MS4.0,baz=122,slow=39						
MKAR	Makanchi Array	22.58	316	P	P	21 47 12.0	+0.4
MKAR				pmax	pmax		
	comp=Z,29nm,0.9s						
MKAR				MLR	MLR		
	comp=Z,558nm,18.6s						
MDJ	Mudanjiang	22.78	50	P	P	21 47 15.0	+1.2
MDJ				pP		21 47 18.0	
MDJ				PcP	PcP	21 51 05.0	-0.2
MDJ				S	S	21 51 25.3	+2.2
MDJ				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.2						
MDJ				pmax	pmax		
	comp=Z,96nm,10.4s						
MDJ				LR	LR		
	comp=N,140nm,11.7s,MS3.7						
MDJ				LR	LR		
	comp=E,110nm,12.0s,MS3.7						
MDJ				LR	LR		
	comp=Z,180nm,14.4s,MS3.6						
NDI	New Delhi	24.14	269	ePKP	P	21 47 25.0	-2.4
KSH	Kashi	24.48	295	P	P	21 47 34.5	+4.1
KSH				pP		21 47 38.5	
KSH				sP	sP	21 47 41.5	+7.3
KSH				PP		21 48 11.3	
KSH				PcP	PcP	21 51 11.8	+2.9
KSH				S	S	21 51 53.8	+3.0
KSH				sS	sS	21 52 00.5	+5.4
KSH				SS		21 52 51.0	
KSH				ScP	ScP	21 54 48.8	+0.9
KSH				PcS	PcS	21 54 50.5	+1.7
KSH				ScS	ScS	21 58 35.5	+0.1
KSH				pmax	pmax		
	comp=Z,35nm,0.7s,mb4.9						
KSH				LR	LR		
	comp=N,280nm,12.3s,MS4.1						
KSH				LR	LR		
	comp=E,330nm,12.7s,MS4.1						
KSH				LR	LR		
	comp=Z,300nm,10.3s,MS4.1						
ULHL	Ulahol	24.81	302	P	P	21 47 35.1	+1.7
	SNR=19						
TKM2	Tokmak 2	25.44	303	P	P	21 47 40.6	+1.5
	SNR=28						
TKM2	Tokmak 2	25.44	303	eP	P	21 47 40.5	+1.4
TKM2				pmax	pmax		
	comp=Z,14nm,0.6s,mb4.7						
TKM2	Tokmak 2	25.44	303	eP	P	21 47 40.5	+1.4
	comp=Z,14nm,0.6s,mb4.7						
KZA	Kyzart	25.49	301	P	P	21 47 41.7	+2.2

SNR=18
KBK Karagaybulak 25.84 302 P **P** **21 47 44.6 +1.9**
SNR=14
ZAA0 Zalesovo Array 25.98 332 *e*P **P** **21 47 43.8 -0.1**
ZALV Zalesovo Beam 25.98 332 P **P** **21 47 43.7 -0.2**
comp=Z,9.3nm,0.5s,mb4.6,baz=131,slow=9.8,SNR=59
ZALV LR LR 21 58 33.7
comp=Z,86nm,19.5s,MS3.3,baz=336,slow=38
ZALV Zalesovo Beam 25.98 332 P **P** **21 47 43.7 -0.2**
ZALV pmax pmax
comp=Z,9.0nm,0.5s,mb4.6
ZALV MLR MLR
comp=Z,86nm,19.5s,MS3.3
UCH Uchtor 26.05 301 P **P** **21 47 46.9 +2.3**
SNR=40
UCH Uchtor 26.05 301 *e*P **P** **21 47 46.8 +2.2**
comp=Z,36nm,1.1s,mb4.8
FRU Bishkek 26.11 302 *e*P **P** **21 47 49.0 +3.8**
AAK Ala-Archa 26.16 302 P **P** **21 47 47.1 +1.5**
comp=Z,2.2nm,0.4s,mb4.1,baz=170,slow=14,SNR=7.7
AAK LR LR 22 00 05.5
comp=Z,353nm,19.7s,MS3.9,baz=89,slow=41
AAK Ala-Archa 26.16 302 P **P** **21 47 47.1 +1.5**
AAK pmax pmax
comp=Z,2.0nm,0.4s,mb4.0
AAK MLR MLR
comp=Z,353nm,19.7s,MS3.9
KLR Kul'dur 26.22 42 *e*P **P** **21 47 41.8 -4.3**
USP Ospenovka 26.30 303 P **P** **21 47 51.4 +4.5**
SNR=10
AML Almayashu 26.63 301 *e*P **P** **21 47 51.8 +1.9**
comp=Z,23nm,0.9s,mb4.7
EKS2 Erkin-Say 26.68 302 P **P** **21 47 51.7 +1.4**
SNR=7.1
EKS2 Erkin-Say 26.68 302 *e*P **P** **21 47 51.0 +0.7**
comp=Z,4.4nm,0.8s,mb4.0
KURK Kurchatov 26.75 321 P **P** **21 47 51.1 +0.3**
comp=Z,16nm,0.8s,mb4.6,baz=126,slow=9.8,SNR=75
KURK PcP PcP 21 51 12.6 -1.2
comp=Z,2.2nm,0.6s,baz=116,slow=2.1,SNR=3.6
KURK LR LR 21 59 11.4
comp=Z,154nm,21.0s,MS3.5,baz=115,slow=38
KURK Kurchatov 26.75 321 *d i*P **P** **21 47 50.7 -0.1**
KURK pmax pmax
comp=Z,40nm,1.2s,mb4.8
KURK Kurchatov 26.75 321 *e*P **P** **21 47 51.2 +0.4**
comp=Z,24nm,0.9s,mb4.7
NVS Novosibirsk 27.27 332⇓ *i*P **P** **21 47 55.2 -0.2**
NVS *e*S **S** **21 52 25.5 -9.1**
NVS pmax pmax
comp=Z,15nm,1.7s,mb4.2
NVS pmax pmax
comp=N,17nm,2.2s
NVS pmax pmax
comp=E,14nm,1.8s
NVS smax
comp=N,13nm,2.2s
NVS smax
comp=E,8.0nm,1.7s
MJAR Matsushiro Arr 27.68 72 P **P** **21 47 58.5 -0.8**
comp=E,0.4nm,0.5s,baz=249,slow=5.1,SNR=3.6
MJAR LR LR 22 00 16.1
comp=E,87nm,18.1s,MS3.4,baz=250,slow=39
HABR Khabarovsk 27.81 46 P **P** **21 47 58.5 -1.9**
HABR *e**SP sP 21 48 12.2 +8.1
HABR 21 48 46.4
HABR PPP 21 48 54.6
HABR *e* 21 51 13.3
HABR *e*S **S** **21 52 40.6 -2.7**
HABR *e**SS sS 21 52 56.8 +9.1
HABR *e*SS 21 53 56.8
HABR *e*SSS 21 54 11.7
HABR *e* 21 58 44.2
HABR pmax pmax
comp=E,20nm,1.2s
HABR pmax pmax
comp=Z,26nm,1.8s,mb4.6
HABR pmax pmax
comp=N,20nm,1.9s
HABR MLR MLR
comp=Z,105nm,15.0s,MS3.5
PSI Prapat 29.89 192 P **P** **21 48 19.8 +0.6**
comp=Z,2.6nm,0.5s,mb4.2,baz=331,slow=10,SNR=2.6
PSI LR LR 22 01 22.6
comp=Z,140nm,18.2s,MS3.6,baz=170,slow=38
PSI Prapat 29.89 192 P **P** **21 48 19.8 +0.7**
PSI pmax pmax
comp=Z,3.0nm,0.5s,mb4.3
PSI MLR MLR
comp=Z,140nm,18.2s,MS3.6
KBL Kabul 29.96 284 *e*P **P** **21 48 20.3 +0.6**
KBL pmax pmax
comp=Z,11nm,0.6s,mb4.8
KBL Kabul 29.96 284 *e*P **P** **21 48 20.3 +0.6**
comp=Z,10nm,0.6s,mb4.7
ASAJ Asahikawa 31.58 57 P **P** **21 48 34.4 +0.4**
comp=Z,1.2nm,0.3s,mb4.2,baz=312,slow=14,SNR=3.3
ASAJ Asahikawa 31.58 57 P **P** **21 48 34.4 +0.5**
ASAJ pmax pmax
comp=Z,1.0nm,0.3s
YSS Yuzh-Sakhalins 32.24 52 *e*P **P** **21 48 41.0 +1.3**
BVAR Borovoye Array 32.32 320 P **P** **21 48 40.6 +0.4**
comp=Z,6.6nm,0.7s,mb4.6,baz=110,slow=9.6,SNR=62
BVAR PcP PcP 21 51 26.0 -2.0
comp=Z,1.5nm,0.6s,baz=130,slow=1.4,SNR=4.0
BVAR Borovoye Array 32.32 320 P **P** **21 48 40.6 +0.3**
BVAR 21 51 26.0
BVAR pmax pmax
comp=Z,7.0nm,0.7s
BRVK Borovoye 32.39 320⇑ *i*P **P** **21 48 38.9 -2.0**
BRVK pmax pmax
comp=Z,12nm,0.7s,mb4.8
BRVK Borovoye 32.39 320 *e*P **P** **21 48 41.3 +0.4**
comp=Z,13nm,0.8s,mb4.8
AKTK Aktyubinsk 38.86 312 P **P** **21 49 37.2 +0.7**
AKTO Aktyubinsk 38.86 312 P **P** **21 49 37.2 +0.7**
comp=Z,7.5nm,0.6s,mb4.6,baz=91,slow=9.2,SNR=23
AKTO Aktyubinsk 38.86 312 P **P** **21 49 37.2 +0.7**
AKTO pmax pmax
comp=Z,8.0nm,0.6s,mb4.6
SVE Sverdlovsk 38.98 322⇓ *e*P **P** **21 49 38.8 +1.4**
SVE pmax pmax
comp=Z,37nm,1.0s,mb5.1
ARU Arti 39.94 321 *c i*P **P** **21 49 44.6 -0.8**
ARU S **S** **21 55 47.6 -2.9**
ARU SS SS 21 58 37.1 -10
ARU pmax pmax
comp=Z,60nm,1.0s,mb5.3
ARU Arti 39.94 321 *e*P **P** **21 49 45.9 +0.5**
comp=Z,48nm,0.9s,mb5.2
TIXI Tiksi 41.44 11 *e*P **P** **21 49 55.8 -1.8**
TIXI pmax pmax
comp=Z,13nm,1.6s,mb4.3
TIXI MLR MLR
comp=Z,428nm,17.0s,MS4.4
TIXI Tiksi 41.44 11 *e*P **P** **21 49 56.2 -1.3**
comp=Z,5.2nm,0.7s,mb4.3
SOKR Solikamsk 41.82 325 *d i*P **P** **21 50 01.4 +0.6**
SOKR pmax pmax
comp=Z,30nm,1.2s,mb4.8
PEA0B Petropavlovsk- 42.83 45 *e*P **P** **21 50 08.7 -0.5**
PETK Petropavlovsk- 42.83 45 P **P** **21 50 08.8 -0.4**
comp=Z,5.7nm,0.7s,mb4.4,baz=304,slow=2.9,SNR=12
PETK LR LR 22 09 38.7
comp=Z,57nm,20.6s,MS3.5,baz=76,slow=38
PETK Petropavlovsk- 42.83 45 P **P** **21 50 08.8 -0.4**
PETK pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
PETK MLR MLR
comp=Z,57nm,20.6s,MS3.5
GNI Garni 48.39 297 P **P** **21 50 55.0 +1.6**
comp=Z,6.3nm,0.6s,mb4.8,baz=313,slow=4.8,SNR=5.8
GNI Garni 48.39 297 P **P** **21 50 55.0 +1.6**
GNI pmax pmax
comp=Z,6.0nm,0.6s
ZEI Tsey 48.58 301 *e*P **P** **21 50 54.2 -0.5**
ZEI pmax pmax
comp=Z,9.0nm,0.5s,mb5.1
MIB Mutribah 48.91 283 *e*P **P** **21 50 56.8 -0.7**
MIB AMb AMB 21 50 58.8
comp=Z,24nm,1.2s,mb5.1
RDF Al-Radifah 49.02 282 *e*P **P** **21 50 57.3 -1.0**
RDF AMb AMB 21 50 59.1
comp=Z,20nm,0.9s,mb5.2
NAY Al-Naaiem 49.17 282 *e*P **P** **21 50 58.6 -0.8**
NAY AMb AMB 21 51 06.0
comp=Z,17nm,0.7s,mb5.2
KIV Kislovodsk 49.27 302⇑ *i*P **P** **21 51 01.4 +1.3**
KIV *i* 21 51 07.9
KIV *i* 21 52 47.3
KIV pmax pmax
comp=Z,30nm,1.6s,mb5.1
KIV MLR MLR
comp=Z,200nm,18.0s,MS4.2
KIV Kislovodsk 49.27 302 *e*P **P** **21 51 00.9 +0.8**
comp=Z,35nm,1.3s,mb5.2
BILL Bilibino 49.79 26⇑ *e*P **P** **21 51 02.4 -1.2**
BILL *e* 21 52 54.9
BILL pmax pmax
comp=Z,8.0nm,1.6s,mb4.5
BILL MLR MLR
comp=Z,300nm,15.0s,MS4.4
BILL Bilibino 49.79 26 *e*P **P** **21 51 03.2 -0.5**
comp=Z,1.8nm,0.4s,mb4.5
VSR Storozhevoye 50.81 312 *e*P **P** **21 51 11.2 -0.4**
VSR *e**PP pP 21 51 18.6 +4.2
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VSR pmax pmax
comp=N,8.0nm,1.3s
VSR pmax pmax
comp=E,20nm,1.1s
VSR MLR MLR
comp=E,70nm,17.0s,MS3.9
VSR MLR MLR
comp=Z,200nm,17.0s,MS4.2
VSR MLR MLR
comp=N,80nm,16.0s,MS3.9
MOS Moscow 51.45 318 *e*P **P** **21 51 14.2 -2.2**
MOS *e* 21 51 19.6
MOS pmax pmax
comp=Z,47nm,0.8s,mb5.5
OBN Obninsk 52.08 317⇓ *i*P **P** **21 51 21.0 -0.1**
OBN *i* 21 51 27.0
OBN *i* 21 53 17.8
OBN pmax pmax
comp=Z,13nm,1.2s,mb4.7
OBN MLR MLR
comp=Z,100nm,16.0s,MS4.0
ANN Anapa 52.84 304 *e*P **P** **21 51 26.1 -0.8**
ANN *e*S **S** **21 58 58.1 +2.4**
ANN pmax pmax
comp=Z,22nm,0.8s,mb5.1
APA Apatity 53.56 333⇑ *e*P **P** **21 51 32.0 +0.1**
APA MLR MLR
comp=Z,300nm,12.0s,MS4.6
FITZ Fitzroy Crossi 53.89 155 *e*P **P** **21 51 34.3 -0.5**
comp=Z,13nm,0.9s,mb4.9
FITZ Fitzroy Crossi 53.89 155 P **P** **21 51 34.4 -0.4**
comp=Z,6.7nm,0.9s,mb4.6,baz=56,slow=3.6,SNR=3.8
JOF Joensuu 54.41 327 *e*P **P** **21 51 36.9 -1.2**
JOF pmax pmax
comp=Z,13nm,0.7s,mb5.0
JOF Joensuu 54.41 327 *ep* **P** **21 51 36.9 -1.2**
comp=Z,13nm,0.7s,mb5.0
JOF Joensuu 54.41 327 *ep* **P** **21 51 36.9 -1.2**
comp=Z,13nm,0.7s,mb5.0
ARCES ARCESS Array B 56.47 335 P **P** **21 51 52.5 -0.3**
comp=Z,11nm,0.7s,mb5.0,baz=80,slow=8.1,SNR=59
ARCES ARCESS Array B 56.47 335 P **P** **21 51 52.5 -0.3**
ARCES pmax pmax
comp=Z,11nm,0.7s
ARE0 ARCESS Array S 56.47 335 *e*P **P** **21 51 52.4 -0.4**
BR131 Keskin Array S 56.78 299 *e*P **P** **21 51 55.1 -0.5**
comp=Z,4.2nm,0.7s,mb4.6
BRTR Keskin Array B 56.78 299 P **P** **21 51 55.1 -0.4**
comp=Z,5.0nm,0.8s,mb4.6,baz=95,slow=6.5,SNR=30
BRTR LR LR 22 20 16.8
comp=Z,53nm,18.3s,MS3.7,baz=213,slow=40
BRTR Keskin Array B 56.78 299 P **P** **21 51 55.2 -0.4**
BRTR pmax pmax
comp=Z,5.0nm,0.8s
BRTR MLR MLR
comp=Z,53nm,18.3s
BRTR Keskin Array B 56.78 299 P **P** **21 51 55.1 -0.4**
BRTR LR LR 22 20 16.8
KAF Kangasniemi 56.79 327 *e*P **P** **21 51 54.0 -1.2**
KAF pmax pmax
comp=Z,11nm,0.6s,mb5.1
KAF Kangasniemi 56.79 327 *ep* **P** **21 51 54.0 -1.2**
comp=Z,11nm,0.6s,mb5.1
KAF Kangasniemi 56.79 327 *ep* **P** **21 51 54.0 -1.2**
comp=Z,11nm,0.6s,mb5.1
FINES FINESS Array B 56.98 326 P **P** **21 51 56.0 -0.6**
comp=Z,15nm,0.7s,mb5.1,baz=82,slow=7.6,SNR=60
FINES LR LR 22 18 40.6
comp=Z,59nm,18.8s,MS3.7,baz=176,slow=38
FINES FINESS Array B 56.98 326 P **P** **21 51 56.0 -0.6**
FINES pmax pmax
comp=Z,15nm,0.7s
FINES MLR MLR
comp=Z,59nm,18.8s
VSU Vasula 57.09 322 *d i*P **P** **21 51 57.1 -0.3**
VSU pmax pmax
comp=Z,28nm,0.8s,mb5.3
AKASG Malin Array Be 57.10 313 P **P** **21 51 56.7 -0.9**
comp=Z,5.3nm,0.6s,mb4.8,baz=69,slow=6.7,SNR=14
AKASG Malin Array Be 57.10 313 *ce*P **P** **21 51 57.0 -0.6**
AKASG pmax pmax
comp=Z,5.0nm,0.6s
AKBB Malin Array Si 57.10 313 *e*P **P** **21 51 56.4 -1.2**
KIEV Kiev 57.11 313 *e*P **P** **21 51 56.4 -1.3**
KIEV pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
KIEV Kiev 57.11 313 *e*P **P** **21 51 56.4 -1.3**
comp=Z,6.3nm,0.5s,mb4.9
MMAI Mount Meron Ar 57.52 291 P **P** **21 52 01.5 +0.7**
comp=Z,0.4nm,0.3s,mb3.9,baz=97,slow=7.4,SNR=5.2
COEN Coen 58.77 135 *e*P **P** **21 52 13.9 +4.2**
comp=Z,117nm,0.8s
EIL Elat 59.07 288 LR LR 22 23 08.2
comp=Z,86nm,18.7s,MS3.9,baz=84,slow=42
WRAB Tennant Creek 59.07 147 *e*P **P** **21 52 11.6 -0.1**
WRAB pmax pmax
comp=Z,25nm,0.8s,mb5.3
WRAB Tennant Creek 59.07 147 *e*P **P** **21 52 11.6 -0.1**
comp=Z,25nm,0.8s,mb5.3
WRA Warramunga Arr 59.08 147 P **P** **21 52 11.1 -0.6**
comp=Z,20nm,0.8s,mb5.2,baz=341,slow=7.4,SNR=29
WRA Warramunga Arr 59.08 147 P **P** **21 52 11.1 -0.6**
WRA pmax pmax
comp=Z,20nm,0.8s
TIRR Tirgusor 59.18 306⇑ *i*P **P** **21 52 12.5 +0.2**
TIRR Tirgusor 59.18 306⇑ *i*P **P** **21 52 12.5 +0.2**
VRI Vrincioaia 59.92 308⇑ *i*P **P** **21 52 18.3 +0.9**
VRI Vrincioaia 59.92 308⇑ *i*P **P** **21 52 18.3 +0.9**
SUW Suwalki 59.95 318 *e*P **P** **21 52 16.8 -0.6**
SUW pmax pmax
comp=Z,20nm,0.9s,mb5.2
SUW Suwalki 59.95 318 *e*P **P** **21 52 16.8 -0.6**
comp=Z,20nm,0.9s,mb5.1
PLOR Plostina 59.98 308⇓ *i*P **P** **21 52 19.2 +1.4**
PLOR Plostina 59.98 308⇓ *i*P **P** **21 52 19.1 +1.3**
ATD Arta Tunnel 60.40 265 P **P** **21 52 22.1 +1.0**
comp=Z,5.0nm,0.8s,mb4.6,baz=74,slow=15,SNR=2.6
BURAR Bucovina Array 60.42 310⇓ *i*P **P** **21 52 20.7 0.0**
BURAR Bucovina Array 60.42 310⇓ *i*P **P** **21 52 20.7 0.0**
BUR08 Bucovina Ar. S 60.42 310 *e*P **P** **21 52 20.6 -0.1**
LVV L'vov 60.55 313 *e*P **P** **21 52 21.6 0.0**
MLR Muntele Rosu 60.56 308 LR LR 22 21 03.4
comp=Z,156nm,19.0s,MS4.2,baz=262,slow=38
MLR Muntele Rosu 60.56 308⇑ *i*P **P** **21 52 22.5 +0.8**
MLR Muntele Rosu 60.56 308⇑ *i*P **P** **21 52 22.5 +0.8**
VOIR 61.17 308⇑ *i*P **P** **21 52 28.4 +2.5**
VOIR 61.17 308⇑ *i*P **P** **21 52 28.4 +2.5**
KWP Kalwaria Pacla 61.42 313 *e*P **P** **21 52 27.9 +0.3**
KWP Kalwaria Pacla 61.42 313 *e*P **P** **21 52 27.6 +0.1**
KWP pmax pmax
comp=Z,19nm,0.6s,mb5.4
KWP Kalwaria Pacla 61.42 313 *e*P **P** **21 52 27.6 0.0**
comp=Z,19nm,0.6s,mb5.4
KWP Kalwaria Pacla 61.42 313⇓ *i*P **P** **21 52 27.9 +0.4**
ASAR Alice Springs 62.15 150 P **P** **21 52 32.2 -0.4**
comp=Z,10nm,0.8s,mb5.0,baz=335,slow=6.3,SNR=21
ASAR Alice Springs 62.15 150 P **P** **21 52 32.2 -0.4**
ASAR pmax pmax
comp=Z,10.0nm,0.8s
STHS Stebnicka Huta 62.40 313 *e*P **P** **21 52 34.4 +0.3**
STHS pmax pmax
comp=Z,3.0nm,1.0s,mb4.4
STHS Stebnicka Huta 62.40 313 *e*P **P** **21 52 34.4 +0.3**
comp=Z,2.9nm,1.0s,mb4.4
STHS Stebnicka Huta 62.40 313 *e*P **P** **21 52 34.3 +0.2**
OJC Ojcow 63.03 314 *e*P **P** **21 52 36.3 -2.0**
NB2 NORSAR Subarra 64.04 327 P **P** **21 52 43.7 -1.1**
comp=Z,9.5nm,0.8s,mb4.9,baz=71,slow=6.9
NOA NORSAR Array B 64.04 327 P **P** **21 52 43.5 -1.3**
comp=Z,8.7nm,0.7s,mb4.9,baz=70,slow=6.7,SNR=42
NOA LR LR 22 22 30.5
comp=Z,52nm,21.0s,MS3.7,baz=80,slow=38
NOA NORSAR Array B 64.04 327 P **P** **21 52 43.5 -1.3**
NOA pmax pmax
comp=Z,9.0nm,0.7s
NOA MLR MLR
comp=Z,52nm,21.0s
NOA NORSAR Array B 64.04 327 P **P** **21 52 43.5 -1.3**
NOA LR LR 22 22 30.5
OKC Ostrava-Krasne 64.16 314 *e*P **P** **21 52 45.6 -0.2**
OKC *e* 21 52 51.8
OKC Ostrava-Krasne 64.16 314 *e*P **P** **21 52 45.6 -0.2**
OKC *ep*P pP 21 52 51.8 +3.2
VYHS Vyhne 64.20 313 *e*P **P** **21 52 46.3 +0.2**
VYHS pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
VYHS Vyhne 64.20 313 *e*P **P** **21 52 46.3 +0.2**
comp=Z,2.7nm,1.0s,mb4.2
VYHS Vyhne 64.20 313 *e*P **P** **21 52 46.3 +0.2**
NAO01 NORSAR Array S 64.26 327 *e*P **P** **21 52 43.3 -2.9**
comp=Z,1.9nm,0.5s,mb4.4
KOLL Kolacno 64.44 313 *e*P **P** **21 52 48.2 +0.6**
KOLL Kolacno 64.44 313 *e*P **P** **21 52 48.2 +0.6**
MORC Moravsky Berou 64.55 314 *e*P **P** **21 52 48.1 -0.2**
MORC pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
MORC Moravsky Berou 64.55 314 *e*P **P** **21 52 48.1 -0.2**
comp=Z,7.7nm,1.1s,mb4.7
MORC Moravsky Berou 64.55 314⇑ *i*P **P** **21 52 48.7 +0.4**
DPC Dobruska-Polom 65.08 315 *e*P **P** **21 52 52.0 +0.2**
DPC *e* 21 52 57.8
DPC MLR MLR
comp=Z,200nm,15.3s,MS4.4
DPC Dobruska-Polom 65.08 315 *e*P **P** **21 52 52.0 +0.2**
DPC *ep*P pP 21 52 57.8 +3.2
DPC AMS AMS 22 22 20.0
comp=Z,200nm,15.3s
UPC Upice 65.21 315 *e*P **P** **21 52 52.6 0.0**
UPC *e* 21 52 59.6
UPC Upice 65.21 315 *e*P **P** **21 52 52.6 0.0**
UPC *ep*P pP 21 52 59.6 +4.1
VRAC Vranov 65.30 314 LR LR 22 22 46.1
comp=Z,187nm,18.0s,MS4.3,baz=68,slow=37
CTAO Charters Tower 65.39 137 *e*P **P** **21 52 58.4 +4.3**
CTAO pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
CTAO Charters Tower 65.39 137 *e*P **P** **21 52 58.4 +4.3**
comp=Z,9.4nm,0.9s,mb4.8
COLD Coldfoot 66.09 24 *e*P **P** **21 52 57.6 -0.4**
comp=Z,2.8nm,0.7s,mb4.4
PRU Pruhonice 66.28 315 *e*P **P** **21 53 00.3 +0.8**
PRU *e* 21 53 05.7
PRU MLR MLR
comp=Z,300nm,22.3s,MS4.5
PRU Pruhonice 66.28 315 *e*P **P** **21 53 00.3 +0.8**
PRU *ep*P pP 21 53 05.7 +3.3
PRU AMS AMS 22 23 00.0
comp=Z,300nm,22.3s
FORT Forrest 66.44 158 *e*P **P** **21 53 03.4 +2.7**
comp=Z,16nm,0.7s,mb5.2
FORT Forrest 66.44 158 *e*P **P** **21 53 03.5 +2.9**
comp=Z,24nm,0.8s,mb5.3
CLL Collm 66.68 317 *e*P **P** **21 53 01.0 -1.1**
CLL *i* 21 53 08.9
CLL Collm 66.68 317 *e*P **P** **21 53 01.0 -1.1**
CLL *i* sP sP 21 53 08.9 +3.0
comp=Z,10.0nm,1.2s
JMIC Jan Mayen 66.93 341 LR LR 22 25 27.8
comp=Z,115nm,20.4s,MS4.1,baz=76,slow=39
KHC Kasperske Hory 67.19 315 *e*P **P** **21 53 05.1 -0.3**
KHC *e* 21 53 10.1
KHC MLR MLR
comp=Z,300nm,22.2s,MS4.5
KHC Kasperske Hory 67.19 315 *e*P **P** **21 53 05.1 -0.3**
KHC *ep*P pP 21 53 10.1 +1.9
KHC AMS AMS 22 23 20.0
comp=Z,300nm,22.2s
BPAW Bear Paw Mtn. 67.21 28 *e*P **P** **21 53 04.8 -0.4**
comp=Z,5.3nm,0.7s,mb4.7
PPLA Purkeypile 67.27 29 *e*P **P** **21 53 05.7 +0.1**
comp=Z,7.0nm,0.6s,mb4.9
TRF Thorofare Moun 67.78 28 *e*P **P** **21 53 09.4 +0.5**
comp=Z,3.0nm,0.7s,mb4.4
COLA College 68.04 26 *e*P **P** **21 53 09.8 -0.6**
COLA pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
COLA College 68.04 26 *e*P **P** **21 53 09.8 -0.6**
comp=Z,7.1nm,0.7s,mb4.8
GRF Grafenberg Arr 68.37 316 *e*P **P** **21 53 12.4 -0.4**
comp=Z,13nm,1.8s,mb4.7
GRF *ep*P pP 21 53 20.5 +4.9
comp=Z,7.0nm,0.4s
GRF Grafenberg Arr 68.37 316 *e*P **P** **21 53 12.4 -0.4**
GRF *e**PP pP 21 53 20.5 +4.9
GRF pmax pmax
comp=Z,13nm,1.8s,mb4.7
PMR Palmer 69.15 29 *e*P **P** **21 53 16.8 -0.6**
PMR pmax pmax
comp=Z,198nm,3.0s
PMR Palmer 69.15 29 *e*P **P** **21 53 16.8 -0.6**
comp=Z,198nm,3.0s
OHAK Old Harbor 69.37 35 *e*P **P** **21 53 18.2 -0.6**
comp=Z,9.5nm,0.7s,mb4.8
KDAK Kodiak Island 69.44 34 *ce*P **P** **21 53 18.8 -0.5**
PAX Paxson 69.92 27 *e*P **P** **21 53 21.4 -0.7**
PAX pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
PAX Paxson 69.92 27 *e*P **P** **21 53 21.4 -0.7**
comp=Z,3.4nm,0.8s,mb4.3
DAVOX Davos/Dischmat 70.44 313 LR LR 22 26 12.6
comp=Z,116nm,19.2s,MS4.2,baz=192,slow=38
INK Inuvik 70.79 20 *e*P **P** **21 53 26.6 -0.8**
INK pmax pmax
comp=Z,7.0nm,0.7s
INK Inuvik 70.79 20 *e*P **P** **21 53 26.6 -0.8**
comp=Z,7.3nm,0.7s,mb4.7
MEM Membach 70.98 318 P **P** **21 53 28.3 -0.5**
CDF Champ du Feu 71.27 316 *e*P **P** **21 53 29.9 -0.7**
WLF Walferdange 71.33 317 P **P** **21 53 31.2 +0.2**
comp=Z,12nm,1.3s,mb4.7
BMRM Bremner River 71.34 29 *e*P **P** **21 53 30.8 -0.1**
comp=Z,9.5nm,0.7s,mb4.8
BCLA Clavier 71.46 318 P **P** **21 53 31.9 +0.1**
comp=Z,20nm,2.8s,mb4.5
SNF Seneffe 71.99 319 P **P** **21 53 35.1 +0.1**
DOU Dourbes 72.02 318 P **P** **21 53 35.1 0.0**
comp=Z,14nm,3.3s
SUMG Summit 72.41 349 *e*P **P** **21 53 36.5 -0.6**
STKA Stephens Creek 72.62 148 *e*P **P** **21 53 43.5 +4.7**
comp=Z,6.4nm,0.6s,mb4.7
STKA Stephens Creek 72.62 148 P **P** **21 53 38.4 -0.5**
comp=Z,7.9nm,0.7s,mb4.7,baz=341,slow=6.6,SNR=15
STKA Stephens Creek 72.62 148 *e*P **P** **21 53 43.6 +4.8**
comp=Z,2.5nm,1.0s,mb4.1
LPG La Plagne 72.96 313 *e*P **P** **21 53 41.0 +0.2**
comp=Z,26nm,0.6s,mb5.0
LPG La Plagne 72.96 313 *e*P **P** **21 53 41.0 +0.2**
LPG pmax pmax
comp=Z,13nm,0.6s,mb5.0
LPG La Plagne 72.96 313 *e*P **P** **21 53 41.0 +0.2**
comp=Z,13nm,0.6s,mb5.0
LPL La Plagne 72.96 313 *e*P **P** **21 53 40.9 +0.1**
comp=Z,20nm,0.5s,mb5.0
LPL La Plagne 72.96 313 *e*P **P** **21 53 40.9 +0.1**
LPL pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
LPL La Plagne 72.96 313 *e*P **P** **21 53 40.9 +0.1**
comp=Z,9.9nm,0.5s,mb5.0
BNI Bardonecchia 73.22 313 *e*P **P** **21 53 41.8 -0.6**
BNI pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
BNI Bardonecchia 73.22 313 *e*P **P** **21 53 41.8 -0.6**
comp=Z,3.0nm,0.6s,mb4.4
SMF Signal de Mont 74.16 315 *e*P **P** **21 53 46.9 -1.0**
comp=Z,25nm,1.0s,mb4.8
SMF Signal de Mont 74.16 315 *e*P **P** **21 53 46.9 -1.0**
SMF pmax pmax
comp=Z,13nm,1.0s,mb4.8
SMF Signal de Mont 74.16 315 *e*P **P** **21 53 46.9 -1.0**
comp=Z,13nm,1.0s,mb4.8

AVF	Avril sur Loir	74.37	316	*e*P	P		21 53 48.1	-1.0
OPO	Ambohidratompo	74.92	236	P	P		21 53 51.8	-0.8
	comp=Z,0.9nm,0.7s,mb3.8,baz=346,slow=4.2,SNR=3.3							
SKAG	Skagway	75.95	27	*e*P	P		21 53 58.7	+0.8
	comp=Z,20nm,1.0s,mb5.0							
YKA	Yellowknife Ar	80.34	17	P	P		21 54 21.0	-1.2
	comp=Z,3.2nm,0.7s,mb4.4,baz=328,slow=5.2,SNR=16							
YKA	Yellowknife Ar	80.34	17	P	P		21 54 21.0	-1.2
YKA				pmax	pmax			
	comp=Z,3.0nm,0.7s							
ESDC	Sonseca Array	82.75	313	P	P		21 54 35.3	-0.1
	comp=Z,0.6nm,0.6s,mb3.8,baz=26,slow=5.0,SNR=3.9							
TAM	Tamanrasset	85.59	294	*e*P	P		21 54 50.5	+0.3
TAM				pmax	pmax			
	comp=Z,2.0nm,0.7s,mb4.5							
TAM	Tamanrasset	85.59	294	*e*P	P		21 54 50.5	+0.3
	comp=Z,1.8nm,0.7s,mb4.4							
FFC	Flin Flon	90.28	15	*c*eP	P		21 55 11.8	-0.3
FFC	Flin Flon	90.28	15	*e*P	P		21 55 11.4	-0.6
	comp=Z,5.0nm,0.8s,mb4.9							
SCHQ	Schefferville	92.94	355	P	P		21 55 23.8	-0.6
	comp=Z,2.5nm,0.7s,mb4.7,baz=291,slow=14,SNR=3.1							
WVOR	Wild Horse Val	95.55	31	*e*P	P		21 55 37.3	+0.7
	comp=Z,6.2nm,0.6s,mb5.2							
OTAV	Otavalo	147.48	6	*e*PKPbc	PKPbc		22 01 56.5	+0.3

IDC 27 21:58:53.9±7.7, 9°.85N×90°.20E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.2/23, mbtmp3.3/4, Error ellipse: s-maj=379.8km s-min=24.8km az=60.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	37.42	351	P	P	22 06 08.4	-0.3
	0.2nm,0.5s,baz=120,slow=8.5,SNR=3.5						
KURK	Kurchatov	41.84	349	P	P	22 06 45.0	-0.6
	0.2nm,0.6s,baz=168,slow=7.8,SNR=2.6						
WRA	Warramunga Arr	52.58	124	P	P	22 08 09.4	-0.4
	0.2nm,0.4s,baz=301,slow=9.8,SNR=10						
ASAR	Alice Springs	54.18	129	P	P	22 08 22.0	+0.6
	0.6nm,0.7s,baz=303,slow=7.3,SNR=6.9						

*CSEM **27** 22:04:09.3±0.2, 39°.00N×41°.18E, h12km, MD2.9, Error ellipse: s-maj=5.1km s-min=3.7km az=124.0*
*DDA **27** 22:04:09.4, 38°.99N×41°.14E, h15km, Md3.0*
*ISK **27** 22:04:09.0, 39°.00N×41°.19E, h14km, MD2.9*
*ISCJB **27** 22:04:09.8±0.6, 39°.04N±0°.03×41°.17E±0°.04, h7km±4km, Error ellipse: s-maj=5.5km s-min=4.4km az=27.8*
ISC 27 22:04:10.3±0.5, 39°.03N±0°.03×41°.15E±0°.04, h11km±4km, n22, σ1°.14/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNGL	BINGOL	0.08	179	*i* P	Pg	22 04 12.2	-0.5
BNGL				*i* S	Sg	22 04 14.3	-0.1
BINT	Bingol	0.54	253	PG	Pg	22 04 20.9	+0.2
BINT				*e*SG	Sg	22 04 29.4	+1.6
BINT	Bingol	0.54	253	*i* Pg	Pg	22 04 21.0	+0.3
BINT				*e*Sg	Sg	22 04 29.4	+1.6
BTMT	Batman	0.88	162	*e*PG	Pg	22 04 26.4	-0.8
BTMT				*e*SG	Sg	22 04 39.0	+0.3
EZM	Erzurum	0.89	11	*e*PG	Pg	22 04 26.6	-0.8
ERZM	Erzurum	0.89	11	*i* P	Pg	22 04 27.3	-0.1
ERZM				*i* S	Sg	22 04 40.5	+1.5
ERZM	Erzurum	0.89	11	*i* P	Pg	22 04 27.3	-0.1
ERZM				*i* S	Sg	22 04 40.5	+1.5
BEST	Besiri	1.14	175	*i* P	Pb	22 04 30.5	-1.5
BEST				*i* S	Sb	22 04 48.0	+1.1
TUTA	Tutak	1.34	74	*i* P	Pn	22 04 34.4	-0.5
TUTA				*i* S	Sb	22 04 54.5	+1.8
TUTA	Tutak	1.34	74	*i* P	Pn	22 04 34.4	-0.6
TUTA				*i* S	Sb	22 04 54.5	+1.8
DIYA	Diyarbakir	1.37	216	*e*P	Pn	22 04 35.9	+0.6
DIYA				*i* S	Sb	22 04 51.8	-1.6
DIYA	Diyarbakir	1.37	216	*e*P	Pn	22 04 35.9	+0.6
DIYA				*i* S	Sb	22 04 51.8	-1.6
PTK	Pertek	1.38	265	*e*PN	Pn	22 04 33.9	-1.5
PTK	Pertek	1.38	265	*e*Pn	Pn	22 04 33.9	-1.5
AGRB	Hanur-Agry	1.53	69	*e*PN	Pn	22 04 36.2	-1.3
AGRB				*e*SN	Sn	22 04 57.0	-0.3
AGRB	Hanur-Agry	1.53	69	*e*Pn	Pn	22 04 36.2	-1.3
AGRB				*e*Sn	Sn	22 04 57.1	-0.3
EZC	Erzincan	1.57	298	*e*PN	Pn	22 04 37.1	-0.9
SVRC	Sivrice-ELAZID	1.58	246	*e*PN	Pn	22 04 36.9	-1.4
SVRC	Sivrice-ELAZID	1.58	246	*e*Pn	Pn	22 04 36.9	-1.3
MARD	Mardin	1.74	190	*i* P	Pn	22 04 40.9	+0.5
MARD				*i* S	Sn	22 05 05.0	+2.5
KEMA	Kemaliye	2.08	277	*i* P	Pn	22 04 46.5	+1.4
KEMA				*i* S	Sn	22 05 15.1	+4.2
KEMA	Kemaliye	2.08	277	*i* P	Pn	22 04 46.5	+1.5
KEMA				*i* S	Sn	22 05 15.1	+4.2

*IDC **27** 22:06:58.7±4.1, 34°.87S×179°.14E, h173km±35km, mb3.9/5, mb1 3.9/6, mb1mx3.7/15, mbtmp3.8/6, Error ellipse: s-maj=45.4km s-min=24.1km az=13.0*
*NEIC **27** 22:07:00.4±1.9, 35°.13S×179°.18E, h196km±16km, mb4.4/4, Error ellipse: s-maj=23.3km s-min=15.1km az=192.0*
*ISCJB **27** 22:07:00.7±3.0, 35°.2S±0°.2×179°.0E±0°.3, h202km±20km, mb4.0/9, Error ellipse: s-maj=39.5km s-min=27.1km az=150.4*
ISC 27 22:07:01.1±3.0, 35°.2S±0°.2×179°.0E±0°.3, h194km±21km, n35, σ0°.75/14, mb4.0/9, 1C, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	3.42	206	P	Pn	22 07 56.1	+0.7
URZ				S	Sn	22 08 37.4	-0.6
	15nm,0.3s,baz=27,slow=15,SNR=5.0						
STKA	Stephens Creek	31.27	265	P	P	22 13 04.8	+2.1
	1.3nm,0.7s,mb3.7,baz=135,slow=12,SNR=2.2						
ASAR	Alice Springs	40.65	274	P	P	22 14 22.0	-0.4
	2.2nm,0.6s,mb3.8,baz=116,slow=7.6,SNR=34						
WRAB	Tennant Creek	42.08	279	*e*P	P	22 14 33.7	-0.4
	3.1nm,0.5s,mb4.0						
WRA	Warramunga Arr	42.09	279	P	P	22 14 33.2	-0.9
	2.1nm,0.4s,mb3.9,baz=116,slow=7.7,SNR=43						
WRA	Warramunga Arr	42.09	279	P	P	22 14 33.2	-0.9
FORT	Forrest	42.61	261	*e*P	P	22 14 38.2	-0.1
	14nm,0.6s,mb4.6						
CASY	Casey	49.74	210	*e*P	P	22 15 33.2	-0.1
	1.3nm,0.6s,mb3.4						
FITZ	Fitzroy Crossi	50.09	275	P	P	22 15 36.9	+0.3
	4.5nm,1.0s,mb3.8,baz=113,slow=12,SNR=4.0						
QSPA	South Pole Qui	54.91	180	P	P	22 16 16.1	+5.0
	9.2nm,0.6s,mb4.5,baz=16,slow=2.9,SNR=66						
QSPA	South Pole Qui	54.91	180	*e*P	P	22 16 15.6	+4.5
	7.9nm,0.6s,mb4.4						
SYO	Syowa Base	71.87	194	*e*P	P	22 18 02.4	+0.1
PETK	Petropavlovsk-	89.89	347	P	P	22 19 37.1	-0.3
	5.4nm,0.7s,mb4.5,baz=126,slow=5.9,SNR=13						
MK31	Makanchi Array	118.89	309	*e*PKPdf	PKPdf	22 25 24.4	-1.5
MKAR	Makanchi Array	118.89	309	PKP	PKPdf	22 25 24.5	-1.4
	0.3nm,0.7s,baz=212,slow=2.5,SNR=4.1						
TKM2	Tokmak 2	121.96	303	*e*PKPdf	PKPdf	22 25 31.9	0.0
KURK	Kurchatov	122.49	312	PKP	PKPdf	22 25 31.6	-1.1
	1.2nm,0.6s,baz=113,slow=2.0,SNR=6.6						
ARCES	ARCESS Array B	142.66	345	PKP	PKPdf	22 26 08.2	-1.7
	1.5nm,0.6s,baz=48,slow=1.3,SNR=6.9						
JOF	Joensuu	145.81	334	*e*p	PKPdf	22 26 14.9	-0.7
	11nm,0.7s						
JOF	Joensuu	145.81	334	*e*p	PKPdf	22 26 14.9	-0.7
	11nm,0.7s						
FINES	FINESS Array B	148.63	335	PKPbc	PKPbc	22 26 23.5	-0.8
	7.1nm,0.6s,baz=35,slow=3.5,SNR=39						
MMAI	Mount Meron Ar	149.92	276	PKPbc	PKPbc	22 26 29.0	+0.6
	2.9nm,0.8s,baz=102,slow=5.0,SNR=5.2						
LIC	Lamto	150.91	172	*e*PKP1	PKPbc	22 26 32.8	+1.5
	24nm,0.7s						
KIC	Kosan Boka	151.08	172	*e*PKP1	PKPbc	22 26 33.1	+1.4
	15nm,0.9s						
TIC	Toumodi	151.33	172	*e*PKP1	PKPbc	22 26 33.7	+1.4
	8.5nm,0.4s						
DBIC	Dimbokro	151.38	172	PKPbc	PKPbc	22 26 33.7	+1.4
	4.9nm,0.8s,baz=225,slow=1.4,SNR=7.6						
DBIC	Dimbokro	151.38	172	*e*PKPbc	PKPbc	22 26 32.1	-0.2
BR131	Keskin Array S	152.28	290	*e*PKPbc	PKPbc	22 26 33.0	-0.6
BRTR	Keskin Array B	152.28	290	PKPbc	PKPbc	22 26 32.8	-0.8
	1.8nm,0.7s,baz=114,slow=3.7,SNR=7.8						
NOA	NORSAR Array B	153.00	347	PKPbc	PKPbc	22 26 34.0	-0.5
	1.7nm,0.7s,baz=31,slow=2.0,SNR=8.5						
NOA	NORSAR Array B	153.00	347	PKPbc	PKPbc	22 26 34.0	-0.5
AKASG	Malin Array Be	153.26	315	PKPbc	PKPbc	22 26 34.5	-1.0
	1.1nm,0.5s,baz=65,slow=2.2,SNR=8.4						
AKASG				PKPab	PKPab	22 26 47.0	-1.2
	0.6nm,0.6s,baz=52,slow=4.0,SNR=5.8						
HFS	Hagfors	153.31	344	PKPbc	PKPbc	22 26 34.4	-0.8
	2.4nm,0.7s,baz=129,slow=2.0,SNR=7.5						
PSZ	Piszkesteto	159.96	316	*e*PKPdf	PKPdf	22 26 35.1	-1.4
WLF	Walferdange	164.64	342	*e*PKPdf	PKPdf	22 26 41.2	+0.2

*ISCJB **27** 22:21:15.0±1.0, 35°.98N±0°.04×21°.47E±0°.08, h11km±6km, Error ellipse: s-maj=11.8km s-min=5.3km az=158.2*
*CSEM **27** 22:21:16.5±0.4, 36°.00N×21°.48E, h15km, ML3.8/3, Error ellipse: s-maj=11.0km s-min=4.1km az=65.0*
*THE **27** 22:21:17.2, 36°.01N×21°.52E, h14km±2km, ML3.8/3, Error ellipse: s-maj=3.6km s-min=0.7km az=243.0*
*ATH **27** 22:21:17.9, 36°.07N×21°.90E, h15km±2km*
ISC 27 22:21:16.0±1.1, 35°.99N±0°.04×21°.47E±0°.09, h12km±6km, n44, σ1°.00/64, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.93	14	P	Pg	22 21 34.2	+0.3
PYL				S	Sg	22 21 47.5	+1.4
PYL	PYLOS	0.93	14	*e*PN	Pg	22 21 33.6	-0.3
PYL	PYLOS	0.93	14	*e*Pn	Pg	22 21 33.6	-0.3
PYL	PYLOS	0.93	14	P	Pg	22 21 34.2	+0.3
PYL				S	Sg	22 21 47.5	+1.4
ITM	Ithomi	1.24	17	P	Pn	22 21 38.7	-0.4
ITM				S	Sb	22 21 56.0	+0.7
ITM	Ithomi	1.24	17	*e*PN	Pn	22 21 39.0	-0.1
ITM				*e*SN	Sn	22 21 54.1	-1.7
ITM	Ithomi	1.24	17	P	Pn	22 21 38.7	-0.4
ITM	Ithomi	1.24	17	*e*Pn	Pn	22 21 39.0	-0.1
ITM				*e*Sn	Sn	22 21 54.1	-1.7
ITM				S	Sb	22 21 56.0	+0.7
KYTH	Kithira	1.30	77	*e*PN	Pn	22 21 36.1	-3.8
VLI	Veliai	1.39	58	*e*PN	Pn	22 21 37.9	-3.3
VLX	Vlachokerasia	1.56	28	P	Pn	22 21 43.2	-0.3
VLX				S	Sn	22 22 03.7	+0.1
VLX	Vlachokerasia	1.56	28	*e*PN	Pn	22 21 43.2	-0.3
VLX				*e*SN	Sn	22 22 01.7	-1.9
VLX	Vlachokerasia	1.56	28	P	Pn	22 21 43.2	-0.3
VLX				*e*Sn	Sn	22 22 01.7	-1.9
VLX				S	Sn	22 22 03.7	+0.1
RLS	Riolos of Patr	2.06	0	*e*PN	Pg	22 21 55.8	+0.2
GUR	Goura	2.06	20	P	Pn	22 21 50.0	-0.4
GUR	Goura	2.06	20	*e*PN	Pn	22 21 51.5	+1.1
GUR	Goura	2.06	20	P	Pn	22 21 50.0	-0.4
GUR	Goura	2.06	20	*e*Pn	Pn	22 21 51.5	+1.1
DID	Didima	2.08	43	P	Pn	22 21 50.5	-0.1
DID				S	Sn	22 22 16.1	-0.2
DID	Didima	2.08	43	*e*PN	Pn	22 21 50.5	-0.1
DID	Didima	2.08	43	P	Pn	22 21 50.5	-0.1
DID				S	Sn	22 22 16.1	-0.2
KARN	Karanos	2.08	106	P	Pn	22 21 50.7	+0.1
KARN				S	Sn	22 22 16.9	+0.5
KARN	Karanos	2.08	106	P	Pn	22 21 50.7	+0.1
KARN				S	Sn	22 22 16.9	+0.5
LAKA	Lakka	2.28	10	P	Pn	22 21 53.5	+0.1
LAKA				S	Sn	22 22 22.2	+0.8
LAKA	Lakka	2.28	10	P	Pn	22 21 53.5	+0.1
LAKA				S	Sn	22 22 22.2	+0.8
VLS	Valsamata	2.29	342	P	Pn	22 21 54.1	+0.6
VLS				S	Sn	22 22 22.7	+1.0
VLS	Valsamata	2.29	342	*e*PN	Pg	22 21 58.4	-1.5
VLS	Valsamata	2.29	342	P	Pn	22 21 54.1	+0.6
VLS				S	Sn	22 22 22.7	+1.0
VAM	Vamos	2.30	104	*e*PN	Pn	22 21 52.9	-0.7
VAM	Vamos	2.30	104	*e*Pn	Pn	22 21 52.9	-0.7
LTK	Loutraki	2.36	30	P	Pn	22 21 54.7	+0.3
LTK	Loutraki	2.36	30	*e*PN	Pn	22 21 56.1	+1.7
LTK	Loutraki	2.36	30	P	Pn	22 21 54.7	+0.3
LTK	Loutraki	2.36	30	*e*Pn	Pn	22 21 56.1	+1.7
GVD	Gavdhos	2.43	117	P	Pn	22 21 55.8	+0.4
GVD	Gavdhos	2.43	117	P	Pn	22 21 55.8	+0.4
EFP	Efpalio	2.46	8	*e*PN	Pn	22 21 59.0	+3.2
DSF	Desfina	2.56	19	P	Pn	22 21 56.9	-0.3
DSF				S	Sn	22 22 28.1	-0.2
DSF	Desfina	2.56	19	P	Pn	22 21 56.9	-0.3
DSF				S	Sn	22 22 28.1	-0.2
SIVA	Sivas	2.90	109	P	Pn	22 22 02.0	+0.2
SIVA	Sivas	2.90	109	P	Pn	22 22 02.0	+0.2
EVR	Evrytania	2.93	5	*e*PB	Pb	22 22 05.7	-2.5
LAST	Lasithi	3.37	103	P	Pn	22 22 09.2	+0.8
LAST	Lasithi	3.37	103	P	Pn	22 22 09.2	+0.8

*ISCJB **27** 22:25:34.1±0.7, 36°.28N±0°.03×21°.96E±0°.04, h3km±5km, mb3.7/6, Error ellipse: s-maj=6.4km s-min=3.9km az=145.6*
*IDC **27** 22:25:35.0±2.1, 36°.73N×22°.29E, h0km, mb3.9/5, mb1 3.9/7, mb1mx3.6/26, mbtmp3.8/7, ML3.2/2, Error ellipse: s-maj=44.0km s-min=24.9km az=35.0*
*CSEM **27** 22:25:35.0±0.3, 36°.29N×21°.99E, h5km±1km, ML4.0/4, Error ellipse: s-maj=7.4km s-min=4.0km az=51.0*
*ATH **27** 22:25:36.0, 36°.35N×22°.01E, h29km±1km, MD3.7/10, ML3.1*
*NEIC **27** 22:25:36.0, 36°.35N×22°.01E, h29km, mb3.7/1, ML3.1(ATH), After ATH.*
*THE **27** 22:25:37.7, 36°.41N×22°.11E, h1km±1km, ML4.0/4, Error ellipse: s-maj=1.8km s-min=0.6km az=238.0*
ISC 27 22:25:35.4±0.7, 36°.29N±0°.03×21°.96E±0°.04, h8km±4km, n112, σ1°.06/138, mb3.7/6, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.63	344	P	Pg	22 25 48.3	+0.7
PYL				S	Sg	22 25 56.7	+0.8
PYL	PYLOS	0.63	344	*e*PN	Pg	22 25 48.2	+0.6
PYL				*e*SN	Sg	22 25 56.9	+1.1
PYL	PYLOS	0.63	344	*e*Pn	Pg	22 25 48.2	+0.6
PYL				S	Sg	22 25 56.7	+0.8
KYTH	Kithira	0.87	90	*e*Pn	Pg	22 25 52.6	+0.6
KYTH	Kithira	0.87	90	*e*PN	Pg	22 25 52.6	+0.6
KYTH	Kithira	0.87	90	*e*Pn	Pg	22 25 52.6	+0.6
ITM	Ithomi	0.89	358	*e*Pn	Pg	22 25 52.3	-0.2
ITM				*e*Sn	Sg	22 26 04.2	+0.1
ITM	Ithomi	0.89	358	P	Pg	22 25 52.2	-0.3
ITM				S	Sg	22 26 03.9	-0.2
ITM	Ithomi	0.89	358	*e*PN	Pg	22 25 52.3	-0.2
ITM				*e*SN	Sg	22 26 04.2	+0.1
ITM	Ithomi	0.89	358	P	Pg	22 25 52.2	-0.3
ITM				S	Sg	22 26 03.9	-0.2
ITM				*e*Sn	Sg	22 26 04.2	+0.1
VLI	Veliai	0.90	61	*e*Pn	Pg	22 25 52.5	-0.1
VLI				*e*Sn	Sg	22 26 04.5	+0.3
VLI	Veliai	0.90	61	*e*PN	Pg	22 25 52.5	-0.1
VLI				*e*SN	Sg	22 26 04.5	+0.3
VLI	Veliai	0.90	61	*e*Pn	Pg	22 25 52.5	-0.1
VLI				*e*Sn	Sg	22 26 04.5	+0.3
VLX	Vlachokerasia	1.13	17	P	Pg	22 25 55.9	-1.2
VLX				S	Sg	22 26 10.6	-1.2
VLX	Vlachokerasia	1.13	17	*e*PN	Pg	22 25 56.0	-1.1
VLX				*e*SN	Sg	22 26 11.3	-0.5
VLX	Vlachokerasia	1.13	17	P	Pg	22 25 55.9	-1.2
VLX				S	Sg	22 26 10.6	-1.2
VLX				*e*Sn	Sg	22 26 11.3	-0.5
DID	Didima	1.59	40	P	Pn	22 26 03.5	-0.2
DID				S	Sn	22 26 23.3	-1.1
DID	Didima	1.59	40	*e*PN	Pn	22 26 03.7	0.0
DID	Didima	1.59	40	*e*Pn	Pn	22 26 03.7	0.0
DID				S	Sn	22 26 23.3	-1.1
GUR	Goura	1.67	10	P	Pn	22 26 05.5	+0.6
GUR				S	Sn	22 26 27.3	+0.8
GUR	Goura	1.67	10	*e*PB	Pn	22 26 04.1	-0.8
GUR	Goura	1.67	10	*e*Pb	Pn	22 26 04.1	-0.8
GUR	Goura	1.67	10	P	Pn	22 26 05.5	+0.6
GUR				S	Sn	22 26 27.3	+0.8
RLS	Riolos of Patr	1.81	348	*e*Pn	Pn	22 26 08.0	+1.2
RLS	Riolos of Patr	1.81	348	*e*PN	Pn	22 26 08.0	+1.2
RLS	Riolos of Patr	1.81	348	*e*Pn	Pn	22 26 08.0	+1.2
KARN	Karanos	1.82	119	P	Pn	22 26 08.3	+1.4
KARN				S	Sg	22 26 33.5	-0.3
KARN	Karanos	1.82	119	P	Pn	22 26 08.3	+1.4
LTK	Loutraki	1.91	25	P	Pn	22 26 08.5	+0.4
LTK	Loutraki	1.91	25	*e*PN	Pn	22 26 08.4	+0.3
LTK	Loutraki	1.91	25	*e*Pn	Pn	22 26 08.4	+0.3
NAIG	Nisos Aigina	1.91	39	*e*Pb	Pn	22 26 07.5	-0.6
NAIG	Nisos Aigina	1.91	39	*e*PB	Pn	22 26 07.5	-0.6
NAIG	Nisos Aigina	1.91	39	*e*Pb	Pn	22 26 07.5	-0.6
LAKA	Lakka	1.95	0	P	Pn	22 26 09.8	+1.1
LAKA				S	Sn	22 26 34.0	+0.7
LAKA	Lakka	1.95	0	P	Pn	22 26 09.8	+1.1
LAKA				S	Sn	22 26 34.0	+0.7
UPR	University Cam	2.00	356	*e*PN	Pn	22 26 08.8	-0.5
UPR	University Cam	2.00	356	*e*Pn	Pn	22 26 08.8	-0.5
VAM	Vamos	2.02	115	*e*Pb	Pn	22 26 11.0	+1.4
VAM	Vamos	2.02	115	*e*PB	Pn	22 26 11.0	+1.4
VAM	Vamos	2.02	115	*e*Pb	Pn	22 26 11.0	+1.4
KALE	Kalithea	2.10	4	P	Pn	22 26 11.6	+0.8
KALE				S	Sn	22 26 37.6	+0.5
KALE	Kalithea	2.10	4	P	Pn	22 26 11.6	+0.8
KALE				S	Sn	22 26 37.6	+0.5
EFP	Efpalio	2.14	359	P	Pg	22 26 14.8	-1.5
EFP	Efpalio	2.14	359	*e*PB	Pn	22 26 11.6	+0.4
EFP	Efpalio	2.14	359	*e*Pb	Pn	22 26 11.6	+0.4
DSF	Desfina	2.17	12	P	Pn	22 26 12.3	+0.6
DSF	Desfina	2.17	12	P	Pn	22 26 12.3	+0.6
VLS	Valsamata	2.18	330	*e*Pn	Pn	22 26 11.0	-0.9
VLS	Valsamata	2.18	330	P	Pn	22 26 13.7	+1.8
VLS	Valsamata	2.18	330	*e*PN	Pn	22 26 11.0	-0.9
VLS	Valsamata	2.18	330	*e*Pn	Pn	22 26 11.0	-0.9
VLS	Valsamata	2.18	330	P	Pn	22 26 13.7	+1.8
ATH	Athens Observa	2.19	39	*e*Pn	Pn	22 26 11.9	-0.1
ATH	Athens Observa	2.19	39	*e*PN	Pn	22 26 11.9	-0.1
ATH	Athens Observa	2.19	39	*e*Pn	Pn	22 26 11.9	-0.1
GVD	Gavdhos	2.26	129	*e*Pg	Pg	22 26 18.0	-0.6
GVD	Gavdhos	2.26	129	*e*Pg	Pg	22 26 18.0	-0.6
PTL	Penteli	2.32	40	*e*Pn	Pn	22 26 12.3	-1.5
PTL	Penteli	2.32	40	*e*PN	Pn	22 26 12.3	-1.5
PTL	Penteli	2.32	40	*e*Pn	Pn	22 26 12.3	-1.5
LKR	Lokris	2.50	19	*e*Pn	Pn	22 26 15.5	-0.7
LKR	Lokris	2.50	19	*e*PN	Pn	22 26 15.5	-0.7
LKR	Lokris	2.50	19	*e*Pn	Pn	22 26 15.5	-0.7
ATAL	Atalanti	2.54	19	P	Pn	22 26 17.5	+0.6
ATAL	Atalanti	2.54	19	P	Pn	22 26 17.5	+0.6
IDI	Anoyia	2.58	112	Pn	Pn	22 26 18.8	+1.4
	3.1nm,0.3s,baz=309,slow=18,SNR=19						
IDI	Anoyia	2.58	112	*e*Pn	Pn	22 26 18.5	+1.2
IDI	Anoyia	2.58	112	*e*PN	Pn	22 26 18.5	+1.2
IDI	Anoyia	2.58	112	*e*Pn	Pn	22 26 18.5	+1.2
EVR	Evrytania	2.63	357	*e*Pb	Pn	22 26 20.0	+2.0
EVR	Evrytania	2.63	357	*e*PB	Pn	22 26 20.0	+2.0
EVR	Evrytania	2.63	357	*e*Pb	Pn	22 26 20.0	+2.0
SIVA	Sivas	2.64	118	*e*Pn	Pn	22 26 18.3	+0.1
SIVA	Sivas	2.64	118	*e*PN	Pn	22 26 18.3	+0.1
SIVA	Sivas	2.64	118	*e*Pn	Pn	22 26 18.3	+0.1
AGG	Agios Georgios	2.75	6	*e*Pn	Pn	22 26 20.0	+0.4
AGG	Agios Georgios	2.75	6	*e*PN	Pn	22 26 20.0	+0.4
AGG	Agios Georgios	2.75	6	*e*Pn	Pn	22 26 20.0	+0.4
APE	Apeiranthos	2.97	74	*e*Pn	Pn	22 26 22.7	0.0
APE	Apeiranthos	2.97	74	*e*PN	Pn	22 26 22.7	0.0
APE	Apeiranthos	2.97	74	*e*Pn	Pn	22 26 22.7	0.0
NPS	Neapolis	3.14	108	*e*Pn	Pn	22 26 24.6	-0.4
NPS	Neapolis	3.14	108	*e*PN	Pn	22 26 24.6	-0.4
NPS	Neapolis	3.14	108	*e*Pn	Pn	22 26 24.6	-0.4
THL	Klokotos Trika	3.27	1	*e*PN	Pn	22 26 27.6	+0.7
THL	Klokotos Trika	3.27	1	*e*Pn	Pn	22 26 27.6	+0.7
JAN	Janina	3.48	346	*e*Pn	Pn	22 26 29.9	+0.2
JAN	Janina	3.48	346	*e*PN	Pn	22 26 29.9	+0.2
JAN	Janina	3.48	346	*e*Pn	Pn	22 26 29.9	+0.2
KEK	Kerkira	3.82	334	*e*Pn	Pn	22 26 33.9	-0.5
KEK	Kerkira	3.82	334	*e*PN	Pn	22 26 33.9	-0.5
KEK	Kerkira	3.82	334	*e*Pn	Pn	22 26 33.9	-0.5
SOH	Sokhos	4.66	13	*e*Pn	Pn	22 26 47.1	+1.2
SOH	Sokhos	4.66	13	*e*PN	Pn	22 26 47.1	+1.2
SOH	Sokhos	4.66	13	*e*Pn	Pn	22 26 47.1	+1.2
TIP	Timpagrande	5.03	307	*e*Pn	Pn	22 26 51

ZALV Zalesovo Beam 43.26 354 P **P 23 15 48.1 +0.1**
1.4nm,0.6s,mb3.9,baz=176,slow=11,SNR=7.9
FITZ Fitzroy Crossi 44.14 130 P **P 23 15 55.3 -0.3**
2.0nm,0.8s,mb3.9,baz=346,slow=4.2,SNR=3.9
BVAR Borovoye Array 45.37 342 P **P 23 16 04.6 -0.3**
0.5nm,0.6s,mb3.6,baz=156,slow=11,SNR=6.0
BRVK Borovoye 45.43 342 *e*P **P 23 16 04.7 -0.6**
0.9nm,0.6s,mb3.8
WRA Warramunga Arr 51.91 126 P **P 23 16 55.5 -0.2**
0.3nm,0.3s,mb3.7,baz=306,slow=8.4,SNR=5.2
WRAB Tennant Creek 51.92 126 *e*P **P 23 16 56.1 +0.3**
7.1nm,0.7s,mb4.7
ASAR Alice Springs 53.64 130 P **P 23 17 08.8 +0.4**
0.5nm,0.6s,mb3.6,baz=306,slow=6.8,SNR=6.1
ASAR PcP PcP 23 18 15.1 +0.5
0.4nm,0.6s,baz=301,slow=4.1,SNR=4.6
BR131 Keskin Array S 58.70 310 *e*P **P 23 17 43.0 -1.3**
0.6nm,0.5s,mb3.9
BRTR Keskin Array B 58.70 310 P **P 23 17 42.5 -1.8**
0.7nm,0.7s,mb3.8,baz=126,slow=7.1,SNR=6.2
FINES FINESS Array B 68.94 332 P **P 23 18 51.4 0.0**
1.1nm,0.7s,mb3.9,baz=100,slow=6.2,SNR=5.5
MORC Moravsky Berou 71.56 319 *e*P **P 23 19 07.9 +0.2**
0.9nm,0.5s,mb4.0
ARCES ARCESS Array B 71.62 340 P **P 23 19 08.3 +0.6**
1.7nm,0.7s,mb4.1,baz=81,slow=5.6,SNR=8.8
NOA NORSAR Array B 75.94 330 P **P 23 19 32.9 -0.2**
1.0nm,0.9s,mb3.7,baz=96,slow=5.4,SNR=2.6

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*BJI **27** 23:17:27.6, 10°.55N×91°.97E, h16km, mB4.6/3, mb4.2/9*
*IDC **27** 23:17:29.1±1.0, 10°.79N×91°.68E, h0km, mb4.1/12, mb1 4.2/13, mb1mx3.9/25, mbtmp4.1/13, ML4.3/1, MS3.1/1, Ms1 3.1/1, ms1mx2.4/29, Error ellipse: s-maj=34.8km s-min=14.3km az=62.0*
*NEIC **27** 23:17:31.1±4.3, 10°.79N×91°.63E, h12km±28km, mb4.2/6, Error ellipse: s-maj=10.9km s-min=8.0km az=55.0*
*ISCJB **27** 23:17:31.8±0.5, 10°.77N±0°.07×91°.64E±0°.09, h33km, mb4.1/18, Error ellipse: s-maj=12.8km s-min=9.8km az=148.0*
ISC 27 23:17:31.5±5.7, 10°.79N±0°.08×91°.65E±0°.08, h15km±37km, n25, σ0s79/24, mb4.1/18, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.38**	**42**	Pn	**Pn**	**23 19 60.0**	**0.0**
	0.7nm,0.3s,baz=235,slow=14,SNR=3.8						
PALK	**Pallekele**	**11.36**	**253**	*e*Pn	**Pn**	**23 20 13.0**	**-0.4**
KSM	**Kuching**	**20.71**	**115**	*e*P	**P**	**23 22 13.5**	**+1.9**
	6.8nm,0.4s						
GYA	**Guiyang**	**21.07**	**40**	P	**P**	**23 22 14.0**	**-1.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.1						
GTA	**Gaotai**	**29.41**	**13**	*e*P	**P**	**23 23 35.5**	**+1.1**
GTA				pP	pP	23 23 41.5	+2.5
GTA				sP	sP	23 23 44.5	+3.6
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.2						
EKS2	**Erkin-Say**	**35.37**	**337**	*e*P	**P**	**23 24 26.2**	**-0.4**
	comp=Z,2.0nm,0.9s,mb4.0						
MK31	**Makanchi Array**	**36.75**	**349**	*e*P	**P**	**23 24 38.8**	**+0.6**
MKAR	**Makanchi Array**	**36.75**	**349**	P	**P**	**23 24 38.7**	**+0.5**
	comp=Z,2.4nm,0.8s,mb4.1,baz=134,slow=8.7,SNR=21						
SONM	**Songino Array**	**38.95**	**16**	P	**P**	**23 24 57.2**	**+0.3**
	comp=Z,1.0nm,0.5s,mb3.8,baz=197,slow=8.9,SNR=14						
ULN	**Ulaanbaatar**	**39.16**	**16**	*e*P	**P**	**23 24 58.3**	**-0.3**
	comp=Z,1.1nm,0.6s,mb3.8						
KURK	**Kurchatov**	**41.22**	**347**	P	**P**	**23 25 15.5**	**-0.1**
	comp=Z,2.3nm,0.9s,mb3.8,baz=162,slow=7.2,SNR=11						
KURK	**Kurchatov**	**41.22**	**347**	*e*P	**P**	**23 25 15.7**	**+0.1**
	comp=Z,4.7nm,1.1s,mb4.0						
KSRS	**Korea Array**	**42.01**	**45**	P	**P**	**23 25 21.0**	**-1.3**
	comp=Z,0.7nm,0.7s,mb3.4,baz=247,slow=8.1,SNR=4.9						
ZALV	**Zalesovo Beam**	**43.39**	**354**	P	**P**	**23 25 33.3**	**+0.1**
	comp=Z,1.3nm,0.3s,mb4.1,baz=177,slow=8.2,SNR=9.8						
ZALV				LR	LR	23 47 08.2	
	comp=Z,22nm,18.2s,baz=246,slow=41						
FITZ	**Fitzroy Crossi**	**44.16**	**130**	P	**P**	**23 25 39.3**	**-0.6**
	comp=Z,5.5nm,0.6s,mb4.5,baz=326,slow=3.5,SNR=19						
BRVK	**Borovoye**	**45.52**	**342**	*e*P	**P**	**23 25 51.3**	**+1.0**
	comp=Z,2.1nm,0.8s,mb4.1						
MJAR	**Matsushiro Arr**	**49.13**	**51**	P	**P**	**23 26 18.4**	**-0.3**
	comp=Z,0.5nm,0.4s,mb3.9,baz=226,slow=7.0,SNR=3.4						
WRA	**Warramunga Arr**	**51.95**	**126**	P	**P**	**23 26 39.6**	**-0.6**
	comp=Z,1.0nm,0.3s,mb4.2,baz=300,slow=10,SNR=13						
WRAB	**Tennant Creek**	**51.95**	**126**	*e*P	**P**	**23 26 40.0**	**-0.3**
	comp=Z,3.5nm,0.6s,mb4.5						
ASAR	**Alice Springs**	**53.66**	**130**	P	**P**	**23 26 52.9**	**0.0**
	comp=Z,4.3nm,0.8s,mb4.5,baz=307,slow=7.3,SNR=33						
ASAR				PcP	PcP	23 27 59.8	+0.6
	comp=Z,1.6nm,0.8s,baz=323,slow=4.4,SNR=6.4						
STKA	**Stephens Creek**	**63.88**	**134**	P	**P**	**23 28 04.5**	**+0.6**
	comp=Z,1.7nm,0.7s,mb4.2,baz=334,slow=12,SNR=4.1						
FINES	**FINESS Array B**	**69.00**	**332**	P	**P**	**23 28 34.7**	**-1.4**
	comp=Z,0.9nm,0.7s,mb3.8,baz=119,slow=11,SNR=3.8						
FINES	**FINESS Array B**	**69.00**	**332**	P	**P**	**23 28 34.7**	**-1.4**
ARCES	**ARCESS Array B**	**71.71**	**340**	P	**P**	**23 28 53.4**	**+0.9**
	comp=Z,2.0nm,0.9s,mb4.0,baz=85,slow=4.1,SNR=5.4						
TXAR	**Lajitas Array**	**137.46**	**20**	PKP	PKPdf	23 36 57.0	+1.6
	comp=Z,0.2nm,0.6s,baz=182,slow=2.4,SNR=2.9						

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*ISK **27** 23:20:44.9, 37°.00N×29°.18E, h9km, MD3.4*
*CSEM **27** 23:20:45.6±0.1, 36°.97N×29°.20E, h8km, MD3.4*
DDA 27 23:20:44.6, 36°.94N×29°.20E, h13km±3km, Md3.2, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.32**	**48**	PG	Pg	23 20 51.5	+0.5
GLHS				SG	Sg	23 20 56.5	+1.1
GLHS	**Glhisar (BURDU**	**0.32**	**48**	*i* Pg	Pg	23 20 51.5	+0.4
GLHS				*i* Sg	Sg	23 20 56.5	+1.1
GOLH	**Golhisar**	**0.41**	**44**	⇑*i*P	Pg	23 20 53.3	+0.5
GOLH				*i* S	Sg	23 21 00.5	+2.2
GOLH	**Golhisar**	**0.41**	**44**	*i* P	Pg	23 20 53.3	+0.6
GOLH				*i* S	Sg	23 21 00.4	+2.2
TURN	**Turunc**	**0.49**	**262**	*i* P	Pg	23 21 00.5	+6.3
TURN				*i* S	Sg	23 21 11.0	+10
ELL	**Elmali**	**0.60**	**109**	PG	Pg	23 20 57.4	+1.1
ELL				SG	Sg	23 21 07.0	+2.8
ELL	**Elmali**	**0.60**	**109**	*i* Pg	Pg	23 20 57.4	+1.1
ELL				*i* Sg	Sg	23 21 07.0	+2.8
DNZL	**Cakiroluk**	**0.76**	**350**	*i* P	Pg	23 20 58.7	-0.6
DNZL	**Cakiroluk**	**0.76**	**350**	*i* P	Pg	23 20 58.7	-0.5
YER	**Yerkesik**	**0.76**	**285**	*e*PG	Pg	23 20 59.6	+0.3
YER	**Yerkesik**	**0.76**	**285**	*e*Pg	Pg	23 20 59.7	+0.3
AKAS	**Kas**	**0.78**	**155**	*i* P	Pg	23 21 01.7	+2.0
AKAS				*i* S	Sg	23 21 20.4	+11
DENT	**Denizli**	**0.82**	**350**	*e*PG	Pg	23 20 59.5	-1.0
DENT	**Denizli**	**0.82**	**350**	*e*Pg	Pg	23 20 59.5	-1.0
KORT	**Korkueli**	**0.92**	**86**	*i* P	Pg	23 21 04.5	+2.2
KORT				*i* S	Sg	23 21 20.2	+5.8
ANTB	**Antalya**	**1.16**	**92**	*e*PN	Pn	23 21 08.3	+1.8
ANTB	**Antalya**	**1.16**	**92**	*e*Pn	Pn	23 21 08.3	+1.7
MLSB	**Milas**	**1.19**	**288**	*e*PN	Pn	23 21 07.6	+0.6
MLSB	**Milas**	**1.19**	**288**	*e*Pn	Pn	23 21 07.6	+0.6
BCK	**Bucak**	**1.22**	**65**	*e*PN	Pn	23 21 08.2	+0.8
BCK	**Bucak**	**1.22**	**65**	*e*Pn	Pn	23 21 08.2	+0.8
AYDN	**Tasoluk**	**1.28**	**305**	*i* P	Pn	23 21 09.1	+1.0
AYDN				*i* S	Sb	23 21 26.5	+1.7
AYDN	**Tasoluk**	**1.28**	**305**	*i* P	Pn	23 21 09.1	+1.0
AYDN				*i* S	Sb	23 21 26.5	+1.7
DAT	**Datca**	**1.32**	**261**	*e*PN	Pn	23 21 09.7	+0.9
DAT	**Datca**	**1.32**	**261**	*e*Pn	Pn	23 21 09.7	+0.9
ISP	**Isparta**	**1.37**	**50**	*e*PN	Pn	23 21 10.5	+1.1
ISP	**Isparta**	**1.37**	**50**	*e*Pn	Pn	23 21 10.5	+1.1
KHL	**Karahalli**	**1.40**	**10**	*e*PN	Pn	23 21 10.1	+0.3
KHL	**Karahalli**	**1.40**	**10**	*e*Pn	Pn	23 21 10.1	+0.3
BDRM	**Kayabasi**	**1.41**	**275**	*i* P	Pn	23 21 11.9	+1.9
BDRM				*i* S	Sn	23 21 31.1	+2.6
BDRM	**Kayabasi**	**1.41**	**275**	*i* P	Pn	23 21 11.9	+1.9
KHAL	**Karahalli**	**1.44**	**9**	*i* P	Pn	23 21 11.7	+1.3
KHAL				*i* S	Sn	23 21 33.0	+3.8
KHAL	**Karahalli**	**1.44**	**9**	*i* P	Pn	23 21 11.7	+1.3
KHAL				*i* S	Sn	23 21 33.0	+3.8
BODT	**Bodrum**	**1.52**	**275**	*e*PN	Pn	23 21 13.4	+1.9
BODT	**Bodrum**	**1.52**	**275**	*e*Pn	Pn	23 21 13.4	+1.9
KULA	**Kula-Manisa**	**1.63**	**345**	*e*PN	Pn	23 21 12.9	-0.1
KULA	**Kula-Manisa**	**1.63**	**345**	*e*Pn	Pn	23 21 12.9	0.0
GCAM	**G?zelcaml?**	**1.74**	**296**	*e*P	Pn	23 21 17.1	+2.6
GCAM	**G?zelcaml?**	**1.74**	**296**	*e*P	Pn	23 21 17.1	+2.6
SHUT	**Suhut-Afyon**	**1.93**	**33**	*e*PN	Pn	23 21 18.7	+1.6
SHUT	**Suhut-Afyon**	**1.93**	**33**	*e*PN	Pn	23 21 18.7	+1.6
IZM	**Izmir**	**2.12**	**314**	*e*PN	Pn	23 21 21.2	+1.6
IZM	**Izmir**	**2.12**	**314**	*e*Pn	Pn	23 21 21.3	+1.6
KDAG	**Bornova**	**2.12**	**314**	*i* P	Pn	23 21 21.9	+2.2
KDAG	**Bornova**	**2.12**	**314**	*i* P	Pn	23 21 21.9	+2.2
DEMI	**Demirci**	**2.13**	**350**	*i* P	Pn	23 21 21.0	+1.1
DEMI	**Demirci**	**2.13**	**350**	*i* P	Pn	23 21 21.0	+1.1
ALT	**Altintas**	**2.23**	**18**	*e*PN	Pn	23 21 22.6	+1.4
ALT	**Altintas**	**2.23**	**18**	*e*Pn	Pn	23 21 22.6	+1.4
BLCB	**Balcova**	**2.24**	**311**	*e*PN	Pn	23 21 22.8	+1.5
BLCB	**Balcova**	**2.24**	**311**	*e*Pn	Pn	23 21 22.8	+1.4
KONT	**Konya--Tatoy**	**2.70**	**67**	*e*PN	Pn	23 21 29.7	+1.9
KONT	**Konya--Tatoy**	**2.70**	**67**	*e*Pn	Pn	23 21 29.7	+1.9
LADK	**Ladik-KONYA**	**2.81**	**63**	*e*PN	Pn	23 21 30.7	+1.5
LADK	**Ladik-KONYA**	**2.81**	**63**	*e*Pn	Pn	23 21 30.7	+1.5
KIZT	**Kizilcal**	**2.87**	**47**	*e*PN	Pn	23 21 32.0	+2.0
KIZT	**Kizilcal**	**2.87**	**47**	*e*Pn	Pn	23 21 32.0	+2.0
ESKT	**Eskisehir**	**2.88**	**26**	*e*PN	Pn	23 21 31.1	+0.9
ESKT	**Eskisehir**	**2.88**	**26**	*e*Pn	Pn	23 21 31.1	+0.9
SULT	**Sultanhani-AKS**	**3.65**	**69**	*e*PN	Pn	23 21 43.0	+2.2
SULT	**Sultanhani-AKS**	**3.65**	**69**	*e*Pn	Pn	23 21 43.0	+2.3

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*IDC **27** 23:27:26.7±1.1, 10°.93N×91°.78E, h0km, mb3.7/9, mb1 3.8/10, mb1mx3.6/25, mbtmp3.7/10, ML4.3/1, Error ellipse: s-maj=41.6km s-min=16.6km az=58.0*
*NEIC **27** 23:27:28.2±0.7, 11°.01N×91°.86E, h10km, mb3.8/2, Error ellipse: s-maj=20.6km s-min=12.1km az=58.0*
*ISCJB **27** 23:27:29.9±0.9, 11°.1N±0°.1×92°.0E±0°.2, h33km, mb3.7/10, Error ellipse: s-maj=24.5km s-min=13.8km az=147.5*
ISC 27 23:27:32.2±0.8, 11°.0N±0°.1×91°.9E±0°.2, h35km, n12, σ0s74/12, mb3.7/10, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.01**	**42**	Pn	**Pn**	**23 29 52.6**	**-0.9**
	0.6nm,0.3s,baz=9.0,slow=16,SNR=4.1						
EKS2	**Erkin-Say**	**35.26**	**337**	*e*P	**P**	**23 34 23.8**	**+0.3**
	0.7nm,0.7s,mb3.7						
MKAR	**Makanchi Array**	**36.56**	**349**	P	**P**	**23 34 35.1**	**+0.5**
	0.7nm,0.6s,mb3.7,baz=152,slow=6.5,SNR=5.9						
SONM	**Songino Array**	**38.63**	**16**	P	**P**	**23 34 53.4**	**+1.3**
	0.4nm,0.5s,mb3.4,baz=205,slow=6.4,SNR=2.2						
KURK	**Kurchatov**	**41.04**	**347**	P	**P**	**23 35 12.2**	**+0.1**
	0.2nm,0.4s,mb3.1,baz=159,slow=8.0,SNR=2.7						
KURK	**Kurchatov**	**41.04**	**347**	*e*P	**P**	**23 35 09.7**	**-2.4**
	1.4nm,0.5s,mb3.9						
ZALV	**Zalesovo Beam**	**43.17**	**354**	P	**P**	**23 35 29.8**	**+0.5**
	0.4nm,0.3s,mb3.7,baz=152,slow=9.8,SNR=2.8						
FITZ	**Fitzroy Crossi**	**44.11**	**131**	P	**P**	**23 35 37.2**	**-0.2**
	3.9nm,1.0s,mb4.1,baz=276,slow=11,SNR=2.8						
WRA	**Warramunga Arr**	**51.87**	**126**	P	**P**	**23 36 37.6**	**+0.2**
	0.2nm,0.3s,mb3.5,baz=307,slow=8.3,SNR=2.9						
ASAR	**Alice Springs**	**53.61**	**130**	P	**P**	**23 36 50.4**	**+0.1**
	0.2nm,0.3s,mb3.5,baz=308,slow=6.6,SNR=3.8						
BRTR	**Keskin Array B**	**58.73**	**310**	P	**P**	**23 37 25.7**	**-1.0**
	0.5nm,0.8s,mb3.6,baz=125,slow=4.2,SNR=3.7						
FINES	**FINESS Array B**	**68.91**	**332**	P	**P**	**23 38 33.2**	**0.0**
	1.8nm,0.9s,mb4.0,baz=116,slow=6.5,SNR=3.5						

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*IDC **27** 23:34:32.5±0.6, 15°.32S×173°.61W, h0km, mb4.6/15, mb1 4.9/15, mb1mx4.8/18, mbtmp4.6/15, MS4.4/17, Ms1 4.4/17, ms1mx4.3/21, Error ellipse: s-maj=26.3km s-min=14.9km az=138.0*
*ISCJB **27** 23:34:36.3±0.2, 15°.19S±0°.06×173°.72W±0°.05, h33km, mb5.0/98, MS4.6/34, Error ellipse: s-maj=10.1km s-min=4.7km az=149.8*
*BJI **27** 23:34:36.9, 15°.20S×173°.70W, h32km, mB5.1/17, mb5.2/20, Ms5.1/17, Ms7 4.7/16*
*MOS **27** 23:34:37.3±1.0, 15°.05S×173°.77W, h33km, mb5.3/31, MS4.9/10, Error ellipse: s-maj=14.7km s-min=8.6km az=57.0*
*NEIC **27** 23:34:38.0±3.1, 15°.15S×173°.74W, h33km±21km, mb5.1/76, Error ellipse: s-maj=8.6km s-min=3.9km az=144.0*
*SZGRF **27** 23:34:40.2, 15°.33S×175°.72W, h42km, Tonga Islands*
*GCMT **27** 23:34:43.2±0.2, 15°.14S×173°.42W, h51km±3km, MW5.2, Moment Tensor Solution. s53,c76; s99,c150; Moment tensor: Scale 10^{16}Nm; M_{rr}-1.52±.22; $M_{\theta\theta}$1.48±.21; $M_{\phi\phi}$0.04±.24; $M_{r\theta}$-7.38±.29; $M_{\theta\phi}$0.45±.18; $M_{\phi r}$0.03±.11; Best double couple: $M_0$7.50000×10^{16} NP1:ϕ_s239.00000°, δ7.00000°, λ-120.00000°. NP2:ϕ_s90.00000°, δ84.00000°, λ-87.00000°. Principal axes: T 7.5300, Plg39.0000°, Azm177.0000°; N 0.0300, Plg3.0000°, Azm269.0000°; P -7.5600, Plg51.0000°, Azm4.0000°; Data Used: II IU IC G CN. Surface waves from 100 sta.*
ISC 27 23:34:39.1±3.1, 15°.20S±0°.07×173°.73W±0°.05, h43km±27km, h27km±2.3km; pP-P, n692, σ0s50/562, mb5.0/98, MS4.6/34, 226C-200D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.29**	**56**	Pn	**Pn**	**23 35 07.5**	**-6.9**
	1μm,0.3s,baz=97,slow=0.7,SNR=480						
AFI				Sn	**Sn**	**23 35 28.5**	**-13**
	4μm,0.3s,baz=37,slow=20,SNR=21						
AFI				LR	LR	23 35 52.8	
	comp=Z,6μm,21.0s,baz=266,slow=36						
AFI	**Afiamalu**	**2.29**	**56**	*e*Pn	**Pn**	**23 35 07.4**	**-7.0**
AFI				*e*Sn	**Sn**	**23 35 28.1**	**-13**
MSVF	**Nonsavu**	**8.28**	**251**	Pn	**Pn**	**23 36 47.3**	**+11**
	380nm,0.8s,SNR=7.9						
MSVF	**Nonsavu**	**8.28**	**251**	*e*Pn	**Pn**	**23 36 47.3**	**+11**
DZM	**Mont Dzumac**	**19.98**	**247**	*e*P	**Pn**	**23 39 11.0**	**+1.0**
	206nm,1.4s						
DZM				*e*S	**S**	**23 42 50.9**	**+0.4**
	290nm,28.1s						
DZM				*e*LQ		23 43 16.7	
	2μm,25.3s						
DZM				*e*LR	LR	23 44 16.4	
	3μm,26.8s						
DZM	**Mont Dzumac**	**19.98**	**247**	*e*P	**Pn**	**23 39 10.4**	**+0.4**
DZM	**Mont Dzumac**	**19.98**	**247**	*e*P	**Pn**	**23 39 10.3**	**+0.3**
	142nm,1.4s						
PPT	**Papeete**	**23.29**	**99**	*e*LR	LR	23 45 02.6	
	993nm,27.8s						
PPT	**Papeete**	**23.29**	**99**	LR	LR	23 47 53.6	
	comp=Z,178nm,18.3s,MS3.6,baz=137,slow=35						
TBI	**Tubuai**	**24.27**	**113**	*e*LQ		23 44 47.8	
	1μm,28.5s						
TBI				*e*LR	LR	23 45 35.5	
	2μm,28.0s,baz=283						
URZ	**Urewera**	**24.35**	**198**	P	**P**	**23 39 52.2**	**-0.8**
	17nm,0.6s,mb4.7,baz=13,slow=4.0,SNR=11						
URZ				LR	LR	23 48 03.3	
	comp=Z,3μm,21.5s,MS4.7,baz=39,slow=33						
URZ	**Urewera**	**24.35**	**198**	*e*P	**P**	**23 39 52.9**	**-0.1**
	50nm,1.0s,mb4.9						
HNR	**Honiara**	**26.33**	**280**	LR	LR	23 47 24.4	
	comp=Z,174nm,20.7s,MS3.6,baz=143,slow=29						
TAOE	**Nuku Hiva Isla**	**33.41**	**83**	*e*LR	LR	23 49 55.0	
	450nm,25.4s						
ARMA	**Armidale**	**35.17**	**238**	*e*P	**P**	**23 41 28.8**	**-0.3**
RKT	**Rikitea**	**37.36**	**108**	*e*LR	LR	23 51 38.5	
	656nm,28.8s						
CTA	**Charters Tower**	**38.38**	**257**	P	**P**	**23 41 55.0**	**-1.4**
	3.9nm,0.8s,mb4.2,baz=66,slow=10.0,SNR=4.4						
CNB	**Canberra Magne**	**38.62**	**232**	*e*P	**P**	**23 41 58.2**	**-0.1**
KIP	**Kipapa**	**39.53**	**23**	*e*P	**P**	**23 42 06.5**	**+0.5**
KIP				pmax	pmax		
	comp=Z,69nm,0.8s,mb5.4						
KIP	**Kipapa**	**39.53**	**23**	*e*P	**P**	**23 42 06.5**	**+0.5**
	comp=Z,69nm,0.8s,mb5.4						
COEN	**Coen**	**41.68**	**266**	*e*P	**P**	**23 42 24.1**	**+0.2**
	comp=Z,228nm,1.4s,mb5.6						
TOO	**Toolangi**	**42.34**	**230**	*e*P	**P**	**23 42 28.7**	**-0.4**
STKA	**Stephens Creek**	**43.86**	**240**	*e*P	**P**	**23 42 41.7**	**+0.3**
	comp=Z,9.9nm,1.2s,mb4.4						
STKA	**Stephens Creek**	**43.86**	**240**	P	**P**	**23 42 41.1**	**-0.3**
	comp=Z,8.5nm,0.8s,mb4.5,baz=86,slow=7.8,SNR=15						
STKA				LR	LR	00 00 01.5	
	comp=Z,299nm,19.3s,MS4.2,baz=56,slow=35						
STKA	**Stephens Creek**	**43.86**	**240**	*e*P	**P**	**23 42 41.6**	**+0.2**
WRAB	**Tennant Creek**	**49.57**	**257**	P	**P**	**23 43 26.9**	**+0.6**
	comp=Z,92nm,0.9s,mb5.8,SNR=17						
WRAB	**Tennant Creek**	**49.57**	**257**	*e*P	**P**	**23 43 25.5**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,42nm,1.5s,mb5.2						
WRAB	**Tennant Creek**	**49.57**	**257**	*e*P	**P**	**23 43 25.5**	**-0.8**
	comp=Z,42nm,1.5s,mb5.2						
WRA	**Warramunga Arr**	**49.58**	**257**	P	**P**	**23 43 25.9**	**-0.5**
	comp=Z,6.6nm,0.4s,mb5.0,baz=90,slow=7.1,SNR=134						
ASAR	**Alice Springs**	**49.87**	**252**	P	**P**	**23 43 27.9**	**-0.7**
	comp=Z,31nm,0.6s,mb5.5,baz=88,slow=7.7,SNR=288						
FORT	**Forrest**	**55.22**	**243**	*e*P	**P**	**23 44 06.8**	**-1.2**
	comp=Z,22nm,0.6s,mb5.4						
FORT	**Forrest**	**55.22**	**243**	*e*P	**P**	**23 44 07.1**	**-1.0**
	comp=Z,29nm,0.6s,mb5.5						
CBIJ	**Chichi jima**	**59.99**	**314**	LR	LR	00 05 22.7	
	comp=Z,324nm,20.3s,MS4.5,baz=284,slow=31						
MBWA	**Marble Bar**	**63.11**	**254**	*e*P	**P**	**23 45 02.2**	**-0.6**
	comp=Z,33nm,1.3s,mb5.3						
SBA	**Scott Base**	**63.42**	**185**	*e*P	**P**	**23 45 06.2**	**+2.3**
SBA				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.3						
SBA	**Scott Base**	**63.42**	**185**	*e*P	**P**	**23 45 06.2**	**+2.2**
	comp=Z,21nm,0.9s,mb5.3						
JHJ	**Hachijo jima 2**	**65.41**	**318**	LR	LR	00 07 47.1	
	comp=Z,248nm,21.3s,MS4.4,baz=130,slow=30						
MJAR	**Matsushiro Arr**	**68.58**	**320**	P	**P**	**23 45 38.7**	**+1.1**
	comp=Z,1.5nm,0.5s,mb4.2,baz=156,slow=5.5,SNR=9.5						
MJAR				LR	LR	00 10 06.3	
	comp=Z,377nm,22.0s,MS4.6,baz=130,slow=31						
CASY	**Casey**	**70.45**	**205**	*e*P	**P**	**23 45 48.2**	**-0.6**
CASY	**Casey**	**70.45**	**205**	*e*P	**P**	**23 45 48.0**	**-0.7**
	comp=Z,13nm,1.1s,mb4.8						
BSC	**Santa Cruz Isl**	**71.01**	**45**	⇑P	**P**	**23 45 52.5**	**-0.1**
	baz=71						
SCI	**San Clemente I**	**71.21**	**47**	⇓P	**P**	**23 45 53.6**	**-0.3**
	baz=71						
PKM	**Peak Mountain**	**71.39**	**44**	⇓P	**P**	**23 45 54.7**	**-0.2**
	baz=72,SNR=5.1						
SAO	**San Andreas Ge**	**71.40**	**42**	*e*P	**P**	**23 45 54.6**	**-0.3**
SAO				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.2						
SAO	**San Andreas Ge**	**71.40**	**42**	*e*P	**P**	**23 45 54.6**	**-0.3**
	comp=Z,28nm,1.0s,mb5.2						
BLG	**Laguna Peak**	**71.47**	**46**	⇓P	**P**	**23 45 55.3**	**-0.1**
	baz=72						
SMMC	**Simmler**	**71.51**	**44**	⇓P	**P**	**23 45 55.7**	**0.0**
	baz=72						
CIS	**Catalina Islan**	**71.54**	**46**	⇓P	**P**	**23 45 55.3**	**-0.5**
	baz=72						
HOPS	**Hopland**	**71.72**	**39**	*e*P	**P**	**23 45 57.7**	**+0.9**
	comp=Z,82nm,1.3s,mb5.5						
OSI	**Osito Adit**	**71.98**	**45**	⇓P	**P**	**23 45 58.6**	**+0.2**
	baz=72						
PET	**Petropavlovsk**	**72.00**	**343**	*e*P	**P**	**23 45 59.6**	**+1.5**
PET				*e*S	S	23 55 18.5	+2.2
PET				*e*PS		23 55 52.1	
PET				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.8						
PET				MLR	MLR		
	comp=Z,400nm,16.0s,MS4.8						
109C	**Camp Elliot, M**	**72.18**	**48**	⇑P	**P**	**23 45 59.3**	**-0.4**
	baz=72						
ARVC	**Arvin**	**72.19**	**45**	⇑P	**P**	**23 45 59.5**	**-0.3**
	baz=72						
MWC	**Mount Wilson**	**72.23**	**46**	*e*P	**P**	**23 45 59.8**	**-0.2**
MWC				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
MWC	**Mount Wilson**	**72.23**	**46**	*e*P	**P**	**23 45 59.8**	**-0.2**
	comp=Z,16nm,0.9s,mb4.9						
PEA0B	**Petropavlovsk-**	**72.34**	**342**	*e*P	**P**	**23 45 59.9**	**-0.3**
PETK	**Petropavlovsk-**	**72.34**	**342**	P	**P**	**23 46 00.6**	**+0.4**
	comp=Z,16nm,0.7s,mb5.0,baz=124,slow=8.6,SNR=24						
PETK				LR	LR	00 11 02.3	
	comp=Z,112nm,21.6s,MS4.1,baz=195,slow=30						
MURC	**Murrieta**	**72.49**	**47**	⇓P	**P**	**23 46 00.9**	**-0.6**
	baz=73						
BFSC	**Mount Baldy Ra**	**72.51**	**

TUQ	Turquoise Moun	74.36	46	⇑P	P	23 46 12.3	-0.2
	baz=74						
SHOC	Shoshone	74.36	45	⇓P	P	23 46 12.1	-0.4
	baz=74						
NVAR	Mina Array Bea	74.39	42	P	P	23 46 12.9	+0.3
	comp=Z,13nm,0.8s,mb4.9,baz=226,slow=10,SNR=83						
PAHR	Pah Rah Range	74.44	41	eP	P	23 46 13.4	+0.5
	comp=Z,32nm,1.1s,mb5.2						
Y12C	Blythe	74.47	48	⇑P	P	23 46 12.9	-0.3
	baz=75						
113A	Mohawk Valley,	74.53	49	⇓P	P	23 46 13.2	-0.4
	baz=75,SNR=6.0						
HOG	Hogback Mounta	74.54	37	P	P	23 46 14.0	+0.6
U10A	Ash Meadows, A	74.60	45	⇓P	P	23 46 13.9	0.0
	baz=75,SNR=8.3						
LDFC	Landfair	74.74	47	eP	P	23 46 14.8	+0.1
	comp=Z,46nm,1.1s,mb5.3						
KDAK	Kodiak Island	74.79	12	iP	P	23 46 15.3	+0.8
KDAK	Kodiak Island	74.79	12	eP	P	23 46 14.5	+0.1
Z13A	Yuma Proving G	74.82	49	⇓P	P	23 46 15.0	-0.3
	baz=75,SNR=15						
214A	Organ Pipe Nat	74.83	50	⇑P	P	23 46 15.2	-0.2
	baz=75,SNR=8.3						
QSPA	South Pole Qui	74.84	180	eP	P	23 46 15.5	+0.9
	comp=Z,47nm,1.0s,mb5.4						
V11A	Goodsprings	74.91	46	⇑P	P	23 46 15.5	-0.2
	baz=75,SNR=7.3						
NEE2	Needles Airpor	74.92	47	⇓P	P	23 46 15.4	-0.4
	baz=75						
Y13A	Salome	75.00	48	⇓P	P	23 46 16.1	-0.1
	baz=75						
W12A	Cal Nev Ari	75.02	46	⇑P	P	23 46 16.3	-0.1
	baz=75						
PDMCI	Parker Dam,Lak	75.02	48	⇑P	P	23 46 16.1	-0.3
	baz=75						
MOD	Modoc	75.16	38	eP	P	23 46 17.6	+0.6
	comp=Z,40nm,1.1s,mb5.3						
114A	Black Gap (USA	75.17	50	⇑P	P	23 46 16.9	-0.4
	baz=75						
S10A	Tonopah Range,	75.23	43	⇑P	P	23 46 17.4	-0.1
	baz=75,SNR=18						
U11A	Corn Creek	75.25	45	⇓P	P	23 46 17.5	-0.1
	baz=75						
V12A	Nelson	75.25	46	⇓P	P	23 46 17.5	-0.2
	baz=75,SNR=6.6						
K05A	Summer Lake	75.31	37	⇓P	P	23 46 18.3	+0.4
	baz=76,SNR=18						
Z14A	Wintersburg	75.42	49	⇓P	P	23 46 18.6	0.0
	baz=76						
W13A	Hualapai Mount	75.61	47	⇓P	P	23 46 19.8	+0.1
	baz=76,SNR=9.7						
115A	Sonoran Desert	75.62	50	⇑P	P	23 46 19.6	-0.2
	baz=76						
R10A	Warm Springs	75.63	43	⇑P	P	23 46 20.2	+0.4
	baz=76,SNR=16						
S11A	Rachel	75.65	44	⇑P	P	23 46 19.8	-0.1
	baz=76						
Y14A	Wickenburg	75.66	48	⇓P	P	23 46 19.9	-0.1
	baz=76,SNR=12						
H04A	Detroit Lake	75.78	35	⇓P	P	23 46 20.1	-0.4
	baz=76,SNR=5.2						
T11A	Corn Creek, Al	75.79	45	⇓P	P	23 46 20.9	+0.2
	baz=76,SNR=27						
KSRS	Korea Array	75.79	316	P	P	23 46 23.5	+2.8
	comp=Z,3.2nm,1.0s,mb4.2,baz=121,slow=6.9,SNR=8.8						
KSRS				LR	LR	00 13 29.3	
	comp=Z,194nm,21.5s,MS4.4,baz=119,slow=31						
U12A	Valley of Fire	75.83	46	⇓P	P	23 46 21.0	0.0
	baz=76						
Q10A	Clear Creek Ra	75.85	43	⇓P	P	23 46 20.9	-0.1
	baz=76,SNR=7.7						
216A	Three Points,	75.86	51	⇓P	P	23 46 21.5	+0.3
	baz=76						
V13A	Grand Canyon W	75.92	46	⇓P	P	23 46 21.2	-0.3
	baz=76,SNR=12						
116A	Eloy	75.94	50	⇓P	P	23 46 21.5	-0.2
	baz=76						
Z15A	Gila River Ind	75.96	49	⇓P	P	23 46 21.6	-0.1
	baz=76						
X14A	Yava	76.00	48	⇑P	P	23 46 22.2	+0.2
	baz=76,SNR=14						
R11A	Troy Canyon, C	76.14	43	⇑P	P	23 46 22.3	-0.3
	baz=76,SNR=20						
Y15A	Casa Rosa Ranc	76.15	49	⇓P	P	23 46 23.0	+0.1
	baz=76,SNR=17						
BMN	Battle Mountai	76.21	41	eP	P	23 46 23.2	+0.2
BMN				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.0						
BMN	Battle Mountai	76.21	41	eP	P	23 46 23.2	+0.2
	comp=Z,18nm,0.8s,mb5.0						
U13A	Pakoon Wash	76.22	46	⇑P	P	23 46 23.5	+0.3
	baz=76,SNR=30						
W14A	Seligman	76.23	47	⇓P	P	23 46 23.7	+0.4
	baz=76,SNR=21						
S12A	Delamar Landin	76.24	44	⇑P	P	23 46 23.6	+0.3
	baz=76						
P10A	Eureka	76.25	42	⇓P	P	23 46 23.2	0.0
	baz=76,SNR=5.6						
Q11A	Duckwater	76.36	43	⇓P	P	23 46 24.0	+0.1
	baz=76,SNR=22						
V14A	Boquillas Ranc	76.43	47	⇑P	P	23 46 24.8	+0.4
	baz=77,SNR=19						
F04A	Amboy	76.43	34	⇓P	P	23 46 23.7	-0.5
	baz=77						
WVOR	Wild Horse Val	76.48	39	eP	P	23 46 24.4	-0.1
WVOR				pmax	pmax		
	comp=Z,38nm,1.3s,mb5.2						
WVOR	Wild Horse Val	76.48	39	eP	P	23 46 24.4	-0.1
	comp=Z,38nm,1.3s,mb5.2						
X15A	Humboldt	76.48	48	⇓P	P	23 46 24.9	+0.2
	baz=77						
TUC	Tucson	76.51	51	eP	P	23 46 25.3	+0.4
TUC				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
TUC	Tucson	76.51	51	eP	P	23 46 25.3	+0.4
	comp=Z,8.1nm,0.7s,mb4.8						
Z16A	Peralta Trail,	76.52	50	⇓P	P	23 46 24.9	-0.1
	baz=77,SNR=5.2						
T13A	Saint George	76.57	45	⇓P	P	23 46 25.4	+0.3
	baz=77,SNR=15						
O10A	Cortez Mining,	76.59	41	⇓P	P	23 46 25.1	-0.1
	baz=77						
NLWA	Neilton Lookou	76.60	32	⇓P	P	23 46 25.3	+0.2
	baz=77						
117A	Oracle	76.67	51	⇑P	P	23 46 26.2	+0.3
	baz=77,SNR=15						
P11A	Circle Ranch,	76.67	42	⇓P	P	23 46 25.5	-0.1
	baz=77						
318A	Bisbee	76.71	52	⇓P	P	23 46 26.2	+0.1
	baz=77,SNR=13						
Y16A	Circle Bar Ran	76.74	49	⇑P	P	23 46 26.4	+0.2
	baz=77,SNR=6.2						
U14A	Mt Trumbull	76.77	46	⇓P	P	23 46 26.6	+0.3
	baz=77,SNR=18						
R12A	Pony Springs,	76.78	44	⇓P	P	23 46 26.4	+0.1
	baz=77,SNR=9.7						
W15A	Williams	76.80	48	⇑P	P	23 46 27.0	+0.5
	baz=77						
TDL	Tradedollar La	76.81	34	P	P	23 46 26.8	+0.6
N10A	Dunphy	76.82	41	⇓P	P	23 46 26.7	+0.2
	baz=77						
S13A	Holt Ranch, En	76.89	45	⇓P	P	23 46 27.3	+0.4
	baz=77,SNR=10						
218A	Dragoon	76.91	51	⇓P	P	23 46 27.5	+0.3
	baz=77						
G06A	Carlson Farm,	76.98	35	⇑P	P	23 46 27.1	-0.2
	baz=77						
Q12A	Willow Creek R	77.00	43	⇑P	P	23 46 27.5	0.0
	baz=77,SNR=8.4						
X16A	Lo Mia Camp, P	77.02	49	⇑P	P	23 46 28.1	+0.3
	baz=77,SNR=16						
O11A	Cowboy Ranch,	77.05	42	⇓P	P	23 46 27.9	+0.1
	baz=77,SNR=10.0						
J08A	Circle Bar Ran	77.11	38	⇑P	P	23 46 28.0	-0.1
	baz=77						
Y17A	Roosevelt	77.12	50	⇑P	P	23 46 28.4	+0.1
	baz=77,SNR=8.0						
R13A	O'Grain Ranch,	77.13	44	⇓P	P	23 46 28.7	+0.4
	baz=77,SNR=7.8						
T14A	Hurricane	77.16	46	⇑P	P	23 46 28.7	+0.2
	baz=77,SNR=7.4						
V15A	Kaibab Nationa	77.18	47	⇑P	P	23 46 29.1	+0.5
	baz=77,SNR=22						
P12A	McGill	77.18	43	⇑P	P	23 46 28.6	+0.1
	baz=77						
Z17A	San Carlos Hig	77.20	50	⇓P	P	23 46 29.1	+0.3
	baz=77						
CCUT	Cedar City	77.22	45	eP	P	23 46 29.7	+0.9
	comp=Z,21nm,1.2s,mb4.9						
319A	Douglas	77.22	52	⇓P	P	23 46 29.2	+0.2
	baz=77,SNR=5.3						
M10A	I.L. Ranch, Tu	77.25	40	⇑P	P	23 46 29.2	+0.4
	baz=77,SNR=7.9						
RSO	Redoubt South	77.27	10	eP	P	23 46 27.7	-0.8
118A	Homack Ranch,	77.28	51	⇓P	P	23 46 29.5	+0.3
	baz=77,SNR=15						
W16A	Flagstaff	77.28	48	⇑P	P	23 46 29.5	+0.3
	baz=77,SNR=5.2						
ARUT	Antelope Range	77.28	45	eP	P	23 46 29.5	+0.3
ARUT				pmax	pmax		
	comp=Z,22nm,1.3s,mb4.9						
ARUT	Antelope Range	77.28	45	eP	P	23 46 29.4	+0.3
	comp=Z,22nm,1.3s,mb4.9						
N11A	Elko Archery C	77.37	41	⇑P	P	23 46 29.6	+0.1
	baz=78						
U15A	North Rim	77.40	47	⇓P	P	23 46 30.3	+0.5
	baz=78,SNR=26						
SVW2	Sparrevohn	77.41	9	eP	P	23 46 28.7	-0.6
Z18A	Geronimo	77.43	50	⇑P	P	23 46 30.3	+0.2
	baz=78						
X17A	Forest Lakes	77.45	49	⇓P	P	23 46 30.9	+0.7
	baz=78						
D05A	Enumclaw	77.46	33	⇓P	P	23 46 30.0	+0.1
	baz=78						
S14A	Cedar City	77.46	45	⇑P	P	23 46 30.5	+0.3
	baz=78						
Q13A	Wheeler Ranch,	77.50	44	⇑P	P	23 46 30.3	0.0
	baz=78,SNR=16						
219A	White Tail Can	77.52	52	⇓P	P	23 46 30.8	+0.2
	baz=78,SNR=11						
L10A	Juniper Basin	77.60	40	⇓P	P	23 46 30.8	0.0
	baz=78,SNR=19						
WUAZ	Wupatki	77.60	48	⇓P	P	23 46 31.5	+0.5
	baz=78,SNR=6.5						
WUAZ	Wupatki	77.60	48	eP	P	23 46 31.8	+0.8
	comp=Z,38nm,1.5s,mb5.1						
T15A	Red Dirt Ranch	77.62	46	⇑P	P	23 46 31.5	+0.4
	baz=78,SNR=27						
ELK	Elko	77.65	42	eP	P	23 46 31.1	0.0
ELK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ELK	Elko	77.65	42	eP	P	23 46 31.1	0.0
	comp=Z,6.2nm,0.8s,mb4.6						
M11A	Holland Ranch,	77.67	41	⇑P	P	23 46 31.5	+0.3
	baz=78,SNR=11						
H08A	Prairie City	77.67	37	⇓P	P	23 46 30.9	-0.3
	baz=78,SNR=6.3						
O12A	Currie	77.71	42	⇑P	P	23 46 31.5	0.0
	baz=78,SNR=7.3						
K10A	MacKenzie Ranc	77.74	39	⇑P	P	23 46 31.6	0.0
	baz=78,SNR=23						
Y18A	Canyon Day Jun	77.75	50	⇑P	P	23 46 32.3	+0.5
	baz=78,SNR=9.2						
P13A	Bates Ranch, G	77.76	43	⇓P	P	23 46 31.9	+0.1
	baz=78,SNR=16						
F07A	Phinny Hill Vi	77.78	35	⇑P	P	23 46 31.3	-0.4
	baz=78						
320A	Kipp Ranch, An	77.78	53	⇑P	P	23 46 32.6	+0.5
	baz=78,SNR=6.8						
R14A	James Farms, M	77.83	45	⇑P	P	23 46 32.4	+0.2
	baz=78						
N12A	Clover Valley,	77.83	42	⇓P	P	23 46 32.1	0.0
	baz=78,SNR=12						
N12A	Clover Valley,	77.83	42	eP	P	23 46 32.4	+0.3
	comp=Z,16nm,1.0s,mb4.9						
119A	Ashpeak Ranch,	77.83	51	⇑P	P	23 46 32.7	+0.3
	baz=78,SNR=5.6						
W17A	Winslow	77.87	48	⇓P	P	23 46 32.7	+0.3
	baz=78						
I09A	Lost Marbles R	77.90	38	⇓P	P	23 46 31.8	-0.7
	baz=78						
G08A	Pilot Rock	77.96	36	⇑P	P	23 46 32.4	-0.3
	baz=78,SNR=9.4						
S15A	Panguitch	77.97	45	⇓P	P	23 46 33.8	+0.9
	baz=78						
HABR	Khabarovsk	78.00	328	eP	P	23 46 31.8	-1.1
HABR				e		23 46 40.7	
HABR				e*SP	sP	23 46 46.0	-4.5
HABR				eS	S	23 56 24.4	+1.1
HABR				e		23 56 37.1	
HABR				e		23 56 48.4	
HABR				eSS	SS	00 01 26.6	+0.9
HABR				pmax	pmax		
	comp=Z,46nm,2.6s,mb5.0						
HABR				pmax	pmax		
	comp=N,15nm,1.3s						
HABR				pmax	pmax		
	comp=E,19nm,1.4s						
HABR				MLR	MLR		
	comp=Z,151nm,20.0s,MS4.3						
Q14A	Sevier Lake (B	78.01	44	⇑P	P	23 46 33.4	+0.2
	baz=78,SNR=28						
220A	Playas Peak, P	78.03	52	⇑P	P	23 46 34.0	+0.5
	baz=78,SNR=22						
V17A	Tonalea, Kykot	78.07	48	⇑P	P	23 46 33.9	+0.4
	baz=78,SNR=25						
L11A	Cat Creek Ranc	78.09	40	⇓P	P	23 46 33.5	0.0
	baz=78,SNR=23						
Z19A	T-Link Ranch,	78.10	51	⇓P	P	23 46 33.8	0.0
	baz=78						
JCW	Jim Creek	78.12	33	eP	P	23 46 33.9	+0.3
O13A	Hicks Ranch, I	78.13	43	⇑P	P	23 46 33.8	0.0
	baz=78						
X18A	Snowflake	78.16	49	⇑P	P	23 46 34.2	0.0
	baz=78						
J10A	Berg Farm, Mel	78.17	39	⇓P	P	23 46 33.6	-0.4
	baz=78						
M12A	Wells	78.21	41	⇑P	P	23 46 34.2	0.0
	baz=78,SNR=17						
T16A	Glen Canyon Da	78.22	46	⇓P	P	23 46 34.8	+0.4
	baz=78						
E07A	Sunnyside	78.22	35	⇓P	P	23 46 33.9	-0.2
	baz=78						
120A	U Bar Ranch, L	78.24	51	⇑P	P	23 46 35.0	+0.4
	baz=78						
K11A	Parker Ranch,	78.25	39	⇑P	P	23 46 34.4	0.0
	baz=78,SNR=15						
R15A	Junction	78.29	45	⇑P	P	23 46 35.4	+0.7
	baz=78						
H09A	Durkee	78.34	37	⇓P	P	23 46 34.7	-0.2
	baz=78						
N13A	Wendover, West	78.37	42	⇑P	P	23 46 35.1	-0.1
	baz=78,SNR=6.1						
N13A	Wendover, West	78.37	42	eP	P	23 46 35.3	+0.2
	comp=Z,32nm,1.1s,mb5.2						
Y19A	Nutrioso	78.41	50	⇓P	P	23 46 36.3	+0.8
	baz=78,SNR=11						
P14A	Drum Mountains	78.45	43	⇓P	P	23 46 35.9	+0.2
	baz=79,SNR=23						
MSU	Marysvale	78.51	45	eP	P	23 46 36.8	+0.8
S16A	Weppner Ranch,	78.52	46	⇑P	P	23 46 36.4	+0.3
	baz=79,SNR=12						
I10A	Payette	78.52	38	⇓P	P	23 46 36.0	+0.1
	baz=79						
Z20A	Nine Sixteen R	78.52	51	⇓P	P	23 46 36.8	+0.7
	baz=79,SNR=13						
L12A	House Creek Ra	78.54	40	⇓P	P	23 46 36.1	+0.1
	baz=79						
B06A	Marblemount	78.56	32	⇓P	P	23 46 35.4	-0.6
	baz=79						
W18A	Petrified Fore	78.59	49	⇓P	P	23 46 36.7	+0.2
	baz=79						
X19A	St. Johns	78.60	50	⇓P	P	23 46 37.2	+0.6
	baz=79,SNR=8.8						
Q15A	Fillmore	78.62	44	⇑P	P	23 46 36.7	+0.1
	baz=79						
E08A	Dider Farm, El	78.62	35	⇑P	P	23 46 36.2	-0.1
	baz=79						
U17A	Shonto	78.62	47	⇑P	P	23 46 37.4	+0.8
	baz=79,SNR=7.8						
G09A	Cove	78.63	37	⇓P	P	23 46 36.1	-0.4
	baz=79,SNR=5.8						
221A	Mesquite Ranch	78.65	52	⇓P	P	23 46 37.4	+0.5
	baz=79						
BMO	Blue Mountains	78.66	37	eP	P	23 46 35.6	-1.0
BMO				pmax	pmax		
	comp=Z,14nm,1.4s,mb4.7						
BMO	Blue Mountains	78.66	37	eP	P	23 46 35.6	-1.0
	comp=Z,14nm,1.4s,mb4.7						
M13A	Montello	78.66	41	⇓P	P	23 46 36.7	0.0
	baz=79						
M13A	Montello	78.66	41	eP	P	23 46 36.5	-0.2
	comp=Z,39nm,1.6s,mb5.1						
M13A				epP	pP	23 46 44.7	-4.8
MDJ	Mudanjiang	78.67	323	P	P	23 46 38.3	+1.6
MDJ				pP	pP	23 46 44.8	-4.7
MDJ				sP	sP	23 46 47.3	-7.0
MDJ				PP	PP	23 49 35.5	+0.1
MDJ				S	S	23 56 33.5	+2.8
MDJ				ScS	ScS	23 56 57.5	+2.9
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
MDJ				pmax	pmax		
	comp=Z,29nm,3.8s						
MDJ				LR	LR		
	comp=N,220nm,32.3s,MS4.5						
MDJ				LR	LR		
	comp=E,250nm,31.3s,MS4.5						
MDJ				LR	LR		
	comp=Z,520nm,32.3s,MS4.7						
T17A	Navajo Res., N	78.72	47	⇑P	P	23 46 37.6	+0.5
	baz=79,SNR=15						
V18A	Ganado	78.73	48	⇓P	P	23 46 37.7	+0.5
	baz=79,SNR=8.8						
MFID	Camas Ranch	78.73	39	⇓P	P	23 46 36.7	-0.4
	baz=79,SNR=11						
H10A	Noah's Angus R	78.84	38	⇑P	P	23 46 37.0	-0.6
	baz=79,SNR=15						
W19A	Sanders	78.84	49	⇑P	P	23 46 38.1	+0.2
	baz=79						
R16A	Teasdale	78.87	45	⇓P	P	23 46 38.7	+0.7
	baz=79,SNR=5.1						
121A	Cookes Peak, D	78.87	52	⇓P	P	23 46 38.5	+0.4
	baz=79,SNR=7.5						
K12A	Draper Farm, C	78.88	40	⇓P	P	23 46 37.6	-0.2
	baz=79						
I11A	Placerville	78.93	39	⇓P	P	23 46 37.7	-0.4
	baz=79,SNR=6.7						
DUG	Dugway	78.93	43	⇓P	P	23 46 38.1	-0.2
	baz=79,SNR=9.9						
DUG	Dugway	78.93	43	eP	P	23 46 38.4	+0.2
DUG				pmax	pmax		
	comp=Z,23nm,1.4s,mb4.9						
DUG	Dugway	78.93	43	eP	P	23 46 38.4	+0.2
	comp=Z,22nm,1.4s,mb4.9						
P15A	Leamington	78.97	44	⇑P	P	23 46 38.5	+0.1
	baz=79						
G10A	Bishop Farm, J	79.02	37	⇓P	P	23 46 38.0	-0.5
	baz=79,SNR=5.5						
N14A	Grayback Hills	79.03	42	⇑P	P	23 46 38.5	-0.3
	baz=79,SNR=8.2						
S17A	Black Ridge (B	79.03	46	⇓P	P	23 46 38.7	-0.1
	baz=79						
D08A	Wollman Farm,	79.03	35	⇓P	P	23 46 38.0	-0.6
	baz=79						
Y20A	Horse Springs,	79.04	50	⇑P	P	23 46 39.8	+0.8
	baz=79,SNR=20						
J12A	Stokes Ranch,	79.09	39	⇓P	P	23 46 38.9	-0.1
	baz=79						
TTA	Tatalina	79.10	8	eP	P	23 46 39.0	+0.4
TTA				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
TTA	Tatalina	79.10	8	eP	P	23 46 39.0	+0.4
	comp=Z,15nm,0.9s,mb4.9						
U18A	Rough Rock, Ch	79.10	48	⇑P	P	23 46 39.5	+0.2
	baz=79,SNR=8.0						
E09A	Wood Farm, Sta	79.14	35	⇓P	P	23 46 38.3	-0.9
	baz=79						
L13A	Double Diamond	79.19	41	⇑P	P	23 46 39.5	0.0
	baz=79,SNR=7.1						
O15A	The Old Anders	79.20	43	⇑P	P	23 46 39.6	-0.1
	baz=79						
222A	Williams Famil	79.21	52	⇑P	P	23 46 39.8	-0.1
	baz=79						
X20A	Quemado	79.23	50	⇑P	P	23 46 40.8	+0.7
	baz=79,SNR=9.3						
M14A	Sheep Mountain	79.26	42	⇓P	P	23 46 40.0	0.0
	baz=79,SNR=34						
DIV	Divide	79.28	13	eP	P	23 46 39.5	-0.2
	comp=Z,20nm,0.8s,mb5.1						
Z21A	St. Cloud Mine	79.30	51	⇓P	P	23 46 41.1	+0.7
	baz=79,SNR=18						
H11A	Donnelly	79.34	38	⇑P	P	23 46 39.8	-0.5
	baz=80,SNR=8.0						
OD2	Odessa Site #2	79.34	35	eP	P	23 46 39.6	-0.7
F10A	Beach Ranch, E	79.35	36	⇑P	P	23 46 39.6	-0.7
	baz=80						
I12A	Atlanta	79.36	39	⇓P	P	23 46 40.6	+0.1
	baz=80,SNR=21						
V19A	Window Rock	79.37	48	⇓P	P	23 46 41.0	+0.2
	baz=80						
Q16A	Castle Valley	79.39	45	⇓P	P	23 46 41.3	+0.6
	baz=80,SNR=6.7						
K13A	Stover Farm, H	79.39	40	⇑P	P	23 46 40.7	0.0
	baz=80,SNR=8.1						
BMRM	Bremner River	79.40	14	eP	P	23 46 39.7	-0.6
	comp=Z,15nm,0.9s,mb4.9						
P16A	Fountain Green	79.41	44	⇑P	P	23 46 41.2	+0.4
	baz=80						
T18A	Mexican Hat	79.44	47	⇓P	P	23 46 41.7	+0.6
	baz=80,SNR=51						
R17A	Hanksville Air	79.47	45	⇑P	P	23 46 41.2	0.0
	baz=80,SNR=20						
N15A	Stansbury Isla	79.48	43	⇑P	P	23 46 41.0	-0.2
	baz=80						
W20A	Ramah	79.50	49	⇑P	P	23 46 42.2	+0.8
	baz=80,SNR=18						
U19A	Dine' College,	79.52	48	⇑P	P	23 46 41.9	+0.3
	baz=80,SNR=14						
122A	Conniff Cattle	79.54	52	⇓P	P	23 46 42.1	+0.4
	baz=80						
TMUT	Trail Mountain	79.55	44	eP	P	23 46 42.2	+0.6
	comp=Z,20nm,1.0s,mb5.0						
G11A	Walters Elk Ra	79.58	37	⇓P	P	23 46 40.9	-0.8
	baz=80,SNR=7.9						
B08A	Colville Reser	79.59	33	⇓P	P	23 46 40.6	-1.1
	baz=80						
L14A	Malta	79.60	41	⇑P	P	23 46 41.6	-0.2
	baz=80,SNR=6.8						
Y21A	Point of Rocks	79.61	51	⇑P	P	23 46 42.9	+0.9
	baz=80,SNR=12						
S18A	Hurst Farm, Bl	79.61	46	⇓P	P	23 46 42.0	0.0
	baz=80,SNR=6.1						
HLID	Hailey	79.68	39	⇓P	P	23 46 42.4	+0.2
	baz=80,SNR=23						
HLID	Hailey	79.68	39	eP	P	23 46 42.6	+0.3
	comp=Z,18nm,1.1s,mb4.9						
X21A	Alamocita Cree	79.72	50	⇓P	P	23 46 43.0	+0.4
	baz=80,SNR=10						
J13A	Cove Ranch, Pi	79.74	40	⇑P	P	23 46 42.8	+0.3
	baz=80,SNR=20						
SPUT	South Promonto	79.74	42	eP	P	23 46 42.9	+0.3
	comp=Z,33nm,1.5s,mb5.0						
HVU	Hansel Valley	79.77	42	eP	P	23 46 42.9	+0.1
HVU				pmax	pmax		
	comp=Z,76nm,1.9s,mb5.3						
HVU	Hansel Valley	79.77	42	eP	P	23 46 42.9	+0.2
	comp=Z,76nm,1.9s,mb5.3						
NJ2	Nanjing	79.79	307	eP	P	23 46 45.0	+1.9
NJ2				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
O16A	Springville	79.81	44	⇓P	P	23

I13A **Wildhorse Cree** 80.05 39 ⇑P P 23 46 44.3 +0.1
baz=80,SNR=6.7
U20A **Newcomb** 80.05 48 ⇑P P 23 46 44.5 +0.1
baz=80
DAU **Daniels Canyon** 80.07 43 eP P 23 46 45.1 +0.7
J14A **Carey** 80.10 40 ⇓P P 23 46 45.0 +0.5
baz=80,SNR=20
Y22A **Socorro** 80.10 51 ⇑P P 23 46 45.0 +0.3
baz=80,SNR=5.6
W21A **San Fidel** 80.11 50 ⇑P P 23 46 45.4 +0.6
baz=80
L15A **Malad City** 80.13 42 ⇑P P 23 46 44.4 -0.3
baz=80,SNR=11
LAZ **Ladron** 80.18 50 eP P 23 46 45.1 0.0
comp=Z,18nm,1.8s,mb4.7
324A **Moseley Ranch,** 80.18 54 ⇑P P 23 46 45.1 -0.1
baz=80,SNR=8.5
N16A **Rees Ranch, Co** 80.19 43 ⇑P P 23 46 45.1 0.0
baz=80
Q18A **Rafter H Ranch** 80.19 45 ⇓P P 23 46 44.8 -0.3
baz=80,SNR=10
Y22D **IRIS PASSCAL I** 80.20 51 ⇓P P 23 46 45.7 +0.5
baz=80
S19A **Harvey Farm, M** 80.24 47 ⇓P P 23 46 45.4 0.0
baz=80,SNR=7.1
425A **Indio Mountain** 80.30 54 ⇑P P 23 46 46.1 +0.2
baz=80,SNR=12
O17A **Robinson Place** 80.31 44 ⇓P P 23 46 46.1 +0.4
baz=80,SNR=13
H13A **Challis** 80.31 39 ⇓P P 23 46 45.4 -0.2
baz=80
X22A **Bernardo** 80.32 50 ⇓P P 23 46 46.5 +0.6
baz=80
MNTX **Cornudas Mount** 80.36 53 eP P 23 46 46.0 -0.2
comp=Z,15nm,1.4s,mb4.7
F12A **Elk City** 80.36 37 ⇑P P 23 46 45.3 -0.5
baz=80,SNR=18
P18A **Preston Nutter** 80.37 45 ⇑P P 23 46 46.2 +0.2
baz=80
Z23A **Rita Site, Whi** 80.37 52 ⇓P P 23 46 46.3 +0.1
baz=80
K15A **Arbon** 80.39 41 ⇑P P 23 46 45.9 -0.2
baz=80,SNR=8.5
R19A **Curley Farm, L** 80.41 46 ⇓P P 23 46 46.2 -0.1
baz=80,SNR=7.2
224A **Cornudas Mount** 80.41 53 ⇓P P 23 46 46.5 0.0
baz=80,SNR=9.3
V21A **Milan** 80.43 49 ⇑P P 23 46 46.9 +0.4
baz=81
MVCO **Mesa Verde** 80.44 47 ⇓P P 23 46 46.6 +0.1
baz=81
BNM **Barren Site** 80.45 51 eP P 23 46 46.9 +0.3
comp=Z,16nm,1.5s,mb4.7
HWUT **Hardware Ranch** 80.46 42 eP P 23 46 46.1 -0.4
comp=Z,5.1nm,0.8s,mb4.5
I14A **Mackay** 80.46 40 ⇑P P 23 46 46.6 +0.2
baz=81,SNR=8.4
626A **Big Bend Ranch** 80.48 56 ⇓P P 23 46 47.0 +0.1
baz=81,SNR=7.7
TRF **Thorofare Moun** 80.49 10 eP P 23 46 45.2 -0.9
comp=Z,12nm,0.7s,mb4.9
LPM **Los Pinos Moun** 80.52 51 eP P 23 46 47.7 +0.8
E12A **Beaver Dam Sad** 80.55 37 ⇑P P 23 46 46.0 -0.9
baz=81
325A **Bean Ranch, Si** 80.55 54 ⇑P P 23 46 47.0 -0.2
baz=81,SNR=17
G13A **Cobalt** 80.61 38 ⇓P P 23 46 47.0 -0.2
baz=81,SNR=7.7
SKAG **Skagway** 80.66 19 eP P 23 46 47.8 +0.7
comp=Z,130nm,2.3s,mb5.5
W22A **Albuquerque** 80.67 50 ⇓P P 23 46 47.8 0.0
baz=81
U21A **Nageezi** 80.69 48 ⇑P P 23 46 48.3 +0.5
baz=81,SNR=21
PV04 **Paradox Valley** 80.70 46 eP P 23 46 47.8 -0.1
526A **Mary Lane Ranc** 80.72 55 ⇑P P 23 46 48.3 +0.1
baz=81,SNR=12
Q19A **Hogan Spring (** 80.72 45 ⇓P P 23 46 48.0 0.0
baz=81,SNR=7.4
124A **Stringfield Ra** 80.72 53 ⇓P P 23 46 48.3 +0.2
baz=81,SNR=8.9
CN2 **Changchun** 80.73 320 eP P 23 46 50.0 +2.1
L16A **Fish Haven** 80.75 42 ⇑P P 23 46 47.7 -0.4
baz=81
TXAR **Lajitas Array** 80.77 56 P P 23 46 48.9 +0.4
comp=Z,3.9nm,1.0s,mb4.3,baz=226,slow=5.2,SNR=25
TXAR LR LR 00 15 44.1
comp=Z,238nm,18.2s,MS4.6,baz=330,slow=31
Y23A **Lovelace Mesa,** 80.78 51 ⇑P P 23 46 48.3 -0.2
baz=81
PV01 **Paradox Valley** 80.82 46 eP P 23 46 48.6 +0.1
comp=Z,3μm,1.5s
J15A **Blackfoot** 80.82 40 ⇑P P 23 46 48.9 +0.6
baz=81,SNR=12
H14A **Leadore** 80.88 39 ⇑P P 23 46 48.7 +0.1
baz=81,SNR=12
ANMO **Albuquerque** 80.92 50 eP P 23 46 49.7 +0.6
ANMO pmax pmax
comp=Z,2.0nm,0.9s
ANMO **Albuquerque** 80.92 50 eP P 23 46 49.7 +0.6
comp=Z,1.7nm,0.9s,mb4.0
F13A **Darby** 80.92 38 ⇓P P 23 46 48.2 -0.6
baz=81
C11A **Tepee Creek (N** 80.96 35 ⇑P P 23 46 48.8 -0.2
baz=81
X23A **Hourglass Bar** 80.96 51 ⇓P P 23 46 49.8 +0.4
baz=81,SNR=5.3
225A **Deer Hill, Car** 80.97 53 ⇓P P 23 46 49.7 +0.3
baz=81,SNR=8.8
R20A **Redvale** 80.97 46 ⇑P P 23 46 49.5 +0.2
baz=81
M17A **Scullys Gap (B** 80.98 43 ⇑P P 23 46 48.7 -0.6
baz=81
MCK **McKinley** 80.99 11 eP P 23 46 48.0 -0.8
MCK pmax pmax
comp=Z,27nm,0.8s,mb5.2
MCK **McKinley** 80.99 11 eP P 23 46 48.0 -0.8
comp=Z,27nm,0.8s,mb5.2
426A **McDonald Obser** 81.00 55 ⇓P P 23 46 49.9 +0.2
baz=81,SNR=20
V22A **San Miguel Ran** 81.01 49 ⇑P P 23 46 49.5 -0.1
baz=81
D12A **Red Ives Fores** 81.03 36 ⇑P P 23 46 49.1 -0.2
baz=81
T21A **Navajo Lake** 81.03 48 ⇑P P 23 46 50.1 +0.4
baz=81,SNR=5.5
627A **Terlingua Ranc** 81.04 56 ⇑P P 23 46 50.1 +0.2
baz=81,SNR=14
Z24A **Sheeppen Canyo** 81.05 52 ⇑P P 23 46 49.7 -0.2
baz=81
K16A **Soda Springs** 81.06 41 ⇑P P 23 46 49.8 +0.2
baz=81,SNR=6.1
I15A **Monteview** 81.09 40 ⇓P P 23 46 50.0 +0.2
baz=81
527A **Woodward Ranch** 81.13 56 ⇑P P 23 46 50.0 -0.3
baz=81,SNR=12
G14A **Jackson** 81.15 38 ⇓P P 23 46 50.0 -0.1
baz=81
S21A **Coal Bank Pass** 81.15 47 ⇑P P 23 46 50.8 +0.6
baz=81,SNR=13
L17A **Cokeville** 81.16 42 ⇓P P 23 46 49.3 -0.9
baz=81
P19A **Cripple Cowboy** 81.23 45 ⇓P P 23 46 50.5 -0.2
baz=81
W23A **Werner Place,** 81.24 50 ⇑P P 23 46 50.9 +0.1
baz=81,SNR=7.0
Y24A **Capitan** 81.25 51 ⇓P P 23 46 50.9 +0.1
baz=81,SNR=10.0
U22A **Llaves** 81.25 49 ⇓P P 23 46 50.9 +0.1
baz=81
J16A **Bone** 81.27 41 ⇓P P 23 46 51.0 +0.2
baz=81,SNR=8.2
MCMT **McKenzie Canyo** 81.30 39 eP P 23 46 50.9 0.0
comp=Z,13nm,1.6s,mb4.6
326A **Caldwell Ranch** 81.30 54 ⇓P P 23 46 50.8 -0.5
baz=81
H15A **Lima** 81.32 39 ⇑P P 23 46 51.3 +0.4
baz=82
125A **Gardner Draw,** 81.32 53 ⇓P P 23 46 50.5 -0.8
baz=81
C12B **Naegeli Ranch,** 81.32 36 ⇑P P 23 46 50.6 -0.3
baz=82
MENT **Mentasta** 81.33 13 eP P 23 46 50.3 -0.3
M18A **Lyman** 81.35 43 ⇓P P 23 46 50.9 -0.4
baz=82
GDL2 **Guadalupe Moun** 81.36 53 eP P 23 46 52.2 +0.7
E13A **Victor** 81.36 37 ⇓P P 23 46 50.2 -0.9
baz=82
Q20A **Ridgley Place,** 81.39 46 ⇑P P 23 46 51.5 0.0
baz=82,SNR=8.2
N18A **Larsen Ranch,** 81.40 44 ⇑P P 23 46 51.2 -0.3
baz=82
O19A **Miners Draw (B** 81.44 44 ⇓P P 23 46 51.1 -0.6
baz=82
K17A **Gardner Place,** 81.45 41 ⇓P P 23 46 51.4 -0.3
baz=82,SNR=5.7
628A **Black Gap, Mar** 81.45 56 ⇑P P 23 46 52.0 0.0
baz=82,SNR=11
V23A **Ortiz Mt. (NFS** 81.47 49 ⇑P P 23 46 52.9 +0.9
baz=82,SNR=5.7
RRI2 **Red Ridge** 81.49 41 eP P 23 46 51.9 0.0
comp=Z,78nm,2.0s,mb5.3
T22A **Edith** 81.50 48 ⇑P P 23 46 52.2 +0.1
baz=82
F14A **Wisdom** 81.51 38 ⇓P P 23 46 51.5 -0.4
baz=82
Z25A **Roswell** 81.53 52 ⇓P P 23 46 52.6 +0.2
baz=82,SNR=6.8
D13A **Huson** 81.56 36 ⇑P P 23 46 51.0 -1.3
baz=82,SNR=8.5
427A **Hayter Ranch,** 81.57 55 ⇑P P 23 46 52.8 +0.2
baz=82,SNR=8.8
L18A **Fontenelle, Gr** 81.61 43 ⇓P P 23 46 52.6 0.0
baz=82
R21A **Cimarron** 81.64 47 ⇓P P 23 46 53.3 +0.5
baz=82,SNR=8.7
I16A **Newdale** 81.65 40 ⇑P P 23 46 53.1 +0.3
baz=82,SNR=6.0
N19A **John Jarvie Ra** 81.69 44 ⇓P P 23 46 52.9 -0.2
baz=82
G15A **Dillon** 81.69 39 ⇓P P 23 46 52.9 -0.1
baz=82,SNR=11
U23A **El Rito** 81.71 49 ⇓P P 23 46 53.7 +0.4
baz=82,SNR=5.7
MSO **Missoula** 81.71 37 eP P 23 46 52.4 -0.6
DLMT **Dillon** 81.73 39 eP P 23 46 53.5 +0.4
comp=Z,34nm,1.7s,mb5.0
E14A **Clinton** 81.75 37 ⇑P P 23 46 52.7 -0.6
baz=82,SNR=5.2
BSMT **Bassoo Peak** 81.79 36 eP P 23 46 52.5 -0.9
REDW **Red Top Meadow** 81.79 41 eP P 23 46 53.9 +0.3
comp=Z,42nm,1.6s,mb5.1
TPAW **Teton Pass** 81.80 41 eP P 23 46 53.9 +0.4
comp=Z,54nm,1.8s,mb5.2
126A **Clayton Basin,** 81.80 53 ⇓P P 23 46 53.4 -0.5
baz=82
Y25A **Mesa, Roswell** 81.81 52 ⇓P P 23 46 53.5 -0.4
baz=82
W24A **Lazy 6 Ranch,** 81.81 50 ⇑P P 23 46 53.6 -0.2
baz=82,SNR=11
C13A **Hot Springs** 81.81 36 ⇑P P 23 46 52.7 -0.9
baz=82
Q21A **Lamborn Mesa,** 81.83 46 ⇑P P 23 46 54.1 +0.2
baz=82
S22A **4UR Ranch, Cre** 81.87 47 ⇓P P 23 46 54.7 +0.6
baz=82,SNR=6.0
J17A **Brown Place, J** 81.88 41 ⇓P P 23 46 54.1 +0.1
baz=82
SNOW **Snow King Moun** 81.91 41 eP P 23 46 54.8 +0.7
comp=Z,59nm,1.8s,mb5.2
K18A **Toltan Ranch,** 81.96 42 ⇓P P 23 46 54.5 0.0
baz=82,SNR=9.5
M19A **Rock Springs** 81.99 43 ⇓P P 23 46 54.4 -0.2
baz=82
IMW **Indian Meadow** 82.00 40 eP P 23 46 55.3 +0.7
comp=Z,65nm,2.0s,mb5.2
F15A **Butte** 82.04 38 ⇑P P 23 46 54.6 -0.2
baz=82
LRM **Limekiln Ridge** 82.06 38 eP P 23 46 54.1 -0.8
LOHW **Long Hollow** 82.08 41 eP P 23 46 55.3 +0.3
comp=Z,16nm,1.4s,mb4.8
X25A **Clemmons Ranch** 82.08 51 ⇑P P 23 46 55.0 -0.3
baz=82
Z26A **Caprock** 82.09 53 ⇑P P 23 46 55.1 -0.2
baz=82,SNR=11
428A **Kincaid Ranch,** 82.09 55 ⇓P P 23 46 55.7 +0.3
baz=82,SNR=6.5
D14A **Greenough** 82.10 37 ⇓P P 23 46 54.0 -1.0
baz=82
T23A **Casias Ranch,** 82.13 48 ⇑P P 23 46 55.8 +0.3
baz=82
R22A **Saguache, Gunn** 82.14 47 ⇓P P 23 46 56.2 +0.7
baz=82,SNR=6.9
G16A **Moss Hill, Enn** 82.14 39 ⇓P P 23 46 55.2 -0.1
baz=82
L19A **Farson** 82.14 43 ⇓P P 23 46 55.2 -0.2
baz=82,SNR=5.7
CHMT **Chamberlain Mo** 82.16 37 eP P 23 46 54.9 -0.5
H16A **Russell Place,** 82.22 40 ⇑P P 23 46 56.2 +0.5
baz=82,SNR=8.5
COLA **College** 82.23 11 eP P 23 46 54.9 -0.4
COLA pmax pmax
comp=Z,25nm,0.7s,mb5.2
COLA **College** 82.23 11 eP P 23 46 54.9 -0.4
comp=Z,25nm,0.7s,mb5.2
P21A **Newcastle** 82.23 46 ⇑P P 23 46 56.0 0.0
baz=82
328A **Wristen Ranch,** 82.25 55 ⇓P P 23 46 55.6 -0.7
baz=82,SNR=6.1
J18A **Kendall Valley** 82.25 41 ⇑P P 23 46 55.8 -0.2
baz=82,SNR=11
B13A **Whitefish** 82.25 35 ⇑P P 23 46 54.8 -1.0
baz=82
E15A **Deer Lodge** 82.26 38 ⇑P P 23 46 55.3 -0.6
baz=82
N20A **Spence Gulch,** 82.27 44 ⇑P P 23 46 56.0 -0.1
baz=82,SNR=5.5
Q22A **Crested Butte,** 82.31 46 ⇑P P 23 46 56.6 +0.2
baz=82,SNR=5.7
127A **Arkansas Junct** 82.33 53 ⇓P P 23 46 56.2 -0.4
baz=82
BW06 **Boulder Array** 82.33 42 ⇓P P 23 46 55.7 -0.7
baz=82,SNR=5.2
BW06 **Boulder Array** 82.33 42 eP P 23 46 56.2 -0.1
comp=Z,51nm,2.0s,mb5.1
PDAR **Pinedale Array** 82.33 42 P P 23 46 56.1 -0.2
comp=Z,3.3nm,0.8s,mb4.3,baz=238,slow=2.8,SNR=25
PDAR LR LR 00 17 59.2
comp=Z,346nm,18.9s,MS4.7,baz=247,slow=32
SMCO **Snowmass** 82.40 46 eP P 23 46 56.9 0.0
comp=Z,68nm,2.1s,mb5.2
BOZ **Bozeman (W)** 82.46 39 ⇑P P 23 46 56.8 -0.2
baz=83,SNR=8.7
BOZ **Bozeman (W)** 82.46 39 eP P 23 46 57.1 +0.1
BOZ pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
BOZ **Bozeman (W)** 82.46 39 eP P 23 46 57.1 +0.1
comp=Z,6.6nm,1.1s,mb4.5
W25A **X Bar L Ranch,** 82.52 51 ⇓P P 23 46 56.8 -0.8
baz=83,SNR=6.3
F16A **Kennard Place,** 82.53 39 ⇑P P 23 46 57.1 -0.2
baz=83
I18A **Diamond G Ranc** 82.62 41 ⇑P P 23 46 57.7 -0.1
baz=83
M20A **Sweetwater, Wa** 82.63 44 ⇑P P 23 46 57.6 -0.3
baz=83
D15A **Lincoln** 82.65 37 ⇓P P 23 46 57.7 -0.3
baz=83
V25A **Rancho No Teng** 82.66 50 ⇓P P 23 46 58.2 0.0
baz=83,SNR=12
Z27A **Tatum** 82.69 53 ⇑P P 23 46 57.8 -0.6
baz=83
X26A **CR and CF Fran** 82.73 51 ⇑P P 23 46 58.1 -0.6
baz=83
N21A **Black Mountain** 82.74 44 ⇓P P 23 46 58.5 -0.1
baz=83,SNR=7.0
L20A **Wamsutter** 82.77 43 ⇑P P 23 46 59.0 +0.3
baz=83,SNR=11
SDCO **Great Sand Dun** 82.82 48 eP P 23 46 59.3 +0.3
comp=Z,26nm,1.9s,mb4.9
K19A **Absolon Red Bu** 82.82 42 ⇓P P 23 46 58.1 -0.8
baz=83
G17A **Pierce Place,** 82.84 39 ⇑P P 23 46 59.6 +0.6
baz=83
HRY **Holter Researc** 82.89 38 eP P 23 46 58.8 -0.4
E16A **East Helena** 82.89 38 ⇑P P 23 46 58.8 -0.3
baz=83
B14A **Marquette Ranc** 82.92 36 ⇑P P 23 46 58.3 -1.0
baz=83
Y27A **Causey** 82.96 52 ⇑P P 23 46 59.3 -0.6
baz=83
S24A **Houchin Ranch,** 82.98 48 ⇓P P 23 47 00.3 +0.4
baz=83,SNR=6.8
C15A **Salmond Ranch,** 82.98 37 ⇑P P 23 46 58.7 -0.9
baz=83,SNR=7.9
U25A **Circle Dot Ran** 83.04 50 ⇓P P 23 47 00.2 -0.1
baz=83
K20A **Yellowstone Ra** 83.07 43 ⇓P P 23 46 59.4 -0.8
baz=83,SNR=7.2
A14A **Double T Ranch** 83.16 35 ⇑P P 23 46 59.6 -0.9
baz=83
F17A **Fitzpatrick Pl** 83.18 39 ⇑P P 23 47 01.0 +0.3
baz=83,SNR=6.6
D16A **Dana Ranch, Ca** 83.22 38 ⇑P P 23 47 00.6 -0.3
baz=83,SNR=6.0
M21A **Separation Pea** 83.23 44 ⇑P P 23 47 00.8 -0.3
baz=83,SNR=9.8
MSTX **Muleshoe** 83.29 52 ⇓P P 23 47 01.5 0.0
baz=83
B15A **Bradely Ranch,** 83.29 36 ⇓P P 23 46 59.8 -1.4
baz=83,SNR=5.6
X27A **F and S Farms,** 83.31 52 ⇓P P 23 47 01.4 -0.2
baz=83
E17A **Martinsdale** 83.34 38 ⇓P P 23 47 01.2 -0.3
baz=84
T25A **Trinidad** 83.35 49 ⇑P P 23 47 01.1 -0.7
baz=84
RWWY **Rawlins** 83.37 44 eP P 23 47 01.5 -0.3
comp=Z,25nm,1.3s,mb5.1
L21A **Rawlins** 83.39 43 ⇓P P 23 47 01.7 -0.2
baz=84
N22A **Wattenberg Ran** 83.48 45 ⇓P P 23 47 02.6 +0.2
baz=84,SNR=12
C16A **Fuhringer Ranc** 83.50 37 ⇑P P 23 47 01.2 -1.1
baz=84
EGAK **Eagle** 83.50 13 eP P 23 47 01.8 -0.1
comp=Z,7.9nm,0.8s,mb4.9
W27A **Bowe Ranch, En** 83.50 51 ⇑P P 23 47 01.9 -0.7
baz=84,SNR=6.0
U26A **Atchley Ranch,** 83.53 50 ⇓P P 23 47 02.3 -0.5
baz=84,SNR=6.6
A15A **Johnson Ranch,** 83.55 35 ⇑P P 23 47 01.8 -0.7
baz=84
S25A **Robets Cordova** 83.55 48 ⇑P P 23 47 02.6 -0.2
baz=84,SNR=9.5
G18A **Lazy EL Ranch,** 83.56 40 ⇑P P 23 47 02.7 +0.1
baz=84,SNR=5.4
ISCO **Idaho Springs** 83.62 46 eP P 23 47 03.6 +0.5
ISCO pmax pmax
comp=Z,10.0nm,1.4s,mb4.8
ISCO **Idaho Springs** 83.62 46 eP P 23 47 03.6 +0.4
comp=Z,10nm,1.4s,mb4.8
F18A **Big Timber** 83.75 39 ⇓P P 23 47 03.8 +0.2
baz=84,SNR=9.8
D17A **Six Diamond Ra** 83.78 38 ⇓P P 23 47 03.6 -0.2
baz=84,SNR=8.4
E18A **Harlowton** 83.95 39 ⇑P P 23 47 05.1 +0.4
baz=84
C17A **Wharram Farm,** 83.98 37 ⇑P P 23 47 04.2 -0.6
baz=84,SNR=11
COLD **Coldfoot** 84.00 9 eP P 23 47 05.1 +0.7
comp=Z,11nm,1.0s,mb5.0
L22A **Ellis Ranch, M** 84.04 44 ⇑P P 23 47 04.6 -0.7
baz=84
A16A **West Butte Ran** 84.17 36 ⇑P P 23 47 04.8 -0.9
baz=84
BILL **Bilibino** 84.27 353 d iP P 23 47 05.4 -0.4
BILL pmax pmax
comp=Z,20nm,1.1s,mb5.2
BILL **Bilibino** 84.27 353 eP P 23 47 05.6 -0.2
comp=Z,15nm,0.9s,mb5.1
B17A **L&G Farms, Che** 84.29 37 ⇓P P 23 47 06.2 -0.2
baz=84
PHWY **Pilot Hill** 84.38 45 eP P 23 47 07.0 0.0
comp=Z,61nm,2.5s,mb5.3
AMTX **Amarillo** 84.47 52 eP P 23 47 07.4 -0.2
comp=Z,12nm,0.9s,mb5.0
AMTX epP pP 23 47 18.7 -1.8
P25A **Willow Gulch B** 84.51 47 ⇑P P 23 47 07.3 -0.3
baz=85
B18A **Beardsley Farm** 84.93 37 ⇑P P 23 47 09.8 +0.3
baz=85
A18A **Metzger Ranch,** 85.15 36 ⇓P P 23 47 10.3 -0.3
baz=85
RSSD **Black Hills** 86.53 43 eP P 23 47 18.6 +1.0
RSSD pmax pmax
comp=Z,7.0nm,0.8s,mb4.9
RSSD **Black Hills** 86.53 43 eP P 23 47 18.6 +1.0
comp=Z,6.5nm,0.8s,mb4.9
GYA **Guiyang** 87.67 298 ⇑i P P 23 47 24.0 +0.4
GYA pP pP 23 47 33.3 -3.2
GYA PP PP 23 50 53.0 +3.4
GYA SKS 23 57 48.5
GYA S S 23 58 02.0 -0.7
GYA SS SS 00 03 53.3 +3.3
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.3
GYA pmax pmax
comp=Z,130nm,6.2s
GYA LR LR
comp=N,530nm,19.4s,MS5.1
GYA LR LR
comp=E,510nm,20.1s,MS5.1
GYA LR LR
comp=Z,620nm,19.8s,MS5.0
MAW **Mawson** 87.88 199 eP P 23 47 24.0 +0.2
comp=Z,8.8nm,0.6s,mb5.2
MAW **Mawson** 87.88 199 P P 23 47 24.1 +0.3
comp=Z,9.1nm,0.6s,mb5.2,baz=127,slow=7.4,SNR=20
MAW LR LR 00 24 15.9
comp=Z,560nm,18.2s,MS5.0,baz=117,slow=34
MAW **Mawson** 87.88 199 eP P 23 47 24.1 +0.3
MAW pmax pmax
comp=Z,2.0nm,0.6s
MAW **Mawson** 87.88 199 eP P 23 47 24.1 +0.3
comp=Z,2.4nm,0.6s,mb4.6
INK **Inuvik** 88.15 14 eP P 23 47 24.2 -0.7
INK pmax pmax
comp=Z,6.0nm,1.1s
INK **Inuvik** 88.15 14 eP P 23 47 24.2 -0.7
comp=Z,5.8nm,1.1s,mb4.7
HHC **Hu-ho-hao-te** 88.66 313 eP P 23 47 27.0 -0.9
HHC pP pP 23 47 35.0 -5.9
HHC sP sP 23 47 38.3 -7.4
HHC PP PP 23 50 58.5 +1.3
HHC SKS 23 57 52.3
HHC S S 23 58 10.5 -1.0
HHC SS SS 00 04 04.5 +0.6
HHC pmax pmax
comp=Z,14nm,0.6s,mb5.5
HHC pmax pmax
comp=Z,64nm,6.5s
HHC LR LR
comp=N,100nm,17.8s,MS4.4
HHC LR LR
comp=E,120nm,21.4s,MS4.4
HHC LR LR
comp=Z,130nm,16.9s,MS4.4
PLCA **Paso Flores** 89.88 132 LR LR 00 17 40.7
comp=Z,259nm,19.3s,MS4.7,baz=103,slow=29
YKA **Yellowknife Ar** 90.04 23 P P 23 47 33.2 -0.7
comp=Z,3.3nm,0.8s,mb4.7,baz=239,slow=4.4,SNR=17
YKA **Yellowknife Ar** 90.04 23 P P 23 47 33.2 -0.7
KMI **Kunming** 90.65 296 P P 23 47 38.5 +0.9
KMI pP pP 23 47 46.5 -4.1
KMI sP sP 23 47 49.8 -5.6
KMI PP PP 23 51 16.3 +2.9
KMI S S 23 58 30.8 +0.1
KMI sS sS 23 58 43.8 -8.7
KMI SS SS 00 04 36.0 +2.5
KMI pmax pmax
comp=Z,5.0nm,0.6s,mb5.0
KMI pmax pmax
comp=Z,80nm,4.3s
KMI LR LR
comp=N,86nm,18.2s,MS4.5
KMI LR LR
comp=E,140nm,20.7s,MS4.5
KMI LR LR
comp=Z,210nm,28.2s
CD2 **Chengdu** 91.44 302 eP P 23 47 41.3 +0.2
CD2 pP pP 23 48 17.5 +23
CD2 sP sP 23 48 32.5 +34
CD2 PP PP 23 51 23.3 +3.8
CD2 SKS 23 57 58.8
CD2 S S 23 58 25.8 -12
CD2 sS sS 23 59 28.8 +29
CD2 pmax pmax
comp=Z,10.0nm,0.8s,mb5.2
CD2 pmax pmax
comp=Z,30nm,5.2s
CD2 **Chengdu** 91.44 302 eP P 23 47 41.5 +0.4

CD2 PP PP 23 51 22.0 +2.5
CD2 pmax pmax
comp=Z,10.0nm,0.8s,mb5.2
CD2 pmax pmax
comp=Z,30nm,8.4s
CD2 LR LR
comp=N,230nm,21.6s,MS4.7
CD2 LR LR
comp=E,200nm,25.2s,MS4.7
CD2 LR LR
comp=Z,230nm,20.4s,MS4.6
CMAR Chiang Mai Arr 92.25 288 P **P 23 47 46.0 +0.8**
comp=Z,1.5nm,1.0s,mb4.3,baz=114,slow=3.3,SNR=6.0
CMAR LR LR 00 22 38.1
comp=Z,151nm,20.2s,MS4.4,baz=279,slow=31
SYO Syowa Base 92.73 191⇓*eP* **P 23 47 44.0 -2.4**
LZH Lanzhou 92.85 306 *eP* **P 23 47 47.3 -0.2**
LZH pP pP 23 47 55.3 -5.2
LZH sP sP 23 47 58.5 -6.9
LZH *e*PP PP 23 51 33.3 +2.7
LZH SKS 23 58 17.8
LZH *e*S S 23 58 49.5 -0.6
LZH sS sS 23 59 02.5 -9.4
LZH *e*SS SS 00 05 07.5 +2.8
LZH pmax pmax
comp=Z,18nm,1.5s,mb5.3
LZH pmax pmax
comp=Z,93nm,9.2s
LZH LR LR
comp=N,280nm,18.2s
LZH LR LR
comp=Z,340nm,20.0s,MS4.8
ULM Lac du Bonnet 93.98 39 LR LR 00 25 27.7
comp=Z,454nm,18.7s,MS5.0,baz=107,slow=32
SONM Songino Array 94.48 318 P **P 23 47 56.1 +1.4**
comp=Z,0.6nm,0.8s,mb4.1,baz=96,slow=5.1,SNR=3.1
SONM LR LR 00 25 34.1
comp=Z,127nm,20.3s,MS4.4,baz=81,slow=32
TIXI Tiksi 94.73 344 *eP* **P 23 47 55.2 -0.1**
MIV Mineville/With 107.69 48 *e*Pdif Pdif 23 48 54.3 +0.4
MK31 Makanchi Array 110.46 315 *e*PKIKP PKiKP 23 53 05.9 -0.9
MKAR Makanchi Array 110.46 315 *e*PKIKP PKiKP 23 53 05.2 -1.6
comp=Z,0.5nm,0.7s,baz=83,slow=4.8,SNR=4.2
MKAR Makanchi Array 110.46 315 *c i*PKIKP PKiKP 23 53 05.9 -0.9
MKAR pmax pmax
comp=Z,1.0nm,0.7s
KURK Kurchatov 112.78 319 *e*PKIKP PKiKP 23 53 11.1 0.0
BVAR Borovoye Array 117.53 322 PKP PKPdf 23 53 20.2 +0.1
comp=Z,1.2nm,0.8s,baz=85,slow=1.7,SNR=8.7
BRVK Borovoye 117.59 322 *e*PKIKP PKPdf 23 53 20.1 -0.1
BRVK Borovoye 117.59 322 *e*PKPdf PKPdf 23 53 19.9 -0.4
ARU Arti 123.00 328 *i* PKIKP PKPdf 23 53 30.2 -0.3
ARU 23 55 18.0
ARU 00 00 30.1
ARU SS SS 00 12 02.0 +11
ARU Arti 123.00 328 *e*PKPdf PKPdf 23 53 30.5 -0.1
ARCES ARCESS Array B 124.37 352 PKP PKPdf 23 53 32.2 -0.6
comp=Z,4.9nm,0.8s,baz=330,slow=1.5,SNR=12
ARCES ARCESS Array B 124.37 352 PKP PKPdf 23 53 32.2 -0.6
FINES FINESS Array B 131.68 347 PKP PKPdf 23 53 46.6 -0.3
comp=Z,3.1nm,0.9s,baz=14,slow=2.9,SNR=8.9
NOA NORSAR Array B 134.09 357 PKP PKPdf 23 53 51.7 +0.2
comp=Z,1.2nm,0.8s,baz=14,slow=3.9,SNR=6.2
AKASG Malin Array Be 140.03 337 PKP PKPdf 23 54 01.2 -1.6
comp=Z,0.3nm,0.3s,baz=15,slow=1.5,SNR=6.3
AKASG Malin Array Be 140.03 337 *i* PKIKP PKPdf 23 54 02.5 -0.3
CLL Collm 143.58 353 *e*PKIKP 23 54 06.0
CLL MLR MLR
comp=Z,100nm,20.6s,MS4.6
CLL Collm 143.58 353 *e*PKPpre 23 54 06.0
CLL *e*PKPdf PKPdf 23 54 09.0 -0.1
CLL *e*PKiKP PKiKP 23 54 13.0 +0.5
UPC Upice 143.91 349 *e*PKIKP PKPdf 23 54 07.9 -1.8
UPC *e* 23 54 21.3
UPC Upice 143.91 349 *e*PKP PKPdf 23 54 07.9 -1.8
UPC *ep*PKP pPKPdf 23 54 21.3 -1.9
NIE Niedzica 144.00 344 *e*PKP PKPdf 23 54 09.7 -0.2
DPC Dobruska-Polom 144.01 349 *e*PKIKP PKPdf 23 54 08.6 -1.3
DPC *e* 23 54 20.3
DPC MLR MLR
comp=Z,300nm,19.6s,MS5.1
DPC Dobruska-Polom 144.01 349 *e*PKP PKPdf 23 54 08.6 -1.3
DPC *ep*PKP pPKPdf 23 54 20.3 -3.0
DPC AMS AMS 00 54 00.0
comp=Z,300nm,19.6s
OKC Ostrava-Krasne 144.13 347 *e*PKIKP PKPdf 23 54 08.0 -2.1
OKC MLR MLR
comp=Z,300nm,24.4s,MS5.0
OKC Ostrava-Krasne 144.13 347 *e*PKP PKPdf 23 54 08.0 -2.1
OKC *ep*PKP pPKPdf 23 54 20.4 -3.2
OKC AMS AMS 00 53 10.0
comp=Z,300nm,24.4s
PVCC Panska Ves 144.13 351 AMS AMS 00 56 40.0
comp=Z,400nm,20.8s
UZH Uzhgorod 144.15 342⇓*i*PKIKP PKPdf 23 54 09.0 -1.2
UZH *i* 23 54 19.2
MORC Moravsky Berou 144.31 347⇑PKIKP PKPdf 23 54 10.1 -0.4
MORC Moravsky Berou 144.31 347 *e*PKPdf PKPdf 23 54 09.6 -0.9
MORC Moravsky Berou 144.31 347⇑*i*P PKPdf 23 54 10.1 -0.4
PRU Pruhonice 144.66 351 *e*PKIKP PKPdf 23 54 10.6 -0.5
PRU *e* 23 54 22.1
PRU MLR MLR
comp=Z,300nm,17.4s,MS5.1
PRU Pruhonice 144.66 351 *e*PKP PKPdf 23 54 10.6 -0.5
PRU *ep*PKP pPKPdf 23 54 22.1 -2.4
PRU AMS AMS 00 57 00.0
comp=Z,300nm,17.4s
MEM Membach 144.68 0 PKP PKPdf 23 54 10.2 -0.9
NKC Novy Kostel 144.70 353 *e*PKIKP PKPdf 23 54 09.9 -1.2
NKC *e* 23 54 21.3
NKC MLR MLR
comp=Z,200nm,21.9s,MS4.8
NKC Novy Kostel 144.70 353 *e*PKP PKPdf 23 54 09.9 -1.2
NKC *ep*PKP pPKPdf 23 54 21.3 -3.2
NKC AMS AMS 00 55 50.0
comp=Z,200nm,21.9s
SNF Seneffe 144.75 2 PKP PKPdf 23 54 10.4 -0.7
BCLA Clavier 144.87 1 PKP PKPdf 23 54 10.7 -0.7
VRI Vrincioaia 144.93 335⇑PKIKP PKPdf 23 54 12.8 +1.1
VRI Vrincioaia 144.93 335⇑*i*P PKPdf 23 54 12.8 +1.1
TNS Taunus Mts 145.03 358 *e*PKPbc PKPbc 23 54 11.4 +0.3
DOU Dourbes 145.17 2 PKP PKPdf 23 54 11.6 -0.3
GIVF Givet 145.17 2⇑*i*PKP1 PKPbc 23 54 12.0 +0.5
comp=Z,44nm,1.1s
TREC Trest 145.17 349 *e*PKIKP PKPdf 23 54 11.3 -0.7
TREC MLR MLR
comp=Z,300nm,24.8s,MS5.0
TREC Trest 145.17 349 *e*PKP PKPdf 23 54 11.3 -0.7
TREC AMS AMS 00 53 50.0
comp=Z,300nm,24.8s
BAIF Baives 145.19 2⇑*i*PKP1 PKPbc 23 54 12.0 +0.4
comp=Z,37nm,1.0s
TIRR Tirgusor 145.31 332 PKIKP PKPdf 23 54 13.1 +0.7
TIRR Tirgusor 145.31 332⇑*i*P PKPbc 23 54 13.3 +1.1
KMBO Kilima Mbogo 145.33 245 PKPbc PKPbc 23 54 13.5 +0.3
comp=Z,2.1nm,0.8s,baz=0.0,slow=20,SNR=6.3
KMBO Kilima Mbogo 145.33 245 *e*PKPbc PKPbc 23 54 13.9 +0.7
GRF Grafenberg Arr 145.37 354 *e*PKPbc PKPbc 23 54 12.1 -0.1
PSZ Piszkesteto 145.49 344 *e*PKIKP PKPdf 23 54 13.4 +0.9
PSZ Piszkesteto 145.49 344⇓*i*P PKPdf 23 54 14.1 +1.6
MLR Muntele Rosu 145.56 335⇑PKIKP PKPdf 23 54 13.0 +0.3
MLR Muntele Rosu 145.56 335 P PKPdf 23 54 13.9 +1.2
MLR Muntele Rosu 145.56 335⇑*i*P PKPdf 23 54 12.9 +0.2
WLF Walferdange 145.63 0 PKP PKPbc 23 54 14.1 +1.1
WLF APKP 23 54 26.3
WLF Walferdange 145.63 0 *e*PKPbc PKPbc 23 54 13.8 +0.8
WLF *ep*PKPbc pPKPbc 23 54 26.4 +0.1
WLF Walferdange 145.63 0 *e*PKPbc PKPbc 23 54 13.9 +0.9
KHC Kasperske Hory 145.64 351 *e*PKPbc PKPbc 23 54 13.2 +0.1
KHC Kasperske Hory 145.64 351 *e*PKP PKPdf 23 54 12.9 +0.1
KHC *ep*PKP pPKPdf 23 54 22.8 -3.4
KHC AMS AMS 00 57 30.0
comp=Z,400nm,24.3s
DRGR 145.65 340⇑PKIKP PKPdf 23 54 12.8 -0.1
DRGR 145.65 340 P PKPdf 23 54 14.0 +1.1
DRGR 145.65 340⇑*i*P PKPdf 23 54 12.8 -0.1
WET Wettzell 145.72 352 *e*PKPbc PKPbc 23 54 12.2 -1.1
WET *ep*PKPbc pPKPbc 23 54 25.6 -1.0
BR131 Keskin Array S 145.80 321 *e*PKPbc PKPbc 23 54 14.5 +0.6
BRTR Keskin Array B 145.80 321 *e*PKPbc PKPbc 23 54 14.5 +0.6
comp=Z,7.8nm,0.7s,baz=43,slow=2.6,SNR=47
GEC2 GERESS Array S 145.90 351 *e*PKPbc PKPbc 23 54 14.5 +0.6
GEC2 *ep*PKPbc pPKPbc 23 54 26.0 -1.2
FLN La Foliniere 146.08 8⇑*i*PKP1 PKPbc 23 54 14.5 +0.1
comp=Z,31nm,0.9s
FLN *e*MLR MLR
comp=Z,503nm,21.8s,MS5.0
FLN La Foliniere 146.08 8⇑*i*PKP PKPdf 23 54 14.5 +1.0
FLN LR LR
comp=Z,500nm,21.8s,MS5.2
SGMF Saint Gilles 146.25 11 *e*PKP1 PKPbc 23 54 14.7 -0.2
LDF La Druitiere 146.29 8⇑*i*PKP1 PKPbc 23 54 14.9 -0.2
comp=Z,20nm,0.9s
GRR Gorron 146.39 9⇑*i*PKP1 PKPbc 23 54 15.5 +0.1
CONA Conrad Observa 146.42 348⇑*i*PKPdf PKPdf 23 54 15.0 +0.9
comp=Z,13nm,1.1s
STU Stuttgart 146.44 356 *ep*PKPbc pPKPbc 23 54 28.0 -0.8
QUIF Quistinic 146.46 12 *e*PKP1 PKPbc 23 54 15.5 -0.1
MOA Molln 146.78 350⇑*i*PKPdf PKPbc 23 54 16.9 -0.4
comp=Z,10.0nm,1.1s
FUR Furstenfeldbru 146.87 354 *e*PKPbc PKPbc 23 54 17.6 +0.8
CDF Champ du Feu 146.87 359 *e*PKP1 PKPbc 23 54 17.0 +0.2
comp=Z,50nm,1.1s
BFO Black Forest 146.92 357 *e*PKPbc PKPbc 23 54 18.2 +1.3
BFO Black Forest 146.92 357 *e*PKPbc PKPbc 23 54 17.1 +0.2
BFO *e* 23 54 30.6
BZS Buzias 147.04 340 PKP2 PKPbc 23 54 17.8 +0.5
BZS Buzias 147.04 340⇑*i*P PKPbc 23 54 17.5 +0.2
ECH Echery 147.07 359 *e*PKP2 PKPab 23 54 19.0 +0.1
RJOB Jochberg 147.11 352 *e*PKPbc PKPbc 23 54 17.6 +0.1
HAU Haudompre 147.29 360⇑*i*PKP1 PKPbc 23 54 18.2 +0.3
comp=Z,14nm,0.7s
HAU *e*MLR MLR
comp=Z,183nm,21.8s,MS4.5
HAU Haudompre 147.29 360⇑*i*PKP PKPbc 23 54 18.2 +0.3
HAU LR LR
comp=Z,180nm,21.8s,MS4.8
PKSM Moragy 147.39 344⇓PKP2 PKPbc 23 54 18.4 +0.1
PKSM Moragy 147.39 344⇓*i*P PKPbc 23 54 18.4 +0.1
WTTA Wattenberg 147.72 353⇑*i*PKPdf PKPbc 23 54 19.5 +0.3
comp=Z,9.4nm,0.6s
SOKA Soboth 147.78 349⇓*i*PKPdf PKPbc 23 54 19.3 0.0
comp=Z,14nm,1.3s
DAVA Damuels 147.87 355⇑*i*PKPdf PKPbc 23 54 19.9 +0.3
comp=Z,19nm,1.4s
HYF Humbligny 147.89 5 *e*PKP1 PKPbc 23 54 19.9 +0.3
LOR Lormes 147.97 3⇑*i*PKP1 PKPbc 23 54 19.9 +0.1
comp=Z,19nm,0.8s
LOR *e*MLR MLR
comp=Z,388nm,21.5s,MS4.9
LOR Lormes 147.97 3⇑*i*PKP PKPbc 23 54 19.9 +0.1
LOR LR LR
comp=Z,390nm,21.5s,MS5.2
SSF Saint Saulge 148.15 4⇑*i*PKP1 PKPbc 23 54 20.5 +0.2
comp=Z,34nm,1.0s
MMAI Mount Meron Ar 148.20 309 PKPbc PKPbc 23 54 21.5 +0.6
comp=Z,2.5nm,0.6s,baz=59,slow=3.9,SNR=5.8
MFF Saint Martin d 148.24 8⇑*i*PKP1 PKPbc 23 54 20.8 +0.2
comp=Z,11nm,0.7s
AVF Avril sur Loir 148.41 4⇑*i*PKP1 PKPbc 23 54 20.9 -0.1
comp=Z,11nm,0.6s
SMF Signal de Mont 148.59 3⇑*i*PKP1 PKPbc 23 54 22.2 +0.7
BGF Bois d'Agland 148.61 5⇑*i*PKP1 PKPbc 23 54 21.7 +0.2
comp=Z,19nm,0.7s
CABF La Chapelle 148.69 0⇑*i*PKP1 PKPbc 23 54 22.6 +0.9
comp=Z,28nm,0.7s
TUE Stuetta 148.72 356 *e*PKPbc PKPbc 23 54 22.8 +1.0
TUE *e* 23 54 34.6
TCF Toulx Ste Croi 148.82 5 *e*PKP1 PKPbc 23 54 21.9 -0.2
comp=Z,32nm,1.3s
LPL La Plagne 149.78 359⇑*i*PKP1 PKPbc 23 54 25.7 +1.2
comp=Z,18nm,0.8s
LPG La Plagne 149.80 359⇑*i*PKP1 PKPbc 23 54 26.0 +1.5
comp=Z,59nm,1.3s
LFF La Frestale 149.99 8 *e*PKP1 PKPbc 23 54 25.1 +0.1
CAF Calviac 150.16 6 *e*PKP1 PKPbc 23 54 25.6 +0.2
BNI Bardonecchia 150.24 359 *e*PKIKP PKPbc 23 54 26.9 +1.3
ORIF Oris-en-Rattie 150.38 1 *e*PKP1 PKPbc 23 54 26.6 +0.7
comp=Z,18nm,1.0s
ORIF *e*MLR MLR
comp=Z,208nm,20.8s,MS4.6
VIVF Saint-Julien-l 150.41 2 *e*PKP1 PKPbc 23 54 26.6 +0.6
comp=Z,30nm,1.1s
MBDF Montbardon 150.57 359 *e*PKP1 PKPbc 23 54 27.2 +0.8
comp=Z,21nm,0.9s
LASF Ste Croix 151.15 4 *e*PKP1 PKPbc 23 54 28.5 +0.7
comp=Z,50nm,1.2s
SMRF Simiane la Rot 151.31 1 *e*PKP1 PKPbc 23 54 29.3 +1.1
comp=Z,22nm,0.8s
SBF Sospel 151.42 358 *e*PKP1 PKPbc 23 54 28.3 -0.1
comp=Z,20nm,0.8s
FRF La Foret Royal 151.74 359⇑*i*PKP1 PKPbc 23 54 29.1 -0.1
comp=Z,31nm,1.1s
ETSF Etsaut 151.78 11 *e*PKP1 PKPbc 23 54 29.8 +0.5
comp=Z,11nm,0.8s
LMR La Mourre 151.96 360⇑*i*PKP1 PKPbc 23 54 29.8 +0.1
comp=Z,16nm,0.9s
AQU L'Aquila 152.25 349 *e*PKIKP PKPbc 23 54 30.8 +0.4
PGF Pioggiola 152.65 356 *e*PKP1 PKPbc 23 54 31.2 -0.1
comp=Z,24nm,1.0s
ESDC Sonseca Array 154.02 18 PKPbc PKPbc 23 54 34.4 0.0
comp=Z,0.3nm,0.5s,baz=339,slow=3.1,SNR=3.9
ESDC PKPab PKPab 23 54 47.2 -0.5
comp=Z,1.4nm,0.7s,baz=322,slow=3.8,SNR=8.7
TIP Timpagrande 154.40 341 *e*PKPbc PKPbc 23 54 35.0 -0.1
KEST Kesra 159.37 353 PKPab PKPab 23 55 11.3 +0.5
comp=Z,1.0nm,0.6s,baz=258,slow=2.5,SNR=5.5
TAM Tamanrasset 172.42 5 *e*PKIKP PKPdf 23 54 44.8 +0.6

*IDC **27** 23:36:37.7±1.2, 10°.90N×91°.52E, h0km, mb3.6/9, mb1 3.7/10, mb1mx3.6/24, mbtmp3.6/10, ML4.2/1, Error ellipse: s-maj=40.6km s-min=18.9km az=56.0*
*NEIC **27** 23:36:38.0±7.3, 10°.92N×91°.52E, h2km±44km, mb3.8/1, Error ellipse: s-maj=23.8km s-min=7.1km az=63.0*
*ISCJB **27** 23:36:40.9±0.8, 10°.98N±0°.10×91°.7E±0°.1, h33km, mb3.6/10, Error ellipse: s-maj=18.3km s-min=11.0km az=144.3*
ISC 27 23:36:43.2±0.8, 10°.97N±0°.10×91°.6E±0°.1, h35km, n15, σ0s37/14, mb3.6/10, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.27**	**43**	Pn	**Pn**	**23 39 08.3**	**+0.2**
0.5nm,0.3s,baz=232,slow=15,SNR=3.0							
CHTO	**Chiang Mai**	**10.52**	**41**	*e*Pn	**Pn**	**23 39 11.3**	**-0.3**
KULM	**Kulim**	**10.56**	**122**	*e*Pn	**Pn**	**23 39 11.3**	**-0.7**
MK31	**Makanchi Array**	**36.58**	**349**	*e*P	**P**	**23 43 45.5**	**-0.2**
MKAR	**Makanchi Array**	**36.58**	**349**	P	**P**	**23 43 45.9**	**+0.2**
0.5nm,0.6s,mb3.6,baz=134,slow=8.8,SNR=5.1							
SONM	**Songino Array**	**38.79**	**16**	P	**P**	**23 44 05.0**	**+0.6**
0.5nm,0.6s,mb3.4,baz=212,slow=5.1,SNR=2.9							
KURK	**Kurchatov**	**41.05**	**347**	P	**P**	**23 44 22.6**	**-0.5**
0.3nm,0.3s,mb3.5,baz=163,slow=6.8,SNR=4.2							
ZALV	**Zalesovo Beam**	**43.21**	**354**	P	**P**	**23 44 40.7**	**0.0**
0.4nm,0.4s,mb3.5,baz=169,slow=8.2,SNR=2.7							
BVAR	**Borovoye Array**	**45.29**	**342**	P	**P**	**23 44 57.3**	**-0.1**
0.2nm,0.5s,mb3.2,baz=158,slow=12,SNR=2.9							
WRA	**Warramunga Arr**	**52.06**	**126**	P	**P**	**23 45 50.2**	**+0.3**
0.5nm,0.5s,mb3.7,baz=306,slow=8.6,SNR=3.6							
WRAB	**Tennant Creek**	**52.07**	**126**	*e*P	**P**	**23 45 50.7**	**+0.7**
0.7nm,0.6s,mb3.8							
ASAR	**Alice Springs**	**53.79**	**130**	P	**P**	**23 46 02.5**	**-0.1**
0.3nm,0.6s,mb3.4,baz=316,slow=6.5,SNR=2.4							
BRTR	**Keskin Array B**	**58.55**	**310**	P	**P**	**23 46 36.4**	**0.0**
0.6nm,0.7s,mb3.8,baz=110,slow=7.1,SNR=5.1							
FINES	**FINESS Array B**	**68.84**	**332**	P	**P**	**23 47 43.7**	**-0.1**
1.0nm,0.7s,mb3.8,baz=70,slow=9.6,SNR=4.3							
MOX	**Moxa**	**75.28**	**320**	*e*PKP	PKiKP	23 54 13.1	+1.3
28nm,2.2s							
MOX							
comp=Z,100nm,19.0s							

*IDC **28** 00:02:15.4±1.9, 10°.71N×91°.58E, h0km, mb3.6/6, mb1 3.7/7, mb1mx3.5/24, mbtmp3.6/7, Error ellipse: s-maj=62.6km s-min=20.5km az=64.0*
*NEIC **28** 00:02:16.5±1.1, 10°.72N×91°.55E, h10km, mb3.9/2, Error ellipse: s-maj=28.9km s-min=12.1km az=60.0*
*ISCJB **28** 00:02:18.7±1.1, 10°.8N±0°.1×91°.8E±0°.2, h33km, mb3.7/7, Error ellipse: s-maj=29.1km s-min=12.6km az=151.1*
ISC 28 00:02:20.7±1.1, 10°.8N±0°.1×91°.7E±0°.2, h35km, n13, σ1s02/13, mb3.7/7, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.39**	**42**	Pn	**Pn**	**00 04 47.7**	**+0.5**
baz=238,slow=14,SNR=2.4							
KULM	**Kulim**	**10.42**	**121**	*e*Pn	**Pn**	**00 04 45.7**	**-1.9**
MK31	**Makanchi Array**	**36.78**	**349**	*e*P	**P**	**00 09 24.6**	**-0.3**
MKAR	**Makanchi Array**	**36.78**	**349**	P	**P**	**00 09 25.4**	**+0.5**
1.0nm,0.6s,mb3.8,baz=133,slow=9.1,SNR=9.7							
MKAR	**Makanchi Array**	**36.78**	**349**	P	**P**	**00 09 25.4**	**+0.5**
SONM	**Songino Array**	**38.97**	**16**	P	**P**	**00 09 43.7**	**+0.3**
0.4nm,0.4s,mb3.5,baz=210,slow=8.3,SNR=3.6							
KURK	**Kurchatov**	**41.26**	**347**	P	**P**	**00 10 01.8**	**-0.5**
0.6nm,0.6s,mb3.4,baz=152,slow=7.8,SNR=3.7							
KURK	**Kurchatov**	**41.26**	**347**	*e*P	**P**	**00 09 59.8**	**-2.4**
1.1nm,0.8s,mb3.5							
ZALV	**Zalesovo Beam**	**43.42**	**354**	P	**P**	**00 10 19.5**	**-0.3**
0.9nm,0.5s,mb3.8,baz=177,slow=12,SNR=5.6							
WRA	**Warramunga Arr**	**51.91**	**126**	P	**P**	**00 11 25.8**	**-0.4**
0.2nm,0.4s,mb3.4,baz=308,slow=8.3,SNR=3.6							
WRA	**Warramunga Arr**	**51.91**	**126**	P	**P**	**00 11 25.8**	**-0.4**
WRAB	**Tennant Creek**	**51.91**	**126**	*e*P	**P**	**00 11 27.9**	**+1.6**
1.6nm,0.6s,mb4.1							
ASAR	**Alice Springs**	**53.62**	**130**	P	**P**	**00 11 39.9**	**+1.0**
0.7nm,0.7s,mb3.7,baz=307,slow=7.2,SNR=6.6							

IDC 28 00:10:35.0±2.9, 10°.69N×91°.50E, h0km, mb3.8/5, mb1 3.8/5, mb1mx3.5/23, mbtmp3.8/5, Error ellipse: s-maj=116.2km s-min=27.4km az=63.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.82**	**349**	P	P	00 17 42.8	-1.8
0.7nm,0.8s,baz=170,slow=8.8,SNR=5.9							
SONM	**Songino Array**	**39.09**	**16**	P	P	00 18 03.8	0.0
0.4nm,0.6s,baz=189,slow=8.3,SNR=2.7							
KURK	**Kurchatov**	**41.29**	**348**	P	P	00 18 22.4	+0.3
1.3nm,0.2s,baz=178,slow=8.3,SNR=6.1							
ZALV	**Zalesovo Beam**	**43.47**	**354**	P	P	00 18 40.8	+1.0
0.6nm,0.3s,baz=168,slow=9.4,SNR=3.5							
ASAR	**Alice Springs**	**53.71**	**130**	P	P	00 19 59.1	0.0
0.5nm,0.6s,baz=302,slow=7.0,SNR=5.1							

*ISCJB **28** 00:16:30.1±0.3, 39°.21N±0°.02×26°.11E±0°.02, h13km±2km, Error ellipse: s-maj=3.0km s-min=2.4km az=147.6*
*CSEM **28** 00:16:30.7±0.1, 39°.23N×26°.10E, h10km, MD3.4, Error ellipse: s-maj=2.7km s-min=2.4km az=56.0*
*NEIC **28** 00:16:30.0, 39°.25N×26°.20E, h7km, MD3.4(ISK), MD3.4(ATH), After ISK.*
*ISK **28** 00:16:30.4, 39°.24N×26°.17E, h9km, MD3.3*
*ATH **28** 00:16:31.2, 39°.28N×26°.25E, h14km, MD3.4/7*
*DDA **28** 00:16:31.1, 39°.28N×26°.25E, h22km±1km, Md3.2*
*THE **28** 00:16:31.2, 39°.22N×26°.14E, h17km±1km, ML3.4/7, Error ellipse: s-maj=1.9km s-min=1.3km az=78.0*
ISC 28 00:16:30.9±0.3, 39°.22N±0°.02×26°.14E±0°.02, h15km±2km, n118, σ1s01/175, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.10**	**76**	*e*Pg	**Pg**	**00 16 33.7**	**-0.5**
PRK				*e*Sg	**Sg**	**00 16 35.7**	**-0.8**
PRK	**Paraskevi**	**0.10**	**76**	P	**Pg**	**00 16 33.4**	**-0.8**
PRK				S	**Sg**	**00 16 35.6**	**-0.9**
PRK	**Paraskevi**	**0.10**	**76**	*e*PG	**Pg**	**00 16 33.7**	**-0.5**
PRK				*e*SG	**Sg**	**00 16 35.7**	**-0.8**
PRK	**Paraskevi**	**0.10**	**76**	P	**Pg**	**00 16 33.4**	**-0.8**
PRK	**Paraskevi**	**0.10**	**76**	*e*Pg	**Pg**	**00 16 33.7**	**-0.5**
PRK				*e*Sg	**Sg**	**00 16 35.7**	**-0.8**
SIGR	**SIGRI**	**0.22**	**267**	P	**Pg**	**00 16 37.0**	**+1.1**
SIGR				S	**Sg**	**00 16 41.1**	**+1.8**
SIGR	**SIGRI**	**0.22**	**267**	P	**Pg**	**00 16 37.0**	**+1.1**
SIGR				S	**Sg**	**00 16 41.1**	**+1.8**
AYVA	**Ayvalik**	**0.43**	**78**	*i* P	**Pg**	**00 16 39.0**	**-0.6**
AYVA				*i* S	**Sg**	**00 16 44.5**	**-0.9**
AYVA	**Ayvalik**	**0.43**	**78**	*i* P	**Pg**	**00 16 39.0**	**-0.6**
AYVA				*i* S	**Sg**	**00 16 44.5**	**-0.9**
EZN	**Ezine**	**0.62**	**13**	PG	**Pg**	**00 16 42.6**	**-0.5**
EZN				SG	**Sg**	**00 16 51.7**	**+0.4**
EZN	**Ezine**	**0.62**	**13**	*i* Pg	**Pg**	**00 16 42.6**	**-0.5**
EZN				*i* Sg	**Sg**	**00 16 51.7**	**+0.4**
BOZC	**Bozcaada**	**0.62**	**354**	*i* P	**Pg**	**00 16 43.0**	**-0.1**
BOZC				*i* S	**Sg**	**00 16 51.4**	**0.0**
CHOS	**Chios island**	**0.84**	**185**	P	**Pg**	**00 16 47.0**	**-0.1**
CHOS				S	**Sg**	**00 16 59.3**	**+1.2**
CHOS	**Chios island**	**0.84**	**185**	*e*PG	**Pg**	**00 16 47.9**	**+0.8**
CHOS				*e*SB	**Sg**	**00 17 00.8**	**+2.7**
CHOS	**Chios island**	**0.84**	**185**	P	**Pg**	**00 16 47.0**	**-0.1**
CHOS	**Chios island**	**0.84**	**185**	*e*Pg	**Pg**	**00 16 47.9**	**+0.8**
CHOS				S	**Sg**	**00 16 59.3**	**+1.2**
URLA	**Izmir**	**0.93**	**157**	*i* P	**Pg**	**00 16 48.7**	**-0.2**
URLA				*i* S	**Sg**	**00 17 01.5**	**+0.4**
URLA	**Izmir**	**0.93**	**157**	*i* P	**Pg**	**00 16 48.7**	**-0.2**
URLA				*i* S	**Sg**	**00 17 01.5**	**+0.4**
GADA	**Gvkgeada**	**0.99**	**349**	*e*PG	**Pg**	**00 16 49.3**	**-0.7**
GADA				*e*SG	**Sg**	**00 17 03.0**	**+0.1**
GADA	**Gvkgeada**	**0.99**	**349**	*e*Pg	**Pg**	**00 16 49.3**	**-0.7**
LIA	**Limnos Island**	**1.00**	**313**	*e*Pb	**Pg**	**00 16 50.8**	**+0.5**
LIA				*e*Sb	**Sg**	**00 17 04.8**	**+1.4**
LIA	**Limnos Island**	**1.00**	**313**	P	**Pg**	**00 16 50.9**	**+0.6**
LIA				S	**Sg**	**00 17 03.7**	**+0.3**
LIA	**Limnos Island**	**1.00**	**313**	*e*PB	**Pg**	**00 16 50.8**	**+0.5**
LIA				*e*SB	**Sg**	**00 17 04.8**	**+1.4**
LIA	**Limnos Island**	**1.00**	**313**	*e*Pb	**Pg**	**00 16 50.8**	**+0.5**
LIA				S	**Sg**	**00 17 03.7**	**+0.3**
BLCB	**Balcova**	**1.09**	**140**	*e*PN	**Pg**	**00 16 52.1**	**+0.1**
BLCB				*e*SN	**Sg**	**00 17 06.4**	**+0.2**
BLCB	**Balcova**	**1.09**	**140**	P	**Pg**	**00 16 51.6**	**-0.4**
BLCB				S	**Sg**	**00 17 05.3**	**-0.9**
BLCB	**Balcova**	**1.09**	**140**	P	**Pg**	**00 16 51.6**	**-0.4**
BLCB	**Balcova**	**1.09**	**140**	*e*Pn	**Pg**	**00 16 52.1**	**+0.1**
BLCB				S	**Sg**	**00 17 05.3**	**-0.9**
KDAG	**Bornova**	**1.20**	**133**	*i* P	**Pn**	**00 16 54.5**	**+1.3**
KDAG				*i* S	**Sb**	**00 17 09.6**	**+0.9**
KDAG	**Bornova**	**1.20**	**133**	*i* P	**Pn**	**00 16 54.5**	**+1.3**
IZM	**Izmir**	**1.20**	**133**	*e*PN	**Pn**	**00 16 54.0**	**+0.8**
IZM	**Izmir**	**1.20**	**133**	*e*Pn	**Pn**	**00 16 54.0**	**+0.8**
LPK	**Lapseki**	**1.24**	**22**	*e*PN	**Pn**	**00 16 53.2**	**-0.6**
LPK	**Lapseki**	**1.24**	**22**	*e*Pn	**Pn**	**00 16 53.2**	**-0.6**
BALY	**Balya**	**1.25**	**65**	*i* P	**Pn**	**00 16 53.5**	**-0.5**
BALY				*i* S	**Sb**	**00 17 09.7**	**-0.5**
BALY	**Balya**	**1.25**	**65**	*i* P	**Pn**	**00 16 53.5**	**-0.4**
AKHS	**Akhisar**	**1.34**	**104**	*i* P	**Pn**	**00 16 54.8**	**-0.4**
AKHS				*i* S	**Sn**	**00 17 11.1**	**-1.7**
AKHS	**Akhisar**	**1.34**	**104**	*i* P	**Pn**	**00 16 54.8**	**-0.4**
AKHS				*i* S	**Sn**	**00 17 11.1**	**-1.7**
AKS	**Akhisar**	**1.34**	**104**	*e*PN	**Pn**	**00 16 55.5**	**+0.3**
AKS	**Akhisar**	**1.34**	**104**	*e*Pn	**Pn**	**00 16 55.5**	**+0.3**
BALB	**Balikesir**	**1.41**	**72**	*e*P

RDO	**Rodhopi**	**1.98**	**347**	*e*PN	**Pn**	**00 17 05.2**	**+1.3**
RDO	**Rodhopi**	**1.98**	**347**	P	**Pn**	**00 17 04.0**	**+0.1**
RDO	**Rodhopi**	**1.98**	**347**	*e*Pn	**Pn**	**00 17 05.2**	**+1.3**
RDO				S	**Sn**	**00 17 27.2**	**-1.2**
OUR	**Ouranopolis**	**2.00**	**304**	P	**Pn**	**00 17 04.3**	**+0.1**
OUR				S	**Sn**	**00 17 27.9**	**-1.1**
OUR	**Ouranopolis**	**2.00**	**304**	P	**Pn**	**00 17 04.3**	**+0.1**
OUR				S	**Sn**	**00 17 27.9**	**-1.1**
DEMI	**Demirci**	**2.01**	**94**	*i* P	**Pg**	**00 17 08.8**	**-0.6**
DEMI				*i* S	**Sg**	**00 17 32.7**	**-2.8**
DEMI	**Demirci**	**2.01**	**94**	*i* P	**Pg**	**00 17 08.8**	**-0.7**
PAIG	**Paliouri**	**2.03**	**291**	P	**Pn**	**00 17 03.7**	**-0.9**
PAIG	**Paliouri**	**2.03**	**291**	P	**Pn**	**00 17 03.7**	**-0.9**
AYDN	**Tasoluk**	**2.07**	**138**	*e*P	**Pg**	**00 17 09.7**	**-0.9**
AYDN				*i* S	**Sg**	**00 17 35.7**	**-1.8**
AYDN	**Tasoluk**	**2.07**	**138**	*e*P	**Pg**	**00 17 09.7**	**-0.9**
AYDN				*i* S	**Sg**	**00 17 35.7**	**-1.8**
KULA	**Kula-Manisa**	**2.09**	**109**	*e*PN	**Pn**	**00 17 06.3**	**+1.0**
KULA	**Kula-Manisa**	**2.09**	**109**	*e*Pn	**Pn**	**00 17 06.3**	**+0.9**
KAVA	**Kavala**	**2.17**	**325**	P	**Pn**	**00 17 06.1**	**-0.4**
KAVA				S	**Sn**	**00 17 31.7**	**-1.4**
KAVA	**Kavala**	**2.17**	**325**	P	**Pn**	**00 17 06.1**	**-0.4**
KAVA				S	**Sn**	**00 17 31.7**	**-1.4**
APE	**Apeiranthos**	**2.20**	**193**	*e*Pn	**Pg**	**00 17 11.2**	**-2.0**
APE	**Apeiranthos**	**2.20**	**193**	P	**Pn**	**00 17 06.3**	**-0.7**
APE	**Apeiranthos**	**2.20**	**193**	*e*Pn	**Pg**	**00 17 11.2**	**-2.0**
APE	**Apeiranthos**	**2.20**	**193**	P	**Pn**	**00 17 06.3**	**-0.7**
CRLT	**Corlu**	**2.26**	**32**	*e*PN	**Pn**	**00 17 08.7**	**+0.9**
CRLT	**Corlu**	**2.26**	**32**	*e*Pn	**Pn**	**00 17 08.7**	**+0.9**
MLSB	**Milas**	**2.31**	**146**	*e*PN	**Pn**	**00 17 10.1**	**+1.6**
MLSB	**Milas**	**2.31**	**146**	*e*Pn	**Pn**	**00 17 10.1**	**+1.6**
BODT	**Bodrum**	**2.34**	**157**	*e*PN	**Pn**	**00 17 10.6**	**+1.7**
BODT	**Bodrum**	**2.34**	**157**	*e*Pn	**Pn**	**00 17 10.6**	**+1.7**
ARMT	**Armutlu**	**2.48**	**56**	*e*PN	**Pn**	**00 17 11.9**	**+1.1**
ARMT	**Armutlu**	**2.48**	**56**	*e*Pn	**Pn**	**00 17 12.0**	**+1.2**
GDZ	**Gediz**	**2.60**	**92**	*i* P	**Pg**	**00 17 19.7**	**-1.0**
GDZ				*i* S	**Sg**	**00 17 50.8**	**-3.6**
GEMT	**Gemlik**	**2.64**	**62**	*e*PN	**Pn**	**00 17 14.2**	**+1.3**
GEMT	**Gemlik**	**2.64**	**62**	*e*Pn	**Pn**	**00 17 14.3**	**+1.3**
EDRB	**Edirne**	**2.66**	**10**	*e*PN	**Pn**	**00 17 14.7**	**+1.4**
EDRB	**Edirne**	**2.66**	**10**	*e*Pn	**Pn**	**00 17 14.7**	**+1.4**
YER	**Yerkesik**	**2.68**	**140**	*e*PN	**Pn**	**00 17 15.2**	**+1.6**
YER	**Yerkesik**	**2.68**	**140**	*e*Pn	**Pn**	**00 17 15.2**	**+1.7**
CTKS	**Kestanelik-??a**	**2.71**	**41**	*e*PN	**Pn**	**00 17 15.2**	**+1.3**
CTKS	**Kestanelik-??a**	**2.71**	**41**	*e*Pn	**Pn**	**00 17 15.2**	**+1.3**
HORT	**Hortiatis**	**2.71**	**301**	P	**Pn**	**00 17 14.6**	**+0.6**
HORT				S	**Sn**	**00 17 45.2**	**-1.4**
HORT	**Hortiatis**	**2.71**	**301**	P	**Pn**	**00 17 14.6**	**+0.6**
HORT				S	**Sn**	**00 17 45.2**	**-1.4**
YLV	**Yalova**	**2.83**	**61**	*e*PN	**Pn**	**00 17 17.5**	**+2.0**
YLV	**Yalova**	**2.83**	**61**	*e*Pn	**Pn**	**00 17 17.5**	**+2.0**
DID	**Didima**	**2.85**	**234**	P	**Pn**	**00 17 15.8**	**-0.1**
DID	**Didima**	**2.85**	**234**	P	**Pn**	**00 17 15.8**	**-0.1**
DSF	**Desfina**	**2.94**	**255**	P	**Pn**	**00 17 17.2**	**+0.1**
DSF				S	**Sn**	**00 17 51.3**	**-0.8**
DSF	**Desfina**	**2.94**	**255**	P	**Pn**	**00 17 17.2**	**+0.1**
DSF				S	**Sn**	**00 17 51.3**	**-0.8**
AGG	**Agios Georgios**	**2.97**	**267**	P	**Pn**	**00 17 17.8**	**+0.3**
AGG	**Agios Georgios**	**2.97**	**267**	P	**Pn**	**00 17 17.8**	**+0.3**
ALT	**Altintas**	**3.09**	**92**	*e*PN	**Pn**	**00 17 20.3**	**+1.1**
ALT	**Altintas**	**3.09**	**92**	*e*Pn	**Pn**	**00 17 20.3**	**+1.1**
THL	**Klokotos Trika**	**3.22**	**277**	P	**Pn**	**00 17 20.1**	**-0.8**
THL				S	**Sn**	**00 17 57.9**	**-1.1**
THL	**Klokotos Trika**	**3.22**	**277**	P	**Pn**	**00 17 20.1**	**-0.8**
THL				S	**Sn**	**00 17 57.9**	**-1.1**
GUR	**Goura**	**3.24**	**248**	P	**Pn**	**00 17 20.6**	**-0.7**
GUR	**Goura**	**3.24**	**248**	P	**Pn**	**00 17 20.6**	**-0.7**
TRIZ	**Trizonia**	**3.29**	**256**	P	**Pn**	**00 17 21.2**	**-0.8**
TRIZ				S	**Sn**	**00 17 58.6**	**-2.3**
TRIZ	**Trizonia**	**3.29**	**256**	P	**Pn**	**00 17 21.2**	**-0.8**
TRIZ				S	**Sn**	**00 17 58.6**	**-2.3**
GULT	**Gulveren**	**3.58**	**69**	*e*PN	**Pn**	**00 17 27.1**	**+1.3**
GULT	**Gulveren**	**3.58**	**69**	*e*Pn	**Pn**	**00 17 27.1**	**+1.2**

IDC ***28*** *00:20:16.5±1.9, 7°.55S×106°.06E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.6/21, mbtmp3.7/5, Error ellipse: s-maj=121.4km s-min=22.4km az=43.0*
DJA ***28*** *00:20:18, 7°.89S×105°.93E, h8km, MLv3.8/9*
ISCJB ***28*** *00:20:19.7±1.4, 7°.99S±0°.07×105°.86E±0°.05, h39km±14km, mb3.6/5, Error ellipse: s-maj=12.6km s-min=7.2km az=25.8*
ISC 28 00:20:21.7±1.5, 7°.94S±0°.08×105°.88E±0°.06, h40km±15km, n16, σ1°13/23, mb3.6/5, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**1.14**	**36**	P	**Pn**	**00 20 37.2**	**-4.1**
SKJI				S	**Sn**	**00 20 53.8**	**-1.9**
CGJI	**Cibinong**	**1.33**	**352**	P	**Pn**	**00 20 41.6**	**-2.2**
CGJI				S	**Sn**	**00 20 59.5**	**-0.8**
SBJI	**Serang**	**1.82**	**8**	P	**Pn**	**00 20 48.9**	**-1.7**
SBJI				S	**Sn**	**00 21 13.6**	**+1.1**
TNG	**Tangerang**	**1.91**	**23**	S	**Sn**	**00 21 15.2**	**+0.5**
TNG				S	**Sn**	**00 21 15.3**	**+0.6**
LEM	**Lembang**	**2.04**	**57**	P	**Pn**	**00 20 53.2**	**-0.4**
LEM				S	**Sn**	**00 21 18.2**	**+0.3**
RBSI	**Rajabasa**	**2.08**	**356**	P	**Pn**	**00 20 54.2**	**0.0**
RBSI				S	**Sn**	**00 21 19.3**	**+0.3**
CMJI	**Cimerak**	**2.55**	**87**	S	**Sn**	**00 21 31.7**	**+1.4**
KASI	**Kota Agung**	**2.77**	**330**	P	**Pn**	**00 21 03.9**	**+0.3**
KASI				S	**Sn**	**00 21 37.8**	**+2.0**
KLSI		**3.42**	**340**	P	**Pn**	**00 21 12.4**	**-0.2**
KLSI				S	**Sn**	**00 21 53.7**	**+1.7**
MDSI	**Maura Dua**	**3.83**	**334**	P	**Pn**	**00 21 18.0**	**-0.2**
WRA	**Warramunga Arr**	**30.02**	**116**	P	**P**	**00 26 27.4**	**+0.3**
	0.9nm,0.7s,mb3.6,baz=289,slow=12,SNR=7.9						
ASAR	**Alice Springs**	**31.07**	**123**	P	**P**	**00 26 37.5**	**+1.2**
	0.7nm,0.9s,mb3.5,baz=302,slow=7.7,SNR=4.7						
MKAR	**Makanchi Array**	**58.40**	**341**	P	**P**	**00 30 11.5**	**-1.6**
	0.4nm,0.6s,mb3.6,baz=142,slow=7.3,SNR=4.5						
BVAR	**Borovoye Array**	**67.80**	**338**	P	**P**	**00 31 14.6**	**-0.8**
	0.8nm,0.7s,mb3.9,baz=169,slow=8.3,SNR=6.3						
BRTR	**Keskin Array B**	**81.63**	**312**	P	**P**	**00 32 36.2**	**+0.4**
	0.5nm,0.8s,mb3.5,baz=137,slow=3.8,SNR=3.6						
TXAR	**Lajitas Array**	**145.01**	**49**	PKP	PKPdf	00 39 55.5	+0.1
	0.6nm,0.8s,baz=217,slow=0.7,SNR=8.2						

ISCJB ***28*** *00:28:03.0±0.5, 48°.10N±0°.02×116°.24W±0°.03, h5km±3km, Error ellipse: s-maj=3.9km s-min=2.5km az=136.2*
PGC ***28*** *00:28:05.8±5.6, 48°.15N×116°.25W, h10km, ML3.0/4, 100km Ene of Spokane, Wa Western Idaho*
ISC 28 00:28:02.9±0.4, 48°.13N±0°.02×116°.29W±0°.03, h5km±3km, n52, σ0°87/83, 42C-38D, Western Idaho

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
C11A	**Tepee Creek (N**	**0.29**	**175**	⇓P	**Pg**	**00 28 08.6**	**+0.1**
	baz=0.3						
C11A				⇓S	**Sg**	**00 28 11.9**	**-0.4**
	baz=0.3						
B12A	**Libby**	**0.58**	**54**	⇑P	**Pg**	**00 28 15.6**	**+1.5**
	baz=0.6,SNR=12						
B12A				⇓S	**Sg**	**00 28 22.8**	**+1.2**
	baz=0.6						
C12B	**Naegeli Ranch,**	**0.69**	**127**	⇑P	**Pg**	**00 28 16.6**	**+0.3**
	baz=0.7,SNR=143						
C12B				⇑S	**Sg**	**00 28 24.7**	**-0.5**
	baz=0.7						
A12A	**Yaak River Ran**	**0.91**	**28**	⇑P	**Pg**	**00 28 21.4**	**+1.0**
	baz=0.9,SNR=14						
A12A				⇑S	**Sg**	**00 28 33.9**	**+1.6**
	baz=0.9						
C13A	**Hot Springs**	**1.24**	**111**	⇑P	**Pg**	**00 28 26.8**	**+0.1**
	baz=1.3						
C13A				⇓S	**Sg**	**00 28 42.8**	**0.0**
	baz=1.3						
B13A	**Whitefish**	**1.25**	**78**	⇑P	**Pg**	**00 28 27.4**	**+0.6**
	baz=1.3,SNR=48						
D12A	**Red Ives Fores**	**1.25**	**149**	⇓P	**Pg**	**00 28 26.1**	**-0.8**
	baz=1.3						
A13A	**Flathead Natio**	**1.49**	**57**	⇑Pg	**Pg**	**00 28 31.7**	**+0.3**
	baz=1.5						
A13A				⇑S	**Sn**	**00 28 50.5**	**+0.5**
	baz=1.5						
D13A	**Huson**	**1.62**	**129**	⇑Pb	**Pb**	**00 28 32.5**	**-0.7**
	baz=1.6,SNR=68						
D13A				⇓Pg	**Pg**	**00 28 33.6**	**-0.3**
	baz=1.6						
D13A				⇓S	**Sn**	**00 28 52.6**	**-0.6**
	baz=1.6						
C14A	**Swan Lake**	**1.75**	**101**	⇑Pn	**Pn**	**00 28 33.4**	**-0.5**
	baz=1.8						
C14A				⇓Pb	**Pb**	**00 28 34.9**	**-0.6**
	baz=1.8						
C14A				⇑Pg	**Pg**	**00 28 36.3**	**-0.1**
	baz=1.8						
E12A	**Beaver Dam Sad**	**1.78**	**164**	⇑Pn	**Pn**	**00 28 33.7**	**-0.6**
	baz=1.8						
E12A				⇑Pb	**Pb**	**00 28 35.7**	**-0.4**
	baz=1.8						
E12A				⇓Sb	**Sb**	**00 28 59.0**	**+0.3**
	baz=1.8						
WALA	**Waterton Lakes**	**1.83**	**59**	⇓Pn	**Pn**	**00 28 36.7**	**+1.6**
WALA				⇓Sg	**Sg**	**00 29 01.8**	**-0.1**
B14A	**Marquette Ranc**	**2.03**	**82**	⇑Sg	**Sg**	**00 29 09.0**	**+0.8**
	baz=2.1						
B08A	**Colville Reser**	**2.04**	**278**	⇑Pn	**Pn**	**00 28 37.5**	**-0.4**
	baz=2.0,SNR=14						
D08A	**Wollman Farm,**	**2.08**	**240**	⇑Pb	**Pb**	**00 28 41.1**	**+0.1**
	baz=2.0						
A14A	**Double T Ranch**	**2.09**	**65**	⇑Pb	**Pb**	**00 28 40.7**	**-0.5**
	baz=2.1						
A14A				⇑Sb	**Sb**	**00 29 08.2**	**+0.8**
	baz=2.1						
D14A	**Greenough**	**2.16**	**118**	⇓Pn	**Pn**	**00 28 38.6**	**-0.8**
	baz=2.2,SNR=7.2						
D14A				⇑Sn	**Sn**	**00 29 05.9**	**-0.7**
	baz=2.2						
E13A	**Victor**	**2.21**	**139**	⇑Pn	**Pn**	**00 28 40.2**	**-0.1**
	baz=2.2,SNR=22						
E13A				⇑Pb	**Pb**	**00 28 42.5**	**-0.8**
	baz=2.2						
F11A	**Grangeville**	**2.24**	**178**	⇑Pb	**Pb**	**00 28 43.4**	**-0.5**
	baz=2.2						
F11A				⇓Sb	**Sb**	**00 29 12.1**	**+0.2**
	baz=2.2						
F10A	**Beach Ranch, E**	**2.25**	**197**	⇓Pb	**Pb**	**00 28 43.4**	**-0.6**
	baz=2.2						
F12A	**Elk City**	**2.48**	**163**	⇓Pn	**Pn**	**00 28 43.6**	**-0.3**
	baz=2.5,SNR=7.6						
F12A				⇓Pb	**Pb**	**00 28 47.2**	**-0.6**
	baz=2.5						
E08A	**Dider Farm, El**	**2.49**	**230**	⇓Pg	**Pg**	**00 28 51.0**	**+0.3**
	baz=2.4						
E08A				⇓Sb	**Sb**	**00 29 20.3**	**+1.2**
	baz=2.4						
B15A	**Bradely Ranch,**	**2.50**	**84**	⇑Pn	**Pn**	**00 28 44.0**	**-0.2**
	baz=2.5,SNR=7.4						
B15A				⇑Sn	**Sn**	**00 29 15.1**	**0.0**
	baz=2.5						
C15A	**Salmond Ranch,**	**2.50**	**97**	⇓Pn	**Pn**	**00 28 43.7**	**-0.6**
	baz=2.5						
A15A	**Johnson Ranch,**	**2.51**	**69**	⇑Sn	**Sn**	**00 29 15.7**	**+0.3**
	baz=2.6						
E14A	**Clinton**	**2.56**	**131**	⇓Pb	**Pb**	**00 28 48.7**	**-0.6**
	baz=2.6						
F13A	**Darby**	**2.70**	**149**	⇓Pn	**Pn**	**00 28 46.5**	**-0.5**
	baz=2.7,SNR=13						
G11A	**Walters Elk Ra**	**2.73**	**180**	⇓Pb	**Pb**	**00 28 51.6**	**-0.5**
	baz=2.7						
G11A				⇓Sb	**Sb**	**00 29 27.0**	**+1.1**
	baz=2.7						
D15A	**Lincoln**	**2.78**	**112**	⇓Pn	**Pn**	**00 28 47.4**	**-0.5**
	baz=2.8,SNR=6.4						
E07A	**Sunnyside**	**2.89**	**238**	⇑Sb	**Sb**	**00 29 33.0**	**+2.6**
	baz=2.8						
G10A	**Bishop Farm, J**	**2.89**	**192**	⇑Pb	**Pb**	**00 28 54.7**	**-0.2**
	baz=2.9						
E15A	**Deer Lodge**	**3.02**	**123**	⇓Pn	**Pn**	**00 28 50.8**	**-0.4**
	baz=3.0,SNR=9.2						
E15A				⇓Pb	**Pb**	**00 28 56.1**	**-0.9**
	baz=3.0						
E15A				⇓Sn	**Sn**	**00 29 27.4**	**-0.3**
	baz=3.0						
E15A				⇑Sb	**Sb**	**00 29 35.5**	**+1.4**
	baz=3.0						
G09A	**Cove**	**3.03**	**200**	⇑Pn	**Pn**	**00 28 51.2**	**-0.2**
	baz=3.0						
C16A	**Fuhringer Ranc**	**3.07**	**94**	⇑Pb	**Pb**	**00 28 57.2**	**-0.8**
	baz=3.1						
A16A	**West Butte Ran**	**3.23**	**74**	⇓Pn	**Pn**	**00 28 54.2**	**0.0**
	baz=3.3						
SLEB	**Sale Mountain**	**3.27**	**339**	⇑Pn	**Pn**	**00 28 56.7**	**+2.0**
SLEB				⇓Sg	**Sg**	**00 29 46.7**	**-1.1**
F07A	**Phinny Hill Vi**	**3.34**	**229**	⇑Sb	**Sb**	**00 29 45.7**	**+2.2**
	baz=3.3						
G13A	**Cobalt**	**3.35**	**154**	⇑Sn	**Sn**	**00 29 35.7**	**-0.3**
	baz=3.4						
G08A	**Pilot Rock**	**3.38**	**214**	⇑Sb	**Sb**	**00 29 47.0**	**+2.4**
	baz=3.3						
D16A	**Dana Ranch, Ca**	**3.40**	**107**	⇑Sb	**Sb**	**00 29 46.1**	**+1.0**
	baz=3.4						
H11A	**Donnelly**	**3.43**	**177**	⇑Pn	**Pn**	**00 28 56.8**	**-0.2**
	baz=3.4,SNR=6.9						
F15A	**Butte**	**3.46**	**130**	⇓Pn	**Pn**	**00 28 57.6**	**+0.1**
	baz=3.5,SNR=6.4						
F15A				⇑Sn	**Sn**	**00 29 37.7**	**-1.1**
	baz=3.5						
F15A				⇑Sb	**Sb**	**00 29 48.4**	**+1.4**
	baz=3.5						
G14A	**Jackson**	**3.48**	**145**	⇑Sn	**Sn**	**00 29 38.6**	**-0.6**
	baz=3.5						
H10A	**Noah's Angus R**	**3.55**	**185**	⇓Pn	**Pn**	**00 28 58.9**	**+0.3**
	baz=3.5,SNR=5.9						
H10A				⇑Pb	**Pb**	**00 29 05.5**	**-0.7**
	baz=3.5						
H10A				⇓Sn	**Sn**	**00 29 40.1**	**-0.9**
	baz=3.5						
H10A				⇑Sb	**Sb**	**00 29 51.0**	**+1.4**
	baz=3.5						
DOWB	**Downie Slide**	**3.69**	**338**	Sg	**Sg**	**00 30 05.5**	**-0.7**
F16A	**Kennard Place,**	**3.96**	**125**	⇓Sn	**Sn**	**00 29 50.8**	**-0.4**
	baz=4.0						
H14A	**Leadore**	**4.05**	**149**	⇓Sn	**Sn**	**00 29 52.7**	**-0.6**
	baz=4.1						
E17A	**Martinsdale**	**4.06**	**112**	⇑Sn	**Sn**	**00 29 53.1**	**-0.3**
	baz=4.1						
E17A				⇓Sb	**Sb**	**00 30 06.5**	**+2.3**
	baz=4.1						
MNB	**Mounoet Dainar**	**4.29**	**343**	⇓Sg	**Sg**	**00 30 19.0**	**-1.6**
BLBC	**Blue River**	**4.35**	**335**	⇑Sg	**Sg**	**00 30 21.0**	**-1.7**
I12A	**Atlanta**	**4.41**	**169**	⇓Pn	**Pn**	**00 29 10.2**	**-0.2**
	baz=4.4,SNR=7.3						
I14A	**Mackay**	**4.64**	**154**	⇓Pn	**Pn**	**00 29 13.7**	**0.0**
	baz=4.7,SNR=9.7						

CASC 28 00:35:15.1±1.7, 13°.17N×89°.61W, h36km±999km, MD3.5, ML2.8, 2D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNET	**Serv Nac Est T**	**0.63**	**36**	*e*P	Pn	00 35 27.7	+0.2
SNET				*e*S	Sn	00 35 37.4	+1.0
BOQS	**Boqueron**	**0.64**	**30**	*e*P	Pn	00 35 27.6	-0.1
BOQS				*e*S	Sn	00 35 38.3	+1.6
SBLS	**San Blas**	**0.66**	**359**	*e*P	Pn	00 35 28.1	+0.1
SBLS				AML	AML	00 35 42.7	
	comp=Z,334nm,0.2s						
LFRS	**El Faro**	**0.70**	**50**	⇓*i*P	Pn	00 35 28.3	-0.1
LFRS				*e*S	Sn	00 35 38.4	+0.4
SNVI	**San Vicente**	**0.87**	**60**	*e*P	Pn	00 35 30.6	-0.2
SNVI				*e*S	Sn	00 35 43.2	+0.9
RBDL	**Robledal**	**0.94**	**355**	⇓*e*P	Pn	00 35 32.1	+0.3
IXG	**Ixpaco**	**1.29**	**321**	*e*P	Pn	00 35 36.9	+0.3
IXG				*e*S	Sn	00 35 53.4	+0.7
VSM	**San Miguel**	**1.32**	**79**	*e*P	Pn	00 35 37.4	+0.3
VSM				*e*S	Sn	00 35 55.0	+1.4
BLLM	**Bellamira**	**1.36**	**79**	*e*P	Pn	00 35 37.7	+0.1
CNCH	**Conchagua**	**1.73**	**86**	*e*P	Pn	00 35 42.8	0.0
CNCH				*e*S	Sn	00 36 04.5	+0.9
FUG	**Fuego 3**	**1.74**	**317**	*e*P	Pn	00 35 43.9	+1.0
FUG				*e*S	Sn	00 36 04.8	+1.0
MRL	**Marmol**	**1.88**	**358**	*e*P	Pn	00 35 46.8	+2.0

NIED ***28*** *00:50:00, 38°.70N×140°.80E, h5km, Mw4.0 Best double couple: M0:9.96000×10^14 NP1:φ=235.00000°, δ63.00000°, λ146.00000°. NP2:φ=342.00000°, δ60.00000°, λ32.00000°.*
NEIC ***28*** *00:50:01.6, 38°.75N×140°.78E, h3km, mb4.2/16, After JMA.*
NEIC Recorded [3 JMA] in Miyagi, [2 JMA] in Iwate and [1 JMA] in Yamagata.
JMA ***28*** *00:50:01.5, 38°.75N×140°.78E, h3km±1km, M4.1 Broadband fault plane solution: P waves. NP1: φ=238.00000°, δ54.00000°, λ149.00000°. NP2: φ=347.00000°, δ66.00000°, λ40.00000°. Principal axes: T Plg45.0000°, Azm207.0000°; N Plg44.0000°, Azm13.0000°; P Plg7.0000°, Azm110.0000°;*
JMA Felt III J1.
ISCJB ***28*** *00:50:01.3±0.5, 38°.74N±0°.02×140°.80E±0°.03, h12km±3km, mb4.0/29, MS3.4/2 Error ellipse: s-maj=4.5km s-min=3.5km az=36.0*
IDC ***28*** *00:50:07.8±2.6, 38°.69N×140°.64E, h53km±23km, mb3.7/14, mb1 3.9/17, mb1mx3.8/27, mbtmp3.7/17, ML3.8/3, MS3.2/5, Ms1 3.2/5, ms1mx2.8/29, Error ellipse: s-maj=19.0km s-min=15.2km az=86.0*
ISC 28 00:50:01.8±0.4, 38°.74N±0°.02×140°.78E±0°.03, h6km±3km, n56, σ0°79/65, mb4.0/29, MS3.4/2, 4C-5D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.37**	**298**	⇓P	**Pg**	**00 50 08.8**	**-0.2**
JYK				S	**Sg**	**00 50 14.1**	**+0.2**
JOU	**Okura**	**0.39**	**194**	⇑P	**Pg**	**00 50 09.3**	**0.0**
JOU				S	**Sg**	**00 50 15.1**	**+0.8**
JMK	**Ichinoseki**	**0.40**	**59**	⇓P	**Pg**	**00 50 09.2**	**-0.3**
JMK				S	**Sg**	**00 50 14.9**	**+0.1**
JIO	**Ouri**	**0.53**	**123**	⇓P	**Pg**	**00 50 11.6**	**-0.4**
JIO				S	**Sg**	**00 50 19.0**	**+0.1**
JRG	**Rokugo**	**0.66**	**350**	⇓P	**Pg**	**00 50 14.3**	**-0.2**
JRG				S	**Sg**	**00 50 24.0**	**+0.9**
JYS	**Shiratake**	**0.77**	**227**	⇑P	**Pg**	**00 50 16.3**	**-0.2**
JYS				S	**Sg**	**00 50 26.8**	**+0.4**
JOM	**Ohasama**	**0.83**	**28**	⇑P	**Pg**	**00 50 17.0**	**-0.7**
JOM				S	**Sg**	**00 50 28.3**	**-0.2**
JYA	**Atsumi**	**0.85**	**260**	⇓P	**Pg**	**00 50 17.6**	**-0.5**
JYA				S	**Sg**	**00 50 29.3**	**+0.2**
JMM	**Marumori**	**0.88**	**179**	⇑P	**Pg**	**00 50 17.6**	**-1.0**
JMM				S	**Sg**	**00 50 29.4**	**-0.5**
MAJO	**Matsushiro**	**3.00**	**224**	*e*Pn	**Pn**	**00 50 50.4**	**+0.6**
MAT	**Matsushiro**	**3.00**	**224**	P	**Pn**	**00 50 50.4**	**+0.6**
MAT				*e*S	**Sn**	**00 51 27.4**	**+1.3**
MJAR	**Matsushiro Arr**	**3.00**	**224**	P	**Pn**	**00 50 50.6**	**+0.8**
	5.2nm,0.3s,baz=29,slow=13,SNR=31						
MJAR				S	**Sn**	**00 51 33.7**	**+7.7**
	5.6nm,0.3s,baz=47,slow=20,SNR=5.5						
MJAR				LR	LR	00 52 03.6	
	comp=Z,195nm,20.2s,baz=55,slow=40						
ERM	**Erimo**	**3.74**	**28**	*e*Pn	**Pn**	**00 51 02.6**	**+2.7**
ASAJ	**Asahikawa**	**5.54**	**14**	P	**Pn**	**00 51 28.2**	**+3.6**
	2.3nm,0.3s,baz=217,slow=12,SNR=6.9						
YSS	**Yuzh-Sakhalins**	**8.33**	**9**	*e*Pn	**Pn**	**00 52 06.4**	**+3.4**
KSRS	**Korea Array**	**10.22**	**267**	P	**Pn**	**00 52 32.3**	**+3.4**
	1.9nm,0.3s,baz=75,slow=14,SNR=24						
KSRS				S	**Sn**	**00 54 28.4**	**+4.7**
	0.3nm,0.3s,baz=76,slow=24,SNR=5.0						
KSRS				LR	LR	00 56 00.6	
	comp=Z,125nm,18.9s,baz=165,slow=35						
CBIJ	**Chichi jima**	**11.68**	**174**	LR	LR	00 57 20.1	
	comp=Z,63nm,18.0s,baz=291,slow=37						
SONM	**Songino Array**	**26.44**	**301**	P	**P**	**00 55 39.5**	**+0.3**
	0.4nm,0.6s,mb3.1,baz=101,slow=7.5,SNR=2.8						
SONM				LR	LR	01 06 35.0	
	comp=Z,60nm,19.2s,MS3.2,baz=266,slow=37						
ZAA0	**Zalesovo Array**	**40.41**	**311**	*e*P	**P**	**00 57 38.9**	**-1.5**
ZALV	**Zalesovo Beam**	**40.41**	**311**	P	**P**	**00 57 39.9**	**-0.5**
	1.5nm,0.6s,mb3.9,baz=94,slow=9.4,SNR=8.8						
CMAR	**Chiang Mai Arr**	**41.48**	**253**	P	**P**	**00 57 48.7**	**-1.0**
	0.4nm,0.3s,mb3.5,baz=43,slow=5.4,SNR=4.5						
MK31	**Makanchi Array**	**42.80**	**300**	*e*P	**P**	**00 57 59.1**	**-1.0**
MKAR	**Makanchi Array**	**42.80**	**300**	P	**P**	**00 57 59.7**	**-0.4**
	0.7nm,0.7s,mb3.5,baz=74,slow=14,SNR=3.7						
MKAR	**Makanchi Array**	**42.80**	**300**	P	**P**	**00 57 59.7**	**-0.4**
KURK	**Kurchatov**	**44.50**	**307**	P	**P**	**00 58 13.9**	**+0.2**
	2.7nm,0.8s,mb4.0,baz=82,slow=8.3,SNR=8.8						
KURK	**Kurchatov**	**44.50**	**307**	*e*P	**P**	**00 58 12.1**	**-1.7**
	2.8nm,0.7s,mb4.1						
TKM2	**Tokmak 2**	**48.40**	**297**	*e*P	**P**	**00 58 44.3**	**-0.1**
	1.5nm,0.6s,mb4.2						
BRVK	**Borovoye**	**49.12**	**311**	*e*P	**P**	**00 58 50.2**	**+0.3**
	1.9nm,0.

	baz=278						
ILA	**Ilan**	**0.43**	**291**	*e*P	**Pb**	**01 14 52.0**	**+0.2**
	baz=301						
ILA				S	**Sb**	**01 14 59.0**	**+0.6**
	baz=301						
TWB1	**Santiao Chiao**	**0.44**	**335⇑**	*i P*	**Pb**	**01 14 52.1**	**+0.2**
	baz=346						
TWB1				S	**Sb**	**01 14 59.2**	**+0.6**
	baz=346						
ENA	**Nanau**	**0.45**	**247**	*i* P	**Pb**	**01 14 51.5**	**-0.5**
	baz=246						
ENA				S	**Sb**	**01 14 59.0**	**+0.1**
	baz=246						
TWE	**Neicheng**	**0.49**	**283**	*i* P	**Pb**	**01 14 52.3**	**-0.3**
	baz=294						
TWE				S	**Sb**	**01 14 59.6**	**-0.3**
	baz=294						
ENTT	**Nioudou**	**0.57**	**273**	P	**Pn**	**01 14 53.5**	**-0.2**
	baz=281						
ENTT				S	**Sb**	**01 15 01.5**	**-0.4**
	baz=281						
NWF	**Wu-fen Shan**	**0.59**	**321**	P	**Pn**	**01 14 53.8**	**-0.3**
	baz=330						
NWF				S	**Sn**	**01 15 02.8**	**+0.2**
	baz=330						
TWA	**Mucha**	**0.67**	**304**	P	**Pn**	**01 14 54.9**	**-0.2**
	baz=321						
TWA				S	**Sn**	**01 15 03.9**	**-0.4**
	baz=321						
TAP1	**Taipei**	**0.75**	**305**	*e*P	**Pn**	**01 14 55.9**	**-0.3**
	baz=312						
TAP1				*e*S	**Sn**	**01 15 05.8**	**-0.5**
	baz=312						
TWD	**Chiawan**	**0.76**	**226**	P	**Pn**	**01 14 55.6**	**-0.7**
	baz=223						
TWD				*e*S	**Sn**	**01 15 06.3**	**-0.3**
	baz=223						
YOJ	**Yonaguni jima**	**0.76**	**101**	P	**Pn**	**01 14 56.0**	**-0.3**
YOJ				*e*S	**Sn**	**01 15 06.6**	**0.0**
NSK	**Sanguang**	**0.76**	**275⇑**	*i P*	**Pn**	**01 14 56.3**	**-0.1**
	baz=283						
NSK				S	**Sn**	**01 15 06.3**	**-0.4**
	baz=283						
NNS	**Nan Shan**	**0.77**	**258**	*e*P	**Pn**	**01 14 56.4**	**0.0**
	baz=259						
NNS				*e*S	**Sn**	**01 15 06.8**	**0.0**
	baz=259						
TWY	**Chenhua**	**0.86**	**321**	*e*P	**Pn**	**01 14 57.6**	**-0.1**
	baz=328						
TWY				*e*S	**Sn**	**01 15 09.3**	**+0.3**
	baz=328						
TWS1	**Kuangyinshan**	**0.86**	**305**	P	**Pn**	**01 14 57.4**	**-0.3**
	baz=319						
TWS1				*e*S	**Sn**	**01 15 08.2**	**-0.9**
	baz=319						
WHF	**Hehuan Shan**	**0.96**	**242⇑**	*i P*	**Pn**	**01 14 58.9**	**-0.3**
	baz=241						
WHF				S	**Sn**	**01 15 10.8**	**-0.9**
	baz=241						
TWT	**Tachien**	**0.99**	**249**	*e*P	**Pn**	**01 14 59.7**	**+0.1**
	baz=250						
TWT				S	**Sn**	**01 15 12.3**	**-0.1**
	baz=250						
ESL	**Shilin**	**1.05**	**221**	*e*P	**Pn**	**01 15 00.0**	**-0.4**
	baz=232						
ESL				*e*S	**Sn**	**01 15 12.7**	**-1.2**
	baz=232						
NSTT	**Nanjuang**	**1.09**	**271**	P	**Pn**	**01 15 01.4**	**+0.5**
	baz=274						
NSTT				S	**Sn**	**01 15 15.4**	**+0.7**
	baz=274						
NSY	**Sanyi**	**1.32**	**262**	*e*S	**Sn**	**01 15 21.4**	**+1.0**
	baz=263						
TWQ1	**Liyuntan**	**1.32**	**259**	*e*P	**Pn**	**01 15 05.1**	**+1.0**
	baz=260						
EHY	**Hungye**	**1.36**	**216**	*e*P	**Pn**	**01 15 02.9**	**-1.7**
	baz=213						
SMLT	**Sun Moon Lake**	**1.38**	**239**	P	**Pn**	**01 15 05.7**	**+0.7**
	baz=228						
SMLT				*e*S	**Sn**	**01 15 22.2**	**+0.1**
	baz=228						
TYC	**Yuchr**	**1.41**	**240**	*e*P	**Pn**	**01 15 05.6**	**+0.4**
	baz=231						
TYC				*e*S	**Sn**	**01 15 23.5**	**+0.9**
	baz=231						
IRIF	**Iriomote-Funau**	**1.43**	**101**	P	**Pn**	**01 15 05.4**	**-0.1**
IRIF				*e*S	**Sn**	**01 15 23.1**	**0.0**
TWF1	**Yuli**	**1.50**	**213**	P	**Pn**	**01 15 04.0**	**-2.5**
	baz=222						
HATJ	**Hateruma jima**	**1.57**	**110**	*e*S	**Sn**	**01 15 27.6**	**+1.0**
JKRS	**Kuro-shima**	**1.69**	**102**	P	**Pn**	**01 15 09.4**	**+0.2**
JKRS				*e*S	**Sn**	**01 15 30.0**	**+0.3**
CHN5	**Tsauling**	**1.71**	**234**	P	**Pn**	**01 15 09.7**	**+0.2**
	baz=220						
CHN5				*e*S	**Sn**	**01 15 30.8**	**+0.6**
	baz=220						
JIJ	**Ishigaki jima**	**1.79**	**97**	P	**Pn**	**01 15 10.2**	**-0.4**
JIJ				*e*S	**Sn**	**01 15 31.3**	**-0.8**
CHN4	**Tsaushan**	**1.93**	**230**	*e*P	**Pn**	**01 15 12.9**	**+0.5**
	baz=216						
CHN4				*e*S	**Sn**	**01 15 36.5**	**+1.1**
	baz=216						
WTP	**Ta-pu**	**1.98**	**227**	*e*P	**Pn**	**01 15 13.2**	**0.0**
	baz=214						
WTP				*e*S	**Sn**	**01 15 36.3**	**-0.5**
	baz=214						
TWK	**Hsinying**	**2.05**	**230**	*e*P	**Pn**	**01 15 15.9**	**+1.7**
	baz=217						
TWK				*e*S	**Sn**	**01 15 38.9**	**+0.3**
	baz=217						
CHN1	**Nanshi**	**2.08**	**227**	*e*P	**Pn**	**01 15 15.6**	**+1.1**
	baz=225						
CHN1				*e*S	**Sn**	**01 15 39.2**	**-0.1**
	baz=225						
SGST	**Jiashian**	**2.12**	**224**	*e*P	**Pn**	**01 15 15.3**	**+0.3**
	baz=213						
SGST				*e*S	**Sn**	**01 15 39.9**	**-0.3**
	baz=213						
JTJ	**Tarama**	**2.28**	**89**	*e*S	**Sn**	**01 15 44.4**	**+0.2**
SSD	**Sandimen**	**2.34**	**218**	*e*P	**Pn**	**01 15 19.1**	**+0.9**
	baz=215						
SSD				*e*S	**Sn**	**01 15 45.3**	**-0.5**
	baz=215						

KRSC 28 01:18:47.5±2.0, 50°55N×160°14E, h10km±10km, ML3.8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**2.55**	**358**	*e*S	Sn	01 20 02.3	+2.3
MIPR	**Malaya Ipel'ka**	**2.73**	**311**	*e*P	Pn	01 19 30.9	-0.5
AVH	**Avacha**	**2.85**	**343**	*e*P	Pn	01 19 35.6	+2.6
AVH				*e*S	Sn	01 20 10.6	+3.2
GNL	**Ganaly**	**3.43**	**338**	*e*P	Pn	01 19 41.9	+1.0
MKZ	**Mys Kozlova**	**4.13**	**13**	*e*P	Pn	01 19 51.6	+1.1
MKZ				*e*S	Sn	01 20 38.5	-0.3

*CSEM **28** 01:30:03.8±0.2, 38°15N×21°54E, h20km, MD3.0, Error ellipse: s-maj=5.0km s-min=3.6km az=155.0*
*ATH **28** 01:30:03.7, 38°12N×21°54E, h20km±2km, MD3.0/13*
*NEIC **28** 01:30:03.7, 38°12N×21°54E, h20km, MD3.0(ATH), After ATH.*
*THE **28** 01:30:04.1, 38°14N×21°55E, h5km±1km, ML2.5/7, Error ellipse: s-maj=1.7km s-min=0.7km az=343.0*
*ISCJB **28** 01:30:04.1±0.4, 38°12N±0°04×21°56E±0°03, h17km±4km, Error ellipse: s-maj=6.1km s-min=3.4km az=165.9*
ISC 28 01:30:04.0±0.4, 38°12N±0°04×21°55E±0°03, h17km±3km, n49, σ0°83/78, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.09**	**226**	*e*Pb	**Pg**	**01 30 07.3**	**-0.1**
RLS				*e*Sb	**Sg**	**01 30 10.2**	**+0.5**
RLS	**Riolos of Patr**	**0.09**	**226**	*e*PB	**Pg**	**01 30 07.2**	**-0.2**
RLS				*e*SB	**Sg**	**01 30 10.2**	**+0.5**
RLS	**Riolos of Patr**	**0.09**	**226**	*e*Pb	**Pg**	**01 30 07.3**	**-0.1**
RLS				*e*Sb	**Sg**	**01 30 10.2**	**+0.5**
UPR	**University Cam**	**0.25**	**49**	P	**Pg**	**01 30 09.6**	**+0.1**
UPR				S	**Sg**	**01 30 13.1**	**-0.2**
UPR	**University Cam**	**0.25**	**49**	*e*PB	**Pg**	**01 30 09.3**	**-0.2**
UPR				*e*SB	**Sg**	**01 30 14.9**	**+1.6**
UPR	**University Cam**	**0.25**	**49**	*e*Pb	**Pg**	**01 30 09.3**	**-0.2**
UPR	**University Cam**	**0.25**	**49**	P	**Pg**	**01 30 09.6**	**+0.1**
UPR				S	**Sg**	**01 30 13.1**	**-0.2**
UPR				*e*Sb	**Sg**	**01 30 14.9**	**+1.6**
LAKA	**Lakka**	**0.36**	**71**	P	**Pg**	**01 30 11.0**	**-0.4**
LAKA				S	**Sg**	**01 30 16.2**	**-0.3**
LAKA	**Lakka**	**0.36**	**71**	P	**Pg**	**01 30 11.0**	**-0.4**
LAKA				S	**Sg**	**01 30 16.2**	**-0.3**
EFP	**Efpalio**	**0.41**	**43**	P	**Pg**	**01 30 12.1**	**-0.3**
EFP				S	**Sg**	**01 30 18.2**	**+0.1**
EFP	**Efpalio**	**0.41**	**43**	*e*PB	**Pg**	**01 30 12.1**	**-0.3**
EFP				*e*SB	**Sg**	**01 30 19.2**	**+1.1**
EFP	**Efpalio**	**0.41**	**43**	*e*Pb	**Pg**	**01 30 12.1**	**-0.3**
EFP				S	**Sg**	**01 30 18.2**	**+0.1**
EFP				*e*Sb	**Sg**	**01 30 19.2**	**+1.1**
TRIZ	**Trizonia**	**0.48**	**59**	P	**Pg**	**01 30 13.1**	**-0.5**
TRIZ				S	**Sg**	**01 30 20.5**	**+0.4**
TRIZ	**Trizonia**	**0.48**	**59**	P	**Pg**	**01 30 13.1**	**-0.5**
TRIZ				S	**Sg**	**01 30 20.5**	**+0.4**
KALE	**Kalithea**	**0.54**	**60**	P	**Pg**	**01 30 14.0**	**-0.7**
KALE				S	**Sg**	**01 30 22.2**	**+0.3**
KALE	**Kalithea**	**0.54**	**60**	P	**Pg**	**01 30 14.0**	**-0.7**
KALE				S	**Sg**	**01 30 22.2**	**+0.3**
KFL	**Anninata**	**0.60**	**269**	P	**Pg**	**01 30 15.1**	**-0.8**
KFL				S	**Sg**	**01 30 24.9**	**+1.0**
GUR	**Goura**	**0.65**	**106**	P	**Pg**	**01 30 15.8**	**-1.0**
GUR				S	**Sg**	**01 30 25.9**	**+0.4**
GUR	**Goura**	**0.65**	**106**	*e*PB	**Pb**	**01 30 15.9**	**-1.0**
GUR				*e*SN	**Sg**	**01 30 26.7**	**+1.2**
GUR	**Goura**	**0.65**	**106**	*e*Pb	**Pb**	**01 30 15.9**	**-1.0**
GUR				S	**Sg**	**01 30 25.9**	**+0.4**
GUR				*e*Sn	**Sg**	**01 30 26.7**	**+1.2**
VLS	**Valsamata**	**0.76**	**274**	*e*Pb	**Pb**	**01 30 17.5**	**-1.2**
VLS				*e*Sn	**Sn**	**01 30 30.4**	**-0.6**
VLS	**Valsamata**	**0.76**	**274**	P	**Pb**	**01 30 17.3**	**-1.4**
VLS				S	**Sb**	**01 30 30.1**	**+1.3**
VLS	**Valsamata**	**0.76**	**274**	*e*PB	**Pb**	**01 30 17.5**	**-1.2**
VLS				*e*SN	**Sn**	**01 30 30.4**	**-0.6**
VLS	**Valsamata**	**0.76**	**274**	*e*Pb	**Pb**	**01 30 17.5**	**-1.2**
VLS				S	**Sb**	**01 30 30.1**	**+1.3**
VLS				*e*Sn	**Sn**	**01 30 30.4**	**-0.6**
EVR	**Evrytania**	**0.82**	**14**	*e*Pn	**Pn**	**01 30 19.9**	**-0.8**
EVR	**Evrytania**	**0.82**	**14**	*e*PN	**Pn**	**01 30 19.9**	**-0.8**
EVR	**Evrytania**	**0.82**	**14**	*e*Pn	**Pn**	**01 30 19.9**	**-0.8**
DSF	**Desfina**	**0.82**	**69**	P	**Pb**	**01 30 18.5**	**-1.3**
DSF				S	**Sb**	**01 30 31.1**	**+0.5**
DSF	**Desfina**	**0.82**	**69**	P	**Pb**	**01 30 18.5**	**-1.3**
DSF				S	**Sb**	**01 30 31.1**	**+0.5**
LKD2	**Lefkada island**	**0.97**	**314**	P	**Pb**	**01 30 21.5**	**-0.8**
LKD2	**Lefkada island**	**0.97**	**314**	P	**Pb**	**01 30 21.5**	**-0.8**
ITM	**Ithomi**	**0.99**	**162**	*e*Pn	**Pn**	**01 30 22.9**	**-0.1**
ITM	**Ithomi**	**0.99**	**162**	P	**Pb**	**01 30 22.1**	**-0.5**
ITM	**Ithomi**	**0.99**	**162**	*e*PN	**Pn**	**01 30 22.9**	**-0.1**
ITM	**Ithomi**	**0.99**	**162**	P	**Pb**	**01 30 22.1**	**-0.5**
ITM	**Ithomi**	**0.99**	**162**	*e*Pn	**Pn**	**01 30 22.9**	**-0.1**
AGG	**Agios Georgios**	**1.09**	**34**	*e*Pn	**Pn**	**01 30 24.4**	**0.0**
AGG	**Agios Georgios**	**1.09**	**34**	*e*PN	**Pn**	**01 30 24.4**	**0.0**
AGG	**Agios Georgios**	**1.09**	**34**	*e*Pn	**Pn**	**01 30 24.4**	**0.0**
LTK	**Loutraki**	**1.12**	**95**	*e*PN	**Pn**	**01 30 25.0**	**+0.1**
LTK	**Loutraki**	**1.12**	**95**	*e*Pn	**Pn**	**01 30 25.0**	**+0.1**
PYL	**PYLOS**	**1.23**	**173**	*e*PN	**Pn**	**01 30 27.6**	**+1.2**
PYL	**PYLOS**	**1.23**	**173**	*e*Pn	**Pn**	**01 30 27.6**	**+1.2**
LKR	**Lokris**	**1.25**	**65**	*e*Pn	**Pn**	**01 30 26.9**	**+0.2**
LKR	**Lokris**	**1.25**	**65**	*e*PN	**Pn**	**01 30 26.9**	**+0.2**
LKR	**Lokris**	**1.25**	**65**	*e*Pn	**Pn**	**01 30 26.9**	**+0.2**
DID	**Didima**	**1.47**	**114**	*e*PN	**Pn**	**01 30 31.3**	**+1.6**
DID	**Didima**	**1.47**	**114**	*e*Pn	**Pn**	**01 30 31.3**	**+1.6**
THL	**Klokotos Trika**	**1.48**	**14**	*e*PN	**Pn**	**01 30 31.9**	**+2.0**

*ISCJB **28** 01:37:46.6±0.7, 27°28N±0°04×103°23E±0°06, h10km, mb3.5/5, Error ellipse: s-maj=7.6km s-min=5.1km az=179.8*
*IDC **28** 01:37:48.6±1.1, 29°16N×105°81E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.5/24, mbtmp3.6/6, ML4.3/1, MS3.1/1, Ms1 3.1/1, ms1mx2.3/23, Error ellipse: s-maj=61.1km s-min=19.6km az=59.0*
*BJI **28** 01:37:50.3, 27°25N×102°84E, h12km, ML3.4/12, Ms7 3.2/2*
ISC 28 01:37:49.5±0.7, 27°26N±0°04×103°19E±0°06, h10km, n10, σ1°43/13, mb3.5/5, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**2.16**	**191**	Pg	**Pg**	**01 38 30.0**	**-1.0**
KMI				Sg	**Sg**	**01 38 59.8**	**+0.8**
KMI				smax			
	comp=N,140nm,0.9s						
KMI				smax			
	comp=E,170nm,0.9s						
GYA	**Guiyang**	**3.21**	**104**	Pg	**Pg**	**01 38 49.3**	**-1.7**
GYA				Sg	**Sg**	**01 39 32.5**	**-0.1**
GYA				smax			
	comp=N,100nm,0.8s						
GYA				smax			
	comp=E,60nm,0.7s						
CD2	**Chengdu**	**3.67**	**8**	Pn	**Pn**	**01 38 50.0**	**+3.7**
CD2				Pg	**Pg**	**01 39 00.0**	**+0.1**
CD2				Sn	**Sn**	**01 39 33.8**	**+4.1**
CD2				Sg	**Sg**	**01 39 48.0**	**+0.5**
CD2				smax			
	comp=N,310nm,0.8s						
CD2				smax			
	comp=E,270nm,0.7s						
CD2				LR	LR		
	comp=Z,300nm,8.3s						
CMAR	**Chiang Mai Arr**	**9.59**	**205**	Pn	Px	01 40 46.0	
	comp=Z,0.5nm,0.3s,baz=6.2,slow=17,SNR=6.3						
MKAR	**Makanchi Array**	**25.52**	**325**	P	**P**	**01 43 18.0**	**-0.1**
	comp=Z,0.4nm,0.5s,mb3.2,baz=113,slow=13,SNR=5.9						
KURK	**Kurchatov**	**29.96**	**328**	P	**P**	**01 43 55.7**	**-2.1**
	comp=Z,0.5nm,0.6s,mb3.4,baz=134,slow=10,SNR=4.3						
BVAR	**Borovoye Array**	**35.41**	**326**	LR	LR	02 00 07.7	
	comp=Z,30nm,19.3s,baz=110,slow=38						
WRA	**Warramunga Arr**	**55.79**	**144**	P	**P**	**01 47 29.8**	**+3.0**
	comp=Z,0.4nm,0.4s,mb3.8,baz=333,slow=8.4,SNR=12						
ASAR	**Alice Springs**	**58.68**	**147**	P	**P**	**01 47 50.2**	**+3.0**
	comp=Z,0.3nm,0.6s,mb3.5,baz=326,slow=6.9,SNR=5.2						
FINES	**FINESS Array B**	**60.33**	**327**	P	**P**	**01 47 56.7**	**-1.5**
	comp=Z,0.4nm,0.6s,mb3.6,baz=73,slow=7.0,SNR=3.9						

IDC 28 01:48:52.2±2.3, 10°67N×91°63E, h29km±7km, mb3.5/5, mb1 3.7/5, mb1mx3.3/23, mbtmp3.5/5, Error ellipse: s-maj=101.7km s-min=18.3km az=59.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.87**	**349**	P	P	01 55 58.5	+0.5
	0.9nm,0.6s,baz=148,slow=9.0,SNR=5.8						
MKAR				pP	pP	01 56 06.4	-0.2
	1.1nm,0.6s,baz=129,slow=8.1,SNR=6.9						
SONM	**Songino Array**	**39.08**	**16**	pP	pP	01 56 24.8	-0.4
	0.5nm,0.4s,baz=211,slow=7.9,SNR=1.8						
KURK	**Kurchatov**	**41.34**	**347**	P	P	01 56 35.4	+0.1
	0.6nm,0.7s,baz=173,slow=7.8,SNR=3.7						
WRA	**Warramunga Arr**	**51.89**	**126**	P	P	01 57 58.5	0.0
	0.6nm,0.6s,baz=307,slow=8.4,SNR=12						
ASAR	**Alice Springs**	**53.60**	**130**	P	P	01 58 10.3	-0.7
	0.4nm,0.7s,baz=296,slow=7.1,SNR=3.0						
ASAR				pP	pP	01 58 20.8	+0.9
	0.4nm,0.6s,baz=304,slow=6.8,SNR=2.6						
FINES	**FINESS Array B**	**69.10**	**332**	P	P	01 59 54.7	-0.7
	1.8nm,0.9s,baz=95,slow=8.8,SNR=3.3						

*ATH **28** 02:10:19.9, 36°05N×21°90E, h14km±3km, MD3.5/6*
*ISCJB **28** 02:10:19.7±0.6, 36°05N±0°03×21°77E±0°05, h10km, Error ellipse: s-maj=6.9km s-min=3.4km az=142.3*
*CSEM **28** 02:10:20.1±0.4, 36°07N×21°92E, h2km, ML3.8/8, Error ellipse: s-maj=8.8km s-min=3.9km az=50.0*
*THE **28** 02:10:20.1, 36°06N×21°79E, h3km±1km, ML3.8/8, Error ellipse: s-maj=2.6km s-min=1.1km az=245.0*
*NEIC **28** 02:10:21.2, 36°08N×21°98E, h5km, ML3.1(ATH), After ATH.*
ISC 28 02:10:20.9±0.6, 36°06N±0°03×21°85E±0°05, h10km, n121, σ0°98/141, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.84**	**354**	P	**Pg**	**02 10 35.4**	**-1.7**
PYL				S	**Sg**	**02 10 47.7**	**-0.3**
PYL	**PYLOS**	**0.84**	**354**	*e*PB	**Pg**	**02 10 35.5**	**-1.6**
PYL				*e*SB	**Sg**	**02 10 49.1**	**+1.1**
PYL	**PYLOS**	**0.84**	**354**	P	**Pg**	**02 10 35.4**	**-1.7**
PYL	**PYLOS**	**0.84**	**354**	*e*Pb	**Pg**	**02 10 35.7**	**-1.4**
PYL				S	**Sg**	**02 10 47.7**	**-0.3**
PYL				*e*Sb	**Sg**	**02 10 49.8**	**+1.8**
KYTH	**Kithira**	**0.99**	**77**	*e*Pb	**Pg**	**02 10 38.6**	**-1.3**
KYTH	**Kithira**	**0.99**	**77**	*e*PN	**Pg**	**02 10 38.5**	**-1.4**
KYTH	**Kithira**	**0.99**	**77**	*e*Pb	**Pg**	**02 10 38.6**	**-1.3**
VLI	**Veliai**	**1.10**	**53**	*e*Pb	**Pg**	**02 10 40.5**	**-1.5**
VLI	**Veliai**	**1.10**	**53**	*e*PB	**Pg**	**02 10 40.3**	**-1.7**
VLI				*e*SB	**Sg**	**02 10 55.0**	**-1.3**
VLI	**Veliai**	**1.10**	**53**	*e*Pb	**Pg**	**02 10 40.5**	**-1.5**
ITM	**Ithomi**	**1.12**	**3**	*e*Pg	**Pg**	**02 10 41.1**	**-1.3**
ITM	**Ithomi**	**1.12**	**3**	P	**Pg**	**02 10 40.9**	**-1.5**
ITM				S	**Sg**	**02 10 56.6**	**-0.4**
ITM	**Ithomi**	**1.12**	**3**	*e*PG	**Pg**	**02 10 40.9**	**-1.5**
ITM				*e*SB	**Sg**	**02 10 56.5**	**-0.5**
ITM	**Ithomi**	**1.12**	**3**	*e*Pg	**Pg**	**02 10 41.1**	**-1.3**
ITM				S	**Sg**	**02 10 56.6**	**-0.4**
VLX	**Vlachokerasia**	**1.38**	**18**	P	**Pn**	**02 10 44.9**	**-1.3**
VLX				S	**Sb**	**02 11 04.7**	**+0.3**
VLX	**Vlachokerasia**	**1.38**	**18**	*e*PN	**Pn**	**02 10 45.0**	**-1.2**
VLX	**Vlachokerasia**	**1.38**	**18**	P	**Pn**	**02 10 44.9**	**-1.3**
VLX				S	**Sb**	**02 11 04.7**	**+0.3**
KARN	**Karanos**	**1.81**	**111**	P	**Pn**	**02 10 51.7**	**-0.4**
KARN				S	**Sn**	**02 11 17.3**	**+2.3**
KARN	**Karanos**	**1.81**	**111**	P	**Pn**	**02 10 51.7**	**-0.4**
KARN				S	**Sn**	**02 11 17.3**	**+2.3**
DID	**Didima**	**1.82**	**37**	P	**Pn**	**02 10 52.3**	**0.0**
DID				S	**Sn**	**02 11 17.3**	**+1.8**
DID	**Didima**	**1.82**	**37**	*e*PG	**Pn**	**02 10 53.2**	**+0.9**
DID	**Didima**	**1.82**	**37**	P	**Pn**	**02 10 52.3**	**0.0**
DID	**Didima**	**1.82**	**37**	*e*Pg	**Pn**	**02 10 53.4**	**+1.1**
DID				S	**Sn**	**02 11 17.3**	**+1.8**
GUR	**Goura**	**1.91**	**12**	P	**Pn**	**02 10 54.9**	**+1.3**
GUR	**Goura**	**1.91**	**12**	*e*PN	**Pn**	**02 10 54.9**	**+1.3**
GUR	**Goura**	**1.91**	**12**	P	**Pn**	**02 10 54.9**	**+1.3**
GUR	**Goura**	**1.91**	**12**	*e*Pg	**Pn**	**02 10 55.3**	**+1.7**
RLS	**Riolos of Patr**	**2.02**	**351**	*e*Pn	**Pg**	**02 10 59.0**	**-0.6**
RLS	**Riolos of Patr**	**2.02**	**351**	*e*PN	**Pn**	**02 10 56.1**	**+1.1**
RLS	**Riolos of Patr**	**2.02**	**351**	*e*Pn	**Pg**	**02 10 59.0**	**-0.6**
VAM	**Vamos**	**2.02**	**108**	*e*Pn	**Pb**	**02 10 58.0**	**+0.3**
VAM	**Vamos**	**2.02**	**108**	*e*PN	**Pn**	**02 10 54.7**	**-0.3**
VAM	**Vamos**	**2.02**	**108**	*e*Pn	**Pb**	**02 10 58.0**	**+0.3**
NAIG	**Nisos Aigina**	**2.15**	**37**	*e*Pg	**Pb**	**02 10 59.7**	**-0.1**
NAIG	**Nisos Aigina**	**2.15**	**37**	*e*PN	**Pn**	**02 10 57.9**	**+1.2**
NAIG	**Nisos Aigina**	**2.15**	**37**	*e*Pg	**Pb**	**02 10 59.7**	**-0.1**
LTK	**Loutraki**	**2.15**	**24**	P	**Pn**	**02 10 57.1**	**+0.2**
LTK				S	**Sn**	**02 11 25.4**	**+1.8**
LTK	**Loutraki**	**2.15**	**24**	*e*PN	**Pn**	**02 10 58.5**	**+1.6**
LTK	**Loutraki**	**2.15**	**24**	P	**Pn**	**02 10 57.1**	**+0.2**
LTK	**Loutraki**	**2.15**	**24**	*e*Pn	**Pb**	**02 10 59.5**	**-0.5**
LTK				S	**Sn**	**02 11 25.4**	**+1.8**
LAKA	**Lakka**	**2.18**	**3**	P	**Pn**	**02 10 58.6**	**+1.4**
LAKA	**Lakka**	**2.18**	**3**	P	**Pn**	**02 10 58.6**	**+1.4**
GVD	**Gavdhos**	**2.20**	**123**	*e*Pn	**Pn**	**02 10 55.0**	**-2.4**
GVD	**Gavdhos**	**2.20**	**123**	P	**Pn**	**02 10 55.1**	**-2.3**
GVD	**Gavdhos**	**2.20**	**123**	P	**Pn**	**02 10 55.1**	**-2.3**
KFL	**Anninata**	**2.21**	**338**	P	**Pn**	**02 10 57.7**	**0.0**
TRIZ	**Trizonia**	**2.31**	**4**	P	**Pn**	**02 11 00.3**	**+1.3**
TRIZ	**Trizonia**	**2.31**	**4**	P	**Pn**	**02 11 00.3**	**+1.3**
KALE	**Kalithea**	**2.34**	**6**	P	**Pn**	**02 10 59.9**	**+0.5**
KALE	**Kalithea**	**2.34**	**6**	P	**Pn**	**02 10 59.9**	**+0.5**
VLS	**Valsamata**	**2.34**	**335**	*e*Pn	**Pg**	**02 11 03.9**	**-1.9**
VLS	**Valsamata**	**2.34**	**335**	P	**Pn**	**02 10 59.4**	**0.0**
VLS	**Valsamata**	**2.34**	**335**	P	**Pn**	**02 10 59.4**	**0.0**
VLS	**Valsamata**	**2.34**	**335**	*e*Pn	**Pg**	**02 11 03.9**	**-1.9**
EFP	**Efpalio**	**2.36**	**1**	P	**Pn**	**02 11 01.4**	**+1.7**
EFP	**Efpalio**	**2.36**	**1**	*e*PN	**Pb**	**02 11 02.0**	**-1.6**
EFP	**Efpalio**	**2.36**	**1**	P	**Pn**	**02 11 01.4**	**+1.7**
EFP	**Efpalio**	**2.36**	**1**	*e*Pn	**Pb**	**02 11 02.3**	**-1.3**
VLY	**Voula,Athens**	**2.37**	**40**	*e*Pn	**Pb**	**02 11 02.8**	**-0.9**
VLY	**Voula,Athens**	**2.37**	**40**	*e*Pn	**Pb**	**02 11 02.8**	**-0.9**
DSF	**Desfina**	**2.41**	**13**	P	**Pn**	**02 11 00.0**	**-0.4**
DSF	**Desfina**	**2.41**	**13**	P	**Pn**	**02 11 00.0**	**-0.4**
ATH	**Athens Observa**	**2.42**	**38**	*e*Pg	**Pb**	**02 11 04.8**	**+0.2**
ATH	**Athens Observa**	**2.42**	**38**	*e*Pg	**Pb**	**02 11 04.8**	**+0.2**
ATHU	**Athens Univers**	**2.46**	**39**	P	**Pn**	**02 11 00.7**	**-0.3**
ATHU	**Athens Univers**	**2.46**	**39**	P	**Pn**	**02 11 00.7**	**-0.3**
PTL	**Penteli**	**2.56**	**39**	*e*Pg	**Pb**	**02 11 06.7**	**-0.2**
PTL	**Penteli**	**2.56**	**39**	*e*PB	**Pn**	**02 11 03.0**	**+0.6**
PTL	**Penteli**	**2.56**	**39**	*e*Pg	**Pb**	**02 11 06.7**	**-0.2**
IDI	**Anoyia**	**2.59**	**106**	*e*Pg	**Pb**	**02 11 07.9**	**+0.4**
SIVA	**Sivas**	**2.63**	**112**	P	**Pn**	**02 11 04.8**	**+1.4**
SIVA	**Sivas**	**2.63**	**112**	P	**Pn**	**02 11 04.8

0.7nm,0.9s,mb3.3,baz=168,slow=7.4,SNR=2.4
KURK Kurchatov 41.56 348 *e*P **P 02 22 01.2 +2.3**
1.0nm,0.6s,mb3.6
ZALV Zalesovo Beam 43.77 354 P **P 02 22 15.8 -1.0**
0.4nm,0.3s,mb3.6,baz=182,slow=4.2,SNR=2.0
WRA Warramunga Arr 51.97 125 P **P 02 23 20.4 -0.4**
0.5nm,0.3s,mb3.9,baz=300,slow=10.0,SNR=16
ASAR Alice Springs 53.65 130 P **P 02 23 33.4 +0.3**
0.4nm,0.5s,mb3.6,baz=304,slow=7.3,SNR=5.4

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*ISCJB **28** 02:37:26.2±0.5, 35°.84N±0°.06×81°.9E±0°.1, h10km, mb3.3/2, MS3.0/2, Error ellipse: s-maj=16.7km s-min=5.3km az=155.0*
*IDC **28** 02:37:30.9±5.9, 36°.08N×81°.57E, h0km, mb3.3/2, mb1 3.6/6, mb1mx3.4/27, mbtmp3.6/6, ML3.5/4, MS2.8/4, Ms1 2.9/4, ms1mx2.5/22, Error ellipse: s-maj=84.1km s-min=38.4km az=7.0*
*NEIC **28** 02:37:32.6±2.5, 36°.13N×81°.57E, h10km, mb3.4/1, Error ellipse: s-maj=33.4km s-min=16.3km az=180.0*
*BJI **28** 02:37:33.9, 36°.31N×81°.88E, h12km, ML3.7/6, Ms3.3/1*
ISC 28 02:37:28.7±0.5, 35°.86N±0°.06×81°.9E±0°.1, h10km, n22, σ0°.82/20, mb3.3/2, MS3.0/2, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**5.95**	**310**	*e*Pn	**Pn**	**02 39 01.3**	**+4.4**
KSH				Sn	**Sn**	**02 40 06.0**	**+0.9**
KSH				smax			
	comp=N,140nm,1.0s						
KSH				smax			
	comp=E,240nm,1.0s						
KKN	**Kakani**	**8.54**	**159**	*e*P	**Pn**	**02 39 33.1**	**+0.6**
	comp=E,13nm,0.5s						
UCH	**Uchtor**	**8.57**	**320**	*e*Pn	**Pn**	**02 39 32.4**	**-0.4**
	comp=E,2.2nm,0.6s						
GUN	**Gumba**	**8.61**	**156**	*e*P	**Pn**	**02 39 32.9**	**-0.6**
	comp=E,18nm,0.5s						
DMN	**Daman**	**8.66**	**161**	*e*P	**Pn**	**02 39 33.8**	**-0.3**
	comp=E,12nm,0.7s						
PKIN	**Phulchoki**	**8.78**	**159**	*e*P	**Pn**	**02 39 36.6**	**+0.9**
	comp=E,14nm,0.5s						
PKI	**Pulchoki**	**8.79**	**159**	*e*P	**Pn**	**02 39 35.9**	**+0.1**
	comp=E,14nm,0.5s						
AAK	**Ala-Archa**	**8.87**	**322**	LR	LR	02 43 17.8	
	comp=E,29nm,18.6s,baz=210,slow=41						
JIRN	**Jiri**	**8.95**	**155**	*e*P	**Pn**	**02 39 37.6**	**-0.5**
	comp=E,40nm,0.4s						
MK31	**Makanchi Array**	**10.93**	**1**	*e*P	**Pn**	**02 40 06.5**	**+1.4**
MKAR	**Makanchi Array**	**10.93**	**1**	*e*Pn	**Pn**	**02 40 06.1**	**+1.0**
	comp=E,0.6nm,0.3s,baz=183,slow=9.4,SNR=10						
MKAR	**Makanchi Array**	**10.93**	**1**	Pn	**Pn**	**02 40 06.1**	**+1.0**
KURK	**Kurchatov**	**15.04**	**352**	Pn	**Pn**	**02 40 59.0**	**-2.2**
	comp=E,0.0nm,0.3s,baz=171,slow=12,SNR=4.5						
KURK				LR	LR	02 47 39.7	
	comp=E,31nm,18.7s,baz=180,slow=41						
KURK	**Kurchatov**	**15.04**	**352**	*e*P	**Pn**	**02 40 59.9**	**-1.3**
	comp=E,1.5nm,0.7s						
KURK				LR	LR	02 47 39.6	
ZALV	**Zalesovo Beam**	**18.20**	**6**	P	**Pn**	**02 41 41.5**	**+0.2**
	comp=E,0.4nm,0.3s,baz=187,slow=12,SNR=6.0						
BVAR	**Borovoye Array**	**18.99**	**338**	P	**Pn**	**02 41 50.1**	**-0.8**
	comp=E,0.2nm,0.3s,baz=146,slow=11,SNR=8.1						
BRVK	**Borovoye**	**19.05**	**338**	*e*P	**Pn**	**02 41 50.5**	**-1.1**
	comp=E,2.3nm,0.8s						
SONM	**Songino Array**	**21.71**	**49**	P	**P**	**02 42 24.4**	**+4.6**
	comp=E,0.7nm,0.6s,mb3.3,baz=242,slow=9.3,SNR=4.1						
AKTK	**Aktyubinsk**	**22.58**	**318**	P	**P**	**02 42 29.0**	**0.0**
AKTO	**Aktyubinsk**	**22.58**	**318**	P	**P**	**02 42 29.0**	**0.0**
	comp=E,1.0nm,0.6s,mb3.4,baz=115,slow=11,SNR=4.8						
EIL	**Elat**	**39.66**	**275**	LR	LR	03 04 37.0	
	comp=E,30nm,19.0s,MS3.2,baz=229,slow=41						
NOA	**NORSAR Array B**	**50.19**	**323**	LR	LR	03 06 54.2	
	comp=E,13nm,19.9s,MS3.0,baz=90,slow=35						

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*BJI **28** 02:39:25.6, 4°.80N×95°.10E, h24km, mB4.1/2, mb4.6/6*
*ISCJB **28** 02:39:29.1±0.5, 4°.77N±0°.09×95°.18E±0°.06, h54km, mb4.4/23, MS3.3/3, Error ellipse: s-maj=12.9km s-min=6.8km az=21.0*
*NEIC **28** 02:39:30.6±0.3, 4°.76N×95°.11E, mb4.6/4, Error ellipse: s-maj=11.1km s-min=5.8km az=221.0*
*IDC **28** 02:39:30.4±0.9, 4°.73N×95°.07E, h54km±6km, mb4.0/16, mb1 4.1/17, mb1mx4.0/27, mbtmp4.0/17, MS3.3/4, Ms1 3.3/4, ms1mx2.9/28, Error ellipse: s-maj=34.3km s-min=12.3km az=50.0*
ISC 28 02:39:31.1±0.5, 4°.76N±0°.08×95°.16E±0°.06, h56km, h56km±1.7km:pP-P, n64, σ0°.79/61, mb4.4/23, MS3.3/3, 4C-3D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**4.23**	**117**	P	**Pn**	**02 40 35.3**	**+2.2**
	3.4nm,0.3s,baz=304,slow=12,SNR=16						
PSI				LR	LR	02 42 36.3	
	comp=Z,430nm,19.5s,baz=297,slow=43						
PSI	**Prapat**	**4.23**	**117**	P	**Pn**	**02 40 35.3**	**+2.3**
PSI				LR	LR	02 42 36.3	
KULM	**Kulim**	**5.50**	**84**	*e*Pn	**Pn**	**02 40 50.4**	**0.0**
	24nm,0.6s						
KULM				*e*Sn	**Sn**	**02 41 52.3**	**0.0**
CMAR	**Chiang Mai Arr**	**14.11**	**15**	P	**Pn**	**02 42 55.4**	**+7.3**
	1.1nm,0.3s,baz=210,slow=11,SNR=32						
CHTO	**Chiang Mai**	**14.45**	**15**	*e*Pn	**Pn**	**02 42 52.6**	**0.0**
CHTO				*e*P		02 42 58.5	
XAN	**Xi'an**	**31.82**	**22**	P	**P**	**02 45 49.8**	**-0.7**
XAN				sP	sP	02 46 02.5	-8.8
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
XAN				pmax	pmax		
	comp=Z,11nm,4.8s						
GTA	**Gaotai**	**34.76**	**6**	*e*P	**P**	**02 46 15.8**	**-0.2**
GTA				pP	pP	02 46 22.8	-7.4
GTA				sP	sP	02 46 26.5	-10
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
FITZ	**Fitzroy Crossi**	**37.68**	**128**	P	**P**	**02 46 40.1**	**-1.1**
	comp=Z,4.1nm,0.9s,mb4.1,baz=343,slow=5.9,SNR=3.6						
ULHL	**Ulahol**	**40.96**	**338**	P	**P**	**02 47 09.1**	**+0.9**
	SNR=13						
KZA	**Kyzart**	**41.19**	**337**	P	**P**	**02 47 11.6**	**+1.4**
	SNR=9.0						
UCH	**Uchtor**	**41.60**	**337**	P	**P**	**02 47 14.8**	**+1.3**
	SNR=25						
UCH	**Uchtor**	**41.60**	**337**	*e*P	**P**	**02 47 14.3**	**+0.8**
	comp=Z,7.2nm,0.7s,mb4.4						
TKM2	**Tokmak 2**	**41.78**	**338**	P	**P**	**02 47 16.0**	**+1.1**
	SNR=7.0						
KBK	**Karagaybulak**	**41.80**	**338**	P	**P**	**02 47 16.7**	**+1.5**
	SNR=15						
AAK	**Ala-Archa**	**41.95**	**337**	P	**P**	**02 47 15.8**	**-0.6**
	comp=Z,5.3nm,0.6s,mb4.3,baz=152,slow=7.4,SNR=12						
EKS2	**Erkin-Say**	**42.26**	**336**	P	**P**	**02 47 19.9**	**+1.1**
	SNR=11						
USP	**Ospenovka**	**42.49**	**338**	P	**P**	**02 47 21.5**	**+0.7**
	SNR=16						
MK31	**Makanchi Array**	**43.33**	**347**	*e*P	**P**	**02 47 27.0**	**-0.5**
MKAR	**Makanchi Array**	**43.33**	**347**	P	**P**	**02 47 27.1**	**-0.5**
	comp=Z,1.7nm,0.4s,mb4.1,baz=198,slow=7.3,SNR=35						
MKAR				LR	LR	03 06 11.9	
	comp=Z,33nm,21.1s,MS3.2,baz=174,slow=37						
SONM	**Songino Array**	**43.99**	**11**	P	**P**	**02 47 32.5**	**-0.2**
	comp=Z,0.4nm,0.3s,mb3.6,baz=189,slow=8.7,SNR=4.0						
SONM				PcP	PcP	02 49 18.0	+0.3
	comp=Z,1.5nm,0.7s,baz=200,slow=2.9,SNR=5.5						
KSRS	**Korea Array**	**44.21**	**38**	LR	LR	03 05 59.4	
	comp=Z,28nm,18.2s,MS3.2,baz=200,slow=36						
WRA	**Warramunga Arr**	**45.67**	**124**	P	**P**	**02 47 46.5**	**0.0**
	comp=Z,16nm,0.9s,mb5.0,baz=302,slow=9.2,SNR=67						
ASAR	**Alice Springs**	**47.17**	**129**	P	**P**	**02 47 58.1**	**-0.2**
	comp=Z,2.6nm,0.8s,mb4.2,baz=300,slow=7.8,SNR=18						
KURK	**Kurchatov**	**47.86**	**346**	P	**P**	**02 48 03.0**	**-0.2**
	comp=Z,3.5nm,0.6s,mb4.5,baz=171,slow=7.0,SNR=21						
KURK				PcP	PcP	02 49 31.4	+0.2
	comp=Z,1.3nm,0.7s,baz=162,slow=3.0,SNR=4.0						
ZALV	**Zalesovo Beam**	**49.76**	**352**	P	**P**	**02 48 17.1**	**-0.6**
	comp=Z,3.8nm,0.6s,mb4.6,baz=183,slow=7.8,SNR=16						
BVAR	**Borovoye Array**	**52.25**	**341**	P	**P**	**02 48 36.3**	**-0.2**
	comp=Z,9.4nm,0.7s,mb4.8,baz=144,slow=8.5,SNR=46						
BVAR				pP	pP	02 48 51.1	-0.2
	comp=Z,3.1nm,0.7s,baz=145,slow=9.1,SNR=5.9						
BRVK	**Borovoye**	**52.31**	**341**	*e*P	**P**	**02 48 36.1**	**-0.8**
	comp=Z,7.6nm,0.7s,mb4.7						
AKTK	**Aktyubinsk**	**55.16**	**332**	P	**P**	**02 48 57.5**	**-0.2**
	comp=Z,0.7nm,0.4s,mb4.1,baz=126,slow=8.4,SNR=5.0						
BR131	**Keskin Array S**	**65.23**	**312**	*e*P	**P**	**02 50 05.8**	**-1.1**
	comp=Z,1.8nm,0.6s,mb4.3						
BR131				*e*pP	pP	02 50 21.5	-0.8
BRTR	**Keskin Array B**	**65.23**	**312**	P	**P**	**02 50 06.4**	**-0.5**
	comp=Z,2.4nm,0.7s,mb4.3,baz=129,slow=7.7,SNR=18						
BRTR				pP	pP	02 50 21.6	-0.8
	comp=Z,1.8nm,0.7s,baz=121,slow=7.2,SNR=9.8						
PETK	**Petropavlovsk-**	**69.95**	**35**	LR	LR	03 25 23.0	
	comp=Z,25nm,18.8s,MS3.5,baz=75,slow=39						
TLCR		**70.06**	**316**	⇧*i*P	**P**	**02 50 37.2**	**0.0**
TIRR	**Tirgusor**	**70.17**	**316**	⇧*i*P	**P**	**02 50 37.3**	**-0.6**
AKASG	**Malin Array Be**	**71.22**	**322**	P	**P**	**02 50 42.7**	**-1.4**
	comp=Z,2.7nm,0.6s,mb4.4,baz=90,slow=5.1,SNR=9.7						
AKASG	**Malin Array Be**	**71.22**	**322**	P	**P**	**02 50 42.7**	**-1.4**
VRI	**Vrincioaia**	**71.64**	**317**	⇧*i*P	**P**	**02 50 47.2**	**+0.4**
PLOR	**Plostina**	**71.69**	**317**	⇧*i*P	**P**	**02 50 48.2**	**+1.1**
MLR	**Muntele Rosu**	**72.10**	**316**	⇧*i*P	**P**	**02 50 50.5**	**+0.9**
VOIR		**72.71**	**316**	⇧*i*P	**P**	**02 50 53.0**	**-0.2**
BURAR	**Bucovina Array**	**73.03**	**318**	⇧*i*P	**P**	**02 50 55.4**	**+0.4**
BUR08	**Bucovina Ar. S**	**73.05**	**318**	*e*P	**P**	**02 50 55.1**	**0.0**
JOF	**Joensuu**	**74.08**	**335**	*e*p	**P**	**02 50 59.8**	**-1.1**
	comp=Z,2.9nm,0.4s,mb4.6						
JOF	**Joensuu**	**74.08**	**335**	*e*p	**P**	**02 50 59.8**	**-1.1**
	comp=Z,2.9nm,0.4s,mb4.6						
FINES	**FINESS Array B**	**75.92**	**332**	P	**P**	**02 51 10.9**	**-0.7**
	comp=Z,2.0nm,0.3s,mb4.5,baz=105,slow=5.4,SNR=39						
FINES				pP	pP	02 51 25.4	-1.9
	comp=Z,1.2nm,0.4s,baz=91,slow=5.6,SNR=3.1						
STHS	**Stebnicka Huta**	**75.95**	**320**	*e*P	**P**	**02 51 13.6**	**+1.6**
STHS	**Stebnicka Huta**	**75.95**	**320**	*e*P	**P**	**02 51 13.6**	**+1.6**
KAF	**Kangasniemi**	**76.01**	**333**	*e*p	**P**	**02 51 10.9**	**-1.1**
	comp=Z,2.2nm,0.5s,mb4.3						
KAF	**Kangasniemi**	**76.01**	**333**	*e*p	**P**	**02 51 10.9**	**-1.1**
	comp=Z,2.2nm,0.5s,mb4.3						
KECS	**Kecovo**	**76.31**	**319**	*e*P	**P**	**02 51 14.0**	**0.0**
KECS	**Kecovo**	**76.31**	**319**	*e*P	**P**	**02 51 14.0**	**0.0**
VYHS	**Vyhne**	**77.39**	**319**	*e*P	**P**	**02 51 19.9**	**-0.2**
VYHS	**Vyhne**	**77.39**	**319**	*e*P	**P**	**02 51 19.9**	**-0.2**
ARCES	**ARCESS Array B**	**78.52**	**340**	P	**P**	**02 51 26.0**	**0.0**
	comp=Z,1.4nm,0.4s,mb4.3,baz=95,slow=6.3,SNR=30						
NOA	**NORSAR Array B**	**82.93**	**331**	P	**P**	**02 51 48.3**	**-1.3**
	comp=Z,1.4nm,1.0s,mb4.0,baz=95,slow=5.0,SNR=3.0						
KEST	**Kesra**	**83.85**	**305**	P	**P**	**02 51 55.7**	**+0.7**
	comp=Z,0.5nm,0.9s,mb3.7,baz=90,slow=8.1,SNR=3.6						
KEST	**Kesra**	**83.85**	**305**	P	**P**	**02 51 55.7**	**+0.7**
LPG	**La Plagne**	**85.53**	**315**	*e*P	**P**	**02 52 03.3**	**+0.1**
	comp=Z,9.4nm,0.9s,mb4.7						
LPG	**La Plagne**	**85.53**	**315**	*e*P	**P**	**02 52 03.3**	**+0.1**
	comp=Z,4.7nm,0.9s,mb4.7						
LPL	**La Plagne**	**85.54**	**315**	*e*P	**P**	**02 52 03.4**	**+0.2**
HAU	**Haudompre**	**85.70**	**318**	*e*P	**P**	**02 52 03.2**	**-0.8**
CABF	**La Chapelle**	**85.94**	**316**	*e*P	**P**	**02 52 05.1**	**-0.1**
TXAR	**Lajitas Array**	**141.59**	**27**	PKP	PKPdf	02 58 57.5	+0.7
	comp=Z,0.3nm,0.6s,baz=352,slow=1.6,SNR=4.7						
CFAA	**Coronel Fontan**	**149.07**	**208**	PKPbc	PKPbc	02 59 13.3	-0.3
	comp=Z,0.3nm,0.7s,baz=89,slow=2.3,SNR=5.9						

IDC 28 02:44:16.0±6.1, 10°.76N×91°.74E, h29km±7km, mb3.5/3, mb1 3.7/3, mb1mx3.2/22, mbtmp3.5/3, Error ellipse: s-maj=313.3km s-min=20.4km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.79**	**349**	P	P	02 51 21.5	+0.4
	0.6nm,0.5s,baz=150,slow=7.5,SNR=4.6						
MKAR				pP	pP	02 51 29.4	-0.4
	1.4nm,0.8s,baz=158,slow=8.3,SNR=6.5						
KURK	**Kurchatov**	**41.27**	**347**	pP	pP	02 52 06.2	-1.1
	0.4nm,0.4s,baz=166,slow=7.3,SNR=4.7						
WRA	**Warramunga Arr**	**51.86**	**126**	P	P	02 53 22.3	+0.3
	0.6nm,0.5s,baz=306,slow=8.4,SNR=6.0						
WRA				pP	pP	02 53 31.5	+0.5
	0.5nm,0.5s,baz=304,slow=8.9,SNR=3.1						
ASAR	**Alice Springs**	**53.58**	**130**	P	P	02 53 33.9	-0.8
	1.0nm,0.7s,baz=310,slow=7.3,SNR=7.6						
ASAR				pP	pP	02 53 43.8	+0.1
	1.0nm,0.7s,baz=309,slow=7.3,SNR=5.5						

TRN 28 02:46:31.8, 15°.73N×61°.09W, h34km, MD3.0, M3.5(FDF), 5C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DWS	**Wesley**	**0.27**	**233**	*e*P	Pb	02 46 40.5	+1.2
DWS				*e*S	Sb	02 46 46.9	+2.6
MGG	**Marie-Galante**	**0.29**	**310**	⇧*i*P	Pb	02 46 40.4	+0.9
DLPL	**La Plaine**	**0.43**	**201**	*e*P	Pb	02 46 42.1	+0.8
DLPL				*e*S	Sb	02 46 52.0	+4.1
MDN	**Morne-Daniel**	**0.51**	**216**	*e*P	Pb	02 46 44.5	+2.0
MDN				*e*S	Sb	02 46 53.5	+3.5
DSTT	**Stowe**	**0.53**	**204**	*e*P	Pb	02 46 44.1	+1.3
DSTT				*e*S	Sb	02 46 52.9	+2.4
SFG	**Saint Francois**	**0.53**	**348**	*e*P	Pb	02 46 40.6	-2.3
DPMT	**Pointe Michel**	**0.55**	**211**	*e*P	Pb	02 46 45.3	+2.1
DPMT				*e*S	Sb	02 46 53.7	+2.8
TBG	**Guadaloupe-3**	**0.55**	**283**	*e*P	Pb	02 46 44.7	+1.4
DFBT	**Forest Bistro**	**0.55**	**208**	*e*P	Pb	02 46 44.8	+1.5
DFBT				*e*S	Sb	02 46 53.9	+2.7
DSHT	**Scott's Head**	**0.59**	**208**	*e*P	Pn	02 46 45.5	+1.8
DSHT				*e*S	Sb	02 46 54.4	+2.4
PHG	**Guadaloupe-2**	**0.61**	**298**	⇧*i*P	Pn	02 46 45.2	+1.2
BCG	**Bois Riant Cap**	**0.62**	**304**	*e*P	Pn	02 46 45.2	+0.9
HMG	**Houelmont**	**0.64**	**293**	⇧*i*P	Pn	02 46 45.8	+1.3
SCG	**Saint Claude**	**0.65**	**297**	⇧*i*P	Pn	02 46 45.8	+1.2
LZG	**Guadaloupe-1**	**0.78**	**302**	*e*P	Pn	02 46 47.7	+1.3
SEG	**Port Louis**	**0.78**	**329**	⇧*i*P	Pn	02 46 45.6	-0.8
FDF	**Fort de France**	**0.99**	**184**	*e*P	Pn	02 46 48.2	-1.2
FDF				*e*S	Sn	02 47 03.5	+1.3
MVM	**Montagne Vaucl**	**1.19**	**171**	*e*P	Pn	02 46 50.4	-1.5
MVM				*e*S	Sn	02 47 06.5	-0.5
BIM	**Bigot**	**1.21**	**179**	*e*P	Pn	02 46 51.3	-1.0
BIM				*e*S	Sn	02 47 08.7	+1.2
SLB	**Belfond**	**1.89**	**179**	*e*P	Pn	02 47 04.7	+3.0
SLB				*e*S	Sn	02 47 27.6	+3.2
MCLT	**Moule a Chique**	**2.02**	**176**	*e*S	Sn	02 47 28.9	+1.5
SKI	**Saint Kitts**	**2.25**	**315**	*e*P	Pn	02 47 08.0	+1.3
SKI				*e*S	Sn	02 47 35.9	+2.7
SVV	**Soufriere Volc**	**2.40**	**183**	*e*P	Pn	02 47 10.2	+1.4
SVV				*e*S	Sn	02 47 39.5	+2.5
SVB	**Belmont**	**2.45**	**184**	*e*P	Pn	02 47 12.0	+2.5
SVB				*e*S	Sn	02 47 39.8	+1.6

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*SOF **28** 03:04:30.7, 40°.80N×23°.85E, h10km, MD2.8*
*ATH **28** 03:04:31.5, 40°.84N×23°.84E, h17km±1km, MD3.5/4*
*CSEM **28** 03:04:31.3±0.1, 40°.82N×23°.87E, h2km, MD3.5, Error ellipse: s-maj=2.7km s-min=2.2km az=117.0*
*NEIC **28** 03:04:31.5, 40°.84N×23°.84E, h17km, MD3.5(ATH), After ATH.*
*ISCJB **28** 03:04:31.1±0.4, 40°.81N±0°.02×23°.85E±0°.02, h4km±3km, Error ellipse: s-maj=2.8km s-min=2.4km az=145.6*
*THE **28** 03:04:32.1, 40°.78N×23°.84E, h5km±1km, ML3.5/19, Error ellipse: s-maj=1.6km s-min=0.9km az=332.0*
*SKO **28** 03:04:32.1, 40°.87N×23°.89E, h8km, M2.7, ML2.9*
ISC 28 03:04:31.6±0.3, 40°.81N±0°.02×23°.86E±0°.02, h4km±2km, n136, σ0°.93/198, 14C, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOH	**Sokhos**	**0.38**	**272**	*e*Pb	**Pg**	**03 04 39.1**	**+0.1**
SOH	**Sokhos**	**0.38**	**272**	P	**Pg**	**03 04 39.0**	**0.0**
SOH				S	**Sg**	**03 04 44.2**	**+0.2**
SOH	**Sokhos**	**0.38**	**272**	*e*PB	**Pg**	**03 04 39.1**	**+0.1**
SOH	**Sokhos**	**0.38**	**272**	P	**Pg**	**03 04 39.0**	**0.0**
SOH				S	**Sg**	**03 04 44.2**	**+0.2**
OUR	**Ouranopolis**	**0.49**	**169**	P	**Pg**	**03 04 41.2**	**+0.2**
OUR				S	**Sg**	**03 04 48.0**	**+0.7**
OUR	**Ouranopolis**	**0.49**	**169**	P	**Pg**	**03 04 41.2**	**+0.2**
OUR				S	**Sg**	**03 04 48.0**	**+0.7**
KAVA	**Kavala**	**0.53**	**69**	P	**Pg**	**03 04 42.2**	**+0.4**
KAVA				S	**Sg**	**03 04 49.6**	**+0.9**
KAVA	**Kavala**	**0.53**	**69**	P	**Pg**	**03 04 42.2**	**+0.4**
KAVA				S	**Sg**	**03 04 49.6**	**+0.9**
NVR	**Nevrokopi**	**0.54**	**0**	P	**Pg**	**03 04 41.5**	**-0.5**
NVR	**Nevrokopi**	**0.54**	**0**	P	**Pg**	**03 04 41.5**	**-0.5**
PLG	**Polygyros**	**0.54**	**216**	⇧*i*Pn	**Pg**	**03 04 42.3**	**+0.3**
PLG				*e*Sn	**Sg**	**03 04 49.7**	**+0.7**
PLG	**Polygyros**	**0.54**	**216**	P	**Pg**	**03 04 42.3**	**+0.3**
PLG				S	**Sg**	**03 04 49.4**	**+0.4**
PLG	**Polygyros**	**0.54**	**216**	⇧*i*PN	**Pg**	**03 04 42.3**	**+0.3**
PLG				*e*SN	**Sg**	**03 04 49.7**	**+0.7**
PLG	**Polygyros**	**0.54**	**216**	P	**Pg**	**03 04 42.3**	**+0.3**
PLG				S	**Sg**	**03 04 49.4**	**+0.4**
HORT	**Hortiatis**	**0.62**	**250**	P	**Pg**	**03 04 43.5**	**+0.1**
HORT				S	**Sg**	**03 04 51.5**	**+0.1**
HORT	**Hortiatis**	**0.62**	**250**	P	**Pg**	**03 04 43.5**	**+0.1**
HORT				S	**Sg**	**03 04 51.5**	**+0.1**
THE	**Thessaloniki**	**0.70**	**255**	P	**Pg**	**03 04 44.9**	**-0.2**
THE				S	**Sg**	**03 04 54.2**	**0.0**
THE	**Thessaloniki**	**0.70**	**255**	P	**Pg**	**03 04 44.9**	**-0.2**
THE				S	**Sg**	**03 04 54.2**	**0.0**
MMB	**Musomiste**	**0.78**	**353**	*i* P	**Pg**	**03 04 45.8**	**-0.8**
MMB	**Musomiste**	**0.78**	**353**	*i* P	**Pg**	**03 04 45.8**	**-0.8**
PAIG	**Paliouri**	**0.90**	**189**	P	**Pg**	**03 04 48.4**	**-0.4**
PAIG	**Paliouri**	**0.90**	**189**	P	**Pg**	**03 04 48.6**	**-0.2**
PAIG				S	**Sg**	**03 05 00.6**	**+0.2**
PAIG	**Paliouri**	**0.90**	**189**	P	**Pg**	**03 04 48.6**	**-0.2**
PAIG				S	**Sg**	**03 05 00.6**	**+0.2**
RZN	**Rozhen**	**1.09**	**36**	P	**Pg**	**03 04 52.1**	**-0.4**
RZN	**Rozhen**	**1.09**	**36**	P	**Pg**	**03 04 52.1**	**-0.4**
VAY	**Valandovo**	**1.10**	**298**	⇧*i*Pg	**Pg**	**03 04 51.6**	**-1.1**
VAY				*e*Sg	**Sg**	**03 05 07.0**	**0.0**
VAY				*e*Lg		03 05 07.2	
	comp=N,198nm,0.3s						
VAY				*e*Lg		03 05 08.9	
	comp=E,189nm,0.3s						
VAY	**Valandovo**	**1.10**	**298**	P	**Pg**	**03 04 51.6**	**-1.1**
VAY				S	**Sg**	**03 05 07.7**	**+0.7**
VAY	**Valandovo**	**1.10**	**298**	P	**Pg**	**03 04 51.6**	**-1.1**
VAY				S	**Sg**	**03 05 07.7**	**+0.7**
KKB	**Krupnik**	**1.21**	**331**	P	**Pg**	**03 04 53.6**	**-1.1**
KKB	**Krupnik**	**1.21**	**331**	P	**Pg**	**03 04 53.6**	**-1.1**
RDO	**Rodhopi**	**1.31**	**75**	*e*Pn	**Pn**	**03 04 56.5**	**-0.2**
RDO	**Rodhopi**	**1.31**	**75**	*e*PN	**Pn**	**03 04 56.5**	**-0.2**
RDO	**Rodhopi**	**1.31**	**75**	*e*Pn	**Pn**	**03 04 56.5**	**-0.2**
LIA	**Limnos Island**	**1.36**	**132**	⇧*i*Pn	**Pn**	**03 04 56.8**	**-0.6**
LIA				*e*Sn	**Sn**	**03 05 17.1**	**+1.2**
LIA	**Limnos Island**	**1.36**	**132**	P	**Pn**	**03 04 56.5**	**-0.9**
LIA				S	**Sg**	**03 05 15.8**	**+0.4**
LIA	**Limnos Island**	**1.36**	**132**	⇧*i*PN	**Pn**	**03 04 56.8**	**-0.6**
LIA				*e*SN	**Sn**	**03 05 17.1**	**+1.2**
LIA	**Limnos Island**	**1.36**	**132**	P	**Pn**	**03 04 56.5**	**-0.9**
LIA	**Limnos Island**	**1.36**	**132**	⇧*i*Pn	**Pn**	**03 04 56.8**	**-0.6**
LIA				S	**Sg**	**03 05 15.8**	**+0.4**
LIA				*e*Sn	**Sn**	**03 05 17.1**	**+1.2**
PLD	**Plovdiv**	**1.44**	**26**	P	**Pn**	**03 04 59.0**	**+0.5**
PLD				S	**Sb**	**03 05 19.5**	**+1.9**
PLD	**Plovdiv**	**1.44**	**26**	P	**Pn**	**03 04 59.9**	**+1.4**
PLD	**Plovdiv**	**1.44**	**26**	P	**Pn**	**03 04 59.0**	**+0.5**
PLD				S	**Sb**	**03 05 19.5**	**+1.9**
KDZ	**Kurdzhali**	**1.44**	**54**	P	**Pn**	**03 04 56.8**	**-1.7**
KDZ	**Kurdzhali**	**1.44**	**54**	P	**Pn**	**03 04 56.8**	**-1.7**
XOR	**Xorichti**	**1.53**	**200**	P	**Pn**	**03 04 59.2**	**-0.5**
XOR	**Xorichti**	**1.53**	**200**	P	**Pn**	**03 04 59.0**	**-0.7**
XOR				S	**Sn**	**03 05 19.1**	**-1.0**
XOR	**Xorichti**	**1.53**	**200**	P	**Pn**	**03 04 59.2**	**-0.5**
XOR				S	**Sn**	**03 05 19.1**	**-1.0**
NEO	**Neokhori**	**1.58**	**198**	*e*Pb	**Pn**	**03 04 59.9**	**-0.5**
NEO				*e*Sn	**Sg**	**03 05 23.6**	**+1.2**
NEO	**Neokhori**	**1.58**	**198**	*e*PB	**Pn**	**03 04 59.9**	**-0.5**
NEO				*e*SN	**Sg**	**03 05 23.6

LKD2			S	Sn	03 06 01.4	+0.4
LKD2	**Lefkada island**	**3.19 232**	P	**Pn**	**03 05 24.1**	**+1.6**
LKD2			S	Sn	03 06 01.4	+0.4
KEK	**Kerkira**	**3.30 252**	P	**Pn**	**03 05 24.9**	**+0.9**
KEK	**Kerkira**	**3.30 252**	P	**Pn**	**03 05 24.9**	**+0.9**
BOLS	**Boljevac**	**3.33 336**	*e*Pn	**Pn**	**03 05 23.9**	**-0.5**
BOLS	**Boljevac**	**3.33 336**	*e*Pn	**Pn**	**03 05 23.9**	**-0.5**
DID	**Didima**	**3.34 189**	P	**Pn**	**03 05 24.0**	**-0.6**
DID			S	Sn	03 06 02.0	-2.6
DID	**Didima**	**3.34 189**	P	**Pn**	**03 05 24.0**	**-0.6**
DID			S	Sn	03 06 02.0	-2.6
VLS	**Valsamata**	**3.65 225**	P	**Pn**	**03 05 29.0**	**+0.1**
VLS	**Valsamata**	**3.65 225**	P	**Pn**	**03 05 29.0**	**+0.1**
GRUS	**Gruza**	**3.86 324**	*e*Pn	**Pn**	**03 05 31.4**	**-0.3**
GRUS	**Gruza**	**3.86 324**	*e*Pn	**Pn**	**03 05 31.4**	**-0.3**
ITM	**Ithomi**	**3.93 203**	P	**Pn**	**03 05 34.4**	**+1.7**
ITM			S	Sn	03 06 17.8	-1.4
ITM	**Ithomi**	**3.93 203**	P	**Pn**	**03 05 34.4**	**+1.7**
ITM			S	Sn	03 06 17.8	-1.4
APE	**Apeiranthos**	**3.96 160**	P	**Pn**	**03 05 32.4**	**-0.7**
APE	**Apeiranthos**	**3.96 160**	P	**Pn**	**03 05 32.4**	**-0.7**
PYL	**PYLOS**	**4.25 204**	P	**Pn**	**03 05 38.8**	**+1.7**
PYL	**PYLOS**	**4.25 204**	P	**Pn**	**03 05 38.8**	**+1.7**
DIVS	**Divibare**	**4.36 320**	*e*Pn	**Pn**	**03 05 40.2**	**+1.7**
DIVS	**Divibare**	**4.36 320**	P	**Pn**	**03 05 37.9**	**-0.6**
DIVS	**Divibare**	**4.36 320**	P	**Pn**	**03 05 37.9**	**-0.6**
DIVS	**Divibare**	**4.36 320**	*e*Pn	**Pn**	**03 05 40.2**	**+1.7**
BBLS	**Lazići**	**4.50 314**	*e*Pn	**Pg**	**03 06 00.8**	**+3.1**

IDC 28 03:10:20.1±1.6, 10°.68N×91°.57E, h26km±6km, mb3.4/7, mb1 3.5/7, mb1mx3.3/23, mbtmp3.4/7, Error ellipse: s-maj=69.9km s-min=19.2km az=61.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.84**	**349**	P	P	03 17 26.1	0.0
	0.7nm,0.6s,baz=156,slow=7.9,SNR=6.0						
MKAR				pP	pP	03 17 33.7	0.0
	1.8nm,0.8s,baz=149,slow=7.2,SNR=6.7						
SONM	**Songino Array**	**39.08**	**16**	P	P	03 17 44.8	-0.2
	0.3nm,0.5s,baz=232,slow=7.1,SNR=2.3						
KURK	**Kurchatov**	**41.31**	**348**	P	P	03 18 03.0	-0.4
	0.4nm,0.7s,baz=177,slow=5.5,SNR=2.4						
KURK				pP	pP	03 18 10.9	-0.2
	1.0nm,0.8s,baz=171,slow=7.5,SNR=3.6						
ZALV	**Zalesovo Beam**	**43.49**	**354**	P	P	03 18 21.6	+0.5
	0.7nm,0.6s,baz=183,slow=13,SNR=3.7						
ZALV				pP	pP	03 18 28.4	-0.5
	1.6nm,0.8s,baz=178,slow=8.8,SNR=3.5						
WRA	**Warramunga Arr**	**51.95**	**126**	P	P	03 19 26.8	-0.4
	0.3nm,0.7s,baz=305,slow=8.7,SNR=5.0						
ASAR	**Alice Springs**	**53.65**	**130**	P	P	03 19 40.1	+0.4
	0.6nm,0.7s,baz=303,slow=6.3,SNR=3.5						
FINES	**FINESS Array B**	**69.06**	**332**	P	P	03 21 22.8	-0.6
	1.0nm,0.7s,baz=126,slow=1.9,SNR=4.1						
FINES				pP	pP	03 21 31.8	+0.2
	1.5nm,0.8s,baz=98,slow=8.6,SNR=3.9						

JMA 28 03:17:52.4, 34°.31N×139°.14E, h8km±1km, M2.8, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKO	**Kozu shima**	**0.12**	**181**	P	Pg	03 17 55.3	+0.2
JKO				S	Sg	03 17 57.7	+0.7
JMY	**Miyakejima3**	**0.39**	**127**	P	Pg	03 18 00.3	+0.3
JIZS	**Izushimoda**	**0.46**	**332**	P	Pg	03 18 01.6	+0.2
JIM2	**Oshima 3**	**0.47**	**31**	P	Pg	03 18 01.8	+0.2
KTJJ	**Kamata 2**	**0.62**	**354**	P	Pg	03 18 04.1	-0.2
JOD2	**Odawara 2**	**0.95**	**357**	P	Pg	03 18 10.0	-0.7
TK03	**Tokai 3**	**0.98**	**262**	P	Pg	03 18 11.6	+0.3
TK04	**Tokai 4**	**1.05**	**274**	P	Pg	03 18 12.4	-0.2
SHZ3	**Shizuoka 3**	**1.07**	**315**	P	Pg	03 18 13.0	-0.1
MAT	**Matsushiro**	**2.35**	**341**	P	Pn	03 18 33.5	+2.2
MAT				*e*S	Sn	03 19 04.4	+4.0

NIED ***28*** *03:17:00, 34°.30N×139°.10E, h5km, Mw3.6 Best double couple: M₀3.19000×10¹⁴ NP1:ϕs=204.00000°, δ58.00000°, λ-42.00000°. NP2:ϕs=319.00000°, δ55.00000°, λ-140.00000°.*

JMA 28 03:18:00.9, 34°.31N×139°.14E, h5km±1km, M3.4, 2C, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKO	**Kozu shima**	**0.12**	**181**	P	Pg	03 18 03.6	+0.2
JKO				*e*S	Sg	03 18 05.8	+0.7
JMY	**Miyakejima3**	**0.39**	**127**	*e*S	Sg	03 18 14.1	+0.6
JIZS	**Izushimoda**	**0.46**	**332**	P	Pg	03 18 10.5	+0.7
JIZS				*e*S	Sg	03 18 16.5	+0.7
JIM2	**Oshima 3**	**0.47**	**31**	P	Pg	03 18 10.1	+0.1
JIM2				*e*S	Sg	03 18 16.7	+0.5
KTJJ	**Kamata 2**	**0.62**	**354**	*e*S	Sg	03 18 20.7	-0.1
JOD2	**Odawara 2**	**0.95**	**357**	⇑P	Pg	03 18 18.7	-0.5
JOD2				*e*S	Sg	03 18 32.8	+1.3
TK03	**Tokai 3**	**0.98**	**262**	P	Pg	03 18 19.8	0.0
TK03				*e*S	Sg	03 18 34.5	+2.0
TK04	**Tokai 4**	**1.05**	**274**	P	Pg	03 18 20.5	-0.5
TK04				*e*S	Sg	03 18 36.7	+2.1
SHZ3	**Shizuoka 3**	**1.07**	**315**	⇑P	Pg	03 18 20.9	-0.6
SHZ3				*e*S	Sg	03 18 36.4	+0.9
MAT	**Matsushiro**	**2.35**	**341**	P	Pn	03 18 40.7	+0.5
MAT				S	Sn	03 19 13.5	+4.0

ISCJB ***28*** *03:26:50.1±0.2, 10°.82N±0°.03×91°.86E±0°.02, h25km, mb4.8/160, MS4.5/55, Error ellipse: s-maj=4.1km s-min=3.0km az=34.6*

MOS ***28*** *03:26:51.7±0.9, 10°.93N×91°.88E, h33km, mb5.1/74, MS4.4/15, Error ellipse: s-maj=8.6km s-min=4.2km az=120.6*

BJI ***28*** *03:26:51.4, 10°.73N×91°.85E, h39km, mB5.0/33, mb4.8/48, Ms4.8/50, Ms7 4.5/44*

NEIC ***28*** *03:26:52.6±1.7, 10°.87N×91°.90E, h29km±11km, mb4.9/76, Error ellipse: s-maj=6.1km s-min=3.6km az=52.0*

IDC ***28*** *03:26:52.1±0.7, 10°.88N×91°.95E, h24km±4km, mb4.5/28, mb1 4.6/30, mb1mx4.5/32, mbtmp4.5/30, ML4.1/2, MS4.4/24, Ms1 4.4/24, ms1mx4.2/35, Error ellipse: s-maj=13.3km s-min=10.1km az=55.0*

TEH ***28*** *03:26:53.0, 10°.89N×91°.92E, h28km*

GCMT ***28*** *03:26:54.8±0.2, 10°.95N×92°.06E, h14km, MW5.1, Moment Tensor Solution. s45,c55; s79,c130; Moment tensor: Scale 10¹⁶Nm; Mrr-3.55±.15; Mθθ-0.15±.09; Mϕϕ3.70±.11; Mrθ1.34±.26; Mθϕ0.60±.08; Mϕr-3.21±.31; Best double couple: M₀5.10000×10¹⁶ NP1:ϕs=207.00000°, δ28.00000°, λ-55.00000°. NP2:ϕs=348.00000°, δ67.00000°, λ-107.00000°. Principal axes: T 4.9200, Plg21.0000°, Azm91.0000°; N 0.2800, Plg16.0000°, Azm355.0000°; P -5.1900, Plg64.0000°, Azm231.0000°; Data Used: II IU IC G CN.*

DJA ***28*** *03:26:55, 10°.75N×92°.00E, h44km, Mw5.3/16*

SZGRF ***28*** *03:27:03.5, 11°.96N×90°.35E, h29km, mb5.0, Andaman Islands, India, region*

ISC 28 03:26:52.4±0.2, 10°.86N±0°.03×91°.88E±0°.02, h26km, h26km±.8km: pP-P, n452, σ0°.93/448, mb4.8/160, MS4.5/55, 21C-25D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**1.16**	**47**	*e*PKP	x	03 28 20.3	
PBA				*e*S	x	03 28 36.4	
CMAR	**Chiang Mai Arr**	**10.18**	**41**	Pn	**Pn**	**03 29 16.9**	**0.0**
	0.6nm,0.3s,baz=235,slow=14,SNR=9.2						
CMAR				LR	LR	03 33 55.2	
	comp=Z,2μm,20.8s,baz=224,slow=42						
KULM	**Kulim**	**10.30**	**122**	*e*Pn	**Pn**	**03 29 18.7**	**+0.2**
	24nm,0.8s						
CHTO	**Chiang Mai**	**10.44**	**40**	*e*P	**Pn**	**03 29 21.7**	**+1.2**
PSI	**Prapat**	**10.63**	**138**	Pn	**Pn**	**03 29 21.6**	**-1.5**
	0.8nm,0.3s,baz=318,slow=8.7,SNR=5.0						
PSI				LR	LR	03 34 38.6	
	comp=Z,2μm,18.6s,baz=309,slow=44						
VIS	**Vishakhapatnam**	**10.73**	**310**	*e*PKP	**Pn**	**03 29 22.4**	**-2.0**
VIS				*e*S	**Sn**	**03 31 12.9**	**-11**
IPM	**Ipoh**	**11.06**	**124**	P	**Pn**	**03 29 28.3**	**-0.6**
FRIM	**Kepong**	**12.28**	**127**	P	**Pn**	**03 29 45.6**	**0.0**
KTGM	**Kuala Trenggan**	**12.42**	**115**	P	**Pn**	**03 29 49.0**	**+1.4**
AGT	**Agartala**	**12.96**	**357**	*ex*	**Pn**	**03 29 58.0**	**+3.1**
KGM	**Kluang**	**14.36**	**127**	P	**Pn**	**03 30 12.9**	**-1.2**
HYB	**Hyderabad**	**14.47**	**298**	*i* P	**Pn**	**03 30 14.5**	**-1.0**
SHL	**Shillong**	**14.63**	**0**	*ex*	x	03 32 50.0	
SHL				*ex*	x	03 33 22.0	
MYKOM	**Kota Tinggi**	**14.92**	**126**	P	**Pn**	**03 30 20.3**	**-1.4**
NGP	**Nagpur**	**16.01**	**311**	*e*PKP	**Pn**	**03 30 35.9**	**+0.1**
NGP				*ex*	x	03 33 37.9	
ODAN	**Odare**	**16.47**	**346**	*e*P	**Pn**	**03 30 40.8**	**-0.8**
	57nm,0.5s						
RAMN	**Ramite**	**16.76**	**343**	*e*P	**Pn**	**03 30 45.0**	**-0.3**
	104nm,0.5s						
TAPN	**Taplejung**	**16.86**	**347**	*e*P	**Pn**	**03 30 46.7**	**0.0**
	231nm,0.9s						
AKL	**Akola**	**17.32**	**306**	*e*PKP	**Pn**	**03 30 53.0**	**+0.7**
AKL				AMb	AMB	03 31 11.7	
	comp=Z,72nm,1.8s						
KMI	**Kunming**	**17.53**	**35**	⇑P	**Pn**	**03 30 56.5**	**+1.5**
KMI				pP	pP	03 31 03.3	+0.2
KMI				sP	sP	03 31 07.0	+0.5
KMI				PP		03 31 11.5	
KMI				S	**Sn**	**03 34 09.3**	**-0.2**
KMI				sS	sS	03 34 19.5	-8.7
KMI				SS		03 34 31.5	
KMI				PcP	PcP	03 35 36.8	+2.2
KMI				pmax	pmax		
	comp=Z,31nm,1.0s						
KMI				pmax	pmax		
	comp=Z,260nm,5.2s						
KMI				LR	LR		
	comp=N,2μm,17.0s						
KMI				LR	LR		
	comp=E,2μm,19.1s						
KMI				LR	LR		
	comp=Z,2μm,18.7s						
JIRN	**Jiri**	**17.55**	**343**	*e*P	**Pn**	**03 30 54.8**	**-0.3**
	comp=Z,123nm,0.8s						
PKI	**Pulchoki**	**17.70**	**341**	*e*P	**Pn**	**03 30 56.2**	**-0.9**
	comp=Z,92nm,0.6s						
PKIN	**Phulchoki**	**17.71**	**341**	*e*P	**Pn**	**03 30 56.3**	**-0.9**
DMN	**Daman**	**17.84**	**340**	*e*P	**Pn**	**03 30 56.5**	**-2.2**
	comp=Z,140nm,0.7s						
GUN	**Gumba**	**17.87**	**342**	*e*P	**Pn**	**03 30 57.3**	**-1.9**
	comp=Z,259nm,1.1s						
KKN	**Kakani**	**17.95**	**341**	*e*P	**Pn**	**03 30 58.4**	**-1.7**
	comp=Z,94nm,0.8s						
BHPL	**Bhopal**	**18.48**	**314**	*i* P	**Pn**	**03 31 07.3**	**+0.6**
BHPL				AMb	AMB	03 31 11.2	
	comp=Z,59nm,1.3s						
POO	**Poona**	**19.02**	**296**	*e*PKP	**Pn**	**03 31 13.7**	**+0.5**
POO				AMb	AMB	03 31 20.6	
	comp=Z,57nm,0.9s						
QIZ	**Qiongzhong**	**19.15**	**63**	P	**Pn**	**03 31 14.3**	**-0.5**
QIZ				S	**Sn**	**03 34 46.8**	**-2.0**
QIZ				sS	sS	03 35 00.0	-1.2
QIZ				pmax	pmax		
	comp=Z,420nm,7.5s						
QIZ				LR	LR		
	comp=N,1μm,18.8s						
QIZ				LR	LR		
	comp=Z,2μm,19.0s						
KSM	**Kuching**	**20.54**	**116**	P	**P**	**03 31 28.2**	**-0.9**
KSM	**Kuching**	**20.54**	**116**	*e*P	**P**	**03 31 28.1**	**-0.9**
	comp=Z,89nm,1.0s						
GYA	**Guiyang**	**20.87**	**40**	P	**P**	**03 31 32.0**	**-0.5**
GYA				pP		03 31 42.8	
GYA				PP		03 31 56.5	
GYA				S	**S**	**03 35 21.5**	**-2.5**
GYA				PcP	PcP	03 35 35.5	-4.9
GYA				SS		03 35 58.3	
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,190nm,5.1s						
GYA				LR	LR		
	comp=N,1μm,16.5s,MS4.5						
GYA				LR	LR		
	comp=E,1μm,14.3s,MS4.5						
GYA				LR	LR		
	comp=Z,2μm,16.5s,MS4.5						
PTH	**Pithoragarh**	**21.54**	**331**	*e*PKP	**P**	**03 31 41.3**	**+1.6**
SBUM	**Sibu**	**21.85**	**111**	P	**P**	**03 31 42.4**	**-0.7**
SBUM	**Sibu**	**21.85**	**111**	P	**P**	**03 31 42.5**	**-0.7**
SBUM	**Sibu**	**21.85**	**111**	P	**P**	**03 31 42.4**	**-0.7**
BTM	**Bintulu**	**22.36**	**108**	P	**P**	**03 31 49.9**	**+1.3**
NDI	**New Delhi**	**22.42**	**324**	*ex*	**P**	**03 31 46.5**	**-2.6**
NDI				*ex*	**S**	**03 35 50.5**	**-3.9**
AJM	**Ajmer**	**22.49**	**316**	*e*PKP	**P**	**03 31 50.7**	**+0.9**
AJM				AMb	AMB	03 31 56.1	
	comp=Z,114nm,1.2s,mb5.2						
CD2	**Chengdu**	**22.79**	**27**	⇑*i* P	**P**	**03 31 53.0**	**0.0**
CD2				pP		03 32 00.0	
CD2				sP	sP	03 32 03.5	-0.2
CD2				PP		03 32 22.0	
CD2				S	**S**	**03 35 56.0**	**-4.8**
CD2				SS		03 36 38.8	
CD2				pmax	pmax		
	comp=Z,90nm,1.6s,mb5.0						
CD2				pmax	pmax		
	comp=Z,160nm,5.2s						
CD2				LR	LR		
	comp=N,1μm,18.0s,MS4.6						
CD2				LR	LR		
	comp=E,1μm,18.0s,MS4.6						
CD2				LR	LR		
	comp=Z,1μm,15.6s,MS4.4						
KKM	**Kota Kinabalu**	**24.54**	**99**	P	**P**	**03 32 10.3**	**+0.3**
KKM	**Kota Kinabalu**	**24.54**	**99**	*e*P	**P**	**03 32 10.7**	**+0.7**
	comp=Z,28nm,1.0s,mb4.8						
SDNR	**Sundarnagar**	**24.74**	**328**	*e*PKP	**P**	**03 32 12.5**	**+0.8**
KDM	**Kudat**	**24.96**	**97**	P	**P**	**03 32 14.2**	**+0.3**
SDKM	**Sandakan**	**25.58**	**100**	P	**P**	**03 32 19.4**	**-0.2**
SDKM	**Sandakan**	**25.58**	**100**	P	**P**	**03 32 19.4**	**-0.2**
THN	**Thein Dam**	**26.13**	**328**	*ex*	x	03 32 35.1	
TSM	**Tawau**	**26.57**	**102**	P	**P**	**03 32 27.8**	**-0.7**
MYLDM	**Lahad Datu**	**26.95**	**100**	P	**P**	**03 32 32.2**	**+0.2**
MYLDM	**Lahad Datu**	**26.95**	**100**	P	**P**	**03 32 32.2**	**+0.2**
LZH	**Lanzhou**	**27.35**	**21**	*e*P	**P**	**03 32 36.3**	**+1.0**
LZH				pP	pP	03 32 45.8	+2.7
LZH				sP	sP	03 32 49.8	+3.4
LZH				PP		03 33 24.3	
LZH				*e*S	**S**	**03 37 12.5**	**-1.1**
LZH				sS	sS	03 37 28.3	+1.8
LZH				SS		03 38 30.5	
LZH				pmax	pmax		
	comp=Z,31nm,1.0s,mb4.8						
LZH				pmax	pmax		
	comp=Z,180nm,4.5s						
LZH				LR	LR		
	comp=E,2μm,13.5s						
LZH				LR	LR		
	comp=Z,2μm,16.3s,MS4.8						
XAN	**Xi'an**	**27.85**	**31**	P	**P**	**03 32 40.3**	**+0.6**
XAN				pP	pP	03 32 49.5	+1.9
XAN				sP	sP	03 32 53.5	+2.7
XAN				PP		03 33 29.8	
XAN				PcP	PcP	03 35 58.3	+2.8
XAN				S	**S**	**03 37 17.3**	**-4.2**
XAN				SS		03 38 38.5	
XAN				ScP	ScP	03 39 33.5	-1.2
XAN				PcS	PcS	03 39 38.3	+0.8
XAN				ScS	ScS	03 43 26.5	-0.4
XAN				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.9						
XAN				LR	LR		
	comp=N,930nm,21.6s,MS4.4						
XAN				LR	LR		
	comp=E,450nm,20.1s,MS4.4						
XAN				LR	LR		
	comp=Z,240nm,15.8s,MS3.9						
WHN	**Wuhan**	**28.62**	**44**	P	**P**	**03 32 54.5**	**+7.8**
WHN				S	**S**	**03 37 44.0**	**+10**
WHN				LR	LR		
	comp=N,2μm,11.4s,MS5.0						
WHN				LR	LR		
	comp=E,1μm,12.8s,MS5.0						
WHN				LR	LR		
	comp=Z,3μm,18.2s						
GTA	**Gaotai**	**29.30**	**13**	P	**P**	**03 32 53.8**	**+1.2**
GTA				pP	pP	03 33 01.0	+0.6
GTA				sP	sP	03 33 04.0	+0.4
GTA				PcP	PcP	03 36 00.3	+1.4
GTA				S	**S**	**03 37 44.3**	**+0.2**
GTA				sS	sS	03 37 57.3	+0.2
GTA				SS	SS	03 39 17.0	-32
GTA				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.5						
GTA				pmax	pmax		
	comp=Z,110nm,6.6s						
GTA				LR	LR		
	comp=N,430nm,18.8s,MS4.3						
GTA				LR	LR		
	comp=E,580nm,18.8s,MS4.3						
GTA				LR	LR		
	comp=Z,580nm,17.0s,MS4.3						
KBL	**Kabul**	**31.46**	**322**	*e*P	**P**	**03 33 12.8**	**+1.0**
KBL				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.8						
KBL	**Kabul**	**31.46**	**322**	*e*P	**P**	**03 33 12.8**	**+1.0**
	comp=Z,18nm,1.1s,mb4.8						
KSH	**Kashi**	**31.85**	**336**	⇓*i* P	**P**	**03 33 14.5**	**-0.7**
KSH				pP	pP	03 33 21.5	-1.5
KSH				sP	sP	03 33 25.0	-1.2
KSH				PP	PP	03 34 18.5	-8.9
KSH				PcP	PcP	03 36 07.8	+2.1
KSH				S	**S**	**03 38 19.3**	**-4.9**
KSH				ScP	ScP	03 39 48.0	+0.5
KSH				PcS	PcS	03 39 50.8	+0.6
KSH				SS	SS	03 40 07.3	-34
KSH				ScS	ScS	03 43 44.0	-1.7
KSH				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.0						
KSH				pmax	pmax		
	comp=Z,110nm,2.9s,mb5.2						
KSH				LR	LR		
	comp=N,560nm,12.5s,MS4.5						
KSH				LR	LR		
	comp=E,260nm,11.1s,MS4.5						
KSH				LR	LR		
	comp=Z,650nm,13.2s,MS4.5						
NJ2	**Nanjing**	**32.62**	**46**	*e*P	**P**	**03 33 25.0**	**+3.0**
NJ2				pP	pP	03 33 34.5	+4.6
NJ2				sP	sP	03 33 38.5	+5.4
NJ2				PP	PP	03 34 35.3	-0.7
NJ2				S	**S**	**03 38 40.0**	**+3.6**
NJ2				sS	sS	03 38 52.0	+2.7
NJ2				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.1						
NJ2				pmax	pmax		
	comp=Z,410nm,3.5s						
NJ2				LR	LR		
	comp=N,2μm,26.7s,MS5.0						
NJ2				LR	LR		
	comp=E,3μm,24.7s,MS5.0						
NJ2				LR	LR		
	comp=Z,790nm,21.9s,MS4.4						
WMQ	**Urumqi**	**33.04**	**354**	P	**P**	**03 33 27.0**	**+1.5**
WMQ				sP	sP	03 33 38.0	+1.4
WMQ				PP	PP	03 34 38.0	-2.5
WMQ				S	**S**	**03 38 43.0**	**+0.4**
WMQ				SS	SS	03 40 43.0	-22
WMQ				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.1						
WMQ				pmax	pmax		
	comp=Z,97nm,3.0s						
WMQ				LR	LR		
	comp=N,510nm,14.0s,MS4.8						
WMQ				LR	LR		
	comp=E,1μm,14.0s,MS4.8						
WMQ				LR	LR		
	comp=Z,500nm,14.0s,MS4.4						
SSE	**Sheshan**	**33.80**	**49**	*e*P	**P**	**03 33 29.3**	**-3.0**
SSE				S	**S**	**03 38 48.8**	**-5.9**
SSE				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.2						
SSE				pmax	pmax		
	comp=Z,76nm,3.5s						
SSE				LR	LR		
	comp=N,700nm,20.9s,MS4.5						
SSE				LR	LR		
	comp=E,510nm,20.9s,MS4.5						
SSE				LR	LR		
	comp=Z,910nm,17.2s,MS4.6						
ULHL	**Ulahol**	**34.13**	**339**	P	**P**	**03 33 36.0**	**+1.0**
	SNR=12						
KZA	**Kyzart**	**34.34**	**338**	P	**P**	**03 33 38.9**	**+2.0**
	SNR=12						
HHC	**Hu-ho-hao-te**	**34.55**	**27**	*e*P	**P**	**03 33 46.5**	**+7.8**
HHC				pP	pP	03 33 53.8	+7.2
HHC				sP	sP	03 33 57.3	+7.5
HHC				PP	PP	03 35 04.0	+6.7
HHC				PcP	PcP	03 36 21.0	+7.8
HHC				S	**S**	**03 39 12.5**	**+6.4**
HHC				sS	sS	03 39 26.5	+7.4
HHC				ScP	ScP	03 40 02.8	+5.9
HHC				PcS	PcS	03 40 05.8	+6.3
HHC				SS	SS	03 41 28.8	-7.6
HHC				ScS	ScS	03 44 04.8	+5.2
HHC				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.2						
HHC				pmax	pmax		
	comp=Z,130nm,5.9s						
HHC				LR	LR		
	comp=N,740nm,14.2s,MS4.7						
HHC				LR	LR		
	comp=E,370nm,10.7s,MS4.7						
HHC				LR	LR		
	comp=Z,740nm,15.6s,MS4.5						
UCH	**Uchtor**	**34.74**	**337**	P	**P**	**03 33 41.9**	**+1.5**
	SNR=18						
UCH	**Uchtor**	**34.74**	**337**	*e*P	**P**	**03 33 41.6**	**+1.3**
UCH				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
UCH	**Uchtor**	**34.74**	**337**	*e*P	**P**	**03 33 41.6**	**+1.3**
	comp=Z,10.0nm,0.7s,mb4.8						
TKM2	**Tokmak 2**	**34.95**	**339**	P	**P**	**03 33 43.2**	**+1.1**
	SNR=12						
TKM2	**Tokmak 2**	**34.95**	**339**	*e*P	**P**	**03 33 43.0**	**+0.9**
TKM2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
TKM2	**Tokmak 2**	**34.95**	**339**	*e*P	**P**	**03 33 43.0**	**+0.9**
	comp=Z,10nm,0.7s,mb4.9						
KBK	**Karagaybulak**	**34.95**	**338**	P	**P**	**03 33 44.0**	**+1.9**
	SNR=10						
AML	**Almayashu**	**34.98**	**336**	*e*P	**P**	**03 33 44.3**	**+1.9**
AML				pmax	pmax		
	comp=Z,46nm,0.7s,mb5.5						
AML	**Almayashu**	**34.98**	**336**	*e*P	**P**	**03 33 44.3**	**+1.9**
	comp=Z,46nm,0.7s,mb5.5						
AAK	**Ala-Archa**	**35.10**	**337**	P	**P**	**03 33 45.1**	**+1.7**
	SNR=11						
AAK	**Ala-Archa**	**35.10**	**337**	P	**P**	**03 33 44.7**	**+1.3**
	comp=Z,16nm,0.9s,mb4.9,baz=164,slow=6.2,SNR=28						
AAK				LR	LR	03 50 10.1	
	comp=Z,1μm,19.5s,MS4.6,baz=49,slow=40						
FRU	**Bishkek**	**35.23**	**338**	*e*P	**P**	**03 33 42.0**	**-2.5**
FRU				*e*	pP	03 33 51.0	-1.4
FRU				pmax	pmax		
	comp=Z,40nm,1.6s,mb5.1						
CHMS	**Chumysh**	**35.32**	**338**	P	**P**	**03 33 46.1**	**+0.9**
	SNR=6.5						
EKS2	**Erkin-Say**	**35.40**	**337**	P	**P**	**03 33 47.8**	**+1.8**
	SNR=18						
EKS2	**Erkin-Say**	**35.40**	**337**	*e*P	**P**	**03 33 47.5**	**+1.5**
EKS2				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
EKS2	**Erkin-Say**	**35.40**	**337**	*e*P	**P**	**03 33 47.5**	**+1.5**
	comp=Z,20nm,0.8s,mb5.1						
USP	**Ospenovka**	**35.64**	**338**	P	**P**	**03 33 49.0**	**+0.9**
	SNR=19	

comp=Z,366nm,18.3s,MS4.2,baz=162,slow=44
MKAR Makanchi Array 36.72 349 P **P** **03 33 57.5 +0.2**
MKAR *PP pP 03 34 04.5 -0.7
SONM Songino Array 38.83 16 P **P** **03 34 15.5 +0.5**
comp=Z,2.9nm,0.8s,mb4.1,baz=196,slow=9.1,SNR=15
SONM pP pP 03 34 21.9 -1.0
comp=Z,8.1nm,0.9s,baz=209,slow=7.1,SNR=14
SONM LR LR 03 53 37.8
comp=Z,868nm,18.2s,MS4.6,baz=287,slow=41
SONM Songino Array 38.83 16 P **P** **03 34 15.5 +0.5**
SONM *PP pP 03 34 21.9 -1.0
ULN Ulaanbaatar 39.03 16 *eP* **P** **03 34 17.8 +1.1**
ULN pmax pmax
comp=Z,29nm,1.6s,mb4.8
ULN Ulaanbaatar 39.03 16 *eP* **P** **03 34 17.8 +1.0**
comp=Z,29nm,1.6s,mb4.8
ULN Ulaanbaatar 39.03 16 ⇓P **P** **03 34 17.2 +0.5**
SNR=7.1
ULN ⇓P 03 34 17.2
SNR=7.1
IKRD Kardeh 39.62 316 *eP* **P** **03 34 15.8 -6.0**
IMEH Mehriz 40.04 306 *eP* **P** **03 34 22.6 -2.8**
ZAK Zakamensk 40.51 11 *eP* **P** **03 34 29.2 +0.2**
KURK Kurchatov 41.20 347 P **P** **03 34 34.3 -0.4**
comp=Z,30nm,1.1s,mb4.8,baz=172,slow=7.3,SNR=48
KURK pP pP 03 34 41.4 -1.3
comp=Z,15nm,0.7s,baz=169,slow=7.5,SNR=19
KURK ScP ScP 03 40 21.9 +0.1
comp=Z,0.2nm,0.5s,baz=156,slow=3.9,SNR=3.7
KURK Kurchatov 41.20 347*d iP* **P** **03 34 34.8 +0.1**
KURK pmax pmax
comp=Z,32nm,1.2s,mb4.8
KURK Kurchatov 41.20 347 *eP* **P** **03 34 34.9 +0.2**
comp=Z,35nm,1.1s,mb4.9
KURK Kurchatov 41.20 347 P **P** **03 34 35.2 +0.5**
SNR=18
KURK P 03 34 35.2
SNR=18
MOY Mondy 41.36 9 *eP* **P** **03 34 39.0 +3.0**
SNY Shenyang 41.49 36 ⇑P **P** **03 34 37.8 +0.6**
SNY pmax pmax
comp=Z,11nm,1.3s,mb4.3
SNY pmax pmax
comp=Z,230nm,3.3s
SNY LR LR
comp=N,800nm,17.3s,MS4.8
SNY LR LR
comp=E,750nm,14.3s,MS4.8
SNY LR LR
comp=Z,820nm,16.2s,MS4.7
KSRS Korea Array 41.80 45 P **P** **03 34 39.0 -0.8**
comp=Z,7.3nm,1.0s,mb4.2,baz=250,slow=8.9,SNR=14
KSRS pP pP 03 34 45.8 -2.0
comp=Z,4.8nm,0.7s,baz=242,slow=9.1,SNR=7.6
KSRS LR LR 03 53 47.1
comp=Z,791nm,18.9s,MS4.6,baz=240,slow=39
TLY Talaya 41.82 11 *eP* **P** **03 34 40.5 +0.8**
TLY *e* 03 36 13.4
TLY *e*PPP 03 36 38.4
TLY *e*S **S** **03 40 57.7 +2.0**
TLY *e*SS SS 03 43 57.7 -4.6
TLY pmax pmax
comp=Z,12nm,0.9s,mb4.5
TLY MLR MLR
comp=Z,360nm,18.0s,MS4.3
MBWA Marble Bar 41.97 139 *eP* **P** **03 34 39.6 -1.8**
MBWA Marble Bar 41.97 139 *eP* **P** **03 34 40.4 -1.0**
comp=Z,19nm,1.0s,mb4.7
IGAR Gharneh 42.45 307 *eP* **P** **03 34 45.7 +0.5**
IRK Irkutsk 42.47 11 *eP* **P** **03 34 47.6 +2.5**
IRK pmax pmax
comp=Z,34nm,2.0s,mb4.6
ISHM Shahmirzad 42.84 312 *eP* **P** **03 34 49.1 +0.7**
IFIR Firoozkooh 43.17 311 *eP* **P** **03 34 50.4 -0.6**
ZAA0 Zalesovo Array 43.34 354 *eP* **P** **03 34 51.7 -0.3**
ZALV Zalesovo Beam 43.34 354 P **P** **03 34 51.9 -0.2**
comp=Z,12nm,0.8s,mb4.7,baz=170,slow=9.0,SNR=40
ZALV pP pP 03 35 00.4 +0.3
comp=Z,11nm,0.6s,baz=178,slow=8.9,SNR=15
ZALV LR LR 03 56 16.1
comp=Z,391nm,21.0s,MS4.3,baz=177,slow=41
ZALV Zalesovo Beam 43.34 354 P **P** **03 34 51.9 -0.2**
ZALV *PP pP 03 35 00.4 +0.3
IPIR Pirpir 43.45 306 *eP* **P** **03 34 54.7 +1.4**
IDMV Damavand 43.68 311 *eP* **P** **03 34 55.8 +0.7**
CN2 Changchun 43.80 35 *eP* **P** **03 34 56.3 +0.4**
CN2 *e*pP pP 03 35 03.8 -0.2
CN2 *e*S **S** **03 41 25.0 -0.1**
CN2 *e*SS SS 03 44 33.5 -8.0
CN2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.7
CN2 pmax pmax
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,600nm,19.0s,MS4.6
CN2 LR LR
comp=E,500nm,19.0s,MS4.6
CN2 LR LR
comp=Z,500nm,17.0s,MS4.5
FITZ Fitzroy Crossi 44.03 130 *eP* **P** **03 34 56.5 -1.6**
comp=Z,104nm,0.9s,mb5.6
FITZ Fitzroy Crossi 44.03 130 P **P** **03 34 57.2 -0.9**
comp=Z,75nm,0.9s,mb5.4,baz=312,slow=5.5,SNR=54
FITZ LR LR 03 55 23.0
comp=Z,482nm,18.1s,MS4.5,baz=308,slow=39
FITZ Fitzroy Crossi 44.03 130 *eP* **P** **03 34 57.1 -1.0**
comp=Z,69nm,0.9s,mb5.4
IR3 Iran Long-Peri 44.39 310 *eP* **P** **03 34 58.3 -2.5**
NVS Novosibirsk 44.40 353 ⇑*iP* **P** **03 35 00.0 -0.6**
NVS *e* 03 36 51.1
NVS *e*S **S** **03 41 33.7 +0.3**
NVS pmax pmax
comp=N,56nm,2.0s
NVS pmax pmax
comp=E,18nm,2.0s
NVS pmax pmax
comp=Z,45nm,2.0s,mb4.8
NVS smax
comp=N,27nm,2.5s
NVS smax
comp=E,24nm,2.5s
RDF Al-Radifah 45.08 300 *eP* **P** **03 35 06.9 +0.4**
RDF AMb AMB 03 35 09.0
comp=Z,50nm,0.5s,mb5.6
BVAR Borovoye Array 45.47 342 P **P** **03 35 08.9 -0.2**
comp=Z,4.3nm,0.5s,mb4.5,baz=146,slow=8.6,SNR=28
MIB Mutribah 45.48 301 *eP* **P** **03 35 09.5 -0.1**
MIB AMb AMB 03 35 11.4
comp=Z,39nm,1.3s,mb5.1
BRVK Borovoye 45.53 342*d iP* **P** **03 35 09.1 -0.5**
BRVK pmax pmax
comp=Z,12nm,1.2s,mb4.7
BRVK Borovoye 45.53 342 *eP* **P** **03 35 09.2 -0.3**
comp=Z,7.8nm,0.8s,mb4.7
BRVK Borovoye 45.53 342 ⇑P **P** **03 35 09.8 +0.2**
SNR=6.9
BRVK ⇑P 03 35 09.8
SNR=6.9
KAKA Kakadu 46.58 119 *eP* **P** **03 35 19.9 +1.5**
comp=Z,13nm,0.8s,mb4.9
MDJ Mudanjiang 46.68 37 P **P** **03 35 20.3 +1.5**
MDJ pP pP 03 35 26.5 -0.4
MDJ PcP PcP 03 36 53.3 +1.1
MDJ PP PP 03 37 09.5 +0.8
MDJ ScP ScP 03 40 44.5 +0.2
MDJ PcS PcS 03 40 49.3 +2.4
MDJ S **S** **03 42 06.5 -0.2**
MDJ pmax pmax
comp=Z,10.0nm,1.8s,mb4.4
MDJ pmax pmax
comp=Z,88nm,4.3s
MDJ LR LR
comp=N,660nm,18.9s,MS4.6
MDJ LR LR
comp=E,210nm,18.9s,MS4.6
MDJ LR LR
comp=Z,800nm,16.8s,MS4.8
ATD Arta Tunnel 48.06 276 P **P** **03 35 31.2 +1.2**
comp=Z,9.6nm,0.8s,mb4.9,baz=17,slow=19,SNR=4.3
ATD LR LR 03 53 19.3
comp=Z,250nm,18.9s,MS4.2,baz=52,slow=33
MAT Matsushiro 48.91 51 P **P** **03 35 35.1 -1.1**
MAT S **S** **03 42 34.0 -4.6**
MJAR Matsushiro Arr 48.91 51 P **P** **03 35 36.1 -0.1**
comp=Z,1.7nm,0.7s,mb4.2,baz=228,slow=5.7,SNR=10
MJAR LR LR 03 58 29.6
comp=Z,407nm,18.5s,MS4.5,baz=265,slow=39
KLBR Kellerberrin 48.96 150 *eP* **P** **03 35 35.6 -1.0**
comp=Z,42nm,1.1s,mb5.4
NWAO Narrogin (SRO) 49.81 152 P **P** **03 35 43.4 +0.3**
comp=Z,21nm,0.9s,mb5.2,baz=289,slow=7.1,SNR=3.7
NWAO Narrogin (SRO) 49.81 152 P **P** **03 35 43.4 +0.3**
MAK Makhachkala 50.02 318 *eP* **P** **03 35 43.9 -0.7**
MAK *e* 03 37 02.1
MAK *e* 03 37 42.0
MAK *e*S **S** **03 43 00.9 +7.0**
MAK pmax pmax
comp=Z,119nm,1.2s,mb5.8
MAK MLR MLR
comp=Z,324nm,15.0s,MS4.5
KLR Kul'dur 50.53 33 *eP* **P** **03 35 50.3 +1.9**
KLR pmax pmax
comp=E,35nm,1.8s
KLR pmax pmax
comp=Z,42nm,1.8s,mb5.1
KLR MLR MLR
comp=Z,2μm,14.0s,MS5.2
GNI Garni 50.77 314 P **P** **03 35 50.7 +0.4**
comp=Z,35nm,0.9s,mb5.3,baz=105,slow=2.8,SNR=4.9
GNI Garni 50.77 314*d iP* **P** **03 35 50.9 +0.6**
GNI pmax pmax
comp=Z,58nm,1.0s
GNI Garni 50.77 314 *eP* **P** **03 35 51.4 +1.1**
comp=Z,52nm,1.0s,mb5.4
GNI Garni 50.77 314 ⇑P **P** **03 35 52.3 +1.9**
SNR=11
GNI ⇑P 03 35 52.3
SNR=11
WRA Warramunga Arr 51.81 126 P **P** **03 35 57.4 -1.0**
comp=Z,19nm,0.9s,mb5.0,baz=306,slow=8.4,SNR=77
WRAB Tennant Creek 51.81 126 *eP* **P** **03 35 57.3 -1.1**
WRAB pmax pmax
comp=Z,18nm,0.6s,mb5.2
WRAB Tennant Creek 51.81 126 *eP* **P** **03 35 57.3 -1.1**
comp=Z,18nm,0.6s,mb5.2
SVE Sverdlovsk 51.82 339⇑*eP* **P** **03 35 58.4 +0.5**
SVE *e* 03 37 04.5
SVE *e*S **S** **03 43 21.6 +3.2**
SVE *e*SS SS 03 46 52.9 -2.3
SVE pmax pmax
comp=Z,36nm,1.2s,mb5.2
SVE MLR MLR
comp=Z,871nm,23.0s,MS4.7
ARU Arti 52.29 337 *eP* **P** **03 36 01.4 0.0**
ARU pmax pmax
comp=Z,58nm,1.7s,mb5.2
ARU Arti 52.29 337 *eP* **P** **03 36 01.4 0.0**
comp=Z,58nm,1.7s,mb5.2
ZEI Tsey 52.35 316 *eP* **P** **03 36 02.3 +0.2**
ZEI pmax pmax
comp=Z,26nm,0.9s,mb5.2
CLNS Chul'man 52.47 22 *eP* **P** **03 36 03.0 +0.3**
CLNS *e*PP pP 03 36 09.4 -1.5
CLNS *e* 03 37 10.0
CLNS *e* 03 38 05.1
CLNS *e*S **S** **03 43 30.6 +3.2**
CLNS pmax pmax
comp=Z,12nm,0.8s,mb4.9
CLNS pmax pmax
comp=N,7.0nm,1.0s
CLNS pmax pmax
comp=E,11nm,1.0s
CLNS pmax pmax
comp=N,7.0nm,0.8s
CLNS pmax pmax
comp=E,7.0nm,0.9s
CLNS pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
CLNS smax
comp=N,47nm,10.8s
CLNS smax
comp=E,50nm,9.2s
CLNS MLR MLR
comp=N,183nm,12.0s,MS4.5
CLNS MLR MLR
comp=Z,221nm,15.0s,MS4.3
CLNS MLR MLR
comp=E,168nm,12.0s,MS4.5
OPO Ambohidratompo 52.90 237 P **P** **03 36 08.2 +1.7**
comp=E,2.4nm,0.8s,mb4.2,baz=58,slow=6.9,SNR=3.6
ASAR Alice Springs 53.53 130 P **P** **03 36 10.7 -0.4**
comp=E,11nm,0.8s,mb4.8,baz=306,slow=7.1,SNR=50
KIV Kislovodsk 53.62 317 *eP* **P** **03 36 12.4 +1.0**
KIV pmax pmax
comp=Z,56nm,1.0s,mb5.5
KIV Kislovodsk 53.62 317 *eP* **P** **03 36 12.4 +1.0**
comp=Z,56nm,1.0s,mb5.5
KIV Kislovodsk 53.62 317 P **P** **03 36 12.7 +1.3**
SNR=15
KIV P 03 36 12.7
SNR=15
FORT Forrest 54.05 141 *eP* **P** **03 36 15.3 +0.6**
comp=Z,28nm,0.8s,mb5.2
ASF Jabal al Asfar 54.74 302 LR LR 03 59 20.3
comp=Z,126nm,21.5s,MS4.0,baz=334,slow=36
SOKR Solikamsk 55.23 339⇓*iP* **P** **03 36 23.2 +0.4**
SOKR pmax pmax
comp=Z,20nm,1.0s,mb5.1
SOKR MLR MLR
comp=Z,730nm,24.0s,MS4.7
SOC Sochi 55.49 316 *eP* **P** **03 36 24.4 -0.7**
SOC *e*PP pP 03 36 32.0 -1.3
SOC *e*PPP 03 39 47.1
SOC *e*S **S** **03 44 07.1 -1.6**
SOC *e* 03 46 01.0
SOC pmax pmax
comp=Z,24nm,1.1s,mb5.1
SOC MLR MLR
comp=Z,265nm,19.0s,MS4.3
KMBO Kilima Mbogo 55.60 261 P **P** **03 36 26.4 +0.1**
comp=Z,2.3nm,0.8s,mb4.3,baz=20,slow=14,SNR=6.3
KMBO LR LR 03 56 45.7
comp=Z,299nm,20.3s,MS4.4,baz=87,slow=32
KMBO Kilima Mbogo 55.60 261 *eP* **P** **03 36 28.4 +2.0**
KMBO pmax pmax
comp=Z,10.0nm,1.2s
KMBO Kilima Mbogo 55.60 261 *eP* **P** **03 36 28.4 +2.0**
comp=Z,9.6nm,1.2s,mb4.7
MMAI Mount Meron Ar 56.13 302 P **P** **03 36 29.9 0.0**
comp=Z,4.0nm,0.9s,mb4.5,baz=101,slow=7.2,SNR=6.4
MMAI LR LR 04 02 45.4
comp=Z,323nm,20.4s,MS4.4,baz=220,slow=38
ANN Anapa 57.44 317 *eP* **P** **03 36 34.8 -4.1**
ANN *e*S **S** **03 44 29.6 -4.9**
ANN pmax pmax
comp=Z,23nm,1.2s,mb5.1
YAK Yakutsk 57.92 20 *eP* **P** **03 36 41.2 -0.8**
YAK *e*PP pP 03 36 48.6 -1.6
YAK *e* 03 37 33.4
YAK *e* 03 38 52.5
YAK *e*PPP 03 40 12.1
YAK *e*S **S** **03 44 38.7 -1.5**
YAK *e*SS sS 03 44 50.5 -3.2
YAK *e* 03 46 29.6
YAK *e*SS SS 03 48 31.7 +0.5
YAK pmax pmax
comp=E,6.0nm,0.9s
YAK pmax pmax
comp=Z,19nm,1.1s,mb5.0
YAK pmax pmax
comp=N,8.0nm,1.4s
YAK pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
YAK smax
comp=E,76nm,1.9s
YAK smax
comp=N,73nm,3.0s
YAK MLR MLR
comp=Z,249nm,14.0s,MS4.5
YAK MLR MLR
comp=N,214nm,19.0s
YAK MLR MLR
comp=E,220nm,12.0s
VORD Divnogorie 58.50 324 *eP* **P** **03 36 45.9 -0.3**
VSR Storozhevoye 58.68 324 *eP* **P** **03 36 46.9 -0.5**
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
VSR pmax pmax
comp=N,10.0nm,1.2s
VSR pmax pmax
comp=E,20nm,1.0s
VSR MLR MLR
comp=Z,230nm,14.0s,MS4.5
VSR MLR MLR
comp=N,170nm,12.0s
VSR MLR MLR
comp=E,420nm,19.0s
BR131 Keskin Array S 58.80 310 *eP* **P** **03 36 48.0 -0.6**
comp=E,5.3nm,0.7s,mb4.7
BRTR Keskin Array B 58.80 310 P **P** **03 36 47.6 -1.0**
comp=E,7.5nm,0.9s,mb4.7,baz=117,slow=7.1,SNR=40
BRTR LR LR 04 07 41.1
comp=E,97nm,18.3s,MS4.0,baz=91,slow=42
SIM Simferopol' 59.74 316*d iP* **P** **03 36 56.0 +1.1**
SIM *e*S **S** **03 45 15.0 +11**
SIM pmax pmax
comp=Z,11nm,0.7s,mb5.0
BBOO Buckleboo 60.51 138 *eP* **P** **03 37 00.2 -0.1**
comp=Z,14nm,1.1s,mb5.0
MOS Moscow 61.38 328 *eP* **P** **03 37 04.6 -1.3**
MOS *e* 03 37 49.6
MOS pmax pmax
comp=Z,55nm,1.0s,mb5.6
OBN Obninsk 61.68 328*d iP* **P** **03 37 08.0 +0.1**
OBN *e*PP pP 03 37 15.3 -0.9
OBN *e* 03 37 45.1
OBN *e* 03 39 25.3
OBN *e*S **S** **03 45 29.6 +0.9**
OBN pmax pmax
comp=Z,85nm,2.5s,mb5.4
OBN MLR MLR
comp=Z,200nm,18.0s,MS4.3
CTAO Charters Tower 61.71 120 *eP* **P** **03 37 09.0 +0.2**
CTAO pmax pmax
comp=Z,18nm,1.1s,mb5.1
CTAO Charters Tower 61.71 120 *eP* **P** **03 37 09.0 +0.2**
comp=Z,18nm,1.1s,mb5.1
TIRR Tirgusor 63.58 314 ⇑P **P** **03 37 20.6 -0.2**
TIRR Tirgusor 63.58 314⇑*iP* **P** **03 37 20.6 -0.2**
STKA Stephens Creek 63.77 134 *eP* **P** **03 37 22.8 +0.6**
comp=Z,4.9nm,0.5s,mb4.8
STKA Stephens Creek 63.77 134 P **P** **03 37 22.1 -0.2**
comp=Z,4.9nm,0.5s,mb4.8,baz=308,slow=10,SNR=11
STKA LR LR 04 06 05.5
comp=Z,414nm,18.8s,MS4.6,baz=120,slow=37
STKA Stephens Creek 63.77 134 *eP* **P** **03 37 23.3 +1.1**
LEOM Leova 64.10 316 P **P** **03 37 24.1 -0.1**
AKASG Malin Array Be 64.44 321 P **P** **03 37 25.0 -1.4**
comp=Z,2.1nm,0.5s,mb4.4,baz=91,slow=5.1,SNR=5.5
AKASG LR LR 04 07 13.0
comp=Z,289nm,21.8s,MS4.4,baz=105,slow=38
AKBB Malin Array Si 64.44 321 *eP* **P** **03 37 25.2 -1.2**
KIEV Kiev 64.45 321 *eP* **P** **03 37 25.0 -1.4**
KIEV pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
KIEV Kiev 64.45 321 *eP* **P** **03 37 25.0 -1.4**
comp=Z,3.9nm,0.7s,mb4.5
TIXI Tiksi 64.78 12 *eP* **P** **03 37 26.5 -1.7**
TIXI pmax pmax
comp=Z,28nm,1.3s,mb5.1
TIXI Tiksi 64.78 12 *eP* **P** **03 37 27.4 -0.9**
comp=Z,8.2nm,0.4s,mb5.1
VRI Vrincioaia 65.02 316 P **P** **03 37 31.1 +0.9**
VRI Vrincioaia 65.02 316⇓*iP* **P** **03 37 31.1 +0.9**
PLOR Plostina 65.07 316 ⇑P **P** **03 37 31.4 +0.9**
PLOR Plostina 65.07 316⇑*iP* **P** **03 37 31.4 +0.9**
TESR 65.19 316 P **P** **03 37 31.3 0.0**
TESR 65.19 316⇓*iP* **P** **03 37 31.2 -0.1**
MLR Muntele Rosu 65.49 315 P **P** **03 37 34.1 +0.8**
MLR Muntele Rosu 65.49 315⇓*iP* **P** **03 37 33.8 +0.5**
VOIR 66.10 315 P **P** **03 37 37.7 +0.4**
VOIR 66.10 315⇓*iP* **P** **03 37 37.1 -0.2**
BUR01 Bucovina Ar. S 66.35 317 P **P** **03 37 39.3 +0.5**
BURAR Bucovina Array 66.35 317 ⇑P **P** **03 37 39.0 +0.2**
BURAR Bucovina Array 66.35 317⇑*iP* **P** **03 37 39.0 +0.2**
BURAR Bucovina Array 66.35 317⇑*iP* **P** **03 37 39.0 +0.2**
BUR08 Bucovina Ar. S 66.36 317 *eP* **P** **03 37 38.8 -0.1**
CMSA Cobar Meteorol 66.56 131 *eP* **P** **03 37 40.7 +0.3**
PETK Petropavlovsk- 66.92 37 LR LR 04 09 35.4
comp=Z,251nm,18.7s,MS4.5,baz=250,slow=38
NACGM Naroch 66.94 325 *e* **P** **03 37 40.0 -2.4**
JOF Joensuu 67.21 334 *eP* **P** **03 37 43.5 -0.5**
JOF pmax pmax
comp=Z,12nm,0.5s,mb5.2
JOF Joensuu 67.21 334 *ep* **P** **03 37 43.5 -0.5**
comp=Z,12nm,0.5s,mb5.2
JOF Joensuu 67.21 334 *ep* **P** **03 37 43.5 -0.5**
comp=Z,12nm,0.5s,mb5.2
PET Petropavlovsk 67.47 37 *eP* **P** **03 37 46.9 +1.1**
PET *e*S S 03 46 40.6 +0.3
PET pmax pmax
comp=Z,100nm,13.6s
PET MLR MLR
comp=Z,600nm,20.0s,MS4.8
VSU Vasula 67.89 329*d iP* **P** **03 37 48.0 -0.4**
VSU pmax pmax
comp=Z,26nm,1.1s,mb5.2
LVZ Lovozero 68.00 340⇑*eP* **P** **03 37 49.4 +0.5**
LVZ pmax pmax
comp=Z,14nm,1.0s,mb5.0
LSZ Lusaka 68.21 249 P **P** **03 37 52.5 +1.3**
comp=Z,7.8nm,1.0s,mb4.7,baz=78,slow=5.5,SNR=11
LSZ Lusaka 68.21 249 *eP* **P** **03 37 52.7 +1.6**
LSZ pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
LSZ Lusaka 68.21 249 *eP* **P** **03 37 52.7 +1.5**
comp=Z,9.1nm,1.0s,mb4.8
APA Apatity 68.28 339⇓*iP* **P** **03 37 50.0 -0.7**
APA *i* 03 38 10.0
APA *e*S S 03 46 42.0 -7.6
APA pmax pmax
comp=Z,26nm,1.0s,mb5.2
APA MLR MLR
comp=Z,500nm,14.0s,MS4.9
KWP Kalwaria Pacla 68.32 319 *eP* **P** **03 37 51.1 -0.2**
KWP Kalwaria Pacla 68.32 319 *eP* **P** **03 37 51.3 0.0**
KWP pmax pmax
comp=Z,34nm,1.3s,mb5.2
KWP Kalwaria Pacla 68.32 319 *eP* **P** **03 37 51.2 0.0**
comp=Z,34nm,1.3s,mb5.2
KWP Kalwaria Pacla 68.32 319⇓*iP* **P** **03 37 51.4 +0.1**
UZH Uzhgorod 68.44 318 *eP* **P** **03 37 52.2 +0.2**
BZS Buzias 68.52 315 ⇓P **P** **03 37 52.2 -0.4**
BZS Buzias 68.52 315⇓*iP* **P** **03 37 52.2 -0.4**
SUW Suwalki 68.79 324 *eP* **P** **03 37 53.2 -0.8**
SUW Suwalki 68.79 324 *eP* **P** **03 37 53.5 -0.6**
SUW pmax pmax
comp=Z,54nm,1.1s,mb5.4
SUW Suwalki 68.79 324 *eP* **P** **03 37 53.5 -0.6**
comp=Z,54nm,1.1s,mb5.4
CRVS Cervenica-Dubn 69.03 318 *eP* **P** **03 37 55.5 -0.2**
CRVS pmax pmax
comp=Z,13nm,1.3s,mb4.7
CRVS Cervenica-Dubn 69.03 318 *eP* **P** **03 37 55.5 -0.2**
comp=Z,12nm,1.3s,mb4.7
CRVS Cervenica-Dubn 69.03 318 *eP* **P** **03 37 55.5 -0.2**
FINES FINESS Array B 69.04 332 P **P** **03 37 55.3 -0.2**
comp=Z,6.2nm,0.5s,mb4.8,baz=100,slow=6.2,SNR=49
FINES LR LR 04 13 45.0
comp=Z,241nm,18.4s,MS4.5,baz=285,slow=41
KAF Kangasniemi 69.13 333 *eP* **P** **03 37 54.9 -1.1**
KAF pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
KAF Kangasniemi 69.13 333 *ep* **P** **03 37 54.9 -1.1**
comp=Z,7.3nm,0.7s,mb4.7
KAF Kangasniemi 69.13 333 *ep* **P** **03 37 54.9 -1.1**
comp=Z,7.3nm,0.7s,mb4.7
STHS Stebnicka Huta 69.24 319 *eP* **P** **03 37 57.0 +0.1**
STHS pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
STHS Stebnicka Huta 69.24 319 *eP* **P** **03 37 57.0 +0.1**
comp=Z,2.9nm,0.8s,mb4.3
STHS Stebnicka Huta 69.24 319 *eP* **P** **03 37 57.0 +0.1**
TOO Toolangi 69.55 137 *eP* **P** **03 38 00.3 +1.3**
KECS Kecovo 69.62 318 *eP* **P** **03 37 59.1 -0.2**
KECS pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
KECS Kecovo 69.62 318 *eP* **P** **03 37 59.1 -0.2**
comp=Z,2.6nm,0.8s,mb4.2
KECS Kecovo 69.62 318 *eP* **P** **03 37 59.1 -0.2**
NIE Niedzica 69.84 319 *eP* **P** **03 38 01.0 +0.3**
PSZ Piszkesteto 69.95 317 *eP* **P** **03 38 00.9 -0.5**
PSZ pmax pmax
comp=Z,19nm,1.5s,mb4.8
PSZ Piszkesteto 69.95 317 *eP* **P** **03 38 00.9 -0.5**
comp=Z,19nm,1.5s,mb4.8
PSZ Piszkesteto 69.95 317⇓*eP* **P** **03 38 01.1 -0.3**

OJC Ojcow 70.27 320 *e*P **P 03 38 01.1 -2.2**
OJC *e*pP pP 03 38 10.4 -1.3
OJC *e*S S 03 47 14.3 +0.7
ARMA Armidale 70.54 128 *e*P **P 03 38 07.0 +1.7**
PKSM Moragy 70.64 315 ⇓P **P 03 38 04.7 -1.0**
PKSM Moragy 70.64 315 ⇓*i*P **P 03 38 04.7 -1.0**
VYHS Vyhne 70.71 318 *e*P **P 03 38 05.4 -0.6**
VYHS pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
VYHS Vyhne 70.71 318 *e*P **P 03 38 05.4 -0.6**
comp=Z,3.9nm,1.2s,mb4.2
VYHS Vyhne 70.71 318 *e*P **P 03 38 05.4 -0.6**
OKC Ostrava-Krasne 71.28 319 *e*P **P 03 38 09.2 -0.3**
OKC *e* pP 03 38 16.5 -1.4
OKC Ostrava-Krasne 71.28 319 *e*P **P 03 38 09.2 -0.3**
OKC *e*pP pP 03 38 16.5 -1.4
MORC Moravsky Berou 71.67 319 *e*P **P 03 38 11.6 -0.2**
MORC pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
MORC Moravsky Berou 71.67 319 *e*P **P 03 38 11.6 -0.2**
comp=Z,8.0nm,1.0s,mb4.6
MORC Moravsky Berou 71.67 319⇑*i*P **P 03 38 11.6 -0.2**
TIP Timpagrande 71.71 308 *e*P **P 03 38 12.5 +0.2**
comp=Z,9.7nm,1.1s,mb4.7
ARCES ARCESS Array B 71.72 340 P **P 03 38 12.0 +0.3**
comp=Z,6.7nm,0.9s,mb4.6,baz=98,slow=4.6,SNR=19
ARCES LR LR 04 11 37.8
comp=Z,538nm,21.8s,MS4.8,baz=295,slow=37
ZST Bratislava 71.84 317 *e*P **P 03 38 12.6 -0.2**
ZST pmax pmax
comp=Z,13nm,1.2s,mb4.7
ZST Bratislava 71.84 317 *e*P **P 03 38 12.6 -0.2**
comp=Z,13nm,1.2s,mb4.8
ZST Bratislava 71.84 317 *e*P **P 03 38 12.6 -0.2**
CEL Celeste 72.38 307 *e*P **P 03 38 16.8 +0.4**
comp=Z,23nm,1.0s,mb5.1
DPC Dobruska-Polom 72.50 319 *e*P **P 03 38 17.0 +0.2**
DPC *e* pP 03 38 24.0 -1.2
DPC Dobruska-Polom 72.50 319 *e*P **P 03 38 17.0 +0.2**
DPC *e*pP pP 03 38 24.0 -1.2
KSP Ksiaz 72.55 320 *e*P **P 03 38 17.3 +0.2**
KSP Ksiaz 72.55 320 *e*P **P 03 38 17.0 -0.1**
KSP *e**PP pP 03 38 25.8 +0.3
UPC Upice 72.71 320 *e*P **P 03 38 18.2 +0.2**
UPC *e* pP 03 38 24.4 -2.0
UPC Upice 72.71 320 *e*P **P 03 38 18.2 +0.2**
UPC *e*pP pP 03 38 24.4 -2.0
BOJS Bojanci 72.97 314 *i* P **P 03 38 18.9 -0.8**
TREC Trest 72.97 318 *e*P **P 03 38 19.1 -0.5**
TREC *e* pP 03 38 26.0 -2.0
TREC Trest 72.97 318 *e*P **P 03 38 19.1 -0.5**
TREC *e*pP pP 03 38 26.0 -2.0
PERS Pernice 73.10 315 *i* P **P 03 38 20.7 +0.3**
SOKA Soboth 73.16 316⇑*i*P **P 03 38 20.9 +0.1**
comp=Z,15nm,1.2s,mb4.8
PRU Pruhonice 73.62 319 *e*P **P 03 38 24.0 +0.6**
PRU *e* pP 03 38 30.7 -1.1
PRU Pruhonice 73.62 319 *e*P **P 03 38 24.0 +0.6**
PRU *e*pP pP 03 38 30.7 -1.1
PVCC Panska Ves 73.63 320 *e*P **P 03 38 23.5 +0.1**
PVCC *e* pP 03 38 30.9 -1.0
PVCC Panska Ves 73.63 320 *e*P **P 03 38 23.5 +0.1**
PVCC *e*pP pP 03 38 30.9 -1.0
LBTB Lobatse 73.75 240 *e*P **P 03 38 26.4 +1.8**
LBTB pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
LBTB Lobatse 73.75 240 *e*P **P 03 38 26.4 +1.7**
comp=Z,10nm,0.8s,mb4.8
SKDS Skadanscina 73.84 314 *i* P **P 03 38 23.4 -1.3**
BRG Berggiesshubel 74.04 320 *e*P **P 03 38 25.5 -0.4**
comp=Z,12nm,1.3s,mb4.7
BRG Berggiesshubel 74.04 320 *i* P **P 03 38 25.8 -0.1**
comp=Z,12nm,1.3s,mb4.7
BRG *i* pP 03 38 34.9 +0.6
comp=Z,8.7nm,1.1s
BRG S S 03 48 12.0 +15
GEC2 GERESS Array S 74.13 318 *e*P **P 03 38 25.9 -0.5**
comp=Z,12nm,1.2s,mb4.7
BILL Bilibino 74.16 22⇑*e*P **P 03 38 25.8 -0.4**
BILL pmax pmax
comp=Z,7.0nm,1.7s,mb4.3
BILL Bilibino 74.16 22 *e*P **P 03 38 26.5 +0.3**
comp=Z,5.2nm,0.6s,mb4.6
BILL *e*pP pP 03 38 34.4 -0.3
KHC Kasperske Hory 74.22 318 *e*P **P 03 38 26.3 -0.6**
KHC pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
KHC Kasperske Hory 74.22 318 *e*P **P 03 38 26.3 -0.6**
comp=Z,7.0nm,1.2s,mb4.5
KHC Kasperske Hory 74.22 318 *e*P **P 03 38 26.6 -0.3**
KHC *e*pP pP 03 38 32.4 -3.0
CLL Collm 74.65 320 *e*P **P 03 38 28.6 -0.8**
comp=Z,9.0nm,1.2s,mb4.6
CLL Collm 74.65 320⇓*i*P **P 03 38 28.9 -0.5**
CLL *i* pP 03 38 35.3 -2.5
CLL *e*S S 03 48 11.0 +7.3
CLL pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
CLL Collm 74.65 320⇓*i*P **P 03 38 28.9 -0.5**
comp=Z,10.0nm,1.3s,mb4.6
CLL LmH 03 17 00.0
comp=N,200nm,19.4s
CLL LmH 03 17 00.0
comp=E,100nm,20.2s
CLL *i* (pP) pP 03 38 35.3 -2.5
CLL *e*PcP PcP 03 38 44.0 +0.4
CLL *e*PP PP 03 41 18.0 +1.7
CLL *e* 03 46 06.0
CLL *e*S S 03 48 11.0 +7.3
CLL *e*PPS 03 48 52.0
CLL *e*SS SS 03 52 48.0 -2.9
CLL *e* 03 53 36.0
CLL *e* 03 57 12.0
CLL *e*SSSS 03 58 18.0
WET Wettzell 74.68 318 *e*P **P 03 38 29.4 -0.2**
comp=Z,12nm,1.3s,mb4.7
RJOB Jochberg 74.71 317 *e*P **P 03 38 28.6 -1.2**
comp=Z,7.0nm,1.2s,mb4.5
TANN Tannenbergstha 74.97 319 *e*P **P 03 38 30.9 -0.4**
comp=Z,10.0nm,1.3s,mb4.6
NKC Novy Kostel 74.98 319 *e*P **P 03 38 31.2 -0.1**
NKC *e* 03 38 36.7
NKC Novy Kostel 74.98 319 *e*P **P 03 38 31.2 -0.1**
NKC *e*pP pP 03 38 36.7 -3.0
ROTZ Rotzenmuhle 75.12 319 *e*P **P 03 38 32.7 +0.5**
comp=Z,17nm,1.3s,mb4.8
BOSA Boshof 75.31 237 P **P 03 38 34.6 +1.0**
comp=Z,13nm,0.8s,mb4.9,baz=82,slow=5.2,SNR=24
BOSA LR LR 04 08 26.2
comp=Z,400nm,18.3s,MS4.8,baz=247,slow=33
BOSA Boshof 75.31 237 *e*P **P 03 38 34.7 +1.1**
BOSA *e**PP pP 03 38 43.6 +1.5
BOSA pmax pmax
comp=Z,15nm,0.8s,mb5.0
BOSA Boshof 75.31 237 *e*P **P 03 38 34.7 +1.1**
comp=Z,15nm,0.8s,mb5.0
BOSA *e*pP pP 03 38 43.6 +1.6
MOX Moxa 75.51 320 *e*P **P 03 38 34.1 -0.3**
MOX
comp=Z,200nm,17.0s
MOX Moxa 75.51 320 *e*P **P 03 38 33.9 -0.5**
comp=Z,12nm,1.4s,mb4.6
FUR Furstenfeldbru 75.73 317 *e*P **P 03 38 35.3 -0.4**
comp=Z,81nm,2.6s,mb5.2
GRF Grafenberg Arr 75.76 319 *e*P **P 03 38 36.2 +0.4**
comp=Z,16nm,0.8s,mb5.0
GRF *e*pP pP 03 38 44.5 +0.2
GRF Grafenberg Arr 75.76 319 *e*P **P 03 38 36.2 +0.4**
GRF *e**PP pP 03 38 44.5 +0.2
GRF pmax pmax
comp=Z,16nm,0.8s,mb5.0
MOTA Moosalm 75.86 316⇑*e*P **P 03 38 35.8 -0.6**
comp=Z,7.6nm,0.8s,mb4.7
NOA NORSAR Array B 76.05 330 P **P 03 38 36.5 -0.7**
comp=Z,9.3nm,1.1s,mb4.6,baz=94,slow=5.6,SNR=18
NOA LR LR 04 19 27.5
comp=Z,170nm,19.2s,MS4.4,baz=105,slow=42
NAO01 NORSAR Array S 76.20 330 *e*P **P 03 38 37.6 -0.5**
comp=Z,5.9nm,0.8s,mb4.6
CLZ Clausthal 76.30 321 *e*P **P 03 38 38.7 -0.1**
comp=Z,16nm,1.3s,mb4.8
BSEG Bad Segeberg 76.34 323 *e*P **P 03 38 39.2 +0.2**
comp=Z,26nm,1.3s,mb5.0
NRDL Niedersach Rie 76.46 322 *e*P **P 03 38 39.8 +0.1**
comp=Z,20nm,1.3s,mb4.9
DAVA Damuels 76.69 316⇓*i*P **P 03 38 41.0 -0.2**
comp=Z,9.7nm,0.6s,mb4.9
TUE Stuetta 77.08 315 *e*P **P 03 38 43.2 -0.1**
comp=Z,7.0nm,0.9s,mb4.6
PGF Pioggiola 77.52 311 *e*P **P 03 38 45.1 -0.8**
comp=Z,28nm,1.0s,mb4.8
PGF Pioggiola 77.52 311 *e*P **P 03 38 45.1 -0.8**
PGF pmax pmax
comp=Z,14nm,1.0s,mb4.8
PGF Pioggiola 77.52 311 *e*P **P 03 38 45.1 -0.8**
comp=Z,14nm,1.0s,mb4.8
TNS Taunus Mts 77.55 319 *e*P **P 03 38 45.9 0.0**
comp=Z,14nm,1.1s,mb4.8
BFO Black Forest 77.70 317 *e*P **P 03 38 46.6 -0.2**
comp=Z,11nm,1.3s,mb4.6
BFO Black Forest 77.70 317 *e*P **P 03 38 46.2 -0.6**
BFO pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
BFO Black Forest 77.70 317 *e*P **P 03 38 46.2 -0.5**
comp=Z,7.0nm,1.0s,mb4.5
KEST Kesra 77.72 304 P **P 03 38 47.3 +0.1**
comp=Z,6.2nm,1.0s,mb4.5,baz=56,slow=2.2,SNR=15
KEST LR LR 04 20 06.8
comp=Z,57nm,18.0s,MS3.9,baz=215,slow=41
KEST Kesra 77.72 304 *e*P **P 03 38 47.2 +0.1**
KEST *e*pP pP 03 38 56.0 +0.4
IBBN Ibbenburen 77.90 321 *e*P **P 03 38 47.9 +0.1**
comp=Z,31nm,1.3s,mb5.1
CASY Casey 78.15 172 *e*P **P 03 38 48.5 -0.3**
comp=Z,16nm,1.6s,mb4.7
BUG Bochum--Univer 78.24 320 *e*P **P 03 38 50.0 +0.3**
comp=Z,35nm,1.5s,mb5.1
CDF Champ du Feu 78.39 317 *e*P **P 03 38 49.9 -0.8**
comp=Z,18nm,1.1s,mb4.6
CDF Champ du Feu 78.39 317 *e*P **P 03 38 49.9 -0.8**
CDF pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
CDF Champ du Feu 78.39 317 *e*P **P 03 38 49.9 -0.8**
comp=Z,9.2nm,1.1s,mb4.6
SBF Sospel 78.58 313 *e*P **P 03 38 51.0 -0.8**
comp=Z,16nm,0.8s,mb4.7
SBF Sospel 78.58 313 *e*P **P 03 38 51.0 -0.8**
SBF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
SBF Sospel 78.58 313 *e*P **P 03 38 51.0 -0.8**
comp=Z,7.8nm,0.8s,mb4.7
HINF Hinteralfeld 78.71 317 *e*P **P 03 38 51.5 -0.9**
LPG La Plagne 78.94 314 *e*P **P 03 38 53.7 0.0**
comp=Z,18nm,0.7s,mb4.8
LPG La Plagne 78.94 314 *e*P **P 03 38 53.7 0.0**
LPG pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
LPG La Plagne 78.94 314 *e*P **P 03 38 53.7 0.0**
comp=Z,8.8nm,0.7s,mb4.8
LPL La Plagne 78.96 314 *e*P **P 03 38 53.7 -0.1**
comp=Z,19nm,0.6s,mb4.9
LPL La Plagne 78.96 314 *e*P **P 03 38 53.7 -0.1**
LPL pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
LPL La Plagne 78.96 314 *e*P **P 03 38 53.7 -0.1**
comp=Z,9.7nm,0.6s,mb4.9
MBDF Montbardon 78.99 314 *e*P **P 03 38 52.8 -1.2**
BNI Bardonecchia 79.03 314 *e*P **P 03 38 53.9 -0.3**
BNI pmax pmax
comp=Z,22nm,1.2s,mb5.0
BNI Bardonecchia 79.03 314 *e*P **P 03 38 53.9 -0.3**
comp=Z,22nm,1.2s,mb5.0
HAU Haudompre 79.04 317 *e*P **P 03 38 53.5 -0.7**
comp=Z,34nm,1.1s,mb4.9
HAU *e*MLR MLR
comp=Z,138nm,22.0s,MS4.0
HAU Haudompre 79.04 317 *e*P **P 03 38 53.5 -0.7**
HAU pmax pmax
comp=Z,17nm,1.1s,mb4.9
HAU MLR MLR
comp=Z,140nm,22.0s,MS4.2
HAU Haudompre 79.04 317 *e*P **P 03 38 53.5 -0.7**
comp=Z,17nm,1.1s,mb4.9
HAU LR LR
comp=Z,140nm,22.0s,MS4.2
TSUM Tsumeb 79.04 248 *e*P **P 03 38 56.3 +1.6**
comp=Z,4.7nm,0.9s,mb4.4
WLF Walferdange 79.05 319 P **P 03 38 54.8 +0.5**
comp=Z,12nm,1.8s,mb4.5
WLF AP pP 03 39 03.8 +1.0
WLF Walferdange 79.05 319 *e*P **P 03 38 54.5 +0.2**
WLF pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
WLF Walferdange 79.05 319 *e*P **P 03 38 54.5 +0.2**
comp=Z,8.8nm,1.0s,mb4.6
FRF La Foret Royal 79.17 312 *e*P **P 03 38 54.4 -0.6**
comp=Z,28nm,1.1s,mb4.8
FRF La Foret Royal 79.17 312 *e*P **P 03 38 54.4 -0.6**
FRF pmax pmax
comp=Z,14nm,1.1s,mb4.8
FRF La Foret Royal 79.17 312 *e*P **P 03 38 54.4 -0.6**
comp=Z,14nm,1.1s,mb4.8
LMR La Mourre 79.29 312 *e*P **P 03 38 55.1 -0.6**
comp=Z,18nm,1.1s,mb4.6
LMR La Mourre 79.29 312 *e*P **P 03 38 55.1 -0.6**
LMR pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
LMR La Mourre 79.29 312 *e*P **P 03 38 55.1 -0.6**
comp=Z,8.8nm,1.1s,mb4.6
CABF La Chapelle 79.32 316 *e*P **P 03 38 55.5 -0.3**
comp=Z,53nm,1.3s,mb5.0
CABF La Chapelle 79.32 316 *e*P **P 03 38 55.5 -0.3**
CABF pmax pmax
comp=Z,26nm,1.3s,mb5.0
CABF La Chapelle 79.32 316 *e*P **P 03 38 55.5 -0.3**
comp=Z,26nm,1.3s,mb5.0
ORIF Oris-en-Rattie 79.60 314 *e*P **P 03 38 57.3 -0.1**
comp=Z,7.0nm,0.7s,mb4.4
ORIF *e*MLR MLR
comp=Z,162nm,19.5s,MS4.1
ORIF Oris-en-Rattie 79.60 314 *e*P **P 03 38 57.3 -0.1**
ORIF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
ORIF Oris-en-Rattie 79.60 314 *e*P **P 03 38 57.3 -0.1**
comp=Z,3.5nm,0.7s,mb4.4
MEZF Maizieres J'vi 79.86 318 *e*P **P 03 38 58.1 -0.6**
SMRF Simiane la Rot 79.91 313 *e*P **P 03 38 58.9 -0.1**
comp=Z,37nm,1.2s,mb4.9
SMRF Simiane la Rot 79.91 313 *e*P **P 03 38 58.9 -0.1**
comp=Z,37nm,1.2s,mb5.2
DOU Dourbes 80.03 319 P **P 03 39 00.4 +0.9**
SNF Seneffe 80.19 320 P **P 03 38 58.8 -1.6**
comp=Z,21nm,2.3s,mb4.7
SUR Sutherland 80.22 234 *e*P **P 03 39 02.6 +1.8**
comp=Z,13nm,0.7s,mb5.0
BAIF Baives 80.28 319 *e*P **P 03 39 00.6 -0.3**
comp=Z,24nm,1.1s,mb4.7
BAIF Baives 80.28 319 *e*P **P 03 39 00.6 -0.3**
BAIF pmax pmax
comp=Z,12nm,1.1s,mb4.7
BAIF Baives 80.28 319 *e*P **P 03 39 00.6 -0.3**
comp=Z,12nm,1.1s,mb4.7
VIVF Saint-Julien-l 80.46 314 *e*P **P 03 39 01.7 -0.3**
comp=Z,27nm,1.0s,mb4.8
VIVF Saint-Julien-l 80.46 314 *e*P **P 03 39 01.7 -0.3**
VIVF pmax pmax
comp=Z,13nm,1.0s,mb4.8
VIVF Saint-Julien-l 80.46 314 *e*P **P 03 39 01.7 -0.3**
comp=Z,13nm,1.0s,mb4.8
SSB Saint Sauveur 80.51 314 *e*P **P 03 39 01.8 -0.5**
SSB pmax pmax
comp=Z,18nm,1.1s,mb4.9
SSB Saint Sauveur 80.51 314 *e*P **P 03 39 01.8 -0.5**
comp=Z,18nm,1.1s,mb4.9
LOR Lormes 80.78 316 *e*P **P 03 39 03.0 -0.7**
comp=Z,27nm,0.9s,mb4.9
LOR *e*MLR MLR
comp=Z,126nm,18.0s,MS4.0
LOR Lormes 80.78 316 *e*P **P 03 39 03.0 -0.7**
LOR pmax pmax
comp=Z,14nm,0.9s,mb4.9
LOR MLR MLR
comp=Z,130nm,18.0s,MS4.3
LOR Lormes 80.78 316 *e*P **P 03 39 03.0 -0.7**
comp=Z,14nm,0.9s,mb4.9
LOR LR LR
comp=Z,130nm,18.0s,MS4.3
SMF Signal de Mont 80.86 316 *e*P **P 03 39 03.3 -0.8**
comp=Z,8.2nm,0.6s,mb4.6
SMF Signal de Mont 80.86 316 *e*P **P 03 39 03.3 -0.8**
SMF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
SMF Signal de Mont 80.86 316 *e*P **P 03 39 03.3 -0.8**
comp=Z,4.1nm,0.6s,mb4.5
MAW Mawson 81.01 191 P **P 03 39 05.0 +0.7**
comp=Z,1.9nm,0.6s,mb4.2,baz=18,slow=13,SNR=3.6
SSF Saint Saulge 81.04 316 *e*P **P 03 39 04.4 -0.7**
LASF Ste Croix 81.13 313 *e*P **P 03 39 05.5 -0.1**
comp=Z,35nm,1.1s,mb4.9
AVF Avril sur Loir 81.18 316 *e*P **P 03 39 05.1 -0.7**
comp=Z,7.6nm,0.6s,mb4.5
AVF Avril sur Loir 81.18 316 *e*P **P 03 39 05.1 -0.7**
AVF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
AVF Avril sur Loir 81.18 316 *e*P **P 03 39 05.1 -0.7**
comp=Z,3.8nm,0.6s,mb4.5
BGF Bois d'Agland 81.55 316 *e*P **P 03 39 07.3 -0.5**
TCF Toulx Ste Croi 82.02 316 *e*P **P 03 39 10.0 -0.2**
comp=Z,30nm,1.3s,mb4.8
TCF Toulx Ste Croi 82.02 316 *e*P **P 03 39 10.0 -0.2**
TCF pmax pmax
comp=Z,15nm,1.3s,mb4.8
TCF Toulx Ste Croi 82.02 316 *e*P **P 03 39 10.0 -0.2**
comp=Z,15nm,1.3s,mb4.8
CAF Calviac 82.30 314 *e*P **P 03 39 11.8 +0.1**
comp=Z,16nm,1.1s,mb4.6
CAF Calviac 82.30 314 *e*P **P 03 39 11.8 +0.1**
CAF pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
CAF Calviac 82.30 314 *e*P **P 03 39 11.8 +0.1**
comp=Z,7.8nm,1.1s,mb4.5
MTLF Montolieu 82.40 313 *e*P **P 03 39 12.1 -0.2**
comp=Z,36nm,1.1s,mb4.9
MTLF Montolieu 82.40 313 *e*P **P 03 39 12.1 -0.2**
MTLF pmax pmax
comp=Z,18nm,1.1s,mb4.9
MTLF Montolieu 82.40 313 *e*P **P 03 39 12.1 -0.2**
comp=Z,18nm,1.1s,mb4.9
TAM Tamanrasset 82.55 292 *e*P **P 03 39 14.5 +1.0**
TAM *e**PP pP 03 39 23.7 +1.7
TAM pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
TAM Tamanrasset 82.55 292 *e*P **P 03 39 14.5 +1.0**
comp=Z,7.6nm,0.9s,mb4.7
TAM *e*pP pP 03 39 23.7 +1.7
RJF Les Rejaudoux 82.63 315 *e*P **P 03 39 13.6 +0.1**
RJF *e*MLR MLR
comp=Z,200nm,20.0s,MS4.2
RJF Les Rejaudoux 82.63 315 *e*P **P 03 39 13.6 +0.1**
RJF LR LR
comp=Z,200nm,20.0s,MS4.5
LFF La Frestale 83.23 314 *e*P **P 03 39 16.6 0.0**
LDF La Druitiere 83.27 318 *e*P **P 03 39 16.1 -0.6**
FLN La Foliniere 83.48 318 *e*P **P 03 39 17.2 -0.6**
FLN *e*MLR MLR
comp=Z,195nm,20.2s,MS4.2
FLN La Foliniere 83.48 318 *e*P **P 03 39 17.2 -0.6**
FLN LR LR
comp=Z,190nm,20.3s,MS4.5
MFF Saint Martin d 83.59 316 *e*P **P 03 39 17.9 -0.5**
comp=Z,29nm,1.0s,mb5.0
MFF Saint Martin d 83.59 316 *e*P **P 03 39 17.9 -0.5**
MFF pmax pmax
comp=Z,14nm,1.0s,mb5.0
MFF Saint Martin d 83.59 316 *e*P **P 03 39 17.9 -0.5**
comp=Z,14nm,1.0s,mb5.1
EPF Esparros 83.80 312 *e*P **P 03 39 18.5 -1.1**
comp=Z,15nm,1.3s,mb4.7
EPF Esparros 83.80 312 *e*P **P 03 39 18.5 -1.1**
EPF pmax pmax
comp=Z,7.0nm,1.3s,mb4.6
EPF Esparros 83.80 312 *e*P **P 03 39 18.5 -1.1**
comp=Z,7.4nm,1.3s,mb4.7
ESK Eskdalemuir 84.04 325 *e*P **P 03 39 20.5 0.0**
ESK pmax pmax
comp=Z,7.0nm,0.7s,mb4.9
ESK Eskdalemuir 84.04 325 *e*P **P 03 39 20.5 0.0**
comp=Z,6.7nm,0.7s,mb4.9
DAG Danmarks Havn 84.10 347 *i* P **P 03 39 20.0 -0.4**
ETSF Etsaut 84.47 312 *e*P **P 03 39 23.3 +0.3**
SJPF Ste Jean 84.92 313 *e*P **P 03 39 25.4 +0.2**
comp=Z,18nm,1.1s,mb4.8
SJPF Ste Jean 84.92 313 *e*P **P 03 39 25.4 +0.2**
SJPF pmax pmax
comp=Z,9.0nm,1.1s,mb4.8
SJPF Ste Jean 84.92 313 *e*P **P 03 39 25.4 +0.2**
comp=Z,9.1nm,1.1s,mb4.8
ESDC Sonseca Array 87.60 310 P **P 03 39 38.4 -0.1**
comp=Z,1.2nm,0.6s,mb4.3,baz=64,slow=3.8,SNR=8.1
ESDC LR LR 04 24 53.6
comp=Z,63nm,19.3s,MS4.0,baz=230,slow=40
SYO Syowa Base 87.60 197⇓*e*PcP PcP 03 39 44.0 +4.4
PBAR Barrancos 90.27 309 *e*P **P 03 39 52.0 +0.9**
comp=Z,29nm,1.3s,mb5.4
COLD Coldfoot 90.38 20 *e*P **P 03 39 51.1 +0.1**
comp=Z,2.6nm,0.9s,mb4.6
SUMG Summit 90.75 347 *e*P **P 03 39 52.8 +0.2**
SUMG pmax pmax
comp=Z,15nm,1.2s
SUMG Summit 90.75 347 *e*P **P 03 39 52.8 +0.2**
comp=Z,15nm,1.2s,mb5.2
SUMG Summit 90.75 347 *i* P **P 03 39 53.4 +0.8**
comp=Z,6.3nm,0.9s,mb5.0
EVO Evora 90.93 309 *e*P **P 03 39 55.7 +1.5**
comp=Z,57nm,1.5s,mb5.4
EVO *e*MLR MLR
comp=Z,133nm,21.0s,MS4.0
SVW2 Sparrevohn 91.11 27 *e*P **P 03 39 55.1 +0.6**
SVW2 *e*pP pP 03 40 04.1 +1.0
PBDV Barranco-do-Ve 91.19 308 *e*P **P 03 39 57.5 +2.1**
comp=Z,34nm,1.2s,mb5.5
BPAW Bear Paw Mtn. 91.64 23 *e*P **P 03 39 57.2 +0.3**
comp=Z,7.1nm,0.6s,mb5.2
BPAW *e*pP pP 03 40 06.0 +0.5
TRF Thorofare Moun 92.23 23 *e*P **P 03 40 00.3 +0.7**
MCK McKinley 92.61 23 *e*P **P 03 40 01.3 -0.1**
MCK pmax pmax
comp=Z,7.0nm,0.8s,mb5.1
MCK McKinley 92.61 23 *e*P **P 03 40 01.3 -0.1**
comp=Z,6.9nm,0.8s,mb5.1
DBIC Dimbokro 95.33 278 LR LR 04 25 48.9
comp=Z,138nm,19.4s,MS4.4,baz=57,slow=37
HLID Hailey 120.77 22 *e*PKPdf PKPdf 03 45 42.8 +0.4
TPAW Teton Pass 122.04 19 *e*PKPdf PKPdf 03 45 46.2 +1.4
BW06 Boulder Array 123.14 19 *e*PKPdf PKPdf 03 45 45.8 -1.2
PDAR Pinedale Array 123.14 19 PKP PKPdf 03 45 46.5 -0.5
comp=Z,1.0nm,1.0s,baz=11,slow=1.8,SNR=5.5
NVAR Mina Array Bea 123.44 28 PKP PKPdf 03 45 48.8 +1.2
comp=Z,2.5nm,1.0s,baz=274,slow=2.2,SNR=11
HWUT Hardware Ranch 123.50 21 *e*PKPdf PKPdf 03 45 47.8 +0.2
PMSA Palmer Station 123.61 192 *e*PKPdf PKPdf 03 45 47.5 +0.5
DUG Dugway 124.28 23 *e*PKIKP PKPdf 03 45 49.6 +0.4
ECSD EROS Data Cent 125.12 8 *e*PKPdf PKPdf 03 45 50.0 -0.7
MSU Marysvale 125.99 23 *e*PKIKP PKPdf 03 45 54.0 +1.5
GSC Goldstone 126.67 29 *e*PKIKP PKPdf 03 45 54.7 +0.8
SDCO Great Sand Dun 128.98 18 *e*PKPdf PKPdf 03 45 59.5 +1.2
WVT Waverly 133.26 360 *e*PKIKP PKPdf 03 46 06.1 -0.3
WMOK Wichita Mounta 133.54 12 *e*PKIKP PKPdf 03 46 08.5 +1.5
GDL2 Guadalupe Moun 134.45 19 *e*PKPdf PKPdf 03 46 09.6 +0.8
MNTX Cornudas Mount 134.57 21 *e*PKPdf PKPdf 03 46 10.3 +1.3
TXAR Lajitas Array 137.32 20 PKP PKPdf 03 46 14.8 +0.6
comp=Z,0.7nm,0.8s,baz=191,slow=0.9,SNR=7.7
TXAR PP PP 03 48 57.7 0.0
comp=Z,0.2nm,0.7s,baz=287,slow=3.7,SNR=2.9
JCT Junction City 137.39 15 *e*PKIKP PKPdf 03 46 13.5 -0.8
HKT Hockley 138.75 10 *e*PKIKP PKPdf 03 46 17.6 +0.8
CRPR Cabo Rojo, PR 144.60 324 *e*PKPdf PKPdf 03 46 26.0 -1.6
PLCA Paso Flores 146.45 205 PKPbc PKPbc 03 46 31.4 0.0
comp=Z,4.8nm,0.8s,baz=126,slow=3.5,SNR=9.7
PLCA Paso Flores 146.45 205 *e*PKPbc PKPbc 03 46 32.0 +0.6
MTDJ Mount Denham 149.27 340 *e*PKPbc PKPbc 03 46 39.8 +0.2
LPAZ La Paz 159.84 252 PKPab PKPab 03 47 29.4 +0.3
comp=Z,4.2nm,1.1s,baz=80,slow=6.0,SNR=7.2
LPAZ La Paz 159.84 252 *e*PKPdf PKPdf 03 46 50.8 +0.9
LPAZ PKPab PKPab 03 47 29.4 +0.3
LPAZ *e*PKPab PKPab 03 47 29.6 +0.5
OTAV Otavalo 165.37 318 *e*PKPdf PKPdf 03 46 55.7 +0.2
OTAV *e*PKPab PKPab 03 47 54.3 +1.0

*NEIC **28** 03:32:07.8±0.9, 10°.36N×91°.33E, h10km, mb4.1/2, Error ellipse: s-maj=46.3km s-min=10.5km az=55.0*
*ISCJB **28** 03:32:09.2±1.1, 10°.4N±0°.2×91°.3E±0°.3, h33km, mb3.8/9, Error ellipse: s-maj=55.6km s-min=12.7km az=145.3*
*IDC **28** 03:32:10.5±1.3, 10°.40N×91°.37E, h26km±5km, mb3.6/8,*

mb1 3.7/8, mb1mx3.5/23, mbtmp3.6/8, Error ellipse: s-maj=58.3km s-min=16.2km az=54.0

ISC 28 03:32:11.7±1.1, 10°.4N±0°.2×91°.4E±0°.3, h35km, (h25km±2.4km:pP-P), n12, σ0s66/11, mb3.8/9, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**37.08**	**350**	*eP*	**P**	**03 39 18.3**	**-0.2**
MKAR	**Makanchi Array**	**37.08**	**350**	P	**P**	**03 39 18.4**	**-0.1**
	1.5nm,0.8s,mb3.9,baz=128,slow=7.9,SNR=4.1						
MKAR				pP	pP	03 39 25.4	-3.3
	2.3nm,0.7s,baz=133,slow=8.5,SNR=9.8						
KURK	**Kurchatov**	**41.55**	**348**	P	**P**	**03 39 55.2**	**-0.4**
	1.1nm,0.8s,mb3.5,baz=159,slow=8.0,SNR=3.5						
KURK				pP	pP	03 40 03.4	-2.6
	1.4nm,0.8s,baz=146,slow=6.9,SNR=5.7						
KURK	**Kurchatov**	**41.55**	**348**	*eP*	**P**	**03 39 56.2**	**+0.6**
	3.4nm,1.0s,mb3.9						
KURK				pP	pP	03 40 03.4	-2.6
ZALV	**Zalesovo Beam**	**43.75**	**354**	P	**P**	**03 40 13.7**	**+0.2**
	0.5nm,0.4s,mb3.6,baz=177,slow=8.7,SNR=2.7						
ZALV				pP	pP	03 40 21.1	-2.7
	0.9nm,0.4s,baz=186,slow=9.7,SNR=3.8						
FITZ	**Fitzroy Crossi**	**44.11**	**130**	P	**P**	**03 40 16.0**	**-0.9**
	3.9nm,0.9s,mb4.1,baz=309,slow=9.8,SNR=4.1						
WRA	**Warramunga Arr**	**51.93**	**125**	P	**P**	**03 41 16.9**	**-0.5**
	0.5nm,0.5s,mb3.7,baz=309,slow=8.0,SNR=5.1						
WRAB	**Tennant Creek**	**51.94**	**125**	*eP*	**P**	**03 41 17.2**	**-0.2**
	1.9nm,0.7s,mb4.1						
ASAR	**Alice Springs**	**53.61**	**130**	P	**P**	**03 41 31.5**	**+1.8**
	0.7nm,0.9s,mb3.6,baz=309,slow=6.6,SNR=3.5						
BRTR	**Keskin Array B**	**58.73**	**310**	P	**P**	**03 42 05.9**	**-0.2**
	0.6nm,0.6s,mb3.8,baz=116,slow=7.5,SNR=3.2						
FINES	**FINESS Array B**	**69.22**	**332**	P	**P**	**03 43 14.8**	**+0.2**
	0.8nm,0.7s,mb3.8,baz=106,slow=10,SNR=2.7						
FINES				pP	pP	03 43 23.5	-2.0
	1.6nm,0.6s,baz=102,slow=8.8,SNR=4.4						
ARCES	**ARCESS Array B**	**71.98**	**340**	pP	pP	03 43 40.1	-2.2
	1.5nm,0.7s,baz=81,slow=7.5,SNR=2.6						

*CSEM **28** 03:32:45.2, 38°.06N×26°.47W, h2km, ML2.7, After PDA*

PDA 28 03:32:45.2±1.0, 38°.06N×26°.47W, h2km±4km, MD3.5, ML2.7, Error ellipse: s-maj=6.3km s-min=1.4km az=31.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRON	**Grota Negra**	**0.80**	**111**	*eP*	Pg	03 33 00.3	-0.1
GRON				*eS*	Sg	03 33 11.5	+0.8
GRON				A		03 33 12.8	
	34nm,0.2s						
CMLA	**Cha da Macela**	**0.80**	**112**	*eP*	Pg	03 32 58.5	-2.1
CMLA				*eS*	Sg	03 33 08.8	-2.2
CMLA				A		03 33 10.4	
	100nm,0.4s						
CMLA				A		03 33 10.5	
	223nm,0.1s						
CMLA	**Cha da Macela**	**0.80**	**112**	*eP*	Pg	03 32 58.5	-2.1
CMLA				*eS*	Sg	03 33 08.8	-2.2
ADH	**Angra Heroismo**	**0.84**	**315**	*eP*	Pg	03 32 58.8	-2.6
ADH				*eS*	Sg	03 33 09.5	-2.9
ADH				A		03 33 11.8	
	224nm,0.2s						
ADH	**Angra Heroismo**	**0.84**	**315**	*eP*	Pg	03 32 58.8	-2.6
ADH				*eS*	Sg	03 33 09.5	-2.9
BART	**Pico Bartolome**	**1.07**	**105**	*eP*	Pg	03 33 02.6	-3.0
BART				*eS*	Sg	03 33 15.0	-4.4
BART				A		03 33 18.6	
	56nm,0.1s						
BART				A		03 33 18.6	
	57nm,0.2s						
BART	**Pico Bartolome**	**1.07**	**105**	*eP*	Pg	03 33 02.6	-3.0
BART				*eS*	Sg	03 33 15.0	-4.4
PID	**Ribeirinha**	**1.35**	**287**	*eP*	Pg	03 33 06.2	-5.0
PID				*eS*	Sg	03 33 22.2	-6.5
PID	**Ribeirinha**	**1.35**	**287**	*eP*	Pg	03 33 06.2	-5.0
PID				*eS*	Sg	03 33 22.2	-6.5
PMAN	**Manadas**	**1.40**	**295**	*eP*	Pn	03 33 07.3	-4.4
PMAN				*eS*	Sg	03 33 23.2	-6.9
PMAN				A		03 33 23.6	
	48nm,0.1s						
PMAN	**Manadas**	**1.40**	**295**	*eP*	Pn	03 33 07.3	-4.4
PMAN				*eS*	Sg	03 33 23.2	-6.9
PSMA	**Santa Maria**	**1.51**	**135**	*eP*	Pn	03 33 08.3	-4.9
PSMA				*eS*	Sb	03 33 25.9	-7.6
PSMA				A		03 33 28.7	
	61nm,0.2s						
PSMN	**Pico do Norte,**	**1.54**	**133**	*eP*	Pn	03 33 08.4	-5.3
PSMN				*eS*	Sn	03 33 26.3	-7.9
PSMN	**Pico do Norte,**	**1.54**	**133**	*eP*	Pn	03 33 08.4	-5.3
PSMN				*eS*	Sn	03 33 26.3	-7.9
ROSA	**Rosais**	**1.54**	**296**	*eP*	Pn	03 33 08.8	-4.9
ROSA				*eS*	Sn	03 33 26.8	-7.5
ROSA	**Rosais**	**1.54**	**296**	*eP*	Pn	03 33 08.8	-4.9
ROSA				*eS*	Sn	03 33 26.8	-7.5
PICO	**Pico**	**1.60**	**286**	*eP*	Pn	03 33 10.0	-4.6
PICO				*eS*	Sn	03 33 28.4	-7.4
PICO	**Pico**	**1.60**	**286**	*eP*	Pn	03 33 10.0	-4.6
PICO				*eS*	Sn	03 33 28.4	-7.4
PCAN	**Candelaria**	**1.64**	**285**	*eS*	Sn	03 33 29.2	-7.5
PCAN				A		03 33 31.2	
	18nm,0.1s						
PCAN	**Candelaria**	**1.64**	**285**	*eS*	Sn	03 33 29.2	-7.5
HOR	**Horta**	**1.76**	**286**	*eS*	Sn	03 33 31.7	-8.1
HOR	**Horta**	**1.76**	**286**	*eS*	Sn	03 33 31.7	-8.1
CALA	**Caldeira**	**1.83**	**287**	*eP*	Pn	03 33 12.9	-4.8
CALA				*eS*	Sn	03 33 34.1	-7.4
CALA	**Caldeira**	**1.83**	**287**	*eP*	Pn	03 33 12.9	-4.8
CALA				*eS*	Sn	03 33 34.1	-7.4
PCED	**Cedros**	**1.85**	**288**	*eP*	Pn	03 33 13.4	-4.5
PCED				*eS*	Sn	03 33 33.7	-8.2
PCED				A		03 33 36.7	
	16nm,0.3s						
PCED	**Cedros**	**1.85**	**288**	*eP*	Pn	03 33 13.4	-4.5
PCED				*eS*	Sn	03 33 33.7	-8.2

*NEIC **28** 03:33:31.2±1.4, 10°.39N×91°.31E, h10km, mb4.0/1, Error ellipse: s-maj=61.9km s-min=11.9km az=60.0*

*IDC **28** 03:33:32.9±1.9, 10°.37N×91°.26E, h20km±6km, mb3.8/8, mb1 3.9/8, mb1mx3.6/25, mbtmp3.8/8, Error ellipse: s-maj=80.4km s-min=17.0km az=60.0*

*ISCJB **28** 03:33:33.0±1.3, 10°.4N±0°.2×91°.4E±0°.4, h33km, mb3.8/9, Error ellipse: s-maj=61.4km s-min=12.7km az=147.6*

ISC 28 03:33:35.4±1.3, 10°.5N±0°.2×91°.4E±0°.4, h35km, (h21km±3.7km:pP-P), n11, σ0s84/11, mb3.8/9, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**37.04**	**350**	P	**P**	**03 40 41.0**	**-0.8**
	1.2nm,0.8s,mb3.8,baz=152,slow=8.2,SNR=3.7						
MKAR				pP	pP	03 40 48.6	-3.4
	2.1nm,0.8s,baz=147,slow=8.2,SNR=7.1						
SONM	**Songino Array**	**39.34**	**16**	P	**P**	**03 41 02.8**	**+1.6**
	0.7nm,0.7s,mb3.5,baz=194,slow=10.0,SNR=2.1						
KURK	**Kurchatov**	**41.51**	**348**	P	**P**	**03 41 18.2**	**-0.9**
	1.0nm,0.9s,mb3.4,baz=158,slow=7.6,SNR=3.1						
KURK				pP	pP	03 41 24.0	-5.3
	1.5nm,0.8s,baz=172,slow=7.9,SNR=5.3						
KURK	**Kurchatov**	**41.51**	**348**	P	**P**	**03 41 18.2**	**-0.9**
KURK				pP	pP	03 41 24.0	-5.3
ZALV	**Zalesovo Beam**	**43.70**	**354**	P	**P**	**03 41 35.7**	**-1.1**
	0.7nm,0.6s,mb3.6,baz=188,slow=9.7,SNR=3.2						
ZALV				pP	pP	03 41 43.1	-4.1
	0.8nm,0.5s,baz=170,slow=9.0,SNR=3.2						
FITZ	**Fitzroy Crossi**	**44.11**	**130**	P	**P**	**03 41 40.5**	**-0.1**
	3.1nm,0.7s,mb4.2,baz=318,slow=6.8,SNR=5.9						
AKTK	**Aktyubinsk**	**48.42**	**332**	P	**P**	**03 42 14.8**	**+0.8**
AKTO	**Aktyubinsk**	**48.42**	**332**	P	**P**	**03 42 14.8**	**+0.8**
	1.3nm,0.6s,mb4.1,baz=98,slow=7.1,SNR=4.5						
WRA	**Warramunga Arr**	**51.93**	**126**	P	**P**	**03 42 41.0**	**-0.2**
	1.9nm,0.7s,mb4.2,baz=305,slow=8.4,SNR=8.8						
WRAB	**Tennant Creek**	**51.93**	**126**	*eP*	**P**	**03 42 40.6**	**-0.5**
	1.2nm,0.6s,mb4.0						
ASAR	**Alice Springs**	**53.61**	**130**	P	**P**	**03 42 54.1**	**+0.6**
	0.7nm,0.5s,mb3.8,baz=302,slow=6.9,SNR=5.9						

*SZGRF **28** 03:34:25.0, 10°.71N×92°.97E, h33km, mb4.5, Andaman Islands, India, region*

*BJI **28** 03:34:25.5, 10°.72N×91°.65E, h22km, mB4.6/5, mb4.7/13, Ms4.5/4, Ms7 4.3/4*

*ISCJB **28** 03:34:26.5±0.3, 10°.77N±0°.05×91°.85E±0°.05, h26km, mb4.5/67, MS4.2/3, Error ellipse: s-maj=7.9km s-min=5.3km az=139.1*

*NEIC **28** 03:34:27.2±2.4, 10°.77N×91°.78E, h18km±14km, mb4.7/41, Error ellipse: s-maj=6.7km s-min=4.6km az=49.0*

*MOS **28** 03:34:27.5±0.9, 10°.80N×91°.91E, h33km, mb4.9/37, Error ellipse: s-maj=10.6km s-min=5.5km az=120.2*

*IDC **28** 03:34:28.5±0.6, 10°.79N×91°.81E, h23km±3km, mb4.2/22, mb1 4.3/24, mb1mx4.2/29, mbtmp4.2/24, ML4.0/2, Error ellipse: s-maj=16.9km s-min=10.2km az=53.0*

ISC 28 03:34:27.8±2.0, 10°.76N±0°.05×91°.78E±0°.05, h21km±14km, h28km±.8km:pP-P, n192, σ0s88/180, mb4.5/67, MS4.2/3, 11C-2D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.32**	**41**	Pn	**Pn**	**03 36 54.5**	**-0.3**
	1.1nm,0.3s,baz=234,slow=15,SNR=3.5						
KULM	**Kulim**	**10.32**	**121**	*e*Pn	**Pn**	**03 36 54.2**	**-0.6**
CHTO	**Chiang Mai**	**10.58**	**40**	*e*P	**Pn**	**03 36 58.0**	**-0.3**
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CHTO	**Chiang Mai**	**10.58**	**40**	*e*Pn	**Pn**	**03 36 58.0**	**-0.3**
	comp=Z,5.9nm,0.8s						
PSI	**Prapat**	**10.62**	**138**	Pn	**Pn**	**03 36 59.6**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=314,slow=12,SNR=4.8						
PALK	**Pallekele**	**11.48**	**253**	*e*P	**Pn**	**03 37 09.9**	**-0.8**
ODAN	**Odare**	**16.54**	**346**	*e*P	**Pn**	**03 38 21.7**	**+3.1**
	comp=Z,48nm,0.7s						
RAMN	**Ramite**	**16.83**	**344**	*e*P	**Pn**	**03 38 26.3**	**+4.1**
	comp=Z,88nm,0.8s						
TAPN	**Taplejung**	**16.94**	**347**	*e*P	**Pn**	**03 38 23.5**	**-0.1**
	comp=Z,113nm,0.9s						
JIRN	**Jiri**	**17.61**	**343**	*e*P	**Pn**	**03 38 32.0**	**0.0**
	comp=Z,46nm,0.7s						
PKI	**Pulchoki**	**17.76**	**341**	*e*P	**Pn**	**03 38 33.4**	**-0.5**
	comp=Z,35nm,0.5s						
PKIN	**Phulchoki**	**17.77**	**341**	*e*P	**Pn**	**03 38 33.6**	**-0.4**
	comp=Z,64nm,0.6s						
DMN	**Daman**	**17.90**	**340**	*e*P	**Pn**	**03 38 35.8**	**+0.3**
	comp=Z,88nm,0.7s						
GUN	**Gumba**	**17.94**	**343**	*e*P	**Pn**	**03 38 34.2**	**-1.8**
KSM	**Kuching**	**20.58**	**115**	*e*P	**P**	**03 39 06.5**	**+0.9**
	comp=Z,52nm,1.3s						
LZH	**Lanzhou**	**27.48**	**22**	*e*P	**P**	**03 40 14.0**	**+1.4**
LZH				pP	pP	03 40 20.0	+1.0
LZH				sP	sP	03 40 23.3	+1.7
LZH				pmax	pmax		
	comp=Z,22nm,1.3s,mb4.5						
LZH				pmax	pmax		
	comp=Z,52nm,5.6s						
LZH				LR	LR		
	comp=E,400nm,13.2s						
LZH				LR	LR		
	comp=Z,510nm,17.0s,MS4.2						
GTA	**Gaotai**	**29.41**	**13⇑**	*e*P	**P**	**03 40 30.8**	**+1.0**
GTA				pP	pP	03 40 37.0	+0.8
GTA				sP	sP	03 40 40.0	+1.2
GTA				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.2						
GTA				pmax	pmax		
	comp=Z,55nm,6.3s						
GTA				LR	LR		
	comp=N,400nm,14.7s,MS4.3						
GTA				LR	LR		
	comp=E,340nm,15.0s,MS4.3						
GTA				LR	LR		
	comp=Z,260nm,17.7s,MS3.9						
KBL	**Kabul**	**31.48**	**322**	*e*P	**P**	**03 40 46.4**	**-1.7**
KBL				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
KBL	**Kabul**	**31.48**	**322**	*e*P	**P**	**03 40 46.4**	**-1.8**
	comp=Z,7.2nm,0.8s,mb4.5						
KSH	**Kashi**	**31.90**	**336**	*e*P	**P**	**03 40 51.0**	**-0.8**
UCH	**Uchtor**	**34.80**	**337**	*e*P	**P**	**03 41 18.5**	**+1.5**
UCH				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
UCH	**Uchtor**	**34.80**	**337**	*e*P	**P**	**03 41 18.5**	**+1.5**
	comp=Z,5.6nm,0.8s,mb4.5						
TKM2	**Tokmak 2**	**35.00**	**339**	*e*P	**P**	**03 41 19.9**	**+1.1**
TKM2				*e*PP	pP	03 41 29.6	+4.4
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
TKM2	**Tokmak 2**	**35.00**	**339**	*e*P	**P**	**03 41 19.9**	**+1.1**
	comp=Z,2.8nm,0.7s,mb4.3						
TKM2				*e*pP	pP	03 41 29.6	+4.4
AAK	**Ala-Archa**	**35.15**	**338**	P	**P**	**03 41 21.7**	**+1.6**
	comp=Z,4.0nm,0.8s,mb4.4,baz=181,slow=5.0,SNR=7.4						
EKS2	**Erkin-Say**	**35.45**	**337**	*e*P	**P**	**03 41 24.5**	**+1.9**
EKS2				*e*PP	pP	03 41 32.9	+3.8
EKS2				pmax	pmax		
	comp=Z,115nm,1.2s,mb5.7						
EKS2	**Erkin-Say**	**35.45**	**337**	*e*P	**P**	**03 41 24.5**	**+1.8**
	comp=Z,115nm,1.2s,mb5.7						
EKS2				*e*pP	pP	03 41 32.9	+3.8
BJI	**Beijing**	**36.30**	**32**	P	**P**	**03 41 38.5**	**+8.6**
BJI				pmax	pmax		
	comp=Z,25nm,0.7s,mb5.2						
BJI				LR	LR		
	comp=N,390nm,16.2s,MS4.6						
BJI				LR	LR		
	comp=E,870nm,17.7s,MS4.6						
BJI				LR	LR		
	comp=Z,490nm,17.7s,MS4.3						
MK31	**Makanchi Array**	**36.80**	**349**	*e*P	**P**	**03 41 33.8**	**-0.3**
MK31				*e*PP	pP	03 41 42.1	+1.5
MKAR	**Makanchi Array**	**36.80**	**349**	P	**P**	**03 41 34.2**	**+0.1**
	comp=Z,9.3nm,0.7s,mb4.7,baz=133,slow=8.6,SNR=36						
MKAR				pP	pP	03 41 41.9	+1.3
	comp=Z,12nm,0.8s,baz=193,slow=9.5,SNR=16						
MKAR	**Makanchi Array**	**36.80**	**349**	P	**P**	**03 41 34.2**	**+0.1**
MKAR				pP	pP	03 41 41.9	+1.3
SONM	**Songino Array**	**38.94**	**16**	P	**P**	**03 41 52.3**	**+0.1**
	comp=Z,1.2nm,0.5s,mb3.9,baz=199,slow=7.9,SNR=5.6						
SONM				pP	pP	03 42 00.1	+1.4
	comp=Z,3.6nm,0.8s,baz=194,slow=7.9,SNR=7.9						
ULN	**Ulaanbaatar**	**39.15**	**16**	*e*P	**P**	**03 41 53.1**	**-0.8**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
ULN	**Ulaanbaatar**	**39.15**	**16**	*e*P	**P**	**03 41 53.1**	**-0.9**
	comp=Z,3.0nm,0.7s,mb4.1						
ZAK	**Zakamensk**	**40.62**	**11**	*e*P	**P**	**03 42 05.7**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,3.0nm,2.0s,mb3.6						
KURK	**Kurchatov**	**41.28**	**347**	P	**P**	**03 42 11.1**	**-0.4**
	comp=Z,6.1nm,0.8s,mb4.3,baz=172,slow=7.7,SNR=22						
KURK	**Kurchatov**	**41.28**	**347**	*e*P	**P**	**03 42 11.7**	**+0.2**
KURK				*e*PP	pP	03 42 19.9	+1.8
KURK				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.6						
KURK	**Kurchatov**	**41.28**	**347**	*e*P	**P**	**03 42 11.7**	**+0.2**
	comp=Z,17nm,1.1s,mb4.6						
KURK				*e*pP	pP	03 42 19.9	+1.8
KSRS	**Korea Array**	**41.94**	**45**	P	**P**	**03 42 18.0**	**+0.9**
	comp=Z,1.4nm,0.7s,mb3.7,baz=240,slow=7.6,SNR=4.5						
MBWA	**Marble Bar**	**41.96**	**139**	*e*P	**P**	**03 42 16.9**	**-0.6**
	comp=Z,4.2nm,0.7s,mb4.2						
ZAA0	**Zalesovo Array**	**43.43**	**354**	*e*P	**P**	**03 42 28.6**	**-0.4**
ZAA0				*e*pP	pP	03 42 36.3	+0.7
ZALV	**Zalesovo Beam**	**43.43**	**354**	P	**P**	**03 42 28.6**	**-0.4**
	comp=Z,5.3nm,0.8s,mb4.3,baz=174,slow=9.8,SNR=15						
ZALV				pP	pP	03 42 36.1	+0.5
	comp=Z,7.7nm,0.8s,baz=176,slow=8.6,SNR=11						
CN2	**Changchun**	**43.93**	**35**	*e*P	**P**	**03 42 42.3**	**+9.1**
CN2				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.8						
FITZ	**Fitzroy Crossi**	**44.04**	**130**	P	**P**	**03 42 33.8**	**-0.6**
	comp=Z,19nm,0.8s,mb4.9,baz=314,slow=5.0,SNR=24						
BVAR	**Borovoye Array**	**45.53**	**342**	P	**P**	**03 42 45.5**	**-0.3**
	comp=Z,2.2nm,0.7s,mb4.2,baz=145,slow=8.2,SNR=7.8						
BVAR				pP	pP	03 42 54.2	+1.8
	comp=Z,5.2nm,0.8s,baz=134,slow=8.5,SNR=8.8						
BRVK	**Borovoye**	**45.59**	**342**	*e*P	**P**	**03 42 46.2**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
BRVK	**Borovoye**	**45.59**	**342**	*e*P	**P**	**03 42 46.2**	**-0.1**
	comp=Z,6.0nm,0.9s,mb4.5						
KAKA	**Kakadu**	**46.62**	**119**	*e*P	**P**	**03 42 54.7**	**-0.2**
	comp=Z,30nm,0.8s,mb5.3						
AKTK	**Aktyubinsk**	**48.31**	**332**	P	**P**	**03 43 08.0**	**+0.3**
AKTO	**Aktyubinsk**	**48.31**	**332**	P	**P**	**03 43 08.0**	**+0.3**
	comp=Z,3.0nm,0.7s,mb4.4,baz=127,slow=9.6,SNR=7.4						
MJAR	**Matsushiro Arr**	**49.04**	**51**	P	**P**	**03 43 15.0**	**+1.5**
	comp=Z,0.4nm,0.5s,mb3.7,baz=254,slow=8.7,SNR=2.8						
GNI	**Garni**	**50.77**	**314**	P	**P**	**03 43 28.5**	**+1.9**
	comp=Z,3.4nm,0.3s,mb4.7,baz=156,slow=20,SNR=6.1						
GNI	**Garni**	**50.77**	**314**	*e*P	**P**	**03 43 28.4**	**+1.8**
GNI				pmax	pmax		
	comp=Z,21nm,1.0s						
GNI	**Garni**	**50.77**	**314**	*e*P	**P**	**03 43 28.4**	**+1.9**
	comp=Z,21nm,1.0s,mb5.0						
WRA	**Warramunga Arr**	**51.83**	**126**	P	**P**	**03 43 34.3**	**-0.5**
	comp=Z,8.4nm,0.6s,mb4.8,baz=306,slow=8.6,SNR=27						
WRA				pP	pP	03 43 42.5	+1.1
	comp=Z,4.9nm,0.5s,baz=306,slow=8.4,SNR=7.4						
WRAB	**Tennant Creek**	**51.83**	**126**	*e*P	**P**	**03 43 34.2**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
WRAB	**Tennant Creek**	**51.83**	**126**	*e*P	**P**	**03 43 34.2**	**-0.6**
	comp=Z,11nm,0.8s,mb4.8						
ARU	**Arti**	**52.34**	**337**	*e*P	**P**	**03 43 38.0**	**0.0**
ARU				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
ARU	**Arti**	**52.34**	**337**	*e*P	**P**	**03 43 38.0**	**0.0**
	comp=Z,9.6nm,0.8s,mb4.8						
ZEI	**Tsey**	**52.35**	**316**	*e*P	**P**	**03 43 40.6**	**+2.2**
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.4s,mb5.0						
ASAR	**Alice Springs**	**53.54**	**130**	P	**P**	**03 43 47.4**	**0.0**
	comp=Z,4.1nm,0.8s,mb4.4,baz=305,slow=7.2,SNR=19						
KIV	**Kislovodsk**	**53.63**	**317**	*e*P	**P**	**03 43 49.6**	**+1.9**
KIV				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
KIV	**Kislovodsk**	**53.63**	**317**	*e*P	**P**	**03 43 49.0**	**+1.3**
	comp=Z,11nm,0.7s,mb4.9						
KIV				*e*pP	pP	03 43 56.0	+1.6
BR131	**Keskin Array S**	**58.80**	**310**	*e*P	**P**	**03 44 24.3**	**-0.4**
	comp=Z,3.6nm,0.7s,mb4.5						
BR131				*e*pP	pP	03 44 32.0	+0.6
BRTR	**Keskin Array B**	**58.80**	**310**	P	**P**	**03 44 24.2**	**-0.5**
	comp=Z,3.5nm,0.8s,mb4.5,baz=120,slow=7.8,SNR=21						
BRTR				pP	pP	03 44 31.4	0.0
	comp=Z,4.0nm,0.7s,baz=127,slow=7.9,SNR=13						
MOS	**Moscow**	**61.42**	**329**	*e*P	**P**	**03 44 39.7**	**-2.7**
MOS				*e*		03 47 03.4	
TIRR	**Tirgusor**	**63.58**	**314**	⇓P	**P**	**03 44 57.1**	**0.0**
TIRR	**Tirgusor**	**63.58**	**314**	⇓/P	**P**	**03 44 57.1**	**0.0**
STKA	**Stephens Creek**	**63.77**	**134**	P	**P**	**03 44 59.0**	**+0.5**
	comp=Z,3.1nm,0.5s,mb4.6,baz=307,slow=12,SNR=8.4						
AKASG	**Malin Array Be**	**64.46**	**321**	P	**P**	**03 45 01.6**	**-1.1**
	comp=Z,1.0nm,0.5s,mb4.1,baz=94,slow=4.4,SNR=8.2						
AKASG				pP	pP	03 45 09.7	+0.2
	comp=Z,2.2nm,0.6s,baz=90,slow=5.1,SNR=5.8						
TIXI	**Tiksi**	**64.89**	**12**	*e*P	**P**	**03 45 03.1**	**-2.1**
TIXI				pmax	pmax		
	comp=Z,22nm,2.2s,mb4.8						
TIXI	**Tiksi**	**64.89**	**12**	*e*P	**P**	**03 45 03.8**	**-1.4**
	comp=Z,5.6nm,0.6s,mb4.8						
VRI	**Vrincioaia**	**65.02**	**316**	⇑P	**P**	**03 45 07.7**	**+1.2**
VRI	**Vrincioaia**	**65.02**	**316**	⇑/P	**P**	**03 45 07.7**	**+1.2**
PLOR	**Plostina**	**65.07**	**316**	⇑P	**P**	**03 45 07.8**	**+1.0**
PLOR	**Plostina**	**65.07**	**316**	⇑/P	**P**	**03 45 07.8**	**+1.0**
MLR	**Muntele Rosu**	**65.49**	**315**	⇑P	**P**	**03 45 10.8**	**+1.2**
MLR	**Muntele Rosu**	**65.49**	**315**	⇑/P	**P**	**03 45 10.8**	**+1.2**
VOIR		**66.11**	**315**	⇑P	**P**	**03 45 13.6**	**+0.1**
VOIR		**66.11**	**315**	⇑/P	**P**	**03 45 13.6**	**+0.1**
BURAR	**Bucovina Array**	**66.36**	**317**	⇑P	**P**	**03 45 16.2**	**+1.1**
BURAR	**Bucovina Array**	**66.36**	**317**	⇑/P	**P**	**03 45 16.2**	**+1.1**
BUR08	**Bucovina Ar. S**	**66.37**	**317**	*e*P	**P**	**03 45 15.4**	**+0.2**
BUR08				*e*pP	pP	03 45 23.9	+1.8
JOF	**Joensuu**	**67.25**	**334**	*e*P	**P**	**03 45 19.7**	**-0.8**
JOF				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
JOF	**Joensuu**	**67.25**	**334**	*e*p	**P**	**03 45 19.7**	**-0.8**
	comp=Z,9.5nm,0.7s,mb4.9						
LSZ	**Lusaka**	**68.09**	**249**	*e*P	**P**	**03 45 25.9**	**-0.7**
LSZ				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
LSZ	**Lusaka**	**68.09**	**249**	*e*P	**P**	**03 45 25.9**	**-0.8**
	comp=Z,4.1nm,1.0s,mb4.4						
CRVS	**Cervenica-Dubn**	**69.04**	**318**	*e*P	**P**	**03 45 32.5**	**+0.5**
CRVS				pmax	pmax		
	comp=Z,23nm,2.3s,mb4.7						
CRVS	**Cervenica-Dubn**	**69.04**	**318**	*e*P	**P**	**03 45 32.5**	**+0.5**
	comp=Z,23nm,2.3s,mb4.7						
CRVS	**Cervenica-Dubn**	**69.04**	**318**	*e*P	**P**	**03 45 32.5**	**+0.5**
FINES	**FINESS Array B**	**69.08**	**332**	P	**P**	**03 45 32.0**	**0.0

LPL	La Plagne	78.96	314	eP	P	03 46 30.0 -0.1
	comp=Z,9.7nm,1.0s,mb4.7					
MBDF	Montbardon	78.99	314	eP	P	03 46 29.1 -1.2
	comp=Z,14nm,0.9s,mb4.6					
MBDF	Montbardon	78.99	314	eP	P	03 46 29.1 -1.2
MBDF				pmax	pmax	
	comp=Z,7.0nm,0.9s,mb4.6					
MBDF	Montbardon	78.99	314	eP	P	03 46 29.1 -1.2
	comp=Z,6.8nm,0.9s,mb4.6					
HAU	Haudompre	79.05	317	eP	P	03 46 29.8 -0.7
	comp=Z,9.7nm,0.7s,mb4.5					
HAU	Haudompre	79.05	317	eP	P	03 46 29.8 -0.7
HAU				pmax	pmax	
	comp=Z,5.0nm,0.7s,mb4.5					
HAU	Haudompre	79.05	317	eP	P	03 46 29.8 -0.7
	comp=Z,4.8nm,0.7s,mb4.5					
FRF	La Foret Royal	79.17	312	eP	P	03 46 30.6 -0.7
LMR	La Mourre	79.28	312	eP	P	03 46 31.0 -0.9
CABF	La Chapelle	79.32	316	eP	P	03 46 31.9 -0.2
ORIF	Oris-en-Rattie	79.60	314	eP	P	03 46 33.5 -0.1
	comp=Z,20nm,1.1s,mb4.7					
ORIF	Oris-en-Rattie	79.60	314	eP	P	03 46 33.5 -0.1
ORIF				pmax	pmax	
	comp=Z,10.0nm,1.1s,mb4.7					
ORIF	Oris-en-Rattie	79.60	314	eP	P	03 46 33.5 -0.1
	comp=Z,9.9nm,1.1s,mb4.7					
MEZF	Maizieres J'vi	79.87	318	eP	P	03 46 34.5 -0.5
GIVF	Givet	79.89	319	eP	P	03 46 34.4 -0.7
SMRF	Simiane la Rot	79.90	313	eP	P	03 46 35.2 -0.1
BAIF	Baives	80.29	319	eP	P	03 46 37.0 -0.2
VIVF	Saint-Julien-l	80.47	314	eP	P	03 46 37.8 -0.5
	comp=Z,22nm,1.0s,mb4.7					
VIVF	Saint-Julien-l	80.47	314	eP	P	03 46 37.8 -0.5
VIVF				pmax	pmax	
	comp=Z,11nm,1.0s,mb4.7					
VIVF	Saint-Julien-l	80.47	314	eP	P	03 46 37.8 -0.5
	comp=Z,11nm,1.0s,mb4.7					
LOR	Lormes	80.79	316	eP	P	03 46 39.3 -0.7
	comp=Z,8.5nm,0.8s,mb4.4					
LOR	Lormes	80.79	316	eP	P	03 46 39.3 -0.7
LOR				pmax	pmax	
	comp=Z,4.0nm,0.8s,mb4.4					
LOR	Lormes	80.79	316	eP	P	03 46 39.3 -0.7
	comp=Z,4.3nm,0.8s,mb4.4					
SMF	Signal de Mont	80.86	316	eP	P	03 46 39.7 -0.7
	comp=Z,8.8nm,0.7s,mb4.5					
SMF	Signal de Mont	80.86	316	eP	P	03 46 39.7 -0.7
SMF				pmax	pmax	
	comp=Z,4.0nm,0.7s,mb4.5					
SMF	Signal de Mont	80.86	316	eP	P	03 46 39.7 -0.7
	comp=Z,4.4nm,0.7s,mb4.5					
SSF	Saint Saulge	81.05	316	eP	P	03 46 40.8 -0.6
LASF	Ste Croix	81.13	313	eP	P	03 46 41.9 +0.1
	comp=Z,15nm,0.9s,mb4.7					
AVF	Avril sur Loir	81.18	316	eP	P	03 46 41.4 -0.7
	comp=Z,9.3nm,0.8s,mb4.5					
AVF	Avril sur Loir	81.18	316	eP	P	03 46 41.4 -0.7
AVF				pmax	pmax	
	comp=Z,5.0nm,0.8s,mb4.5					
AVF	Avril sur Loir	81.18	316	eP	P	03 46 41.4 -0.7
	comp=Z,4.7nm,0.8s,mb4.5					
BGF	Bois d'Agland	81.56	316	eP	P	03 46 43.8 -0.3
	comp=Z,6.5nm,0.5s,mb4.5					
BGF	Bois d'Agland	81.56	316	eP	P	03 46 43.8 -0.3
BGF				pmax	pmax	
	comp=Z,3.0nm,0.5s,mb4.5					
BGF	Bois d'Agland	81.56	316	eP	P	03 46 43.8 -0.3
	comp=Z,3.3nm,0.5s,mb4.5					
TCF	Toulx Ste Croi	82.02	316	eP	P	03 46 46.4 -0.1
CAF	Calviac	82.30	314	eP	P	03 46 47.8 -0.2
MTLF	Montolieu	82.40	313	eP	P	03 46 48.4 -0.2
	comp=Z,11nm,0.8s,mb4.5					
MTLF	Montolieu	82.40	313	eP	P	03 46 48.4 -0.2
MTLF				pmax	pmax	
	comp=Z,6.0nm,0.8s,mb4.6					
MTLF	Montolieu	82.40	313	eP	P	03 46 48.4 -0.2
	comp=Z,5.6nm,0.8s,mb4.5					
TAM	Tamanrasset	82.50	292	eP	P	03 46 50.9 +1.4
TAM				pmax	pmax	
	comp=Z,4.0nm,1.1s,mb4.3					
TAM	Tamanrasset	82.50	292	eP	P	03 46 50.9 +1.4
	comp=Z,3.7nm,1.1s,mb4.2					
RJF	Les Rejaudoux	82.63	315	eP	P	03 46 49.8 0.0
	comp=Z,14nm,0.9s,mb4.7					
RJF	Les Rejaudoux	82.63	315	eP	P	03 46 49.8 0.0
RJF				pmax	pmax	
	comp=Z,7.0nm,0.9s,mb4.7					
RJF	Les Rejaudoux	82.63	315	eP	P	03 46 49.8 0.0
	comp=Z,7.0nm,0.9s,mb4.7					
LFF	La Frestale	83.23	314	eP	P	03 46 53.0 +0.2
LDF	La Druitiere	83.28	318	eP	P	03 46 52.3 -0.7
FLN	La Foliniere	83.49	318	eP	P	03 46 53.4 -0.7
MFF	Saint Martin d	83.59	316	eP	P	03 46 54.1 -0.6
	comp=Z,13nm,0.7s,mb4.8					
MFF	Saint Martin d	83.59	316	eP	P	03 46 54.1 -0.6
MFF				pmax	pmax	
	comp=Z,7.0nm,0.7s,mb4.9					
MFF	Saint Martin d	83.59	316	eP	P	03 46 54.1 -0.6
	comp=Z,6.6nm,0.7s,mb4.9					
ESDC	Sonseca Array	87.59	310	P	P	03 47 15.5 +0.8
	comp=Z,0.3nm,0.5s,mb3.8,baz=84,slow=4.8,SNR=4.1					
TRF	Thorofare Moun	92.35	23	eP	P	03 47 36.6 +0.1
	comp=Z,2.4nm,0.8s,mb4.6					
COLA	College	92.54	22	eP	P	03 47 37.1 -0.2
COLA				pmax	pmax	
	comp=Z,2.0nm,0.8s,mb4.6					
COLA	College	92.54	22	eP	P	03 47 37.1 -0.2
	comp=Z,2.3nm,0.8s,mb4.7					
TPAW	Teton Pass	122.17	19	ePKPdf	PKPdf	03 53 21.3 -0.1
SNOW	Snow King Moun	122.25	19	ePKPdf	PKPdf	03 53 22.4 +0.9
PDAR	Pinedale Array	123.26	19	PKP	PKPdf	03 53 23.6 +0.1
	comp=Z,0.4nm,0.8s,baz=56,slow=1.6,SNR=3.1					
NVAR	Mina Array Bea	123.57	28	PKP	PKPdf	03 53 25.4 +1.3
	comp=Z,0.9nm,0.7s,baz=253,slow=1.3,SNR=8.6					
HWUT	Hardware Ranch	123.63	21	ePKPdf	PKPdf	03 53 24.0 -0.2
DUG	Dugway	124.41	23	ePKIKP	PKPdf	03 53 26.2 +0.5
TUC	Tucson	132.04	26	ePKPdf	PKPdf	03 53 38.5 -2.0
TXAR	Lajitas Array	137.44	20	PKP	PKPdf	03 53 52.5 +1.8
	comp=Z,0.3nm,0.8s,baz=158,slow=1.3,SNR=3.9					
TXAR				PP	PP	03 56 30.0 -4.7
	comp=Z,0.3nm,0.4s,baz=299,slow=1.9,SNR=6.0					
TXAR	Lajitas Array	137.44	20	PKP	PKPdf	03 53 52.5 +1.8
TXAR				PP	PP	03 56 30.0 -4.7
PLCA	Paso Flores	146.32	205	PKPbc	PKPbc	03 54 07.7 +0.4
	comp=Z,4.5nm,0.9s,baz=160,slow=6.0,SNR=5.8					
PLCA	Paso Flores	146.32	205	ePKPbc	PKPbc	03 54 08.0 +0.7
LPAZ	La Paz	159.72	252	PKPab	PKPab	03 55 06.4 +1.5
	comp=Z,0.9nm,0.8s,baz=124,slow=7.3,SNR=3.2					

IDC 28 03:41:00.0±13.0, 10°74N×91°90E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.3/23, mbtmp3.5/4, Error ellipse: s-maj=724.0km s-min=25.6km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	36.85	349	P	P	03 48 09.9	-0.1
	0.4nm,0.6s,baz=155,slow=7.2,SNR=3.5						
FITZ	Fitzroy Crossi	43.94	130	P	P	03 49 07.2	-1.8
	0.7nm,0.3s,baz=305,slow=16,SNR=12						
WRA	Warramunga Arr	51.72	126	P	P	03 50 10.5	+1.0
	0.2nm,0.4s,baz=308,slow=8.2,SNR=4.8						
ASAR	Alice Springs	53.44	130	P	P	03 50 23.1	+0.9
	0.3nm,0.6s,baz=304,slow=6.6,SNR=3.4						

IDC 28 03:44:09.5±8.4, 11°10N×92°41E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/22, mbtmp3.5/3, Error ellipse: s-maj=444.0km s-min=28.2km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	36.60	348	P	P	03 51 17.2	0.0
	0.9nm,0.8s,baz=155,slow=7.4,SNR=5.9						
WRA	Warramunga Arr	51.52	127	P	P	03 53 17.1	-0.3
	0.4nm,0.8s,baz=305,slow=8.9,SNR=3.0						
ASAR	Alice Springs	53.29	131	P	P	03 53 30.8	+0.3
	0.3nm,0.8s,baz=310,slow=7.2,SNR=3.0						

*HLW **28** 03:44:04.6, 33°83N×35°55E, h12km±19km, Md2.8, Ml2.8*
*ISCJB **28** 03:44:09.7±0.5, 33°34N±0°02×35°37E±0°05, h5km±4km, Error ellipse: s-maj=7.1km s-min=2.9km az=24.1*
*GRAL **28** 03:44:10.8±0.3, 33°32N×35°41E, h0km±2km, MD3.4*
*GII **28** 03:44:10.1±0.6, 33°28N×35°42E, h1km, Md2.7/9, Mm2.3/7*
*CSEM **28** 03:44:10.4±0.2, 33°34N×35°39E, h2km, ML3.4, Error ellipse: s-maj=7.1km s-min=3.5km az=110.0*

ISC 28 03:44:10.3±0.5, 33°34N±0°02×35°39E±0°05, h3km±4km, n36, σ0°51/51, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSDI	Kefar Szold	0.27	124	Pg	Pg	03 44 14.9	-0.6
KSDI				Sg	Sg	03 44 19.8	+0.7
HNTI	Hanita	0.32	215	Pg	Pg	03 44 16.4	0.0
HNTI				Sg	Sg	03 44 21.8	+1.3
MMA0	Mount Meron ar	0.33	178	Pg	Pg	03 44 16.2	-0.4
MMA0				Sg	Sg	03 44 21.5	+0.7
MMC6	Mount Meron ar	0.33	180	Pg	Pg	03 44 16.3	-0.3
RCY	Rachaya	0.39	69	eP	Pg	03 44 17.9	+0.2
RCY				eS	Sg	03 44 23.2	+0.5
RCY	Rachaya	0.39	69	eP	Pg	03 44 17.9	+0.2
RCY				eS	Sg	03 44 23.2	+0.5
KSHT	Keshet	0.51	135	Pg	Pg	03 44 19.6	-0.4
BEYL	Beirut	0.53	9	eP	Pg	03 44 20.9	+0.3
BEYL	Beirut	0.53	9	eP	Pg	03 44 20.9	+0.4
BHL	Bhannes	0.60	21	eP	Pg	03 44 21.9	0.0
BHL				eS	Sg	03 44 30.1	+0.5
BHL	Bhannes	0.60	21	eP	Pg	03 44 21.9	+0.1
BHL				eS	Sg	03 44 30.1	+0.5
BLGI	Bet Lehem HaGe	0.63	195	Pg	Pg	03 44 22.4	0.0
OFRI	'Ofer	0.80	205	Pg	Pg	03 44 25.5	-0.1
MMLI	Mount Malkishu	0.90	178	Pg	Pg	03 44 26.7	-0.9
MMLI				Sg	Sg	03 44 39.3	0.0
HWQ	Hawqa	1.04	26	eP	Pg	03 44 30.3	0.0
HWQ				eS	Sg	03 44 43.8	+0.1
HMDT	Nahal Hemdat	1.09	174	Pg	Pg	03 44 30.1	-1.1
HMDT				Sg	Sg	03 44 46.0	+0.6
SLTI	Sal'it	1.14	195	Pg	Pg	03 44 31.2	-0.9
SLTI				Sg	Sg	03 44 47.2	+0.3
FKH	Fakeheh	1.23	43	eP	Pg	03 44 33.5	-0.3
FKH				eS	Sg	03 44 49.7	0.0
DSI	Dead Sea	1.77	180	Pn	Pn	03 44 41.1	-0.7
DSI				Sn	Sn	03 45 05.1	+0.3
YTIR	Yattir	1.99	187	Pn	Pn	03 44 44.9	+0.1
MZDA	Masada	2.03	181	Pn	Pn	03 44 45.4	0.0
RTMI	Retamim	2.36	195	Pn	Pn	03 44 50.1	+0.2
ZFRI	Zfri	2.79	184	Pn	Pn	03 44 55.6	-0.2
PRNI	Paran	3.00	186	Pn	Pn	03 44 58.3	-0.4
KRMI	Paran Flat	3.27	190	Pn	Pn	03 45 02.4	0.0
AMAG	Maghara	3.27	215	P	Pn	03 45 02.2	-0.3
	baz=213						
AMAG	Maghara	3.27	215	P	Pn	03 45 02.2	-0.2
HRFI	Mount Harif	3.31	185	Pn	Pn	03 45 02.6	-0.4
HNKL	Nakhl	3.61	200	P	Pn	03 45 07.2	0.0
	baz=200						
HNKL				S	Sn	03 45 51.5	+1.2
	baz=200						
HNKL				AMP		03 46 00.0	
	comp=E,10μm,0.4s,logA/T=4.4,baz=200						
HNKL	Nakhl	3.61	200	P	Pn	03 45 07.2	+0.1
HNKL				S	Sn	03 45 51.5	+1.2
SUZ		4.12	213	P	Pn	03 45 13.8	-0.3
	baz=211						
SUZ		4.12	213	P	Pn	03 45 13.8	-0.3
HBST	Basata	4.15	188	P	Pn	03 45 15.0	+0.4
	baz=189						
HBST				AMP		03 46 00.0	
	comp=E,40μm,0.6s,logA/T=4.8,baz=189						
HBST	Basata	4.15	188	P	Pn	03 45 15.0	+0.4
HKAT	Jabal Katrina	4.95	194	P	Pn	03 45 25.3	-0.3
	baz=195						
HKAT	Jabal Katrina	4.95	194	P	Pn	03 45 25.3	-0.3

IDC 28 04:02:21.7±3.6, 2°08S×139°14E, h0km, mb3.7/2, mb1 4.0/3, mb1mx3.6/14, mbtmp3.8/3, ML4.0/1, Error ellipse: s-maj=161.2km s-min=28.3km az=89.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.36	194	P	Pn	04 06 38.0	0.0
	0.5nm,0.3s,baz=15,slow=12,SNR=27						
ASAR	Alice Springs	22.05	193	P	P	04 07 18.9	+0.8
	2.7nm,0.9s,baz=26,slow=10,SNR=18						
BVAR	Borovoye Array	79.05	325	P	P	04 14 27.4	-0.3
	0.3nm,0.4s,baz=92,slow=12,SNR=3.2						

*ISCJB **28** 04:02:21.3±0.4, 32°33N±0°02×115°26W±0°02, h13km±3km, Error ellipse: s-maj=3.8km s-min=2.7km az=173.0*
*NEIC **28** 04:02:23.3, 32°31N×115°30W, h4km, ML3.6(ECX), ML3.4(PAS), After ECX.*
*ECX **28** 04:02:23.4±0.6, 32°31N×115°31W, h5km, MD3.5, ML3.6*

ISC 28 04:02:21.6±0.3, 32°34N±0°02×115°29W±0°02, h13km±2km, n57, σ1°08/83, 24C-17D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	Cerro Prieto	0.08	352	eP	Pg	04 02 24.4	0.0
CPBX				eS	Sg	04 02 26.0	-0.3
CPBX				⇑e		04 02 30.0	
	comp=N,77μm,0.3s						
CPBX				e		04 02 44.8	
	comp=E,72μm,0.4s						
EMX	El Mayor	0.35	173	eP	Pg	04 02 29.1	+0.3
EMX				i S	Sg	04 02 34.0	+0.4
SGL	Mount Signal	0.48	310	⇓iP	Pg	04 02 32.1	+1.0
COA	Coachella	0.54	15	⇑eP	Pg	04 02 33.9	+1.7
YUH	Yuha Desert	0.61	300	⇓eP	Pg	04 02 34.2	+0.6
COK	Cook Ranch	0.62	324	⇑eP	Pg	04 02 34.9	+1.1
112A	Yuma	0.63	72	⇓P	Pg	04 02 34.8	+0.8
	baz=0.7,SNR=690						
112A				⇓S	Sg	04 02 43.4	+1.1
	baz=0.7						
YMD	Yuma Desert	0.67	71	eP	Pg	04 02 35.3	+0.7
RDX	Rancho Dawling	0.69	233	i P	Pg	04 02 35.1	+0.1
RMX	La Rumorosa	0.71	292	eP	Pg	04 02 35.8	+0.3
RMX				eS	Sg	04 02 45.4	+0.5
SWSC	Sam W. Stewart	0.73	325	⇑P	Pg	04 02 36.1	+0.2
	baz=0.9,SNR=87						
DVTC	Desert V Tower	0.75	295	⇓P	Pg	04 02 36.7	+0.4
	baz=0.9,SNR=26						
DVTC				⇑S	Sg	04 02 46.3	+0.2
	baz=0.9						
GLA	Glamis	0.81	29	⇑P	Pg	04 02 37.4	+0.1
	baz=1.0,SNR=66						
GLA				⇑S	Sg	04 02 48.0	+0.1
	baz=1.0						
GLA	Glamis	0.81	29	ePg	Pg	04 02 37.5	+0.1
GLA				eSg	Sg	04 02 49.5	+1.6
ECBX	El Chinero	0.89	167	eP	Pg	04 02 38.6	-0.2
MONP	Monument Peak	1.10	300	⇓P	Pb	04 02 41.7	-0.8
	baz=1.2,SNR=279						
CBX	Cerro Bola	1.16	269	eP	Pb	04 02 43.7	+0.2
CBX				eS	Sb	04 02 58.9	+0.4
BAR	Barrett	1.21	287	ePn	Pn	04 02 44.5	+0.3
BAR				eSg	Sg	04 03 00.1	-0.7
SPX	San Pedro Mart	1.30	187	eP	Pn	04 02 45.2	-0.2
ECNX	Esteban Cantu	1.30	239	eP	Pn	04 02 45.6	+0.1
ECNX				eP		04 02 45.0	
ECNX				i S	Sb	04 03 01.3	-1.2
BC3	Big Chuckawall	1.32	354	⇓P	Pn	04 02 44.6	-1.1
	baz=1.5,SNR=35						
113A	Mohawk Valley,	1.36	71	⇑P	Pn	04 02 45.6	-0.6
	baz=1.4,SNR=126						
PBX	Punta Banda	1.36	244	eP	Pn	04 02 46.4	+0.2
PBX				eS	Sn	04 03 04.6	+0.6
PBX				i S	Sn	04 03 04.8	+0.8
PFO	Pinyon Flat Ob	1.60	323	⇑P	Pn	04 02 48.7	-0.9
	baz=1.8,SNR=99						
PFO	Pinyon Flat Ob	1.60	323	ePn	Pn	04 02 48.7	-0.9
PFO				ePg	Pg	04 02 54.2	+1.9
Z13A	Yuma Proving G	1.62	58	⇑Pn	Pn	04 02 49.0	-0.8
	baz=1.7,SNR=125						
Z13A				⇓Pb	Pb	04 02 51.2	-0.2
	baz=1.7						
109C	Camp Elliot, M	1.62	290	⇑Pb	Pb	04 02 51.3	-0.2
	baz=1.7						
109C				⇑Sb	Sb	04 03 12.3	+0.5
	baz=1.7						
IRM	Iron Mountain	1.82	4	⇓Pn	Pn	04 02 51.5	-1.0
	baz=2.0						
IRM				⇑Pb	Pb	04 02 54.1	-0.6
	baz=2.0						
MURC	Murrieta	2.04	309	⇑Pn	Pn	04 02 54.8	-0.8
	baz=2.2,SNR=34						
114A	Black Gap (USA	2.08	78	⇑Pn	Pn	04 02 55.7	-0.4
	baz=2.1,SNR=15						
214A	Organ Pipe Nat	2.14	100	⇑Pn	Pn	04 02 56.1	-0.9
	baz=2.1,SNR=20						
115A	Sonoran Desert	2.61	81	⇑Pn	Pn	04 03 03.0	-0.5
	baz=2.6						
LDFC	Landfair	2.73	3	ePn	Pn	04 03 06.8	+1.6
LDFC				ePg	Pg	04 03 15.3	+1.3
BFSC	Mount Baldy Ra	2.74	314	⇓Sb	Sb	04 03 45.9	+2.0
	baz=2.9						
Z15A	Gila River Ind	2.80	69	⇑Pn	Pn	04 03 05.8	-0.3
	baz=2.8						
CIS	Catalina Islan	2.83	293	⇓Sb	Sb	04 03 48.4	+2.0
	baz=2.9						
Y15A	Casa Rosa Ranc	2.96	56	⇓Pn	Pn	04 03 07.1	-1.1
	baz=3.0,SNR=9.9						
MWC	Mount Wilson	2.98	310	ePn	Pn	04 03 10.9	+2.3
MWC				ePg	Pg	04 03 16.9	-1.8
MWC				eSg	Sg	04 03 54.7	-2.7
PASC	Pasadena Art C	3.03	308	ePg	Pg	04 03 17.5	-2.3
PASC				eSg	Sg	04 03 56.4	-2.7
116A	Eloy	3.04	85	⇓Pb	Pb	04 03 16.0	+0.5
	baz=3.0						
GSC	Goldstone	3.21	337	ePg	Pg	04 03 21.8	-1.4
X15A	Humboldt	3.33	49	⇓Pn	Pn	04 03 12.7	-0.7
	baz=3.4						
V12A	Nelson	3.40	6	⇓Pn	Pn	04 03 13.7	-0.6
	baz=3.6						
Y16A	Circle Bar Ran	3.55	63	⇓Pn	Pn	04 03 16.5	+0.1
	baz=3.6,SNR=9.9						
TUC	Tucson	3.82	89	ePn	Pn	04 03 23.0	+3.0
TUC				ePg	Pg	04 03 33.4	-1.4
TUC				ePg	Sg	04 04 21.0	-3.2
Y17A	Roosevelt	3.97	69	⇑Pn	Pn	04 03 21.5	-0.7
	baz=4.0,SNR=11						
U12A	Valley of Fire	4.13	8	⇑Pn	Pn	04 03 23.5	-0.8
	baz=4.3						
ISA	Isabella	4.24	322	ePn	Pn	04 03 26.9	+1.0
ISA				ePg	Pg	04 03 41.7	-1.1
ISA				eSg	Sg	04 04 33.8	-3.9
118A	Homack Ranch,	4.51	85	⇑Pn	Pn	04 03 30.1	+0.6
	baz=4.5						
WUAZ	Wupatki	4.54	45	ePn	Pn	04 03 32.3	+2.3
WUAZ				eSg	Sg	04 04 39.9	-7.5
318A	Bisbee	4.60	100	⇓Pn	Pn	04 03 31.3	+0.5
	baz=4.5						
X18A	Snowflake	4.97	63	⇑Pn	Pn	04 03 35.8	-0.1
	baz=5.0						
Y19A	Nutrioso	5.31	71	⇑Pn	Pn	04 03 41.3	+0.7
	baz=5.3						
CCUT	Cedar City	5.43	16	ePn	Pn	04 03 45.3	+3.0
	comp=E,11nm,1.2s						
CCUT				ePg	Pg	04 04 05.5	-0.1
X19A	St. Johns	5.43	66	⇑Pn	Pn	04 03 41.9	-0.4
	baz=5.5						
ARUT	Antelope Range	5.64	15	ePg	Pg	04 04 06.7	-2.9
	comp=E,13nm,1.0s						
MSU	Marysvale	6.66	22	ePg	Pg	04 04 23.7	-5.4
	comp=E,5.4nm,0.9s						

IDC 28 04:15:41.3±8.1, 9°96N×90°53E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/22, mbtmp3.6/3, Error ellipse: s-maj=386.6km s-min=29.0km az=60.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	37.37	351	P	P	04 22 55.4	-0.2
	0.6nm,0.7s,baz=139,slow=8.0,SNR=5.5						
WRA	Warramunga Arr	52.38	125	P	P	04 24 55.4	-0.2
	0.3nm,0.3s,baz=301,slow=10.0,SNR=22						
ASAR	Alice Springs	53.99	129	P	P	04 25 08.0	+0.5
	0.6nm,0.9s,baz=309,slow=7.8,SNR=4.4						

IDC 28 04:17:33.6±8.0, 10°98N×92°28E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/22, mbtmp3.6/3, Error ellipse: s-maj=414.8km s-min=28.8km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	36.68	348	P	P	04 24 42.1	0.0
	0.9nm,0.7s,baz=148,slow=7.9,SNR=5.7						
WRA	Warramunga Arr	51.56	126	P	P	04 26 41.5	-0.4
	1.0nm,0.7s,baz=305,slow=8.7,SNR=8.0						
ASAR	Alice Springs	53.31	131	P	P	04 26 55.3	+0.5
	0.5nm,0.6s,baz=309,slow=6.2,SNR=4.4						

*ISK **28** 04:23:27.4, 37°10N×34°55E, h5km, MD3.4*
*ISCJB **28** 04:23:27.7±0.5, 37°09N±0°03×34°55E±0°03, h5km±4km, Error ellipse: s-maj=4.5km s-min=3.6km az=163.5*
*CSEM **28** 04:23:28.2±0.1, 37°10N×34°57E, h8km, MD3.4, Error ellipse: s-maj=1.8km s-min=1.5km az=13.0*
*DDA **28** 04:23:28.0, 37°06N×34°65E, h17km, Md3.1*

ISC 28 04:23:28.6±0.5, 37°09N±0°03×34°56E±0°03, h9km±3km, n53, σ0°87/72, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MERS	Mersin	0.22	188	PG	Pg	04 23 32.7	-0.4
MERS				eSG	Sg	04 23 36.3	+0.2
MERS	Mersin	0.22	188	i Pg	Pg	04 23 32.7	-0.4
MERS				eSg	Sg	04 23 36.3	+0.2
GULE	Gulek	0.26	42	i P	Pg	04 23 33.8	0.0
GULE				i S	Sg	04 23 37.9	+0.6
GULE	Gulek	0.26	42	i P	Pg	04 23 33.8	0.0
GULE				i S	Sg	04 23 37.9	+0.6
KARA	Karaisali	0.43	67	PG	Pg	04 23 36.1	-0.8
KARA				eSG	Sg	04 23 42.4	-0.2
KARA	Karaisali	0.43	67	i Pg	Pg	04 23 36.1	-0.8
KARA				eSg	Sg	04 23 42.4	-0.2
KRTS	Karatas	0.83	128	ePG	Pg	04 23 44.0	-0.6
KRTS				eSG	Sg	04 23 56.5	+1.1
KRTS	Karatas	0.83	128	ePg	Pg	04 23 44.0	-0.6
KRTS				eSg	Sg	04 23 56.5	+1.1
YURE	YUREGIR	0.90	107	i P	Pg	04 23 46.4	+0.5
YURE				i S	Sg	04 24 00.0	+2.5

PINB				*i* S	**Sg**	**04 24 36.8**	**-1.0**
PINB	**Pinarbasi**	**2.15**	**42**	*i* P	**Pn**	**04 24 07.1**	**+2.4**
SARI	**SarD1z-Kayseri**	**2.32**	**46**	*e*PN	**Pn**	**04 24 02.6**	**-4.3**
LEF	**Lefka**	**2.39**	**215**	*e*PN	**Pn**	**04 24 08.5**	**+0.6**
LEF	**Lefka**	**2.39**	**215**	*e*Pn	**Pn**	**04 24 08.5**	**+0.6**
GZT	**Gaziantep**	**2.41**	**83**	*i* P	**Pn**	**04 24 08.6**	**+0.4**
YOZ	**Yozgat**	**2.62**	**13**	*e*PN	**Pn**	**04 24 11.2**	**+0.2**
YOZ	**Yozgat**	**2.62**	**13**	*e*Pn	**Pn**	**04 24 11.3**	**+0.3**
KIZT	**Kizilcal**	**2.77**	**311**	*e*PN	**Pn**	**04 24 13.0**	**-0.2**
KIZT	**Kizilcal**	**2.77**	**311**	*e*Pn	**Pn**	**04 24 13.0**	**-0.1**
SUTC	**Sutluce-Ispart**	**2.87**	**279**	*e*PN	**Pn**	**04 24 14.5**	**0.0**
SUTC	**Sutluce-Ispart**	**2.87**	**279**	*e*Pn	**Pn**	**04 24 14.5**	**+0.1**
CORM	**Corum**	**3.08**	**1**	*e*PN	**Pn**	**04 24 18.1**	**+0.7**
CORM	**Corum**	**3.08**	**1**	*e*Pn	**Pn**	**04 24 18.2**	**+0.7**

IDC 28 04:30:46.9±8.1, 10°.13N×90°.77E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/22, mbtmp3.6/3, Error ellipse: s-maj=393.5km s-min=28.0km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**37.25**	**350**	P	P	04 38 00.0	-0.2
	0.9nm,0.7s,baz=136,slow=9.4,SNR=6.8						
WRA	**Warramunga Arr**	**52.27**	**125**	P	P	04 39 59.6	-0.8
	0.3nm,0.3s,baz=301,slow=9.9,SNR=9.3						
ASAR	**Alice Springs**	**53.91**	**129**	P	P	04 40 13.4	+0.9
	0.4nm,0.7s,baz=303,slow=8.4,SNR=3.8						

IDC 28 04:33:58.1±9.3, 10°.64N×91°.73E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.4/22, mbtmp3.7/3, MS3.9/1, Ms1 3.9/1, ms1mx2.9/18, Error ellipse: s-maj=481.5km s-min=27.5km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.91**	**349**	P	P	04 41 08.6	0.0
	1.1nm,0.7s,baz=134,slow=9.7,SNR=9.1						
WRA	**Warramunga Arr**	**51.80**	**126**	P	P	04 43 08.0	-0.1
	0.6nm,0.5s,baz=305,slow=8.7,SNR=4.8						
ASAR	**Alice Springs**	**53.51**	**130**	P	P	04 43 20.8	+0.1
	0.4nm,0.6s,baz=306,slow=7.3,SNR=4.1						
AKASG	**Malin Array Be**	**64.52**	**321**	LR	LR	05 18 56.4	
	comp=Z,86nm,18.7s,baz=90,slow=42						

ISCJB ***28*** *04:34:59.2±0.9, 10°.85N±0°.03×91°.69E±0°.02, h0km±5km, mb5.1/202, MS4.3/36, Error ellipse: s-maj=4.8km s-min=3.5km az=25.3*

BJI ***28*** *04:35:00.5, 10°.65N×91°.65E, h20km, mB4.9/34, mb4.9/48, Ms4.7/48, Ms7 4.4/41*

NEIC ***28*** *04:35:01.6±2.4, 10°.86N×91°.68E, h5km±15km, mb5.1/105, Error ellipse: s-maj=6.2km s-min=4.5km az=221.0*

SZGRF ***28*** *04:35:02.8, 10°.07N×91°.64E, h26km, mb5.2, Andaman Islands, India, region*

GCMT ***28*** *04:35:04.0±0.3, 10°.87N×91°.96E, h17km±1km, MW4.9, Moment Tensor Solution. s24,c27; s64,c95; Moment tensor: Scale 10^16^Nm; Mrr-2.51±.20; Mθθ0.27±.10; Mφφ2.24±.13; Mrθ-0.02±.29; Mθφ0.49±.07; Mφr-2.28±.31; Best double couple: M0 3.30000×10^16^ NP1:φ5200.00000°, δ24.00000°, λ-76.00000°. NP2:φ5 5.00000°, δ67.00000°, λ-96.00000°. Principal axes: T 3.2300, Plg21.0000°, Azm100.0000°; N 0.2000, Plg6.0000°, Azm7.0000°; P -3.4400, Plg68.0000°, Azm263.0000°; Data Used: II IU IC G CN.*

MOS ***28*** *04:35:04.5±1.1, 10°.94N×91°.67E, h33km, mb5.4/83, MS4.3/13 Error ellipse: s-maj=7.8km s-min=4.0km az=121.6*

IDC ***28*** *04:35:04.0±0.8, 10°.83N×91°.68E, h22km±4km, mb4.7/26, mb1 4.7/28, mb1mx4.7/31, mbtmp4.7/28, ML4.3/2, MS4.1/9, Ms1 4.1/9, ms1mx3.8/20, Error ellipse: s-maj=13.6km s-min=10.2km az=56.0*

TEH ***28*** *04:35:19, 10°.90N×91°.75E, h27km*

DJA ***28*** *04:35:19, 10°.96N×92°.04E, h145km, mb4.8/29*

ISC 28 04:35:03.1±1.0, 10°.87N±0°.03×91°.72E±0°.02, h13km±6km, h28km±.9km: pP-P, n538, σ1°.08/536, mb5.0/202, MS4.3/36, 30C-26D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**1.27**	**52**	*e*PKP	x	04 36 34.2	
PBA				*e*S	x	04 36 54.0	
CMAR	**Chiang Mai Arr**	**10.28**	**42**	Pn	**Pn**	**04 37 31.1**	**+0.8**
	1.1nm,0.3s,baz=235,slow=15,SNR=9.2						
CMAR				Sn	**Sn**	**04 39 23.6**	**-2.0**
	0.8nm,0.3s,baz=238,slow=25,SNR=2.9						
CMAR				LR	LR	04 41 57.2	
	comp=Z,1μm,18.4s,baz=224,slow=40						
CMAR	**Chiang Mai Arr**	**10.28**	**42**	P	**Pn**	**04 37 31.2**	**+0.9**
CMAR						04 39 23.6	
KULM	**Kulim**	**10.44**	**121**	P	**Pn**	**04 37 34.4**	**+1.9**
KULM	**Kulim**	**10.44**	**121**	*e*Pn	**Pn**	**04 37 32.7**	**+0.2**
	42nm,0.9s						
CHTO	**Chiang Mai**	**10.54**	**41**	*e*P	**Pn**	**04 37 35.5**	**+1.6**
CHTO	**Chiang Mai**	**10.54**	**41**	P	Px	04 37 45.3	
	SNR=5.7						
CHTO				P	Px	04 37 45.3	
	SNR=5.7						
VIS	**Vishakhapatnam**	**10.60**	**311**	*e*PKP	**Pn**	**04 37 32.8**	**-2.0**
PSI	**Prapat**	**10.74**	**138**	Pn	**Pn**	**04 37 36.6**	**-0.1**
	1.3nm,0.3s,baz=306,slow=16,SNR=3.5						
PSI				LR	LR	04 42 30.9	
	comp=Z,2μm,20.4s,baz=309,slow=41						
IPM	**Ipoh**	**11.20**	**124**	P	**Pn**	**04 37 43.1**	**+0.2**
IPM	**Ipoh**	**11.20**	**124**	P	**Pn**	**04 37 47.5**	**+4.5**
MDRS	**Chennai**	**11.43**	**282**	*ex*	x	04 38 00.1	
MDRS				*ex*	x	04 40 46.2	
PALK	**Pallekele**	**11.45**	**253**	Pn	**Pn**	**04 37 46.0**	**-0.4**
	867nm,0.9s,SNR=5.7						
PALK	**Pallekele**	**11.45**	**253**	*e*P	**Pn**	**04 37 45.2**	**-1.2**
PALK				pmax	pmax		
	comp=Z,126nm,0.8s						
PALK	**Pallekele**	**11.45**	**253**	*e*Pn	**Pn**	**04 37 45.2**	**-1.2**
	comp=Z,126nm,0.8s						
PALK				*e*Sn	**Sn**	**04 39 42.5**	**-12**
KTGM	**Kuala Trenggan**	**12.57**	**115**	P	**Pn**	**04 38 03.8**	**+2.1**
HYB	**Hyderabad**	**14.32**	**298**	*i* P	**Pn**	**04 38 26.0**	**+0.4**
HYB				*e*S	**Sn**	**04 41 06.0**	**+1.5**
KGM	**Kluang**	**14.49**	**127**	P	**Pn**	**04 38 27.0**	**-1.0**
SHL	**Shillong**	**14.62**	**1**	*e*PKP	**Pn**	**04 38 29.0**	**-0.6**
SHL				*ex*	x	04 40 37.0	
TRD	**Trivandrum**	**14.74**	**262⇑**	*ex*	x	04 41 50.0	
MYKOM	**Kota Tinggi**	**15.05**	**126**	P	**Pn**	**04 38 34.6**	**-1.0**
NGP	**Nagpur**	**15.88**	**312**	*e*PKP	**Pn**	**04 38 47.0**	**+0.5**
NGP				*ex*	x	04 38 55.5	
	comp=Z,104nm,1.6s						
NGP				*e*S	**Sn**	**04 41 44.5**	**+2.0**
ODAN	**Odare**	**16.42**	**346**	*e*P	**Pn**	**04 38 51.2**	**-2.1**
	comp=Z,28nm,0.4s						
RAMN	**Ramite**	**16.70**	**344**	*e*P	**Pn**	**04 38 56.7**	**-0.2**
	comp=Z,98nm,0.5s						
TAPN	**Taplejung**	**16.82**	**348**	*e*P	**Pn**	**04 38 55.1**	**-3.3**
	comp=Z,179nm,1.0s						
JIRN	**Jiri**	**17.49**	**343**	*e*P	**Pn**	**04 39 04.8**	**-1.9**
	comp=Z,87nm,0.7s						
KMI	**Kunming**	**17.61**	**35**	P	**Pn**	**04 39 10.8**	**+2.5**
KMI				pP	pP	04 39 17.0	+4.0
KMI				sP	sP	04 39 21.0	+6.3
KMI				PP		04 39 26.0	
KMI				S	**Sn**	**04 42 25.0**	**+0.6**
KMI				sS	sS	04 42 34.8	-3.1
KMI				SS		04 42 47.0	
KMI				PcP	PcP	04 43 49.8	+2.2
KMI				pmax	pmax		
	comp=Z,26nm,1.1s						
KMI				pmax	pmax		
	comp=Z,200nm,5.2s						
KMI				LR	LR		
	comp=N,2μm,16.3s						
KMI				LR	LR		
	comp=E,2μm,12.9s						
KMI				LR	LR		
	comp=Z,1μm,16.6s						
PKI	**Pulchoki**	**17.64**	**341**	*e*P	**Pn**	**04 39 08.3**	**-0.3**
	comp=Z,224nm,1.1s						
PKIN	**Phulchoki**	**17.65**	**341**	*e*P	**Pn**	**04 39 08.6**	**-0.1**
	comp=Z,253nm,1.0s						
DMN	**Daman**	**17.77**	**340**	*e*P	**Pn**	**04 39 09.4**	**-0.8**
	comp=Z,153nm,0.7s						
GUN	**Gumba**	**17.82**	**343**	*e*P	**Pn**	**04 39 09.9**	**-0.9**
	comp=Z,82nm,0.6s						
KKN	**Kakani**	**17.88**	**341**	*e*P	**Pn**	**04 39 10.5**	**-1.1**
	comp=Z,95nm,0.9s						
KAD	**Karad**	**18.16**	**293**	*e*PKP	**Pn**	**04 39 13.7**	**-1.4**
KAD				AMb	AMB	04 39 28.5	
	comp=Z,57nm,1.1s						
BHPL	**Bhopal**	**18.36**	**314**	*e*PKP	**Pn**	**04 39 16.6**	**-0.9**
BHPL				AMb	AMB	04 39 22.5	
	comp=Z,92nm,1.2s						
POO	**Poona**	**18.87**	**296**	*e*PKP	**Pn**	**04 39 22.5**	**-1.3**
POO				AMb	AMB	04 39 27.2	
	comp=Z,94nm,0.9s						
QIZ	**Qiongzhong**	**19.29**	**63**	P	**Pn**	**04 39 27.8**	**-1.0**
QIZ				sP	sP	04 39 37.5	+4.3
QIZ				S	**Sn**	**04 43 03.8**	**-1.2**
QIZ				sS	sS	04 43 14.0	+2.0
QIZ				pmax	pmax		
	comp=Z,270nm,5.2s						
QIZ				LR	LR		
	comp=N,1μm,14.9s						
QIZ				LR	LR		
	comp=Z,1μm,13.6s						
KSM	**Kuching**	**20.69**	**116**	P	**P**	**04 39 46.1**	**+3.0**
KSM	**Kuching**	**20.69**	**116**	*e*P	**P**	**04 39 42.9**	**-0.2**
	comp=Z,94nm,0.8s						
GYA	**Guiyang**	**20.96**	**40**	P	**P**	**04 39 45.5**	**-0.4**
GYA				pP		04 39 54.3	
GYA				PP		04 40 09.8	
GYA				S	**S**	**04 43 36.3**	**-3.0**
GYA				PcP	PcP	04 43 49.0	-4.5
GYA				SS		04 44 11.5	
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,90nm,3.7s						
GYA				LR	LR		
	comp=N,2μm,15.8s,MS4.7						
GYA				LR	LR		
	comp=E,2μm,15.5s,MS4.7						
GYA				LR	LR		
	comp=Z,2μm,16.8s,MS4.7						
PTH	**Pithoragarh**	**21.46**	**332**	*e*PKP	**P**	**04 39 52.0**	**+0.7**
SBUM	**Sibu**	**22.00**	**111**	P	**P**	**04 39 57.7**	**+0.5**
SONA	**Sohna**	**22.07**	**324**	*e*PKP	**P**	**04 39 58.4**	**+0.6**
SONA				AMb	AMB	04 40 03.0	
	comp=Z,176nm,0.8s,mb5.5						
NDI	**New Delhi**	**22.32**	**325**	*e*PKP	**P**	**04 40 01.0**	**+0.5**
NDI				*e*S	**S**	**04 44 08.0**	**+2.1**
AJM	**Ajmer**	**22.38**	**316**	*e*PKP	**P**	**04 40 01.0**	**-0.1**
AJM				AMb	AMB	04 40 06.9	
	comp=Z,151nm,1.0s,mb5.4						
JOSI	**Joshimath**	**22.61**	**332**	*e*PKP	**P**	**04 40 03.6**	**0.0**
KHET	**Khetri**	**22.71**	**321**	*e*PKP	**P**	**04 40 04.4**	**-0.2**
KHET				AMb	AMB	04 40 09.2	
	comp=Z,160nm,1.1s,mb5.4						
CD2	**Chengdu**	**22.86**	**27⇑**	*i*P	**P**	**04 40 06.8**	**+0.6**
CD2				pP		04 40 13.8	
CD2				sP	sP	04 40 17.3	+5.6
CD2				PP		04 40 36.0	
CD2				PcP	PcP	04 43 59.3	+2.2
CD2				S	**S**	**04 44 10.0**	**-5.6**
CD2				sS	sS	04 44 21.3	-0.9
CD2				SS		04 44 53.5	
CD2				PcS	PcS	04 47 36.8	+0.6
CD2				pmax	pmax		
	comp=Z,70nm,1.1s,mb5.0						
CD2				pmax	pmax		
	comp=Z,150nm,5.6s						
CD2				LR	LR		
	comp=N,1μm,14.4s,MS4.7						
CD2				LR	LR		
	comp=E,1μm,13.2s,MS4.7						
CD2				LR	LR		
	comp=Z,1μm,14.4s,MS4.5						
KKR	**Kurukshetra**	**23.52**	**326**	*e*PKP	**P**	**04 40 13.2**	**0.0**
KLP	**Kalpa**	**24.04**	**331**	*e*PKP	**P**	**04 40 16.9**	**-1.0**
KLP				AMb	AMB	04 40 22.9	
	comp=Z,80nm,0.7s,mb5.3						
KKM	**Kota Kinabalu**	**24.69**	**99**	P	**P**	**04 40 24.3**	**+0.2**
KKM	**Kota Kinabalu**	**24.69**	**99**	*e*P	**P**	**04 40 23.7**	**-0.4**
	comp=Z,55nm,1.2s,mb5.0						
BHK	**Bhakra**	**24.87**	**328**	*e*PKP	**P**	**04 40 25.0**	**-0.5**
KDM	**Kudat**	**25.12**	**97**	P	**P**	**04 40 28.9**	**+0.9**
SDKM	**Sandakan**	**25.73**	**100**	P	**P**	**04 40 32.4**	**-1.1**
TSM	**Tawau**	**26.72**	**102**	P	**P**	**04 40 42.2**	**-0.3**
MYLDM	**Lahad Datu**	**27.11**	**100**	P	**P**	**04 40 46.5**	**+0.6**
MYLDM	**Lahad Datu**	**27.11**	**100**	P	**P**	**04 40 46.6**	**+0.7**
LZH	**Lanzhou**	**27.40**	**22**	*e*P	**P**	**04 40 49.5**	**+1.2**
LZH				pP	pP	04 40 59.0	+6.6
LZH				sP	sP	04 41 03.0	+9.0
LZH				PP		04 41 37.5	
LZH				*e*S	**S**	**04 45 25.3**	**-2.9**
LZH				sS	sS	04 45 41.5	+6.6
LZH				SS		04 46 43.8	
LZH				pmax	pmax		
	comp=Z,56nm,1.3s,mb4.9						
LZH				pmax	pmax		
	comp=Z,170nm,5.6s						
LZH				LR	LR		
	comp=E,890nm,11.5s						
LZH				LR	LR		
	comp=Z,1μm,15.0s,MS4.7						
XAN	**Xi'an**	**27.92**	**32**	P	**P**	**04 40 52.0**	**-1.0**
XAN				pP	pP	04 40 59.3	+2.2
XAN				sP	sP	04 41 03.5	+4.8
XAN				PP		04 41 41.8	
XAN				PcP	PcP	04 44 06.8	-1.7
XAN				S	**S**	**04 45 31.3**	**-5.2**
XAN				ScP	ScP	04 47 45.0	-4.2
XAN				PcS	PcS	04 47 48.0	-2.5
XAN				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.9						
XAN				pmax	pmax		
	comp=Z,15nm,4.7s						
XAN				LR	LR		
	comp=N,570nm,18.2s,MS4.2						
XAN				LR	LR		
	comp=E,230nm,16.1s,MS4.2						
XAN				LR	LR		
	comp=Z,170nm,15.0s,MS3.8						
TGY	**Tagaytay City**	**28.70**	**81**	P	**P**	**04 41 01.4**	**+1.3**
	comp=Z,102nm,0.3s,mb6.0,baz=176,slow=4.1,SNR=2.9						
WHN	**Wuhan**	**28.73**	**44**	P	**P**	**04 41 07.3**	**+7.1**
WHN				S	**S**	**04 45 33.5**	**-16**
WHN				LR	LR		
	comp=N,2μm,16.6s,MS5.0						
WHN				LR	LR		
	comp=E,2μm,16.7s,MS5.0						
WHN				LR	LR		
	comp=Z,2μm,13.0s,MS5.0						
GTA	**Gaotai**	**29.32**	**13**	⇑P	**P**	**04 41 06.5**	**+1.1**
GTA				pP	pP	04 41 13.5	+4.1
GTA				sP	sP	04 41 17.3	+6.2
GTA				PcP	PcP	04 44 13.8	+2.0
GTA				S	**S**	**04 45 57.8**	**-0.6**
GTA				sS	sS	04 46 09.8	+4.7
GTA				SS	SS	04 47 30.0	-33
GTA				pmax	pmax		
	comp=Z,35nm,1.8s,mb4.8						
GTA				pmax	pmax		
	comp=Z,130nm,6.0s						
GTA				LR	LR		
	comp=N,540nm,15.5s,MS4.4						
GTA				LR	LR		
	comp=E,530nm,15.5s,MS4.4						
GTA				LR	LR		
	comp=Z,490nm,17.0s,MS4.2						
KBL	**Kabul**	**31.35**	**322**	*e*P	**P**	**04 41 24.0**	**+0.6**
KBL				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.0						
KBL	**Kabul**	**31.35**	**322**	*e*P	**P**	**04 41 24.0**	**+0.6**
	comp=Z,23nm,0.9s,mb5.0						
KSH	**Kashi**	**31.78**	**337**	P	**P**	**04 41 26.3**	**-0.8**
KSH				pP	pP	04 41 33.5	+2.3
KSH				sP	sP	04 41 37.0	+4.2
KSH				PP	PP	04 42 30.3	-8.7
KSH				PcP	PcP	04 44 19.8	+1.5
KSH				S	**S**	**04 46 31.0**	**-5.9**
KSH				sS	sS	04 46 43.3	-0.3
KSH				ScP	ScP	04 48 00.0	-1.6
KSH				PcS	PcS	04 48 02.8	0.0
KSH				SS	SS	04 48 19.3	-34
KSH				ScS	ScS	04 51 56.0	-3.6
KSH				pmax	pmax		
	comp=Z,34nm,0.8s,mb5.2						
KSH				pmax	pmax		
	comp=Z,110nm,2.7s,mb5.2						
KSH				LR	LR		
	comp=N,140nm,6.6s						
KSH				LR	LR		
	comp=E,730nm,14.6s						
KSH				LR	LR		
	comp=Z,370nm,13.2s,MS4.2						
NJ2	**Nanjing**	**32.73**	**46**	*e*P	**P**	**04 41 43.8**	**+8.3**
NJ2				pP	pP	04 41 53.5	+14
NJ2				sP	sP	04 41 57.3	+16
NJ2				PP	PP	04 42 53.8	+4.2
NJ2				S	**S**	**04 47 01.0**	**+9.1**
NJ2				sS	sS	04 47 19.0	+20
NJ2				pmax	pmax		
	comp=Z,40nm,0.7s,mb5.5						
NJ2				pmax	pmax		
	comp=Z,180nm,3.6s						
NJ2				LR	LR		
	comp=N,2μm,24.5s						
NJ2				LR	LR		
	comp=E,850nm,18.8s						
NJ2				LR	LR		
	comp=Z,16μm,13.8s						
WMQ	**Urumqi**	**33.01**	**355**	P	**P**	**04 41 39.0**	**+1.1**
WMQ				sP	sP	04 41 50.0	+6.4
WMQ				PP	PP	04 42 50.0	-2.6
WMQ				S	**S**	**04 46 55.0**	**-1.0**
WMQ				sS	sS	04 47 07.0	+4.3
WMQ				SS	SS	04 48 55.0	-23
WMQ				pmax	pmax		
	comp=Z,41nm,1.0s,mb5.3						
WMQ				pmax	pmax		
	comp=Z,160nm,3.0s						
WMQ				LR	LR		
	comp=N,470nm,14.0s,MS4.6						
WMQ				LR	LR		
	comp=E,700nm,14.0s,MS4.6						
WMQ				LR	LR		
	comp=Z,350nm,14.0s,MS4.2						
SSE	**Sheshan**	**33.91**	**49**	*e*P	**P**	**04 41 44.5**	**-1.4**
SSE				pP	pP	04 41 53.5	+3.5
SSE				sP	sP	04 41 57.5	+5.9
SSE				S	**S**	**04 47 05.0**	**-5.3**
SSE				sS	sS	04 47 22.3	+5.3
SSE				pmax	pmax		
	comp=Z,21nm,0.7s,mb5.2						
SSE				pmax	pmax		
	comp=Z,71nm,3.5s						
SSE				LR	LR		
	comp=N,560nm,19.7s,MS4.4						
SSE				LR	LR		
	comp=E,420nm,19.7s,MS4.4						
SSE				LR	LR		
	comp=Z,720nm,14.1s						
ULHL	**Ulahol**	**34.06**	**339**	P	**P**	**04 41 49.3**	**+2.3**
	SNR=14						
KZA	**Kyzart**	**34.27**	**338**	P	**P**	**04 41 50.5**	**+1.6**
	SNR=25						
HHC	**Hu-ho-hao-te**	**34.61**	**27**	*e*P	**P**	**04 41 54.0**	**+2.2**
HHC				pP	pP	04 42 01.0	+5.1
HHC				sP	sP	04 42 04.5	+6.9
HHC				PP	PP	04 43 11.0	+0.6
HHC				PcP	PcP	04 44 27.0	+0.8
HHC				S	**S**	**04 47 21.3**	**+0.4**
HHC				sS	sS	04 47 34.3	+6.7
HHC				ScP	ScP	04 48 10.3	-1.1
HHC				PcS	PcS	04 48 13.0	+0.4
HHC				SS	SS	04 49 36.0	-15
HHC				ScS	ScS	04 52 12.0	-2.3
HHC				pmax	pmax		
	comp=Z,18nm,0.6s,mb5.2						
HHC				pmax	pmax		
	comp=Z,100nm,4.5s						
HHC				LR	LR		
	comp=N,400nm,12.3s,MS4.6						
HHC				LR	LR		
	comp=E,500nm,12.3s,MS4.6						
HHC				LR	LR		
	comp=Z,550nm,15.6s,MS4.4						
UCH	**Uchtor**	**34.67**	**337**	P	**P**	**04 41 55.3**	**+2.9**
	SNR=22						
UCH	**Uchtor**	**34.67**	**337**	*e*P	**P**	**04 41 53.4**	**+1.1**
	comp=Z,20nm,1.0s,mb5.0						
TKM2	**Tokmak 2**	**34.88**	**339**	P	**P**	**04 41 56.0**	**+1.9**
	SNR=16						
TKM2	**Tokmak 2**	**34.88**	**339**	*e*P	**P**	**04 41 55.8**	**+1.7**
TKM2				*e**PP	pP	04 42 03.1	+4.9
TKM2				pmax	pmax		
	comp=Z,26nm,1.2s,mb5.0						
TKM2	**Tokmak 2**	**34.88**	**339**	*e*P	**P**	**04 41 55.8**	**+1.7**
	comp=Z,26nm,1.2s,mb5.0						
TKM2				*e*pP	pP	04 42 03.1	+4.9
KBK	**Karagaybulak**	**34.88**	**338**	P	**P**	**04 41 57.3**	**+3.1**
	SNR=16						
AML	**Almayashu**	**34.91**	**336**	P	**P**	**04 41 57.6**	**+3.3**
	SNR=8.8						
AML	**Almayashu**	**34.91**	**336**	*e*P	**P**	**04 41 55.5**	**+1.1**
	comp=Z,89nm,1.0s,mb5.7						
AAK	**Ala-Archa**	**35.03**	**338**	P	**P**	**04 41 56.1**	**+0.7**
	comp=Z,265nm,1.1s,mb6.1,SNR=11						
AAK	**Ala-Archa**	**35.03**	**338**	P	**P**	**04 41 58.4**	**+3.0**
	SNR=20						
AAK	**Ala-Archa**	**35.03**	**338**	P	**P**	**04 41 56.7**	**+1.3**
	comp=Z,25nm,0.9s,mb5.1,baz=166,slow=6.3,SNR=55						
FRU	**Bishkek**	**35.16**	**338**	*e*P	**P**	**04 41 57.0**	**+0.5**
FRU				*e*		04 42 14.0	
FRU				pmax	pmax		
	comp=Z,100nm,1.4s,mb5.5						
CHMS	**Chumysh**	**35.25**	**338**	P	**P**	**04 41 59.5**	**+2.2**
	SNR=8.2						
EKS2	**Erkin-Say**	**35.33**	**337**	P	**P**	**04 42 01.1**	**+3.2**
	SNR=37						
EKS2	**Erkin-Say**	**35.33**	**337**	*e*P	**P**	**04 41 59.4**	**+1.4**
	comp=Z,43nm,1.0s,mb5.3						
USP	**Ospenovka**	**35.58**	**338**	P	**P**	**04 42 02.5**	**+2.4**
	SNR=30						
BJI	**Beijing**	**36.24**	**33**	P	**P**	**04 42 06.8**	**+0.9**
BJI				sP	sP	04 42 15.5	+3.9
BJI				PP	PP	04 43 26.8	-1.6
BJI				S	**S**	**04 47 47.3**	**+1.3**
BJI				sS	sS	04 47 58.0	+5.3
BJI				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.2						
BJI				pmax	pmax		
	comp=Z,92nm,3.9s						
BJI				LR	LR		
	comp=N,770nm,18.1s,MS4.7						
BJI				LR	LR		
	comp=E,730nm,18.1s,MS4.7						
BJI				LR	LR		
	comp=Z,680nm,18.7s,MS4.5						
MK31	**Makanchi Array**	**36.68**	**349**	*e*P	**P**	**04 42 09.3**	**-0.2**
MKAR	**Makanchi Array**	**36.68**	**349**	P	**P**	**04 42 09.4**	**-0.1**
	comp=Z,27nm,0.8s,mb5.1,baz=131,slow=8.7,SNR=103						
MKAR				LR	LR	05 01 31.5	
	comp=Z,361nm,18.9s,MS4.2,baz=163,slow=43						
SONM	**Songino Array**	**38.86**	**16**	P	**P**	**04 42 28.2**	**+0.3**
	comp=Z,24nm,1.0s,mb4.9,baz=196,slow=7.7,SNR=70						
SONM				PcP	PcP	04 44 39.9	+1.0
	comp=Z,2.9nm,0.8s,baz=214,slow=3.2,SNR=5.1						
SONM				LR	LR	05 01 52.7	
	comp=Z,275nm,18.2s,MS4.1,baz=7.6,slow=41						
SONM	**Songino Array**	**38.86**	**16**	P	**P**	**04 42 28.2**	**+0.3**
SONM						04 44 39.9	
ULN	**Ulaanbaatar**	**39.07**	**16**	*e*P	**P**	**04 42 30.4**	**+0.8**
ULN				pmax	pmax		
	comp=Z,24nm,1.2s,mb4.8						
ULN	**Ulaanbaatar**	**39.07**	**16**	*e*P	**P**	**04 42 30.4**	**+0.7**
	comp=Z,24nm,1.2s,mb4.8						
ULN	**Ulaanbaatar**	**39.07**	**16**	P	**P**	**04

KURK PcP PcP 04 44 46.8 +0.6
comp=Z,2.6nm,0.6s,baz=169,slow=2.4,SNR=4.5
KURK ScP ScP 04 48 34.9 -1.0
comp=Z,0.5nm,0.2s,baz=168,slow=3.1,SNR=4.6
KURK LR LR 05 02 55.0
comp=Z,382nm,21.8s,MS4.2,baz=175,slow=41
KURK Kurchatov 41.16 347 *d iP* **P 04 42 46.8 -0.2**
KURK pmax pmax
comp=Z,85nm,1.7s,mb5.1
KURK Kurchatov 41.16 347 *eP* **P 04 42 46.3 -0.7**
comp=Z,51nm,1.1s,mb5.1
KURK Kurchatov 41.16 347 P **P 04 42 47.6 +0.7**
SNR=24
KURK P 04 42 47.6
SNR=24
MOY Mondy 41.38 9 *eP* **P 04 42 49.2 +0.5**
TLY Talaya 41.84 11 *d iP* **P 04 42 54.5 +2.0**
TLY *e* 04 44 28.2
TLY *e*PPP 04 44 53.7
TLY *e*S **S 04 49 10.6 +0.7**
TLY *e*SS SS 04 52 08.5 -7.7
TLY pmax pmax
comp=Z,15nm,1.1s,mb4.5
TLY MLR MLR
comp=Z,262nm,17.0s,MS4.2
TLY Talaya 41.84 11 *eP* **P 04 42 52.6 0.0**
comp=Z,15nm,1.1s,mb4.5
KSRS Korea Array 41.91 45 P **P 04 42 53.2 -0.1**
comp=Z,4.5nm,0.8s,mb4.1,baz=242,slow=9.3,SNR=10.0
KSRS pP pP 04 42 59.7 +2.2
comp=Z,9.2nm,1.0s,baz=244,slow=8.8,SNR=8.5
MBWA Marble Bar 42.08 139 *eP* **P 04 42 54.5 -0.4**
comp=Z,58nm,1.4s,mb5.0
IANJ Anjilo 42.12 312 *eP* **P 04 42 53.9 -1.2**
IRK Irkutsk 42.49 11 *eP* **P 04 42 59.2 +1.3**
IRK pmax pmax
comp=Z,32nm,1.4s,mb4.8
ISHM Shahmirzad 42.72 312 *eP* **P 04 43 01.4 +1.4**
ILAS Lasjerd 42.78 311 *eP* **P 04 43 00.3 -0.2**
IFIR Firoozkooh 43.04 311 *eP* **P 04 43 03.8 +1.2**
ZAA0 Zalesovo Array 43.32 354 *eP* **P 04 43 04.2 -0.3**
ZAA0 epP pP 04 43 11.7 +3.0
ZALV Zalesovo Beam 43.32 354 P **P 04 43 04.0 -0.5**
comp=Z,25nm,0.7s,mb5.0,baz=182,slow=5.6,SNR=81
ZALV pP pP 04 43 11.4 +2.8
comp=Z,27nm,1.0s,baz=176,slow=8.9,SNR=12
ZALV LR LR 05 05 44.3
comp=Z,214nm,18.1s,MS4.1,baz=349,slow=42
ZALV Zalesovo Beam 43.32 354 P **P 04 43 04.0 -0.5**
ZALV *PP pP 04 43 11.4 +2.8
IDMV Damavand 43.55 311 *eP* **P 04 43 06.6 -0.1**
CN2 Changchun 43.88 35 *eP* **P 04 43 09.5 +0.2**
CN2 epP pP 04 43 17.0 +3.6
CN2 *e*S **S 04 49 38.3 -1.9**
CN2 *e*SS SS 04 52 46.5 -10
CN2 pmax pmax
comp=Z,20nm,0.8s,mb4.9
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,500nm,20.0s,MS4.5
CN2 LR LR
comp=E,400nm,20.0s,MS4.5
CN2 LR LR
comp=Z,400nm,20.0s,MS4.3
FITZ Fitzroy Crossi 44.16 130 *eP* **P 04 43 09.9 -1.9**
comp=Z,96nm,0.8s,mb5.6
FITZ Fitzroy Crossi 44.16 130 P **P 04 43 09.8 -2.0**
comp=Z,27nm,1.0s,mb4.9,baz=320,slow=6.3,SNR=29
FITZ Fitzroy Crossi 44.16 130 *eP* **P 04 43 10.7 -1.1**
comp=Z,92nm,1.0s,mb5.5
FITZ epP pP 04 43 20.1 +4.1
IR3 Iran Long-Peri 44.26 310 *eP* **P 04 43 11.6 -0.8**
NVS Novosibirsk 44.37 353⇑*iP* **P 04 43 12.1 -0.9**
NVS *e*S **S 04 49 44.6 -2.3**
NVS pmax pmax
comp=N,27nm,1.5s
NVS pmax pmax
comp=Z,30nm,1.5s,mb4.8
NVS pmax pmax
comp=E,12nm,1.3s
NVS smax
comp=N,10.0nm,2.0s
NVS smax
comp=E,19nm,2.0s
RDF Al-Radifah 44.94 300 *eP* **P 04 43 17.9 0.0**
RDF AMb AMB 04 43 20.8
comp=Z,86nm,1.0s,mb5.5
NAY Al-Naaiem 45.28 300 *eP* **P 04 43 20.2 -0.5**
NAY AMb AMB 04 43 24.1
comp=Z,33nm,1.1s,mb5.1
BVAR Borovoye Array 45.41 342 P **P 04 43 20.8 -0.5**
comp=Z,6.0nm,0.8s,mb4.5,baz=142,slow=7.5,SNR=20
BVAR pP pP 04 43 28.5 +3.1
comp=Z,2.9nm,0.6s,baz=142,slow=7.5,SNR=5.5
BRVK Borovoye 45.47 342 *c iP* **P 04 43 22.2 +0.5**
BRVK pmax pmax
comp=Z,21nm,1.2s,mb4.8
BRVK Borovoye 45.47 342 *eP* **P 04 43 21.2 -0.5**
comp=Z,13nm,0.9s,mb4.8
MEEK Meekatharra 45.53 145 *eP* **P 04 43 22.3 -0.3**
KAKA Kakadu 46.73 119 *eP* **P 04 43 30.9 -1.3**
comp=Z,10nm,0.8s,mb4.8
MDJ Mudanjiang 46.77 37 P **P 04 43 33.5 +1.3**
MDJ pP pP 04 43 40.3 +4.0
MDJ sP sP 04 43 43.5 +5.5
MDJ PcP PcP 04 45 06.5 +1.1
MDJ PP PP 04 45 23.8 +1.7
MDJ ScP ScP 04 48 56.3 -2.6
MDJ PcS PcS 04 49 00.8 +0.7
MDJ S **S 04 50 24.5 +2.6**
MDJ ScS ScS 04 53 27.0 +0.2
MDJ pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
MDJ pmax pmax
comp=Z,110nm,8.3s
MDJ LR LR
comp=N,250nm,18.7s,MS4.4
MDJ LR LR
comp=E,310nm,17.2s,MS4.4
MDJ LR LR
comp=Z,550nm,14.1s,MS4.7
VLA Vladivostok 47.38 40 P **P 04 43 33.0 -3.9**
VLA pmax pmax
comp=Z,96nm,1.6s,mb5.5
VLA MLR MLR
comp=Z,400nm,12.3s,MS4.6
AKTK Aktyubinsk 48.19 332 P **P 04 43 42.8 -0.3**
AKTO Aktyubinsk 48.19 332 P **P 04 43 42.8 -0.3**
comp=Z,10nm,0.7s,mb5.0,baz=121,slow=8.2,SNR=30
MAJO Matsushiro 49.03 51 *eP* **P 04 43 49.1 -0.7**
MAT Matsushiro 49.03 51 P **P 04 43 50.8 +1.0**
MAT S **S 04 50 55.0 +0.8**
MJAR Matsushiro Arr 49.03 51 P **P 04 43 50.7 +0.9**
comp=Z,1.4nm,0.8s,mb4.1,baz=242,slow=6.6,SNR=8.0
MJAR PcP PcP 04 45 14.4 +0.8
comp=Z,2.7nm,0.8s,baz=247,slow=3.9,SNR=5.3
KLBR Kellerberrin 49.04 150 *eP* **P 04 43 49.8 -0.1**
comp=Z,22nm,0.8s,mb5.2
MAK Makhachkala 49.90 318 *eP* **P 04 43 57.7 +1.3**
MAK *e* 04 45 14.3
MAK *e* 04 45 46.6
MAK *e*S **S 04 51 10.1 +3.9**
MAK pmax pmax
comp=Z,233nm,1.8s,mb5.9
KLR Kul'dur 50.61 33 *eP* **P 04 44 03.7 +2.1**
GNI Garni 50.65 314 LR LR 05 07 55.1
comp=Z,79nm,19.1s,MS3.8,baz=95,slow=39
GNI Garni 50.65 314 *c iP* **P 04 44 01.7 -0.4**
GNI pmax pmax
comp=Z,84nm,1.2s
GNI Garni 50.65 314 *eP* **P 04 44 04.0 +1.9**
comp=Z,124nm,1.4s,mb5.7
GNI Garni 50.65 314⇓P **P 04 44 04.2 +2.1**
SNR=14
GNI ⇓P 04 44 04.2
SNR=14
SVE Sverdlovsk 51.76 339⇓*eP* **P 04 44 10.3 +0.2**
SVE *e*S **S 04 51 38.9 +7.4**
SVE pmax pmax
comp=Z,73nm,1.3s,mb5.5
SVE MLR MLR
comp=Z,642nm,24.0s,MS4.6
WRA Warramunga Arr 51.94 126 P **P 04 44 10.8 -1.3**
comp=Z,9.5nm,0.4s,mb5.1,baz=307,slow=8.3,SNR=73
WRA Warramunga Arr 51.94 126 P **P 04 44 10.8 -1.3**
WRAB Tennant Creek 51.95 126 P **P 04 44 11.4 -0.7**
comp=Z,254nm,0.8s,mb6.2,SNR=9.9
WRAB Tennant Creek 51.95 126 *eP* **P 04 44 11.4 -0.7**
WRAB *e*PP pP 04 44 19.1 +2.8
WRAB pmax pmax
comp=Z,26nm,0.7s,mb5.3
WRAB Tennant Creek 51.95 126 *eP* **P 04 44 11.4 -0.7**
comp=Z,26nm,0.7s,mb5.3
WRAB *ep*P pP 04 44 19.1 +2.9
HABR Khabarovsk 52.02 35 *eP* **P 04 44 19.4 +7.2**
HABR *e* 04 46 08.5
HABR S **S 04 51 33.7 -1.7**
HABR *e*SS sS 04 51 48.2 +5.8
HABR *e* 04 53 57.9
HABR *e*SS SS 04 55 11.4 -1.2
HABR *e*SSS 04 56 54.1
HABR pmax pmax
comp=E,22nm,1.2s
HABR pmax pmax
comp=Z,30nm,1.2s,mb5.1
HABR pmax pmax
comp=N,15nm,1.3s
HABR MLR MLR
comp=Z,145nm,16.0s,MS4.1
ARU Arti 52.22 337 *d iP* **P 04 44 14.1 +0.6**
ARU 04 46 09.8
ARU S **S 04 51 38.6 +0.8**
ARU SS SS 04 55 10.4 -4.9
ARU pmax pmax
comp=Z,61nm,1.7s,mb5.2
ARU MLR MLR
comp=Z,537nm,19.0s,MS4.6
ARU Arti 52.22 337 *eP* **P 04 44 13.4 -0.1**
comp=Z,32nm,1.0s,mb5.2
ZEI Tsey 52.23 316 *eP* **P 04 44 14.1 +0.2**
ZEI pmax pmax
comp=Z,20nm,1.0s,mb5.0
CLNS Chul'man 52.52 22 *eP* **P 04 44 22.1 +6.3**
CLNS pmax pmax
comp=Z,26nm,1.2s,mb5.0
CLNS pmax pmax
comp=E,13nm,1.1s
CLNS pmax pmax
comp=N,15nm,1.4s
OPO Ambohidratompo 52.77 237 P **P 04 44 17.4 -0.8**
comp=N,3.1nm,0.7s,mb4.3,baz=68,slow=8.7,SNR=5.6
OPO PcP PcP 04 45 28.8 +1.0
comp=N,3.6nm,0.8s,baz=110,slow=7.8,SNR=3.8
ABPO Ambohimpanom 52.97 236 *eP* **P 04 44 21.4 +1.8**
ABPO pmax pmax
comp=Z,39nm,1.3s,mb5.2
ABPO Ambohimpanom 52.97 236 *eP* **P 04 44 21.4 +1.8**
comp=Z,39nm,1.3s,mb5.2
KIV Kislovodsk 53.51 317 P **P 04 44 23.8 +0.5**
comp=Z,370nm,0.9s,mb6.3,SNR=6.2
KIV Kislovodsk 53.51 317 *d iP* **P 04 44 23.3 0.0**
KIV *e*SS SS 04 55 37.2 +1.1
KIV pmax pmax
comp=Z,123nm,1.7s,mb5.6
KIV Kislovodsk 53.51 317 *eP* **P 04 44 23.6 +0.3**
comp=Z,58nm,0.9s,mb5.5
KIV Kislovodsk 53.51 317 P **P 04 44 24.1 +0.8**
SNR=17
KIV P 04 44 24.1
SNR=17
ASAR Alice Springs 53.66 130 P **P 04 44 23.1 -1.5**
comp=Z,20nm,0.8s,mb5.1,baz=306,slow=6.5,SNR=75
SOKR Solikamsk 55.16 339 *d iP* **P 04 44 36.3 +1.3**
SOKR pmax pmax
comp=Z,50nm,1.6s,mb5.3
SOKR MLR MLR
comp=Z,370nm,21.0s,MS4.4
SOC Sochi 55.38 316 *eP* **P 04 44 35.8 -1.1**
SOC *e*PP pP 04 44 45.9 +4.8
SOC *e*S **S 04 52 11.2 -10**
SOC pmax pmax
comp=Z,50nm,1.4s,mb5.3
KMBO Kilima Mbogo 55.45 261 *eP* **P 04 44 39.4 +1.5**
KMBO pmax pmax
comp=Z,14nm,1.2s
KMBO Kilima Mbogo 55.45 261 *eP* **P 04 44 39.4 +1.5**
comp=Z,14nm,1.2s,mb4.9
YSS Yuzh-Sakhalins 55.97 40 *eP* **P 04 44 40.7 -0.4**
YSS pmax pmax
comp=Z,27nm,1.1s,mb5.2
YSS Yuzh-Sakhalins 55.97 40 *eP* **P 04 44 40.7 -0.4**
comp=Z,27nm,1.1s,mb5.2
ANN Anapa 57.33 317 *eP* **P 04 44 48.0 -2.8**
ANN *e*S **S 04 52 43.4 -3.5**
ANN pmax pmax
comp=Z,19nm,1.3s,mb5.0
YAK Yakutsk 57.97 20 *eP* **P 04 44 53.9 -1.1**
YAK pmax pmax
comp=E,9.0nm,1.0s
YAK pmax pmax
comp=Z,22nm,0.9s,mb5.2
YAK pmax pmax
comp=N,10.0nm,1.4s
VORD Divnogorie 58.40 324 *eP* **P 04 44 58.6 +0.4**
VSR Storozhevoye 58.58 324 *eP* **P 04 44 59.3 -0.1**
VSR pmax pmax
comp=Z,30nm,1.0s,mb5.3
VSR pmax pmax
comp=N,10.0nm,1.2s
VSR pmax pmax
comp=E,10.0nm,0.6s
BR131 Keskin Array S 58.68 310 *eP* **P 04 44 59.5 -0.9**
comp=E,9.0nm,0.8s,mb4.8
BRTR Keskin Array B 58.68 310 P **P 04 44 58.8 -1.6**
comp=E,11nm,0.8s,mb4.9,baz=125,slow=7.7,SNR=57
SIM Simferopol' 59.62 316 *d iP* **P 04 45 09.0 +2.2**
SIM *e*S **S 04 53 19.0 +2.2**
SIM pmax pmax
comp=Z,23nm,0.7s,mb5.3
SIM MLR MLR
comp=Z,100nm,18.7s,MS4.0
MOS Moscow 61.29 329 *eP* **P 04 45 17.3 -0.7**
MOS pmax pmax
comp=Z,109nm,1.3s,mb5.8
OBN Obninsk 61.58 328 *d iP* **P 04 45 20.5 +0.5**
OBN *e*PP pP 04 45 28.3 +4.0
OBN pmax pmax
comp=Z,111nm,1.7s,mb5.7
OBN Obninsk 61.58 328 *eP* **P 04 45 21.0 +1.0**
comp=Z,53nm,0.9s,mb5.7
CTA Charters Tower 61.86 120 *eP* **P 04 45 22.0 -0.4**
comp=Z,9.2nm,1.1s,mb4.8
CTAO Charters Tower 61.86 120 *eP* **P 04 45 22.4 0.0**
CTAO pmax pmax
comp=Z,14nm,1.0s,mb5.0
CTAO Charters Tower 61.86 120 *eP* **P 04 45 22.4 0.0**
comp=Z,14nm,1.0s,mb5.1
TIRR Tirgusor 63.46 314⇑*P* **P 04 45 31.7 -1.1**
TIRR Tirgusor 63.46 314 *eP* **P 04 45 32.5 -0.2**
comp=Z,28nm,1.4s,mb5.2
TIRR Tirgusor 63.46 314⇑*iP* **P 04 45 31.7 -1.1**
STKA Stephens Creek 63.89 134 *eP* **P 04 45 35.4 -0.4**
comp=Z,16nm,0.6s,mb5.2
STKA Stephens Creek 63.89 134 P **P 04 45 35.2 -0.6**
comp=Z,12nm,0.9s,mb4.9,baz=332,slow=5.6,SNR=18
STKA Stephens Creek 63.89 134 *eP* **P 04 45 36.6 +0.8**
LEOM Leova 63.98 317 P **P 04 45 37.2 +1.0**
AKASG Malin Array Be 64.33 321 P **P 04 45 36.4 -2.0**
comp=Z,12nm,0.8s,mb5.0,baz=90,slow=5.0,SNR=33
AKBB Malin Array Si 64.33 321 *eP* **P 04 45 37.8 -0.6**
KIEV Kiev 64.34 321 *eP* **P 04 45 36.5 -1.9**
KIEV pmax pmax
comp=Z,12nm,1.0s,mb4.9
KIEV Kiev 64.34 321 *eP* **P 04 45 36.5 -1.9**
comp=Z,12nm,1.0s,mb4.9
TIXI Tiksi 64.80 12 *eP* **P 04 45 40.2 -0.9**
TIXI pmax pmax
comp=Z,29nm,1.5s,mb5.1
TIXI MLR MLR
comp=Z,283nm,15.0s,MS4.6
TIXI Tiksi 64.80 12 *eP* **P 04 45 39.5 -1.6**
comp=Z,8.8nm,0.6s,mb5.0
VRI Vrincioaia 64.90 316⇑*P* **P 04 45 42.1 -0.1**
VRI Vrincioaia 64.90 316 *eP* **P 04 45 42.7 +0.5**
VRI Vrincioaia 64.90 316⇑*iP* **P 04 45 42.1 -0.1**
PLOR Plostina 64.95 316⇓*P* **P 04 45 42.3 -0.2**
PLOR Plostina 64.95 316⇓*iP* **P 04 45 42.3 -0.2**
BUC1 Bucharest 65.12 314 P **P 04 45 44.1 +0.4**
KDZ Kurdzhali 65.17 311 P **P 04 45 44.0 0.0**
MLR Muntele Rosu 65.37 315⇑*P* **P 04 45 45.1 -0.1**
MLR Muntele Rosu 65.37 315 *P* **P 04 45 45.8 +0.5**
MLR Muntele Rosu 65.37 315⇑*iP* **P 04 45 45.1 -0.1**
RZN Rozhen 65.69 311 *P* **P 04 45 47.4 0.0**
VOIR 65.98 315⇑*P* **P 04 45 48.5 -0.7**
VOIR 65.98 315 *P* **P 04 45 51.0 +1.8**
VOIR 65.98 315⇑*iP* **P 04 45 48.5 -0.7**
PGB Panagyurishte 66.21 312 *P* **P 04 45 50.7 0.0**
BUR01 Bucovina Ar. S 66.23 317 *P* **P 04 45 52.3 +1.5**
BURAR Bucovina Array 66.23 317⇑*P* **P 04 45 50.4 -0.4**
BURAR Bucovina Array 66.23 317⇑*iP* **P 04 45 50.4 -0.4**
BUR08 Bucovina Ar. S 66.25 317 *eP* **P 04 45 50.5 -0.4**
MMB Musomiste 66.42 311 *P* **P 04 45 52.2 +0.1**
KKB Krupnik 66.93 311 *P* **P 04 45 54.8 -0.5**
JOF Joensuu 67.13 334 *eP* **P 04 45 55.1 -1.1**
JOF pmax pmax
comp=Z,61nm,0.9s,mb5.6
JOF Joensuu 67.13 334 *ep* **P 04 45 55.1 -1.1**
comp=Z,61nm,0.9s,mb5.6
JOF Joensuu 67.13 334 *ep* **P 04 45 55.1 -1.1**
comp=Z,61nm,0.9s,mb5.6
LVV L'vov 67.40 320 *eP* **P 04 45 57.6 -0.5**
PET Petropavlovsk 67.56 37 *eP* **P 04 45 56.5 -2.6**
PET *e*S S 04 54 50.0 -5.4
PET MLR MLR
comp=Z,500nm,13.0s,MS4.9
DRGR 67.79 316⇑*P* **P 04 45 59.7 -1.0**
DRGR 67.79 316 *P* **P 04 46 02.0 +1.3**
DRGR 67.79 316⇑*iP* **P 04 45 59.7 -1.0**
VSU Vasula 67.81 329 *eP* **P 04 45 58.1 -2.4**
VSU pmax pmax
comp=Z,79nm,2.0s,mb5.4
LVZ Lovozero 67.94 340⇑*eP* **P 04 46 01.8 +0.6**
LVZ pmax pmax
comp=Z,47nm,2.5s,mb5.1
LSZ Lusaka 68.07 249 P **P 04 46 03.0 +0.1**
comp=Z,9.6nm,0.8s,mb4.9,baz=66,slow=6.5,SNR=16
LSZ Lusaka 68.07 249 *eP* **P 04 46 04.4 +1.5**
LSZ pmax pmax
comp=Z,17nm,1.0s,mb5.0
LSZ Lusaka 68.07 249 *eP* **P 04 46 04.4 +1.5**
comp=Z,17nm,1.0s,mb5.0
KWP Kalwaria Pacla 68.21 319⇓*P* **P 04 46 02.8 -0.5**
KWP Kalwaria Pacla 68.21 319⇓*iP* **P 04 46 02.8 -0.5**
APA Apatity 68.22 339⇓*iP* **P 04 46 04.2 +1.2**
APA *i* 04 46 26.0
APA *e* 04 48 34.0
APA *e*S S 04 54 56.0 -6.8
APA pmax pmax
comp=Z,42nm,1.0s,mb5.4
APA MLR MLR
comp=Z,400nm,13.0s,MS4.8
BZS Buzias 68.40 315⇑*P* **P 04 46 03.6 -0.9**
BZS Buzias 68.40 315 *P* **P 04 46 04.7 +0.2**
BZS Buzias 68.40 315⇑*iP* **P 04 46 03.6 -0.9**
SUW Suwalki 68.69 324 *eP* **P 04 46 06.0 -0.2**
SUW Suwalki 68.69 324 *eP* **P 04 46 05.9 -0.3**
SUW pmax pmax
comp=Z,86nm,1.0s,mb5.6
SUW Suwalki 68.69 324 *eP* **P 04 46 05.8 -0.3**
comp=Z,86nm,1.0s,mb5.6
CRVS Cervenica-Dubn 68.91 318 *eP* **P 04 46 08.0 +0.3**
CRVS pmax pmax
comp=Z,25nm,1.2s,mb5.0
CRVS Cervenica-Dubn 68.91 318 *eP* **P 04 46 08.0 +0.3**
comp=Z,25nm,1.2s,mb5.0
CRVS Cervenica-Dubn 68.91 318 *eP* **P 04 46 08.0 +0.3**
FINES FINESS Array B 68.96 332 P **P 04 46 07.0 -0.7**
comp=Z,26nm,0.8s,mb5.2,baz=103,slow=6.8,SNR=81
KAF Kangasniemi 69.05 333 *eP* **P 04 46 07.0 -1.3**
KAF pmax pmax
comp=Z,46nm,1.1s,mb5.3
KAF Kangasniemi 69.05 333 *ep* **P 04 46 07.0 -1.3**
comp=Z,46nm,1.1s,mb5.3
KAF Kangasniemi 69.05 333 *ep* **P 04 46 07.0 -1.3**
comp=Z,46nm,1.1s,mb5.3
STHS Stebnicka Huta 69.12 319 *eP* **P 04 46 09.6 +0.6**
STHS pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
STHS Stebnicka Huta 69.12 319 *eP* **P 04 46 09.6 +0.6**
comp=Z,7.1nm,0.9s,mb4.6
STHS Stebnicka Huta 69.12 319 *eP* **P 04 46 09.6 +0.6**
KECS Kecovo 69.50 318 *eP* **P 04 46 11.8 +0.5**
KECS pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
KECS Kecovo 69.50 318 *eP* **P 04 46 11.8 +0.5**
comp=Z,5.8nm,0.9s,mb4.5
KECS Kecovo 69.50 318 *eP* **P 04 46 11.8 +0.5**
TOO Toolangi 69.67 137 *eP* **P 04 46 13.8 +1.3**
NIE Niedzica 69.73 319 *eP* **P 04 46 13.6 +0.9**
PSZ Piszkesteto 69.83 317⇓*P* **P 04 46 11.9 -1.5**
PSZ Piszkesteto 69.83 317 *eP* **P 04 46 12.7 -0.7**
comp=Z,13nm,1.0s,mb4.8
PSZ Piszkesteto 69.83 317⇑*eP* **P 04 46 12.7 -0.7**
PSZ Piszkesteto 69.83 317⇓*iP* **P 04 46 11.9 -1.5**
OJC Ojcow 70.16 320 *i P* **P 04 46 13.7 -1.6**
PKSM Moragy 70.52 315⇓*P* **P 04 46 15.9 -1.8**
PKSM Moragy 70.52 315⇓*iP* **P 04 46 15.9 -1.8**
VYHS Vyhne 70.59 318 *eP* **P 04 46 18.4 +0.4**
VYHS pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
VYHS Vyhne 70.59 318 *eP* **P 04 46 18.4 +0.4**
comp=Z,7.0nm,1.2s,mb4.5
VYHS Vyhne 70.59 318 *eP* **P 04 46 18.4 +0.4**
ARMA Armidale 70.67 128 *eP* **P 04 46 20.4 +1.6**
OKC Ostrava-Krasne 71.17 319 *eP* **P 04 46 22.3 +0.8**
OKC Ostrava-Krasne 71.17 319 *eP* **P 04 46 22.3 +0.8**
OKC *ex* x 04 46 28.9
SMOL Smolenice 71.53 318 *eP* **P 04 46 23.0 -0.7**
SMOL Smolenice 71.53 318 *eP* **P 04 46 23.0 -0.7**
MORC Moravsky Berou 71.56 319 *eP* **P 04 46 23.5 -0.4**
comp=Z,16nm,1.0s,mb4.9
MORC Moravsky Berou 71.56 319⇑*iP* **P 04 46 23.5 -0.4**
TIP Timpagrande 71.58 308 *eP* **P 04 46 23.8 -0.4**
comp=Z,19nm,1.3s,mb4.9
TIP *ep*P pP 04 46 33.4 +4.8
ARCES ARCESS Array B 71.65 340 P **P 04 46 23.5 -0.6**
comp=Z,6.9nm,0.6s,mb4.7,baz=93,slow=6.1,SNR=35
GKP Gorka Klasztor 72.08 323 *eP* **P 04 46 27.1 +0.2**
VRAC Vranov 72.14 318⇓*P* **P 04 46 26.7 -0.7**
VRAC Vranov 72.14 318⇓*iP* **P 04 46 26.7 -0.7**
CEL Celeste 72.25 307 *eP* **P 04 46 28.1 -0.2**
comp=Z,53nm,1.1s,mb5.4
DPC Dobruska-Polom 72.39 319 *eP* **P 04 46 28.7 -0.1**
DPC *e* 04 46 36.8
DPC MLR MLR
comp=Z,200nm,7.3s
DPC Dobruska-Polom 72.39 319 *eP* **P 04 46 28.7 -0.1**
DPC *ex* x 04 46 36.8
DPC AMS AMS 05 30 10.0
comp=Z,200nm,7.3s
KSP Ksiaz 72.44 320 *eP* **P 04 46 30.0 +0.9**
KSP Ksiaz 72.44 320 *eP* **P 04 46 28.7 -0.5**
UPC Upice 72.60 320 *eP* **P 04 46 30.2 +0.1**
UPC Upice 72.60 320 *eP* **P 04 46 30.2 +0.1**
ARSA Arzberg 72.73 316⇑*iP* **P 04 46 29.6 -1.4**
comp=Z,28nm,1.9s,mb4.9
BOJS Bojanci 72.85 314 *i P* **P 04 46 31.6 -0.1**
TREC Trest 72.86 318 *eP* **P 04 46 30.8 -0.9**
TREC Trest 72.86 318 *eP* **P 04 46 30.8 -0.9**
PERS Pernice 72.98 315 *i P* **P 04 46 32.8 +0.3**
PRU Pruhonice 73.51 319 *eP* **P 04 46 36.2 +0.7**
PRU *e* 04 46 43.4
PRU MLR MLR
comp=Z,100nm,12.1s,MS4.3
PRU Pruhonice 73.51 319 *eP* **P 04 46 36.2 +0.7**
PRU *ex* x 04 46 43.4
PRU AMS AMS 05 27 50.0
comp=Z,100nm,12.1s
PVCC Panska Ves 73.52 320 *eP* **P 04 46 36.5 +1.0**
PVCC Panska Ves 73.52 320 *eP* **P 04 46 36.5 +1.0**
LBTB Lobatse 73.62 240 *eP* **P 04 46 37.0 +0.4**
LBTB pmax pmax
comp=Z,20nm,0.8s,mb5.1
LBTB Lobatse 73.62 240 *eP* **P 04 46 37.0 +0.5**
comp=Z,20nm,0.8s,mb5.1
JAVS Javornik 73.69 315 *i P* **P 04 46 36.3 -0.3**
SKDS Skadanscina 73.72 314 *i P* **P 04 46 36.2 -0.6**
BRG Berggiesshubel 73.93 320 *eP* **P 04 46 38.7 +0.7**
comp=Z,15nm,0.9s,mb4.9
BRG Berggiesshubel 73.93 320 *i P* **P 04 46 38.7 +0.7**
comp=Z,15nm,0.9s,mb4.9
BRG *i* 04 47 39.9
comp=Z,12nm,1.7s

GEC2 GERESS Array S 74.01 318 *e*P **P 04 46 39.1 +0.6**
comp=Z,18nm,0.9s,mb5.0
KHC Kasperske Hory 74.10 318 *e*P **P 04 46 39.5 +0.5**
KHC pmax pmax
comp=Z,12nm,1.2s,mb4.7
KHC Kasperske Hory 74.10 318 *e*P **P 04 46 39.5 +0.5**
comp=Z,12nm,1.2s,mb4.7
KHC Kasperske Hory 74.10 318 *e*P **P 04 46 39.4 +0.4**
KHC *ex* x 04 46 46.3
KHC AMS AMS 05 27 40.0
comp=Z,200nm,15.9s
RUE Ruedersdorf 74.11 322 *e*P **P 04 46 39.5 +0.5**
comp=Z,41nm,0.7s,mb5.5
RUE Ruedersdorf 74.11 322 *e*P **P 04 46 39.6 +0.7**
comp=Z,16nm,0.7s,mb5.1
KBA Koelnbreinsper 74.21 316⇑ *i*P **P 04 46 39.1 -0.5**
comp=Z,15nm,1.2s,mb4.8
BILL Bilibino 74.22 22*d i*P **P 04 46 39.2 -0.1**
BILL *e**PP pP 04 46 47.0 +3.4
BILL *e* 04 49 20.3
BILL *e*S S 04 56 10.6 -1.7
BILL pmax pmax
comp=Z,14nm,1.7s,mb4.6
BILL Bilibino 74.22 22 *e*P **P 04 46 39.4 +0.1**
comp=Z,1.9nm,0.6s,mb4.2
BILL *e*pP pP 04 46 46.6 +3.0
CLL Collm 74.54 320 *e*P **P 04 46 41.8 +0.3**
comp=Z,21nm,1.2s,mb4.9
CLL Collm 74.54 320 *i* P **P 04 46 41.3 -0.2**
CLL *e* 04 46 49.0
CLL pmax pmax
comp=Z,21nm,1.2s,mb4.9
CLL Collm 74.54 320 *i* P **P 04 46 41.3 -0.2**
comp=Z,21nm,1.2s,mb4.9
CLL *e* 04 46 49.0
CLL *e*S S 04 56 18.0 +1.5
WET Wettzell 74.56 318 *e*P **P 04 46 42.3 +0.6**
comp=Z,15nm,1.0s,mb4.9
HFS Hagfors 74.68 329 P **P 04 46 41.1 -1.0**
comp=Z,16nm,0.8s,mb5.0,baz=102,slow=6.4,SNR=26
TANN Tannenbergstha 74.86 319 *e*P **P 04 46 44.0 +0.6**
comp=Z,16nm,1.2s,mb4.8
NKC Novy Kostel 74.86 319 *e*P **P 04 46 44.5 +1.1**
NKC Novy Kostel 74.86 319 *e*P **P 04 46 44.5 +1.1**
WERN Wernitzgruen 74.91 319 *e*P **P 04 46 44.4 +0.7**
comp=Z,81nm,2.4s,mb5.2
GUNZ Gunzen 74.94 319 *e*P **P 04 46 44.6 +0.8**
comp=Z,14nm,0.9s,mb4.9
WERD Werda 74.96 319 *e*P **P 04 46 44.5 +0.6**
comp=Z,13nm,0.9s,mb4.9
BOSA Boshof 75.19 236 P **P 04 46 44.7 -1.0**
comp=Z,20nm,0.8s,mb5.1,baz=81,slow=5.8,SNR=31
BOSA Boshof 75.19 236 *e*P **P 04 46 45.9 +0.3**
BOSA pmax pmax
comp=Z,21nm,0.8s,mb5.1
BOSA Boshof 75.19 236 *e*P **P 04 46 45.9 +0.3**
comp=Z,21nm,0.8s,mb5.1
WTTA Wattenberg 75.38 316⇑ *i*P **P 04 46 44.6 -1.8**
comp=Z,27nm,1.1s,mb5.1
MOX Moxa 75.40 320 *e*P **P 04 46 41.2 -5.3**
comp=Z,28nm,1.4s,mb5.0
MOX *e* 04 46 47.2
MOX Moxa 75.40 320 *e*P **P 04 46 47.1 +0.6**
comp=Z,34nm,1.6s,mb5.0
GRF Grafenberg Arr 75.65 319 *e*P **P 04 46 49.0 +1.1**
comp=Z,33nm,1.0s,mb5.2
GRF Grafenberg Arr 75.65 319 *e*P **P 04 46 49.0 +1.1**
GRF pmax pmax
comp=Z,33nm,1.0s,mb5.2
MOTA Moosalm 75.74 316⇓ *i*P **P 04 46 47.0 -1.5**
comp=Z,18nm,0.9s,mb5.0
NB2 NORSAR Subarra 75.96 330 P **P 04 46 48.0 -1.5**
comp=Z,23nm,1.0s,mb5.1,baz=95,slow=5.6
NOA NORSAR Array B 75.96 330 P **P 04 46 48.3 -1.2**
comp=Z,8.5nm,0.8s,mb4.8,baz=94,slow=5.7,SNR=34
RETA Reutte 75.97 316⇑ *i*P **P 04 46 48.4 -1.4**
comp=Z,30nm,1.3s,mb5.1
FETA Feichten 76.00 316⇑ *i*P **P 04 46 47.5 -2.5**
comp=Z,16nm,0.9s,mb5.0
NAO01 NORSAR Array S 76.11 330 *e*P **P 04 46 49.2 -1.2**
comp=Z,12nm,0.9s,mb4.8
CLZ Clausthal 76.19 321 *e*P **P 04 46 51.6 +0.6**
comp=Z,21nm,0.8s,mb5.1
BSEG Bad Segeberg 76.23 323 *e*P **P 04 46 52.1 +0.9**
comp=Z,37nm,1.0s,mb5.3
NRDL Niedersach Rie 76.35 322 *e*P **P 04 46 52.8 +0.9**
comp=Z,32nm,1.4s,mb5.1
DAVA Damuels 76.57 316⇓ *i*P **P 04 46 52.4 -0.9**
comp=Z,29nm,0.9s,mb5.2
DAVOX Davos/Dischmat 76.59 316 P **P 04 46 53.6 +0.3**
comp=Z,7.8nm,0.7s,mb4.8,baz=114,slow=9.9,SNR=10
MUD Monsted U'grnd 76.90 326 *i* P **P 04 46 55.2 +0.3**
comp=Z,16nm,1.0s,mb4.9
TUE Stuetta 76.96 315 *e*P **P 04 46 55.3 -0.1**
comp=Z,10.0nm,0.8s,mb4.8
MIR Mirnyy 77.22 179⇑ *i*P **P 04 46 57.2 +0.9**
MIR pmax pmax
comp=Z,21nm,1.0s,mb5.0
TOD Tromm 77.22 319 *e*P **P 04 46 57.3 +0.4**
SPAK Spaichingen-Ko 77.29 317 *e*P **P 04 46 57.5 +0.3**
TNS Taunus Mts 77.43 319 *e*P **P 04 46 58.7 +0.7**
comp=Z,34nm,1.1s,mb5.2
BFO Black Forest 77.58 317 *e*P **P 04 46 58.9 0.0**
comp=Z,18nm,1.1s,mb4.9
BFO Black Forest 77.58 317 *e*P **P 04 46 58.4 -0.5**
BFO pmax pmax
comp=Z,13nm,1.2s,mb4.7
BFO Black Forest 77.58 317 *e*P **P 04 46 58.4 -0.5**
comp=Z,13nm,1.2s,mb4.7
KEST Kesra 77.58 304 P **P 04 46 59.1 -0.1**
comp=Z,8.8nm,0.9s,mb4.7,baz=305,slow=1.8,SNR=26
KEST LR LR 05 25 37.2
comp=Z,48nm,19.3s,MS3.8,baz=228,slow=39
KEST Kesra 77.58 304 *e*P **P 04 46 60.0 +0.8**
IBBN Ibbenburen 77.80 321 *e*P **P 04 47 00.7 +0.7**
comp=Z,34nm,1.0s,mb5.2
FELD Feldberg im Sc 77.82 317 *e*P **P 04 47 00.3 +0.1**
LANF Langenberg 77.90 318 *e*P **P 04 47 00.9 +0.2**
BUG Bochum--Univer 78.13 320 *e*P **P 04 47 02.5 +0.6**
comp=Z,22nm,1.1s,mb5.0
CASY Casey 78.18 172 *e*P **P 04 47 01.9 +0.2**
comp=Z,28nm,1.7s,mb4.9
CDF Champ du Feu 78.28 317 *e*P **P 04 47 01.3 -1.5**
comp=Z,30nm,1.0s,mb4.9
CDF Champ du Feu 78.28 317 *e*P **P 04 47 01.3 -1.5**
CDF pmax pmax
comp=Z,15nm,1.0s,mb4.9
CDF Champ du Feu 78.28 317 *e*P **P 04 47 01.3 -1.5**
comp=Z,15nm,1.0s,mb4.9
SAOF Saorge 78.36 313 *e*P **P 04 47 05.5 +2.2**
MOF Molkenrain 78.41 317 *e*P **P 04 47 03.5 0.0**
SBF Sospel 78.45 313 *e*P **P 04 47 02.3 -1.5**
comp=Z,30nm,0.9s,mb4.9
SBF Sospel 78.45 313 *e*P **P 04 47 02.3 -1.5**
SBF pmax pmax
comp=Z,15nm,0.9s,mb4.9
SBF Sospel 78.45 313 *e*P **P 04 47 02.3 -1.5**
comp=Z,15nm,0.9s,mb4.9
HINF Hinteralfeld 78.60 317 *e*P **P 04 47 02.6 -1.9**
comp=Z,3.9nm,0.5s,mb4.3
HINF Hinteralfeld 78.60 317 *e*P **P 04 47 02.6 -1.9**
HINF pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
HINF Hinteralfeld 78.60 317 *e*P **P 04 47 02.6 -1.9**
comp=Z,2.0nm,0.5s,mb4.3
LOMF Lomont 78.64 316 *e*P **P 04 47 04.4 -0.4**
OG01 Vacheresse 78.81 315 *e*P **P 04 47 05.0 -0.8**
LPG La Plagne 78.82 314 *e*P **P 04 47 05.0 -0.8**
comp=Z,47nm,0.9s,mb5.1
LPG La Plagne 78.82 314 *e*P **P 04 47 05.0 -0.8**
LPG pmax pmax
comp=Z,24nm,0.9s,mb5.1
LPG La Plagne 78.82 314 *e*P **P 04 47 05.0 -0.8**
comp=Z,24nm,0.9s,mb5.1
LPL La Plagne 78.83 314 *e*P **P 04 47 04.9 -1.0**
comp=Z,52nm,0.8s,mb5.2
LPL La Plagne 78.83 314 *e*P **P 04 47 04.9 -1.0**
LPL pmax pmax
comp=Z,26nm,0.8s,mb5.2
LPL La Plagne 78.83 314 *e*P **P 04 47 04.9 -1.0**
comp=Z,26nm,0.8s,mb5.2
MBDF Montbardon 78.87 314 *e*P **P 04 47 04.2 -1.9**
comp=Z,20nm,0.9s,mb4.8
MBDF Montbardon 78.87 314 *e*P **P 04 47 04.2 -1.9**
MBDF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
MBDF Montbardon 78.87 314 *e*P **P 04 47 04.2 -1.9**
comp=Z,10nm,0.9s,mb4.8
RSL Roselend 78.90 315 *e*P **P 04 47 06.6 +0.4**
TSUM Tsumeb 78.90 248 *e*P **P 04 47 07.7 +1.0**
comp=Z,9.5nm,1.1s,mb4.6
BNI Bardonecchia 78.91 314 *e*P **P 04 47 06.4 +0.1**
BNI pmax pmax
comp=Z,17nm,1.0s,mb4.9
BNI Bardonecchia 78.91 314 *e*P **P 04 47 06.4 +0.1**
comp=Z,17nm,1.0s,mb4.9
HAU Haudompre 78.92 317 *e*P **P 04 47 04.8 -1.5**
comp=Z,65nm,1.0s,mb5.2
HAU *e*MLR MLR
comp=Z,99nm,19.5s,MS3.9
HAU Haudompre 78.92 317 *e*P **P 04 47 04.8 -1.5**
HAU pmax pmax
comp=Z,32nm,1.0s,mb5.2
HAU MLR MLR
comp=Z,100nm,19.5s,MS4.2
HAU Haudompre 78.92 317 *e*P **P 04 47 04.8 -1.5**
comp=Z,32nm,1.0s,mb5.2
HAU LR LR
comp=Z,100nm,19.5s,MS4.2
WLF Walferdange 78.94 319 P **P 04 47 06.0 -0.4**
comp=Z,15nm,1.5s,mb4.7
WLF Walferdange 78.94 319 *e*P **P 04 47 07.4 +1.0**
comp=Z,32nm,1.3s,mb5.1
WLF Walferdange 78.94 319 *e*P **P 04 47 06.8 +0.4**
WLF pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
WLF Walferdange 78.94 319 *e*P **P 04 47 06.8 +0.4**
comp=Z,6.9nm,0.6s,mb4.8
MEM Membach 78.97 320 P **P 04 47 07.3 +0.8**
comp=Z,9.5nm,2.1s,mb4.4
FRF La Foret Royal 79.05 312 *e*P **P 04 47 05.6 -1.5**
comp=Z,66nm,1.4s,mb5.1
FRF La Foret Royal 79.05 312 *e*P **P 04 47 05.6 -1.5**
FRF pmax pmax
comp=Z,33nm,1.4s,mb5.1
FRF La Foret Royal 79.05 312 *e*P **P 04 47 05.6 -1.5**
comp=Z,33nm,1.4s,mb5.1
LMR La Mourre 79.16 312 *e*P **P 04 47 06.3 -1.5**
comp=Z,20nm,1.1s,mb4.7
LMR La Mourre 79.16 312 *e*P **P 04 47 06.3 -1.5**
LMR pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
LMR La Mourre 79.16 312 *e*P **P 04 47 06.3 -1.5**
comp=Z,9.9nm,1.1s,mb4.7
CABF La Chapelle 79.20 316 *e*P **P 04 47 07.0 -0.9**
comp=Z,58nm,1.1s,mb5.1
CABF La Chapelle 79.20 316 *e*P **P 04 47 07.0 -0.9**
CABF pmax pmax
comp=Z,29nm,1.1s,mb5.1
CABF La Chapelle 79.20 316 *e*P **P 04 47 07.0 -0.9**
comp=Z,29nm,1.1s,mb5.1
BCLA Clavier 79.44 319 P **P 04 47 09.7 +0.6**
comp=Z,19nm,2.7s,mb4.5
ORIF Oris-en-Rattie 79.48 314 *e*P **P 04 47 08.6 -0.9**
comp=Z,21nm,0.9s,mb4.8
ORIF *e*MLR MLR
comp=Z,105nm,22.2s,MS3.8
ORIF Oris-en-Rattie 79.48 314 *e*P **P 04 47 08.6 -0.9**
ORIF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
ORIF Oris-en-Rattie 79.48 314 *e*P **P 04 47 08.6 -0.9**
comp=Z,10nm,0.9s,mb4.8
MEZF Maizieres J'vi 79.75 318 *e*P **P 04 47 09.5 -1.3**
comp=Z,42nm,1.1s,mb5.0
MEZF Maizieres J'vi 79.75 318 *e*P **P 04 47 09.5 -1.3**
comp=Z,42nm,1.1s,mb5.3
GIVF Givet 79.77 319 *e*P **P 04 47 09.7 -1.2**
SMRF Simiane la Rot 79.78 313 *e*P **P 04 47 10.2 -0.9**
comp=Z,34nm,1.1s,mb4.9
SMRF Simiane la Rot 79.78 313 *e*P **P 04 47 10.2 -0.9**
comp=Z,34nm,1.1s,mb5.2
DOU Dourbes 79.92 319 P **P 04 47 12.1 +0.4**
SNF Seneffe 80.08 320 P **P 04 47 13.0 +0.5**
comp=Z,17nm,2.7s,mb4.5
SUR Sutherland 80.09 234 *e*P **P 04 47 14.8 +1.8**
comp=Z,13nm,0.8s,mb4.9
BAIF Baives 80.17 319 *e*P **P 04 47 12.0 -1.1**
comp=Z,35nm,1.0s,mb5.0
BAIF Baives 80.17 319 *e*P **P 04 47 12.0 -1.1**
BAIF pmax pmax
comp=Z,17nm,1.0s,mb4.9
BAIF Baives 80.17 319 *e*P **P 04 47 12.0 -1.1**
comp=Z,18nm,1.0s,mb4.9
VIVF Saint-Julien-l 80.34 314 *e*P **P 04 47 12.9 -1.2**
comp=Z,54nm,0.9s,mb5.2
VIVF Saint-Julien-l 80.34 314 *e*P **P 04 47 12.9 -1.2**
VIVF pmax pmax
comp=Z,27nm,0.9s,mb5.2
VIVF Saint-Julien-l 80.34 314 *e*P **P 04 47 12.9 -1.2**
comp=Z,27nm,0.9s,mb5.2
SSB Saint Sauveur 80.39 314 *e*P **P 04 47 13.6 -0.8**
SSB pmax pmax
comp=Z,28nm,1.1s,mb5.1
SSB Saint Sauveur 80.39 314 *e*P **P 04 47 13.6 -0.8**
comp=Z,28nm,1.1s,mb5.1
LOR Lormes 80.66 316 *e*P **P 04 47 14.3 -1.5**
comp=Z,72nm,1.0s,mb5.2
LOR *e*MLR MLR
comp=Z,77nm,19.8s,MS3.8
LOR Lormes 80.66 316 *e*P **P 04 47 14.3 -1.5**
LOR pmax pmax
comp=Z,36nm,1.0s,mb5.3
LOR MLR MLR
comp=Z,80nm,19.8s,MS4.1
LOR Lormes 80.66 316 *e*P **P 04 47 14.3 -1.5**
comp=Z,36nm,1.0s,mb5.3
LOR LR LR
comp=Z,80nm,19.8s,MS4.1
SMF Signal de Mont 80.74 316 *e*P **P 04 47 14.7 -1.5**
comp=Z,55nm,1.0s,mb5.2
SMF Signal de Mont 80.74 316 *e*P **P 04 47 14.7 -1.5**
SMF pmax pmax
comp=Z,28nm,1.0s,mb5.2
SMF Signal de Mont 80.74 316 *e*P **P 04 47 14.7 -1.5**
comp=Z,28nm,1.0s,mb5.1
SSF Saint Saulge 80.92 316 *e*P **P 04 47 15.8 -1.4**
comp=Z,32nm,1.0s,mb4.9
SSF Saint Saulge 80.92 316 *e*P **P 04 47 15.8 -1.4**
SSF pmax pmax
comp=Z,16nm,1.0s,mb4.9
SSF Saint Saulge 80.92 316 *e*P **P 04 47 15.8 -1.4**
comp=Z,16nm,1.0s,mb4.9
PLDF La Plantade 80.96 315 *e*P **P 04 47 19.1 +1.7**
MAW Mawson 80.99 191 *e*P **P 04 47 18.4 +1.4**
comp=Z,4.0nm,0.8s,mb4.4
MAW Mawson 80.99 191 P **P 04 47 17.0 +1.1**
comp=Z,4.3nm,0.7s,mb4.5,baz=7.6,slow=6.8,SNR=7.8
LASF Ste Croix 81.01 313 *e*P **P 04 47 16.9 -0.8**
comp=Z,62nm,1.1s,mb5.1
AVF Avril sur Loir 81.06 316 *e*P **P 04 47 16.4 -1.5**
comp=Z,38nm,0.9s,mb5.0
AVF Avril sur Loir 81.06 316 *e*P **P 04 47 16.4 -1.5**
AVF pmax pmax
comp=Z,19nm,0.9s,mb5.0
AVF Avril sur Loir 81.06 316 *e*P **P 04 47 16.4 -1.5**
comp=Z,19nm,0.9s,mb5.0
LBL Lubilhac 81.31 314 *e*P **P 04 47 20.5 +1.2**
BGF Bois d'Agland 81.43 316 *e*P **P 04 47 18.9 -1.0**
comp=Z,50nm,0.9s,mb5.2
BGF Bois d'Agland 81.43 316 *e*P **P 04 47 18.9 -1.0**
BGF pmax pmax
comp=Z,25nm,0.9s,mb5.1
BGF Bois d'Agland 81.43 316 *e*P **P 04 47 18.9 -1.0**
comp=Z,25nm,0.9s,mb5.2
HYF Humbligny 81.49 316 *e*P **P 04 47 19.4 -0.8**
TCF Toulx Ste Croi 81.90 316 *e*P **P 04 47 21.4 -1.0**
comp=Z,53nm,1.3s,mb5.0
TCF Toulx Ste Croi 81.90 316 *e*P **P 04 47 21.4 -1.0**
TCF pmax pmax
comp=Z,27nm,1.3s,mb5.0
TCF Toulx Ste Croi 81.90 316 *e*P **P 04 47 21.4 -1.0**
comp=Z,26nm,1.3s,mb5.0
CAF Calviac 82.18 314 *e*P **P 04 47 23.1 -0.8**
comp=Z,50nm,1.2s,mb5.0
CAF Calviac 82.18 314 *e*P **P 04 47 23.1 -0.8**
CAF pmax pmax
comp=Z,25nm,1.2s,mb5.0
CAF Calviac 82.18 314 *e*P **P 04 47 23.1 -0.8**
comp=Z,25nm,1.2s,mb5.0
MTLF Montolieu 82.28 313 *e*P **P 04 47 23.5 -0.9**
comp=Z,46nm,0.9s,mb5.1
MTLF Montolieu 82.28 313 *e*P **P 04 47 23.5 -0.9**
MTLF pmax pmax
comp=Z,23nm,0.9s,mb5.1
MTLF Montolieu 82.28 313 *e*P **P 04 47 23.5 -0.9**
comp=Z,23nm,0.9s,mb5.1
ETOS Mallorca 82.31 309 P **P 04 47 26.1 +1.4**
comp=Z,19nm,1.1s,mb4.9
TAM Tamanrasset 82.39 292 *e*P **P 04 47 26.0 +0.5**
TAM *e* 04 50 34.6
TAM pmax pmax
comp=Z,20nm,1.0s,mb5.0
TAM Tamanrasset 82.39 292 *e*P **P 04 47 26.0 +0.6**
comp=Z,20nm,1.0s,mb5.0
TAM *e*PP PP 04 50 34.5 +0.2
RJF Les Rejaudoux 82.51 315 *e*P **P 04 47 24.9 -0.7**
comp=Z,30nm,0.8s,mb5.1
RJF *e*MLR MLR
comp=Z,90nm,22.0s,MS3.8
RJF Les Rejaudoux 82.51 315 *e*P **P 04 47 24.9 -0.7**
RJF pmax pmax
comp=Z,15nm,0.8s,mb5.1
RJF MLR MLR
comp=Z,90nm,22.0s,MS4.1
RJF Les Rejaudoux 82.51 315 *e*P **P 04 47 24.9 -0.7**
comp=Z,15nm,0.8s,mb5.1
RJF LR LR
comp=Z,90nm,22.0s,MS4.1
CLLI Llivia 82.57 312 P **P 04 47 27.5 +1.5**
LFF La Frestale 83.11 314 *e*P **P 04 47 28.0 -0.7**
comp=Z,42nm,1.1s,mb5.1
LFF La Frestale 83.11 314 *e*P **P 04 47 28.0 -0.7**
LFF pmax pmax
comp=Z,21nm,1.1s,mb5.1
LFF La Frestale 83.11 314 *e*P **P 04 47 28.0 -0.7**
comp=Z,21nm,1.1s,mb5.1
LDF La Druitiere 83.15 318 *e*P **P 04 47 27.5 -1.4**
comp=Z,42nm,0.9s,mb5.2
LDF La Druitiere 83.15 318 *e*P **P 04 47 27.5 -1.4**
LDF pmax pmax
comp=Z,21nm,0.9s,mb5.2
LDF La Druitiere 83.15 318 *e*P **P 04 47 27.5 -1.4**
comp=Z,21nm,0.9s,mb5.2
CSOR Sort 83.20 312 P **P 04 47 29.6 +0.4**
comp=Z,23nm,1.1s,mb5.1
FLN La Foliniere 83.36 318 *e*P **P 04 47 28.6 -1.4**
comp=Z,22nm,0.8s,mb4.9
FLN *e*MLR MLR
comp=Z,118nm,18.2s,MS4.0
FLN La Foliniere 83.36 318 *e*P **P 04 47 28.6 -1.4**
FLN pmax pmax
comp=Z,11nm,0.8s,mb4.9
FLN MLR MLR
comp=Z,120nm,18.3s,MS4.3
FLN La Foliniere 83.36 318 *e*P **P 04 47 28.6 -1.4**
comp=Z,11nm,0.8s,mb4.9
FLN LR LR
comp=Z,120nm,18.3s,MS4.3
EPOB Poblet 83.39 311 P **P 04 47 30.9 +0.7**
comp=Z,23nm,0.7s,mb5.3
MFF Saint Martin d 83.47 316 *e*P **P 04 47 29.3 -1.3**
comp=Z,54nm,0.8s,mb5.3
MFF Saint Martin d 83.47 316 *e*P **P 04 47 29.3 -1.3**
MFF pmax pmax
comp=Z,27nm,0.8s,mb5.3
MFF Saint Martin d 83.47 316 *e*P **P 04 47 29.3 -1.3**
comp=Z,27nm,0.8s,mb5.3
EIBI Ibiza 83.54 308 P **P 04 47 32.7 +1.6**
comp=Z,11nm,0.8s,mb5.0
GRR Gorron 83.67 318 *e*P **P 04 47 30.2 -1.3**
EPF Esparros 83.68 312 *e*P **P 04 47 30.0 -1.7**
comp=Z,16nm,1.0s,mb4.8
EPF Esparros 83.68 312 *e*P **P 04 47 30.0 -1.7**
EPF pmax pmax
comp=Z,8.0nm,1.0s,mb4.8
EPF Esparros 83.68 312 *e*P **P 04 47 30.0 -1.7**
comp=Z,7.9nm,1.0s,mb4.8
EBIE Bielsa 83.88 312 P **P 04 47 33.9 +1.1**
comp=Z,9.5nm,0.8s,mb5.0
ESK Eskdalemuir 83.94 325 *e*P **P 04 47 33.4 +0.6**
ESK pmax pmax
comp=Z,18nm,0.9s,mb5.2
ESK Eskdalemuir 83.94 325 *e*P **P 04 47 33.4 +0.6**
comp=Z,18nm,0.9s,mb5.2
ERTA Horta de San J 84.01 310 P **P 04 47 34.5 +1.1**
comp=Z,12nm,0.7s,mb5.1
DAG Danmarks Havn 84.05 347⇑ *i*P **P 04 47 32.5 -0.5**
comp=Z,5.0nm,1.0s,mb4.6
ETSF Etsaut 84.35 312 *e*P **P 04 47 34.4 -0.7**
comp=Z,26nm,1.1s,mb5.0
ETSF Etsaut 84.35 312 *e*P **P 04 47 34.4 -0.7**
ETSF pmax pmax
comp=Z,13nm,1.1s,mb5.0
ETSF Etsaut 84.35 312 *e*P **P 04 47 34.4 -0.7**
comp=Z,13nm,1.1s,mb5.0
ESAC San Caprasio 84.48 311 P **P 04 47 36.9 +1.0**
comp=Z,30nm,0.8s,mb5.5
EMOS Mosqueruela 84.71 310 P **P 04 47 38.8 +1.8**
comp=Z,24nm,0.8s,mb5.4
SJPF Ste Jean 84.80 313 *e*P **P 04 47 36.8 -0.6**
comp=Z,24nm,1.0s,mb5.0
SJPF Ste Jean 84.80 313 *e*P **P 04 47 36.8 -0.6**
SJPF pmax pmax
comp=Z,12nm,1.0s,mb5.0
SJPF Ste Jean 84.80 313 *e*P **P 04 47 36.8 -0.6**
comp=Z,12nm,1.0s,mb5.0
EBEN Beniarda 84.80 308 P **P 04 47 39.5 +2.0**
comp=Z,4.6nm,0.8s,mb4.7
SGMF Saint Gilles 84.81 318 *e*P **P 04 47 36.0 -1.3**
ETOR Torete 85.81 311 P **P 04 47 43.5 +1.0**
ETOR pmax pmax
comp=Z,7.0nm,0.7s,mb5.0
ETOR Torete 85.81 311 P **P 04 47 43.5 +1.0**
comp=Z,7.3nm,0.7s,mb5.0
ETOB Tobarra 85.83 308 P **P 04 47 44.4 +1.7**
comp=Z,6.8nm,0.9s,mb4.9
EHUE Huescar 86.79 308 P **P 04 47 47.3 -0.1**
EHUE pmax pmax
comp=Z,35nm,2.2s,mb5.2
EHUE Huescar 86.79 308 P **P 04 47 47.3 -0.1**
comp=Z,35nm,2.2s,mb5.2
ESDC Sonseca Array 87.47 310 P **P 04 47 50.1 -0.6**
comp=Z,7.0nm,1.0s,mb4.9,baz=58,slow=4.6,SNR=11
ESDC Sonseca Array 87.47 310 P **P 04 47 51.6 +0.9**
comp=Z,2.7nm,0.6s,mb4.7
SYO Syowa Base 87.56 197⇓ *e*P **P 04 47 50.0 -0.3**
EGUA Guajares 87.75 307 P **P 04 47 51.6 -0.4**
comp=Z,75nm,0.9s,mb5.9
EADA Adamuz 88.26 308 P **P 04 47 55.7 +1.3**
comp=Z,5.5nm,0.8s,mb4.8
EMIJ Mijas 88.75 307 P **P 04 47 56.3 -0.6**
comp=Z,7.5nm,0.8s,mb5.1
EBAD Badajoz 89.99 309 P **P 04 48 02.0 -0.6**
comp=Z,8.7nm,0.9s,mb5.1
PBAR Barrancos 90.14 309 *e*P **P 04 48 04.7 +1.4**
comp=Z,46nm,1.6s,mb5.6
SUMG Summit 90.70 347 *e*P **P 04 48 06.5 +1.3**
comp=Z,10nm,0.9s,mb5.2
SUMG Summit 90.70 347 *i* P **P 04 48 05.9 +0.7**
comp=Z,11nm,0.9s,mb5.2
PBEJ Beja 90.81 309 *e*P **P 04 48 08.2 +1.8**
comp=Z,20nm,1.2s,mb5.3
PTOM Tomar 90.83 310 *e*P **P 04 48 07.8 +1.3**
comp=Z,46nm,1.4s,mb5.6
PVAQ Vaqueiros 90.85 308 *e*P **P 04 48 07.1 +0.5**
comp=Z,33nm,1.6s,mb5.4
PBDV Barranco-do-Ve 91.06 308 *e*P **P 04 48 09.6 +2.0**
comp=Z,49nm,1.6s,mb5.6
SVW2 Sparrevohn 91.17 27 *e*P **P 04 48 09.0 +1.4**
TRF Thorofare Moun 92.28 23 *e*P **P 04 48 13.7 +1.1**
comp=Z,4.7nm,0.9s,mb4.8
MCK McKinley 92.66 23 *e*P **P 04 48 14.9 +0.5**
MCK pmax pmax
comp=Z,12nm,1.1s,mb5.2
MCK McKinley 92.66 23 *e*P **P 04 48 14.9 +0.5**
comp=Z,12nm,1.1s,mb5.2
INK Inuvik 94.77 15 *e*P **P 04 48 23.8 -0.3**
INK pmax pmax
comp=Z,2.0nm,0.7s
INK Inuvik 94.77 15 *e*P **P 04 48 23.8 -0.2**
comp=Z,2.2nm,0.7s,mb4.7
DBIC Dimbokro 95.17 278 LR LR 05 33 54.7
comp=Z,56nm,18.9s,MS4.1,baz=43,slow=37
BOZ Bozeman (W) 119.94 19 *e*PKIKP PKPdf 04 53 53.9 +0.4
WVOR Wild Horse Val 120.10 26 *e*PKIKP PKPdf 04 53 54.7 +0.8
LAO LASA Array 120.49 14 *e*PKPdf PKPdf 04 53 55.8 +1.3
HLID Hailey 120.82 22 *e*PKPdf PKPdf 04 53 55.7 +0.4
TPAW Teton Pass 122.09 19 *e*PKPdf PKPdf 04 53 58.7 +1.0
LOHW Long Hollow 122.09 19 *e*PKPdf PKPdf 04 53 58.7 +1.0
SNOW Snow King Moun 122.17 19 *e*PKPdf PKPdf 04 53 59.0 +1.1

REDW	Red Top Meadow	122.23	19	ePKPdf	PKPdf	04 53 58.9	+0.9
BW06	Boulder Array	123.18	19	ePKPdf	PKPdf	04 54 00.2	+0.4
PDAR	Pinedale Array	123.18	19	PKP	PKPdf	04 54 00.1	+0.2
	comp=Z,1.1nm,0.7s,baz=45,slow=1.9,SNR=11						
RSSD	Black Hills	123.43	14	ePKIKP	PKPdf	04 54 00.6	+0.3
NVAR	Mina Array Bea	123.50	28	PKP	PKPdf	04 54 02.2	+1.6
	comp=Z,1.7nm,0.7s,baz=309,slow=1.9,SNR=14						
HWUT	Hardware Ranch	123.55	21	ePKPdf	PKPdf	04 54 00.9	+0.3
DUG	Dugway	124.34	23	ePKIKP	PKPdf	04 54 03.2	+1.1
DUG				e		04 54 10.4	
MSU	Marysvale	126.04	23	ePKIKP	PKPdf	04 54 07.6	+2.1
ANMO	Albuquerque	131.28	20	ePKIKP	PKPdf	04 54 16.8	+1.2
TUC	Tucson	131.97	26	ePKIKP	PKPdf	04 54 18.4	+1.5
WVT	Waverly	133.25	359	ePKIKP	PKPdf	04 54 19.3	+0.1
GDL2	Guadalupe Moun	134.49	19	ePKPdf	PKPdf	04 54 22.8	+1.1
MNTX	Cornudas Mount	134.61	21	ePKPdf	PKPdf	04 54 23.6	+1.7
TXAR	Lajitas Array	137.36	20	PKP	PKPdf	04 54 27.1	0.0
	comp=Z,0.6nm,0.6s,baz=196,slow=0.9,SNR=8.2						
JCT	Junction City	137.42	15	ePKIKP	PKPdf	04 54 27.6	+0.4
TRQA	Tornquist	144.11	217	ePKPdf	PKPdf	04 54 36.6	-2.3
PLCA	Paso Flores	146.39	205	ePKP2	PKPab	04 54 45.2	+0.4
TEIG	Tepich	149.10	360	ePKPbc	PKPbc	04 54 52.3	+0.4
LPAZ	La Paz	159.69	252	PKP	PKPdf	04 55 04.0	+1.4
	comp=Z,1.5nm,1.0s,baz=51,slow=7.6,SNR=4.6						
LPAZ				PKPab	PKPab	04 55 42.8	+1.5
	comp=Z,6.5nm,1.1s,baz=80,slow=6.5,SNR=12						
OTAV	Otavalo	165.26	318	ePKPdf	PKPdf	04 55 09.6	+1.3

*IDC **28** 04:40:19.5±0.8, 10°.79N×91°.67E, h0km, mb4.0/11, mb1 4.1/11, mb1mx3.8/24, mbtmp4.0/11, Error ellipse: s-maj=35.7km s-min=18.0km az=60.0*
*NEIC **28** 04:40:21.0±0.5, 10°.84N×91°.72E, h10km, mb4.2/3, Error ellipse: s-maj=22.8km s-min=9.4km az=57.0*
*ISCJB **28** 04:40:22.5±0.7, 10°.8N±0°.1×91°.7E±0°.2, h33km, mb4.0/13, Error ellipse: s-maj=31.2km s-min=12.6km az=146.9*

ISC 28 04:40:24.8±0.7, 10°.9N±0°.1×91°.7E±0°.2, h35km, n18, σ0s47/18, mb4.0/13, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKS2	Erkin-Say	35.36	337	eP	P	04 47 16.7	-0.2
	3.5nm,0.9s,mb4.3						
MK31	Makanchi Array	36.71	349	eP	P	04 47 28.8	+0.3
MKAR	Makanchi Array	36.71	349	P	P	04 47 29.1	+0.6
	2.3nm,0.6s,mb4.2,baz=144,slow=8.6,SNR=10						
KURK	Kurchatov	41.19	347	P	P	04 48 06.2	+0.3
	0.7nm,0.4s,mb3.6,baz=172,slow=8.4,SNR=3.9						
KURK	Kurchatov	41.19	347	eP	P	04 48 04.2	-1.7
	1.7nm,0.7s,mb3.8						
ZALV	Zalesovo Beam	43.34	354	P	P	04 48 23.8	+0.4
	2.0nm,0.5s,mb4.1,baz=171,slow=9.0,SNR=6.2						
AKTK	Aktyubinsk	48.22	332	P	P	04 49 01.9	-0.1
AKTO	Aktyubinsk	48.22	332	P	P	04 49 01.9	-0.1
	1.1nm,0.5s,mb4.1,baz=130,slow=9.6,SNR=3.6						
WRA	Warramunga Arr	51.91	126	P	P	04 49 30.1	-0.2
	0.5nm,0.4s,mb3.8,baz=299,slow=10.0,SNR=9.7						
WRAB	Tennant Creek	51.91	126	eP	P	04 49 30.2	-0.2
	2.2nm,0.6s,mb4.3						
ASAR	Alice Springs	53.63	130	P	P	04 49 43.2	+0.2
	1.8nm,0.7s,mb4.1,baz=303,slow=6.3,SNR=6.6						
BRTR	Keskin Array B	58.71	310	P	P	04 50 18.6	-0.6
	1.1nm,0.7s,mb4.0,baz=119,slow=7.4,SNR=5.7						
FINES	FINESS Array B	68.99	332	P	P	04 51 26.3	-0.1
	2.4nm,0.8s,mb4.2,baz=85,slow=4.2,SNR=6.8						
ARCES	ARCESS Array B	71.68	340	P	P	04 51 43.2	+0.5
	1.2nm,0.8s,mb3.9,baz=90,slow=7.3,SNR=4.8						
BOSA	Boshof	75.19	236	P	P	04 52 04.7	+0.6
	2.8nm,1.0s,mb4.2,baz=60,slow=8.1,SNR=2.6						
NB2	NORSAR Subarra	75.99	330	P	P	04 52 07.8	-0.3
	comp=Z,0.8nm,0.7s,mb3.8,baz=94,slow=5.9						
NOA	NORSAR Array B	75.99	330	P	P	04 52 07.7	-0.4
	comp=Z,0.4nm,0.6s,mb3.5,baz=99,slow=5.1,SNR=3.4						
NOA	NORSAR Array B	75.99	330	P	P	04 52 07.7	-0.4

*IDC **28** 04:43:20.8±2.3, 10°.74N×91°.69E, h0km, mb3.8/6, mb1 3.8/6, mb1mx3.5/23, mbtmp3.8/6, Error ellipse: s-maj=128.0km s-min=20.5km az=58.0*
*NEIC **28** 04:43:22.4±1.1, 10°.82N×91°.77E, h10km, mb4.1/2, Error ellipse: s-maj=46.8km s-min=10.0km az=54.0*
*ISCJB **28** 04:43:23.7±1.5, 10°.8N±0°.3×91°.7E±0°.3, h33km, mb3.8/8, Error ellipse: s-maj=60.1km s-min=13.6km az=143.5*

ISC 28 04:43:26.3±1.5, 10°.8N±0°.3×91°.8E±0°.4, h35km, n11, σ0s30/11, mb3.8/8, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKM	Kota Kinabalu	24.60	99	eP	P	04 48 43.5	0.0
	4.8nm,0.5s,mb4.3						
MK31	Makanchi Array	36.73	349	eP	P	04 50 30.4	+0.2
MKAR	Makanchi Array	36.73	349	P	P	04 50 30.2	+0.1
	1.2nm,0.7s,mb3.9,baz=129,slow=8.9,SNR=6.9						
KURK	Kurchatov	41.21	347	P	P	04 51 07.5	-0.1
	0.6nm,0.2s,mb3.8,baz=170,slow=6.6,SNR=2.8						
KURK	Kurchatov	41.21	347	eP	P	04 51 06.4	-1.2
	1.7nm,0.7s,mb3.8						
ZALV	Zalesovo Beam	43.35	354	P	P	04 51 25.2	+0.2
	0.2nm,0.3s,mb3.3,baz=176,slow=8.9,SNR=4.0						
WRA	Warramunga Arr	51.85	126	P	P	04 52 31.3	-0.2
	0.2nm,0.4s,mb4.3,baz=300,slow=10.0,SNR=5.5						
WRAB	Tennant Creek	51.86	126	eP	P	04 52 31.7	+0.2
	3.8nm,1.0s,mb4.3						
ASAR	Alice Springs	53.58	130	P	P	04 52 44.2	0.0
	0.3nm,0.6s,mb3.4,baz=308,slow=7.4,SNR=2.5						
FINES	FINESS Array B	69.03	332	P	P	04 54 28.2	0.0
	1.2nm,0.8s,mb3.9,baz=96,slow=8.5,SNR=3.7						
FINES	FINESS Array B	69.03	332	P	P	04 54 28.2	0.0

*IDC **28** 04:44:47.7±1.3, 10°.64N×91°.76E, h0km, mb4.0/9, mb1 4.1/9, mb1mx3.7/25, mbtmp4.0/9, Error ellipse: s-maj=71.4km s-min=16.6km az=54.0*
*NEIC **28** 04:44:49.4±0.8, 10°.68N×91°.84E, h10km, mb4.0/2, Error ellipse: s-maj=46.4km s-min=10.0km az=54.0*
*ISCJB **28** 04:44:50.8±0.9, 10°.7N±0°.2×91°.8E±0°.3, h33km, mb3.9/12, Error ellipse: s-maj=53.5km s-min=11.6km az=143.6*

ISC 28 04:44:53.3±0.9, 10°.7N±0°.2×91°.9E±0°.3, h35km, n15, σ0s77/15, mb3.9/12, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKS2	Erkin-Say	35.53	337	eP	P	04 51 48.1	+1.2
	1.7nm,0.8s,mb4.0						
MK31	Makanchi Array	36.86	349	eP	P	04 51 57.9	-0.3
MKAR	Makanchi Array	36.86	349	P	P	04 51 58.3	+0.1
	2.1nm,0.7s,mb4.1,baz=131,slow=8.3,SNR=13						
KURK	Kurchatov	41.34	347	P	P	04 52 34.9	-0.7
	0.6nm,0.2s,mb3.8,baz=164,slow=7.0,SNR=3.5						
ZALV	Zalesovo Beam	43.48	354	P	P	04 52 52.5	-0.4
	0.6nm,0.5s,mb3.6,baz=178,slow=8.8,SNR=4.3						
FITZ	Fitzroy Crossi	43.92	130	P	P	04 52 55.8	-1.2
	5.4nm,0.9s,mb4.3,baz=356,slow=1.4,SNR=5.9						
AKTK	Aktyubinsk	48.41	332	P	P	04 53 32.9	+1.0
AKTO	Aktyubinsk	48.41	332	P	P	04 53 32.9	+1.0
	1.0nm,0.6s,mb4.0,baz=148,slow=15,SNR=3.8						
WRA	Warramunga Arr	51.71	126	P	P	04 53 58.1	+0.8
	1.0nm,0.7s,mb3.9,baz=301,slow=10.0,SNR=8.0						
WRAB	Tennant Creek	51.71	126	eP	P	04 53 57.5	+0.1
	1.2nm,0.7s,mb3.9						
ASAR	Alice Springs	53.43	130	P	P	04 54 10.7	+0.6
	0.7nm,0.9s,mb3.6,baz=310,slow=7.2,SNR=3.3						
BRTR	Keskin Array B	58.91	310	P	P	04 54 48.4	-0.7
	0.5nm,0.7s,mb3.6,baz=88,slow=12,SNR=4.1						
JOF	Joensuu	67.34	334	ep	P	04 55 44.1	-0.4
	1.5nm,0.5s,mb4.3						
JOF	Joensuu	67.34	334	ep	P	04 55 44.1	-0.4
	1.5nm,0.5s,mb4.3						
FINES	FINESS Array B	69.17	332	P	P	04 55 55.0	-1.0
	0.9nm,0.8s,mb3.8,baz=261,slow=9.5,SNR=4.0						

*ISK **28** 04:46:55.9, 37°.03N×35°.18E, h25km, ML2.6*
*CSEM **28** 04:46:56.4±0.1, 37°.00N×35°.23E, h30km, ML2.6, Error ellipse: s-maj=2.9km s-min=2.0km az=28.0*
*DDA **28** 04:46:56.4, 36°.93N×35°.26E, h7km±2km, Md2.8*
*ISCJB **28** 04:46:56.4±1.0, 37°.01N±0°.06×35°.21E±0°.06, h40km±18km, Error ellipse: s-maj=10.3km s-min=6.0km az=30.4*

ISC 28 04:46:56.6±0.8, 37°.02N±0°.06×35°.22E±0°.06, h37km±21km, n20, σ0s68/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARA	Karaisali	0.27	331	ePG	Pn	04 47 03.7	-0.7
KARA	Karaisali	0.27	331	ePg	Pn	04 47 03.7	-0.6
YURE	YUREGIR	0.38	121	iP	Pn	04 47 05.2	-0.5
YURE	YUREGIR	0.38	121	iP	Pn	04 47 05.2	-0.5
GULE	Gulek	0.44	306	iP	Pn	04 47 06.7	+0.3
GULE				iS	Sn	04 47 14.5	+1.2
GULE	Gulek	0.44	306	iP	Pn	04 47 06.7	+0.3
GULE				iS	Sn	04 47 14.5	+1.2
KRTS	Karatas	0.47	165	ePG	Pn	04 47 06.4	-0.4
KRTS				eSG	Sn	04 47 14.2	+0.4
KRTS	Karatas	0.47	165	ePg	Pn	04 47 06.4	-0.4
KRTS				eSg	Sn	04 47 14.2	+0.4
MERS	Mersin	0.58	255	ePG	Pn	04 47 07.4	-1.0
MERS				eSG	Sn	04 47 15.8	-0.8
MERS	Mersin	0.58	255	ePg	Pn	04 47 07.4	-0.9
MERS				eSg	Sn	04 47 15.8	-0.8
KOZT	Kozan	0.67	46	ePG	Pn	04 47 09.5	0.0
COBT	Iskenderun	0.97	121	iP	Pn	04 47 13.7	+0.1
COBT				iS	Sn	04 47 26.4	+0.2
COBT	Iskenderun	0.97	121	iP	Pn	04 47 13.7	0.0
COBT				iS	Sn	04 47 26.4	+0.2
YAYL	Yayladag	1.22	144	iP	Pn	04 47 17.4	+0.3
YAYL				iS	Sn	04 47 32.6	+0.3
YAYL	Yayladag	1.22	144	iP	Pn	04 47 17.4	+0.3
YAYL				iS	Sn	04 47 32.6	+0.3
IKL	Isikli	1.46	238	ePN	Pn	04 47 20.5	0.0
IKL	Isikli	1.46	238	ePn	Pn	04 47 20.5	+0.1
SARI	SarD1z-Kayseri	2.02	35	ePN	Pn	04 47 24.6	-3.6
HDMB	Hadim	2.19	269	ePN	Pn	04 47 31.5	+1.0
HDMB	Hadim	2.19	269	ePn	Pn	04 47 31.5	+1.0

IDC 28 04:50:04.9±7.8, 10°.42N×91°.19E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.5/23, mbtmp3.8/4, Error ellipse: s-maj=391.3km s-min=25.3km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	37.03	350	P	P	04 57 16.3	-0.1
	1.3nm,0.7s,baz=132,slow=8.4,SNR=8.8						
FITZ	Fitzroy Crossi	44.27	130	P	P	04 58 16.3	-0.2
	1.9nm,0.8s,baz=302,slow=9.5,SNR=4.4						
WRA	Warramunga Arr	52.10	125	P	P	04 59 16.6	-0.5
	0.8nm,0.6s,baz=304,slow=8.8,SNR=10						
ASAR	Alice Springs	53.77	130	P	P	04 59 30.0	+0.6
	0.5nm,0.6s,baz=300,slow=7.4,SNR=5.5						

IDC 28 04:55:05.0±2.8, 10°.67N×91°.75E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.4/23, mbtmp3.7/4, Error ellipse: s-maj=167.0km s-min=22.7km az=55.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	36.89	349	P	P	05 02 15.6	+0.4
	0.9nm,0.7s,baz=119,slow=8.6,SNR=7.3						
AKTO	Aktyubinsk	48.38	332	P	P	05 03 48.2	-0.4
	0.4nm,0.3s,baz=113,slow=7.7,SNR=2.4						
WRA	Warramunga Arr	51.80	126	P	P	05 04 14.8	-0.2
	0.8nm,0.7s,baz=306,slow=8.6,SNR=11						
ASAR	Alice Springs	53.51	130	P	P	05 04 27.9	+0.3
	0.7nm,0.7s,baz=314,slow=6.8,SNR=4.7						

IDC 28 04:56:08.9±8.2, 11°.01N×92°.31E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/22, mbtmp3.5/3, MS4.0/1, Ms1 4.0/1, ms1mx2.8/27, Error ellipse: s-maj=430.3km s-min=28.8km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	36.66	348	P	P	05 03 17.2	0.0
	0.9nm,0.7s,baz=134,slow=8.3,SNR=5.1						
ATD	Arta Tunnel	48.46	276	LR	LR	05 21 01.4	
	comp=Z,167nm,20.3s,baz=302,slow=31						
WRA	Warramunga Arr	51.56	126	P	P	05 05 16.6	-0.4
	0.5nm,0.7s,baz=305,slow=8.6,SNR=2.9						
ASAR	Alice Springs	53.31	131	P	P	05 05 30.4	+0.4
	0.4nm,0.8s,baz=310,slow=7.2,SNR=2.8						

*IDC **28** 04:59:59.7±0.6, 10°.97N×91°.80E, h0km, mb4.1/17, mb1 4.2/18, mb1mx4.0/27, mbtmp4.1/18, ML4.3/1, MS3.5/3, Ms1 3.5/3, ms1mx3.1/35, Error ellipse: s-maj=24.1km s-min=12.4km az=61.0*
*NEIC **28** 05:00:01.2±0.4, 10°.96N×91°.84E, h10km, mb4.4/5, Error ellipse: s-maj=10.7km s-min=7.0km az=63.0*
*ISCJB **28** 05:00:02.9±0.5, 11°.00N±0°.07×91°.95E±0°.09, h33km, mb4.2/23, MS3.7/4, Error ellipse: s-maj=13.1km s-min=8.9km az=154.6*
*BJI **28** 05:00:06.7, 11°.64N×91°.87E, h10km, mB4.7/4, mb4.2/11, Ms3.9/3, Ms7 3.7/3*

ISC 28 05:00:05.1±0.5, 10°.99N±0°.07×91°.91E±0°.09, h35km, n37, σ0s78/35, mb4.2/23, MS3.7/4, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	10.07	42	Pn	Pn	05 02 25.9	-1.5
	0.8nm,0.3s,baz=237,slow=15,SNR=4.4						
CMAR				LR	LR	05 07 07.9	
	comp=Z,223nm,19.5s,baz=14,slow=42						
CHTO	Chiang Mai	10.33	40	ePn	Pn	05 02 30.1	-0.8
	8.9nm,0.8s						
GYA	Guiyang	20.75	40	P	P	05 04 43.5	+0.5
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LZH	Lanzhou	27.23	21	eP	P	05 05 49.8	+4.0
LZH				pP	pP	05 05 55.5	-0.4
LZH				sP	sP	05 05 56.8	-3.3
LZH				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.5						
LZH				pmax	pmax		
	comp=Z,49nm,4.2s						
LZH				LR	LR		
	comp=N,310nm,14.0s						
LZH				LR	LR		
	comp=Z,440nm,17.6s,MS4.1						
GTA	Gaotai	29.17	13	eP	P	05 06 04.8	+1.7
GTA				pP	pP	05 06 10.3	-2.9
GTA				sP	sP	05 06 12.8	-4.6
GTA				pmax	pmax		
	comp=Z,5.0nm,1.6s,mb4.0						
GTA				pmax	pmax		
	comp=Z,98nm,6.6s						
GTA				LR	LR		
	comp=N,110nm,17.6s,MS3.8						
GTA				LR	LR		
	comp=E,150nm,16.7s,MS3.8						
GTA				LR	LR		
	comp=Z,110nm,16.1s,MS3.6						
AAK	Ala-Archa	35.00	337	P	P	05 06 53.6	-0.6
	comp=Z,1.2nm,0.3s,mb4.3,baz=221,slow=8.4,SNR=3.6						
EKS2	Erkin-Say	35.30	337	eP	P	05 06 58.0	+1.3
	comp=Z,2.8nm,0.7s,mb4.3						
MK31	Makanchi Array	36.61	349	eP	P	05 07 07.4	-0.5
MKAR	Makanchi Array	36.61	349	P	P	05 07 07.6	-0.3
	comp=Z,1.4nm,0.8s,mb4.0,baz=134,slow=7.3,SNR=14						
MKAR				LR	LR	05 25 36.0	
	comp=Z,62nm,18.4s,MS3.4,baz=170,slow=42						
MKAR	Makanchi Array	36.61	349	P	P	05 07 07.6	-0.3
MKAR				LR	LR	05 25 36.0	
SONM	Songino Array	38.70	16	P	P	05 07 26.7	+1.1
	comp=Z,1.7nm,0.8s,mb3.8,baz=202,slow=8.5,SNR=13						
ULN	Ulaanbaatar	38.90	16	eP	P	05 07 28.8	+1.5
	comp=Z,5.7nm,1.0s,mb4.3						
KURK	Kurchatov	41.09	347	P	P	05 07 45.0	-0.4
	comp=Z,2.5nm,0.9s,mb3.8,baz=164,slow=7.1,SNR=6.9						
KURK	Kurchatov	41.09	347	P	P	05 07 45.0	-0.4
KSRS	Korea Array	41.69	45	P	P	05 07 50.0	-0.6
	comp=Z,0.6nm,0.4s,mb3.6,baz=239,slow=9.0,SNR=3.2						
KSRS				LR	LR	05 27 02.7	
	comp=Z,66nm,20.7s,MS3.5,baz=80,slow=39						
ZAA0	Zalesovo Array	43.22	354	eP	P	05 08 03.4	+0.6
ZALV	Zalesovo Beam	43.22	354	P	P	05 08 02.8	+0.1
	comp=Z,1.5nm,0.4s,mb4.1,baz=165,slow=9.2,SNR=7.1						
FITZ	Fitzroy Crossi	44.09	131	eP	P	05 08 10.3	+0.1
	comp=Z,9.3nm,0.8s,mb4.6						
BVAR	Borovoye Array	45.36	342	P	P	05 08 19.9	0.0
	comp=Z,0.8nm,0.6s,mb3.8,baz=170,slow=9.7,SNR=4.2						
AKTK	Aktyubinsk	48.18	331	P	P	05 08 42.2	+0.2
AKTO	Aktyubinsk	48.18	331	P	P	05 08 42.2	+0.2
	comp=Z,1.1nm,0.5s,mb4.1,baz=150,slow=8.1,SNR=2.6						
NWAO	Narrogin (SRO)	49.91	152	P	P	05 08 55.3	-0.1
	comp=Z,12nm,0.8s,mb5.0,baz=296,slow=7.0,SNR=4.6						
WRA	Warramunga Arr	51.86	126	P	P	05 09 10.5	+0.2
	comp=Z,1.6nm,0.3s,mb4.4,baz=300,slow=10.0,SNR=76						
WRA				PcP	PcP	05 10 23.8	+0.8
	comp=Z,0.6nm,0.5s,baz=319,slow=2.9,SNR=6.9						
WRA	Warramunga Arr	51.86	126	P	P	05 09 10.5	+0.2
WRA				PcP	PcP	05 10 23.8	+0.8
WRAB	Tennant Creek	51.86	126	eP	P	05 09 10.0	-0.4
	comp=Z,6.1nm,0.6s,mb4.7						
ASAR	Alice Springs	53.59	130	P	P	05 09 23.7	+0.6
	comp=Z,3.6nm,0.6s,mb4.5,baz=306,slow=6.5,SNR=26						
ASAR				PcP	PcP	05 10 30.1	+0.7
	comp=Z,2.3nm,0.7s,baz=301,slow=2.5,SNR=5.4						
BR131	Keskin Array S	58.75	310	eP	P	05 09 58.3	-1.4
	comp=Z,1.8nm,0.7s,mb4.2						
BRTR	Keskin Array B	58.75	310	P	P	05 09 58.2	-1.6
	comp=Z,1.0nm,0.8s,mb3.9,baz=121,slow=6.3,SNR=5.7						
STKA	Stephens Creek	63.83	134	P	P	05 10 34.1	-0.1
	comp=Z,2.2nm,0.6s,mb4.4,baz=309,slow=11,SNR=8.0						
FINES	FINESS Array B	68.95	332	P	P	05 11 06.0	-0.5
	comp=Z,1.2nm,0.7s,mb4.0,baz=73,slow=6.6,SNR=5.6						
ARCES	ARCESS Array B	71.61	340	P	P	05 11 22.2	-0.4
	comp=Z,1.1nm,0.7s,mb3.9,baz=81,slow=7.7,SNR=7.7						
BOSA	Boshof	75.41	237	P	P	05 11 46.0	+0.3
	comp=Z,4.9nm,0.9s,mb4.5,baz=72,slow=8.3,SNR=6.5						
BOSA	Boshof	75.41	237	P	P	05 11 46.0	+0.3
NB2	NORSAR Subarra	75.96	330	P	P	05 11 47.4	-0.8
	comp=Z,3.4nm,1.1s,mb4.2,baz=92,slow=5.9						
NOA	NORSAR Array B	75.96	330	P	P	05 11 47.5	-0.8
	comp=Z,0.3nm,0.6s,mb3.4,baz=120,slow=3.5,SNR=2.9						
NVAR	Mina Array Bea	123.32	28	PKP	PKPdf	05 19 00.3	+1.5
	comp=Z,0.3nm,0.5s,baz=316,slow=4.1,SNR=3.8						
TXAR	Lajitas Array	137.19	20	PKP	PKPdf	05 19 24.1	-1.3
	comp=Z,0.2nm,0.7s,baz=347,slow=3.7,SNR=3.3						

IDC 28 05:05:04.7±6.8, 9°.89N×90°.44E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.5/23, mbtmp3.8/5, Error ellipse: s-maj=326.4km s-min=20.9km az=60.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	37.42	351	P	P	05 12 20.4	+0.8
	1.8nm,0.7s,baz=129,slow=8.8,SNR=12						
KURK	Kurchatov	41.85	349	P	P	05 12 56.0	-0.4
	1.3nm,0.8s,baz=175,slow=8.2,SNR=4.0						
ZALV	Zalesovo Beam	44.17	355	P	P	05 13 13.2	-1.9
	0.5nm,0.6s,baz=170,slow=10,SNR=3.9						
WRA	Warramunga Arr	52.41	125	P	P	05 14 19.9	+0.6
	0.5nm,0.4s,baz=301,slow=9.9,SNR=16						
ASAR	Alice Springs	54.02	129	P	P	05 14 30.6	-0.5
	0.8nm,0.8s,baz=305,slow=6.6,SNR=6.0						

IDC 28 05:13:13.0±7.9, 9°.81N×90°.27E, h0km, mb3.9/3, mb1 4.0/3, mb1mx3.5/22, mbtmp3.9/3, Error ellipse: s-maj=377.9km s-min=26.2km az=60.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	37.48	351	P	P	05 20 28.1	-0.2
	2.2nm,0.7s,baz=128,slow=9.3,SNR=17						
WRA	Warramunga Arr	52.49	124	P	P	05 22 27.4	-0.7
	0.6nm,0.4s,baz=300,slow=9.9,SNR=19						
ASAR	Alice Springs	54.09	129	P	P	05 22 40.9	+1.0
	0.5nm,0.5s,baz=305,slow=6.2,SNR=6.7						

*NEIC **28** 05:14:57.8, 32°.33N×115°.29W, h4km, ML2.7(ECX), ML2.5(PAS), After ECX.*

ECX 28 05:14:57.8±0.7, 32°.33N×115°.29W, h4km, MD2.6, ML2.7, 6C-5D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	Cerro Prieto	0.09	351⇓	eP	Pg	05 14 59.3	-0.4
CPBX				eS	Sg	05 15 01.4	+0.5
CPBX				⇑e		05 15 05.8	
	comp=N,10μm,0.3s						
EMX	El Mayor	0.34	173⇓	eP	Pg	05 15 03.8	-0.5
EMX				eS	Sg	05 15 08.7	-0.1
EMX				⇑e		05 15 08.8	
	comp=N,466nm,0.2s						
EMX	El Mayor	0.34	173	eP	Pg	05 15 03.8	-0.5
EMX				eS	Sg	05 15 08.6	-0.2
SGL	Mount Signal	0.49	311⇓	eP	Pg	05 15 06.9	-0.3
YUH	Yuha Desert	0.62	301⇓	iP	Pg	05 15 09.0	-0.8
COK	Cook Ranch	0.64	325⇑	eP	Pg	05 15 09.7	-0.4
YMD	Yuma Desert	0.67	70⇑	eP	Pg	05 15 10.2	-0.4
RDX	Rancho Dawling	0.68	234⇑	eP	Pg	05 15 09.8	-1.1
RDX				eS	Sg	05 15 19.8	0.0
RMX	La Rumorosa	0.72	292⇑	eP	Pg	05 15 10.6	-1.0
RMX				eS	Sg	05 15 20.3	-0.8
GLA	Glamis	0.82	28	ePg	Pg	05 15 13.1	-0.4
GLA				eSg	Sg	05 15 23.8	-0.4
ECBX	El Chinero	0.88	167	eP	Pg	05 15 13.7	-1.0
ECBX				eS	Sg	05 15 25.1	-0.9
CBX	Cerro Bola	1.17

12nm,0.3s,SNR=13
ENIJ S Sn 05 16 40.6 -0.2
38nm,0.3s,SNR=6.3
EBER Berja 1.89 324 P Pn 05 16 21.6 -0.2
EBER S Sn 05 16 47.1 +1.5
EBER Berja 1.89 324 P Pn 05 16 21.6 -0.2
6.7nm,0.3s,SNR=21
EBER S Sn 05 16 47.1 +1.5
15nm,0.4s,SNR=5.3
EBER Berja 1.89 324 P Pn 05 16 21.6 -0.2
6.7nm,0.3s,SNR=21
EBER S Sn 05 16 47.1 +1.4
15nm,0.4s,SNR=5.3
TOU Touzarine 1.89 258 P Pn 05 16 21.0 -0.8
TOU S Sn 05 16 43.0 -2.7
TOU Touzarine 1.89 258 *i* P Pn 05 16 21.0 -0.8
TOU *i* S Sn 05 16 43.0 -2.7
MPAL Palemas 2.00 266 P Pn 05 16 23.0 -0.3
MPAL S Sn 05 16 46.0 -2.4
MPAL Palemas 2.00 266 *e*P Pn 05 16 23.0 -0.3
MPAL *e*S Sn 05 16 46.0 -2.4
EGUA Guajares 2.21 312 P Pn 05 16 25.6 -0.7
EGUA S Sn 05 16 53.8 +0.1
EGUA Guajares 2.21 312 P Pn 05 16 25.6 -0.7
8.7nm,0.2s,SNR=7.9
EGUA S Sn 05 16 53.8 +0.1
7.1nm,0.4s,SNR=7.9
EGUA Guajares 2.21 312 P Pn 05 16 25.6 -0.7
8.7nm,0.2s,SNR=7.9
EGUA S Sn 05 16 53.8 +0.1
7.1nm,0.4s,SNR=7.9
EQUE Quentar 2.40 320 P Pn 05 16 29.9 +1.0
9.9nm,0.3s,SNR=35
EQUE S Sn 05 16 59.2 +0.8
6.0nm,0.4s,SNR=4.7
EQUE Quentar 2.40 320 P Pn 05 16 29.9 +1.0
9.9nm,0.3s,SNR=35
EQUE S Sn 05 16 59.2 +0.8
6.0nm,0.4s,SNR=4.7
ERON Agron 2.48 312 P Pn 05 16 30.7 +0.8
ERON S Sn 05 17 03.2 +2.9
ERON Agron 2.48 312 P Pn 05 16 30.7 +0.8
2.7nm,0.1s,SNR=7.9
ERON S Sn 05 17 03.2 +2.9
8.7nm,0.4s,SNR=7.9
ERON Agron 2.48 312 P Pn 05 16 30.7 +0.7
2.7nm,0.1s,SNR=7.9
ERON S Sn 05 17 03.2 +2.9
8.7nm,0.4s,SNR=7.9
ECOG Cogollos-Vega 2.52 319 P Pn 05 16 31.6 +1.0
ECOG S Sn 05 17 01.6 +0.2
ECOG Cogollos-Vega 2.52 319 P Pn 05 16 31.6 +1.0
9.6nm,0.3s,SNR=7.9
ECOG S Sn 05 17 01.6 +0.2
6.4nm,0.3s,SNR=7.9
ECOG Cogollos-Vega 2.52 319 P Pn 05 16 31.6 +1.0
9.6nm,0.3s,SNR=7.9
ECOG S Sn 05 17 01.6 +0.2
6.4nm,0.3s,SNR=7.9
EHUE Huescar 2.59 341 P Pn 05 16 32.6 +1.2
EHUE S Sn 05 17 02.6 -0.3
EHUE Huescar 2.59 341 P Pn 05 16 32.6 +1.2
2.9nm,0.2s,SNR=7.9
EHUE S Sn 05 17 02.6 -0.3
6.5nm,0.4s,SNR=7.9
EHUE Huescar 2.59 341 P Pn 05 16 32.6 +1.2
2.9nm,0.2s,SNR=7.9
EHUE S Sn 05 17 02.6 -0.3
6.5nm,0.4s,SNR=7.9
EQES Quesada 2.73 333 P Pn 05 16 35.9 +2.5
EQES S Sn 05 17 06.5 0.0
EQES Quesada 2.73 333 P Pn 05 16 35.9 +2.5
14nm,0.4s,SNR=15
EQES S Sn 05 17 06.5 0.0
17nm,0.4s,SNR=6.7
EQES Quesada 2.73 333 P Pn 05 16 35.9 +2.5
14nm,0.4s,SNR=15
EMIJ Mijas 2.91 295 P Pn 05 16 34.4 -1.4
EMIJ S Sn 05 17 09.2 -1.6
EMIJ Mijas 2.91 295 P Pn 05 16 34.4 -1.4
2.8nm,0.3s,SNR=13
EMIJ S Sn 05 17 09.2 -1.6
3.2nm,0.3s,SNR=5.1
EMIJ Mijas 2.91 295 P Pn 05 16 34.4 -1.4
2.8nm,0.3s,SNR=13
EMIJ S Sn 05 17 09.2 -1.6
3.2nm,0.3s,SNR=5.1
ETOB Tobarra 3.26 359 P Pn 05 16 41.4 +0.6
ETOB S Sn 05 17 17.5 -2.1
ETOB Tobarra 3.26 359 P Pn 05 16 41.4 +0.6
4.0nm,0.3s,SNR=28
ETOB S Sn 05 17 17.5 -2.1
18nm,0.6s,SNR=5.2
ETOB Tobarra 3.26 359 P Pn 05 16 41.4 +0.7
4.0nm,0.3s,SNR=28
ETOB S Sn 05 17 17.5 -2.1
18nm,0.6s,SNR=5.2
EVIA Vianos 3.35 347 P Pn 05 16 44.3 +2.3
EVIA S Sn 05 17 21.3 -0.5
EVIA Vianos 3.35 347 P Pn 05 16 44.3 +2.3
1.9nm,0.2s,SNR=15
EVIA S Sn 05 17 21.3 -0.5
36nm,0.5s,SNR=7.7
EVIA Vianos 3.35 347 P Pn 05 16 44.3 +2.3
1.9nm,0.2s,SNR=15
EVIA S Sn 05 17 21.3 -0.5
36nm,0.5s,SNR=7.7
EJIF Jimena Fronter 3.39 290 P Pn 05 16 43.9 +1.4
EJIF Jimena Fronter 3.39 290 P Pn 05 16 43.9 +1.4
1.1nm,0.2s,SNR=7.9
EJIF Jimena Fronter 3.39 290 P Pn 05 16 43.9 +1.4
1.1nm,0.2s,SNR=7.9
EBEN Beniarda 3.48 17 P Pn 05 16 43.8 +0.2
EBEN S Sn 05 17 22.0 -2.9
EBEN Beniarda 3.48 17 P Pn 05 16 43.8 +0.2
0.2nm,0.1s,SNR=7.9
EBEN S Sn 05 17 22.0 -2.9
0.9nm,0.2s,SNR=7.9
EBEN Beniarda 3.48 17 P Pn 05 16 43.8 +0.2
0.2nm,0.1s,SNR=7.9
EBEN S Sn 05 17 22.0 -2.8
0.9nm,0.2s,SNR=7.9
EADA Adamuz 3.72 319 P Pn 05 16 47.3 +0.3
EADA S Sn 05 17 30.5 -0.4
EADA Adamuz 3.72 319 P Pn 05 16 47.3 +0.3
2.5nm,0.3s,SNR=12
EADA S Sn 05 17 30.5 -0.4
1.1nm,0.2s,SNR=7.9
EADA Adamuz 3.72 319 P Pn 05 16 47.3 +0.3
2.5nm,0.3s,SNR=12
EIBI Ibiza 4.29 31 P Pn 05 16 53.9 -1.0
EIBI S Sn 05 17 41.5 -3.5
EIBI Ibiza 4.29 31 P Pn 05 16 53.8 -1.0
0.7nm,0.1s,SNR=11
EIBI S Sn 05 17 41.5 -3.5
2.4nm,0.2s,SNR=7.9
EIBI Ibiza 4.29 31 P Pn 05 16 53.8 -1.1
0.7nm,0.1s,SNR=11
EIBI S Sn 05 17 41.5 -3.5
2.4nm,0.2s,SNR=7.9
ESDC Sonseca Array 4.71 336 P Pn 05 17 01.7 +1.0
ESDC Sonseca Array 4.71 336 P Pn 05 17 01.7 +1.0
0.5nm,0.2s,baz=151,slow=13,SNR=4.2
ESDC Sonseca Array 4.71 336 P Pn 05 17 01.7 +1.0
0.5nm,0.2s,slow=13,SNR=4.2
EMIN Mina Concepcio 4.80 301 P Pn 05 17 01.5 -0.3
EMIN S Sn 05 17 57.1 -0.3
EMIN Mina Concepcio 4.80 301 P Pn 05 17 01.5 -0.3
1.5nm,0.4s,SNR=9.4
EMIN S Sn 05 17 57.1 -0.3
0.7nm,0.2s,SNR=7.9
EMIN Mina Concepcio 4.80 301 P Pn 05 17 01.5 -0.3
1.5nm,0.4s,SNR=9.4
EMIN S Sn 05 17 57.1 -0.3
0.7nm,0.2s,SNR=7.9
EMOS Mosqueruela 5.05 9 P Pn 05 17 07.0 +1.7
EMOS S Sn 05 18 01.6 -1.9
EMOS Mosqueruela 5.05 9 P Pn 05 17 07.0 +1.8
1.6nm,0.3s,SNR=7.3
EMOS S Sn 05 18 01.6 -1.9
0.7nm,0.3s,SNR=7.9
EMOS Mosqueruela 5.05 9 P Pn 05 17 07.0 +1.8
1.6nm,0.3s,SNR=7.3
EMOS S Sn 05 18 01.6 -1.9
0.7nm,0.3s,SNR=7.9
PBAR Barrancos 5.25 304 *e*Pn Pn 05 17 08.6 +0.6
PBAR *e*Sn Sn 05 18 08.1 -0.4
PBAR A 05 18 12.6
1.9nm,0.9s
PBAR Barrancos 5.25 304 *e*Pn Pn 05 17 08.6 +0.6
EGRO El Granado 5.28 296 P Pn 05 17 08.6 +0.2
EGRO S Sn 05 18 09.8 +0.5
EGRO El Granado 5.28 296 P Pn 05 17 08.6 +0.2
2.9nm,0.3s,SNR=8.7
EGRO S Sn 05 18 09.8 +0.5
4.4nm,0.7s,SNR=5.5
EGRO El Granado 5.28 296 P Pn 05 17 08.6 +0.2
2.9nm,0.3s,SNR=8.7
EGRO S Sn 05 18 09.8 +0.5
4.4nm,0.7s,SNR=5.5
PVAQ Vaqueiros 5.41 294 *e*Pn Pn 05 17 10.7 +0.5
PVAQ *e*Sn Sn 05 18 11.5 -0.9
PVAQ A 05 18 21.3
2.8nm,0.7s
PVAQ Vaqueiros 5.41 294 *e*Pn Pn 05 17 10.7 +0.5
PVAQ *e*Sn Sn 05 18 11.5 -0.9
2.8nm,0.7s
ETOR Torete 5.45 356 P Pn 05 17 11.9 +1.1
ETOR S Sn 05 18 11.6 -2.0
ETOR Torete 5.45 356 P Pn 05 17 11.9 +1.1
1.8nm,0.2s,SNR=7.9
ETOR S Sn 05 18 11.6 -2.0
3.0nm,0.4s,SNR=7.9
ETOR Torete 5.45 356 P Pn 05 17 11.9 +1.1
1.8nm,0.2s,SNR=7.9
ETOR S Sn 05 18 11.6 -1.9
3.0nm,0.4s,SNR=7.9
PBDV Barranco-do-Ve 5.51 292 *e*Pn Pn 05 17 12.8 +1.1
PBDV *e*Sn Sn 05 18 14.8 -0.3
PBDV A 05 18 24.7
2.2nm,0.8s
PBDV Barranco-do-Ve 5.51 292 *e*Pn Pn 05 17 12.8 +1.1
PBDV *e*Sn Sn 05 18 14.8 -0.3
2.2nm,0.8s
EBAD Badajoz 5.55 309 P Pn 05 17 12.2 +0.1
EBAD Badajoz 5.55 309 P Pn 05 17 12.2 +0.1
1.2nm,0.2s,SNR=13
EBAD Badajoz 5.55 309 P Pn 05 17 12.2 +0.1
1.2nm,0.2s,SNR=13
PESTR Estremoz 5.98 307 *e*Pn Pn 05 17 18.2 +0.1
PESTR Estremoz 5.98 307 *e*Pn Pn 05 17 18.2 +0.1
EVO Evora 6.09 303 *e*Pn Pn 05 17 18.8 -0.8
EVO Evora 6.09 303 *e*Pn Pn 05 17 18.8 -0.8
PFVI Vila Bisbo 6.17 289 P Pn 05 17 21.2 +0.5
PFVI S Sn 05 18 30.2 -1.1
PFVI Vila Bisbo 6.17 289 P Pn 05 17 21.2 +0.5
1.3nm,0.2s,SNR=5.8
PFVI S Sn 05 18 30.2 -1.1
8.6nm,0.7s,SNR=7.9
PFVI Vila Bisbo 6.17 289 *e*Pn Pn 05 17 21.8 +1.1
PFVI Vila Bisbo 6.17 289 P Pn 05 17 21.2 +0.5
1.3nm,0.2s,SNR=5.8
PFVI Vila Bisbo 6.17 289 *e*Pn Pn 05 17 21.8 +1.1
PFVI S Sn 05 18 30.2 -1.1
8.6nm,0.7s,SNR=7.9
PCBR Castelo Branco 6.51 315 *e*Pn Pn 05 17 25.8 +0.5
PCBR Castelo Branco 6.51 315 *e*Pn Pn 05 17 25.8 +0.5
MVO Moncorvo 7.23 325 P Pn 05 17 35.7 +0.5
MVO Moncorvo 7.23 325 P Pn 05 17 35.7 +0.5
2.3nm,0.3s,SNR=6.6
MVO Moncorvo 7.23 325 *e*Pn Pn 05 17 36.5 +1.3
MVO Moncorvo 7.23 325 P Pn 05 17 35.7 +0.5
2.3nm,0.3s,SNR=6.6
MVO Moncorvo 7.23 325 *e*Pn Pn 05 17 36.5 +1.3

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*IDC **28** 05:21:17.5±0.8, 10°.70N×91°.76E, h0km, mb4.2/14, mb1 4.3/15, mb1mx4.0/27, mbtmp4.2/15, ML4.1/1, MS3.0/2, Ms1 3.0/2, ms1mx2.5/31, Error ellipse: s-maj=37.1km s-min=13.1km az=56.0*
*ISCJB **28** 05:21:18.3±2.9, 10°.64N±0°.07×91°.75E±0°.06, h19km±22km, mb4.3/19, MS3.5/2, Error ellipse: s-maj=12.3km s-min=10.0km az=25.6*
*NEIC **28** 05:21:21.5±2.4, 10°.75N×91°.85E, h24km±18km, mb4.4/7, Error ellipse: s-maj=10.2km s-min=6.5km az=50.0*
*BJI **28** 05:21:24.5, 11°.47N×91°.81E, h14km, mB4.8/2, mb4.5/8, Ms4.0/1, Ms7 3.5/1*
ISC 28 05:21:21.9±2.8, 10°.68N±0°.07×91°.77E±0°.06, h29km±20km, h25km±1.1km: pP-P, n32, σ0s82/32, mb4.3/19, MS3.5/2, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	**Kulim**	**10.30**	**121**	*e*Pn	**Pn**	**05 23 48.0**	**+0.2**
CMAR	**Chiang Mai Arr**	**10.39**	**41**	Pn	**Pn**	**05 23 47.2**	**-1.8**
0.5nm,0.3s,baz=235,slow=15,SNR=3.4							
PSI	**Prapat**	**10.57**	**137**	LR	LR	05 27 57.3	
comp=Z,48nm,20.5s,baz=191,slow=38							
PALK	**Pallekele**	**11.44**	**254**	*e*Pn	**Pn**	**05 24 04.8**	**+1.3**
PALK				*e*Sn	**Sn**	**05 26 09.0**	**-1.4**
HHC	**Hu-ho-hao-te**	**34.76**	**27**	*e*P	**P**	**05 28 10.8**	**+1.1**
HHC				pP	pP	05 28 18.0	-0.2
HHC				sP	sP	05 28 21.5	-0.2
HHC				PP	PP	05 29 27.8	-1.0
HHC				PcP	PcP	05 30 44.8	+1.9
HHC				S	**S**	**05 33 38.5**	**+0.2**
HHC				ScP	ScP	05 34 28.0	+1.5
HHC				PcS	PcS	05 34 31.3	+1.9
HHC				ScS	ScS	05 38 29.0	-0.6
HHC				pmax	pmax		
comp=Z,12nm,0.8s,mb4.9							
HHC				pmax	pmax		
comp=Z,120nm,5.8s							
HHC				LR	LR		
comp=N,94nm,15.5s,MS3.9							
HHC				LR	LR		
comp=E,140nm,14.3s,MS3.9							
HHC				LR	LR		
comp=Z,77nm,15.5s,MS3.5							
UCH	**Uchtor**	**34.87**	**337**	*e*P	**P**	**05 28 11.9**	**+1.3**
comp=Z,2.4nm,0.7s,mb4.2							
AAK	**Ala-Archa**	**35.22**	**338**	P	**P**	**05 28 15.2**	**+1.5**
comp=Z,1.2nm,0.3s,mb4.3,baz=199,slow=9.3,SNR=5.0							
EKS2	**Erkin-Say**	**35.52**	**337**	*e*P	**P**	**05 28 17.4**	**+1.2**
comp=Z,5.3nm,0.9s,mb4.5							
MK31	**Makanchi Array**	**36.88**	**349**	*e*P	**P**	**05 28 27.4**	**-0.4**
MK31				*e*	pP	05 28 35.0	-1.3
MKAR	**Makanchi Array**	**36.88**	**349**	P	**P**	**05 28 27.5**	**-0.2**
comp=Z,3.9nm,0.5s,mb4.5,baz=134,slow=8.5,SNR=41							
SONM	**Songino Array**	**39.03**	**16**	P	**P**	**05 28 45.6**	**-0.2**
comp=Z,0.5nm,0.5s,mb3.5,baz=216,slow=7.1,SNR=3.3							
SONM				LR	LR	05 48 07.4	
comp=Z,44nm,19.8s,MS3.3,baz=336,slow=41							
KURK	**Kurchatov**	**41.35**	**347**	P	**P**	**05 29 04.3**	**-0.8**
comp=Z,3.8nm,0.9s,mb4.0,baz=171,slow=7.4,SNR=12							
KURK	**Kurchatov**	**41.35**	**347**	*e*P	**P**	**05 29 04.8**	**-0.4**
comp=Z,1.6nm,0.6s,mb3.8							
MBWA	**Marble Bar**	**41.91**	**139**	*e*P	**P**	**05 29 04.5**	**-5.5**
comp=Z,20nm,0.9s,mb4.7							
ZAA0	**Zalesovo Array**	**43.51**	**354**	*e*P	**P**	**05 29 21.7**	**-0.9**
ZALV	**Zalesovo Beam**	**43.51**	**354**	P	**P**	**05 29 22.1**	**-0.5**
comp=Z,2.0nm,0.5s,mb4.1,baz=174,slow=9.9,SNR=11							
FITZ	**Fitzroy Crossi**	**44.00**	**130**	P	**P**	**05 29 26.9**	**-0.2**
comp=Z,12nm,0.9s,mb4.6,baz=303,slow=4.6,SNR=19							
FITZ	**Fitzroy Crossi**	**44.00**	**130**	*e*P	**P**	**05 29 26.7**	**-0.4**
comp=Z,9.8nm,0.9s,mb4.5							
FITZ				*e*	pP	05 29 33.1	-2.6
AKTK	**Aktyubinsk**	**48.38**	**332**	P	**P**	**05 30 01.2**	**+0.2**
AKTO	**Aktyubinsk**	**48.38**	**332**	P	**P**	**05 30 01.2**	**+0.2**
comp=Z,1.7nm,0.5s,mb4.3,baz=119,slow=9.4,SNR=5.4							
WRA	**Warramunga Arr**	**51.79**	**126**	P	**P**	**05 30 27.0**	**-0.4**
comp=Z,3.1nm,0.5s,mb4.5,baz=301,slow=10,SNR=68							
WRAB	**Tennant Creek**	**51.79**	**126**	*e*P	**P**	**05 30 26.8**	**-0.6**
comp=Z,5.3nm,0.6s,mb4.7							
ASAR	**Alice Springs**	**53.50**	**130**	P	**P**	**05 30 40.3**	**+0.3**
comp=Z,2.8nm,0.5s,mb4.4,baz=306,slow=6.4,SNR=37							
BRTR	**Keskin Array B**	**58.84**	**310**	P	**P**	**05 31 17.6**	**-0.3**
comp=Z,1.5nm,0.7s,mb4.1,baz=108,slow=7.9,SNR=8.6							
STKA	**Stephens Creek**	**63.73**	**134**	P	**P**	**05 31 52.0**	**+0.9**
comp=Z,1.3nm,0.3s,mb4.4,baz=318,slow=24,SNR=6.7							
STKA	**Stephens Creek**	**63.73**	**134**	*e*P	**P**	**05 31 52.2**	**+1.1**
comp=Z,0.5nm,0.7s,mb3.6							
FINES	**FINESS Array B**	**69.15**	**332**	P	**P**	**05 32 25.2**	**-0.1**
comp=Z,1.9nm,0.7s,mb4.2,baz=104,slow=7.6,SNR=9.5							
FINES	**FINESS Array B**	**69.15**	**332**	P	**P**	**05 32 25.2**	**-0.1**
ARCES	**ARCESS Array B**	**71.85**	**340**	P	**P**	**05 32 41.6**	**-0.1**
comp=Z,1.3nm,0.8s,mb3.9,baz=46,slow=6.9,SNR=3.9							
NB2	**NORSAR Subarra**	**76.15**	**330**	P	**P**	**05 33 06.3**	**-0.6**
comp=Z,0.5nm,0.6s,mb3.6,baz=97,slow=5.3							
NOA	**NORSAR Array B**	**76.15**	**330**	P	**P**	**05 33 06.4**	**-0.6**
comp=Z,0.8nm,0.7s,mb3.7,baz=94,slow=5.8,SNR=4.3							
TXAR	**Lajitas Array**	**137.52**	**20**	PKP	PKPdf	05 40 45.5	+1.8
comp=Z,0.1nm,0.6s,baz=57,slow=3.3,SNR=2.8							

IDC 28 05:35:00.4±2.8, 21°.29S×179°.91E, h0km, mb4.1/3, mb1 4.4/3, mb1mx3.9/15, mbtmp4.1/3, Error ellipse: s-maj=279.3km s-min=32.5km az=162.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.44**	**258**	P	P	05 42 56.4	-0.8
1.1nm,0.3s,baz=96,slow=7.5,SNR=13							
WRA	**Warramunga Arr**	**42.56**	**263**	P	P	05 42 58.9	+0.7
2.6nm,0.3s,baz=97,slow=8.4,SNR=150							
TXAR	**Lajitas Array**	**89.13**	**58**	P	P	05 47 58.2	+0.1
0.3nm,0.7s,baz=216,slow=7.0,SNR=6.3							

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*IDC **28** 05:45:27.3±1.0, 10°.78N×91°.72E, h0km, mb4.0/9, mb1 4.1/9, mb1mx3.8/23, mbtmp4.0/9, Error ellipse: s-maj=35.4km s-min=22.5km az=68.0*
*NEIC **28** 05:45:28.2±0.7, 10°.66N×91°.57E, h10km, mb4.2/2, Error ellipse: s-maj=28.4km s-min=10.9km az=55.0*
*ISCJB **28** 05:45:30.1±0.9, 10°.7N±0°.2×91°.7E±0°.2, h33km, mb3.9/10, Error ellipse: s-maj=34.4km s-min=15.9km az=147.6*
ISC 28 05:45:32.7±0.8, 10°.8N±0°.1×91°.8E±0°.2, h35km, n15, σ0s60/15, mb3.9/10, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.29**	**42**	Pn	**Pn**	**05 48 06.2**	**+8.4**
baz=237,slow=15,SNR=5.7							
MK31	**Makanchi Array**	**36.74**	**349**	*e*P	**P**	**05 52 36.6**	**-0.1**
MK31				*e*	pP	05 52 44.4	-2.5
MKAR	**Makanchi Array**	**36.74**	**349**	P	**P**	**05 52 36.9**	**+0.3**
2.8nm,0.8s,mb4.1,baz=130,slow=8.6,SNR=19							
SONM	**Songino Array**	**38.90**	**16**	P	**P**	**05 52 55.8**	**+1.0**
1.2nm,0.8s,mb3.7,baz=205,slow=9.2,SNR=6.1							
KURK	**Kurchatov**	**41.22**	**347**	P	**P**	**05 53 13.8**	**-0.3**
1.8nm,0.9s,mb3.7,baz=170,slow=7.4,SNR=8.6							
KURK	**Kurchatov**	**41.22**	**347**	*e*P	**P**	**05 53 14.1**	**+0.1**
4.3nm,1.0s,mb4.0							
KURK				*e*	pP	05 53 21.9	-2.4
ZALV	**Zalesovo Beam**	**43.37**	**354**	P	**P**	**05 53 31.6**	**+0.1**
1.6nm,0.6s,mb4.0,baz=183,slow=7.4,SNR=7.9							
WRA	**Warramunga Arr**	**51.87**	**126**	P	**P**	**05 54 37.5**	**-0.5**
0.5nm,0.6s,mb3.6,baz=301,slow=9.9,SNR=15							
WRA	**Warramunga Arr**	**51.87**	**126**	P	**P**	**05 54 37.5**	**-0.5**
WRAB	**Tennant Creek**	**51.88**	**126**	*e*P	**P**	**05 54 38.0**	**0.0**
2.6nm,0.8s,mb4.2							
BRTR	**Keskin Array B**	**58.75**	**310**	P	**P**	**05 55 26.4**	**-0.9**
0.7nm,0.7s,mb3.8,baz=123,slow=9.0,SNR=4.0							
FINES	**FINESS Array B**	**69.03**	**332**	P	**P**	**05 56 34.3**	**-0.2**
2.4nm,0.8s,mb4.2,baz=108,slow=6.2,SNR=7.9							
BOSA	**Boshof**	**75.20**	**237**	P	**P**	**05 57 13.3**	**+1.2**
2.7nm,0.9s,mb4.2,baz=157,slow=9.6,SNR=3.6							
NB2	**NORSAR Subarra**	**76.03**	**330**	P	**P**	**05 57 15.8**	**-0.4**
comp=Z,0.5nm,0.6s,mb3.6,baz=94,slow=5.9							
NOA	**NORSAR Array B**	**76.03**	**330**	P	**P**	**05 57 15.7**	**-0.6**
comp=Z,1.0nm,0.8s,mb3.8,baz=94,slow=5.9,SNR=4.3							

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*IDC **28** 05:50:36.2±1.0, 50°.44N×173°.01W, h0km, mb3.5/4, mb1 3.9/6, mb1mx3.6/28, mbtmp3.7/6, ML3.2/2, Error ellipse: s-maj=36.6km s-min=16.9km az=1.0*
*ISCJB **28** 05:50:56.3±0.8, 52°.5N±0°.2×174°.1W±0°.2, h214km±10km, mb3.1/4, Error ellipse: s-maj=45.1km s-min=11.1km az=153.2*
*NEIC **28** 05:50:59.0, 52°.33N×174°.23W, h214km, MG3.2(AEIC), After AEIC.*
ISC 28 05:50:56.7±0.7, 52°.7N±0°.2×174°.1W±0°.2, h204km±9km, n11, σ0s78/14, mb3.1/4, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.78**	**245**	P	**Pn**	**05 51 33.6**	**+0.3**
ADK				S	**Sn**	**05 52 01.5**	**-0.2**
FX1	**Attu Island--F**	**7.74**	**277**	Pn	**Pn**	**05 52 46.6**	**+0.3**
0.4nm,0.3s,baz=100,slow=18,SNR=3.2							
FX1	**Attu Island--F**	**7.74**	**277**	Pn	**Pn**	**05 52 46.6**	**+0.3**
KDAK	**Kodiak Island**	**13.27**	**59**	Pn	**Pn**	**05 53 58.3**	**+1.2**
0.9nm,0.3s,baz=268,slow=6.5,SNR=5.5							
KDAK				Sn	**Sn**	**05 56 23.8**	**-1.3**
0.2nm,0.3s,baz=182,slow=23,SNR=5.9							
KDAK	**Kodiak Island**	**13.27**	**59**	Pn	**Pn**	**05 53 58.3**	**+1.2**
KDAK				Sn	**Sn**	**05 56 23.8**	**-1.3**
PDAR	**Pinedale Array**	**43.15**	**76**	P	**P**	**05 58 37.6**	**+0.8**
0.6nm,0.5s,mb3.3,baz=298,slow=4.6,SNR=6.6							
PDAR	**Pinedale Array**	**43.15**	**76**	P	**P**	**05 58 37.6**	**+0.8**
TXAR	**Lajitas Array**	**55.61**	**86**	P	**P**	**06 00 11.5**	**+0.4**
0.1nm,0.4s,mb2.7,baz=317,slow=5.1,SNR=3.4							
TXAR	**Lajitas Array**	**55.61**	**86**	P	**P**	**06 00 11.5**	**+0.4**
WRA	**Warramunga Arr**	**85.00**	**228**	P	**P**	**06 03 07.8**	**-1.1**
0.2nm,0.6s,mb3.0,baz=30,slow=5.7,SNR=3.8							
ASAR	**Alice Springs**	**88.45**	**226**	P	**P**	**06 03 25.1**	**-0.4**
0.3nm,0.6s,mb3.3,baz=20,slow=4.5,SNR=4.7							

IDC 28 05:56:41.3±3.5, 9°.49N×89°.44E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/22, mbtmp3.6/5, Error ellipse: s-maj=132.0km s-min=23.1km az=64.0, Bay of Bengal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**37.67**	**352**	P	P	06 03 58.9	+0.7
1.5nm,0.7s,baz=132,slow=8.3,SNR=13							
SONM	**Songino Array**	**40.81**	**17**	P	P	06 04 24.7	+0.3
0.3nm,0.3s,baz=187,slow=11,SNR=2.9							
ZALV	**Zalesovo Beam**	**44.49**	**356**	P	P	06 04 52.9	-1.4
0.8nm,0.6s,baz=188,slow=9.0,SNR=5.1							
WRA	**Warramunga Arr**	**53.00**	**124**	P	P	06 05 59.8	-0.4
0.3nm,0.6s,baz=300,slow=10.0,SNR=4.6							
ASAR	**Alice Springs**	**54.54**	**128**	P	P	06 06 12.0	+0.5
0.6nm,0.8s,baz=305,slow=6.7,SNR=5.2							

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*IDC **28** 06:18:18.0±1.1, 10°.73N×91°.52E, h0km, mb3.8/10, mb1 4.0/10, mb1mx3.7/24, mbtmp3.8/10, MS3.5/2, Ms1 3.5/2, ms1mx2.7/28, Error ellipse: s-maj=64.1km s-min=17.4km az=53.0*
*NEIC **28** 06:18:19.6±0.7, 10°.74N×91°.56E, h10km, mb4.1/2, Error ellipse: s-maj=38.5km s-min=9.9km az=54.0*
*ISCJB **28** 06:18:21.1±0.9, 10°.7N±0°.2×91°.6E±0°.3, h33km, mb3.9/11, Error ellipse: s-maj=51.4km s-min=13.0km az=143.3*
ISC 28 06:18:23.6±0.9, 10°.8N±0°.2×91°.6E±0°.3, h35km, n19, σ0s53/17, mb3.9/11, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**10.74**	**137**	LR	LR	06 26 12.8	
comp=Z,104nm,18.5s,baz=74,slow=44							
MK31	**Makanchi Array**	**36.74**	**349**	*e*P	**P**	**06 25 27.8**	**+0.3**
MK31				*e*	pP	06 25 35.5	-2.2
MKAR	**Makanchi Array**	**36.74**	**349**	P	**P**	**06 25 27.9**	**+0.4**
1.6nm,0.8s,mb3.9,baz=127,slow=9.3,SNR=12							
KURK	**Kurchatov**	**41.22**	**347**	P	**P**	**06 26 04.4**	**-0.5**
1.1nm,0.9s,mb3.5,baz=164,slow=7.5,SNR=4.5							
KURK	**Kurchatov**	**41.22**	**347**	*e*P	**P**	**06 26 04.8**	**-0.1**
2.7nm,1.1s,mb3.8							
KURK				*e*	pP	06 26 12.2	-3.0
ZALV	**Zalesovo Beam**	**43.38**	**354**	P	**P**	**06 26 21.7**	**-0.8**
0.8nm,0.4s,mb3.8,baz=146,slow=8.2,SNR=5.4							
AKTK	**Aktyubinsk**	**48.22**	**332**	P	**P**	**06 27 01.4**	**+0.7**
AKTO	**Aktyubinsk**	**48.22**	**332**	P	**P**	**06 27 01.4**	**+0.7**
0.6nm,0.4s,mb4.0,baz=119,slow=13,SNR=2.8							
WRA	**Warramunga Arr**	**51.96**	**126**	P	**P**	**06 27 29.3**	**-0.2**
0.6nm,0.4s,mb3.8,baz=306,slow=8.3,SNR=29							
WRAB	**Tennant Creek**	**51.97**	**126**	*e*P	**P**	**06 27 29.5**	**-0.1**
2.6nm,0.7s,mb4.3							
ASAR	**Alice Springs**	**53.67**	**130**	P	**P**	**06 27 42.6**	**+0.5**
1.2nm,0.7s,mb3.9,baz=306,slow=6.5,SNR=15							
BRTR	**Keskin Array B**	**58.67**	**310**	P	**P**	**06 28 16.9**	**-0.7**
0.5nm,0.5s,mb3.8,baz=122,slow=7.0,SNR=3.1							
CTA	**Charters Tower**	**61.89**	**120**	LR	LR

comp=Z,3.4nm,1.2s,mb4.2,baz=96,slow=5.3
NOA NORSAR Array B 75.99 330 P **P** **06 30 06.9 +0.1**
comp=Z,0.8nm,1.0s,mb3.6,baz=94,slow=5.7,SNR=2.8

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*ISCJB **28** 06:19:24.8±0.8,21°.94S±0°.04×67°.23W±0°.06,h176km±7km, mb4.2/40, Error ellipse: s-maj=9.4km s-min=6.2km az=158.9*
*IDC **28** 06:19:26.2±1.6,21°.86S×67°.16W,h178km±14km,mb3.7/10, mb1 3.9/15,mb1mx3.9/18,mbtmp3.7/15, Error ellipse: s-maj=19.1km s-min=12.2km az=71.0*
*NEIC **28** 06:19:27.3±0.3,21°.94S×67°.18W,mb4.3/29, Error ellipse: s-maj=12.1km s-min=7.7km az=72.0*
*BJI **28** 06:19:28.2,21°.90S×67°.20W,h185km*
ISC 28 06:19:25.8±0.8,21°.91S±0°.05×67°.17W±0°.06,h168km±7km, h195km±5.6km;pP-P,n257,σ0°.71/254,mb4.2/40,101C-84D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**5.66**	**351**	P	**Pn**	**06 20 50.8**	**+2.4**
	4.0nm,0.3s,baz=158,slow=6.7,SNR=248						
LPAZ				S	**Sn**	**06 21 53.6**	**+0.6**
	2.2nm,0.3s,baz=306,slow=13,SNR=6.7						
LPAZ	**La Paz**	**5.66**	**351**	*e*Pn	**Pn**	**06 20 50.9**	**+2.5**
LPAZ				*e*Sn	**Sn**	**06 21 55.4**	**+2.3**
LCO	**Las Campanas**	**7.76**	**204**	*e*Pn	**Pn**	**06 21 14.2**	**-1.8**
LCO				*e*Sn	**Sn**	**06 22 38.4**	**-4.4**
SIV	**San Ignacio**	**8.24**	**45**	P	**Pn**	**06 21 21.8**	**-0.5**
	37nm,0.3s,baz=250,slow=10.0,SNR=707						
SIV				S	**Sn**	**06 22 49.3**	**-5.1**
	5.4nm,0.3s,baz=128,slow=24,SNR=7.8						
CFAA	**Coronel Fontan**	**9.71**	**185**	P	**Pn**	**06 21 41.8**	**+0.2**
	0.3nm,0.3s,baz=16,slow=12,SNR=22						
CFAA				S	**Sn**	**06 23 24.1**	**-5.4**
	0.6nm,0.3s,baz=150,slow=15,SNR=9.8						
NNA	**Nana**	**13.52**	**315**	P	**Pn**	**06 22 32.5**	**+1.4**
	1.0nm,0.3s,baz=152,slow=11,SNR=8.5						
NNA	**Nana**	**13.52**	**315**	*e*P	**Pn**	**06 22 34.8**	**+3.8**
TRQA	**Tornquist**	**16.70**	**166**	*e*P	**Pn**	**06 23 10.4**	**+0.3**
	116nm,1.9s						
SPB	**Sao Paulo**	**18.28**	**99**	*e*P	**P**	**06 23 27.8**	**+0.9**
	15nm,0.6s						
PLCA	**Paso Flores**	**18.99**	**188**	P	**P**	**06 23 33.8**	**-0.6**
	0.2nm,0.3s,baz=21,slow=9.1,SNR=5.4						
CAM4	**Nova Friburgo**	**22.79**	**96**	⇑*i*P	**P**	**06 24 14.3**	**+0.2**
CAM4				*i*		06 24 18.6	
CAM4				*i*		06 24 21.2	
CAM4				*i*		06 24 29.7	
APG	**El Apazote**	**43.22**	**326**	P	**P**	**06 27 09.1**	**-1.3**
	3.7nm,0.8s,mb4.1,baz=97,slow=16,SNR=4.4						
CPCT	**Cooper Cave**	**59.37**	**344**	*e*P	**P**	**06 29 08.5**	**-1.8**
SWET	**Sewanee**	**59.53**	**342**	*e*P	**P**	**06 29 10.2**	**-1.3**
SWET				*e*pP	pP	06 29 52.9	+2.3
JCT	**Junction City**	**60.80**	**328**	*e*P	**P**	**06 29 19.6**	**-0.5**
	4.2nm,0.6s,mb4.5						
WVT	**Waverly**	**60.94**	**341**	*e*P	**P**	**06 29 18.9**	**-2.0**
	10nm,0.8s,mb4.7						
MIAR	**Mount Ida**	**61.50**	**335**	*e*P	**P**	**06 29 23.3**	**-1.5**
	1.8nm,0.9s,mb3.9						
628A	**Black Gap, Mar**	**61.60**	**325**	⇑P	**P**	**06 29 24.7**	**-0.8**
	baz=62						
627A	**Terlingua Ranc**	**61.84**	**324**	⇓P	**P**	**06 29 26.0**	**-1.1**
	baz=62						
TXAR	**Lajitas Array**	**61.90**	**324**	P	**P**	**06 29 26.6**	**-0.9**
	0.7nm,0.7s,mb3.6,baz=149,slow=8.8,SNR=11						
TXAR				pP	pP	06 30 14.2	+7.2
	0.4nm,0.8s,baz=139,slow=9.8,SNR=3.2						
626A	**Big Bend Ranch**	**62.33**	**324**	⇑P	**P**	**06 29 29.4**	**-1.0**
	baz=62						
527A	**Woodward Ranch**	**62.50**	**325**	⇓P	**P**	**06 29 30.4**	**-1.1**
	baz=63						
526A	**Mary Lane Ranc**	**62.69**	**324**	⇓P	**P**	**06 29 32.2**	**-0.7**
	baz=63						
328A	**Wristen Ranch,**	**63.05**	**326**	⇑P	**P**	**06 29 34.2**	**-0.9**
	baz=63						
426A	**McDonald Obser**	**63.13**	**325**	⇓P	**P**	**06 29 35.1**	**-0.6**
	baz=63						
FVM	**French Village**	**63.46**	**340**	*e*P	**P**	**06 29 35.6**	**-2.0**
	3.4nm,0.3s,mb4.7						
325A	**Bean Ranch, Si**	**64.19**	**324**	⇓P	**P**	**06 29 41.7**	**-0.9**
	baz=64						
324A	**Moseley Ranch,**	**64.52**	**324**	⇑P	**P**	**06 29 42.8**	**-1.9**
	baz=65						
225A	**Deer Hill, Car**	**64.68**	**325**	⇓P	**P**	**06 29 45.2**	**-0.6**
	baz=65						
125A	**Gardner Draw,**	**65.02**	**325**	⇓P	**P**	**06 29 46.8**	**-1.1**
	baz=65						
224A	**Cornudas Mount**	**65.03**	**324**	⇓P	**P**	**06 29 47.0**	**-1.0**
	baz=65						
MSTX	**Muleshoe**	**65.09**	**328**	⇓P	**P**	**06 29 47.2**	**-1.2**
	baz=65						
Z26A	**Caprock**	**65.15**	**326**	⇑P	**P**	**06 29 47.8**	**-1.0**
	baz=65						
Y27A	**Causey**	**65.22**	**327**	⇓P	**P**	**06 29 47.7**	**-1.5**
	baz=66						
124A	**Stringfield Ra**	**65.47**	**325**	⇑P	**P**	**06 29 50.3**	**-0.6**
	baz=66						
Z25A	**Roswell**	**65.53**	**326**	⇓P	**P**	**06 29 50.1**	**-1.2**
	baz=66						
Z24A	**Sheeppen Canyo**	**65.91**	**325**	⇓P	**P**	**06 29 52.2**	**-1.4**
	baz=66						
222A	**Williams Famil**	**65.91**	**323**	⇑P	**P**	**06 29 53.4**	**-0.4**
	baz=66						
Y25A	**Mesa, Roswell**	**66.02**	**326**	⇑P	**P**	**06 29 52.8**	**-1.6**
	baz=66						
X26A	**CR and CF Fran**	**66.07**	**327**	⇑P	**P**	**06 29 53.2**	**-1.5**
	baz=66						
220A	**Playas Peak, P**	**66.56**	**322**	⇓P	**P**	**06 29 57.3**	**-0.6**
	baz=67,SNR=6.1						
319A	**Douglas**	**66.61**	**321**	⇓P	**P**	**06 29 58.2**	**0.0**
	baz=67						
Z22A	**Elephant Butte**	**66.71**	**324**	⇑P	**P**	**06 29 58.7**	**-0.1**
	baz=67,SNR=9.2						
W25A	**X Bar L Ranch,**	**66.92**	**327**	⇑P	**P**	**06 29 59.4**	**-0.7**
	baz=67						
LIC	**Lamto**	**66.95**	**73**	*e*P	**P**	**06 29 59.4**	**-1.3**
	30nm,1.4s,mb4.9						
V26A	**Tequesquite Ra**	**67.05**	**328**	⇓P	**P**	**06 30 00.0**	**-0.8**
	baz=67						
219A	**White Tail Can**	**67.05**	**322**	⇑P	**P**	**06 30 00.4**	**-0.5**
	baz=67						
318A	**Bisbee**	**67.07**	**321**	⇓P	**P**	**06 30 00.4**	**-0.6**
	baz=67						
120A	**U Bar Ranch, L**	**67.10**	**323**	⇑P	**P**	**06 30 00.8**	**-0.5**
	baz=67						
Z21A	**St. Cloud Mine**	**67.14**	**324**	⇑P	**P**	**06 30 01.8**	**+0.4**
	baz=67,SNR=6.0						
TIC	**Toumodi**	**67.15**	**72**	*e*P	**P**	**06 30 00.8**	**-1.2**
	8.9nm,0.5s,mb4.8						
KIC	**Kosan Boka**	**67.27**	**73**	*e*P	**P**	**06 30 01.7**	**-1.0**
	21nm,0.7s,mb5.1						
DBIC	**Dimbokro**	**67.30**	**72**	P	**P**	**06 30 01.8**	**-1.2**
	11nm,0.8s,mb4.7,baz=207,slow=7.7,SNR=13						
DBIC	**Dimbokro**	**67.30**	**72**	*e*P	**P**	**06 30 01.9**	**-1.1**
	11nm,0.8s,mb4.7						
218A	**Dragoon**	**67.49**	**321**	⇓P	**P**	**06 30 03.1**	**-0.6**
	baz=68						
V25A	**Rancho No Teng**	**67.49**	**328**	⇑P	**P**	**06 30 02.8**	**-0.8**
	baz=68						
Z20A	**Nine Sixteen R**	**67.50**	**323**	⇓P	**P**	**06 30 03.9**	**+0.1**
	baz=68,SNR=6.2						
U26A	**Atchley Ranch,**	**67.51**	**329**	⇑P	**P**	**06 30 03.2**	**-0.6**
	baz=68						
Y21A	**Point of Rocks**	**67.67**	**324**	⇑P	**P**	**06 30 05.5**	**+0.7**
	baz=68,SNR=5.2						
ANMO	**Albuquerque**	**67.74**	**326**	*e*P	**P**	**06 30 05.2**	**0.0**
	0.5nm,0.8s,mb3.3						
U25A	**Circle Dot Ran**	**67.83**	**328**	⇓P	**P**	**06 30 05.3**	**-0.5**
	baz=68						
118A	**Homack Ranch,**	**67.93**	**322**	⇓P	**P**	**06 30 06.0**	**-0.4**
	baz=68						
Y20A	**Horse Springs,**	**67.97**	**324**	⇓P	**P**	**06 30 06.8**	**+0.1**
	baz=68						
W22A	**Albuquerque**	**68.05**	**326**	⇑P	**P**	**06 30 07.6**	**+0.5**
	baz=68						
X21A	**Alamocita Cree**	**68.06**	**325**	⇓P	**P**	**06 30 07.7**	**+0.5**
	baz=68						
V23A	**Ortiz Mt. (NFS**	**68.21**	**327**	⇑P	**P**	**06 30 08.2**	**+0.1**
	baz=68						
QSPA	**South Pole Qui**	**68.29**	**180**	*e*P	**P**	**06 30 09.2**	**+1.2**
	1.7nm,0.6s,mb4.0						
117A	**Oracle**	**68.33**	**321**	⇓P	**P**	**06 30 08.7**	**-0.2**
	baz=68,SNR=5.1						
216A	**Three Points,**	**68.34**	**320**	⇑P	**P**	**06 30 08.8**	**-0.2**
	baz=68						
Y19A	**Nutrioso**	**68.50**	**323**	⇓P	**P**	**06 30 10.3**	**+0.4**
	baz=69,SNR=12						
X20A	**Quemado**	**68.52**	**324**	⇓P	**P**	**06 30 09.5**	**-0.5**
	baz=69						
V22A	**San Miguel Ran**	**68.71**	**326**	⇑P	**P**	**06 30 10.9**	**-0.4**
	baz=69						
Y18A	**Canyon Day Jun**	**68.80**	**323**	⇓P	**P**	**06 30 11.3**	**-0.6**
	baz=69						
S25A	**Robets Cordova**	**68.85**	**329**	⇓P	**P**	**06 30 11.9**	**-0.1**
	baz=69						
214A	**Organ Pipe Nat**	**69.11**	**319**	⇓P	**P**	**06 30 14.3**	**+0.5**
	baz=69						
Y17A	**Roosevelt**	**69.20**	**322**	⇓P	**P**	**06 30 14.6**	**+0.3**
	baz=69,SNR=6.4						
S24A	**Houchin Ranch,**	**69.21**	**328**	⇑P	**P**	**06 30 14.9**	**+0.6**
	baz=70						
Z16A	**Peralta Trail,**	**69.28**	**321**	⇑P	**P**	**06 30 15.4**	**+0.6**
	baz=70						
W19A	**Sanders**	**69.43**	**324**	⇑P	**P**	**06 30 16.4**	**+0.7**
	baz=70						
U21A	**Nageezi**	**69.50**	**326**	⇑P	**P**	**06 30 16.4**	**+0.4**
	baz=70						
R24A	**Sanders Place,**	**69.62**	**329**	⇓P	**P**	**06 30 16.4**	**-0.4**
	baz=70						
X17A	**Forest Lakes**	**69.64**	**322**	⇑P	**P**	**06 30 17.7**	**+0.7**
	baz=70						
T21A	**Navajo Lake**	**69.86**	**326**	⇑P	**P**	**06 30 18.4**	**+0.1**
	baz=70						
U20A	**Newcomb**	**69.91**	**325**	⇑P	**P**	**06 30 18.7**	**+0.2**
	baz=70						
X16A	**Lo Mia Camp, P**	**70.06**	**322**	⇑P	**P**	**06 30 19.2**	**-0.3**
	baz=70						
S22A	**4UR Ranch, Cre**	**70.09**	**327**	⇑P	**P**	**06 30 18.8**	**-0.9**
	baz=70						
Y15A	**Casa Rosa Ranc**	**70.24**	**321**	⇓P	**P**	**06 30 20.4**	**-0.3**
	baz=70						
S21A	**Coal Bank Pass**	**70.51**	**327**	⇑P	**P**	**06 30 22.5**	**+0.3**
	baz=71						
T19A	**Beclabito**	**70.52**	**325**	⇑P	**P**	**06 30 22.1**	**-0.2**
	baz=71						
MVCO	**Mesa Verde**	**70.53**	**326**	⇓P	**P**	**06 30 22.2**	**-0.1**
	baz=71						
MVCO	**Mesa Verde**	**70.53**	**326**	*e*P	**P**	**06 30 22.5**	**+0.2**
	8.5nm,1.3s,mb4.3						
X15A	**Humboldt**	**70.57**	**322**	⇑P	**P**	**06 30 22.5**	**-0.1**
	baz=71						
V17A	**Tonalea, Kykot**	**70.58**	**323**	⇓P	**P**	**06 30 23.2**	**+0.5**
	baz=71,SNR=6.3						
W16A	**Flagstaff**	**70.61**	**323**	⇑P	**P**	**06 30 22.7**	**-0.2**
	baz=71,SNR=6.3						
Y14A	**Wickenburg**	**70.63**	**321**	⇑P	**P**	**06 30 23.1**	**+0.2**
	baz=71						
U18A	**Rough Rock, Ch**	**70.66**	**325**	⇓P	**P**	**06 30 22.9**	**-0.2**
	baz=71						
WUAZ	**Wupatki**	**70.82**	**323**	⇑P	**P**	**06 30 23.6**	**-0.5**
	baz=71						
X14A	**Yava**	**70.94**	**321**	⇓P	**P**	**06 30 24.7**	**-0.1**
	baz=71						
T18A	**Mexican Hat**	**71.19**	**325**	⇑P	**P**	**06 30 26.1**	**-0.3**
	baz=71,SNR=8.6						
R20A	**Redvale**	**71.21**	**327**	P	**P**	**06 30 27.2**	**+0.8**
	baz=72,SNR=6.1						
U17A	**Shonto**	**71.22**	**324**	⇑P	**P**	**06 30 26.5**	**-0.1**
	baz=72						
S19A	**Harvey Farm, M**	**71.26**	**326**	⇓P	**P**	**06 30 26.8**	**0.0**
	baz=72,SNR=6.4						
PV01	**Paradox Valley**	**71.27**	**327**	*e*P	**P**	**06 30 27.1**	**+0.3**
	338nm,1.0s						
SMCO	**Snowmass**	**71.27**	**328**	*e*P	**P**	**06 30 27.6**	**+0.9**
	2.4nm,0.6s,mb4.1						
Q21A	**Lamborn Mesa,**	**71.30**	**328**	⇑P	**P**	**06 30 27.1**	**+0.2**
	baz=72						
V15A	**Kaibab Nationa**	**71.49**	**323**	⇑P	**P**	**06 30 29.2**	**+1.1**
	baz=72,SNR=5.4						
T17A	**Navajo Res., N**	**71.59**	**324**	⇑P	**P**	**06 30 29.3**	**+0.6**
	baz=72,SNR=5.9						
S18A	**Hurst Farm, Bl**	**71.67**	**325**	⇑P	**P**	**06 30 29.9**	**+0.7**
	baz=72,SNR=9.2						
PV10	**Paradox Valley**	**71.69**	**326**	*e*P	**P**	**06 30 29.6**	**+0.3**
	18nm,0.5s,mb5.0						
P21A	**Newcastle**	**71.77**	**328**	⇓P	**P**	**06 30 30.3**	**+0.5**
	baz=72						
V14A	**Boquillas Ranc**	**71.89**	**322**	⇑P	**P**	**06 30 31.7**	**+1.2**
	baz=72,SNR=6.2						
BC3	**Big Chuckawall**	**71.89**	**319**	⇓P	**P**	**06 30 30.9**	**+0.3**
	baz=72						
U15A	**North Rim**	**71.99**	**323**	⇓P	**P**	**06 30 31.6**	**+0.4**
	baz=72,SNR=6.5						
Q19A	**Hogan Spring (**	**72.24**	**327**	⇑P	**P**	**06 30 32.9**	**+0.4**
	baz=72						
T15A	**Red Dirt Ranch**	**72.47**	**323**	⇓P	**P**	**06 30 35.0**	**+1.1**
	baz=73,SNR=7.0						
U14A	**Mt Trumbull**	**72.49**	**323**	⇑P	**P**	**06 30 34.8**	**+0.7**
	baz=73,SNR=8.7						
V13A	**Grand Canyon W**	**72.54**	**322**	⇑P	**P**	**06 30 34.9**	**+0.5**
	baz=73						
S16A	**Weppner Ranch,**	**72.55**	**324**	⇓P	**P**	**06 30 34.9**	**+0.5**
	baz=73						
R17A	**Hanksville Air**	**72.59**	**325**	P	**P**	**06 30 35.3**	**+0.6**
	baz=73,SNR=8.1						
P19A	**Cripple Cowboy**	**72.61**	**327**	P	**P**	**06 30 35.3**	**+0.5**
	baz=73,SNR=11						
O20A	**White River Ci**	**72.63**	**328**	⇓P	**P**	**06 30 35.4**	**+0.5**
	baz=73						
GMRC	**Granite Mounta**	**72.79**	**320**	⇓P	**P**	**06 30 36.2**	**+0.3**
	baz=73,SNR=6.3						
T14A	**Hurricane**	**72.89**	**323**	⇑P	**P**	**06 30 36.6**	**+0.2**
	baz=73						
S15A	**Panguitch**	**72.93**	**324**	⇑P	**P**	**06 30 36.8**	**+0.1**
	baz=73						
V12A	**Nelson**	**72.96**	**321**	⇑P	**P**	**06 30 36.7**	**-0.2**
	baz=73						
SRU	**San Rafael**	**73.01**	**326**	⇑P	**P**	**06 30 37.4**	**+0.3**
	baz=73,SNR=7.6						
SRU	**San Rafael**	**73.01**	**326**	*e*P	**P**	**06 30 37.4**	**+0.3**
	7.7nm,0.9s,mb4.4						
Q16A	**Castle Valley**	**73.20**	**326**	⇓P	**P**	**06 30 38.2**	**0.0**
	baz=73						
P18A	**Preston Nutter**	**73.25**	**327**	P	**P**	**06 30 39.3**	**+0.8**
	baz=74,SNR=7.2						
U12A	**Valley of Fire**	**73.27**	**322**	⇓P	**P**	**06 30 38.9**	**+0.2**
	baz=74						
R15A	**Junction**	**73.27**	**324**	⇑P	**P**	**06 30 39.4**	**+0.7**
	baz=74						
T13A	**Saint George**	**73.32**	**323**	⇑P	**P**	**06 30 39.5**	**+0.6**
	baz=74						
V11A	**Goodsprings**	**73.38**	**321**	⇓P	**P**	**06 30 39.7**	**+0.4**
	baz=74						
P17A	**Butcher Ranch,**	**73.39**	**326**	⇓P	**P**	**06 30 39.8**	**+0.5**
	baz=74						
CCUT	**Cedar City**	**73.39**	**323**	*e*P	**P**	**06 30 41.0**	**+1.6**
	5.6nm,0.9s,mb4.3						
CCUT				*e*pP	pP	06 31 26.1	+6.0
MSU	**Marysvale**	**73.44**	**325**	*e*P	**P**	**06 30 40.4**	**+0.8**
	4.3nm,0.9s,mb4.2						
L21A	**Rawlins**	**73.63**	**330**	⇑P	**P**	**06 30 40.9**	**+0.2**
	baz=74						
N19A	**Jon Jarvie Ra**	**73.67**	**328**	⇑P	**P**	**06 30 41.1**	**+0.2**
	baz=74						
S13A	**Holt Ranch, En**	**73.69**	**323**	⇓P	**P**	**06 30 41.6**	**+0.5**
	baz=74						
O17A	**Robinson Place**	**73.92**	**327**	⇑P	**P**	**06 30 42.9**	**+0.5**
	baz=74,SNR=8.6						
R13A	**O'Grain Ranch,**	**74.18**	**323**	⇑P	**P**	**06 30 43.8**	**-0.1**
	baz=74						
T11A	**Corn Creek, Al**	**74.22**	**322**	⇑P	**P**	**06 30 44.8**	**+0.5**
	baz=74,SNR=7.0						
EDW2	**Edwards Air Fo**	**74.27**	**319**	⇑P	**P**	**06 30 44.0**	**-0.5**
	baz=74						
S12A	**Delamar Landin**	**74.27**	**322**	⇓P	**P**	**06 30 45.4**	**+0.9**
	baz=74						
U10A	**Ash Meadows, A**	**74.30**	**321**	⇓P	**P**	**06 30 45.0**	**+0.3**
	baz=74						
Q14A	**Sevier Lake (B**	**74.38**	**324**	⇓P	**P**	**06 30 45.2**	**+0.1**
	baz=75,SNR=6.3						
JLU	**Jordanelle**	**74.59**	**327**	*e*P	**P**	**06 30 46.6**	**+0.4**
	2.1nm,0.8s,mb3.8						
K20A	**Yellowstone Ra**	**74.62**	**330**	⇓P	**P**	**06 30 46.3**	**0.0**
	baz=75						
R12A	**Pony Springs,**	**74.64**	**323**	⇑P	**P**	**06 30 47.1**	**+0.5**
	baz=75,SNR=7.3						
L19A	**Farson**	**74.68**	**329**	⇑P	**P**	**06 30 47.2**	**+0.5**
	baz=75						
P14A	**Drum Mountains**	**74.70**	**325**	⇑P	**P**	**06 30 47.2**	**+0.3**
	baz=75						
M17A	**Scullys Gap (B**	**74.84**	**328**	⇑P	**P**	**06 30 47.6**	**-0.1**
	baz=75						
L18A	**Fontenelle, Gr**	**74.87**	**328**	P	**P**	**06 30 48.1**	**+0.3**
	baz=75,SNR=6.2						
ISA	**Isabella**	**75.08**	**319**	⇓P	**P**	**06 30 48.8**	**-0.4**
	baz=75						
ISA	**Isabella**	**75.08**	**319**	*e*P	**P**	**06 30 49.7**	**+0.5**
	2.7nm,0.8s,mb3.9						
P13A	**Bates Ranch, G**	**75.11**	**324**	⇑P	**P**	**06 30 49.8**	**+0.6**
	baz=75						
R11A	**Troy Canyon, C**	**75.20**	**323**	⇓P	**P**	**06 30 49.9**	**+0.1**
	baz=75						
PDAR	**Pinedale Array**	**75.28**	**329**	P	**P**	**06 30 49.8**	**-0.4**
	0.9nm,0.7s,mb3.5,baz=131,slow=6.2,SNR=7.8						
N15A	**Stansbury Isla**	**75.35**	**326**	⇑P	**P**	**06 30 50.2**	**-0.5**
	baz=76						
HWUT	**Hardware Ranch**	**75.39**	**327**	*e*P	**P**	**06 30 50.5**	**-0.4**
	2.7nm,0.8s,mb3.9						
K18A	**Toltan Ranch,**	**75.41**	**329**	⇑P	**P**	**06 30 51.2**	**+0.3**
	baz=76,SNR=5.4						
L17A	**Cokeville**	**75.41**	**328**	⇓P	**P**	**06 30 50.9**	**-0.1**
	baz=76						
PKM	**Peak Mountain**	**75.42**	**318**	⇑P	**P**	**06 30 51.0**	**-0.2**
	baz=76						
S10A	**Tonopah Range,**	**75.48**	**322**	⇑P	**P**	**06 30 50.8**	**-0.6**
	baz=76						
R10A	**Warm Springs**	**75.57**	**322**	⇑P	**P**	**06 30 53.1**	**+1.2**
	baz=76						
O13A	**Hicks Ranch, I**	**75.58**	**325**	⇓P	**P**	**06 30 52.7**	**+0.8**
	baz=76						
SPUT	**South Promonto**	**75.62**	**326**	*e*P	**P**	**06 30 51.2**	**-0.9**
	8.6nm,1.2s,mb4.3						
L16A	**Fish Haven**	**75.63**	**328**	⇑P	**P**	**06 30 53.4**	**+1.3**
	baz=76						
N14A	**Grayback Hills**	**75.67**	**326**	⇑P	**P**	**06 30 52.9**	**+0.5**
	baz=76						
M15A	**Larsen Ranch,**	**75.73**	**327**	⇑P	**P**	**06 30 52.8**	**0.0**
	baz=76,SNR=6.5						
J18A	**Kendall Valley**	**75.84**	**329**	P	**P**	**06 30 53.4**	**+0.1**
	baz=76,SNR=7.1						
K17A	**Gardner Place,**	**75.92**	**328**	⇓P	**P**	**06 30 54.1**	**+0.3**
	baz=76						
O12A	**Currie**	**76.08**	**324**	⇓P	**P**	**06 30 54.6**	**-0.2**
	baz=76,SNR=5.3						
L15A	**Malad City**	**76.10**	**327**	⇓P	**P**	**06 30 54.4**	**-0.4**
	baz=76,SNR=5.8						
I18A	**Diamond G Ranc**	**76.11**	**330**	⇑P	**P**	**06 30 55.4**	**+0.6**
	baz=76						
ULM	**Lac du Bonnet**	**76.20**	**341**	P	**P**	**06 30 52.2**	**-3.0**
	2.6nm,0.6s,mb4.1,baz=160,slow=3.5,SNR=2.9						
M14A	**Sheep Mountain**	**76.23**	**326**	⇑P	**P**	**06 30 55.7**	**+0.2**
	baz=76						
J17A	**Brown Place, J**	**76.28**	**329**	⇓P	**P**	**06 30 56.3**	**+0.5**
	baz=76						
K16A	**Soda Springs**	**76.31**	**328**	⇑P	**P**	**06 30 56.8**	**+0.8**
	baz=77,SNR=6.5						
SCHQ	**Schefferville**	**76.42**	**0**	P	**P**	**06 30 55.1**	**-1.2**
	1.3nm,0.7s,mb3.7,baz=225,slow=19,SNR=2.5						
TPAW	**Teton Pass**	**76.49**	**329**	*e*P	**P**	**06 30 57.0**	**0.0**
	5.2nm,1.3s,mb4.0						
L14A	**Malta**	**76.56**	**327**	⇓P	**P**	**06 30 57.6**	**+0.2**
	baz=77						
P10A	**Eureka**	**76.58**	**323**	⇑P	**P**	**06 30 58.0**	**+0.4**
	baz=77						
K15A	**Arbon**	**76.67**	**327**	⇓P	**P**	**06 30 58.2**	**+0.1**
	baz=77						
NVAR	**Mina Array Bea**	**76.82**	**321**	P	**P**	**06 30 58.5**	**-0.5**
	1.2nm,0.8s,mb3.5,baz=155,slow=7.5,SNR=9.2						
NVAR				pP	pP	06 31 50.0	+10
	0.4nm,0.8s,baz=152,slow=6.4,SNR=2.8						
RLMT	**Red Lodge**	**76.95**	**331**	⇑P	**P**	**06 31 00.1**	**+0.5**
	baz=77						
L13A	**Double Diamond**	**76.96**	**326**	⇑P	**P**	**06 31 00.1**	**+0.5**
	baz=77						
SUR	**Sutherland**	**76.97**	**120**	*e*P	**P**	**06 31 01.4**	**+1.2**
	12nm,0.8s,mb4.6						
M12A	**Wells**	**76.99**	**325**	⇑P	**P**	**06 30 59.8**	**0.0**
	baz=77						
J15A	**Blackfoot**	**77.15**	**328**	⇓P	**P**	**06 31 01.2**	**+0.6**
	baz=77						
G18A	**Lazy EL Ranch,**	**77.23**	**331**	⇑P	**P**	**06 31 00.5**	**-0.6**
	baz=78						
K13A	**Stover Farm, H**	**77.43**	**326**	⇑P	**P**	**06 31 02.2**	**-0.1**
	baz=78						
M11A	**Holland Ranch,**	**77.47**	**325**	⇑P	**P**	**06 31 02.7**	**+0.2**
	baz=78						
DGMT	**Dagmar**	**77.50**	**336**	⇓P	**P**	**06 31 02.2**	**-0.3**
	baz=78						
H16A	**Russell Place,**	**77.55**	**329**	⇑P	**P**	**06 31 03.6**	**+0.7**
	baz=78						
L12A	**House Creek Ra**	**77.56**	**326**	⇑P	**P**	**06 31 03.8**	**+0.8**
	baz=78						
J14A	**Carey**	**77.63**	**327**	⇓P	**P**	**06 31 03.3**	**-0.1**
	baz=78						
GCMT	**Greycliff**	**77.64**	**331**	*e*P	**P**	**06 31 03.2**	**-0.1**
	1.3nm,0.7s,mb3.7						
F18A	**Big Timber**	**77.75**	**331**	P	**P**	**06 31 04.0**	**+0.1**
	baz=78,SNR=5.8						
K12A	**Draper Farm, C**	**77.85**	**326**	⇑P	**P**	**06 31 05.0**	**+0.5**
	baz=78,SNR=5.6						

B15A	Bradely Ranch, baz=81	80.84	331	⇓P	P	06 31 20.0	-0.6
G10A	Bishop Farm, J baz=81	80.85	327	⇓P	P	06 31 20.4	-0.4
A16A	West Butte Ran baz=81,SNR=9.0	80.89	332	⇑P	P	06 31 20.2	-0.7
K05A	Summer Lake baz=81	81.14	323	⇓P	P	06 31 22.4	0.0
G09A	Cove baz=81,SNR=7.8	81.18	326	⇓P	P	06 31 22.4	-0.1
C13A	Hot Springs baz=82	81.30	330	⇑P	P	06 31 23.2	+0.1
BOSA	Boshof 6.0nm,0.9s,mb4.2,baz=277,slow=4.7,SNR=6.6	81.82	117	P	P	06 31 26.4	0.0
A13A	Flathead Natio baz=82	82.13	331	⇑P	P	06 31 27.8	+0.3
LBTB	Lobatse 11nm,0.8s,mb4.6	83.37	114	eP	P	06 31 34.7	+0.1
MAW	Mawson 1.4nm,0.6s,mb3.9,baz=287,slow=11,SNR=4.0	83.47	163	P	P	06 31 34.7	+0.6
TAM	Tamanrasset 5.6nm,1.1s,mb4.2	83.56	62	eP	P	06 31 35.6	+0.2
ESDC	Sonseca Array 0.5nm,0.4s,mb3.6,baz=253,slow=7.6,SNR=5.6	84.99	44	P	P	06 31 42.1	-0.2
LSZ	Lusaka 12nm,1.4s,mb4.6	89.23	106	eP	P	06 32 05.1	+1.9
YKA	Yellowknife Ar 1.6nm,0.8s,mb4.1,baz=132,slow=4.7,SNR=9.5	92.11	340	P	P	06 32 14.6	-0.8
ASAR	Alice Springs 0.3nm,0.8s,baz=118,slow=1.3,SNR=3.0	130.28	206	PKP	PKPdf	06 38 15.7	-1.0
WRA	Warramunga Arr 0.3nm,0.6s,baz=155,slow=1.9,SNR=5.5	133.40	208	PKP	PKPdf	06 38 22.2	-0.5
MK31	Makanchi Array	144.99	37	ePKPdf	PKPdf	06 38 42.6	-0.2
MKAR	Makanchi Array 4.1nm,0.8s,baz=35,slow=6.6,SNR=36	144.99	37	PKP	PKPdf	06 38 42.4	-0.4
HHC	Hu-ho-hao-te	161.09	3	ePKP	PKPdf	06 39 06.5	+0.4
LZH	Lanzhou	163.84	27	ePKP	PKPdf	06 39 10.5	+1.5
LZH				pPKP	pPKPdf	06 39 53.5	0.0
LZH				PKPab	PKPab	06 40 07.5	+5.2
LZH	comp=N,100nm,18.5s			LR	LR		
LZH	comp=Z,150nm,20.3s			LR	LR		
CD2	Chengdu	167.90	40	ePKP	PKPdf	06 39 12.5	+0.1
NJ2	Nanjing	168.56	333	ePKP	PKPdf	06 39 13.0	+0.2

IDC 28 06:32:31.4±8.4, 10°48N×90°58E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/22, mbtmp3.5/3, Error ellipse: s-maj=412.5km s-min=28.0km az=61.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array 0.5nm,0.6s,baz=159,slow=8.9,SNR=3.0	36.88	350	P	P	06 39 41.4	-0.1
WRA	Warramunga Arr 0.2nm,0.5s,baz=301,slow=9.9,SNR=5.2	52.62	125	P	P	06 41 47.4	-0.2
ASAR	Alice Springs 0.5nm,0.9s,baz=313,slow=7.5,SNR=2.8	54.27	129	P	P	06 41 59.9	+0.3

IDC 28 06:32:50.8±7.0, 11°33N×92°76E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.5/22, mbtmp3.6/3, Error ellipse: s-maj=371.9km s-min=29.9km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array 0.5nm,0.5s,baz=137,slow=8.2,SNR=3.6	36.44	348	P	P	06 39 57.4	+0.1
WRA	Warramunga Arr 0.4nm,0.4s,baz=308,slow=8.2,SNR=10	51.39	127	P	P	06 41 57.6	-0.2
ASAR	Alice Springs 0.8nm,0.7s,baz=308,slow=6.2,SNR=8.9	53.18	131	P	P	06 42 11.2	+0.1

IDC 28 06:39:53.9±12.0, 11°71N×93°36E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/22, mbtmp3.3/3, Error ellipse: s-maj=690.8km s-min=27.2km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array 0.3nm,0.5s,baz=143,slow=8.6,SNR=3.8	36.20	347	P	P	06 46 58.3	0.0
WRA	Warramunga Arr 0.3nm,0.6s,baz=308,slow=8.3,SNR=3.5	51.16	128	P	P	06 48 59.2	+0.2
ASAR	Alice Springs 0.2nm,0.8s,baz=304,slow=8.7,SNR=3.0	52.99	132	P	P	06 49 12.6	-0.2

IDC 28 07:00:58.5±8.5, 9°63N×89°83E, h0km, mb3.5/3, mb1 3.6/3, mb1mx3.3/23, mbtmp3.5/3, Error ellipse: s-maj=398.9km s-min=27.9km az=61.0, Bay of Bengal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array 0.8nm,0.8s,baz=127,slow=9.0,SNR=7.2	37.58	352	P	P	07 08 14.5	-0.2
WRA	Warramunga Arr 0.4nm,0.6s,baz=300,slow=10.0,SNR=12	52.76	124	P	P	07 10 15.4	-0.3
ASAR	Alice Springs 0.3nm,0.8s,baz=307,slow=6.4,SNR=3.8	54.32	128	P	P	07 10 27.6	+0.5

*ISK **28** 07:18:29.3, 38°76N×30°36E, h12km, MD2.7*
*CSEM **28** 07:18:29.3±0.1, 38°77N×30°43E, h2km, MD2.7, Error ellipse: s-maj=1.9km s-min=1.6km az=83.0*
*DDA **28** 07:18:29.7, 38°82N×30°42E, h7km±5km, Md2.7*
*ISCJB **28** 07:18:29.5±0.5, 38°77N±0°03×30°40E±0°03, h4km±5km, Error ellipse: s-maj=4.7km s-min=3.7km az=28.5*

ISC 28 07:18:29.9±0.4, 38°77N±0°03×30°41E±0°03, h7km±5km, n33, σ0°88/51, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHUT	Suhut-Afyon	0.24	153	PG	Pg	07 18 35.4	+0.7
SHUT				eSG	Sg	07 18 39.1	+1.2
SHUT	Suhut-Afyon	0.24	153	i Pg	Pg	07 18 35.4	+0.7
SHUT				eSg	Sg	07 18 39.1	+1.2
ALT	Altintas	0.37	321	PG	Pg	07 18 37.0	-0.1
ALT				eSG	Sg	07 18 42.0	-0.1
ALT	Altintas	0.37	321	i Pg	Pg	07 18 37.0	-0.1
ALT				eSg	Sg	07 18 42.0	0.0
BOLV	Bolvadin	0.42	97	i P	Pg	07 18 38.6	+0.4
BOLV				i S	Sg	07 18 44.2	+0.4
BOLV	Bolvadin	0.42	97	i P	Pg	07 18 38.6	+0.4
BOLV				i S	Sg	07 18 44.2	+0.5
GDZ	Gediz	0.79	294	i P	Pg	07 18 47.5	+2.4
GDZ				i S	Sg	07 18 56.4	+0.9
GDZ	Gediz	0.79	294	i P	Pg	07 18 47.5	+2.3
GDZ				i S	Sg	07 18 56.4	+0.9
KHAL	Karahalli	0.82	241	i P	Pg	07 18 45.5	-0.2
KHAL				i S	Sg	07 18 54.7	-1.7
KHAL	Karahalli	0.82	241	i P	Pg	07 18 45.5	-0.2
KHAL				i S	Sg	07 18 54.7	-1.7
ESKT	Eskisehir	0.82	24	ePG	Pg	07 18 45.5	-0.3
ESKT	Eskisehir	0.82	24	i P	Pg	07 18 45.2	-0.6
ESKT				i S	Sg	07 18 56.1	-0.4
ESKT	Eskisehir	0.82	24	ePg	Pg	07 18 45.5	-0.3
SEYT	Eskypehyr	0.82	24	i P	Pg	07 18 45.2	-0.6
SEYT				i S	Sg	07 18 56.1	-0.4
KHL	Karahalli	0.83	238	ePG	Pg	07 18 44.7	-1.1
KHL	Karahalli	0.83	238	ePg	Pg	07 18 44.7	-1.1
ISP	Isparta	0.95	175	ePG	Pg	07 18 47.7	-0.4
SVRH	Sivrihisar-ESK	1.10	52	ePN	Pn	07 18 51.5	-0.2
SVRH	Sivrihisar-ESK	1.10	52	ePn	Pn	07 18 51.5	-0.2
BORA	Eskisehir	1.11	2	i P	Pg	07 18 50.7	-0.6
BORA				i S	Sg	07 19 05.1	-0.6
BORA	Eskisehir	1.11	2	i P	Pg	07 18 50.7	-0.5
BORA				i S	Sg	07 19 05.1	-0.6
KIZT	Kizilcal	1.15	84	ePN	Pn	07 18 52.5	0.0
KIZT	Kizilcal	1.15	84	ePn	Pn	07 18 52.5	+0.1
KDHN	Kadinhani	1.36	100	i P	Pn	07 18 55.3	0.0
KDHN				i S	Sb	07 19 12.7	-0.5
KDHN	Kadinhani	1.36	100	i P	Pn	07 18 55.3	0.0
KDHN				i S	Sb	07 19 12.7	-0.5
SUTC	Sutluce-Ispart	1.37	160	ePN	Pn	07 18 55.2	-0.2
SUTC	Sutluce-Ispart	1.37	160	ePn	Pn	07 18 55.2	-0.2
KULA	Kula-Manisa	1.39	260	ePN	Pn	07 18 54.6	-1.2
KULA	Kula-Manisa	1.39	260	ePn	Pn	07 18 54.6	-1.1
GULT	Gulveren	1.66	3	ePN	Pn	07 18 59.2	-0.2
GULT	Gulveren	1.66	3	ePn	Pn	07 18 59.2	-0.3
DURS	Dursunbey	1.72	300	i P	Pn	07 19 00.8	+0.6
DURS				i S	Sn	07 19 25.1	+2.6
DURS	Dursunbey	1.72	300	i P	Pn	07 19 00.8	+0.6
DURS				i S	Sn	07 19 25.1	+2.7

*NIED **28** 07:24:00, 37°90N×142°60E, h29km, Mw3.4 Best double couple: M0 1.26000×10^14 NP1:φ8 29.00000°, δ72.00000°, λ115.00000°. NP2:φ8 152.00000°, δ31.00000°, λ37.00000°.*

JMA 28 07:24:45.6±0.2, 37°89N×142°56E, h32km±3km, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	Ouri	1.11	301	P	Pn	07 25 05.3	+0.4
JIO				eS	Sn	07 25 19.2	+0.1
OFUJ	Ofunato	1.38	330	P	Pn	07 25 09.1	+0.5
JMM	Marumori	1.40	270	P	Pn	07 25 09.3	+0.4
JMM				eS	Sn	07 25 26.7	+0.5
JFK	Kawauchi	1.44	249	P	Pn	07 25 09.9	+0.5
JMK	Ichinoseki	1.49	316	P	Pn	07 25 11.1	+0.9
JOU	Okura	1.57	288	P	Pn	07 25 12.6	+1.4
JOU				eS	Sn	07 25 32.6	+2.2
JFT	Otama	1.80	259	P	Pn	07 25 15.9	+1.5
JFT				eS	Sn	07 25 38.5	+2.3
JOM	Ohasama	1.87	328	P	Pn	07 25 17.1	+1.8
JOM				eS	Sn	07 25 40.8	+3.1
JYS	Shiratake	2.00	280	P	Pn	07 25 19.1	+2.0
JYS				eS	Sn	07 25 43.7	+2.7
JYK	Kaneyama	2.01	301	P	Pn	07 25 19.1	+1.8
JANG	Nango	2.61	342	P	Pn	07 25 27.6	+2.1

IDC 28 07:33:25.8±7.8, 23°32S×179°82W, h479km±88km, mb3.2/5, mb1 3.4/6, mb1mx3.2/17, mbtmp3.2/6, Error ellipse: s-maj=57.9km s-min=25.7km az=15.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera 1.4nm,0.3s,baz=342,slow=3.2,SNR=2.9	15.12	189	P	P	07 36 38.5	+1.2
RPZ	Rata Peaks 11nm,0.9s,baz=335,slow=5.5,SNR=3.4	21.69	198	P	P	07 37 39.5	-1.0
STKA	Stephens Creek 1.5nm,0.6s,baz=99,slow=13,SNR=4.3	35.09	247	P	P	07 39 38.7	+0.9
ASAR	Alice Springs 0.7nm,0.4s,baz=96,slow=7.5,SNR=15	42.30	260	P	P	07 40 36.5	+0.1
WRA	Warramunga Arr 0.7nm,0.3s,baz=92,slow=8.5,SNR=35	42.62	265	P	P	07 40 38.8	-0.3
TXAR	Lajitas Array 0.2nm,0.6s,baz=224,slow=7.1,SNR=5.2	89.99	58	P	P	07 45 34.1	+0.6
MMAI	Mount Meron Ar 0.6nm,0.3s,baz=76,slow=6.1,SNR=3.1	147.61	295	PKPbc	PKPbc	07 52 15.2	-0.7

IDC 28 07:51:49.0±5.3, 10°87N×92°06E, h0km, mb4.0/5, mb1 4.1/5, mb1mx3.6/23, mbtmp4.0/5, Error ellipse: s-maj=290.2km s-min=24.1km az=61.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array 0.1nm,0.7s,baz=136,slow=7.2,SNR=11	36.75	349	P	P	07 58 58.0	0.0
FITZ	Fitzroy Crossi 3.1nm,0.8s,baz=337,slow=7.7,SNR=5.9	43.90	131	P	P	07 59 57.4	-0.3
WRA	Warramunga Arr 0.9nm,0.6s,baz=305,slow=8.6,SNR=21	51.67	126	P	P	08 00 57.8	-0.2
ASAR	Alice Springs 0.6nm,0.5s,baz=306,slow=6.8,SNR=7.9	53.40	130	P	P	08 01 11.1	+0.3
STKA	Stephens Creek 2.5nm,0.9s,baz=315,slow=13,SNR=2.9	63.65	134	P	P	08 02 22.3	+0.1

IDC 28 08:00:02.9±7.5, 11°43N×91°79E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.4/22, mbtmp3.7/3, Error ellipse: s-maj=388.0km s-min=27.4km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array 1.0nm,0.8s,baz=149,slow=8.2,SNR=8.2	36.15	349	P	P	08 07 06.8	0.0
WRA	Warramunga Arr 0.6nm,0.5s,baz=305,slow=8.7,SNR=8.3	52.22	126	P	P	08 09 15.9	-0.1
ASAR	Alice Springs 1.0nm,0.8s,baz=309,slow=7.0,SNR=8.4	53.97	131	P	P	08 09 29.0	+0.1

*TRN **28** 08:03:46.4, 15°03N×61°00W, h161km, MD3.7, M3.5(FDF)*
*ISCJB **28** 08:03:46.8±0.3, 14°97N±0°02×61°14W±0°07, h162km±2km, mb3.8/12, Error ellipse: s-maj=10.5km s-min=3.5km az=168.9*
*NEIC **28** 08:03:47.6±0.5, 15°05N×61°10W, h151km±4km, mb4.6/10, Error ellipse: s-maj=9.5km s-min=6.4km az=53.0*
*IDC **28** 08:03:47.1±0.5, 15°02N×61°00W, h150km±3km, mb3.4/7, mb1 3.7/10, mb1mx3.5/23, mbtmp3.5/10, Error ellipse: s-maj=14.6km s-min=5.8km az=82.0*
*BJI **28** 08:03:47.0, 15°10N×61°10W, h151km, mB4.8/3*

ISC 28 08:03:47.8±0.3, 14°97N±0°02×61°14W±0°06, h158km±2km, n68, σ0°93/85, mb3.8/12, 5C-10D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDF	Fort de France	0.23	183	ePg	Pn	08 04 08.5	-0.6
FDF				eSg	Sn	08 04 24.0	-1.4
FDF	Fort de France	0.23	183	⇓i P	Pn	08 04 08.8	-0.3
FDF				⇓eS	Sn	08 04 24.4	-0.9
DSTT	Stowe	0.32	330	⇑eP	Pn	08 04 10.8	+1.5
DSTT				eS	Sn	08 04 26.2	+0.4
DSHT	Scott's Head	0.33	317	eP	Pn	08 04 10.8	+1.5
DSHT				eS	Sn	08 04 27.0	+1.2
DFBT	Forest Bistro	0.34	322	eP	Pn	08 04 10.7	+1.3
DFBT				eS	Sn	08 04 26.5	+0.6
DPMT	Pointe Michel	0.37	322	eP	Pn	08 04 10.9	+1.4
DPMT				eS	Sn	08 04 27.1	+1.0
DLPL	La Plaine	0.38	344	eP	Pn	08 04 09.0	-0.5
DLPL				eS	Sn	08 04 26.1	-0.1
MDN	Morne-Daniel	0.43	325	⇓i P	Pn	08 04 11.3	+1.6
MDN				eS	Sn	08 04 27.1	+0.7
BIM	Bigot	0.45	172	⇓i P	Pn	08 04 09.5	-0.4
BIM				⇓eS	Sn	08 04 26.5	-0.2
MVM	Montagne Vaucl	0.47	150	eP	Pn	08 04 09.5	-0.4
DWS	Wesley	0.62	344	eP	Pn	08 04 11.6	+0.9
DWS				eS	Sn	08 04 29.1	+0.9
MGG	Marie-Galante	0.96	350	⇓i P	Pn	08 04 12.3	-0.7
SLW	Petit Monier	0.96	168	eP	Pn	08 04 12.7	-0.3
SLW	Petit Monier	0.96	168	⇑eP	Pn	08 04 13.6	+0.5
SLW				eS	Sn	08 04 30.6	-1.7
SLW				eS	Sn	08 04 32.0	-0.3
TBG	Guadaloupe-3	1.00	331	⇓i P	Pn	08 04 12.8	-0.6
SLPE	Piton Saint Es	1.13	173	⇑eP	Pn	08 04 15.2	+0.8
SLPE				eS	Sn	08 04 34.6	-0.2
HMG	Houelmont	1.14	332	eP	Pn	08 04 14.2	-0.4
PHG	Guadaloupe-2	1.15	335	eP	Pn	08 04 14.3	-0.3
SLDE	Delcer	1.16	176	⇑eP	Pn	08 04 15.6	+0.8
SCG	Saint Claude	1.18	334	⇓i P	Pn	08 04 14.6	-0.3
SCG				⇓eS	Sn	08 04 34.6	-1.0
BCG	Bois Riant Cap	1.20	337	eP	Pn	08 04 14.6	-0.5
MCLT	Moule a Chique	1.27	171	eP	Pn	08 04 15.5	-0.2
SFG	Saint Francois	1.28	358	eP	Pn	08 04 14.8	-0.9
LZG	Guadaloupe-1	1.32	332	⇓i P	Pn	08 04 15.7	-0.4
DEG	La Desirade	1.34	3	eP	Pn	08 04 15.4	-1.0
SEG	Port Louis	1.47	346	eP	Pn	08 04 17.1	-0.6
SVV	Soufriere Volc	1.64	183	eP	Pn	08 04 20.6	+1.1
SVV				eS	Sn	08 04 45.3	+1.5
SVB	Belmont	1.69	184	⇑eP	Pn	08 04 20.2	+0.2
SVB				eS	Sn	08 04 44.2	-0.5
FCV	Fort Charlotte	1.80	183	eP	Pn	08 04 21.0	-0.3
FCV	Fort Charlotte	1.80	183	e	Px	08 04 36.8	
BPA	Boggy Peak	2.18	342	eP	Pn	08 04 24.1	-1.4
BPA				eS	Sn	08 04 51.1	-3.5
BBGH	Gun Hill	2.38	140	ePn	Pn	08 04 28.8	+0.9
ANWB	Willy Bob	2.76	347	ePn	Pn	08 04 30.7	-1.7
ANWB				eSn	Sn	08 05 03.2	-3.9
SKI	Saint Kitts	2.81	327	eP	Pn	08 04 33.1	0.0
SKI				eS	Sn	08 05 07.5	-0.7
GRGR	Grenville	2.86	190	ePn	Pn	08 04 33.8	0.0
GRGR				eSn	Sn	08 05 08.9	-0.5
TOSP	Speyside	3.69	171	eP	Pn	08 04 45.4	+1.0
TOSP				eS	Sn	08 05 25.3	-3.1
TCE	Chacachacare	4.29	188	eS	Sn	08 05 41.1	-1.0
TRN	Trinidad (W)	4.30	183	eS	Sn	08 05 41.4	-1.1
TBH	Brigand Hill	4.46	179	eS	Sn	08 05 45.7	-0.5
TPP	Pointe-a-Pierr	4.63	184	eS	Sn	08 05 48.9	-1.4
MTP	Monte Pirata 31nm,0.3s	5.25	307	ePn	Pn	08 05 04.7	-0.1
MTP				eSn	Sn	08 06 09.0	+4.2
CBYP	Canovanas 50nm,0.5s	5.59	307	ePn	Pn	08 05 09.5	+0.3
SJG	San Juan 7.6nm,0.3s,baz=54,slow=2.6,SNR=14	5.73	304	P	Pn	08 05 10.6	-0.5
SJG				S	Sn	08 06 20.2	+4.0
SJG	San Juan 3.8nm,0.3s,baz=283,slow=23,SNR=6.9	5.73	304	ePn	Pn	08 05 10.3	-0.8
PCRV	Puerto La Cruz 1.4nm,0.3s,baz=312,slow=4.5,SNR=5.7	5.86	216	P	Pn	08 05 13.0	+0.2
CRPR	Cabo Rojo, PR 56nm,0.5s	6.47	299	ePn	Pn	08 05 20.1	-0.8
AGPR	Aguadilla, PR 31nm,0.6s	6.70	302	ePn	Pn	08 05 23.8	0.0
SDDR	Presa de Saban 11nm,0.4s	10.50	294	ePn	Pn	08 06 13.8	-0.4
ROSC	El Rosal 1.4nm,0.3s,baz=88,slow=16,SNR=5.6	16.41	234	P	Pn	08 07 32.2	+2.8
ROSC	El Rosal	16.41	234	eP	Pn	08 07 32.1	+2.7
LRAL	Lakeview Retre 1.7nm,0.4s,mb4.1	29.56	312	eP	P	08 09 38.3	+0.5
WVT	Waverly 1.8nm,0.6s,mb4.0	31.82	316	eP	P	08 09 58.0	+0.4
WMOK	Wichita Mounta 2.1nm,0.5s,mb4.0	39.12	307	eP	P	08 10 59.4	-0.5
TXAR	Lajitas Array 0.2nm,0.4s,mb3.1,baz=110,slow=7.3,SNR=12	41.67	297	P	P	08 11 20.8	-0.2
AGMN	Agassiz Nation 5.8nm,0.6s,mb4.4	43.82	327	eP	P	08 11 38.1	+0.1
PDAR	Pinedale Array 1.3nm,0.6s,mb3.7,baz=112,slow=9.0,SNR=12	49.76	314	P	P	08 12 24.9	+0.7
BGU	Big Grassy Mou 11nm,1.4s,mb4.3	51.72	311	eP	P	08 12 40.0	+1.0
NVAR	Mina Array Bea 0.8nm,0.7s,mb3.6,baz=106,slow=7.3,SNR=8.7	55.22	307	P	P	08 13 05.6	+1.1
YKA	Yellowknife Ar 0.5nm,0.3s,mb3.8,baz=105,slow=7.4,SNR=6.2	60.37	335	P	P	08 13 38.9	-1.0
KEST	Kesra 1.9nm,0.8s,mb4.0,baz=279,slow=13,SNR=2.6	65.67	57	P	P	08 14 14.2	-1.4
NB2	NORSAR Subarra comp=Z,0.5nm,0.8s,mb3.3,baz=262,slow=6.5	68.48	30	P	P	08 14 35.0	+2.3
NOA	NORSAR Array B comp=Z,0.8nm,0.8s,mb3.5,baz=262,slow=6.6,SNR=4.0	68.48	30	P	P	08 14 33.8	+1.1
FINES	FINESS Array B comp=Z,1.1nm,0.7s,mb3.6,baz=289,slow=5.8,SNR=4.4	75.66	30	P	P	08 15 15.9	+0.5
HHC	Hu-ho-hao-te	124.06	7	ePKP	PKPdf	08 22 26.3	-1.5
HHC				sPKP		08 23 25.5	
HHC				PP	PP	08 24 15.3	+2.8
HHC				PKS		08 26 01.5	
HHC				SKS	SKSdf	08 29 20.5	-4.6
HHC				SKKS	SKKSac	08 30 50.3	-6.5
HHC				SS	SS	08 40 48.3	-1.0
HHC	comp=N,66nm,19.0s			LR	LR		
HHC	comp=E,59nm,17.8s			LR	LR		
HHC	comp=Z,55nm,21.4s			LR	LR		
LZH	Lanzhou	127.27	15	ePKP	PKPdf	08 22 32.5	-1.6
LZH				sPKP		08 23 31.8	
LZH	comp=N,130nm,18.3s			LR	LR		
LZH	comp=Z,200nm,20.5s			LR	LR		
CD2	Chengdu	132.13	18	ePKP	PKPdf	08 22 41.0	-2.5
NJ2	Nanjing	133.25	0	ePKP	PKPdf	08 22 45.0	-0.5
GYA	Guiyang	137.15	16	ePdif	Pdif	08 19 59.0	-1.1
GYA				PKP	PKPdf	08 22 51.8	-1.2
GYA				sPKP		08 23 47.5	
GYA				PP	PP	08 25 40.5	+3.3
GYA	comp=Z,70nm,7.8s			AMB	AMB		

*NIED **28** 08:13:00, 30°60N×142°00E, h11km, Mw3.8 Best double couple: M0 6.51000×10^14 NP1:φ8 140.00000°, δ76.00000°, λ71.00000°. NP2:φ8 15.00000°, δ23.00000°, λ143.00000°.*
*ISCJB **28** 08:13:48.6±2.0, 30°59N±0°05×141°9E±0°2, h28km±16km, mb3.6/6, Error ellipse: s-maj=23.4km s-min=5.2km az=165.0*
*JMA **28** 08:13:49.0±0.2, 30°61N×142°01E, h49km, M4.0*
*IDC **28** 08:13:52.7±0.7, 30°51N×141°85E, h42km±6km, mb3.5/6, mb1 3.7/9, mb1mx3.5/25, mbtmp3.5/9, ML3.4/3, MS2.9/1, Ms1 2.9/1, ms1mx2.1/36, Error ellipse: s-maj=23.0km s-min=7.7km az=73.0*

ISC 28 08:13:49.8±2.1, 30°59N±0°05×142°0E±0°1, h22km±16km, h43km±1.6km: pP-P, n20, σ0°96/29, mb3.6/6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2 5.0nm,0.3s,baz=247,slow=23,SNR=3.2	3.15	324	P	Pn	08 14 37.6	-0.4
JHJ				S	Sn	08 15 16.2	+1.3
CBIJ	Chichi jima 26nm,0.3s,baz=248,slow=23,SNR=6.2	3.48	177	P	Pn	08 14 42.5	-0.1
CBIJ				eS	Sn	08 15 21.0	-2.1
CBIJ	Chichi jima 7.7nm,0.3s,baz=287,slow=19,SNR=8.1	3.48	177	P	Pn	08 14 42.4	-0.2
CBIJ				S	Sn	08 15 22.6	-0.4
BSO1	Boso 1 18nm,0.3s,baz=288,slow=22,SNR=7.3	4.15	348	P	Pn	08 14 51.0	-0.7
BSO1				eS	Sn	08 15 38.0	-1.5
BSO2	Boso 2	4.29	346	eS	Sn	08 15 43.8	+0.9
BSO3	Boso 3	4.39	344	P	Pn	08 14 55.0	0.0
JOD2	Odawara 2	5.27	333	P	Pn	08 15 08.4	+1.3
JHU	Hanno	5.72	337	P	Pn	08 15 13.8	+0.4
JHU				eS	Sn	08 16 16.5	-1.8
JRY	Ryogami san 0.9nm,0.3s,baz=159,slow=11,SNR=16	6.00	335	P	Pn	08 15 18.3	+1.1
JRY				eS	Sn	08 16 25.5	+0.2
JHO	Hitachi	6.13	349	P	Pn	08 15 17.6	-1.3
JHO				eS	Sn	08 16 22.8	-5.5
JAG	Ashikaga	6.20	341	P	Pn	08 15 20.1	+0.2
JAG				eS	Sn	08 16 28.2	-1.9
MJAR	Matsushiro Arr 0.7nm,0.3s,baz=72,slow=30,SNR=5.4	6.73	333	P	Pn	08 15 27.9	+0.7
MJAR				S	Sn	08 16 43.7	+0.6
MAT	Matsushiro 1.8nm,0.5s,baz=33,slow=8.3,SNR=8.8	6.73	333	P	Pn	08 15 26.7	-0.5
MAT				S	Sn	08 16 42.6	-0.6
GUMO	Guam comp=Z,41nm,21.4s,baz=46,slow=31	17.12	170	LR	LR	08 22 47.6	
MKAR	Makanchi Array 0.6nm,0.7s,mb3.8,baz=80,slow=16,SNR=5.3	48.19	307	P	P	08 22 28.9	+0.6
WRA	Warramunga Arr 0.8nm,0.4s,mb4.0,baz=6.5,slow=7.7,SNR=33	50.77	189	P	P	08 22 47.2	-1.0
WRA				pP	pP	08 22 60.0	+4.7
ASAR	Alice Springs 1.8nm,0.5s,baz=6.3,slow=7.6,SNR=8.3	54.50	189	P	P	08 23 15.9	+0.2
ASAR				pP	pP	08 23 28.1	+5.3
FINES	FINESS Array B 0.7nm,0.5s,baz=2.2,slow=5.4,SNR=5.4	74.76	333	P	P	08 25 28.6	+1.0

MOS ***28*** *08:56:56.3±0.9, 33°.02S×15°.98W, h10km, mb5.7/72, Error ellipse: s-maj=14.5km s-min=4.9km az=74.3*
NEIC ***28*** *08:56:57.4±0.1, 33°.10S×16°.04W, h10km, mb5.4/126, MS4.7/168, Error ellipse: s-maj=5.3km s-min=3.9km az=129.0*
SZGRF ***28*** *08:56:58.9, 32°.83S×16°.44W, h33km, mb5.6, MS4.9, Southern Mid-Atlantic Ridge*
GCMT ***28*** *08:57:02.0±0.2, 33°.12S×15°.73W, h12km, MW5.2, Moment Tensor Solution. s38,c49; s98,c160; Moment tensor: Scale 10^{16}Nm; M_{rr}7.18±.13; $M_{\theta\theta}$-5.74±.13; $M_{\phi\phi}$-1.44±.13; $M_{r\theta}$-0.67±.43; $M_{\theta\phi}$-1.87±.12; $M_{r\phi}$0.11±.49; Best double couple: $M_0$6.80000×10^{16} NP1:ϕ_s67.00000°, δ43.00000°, λ86.00000°. NP2:ϕ_s252.00000°, δ48.00000°, λ93.00000°. Principal axes: T 7.2200, Plg87.0000°, Azm204.0000°; N -0.7600, Plg2.0000°, Azm70.0000°; P -6.4700, Plg2.0000°, Azm340.0000°; Data Used: II IU G CN IC.*
PRE ***28*** *08:57:08.9±2.1, 32°.76S×14°.27W, h10km, MS4.5*
DJA ***28*** *08:57:20, 33°.53S×15°.03W, h173km, mb5.3/9*
ISC 28 08:56:57.5±0.2, 33°.12S±0°.04×15°.97W±0°.04, h10km, (h19km±4.2km·pP-P), n798, σ0s79/511, mb5.3/192, MS4.7/208, 65C-62D, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHEL	**Horse Pasture**	**19.43**	**31**	P	**Pn**	**09 01 24.2**	**-1.1**
	2μm,1.1s,SNR=9.6						
SHEL	**Horse Pasture**	**19.43**	**31**	*e*P	**Pn**	**09 01 23.8**	**-1.5**
SHEL				pmax	pmax		
	comp=Z,830nm,1.4s						
SHEL	**Horse Pasture**	**19.43**	**31**	*e*P	**Pn**	**09 01 23.8**	**-1.5**
	comp=Z,830nm,1.4s						
CAM4	**Nova Friburgo**	**25.80**	**288**	⇓*i*P	**P**	**09 02 29.1**	**+0.2**
CAM4				*i*	pP	09 02 31.7	-0.2
CAM4				*i*		09 02 34.4	
CAM4				*i*		09 02 43.8	
CAM4				*i*		09 27 26.0	
SPB	**Sao Paulo**	**29.18**	**281**	*e*P	**P**	**09 02 58.8**	**-0.4**
	comp=Z,37nm,1.1s,mb5.0						
SPB				LR	LR		
	comp=Z,1μm,21.0s,MS4.5						
ELIM	**Elim**	**29.60**	**103**	*e*P	**P**	**09 03 02.3**	**-0.6**
SUR	**Sutherland**	**30.84**	**99**	P	**P**	**09 03 15.3**	**+1.5**
	comp=Z,24nm,0.9s,mb5.0,baz=263,slow=5.3,SNR=7.5						
SUR				LR	LR	09 12 42.3	
	comp=Z,812nm,19.5s,MS4.4,baz=295,slow=31						
SUR	**Sutherland**	**30.84**	**99**	*e*P	**P**	**09 03 15.4**	**+1.6**
	comp=Z,52nm,1.1s,mb5.3						
SUR				LR	LR		
	comp=Z,871nm,20.0s,MS4.4						
SUR	**Sutherland**	**30.84**	**99**	*e*P	**P**	**09 03 14.7**	**+0.9**
SUR				AMS	AMS	09 13 01.3	
	comp=Z,599nm,20.4s,MS4.2						
UPI	**Upington**	**32.23**	**92**	*e*P	**P**	**09 03 25.1**	**-1.0**
UPI				AMS	AMS	09 17 14.1	
	comp=Z,6μm,22.0s,MS5.2						
RCBR	**Riachuelo**	**32.89**	**321**	*e*P	**P**	**09 03 31.8**	**-0.1**
	comp=Z,138nm,1.3s,mb5.7						
RCBR				LR	LR		
	comp=Z,1μm,19.0s,MS4.7						
TSUM	**Tsumeb**	**32.99**	**74**	P	**P**	**09 03 31.9**	**-0.9**
	comp=Z,12nm,0.9s,mb4.8,baz=233,slow=8.4,SNR=10						
TSUM	**Tsumeb**	**32.99**	**74**	*e*P	**P**	**09 03 31.6**	**-1.2**
	comp=Z,33nm,1.2s,mb5.1						
TSUM				LR	LR		
	comp=Z,763nm,20.0s,MS4.4						
TSUM	**Tsumeb**	**32.99**	**74**	*e*P	**P**	**09 03 31.5**	**-1.4**
TSUM				AMS	AMS	09 14 27.1	
	comp=Z,6μm,20.2s,MS5.3						
PKA	**Prieska**	**33.11**	**95**	*e*P	**P**	**09 03 33.0**	**-0.8**
PKA				AMS	AMS	09 15 10.9	
	comp=Z,304nm,18.2s,MS4.0						
SOE	**Somerset East**	**34.70**	**101**	*e*P	**P**	**09 03 47.7**	**+0.1**
SOE				AMS	AMS	09 15 37.4	
	comp=Z,957nm,20.3s,MS4.5						
HVD	**Gariep Dam**	**35.15**	**97**	*e*P	**P**	**09 03 51.8**	**+0.3**
HVD				AMS	AMS	09 15 26.1	
	comp=Z,830nm,20.6s,MS4.5						
BOSA	**Boshof**	**35.51**	**94**	P	**P**	**09 03 53.8**	**-0.7**
	comp=Z,20nm,0.8s,mb5.1,baz=254,slow=7.7,SNR=40						
BOSA				LR	LR	09 15 44.2	
	comp=Z,874nm,18.8s,MS4.5,baz=253,slow=32						
BOSA	**Boshof**	**35.51**	**94**	*e*P	**P**	**09 03 54.3**	**-0.3**
BOSA				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.1						
BOSA				MLR	MLR		
	comp=Z,1μm,22.0s,MS4.6						
BOSA	**Boshof**	**35.51**	**94**	*e*P	**P**	**09 03 54.2**	**-0.3**
	comp=Z,22nm,0.8s,mb5.1						
BOSA				LR	LR		
	comp=Z,1μm,22.0s,MS4.6						
BOSA	**Boshof**	**35.51**	**94**	*e*P	**P**	**09 03 53.9**	**-0.6**
BOSA				AMS	AMS	09 15 49.8	
	comp=Z,848nm,19.5s,MS4.5						
SWZ	**Schweizer**	**36.03**	**92**	*e*P	**P**	**09 03 58.0**	**-1.1**
SWZ				AMS	AMS	09 16 03.6	
	comp=Z,1μm,21.5s,MS4.6						
LBTB	**Lobatse**	**37.03**	**88**	P	**P**	**09 04 07.1**	**-0.5**
	comp=Z,36nm,1.1s,mb5.1,baz=265,slow=9.8,SNR=19						
LBTB	**Lobatse**	**37.03**	**88**	*e*P	**P**	**09 04 07.0**	**-0.6**
LBTB				pmax	pmax		
	comp=Z,96nm,1.4s,mb5.4						
LBTB				MLR	MLR		
	comp=Z,699nm,20.0s,MS4.5						
LBTB	**Lobatse**	**37.03**	**88**	*e*P	**P**	**09 04 07.0**	**-0.6**
	comp=Z,96nm,1.4s,mb5.4						
LBTB				LR	LR		
	comp=Z,699nm,20.0s,MS4.5						
LBTB	**Lobatse**	**37.03**	**88**	*e*P	**P**	**09 04 06.5**	**-1.0**
LBTB				AMS	AMS	09 16 55.8	
	comp=Z,603nm,20.4s,MS4.4						
TRQA	**Tornquist**	**37.45**	**249**	*e*P	**P**	**09 04 10.8**	**-0.2**
	comp=Z,52nm,1.3s,mb5.2						
TRQA				*e*PcP	PcP	09 06 27.6	-1.9
TRQA				LR	LR		
	comp=Z,823nm,22.0s,MS4.5						
SEK	**Senekal**	**37.58**	**95**	*e*P	**P**	**09 04 11.6**	**-0.7**
SEK				AMS	AMS	09 19 30.4	
	comp=Z,630nm,17.2s,MS4.5						
KSR	**Koster**	**37.81**	**90**	*e*P	**P**	**09 04 13.6**	**-0.7**
PRYS	**Parys**	**37.82**	**92**	*e*P	**P**	**09 04 13.3**	**-0.9**
PRYS				AMS	AMS	09 17 46.7	
	comp=Z,614nm,17.9s,MS4.5						
ERPM	**east rand prop**	**38.76**	**92**	*e*P	**P**	**09 04 22.7**	**+0.5**
SLR	**Silverton**	**39.01**	**91**	*e*P	**P**	**09 04 23.5**	**-0.9**
SLR				AMS	AMS	09 17 42.7	
	comp=Z,817nm,21.2s,MS4.5						
LIC	**Lamto**	**40.49**	**17**	⇑*i*P	**P**	**09 04 35.7**	**-0.9**
	comp=Z,650nm,1.3s,mb5.9,baz=205						
LIC				*e*MLR	MLR		
	comp=Z,1μm,19.2s,MS4.5						
LIC	**Lamto**	**40.49**	**17**	*e*P	**P**	**09 04 35.2**	**-1.4**
	comp=Z,673nm,1.3s,mb6.2						
LIC	**Lamto**	**40.49**	**17**	⇑*i*P	**P**	**09 04 35.7**	**-0.9**
	comp=Z,325nm,1.3s,mb5.9						
LIC				LR	LR		
	comp=Z,670nm,19.3s,MS4.5						
MAIT	**Maitri**	**40.60**	**166**	*e*P	**P**	**09 04 37.3**	**+0.3**
NVL	**N'lazarevskaya**	**40.61**	**166**	⇑*i*P	**P**	**09 04 35.1**	**-2.0**
NVL				*e**PP	pP	09 04 42.7	+2.5
NVL				*e*SS	**S**	**09 10 40.1**	**-6.2**
NVL				pmax	pmax		
	comp=Z,37nm,0.8s,mb5.1						
KIC	**Kosan Boka**	**40.69**	**17**	*e*P	**P**	**09 04 36.6**	**-1.7**
	comp=Z,510nm,1.0s,mb6.1						
TIC	**Toumodi**	**40.89**	**17**	*e*P	**P**	**09 04 38.4**	**-1.6**
	comp=Z,716nm,1.2s,mb6.2						
DBIC	**Dimbokro**	**40.96**	**17**	P	**P**	**09 04 39.5**	**-1.0**
	comp=Z,109nm,0.9s,mb5.5,baz=173,slow=9.7,SNR=63						
DBIC				LR	LR	09 17 47.7	
	comp=Z,994nm,18.7s,MS4.7,baz=176,slow=31						
DBIC	**Dimbokro**	**40.96**	**17**	*e*P	**P**	**09 04 39.6**	**-0.9**
DBIC				pmax	pmax		
	comp=Z,215nm,1.0s						
DBIC				MLR	MLR		
	comp=Z,1μm,20.0s						
DBIC	**Dimbokro**	**40.96**	**17**	*e*P	**P**	**09 04 39.6**	**-0.9**
	comp=Z,215nm,1.0s,mb5.7						
DBIC				LR	LR		
	comp=Z,1μm,20.0s,MS4.7						
DBIC	**Dimbokro**	**40.96**	**17**	*i*P	**P**	**09 04 39.6**	**-0.9**
POGA	**Pongola**	**41.23**	**95**	*e*P	**P**	**09 04 43.0**	**+0.3**
MSNA	**Messina**	**41.81**	**87**	*e*P	**P**	**09 04 46.9**	**-0.7**
MSNA				AMS	AMS	09 19 20.4	
	comp=Z,406nm,21.0s,MS4.3						
USHA	**Ushuaia**	**42.32**	**223**	P	**P**	**09 04 51.9**	**+0.6**
	comp=Z,14nm,1.0s,mb4.5,baz=68,slow=11,SNR=3.2						
USHA				LR	LR	09 18 59.2	
	comp=Z,595nm,20.4s,MS4.5,baz=252,slow=31						
MOPA	**Mopani**	**42.48**	**90**	*e*P	**P**	**09 04 51.8**	**-1.2**
MOPA				AMS	AMS	09 21 05.7	
	comp=Z,996nm,19.5s,MS4.7						
PMSA	**Palmer Station**	**42.98**	**208**	P	**P**	**09 04 57.4**	**+1.0**
	comp=Z,78nm,1.2s,mb5.3,baz=1.0,slow=3.8,SNR=3.6						
PMSA				LR	LR	09 19 58.0	
	comp=Z,388nm,18.2s,MS4.3,baz=277,slow=32						
LSZ	**Lusaka**	**43.66**	**77**	P	**P**	**09 05 03.2**	**+0.6**
	comp=Z,26nm,1.1s,mb4.9,baz=231,slow=8.5,SNR=27						
LSZ	**Lusaka**	**43.66**	**77**	*e*P	**P**	**09 05 02.4**	**-0.2**
LSZ				pmax	pmax		
	comp=Z,75nm,1.3s,mb5.3						
LSZ				MLR	MLR		
	comp=Z,557nm,21.0s,MS4.5						
LSZ	**Lusaka**	**43.66**	**77**	*e*P	**P**	**09 05 02.4**	**-0.3**
	comp=Z,75nm,1.3s,mb5.3						
LSZ				LR	LR		
	comp=Z,557nm,21.0s,MS4.5						
LSZ	**Lusaka**	**43.66**	**77**	P	**P**	**09 05 03.4**	**+0.8**
	SNR=16						
LSZ				P		09 05 03.4	
	SNR=16						
LSZ	**Lusaka**	**43.66**	**77**	*e*P	**P**	**09 05 03.3**	**+0.7**
PLCA	**Paso Flores**	**43.69**	**244**	P	**P**	**09 05 02.8**	**+0.2**
	comp=Z,18nm,1.1s,mb4.7,baz=90,slow=6.4,SNR=12						
PLCA				LR	LR	09 21 40.8	
	comp=Z,318nm,19.3s,MS4.2,baz=103,slow=34						
PLCA	**Paso Flores**	**43.69**	**244**	*e*P	**P**	**09 05 02.4**	**-0.2**
PLCA				pmax	pmax		
	comp=Z,48nm,1.4s						
PLCA	**Paso Flores**	**43.69**	**244**	*e*P	**P**	**09 05 02.4**	**-0.2**
	comp=Z,48nm,1.4s,mb5.0						
CFAA	**Coronel Fontan**	**43.80**	**257**	P	**P**	**09 05 02.1**	**-1.5**
	comp=Z,2.3nm,1.0s,baz=99,slow=7.5,SNR=30						
CFAA				LR	LR	09 20 46.9	
	comp=Z,53nm,20.9s,MS3.4,baz=116,slow=33						
ILCA	**Isla Las Cabra**	**44.99**	**242**	*e*P	**P**	**09 05 09.3**	**-3.7**
FCH	**Farellones**	**44.99**	**254**	*e*P	**P**	**09 05 13.6**	**+0.4**
CLCH	**Cerro Calan**	**45.18**	**254**	*e*P	**P**	**09 05 14.3**	**-0.3**
SYO	**Syowa Base**	**47.29**	**156**	⇓*i*P	**P**	**09 05 29.4**	**-1.3**
SYO	**Syowa Base**	**47.29**	**156**	⇓*e*pP	pP	09 05 31.2	-2.6
SYO	**Syowa Base**	**47.29**	**156**	⇓*i*sP	sP	09 05 32.2	-2.9
SACV	**Santiago Islan**	**48.38**	**350**	*e*P	**P**	**09 05 39.1**	**-0.5**
	comp=Z,121nm,1.1s,mb5.8						
SACV				*e*PcP	PcP	09 07 06.7	+0.5
SACV				LR	LR		
	comp=Z,766nm,19.0s,MS4.7						
LPAZ	**La Paz**	**49.76**	**277**	P	**P**	**09 05 49.6**	**-0.9**
	comp=Z,13nm,1.1s,mb4.9,baz=107,slow=6.8,SNR=25						
LPAZ				LR	LR	09 25 44.1	
	comp=Z,430nm,20.0s,MS4.5,baz=65,slow=35						
LPAZ	**La Paz**	**49.76**	**277**	*e*P	**P**	**09 05 49.3**	**-1.2**
LPAZ				pmax	pmax		
	comp=Z,62nm,1.6s						
LPAZ				MLR	MLR		
	comp=Z,711nm,21.0s						
LPAZ	**La Paz**	**49.76**	**277**	*e*P	**P**	**09 05 49.3**	**-1.2**
	comp=Z,62nm,1.6s,mb5.4						
LPAZ				LR	LR		
	comp=Z,711nm,21.0s,MS4.7						
MBAR	**Mbarara**	**54.47**	**63**	PFAKE		09 06 40.0	+14
MBAR				LR	LR		
	comp=Z,1μm,22.0s,MS4.8						
MBAR	**Mbarara**	**54.47**	**63**	*e*P	**P**	**09 06 26.2**	**+0.7**
MAW	**Mawson**	**55.62**	**153**	⇓*i*P	**P**	**09 06 32.6**	**-0.5**
	comp=Z,35nm,0.8s,mb5.4						
MAW	**Mawson**	**55.62**	**153**	P	**P**	**09 06 33.5**	**+0.4**
	comp=Z,53nm,0.9s,mb5.6,baz=267,slow=6.8,SNR=77						
MAW				LR	LR	09 24 56.7	
	comp=Z,1μm,21.3s,MS4.9,baz=273,slow=30						
MAW	**Mawson**	**55.62**	**153**	*e*P	**P**	**09 06 33.1**	**0.0**
MAW				pmax	pmax		
	comp=Z,24nm,1.2s						
MAW	**Mawson**	**55.62**	**153**	*e*P	**P**	**09 06 33.1**	**-0.1**
	comp=Z,24nm,1.2s,mb5.1						
QSPA	**South Pole Qui**	**57.12**	**180**	*e*P	**P**	**09 06 45.0**	**+1.4**
	comp=Z,110nm,0.8s,mb5.9						
QSPA				LR	LR		
	comp=Z,740nm,22.0s,MS4.7						
ABPO	**Ambohimpanom**	**57.71**	**93**	*e*P	**P**	**09 06 49.8**	**+1.1**
ABPO				pmax	pmax		
	comp=Z,43nm,1.3s,mb5.3						
ABPO				MLR	MLR		
	comp=Z,713nm,19.0s,MS4.8						
ABPO	**Ambohimpanom**	**57.71**	**93**	*e*P	**P**	**09 06 49.8**	**+1.1**
	comp=Z,43nm,1.3s,mb5.3						
ABPO				LR	LR		
	comp=Z,713nm,19.0s,MS4.8						
OPO	**Ambohidratompo**	**57.88**	**92**	P	**P**	**09 06 51.2**	**+1.3**
	comp=Z,8.6nm,1.0s,mb4.7,baz=245,slow=6.7,SNR=8.3						
KMBO	**Kilima Mbogo**	**59.14**	**69**	P	**P**	**09 06 59.5**	**+0.8**
	comp=Z,2.2nm,0.9s,mb4.2,baz=360,slow=24,SNR=5.0						
KMBO				LR	LR	09 31 00.5	
	comp=Z,249nm,18.3s,MS4.4,baz=270,slow=35						
KMBO	**Kilima Mbogo**	**59.14**	**69**	*e*P	**P**	**09 07 00.7**	**+2.0**
KMBO				pmax	pmax		
	comp=Z,27nm,1.9s						
KMBO				MLR	MLR		
	comp=Z,303nm,20.0s						
KMBO	**Kilima Mbogo**	**59.14**	**69**	*e*P	**P**	**09 07 00.7**	**+2.0**
	comp=Z,27nm,1.9s,mb5.0						
KMBO				LR	LR		
	comp=Z,303nm,20.0s,MS4.4						
KMBO	**Kilima Mbogo**	**59.14**	**69**	*e*P	**P**	**09 07 00.5**	**+1.8**
NNA	**Nana**	**59.21**	**276**	*e*P	**P**	**09 06 59.4**	**+0.2**
TAM	**Tamanrasset**	**59.26**	**23**	*e*P	**P**	**09 06 59.5**	**+0.2**
TAM				pmax	pmax		
	comp=Z,100nm,1.3s,mb5.7						
TAM				MLR	MLR		
	comp=Z,550nm,20.0s,MS4.7						
TAM	**Tamanrasset**	**59.26**	**23**	*e*P	**P**	**09 06 59.5**	**+0.2**
	comp=Z,100nm,1.3s,mb5.7						
TAM				LR	LR		
	comp=Z,550nm,20.0s,MS4.7						
FDF	**Fort de France**	**64.22**	**310**	PFAKE		09 07 40.0	+7.1
FDF				LR	LR		
	comp=Z,320nm,20.0s,MS4.5						
ANWB	**Willy Bob**	**66.83**	**312**	PFAKE		09 08 00.0	+10
ANWB				LR	LR		
	comp=Z,425nm,20.0s,MS4.7						
ROSC	**El Rosal**	**66.87**	**293**	P	**P**	**09 07 50.8**	**+0.7**
	comp=Z,1.9nm,0.5s,mb4.4,baz=91,slow=24,SNR=5.3						
ROSC				LR	LR	09 35 34.0	
	comp=Z,519nm,18.3s,MS4.8,baz=42,slow=35						
ROSC	**El Rosal**	**66.87**	**293**	*e*P	**P**	**09 07 50.7**	**+0.6**
MIR	**Mirnyy**	**67.10**	**156**	⇑*i*P	**P**	**09 07 51.0**	**+0.2**
MIR				pmax	pmax		
	comp=Z,130nm,1.4s,mb5.8						
OTAV	**Otavalo**	**67.33**	**286**	*e*P	**P**	**09 07 53.5**	**+0.4**
	comp=Z,20nm,1.3s,mb5.0						
OTAV				LR	LR		
	comp=Z,652nm,20.0s,MS4.8						
SBA	**Scott Base**	**69.27**	**181**	*e*P	**P**	**09 08 05.1**	**+0.8**
SBA				pmax	pmax		
	comp=Z,105nm,1.0s,mb5.7						
SBA				MLR	MLR		
	comp=Z,538nm,21.0s,MS4.8						
SBA	**Scott Base**	**69.27**	**181**	*e*P	**P**	**09 08 05.1**	**+0.9**
	comp=Z,105nm,1.0s,mb5.7						
SBA				LR	LR		
	comp=Z,538nm,21.0s,MS4.8						
STVI	**Saint Thomas**	**69.34**	**310**	*e*P	**P**	**09 08 04.9**	**-0.5**
SFS	**San Fernando**	**69.83**	**8**	PFAKE		09 08 20.0	+12
SFS				LR	LR		
	comp=Z,1μm,19.0s,MS5.2						
EJIF	**Jimena Fronter**	**69.91**	**9**	P	**P**	**09 08 07.0**	**-1.6**
EJIF				pmax	pmax		
	comp=Z,51nm,2.7s,mb5.0						
EJIF	**Jimena Fronter**	**69.91**	**9**	P	**P**	**09 08 07.0**	**-1.5**
	comp=Z,51nm,2.7s,mb5.0						
SJG	**San Juan**	**69.94**	**309**	PFAKE		09 08 20.0	+11
SJG				LR	LR		
	comp=Z,356nm,20.0s,MS4.6						
ETRT	**Tiaret**	**70.05**	**15**	P	**P**	**09 08 11.2**	**+1.7**
EMIJ	**Mijas**	**70.11**	**10**	P	**P**	**09 08 09.2**	**-0.6**
	comp=Z,52nm,1.2s,mb5.3						
PFVI	**Vila Bisbo**	**70.21**	**6**	P	**P**	**09 08 10.1**	**-0.3**
PFVI	**Vila Bisbo**	**70.21**	**6**	*e*P	**P**	**09 08 11.0**	**+0.6**
	comp=Z,110nm,1.4s,mb5.6						
PFVI				*e*S	S	09 17 28.5	+6.6
PFVI	**Vila Bisbo**	**70.21**	**6**	*e*LR	LR	09 30 39.6	
	comp=Z,314nm,20.0s						
ESPR	**Espera**	**70.27**	**9**	P	**P**	**09 08 10.2**	**-0.5**
	comp=Z,26nm,1.1s,mb5.1						
PBDV	**Barranco-do-Ve**	**70.41**	**7**	*e*P	**P**	**09 08 12.0**	**+0.4**
	comp=Z,179nm,1.5s,mb5.8						
PBDV				*e*S	S	09 17 32.8	+8.7
PBDV	**Barranco-do-Ve**	**70.41**	**7**	*e*LR	LR	09 30 39.2	
	comp=Z,401nm,24.0s						
EANR	**`Ain N'Sour**	**70.55**	**15**	P	**P**	**09 08 12.5**	**0.0**
PVAQ	**Vaqueiros**	**70.58**	**7**	*e*P	**P**	**09 08 12.9**	**+0.2**
	comp=Z,129nm,1.8s,mb5.5						
PVAQ				*e*S	S	09 17 31.3	+5.1
PVAQ	**Vaqueiros**	**70.58**	**7**	*e*LR	LR	09 30 37.7	
	comp=Z,401nm,22.0s						
ERON	**Agron**	**70.70**	**10**	P	**P**	**09 08 12.7**	**-0.7**
	comp=Z,46nm,1.2s,mb5.3						
EBER	**Berja**	**70.72**	**11**	P	**P**	**09 08 13.7**	**+0.2**
	comp=Z,9.2nm,0.9s,mb4.7						
EGRO	**El Granado**	**70.74**	**7**	P	**P**	**09 08 14.0**	**+0.4**
	comp=Z,30nm,1.0s,mb5.2						
ELOJ	**Sierra Loja**	**70.77**	**10**	P	**P**	**09 08 13.7**	**-0.1**
ELOJ				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.1						
ELOJ	**Sierra Loja**	**70.77**	**10**	P	**P**	**09 08 13.7**	**-0.1**
	comp=Z,17nm,0.7s,mb5.1						
PCVE	**Castro Verde**	**70.78**	**7**	*e*S	S	09 17 32.5	+4.0
PCVE	**Castro Verde**	**70.78**	**7**	*e*LR	LR	09 30 51.8	
	comp=Z,343nm,24.0s						
ECHA	**Ech Chlef**	**70.80**	**15**	P	**P**	**09 08 12.6**	**-1.4**
ENIJ	**Nijar**	**70.91**	**12**	P	**P**	**09 08 14.7**	**0.0**
ENIJ				pmax	pmax		
	comp=Z,35nm,1.0s,mb5.2						
ENIJ	**Nijar**	**70.91**	**12**	P	**P**	**09 08 14.7**	**+0.1**
	comp=Z,35nm,1.0s,mb5.2						
EBNR	**Beni Rached**	**70.97**	**15**	P	**P**	**09 08 16.4**	**+1.4**
ECOG	**Cogollos-Vega**	**70.99**	**10**	P	**P**	**09 08 16.2**	**+1.1**
ECOG				pmax	pmax		
	comp=Z,34nm,0.9s,mb5.3						
ECOG	**Cogollos-Vega**	**70.99**	**10**	P	**P**	**09 08 16.2**	**+1.0**
	comp=Z,34nm,0.9s,mb5.3						
EMIN	**Mina Concepcio**	**71.06**	**8**	P	**P**	**09 08 14.2**	**-1.3**
	comp=Z,27nm,0.9s,mb5.2						
ELUQ	**Luque**	**71.16**	**10**	P	**P**	**09 08 14.9**	**-1.3**
ELUQ				pmax	pmax		
	comp=Z,1μm,3.8s						
ELUQ	**Luque**	**71.16**	**10**	P	**P**	**09 08 14.9**	**-1.3**
	comp=Z,1μm,3.8s						
PBEJ	**Beja**	**71.19**	**7**	*e*P	**P**	**09 08 16.5**	**+0.2**
	comp=Z,65nm,1.8s,mb5.3						
EMHD	**Djebel Mahouad**	**71.20**	**16**	P	**P**	**09 08 15.5**	**-1.0**
ADJB	**Djebel Djouab**	**71.27**	**16**	P	**P**	**09 08 17.9**	**+1.0**
PBAR	**Barrancos**	**71.42**	**7**	*e*P	**P**	**09 08 18.0**	**+0.3**
	comp=Z,129nm,1.6s,mb5.6						
PBAR				*e*S	S	09 17 41.0	+5.1
PBAR	**Barrancos**	**71.42**	**7**	*e*LR	LR	09 30 52.3	
	comp=Z,326nm,20.0s						
EQES	**Quesada**	**71.58**	**11**	P	**P**	**09 08 18.1**	**-0.7**
	comp=Z,19nm,1.3s,mb4.9						
EHUE	**Huescar**	**71.67**	**11**	P	**P**	**09 08 17.8**	**-1.4**
EHUE				pmax	pmax		
	comp=Z,110nm,1.5s,mb5.6						
EHUE	**Huescar**	**71.67**	**11**	P	**P**	**09 08 17.8**	**-1.4**
	comp=Z,110nm,1.5s,mb5.6						
EVO	**Evora**	**71.67**	**7**	⇑*i*P	**P**	**09 08 19.1**	**-0.2**
	comp=Z,244nm,1.6s,mb5.6						
EVO				*e*MLR	MLR		
	comp=Z,460nm,19.5s,MS4.5						
EVO	**Evora**	**71.67**	**7**	*e*P	**P**	**09 08 19.5**	**+0.2**
	comp=Z,90nm,1.6s,mb5.5						
EADA	**Adamuz**	**71.72**	**9**	P	**P**	**09 08 18.9**	**-0.6**
	comp=Z,19nm,0.9s,mb5.0						
ABA	**Alger-Bouzarea**	**71.79**	**16**	P	**P**	**09 08 14.0**	**-6.0**
SET	**Setif**	**71.80**	**18**	P	**P**	**09 08 22.0**	**+1.9**
EBAN	**Banos Encina**	**71.83**	**10**	P	**P**	**09 08 18.5**	**-1.7**
EBAN				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
EBAN	**Banos Encina**	**71.83**	**10**	P	**P**	**09 08 18.5**	**-1.7**
	comp=Z,10nm,0.7s,mb4.9						
CTEI	**Djebel Teioual**	**71.94**	**19**	P	**P**	**09 08 22.4**	**+1.5**
PMAFR	**Mafra**	**71.98**	**5**	*e*S	S	09 17 46.4	+4.1
PMAFR	**Mafra**	**71.98**	**5**	*e*LR	LR	09 31 21.2	
	comp=Z,246nm,18.0s						
EBAD	**Badajoz**	**72.00**	**7**	P	**P**	**09 08 21.2**	**0.0**
	comp=Z,18nm,1.0s,mb5.0						
PESTR	**Estremoz**	**72.05**	**7**	*e*P	**P**	**09 08 21.9**	**+0.4**
	comp=Z,112nm,1.6s,mb5.5						
PESTR				*e*S	S	09 17 49.5	+6.4
PESTR	**Estremoz**	**72.05**	**7**	*e*LR	LR	09 31 08.3	
	comp=Z,273nm,20.0s						
CASM	**Ain Smara**	**72.15**	**19**	P	**P**	**09 08 21.8**	**-0.4**
DFRA	**Djebel Bou Aff**	**72.25**	**18**	P	**P**	**09 08 23.9**	**+1.1**
CKFL	**Kef-Lekhel**	**72.34**	**19**	P	**P**	**09 08 23.0**	**-0.3**
ABSA	**Djebel Ababsia**	**72.44**	**20**	P	**P**	**09 08 24.3**	**+0.4**
KEST	**Kesra**	**72.48**	**21**	P	**P**	**09 08 24.4**	**+0.3**
	comp=Z,16n

WDD Wield Dalam 74.33 25 PFAKE 09 08 50.0 +15
WDD LR LR
comp=Z,212nm,19.0s,MS4.5
MVO Moncorvo 74.38 7 P **P 09 08 33.7 -1.5**
MVO Moncorvo 74.38 7 *eP* **P 09 08 36.5 +1.3**
comp=Z,77nm,1.4s,mb5.4
MVO Moncorvo 74.38 7 *e*LR LR 09 33 02.1
comp=Z,293nm,22.0s
EMOS Mosqueruela 74.51 12 P **P 09 08 34.3 -1.7**
comp=Z,22nm,0.9s,mb5.1
ETOR Torete 74.69 11 P **P 09 08 38.0 +1.0**
ETOR pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
ETOR Torete 74.69 11 P **P 09 08 38.0 +0.9**
comp=Z,8.2nm,1.0s,mb4.6
PCAB Cabril 74.82 6 *eP* **P 09 08 38.0 +0.2**
comp=Z,72nm,1.4s,mb5.4
ELOB Lobios 74.98 6 P **P 09 08 39.2 +0.5**
comp=Z,9.0nm,0.7s,mb4.8
PBRG Braganca 75.04 7 *eP* **P 09 08 39.5 +0.4**
comp=Z,84nm,1.5s,mb5.5
ECAL Calabor 75.18 7 P **P 09 08 40.5 +0.7**
comp=Z,18nm,0.9s,mb5.0
ERTA Horta de San J 75.23 13 P **P 09 08 40.7 +0.6**
comp=Z,39nm,1.1s,mb5.2
GRTK Grand Turk 75.64 308 PFAKE 09 08 50.0 +7.0
GRTK LR LR
comp=Z,357nm,19.0s,MS4.7
EPOB Poblet 75.75 13 P **P 09 08 43.6 +0.4**
comp=Z,22nm,1.2s,mb5.0
ESAC San Caprasio 75.83 12 P **P 09 08 44.5 +0.9**
comp=Z,22nm,0.6s,mb5.3
VSL Villasalto 75.98 20 PFAKE 09 09 00.0 +16
VSL LR LR
comp=Z,321nm,21.0s,MS4.6
ECRI Cripan 76.37 10 P **P 09 08 46.3 -0.3**
ECRI pmax pmax
comp=Z,16nm,1.5s,mb4.7
ECRI Cripan 76.37 10 P **P 09 08 46.3 -0.4**
comp=Z,16nm,1.5s,mb4.7
CFON Fontmartina 76.42 14 P **P 09 08 46.4 -0.5**
comp=Z,83nm,1.9s,mb5.3
EARI Arriondas 76.69 8 P **P 09 08 50.4 +2.0**
comp=Z,18nm,1.0s,mb5.0
CSOR Sort 76.75 13 P **P 09 08 49.1 +0.3**
comp=Z,42nm,1.4s,mb5.2
ELAN Lanestosa 76.85 9 P **P 09 08 50.2 +0.9**
comp=Z,20nm,0.9s,mb5.1
EBIE Bielsa 76.88 12 P **P 09 08 50.0 +0.5**
comp=Z,5.7nm,1.0s,mb4.5
CEL Celeste 76.95 25 *eP* **P 09 08 50.3 +0.2**
CEL comp=Z,51nm,1.4s,mb5.3 LR LR
comp=Z,284nm,20.0s,MS4.6
ETSF Etsaut 76.96 12 *eP* **P 09 08 50.1 +0.1**
comp=Z,163nm,1.6s,mb5.4
ETSF Etsaut 76.96 12 *eP* **P 09 08 50.1 +0.1**
ETSF pmax pmax
comp=Z,81nm,1.6s,mb5.4
ETSF Etsaut 76.96 12 *eP* **P 09 08 50.1 +0.1**
comp=Z,81nm,1.6s,mb5.4
SJPF Ste Jean 77.06 11 *eP* **P 09 08 50.8 +0.3**
comp=Z,187nm,1.6s,mb5.5
SJPF Ste Jean 77.06 11 *eP* **P 09 08 50.8 +0.3**
SJPF pmax pmax
comp=Z,93nm,1.6s,mb5.5
SJPF Ste Jean 77.06 11 *eP* **P 09 08 50.8 +0.3**
comp=Z,93nm,1.6s,mb5.5
ELIZ Elizondo 77.06 11 P **P 09 08 51.3 +0.8**
ELIZ pmax pmax
comp=Z,15nm,0.8s,mb5.0
ELIZ Elizondo 77.06 11 P **P 09 08 51.3 +0.8**
comp=Z,14nm,0.8s,mb5.0
EALK Alkurruntz 77.12 11 P **P 09 08 52.4 +1.5**
comp=Z,8.6nm,0.8s,mb4.7
SALF Salau 77.14 13 *eP* **P 09 08 51.8 +0.8**
REYF Montagne du Re 77.16 12 *eP* **P 09 08 52.0 +0.9**
EPF Esparros 77.24 12 *eP* **P 09 08 51.5 -0.1**
comp=Z,194nm,1.7s,mb5.5
EPF Esparros 77.24 12 *eP* **P 09 08 51.5 -0.1**
EPF pmax pmax
comp=Z,97nm,1.7s,mb5.5
EPF Esparros 77.24 12 *eP* **P 09 08 51.5 -0.1**
comp=Z,97nm,1.7s,mb5.5
MLS Moulis 77.31 13 *eP* **P 09 08 52.2 +0.3**
MTDJ Mount Denham 77.84 301 PFAKE 09 09 10.0 +15
MTDJ LR LR
comp=Z,487nm,21.0s,MS4.8
MTLF Montolieu 77.89 13 *eP* **P 09 08 54.1 -1.1**
comp=Z,104nm,1.6s,mb5.2
MTLF Montolieu 77.89 13 *eP* **P 09 08 54.1 -1.1**
MTLF pmax pmax
comp=Z,52nm,1.6s,mb5.2
MTLF Montolieu 77.89 13 *eP* **P 09 08 54.1 -1.1**
comp=Z,52nm,1.6s,mb5.2
TIP Timpagrande 78.08 25 *eP* **P 09 08 55.5 -0.9**
TIP comp=Z,76nm,1.4s,mb5.4 LR LR
comp=Z,286nm,21.0s,MS4.6
CUC Castrocucco 78.47 24 PFAKE 09 09 10.0 +12
CUC LR LR
comp=Z,227nm,19.0s,MS4.5
JTS JuntasAbangare 78.48 290 P **P 09 09 00.1 +0.9**
comp=Z,152nm,1.3s,mb5.8,SNR=6.1
LMR La Mourre 78.82 17 *eP* **P 09 08 59.8 -0.5**
comp=Z,104nm,1.4s,mb5.3
LMR La Mourre 78.82 17 *eP* **P 09 08 59.8 -0.5**
LMR pmax pmax
comp=Z,52nm,1.4s,mb5.3
LMR La Mourre 78.82 17 *eP* **P 09 08 59.8 -0.5**
comp=Z,52nm,1.4s,mb5.3
LASF Ste Croix 78.93 14 *eP* **P 09 09 00.6 -0.3**
comp=Z,162nm,1.5s,mb5.4
FRF La Foret Royal 79.07 17 *eP* **P 09 09 01.1 -0.6**
comp=Z,174nm,1.6s,mb5.4
FRF La Foret Royal 79.07 17 *eP* **P 09 09 01.1 -0.6**
FRF pmax pmax
comp=Z,87nm,1.6s,mb5.4
FRF La Foret Royal 79.07 17 *eP* **P 09 09 01.1 -0.6**
comp=Z,87nm,1.6s,mb5.4
LFF La Frestale 79.17 12 *eP* **P 09 09 02.1 -0.1**
comp=Z,249nm,1.6s,mb5.6
LFF La Frestale 79.17 12 *eP* **P 09 09 02.1 -0.1**
LFF pmax pmax
comp=Z,125nm,1.6s,mb5.6
LFF La Frestale 79.17 12 *eP* **P 09 09 02.1 -0.1**
comp=Z,125nm,1.6s,mb5.6
SMRF Simiane la Rot 79.21 16 *eP* **P 09 09 02.6 +0.2**
comp=Z,77nm,1.4s,mb5.2
SMRF Simiane la Rot 79.21 16 *eP* **P 09 09 02.6 +0.2**
comp=Z,77nm,1.4s,mb5.4
CALN Calern 79.31 17 *eP* **P 09 09 03.5 +0.5**
CAF Calviac 79.39 13 *eP* **P 09 09 03.0 -0.4**
comp=Z,84nm,1.3s,mb5.2
CAF Calviac 79.39 13 *eP* **P 09 09 03.0 -0.4**
CAF pmax pmax
comp=Z,42nm,1.3s,mb5.2
CAF Calviac 79.39 13 *eP* **P 09 09 03.0 -0.4**
comp=Z,42nm,1.3s,mb5.2
REVF Revere 79.41 17 *eP* **P 09 09 03.9 +0.4**
SBF Sospel 79.54 17 *eP* **P 09 09 03.9 -0.3**
comp=Z,69nm,1.2s,mb5.2
SBF Sospel 79.54 17 *eP* **P 09 09 03.9 -0.3**
SBF pmax pmax
comp=Z,34nm,1.2s,mb5.2
SBF Sospel 79.54 17 *eP* **P 09 09 03.9 -0.3**
comp=Z,34nm,1.2s,mb5.2
LUCF Luceram 79.55 17 *eP* **P 09 09 05.0 +0.7**
TOUF Mont Tournerai 79.64 17 *eP* **P 09 09 04.4 -0.4**
RJF Les Rejaudoux 79.66 12 *eP* **P 09 09 04.5 -0.3**
comp=Z,107nm,1.3s,mb5.3
RJF *e*MLR MLR
comp=Z,888nm,20.0s,MS4.8
RJF Les Rejaudoux 79.66 12 *eP* **P 09 09 04.5 -0.3**
RJF pmax pmax
comp=Z,54nm,1.3s,mb5.3
RJF MLR MLR
comp=Z,890nm,20.0s,MS5.1
RJF Les Rejaudoux 79.66 12 *eP* **P 09 09 04.5 -0.3**
comp=Z,54nm,1.3s,mb5.3
RJF LR LR
comp=Z,890nm,20.0s,MS5.1
AUTN L'Aution 79.66 17 *eP* **P 09 09 05.8 +0.9**
SAOF Saorge 79.69 17 *eP* **P 09 09 05.7 +0.7**
OG25 Le Caire 79.70 16 *eP* **P 09 09 04.7 -0.4**
BBSR BB Station 79.71 320 PFAKE 09 09 20.0 +15
BBSR LR LR
comp=Z,118nm,19.0s,MS4.2
AQU L'Aquila 79.80 22 ⇑P **P 09 09 06.8 +1.1**
AQU L'Aquila 79.80 22 *eP* **P 09 09 06.0 +0.3**
comp=Z,53nm,1.5s,mb5.2
AQU LR LR
comp=Z,740nm,21.0s,MS5.0
AQU L'Aquila 79.80 22 ⇑*iP* **P 09 09 06.8 +1.1**
VIVF Saint-Julien-l 79.85 15 *eP* **P 09 09 05.9 0.0**
comp=Z,227nm,1.6s,mb5.6
VIVF Saint-Julien-l 79.85 15 *eP* **P 09 09 05.9 0.0**
VIVF pmax pmax
comp=Z,114nm,1.6s,mb5.5
VIVF Saint-Julien-l 79.85 15 *eP* **P 09 09 05.9 0.0**
comp=Z,114nm,1.6s,mb5.5
SRN Sarande 79.90 27 PN **P 09 09 06.5 +0.2**
LBL Lubilhac 79.92 14 *eP* **P 09 09 06.0 -0.2**
ORIF Oris-en-Rattie 80.17 16 *eP* **P 09 09 07.9 +0.3**
comp=Z,224nm,1.6s,mb5.5
ORIF *e*MLR MLR
comp=Z,1µm,18.5s,MS4.9
ORIF Oris-en-Rattie 80.17 16 *eP* **P 09 09 07.9 +0.3**
ORIF pmax pmax
comp=Z,112nm,1.6s,mb5.5
ORIF Oris-en-Rattie 80.17 16 *eP* **P 09 09 07.9 +0.3**
comp=Z,112nm,1.6s,mb5.5
MBDF Montbardon 80.20 16 *eP* **P 09 09 08.0 +0.2**
comp=Z,115nm,1.3s,mb5.3
MBDF Montbardon 80.20 16 *eP* **P 09 09 08.0 +0.2**
MBDF pmax pmax
comp=Z,58nm,1.3s,mb5.3
MBDF Montbardon 80.20 16 *eP* **P 09 09 08.0 +0.2**
comp=Z,58nm,1.3s,mb5.3
SSB Saint Sauveur 80.22 15 *eP* **P 09 09 07.8 -0.1**
SSB *e* 09 12 09.0
SSB pmax pmax
comp=Z,168nm,2.2s,mb5.6
SSB MLR MLR
comp=Z,376nm,20.0s,MS4.7
SSB Saint Sauveur 80.22 15 *eP* **P 09 09 07.8 -0.1**
comp=Z,168nm,2.2s,mb5.6
SSB *e*PP PP 09 12 09.0 -2.0
SSB LR LR
comp=Z,376nm,20.0s,MS4.7
COLF Collangettes 80.28 14 *eP* **P 09 09 08.7 +0.5**
PYM Petit Puy Mans 80.37 13 *eP* **P 09 09 09.6 +0.9**
BNI Bardonecchia 80.48 16 *eP* **P 09 09 09.3 0.0**
BNI pmax pmax
comp=Z,22nm,1.2s,mb5.0
BNI MLR MLR
comp=Z,628nm,21.0s,MS4.9
BNI Bardonecchia 80.48 16 *eP* **P 09 09 09.3 0.0**
comp=Z,22nm,1.2s,mb5.0
BNI LR LR
comp=Z,628nm,21.0s,MS4.9
VLC Villacollemand 80.58 19 PFAKE 09 09 20.0 +10
VLC LR LR
comp=Z,450nm,19.0s,MS4.8
MFF Saint Martin d 80.63 11 *eP* **P 09 09 10.1 0.0**
comp=Z,168nm,1.6s,mb5.4
MFF Saint Martin d 80.63 11 *eP* **P 09 09 10.1 0.0**
MFF pmax pmax
comp=Z,84nm,1.6s,mb5.4
MFF Saint Martin d 80.63 11 *eP* **P 09 09 10.1 0.0**
comp=Z,84nm,1.6s,mb5.4
AGO Saint Agoulin 80.68 13 *eP* **P 09 09 10.9 +0.6**
PLDF La Plantade 80.70 14 *eP* **P 09 09 11.1 +0.7**
TCF Toulx Ste Croi 80.73 13 *eP* **P 09 09 10.7 +0.1**
comp=Z,165nm,1.6s,mb5.4
TCF Toulx Ste Croi 80.73 13 *eP* **P 09 09 10.7 +0.1**
TCF pmax pmax
comp=Z,83nm,1.6s,mb5.4
TCF Toulx Ste Croi 80.73 13 *eP* **P 09 09 10.7 +0.1**
comp=Z,83nm,1.6s,mb5.4
KBN Korca 80.85 27 PN **P 09 09 12.6 +1.2**
LPG La Plagne 80.92 16 *eP* **P 09 09 12.0 +0.4**
comp=Z,110nm,1.2s,mb5.4
LPG La Plagne 80.92 16 *eP* **P 09 09 12.0 +0.4**
LPG pmax pmax
comp=Z,55nm,1.2s,mb5.4
LPG La Plagne 80.92 16 *eP* **P 09 09 12.0 +0.4**
comp=Z,55nm,1.2s,mb5.4
LPL La Plagne 80.93 16 *eP* **P 09 09 11.9 +0.2**
comp=Z,135nm,1.3s,mb5.4
LPL La Plagne 80.93 16 *eP* **P 09 09 11.9 +0.2**
LPL pmax pmax
comp=Z,67nm,1.3s,mb5.4
LPL La Plagne 80.93 16 *eP* **P 09 09 11.9 +0.2**
comp=Z,67nm,1.3s,mb5.4
BGF Bois d'Agland 81.11 13 *eP* **P 09 09 12.6 0.0**
TIR Tirane 81.12 26 *eP* **P 09 09 13.3 +0.5**
TIR pmax pmax
comp=Z,122nm,1.2s,mb5.7
TIR MLR MLR
comp=Z,201nm,19.0s,MS4.5
TIR Tirane 81.12 26 *eP* **P 09 09 13.3 +0.4**
comp=Z,122nm,1.2s,mb5.7
TIR LR LR
comp=Z,201nm,19.0s,MS4.5
SMF Signal de Mont 81.39 14 *eP* **P 09 09 14.0 -0.1**
comp=Z,112nm,1.2s,mb5.4
SMF Signal de Mont 81.39 14 *eP* **P 09 09 14.0 -0.1**
SMF pmax pmax
comp=Z,56nm,1.2s,mb5.4
SMF Signal de Mont 81.39 14 *eP* **P 09 09 14.0 -0.1**
comp=Z,56nm,1.2s,mb5.4
AVF Avril sur Loir 81.43 13 *eP* **P 09 09 14.3 0.0**
comp=Z,144nm,1.3s,mb5.5
AVF Avril sur Loir 81.43 13 *eP* **P 09 09 14.3 0.0**
AVF pmax pmax
comp=Z,72nm,1.3s,mb5.4
AVF Avril sur Loir 81.43 13 *eP* **P 09 09 14.3 0.0**
comp=Z,72nm,1.3s,mb5.4
QUIF Quistinic 81.48 9 *eP* **P 09 09 14.6 0.0**
comp=Z,216nm,1.6s,mb5.5
QUIF Quistinic 81.48 9 *eP* **P 09 09 14.6 0.0**
QUIF pmax pmax
comp=Z,108nm,1.6s,mb5.5
QUIF Quistinic 81.48 9 *eP* **P 09 09 14.6 0.0**
comp=Z,108nm,1.6s,mb5.5
MMAI Mount Meron Ar 81.65 42 P **P 09 09 17.7 +1.9**
comp=Z,4.4nm,0.9s,mb4.4,baz=224,slow=6.0,SNR=9.2
MMAI LR LR 09 45 51.6
comp=Z,160nm,18.7s,MS4.4,baz=305,slow=36
SSF Saint Saulge 81.72 13 *eP* **P 09 09 15.6 -0.2**
comp=Z,151nm,1.5s,mb5.4
SSF Saint Saulge 81.72 13 *eP* **P 09 09 15.6 -0.2**
SSF pmax pmax
comp=Z,75nm,1.5s,mb5.4
SSF Saint Saulge 81.72 13 *eP* **P 09 09 15.6 -0.2**
comp=Z,75nm,1.5s,mb5.4
PUK Puka 81.74 26 PN **P 09 09 16.3 +0.2**
CABF La Chapelle 81.82 15 *eP* **P 09 09 16.0 -0.4**
comp=Z,143nm,1.5s,mb5.4
CABF La Chapelle 81.82 15 *eP* **P 09 09 16.0 -0.4**
CABF pmax pmax
comp=Z,72nm,1.5s,mb5.4
CABF La Chapelle 81.82 15 *eP* **P 09 09 16.0 -0.4**
comp=Z,72nm,1.5s,mb5.4
ASF Jabal al Asfar 81.87 43 PP PP 09 12 22.2 -2.6
comp=Z,1.7nm,0.7s,baz=334,slow=6.0,SNR=3.4
ROSF Rostrenen 81.89 9 *eP* **P 09 09 16.8 +0.1**
comp=Z,210nm,1.4s,mb5.6
ROSF Rostrenen 81.89 9 *eP* **P 09 09 16.8 +0.1**
ROSF pmax pmax
comp=Z,105nm,1.4s,mb5.6
ROSF Rostrenen 81.89 9 *eP* **P 09 09 16.8 +0.1**
comp=Z,105nm,1.4s,mb5.6
SGMF Saint Gilles 81.89 9 *eP* **P 09 09 16.5 -0.2**
comp=Z,130nm,1.3s,mb5.4
SGMF Saint Gilles 81.89 9 *eP* **P 09 09 16.5 -0.2**
SGMF pmax pmax
comp=Z,65nm,1.3s,mb5.4
SGMF Saint Gilles 81.89 9 *eP* **P 09 09 16.5 -0.2**
comp=Z,65nm,1.3s,mb5.4
LOR Lormes 81.99 13 *eP* **P 09 09 16.8 -0.4**
comp=Z,143nm,1.6s,mb5.3,baz=205
LOR *e*MLR MLR
comp=Z,615nm,22.8s,MS4.6
LOR Lormes 81.99 13 *eP* **P 09 09 16.8 -0.4**
LOR pmax pmax
comp=Z,71nm,1.6s,mb5.3
LOR MLR MLR
comp=Z,620nm,22.8s,MS4.9
LOR Lormes 81.99 13 *eP* **P 09 09 16.8 -0.4**
comp=Z,71nm,1.6s,mb5.3
LOR LR LR
comp=Z,620nm,22.8s,MS4.9
CSS Prodhromos 82.00 39 PFAKE 09 09 30.0 +12
CSS LR LR
comp=Z,203nm,21.0s,MS4.5
BCI Bajram Curri 82.08 26 PN **P 09 09 18.5 +0.6**
GRR Gorron 82.26 10 *eP* **P 09 09 18.5 -0.2**
comp=Z,152nm,1.6s,mb5.4
GRR Gorron 82.26 10 *eP* **P 09 09 18.5 -0.2**
GRR pmax pmax
comp=Z,76nm,1.6s,mb5.4
GRR Gorron 82.26 10 *eP* **P 09 09 18.5 -0.2**
comp=Z,76nm,1.6s,mb5.4
TUE Stuetta 82.46 17 *eP* **P 09 09 19.1 -0.6**
comp=Z,121nm,2.0s,mb5.5
TUE *e*PP PP 09 12 26.1 -3.3
TUE LR LR
comp=Z,744nm,19.0s,MS5.1
TGUH Tegucigalpa,Un 82.54 292 PFAKE 09 09 30.0 +9.1
TGUH LR LR
comp=Z,312nm,19.0s,MS4.7
LDF La Druitiere 82.57 11 *eP* **P 09 09 20.1 -0.2**
comp=Z,207nm,1.6s,mb5.6
LDF La Druitiere 82.57 11 *eP* **P 09 09 20.1 -0.2**
LDF pmax pmax
comp=Z,103nm,1.6s,mb5.6
LDF La Druitiere 82.57 11 *eP* **P 09 09 20.1 -0.2**
comp=Z,103nm,1.6s,mb5.6
FLN La Foliniere 82.68 10 *eP* **P 09 09 20.7 -0.1**
comp=Z,262nm,1.6s,mb5.7,baz=216
FLN *e*MLR MLR
comp=Z,722nm,20.8s,MS4.7
FLN La Foliniere 82.68 10 *eP* **P 09 09 20.7 -0.1**
FLN pmax pmax
comp=Z,131nm,1.6s,mb5.7
FLN MLR MLR
comp=Z,720nm,20.8s,MS5.0
FLN La Foliniere 82.68 10 *eP* **P 09 09 20.7 -0.1**
comp=Z,131nm,1.6s,mb5.7
FLN LR LR
comp=Z,720nm,20.8s,MS5.0
LOMF Lomont 82.69 15 *eP* **P 09 09 21.1 +0.2**
ISP Isparta 82.80 35 P **P 09 09 22.7 +1.0**
ISP LR LR
comp=Z,96nm,20.0s,MS4.2
ISP Isparta 82.80 35 ⇑*iP* **P 09 09 22.2 +0.5**
KKB Krupnik 82.81 28 P **P 09 09 21.5 -0.2**
MMB Musomiste 82.83 29 P **P 09 09 21.4 -0.4**
DAVOX Davos/Dischmat 82.88 18 P **P 09 09 21.7 -0.3**
comp=Z,18nm,0.9s,mb5.1,baz=208,slow=4.8,SNR=5.7
DAVOX PP PP 09 12 29.8 -3.0
comp=Z,10nm,0.8s,baz=209,slow=7.8,SNR=7.0
SKDS Skadanscina 82.89 21 *iP* **P 09 09 22.8 +0.8**
BBS Basel-Blauen 82.95 16 *eP* **P 09 09 22.6 +0.3**
TRI Trieste 82.96 20 PFAKE 09 09 30.0 +7.6
TRI LR LR
comp=Z,449nm,22.0s,MS4.8
HINF Hinteralfeld 83.13 15 *eP* **P 09 09 22.5 -0.7**
comp=Z,117nm,1.7s,mb5.3
HINF Hinteralfeld 83.13 15 *eP* **P 09 09 22.5 -0.7**
HINF pmax pmax
comp=Z,58nm,1.7s,mb5.3
HINF Hinteralfeld 83.13 15 *eP* **P 09 09 22.5 -0.7**
comp=Z,58nm,1.7s,mb5.3
HAU Haudompre 83.20 15 *eP* **P 09 09 23.0 -0.6**
comp=Z,119nm,1.6s,mb5.4
HAU *e*MLR MLR
comp=Z,448nm,21.2s,MS4.5
HAU Haudompre 83.20 15 *eP* **P 09 09 23.0 -0.6**
HAU pmax pmax
comp=Z,59nm,1.6s,mb5.4
HAU MLR MLR
comp=Z,450nm,21.3s,MS4.8
HAU Haudompre 83.20 15 *eP* **P 09 09 23.0 -0.6**
comp=Z,59nm,1.6s,mb5.4
HAU LR LR
comp=Z,450nm,21.3s,MS4.8
JAVS Javornik 83.21 21 *iP* **P 09 09 23.2 -0.5**
BOJS Bojanci 83.22 22 *iP* **P 09 09 23.7 0.0**
MOF Molkenrain 83.23 15 *eP* **P 09 09 23.8 +0.1**
VOY Vojsko 83.29 20 *eP* **P 09 09 23.2 -0.9**
VOY *e* 09 09 34.1
VOY *e* 09 09 41.7
FETA Feichten 83.32 18 ⇑*iP* **P 09 09 23.4 -0.8**
comp=Z,24nm,1.5s,mb5.0,SNR=9.3
RZN Rozhen 83.32 29 P **P 09 09 24.0 -0.3**
DAVA Damuels 83.35 17 ⇑*iP* **P 09 09 23.8 -0.6**
comp=Z,76nm,1.3s,mb5.6
MEZF Maizieres J'vi 83.40 14 *eP* **P 09 09 24.6 0.0**
comp=Z,349nm,1.8s,mb5.8,baz=189
MEZF Maizieres J'vi 83.40 14 *eP* **P 09 09 24.6 0.0**
comp=Z,349nm,1.8s,mb6.1
FELD Feldberg im Sc 83.45 16 *eP* **P 09 09 24.9 +0.1**
LJU Ljubljana 83.49 21 *iP* **P 09 09 24.9 -0.2**
ABTA Abfaltersbach 83.55 19 ⇑*iP* **P 09 09 25.3 -0.1**
comp=Z,61nm,1.3s,mb5.6,SNR=21
ECH Echery 83.58 15 *eP* **P 09 09 25.5 0.0**
ECH Echery 83.58 15 *eP* **P 09 09 24.7 -0.8**
ECH *e* 09 12 37.5
ECH pmax pmax
comp=Z,35nm,1.4s,mb5.3
ECH MLR MLR
comp=Z,356nm,20.0s,MS4.7
ECH Echery 83.58 15 *eP* **P 09 09 24.7 -0.8**
comp=Z,35nm,1.4s,mb5.3
ECH *e*PP PP 09 12 37.5 -1.1
ECH LR LR
comp=Z,356nm,20.0s,MS4.7
KDZ Kurdzhali 83.58 30 P **P 09 09 24.6 -1.1**
PLD Plovdiv 83.67 29 P **P 09 09 25.4 -0.7**
MOTA Moosalm 83.72 18 ⇑*iP* **P 09 09 25.1 -1.1**
comp=Z,34nm,1.5s,mb5.3,SNR=5.5
MYKA Terra Mystica 83.76 20 ⇑*iP* **P 09 09 26.4 -0.1**
comp=Z,20nm,1.2s,mb5.1
RETA Reutte 83.76 18 ⇑*iP* **P 09 09 25.6 -0.9**
comp=Z,24nm,1.3s,mb5.2,SNR=7.6
WTTA Wattenberg 83.78 19 ⇑*iP* **P 09 09 26.0 -0.5**
comp=Z,63nm,1.3s,mb5.6,SNR=16
CDF Champ du Feu 83.79 15 *eP* **P 09 09 26.0 -0.6**
comp=Z,142nm,1.8s,mb5.5
CDF Champ du Feu 83.79 15 *eP* **P 09 09 26.0 -0.6**
CDF pmax pmax
comp=Z,71nm,1.8s,mb5.5
CDF Champ du Feu 83.79 15 *eP* **P 09 09 26.0 -0.6**
comp=Z,71nm,1.8s,mb5.5
PGB Panagyurishte 83.82 29 P **P 09 09 26.2 -0.7**
SPAK Spaichingen-Ko 83.84 16 *eP* **P 09 09 27.0 +0.1**
BFO Black Forest 83.95 16 P **P 09 09 26.9 -0.5**
comp=Z,151nm,1.2s,mb6.0,SNR=9.5
BFO Black Forest 83.95 16 *eP* **P 09 09 26.4 -1.0**
comp=Z,48nm,1.2s,mb5.5
BFO *e*PP PP 09 12 40.1 -1.5
BFO Black Forest 83.95 16 *eP* **P 09 09 26.5 -0.9**
BFO *e* 09 12 38.9
BFO pmax pmax
comp=Z,47nm,1.3s,mb5.5
BFO MLR MLR
comp=Z,442nm,19.0s,MS4.9
BFO Black Forest 83.95 16 *eP* **P 09 09 26.5 -0.9**
comp=Z,47nm,1.3s,mb5.5
BFO *e*PP PP 09 12 38.9 -2.7
BFO LR LR
comp=Z,442nm,19.0s,MS4.9
DIM Dimitrovgrad 83.96 30 P **P 09 09 27.2 -0.4**
SOKA Soboth 84.21 21 ⇑*iP* **P 09 09 28.9 +0.2**
comp=Z,57nm,1.3s,mb5.5
LANF Langenberg 84.44 15 *eP* **P 09 09 30.2 +0.3**
FUR Furstenfeldbru 84.52 18 *eP* **P 09 09 29.7 -0.6**
comp=Z,135nm,1.5s,mb5.8
FUR *e*PP PP 09 12 44.8 -1.4
RJOB Jochberg 84.53 19 *eP* **P 09 09 29.0 -1.4**
comp=Z,51nm,1.7s,mb5.4
RJOB *e*PP PP 09 12 44.5 -1.8
STU Stuttgart 84.57 16 *eP* **P 09 09 29.8 -0.7**
comp=Z,78nm,1.4s,mb5.7
STU Stuttgart 84.57 16 *eP* **P 09 09 29.8 -0.7**
STU pmax pmax
comp=Z,42nm,1.0s,mb5.5
STU Stuttgart 84.57 16 *eP* **P 09 09 29.8 -0.7**
comp=Z,42nm,1.0s,mb5.5
BAIF Baives 84.73 13 *eP* **P 09 09 31.3 0.0**
comp=Z,110nm,1.4s,mb5.5
BAIF Baives 84.73 13 *eP* **P 09 09 31.3 0.0**
BAIF pmax pmax
comp=Z,55nm,1.4s,mb5.5
BAIF Baives 84.73 13 *eP* **P 09 09 31.3 0.0**
comp=Z,55nm,1.4s,mb5.5
WLF Walferdange 84.73 14 P **P 09 09 32.2 +0.9**

comp=Z,39nm,1.6s,mb5.3
WLF Walferdange 84.73 14 *e*P **P 09 09 31.3 0.0**
comp=Z,95nm,1.6s,mb5.7
WLF *e*PP PP 09 12 47.2 -0.7
WLF Walferdange 84.73 14 *e*P **P 09 09 31.2 -0.1**
WLF *e* 09 12 45.7
WLF pmax pmax
comp=Z,78nm,1.4s,mb5.7
WLF MLR MLR
comp=Z,359nm,20.0s,MS4.8
WLF Walferdange 84.73 14 *e*P **P 09 09 31.1 -0.2**
comp=Z,78nm,1.4s,mb5.7
WLF *e*PP PP 09 12 45.7 -2.2
WLF LR LR
comp=Z,359nm,20.0s,MS4.8
JMB Yambol 84.75 30 P **P 09 09 30.8 -0.8**
KTD Kalmit 84.83 16 *e*P **P 09 09 32.5 +0.7**
DOU Dourbes 84.84 13 P **P 09 09 32.4 +0.5**
comp=Z,22nm,2.2s,mb4.9
PVL Pavlikeni 84.85 29 P **P 09 09 30.4 -1.7**
ARSA Arzberg 84.87 21 ⇓*i*P **P 09 09 32.1 0.0**
comp=Z,45nm,1.3s,mb5.4,SNR=19
GIVF Givet 84.89 13 *e*P **P 09 09 32.1 0.0**
comp=Z,178nm,1.7s,mb5.6
GIVF Givet 84.89 13 *e*P **P 09 09 32.1 0.0**
GIVF pmax pmax
comp=Z,89nm,1.7s,mb5.6
GIVF Givet 84.89 13 *e*P **P 09 09 32.1 0.0**
comp=Z,89nm,1.7s,mb5.6
PKSM Moragy 84.94 23 P **P 09 09 32.3 -0.1**
PKSM Moragy 84.94 23 ⇑*i*P **P 09 09 32.2 -0.2**
MOA Molln 85.05 20 ⇑*i*P **P 09 09 32.3 -0.7**
comp=Z,37nm,1.1s,mb5.4
SZH Strazhica 85.13 29 P **P 09 09 32.9 -0.6**
SNF Seneffe 85.17 13 P **P 09 09 34.3 +0.8**
comp=Z,40nm,1.6s,mb5.3
ABH Alteburg 85.24 15 *e*P **P 09 09 34.4 +0.6**
TOD Tromm 85.26 16 *e*P **P 09 09 34.6 +0.6**
BCLA Clavier 85.28 13 P **P 09 09 35.3 +1.3**
comp=Z,34nm,1.7s,mb5.2
BZS Buzias 85.45 25 ⇓P **P 09 09 35.1 +0.1**
BZS Buzias 85.45 25 ⇓*i*P **P 09 09 35.1 +0.1**
UCC Uccle 85.47 13 P **P 09 09 34.8 -0.1**
CONA Conrad Observa 85.58 21 *i* P **P 09 09 35.8 +0.2**
comp=Z,48nm,1.3s,mb5.5,SNR=26
MEM Membach 85.60 14 P **P 09 09 36.3 +0.6**
comp=Z,17nm,1.7s,mb5.0
PRD Provadia 85.69 30 P **P 09 09 35.0 -1.3**
HGN Heimansgroeve 85.73 14 *e*P **P 09 09 35.7 -0.6**
comp=Z,30nm,2.0s,mb5.2
HGN Heimansgroeve 85.73 14 *e*P PP 09 12 54.0 -2.1
comp=Z,49nm,2.0s
TNS Taunus Mts 85.75 15 *e*P **P 09 09 36.4 0.0**
comp=Z,85nm,1.4s,mb5.8
TNS *e*PP PP 09 12 55.0 -1.2
GEC2 GERESS Array S 85.79 19 *e*P **P 09 09 35.8 -0.8**
comp=Z,37nm,1.6s,mb5.4
GEC2 *e*PP PP 09 12 54.8 -1.8
BR131 Keskin Array S 85.80 36 *e*P **P 09 09 36.3 -0.6**
comp=Z,53nm,1.8s,mb5.5
BRTR Keskin Array B 85.80 36 P **P 09 09 36.9 -0.1**
comp=Z,2.9nm,1.0s,mb4.5,baz=191,slow=2.5,SNR=21
WET Wettzell 85.84 19 *e*P **P 09 09 36.2 -0.7**
comp=Z,91nm,1.6s,mb5.8
WET *e*PP PP 09 12 55.2 -1.7
GRF Grafenberg Arr 85.92 17 *e*P **P 09 09 36.8 -0.4**
comp=Z,166nm,1.7s,mb6.0
GRF *e*L 09 45 45.7
comp=Z,520nm,19.0s
GRF Grafenberg Arr 85.92 17 *e*P **P 09 09 36.8 -0.4**
GRF pmax pmax
comp=Z,166nm,1.7s,mb6.0
GRF MLR MLR
comp=Z,500nm,19.0s,MS4.9
KHC Kasperske Hory 86.02 19 *e*P **P 09 09 37.0 -0.8**
KHC *e* 09 12 56.2
KHC MLR MLR
comp=Z,500nm,14.7s,MS5.0
KHC Kasperske Hory 86.02 19 *e*P **P 09 09 36.8 -1.0**
comp=Z,49nm,1.5s,mb5.5
KHC Kasperske Hory 86.02 19 *e*P **P 09 09 37.0 -0.8**
KHC *e*PP PP 09 12 56.2 -2.2
KHC AMS AMS 09 46 30.0
comp=Z,500nm,14.7s
DEV Deva 86.15 26 ⇓*i*P **P 09 09 39.3 +0.8**
ZST Bratislava 86.20 21 *e*P **P 09 09 37.9 -0.8**
ZST pmax pmax
comp=Z,13nm,1.2s,mb5.0
ZST Bratislava 86.20 21 *e*P **P 09 09 37.9 -0.8**
comp=Z,13nm,1.2s,mb5.0
ZST Bratislava 86.20 21 *e*P **P 09 09 37.9 -0.8**
PSN Preselentsi 86.42 30 P **P 09 09 39.8 -0.1**
BUG Bochum--Univer 86.65 14 *e*P **P 09 09 41.0 +0.2**
comp=Z,69nm,1.5s,mb5.7
BUG *e*PP PP 09 13 02.3 -1.1
UBBA Unterbreizbach 86.67 16 *e*P **P 09 09 42.7 +1.8**
comp=Z,50nm,1.7s,mb5.5
UBBA *e*PP PP 09 13 01.3 -2.3
TREC Trest 86.70 20 *e*P **P 09 09 41.2 +0.1**
TREC *e* 09 13 02.8
TREC MLR MLR
comp=Z,400nm,20.9s,MS4.8
TREC Trest 86.70 20 *e*P **P 09 09 41.2 +0.1**
TREC *e*PP PP 09 13 02.8 -1.1
TREC AMS AMS 09 45 50.0
comp=Z,400nm,20.9s
NKC Novy Kostel 86.73 18 *e*P **P 09 09 41.5 +0.3**
NKC *e* 09 13 03.3
NKC MLR MLR
comp=Z,600nm,19.5s,MS5.0
NKC Novy Kostel 86.73 18 *e*P **P 09 09 41.5 +0.3**
NKC *e*PP PP 09 13 03.3 -0.8
NKC AMS AMS 09 46 40.0
comp=Z,600nm,19.5s
PSZ Piszkesteto 86.84 23 ⇓P **P 09 09 42.2 +0.3**
PSZ Piszkesteto 86.84 23 *e*P **P 09 09 41.6 -0.3**
comp=Z,57nm,1.2s,mb5.7
PSZ LR LR
comp=Z,229nm,20.0s,MS4.6
PSZ Piszkesteto 86.84 23 ⇑*e*PcP PcP 09 09 41.9 -2.2
PSZ Piszkesteto 86.84 23 ⇓*i*P **P 09 09 42.2 +0.3**
DRGR 86.85 25 ⇓P **P 09 09 42.3 +0.4**
DRGR 86.85 25 P **P 09 09 42.2 +0.3**
DRGR 86.85 25 ⇓*i*P **P 09 09 42.3 +0.4**
CVD Cernavoda 86.86 30 ⇑*i*P **P 09 09 43.3 +1.3**
MOX Moxa 86.89 17 *e*P **P 09 09 42.4 +0.4**
comp=Z,48nm,2.0s,mb5.4
MOX *e* 09 09 57.2
MOX
comp=Z,300nm,20.0s
MOX Moxa 86.89 17 *e*P **P 09 09 41.6 -0.4**
comp=Z,37nm,1.7s,mb5.3
TANN Tannenbergstha 86.90 18 *e*P **P 09 09 41.7 -0.3**
comp=Z,59nm,1.6s,mb5.6
MDB Medias 86.92 27 ⇑*i*P **P 09 09 42.7 +0.4**
DWPF Disney 86.97 306 PFAKE 09 09 50.0 +7.0
DWPF LR LR
comp=Z,250nm,19.0s,MS4.6
MLR Muntele Rosu 86.98 28 P **P 09 09 42.5 -0.1**
comp=Z,79nm,1.2s,mb5.8,baz=174,slow=3.4,SNR=43
MLR PP PP 09 13 05.3 -0.9
comp=Z,4.8nm,0.9s,baz=302,slow=9.3,SNR=3.4
MLR Muntele Rosu 86.98 28 P **P 09 09 42.8 +0.3**
MLR Muntele Rosu 86.98 28 ⇑*i*P **P 09 09 42.7 +0.1**
TEIG Tepich 86.99 296 *e*P **P 09 09 42.8 -0.5**
comp=Z,137nm,1.4s,mb6.0
TEIG LR LR
comp=Z,331nm,19.0s,MS4.8
VYHS Vyhne 87.00 22 *e*P **P 09 09 42.3 -0.3**
VYHS *e* 09 13 04.9
VYHS pmax pmax
comp=Z,37nm,1.6s,mb5.4
VYHS Vyhne 87.00 22 *e*P **P 09 09 42.3 -0.3**
comp=Z,37nm,1.6s,mb5.4
VYHS *e* 09 13 04.9
VYHS Vyhne 87.00 22 *e*P **P 09 09 42.3 -0.3**
VYHS *e*PP PP 09 13 04.9 -1.5
VRAC Vranov 87.03 21 P **P 09 09 43.0 +0.2**
comp=Z,6.5nm,0.7s,mb5.0,baz=201,slow=4.8,SNR=16
VRAC PP PP 09 13 03.9 -2.7
comp=Z,3.9nm,0.3s,baz=115,slow=17,SNR=11
VRAC Vranov 87.03 21 P **P 09 09 43.2 +0.4**
VRAC Vranov 87.03 21 ⇓*i*P **P 09 09 42.8 +0.1**
WTSB Winterswijk 87.05 14 *e*P **P 09 09 43.7 +0.9**
comp=Z,50nm,1.5s,mb5.5
WTSB Winterswijk 87.05 14 *e*P PP 09 13 04.9 -1.8
comp=Z,45nm,2.1s
PRU Pruhonice 87.06 19 *e*P **P 09 09 43.5 +0.6**
PRU *e* 09 13 03.9
PRU MLR MLR
comp=Z,300nm,20.1s,MS4.7
PRU Pruhonice 87.06 19 *e*P **P 09 09 43.5 +0.6**
PRU *e*PP PP 09 13 03.9 -2.9
PRU AMS AMS 09 47 30.0
comp=Z,300nm,20.1s
PRA Prague 87.11 19 P **P 09 09 43.0 -0.1**
HARR Harsova 87.13 30 ⇑P **P 09 09 41.8 -1.5**
HARR Harsova 87.13 30 ⇑*i*P **P 09 09 41.8 -1.5**
TIRR Tirgusor 87.14 30 ⇓P **P 09 09 43.4 0.0**
TIRR Tirgusor 87.14 30 ⇓*i*P **P 09 09 43.4 0.0**
PLOR Plostina 87.56 28 ⇓P **P 09 09 46.1 +0.7**
PLOR Plostina 87.56 28 ⇓*i*P **P 09 09 46.0 +0.6**
PVCC Panska Ves 87.56 19 *e*P **P 09 09 45.7 +0.5**
PVCC *e* 09 13 09.0
PVCC MLR MLR
comp=Z,400nm,17.9s,MS4.9
PVCC Panska Ves 87.56 19 *e*P **P 09 09 45.7 +0.5**
PVCC *e*PP PP 09 13 09.0 -1.8
PVCC AMS AMS 09 47 10.0
comp=Z,400nm,17.9s
IBBN Ibbenburen 87.57 14 *e*P **P 09 09 45.8 +0.6**
comp=Z,66nm,1.5s,mb5.6
VRI Vrincioaia 87.60 28 ⇑P **P 09 09 45.4 -0.2**
VRI Vrincioaia 87.60 28 P **P 09 09 45.0 -0.6**
VRI Vrincioaia 87.60 28 ⇑*i*P **P 09 09 45.4 -0.2**
BRG Berggiesshubel 87.70 18 *e*P **P 09 09 45.7 -0.2**
comp=Z,23nm,1.6s,mb5.2
BRG Berggiesshubel 87.70 18 *i* P **P 09 09 46.0 0.0**
comp=Z,23nm,1.6s,mb5.2
BRG *i* 09 10 00.9
comp=Z,23nm,1.9s
BRG *i* 09 13 10.9
comp=Z,13nm,1.4s
BRG S S 09 20 26.0 -1.7
BRG
comp=N,349nm,15.7s
BRG
comp=E,167nm,18.4s
BRG
comp=Z,466nm,17.5s
CLZ Clausthal 87.70 16 *e*P **P 09 09 46.1 +0.2**
comp=Z,30nm,1.5s,mb5.3
CLZ *e*PP PP 09 13 09.9 -2.1
MORC Moravsky Berou 87.73 21 P **P 09 09 46.7 +0.6**
MORC Moravsky Berou 87.73 21 *e*P **P 09 09 46.0 -0.1**
comp=Z,45nm,1.5s,mb5.5
MORC *e*PP PP 09 13 10.8 -1.5
MORC Moravsky Berou 87.73 21 ⇑*i*P **P 09 09 46.5 +0.4**
CLL Collm 87.85 18 *e*P **P 09 09 46.4 -0.2**
comp=Z,44nm,1.6s,mb5.4
CLL *e*PP PP 09 13 11.0 -2.1
CLL Collm 87.85 18 ⇑*i*P **P 09 09 46.5 -0.1**
CLL *i* 09 13 11.3
CLL *e*S S 09 20 30.0 +0.9
CLL pmax pmax
comp=Z,45nm,1.6s,mb5.5
CLL pmax pmax
comp=Z,29nm,1.3s,mb5.3
CLL MLR MLR
comp=Z,300nm,19.0s,MS4.7
CLL Collm 87.85 18 ⇑*i*P **P 09 09 46.5 -0.1**
comp=Z,45nm,1.6s,mb5.5
CLL *i* PP PP 09 13 11.3 -1.8
comp=Z,29nm,1.3s
CLL *e*S S 09 20 30.0 +0.9
CLL *e*PS 09 21 32.0
CLL *e*SS SS 09 26 15.0 -2.2
CLL *e*SSS 09 29 42.0
CLL *e*SSSS 09 32 42.0
CLL Lm 09 47 00.0
comp=N,200nm,18.0s
CLL Lm 09 47 00.0
comp=E,200nm,18.8s
CLL Lm 09 47 00.0
comp=Z,300nm,19.0s
BMR Baia Mare 87.88 25 P **P 09 09 48.0 +1.1**
BMR Baia Mare 87.88 25 ⇑*i*P **P 09 09 47.1 +0.2**
DPC Dobruska-Polom 87.89 20 *e*P **P 09 09 47.4 +0.6**
DPC *e* 09 13 08.1
DPC MLR MLR
comp=Z,300nm,14.5s,MS4.8
DPC Dobruska-Polom 87.89 20 *e*P **P 09 09 47.4 +0.6**
DPC *e*PP PP 09 13 08.1 -5.3
DPC AMS AMS 09 47 30.0
comp=Z,300nm,14.5s
UPC Upice 87.94 20 *e*P **P 09 09 47.7 +0.6**
UPC *e* 09 13 11.1
UPC Upice 87.94 20 *e*P **P 09 09 47.7 +0.6**
UPC *e*PP PP 09 13 11.1 -2.8
OKC Ostrava-Krasne 87.97 21 *e*P **P 09 09 47.4 +0.2**
OKC *e* 09 13 12.8
OKC MLR MLR
comp=Z,700nm,20.7s,MS5.1
OKC Ostrava-Krasne 87.97 21 *e*P **P 09 09 47.4 +0.2**
OKC *e*PP PP 09 13 12.8 -1.3
OKC AMS AMS 09 49 00.0
comp=Z,700nm,20.7s
NRDL Niedersach Rie 88.25 16 *e*P **P 09 09 49.5 +1.0**
comp=Z,82nm,1.7s,mb5.7
NRDL *e*PP PP 09 13 14.3 -2.0
UZH Uzhgorod 88.27 24 *e*P **P 09 09 47.8 -0.9**
NIE Niedzica 88.29 23 *e*P **P 09 09 49.7 +1.0**
KSP Ksiaz 88.32 20 *e*P **P 09 09 49.5 +0.6**
KSP *e* 09 13 14.5
BUR01 Bucovina Ar. S 88.46 26 P **P 09 09 50.8 +1.2**
BURAR Bucovina Array 88.46 26 ⇓P **P 09 09 50.5 +0.9**
BURAR Bucovina Array 88.46 26 ⇓*i*P **P 09 09 49.9 +0.3**
BUR08 Bucovina Ar. S 88.48 26 *e*P **P 09 09 49.8 +0.1**
LEOM Leova 88.70 29 ⇑*i*P **P 09 09 50.4 -0.4**
ESK Eskdalemuir 88.76 7 *i* P **P 09 09 52.1 +1.3**
ESK Eskdalemuir 88.76 7 *e*P **P 09 09 50.1 -0.8**
comp=Z,105nm,1.6s,mb5.9
ESK LR LR
comp=Z,315nm,19.0s,MS4.8
OJC Ojcow 88.82 22 *e*P **P 09 09 49.4 -1.8**
ARQ Araqi 88.98 61 P **P 09 09 54.2 +1.5**
SNR=7.6
KWP Kalwaria Pacla 89.27 24 PFAKE 09 10 00.0 +6.6
KWP LR LR
comp=Z,793nm,19.0s,MS5.2
KWP Kalwaria Pacla 89.27 24 ⇑*i*P **P 09 09 54.2 +0.8**
NAZ Nazwa, Dubai 89.34 59 ⇓P **P 09 09 54.9 +0.6**
SNR=7.0
KIS Kishinev 89.36 29 *e*UNK 09 09 52.0
KIS Kishinev 89.36 29 *e*P **P 09 09 52.0 -1.9**
KIS *e* 09 13 20.0
CNNC Cliffs of the 89.38 314 PFAKE 09 10 10.0 +16
CNNC LR LR
comp=Z,334nm,20.0s,MS4.8
NHSC New Hope 89.38 311 PFAKE 09 10 10.0 +16
NHSC LR LR
comp=Z,284nm,19.0s,MS4.7
ASHO Ashiyiah 89.44 60 P **P 09 09 55.8 +0.9**
SNR=7.2
HATD Hatta, Dubai 89.58 60 P **P 09 09 56.4 +1.0**
SNR=8.7
BSEG Bad Segeberg 89.64 15 *e*P **P 09 09 55.6 +0.6**
comp=Z,79nm,1.4s,mb5.8
BSEG *e*PP PP 09 13 26.0 -1.4
HOQ Hoqain 89.70 61 ⇓P **P 09 09 56.6 +0.5**
SNR=7.9
LVV L'vov 89.88 25 *e*P **P 09 09 55.8 -0.4**
CBN Corbin 91.06 316 *e*P **P 09 10 01.9 -0.2**
comp=Z,8.2nm,0.3s,mb5.5
CBN LR LR
comp=Z,224nm,20.0s,MS4.6
ANN Anapa 91.47 35 *e*P **P 09 10 03.1 -0.7**
ANN pmax pmax
comp=Z,39nm,1.8s,mb5.4
GOGA Godfrey 91.69 309 PFAKE 09 10 20.0 +15
GOGA LR LR
comp=Z,208nm,20.0s,MS4.6
SOC Sochi 91.71 37 *e*P **P 09 10 04.0 -0.9**
SOC *e**PP pP 09 10 09.8 +1.5
SOC *e*S SKSac 09 20 40.4 +3.0
SOC pmax pmax
comp=Z,15nm,0.5s,mb5.6
MUD Monsted U'grnd 91.75 14 *i* P **P 09 10 05.9 +1.1**
comp=Z,19nm,1.2s,mb5.3
PKME Peaks-Kenny Pk 91.78 325 PFAKE 09 10 20.0 +15
PKME LR LR
comp=Z,317nm,19.0s,MS4.8
GNI Garni 91.98 42 P **P 09 10 07.5 +1.3**
comp=Z,3.0nm,0.3s,mb5.1,baz=92,slow=4.8,SNR=10.0
GNI Garni 91.98 42 *d i*P **P 09 10 08.0 +1.7**
GNI pmax pmax
comp=Z,103nm,1.8s
GNI MLR MLR
comp=Z,123nm,19.0s
GNI Garni 91.98 42 *e*P **P 09 10 08.3 +2.0**
comp=Z,137nm,1.6s,mb6.0
GNI LR LR
comp=Z,135nm,20.0s,MS4.4
GNI Garni 91.98 42 P **P 09 10 08.5 +2.2**
SNR=8.3
GNI P 09 10 08.5
SNR=8.3
BLA Blacksburg 92.21 314 PFAKE 09 10 20.0 +13
BLA LR LR
comp=Z,266nm,21.0s,MS4.7
LBNH Lisbon 92.32 323 PFAKE 09 10 20.0 +12
LBNH LR LR
comp=Z,305nm,22.0s,MS4.7
ELN Prospectdale 92.42 314 *e*P **P 09 10 08.1 -0.3**
KIEV Kiev 92.49 27 *e*P **P 09 10 08.3 0.0**
KIEV pmax pmax
comp=Z,41nm,1.5s,mb5.5
KIEV MLR MLR
comp=Z,192nm,22.0s,MS4.5
KIEV Kiev 92.49 27 *e*P **P 09 10 08.3 0.0**
comp=Z,41nm,1.5s,mb5.5
KIEV LR LR
comp=Z,192nm,22.0s,MS4.5
AKASG Malin Array Be 92.50 27 P **P 09 10 08.1 -0.3**
comp=Z,10nm,1.1s,mb5.2,baz=219,slow=5.1,SNR=35
AKASG LR LR 09 53 09.7
comp=Z,78nm,18.2s,MS4.2,baz=250,slow=36
AKBB Malin Array Si 92.50 27 *e*P **P 09 10 08.1 -0.3**
BRAL Brewton 92.60 306 PFAKE 09 10 20.0 +11
BRAL LR LR
comp=Z,309nm,20.0s,MS4.8
SSPA Standing Stone 92.99 318 PFAKE 09 10 20.0 +9.1
SSPA LR LR
comp=Z,268nm,20.0s,MS4.7
BINY Binghamton 93.00 320 *e*P **P 09 10 11.1 +0.1**
comp=Z,13nm,1.1s,mb5.3
BINY LR LR
comp=Z,226nm,19.0s,MS4.6
TBLG Delisi 93.06 41 *e*P **P 09 10 12.4 +1.2**
TBLG Delisi 93.06 41 P **P 09 10 12.4 +1.2**
MTA Mtatsminda 93.06 41 P **P 09 10 12.3 +1.1**
SUW Suwalki 93.15 22 *e*P **P 09 10 11.7 +0.4**
DGRG David-gareji 93.22 41 P **P 09 10 13.6 +1.6**
NCB Newcomb 93.30 322 PFAKE 09 10 20.0 +7.8
NCB LR LR
comp=Z,269nm,20.0s,MS4.7
ZEI Tsey 93.31 40 *e*P **P 09 10 10.9 -1.4**
ZEI pmax pmax
comp=Z,46nm,1.3s,mb5.8
MCWV Mont Chateau 93.47 316 PFAKE 09 10 20.0 +6.9
MCWV LR LR
comp=Z,275nm,21.0s,MS4.7
KIV Kislovodsk 93.49 38 *c i*P **P 09 10 13.4 +0.3**
KIV *e* 09 13 57.0
KIV *e*PS PS 09 22 33.5 -2.4
KIV pmax pmax
comp=Z,50nm,1.6s,mb5.7
KIV MLR MLR
comp=Z,100nm,18.0s,MS4.3
KIV Kislovodsk 93.49 38 *e*P **P 09 10 14.0 +0.8**
comp=Z,14nm,0.4s,mb5.7
KIV LR LR
comp=Z,98nm,20.0s,MS4.3
LRAL Lakeview Retre 93.78 307 *e*P **P 09 10 13.9 -0.8**
comp=Z,7.7nm,1.1s,mb5.0
LRAL LR LR
comp=Z,210nm,22.0s,MS4.5
LONY Lake Ozonia 93.93 322 PFAKE 09 10 30.0 +15
LONY LR LR
comp=Z,262nm,22.0s,MS4.7
SWET Sewanee 94.41 310 *e*P **P 09 10 16.3 -1.3**
KONO Kongsberg 94.82 13 PFAKE 09 10 30.0 +11
KONO LR LR
comp=Z,274nm,20.0s,MS4.7
ERPA Erie 95.16 318 PFAKE 09 10 30.0 +9.2
ERPA LR LR
comp=Z,258nm,20.0s,MS4.7
MAK Makhachkala 95.40 41 *e*P **P 09 10 19.5 -2.4**
MAK *e*PPP 09 16 20.7
MAK pmax pmax
comp=Z,143nm,1.2s,mb6.3
MAK MLR MLR
comp=Z,204nm,21.0s,MS4.6
ACSO Alum Creek Sta 95.68 315 PFAKE 09 10 30.0 +6.7
ACSO LR LR
comp=Z,238nm,20.0s,MS4.7
VBMS Vicksburg 95.69 305 PFAKE 09 10 30.0 +6.5
VBMS LR LR
comp=Z,419nm,21.0s,MS4.9
HFS Hagfors 96.08 14 PP PP 09 14 11.4 -6.4
comp=Z,3.2nm,1.0s,baz=32,slow=8.7,SNR=3.6
WVT Waverly 96.19 309 *e*P **P 09 10 23.7 -2.0**
WVT pmax pmax
comp=Z,61nm,2.2s,mb5.6
WVT MLR MLR
comp=Z,200nm,21.0s,MS4.6
WVT Waverly 96.19 309 *e*P **P 09 10 23.7 -2.0**
comp=Z,60nm,2.2s,mb5.6
WVT LR LR
comp=Z,200nm,21.0s,MS4.6
OXF Oxford 96.27 307 PFAKE 09 10 40.0 +14
OXF LR LR
comp=Z,283nm,22.0s,MS4.7
NOA NORSAR Array B 96.42 13 P **P 09 10 27.4 +1.3**
comp=Z,6.8nm,1.2s,mb5.0,baz=199,slow=5.2,SNR=4.9
NOA PP PP 09 14 15.7 -4.8
comp=Z,9.4nm,1.2s,baz=204,slow=7.8,SNR=5.8
NOA LR LR 09 51 48.3
comp=Z,108nm,19.8s,MS4.3,baz=205,slow=34
NOA NORSAR Array B 96.42 13 P **P 09 10 27.4 +1.3**
NOA 09 14 15.7
NOA NORSAR Array B 96.42 13 P **P 09 10 27.4 +1.3**
NOA PP PP 09 14 15.7 -4.8
NOA LR LR 09 51 48.3
WCI Wyandotte Cave 96.47 312 PFAKE 09 10 40.0 +13
WCI LR LR
comp=Z,237nm,19.0s,MS4.7
AAM Ann Arbor 97.37 316 PFAKE 09 10 40.0 +9.1
AAM LR LR
comp=Z,322nm,19.0s,MS4.8
SCHQ Schefferville 97.88 333 LR LR 09 49 49.6
comp=Z,296nm,18.3s,MS4.8,baz=280,slow=32
SCHQ Schefferville 97.88 333 PFAKE 09 10 40.0 +7.1
SCHQ LR LR
comp=Z,425nm,20.0s,MS4.9
HKT Hockley 98.16 300 PFAKE 09 10 50.0 +15
HKT LR LR
comp=Z,188nm,20.0s,MS4.6
NATX Nacogdoches 98.32 302 PFAKE 09 10 50.0 +15
NATX LR LR
comp=Z,174nm,20.0s,MS4.5
OBN Obninsk 98.74 27 *e*P **P 09 10 38.7 +2.0**
OBN *e* 09 14 38.7
OBN *e*SS SS 09 28 54.0 +1.1
OBN pmax pmax
comp=Z,4.0nm,0.7s,mb5.1
OBN MLR MLR
comp=Z,200nm,17.0s,MS4.7
OBN Obninsk 98.74 27 PFAKE 09 10 50.0 +13
OBN LR LR
comp=Z,151nm,20.0s,MS4.5
MIAR Mount Ida 99.11 305 *e*P **P 09 10 37.5 -1.4**
MIAR pmax pmax
comp=Z,11nm,1.4s,mb5.2
MIAR MLR MLR
comp=Z,328nm,22.0s,MS4.8
MIAR Mount Ida 99.11 305 *e*P **P 09 10 37.5 -1.4**
comp=Z,11nm,1.4s,mb5.2
MIAR LR LR
comp=Z,328nm,22.0s,MS4.8
CCM Cathedral Cave 99.53 309 PFAKE 09 10 50.0 +9.3
CCM LR LR
comp=Z,161nm,19.0s,MS4.5
HDIL Hopedale 99.72 312 PFAKE 09 10 50.0 +8.3
HDIL LR LR

comp=Z,311nm,22.0s,MS4.8
FINES FINESS Array B 100.22 19 PP PP 09 14 43.3 -6.3
comp=Z,2.8nm,0.9s,baz=212,slow=6.8,SNR=5.8
KAF Kangasniemi 100.84 19 *ep* PP 09 14 44.8 -9.5
comp=Z,9.5nm,1.1s
KAF Kangasniemi 100.84 19 *ep* PP 09 14 44.8 -9.5
comp=Z,9.5nm,1.1s
JCT Junction City 101.34 299 PFAKE 09 11 00.0 +11
JCT LR LR
comp=Z,197nm,21.0s,MS4.6
JFWS Jewell Farm 101.65 314 PFAKE 09 11 00.0 +10
JFWS LR LR
comp=Z,262nm,22.0s,MS4.7
WMOK Wichita Mounta 102.83 303 PFAKE 09 11 10.0 +15
WMOK LR LR
comp=Z,192nm,20.0s,MS4.6
JOF Joensuu 102.88 20 *ep* PP 09 14 57.9 -12
comp=Z,5.4nm,1.0s
JOF Joensuu 102.88 20 *ep* PP 09 14 57.9 -12
comp=Z,5.4nm,1.0s
SCIA State Center 102.92 312 PFAKE 09 11 10.0 +14
SCIA LR LR
comp=Z,256nm,22.0s,MS4.7
628A Black Gap, Mar 103.12 297 ⇑PP PP 09 15 12.3 +0.1
baz=103,SNR=5.5
SFJD Kangerlussuaq 103.23 347 PFAKE 09 11 10.0 +13
SFJD LR LR
comp=Z,474nm,22.0s,MS5.0
627A Terlingua Ranc 103.48 296 ⇓PP PP 09 15 13.9 -1.0
baz=104
428A Kincaid Ranch, 103.60 298 ⇓PP PP 09 15 15.1 -0.6
baz=104
KSU1 Kansas State U 103.62 308 PFAKE 09 11 10.0 +11
KSU1 LR LR
comp=Z,256nm,21.0s,MS4.7
TXAR Lajitas Array 103.63 296 Pdiff Pdif 09 10 58.8 -0.3
comp=Z,1.0nm,1.2s,baz=96,slow=3.9,SNR=3.9
TXAR PP PP 09 15 11.5 -4.5
comp=Z,1.0nm,1.1s,baz=139,slow=7.8,SNR=5.1
TXAR Lajitas Array 103.63 296 Pdif Pdif 09 10 58.8 -0.3
TXAR PP PP 09 15 11.5 -4.5
527A Woodward Ranch 104.00 297 ⇓PKiKP PKiKP 09 15 17.2 -1.0
baz=104
626A Big Bend Ranch 104.09 296 ⇑PP PP 09 15 18.1 -1.3
baz=104
427A Hayter Ranch, 104.19 298 ⇓PKiKP PKiKP 09 15 17.5 -1.1
baz=104
426A McDonald Obser 104.57 297 ⇓Pdiff Pdif 09 11 02.7 -0.5
baz=105
426A ⇑PP PP 09 15 22.6 -0.4
baz=105,SNR=5.4
AMTX Amarillo 104.95 302 PFAKE 09 11 20.0 +15
AMTX LR LR
comp=Z,200nm,20.0s,MS4.7
EYMN Ely 105.17 318 PFAKE 09 15 30.0 +10
EYMN LR LR
comp=Z,245nm,19.0s,MS4.8
Z27A Tatum 105.28 300 ⇓PKiKP PKiKP 09 15 19.6 -0.9
baz=105
425A Indio Mountain 105.34 297 ⇓PKiKP PKiKP 09 15 18.9 -1.8
baz=105
425A ⇓PP PP 09 15 27.5 -1.2
baz=105
CBKS Cedar Bluff 105.57 306 PFAKE 09 15 30.0 +9.2
CBKS LR LR
comp=Z,264nm,22.0s,MS4.7
325A Bean Ranch, Si 105.62 297 ⇓PP PP 09 15 30.1 -0.6
baz=106,SNR=5.1
ECSD EROS Data Cent 106.01 312 PFAKE 09 15 30.0 +8.5
ECSD LR LR
comp=Z,201nm,20.0s,MS4.7
W27A Bowe Ranch, En 106.03 302 ⇑PP PP 09 15 33.1 -0.6
baz=106
324A Moseley Ranch, 106.04 297 ⇓PP PP 09 15 33.4 -0.4
baz=106
MNTX Cornudas Mount 106.09 297 PFAKE 09 15 30.0 +8.0
MNTX LR LR
comp=Z,179nm,20.0s,MS4.6
Z25A Roswell 106.36 299 ⇓PP PP 09 15 35.6 -0.6
baz=106
ARCES ARCESS Array B 106.74 14 PP PP 09 15 33.9 -4.2
comp=Z,5.4nm,1.0s,baz=259,slow=1.9,SNR=5.9
KEV Kevo 107.22 14 PFAKE 09 15 30.0 +7.0
KEV LR LR
comp=Z,357nm,20.0s,MS4.9
V25A Rancho No Teng 107.51 302 ⇓PP PP 09 15 41.3 -3.3
baz=108
AGMN Agassiz Nation 107.85 316 PFAKE 09 15 40.0 +15
AGMN LR LR
comp=Z,207nm,20.0s,MS4.7
Z22A Elephant Butte 108.00 298 ⇑PP PP 09 15 48.2 -0.1
baz=108
OGNE Ogallala 108.14 307 PFAKE 09 15 40.0 +14
OGNE LR LR
comp=Z,239nm,22.0s,MS4.7
W23A Werner Place, 108.30 300 ⇓PP PP 09 15 49.0 -1.4
baz=108
ANMO Albuquerque 108.43 300 PFAKE 09 15 40.0 +14
ANMO LR LR
comp=Z,172nm,22.0s,MS4.6
S24A Houchin Ranch, 108.78 303 ⇓PP PP 09 15 52.8 -1.1
baz=109
U23A El Rito 108.87 301 ⇑PP PP 09 15 52.7 -1.9
baz=109
SDCO Great Sand Dun 109.03 303 PFAKE 09 15 40.0 +13
SDCO LR LR
comp=Z,251nm,22.0s,MS4.7
ARU Arti 109.14 35 PFAKE 09 15 40.0 +13
ARU LR LR
comp=Z,174nm,19.0s,MS4.6
Z20A Nine Sixteen R 109.14 297 ⇑PP PP 09 15 56.0 -0.6
baz=109,SNR=5.6
Y20A Horse Springs, 109.35 298 ⇓PP PP 09 15 58.1 0.0
baz=110
318A Bisbee 109.43 295 ⇓PP PP 09 15 59.1 +0.5
baz=110
X20A Quemado 109.73 299 ⇓PP PP 09 15 58.7 -2.1
baz=110
ISCO Idaho Springs 110.05 305 PFAKE 09 15 40.0 +11
ISCO LR LR
comp=Z,245nm,22.0s,MS4.7
T21A Navajo Lake 110.13 302 ⇑PP PP 09 16 01.4 -2.3
baz=110
V20A Brimhall 110.27 300 ⇑PP PP 09 16 02.9 -1.8
baz=110
TUC Tucson 110.42 296 PFAKE 09 15 40.0 +10
TUC LR LR
comp=Z,180nm,19.0s,MS4.7
CAN Canberra 110.47 167 PFAKE 09 15 40.0 +10
CAN LR LR
comp=Z,792nm,20.0s,MS5.3
Y18A Canyon Day Jun 110.52 297 ⇑PP PP 09 16 04.8 -1.7
baz=111
MVCO Mesa Verde 110.92 301 ⇓PP PP 09 16 07.4 -1.9
baz=111
MVCO Mesa Verde 110.92 301 PFAKE 09 15 40.0 +9.1
MVCO LR LR
comp=Z,147nm,20.0s,MS4.6
AML Almayashu 111.09 53 PFAKE 09 15 40.0 +8.9
AML LR LR
comp=Z,138nm,19.0s,MS4.6
Y17A Roosevelt 111.09 297 ⇑PP PP 09 16 08.4 -2.3
baz=111
T19A Beclabito 111.13 301 ⇑PP PP 09 16 08.5 -2.4
baz=111
R20A Redvale 111.26 302 ⇓PP PP 09 16 08.8 -3.0
baz=111
EKS2 Erkin-Say 111.37 52 PFAKE 09 15 40.0 +8.4
EKS2 LR LR
comp=Z,216nm,21.0s,MS4.7
AAK Ala-Archa 111.84 53 PP PP 09 16 11.2 -4.6
comp=Z,1.5nm,0.4s,baz=216,slow=7.0,SNR=3.8
WUAZ Wupatki 112.28 299 PFAKE 09 15 50.0 +16
WUAZ LR LR
comp=Z,262nm,22.0s,MS4.8
X15A Humboldt 112.47 297 ⇑PP PP 09 16 18.6 -1.9
baz=113
TAOE Nuku Hiva Isla 112.50 242 *e*LR LR 09 49 06.0
comp=Z,237nm,26.9s
TKM2 Tokmak 2 112.70 53 PFAKE 09 15 50.0 +16
TKM2 LR LR
comp=Z,169nm,22.0s,MS4.6
Y14A Wickenburg 112.81 296 ⇑PP PP 09 16 22.3 -0.7
baz=113
DGMT Dagmar 112.87 314 PFAKE 09 15 50.0 +16
DGMT LR LR
comp=Z,245nm,22.0s,MS4.8

PPT Papeete 112.89 229 *e*LR LR 09 49 14.3
comp=Z,313nm,34.8s
Q18A Rafter H Ranch 112.90 303 ⇓PP PP 09 16 21.2 -2.3
baz=113
X14A Yava 112.95 297 ⇑PP PP 09 16 21.4 -2.6
baz=113
KBS Kingsbay 112.97 6 PFAKE 09 15 50.0 +16
KBS LR LR
comp=Z,187nm,20.0s,MS4.7
P18A Preston Nutter 113.19 303 ⇑PP PP 09 16 25.0 -0.6
baz=113
S16A Weppner Ranch, 113.37 301 ⇓PP PP 09 16 25.5 -1.3
baz=114
LAO LASA Array 113.39 311 PFAKE 09 15 50.0 +15
LAO LR LR
comp=Z,260nm,20.0s,MS4.8
L19A Farson 113.59 306 ⇑PP PP 09 16 27.6 -0.8
baz=114
BRVK Borovoye 113.61 41 PFAKE 09 15 50.0 +15
BRVK LR LR
comp=Z,196nm,19.0s,MS4.7
T15A Red Dirt Ranch 113.65 300 ⇑PP PP 09 16 27.5 -1.4
baz=114
BVAR Borovoye Array 113.65 41 PP PP 09 16 26.1 -2.4
comp=Z,0.6nm,0.5s,baz=247,slow=11,SNR=4.5
BVAR PKKPbc PKKPbc 09 26 22.2 +2.5
comp=Z,0.4nm,0.4s,baz=60,slow=7.0,SNR=4.1
O17A Robinson Place 113.77 303 ⇓P PP 09 16 28.7 -1.0
baz=114,SNR=5.3
PDAR Pinedale Array 113.99 306 PKP PKiKP 09 15 35.6 -0.9
comp=Z,0.4nm,0.8s,baz=180,slow=1.5,SNR=5.0
PDAR PP PP 09 16 28.5 -2.7
comp=Z,2.1nm,1.1s,baz=145,slow=5.4,SNR=7.3
BW06 Boulder Array 114.00 306 PFAKE 09 15 50.0 +13
BW06 LR LR
comp=Z,284nm,19.0s,MS4.9
R15A Junction 114.06 301 ⇑PP PP 09 16 31.1 -0.6
baz=114
MVU Marysvale 114.13 301 PFAKE 09 15 50.0 +13
MVU LR LR
comp=Z,157nm,20.0s,MS4.6
FFC Flin Flon 114.15 321 PFAKE 09 15 50.0 +14
FFC LR LR
comp=Z,254nm,20.0s,MS4.8
M17A Scullys Gap (B 114.23 305 ⇓PP PP 09 16 31.2 -1.7
baz=114
O16A Springville 114.31 303 ⇑PP PP 09 16 33.5 0.0
baz=114
N16A Rees Ranch, Co 114.54 304 ⇓PP PP 09 16 34.8 -0.3
baz=115
I18A Diamond G Ranc 114.54 307 ⇓PP PP 09 16 35.6 +0.6
baz=115
U13A Pakoon Wash 114.56 299 ⇓PP PP 09 16 33.1 -2.2
baz=115
RLMT Red Lodge 114.73 309 PFAKE 09 15 50.0 +12
RLMT LR LR
comp=Z,217nm,19.0s,MS4.8
T13A Saint George 114.76 299 ⇑PP PP 09 16 34.8 -1.9
baz=115
HWUT Hardware Ranch 114.91 305 *e*PKPdf PKiKP 09 15 37.3 -1.1
HWUT LR LR
comp=Z,198nm,21.0s,MS4.7
AHID Auburn Hatcher 115.04 306 PFAKE 09 15 50.0 +11
AHID LR LR
comp=Z,225nm,20.0s,MS4.8
BELC Belle Mtn. Jos 115.10 295 ⇑PP PP 09 16 37.8 -1.4
baz=115
P14A Drum Mountains 115.17 302 ⇓PP PP 09 16 39.9 +0.3
baz=115
TPAW Teton Pass 115.22 307 *e*PKPdf PKiKP 09 15 38.7 -0.2
DUG Dugway 115.23 303 ⇑PP PP 09 16 38.6 -1.4
baz=115,SNR=6.6
DUG Dugway 115.23 303 PFAKE 09 15 50.0 +11
DUG LR LR
comp=Z,207nm,20.0s,MS4.7
LKWY Lake 115.26 308 PFAKE 09 15 50.0 +11
LKWY LR LR
comp=Z,334nm,21.0s,MS4.9
PFO Pinyon Flat Ob 115.28 295 PFAKE 09 15 50.0 +11
PFO LR LR
comp=Z,155nm,19.0s,MS4.6
F18A Big Timber 115.32 310 ⇓PP PP 09 16 40.1 -0.4
baz=115
L15A Malad City 115.63 305 ⇓PP PP 09 16 41.3 -1.4
baz=116
BGU Big Grassy Mou 115.66 303 *e*PKPdf PKPdf 09 15 39.8 -0.1
BGU *e*PP PP 09 16 41.8 -1.2
K15A Arbon 115.98 305 ⇑PP PP 09 16 44.4 -0.8
baz=116,SNR=5.8
M14A Sheep Mountain 116.10 304 ⇓PP PP 09 16 44.8 -1.3
baz=116,SNR=5.2
EGMT Eagleton 116.12 312 PFAKE 09 15 50.0 +10
EGMT LR LR
comp=Z,234nm,21.0s,MS4.8
J15A Blackfoot 116.18 306 ⇓PP PP 09 16 46.5 -0.1
baz=116
K14A Jones Ranch, D 116.37 305 ⇑PP PP 09 16 47.0 -1.0
baz=116
BOZ Bozeman (W) 116.47 309 PFAKE 09 15 50.0 +8.8
BOZ LR LR
comp=Z,186nm,21.0s,MS4.7
R11A Troy Canyon, C 116.50 300 ⇑PP PP 09 16 48.3 -0.7
baz=117
M13A Montello 116.62 304 ⇓PP PP 09 16 50.3 +0.6
baz=117
M13A Montello 116.62 304 *e*PKPdf PKPdf 09 15 42.0 +0.3
M13A *e*PP PP 09 16 48.7 -1.0
O12A Currie 116.62 302 ⇑PP PP 09 16 48.9 -0.9
baz=117
ASAR Alice Springs 116.64 149 PKP PKPdf 09 15 40.7 -1.8
comp=Z,1.2nm,0.9s,baz=344,slow=0.1,SNR=9.6
H15A Lima 116.77 307 ⇓PP PP 09 16 50.4 -0.3
baz=117
J14A Carey 116.89 306 ⇑PP PP 09 16 50.8 -0.8
baz=117,SNR=9.2
DLMT Dillon 117.00 308 *e*PKPdf PKPdf 09 15 42.5 +0.3
N12A Clover Valley, 117.05 303 ⇑PP PP 09 16 51.4 -1.3
baz=117
LRM Limekiln Ridge 117.07 309 *e*PKPdf PKPdf 09 15 42.6 +0.2
LRM *e*PP PP 09 16 53.4 +0.7
P11A Circle Ranch, 117.08 301 ⇓PP PP 09 16 53.4 +0.4
baz=117
ELK Elko 117.15 303 PFAKE 09 15 50.0 +7.3
ELK LR LR
comp=Z,225nm,20.0s,MS4.8
DAC Darwin (Calif) 117.20 297 PFAKE 09 15 50.0 +7.1
DAC LR LR
comp=Z,218nm,21.0s,MS4.8
L12A House Creek Ra 117.50 304 ⇓PP PP 09 16 54.5 -1.4
baz=118
KURK Kurchatov 117.55 46*c i*PKIKP PKPdf 09 15 44.1 +1.0
KURK pmax pmax
comp=Z,2.0nm,1.2s
KURK Kurchatov 117.55 46 PFAKE 09 15 50.0 +6.9
KURK LR LR
comp=Z,110nm,20.0s,MS4.5
HLID Hailey 117.59 306 ⇓PP PP 09 16 55.7 -0.7
baz=118
HLID Hailey 117.59 306 PFAKE 09 16 00.0 +17
HLID LR LR
comp=Z,248nm,20.0s,MS4.8
TPH Tonopah 117.60 299 PFAKE 09 16 00.0 +16
TPH LR LR
comp=Z,187nm,22.0s,MS4.7
J12A Stokes Ranch, 117.94 305 ⇓PP PP 09 16 58.6 -0.3
baz=118
CHMT Chamberlain Mo 117.96 310 *e*PKPdf PKPdf 09 15 43.3 -0.7
CHMT *e*PP PP 09 16 59.4 +0.4
MSO Missoula 118.38 309 PFAKE 09 16 00.0 +15
MSO LR LR
comp=Z,164nm,19.0s,MS4.7
BMN Battle Mountai 118.45 302 PFAKE 09 16 00.0 +15
BMN LR LR
comp=Z,174nm,19.0s,MS4.7
L10A Juniper Basin 118.49 304 ⇓PP PP 09 17 02.3 -0.4
baz=119
NVAR Mina Array Bea 118.52 299 PKP PKPdf 09 15 45.5 +0.1
comp=Z,1.3nm,0.9s,baz=149,slow=3.5,SNR=10
NVAR PP PP 09 17 00.7 -2.3
comp=Z,0.7nm,0.3s,baz=145,slow=12,SNR=13
NVAR PKKPab PKKPab 09 26 04.1 +0.6
comp=Z,0.4nm,0.7s,baz=249,slow=7.8,SNR=5.1
NVAR Mina Array Bea 118.52 299 PKP PKPdf 09 15 45.5 +0.1
NVAR PP PP 09 17 00.7 -2.3
NVAR PKKPab PKKPab 09 26 04.1 +0.5
MKAR Makanchi Array 118.55 51 PKP PKPdf 09 15 44.8 -0.4

comp=Z,1.3nm,1.0s,baz=61,slow=3.5,SNR=6.7
MKAR PP PP 09 16 59.4 -3.6
comp=Z,0.7nm,0.9s,baz=243,slow=5.3,SNR=4.1
MKAR PKKPbc PKKPbc 09 26 03.0 +0.6
comp=Z,1.7nm,0.9s,baz=7.6,slow=4.4,SNR=9.4
MKAR Makanchi Array 118.55 51 PKIKP PKPdf 09 15 44.8 -0.4
MKAR 09 16 59.4
MKAR Makanchi Array 118.55 51 PKP PKPdf 09 15 44.8 -0.4
MKAR PP PP 09 16 59.4 -3.6
MKAR PKKPbc PKKPbc 09 26 03.0 +0.6
D13A Huson 118.80 310 ⇓PP PP 09 17 05.3 +0.5
baz=119
CMB Columbia Colle 119.91 298 *e*PKIKP PKPdf 09 15 48.5 +0.4
CMB MLR MLR
comp=Z,194nm,21.0s,MS4.7
BMO Blue Mountains 119.98 306 *e*PKIKP PKPdf 09 15 46.7 -1.3
BMO MLR MLR
comp=Z,190nm,21.0s,MS4.7
WRA Warramunga Arr 120.09 147 PKP PKPdf 09 15 47.5 -1.6
comp=Z,2.1nm,1.0s,baz=225,slow=2.0,SNR=7.1
WRA PP PP 09 17 12.3 -0.3
comp=Z,4.0nm,1.2s,baz=188,slow=7.8,SNR=4.0
WRA PKKPbc PKKPbc 09 25 56.3 -0.2
comp=Z,4.2nm,1.4s,baz=16,slow=3.6,SNR=4.9
WRA Warramunga Arr 120.09 147 PKIKP PKPdf 09 15 47.6 -1.5
WRA 09 17 12.4
WVOR Wild Horse Val 120.12 303 *e*PKIKP PKPdf 09 15 48.0 -0.4
WVOR *e* 09 17 11.7
WVOR MLR MLR
comp=Z,177nm,20.0s,MS4.7
SAO San Andreas Ge 120.26 296 PFAKE 09 16 00.0 +11
SAO LR LR
comp=Z,170nm,19.0s,MS4.7
CMAR Chiang Mai Arr 120.44 87 PKP PKPdf 09 15 48.9 -0.8
comp=Z,2.0nm,0.4s,baz=246,slow=3.8,SNR=15
CHTO Chiang Mai 120.61 87 *e*PKIKP PKPdf 09 15 50.0 0.0
CHTO MLR MLR
comp=Z,158nm,19.0s,MS4.7
KSM Kuching 120.68 110 PFAKE 09 16 00.0 +10
KSM LR LR
comp=Z,314nm,20.0s,MS5.0
NEW Newport 120.87 310 PFAKE 09 16 00.0 +10
NEW LR LR
comp=Z,197nm,20.0s,MS4.8
MOD Modoc 121.13 302 *e*PKPdf PKPdf 09 15 50.8 +0.5
MOD LR LR
comp=Z,208nm,19.0s,MS4.8
WMQ Urumqi 121.25 55 *e*PKP PKPdf 09 15 52.0 +1.5
MCCM Marconi Confer 121.80 297 PFAKE 09 16 00.0 +8.2
MCCM LR LR
comp=Z,154nm,19.0s,MS4.7
HAWA Hanford 121.92 308 PFAKE 09 16 00.0 +8.3
HAWA LR LR
comp=Z,228nm,20.0s,MS4.8
ZALV Zalesovo Beam 122.11 43 PKP PKPdf 09 15 50.5 -1.3
comp=Z,0.4nm,0.3s,baz=227,slow=3.5,SNR=4.5
ZALV PP PP 09 17 24.0 -3.2
comp=Z,0.9nm,0.6s,baz=290,slow=6.0,SNR=3.7
ZALV PKKPbc PKKPbc 09 25 48.0 -1.2
comp=Z,8.1nm,1.1s,baz=72,slow=4.8,SNR=11
ZALV Zalesovo Beam 122.11 43 PKIKP PKPdf 09 15 50.5 -1.3
ZALV 09 17 24.0
HOPS Hopland 122.22 298 PFAKE 09 16 00.0 +7.5
HOPS LR LR
comp=Z,133nm,19.0s,MS4.6
WDC Whiskeytown Da 122.33 300 PFAKE 09 16 00.0 +7.3
WDC LR LR
comp=Z,241nm,20.0s,MS4.8
YKA Yellowknife Ar 122.70 327 PKP PKPdf 09 15 51.4 -1.3
comp=Z,3.9nm,0.9s,baz=95,slow=1.8,SNR=22
YKA PKKPbc PKKPbc 09 25 46.5 -0.6
comp=Z,1.1nm,0.9s,baz=282,slow=3.3,SNR=6.0
YKA Yellowknife Ar 122.70 327 PKP PKPdf 09 15 51.4 -1.3
YKA PKKPbc PKKPbc 09 25 46.5 -0.6
YBH Yreka Blue Hor 122.79 301 PFAKE 09 16 00.0 +6.5
YBH LR LR
comp=Z,174nm,19.0s,MS4.7
BBOR Butler Butte 123.10 303 P Pdif 09 12 27.1 +1.5
HUMO Hull Mountain 123.22 302 *e*PKPdf PKPdf 09 15 54.9 +0.6
HUMO LR LR
comp=Z,200nm,19.0s,MS4.8
JCW Jim Creek 123.96 309 *e*PKPdf PKPdf 09 15 54.5 -1.1
KMOR Kings Mountain 124.39 306 P Pdif 09 12 28.2 -3.2
CTAO Charters Tower 124.43 160 PFAKE 09 16 10.0 +13
CTAO LR LR
comp=Z,196nm,19.0s,MS4.8
NLO Nicolai Mounta 124.47 306 P Pdif 09 12 33.1 +1.4
NLWA Neilton Lookou 125.05 308 PFAKE 09 16 10.0 +12
NLWA LR LR
comp=Z,298nm,19.0s,MS5.0
DZM Mont Dzumac 125.07 183 *e*LR LR 09 54 56.3
comp=Z,502nm,22.8s
KMI Kunming 126.52 82 PKP PKPdf 09 16 01.5 +0.3
KMI sPKP 09 16 05.3
KMI PP PP 09 18 01.8 +4.3
KMI AMB AMB
comp=Z,82nm,6.2s
KMI LR LR
comp=N,100nm,23.0s,MS4.6
KMI LR LR
comp=E,100nm,24.6s,MS4.6
KMI LR LR
comp=Z,120nm,18.4s
KKM Kota Kinabalu 128.12 110 PFAKE 09 16 20.0 +15
KKM LR LR
comp=Z,96nm,20.0s,MS4.5
GTA Gaotai 128.80 64 *e*PKP PKPdf 09 16 05.8 +0.7
GTA PKS 09 19 41.5
GTA SKS SKSdf 09 23 16.5 -0.3
GTA AMB AMB
comp=Z,76nm,6.0s
GTA LR LR
comp=N,86nm,19.2s,MS4.6
GTA LR LR
comp=E,100nm,19.8s,MS4.6
GTA LR LR
comp=Z,150nm,19.5s,MS4.7
CD2 Chengdu 129.47 75 *e*PKP PKPdf 09 16 06.0 -0.6
CD2 sPKP 09 16 10.3
CD2 PP PP 09 18 21.0 +4.2
CD2 PKS 09 19 41.3
CD2 SKS SKSdf 09 23 12.5 -5.9
CD2 SKKS SKKSac 09 25 08.0 -5.6
CD2 AMB AMB
comp=Z,250nm,10.2s
CD2 LR LR
comp=N,180nm,15.6s
CD2 LR LR
comp=Z,130nm,19.2s,MS4.6
DLBC Dease Lake 129.98 321 *e*PKPdf PKPdf 09 16 06.9 +0.2
GYA Guiyang 130.29 82 Pdif Pdif 09 12 57.0 -0.6
GYA PKP PKPdf 09 16 07.5 -0.8
GYA PP PP 09 18 25.5 +3.2
GYA PKS 09 19 43.0
GYA SKKS SKKSac 09 25 16.0 -2.9
GYA AMB AMB
comp=Z,180nm,7.8s
GYA LR LR
comp=N,820nm,20.8s,MS5.5
GYA LR LR
comp=E,630nm,21.4s,MS5.5
GYA LR LR
comp=Z,840nm,22.5s,MS5.4
INK Inuvik 130.48 334 *e*PKIKP PKPdf 09 16 06.4 -1.0
MOY Mondy 131.49 48 *e*PKIKP PKPdf 09 16 11.0 +1.2
MOY pmax pmax
comp=Z,36nm,2.5s
TLY Talaya 133.14 48 *e*PKIKP PKPdf 09 16 13.6 +0.7
TLY *e* 09 18 39.5
TLY MLR MLR
comp=Z,160nm,20.0s,MS4.7
TLY Talaya 133.14 48 *e*PKPdf PKPdf 09 16 13.6 +0.7
TLY *e*PP PP 09 18 39.5 -0.5
TLY *e*SKPdf SKPdf 09 19 47.6 -0.6
TLY LR LR
comp=Z,160nm,20.0s,MS4.7
IRK Irkutsk 133.53 47 *e*PKIKP PKPdf 09 16 11.9 -1.7
IRK pmax pmax
comp=Z,25nm,1.6s
DAWY Dawson 133.77 329 *e*PKPdf PKPdf 09 16 13.0 -0.8
EGAK Eagle 134.32 331 *e*PKPdf PKPdf 09 16 14.2 -0.6
EGAK LR LR
comp=Z,420nm,20.0s,MS5.2
SONM Songino Array 134.79 53 PKP PKPdf 09 16 15.5 -0.6
comp=Z,1.3nm,1.0s,baz=236,slow=1.6,SNR=9.0

SONM				PP	PP	09 18 50.8	+0.3
	comp=Z,1.9nm,1.1s,baz=258,slow=7.4,SNR=6.8							
ULN	**Ulaanbaatar**	**135.24**	**53**	PFAKE		09 16 30.0	+13
ULN				LR	LR			
	comp=Z,178nm,19.0s,MS4.8							
BMRM	**Bremner River**	**136.92**	**326**	*e*PKPdf	PKPdf	09 16 20.1	+0.5
COLA	**College**	**136.97**	**332**	*e*PKIKP	PKIKP	09 16 18.4	-1.3
COLA				MLR	MLR			
	comp=Z,342nm,20.0s,MS5.1							
TIXI	**Tiksi**	**137.15**	**16**	*e*PKIKP	PKPdf	09 16 18.6	-1.2
TIXI				*e*		09 19 03.7	
TIXI				MLR	MLR			
	comp=Z,106nm,19.0s,MS4.6							
HNR	**Honiara**	**137.50**	**174**	PFAKE		09 16 30.0	+7.7
HNR				LR	LR			
	comp=Z,364nm,19.0s,MS5.1							
MCK	**McKinley**	**137.87**	**331**	*e*PKIKP	PKPdf	09 16 21.4	0.0
HHC	**Hu-ho-hao-te**	**137.92**	**64**	*e*PKP	PKPdf	09 16 18.0	-4.2
HHC				PP	PP	09 19 13.0	+2.5
HHC				PKS		09 19 52.5	
HHC				SKS	SKSdf	09 23 27.0	-5.8
HHC				SKKS	SKKSac	09 26 00.0	-4.5
HHC				SS	SS	09 37 19.5	-1.7
HHC				AMB	AMB			
	comp=Z,48nm,6.5s							
HHC				LR	LR			
	comp=N,110nm,22.6s,MS5.0							
HHC				LR	LR			
	comp=E,300nm,25.0s,MS5.0							
HHC				LR	LR			
	comp=Z,91nm,27.3s,MS4.4							
TRF	**Thorofare Moun**	**138.53**	**331**	*e*PKPdf	PKPdf	09 16 22.1	-0.5
PMR	**Palmer**	**138.78**	**328**	*e*PKIKP	PKPdf	09 16 23.4	+0.3
PPLA	**Purkeypile**	**139.55**	**331**	*e*PKPdf	PKPdf	09 16 24.3	-0.2
TTA	**Tatalina**	**141.07**	**332**	*e*PKIKP	PKPdf	09 16 28.5	+1.3
BJI	**Beijing**	**141.33**	**66**	PKP	PKPdf	09 16 27.8	-0.6
BJI				LR	LR			
	comp=N,120nm,20.6s,MS4.8							
BJI				LR	LR			
	comp=E,120nm,18.7s,MS4.8							
BJI				LR	LR			
	comp=Z,100nm,23.5s,MS4.5							
KDAK	**Kodiak Island**	**141.81**	**323**	PFAKE		09 16 40.0	+11
KDAK				LR	LR			
	comp=Z,531nm,21.0s,MS5.3							
NJ2	**Nanjing**	**142.14**	**79**	*e*PKP	PKPdf	09 16 29.3	-0.8
YAK	**Yakutsk**	**143.73**	**27**	PFAKE		09 16 40.0	+8.0
YAK				LR	LR			
	comp=Z,178nm,22.0s,MS4.8							
CLNS	**Chul'man**	**144.30**	**36**	*e*PKHKP		09 16 28.9	
CLNS				pmax	pmax			
	comp=N,4.0nm,0.8s							
CLNS				pmax	pmax			
	comp=Z,15nm,1.2s							
CLNS				pmax	pmax			
	comp=E,5.0nm,0.7s							
BILL	**Bilibino**	**145.02**	**359***c*	*i*PKIKP	PKPdf	09 16 33.0	-1.1
BILL				*e*		09 19 50.6	
BILL				pmax	pmax			
	comp=Z,76nm,1.2s							
BILL	**Bilibino**	**145.02**	**359**	*e*PKPdf	PKPdf	09 16 33.0	-1.0
BILL				LR	LR			
	comp=Z,281nm,21.0s,MS5.0							
CHGN	**Chignik**	**145.32**	**323**	*e*PKPdf	PKPdf	09 16 33.8	-1.1
GAMB	**Gambell**	**145.81**	**341**	*e*PKPdf	PKPdf	09 16 36.4	+0.8
SDPT	**Sand Point**	**146.79**	**323**	*e*PKPdf	PKPdf	09 16 37.2	-0.2
CN2	**Changchun**	**148.22**	**59**	*e*PKPbc	PKPbc	09 16 43.3	-0.2
FALS	**False Pass**	**148.51**	**325**	*e*PKPbc	PKPbc	09 16 42.7	-1.2
INCN	**Inchon**	**149.30**	**71**	*e*PKPbc	PKPbc	09 16 46.5	0.2
AKUT	**Akutan**	**150.06**	**324**	*e*PKPdf	PKPdf	09 16 42.7	-0.1
AKUT				*e*PKPbc	PKPbc	09 16 47.2	-0.6
AKUT				*e*PKPab	PKPab	09 16 53.7	+0.1
KSRS	**Korea Array**	**150.33**	**71**	PKP	PKPdf	09 16 43.6	-0.2
	comp=Z,0.4nm,0.5s,baz=162,slow=25,SNR=5.4							
UNV	**Unalaska Valle**	**150.58**	**324**	*e*PKPdf	PKPdf	09 16 44.0	+0.4
UNV				*e*PKPbc	PKPbc	09 16 48.4	-0.7
UNV				*e*PKPab	PKPab	09 16 54.4	-1.5
MDJ	**Mudanjiang**	**151.04**	**57**	PKPbc	PKPdf	09 16 43.8	-0.9
MDJ				pPKP	pPKPdf	09 16 47.3	-0.8
MDJ				sPKP		09 16 48.5	
MDJ				PKS		09 20 16.5	
MDJ				PP	PP	09 20 28.8	+0.1
MDJ				SKS	SKSdf	09 23 53.3	+1.1
MDJ				SS	SS	09 39 47.3	-4.0
MDJ				AMB	AMB			
	comp=Z,79nm,4.3s							
MDJ				LR	LR			
	comp=N,64nm,22.5s,MS4.6							
MDJ				LR	LR			
	comp=E,99nm,24.5s,MS4.6							
MDJ				LR	LR			
	comp=Z,110nm,20.4s,MS4.7							
KLR	**Kul'dur**	**151.14**	**46**	*e*PKIKP	PKPdf	09 16 40.5	-4.2
KLR				*e*		09 16 45.8	
KLR				pmax	pmax			
	comp=E,24nm,1.4s							
KLR				pmax	pmax			
	comp=Z,90nm,1.4s							
HABR	**Khabarovsk**	**153.44**	**46**	*e*PKIKP	PKPdf	09 16 52.5	+4.4
HABR				*e*		09 16 55.3	
HABR				*e*		09 17 00.5	
HABR				*e*		09 17 07.1	
HABR						09 23 53.7	
HABR				SS	SS	09 40 16.0	-1.1
HABR				*e*SSS		09 46 06.3	
ADK	**Adak**	**156.60**	**329**	PFAKE		09 17 00.0	+7.7
ADK				LR	LR			
	comp=Z,294nm,21.0s,MS5.1							
MAJO	**Matsushiro**	**158.55**	**74**	PFAKE		09 17 10.0	+15
MAJO				LR	LR			
	comp=Z,180nm,22.0s,MS4.9							
MAT	**Matsushiro**	**158.55**	**74**	PKP	PKPdf	09 16 54.4	-0.9
MJAR	**Matsushiro Arr**	**158.55**	**74**	PKP	PKPdf	09 16 54.3	-0.9
	comp=Z,0.6nm,0.6s,baz=265,slow=2.8,SNR=7.7							
MJAR				PKPab	PKPab	09 17 30.4	0.0
	comp=Z,6.4nm,1.1s,baz=272,slow=5.1,SNR=11							
YSS	**Yuzh-Sakhalins**	**158.73**	**43**	PFAKE		09 17 10.0	+15
YSS				LR	LR			
	comp=Z,80nm,21.0s,MS4.5							
PETK	**Petropavlovsk-**	**159.51**	**11**	PKP	PKPdf	09 16 55.5	-0.4
	comp=Z,11nm,1.1s,baz=174,slow=2.7,SNR=11							
PETK				PKPab	PKPab	09 17 32.5	-1.3
	comp=Z,18nm,1.4s,baz=87,slow=5.2,SNR=5.0							
PETK	**Petropavlovsk-**	**159.51**	**11**	PKP	PKPdf	09 16 55.5	-0.4
PETK				PKPab	PKPab	09 17 32.5	-1.3
PET	**Petropavlovsk**	**159.74**	**9**	PFAKE		09 17 10.0	+14
PET				LR	LR			
	comp=Z,282nm,21.0s,MS5.1							
ERM	**Erimo**	**161.26**	**56**	PFAKE		09 17 10.0	+12
ERM				LR	LR			
	comp=Z,218nm,20.0s							
WAKE	**Wake Island**	**166.02**	**190**	PFAKE		09 17 10.0	+6.7
WAKE				LR	LR			
	comp=Z,387nm,19.0s							

ISCJB ***28*** *09:08:57.4±0.5, 39.°80N±0.°02×25.°63E±0.°02, h2km±4km, Error ellipse: s-maj=3.4km s-min=3.0km az=22.9*
ATH ***28*** *09:08:57.5, 39.°78N×25.°60E, h23km±2km, MD3.0/4*
THE ***28*** *09:08:57.7, 39.°79N×25.°65E, h3km±2km, ML2.9/5, Error ellipse: s-maj=2.9km s-min=1.0km az=73.0*
NEIC ***28*** *09:08:57.5, 39.°78N×25.°60E, h23km, MD3.1(ISK), MD3.0(ATH), After ATH.*
CSEM ***28*** *09:08:57.8±0.1, 39.°80N×25.°61E, h5km, MD3.3, Error ellipse: s-maj=3.4km s-min=2.7km az=11.0*
DDA ***28*** *09:08:58.2, 39.°81N×25.°70E, h7km±4km, Md2.8*
ISK ***28*** *09:08:58.2, 39.°84N×25.°66E, h9km, MD3.3*
ISC 28 09:08:58.1±0.5, 39.79N±0.°02×25.63E±0.°02, h6km±3km, n67, σ0.80/107, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIA	**Limnos Island**	**0.36**	**287**	*e*Pb	**Pg**	**09 09 05.3**	**+0.3**
LIA				*e*Sb	**Sg**	**09 09 10.4**	**+0.8**
LIA	**Limnos Island**	**0.36**	**287**	P	**Pg**	**09 09 05.3**	**+0.3**
LIA				S	**Sg**	**09 09 09.7**	**+0.1**
LIA	**Limnos Island**	**0.36**	**287**	*e*PB	**Pg**	**09 09 05.3**	**+0.3**
LIA				*e*SB	**Sg**	**09 09 10.4**	**+0.8**
LIA	**Limnos Island**	**0.36**	**287**	P	**Pg**	**09 09 05.3**	**+0.3**
LIA				S	**Sg**	**09 09 09.7**	**+0.1**
LIA				*e*Sb	**Sg**	**09 09 10.4**	**+0.8**
GADA	**Gvkgeada**	**0.45**	**28**	*e*PG	**Pg**	**09 09 06.5**	**-0.3**
GADA	**Gvkgeada**	**0.45**	**28**	*e*Pg	**Pg**	**09 09 06.5**	**-0.2**
EZN	**Ezine**	**0.54**	**86**	*e*PG	**Pg**	**09 09 08.8**	**+0.4**
EZN	**Ezine**	**0.54**	**86**	*e*Pg	**Pg**	**09 09 08.8**	**+0.3**
SIGR	**SIGRI**	**0.61**	**163**	P	**Pg**	**09 09 09.0**	**-0.7**
SIGR				S	**Sg**	**09 09 17.6**	**0.0**
SIGR	**SIGRI**	**0.61**	**163**	P	**Pg**	**09 09 09.0**	**-0.7**
SIGR				S	**Sg**	**09 09 17.6**	**0.0**
PRK	**Paraskevi**	**0.74**	**137**	*e*Pn	**Pg**	**09 09 12.0**	**-0.3**
PRK				*e*Sn	**Sb**	**09 09 23.2**	**-0.5**
PRK	**Paraskevi**	**0.74**	**137**	P	**Pg**	**09 09 11.9**	**-0.4**
PRK				S	**Sg**	**09 09 22.5**	**+0.6**
PRK	**Paraskevi**	**0.74**	**137**	*e*PN	**Pg**	**09 09 12.0**	**-0.3**
PRK				*e*SN	**Sb**	**09 09 23.2**	**-0.5**
PRK	**Paraskevi**	**0.74**	**137**	P	**Pg**	**09 09 11.9**	**-0.4**
PRK				S	**Sg**	**09 09 22.5**	**+0.6**
PRK				*e*Sn	**Sb**	**09 09 23.2**	**-0.5**
AYVA	**Ayvalik**	**0.96**	**120**	*i* P	**Pg**	**09 09 16.6**	**+0.2**
AYVA				*i* S	**Sg**	**09 09 31.1**	**+2.3**
AYVA	**Ayvalik**	**0.96**	**120**	*i* P	**Pg**	**09 09 16.6**	**+0.2**
AYVA				*i* S	**Sg**	**09 09 31.1**	**+2.3**
ENEZ	**Enez**	**1.02**	**23**	*e*PG	**Pg**	**09 09 16.9**	**-0.8**
ENEZ				*e*SG	**Sg**	**09 09 31.2**	**+0.2**
ENEZ	**Enez**	**1.02**	**23**	*e*Pg	**Pg**	**09 09 16.9**	**-0.8**
ENEZ				*e*Sg	**Sg**	**09 09 31.2**	**+0.2**
LPK	**Lapseki**	**1.05**	**56**	*e*PG	**Pg**	**09 09 17.4**	**-0.8**
LPK				*e*SG	**Sg**	**09 09 32.2**	**+0.5**
LPK	**Lapseki**	**1.05**	**56**	*e*Pg	**Pg**	**09 09 17.4**	**-0.7**
LPK				*e*Sg	**Sg**	**09 09 32.2**	**+0.5**
ALN	**Alexandroupoli**	**1.15**	**16**	*e*Pn	**Pg**	**09 09 19.2**	**-0.9**
ALN				*e*Sb	**Sg**	**09 09 35.1**	**+0.1**
ALN	**Alexandroupoli**	**1.15**	**16**	P	**Pg**	**09 09 19.1**	**-1.0**
ALN				S	**Sg**	**09 09 35.1**	**+0.1**
ALN	**Alexandroupoli**	**1.15**	**16**	*e*PN	**Pg**	**09 09 19.2**	**-0.9**
ALN				*e*SB	**Sg**	**09 09 35.1**	**+0.1**
ALN	**Alexandroupoli**	**1.15**	**16**	P	**Pg**	**09 09 19.1**	**-1.0**
ALN				S	**Sg**	**09 09 35.1**	**+0.1**
RDO	**Rodhopi**	**1.35**	**357**	*e*Pn	**Pn**	**09 09 24.0**	**+0.6**
RDO	**Rodhopi**	**1.35**	**357**	*e*PN	**Pn**	**09 09 24.0**	**+0.6**
RDO	**Rodhopi**	**1.35**	**357**	*e*Pn	**Pn**	**09 09 24.0**	**+0.6**
OUR	**Ouranopolis**	**1.37**	**294**	P	**Pn**	**09 09 22.1**	**-1.6**
OUR				S	**Sb**	**09 09 42.5**	**+0.6**
OUR	**Ouranopolis**	**1.37**	**294**	P	**Pn**	**09 09 22.1**	**-1.6**
OUR				S	**Sb**	**09 09 42.5**	**+0.6**
KRBG	**Karabiga-Canak**	**1.42**	**64**	*e*PN	**Pn**	**09 09 23.9**	**-0.4**
KRBG				*e*SN	**Sn**	**09 09 42.5**	**-0.7**
KRBG	**Karabiga-Canak**	**1.42**	**64**	*e*Pn	**Pn**	**09 09 23.9**	**-0.4**
KRBG				*e*Sn	**Sn**	**09 09 42.5**	**-0.8**
CHOS	**Chios island**	**1.44**	**166**	P	**Pn**	**09 09 23.7**	**-1.0**
CHOS				S	**Sb**	**09 09 43.0**	**-0.9**
CHOS	**Chios island**	**1.44**	**166**	*e*PN	**Pn**	**09 09 23.7**	**-1.0**
CHOS	**Chios island**	**1.44**	**166**	*e*Pn	**Pn**	**09 09 23.7**	**-1.0**
CHOS				S	**Sb**	**09 09 43.0**	**-0.9**
KAVA	**Kavala**	**1.47**	**325**	P	**Pn**	**09 09 24.1**	**-1.0**
KAVA				S	**Sn**	**09 09 44.5**	**-0.1**
KAVA	**Kavala**	**1.47**	**325**	P	**Pn**	**09 09 24.1**	**-1.0**
KAVA				S	**Sn**	**09 09 44.5**	**-0.1**
AOS	**Alonnisos**	**1.49**	**246**	P	**Pn**	**09 09 25.9**	**+0.6**
AOS				S	**Sn**	**09 09 46.1**	**+1.1**
AOS	**Alonnisos**	**1.49**	**246**	P	**Pn**	**09 09 25.9**	**+0.6**
AOS				S	**Sn**	**09 09 46.1**	**+1.1**
RKY	**Sarkoy-Tekirda**	**1.49**	**53**	*e*PN	**Pn**	**09 09 25.1**	**-0.2**
RKY				*e*SN	**Sn**	**09 09 45.0**	**0.0**
RKY	**Sarkoy-Tekirda**	**1.49**	**53**	*e*Pn	**Pn**	**09 09 25.1**	**-0.2**
RKY				*e*Sn	**Sn**	**09 09 45.0**	**0.0**
SART	**Tekirdag**	**1.49**	**53**	*i* P	**Pn**	**09 09 25.1**	**-0.2**
SART				*i* S	**Sn**	**09 09 45.4**	**+0.4**
SART	**Tekirdag**	**1.49**	**53**	*i* P	**Pn**	**09 09 25.1**	**-0.2**
SART				*i* S	**Sn**	**09 09 45.4**	**+0.3**
PAIG	**Paliouri**	**1.50**	**276**	P	**Pn**	**09 09 23.6**	**-1.9**
PAIG	**Paliouri**	**1.50**	**276**	P	**Pn**	**09 09 23.6**	**-1.9**
BALY	**Balya**	**1.54**	**91**	*i* P	**Pn**	**09 09 25.4**	**-0.6**
BALY				*i* S	**Sn**	**09 09 46.4**	**+0.2**
BALY	**Balya**	**1.54**	**91**	*i* P	**Pn**	**09 09 25.4**	**-0.6**
BALY				*i* S	**Sn**	**09 09 46.4**	**+0.1**
GONE	**Gonen-Balikesi**	**1.60**	**80**	*e*PN	**Pn**	**09 09 26.8**	**-0.1**
GONE	**Gonen-Balikesi**	**1.60**	**80**	*e*Pn	**Pn**	**09 09 26.8**	**-0.1**
MFT	**Murefte**	**1.61**	**51**	*e*PN	**Pn**	**09 09 26.9**	**-0.1**
MFT	**Murefte**	**1.61**	**51**	*e*Pn	**Pn**	**09 09 26.9**	**-0.1**
BALB	**Balikesir**	**1.75**	**94**	*e*PN	**Pn**	**09 09 29.0**	**+0.1**
BALB	**Balikesir**	**1.75**	**94**	*e*Pn	**Pn**	**09 09 29.0**	**+0.2**
PLG	**Polygyros**	**1.77**	**290**	*e*Pn	**Pn**	**09 09 29.3**	**+0.1**
PLG	**Polygyros**	**1.77**	**290**	P	**Pn**	**09 09 29.3**	**+0.1**
PLG				S	**Sn**	**09 09 53.3**	**+1.3**
PLG	**Polygyros**	**1.77**	**290**	*e*PN	**Pn**	**09 09 29.3**	**+0.1**
PLG	**Polygyros**	**1.77**	**290**	P	**Pn**	**09 09 29.3**	**+0.1**
PLG				S	**Sn**	**09 09 53.3**	**+1.3**
EDC	**Edincik**	**1.81**	**71**	*e*PN	**Pn**	**09 09 30.1**	**+0.5**
EDC	**Edincik**	**1.81**	**71**	*e*Pn	**Pn**	**09 09 30.1**	**+0.5**
BNT	**Bandirma**	**1.85**	**72**	*e*PN	**Pn**	**09 09 30.6**	**+0.4**
SOH	**Sokhos**	**2.02**	**301**	P	**Pn**	**09 09 34.2**	**+1.6**
SOH	**Sokhos**	**2.02**	**301**	P	**Pn**	**09 09 34.2**	**+1.6**
HORT	**Hortiatis**	**2.09**	**293**	P	**Pn**	**09 09 32.2**	**-1.4**
HORT	**Hortiatis**	**2.09**	**293**	P	**Pn**	**09 09 32.2**	**-1.4**
ARMT	**Armutlu**	**2.60**	**72**	*e*PN	**Pn**	**09 09 41.5**	**+0.9**
ARMT	**Armutlu**	**2.60**	**72**	*e*Pn	**Pn**	**09 09 41.5**	**+1.0**
YLV	**Yalova**	**2.97**	**74**	*e*PN	**Pn**	**09 09 47.0**	**+1.3**
YLV	**Yalova**	**2.97**	**74**	*e*Pn	**Pn**	**09 09 47.0**	**+1.3**

BJI ***28*** *09:30:56.6, 5.°18S×151.°59E, h147km, mB4.8/19, mb5.0/35*
ISCJB ***28*** *09:30:57.5±1.2, 5.°19S±0.°04×150.°95E±0.°05, h133km±11km, mb4.6/52, Error ellipse: s-maj=8.8km s-min=6.8km az=21.6*
MOS ***28*** *09:30:59.6±1.0, 5.°11S×150.°97E, h154km, mb4.8/16, Error ellipse: s-maj=12.8km s-min=8.1km az=92.9*
IDC ***28*** *09:31:00.5±0.6, 5.°24S×150.°88E, h149km±5km, mb4.2/17, mb1 4.4/18, mb1mx4.4/19, mbtmp4.3/18, MS3.4/2, Ms1 3.4/2, ms1mx2.9/23, Error ellipse: s-maj=13.6km s-min=8.5km az=106.0*
NEIC ***28*** *09:31:00.3±0.2, 5.°16S×150.°95E, mb4.8/23, Error ellipse: s-maj=7.2km s-min=5.0km az=96.0*
GCMT ***28*** *09:31:01.4±0.3, 5.°34S×151.°04E, h148km±3km, MW5.0, Moment Tensor Solution. s21,c23; s72,c102; Moment tensor: Scale 10^{16}Nm; M_{rr}-2.27±.15; $M_{\theta\theta}$0.85±.18; $M_{\phi\phi}$1.42±.18; $M_{r\theta}$-2.25±.12; $M_{\theta\phi}$2.70±.18; $M_{\phi r}$0.49±.15; Best double couple: $M_0$4.10000×10^{16} NP1:ϕ_s189.00000°, δ47.00000°, λ-146.00000°. NP2:ϕ_s75.00000°, δ66.00000°, λ-49.00000°. Principal axes: T 4.0800, Plg11.0000°, Azm136.0000°; N -0.0300, Plg37.0000°, Azm235.0000°; P -4.0500, Plg51.0000°, Azm32.0000°; Data Used: IU IC G II CN.*
ISC 28 09:31:01.2±1.1, 5.°25S±0.°04×151.°01E±0.°05, h155km±10km, h145km±1.5km:pP-P, n124, σ1.02/121, mb4.6/52, 9C-1D, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**9.79**	**116**	P	**Pn**	**09 33 18.3**	**-0.1**
	5.5nm,0.3s,baz=206,slow=3.0,SNR=8.7						
HNR				LR	LR	09 36 29.8	
	comp=Z,167nm,21.5s,baz=325,slow=33						
HNR	**Honiara**	**9.79**	**116**	*e*P	**Pn**	**09 33 18.4**	**-0.1**
HNR				pmax	pmax		
	comp=Z,237nm,0.9s						
HNR	**Honiara**	**9.79**	**116**	*e*Pn	**Pn**	**09 33 18.4**	**0.0**
	comp=Z,237nm,0.9s						
CTA	**Charters Tower**	**15.46**	**197**	*e*P	**Pn**	**09 34 33.7**	**+2.5**
	comp=Z,23nm,1.5s						
CTA	**Charters Tower**	**15.46**	**197**	P	**Pn**	**09 34 33.2**	**+2.0**
	comp=Z,0.8nm,0.3s,baz=25,slow=12,SNR=7.4						
CTAO	**Charters Tower**	**15.46**	**197**	*e*P	**Pn**	**09 34 34.2**	**+3.0**
CTAO				pmax	pmax		
	comp=Z,85nm,1.4s						
CTAO	**Charters Tower**	**15.46**	**197**	*e*P	**Pn**	**09 34 34.2**	**+3.1**
	comp=Z,85nm,1.4s						
GUMO	**Guam**	**19.68**	**342**	*e*P	**P**	**09 35 19.6**	**+1.1**
GUMO				pmax	pmax		
	comp=Z,475nm,1.0s						
GUMO	**Guam**	**19.68**	**342**	*e*P	**P**	**09 35 19.6**	**+1.1**
	comp=Z,475nm,1.0s						
KAKA	**Kakadu**	**19.77**	**247**	*e*P	**P**	**09 35 18.7**	**-0.8**
	comp=Z,29nm,0.2s						
KAKA				*e*S	**S**	**09 38 48.2**	**-5.8**
KAKA	**Kakadu**	**19.77**	**247**	*e*P	**P**	**09 35 18.8**	**-0.7**
	comp=Z,89nm,0.3s						
EIDS	**Eidsvold**	**20.01**	**180**	*e*P	**P**	**09 35 22.7**	**+0.7**
	comp=Z,36nm,0.9s						
WRAB	**Tennant Creek**	**21.81**	**227**	*e*P	**P**	**09 35 40.4**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,147nm,1.9s,mb5.1						
WRAB	**Tennant Creek**	**21.81**	**227**	*e*P	**P**	**09 35 40.4**	**-0.8**
	comp=Z,147nm,1.9s,mb5.1						
WRA	**Warramunga Arr**	**21.83**	**227**	P	**P**	**09 35 39.5**	**-1.8**
	comp=Z,8.5nm,0.4s,mb4.6,baz=50,slow=10.0,SNR=83						
WRA				pP		09 36 05.3	
	comp=Z,12nm,0.8s,baz=51,slow=11,SNR=5.0						
WRA				S	**S**	**09 39 31.5**	**-0.9**
	comp=Z,9.1nm,0.9s,baz=50,slow=18,SNR=12						
WRA				ScP	ScP	09 42 59.2	+1.0
	comp=Z,2.6nm,0.9s,baz=51,slow=2.7,SNR=7.3						
WRA	**Warramunga Arr**	**21.83**	**227**	P	**P**	**09 35 39.5**	**-1.9**
WRA				S	**S**	**09 39 31.5**	**-0.9**
WRA	**Warramunga Arr**	**21.83**	**227**	P	**P**	**09 35 39.5**	**-1.8**
WRA				pP		09 36 05.3	
WRA				S	**S**	**09 39 31.5**	**-0.9**
WRA				ScP	ScP	09 42 59.2	+1.0
DZM	**Mont Dzumac**	**22.43**	**140**	*e*P	**P**	**09 35 46.8**	**-0.6**
DZM	**Mont Dzumac**	**22.43**	**140**	*e*P	**P**	**09 35 47.8**	**+0.4**
	comp=Z,39nm,0.9s,mb4.8						
ASAR	**Alice Springs**	**24.64**	**220**	P	**P**	**09 36 07.7**	**+0.1**
	comp=Z,11nm,0.6s,mb4.5,baz=52,slow=9.1,SNR=73						
ASAR				pP		09 36 34.8	
	comp=Z,3.1nm,0.8s,baz=36,slow=18,SNR=4.3						
ASAR				PcP	PcP	09 39 40.3	-0.7
	comp=Z,2.0nm,0.7s,baz=64,slow=2.6,SNR=6.6						
ASAR				S	**S**	**09 40 16.4**	**-1.2**
	comp=Z,0.9nm,0.7s,baz=44,slow=14,SNR=5.2						
ASAR				ScP	ScP	09 43 06.9	+1.3
	comp=Z,1.8nm,0.7s,baz=45,slow=3.0,SNR=9.4						
ASAR	**Alice Springs**	**24.64**	**220**	P	**P**	**09 36 07.7**	**+0.2**
ASAR				*PP		09 36 34.8	
ASAR						09 39 40.4	
ASAR				S	**S**	**09 40 16.5**	**-1.1**
ARMA	**Armidale**	**25.05**	**179**	*e*P	**P**	**09 36 10.1**	**-1.0**
ARMA	**Armidale**	**25.05**	**179**	*e*P	**P**	**09 36 12.3**	**+1.2**
	comp=Z,26nm,1.1s,mb4.7						
FITZ	**Fitzroy Crossi**	**27.88**	**241**	*e*P	**P**	**09 36 35.6**	**-1.1**
	comp=Z,45nm,0.9s,mb5.2						
FITZ				*e*	pP	09 37 06.4	-2.8
FITZ	**Fitzroy Crossi**	**27.88**	**241**	P	**P**	**09 36 36.3**	**-0.4**
	comp=Z,14nm,0.3s,mb5.1,baz=78,slow=6.6,SNR=92						
FITZ				pP	pP	09 37 06.1	-3.1
	comp=Z,26nm,0.9s,baz=79,slow=8.6,SNR=5.9						
FITZ	**Fitzroy Crossi**	**27.88**	**241**	*e*P	**P**	**09 36 36.1**	**-0.6**
	comp=Z,36nm,1.0s,mb5.1						
FITZ				*e*pP	pP	09 37 06.2	-3.0
STKA	**Stephens Creek**	**27.92**	**197**	*e*P	**P**	**09 36 36.9**	**0.0**
	comp=Z,3.7nm,1.0s,mb4.1						
STKA	**Stephens Creek**	**27.92**	**197**	P	**P**	**09 36 37.0**	**+0.1**
	comp=Z,2.8nm,0.8s,mb4.1,baz=36,slow=12,SNR=7.4						
STKA				pP	pP	09 37 07.3	-2.1
	comp=Z,11nm,1.1s,baz=357,slow=7.7,SNR=4.1						
CBIJ	**Chichi jima**	**33.26**	**346**	LR	LR	09 49 51.2	
	comp=Z,77nm,18.0s,baz=156,slow=34						
MBWA	**Marble Bar**	**34.20**	**240**	⇑*i*P	**P**	**09 37 31.4**	**-0.8**
MBWA	**Marble Bar**	**34.20**	**240**	*e*P	**P**	**09 37 31.4**	**-0.8**
	comp=Z,20nm,0.8s,mb4.9						
MBWA				*e*pP	pP	09 38 00.5	-4.7
MEEK	**Meekatharra**	**37.52**	**232**	⇑*i*P	**P**	**09 38 00.2**	**-0.2**
URZ	**Urewera**	**40.53**	**148**	P	**P**	**09 38 26.3**	**+1.1**
	comp=Z,6.1nm,0.6s,mb4.4,baz=32,slow=11,SNR=5.7						
MORW	**Morawa**	**40.68**	**230**	⇑*i*P	**P**	**09 38 26.0**	**-0.6**
YHNB	**Yeheng**	**41.42**	**317**	*e*P	**P**	**09 38 32.5**	**-0.2**
	comp=Z,61nm,1.0s,mb5.2						
RPZ	**Rata Peaks**	**42.19**	**158**	P	**P**	**09 38 39.9**	**+1.2**
	comp=Z,25nm,1.0s,mb4.8,baz=345,slow=4.1,SNR=5.5						
MJAR	**Matsushiro Arr**	**43.26**	**345**	P	**P**	**09 38 45.7**	**-1.6**
	comp=Z,8.2nm,1.0s,mb4.3,baz=169,slow=8.9,SNR=27						
MJAR	**Matsushiro Arr**	**43.26**	**345**	P	**P**	**09 38 45.7**	**-1.6**
MAJO	**Matsushiro**	**43.26**	**345**	*e*P	**P**	**09 38 46.1**	**-1.2**
MAJO				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.6						
MAJO	**Matsushiro**	**43.26**	**345**	*e*P	**P**	**09 38 46.1**	**-1.3**
	comp=Z,18nm,1.0s,mb4.6						
MAT	**Matsushiro**	**43.26**	**345**	P	**P**	**09 38 45.2**

HHC	**Hu-ho-hao-te**	**58.38**	**326**	*e*P	**P**	**09 40 41.8**	**+1.4**
HHC				pP	pP	09 41 15.0	-1.6
HHC				sP	sP	09 41 30.5	-3.0
HHC				PP	PP	09 42 55.0	+3.5
HHC				ScP	ScP	09 45 16.8	+1.4
HHC				PcS	PcS	09 45 31.0	-0.2
HHC				S	**S**	**09 48 31.8**	**+0.8**
HHC				sS	sS	09 49 29.8	-4.0
HHC				ScS	ScS	09 50 13.8	-1.1
HHC				SS	SS	09 52 27.8	+1.8
HHC				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.1						
HHC				pmax	pmax		
	comp=Z,71nm,5.7s						
HHC				LR	LR		
	comp=N,130nm,19.0s						
HHC				LR	LR		
	comp=E,380nm,20.5s						
HHC				LR	LR		
	comp=Z,52nm,20.2s						
PETK	**Petropavlovsk-**	**58.41**	**5**	P	**P**	**09 40 40.5**	**+0.2**
	comp=Z,30nm,1.0s,mb5.1,baz=166,slow=6.2,SNR=16						
LZH	**Lanzhou**	**60.32**	**317**	⇑P	**P**	**09 40 55.5**	**+1.7**
LZH				pP	pP	09 41 28.5	-1.7
LZH				sP	sP	09 41 44.8	-2.3
LZH				PP	PP	09 43 11.5	+2.8
LZH				sS	sS	09 49 55.5	-3.7
LZH				*e*SS	SS	09 52 58.3	+1.7
LZH				pmax	pmax		
	comp=Z,35nm,1.5s,mb5.0						
LZH				pmax	pmax		
	comp=Z,130nm,7.3s						
LZH				LR	LR		
	comp=E,220nm,14.5s						
LZH				LR	LR		
	comp=Z,290nm,18.3s						
GTA	**Gaotai**	**64.78**	**318**	⇑*e*P	**P**	**09 41 24.5**	**+1.2**
GTA				pP	pP	09 41 58.5	-1.7
GTA				sP	sP	09 42 14.0	-3.0
GTA				PP	PP	09 43 51.0	+3.1
GTA				S	**S**	**09 49 52.0**	**+0.2**
GTA				sS	sS	09 50 51.5	-4.1
GTA				SS	SS	09 54 08.0	+1.8
GTA				pmax	pmax		
	comp=Z,6.0nm,1.5s,mb4.2						
GTA				pmax	pmax		
	comp=Z,31nm,5.4s						
GTA				LR	LR		
	comp=N,86nm,19.1s						
GTA				LR	LR		
	comp=E,100nm,20.3s						
GTA				LR	LR		
	comp=Z,150nm,18.8s						
ULN	**Ulaanbaatar**	**65.44**	**329**	*e*P	**P**	**09 41 28.3**	**+0.9**
ULN				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.6						
ULN	**Ulaanbaatar**	**65.44**	**329**	*e*P	**P**	**09 41 28.3**	**+0.9**
	comp=Z,11nm,1.1s,mb4.6						
SONM	**Songino Array**	**65.76**	**329**	P	**P**	**09 41 29.7**	**+0.3**
	comp=Z,7.3nm,0.9s,mb4.5,baz=135,slow=6.0,SNR=35						
SONM				pP	pP	09 42 05.2	-1.2
	comp=Z,4.1nm,1.0s,baz=145,slow=6.2,SNR=3.8						
CASY	**Casey**	**67.07**	**197**	*e*P	**P**	**09 41 37.8**	**+0.3**
YAK	**Yakutsk**	**69.07**	**349**	*e*P	**P**	**09 41 48.7**	**-1.2**
YAK				pmax	pmax		
	comp=E,6.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,33nm,1.3s,mb4.9						
YAK				pmax	pmax		
	comp=N,15nm,1.7s						
YAK	**Yakutsk**	**69.07**	**349**	*e*P	**P**	**09 41 49.8**	**-0.2**
TLY	**Talaya**	**69.58**	**331**	*e*P	**P**	**09 41 53.9**	**+0.6**
TLY				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
MOY	**Mondy**	**70.88**	**330**	*e*P	**P**	**09 42 02.4**	**+1.2**
MOY				pmax	pmax		
	comp=Z,22nm,1.4s,mb4.7						
BILL	**Bilibino**	**73.91**	**6**	*e*P	**P**	**09 42 18.9**	**+0.1**
BILL				pmax	pmax		
	comp=Z,30nm,1.1s,mb4.9						
BILL	**Bilibino**	**73.91**	**6**	*e*P	**P**	**09 42 18.9**	**+0.1**
	comp=Z,30nm,1.1s,mb4.9						
WMQ	**Urumqi**	**74.86**	**318**	*e*P	**P**	**09 42 33.0**	**+8.1**
TIXI	**Tiksi**	**78.11**	**353**	*e*P	**P**	**09 42 41.1**	**-1.4**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.3						
TIXI	**Tiksi**	**78.11**	**353**	*e*P	**P**	**09 42 41.3**	**-1.3**
MK31	**Makanchi Array**	**79.49**	**319**	*e*P	**P**	**09 42 50.5**	**-0.1**
MKAR	**Makanchi Array**	**79.49**	**319**	P	**P**	**09 42 50.0**	**-0.6**
	comp=Z,1.6nm,0.9s,mb3.6,baz=84,slow=11,SNR=10						
MKAR				pP	pP	09 43 27.6	-1.3
	comp=Z,2.0nm,0.9s,baz=91,slow=9.7,SNR=4.3						
ZAA0	**Zalesovo Array**	**80.54**	**327**	*e*P	**P**	**09 42 54.6**	**-1.4**
ZALV	**Zalesovo Beam**	**80.54**	**327**	P	**P**	**09 42 54.8**	**-1.3**
	comp=Z,2.4nm,0.4s,mb4.2,baz=104,slow=6.3,SNR=19						
PMR	**Palmer**	**80.83**	**25**	*e*P	**P**	**09 42 56.3**	**-1.1**
PMR				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.3						
PMR	**Palmer**	**80.83**	**25**	*e*P	**P**	**09 42 56.3**	**-1.1**
	comp=Z,8.4nm,0.9s,mb4.4						
BPAW	**Bear Paw Mtn.**	**81.37**	**22**	*e*P	**P**	**09 42 57.0**	**-3.2**
	comp=Z,5.7nm,0.9s,mb4.2						
COLA	**College**	**82.93**	**22**	*e*P	**P**	**09 43 06.7**	**-1.6**
COLA				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
COLA	**College**	**82.93**	**22**	*e*P	**P**	**09 43 06.7**	**-1.6**
	comp=Z,8.5nm,0.9s,mb4.5						
KURK	**Kurchatov**	**83.02**	**322**	⇑*e*P	**P**	**09 43 08.5**	**-0.6**
KURK				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
KURK	**Kurchatov**	**83.02**	**322**	*e*P	**P**	**09 43 07.9**	**-1.2**
UCH	**Uchtor**	**83.57**	**313**	*e*P	**P**	**09 43 12.4**	**+0.2**
UCH				*e**PP	pP	09 43 49.0	-1.8
UCH				pmax	pmax		
	comp=Z,15nm,1.5s,mb4.5						
UCH	**Uchtor**	**83.57**	**313**	*e*P	**P**	**09 43 12.4**	**+0.3**
	comp=Z,15nm,1.5s,mb4.5						
UCH				*e*pP	pP	09 43 49.0	-1.8
MENT	**Mentasta**	**83.70**	**25**	*e*P	**P**	**09 43 05.3**	**-7.0**
EKS2	**Erkin-Say**	**84.20**	**314**	*e*P	**P**	**09 43 15.3**	**0.0**
EKS2				*e**PP	pP	09 43 50.9	-3.1
EKS2				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.5						
EKS2	**Erkin-Say**	**84.20**	**314**	*e*P	**P**	**09 43 15.3**	**0.0**
	comp=Z,13nm,1.4s,mb4.5						
EKS2				*e*pP	pP	09 43 50.9	-3.2
MAW	**Mawson**	**84.47**	**203**	P	**P**	**09 43 16.2**	**0.0**
	comp=Z,1.3nm,0.3s,mb4.2,baz=54,slow=7.1,SNR=6.8						
QSPA	**South Pole Qui**	**84.72**	**180**	*e*P	**P**	**09 43 18.1**	**+0.8**
	comp=Z,6.0nm,0.7s,mb4.4						
EGAK	**Eagle**	**85.47**	**23**	*e*P	**P**	**09 43 21.0**	**-0.2**
HYT	**Haines Junctio**	**85.66**	**28**	*e*P	**P**	**09 43 22.9**	**+0.8**
DAWY	**Dawson**	**85.92**	**24**	*e*P	**P**	**09 43 23.7**	**+0.2**
SKAG	**Skagway**	**86.28**	**29**	*e*P	**P**	**09 43 26.1**	**+0.8**
	comp=Z,11nm,1.0s,mb4.5						
BVAR	**Borovoye Array**	**88.53**	**323**	P	**P**	**09 43 34.4**	**-1.7**
	comp=Z,3.7nm,0.9s,mb4.3,baz=108,slow=4.8,SNR=15						
BVAR				pP	pP	09 44 13.9	-1.3
	comp=Z,2.4nm,1.0s,baz=106,slow=4.9,SNR=2.4						
BRVK	**Borovoye**	**88.60**	**323**	*e*P	**P**	**09 43 35.0**	**-1.5**
DLBC	**Dease Lake**	**88.68**	**31**	*e*P	**P**	**09 43 37.4**	**+0.6**
INK	**Inuvik**	**89.51**	**21**	*e*P	**P**	**09 43 39.7**	**-0.7**
INK				pmax	pmax		
	comp=Z,14nm,1.0s						
INK	**Inuvik**	**89.51**	**21**	*e*P	**P**	**09 43 39.7**	**-0.7**
	comp=Z,14nm,1.0s,mb4.8						
HUMO	**Hull Mountain**	**90.60**	**47**	*e*P	**P**	**09 43 46.3**	**+0.2**
MTUM	**Tungsten Hills**	**93.49**	**53**	*e*P	**P**	**09 43 59.5**	**-0.1**
MWC	**Mount Wilson**	**93.69**	**56**	*e*P	**P**	**09 44 00.9**	**+0.3**
NVAR	**Mina Array Bea**	**93.76**	**52**	P	**P**	**09 44 01.5**	**+0.7**
	comp=Z,1.4nm,0.7s,mb4.2,baz=249,slow=6.4,SNR=18						
GSC	**Goldstone**	**94.78**	**55**	*e*P	**P**	**09 44 05.6**	**0.0**
ARU	**Arti**	**95.69**	**326**	*e*P	**P**	**09 44 06.6**	**-2.6**
ARU						09 47 56.5	
ARU				S	SKSac	09 54 29.1	-1.4
ARU				SS	SS	10 01 37.1	-8.6
N12A	**Clover Valley,**	**96.39**	**50**	*e*P	**P**	**09 44 13.4**	**+0.7**
YKA	**Yellowknife Ar**	**96.65**	**28**	P	**P**	**09 44 12.3**	**-1.1**
	comp=Z,0.9nm,0.5s,mb4.3,baz=272,slow=4.7,SNR=9.7						
HLID	**Hailey**	**96.90**	**47**	*e*P	**P**	**09 44 15.1**	**+0.1**
	comp=Z,1.1nm,0.7s,mb4.3						
PDAR	**Pinedale Array**	**100.47**	**48**	P	Pdif	09 44 30.5	-0.2
	comp=Z,0.9nm,0.6s,baz=242,slow=1.5,SNR=10						
ARCES	**ARCESS Array B**	**106.76**	**343**	PKiKP	PKiKP	09 49 07.3	-0.4
	comp=Z,1.0nm,0.7s,baz=41,slow=3.9,SNR=4.2						
NB2	**NORSAR Subarra**	**116.71**	**339**	PKPdf	PKPdf	09 49 25.2	-1.6
	comp=Z,0.7nm,0.7s,baz=44,slow=1.9						
NOA	**NORSAR Array B**	**116.71**	**339**	PKP	PKPdf	09 49 25.5	-1.2
	comp=Z,0.7nm,0.7s,baz=48,slow=1.8,SNR=4.7						
NOA	**NORSAR Array B**	**116.71**	**339**	PKP	PKPdf	09 49 25.5	-1.3
BOSA	**Boshof**	**117.92**	**234**	PKP	PKPdf	09 49 30.0	-0.1
	comp=Z,5.2nm,1.1s,baz=12,slow=10,SNR=5.1						
BOSA	**Boshof**	**117.92**	**234**	PKP	PKPdf	09 49 30.0	-0.1
DPC	**Dobruska-Polom**	**121.22**	**328**	*e*PKIKP	PKPdf	09 49 33.7	-2.1
DPC	**Dobruska-Polom**	**121.22**	**328**	*e*PKPdf	PKPdf	09 49 33.7	-2.1
DPC				*ex*	x	09 49 37.7	
PRU	**Pruhonice**	**122.37**	**328**	*e*PKIKP	PKPdf	09 49 34.1	-3.9
PRU	**Pruhonice**	**122.37**	**328**	*e*PKPdf	PKPdf	09 49 34.1	-3.9
PRU				*ex*	x	09 49 37.4	
KHC	**Kasperske Hory**	**123.38**	**328**	*e*PKIKP	PKPdf	09 49 35.3	-4.7
KHC	**Kasperske Hory**	**123.38**	**328**	*e*PKPdf	PKPdf	09 49 35.3	-4.7
KHC				*ex*	x	09 49 39.2	
ROSC	**El Rosal**	**134.84**	**88**	PKP	PKPdf	09 50 03.3	+0.5
	comp=Z,4.6nm,0.4s,baz=94,slow=16,SNR=3.5						
LPAZ	**La Paz**	**135.77**	**120**	PKP	PKPdf	09 50 05.4	+1.0
	comp=Z,1.5nm,0.5s,baz=354,slow=0.5,SNR=6.6						

MEX 28 09:51:12.6±1.1, 16°.88N×95°.18W, h117km±20km, MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUIG	**Tuzandepetl**	**1.36**	**32**	*e*P	Pn	09 51 36.7	-1.6
TUIG				*i* S	Sn	09 51 55.7	-2.0
HUIG	**Huatulco**	**1.42**	**219**	*e*P	Pn	09 51 36.9	-2.0
HUIG				*e*S	Sn	09 51 57.2	-1.7
VHO	**Vista Hermosa**	**1.50**	**278**	*e*P	Pn	09 51 39.9	0.0
VHO				*e*S	Sn	09 51 60.0	-0.7
TGIG		**1.97**	**93**	*i* P	Pn	09 51 45.4	-0.1
TGIG				*i* S	Sn	09 52 08.6	-2.1
PCIG		**2.21**	**121**	*i* P	Pn	09 51 48.6	0.0
PCIG				*i* S	Sn	09 52 15.4	-0.8
PNIG	**Pinotepa**	**2.87**	**261**	*e*P	Pn	09 51 55.3	-1.8
PNIG				*e*S	Sn	09 52 30.3	-1.1

*CSEM **28** 10:09:30.7±0.4, 37°.70N×43°.65E, h2km, MD2.9, Error ellipse: s-maj=21.0km s-min=6.3km az=83.0*
*DDA **28** 10:09:30.9, 37°.65N×43°.72E, h8km±2km, Md2.9*
*ISK **28** 10:09:30.9, 37°.71N×43°.57E, h8km, MD2.9*
*ISCJB **28** 10:09:30.8±0.8, 37°.71N±0°.03×43°.69E±0°.08, h0km±11km, Error ellipse: s-maj=10.4km s-min=4.7km az=169.9*

ISC 28 10:09:31.1±0.9, 37°.70N±0°.03×43°.76E±0°.09, h3km±10km, n16, σ0°.80/25, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAKT	**HAKKARI**	**0.14**	**195**	*i* P	**Pg**	**10 09 32.8**	**-1.2**
HAKT				*i* S	**Sg**	**10 09 35.6**	**-0.3**
HAKT	**HAKKARI**	**0.14**	**195**	*i* P	**Pg**	**10 09 32.8**	**-1.1**
HAKT				*i* S	**Sg**	**10 09 35.6**	**-0.2**
CUKT	**Cukurca**	**0.47**	**195**	*e*PG	**Pg**	**10 09 40.5**	**+0.5**
CUKT				*e*SG	**Sg**	**10 09 47.0**	**+1.0**
CUKT	**Cukurca**	**0.47**	**195**	*e*Pg	**Pg**	**10 09 40.5**	**+0.5**
CUKT				*e*Sg	**Sg**	**10 09 47.0**	**+1.0**
VANT	**Van**	**0.82**	**332**	*e*PG	**Pg**	**10 09 45.9**	**-0.8**
VANT	**Van**	**0.82**	**332**	*e*Pg	**Pg**	**10 09 45.9**	**-0.9**
TVAN	**Van**	**0.87**	**342**	*i* P	**Pg**	**10 09 48.6**	**+0.8**
TVAN				*i* S	**Sg**	**10 10 02.6**	**+3.5**
TVAN	**Van**	**0.87**	**342**	*i* P	**Pg**	**10 09 48.6**	**+0.8**
TVAN				*i* S	**Sg**	**10 10 02.6**	**+3.4**
VANB	**Van**	**0.94**	**342**	*e*PG	**Pg**	**10 09 48.3**	**-0.8**
VANB				*e*SG	**Sg**	**10 10 01.6**	**+0.3**
VANB	**Van**	**0.94**	**342**	*e*Pg	**Pg**	**10 09 48.3**	**-0.8**
VANB				*e*Sg	**Sg**	**10 10 01.6**	**+0.3**
CLDR	**Caldiran**	**1.45**	**5**	*e*PN	**Pn**	**10 09 58.8**	**+0.7**
CLDR	**Caldiran**	**1.45**	**5**	*e*Pn	**Pn**	**10 09 58.8**	**+0.7**
BTMT	**Batman**	**1.86**	**286**	*e*PN	**Pn**	**10 10 03.8**	**+0.1**
AGRB	**Hanur-Agry**	**1.97**	**343**	*e*PN	**Pn**	**10 10 04.2**	**-1.0**
AGRB	**Hanur-Agry**	**1.97**	**343**	*e*Pn	**Pn**	**10 10 04.2**	**-1.0**
BEST	**Besiri**	**1.98**	**276**	*e*P	**Pg**	**10 10 09.1**	**+0.1**
BEST				*i* S	**Sg**	**10 10 34.5**	**-0.1**

IDC 28 10:10:58.9±1.0, 31°.66N×103°.80E, h0km, mb3.7/4, mb1 3.8/6, mb1mx3.5/26, mbtmp3.6/6, ML3.6/2, Error ellipse: s-maj=63.3km s-min=21.2km az=65.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.86**	**200**	Pn	Pn	10 14 17.6	+1.0
	0.2nm,0.3s,baz=225,slow=28,SNR=3.4						
SONM	**Songino Array**	**16.27**	**6**	Pn	Pn	10 14 50.3	+1.6
	0.1nm,0.3s,baz=175,slow=8.5,SNR=3.7						
FINES	**FINESS Array B**	**56.96**	**326**	P	P	10 20 46.2	+0.6
	1.4nm,0.6s,baz=103,slow=6.0,SNR=8.6						
WRA	**Warramunga Arr**	**59.08**	**146**	P	P	10 21 00.5	-0.5
	0.9nm,0.6s,baz=340,slow=7.8,SNR=16						
ASAR	**Alice Springs**	**62.10**	**149**	P	P	10 21 22.1	+0.6
	0.4nm,0.5s,baz=334,slow=6.6,SNR=6.8						
NOA	**NORSAR Array B**	**64.05**	**327**	P	P	10 21 33.0	-1.1
	0.2nm,0.4s,baz=78,slow=6.4,SNR=3.6						

*NEIC **28** 10:15:31.0±0.8, 27°.56S×179°.62E, h476km±9km, mb4.6/23, Error ellipse: s-maj=10.1km s-min=7.8km az=134.0*
*IDC **28** 10:15:30.3±1.5, 27°.54S×179°.61E, h473km±16km, mb3.8/15, mb1 4.0/18, mb1mx4.0/21, mbtmp3.9/18, Error ellipse: s-maj=12.9km s-min=11.6km az=160.0*
*BJI **28** 10:15:30.5, 27°.60S×179°.60E, h476km, mB4.9/9, mb4.7/13*
*ISCJB **28** 10:15:30.4±0.9, 27°.54S±0°.05×179°.52E±0°.05, h474km±10km, mb4.4/39, Error ellipse: s-maj=8.8km s-min=6.1km az=137.6*

ISC 28 10:15:31.3±0.9, 27°.58S±0°.06×179°.56E±0°.05, h475km±11km, h480km±6km: pP-P, n267, σ0°.67/245, mb4.4/39, 87C-71D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUZ	**Omahuta**	**9.16**	**212**	*e*Pn	**P**	**10 17 42.3**	**+2.9**
	314nm,1.3s						
MSVF	**Nonsavu**	**9.90**	**352**	*e*Pn	**P**	**10 17 47.0**	**-0.6**
	30nm,0.5s						
URZ	**Urewera**	**10.85**	**190**	P	**P**	**10 17 55.5**	**-1.9**
	18nm,0.3s,baz=45,slow=2.6,SNR=78						
URZ				S	**S**	**10 19 58.4**	**+0.5**
	2.1nm,0.3s,baz=236,slow=22,SNR=6.6						
URZ	**Urewera**	**10.85**	**190**	*e*Pn	**P**	**10 17 56.5**	**-0.9**
	101nm,0.6s						
DZM	**Mont Dzumac**	**13.11**	**292**	*e*P	**P**	**10 18 23.9**	**+1.9**
SNZO	**South Karori**	**14.27**	**195**	*e*P	**P**	**10 18 32.9**	**-1.1**
AFI	**Afiamalu**	**15.82**	**32**	P	**P**	**10 18 47.4**	**-3.3**
	37nm,0.3s,baz=144,slow=3.4,SNR=34						
AFI	**Afiamalu**	**15.82**	**32**	*e*Pn	**P**	**10 18 47.0**	**-3.7**
	138nm,0.6s						
AFI				*e*Sn	**S**	**10 21 29.5**	**-5.9**
RPZ	**Rata Peaks**	**17.50**	**201**	P	**P**	**10 19 06.2**	**-1.8**
	4.4nm,0.3s,baz=113,slow=1.5,SNR=14						
RPZ	**Rata Peaks**	**17.50**	**201**	*e*P	**P**	**10 19 05.8**	**-2.2**
	67nm,0.8s						
RPZ				*e*S	**S**	**10 22 01.4**	**-4.2**
ARMA	**Armidale**	**24.57**	**257**	*e*P	**P**	**10 20 14.0**	**+1.5**
ARMA	**Armidale**	**24.57**	**257**	*e*P	**P**	**10 20 14.1**	**+1.6**
	12nm,0.8s,mb4.4						
EIDS	**Eidsvold**	**25.57**	**268**	*e*P	**P**	**10 20 21.7**	**+0.3**
	15nm,0.6s,mb4.6						
CNB	**Canberra Magne**	**26.82**	**246**	*e*P	**P**	**10 20 33.6**	**+1.3**
CAN	**Canberra**	**27.11**	**246**	*e*P	**P**	**10 20 36.3**	**+1.4**
	6.1nm,0.5s,mb4.3						
MILA	**Mila**	**27.28**	**242**	*e*P	**P**	**10 20 37.8**	**+1.4**
	26nm,0.8s,mb4.7						
TOO	**Toolangi**	**30.25**	**242**	*e*P	**P**	**10 21 02.5**	**+0.2**
CTA	**Charters Tower**	**31.30**	**276**	*e*P	**P**	**10 21 12.1**	**+0.6**
	9.9nm,0.4s,mb4.6						
CTA	**Charters Tower**	**31.30**	**276**	P	**P**	**10 21 12.1**	**+0.6**
	15nm,0.5s,mb4.7,baz=101,slow=10,SNR=35						
CTAO	**Charters Tower**	**31.30**	**276**	*e*P	**P**	**10 21 11.9**	**+0.3**
	9.5nm,0.5s,mb4.5						
STKA	**Stephens Creek**	**33.14**	**253**	*e*P	**P**	**10 21 27.2**	**+0.1**
	6.8nm,0.4s,mb4.4						
STKA	**Stephens Creek**	**33.14**	**253**	P	**P**	**10 21 27.3**	**+0.1**
	8.8nm,0.5s,mb4.5,baz=99,slow=12,SNR=39						
STKA	**Stephens Creek**	**33.14**	**253**	P	**P**	**10 21 27.3**	**+0.1**
COEN	**Coen**	**36.48**	**284**	*e*P	**P**	**10 21 55.7**	**+0.4**
	35nm,0.5s,mb5.0						
ASAR	**Alice Springs**	**41.18**	**265**	P	**P**	**10 22 33.0**	**-0.5**
	7.3nm,0.7s,mb4.2,baz=99,slow=8.3,SNR=132						
ASAR				S	**S**	**10 28 11.4**	**-0.6**
	0.6nm,0.7s,baz=94,slow=15,SNR=5.6						
WRAB	**Tennant Creek**	**41.89**	**270**	*e*P	**P**	**10 22 38.6**	**-0.7**
	18nm,0.7s,mb4.6						
WRA	**Warramunga Arr**	**41.90**	**270**	P	**P**	**10 22 38.6**	**-0.7**
	16nm,0.6s,mb4.6,baz=110,slow=6.4,SNR=205						
FORT	**Forrest**	**44.76**	**253**	*e*P	**P**	**10 23 00.1**	**-1.5**
	46nm,0.6s,mb5.1						
FORT	**Forrest**	**44.76**	**253**	*e*P	**P**	**10 23 00.4**	**-1.2**
	55nm,0.6s,mb5.2						
KAKA	**Kakadu**	**46.37**	**279**	*e*P	**P**	**10 23 12.4**	**-1.7**
	7.7nm,0.3s,mb4.6						
FITZ	**Fitzroy Crossi**	**50.26**	**269**	*e*P	**P**	**10 23 42.2**	**-1.0**
	7.8nm,0.7s,mb4.2						
FITZ	**Fitzroy Crossi**	**50.26**	**269**	P	**P**	**10 23 42.5**	**-0.6**
	4.8nm,0.8s,mb3.9,baz=136,slow=8.3,SNR=12						
SBA	**Scott Base**	**50.70**	**183**	*e*P	**P**	**10 23 46.5**	**+1.0**
	11nm,1.0s,mb4.2						
CASY	**Casey**	**56.65**	**207**	*e*P	**P**	**10 24 26.2**	**-1.8**
CASY	**Casey**	**56.65**	**207**	*e*P	**P**	**10 24 26.2**	**-1.8**
	6.5nm,0.7s,mb4.1						
QSPA	**South Pole Qui**	**62.52**	**180**	P	**P**	**10 25 07.3**	**+0.2**
	5.5nm,0.6s,mb4.3,baz=33,slow=1.1,SNR=41						
QSPA	**South Pole Qui**	**62.52**	**180**	*e*P	**P**	**10 25 07.3**	**+0.2**
	14nm,1.2s,mb4.4						
MAW	**Mawson**	**74.18**	**201**	*e*P	**P**	**10 26 17.4**	**-0.8**
	2.5nm,0.5s,mb4.0						
MAW	**Mawson**	**74.18**	**201**	P	**P**	**10 26 17.8**	**-0.4**
	2.8nm,0.5s,mb4.0,baz=145,slow=6.1,SNR=12						
MAW	**Mawson**	**74.18**	**201**	*e*P	**P**	**10 26 17.4**	**-0.8**
	6.7nm,2.0s,mb3.8						
MJAR	**Matsushiro Arr**	**74.72**	**327**	P	**P**	**10 26 20.0**	**-1.6**
	0.9nm,0.6s,mb3.5,baz=2.5,slow=24,SNR=6.2						
ASAJ	**Asahikawa**	**78.97**	**334**	P	**P**	**10 26 44.8**	**0.0**
	6.9nm,0.6s,mb4.3,baz=198,slow=12,SNR=9.2						
SYO	**Syowa Base**	**79.36**	**194**	‖*e*K	**P**	**10 26 42.0**	**-4.6**
SYO	**Syowa Base**	**79.36**	**194**	‖*e*PcP	PcP	10 26 50.4	-2.5
KSRS	**Korea Array**	**80.82**	**321**	P	**P**	**10 26 53.9**	**-0.8**
	1.1nm,0.9s,mb3.4,baz=126,slow=5.3,SNR=4.5						
YSS	**Yuzh-Sakhalins**	**81.30**	**335**	*e*P	**P**	**10 26 56.1**	**-0.8**
PETK	**Petropavlovsk-**	**82.58**	**347**	P	**P**	**10 27 02.5**	**-0.8**
	4.2nm,0.6s,mb4.2,baz=113,slow=7.7,SNR=24						
NJ2	**Nanjing**	**82.79**	**312**	*e*P	**P**	**10 27 05.0**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,30nm,0.7s,mb4.9						
PKM	**Peak Mountain**	**84.51**	**46**	⇑P	**P**	**10 27 13.9**	**+0.4**
	baz=85						
SMMC	**Simmler**	**84.65**	**46**	⇓P	**P**	**10 27 14.4**	**+0.3**
	baz=85						
MURC	**Murrieta**	**85.42**	**48**	⇓P	**P**	**10 27 17.7**	**-0.2**
	baz=86						
BFSC	**Mount Baldy Ra**	**85.50**	**48**	P	**P**	**10 27 18.4**	**+0.1**
	baz=86,SNR=5.8						
MONP	**Monument Peak**	**85.51**	**49**	⇓P	**P**	**10 27 18.8**	**+0.4**
	baz=86						
DVTC	**Desert V Tower**	**85.59**	**50**	⇓P	**P**	**10 27 19.1**	**+0.4**
	baz=86						
EDW2	**Edwards Air Fo**	**85.68**	**47**	⇓P	**P**	**10 27 19.5**	**+0.4**
	baz=86,SNR=6.8						
ISA	**Isabella**	**85.84**	**46**	P	**P**	**10 27 20.2**	**+0.3**
	baz=86,SNR=9.1						
ISA	**Isabella**	**85.84**	**46**	*e*P	**P**	**10 27 20.0**	**+0.1**
PFO	**Pinyon Flat Ob**	**85.92**	**49**	⇓P	**P**	**10 27 20.2**	**-0.2**
	baz=86						
PLCA	**Paso Flores**	**85.99**	**134**	P	**P**	**10 27 20.9**	**+0.1**
	comp=Z,2.9nm,1.0s,mb3.9,baz=236,slow=5.3,SNR=7.9						
BBRC	**Big Bear Solar**	**86.00**	**48**	⇑P	**P**	**10 27 20.6**	**-0.1**
	baz=86						
CMB	**Columbia Colle**	**86.14**	**43**	*e*P	**P**	**10 27 20.9**	**-0.3**
LRMC	**Laurel Mountai**	**86.24**	**47**	⇓P	**P**	**10 27 22.1**	**+0.3**
	baz=86						
BELC	**Belle Mtn. Jos**	**86.45**	**49**	P	**P**	**10 27 23.5**	**+0.6**
	baz=87,SNR=7.2						
GLA	**Glamis**	**86.68**	**50**	⇑P	**P**	**10 27 25.0**	**+1.0**
	baz=87						
GSC	**Goldstone**	**86.70**	**47**	⇓P	**P**	**10 27 24.4**	**+0.4**
	baz=87,SNR=5.3						
GSC	**Goldstone**	**86.70**	**47**	*e*P	**P**	**10 27 23.5**	**-0.5**
MPMC	**Manual Prosp

U13A	Pakoon Wash	89.22	48	⇓P	P	10 27 36.4 +0.6
	baz=89,SNR=6.1					
117A	Oracle	89.24	52	⇑P	P	10 27 36.2 +0.2
	baz=89,SNR=5.0					
X15A	Humboldt	89.27	50	⇑P	P	10 27 36.3 +0.2
	baz=89,SNR=7.0					
R11A	Troy Canyon, C	89.31	45	⇓P	P	10 27 36.2 0.0
	baz=90					
V14A	Boquillas Ranc	89.34	49	P	P	10 27 37.0 +0.7
	baz=90,SNR=5.2					
S12A	Delamar Landin	89.34	46	⇑P	P	10 27 37.1 +0.8
	baz=90,SNR=5.4					
218A	Dragoon	89.40	53	⇓P	P	10 27 37.4 +0.6
	baz=90,SNR=19					
H04A	Detroit Lake	89.40	37	⇓P	P	10 27 36.5 +0.1
	baz=90					
Y16A	Circle Bar Ran	89.45	51	⇑P	P	10 27 37.9 +1.0
	baz=90,SNR=5.5					
P10A	Eureka	89.52	44	⇑P	P	10 27 36.4 -0.7
	baz=90					
Q11A	Duckwater	89.56	45	⇓P	P	10 27 37.0 -0.3
	baz=90					
319A	Douglas	89.62	54	⇑P	P	10 27 38.4 +0.7
	baz=90,SNR=6.0					
U14A	Mt Trumbull	89.74	48	⇑P	P	10 27 38.7 +0.5
	baz=90,SNR=7.7					
X16A	Lo Mia Camp, P	89.78	51	⇓P	P	10 27 38.5 +0.1
	baz=90,SNR=9.0					
Y17A	Roosevelt	89.79	51	⇑P	P	10 27 38.4 -0.1
	baz=90					
118A	Homack Ranch,	89.82	53	⇑P	P	10 27 39.1 +0.4
	baz=90,SNR=5.8					
R12A	Pony Springs,	89.92	46	⇓P	P	10 27 39.4 +0.4
	baz=90,SNR=5.4					
WVOR	Wild Horse Val	89.95	41	eP	P	10 27 38.8 -0.2
	comp=Z,6.3nm,1.0s,mb4.4					
219A	White Tail Can	89.97	54	⇑P	P	10 27 39.7 +0.3
	baz=90					
V15A	Kaibab Nationa	90.07	49	⇑P	P	10 27 39.9 +0.2
	baz=90					
F04A	Amboy	90.10	36	⇓P	P	10 27 40.1 +0.5
	baz=90					
HOOD	Mount Hood Mea	90.11	37	eP	P	10 27 38.0 -1.6
320A	Kipp Ranch, An	90.14	54	⇑P	P	10 27 41.4 +1.2
	baz=90,SNR=8.4					
X17A	Forest Lakes	90.17	51	⇑P	P	10 27 40.2 0.0
	baz=90					
T14A	Hurricane	90.17	48	⇑P	P	10 27 39.8 -0.4
	baz=90					
Q12A	Willow Creek R	90.19	45	⇓P	P	10 27 39.7 -0.5
	baz=90					
R13A	O'Grain Ranch,	90.24	46	⇓P	P	10 27 40.4 -0.1
	baz=90					
CCUT	Cedar City	90.27	47	eP	P	10 27 40.9 +0.2
O11A	Cowboy Ranch,	90.33	44	⇑P	P	10 27 40.6 -0.2
	baz=90					
U15A	North Rim	90.33	48	⇑P	P	10 27 40.7 -0.2
	baz=90,SNR=9.8					
Y18A	Canyon Day Jun	90.39	52	⇑P	P	10 27 41.9 +0.6
	baz=90,SNR=7.9					
P12A	McGill	90.40	45	⇓P	P	10 27 41.3 +0.1
	baz=91					
220A	Playas Peak, P	90.45	54	⇑P	P	10 27 41.0 -0.6
	baz=91					
S14A	Cedar City	90.51	47	⇓P	P	10 27 42.1 +0.4
	baz=91					
T15A	Red Dirt Ranch	90.61	48	⇑P	P	10 27 41.9 -0.3
	baz=91,SNR=5.2					
J08A	Circle Bar Ran	90.61	40	⇓P	P	10 27 40.7 -1.3
	baz=91,SNR=5.7					
M10A	I.L. Ranch, Tu	90.62	42	⇑P	P	10 27 42.3 +0.1
	baz=91,SNR=6.9					
KMI	Kunming	90.63	298	P	P	10 27 42.3 -0.3
KMI				pmax	pmax	
	comp=Z,7.0nm,0.9s,mb4.6					
Q13A	Wheeler Ranch,	90.66	46	⇑P	P	10 27 42.4 +0.1
	baz=91,SNR=7.4					
120A	U Bar Ranch, L	90.72	53	⇑P	P	10 27 43.1 +0.3
	baz=91					
X18A	Snowflake	90.86	51	⇑P	P	10 27 43.8 +0.3
	baz=91					
V17A	Tonalea, Kykot	90.89	50	⇑P	P	10 27 43.7 +0.2
	baz=91,SNR=5.2					
P13A	Bates Ranch, G	90.95	45	⇑P	P	10 27 43.7 0.0
	baz=91,SNR=5.9					
O12A	Currie	90.97	44	⇑P	P	10 27 43.5 -0.3
	baz=91					
S15A	Panguitch	90.99	47	P	P	10 27 45.2 +1.2
	baz=91,SNR=6.4					
L10A	Juniper Basin	91.00	42	P	P	10 27 44.1 +0.2
	baz=91,SNR=14					
M11A	Holland Ranch,	91.02	43	⇑P	P	10 27 44.3 +0.3
	baz=91					
Y19A	Nutrioso	91.04	52	⇓P	P	10 27 44.7 +0.4
	baz=91					
Z20A	Nine Sixteen R	91.05	53	⇑P	P	10 27 44.1 -0.2
	baz=91					
N12A	Clover Valley,	91.13	44	⇓P	P	10 27 43.7 -0.8
	baz=91,SNR=6.4					
N12A	Clover Valley,	91.13	44	eP	P	10 27 44.9 +0.3
D05A	Enumclaw	91.15	36	⇑P	P	10 27 45.9 +1.5
	baz=91,SNR=6.2					
Q14A	Sevier Lake (B	91.15	46	⇑P	P	10 27 44.8 +0.1
	baz=91,SNR=9.9					
K10A	MacKenzie Ranc	91.19	41	⇑P	P	10 27 44.9 +0.2
	baz=91,SNR=5.3					
O13A	Hicks Ranch, I	91.36	45	⇑P	P	10 27 46.1 +0.5
	baz=92					
L11A	Cat Creek Ranc	91.48	42	P	P	10 27 46.3 +0.2
	baz=92,SNR=7.2					
V18A	Ganado	91.52	50	⇑P	P	10 27 46.8 +0.4
	baz=92					
M12A	Wells	91.54	43	⇑P	P	10 27 45.6 -0.8
	baz=92					
G08A	Pilot Rock	91.55	38	⇓P	P	10 27 45.0 -1.3
	baz=92					
MSU	Marysvale	91.58	47	eP	P	10 27 47.7 +1.0
N13A	Wendover, West	91.65	44	⇑P	P	10 27 45.9 -1.0
	baz=92,SNR=5.7					
N13A	Wendover, West	91.65	44	eP	P	10 27 46.4 -0.5
	comp=Z,6.4nm,1.0s,mb4.5					
K11A	Parker Ranch,	91.67	42	⇓P	P	10 27 46.5 -0.4
	baz=92,SNR=6.1					
Z21A	St. Cloud Mine	91.80	53	⇓P	P	10 27 47.6 -0.3
	baz=92					
L12A	House Creek Ra	91.91	43	⇑P	P	10 27 48.2 +0.2
	baz=92,SNR=5.1					
M13A	Montello	91.97	44	⇓P	P	10 27 48.6 +0.3
	baz=92,SNR=12					
M13A	Montello	91.97	44	eP	P	10 27 48.5 +0.1
	comp=Z,11nm,1.1s,mb4.7					
DUG	Dugway	92.13	45	⇓P	P	10 27 49.1 -0.1
	baz=92					
Y21A	Point of Rocks	92.17	53	⇑P	P	10 27 49.2 -0.3
	baz=92					
MFID	Camas Ranch	92.18	41	⇑P	P	10 27 48.7 -0.6
	baz=92					
K12A	Draper Farm, C	92.27	42	⇓P	P	10 27 48.5 -1.2
	baz=92					
N14A	Grayback Hills	92.28	44	⇓P	P	10 27 49.5 -0.3
	baz=92					
Z22A	Elephant Butte	92.28	54	⇓P	P	10 27 49.6 -0.4
	baz=92					
U19A	Dine' College,	92.33	50	⇑P	P	10 27 50.4 +0.2
	baz=92					
T18A	Mexican Hat	92.34	49	⇓P	P	10 27 49.4 -0.8
	baz=92					
H10A	Noah's Angus R	92.36	40	⇑P	P	10 27 49.3 -0.7
	baz=92					
O15A	The Old Anders	92.40	45	⇓P	P	10 27 50.5 +0.2
	baz=93					
I11A	Placerville	92.40	41	⇓P	P	10 27 49.9 -0.4
	baz=93					
324A	Moseley Ranch,	92.41	56	⇓P	P	10 27 50.0 -0.6
	baz=92					
626A	Big Bend Ranch	92.46	58	⇑P	P	10 27 50.8 -0.1
	baz=93					
J12A	Stokes Ranch,	92.51	42	⇓P	P	10 27 51.1 +0.3
	baz=93,SNR=6.6					
L13A	Double Diamond	92.52	43	⇓P	P	10 27 51.0 +0.1
	baz=93					
M14A	Sheep Mountain	92.55	44	P	P	10 27 50.8 -0.2
	baz=93,SNR=9.4					
G10A	Bishop Farm, J	92.57	39	⇓P	P	10 27 50.4 -0.6
	baz=93					
Y22A	Socorro	92.64	53	⇓P	P	10 27 51.2 -0.4
	baz=93					
TXAR	Lajitas Array	92.70	58	P	P	10 27 52.1 +0.1
	comp=Z,0.8nm,0.8s,mb3.8,baz=206,slow=6.6,SNR=9.5					
224A	Cornudas Mount	92.71	55	⇑P	P	10 27 51.6 -0.4
	baz=93					
N15A	Stansbury Isla	92.71	45	P	P	10 27 51.7 -0.1
	baz=93,SNR=6.2					
HHC	Hu-ho-hao-te	92.74	315	eP	P	10 27 53.3 +1.4
HHC				S	S	10 38 15.3 -0.2
HHC				pmax	pmax	
	comp=Z,19nm,0.8s,mb5.2					
HHC				pmax	pmax	
	comp=Z,160nm,5.5s					
526A	Mary Lane Ranc	92.75	58	⇑P	P	10 27 51.3 -0.9
	baz=93					
325A	Bean Ranch, Si	92.75	56	⇑P	P	10 27 51.6 -0.6
	baz=93					
K13A	Stover Farm, H	92.76	43	⇑P	P	10 27 52.2 +0.2
	baz=93					
CD2	Chengdu	92.77	303	eP	P	10 27 52.0 -0.3
CD2				pP	pP	10 29 40.3 +1.1
CD2				sP	sP	10 30 28.0 +0.5
CD2				pmax	pmax	
	comp=Z,10.0nm,0.6s,mb5.0					
CD2				pmax	pmax	
	comp=Z,30nm,5.2s					
I12A	Atlanta	92.81	41	⇓P	P	10 27 52.4 +0.2
	baz=93					
H11A	Donnelly	92.84	40	⇑P	P	10 27 51.1 -1.1
	baz=93,SNR=6.6					
F10A	Beach Ranch, E	92.92	39	⇓P	P	10 27 52.0 -0.6
	baz=93					
627A	Terlingua Ranc	92.97	58	⇓P	P	10 27 52.6 -0.6
	baz=93					
O16A	Springville	92.97	46	⇓P	P	10 27 51.9 -1.0
	baz=93					
SRU	San Rafael	92.99	47	⇓P	P	10 27 53.0 -0.1
	baz=93					
SRU	San Rafael	92.99	47	eP	P	10 27 52.0 -1.1
SPUT	South Promonto	92.99	44	eP	P	10 27 53.3 +0.2
R18A	Canyonlands Na	93.00	48	⇑P	P	10 27 52.3 -0.9
	baz=93					
M15A	Larsen Ranch,	93.08	44	⇓P	P	10 27 53.2 -0.2
	baz=93,SNR=8.4					
426A	McDonald Obser	93.09	57	⇓P	P	10 27 53.5 -0.3
	baz=93					
HLID	Hailey	93.10	42	⇓P	P	10 27 53.8 +0.3
	baz=93					
527A	Woodward Ranch	93.14	58	⇑P	P	10 27 53.7 -0.3
	baz=93					
S19A	Harvey Farm, M	93.16	49	⇑P	P	10 27 53.7 -0.2
	baz=93					
K14A	Jones Ranch, D	93.25	43	⇑P	P	10 27 54.3 +0.1
	baz=93					
628A	Black Gap, Mar	93.36	59	⇑P	P	10 27 54.7 -0.4
	baz=94					
H12A	Diamond D Ranc	93.42	41	⇓P	P	10 27 54.4 -0.5
	baz=94					
L15A	Malad City	93.42	44	⇑P	P	10 27 55.0 0.0
	baz=94					
O17A	Robinson Place	93.45	46	⇑P	P	10 27 55.6 +0.4
	baz=94					
U21A	Nageezi	93.46	51	⇓P	P	10 27 54.8 -0.5
	baz=94					
J14A	Carey	93.49	42	⇑P	P	10 27 55.9 +0.6
	baz=94					
ANMO	Albuquerque	93.52	52	eP	P	10 27 55.7 +0.1
125A	Gardner Draw,	93.64	55	⇑P	P	10 27 55.8 -0.4
	baz=94					
427A	Hayter Ranch,	93.65	57	⇑P	P	10 27 56.0 -0.4
	baz=94					
K15A	Arbon	93.72	43	⇑P	P	10 27 56.2 -0.2
	baz=94					
TRF	Thorofare Moun	93.81	13	eP	P	10 27 54.5 -1.8
	comp=Z,5.2nm,0.7s,mb4.7					
L16A	Fish Haven	94.02	44	⇓P	P	10 27 57.3 -0.5
	baz=94					
J15A	Blackfoot	94.19	43	⇓P	P	10 27 58.4 -0.1
	baz=94					
M17A	Scullys Gap (B	94.20	45	⇓P	P	10 27 58.3 -0.3
	baz=94					
BPAW	Bear Paw Mtn.	94.26	13	P	P	10 27 58.6 +0.4
	comp=Z,5.4nm,0.7s,mb4.7					
P19A	Cripple Cowboy	94.28	47	⇑P	P	10 27 58.8 -0.2
	baz=94					
Q20A	Ridgley Place,	94.36	48	⇑P	P	10 27 58.8 -0.6
	baz=94					
K17A	Gardner Place,	94.74	44	⇑P	P	10 28 01.6 +0.5
	baz=95					
G15A	Dillon	95.15	41	⇑P	P	10 28 02.9 +0.1
	baz=95					
K18A	Toltan Ranch,	95.22	44	⇓P	P	10 28 02.9 -0.3
	baz=95					
LZH	Lanzhou	95.32	308	⇑P	P	10 28 06.5 +2.7
LZH				pP	pP	10 29 55.3 +4.4
LZH				sP	sP	10 30 42.3 +3.2
LZH				PP	PP	10 32 07.0 +4.6
LZH				pmax	pmax	
	comp=Z,19nm,1.5s,mb4.9					
LZH				pmax	pmax	
	comp=Z,54nm,9.3s					
J18A	Kendall Valley	95.55	44	⇑P	P	10 28 04.4 -0.2
	baz=96					
PDAR	Pinedale Array	95.59	44	P	P	10 28 03.7 -1.2
	comp=Z,0.6nm,0.8s,mb3.8,baz=180,slow=2.2,SNR=5.2					
H16A	Russell Place,	95.62	42	⇑P	P	10 28 04.8 -0.2
	baz=96					
N21A	Black Mountain	95.82	47	⇑P	P	10 28 05.8 -0.2
	baz=96					
MKAR	Makanchi Array	114.32	312	PKP	PKiKP	10 33 13.9 -2.1
	comp=Z,0.6nm,0.5s,baz=67,slow=4.7,SNR=8.3					
KURK	Kurchatov	117.56	315	PKP	PKPdf	10 33 19.9 -2.2
	comp=Z,1.8nm,0.7s,baz=107,slow=1.9,SNR=7.7					
KURK	Kurchatov	117.56	315	ePKPdf	PKPdf	10 33 20.1 -2.1
BVAR	Borovoye Array	122.90	317	PKP	PKPdf	10 33 30.2 -2.2
	comp=Z,3.3nm,0.6s,baz=90,slow=1.5,SNR=18					
SCHQ	Schefferville	125.54	41	PKP	PKPdf	10 33 35.0 -2.4
	comp=Z,0.8nm,0.5s,baz=206,slow=7.4,SNR=3.8					
SFJD	Kangerlussuaq	130.31	23	PKhKP		10 33 39.0
	comp=Z,9.6nm,0.8s,baz=164,slow=5.6,SNR=4.4					
ARCES	ARCESS Array B	135.39	347	PKhKP		10 33 43.7
	comp=Z,1.5nm,0.9s,baz=7.8,slow=2.7,SNR=7.6					
ARCES				PKP	PKPdf	10 33 54.9 -0.7
	comp=Z,3.3nm,0.6s,baz=64,slow=2.8,SNR=14					
ARCES				SKPbc	SKPbc	10 36 40.0 -1.6
	comp=Z,1.0nm,0.7s,baz=20,slow=3.9,SNR=4.0					
JOF	Joensuu	139.02	338	ep	PKPdf	10 34 01.4 -1.1
	comp=Z,3.6nm,0.5s					
JOF	Joensuu	139.02	338	ep	PKPdf	10 34 01.4 -1.1
	comp=Z,3.6nm,0.5s					
KAF	Kangasniemi	141.19	340	ep	PKPdf	10 34 06.5 +0.1
	comp=Z,3.5nm,0.5s					
KAF	Kangasniemi	141.19	340	ep	PKPdf	10 34 06.5 +0.1
	comp=Z,3.5nm,0.5s					
FINES	FINESS Array B	141.77	340	PKhKP		10 34 00.3
	comp=Z,1.6nm,0.4s,baz=59,slow=3.4,SNR=15					
NOA	NORSAR Array B	145.63	350	PKPbc	PKPbc	10 34 13.7 -1.9
	comp=Z,7.5nm,0.7s,baz=16,slow=4.6,SNR=36					
NAO01	NORSAR Array S	145.87	350	ePKPdf	PKPdf	10 34 14.4 -0.2
NAO01				ePKPbc	PKPbc	10 34 16.3 +0.1
AKASG	Malin Array Be	147.77	324	PKPbc	PKPbc	10 34 20.1 -1.6
	comp=Z,7.2nm,0.4s,baz=45,slow=3.3,SNR=40					
AKBB	Malin Array Si	147.77	324	ePKPbc	PKPbc	10 34 20.0 -1.7
AKBB				ePKPab	PKPab	10 34 23.6 -2.1
KIEV	Kiev	147.78	324	ePKPbc	PKPbc	10 34 20.0 -1.7
KIEV				ePKPab	PKPab	10 34 23.9 -1.9
MMAI	Mount Meron Ar	148.69	289	PKPbc	PKPbc	10 34 24.1 -0.5
	comp=Z,6.2nm,0.5s,baz=75,slow=7.3,SNR=12					
BR131	Keskin Array S	149.34	302	ePKPbc	PKPbc	10 34 24.5 -1.4
BR131				ePKPab	PKPab	10 34 31.7 -0.9
BRTR	Keskin Array B	149.34	302	PKPbc	PKPbc	10 34 24.6 -1.4
	comp=Z,2.0nm,0.8s,baz=129,slow=3.3,SNR=14					
BUR08	Bucovina Ar. S	151.69	322	ePKPbc	PKPbc	10 34 31.4 +0.2
BUR08				ePKPab	PKPab	10 34 41.9 -0.3
CLL	Collm	154.21	340	ePKPbc	PKPbc	10 34 35.0 -1.5
	comp=Z,5.0nm,0.8s					
CLL				i PKPab	PKPab	10 34 51.3 -1.4
	comp=Z,5.0nm,0.7s					
VYHS	Vyhne	154.32	330	ePKPbc	PKPab	10 34 52.6 -0.7
DBIC	Dimbokro	158.78	168	PKP	PKPdf	10 34 33.7 -1.2
	comp=Z,3.9nm,1.0s,baz=262,slow=9.9,SNR=3.1					
MDT	Midelt	173.65	34	PKP	PKPdf	10 34 45.9 +0.1
	comp=Z,1.3nm,0.7s,baz=326,slow=6.1,SNR=3.7					

*IDC **28** 10:15:37.8±4.0, 53°.21N×166°.15W, h0km, mb3.6/5, mb1 3.9/5, mb1mx3.5/27, mbtmp3.6/5, MS3.8/3, Ms1 3.8/3, ms1mx3.0/38, Error ellipse: s-maj=103.0km s-min=31.3km az=37.0*

*ISCJB **28** 10:15:44.6±0.8, 53°.47N±0°.06×165°.19W±0°.06, h33km, mb3.6/5, MS3.9/3, Error ellipse: s-maj=9.2km s-min=5.1km az=7.7*

*NEIC **28** 10:15:46.5±1.2, 53°.57N×165°.36W, h35km±12km, ML3.5(AEIC), Error ellipse: s-maj=17.9km s-min=8.2km az=174.0*

ISC 28 10:15:46.3±0.8, 53°.52N±0°.06×165°.28W±0°.06, h35km, n20, σ0.94/24, mb3.6/5, MS3.9/3, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKUT	Akutan	0.69	335	P	Pn	10 15 58.9	-0.5
AKUT				S	Sn	10 16 09.6	+0.7
AKLV	Akutan Long Va	0.76	329	P	Pn	10 15 59.9	-0.6
AKLV				S	Sn	10 16 11.2	+0.5
UNV	Unalaska Valle	0.80	295	P	Pn	10 16 00.2	-0.7
UNV				S	Sn	10 16 11.6	0.0
AKGG	Akutan Green G	0.80	329	P	Pn	10 16 00.7	-0.4
AKGG				S	Sn	10 16 12.7	+1.0
OKFG	Magazine Ridge	1.58	267	P	Pn	10 16 11.4	-0.2
FALS	False Pass	1.73	38	P	Pn	10 16 12.5	-1.4
FALS				eSn	Sn	10 16 34.0	-0.7
SDPT	Sand Point	3.35	55	P	Pn	10 16 36.2	+0.1
SDPT				S	Sn	10 17 13.8	-0.8
CHGN	Chignik	4.84	52	ePn	Pn	10 16 56.5	-0.1
CHGN				eSn	Sn	10 17 56.0	+4.7
SEW	Seward	10.88	46	ePn	Pn	10 18 19.4	+0.1
EGAK	Eagle	16.61	38	eP	Pn	10 19 38.2	+2.2
	1.2nm,0.7s						
YKA	Yellowknife Ar	27.61	51	P	P	10 21 31.6	+1.8
	0.4nm,0.5s,mb3.3,baz=272,slow=7.5,SNR=5.1						
YKA	Yellowknife Ar	27.61	51	P	P	10 21 31.6	+1.8
NVAR	Mina Array Bea	35.26	96	P	P	10 22 39.0	+1.6
	0.4nm,0.8s,mb3.4,baz=282,slow=7.4,SNR=3.6						
TXAR	Lajitas Array	50.29	93	P	P	10 24 39.3	+0.2
	0.1nm,0.5s,mb3.1,baz=302,slow=2.8,SNR=3.7						
TKL	Tuckaleechee C	57.50	73	LR	LR	10 48 33.1	
	comp=Z,82nm,18.4s,MS3.9,baz=33,slow=34						
MKAR	Makanchi Array	64.77	315	LR	LR	10 58 30.9	
	comp=Z,30nm,21.2s,MS3.5,baz=356,slow=40						
FINES	FINESS Array B	65.03	354	P	P	10 26 20.9	-1.3
	1.6nm,0.5s,mb4.3,baz=19,slow=7.9,SNR=9.7						
NB2	NORSAR Subarra	65.76	2	P	P	10 26 25.8	-1.1
	comp=Z,0.7nm,0.5s,mb4.0,baz=360,slow=6.2						
NOA	NORSAR Array B	65.76	2	P	P	10 26 25.9	-1.0
	comp=Z,0.8nm,0.6s,mb3.9,baz=360,slow=6.2,SNR=5.2						
AFI	Afiamalu	67.38	187	LR	LR	10 54 39.2	
	comp=Z,176nm,18.9s,MS4.3,baz=99,slow=35						

*IDC **28** 10:23:11.3±9.3, 5°.65S×129°.01E, h244km±113km, mb3.4/1, mb1 3.5/4, mb1mx3.1/19, mbtmp3.2/4, Error ellipse: s-maj=63.3km s-min=29.3km az=53.0*

*NEIC **28** 10:23:16.0±2.4, 5°.82S×128°.94E, h309km±29km, mb4.8/3, Error ellipse: s-maj=23.8km s-min=17.7km az=204.0*

ISC 28 10:23:10.9±2.3, 5°.61S±0°.09×128°.8E±0°.1, h242km±31km, n11, σ1.56/15, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	7.93	153	eP	Pn	10 25 05.6	+2.3
	7.7nm,0.2s						
KAKA				eS	Sx	10 26 27.9	
KAKA	Kakadu	7.93	153	ePn	Pn	10 25 05.4	+2.1
	43nm,0.4s						
KAKA				eSn	Sx	10 26 29.2	
FITZ	Fitzroy Crossi	12.79	194	eP	Pn	10 26 05.3	+0.8
	2.5nm,0.3s						
FITZ				eS	Sx	10 28 21.7	
FITZ	Fitzroy Crossi	12.79	194	P	Pn	10 26 06.2	+1.7
	0.7nm,0.3s,baz=36,slow=15,SNR=14						
FITZ				S	S	10 28 25.6	-1.3
	0.5nm,0.3s,baz=90,slow=21,SNR=3.2						
WRAB	Tennant Creek	15.23	160	eP	Pn	10 26 33.3	-1.0
	1.5nm,0.5s						
WRAB				eS	S	10 29 24.1	+1.7
WRA	Warramunga Arr	15.24	160	P	Pn	10 26 32.3	-2.1
	0.7nm,0.3s,baz=341,slow=11,SNR=16						
WRA				S	S	10 29 24.1	+1.5
	0.6nm,0.3s,baz=334,slow=22,SNR=4.0						
WRA	Warramunga Arr	15.24	160	P	Pn	10 26 32.3	-2.1
WRA				S	S	10 29 24.1	+1.5
COEN	Coen	16.42	121	eP	P	10 26 44.9	-2.1
	59nm,0.4s						
MBWA	Marble Bar	17.77	209	eP	P	10 27 00.7	-0.9
	36nm,1.8s						
ASAR	Alice Springs	18.62	165	P	P	10 27 10.2	-0.6
	0.6nm,0.3s,baz=346,slow=12,SNR=22						
CMAR	Chiang Mai Arr	37.91	310	P	P	10 30 07.2	+1.8
	1.0nm,0.5s,baz=135,slow=7.3,SNR=5.8						

*KISR **28** 10:25:19.6±0.8, 26°.82N×56°.94E, h4km±999km, ML3.9*

*CSEM **28** 10:25:21.9±0.9, 26°.45N×57°.16E, h10km, ML3.4/2, Error ellipse: s-maj=21.0km s-min=9.9km az=71.0*

ISC 28 10:25:21.5±1.6, 26°.51N±0°.06×57°.2E±0°.1, h10km, n11, σ0.90/18, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BANOM	Banah	0.97	233	P	Pg	10 25 39.4	-0.9
	SNR=358						
BANOM				S	Sg	10 25 54.1	+1.2
NAZ	Nazwa, Dubai	2.04	222	P	Pn	10 25 56.2	+0.4
ASHO	Ashiyiah	2.08	209	P	Pn	10 25 54.8	-1.6
	SNR=12						
FAQ	Al Faqa, Dubai	2.26	219	P	Pn	10 25 58.8	-0.1
ASUD	Al Ashush, Dub	2.51	222	P	Pn	10 26 02.3	0.0
RDF	Al-Radifah	8.85	288	eP	Pn	10 27 30.6	+1.1
RDF				eS	Sn	10 29 08.7	-0.7
RDF				AML	AML	10 29 10.0	
	comp=Z,8.8nm,0.8s						
RDF	Al-Radifah	8.85	288	eP	Pn	10 27 30.6	+1.1
RDF				eS	Sn	10 29 08.7	-0.7
UMR	Umm Al-Rimmam	8.88	292	eP	Pn	10 27 30.4	+0.5
UMR				eS	Sn	10 29 09.2	-0.9
UMR				AML	AML	10 29 10.3	
	comp=Z,5.7nm,0.3s						
UMR	Umm Al-Rimmam	8.88	292	eP	Pn	10 27 30.4	+0.5
UMR				eS	Sn	10 29 09.2	-0.8
	comp=Z,5.0nm,0.6s						
NAY	Al-Naaiem	9.19	290	eP	Pn	10 27 35.7	+1.5
NAY				eS	Sn	10 29 17.2	-0.5
NAY				AML	AML	10 29 19.3	
	comp=Z,5.2nm,0.6s						
NAY	Al-Naaiem	9.19	290	eP	Pn	10 27 35.7	+1.5
NAY				eS	Sn	10 29 17.2	-0.5

*IDC **28** 10:41:53.6±7.3, 11°.30N×92°.68E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/23, mbtmp3.

CASC 28 10:49:41.8±1.0, 8.56N×82.94W, h4km, MD3.5, 1C-1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.25**	**293**	*eP*	Pg	10 49 47.0	+0.4
ACR				*eS*	Sg	10 49 52.3	+2.4
BAR1		**0.78**	**331**	*eP*	Pg	10 49 57.1	+0.4
BUS	**Buena Vista**	**1.28**	**321**	*eP*	Pg	10 50 05.3	-1.2
BUS				*eS*	Sg	10 50 24.7	+1.6
PRS1	**Puriscal**	**1.96**	**316**	*eP*	Pn	10 50 15.9	0.0
PRS1				*eS*	Sn	10 50 41.0	0.0

*IDC **28** 11:08:05.5±1.8, 10.62N×91.53E, h0km, mb3.5/6, mb1 3.6/6, mb1mx3.4/23, mbtmp3.5/6, Error ellipse: s-maj=76.6km s-min=21.6km az=60.0*
*NEIC **28** 11:08:09.5±0.8, 11.19N×92.30E, h10km, mb4.4/1, Error ellipse: s-maj=21.7km s-min=15.8km az=207.0*
*ISCJB **28** 11:08:10.9±0.7, 11.1N±0.1×92.2E±0.1, h33km, mb3.5/7, Error ellipse: s-maj=19.6km s-min=13.9km az=28.7*

ISC 28 11:08:13.4±0.7, 11.1N±0.1×92.2E±0.1, h35km, n13, σ1937/12, mb3.5/7, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**11.96**	**252**	*ePn*	Pn	11 11 03.1	+1.7
KBL	**Kabul**	**31.46**	**322**	*eP*	P	11 14 29.9	-1.8
	2.7nm,0.5s,mb4.3						
DAV	**Davao City (W)**	**33.20**	**94**	*eP*	P	11 14 47.0	-0.2
	126nm,0.4s						
MKAR	**Makanchi Array**	**36.56**	**349**	P	P	11 15 15.5	-0.2
	0.3nm,0.5s,mb3.4,baz=140,slow=9.6,SNR=3.9						
MKAR	**Makanchi Array**	**36.56**	**349**	P	P	11 15 15.5	-0.2
SONM	**Songino Array**	**38.52**	**15**	P	P	11 15 35.1	+2.8
	0.3nm,0.4s,mb3.4,baz=210,slow=5.0,SNR=2.6						
ZALV	**Zalesovo Beam**	**43.15**	**354**	P	P	11 16 11.1	+0.7
	0.3nm,0.3s,mb3.5,baz=138,slow=8.9,SNR=2.6						
WRA	**Warramunga Arr**	**51.70**	**126**	P	P	11 17 16.3	-1.0
	0.2nm,0.6s,mb3.2,baz=300,slow=10.0,SNR=6.3						
ASAR	**Alice Springs**	**53.45**	**131**	P	P	11 17 29.4	-0.8
	0.4nm,0.6s,mb3.5,baz=300,slow=7.0,SNR=5.1						
PMG	**Port Moresby**	**58.34**	**108**	*eP*	P	11 18 07.3	+1.8
	32nm,0.9s						
FINES	**FINESS Array B**	**68.98**	**332**	P	P	11 19 13.3	-1.6
	0.4nm,0.6s,mb3.5,baz=124,slow=28,SNR=2.5						
FINES	**FINESS Array B**	**68.98**	**332**	P	P	11 19 13.3	-1.6
TMUT	**Trail Mountain**	**125.34**	**22**	*e*PKPdf	PKPdf	11 27 06.2	-4.7

IDC 28 11:22:31.0±7.0, 10.04N×90.36E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/23, mbtmp3.6/3, Error ellipse: s-maj=337.7km s-min=29.4km az=61.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**37.27**	**351**	P	P	11 29 44.4	0.0
	0.5nm,0.5s,baz=134,slow=7.9,SNR=4.4						
WRA	**Warramunga Arr**	**52.55**	**125**	P	P	11 31 45.9	-0.7
	0.4nm,0.5s,baz=300,slow=10.0,SNR=10						
ASAR	**Alice Springs**	**54.16**	**129**	P	P	11 31 59.1	+0.7
	0.6nm,0.6s,baz=301,slow=6.7,SNR=12						

IDC 28 11:28:21.4±2.3, 27.17S×177.08W, h0km, mb3.5/3, mb1 3.8/4, mb1mx3.6/16, mbtmp3.7/4, ML4.5/1, Error ellipse: s-maj=52.3km s-min=28.9km az=75.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.20**	**199**	Pn	Pn	11 28 59.7	+0.4
	126nm,0.3s,baz=32,slow=23,SNR=7.0						
RAO				Sn	Sn	11 29 27.0	-0.2
	144nm,0.3s,baz=83,slow=23,SNR=3.6						
ASAR	**Alice Springs**	**44.19**	**263**	P	P	11 36 32.1	-0.2
	0.4nm,0.8s,baz=88,slow=6.3,SNR=6.4						
WRA	**Warramunga Arr**	**44.89**	**268**	P	P	11 36 37.9	-0.1
	0.4nm,0.6s,baz=104,slow=7.9,SNR=3.3						
QSPA	**South Pole Qui**	**62.93**	**180**	P	P	11 38 49.3	+0.2
	0.8nm,0.8s,baz=321,slow=6.4,SNR=5.9						
BRTR	**Keskin Array B**	**151.62**	**304**	PKPab	PKPab	11 48 26.6	+0.3
	0.3nm,0.4s,baz=74,slow=2.1,SNR=3.5						

ISK 28 11:30:49.1, 40.44N×29.20E, h5km, MD2.3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEMT	**Gemlik**	**0.01**	**257**	PG	Pg	11 30 50.2	+0.2
GEMT				SG	Sg	11 30 50.9	+0.3
YLV	**Yalova**	**0.18**	**45**	*e*PG	Pg	11 30 53.3	+0.6
YLV				*e*SG	Sg	11 30 56.6	+1.4
ARMT	**Armutlu**	**0.29**	**297**	*e*PN	Pg	11 30 55.2	+0.6
ARMT				*e*SN	Sg	11 31 00.2	+1.7

*IDC **28** 11:30:52.0±3.7, 32.04S×179.75E, h312km±34km, mb3.4/5, mb1 3.7/6, mb1mx3.4/16, mbtmp3.5/6, Error ellipse: s-maj=33.0km s-min=20.4km az=30.0*
*ISCJB **28** 11:30:57.7±1.7, 32.6S±0.1×179.6E±0.2, h378km±18km, mb3.6/7, Error ellipse: s-maj=26.5km s-min=17.0km az=9.1*
*NEIC **28** 11:30:58.7±1.7, 32.71S×179.76E, h395km±19km, mb4.0/3, Error ellipse: s-maj=25.9km s-min=18.6km az=207.0*

ISC 28 11:30:58.8±1.5, 32.73S±0.10×179.7E±0.2, h385km±14km, n16, σ0992/14, mb3.7/7, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.90**	**200**	P	Pn	11 32 29.8	+0.3
	2.5nm,0.3s,baz=23,slow=9.7,SNR=56						
URZ				S	S	11 33 43.6	+0.1
	5.9nm,0.3s,baz=76,slow=20,SNR=16						
SNZO	**South Karori**	**9.43**	**203**	*e*Pn	Pn	11 33 10.8	+0.8
SNZO				*e*Sn	S	11 34 55.2	-2.5
RPZ	**Rata Peaks**	**12.88**	**209**	S	S	11 36 09.7	+0.8
	1.1nm,0.3s,baz=190,slow=20,SNR=8.4						
DZM	**Mont Dzumac**	**15.81**	**309**	*eP*	P	11 34 21.1	+0.4
	10nm,0.7s						
STKA	**Stephens Creek**	**32.07**	**261**	P	P	11 36 53.1	+1.6
	2.7nm,0.9s,mb3.6,baz=119,slow=10,SNR=3.9						
CTAO	**Charters Tower**	**32.32**	**285**	*eP*	P	11 36 53.5	-0.3
	3.9nm,0.7s,mb3.9						
ASAR	**Alice Springs**	**41.06**	**271**	P	P	11 38 06.5	-0.1
	1.2nm,0.4s,mb3.5,baz=107,slow=7.6,SNR=20						
WRAB	**Tennant Creek**	**42.26**	**276**	*eP*	P	11 38 15.3	-0.9
	2.9nm,0.3s,mb4.1						
WRA	**Warramunga Arr**	**42.27**	**276**	P	P	11 38 15.5	-0.8
	4.4nm,0.3s,mb4.3,baz=112,slow=8.0,SNR=122						
WRA	**Warramunga Arr**	**42.27**	**276**	P	P	11 38 15.5	-0.8
QSPA	**South Pole Qui**	**57.39**	**180**	P	P	11 40 13.3	+5.5
	1.2nm,0.7s,mb3.4,baz=72,slow=2.3,SNR=9.6						
NVAR	**Mina Array Bea**	**91.30**	**44**	P	P	11 43 21.2	-0.2
	0.1nm,0.2s,mb3.2,baz=213,slow=11,SNR=3.7						
JOF	**Joensuu**	**143.78**	**336**	*ep*	PKPdf	11 49 42.5	-5.3
	0.4nm,0.3s						
JOF	**Joensuu**	**143.78**	**336**	*ep*	PKPdf	11 49 42.5	-5.3
	0.4nm,0.3s						
FINES	**FINESS Array B**	**146.57**	**337**	PKPbc	PKPbc	11 49 52.9	-2.0
	2.2nm,0.7s,baz=26,slow=5.1,SNR=12						
NOA	**NORSAR Array B**	**150.69**	**349**	PKPbc	PKPbc	11 50 03.9	-1.3
	0.8nm,0.6s,baz=15,slow=4.1,SNR=5.2						

*IDC **28** 11:41:27.6±0.7, 33.03S×15.97W, h0km, mb4.2/11, mb1 4.3/11, mb1mx4.1/21, mbtmp4.2/11, MS3.5/8, Ms1 3.4/8, ms1mx3.3/19, Error ellipse: s-maj=21.8km s-min=17.8km az=158.0*
*ISCJB **28** 11:41:27.6±0.5, 33.09S±0.09×16.0W±0.1, h10km, mb4.6/29, MS3.5/13, Error ellipse: s-maj=14.4km s-min=12.4km az=42.5*
*NEIC **28** 11:41:29.2±0.3, 33.09S×15.99W, h10km, mb4.8/10, Error ellipse: s-maj=10.8km s-min=9.2km az=155.0*
*SZGRF **28** 11:41:35.8, 31.44S×17.74W, h33km, mb4.8, Southern Mid-Atlantic Ridge*

ISC 28 11:41:29.5±0.5, 33.06S±0.09×16.0W±0.1, h10km, n61, σ0953/55, mb4.6/29, MS3.5/13, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSUM	**Tsumeb**	**32.98**	**74**	P	P	11 48 04.0	-0.6
	5.0nm,0.9s,mb4.4,baz=210,slow=4.3,SNR=3.8						
TSUM				LR	LR	11 58 19.0	
	comp=Z,65nm,20.0s,MS3.3,baz=142,slow=31						
BOSA	**Boshof**	**35.52**	**94**	P	P	11 48 25.5	-1.1
	7.1nm,1.1s,mb4.5,baz=199,slow=12,SNR=5.2						
BOSA				LR	LR	11 59 47.0	
	comp=Z,60nm,20.9s,MS3.3,baz=157,slow=31						
CPUP	**Villa Florida**	**36.37**	**270**	LR	LR	12 00 28.1	
	comp=Z,51nm,19.2s,MS3.3,baz=184,slow=31						
LIC	**Lamto**	**40.42**	**17**	*eP*	P	11 49 07.6	-0.4
LIC				*e*MLR	MLR		
	comp=Z,115nm,19.2s,MS3.4						
LIC	**Lamto**	**40.42**	**17**	*eP*	P	11 49 07.6	-0.4
	comp=Z,45nm,0.9s,mb5.2						
KIC	**Kosan Boka**	**40.62**	**17**	*eP*	P	11 49 09.1	-0.6
	comp=Z,54nm,0.7s,mb5.3						
TIC	**Toumodi**	**40.83**	**17**	*eP*	P	11 49 11.0	-0.4
	comp=Z,53nm,0.8s,mb5.2						
DBIC	**Dimbokro**	**40.90**	**17**	P	P	11 49 11.6	-0.4
	comp=Z,13nm,0.8s,mb4.6,baz=177,slow=8.5,SNR=18						
DBIC				LR	LR	12 01 52.0	
	comp=Z,72nm,21.5s,MS3.5,baz=114,slow=30						
LSZ	**Lusaka**	**43.65**	**77**	P	P	11 49 35.1	+0.6
	comp=Z,0.8nm,0.4s,mb3.8,baz=227,slow=7.6,SNR=4.1						
CFAA	**Coronel Fontan**	**43.81**	**257**	P	P	11 49 34.4	-1.2
	comp=Z,0.1nm,0.3s,baz=196,slow=1.3,SNR=4.0						
SIV	**San Ignacio**	**44.04**	**282**	P	P	11 49 38.6	+0.9
	comp=Z,2.8nm,1.0s,mb4.0,baz=128,slow=11,SNR=10						
TORD	**Torodi Ar. Bea**	**48.94**	**23**	P	P	11 50 15.3	-0.6
	comp=Z,17nm,0.8s,mb5.1,baz=201,slow=8.4,SNR=90						
TORD				LR	LR	12 06 58.3	
	comp=Z,61nm,19.1s,MS3.6,baz=185,slow=31						
LPAZ	**La Paz**	**49.75**	**276**	P	P	11 50 21.4	-0.9
	comp=Z,1.0nm,0.8s,mb3.9,baz=126,slow=5.8,SNR=3.8						
MAW	**Mawson**	**55.69**	**153**	P	P	11 51 05.7	+0.2
	comp=Z,2.0nm,0.8s,mb4.2,baz=252,slow=11,SNR=4.3						
MAW				LR	LR	12 09 05.5	
	comp=Z,91nm,21.6s,MS3.8,baz=180,slow=30						
QSPA	**South Pole Qui**	**57.19**	**180**	P	P	11 51 16.7	+0.7
	comp=Z,4.9nm,0.8s,mb4.6,baz=220,slow=4.3,SNR=18						
TAM	**Tamanrasset**	**59.20**	**23**	*eP*	P	11 51 31.9	+1.1
	comp=Z,22nm,1.5s,mb5.0						
EVO	**Evora**	**71.61**	**7**	*eP*	P	11 52 50.6	-0.2
	comp=Z,12nm,0.8s,mb4.6						
EVO				*e*MLR	MLR		
	comp=Z,77nm,19.2s,MS3.7						
KEST	**Kesra**	**72.42**	**21**	LR	LR	12 23 26.3	
	comp=Z,18nm,19.4s,MS3.4,baz=240,slow=35						
ESDC	**Sonseca Array**	**73.22**	**10**	LR	LR	12 23 54.7	
	comp=Z,19nm,21.3s,MS3.3,baz=275,slow=35						
ETSF	**Etsaut**	**76.89**	**12**	*eP*	P	11 53 21.9	+0.4
	comp=Z,12nm,1.1s,mb4.4						
ETSF	**Etsaut**	**76.89**	**12**	*eP*	P	11 53 21.9	+0.4
	comp=Z,5.8nm,1.1s,mb4.4						
SJPF	**Ste Jean**	**76.99**	**11**	*eP*	P	11 53 22.7	+0.6
	comp=Z,14nm,1.0s,mb4.5						
SJPF	**Ste Jean**	**76.99**	**11**	*eP*	P	11 53 22.7	+0.6
	comp=Z,7.1nm,1.0s,mb4.5						
EPF	**Esparros**	**77.18**	**12**	*eP*	P	11 53 23.4	+0.3
MTLF	**Montolieu**	**77.83**	**13**	*eP*	P	11 53 25.9	-0.9
LMR	**La Mourre**	**78.75**	**17**	*eP*	P	11 53 31.7	-0.2
	comp=Z,46nm,1.4s,mb4.9						
LMR	**La Mourre**	**78.75**	**17**	*eP*	P	11 53 31.7	-0.2
	comp=Z,23nm,1.4s,mb4.9						
LASF	**Ste Croix**	**78.87**	**14**	*eP*	P	11 53 32.5	0.0
FRF	**La Foret Royal**	**79.00**	**17**	*eP*	P	11 53 32.9	-0.3
	comp=Z,9.1nm,0.8s,mb4.4						
LFF	**La Frestale**	**79.10**	**12**	*eP*	P	11 53 34.0	+0.3
SMRF	**Simiane la Rot**	**79.15**	**16**	*eP*	P	11 53 34.6	+0.6
SBF	**Sospel**	**79.48**	**17**	*eP*	P	11 53 35.7	-0.1
RJF	**Les Rejaudoux**	**79.59**	**12**	*eP*	P	11 53 36.6	+0.2
	comp=Z,12nm,1.0s,mb4.5						
RJF				*e*MLR	MLR		
	comp=Z,90nm,20.5s,MS3.8						
VIVF	**Saint-Julien-l**	**79.78**	**15**	*eP*	P	11 53 37.7	+0.2
	comp=Z,35nm,1.4s,mb4.8						
VIVF	**Saint-Julien-l**	**79.78**	**15**	*eP*	P	11 53 37.7	+0.2
	comp=Z,18nm,1.4s,mb4.8						
MFF	**Saint Martin d**	**80.57**	**11**	*eP*	P	11 53 41.9	+0.3
TCF	**Toulx Ste Croi**	**80.67**	**13**	*eP*	P	11 53 42.6	+0.4
LPG	**La Plagne**	**80.86**	**16**	*eP*	P	11 53 44.1	+0.9
	comp=Z,17nm,1.1s,mb4.6						
LPG	**La Plagne**	**80.86**	**16**	*eP*	P	11 53 44.1	+0.9
	comp=Z,8.5nm,1.1s,mb4.6						
LPL	**La Plagne**	**80.87**	**16**	*eP*	P	11 53 44.0	+0.7
	comp=Z,17nm,1.0s,mb4.6						
SMF	**Signal de Mont**	**81.32**	**14**	*eP*	P	11 53 45.9	+0.2
AVF	**Avril sur Loir**	**81.37**	**13**	*eP*	P	11 53 46.3	+0.4
	comp=Z,12nm,0.9s,mb4.5						
QUIF	**Quistinic**	**81.42**	**9**	*eP*	P	11 53 45.8	-0.4
SSF	**Saint Saulge**	**81.66**	**13**	*eP*	P	11 53 47.6	+0.2
CABF	**La Chapelle**	**81.76**	**15**	*eP*	P	11 53 47.9	-0.1
	comp=Z,17nm,1.0s,mb4.6						
LOR	**Lormes**	**81.92**	**13**	*eP*	P	11 53 48.9	+0.1
LOR				*e*MLR	MLR		
	comp=Z,43nm,22.9s,MS3.5						
LOR	**Lormes**	**81.92**	**13**	*eP*	P	11 53 48.9	+0.1
LOR				LR	LR		
	comp=Z,40nm,22.9s,MS3.7						
GRR	**Gorron**	**82.20**	**10**	*eP*	P	11 53 50.3	0.0
	comp=Z,18nm,1.1s,mb4.6						
GRR	**Gorron**	**82.20**	**10**	*eP*	P	11 53 50.3	0.0
	comp=Z,8.9nm,1.1s,mb4.6						
HAU	**Haudompre**	**83.14**	**15**	*eP*	P	11 53 54.8	-0.4
HAU				*e*MLR	MLR		
	comp=Z,52nm,17.8s,MS3.6						
CDF	**Champ du Feu**	**83.73**	**15**	*eP*	P	11 53 57.8	-0.4
BAIF	**Baives**	**84.66**	**13**	*eP*	P	11 54 03.2	+0.3
	comp=Z,59nm,1.7s,mb5.1						
BAIF	**Baives**	**84.66**	**13**	*eP*	P	11 54 03.2	+0.3
	comp=Z,29nm,1.7s,mb5.1						
GRF	**Grafenberg Arr**	**85.85**	**17**	*eP*	P	11 54 08.9	0.0
	comp=Z,8.0nm,1.2s,mb4.8						
GRF	**Grafenberg Arr**	**85.85**	**17**	*eP*	P	11 54 08.9	0.0
	comp=Z,8.0nm,1.2s,mb4.8						
VYHS	**Vyhne**	**86.94**	**22**	*eP*	P	11 54 14.1	-0.2
	comp=Z,7.7nm,1.7s,mb4.7						
VYHS	**Vyhne**	**86.94**	**22**	*eP*	P	11 54 14.1	-0.2
CLL	**Collm**	**87.79**	**18**	*e*PP	PP	11 57 42.0	-2.6
AKASG	**Malin Array Be**	**92.44**	**27**	P	P	11 54 40.0	0.0
	comp=Z,0.4nm,0.4s,mb4.1,baz=219,slow=4.1,SNR=6.2						
BILL	**Bilibino**	**144.95**	**359**	*e*PKPdf	PKPdf	12 01 05.4	-0.5
KSRS	**Korea Array**	**150.31**	**71**	PKPbc	PKPbc	12 01 19.4	-1.5
	comp=Z,0.4nm,0.3s,baz=256,slow=3.6,SNR=5.4						

IDC 28 11:46:07.2±46.0, 15.42S×173.65W, h0km, mb4.0/3, mb1 4.1/3, mb1mx3.7/16, mbtmp4.0/3, Error ellipse: s-maj=885.1km s-min=174.3km az=78.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**43.82**	**240**	P	P	11 54 15.7	+0.5
	1.4nm,0.5s,baz=100,slow=11,SNR=7.1						
WRA	**Warramunga Arr**	**49.61**	**257**	P	P	11 54 59.9	-0.8
	0.2nm,0.3s,baz=94,slow=8.1,SNR=6.3						
ASAR	**Alice Springs**	**49.88**	**252**	P	P	11 55 02.8	+0.1
	2.1nm,0.5s,baz=88,slow=8.0,SNR=34						

DJA 28 11:55:50.0, 7.9N×122.28E, h95km, MLv3.9/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.46**	**228**	P	Pn	11 56 07.2	+2.2
KMSI	**Cibinong**	**1.71**	**97**	P	Pn	11 56 20.7	+2.0
KMSI				S	Sn	11 56 42.1	+1.6
APSI	**Ampana**	**1.80**	**200**	P	Pn	11 56 19.1	-0.8
APSI				S	Sn	11 56 43.6	+1.0
LUWI	**Luwuk**	**1.89**	**165**	P	Pn	11 56 20.6	-0.3
LUWI				S	Sn	11 56 44.3	-0.1
MNI	**Manado**	**2.64**	**76**	P	Pn	11 56 32.3	+1.5
MNI				S	Sn	11 57 01.9	-0.3

*BJI **28** 12:10:42.9, 6.12S×155.54E, h37km, mB5.0/23, mb4.8/40, Ms4.9/24, Ms7 4.3/26*
*ISCJB **28** 12:10:42.9±0.1, 6.55S±0.03×154.93E±0.03, h32km, mb5.0/85, MS4.2/14, Error ellipse: s-maj=4.9km s-min=3.8km az=166.3*
*MOS **28** 12:10:43.3±0.8, 6.42S×154.88E, h33km, mb5.2/20, Error ellipse: s-maj=10.8km s-min=8.7km az=72.8*
*IDC **28** 12:10:43.4±0.6, 6.52S×155.05E, h28km±3km, mb4.6/20, mb1 4.7/21, mb1mx4.7/22, mbtmp4.6/21, ML4.3/1, MS4.0/7, Ms1 4.0/7, ms1mx3.8/21, Error ellipse: s-maj=15.0km s-min=11.2km az=117.0*
*NEIC **28** 12:10:44.2±0.1, 6.52S×154.94E, mb5.0/42, Error ellipse: s-maj=6.1km s-min=4.6km az=119.0*
*GCMT **28** 12:10:48.9±0.3, 6.82S×154.99E, h37km, MW5.0, Moment Tensor Solution. s54,c69; s44,c55; Moment tensor: Scale 10^{16}Nm; M_{rr}=3.86±.18; $M_{\theta\theta}$=-2.92±.13; $M_{\phi\phi}$=-0.93±.15; $M_{r\theta}$=0.82±.14; $M_{\theta\phi}$=2.21±.13; $M_{\phi r}$=-0.30±.16; Best double couple: M_0=4.20000×10^{16} NP1:ϕ_s=306.00000°, δ39.00000°, λ95.00000° NP2:ϕ_s=120.00000°, δ51.00000°, λ86.00000°. Principal axes: T 3.9600, Plg83.0000°, Azm4.0000°; N 0.4900, Plg3.0000°, Azm122.0000°; P -4.4400, Plg6.0000°, Azm213.0000°; Data Used: IU II G CN IC.*
*DJA **28** 12:11:01, 6.70S×154.60E, h162km, mb5.2/30*

ISC 28 12:10:44.9±0.1, 6.55S±0.03×154.98E±0.03, h34km, h34km±.4km:pP-P, n347, σ0979/289, mb5.0/85, MS4.2/14, 65C-54D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.69**	**121**	Pn	Pn	12 12 11.3	+4.3
	17nm,0.3s,baz=212,slow=3.6,SNR=4.6						
HNR				Sn	Sn	12 13 19.8	+8.6
	33nm,0.3s,baz=133,slow=19,SNR=2.7						
HNR				LR	LR	12 13 57.5	
	comp=Z,965nm,19.8s,baz=290,slow=34						
HNR	**Honiara**	**5.69**	**121**	*eP*	Pn	12 12 09.6	+2.6
HNR				*e*		12 13 12.0	
HNR				pmax	pmax		
	comp=Z,475nm,0.8s						
HNR	**Honiara**	**5.69**	**121**	*e*Pn	Pn	12 12 09.6	+2.5
	comp=Z,475nm,0.8s						
HNR				*e*Sn	Sn	12 13 12.0	+0.8
COEN	**Coen**	**13.74**	**237**	*eP*	Pn	12 13 58.8	+1.4
CTA	**Charters Tower**	**15.90**	**211**	*eP*	Pn	12 14 27.3	+1.2
	comp=Z,29nm,0.8s						
CTA	**Charters Tower**	**15.90**	**211**	Pn	Pn	12 14 27.3	+1.2
	comp=Z,0.8nm,0.3s,baz=40,slow=12,SNR=8.0						
CTA				LR	LR	12 19 48.5	
	comp=Z,783nm,20.0s,baz=52,slow=34						
CTAO	**Charters Tower**	**15.90**	**211**	*eP*	Pn	12 14 26.9	+0.8
CTAO				pmax	pmax		
	comp=Z,45nm,0.9s						
CTAO	**Charters Tower**	**15.90**	**211**	*e*Pn	Pn	12 14 26.9	+0.7
	comp=Z,45nm,0.9s						
DZM	**Mont Dzumac**	**18.99**	**145**	*eP*	Pn	12 15 07.2	+2.7
	comp=Z,88nm,1.1s						
DZM				*e*LR	LR	12 19 35.6	
	comp=Z,1μm,26.7s						
DZM	**Mont Dzumac**	**18.99**	**145**	*eP*	Pn	12 15 03.9	-0.6
	comp=Z,42nm,0.9s						
EIDS	**Eidsvold**	**19.08**	**191**	*eP*	Pn	12 15 05.3	-0.2
EIDS	**Eidsvold**	**19.08**	**191**	*e*Pn	Pn	12 15 04.6	-1.0
	comp=Z,36nm,1.2s						
RMQ	**Roma**	**20.69**	**196**	*eP*	P	12 15 22.6	+0.5
	comp=Z,129nm,1.1s						
KAKA	**Kakadu**	**23.04**	**253**	*eP*	P	12 15 46.9	-0.4
	comp=Z,40nm,0.6s,mb5.0						
KAKA	**Kakadu**	**23.04**	**253**	*eP*	P	12 15 46.6	-0.7
	comp=Z,136nm,0.8s,mb5.4						
ARMA	**Armidale**	**23.95**	**187**	*eP*	P	12 15 56.1	+0.1
ARMA	**Armidale**	**23.95**	**187**	*eP*	P	12 15 56.7	+0.7
	comp=Z,66nm,1.4s,mb4.9						
WRAB	**Tennant Creek**	**24.04**	**234**	P	P	12 15 57.9	+1.0
	comp=Z,375nm,0.6s,mb6.0,SNR=28						
WRAB	**Tennant Creek**	**24.04**	**234**	*eP*	P	12 15 57.3	+0.4
WRAB				pmax	pmax		
	comp=Z,73nm,1.0s,mb5.1						
WRAB	**Tennant Creek**	**24.04**	**234**	*eP*	P	12 15 57.3	+0.4
	comp=Z,73nm,1.0s,mb5.1						
WRA	**Warramunga Arr**	**24.06**	**234**	P	P	12 15 57.5	+0.4
	comp=Z,26nm,0.6s,mb4.9,baz=57,slow=10,SNR=211						
WRA				PcP	PcP	12 19 38.0	-0.3
	comp=Z,12nm,0.6s,baz=58,slow=2.4,SNR=24						
WRA				pPcP		12 19 47.9	
	comp=Z,7.7nm,0.7s,baz=58,slow=2.4,SNR=7.0						
WRA				S	S	12 20 16.0	+3.6
	comp=Z,7.0nm,1.1s,baz=57,slow=15,SNR=5.6						
WRA	**Warramunga Arr**	**24.06**	**234**	P	P	12 15 57.5	+0.4
WRA						12 19 38.1	
WRA				S	S	12 20 16.0	+3.6
MSVF	**Nonsavu**	**25.11**	**118**	P	pP	12 16 16.0	-0.5
	comp=Z,396nm,1.1s,SNR=5.1						
MSVF	**Nonsavu**	**25.11**	**118**	*eP*	P	12 16 07.4	+0.7
	comp=Z,86nm,1.1s,mb5.2						
ASAR	**Alice Springs**	**26.45**	**228**	P	P	12 16 18.4	-0.4
	comp=Z,7.1nm,0.6s,mb4.4,baz=61,slow=8.8,SNR=195						
ASAR				PcP	PcP	12 19 43.5	-0.1
	comp=Z,6.7nm,0.7s,baz=63,slow=2.8,SNR=12						
ASAR				pPcP		12 19 53.4	
	comp=Z,3.9nm,0.7s,baz=57,slow=3.3,SNR=6.6						
ASAR				ScP	ScP	12 23 20.6	-0.6
	comp=Z,1.1nm,0.7s,baz=52,slow=2.9,SNR=6.2						
ASAR	**Alice Springs**	**26.45**	**228**	P	P	12 16 18.4	-0.4
ASAR						12 19 43.5	
MGCD	**Mangrove Creek**	**26.77**	**187**	*eP*	P	12 16 21.5	0.0
	comp=Z,86nm,1.2s,mb5.2						
KNA	**Kununurra**	**27.26**	**248**	*eP*	P	12 16 26.5	+0.3
	comp=Z,20nm,0.6s,mb4.8						
STKA	**Stephens Creek**	**28.13**	**205**	*eP*	P	12 16 32.5	-1.2
	comp=Z,10nm,0.8s,mb4.5						
STKA	**Stephens Creek**	**28.13**	**205**	P	P	12 16 33.0	-0.7
	comp=Z,3.0nm,0.5s,mb4.2,baz=16,slow=11,SNR=5.3						
STKA				PcP	PcP	12 19 47.0	-0.5
	comp=Z,6.3nm,0.7s,baz=275,slow=5.9,SNR=3.7						
STKA

MYKOM **Kota Tinggi** 51.70 277 P **P** 12 19 49.1 0.0
KGM **Kluang** 52.26 278 P **P** 12 19 53.9 +0.6
KTGM **Kuala Trenggan** 53.08 282 P **P** 12 20 00.3 +1.0
WHN **Wuhan** 53.61 316 ⇓P **P** 12 20 03.5 +0.5
FRIM **Kepong** 54.14 279 P **P** 12 20 06.9 -0.3
YSS **Yuzh-Sakhalins** 54.36 350 eP **P** 12 20 08.2 +0.1
YSS pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
YSS **Yuzh-Sakhalins** 54.36 350 eP **P** 12 20 08.2 +0.1
comp=Z,9.6nm,0.9s,mb4.7
IPM **Ipoh** 54.96 280 P **P** 12 20 13.1 0.0
PPT **Papeete** 55.14 107 eS **S** 12 27 58.5 +3.1
comp=Z,78nm,23.0s
PPT eLR LR 12 36 26.6
comp=Z,146nm,22.0s
PPT **Papeete** 55.14 107 LR LR 12 39 16.7
comp=Z,199nm,18.2s,MS4.2,baz=325,slow=31
KULM **Kulim** 55.49 281 P **P** 12 20 17.1 +0.2
KULM **Kulim** 55.49 281 eP **P** 12 20 16.3 -0.6
comp=Z,17nm,0.8s,mb5.1
KULM epP pP 12 20 26.4 -0.9
KULM ePcP PcP 12 21 17.0 +0.1
KULM ePP PP 12 22 19.2 -2.0
MDJ **Mudanjiang** 55.82 338 P **P** 12 20 19.0 +0.3
MDJ pP pP 12 20 28.0 -1.1
MDJ sP sP 12 20 32.0 -1.2
MDJ PcP PcP 12 21 18.0 +0.6
MDJ PP PP 12 22 24.0 +0.4
MDJ ScP ScP 12 25 14.0 0.0
MDJ PcS PcS 12 25 17.3 -0.2
MDJ S **S** 12 28 06.5 +2.9
MDJ ScS ScS 12 30 04.5 -0.8
MDJ pmax pmax
comp=Z,11nm,1.5s,mb4.7
MDJ pmax pmax
comp=Z,34nm,3.7s
MDJ LR LR
comp=Z,56nm,27.8s,MS3.5
TBI **Tubuai** 55.87 114 eLR LR 12 36 48.9
comp=Z,424nm,29.0s,baz=283
PSI **Prapat** 56.72 278 P **P** 12 20 24.8 -1.0
comp=Z,10.0nm,0.6s,mb5.0,baz=82,slow=4.5,SNR=6.1
CN2 **Changchun** 56.78 335 eP **P** 12 20 25.0 -0.6
CN2 pmax pmax
comp=Z,20nm,1.2s,mb5.0
GYA **Guiyang** 57.17 307 P **P** 12 20 31.0 +2.3
GYA pP pP 12 20 40.8 +1.7
GYA sP sP 12 20 45.3 +2.1
GYA PcP PcP 12 21 25.8 +2.7
GYA PP PP 12 22 39.0 +3.0
GYA ScP ScP 12 25 20.5 +0.1
GYA PcS PcS 12 25 27.5 +3.3
GYA S **S** 12 28 22.8 +0.7
GYA sS sS 12 28 39.0 -0.3
GYA SS SS 12 32 12.5 +0.8
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,120nm,4.9s
GYA LR LR
comp=N,520nm,18.8s,MS4.8
GYA LR LR
comp=E,430nm,19.4s,MS4.8
GYA LR LR
comp=Z,540nm,18.5s,MS4.7
BJI **Beijing** 58.55 326 P **P** 12 20 39.3 +1.2
BJI S **S** 12 28 41.8 +2.2
BJI SS SS 12 32 33.0 +0.2
BJI pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
BJI LR LR
comp=N,53nm,18.7s,MS4.1
BJI LR LR
comp=E,110nm,16.8s,MS4.1
BJI LR LR
comp=Z,80nm,23.4s
KLR **Kul'dur** 59.14 342 eP **P** 12 20 38.3 -3.7
XAN **Xi'an** 59.38 316 P **P** 12 20 43.3 -0.6
XAN pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
PEA0B **Petropavlovsk-** 59.48 2 eP **P** 12 20 44.9 +0.6
PETK **Petropavlovsk-** 59.48 2 P **P** 12 20 44.9 +0.6
comp=Z,15nm,0.8s,mb5.1,baz=162,slow=7.0,SNR=22
PETK LR LR 12 41 55.8
comp=Z,139nm,21.1s,MS4.1,baz=86,slow=32
KMI **Kunming** 59.75 304 ⇓P **P** 12 20 49.0 +2.3
KMI pP pP 12 20 58.0 +0.8
KMI sP sP 12 21 01.3 +0.1
KMI PP PP 12 23 02.8 +3.8
KMI S **S** 12 28 55.5 -0.3
KMI SS SS 12 32 52.8 +0.4
KMI pmax pmax
comp=Z,37nm,1.0s,mb5.4
KMI LR LR
comp=N,120nm,13.7s,MS4.3
KMI LR LR
comp=E,150nm,17.0s,MS4.3
KMI LR LR
comp=Z,160nm,19.5s,MS4.2
CM31 **Chiang Mai Arr** 60.58 295 eP **P** 12 20 53.9 +1.4
CMAR **Chiang Mai Arr** 60.58 295 P **P** 12 20 53.6 +1.1
comp=Z,66nm,0.7s,mb5.9,baz=122,slow=5.2,SNR=347
CHTO **Chiang Mai** 60.69 296 eP **P** 12 20 54.1 +0.8
CHTO pmax pmax
comp=Z,39nm,0.8s,mb5.6
CHTO **Chiang Mai** 60.69 296 eP **P** 12 20 54.1 +0.8
comp=Z,39nm,0.8s,mb5.6
CD2 **Chengdu** 61.51 310 eP **P** 12 20 59.8 +1.2
CD2 pP pP 12 21 10.0 +0.9
CD2 sP sP 12 21 14.0 +0.8
CD2 PP PP 12 23 17.5 +3.1
CD2 PcS PcS 12 25 42.5 -0.8
CD2 S **S** 12 29 17.8 -0.3
CD2 sS sS 12 29 34.8 -0.6
CD2 ScS ScS 12 30 45.0 -2.9
CD2 SS SS 12 33 20.8 +1.0
CD2 pmax pmax
comp=Z,30nm,0.8s,mb5.5
CD2 pmax pmax
comp=Z,130nm,5.2s
CD2 LR LR
comp=N,140nm,18.0s,MS4.4
CD2 LR LR
comp=E,220nm,21.6s,MS4.4
CD2 LR LR
comp=Z,180nm,21.6s,MS4.2
HHC **Hu-ho-hao-te** 61.73 324 eP **P** 12 21 02.3 +2.5
HHC pP pP 12 21 12.5 +2.1
HHC sP sP 12 21 16.5 +2.1
HHC PcP PcP 12 21 43.0 +2.1
HHC PP PP 12 23 20.5 +4.4
HHC ScP ScP 12 25 40.3 0.0
HHC PcS PcS 12 25 44.3 +0.5
HHC S **S** 12 29 21.3 +0.9
HHC sS sS 12 29 38.3 +0.5
HHC ScS ScS 12 30 47.5 -1.5
HHC SS SS 12 33 25.5 +2.7
HHC pmax pmax
comp=Z,8.0nm,0.6s,mb5.0
HHC pmax pmax
comp=Z,59nm,5.6s
HHC LR LR
comp=N,100nm,20.2s,MS4.2
HHC LR LR
comp=E,160nm,20.2s,MS4.2
HHC LR LR
comp=Z,88nm,20.2s,MS3.9
LZH **Lanzhou** 63.99 315 eP **P** 12 21 15.5 +0.5
LZH pP pP 12 21 25.8 +0.2
LZH sP sP 12 21 29.8 +0.2
LZH PP PP 12 23 38.5 +2.4
LZH eS **S** 12 29 48.5 -0.5
LZH sS sS 12 30 04.5 -1.9
LZH SS SS 12 33 58.3 0.0
LZH pmax pmax
comp=Z,23nm,1.1s,mb5.1
LZH pmax pmax
comp=Z,130nm,4.6s
LZH LR LR
comp=E,600nm,19.0s
LZH LR LR
comp=Z,910nm,20.0s,MS5.0
CASY **Casey** 67.01 198 eP **P** 12 21 33.0 -1.0
comp=Z,5.8nm,0.7s,mb4.7

GTA **Gaotai** 68.41 317 ⇓P **P** 12 21 44.3 +1.0
GTA pP pP 12 21 54.5 +0.6
GTA sP sP 12 21 58.8 +0.9
GTA PP PP 12 24 19.3 +4.6
GTA S S 12 30 44.5 +2.0
GTA sS sS 12 31 02.8 +2.7
GTA pmax pmax
comp=Z,11nm,1.3s,mb4.7
GTA pmax pmax
comp=Z,79nm,6.6s
GTA LR LR
comp=N,80nm,17.0s,MS4.2
GTA LR LR
comp=E,81nm,17.6s,MS4.2
GTA LR LR
comp=Z,140nm,17.3s,MS4.2
ULN **Ulaanbaatar** 68.62 328 eP **P** 12 21 44.9 +0.5
ULN pmax pmax
comp=Z,11nm,0.9s,mb4.8
ULN **Ulaanbaatar** 68.62 328 eP **P** 12 21 44.9 +0.5
comp=Z,11nm,0.9s,mb4.8
SONM **Songino Array** 68.95 327 P **P** 12 21 46.8 +0.3
comp=Z,11nm,0.8s,mb4.8,baz=129,slow=6.2,SNR=49
SONM PKPPKP 12 49 59.5
comp=Z,1.1nm,0.7s,baz=292,slow=2.1,SNR=6.9
SHL **Shillong** 69.06 300 ePKP **P** 12 21 47.0 -0.6
RKT **Rikitea** 69.12 112 eLR LR 12 42 56.5
comp=Z,298nm,28.8s
YAK **Yakutsk** 71.12 348 eP pP 12 22 09.0 -1.2
YAK pmax pmax
comp=Z,12nm,0.9s,mb4.8
SBA **Scott Base** 71.53 177 eP **P** 12 22 02.7 +0.9
SBA pmax pmax
comp=Z,23nm,1.6s,mb4.9
SBA **Scott Base** 71.53 177 eP **P** 12 22 02.7 +0.9
comp=Z,23nm,1.6s,mb4.9
SDPT **Sand Point** 71.86 25 eP **P** 12 22 03.5 -0.5
comp=Z,27nm,0.7s,mb5.3
TLY **Talaya** 72.67 329 eP **P** 12 22 09.0 0.0
TAPN **Taplejung** 73.16 301 eP **P** 12 22 12.3 -0.2
comp=Z,68nm,0.9s,mb5.6
ODAN **Odare** 73.29 300 eP **P** 12 22 12.9 -0.4
comp=Z,135nm,0.6s,mb6.0
CHGN **Chignik** 73.36 25 eP **P** 12 22 12.3 -0.7
RAMN **Ramite** 73.99 300 eP **P** 12 22 16.7 -0.7
comp=Z,36nm,0.6s,mb5.5
JIRN **Jiri** 74.54 301 eP **P** 12 22 20.6 0.0
comp=Z,24nm,0.7s,mb5.2
VIS **Vishakhapatnam** 74.70 290 ePKP **P** 12 22 21.2 -0.4
VIS AMb AMB 12 22 25.9
comp=Z,28nm,0.8s,mb5.2
BILL **Bilibino** 74.84 4⇑ eP **P** 12 22 21.7 +0.3
BILL e 12 22 35.8
BILL e 12 25 11.8
BILL pmax pmax
comp=Z,34nm,1.0s,mb5.2
BILL **Bilibino** 74.84 4 eP **P** 12 22 21.6 +0.1
comp=Z,23nm,0.8s,mb5.2
GUN **Gumba** 74.87 301 eP **P** 12 22 22.1 -0.4
comp=Z,99nm,0.7s,mb5.9
PKI **Pulchoki** 75.18 301 eP **P** 12 22 23.2 -1.1
comp=Z,71nm,1.0s,mb5.6
PKIN **Phulchoki** 75.19 301 eP **P** 12 22 23.5 -0.9
comp=Z,46nm,0.7s,mb5.5
KKN **Kakani** 75.35 301 eP **P** 12 22 24.5 -0.7
comp=Z,68nm,0.8s,mb5.6
DMN **Daman** 75.45 301 eP **P** 12 22 25.4 -0.4
comp=Z,102nm,0.8s,mb5.8
OHAK **Old Harbor** 76.14 26 eP **P** 12 22 28.8 -0.3
comp=Z,32nm,0.8s,mb5.3
KDAK **Kodiak Island** 76.78 26 *i* P **P** 12 22 32.8 +0.1
KDAK **Kodiak Island** 76.78 26 eP **P** 12 22 32.9 +0.3
SVW2 **Sparrevohn** 77.60 22 eP **P** 12 22 37.4 +0.2
WMQ **Urumqi** 78.49 317 eP **P** 12 22 43.0 +0.4
TTA **Tatalina** 78.62 21 eP **P** 12 22 43.3 +0.5
NGP **Nagpur** 79.35 293 ePKP **P** 12 22 46.2 -1.5
SEW **Seward** 79.44 25 eP **P** 12 22 47.2 -0.2
comp=Z,28nm,1.1s,mb5.1
PPLA **Purkeypile** 79.97 22 eP **P** 12 22 50.0 -0.2
comp=Z,13nm,1.1s,mb4.8
PMR **Palmer** 80.39 24 eP **P** 12 22 51.8 -0.7
PMR pmax pmax
comp=Z,22nm,0.7s,mb5.2
PMR **Palmer** 80.39 24 eP **P** 12 22 51.8 -0.7
comp=Z,22nm,0.7s,mb5.2
TRF **Thorofare Moun** 80.99 22 epP pP 12 23 07.2 +0.7
AKL **Akola** 81.13 292 ePKP **P** 12 22 56.8 -0.6
BHPL **Bhopal** 81.23 295 ePKP **P** 12 22 57.2 -0.6
IMA2 **Indian Mountai** 81.39 19 eP **P** 12 23 01.4 +3.6
DIV **Divide** 81.52 25 eP **P** 12 22 58.5 0.0
MCK **McKinley** 81.65 22 eP **P** 12 22 58.4 -0.8
MCK e*PP pP 12 23 08.6 -1.4
MCK e*SP sP 12 23 12.7 -1.3
MCK pmax pmax
comp=Z,27nm,0.8s,mb5.2
MCK **McKinley** 81.65 22 eP **P** 12 22 58.4 -0.8
comp=Z,27nm,0.8s,mb5.2
MCK epP pP 12 23 08.6 -1.5
MCK esP sP 12 23 12.7 -1.3
BMRM **Bremner River** 81.93 25 eP **P** 12 23 00.9 +0.1
comp=Z,13nm,0.7s,mb5.0
COLA **College** 82.67 21 eP **P** 12 23 03.3 -1.2
COLA pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
COLA **College** 82.67 21 eP **P** 12 23 03.3 -1.2
comp=Z,7.0nm,0.6s,mb4.9
MK31 **Makanchi Array** 83.06 319 eP **P** 12 23 06.6 -0.3
MK31 e*PP pP 12 23 16.9 -0.9
MK31 e*SP sP 12 23 21.6 -0.1
MKAR **Makanchi Array** 83.06 319 P **P** 12 23 06.0 -0.9
comp=Z,10.0nm,0.9s,mb4.8,baz=84,slow=11,SNR=51
MKAR pP pP 12 23 16.6 -1.1
comp=Z,6.5nm,0.8s,baz=84,slow=11,SNR=9.7
MKAR PKKP PKKPbc 12 41 23.5 -7.2
comp=Z,0.6nm,0.9s,baz=268,slow=3.6,SNR=4.5
MKAR **Makanchi Array** 83.06 319 P **P** 12 23 06.1 -0.8
MKAR *PP pP 12 23 16.7 -1.1
MKAR **Makanchi Array** 83.06 319 P **P** 12 23 06.0 -0.9
MKAR pP pP 12 23 16.6 -1.1
MKAR PKKP PKKPbc 12 41 23.5 -7.2
KAD **Karad** 83.20 288 ePKP **P** 12 23 07.5 -0.8
MENT **Mentasta** 83.26 24 eP **P** 12 23 07.6 0.0
QSPA **South Pole Qui** 83.42 180 eP **P** 12 23 07.8 -0.4
comp=Z,29nm,0.8s,mb5.4
PNL **Peninsula** 83.66 28 eP **P** 12 23 09.8 +0.1
comp=Z,27nm,0.8s,mb5.4
ZAA0 **Zalesovo Array** 83.80 326 eP **P** 12 23 08.7 -1.9
ZAA0 ePcP PcP 12 23 14.2 -0.4
ZALV **Zalesovo Beam** 83.80 326 P **P** 12 23 08.6 -2.0
comp=Z,4.5nm,0.8s,mb4.7,baz=111,slow=5.6,SNR=22
ZALV **Zalesovo Beam** 83.80 326 P **P** 12 23 08.6 -2.0
AJM **Ajmer** 84.30 297 ePKP **P** 12 23 13.2 -0.6
MAW **Mawson** 84.80 203 eP **P** 12 23 14.7 -0.7
comp=Z,9.6nm,0.9s,mb4.9
MAW **Mawson** 84.80 203 P **P** 12 23 14.9 -0.5
comp=Z,8.2nm,0.7s,mb5.0,baz=70,slow=6.2,SNR=19
MAW **Mawson** 84.80 203 eP **P** 12 23 14.6 -0.8
MAW e*PP pP 12 23 26.1 -0.2
MAW pmax pmax
comp=Z,6.0nm,1.2s
MAW **Mawson** 84.80 203 eP **P** 12 23 14.6 -0.8
comp=Z,6.5nm,1.2s,mb4.6
MAW epP pP 12 23 26.1 -0.3
NVS **Novosibirsk** 84.97 327 eP **P** 12 23 14.5 -2.0
NVS pmax pmax
comp=E,19nm,1.7s
NVS pmax pmax
comp=Z,16nm,1.7s,mb4.9
EGAK **Eagle** 85.12 23 eP **P** 12 23 17.1 +0.1
comp=Z,12nm,0.8s,mb5.1
EGAK epP pP 12 23 26.8 -1.0
SKAG **Skagway** 85.49 29 eP **P** 12 23 19.5 +0.5
DAWY **Dawson** 85.50 24 eP **P** 12 23 19.1 +0.1
DAWY epP pP 12 23 30.2 +0.4
KSH **Kashi** 85.71 310 P **P** 12 23 23.0 +2.5
KSH pP pP 12 23 33.5 +2.1
KSH sP sP 12 23 37.3 +1.9
KSH PP PP 12 26 44.8 +4.7
KSH SKS 12 33 43.3
KSH S S 12 33 51.0 +0.1
KSH sS sS 12 34 10.5 +1.6
KSH SS SS 12 39 34.8 +6.7
KSH pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
KSH pmax pmax
comp=Z,40nm,6.0s
KSH LR LR
comp=N,140nm,8.1s
KSH LR LR
comp=E,99nm,5.5s
KSH LR LR
comp=Z,78nm,4.7s
KURK **Kurchatov** 86.47 322 ceP **P** 12 23 21.9 -2.1
KURK pmax pmax
comp=Z,5.0nm,1.2s,mb4.6
KURK **Kurchatov** 86.47 322 eP **P** 12 23 22.3 -1.8
comp=Z,3.2nm,0.7s,mb4.7
DLBC **Dease Lake** 87.77 31 eP **P** 12 23 30.2 +0.1
DLBC epP pP 12 23 40.7 -0.4
YBH **Yreka Blue Hor** 88.61 48 P **P** 12 23 34.4 -0.1
comp=Z,3.0nm,0.9s,mb4.6,baz=210,slow=7.4,SNR=6.7
INK **Inuvik** 89.31 21 eP **P** 12 23 36.8 -0.4
INK e*PP pP 12 23 45.7 -2.5
BEKR **Beckworth** 90.07 50 ⇓P **P** 12 23 41.2 -0.2
baz=90
K05A **Summer Lake** 90.10 47 ⇑P **P** 12 23 41.8 +0.3
baz=90
WCN **Washoe City** 90.45 51 ⇑P **P** 12 23 43.9 +0.7
baz=90
SCI **San Clemente I** 90.58 57 ⇓P **P** 12 23 43.8 -0.2
baz=91
WAKR **Walker** 90.59 51 eP **P** 12 23 44.8 +0.9
CIS **Catalina Islan** 90.75 57 ⇑P **P** 12 23 44.9 +0.2
baz=91,SNR=5.1
PAHR **Pah Rah Range** 90.79 50 eP **P** 12 23 45.0 +0.2
ISA **Isabella** 90.98 54 ⇑P **P** 12 23 45.7 -0.1
baz=91
MWC **Mount Wilson** 91.14 56 eP **P** 12 23 47.1 +0.6
MWC e*PP pP 12 23 57.2 -0.3
MWC pmax pmax
comp=Z,14nm,0.7s,mb5.4
MWC **Mount Wilson** 91.14 56 eP **P** 12 23 47.1 +0.6
comp=Z,14nm,0.7s,mb5.4
MWC epP pP 12 23 57.2 -0.2
EDW2 **Edwards Air Fo** 91.27 55 ⇓P **P** 12 23 47.1 0.0
baz=91,SNR=6.8
CWC **Cottonwood Cre** 91.39 54 ⇑P **P** 12 23 48.0 +0.3
baz=92
NVAR **Mina Array Bea** 91.46 52 P **P** 12 23 48.6 +0.7
comp=Z,5.2nm,0.8s,mb4.9,baz=249,slow=6.7,SNR=36
BFSC **Mount Baldy Ra** 91.47 56 ⇑P **P** 12 23 48.3 +0.3
baz=92
LRMC **Laurel Mountai** 91.59 55 ⇓P **P** 12 23 48.9 +0.3
baz=92
MURC **Murrieta** 91.77 57 ⇑P **P** 12 23 50.2 +0.7
baz=92
MPMC **Manual Prospec** 91.82 54 ⇑P **P** 12 23 49.9 +0.2
baz=92,SNR=5.0
BVAR **Borovoye Array** 91.93 323 P **P** 12 23 47.3 -2.4
comp=Z,1.3nm,0.7s,mb4.4,baz=101,slow=7.7,SNR=9.2
J08A **Circle Bar Ran** 91.94 47 ⇓P **P** 12 23 49.9 -0.1
baz=92
BRVK **Borovoye** 92.00 323 ceP **P** 12 23 49.0 -1.1
BRVK pmax pmax
comp=Z,6.0nm,2.5s,mb4.5
GSC **Goldstone** 92.29 55 ⇑P **P** 12 23 52.0 +0.1
baz=92
GSC **Goldstone** 92.29 55 eP **P** 12 23 51.5 -0.3
GSC pmax pmax
comp=Z,2.0nm,0.6s,mb4.6
GSC **Goldstone** 92.29 55 eP **P** 12 23 51.5 -0.3
comp=Z,2.0nm,0.6s,mb4.6
MONP **Monument Peak** 92.34 57 ⇓P **P** 12 23 52.4 +0.3
baz=92,SNR=5.9
FURC **Furnace Creek,** 92.37 54 ⇑P **P** 12 23 52.3 +0.1
baz=92,SNR=7.9
PFO **Pinyon Flat Ob** 92.39 57 ⇑P **P** 12 23 52.8 +0.4
baz=92,SNR=5.0
PFO **Pinyon Flat Ob** 92.39 57 eP **P** 12 23 52.8 +0.5
PFO e*PP pP 12 24 03.1 -0.2
PFO pmax pmax
comp=Z,3.0nm,0.8s,mb4.7
PFO **Pinyon Flat Ob** 92.39 57 eP **P** 12 23 52.8 +0.4
comp=Z,3.2nm,0.8s,mb4.7
PFO epP pP 12 24 03.1 -0.2
HEC **Hector,Ludlow** 92.62 55 ⇓P **P** 12 23 53.4 0.0
baz=93
H09A **Durkee** 92.68 46 ⇓P **P** 12 23 53.9 +0.5
baz=93
SYO **Syowa Base** 92.74 199⇑ eP **P** 12 23 50.7 -2.5
S10A **Tonopah Range,** 92.74 52 P **P** 12 23 54.6 +0.7
baz=93,SNR=20
SHOC **Shoshone** 92.78 54 ⇑P **P** 12 23 53.9 -0.2
baz=93
U10A **Ash Meadows, A** 92.79 54 ⇑P **P** 12 23 54.7 +0.6
baz=93,SNR=5.1
BELC **Belle Mtn. Jos** 92.81 56 P **P** 12 23 54.9 +0.6
baz=93,SNR=18
BMO **Blue Mountains** 92.95 45 eP **P** 12 23 54.1 -0.6
BMO e*PP pP 12 24 04.3 -1.3
BMO pmax pmax
comp=Z,2.0nm,0.8s,mb4.6
BMO **Blue Mountains** 92.95 45 eP **P** 12 23 54.1 -0.6
comp=Z,2.0nm,0.8s,mb4.6
BMO epP pP 12 24 04.3 -1.3
Q10A **Clear Creek Ra** 92.99 51 ⇑P **P** 12 23 55.5 +0.5
baz=93,SNR=5.2
TUQ **Turquoise Moun** 93.02 55 ⇑P **P** 12 23 55.0 -0.2
baz=93,SNR=5.2
P10A **Eureka** 93.02 51 ⇓P **P** 12 23 55.3 +0.2
baz=93
F10A **Beach Ranch, E** 93.13 44 ⇓P **P** 12 23 55.3 -0.2
baz=93
G10A **Bishop Farm, J** 93.13 45 ⇑P **P** 12 23 55.0 -0.4
baz=93
GMRC **Granite Mounta** 93.17 56 P **P** 12 23 56.3 +0.4
baz=93,SNR=9.6
BC3 **Big Chuckawall** 93.23 57 ⇓P **P** 12 23 56.9 +0.7
baz=93,SNR=5.7
H10A **Noah's Angus R** 93.32 46 ⇓P **P** 12 23 55.1 -1.3
baz=93
S11A **Rachel** 93.38 53 ⇑P **P** 12 23 56.3 -0.5
baz=93
V11A **Goodsprings** 93.46 54 ⇓P **P** 12 23 57.1 -0.2
baz=94
IRM **Iron Mountain** 93.53 56 ⇓P **P** 12 23 57.8 +0.2
baz=94,SNR=11
Q11A **Duckwater** 93.57 51 ⇑P **P** 12 23 58.4 +0.7
baz=94
R11A **Troy Canyon, C** 93.58 52 ⇑P **P** 12 23 58.2 +0.5
baz=94,SNR=7.8
LDFC **Landfair** 93.65 55 eP **P** 12 23 58.4 +0.3
comp=Z,6.8nm,0.6s,mb5.2
LDFC epP pP 12 24 10.4 +1.3
O11A **Cowboy Ranch,** 93.69 50 ⇑P **P** 12 23 58.5 +0.3
baz=94
G11A **Walters Elk Ra** 93.74 45 ⇑P **P** 12 23 58.0 -0.3
baz=94
T11A **Corn Creek, Al** 93.76 53 ⇓P **P** 12 23 58.6 0.0
baz=94,SNR=7.6
L11A **Cat Creek Ranc** 93.81 48 ⇓P **P** 12 23 59.1 +0.4
baz=94
H11A **Donnelly** 93.85 46 ⇑P **P** 12 23 58.7 -0.1
baz=94
V12A **Nelson** 93.92 55 ⇑P **P** 12 23 59.1 -0.2
baz=94,SNR=5.2
ELK **Elko** 94.06 50 P **P** 12 23 60.0 +0.1
comp=Z,2.4nm,0.9s,mb4.6,baz=240,slow=3.9,SNR=5.8
S12A **Delamar Landin** 94.09 53 ⇓P **P** 12 24 00.0 0.0
baz=94
P12A **McGill** 94.20 51 ⇓P **P** 12 23 60.0 -0.6
baz=94
N12A **Clover Valley,** 94.22 50 ⇑P **P** 12 24 01.0 +0.3
baz=94,SNR=8.0
N12A **Clover Valley,** 94.22 50 eP **P** 12 24 00.9 +0.3
comp=Z,5.7nm,0.8s,mb5.0
N12A epP pP 12 24 11.3 -0.2
Q12A **Willow Creek R** 94.23 51 ⇑P **P** 12 24 01.0 +0.4
baz=94,SNR=7.2
U12A **Valley of Fire** 94.23 54 ⇑P **P** 12 24 00.8 +0.1
baz=94,SNR=5.5
R12A **Pony Springs,** 94.34 52 ⇑P **P** 12 24 01.2 0.0
baz=94
L12A **House Creek Ra** 94.35 48 ⇓P **P** 12 24 01.0 -0.2
baz=94
M12A **Wells** 94.36 49 ⇓P **P** 12 24 01.3 +0.1
baz=94
PDMCI **Parker Dam,Lak** 94.37 56 ⇑P **P** 12 24 00.7 -0.8
baz=94
J12A **Stokes Ranch,** 94.38 47 ⇑P **P** 12 24 01.2 -0.1
baz=94
O12A **Currie** 94.40 50 ⇑P **P** 12 24 01.7 +0.3

baz=94,SNR=6.0
K12A Draper Farm, C 94.47 48 ⇑P P 12 24 01.7 0.0
baz=94
D12A Red Ives Fores 94.52 43 ⇑P P 12 24 01.6 -0.3
baz=95
V13A Grand Canyon W 94.63 55 ⇓P P 12 24 02.3 -0.3
baz=95,SNR=11
U13A Pakoon Wash 94.69 54 ⇓P P 12 24 02.9 +0.1
baz=95,SNR=5.4
T13A Saint George 94.79 53 ⇓P P 12 24 04.3 +1.0
baz=95,SNR=6.4
R13A O'Grain Ranch, 94.83 52 ⇓P P 12 24 03.2 -0.2
baz=95
S13A Holt Ranch, En 94.87 53 ⇑P P 12 24 02.5 -1.2
baz=95
HLID Hailey 94.91 47 ⇑P P 12 24 02.9 -0.8
baz=95
M13A Montello 94.92 49 ⇓P P 12 24 03.4 -0.5
baz=95,SNR=5.9
M13A Montello 94.92 49 *e*P **P 12 24 03.9 +0.1**
comp=Z,3.3nm,0.8s,mb4.8
M13A *e*pP pP 12 24 14.8 0.0
H13A Challis 95.09 46 ⇓P P 12 24 04.2 -0.3
baz=95
B13A Whitefish 95.21 42 ⇓P P 12 24 04.5 -0.5
baz=95
CCUT Cedar City 95.26 53 *e*P **P 12 24 06.2 +0.7**
comp=Z,1.5nm,0.7s,mb4.5
CCUT *e*pP pP 12 24 16.5 +0.1
U14A Mt Trumbull 95.32 54 ⇓P P 12 24 06.4 +0.6
baz=95,SNR=13
V14A Boquillas Ranc 95.33 55 ⇓P P 12 24 06.3 +0.5
baz=95
S14A Cedar City 95.43 53 ⇓P P 12 24 06.1 -0.1
baz=96
Q14A Sevier Lake (B 95.43 51 ⇓P P 12 24 05.8 -0.4
baz=96
T14A Hurricane 95.45 53 ⇑P P 12 24 07.0 +0.7
baz=96
M14A Sheep Mountain 95.55 49 ⇑P P 12 24 06.8 +0.1
baz=96
I14A Mackay 95.63 47 ⇓P P 12 24 07.0 0.0
baz=96
P14A Drum Mountains 95.63 51 ⇓P P 12 24 07.5 +0.4
baz=96
K14A Jones Ranch, D 95.74 48 ⇑P P 12 24 06.8 -0.7
baz=96
A14A Double T Ranch 95.94 41 ⇑P P 12 24 08.0 -0.3
baz=96
YKA Yellowknife Ar 95.95 28 P **P 12 24 07.7 -0.3**
comp=Z,12nm,0.8s,mb5.4,baz=268,slow=4.7,SNR=60
YKA PKKP PKKPbc 12 40 54.3 -4.6
comp=Z,1.0nm,0.7s,baz=92,slow=2.8,SNR=5.5
X15A Humboldt 95.96 56 ⇓P P 12 24 08.1 -0.6
baz=96
HVU Hansel Valley 95.99 49 *e*P **P 12 24 08.8 +0.1**
HVU pmax pmax
comp=Z,3.0nm,1.1s,mb4.6
HVU Hansel Valley 95.99 49 *e*P **P 12 24 08.8 +0.1**
comp=Z,3.4nm,1.1s,mb4.7
U15A North Rim 96.04 54 ⇑P P 12 24 09.6 +0.6
baz=96,SNR=7.9
V15A Kaibab Nationa 96.09 55 ⇓P P 12 24 10.4 +1.1
baz=96
EDM Edmonton 96.20 37 *e*P **P 12 24 08.7 -0.6**
EDM *e**PP pP 12 24 19.1 -1.2
L15A Malad City 96.29 49 ⇓P P 12 24 09.3 -0.7
baz=96
J15A Blackfoot 96.33 47 ⇓P P 12 24 08.1 -2.1
baz=96
G15A Dillon 96.38 45 ⇓P P 12 24 09.4 -1.0
baz=96
A15A Johnson Ranch, 96.40 41 ⇑P P 12 24 09.3 -1.1
baz=96
S16A Weppner Ranch, 96.67 53 ⇑P P 12 24 12.7 +0.8
baz=97
R16A Teasdale 96.79 52 ⇑P P 12 24 13.6 +1.2
baz=97
Q16A Castle Valley 97.06 52 ⇑P P 12 24 14.2 +0.6
baz=97
R17A Hanksville Air 97.40 52 ⇓P P 12 24 14.9 -0.3
baz=97
O17A Robinson Place 97.45 50 ⇑P P 12 24 14.8 -0.6
baz=98
S18A Hurst Farm, Bl 97.94 53 ⇓P P 12 24 18.0 +0.4
baz=98
R18A Canyonlands Na 98.04 52 ⇑P P 12 24 17.9 -0.2
baz=98
E18A Harlowton 98.23 44 ⇑P P 12 24 18.5 -0.1
baz=98
BW06 Boulder Array 98.42 48 ⇓P P 12 24 18.8 -0.8
baz=98
PDAR Pinedale Array 98.42 48 P **P 12 24 18.0 -1.6**
comp=Z,1.5nm,0.9s,mb4.5,baz=270,slow=3.0,SNR=10
L19A Farson 98.55 48 ⇑P P 12 24 19.5 -0.7
baz=99
S19A Harvey Farm, M 98.62 53 ⇑P P 12 24 21.5 +0.8
baz=99
O19A Miners Draw (B 98.69 50 ⇓P P 12 24 20.7 -0.2
baz=99
P19A Cripple Cowboy 98.79 51 ⇓P P 12 24 21.5 +0.1
baz=99
X20A Quemado 99.04 56 ⇓P P 12 24 23.4 +0.7
baz=99
MVCO Mesa Verde 99.11 53 ⇑P P 12 24 22.9 0.0
baz=99
Q20A Ridgley Place, 99.31 52 ⇑P P 12 24 23.2 -0.5
baz=99
L20A Wamsutter 99.31 49 ⇑P P 12 24 23.3 -0.3
baz=99
N20A Spence Gulch, 99.36 50 ⇑P P 12 24 24.1 +0.2
baz=99
M20A Sweetwater, Wa 99.42 49 ⇑P P 12 24 24.2 +0.1
baz=100
Q21A Lamborn Mesa, 99.87 52 ⇑P Pdif 12 24 26.8 +0.9
baz=100
N21A Black Mountain 99.92 50 ⇑P Pdif 12 24 26.6 +0.6
baz=100
M21A Separation Pea 100.04 49 ⇓P Pdif 12 24 26.3 -0.3
baz=100
TXAR Lajitas Array 103.07 62 PKKPbc PKKPbc 12 40 35.1 -2.5
comp=Z,0.7nm,0.8s,baz=107,slow=4.5,SNR=8.4
ARCES ARCESS Array B 109.16 343 PKiKP PKiKP 12 29 10.5 -0.1
comp=Z,1.5nm,0.9s,baz=64,slow=2.8,SNR=4.9
KIV Kislovodsk 110.52 314 *e*P Pdif 12 25 14.8 +1.6
KIV *e* 12 29 49.1
KIV pmax pmax
comp=Z,2.0nm,0.7s
FINES FINESS Array B 113.53 336 PKiKP PKiKP 12 29 17.8 -1.3
comp=Z,0.6nm,0.6s,baz=329,slow=2.2,SNR=4.3
FINES PKKPbc PKKPbc 12 40 02.2 -3.3
comp=Z,2.2nm,0.8s,baz=141,slow=3.7,SNR=7.7
FINES PKKPab PKKPab 12 40 12.8 +2.2
comp=Z,2.1nm,0.7s,baz=146,slow=3.7,SNR=6.8
FINES FINESS Array B 113.53 336 PKPdf PKiKP 12 29 17.8 -1.3
FINES PKKPbc PKKPbc 12 40 02.2 -3.3
FINES PKKPab PKKPab 12 40 12.8 +2.2
WCI Wyandotte Cave 116.48 50 *e*PKIKP PKPdf 12 29 23.7 -1.8
PLCA Paso Flores 117.08 142 PKP PKPdf 12 29 25.5 -1.2
comp=Z,1.0nm,0.7s,baz=13,slow=16,SNR=3.0
AKASG Malin Array Be 117.17 325 PKP PKPdf 12 29 25.0 -1.5
comp=Z,2.1nm,0.5s,baz=71,slow=1.5,SNR=7.1
AKASG PKKPbc PKKPbc 12 39 49.8 -2.8
comp=Z,2.6nm,0.7s,baz=256,slow=4.0,SNR=6.7
KMBO Kilima Mbogo 117.38 265 PKP PKPdf 12 29 28.1 +0.1
comp=Z,0.8nm,0.4s,baz=1.5,slow=23,SNR=3.9
BRTR Keskin Array B 118.08 312 PKP PKPdf 12 29 26.4 -2.2
comp=Z,1.3nm,0.6s,baz=127,slow=2.6,SNR=7.5
BRTR PKKPbc PKKPbc 12 39 46.8 -2.2
comp=Z,0.8nm,0.7s,baz=224,slow=5.0,SNR=5.2
NOA NORSAR Array B 119.28 341 PKP PKPdf 12 29 28.8 -1.4
comp=Z,0.9nm,0.8s,baz=43,slow=1.9,SNR=5.0
NOA PKKPbc PKKPbc 12 39 42.2 -3.0
comp=Z,0.6nm,0.7s,baz=41,slow=3.5,SNR=3.8
NOA NORSAR Array B 119.28 341 PKP PKPdf 12 29 28.8 -1.4
NOA PKKPbc PKKPbc 12 39 42.2 -3.0
SADO Sadowa 119.63 42 PKP PKPdf 12 29 29.9 -1.4
comp=Z,8.6nm,0.7s,baz=290,slow=1.5,SNR=10
SADO pPKP pPKPdf 12 29 40.0 -2.6
comp=Z,5.7nm,0.7s,baz=301,slow=5.1,SNR=4.5
SADO Sadowa 119.63 42 PKP PKPdf 12 29 29.9 -1.4
SADO pPKP pPKPdf 12 29 40.0 -2.6
TLCR 119.65 319 ⇓PKIKP PKPdf 12 29 31.0 -0.4
TLCR 119.65 319 ⇓*i*P PKPdf 12 29 31.0 -0.4
BOSA Boshof 120.28 232 PKP PKPdf 12 29 32.8 -0.4
comp=Z,7.3nm,0.6s,baz=53,slow=1.4,SNR=20
BOSA pPKP pPKPdf 12 29 42.0 -2.5
comp=Z,4.6nm,0.7s,baz=29,slow=5.4,SNR=3.6

BUR08 Bucovina Ar. S 120.89 323 *e*PKPdf PKPdf 12 29 33.5 -0.1
BURAR Bucovina Array 120.89 323 ⇓PKIKP PKPdf 12 29 32.8 -0.9
BURAR Bucovina Array 120.89 323 ⇓*i*P PKPdf 12 29 32.8 -0.9
MCWV Mont Chateau 120.92 47 *e*PKPdf PKPdf 12 29 32.7 -1.4
MLR Muntele Rosu 121.38 320 ⇑PKIKP PKPdf 12 29 34.4 -0.3
MLR Muntele Rosu 121.38 320 ⇑*i*P PKPdf 12 29 34.4 -0.3
JSC Jenkinsville 121.38 54 *e*PKIKP PKPdf 12 29 34.2 -0.9
SCHQ Schefferville 121.39 27 PKP PKPdf 12 29 33.3 -1.1
comp=Z,2.6nm,0.7s,baz=230,slow=1.8,SNR=6.4
SCHQ pPKP pPKPdf 12 29 43.6 -2.1
comp=Z,2.3nm,0.6s,baz=185,slow=19,SNR=2.8
VOIR 121.97 320 ⇓PKIKP PKPdf 12 29 37.0 +1.2
VOIR 121.97 320 ⇓*i*P PKPdf 12 29 37.0 +1.2
SSPA Standing Stone 122.00 46 *e*PKPdf PKPdf 12 29 34.5 -1.6
LONY Lake Ozonia 122.66 40 *e*PKPdf PKPdf 12 29 34.6 -2.6
LONY *ep*PKPdf pPKPdf 12 29 45.9 -2.5
LSZ Lusaka 123.00 247 *e*PKIKP PKPdf 12 29 38.5 -0.2
LSZ *e* 12 29 48.6
BZS Buzias 124.02 322 ⇑PKIKP PKPdf 12 29 37.8 -2.0
BZS Buzias 124.02 322 ⇑*i*P PKPdf 12 29 37.8 -2.0
DPC Dobruska-Polom 124.39 329 *e*PKIKP PKPdf 12 29 40.0 -0.3
DPC Dobruska-Polom 124.39 329 *e*PKPdf PKPdf 12 29 40.0 -0.3
BRG Berggiesshubel 125.25 331 *e*PKPdf PKPdf 12 29 41.9 -0.1
BRG Berggiesshubel 125.25 331 *e*PKP PKPdf 12 29 41.4 -0.6
comp=Z,3.7nm,1.0s
CLL Collm 125.42 332 *e*PKPdf PKPdf 12 29 42.2 -0.1
CLL Collm 125.42 332 *i* PKIKP PKPdf 12 29 41.1 -1.2
CLL pmax pmax
comp=Z,12nm,1.5s
CLL Collm 125.42 332 *i* PKPdf PKPdf 12 29 41.1 -1.2
comp=Z,12nm,1.5s
PKSM Moragy 125.50 324 ⇑PKIKP PKPdf 12 29 40.0 -2.6
PKSM Moragy 125.50 324 ⇑*i*P PKPdf 12 29 40.0 -2.6
CLZ Clausthal 126.25 334 *e*PKPdf PKPdf 12 29 43.8 -0.1
KHC Kasperske Hory 126.55 329 *e*PKPdf PKPdf 12 29 43.6 -0.9
KHC *ep*PKPdf pPKPdf 12 29 55.2 -0.6
KHC Kasperske Hory 126.55 329 *e*PKPdf PKPdf 12 29 44.1 -0.4
KHC *ep*PKP pPKPdf 12 29 54.5 -1.3
GEC2 GERESS Array S 126.67 329 *e*PKPdf PKPdf 12 29 44.6 -0.1
GRF Grafenberg Arr 127.34 331 *e*PKP PKPdf 12 29 45.1 -0.9
HINF Hinteralfeld 130.72 332 *e*PKIKP PKPdf 12 29 51.5 -1.0
LPAZ La Paz 131.69 119 PKhKP 12 29 49.1
comp=Z,2.5nm,0.9s,baz=0.0,slow=0.0,SNR=3.7
LPAZ PKP PKPdf 12 29 55.6 +0.4
comp=Z,2.1nm,0.8s,baz=307,slow=3.0,SNR=6.4
LPAZ La Paz 131.69 119 PKP PKPdf 12 29 55.6 +0.4
CABF La Chapelle 131.95 331 *e*PKIKP PKPdf 12 29 53.1 -1.8
LPL La Plagne 132.42 330 *e*PKIKP PKPdf 12 29 54.0 -1.8
comp=Z,3.0nm,0.6s
LPG La Plagne 132.43 330 *e*PKIKP PKPdf 12 29 54.8 -1.0
comp=Z,8.3nm,0.8s
TCF Toulx Ste Croi 133.97 334 *e*PKIKP PKPdf 12 29 56.8 -1.9
CPUP Villa Florida 134.72 138 PKP PKPdf 12 29 59.1 -1.6
comp=Z,3.3nm,0.8s,baz=243,slow=2.9,SNR=9.4
CPUP pPKP pPKPdf 12 30 08.2 -3.8
comp=Z,3.5nm,0.8s,baz=55,slow=4.1,SNR=3.5
TORD Torodi Ar. Bea 152.89 286 PKP PKPdf 12 30 30.8 -1.5
comp=Z,1.4nm,0.7s,baz=30,slow=1.3,SNR=8.6
TORD PKPbc PKPbc 12 30 38.3 -1.2
comp=Z,16nm,0.7s,baz=38,slow=2.3,SNR=72
TORD pPKPbc pPKPbc 12 30 47.6 -3.1
comp=Z,13nm,0.9s,baz=58,slow=1.5,SNR=12
KIC Kosan Boka 159.84 271 *e*PKP1 PKPab 12 31 19.7 -0.9
comp=Z,30nm,0.9s
DBIC Dimbokro 159.97 272 PKPab PKPab 12 31 20.6 -0.6
comp=Z,13nm,0.8s,baz=67,slow=6.1,SNR=8.9
LIC Lamto 160.13 270 *e*PKP2 PKPab 12 31 20.7 -1.2
comp=Z,34nm,1.0s
LIC Lamto 160.13 270 *e*PKP1 PKPab 12 31 20.6 -1.3
comp=Z,52nm,1.1s
TIC Toumodi 160.13 271 *e*PKP1 PKPab 12 31 20.5 -1.4
comp=Z,12nm,0.2s

DDA ***28*** *12:21:36.2, 39°.43N×40°.85E, h7km±4km, Md2.8*
ISK ***28*** *12:21:36.1, 39°.49N×40°.78E, h3km, MD2.8*
ISCJB ***28*** *12:21:36.4±0.8, 39°.46N±0°.04×40°.80E±0°.05, h1km±9km, Error ellipse: s-maj=7.9km s-min=5.0km az=34.2*
CSEM ***28*** *12:21:37.1±0.3, 39°.48N×40°.76E, h10km, MD2.8, Error ellipse: s-maj=10.1km s-min=5.7km az=137.0*
ISC 28 12:21:37.4±0.8, 39°.44N±0°.04×40°.86E±0°.06, h1km±8km, n12, σ1§05/20, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNGL	**BINGOL**	**0.54**	**155**	*i* P	**Pg**	**12 21 47.0**	**-0.7**
BNGL				*i* S	**Sg**	**12 21 53.9**	**-0.7**
EZM	**Erzurum**	**0.61**	**40**	*e*PG	**Pg**	**12 21 48.5**	**-0.5**
EZM				*e*SG	**Sg**	**12 21 58.0**	**+1.2**
ERZM	**Erzurum**	**0.61**	**40**	*i* P	**Pg**	**12 21 48.7**	**-0.3**
ERZM				*i* S	**Sg**	**12 21 56.6**	**-0.3**
ERZM	**Erzurum**	**0.61**	**40**	*i* P	**Pg**	**12 21 48.7**	**-0.3**
ERZM				*i* S	**Sg**	**12 21 56.6**	**-0.3**
BINT	**Bingol**	**0.63**	**207**	*e*PG	**Pg**	**12 21 49.8**	**+0.3**
BINT				*e*SG	**Sg**	**12 21 59.3**	**+1.6**
BINT	**Bingol**	**0.63**	**207**	*e*Pg	**Pg**	**12 21 49.8**	**+0.3**
BINT				*e*Sg	**Sg**	**12 21 59.3**	**+1.6**
EZC	**Erzincan**	**0.86**	**291**	*e*PN	**Pn**	**12 21 58.4**	**+1.9**
PTK	**Pertek**	**1.26**	**245**	*e*PN	**Pn**	**12 21 60.0**	**-2.2**
PTK	**Pertek**	**1.26**	**245**	*e*Pn	**Pn**	**12 22 00.0**	**-2.1**
GUMT	**Gumushane**	**1.47**	**314**	*e*PN	**Pn**	**12 22 03.8**	**-1.1**
TUTA	**Tutak**	**1.52**	**91**	*i* P	**Pn**	**12 22 05.6**	**0.0**
TUTA				*i* S	**Sn**	**12 22 26.7**	**+0.8**
TUTA	**Tutak**	**1.52**	**91**	*i* P	**Pn**	**12 22 05.6**	**0.0**
TUTA				*i* S	**Sn**	**12 22 26.7**	**+0.8**

IDC ***28*** *12:40:17.3±3.3, 5°.04S×151°.12E, h182km±28km, mb3.7/9, mb1 3.8/10, mb1mx3.6/18, mbtmp3.7/10, Error ellipse: s-maj=43.1km s-min=15.9km az=114.0*
ISCJB ***28*** *12:40:18.0±2.5, 5°.1S±0°.2×151°.2E±0°.2, h204km±24km, mb3.8/11, Error ellipse: s-maj=38.2km s-min=20.8km az=30.8*
NEIC ***28*** *12:40:19.3±1.8, 5°.12S×151°.18E, h204km±17km, mb4.3/3, Error ellipse: s-maj=24.5km s-min=13.2km az=116.0*
ISC 28 12:40:19.2±2.4, 5°.1S±0°.2×151°.2E±0°.2, h202km±22km, n15, σ0§68/15, mb3.8/11, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.83**	**223**	*e*Pn	**Pn**	**12 41 44.3**	**-0.1**
	64nm,0.7s						
COEN	**Coen**	**11.80**	**221**	*e*Pn	**Pn**	**12 43 02.2**	**+0.6**
CTA	**Charters Tower**	**15.63**	**197**	P	**Pn**	**12 43 48.2**	**-0.9**
	0.1nm,0.3s,baz=27,slow=6.8,SNR=3.1						
KAKA	**Kakadu**	**19.98**	**247**	*e*P	**P**	**12 44 36.1**	**-0.3**
	46nm,0.4s						
WRAB	**Tennant Creek**	**22.02**	**227**	*e*P	**P**	**12 44 57.5**	**-0.1**
	5.2nm,0.6s,mb4.2						
WRA	**Warramunga Arr**	**22.04**	**227**	P	**P**	**12 44 57.6**	**-0.1**
	4.7nm,0.5s,mb4.3,baz=50,slow=10,SNR=97						
WRA				ScP	ScP	12 52 08.6	+2.4
	1.1nm,0.9s,baz=54,slow=2.9,SNR=11						
ASAR	**Alice Springs**	**24.84**	**220**	P	**P**	**12 45 23.4**	**+0.2**
	1.9nm,0.6s,mb3.9,baz=52,slow=8.4,SNR=22						
FITZ	**Fitzroy Crossi**	**28.09**	**241**	P	**P**	**12 45 52.3**	**0.0**
	2.2nm,0.6s,mb3.9,baz=85,slow=5.9,SNR=18						
MBWA	**Marble Bar**	**34.41**	**239**	*e*P	**P**	**12 46 48.6**	**+1.0**
	1.9nm,0.7s,mb3.7						
PETK	**Petropavlovsk-**	**58.27**	**5**	P	**P**	**12 49 52.2**	**-0.1**
	1.8nm,0.6s,mb3.9,baz=157,slow=5.8,SNR=8.4						
SONM	**Songino Array**	**65.74**	**329**	P	**P**	**12 50 43.5**	**+1.3**
	1.1nm,0.6s,mb3.7,baz=143,slow=4.6,SNR=5.0						
ZALV	**Zalesovo Beam**	**80.52**	**327**	P	**P**	**12 52 07.8**	**-0.9**
	0.8nm,0.4s,mb3.7,baz=106,slow=5.8,SNR=5.9						
KURK	**Kurchatov**	**83.03**	**322**	P	**P**	**12 52 21.5**	**-0.4**
	0.4nm,0.2s,mb3.7,baz=109,slow=4.4,SNR=3.8						
BVAR	**Borovoye Array**	**88.53**	**323**	P	**P**	**12 52 47.6**	**-1.2**
	0.4nm,0.3s,mb3.7,baz=116,slow=6.6,SNR=4.0						
NVAR	**Mina Array Bea**	**93.55**	**52**	P	**P**	**12 53 13.3**	**+0.9**
	0.2nm,0.4s,mb3.5,baz=254,slow=6.1,SNR=4.8						

IDC ***28*** *12:47:50.4±2.5, 23°.79S×179°.89W, h501km±23km, mb3.6/8, mb1 3.7/9, mb1mx3.4/18, mbtmp3.6/9, Error ellipse: s-maj=26.3km s-min=20.7km az=28.0*
NEIC ***28*** *12:47:52.0±3.1, 23°.83S×179°.94W, h521km±35km, mb4.3/4, Error ellipse: s-maj=30.0km s-min=16.0km az=205.0*
ISC 28 12:47:54.9±3.3, 24°.1S±0°.2×180°.0W±0°.2, h560km±38km, n23, σ1§04/24, mb4.2/13, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.35**	**189**	P	**P**	**12 50 56.5**	**-0.8**
	1.6nm,0.3s,baz=193,slow=23,SNR=9.7						
URZ				S	**S**	**12 53 27.0**	**-0.6**
	0.3nm,0.3s,baz=315,slow=10.0,SNR=2.5						
URZ	**Urewera**	**14.35**	**189**	*e*P	**P**	**12 50 57.0**	**-0.3**
URZ				S	**S**	**12 53 27.0**	**-0.6**
RPZ	**Rata Peaks**	**20.92**	**198**	P	**P**	**12 52 00.9**	**+2.3**
	8.1nm,0.5s,baz=79,slow=5.2,SNR=8.3						
ARMA	**Armidale**	**25.98**	**250**	*e*P	**P**	**12 52 43.3**	**-0.5**
	5.2nm,0.7s,mb4.3						
EIDS	**Eidsvold**	**26.30**	**261**	*e*P	**P**	**12 52 47.3**	**+0.6**
CMSA	**Cobar Meteorol**	**31.17**	**249**	*e*P	**P**	**12 53 30.0**	**+1.2**
CTA	**Charters Tower**	**31.50**	**271**	*e*P	**P**	**12 53 32.0**	**+0.2**
	10.0nm,0.3s,mb4.8						
CTA	**Charters Tower**	**31.50**	**271**	P	**P**	**12 53 32.1**	**+0.3**
	13nm,0.3s,mb4.9,baz=92,slow=11,SNR=26						
CTAO	**Charters Tower**	**31.50**	**271**	*e*P	**P**	**12 53 32.0**	**+0.2**
	10nm,0.4s,mb4.7						
STKA	**Stephens Creek**	**34.67**	**248**	P	**P**	**12 53 59.4**	**+1.0**
	2.1nm,0.5s,mb4.0,baz=324,slow=2.9,SNR=7.7						
ASAR	**Alice Springs**	**42.03**	**261**	P	**P**	**12 54 58.5**	**+0.4**
	4.0nm,0.6s,mb4.1,baz=97,slow=8.1,SNR=38						
ASAR				ScP	ScP	12 59 44.4	+7.0
	0.3nm,0.7s,baz=96,slow=4.9,SNR=5.4						
WRAB	**Tennant Creek**	**42.41**	**266**	*e*P	**P**	**12 55 00.4**	**-0.7**
	4.2nm,0.4s,mb4.3						
WRA	**Warramunga Arr**	**42.42**	**266**	P	**P**	**12 55 00.6**	**-0.5**
	3.2nm,0.3s,mb4.3,baz=90,slow=6.0,SNR=425						
WRA				ScP	ScP	12 59 45.8	+6.8
	0.5nm,0.8s,baz=89,slow=3.8,SNR=5.0						
FORT	**Forrest**	**46.27**	**250**	*e*P	**P**	**12 55 30.6**	**-0.1**
	21nm,0.6s,mb4.8						
KAKA	**Kakadu**	**46.35**	**275**	*e*P	**P**	**12 55 30.1**	**-1.4**
	4.6nm,0.5s,mb4.3						
KNA	**Kununurra**	**48.68**	**270**	*e*P	**P**	**12 55 48.9**	**0.0**
	4.0nm,0.3s,mb4.4						
FITZ	**Fitzroy Crossi**	**50.84**	**266**	*e*P	**P**	**12 56 05.0**	**+0.3**
	5.1nm,0.7s,mb4.0						
FITZ	**Fitzroy Crossi**	**50.84**	**266**	P	**P**	**12 56 05.1**	**+0.4**
	2.1nm,0.5s,mb3.7,baz=99,slow=13,SNR=17						
CASY	**Casey**	**59.95**	**206**	*e*P	**P**	**12 57 05.0**	**-2.2**
	13nm,1.1s,mb4.2						
MAW	**Mawson**	**77.58**	**200**	P	**P**	**12 58 54.6**	**+1.4**
	2.0nm,0.6s,mb3.6,baz=110,slow=4.9,SNR=3.6						
COCO	**West Island**	**78.98**	**262**	*e*P	**P**	**12 58 58.4**	**-3.3**
	370nm,1.4s						
TXAR	**Lajitas Array**	**90.51**	**58**	P	**P**	**12 59 57.8**	**+0.1**
	0.6nm,0.7s,mb3.6,baz=214,slow=7.1,SNR=8.1						
MMAI	**Mount Meron Ar**	**147.80**	**294**	PKPbc	PKPbc	13 06 38.2	+0.8
	1.4nm,0.4s,baz=60,slow=6.8,SNR=4.1						

IDC ***28*** *12:48:33.6±3.7, 24°.24S×179°.88E, h484km±35km, mb3.6/6, mb1 3.8/6, mb1mx3.4/16, mbtmp3.6/6, Error ellipse: s-maj=89.4km s-min=27.7km az=163.0*
ISCJB ***28*** *12:48:33.4±1.4, 24°.7S±0°.4×179°.9E±0°.2, h500km, mb4.2/10, Error ellipse: s-maj=61.4km s-min=22.5km az=162.5*
ISC 28 12:48:34.3±1.4, 24°.7S±0°.4×180°.0E±0°.2, h500km, n13, σ0§56/13, mb4.2/10, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMSA	**Cobar Meteorol**	**30.91**	**249**	*e*P	**P**	**12 54 09.7**	**+0.2**
CTA	**Charters Tower**	**31.46**	**272**	*e*P	**P**	**12 54 14.9**	**+0.5**
	8.1nm,0.3s,mb4.6						
CTA	**Charters Tower**	**31.46**	**272**	P	**P**	**12 54 15.2**	**+0.7**
	13nm,0.3s,mb4.8,baz=98,slow=10,SNR=15						
MTSU	**Mount Surprise**	**33.76**	**274**	*e*P	**P**	**12 54 34.9**	**+0.9**
	22nm,0.7s,mb4.7						
STKA	**Stephens Creek**	**34.41**	**249**	P	**P**	**12 54 39.9**	**+0.6**
	3.2nm,0.6s,mb4.0,baz=87,slow=12,SNR=7.1						
ASAR	**Alice Springs**	**41.89**	**261**	P	**P**	**12 55 40.4**	**0.0**
	1.6nm,0.4s,mb3.8,baz=96,slow=8.4,SNR=12						
WRA	**Warramunga Arr**	**42.34**	**267**	P	**P**	**12 55 43.3**	**-0.7**
	4.6nm,0.3s,mb4.3,baz=99,slow=7.0,SNR=41						
WRA				ScP	ScP	13 00 31.1	+2.0
	0.5nm,0.8s,baz=102,slow=3.6,SNR=5.0						
FORT	**Forrest**	**46.02**	**250**	*e*P	**P**	**12 56 11.7**	**-0.7**
	17nm,0.7s,mb4.6						
KAKA	**Kakadu**	**46.36**	**276**	*e*P	**P**	**12 56 14.3**	**-0.9**
	3.3nm,0.3s,mb4.2						
KNA	**Kununurra**	**48.64**	**270**	*e*P	**P**	**12 56 32.4**	**+0.1**
	6.8nm,0.6s,mb4.2						
FITZ	**Fitzroy Crossi**	**50.75**	**266**	*e*P	**P**	**12 56 47.6**	**-0.3**
	5.7nm,0.6s,mb4.1						
FITZ	**Fitzroy Crossi**	**50.75**	**266**	P	**P**	**12 56 47.9**	**0.0**
	1.3nm,0.4s,mb3.7,baz=115,slow=11,SNR=10						
TXAR	**Lajitas Array**	**90.87**	**58**	P	**P**	**13 00 44.5**	**+0.1**
	0.4nm,0.7s,mb3.4,baz=216,slow=6.5,SNR=6.0						

BJI ***28*** *12:54:44.1, 10°.77N×91°.73E, h16km, mB6.2/47, mb5.8/67, Ms6.3/81, Ms7 6.1/62*
ISCJB ***28*** *12:54:44.0±0.6, 10°.90N±0°.02×91°.72E±0°.01, h10km±3km, mb5.8/352, MS6.0/316, Error ellipse: s-maj=3.7km s-min=2.4km az=12.2*
NEIC ***28*** *12:54:46.4±0.1, 10°.85N×91°.71E, h15km, mb5.9/201, ME6.1, MS6.0/211, MW6.1, MW6.1, Error ellipse: s-maj=3.5km s-min=2.4km az=204.0 Broadband fault plane solution: P waves. NP1:φs0.00000°, δ75.00000°, λ-90.00000°. NP2:φs180.00000°, δ15.00000°, λ-90.00000°. Principal axes: T Plg30.0000°, Azm90.0000°; N Plg0.0000°, Azm0.0000°; P Plg60.0000°, Azm270.0000°; Moment Tensor Solution. s87 Moment tensor: Scale 10^18 Nm; Mrr-0.86; Mθθ0.34; Mφφ0.51; Mrθ0.20; Mθφ0.54; Mφr-1.72; Best double couple: M0 2.00000×10^18 NP1:φs239.00000°, δ21.00000°, λ-34.00000°. NP2:φs2.00000°, δ78.00000°, λ-107.00000°. Principal axes: T 1.7600, Plg31.0000°, Azm106.0000°; N 0.3600, Plg16.0000°, Azm5.0000°; P -2.1200, Plg53.0000°, Azm251.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt at Port Blair.
DJA ***28*** *12:54:48, 10°.79N×91°.87E, h13km, Mw6.3/71*
MOS ***28*** *12:54:48.0±0.9, 10°.95N×91°.73E, h33km, mb6.2/136, MS5.9/117, Error ellipse: s-maj=12.1km s-min=6.5km az=101.4*
IDC ***28*** *12:54:49.7±1.5, 10°.82N×91°.85E, h38km±11km, mb5.5/31, mb1 5.5/32, mb1mx5.5/32, mbtmp5.4/32, ML5.2/1, MS5.8/38, Ms1 5.8/38, ms1mx5.8/43, Error ellipse: s-maj=11.6km s-min=7.6km az=45.0*
TEH ***28*** *12:54:50.0, 10°.82N×91°.76E, h35km*
GCMT ***28*** *12:54:50.3±0.1, 10°.90N×91°.80E, h12km, MW6.1, Moment Tensor Solution. s112,c240; s88,c135; Moment tensor: Scale 10^18 Nm; Mrr-1.25±.01; Mθθ-0.04±.01; Mφφ1.29±.01; Mrθ0.83±.02; Mθφ0.51±.01; Mφr-0.39±.02; Best double couple: M0 1.60000×10^18 NP1:φs225.00000°, δ50.00000°, λ-49.00000°. NP2:φs352.00000°, δ55.00000°, λ-128.00000°. Principal axes: T 1.4700, Plg3.0000°, Azm107.0000°; N 0.3200, Plg30.0000°, Azm16.0000°; P -1.7800, Plg60.0000°, Azm202.0000°; Data Used: II IU IC G CN. Surface waves: sta=112, comp=260, per= 50.*
SZGRF ***28*** *12:54:51.3, 10°.79N×91°.14E, h33km, mb5.8, MS5.9, Andaman Islands, India, region*
BGS ***28*** *12:54:52.0±1.5, 11°.39N×90°.35E, h15km±999km, mb5.6, MS6.0*
PRE ***28*** *12:54:55.0±1.9, 10°.21N×91°.28E, h35km

CMAR						12 59 02.6
CMAR				pmax	pmax	
	comp=Z,6.0nm,0.3s					
CMAR				MLR	MLR	
	comp=Z,58μm,19.6s					
KULM	**Kulim**	**10.43**	**121**	P	**Pn**	**12 57 16.4 +0.2**
KULM	**Kulim**	**10.43**	**121**	*e*Pn	**Pn**	**12 57 15.0 -1.2**
	comp=Z,849nm,1.3s					
CHTO	**Chiang Mai**	**10.54**	**41**	*e*Pn	**Pn**	**12 57 17.2 -0.5**
CHTO				*e*Sn	**Sn**	**12 59 09.1 -5.7**
CHTO	**Chiang Mai**	**10.54**	**41**	⇓P	**Pn**	**12 57 17.4 -0.3**
	SNR=29					
CHTO				⇓P		12 57 17.4
	SNR=29					
VIS	**Vishakhapatnam**	**10.61**	**311**	*e*PKP	**Pn**	**12 57 17.1 -1.6**
VIS				*i* S	**Sn**	**12 59 06.9 -10**
PSI	**Prapat**	**10.73**	**138**	Pn	**Pn**	**12 57 17.0 -3.4**
	comp=Z,4.3nm,0.3s,baz=312,slow=10,SNR=14					
PSI				Sn	**Sn**	**12 59 30.1 +10**
	comp=Z,3.1nm,0.3s,baz=180,slow=20,SNR=1.8					
PSI				LR	LR	13 02 46.3
	comp=Z,86μm,18.1s,baz=310,slow=45					
PSI	**Prapat**	**10.73**	**138**	P	**Pn**	**12 57 17.0 -3.4**
PSI						12 59 30.1
PSI				pmax	pmax	
	comp=Z,4.0nm,0.3s					
PSI				smax		
	comp=N,3.0nm,0.3s					
PSI				MLR	MLR	
	comp=Z,86μm,18.1s					
IPM	**Ipoh**	**11.19**	**124**	P	**Pn**	**12 57 25.3 -1.3**
PALK	**Pallekele**	**11.46**	**253**	Pn	**Pn**	**12 57 29.8 -0.5**
	comp=Z,3μm,0.7s,SNR=30					
CAL	**Calcutta**	**12.05**	**345**	*e*PKP	**Pn**	**12 57 35.9 -2.5**
CAL				*ex*	x	13 00 43.7
FRIM	**Kepong**	**12.40**	**127**	P	**Pn**	**12 57 42.3 -1.0**
KTGM	**Kuala Trenggan**	**12.56**	**115**	P	**Pn**	**12 57 45.7 +0.3**
AGT	**Agartala**	**12.95**	**358**	*i* x	**Pn**	**12 57 47.0 -3.7**
AGT				*ex*	x	12 59 45.0
HYB	**Hyderabad**	**14.33**	**298**	*i* P	**Pn**	**12 58 09.0 -0.6**
	comp=Z,120nm,1.0s					
HYB				*e*S	**Sn**	**13 00 48.0 +0.2**
HYB				LR	LR	13 06 00.0
	comp=Z,46nm,20.0s					
KGM	**Kluang**	**14.48**	**127**	P	**Pn**	**12 58 10.2 -1.5**
SHL	**Shillong**	**14.62**	**1**	*e*PKP	**Pn**	**12 58 08.5 -5.0**
SHL				*e*S	**Sn**	**13 00 49.0 -5.7**
TRD	**Trivandrum**	**14.75**	**262**	⇑*i* x	x	12 58 26.5
TRD				*i* S	**Sn**	**13 00 56.5 -1.4**
MYKOM	**Kota Tinggi**	**15.04**	**126**	P	**Pn**	**12 58 16.8 -2.4**
NGP	**Nagpur**	**15.89**	**312**	*e*PKP	**Pn**	**12 58 29.3 -1.0**
NGP				*ex*	x	13 01 32.3
SLGI	**Shiliguri**	**16.06**	**349**	*ex*	**Pn**	**12 58 36.5 +4.2**
ODAN	**Odare**	**16.43**	**346**	*e*P	**Pn**	**12 58 32.3 -4.7**
	comp=Z,462nm,0.5s					
JBP	**Jabalpur**	**16.59**	**319**	⇑*i*P	**Pn**	**12 58 37.3 -1.8**
JBP				*ex*	x	13 01 31.5
RAMN	**Ramite**	**16.71**	**344**	*e*P	**Pn**	**12 58 36.3 -4.4**
TAPN	**Taplejung**	**16.83**	**348**	*e*P	**Pn**	**12 58 37.5 -4.6**
	comp=Z,2μm,1.1s					
AKL	**Akola**	**17.19**	**306**	⇑*i*P	**Pn**	**12 58 46.5 -0.3**
AKL				*ex*	x	12 58 54.0
	comp=Z,1μm,1.3s					
AKL				*i* x	x	13 01 53.0
JIRN	**Jiri**	**17.50**	**343**	*e*P	**Pn**	**12 58 47.2 -3.3**
KMI	**Kunming**	**17.61**	**35**	⇑P	**Pn**	**12 58 54.0 +2.1**
KMI				pP	pP	12 59 02.3 +2.1
KMI				PP		12 59 09.3
KMI				S	**Sn**	**13 02 08.5 +1.2**
KMI				sS	sS	13 02 21.8 -4.4
KMI				SS		13 02 31.5
KMI				PcP	PcP	13 03 31.0 +0.4
KMI				pmax	pmax	
	comp=Z,200nm,1.2s					
KMI				pmax	pmax	
	comp=Z,13μm,12.1s					
KMI				LR	LR	
	comp=N,61μm,17.8s					
KMI				LR	LR	
	comp=E,56μm,16.7s					
KMI				LR	LR	
	comp=Z,42μm,12.5s					
PKI	**Pulchoki**	**17.65**	**341**	*e*P	**Pn**	**12 58 48.0 -4.3**
PKIN	**Phulchoki**	**17.66**	**341**	*e*P	**Pn**	**12 58 48.4 -4.0**
DMN	**Daman**	**17.78**	**340**	*e*P	**Pn**	**12 58 49.9 -4.1**
GUN	**Gumba**	**17.82**	**343**	*e*P	**Pn**	**12 58 51.0 -3.5**
	comp=Z,1μm,1.1s					
KKN	**Kakani**	**17.89**	**341**	*e*P	**Pn**	**12 58 51.3 -4.0**
	comp=Z,467nm,0.9s					
GOA	**Goa**	**18.02**	**287**	⇑*i*P	**Pn**	**12 58 54.1 -3.0**
GOA				*ex*	x	13 01 59.6
KAD	**Karad**	**18.17**	**293**	*e*PKP	**Pn**	**12 58 57.9 -1.0**
KAD				AMb	AMB	12 59 04.7
	comp=Z,617nm,1.9s					
KAD				*ex*	x	13 02 04.2
BHPL	**Bhopal**	**18.37**	**314**	*e*PKP	**Pn**	**12 59 01.2 -0.1**
BHPL				AMb	AMB	12 59 06.6
	comp=Z,604nm,0.9s					
BHPL				*e*S	**Sn**	**13 02 26.4 +0.5**
MNCY	**Minicoy**	**18.61**	**264**	*i* x	**Pn**	**12 59 06.0 +1.7**
MNCY				*i* x	x	13 00 32.0
LSA	**Lhasa**	**18.75**	**358**	P	**Pn**	**12 59 05.3 -0.4**
LSA				S	**Sn**	**13 02 36.0 +1.3**
LSA				LR	LR	
	comp=N,12μm,6.7s					
LSA				LR	LR	
	comp=E,9μm,3.6s					
LSA				LR	LR	
	comp=Z,1μm,6.2s					
POO	**Poona**	**18.89**	**296**	*e*PKP	**Pn**	**12 59 06.1 -1.5**
POO				AMb	AMB	12 59 13.3
	comp=Z,853nm,1.6s					
POO				*ex*	x	13 02 36.2
QIZ	**Qiongzhong**	**19.28**	**63**	P	**Pn**	**12 59 11.0 -1.3**
QIZ				sP	sP	12 59 16.3 -5.9
QIZ				S	**Sn**	**13 02 40.5 -7.3**
QIZ				sS	sS	13 02 57.5 -2.6
QIZ				pmax	pmax	
	comp=Z,17μm,14.3s					
QIZ				LR	LR	
	comp=N,46μm,17.5s					
QIZ				LR	LR	
	comp=E,15μm,16.9s					
QIZ				LR	LR	
	comp=Z,61μm,14.0s					
KSM	**Kuching**	**20.68**	**116**	P	**P**	**12 59 26.0 -0.5**
KSM	**Kuching**	**20.68**	**116**	*e*P	**P**	**12 59 24.7 -1.7**
	comp=Z,561nm,1.0s					
KSM				*e*S	**S**	**13 03 14.7 -1.6**
KSM				LR	LR	
	comp=Z,62μm,20.0s,MS6.0					
GYA	**Guiyang**	**20.96**	**40**	P	**P**	**12 59 30.0 +0.6**
GYA				PP		12 59 54.3
GYA				S	**S**	**13 03 20.5 -1.1**
GYA				PcP	PcP	13 03 33.3 -3.2
GYA				SS		13 03 56.0
GYA				ScP	ScP	13 07 13.3 +1.8
GYA				pmax	pmax	
	comp=Z,250nm,0.7s					
GYA				pmax	pmax	
	comp=Z,6μm,10.6s					
GYA				LR	LR	
	comp=N,38μm,17.4s,MS5.9					
GYA				LR	LR	
	comp=E,29μm,19.2s,MS5.9					
GYA				LR	LR	
	comp=Z,54μm,17.7s,MS6.0					
PTH	**Pithoragarh**	**21.47**	**332**	*e*PKP	**P**	**12 59 36.0 +1.2**
PTH				*ex*	x	13 03 29.0
SBUM	**Sibu**	**21.99**	**111**	P	**P**	**12 59 39.6 -0.9**
NDI	**New Delhi**	**22.33**	**325**	*e*PKP	**P**	**12 59 43.0 -1.1**
NDI				*ex*	x	13 03 35.0
AJM	**Ajmer**	**22.39**	**316**	*e*PKP	**P**	**12 59 44.6 0.0**
AJM				AMb	AMB	12 59 50.0
	comp=Z,1μm,1.5s,mb6.0					
AJM				*e*S	**S**	**13 03 52.1 +2.6**
BTM	**Bintulu**	**22.51**	**108**	P	**P**	**12 59 46.4 +0.3**
CD2	**Chengdu**	**22.86**	**27**	⇓*i*P	**P**	**12 59 49.3 -0.3**
CD2				pP		12 59 58.5
CD2				sP	sP	13 00 03.0 +2.2
CD2				PP		13 00 19.5
CD2				S	**S**	**13 03 53.3 -4.3**
CD2				sS	sS	13 04 08.5 -2.3
CD2				SS		13 04 38.5
CD2				PcS	PcS	13 07 17.8 -1.4
CD2				pmax	pmax	
	comp=Z,830nm,1.0s,mb6.1					
CD2				pmax	pmax	
	comp=Z,14μm,9.6s					
CD2				LR	LR	
	comp=N,54μm,16.8s,MS6.2					
CD2				LR	LR	
	comp=E,56μm,15.6s,MS6.2					
CD2				LR	LR	
	comp=Z,31μm,16.8s,MS5.8					
DDI	**Dehra Dun**	**23.16**	**329**	⇓*i*P	**P**	**12 59 51.5 -1.3**
DDI				*ex*	x	13 04 02.5
COCO	**West Island**	**23.46**	**167**	*e*P	**P**	**12 59 57.8 +1.8**
COCO				pmax	pmax	
	comp=Z,826nm,1.2s,mb6.0					
COCO				MLR	MLR	
	comp=Z,33μm,20.0s,MS5.8					
COCO	**West Island**	**23.46**	**167**	*e*P	**P**	**12 59 57.8 +1.8**
	comp=Z,826nm,1.2s,mb6.0					
COCO				LR	LR	
	comp=Z,33μm,20.0s,MS5.8					
GZH	**Guangzhou**	**23.94**	**57**	P	**P**	**13 00 05.0 +4.6**
GZH				S	**S**	**13 04 25.0 +10**
GZH				LR	LR	
	comp=N,37μm,15.9s,MS6.1					
GZH				LR	LR	
	comp=E,25μm,13.4s,MS6.1					
GZH				LR	LR	
	comp=Z,39μm,16.8s,MS6.0					
HKC	**Hong Kong Obse**	**24.29**	**59**	*i* P	**P**	**13 00 04.0 +0.4**
HKC				*i* S	**S**	**13 04 24.0 +2.9**
BHJ	**Bhuj**	**24.39**	**303**	*e*PKP	**P**	**13 00 04.9 +0.4**
BHJ				*e*S	**S**	**13 04 23.9 +1.2**
SDNR	**Sundarnagar**	**24.66**	**329**	*e*PKP	**P**	**13 00 08.5 +1.6**
SDNR				*ex*	x	13 04 39.5
KKM	**Kota Kinabalu**	**24.68**	**99**	P	**P**	**13 00 07.8 +0.5**
KKM	**Kota Kinabalu**	**24.68**	**99**	*e*P	**P**	**13 00 06.8 -0.4**
	comp=Z,367nm,1.2s,mb5.8					
KKM				LR	LR	
	comp=Z,25μm,20.0s,MS5.7					
BHK	**Bhakra**	**24.88**	**328**	*ex*	**P**	**13 00 06.2 -2.7**
BHK				*ex*	x	13 04 05.2
KDM	**Kudat**	**25.11**	**97**	P	**P**	**13 00 11.5 +0.3**
SDKM	**Sandakan**	**25.72**	**100**	P	**P**	**13 00 16.9 +0.2**
BATP	**Bataraza**	**25.77**	**92**	*e*P	**P**	**13 00 18.1 +1.0**
DLH	**Dalhousie**	**26.00**	**328**	*e*PKP	**P**	**13 00 21.0 +1.9**
DLH				*ex*	x	13 05 14.0
THN	**Thein Dam**	**26.05**	**328**	*e*PKP	**P**	**13 00 19.0 -0.5**
THN				*ex*	x	13 05 16.2
DGAR	**Diego Garcia**	**26.42**	**227**	PFAKE		13 00 30.0 +7.0
DGAR				LR	LR	
	comp=Z,21μm,20.0s,MS5.7					
TSM	**Tawau**	**26.71**	**102**	P	**P**	**13 00 25.7 0.0**
MYLDM	**Lahad Datu**	**27.09**	**100**	P	**P**	**13 00 29.6 +0.5**
ENPP	**El Nido**	**27.18**	**87**	*e*P	**P**	**13 00 31.0 +1.1**
LZH	**Lanzhou**	**27.40**	**22**	⇓P	**P**	**13 00 32.3 +0.7**
LZH				pP	pP	13 00 41.5 +1.7
LZH				sP	sP	13 00 45.8 +2.6
LZH				PP		13 01 20.3
LZH				S	**S**	**13 05 09.5 -0.7**
LZH				sS	sS	13 05 24.3 +0.6
LZH				SS		13 06 27.5
LZH				pmax	pmax	
	comp=Z,350nm,1.0s,mb5.8					
LZH				pmax	pmax	
	comp=Z,2μm,5.6s					
LZH				LR	LR	
	comp=E,40μm,14.2s					
LZH				LR	LR	
	comp=Z,59μm,18.6s,MS6.2					
BOLP	**Bolinao**	**27.92**	**76**	*e*P	**P**	**13 00 37.2 +0.7**
XAN	**Xi'an**	**27.92**	**32**	P	**P**	**13 00 35.0 -1.3**
XAN				pP	pP	13 00 47.0 +2.5
XAN				S	**S**	**13 05 13.0 -5.4**
XAN				pmax	pmax	
	comp=Z,40nm,0.9s,mb5.0					
XAN				pmax	pmax	
	comp=Z,1μm,13.2s					
XAN				LR	LR	
	comp=N,26μm,16.9s,MS5.9					
XAN				LR	LR	
	comp=E,10μm,15.6s,MS5.9					
XAN				LR	LR	
	comp=Z,7μm,19.1s,MS5.3					
BUSP	**Coron**	**27.93**	**85**	*e*P	**P**	**13 00 36.1 -0.5**
LUBP	**Lubang**	**28.00**	**81**	*e*P	**P**	**13 00 37.1 -0.1**
TGY	**Tagaytay City**	**28.69**	**81**	P	**P**	**13 00 42.9 -0.5**
	comp=Z,482nm,0.7s,mb6.4,baz=231,slow=3.6,SNR=8.9					
TGY				LR	LR	13 13 16.5
	comp=Z,143nm,18.2s,baz=79,slow=39					
WHN	**Wuhan**	**28.72**	**44**	P	**P**	**13 00 43.0 -0.5**
WHN				S	**S**	**13 05 28.5 -2.6**
WHN				pmax	pmax	
	comp=Z,81nm,0.8s,mb5.5					
WHN				pmax	pmax	
	comp=Z,6μm,11.9s					
WHN				LR	LR	
	comp=N,72μm,16.0s,MS6.5					
WHN				LR	LR	
	comp=E,64μm,13.0s,MS6.5					
WHN				LR	LR	
	comp=Z,103μm,15.0s,MS6.6					
CUYO	**Cuyo Island**	**28.76**	**87**	*e*P	**P**	**13 00 43.6 -0.5**
SJMP	**San Jose**	**28.82**	**84**	*e*P	**P**	**13 00 44.6 0.0**
ABRA	**Dolores**	**28.86**	**73**	*e*P	**P**	**13 00 45.4 +0.5**
QZH	**Quanzhou**	**29.07**	**58**	⇑*i*P	**P**	**13 00 46.8 +0.2**
QZH				S	**S**	**13 05 32.3 -4.4**
QZH				pmax	pmax	
	comp=Z,270nm,0.8s,mb6.0					
QZH				pmax	pmax	
	comp=Z,7μm,11.5s					
QZH				LR	LR	
	comp=N,48μm,13.6s,MS6.3					
QZH				LR	LR	
	comp=E,20μm,12.1s,MS6.3					
QZH				LR	LR	
	comp=Z,43μm,16.3s,MS6.2					
GTA	**Gaotai**	**29.32**	**13**	⇓P	**P**	**13 00 50.3 +1.6**
GTA				pP	pP	13 00 59.8 +2.9
GTA				sP	sP	13 01 03.8 +3.5
GTA				PcP	PcP	13 03 56.0 +1.1
GTA				S	**S**	**13 05 41.5 +1.2**
GTA				sS	sS	13 05 57.5 +3.6
GTA				SS	SS	13 07 16.8 -29
GTA				pmax	pmax	
	comp=Z,250nm,1.0s,mb5.9					
GTA				pmax	pmax	
	comp=Z,2μm,6.6s					
GTA				LR	LR	
	comp=N,21μm,18.6s,MS6.0					
GTA				LR	LR	
	comp=E,21μm,15.3s,MS6.0					
GTA				LR	LR	
	comp=Z,22μm,18.0s,MS5.8					
APYP	**Conner**	**29.40**	**73**	*e*P	**P**	**13 00 50.1 +0.4**
OTRP	**Odiongan**	**29.70**	**84**	*e*P	**P**	**13 00 52.8 +0.4**
CAUP	**Cauayan**	**29.81**	**75**	*e*P	**P**	**13 00 55.0 +1.7**
TPUB	**Ta-pu**	**30.20**	**62**	*e*P	**P**	**13 00 57.4 +0.8**
	comp=Z,111nm,0.8s,mb5.6					
SGCP	**Mt. Cagua**	**30.21**	**72**	*e*P	**P**	**13 00 57.1 +0.2**
GUIM	**Jordan**	**30.32**	**88**	*e*P	**P**	**13 00 51.2 -6.6**
TWG	**Pinlang**	**30.43**	**63**	*e*P	**P**	**13 01 00.2 +1.5**
	comp=Z,154nm,0.7s,mb5.8					
SSLB	**Suanglung**	**30.64**	**61**	*e*P	**P**	**13 01 01.4 +0.8**
	comp=Z,168nm,0.6s,mb6.0					
SSLB				*e*S	**S**	**13 06 07.0 +5.6**
YULB	**Yu-li**	**30.80**	**62**	*e*P	**P**	**13 01 03.5 +1.4**
	comp=Z,245nm,0.8s,mb6.1					
YULB				*e*PcP	PcP	13 04 00.9 +1.9
YHNB	**Yeheng**	**31.30**	**60**	*e*P	**P**	**13 01 07.7 +1.3**
	comp=Z,223nm,0.9s,mb6.0					
YHNB				LR	LR	
	comp=Z,18μm,20.0s,MS5.7					
NACB	**Ninganchiao**	**31.32**	**61**	*e*P	**P**	**13 01 08.6 +2.0**
	comp=Z,46nm,0.7s,mb5.4					
NACB				*e*S	**S**	**13 06 14.7 +2.6**
KBL	**Kabul**	**31.36**	**322**	*e*P	**P**	**13 01 07.6 +0.8**
KBL				pmax	pmax	
	comp=Z,128nm,1.0s,mb5.7					
KBL	**Kabul**	**31.36**	**322**	*e*P	**P**	**13 01 07.6 +0.8**
	comp=Z,128nm,1.0s,mb5.7					
PAGZ	**Pagadian**	**31.37**	**93**	*e*P	**P**	**13 01 09.2 +2.0**
TATO	**Taipei**	**31.51**	**60**	*e*P	**P**	**13 01 09.2 +0.9**
	comp=Z,196nm,0.9s,mb5.9					
TATO				LR	LR	
	comp=Z,24μm,19.0s,MS5.9					
KSH	**Kashi**	**31.79**	**337**	P	**P**	**13 01 09.8 -0.7**
KSH				pP	pP	13 01 14.0 -4.7
KSH				sP	sP	13 01 16.8 -5.3
KSH				PP	PP	13 02 13.5 -9.1
KSH				PcP	PcP	13 04 03.3 +2.0
KSH				S	**S**	**13 06 15.5 -3.5**
KSH				ScP	ScP	13 07 44.5 +1.5
KSH				PcS	PcS	13 07 46.3 +0.5
KSH				SS	SS	13 08 03.0 -33
KSH				ScS	ScS	13 11 40.8 -0.3
KSH				pmax	pmax	
	comp=Z,190nm,1.0s,mb5.9					
KSH				pmax	pmax	
	comp=Z,690nm,3.4s					
KSH				LR	LR	
	comp=N,11μm,11.2s,MS6.0					
KSH				LR	LR	
	comp=E,14μm,12.3s,MS6.0					
KSH				LR	LR	
	comp=Z,24μm,14.4s,MS6.0					
PVCP	**Virac**	**31.79**	**82**	*e*P	**P**	**13 01 10.8 -0.1**
CNP	**Catarman**	**32.28**	**84**	*e*P	**P**	**13 01 15.0 -0.1**
TIY	**Taiyuan**	**32.56**	**31**	*e*P	**P**	**13 01 16.8 -0.5**
TIY				S	**S**	**13 06 30.3 -0.8**
TIY				pmax	pmax	
	comp=Z,2μm,10.3s					
TIY				LR	LR	
	comp=N,25μm,11.3s,MS6.3					
TIY				LR	LR	
	comp=E,27μm,12.1s,MS6.3					
TIY				LR	LR	
	comp=Z,34μm,12.3s,MS6.2					
PLP	**Palo**	**32.63**	**86**	⇓*e*P	**P**	**13 01 17.8 -0.4**
NJ2	**Nanjing**	**32.72**	**46**	*e*P	**P**	**13 01 19.8 +1.0**
NJ2				pP	pP	13 01 29.5 +2.5
NJ2				sP	sP	13 01 33.3 +2.9
NJ2				PP	PP	13 02 29.0 -4.0
NJ2				S	**S**	**13 06 33.0 -0.7**
NJ2				sS	sS	13 06 45.0 -2.3
NJ2				pmax	pmax	
	comp=Z,140nm,0.7s,mb6.0					
NJ2				pmax	pmax	
	comp=Z,3μm,11.5s					
NJ2				LR	LR	
	comp=N,42μm,16.4s,MS6.3					
NJ2				LR	LR	
	comp=E,32μm,19.0s,MS6.3					
NJ2				LR	LR	
	comp=Z,31μm,14.3s,MS6.2					
BUKP	**Musuan**	**33.01**	**92**	*e*P	**P**	**13 01 22.0 +0.4**
WMQ	**Urumqi**	**33.02**	**355**	⇓*i*P	**P**	**13 01 23.0 +1.8**
WMQ				pP	pP	13 01 33.0 +3.6
WMQ				sP	sP	13 01 37.0 +4.2
WMQ				PP	PP	13 02 34.0 -2.2
WMQ				S	**S**	**13 06 39.0 +1.0**
WMQ				ScP	ScP	13 07 47.0 -0.1
WMQ				SS	SS	13 08 39.0 -22
WMQ				pmax	pmax	
	comp=Z,280nm,1.0s,mb6.2					
WMQ				pmax	pmax	
	comp=Z,4μm,3.0s					
WMQ				LR	LR	
	comp=N,18μm,12.0s,MS6.4					
WMQ				LR	LR	
	comp=E,45μm,12.0s,MS6.4					
WMQ				LR	LR	
	comp=Z,15μm,12.0s,MS5.9					
WBK	**Wadi Bani Khal**	**33.39**	**295**	⇓P	**P**	**13 01 28.0 +3.2**
	SNR=13					
DMPH	**Davao City--Mi**	**33.56**	**94**	*e*P	**P**	**13 01 26.7 +0.3**
DAV	**Davao City (W)**	**33.64**	**94**	PFAKE		13 01 40.0 +13
DAV				LR	LR	
	comp=Z,14μm,19.0s,MS5.7					
DAV	**Davao City (W)**	**33.64**	**94**	⇑*e*P	**P**	**13 01 25.5 -1.5**
BTO	**Baotou**	**33.74**	**25**	*e*P	**P**	**13 01 27.0 -0.6**
BTO				S	**S**	**13 06 48.3 -1.1**
BTO				LR	LR	
	comp=N,12μm,13.2s,MS5.8					
BTO				LR	LR	
	comp=E,7μm,15.2s,MS5.8					
SSE	**Sheshan**	**33.90**	**49**	⇑P	**P**	**13 01 30.3 +1.2**
SSE				pP	pP	13 01 39.5 +2.1
SSE				sP	sP	13 01 43.0 +2.2
SSE				PP	PP	13 02 46.8 +0.6
SSE				PcP	PcP	13 04 10.0 +2.6
SSE				S	**S**	**13 06 50.8 -1.3**
SSE				sS	sS	13 07 06.3 +0.6
SSE				pmax	pmax	
	comp=Z,83nm,0.7s,mb5.8					
SSE				pmax	pmax	
	comp=Z,740nm,4.3s					
SSE				LR	LR	
	comp=N,26μm,18.6s,MS6.1					
SSE				LR	LR	
	comp=E,16μm,18.6s,MS6.1					
SSE				LR	LR	
	comp=Z,38μm,15.1s,MS6.2					
ULHL	**Ulahol**	**34.07**	**339**	P	**P**	**13 01 31.8 +1.4**
	SNR=93					
JMDO	**Jabal Madar**	**34.10**	**294**	⇓P	**P**	**13 01 33.7 +2.7**
	SNR=8.9					
TIA	**Tai'an**	**34.12**	**38**	⇓P	**P**	**13 01 31.3 +0.3**
TIA				pP	pP	13 01 41.0 +1.8
TIA				sP	sP	13 01 44.5 +1.9
TIA				S	**S**	**13 06 57.0 +1.6**
TIA				sS	sS	13 07 11.3 +2.3
TIA				LR	LR	
	comp=N,29μm,15.7s,MS6.3					
TIA				LR	LR	
	comp=E,35μm,16.0s,MS6.3					
KZA	**Kyzart**	**34.28**	**338**	P	**P**	**13 01 34.2 +2.0**
	SNR=195					
SMDO	**Samad**	**34.33**	**295**	⇓P	**P**	**13 01 36.0 +3.1**
	SNR=15					
HHC	**Hu-ho-hao-te**	**34.61**	**27**	*e*P	**P**	**13 01 35.8 +0.7**
HHC				pP	pP	13 01 40.3 -3.1
HHC				sP	sP	13 01 42.8 -4.0
HHC				PP	PP	13 02 52.8 -1.1
HHC				PcP	PcP	13 04 09.8 +0.6
HHC				S	**S**	**13 07 04.3 +1.5**
HHC				sS	sS	13 07 12.8 -3.6
HHC				ScP	ScP	13 07 52.8 0.0
HHC				PcS	PcS	13 07 55.0 -0.6
HHC				SS	SS	13 09 17.8 -16
HHC				ScS	ScS	13 11 55.0 -0.7
HHC				pmax	pmax	
	comp=Z,81nm,0.9s,mb5.7					
HHC				pmax	pmax	
	comp=Z,1μm,5.2s					
HHC				LR	LR	
	comp=N,13μm,15.0s,MS6.1					
HHC				LR	LR	
	comp=E,22μm,13.9s,MS6.1					
HHC				LR	LR	
	comp=Z,18μm,20.0s					
UCH	**Uchtor**	**34.68**	**337**	P	**P**	**13 01 37.6 +1.9**
	SNR=160					
UCH	**Uchtor**	**34.68**	**337**	*e*P	**P**	**13 01 37.4 +1.7**
	comp=Z,12nm,1.8s					
UCH				*e*S	**S**	**13 07 05.7 +1.8**
UCH				LR	LR	
	comp=Z,33μm,21.0s,MS6.1					
AAA	**Alma-Ata**	**34.75**	**341**	*i* P	**P**	**13 01 37.9 +1.7**
AAA				*e*S	**S**	**13 07 07.8 +3.0**
AAA				pmax	pmax	
	comp=Z,8μm,7.4s					
AAA				smax		
	comp=E,15μm,10.5s					
AAA				MLR	MLR	
	comp=Z,26μm,18.0s,MS6.0					
TKM2	**Tokmak 2**	**34.89**	**339**	P	**P**	**13 01 38.9 +1.4**
	SNR=80					
TKM2	**Tokmak 2**	**34.89**	**339**	*e*P	**P**	**13 01 38.7 +1.2**
TKM2				*e*S	**S**	**13 07 05.0 -2.0**
TKM2				pmax	pmax	
	comp=Z,117nm,1.1s,mb5.7					
TKM2				MLR	MLR	
	comp=Z,24μm,21.0s,MS5.9					
TKM2	**Tokmak 2**	**34.89**	**339**	*e*P	**P**	**13 01 38.7 +1.3**
	comp=Z,117nm,1.1s,mb5.7					
TKM2				*e*S	**S**	**13 07 05.0 -2.0**
TKM2				LR	LR	
	comp=Z,24μm,21.0s,MS5.9					

KBK	**Karagaybulak**	**34.89 338**	P	**P**	**13 01 39.6 +2.1**
	SNR=110				
AML	**Almayashu**	**34.92 336**	P	**P**	**13 01 40.1 +2.4**
	SNR=20				
AML	**Almayashu**	**34.92 336**	*e*P	**P**	**13 01 39.8 +2.1**
	comp=Z,613nm,1.1s,mb6.5				
AML			*e*S	**S**	**13 07 08.9 +1.5**
AML			LR	LR	
	comp=Z,13μm,19.0s,MS5.7				
BSY	**Bisya**	**35.01 294**	⇓P	**P**	**13 01 41.8 +3.0**
	SNR=22				
AAK	**Ala-Archa**	**35.04 338**	P	**P**	**13 01 40.5 +1.7**
	comp=Z,2μm,1.0s,mb6.9,SNR=77				
AAK	**Ala-Archa**	**35.04 338**	P	**P**	**13 01 40.9 +2.1**
	SNR=126				
AAK	**Ala-Archa**	**35.04 338**	P	**P**	**13 01 40.8 +2.0**
	comp=Z,143nm,1.0s,mb5.9,baz=160,slow=6.8,SNR=242				
AAK			LR	LR	13 18 35.6
	comp=Z,40μm,20.9s,MS6.2,baz=144,slow=41				
AAK	**Ala-Archa**	**35.04 338**	P	**P**	**13 01 40.8 +2.0**
AAK			pmax	pmax	
	comp=Z,143nm,1.0s,mb5.9				
AAK			MLR	MLR	
	comp=Z,40μm,20.9s,MS6.2				
HOQ	**Hoqain**	**35.12 296**	P	**P**	**13 01 42.9 +3.2**
	SNR=18				
FRU	**Bishkek**	**35.16 338**	⇓*i*P	**P**	**13 01 40.0 +0.1**
FRU			pmax	pmax	
	comp=Z,530nm,1.4s,mb6.3				
CHMS	**Chumysh**	**35.26 338**	P	**P**	**13 01 41.5 +0.9**
	SNR=65				
EKS2	**Erkin-Say**	**35.33 337**	P	**P**	**13 01 43.5 +2.2**
	SNR=137				
EKS2	**Erkin-Say**	**35.33 337**	*e*P	**P**	**13 01 43.2 +1.9**
	comp=Z,238nm,1.0s,mb6.1				
EKS2			*e*S	**S**	**13 07 16.7 +2.9**
EKS2			LR	LR	
	comp=Z,23μm,21.0s,MS5.9				
USP	**Ospenovka**	**35.58 338**	P	**P**	**13 01 44.9 +1.5**
	SNR=113				
ARQ	**Araqi**	**35.76 295**	⇑P	**P**	**13 01 48.0 +2.8**
	SNR=14				
BJI	**Beijing**	**36.24 33**	P	**P**	**13 01 50.0 +0.9**
BJI			pP	pP	13 01 59.8 +2.4
BJI			sP	sP	13 02 03.8 +3.0
BJI			S	**S**	**13 07 27.5 -0.3**
BJI			sS	sS	13 07 46.0 +4.5
BJI			pmax	pmax	
	comp=Z,360nm,0.8s,mb6.3				
BJI			pmax	pmax	
	comp=Z,2μm,7.9s				
BJI			LR	LR	
	comp=N,34μm,18.0s,MS6.3				
BJI			LR	LR	
	comp=E,30μm,16.8s,MS6.3				
BJI			LR	LR	
	comp=Z,24μm,17.9s,MS6.0				
ASHO	**Ashiyiah**	**36.51 297**	⇓P	**P**	**13 01 54.5 +2.8**
	SNR=21				
MK31	**Makanchi Array**	**36.69 349**	*e*P	**P**	**13 01 53.4 +0.5**
MKAR	**Makanchi Array**	**36.69 349**	P	**P**	**13 01 53.6 +0.7**
	comp=Z,362nm,1.0s,mb6.2,baz=128,slow=9.4,SNR=691				
MKAR			S	**S**	**13 07 34.9 +0.4**
	comp=Z,1.2nm,0.6s,baz=185,slow=12,SNR=1.9				
MKAR			LR	LR	13 21 07.8
	comp=Z,20μm,18.9s,MS5.9,baz=167,slow=43				
MKAR	**Makanchi Array**	**36.69 349**	P	**P**	**13 01 53.6 +0.7**
MKAR			S	**S**	**13 07 34.9 +0.4**
MKAR			pmax	pmax	
	comp=Z,362nm,1.0s				
MKAR			smax		
	comp=N,1.0nm,0.6s				
MKAR			MLR	MLR	
	comp=Z,20μm,18.9s				
IBND	**Bandar-abas**	**36.93 302**	*e*P	**P**	**13 01 58.1 +2.9**
NAZ	**Nazwa, Dubai**	**36.94 297**	⇓P	**P**	**13 01 57.3 +1.9**
	SNR=11				
ASUD	**Al Ashush, Dub**	**37.14 297**	⇓P	**P**	**13 02 00.0 +3.0**
	SNR=14				
WHFO	**Wadi Hawf**	**37.37 285**	⇓P	**P**	**13 02 01.0 +1.9**
	SNR=13				
ABTO	**Aybut**	**37.77 284**	P	**P**	**13 02 05.2 +2.7**
	SNR=6.2				
IMYA	**Miami**	**38.20 317**	*e*P	**P**	**13 02 06.1 +0.3**
IMOG	**Moghan**	**38.59 316**	*e*P	**P**	**13 02 09.4 +0.3**
DL2	**Dalian**	**38.59 39**	P	**P**	**13 02 10.3 +1.2**
DL2			S	**S**	**13 08 04.5 +0.8**
DL2			pmax	pmax	
	comp=Z,50nm,0.9s,mb5.2				
DL2			pmax	pmax	
	comp=Z,2μm,8.3s				
DL2			LR	LR	
	comp=N,13μm,18.0s				
DL2			LR	LR	
	comp=Z,16μm,15.7s,MS6.0				
SONM	**Songino Array**	**38.86 16**	P	**P**	**13 02 12.1 +0.9**
	comp=Z,156nm,0.9s,mb5.7,baz=198,slow=8.8,SNR=506				
SONM			PcP	PcP	13 04 23.1 +1.2
	comp=Z,26nm,0.8s,baz=198,slow=2.7,SNR=4.6				
SONM			LR	LR	13 20 58.3
	comp=Z,14μm,18.5s,MS5.8,baz=198,slow=40				
SONM	**Songino Array**	**38.86 16**	P	**P**	**13 02 12.1 +0.9**
SONM					13 04 23.1
SONM			pmax	pmax	
	comp=Z,156nm,0.9s				
SONM			MLR	MLR	
	comp=Z,14μm,18.5s				
ULN	**Ulaanbaatar**	**39.07 16**	*e*P	**P**	**13 02 13.6 +0.7**
ULN			pmax	pmax	
	comp=Z,713nm,2.0s,mb6.0				
ULN			MLR	MLR	
	comp=Z,12μm,19.0s,MS5.8				
ULN	**Ulaanbaatar**	**39.07 16**	*e*P	**P**	**13 02 13.6 +0.7**
	comp=Z,713nm,2.0s,mb6.0				
ULN			LR	LR	
	comp=Z,12μm,19.0s,MS5.8				
ULN	**Ulaanbaatar**	**39.07 16**	⇓P	**P**	**13 02 13.6 +0.7**
	SNR=122				
ULN			⇓P		13 02 13.6
	SNR=122				
IBAF	**Bafgh**	**39.24 307**	*e*P	**P**	**13 02 16.4 +1.7**
MSEY	**Mahe Island**	**39.25 249**	PFAKE		13 02 30.0 +15
MSEY			LR	LR	
	comp=Z,7μm,22.0s,MS5.5				
IKRD	**Kardeh**	**39.51 316**	*e*P	**P**	**13 02 11.8 -5.0**
IMEH	**Mehriz**	**39.92 306**	*e*P	**P**	**13 02 21.0 +0.7**
ABKT	**Ailbek**	**40.40 318**	P	**P**	**13 02 26.1 +2.0**
	comp=Z,1μm,1.1s,mb6.6,SNR=47				
VAN	**Vannovskaya**	**40.41 318**	⇓*i*P	**P**	**13 02 26.2 +1.9**
VAN			*e*S	**S**	**13 08 36.4 +5.4**
ISRV	**Sarvestan**	**40.42 303**	*e*P	**P**	**13 02 26.5 +2.0**
IPAR	**Pars**	**40.62 303**	*e*P	**P**	**13 02 28.7 +2.5**
ISAD	**Sadrabad**	**40.85 307**	*e*P	**P**	**13 02 29.5 +1.5**
INCN	**Inchon**	**41.03 44**	*e*P	**P**	**13 02 29.1 -0.3**
	comp=Z,516nm,1.6s,mb5.9				
INCN			LR	LR	
	comp=Z,25μm,20.0s,MS6.1				
INCN	**Inchon**	**41.03 44**	⇑P	**P**	**13 02 30.6 +1.2**
	SNR=9.8				
INCN			⇑P		13 02 30.6
	SNR=9.8				
KURK	**Kurchatov**	**41.17 347**	P	**P**	**13 02 31.6 +1.3**
	comp=Z,1μm,1.1s,mb6.5,SNR=98				
KURK	**Kurchatov**	**41.17 347**	P	**P**	**13 02 29.7 -0.6**
	comp=Z,244nm,1.0s,mb5.8,baz=162,slow=7.7,SNR=274				
KURK			ScP	ScP	13 08 17.6 +0.3
	comp=Z,1.2nm,0.4s,baz=134,slow=5.4,SNR=5.4				
KURK			LR	LR	13 23 37.1
	comp=Z,18μm,19.8s,MS5.9,baz=165,slow=42				
KURK	**Kurchatov**	**41.17 347**	*d i*P	**P**	**13 02 30.8 +0.5**
KURK			pmax	pmax	
	comp=Z,318nm,1.0s,mb5.9				
KURK			MLR	MLR	
	comp=Z,26μm,23.0s,MS6.0				
KURK	**Kurchatov**	**41.17 347**	*e*P	**P**	**13 02 31.3 +1.0**
	comp=Z,324nm,1.1s,mb5.9				
KURK			LR	LR	
	comp=Z,23μm,20.0s,MS6.0				
KURK	**Kurchatov**	**41.17 347**	P	**P**	**13 02 31.3 +1.0**
	SNR=182				
KURK			P		13 02 31.3
	SNR=182				
MOY	**Mondy**	**41.38 9**	*e*P	**P**	**13 02 33.1 +1.1**
MOY			pmax	pmax	
	comp=Z,321nm,2.9s,mb5.4				
SNY	**Shenyang**	**41.58 36**	⇓P	**P**	**13 02 33.8 0.0**
SNY			S	**S**	**13 08 48.5 +0.3**
SNY			pmax	pmax	
	comp=Z,110nm,0.7s,mb5.6				
SNY			pmax	pmax	
	comp=Z,4μm,9.2s				
SNY			LR	LR	
	comp=N,20μm,18.2s,MS6.1				
SNY			LR	LR	
	comp=E,13μm,18.4s,MS6.1				
SNY			LR	LR	
	comp=Z,28μm,16.7s,MS6.2				
MUKL	**Al Mukalla**	**41.76 280**	*e*P	**P**	**13 02 37.7 +2.0**
TLY	**Talaya**	**41.84 11**	P	**P**	**13 02 37.8 +2.0**
	comp=Z,392nm,1.0s,mb6.0,SNR=40				
TLY	**Talaya**	**41.84 11**	*d i*P	**P**	**13 02 37.5 +1.7**
TLY			*e*		13 04 22.9
TLY			*e*PPP		13 04 37.2
TLY			*e*S	**S**	**13 08 55.2 +3.4**
TLY			*e*SSS		13 12 28.6
TLY			pmax	pmax	
	comp=Z,176nm,1.6s,mb5.4				
TLY			MLR	MLR	
	comp=Z,12μm,20.0s,MS5.8				
TLY	**Talaya**	**41.84 11**	*e*P	**P**	**13 02 37.1 +1.3**
	comp=Z,220nm,1.5s,mb5.6				
TLY			LR	LR	
	comp=Z,13μm,20.0s,MS5.8				
TLY	**Talaya**	**41.84 11**	P	**P**	**13 02 37.9 +2.1**
	SNR=131				
TLY			P		13 02 37.9
	SNR=131				
KSRS	**Korea Array**	**41.90 45**	P	**P**	**13 02 36.1 -0.4**
	comp=Z,24nm,0.6s,mb5.0,baz=243,slow=8.6,SNR=53				
KSRS			LR	LR	13 22 11.6
	comp=Z,19μm,18.8s,MS6.0,baz=238,slow=39				
KSRS	**Korea Array**	**41.90 45**	P	**P**	**13 02 36.1 -0.4**
KSRS			pmax	pmax	
	comp=Z,24nm,0.6s,mb5.0				
KSRS			MLR	MLR	
	comp=Z,19μm,18.8s,MS6.0				
MBWA	**Marble Bar**	**42.07 139**	*e*P	**P**	**13 02 36.8 -1.3**
MBWA			*e*S	**S**	**13 08 46.0 -10**
MBWA	**Marble Bar**	**42.07 139**	*e*P	**P**	**13 02 36.8 -1.3**
	comp=Z,204nm,1.2s,mb5.6				
MBWA			LR	LR	
	comp=Z,14μm,20.0s,MS5.8				
MBWA	**Marble Bar**	**42.07 139**	⇓P	**P**	**13 02 37.2 -0.9**
	SNR=7.4				
MBWA			⇓P		13 02 37.2
	SNR=7.4				
IANJ	**Anjilo**	**42.13 312**	*e*P	**P**	**13 02 39.3 +0.9**
IZEF	**Zefreh**	**42.28 307**	*e*P	**P**	**13 02 39.7 0.0**
IGAR	**Gharneh**	**42.32 307**	*e*P	**P**	**13 02 41.5 +1.4**
IRK	**Irkutsk**	**42.50 11**	⇑*i*P	**P**	**13 02 41.8 +0.7**
IRK			*e*		13 04 35.0
IRK			pmax	pmax	
	comp=Z,322nm,2.0s,mb5.6				
IKIA	**Kiasar**	**42.62 313**	*e*P	**P**	**13 02 44.2 +1.8**
IGLO	**Ghaloghah**	**42.65 313**	*e*P	**P**	**13 02 44.0 +1.3**
ISHM	**Shahmirzad**	**42.73 312**	*e*P	**P**	**13 02 45.1 +1.8**
ILAS	**Lasjerd**	**42.79 311**	*e*P	**P**	**13 02 44.2 +0.4**
ISFB	**Sefidab**	**42.91 309**	*e*P	**P**	**13 02 46.2 +1.4**
IKLH	**Kolahrood**	**43.02 308**	*e*P	**P**	**13 02 46.8 +1.1**
IFIR	**Firoozkooh**	**43.05 311**	*e*P	**P**	**13 02 48.4 +2.4**
IALA	**Alasht**	**43.20 312**	*e*P	**P**	**13 02 48.8 +1.7**
ZAA0	**Zalesovo Array**	**43.32 354**	*e*P	**P**	**13 02 48.1 +0.3**
ZAA0			*e*S	**S**	**13 09 08.6 -4.9**
ZALV	**Zalesovo Beam**	**43.32 354**	P	**P**	**13 02 48.2 +0.4**
	comp=Z,225nm,0.9s,mb5.9,baz=169,slow=8.6,SNR=550				
ZALV			LR	LR	13 25 02.4
	comp=Z,12μm,19.6s,MS5.8,baz=176,slow=42				
ZALV	**Zalesovo Beam**	**43.32 354**	P	**P**	**13 02 48.2 +0.4**
ZALV			pmax	pmax	
	comp=Z,225nm,0.9s,mb5.9				
ZALV			MLR	MLR	
	comp=Z,12μm,19.6s,MS5.8				
IPIR	**Pirpir**	**43.33 307**	*e*P	**P**	**13 02 49.3 +1.1**
IDMV	**Damavand**	**43.56 311**	*e*P	**P**	**13 02 52.0 +2.0**
IPRN	**Peran**	**43.62 312**	*e*P	**P**	**13 02 52.3 +1.8**
CN2	**Changchun**	**43.88 35**	*e*P	**P**	**13 02 52.8 +0.3**
CN2			pmax	pmax	
	comp=Z,30nm,0.7s,mb5.1				
CN2			LR	LR	
	comp=N,20μm,15.0s,MS6.3				
CN2			LR	LR	
	comp=E,21μm,15.0s,MS6.3				
CN2			LR	LR	
	comp=Z,20μm,16.0s,MS6.1				
FITZ	**Fitzroy Crossi**	**44.15 130**	*e*P	**P**	**13 02 53.5 -1.4**
	comp=Z,581nm,0.9s,mb6.3				
FITZ			*e*S	**S**	**13 09 11.0 -16**
FITZ	**Fitzroy Crossi**	**44.15 130**	P	**P**	**13 02 53.9 -1.0**
	comp=Z,156nm,0.9s,mb5.7,baz=322,slow=5.7,SNR=195				
FITZ			LR	LR	13 23 08.7
	comp=Z,16μm,21.4s,MS5.9,baz=305,slow=39				
FITZ	**Fitzroy Crossi**	**44.15 130**	*e*P	**P**	**13 02 54.0 -0.9**
	comp=Z,221nm,0.8s,mb5.9				
FITZ			*e*S	**S**	**13 09 17.9 -8.6**
IR3	**Iran Long-Peri**	**44.27 310**	*e*P	**P**	**13 02 57.4 +1.6**
NVS	**Novosibirsk**	**44.38 353**	⇓*i*P	**P**	**13 02 56.1 -0.1**
NVS			*i* S	**S**	**13 09 28.1 -0.8**
NVS			pmax	pmax	
	comp=Z,199nm,1.0s,mb5.8				
NVS			pmax	pmax	
	comp=N,335nm,1.9s				
NVS			pmax	pmax	
	comp=E,74nm,1.2s				
NVS			smax		
	comp=N,222nm,2.1s				
NVS			smax		
	comp=E,124nm,2.4s				
QRN	**Al-Qurain**	**44.59 300**	*e*P	**P**	**13 02 58.7 +0.2**
QRN			AMb	AMB	13 03 03.2
	comp=Z,310nm,1.9s,mb5.8				
IMHD	**Mahdasht**	**44.62 310**	*e*P	**P**	**13 03 00.1 +1.5**
CIT	**Chita**	**44.70 19**	*e*P	**P**	**13 02 59.4 +0.5**
CIT			*e*		13 03 12.3
CIT			*e*		13 09 36.6
CIT			*e*		13 12 54.4
CIT			pmax	pmax	
	comp=Z,570nm,2.3s,mb6.0				
KBD	**Kabd**	**44.89 301**	*e*P	**P**	**13 03 01.4 +0.6**
KBD			AMb	AMB	13 03 03.1
	comp=Z,205nm,1.2s,mb5.8				
RDF	**Al-Radifah**	**44.95 300**	*e*P	**P**	**13 03 01.9 +0.6**
RDF			AMb	AMB	13 03 04.2
	comp=Z,380nm,1.3s,mb6.1				
UMR	**Umm Al-Rimmam**	**44.97 301**	*e*P	**P**	**13 03 01.6 +0.2**
UMR			AMb	AMB	13 03 05.5
	comp=Z,249nm,1.1s,mb6.0				
IRAZ	**Razeghan**	**45.07 310**	*e*P	**P**	**13 03 03.3 +1.2**
BDHA	**Al Bayda'**	**45.13 279**	⇓*e*P	**P**	**13 03 05.2 +2.2**
BDHA			AMb	AMB	13 03 06.5
	comp=Z,1μm,1.4s,mb6.5				
NAY	**Al-Naaiem**	**45.29 300**	*e*P	**P**	**13 03 04.3 +0.3**
NAY			AMb	AMB	13 03 06.6
	comp=Z,198nm,1.3s,mb5.8				
MIB	**Mutribah**	**45.35 301**	*e*P	**P**	**13 03 04.9 +0.4**
MIB			AMb	AMB	13 03 06.6
	comp=Z,306nm,1.2s,mb6.0				
BVAR	**Borovoye Array**	**45.41 342**	P	**P**	**13 03 04.8 +0.3**
	comp=Z,32nm,0.6s,mb5.3,baz=149,slow=6.9,SNR=195				
BVAR			PcP	PcP	13 04 43.8 +0.3
	comp=Z,27nm,0.8s,baz=146,slow=2.9,SNR=5.1				
BVAR			ScP	ScP	13 08 35.2 +0.7
	comp=Z,3.9nm,1.0s,baz=126,slow=7.3,SNR=3.1				
BRVK	**Borovoye**	**45.48 342**	*d i*P	**P**	**13 03 05.2 +0.2**
BRVK			pmax	pmax	
	comp=Z,126nm,1.2s,mb5.6				
BRVK			MLR	MLR	
	comp=Z,12μm,17.0s,MS5.9				
BRVK	**Borovoye**	**45.48 342**	*e*P	**P**	**13 03 05.3 +0.3**
BRVK			LR	LR	
	comp=Z,16μm,19.0s,MS6.0				
BRVK	**Borovoye**	**45.48 342**	P	**P**	**13 03 05.6 +0.5**
	SNR=54				
BRVK			P		13 03 05.6
	SNR=54				
MEEK	**Meekatharra**	**45.52 145**	*e*P	**P**	**13 03 04.9 -0.8**
DHBB	**Dhamar BB**	**46.26 280**	⇓*e*P	**P**	**13 03 14.2 +2.4**
DHBB			AMb	AMB	13 03 16.2
	comp=Z,2μm,1.6s,mb6.9				
KAKA	**Kakadu**	**46.72 119**	*e*P	**P**	**13 03 13.7 -1.7**
	comp=Z,69nm,0.6s,mb5.8				
KAKA	**Kakadu**	**46.72 119**	*e*P	**P**	**13 03 14.0 -1.4**
	comp=Z,246nm,0.6s,mb6.3				
MDJ	**Mudanjiang**	**46.77 37**	P	**P**	**13 03 16.0 +0.6**
MDJ			pP	pP	13 03 20.0 -3.8
MDJ			sP	sP	13 03 21.5 -5.7
MDJ			PcP	PcP	13 04 50.0 +1.6
MDJ			ScP	ScP	13 08 43.3 +3.0
MDJ			PcS	PcS	13 08 44.8 +1.7
MDJ			S	**S**	**13 10 07.3 +3.6**
MDJ			pmax	pmax	
	comp=Z,42nm,1.2s,mb5.2				
MDJ			pmax	pmax	
	comp=Z,3μm,10.0s				
MDJ			LR	LR	
	comp=N,10μm,15.8s,MS6.1				
MDJ			LR	LR	
	comp=E,13μm,14.2s,MS6.1				
MDJ			LR	LR	
	comp=Z,23μm,14.2s,MS6.3				
HAJJ	**Hajjah**	**47.01 281**	⇓*e*P	**P**	**13 03 19.9 +2.2**
VLA	**Vladivostok**	**47.37 40**	*e*P	**P**	**13 03 19.9 -0.2**
VLA			*e*PP	pP	13 03 29.0 +0.4
VLA			*e*		13 04 50.0
VLA					13 05 17.0
VLA			pmax	pmax	
	comp=Z,58nm,1.1s,mb5.4				
VLA			MLR	MLR	
	comp=Z,32μm,18.6s,MS6.3				
IDHR	**Dehrash**	**47.54 307**	*e*P	**P**	**13 03 21.2 -0.4**
RER	**Riviere de l'E**	**47.57 228**	*e*P	**P**	**13 03 22.9 +1.1**
	comp=Z,285nm,1.4s,mb6.1				
RER			LR	LR	
	comp=Z,10μm,19.0s,MS5.8				
ATD	**Arta Tunnel**	**47.91 276**	LR	LR	13 19 44.7
	comp=Z,8μm,22.0s,MS5.7,baz=77,slow=31				
AKTO	**Aktyubinsk**	**48.20 332**	LR	LR	13 25 55.1
	comp=Z,9μm,19.9s,MS5.8,baz=311,slow=39				
BHD	**Baghdad**	**48.71 305**	*i* P	**P**	**13 03 29.8 -0.8**
BHD			*i* PcP	PcP	13 04 54.0 -1.6
BHD			*i* PP	PP	13 05 23.0 -0.9
BHD			*i* ScP	ScP	13 08 49.5 +0.7
BHD			*i* PcS	PcS	13 08 52.8 +1.0
BHD			*i* ScP		13 10 32.5
BHD			*i* SS	SS	13 14 05.0 +2.8
IAZR	**Azarshahr**	**48.86 311**	*e*P	**P**	**13 03 32.7 +1.0**
MAJO	**Matsushiro**	**49.02 51**	*e*P	**P**	**13 03 32.2 -0.8**
MAJO			MLR	MLR	
	comp=Z,11μm,19.0s,MS5.9				
MAT	**Matsushiro**	**49.02 51**	P	**P**	**13 03 32.7 -0.3**
MAT			S	**S**	**13 10 36.2 +0.3**
MJAR	**Matsushiro Arr**	**49.02 51**	P	**P**	**13 03 33.0 +0.1**
	comp=Z,20nm,0.8s,mb5.2,baz=221,slow=6.9,SNR=63				
MJAR			PcP	PcP	13 04 57.5 +0.8
	comp=Z,26nm,0.8s,baz=242,slow=3.6,SNR=12				
MJAR			ScP	ScP	13 08 49.9 -0.2
	comp=Z,1.2nm,0.5s,baz=247,slow=3.2,SNR=7.9				
MJAR			LR	LR	13 27 12.4
	comp=Z,7μm,18.4s,MS5.7,baz=245,slow=40				
KLBR	**Kellerberrin**	**49.03 150**	*e*P	**P**	**13 03 32.3 -0.7**
	comp=Z,126nm,0.9s,mb5.9				
JHJ	**Hachijo jima 2**	**49.24 55**	LR	LR	13 27 36.7
	comp=Z,5μm,18.1s,MS5.5,baz=252,slow=40				
ISHB	**Shabestar**	**49.34 312**	*e*P	**P**	**13 03 36.3 +0.9**
IMRD	**Marand**	**49.44 312**	*e*P	**P**	**13 03 36.9 +0.8**
NWAO	**Narrogin (SRO)**	**49.89 152**	*e*P	**P**	**13 03 38.8 -0.7**
	comp=Z,920nm,0.8s,mb6.9				
NWAO	**Narrogin (SRO)**	**49.89 152**	LR	LR	13 28 01.8
	comp=Z,123nm,18.3s,baz=333,slow=40				
NWAO	**Narrogin (SRO)**	**49.89 152**	*e*P	**P**	**13 03 38.7 -0.8**
NWAO			LR	LR	
	comp=Z,11μm,20.0s,MS5.8				
MAK	**Makhachkala**	**49.91 318**	*e*P	**P**	**13 03 40.6 +1.0**
MAK			*e*		13 04 58.1
MAK			*e*		13 05 42.9
MAK			*e*PPP		13 06 29.3
MAK			*e*S	**S**	**13 10 52.7 +4.5**
MAK			*e*		13 13 29.5
MAK			*e*SSS		13 15 41.4
MAK			pmax	pmax	
	comp=Z,449nm,1.6s,mb6.2				
MAK			pmax	pmax	
	comp=Z,10μm,10.0s				
CBIJ	**Chichi jima**	**50.03 64**	LR	LR	13 26 58.0
	comp=Z,4μm,18.4s,MS5.4,baz=256,slow=39				
CUKT	**Cukurca**	**50.49 310**	*e*P	**P**	**13 03 44.2 0.0**
HAKT	**HAKKARI**	**50.52 310**	*i* P	**P**	**13 03 41.4 -3.0**
KLR	**Kul'dur**	**50.61 33**	⇑*i*P	**P**	**13 03 41.0 -3.8**
KLR			*e*S	**S**	**13 10 46.5 -11**
KLR			pmax	pmax	
	comp=E,330nm,2.2s				
KLR			pmax	pmax	
	comp=Z,450nm,2.2s,mb6.0				
KLR			pmax	pmax	
	comp=E,2μm,11.0s				
KLR			pmax	pmax	
	comp=Z,6μm,11.0s				
KLR			smax		
	comp=N,6μm,13.0s				
KLR			smax		
	comp=E,3μm,13.0s				
GNI	**Garni**	**50.66 314**	*e*P	**P**	**13 03 47.0 +1.7**
GNI	**Garni**	**50.66 314**	LR	LR	13 27 10.5
	comp=E,6μm,18.8s,MS5.6,baz=106,slow=38				
GNI	**Garni**	**50.66 314**	*d i*P	**P**	**13 03 46.7 +1.3**
GNI			pmax	pmax	
	comp=Z,419nm,1.2s				
GNI	**Garni**	**50.66 314**	*e*P	**P**	**13 03 46.5 +1.1**
	comp=Z,481nm,1.3s,mb6.3				
GNI			*e*S	**S**	**13 11 04.5 +5.8**
GNI			LR	LR	
	comp=Z,5μm,20.0s,MS5.5				
GNI	**Garni**	**50.66 314**	P	**P**	**13 03 47.5 +2.1**
	SNR=59				
GNI			P		13 03 47.5
	SNR=59				
DGRG	**David-gareji**	**50.71 315**	P	**P**	**13 03 47.9 +2.1**
DGRG			S	**S**	**13 11 17.9 +18**
CLDR	**Caldiran**	**50.89 312**	*e*P	**P**	**13 03 48.9 +1.7**
KMBL	**Kambalda**	**50.98 146**	*e*P	**P**	**13 03 46.6 -1.3**
	comp=Z,399nm,1.2s,mb6.2				
DESE	**Dese**	**51.08 276**	*e*P	**P**	**13 03 52.7 +3.8**
DESE			*e*S	**S**	**13 10 50.9 -14**
VANB	**Van**	**51.09 311**	*e*P	**P**	**13 03 48.2 -0.5**
DYDN	**Diyadin**	**51.20 312**	*i* P	**P**	**13 03 50.8 +1.3**
MTA	**Mtatsminda**	**51.21 315**	P	**P**	**13 03 50.7 +1.2**
MTA			S	**S**	**13 10 59.2 -7.0**
TBLG	**Delisi**	**51.26 315**	*i* P	**P**	**13 03 51.1 +1.2**
TBLG	**Delisi**	**51.26 315**	P	**P**	**13 03 51.1 +1.2**
AGRB	**Hanur-Agry**	**51.71 312**	*e*P	**P**	**13 03 54.8 +1.5**
SVE	**Sverdlovsk**	**51.76 339**	⇑*e*P	**P**	**13 03 54.2 +0.9**
SVE			*e*		13 05 51.2
SVE			*e*PPP		13 06 49.3
SVE			*e*S	**S**	**13 11 15.2 +1.8**
SVE			*e*		13 13 41.0
SVE			pmax	pmax	
	comp=Z,376nm,1.1s,mb6.2				
SVE			MLR	MLR	
	comp=Z,27μm,22.0s,MS6.2				
TUTA	**Tutak**	**51.79 312**	*i* P	**P**	**13 03 54.4 +0.6**
GOR	**Gori**	**51.79 316**	P	**P**	**13 03 49.4 -4.4**
GUMO	**Guam**	**51.93 81**	P	**P**	**13 03 54.2 -1.0**
GUMO			LR	LR	
	comp=Z,7μm,20.0s,MS5.7				
WRA	**Warramunga Arr**	**51.93 126**	P	**P**	**13 03 54.1 -1.1**
	comp=Z,53nm,0.5s,mb5.7,baz=307,slow=8.2,SNR=436				
WRA			S	**S**	**13 11 12.4 -4.3**
	comp=Z,11nm,1.0s,baz=299,slow=15,SNR=9.4				
WRA			LR	LR	13 30 17.0
	comp=Z,9μm,19.5s,MS5.8,baz=300,slow=41				
WRA	**Warramunga Arr**	**51.93 126**	P	**P**	**13 03 54.1 -1.1**
WRA			S	**S**	**13 11 12.4 -4.3**
WRA			pmax	pmax	
	comp=Z,53nm,0.5s				
WRA			smax		
	comp=N,11nm,1.0s				
WRA			MLR	MLR	
	comp=Z,9μm,19.5s				
WRAB	**Tennant Creek**	**51.94 126**	*e*P	**P**	**13 03 54.4 -0.8**
WRAB			pmax	pmax	
	comp=Z,172nm,0.6s,mb6.2				
WRAB			MLR	MLR	
	comp=Z,9μm,20.0s,MS5.8				
WRAB	**Tennant Creek**	**51.94

HABR	**Khabarovsk**	**52.02**	**35***d*	e P	**P**	**13 03 55.2 -0.2**
HABR				e*PP	pP	13 04 04.1 +0.1
HABR				e*SP	sP	13 04 09.0 +1.7
HABR				e		13 05 04.7
HABR						13 05 53.6
HABR				PPP		13 06 56.3
HABR				eS	**S**	**13 11 18.1 +0.9**
HABR				e*SS	sS	13 11 35.3 +4.0
HABR				e		13 13 41.8
HABR				eSS	SS	13 14 57.4 +2.9
HABR				pmax	pmax	
	comp=E,59nm,0.7s					
HABR				pmax	pmax	
	comp=N,31nm,1.2s					
HABR				pmax	pmax	
	comp=Z,163nm,1.1s,mb5.9					
HABR				pmax	pmax	
	comp=Z,1μm,5.3s					
HABR				MLR	MLR	
	comp=E,12μm,14.0s,MS6.2					
HABR				MLR	MLR	
	comp=N,10μm,13.0s,MS6.2					
HABR				MLR	MLR	
	comp=Z,25μm,21.0s					
ARU	**Arti**	**52.23 337**		P	**P**	**13 03 57.6 +0.8**
	comp=Z,987nm,1.0s,mb6.7,SNR=53					
ARU	**Arti**	**52.23 337**	*d*	i P	**P**	**13 03 56.5 -0.3**
ARU				e		13 05 06.7
ARU				e		13 05 57.4
ARU				PPP		13 07 00.4
ARU				S	**S**	**13 11 21.8 +2.1**
ARU						13 13 47.3
ARU				SS	SS	13 14 58.1 +0.7
ARU				pmax	pmax	
	comp=Z,214nm,1.0s,mb6.0					
ARU				MLR	MLR	
	comp=Z,24μm,20.0s,MS6.2					
ARU	**Arti**	**52.23 337**		e P	**P**	**13 03 57.2 +0.5**
ARU				LR	LR	
	comp=Z,26μm,21.0s,MS6.2					
ZEI	**Tsey**	**52.24 316**		e P	**P**	**13 03 56.4 -0.8**
ZEI				e		13 05 56.8
ZEI				eS	**S**	**13 11 21.7 +1.3**
ZEI				e		13 13 43.3
ZEI				pmax	pmax	
	comp=Z,94nm,1.0s,mb5.7					
BTMT	**Batman**	**52.38 310**		e P	**P**	**13 03 58.7 +0.4**
ONI	**Oni**	**52.48 316**		P	**P**	**13 04 00.2 +1.3**
ONI				S	**S**	**13 11 18.5 -5.1**
CLNS	**Chul'man**	**52.52**	**22***d*	i P	**P**	**13 03 59.3 +0.3**
CLNS				e*PP	pP	13 04 07.3 -0.3
CLNS				e		13 05 09.2
CLNS				e		13 05 59.7
CLNS				ePPP		13 07 00.3
CLNS				eS	**S**	**13 11 22.2 -1.6**
CLNS				eSSS		13 16 41.8
CLNS				pmax	pmax	
	comp=Z,132nm,0.8s,mb5.9					
CLNS				pmax	pmax	
	comp=E,69nm,0.9s					
CLNS				pmax	pmax	
	comp=N,62nm,0.8s					
CLNS				pmax	pmax	
	comp=Z,15nm,1.0s,mb4.9					
CLNS				pmax	pmax	
	comp=N,17nm,1.0s					
CLNS				pmax	pmax	
	comp=E,16nm,1.0s					
CLNS				smax		
	comp=N,3μm,12.7s					
CLNS				smax		
	comp=E,2μm,13.8s					
CLNS				MLR	MLR	
	comp=N,12μm,14.0s,MS6.2					
CLNS				MLR	MLR	
	comp=E,8μm,16.0s,MS6.2					
CLNS				MLR	MLR	
	comp=Z,15μm,15.0s,MS6.2					
HOMI	**Horasan**	**52.66 312**		i P	**P**	**13 04 01.4 +1.1**
MARD	**Mardin**	**52.66 309**		i P	**P**	**13 03 58.5 -1.9**
BNGL	**BINGOL**	**52.87 311**		i P	**P**	**13 04 02.2 +0.3**
ABPO	**Ambohimpanom**	**52.97 236**		e P	**P**	**13 04 04.8 +1.9**
ABPO				pmax	pmax	
	comp=Z,394nm,1.4s,mb6.2					
ABPO				MLR	MLR	
	comp=Z,14μm,19.0s,MS6.0					
ABPO	**Ambohimpanom**	**52.97 236**		e P	**P**	**13 04 04.8 +1.9**
	comp=Z,394nm,1.4s,mb6.2					
ABPO				LR	LR	
	comp=Z,14μm,19.0s,MS6.0					
ERZM	**Erzurum**	**53.01 312**		i P	**P**	**13 04 04.7 +1.8**
EZM	**Erzurum**	**53.01 312**		e P	**P**	**13 04 04.8 +2.0**
ARTV	**Artvin**	**53.03 314**		i P	**P**	**13 04 02.5 -0.5**
DDEM	**Demirkent**	**53.05 313**		i P	**P**	**13 04 04.1 +0.9**
DBAD	**Bademkaya**	**53.14 314**		i P	**P**	**13 04 04.7 +0.9**
BCA	**Borcka**	**53.33 314**		e P	**P**	**13 04 06.0 +0.8**
BINT	**Bingol**	**53.34 311**		e P	**P**	**13 04 08.6 +3.2**
DIYA	**Diyarbakir**	**53.34 309**		i P	**P**	**13 04 05.9 +0.5**
KIV	**Kislovodsk**	**53.52 317**		P	**P**	**13 04 07.4 +0.9**
	comp=Z,2μm,1.1s,mb6.9,SNR=44					
KIV	**Kislovodsk**	**53.52 317**	*d*	i P	**P**	**13 04 06.7 +0.2**
KIV				e		13 05 12.7
KIV				eS	**S**	**13 11 37.9 +0.1**
KIV				eSS	SS	13 15 20.3 +2.0
KIV				pmax	pmax	
	comp=Z,362nm,1.0s,mb6.3					
KIV	**Kislovodsk**	**53.52 317**		e P	**P**	**13 04 07.3 +0.8**
	comp=Z,372nm,1.1s,mb6.2					
KIV				eS	**S**	**13 11 39.0 +1.3**
KIV				LR	LR	
	comp=Z,5μm,21.0s,MS5.6					
KIV	**Kislovodsk**	**53.52 317**	⇓	P	**P**	**13 04 07.8 +1.2**
	SNR=135					
KIV			⇓	P		13 04 07.8
	SNR=135					
ASAR	**Alice Springs**	**53.65 130**		P	**P**	**13 04 06.8 -1.1**
	comp=Z,150nm,0.7s,mb6.0,baz=307,slow=6.7,SNR=863					
ASAR				PcP	PcP	13 05 13.8 -0.2
	comp=Z,41nm,0.7s,baz=314,slow=4.0,SNR=4.7					
ASAR				S	**S**	**13 11 35.5 -4.6**
	comp=Z,3.4nm,0.9s,baz=298,slow=14,SNR=7.0					
ASAR	**Alice Springs**	**53.65 130**		P	**P**	**13 04 06.8 -1.0**
ASAR						13 05 13.9
ASAR				S	**S**	**13 11 35.5 -4.6**
ASAR				pmax	pmax	
	comp=Z,150nm,0.7s					
ASAR				smax		
	comp=N,3.0nm,0.9s					
KOPT	**Kop Dagi**	**53.67 312**		i P	**P**	**13 04 09.0 +1.2**
SVRC	**Sivrice-ELAZID**	**54.08 310**		e P	**P**	**13 04 10.9 +0.1**
FORT	**Forrest**	**54.15 141**		e P	**P**	**13 04 11.0 -0.3**
	comp=N,125nm,0.7s,mb6.0					
FORT	**Forrest**	**54.15 141**		e P	**P**	**13 04 10.7 -0.7**
	comp=N,155nm,0.8s,mb6.0					
PTK	**Pertek**	**54.16 310**		e P	**P**	**13 04 12.0 +0.6**
URFA	**Urfa**	**54.20 308**		e P	**P**	**13 04 12.5 +0.8**
ELZG	**Elazig**	**54.36 310**		i P	**P**	**13 04 13.3 +0.6**
EZC	**Erzincan**	**54.44 311**		e P	**P**	**13 04 14.6 +1.3**
ERM	**Erimo**	**54.46 46**		e P	**P**	**13 04 13.5 0.0**
ERM				eS	**S**	**13 11 50.7 +0.1**
ERM				pmax	pmax	
	comp=Z,25nm,0.6s,mb5.3					
ERM				MLR	MLR	
	comp=Z,12μm,19.0s,MS6.0					
ERM	**Erimo**	**54.46 46**		e P	**P**	**13 04 13.5 0.0**
	comp=Z,25nm,0.6s,mb5.3					
ERM				eS	**S**	**13 11 50.7 +0.1**
ERM				LR	LR	
	comp=Z,12μm,19.0s,MS6.0					
KTUT	**Trabzon**	**54.51 313**		e P	**P**	**13 04 14.3 +0.5**
GUMT	**Gumushane**	**54.55 312**		e P	**P**	**13 04 15.7 +1.6**
ATAB	**Bozova**	**54.61 308**		i P	**P**	**13 04 15.2 +0.5**
ASAJ	**Asahikawa**	**54.80 43**		S	**S**	**13 11 55.5 +0.4**
	comp=Z,1.5nm,0.5s,baz=58,slow=15,SNR=1.9					
ASAJ				LR	LR	13 28 32.0
	comp=Z,11μm,21.8s,MS5.9,baz=115,slow=37					
KEMA	**Kemaliye**	**54.94 311**		i P	**P**	**13 04 17.2 +0.2**
AKCD	**Akcadag**	**55.11 309**		i P	**P**	**13 04 18.6 +0.3**
SOKR	**Solikamsk**	**55.17 339**	⇓	i P	**P**	**13 04 18.9 +0.6**
SOKR						13 05 20.6
SOKR						13 06 25.4
SOKR				S	**S**	**13 11 58.4 -1.1**
SOKR				SS	SS	13 15 48.6 +4.9
SOKR				SSS		13 17 40.9
SOKR				pmax	pmax	
	comp=Z,290nm,1.2s,mb6.2					
SOKR				MLR	MLR	
	comp=Z,24μm,21.0s,MS6.2					
ESPY	**Espiye-Giresun**	**55.23 313**		e P	**P**	**13 04 19.0 -0.1**
GAZ	**Gaziantep**	**55.38 308**		e P	**P**	**13 04 21.2 +1.0**
SOC	**Sochi**	**55.39 316**	*c*	i P	**P**	**13 04 19.9 -0.3**
SOC				e*PP	pP	13 04 26.6 -2.2
SOC				eS	**S**	**13 12 02.5 -0.5**
SOC				e*SS	sS	13 12 16.1 -1.0
SOC				pmax	pmax	
	comp=Z,207nm,1.3s,mb6.0					
SOC				MLR	MLR	
	comp=Z,14μm,22.0s,MS6.0					
KUZU	**Kuzuini**	**55.39 307**		i P	**P**	**13 04 20.6 +0.2**
KMBO	**Kilima Mbogo**	**55.46 261**		P	**P**	**13 04 21.9 +0.7**
	comp=Z,30nm,1.0s,mb5.3,baz=1.5,slow=24,SNR=44					
KMBO				LR	LR	13 23 52.8
	comp=Z,13μm,20.9s,MS6.0,baz=82,slow=31					
KMBO	**Kilima Mbogo**	**55.46 261**		i P	**P**	**13 04 16.3 -4.9**
KMBO	**Kilima Mbogo**	**55.46 261**		e P	**P**	**13 04 22.4 +1.3**
	comp=Z,90nm,1.3s,mb5.6					
KMBO				eS	**S**	**13 12 20.5 +16**
KMBO				LR	LR	
	comp=Z,12μm,21.0s,MS6.0					
KMBO	**Kilima Mbogo**	**55.46 261**		P	**P**	**13 04 23.2 +2.1**
	SNR=29					
KMBO				P		13 04 23.2
	SNR=29					
KMBO	**Kilima Mbogo**	**55.46 261**	⇓	i P	**P**	**13 04 23.1 +1.9**
GRSN	**GIRESUNGRSN**	**55.57 312**		i P	**P**	**13 04 21.5 -0.1**
HWQ	**Hawqa**	**55.77 304**		e P	**P**	**13 04 23.6 +0.5**
BHL	**Bhannes**	**55.95 304**		e P	**P**	**13 04 25.2 +0.8**
YSS	**Yuzh-Sakhalins**	**55.97 40**	⇓	i P	**P**	**13 04 24.2 -0.1**
YSS				eS	**S**	**13 12 09.0 -1.6**
YSS				e*SS	sS	13 12 19.0 -5.8
YSS				eSS	SS	13 15 56.0 -0.8
YSS				pmax	pmax	
	comp=Z,120nm,0.8s,mb6.0					
YSS				pmax	pmax	
	comp=Z,1μm,5.0s					
YSS				MLR	MLR	
	comp=E,12μm,17.0s,MS6.2					
YSS				MLR	MLR	
	comp=Z,10μm,17.0s,MS6.0					
YSS				MLR	MLR	
	comp=N,11μm,16.0s,MS6.2					
YSS	**Yuzh-Sakhalins**	**55.97 40**		e P	**P**	**13 04 24.6 +0.4**
	comp=N,116nm,0.8s,mb6.0					
YSS				LR	LR	
	comp=Z,3μm,19.0s,MS5.5					
COBT	**Iskenderun**	**55.98 307**		i P	**P**	**13 04 25.8 +1.2**
YAYL	**Yayladag**	**55.99 306**		i P	**P**	**13 04 24.8 +0.1**
MMAI	**Mount Meron Ar**	**56.00 302**		P	**P**	**13 04 25.6 +0.8**
	comp=Z,39nm,1.1s,mb5.3,baz=92,slow=12,SNR=27					
MMAI				PcP	PcP	13 05 24.8 +1.8
	comp=Z,16nm,1.0s,baz=108,slow=4.7,SNR=4.3					
MMAI				S	**S**	**13 12 15.1 +3.6**
	comp=Z,1.0nm,0.6s,baz=241,slow=44,SNR=2.6					
MMAI				LR	LR	13 32 27.0
	comp=Z,9μm,18.1s,MS5.9,baz=100,slow=40					
SARI	**SarD1z-Kayseri**	**56.13 309**		e P	**P**	**13 04 27.3 +1.7**
SVSK	**Karacayir**	**56.22 311**		e P	**P**	**13 04 27.1 +0.9**
PINB	**Pinarbasi**	**56.36 309**		i P	**P**	**13 04 26.3 -0.9**
CEYT	**Ceyhan**	**56.48 307**		e P	**P**	**13 04 29.2 +1.0**
KOZT	**Kozan**	**56.52 308**		e P	**P**	**13 04 28.7 +0.3**
YURE	**YUREGIR**	**56.53 307**		i P	**P**	**13 04 28.7 +0.2**
ERBA	**Erbaa**	**56.60 312**		i P	**P**	**13 04 29.1 +0.2**
TOKT	**Tokat**	**56.66 311**		e P	**P**	**13 04 29.8 +0.5**
COEN	**Coen**	**56.67 115**		e P	**P**	**13 04 28.5 -1.3**
COEN	**Coen**	**56.67 115**		e P	**P**	**13 04 28.4 -1.3**
	comp=Z,219nm,0.8s,mb6.2					
COEN				ePcP	PcP	13 05 26.3 +0.5
TOKA	**Tokat**	**56.71 311**		i P	**P**	**13 04 29.2 -0.5**
YUK	**Yuzh-Kuril'sk**	**56.99 44**	⇓	i P	**P**	**13 04 31.8 +0.2**
YUK				i S	**S**	**13 12 26.9 +2.7**
YUK				pmax	pmax	
	comp=Z,1μm,2.0s,mb6.5					
YUK				pmax	pmax	
	comp=Z,660nm,1.4s,mb6.5					
YUK				pmax	pmax	
	comp=N,180nm,1.5s					
YUK				pmax	pmax	
	comp=E,140nm,0.7s					
YUK				smax		
	comp=N,6μm,12.7s					
YUK				smax		
	comp=N,1μm,3.0s					
YUK				smax		
	comp=E,910nm,3.0s					
YUK				MLR	MLR	
	comp=N,6μm,19.0s,MS6.1					
YUK				MLR	MLR	
	comp=E,12μm,19.0s,MS6.1					
YUK				MLR	MLR	
	comp=Z,12μm,19.0s,MS6.0					
KARA	**Karaisali**	**57.08 307**		e P	**P**	**13 04 32.9 +0.5**
KVT	**Kavak**	**57.23 312**		e P	**P**	**13 04 33.8 +0.5**
GULE	**Gulek**	**57.30 307**		i P	**P**	**13 04 33.5 -0.4**
ANN	**Anapa**	**57.34 317**	*d*	i P	**P**	**13 04 32.7 -1.3**
ANN				i		13 06 38.4
ANN				i PPP		13 08 01.5
ANN				eS	**S**	**13 12 27.1 -1.7**
ANN				eSS	SS	13 16 19.7 +1.3
ANN				eSSS		13 18 35.1
ANN				pmax	pmax	
	comp=Z,84nm,1.3s,mb5.6					
MERS	**Mersin**	**57.41 307**		e P	**P**	**13 04 35.1 +0.3**
EREN	**Erenkoy**	**57.44 305**		e P	**P**	**13 04 34.7 -0.3**
LFK	**Lefkose**	**57.91 305**		e P	**P**	**13 04 38.3 +0.1**
DIKM	**Dikmen**	**57.95 313**		e P	**P**	**13 04 38.4 0.0**
IKL	**Isikli**	**57.95 306**		e P	**P**	**13 04 38.2 -0.3**
YAK	**Yakutsk**	**57.97 20**		i P	**P**	**13 04 37.9 -0.3**
YAK				e*PP	pP	13 04 45.0 -1.8
YAK				e		13 05 27.3
YAK				e		13 06 49.3
YAK				eS	**S**	**13 12 36.0 -0.5**
YAK				e*SS	sS	13 12 48.3 -2.5
YAK				e		13 14 20.4
YAK				eSS	SS	13 16 30.4 +2.7
YAK				pmax	pmax	
	comp=E,60nm,0.9s					
YAK				pmax	pmax	
	comp=Z,266nm,1.0s,mb6.2					
YAK				pmax	pmax	
	comp=N,52nm,0.9s					
YAK				pmax	pmax	
	comp=Z,821nm,9.3s					
YAK				smax		
	comp=N,795nm,3.2s					
YAK				smax		
	comp=E,621nm,1.9s					
YAK				MLR	MLR	
	comp=N,9μm,18.0s,MS6.1					
YAK				MLR	MLR	
	comp=E,8μm,14.0s,MS6.1					
YAK				MLR	MLR	
	comp=Z,14μm,16.0s,MS6.2					
YAK	**Yakutsk**	**57.97 20**		e P	**P**	**13 04 37.6 -0.5**
	comp=Z,250nm,0.8s,mb6.3					
YAK				eS	**S**	**13 12 31.6 -4.9**
YAK				LR	LR	
	comp=Z,11μm,20.0s,MS6.0					
CSS	**Prodhromos**	**58.02 304**		P	**P**	**13 04 38.9 -0.1**
	comp=Z,1.7nm,1.1s					
CSS	**Prodhromos**	**58.02 304**		P	**P**	**13 04 37.1 -1.9**
CTKT	**Corum**	**58.04 311**		i P	**P**	**13 04 38.6 -0.4**
CORM	**Corum**	**58.05 311**		e P	**P**	**13 04 39.3 +0.1**
CDAG	**Cicekdag**	**58.11 310**		i P	**P**	**13 04 38.6 -1.1**
MAMC	**Mammari**	**58.14 305**		P	**P**	**13 04 40.8 +0.9**
BOYT	**Boyabat**	**58.15 312**		i P	**P**	**13 04 40.7 +0.8**
LEF	**Lefka**	**58.40 305**		e P	**P**	**13 04 40.9 -0.8**
VORD	**Divnogorie**	**58.41 324**		e P	**P**	**13 04 41.2 -0.3**
VORD				eS	**S**	**13 12 40.7 -2.0**
VORD				smax		
	comp=N,60nm,7.0s					
VORD				smax		
	comp=Z,20nm,6.3s					
VORD				smax		
	comp=E,40nm,7.3s					
SULT	**Sultanhani-AKS**	**58.46 308**		e P	**P**	**13 04 42.6 +0.5**
VSR	**Storozhevoye**	**58.59 324**	*d*	i P	**P**	**13 04 42.3 -0.4**
VSR				e*PP	pP	13 04 52.4 +1.1
VSR				e		13 05 31.9
VSR				e		13 06 51.6
VSR				eS	**S**	**13 12 42.2 -2.7**
VSR				pmax	pmax	
	comp=N,40nm,1.0s					
VSR				pmax	pmax	
	comp=Z,180nm,1.0s,mb6.1					
VSR				pmax	pmax	
	comp=E,140nm,1.2s					
VSR				pmax	pmax	
	comp=Z,330nm,4.1s					
VSR				pmax	pmax	
	comp=N,400nm,3.4s					
VSR				pmax	pmax	
	comp=E,340nm,4.2s					
VSR				smax		
	comp=E,2μm,7.0s					
VSR				smax		
	comp=N,760nm,5.2s					
VSR				smax		
	comp=Z,370nm,5.2s					
VSR				MLR	MLR	
	comp=Z,11μm,19.0s,MS6.0					
VSR				MLR	MLR	
	comp=N,7μm,16.0s,MS6.0					
VSR				MLR	MLR	
	comp=E,7μm,18.0s,MS6.0					
ALFC	**Alevga**	**58.64 305**		P	**P**	**13 04 43.3 -0.1**
	comp=E,1.4nm,0.7s					
BR131	**Keskin Array S**	**58.69 310**		e P	**P**	**13 04 42.6 -1.0**
	comp=E,60nm,1.0s,mb5.6					
BR131				LR	LR	
	comp=Z,4μm,22.0s,MS5.5					
BRTR	**Keskin Array B**	**58.69 310**		P	**P**	**13 04 42.8 -0.9**
	comp=Z,54nm,1.0s,mb5.5,baz=121,slow=6.0,SNR=172					
BRTR				LR	LR	13 35 08.9
	comp=Z,3μm,18.9s,MS5.5,baz=93,slow=41					
BRTR	**Keskin Array B**	**58.69 310**		P	**P**	**13 04 42.8 -0.8**
BRTR				pmax	pmax	
	comp=Z,54nm,1.0s					
BRTR				MLR	MLR	
	comp=Z,3μm,18.9s					
TOS	**Tosya**	**58.70 312**		e P	**P**	**13 04 43.6 0.0**
VOR	**Voronezh**	**58.78 325**	⇓	i P	**P**	**13 04 44.0 0.0**
VOR				eS	**S**	**13 12 46.0 -1.4**
VOR				pmax	pmax	
	comp=Z,700nm,1.2s,mb6.6					
PPCY	**Paphos**	**58.81 304**		P	**P**	**13 04 44.6 +0.1**
CANT	**Cankiri**	**58.90 311**		e P	**P**	**13 04 45.3 +0.2**
ELDT	**Eldivan**	**59.02 311**		i P	**P**	**13 04 45.3 -0.6**
HDMB	**Hadim**	**59.03 307**		e P	**P**	**13 04 45.9 -0.2**
BBAL	**Bala**	**59.04 310**		i P	**P**	**13 04 45.0 -1.1**
GAZI	**Gazipasa**	**59.05 306**		i P	**P**	**13 04 43.9 -2.2**
BALT	**Daday**	**59.28 312**		i P	**P**	**13 04 47.7 0.0**
KONT	**Konya--Tatoy**	**59.31 308**		e P	**P**	**13 04 47.6 -0.4**
LADK	**Ladik-KONYA**	**59.35 308**		e P	**P**	**13 04 47.8 -0.4**
LOD	**Lodumlu**	**59.38 310**		e P	**P**	**13 04 47.6 -0.8**
KDHN	**Kadinhani**	**59.60 308**		i P	**P**	**13 04 47.4 -2.6**
SIM	**Simferopol'**	**59.63 316**	*d*	i P	**P**	**13 04 51.7 +1.6**
SIM				eS	**S**	**13 12 58.0 -0.7**
SIM				pmax	pmax	
	comp=Z,124nm,1.1s,mb5.8					
SIM				pmax	pmax	
	comp=Z,2μm,9.9s					
SIM				MLR	MLR	
	comp=Z,5μm,18.8s,MS5.7					
SAFT	**Safranbolu**	**59.73 312**		e P	**P**	**13 04 50.8 0.0**
KIZT	**Kizilcal**	**59.85 309**		e P	**P**	**13 04 50.5 -1.2**
SGKT	**Sivrigoynuk**	**60.05 311**		i P	**P**	**13 04 52.5 -0.6**
SVRH	**Sivrihisar-ESK**	**60.23 309**		e P	**P**	**13 04 53.9 -0.4**
SUTC	**Sutluce-Ispart**	**60.29 307**		e P	**P**	**13 04 54.2 -0.5**
BOLV	**Bolvadin**	**60.54 308**		i P	**P**	**13 04 55.2 -1.2**
BCK	**Bucak**	**60.61 307**		e P	**P**	**13 04 55.4 -1.6**
BBOO	**Buckleboo**	**60.61 138**		e P	**P**	**13 04 56.5 -0.4**
	comp=Z,56nm,0.7s,mb5.8					
KDZE	**Karadeniz Ereo**	**60.66 311**		e P	**P**	**13 04 56.2 -0.9**
MDU	**Mudurnu**	**60.66 310**		e P	**P**	**13 04 56.8 -0.4**
ISP	**Isparta**	**60.72 307**		e P	**P**	**13 04 57.0 -0.6**
ISP	**Isparta**	**60.72 307**		e P	**P**	**13 04 56.5 -1.2**
ISP				eS	**S**	**13 13 11.5 -1.4**
ISP				pmax	pmax	
	comp=Z,215nm,1.3s,mb6.1					
ISP				MLR	MLR	
	comp=Z,5μm,19.0s,MS5.7					
ISP	**Isparta**	**60.72 307**		e P	**P**	**13 04 56.5 -1.1**
	comp=Z,215nm,1.3s,mb6.1					
ISP				eS	**S**	**13 13 11.5 -1.4**
ISP				LR	LR	
	comp=Z,5μm,19.0s,MS5.7					
ISP	**Isparta**	**60.72 307**		P	**P**	**13 04 56.2 -1.5**
ISP	**Isparta**	**60.72 307**	⇑	i P	**P**	**13 04 58.1 +0.4**
KORT	**Korkueli**	**60.73 306**		i P	**P**	**13 04 55.6 -2.1**
ESKT	**Eskisehir**	**60.76 309**		i P	**P**	**13 04 56.8 -1.1**
SHUT	**Suhut-Afyon**	**60.82 308**		e P	**P**	**13 04 57.7 -0.6**
HENT	**Hendek**	**60.97 311**		i P	**P**	**13 04 58.5 -0.8**
ELL	**Elmali**	**61.04 306**		e P	**P**	**13 04 59.9 0.0**
BORA	**Eskisehir**	**61.12 310**		i P	**P**	**13 04 59.0 -1.3**
GULT	**Gulveren**	**61.18 310**		e P	**P**	**13 05 00.3 -0.4**
AKAS	**Kas**	**61.21 305**		i P	**P**	**13 04 58.8 -2.2**
ALT	**Altintas**	**61.24 309**		e P	**P**	**13 05 00.6 -0.6**
MOS	**Moscow**	**61.30 329**	κ	i P	**P**	**13 05 01.6 +0.4**
MOS				e		13 05 48.9
MOS				e		13 07 11.9
MOS				ePPP		13 08 42.8
MOS				eS	**S**	**13 13 18.6 -1.1**
MOS				e		13 14 52.6
MOS				pmax	pmax	
	comp=Z,1μm,1.7s,mb6.7					
MOS				pmax	pmax	
	comp=Z,561nm,1.3s,mb6.5					
MOS				smax		
	comp=E,6μm,7.0s					
MOS				smax		
	comp=N,5μm,7.0s					
GOLH	**Golhisar**	**61.39 306**		i P	**P**	**13 05 01.2 -1.0**
OBN	**Obninsk**	**61.59 328**		P	**P**	**13 05 03.3 +0.1**
	comp=N,2μm,1.2s,mb7.0,SNR=21					
OBN	**Obninsk**	**61.59 328**	*d*	i P	**P**	**13 05 03.2 0.0**
OBN				e		13 05 45.1
OBN				e		13 07 18.8
OBN				eS	**S**	**13 13 23.6 +0.2**
OBN				pmax	pmax	
	comp=Z,621nm,1.7s,mb6.5					
OBN	**Obninsk**	**61.59 328**		e P	**P**	**13 05 03.2 0.0**
	comp=Z,531nm,1.3s,mb6.5					
OBN				eS	**S**	**13 13 23.7 +0.3**
OBN				LR	LR	
	comp=Z,9μm,19.0s,MS6.0					
KHAL	**Karahalli**	**61.61 308**		i P	**P**	**13 05 01.7 -2.0**
CAVI	**Cavuskoy**	**61.64 310**		e P	**P**	**13 05 03.3 -0.6**
GDZ	**Gediz**	**61.73 309**		i P	**P**	**13 05 02.8 -1.7**
ADVT	**Abdulvahap**	**61.76 310**		e P	**P**	**13 05 04.0 -0.6**
CTA	**Charters Tower**	**61.85 120**		e P	**P**	**13 05 05.6 +0.1**
	comp=Z,83nm,1.0s,mb5.8					
CTA	**Charters Tower**	**61.85 120**		S	**S**	**13 13 24.3 -3.4**
	comp=Z,2.7nm,0.6s,baz=112,slow=19,SNR=2.2					
CTA				LR	LR	13 34 11.8
	comp=Z,10μm,21.8s,MS5.9,baz=290,slow=38					
CTAO	**Charters Tower**	**61.85 120**		e P	**P**	**13 05 05.7 +0.2**
CTAO				pmax	pmax	
	comp=Z,229nm,1.3s,mb6.2					
CTAO				MLR	MLR	
	comp=Z,9μm,22.0s,MS5.9					
CTAO	**Charters Tower**	**61.85 120**		e P	**P**	**13 05 05.7 +0.2**
	comp=Z,229nm,1.3s,mb6.2					
CTAO				LR	LR	
	comp=Z,9μm,22.0s,MS5.9					
DNZL	**Cakiroluk**	**61.86 307**		i P	**P**	**13 05 03.4 -1.9**
HRT	**Hereke**	**61.88 311**		e P	**P**	**13 05 04.7 -0.7**
SILT	**Sile**	**61.96 311**		e P	**P**	**13 05 03.8 -2.2**
YLV	**Yalova**	**62.06 310**		e P	**P**	**13 05 05.5 -1.1**
TURN	**Turunc**	**62.10 306**		i P	**P**	**13 05 07.3 +0.3**
ULDT	**Uludag**	**62.16 310**		i P	**P**	**13 05 06.6 -0.8**
GEMT	**Gemlik**	**62.17 310**		e P	**P**	**13 05 07.5 0.0**
KULA	**Kula-Manisa**	**62.28 308**		e P	**P**	**13 05 07.9 -0.2**
DEMI	**Demirci**	**62.31 308**		i P	**P**	**13 05 06.9 -1.5**
ISK	**Istanbul-Kandi**	**62.38 311**		e P	**P**	**13 05 08.3 -0.5**
YER	**Yerkesik**	**62.38 306**		e P	**P**	**13 05 08.0 -0.9**
ARG	**Arkhangelos**	**62.

MLSB Milas 62.80 306 *e*P **P** **13 05 11.2 -0.5**
CTKS Kestanelik-??a 62.82 311 *e*P **P** **13 05 10.8 -1.0**
ELBA Catalca 62.86 311 *i* P **P** **13 05 09.1 -2.9**
PAF Port-aux-Franc 62.88 196 PFAKE 13 05 20.0 +8.2
PAF LR LR
comp=Z,11μm,21.0s,MS6.0
DAT Datca 62.89 306 *e*P **P** **13 05 11.9 -0.4**
AKHS Akhisar 62.98 308 *i* P **P** **13 05 11.9 -0.9**
CTYL Yal??k??y-??at 63.02 311 *e*P **P** **13 05 11.4 -1.7**
SLVT Silivri 63.04 311 *e*P **P** **13 05 12.1 -1.1**
BDRM Kayabasi 63.04 306 *i* P **P** **13 05 11.2 -2.1**
BALB Balikesir 63.04 309 *e*P **P** **13 05 12.3 -0.9**
KARP Karpathos 63.10 304 *e*P **P** **13 05 13.7 0.0**
BODT Bodrum 63.15 306 *e*P **P** **13 05 12.3 -1.7**
GONE Gonen-Balikesi 63.25 309 *e*P **P** **13 05 13.9 -0.7**
BALY Balya 63.26 309 *i* P **P** **13 05 13.9 -0.7**
GCAM G?zelcaml? 63.28 307 *i* P **P** **13 05 14.6 -0.3**
TLCR 63.34 315 ⇑P **P** **13 05 15.4 +0.3**
TLCR 63.34 315 ⇑*i*P **P** **13 05 15.4 +0.3**
KDAG Bornova 63.34 308 *i* P **P** **13 05 14.9 -0.4**
IZM Izmir 63.35 308 *e*P **P** **13 05 17.5 +2.2**
TIRR Tirgusor 63.47 314 P **P** **13 05 15.9 -0.1**
TIRR Tirgusor 63.47 314 *e*P **P** **13 05 15.3 -0.7**
comp=Z,60nm,1.0s,mb5.7
TIRR Tirgusor 63.47 314 ⇑*i*P **P** **13 05 15.7 -0.3**
PSN Preselentsi 63.49 313 P **P** **13 05 15.8 -0.3**
BLCB Balcova 63.52 307 *e*P **P** **13 05 16.1 -0.4**
BLCB Balcova 63.52 307 P **P** **13 05 16.1 -0.3**
KRBG Karabiga-Canak 63.59 310 *e*P **P** **13 05 15.8 -1.1**
SMG Samos 63.60 307 *e*P **P** **13 05 14.6 -2.4**
MFT Murefte 63.66 310 *e*P **P** **13 05 17.4 +0.1**
KIS Kishinev 63.72 317 *i* P **P** **13 05 16.0 -1.6**
comp=Z,400nm,1.1s,mb6.4
KIS Kishinev 63.72 317 *e*PP PP 13 07 36.0 -1.8
KIS Kishinev 63.72 317 *e*PPP 13 09 03.0
KIS *e*S **S** **13 13 48.0 -2.4**
comp=Z,2μm,11.0s
KIS Kishinev 63.72 317 ⇓*i*P **P** **13 05 16.0 -1.6**
KIS *e* 13 05 34.0
KIS *e* 13 07 36.0
KIS *e*S **S** **13 13 48.0 -2.4**
KIS *e*PS 13 14 12.0
KIS *e* 13 15 05.0
KIS *e*SS SS 13 17 56.0 -2.4
KIS pmax pmax
comp=Z,440nm,1.1s,mb6.4
KIS pmax pmax
comp=Z,4μm,11.0s
KIS pmax pmax
comp=Z,4μm,12.0s
KIS MLR MLR
comp=N,7μm,19.0s,MS6.0
KIS MLR MLR
comp=E,5μm,19.0s,MS6.0
KIS MLR MLR
comp=Z,4μm,19.0s,MS5.6
KIS MLR MLR
comp=Z,7μm,21.0s
KIS Kishinev 63.72 317 P **P** **13 05 17.6 +0.1**
KIS Kishinev 63.72 317 ⇓*i*P **P** **13 05 17.6 0.0**
SART Tekirdag 63.73 310 *i* P **P** **13 05 16.3 -1.4**
CFR Carcaliu 63.80 315 ⇑P **P** **13 05 18.3 +0.1**
CFR Carcaliu 63.80 315 P **P** **13 05 18.4 +0.2**
CFR Carcaliu 63.80 315 ⇑*i*P **P** **13 05 18.3 +0.1**
ZKR Zakros 63.83 304 P **P** **13 05 16.6 -1.9**
ZKR Zakros 63.83 304 *e*P **P** **13 05 18.6 +0.1**
URLA Izmir 63.86 307 *i* P **P** **13 05 17.6 -1.0**
STKA Stephens Creek 63.88 134 *e*P **P** **13 05 18.9 +0.1**
comp=Z,120nm,0.9s,mb5.9
STKA *e*S **S** **13 13 48.0 -4.8**
STKA Stephens Creek 63.88 134 P **P** **13 05 18.9 +0.1**
comp=Z,68nm,0.9s,mb5.7,baz=311,slow=6.2,SNR=94
STKA LR LR 13 34 02.4
comp=Z,11μm,22.0s,MS6.0,baz=297,slow=37
STKA Stephens Creek 63.88 134 *e*P **P** **13 05 18.8 -0.1**
comp=Z,68nm,1.2s,mb5.6
PRD Provadia 63.96 313 P **P** **13 05 18.6 -0.7**
LEOM Leova 63.99 317 P **P** **13 05 19.4 0.0**
LEOM Leova 63.99 317 ⇑*i*P **P** **13 05 19.5 +0.1**
LPK Lapseki 64.00 310 *e*P **P** **13 05 19.7 +0.1**
PRK Paraskevi 64.22 308 P **P** **13 05 20.7 -0.3**
PRK Paraskevi 64.22 308 *e*P **P** **13 05 21.0 0.0**
EDRB Edirne 64.22 311 *e*P **P** **13 05 20.6 -0.4**
XRY Khrisi 64.23 303 *e*P **P** **13 05 20.9 -0.3**
AMRR Amara 64.26 314 P **P** **13 05 22.1 +1.0**
AMRR Amara 64.26 314 ⇑*i*P **P** **13 05 21.1 -0.1**
CHOS Chios island 64.29 307 P **P** **13 05 20.6 -0.9**
CHOS Chios island 64.29 307 *e*P **P** **13 05 20.9 -0.6**
NPS Neapolis 64.33 304 *e*P **P** **13 05 21.9 +0.1**
AKASG Malin Array Be 64.34 321 P **P** **13 05 20.7 -0.9**
comp=Z,75nm,0.9s,mb5.7,baz=89,slow=4.9,SNR=180
AKASG PP PP 13 07 38.4 -4.8
comp=Z,4.4nm,0.8s,baz=98,slow=6.6,SNR=4.3
AKASG LR LR 13 39 12.5
comp=Z,6μm,19.8s,MS5.8,baz=120,slow=41
AKASG Malin Array Be 64.34 321 P **P** **13 05 20.7 -0.9**
AKASG 13 07 38.4
AKASG pmax pmax
comp=Z,75nm,0.9s
AKASG pmax pmax
comp=Z,4.0nm,0.8s
AKBB Malin Array Si 64.34 321 *e*P **P** **13 05 20.4 -1.2**
KIEV Kiev 64.35 321 *e*P **P** **13 05 20.6 -1.1**
KIEV *e*S **S** **13 13 52.3 -5.8**
KIEV pmax pmax
comp=Z,90nm,1.0s,mb5.8
KIEV MLR MLR
comp=Z,5μm,20.0s,MS5.7
KIEV Kiev 64.35 321 *e*P **P** **13 05 20.6 -1.0**
comp=Z,90nm,1.0s,mb5.8
KIEV *e*S **S** **13 13 52.3 -5.8**
KIEV LR LR
comp=Z,5μm,20.0s,MS5.7
LAST Lasithi 64.43 304 P **P** **13 05 22.4 -0.1**
LAST Lasithi 64.43 304 *e*P **P** **13 05 22.6 +0.1**
JMB Yambol 64.44 312 P **P** **13 05 22.5 +0.1**
JMB Yambol 64.44 312 P **P** **13 05 22.8 +0.4**
ENEZ Enez 64.50 310 *e*P **P** **13 05 22.9 0.0**
PETR 64.53 316 ⇓*i*P **P** **13 05 23.7 +0.7**
SIGR SIGRI 64.54 308 P **P** **13 05 22.6 -0.5**
THR1 Thera Island 64.55 305 P **P** **13 05 22.4 -0.9**
APE Apeiranthos 64.56 306 ⇓P **P** **13 05 23.1 -0.2**
APE Apeiranthos 64.56 306 P **P** **13 05 21.5 -1.8**
APE Apeiranthos 64.56 306 ⇓*i*P **P** **13 05 23.1 -0.2**
APE Apeiranthos 64.56 306 *e*P **P** **13 05 21.1 -2.2**
ALN Alexandroupoli 64.61 310 P **P** **13 05 22.4 -1.1**
ALN Alexandroupoli 64.61 310 *e*P **P** **13 05 23.1 -0.4**
GADA Gvkgeada 64.63 309 *e*P **P** **13 05 22.4 -1.3**
THR5 Thira Island, 64.65 305 P **P** **13 05 23.3 -0.6**
TIXI Tiksi 64.81 12 ⇓*i*P **P** **13 05 23.6 -0.6**
TIXI *e* 13 07 45.2
TIXI *e*S **S** **13 14 00.9 -2.1**
TIXI *e*SS SS 13 18 12.8 -1.6
TIXI pmax pmax
comp=Z,329nm,2.0s,mb6.0
TIXI pmax pmax
comp=E,450nm,1.5s
TIXI pmax pmax
comp=N,570nm,1.7s
TIXI smax
comp=N,6μm,16.0s
TIXI smax
comp=E,2μm,12.0s
TIXI MLR MLR
comp=E,3μm,18.4s,MS6.0
TIXI MLR MLR
comp=Z,10μm,14.0s,MS6.2
TIXI MLR MLR
comp=N,8μm,15.8s,MS6.0
TIXI Tiksi 64.81 12 *e*P **P** **13 05 23.6 -0.6**
comp=N,210nm,1.2s,mb6.0
TIXI *e*S **S** **13 14 03.8 +0.8**
TIXI LR LR
comp=Z,11μm,19.0s,MS6.1
IDI Anoyia 64.92 304 *e*P **P** **13 05 25.2 -0.5**
SIVA Sivas 64.97 304 P **P** **13 05 25.5 -0.5**
SIVA Sivas 64.97 304 *e*P **P** **13 05 25.8 -0.2**
RDO Rodhopi 65.02 310 P **P** **13 05 26.4 +0.2**
RDO Rodhopi 65.02 310 *e*P **P** **13 05 25.6 -0.6**
SZH Strazhica 65.03 313 P **P** **13 05 25.5 -0.7**
LIA Limnos Island 65.14 309 P **P** **13 05 25.9 -1.1**
LIA Limnos Island 65.14 309 *e*P **P** **13 05 26.6 -0.4**
DIM Dimitrovgrad 65.15 311 P **P** **13 05 26.5 -0.5**

KDZ Kurdzhali 65.18 311 P **P** **13 05 27.0 -0.2**
MLR Muntele Rosu 65.38 315 ⇑P **P** **13 05 29.3 +0.8**
MLR Muntele Rosu 65.38 315 ⇑*i*P **P** **13 05 29.3 +0.8**
PVL Pavlikeni 65.46 313 P **P** **13 05 29.5 +0.5**
VAM Vamos 65.50 304 *e*P **P** **13 05 29.6 +0.2**
ZIMR 65.50 313 ⇑P **P** **13 05 29.5 +0.2**
ZIMR 65.50 313 ⇑*i*P **P** **13 05 29.5 +0.2**
SKR Severo-Kuril's 65.50 39 *e*P **P** **13 05 30.0 +0.9**
SKR *e* 13 05 58.0
SKR *e*PPP 13 09 30.0
SKR *e*S S 13 14 14.0 +1.7
SKR pmax pmax
comp=Z,160nm,1.0s,mb6.0
SKR pmax pmax
comp=E,2μm,4.0s
SKR pmax pmax
comp=Z,3μm,4.0s
SKR smax
comp=N,5μm,12.0s
SKR smax
comp=E,5μm,12.0s
SKR MLR MLR
comp=N,7μm,16.0s,MS6.1
SKR MLR MLR
comp=E,6μm,16.0s,MS6.1
SKR MLR MLR
comp=Z,9μm,16.0s,MS6.1
GVD Gavdhos 65.55 303 *e*P **P** **13 05 29.2 -0.6**
comp=Z,349nm,1.1s,mb6.3
GVD Gavdhos 65.55 303 P **P** **13 05 28.3 -1.5**
GVD Gavdhos 65.55 303 *e*P **P** **13 05 29.3 -0.5**
RZN Rozhen 65.70 311 P **P** **13 05 30.4 -0.2**
KARN Karanos 65.72 304 P **P** **13 05 30.6 -0.3**
KARN Karanos 65.72 304 *e*P **P** **13 05 31.0 +0.1**
PLD Plovdiv 65.77 311 P **P** **13 05 30.1 -0.9**
PLD Plovdiv 65.77 311 P **P** **13 05 30.2 -0.8**
KAVA Kavala 65.77 310 P **P** **13 05 30.3 -0.8**
PTL Penteli 65.97 307 *e*P **P** **13 05 31.9 -0.5**
VOIR 65.99 315 ⇓P **P** **13 05 32.7 +0.3**
VOIR 65.99 315 ⇓*i*P **P** **13 05 32.7 +0.3**
VLY Voula,Athens 66.01 307 *e*P **P** **13 05 31.6 -1.1**
ATHU Athens Univers 66.03 307 P **P** **13 05 29.8 -3.0**
AOS Alonnisos 66.06 308 P **P** **13 05 29.8 -3.2**
OUR Ouranopolis 66.10 309 P **P** **13 05 31.8 -1.4**
MICGM Minsk 66.13 325 ⇓*i*P **P** **13 05 30.0 -3.1**
MNK Minsk 66.15 325 ⇓*i*P **P** **13 05 30.0 -3.3**
MNK *e*PPP 13 09 32.0
MNK *e*S S 13 14 16.0 -4.1
MNK *e* 13 15 20.0
MNK pmax pmax
comp=Z,670nm,1.0s,mb6.6
MNK pmax pmax
comp=E,470nm,1.2s
PGB Panagyurishte 66.22 312 P **P** **13 05 33.0 -0.9**
NAIG Nisos Aigina 66.24 306 *e*P **P** **13 05 32.6 -1.6**
BURAR Bucovina Array 66.25 317 P **P** **13 05 34.6 +0.6**
BURAR Bucovina Array 66.25 317 ⇑*i*P **P** **13 05 34.7 +0.7**
BUR08 Bucovina Ar. S 66.26 317 *e*P **P** **13 05 34.3 +0.2**
PAIG Paliouri 66.29 309 P **P** **13 05 33.7 -0.7**
NVR Nevrokopi 66.30 310 *e*P **P** **13 05 33.8 -0.7**
DID Didima 66.42 306 P **P** **13 05 32.3 -3.0**
DID Didima 66.42 306 *e*P **P** **13 05 32.5 -2.8**
PUL Pulkovo 66.46 331 ⇓*e*P **P** **13 05 35.7 +0.6**
PUL pmax pmax
comp=Z,540nm,1.0s,mb6.5
KYTH Kithira 66.50 305 *e*P **P** **13 05 34.4 -1.4**
PLG Polygyros 66.51 309 P **P** **13 05 34.9 -0.9**
PLG Polygyros 66.51 309 *e*P **P** **13 05 34.9 -0.9**
VLI Velíai 66.61 305 *e*P **P** **13 05 35.0 -1.5**
XOR Xorichti 66.61 308 P **P** **13 05 33.9 -2.6**
SOH Sokhos 66.63 310 P **P** **13 05 35.4 -1.2**
SOH Sokhos 66.63 310 *e*P **P** **13 05 35.8 -0.8**
LTK Loutraki 66.67 307 P **P** **13 05 34.2 -2.7**
LTK Loutraki 66.67 307 *e*P **P** **13 05 35.3 -1.6**
CMSA Cobar Meteorol 66.68 131 *e*P **P** **13 05 37.4 +0.4**
ATAL Atalanti 66.69 307 P **P** **13 05 34.8 -2.2**
LKR Lokris 66.70 307 P **P** **13 05 34.1 -3.0**
LKR Lokris 66.70 307 *e*P **P** **13 05 35.1 -2.0**
HORT Hortiatis 66.80 310 P **P** **13 05 35.4 -2.3**
NACGM Naroch 66.85 325 *e*P **P** **13 05 34.0 -3.7**
THE Thessaloniki 66.90 310 P **P** **13 05 36.4 -1.9**
KKB Krupnik 66.94 311 P **P** **13 05 37.8 -0.7**
IDID Didziasalis 66.98 326 *e*P **P** **13 05 38.6 +0.1**
IDID AMB AMB 13 05 40.2
comp=Z,112nm,1.0s,mb5.8
PETK Petropavlovsk- 67.01 37 P **P** **13 05 37.9 -0.8**
comp=Z,8.6nm,0.7s,mb4.9,baz=210,slow=5.2,SNR=16
PETK LR LR 13 40 15.8
comp=Z,7μm,18.1s,MS5.9,baz=242,slow=41
PETK Petropavlovsk- 67.01 37 P **P** **13 05 37.9 -0.9**
PETK pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
PETK MLR MLR
comp=Z,7μm,18.1s,MS5.9
PETK Petropavlovsk- 67.01 37 P **P** **13 05 37.9 -0.8**
PETK LR LR 13 40 15.8
DSF Desfina 67.05 307 P **P** **13 05 35.2 -4.1**
VLX Vlachokerasia 67.09 306 P **P** **13 05 37.8 -1.8**
VLX Vlachokerasia 67.09 306 *e*P **P** **13 05 38.3 -1.3**
JOF Joensuu 67.14 334 *e*P **P** **13 05 38.3 -1.1**
JOF pmax pmax
comp=Z,380nm,1.0s,mb6.4
JOF Joensuu 67.14 334 *e*p **P** **13 05 38.3 -1.1**
comp=Z,380nm,1.0s,mb6.4
JOF Joensuu 67.14 334 *e*p **P** **13 05 38.3 -1.1**
comp=Z,380nm,1.0s,mb6.4
GUR Goura 67.16 307 P **P** **13 05 38.0 -2.0**
GUR Goura 67.16 307 *e*P **P** **13 05 39.0 -1.0**
AGG Agios Georgios 67.25 308 P **P** **13 05 38.0 -2.6**
AGG Agios Georgios 67.25 308 *e*P **P** **13 05 38.5 -2.1**
VAY Valandovo 67.27 310 ⇓*i*P **P** **13 05 38.9 -1.7**
VAY Valandovo 67.27 310 P **P** **13 05 38.7 -1.9**
IIGN Ignalina 67.27 326 *e*P **P** **13 05 40.5 +0.1**
IIGN AMB AMB 13 05 42.1
comp=Z,101nm,1.0s,mb5.8
KALE Kalithea 67.35 307 P **P** **13 05 38.8 -2.4**
IZAR Zarasai 67.36 326 *e*P **P** **13 05 40.9 0.0**
IZAR AMB AMB 13 05 42.6
comp=Z,84nm,1.0s,mb5.7
ISAL Salakas 67.38 326 *e*P **P** **13 05 41.1 0.0**
ISAL AMB AMB 13 05 42.7
comp=Z,76nm,1.1s,mb5.7
BMR Baia Mare 67.40 317 P **P** **13 05 42.0 +0.6**
BMR Baia Mare 67.40 317 ⇑*i*P **P** **13 05 42.1 +0.7**
TRIZ Trizonia 67.40 307 P **P** **13 05 38.2 -3.4**
LVV L'vov 67.41 320 ⇑*i*P **P** **13 05 40.8 -0.5**
LVV *e* 13 06 05.2
LVV *e* 13 08 08.2
LVV *e*S S 13 14 33.8 -1.6
LVV *e*PS 13 15 00.4
LVV *e*SS SS 13 18 56.4 +0.8
ITM Ithomi 67.44 306 P **P** **13 05 40.3 -1.5**
ITM Ithomi 67.44 306 *e*P **P** **13 05 40.5 -1.3**
LAKA Lakka 67.47 307 P **P** **13 05 39.9 -2.1**
THL Klokotos Trika 67.54 308 P **P** **13 05 39.0 -3.4**
THL Klokotos Trika 67.54 308 *e*P **P** **13 05 40.2 -2.2**
EFP Efpalio 67.54 307 P **P** **13 05 40.4 -2.0**
EFP Efpalio 67.54 307 *e*P **P** **13 05 40.7 -1.7**
DEV Deva 67.55 315 ⇑P **P** **13 05 43.2 +0.9**
DEV Deva 67.55 315 ⇑*i*P **P** **13 05 43.2 +0.9**
PET Petropavlovsk 67.55 37 *de*P **P** **13 05 40.6 -1.6**
PET *e*S S 13 14 36.3 -0.7
PET *e*PS 13 15 06.6
PET *e*SSS 13 22 01.9
PET pmax pmax
comp=Z,42nm,0.8s,mb5.5
PET pmax pmax
comp=Z,2μm,11.5s
PET pmax pmax
comp=Z,3μm,9.3s
PET smax
comp=N,2μm,10.0s
PET smax
comp=N,4μm,15.6s
PET MLR MLR
comp=Z,12μm,19.0s,MS6.1
PET MLR MLR
comp=Z,10μm,19.0s
PET Petropavlovsk 67.55 37 PFAKE 13 05 50.0 +7.8
PET LR LR
comp=Z,11μm,20.0s,MS6.1
PYL PYLOS 67.57 305 P **P** **13 05 41.8 -0.9**
PYL PYLOS 67.57 305 *e*P **P** **13 05 41.0 -1.7**

EVR Evrytania 67.65 308 *e*P **P** **13 05 43.1 0.0**
KZN Kozani 67.78 309 P **P** **13 05 41.9 -2.0**
KZN Kozani 67.78 309 *e*P **P** **13 05 42.5 -1.4**
DRGR 67.80 316 ⇑P **P** **13 05 44.4 +0.5**
DRGR 67.80 316 P **P** **13 05 44.3 +0.4**
DRGR 67.80 316 ⇑*i*P **P** **13 05 44.4 +0.5**
VSU Vasula 67.81 329 *d i*P **P** **13 05 43.5 -0.2**
VSU pmax pmax
comp=Z,258nm,0.9s,mb6.3
VSU MLR MLR
comp=Z,8μm,19.0s,MS6.0
RLS Riolos of Patr 67.86 307 *e*P **P** **13 05 43.6 -0.8**
LVZ Lovozero 67.95 340 P **P** **13 05 44.9 +0.5**
comp=Z,887nm,1.0s,mb6.8,SNR=24
LVZ Lovozero 67.95 340 PFAKE 13 06 00.0 +16
LVZ LR LR
comp=Z,22μm,21.0s,MS6.4
LSZ Lusaka 68.08 249 LR LR 13 33 17.3
comp=Z,18μm,18.0s,MS6.3,baz=79,slow=34
LSZ Lusaka 68.08 249 *e*P **P** **13 05 46.6 +0.5**
LSZ pmax pmax
comp=Z,112nm,1.2s,mb5.8
LSZ MLR MLR
comp=Z,6μm,19.0s,MS5.8
LSZ Lusaka 68.08 249 *e*P **P** **13 05 46.6 +0.5**
comp=Z,112nm,1.2s,mb5.8
LSZ LR LR
comp=Z,6μm,19.0s,MS5.8
LSZ Lusaka 68.08 249 ⇑P **P** **13 05 47.6 +1.5**
SNR=38
LSZ ⇑P 13 05 47.6
SNR=38
LSZ Lusaka 68.08 249 ⇓*i*P **P** **13 05 47.3 +1.1**
EIDS Eidsvold 68.09 123 *e*P **P** **13 05 45.9 -0.2**
comp=Z,113nm,1.3s,mb5.7
FNA Florina 68.12 310 P **P** **13 05 44.4 -1.6**
MOPA Mopani 68.16 239 ⇓*i*P **P** **13 05 47.1 +0.5**
MOPA AMS AMS 13 32 52.4
comp=Z,13μm,17.8s,MS6.2
SKO Skopje 68.17 311 ⇓*i*P **P** **13 05 45.1 -1.2**
SKO Skopje 68.17 311 P **P** **13 05 44.8 -1.5**
KWP Kalwaria Pacla 68.22 319 *e*P **P** **13 05 46.5 0.0**
KWP *e*pP pP 13 05 56.4 +1.1
KWP *e*S S 13 14 52.5 +7.3
KWP *e*SKS 13 15 45.0
KWP *e*SSS 13 22 42.0
KWP LMZ 13 42 30.5
comp=Z,4μm,21.5s
KWP Kalwaria Pacla 68.22 319 ⇓*e*P **P** **13 05 46.5 0.0**
KWP *e**PP pP 13 05 56.4 +1.1
KWP *e*S S 13 14 52.5 +7.3
KWP *e* 13 15 45.1
KWP Kalwaria Pacla 68.22 319 *e*P **P** **13 05 46.4 -0.1**
comp=Z,256nm,1.1s,mb6.2
KWP LR LR
comp=Z,5μm,20.0s,MS5.7
KWP Kalwaria Pacla 68.22 319 ⇑*i*P **P** **13 05 46.7 +0.2**
APA Apatity 68.23 339 ⇑*i*P **P** **13 05 46.4 +0.2**
APA *i* 13 06 00.0
APA *i* 13 08 20.0
APA *i* PPP 13 09 50.0
APA *i* S S 13 14 46.0 +1.4
APA pmax pmax
comp=Z,236nm,1.0s,mb6.2
APA MLR MLR
comp=Z,18μm,19.0s,MS6.3
KRUS Krusevo 68.26 310 ⇑*i*P **P** **13 05 45.1 -1.8**
UZH Uzhgorod 68.34 318 ⇑*i*P **P** **13 05 47.2 -0.1**
UZH *e* pP 13 05 54.6 -1.4
UZH *i* 13 06 11.4
UZH *i* S S 13 14 45.2 -1.4
UZH *e*SS SS 13 19 06.0 -4.1
UZH MLR MLR
comp=N,3μm,20.0s,MS5.7
UZH MLR MLR
comp=E,4μm,20.0s,MS5.7
UZH MLR MLR
comp=Z,2μm,20.0s,MS5.3
KFL Anninata 68.40 307 P **P** **13 05 46.7 -1.1**
BZS Buzias 68.41 315 ⇑P **P** **13 05 47.7 0.0**
BZS Buzias 68.41 315 P **P** **13 05 47.5 -0.2**
BZS Buzias 68.41 315 ⇑*i*P **P** **13 05 47.7 0.0**
JAN Janina 68.44 308 *e*P **P** **13 05 47.0 -1.1**
LKD2 Lefkada island 68.54 307 P **P** **13 05 47.3 -1.4**
KBN Korca 68.55 309 PN **P** **13 05 47.1 -1.6**
VLS Valsamata 68.56 307 P **P** **13 05 47.1 -1.7**
VLS Valsamata 68.56 307 *e*P **P** **13 05 47.3 -1.5**
OHR Ohrid 68.58 310 ⇓*i*P **P** **13 05 46.5 -2.4**
OHR Ohrid 68.58 310 P **P** **13 05 46.1 -2.8**
SUW Suwalki 68.70 324 *e*P **P** **13 05 48.7 -0.7**
SUW *e*pP pP 13 05 58.5 +0.4
SUW *e*PP PP 13 08 18.6 -2.5
SUW *e*S S 13 14 53.4 +2.7
SUW *e*SKS 13 15 59.8
SUW *e*SS SS 13 19 13.0 -2.4
SUW LMZ 13 40 21.2
comp=Z,9μm,18.8s
SUW Suwalki 68.70 324 ⇓*e*P **P** **13 05 48.7 -0.7**
SUW *e**PP pP 13 05 58.6 +0.4
SUW *e* 13 08 18.6
SUW *e*S S 13 14 53.4 +2.7
SUW *e*SS SS 13 19 13.0 -2.4
SUW MLR MLR
comp=Z,9μm,18.8s,MS6.0
SUW Suwalki 68.70 324 *e*P **P** **13 05 48.4 -1.0**
comp=Z,626nm,1.1s,mb6.5
IGT Igoumenitsa 68.83 308 P **P** **13 05 48.5 -2.0**
MSNA Messina 68.88 241 ⇓*i*P **P** **13 05 52.2 +1.1**
MSNA AMS AMS 13 32 41.1
comp=Z,11μm,19.0s,MS6.1
FINES FINESS Array B 68.97 332 P **P** **13 05 51.0 0.0**
comp=Z,139nm,0.8s,mb5.9,baz=102,slow=8.0,SNR=266
FINES LR LR 13 41 32.8
comp=Z,10μm,21.1s,MS6.0,baz=107,slow=41
FINES FINESS Array B 68.97 332 P **P** **13 05 51.0 +0.1**
FINES pmax pmax
comp=Z,139nm,0.9s
FINES MLR MLR
comp=Z,10μm,21.1s
KAF Kangasniemi 69.06 333 *e*P **P** **13 05 49.9 -1.5**
KAF pmax pmax
comp=Z,269nm,1.0s,mb6.1
KAF Kangasniemi 69.06 333 *e*p **P** **13 05 49.9 -1.5**
comp=Z,269nm,1.0s,mb6.1
KAF Kangasniemi 69.06 333 *e*p **P** **13 05 49.9 -1.5**
comp=Z,269nm,1.0s,mb6.1
SRN Sarande 69.11 309 PN **P** **13 05 49.9 -2.3**
BCI Bajram Curri 69.22 311 PN **P** **13 05 51.4 -1.4**
KEK Kerkira 69.25 308 P **P** **13 05 49.9 -3.2**
KEK Kerkira 69.25 308 *e*P **P** **13 05 51.5 -1.6**
TIR Tirane 69.30 310 PFAKE 13 06 10.0 +17
TIR LR LR
comp=Z,6μm,22.0s,MS5.8
TIR Tirane 69.30 310 P **P** **13 05 49.3 -4.1**
PVY Plav 69.30 311 ⇓*i*P **P** **13 05 52.1 -1.3**
PVY Plav 69.30 311 ⇓*i*P **P** **13 05 52.2 -1.2**
PUK Puka 69.32 311 PN **P** **13 05 52.6 -0.9**
IVA Berane 69.38 312 ⇓*i*P **P** **13 05 52.8 -1.0**
IVA Berane 69.38 312 ⇓*i*P **P** **13 05 52.8 -1.0**
DIVS Divibare 69.41 313 P **P** **13 05 52.9 -1.1**
POGA Pongola 69.54 235 ⇓*i*P **P** **13 05 55.4 +0.4**
POGA AMS AMS 13 32 19.7
comp=Z,11μm,19.5s,MS6.1
TOO Toolangi 69.66 137 *e*P **P** **13 05 56.6 +1.0**
TOO *e*S S 13 15 06.8 +4.4
WAR Warsaw 69.68 322 *e*P **P** **13 05 56.0 +0.5**
WAR *e*S S 13 15 05.2 +2.9
WAR *e*SKS 13 16 09.3
WAR LMZ 13 37 56.1
comp=Z,12μm,24.0s
WAR Warsaw 69.68 322 *e*P **P** **13 05 56.0 +0.5**
WAR *e*S S 13 15 05.2 +2.9
WAR MLR MLR
comp=Z,12μm,24.0s,MS6.0
NIE Niedzica 69.74 319 *e*P **P** **13 05 56.5 +0.6**
PLE Pljevlja 69.78 312 ⇓*i*P **P** **13 05 56.1 -0.2**
PLE Pljevlja 69.78 312 ⇓*i*P **P** **13 05 56.1 -0.2**
ULC Ulcinj 69.80 311 ⇓*i*P **P** **13 05 55.0 -1.4**
ULC Ulcinj 69.80 311 ⇓*i*P **P** **13 05 55.1 -1.3**
TTG Podgorica 69.82 311 ⇓*i*P **P** **13 05 54.9 -1.7**
TTG Podgorica 69.82 311 ⇓*i*P **P** **13 05 54.9 -1.6**
PSZ Piszkesteto 69.84 317 *e*P **P** **13 05 56.0 -0.6**
PSZ pmax pmax

comp=Z,72nm,1.0s,mb5.6
PSZ MLR MLR
comp=Z,4μm,20.0s,MS5.7
PSZ Piszkesteto 69.84 317 *e*P **P 13 05 56.0 -0.6**
comp=Z,72nm,1.0s,mb5.6
PSZ LR LR
comp=Z,4μm,20.0s,MS5.7
PSZ Piszkesteto 69.84 317⇓*e*P **P 13 05 56.4 -0.2**
PSZ Piszkesteto 69.84 317⇑*i*P **P 13 05 56.8 +0.2**
NKY Niksic 70.04 312⇓*i*P **P 13 05 56.3 -1.6**
NKY Niksic 70.04 312⇓*i*P **P 13 05 56.4 -1.5**
BUM Brajici-Budva 70.08 311⇓*i*P **P 13 05 56.6 -1.6**
BUM Brajici-Budva 70.08 311⇓*i*P **P 13 05 56.7 -1.5**
UPM Unac-Piva 70.12 312⇓*i*P **P 13 05 57.4 -1.0**
UPM Unac-Piva 70.12 312⇓*i*P **P 13 05 57.5 -0.9**
OJC Ojcow 70.17 320 *i* P **P 13 05 56.5 -2.0**
OJC *e*pP pP 13 06 06.4 -0.9
OJC *e*PcP PcP 13 06 19.2 -1.1
OJC *e*S S 13 15 10.0 +1.9
OJC L 13 41 33.1
comp=Z,5.9nm,19.3s
BRY Bratogost 70.37 312⇓*i*P **P 13 05 58.9 -1.1**
BRY Bratogost 70.37 312⇓*i*P **P 13 05 59.0 -1.0**
HCY Herceg Novi 70.38 311⇓*i*P **P 13 05 58.8 -1.2**
HCY Herceg Novi 70.38 311⇓*i*P **P 13 05 58.8 -1.2**
PKSM Moragy 70.53 315 P **P 13 06 00.5 -0.4**
PKSM Moragy 70.53 315⇓*i*P **P 13 06 00.5 -0.4**
VYHS Vyhne 70.60 318 *e*P **P 13 06 00.5 -0.7**
VYHS *e* 13 10 26.7
VYHS *e*S S 13 15 11.7 -1.6
VYHS *e*SS SS 13 19 52.2 +7.2
VYHS pmax pmax
comp=Z,30nm,1.0s,mb5.2
VYHS Vyhne 70.60 318 *e*P **P 13 06 00.5 -0.7**
comp=Z,30nm,1.0s,mb5.2
VYHS *e*PP PP 13 08 38.0 +0.3
VYHS *e*PP PP 13 08 40.8 +3.1
VYHS *e* 13 10 26.7
VYHS *e*S S 13 15 11.7 -1.6
VYHS *e*SS SS 13 19 52.2 +7.2
VYHS *e* 13 33 59.2
VYHS Vyhne 70.60 318 *e*P **P 13 06 00.5 -0.7**
VYHS *e*PP PP 13 08 38.0 +0.3
VYHS *e* 13 10 26.7
VYHS *e*S S 13 15 11.7 -1.6
VYHS *e*SS SS 13 19 52.2 +7.2
VYHS *e* 13 33 59.2
ARMA Armidale 70.66 128 *e*P **P 13 06 03.3 +1.4**
ARMA *e*S S 13 15 19.9 +5.4
ARMA Armidale 70.66 128 *e*P **P 13 06 02.4 +0.6**
comp=Z,227nm,1.3s,mb5.9
HNR Honiara 70.78 104 P **P 13 06 03.1 +0.2**
comp=Z,112nm,0.7s,mb5.9,baz=263,slow=5.4,SNR=5.6
HNR Honiara 70.78 104 P **P 13 06 03.1 +0.1**
HNR pmax pmax
comp=Z,113nm,0.7s,mb5.9
HNR Honiara 70.78 104 *e*P **P 13 06 03.7 +0.8**
comp=Z,274nm,0.9s,mb6.2
HNR LR LR
comp=Z,3μm,22.0s,MS5.5
CAN Canberra 70.94 133 *e*P **P 13 06 04.0 +0.5**
CAN pmax pmax
comp=Z,288nm,1.4s,mb6.0
CAN MLR MLR
comp=Z,9μm,22.0s,MS6.0
CAN Canberra 70.94 133 *e*P **P 13 06 04.0 +0.5**
comp=Z,288nm,1.4s,mb6.0
CAN LR LR
comp=Z,9μm,22.0s,MS6.0
STON Ston 70.99 312 *i* P **P 13 06 01.0 -2.7**
RAC Raciborz 71.18 319 *e*P **P 13 06 05.2 +0.5**
RAC *e*S S 13 15 18.9 -1.0
RAC MLR MLR
comp=E,4μm,18.0s
RAC MLR MLR
comp=Z,3μm,18.0s,MS5.6
OKC Ostrava-Krasne 71.18 319 *e*P **P 13 06 04.7 0.0**
OKC *e* pP 13 06 11.8 -1.8
OKC *e* 13 08 46.6
OKC *e*S S 13 15 24.6 +4.6
OKC MLR MLR
comp=Z,4μm,17.1s,MS5.7
OKC Ostrava-Krasne 71.18 319 *e*P **P 13 06 04.7 0.0**
OKC *ex* x 13 06 11.8
OKC *e*PP PP 13 08 46.6 +4.0
OKC *e*S S 13 15 24.6 +4.6
OKC AMS AMS 13 45 40.0
comp=Z,4μm,17.1s
CNB Canberra Magne 71.20 133 *e*P **P 13 06 05.1 +0.1**
CNB *e*S S 13 15 21.9 +1.3
KEV Kevo 71.24 341 *e*P **P 13 06 04.7 0.0**
KEV pmax pmax
comp=Z,147nm,1.0s,mb5.9
KEV MLR MLR
comp=Z,12μm,21.0s,MS6.1
KEV Kevo 71.24 341 *e*P **P 13 06 04.7 0.0**
comp=Z,147nm,1.0s,mb5.9
KEV LR LR
comp=Z,12μm,21.0s,MS6.1
MORC Moravsky Berou 71.57 319 *e*P **P 13 06 06.8 -0.3**
MORC *e* 13 08 47.9
MORC pmax pmax
comp=Z,102nm,1.0s,mb5.7
MORC Moravsky Berou 71.57 319 *e*P **P 13 06 06.8 -0.3**
comp=Z,102nm,1.0s,mb5.7
MORC *e*PP PP 13 08 47.9 +1.9
MORC Moravsky Berou 71.57 319⇓*i*P **P 13 06 07.4 +0.3**
TIP Timpagrande 71.59 308 *e*P **P 13 06 06.9 -0.5**
comp=Z,91nm,1.1s,mb5.6
TIP LR LR
comp=Z,3μm,19.0s,MS5.5
SLR Silverton 71.63 238 *e*P **P 13 06 09.2 +1.3**
SLR AMS AMS 13 36 05.3
comp=Z,12μm,17.9s,MS6.2
ARCES ARCESS Array B 71.66 340 P **P 13 06 08.0 +0.7**
comp=Z,79nm,0.8s,mb5.7,baz=98,slow=6.4,SNR=170
ARCES LR LR 13 39 35.0
comp=Z,16μm,21.0s,MS6.3,baz=294,slow=37
ARCES ARCESS Array B 71.66 340 P **P 13 06 08.0 +0.8**
ARCES pmax pmax
comp=Z,79nm,0.8s
ARCES MLR MLR
comp=Z,16μm,21.0s
ARE0 ARCESS Array S 71.66 340 *e*P **P 13 06 07.9 +0.7**
ZST Bratislava 71.73 317 *e*P **P 13 06 07.9 -0.2**
ZST *e* 13 10 38.0
ZST pmax pmax
comp=Z,128nm,1.1s,mb5.8
ZST Bratislava 71.73 317 *e*P **P 13 06 07.9 -0.2**
comp=Z,128nm,1.1s,mb5.8
ZST *e* 13 10 38.0
ZST *e*SS SS 13 19 52.2 -10
ZST Bratislava 71.73 317 *e*P **P 13 06 07.9 -0.2**
ZST *e* 13 10 38.0
ZST *e*SS SS 13 19 52.2 -10
ERPM east rand prop 71.89 238 *e*P **P 13 06 11.0 +1.6**
ERPM AMS AMS 13 38 13.8
comp=Z,7μm,17.0s,MS6.0
SISC Sisak 72.07 314 *i* P **P 13 06 09.1 -1.1**
GKP Gorka Klasztor 72.09 323 *e*P **P 13 06 09.7 -0.4**
GKP *e*pP pP 13 06 19.6 +0.7
GKP *e*PP PP 13 09 01.8 +11
GKP *e*PPP 13 10 43.6
GKP *e*S S 13 15 33.8 +3.5
GKP *e*SKS 13 16 27.2
GKP *e*SSS 13 23 55.8
GKP LMZ 13 39 36.8
comp=Z,12μm,24.2s
GKP Gorka Klasztor 72.09 323⇓*e*P **P 13 06 09.7 -0.4**
GKP *e**PP pP 13 06 19.6 +0.7
GKP *e*S S 13 15 33.8 +3.5
GKP MLR MLR
comp=Z,12μm,24.2s,MS6.1
VRAC Vranov 72.15 318 P **P 13 06 10.6 +0.1**
VRAC Vranov 72.15 318⇑*i*P **P 13 06 10.7 +0.2**
KOGS Kog 72.20 315 *i* P **P 13 06 10.7 -0.2**
CEL Celeste 72.26 307 *e*P **P 13 06 11.5 +0.1**
comp=Z,303nm,1.1s,mb6.1
CEL LR LR
comp=Z,3μm,19.0s,MS5.6
KTK1 Kautokeino 72.27 339 *e*P **P 13 06 12.2 +1.3**
KTK1 *e*S S 13 15 33.8 +1.9
KTK1 *e* 13 15 37.0
CUC Castrocucco 72.33 309 *e*P **P 13 06 10.8 -1.1**
comp=Z,91nm,1.3s,mb5.5
CUC LR LR
comp=Z,3μm,20.0s,MS5.6
WAKE Wake Island 72.38 73 PFAKE 13 06 20.0 +7.5
WAKE LR LR
comp=Z,3μm,21.0s,MS5.6
DPC Dobruska-Polom 72.40 319 *e*P **P 13 06 12.7 +0.7**
DPC *e*S S 13 15 40.8 +6.8
DPC MLR MLR
comp=Z,4μm,14.3s,MS5.9
DPC Dobruska-Polom 72.40 319 *e*P **P 13 06 12.7 +0.7**
DPC *e*S S 13 15 40.8 +6.8
DPC AMS AMS 13 49 50.0
comp=Z,4μm,14.3s
KLOF Kloof 72.42 238 *e*P **P 13 06 14.7 +2.2**
KLOF AMS AMS 13 38 51.1
comp=Z,6μm,17.1s,MS6.0
KSP Ksiaz 72.45 320 *e*P **P 13 06 12.8 +0.4**
KSP *e*pP pP 13 06 22.7 +1.6
KSP *e*PP PP 13 09 03.1 +10
KSP *e*PPP 13 10 48.5
KSP *e*S S 13 15 37.5 +2.9
KSP *e*SKS 13 16 24.6
KSP *e*SS SS 13 20 37.2 +24
KSP *e*SSS 13 23 36.8
KSP LMZ 13 43 40.5
comp=Z,10μm,20.3s
KSP Ksiaz 72.45 320⇓*i*P **P 13 06 12.6 +0.3**
KSP *e* 13 08 53.6
KSP *e*PPP 13 10 42.0
KSP *e*S S 13 15 34.0 -0.6
KSP *e* 13 16 10.5
KSP *e*SS SS 13 20 12.0 -1.2
CONA Conrad Observa 72.55 317 *i* P **P 13 06 12.6 -0.3**
comp=Z,50nm,1.0s,mb5.4,SNR=29
UPC Upice 72.61 320 *e*P **P 13 06 13.6 +0.3**
UPC Upice 72.61 320 *e*P **P 13 06 13.6 +0.3**
ARSA Arzberg 72.74 316 *i* P **P 13 06 14.2 0.0**
comp=Z,99nm,1.6s,mb5.5,SNR=20
KSR Koster 72.83 239 *e*P **P 13 06 16.9 +1.9**
KSR AMS AMS 13 29 59.3
comp=Z,6μm,20.5s,MS5.8
PRYS Parys 72.84 237⇓*i*P **P 13 06 15.8 +0.7**
PRYS AMS AMS 13 38 46.6
comp=Z,6μm,16.8s,MS6.0
BOJS Bojanci 72.86 314 *e*P **P 13 06 14.3 -0.6**
BOJS *e* pP 13 06 24.3 +0.6
BOJS *e*PP PP 13 09 00.2 +3.1
BOJS *e* 13 10 48.1
BOJS *e*S S 13 15 40.5 +1.1
BOJS *e* 13 16 15.9
BOJS *e*SS SS 13 20 33.4 +14
TREC Trest 72.87 318 *e*P **P 13 06 14.9 +0.1**
TREC MLR MLR
comp=Z,5μm,17.8s,MS5.8
TREC Trest 72.87 318 *e*P **P 13 06 14.9 +0.1**
TREC AMS AMS 13 43 20.0
comp=Z,5μm,17.8s
SOKA Soboth 73.05 316⇓*i*P **P 13 06 15.9 -0.1**
comp=Z,132nm,1.1s,mb5.8
NVLJ Novalja 73.10 313 *i* P **P 13 06 14.1 -2.3**
SEK Senekal 73.15 236⇓*i*P **P 13 06 17.9 +1.0**
SEK AMS AMS 13 34 42.2
comp=Z,13μm,19.1s,MS6.2
OBKA Obir 73.38 315 *i* P **P 13 06 17.9 0.0**
comp=Z,111nm,1.1s,mb5.7,SNR=31
LJU Ljubljana 73.38 315 *i* P **P 13 06 17.7 -0.2**
LJU *i* pP 13 06 27.8 +1.0
LJU *e*PP PP 13 09 05.1 +3.5
LJU *e*S S 13 15 48.1 +2.8
WDD Wield Dalam 73.38 304 PFAKE 13 06 30.0 +12
WDD LR LR
comp=Z,3μm,19.0s,MS5.6
PRU Pruhonice 73.52 319 *e*P **P 13 06 19.5 +0.8**
PRU *e* pP 13 06 26.5 -1.0
PRU *e* 13 09 04.0
PRU *e*S S 13 15 50.9 +4.2
PRU MLR MLR
comp=Z,4μm,17.7s,MS5.7
PRU Pruhonice 73.52 319 *e*P **P 13 06 19.5 +0.8**
PRU *ex* x 13 06 26.5
PRU *e*PP PP 13 09 04.0 +1.4
PRU *e*S S 13 15 50.9 +4.2
PRU AMS AMS 13 43 20.0
comp=Z,4μm,17.7s
PVCC Panska Ves 73.53 320 *e*P **P 13 06 19.1 +0.4**
PVCC *e* pP 13 06 25.5 -2.1
PVCC MLR MLR
comp=Z,5μm,19.2s,MS5.8
PVCC Panska Ves 73.53 320 *e*P **P 13 06 19.1 +0.4**
PVCC *ex* x 13 06 25.5
PVCC AMS AMS 13 45 00.0
comp=Z,5μm,19.2s
PRA Prague 73.59 319 P **P 13 06 19.0 -0.1**
PRA SS SS 13 20 33.0 +2.3
PRA AMS AMS 13 44 20.0
MOA Molln 73.61 317 *i* P **P 13 06 18.8 -0.5**
comp=Z,61nm,1.0s,mb5.5,SNR=28
BSD Bornholm Skovb 73.62 324⇓*i*P **P 13 06 18.0 -1.1**
comp=Z,106nm,0.9s,mb5.8
BSD *i* 13 10 54.4
BSD *e*S S 13 15 43.5 -4.1
BSD
comp=Z,5μm,21.0s
LBTB Lobatse 73.63 240 *e*P **P 13 06 21.0 +1.3**
LBTB pmax pmax
comp=Z,217nm,1.3s,mb5.9
LBTB MLR MLR
comp=Z,10μm,19.0s,MS6.1
LBTB Lobatse 73.63 240 *e*P **P 13 06 20.9 +1.2**
comp=Z,217nm,1.3s,mb5.9
LBTB LR LR
comp=Z,10μm,19.0s,MS6.1
LBTB Lobatse 73.63 240⇓*i*P **P 13 06 20.9 +1.2**
LBTB AMS AMS 13 34 58.5
comp=Z,9μm,18.5s,MS6.1
JAVS Javornik 73.70 315 *i* P **P 13 06 18.5 -1.3**
JAVS *i* 13 06 29.1
JAVS *e*PP PP 13 09 07.5 +3.2
JAVS *e* 13 11 01.2
JAVS *e*S S 13 15 56.6 +7.7
SKDS Skadanscina 73.73 314 *i* P **P 13 06 18.6 -1.4**
SKDS *i* pP 13 06 28.6 -0.3
SKDS *e*PP PP 13 09 07.2 +2.6
SKDS *e*S S 13 15 51.3 +2.0
SKDS *e* 13 16 34.5
TRI Trieste 73.91 314 *e*P **P 13 06 19.6 -1.4**
TRI *e* 13 09 05.3
TRI pmax pmax
comp=Z,53nm,1.1s,mb5.4
TRI MLR MLR
comp=Z,3μm,21.0s,MS5.6
TRI Trieste 73.91 314 *e*P **P 13 06 19.6 -1.5**
comp=Z,53nm,1.1s,mb5.4
TRI *e*PP PP 13 09 05.3 -0.8
TRI LR LR
comp=Z,3μm,21.0s,MS5.6
TRO Tromso 73.91 340⇓*i*P **P 13 06 20.5 -0.1**
TRO *e*S S 13 15 52.4 +1.9
TRO AMS AMS 13 42 49.4
comp=Z,18μm,19.5s,MS6.4
BRG Berggiesshubel 73.94 320 *e*P **P 13 06 21.3 +0.2**
comp=Z,88nm,1.1s,mb5.6
BRG *e*S S 13 15 57.7 +6.2
BRG Berggiesshubel 73.94 320 *i* P **P 13 06 21.3 +0.2**
comp=Z,87nm,1.1s,mb5.6
BRG *i* 13 09 08.6
comp=Z,25nm,1.5s
BRG S S 13 15 56.0 +4.5
BRG
comp=N,6μm,17.0s
BRG
comp=E,5μm,18.2s
BRG
comp=Z,6μm,18.9s
MYKA Terra Mystica 74.01 315⇑*i*P **P 13 06 21.2 -0.4**
comp=Z,47nm,1.1s,mb5.3
GEC2 GERESS Array S 74.02 318 *e*P **P 13 06 21.7 0.0**
comp=Z,101nm,1.0s,mb5.7
GEC2 *e*S S 13 15 58.1 +5.7
KHC Kasperske Hory 74.11 318 *e*P **P 13 06 22.1 -0.1**
KHC *e* pP 13 06 31.0 0.0
KHC *e* 13 09 03.6
KHC *e*S S 13 16 00.2 +6.8
KHC MLR MLR
comp=Z,4μm,18.3s,MS5.8
KHC Kasperske Hory 74.11 318 *e*P **P 13 06 21.9 -0.2**
comp=Z,34nm,0.8s,mb5.3
KHC *e*S S 13 16 06.4 +13
KHC Kasperske Hory 74.11 318 *e*P **P 13 06 22.1 -0.1**
KHC *ex* x 13 06 31.0
KHC *e*PP PP 13 09 03.6 -4.1
KHC *e*S S 13 16 00.2 +6.8
KHC AMS AMS 13 43 00.0
comp=Z,4μm,18.3s
RUE Ruedersdorf 74.12 322 *e*P **P 13 06 22.1 0.0**
comp=Z,259nm,1.0s,mb6.1
AQU L'Aquila 74.15 311 *e*P **P 13 06 21.7 -0.9**
AQU pmax pmax
comp=Z,75nm,1.2s,mb5.5
AQU MLR MLR
comp=Z,6μm,22.0s,MS5.8
AQU L'Aquila 74.15 311 *e*P **P 13 06 21.7 -0.9**
comp=Z,75nm,1.2s,mb5.5
AQU LR LR
comp=Z,6μm,22.0s,MS5.8
AQU L'Aquila 74.15 311⇑*i*P **P 13 06 22.4 -0.2**
BILL Bilibino 74.22 22 *d*i P **P 13 06 21.7 -0.7**
BILL *e**PP pP 13 06 33.5 +2.2
BILL *e*S S 13 15 53.2 -0.7
BILL pmax pmax
comp=Z,55nm,1.0s,mb5.4
BILL MLR MLR
comp=Z,4μm,15.0s,MS5.8
BILL Bilibino 74.22 22 *e*P **P 13 06 21.9 -0.5**
comp=Z,53nm,1.0s,mb5.4
BILL *e*S S 13 16 01.5 +7.6
BILL LR LR
comp=Z,16μm,19.0s,MS6.3
KBA Koelnbreinsper 74.22 316 *i* P **P 13 06 22.3 -0.5**
comp=Z,94nm,1.1s,mb5.6,SNR=54
CLL Collm 74.55 320 *e*P **P 13 06 24.4 -0.3**
comp=Z,95nm,1.1s,mb5.6
CLL *e*S S 13 16 03.2 +4.9
CLL Collm 74.55 320⇓*i*P **P 13 06 24.6 -0.1**
CLL *i* pP 13 06 31.8 -1.7
CLL pmax pmax
comp=Z,95nm,1.1s,mb5.6
CLL MLR MLR
comp=Z,8μm,18.0s,MS6.0
CLL Collm 74.55 320⇓*i*P **P 13 06 24.6 -0.1**
comp=Z,95nm,1.1s,mb5.6
CLL *i* sP sP 13 06 31.8 -5.0
CLL *e*(PcP) PcP 13 06 41.0 +2.0
CLL *e*PP PP 13 09 11.0 -0.3
CLL *e*PPP 13 11 02.0
CLL *e*S S 13 16 07.0 +8.7
CLL *e*PS 13 16 38.0
CLL *e*PPS 13 16 43.0
CLL *e*SS SS 13 21 12.0 +27
CLL *e* 13 22 12.0
CLL *e*SSS 13 24 30.0
CLL *e* 13 27 00.0
CLL LmV 13 45 00.0
comp=Z,8μm,18.0s
WET Wettzell 74.57 318 *e*P **P 13 06 24.9 +0.1**
comp=Z,85nm,1.1s,mb5.6
WET *e*S S 13 16 05.1 +6.5
RJOB Jochberg 74.60 317 *e*P **P 13 06 24.3 -0.8**
comp=Z,59nm,1.0s,mb5.5
RJOB *e*S S 13 16 02.7 +3.7
SWZ Schweizer 74.62 238⇓*i*P **P 13 06 26.7 +1.2**
SWZ AMS AMS 13 35 51.9
comp=Z,8μm,18.7s,MS6.0
ABTA Abfaltersbach 74.79 316⇓*i*P **P 13 06 25.2 -0.9**
comp=Z,55nm,1.1s,mb5.4,SNR=23
TANN Tannenbergstha 74.87 319 *e*P **P 13 06 26.6 +0.1**
comp=Z,66nm,1.1s,mb5.5
TANN *e*S S 13 16 09.1 +7.2
NKC Novy Kostel 74.88 319 *e*P **P 13 06 26.8 +0.2**
NKC MLR MLR
comp=Z,6μm,15.8s,MS6.0
NKC Novy Kostel 74.88 319 *e*P **P 13 06 26.8 +0.2**
NKC AMS AMS 13 45 50.0
comp=Z,6μm,15.8s
BJO Bjornoya 74.95 345 *e*P **P 13 06 27.1 +0.5**
BJO *e*S S 13 16 06.7 +4.7
BJO AMS AMS 13 41 43.4
comp=Z,9μm,19.5s,MS6.1
MOR8 Moi Rana 74.99 336⇓*i*P **P 13 06 26.4 -0.5**
MOR8 AMb AMB 13 06 27.3
comp=Z,138nm,1.3s,mb5.7
MOR8 Moi Rana 74.99 336⇓*i*P **P 13 06 26.4 -0.5**
comp=Z,138nm,1.3s,mb5.7
BJO1 Bjornoya 75.00 345 *e*P **P 13 06 27.1 +0.2**
BJO1 LR LR
comp=Z,9μm,19.5s,MS6.1
COP Copenhagen 75.06 325⇓*i*P **P 13 06 27.6 0.0**
comp=Z,33nm,1.0s,mb5.2
COP *i* 13 11 07.3
COP *e*S S 13 16 09.4 +5.6
COP
comp=Z,2μm,17.0s
BOSA Boshof 75.19 236 P **P 13 06 29.8 +1.0**
comp=Z,126nm,1.0s,mb5.8,baz=78,slow=5.6,SNR=70
BOSA LR LR 13 35 47.8
comp=Z,11μm,19.3s,MS6.2,baz=72,slow=33
BOSA Boshof 75.19 236 *e*P **P 13 06 28.8 0.0**
BOSA pmax pmax
comp=Z,201nm,1.1s,mb6.0
BOSA MLR MLR
comp=Z,11μm,20.0s,MS6.2
BOSA Boshof 75.19 236 *e*P **P 13 06 28.8 0.0**
comp=Z,201nm,1.1s,mb6.0
BOSA LR LR
comp=Z,11μm,20.0s,MS6.2
BOSA Boshof 75.19 236⇑*i*P **P 13 06 29.6 +0.9**
BOSA AMS AMS 13 35 58.8
comp=Z,10μm,18.9s,MS6.1
WTTA Wattenberg 75.39 316⇓*i*P **P 13 06 28.8 -0.8**
comp=Z,127nm,1.0s,mb5.8,SNR=44
MOX Moxa 75.41 320⇓*i*P **P 13 06 29.7 0.0**
comp=Z,134nm,1.5s,mb5.7
MOX *e*S S 13 16 16.0 +8.1
MOX
comp=Z,4μm,21.0s
MOX Moxa 75.41 320 *e*P **P 13 06 29.7 0.0**
comp=Z,95nm,1.2s,mb5.6
MOX *e*S S 13 16 14.2 +6.3
WATA Walderalm 75.43 316⇓*i*P **P 13 06 28.8 -1.0**
comp=Z,58nm,1.0s,mb5.4,SNR=18
FLOS Flostrand 75.44 336 *e*P **P 13 06 29.6 +0.1**
KONS Konsvik 75.56 336 *e*P **P 13 06 30.4 +0.3**
STOK Stokkvaagen 75.58 336 *e*P **P 13 06 32.8 +2.5**
STOK *e*S S 13 16 13.1 +3.9
FUR Furstenfeldbru 75.63 317 *e*P **P 13 06 30.5 -0.4**
comp=Z,124nm,1.3s,mb5.7
FUR *e*S S 13 16 14.5 +4.1
GRF Grafenberg Arr 75.66 319 *e*P **P 13 06 31.5 +0.4**
comp=Z,194nm,1.1s,mb6.0
GRF *e*PP PP 13 09 18.2 -2.6
GRF *e*S S 13 16 17.7 +7.0
GRF *e*L 13 44 56.4
comp=Z,6μm,19.6s
GRF Grafenberg Arr 75.66 319 *e*P **P 13 06 31.5 +0.4**
GRF *e* 13 09 18.2
GRF *e*S S 13 16 17.7 +7.0
GRF pmax pmax
comp=Z,194nm,1.1s,mb6.0
GRF MLR MLR
comp=Z,6μm,19.6s,MS5.9
HVD Gariep Dam 75.73 235 *e*P **P 13 06 33.5 +1.7**
HVD AMS AMS 13 35 52.5
comp=Z,11μm,18.7s,MS6.2
MOTA Moosalm 75.75 316⇓*i*P **P 13 06 30.7 -0.9**
comp=Z,104nm,0.9s,mb5.7,SNR=39
NSS Namsos 75.85 334⇓*i*P **P 13 06 30.6 -1.3**
NSS AMb AMB 13 06 31.8
comp=Z,200nm,1.2s,mb5.9
NSS *e*S S 13 16 14.4 +2.1
NSS *e*SS SS 13 21 07.4 +3.1
NSS AMS AMS 13 44 55.3
comp=Z,10μm,12.1s,MS6.3
NSS Namsos 75.85 334⇓*i*P **P 13 06 30.6 -1.3**
comp=Z,200nm,1.2s,mb5.9
NSS LR LR
comp=Z,10μm,12.1s,MS6.3
NB2 NORSAR Subarra 75.97 330 P **P 13 06 32.3 -0.3**
comp=Z,122nm,1.0s,mb5.8,baz=94,slow=5.9

NOA NORSAR Array B 75.97 330 P **P** **13 06 32.1 -0.5**
comp=Z,66nm,0.9s,mb5.5,baz=94,slow=5.8,SNR=155
NOA LR LR 13 47 43.9
comp=Z,8µm,18.3s,MS6.1,baz=100,slow=42
GRM Grahamstown 75.97 232 *e*P **P** **13 06 34.8 +1.6**
GRM AMS AMS 13 44 32.5
comp=Z,6µm,16.3s,MS6.0
RETA Reutte 75.98 316 *i* P **P** **13 06 32.4 -0.5**
comp=Z,143nm,1.1s,mb5.8,SNR=57
FETA Feichten 76.01 316 *i* P **P** **13 06 32.5 -0.7**
comp=Z,101nm,1.0s,mb5.7,SNR=77
NAO01 NORSAR Array S 76.12 330 *e*P **P** **13 06 32.9 -0.6**
comp=Z,90nm,1.0s,mb5.7
NAO01 LR LR
comp=Z,8µm,20.0s,MS6.0
OSL Oslo 76.16 329 *e*P **P** **13 06 33.3 -0.5**
OSL AMb AMB 13 06 34.4
comp=Z,217nm,1.3s,mb5.9
OSL Oslo 76.16 329 *e*P **P** **13 06 33.3 -0.5**
comp=Z,217nm,1.3s,mb5.9
CLZ Clausthal 76.20 321 *e*P **P** **13 06 34.2 +0.1**
comp=Z,130nm,1.0s,mb5.8
CLZ *e*S S 13 16 20.7 +4.1
BSEG Bad Segeberg 76.24 323 *e*P **P** **13 06 34.6 +0.3**
comp=Z,216nm,1.1s,mb6.0
BSEG *e*S S 13 16 21.7 +4.8
FX1 Attu Island--F 76.25 38 P **P** **13 06 34.6 +0.2**
comp=Z,70nm,0.7s,mb5.7,baz=292,slow=2.0,SNR=19
FX1 Attu Island--F 76.25 38 P **P** **13 06 34.6 +0.2**
FX1 pmax pmax
comp=Z,70nm,0.7s
VLC Villacollemand 76.32 313 PFAKE 13 06 50.0 +15
VLC LR LR
comp=Z,4µm,20.0s,MS5.7
UBBA Unterbreizbach 76.44 320 *e*P **P** **13 06 35.3 -0.2**
comp=Z,49nm,1.5s,mb5.2
UBBA *e*S S 13 16 24.5 +5.3
SOE Somerset East 76.47 232 *e*P **P** **13 06 37.8 +1.8**
SOE AMS AMS 13 40 43.6
comp=Z,7µm,17.7s,MS6.0
DAVA Damuels 76.58 316 *i* P **P** **13 06 36.2 -0.2**
comp=Z,185nm,1.0s,mb6.0,SNR=41
KONO Kongsberg 76.72 329⇓*i*P **P** **13 06 36.7 -0.2**
KONO AMb AMB 13 06 37.9
comp=Z,123nm,1.6s,mb5.6
KONO *e*S S 13 16 24.1 +2.2
KONO AMS AMS 13 44 37.2
comp=Z,11µm,18.6s,MS6.2
KONO Kongsberg 76.72 329 *e*P **P** **13 06 36.8 -0.1**
KONO pmax pmax
comp=Z,149nm,1.2s,mb5.8
KONO MLR MLR
comp=Z,14µm,20.0s,MS6.3
KONO Kongsberg 76.72 329 *e*P **P** **13 06 36.8 -0.2**
comp=Z,149nm,1.2s,mb5.8
KONO LR LR
comp=Z,14µm,20.0s,MS6.3
SMY Shemya 76.82 38 *e*P **P** **13 06 37.2 -0.4**
SMY pmax pmax
comp=Z,218nm,0.8s,mb6.1
SMY Shemya 76.82 38 *e*P **P** **13 06 37.2 -0.4**
comp=Z,218nm,0.8s,mb6.1
MUD Monsted U'grnd 76.91 326⇓*i*P **P** **13 06 38.5 +0.4**
comp=Z,109nm,1.0s,mb5.7
MUD *e*S S 13 16 29.3 +5.2
MUD
comp=Z,6µm,19.0s
TUE Stuetta 76.97 315 *e*P **P** **13 06 38.4 -0.3**
comp=Z,109nm,1.1s,mb5.7
TUE LR LR
comp=Z,5µm,20.0s,MS5.8
STU Stuttgart 77.00 318 *e*P **P** **13 06 38.6 -0.1**
comp=Z,63nm,1.1s,mb5.5
STU *e*S S 13 16 30.8 +5.4
STU Stuttgart 77.00 318 *e*P **P** **13 06 38.4 -0.3**
STU *e* 13 09 34.9
STU pmax pmax
comp=Z,54nm,0.8s,mb5.5
STU Stuttgart 77.00 318 *e*P **P** **13 06 38.4 -0.4**
comp=Z,54nm,0.8s,mb5.5
STU *e*PP PP 13 09 34.9 +2.8
MIR Mirnyy 77.21 179⇓*i*P **P** **13 06 39.8 +0.4**
MIR *e* 13 09 32.0
MIR *e*S S 13 16 21.0 -5.8
MIR *e*SS SS 13 21 31.0 +5.7
MIR pmax pmax
comp=N,792nm,8.0s
MIR pmax pmax
comp=Z,3µm,10.0s
MIR smax
comp=N,1µm,10.0s
MIR smax
comp=E,4µm,12.0s
TOD Tromm 77.23 319 *e*P **P** **13 06 40.0 0.0**
SPAK Spaichingen-Ko 77.30 317 *e*P **P** **13 06 40.4 0.0**
VSL Villasalto 77.30 308 *e*P **P** **13 06 39.1 -1.5**
comp=E,49nm,1.0s,mb5.4
VSL *e*PP PP 13 09 44.0 +9.2
VSL LR LR
comp=Z,2µm,19.0s,MS5.4
OSPF L'Ospedale 77.31 310 *e*P **P** **13 06 40.2 -0.4**
KBS Kingsbay 77.44 349⇓*i*P **P** **13 06 40.7 0.0**
KBS AMb AMB 13 06 51.5
comp=Z,116nm,3.2s
KBS *e*S S 13 16 30.0 +0.8
KBS AMS AMS 13 50 59.0
comp=Z,8µm,23.9s,MS6.0
KBS Kingsbay 77.44 349 *e*P **P** **13 06 40.6 -0.1**
KBS pmax pmax
comp=Z,88nm,0.9s,mb5.7
KBS MLR MLR
comp=Z,7µm,20.0s,MS6.0
KBS Kingsbay 77.44 349 *e*P **P** **13 06 40.6 0.0**
comp=Z,88nm,0.9s,mb5.7
KBS LR LR
comp=Z,7µm,20.0s,MS6.0
TNS Taunus Mts 77.44 319 *e*P **P** **13 06 41.3 +0.1**
comp=Z,137nm,1.1s,mb5.8
TNS *e*S S 13 16 36.5 +6.3
BFO Black Forest 77.59 317 *e*P **P** **13 06 41.5 -0.6**
comp=Z,84nm,1.1s,mb5.6
BFO *e*S S 13 16 37.0 +5.1
BFO Black Forest 77.59 317 *e*P **P** **13 06 41.6 -0.5**
BFO pmax pmax
comp=Z,72nm,1.0s,mb5.6
BFO MLR MLR
comp=Z,4µm,20.0s,MS5.7
BFO Black Forest 77.59 317 *e*P **P** **13 06 41.6 -0.5**
comp=Z,72nm,1.0s,mb5.5
BFO LR LR
comp=Z,4µm,20.0s,MS5.7
KEST Kesra 77.59 304 P **P** **13 06 42.6 +0.3**
comp=Z,54nm,1.0s,mb5.5,baz=15,slow=1.3,SNR=96
KEST LR LR 13 46 20.6
comp=Z,1µm,18.5s,MS5.3,baz=212,slow=40
KEST Kesra 77.59 304 *e*P **P** **13 06 42.5 +0.2**
PKA Prieska 77.61 236 *e*P **P** **13 06 43.6 +1.1**
PKA AMS AMS 13 37 06.5
comp=Z,3µm,19.0s,MS5.6
KTD Kalmit 77.71 318 *e*P **P** **13 06 42.8 +0.1**
MOL Molde 77.75 332⇓*i*P **P** **13 06 43.2 +0.5**
MOL *e*S S 13 16 37.4 +4.3
MOL AMS AMS 13 43 43.5
comp=Z,8µm,25.4s,MS6.0
IBBN Ibbenburen 77.81 321 *e*P **P** **13 06 43.3 +0.1**
comp=Z,173nm,1.1s,mb5.9
IBBN *e*S S 13 16 37.7 +3.7
FELD Feldberg im Sc 77.83 317 *e*P **P** **13 06 43.4 0.0**
LANF Langenberg 77.91 318 *e*P **P** **13 06 43.9 +0.1**
ABH Alteburg 78.04 319 *e*P **P** **13 06 44.7 +0.2**
LIBD Limburg 78.09 317 *e*P **P** **13 06 44.9 +0.1**
BUG Bochum--Univer 78.14 320 *e*P **P** **13 06 45.0 -0.1**
comp=Z,119nm,1.1s,mb5.7
BUG *e*S S 13 16 42.8 +5.1
CASY Casey 78.18 172 *e*P **P** **13 06 44.5 -0.3**
CASY Casey 78.18 172 *e*P **P** **13 06 44.0 -0.8**
comp=Z,56nm,1.1s,mb5.4
CASY LR LR
comp=Z,11µm,19.0s,MS6.2
BBS Basel-Blauen 78.19 316 *e*P **P** **13 06 45.1 -0.3**
ODD1 Odda 78.22 329 *e*P **P** **13 06 45.3 0.0**
ODD1 AMb AMB 13 06 57.0
comp=Z,77nm,2.5s,mb5.2
ODD1 Odda 78.22 329 *e*P **P** **13 06 45.3 0.0**
comp=Z,77nm,2.5s,mb5.2
CDF Champ du Feu 78.29 317⇓*i*P **P** **13 06 45.6 -0.3**
comp=Z,185nm,1.1s,mb5.6
CDF Champ du Feu 78.29 317⇓*i*P **P** **13 06 45.6 -0.3**
CDF pmax pmax
comp=Z,93nm,1.1s,mb5.6
CDF Champ du Feu 78.29 317⇓*i*P **P** **13 06 45.6 -0.3**
comp=Z,93nm,1.1s,mb5.6
SAOF Saorge 78.37 313 *e*P **P** **13 06 46.1 -0.4**
ECH Echery 78.38 317 *e*P **P** **13 06 46.0 -0.4**
ECH Echery 78.38 317 *e*P **P** **13 06 45.8 -0.6**
ECH *e* 13 09 48.1
ECH pmax pmax
comp=Z,37nm,1.1s,mb5.2
ECH MLR MLR
comp=Z,3µm,20.0s,MS5.7
ECH Echery 78.38 317 *e*P **P** **13 06 45.8 -0.7**
comp=Z,37nm,1.1s,mb5.2
ECH *e*PP PP 13 09 48.1 +4.4
ECH LR LR
comp=Z,3µm,20.0s,MS5.7
WTSB Winterswijk 78.41 321⇓*i*P **P** **13 06 46.6 0.0**
comp=Z,134nm,1.5s,mb5.7
WTSB Winterswijk 78.41 321 pP pP 13 06 56.6 +1.1
comp=Z,155nm,4.1s
UPI Upington 78.42 238⇓*i*P **P** **13 06 48.2 +1.2**
UPI AMS AMS 13 37 54.0
comp=Z,10µm,19.3s,MS6.2
MOF Molkenrain 78.42 317 *e*P **P** **13 06 46.4 -0.3**
WIT Witteveen 78.45 322 *e*P **P** **13 06 47.7 +1.0**
AUTN L'Aution 78.46 313 *e*P **P** **13 06 47.0 0.0**
SBF Sospel 78.46 313⇓*i*P **P** **13 06 46.5 -0.5**
comp=Z,187nm,1.0s,mb5.7
SBF Sospel 78.46 313⇓*i*P **P** **13 06 46.5 -0.5**
SBF pmax pmax
comp=Z,93nm,1.0s,mb5.7
SBF Sospel 78.46 313⇓*i*P **P** **13 06 46.5 -0.5**
comp=Z,93nm,1.0s,mb5.7
REVF Revere 78.52 313 *e*P **P** **13 06 47.0 -0.3**
LUCF Luceram 78.53 313 *e*P **P** **13 06 47.2 -0.1**
HINF Hinteralfeld 78.61 317⇓*i*P **P** **13 06 46.9 -0.8**
comp=Z,73nm,1.0s,mb5.3
HINF Hinteralfeld 78.61 317⇓*i*P **P** **13 06 46.9 -0.8**
HINF pmax pmax
comp=Z,36nm,1.0s,mb5.3
HINF Hinteralfeld 78.61 317⇓*i*P **P** **13 06 46.9 -0.8**
comp=Z,36nm,1.0s,mb5.3
LOMF Lomont 78.66 316 *e*P **P** **13 06 47.7 -0.3**
MVIF Mont Vial 78.66 313 *e*P **P** **13 06 48.2 +0.1**
OG01 Vacheresse 78.82 315 *e*P **P** **13 06 49.2 +0.3**
LPG La Plagne 78.83 314⇓*i*P **P** **13 06 49.2 +0.2**
comp=Z,253nm,1.1s,mb5.8
LPG La Plagne 78.83 314⇓*i*P **P** **13 06 49.2 +0.2**
LPG pmax pmax
comp=Z,126nm,1.1s,mb5.8
LPG La Plagne 78.83 314⇓*i*P **P** **13 06 49.2 +0.2**
comp=Z,126nm,1.1s,mb5.8
LPL La Plagne 78.85 314⇓*i*P **P** **13 06 49.2 +0.1**
comp=Z,369nm,0.9s,mb6.0
LPL La Plagne 78.85 314⇓*i*P **P** **13 06 49.2 +0.1**
LPL pmax pmax
comp=Z,184nm,0.9s,mb6.0
LPL La Plagne 78.85 314⇓*i*P **P** **13 06 49.2 +0.1**
comp=Z,184nm,0.9s,mb6.0
BER Bergen 78.86 330⇓*i*P **P** **13 06 49.0 +0.2**
BER *e*S S 13 16 44.0 -1.0
BER *e*SS SS 13 21 53.3 +3.5
BER AML AML 13 48 21.3
comp=Z,5µm,11.1s
CALN Calern 78.86 313 *e*P **P** **13 06 49.5 +0.3**
SURF Saint Ours 78.86 313 *e*P **P** **13 06 49.5 +0.3**
MBDF Montbardon 78.88 314⇓*i*P **P** **13 06 48.5 -0.8**
comp=Z,121nm,1.0s,mb5.5
MBDF Montbardon 78.88 314⇓*i*P **P** **13 06 48.5 -0.8**
MBDF pmax pmax
comp=Z,61nm,1.0s,mb5.5
MBDF Montbardon 78.88 314⇓*i*P **P** **13 06 48.5 -0.8**
comp=Z,61nm,1.0s,mb5.5
TSUM Tsumeb 78.91 248 *e*P **P** **13 06 51.7 +1.8**
comp=Z,147nm,1.7s,mb5.6
TSUM *e*PP PP 13 09 50.5 +1.6
TSUM LR LR
comp=Z,6µm,19.0s,MS6.0
TSUM Tsumeb 78.91 248 *e*P **P** **13 06 51.8 +1.9**
RSL Roselend 78.91 315 *e*P **P** **13 06 49.5 +0.1**
BNI Bardonecchia 78.92 314 *e*P **P** **13 06 48.8 -0.7**
BNI *e* 13 09 53.4
BNI pmax pmax
comp=Z,129nm,1.0s,mb5.8
BNI MLR MLR
comp=Z,4µm,22.0s,MS5.7
BNI Bardonecchia 78.92 314 *e*P **P** **13 06 48.8 -0.7**
comp=Z,129nm,1.0s,mb5.8
BNI *e*PP PP 13 09 53.4 +5.2
BNI LR LR
comp=Z,4µm,22.0s,MS5.7
ASK Askoy 78.92 330 *e*P **P** **13 06 49.2 0.0**
HAU Haudompre 78.93 317⇓*i*P **P** **13 06 49.1 -0.4**
comp=Z,303nm,1.0s,mb5.9
HAU *e*MLR MLR
comp=Z,6µm,21.2s,MS5.6
HAU Haudompre 78.93 317⇓*i*P **P** **13 06 49.1 -0.4**
HAU pmax pmax
comp=Z,152nm,1.0s,mb5.9
HAU MLR MLR
comp=Z,6µm,21.3s,MS5.9
HAU Haudompre 78.93 317⇓*i*P **P** **13 06 49.1 -0.4**
comp=Z,152nm,1.0s,mb5.9
HAU LR LR
comp=Z,6µm,21.3s,MS5.9
FOO Floro 78.95 331⇓*i*P **P** **13 06 48.2 -1.1**
FOO *e*PP PP 13 09 50.9 +2.9
FOO *e*S S 13 16 50.4 +4.5
FOO AMS AMS 13 44 54.8
comp=Z,11µm,21.0s,MS6.2
WLF Walferdange 78.95 319 P **P** **13 06 50.0 +0.5**
comp=Z,62nm,1.3s,mb5.4
WLF Walferdange 78.95 319 *e*P **P** **13 06 50.0 +0.4**
comp=Z,115nm,1.2s,mb5.7
WLF *e*S S 13 16 52.7 +6.3
WLF Walferdange 78.95 319 *e*P **P** **13 06 49.9 +0.3**
WLF pmax pmax
comp=Z,119nm,1.3s,mb5.7
WLF MLR MLR
comp=Z,5µm,21.0s,MS5.8
WLF Walferdange 78.95 319 *e*P **P** **13 06 49.9 +0.4**
comp=Z,119nm,1.3s,mb5.7
WLF LR LR
comp=Z,5µm,21.0s,MS5.8
MEM Membach 78.98 320 P **P** **13 06 49.6 -0.1**
comp=Z,34nm,1.3s,mb5.1
HGN Heimansgroeve 79.02 320⇓*i*P **P** **13 06 49.2 -0.7**
comp=Z,43nm,1.1s,mb5.3
HGN Heimansgroeve 79.02 320 *e*pP pP 13 06 59.3 +0.4
comp=Z,108nm,4.9s
HGN Heimansgroeve 79.02 320 *e*PP PP 13 09 53.8 +4.9
ABSA Djebel Ababsia 79.06 305 P **P** **13 06 51.0 +0.6**
FRF La Foret Royal 79.06 312⇓*i*P **P** **13 06 50.0 -0.3**
comp=Z,258nm,1.2s,mb5.7
FRF La Foret Royal 79.06 312⇓*i*P **P** **13 06 50.0 -0.3**
FRF pmax pmax
comp=Z,129nm,1.2s,mb5.7
FRF La Foret Royal 79.06 312⇓*i*P **P** **13 06 50.0 -0.3**
comp=Z,129nm,1.2s,mb5.7
CMAH Djebel Manchou 79.07 305 P **P** **13 06 50.0 -0.5**
LMR La Mourre 79.17 312⇓*i*P **P** **13 06 50.6 -0.3**
comp=Z,138nm,1.2s,mb5.5
LMR La Mourre 79.17 312⇓*i*P **P** **13 06 50.6 -0.3**
LMR pmax pmax
comp=Z,69nm,1.2s,mb5.5
LMR La Mourre 79.17 312⇓*i*P **P** **13 06 50.6 -0.3**
comp=Z,69nm,1.2s,mb5.5
BEBN Eben Emael 79.18 320 P **P** **13 06 50.8 0.0**
CABF La Chapelle 79.21 316⇓*i*P **P** **13 06 51.2 +0.1**
comp=Z,287nm,1.1s,mb5.8
CABF La Chapelle 79.21 316⇓*i*P **P** **13 06 51.2 +0.1**
CABF pmax pmax
comp=Z,144nm,1.1s,mb5.8
CABF La Chapelle 79.21 316⇓*i*P **P** **13 06 51.2 +0.1**
comp=Z,144nm,1.1s,mb5.8
GDM Grand'Maison 79.30 314 *e*P **P** **13 06 51.4 -0.2**
OG25 Le Caire 79.40 313 *e*P **P** **13 06 51.9 -0.2**
BCLA Clavier 79.45 320 P **P** **13 06 52.0 -0.2**
comp=Z,40nm,1.4s,mb5.2
ORIF Oris-en-Rattie 79.49 314⇓*i*P **P** **13 06 52.0 -0.6**
comp=Z,101nm,0.9s,mb5.5
ORIF *e*MLR MLR
comp=Z,7µm,20.0s,MS5.7
ORIF Oris-en-Rattie 79.49 314⇓*i*P **P** **13 06 52.0 -0.6**
ORIF pmax pmax
comp=Z,51nm,0.9s,mb5.5
ORIF Oris-en-Rattie 79.49 314⇓*i*P **P** **13 06 52.0 -0.6**
comp=Z,50nm,0.9s,mb5.5
CKFL Kef-Lekhel 79.65 305 P **P** **13 06 53.0 -0.7**
MEZF Maizieres J'vi 79.76 318⇓*i*P **P** **13 06 53.8 -0.2**
comp=Z,218nm,1.0s,mb5.7
MEZF Maizieres J'vi 79.76 318⇓*i*P **P** **13 06 53.8 -0.2**
comp=Z,218nm,1.0s,mb6.0
GIVF Givet 79.78 319⇓*i*P **P** **13 06 53.9 -0.2**
comp=Z,140nm,1.2s,mb5.5
GIVF Givet 79.78 319⇓*i*P **P** **13 06 53.9 -0.2**
GIVF pmax pmax
comp=Z,70nm,1.2s,mb5.5
GIVF Givet 79.78 319⇓*i*P **P** **13 06 53.9 -0.2**
comp=Z,70nm,1.2s,mb5.5
SMRF Simiane la Rot 79.79 313⇓*i*P **P** **13 06 54.5 +0.2**
comp=Z,158nm,1.2s,mb5.5
SMRF Simiane la Rot 79.79 313⇓*i*P **P** **13 06 54.5 +0.2**
comp=Z,158nm,1.2s,mb5.8
CASM Ain Smara 79.85 305 P **P** **13 06 54.0 -0.8**
DOU Dourbes 79.92 319 P **P** **13 06 54.8 -0.1**
comp=Z,30nm,1.2s,mb5.1
CTEI Djebel Teioual 79.94 305 P **P** **13 06 56.0 +0.8**
UCC Uccle 80.02 320 P **P** **13 06 55.0 -0.3**
SNF Seneffe 80.09 320 P **P** **13 06 55.6 -0.1**
comp=Z,44nm,1.1s,mb5.3
SUR Sutherland 80.10 234 *e*P **P** **13 06 58.0 +1.9**
comp=Z,190nm,1.3s,mb5.9
SUR LR LR
comp=Z,10µm,21.0s,MS6.1
SUR Sutherland 80.10 234 P **P** **13 06 58.4 +2.3**
comp=Z,585nm,1.0s,mb6.5,SNR=14
SUR Sutherland 80.10 234 *e*P **P** **13 06 58.0 +1.9**
SUR AMS AMS 13 37 47.9
comp=Z,6µm,20.1s,MS5.9
BAIF Baives 80.18 319⇓*i*P **P** **13 06 56.3 +0.1**
comp=Z,210nm,1.1s,mb5.7
BAIF Baives 80.18 319⇓*i*P **P** **13 06 56.3 +0.1**
BAIF pmax pmax
comp=Z,105nm,1.1s,mb5.7
BAIF Baives 80.18 319⇓*i*P **P** **13 06 56.3 +0.1**
comp=Z,105nm,1.1s,mb5.7
DZM Mont Dzumac 80.20 115 *e*P **P** **13 06 57.3 +0.5**
comp=Z,208nm,1.2s,mb5.9
DZM *e*S S 13 16 55.6 -5.0
comp=Z,1µm,24.1s
DZM *e*SS SS 13 22 07.0 -5.1
comp=Z,7µm,31.4s
DZM *e*LR LR 13 31 50.6
comp=Z,11µm,25.2s
DZM Mont Dzumac 80.20 115 P **P** **13 06 56.0 -0.9**
comp=Z,81nm,1.1s,mb5.6
DFRA Djebel Bou Aff 80.31 305 P **P** **13 06 57.0 -0.2**
VIVF Saint-Julien-l 80.35 314⇓*i*P **P** **13 06 57.2 -0.1**
comp=Z,312nm,1.0s,mb5.9
VIVF Saint-Julien-l 80.35 314⇓*i*P **P** **13 06 57.2 -0.1**
VIVF pmax pmax
comp=Z,156nm,1.0s,mb5.9
VIVF Saint-Julien-l 80.35 314⇓*i*P **P** **13 06 57.2 -0.1**
comp=Z,156nm,1.0s,mb5.9
SSB Saint Sauveur 80.40 314 *e*P **P** **13 06 57.5 0.0**
SSB pmax pmax
comp=Z,108nm,0.9s,mb5.8
SSB MLR MLR
comp=Z,3µm,20.0s,MS5.6
SSB Saint Sauveur 80.40 314 *e*P **P** **13 06 57.5 -0.1**
comp=Z,108nm,0.9s,mb5.8
SSB LR LR
comp=Z,3µm,20.0s,MS5.6
CKHR Kef el Ahmar 80.66 305 P **P** **13 06 59.0 -0.1**
LOR Lormes 80.67 316⇓*i*P **P** **13 06 58.6 -0.3**
comp=Z,347nm,1.1s,mb5.9
LOR *e*MLR MLR
comp=Z,6µm,21.5s,MS5.6
LOR Lormes 80.67 316⇓*i*P **P** **13 06 58.6 -0.3**
LOR pmax pmax
comp=Z,174nm,1.1s,mb5.9
LOR MLR MLR
comp=Z,6µm,21.5s,MS5.9
LOR Lormes 80.67 316⇓*i*P **P** **13 06 58.6 -0.3**
comp=Z,174nm,1.1s,mb5.9
LOR LR LR
comp=Z,6µm,21.5s,MS5.9
SET Setif 80.73 305 P **P** **13 07 00.0 +0.5**
SMF Signal de Mont 80.75 316⇓*i*P **P** **13 06 59.0 -0.4**
comp=Z,203nm,1.0s,mb5.7
SMF Signal de Mont 80.75 316⇓*i*P **P** **13 06 59.0 -0.4**
SMF pmax pmax
comp=Z,102nm,1.0s,mb5.7
SMF Signal de Mont 80.75 316⇓*i*P **P** **13 06 59.0 -0.4**
comp=Z,102nm,1.0s,mb5.7
SSF Saint Saulge 80.94 316⇓*i*P **P** **13 07 00.1 -0.3**
comp=Z,290nm,1.4s,mb5.7
SSF Saint Saulge 80.94 316⇓*i*P **P** **13 07 00.1 -0.3**
SSF pmax pmax
comp=Z,145nm,1.4s,mb5.7
SSF Saint Saulge 80.94 316⇓*i*P **P** **13 07 00.1 -0.3**
comp=Z,145nm,1.4s,mb5.7
COLF Collangettes 80.97 315 *e*P **P** **13 07 00.9 +0.3**
PLDF La Plantade 80.97 315 *e*P **P** **13 07 00.8 +0.2**
MAW Mawson 80.99 191 *e*P **P** **13 06 53.4 -6.6**
comp=Z,28nm,0.8s,mb5.2
MAW *e*S S 13 17 10.0 +3.0
MAW Mawson 80.99 191 P **P** **13 07 00.4 +0.3**
comp=Z,34nm,0.8s,mb5.3,baz=18,slow=6.0,SNR=37
MAW LR LR 13 38 02.4
comp=Z,5µm,19.0s,MS5.9,baz=30,slow=32
MAW Mawson 80.99 191 *e*P **P** **13 07 00.5 +0.4**
comp=Z,11nm,0.9s,mb4.8
MAW LR LR
comp=Z,8µm,19.0s,MS6.1
LASF Ste Croix 81.02 313⇓*i*P **P** **13 07 01.2 +0.4**
comp=Z,357nm,1.1s,mb5.9
AVF Avril sur Loir 81.07 316⇓*i*P **P** **13 07 00.7 -0.4**
comp=Z,201nm,1.1s,mb5.7
AVF Avril sur Loir 81.07 316⇓*i*P **P** **13 07 00.7 -0.4**
AVF pmax pmax
comp=Z,101nm,1.1s,mb5.7
AVF Avril sur Loir 81.07 316⇓*i*P **P** **13 07 00.7 -0.4**
comp=Z,101nm,1.1s,mb5.7
AGO Saint Agoulin 81.31 315 *e*P **P** **13 07 02.7 +0.4**
LBL Lubilhac 81.32 314 *e*P **P** **13 07 02.7 +0.3**
AKF Akfadou 81.35 306 P **P** **13 07 03.9 +1.1**
PYM Petit Puy Mans 81.42 315 *e*P **P** **13 07 03.2 +0.2**
BGF Bois d'Agland 81.44 316⇓*i*P **P** **13 07 03.1 0.0**
comp=Z,255nm,1.1s,mb5.8
BGF Bois d'Agland 81.44 316⇓*i*P **P** **13 07 03.1 0.0**
BGF pmax pmax
comp=Z,128nm,1.1s,mb5.8
BGF Bois d'Agland 81.44 316⇓*i*P **P** **13 07 03.1 0.0**
comp=Z,128nm,1.1s,mb5.8
HYF Humbligny 81.50 316⇓*i*P **P** **13 07 03.7 +0.4**
ELIM Elim 81.67 232 *e*P **P** **13 07 05.5 +1.1**
ATAF Djebel Tarf 81.68 305 P **P** **13 07 07.2 +2.7**
EJON La Jonquera 81.91 312 P **P** **13 07 05.8 +0.2**
comp=Z,74nm,1.0s,mb5.6
TCF Toulx Ste Croi 81.91 316⇓*i*P **P** **13 07 05.7 +0.2**
comp=Z,224nm,1.2s,mb5.7
TCF Toulx Ste Croi 81.91 316⇓*i*P **P** **13 07 05.7 +0.2**
TCF pmax pmax
comp=Z,112nm,1.2s,mb5.7
TCF Toulx Ste Croi 81.91 316⇓*i*P **P** **13 07 05.7 +0.2**
comp=Z,112nm,1.2s,mb5.7
AKET Djebel Ketaf 81.97 305 P **P** **13 07 07.2 +1.1**
KOMG Komaggas 82.00 238⇓*i*P **P** **13 07 08.1 +1.8**
KOMG AMS AMS 13 41 31.1
comp=Z,7µm,18.0s,MS6.1
LRW Lerwick 82.11 330 *e*P **P** **13 07 05.8 -0.4**
LRW AMb AMB 13 07 17.8
comp=Z,163nm,3.4s
LRW AMS AMS 13 49 06.4
comp=Z,7µm,19.9s,MS6.0
LRW Lerwick 82.11 330 P **P** **13 07 05.8 -0.4**
LRW AMb AMB 13 07 17.8
comp=Z,163nm,3.4s
LRW AMS AMS 13 49 06.4
comp=Z,7µm,19.9s
FILF Fillols 82.14 312 *e*P **P** **13 07 07.4 +0.6**
CAF Calviac 82.19 314⇓*i*P **P** **13 07 07.3 +0.3**
comp=Z,175nm,1.1s,mb5.6
CAF Calviac 82.19 314⇓*i*P **P** **13 07 07.3 +0.3**
CAF pmax pmax
comp=Z,88nm,1.1s,mb5.6
CAF Calviac 82.19 314⇓*i*P **P** **13 07 07.3 +0.3**

comp=Z,88nm,1.1s,mb5.6
MTLF Montolieu 82.29 313⇓iP P 13 07 07.7 +0.1
comp=Z,226nm,1.0s,mb5.8
MTLF Montolieu 82.29 313⇓iP P 13 07 07.7 +0.1
MTLF pmax pmax
comp=Z,113nm,1.0s,mb5.8
MTLF Montolieu 82.29 313⇓iP P 13 07 07.7 +0.1
comp=Z,113nm,1.0s,mb5.8
WAL1 Walls 82.31 330 eP P 13 07 07.3 0.0
WAL1 Walls 82.31 330 P P 13 07 07.3 0.0
ADJB Djebel Djouab 82.31 305 P P 13 07 08.9 +1.0
ETOS Mallorca 82.32 309 P P 13 07 08.6 +0.8
comp=Z,239nm,1.2s,mb6.0
CFON Fontmartina 82.33 311 P P 13 07 08.1 +0.2
comp=Z,145nm,1.1s,mb5.8
TAM Tamanrasset 82.41 292 eP P 13 07 10.2 +1.6
TAM e 13 10 19.2
TAM pmax pmax
comp=Z,99nm,1.1s,mb5.7
TAM MLR MLR
comp=Z,12µm,22.0s,MS6.2
TAM Tamanrasset 82.41 292 eP P 13 07 10.2 +1.6
comp=Z,99nm,1.1s,mb5.7
TAM ePP PP 13 10 19.1 +1.4
TAM LR LR
comp=Z,12µm,22.0s,MS6.2
CARF Carcanieres 82.45 312 eP P 13 07 08.2 -0.2
RJF Les Rejaudoux 82.52 315⇓iP P 13 07 09.1 +0.3
comp=Z,293nm,1.2s,mb5.9
RJF eMLR MLR
comp=Z,4µm,20.0s,MS5.5
RJF Les Rejaudoux 82.52 315⇓iP P 13 07 09.1 +0.3
RJF pmax pmax
comp=Z,147nm,1.2s,mb5.9
RJF MLR MLR
comp=Z,4µm,20.0s,MS5.8
RJF Les Rejaudoux 82.52 315⇓iP P 13 07 09.1 +0.3
comp=Z,147nm,1.2s,mb5.9
RJF LR LR
comp=Z,4µm,20.0s,MS5.8
ADK Adak 82.52 39 eP P 13 07 07.3 -1.3
ADK pmax pmax
comp=Z,126nm,1.4s,mb5.8
ADK Adak 82.52 39 eP P 13 07 07.3 -1.3
comp=Z,126nm,1.4s,mb5.8
ABA Alger-Bouzarea 82.55 306 P P 13 07 12.0 +2.9
CLLI Llivia 82.58 312 P P 13 07 09.8 +0.7
EMHD Djebel Mahouad 82.70 305 P P 13 07 11.0 +1.1
SALF Salau 83.11 312 eP P 13 07 11.1 -0.8
LFF La Frestale 83.12 314⇓iP P 13 07 12.3 +0.4
comp=Z,206nm,1.1s,mb5.8
LFF La Frestale 83.12 314⇓iP P 13 07 12.3 +0.4
LFF pmax pmax
comp=Z,103nm,1.1s,mb5.8
LFF La Frestale 83.12 314⇓iP P 13 07 12.3 +0.4
comp=Z,103nm,1.1s,mb5.8
JMIC Jan Mayen 83.12 341 eP P 13 07 13.3 +2.0
JMIC e 13 17 34.6
JMIC AMS AMS 13 44 47.7
comp=Z,6µm,19.9s,MS6.0
JMIC Jan Mayen 83.12 341 LR LR 13 47 50.3
comp=Z,7µm,18.7s,MS6.0,baz=84,slow=38
MLS Moulis 83.15 312 eP P 13 07 11.5 -0.6
LDF La Druitiere 83.16 318⇓iP P 13 07 11.8 -0.2
comp=Z,250nm,1.1s,mb5.9
LDF La Druitiere 83.16 318⇓iP P 13 07 11.8 -0.2
LDF pmax pmax
comp=Z,125nm,1.1s,mb5.9
LDF La Druitiere 83.16 318⇓iP P 13 07 11.8 -0.2
comp=Z,125nm,1.1s,mb5.8
CSOR Sort 83.21 312 P P 13 07 12.8 +0.4
comp=Z,159nm,1.1s,mb6.0
GAMB Gambell 83.23 26 eP P 13 07 12.3 +0.3
comp=Z,67nm,0.8s,mb5.7
HPK Haverah Park 83.27 324 eP P 13 07 12.3 -0.2
HPK AMS AMS 13 48 05.5
comp=Z,7µm,20.3s,MS6.0
HPK Haverah Park 83.27 324 P P 13 07 12.3 -0.2
HPK AMS AMS 13 48 05.5
comp=Z,7µm,20.3s
CWF Charnwood Fore 83.28 322 eP P 13 07 11.6 -0.9
CWF AMb AMB 13 07 23.6
comp=Z,113nm,3.0s
CWF AMS AMS 13 46 22.9
comp=Z,6µm,23.1s,MS5.9
CWF Charnwood Fore 83.28 322 P P 13 07 11.6 -0.9
CWF AMb AMB 13 07 23.6
comp=Z,113nm,3.0s
CWF AMS AMS 13 46 22.9
comp=Z,6µm,23.1s
KBI1 Birley Grange 83.33 323 eP P 13 07 11.7 -1.0
KBI1 Birley Grange 83.33 323 P P 13 07 11.7 -1.0
FLN La Foliniere 83.37 318⇓iP P 13 07 12.8 -0.3
comp=Z,227nm,1.1s,mb5.8
FLN eMLR MLR
comp=Z,5µm,22.8s,MS5.5
FLN La Foliniere 83.37 318⇓iP P 13 07 12.8 -0.3
FLN pmax pmax
comp=Z,114nm,1.1s,mb5.8
FLN MLR MLR
comp=Z,5µm,22.8s,MS5.8
FLN La Foliniere 83.37 318⇓iP P 13 07 12.8 -0.3
comp=Z,114nm,1.1s,mb5.8
FLN LR LR
comp=Z,5µm,22.8s,MS5.8
EPOB Poblet 83.40 311 P P 13 07 13.7 +0.3
comp=Z,188nm,1.1s,mb6.0
WOL Wolverton 83.45 321 eP P 13 07 12.7 -0.7
WOL AMb AMB 13 07 14.3
comp=Z,249nm,1.2s,mb6.1
WOL AMS AMS 13 57 27.1
comp=Z,4µm,17.8s,MS5.8
WOL Wolverton 83.45 321 P P 13 07 12.7 -0.7
WOL AMb AMB 13 07 14.3
comp=Z,249nm,1.2s,mb6.1
WOL AMS AMS 13 57 27.1
comp=Z,4µm,17.8s
XAL Allendale 83.47 325 eP P 13 07 13.0 -0.4
XAL Allendale 83.47 325 P P 13 07 13.0 -0.4
LHO Holmfirth 83.47 323 eP P 13 07 12.9 -0.6
LHO Holmfirth 83.47 323 P P 13 07 12.9 -0.6
MFF Saint Martin d 83.48 316⇓iP P 13 07 13.5 -0.2
comp=Z,278nm,1.0s,mb5.9
MFF Saint Martin d 83.48 316⇓iP P 13 07 13.5 -0.2
MFF pmax pmax
comp=Z,139nm,1.0s,mb5.9
MFF Saint Martin d 83.48 316⇓iP P 13 07 13.5 -0.2
comp=Z,139nm,1.0s,mb5.9
ESY Stoneypath 83.52 326 eP P 13 07 13.1 -0.6
ESY Stoneypath 83.52 326 P P 13 07 13.1 -0.6
EIBI Ibiza 83.55 308 P P 13 07 15.1 +0.8
comp=Z,132nm,1.1s,mb6.0
KWE Weaver Farm 83.55 323 eP P 13 07 13.7 -0.2
KWE Weaver Farm 83.55 323 P P 13 07 13.7 -0.2
MCD Coleburn Disti 83.58 327 eP P 13 07 13.6 -0.3
MCD Coleburn Disti 83.58 327 P P 13 07 13.6 -0.3
GRR Gorron 83.68 318⇓iP P 13 07 14.4 -0.3
comp=Z,103nm,1.2s,mb5.5
GRR Gorron 83.68 318⇓iP P 13 07 14.4 -0.3
GRR pmax pmax
comp=Z,52nm,1.2s,mb5.5
GRR Gorron 83.68 318⇓iP P 13 07 14.4 -0.3
comp=Z,52nm,1.2s,mb5.5
EPF Esparros 83.69 312⇓iP P 13 07 14.2 -0.6
comp=Z,101nm,1.3s,mb5.5
EPF Esparros 83.69 312⇓iP P 13 07 14.2 -0.6
EPF pmax pmax
comp=Z,51nm,1.3s,mb5.5
EPF Esparros 83.69 312⇓iP P 13 07 14.2 -0.6
comp=Z,51nm,1.3s,mb5.5
RESF Ens 83.72 312 eP P 13 07 15.8 +0.8
SWN1 Swindon 83.77 321 eP P 13 07 14.8 -0.3
SWN1 AMb AMB 13 07 16.0
comp=Z,279nm,1.3s,mb6.2
SWN1 AMS AMS 13 56 58.4
comp=Z,5µm,16.4s,MS5.9
SWN1 Swindon 83.77 321 P P 13 07 14.8 -0.3
SWN1 AMb AMB 13 07 16.0
comp=Z,279nm,1.3s,mb6.2
SWN1 AMS AMS 13 56 58.4
comp=Z,5µm,16.4s
EBL Broad Law 83.78 325 eP P 13 07 14.1 -0.9
EBL Broad Law 83.78 325 P P 13 07 14.1 -0.9
EBNR Beni Rached 83.82 306 P P 13 07 17.0 +1.3
EDI Edinburgh 83.83 326 eP P 13 07 15.0 -0.3
EDI AMS AMS 13 54 13.5
comp=Z,5µm,16.1s,MS6.0
EDI Edinburgh 83.83 326 P **P 13 07 15.0 -0.3**
EDI AMS AMS 13 54 13.5
comp=Z,5µm,16.1s
LABF Labassere 83.88 313 eP P 13 07 15.6 -0.2
EBIE Bielsa 83.89 312 P P 13 07 16.5 +0.6
comp=Z,180nm,1.5s,mb6.0
ECK Cauldkaine Hil 83.93 325 eP P 13 07 15.2 -0.6
ECK Cauldkaine Hil 83.93 325 P P 13 07 15.2 -0.6
VIEF Viey 83.94 312 eP P 13 07 16.7 +0.6
ESK Eskdalemuir 83.95 325 eP P 13 07 15.6 -0.3
ESK AMS AMS 13 57 52.6
comp=Z,6µm,15.0s,MS6.1
ESK Eskdalemuir 83.95 325 P **P 13 07 15.6 -0.3**
ESK AMS AMS 13 57 52.6
comp=Z,6µm,15.0s
ESK Eskdalemuir 83.95 325 eP P 13 07 16.0 +0.1
ESK pmax pmax
comp=Z,51nm,0.9s,mb5.7
ESK MLR MLR
comp=Z,5µm,21.0s,MS5.9
ESK Eskdalemuir 83.95 325 eP P 13 07 16.0 +0.1
comp=Z,51nm,0.9s,mb5.7
ESK LR LR
comp=Z,5µm,21.0s,MS5.9
EBH Black Hill 83.95 326 eP P 13 07 15.4 -0.5
EBH Black Hill 83.95 326 P **P 13 07 15.4 -0.5**
ECHA Ech Chlef 83.97 306 P P 13 07 18.0 +1.5
EAU Auchinoon 83.99 326 eP P 13 07 16.4 +0.3
EAU Auchinoon 83.99 326 P P 13 07 16.4 +0.3
MVH1 Achvaich 84.00 328 eP P 13 07 15.6 -0.5
MVH1 Achvaich 84.00 328 P P 13 07 15.6 -0.5
ERTA Horta de San J 84.02 310 P P 13 07 16.9 +0.4
comp=Z,191nm,1.2s,mb6.1
DAG Danmarks Havn 84.06 347⇑iP P 13 07 15.6 -0.5
comp=Z,56nm,1.0s,mb5.7
DAG
comp=Z,13µm,21.0s
ETRT Tiaret 84.14 305 P P 13 07 18.8 +1.5
MDO Dochfour 84.19 327 eP P 13 07 16.1 -1.0
MDO Dochfour 84.19 327 P P 13 07 16.1 -1.0
REYF Montagne du Re 84.21 313 eP P 13 07 18.1 +0.6
EANR `Ain N'Sour 84.22 305 P P 13 07 18.7 +1.0
HLM1 Long Mynd 84.26 322 eP P 13 07 17.3 -0.2
HLM1 Long Mynd 84.26 322 P P 13 07 17.3 -0.2
ETSF Etsaut 84.36 312⇓iP P 13 07 18.7 +0.4
comp=Z,130nm,1.1s,mb5.7
ETSF Etsaut 84.36 312⇓iP P 13 07 18.7 +0.4
ETSF pmax pmax
comp=Z,65nm,1.1s,mb5.7
ETSF Etsaut 84.36 312⇓iP P 13 07 18.7 +0.4
comp=Z,65nm,1.1s,mb5.7
HGH Gray Hill 84.37 321 eP P 13 07 17.2 -0.9
HGH Gray Hill 84.37 321 P P 13 07 17.2 -0.9
JSA Saint Aubin 84.40 319 eP P 13 07 17.6 -0.8
JSA AMb AMB 13 07 18.8
comp=Z,86nm,1.2s,mb5.8
JSA AMS AMS 13 46 06.9
comp=Z,5µm,23.2s,MS5.8
JSA Saint Aubin 84.40 319 P **P 13 07 17.6 -0.8**
JSA AMb AMB 13 07 18.8
comp=Z,86nm,1.2s,mb5.8
JSA AMS AMS 13 46 06.9
comp=Z,5µm,23.2s
EAB Aberfoyle 84.42 326 eP P 13 07 18.0 -0.3
EAB Aberfoyle 84.42 326 P **P 13 07 18.0 -0.3**
RSC Scourie 84.44 328 eP P 13 07 18.5 +0.2
RSC Scourie 84.44 328 P **P 13 07 18.5 +0.2**
TNA Tiry 84.44 24 eP P 13 07 17.9 -0.2
comp=Z,44nm,0.9s,mb5.6
ESAC San Caprasio 84.49 311 P P 13 07 19.3 +0.3
comp=Z,302nm,1.0s,mb6.4
PGBU Glenifferbraes 84.57 326 eP P 13 07 18.3 -0.7
PGBU AMb AMB 13 07 30.4
comp=Z,174nm,2.6s,mb5.7
PGBU AMS AMS 13 53 29.6
comp=Z,5µm,15.5s,MS6.0
PGBU Glenifferbraes 84.57 326 P **P 13 07 18.3 -0.7**
PGBU AMb AMB 13 07 30.4
comp=Z,174nm,2.6s,mb5.7
PGBU AMS AMS 13 53 29.6
comp=Z,5µm,15.5s
HTR Trewern Hill 84.57 322 eP P 13 07 18.4 -0.7
HTR Trewern Hill 84.57 322 P **P 13 07 18.4 -0.7**
ORDF Ordiarp 84.58 313 eP P 13 07 18.9 -0.5
KAC Achnashellach 84.67 327 eP P 13 07 19.2 -0.4
KAC Achnashellach 84.67 327 P **P 13 07 19.2 -0.4**
EMOS Mosqueruela 84.72 310 P P 13 07 21.5 +1.3
comp=Z,398nm,1.2s,mb6.4
WPM1 Penmaenmawr 84.73 323 eP P 13 07 19.3 -0.6
WPM1 Penmaenmawr 84.73 323 P **P 13 07 19.3 -0.6**
KSB Sheil Bridge 84.80 327 eP P 13 07 20.2 0.0
KSB Sheil Bridge 84.80 327 P **P 13 07 20.2 0.0**
SJPF Ste Jean 84.81 313⇓iP P 13 07 20.9 +0.4
comp=Z,162nm,1.2s,mb5.7
SJPF Ste Jean 84.81 313⇓iP P 13 07 20.9 +0.4
SJPF pmax pmax
comp=Z,81nm,1.2s,mb5.7
SJPF Ste Jean 84.81 313⇓iP P 13 07 20.9 +0.4
comp=Z,81nm,1.2s,mb5.7
OSSF Osses 84.81 313 eP P 13 07 20.2 -0.3
EBEN Beniarda 84.81 308 P P 13 07 22.2 +1.6
comp=Z,61nm,1.2s,mb5.6
SGMF Saint Gilles 84.82 318⇓iP P 13 07 20.3 -0.2
comp=Z,92nm,1.1s,mb5.5
SGMF Saint Gilles 84.82 318⇓iP P 13 07 20.3 -0.2
SGMF pmax pmax
comp=Z,46nm,1.1s,mb5.5
SGMF Saint Gilles 84.82 318⇓iP P 13 07 20.3 -0.2
comp=Z,46nm,1.1s,mb5.5
GIM North Isle of 84.86 324 eP P 13 07 20.7 +0.1
GIM North Isle of 84.86 324 P **P 13 07 20.7 +0.1**
RRR Rubha Reidh 84.87 328 eP P 13 07 20.7 +0.2
RRR Rubha Reidh 84.87 328 P **P 13 07 20.7 +0.2**
GAL1 Galloway 84.88 325 eP P 13 07 20.1 -0.5
GAL1 AMb AMB 13 07 30.2
comp=Z,91nm,3.8s
GAL1 AMS AMS 13 53 33.5
comp=Z,6µm,15.0s,MS6.1
GAL1 Galloway 84.88 325 P **P 13 07 20.1 -0.5**
GAL1 AMb AMB 13 07 30.2
comp=Z,91nm,3.8s
GAL1 AMS AMS 13 53 33.5
comp=Z,6µm,15.0s
KPL Plockton 84.90 327 eP P 13 07 20.6 0.0
KPL AMb AMB 13 07 23.6
comp=Z,114nm,1.1s,mb5.9
KPL AMS AMS 13 50 27.7
comp=Z,6µm,18.2s,MS6.0
KPL Plockton 84.90 327 P **P 13 07 20.6 0.0**
KPL AMb AMB 13 07 23.6
comp=Z,114nm,1.1s,mb5.9
KPL AMS AMS 13 50 27.7
comp=Z,6µm,18.2s
YLL Llanberis 84.91 323 eP P 13 07 20.8 0.0
YLL Llanberis 84.91 323 P **P 13 07 20.8 0.0**
DRV Dumont d'Urvil 84.92 163 P P 13 07 25.0 +4.6
DRV S S 13 17 42.0 -5.0
DRV R 13 36 00.0
WME Myndd Eilian 84.94 323 eP P 13 07 20.5 -0.5
WME Myndd Eilian 84.94 323 P **P 13 07 20.5 -0.5**
EALK Alkurruntz 84.99 313 P **P 13 07 21.8 +0.4**
comp=Z,57nm,0.9s,mb5.7
ELIZ Elizondo 85.02 313 P **P 13 07 21.9 +0.3**
ELIZ pmax pmax
comp=Z,47nm,1.0s,mb5.6
ELIZ Elizondo 85.02 313 P **P 13 07 21.9 +0.3**
comp=Z,47nm,1.0s,mb5.6
YRE Yr Eifl 85.09 323 eP P 13 07 21.4 -0.3
YRE Yr Eifl 85.09 323 P **P 13 07 21.4 -0.3**
YRC Rhoscolyn 85.13 323 eP P 13 07 21.8 -0.1
YRC Rhoscolyn 85.13 323 P **P 13 07 21.8 -0.1**
ECHE Chera 85.23 309 P **P 13 07 23.7 +1.0**
ECHE pmax pmax
comp=Z,62nm,1.0s,mb5.7
ECHE Chera 85.23 309 P **P 13 07 23.7 +1.0**
comp=Z,62nm,1.0s,mb5.7
ROSF Rostrenen 85.28 318⇓iP P 13 07 22.5 -0.2
comp=Z,174nm,1.4s,mb5.7
ROSF Rostrenen 85.28 318⇓iP P 13 07 22.5 -0.2
ROSF pmax pmax
comp=Z,87nm,1.4s,mb5.7
ROSF Rostrenen 85.28 318⇓iP P 13 07 22.5 -0.2
comp=Z,87nm,1.4s,mb5.7
QUIF Quistinic 85.28 318⇓iP P 13 07 22.2 -0.6
comp=Z,127nm,1.3s,mb5.6
QUIF Quistinic 85.28 318⇓iP P 13 07 22.2 -0.6
QUIF pmax pmax
comp=Z,63nm,1.3s,mb5.6
QUIF Quistinic 85.28 318⇓iP P 13 07 22.2 -0.6
comp=Z,63nm,1.3s,mb5.6
DYA Yadsworthy 85.29 320 eP P 13 07 22.0 -0.8
DYA AMb AMB 13 07 33.8
comp=Z,118nm,2.2s,mb5.6
DYA AMS AMS 13 58 28.6
comp=Z,5µm,16.8s,MS6.0
DYA Yadsworthy 85.29 320 P **P 13 07 22.0 -0.8**
DYA AMb AMB 13 07 33.8
comp=Z,118nm,2.2s,mb5.6
DYA AMS AMS 13 58 28.6
comp=Z,5µm,16.8s
RRH Rhenigidale 85.31 328 eP P 13 07 22.9 +0.2
RRH Rhenigidale 85.31 328 P **P 13 07 22.9 +0.2**
KSK Scoval 85.42 328 eP P 13 07 23.9 +0.6
KSK Scoval 85.42 328 P **P 13 07 23.9 +0.6**
HTL Hartland 85.53 321 eP P 13 07 22.8 -1.2
HTL AMb AMB 13 07 25.7
comp=Z,139nm,1.1s,mb6.1
HTL AMS AMS 13 48 21.6
comp=Z,4µm,18.5s,MS5.8
HTL Hartland 85.53 321 P **P 13 07 22.8 -1.2**
HTL AMb AMB 13 07 25.7
comp=Z,139nm,1.1s,mb6.1
HTL AMS AMS 13 48 21.6
comp=Z,4µm,18.5s
CART Cartagena 85.61 307 eP P 13 07 24.6 -0.1
comp=Z,136nm,1.2s,mb6.0
GMM Mts of Mourne 85.72 324 eP P 13 07 24.4 -0.5
GMM Mts of Mourne 85.72 324 P **P 13 07 24.4 -0.5**
MIDW Midway 85.73 62 PFAKE 13 07 40.0 +15
MIDW LR LR
comp=Z,2µm,20.0s,MS5.4
ETOR Torete 85.83 311 P **P 13 07 26.0 +0.3**
ETOR pmax pmax
comp=Z,39nm,1.0s,mb5.6
ETOR Torete 85.83 311 P **P 13 07 26.0 +0.3**
comp=Z,39nm,1.0s,mb5.6
ECRI Cripan 85.83 312 P **P 13 07 26.3 +0.7**
ECRI pmax pmax
comp=Z,31nm,0.9s,mb5.5
ECRI Cripan 85.83 312 P **P 13 07 26.3 +0.7**
comp=Z,31nm,0.9s,mb5.5
ETOB Tobarra 85.84 308 P **P 13 07 26.7 +0.9**
comp=Z,194nm,1.6s,mb6.1
ALE Alert 86.01 357 P **P 13 07 25.0 -0.8**
comp=Z,326nm,0.9s,mb6.6,SNR=24
CCA1 Carnmenellis 86.16 320 eP P 13 07 25.7 -1.4
CCA1 AMb AMB 13 07 29.4
comp=Z,72nm,2.2s,mb5.5
CCA1 AMS AMS 13 55 25.8
comp=Z,4µm,16.7s,MS5.9
CCA1 Carnmenellis 86.16 320 P **P 13 07 25.7 -1.4**
CCA1 AMb AMB 13 07 29.4
comp=Z,72nm,2.2s,mb5.5
CCA1 AMS AMS 13 55 25.8
comp=Z,4µm,16.7s
DSB Dublin 86.19 323 eP P 13 07 27.6 +0.4
comp=Z,44nm,1.0s,mb5.6
DMUB Kingscourt 86.35 324 eP P 13 07 27.7 -0.2
ELAN Lanestosa 86.37 313 P **P 13 07 28.6 +0.3**
comp=Z,38nm,0.9s,mb5.6
EVIA Vianos 86.58 309 P **P 13 07 30.4 +1.0**
EVIA pmax pmax
comp=Z,69nm,1.2s,mb5.8
EVIA Vianos 86.58 309 P **P 13 07 30.4 +1.0**
comp=Z,69nm,1.2s,mb5.8
ENIJ Nijar 86.66 307 P **P 13 07 30.6 +0.7**
ENIJ pmax pmax
comp=Z,10.0nm,0.7s,mb5.2
ENIJ Nijar 86.66 307 P **P 13 07 30.6 +0.7**
comp=Z,10nm,0.7s,mb5.2
EHUE Huescar 86.80 308 P **P 13 07 30.7 +0.1**
EHUE pmax pmax
comp=Z,56nm,1.1s,mb5.7
EHUE Huescar 86.80 308 P **P 13 07 30.7 +0.1**
comp=Z,56nm,1.1s,mb5.7
EQES Quesada 87.18 308 P **P 13 07 32.4 0.0**
comp=Z,144nm,1.8s,mb5.9
EBER Berja 87.22 307 P **P 13 07 33.1 +0.5**
comp=Z,139nm,1.4s,mb6.0
ESBB Sonseca Array 87.48 310 P **P 13 07 33.9 +0.1**
ESDC Sonseca Array 87.48 310 P **P 13 07 34.0 +0.2**
comp=Z,18nm,0.8s,mb5.3,baz=60,slow=4.6,SNR=61
ESDC LR LR 13 52 10.2
comp=Z,2µm,20.3s,MS5.5,baz=60,slow=39
ESDC Sonseca Array 87.48 310 P **P 13 07 34.0 +0.2**
comp=Z,28nm,1.0s,mb5.5
ESLA Sonseca Array 87.48 310 eP P 13 07 33.8 -0.1
comp=Z,11nm,1.1s,mb5.0
ESLA LR LR
comp=Z,11µm,20.0s,MS6.3
SCO Scoresbysund 87.49 342⇓iP P 13 07 34.1 +0.9
comp=Z,25nm,1.0s,mb5.4
SCO i 13 11 01.1
SCO i S S 13 18 11.6 -0.6
SCO
comp=Z,8µm,20.0s
SYO Syowa Base 87.56 197⇑iP P 13 07 33.0 -0.4
SYO Syowa Base 87.56 197⇓iPcP PcP 13 07 35.0 -0.3
EARI Arriondas 87.63 314 P **P 13 07 34.7 +0.2**
comp=Z,108nm,1.4s,mb5.9
EBAN Banos Encina 87.66 308 P **P 13 07 35.3 +0.6**
EBAN pmax pmax
comp=Z,29nm,0.9s,mb5.5
EBAN Banos Encina 87.66 308 P **P 13 07 35.3 +0.6**
comp=Z,29nm,0.9s,mb5.5
ECOG Cogollos-Vega 87.67 307 P **P 13 07 34.5 -0.3**
ECOG pmax pmax
comp=Z,30nm,1.2s,mb5.4
ECOG Cogollos-Vega 87.67 307 P **P 13 07 34.5 -0.3**
comp=Z,30nm,1.2s,mb5.4
EGUA Guajares 87.76 307 P **P 13 07 35.4 +0.2**
comp=Z,596nm,1.0s,mb6.8
PAB San Pablo 87.80 310 eP P 13 07 35.4 +0.1
PAB e 13 10 59.4
PAB pmax pmax
comp=Z,32nm,1.0s,mb5.5
PAB MLR MLR
comp=Z,2µm,19.0s,MS5.6
PAB San Pablo 87.80 310 eP P 13 07 35.4 +0.1
comp=Z,32nm,1.0s,mb5.5
PAB ePP PP 13 10 59.4 -1.7
PAB LR LR
comp=Z,2µm,19.0s,MS5.6
UNV Unalaska Valle 88.16 35 P **P 13 07 35.2 -1.5**
comp=Z,31nm,0.9s,mb5.5
EADA Adamuz 88.27 308 P **P 13 07 37.8 +0.2**
comp=Z,156nm,1.2s,mb6.1
AKUT Akutan 88.49 35 eP P 13 07 36.3 -2.0
comp=Z,116nm,0.8s,mb6.2
EMIJ Mijas 88.76 307 P **P 13 07 38.9 -1.0**
comp=Z,38nm,0.9s,mb5.7
ECAB El Cabril 88.94 308 P **P 13 07 40.1 -0.6**
comp=Z,91nm,1.1s,mb6.0
EPLA Plasencia 88.99 310 P **P 13 07 41.8 +0.9**
EPLA pmax pmax
comp=Z,101nm,1.3s,mb6.0
EPLA Plasencia 88.99 310 P **P 13 07 41.8 +0.8**
comp=Z,101nm,1.3s,mb6.0
EPON Pontenova 89.00 314 P **P 13 07 41.5 +0.6**
comp=Z,24nm,0.8s,mb5.6
ECAL Calabor 89.03 312 P **P 13 07 42.0 +0.9**
comp=Z,56nm,1.4s,mb5.7
FUNA Funafuti 89.12 99 PFAKE 13 07 50.0 +8.0
FUNA LR LR
comp=Z,16µm,19.0s,MS6.5
EJIF Jimena Fronter 89.34 307 P **P 13 07 42.7 +0.1**
EJIF pmax pmax
comp=Z,133nm,1.1s,mb6.2
EJIF Jimena Fronter 89.34 307 P **P 13 07 42.7 0.0**
comp=Z,133nm,1.1s,mb6.2
MVO Moncorvo 89.43 312 P **P 13 07 43.4 +0.4**
MVO Moncorvo 89.43 312 eP P 13 07 43.5 +0.5
comp=Z,64nm,1.3s,mb5.8
MVO epP pP 13 07 53.4 +1.4
MVO Moncorvo 89.43 312 ePP PP 13 11 21.6 +7.5
MVO eS S 13 18 23.9 -7.8
MVO eSS SS 13 24 44.6 +18
MVO Moncorvo 89.43 312 eLR LR 13 39 11.6
comp=Z,3µm,21.2s
MDT Midelt 89.45 303 LR LR 13 54 25.7

comp=Z,6µm,18.2s,MS6.0,baz=98,slow=40
ESPR Espera 89.55 307 P **P 13 07 43.6 0.0**
comp=Z,110nm,1.2s,mb6.1
FALS False Pass 89.59 34 *e*P **P 13 07 42.4 -1.0**
comp=Z,51nm,0.6s,mb6.0
BORG Borgarnes 89.76 337 LR LR 13 49 28.8
comp=Z,4µm,21.0s,MS5.9,baz=237,slow=36
BORG Borgarnes 89.76 337 *e*P **P 13 07 47.1 +3.1**
BORG pmax pmax
comp=Z,85nm,1.0s
BORG MLR MLR
comp=Z,8µm,19.0s
BORG Borgarnes 89.76 337 *e*P **P 13 07 47.1 +3.1**
comp=Z,85nm,1.0s,mb6.0
BORG LR LR
comp=Z,8µm,19.0s,MS6.2
MSVF Nonsavu 89.81 108 *e*P **P 13 07 47.0 +1.8**
comp=Z,76nm,1.4s,mb5.8
MSVF LR LR
comp=Z,4µm,20.0s,MS5.8
RPZ Rata Peaks 89.83 135 P **P 13 07 45.1 +0.4**
comp=Z,27nm,0.9s,mb5.6,baz=55,slow=0.8,SNR=7.6
RPZ LR LR 13 47 34.1
comp=Z,8µm,21.9s,MS6.1,baz=288,slow=35
PVRL Vila Real 89.91 312 *e*P **P 13 07 46.5 +1.3**
comp=Z,66nm,1.4s,mb5.8
PVRL *e*pP pP 13 07 56.0 +1.8
SFS San Fernando 89.91 307 PFAKE 13 08 00.0 +15
SFS LR LR
comp=Z,6µm,20.0s,MS6.0
EMIN Mina Concepcio 89.97 308 P **P 13 07 45.9 +0.3**
comp=Z,66nm,1.1s,mb5.9
EBAD Badajoz 90.00 309 P **P 13 07 46.1 +0.4**
comp=Z,70nm,1.1s,mb5.9
MTE Manteigas 90.00 311 *e*P **P 13 07 45.6 -0.1**
comp=Z,80nm,1.1s,mb6.0
MTE LR LR
comp=Z,2µm,20.0s,MS5.6
MTE Manteigas 90.00 311 *e*P **P 13 07 46.4 +0.7**
comp=Z,125nm,1.5s,mb6.0
MTE *e*pP pP 13 07 56.4 +1.7
MTE Manteigas 90.00 311 *e*PP PP 13 11 24.9 +6.3
MTE *e*S S 13 18 25.9 -11
MTE *e*SS SS 13 24 42.0 +7.0
MTE Manteigas 90.00 311 *e*LR LR 13 39 35.8
comp=Z,2µm,18.2s
ELOB Lobios 90.01 313 P **P 13 07 46.2 +0.6**
comp=Z,37nm,1.0s,mb5.7
PCAB Cabril 90.03 312 *e*P **P 13 07 46.4 +0.6**
comp=Z,103nm,1.3s,mb6.0
PCAB *e*pP pP 13 07 57.5 +2.7
PCBR Castelo Branco 90.08 311 *e*P **P 13 07 46.7 +0.6**
comp=Z,100nm,1.1s,mb6.1
STS Santiago 90.10 314 P **P 13 07 47.0 +0.9**
STS pmax pmax
comp=Z,60nm,0.9s,mb5.9
STS Santiago 90.10 314 P **P 13 07 47.0 +0.9**
comp=Z,60nm,0.9s,mb5.9
PMRV Marv??o 90.12 310 *e*P **P 13 07 46.7 +0.5**
comp=Z,91nm,1.2s,mb6.0
PMRV *e*pP pP 13 07 57.0 +1.7
PMRV Marv??o 90.12 310 *e*PP PP 13 11 25.6 +6.0
PMRV *e*S S 13 18 27.7 -10
PMRV *e*SS SS 13 24 52.6 +16
PMRV Marv??o 90.12 310 *e*LR LR 13 38 48.0
comp=Z,2µm,19.7s
PBAR Barrancos 90.16 309 *e*P **P 13 07 47.2 +0.8**
comp=Z,214nm,1.3s,mb6.3
PBAR *e*pP pP 13 07 57.3 +1.8
PBAR Barrancos 90.16 309 *e*PP PP 13 11 25.4 +5.4
PBAR *e*S S 13 18 29.3 -9.3
PBAR *e*SS SS 13 24 48.1 +11
PBAR Barrancos 90.16 309 *e*LR LR 13 38 56.6
comp=Z,2µm,19.1s
PVIS Viseu 90.18 311 *e*P **P 13 07 48.1 +1.6**
comp=Z,96nm,1.5s,mb5.9
TTA Tatalina 90.21 25 *e*P **P 13 07 47.2 +1.1**
TTA pmax pmax
comp=Z,125nm,1.2s,mb6.1
TTA Tatalina 90.21 25 *e*P **P 13 07 47.2 +1.1**
comp=Z,125nm,1.2s,mb6.1
EMAZ Mazaricos 90.39 314 P **P 13 07 48.5 +1.0**
comp=Z,190nm,1.2s,mb6.3
EZAM Zamans 90.40 313 P **P 13 07 48.1 +0.6**
EZAM pmax pmax
comp=Z,39nm,0.8s,mb5.8
EZAM Zamans 90.40 313 P **P 13 07 48.1 +0.7**
comp=Z,39nm,0.8s,mb5.8
PESTR Estremoz 90.41 310 *e*P **P 13 07 48.1 +0.5**
comp=Z,61nm,1.6s,mb5.7
PESTR *e*pP pP 13 07 58.1 +1.5
PESTR Estremoz 90.41 310 *e*PP PP 13 11 27.7 +5.8
PESTR *e*S S 13 18 28.3 -13
PESTR *e*SS SS 13 24 47.7 +6.6
PESTR Estremoz 90.41 310 *e*LR LR 13 39 10.7
comp=Z,3µm,21.0s
COLD Coldfoot 90.42 20 *e*P **P 13 07 47.3 +0.3**
comp=Z,19nm,0.9s,mb5.4
EGRO El Granado 90.65 308 P **P 13 07 49.5 +0.8**
comp=Z,146nm,1.2s,mb6.2
SUMG Summit 90.71 347 *e*P **P 13 07 49.5 +1.2**
comp=Z,161nm,1.1s,mb6.3
SUMG Summit 90.71 347 ‖ *i*P **P 13 07 49.2 +0.9**
comp=Z,96nm,1.0s,mb6.1
SUMG *i* 13 11 35.8
SUMG *e*S S 13 18 45.6 +3.3
SUMG
comp=Z,6µm,19.0s
EVO Evora 90.81 309 ‖ *i*P **P 13 07 50.5 +1.0**
comp=Z,95nm,1.1s,mb5.7
EVO *e*MLR MLR
comp=Z,4µm,20.2s,MS5.5
EVO Evora 90.81 309 *e*P **P 13 07 50.1 +0.6**
comp=Z,82nm,1.1s,mb6.0
EVO *e*pP pP 13 08 00.3 +1.8
EVO Evora 90.81 309 *e*PP PP 13 11 32.4 +7.3
PBEJ Beja 90.82 309 *e*P **P 13 07 50.3 +0.7**
comp=Z,94nm,1.3s,mb6.0
PTOM Tomar 90.84 310 *e*P **P 13 07 50.4 +0.8**
comp=Z,216nm,1.2s,mb6.4
PVAQ Vaqueiros 90.86 308 *e*P **P 13 07 50.3 +0.5**
comp=Z,163nm,1.4s,mb6.2
PVAQ *e*pP pP 13 08 00.5 +1.7
PVAQ Vaqueiros 90.86 308 *e*PP PP 13 11 31.9 +6.3
PVAQ *e*S SKSac 13 18 29.8 +10
PVAQ Vaqueiros 90.86 308 *e*LR LR 13 39 26.1
comp=Z,2µm,16.6s
EVOP Sao Brissos 90.89 309 *e*P **P 13 07 50.4 +0.5**
EVOP *e*S SKSac 13 18 20.7 +0.5
EVOP *e*S SKSac 13 18 20.9 +0.7
EVOP *e*SS SS 13 24 50.7 +2.5
EVOP AMS AMS 13 55 50.5
comp=E,3µm,18.2s
EVOP Sao Brissos 90.89 309 *e*P **P 13 07 50.4 +0.5**
EVOP *e*S SKSac 13 18 20.7 +0.5
EVOP *e*SS SS 13 24 50.7 +2.6
SDPT Sand Point 91.02 33 *e*P **P 13 07 49.3 -0.7**
comp=E,80nm,0.6s,mb6.2
PCVE Castro Verde 91.06 309 *e*P **P 13 07 52.3 +1.7**
comp=E,76nm,1.5s,mb5.8
PCVE *e*pP pP 13 08 02.6 +2.9
PCVE Castro Verde 91.06 309 *e*PP PP 13 11 33.9 +6.8
PCVE *e*S S 13 18 33.2 -14
PCVE *e*SS SS 13 24 59.1 +8.6
PCVE Castro Verde 91.06 309 *e*LR LR 13 39 01.1
comp=E,2µm,20.0s
PBDV Barranco-do-Ve 91.07 308 *e*P **P 13 07 51.8 +1.1**
comp=E,203nm,1.3s,mb6.3
PBDV *e*pP pP 13 08 01.8 +2.0
PBDV Barranco-do-Ve 91.07 308 *e*PP PP 13 11 34.6 +7.4
PBDV *e*S S 13 18 35.7 -11
PBDV Barranco-do-Ve 91.07 308 *e*LR LR 13 40 00.8
comp=E,3µm,20.0s
SVW2 Sparrevohn 91.17 27 *e*P **P 13 07 51.9 +1.3**
LIS Lisbon 91.62 310 *e*P **P 13 07 53.9 +0.6**
LIS *e*S SKSac 13 18 25.2 +0.9
LIS *e*S SKSac 13 18 25.3 +1.0
LIS *e*SS SS 13 25 00.8 +2.2
LIS AMS AMS 13 54 32.5
comp=E,3µm,38.8s
LIS Lisbon 91.62 310 *e*P **P 13 07 53.9 +0.6**
LIS *e*S SKSac 13 18 25.2 +0.9
LIS *e*SS SS 13 25 00.8 +2.2
PMAFR Mafra 91.66 310 *e*P **P 13 07 54.3 +0.9**
comp=E,155nm,1.4s,mb6.1
PMAFR *e*pP pP 13 08 04.5 +2.0
PMAFR Mafra 91.66 310 *e*PP PP 13 11 38.6 +6.8
PMAFR *e*S S 13 18 37.3 -15
PMAFR Mafra 91.66 310 *e*LR LR 13 39 44.9
comp=E,2µm,16.7s
CHGN Chignik 91.75 32 *e*P **P 13 07 52.5 -0.9**
PFVI Vila Bisbo 91.79 308 P **P 13 07 55.6 +1.6**
PFVI Vila Bisbo 91.79 308 *e*P **P 13 07 54.6 +0.5**
comp=E,122nm,1.9s,mb5.9
PFVI *e*pP pP 13 08 04.6 +1.5
PFVI Vila Bisbo 91.79 308 *e*PP PP 13 11 38.6 +5.7
PFVI *e*S S 13 18 40.0 -14
PFVI Vila Bisbo 91.79 308 *e*LR LR 13 39 57.5
comp=E,3µm,18.1s
PPLA Purkeypile 91.80 24 *e*P **P 13 07 54.1 +0.6**
comp=E,99nm,1.3s,mb6.0
SNZO South Karori 91.87 132 PFAKE 13 08 10.0 +16
SNZO LR LR
comp=Z,7µm,21.0s,MS6.1
TRF Thorofare Moun 92.28 23 *e*P **P 13 07 55.9 +0.1**
comp=Z,36nm,0.8s,mb5.8
TRF *e*PP PP 13 11 38.3 +2.4
COLA College 92.46 22 *e*P **P 13 07 56.2 -0.4**
COLA *e* 13 11 40.1
COLA pmax pmax
comp=Z,23nm,1.0s,mb5.5
COLA MLR MLR
comp=Z,7µm,19.0s,MS6.1
COLA College 92.46 22 *e*P **P 13 07 56.1 -0.4**
comp=Z,24nm,1.0s,mb5.5
COLA *e*PP PP 13 11 40.1 +2.8
COLA LR LR
comp=Z,7µm,19.0s,MS6.1
MCK McKinley 92.66 23 *e*P **P 13 07 57.2 -0.3**
MCK *e* 13 11 40.7
MCK pmax pmax
comp=Z,71nm,0.9s,mb6.1
MCK McKinley 92.66 23 *e*P **P 13 07 57.2 -0.3**
comp=Z,71nm,0.9s,mb6.1
MCK *e*PP PP 13 11 40.7 +1.8
RSO Redoubt South 92.69 27 *e*P **P 13 07 58.0 +0.3**
PMR Palmer 93.68 25 *e*P **P 13 08 02.2 0.0**
PMR *e* 13 11 46.7
PMR pmax pmax
comp=Z,56nm,1.0s,mb6.0
PMR Palmer 93.68 25 *e*P **P 13 08 02.2 0.0**
comp=Z,56nm,1.0s,mb6.0
PMR *e*PP PP 13 11 46.7 -0.2
RC01 Rabbit Creek A 93.69 25 *e*P **P 13 08 02.4 +0.1**
comp=Z,67nm,1.0s,mb6.0
RC01 *e*PP PP 13 11 47.5 +0.6
OHAK Old Harbor 93.93 30 *e*P **P 13 08 03.5 0.0**
comp=Z,73nm,0.8s,mb6.2
KDAK Kodiak Island 94.01 29 P **P 13 08 04.6 +0.8**
comp=Z,513nm,0.9s,mb7.0,SNR=13
KDAK Kodiak Island 94.01 29 P **P 13 08 04.7 +0.9**
comp=Z,76nm,0.9s,mb6.1,baz=320,slow=1.8,SNR=34
KDAK Kodiak Island 94.01 29 *e*P **P 13 08 04.3 +0.5**
KDAK pmax pmax
comp=Z,88nm,1.0s,mb6.1
KDAK MLR MLR
comp=Z,8µm,20.0s,MS6.2
KDAK Kodiak Island 94.01 29 *e*P **P 13 08 04.3 +0.5**
comp=Z,88nm,1.0s,mb6.1
KDAK LR LR
comp=Z,8µm,20.0s,MS6.2
SEW Seward 94.31 26 *e*P **P 13 08 05.1 0.0**
comp=Z,65nm,1.1s,mb6.0
PAX Paxson 94.39 23 *e*P **P 13 08 05.8 +0.3**
PAX pmax pmax
comp=Z,237nm,2.1s,mb6.2
PAX Paxson 94.39 23 *e*P **P 13 08 05.8 +0.4**
comp=Z,237nm,2.1s,mb6.2
INK Inuvik 94.78 15 *e*P **P 13 08 06.8 -0.3**
INK pmax pmax
comp=Z,30nm,1.0s
INK Inuvik 94.78 15 *e*P **P 13 08 06.8 -0.3**
comp=Z,30nm,1.0s,mb5.7
EGAK Eagle 94.86 20 *e*P **P 13 08 07.3 -0.2**
comp=Z,17nm,1.0s,mb5.4
EGAK LR LR
comp=Z,7µm,19.0s,MS6.2
MENT Mentasta 95.06 22 *e*P **P 13 08 09.5 +0.9**
KIC Kosan Boka 95.13 277 *e*P **P 13 08 10.1 +0.2**
comp=Z,68nm,1.3s,mb5.9
JOHN Johnston Islan 95.13 72 PFAKE 13 08 20.0 +10
JOHN LR LR
comp=Z,3µm,22.0s,MS5.7
DBIC Dimbokro 95.18 278 P **P 13 08 10.9 +0.8**
comp=Z,19nm,1.1s,mb5.4,baz=66,slow=6.3,SNR=9.4
DBIC PKKP PKKPbc 13 25 01.6 -2.1
comp=Z,3.2nm,0.9s,baz=225,slow=4.2,SNR=3.3
DBIC LR LR 13 52 56.9
comp=Z,4µm,18.4s,MS5.9,baz=49,slow=37
DBIC Dimbokro 95.18 278 *e*P **P 13 08 10.6 +0.5**
DBIC *e* 13 11 58.8
DBIC pmax pmax
comp=Z,58nm,1.4s
DBIC MLR MLR
comp=Z,4µm,21.0s
DBIC Dimbokro 95.18 278 *e*P **P 13 08 10.6 +0.4**
comp=Z,58nm,1.4s,mb5.8
DBIC *e*PP PP 13 11 58.8 -1.5
DBIC LR LR
comp=Z,4µm,21.0s,MS5.9
DBIC Dimbokro 95.18 278 *e*P **P 13 08 10.6 +0.5**
DIV Divide 95.30 24 *e*P **P 13 08 10.5 +0.8**
comp=Z,8.9nm,0.7s,mb5.3
TIC Toumodi 95.34 278 *e*P **P 13 08 11.4 +0.5**
comp=Z,105nm,1.2s,mb6.1
TIC Toumodi 95.34 278 *e*P **P 13 08 11.4 +0.5**
TIC pmax pmax
comp=Z,105nm,1.2s,mb6.1
LIC Lamto 95.43 277 *e*P **P 13 08 11.7 +0.4**
comp=Z,79nm,1.3s,mb5.7
LIC *e*MLR MLR
comp=Z,7µm,19.8s,MS5.8
LIC Lamto 95.43 277 *e*P **P 13 08 11.5 +0.2**
comp=Z,78nm,1.3s,mb6.0
LIC Lamto 95.43 277 *e*P **P 13 08 11.7 +0.4**
comp=Z,40nm,1.3s,mb5.7
LIC LR LR
comp=Z,3µm,19.8s,MS5.8
BMRM Bremner River 95.86 24 *e*P **P 13 08 12.8 +0.6**
comp=Z,42nm,1.0s,mb5.8
DAWY Dawson 95.91 20 *e*P **P 13 08 12.5 +0.1**
MAIT Maitri 96.90 199 *e*P **P 13 08 17.6 +1.0**
SBA Scott Base 97.43 168 P **P 13 08 19.3 +0.4**
SBA pmax pmax
comp=Z,163nm,2.1s,mb6.1
SBA MLR MLR
comp=Z,8µm,19.0s,MS6.2
SBA Scott Base 97.43 168 P **P 13 08 19.3 +0.4**
comp=Z,163nm,2.1s,mb6.1
SBA LR LR
comp=Z,8µm,19.0s,MS6.2
SFJD Kangerlussuaq 97.67 346 P **P 13 08 19.4 -0.8**
comp=Z,14nm,0.9s,mb5.5,baz=43,slow=7.4,SNR=2.2
SFJD PP PP 13 12 09.6 -7.9
comp=Z,11nm,1.0s,baz=26,slow=13,SNR=3.3
SFJD Kangerlussuaq 97.67 346 P **P 13 08 19.4 -0.9**
SFJD pmax pmax
comp=Z,14nm,0.9s,mb5.5
SFJD Kangerlussuaq 97.67 346 P **P 13 08 19.4 -0.8**
SFJD PP PP 13 12 09.7 -7.9
SFJD LR LR
comp=Z,5µm,21.0s,MS6.0
SFJD Kangerlussuaq 97.67 346 *i* P **P 13 08 22.2 +1.9**
comp=Z,12nm,0.9s,mb5.4
SFJD *e* 13 12 19.2
SFJD *i* S S 13 19 43.3 -0.3
SFJD
comp=Z,4µm,20.0s
AFI Afiamalu 98.78 103 LR LR 13 47 11.8
comp=Z,2µm,20.0s,MS5.5,baz=110,slow=32
AFI Afiamalu 98.78 103 PFAKE 13 08 40.0 +14
AFI LR LR
comp=Z,2µm,20.0s,MS5.6
SHEL Horse Pasture 100.03 256 PFAKE 13 08 40.0 +8.9
SHEL LR LR
comp=Z,3µm,19.0s,MS5.9
QSPA South Pole Qui 100.75 180 PFAKE 13 08 50.0 +16
QSPA LR LR
comp=Z,11µm,20.0s,MS6.4
CMLA Cha da Macela 104.02 313 *e*PP PP 13 12 45.7 -21
CMLA *e*LR LR 13 42 43.7
CMLA Cha da Macela 104.02 313 PFAKE 13 09 00.0 +11
CMLA LR LR
comp=Z,3µm,19.0s,MS5.8
YKA Yellowknife Ar 104.06 12 Pdiff Pdif 13 08 48.5 -0.4
comp=Z,2.4nm,0.9s,baz=332,slow=4.6,SNR=10
YKA PKiKP PKiKP 13 13 04.0 -1.9
comp=Z,4.8nm,1.0s,baz=335,slow=7.7,SNR=6.4
YKA PKKPbc PKKPbc 13 24 37.1 -2.9
comp=Z,1.7nm,0.8s,baz=150,slow=2.2,SNR=5.7
YKA Yellowknife Ar 104.06 12 P Pdif 13 08 48.5 -0.5
YKA *i* 13 13 04.0
YKA pmax pmax
comp=Z,2.0nm,0.9s
YKA pmax pmax
comp=Z,5.0nm,1.0s
YKA Yellowknife Ar 104.06 12 Pdif Pdif 13 08 48.5 -0.4
KIP Kipapa 104.41 64 PFAKE 13 09 00.0 +9.4
KIP LR LR
comp=Z,2µm,22.0s,MS5.6
POHA Pohakuloa 107.14 65 PFAKE 13 13 20.0 +7.2
POHA LR LR
comp=Z,2µm,21.0s,MS5.7
XMAS Kiritimati 110.02 84 PFAKE 13 13 30.0 +12
XMAS LR LR
comp=Z,2µm,19.0s,MS5.7
SACV Santiago Islan 110.99 291 PFAKE 13 13 30.0 +10
SACV LR LR
comp=Z,3µm,21.0s,MS5.8
RAR Rarotonga 110.99 109 PFAKE 13 13 30.0 +10
RAR LR LR
comp=Z,2µm,19.0s,MS5.8
SCHQ Schefferville 112.10 347 PKiKP PKiKP 13 13 20.0 -1.2
comp=Z,6.7nm,1.0s,baz=17,slow=2.4,SNR=4.7
SCHQ PP PP 13 14 01.2 -3.3
comp=Z,9.2nm,0.9s,baz=23,slow=6.6,SNR=5.7
SCHQ Schefferville 112.10 347 PKPdf PKiKP 13 13 20.0 -1.2
SCHQ PP PP 13 14 01.2 -3.3
SCHQ LR LR
comp=Z,7µm,20.0s,MS6.3
EDM Edmonton 112.66 16 *e*PKiKP PKiKP 13 13 22.5 +0.2
FFC Flin Flon 113.64 9 *e*PKiKP PKiKP 13 13 21.5 -2.6
FFC MLR MLR
comp=Z,7µm,21.0s,MS6.2
NLWA Neilton Lookou 113.91 26 PFAKE 13 13 40.0 +15
NLWA LR LR
comp=Z,3µm,20.0s,MS5.9
JCW Jim Creek 114.07 24 *e*PKPdf PKiKP 13 13 25.3 +0.1
NEW Newport 115.82 21 PFAKE 13 13 40.0 +11
NEW LR LR
comp=Z,6µm,21.0s,MS6.2
COR Corvallis 116.34 27 PFAKE 13 13 40.0 +10
COR LR LR
comp=Z,2µm,20.0s,MS5.8
HAWA Hanford 116.49 24 PFAKE 13 13 40.0 +10
HAWA LR LR
comp=Z,3µm,19.0s,MS6.0
BSMT Bassoo Peak 116.97 20 *e*PKPdf PKPdf 13 13 30.8 0.0
LNOR Lincton Mounta 117.41 23 *e*PKiKP PKPdf 13 13 31.9 +0.2
SWMT Swartz Lake 117.53 19 *e*PKPdf PKPdf 13 13 31.9 0.0
SLMT Seeley Lake 117.93 19 *e*PKPdf PKPdf 13 13 32.5 -0.1
BBOR Butler Butte 117.95 28 P PKPdf 13 13 32.9 +0.1
HUMO Hull Mountain 118.03 28 *e*PKPdf PKPdf 13 13 33.6 +0.7
HUMO *e*PP PP 13 14 47.1 +0.3
HUMO LR LR
comp=Z,3µm,22.0s,MS5.9
MSO Missoula 118.15 20 PFAKE 13 13 40.0 +7.0
MSO LR LR
comp=Z,4µm,21.0s,MS6.0
EGMT Eagleton 118.34 16 *e*PKPdf PKPdf 13 13 33.4 0.0
EGMT *e*PP PP 13 14 48.9 +0.4
EGMT LR LR
comp=Z,6µm,20.0s,MS6.2
BUOR Burton Butte 118.62 28 P PKPdf 13 13 35.1 +1.0
BMO Blue Mountains 118.64 23 *e*PKPdf PKPdf 13 13 34.0 0.0
BMO *e*PP PP 13 14 44.5 -6.2
BMO LR LR
comp=Z,3µm,20.0s,MS6.0
ULM Lac du Bonnet 118.78 6 PKP PKPdf 13 13 33.7 -0.5
comp=Z,11nm,0.8s,baz=7.3,slow=4.1,SNR=7.2
ULM PP PP 13 14 49.0 -2.4
comp=Z,12nm,0.9s,baz=326,slow=11,SNR=2.6
ULM PKKPbc PKKPbc 13 23 48.2 -3.1
comp=Z,2.6nm,0.4s,baz=212,slow=1.8,SNR=4.1
ULM Lac du Bonnet 118.78 6 PKP PKPdf 13 13 33.7 -0.5
ULM PP PP 13 14 49.0 -2.4
ULM PKKPbc PKKPbc 13 23 48.2 -3.1
ULM LR LR
comp=Z,6µm,20.0s,MS6.2
YBH Yreka Blue Hor 118.83 29 PFAKE 13 13 50.0 +15
YBH LR LR
comp=Z,3µm,19.0s,MS5.9
DGMT Dagmar 119.27 12 *e*PKPdf PKPdf 13 13 35.2 +0.1
DGMT LR LR
comp=Z,5µm,19.0s,MS6.1
LRM Limekiln Ridge 119.52 19 *e*PKPdf PKPdf 13 13 35.9 +0.2
LRM *e*PP PP 13 14 54.5 -2.3
WDC Whiskeytown Da 119.80 30 *e*PKiKP PKPdf 13 13 36.3 -0.1
WDC *e* 13 14 59.9
WDC MLR MLR
comp=Z,3µm,21.0s,MS5.9
MOD Modoc 119.80 27 *e*P PKPdf 13 13 37.5 +1.1
MOD *e*PP PP 13 15 01.1 +2.2
MOD LR LR
comp=Z,3µm,21.0s,MS6.0
DLMT Dillon 119.88 20 *e*PKPdf PKPdf 13 13 36.8 +0.3
DLMT *e*PP PP 13 14 58.7 -0.5
BOZ Bozeman (W) 119.94 19 *e*PKiKP PKPdf 13 13 37.0 +0.5
BOZ *e* 13 14 59.1
BOZ MLR MLR
comp=Z,5µm,19.0s,MS6.2
WVOR Wild Horse Val 120.10 26 *e*PKiKP PKPdf 13 13 37.4 +0.5
WVOR *e* 13 15 01.9
WVOR MLR MLR
comp=Z,2µm,19.0s,MS5.8
LBCM Butte Creek Ri 120.17 29 P PKPdf 13 13 37.7 +0.6
MCMT McKenzie Canyo 120.27 20 *e*PKPdf PKPdf 13 13 37.8 +0.6
GCMT Greycliff 120.41 17 *e*PKPdf PKPdf 13 13 37.6 +0.2
PPT Papeete 120.41 104 *e*PP PP 13 14 57.8 -7.1
comp=Z,433nm,24.8s
PPT Papeete 120.41 104 *e*PS PS 13 24 50.5 -5.6
comp=Z,1µm,25.0s
PPT *e*SS SS 13 31 26.5 -6.1
comp=Z,1µm,24.8s
PPT *e*LR LR 13 50 28.6
comp=Z,7µm,31.8s
LAO LASA Array 120.49 14 *e*PKPdf PKPdf 13 13 38.5 +0.9
LAO *e*PP PP 13 15 08.6 +5.3
LAO LR LR
comp=Z,5µm,20.0s,MS6.2
TBI Tubuai 120.59 111 *e*PP PP 13 15 02.0 -4.0
comp=Z,286nm,25.0s
TBI *e*SKSac SKSac 13 20 30.0 -4.6
comp=Z,622nm,25.0s
TBI Tubuai 120.59 111 *e*PS PS 13 24 53.7 -3.9
comp=Z,1µm,24.8s
TBI *e*SS SS 13 31 36.2 +1.5
comp=Z,3µm,36.2s
TBI *e*LR LR 13 50 32.8
comp=Z,7µm,37.8s
AGMN Agassiz Nation 120.72 6 *e*PKPdf PKPdf 13 13 37.4 -0.6
AGMN *e*PP PP 13 15 02.5 -2.2
AGMN LR LR
comp=Z,5µm,21.0s,MS6.1
QLMT Earthquake Lak 120.73 19 *e*PKPdf PKPdf 13 13 38.6 +0.5
HOPS Hopland 120.74 31 PFAKE 13 13 50.0 +12
HOPS LR LR
comp=Z,3µm,19.0s,MS5.9
HLID Hailey 120.82 22 *e*PKPdf PKPdf 13 13 38.9 +0.6
HLID *e*PP PP 13 15 07.7 +1.9
HLID LR LR
comp=Z,5µm,20.0s,MS6.2
YMR Madison River 121.03 19 *e*PKPdf PKPdf 13 13 40.2 +1.6
YMR *e*PP PP 13 15 14.5 +7.5
RLMT Red Lodge 121.13 17 PFAKE 13 13 50.0 +11
RLMT LR LR
comp=Z,5µm,20.0s,MS6.2
YFT Old Faithful 121.26 19 *e*PKPdf PKPdf 13 13 41.4 +2.2
LKWY Lake 121.30 18 PKiKP PKPdf 13 13 39.8 +0.6
LKWY MLR MLR
comp=Z,8µm,20.0s,MS6.3
EYMN Ely 121.38 3 PFAKE 13 13 50.0 +11
EYMN LR LR
comp=Z,7µm,21.0s,MS6.3
MCCM Marconi Confer 121.48 32 PFAKE 13 13 50.0 +10
MCCM LR LR

comp=Z,2μm,21.0s,MS5.7
PKME Peaks-Kenny Pk 121.56 344 *e*PKPdf PKPdf 13 13 38.8 -0.8
PKME LR LR
comp=Z,4μm,22.0s,MS6.1
IMW Indian Meadow 121.73 19 *e*PKPdf PKPdf 13 13 40.5 +0.5
IMW *e*PP PP 13 15 14.2 +2.4
TPAW Teton Pass 122.09 19 *e*PKPdf PKPdf 13 13 41.6 +0.9
TPAW *e*PP PP 13 15 13.3 -0.9
LOHW Long Hollow 122.09 19 *e*PKPdf PKPdf 13 13 41.2 +0.5
LOHW *e*PP PP 13 15 11.7 -2.5
RRI2 Red Ridge 122.09 20 *e*PKPdf PKPdf 13 13 41.5 +0.7
RRI2 *e*PP PP 13 15 11.8 -2.6
REDW Red Top Meadow 122.23 19 *e*PKPdf PKPdf 13 13 41.7 +0.7
REDW *e*PP PP 13 15 14.0 -1.3
BMN Battle Mountai 122.35 26 *e*PKIKP PKPdf 13 13 41.7 +0.4
BMN *e* 13 15 20.6
BMN MLR MLR
comp=Z,2μm,20.0s,MS5.8
AHID Auburn Hatcher 122.68 20 PFAKE 13 13 50.0 +8.1
AHID LR LR
comp=Z,5μm,20.0s,MS6.2
M13A Montello 122.81 23 *e*PKPdf PKPdf 13 13 42.3 +0.1
CMB Columbia Colle 122.82 30 *e*PKIKP PKPdf 13 13 42.2 -0.1
CMB *e* 13 15 18.1
CMB MLR MLR
comp=Z,3μm,20.0s,MS5.9
N12A Clover Valley, 122.91 24 *e*PKPdf PKPdf 13 13 43.4 +1.0
N12A *e*PP PP 13 15 19.6 -0.3
ELK Elko 122.92 24 *e*PKIKP PKPdf 13 13 43.0 +0.6
ELK MLR MLR
comp=Z,4μm,20.0s
HVU Hansel Valley 122.97 22 *e*PKIKP PKPdf 13 13 43.0 +0.5
HVU *e* 13 15 20.2
LBNH Lisbon 123.18 346 *e*PKIKP PKPdf 13 13 42.5 -0.3
LBNH *e* 13 15 20.4
LBNH MLR MLR
comp=Z,4μm,20.0s,MS6.1
BW06 Boulder Array 123.18 19 PFAKE 13 13 50.0 +7.1
BW06 LR LR
comp=Z,4μm,21.0s,MS6.1
PDAR Pinedale Array 123.18 19 PKP PKPdf 13 13 42.8 -0.1
comp=Z,11nm,0.8s,baz=55,slow=1.0,SNR=75
PDAR PKKPbc PKKPbc 13 23 32.3 -2.3
comp=Z,0.6nm,0.5s,baz=134,slow=4.3,SNR=5.2
N13A Wendover, West 123.23 23 *e*PKPdf PKPdf 13 13 43.5 +0.5
N13A *e*PP PP 13 15 24.0 +1.9
SAO San Andreas Ge 123.27 32 *e*PKIKP PKPdf 13 13 43.4 +0.2
SAO *e* 13 15 23.3
SAO MLR MLR
comp=Z,2μm,20.0s,MS5.8
COWI Conover 123.29 1 *e*PKPdf PKPdf 13 13 43.2 +0.2
COWI *e*PP PP 13 15 22.6 +0.5
COWI LR LR
comp=Z,6μm,20.0s,MS6.2
LONY Lake Ozonia 123.40 348 *e*PKPdf PKPdf 13 13 42.8 -0.5
LONY *e*PP PP 13 15 21.5 -1.5
LONY LR LR
comp=Z,5μm,22.0s,MS6.1
RSSD Black Hills 123.43 14 *e*PKIKP PKPdf 13 13 43.3 0.0
RSSD *e* 13 15 22.5
RSSD MLR MLR
comp=Z,4μm,20.0s,MS6.0
NVAR Mina Array Bea 123.50 28 PKP PKPdf 13 13 44.9 +1.2
comp=Z,19nm,0.8s,baz=266,slow=1.5,SNR=120
NVAR PKKPbc PKKPbc 13 23 32.9 -0.3
comp=Z,1.2nm,0.9s,baz=154,slow=5.9,SNR=7.6
NVAR Mina Array Bea 123.50 28 PKP PKPdf 13 13 44.9 +1.2
NVAR PKKPbc PKKPbc 13 23 32.9 -0.3
HWUT Hardware Ranch 123.55 21 *e*PKPdf PKPdf 13 13 43.9 +0.3
HWUT *e*PP PP 13 15 21.9 -2.3
HWUT LR LR
comp=Z,5μm,20.0s,MS6.2
PMSA Palmer Station 123.58 192 PFAKE 13 13 50.0 +7.1
PMSA LR LR
comp=Z,8μm,21.0s,MS6.4
BGU Big Grassy Mou 123.62 22 *e*PKPdf PKPdf 13 13 44.1 +0.3
BGU *e*PP PP 13 15 23.9 -0.9
NCB Newcomb 123.95 348 *e*PKPdf PKPdf 13 13 44.2 -0.1
NCB LR LR
comp=Z,5μm,22.0s,MS6.1
NOQ North Oquirrh 124.19 22 *e*PKPdf PKPdf 13 13 45.7 +0.8
NOQ *e*PP PP 13 15 30.7 +2.2
TPH Tonopah 124.29 28 PFAKE 13 14 00.0 +15
TPH LR LR
comp=Z,3μm,21.0s,MS6.0
CTU Camp Tracy 124.29 22 *e*PKPdf PKPdf 13 13 45.5 +0.5
CTU *e*PP PP 13 15 31.9 +2.6
DUG Dugway 124.34 23 *e*PKPdf PKPdf 13 13 45.7 +0.6
DUG *e*PP PP 13 15 21.3 -8.2
DUG LR LR
comp=Z,3μm,20.0s,MS5.9
JLU Jordanelle 124.48 21 *e*PKPdf PKPdf 13 13 46.0 +0.6
DAU Daniels Canyon 124.72 21 *e*PKIKP PKPdf 13 13 46.3 +0.4
DAU *e* 13 15 32.6
NLU North Lily Min 124.82 22 *e*PKPdf PKPdf 13 13 46.8 +0.7
NLU *e*PP PP 13 15 31.8 -1.0
RWWY Rawlins 124.88 17 *e*PKPdf PKPdf 13 13 46.5 +0.3
RWWY *e*PP PP 13 15 32.2 -0.8
MPU Maple Canyon 124.93 22 *e*PKPdf PKPdf 13 13 46.8 +0.5
MPU *e*PP PP 13 15 34.0 +0.5
ECSD EROS Data Cent 125.13 7 *e*PKPdf PKPdf 13 13 46.3 -0.3
ECSD *e*PP PP 13 15 26.0 -8.6
ECSD LR LR
comp=Z,4μm,20.0s,MS6.0
DAC Darwin (Calif) 125.57 29 PFAKE 13 14 00.0 +12
DAC LR LR
comp=Z,3μm,19.0s,MS6.0
ISA Isabella 125.63 30 *e*PKIKP PKPdf 13 13 48.6 +0.8
TMUT Trail Mountain 125.72 22 *e*PKPdf PKPdf 13 13 48.5 +0.7
PHWY Pilot Hill 125.73 16 *e*PKPdf PKPdf 13 13 47.5 -0.3
PHWY *e*PP PP 13 15 35.5 -3.2
BINY Binghamton 126.00 349 *e*PKPdf PKPdf 13 13 48.3 0.0
BINY LR LR
comp=Z,5μm,22.0s,MS6.2
MVU Marysvale 126.03 23 PFAKE 13 14 00.0 +12
MVU LR LR
comp=Z,3μm,19.0s,MS5.9
MSU Marysvale 126.04 23 *e*PKIKP PKPdf 13 13 50.1 +1.6
SRU San Rafael 126.13 21 *e*PKIKP PKPdf 13 13 47.7 -0.9
SRU *e* 13 15 39.8
ARUT Antelope Range 126.16 25 *e*PKIKP PKPdf 13 13 50.3 +1.6
CCUT Cedar City 126.40 25 *e*PKPdf PKPdf 13 13 50.1 +0.9
JFWS Jewell Farm 126.45 2 *e*PKIKP PKPdf 13 13 48.3 -0.8
JFWS MLR MLR
comp=Z,6μm,20.0s,MS6.2
ERPA Erie 126.73 352 *e*PKPdf PKPdf 13 13 49.7 0.0
ERPA LR LR
comp=Z,5μm,19.0s,MS6.2
GSC Goldstone 126.74 29 *e*PKIKP PKPdf 13 13 50.9 +1.0
OGNE Ogallala 126.90 13 *e*PKPdf PKPdf 13 13 50.1 +0.1
OGNE LR LR
comp=Z,5μm,19.0s,MS6.2
AAM Ann Arbor 126.92 356 PFAKE 13 14 00.0 +10
AAM LR LR
comp=Z,8μm,22.0s,MS6.4
PASC Pasadena Art C 126.96 31 *e*PKPdf PKPdf 13 13 50.9 +0.6
PASC *e*PP PP 13 15 46.9 -0.4
MWC Mount Wilson 126.98 31 *e*PKIKP PKPdf 13 13 51.5 +1.1
MWC *e* 13 15 47.9
ISCO Idaho Springs 127.08 17 *e*PKIKP PKPdf 13 13 50.9 +0.5
ISCO MLR MLR
comp=Z,4μm,19.0s,MS6.1
SMCO Snowmass 127.25 18 *e*PKPdf PKPdf 13 13 51.1 +0.3
SCIA State Center 127.29 5 *e*PKPdf PKPdf 13 13 50.8 0.0
SCIA *e*PP PP 13 15 48.1 -0.8
SCIA LR LR
comp=Z,6μm,21.0s,MS6.2
PV04 Paradox Valley 127.34 20 *e*PKPdf PKPdf 13 13 51.1 +0.1
PV01 Paradox Valley 127.69 20 *e*PKPdf PKPdf 13 13 52.0 +0.4
LDFC Landfair 127.72 28 *e*PKPdf PKPdf 13 13 51.8 +0.1
LDFC *e*PP PP 13 15 53.5 +1.4
SSPA Standing Stone 127.86 350 *e*PKPdf PKPdf 13 13 51.6 -0.3
SSPA LR LR
comp=Z,4μm,19.0s,MS6.1
RCBR Riachuelo 127.99 271 PFAKE 13 14 00.0 +7.2
RCBR LR LR
comp=Z,3μm,21.0s,MS5.9
PFO Pinyon Flat Ob 128.27 30 PKIKP PKPdf 13 13 54.1 +1.2
PFO *e* 13 15 55.0
PFO MLR MLR
comp=Z,2μm,20.0s,MS5.9
MVCO Mesa Verde 128.54 21 *e*PKPdf PKPdf 13 13 54.3 +1.0
MVCO LR LR
comp=Z,5μm,20.0s,MS6.2
HDIL Hopedale 128.83 1 *e*PKPdf PKPdf 13 13 53.3 -0.4
HDIL *e*PP PP 13 15 58.1 -0.8
HDIL LR LR
comp=Z,4μm,22.0s,MS6.1
TAOE Nuku Hiva Isla 128.90 93 *e*PP PP 13 15 55.0 -6.9
comp=Z,1μm,24.3s
TAOE *e*SS SS 13 33 14.7 -5.2
comp=Z,4μm,31.6s
TAOE *e*LQ 13 48 55.3
comp=Z,2μm,33.6s
TAOE *e*LR LR 13 54 20.3
comp=Z,6μm,36.5s
BAR Barrett 128.91 31 *e*PKPdf PKPdf 13 13 53.7 -0.4
ACSO Alum Creek Sta 128.93 355 *e*PKPdf PKPdf 13 13 53.3 -0.6
ACSO LR LR
comp=Z,6μm,22.0s,MS6.2
WUAZ Wupatki 128.96 24 *e*PKPdf PKPdf 13 13 54.9 +0.7
WUAZ LR LR
comp=Z,2μm,21.0s,MS5.8
SDCO Great Sand Dun 129.02 18 *e*PKPdf PKPdf 13 13 54.7 +0.5
SDCO *e*PP PP 13 16 00.9 +0.5
SDCO LR LR
comp=Z,6μm,21.0s,MS6.2
MCWV Mont Chateau 129.13 352 *e*PKPdf PKPdf 13 13 54.6 +0.3
MCWV LR LR
comp=Z,10μm,22.0s,MS6.5
CBKS Cedar Bluff 129.43 12 *e*PKIKP PKPdf 13 13 55.2 +0.3
CBKS MLR MLR
comp=Z,5μm,19.0s,MS6.2
GLA Glamis 129.51 29 *e*PKIKP PKPdf 13 13 56.2 +0.9
KSU1 Kansas State U 129.69 8 *e*PKPdf PKPdf 13 13 55.5 0.0
KSU1 LR LR
comp=Z,7μm,20.0s,MS6.3
CBN Corbin 130.13 349 *e*PKPdf PKPdf 13 13 49.6 -6.7
CBN LR LR
comp=Z,7μm,21.0s,MS6.3
OLIL Olney 130.66 360 *e*PKPdf PKPdf 13 13 57.8 +0.5
WCI Wyandotte Cave 131.13 358 *e*PKIKP PKPdf 13 13 57.6 -0.6
WCI *e* 13 16 12.7
WCI MLR MLR
comp=Z,5μm,20.0s,MS6.2
CCM Cathedral Cave 131.26 3 *e*PKIKP PKPdf 13 13 57.1 -1.3
CCM MLR MLR
comp=Z,6μm,22.0s,MS6.3
ANMO Albuquerque 131.28 20 *e*PKIKP PKPdf 13 14 00.0 +1.4
ANMO *e* 13 16 12.2
ANMO MLR MLR
comp=Z,6μm,20.0s
BBSR BB Station 131.46 333 PFAKE 13 14 10.0 +11
BBSR LR LR
comp=Z,3μm,20.0s,MS5.9
LAZ Ladron 131.55 21 *e*PKPdf PKPdf 13 14 00.1 +1.0
BLA Blacksburg 131.61 352 *e*PKPdf PKPdf 13 13 59.2 +0.1
BLA *e*PP PP 13 16 12.7 -4.4
BLA LR LR
comp=Z,8μm,22.0s,MS6.4
ELN Prospectdale 131.64 352 *e*PKPdf PKPdf 13 13 58.8 -0.4
SIUC Southern Illin 131.67 1 *e*PKPdf PKPdf 13 13 59.6 +0.4
BNM Barren Site 131.95 21 *e*PKPdf PKPdf 13 14 00.8 +0.9
TUC Tucson 131.97 26 *e*PKIKP PKPdf 13 13 59.0 -0.9
TUC MLR MLR
comp=Z,2μm,20.0s,MS5.8
AMTX Amarillo 132.76 15 PFAKE 13 14 10.0 +8.6
AMTX LR LR
comp=Z,5μm,20.0s,MS6.2
CNNC Cliffs of the 133.10 348 PFAKE 13 14 10.0 +8.0
CNNC LR LR
comp=Z,5μm,20.0s,MS6.2
WVT Waverly 133.26 360 *e*PKIKP PKPdf 13 14 02.0 -0.3
WVT MLR MLR
comp=Z,7μm,19.0s,MS6.4
TKL Tuckaleechee C 133.53 355 *e*PKIKP PKPdf 13 14 02.9 +0.1
WMOK Wichita Mounta 133.56 12 PFAKE 13 14 10.0 +7.1
WMOK LR LR
comp=Z,5μm,20.0s,MS6.2
CPCT Cooper Cave 133.80 356 *e*PKPdf PKPdf 13 14 03.3 0.0
RKT Rikitea 133.90 112 *e*PP PP 13 16 32.2 -1.7
comp=Z,2μm,25.5s
RKT *e*LR LR 13 56 45.8
comp=Z,7μm,37.8s
SWET Sewanee 134.12 357 *e*PKPdf PKPdf 13 14 03.3 -0.6
UALR University of 134.45 5 *e*PKPdf PKPdf 13 14 04.8 +0.3
UALR *e*PP PP 13 16 35.3 +0.1
MIAR Mount Ida 134.56 6 *e*PKIKP PKPdf 13 14 03.5 -1.2
MIAR MLR MLR
comp=Z,5μm,19.0s,MS6.3
JSC Jenkinsville 134.61 352 *e*PKIKP PKPdf 13 14 04.8 -0.1
MNTX Cornudas Mount 134.61 21 PFAKE 13 14 20.0 +15
MNTX LR LR
comp=Z,3μm,20.0s,MS6.1
OXF Oxford 134.86 1 PFAKE 13 14 20.0 +15
OXF LR LR
comp=Z,5μm,21.0s,MS6.2
NHSC New Hope 135.60 350 PFAKE 13 14 20.0 +13
NHSC LR LR
comp=Z,5μm,21.0s,MS6.2
GOGA Godfrey 135.73 354 *e*PKIKP PKPdf 13 14 06.6 -0.4
GOGA MLR MLR
comp=Z,6μm,21.0s,MS6.3
LRAL Lakeview Retre 136.33 358 *e*PKPdf PKPdf 13 14 06.5 -1.5
LRAL LR LR
comp=Z,5μm,22.0s,MS6.2
VBMS Vicksburg 137.11 3 *e*PKPdf PKPdf 13 14 10.5 +1.0
VBMS LR LR
comp=Z,5μm,20.0s,MS6.3
NATX Nacogdoches 137.18 8 PFAKE 13 14 20.0 +10
NATX LR LR
comp=Z,6μm,20.0s,MS6.3
TXAR Lajitas Array 137.36 20 PKhKP PKPpre 13 13 58.4
comp=Z,1.3nm,0.8s,baz=283,slow=1.4,SNR=11
TXAR PKP PKPdf 13 14 10.2 0.0
comp=Z,17nm,1.0s,baz=280,slow=0.5,SNR=25
TXAR PP PP 13 16 47.5 -6.3
comp=Z,2.6nm,1.0s,baz=347,slow=3.7,SNR=3.2
TXAR Lajitas Array 137.36 20 PKP PKPdf 13 14 10.2 0.0
TXAR PP PP 13 16 47.5 -6.3
JCT Junction City 137.42 15 PFAKE 13 14 20.0 +10
JCT LR LR
comp=Z,5μm,21.0s,MS6.3
BRAL Brewton 138.35 358 *e*PKPdf PKPdf 13 14 12.2 +0.3
BRAL LR LR
comp=Z,6μm,19.0s,MS6.4
HKT Hockley 138.77 10 PFAKE 13 14 20.0 +7.3
HKT LR LR
comp=Z,6μm,19.0s,MS6.4
SPB Sao Paulo 139.14 246 PFAKE 13 14 30.0 +17
SPB LR LR
comp=Z,3μm,19.0s,MS6.1
DWPF Disney 140.69 350 PFAKE 13 14 30.0 +14
DWPF LR LR
comp=Z,5μm,22.0s,MS6.2
KVTX Kingsville 140.69 14 PFAKE 13 14 30.0 +14
KVTX LR LR
comp=Z,4μm,20.0s,MS6.1
ANWB Willy Bob 141.42 317 PFAKE 13 14 30.0 +12
ANWB LR LR
comp=Z,2μm,22.0s,MS5.9
BBGH Gun Hill 142.84 309 PFAKE 13 14 30.0 +10
BBGH LR LR
comp=Z,4μm,20.0s,MS6.1
FDF Fort de France 142.99 313 PFAKE 13 14 30.0 +9.4
FDF LR LR
comp=Z,2μm,20.0s,MS6.0
CBYP Canovanas 143.56 322 *e*PKPdf PKPdf 13 14 18.6 -2.9
GRTK Grand Turk 143.69 332 PFAKE 13 14 30.0 +8.3
GRTK LR LR
comp=Z,3μm,20.0s,MS6.0
SJG San Juan 143.86 323 *e*PKIKP PKPdf 13 14 19.2 -2.9
SJG MLR MLR
comp=Z,2μm,19.0s
TRQA Tornquist 144.12 217 *e*PKPdf PKPdf 13 14 19.9 -2.1
TRQA LR LR
comp=Z,5μm,19.0s,MS6.3
AGPR Aguadilla, PR 144.14 324 *e*PKPdf PKPdf 13 14 20.9 -1.7
ICM Isla Caja Muer 144.25 323 *e*PKPdf PKPdf 13 14 21.1 -1.7
CRPR Cabo Rojo, PR 144.51 324 *e*PKPdf PKPdf 13 14 21.8 -1.4
GRGR Grenville 145.06 310 *e*PKPbc PKPbc 13 14 23.8 +0.1
GRGR LR LR
comp=Z,2μm,20.0s,MS5.8
SDDR Presa de Saban 145.94 330 *e*PKPbc PKPbc 13 14 27.1 +0.8
SDDR LR LR
comp=Z,3μm,21.0s,MS6.1
PLCA Paso Flores 146.39 205 PKPbc PKPbc 13 14 27.4 +0.4
comp=Z,40nm,0.7s,baz=146,slow=4.2,SNR=81
PLCA Paso Flores 146.39 205 *e*PKPbc PKPbc 13 14 27.4 +0.4
PLCA LR LR
comp=Z,4μm,19.0s,MS6.2
GTBY Guantanamo Bay 146.77 337 *e*PKPbc PKPbc 13 14 28.9 +0.1
GTBY LR LR
comp=Z,3μm,20.0s,MS6.1
CPUP Villa Florida 147.00 238 PKPbc PKPbc 13 14 27.6 -1.6
comp=Z,55nm,0.9s,baz=81,slow=3.5,SNR=47
CPUP Villa Florida 147.00 238 PFAKE 13 14 40.0 +13
CPUP LR LR
comp=Z,453nm,20.0s,MS5.2
BBJ Bamboo Saint A 148.97 339‖ *e*P PKPdf 13 14 31.3 +0.6
BBJ Bamboo Saint A 148.97 339‖ *i*P PKPbc 13 14 35.4 +0.6
GWJ Greenwich 149.07 338⇑ *e*P PKPdf 13 14 31.2 +0.3
GWJ Greenwich 149.07 338 *i*P PKPbc 13 14 35.5 +0.6
STH Stony Hill 149.09 338⇑ *e*P PKPdf 13 14 31.9 +1.0
STH Stony Hill 149.09 338 *i*P PKPbc 13 14 35.5 +0.5
TEIG Tepich 149.10 0 *e*PKPbc PKPbc 13 14 35.4 +0.4
TEIG *e*PKPab PKPab 13 14 39.6 +0.5
TEIG LR LR
comp=Z,4μm,21.0s,MS6.2
HOJ Hope 149.14 338⇑ *e*P PKPdf 13 14 32.8 +1.8
HOJ Hope 149.14 338⇑ *i*P PKPbc 13 14 35.9 +0.8
MTDJ Mount Denham 149.21 340 *e*PKPdf PKPdf 13 14 31.9 +0.8
MTDJ *e*PKPbc PKPbc 13 14 36.2 +0.9
MTDJ LR LR
comp=Z,3μm,20.0s,MS6.1
TGUH Tegucigalpa,Un 155.22 358 *e*PKPdf PKPdf 13 14 41.4 +1.3
TGUH LR LR
comp=Z,4μm,22.0s,MS6.2
LCO Las Campanas 155.59 220 *e*PKPdf PKPdf 13 14 41.0 +0.8
LCO *e*PKPab PKPab 13 15 07.1 +1.0
LCO LR LR
comp=Z,4μm,20.0s,MS6.3
BCIP Isla Barro Col 158.40 337 PFAKE 13 15 00.0 +16
BCIP LR LR
comp=Z,2μm,21.0s,MS5.9
ROSC El Rosal 159.10 318 PKP PKPdf 13 14 45.9 +0.8
comp=Z,29nm,1.0s,baz=132,slow=7.8,SNR=12
ROSC PKPab PKPab 13 15 22.9 +1.2
comp=Z,47nm,1.1s,baz=84,slow=18,SNR=7.3
ROSC El Rosal 159.10 318 *e*PKPdf PKPdf 13 14 46.1 +1.0
ROSC *e*PKPab PKPab 13 15 23.6 +1.9
LPAZ La Paz 159.70 252 PKP PKPdf 13 14 46.9 +1.2
comp=Z,11nm,1.0s,baz=28,slow=3.5,SNR=14
LPAZ PKPab PKPab 13 15 24.9 +0.6
comp=Z,37nm,1.1s,baz=74,slow=6.2,SNR=14
LPAZ La Paz 159.70 252 PKIKP PKPdf 13 14 46.9 +1.2
LPAZ 13 15 24.9
comp=Z,11nm,1.0s
LPAZ pmax pmax
comp=Z,37nm,1.1s
LPAZ pmax pmax
LPAZ La Paz 159.70 252 PKP PKPdf 13 14 46.9 +1.2
LPAZ PKPab PKPab 13 15 24.9 +0.6
LPAZ LR LR
comp=Z,5μm,19.0s,MS6.4
OTAV Otavalo 165.27 318 *e*PKPdf PKPdf 13 14 51.9 +0.6
OTAV *e*PKPab PKPab 13 15 49.4 +0.7
OTAV LR LR
comp=Z,3μm,19.0s
NNA Nana 168.74 263 PFAKE 13 15 00.0 +6.2
NNA LR LR
comp=Z,5μm,19.0s
PAYG Puerto Ayora 169.68 11 PFAKE 13 15 10.0 +15
PAYG LR LR
comp=Z,3μm,19.0s

IDC 28 13:05:49.9±2.6, 10°.69N×91°.64E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.5/22, mbtmp3.8/4, Error ellipse: s-maj=169.2km s-min=24.2km az=54.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.84**	**349**	P	P	13 13 00.0	+0.3
	1.8nm,0.9s,baz=140,slow=11,SNR=3.6						
WRA	**Warramunga Arr**	**51.90**	**126**	P	P	13 15 00.2	-0.5
	0.6nm,0.7s,baz=308,slow=8.4,SNR=3.5						
ASAR	**Alice Springs**	**53.61**	**130**	P	P	13 15 13.7	+0.5
	0.9nm,0.8s,baz=308,slow=6.3,SNR=4.8						
FINES	**FINESS Array B**	**69.08**	**332**	P	P	13 16 57.3	-0.1
	0.9nm,0.7s,baz=106,slow=10,SNR=3.0						

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*IDC **28** 13:09:05.6±2.8, 10°.71N×91°.82E, h0km, mb4.0/6, mb1 4.2/6, mb1mx3.7/24, mbtmp4.0/6, Error ellipse: s-maj=115.6km s-min=19.7km az=64.0*
*NEIC **28** 13:09:06.5±2.2, 10°.76N×91°.80E, h10km, mb4.5/2, Error ellipse: s-maj=99.2km s-min=14.5km az=62.0*
*ISCJB **28** 13:09:07.6±2.3, 10°.7N±0°.3×91°.7E±0°.6, h33km, mb4.1/8, Error ellipse: s-maj=97.6km s-min=14.1km az=152.0*
ISC 28 13:09:10.0±2.3, 10°.7N±0°.3×91°.7E±0°.6, h35km, n11, σ0s85/11, mb4.1/8, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**36.84**	**349**	*e*P	**P**	**13 16 14.1**	**-0.6**
MKAR	**Makanchi Array**	**36.84**	**349**	P	**P**	**13 16 15.2**	**+0.5**
	2.1nm,0.9s,mb4.0,baz=146,slow=7.3,SNR=4.6						
SONM	**Songino Array**	**39.02**	**16**	P	**P**	**13 16 33.7**	**+0.6**
	1.1nm,0.9s,mb3.6,baz=216,slow=7.1,SNR=3.0						
SONM	**Songino Array**	**39.02**	**16**	P	**P**	**13 16 33.6**	**+0.6**
KURK	**Kurchatov**	**41.32**	**347**	P	**P**	**13 16 52.7**	**+0.6**
	1.3nm,0.3s,mb4.1,baz=179,slow=7.5,SNR=3.9						
KURK	**Kurchatov**	**41.32**	**347**	P	**P**	**13 16 52.7**	**+0.6**
FITZ	**Fitzroy Crossi**	**44.06**	**130**	P	**P**	**13 17 14.6**	**-0.2**
	3.7nm,1.0s,mb4.1,baz=239,slow=5.9,SNR=7.6						
WRA	**Warramunga Arr**	**51.85**	**126**	P	**P**	**13 18 15.2**	**+0.1**
	1.2nm,0.7s,mb4.0,baz=305,slow=8.7,SNR=5.3						
WRAB	**Tennant Creek**	**51.86**	**126**	*e*P	**P**	**13 18 15.0**	**-0.2**
	1.8nm,0.4s,mb4.3						
ASAR	**Alice Springs**	**53.56**	**130**	P	**P**	**13 18 28.4**	**+0.7**
	2.3nm,0.8s,mb4.2,baz=305,slow=6.7,SNR=12						
BPAW	**Bear Paw Mtn.**	**91.85**	**23**	*e*P	**P**	**13 22 11.4**	**-2.7**
	3.1nm,0.8s,mb4.7						

IDC 28 13:12:08.9±11.0, 10°.58N×91°.58E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.5/23, mbtmp3.9/4, Error ellipse: s-maj=601.0km s-min=25.6km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.94**	**349**	P	P	13 19 19.6	0.0
	0.7nm,0.7s,baz=146,slow=10,SNR=3.6						
FITZ	**Fitzroy Crossi**	**44.08**	**130**	P	P	13 20 18.8	-0.2
	2.6nm,0.7s,baz=293,slow=13,SNR=7.5						
WRA	**Warramunga Arr**	**51.88**	**126**	P	P	13 21 19.5	0.0
	1.1nm,0.6s,baz=305,slow=7.9,SNR=13						
ASAR	**Alice Springs**	**53.58**	**130**	P	P	13 21 32.1	+0.1
	0.5nm,0.6s,baz=304,slow=6.9,SNR=5.9						

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*BJI **28** 13:13:05.6, 10°.39N×91°.50E, h29km, mb4.4/7*
*ISCJB **28** 13:13:09.7±0.4, 10°.82N±0°.06×91°.82E±0°.07, h25km, mb4.2/29, Error ellipse: s-maj=10.3km s-min=8.2km az=136.7*
*MOS **28** 13:13:10.6±1.2, 10°.83N×91°.81E, h33km, mb4.7/11, Error ellipse: s-maj=14.4km s-min=10.9km az=102.4*
*NEIC **28** 13:13:11.4±2.4, 10°.83N×91°.79E, h22km±17km, mb3.9/3, Error ellipse: s-maj=8.4km s-min=6.7km az=51.0*
*IDC **28** 13:13:12.1±0.6, 10°.86N×91°.82E, h25km±3km, mb3.9/17, mb1 4.0/18, mb1mx3.9/26, mbtmp3.9/18, ML4.1/1, Error ellipse: s-maj=19.5km s-min=11.2km az=59.0*
ISC 28 13:13:12.2±0.4, 10°.83N±0°.06×91°.81E±0°.06, h27km, h27km±1.3km; pP-P, n51, σ0s90/50, mb4.2/29, 2C-2D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**10.25**	**41**	*e*Pn	**Pn**	**13 15 37.6**	**0.0**
	9.6nm,1.3s						
CMAR	**Chiang Mai Arr**	**10.25**	**41**	Pn	**Pn**	**13 15 36.7**	**-0.9**
	0.4nm,0.3s,baz=238,slow=15,SNR=3.6						
PALK	**Pallekele**	**11.52**	**253**	*e*P	**Pn**	**13 15 54.6**	**-0.5**
PALK				pmax	pmax		
	comp=Z,62nm,1.0s						
PALK	**Pallekele**	**11.52**	**253**	*e*Pn	**Pn**	**13 15 54.6**	**-0.5**
	comp=Z,62nm,1.0s						
PALK				*e*Sn	**Sn**	**13 17 48.0**	**-15**

KSM Kuching 20.59 116 *eP* **P 13 17 50.8 +1.5**
GTA Gaotai 29.35 13 *eP* **P 13 19 14.3 +1.5**
GTA pP pP 13 19 18.8 -1.9
GTA sP sP 13 19 21.5 -2.5
GTA pmax pmax
comp=Z,11nm,1.3s,mb4.4
EKS2 Erkin-Say 35.41 337 *eP* **P 13 20 06.2 +0.4**
MK31 Makanchi Array 36.75 349 *eP* **P 13 20 16.9 -0.3**
MKAR Makanchi Array 36.75 349 P **P 13 20 17.3 +0.1**
comp=Z,3.3nm,0.6s,mb4.3,baz=133,slow=8.5,SNR=18
SONM Songino Array 38.88 16 P **P 13 20 36.1 +0.9**
comp=Z,2.5nm,0.6s,mb4.1,baz=198,slow=9.0,SNR=14
ULN Ulaanbaatar 39.08 16 *eP* **P 13 20 37.1 +0.2**
ULN pmax pmax
comp=Z,2.0nm,0.9s,mb3.9
ULN Ulaanbaatar 39.08 16 *eP* **P 13 20 37.1 +0.2**
comp=Z,2.0nm,0.9s,mb3.9
KURK Kurchatov 41.23 347 P **P 13 20 54.1 -0.5**
comp=Z,6.8nm,1.1s,mb4.2,baz=166,slow=7.6,SNR=6.7
KURK pP pP 13 21 01.2 -1.5
comp=Z,1.1nm,0.2s,baz=164,slow=7.3,SNR=2.4
KURK PcP PcP 13 22 53.9 +0.6
comp=Z,0.6nm,0.2s,baz=164,slow=3.8,SNR=3.5
KURK Kurchatov 41.23 347‖ *eP* **P 13 20 55.5 +0.9**
KURK pmax pmax
comp=Z,3.0nm,0.8s,mb4.0
KSRS Korea Array 41.87 45 P **P 13 20 58.8 -1.4**
comp=Z,1.0nm,0.6s,mb3.6,baz=246,slow=8.6,SNR=4.2
KSRS pP pP 13 21 07.0 -1.3
comp=Z,0.9nm,0.5s,baz=241,slow=9.2,SNR=3.3
ZAA0 Zalesovo Array 43.37 354 *eP* **P 13 21 11.8 -0.2**
ZAA0 epP pP 13 21 20.2 0.0
ZALV Zalesovo Beam 43.37 354 P **P 13 21 12.1 0.0**
comp=Z,4.2nm,0.7s,mb4.3,baz=170,slow=9.0,SNR=12
ZALV pP pP 13 21 20.3 +0.2
comp=Z,2.0nm,0.5s,baz=176,slow=9.8,SNR=5.7
FITZ Fitzroy Crossi 44.06 130 P **P 13 21 17.6 -0.5**
comp=Z,2.6nm,0.5s,mb4.2,baz=333,slow=8.6,SNR=12
FITZ pP pP 13 21 26.3 0.0
comp=Z,7.6nm,0.7s,baz=315,slow=4.4,SNR=9.1
BVAR Borovoye Array 45.48 342 P **P 13 21 27.9 -1.0**
comp=Z,1.2nm,0.8s,mb3.8,baz=120,slow=10,SNR=4.8
AKTK Aktyubinsk 48.27 332 P **P 13 21 50.7 -0.1**
AKTO Aktyubinsk 48.27 332 P **P 13 21 50.7 -0.1**
comp=Z,0.8nm,0.6s,mb4.0,baz=127,slow=18,SNR=3.7
MJAR Matsushiro Arr 48.98 51 P **P 13 21 57.6 +1.1**
comp=Z,0.9nm,1.0s,mb3.8,baz=248,slow=12,SNR=4.8
WRA Warramunga Arr 51.84 126 P **P 13 22 18.4 0.0**
comp=Z,1.3nm,0.3s,mb4.3,baz=307,slow=8.2,SNR=24
WRAB Tennant Creek 51.84 126 *eP* **P 13 22 17.8 -0.6**
WRAB pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
WRAB Tennant Creek 51.84 126 *eP* **P 13 22 17.8 -0.6**
comp=Z,2.8nm,0.5s,mb4.5
ARU Arti 52.30 337*d iP* **P 13 22 22.0 +0.8**
ARU 13 24 16.4
ARU S **S 13 29 47.4 +2.7**
ARU pmax pmax
comp=Z,14nm,2.5s,mb4.5
ASAR Alice Springs 53.56 130 P **P 13 22 31.2 +0.2**
comp=Z,3.0nm,0.7s,mb4.3,baz=304,slow=6.9,SNR=13
KIV Kislovodsk 53.60 317‖ *eP* **P 13 22 33.2 +2.1**
KIV *e* 13 23 35.5
KIV pmax pmax
comp=Z,3.0nm,0.4s,mb4.6
BRTR Keskin Array B 58.78 310 P **P 13 23 07.3 -0.8**
comp=Z,1.2nm,0.8s,mb4.0,baz=126,slow=6.3,SNR=4.5
OBN Obninsk 61.67 328 *eP* **P 13 23 27.5 -0.1**
OBN *e* 13 24 08.9
OBN pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
CTAO Charters Tower 61.75 120 *eP* **P 13 23 28.7 -0.1**
CTAO pmax pmax
comp=Z,38nm,1.5s,mb5.3
CTAO Charters Tower 61.75 120 *eP* **P 13 23 28.6 -0.1**
comp=Z,38nm,1.5s,mb5.3
STKA Stephens Creek 63.79 134 P **P 13 23 42.2 +0.1**
comp=Z,2.0nm,0.7s,mb4.2,baz=307,slow=9.2,SNR=6.4
STKA pP pP 13 23 50.0 -0.6
comp=Z,2.2nm,0.5s,baz=286,slow=4.6,SNR=2.6
STKA Stephens Creek 63.79 134 *eP* **P 13 23 41.0 -1.2**
comp=Z,0.5nm,0.6s,mb3.7
TIXI Tiksi 64.83 12 *eP* **P 13 23 46.6 -1.7**
TIXI pmax pmax
comp=Z,10.0nm,1.5s,mb4.6
JOF Joensuu 67.21 334 *eP* **P 13 24 03.5 -0.2**
JOF pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
JOF Joensuu 67.21 334 *ep* **P 13 24 03.5 -0.2**
comp=Z,8.9nm,0.9s,mb4.8
FINES FINESS Array B 69.04 332 P **P 13 24 15.4 +0.1**
comp=Z,2.4nm,0.7s,mb4.2,baz=86,slow=9.8,SNR=7.9
KAF Kangasniemi 69.13 333 *eP* **P 13 24 12.6 -3.2**
KAF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
KAF Kangasniemi 69.13 333 *ep* **P 13 24 12.6 -3.2**
comp=Z,5.0nm,0.9s,mb4.4
ARCES ARCESS Array B 71.73 340 P **P 13 24 30.9 -0.6**
comp=Z,1.0nm,0.7s,mb3.9,baz=86,slow=6.3,SNR=5.8
BILL Bilibino 74.22 22‖ *eP* **P 13 24 47.1 +0.8**
BILL pmax pmax
comp=Z,6.0nm,1.7s,mb4.2
CLL Collm 74.64 320 *eP* **P 13 24 49.0 0.0**
CLL pmax pmax
comp=Z,10.0nm,1.5s,mb4.5
BOSA Boshof 75.24 237 P **P 13 24 54.2 +1.2**
comp=Z,2.0nm,0.8s,mb4.1,baz=70,slow=4.8,SNR=4.1
BOSA pP pP 13 25 01.9 +0.4
comp=Z,3.5nm,0.7s,baz=86,slow=12,SNR=3.3
BOSA Boshof 75.24 237 P **P 13 24 54.2 +1.2**
BOSA pP pP 13 25 01.9 +0.4
NB2 NORSAR Subarra 76.05 330 P **P 13 24 54.9 -2.1**
comp=Z,2.3nm,0.9s,mb4.1,baz=93,slow=5.9
NOA NORSAR Array B 76.05 330 P **P 13 24 56.5 -0.5**
comp=Z,0.5nm,0.9s,mb3.4,baz=124,slow=8.9,SNR=3.2
NOA pP pP 13 25 04.7 -0.8
comp=Z,0.9nm,0.7s,baz=93,slow=5.8,SNR=4.2
NOA NORSAR Array B 76.05 330 P **P 13 24 56.5 -0.5**
NOA pP pP 13 25 04.7 -0.8
NVAR Mina Array Bea 123.50 28 PKP PKPdf 13 32 09.4 +2.0
comp=Z,0.2nm,0.4s,baz=321,slow=2.6,SNR=3.4
NVAR pPKP pPKPdf 13 32 17.1 +0.6
comp=Z,0.2nm,0.4s,baz=3.8,slow=2.7,SNR=2.5
NVAR Mina Array Bea 123.50 28 PKP PKPdf 13 32 09.4 +1.9
NVAR pPKP pPKPdf 13 32 17.1 +0.6
TXAR Lajitas Array 137.37 20 PKP PKPdf 13 32 33.0 -1.0
comp=Z,1.3nm,1.2s,baz=332,slow=1.5,SNR=3.7

IDC 28 13:19:12.9±5.7,19°.67S×175°.59W,h0km,mb4.2/3,
mb1 4.4/3,mb1mx3.8/17,mbtmp4.2/3,Error ellipse:
s-maj=250.8km s-min=93.2km az=157.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**35.83**	**263**	P	P	13 26 16.1	+1.6
	2.8nm,0.7s,baz=96,slow=9.2,SNR=2.9						
ASAR	**Alice Springs**	**46.91**	**256**	P	P	13 27 45.0	-0.6
	1.6nm,0.5s,baz=96,slow=7.6,SNR=32						
WRA	**Warramunga Arr**	**46.96**	**261**	P	P	13 27 45.0	-1.0
	0.9nm,0.3s,baz=96,slow=7.5,SNR=42						
AKASG	**Malin Array Be**	**143.33**	**333**	PKP	PKPdf	13 38 49.1	0.0
	0.9nm,0.4s,baz=48,slow=3.4,SNR=4.9						

BJI ***28*** *13:24:59.9,6°.02S×131°.26E,h28km,mB5.2/2,mb5.0/19*
IDC ***28*** *13:25:01.3±0.5,5°.64S×130°.83E,h0km,mb4.7/17,*
mb1 4.7/20,mb1mx4.7/24,mbtmp4.7/20,ML4.9/3,Error
ellipse: s-maj=23.2km s-min=11.9km az=79.0
MOS ***28*** *13:25:04.4±1.1,5°.62S×130°.83E,h33km,mb5.2/17,Error*
ellipse: s-maj=16.7km s-min=7.8km az=106.9
NEIC ***28*** *13:25:06.2±0.3,5°.67S×130°.89E,h35km,mb4.8/18,Error*
ellipse: s-maj=11.6km s-min=6.1km az=74.0
ISCJB ***28*** *13:25:09.3±0.7,5°.70S±0°.04×130°.93E±0°.05,h83km±6km,*
mb4.8/51,Error ellipse: s-maj=8.1km s-min=5.8km
az=157.3
DJA ***28*** *13:25:11,5°.76S×131°.04E,h102km,mb4.9/12*
ISC 28 13:25:11.1±0.5,5.70S±0°.04×130°.91E±0°.04,h82km±5km,
n130,σ1§19/118,mb4.8/51,2C-1D,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**1.81**	**88**	P	**Pn**	13 25 41.5	+0.9
TLE				S	**Sn**	13 26 04.4	+1.3
AAI	**Ambon**	**3.37**	**306**	P	**Pn**	13 26 01.7	+0.2
NLAI	**Namlea**	**4.52**	**303**	P	Px	13 26 19.2	
LBMI	**Labuha**	**6.07**	**326**	P	**Pn**	**13 26 38.7**	**+0.3**
	1.1nm3μm114nm,0.8s						
BAKI	**Biak**	**6.85**	**49**	P	**Pn**	**13 26 48.2**	**-0.7**
	1.0nm275nm,0.8s						
BAKI				S	**Sn**	**13 28 00.4**	**-5.1**
	1.0nm275nm,0.8s						
KAKA	**Kakadu**	**7.13**	**168**	*eP*	**Pn**	**13 26 50.7**	**-2.0**
	63nm,0.2s						
KAKA				*eS*	**Sn**	**13 28 07.0**	**-5.3**
KAKA	**Kakadu**	**7.13**	**168**	*ePn*	**Pn**	**13 26 50.4**	**-2.3**
	205nm,0.4s						
KAKA				*eSn*	**Sn**	**13 28 06.1**	**-6.1**
KAKA	**Kakadu**	**7.13**	**168**	P	**Pn**	**13 26 51.2**	**-1.5**
	180nm,0.5s						
KDI	**Kendari**	**8.45**	**281**	P	Px	13 27 15.4	
	45nm,1.3s						
SMPI	**Sarmi**	**8.61**	**65**	P	**Pn**	**13 27 11.8**	**-1.1**
	29nm,1.0s						
MMRI	**Maumere**	**9.09**	**251**	P	Px	13 27 24.7	
	68nm,1.1s						
KMSI	**Cibinong**	**9.31**	**312**	P	**Pn**	**13 27 24.4**	**+1.8**
	96nm,1.2s						
LUWI	**Luwuk**	**9.35**	**299**	P	**Pn**	**13 27 24.3**	**+1.2**
	56nm,1.2s						
KNA	**Kununurra**	**10.21**	**192**	P	**Pn**	**13 27 32.4**	**-2.4**
	728nm,0.5s						
APSI	**Ampana**	**10.40**	**297**	P	**Pn**	**13 27 39.3**	**+1.9**
	56nm,1.1s						
TTSI	**Tana Toraja**	**11.37**	**283**	P	Px	13 27 53.7	
	56nm,0.9s,5μm						
FITZ	**Fitzroy Crossi**	**13.36**	**202**	*eP*	**Pn**	**13 28 12.4**	**-5.0**
	31nm,0.4s						
FITZ				*eS*	Sx	13 30 33.0	
FITZ	**Fitzroy Crossi**	**13.36**	**202**	Pn	**Pn**	**13 28 12.6**	**-4.7**
	6.5nm,0.3s,baz=37,slow=10,SNR=109						
FITZ				Sn	Sx	13 30 32.9	
	4.8nm,0.3s,baz=91,slow=22,SNR=7.0						
FITZ	**Fitzroy Crossi**	**13.36**	**202**	P	**Pn**	**13 28 13.5**	**-3.9**
WRAB	**Tennant Creek**	**14.54**	**167**	*eP*	**Pn**	**13 28 27.0**	**-5.7**
WRAB				pmax	pmax		
	comp=Z,14nm,2.2s						
WRAB	**Tennant Creek**	**14.54**	**167**	*ePn*	**Pn**	**13 28 27.0**	**-5.7**
	comp=Z,14nm,2.2s						
WRAB				*eSn*	Sx	13 31 00.0	
WRA	**Warramunga Arr**	**14.54**	**167**	Pn	**Pn**	**13 28 27.4**	**-5.4**
	comp=Z,4.2nm,0.3s,baz=345,slow=13,SNR=57						
WRA				Sn	Sx	13 31 00.3	
	comp=Z,8.5nm,0.3s,baz=351,slow=24,SNR=7.4						
COEN	**Coen**	**14.60**	**125**	*ePn*	**Pn**	**13 28 30.8**	**-2.8**
	comp=Z,254nm,1.0s						
ASAR	**Alice Springs**	**18.09**	**171**	P	**Pn**	**13 29 15.1**	**-1.9**
	comp=Z,6.1nm,0.3s,baz=352,slow=9.5,SNR=136						
ASAR				S	Sx	13 32 25.6	
	comp=Z,2.3nm,0.3s,baz=352,slow=26,SNR=9.2						
KKM	**Kota Kinabalu**	**18.75**	**308**	*eP*	**Pn**	**13 29 23.3**	**-1.7**
	comp=Z,23nm,0.8s						
MBWA	**Marble Bar**	**18.81**	**214**	*eP*	**Pn**	**13 29 25.2**	**-0.4**
MBWA	**Marble Bar**	**18.81**	**214**	*eP*	**Pn**	**13 29 24.8**	**-0.9**
	comp=Z,8.8nm,0.4s						
MBWA				*eSn*	Sx	13 32 31.2	
CTA	**Charters Tower**	**20.66**	**135**	*eP*	**P**	**13 29 46.4**	**+2.0**
	comp=Z,10nm,1.1s						
CTA	**Charters Tower**	**20.66**	**135**	P	**P**	**13 29 46.5**	**+2.1**
	comp=Z,11nm,0.9s,baz=319,slow=13,SNR=5.8						
CTA	**Charters Tower**	**20.66**	**135**	P	**P**	**13 29 46.5**	**+2.1**
CTAO	**Charters Tower**	**20.66**	**135**	*eP*	**P**	**13 29 43.4**	**-1.0**
CTAO				pmax	pmax		
	comp=Z,27nm,1.1s						
CTAO	**Charters Tower**	**20.66**	**135**	*eP*	**P**	**13 29 43.4**	**-1.0**
	comp=Z,27nm,1.1s						
GUMO	**Guam**	**23.65**	**36**	*eP*	**P**	**13 30 15.4**	**+0.3**
GUMO				pmax	pmax		
	comp=Z,98nm,1.1s,mb5.0						
GUMO	**Guam**	**23.65**	**36**	*eP*	**P**	**13 30 15.4**	**+0.3**
	comp=Z,98nm,1.1s,mb5.0						
FORT	**Forrest**	**25.09**	**186**	*eP*	**P**	**13 30 29.9**	**+1.8**
	comp=Z,16nm,0.5s,mb4.7						
KMBL	**Kambalda**	**26.90**	**197**	*eP*	**P**	**13 30 45.3**	**+0.8**
	comp=Z,54nm,0.4s,mb5.4						
STKA	**Stephens Creek**	**27.89**	**160**	*eP*	**P**	**13 30 54.5**	**+1.2**
	comp=Z,6.1nm,1.0s,mb4.1						
STKA	**Stephens Creek**	**27.89**	**160**	P	**P**	**13 30 54.5**	**+1.2**
	comp=Z,4.5nm,0.7s,mb4.1,baz=329,slow=8.6,SNR=12						
STKA	**Stephens Creek**	**27.89**	**160**	*eP*	**P**	**13 30 53.7**	**+0.4**
	comp=Z,0.7nm,0.6s						
KLBR	**Kellerberrin**	**28.56**	**204**	*eP*	**P**	**13 31 00.0**	**+0.8**
	comp=Z,114nm,1.6s,mb5.2						
CMSA	**Cobar Meteorol**	**29.20**	**153**	*eP*	**P**	**13 31 06.3**	**+1.4**
NWAO	**Narrogin (SRO)**	**29.94**	**203**	P	**P**	**13 31 12.4**	**+0.9**
	comp=Z,3.2nm,0.3s,mb4.4,baz=16,slow=11,SNR=7.0						
NWAO	**Narrogin (SRO)**	**29.94**	**203**	*eP*	**P**	**13 31 12.3**	**+0.8**
NWAO				pmax	pmax		
	comp=Z,3.0nm,0.4s						
NWAO	**Narrogin (SRO)**	**29.94**	**203**	*eP*	**P**	**13 31 12.3**	**+0.8**
	comp=Z,2.7nm,0.4s,mb4.2						
ARMA	**Armidale**	**31.38**	**144**	*eP*	**P**	**13 31 27.0**	**+2.8**
WHN	**Wuhan**	**39.38**	**337**	P	**P**	**13 32 33.0**	**+0.3**
CMAR	**Chiang Mai Arr**	**39.62**	**308**	P	**P**	**13 32 34.8**	**-0.2**
	comp=Z,5.6nm,0.7s,mb4.5,baz=140,slow=7.7,SNR=32						
CHTO	**Chiang Mai**	**39.82**	**308**	*eP*	**P**	**13 32 36.0**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.7						
CHTO	**Chiang Mai**	**39.82**	**308**	*eP*	**P**	**13 32 36.0**	**-0.6**
	comp=Z,10nm,0.9s,mb4.7						
KMI	**Kunming**	**41.10**	**319**	P	**P**	**13 32 48.3**	**+1.2**
KMI				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.9						
MJAR	**Matsushiro Arr**	**42.57**	**9**	P	**P**	**13 32 57.9**	**-1.0**
	comp=Z,10nm,0.9s,mb4.6,baz=188,slow=9.8,SNR=50						
MAJO	**Matsushiro**	**42.57**	**9**	*eP*	**P**	**13 32 57.7**	**-1.2**
MAJO				pmax	pmax		
	comp=Z,25nm,0.9s,mb4.9						
MAJO	**Matsushiro**	**42.57**	**9**	*eP*	**P**	**13 32 57.7**	**-1.2**
	comp=Z,25nm,0.9s,mb4.9						
MAT	**Matsushiro**	**42.57**	**9**	P	**P**	**13 32 57.6**	**-1.3**
KSRS	**Korea Array**	**43.02**	**357**	P	**P**	**13 33 03.1**	**+0.6**
	comp=Z,1.6nm,0.6s,mb4.0,baz=171,slow=8.7,SNR=10						
BJI	**Beijing**	**47.50**	**345**	P	**P**	**13 33 37.5**	**-0.4**
BJI				pmax	pmax		
	comp=Z,45nm,0.7s,mb5.3						
VLA	**Vladivostok**	**48.60**	**1**	*eP*	**P**	**13 33 45.4**	**-0.9**
VLA				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
CN2	**Changchun**	**49.52**	**355**	*eP*	**P**	**13 33 53.5**	**+0.2**
CN2				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.2						
ASAJ	**Asahikawa**	**50.69**	**11**	P	**P**	**13 34 02.4**	**+0.1**
	comp=Z,6.5nm,0.9s,mb4.7,baz=248,slow=11,SNR=5.4						
URZ	**Urewera**	**52.91**	**135**	P	**P**	**13 34 21.5**	**+2.6**
	comp=Z,9.8nm,1.0s,mb4.8,baz=297,slow=9.0,SNR=3.0						
ODAN	**Odare**	**53.11**	**310**	*ePn*	**P**	**13 34 19.4**	**-1.2**
	comp=Z,42nm,0.8s,mb5.5						
TAPN	**Taplejung**	**53.12**	**310**	*ePn*	**P**	**13 34 19.0**	**-1.6**
	comp=Z,26nm,0.6s,mb5.5						
GTA	**Gaotai**	**53.29**	**330**	*eP*	**P**	**13 34 22.5**	**+0.9**
GTA				pP	pP	13 34 26.5	-16
GTA				PcP	PcP	13 35 30.5	+2.2
GTA				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.6						
RAMN	**Ramite**	**53.76**	**309**	*ePn*	**P**	**13 34 24.3**	**-1.0**
	comp=Z,106nm,0.7s						
HABR	**Khabarovsk**	**54.06**	**3**	*eP*	**P**	**13 34 25.5**	**-1.6**
HABR				*e*		13 35 28.6	
HABR				*e*		13 36 27.5	
HABR				*e*PPP		13 37 36.2	
HABR				*e**SS	sS	13 42 22.1	-10
HABR						13 44 09.5	
HABR				pmax	pmax		
	comp=Z,21nm,1.4s,mb5.0						
HABR				pmax	pmax		
	comp=N,9.0nm,1.1s						
HABR				pmax	pmax		
	comp=E,47nm,2.9s						
GUN	**Gumba**	**54.80**	**310**	*ePn*	**P**	**13 34 31.6**	**-1.2**
	comp=E,87nm,0.7s						
PKI	**Pulchoki**	**54.99**	**309**	*ePn*	**P**	**13 34 32.8**	**-1.4**
	comp=E,20nm,0.7s,mb5.3						
KKN	**Kakani**	**55.20**	**310**	*ePn*	**P**	**13 34 34.6**	**-1.1**
	comp=E,50nm,0.9s,mb5.5						
DMN	**Daman**	**55.24**	**309**	*ePn*	**P**	**13 34 35.0**	**-1.0**
	comp=E,48nm,0.9s,mb5.5						
ULN	**Ulaanbaatar**	**57.33**	**341**	*eP*	**P**	**13 34 51.2**	**+0.8**
ULN				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
ULN	**Ulaanbaatar**	**57.33**	**341**	*eP*	**P**	**13 34 51.2**	**+0.7**
	comp=Z,12nm,0.9s,mb4.9						
SONM	**Songino Array**	**57.51**	**341**	P	**P**	**13 34 52.5**	**+0.8**
	comp=Z,5.9nm,0.7s,mb4.7,baz=163,slow=6.5,SNR=25						
CASY	**Casey**	**62.12**	**189**	*eP*	**P**	**13 35 21.3**	**-1.8**
	comp=Z,2.5nm,0.8s,mb4.3						
PETK	**Petropavlovsk-**	**62.81**	**18**	P	**P**	**13 35 28.8**	**+1.0**
	comp=Z,13nm,0.8s,mb4.9,baz=188,slow=4.5,SNR=20						
WMQ	**Urumqi**	**62.82**	**326**	*eP*	**P**	**13 35 29.5**	**+1.4**
WMQ				pmax	pmax		
	comp=Z,42nm,1.0s,mb5.3						
YAK	**Yakutsk**	**67.54**	**359**	*eP*	**P**	**13 35 56.9**	**-1.4**
YAK				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.1						
YAK				pmax	pmax		
	comp=N,9.0nm,1.2s						
YAK	**Yakutsk**	**67.54**	**359**	*eP*	**P**	**13 35 57.6**	**-0.7**
	comp=N,44nm,0.8s,mb5.3						
MK31	**Makanchi Array**	**67.65**	**326**	*eP*	**P**	**13 35 59.7**	**+0.4**
MKAR	**Makanchi Array**	**67.65**	**326**	P	**P**	**13 35 60.0**	**+0.7**
	comp=N,15nm,0.5s,mb5.1,baz=99,slow=12,SNR=173						
MKAR	**Makanchi Array**	**67.65**	**326**	P	**P**	**13 35 60.0**	**+0.7**
KZA	**Kyzart**	**69.39**	**319**	P	**P**	**13 36 11.9**	**+1.6**
	SNR=9.9						
TKM2	**Tokmak 2**	**69.57**	**320**	P	**P**	**13 36 12.5**	**+1.1**
	SNR=16						
TKM2	**Tokmak 2**	**69.57**	**320**	*eP*	**P**	**13 36 11.5**	**+0.1**
TKM2				pmax	pmax		
	comp=Z,24nm,1.1s,mb4.9						
TKM2	**Tokmak 2**	**69.57**	**320**	*eP*	**P**	**13 36 11.5**	**+0.2**
	comp=Z,24nm,1.1s,mb4.9						
UCH	**Uchtor**	**69.94**	**319**	P	**P**	**13 36 15.2**	**+1.6**
	SNR=24						
AAK	**Ala-Archa**	**70.15**	**319**	P	**P**	**13 36 16.6**	**+1.7**
	SNR=5.4						
AAK	**Ala-Archa**	**70.15**	**319**	P	**P**	**13 36 16.6**	**+1.7**
	comp=Z,2.5nm,0.3s,mb4.5,baz=139,slow=3.6,SNR=14						
USP	**Ospenovka**	**70.44**	**320**	P	**P**	**13 36 17.6**	**+1.0**
	SNR=15						
EKS2	**Erkin-Say**	**70.63**	**319**	P	**P**	**13 36 19.3**	**+1.5**
	SNR=12						
EKS2	**Erkin-Say**	**70.63**	**319**	*eP*	**P**	**13 36 19.1**	**+1.3**
EKS2				pmax	pmax		
	comp=Z,21nm,1.1s,mb4.9						
EKS2	**Erkin-Say**	**70.63**	**319**	*eP*	**P**	**13 36 19.1**	**+1.3**
	comp=Z,21nm,1.1s,mb4.9						
ZALV	**Zalesovo Beam**	**70.83**	**333**	P	**P**	**13 36 18.3**	**-0.5**
	comp=Z,5.6nm,0.5s,mb4.6,baz=113,slow=5.0,SNR=25						
ZALV	**Zalesovo Beam**	**70.83**	**333**	P	**P**	**13 36 18.3**	**-0.5**
KURK	**Kurchatov**	**71.89**	**328**	P	**P**	**13 36 25.5**	**+0.3**
	comp=Z,11nm,0.8s,mb4.7,baz=127,slow=5.0,SNR=18						
KURK	**Kurchatov**	**71.89**	**328***c iP*		**P**	**13 36 25.5**	**+0.2**
KURK				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.9						
KURK	**Kurchatov**	**71.89**	**328**	*eP*	**P**	**13 36 25.0**	**-0.3**
	comp=Z,8.6nm,0.8s,mb4.6						
NVS	**Novosibirsk**	**72.12**	**333**	*eP*	**P**	**13 36 25.9**	**-0.6**
SBA	**Scott Base**	**74.50**	**173**	*eP*	**P**	**13 36 42.1**	**+1.9**
SBA				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.2						
SBA	**Scott Base**	**74.50**	**173**	*eP*	**P**	**13 36 42.1**	**+1.9**
	comp=Z,5.2nm,1.0s,mb4.2						
MAW	**Mawson**	**76.48**	**201**	P	**P**	**13 36 52.4**	**+0.7**
	comp=Z,1.5nm,0.2s,mb4.3,baz=85,slow=6.9,SNR=11						
MAW	**Mawson**	**76.48**	**201**	*eP*	**P**	**13 36 52.4**	**+0.7**
TIXI	**Tiksi**	**77.21**	**359**	*eP*	**P**	**13 36 54.8**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
TIXI	**Tiksi**	**77.21**	**359**	*eP*	**P**	**13 36 55.0**	**-0.6**
	comp=Z,7.2nm,0.6s,mb4.6						
BVAR	**Borovoye Array**	**77.46**	**327**	P	**P**	**13 36 57.5**	**+0.1**
	comp=Z,8.6nm,0.9s,mb4.5,baz=120,slow=5.8,SNR=36						
BRVK	**Borovoye**	**77.53**	**327**‖ *eP*		**P**	**13 36 58.4**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.6						
BILL	**Bilibino**	**77.65**	**13**	*eP*	**P**	**13 36 58.3**	**+0.1**
OPO	**Ambohidratompo**	**82.28**	**252**	P	**P**	**13 37 24.7**	**+0.5**
	comp=Z,1.7nm,0.7s,mb4.0,baz=119,slow=13,SNR=3.5						
SDPT	**Sand Point**	**82.74**	**32**	*eP*	**P**	**13 37 25.6**	**-0.2**
	comp=Z,28nm,0.8s,mb5.2						
SVE	**Sverdlovsk**	**84.13**	**329**	*eP*	**P**	**13 37 33.3**	**+0.4**
SVE				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.0						
QSPA	**South Pole Qui**	**84.27**	**180**	*eP*	**P**	**13 37 34.0**	**+0.7**
	comp=Z,10nm,0.8s,mb4.7						
ARU	**Arti**	**85.09**	**328***c iP*		**P**	**13 37 37.3**	**-0.4**
ARU						13 40 56.5	
ARU				S	S	13 47 57.1	-3.4
ARU				SS	SS	13 53 38.5	+2.7
ARU				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.8						
ARU	**Arti**	**85.09**	**328**	*eP*	**P**	**13 37 36.8**	**-1.0**
	comp=Z,11nm,0.9s,mb4.8						
QRN	**Al-Qurain**	**86.60**	**299**	*eP*	**P**	**13 37 44.2**	**-1.6**
QRN				AMb	AMB	13 37 46.6	
	comp=Z,37nm,1.0s,mb5.3						
MIB	**Mutribah**	**87.25**	**300**	*eP*	**P**	**13 37 47.1**	**-1.8**
MIB				AMb	AMB	13 37 49.8	
	comp=Z,23nm,0.9s,mb5.1						
NAY	**Al-Naaiem**	**87.25**	**300**	*eP*	**P**	**13 37 47.8**	**-1.2**
NAY				AMb	AMB	13 37 49.6	
	comp=Z,12nm,0.9s,mb4.8						
KDAK	**Kodiak Island**	**87.64**	**31**	P	**P**	**13 37 50.6**	**+0.4**
	comp=Z,6.1nm,0.8s,mb4.7,baz=195,slow=10,SNR=4.8						
KDAK	**Kodiak Island**	**87.64**	**31**	*i P*	**P**	**13 37 52.7**	**+2.5**
OBN	**Obninsk**	**97.13**	**325**	*eP*	**P**	**13 38 32.6**	**-1.5**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.9						
ARCES	**ARCESS Array B**	**100.68**	**340

BALY *i* S **Sg** **13 29 09.6 -0.8**

*DDA **28** 13:28:28.8, 37.°02N×29.°14E, h7km±5km, Md3.0*
*ISK **28** 13:28:28.5, 37.°03N×29.°20E, h10km, MD2.9*
*ISCJB **28** 13:28:28.8±0.7, 37.°02N±0.°03×29.°16E±0.°04, h5km±7km, Error ellipse: s-maj=6.4km s-min=5.3km az=136.4*
*CSEM **28** 13:28:29.0±0.1, 37.°03N×29.°19E, h10km, MD2.9, Error ellipse: s-maj=2.3km s-min=1.6km az=22.0*
ISC 28 13:28:29.7±0.6,**37.°04N**±0.°04×**29.°20E**±0.°04,**h13**km±6km, **n22**,σ1**9**05/35,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.27**	**64**	*e*PG	**Pg**	**13 28 33.7**	**-1.7**
GLHS				*e*SG	**Sg**	**13 28 39.2**	**0.0**
GLHS	**Glhisar (BURDU**	**0.27**	**64**	*e*Pg	**Pg**	**13 28 33.7**	**-1.7**
GLHS				*e*Sg	**Sg**	**13 28 39.2**	**0.0**
GOLH	**Golhisar**	**0.35**	**56**	*i* P	**Pg**	**13 28 35.7**	**-1.1**
GOLH				*i* S	**Sg**	**13 28 42.8**	**+1.1**
GOLH	**Golhisar**	**0.35**	**56**	*i* P	**Pg**	**13 28 35.7**	**-1.2**
GOLH				*i* S	**Sg**	**13 28 42.8**	**+1.1**
TURN	**Turunc**	**0.50**	**251**	*i* P	**Pg**	**13 28 42.8**	**+3.2**
TURN				*i* S	**Sg**	**13 28 54.2**	**+7.9**
TURN	**Turunc**	**0.50**	**251**	*i* P	**Pg**	**13 28 42.8**	**+3.2**
ELL	**Elmali**	**0.64**	**117**	*e*PG	**Pg**	**13 28 41.5**	**-0.7**
ELL				*e*SG	**Sg**	**13 28 50.6**	**0.0**
ELL	**Elmali**	**0.64**	**117**	*e*Pg	**Pg**	**13 28 41.5**	**-0.7**
ELL				*e*Sg	**Sg**	**13 28 50.6**	**-0.1**
DNZL	**Cakiroluk**	**0.66**	**350**	*i* P	**Pg**	**13 28 42.1**	**-0.5**
DNZL				*i* S	**Sg**	**13 28 52.6**	**+1.2**
DNZL	**Cakiroluk**	**0.66**	**350**	*i* P	**Pg**	**13 28 42.1**	**-0.5**
DNZL				*i* S	**Sg**	**13 28 52.6**	**+1.3**
YER	**Yerkesik**	**0.74**	**278**	*e*PG	**Pg**	**13 28 43.3**	**-0.7**
YER	**Yerkesik**	**0.74**	**278**	*e*Pg	**Pg**	**13 28 43.3**	**-0.7**
AKAS	**Kas**	**0.87**	**158**	*i* P	**Pb**	**13 28 45.9**	**-0.7**
AKAS				*i* S	**Sg**	**13 28 59.0**	**+1.2**
AKAS	**Kas**	**0.87**	**158**	*i* P	**Pb**	**13 28 45.9**	**-0.7**
AKAS				*i* S	**Sg**	**13 28 59.0**	**+1.1**
KORT	**Korkueli**	**0.93**	**92**	*i* P	**Pb**	**13 28 46.8**	**-0.8**
KORT				*i* S	**Sb**	**13 29 02.0**	**+2.3**
KORT	**Korkueli**	**0.93**	**92**	*i* P	**Pb**	**13 28 46.8**	**-0.8**
KORT				*i* S	**Sb**	**13 29 02.0**	**+2.3**
KHL	**Karahalli**	**1.31**	**11**	*e*PN	**Pn**	**13 28 53.8**	**+0.1**
KHL	**Karahalli**	**1.31**	**11**	*e*Pn	**Pn**	**13 28 53.8**	**+0.2**
DAT	**Datca**	**1.33**	**257**	*e*PN	**Pn**	**13 28 53.6**	**-0.4**
DAT	**Datca**	**1.33**	**257**	*e*Pn	**Pn**	**13 28 53.6**	**-0.4**
SUTC	**Sutluce-Ispart**	**1.50**	**73**	*e*PN	**Pn**	**13 28 56.2**	**-0.1**
SUTC	**Sutluce-Ispart**	**1.50**	**73**	*e*Pn	**Pn**	**13 28 56.2**	**-0.1**

*IDC **28** 13:29:16.1±2.6, 45.°16N×148.°39E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.6/23, mbtmp3.9/4, ML2.8/1, Error ellipse: s-maj=68.3km s-min=37.1km az=173.0*
*JMA **28** 13:29:24.4±0.1, 43.°88N×147.°97E, h93km±5km, M3.2*
*ISCJB **28** 13:29:25.8±1.2, 43.°92N±0.°09×147.°6E±0.°1, h140km±9km, mb3.6/4, Error ellipse: s-maj=19.8km s-min=11.2km az=41.1*
ISC 28 13:29:26.4±1.2,**43.°92N**±0.°09×**147.°7E**±0.°1,**h131**km±10km, **n18**,σ0**9**90/29,**mb3.6**/4,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.51**	**249**	P	**Pn**	**13 29 53.1**	**-1.6**
NEM2				*e*S	**Sn**	**13 30 14.8**	**-1.4**
JRA	**Rausu**	**1.85**	**272**	P	**Pn**	**13 29 57.8**	**-0.8**
JRA				*e*S	**Sn**	**13 30 22.8**	**-0.4**
JNK	**Nakash**	**2.17**	**262**	P	**Pn**	**13 30 02.2**	**-0.3**
JNK				*e*S	**Sn**	**13 30 30.2**	**0.0**
JAK	**Akkeshi**	**2.36**	**248**	P	**Pn**	**13 30 04.7**	**-0.2**
JAK				*e*S	**Sn**	**13 30 34.5**	**+0.1**
JTKR	**Abashiri--Toko**	**2.73**	**272**	P	**Pn**	**13 30 09.5**	**0.0**
JTKR				*e*S	**Sn**	**13 30 42.2**	**-0.5**
JAR	**Ashorobuto**	**2.91**	**259**	P	**Pn**	**13 30 12.9**	**+1.0**
JAR				*e*S	**Sn**	**13 30 48.9**	**+2.0**
JCH	**Churui**	**3.42**	**249**	P	**Pn**	**13 30 19.0**	**+0.6**
JCH				*e*S	**Sn**	**13 30 59.4**	**+0.8**
JKK2	**Kamakawa 2**	**3.57**	**271**	P	**Pn**	**13 30 21.3**	**+0.8**
ASAJ	**Asahikawa**	**3.68**	**275**	Pn	**Pn**	**13 30 22.4**	**+0.5**
	0.4nm,0.3s,baz=140,slow=30,SNR=4.4						
JNBK	**Urakawa-nobuka**	**3.96**	**247**	P	**Pn**	**13 30 26.2**	**+0.5**
JNBK				*e*S	**Sn**	**13 31 11.9**	**+0.3**
JWK2	**Keihoku**	**4.36**	**291**	P	**Pn**	**13 30 31.6**	**+0.6**
JKB	**Kayabe**	**5.29**	**250**	P	**Pn**	**13 30 44.3**	**+0.9**
JKB				*e*S	**Sn**	**13 31 43.0**	**-0.3**
JOT	**Ohata**	**5.51**	**245**	P	**Pn**	**13 30 47.5**	**+1.2**
JOT				*e*S	**Sn**	**13 31 46.8**	**-1.8**
JANG	**Nango**	**5.79**	**234**	P	**Pn**	**13 30 51.2**	**+1.1**
JANG				*e*S	**Sn**	**13 31 54.1**	**-1.3**
ARCES	**ARCESS Array B**	**59.23**	**340**	P	**P**	**13 39 11.9**	**-1.4**
	1.8nm,0.9s,mb3.9,baz=51,slow=8.5,SNR=4.0						
FINES	**FINESS Array B**	**64.91**	**333**	P	**P**	**13 39 50.7**	**-0.6**
	1.4nm,0.5s,mb4.0,baz=38,slow=9.3,SNR=9.8						
NOA	**NORSAR Array B**	**69.59**	**339**	P	**P**	**13 40 20.5**	**-0.3**
	0.8nm,0.8s,mb3.5,baz=29,slow=6.6,SNR=3.6						
TXAR	**Lajitas Array**	**82.24**	**57**	P	**P**	**13 41 33.6**	**+0.5**
	0.3nm,0.6s,mb3.1,baz=305,slow=3.8,SNR=6.2						

*NEIC **28** 13:31:01.5±0.3, 10.°74N×91.°70E, h10km, mb4.6/16, Error ellipse: s-maj=8.8km s-min=7.5km az=49.0*
*BJI **28** 13:31:02.0, 10.°75N×91.°79E, h26km, mb4.6/11*
*MOS **28** 13:31:03.6±1.0, 10.°88N×91.°81E, h33km, mb4.8/22, Error ellipse: s-maj=14.0km s-min=6.7km az=116.2*
*IDC **28** 13:31:04.7±0.5, 10.°80N×91.°71E, h27km±3km, mb4.1/20, mb1 4.2/21, mb1mx4.1/25, mbtmp4.1/21, ML4.2/1, Error ellipse: s-maj=18.6km s-min=9.3km az=59.0*
*SZGRF **28** 13:31:07.6, 11.°03N×91.°38E, h33km, mb4.5, Andaman Islands, India, region*
ISC 28 13:31:01.9±3.0,**10.°74N**±0.°06×**91.°72E**±0.°06,**h13**km±18km, **h30**km±.5km:**pP-P**,**n125**,σ0**9**90/118,**mb4.4**/51,**11C-8D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**10.37**	**41**	*e*Pn	**Pn**	**13 33 30.5**	**0.0**
	1.9nm,0.4s						
CMAR	**Chiang Mai Arr**	**10.37**	**41**	Pn	**Pn**	**13 33 30.2**	**-0.3**
	0.6nm,0.3s,baz=238,slow=15,SNR=6.5						
PALK	**Pallekele**	**11.42**	**253**	*e*P	**Pn**	**13 33 43.8**	**-1.1**
PALK				pmax	pmax		
	comp=Z,117nm,1.7s						
PALK	**Pallekele**	**11.42**	**253**	*e*Pn	**Pn**	**13 33 43.8**	**-1.1**
	comp=Z,117nm,1.7s						
KSM	**Kuching**	**20.63**	**115**	*e*P	**P**	**13 35 41.5**	**+0.1**
	comp=Z,16nm,0.8s						
GYA	**Guiyang**	**21.06**	**40**	P	**P**	**13 35 46.0**	**+0.1**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2						
GTA	**Gaotai**	**29.45**	**13**	*e*P	**P**	**13 37 06.5**	**+1.0**
GTA				pP	pP	13 37 16.0	+6.7
GTA				sP	sP	13 37 21.5	+11
GTA				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.6						
AAK	**Ala-Archa**	**35.15**	**338**	P	**P**	**13 37 56.9**	**+1.4**
	comp=Z,1.3nm,0.3s,mb4.4,baz=112,slow=4.1,SNR=5.9						
EKS2	**Erkin-Say**	**35.45**	**337**	*e*P	**P**	**13 37 59.5**	**+1.5**
EKS2				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
EKS2	**Erkin-Say**	**35.45**	**337**	*e*P	**P**	**13 37 59.5**	**+1.6**
	comp=Z,2.4nm,0.7s,mb4.2						
MK31	**Makanchi Array**	**36.81**	**349**	*e*P	**P**	**13 38 09.7**	**+0.1**
MKAR	**Makanchi Array**	**36.81**	**349**	P	**P**	**13 38 10.4**	**+0.8**
	comp=Z,8.4nm,0.8s,mb4.7,baz=132,slow=8.7,SNR=14						
MKAR				pP	pP	13 38 18.2	+4.8
	comp=Z,4.5nm,0.7s,baz=134,slow=10,SNR=8.5						
MKAR				PcP	PcP	13 40 31.9	+0.4
	comp=Z,0.6nm,0.6s,baz=116,slow=3.4,SNR=5.3						
SONM	**Songino Array**	**38.98**	**16**	P	**P**	**13 38 28.7**	**+0.8**
	comp=Z,6.1nm,0.8s,mb4.4,baz=198,slow=8.8,SNR=22						
SONM				pP	pP	13 38 37.1	+5.3
	comp=Z,2.1nm,0.6s,baz=200,slow=7.3,SNR=5.5						
SONM				PcP	PcP	13 40 38.8	+0.6
	comp=Z,1.2nm,0.7s,baz=197,slow=3.9,SNR=5.0						
ULN	**Ulaanbaatar**	**39.19**	**16**	*e*P	**P**	**13 38 29.5**	**-0.1**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.9						
ULN	**Ulaanbaatar**	**39.19**	**16**	*e*P	**P**	**13 38 29.5**	**-0.1**
	comp=Z,2.4nm,0.9s,mb3.9						
KURK	**Kurchatov**	**41.29**	**347**	P	**P**	**13 38 46.8**	**-0.2**
	comp=Z,5.4nm,0.9s,mb4.2,baz=171,slow=7.1,SNR=12						
KURK				pP	pP	13 38 55.3	+4.4
	comp=Z,4.5nm,0.9s,baz=168,slow=7.7,SNR=8.6						
KURK				PcP	PcP	13 40 45.8	+0.3
	comp=Z,0.3nm,0.3s,baz=132,slow=2.3,SNR=3.6						
KURK	**Kurchatov**	**41.29**	**347**	*e*P	**P**	**13 38 47.7**	**+0.7**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.3						
KURK	**Kurchatov**	**41.29**	**347**	*e*P	**P**	**13 38 47.5**	**+0.5**
	comp=Z,7.4nm,1.0s,mb4.3						
KSRS	**Korea Array**	**41.99**	**45**	P	**P**	**13 38 52.0**	**-1.0**
	comp=Z,2.5nm,1.1s,mb3.8,baz=240,slow=7.9,SNR=4.1						
ZALV	**Zalesovo Beam**	**43.45**	**354**	P	**P**	**13 39 04.7**	**+0.2**
	comp=Z,9.3nm,0.8s,mb4.6,baz=175,slow=9.7,SNR=21						
ZALV	**Zalesovo Beam**	**43.45**	**354**	P	**P**	**13 39 04.7**	**+0.2**
CN2	**Changchun**	**43.98**	**35**	*e*P	**P**	**13 39 09.0**	**0.0**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.9						
FITZ	**Fitzroy Crossi**	**44.07**	**130**	P	**P**	**13 39 10.7**	**+0.7**
	comp=Z,2.8nm,0.5s,mb4.2,baz=45,slow=23,SNR=5.6						
FITZ				pP	pP	13 39 19.3	+5.3
	comp=Z,14nm,0.8s,baz=315,slow=5.6,SNR=11						
BVAR	**Borovoye Array**	**45.53**	**342**	P	**P**	**13 39 21.4**	**+0.2**
	comp=Z,1.3nm,0.6s,mb4.0,baz=142,slow=8.7,SNR=4.8						
BVAR				PcP	PcP	13 40 59.6	-0.2
	comp=Z,1.1nm,0.7s,baz=103,slow=4.7,SNR=3.5						
BRVK	**Borovoye**	**45.59**	**342**	*e*P	**P**	**13 39 22.5**	**+0.8**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.5s,mb4.1						
MJAR	**Matsushiro Arr**	**49.10**	**51**	PcP	PcP	13 41 13.7	+0.8
	comp=Z,0.1nm,0.3s,baz=240,slow=3.4,SNR=9.2						
GNI	**Garni**	**50.74**	**314**	*de*P	**P**	**13 40 04.3**	**+2.6**
GNI				pmax	pmax		
	comp=Z,20nm,1.2s						
WRA	**Warramunga Arr**	**51.86**	**126**	P	**P**	**13 40 10.4**	**+0.1**
	comp=Z,1.6nm,0.5s,mb4.2,baz=306,slow=8.4,SNR=12						
WRA				pP	pP	13 40 19.5	+5.1
	comp=Z,3.0nm,0.5s,baz=306,slow=8.6,SNR=14						
WRAB	**Tennant Creek**	**51.86**	**126**	*e*P	**P**	**13 40 07.8**	**-2.6**
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
WRAB	**Tennant Creek**	**51.86**	**126**	*e*P	**P**	**13 40 07.8**	**-2.6**
	comp=Z,5.4nm,0.6s,mb4.7						
ARU	**Arti**	**52.34**	**337**	*d i* P	**P**	**13 40 13.5**	**+0.1**
ARU				*e*		13 42 09.1	
ARU				S	**S**	**13 47 39.1**	**+0.6**
ARU				SS	SS	13 51 11.6	-4.7
ARU				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.5						
ASAR	**Alice Springs**	**53.57**	**130**	P	**P**	**13 40 23.6**	**+0.6**
	comp=Z,3.6nm,0.6s,mb4.5,baz=305,slow=6.7,SNR=23						
ASAR				pP	pP	13 40 32.8	+5.8
	comp=Z,5.5nm,0.7s,baz=308,slow=7.2,SNR=17						
ASAR				PcP	PcP	13 41 30.4	+0.7
	comp=Z,1.2nm,0.6s,baz=314,slow=3.9,SNR=4.1						
KIV	**Kislovodsk**	**53.61**	**317**	*e*P	**P**	**13 40 24.3**	**+1.3**
KIV				*e**PP	pP	13 40 32.8	+5.8
KIV				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
YAK	**Yakutsk**	**58.09**	**20**	*e*P	**P**	**13 40 53.3**	**-1.5**
YAK				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.9						
VSR	**Storozhevoye**	**58.69**	**324**	*e*P	**P**	**13 40 58.8**	**-0.4**
VSR				pmax	pmax		
	comp=N,4.0nm,0.4s						
VSR				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.9						
VSR				pmax	pmax		
	comp=E,4.0nm,0.5s						
BRTR	**Keskin Array B**	**58.77**	**310**	P	**P**	**13 40 59.4**	**-0.6**
	comp=E,1.8nm,0.7s,mb4.2,baz=124,slow=7.7,SNR=9.7						
BRTR				pP	pP	13 41 07.8	+3.7
	comp=E,1.3nm,0.8s,baz=144,slow=7.3,SNR=3.7						
OBN	**Obninsk**	**61.70**	**328**	*e*P	**P**	**13 41 19.7**	**0.0**
OBN				*e*		13 42 01.6	
OBN				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.8						
STKA	**Stephens Creek**	**63.80**	**134**	P	**P**	**13 41 35.1**	**+1.0**
	comp=Z,3.3nm,0.9s,mb4.4,baz=313,slow=10,SNR=6.5						
STKA				pP	pP	13 41 43.7	+5.5
	comp=Z,4.0nm,0.8s,baz=315,slow=4.5,SNR=2.8						
STKA	**Stephens Creek**	**63.80**	**134**	P	**P**	**13 41 35.1**	**+1.0**
STKA				pP	pP	13 41 43.7	+5.5
AKASG	**Malin Array Be**	**64.44**	**321**	P	**P**	**13 41 36.5**	**-1.5**
	comp=Z,1.4nm,0.6s,mb4.2,baz=72,slow=7.3,SNR=7.0						
TIXI	**Tiksi**	**64.93**	**12**	*e*P	**P**	**13 41 39.1**	**-1.8**
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.5						
TIXI	**Tiksi**	**64.93**	**12**	*e*P	**P**	**13 41 39.8**	**-1.1**
	comp=Z,5.1nm,0.9s,mb4.5						
VRI	**Vrincioaia**	**65.00**	**316**	⇑P	**P**	**13 41 42.7**	**+0.9**
VRI	**Vrincioaia**	**65.00**	**316**	⇑*i*P	**P**	**13 41 42.7**	**+0.9**
PLOR	**Plostina**	**65.05**	**316**	⇑P	**P**	**13 41 43.0**	**+0.9**
PLOR	**Plostina**	**65.05**	**316**	⇑*i*P	**P**	**13 41 43.0**	**+0.9**
MLR	**Muntele Rosu**	**65.47**	**315**	⇓P	**P**	**13 41 45.6**	**+0.8**
MLR	**Muntele Rosu**	**65.47**	**315**	⇓*i*P	**P**	**13 41 45.6**	**+0.8**
BURAR	**Bucovina Array**	**66.33**	**317**	⇑P	**P**	**13 41 51.1**	**+0.7**
BURAR	**Bucovina Array**	**66.33**	**317**	⇑*i*P	**P**	**13 41 51.0**	**+0.6**
JOF	**Joensuu**	**67.25**	**334**	*e*P	**P**	**13 41 55.8**	**-0.1**
JOF				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0						
JOF	**Joensuu**	**67.25**	**334**	*ep*	**P**	**13 41 55.8**	**-0.1**
	comp=Z,12nm,0.8s,mb5.0						
JOF	**Joensuu**	**67.25**	**334**	*ep*	**P**	**13 41 55.8**	**-0.1**
	comp=Z,12nm,0.8s,mb5.0						
BZS	**Buzias**	**68.50**	**315**	⇑P	**P**	**13 42 04.4**	**+0.3**
BZS	**Buzias**	**68.50**	**315**	⇑*i*P	**P**	**13 42 04.3**	**+0.2**
FINES	**FINESS Array B**	**69.08**	**332**	P	**P**	**13 42 07.5**	**+0.1**
	comp=Z,5.7nm,0.7s,mb4.6,baz=115,slow=8.6,SNR=21						
FINES				pP	pP	13 42 15.9	+4.4
	comp=Z,4.3nm,0.7s,baz=116,slow=8.7,SNR=7.7						
FINES	**FINESS Array B**	**69.08**	**332**	P	**P**	**13 42 07.5**	**+0.1**
FINES				pP	pP	13 42 15.9	+4.4
KAF	**Kangasniemi**	**69.17**	**333**	*e*P	**P**	**13 42 05.8**	**-2.2**
KAF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
KAF	**Kangasniemi**	**69.17**	**333**	*ep*	**P**	**13 42 05.8**	**-2.2**
	comp=Z,5.8nm,0.8s,mb4.6						
KAF	**Kangasniemi**	**69.17**	**333**	*ep*	**P**	**13 42 05.8**	**-2.2**
	comp=Z,5.8nm,0.8s,mb4.6						
MORC	**Moravsky Berou**	**71.66**	**319**	⇓P	**P**	**13 42 23.3**	**-0.2**
MORC	**Moravsky Berou**	**71.66**	**319**	⇓*i*P	**P**	**13 42 23.3**	**-0.2**
ARCES	**ARCESS Array B**	**71.78**	**340**	P	**P**	**13 42 24.5**	**+0.7**
	comp=Z,3.3nm,0.8s,mb4.3,baz=87,slow=6.1,SNR=12						
ARE0	**ARCESS Array S**	**71.78**	**340**	*e*P	**P**	**13 42 26.5**	**+2.8**
BRG	**Berggiesshubel**	**74.04**	**320**	*i* P	**P**	**13 42 37.8**	**+0.3**
	comp=Z,2.7nm,0.8s,mb4.2						
BILL	**Bilibino**	**74.33**	**22**	⇓*e*P	**P**	**13 42 38.5**	**-0.4**
BILL				pmax	pmax		
	comp=Z,6.0nm,2.0s,mb4.2						
CLL	**Collm**	**74.65**	**320**	*e*P	**P**	**13 42 41.0**	**-0.1**
CLL				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.5						
CLL	**Collm**	**74.65**	**320**	*e*P	**P**	**13 42 41.0**	**-0.1**
	comp=Z,8.0nm,1.4s,mb4.5						
BOSA	**Boshof**	**75.12**	**237**	P	**P**	**13 42 46.1**	**+1.9**
	comp=Z,5.3nm,0.8s,mb4.5,baz=80,slow=5.8,SNR=6.8						
GRF	**Grafenberg Arr**	**75.75**	**319**	*e*P	**P**	**13 42 47.6**	**+0.1**
	comp=Z,6.0nm,1.0s,mb4.5						
GRF	**Grafenberg Arr**	**75.75**	**319**	*e*P	**P**	**13 42 47.6**	**+0.1**
GRF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
NB2	**NORSAR Subarra**	**76.08**	**330**	P	**P**	**13 42 48.5**	**-0.6**
	comp=Z,1.5nm,0.6s,mb4.1,baz=97,slow=5.3						
NOA	**NORSAR Array B**	**76.08**	**330**	P	**P**	**13 42 48.8**	**-0.3**
	comp=Z,1.8nm,0.7s,mb4.1,baz=94,slow=5.7,SNR=11						
NOA				pP	pP	13 42 57.5	+4.2
	comp=Z,0.9nm,0.7s,baz=99,slow=5.7,SNR=3.2						
KEST	**Kesra**	**77.66**	**304**	P	**P**	**13 42 59.1**	**+0.6**
	comp=Z,0.6nm,0.7s,mb3.6,baz=311,slow=4.3,SNR=5.0						
CDF	**Champ du Feu**	**78.38**	**317**	*e*P	**P**	**13 43 01.4**	**-0.9**
LPG	**La Plagne**	**78.92**	**314**	*e*P	**P**	**13 43 05.0**	**-0.3**
	comp=Z,8.0nm,0.7s,mb4.5						
LPG	**La Plagne**	**78.92**	**314**	*e*P	**P**	**13 43 05.0**	**-0.3**
LPG				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
LPG	**La Plagne**	**78.92**	**314**	*e*P	**P**	**13 43 05.0**	**-0.3**
	comp=Z,4.0nm,0.7s,mb4.5						
LPL	**La Plagne**	**78.93**	**314**	*e*P	**P**	**13 43 05.1**	**-0.3**
	comp=Z,9.5nm,0.7s,mb4.6						
LPL	**La Plagne**	**78.93**	**314**	*e*P	**P**	**13 43 05.1**	**-0.3**
LPL				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
LPL	**La Plagne**	**78.93**	**314**	*e*P	**P**	**13 43 05.1**	**-0.3**
	comp=Z,4.8nm,0.7s,mb4.5						
CABF	**La Chapelle**	**79.30**	**316**	*e*P	**P**	**13 43 07.0**	**-0.4**
	comp=Z,11nm,0.9s,mb4.5						
CABF	**La Chapelle**	**79.30**	**316**	*e*P	**P**	**13 43 07.0**	**-0.4**
CABF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
CABF	**La Chapelle**	**79.30**	**316**	*e*P	**P**	**13 43 07.0**	**-0.4**
	comp=Z,5.7nm,0.9s,mb4.5						
VIVF	**Saint-Julien-l**	**80.44**	**314**	*e*P	**P**	**13 43 13.0**	**-0.6**
	comp=Z,9.2nm,0.8s,mb4.5						
VIVF	**Saint-Julien-l**	**80.44**	**314**	*e*P	**P**	**13 43 13.0**	**-0.6**
VIVF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
VIVF	**Saint-Julien-l**	**80.44**	**314**	*e*P	**P**	**13 43 13.0**	**-0.6**
	comp=Z,4.6nm,0.8s,mb4.5						
LOR	**Lormes**	**80.76**	**316**	*e*P	**P**	**13 43 14.3**	**-1.0**
	comp=Z,9.7nm,0.8s,mb4.5						
LOR	**Lormes**	**80.76**	**316**	*e*P	**P**	**13 43 14.3**	**-1.0**
LOR				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
LOR	**Lormes**	**80.76**	**316**	*e*P	**P**	**13 43 14.3**	**-1.0**
	comp=Z,4.8nm,0.8s,mb4.5						
SMF	**Signal de Mont**	**80.84**	**316**	*e*P	**P**	**13 43 14.8**	**-0.9**
	comp=Z,8.1nm,0.7s,mb4.5						
SMF	**Signal de Mont**	**80.84**	**316**	*e*P	**P**	**13 43 14.8**	**-0.9**
SMF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
SMF	**Signal de Mont**	**80.84**	**316**	*e*P	**P**	**13 43 14.8**	**-0.9**
	comp=Z,4.1nm,0.7s,mb4.5						
MAW	**Mawson**	**80.86**	**191**	P	**P**	**13 43 17.1**	**+1.8**
	comp=Z,1.3nm,0.7s,mb4.0,baz=326,slow=4.0,SNR=4.2						
SSF	**Saint Saulge**	**81.03**	**316**	*e*P	**P**	**13 43 15.9**	**-0.8**
	comp=Z,3.6nm,0.5s,mb4.2						
SSF	**Saint Saulge**	**81.03**	**316**	*e*P	**P**	**13 43 15.9**	**-0.8**
SSF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
SSF	**Saint Saulge**	**81.03**	**316**	*e*P	**P**	**13 43 15.9**	**-0.8**
	comp=Z,1.8nm,0.5s,mb4.3						
LASF	**Ste Croix**	**81.10**	**313**	*e*P	**P**	**13 43 16.7**	**-0.5**
	comp=Z,35nm,1.2s,mb4.9						
AVF	**Avril sur Loir**	**81.16**	**316**	*e*P	**P**	**13 43 16.5**	**-0.9**
	comp=Z,9.7nm,0.8s,mb4.5						
AVF	**Avril sur Loir**	**81.16**	**316**	*e*P	**P**	**13 43 16.5**	**-0.9**
AVF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
AVF	**Avril sur Loir**	**81.16**	**316**	*e*P	**P**	**13 43 16.5**	**-0.9**
	comp=Z,4.8nm,0.8s,mb4.5						
CAF	**Calviac**	**82.27**	**314**	*e*P	**P**	**13 43 23.0**	**-0.3**
MTLF	**Montolieu**	**82.37**	**313**	*e*P	**P**	**13 43 23.6**	**-0.3**
	comp=Z,7.6nm,0.7s,mb4.4						
MTLF	**Montolieu**	**82.37**	**313**	*e*P	**P**	**13 43 23.6**	**-0.3**
MTLF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
MTLF	**Montolieu**	**82.37**	**313**	*e*P	**P**	**13 43 23.6**	**-0.3**
	comp=Z,3.8nm,0.7s,mb4.4						
RJF	**Les Rejaudoux**	**82.61**	**315**	*e*P	**P**	**13 43 24.9**	**-0.2**
LFF	**La Frestale**	**83.20**	**314**	*e*P	**P**	**13 43 28.0**	**-0.2**
LFF	**La Frestale**	**83.20**	**314**	*e*P	**P**	**13 43 28.0**	**-0.2**
LDF	**La Druitiere**	**83.26**	**318**	*e*P	**P**	**13 43 27.5**	**-0.9**
	comp=Z,9.3nm,0.7s,mb4.6						
LDF	**La Druitiere**	**83.26**	**318**	*e*P	**P**	**13 43 27.5**	**-0.9**
FLN	**La Foliniere**	**83.47**	**318**	*e*P	**P**	**13 43 28.5**	**-0.9**
FLN	**La Foliniere**	**83.47**	**318**	*e*P	**P**	**13 43 28.5**	**-0.9**
**MFF

comp=Z,6.5nm,0.8s,mb4.3
LPG La Plagne 78.81 314 *e*P **P 13 52 45.4 +0.3**
comp=Z,3.3nm,0.8s,mb4.3
LPL La Plagne 78.83 314 *e*P **P 13 52 45.4 +0.3**
comp=Z,3.5nm,0.6s,mb4.2
LPL La Plagne 78.83 314 *e*P **P 13 52 45.4 +0.3**
comp=Z,1.8nm,0.6s,mb4.2
VIVF Saint-Julien-l 80.33 314 *e*P **P 13 52 53.4 +0.1**
SMF Signal de Mont 80.74 316 *e*P **P 13 52 55.2 -0.3**
comp=Z,3.3nm,0.5s,mb4.2
SMF Signal de Mont 80.74 316 *e*P **P 13 52 55.2 -0.3**
comp=Z,1.6nm,0.5s,mb4.2
MFF Saint Martin d 83.47 316 *e*P **P 13 53 09.8 0.0**
NVAR Mina Array Bea 123.69 28 PKP PKPdf 13 59 40.2 0.0
comp=Z,0.2nm,0.5s,baz=337,slow=1.2,SNR=3.0

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*ISCJB **28** 13:46:03.5±0.4, 35°.53N±0°.03×22°.31E±0°.03, h78km±6km, mb3.7/7, Error ellipse: s-maj=5.7km s-min=3.2km az=40.2*
*IDC **28** 13:46:03.0±1.9, 35°.45N×22°.23E, h48km±15km, mb3.6/7, mb1 3.6/14, mb1mx3.5/32, mbtmp3.6/14, ML3.7/7, MS3.5/1, Ms1 3.5/1, ms1mx2.9/44, Error ellipse: s-maj=40.2km s-min=11.1km az=15.0*
*CSEM **28** 13:46:04.3±0.3, 35°.47N×22°.30E, h69km±3km, ML3.5, Error ellipse: s-maj=7.0km s-min=3.6km az=34.0*
*NEIC **28** 13:46:04.2, 35°.49N×22°.37E, h65km, MG3.5(ATH), After ATH.*
*ATH **28** 13:46:04.2, 35°.49N×22°.37E, h65km±16km, ML3.5*
*THE **28** 13:46:05.9, 35°.63N×22°.50E, h86km±8km, ML4.2/17, Error ellipse: s-maj=8.4km s-min=1.3km az=67.0*
ISC 28 13:46:04.9±0.4, 35°.52N±0°.03×22°.33E±0°.03, h64km±6km, n197, σ 1°.10/255, mb3.8/7, 1C-1D, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.95**	**37**	*e*P	**Pn**	**13 46 22.6**	**+0.2**
KYTH	**Kithira**	**0.95**	**37**	*e*P	**Pn**	**13 46 22.6**	**+0.2**
KYTH	**Kithira**	**0.95**	**37**	*e*P	**Pn**	**13 46 22.6**	**+0.2**
VLI	**Veliai**	**1.29**	**22**	*e*P	**Pn**	**13 46 27.7**	**+0.8**
VLI	**Veliai**	**1.29**	**22**	*e*P	**Pn**	**13 46 27.7**	**+0.8**
VLI	**Veliai**	**1.29**	**22**	*e*P	**Pn**	**13 46 27.7**	**+0.8**
KARN	**Karanos**	**1.30**	**95**	P	**Pn**	**13 46 26.9**	**-0.1**
KARN				S	**Sn**	**13 46 43.1**	**-0.5**
KARN	**Karanos**	**1.30**	**95**	*e*P	**Pn**	**13 46 26.9**	**-0.1**
KARN	**Karanos**	**1.30**	**95**	*e*P	**Pn**	**13 46 26.9**	**-0.1**
KARN				S	**Sn**	**13 46 43.1**	**-0.5**
PYL	**PYLOS**	**1.45**	**341**	P	**Pn**	**13 46 28.8**	**-0.2**
PYL	**PYLOS**	**1.45**	**341**	*e*P	**Pn**	**13 46 29.8**	**+0.8**
PYL	**PYLOS**	**1.45**	**341**	*e*P	**Pn**	**13 46 29.8**	**+0.8**
VAM	**Vamos**	**1.53**	**94**	*e*P	**Pn**	**13 46 30.1**	**+0.1**
VAM	**Vamos**	**1.53**	**94**	*e*P	**Pn**	**13 46 30.1**	**+0.1**
VAM	**Vamos**	**1.53**	**94**	*e*P	**Pn**	**13 46 30.1**	**+0.1**
GVD	**Gavdhos**	**1.59**	**115**	*e*P	**Pn**	**13 46 30.2**	**-0.7**
GVD	**Gavdhos**	**1.59**	**115**	P	**Pn**	**13 46 30.3**	**-0.6**
GVD	**Gavdhos**	**1.59**	**115**	*e*P	**Pn**	**13 46 30.2**	**-0.7**
GVD	**Gavdhos**	**1.59**	**115**	P	**Pn**	**13 46 30.3**	**-0.6**
ITM	**Ithomi**	**1.68**	**349**	*e*P	**Pn**	**13 46 34.4**	**+2.3**
ITM	**Ithomi**	**1.68**	**349**	P	**Pn**	**13 46 34.0**	**+1.9**
ITM	**Ithomi**	**1.68**	**349**	*e*P	**Pn**	**13 46 34.4**	**+2.3**
ITM	**Ithomi**	**1.68**	**349**	P	**Pn**	**13 46 34.0**	**+1.9**
VLX	**Vlachokerasia**	**1.84**	**1**	P	**Pn**	**13 46 36.9**	**+2.6**
VLX	**Vlachokerasia**	**1.84**	**1**	P	**Pn**	**13 46 36.9**	**+2.6**
SIVA	**Sivas**	**2.09**	**103**	P	**Pn**	**13 46 37.4**	**-0.2**
SIVA	**Sivas**	**2.09**	**103**	P	**Pn**	**13 46 37.4**	**-0.2**
IDI	**Anoyia**	**2.10**	**96**	P	**Pn**	**13 46 38.0**	**+0.3**
	7.0nm,0.3s,baz=275,slow=14,SNR=47						
IDI				S	**Sn**	**13 47 03.3**	**+0.4**
	35nm,0.3s,baz=276,slow=18,SNR=8.9						
IDI				LR	LR	13 47 47.0	
	comp=Z,1μm,21.2s,baz=118,slow=48						
IDI	**Anoyia**	**2.10**	**96**	P	**Pn**	**13 46 38.0**	**+0.3**
IDI				S	**Sn**	**13 47 03.3**	**+0.4**
IDI				LR	LR	13 47 47.0	
IDI	**Anoyia**	**2.10**	**96**	P	**Pn**	**13 46 38.0**	**+0.2**
IDI				S	**Sn**	**13 47 03.3**	**+0.4**
DID	**Didima**	**2.11**	**20**	P	**Pn**	**13 46 38.2**	**+0.3**
DID				S	**Sn**	**13 47 01.9**	**-1.1**
DID	**Didima**	**2.11**	**20**	*e*P	**Pn**	**13 46 38.6**	**+0.7**
DID	**Didima**	**2.11**	**20**	*e*P	**Pn**	**13 46 38.6**	**+0.7**
DID				S	**Sn**	**13 47 01.9**	**-1.1**
GUR	**Goura**	**2.41**	**0**	P	**Pn**	**13 46 44.0**	**+2.1**
GUR				S	**Sn**	**13 47 11.8**	**+1.5**
GUR	**Goura**	**2.41**	**0**	*e*P	**Pn**	**13 46 45.0**	**+3.1**
GUR	**Goura**	**2.41**	**0**	P	**Pn**	**13 46 44.0**	**+2.1**
GUR				S	**Sn**	**13 47 11.8**	**+1.5**
NAIG	**Nisos Aigina**	**2.42**	**22**	*e*P	**Pn**	**13 46 42.8**	**+0.8**
NAIG	**Nisos Aigina**	**2.42**	**22**	*e*P	**Pn**	**13 46 42.8**	**+0.8**
NAIG	**Nisos Aigina**	**2.42**	**22**	*e*P	**Pn**	**13 46 42.8**	**+0.8**
LTK	**Loutraki**	**2.54**	**11**	P	**Pn**	**13 46 45.1**	**+1.3**
LTK				S	**Sn**	**13 47 14.2**	**+0.5**
LTK	**Loutraki**	**2.54**	**11**	*e*P	**Pn**	**13 46 45.9**	**+2.1**
LTK	**Loutraki**	**2.54**	**11**	P	**Pn**	**13 46 45.1**	**+1.3**
LTK				S	**Sn**	**13 47 14.2**	**+0.5**
LAST	**Lasithi**	**2.60**	**97**	*e*P	**Pn**	**13 46 45.1**	**+0.6**
LAST	**Lasithi**	**2.60**	**97**	P	**Pn**	**13 46 45.1**	**+0.6**
LAST	**Lasithi**	**2.60**	**97**	*e*P	**Pn**	**13 46 45.1**	**+0.6**
LAST	**Lasithi**	**2.60**	**97**	*e*P	**Pn**	**13 46 45.1**	**+0.6**
THR5	**Thira Island,**	**2.60**	**69**	P	**Pn**	**13 46 44.0**	**-0.6**
THR5				S	**Sn**	**13 47 14.6**	**-0.5**
THR5	**Thira Island,**	**2.60**	**69**	P	**Pn**	**13 46 44.0**	**-0.6**
THR5				S	**Sn**	**13 47 14.6**	**-0.5**
VLY	**Voula,Athens**	**2.60**	**26**	*e*P	**Pn**	**13 46 44.4**	**-0.2**
VLY	**Voula,Athens**	**2.60**	**26**	*e*P	**Pn**	**13 46 44.4**	**-0.2**
VLY	**Voula,Athens**	**2.60**	**26**	*e*P	**Pn**	**13 46 44.4**	**-0.2**
RLS	**Riolos of Patr**	**2.62**	**345**	*e*P	**Pn**	**13 46 47.0**	**+2.1**
RLS	**Riolos of Patr**	**2.62**	**345**	*e*P	**Pn**	**13 46 47.0**	**+2.1**
RLS	**Riolos of Patr**	**2.62**	**345**	*e*P	**Pn**	**13 46 47.0**	**+2.1**
THR6	**Thira Island,**	**2.62**	**71**	P	**Pn**	**13 46 44.1**	**-0.8**
THR6	**Thira Island,**	**2.62**	**71**	P	**Pn**	**13 46 44.1**	**-0.8**
THR1	**Thera Island**	**2.67**	**71**	P	**Pn**	**13 46 44.7**	**-0.9**
THR1				S	**Sn**	**13 47 15.0**	**-1.8**
THR1	**Thera Island**	**2.67**	**71**	P	**Pn**	**13 46 44.7**	**-0.9**
THR1				S	**Sn**	**13 47 15.0**	**-1.8**
ATH	**Athens Observa**	**2.68**	**24**	*e*P	**Pn**	**13 46 46.7**	**+1.0**
ATH	**Athens Observa**	**2.68**	**24**	*e*P	**Pn**	**13 46 46.7**	**+1.0**
ATH	**Athens Observa**	**2.68**	**24**	*e*P	**Pn**	**13 46 46.7**	**+1.0**
NPS	**Neapolis**	**2.69**	**95**	*e*P	**Pn**	**13 46 46.8**	**+1.0**
NPS	**Neapolis**	**2.69**	**95**	*e*P	**Pn**	**13 46 46.8**	**+1.0**
NPS	**Neapolis**	**2.69**	**95**	*e*P	**Pn**	**13 46 46.8**	**+1.0**
ATHU	**Athens Univers**	**2.70**	**25**	P	**Pn**	**13 46 46.1**	**+0.2**
ATHU	**Athens Univers**	**2.70**	**25**	P	**Pn**	**13 46 46.1**	**+0.2**
LAKA	**Lakka**	**2.73**	**354**	P	**Pn**	**13 46 48.5**	**+2.2**
LAKA	**Lakka**	**2.73**	**354**	P	**Pn**	**13 46 48.5**	**+2.2**
PTL	**Penteli**	**2.80**	**26**	*e*P	**Pn**	**13 46 47.5**	**+0.2**
PTL	**Penteli**	**2.80**	**26**	*e*P	**Pn**	**13 46 47.5**	**+0.2**
PTL	**Penteli**	**2.80**	**26**	*e*P	**Pn**	**13 46 47.5**	**+0.2**
TRIZ	**Trizonia**	**2.84**	**356**	P	**Pn**	**13 46 49.4**	**+1.5**
TRIZ				S	**Sn**	**13 47 21.0**	**+0.1**
TRIZ	**Trizonia**	**2.84**	**356**	P	**Pn**	**13 46 49.4**	**+1.5**
TRIZ				S	**Sn**	**13 47 21.0**	**+0.1**
KFL	**Anninata**	**2.86**	**335**	P	**Pn**	**13 46 49.0**	**+0.9**
KALE	**Kalithea**	**2.87**	**357**	P	**Pn**	**13 46 49.1**	**+0.9**
KALE				S	**Sn**	**13 47 22.5**	**+1.0**
KALE	**Kalithea**	**2.87**	**357**	P	**Pn**	**13 46 49.1**	**+0.9**
KALE				S	**Sn**	**13 47 22.5**	**+1.0**
DSF	**Desfina**	**2.89**	**3**	P	**Pn**	**13 46 49.0**	**+0.6**
DSF				S	**Sn**	**13 47 21.4**	**-0.6**
DSF	**Desfina**	**2.89**	**3**	P	**Pn**	**13 46 49.0**	**+0.6**
DSF				S	**Sn**	**13 47 21.4**	**-0.6**
EFP	**Efpalio**	**2.92**	**353**	P	**Pn**	**13 46 49.7**	**+0.8**
EFP				S	**Sn**	**13 47 23.6**	**+0.9**
EFP	**Efpalio**	**2.92**	**353**	P	**Pn**	**13 46 49.7**	**+0.8**
EFP				S	**Sn**	**13 47 23.6**	**+0.9**
VLS	**Valsamata**	**2.99**	**333**	*e*P	**Pn**	**13 46 50.3**	**+0.4**
VLS	**Valsamata**	**2.99**	**333**	P	**Pn**	**13 46 50.2**	**+0.3**
VLS				S	**Sn**	**13 47 24.2**	**-0.4**
VLS	**Valsamata**	**2.99**	**333**	*e*P	**Pn**	**13 46 50.3**	**+0.4**
VLS	**Valsamata**	**2.99**	**333**	*e*P	**Pn**	**13 46 50.3**	**+0.4**
VLS				S	**Sn**	**13 47 24.2**	**-0.4**
APE	**Apeiranthos**	**3.01**	**58**	P	**Pn**	**13 46 51.5**	**+1.4**
APE	**Apeiranthos**	**3.01**	**58**	P	**Pn**	**13 46 49.5**	**-0.6**
APE				S	**Sn**	**13 47 22.2**	**-2.8**
APE	**Apeiranthos**	**3.01**	**58**	P	**Pn**	**13 46 49.5**	**-0.6**
APE				S	**Sn**	**13 47 22.2**	**-2.8**
LKR	**Lokris**	**3.17**	**10**	*e*P	**Pn**	**13 46 52.9**	**+0.6**
LKR	**Lokris**	**3.17**	**10**	P	**Pn**	**13 46 53.0**	**+0.7**
LKR				S	**Sn**	**13 47 29.5**	**+0.7**
LKR	**Lokris**	**3.17**	**10**	*e*P	**Pn**	**13 46 52.9**	**+0.6**
LKR				S	**Sn**	**13 47 29.5**	**+0.7**
ZKR	**Zakros**	**3.20**	**96**	P	**Pn**	**13 46 53.4**	**+0.6**
ZKR				S	**Sn**	**13 47 29.7**	**0.0**
ZKR	**Zakros**	**3.20**	**96**	P	**Pn**	**13 46 53.4**	**+0.6**
ZKR				S	**Sn**	**13 47 29.7**	**0.0**
ATAL	**Atalanti**	**3.21**	**10**	P	**Pn**	**13 46 52.7**	**-0.2**
ATAL				S	**Sn**	**13 47 29.1**	**-0.8**
ATAL	**Atalanti**	**3.21**	**10**	P	**Pn**	**13 46 52.7**	**-0.2**
ATAL				S	**Sn**	**13 47 29.1**	**-0.8**
AGG	**Agios Georgios**	**3.49**	**360**	P	**Pn**	**13 46 58.5**	**+1.8**
AGG	**Agios Georgios**	**3.49**	**360**	P	**Pn**	**13 46 58.5**	**+1.8**
AGG				S	**Sn**	**13 47 37.1**	**+0.3**
AGG	**Agios Georgios**	**3.49**	**360**	P	**Pn**	**13 46 58.5**	**+1.8**
AGG				S	**Sn**	**13 47 37.1**	**+0.3**
LKD2	**Lefkada island**	**3.52**	**338**	P	**Pn**	**13 46 58.6**	**+1.5**
LKD2				S	**Sn**	**13 47 37.9**	**+0.4**
LKD2	**Lefkada island**	**3.52**	**338**	P	**Pn**	**13 46 58.6**	**+1.5**
LKD2				S	**Sn**	**13 47 37.9**	**+0.4**
NEO	**Neokhori**	**3.84**	**10**	*e*P	**Pn**	**13 47 02.9**	**+1.4**
NEO	**Neokhori**	**3.84**	**10**	*e*P	**Pn**	**13 47 02.9**	**+1.4**
NEO	**Neokhori**	**3.84**	**10**	*e*P	**Pn**	**13 47 02.9**	**+1.4**
AOS	**Alonnisos**	**3.84**	**18**	P	**Pn**	**13 47 02.6**	**+1.1**
AOS	**Alonnisos**	**3.84**	**18**	P	**Pn**	**13 47 01.4**	**-0.1**
AOS				S	**Sn**	**13 47 43.2**	**-2.2**
AOS	**Alonnisos**	**3.84**	**18**	P	**Pn**	**13 47 01.4**	**-0.1**
AOS				S	**Sn**	**13 47 43.2**	**-2.2**
XOR	**Xorichti**	**3.90**	**10**	P	**Pn**	**13 47 03.6**	**+1.4**
XOR	**Xorichti**	**3.90**	**10**	P	**Pn**	**13 47 03.0**	**+0.8**
XOR				S	**Sn**	**13 47 46.9**	**+0.2**
XOR	**Xorichti**	**3.90**	**10**	P	**Pn**	**13 47 03.0**	**+0.8**
XOR				S	**Sn**	**13 47 46.9**	**+0.2**
THL	**Klokotos Trika**	**4.04**	**357**	P	**Pn**	**13 47 05.2**	**+1.0**
THL				S	**Sn**	**13 47 49.5**	**-0.8**
THL	**Klokotos Trika**	**4.04**	**357**	*e*P	**Pn**	**13 47 05.5**	**+1.3**
THL	**Klokotos Trika**	**4.04**	**357**	P	**Pn**	**13 47 05.2**	**+1.0**
THL				S	**Sn**	**13 47 49.5**	**-0.8**
CHOS	**Chios island**	**4.13**	**45**	P	**Pn**	**13 47 04.9**	**-0.5**
CHOS	**Chios island**	**4.13**	**45**	P	**Pn**	**13 47 04.9**	**-0.5**
IGT	**Igoumenitsa**	**4.30**	**339**	P	**Pn**	**13 47 07.8**	**0.0**
IGT				S	**Sn**	**13 47 54.1**	**-2.6**
IGT	**Igoumenitsa**	**4.30**	**339**	P	**Pn**	**13 47 07.8**	**0.0**
IGT				S	**Sn**	**13 47 54.1**	**-2.6**
PAIG	**Paliouri**	**4.52**	**13**	P	**Pn**	**13 47 11.1**	**+0.3**
PAIG	**Paliouri**	**4.52**	**13**	P	**Pn**	**13 47 11.2**	**+0.4**
PAIG	**Paliouri**	**4.52**	**13**	P	**Pn**	**13 47 11.1**	**+0.3**
KEK	**Kerkira**	**4.64**	**335**	*e*P	**Pn**	**13 47 13.1**	**+0.7**
KEK	**Kerkira**	**4.64**	**335**	P	**Pn**	**13 47 13.1**	**+0.7**
KEK	**Kerkira**	**4.64**	**335**	*e*P	**Pn**	**13 47 13.1**	**+0.7**
KEK	**Kerkira**	**4.64**	**335**	*e*P	**Pn**	**13 47 13.1**	**+0.7**
ARG	**Arkhangelos**	**4.76**	**80**	P	**Pn**	**13 47 14.4**	**+0.4**
ARG				S	**Sn**	**13 48 03.9**	**-3.9**
ARG	**Arkhangelos**	**4.76**	**80**	P	**Pn**	**13 47 14.4**	**+0.4**
ARG				S	**Sn**	**13 48 03.9**	**-3.9**
KZN	**Kozani**	**4.79**	**355**	P	**Pn**	**13 47 15.9**	**+1.4**
KZN				S	**Sn**	**13 48 07.4**	**-1.3**
KZN	**Kozani**	**4.79**	**355**	P	**Pn**	**13 47 15.9**	**+1.4**
KZN				S	**Sn**	**13 48 07.4**	**-1.3**
PRK	**Paraskevi**	**4.86**	**39**	P	**Pn**	**13 47 14.5**	**-0.9**
PRK	**Paraskevi**	**4.86**	**39**	P	**Pn**	**13 47 14.5**	**-0.9**
PLG	**Polygyros**	**4.92**	**10**	P	**Pn**	**13 47 16.5**	**+0.3**
PLG	**Polygyros**	**4.92**	**10**	P	**Pn**	**13 47 16.7**	**+0.5**
PLG				S	**Sn**	**13 48 11.3**	**-0.5**
PLG	**Polygyros**	**4.92**	**10**	P	**Pn**	**13 47 16.5**	**+0.3**
PLG				S	**Sn**	**13 48 11.3**	**-0.5**
OUR	**Ouranopolis**	**4.98**	**15**	P	**Pn**	**13 47 16.8**	**-0.2**
OUR	**Ouranopolis**	**4.98**	**15**	P	**Pn**	**13 47 16.8**	**-0.2**
HORT	**Hortiatis**	**5.10**	**7**	P	**Pn**	**13 47 18.8**	**+0.1**
HORT	**Hortiatis**	**5.10**	**7**	P	**Pn**	**13 47 18.8**	**+0.1**
FNA	**Florina**	**5.30**	**352**	P	**Pn**	**13 47 23.4**	**+1.9**
FNA	**Florina**	**5.30**	**352**	P	**Pn**	**13 47 22.1**	**+0.6**
FNA	**Florina**	**5.30**	**352**	P	**Pn**	**13 47 22.1**	**+0.6**
SOH	**Sokhos**	**5.35**	**8**	P	**Pn**	**13 47 22.8**	**+0.7**
SOH	**Sokhos**	**5.35**	**8**	P	**Pn**	**13 47 22.9**	**+0.8**
SOH	**Sokhos**	**5.35**	**8**	P	**Pn**	**13 47 22.8**	**+0.7**
BIA	**Bitola**	**5.54**	**352**	*e*Sn	**Sn**	**13 48 24.8**	**-2.2**
BIA				*e*Lg		13 48 25.0	
	comp=E,25nm,0.3s						
BIA				*e*Lg		13 48 25.6	
	comp=N,23nm,0.3s						
OHR	**Ohrid**	**5.71**	**348**	*e*Sn	**Sn**	**13 48 26.7**	**-4.4**
OHR				*e*Lg		13 48 27.0	
	comp=N,40nm,0.8s						
OHR				*e*Lg		13 48 27.4	
	comp=E,39nm,0.5s						
OHR	**Ohrid**	**5.71**	**348**	P	**Pn**	**13 47 27.6**	**+0.6**
OHR	**Ohrid**	**5.71**	**348**	P	**Pn**	**13 47 27.6**	**+0.6**
KAVA	**Kavala**	**5.73**	**17**	P	**Pn**	**13 47 26.6**	**-0.7**
KAVA	**Kavala**	**5.73**	**17**	P	**Pn**	**13 47 26.6**	**-0.7**
TIP	**Timpagrande**	**5.75**	**311**	P	**Pn**	**13 47 26.7**	**-0.8**
TIP	**Timpagrande**	**5.75**	**311**	P	**Pn**	**13 47 26.7**	**-0.8**
VAY	**Valandovo**	**5.79**	**2**	*e*Pn	**Pn**	**13 47 27.9**	**-0.3**
VAY				*e*Lg		13 48 31.4	
	comp=E,31nm,1.1s						
VAY				*e*Sn	**Sn**	**13 48 31.4**	**-1.7**
VAY				*e*Lg		13 48 31.6	
	comp=N,43nm,1.2s						
CEL	**Celeste**	**5.84**	**300**	P	**Pn**	**13 47 28.2**	**-0.6**
CEL	**Celeste**	**5.84**	**300**	P	**Pn**	**13 47 28.2**	**-0.6**
KRUS	**Krusevo**	**5.90**	**352**	*e*Pn	**Pn**	**13 47 30.1**	**+0.5**
KRUS				*e*Sn	**Sn**	**13 48 32.4**	**-3.4**
KRUS				*e*Lg		13 48 32.5	
	comp=E,9.0nm,0.3s						
KRUS				*e*Lg		13 48 32.7	
	comp=N,11nm,0.4s						
NVR	**Nevrokopi**	**5.94**	**11**	P	**Pn**	**13 47 30.7**	**+0.5**
NVR	**Nevrokopi**	**5.94**	**11**	P	**Pn**	**13 47 30.7**	**+0.5**
ALN	**Alexandroupoli**	**6.11**	**27**	P	**Pn**	**13 47 32.0**	**-0.5**
ALN	**Alexandroupoli**	**6.11**	**27**	P	**Pn**	**13 47 32.0**	**-0.5**
TAR1	**Taranto**	**6.39**	**323**	*e*Pn	**Pn**	**13 47 35.2**	**-1.1**
PE1	**Pezze di Greco**	**6.54**	**325**	*e*Pn	**Pn**	**13 47 36.8**	**-1.6**
VAE	**Valguarnera**	**6.67**	**289**	P	**Pn**	**13 47 38.7**	**-1.5**
	comp=N,1.7nm,0.3s,baz=76,slow=17,SNR=3.1						
VAE				S	**Sn**	**13 48 53.9**	**-0.9**
	comp=N,1.5nm,0.3s,baz=27,slow=6.8,SNR=2.6						
VAE	**Valguarnera**	**6.67**	**289**	P	**Pn**	**13 47 38.7**	**-1.5**
VAE				S	**Sn**	**13 48 53.9**	**-0.9**
VAE	**Valguarnera**	**6.67**	**289**	P	**Pn**	**13 47 38.7**	**-1.5**
VAE				S	**Sn**	**13 48 53.9**	**-0.9**
CUC	**Castrocucco**	**6.82**	**313**	*e*Pn	**Pn**	**13 47 40.7**	**-1.5**
	comp=N,23nm,0.9s						
CUC	**Castrocucco**	**6.82**	**313**	*e*Pn	**Pn**	**13 47 40.7**	**-1.6**
	comp=N,23nm,0.9s						
SG1	**Sgolgore (BA)**	**6.93**	**322**	*e*Pn	**Pn**	**13 47 42.5**	**-1.2**
BAI	**Bari**	**7.03**	**324**	*e*Pn	**Pn**	**13 47 44.3**	**-0.8**
STON	**Ston**	**8.17**	**335**	*e*Pn	**Pn**	**13 47 57.7**	**-3.0**
STON				Sn	**Sn**	**13 49 21.5**	**-10**
GRUS	**Gruza**	**8.45**	**352**	*i/e*Pn	**Pn**	**13 48 02.6**	**-1.8**
BBLS	**Lazići**	**8.63**	**346**	*i/e*Pn	**Pn**	**13 48 05.5**	**-1.5**
DIVS	**Divibare**	**8.75**	**349**	*e*Pn	**Pn**	**13 48 07.3**	**-1.3**
BRTR	**Keskin Array B**	**9.90**	**62**	P	**Pn**	**13 48 24.4**	**+0.1**
	comp=N,0.2nm,0.3s,baz=242,slow=15,SNR=5.0						
BRTR	**Keskin Array B**	**9.90**	**62**	P	**Pn**	**13 48 24.5**	**+0.2**
MLR	**Muntele Rosu**	**10.33**	**14**	P	**Pn**	**13 48 28.5**	**-1.6**
	comp=N,0.1nm,0.3s,baz=183,slow=18,SNR=2.4						
MLR	**Muntele Rosu**	**10.33**	**14**	P	**Pn**	**13 48 28.5**	**-1.6**
NVLJ	**Novalja**	**10.68**	**330**	*e*Pn	**Pn**	**13 48 33.0**	**-1.9**
NVLJ				Sn	**Sn**	**13 50 21.4**	**-11**
NVLJ	**Novalja**	**10.68**	**330**	*e*Pn	**Pn**	**13 48 33.0**	**-2.0**
MMAI	**Mount Meron Ar**	**11.10**	**99**	P	**Pn**	**13 48 38.2**	**-2.5**
	comp=N,0.9nm,0.3s,baz=273,slow=11,SNR=5.5						
EIL	**Elat**	**12.13**	**115**	P	**Pn**	**13 48 51.7**	**-3.1**
	comp=N,0.6nm,0.3s,baz=182,slow=14,SNR=5.4						
EIL	**Elat**	**12.13**	**115**	P	**Pn**	**13 48 51.7**	**-3.2**
EIL	**Elat**	**12.13**	**115**	P	**Pn**	**13 48 51.7**	**-3.2**
AKASG	**Malin Array Be**	**15.97**	**16**	P	**Pn**	**13 49 45.6**	**+0.3**
	comp=N,1.8nm,0.3s,baz=207,slow=11,SNR=5.6						
AKASG	**Malin Array Be**	**15.97**	**16**	P	**Pn**	**13 49 45.7**	**+0.3**
FINES	**FINESS Array B**	**26.05**	**4**	P	**P**	**13 51 32.6**	**+0.8**
	comp=N,0.7nm,0.6s,mb3.4,baz=175,slow=9.6,SNR=3.9						
FINES	**FINESS Array B**	**26.05**	**4**	P	**P**	**13 51 32.7**	**+0.8**
ARCES	**ARCESS Array B**	**34.11**	**2**	P	**P**	**13 52 42.9**	**-0.1**
	comp=N,0.9nm,0.6s,mb3.9,baz=187,slow=8.6,SNR=11						
ARCES	**ARCESS Array B**	**34.11**	**2**	P	**P**	**13 52 42.9**	**-0.1**
ARCES	**ARCESS Array B**	**34.11**	**2**	P	**P**	**13 52 42.9**	**-0.1**
BVAR	**Borovoye Array**	**37.78**	**47**	P	**P**	**13 53 14.6**	**0.0**
	comp=N,0.4nm,0.4s,mb3.5,baz=258,slow=5.7,SNR=3.4						
BVAR	**Borovoye Array**	**37.78**	**47**	P	**P**	**13 53 14.6**	**0.0**
KURK	**Kurchatov**	**42.75**	**51**	P	**P**	**13 53 55.5**	**-0.2**
	comp=N,0.8nm,0.4s,mb3.8,baz=276,slow=8.5,SNR=7.7						
KURK	**Kurchatov**	**42.75**	**51**	P	**P**	**13 53 55.5**	**-0.2**
MKAR	**Makanchi Array**	**45.50**	**56**	P	**P**	**13 54 18.6**	**+0.8**
	comp=N,1.5nm,0.6s,mb4.1,baz=294,slow=4.6,SNR=16						
MKAR	**Makanchi Array**	**45.50**	**56**	P	**P**	**13 54 18.5**	**+0.7**
ZALV	**Zalesovo Beam**	**46.42**	**46**	P	**P**	**13 54 25.4**	**+0.5**
	comp=N,1.1nm,0.3s,mb4.3,baz=268,slow=10,SNR=3.6						
ZALV	**Zalesovo Beam**	**46.42**	**46**	P	**P**	**13 54 25.4**	**+0.5**
SONM	**Songino Array**	**61.03**	**50**	P	**P**	**13 56 13.4**	**+1.7**
	comp=N,0.4nm,0.5s,mb3.8,baz=282,slow=7.2,SNR=3.4						

IDC 28 13:47:59.3±15.0, 10°.73N×91°.71E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/22, mbtmp3.5/3, Error ellipse: s-maj=510.5km s-min=31.4km az=74.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**39.00**	**16**	P	P	13 55 27.5	+0.1
	0.3nm,0.4s,baz=211,slow=8.2,SNR=3.0						
WRA	**Warramunga Arr**	**51.86**	**126**	P	P	13 57 09.7	-0.1
	0.3nm,0.6s,baz=306,slow=8.6,SNR=4.0						
ASAR	**Alice Springs**	**53.57**	**130**	P	P	13 57 22.4	0.0
	0.5nm,0.7s,baz=305,slow=6.7,SNR=5.8						

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*ISCJB **28** 13:51:02.0±0.8, 35°.56N±0°.05×22°.43E±0°.05, h85km±12km, Error ellipse: s-maj=10.5km s-min=4.5km az=38.3*
*CSEM **28** 13:51:03.0±0.4, 35°.52N×22°.41E, h60km, MD3.6, Error ellipse: s-maj=10.2km s-min=3.9km az=38.0*
*THE **28** 13:51:03.5, 35°.61N×22°.46E, h27km±6km, ML3.9/9, Error ellipse: s-maj=7.0km s-min=1.1km az=217.0*
*ATH **28** 13:51:05.4, 35°.59N×22°.78E, h51km±33km, MD3.6/8*
*NEIC **28** 13:51:05.4, 35°.59N×22°.78E, h51km, MD3.6(ATH), After ATH.*
ISC 28 13:51:03.5±0.8, 35°.55N±0°.05×22°.43E±0°.06, h63km±21km, n80, σ 0°.88/106, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.88**	**34**	*e*P	**Pn**	**13 51 19.8**	**-0.3**
KYTH	**Kithira**	**0.88**	**34**	*e*P	**Pn**	**13 51 19.8**	**-0.3**
KYTH	**Kithira**	**0.88**	**34**	*e*P	**Pn**	**13 51 19.8**	**-0.3**
KARN	**Karanos**	**1.23**	**97**	P	**Pn**	**13 51 24.2**	**-0.4**
KARN				S	**Sn**	**13 51 40.9**	**+0.5**
KARN	**Karanos**	**1.23**	**97**	*e*P	**Pn

ASAR	**Alice Springs**	**53.57 130**	P	P	14 01 43.2	+0.1
	0.5nm,0.7s,baz=303,slow=6.4,SNR=4.5					

*BJI **28** 13:52:53.8, 10.°64N×91.°70E, h13km, mb4.3/7*
*IDC **28** 13:52:54.7±0.5, 10.°76N×91.°76E, h0km, mb4.3/21, mb1 4.4/21, mb1mx4.3/27, mbtmp4.3/21, Error ellipse: s-maj=21.8km s-min=12.2km az=55.0*
*NEIC **28** 13:52:56.2±0.3, 10.°66N×91.°61E, h10km, mb4.5/7, Error ellipse: s-maj=10.0km s-min=7.4km az=49.0*
*MOS **28** 13:52:57.6±1.0, 10.°70N×91.°70E, h33km, mb4.9/13, Error ellipse: s-maj=14.4km s-min=7.1km az=114.8*
*ISCJB **28** 13:52:57.5±0.4, 10.°70N±0.°07×91.°73E±0.°06, h33km, mb4.4/43, Error ellipse: s-maj=10.9km s-min=7.7km az=38.2*
*SZGRF **28** 13:53:01.1, 11.°57N×92.°26E, h33km, mb4.7, Andaman Islands, India, region*

ISC 28 13:52:59.8±0.4, 10.°69N±0.°07×91.°69E±0.°06, h35km, (h15km±5.9km:pP-P), n85, σ0s89/82, mb4.4/43, 9C-4D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**10.43**	**41**	*e*Pn	**Pn**	**13 55 27.9**	**+1.0**
	1.5nm,0.4s						
CMAR	**Chiang Mai Arr**	**10.43**	**41**	Pn	**Pn**	**13 55 28.1**	**+1.2**
	0.1nm,0.3s,baz=241,slow=15,SNR=3.2						
KSM	**Kuching**	**20.63**	**115**	*e*P	**P**	**13 57 36.8**	**+0.3**
	14nm,1.1s						
LZH	**Lanzhou**	**27.58**	**22**	*e*P	**P**	**13 59 00.3**	**+17**
LZH				pP	pP	13 59 05.0	+11
LZH				sP	sP	13 59 07.5	+10
LZH				pmax	pmax		
	comp=Z,21nm,1.3s,mb4.6						
LZH				pmax	pmax		
	comp=Z,89nm,4.4s						
GTA	**Gaotai**	**29.50**	**13**	*e*P	**P**	**13 59 01.5**	**+0.8**
GTA				pP	pP	13 59 06.0	-4.8
GTA				sP	sP	13 59 08.5	-6.5
GTA				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5						
KSH	**Kashi**	**31.93**	**337**	*e*P	**P**	**13 59 21.3**	**-0.9**
AAK	**Ala-Archa**	**35.19**	**338**	P	**P**	**13 59 51.3**	**+0.8**
	comp=Z,1.4nm,0.3s,mb4.4,baz=166,slow=6.3,SNR=11						
AAK	**Ala-Archa**	**35.19**	**338**	P	**P**	**13 59 51.3**	**+0.8**
EKS2	**Erkin-Say**	**35.48**	**337**	*e*P	**P**	**13 59 54.3**	**+1.3**
EKS2				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
EKS2	**Erkin-Say**	**35.48**	**337**	*e*P	**P**	**13 59 54.3**	**+1.3**
	comp=Z,8.5nm,1.0s,mb4.6						
MK31	**Makanchi Array**	**36.86**	**349**	*e*P	**P**	**14 00 04.2**	**-0.5**
MKAR	**Makanchi Array**	**36.86**	**349**	P	**P**	**14 00 04.5**	**-0.2**
	comp=Z,6.5nm,0.8s,mb4.5,baz=131,slow=8.9,SNR=41						
MKAR				PcP	PcP	14 02 26.0	0.0
	comp=Z,0.6nm,0.7s,baz=104,slow=4.9,SNR=3.6						
MKAR	**Makanchi Array**	**36.86**	**349**	P	**P**	**14 00 04.5**	**-0.2**
MKAR				PcP	PcP	14 02 26.0	0.0
SONM	**Songino Array**	**39.04**	**16**	P	**P**	**14 00 23.2**	**+0.1**
	comp=Z,3.4nm,0.9s,mb4.1,baz=196,slow=9.6,SNR=18						
SONM				PcP	PcP	14 02 33.6	+0.9
	comp=Z,1.0nm,0.8s,baz=197,slow=2.4,SNR=3.4						
ULN	**Ulaanbaatar**	**39.24**	**16**	*e*P	**P**	**14 00 24.0**	**-0.8**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.9						
ULN	**Ulaanbaatar**	**39.24**	**16**	*e*P	**P**	**14 00 24.0**	**-0.8**
	comp=Z,1.9nm,0.9s,mb3.8						
KURK	**Kurchatov**	**41.33**	**347**	P	**P**	**14 00 41.3**	**-0.7**
	comp=Z,5.0nm,0.9s,mb4.1,baz=163,slow=7.4,SNR=21						
KURK				PcP	PcP	14 02 39.4	-0.7
	comp=Z,1.1nm,1.0s,baz=158,slow=3.3,SNR=3.8						
KURK	**Kurchatov**	**41.33**	**347**	⇓*e*P	**P**	**14 00 41.6**	**-0.4**
KURK				pmax	pmax		
	comp=Z,13nm,1.5s,mb4.3						
KSRS	**Korea Array**	**42.05**	**45**	P	**P**	**14 00 47.0**	**-1.2**
	comp=Z,1.5nm,0.9s,mb3.6,baz=247,slow=6.8,SNR=3.2						
ZALV	**Zalesovo Beam**	**43.49**	**354**	P	**P**	**14 00 59.4**	**-0.2**
	comp=Z,6.6nm,0.8s,mb4.4,baz=170,slow=9.0,SNR=23						
FITZ	**Fitzroy Crossi**	**44.06**	**130**	P	**P**	**14 01 03.7**	**-1.0**
	comp=Z,3.2nm,0.6s,mb4.2,baz=302,slow=6.0,SNR=12						
NVS	**Novosibirsk**	**44.55**	**353**	*e*P	**P**	**14 00 56.2**	**-12**
BVAR	**Borovoye Array**	**45.57**	**342**	P	**P**	**14 01 15.9**	**-0.3**
	comp=Z,0.9nm,0.6s,mb3.9,baz=157,slow=8.0,SNR=8.1						
BRVK	**Borovoye**	**45.63**	**342**	*i* P	**P**	**14 01 16.4**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.2						
AKTK	**Aktyubinsk**	**48.34**	**332**	P	**P**	**14 01 37.8**	**-0.1**
AKTO	**Aktyubinsk**	**48.34**	**332**	P	**P**	**14 01 37.8**	**-0.1**
	comp=Z,2.7nm,0.7s,mb4.4,baz=127,slow=8.7,SNR=9.5						
MJAR	**Matsushiro Arr**	**49.16**	**51**	P	**P**	**14 01 46.7**	**+2.3**
	comp=Z,0.8nm,0.9s,mb3.8,baz=230,slow=5.5,SNR=4.1						
GNI	**Garni**	**50.76**	**314**	*i* P	**P**	**14 01 58.1**	**+1.6**
WRA	**Warramunga Arr**	**51.85**	**126**	P	**P**	**14 02 04.7**	**-0.3**
	comp=Z,1.0nm,0.5s,mb4.0,baz=300,slow=10.0,SNR=12						
WRAB	**Tennant Creek**	**51.86**	**126**	*e*P	**P**	**14 02 04.5**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
WRAB	**Tennant Creek**	**51.86**	**126**	*e*P	**P**	**14 02 04.5**	**-0.5**
	comp=Z,4.6nm,0.6s,mb4.6						
SVE	**Sverdlovsk**	**51.91**	**339**	*e*P	**P**	**14 02 05.4**	**+0.5**
SVE				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.8						
ZEI	**Tsey**	**52.34**	**316**	*e*P	**P**	**14 02 10.0**	**+1.7**
ZEI				pmax	pmax		
	comp=Z,11nm,0.4s,mb5.1						
ARU	**Arti**	**52.37**	**337**	*d i*P	**P**	**14 02 06.9**	**-1.4**
ARU				*e*		14 04 04.0	
ARU				S	**S**	**14 09 30.9**	**-0.6**
ARU				SS	SS	14 13 04.9	-4.7
ARU				pmax	pmax		
	comp=Z,15nm,1.7s,mb4.7						
ASAR	**Alice Springs**	**53.56**	**130**	P	**P**	**14 02 17.2**	**-0.3**
	comp=Z,3.5nm,0.8s,mb4.3,baz=306,slow=7.7,SNR=17						
KIV	**Kislovodsk**	**53.62**	**317**	*c i*P	**P**	**14 02 18.8**	**+1.1**
KIV				*e**PP	pP	14 02 26.6	-1.7
KIV				*e**SP	sP	14 02 31.7	-0.7
KIV				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
VSR	**Storozhevoye**	**58.71**	**324**	*e*P	**P**	**14 02 53.2**	**-0.7**
VSR				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.9						
VSR				pmax	pmax		
	comp=N,10.0nm,1.0s						
VSR				pmax	pmax		
	comp=E,5.0nm,0.5s						
BR131	**Keskin Array S**	**58.77**	**310**	*e*P	**P**	**14 02 53.4**	**-1.3**
	comp=E,1.5nm,0.8s,mb4.1						
BRTR	**Keskin Array B**	**58.77**	**310**	P	**P**	**14 02 54.0**	**-0.6**
	comp=E,2.1nm,0.7s,mb4.3,baz=111,slow=6.8,SNR=14						
OBN	**Obninsk**	**61.72**	**328**	⇑*e*P	**P**	**14 03 15.0**	**+0.5**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb5.0						
STKA	**Stephens Creek**	**63.78**	**133**	P	**P**	**14 03 29.1**	**+0.6**
	comp=Z,3.4nm,0.8s,mb4.4,baz=310,slow=8.9,SNR=4.1						
AKASG	**Malin Array Be**	**64.46**	**321**	P	**P**	**14 03 31.6**	**-1.1**
	comp=Z,1.1nm,0.5s,mb4.2,baz=94,slow=5.0,SNR=9.1						
TIXI	**Tiksi**	**64.98**	**12**	*e*P	**P**	**14 03 33.3**	**-2.5**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.4						
IDI	**Anoyia**	**65.00**	**304**	P	**P**	**14 03 36.6**	**+0.1**
	comp=Z,8.0nm,1.1s,mb4.7,baz=272,slow=1.4,SNR=3.9						
VRI	**Vrincioaia**	**65.01**	**316**	⇓P	**P**	**14 03 37.2**	**+0.8**
VRI	**Vrincioaia**	**65.01**	**316**	⇓*i*P	**P**	**14 03 37.2**	**+0.8**
PLOR	**Plostina**	**65.06**	**316**	⇑P	**P**	**14 03 37.6**	**+0.9**
PLOR	**Plostina**	**65.06**	**316**	⇑*i*P	**P**	**14 03 37.6**	**+0.9**
MLR	**Muntele Rosu**	**65.48**	**315**	P	**P**	**14 03 40.3**	**+0.9**
	comp=Z,9.2nm,0.9s,mb4.8,baz=108,slow=2.8,SNR=15						
MLR	**Muntele Rosu**	**65.48**	**315**	⇑*i*P	**P**	**14 03 40.2**	**+0.7**
BURAR	**Bucovina Array**	**66.35**	**317**	⇑P	**P**	**14 03 45.6**	**+0.6**
BURAR	**Bucovina Array**	**66.35**	**317**	⇑*i*P	**P**	**14 03 45.6**	**+0.6**
JOF	**Joensuu**	**67.28**	**334**	*e*P	**P**	**14 03 49.7**	**-1.0**
JOF				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.0						
JOF	**Joensuu**	**67.28**	**334**	*ep*	**P**	**14 03 49.7**	**-1.0**
	comp=Z,13nm,0.8s,mb5.0						
JOF	**Joensuu**	**67.28**	**334**	*ep*	**P**	**14 03 49.7**	**-1.0**
	comp=Z,13nm,0.8s,mb5.0						
FINES	**FINESS Array B**	**69.11**	**332**	P	**P**	**14 04 02.1**	**-0.1**
	comp=Z,5.4nm,0.8s,mb4.6,baz=110,slow=8.5,SNR=22						
KAF	**Kangasniemi**	**69.20**	**333**	*e*P	**P**	**14 04 01.7**	**-1.0**
KAF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
KAF	**Kangasniemi**	**69.20**	**333**	*ep*	**P**	**14 04 01.7**	**-1.0**
	comp=Z,10.0nm,1.0s,mb4.7						
KAF	**Kangasniemi**	**69.20**	**333**	*ep*	**P**	**14 04 01.7**	**-1.0**
	comp=Z,10.0nm,1.0s,mb4.7						
OJC	**Ojcow**	**70.28**	**320**	*e*P	**P**	**14 04 07.3**	**-2.3**
MORC	**Moravsky Berou**	**71.68**	**319**	⇑P	**P**	**14 04 18.3**	**+0.2**
MORC	**Moravsky Berou**	**71.68**	**319**	⇑*i*P	**P**	**14 04 18.3**	**+0.2**
ARCES	**ARCESS Array B**	**71.81**	**340**	P	**P**	**14 04 19.1**	**+0.5**
	comp=Z,2.2nm,0.8s,mb4.2,baz=91,slow=5.2,SNR=10						
BRG	**Berggiesshubel**	**74.06**	**320**	*i* P	**P**	**14 04 32.5**	**+0.3**
	comp=Z,2.7nm,0.9s,mb4.2						
BILL	**Bilibino**	**74.39**	**22**	*e*P	**P**	**14 04 33.8**	**0.0**
CLL	**Collm**	**74.67**	**320**	*e*P	**P**	**14 04 35.0**	**-0.7**
CLL	**Collm**	**74.67**	**320**	*e*P	**P**	**14 04 35.0**	**-0.7**
BOSA	**Boshof**	**75.07**	**237**	P	**P**	**14 04 40.4**	**+2.0**
	comp=Z,3.4nm,0.7s,mb4.4,baz=79,slow=5.9,SNR=6.6						
BOSA	**Boshof**	**75.07**	**237**	P	**P**	**14 04 40.4**	**+2.0**
GRF	**Grafenberg Arr**	**75.77**	**319**	*e*P	**P**	**14 04 42.1**	**0.0**
	comp=Z,5.0nm,0.9s,mb4.4						
GRF	**Grafenberg Arr**	**75.77**	**319**	*e*P	**P**	**14 04 42.1**	**0.0**
GRF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
NB2	**NORSAR Subarra**	**76.11**	**330**	P	**P**	**14 04 43.0**	**-0.8**
	comp=Z,3.5nm,0.8s,mb4.3,baz=96,slow=5.6						
NOA	**NORSAR Array B**	**76.11**	**330**	P	**P**	**14 04 43.2**	**-0.5**
	comp=Z,1.9nm,0.8s,mb4.1,baz=94,slow=5.7,SNR=11						
NOA	**NORSAR Array B**	**76.11**	**330**	P	**P**	**14 04 43.2**	**-0.5**
KEST	**Kesra**	**77.66**	**304**	P	**P**	**14 04 53.6**	**+0.5**
	comp=Z,2.1nm,0.9s,mb4.1,baz=303,slow=7.1,SNR=5.7						
LPG	**La Plagne**	**78.93**	**314**	*e*P	**P**	**14 04 59.9**	**0.0**
	comp=Z,14nm,0.9s,mb4.6						
LPL	**La Plagne**	**78.94**	**314**	*e*P	**P**	**14 05 00.0**	**0.0**
	comp=Z,9.6nm,0.7s,mb4.5						
SMF	**Signal de Mont**	**80.85**	**316**	*e*P	**P**	**14 05 09.7**	**-0.6**
	comp=Z,6.4nm,0.6s,mb4.4						
MFF	**Saint Martin d**	**83.58**	**316**	*e*P	**P**	**14 05 24.2**	**-0.4**
	comp=Z,8.8nm,0.8s,mb4.6						
MFF	**Saint Martin d**	**83.58**	**316**	*e*P	**P**	**14 05 24.2**	**-0.4**
MFF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.6						
MFF	**Saint Martin d**	**83.58**	**316**	*e*P	**P**	**14 05 24.2**	**-0.4**
	comp=Z,4.4nm,0.8s,mb4.6						
NVAR	**Mina Array Bea**	**123.67**	**28**	PKP	PKPdf	14 11 55.8	+1.5
	comp=Z,0.3nm,0.5s,baz=270,slow=0.9,SNR=3.5						
TXAR	**Lajitas Array**	**137.54**	**20**	PKP	PKPdf	14 12 22.9	+2.1
	comp=Z,0.3nm,0.8s,baz=35,slow=4.6,SNR=3.6						
PLCA	**Paso Flores**	**146.22**	**205**	PKPbc	PKPbc	14 12 38.2	+1.4
	comp=Z,2.0nm,0.8s,baz=234,slow=12,SNR=4.0						
CPUP	**Villa Florida**	**146.88**	**238**	PKPbc	PKPbc	14 12 40.3	+1.1
	comp=Z,2.5nm,0.8s,baz=83,slow=19,SNR=6.9						

*CSEM **28** 13:55:58.9±0.5, 36.°10N×21.°86E, h2km, MD3.1, Error ellipse: s-maj=11.8km s-min=6.0km az=50.0*
*ATH **28** 13:55:59.8, 36.°18N×21.°87E, h13km±2km, MD3.1/3*
*ISCJB **28** 13:55:59.1±1.1, 36.°11N±0.°05×21.°83E±0.°08, h10km, Error ellipse: s-maj=10.7km s-min=6.3km az=147.6*
*THE **28** 13:56:00.8, 36.°16N×21.°82E, h7km±2km, ML3.1/2, Error ellipse: s-maj=4.1km s-min=2.3km az=251.0*

ISC 28 13:55:58.7±1.5, 36.°09N±0.°06×21.°82E±0.°09, h2km±6km, n35, σ0s80/47, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.81**	**355**	P	**Pg**	**13 56 13.7**	**-0.5**
PYL				S	**Sg**	**13 56 26.7**	**+2.0**
PYL	**PYLOS**	**0.81**	**355**	*e*PB	**Pg**	**13 56 13.6**	**-0.6**
PYL	**PYLOS**	**0.81**	**355**	P	**Pg**	**13 56 13.7**	**-0.5**
PYL				S	**Sg**	**13 56 26.7**	**+2.0**
KYTH	**Kithira**	**1.00**	**79**	*e*PB	**Pg**	**13 56 17.9**	**0.0**
KYTH	**Kithira**	**1.00**	**79**	*e*Pb	**Pg**	**13 56 17.9**	**0.0**
ITM	**Ithomi**	**1.09**	**4**	P	**Pg**	**13 56 19.1**	**-0.6**
ITM				S	**Sg**	**13 56 33.9**	**+0.1**
ITM	**Ithomi**	**1.09**	**4**	*e*PN	**Pg**	**13 56 19.2**	**-0.5**
ITM	**Ithomi**	**1.09**	**4**	P	**Pg**	**13 56 19.1**	**-0.6**
ITM				S	**Sg**	**13 56 33.9**	**+0.1**
VLI	**Veliai**	**1.10**	**55**	*e*PB	**Pg**	**13 56 19.2**	**-0.6**
VLI	**Veliai**	**1.10**	**55**	*e*Pb	**Pg**	**13 56 19.2**	**-0.6**
VLX	**Vlachokerasia**	**1.35**	**19**	P	**Pn**	**13 56 23.5**	**-1.1**
VLX				S	**Sg**	**13 56 42.4**	**+0.1**
VLX	**Vlachokerasia**	**1.35**	**19**	*e*PG	**Pg**	**13 56 23.4**	**-1.3**
VLX	**Vlachokerasia**	**1.35**	**19**	P	**Pn**	**13 56 23.5**	**-1.1**
VLX				S	**Sg**	**13 56 42.4**	**+0.1**
DID	**Didima**	**1.81**	**38**	P	**Pn**	**13 56 31.3**	**+0.4**
DID				S	**Sn**	**13 56 54.5**	**0.0**
DID	**Didima**	**1.81**	**38**	*e*PN	**Pn**	**13 56 31.6**	**+0.7**
DID	**Didima**	**1.81**	**38**	P	**Pn**	**13 56 31.3**	**+0.4**
DID	**Didima**	**1.81**	**38**	*e*Pn	**Pn**	**13 56 31.6**	**+0.7**
DID				S	**Sn**	**13 56 54.5**	**0.0**
KARN	**Karanos**	**1.84**	**111**	P	**Pn**	**13 56 31.4**	**+0.2**
KARN	**Karanos**	**1.84**	**111**	P	**Pn**	**13 56 31.4**	**+0.2**
GUR	**Goura**	**1.89**	**13**	P	**Pn**	**13 56 33.0**	**+1.0**
GUR	**Goura**	**1.89**	**13**	P	**Pn**	**13 56 33.0**	**+1.0**
LTK	**Loutraki**	**2.14**	**25**	P	**Pn**	**13 56 37.0**	**+1.6**
LTK	**Loutraki**	**2.14**	**25**	P	**Pn**	**13 56 37.0**	**+1.6**
LAKA	**Lakka**	**2.15**	**3**	P	**Pn**	**13 56 36.1**	**+0.5**
LAKA	**Lakka**	**2.15**	**3**	P	**Pn**	**13 56 36.1**	**+0.5**
TRIZ	**Trizonia**	**2.28**	**5**	P	**Pn**	**13 56 37.0**	**-0.4**
TRIZ	**Trizonia**	**2.28**	**5**	P	**Pn**	**13 56 37.0**	**-0.4**
VLS	**Valsamata**	**2.31**	**335**	P	**Pn**	**13 56 37.8**	**+0.1**
VLS				S	**Sn**	**13 57 05.8**	**-0.8**
VLS	**Valsamata**	**2.31**	**335**	P	**Pn**	**13 56 37.8**	**+0.1**
VLS				S	**Sn**	**13 57 05.8**	**-0.8**
KALE	**Kalithea**	**2.31**	**6**	P	**Pn**	**13 56 37.6**	**-0.2**
KALE	**Kalithea**	**2.31**	**6**	P	**Pn**	**13 56 37.6**	**-0.2**
DSF	**Desfina**	**2.38**	**13**	P	**Pn**	**13 56 38.7**	**-0.1**
DSF	**Desfina**	**2.38**	**13**	P	**Pn**	**13 56 38.7**	**-0.1**
AGG	**Agios Georgios**	**2.96**	**8**	P	**Pn**	**13 56 47.5**	**+0.9**
AGG				S	**Sn**	**13 57 21.6**	**-1.1**
AGG	**Agios Georgios**	**2.96**	**8**	P	**Pn**	**13 56 47.5**	**+0.9**
AGG				S	**Sn**	**13 57 21.6**	**-1.1**

*ISCJB **28** 13:57:01.9±1.1, 10.°75N±0.°03×91.°74E±0.°03, h9km±6km, mb4.9/132, MS4.7/11, Error ellipse: s-maj=5.8km s-min=4.2km az=28.2*
*BJI **28** 13:57:01.2, 10.°45N×91.°79E, h23km, mB5.4/20, mb5.1/49, Ms4.9/27, Ms7 4.7/26*
*IDC **28** 13:57:02.3±0.4, 10.°77N×91.°73E, h0km, mb4.8/27, mb1 4.8/29, mb1mx4.8/31, mbtmp4.7/29, ML4.2/2, Error ellipse: s-maj=14.7km s-min=9.8km az=59.0*
*NEIC **28** 13:57:03.6±0.1, 10.°73N×91.°71E, h10km, mb4.9/53, Error ellipse: s-maj=4.8km s-min=3.5km az=209.0*
*MOS **28** 13:57:05.2±1.0, 10.°76N×91.°81E, h33km, mb5.2/60, Error ellipse: s-maj=7.8km s-min=4.5km az=119.4*
*SZGRF **28** 13:57:09.3, 10.°87N×91.°46E, h33km, mb4.9, Andaman Islands, India, region*
*DJA **28** 13:57:09, 10.°68N×91.°74E, h47km, mb5.2/48*

ISC 28 13:57:06.6±1.1, 10.°75N±0.°03×91.°73E±0.°03, h28km±7km, h22km±2.8km:pP-P, n347, σ0s84/345, mb4.9/132, MS4.7/11, 10C-20D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**1.34**	**48**	*e*PKP	x	13 58 36.6	
PBA				*e*S	x	13 58 54.7	
KULM	**Kulim**	**10.36**	**121**	P	**Pn**	**13 59 35.1**	**+1.6**
KULM	**Kulim**	**10.36**	**121**	*e*Pn	**Pn**	**13 59 32.8**	**-0.7**
	31nm,1.1s						
CM31	**Chiang Mai Arr**	**10.36**	**41**	*e*Pn	**Pn**	**13 59 33.3**	**-0.2**
CMAR	**Chiang Mai Arr**	**10.36**	**41**	Pn	**Pn**	**13 59 32.4**	**-1.1**
	1.2nm,0.3s,baz=236,slow=15,SNR=19						
CHTO	**Chiang Mai**	**10.63**	**40**	*e*P	**Pn**	**13 59 37.2**	**+0.2**
PSI	**Prapat**	**10.64**	**137**	Pn	**Pn**	**13 59 37.0**	**-0.3**
	0.6nm,0.3s,baz=356,slow=15,SNR=3.7						
VIS	**Vishakhapatnam**	**10.69**	**311**	*e*PKP	**Pn**	**13 59 36.6**	**-1.3**
VIS				*ex*	x	14 01 24.4	
PALK	**Pallekele**	**11.43**	**253**	*e*P	**Pn**	**13 59 48.0**	**0.0**
PALK				pmax	pmax		
	comp=Z,47nm,0.7s						
PALK	**Pallekele**	**11.43**	**253**	*e*Pn	**Pn**	**13 59 48.0**	**0.0**
	comp=Z,47nm,0.7s						
KTGM	**Kuala Trenggan**	**12.51**	**115**	P	**Pn**	**14 00 04.6**	**+1.8**
SHL	**Shillong**	**14.74**	**1**	*ex*	**Pn**	**14 00 40.0**	**+6.8**
SHL				*ex*	x	14 03 05.0	
MYKOM	**Kota Tinggi**	**14.97**	**126**	P	**Pn**	**14 00 36.6**	**+0.2**
NGP	**Nagpur**	**15.98**	**312**	*ex*	x	14 03 34.5	
RAMN	**Ramite**	**16.83**	**344**	*e*P	**Pn**	**14 01 06.7**	**+6.5**
	comp=Z,74nm,0.6s						
KMI	**Kunming**	**17.71**	**35**	P	**Pn**	**14 01 12.0**	**+0.8**
KMI				pP	pP	14 01 15.8	-3.7
KMI				sP	sP	14 01 17.0	-6.1
KMI				PP		14 01 28.8	
KMI				S	**Sn**	**14 04 30.3**	**+2.5**
KMI				sS	sS	14 04 34.0	-12
KMI				SS		14 04 52.8	
KMI				pmax	pmax		
	comp=Z,43nm,1.0s						
KMI				LR	LR		
	comp=N,1μm,10.9s						
KMI				LR	LR		
	comp=E,920nm,12.5s						
KMI				LR	LR		
	comp=Z,1μm,13.1s						
PKI	**Pulchoki**	**17.76**	**341**	*e*P	**Pn**	**14 01 11.3**	**-0.6**
	comp=Z,90nm,0.9s						
PKIN	**Phulchoki**	**17.77**	**341**	*e*P	**Pn**	**14 01 12.0**	**0.0**
	comp=Z,78nm,0.7s						
DMN	**Daman**	**17.89**	**341**	*e*P	**Pn**	**14 01 13.2**	**-0.3**
	comp=Z,122nm,0.9s						
GUN	**Gumba**	**17.94**	**343**	*e*P	**Pn**	**14 01 14.7**	**+0.7**
	comp=Z,61nm,0.6s						
KKN	**Kakani**	**18.01**	**341**	*e*P	**Pn**	**14 01 14.4**	**-0.5**
	comp=Z,63nm,0.8s						
KAD	**Karad**	**18.22**	**293**	*ex*	**Pn**	**14 01 14.2**	**-3.4**
KAD				AMb	AMB	14 01 29.8	
	comp=Z,79nm,1.1s						
BHPL	**Bhopal**	**18.46**	**314**	*e*PKP	**Pn**	**14 01 19.7**	**-0.8**
BHPL				AMb	AMB	14 01 23.9	
	comp=Z,45nm,0.8s						
POO	**Poona**	**18.94**	**296**	*e*PKP	**Pn**	**14 01 25.3**	**-1.0**
POO				AMb	AMB	14 01 30.4	
	comp=Z,49nm,0.8s						
KSM	**Kuching**	**20.62**	**115**	P	**P**	**14 01 43.8**	**-0.2**
KSM	**Kuching**	**20.62**	**115**	*e*P	**P**	**14 01 43.1**	**-0.8**
	comp=Z,45nm,0.7s						
GYA	**Guiyang**	**21.05**	**40**	⇓*i*P	**P**	**14 01 48.3**	**-0.1**
GYA				PP		14 02 13.3	
GYA				S	**S**	**14 05 41.3**	**-0.2**
GYA				SS		14 06 14.8	
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.5						
GYA				pmax	pmax		
	comp=Z,2μm,11.5s						
GYA				LR	LR		
	comp=N,610nm,16.4s,MS4.2						
GYA				LR	LR		
	comp=E,570nm,15.2s,MS4.2						
GYA				LR	LR		
	comp=Z,670nm,16.7s,MS4.1						
PTH	**Pithoragarh**	**21.57**	**332**	*e*PKP	**P**	**14 01 55.0**	**+0.9**
SBUM	**Sibu**	**21.94**	**111**	P	**P**	**14 01 57.8**	**-0.4**
NDI	**New Delhi**	**22.43**	**325**	*ex*	**P**	**14 02 09.0**	**+5.8**
AJM	**Ajmer**	**22.47**	**316**	*e*PKP	**P**	**14 02 04.5**	**+0.8**
AJM				AMb	AMB	14 02 15.5	
	comp=Z,54nm,1.2s,mb4.8						
CD2	**Chengdu**	**22.96**	**27**	⇓*i*P	**P**	**14 02 08.0**	**-0.8**
CD2				pP		14 02 12.0	
CD2				sP	sP	14 02 15.0	-5.1
CD2				PP		14 02 37.8	
CD2				S	**S**	**14 06 13.5**	**-3.9**
CD2				SS		14 06 58.0	
CD2				pmax	pmax		
	comp=Z,170nm,1.1s,mb5.4						
CD2				pmax	pmax		
	comp=Z,250nm,6.2s						
CD2				LR	LR		
	comp=N,2μm,14.4s						
CD2				LR	LR		
	comp=Z,2μm,13.2s,MS4.7						
DDI	**Dehra Dun**	**23.27**	**329**	*e*PKP	**P**	**14 02 12.0**	**0.0**
DDI				*e*S	**S**	**14 06 26.5**	**+4.1**
KKM	**Kota Kinabalu**	**24.66**	**99**	P	**P**	**14 02 26.2**	**+1.0**
KKM	**Kota Kinabalu**	**24.66**	**99**	*e*Pn	**P**	**14 02 24.9**	**-0.3**
	comp=Z,29nm,1.0s,mb4.8						
SDNR	**Sundarnagar**	**24.76**	**329**	*e*PKP	**P**	**14 02 27.5**	**+1.6**
KDM	**Kudat**	**25.09**	**97**	P	**P**	**14 02 29.4**	**+0.3**
SDKM	**Sandakan**	**25.70**	**99**	P	**P**	**14 02 34.8**	**+0.1**
TSM	**Tawau**	**26.68**	**102**	P	**P**	**14 02 43.2**	**-0.4**
MYLDM	**Lahad Datu**	**27.07**	**100**	P	**P**	**14 02 48.3**	**+1.3**
LZH	**Lanzhou**	**27.51**	**22**	*e*P	**P**	**14 02 50.5**	**-0.2**
LZH				pP	pP	14 03 00.0	+1.0
LZH				sP	sP	14 03 04.0	+1.5
LZH				PP		14 03 39.3	
LZH				*e*S	**S**	**14 07 28.0**	**-2.0**
LZH				sS	sS	14 07 44.3	+0.6
LZH				SS		14 08 47.5	
LZH				pmax	pmax		
	comp=Z,53nm,1.2s,mb5.0						
LZH				pmax	pmax		
	comp=Z,170nm,5.6s						
LZH				L

WMQ ScP ScP 14 10 08.0 +2.4
WMQ SS SS 14 11 00.0 -21
WMQ pmax pmax
comp=Z,36nm,1.0s,mb5.3
WMQ pmax pmax
comp=Z,100nm,3.0s
WMQ LR LR
comp=N,610nm,12.0s,MS4.7
WMQ LR LR
comp=E,530nm,12.0s,MS4.7
WMQ LR LR
comp=Z,610nm,12.0s,MS4.5
KZA Kyzart 34.39 338 P P 14 03 52.9 +1.6
SNR=8.8
HHC Hu-ho-hao-te 34.72 27 eP P 14 03 54.0 -0.1
HHC pP pP 14 03 58.5 -4.0
HHC sP sP 14 04 01.0 -4.9
HHC PP PP 14 05 11.0 -2.1
HHC PcP PcP 14 06 27.3 -0.3
HHC S **S 14 09 24.0 +1.5**
HHC ScP ScP 14 10 11.0 -0.2
HHC SS SS 14 11 36.3 -17
HHC ScS ScS 14 14 13.3 -1.0
HHC pmax pmax
comp=Z,27nm,0.8s,mb5.2
HHC pmax pmax
comp=Z,150nm,5.6s
HHC LR LR
comp=N,740nm,12.8s,MS4.8
HHC LR LR
comp=E,980nm,12.9s,MS4.8
HHC LR LR
comp=Z,1μm,15.1s,MS4.7
UCH Uchtor 34.79 337 P P 14 03 56.4 +1.7
SNR=8.5
TKM2 Tokmak 2 35.00 339 P P 14 03 58.0 +1.4
SNR=8.5
AAK Ala-Archa 35.15 338 P P 14 03 59.3 +1.5
comp=Z,105nm,1.0s,mb5.7,SNR=5.4
AAK Ala-Archa 35.15 338 P P 14 03 60.0 +2.1
SNR=7.7
AAK Ala-Archa 35.15 338 P P 14 03 58.4 +0.5
comp=Z,4.7nm,0.6s,mb4.6,baz=167,slow=5.9,SNR=18
EKS2 Erkin-Say 35.45 337 P P 14 04 02.2 +1.8
SNR=11
EKS2 Erkin-Say 35.45 337 eP P 14 04 01.9 +1.5
EKS2 pmax pmax
comp=Z,19nm,0.8s,mb5.1
EKS2 Erkin-Say 35.45 337 eP P 14 04 01.9 +1.5
comp=Z,19nm,0.8s,mb5.1
USP Ospenovka 35.70 338 P P 14 04 03.6 +1.1
SNR=15
BJI Beijing 36.34 32 P P 14 04 08.5 +0.4
BJI pmax pmax
comp=Z,100nm,0.7s,mb5.8
MK31 Makanchi Array 36.81 349 eP P 14 04 12.3 +0.3
MKAR Makanchi Array 36.81 349 P P 14 04 12.2 +0.2
comp=Z,25nm,0.8s,mb5.1,baz=130,slow=8.8,SNR=115
MKAR PcP PcP 14 06 34.0 +0.3
comp=Z,2.4nm,0.7s,baz=100,slow=4.0,SNR=5.6
SONM Songino Array 38.97 16 P P 14 04 30.7 +0.4
comp=Z,23nm,0.9s,mb4.9,baz=198,slow=8.5,SNR=82
SONM PcP PcP 14 06 41.3 +1.0
comp=Z,4.6nm,0.8s,baz=203,slow=3.3,SNR=6.8
ULN Ulaanbaatar 39.18 16 eP P 14 04 31.8 -0.2
ULN pmax pmax
comp=Z,20nm,1.1s,mb4.8
ULN Ulaanbaatar 39.18 16 eP P 14 04 31.8 -0.2
comp=Z,20nm,1.1s,mb4.8
KURK Kurchatov 41.28 347 P P 14 04 49.2 -0.2
comp=Z,155nm,1.2s,mb5.5,SNR=16
KURK Kurchatov 41.28 347 P P 14 04 49.0 -0.3
comp=Z,17nm,0.9s,mb4.7,baz=163,slow=7.4,SNR=38
KURK PcP PcP 14 06 47.8 +0.1
comp=Z,4.8nm,0.8s,baz=158,slow=2.7,SNR=7.0
KURK Kurchatov 41.28 347 d iP P 14 04 49.2 -0.2
KURK pmax pmax
comp=Z,52nm,1.7s,mb4.9
KURK Kurchatov 41.28 347 eP P 14 04 49.6 +0.2
comp=Z,32nm,1.1s,mb4.9
TLY Talaya 41.96 11 P P 14 04 56.5 +1.6
comp=Z,67nm,0.9s,mb5.3,SNR=6.1
TLY Talaya 41.96 11 eP P 14 04 56.2 +1.3
TLY pmax pmax
comp=Z,19nm,1.2s,mb4.6
TLY Talaya 41.96 11 eP P 14 04 55.9 +1.0
KSRS Korea Array 41.98 45 P P 14 04 54.4 -1.0
comp=Z,12nm,1.1s,mb4.5,baz=242,slow=8.9,SNR=24
IRK Irkutsk 42.61 11 eP P 14 05 00.9 +0.7
IRK e 14 05 15.5
IRK pmax pmax
comp=Z,26nm,1.8s,mb4.7
ZAA0 Zalesovo Array 43.44 354 eP P 14 05 06.5 -0.4
ZALV Zalesovo Beam 43.44 354 P P 14 05 06.9 0.0
comp=Z,28nm,0.8s,mb5.0,baz=174,slow=9.6,SNR=95
CN2 Changchun 43.98 35 eP P 14 05 11.0 -0.4
CN2 pmax pmax
comp=Z,70nm,0.8s,mb5.4
FITZ Fitzroy Crossi 44.07 130 eP P 14 05 11.8 -0.6
comp=Z,41nm,0.6s,mb5.3
FITZ Fitzroy Crossi 44.07 130 P P 14 05 12.0 -0.4
comp=Z,24nm,0.6s,mb5.1,baz=320,slow=5.8,SNR=97
NVS Novosibirsk 44.49 353 eP P 14 05 13.5 -1.8
NVS pmax pmax
comp=Z,19nm,0.9s,mb4.8
NVS pmax pmax
comp=N,26nm,1.5s
CIT Chita 44.81 19 eP P 14 05 17.8 -0.1
CIT pmax pmax
comp=Z,57nm,1.4s,mb5.2
RDF Al-Radifah 45.01 300 eP P 14 05 20.2 +0.3
RDF AMb AMB 14 05 23.1
comp=Z,18nm,0.7s,mb5.0
KNA Kununurra 45.14 125 eP P 14 05 19.6 -1.4
comp=Z,17nm,1.0s,mb4.8
NAY Al-Naaiem 45.36 301 eP P 14 05 23.0 +0.4
NAY AMb AMB 14 05 31.6
comp=Z,17nm,1.3s,mb4.7
MIB Mutribah 45.42 301 eP P 14 05 23.5 +0.4
MIB AMb AMB 14 05 31.7
comp=Z,22nm,0.9s,mb5.0
BVAR Borovoye Array 45.53 342 P P 14 05 23.7 +0.1
comp=Z,5.1nm,0.8s,mb4.5,baz=139,slow=7.9,SNR=20
BVAR PcP PcP 14 07 02.6 +0.6
comp=Z,2.5nm,0.7s,baz=164,slow=6.0,SNR=4.4
BRVK Borovoye 45.59 342 d iP P 14 05 23.9 -0.2
BRVK pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
BRVK Borovoye 45.59 342 eP P 14 05 23.7 -0.3
comp=Z,8.0nm,0.9s,mb4.7
KAKA Kakadu 46.66 119 eP P 14 05 31.7 -1.3
comp=Z,7.0nm,0.4s,mb4.9
MDJ Mudanjiang 46.86 37 P P 14 05 34.3 +0.1
MDJ pP pP 14 05 37.3 -5.5
MDJ PcP PcP 14 07 07.0 +0.2
MDJ PP PP 14 07 22.0 -2.6
MDJ ScP ScP 14 11 01.0 +2.2
MDJ PcS PcS 14 11 02.8 +1.2
MDJ S **S 14 12 29.0 +5.9**
MDJ pmax pmax
comp=Z,13nm,1.6s,mb4.6
MDJ pmax pmax
comp=Z,990nm,12.4s
MDJ LR LR
comp=N,300nm,21.3s,MS4.5
MDJ LR LR
comp=E,490nm,17.0s,MS4.5
MDJ LR LR
comp=Z,340nm,21.7s,MS4.3
AKTK Aktyubinsk 48.30 332 P P 14 05 44.8 -0.5
AKTO Aktyubinsk 48.30 332 P P 14 05 44.8 -0.5
comp=Z,4.3nm,0.6s,mb4.7,baz=115,slow=7.4,SNR=14
MAJO Matsushiro 49.09 51 eP P 14 05 51.6 0.0
MAT Matsushiro 49.09 51 P P 14 05 51.0 -0.6
MJAR Matsushiro Arr 49.09 51 P P 14 05 51.4 -0.3
comp=Z,3.2nm,0.8s,mb4.4,baz=227,slow=6.4,SNR=16
MJAR PcP PcP 14 07 15.6 +0.5
comp=Z,5.6nm,0.8s,baz=244,slow=3.5,SNR=13
NWAO Narrogin (SRO) 49.78 152 P P 14 05 57.0 +0.2
comp=Z,12nm,0.6s,mb5.1,baz=61,slow=19,SNR=10
GNI Garni 50.74 314 c iP P 14 06 06.2 +2.1
GNI pmax pmax
comp=Z,20nm,1.2s
WRA Warramunga Arr 51.86 126 P P 14 06 12.2 -0.5
comp=Z,19nm,0.7s,mb5.1,baz=306,slow=8.5,SNR=93
WRA PcP PcP 14 07 25.7 +0.2
comp=Z,5.5nm,0.8s,baz=319,slow=3.2,SNR=8.6
WRAB Tennant Creek 51.86 126 P P 14 06 12.0 -0.8
comp=Z,224nm,0.6s,SNR=18
WRAB Tennant Creek 51.86 126 eP P 14 06 12.4 -0.3
SVE Sverdlovsk 51.88 339⇑ eP P 14 06 13.0 +0.7
SVE pmax pmax
comp=Z,36nm,1.1s,mb5.2
HABR Khabarovsk 52.12 35 eP P 14 06 12.1 -2.1
HABR e*SP sP 14 06 18.4 -7.9
HABR 14 07 23.8
HABR 14 08 10.1
HABR PPP 14 09 11.1
HABR S **S 14 13 35.9 -0.7**
HABR e*SS sS 14 13 44.2 -6.6
HABR e 14 16 01.2
HABR eSS SS 14 17 13.9 -0.2
HABR pmax pmax
comp=N,24nm,2.0s
HABR pmax pmax
comp=E,14nm,1.1s
HABR pmax pmax
comp=Z,44nm,1.4s,mb5.2
HABR MLR MLR
comp=Z,405nm,15.0s,MS4.6
ZEI Tsey 52.33 316 eP P 14 06 16.7 +0.8
ZEI pmax pmax
comp=Z,8.0nm,0.5s,mb4.9
ARU Arti 52.34 337 d iP P 14 06 15.6 -0.1
ARU e 14 08 11.8
ARU S **S 14 13 42.9 +3.6**
ARU pmax pmax
comp=Z,24nm,1.2s,mb5.0
ARU Arti 52.34 337 eP P 14 06 15.5 -0.3
CLNS Chul'man 52.63 22 eP P 14 06 18.0 +0.1
CLNS pmax pmax
comp=Z,35nm,1.0s,mb5.2
CLNS pmax pmax
comp=E,12nm,0.9s
CLNS pmax pmax
comp=N,13nm,0.9s
OPO Ambohidratompo 52.72 237 PcP PcP 14 07 30.1 +1.4
comp=N,1.9nm,0.7s,baz=106,slow=5.2,SNR=3.8
ASAR Alice Springs 53.57 130 P P 14 06 25.1 -0.2
comp=N,39nm,0.8s,mb5.4,baz=305,slow=6.7,SNR=231
ASAR PcP PcP 14 07 32.3 +0.5
comp=N,7.9nm,0.7s,baz=312,slow=3.2,SNR=9.6
KIV Kislovodsk 53.60 317⇓ eP P 14 06 26.1 +0.8
KIV pmax pmax
comp=Z,22nm,1.0s,mb5.0
ERM Erimo 54.54 46 i P P 14 06 31.3 -0.9
SOKR Solikamsk 55.28 339⇑ iP P 14 06 37.1 -0.1
SOKR pmax pmax
comp=Z,20nm,1.0s,mb5.1
KMBO Kilima Mbogo 55.44 261 P P 14 06 38.0 -1.2
comp=Z,2.6nm,1.0s,mb4.2,baz=0.0,slow=20,SNR=2.9
YSS Yuzh-Sakhalins 56.06 40 eP P 14 06 42.6 -0.4
YSS pmax pmax
comp=Z,32nm,0.9s,mb5.3
YSS Yuzh-Sakhalins 56.06 40 eP P 14 06 42.6 -0.4
comp=Z,32nm,0.9s,mb5.4
YAK Yakutsk 58.08 20 eP P 14 06 55.8 -1.3
YAK pmax pmax
comp=Z,35nm,0.8s,mb5.4
YAK pmax pmax
comp=E,13nm,1.1s
YAK pmax pmax
comp=N,12nm,1.0s
YAK Yakutsk 58.08 20 eP P 14 06 56.3 -0.7
VORD Divnogorie 58.51 324 eP P 14 06 59.2 -1.1
VSR Storozhevoye 58.69 324 eP P 14 07 00.3 -1.2
VSR pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
VSR pmax pmax
comp=N,8.0nm,1.0s
VSR pmax pmax
comp=E,6.0nm,0.5s
BRTR Keskin Array B 58.77 310 P P 14 07 01.8 -0.5
comp=E,4.3nm,0.8s,mb4.5,baz=117,slow=7.1,SNR=23
SIM Simferopol' 59.72 316 eP P 14 07 10.0 +1.2
SIM pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
MOS Moscow 61.40 329 eP P 14 07 18.6 -1.4
MOS pmax pmax
comp=Z,72nm,1.2s,mb5.7
OBN Obninsk 61.70 328 d iP P 14 07 22.0 0.0
OBN e 14 08 02.8
OBN eS **S 14 15 42.1 -0.7**
OBN pmax pmax
comp=Z,61nm,2.5s,mb5.3
CTA Charters Tower 61.78 120 eP P 14 07 23.6 +0.4
comp=Z,15nm,0.9s,mb5.1
CTAO Charters Tower 61.78 120 eP P 14 07 22.0 -1.2
CTAO pmax pmax
comp=Z,56nm,1.5s,mb5.5
CTAO Charters Tower 61.78 120 eP P 14 07 22.0 -1.2
comp=Z,56nm,1.5s,mb5.5
STKA Stephens Creek 63.80 134 eP P 14 07 36.8 +0.4
comp=Z,9.6nm,0.6s,mb5.0
STKA Stephens Creek 63.80 134 P P 14 07 36.9 +0.4
comp=Z,11nm,0.6s,mb5.1,baz=330,slow=8.2,SNR=18
STKA Stephens Creek 63.80 134 eP P 14 07 36.3 -0.1
comp=Z,3.3nm,0.8s,mb4.4
AKASG Malin Array Be 64.44 321 P P 14 07 39.4 -1.0
comp=Z,4.6nm,0.7s,mb4.6,baz=86,slow=5.4,SNR=18
TIXI Tiksi 64.92 12 eP P 14 07 42.1 -1.0
TIXI pmax pmax
comp=Z,25nm,1.0s,mb5.2
TIXI Tiksi 64.92 12 eP P 14 07 42.1 -1.0
comp=Z,25nm,1.0s,mb5.2
VRI Vrincioaia 65.00 316 ⇓ P P 14 07 45.0 +0.9
VRI Vrincioaia 65.00 316 ⇓ iP P 14 07 45.0 +0.9
PLOR Plostina 65.05 316 ⇑ P P 14 07 45.3 +0.9
PLOR Plostina 65.05 316 ⇑ iP P 14 07 45.3 +0.9
MLR Muntele Rosu 65.47 315 P P 14 07 47.9 +0.8
comp=Z,19nm,0.9s,mb5.1,baz=156,slow=2.7,SNR=29
MLR Muntele Rosu 65.47 315 ⇓ P P 14 07 48.5 +1.4
MLR Muntele Rosu 65.47 315 ⇓ iP P 14 07 48.5 +1.4
BURAR Bucovina Array 66.33 317 ⇓ P P 14 07 53.3 +0.6
BURAR Bucovina Array 66.33 317 ⇓ iP P 14 07 53.3 +0.6
BUR08 Bucovina Ar. S 66.35 317 eP P 14 07 52.9 +0.1
CMSA Cobar Meteorol 66.59 131 eP P 14 07 55.3 +0.7
IDID Didziasalis 67.08 326 eP P 14 07 57.2 0.0
IDID AMB AMB 14 07 58.5
comp=Z,9.5nm,0.9s,mb4.8
PETK Petropavlovsk- 67.10 37 P P 14 07 56.8 -0.7
comp=Z,1.7nm,0.7s,mb4.2,baz=299,slow=0.9,SNR=5.3
JOF Joensuu 67.25 334 eP P 14 07 57.6 -0.6
JOF pmax pmax
comp=Z,31nm,0.7s,mb5.5
JOF Joensuu 67.25 334 ep P 14 07 57.6 -0.6
comp=Z,31nm,0.7s,mb5.5
JOF Joensuu 67.25 334 ep P 14 07 57.6 -0.6
comp=Z,31nm,0.7s,mb5.5
IIGN Ignalina 67.37 326 eP P 14 07 59.1 -0.1
IIGN AMB AMB 14 08 00.2
comp=Z,9.1nm,1.4s,mb4.6
IZAR Zarasai 67.46 326 eP P 14 07 59.6 0.0
IZAR AMB AMB 14 08 00.8
comp=Z,7.1nm,1.0s,mb4.6
ISAL Salakas 67.48 326 eP P 14 07 59.7 -0.1
ISAL AMB AMB 14 08 00.9
comp=Z,6.6nm,1.0s,mb4.6
DRGR 67.89 316 ⇓ P P 14 08 02.8 +0.2
DRGR 67.89 316 ⇓ iP P 14 08 02.8 +0.2
VSU Vasula 67.92 329⇑ eP P 14 08 02.6 +0.1
APA Apatity 68.34 339 ⇓ iP P 14 08 05.8 +0.8
APA pmax pmax
comp=Z,28nm,1.0s,mb5.2
APA MLR MLR
comp=Z,500nm,12.0s,MS5.0
BZS Buzias 68.50 315 ⇑ P P 14 08 06.5 +0.1
BZS Buzias 68.50 315 ⇑ iP P 14 08 06.5 +0.1
SUW Suwalki 68.80 324 eP P 14 08 07.3 -0.8
FINES FINESS Array B 69.08 332 P P 14 08 09.6 -0.1
comp=Z,16nm,0.7s,mb5.0,baz=104,slow=8.0,SNR=56
KAF Kangasniemi 69.17 333 eP P 14 08 09.5 -0.7
KAF pmax pmax
comp=Z,20nm,0.9s,mb5.0
KAF Kangasniemi 69.17 333 ep P 14 08 09.5 -0.7
comp=Z,20nm,0.9s,mb5.0
KAF Kangasniemi 69.17 333 ep P 14 08 09.5 -0.7
comp=Z,20nm,0.9s,mb5.0
TOO Toolangi 69.57 137 eP P 14 08 13.9 +0.8
OJC Ojcow 70.26 320 eP P 14 08 15.4 -1.8
ARMA Armidale 70.58 128 eP P 14 08 21.3 +1.8
PKSM Moragy 70.62 315 ⇑ P P 14 08 19.0 -0.5
PKSM Moragy 70.62 315 ⇑ iP P 14 08 19.0 -0.5
VYHS Vyhne 70.69 318 eP P 14 08 19.0 -0.9
comp=Z,2.0nm,0.9s,mb4.0
VYHS Vyhne 70.69 318 eP P 14 08 19.0 -0.9
CAN Canberra 70.86 133 eP P 14 08 21.7 +0.6
CAN pmax pmax
comp=Z,22nm,1.1s,mb5.0
CAN Canberra 70.86 133 eP P 14 08 21.7 +0.6
comp=Z,22nm,1.1s,mb5.0
OKC Ostrava-Krasne 71.28 319 eP P 14 08 23.5 +0.1
OKC e pP 14 08 30.2 -2.1
OKC Ostrava-Krasne 71.28 319 eP P 14 08 23.5 +0.1
OKC epP pP 14 08 30.2 -2.1
MORC Moravsky Berou 71.66 319 eP P 14 08 25.3 -0.4
MORC pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
MORC Moravsky Berou 71.66 319 eP P 14 08 25.3 -0.5
comp=Z,7.7nm,1.0s,mb4.6
MORC Moravsky Berou 71.66 319 ⇓ iP P 14 08 26.0 +0.3
ARCES ARCESS Array B 71.77 340 P P 14 08 26.6 +0.6
comp=Z,8.1nm,0.7s,mb4.8,baz=90,slow=6.0,SNR=29
ZST Bratislava 71.82 317 eP P 14 08 26.3 -0.4
ZST pmax pmax
comp=Z,20nm,1.5s,mb4.8
ZST Bratislava 71.82 317 eP P 14 08 26.3 -0.4
comp=Z,20nm,1.5s,mb4.8
ZST Bratislava 71.82 317 eP P 14 08 26.3 -0.4
DPC Dobruska-Polom 72.49 319 eP P 14 08 31.2 +0.5
DPC e pP 14 08 37.7 -1.9
DPC Dobruska-Polom 72.49 319 eP P 14 08 31.2 +0.5
DPC epP pP 14 08 37.7 -1.9
KSP Ksiaz 72.55 320 eP P 14 08 31.5 +0.5
KSP Ksiaz 72.55 320 eP P 14 08 31.2 +0.2
UPC Upice 72.70 320 eP P 14 08 32.2 +0.3
UPC Upice 72.70 320 eP P 14 08 32.2 +0.3
PRU Pruhonice 73.61 319 eP P 14 08 37.9 +0.6
PRU e pP 14 08 46.0 -0.3
PRU Pruhonice 73.61 319 eP P 14 08 37.9 +0.6
PRU ex x 14 08 46.0
PVCC Panska Ves 73.62 320 eP P 14 08 37.6 +0.2
PVCC Panska Ves 73.62 320 eP P 14 08 37.6 +0.2
BRG Berggiesshubel 74.03 320 eP P 14 08 39.8 0.0
comp=Z,6.0nm,0.8s,mb4.6
BRG Berggiesshubel 74.03 320 i P P 14 08 39.9 +0.1
comp=Z,6.2nm,0.8s,mb4.6
GEC2 GERESS Array S 74.11 318 eP P 14 08 40.2 -0.1
comp=Z,8.0nm,0.8s,mb4.7
KHC Kasperske Hory 74.20 318 eP P 14 08 40.7 -0.1
KHC pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
KHC Kasperske Hory 74.20 318 eP P 14 08 40.7 -0.1
comp=Z,2.6nm,0.6s,mb4.3
KHC Kasperske Hory 74.20 318 eP P 14 08 40.7 -0.1
KHC ex x 14 08 48.9
BILL Bilibino 74.33 22 d iP P 14 08 40.6 -0.5
BILL e*PP pP 14 08 51.9 +1.8
BILL pmax pmax
comp=Z,20nm,1.7s,mb4.8
BILL Bilibino 74.33 22 eP P 14 08 40.7 -0.5
comp=Z,2.9nm,0.6s,mb4.4
CLL Collm 74.64 320 eP P 14 08 42.3 -1.0
comp=Z,6.0nm,0.7s,mb4.6
CLL Collm 74.64 320 eP P 14 08 42.0 -1.3
CLL e pP 14 08 52.0 -0.3
CLL pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
CLL Collm 74.64 320 eP P 14 08 42.0 -1.3
comp=Z,6.0nm,0.8s,mb4.6
WET Wettzell 74.66 318 eP P 14 08 43.4 -0.1
comp=Z,11nm,1.4s,mb4.6
RJOB Jochberg 74.69 317 eP P 14 08 44.0 +0.3
comp=Z,6.0nm,0.9s,mb4.5
TANN Tannenbergstha 74.96 319 eP P 14 08 45.2 0.0
comp=Z,8.0nm,1.4s,mb4.5
BOSA Boshof 75.13 237 P P 14 08 48.6 +2.1
comp=Z,12nm,0.7s,mb4.9,baz=77,slow=5.4,SNR=23
MOX Moxa 75.51 320 eP P 14 08 48.5 +0.2
MOX Moxa 75.51 320 eP P 14 08 48.3 0.0
comp=Z,7.0nm,0.8s,mb4.6
GRF Grafenberg Arr 75.75 319 eP P 14 08 50.3 +0.6
comp=Z,20nm,1.2s,mb4.9
GRF Grafenberg Arr 75.75 319 eP P 14 08 50.3 +0.6
GRF pmax pmax
comp=Z,20nm,1.2s,mb4.9
NOA NORSAR Array B 76.08 330 P P 14 08 50.9 -0.5
comp=Z,5.7nm,0.8s,mb4.6,baz=94,slow=5.7,SNR=29
CLZ Clausthal 76.30 321 eP P 14 08 52.8 0.0
comp=Z,13nm,0.7s,mb5.0
BSEG Bad Segeberg 76.34 323 eP P 14 08 53.3 +0.3
comp=Z,19nm,1.0s,mb5.0
NRDL Niedersach Rie 76.46 322 eP P 14 08 53.9 +0.2
comp=Z,9.0nm,1.0s,mb4.7
DAVOX Davos/Dischmat 76.68 316 P P 14 08 55.5 +0.4
comp=Z,4.7nm,0.7s,mb4.5,baz=112,slow=8.2,SNR=8.1
PGF Pioggiola 77.48 311 eP P 14 08 58.0 -1.7
TNS Taunus Mts 77.54 319 eP P 14 08 59.7 -0.1
comp=Z,10.0nm,0.7s,mb4.8
KEST Kesra 77.66 304 P P 14 09 00.8 0.0
comp=Z,4.7nm,0.9s,mb4.4,baz=301,slow=2.6,SNR=11
BFO Black Forest 77.68 317 eP P 14 09 00.3 -0.4
comp=Z,6.0nm,1.0s,mb4.5
IBBN Ibbenburen 77.90 321 eP P 14 09 02.0 +0.2
comp=Z,17nm,0.9s,mb5.0
FELD Feldberg im Sc 77.92 317 eP P 14 09 01.8 -0.2
LANF Langenberg 78.00 318 eP P 14 09 02.7 +0.3
CASY Casey 78.06 172 eP P 14 09 02.6 +0.4
CDF Champ du Feu 78.38 317 eP P 14 09 04.0 -0.5
comp=Z,11nm,0.9s,mb4.5
CDF Champ du Feu 78.38 317 eP P 14 09 04.0 -0.5
CDF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
CDF Champ du Feu 78.38 317 eP P 14 09 04.0 -0.5
comp=Z,5.3nm,0.9s,mb4.5
MOF Molkenrain 78.51 317 eP P 14 09 05.3 0.0
HINF Hinteralfeld 78.70 317 eP P 14 09 05.4 -0.9
LPG La Plagne 78.92 314 eP P 14 09 07.7 +0.1
comp=Z,19nm,0.7s,mb4.8
LPG La Plagne 78.92 314 eP P 14 09 07.7 +0.1
LPG pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
LPG La Plagne 78.92 314 eP P 14 09 07.7 +0.1
comp=Z,9.6nm,0.7s,mb4.8
LPL La Plagne 78.93 314 eP P 14 09 07.8 +0.1
comp=Z,23nm,0.7s,mb4.9
LPL La Plagne 78.93 314 eP P 14 09 07.8 +0.1
LPL pmax pmax
comp=Z,12nm,0.7s,mb4.9
LPL La Plagne 78.93 314 eP P 14 09 07.8 +0.1
comp=Z,12nm,0.7s,mb4.9
MBDF Montbardon 78.96 314 eP P 14 09 07.0 -0.8
comp=Z,17nm,1.0s,mb4.6
MBDF Montbardon 78.96 314 eP P 14 09 07.0 -0.8
MBDF pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
MBDF Montbardon 78.96 314 eP P 14 09 07.0 -0.8
comp=Z,8.5nm,1.0s,mb4.6
BNI Bardonecchia 79.00 314 eP P 14 09 05.6 -2.5
BNI pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
BNI Bardonecchia 79.00 314 eP P 14 09 05.6 -2.4
comp=Z,10nm,0.9s,mb4.8
HAU Haudompre 79.02 317 eP P 14 09 07.5 -0.6
comp=Z,27nm,0.9s,mb4.9
HAU Haudompre 79.02 317 eP P 14 09 07.5 -0.6
HAU pmax pmax
comp=Z,13nm,0.9s,mb4.9
HAU Haudompre 79.02 317 eP P 14 09 07.5 -0.6
comp=Z,13nm,0.9s,mb4.9
MEM Membach 79.08 320 P P 14 09 08.7 +0.3
FRF La Foret Royal 79.14 312 eP P 14 09 08.5 -0.3
comp=Z,19nm,0.9s,mb4.7
FRF La Foret Royal 79.14 312 eP P 14 09 08.5 -0.3
FRF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
FRF La Foret Royal 79.14 312 eP P 14 09 08.5 -0.3
comp=Z,9.7nm,0.9s,mb4.7
LMR La Mourre 79.26 312 eP P 14 09 09.0 -0.5
comp=Z,30nm,1.2s,mb4.8
LMR La Mourre 79.26 312 eP P 14 09 09.0 -0.5
LMR pmax pmax
comp=Z,15nm,1.2s,mb4.8
LMR La Mourre 79.26 312 eP P 14 09 09.0 -0.5
comp=Z,15nm,1.2s,mb4.8
CABF La Chapelle 79.30 316 eP P 14 09 09.7 +0.1
comp=Z,34nm,1.1s,mb4.9

CABF	**La Chapelle**	**79.30**	**316**	*e*P	**P**	**14 09 09.7 +0.1**
CABF				pmax	pmax	
	comp=Z,17nm,1.1s,mb4.9					
CABF	**La Chapelle**	**79.30**	**316**	*e*P	**P**	**14 09 09.7 +0.1**
	comp=Z,17nm,1.1s,mb4.9					
BCLA	**Clavier**	**79.54**	**320**	P	**P**	**14 09 10.3 -0.5**
ORIF	**Oris-en-Rattie**	**79.58**	**314**	*e*P	**P**	**14 09 10.6 -0.6**
	comp=Z,9.4nm,0.8s,mb4.5					
ORIF	**Oris-en-Rattie**	**79.58**	**314**	*e*P	**P**	**14 09 10.6 -0.6**
ORIF				pmax	pmax	
	comp=Z,5.0nm,0.8s,mb4.5					
ORIF	**Oris-en-Rattie**	**79.58**	**314**	*e*P	**P**	**14 09 10.6 -0.6**
	comp=Z,4.7nm,0.8s,mb4.5					
MEZF	**Maizieres J'vi**	**79.85**	**318**	*e*P	**P**	**14 09 13.2 +0.6**
	comp=Z,15nm,0.8s,mb4.7					
MEZF	**Maizieres J'vi**	**79.85**	**318**	*e*P	**P**	**14 09 13.2 +0.6**
	comp=Z,15nm,0.8s,mb5.0					
SMRF	**Simiane la Rot**	**79.88**	**313**	*e*P	**P**	**14 09 13.1 +0.3**
	comp=Z,8.0nm,0.7s,mb4.5					
SMRF	**Simiane la Rot**	**79.88**	**313**	*e*P	**P**	**14 09 13.1 +0.3**
	comp=Z,8.0nm,0.7s,mb4.8					
SNF	**Seneffe**	**80.18**	**320**	P	**P**	**14 09 14.5 +0.1**
BAIF	**Baives**	**80.27**	**319**	*e*P	**P**	**14 09 14.7 -0.1**
	comp=Z,19nm,1.0s,mb4.7					
BAIF	**Baives**	**80.27**	**319**	*e*P	**P**	**14 09 14.7 -0.1**
BAIF				pmax	pmax	
	comp=Z,10.0nm,1.0s,mb4.7					
BAIF	**Baives**	**80.27**	**319**	*e*P	**P**	**14 09 14.7 -0.1**
	comp=Z,9.6nm,1.0s,mb4.7					
VIVF	**Saint-Julien-l**	**80.44**	**314**	*e*P	**P**	**14 09 15.7 -0.1**
	comp=Z,19nm,0.7s,mb4.8					
VIVF	**Saint-Julien-l**	**80.44**	**314**	*e*P	**P**	**14 09 15.7 -0.1**
VIVF				pmax	pmax	
	comp=Z,9.0nm,0.7s,mb4.8					
VIVF	**Saint-Julien-l**	**80.44**	**314**	*e*P	**P**	**14 09 15.7 -0.1**
	comp=Z,9.4nm,0.7s,mb4.8					
SSB	**Saint Sauveur**	**80.49**	**314**	*e*P	**P**	**14 09 14.3 -1.8**
SSB				pmax	pmax	
	comp=Z,7.0nm,0.6s,mb4.8					
SSB	**Saint Sauveur**	**80.49**	**314**	*e*P	**P**	**14 09 14.3 -1.8**
	comp=Z,7.1nm,0.6s,mb4.8					
LOR	**Lormes**	**80.76**	**316**	*e*P	**P**	**14 09 17.1 -0.4**
	comp=Z,16nm,0.7s,mb4.7					
LOR	**Lormes**	**80.76**	**316**	*e*P	**P**	**14 09 17.1 -0.4**
LOR				pmax	pmax	
	comp=Z,8.0nm,0.7s,mb4.8					
LOR	**Lormes**	**80.76**	**316**	*e*P	**P**	**14 09 17.1 -0.4**
	comp=Z,7.8nm,0.7s,mb4.8					
SMF	**Signal de Mont**	**80.84**	**316**	*e*P	**P**	**14 09 17.5 -0.5**
	comp=Z,17nm,0.7s,mb4.8					
SMF	**Signal de Mont**	**80.84**	**316**	*e*P	**P**	**14 09 17.5 -0.5**
SMF				pmax	pmax	
	comp=Z,8.0nm,0.7s,mb4.8					
SMF	**Signal de Mont**	**80.84**	**316**	*e*P	**P**	**14 09 17.5 -0.5**
	comp=Z,8.4nm,0.7s,mb4.8					
MAW	**Mawson**	**80.87**	**191**	*e*P	**P**	**14 09 19.0 +1.5**
	comp=Z,5.0nm,0.7s,mb4.5					
MAW	**Mawson**	**80.87**	**191**	P	**P**	**14 09 18.4 +0.9**
	comp=Z,5.4nm,0.7s,mb4.6,baz=13,slow=5.5,SNR=17					
SSF	**Saint Saulge**	**81.02**	**316**	*e*P	**P**	**14 09 18.6 -0.3**
	comp=Z,12nm,0.8s,mb4.6					
SSF	**Saint Saulge**	**81.02**	**316**	*e*P	**P**	**14 09 18.6 -0.3**
SSF				pmax	pmax	
	comp=Z,6.0nm,0.8s,mb4.6					
SSF	**Saint Saulge**	**81.02**	**316**	*e*P	**P**	**14 09 18.6 -0.3**
	comp=Z,6.1nm,0.8s,mb4.6					
PLDF	**La Plantade**	**81.06**	**315**	*e*P	**P**	**14 09 20.0 +0.8**
LASF	**Ste Croix**	**81.10**	**313**	*e*P	**P**	**14 09 19.6 +0.2**
	comp=Z,28nm,1.0s,mb4.8					
AVF	**Avril sur Loir**	**81.16**	**316**	*e*P	**P**	**14 09 19.2 -0.5**
	comp=Z,16nm,0.7s,mb4.7					
AVF	**Avril sur Loir**	**81.16**	**316**	*e*P	**P**	**14 09 19.2 -0.5**
AVF				pmax	pmax	
	comp=Z,8.0nm,0.7s,mb4.8					
AVF	**Avril sur Loir**	**81.16**	**316**	*e*P	**P**	**14 09 19.2 -0.5**
	comp=Z,7.9nm,0.7s,mb4.8					
PYM	**Petit Puy Mans**	**81.51**	**315**	*e*P	**P**	**14 09 22.5 +0.9**
BGF	**Bois d'Agland**	**81.53**	**316**	*e*P	**P**	**14 09 21.6 0.0**
	comp=Z,13nm,0.4s,mb4.9					
BGF	**Bois d'Agland**	**81.53**	**316**	*e*P	**P**	**14 09 21.6 0.0**
BGF				pmax	pmax	
	comp=Z,7.0nm,0.4s,mb4.9					
BGF	**Bois d'Agland**	**81.53**	**316**	*e*P	**P**	**14 09 21.6 0.0**
	comp=Z,6.6nm,0.4s,mb4.9					
HYF	**Humbligny**	**81.59**	**316**	*e*P	**P**	**14 09 22.2 +0.3**
TCF	**Toulx Ste Croi**	**82.00**	**316**	*e*P	**P**	**14 09 24.1 0.0**
	comp=Z,7.4nm,0.6s,mb4.5					
TCF	**Toulx Ste Croi**	**82.00**	**316**	*e*P	**P**	**14 09 24.1 0.0**
TCF				pmax	pmax	
	comp=Z,4.0nm,0.6s,mb4.5					
TCF	**Toulx Ste Croi**	**82.00**	**316**	*e*P	**P**	**14 09 24.1 0.0**
	comp=Z,3.7nm,0.6s,mb4.5					
CAF	**Calviac**	**82.27**	**314**	*e*P	**P**	**14 09 25.8 +0.2**
	comp=Z,10nm,0.8s,mb4.5					
CAF	**Calviac**	**82.27**	**314**	*e*P	**P**	**14 09 25.8 +0.2**
CAF				pmax	pmax	
	comp=Z,5.0nm,0.8s,mb4.5					
CAF	**Calviac**	**82.27**	**314**	*e*P	**P**	**14 09 25.8 +0.2**
	comp=Z,5.1nm,0.8s,mb4.5					
MTLF	**Montolieu**	**82.37**	**313**	*e*P	**P**	**14 09 26.2 +0.1**
	comp=Z,15nm,0.7s,mb4.7					
MTLF	**Montolieu**	**82.37**	**313**	*e*P	**P**	**14 09 26.2 +0.1**
MTLF				pmax	pmax	
	comp=Z,7.0nm,0.7s,mb4.7					
MTLF	**Montolieu**	**82.37**	**313**	*e*P	**P**	**14 09 26.2 +0.1**
	comp=Z,7.3nm,0.7s,mb4.7					
RJF	**Les Rejaudoux**	**82.61**	**315**	*e*P	**P**	**14 09 27.6 +0.3**
	comp=Z,18nm,0.8s,mb4.8					
RJF	**Les Rejaudoux**	**82.61**	**315**	*e*P	**P**	**14 09 27.6 +0.3**
RJF				pmax	pmax	
	comp=Z,9.0nm,0.8s,mb4.8					
RJF	**Les Rejaudoux**	**82.61**	**315**	*e*P	**P**	**14 09 27.6 +0.3**
	comp=Z,8.8nm,0.8s,mb4.8					
LFF	**La Frestale**	**83.20**	**314**	*e*P	**P**	**14 09 30.6 +0.2**
LDF	**La Druitiere**	**83.25**	**318**	*e*P	**P**	**14 09 30.2 -0.4**
	comp=Z,45nm,1.2s,mb5.1					
LDF	**La Druitiere**	**83.25**	**318**	*e*P	**P**	**14 09 30.2 -0.4**
LDF				pmax	pmax	
	comp=Z,23nm,1.2s,mb5.1					
LDF	**La Druitiere**	**83.25**	**318**	*e*P	**P**	**14 09 30.2 -0.4**
	comp=Z,23nm,1.2s,mb5.1					
FLN	**La Foliniere**	**83.47**	**318**	*e*P	**P**	**14 09 31.3 -0.4**
	comp=Z,13nm,0.8s,mb4.7					
FLN	**La Foliniere**	**83.47**	**318**	*e*P	**P**	**14 09 31.3 -0.4**
FLN				pmax	pmax	
	comp=Z,7.0nm,0.8s,mb4.7					
FLN	**La Foliniere**	**83.47**	**318**	*e*P	**P**	**14 09 31.3 -0.4**
	comp=Z,6.7nm,0.8s,mb4.7					
MFF	**Saint Martin d**	**83.57**	**316**	*e*P	**P**	**14 09 32.0 -0.3**
	comp=Z,20nm,0.7s,mb5.0					
MFF	**Saint Martin d**	**83.57**	**316**	*e*P	**P**	**14 09 32.0 -0.3**
MFF				pmax	pmax	
	comp=Z,10.0nm,0.7s,mb5.0					
MFF	**Saint Martin d**	**83.57**	**316**	*e*P	**P**	**14 09 32.0 -0.3**
	comp=Z,10.0nm,0.7s,mb5.0					
EPF	**Esparros**	**83.77**	**312**	*e*P	**P**	**14 09 32.7 -0.7**
ETSF	**Etsaut**	**84.44**	**312**	*e*P	**P**	**14 09 37.3 +0.5**
	comp=Z,14nm,1.0s,mb4.7					
ETSF	**Etsaut**	**84.44**	**312**	*e*P	**P**	**14 09 37.3 +0.5**
ETSF				pmax	pmax	
	comp=Z,7.0nm,1.0s,mb4.8					
ETSF	**Etsaut**	**84.44**	**312**	*e*P	**P**	**14 09 37.3 +0.5**
	comp=Z,7.1nm,1.0s,mb4.8					
SJPF	**Ste Jean**	**84.89**	**313**	*e*P	**P**	**14 09 40.7 +1.6**
	comp=Z,6.7nm,0.7s,mb4.6					
SJPF	**Ste Jean**	**84.89**	**313**	*e*P	**P**	**14 09 40.7 +1.6**
SJPF				pmax	pmax	
	comp=Z,3.0nm,0.7s,mb4.5					
SJPF	**Ste Jean**	**84.89**	**313**	*e*P	**P**	**14 09 40.7 +1.6**
	comp=Z,3.3nm,0.7s,mb4.6					
SGMF	**Saint Gilles**	**84.91**	**318**	*e*P	**P**	**14 09 39.8 +0.8**
ROSF	**Rostrenen**	**85.37**	**318**	*e*P	**P**	**14 09 41.2 -0.1**
QUIF	**Quistinic**	**85.37**	**318**	*e*P	**P**	**14 09 40.7 -0.7**
SYO	**Syowa Base**	**87.45**	**197**⇓	*e*P	**P**	**14 09 51.4 +0.4**
ESDC	**Sonseca Array**	**87.56**	**310**	P	**P**	**14 09 52.8 +0.5**
	comp=Z,1.0nm,0.5s,mb4.3,baz=68,slow=3.8,SNR=8.2					
SUMG	**Summit**	**90.82**	**347**	*e*P	**P**	**14 10 07.7 +0.8**
SUMG				pmax	pmax	
	comp=Z,15nm,1.1s					
SUMG	**Summit**	**90.82**	**347**	*e*P	**P**	**14 10 07.7 +0.8**
	comp=Z,15nm,1.1s,mb5.2					
SUMG	**Summit**	**90.82**	**347**	*i* P	**P**	**14 10 07.7 +0.8**
	comp=Z,9.9nm,0.9s,mb5.1					
SVW2	**Sparrevohn**	**91.27**	**27**	*e*P	**P**	**14 10 08.9 -0.3**
BPAW	**Bear Paw Mtn.**	**91.80**	**23**	*e*P	**P**	**14 10 11.9 +0.3**
	comp=Z,29nm,1.2s,mb5.5					
OHAK	**Old Harbor**	**94.03**	**30**	*e*P	**P**	**14 10 21.7 -0.4**
	comp=Z,27nm,1.2s,mb5.5					
KDAK	**Kodiak Island**	**94.11**	**29**	*i* P	**P**	**14 10 23.7 +1.3**
PDAR	**Pinedale Array**	**123.29**	**19**	PKP	PKPdf	14 16 01.5 +0.3
	comp=Z,1.4nm,0.7s,baz=13,slow=0.5,SNR=11					
NVAR	**Mina Array Bea**	**123.61**	**28**	PKP	PKPdf	14 16 03.2 +1.3
	comp=Z,1.2nm,0.6s,baz=311,slow=2.0,SNR=18					
NVAR	**Mina Array Bea**	**123.61**	**28**	PKP	PKPdf	14 16 03.2 +1.3
HWUT	**Hardware Ranch**	**123.66**	**21**	*e*PKPdf	PKPdf	14 16 02.1 +0.2
MSU	**Marysvale**	**126.15**	**23**	*e*PKIKP	PKPdf	14 16 06.2 -0.6
GDL2	**Guadalupe Moun**	**134.61**	**19**	*e*PKPdf	PKPdf	14 16 23.2 +0.2
TXAR	**Lajitas Array**	**137.47**	**20**	PKhKP		14 16 19.7
	comp=Z,0.2nm,0.6s,baz=183,slow=0.8,SNR=3.9					
TXAR				PKP	PKPdf	14 16 29.2 +0.8
	comp=Z,1.0nm,0.6s,baz=88,slow=0.4,SNR=14					
TXAR	**Lajitas Array**	**137.47**	**20**	PKP		14 16 19.7
TXAR				PKP	PKPdf	14 16 29.2 +0.8
JCT	**Junction City**	**137.54**	**15**	*e*PKIKP	PKPdf	14 16 27.2 -1.3
PLCA	**Paso Flores**	**146.28**	**205**	PKPbc	PKPbc	14 16 46.1 +1.3
	comp=Z,6.9nm,0.7s,baz=145,slow=3.0,SNR=16					
CPUP	**Villa Florida**	**146.94**	**238**	PKPbc	PKPbc	14 16 45.8 -1.5
	comp=Z,3.3nm,0.6s,baz=100,slow=3.2,SNR=13					
MTDJ	**Mount Denham**	**149.32**	**340**	*e*PKPbc	PKPbc	14 16 54.5 +0.8
LPAZ	**La Paz**	**159.67**	**252**	PKP	PKPdf	14 17 03.5 -0.2
	comp=Z,1.3nm,0.8s,baz=113,slow=3.9,SNR=4.3					
LPAZ				PKPab	PKPab	14 17 41.8 -0.5
	comp=Z,3.7nm,1.1s,baz=114,slow=6.3,SNR=6.6					

*IDC **28** 14:02:13.9±2.3, 10°.45N×91°.34E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.5/23, mbtmp3.7/6, Error ellipse: s-maj=121.4km s-min=19.9km az=58.0*
*NEIC **28** 14:02:15.6±2.1, 10°.51N×91°.42E, h10km, mb3.9/1, Error ellipse: s-maj=114.0km s-min=14.6km az=58.0*
*ISCJB **28** 14:02:16.7±1.8, 10°.4N±0°.4×91°.3E±0°.6, h33km, mb3.8/8, Error ellipse: s-maj=94.1km s-min=14.6km az=147.0*

ISC 28 14:02:19.2±1.8, 10°.5N±0°.4×91°.4E±0°.6, h35km, n11, σ0s84/11, mb3.8/8, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**37.00**	**350**	*e*P	**P**		**14 09 25.3**	**-0.1**
MKAR	**Makanchi Array**	**37.00**	**350**	P	**P**		**14 09 26.1**	**+0.7**
	1.4nm,0.8s,mb3.9,baz=133,slow=8.4,SNR=4.9							
KURK	**Kurchatov**	**41.47**	**348**	P	**P**		**14 10 00.1**	**-2.5**
	0.6nm,0.6s,mb3.4,baz=178,slow=7.9,SNR=3.5							
ZALV	**Zalesovo Beam**	**43.67**	**354**	P	**P**		**14 10 21.1**	**+0.7**
	0.6nm,0.5s,mb3.6,baz=170,slow=11,SNR=2.9							
WRA	**Warramunga Arr**	**51.98**	**126**	P	**P**		**14 11 25.7**	**+0.3**
	0.3nm,0.4s,mb3.5,baz=300,slow=10,SNR=10							
WRA	**Warramunga Arr**	**51.98**	**126**	P	**P**		**14 11 25.7**	**+0.3**
WRAB	**Tennant Creek**	**51.99**	**126**	*e*P	**P**		**14 11 25.3**	**-0.1**
	1.0nm,0.6s,mb3.9							
ASAR	**Alice Springs**	**53.67**	**130**	P	**P**		**14 11 37.4**	**-0.3**
	0.7nm,0.8s,mb3.7,baz=307,slow=8.0,SNR=5.5							
JOF	**Joensuu**	**67.34**	**335**	*e*p	**P**		**14 13 10.1**	**-0.3**
	2.6nm,0.5s,mb4.5							
JOF	**Joensuu**	**67.34**	**335**	*e*p	**P**		**14 13 10.1**	**-0.3**
	2.6nm,0.5s,mb4.5							
FINES	**FINESS Array B**	**69.15**	**332**	P	**P**		**14 13 22.5**	**+0.7**
	1.2nm,0.6s,mb4.0,baz=119,slow=8.6,SNR=6.7							

*IDC **28** 14:03:49.4±1.8, 10°.66N×91°.54E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.6/23, mbtmp3.9/7, Error ellipse: s-maj=78.7km s-min=19.9km az=60.0*
*NEIC **28** 14:03:50.8±1.7, 10°.67N×91°.60E, h10km, mb3.7/1, Error ellipse: s-maj=75.0km s-min=11.4km az=62.0*
*ISCJB **28** 14:03:51.8±1.3, 10°.6N±0°.2×91°.5E±0°.3, h33km, mb3.9/10, Error ellipse: s-maj=45.2km s-min=13.8km az=153.0*

ISC 28 14:03:54.1±1.3, 10°.6N±0°.2×91°.5E±0°.3, h35km, n13, σ0s53/13, mb3.9/10, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**27.76**	**22**	*e*P	**P**		**14 09 40.5**	**+0.9**
LZH				pP	pP		14 09 45.0	-4.6
LZH				sP	sP		14 09 48.5	-5.4
LZH				pmax	pmax			
	comp=Z,18nm,1.4s,mb4.5							
GTA	**Gaotai**	**29.65**	**13**	*e*P	**P**		**14 09 56.0**	**-0.4**
GTA				pP	pP		14 10 00.5	-5.9
GTA				sP	sP		14 10 03.0	-7.7
GTA				pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.1							
MK31	**Makanchi Array**	**36.91**	**350**	*e*P	**P**		**14 10 59.2**	**-0.2**
MKAR	**Makanchi Array**	**36.91**	**350**	P	**P**		**14 10 59.7**	**+0.3**
	comp=Z,1.3nm,0.5s,mb4.0,baz=136,slow=8.5,SNR=11							
MKAR	**Makanchi Array**	**36.91**	**350**	P	**P**		**14 10 59.7**	**+0.2**
SONM	**Songino Array**	**39.20**	**16**	P	**P**		**14 11 18.4**	**-0.4**
	comp=Z,1.0nm,0.6s,mb3.7,baz=195,slow=8.5,SNR=5.6							
KURK	**Kurchatov**	**41.38**	**348**	P	**P**		**14 11 36.5**	**-0.3**
	comp=Z,1.2nm,0.9s,mb3.5,baz=158,slow=7.8,SNR=3.6							
ZALV	**Zalesovo Beam**	**43.57**	**354**	P	**P**		**14 11 54.2**	**-0.3**
	comp=Z,0.7nm,0.4s,mb3.7,baz=161,slow=6.4,SNR=5.6							
ZALV	**Zalesovo Beam**	**43.57**	**354**	P	**P**		**14 11 54.2**	**-0.3**
WRA	**Warramunga Arr**	**51.99**	**126**	P	**P**		**14 13 00.5**	**+0.3**
	comp=Z,0.6nm,0.6s,mb3.7,baz=307,slow=8.6,SNR=4.7							
WRAB	**Tennant Creek**	**51.99**	**126**	*e*P	**P**		**14 12 59.3**	**-1.0**
	comp=Z,1.0nm,0.9s,mb3.8							
ASAR	**Alice Springs**	**53.68**	**130**	P	**P**		**14 13 13.3**	**+0.6**
	comp=Z,1.5nm,0.8s,mb4.0,baz=308,slow=6.7,SNR=7.4							
FINES	**FINESS Array B**	**69.09**	**332**	P	**P**		**14 14 56.7**	**+0.4**
	comp=Z,1.2nm,0.8s,mb3.9,baz=117,slow=12,SNR=3.3							

IDC 28 14:13:59.6±1.6, 10°.54N×91°.46E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.5/22, mbtmp3.7/6, Error ellipse: s-maj=73.8km s-min=20.7km az=58.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.97**	**350**	P	P		14 21 10.2	-0.2
	1.3nm,0.8s,baz=128,slow=9.2,SNR=9.2							
SONM	**Songino Array**	**39.25**	**16**	P	P		14 21 29.9	+0.2
	0.3nm,0.5s,baz=212,slow=6.8,SNR=3.4							
WRA	**Warramunga Arr**	**51.95**	**126**	P	P		14 23 10.3	-0.4
	0.2nm,0.4s,baz=307,slow=8.0,SNR=10							
ASAR	**Alice Springs**	**53.64**	**130**	P	P		14 23 23.6	+0.4
	0.9nm,0.8s,baz=315,slow=5.4,SNR=8.4							
JOF	**Joensuu**	**67.32**	**335**	*e*p	P		14 24 56.2	+0.1
	2.9nm,0.6s							
JOF	**Joensuu**	**67.32**	**335**	*e*p	P		14 24 56.2	+0.1
	2.9nm,0.6s							
FINES	**FINESS Array B**	**69.14**	**332**	P	P		14 25 07.0	-0.5
	1.4nm,0.7s,baz=116,slow=4.4,SNR=6.3							
KAF	**Kangasniemi**	**69.23**	**333**	*e*p	P		14 25 06.3	-1.8
	1.4nm,0.5s							
KAF	**Kangasniemi**	**69.23**	**333**	*e*p	P		14 25 06.3	-1.8
	1.4nm,0.5s							
ARCES	**ARCESS Array B**	**71.88**	**340**	P	P		14 25 25.1	+1.0
	2.0nm,0.9s,baz=98,slow=6.5,SNR=4.7							

*NEIC **28** 14:16:35.3, 19°.39N×69°.43W, h77km, MD3.5(RSPR), After RSPR.*

RSPR 28 14:16:35.3, 19°.39N×69°.43W, h77km±5km, MD3.5/8, MD3.5/8, 6C-2D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**1.32**	**131**⇑	*e*P		Pn	14 16 54.7	-3.5
PCDR	**Punta Cana, DR**	**1.32**	**131**	*e*S		Sn	14 17 08.1	-7.3
AGPR	**Aguadilla, PR**	**2.38**	**112**⇓	*e*P		Pn	14 17 09.9	-2.3
AGPR				*e*S		Sn	14 17 37.6	-2.9
LSP	**Las Mesas**	**2.53**	**118**⇑	*e*P		Pn	14 17 13.1	-1.2
LSP				*e*S		Sn	14 17 44.8	+0.7
CRPR	**Cabo Rojo, PR**	**2.60**	**122**⇓	*e*P		Pn	14 17 15.3	+0.1
CRPR				*e*S		Sn	14 17 45.6	-0.1
LRS	**Lares**	**2.68**	**114**⇑	*e*P		Pn	14 17 15.5	-0.8
LRS				*e*S		Sn	14 17 47.1	-0.7
AOPR	**Arecibo Observ**	**2.74**	**112**	*e*S		Sn	14 17 48.5	-0.7
GBPR	**Guanica, Bosqu**	**2.80**	**120**⇑	*e*P		Pn	14 17 17.5	-0.4
GBPR				*e*S		Sn	14 17 52.9	+2.2
CELP	**Cerrillos**	**3.00**	**115**⇑	*e*P		Pn	14 17 21.0	+0.3
CELP				*e*S		Sn	14 17 56.4	+0.8
HUMP	**Col San Antoni**	**3.61**	**110**	*e*S		Sn	14 18 10.4	0.0
MTP	**Monte Pirata**	**3.90**	**109**⇑	*e*P		Pn	14 17 32.9	+0.1
MTP				*e*S		Sn	14 18 17.4	+0.1

IDC 28 14:17:43.4±2.8, 10°.17N×90°.85E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.5/22, mbtmp3.8/4, Error ellipse: s-maj=164.2km s-min=24.5km az=55.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**37.22**	**350**	P	P		14 24 56.6	+0.3
	0.7nm,0.6s,baz=148,slow=8.5,SNR=6.3							
WRA	**Warramunga Arr**	**52.23**	**125**	P	P		14 26 56.2	-0.4
	0.3nm,0.4s,baz=302,slow=7.5,SNR=5.8							
ASAR	**Alice Springs**	**53.87**	**129**	P	P		14 27 09.1	+0.4
	0.6nm,0.8s,baz=308,slow=6.7,SNR=6.1							
FINES	**FINESS Array B**	**69.18**	**332**	P	P		14 28 51.3	-0.2
	2.2nm,1.0s,baz=105,slow=6.5,SNR=4.3							

*ISCJB **28** 14:30:04.3±1.4, 10°.80N±0°.04×91°.75E±0°.03, h7km±8km, mb4.6/68, MS4.2/10, Error ellipse: s-maj=7.1km s-min=4.7km az=29.9*
*BJI **28** 14:30:04.8, 10°.57N×91°.77E, h24km, mB5.0/15, mb4.7/39, Ms4.7/19, Ms7 4.4/19*
*IDC **28** 14:30:05.3±0.4, 10°.84N×91°.80E, h0km, mb4.4/22, mb1 4.5/24, mb1mx4.4/29, mbtmp4.4/24, ML4.2/2, MS4.1/4, Ms1 4.1/4, ms1mx3.6/29, Error ellipse: s-maj=17.8km s-min=10.4km az=61.0*
*NEIC **28** 14:30:06.6±2.5, 10°.83N×91°.79E, h10km±15km, mb4.7/22, Error ellipse: s-maj=6.8km s-min=4.8km az=59.0*
*MOS **28** 14:30:07.9±0.9, 10°.80N×91°.82E, h33km, mb4.9/29, Error ellipse: s-maj=10.4km s-min=6.1km az=115.6*
*SZGRF **28** 14:30:13.4, 12°.10N×92°.01E, h25km, mb4.6, Andaman Islands, India, region*
*DJA **28** 14:30:17, 11°.08N×92°.37E, h60km, mb4.9/25*

ISC 28 14:30:09.0±1.2, 10°.83N±0°.04×91°.78E±0°.03, h24km±9km, h28km±2.0km: pP-P, n154, σ0s86/158, mb4.6/68, MS4.2/10, 5C-9D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.28**	**42**	Pn	**Pn**		**14 32 32.9**	**-2.1**
	1.0nm,0.3s,baz=227,slow=16,SNR=4.8							
CMAR				LR	LR		14 36 26.7	
	comp=Z,816nm,19.8s,baz=4.2,slow=37							
KULM	**Kulim**	**10.36**	**121**	P	**Pn**		**14 32 36.4**	**+0.2**
KULM	**Kulim**	**10.36**	**121**	*e*Pn	**Pn**		**14 32 35.6**	**-0.7**
	37nm,1.1s							
CHTO	**Chiang Mai**	**10.54**	**40**	*e*P	**Pn**		**14 32 38.9**	**+0.4**
PSI	**Prapat**	**10.67**	**138**	Pn	**Pn**		**14 32 40.0**	**-0.4**
	0.7nm,0.3s,baz=252,slow=9.5,SNR=3.2							
VIS	**Vishakhapatnam**	**10.67**	**311**	*e*PKP	**Pn**		**14 32 38.8**	**-1.6**
VIS				AMb	AMB		14 32 44.5	
	comp=Z,98nm,0.8s							
VIS				*i* S	**Sn**		**14 34 28.7**	**-11**
IPM	**Ipoh**	**11.12**	**124**	P	**Pn**		**14 32 46.6**	**0.0**
PALK	**Pallekele**	**11.49**	**253**	*e*P	**Pn**		**14 32 51.4**	**-0.3**
PALK				pmax	pmax			
	comp=Z,58nm,0.9s							
PALK	**Pallekele**	**11.49**	**253**	*e*Pn	**Pn**		**14 32 51.4**	**-0.3**
	comp=Z,58nm,0.9s							
FRIM	**Kepong**	**12.34**	**127**	P	**Pn**		**14 33 03.7**	**+0.4**
HYB	**Hyderabad**	**14.39**	**299**	*i* P	**Pn**		**14 33 31.0**	**-0.3**
HYB				*e*S	**Sn**		**14 36 12.0**	**+1.7**
KGM	**Kluang**	**14.42**	**127**	P	**Pn**		**14 33 31.9**	**+0.2**
SHL	**Shillong**	**14.66**	**0**	*ex*	**Pn**		**14 33 42.0**	**+7.1**
SHL				*ex*	x		14 36 03.0	
MYKOM	**Kota Tinggi**	**14.98**	**126**	P	**Pn**		**14 33 38.4**	**-0.9**
KMI	**Kunming**	**17.61**	**35**	P	**Pn**		**14 34 14.5**	**+1.6**
KMI				pP	pP		14 34 23.3	+3.0
KMI				sP	sP		14 34 28.0	+4.5
KMI				PP			14 34 30.5	
KMI				S	**Sn**		**14 37 28.5**	**0.0**
KMI				sS	sS		14 37 41.3	-4.8
KMI				SS			14 37 51.0	
KMI				pmax	pmax			
	comp=Z,13nm,1.3s							
KMI				LR	LR			
	comp=N,530nm,16.6s							
KMI				LR	LR			
	comp=E,700nm,13.6s							

KSH	**Kashi**	**31.84**	**336**	*e*P	**P**	**14 36 31.3**	**-0.7**
KSH				pP	pP	14 36 40.8	+1.6
KSH				sP	sP	14 36 44.8	+2.6
KSH				PP	PP	14 37 35.5	-8.7
KSH				PcP	PcP	14 39 24.5	+1.9
KSH				S	**S**	**14 41 35.0**	**-6.2**
KSH				sS	sS	14 41 51.3	-1.8
KSH				ScP	ScP	14 43 03.5	-1.2
KSH				PcS	PcS	14 43 07.5	+0.4
KSH				ScS	ScS	14 46 59.8	-3.1
KSH				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
KSH				pmax	pmax		
	comp=Z,470nm,9.3s						
KSH				LR	LR		
	comp=N,370nm,9.9s						
KSH				LR	LR		
	comp=E,670nm,11.4s						
KSH				LR	LR		
	comp=Z,250nm,6.0s						
NJ2	**Nanjing**	**32.71**	**46**	*e*P	**P**	**14 36 41.5**	**+1.7**
NJ2				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
WMQ	**Urumqi**	**33.06**	**355**	*e*P	**P**	**14 36 45.0**	**+2.4**
WMQ				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.1						
HHC	**Hu-ho-hao-te**	**34.63**	**27**	*e*P	**P**	**14 36 57.0**	**+0.7**
HHC				pP	pP	14 37 06.8	+3.3
HHC				sP	sP	14 37 10.5	+4.0
HHC				PP	PP	14 38 15.3	+0.3
HHC				PcP	PcP	14 39 31.0	+0.6
HHC				S	**S**	**14 42 24.0**	**-0.4**
HHC				sS	sS	14 42 39.0	+2.7
HHC				ScP	ScP	14 43 13.5	-0.8
HHC				PcS	PcS	14 43 18.3	+1.5
HHC				SS	SS	14 44 36.0	-19
HHC				ScS	ScS	14 47 14.0	-3.3
HHC				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.0						
HHC				pmax	pmax		
	comp=Z,410nm,6.0s						
HHC				LR	LR		
	comp=N,310nm,11.8s,MS4.5						
HHC				LR	LR		
	comp=E,500nm,11.7s,MS4.5						
HHC				LR	LR		
	comp=Z,390nm,12.5s,MS4.3						
AAK	**Ala-Archa**	**35.09**	**338**	P	**P**	**14 37 01.6**	**+1.3**
	comp=Z,1.5nm,0.4s,mb4.3,baz=136,slow=4.4,SNR=10						
BJI	**Beijing**	**36.25**	**32**	P	**P**	**14 37 11.0**	**+0.8**
BJI				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.3						
MK31	**Makanchi Array**	**36.74**	**349**	*e*P	**P**	**14 37 14.4**	**+0.1**
MKAR	**Makanchi Array**	**36.74**	**349**	P	**P**	**14 37 14.8**	**+0.5**
	comp=Z,8.1nm,0.8s,mb4.6,baz=132,slow=8.6,SNR=53						
MKAR				PcP	PcP	14 39 36.7	+0.3
	comp=Z,0.9nm,0.6s,baz=99,slow=4.0,SNR=5.3						
SONM	**Songino Array**	**38.88**	**16**	P	**P**	**14 37 33.1**	**+0.7**
	comp=Z,5.7nm,0.9s,mb4.3,baz=197,slow=9.1,SNR=38						
SONM				PcP	PcP	14 39 43.8	+0.8
	comp=Z,1.5nm,0.8s,baz=202,slow=3.2,SNR=4.1						
ULN	**Ulaanbaatar**	**39.09**	**16**	*e*P	**P**	**14 37 34.3**	**+0.1**
ULN				pmax	pmax		
	comp=Z,14nm,1.4s,mb4.5						
ULN	**Ulaanbaatar**	**39.09**	**16**	*e*P	**P**	**14 37 34.3**	**+0.1**
	comp=Z,14nm,1.4s,mb4.5						
KURK	**Kurchatov**	**41.22**	**347**	P	**P**	**14 37 51.5**	**-0.2**
	comp=Z,3.4nm,0.6s,mb4.1,baz=172,slow=7.3,SNR=30						
KURK				PcP	PcP	14 39 50.6	+0.1
	comp=Z,2.0nm,0.9s,baz=154,slow=2.3,SNR=5.5						
KURK				LR	LR	14 55 54.9	
	comp=Z,217nm,19.7s,MS4.0,baz=335,slow=38						
KURK	**Kurchatov**	**41.22**	**347**	*e*P	**P**	**14 37 52.2**	**+0.5**
KURK				pmax	pmax		
	comp=Z,24nm,1.2s,mb4.7						
KURK	**Kurchatov**	**41.22**	**347**	*e*P	**P**	**14 37 52.2**	**+0.5**
	comp=Z,24nm,1.2s,mb4.7						
KSRS	**Korea Array**	**41.90**	**45**	P	**P**	**14 37 57.0**	**-0.6**
	comp=Z,4.9nm,1.0s,mb4.1,baz=244,slow=8.8,SNR=12						
KSRS				LR	LR	14 56 24.7	
	comp=Z,318nm,18.2s,MS4.2,baz=9.1,slow=38						
IRK	**Irkutsk**	**42.53**	**11**	*e*P	**P**	**14 38 03.5**	**+1.1**
IRK				*e*		14 40 18.1	
IRK				pmax	pmax		
	comp=Z,25nm,1.5s,mb4.7						
ZAA0	**Zalesovo Array**	**43.37**	**354**	*e*P	**P**	**14 38 08.6**	**-0.6**
ZALV	**Zalesovo Beam**	**43.37**	**354**	P	**P**	**14 38 09.4**	**+0.2**
	comp=Z,6.1nm,0.7s,mb4.5,baz=173,slow=9.4,SNR=31						
CN2	**Changchun**	**43.88**	**35**	*e*P	**P**	**14 38 13.5**	**-0.1**
CN2				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.1						
FITZ	**Fitzroy Crossi**	**44.09**	**130**	*e*P	**P**	**14 38 14.8**	**-0.7**
	comp=Z,30nm,0.7s,mb5.1						
FITZ	**Fitzroy Crossi**	**44.09**	**130**	P	**P**	**14 38 15.0**	**-0.5**
	comp=Z,56nm,1.2s,mb5.2,baz=315,slow=6.2,SNR=45						
NVS	**Novosibirsk**	**44.42**	**353**	*e*P	**P**	**14 38 14.4**	**-3.2**
NVS				*e*S	**S**	**14 44 48.3**	**-2.6**
NVS				pmax	pmax		
	comp=Z,19nm,1.6s,mb4.6						
NVS				pmax	pmax		
	comp=N,19nm,2.2s						
NVS				smax			
	comp=E,18nm,2.1s						
NVS				smax			
	comp=N,5.0nm,1.6s						
BVAR	**Borovoye Array**	**45.47**	**342**	P	**P**	**14 38 25.8**	**-0.2**
	comp=N,0.8nm,0.5s,mb3.8,baz=141,slow=9.6,SNR=9.8						
BRVK	**Borovoye**	**45.53**	**342**	*e*P	**P**	**14 38 26.4**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.5						
BRVK	**Borovoye**	**45.53**	**342**	*e*P	**P**	**14 38 26.4**	**-0.1**
	comp=Z,8.1nm,1.2s,mb4.5						
MDJ	**Mudanjiang**	**46.77**	**37**	P	**P**	**14 38 36.8**	**+0.4**
MDJ				pmax	pmax		
	comp=Z,12nm,1.9s,mb4.5						
MDJ				pmax	pmax		
	comp=Z,530nm,14.0s						
ATD	**Arta Tunnel**	**47.96**	**276**	LR	LR	14 55 35.5	
	comp=Z,137nm,18.2s,MS4.0,baz=84,slow=32						
MAT	**Matsushiro**	**49.01**	**51**	P	**P**	**14 38 53.8**	**-0.1**
MJAR	**Matsushiro Arr**	**49.01**	**51**	P	**P**	**14 38 54.2**	**+0.2**
	comp=Z,1.6nm,0.9s,mb4.0,baz=253,slow=8.5,SNR=8.7						
MJAR				PcP	PcP	14 40 18.1	+0.4
	comp=Z,2.1nm,0.8s,baz=244,slow=3.7,SNR=8.3						
NWAO	**Narrogin (SRO)**	**49.83**	**152**	P	**P**	**14 39 00.8**	**+0.6**
	comp=Z,11nm,0.9s,mb4.9,baz=346,slow=8.3,SNR=4.4						
NWAO	**Narrogin (SRO)**	**49.83**	**152**	P	**P**	**14 39 00.8**	**+0.6**
KLR	**Kul'dur**	**50.62**	**33**	*e*P	**P**	**14 39 00.0**	**-5.9**
SVE	**Sverdlovsk**	**51.82**	**339**	*e*P	**P**	**14 39 15.1**	**+0.3**
SVE				pmax	pmax		
	comp=Z,22nm,1.3s,mb4.9						
WRA	**Warramunga Arr**	**51.87**	**126**	P	**P**	**14 39 15.2**	**-0.5**
	comp=Z,7.0nm,0.5s,mb4.9,baz=306,slow=8.3,SNR=164						
WRA				PcP	PcP	14 40 28.6	+0.1
	comp=Z,2.8nm,0.8s,baz=314,slow=3.1,SNR=5.1						
WRAB	**Tennant Creek**	**51.87**	**126**	*e*P	**P**	**14 39 15.3**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,26nm,1.2s,mb5.0						
WRAB	**Tennant Creek**	**51.87**	**126**	*e*P	**P**	**14 39 15.3**	**-0.4**
	comp=Z,26nm,1.2s,mb5.0						
HABR	**Khabarovsk**	**52.02**	**35**	*e*P	**P**	**14 39 15.4**	**-1.1**
HABR				*e**SP	sP	14 39 28.5	+1.6
HABR				*e*		14 40 26.3	
HABR						14 41 13.3	
HABR				S	**S**	**14 46 38.4**	**-0.3**
HABR				*e**SS	sS	14 46 53.5	+2.5
HABR				*e*		14 49 01.7	
HABR				*e*SS	SS	14 50 16.1	+0.2
HABR				*e*SSS		14 51 58.0	
HABR				pmax	pmax		
	comp=E,20nm,2.2s						
HABR				pmax	pmax		
	comp=N,9.0nm,1.3s						
HABR				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7						
ARU	**Arti**	**52.28**	**337**	*d i*P	**P**	**14 39 18.3**	**+0.1**
ARU				*e*		14 41 11.3	
ARU				S	**S**	**14 46 43.3**	**+1.4**
ARU				SS	SS	14 50 14.4	-5.2
ARU				pmax	pmax		
	comp=Z,11nm,1.7s,mb4.5						
ARU	**Arti**	**52.28**	**337**	*e*P	**P**	**14 39 18.0**	**-0.3**
	comp=Z,16nm,1.4s,mb4.8						
ZEI	**Tsey**	**52.30**	**316**	*e*P	**P**	**14 39 18.4**	**-0.3**
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.9						
KIV	**Kislovodsk**	**53.58**	**317⇑**	*e*P	**P**	**14 39 29.3**	**+1.2**
KIV				*e**PP	pP	14 39 36.3	+0.7
KIV				pmax	pmax		
	comp=Z,16nm,1.7s,mb4.7						
KIV				MLR	MLR		
	comp=Z,200nm,18.0s,MS4.2						
ASAR	**Alice Springs**	**53.59**	**130**	P	**P**	**14 39 28.1**	**-0.3**
	comp=Z,21nm,0.8s,mb5.1,baz=305,slow=6.8,SNR=181						
ASAR				PcP	PcP	14 40 35.2	+0.4
	comp=Z,4.4nm,0.9s,baz=312,slow=3.4,SNR=5.4						
YSS	**Yuzh-Sakhalins**	**55.97**	**40**	*e*P	**P**	**14 39 45.6**	**+0.3**
YSS				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.0						
YSS	**Yuzh-Sakhalins**	**55.97**	**40**	*e*P	**P**	**14 39 45.6**	**+0.3**
	comp=Z,15nm,1.0s,mb5.0						
YAK	**Yakutsk**	**57.99**	**20**	*e*P	**P**	**14 39 57.8**	**-1.6**
YAK				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.0						
YAK	**Yakutsk**	**57.99**	**20**	*e*P	**P**	**14 39 59.1**	**-0.3**
	comp=Z,19nm,0.9s,mb5.1						
VSR	**Storozhevoye**	**58.65**	**324**	*e*P	**P**	**14 40 04.0**	**-0.2**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.7						
VSR				pmax	pmax		
	comp=N,10.0nm,1.6s						
VSR				pmax	pmax		
	comp=E,8.0nm,0.6s						
BRTR	**Keskin Array B**	**58.75**	**310**	P	**P**	**14 40 04.2**	**-1.0**
	comp=E,1.0nm,0.6s,mb4.0,baz=128,slow=5.5,SNR=7.9						
MOS	**Moscow**	**61.36**	**329**	*e*P	**P**	**14 40 22.3**	**-0.4**
MOS				pmax	pmax		
	comp=Z,44nm,1.2s,mb5.5						
OBN	**Obninsk**	**61.65**	**328⇑**	*e*P	**P**	**14 40 25.7**	**+1.0**
OBN				*e**PP	pP	14 40 32.5	+0.2
OBN				pmax	pmax		
	comp=Z,34nm,1.7s,mb5.2						
CTA	**Charters Tower**	**61.78**	**120**	P	**P**	**14 40 25.6**	**-0.5**
	comp=Z,4.8nm,0.8s,mb4.7,baz=321,slow=7.7,SNR=3.8						
STKA	**Stephens Creek**	**63.82**	**134**	*e*P	**P**	**14 40 39.8**	**+0.3**
	comp=Z,11nm,1.0s,mb4.8						
STKA	**Stephens Creek**	**63.82**	**134**	P	**P**	**14 40 40.0**	**+0.5**
	comp=Z,7.7nm,0.6s,mb4.9,baz=302,slow=6.3,SNR=8.2						
STKA	**Stephens Creek**	**63.82**	**134**	*e*P	**P**	**14 40 39.2**	**-0.3**
STKA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
STKA	**Stephens Creek**	**63.82**	**134**	*e*P	**P**	**14 40 39.2**	**-0.3**
	comp=Z,3.2nm,0.9s,mb4.3						
AKASG	**Malin Array Be**	**64.41**	**321**	P	**P**	**14 40 41.9**	**-1.2**
	comp=Z,0.9nm,0.5s,mb4.1,baz=77,slow=6.5,SNR=8.7						
TIXI	**Tiksi**	**64.83**	**12**	*e*P	**P**	**14 40 44.6**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,20nm,1.5s,mb4.9						
TIXI	**Tiksi**	**64.83**	**12**	*e*P	**P**	**14 40 44.4**	**-1.1**
	comp=Z,34nm,1.6s,mb5.1						
VRI	**Vrincioaia**	**64.97**	**316**	⇑P	**P**	**14 40 47.5**	**+0.6**
PLOR	**Plostina**	**65.02**	**316**	⇓P	**P**	**14 40 48.5**	**+1.3**
MLR	**Muntele Rosu**	**65.44**	**315**	⇑P	**P**	**14 40 50.6**	**+0.7**
BUR08	**Bucovina Ar. S**	**66.32**	**317**	*e*P	**P**	**14 40 55.4**	**-0.1**
RMQ	**Roma**	**66.61**	**125**	*e*P	**P**	**14 40 58.7**	**+1.0**
	comp=Z,14nm,0.9s,mb5.0						
CMSA	**Cobar Meteorol**	**66.61**	**131**	*e*P	**P**	**14 40 58.2**	**+0.5**
JOF	**Joensuu**	**67.19**	**334**	*e*P	**P**	**14 41 00.1**	**-0.7**
JOF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
JOF	**Joensuu**	**67.19**	**334**	*e*p	**P**	**14 41 00.1**	**-0.7**
	comp=Z,7.2nm,0.8s,mb4.8						
APA	**Apatity**	**68.28**	**339**	⇓*i*P	**P**	**14 41 08.4**	**+0.8**
APA				MLR	MLR		
	comp=Z,500nm,19.0s,MS4.8						
CRVS	**Cervenica-Dubn**	**68.99**	**318**	*e*P	**P**	**14 41 12.8**	**+0.5**
CRVS				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
CRVS	**Cervenica-Dubn**	**68.99**	**318**	*e*P	**P**	**14 41 12.8**	**+0.5**
	comp=Z,5.4nm,1.1s,mb4.4						
FINES	**FINESS Array B**	**69.03**	**332**	P	**P**	**14 41 12.2**	**-0.1**
	comp=Z,4.2nm,0.8s,mb4.4,baz=106,slow=6.8,SNR=14						
KAF	**Kangasniemi**	**69.11**	**333**	*e*P	**P**	**14 41 11.9**	**-1.0**
KAF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
KAF	**Kangasniemi**	**69.11**	**333**	*e*p	**P**	**14 41 11.9**	**-1.0**
	comp=Z,9.8nm,1.0s,mb4.7						
KECS	**Kecovo**	**69.57**	**318**	*e*P	**P**	**14 41 15.0**	**-1.0**
KECS				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
KECS	**Kecovo**	**69.57**	**318**	*e*P	**P**	**14 41 15.0**	**-1.0**
	comp=Z,1.6nm,0.8s,mb4.0						
PSZ	**Piszkesteto**	**69.90**	**317**	⇓P	**P**	**14 41 17.2**	**-0.8**
PSZ	**Piszkesteto**	**69.90**	**317**	⇓*i*P	**P**	**14 41 17.2**	**-0.8**
OJC	**Ojcow**	**70.23**	**320**	*e*P	**P**	**14 41 17.7**	**-2.3**
VYHS	**Vyhne**	**70.67**	**318**	*e*P	**P**	**14 41 22.6**	**-0.1**
VYHS				pmax	pmax		
	comp=Z,6.0nm,1.7s,mb4.2						
VYHS	**Vyhne**	**70.67**	**318**	*e*P	**P**	**14 41 22.6**	**-0.1**
	comp=Z,5.9nm,1.7s,mb4.2						
VYHS	**Vyhne**	**70.67**	**318**	*e*P	**P**	**14 41 22.6**	**-0.1**
MORC	**Moravsky Berou**	**71.63**	**319**	*e*P	**P**	**14 41 28.7**	**+0.2**
MORC				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
MORC	**Moravsky Berou**	**71.63**	**319**	*e*P	**P**	**14 41 28.7**	**+0.2**
	comp=Z,7.4nm,1.1s,mb4.5						
MORC	**Moravsky Berou**	**71.63**	**319**	⇓*i*P	**P**	**14 41 29.2**	**+0.7**
ARCES	**ARCESS Array B**	**71.71**	**340**	P	**P**	**14 41 29.2**	**+0.6**
	comp=Z,1.6nm,0.6s,mb4.2,baz=86,slow=5.1,SNR=13						
ZST	**Bratislava**	**71.79**	**317**	*e*P	**P**	**14 41 29.7**	**+0.2**
ZST				pmax	pmax		
	comp=Z,14nm,1.4s,mb4.7						
ZST	**Bratislava**	**71.79**	**317**	*e*P	**P**	**14 41 29.7**	**+0.2**
	comp=Z,14nm,1.4s,mb4.7						
BRG	**Berggiesshubel**	**74.00**	**320**	*i* P	**P**	**14 41 42.3**	**-0.3**
	comp=Z,6.5nm,1.3s,mb4.4						
BRG				*i*	pP	14 41 49.9	-0.4
	comp=Z,9.4nm,1.3s						
BILL	**Bilibino**	**74.23**	**22⇓**	*e*P	**P**	**14 41 43.2**	**-0.4**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.4						
CLL	**Collm**	**74.61**	**320**	*i* P	**P**	**14 41 45.8**	**-0.3**
CLL				*i*	pP	14 41 52.6	-1.3
CLL				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
CLL	**Collm**	**74.61**	**320**	*i* P	**P**	**14 41 45.8**	**-0.3**
	comp=Z,5.0nm,1.0s,mb4.4						
CLL				*i* sP	sP	14 41 52.6	-4.1
	comp=Z,11nm,1.3s						
BOSA	**Boshof**	**75.21**	**237**	P	**P**	**14 41 51.3**	**+1.3**
	comp=Z,7.4nm,0.9s,mb4.6,baz=54,slow=5.4,SNR=5.8						
GRF	**Grafenberg Arr**	**75.72**	**319**	*e*P	**P**	**14 41 52.4**	**-0.1**
	comp=Z,7.0nm,1.3s,mb4.4						
GRF				*e*pP	pP	14 41 59.5	-0.8
GRF	**Grafenberg Arr**	**75.72**	**319**	*e*P	**P**	**14 41 52.4**	**-0.1**
GRF				*e**PP	pP	14 41 59.5	-0.8
GRF				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.4						
NB2	**NORSAR Subarra**	**76.03**	**330**	P	**P**	**14 41 53.3**	**-0.8**
	comp=Z,14nm,1.2s,mb4.8,baz=91,slow=5.6						
NOA	**NORSAR Array B**	**76.03**	**330**	P	**P**	**14 41 53.4**	**-0.7**
	comp=Z,3.3nm,1.0s,mb4.2,baz=94,slow=5.6,SNR=5.0						
KEST	**Kesra**	**77.66**	**304**	P	**P**	**14 42 04.2**	**+0.4**
	comp=Z,2.6nm,1.0s,mb4.1,baz=34,slow=3.9,SNR=4.7						
CASY	**Casey**	**78.13**	**172**	*e*P	**P**	**14 42 05.4**	**-0.2**
	comp=Z,6.6nm,1.3s,mb4.4						
LPG	**La Plagne**	**78.90**	**314**	*e*P	**P**	**14 42 09.9**	**-0.5**
	comp=Z,8.0nm,0.8s,mb4.4						
LPG	**La Plagne**	**78.90**	**314**	*e*P	**P**	**14 42 09.9**	**-0.5**
LPG				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
LPG	**La Plagne**	**78.90**	**314**	*e*P	**P**	**14 42 09.9**	**-0.5**
	comp=Z,4.0nm,0.8s,mb4.4						
LPL	**La Plagne**	**78.91**	**314**	*e*P	**P**	**14 42 09.9**	**-0.6**
VIVF	**Saint-Julien-l**	**80.42**	**314**	*e*P	**P**	**14 42 17.8**	**-0.9**
	comp=Z,19nm,1.1s,mb4.7						
VIVF	**Saint-Julien-l**	**80.42**	**314**	*e*P	**P**	**14 42 17.8**	**-0.9**
VIVF				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
VIVF	**Saint-Julien-l**	**80.42**	**314**	*e*P	**P**	**14 42 17.8**	**-0.9**
	comp=Z,9.6nm,1.1s,mb4.6						
SMF	**Signal de Mont**	**80.81**	**316**	*e*P	**P**	**14 42 19.5**	**-1.3**
MAW	**Mawson**	**80.96**	**191**	P	**P**	**14 42 22.2**	**+1.2**
	comp=Z,5.1nm,0.9s,mb4.4,baz=342,slow=6.1,SNR=7.4						
TAM	**Tamanrasset**	**82.47**	**292**	*e*P	**P**	**14 42 31.3**	**+1.3**
TAM				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
TAM	**Tamanrasset**	**82.47**	**292**	*e*P	**P**	**14 42 31.3**	**+1.3**
	comp=Z,4.9nm,1.0s,mb4.4						
MFF	**Saint Martin d**	**83.54**	**316**	*e*P	**P**	**14 42 34.1**	**-1.0**
	comp=Z,13nm,0.8s,mb4.8						
MFF	**Saint Martin d**	**83.54**	**316**	*e*P	**P**	**14 42 34.1**	**-1.0**
MFF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.8						
MFF	**Saint Martin d**	**83.54**	**316**	*e*P	**P**	**14 42 34.1**	**-1.0**
	comp=Z,6.4nm,0.8s,mb4.8						
SVW2	**Sparrevohn**	**91.18**	**27**	*e*P	**P**	**14 43 12.1**	**+0.3**
MCK	**McKinley**	**92.68**	**23**	*e*P	**P**	**14 43 17.6**	**-1.1**
MCK				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb5.1						
MCK	**McKinley**	**92.68**	**23**	*e*P	**P**	**14 43 17.6**	**-1.0**
	comp=Z,7.7nm,1.1s,mb5.0						
TXAR	**Lajitas Array**	**137.38**	**20**	PKP	PKPdf	14 49 33.5	+2.3
	comp=Z,0.3nm,0.6s,baz=290,slow=0.7,SNR=6.2						
PLCA	**Paso Flores**	**146.37**	**205**	PKPbc	PKPbc	14 49 48.9	+0.8
	comp=Z,4.2nm,1.0s,baz=206,slow=8.9,SNR=5.4						
CPUP	**Villa Florida**	**147.02**	**238**	PKPbc	PKPbc	14 49 49.9	-0.5
	comp=Z,2.9nm,0.8s,baz=73,slow=5.5,SNR=7.0						
CPUP	**Villa Florida**	**147.02**	**238**	PKPbc	PKPbc	14 49 49.9	-0.5
APG	**El Apazote**	**154.24**	**5**	PKPab	PKPab	14 50 20.9	-0.8
	comp=Z,2.6nm,0.9s,baz=6.1,slow=3.4,SNR=4.6						
LPAZ	**La Paz**	**159.73**	**252**	PKPab	PKPab	14 50 46.7	+1.1
	comp=Z,1.7nm,0.8s,baz=104,slow=5.2,SNR=5.9						

*ATH **28** 14:30:12.9, 35.°50N±22.°34E, h41km, MD3.5/5*
*NEIC **28** 14:30:12.9, 35.°50N±22.°34E, h41km, MD3.5(ATH), After ATH.*
*CSEM **28** 14:30:13.1±0.4, 35.°47N±22.°34E, h30km, MD3.5, Error ellipse: s-maj=10.2km s-min=4.6km az=39.0*
*ISCJB **28** 14:30:14.2±0.7, 35.°61N±0.°04×22.°51E±0.°05, h86km±11km, Error ellipse: s-maj=7.7km s-min=4.3km az=43.8*
*THE **28** 14:30:15.6, 35.°66N×22.°53E, h25km±31km, ML3.6/6, Error ellipse: s-maj=31.6km s-min=1.4km az=0.0*
ISC 28 14:30:15.5±0.7, 35.°59N±0.°04×22.°49E±0.°05, h66km±18km, n105, σ1°07/143, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.82**	**32**	*e*P	**Pn**	**14 30 31.5**	**+0.1**
KYTH	**Kithira**	**0.82**	**32**	*e*P	**Pn**	**14 30 31.5**	**+0.1**
KYTH	**Kithira**	**0.82**	**32**	*e*P	**Pn**	**14 30 31.5**	**+0.1**
KARN	**Karanos**	**1.18**	**99**	P	**Pn**	**14 30 35.3**	**-0.7**
KARN				S	**Sn**	**14 30 51.7**	**+0.4**
KARN	**Karanos**	**1.18**	**99**	P	**Pn**	**14 30 35.3**	**-0.7**
KARN				S	**Sn**	**14 30 51.7**	**+0.4**
VLI	**Veliai**	**1.18**	**18**	*e*P	**Pn**	**14 30 36.6**	**+0.6**
VLI	**Veliai**	**1.18**	**18**	*e*P	**Pn**	**14 30 36.6**	**+0.6**
VLI	**Veliai**	**1.18**	**18**	*e*P	**Pn**	**14 30 36.6**	**+0.6**
VAM	**Vamos**	**1.40**	**97**	*e*P	**Pn**	**14 30 39.3**	**+0.3**
VAM	**Vamos**	**1.40**	**97**	*e*P	**Pn**	**14 30 39.3**	**+0.3**
VAM	**Vamos**	**1.40**	**97**	*e*P	**Pn**	**14 30 39.3**	**+0.3**
PYL	**PYLOS**	**1.44**	**335**	P	**Pn**	**14 30 38.1**	**-1.3**
PYL				S	**Sn**	**14 30 56.1**	**-1.3**
PYL	**PYLOS**	**1.44**	**335**	*e*P	**Pn**	**14 30 38.7**	**-0.7**
PYL	**PYLOS**	**1.44**	**335**	*e*P	**Pn**	**14 30 38.2**	**-1.2**
PYL	**PYLOS**	**1.44**	**335**	*e*P	**Pn**	**14 30 38.2**	**-1.2**
PYL				S	**Sn**	**14 30 56.1**	**-1.3**
GVD	**Gavdhos**	**1.51**	**119**	*e*Pn	**Pn**	**14 30 38.0**	**-2.3**
GVD	**Gavdhos**	**1.51**	**119**	P	**Pn**	**14 30 39.0**	**-1.3**
GVD	**Gavdhos**	**1.51**	**119**	*e*Pn	**Pn**	**14 30 38.0**	**-2.3**
GVD	**Gavdhos**	**1.51**	**119**	P	**Pn**	**14 30 39.0**	**-1.3**
ITM	**Ithomi**	**1.65**	**344**	*e*P	**Pn**	**14 30 42.4**	**+0.1**
ITM	**Ithomi**	**1.65**	**344**	P	**Pn**	**14 30 43.0**	**+0.7**
ITM	**Ithomi**	**1.65**	**344**	*e*P	**Pn**	**14 30 42.4**	**+0.1**
ITM	**Ithomi**	**1.65**	**344**	*e*P	**Pn**	**14 30 42.4**	**+0.1**
VLX	**Vlachokerasia**	**1.78**	**357**	P	**Pn**	**14 30 46.9**	**+2.9**
VLX	**Vlachokerasia**	**1.78**	**357**	P	**Pn**	**14 30 46.9**	**+2.9**
SIVA	**Sivas**	**1.98**	**106**	P	**Pn**	**14 30 48.7**	**+2.0**
SIVA	**Sivas**	**1.98**	**106**	P	**Pn**	**14 30 48.7**	**+2.0**
DID	**Didima**	**2.00**	**17**	P	**Pn**	**14 30 47.5**	**+0.5**
DID				S	**Sn**	**14 31 10.3**	**-0.7**
DID	**Didima**	**2.00**	**17**	*e*P	**Pn**	**14 30 47.8**	**+0.8**
DID	**Didima**	**2.00**	**17**	*e*P	**Pn**	**14 30 47.3**	**+0.3**
DID	**Didima**	**2.00**	**17**	*e*P	**Pn**	**14 30 47.3**	**+0.3**
DID				S	**Sn**	**14 31 10.3**	**-0.7**
NAIG	**Nisos Aigina**	**2.31**	**20**	*e*P

CHOS	**Chios island**	**3.99**	**45**	P	**Pn**	**14 31 14.4**	**+0.3**
CHOS				S	**Sn**	**14 31 57.9**	**-1.6**
IGT	**Igoumenitsa**	**4.29**	**337**	P	**Pn**	**14 31 16.8**	**-1.4**
IGT	**Igoumenitsa**	**4.29**	**337**	P	**Pn**	**14 31 16.8**	**-1.4**
PAIG	**Paliouri**	**4.43**	**12**	P	**Pn**	**14 31 20.1**	**0.0**
PAIG	**Paliouri**	**4.43**	**12**	P	**Pn**	**14 31 20.1**	**0.0**
KEK	**Kerkira**	**4.64**	**333**	P	**Pn**	**14 31 21.2**	**-1.7**
KEK	**Kerkira**	**4.64**	**333**	P	**Pn**	**14 31 21.2**	**-1.7**
KZN	**Kozani**	**4.74**	**353**	P	**Pn**	**14 31 25.5**	**+1.1**
KZN				S	**Sn**	**14 32 17.9**	**-0.1**
KZN	**Kozani**	**4.74**	**353**	P	**Pn**	**14 31 25.5**	**+1.1**
KZN				S	**Sn**	**14 32 17.9**	**-0.1**
HORT	**Hortiatis**	**5.02**	**5**	P	**Pn**	**14 31 28.1**	**-0.1**
HORT	**Hortiatis**	**5.02**	**5**	P	**Pn**	**14 31 28.1**	**-0.1**
FNA	**Florina**	**5.26**	**351**	P	**Pn**	**14 31 31.0**	**-0.4**
FNA	**Florina**	**5.26**	**351**	P	**Pn**	**14 31 31.0**	**-0.4**
SOH	**Sokhos**	**5.26**	**7**	P	**Pn**	**14 31 31.7**	**+0.2**
SOH	**Sokhos**	**5.26**	**7**	P	**Pn**	**14 31 31.7**	**+0.2**
TAR1	**Taranto**	**6.41**	**322**	*e*Pn	**Pn**	**14 31 44.2**	**-3.0**
PE1	**Pezze di Greco**	**6.56**	**324**	*e*Pn	**Pn**	**14 31 45.3**	**-3.9**
SG1	**Sgolgore (BA)**	**6.96**	**321**	*e*Pn	**Pn**	**14 31 51.9**	**-2.7**

*ISK **28** 14:32:54.6, 40°.84N×39°.67E, h16km, ML2.3*
*CSEM **28** 14:32:54.9±0.1, 40°.82N×39°.71E, h10km, MD2.7, Error ellipse: s-maj=4.9km s-min=3.2km az=163.0*
*ISCJB **28** 14:32:54.8±0.7, 40°.82N±0°.08×39°.68E±0°.06, h13km±7km, Error ellipse: s-maj=14.5km s-min=6.0km az=157.6*
*DDA **28** 14:32:56.1, 40°.96N×39°.89E, h7km±2km, Md2.7*

ISC 28 14:32:55.1±0.7, 40°.82N±0°.08×39°.70E±0°.07, h13km±7km, n14, σ0°36/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACK	**Trabzon**	**0.13**	**23**	*i* P	**Pg**	**14 32 58.3**	**-0.2**
MACK				*i* S	**Sg**	**14 33 00.5**	**-0.4**
MACK	**Trabzon**	**0.13**	**23**	*i* P	**Pg**	**14 32 58.3**	**-0.2**
MACK				*i* S	**Sg**	**14 33 00.5**	**-0.4**
KTUT	**Trabzon**	**0.17**	**17**	*e*PG	**Pg**	**14 32 59.1**	**0.0**
KTUT				*e*SG	**Sg**	**14 33 02.4**	**+0.6**
KTUT	**Trabzon**	**0.17**	**17**	*e*Pg	**Pg**	**14 32 59.1**	**0.0**
KTUT				*e*Sg	**Sg**	**14 33 02.4**	**+0.5**
GUMT	**Gumushane**	**0.40**	**205**	*e*PG	**Pg**	**14 33 03.0**	**0.0**
GUMT	**Gumushane**	**0.40**	**205**	*e*Pg	**Pg**	**14 33 03.1**	**+0.1**
ESPY	**Espiye-Giresun**	**0.74**	**278**	*e*PG	**Pg**	**14 33 09.1**	**-0.4**
ESPY				*e*SG	**Sg**	**14 33 19.4**	**+0.1**
ESPY	**Espiye-Giresun**	**0.74**	**278**	*e*Pg	**Pg**	**14 33 09.1**	**-0.4**
ESPY				*e*Sg	**Sg**	**14 33 19.4**	**+0.1**
DBAD	**Bademkaya**	**1.52**	**82**	*i* P	**Pn**	**14 33 22.4**	**+0.3**
DBAD				*i* S	**Sn**	**14 33 41.2**	**-0.6**
DBAD	**Bademkaya**	**1.52**	**82**	*i* P	**Pn**	**14 33 22.4**	**+0.3**
DBAD				*i* S	**Sn**	**14 33 41.2**	**-0.6**
DDEM	**Demirkent**	**1.56**	**87**	*i* P	**Pn**	**14 33 23.2**	**+0.7**
DDEM				*i* S	**Sn**	**14 33 42.6**	**0.0**
DDEM	**Demirkent**	**1.56**	**87**	*i* P	**Pn**	**14 33 23.2**	**+0.7**
DDEM				*i* S	**Sn**	**14 33 42.6**	**0.0**
BCA	**Borcka**	**1.58**	**66**	*e*PN	**Pn**	**14 33 22.8**	**0.0**
BCA	**Borcka**	**1.58**	**66**	*e*Pn	**Pn**	**14 33 22.8**	**-0.1**

*IDC **28** 14:33:34.3±1.0, 10°.66N×91°.50E, h0km, mb4.1/14, mb1 4.1/14, mb1mx4.0/24, mbtmp4.1/14, Error ellipse: s-maj=36.4km s-min=17.6km az=50.0*
*NEIC **28** 14:33:35.8±1.2, 10°.71N×91°.51E, h10km, mb4.5/2, Error ellipse: s-maj=48.9km s-min=9.2km az=56.0*
*ISCJB **28** 14:33:37.3±0.8, 10°.7N±0°.1×91°.5E±0°.2, h33km, mb4.1/16, Error ellipse: s-maj=26.9km s-min=10.9km az=141.2*
*BJI **28** 14:33:38.4, 11°.24N×91°.94E, h10km, mb4.3/5*

ISC 28 14:33:39.7±0.8, 10°.7N±0°.1×91°.6E±0°.2, h35km, n21, σ0°60/21, mb4.1/16, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSM	**Kuching**	**20.77**	**115**	*e*P	**P**	**14 38 18.1**	**+0.3**
GTA	**Gaotai**	**29.51**	**13**	*e*P	**P**	**14 39 41.5**	**+0.8**
GTA				pP	pP	14 39 46.0	-4.8
GTA				sP	sP	14 39 48.5	-6.5
GTA				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.0						
AAK	**Ala-Archa**	**35.11**	**338**	P	**P**	**14 40 30.7**	**+0.9**
	comp=Z,1.1nm,0.3s,mb4.2,baz=187,slow=5.7,SNR=6.7						
MK31	**Makanchi Array**	**36.81**	**349**	*e*P	**P**	**14 40 44.0**	**-0.2**
MKAR	**Makanchi Array**	**36.81**	**349**	P	**P**	**14 40 43.6**	**-0.6**
	comp=Z,6.0nm,0.9s,mb4.4,baz=129,slow=9.5,SNR=11						
SONM	**Songino Array**	**39.05**	**16**	P	**P**	**14 41 03.4**	**+0.3**
	comp=Z,2.2nm,0.9s,mb3.9,baz=200,slow=9.8,SNR=5.3						
KURK	**Kurchatov**	**41.28**	**348**	P	**P**	**14 41 21.3**	**-0.2**
	comp=Z,3.9nm,0.9s,mb4.0,baz=162,slow=7.5,SNR=7.6						
KURK	**Kurchatov**	**41.28**	**348**	*e*P	**P**	**14 41 21.2**	**-0.3**
	comp=Z,14nm,1.1s,mb4.5						
KSRS	**Korea Array**	**42.13**	**45**	P	**P**	**14 41 28.7**	**0.0**
	comp=Z,2.5nm,1.1s,mb3.8,baz=243,slow=7.6,SNR=2.7						
ZAA0	**Zalesovo Array**	**43.45**	**354**	*e*P	**P**	**14 41 37.1**	**-2.1**
ZALV	**Zalesovo Beam**	**43.45**	**354**	P	**P**	**14 41 39.1**	**0.0**
	comp=Z,3.0nm,0.7s,mb4.1,baz=170,slow=9.0,SNR=10						
BVAR	**Borovoye Array**	**45.51**	**342**	P	**P**	**14 41 55.6**	**+0.1**
	comp=Z,0.7nm,0.6s,mb3.8,baz=147,slow=8.5,SNR=4.4						
WRA	**Warramunga Arr**	**51.98**	**126**	P	**P**	**14 42 45.8**	**0.0**
	comp=Z,0.6nm,0.4s,mb3.9,baz=300,slow=10.0,SNR=8.6						
WRAB	**Tennant Creek**	**51.99**	**126**	*e*P	**P**	**14 42 45.5**	**-0.3**
	comp=Z,1.6nm,0.3s,mb4.4						
ASAR	**Alice Springs**	**53.69**	**130**	P	**P**	**14 42 58.2**	**-0.1**
	comp=Z,2.5nm,0.7s,mb4.2,baz=306,slow=6.8,SNR=7.9						
BRTR	**Keskin Array B**	**58.65**	**310**	P	**P**	**14 43 33.9**	**+0.2**
	comp=Z,2.0nm,1.0s,mb4.1,baz=105,slow=7.8,SNR=6.4						
AKASG	**Malin Array Be**	**64.36**	**321**	P	**P**	**14 44 11.8**	**-0.1**
	comp=Z,1.2nm,0.7s,mb4.0,baz=100,slow=4.4,SNR=5.7						
FINES	**FINESS Array B**	**69.02**	**332**	P	**P**	**14 44 41.5**	**0.0**
	comp=Z,3.0nm,0.9s,mb4.2,baz=42,slow=5.9,SNR=8.0						
ARCES	**ARCESS Array B**	**71.75**	**340**	P	**P**	**14 44 58.9**	**+0.9**
	comp=Z,1.4nm,0.8s,mb3.9,baz=101,slow=5.1,SNR=4.2						
NB2	**NORSAR Subarra**	**76.02**	**330**	P	**P**	**14 45 23.2**	**+0.1**
	comp=Z,3.1nm,0.9s,mb4.2,baz=92,slow=5.3						
NOA	**NORSAR Array B**	**76.02**	**330**	P	**P**	**14 45 22.9**	**-0.2**
	comp=Z,2.4nm,1.1s,mb4.1,baz=94,slow=5.4,SNR=3.8						

*NEIC **28** 14:39:08.8±1.4, 12°.80S×169°.31E, h629km±17km, mb3.9/6, Error ellipse: s-maj=18.2km s-min=11.8km az=164.0*
*IDC **28** 14:39:09.7±1.6, 12°.84S×169°.25E, h645km±21km, mb3.4/12, mb1 3.5/12, mb1mx3.3/21, mbtmp3.4/12, Error ellipse: s-maj=18.2km s-min=11.4km az=153.0*
*ISCJB **28** 14:39:10.0±1.5, 13°.0S±0°.1×169°.27E±0°.09, h672km±23km, mb3.9/18, Error ellipse: s-maj=21.9km s-min=11.8km az=161.3*

ISC 28 14:39:10.4±1.5, 12°.9S±0°.1×169°.31E±0°.09, h654km±21km, n55, σ0°72/24, mb3.9/17, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**9.70**	**121**	*e*P	**P**	**14 41 26.5**	**-0.9**
	21nm,0.6s						
URZ	**Urewera**	**26.18**	**166**	P	**P**	**14 43 55.9**	**-0.3**
	7.2nm,0.8s,mb4.2,baz=308,slow=6.7,SNR=3.6						
RPZ	**Rata Peaks**	**30.73**	**178**	P	**P**	**14 44 36.5**	**+1.1**
	6.6nm,0.8s,mb4.2,baz=162,slow=3.2,SNR=2.3						
WRAB	**Tennant Creek**	**34.20**	**254**	*e*P	**P**	**14 45 04.5**	**-0.3**
	4.6nm,0.6s,mb4.2						
WRA	**Warramunga Arr**	**34.21**	**254**	P	**P**	**14 45 05.1**	**+0.2**
	4.4nm,0.5s,mb4.3,baz=84,slow=8.7,SNR=41						
WRA				S	**S**	**14 49 46.2**	**-1.7**
	0.9nm,0.9s,baz=85,slow=14,SNR=4.7						
WRA				ScP	ScP	14 50 09.6	+3.4
	0.5nm,0.6s,baz=87,slow=3.6,SNR=5.7						
WRA	**Warramunga Arr**	**34.21**	**254**	P	**P**	**14 45 05.1**	**+0.2**
WRA				S	**S**	**14 49 46.2**	**-1.8**
WRA				ScP	ScP	14 50 09.6	+3.4
ASAR	**Alice Springs**	**35.18**	**247**	P	**P**	**14 45 13.4**	**+0.6**
	5.8nm,0.4s,mb4.4,baz=75,slow=9.5,SNR=65						
ASAR				S	**S**	**14 50 00.9**	**-1.5**
	0.3nm,0.3s,baz=77,slow=17,SNR=4.3						
ASAR				ScP	ScP	14 50 12.8	+3.1
	0.8nm,0.8s,baz=83,slow=3.4,SNR=6.5						
KAKA	**Kakadu**	**35.93**	**266**	*e*P	**P**	**14 45 19.1**	**-0.1**
	18nm,0.3s,mb5.1						
FITZ	**Fitzroy Crossi**	**42.32**	**257**	P	**P**	**14 46 11.0**	**+1.0**
	2.1nm,0.7s,mb3.7,baz=100,slow=7.3,SNR=6.2						
MBWA	**Marble Bar**	**47.95**	**253**	*e*P	**P**	**14 46 53.2**	**+0.6**
	2.1nm,0.5s,mb3.7						
CASY	**Casey**	**65.95**	**202**	*e*P	**P**	**14 48 53.4**	**-0.3**
	1.4nm,0.9s,mb3.3						
PETK	**Petropavlovsk-**	**66.50**	**352**	P	**P**	**14 48 57.0**	**-0.3**
	3.6nm,0.9s,mb3.7,baz=131,slow=4.8,SNR=6.6						
QSPA	**South Pole Qui**	**77.11**	**180**	*e*P	**P**	**14 49 50.3**	**-7.7**
	1.8nm,0.7s,mb3.7						
SONM	**Songino Array**	**82.24**	**323**	P	**P**	**14 50 25.4**	**+0.3**
	0.4nm,0.5s,mb3.2,baz=120,slow=8.5,SNR=2.4						
SONM	**Songino Array**	**82.24**	**323**	P	**P**	**14 50 25.4**	**+0.3**
YBH	**Yreka Blue Hor**	**82.74**	**44**	P	**P**	**14 50 28.6**	**+0.8**
	3.0nm,0.9s,mb3.8,baz=201,slow=8.6,SNR=5.5						
CMB	**Columbia Colle**	**82.92**	**49**	*e*P	**P**	**14 50 28.9**	**0.0**
	3.0nm,1.0s,mb3.8						
NVAR	**Mina Array Bea**	**84.59**	**49**	P	**P**	**14 50 37.5**	**+0.5**
	1.3nm,0.8s,mb3.6,baz=232,slow=7.0,SNR=4.4						
ELK	**Elko**	**87.61**	**47**	P	**P**	**14 50 51.1**	**-0.1**
	1.2nm,0.7s,mb3.7,baz=232,slow=17,SNR=4.2						
YKA	**Yellowknife Ar**	**95.04**	**27**	P	**P**	**14 51 23.4**	**-1.4**
	1.6nm,0.8s,mb4.2,baz=258,slow=4.5,SNR=9.8						
YKA	**Yellowknife Ar**	**95.04**	**27**	P	**P**	**14 51 23.4**	**-1.4**
MKAR	**Makanchi Array**	**97.27**	**316**	P	Pdif	14 51 34.2	-1.0
	0.6nm,0.8s,baz=106,slow=9.1,SNR=4.3						
MKAR	**Makanchi Array**	**97.27**	**316**	P	Pdif	14 51 34.2	-1.0
ARCES	**ARCESS Array B**	**118.99**	**346**	PKP	PKPdf	14 56 45.2	-0.7
	1.8nm,0.5s,baz=74,slow=1.8,SNR=32						
ARCES	**ARCESS Array B**	**118.99**	**346**	PKP	PKPdf	14 56 45.2	-0.7
FINES	**FINESS Array B**	**124.75**	**340**	PKP	PKPdf	14 56 56.8	-0.4
	0.6nm,0.7s,baz=107,slow=3.3,SNR=6.6						
NOA	**NORSAR Array B**	**129.37**	**346**	PKP	PKPdf	14 57 06.4	+0.4
	0.5nm,0.6s,baz=34,slow=2.3,SNR=3.3						
MBAR	**Mbarara**	**136.78**	**255**	*e*PKPdf	PKPdf	14 57 20.3	-1.0
FLN	**La Foliniere**	**143.27**	**349**	*e*PKP1	PKPdf	14 57 30.2	-1.7
	5.1nm,0.4s						
LDF	**La Druitiere**	**143.36**	**348**	*e*PKP1	PKPdf	14 57 31.2	-0.9
	3.3nm,0.5s						
CABF	**La Chapelle**	**143.55**	**340**	*e*PKP1	PKPdf	14 57 32.0	-0.5
	15nm,0.8s						
LOR	**Lormes**	**143.64**	**343**	*e*PKP1	PKPdf	14 57 31.8	-0.8
GRR	**Gorron**	**143.70**	**349**	*e*PKP1	PKPdf	14 57 31.9	-0.8
	16nm,0.7s						
SSF	**Saint Saulge**	**143.93**	**343**	*e*PKP1	PKPdf	14 57 33.0	-0.1
	11nm,0.7s						
SGMF	**Saint Gilles**	**144.12**	**351**	*e*PKP1	PKPdf	14 57 33.1	-0.3
SMF	**Signal de Mont**	**144.21**	**343**	*e*PKP1	PKPdf	14 57 34.0	+0.4
	10nm,0.7s						
AVF	**Avril sur Loir**	**144.22**	**343**	*e*PKP1	PKPdf	14 57 34.6	+1.0
	5.4nm,0.6s						
LPL	**La Plagne**	**144.29**	**339**	*e*PKP1	PKPdf	14 57 35.0	+1.2
	5.0nm,0.7s						
LPG	**La Plagne**	**144.30**	**339**	*e*PKP1	PKPdf	14 57 35.2	+1.4
	4.9nm,0.6s						
QUIF	**Quistinic**	**144.54**	**351**	*e*PKP1	PKPdf	14 57 34.8	+0.6
MBDF	**Montbardon**	**144.96**	**338**	*e*PKP1	PKPdf	14 57 35.9	+0.9
TCF	**Toulx Ste Croi**	**144.99**	**344**	*e*PKP1	PKPdf	14 57 36.9	+1.9
	3.7nm,0.6s						
ORIF	**Oris-en-Rattie**	**145.11**	**339**	*e*PKP1	PKPbc	14 57 36.7	+0.3
	11nm,0.8s						
MFF	**Saint Martin d**	**145.26**	**347**	*e*PKP1	PKPbc	14 57 36.8	0.0
	8.5nm,0.6s						
SBF	**Sospel**	**145.44**	**337**	*e*PKP1	PKPab	14 57 38.5	-0.6
	8.6nm,0.5s						
SBF	**Sospel**	**145.44**	**337**	*e*PKP	PKPab	14 57 38.5	-0.6
PGF	**Pioggiola**	**145.89**	**334**	*e*PKP1	PKPbc	14 57 38.5	-0.2
	6.9nm,0.7s						
PGF	**Pioggiola**	**145.89**	**334**	*e*PKP	PKPbc	14 57 38.5	-0.2
FRF	**La Foret Royal**	**146.00**	**337**	*e*PKP1	PKPbc	14 57 38.7	-0.3
FRF	**La Foret Royal**	**146.00**	**337**	*e*PKP	PKPbc	14 57 38.7	-0.3
SMRF	**Simiane la Rot**	**146.04**	**339**	*e*PKP1	PKPbc	14 57 39.3	+0.2
	16nm,0.9s						
RJF	**Les Rejaudoux**	**146.09**	**344**	*e*PKP1	PKPbc	14 57 39.2	+0.1
	4.8nm,0.5s						
LMR	**La Mourre**	**146.25**	**337**	*e*PKP1	PKPbc	14 57 39.8	+0.1
	14nm,0.8s						
LFF	**La Frestale**	**146.62**	**345**	*e*PKP1	PKPbc	14 57 41.3	+0.7
MTLF	**Montolieu**	**147.70**	**342**	*e*PKP1	PKPbc	14 57 43.7	+0.3
	4.4nm,0.7s						

*NEIC **28** 14:41:32.7±1.0, 10°.59N×91°.56E, h10km, mb3.7/1, Error ellipse: s-maj=25.9km s-min=12.1km az=73.0*
*IDC **28** 14:41:32.7±7.8, 10°.83N×91°.99E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.4/23, mbtmp3.7/5, MS4.1/1, Ms1 4.1/1, ms1mx2.8/24, Error ellipse: s-maj=391.1km s-min=22.2km az=61.0*
*ISCJB **28** 14:41:34.7±1.3, 10°.7N±0°.1×91°.8E±0°.2, h33km, mb3.6/6, Error ellipse: s-maj=34.4km s-min=16.0km az=163.5*

ISC 28 14:41:36.7±1.3, 10°.6N±0°.1×91°.7E±0°.2, h35km, n9, σ0°27/8, mb3.6/6, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**10.49**	**41**	Pn	**Pn**	**14 44 04.7**	**0.0**
	1.0nm,0.3s						
MKAR	**Makanchi Array**	**36.90**	**349**	P	**P**	**14 48 41.9**	**0.0**
	0.6nm,0.8s,mb3.5,baz=149,slow=7.5,SNR=4.5						
ZALV	**Zalesovo Beam**	**43.54**	**354**	P	**P**	**14 49 36.8**	**0.0**
	0.3nm,0.3s,mb3.5,baz=174,slow=7.1,SNR=3.6						
FITZ	**Fitzroy Crossi**	**44.06**	**130**	P	**P**	**14 49 41.3**	**-0.2**
	1.5nm,0.7s,mb3.8,baz=282,slow=19,SNR=4.0						
WRA	**Warramunga Arr**	**51.86**	**126**	P	**P**	**14 50 42.2**	**+0.3**
	0.3nm,0.5s,mb3.5,baz=307,slow=8.7,SNR=5.8						
WRA	**Warramunga Arr**	**51.86**	**126**	P	**P**	**14 50 42.2**	**+0.3**
WRAB	**Tennant Creek**	**51.87**	**126**	P	**P**	**14 50 41.4**	**-0.5**
	0.8nm,0.7s,mb3.8						
GUMO	**Guam**	**52.04**	**81**	LR	LR	15 10 38.1	
	comp=Z,174nm,18.9s,slow=34						
ASAR	**Alice Springs**	**53.57**	**130**	P	**P**	**14 50 54.9**	**+0.4**
	1.0nm,0.7s,mb3.8,baz=304,slow=6.5,SNR=9.6						

*NEIC **28** 14:44:10.5, 37°.59N×118°.82W, h12km, mb4.4/1, MW3.9(BRK), After NCEDC.*
NEIC Felt [IV] at Mammoth Lakes; [III] at Bishop, Mariposa, Oakhurst, Twain Harte and Yosemite National Park; [II] at Arnold and Shaver Lake. Also felt at Ahwahnee, Chowchilla, El Portal, Fish Camp, Groveland, June Lake, Long Barn, Martinez, Monterey, North Fork, Porterville, San Leandro, Sonora and Soulsbyville.
*ISCJB **28** 14:44:10.1±0.2, 37°.59N±0°.01×118°.76W±0°.02, h10km, Error ellipse: s-maj=2.2km s-min=1.7km az=178.9*
*IDC **28** 14:44:11.2±1.4, 37°.65N×118°.86W, h0km, mb1 3.8/4, mb1mx3.4/26, mbtmp3.4/4, ML3.7/4, Error ellipse: s-maj=11.8km s-min=9.9km az=142.0*

ISC 28 14:44:10.6±0.2, 37°.60N±0°.01×118°.80W±0°.02, h10km, n153, σ1°10/223, 80C-75D, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLAC	**Mammoth Lakes**	**0.04**	**321**	⇑P	**Pg**	**14 44 12.9**	**+0.4**
	baz=0.0,SNR=1000						
MLAC				⇓S	**Sg**	**14 44 14.9**	**+1.0**
	baz=0.0						
MTUM	**Tungsten Hills**	**0.31**	**142**	*e*Pg	**Pg**	**14 44 16.7**	**0.0**
TIN	**Tinemaha**	**0.71**	**140**	⇑P	**Pg**	**14 44 24.2**	**-0.1**
	baz=0.7,SNR=320						
TIN				⇓S	**Sg**	**14 44 33.8**	**+0.3**
	baz=0.7						
NVAR	**Mina Array Bea**	**0.92**	**25**	Pg	**Pg**	**14 44 28.2**	**0.0**
	797nm,0.3s,baz=208,slow=18,SNR=9035						
NVAR				Lg		14 44 41.0	
	915nm,0.3s,baz=202,slow=30,SNR=24						
WAKR	**Walker**	**1.04**	**331**	*e*Pn	**Pn**	**14 44 30.4**	**-0.8**
WAKR				*e*Sn	**Sn**	**14 44 45.9**	**+0.2**
GRAC	**Grapevine Rang**	**1.29**	**117**	⇑Pg	**Pg**	**14 44 35.1**	**-0.1**
	baz=1.3,SNR=38						
CWC	**Cottonwood Cre**	**1.29**	**153**	⇓P	**Pn**	**14 44 34.0**	**-0.6**
	baz=1.3,SNR=99						
CWC				⇑S	**Sb**	**14 44 51.1**	**-0.4**
	baz=1.3						
CMB	**Columbia Colle**	**1.33**	**290**	*e*Pn	**Pn**	**14 44 34.0**	**-1.2**
CMB				*e*Sb	**Sn**	**14 44 50.8**	**-2.1**
RCTC	**Rector, Farmer**	**1.33**	**195**	⇓Pg	**Pn**	**14 44 34.5**	**-0.7**
	baz=1.3,SNR=54						
RCTC				⇑S	**Sn**	**14 44 51.5**	**-1.5**
	baz=1.3						
S10A	**Tonopah Range,**	**1.78**	**79**	⇓Pn	**Pn**	**14 44 41.6**	**+0.2**
	baz=1.8,SNR=538						
S10A				⇑Pb	**Pb**	**14 44 43.7**	**+0.5**
	baz=1.8						
S10A				⇓Sb	**Sg**	**14 45 07.8**	**+0.1**
	baz=1.8						
MPMC	**Manual Prospec**	**1.86**	**145**	⇓Pn	**Pn**	**14 44 42.0**	**-0.5**
	baz=1.9,SNR=460						
MPMC				⇑Pb	**Pb**	**14 44 44.1**	**-0.5**
	baz=1.9						
MPMC				⇑Pg	**Pg**	**14 44 45.1**	**-1.1**
	baz=1.9						
WCN	**Washoe City**	**1.86**	**337**	⇑Pn	**Pn**	**14 44 42.4**	**-0.1**
	baz=1.9,SNR=655						
WCN				⇓Pb	**Pb**	**14 44 43.9**	**-0.7**
	baz=1.9						
WCN				⇑Pg	**Pg**	**14 44 45.6**	**-0.7**
	baz=1.9						
WCN				⇓Sb	**Sg**	**14 45 09.3**	**-1.1**
	baz=1.9						
FURC	**Furnace Creek,**	**1.92**	**125**	⇓Pb	**Pb**	**14 44 45.0**	**-0.6**
	baz=1.9						
FURC				⇑Pg	**Pg**	**14 44 46.7**	**-0.6**
	baz=1.9						
ISA	**Isabella**	**1.95**	**172**	⇓Pb	**Pb**	**14 44 45.5**	**-0.6**
	baz=1.9						
ISA				⇓Sb	**Sb**	**14 45 10.2**	**-0.2**
	baz=1.9						
ISA	**Isabella**	**1.95**	**172**	*e*Pn	**Pb**	**14 44 45.2**	**-0.9**
ISA				*e*Sn	**Sb**	**14 45 09.6**	**-0.8**
R10A	**Warm Springs**	**2.09**	**70**	⇑Pn	**Pn**	**14 44 46.2**	**+0.5**
	baz=2.1,SNR=208						
R10A				⇑Pb	**Pb**	**14 44 48.9**	**+0.3**
	baz=2.1						
R10A				⇑Sb	**Sg**	**14 45 17.6**	**-0.2**
	baz=2.1						
PAHR	**Pah Rah Range**	**2.16**	**348**	*e*Pn	**Pn**	**14 44 47.3**	**+0.7**
Q10A	**Clear Creek Ra**	**2.25**	**56**	⇑Pn	**Pn**	**14 44 48.6**	**+0.7**
	baz=2.3,SNR=24						
Q10A				⇓Pb	**Pb**	**14 44 51.7**	**+0.3**
	baz=2.3						
Q10A				⇓Sb	**Sg**	**14 45 22.1**	**-0.9**
	baz=2.3						
SAO	**San Andreas Ge**	**2.27**	**249**	*e*Pn	**Pn**	**14 44 49.1**	**+1.0**
SAO				*e*Sn	**Sb**	**14 45 18.3**	**-1.4**
LRMC	**Laurel Mountai**	**2.30**	**157**	⇑Pn	**Pn**	**14 44 47.9**	**-0.5**
	baz=2.3,SNR=163						
LRMC				⇑Pb	**Pb**	**14 44 51.0**	**-1.0**
	baz=2.3						
LRMC				⇓Sb	**Sb**	**14 45 21.2**	**+0.7**
	baz=2.3						
U10A	**Ash Meadows, A**	**2.30**	**120**	⇓Pn	**Pn**	**14 44 48.3**	**-0.2**
	baz=2.3,SNR=25						
U10A				⇑Pg	**Pg**	**14 44 54.1**	**-0.6**
	baz=2.3						
S11A	**Rachel**	**2.42**	**88**	⇓Pn	**Pn**	**14 44 50.0**	**-0.2**
	baz=2.4						
S11A				⇑Pg	**Pg**	**14 44 57.2**	**+0.2**
	baz=2.4						
S11A				⇑Sb	**Sg**	**14 45 27.2**	**-1.3**
	baz=2.4						
ARVC	**Arvin**	**2.46**	**181**	⇓Pb	**Pb**	**14 44 53.4**	**-1.5**
	baz=2.5						
ARVC				⇑Sb	**Sb**	**14 45 25.6**	**+0.3**
	baz=2.5						
SMMC	**Simmler**	**2.48**	**203**	⇓Pb	**Pb**	**14 44 53.2**	**-2.0**
	baz=2.5,SNR=68						
BEKR	**Beckworth**	**2.57**	**332**	⇑Pg	**Pg**	**14 44 58.9**	**-1.0**
	baz=2.6						
SHOC	**Shoshone**	**2.64**	**129**	⇑Pg	**Pg**	**14 44 59.3**	**-1.8**
	baz=2.6						
R11A	**Troy Canyon, C**	**2.65**	**73**	⇓Pn	**Pn**	**14 44 53.2**	**-0.1**
	baz=2.7,SNR=56						
R11A				⇓Pb	**Pb**	**14 44 58.5**	**+0.4**
	baz=2.7						
R11A				⇑Sb	**Sg**	**14 45 33.7**	**-2.0**
	baz=2.7						
P10A	**Eureka**	**2.73**	**41**	⇑Pn	**Pn**	**14 44 54.7**	**+0.3**
	baz=2.7						
P10A				⇑Pb	**Pb**	**14 44 59.9**	**+0.5**
	baz=2.7						
OHCM	**Honcut**	**2.73**	**310**	*e*Pn	**Pn**	**14 44 52.4**	**-2.0**
Q11A	**Duckwater**	**2.77**	**62**	⇑Pn	**Pn**	**14 44 55.3**	**+0.3**
	baz=2.8,SNR=11						
Q11A				⇓Pb	**Pb**	**14 45 00.9**	**+0.

baz=3.8
GMRC ⇑Pb **Pb** **14 45 16.3 -1.2**
baz=3.8
R13A O'Grain Ranch, 3.87 80 ⇓Pn **Pn** **14 45 10.2 +0.2**
baz=3.9,SNR=19
LDFC Landfair 3.90 129 *e*Pn **Pn** **14 45 12.8 +2.3**
S13A Holt Ranch, En 3.92 89 ⇑Pn **Pn** **14 45 11.1 +0.3**
baz=3.9,SNR=14
S13A ⇑Sb **Sb** **14 46 10.9 +3.6**
baz=3.9
T13A Saint George 3.94 97 ⇓Pn **Pn** **14 45 11.4 +0.3**
baz=3.9,SNR=23
T13A ⇓Sb **Sb** **14 46 11.9 +4.0**
baz=3.9
N11A Elko Archery C 4.00 36 ⇓Sb **Sg** **14 46 14.8 -4.3**
baz=4.0
U13A Pakoon Wash 4.05 105 ⇓Pn **Pn** **14 45 11.7 -0.8**
baz=4.0,SNR=8.9
U13A ⇑Sb **Sb** **14 46 15.8 +4.9**
baz=4.0
O12A Currie 4.14 49 ⇓Pn **Pn** **14 45 13.9 +0.1**
baz=4.2,SNR=10
WDC Whiskeytown Da 4.16 317 *e*Pn **Pn** **14 45 13.7 -0.5**
P13A Bates Ranch, G 4.19 62 ⇓Pn **Pn** **14 45 14.5 0.0**
baz=4.2,SNR=18
ELK Elko 4.19 40 Pn **Pn** **14 45 15.2 +0.7**
3.5nm,0.3s,baz=230,slow=11,SNR=59
ELK Pg **Pb** **14 45 24.4 +0.1**
12nm,0.3s,baz=223,slow=12,SNR=34
ELK Lg 14 46 22.9
30nm,0.3s,baz=121,slow=19,SNR=10
ELK Elko 4.19 40 *e*Pn **Pn** **14 45 15.6 +1.1**
CIS Catalina Islan 4.19 175 ⇑Sb **Sb** **14 46 16.5 +1.4**
baz=4.2
MURC Murrieta 4.20 161 ⇓Pn **Pn** **14 45 13.5 -1.1**
baz=4.2
V13A Grand Canyon W 4.24 113 ⇓Pn **Pn** **14 45 14.9 -0.4**
baz=4.2,SNR=8.6
BELC Belle Mtn. Jos 4.25 147 ⇑Pn **Pn** **14 45 15.2 -0.1**
baz=4.3,SNR=19
ARUT Antelope Range 4.26 86 *e*Pn **Pn** **14 45 16.1 +0.7**
ARUT *e*S **Sg** **14 46 26.0 -1.2**
KCPM Cahto Peak 4.29 301 *e*Pn **Pn** **14 45 19.4 +3.6**
CCUT Cedar City 4.32 89 *e*Pn **Pn** **14 45 17.6 +1.3**
N12A Clover Valley, 4.37 41 ⇑Pn **Pn** **14 45 17.4 +0.4**
baz=4.4,SNR=41
N12A ⇑Pb **Pb** **14 45 27.6 +0.2**
baz=4.4
N12A Clover Valley, 4.37 41 *e*Pn **Pn** **14 45 17.7 +0.7**
PFO Pinyon Flat Ob 4.41 154 *e*Pn **Pn** **14 45 19.3 +1.7**
MOD Modoc 4.45 345 *e*Pg **Pg** **14 45 32.3 -3.5**
S14A Cedar City 4.47 86 ⇓Pn **Pn** **14 45 18.3 0.0**
baz=4.5
M11A Holland Ranch, 4.48 30 ⇑Pn **Pn** **14 45 18.7 +0.3**
baz=4.5,SNR=6.4
IRM Iron Mountain 4.53 138 ⇑Pn **Pn** **14 45 19.2 0.0**
baz=4.5
O13A Hicks Ranch, I 4.53 55 ⇑Pb **Pb** **14 45 30.2 0.0**
baz=4.5
T14A Hurricane 4.59 95 ⇑Pn **Pn** **14 45 19.9 -0.1**
baz=4.6,SNR=8.5
U14A Mt Trumbull 4.65 103 ⇓Sb **Sb** **14 46 33.5 +5.3**
baz=4.7
N13A Wendover, West 4.83 46 ⇓Pn **Pn** **14 45 23.6 +0.3**
baz=4.8
N13A Wendover, West 4.83 46 *e*Pn **Pn** **14 45 22.2 -1.1**
N13A *e*S **Sg** **14 46 43.0 -2.6**
M12A Wells 4.86 37 ⇑Pn **Pn** **14 45 23.5 -0.1**
baz=4.9
P14A Drum Mountains 4.91 64 ⇑Sb **Sb** **14 46 41.3 +5.6**
baz=4.9
V14A Boquillas Ranc 4.98 111 ⇓Sb **Sb** **14 46 41.9 +4.1**
baz=5.0
MONP Monument Peak 5.08 157 ⇑Sb **Sb** **14 46 44.0 +3.3**
baz=5.1
YBH Yreka Blue Hor 5.11 325 Pn **Pn** **14 45 30.1 +2.9**
1.1nm,0.3s,baz=152,slow=7.5,SNR=21
YBH Lg 14 46 50.2
0.6nm,0.3s,baz=100,slow=17,SNR=1.7
YBH Yreka Blue Hor 5.11 325 *e*Pn **Pb** **14 45 30.2 -10**
L11A Cat Creek Ranc 5.13 26 ⇓Pn **Pn** **14 45 27.3 -0.1**
baz=5.2,SNR=5.9
T15A Red Dirt Ranch 5.15 94 ⇑Pn **Pn** **14 45 27.1 -0.6**
baz=5.2,SNR=6.7
M13A Montello 5.20 42 ⇑Pn **Pn** **14 45 28.7 +0.4**
baz=5.2
M13A Montello 5.20 42 *e*Pn **Pn** **14 45 29.5 +1.2**
R15A Junction 5.20 81 ⇓Sb **Sb** **14 46 50.0 +6.1**
baz=5.2
BAR Barrett 5.21 160 *e*Pn **Pn** **14 45 31.0 +2.5**
MSU Marysvale 5.31 78 *e*Pn **Pn** **14 45 31.8 +1.9**
U15A North Rim 5.34 101 ⇓Pn **Pn** **14 45 30.3 0.0**
baz=5.3,SNR=6.5
DUG Dugway 5.34 59 ⇑Pn **Pn** **14 45 30.8 +0.5**
baz=5.4,SNR=10
DUG ⇑Sb **Sb** **14 46 52.7 +4.5**
baz=5.4
DUG Dugway 5.34 59 *e*Pn **Pn** **14 45 32.8 +2.4**
DUG *e*Pg **Pg** **14 45 51.2 -1.6**
N14A Grayback Hills 5.44 52 ⇑Pn **Pn** **14 45 31.8 +0.1**
baz=5.4,SNR=8.8
N14A ⇑Sb **Sb** **14 46 56.1 +5.2**
baz=5.4
BGU Big Grassy Mou 5.58 52 *e*Pn **Pn** **14 45 34.5 +0.9**
36nm,0.6s
K11A Parker Ranch, 5.59 21 ⇓Sb **Sb** **14 47 00.8 +5.7**
baz=5.6
O15A The Old Anders 5.62 60 ⇓Pn **Pn** **14 45 34.1 0.0**
baz=5.6
S16A Weppner Ranch, 5.72 87 ⇑Pn **Pn** **14 45 35.6 +0.1**
baz=5.7,SNR=6.0
M14A Sheep Mountain 5.74 46 ⇓Pn **Pn** **14 45 36.0 +0.2**
baz=5.8,SNR=8.3
NLU North Lily Min 5.76 64 *e*Pn **Pn** **14 45 39.3 +3.2**
NLU *e*Pg **Pg** **14 45 57.9 -3.0**
NLU *e*Sg **Sg** **14 47 13.7 -1.7**
R16A Teasdale 5.83 81 ⇓Sb **Sb** **14 47 07.3 +5.2**
baz=5.8
K12A Draper Farm, C 5.85 29 ⇑Pn **Pn** **14 45 37.6 +0.3**
baz=5.9
K12A ⇑Sb **Sb** **14 47 09.2 +6.4**
baz=5.9
HUMO Hull Mountain 5.93 329 *e*Pn **Pn** **14 45 42.4 +4.0**
Z13A Yuma Proving G 6.07 135 ⇑Pn **Pn** **14 45 40.1 -0.3**
baz=6.1
MPU Maple Canyon 6.10 64 *e*Pg **Pg** **14 46 04.5 -2.8**
MPU *e*Sg **Sg** **14 47 26.9 +0.7**
L14A Malta 6.16 42 ⇓Pb **Pb** **14 45 57.2 -0.7**
baz=6.2
TMUT Trail Mountain 6.20 72 *e*Pn **Pn** **14 45 47.7 +5.6**
K13A Stover Farm, H 6.21 34 ⇓Pb **Pb** **14 45 59.2 +0.5**
baz=6.2
MFID Camas Ranch 6.24 20 ⇓Pb **Pb** **14 45 58.2 -1.0**
baz=6.3
HVU Hansel Valley 6.25 46 *e*Pn **Pn** **14 45 46.1 +3.4**
CTU Camp Tracy 6.29 58 *e*Pn **Pb** **14 45 54.3 -5.8**
J12A Stokes Ranch, 6.31 25 ⇓Pb **Pb** **14 46 00.2 -0.3**
baz=6.3
WUAZ Wupatki 6.33 107 Pn **Pn** **14 45 44.4 +0.5**
WUAZ *e*Sg **Sg** **14 47 26.6 -7.1**
S17A Black Ridge (B 6.35 87 ⇑Pn **Pn** **14 45 43.8 -0.4**
baz=6.3
Y15A Casa Rosa Ranc 6.39 123 ⇓Pn **Pn** **14 45 44.0 -0.7**
baz=6.4
T17A Navajo Res., N 6.40 93 ⇑Pn **Pn** **14 45 44.9 0.0**
baz=6.4
JLU Jordanelle 6.46 60 *e*Pn **Pn** **14 45 47.7 +2.1**
DAU Daniels Canyon 6.51 62 *e*Pn **Pn** **14 45 50.5 +4.1**
DAU *e*Pg **Pg** **14 46 11.9 -3.4**
K14A Jones Ranch, D 6.56 39 ⇑Pb **Pb** **14 46 04.3 -0.4**
baz=6.6
SRU San Rafael 6.68 74 *e*Pn **Pn** **14 45 52.5 +3.8**
I12A Atlanta 6.79 23 ⇑Pb **Pb** **14 46 08.7 +0.1**
baz=6.8
HLID Hailey 6.83 28 *e*Pn **Pn** **14 45 54.6 +3.8**
HWUT Hardware Ranch 6.87 52 *e*Pn **Pn** **14 45 55.5 +4.1**
J14A Carey 7.00 33 ⇑Pb **Pb** **14 46 12.8 +0.7**
baz=7.0
Y16A Circle Bar Ran 7.01 120 ⇑Pg **Pg** **14 46 24.1 -0.7**
baz=7.0
T18A Mexican Hat 7.12 91 ⇓Pn **Pn** **14 45 54.8 0.0**
baz=7.1
I13A Wildhorse Cree 7.24 28 ⇓Pb **Pb** **14 46 16.6 +0.3**
baz=7.3
V18A Ganado 7.37 102 ⇓Pg **Pg** **14 46 30.8 -0.9**
baz=7.4
H11A Donnelly 7.41 16 ⇓Pb **Pb** **14 46 19.0 -0.1**
baz=7.4
I14A Mackay 7.51 31 ⇑Pb **Pb** **14 46 21.6 +0.7**
baz=7.5
J15A Blackfoot 7.56 38 ⇑Pb **Pb** **14 46 23.0 +1.3**
baz=7.6
H13A Challis 7.76 25 ⇓Pb **Pb** **14 46 25.9 +0.8**
baz=7.8
PV04 Paradox Valley 7.86 81 *e*Pn **Pn** **14 46 07.8 +3.0**
PV01 Paradox Valley 8.11 83 *e*Pn **Pn** **14 46 10.1 +1.8**
PV01 *e*Lg 14 48 23.2
MVCO Mesa Verde 8.21 90 Pn **Pn** **14 46 12.1 +2.4**
MVCO *e*Pg Pn 14 46 45.2 +36
MVCO *e*Sg Sn 14 48 34.7 +52
REDW Red Top Meadow 8.36 44 *e*Pn **Pn** **14 46 16.2 +4.5**
MCMT McKenzie Canyo 8.50 30 *e*Pn **Pn** **14 46 18.9 +5.3**
PDAR Pinedale Array 8.76 51 Pn **Pn** **14 46 22.0 +4.8**
0.1nm,0.3s,baz=225,slow=12,SNR=8.1
DLMT Dillon 9.05 29 *e*Pn **Pn** **14 46 27.0 +5.9**
TXAR Lajitas Array 15.07 119 Pn **Pn** **14 47 52.0 +8.5**
0.0nm,0.3s,baz=301,slow=9.8,SNR=6.1
FFC Flin Flon 20.62 28 *e*P **P** **14 48 50.8 +0.9**
52nm,2.7s

IDC 28 14:49:02.6±14.0, 9°89N×90°38E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/22, mbtmp3.5/3, Error ellipse: s-maj=705.6km s-min=30.6km az=60.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**37.41**	**351**	P	P	14 56 17.4	0.0
	0.8nm,0.9s,baz=130,slow=9.5,SNR=4.1						
WRA	**Warramunga Arr**	**52.45**	**125**	P	P	14 58 17.5	0.0
	0.3nm,0.4s,baz=304,slow=7.4,SNR=4.8						
ASAR	**Alice Springs**	**54.06**	**129**	P	P	14 58 29.2	0.0
	0.7nm,0.7s,baz=302,slow=7.3,SNR=6.8						

*ISCJB **28** 14:54:59.6±0.5, 22°59N±0°02×121°45E±0°03, h15km±5km, Error ellipse: s-maj=4.2km s-min=3.6km az=8.7*
*TAP **28** 14:55:01.0, 22°65N×121°31E, h17km, ML3.8, B*
*JMA **28** 14:55:01.3±0.2, 22°50N×121°52E, h45km, M3.4*
*NEIC **28** 14:55:01.2±3.5, 22°76N×121°39E, h10km, Error ellipse: s-maj=34.7km s-min=11.9km az=152.0*
ISC 28 14:54:59.7±0.4, 22°60N±0°02×121°41E±0°02, h10km±3km, n68, σ0°92/97, 12C-3D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTN	**Taitung**	**0.29**	**302**	⇓*iP*	**Pg**	**14 55 06.5**	**+1.0**
	baz=314						
TTN				*e*S	**Sg**	**14 55 10.6**	**+1.1**
	baz=314						
TWG	**Pinlang**	**0.38**	**305**	*e*P	**Pg**	**14 55 07.2**	**0.0**
TWG				*e*S	**Sg**	**14 55 13.3**	**+0.9**
TWG	**Pinlang**	**0.38**	**305**	⇓*iP*	**Pg**	**14 55 07.6**	**+0.3**
	baz=310						
TWG				S	**Sg**	**14 55 12.7**	**+0.3**
	baz=310						
ECL	**Taimali**	**0.42**	**269**	⇑*iP*	**Pg**	**14 55 08.1**	**+0.1**
	baz=262						
ECL				*e*S	**Sg**	**14 55 13.3**	**-0.4**
	baz=262						
TAW	**Tawu**	**0.54**	**243**	⇓*iP*	**Pg**	**14 55 10.5**	**+0.3**
	baz=233						
TAW				*e*S	**Sg**	**14 55 16.8**	**-0.4**
	baz=233						
EAST	**Anshuo**	**0.56**	**247**	P	**Pg**	**14 55 10.8**	**+0.1**
	baz=246						
EAST				S	**Sg**	**14 55 17.9**	**-0.3**
	baz=246						
LAY	**Lan-yu**	**0.57**	**167**	*e*P	**Pg**	**14 55 12.3**	**+1.4**
	baz=159						
LAY				*e*S	**Sg**	**14 55 22.8**	**+4.3**
	baz=159						
ELDTW	**Lidau**	**0.69**	**328**	⇑*iP*	**Pg**	**14 55 12.5**	**-0.6**
	baz=334						
SSD	**Sandimen**	**0.73**	**281**	⇑*iP*	**Pg**	**14 55 13.0**	**-0.9**
	baz=275						
SSD				*e*S	**Sg**	**14 55 21.0**	**-2.5**
	baz=275						
TWF1	**Yuli**	**0.75**	**352**	*e*P	**Pg**	**14 55 13.8**	**-0.5**
	baz=347						
SCZT	**Fangliau**	**0.77**	**253**	⇑P	**Pg**	**14 55 14.1**	**-0.4**
	baz=247						
YULB	**Yu-li**	**0.79**	**352**	*e*P	**Pg**	**14 55 13.9**	**-1.2**
STYT	**Tauyuan**	**0.82**	**313**	⇑*iP*	**Pg**	**14 55 14.9**	**-0.7**
	baz=327						
TSEB	**Hengchuen, Pin**	**0.84**	**214**	*e*P	**Pg**	**14 55 15.3**	**-0.7**
	baz=209						
TSEB				*e*S	**Sg**	**14 55 27.8**	**+0.8**
	baz=209						
HEN	**Hengchun**	**0.86**	**227**	*e*P	**Pg**	**14 55 15.9**	**-0.4**
	baz=220						
TWK1	**Hengchun**	**0.86**	**221**	*e*P	**Pg**	**14 55 15.9**	**-0.5**
	baz=213						
TWK1				*e*S	**Sg**	**14 55 27.1**	**-0.5**
	baz=213						
SGST	**Jiashian**	**0.90**	**302**	⇑*iP*	**Pg**	**14 55 17.0**	**-0.1**
	baz=303						
EHY	**Hungye**	**0.90**	**355**	*e*P	**Pg**	**14 55 16.1**	**-1.1**
TWM1	**Shoushan**	**0.94**	**284**	⇑*iP*	**Pg**	**14 55 18.3**	**+0.5**
	baz=282						
WTP	**Ta-pu**	**0.97**	**311**	⇑*iP*	**Pg**	**14 55 18.2**	**-0.4**
	baz=323						
CHN1	**Nanshi**	**1.00**	**306**	⇑*iP*	**Pg**	**14 55 19.1**	**+0.1**
	baz=308						
CHN1				*e*S	**Sg**	**14 55 32.9**	**+0.9**
	baz=308						
TPUB	**Ta-pu**	**1.00**	**314**	*e*P	**Pg**	**14 55 18.1**	**-0.9**
TWP	**Hsiaoliuchiu**	**1.00**	**255**	*e*P	**Pg**	**14 55 20.8**	**+1.8**
	baz=246						
KAU	**Kaohsiung**	**1.02**	**268**	*e*P	**Pg**	**14 55 20.4**	**+1.0**
	baz=266						
CHN4	**Tsaushan**	**1.06**	**315**	⇑P	**Pb**	**14 55 19.6**	**-0.5**
	baz=326						
TWK	**Hsinying**	**1.08**	**308**	⇑*iP*	**Pb**	**14 55 20.2**	**-0.3**
	baz=320						
TWK				*e*S	**Sb**	**14 55 34.1**	**-0.5**
	baz=320						
TAI1	**Yung-k'ang**	**1.18**	**292**	*e*P	**Pb**	**14 55 22.0**	**-0.1**
	baz=292						
CHN5	**Tsauling**	**1.20**	**326**	⇑*iP*	**Pn**	**14 55 22.0**	**-0.5**
	baz=328						
ESL	**Shilin**	**1.21**	**1**	*e*P	**Pn**	**14 55 21.9**	**-0.8**
	baz=5.0						
SSLB	**Suanglung**	**1.25**	**340**	*e*P	**Pn**	**14 55 21.9**	**-1.4**
SCLT	**Jiali**	**1.26**	**297**	*e*P	**Pn**	**14 55 23.4**	**+0.1**
	baz=298						
SCLT				*e*S	**Sb**	**14 55 40.7**	**+0.9**
	baz=298						
CHY	**Chiayi**	**1.27**	**315**	*e*P	**Pn**	**14 55 23.4**	**-0.1**
	baz=328						
CHY				*e*S	**Sb**	**14 55 40.0**	**-0.3**
	baz=328						
WGK	**Gukeng**	**1.33**	**324**	*e*P	**Pn**	**14 55 24.6**	**+0.3**
	baz=327						
WGK				*e*S	**Sb**	**14 55 42.8**	**+0.9**
	baz=327						
SMLT	**Sun Moon Lake**	**1.36**	**340**	*e*P	**Pn**	**14 55 25.0**	**+0.2**
	baz=344						
SMLT				*e*S	**Sb**	**14 55 42.1**	**-0.6**
	baz=344						
TYC	**Yuchr**	**1.39**	**339**	P	**Pn**	**14 55 25.5**	**+0.3**
	baz=343						
TYC				S	**Sn**	**14 55 43.5**	**-0.1**
	baz=343						
WNT	**Mingjian**	**1.44**	**332**	*e*P	**Pn**	**14 55 26.9**	**+1.1**
	baz=335						
WNT				*e*S	**Sn**	**14 55 43.5**	**-1.1**
	baz=335						
TWD	**Chiawan**	**1.48**	**7**	*e*P	**Pn**	**14 55 25.3**	**-1.1**
	baz=357						
WHF	**Hehuan Shan**	**1.54**	**355**	*e*P	**Pn**	**14 55 26.8**	**-0.4**
	baz=8.0						
NACB	**Ninganchiao**	**1.57**	**6**	*e*Pn	**Pn**	**14 55 26.6**	**-1.1**
NACB				*e*Sn	**Sn**	**14 55 49.8**	**+1.7**
TWT	**Tachien**	**1.66**	**353**	*e*P	**Pn**	**14 55 29.7**	**+0.9**
	baz=354						
TCU	**Taichung**	**1.68**	**336**	*e*P	**Pn**	**14 55 29.9**	**+0.8**
	baz=336						
WDGT	**Dungji**	**1.74**	**292**	*e*P	**Pn**	**14 55 28.8**	**-1.2**
	baz=292						
NNS	**Nan Shan**	**1.83**	**359**	*e*P	**Pn**	**14 55 33.7**	**+2.5**
	baz=14						
TWQ1	**Liyutan**	**1.83**	**341**	*e*P	**Pn**	**14 55 32.7**	**+1.4**
	baz=343						
TWQ1				*e*S	**Sn**	**14 55 55.8**	**+1.2**
	baz=343						
ENA	**Nanau**	**1.84**	**9**	*e*P	**Pn**	**14 55 30.1**	**-1.3**
	baz=359						
NSY	**Sanyi**	**1.90**	**342**	*e*P	**Pn**	**14 55 33.4**	**+1.2**
	baz=343						
NSY				*e*S	**Sn**	**14 55 58.3**	**+2.1**
	baz=343						
PNG	**Penghu**	**1.96**	**300**	*e*P	**Pn**	**14 55 32.1**	**-0.9**
	baz=300						
PNG				*e*S	**Sn**	**14 55 54.9**	**-2.8**
	baz=300						
ENTT	**Nioudou**	**2.03**	**4**	*e*P	**Pn**	**14 55 33.8**	**-0.2**
	baz=5.0						
TWC	**Suao**	**2.04**	**11**	*e*P	**Pn**	**14 55 35.2**	**+1.1**
NSTT	**Nanjuang**	**2.06**	**350**	*e*P	**Pn**	**14 55 34.8**	**+0.5**
	baz=350						
YHNB	**Yeheng**	**2.06**	**359**	*e*Pn	**Pn**	**14 55 34.4**	**+0.1**
NSK	**Sanguang**	**2.06**	**359**	*e*P	**Pn**	**14 55 35.1**	**+0.6**
	baz=14						
TWE	**Neicheng**	**2.12**	**6**	*e*P	**Pn**	**14 55 35.4**	**+0.2**
	baz=7.0						
YOJ	**Yonaguni jima**	**2.36**	**38**	P	**Pn**	**14 55 39.2**	**+0.7**
YOJ				*e*S	**Sn**	**14 56 06.9**	**-0.7**
TWA	**Mucha**	**2.37**	**4**	*e*P	**Pn**	**14 55 37.7**	**-0.9**
	baz=16						
TWB1	**Santiao Chiao**	**2.45**	**12**	*e*P	**Pn**	**14 55 41.5**	**+1.7**
	baz=2.0						
NWF	**Wu-fen Shan**	**2.48**	**8**	*e*P	**Pn**	**14 55 40.0**	**-0.2**
	baz=7.0						
HATJ	**Hateruma jima**	**2.63**	**56**	P	**Pn**	**14 55 42.3**	**0.0**
HATJ				*e*S	**Sn**	**14 56 12.4**	**-1.9**
IRIF	**Iriomote-Funau**	**2.74**	**51**	P	**Pn**	**14 55 44.0**	**+0.3**
IRIF				S	**Sn**	**14 56 16.5**	**-0.4**
JKRS	**Kuro-shima**	**2.89**	**55**	P	**Pn**	**14 55 46.0**	**+0.2**
JKRS				*e*S	**Sn**	**14 56 20.2**	**-0.3**
JIJ	**Ishigaki jima**	**3.06**	**55**	P	**Pn**	**14 55 48.3**	**+0.2**
JIJ				*e*S	**Sn**	**14 56 23.1**	**-1.7**
KNM	**Kinmen**	**3.28**	**304**	*e*P	**Pn**	**14 55 51.6**	**+0.5**
	baz=303						
QZH	**Quanzhou**	**3.48**	**313**	*e*Pn	**Pn**	**14 55 53.0**	**-0.9**
QZH				Sn	**Sn**	**14 56 31.0**	**-4.1**
QZH				smax			
	comp=N,150nm,0.2s						
QZH				smax			
	comp=E,110nm,0.4s						
JTJ	**Tarama**	**3.64**	**55**	P	**Pn**	**14 55 56.5**	**+0.4**
JTJ				*e*S	**Sn**	**14 56 38.4**	**-0.6**
JMJ	**Miyako jima 2**	**4.18**	**57**	P	**Pn**	**14 56 04.1**	**+0.5**
JOGS	**Gusukube**	**4.25**	**59**	P	**Pn**	**14 56 05.2**	**+0.8**
NJ2	**Nanjing**	**9.68**	**347**	*e*P	**Pn**	**14 57 21.0**	**+1.9**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GYA	**Guiyang**	**13.96**	**289**	P	**Pn**	**14 58 09.8**	**-7.8**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						

*MEX **28** 15:07:11.4±0.9, 13°95N×93°12W, h17km±62km, MD3.9*
*ISCJB **28** 15:07:11.1±1.5, 14°18N±0°06×93°15W±0°04, h15km±10km, mb4.0/16, Error ellipse: s-maj=10.3km s-min=5.9km az=30.2*
*IDC **28** 15:07:12.7±1.0, 14°64N×92°96W, h0km, mb3.9/8, mb1 4.2/10, mb1mx4.0/22, mbtmp4.0/10, ML3.6/2, MS3.0/1, Ms1 3.0/1, ms1mx2.8/27, Error ellipse: s-maj=42.2km s-min=12.4km az=51.0*
*NEIC **28** 15:07:17.1±0.7, 14°56N×92°82W, h35km, mb4.2/11, Error ellipse: s-maj=18.6km s-min=8.0km az=224.0*
ISC 28 15:07:11.8±1.5, 14°27N±0°05×93°10W±0°05, h3km±10km, n130, σ0°93/137, mb4.0/16, 50C-39D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.03**	**52**	*i*P	**Pg**	**15 07 31.1**	**-0.4**
THIG				*i*S	**Sg**	**15 07 45.4**	**+0.5**
PCIG		**1.43**	**356**	*e*P	**Pn**	**15 07 36.9**	**-1.7**
PCIG				*i*S	**Sb**	**15 07 58.5**	**+0.7**
TGIG		**2.49**	**360**	*e*P	**Pn**	**15 07 54.0**	**+0.7**
TGIG				*i*S	**Sn**	**15 08 25.6**	**+1.4**
APG	**El Apazote**	**2.66**	**74**	Pn	**Pn**	**15 07 55.8**	**+0.3**
	9.7nm,0.3s,baz=242,slow=7.0,SNR=75						
HUIG	**Huatulco**	**3.26**	**298**	*e*P	**Pn**	**15 08 00.9**	**-3.0**
HUIG				*i*S	**Sn**	**15 08 39.7**	**-3.5**
CMIG	**Matias Romero**	**3.29**	**329**	Pn	**Pn**	**15 08 03.5**	**-0.7**
	12nm,0.3s,baz=137,slow=12,SNR=72						
CMIG				Sn	**Sn**	**15 08 39.4**	**-4.5**
	13nm,0.3s,baz=99,slow=17,SNR=3.7						
CMIG				Lg		15 08 48.5	
	21nm,0.3s,baz=93,slow=19,SNR=5.9						
CMIG				LR	LR	15 09 29.8	
	comp=Z,238nm,19.9s,baz=140,slow=45						
TUIG	**Tuzandepetl**	**3.95**	**341**	*i*P	**Pn**	**15 08 14.4**	**+1.0**
TUIG				*i*S	**Sn**	**15 08 59.4**	**-0.8**
VHO	**Vista Hermosa**	**4.47**	**309**	*e*P	**Pn**	**15 08 19.6**	**-0.9**
VHO				*i*S	**Sn**	**15 09 12.2**	**-0.8**
PNIG	**Pinotepa**	**5.29**	**294**	*e*P	**Pn**	**15 08 29.8**	**-1.9**
PNIG				*i*S	**Sn**	**15 09 29.1**	**-4.1**
TGUH	**Tegucigalpa,Un**	**5.66**	**91**	Pn	**Pn**	**15 08 35.1**	**-1.8**
	25nm,0.3s						
TPIG	**Tehuac#an**	**5.81**	**316**	*i*S	**Sn**	**15 09 47.1**	**+1.1**
TEIG	**Tepich**	**7.50**	**37**	*e*Pn	**Pn**	**15 09 00.8**	**-1.4**
628A	**Black Gap, Mar**	**17.64**	**331**	⇑P	**Pn**	**15 11 18.7**	**0.0**
	baz=16,SNR=5.0						
627A	**Terlingua Ranc**	**17.85**	**329**	⇑P	**Pn**	**15 11 23.3**	**+2.0**
	baz=16,SNR=20						
TXAR	**Lajitas Array**	**17.90**	**329**	P	**Pn**	**15 11 23.0**	**+1.2**
	0.1nm,0.3s,baz=154,slow=11,SNR=21						
528A	**Cox Ranch, San**	**18.16**	**332**	⇓P	**Pn**	**15 11 26.8**	**+1.7**
	baz=16						
626A	**Big Bend Ranch**	**18.31**	**328**	⇑P	**Pn**	**15 11 27.9**	**+0.9**
	baz=16						
527A	**Woodward Ranch**	**18.54**	**330**	⇓P	**Pn**	**15 11 30.7**	**+1.1**
	baz=17,SNR=5.9						
428A	**Kincaid Ranch,**	**18.60**	**333**	⇑P	**Pn**	**15 11 31.1**	**+0.7**
	baz=17						
526A	**Mary Lane Ranc**	**18.70**	**329**	⇑P	**Pn**	**15 11 32.4**	**+0.7**
	baz=17,SNR=9.3						
427A	**Hayter Ranch,**	**19.02**	**332**	⇑P	**Pn**	**15 11 34.2**	**-1.4**
	baz=17,SNR=6.6						
426A	**McDonald Obser**	**19.17**	**330**	⇑P	**Pn**	**15 11 37.0**	**-0.3**
	baz=17,SNR=8.2						
328A	**Wristen Ranch,**	**19.22**	**334**	⇓P	**Pn**	**15 11 38.5**	**+0.6**
	baz=17,SNR=6.1						
425A	**Indio Mountain**	**19.74**	**328**	⇑P	**Pn**	**15 11 43.4**	**-0.8**
	baz=18,SNR=8.5						
OTAV	**Otavalo**	**20.11**	**133**	*e*P	**P**	**15 11 47.2**	**+0.3**
	0.9nm,0.5s						
MIAR	**Mount Ida**	**20.19**	**359**	*e*P	**P**	**15 11 44.5**	**-3.2**
	15nm,1.0s						
325A	**Bean Ranch, Si**	**20.20**	**329**	⇓P	**P**	**15 11 48.2**	**+0.3**
	baz=18						
324A	**Moseley Ranch,**	**20.52**	**328**	⇑P	**P**	**15 11 51.0**	**-0.3**
	baz=19,SNR=6.0						
127A	**Arkansas Junct**	**20.57**	**335**	⇓P	**P**	**15 11 51.8**	**0.0**
	baz=19						
GDL2	**Guadalupe Moun**	**20.60**	**332**	*e*P	**P**	**15 11 53.7**	**+1.6**
MNTX	**Cornudas Mount**	**20.67**	**329**	*e*P	**P**	**15 11 53.4**	**+0.4**
	4.6nm,0.9s						
225A	**Deer Hill, Car**	**20.74**	**331**	⇓P	**P**	**15 11 53.5**	**-0.2**
	baz=19,SNR=5.1						
126A	**Clayton Basin,**	**20.83**	**333**	⇓P	**P**	**15 11 54.5**	**-0.1**
	baz=19						
224A	**Cornudas Mount**	**21.05**	**329**	⇓P	**P**	**15 11 56.7**	**-0.2**
	baz=19,SNR=8.2						
Z27A	**Tatum**	**21.07**	**336**	⇓P	**P**	**15 11 57.0**	**-0.2**
	baz=19,SNR=22						
125A	**Gardner Draw,**	**21.12**	**332**	⇑P	**P**	**15 11 58.3**	**+0.5**
	baz=19,SNR=11						
Z26A	**Caprock**

baz=20,SNR=10
320A Kipp Ranch, An 22.11 323 ⇑P P 15 12 09.4 +1.1
baz=20
Y25A Mesa, Roswell 22.21 334 ⇓P P 15 12 09.2 -0.2
baz=20
122A Conniff Cattle 22.30 328 ⇑P P 15 12 09.3 -1.0
baz=20
Z23A Rita Site, Whi 22.36 330 ⇑P P 15 12 11.2 +0.2
baz=20
X26A CR and CF Fran 22.39 336 ⇑P P 15 12 11.1 -0.2
baz=20
Y24A Capitan 22.54 332 ⇑P P 15 12 12.3 -0.6
baz=21,SNR=9.8
W27A Bowe Ranch, En 22.57 338 ⇓P P 15 12 12.6 -0.6
baz=21,SNR=8.6
121A Cookes Peak, D 22.58 326 ⇑P P 15 12 14.7 +1.4
baz=21,SNR=7.6
Z22A Elephant Butte 22.72 329 ⇑P P 15 12 15.0 +0.2
baz=21
Y23A Lovelace Mesa, 22.82 331 ⇑P P 15 12 16.2 +0.3
baz=21
219A White Tail Can 23.01 323 ⇑P P 15 12 18.0 0.0
baz=21
120A U Bar Ranch, L 23.06 325 ⇓P P 15 12 19.1 +0.7
baz=21
318A Bisbee 23.06 321 ⇓P P 15 12 18.7 +0.3
baz=21
W25A X Bar L Ranch, 23.23 336 ⇑P P 15 12 19.8 -0.5
baz=21,SNR=7.3
Y22A Socorro 23.26 330 ⇓P P 15 12 20.4 -0.2
baz=21
BNM Barren Site 23.27 331 *eP* P 15 12 22.2 +1.5
6.3nm,1.0s,mb4.0
Z20A Nine Sixteen R 23.46 326 ⇓P P 15 12 21.2 -1.5
baz=22
V26A Tequesquite Ra 23.48 338 ⇓P P 15 12 21.9 -1.0
baz=22
W24A Lazy 6 Ranch, 23.61 334 ⇓P P 15 12 23.4 -0.8
baz=22
CCM Cathedral Cave 23.75 4 *eP* P 15 12 22.0 -3.4
17nm,1.6s,mb4.2
V25A Rancho No Teng 23.84 336 ⇑P P 15 12 25.6 -0.6
baz=22,SNR=6.8
ANMO Albuquerque 23.86 332 P P 15 12 26.2 -0.3
1.3nm,0.6s,mb3.5,baz=150,slow=12,SNR=5.8
ANMO Albuquerque 23.86 332 P P 15 12 26.2 -0.3
118A Homack Ranch, 23.89 323 ⇓P P 15 12 27.8 +1.0
baz=22
Y20A Horse Springs, 23.96 327 ⇑P P 15 12 28.3 +0.9
baz=22,SNR=5.4
U26A Atchley Ranch, 24.00 339 ⇓P P 15 12 28.4 +0.6
baz=22
X21A Alamocita Cree 24.08 329 ⇑P P 15 12 29.1 +0.7
baz=22,SNR=6.4
TUC Tucson 24.15 321 *eP* P 15 12 30.6 +1.5
4.4nm,1.0s,mb3.8
U25A Circle Dot Ran 24.25 337 ⇑P P 15 12 28.8 -1.3
baz=22
117A Oracle 24.30 322 ⇑P P 15 12 29.5 -1.0
baz=22
Y19A Nutrioso 24.46 326 ⇑P P 15 12 31.7 -0.3
baz=23
X20A Quemado 24.51 328 ⇓P P 15 12 32.3 -0.2
baz=23
V22A San Miguel Ran 24.86 333 ⇓P P 15 12 35.9 +0.3
baz=23
S25A Robets Cordova 25.38 339 ⇑P P 15 12 40.2 -0.2
baz=24,SNR=6.3
U21A Nageezi 25.62 332 ⇑P P 15 12 43.2 +0.7
baz=24
S24A Houchin Ranch, 25.65 337 ⇑P P 15 12 42.6 -0.2
baz=24
ATAH Atahualpa 25.68 144 P P 15 12 49.0 +5.7
4.5nm,0.7s,mb4.1,baz=346,slow=12,SNR=2.8
SDCO Great Sand Dun 25.85 337 *eP* P 15 12 45.0 +0.5
5.1nm,1.1s,mb4.0
R24A Sanders Place, 26.13 338 ⇑P P 15 12 47.9 +0.8
baz=24
S22A 4UR Ranch, Cre 26.37 335 ⇑P P 15 12 49.5 +0.3
baz=24
V17A Tonalea, Kykot 26.55 326 ⇓P P 15 12 51.1 +0.2
baz=25
PV01 Paradox Valley 27.44 333 *eP* P 15 12 57.6 -1.3
PDAR Pinedale Array 31.74 337 P P 15 13 37.1 +0.1
0.4nm,0.6s,mb3.5,baz=146,slow=8.3,SNR=3.8
M13A Montello 32.61 330 ⇓P P 15 13 46.2 +1.5
baz=31
L14A Malta 32.70 332 ⇓P P 15 13 46.6 +1.1
baz=31
REDW Red Top Meadow 32.75 336 *eP* P 15 13 45.9 0.0
18nm,1.7s,mb4.7
NVAR Mina Array Bea 32.79 322 P P 15 13 47.7 +1.4
1.3nm,0.7s,mb4.0,baz=143,slow=9.0,SNR=15
M12A Wells 33.02 329 ⇑P P 15 13 49.6 +1.3
baz=31
L11A Cat Creek Ranc 34.00 329 ⇓P P 15 13 57.8 +1.0
baz=32
HLID Hailey 34.43 332 *eP* P 15 14 00.8 +0.3
40nm,3.0s
MCMT McKenzie Canyo 34.77 335 *eP* P 15 14 04.0 +0.6
2.4nm,0.9s,mb4.1
H14A Leadore 34.81 334 ⇓P P 15 14 04.7 +0.9
baz=33
F17A Fitzpatrick Pl 34.84 338 ⇑P P 15 14 04.4 +0.4
baz=33,SNR=5.3
I12A Atlanta 34.94 332 ⇓P P 15 14 04.6 -0.3
baz=33
BEKR Beckworth 34.94 322 ⇑P P 15 14 05.5 +0.6
baz=33
E18A Harlowton 35.15 340 ⇓P P 15 14 05.1 -1.6
baz=33
H13A Challis 35.15 333 ⇓P P 15 14 06.2 -0.5
baz=33
H12A Diamond D Ranc 35.40 333 ⇓P P 15 14 09.4 +0.5
baz=34
D18A Linhart Farms, 35.66 340 ⇓P P 15 14 10.1 -1.0
baz=34
E16A East Helena 35.74 338 ⇑P P 15 14 10.5 -1.2
baz=34
D17A Six Diamond Ra 35.92 339 ⇓P P 15 14 13.5 +0.2
baz=34
F13A Darby 36.16 335 ⇑P P 15 14 15.2 -0.1
baz=34
H10A Noah's Angus R 36.30 331 ⇓P P 15 14 16.6 0.0
baz=34
I09A Lost Marbles R 36.32 329 ⇑P P 15 14 16.7 0.0
baz=34
C17A Wharram Farm, 36.36 340 ⇑P P 15 14 16.9 -0.2
baz=34
EGMT Eagleton 36.38 341 ⇑P P 15 14 16.9 -0.3
baz=34
D15A Lincoln 36.48 338 ⇑P P 15 14 18.3 +0.2
baz=35
F12A Elk City 36.53 334 ⇑P P 15 14 18.2 -0.3
baz=35,SNR=6.5
E13A Victor 36.63 335 ⇑P P 15 14 18.9 -0.4
baz=35
G11A Walters Elk Ra 36.69 332 ⇓P P 15 14 19.2 -0.7
baz=35
B18A Beardsley Farm 36.71 341 ⇓P P 15 14 20.3 +0.3
baz=35
C16A Fuhringer Ranc 36.84 339 ⇑P P 15 14 20.6 -0.6
baz=35
D14A Greenough 36.88 337 ⇑P P 15 14 20.6 -0.9
baz=35
G10A Bishop Farm, J 37.00 331 ⇑P P 15 14 22.5 0.0
baz=35
F10A Beach Ranch, E 37.57 332 ⇑P P 15 14 27.2 -0.1
baz=36
D12A Red Ives Fores 37.60 335 ⇓P P 15 14 26.7 -0.9
baz=36
A15A Johnson Ranch, 38.19 339 ⇑P P 15 14 32.9 +0.3
baz=36
LPAZ La Paz 39.12 140 P P 15 14 44.0 +3.2
1.1nm,0.7s,mb3.7,baz=298,slow=7.4,SNR=4.4
SIV San Ignacio 43.66 132 P P 15 15 20.2 +2.1
1.2nm,0.6s,mb3.8,baz=306,slow=17,SNR=5.1
YKA Yellowknife Ar 50.52 347 P P 15 16 09.7 -1.3
4.4nm,0.7s,mb4.5,baz=152,slow=7.4,SNR=23
YKA Yellowknife Ar 50.52 347 P P 15 16 09.7 -1.3
INK Inuvik 59.88 344 *eP* P 15 17 17.2 -1.4
NB2 NORSAR Subarra 84.42 28 P P 15 19 43.2 -2.3
comp=Z,0.7nm,0.8s,mb3.8,baz=293,slow=5.1
NOA NORSAR Array B 84.42 28 P P 15 19 43.5 -2.0
comp=Z,0.6nm,0.7s,mb3.9,baz=291,slow=5.1,SNR=4.7
NOA NORSAR Array B 84.42 28 P P 15 19 43.5 -2.0
FINES FINESS Array B 90.71 25 P P 15 20 12.7 -3.1
comp=Z,0.5nm,0.5s,mb4.2,baz=280,slow=3.5,SNR=6.7

CMAR Chiang Mai Arr 145.38 340 PKPbc PKPbc 15 26 49.9 -2.1
comp=Z,1.9nm,0.8s,baz=2.0,slow=2.8,SNR=11

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*CASC **28** 15:08:58.6±2.2, 14°.27N×93°.76W, h34km±999km, MD4.1, mb4.2(NEIC)*
*IDC **28** 15:09:01.5±2.9, 14°.10N×93°.17W, h0km, mb3.7/3, mb1 4.2/6, mb1mx3.8/21, mbtmp3.8/6, ML3.5/2, Error ellipse: s-maj=59.5km s-min=25.3km az=35.0*
ISC 28 15:09:02.3±1.8,**13°.5N**±0°.2×**93°.38W**±0°.06,**h35**km,**n12,** σ1**9**27/15,**mb3.7/4, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**1.86**	**65**	*eP*	**Pn**	**15 09 30.6**	**-1.1**
TP2	**Tecpan 2**	**2.60**	**61**	*eP*	**Pn**	**15 09 41.6**	**-0.3**
TP2				*eS*	**Sn**	**15 10 13.2**	**+0.9**
FUG	**Fuego 3**	**2.62**	**70**	*eP*	**Pn**	**15 09 40.9**	**-1.3**
PCG	**Pacaya**	**2.82**	**72**	*eP*	**Pn**	**15 09 46.9**	**+2.0**
NBG	**Las Nubes**	**3.12**	**70**	*eP*	**Pn**	**15 09 49.0**	**-0.1**
APG	**El Apazote**	**3.18**	**62**	Pn	**Pn**	**15 09 48.0**	**-1.8**
	4.7nm,0.3s,baz=204,slow=12,SNR=7.1						
APG				Sn	**Sn**	**15 10 27.3**	**+0.7**
	33nm,0.3s,baz=208,slow=23,SNR=4.4						
CMIG	**Matias Romero**	**3.81**	**338**	Pn	**Pn**	**15 09 56.5**	**-2.1**
	baz=163,slow=19,SNR=1.3						
CMIG				Sn	**Sn**	**15 10 34.5**	**-7.8**
	8.9nm,0.3s,baz=158,slow=19,SNR=3.2						
CMIG				Lg		15 10 49.0	
	30nm,0.3s,baz=221,slow=22,SNR=4.8						
TXAR	**Lajitas Array**	**18.38**	**330**	P	**Pn**	**15 13 14.7**	**+0.2**
	0.0nm,0.3s,baz=153,slow=11,SNR=5.4						
TKL	**Tuckaleechee C**	**23.66**	**20**	P	**P**	**15 14 16.3**	**+5.6**
	1.9nm,0.7s,mb3.7,baz=192,slow=9.3,SNR=3.5						
PDAR	**Pinedale Array**	**32.30**	**337**	P	**P**	**15 15 29.3**	**+1.4**
	0.4nm,0.8s,mb3.3,baz=132,slow=9.5,SNR=2.8						
NVAR	**Mina Array Bea**	**33.20**	**323**	P	**P**	**15 15 37.9**	**+2.0**
	0.6nm,0.6s,mb3.7,baz=143,slow=8.2,SNR=5.0						
YKA	**Yellowknife Ar**	**51.17**	**348**	P	**P**	**15 18 01.1**	**-0.6**
	2.1nm,0.7s,mb4.2,baz=150,slow=7.2,SNR=9.0						

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*IDC **28** 15:23:26.0±1.6, 10°.70N×91°.72E, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.6/24, mbtmp3.7/8, ML3.7/1, Error ellipse: s-maj=59.1km s-min=17.1km az=63.0*
*NEIC **28** 15:23:27.3±0.7, 10°.70N×91°.74E, h10km, mb3.9/1, Error ellipse: s-maj=21.3km s-min=9.5km az=66.0*
*ISCJB **28** 15:23:29.3±1.0, 10°.8N±0°.1×91°.9E±0°.2, h33km, mb3.7/8, Error ellipse: s-maj=29.9km s-min=13.3km az=156.0*
ISC 28 15:23:31.3±1.1,**10°.7N**±0°.1×**91°.8E**±0°.2,**h35**km,**n10,** σ0**44**/10,**mb3.7/8, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.31**	**41**	Pn	**Pn**	**15 25 56.6**	**-0.2**
	0.2nm,0.3s,baz=232,slow=15,SNR=3.0						
MK31	**Makanchi Array**	**36.83**	**349**	*eP*	**P**	**15 30 35.6**	**-0.3**
MKAR	**Makanchi Array**	**36.83**	**349**	P	**P**	**15 30 35.9**	**0.0**
	1.4nm,0.7s,mb3.9,baz=127,slow=8.1,SNR=14						
SONM	**Songino Array**	**38.95**	**16**	P	**P**	**15 30 54.3**	**+0.4**
	1.2nm,0.8s,mb3.6,baz=200,slow=7.6,SNR=6.6						
ZALV	**Zalesovo Beam**	**43.45**	**354**	P	**P**	**15 31 31.1**	**+0.4**
	1.3nm,0.6s,mb3.8,baz=181,slow=9.8,SNR=7.6						
FITZ	**Fitzroy Crossi**	**44.00**	**130**	P	**P**	**15 31 35.7**	**+0.1**
	1.3nm,0.8s,mb3.7,baz=256,slow=17,SNR=6.1						
BVAR	**Borovoye Array**	**45.56**	**342**	P	**P**	**15 31 47.2**	**-0.3**
	0.3nm,0.5s,mb3.5,baz=140,slow=12,SNR=2.7						
WRA	**Warramunga Arr**	**51.79**	**126**	P	**P**	**15 32 36.2**	**+0.2**
	0.3nm,0.5s,mb3.5,baz=300,slow=10.0,SNR=13						
WRAB	**Tennant Creek**	**51.79**	**126**	*eP*	**P**	**15 32 35.0**	**-1.0**
	0.6nm,0.4s,mb3.9						
ASAR	**Alice Springs**	**53.51**	**130**	P	**P**	**15 32 49.2**	**+0.6**
	1.3nm,0.7s,mb4.0,baz=306,slow=7.0,SNR=22						

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*IDC **28** 15:23:55.2±1.7, 10°.71N×91°.60E, h0km, mb3.8/9, mb1 4.0/9, mb1mx3.7/23, mbtmp3.8/9, Error ellipse: s-maj=80.3km s-min=16.8km az=59.0*
*NEIC **28** 15:23:56.1±1.6, 10°.66N×91°.46E, h10km, mb3.9/1, Error ellipse: s-maj=68.6km s-min=9.5km az=62.0*
*ISCJB **28** 15:23:58.1±1.4, 10°.7N±0°.2×91°.6E±0°.4, h33km, mb3.7/11, Error ellipse: s-maj=64.2km s-min=12.8km az=149.3*
ISC 28 15:24:00.5±1.4,**10°.8N**±0°.2×**91°.6E**±0°.4,**h35**km,**n12,** σ0**41**/12,**mb3.7**/11,**Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**36.79**	**349**	*eP*	**P**	**15 31 04.0**	**-0.8**
MKAR	**Makanchi Array**	**36.79**	**349**	P	**P**	**15 31 04.7**	**-0.1**
	1.9nm,0.7s,mb4.0,baz=132,slow=8.5,SNR=10						
SONM	**Songino Array**	**38.99**	**16**	P	**P**	**15 31 24.0**	**+0.5**
	0.8nm,0.9s,mb3.5,baz=205,slow=9.7,SNR=3.8						
KURK	**Kurchatov**	**41.26**	**347**	P	**P**	**15 31 41.8**	**-0.4**
	0.7nm,0.6s,mb3.5,baz=170,slow=7.2,SNR=3.6						
ZALV	**Zalesovo Beam**	**43.43**	**354**	P	**P**	**15 31 59.8**	**+0.1**
	1.2nm,0.5s,mb3.9,baz=163,slow=10,SNR=6.3						
FITZ	**Fitzroy Crossi**	**44.14**	**130**	P	**P**	**15 32 05.9**	**-0.1**
	1.6nm,0.8s,mb3.8,baz=252,slow=20,SNR=2.6						
WRA	**Warramunga Arr**	**51.94**	**126**	P	**P**	**15 33 05.8**	**-0.4**
	0.7nm,0.6s,mb3.8,baz=306,slow=8.6,SNR=3.3						
WRAB	**Tennant Creek**	**51.94**	**126**	*eP*	**P**	**15 33 06.3**	**0.0**
	0.6nm,0.4s,mb3.9						
ASAR	**Alice Springs**	**53.65**	**130**	P	**P**	**15 33 19.2**	**+0.3**
	0.9nm,0.8s,mb3.8,baz=308,slow=7.0,SNR=3.6						
FINES	**FINESS Array B**	**69.03**	**332**	P	**P**	**15 35 02.6**	**+0.3**
	0.5nm,0.5s,mb3.7,baz=104,slow=10,SNR=4.5						
ARCES	**ARCESS Array B**	**71.74**	**340**	P	**P**	**15 35 19.3**	**+0.5**
	1.6nm,0.9s,mb3.9,baz=99,slow=5.6,SNR=3.8						
NOA	**NORSAR Array B**	**76.03**	**330**	P	**P**	**15 35 48.7**	**+4.7**
	0.6nm,0.8s,mb3.6,baz=88,slow=6.9,SNR=3.3						

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*DDA **28** 15:26:13.3, 35°.22N×29°.53E, h29km±2km, Md3.4*
*NEIC **28** 15:26:16.0, 35°.57N×29°.60E, h6km, MD3.6(ISK), ML3.5(NIC), After ISK.*
*ATH **28** 15:26:19.5, 36°.03N×29°.66E, h80km±2km*
*ISK **28** 15:26:19.9, 35°.62N×29°.55E, h28km, MD3.5*
*CSEM **28** 15:26:22.5±0.1, 35°.71N×29°.56E, h40km, MD3.4, Error ellipse: s-maj=2.8km s-min=2.1km az=26.0*
*NIC **28** 15:26:24.1±0.2, 35°.61N×29°.68E, h55km, ML3.5, MW3.1*
*HLW **28** 15:26:25.5, 35°.36N×29°.44E, h31km±41km, Md3.2, Ml3.3*
ISC 28 15:26:22.5±0.6,**35°.71N**±0°.02×**29°.55E**±0°.02,**h34**km±5km, **n132,** σ0**84**/161,**Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSL	**Kastellorizon**	**0.44**	**4**	*eP*	**Pb**	**15 26 31.6**	**-0.6**
KSL	**Kastellorizon**	**0.44**	**4**	*eP*	**Pb**	**15 26 31.6**	**-0.6**
AKAS	**Kas**	**0.52**	**5**	*iP*	**Pb**	**15 26 33.1**	**-0.3**
AKAS				*iS*	**Sb**	**15 26 40.9**	**-0.2**
AKAS	**Kas**	**0.52**	**5**	*iP*	**Pb**	**15 26 33.2**	**-0.3**
AKAS				*iS*	**Sb**	**15 26 40.9**	**-0.2**
ELL	**Elmali**	**1.08**	**16**	*ePN*	**Pn**	**15 26 41.1**	**0.0**
ELL				*eSN*	**Sn**	**15 26 56.4**	**+1.5**
ELL	**Elmali**	**1.08**	**16**	*ePn*	**Pn**	**15 26 41.1**	**0.0**
ELL				*eSn*	**Sn**	**15 26 56.4**	**+1.5**
ARG	**Arkhangelos**	**1.26**	**294**	*eP*	**Pn**	**15 26 42.5**	**-1.1**
ARG	**Arkhangelos**	**1.26**	**294**	*eP*	**Pn**	**15 26 42.5**	**-1.1**
ARG	**Arkhangelos**	**1.26**	**294**	*eP*	**Pn**	**15 26 42.5**	**-1.1**
TURN	**Turunc**	**1.39**	**327**	*iP*	**Pn**	**15 26 46.3**	**+0.9**
TURN				*iS*	**Sn**	**15 27 03.2**	**+0.6**
TURN	**Turunc**	**1.39**	**327**	*iP*	**Pn**	**15 26 46.3**	**+0.9**
TURN				*iS*	**Sn**	**15 27 03.2**	**+0.6**
KORT	**Korkueli**	**1.44**	**26**	*iP*	**Pn**	**15 26 46.5**	**+0.3**
KORT				*iS*	**Sn**	**15 27 04.9**	**+1.0**
KORT	**Korkueli**	**1.44**	**26**	*iP*	**Pn**	**15 26 46.5**	**+0.3**
KORT				*iS*	**Sn**	**15 27 04.9**	**+1.0**
GLHS	**Glhisar (BURDU**	**1.44**	**358**	*ePN*	**Pn**	**15 26 45.9**	**-0.3**
GLHS	**Glhisar (BURDU**	**1.44**	**358**	*ePn*	**Pn**	**15 26 45.9**	**-0.3**
ANTB	**Antalya**	**1.48**	**37**	*ePN*	**Pn**	**15 26 47.0**	**+0.3**
ANTB				*eSN*	**Sn**	**15 27 05.5**	**+0.5**
ANTB	**Antalya**	**1.48**	**37**	*ePn*	**Pn**	**15 26 47.1**	**+0.3**
ANTB				*eSn*	**Sn**	**15 27 05.5**	**+0.5**
YER	**Yerkesik**	**1.75**	**325**	*ePN*	**Pn**	**15 26 50.6**	**+0.2**
YER	**Yerkesik**	**1.75**	**325**	*ePn*	**Pn**	**15 26 50.6**	**+0.2**
DAT	**Datca**	**1.89**	**303**	*ePN*	**Pn**	**15 26 52.0**	**-0.3**
DAT	**Datca**	**1.89**	**303**	*ePn*	**Pn**	**15 26 52.0**	**-0.3**
BCK	**Bucak**	**1.94**	**25**	*ePN*	**Pn**	**15 26 53.3**	**+0.3**
BCK	**Bucak**	**1.94**	**25**	*ePn*	**Pn**	**15 26 53.3**	**+0.3**
KARP	**Karpathos**	**1.95**	**266**	*eP*	**Pn**	**15 26 53.9**	**+0.7**
KARP	**Karpathos**	**1.95**	**266**	*eP*	**Pn**	**15 26 53.9**	**+0.7**
KARP	**Karpathos**	**1.95**	**266**	*eP*	**Pn**	**15 26 53.9**	**+0.7**
DNZL	**Cakiroluk**	**2.02**	**349**	*iP*	**Pn**	**15 26 53.7**	**-0.3**
DNZL	**Cakiroluk**	**2.02**	**349**	*iP*	**Pn**	**15 26 53.7**	**-0.4**
DENT	**Denizli**	**2.08**	**349**	*ePN*	**Pn**	**15 26 54.9**	**0.0**
DENT	**Denizli**	**2.08**	**349**	*ePn*	**Pn**	**15 26 54.9**	**-0.1**
SUTC	**Sutluce-Ispart**	**2.11**	**33**	*ePN*	**Pn**	**15 26 55.9**	**+0.5**
SUTC	**Sutluce-Ispart**	**2.11**	**33**	*ePn*	**Pn**	**15 26 55.9**	**+0.5**
MLSB	**Milas**	**2.13**	**318**	*ePN*	**Pn**	**15 26 56.0**	**+0.4**
MLSB	**Milas**	**2.13**	**318**	*ePn*	**Pn**	**15 26 56.0**	**+0.4**
BDRM	**Kayabasi**	**2.17**	**309**	*iP*	**Pn**	**15 26 55.5**	**-0.6**
BDRM				*iS*	**Sn**	**15 27 19.3**	**-2.6**
BDRM	**Kayabasi**	**2.17**	**309**	*iP*	**Pn**	**15 26 55.5**	**-0.7**
BDRM				*iS*	**Sn**	**15 27 19.3**	**-2.6**
ISP	**Isparta**	**2.25**	**20**	*ePN*	**Pn**	**15 26 57.5**	**+0.3**
BODT	**Bodrum**	**2.25**	**307**	*ePN*	**Pn**	**15 26 56.5**	**-0.8**
BODT	**Bodrum**	**2.25**	**307**	*ePn*	**Pn**	**15 26 56.6**	**-0.7**
GAZI	**Gazipasa**	**2.31**	**76**	*iP*	**Pn**	**15 26 57.5**	**-0.5**
GAZI				*iS*	**Sn**	**15 27 22.8**	**-2.4**
GAZI	**Gazipasa**	**2.31**	**76**	*iP*	**Pn**	**15 26 57.5**	**-0.5**
GAZI				*iS*	**Sn**	**15 27 22.8**	**-2.4**
AYDN	**Tasoluk**	**2.36**	**326**	*iP*	**Pn**	**15 26 58.9**	**+0.1**
AYDN				*iS*	**Sn**	**15 27 25.0**	**-1.7**
AYDN	**Tasoluk**	**2.36**	**326**	*iP*	**Pn**	**15 26 58.9**	**+0.1**
AYDN				*iS*	**Sn**	**15 27 25.0**	**-1.6**
PPCY	**Paphos**	**2.43**	**109**	P	**Pn**	**15 27 00.1**	**+0.3**
PPCY	**Paphos**	**2.43**	**109**	P	**Pn**	**15 27 00.1**	**+0.3**
ALFC	**Alevga**	**2.55**	**102**	P	**Pn**	**15 27 01.5**	**+0.1**
	26nm,0.1s						
ALFC				S	**Sn**	**15 27 31.4**	**+0.1**
ALFC	**Alevga**	**2.55**	**102**	P	**Pn**	**15 27 01.5**	**+0.1**
	26nm,0.1s						
ALFC				S	**Sn**	**15 27 31.4**	**+0.1**
KHL	**Karahalli**	**2.61**	**360**	*ePN*	**Pn**	**15 27 03.5**	**+1.3**
KHL	**Karahalli**	**2.61**	**360**	*ePn*	**Pn**	**15 27 03.5**	**+1.3**
HDMB	**Hadim**	**2.68**	**61**	*ePN*	**Pn**	**15 27 03.8**	**+0.6**
HDMB	**Hadim**	**2.68**	**61**	*ePn*	**Pn**	**15 27 03.8**	**+0.6**
GCAM	**G?zelcaml?**	**2.72**	**318**	*iP*	**Pn**	**15 27 03.3**	**-0.4**
GCAM				*iS*	**Sn**	**15 27 32.6**	**-2.9**
GCAM	**G?zelcaml?**	**2.72**	**318**	*iP*	**Pn**	**15 27 03.3**	**-0.4**
GCAM				*iS*	**Sn**	**15 27 32.6**	**-2.8**
ZKR	**Zakros**	**2.79**	**259**	*eP*	**Pn**	**15 27 05.7**	**+1.1**
ZKR	**Zakros**	**2.79**	**259**	*eP*	**Pn**	**15 27 05.7**	**+1.1**
ZKR	**Zakros**	**2.79**	**259**	*eP*	**Pn**	**15 27 05.7**	**+1.1**
LEF	**Lefka**	**2.79**	**101**	*ePN*	**Pn**	**15 27 03.3**	**-1.4**
LEF	**Lefka**	**2.79**	**101**	*ePn*	**Pn**	**15 27 03.3**	**-1.4**
KULA	**Kula-Manisa**	**2.89**	**346**	*ePN*	**Pn**	**15 27 05.8**	**-0.2**
KULA	**Kula-Manisa**	**2.89**	**346**	*ePn*	**Pn**	**15 27 05.8**	**-0.2**
SZAC	**Souni-Zanaja**	**2.89**	**108**	P	**Pn**	**15 27 06.4**	**+0.3**
	17nm,0.2s						
SZAC				S	**Sn**	**15 27 39.7**	**0.0**
SZAC	**Souni-Zanaja**	**2.89**	**108**	P	**Pn**	**15 27 06.4**	**+0.3**
	17nm,0.2s						
SZAC				S	**Sn**	**15 27 39.7**	**0.0**
SHUT	**Suhut-Afyon**	**2.95**	**15**	*ePN*	**Pn**	**15 27 06.9**	**0.0**
SHUT	**Suhut-Afyon**	**2.95**	**15**	*ePn*	**Pn**	**15 27 06.9**	**0.0**
MAMC	**Mammari**	**3.04**	**99**	P	**Pn**	**15 27 08.9**	**+0.7**
MAMC	**Mammari**	**3.04**	**99**	P	**Pn**	**15 27 08.9**	**+0.7**
KONT	**Konya--Tatoy**	**3.17**	**45**	*ePN*	**Pn**	**15 27 10.8**	**+0.8**
KONT	**Konya--Tatoy**	**3.17**	**45**	*ePn*	**Pn**	**15 27 10.8**	**+0.8**
CSS	**Prodhromos**	**3.18**	**102**	P	**Pn**	**15 27 10.2**	**+0.1**
	2.6nm,0.3s						
CSS				S	**Sn**	**15 27 46.6**	**-0.2**
CSS	**Prodhromos**	**3.18**	**102**	*eP*	**Pn**	**15 27 09.0**	**-1.1**
CSS	**Prodhromos**	**3.18**	**102**	P	**Pn**	**15 27 10.2**	**+0.1**
	2.6nm,0.3s						
CSS				S	**Sn**	**15 27 46.6**	**-0.2**
NPS	**Neapolis**	**3.24**	**263**	*eP*	**Pn**	**15 27 12.2**	**+1.3**
NPS	**Neapolis**	**3.24**	**263**	*eP*	**Pn**	**15 27 12.2**	**+1.3**
NPS	**Neapolis**	**3.24**	**263**	*eP*	**Pn**	**15 27 12.2**	**+1.3**
LFK	**Lefkose**	**3.28**	**96**	*ePN*	**Pn**	**15 27 10.8**	**-0.6**
LFK	**Lefkose**	**3.28**	**96**	*ePn*	**Pn**	**15 27 10.9**	**-0.5**
BLCB	**Balcova**	**3.34**	**324**	*ePN*	**Pn**	**15 27 13.0**	**+0.8**
BLCB	**Balcova**	**3.34**	**324**	*ePn*	**Pn**	**15 27 13.0**	**+0.8**
LAST	**Lasithi**	**3.37**	**262**	*eP*	**Pn**	**15 27 14.2**	**+1.6**
LAST	**Lasithi**	**3.37**	**262**	*eP*	**Pn**	**15 27 14.2**	**+1.6**
LAST	**Lasithi**	**3.37**	**262**	*eP*	**Pn**	**15 27 14.2**	**+1.6**
IKL	**Isikli**	**3.40**	**80**	*ePN*	**Pn**	**15 27 12.9**	**-0.2**
IKL	**Isikli**	**3.40**	**80**	*ePn*	**Pn**	**15 27 12.9**	**-0.1**
KDHN	**Kadinhani**	**3.48**	**35**	*iP*	**Pn**	**15 27 14.9**	**+0.8**
KDHN				*iS*	**Sn**	**15 27 52.1**	**-2.0**
KDHN	**Kadinhani**	**3.48**	**35**	*iP*	**Pn**	**15 27 14.9**	**+0.8**
KDHN				*iS*	**Sn**	**15 27 52.1**	**-2.0**
KIZT	**Kizilcal**	**3.67**	**30**	*ePN*	**Pn**	**15 27 17.0**	**+0.2**
KIZT	**Kizilcal**	**3.67**	**30**	*ePn*	**Pn**	**15 27 17.0**	**+0.2**
PHNC	**Paralimni**	**3.73**	**100**	P	**Pn**	**15 27 20.0**	**+2.3**
PHNC				S	**Sn**	**15 28 00.8**	**+0.4**
PHNC	**Paralimni**	**3.73**	**100**	P	**Pn**	**15 27 20.0**	**+2.3**
PHNC				S	**Sn**	**15 28 00.8**	**+0.4**
EREN	**Erenkoy**	**3.77**	**91**	*ePN*	**Pn**	**15 27 17.6**	**-0.6**
EREN	**Erenkoy**	**3.77**	**91**	*ePn*	**Pn**	**15 27 17.6**	**-0.6**
IDI	**Anoyia**	**3.82**	**265**	*eP*	**Pn**	**15 27 19.2**	**+0.3**
IDI	**Anoyia**	**3.82**	**265**	*eP*	**Pn**	**15 27 19.2**	**+0.3**
IDI	**Anoyia**	**3.82**	**265**	*eP*	**Pn**	**15 27 19.2**	**+0.3**
SVRH	**Sivrihisar-ESK**	**4.05**	**22**	*ePN*	**Pn**	**15 27 22.5**	**+0.6**
SVRH	**Sivrihisar-ESK**	**4.05**	**22**	*ePn*	**Pn**	**15 27 22.5**	**+0.5**
MERS	**Mersin**	**4.18**	**73**	*ePN*	**Pn**	**15 27 24.1**	**+0.3**
MERS	**Mersin**	**4.18**	**73**	*ePn*	**Pn**	**15 27 24.1**	**+0.3**
KARN	**Karanos**	**4.60**	**268**	*eP*	**Pn**	**15 27 30.2**	**+0.6**
KARN	**Karanos**	**4.60**	**268**	*eP*	**Pn**	**15 27 30.3**	**+0.7**
KARA	**Karaisali**	**4.70**	**69**	*ePN*	**Pn**	**15 27 31.6**	**+0.7**
KARA	**Karaisali**	**4.70

MOS ***28*** *15:29:12.1±0.9, 10°.98N×91°.91E, h33km, mb5.6/100, MS5.1/56, Error ellipse: s-maj=7.1km s-min=3.8km az=123.0*

GCMT ***28*** *15:29:13.9±0.2, 11°.00N×92°.10E, h13km, MW5.4, Moment Tensor Solution. s75,c118; s89,c157; Moment tensor: Scale 10^17^Nm; Mrr-0.83±.03; Mθθ-0.02±.02; Mφφ0.86±.02; Mrθ0.30±.05; Mθφ0.16±.02; Mφr-1.33±.10; Best double couple: M0 1.60000×10^17^ NP1:φ206.00000°, δ19.00000°, λ-56.00000°. NP2:φ351.00000°, δ75.00000°, λ-101.00000°. Principal axes: T 1.5900, Plg29.0000°, Azm90.0000°; N 0.0500, Plg10.0000°, Azm354.0000°; P -1.6300, Plg59.0000°, Azm247.0000°; Data Used: II IU IC G CN.*

DJA ***28*** *15:29:15, 10°.93N×92°.07E, h36km, Mw5.6/44*

ISC 28 15:29:12.9±0.1, 10°.92N±0°.02×91°.89E±0°.02, h28km, h28km±.7km:pP-P, n986, σ19°.05/775, mb5.3/264, MS5.2/242, 77C-100D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	**10.14**	**41**	*e*Pn	**Pn**	**15 31 35.9**	**-0.7**
CMAR	**Chiang Mai Arr**	**10.14**	**41**	Pn	**Pn**	**15 31 36.2**	**-0.4**
	1.9nm,0.3s,baz=235,slow=15,SNR=52						
CMAR				Sn	**Sn**	**15 33 32.5**	**+3.1**
	0.8nm,0.3s,baz=231,slow=27,SNR=4.3						
KULM	**Kulim**	**10.32**	**122**	P	**Pn**	**15 31 40.2**	**+1.2**
KULM	**Kulim**	**10.32**	**122**	P	**Pn**	**15 31 40.8**	**+1.7**
KULM	**Kulim**	**10.32**	**122**	P	**Pn**	**15 31 41.2**	**+2.1**
KULM	**Kulim**	**10.32**	**122**	*e*Pn	**Pn**	**15 31 39.1**	**0.0**
	66nm,1.0s						
CHTO	**Chiang Mai**	**10.40**	**40**	*e*P	**Pn**	**15 31 39.3**	**-0.9**
CHTO	**Chiang Mai**	**10.40**	**40**	⇓P	**Pn**	**15 31 40.0**	**-0.2**
	SNR=21						
CHTO				⇓P		15 31 40.0	
	SNR=21						
PSI	**Prapat**	**10.66**	**139**	Pn	**Pn**	**15 31 42.2**	**-1.6**
	1.1nm,0.3s,baz=307,slow=9.9,SNR=9.5						
PSI	**Prapat**	**10.66**	**139**	Pn	**Pn**	**15 31 42.2**	**-1.6**
VIS	**Vishakhapatnam**	**10.70**	**310**	*e*PKP	**Pn**	**15 31 43.0**	**-1.4**
IPM	**Ipoh**	**11.08**	**125**	P	**Pn**	**15 31 48.1**	**-1.5**
PALK	**Pallekele**	**11.62**	**253**	Pn	**Pn**	**15 31 58.8**	**+1.8**
	1μm,1.0s,SNR=6.7						
PALK	**Pallekele**	**11.62**	**253**	*e*P	**Pn**	**15 31 55.9**	**-1.1**
PALK				pmax	pmax		
	comp=Z,92nm,0.3s						
PALK	**Pallekele**	**11.62**	**253**	*e*Pn	**Pn**	**15 31 55.9**	**-1.1**
	comp=Z,92nm,0.3s						
FRIM	**Kepong**	**12.31**	**128**	P	**Pn**	**15 32 05.9**	**-0.4**
KTGM	**Kuala Trenggan**	**12.44**	**116**	P	**Pn**	**15 32 09.7**	**+1.6**
KTGM	**Kuala Trenggan**	**12.44**	**116**	P	**Pn**	**15 32 10.1**	**+2.0**
KGM	**Kluang**	**14.38**	**127**	P	**Pn**	**15 32 33.7**	**-1.1**
HYB	**Hyderabad**	**14.45**	**298**	*i* P	**Pn**	**15 32 35.5**	**-0.1**
HYB				*e*S	Sn	15 35 36.0	+21
SHL	**Shillong**	**14.57**	**360**	*e*PKP	**Pn**	**15 32 32.0**	**-5.2**
SHL				*e*S	**Sn**	**15 35 14.0**	**-3.9**
MYKOM	**Kota Tinggi**	**14.94**	**127**	P	**Pn**	**15 32 41.8**	**-0.4**
NGP	**Nagpur**	**15.98**	**311**	*e*PKP	**Pn**	**15 32 54.8**	**-1.0**
NGP				*e*x	x	15 33 01.2	
	comp=Z,250nm,1.6s						
NGP				*e*x	x	15 35 48.5	
ODAN	**Odare**	**16.42**	**346**	*e*P	**Pn**	**15 33 00.0**	**-1.3**
	comp=Z,398nm,1.1s						
JBP	**Jabalpur**	**16.66**	**319**	⇑*i*P	**Pn**	**15 33 03.0**	**-1.3**
JBP				*e*x	x	15 33 29.0	
	comp=Z,208nm,1.1s						
JBP				*e*x	x	15 36 02.8	
RAMN	**Ramite**	**16.71**	**343**	*e*P	**Pn**	**15 33 04.0**	**-1.0**
TAPN	**Taplejung**	**16.82**	**347**	*e*P	**Pn**	**15 33 04.2**	**-2.1**
	comp=Z,418nm,1.0s						
AKL	**Akola**	**17.29**	**306**	*i* P	**Pn**	**15 33 13.2**	**+0.9**
AKL				*e*x	x	15 33 17.8	
	comp=Z,335nm,1.8s						
AKL				*i* x	x	15 36 11.1	
KMI	**Kunming**	**17.48**	**35**	⇓P	**Pn**	**15 33 16.5**	**+1.8**
KMI				pP	pP	15 33 23.0	-0.3
KMI				sP	sP	15 33 27.0	+0.1
KMI				PP		15 33 31.0	
KMI				S	**Sn**	**15 36 26.0**	**-2.6**
KMI				sS	sS	15 36 36.5	-12
KMI				SS		15 36 47.8	
KMI				PcP	PcP	15 37 59.8	+5.1
KMI				pmax	pmax		
	comp=Z,85nm,1.3s						
KMI				pmax	pmax		
	comp=Z,610nm,3.1s						
KMI				LR	LR		
	comp=N,8μm,17.8s						
KMI				LR	LR		
	comp=E,8μm,17.4s						
KMI				LR	LR		
	comp=Z,11μm,17.8s						
JIRN	**Jiri**	**17.50**	**343**	*e*P	**Pn**	**15 33 12.9**	**-2.0**
PKI	**Pulchoki**	**17.65**	**341**	*e*P	**Pn**	**15 33 13.5**	**-3.3**
PKIN	**Phulchoki**	**17.66**	**341**	*e*P	**Pn**	**15 33 13.8**	**-3.1**
DMN	**Daman**	**17.79**	**340**	*e*P	**Pn**	**15 33 16.2**	**-2.3**
	comp=Z,400nm,0.9s						
GUN	**Gumba**	**17.82**	**342**	*e*P	**Pn**	**15 33 16.5**	**-2.4**
KKN	**Kakani**	**17.90**	**341**	*e*P	**Pn**	**15 33 16.1**	**-3.7**
	comp=Z,317nm,1.1s						
GOA	**Goa**	**18.16**	**286**	⇑*e*PKP	**Pn**	**15 33 23.5**	**+0.4**
GOA				*e*x	x	15 36 31.4	
KAD	**Karad**	**18.30**	**292**	*e*PKP	**Pn**	**15 33 25.6**	**+0.8**
KAD				AMb	AMB	15 33 29.6	
	comp=Z,196nm,2.5s						
BHPL	**Bhopal**	**18.45**	**313**	*e*PKP	**Pn**	**15 33 27.1**	**+0.4**
BHPL				AMb	AMB	15 33 31.1	
	comp=Z,242nm,2.2s						
LSA	**Lhasa**	**18.70**	**358**	P	**Pn**	**15 33 29.8**	**+0.2**
LSA				LR	LR		
	comp=N,4μm,15.6s						
LSA				LR	LR		
	comp=E,5μm,14.5s						
LSA				LR	LR		
	comp=Z,7μm,17.9s						
POO	**Poona**	**19.01**	**296**	*e*PKP	**Pn**	**15 33 33.2**	**-0.1**
POO				AMb	AMB	15 33 36.3	
	comp=Z,178nm,1.4s						
QIZ	**Qiongzhong**	**19.12**	**63**	P	**Pn**	**15 33 35.0**	**+0.3**
QIZ				sP	sP	15 33 45.3	+0.3
QIZ				S	**Sn**	**15 37 02.8**	**-5.4**
QIZ				pmax	pmax		
	comp=Z,66nm,1.8s						
QIZ				pmax	pmax		
	comp=Z,2μm,7.9s						
QIZ				LR	LR		
	comp=N,6μm,17.6s						
QIZ				LR	LR		
	comp=Z,8μm,13.6s						
KSM	**Kuching**	**20.56**	**116**	P	**P**	**15 33 49.2**	**-0.3**
KSM	**Kuching**	**20.56**	**116**	*e*P	**P**	**15 33 48.7**	**-0.8**
	comp=Z,186nm,1.0s						
KSM				LR	LR		
	comp=Z,7μm,19.0s,MS5.1						
GYA	**Guiyang**	**20.82**	**40**	P	**P**	**15 33 52.0**	**-0.2**
GYA				pP		15 34 02.8	
GYA				sP	sP	15 34 08.3	+4.7
GYA				PP		15 34 15.5	
GYA				S	**S**	**15 37 40.3**	**-2.9**
GYA				sS	sS	15 37 53.0	-2.5
GYA				PcP	PcP	15 37 57.0	-3.6
GYA				SS		15 38 15.0	
GYA				pmax	pmax		
	comp=Z,60nm,1.0s						
GYA				LR	LR		
	comp=N,6μm,15.2s,MS5.2						
GYA				LR	LR		
	comp=E,6μm,15.5s,MS5.2						
GYA				LR	LR		
	comp=Z,8μm,17.1s,MS5.2						
PTH	**Pithoragarh**	**21.50**	**331**	*e*PKP	**P**	**15 34 01.0**	**+1.5**
SBUM	**Sibu**	**21.86**	**111**	P	**P**	**15 34 03.3**	**-0.2**
BTM	**Bintulu**	**22.37**	**108**	P	**P**	**15 34 08.9**	**-0.1**
NDI	**New Delhi**	**22.39**	**324**	⇓*i*P	**P**	**15 34 08.0**	**-1.0**
NDI				*e*x	x	15 38 20.0	
AJM	**Ajmer**	**22.46**	**316**	*e*PKP	**P**	**15 34 10.0**	**+0.2**
AJM				*e*PKP		15 34 10.8	
AJM				AMb	AMB	15 34 13.9	
	comp=Z,477nm,2.5s,mb5.5						
CD2	**Chengdu**	**22.74**	**27**	⇑*i*P	**P**	**15 34 12.0**	**-0.8**
CD2				pP		15 34 21.3	
CD2				sP	sP	15 34 25.3	+1.1
CD2				PP		15 34 41.5	
CD2				PcP	PcP	15 38 04.3	0.0
CD2				S	**S**	**15 38 14.5**	**-5.5**
CD2				sS	sS	15 38 29.5	-3.6
CD2				SS		15 38 58.5	
CD2				pmax	pmax		
	comp=Z,160nm,1.3s,mb5.3						
CD2				pmax	pmax		
	comp=Z,210nm,5.8s						
CD2				LR	LR		
	comp=N,7μm,16.8s,MS5.3						
CD2				LR	LR		
	comp=E,7μm,14.4s,MS5.3						
CD2				LR	LR		
	comp=Z,6μm,13.2s,MS5.2						
DDI	**Dehra Dun**	**23.20**	**328**	⇓*i*P	**P**	**15 34 16.9**	**-0.7**
DDI				*e*S	**S**	**15 38 29.0**	**+1.4**
COCO	**West Island**	**23.47**	**168**	PFAKE		15 34 30.0	+9.5
COCO				LR	LR		
	comp=Z,6μm,19.0s,MS5.1						
GZH	**Guangzhou**	**23.78**	**57**	P	**P**	**15 34 25.0**	**+1.7**
GZH				S	**S**	**15 38 36.5**	**-0.7**
GZH				LR	LR		
	comp=N,7μm,17.1s,MS5.3						
GZH				LR	LR		
	comp=E,5μm,17.7s,MS5.3						
GZH				LR	LR		
	comp=Z,7μm,15.2s,MS5.2						
SMLA	**Simla**	**24.31**	**328**	*i* P	**P**	**15 34 29.0**	**+1.0**
SMLA				⇓E		15 34 31.9	
	comp=Z,470nm,0.7s						
SMLA				*i* x	x	15 38 50.2	
KKM	**Kota Kinabalu**	**24.54**	**99**	P	**P**	**15 34 30.9**	**+0.6**
KKM	**Kota Kinabalu**	**24.54**	**99**	P	**P**	**15 34 31.7**	**+1.4**
KKM	**Kota Kinabalu**	**24.54**	**99**	*e*P	**P**	**15 34 29.4**	**-1.0**
	comp=Z,255nm,1.8s,mb5.5						
KKM				LR	LR		
	comp=Z,5μm,19.0s,MS5.0						
BHK	**Bhakra**	**24.93**	**327**	*e*PKP	**P**	**15 34 33.8**	**+0.1**
KDM	**Kudat**	**24.96**	**97**	P	**P**	**15 34 34.1**	**0.0**
SDKM	**Sandakan**	**25.58**	**100**	P	**P**	**15 34 39.3**	**-0.5**
THN	**Thein Dam**	**26.09**	**328**	*e*PKP	**P**	**15 34 43.5**	**-0.7**
THN				*e*x	x	15 40 12.4	
DGAR	**Diego Garcia**	**26.56**	**228**	PFAKE		15 35 00.0	+11
DGAR				LR	LR		
	comp=Z,4μm,19.0s,MS5.0						
TSM	**Tawau**	**26.57**	**102**	P	**P**	**15 34 48.2**	**-0.6**
MYLDM	**Lahad Datu**	**26.95**	**100**	P	**P**	**15 34 53.2**	**+1.1**
LZH	**Lanzhou**	**27.30**	**21**	*e*P	**P**	**15 34 55.8**	**+0.7**
LZH				pP	pP	15 35 05.3	+1.9
LZH				sP	sP	15 35 09.0	+2.1
LZH				PP		15 35 43.5	
LZH				S	**S**	**15 39 31.5**	**-1.4**
LZH				sS	sS	15 39 46.8	+0.1
LZH				SS		15 40 47.8	
LZH				pmax	pmax		
	comp=Z,280nm,1.5s,mb5.6						
LZH				pmax	pmax		
	comp=Z,530nm,4.6s						
LZH				LR	LR		
	comp=N,6μm,17.4s						
LZH				LR	LR		
	comp=Z,7μm,18.5s,MS5.3						
XAN	**Xi'an**	**27.80**	**31**	P	**P**	**15 34 58.0**	**-1.6**
XAN				pP	pP	15 35 10.5	+2.6
XAN				S	**S**	**15 39 30.3**	**-10**
XAN				LR	LR		
	comp=N,26μm,16.8s,MS5.9						
XAN				LR	LR		
	comp=E,10μm,15.6s,MS5.9						
XAN				LR	LR		
	comp=Z,7μm,19.1s,MS5.3						
TGY	**Tagaytay City**	**28.53**	**81**	P	**P**	**15 35 06.8**	**+0.5**
	comp=Z,52nm,0.3s,mb5.8,baz=93,slow=15,SNR=4.0						
TGY				LR	LR	15 46 46.8	
	comp=Z,17nm,18.7s,baz=64,slow=37						
WHN	**Wuhan**	**28.58**	**44**	P	**P**	**15 35 07.3**	**+0.7**
WHN				S	**S**	**15 39 54.0**	**+0.8**
WHN				LR	LR		
	comp=N,10μm,14.9s,MS5.7						
WHN				LR	LR		
	comp=E,9μm,15.7s,MS5.7						
WHN				LR	LR		
	comp=Z,13μm,17.6s,MS5.6						
QZH	**Quanzhou**	**28.91**	**58**	⇑*i*P	**P**	**15 35 08.8**	**-0.8**
QZH				S	**S**	**15 39 53.0**	**-5.5**
QZH				LR	LR		
	comp=N,2μm,10.1s						
QZH				LR	LR		
	comp=E,8μm,16.1s						
QZH				LR	LR		
	comp=Z,8μm,17.1s						
GTA	**Gaotai**	**29.24**	**13**	⇓P	**P**	**15 35 13.5**	**+1.1**
GTA				pP	pP	15 35 23.0	+2.3
GTA				sP	sP	15 35 27.0	+2.8
GTA				PcP	PcP	15 38 20.5	+1.5
GTA				S	**S**	**15 40 04.0**	**+0.6**
GTA				sS	sS	15 40 19.8	+2.6
GTA				SS	SS	15 41 36.5	-32
GTA				pmax	pmax		
	comp=Z,50nm,1.2s,mb5.1						
GTA				pmax	pmax		
	comp=Z,350nm,6.3s						
GTA				LR	LR		
	comp=N,3μm,15.0s,MS5.1						
GTA				LR	LR		
	comp=E,3μm,16.8s,MS5.1						
GTA				LR	LR		
	comp=Z,3μm,15.9s,MS5.0						
YHNB	**Yeheng**	**31.14**	**60**	PFAKE		15 35 40.0	+11
YHNB				LR	LR		
	comp=Z,3μm,19.0s,MS5.0						
TATO	**Taipei**	**31.35**	**60**	PFAKE		15 35 40.0	+8.8
TATO				LR	LR		
	comp=Z,4μm,19.0s,MS5.2						
KBL	**Kabul**	**31.42**	**322**	*e*P	**P**	**15 35 32.9**	**+1.2**
KBL				pmax	pmax		
	comp=Z,47nm,0.9s,mb5.3						
KBL	**Kabul**	**31.42**	**322**	*e*P	**P**	**15 35 32.9**	**+1.1**
	comp=Z,47nm,0.9s,mb5.3						
KSH	**Kashi**	**31.81**	**336**	⇓*i*P	**P**	**15 35 35.0**	**0.0**
KSH				pP	pP	15 35 44.5	+1.1
KSH				sP	sP	15 35 48.5	+1.6
KSH				PP	PP	15 36 39.0	-8.2
KSH				PcP	PcP	15 38 28.3	+2.6
KSH				S	**S**	**15 40 38.5**	**-5.1**
KSH				sS	sS	15 40 55.3	-2.1
KSH				ScP	ScP	15 42 07.5	+0.2
KSH				PcS	PcS	15 42 11.5	+1.2
KSH				SS	SS	15 42 27.5	-33
KSH				ScS	ScS	15 46 03.8	-1.7
KSH				pmax	pmax		
	comp=Z,75nm,0.9s,mb5.5						
KSH				pmax	pmax		
	comp=Z,420nm,3.5s						
KSH				LR	LR		
	comp=N,2μm,12.3s,MS5.2						
KSH				LR	LR		
	comp=E,2μm,12.1s,MS5.2						
KSH				LR	LR		
	comp=Z,2μm,12.5s,MS5.1						
TIY	**Taiyuan**	**32.44**	**31**	*e*P	**P**	**15 35 44.0**	**+3.4**
TIY				S	**S**	**15 40 54.3**	**+0.8**
TIY				LR	LR		
	comp=N,5μm,12.2s,MS5.5						
TIY				LR	LR		
	comp=E,4μm,12.6s,MS5.5						
TIY				LR	LR		
	comp=Z,6μm,12.7s,MS5.5						
NJ2	**Nanjing**	**32.58**	**46**	*e*P	**P**	**15 35 43.0**	**+1.1**
NJ2				pP	pP	15 35 52.5	+2.3
NJ2				sP	sP	15 35 56.5	+2.8
NJ2				PP	PP	15 36 51.3	-4.5
NJ2				S	**S**	**15 40 53.0**	**-2.8**
NJ2				sS	sS	15 41 10.0	+0.4
NJ2				pmax	pmax		
	comp=Z,120nm,0.8s,mb5.9						
NJ2				pmax	pmax		
	comp=Z,370nm,10.8s						
NJ2				LR	LR		
	comp=N,4μm,15.5s,MS5.4						
NJ2				LR	LR		
	comp=E,5μm,14.9s,MS5.4						
NJ2				LR	LR		
	comp=Z,4μm,15.2s,MS5.3						
WMQ	**Urumqi**	**32.99**	**354**	P	**P**	**15 35 47.0**	**+1.7**
WMQ				pP	pP	15 35 57.0	+3.3
WMQ				sP	sP	15 36 01.0	+3.9
WMQ				PP	PP	15 36 58.0	-2.2
WMQ				S	**S**	**15 41 02.0**	**+0.2**
WMQ				ScP	ScP	15 42 11.0	-0.3
WMQ				SS	SS	15 43 03.0	-22
WMQ				pmax	pmax		
	comp=Z,64nm,1.0s,mb5.5						
WMQ				pmax	pmax		
	comp=Z,100nm,3.0s						
WMQ				LR	LR		
	comp=N,3μm,12.0s,MS5.6						
WMQ				LR	LR		
	comp=E,6μm,12.0s,MS5.6						
WMQ				LR	LR		
	comp=Z,2μm,12.0s,MS5.1						
DAV	**Davao City (W)**	**33.48**	**94**	PFAKE		15 36 00.0	+10
DAV				LR	LR		
	comp=Z,1μm,20.0s,MS4.7						
BTO	**Baotou**	**33.63**	**25**	*e*P	**P**	**15 35 48.3**	**-2.7**
SSE	**Sheshan**	**33.76**	**49**	*e*P	**P**	**15 35 51.8**	**-0.4**
SSE				sP	sP	15 36 04.8	+0.8
SSE				S	**S**	**15 41 11.5**	**-2.6**
SSE				sS	sS	15 41 26.3	-1.7
SSE				ScS	ScS	15 46 15.8	0.0
SSE				pmax	pmax		
	comp=Z,21nm,0.7s,mb5.2						
SSE				pmax	pmax		
	comp=Z,100nm,3.5s						
SSE				LR	LR		
	comp=N,1μm,18.1s,MS5.1						
SSE				LR	LR		
	comp=E,3μm,18.1s,MS5.1						
SSE				LR	LR		
	comp=Z,4μm,17.0s,MS5.2						
KZA	**Kyzart**	**34.29**	**338**	P	**P**	**15 35 59.3**	**+2.6**
	SNR=25						
SMDO	**Samad**	**34.45**	**295**	P	**P**	**15 36 02.0**	**+3.7**
	SNR=6.9						
HHC	**Hu-ho-hao-te**	**34.50**	**27**	*e*P	**P**	**15 35 59.0**	**+0.5**
HHC				pP	pP	15 36 08.8	+1.9
HHC				sP	sP	15 36 12.8	+2.4
HHC				PP	PP	15 37 15.0	-2.0
HHC				PcP	PcP	15 38 35.0	+1.7
HHC				S	**S**	**15 41 24.5**	**-0.9**
HHC				sS	sS	15 41 39.5	+0.3
HHC				ScP	ScP	15 42 16.3	-0.4
HHC				PcS	PcS	15 42 19.3	-0.3
HHC				SS	SS	15 43 34.0	-22
HHC				ScS	ScS	15 46 19.3	-0.1
HHC				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.0						
HHC				pmax	pmax		
	comp=Z,140nm,4.6s						
HHC				LR	LR		
	comp=N,4μm,14.7s,MS5.4						
HHC				LR	LR		
	comp=E,3μm,12.2s,MS5.4						
HHC				LR	LR		
	comp=Z,4μm,14.8s,MS5.2						
UCH	**Uchtor**	**34.70**	**337**	P	**P**	**15 36 01.8**	**+1.6**
	SNR=44						
UCH	**Uchtor**	**34.70**	**337**	*e*P	**P**	**15 36 01.4**	**+1.2**
	comp=Z,42nm,1.0s,mb5.3						
TKM2	**Tokmak 2**	**34.90**	**339**	P	**P**	**15 36 03.6**	**+1.7**
	SNR=36						
TKM2	**Tokmak 2**	**34.90**	**339**	*e*P	**P**	**15 36 02.9**	**+1.0**
TKM2				pmax	pmax		
	comp=Z,62nm,1.2s,mb5.4						
TKM2				MLR	MLR		
	comp=Z,4μm,19.0s,MS5.2						
TKM2	**Tokmak 2**	**34.90**	**339**	*e*P	**P**	**15 36 02.9**	**+1.0**
	comp=Z,62nm,1.2s,mb5.4						
TKM2				LR	LR		
	comp=Z,4μm,19.0s,MS5.2						
KBK	**Karagaybulak**	**34.91**	**338**	P	**P**	**15 36 04.5**	**+2.5**
	SNR=37						
AML	**Almayashu**	**34.94**	**336**	P	**P**	**15 36 04.9**	**+2.6**
	SNR=9.1						
AML	**Almayashu**	**34.94**	**336**	*e*P	**P**	**15 36 04.0**	**+1.7**
	comp=Z,246nm,1.3s,mb6.0						
AML				LR	LR		
	comp=Z,2μm,19.0s,MS5.0						
AAK	**Ala-Archa**	**35.05**	**337**	P	**P**	**15 36 05.8**	**+2.5**
	comp=Z,487nm,1.2s,mb6.3,SNR=26						
AAK	**Ala-Archa**	**35.05**	**337**	P	**P**	**15 36 05.7**	**+2.5**
	SNR=41						
AAK	**Ala-Archa**	**35.05**	**337**	P	**P**	**15 36 05.6**	**+2.4**
	comp=Z,46nm,1.0s,mb5.4,baz=146,slow=5.5,SNR=102						
AAK				LR	LR	15 52 38.3	
	comp=Z,5μm,19.2s,MS5.3,baz=48,slow=40						
AAK	**Ala-Archa**	**35.05**	**337**	P	**P**	**15 36 05.6**	**+2.4**
AAK				LR	LR	15 52 38.3	
BSY	**Bisya**	**35.13**	**294**	P	**P**	**15 36 07.4**	**+3.2**
	SNR=9.4						
FRU	**Bishkek**	**35.18**	**338**	*i* P	**P**	**15 36 04.0**	**-0.4**
FRU				pmax	pmax		
	comp=Z,330nm,1.8s,mb6.0						
HOQ	**Hoqain**	**35.24**	**296**	⇑P	**P**	**15 36 08.0**	**+2.9**
	SNR=8.0						
CHMS	**Chumysh**	**35.27**	**338**	P	**P**	**15 36 07.0**	**+1.8**
	SNR=34						
EKS2	**Erkin-Say**	**35.35**	**337**	P	**P**	**15 36 07.7**	**+1.9**
	SNR=88						
EKS2	**Erkin-Say**	**35.35**	**337**	*e*P	**P**	**15 36 07.3**	**+1.5**
	comp=Z,88nm,1.0s,mb5.7						
EKS2				LR	LR		
	comp=Z,3μm,20.0s,MS5.0						
USP	**Ospenovka**	**35.60**	**338**	P	**P**	**15 36 09.8**	**+1.8**
	SNR=60						
BJI	**Beijing**	**36.12**	**32**	P	**P**	**15 36 13.0**	**+0.6**
BJI				PP	PP	15 37 40.3	+5.4
BJI				S	**S**	**15 41 51.3**	**+1.0**
BJI				sS	sS	15 42 05.3	+1.2
BJI				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.1						
BJI				pmax	pmax		
	comp=Z,790nm,3.5s						
BJI				LR	LR		
	comp=N,4μm,17.5s,MS5.5						
BJI				LR	LR		
	comp=E,7μm,18.1s,MS5.5						
BJI				LR	LR		
	comp=Z,5μm,18.5s,MS5.3						
HATD	**Hatta, Dubai**	**36.60**	**297**	P	**P**	**15 36 20.7**	**+3.9**
	SNR=9.5						
ASHO	**Ashiyiah**	**36.63**	**297**	⇓P	**P**	**15 36 20.5**	**+3.4**
	SNR=8.3						
MK31	**Makanchi Array**	**36.67**	**349**	*e*P	**P**	**15 36 17.1**	**0.0**
MK31				*e*	pP	15 36 25.6	+0.1
MKAR	**Makanchi Array**	**36.67**	**349**	P	**P**	**15 36 17.4**	**+0.3**
	comp=Z,52nm,0.8s,mb5.4,baz=123,slow=8.8,SNR=315						
MKAR				LR	LR	15 55 57.9	
	comp=Z,2μm,18.6s,MS4.8,baz=162,slow=44						
ASUD	**Al Ashush, Dub**	**37.26**	**296**	P	**P**	**15 36 26.2**	**+3.8**
	SNR=5.3						
DL2	**Dalian**	**38.46**	**38**	⇓*i*P	**P**	**15 36 34.3**	**+2.0**
DL2				S	**S**	**15 42 26.8**	**+0.9**
DL2				pmax	pmax		
	comp=Z,30nm,1.3s,mb4.9						
DL2				pmax	pmax		
	comp=Z,460nm,3.7s						
DL2				LR	LR		
	comp=N,2μm,17.7s						
DL2				LR	LR		
	comp=Z,2μm,18.9s,MS4.9						
SONM	**Songino Array**	**38.77**	**16**	P	**P**	**15 36 35.7**	**+0.8**
	comp=Z,17nm,1.0s,mb4.7,baz=197,slow=9.0,SNR=72						
SONM				PcP	PcP	15 38 47.1	+1.1
	comp=Z,5.4nm,0.9s,baz=203,slow=4.2,SNR=3.5						
SONM				S	**S**	**15 42 33.9**	**+3.5**
	comp=Z,1.5nm,1.0s,baz=186,slow=8.7,SNR=4.2						
SONM				LR	LR	15 55 56.1	
	comp=Z,4μm,18.1s,MS5.3,baz=193,slow=42						
SONM	**Songino Array**	**38.77**	**16**	P	**P**	**15 36 35.7**	**+0.9**
SONM						15 38 47.1	
SONM				S	**S**	**15 42 33.9**	**+3.5**
ULN	**Ulaanbaatar**	**38.98**	**16**	*e*P	**P**	**15 36 36.8**	**+0.3**
ULN				pmax	pmax		
	comp=Z,111nm,1.9s,mb5.3						
ULN				MLR	MLR		
	comp=Z,4μm,19.0s,MS5.3						
ULN	**Ulaanbaatar**	**38.98**	**16**	*e*P	**P**	**15 36 36.8**	**+0.2

ULN Ulaanbaatar 38.98 16 P **P 15 36 37.3 +0.8**
SNR=24
ULN P 15 36 37.3
SNR=24
MSEY Mahe Island 39.41 249 PFAKE 15 36 50.0 +9.4
MSEY LR LR
comp=Z,2μm,19.0s,MS5.0
ABKT Ailbek 40.47 317 P **P 15 36 51.7 +2.6**
comp=Z,455nm,1.2s,mb6.1,SNR=20
INCN Inchon 40.89 44 PFAKE 15 37 00.0 +7.4
INCN LR LR
comp=Z,5μm,19.0s,MS5.4
KURK Kurchatov 41.16 347 P **P 15 36 55.1 +0.5**
comp=Z,459nm,1.0s,mb6.1,SNR=54
KURK Kurchatov 41.16 347 P **P 15 36 55.2 +0.7**
comp=Z,63nm,1.0s,mb5.2,baz=173,slow=7.3,SNR=256
KURK PcP PcP 15 38 54.1 +0.6
comp=Z,4.7nm,0.8s,baz=159,slow=2.3,SNR=3.8
KURK ScP ScP 15 42 42.4 +0.8
comp=Z,2.8nm,1.0s,baz=160,slow=2.9,SNR=4.5
KURK LR LR 15 57 21.3
comp=Z,3μm,19.9s,MS5.2,baz=155,slow=41
KURK Kurchatov 41.16 347 *d iP* **P 15 36 55.2 +0.6**
KURK pmax pmax
comp=Z,113nm,1.0s,mb5.5
KURK MLR MLR
comp=Z,4μm,21.0s,MS5.3
KURK Kurchatov 41.16 347 *e*P **P 15 36 55.0 +0.4**
KURK LR LR
comp=Z,4μm,20.0s,MS5.2
MOY Mondy 41.31 9 *e*P **P 15 36 57.7 +1.9**
MOY pmax pmax
comp=Z,86nm,2.7s,mb4.9
KSRS Korea Array 41.76 45 P **P 15 36 58.3 -1.4**
comp=Z,11nm,1.1s,mb4.4,baz=244,slow=8.4,SNR=18
KSRS LR LR 15 56 15.0
comp=Z,4μm,18.3s,MS5.3,baz=241,slow=39
TLY Talaya 41.77 11 P **P 15 37 01.5 +2.0**
comp=Z,102nm,0.9s,mb5.5,SNR=9.7
TLY Talaya 41.77 11 *d iP* **P 15 37 00.7 +1.2**
TLY *e*PPP 15 38 58.4
TLY *e*S **S 15 43 17.3 +2.3**
TLY pmax pmax
comp=Z,52nm,1.9s,mb4.8
TLY Talaya 41.77 11 PFAKE 15 37 10.0 +10
TLY LR LR
comp=Z,2μm,20.0s,MS4.9
TLY Talaya 41.77 11 ⇓P **P 15 37 01.9 +2.4**
SNR=13
TLY ⇓P 15 37 01.9
SNR=13
MBWA Marble Bar 42.01 139 *e*P **P 15 37 00.2 -1.7**
comp=Z,65nm,1.0s,mb5.2
MBWA LR LR
comp=Z,2μm,21.0s,MS5.0
ZAA0 Zalesovo Array 43.29 354 *e*P **P 15 37 11.7 -0.2**
ZAA0 *e* pP 15 37 19.9 -0.6
ZALV Zalesovo Beam 43.29 354 P **P 15 37 12.4 +0.5**
comp=Z,39nm,0.9s,mb5.1,baz=170,slow=9.0,SNR=139
ZALV LR LR 15 58 44.6
comp=Z,2μm,20.1s,MS5.0,baz=174,slow=41
CN2 Changchun 43.75 35 *e*P **P 15 37 16.0 +0.2**
CN2 pmax pmax
comp=Z,30nm,1.6s,mb4.8
FITZ Fitzroy Crossi 44.06 131 *e*P **P 15 37 16.9 -1.7**
comp=Z,158nm,0.9s,mb5.7
FITZ *e*pP pP 15 37 25.6 -1.6
FITZ Fitzroy Crossi 44.06 131 P **P 15 37 17.2 -1.4**
comp=Z,96nm,0.9s,mb5.5,baz=303,slow=4.3,SNR=87
FITZ LR LR 15 57 32.8
comp=Z,2μm,19.8s,MS5.0,baz=307,slow=39
NVS Novosibirsk 44.35 353 *i* P **P 15 37 19.5 -0.9**
NVS *i* S **S 15 43 51.2 -1.6**
NVS pmax pmax
comp=N,119nm,1.9s
NVS pmax pmax
comp=Z,118nm,1.9s,mb5.3
NVS pmax pmax
comp=E,38nm,1.6s
NVS smax
comp=N,78nm,2.4s
NVS smax
comp=E,115nm,2.4s
CIT Chita 44.61 19 *e*P **P 15 37 23.0 +0.5**
CIT *e* 15 43 54.4
CIT *e* 15 47 18.6
CIT pmax pmax
comp=Z,146nm,2.6s,mb5.3
RDF Al-Radifah 45.06 300 *e*P **P 15 37 27.1 +0.6**
RDF AMb AMB 15 37 29.8
comp=Z,189nm,1.7s,mb5.7
UMR Umm Al-Rimmam 45.08 301 *e*P **P 15 37 27.2 +0.6**
UMR AMb AMB 15 37 28.7
comp=Z,83nm,1.8s,mb5.3
NAY Al-Naaiem 45.40 300 *e*P **P 15 37 29.4 +0.1**
NAY AMb AMB 15 37 32.2
comp=Z,74nm,1.6s,mb5.3
BVAR Borovoye Array 45.42 342 P **P 15 37 29.2 +0.3**
comp=Z,17nm,0.8s,mb4.9,baz=145,slow=8.1,SNR=117
BVAR PcP PcP 15 39 08.1 +0.3
comp=Z,6.8nm,0.8s,baz=73,slow=5.1,SNR=4.2
BVAR ScP ScP 15 42 59.4 +0.6
comp=Z,2.3nm,0.9s,baz=210,slow=5.1,SNR=3.8
BVAR Borovoye Array 45.42 342 P **P 15 37 29.2 +0.2**
BVAR 15 39 08.1
MIB Mutribah 45.46 301 *e*P **P 15 37 30.1 +0.4**
MIB AMb AMB 15 37 32.8
comp=Z,131nm,1.1s,mb5.7
BRVK Borovoye 45.48 342 P **P 15 37 30.9 +1.5**
comp=Z,202nm,1.1s,mb5.9,SNR=26
BRVK Borovoye 45.48 342 *d iP* **P 15 37 29.8 +0.4**
BRVK pmax pmax
comp=Z,51nm,1.2s,mb5.2
BRVK MLR MLR
comp=Z,3μm,21.0s,MS5.2
BRVK Borovoye 45.48 342 *e*P **P 15 37 29.4 -0.1**
BRVK LR LR
comp=Z,3μm,19.0s,MS5.2
KAKA Kakadu 46.60 119 *e*P **P 15 37 37.6 -1.2**
comp=Z,15nm,0.6s,mb5.1
KAKA Kakadu 46.60 119 *e*P **P 15 37 36.7 -2.1**
comp=Z,43nm,0.6s,mb5.6
MDJ Mudanjiang 46.64 37 P **P 15 37 39.5 +0.8**
MDJ pP pP 15 37 48.5 +1.2
MDJ sP sP 15 37 52.8 +2.1
MDJ PP PP 15 39 29.5 +1.0
MDJ ScP ScP 15 43 04.0 -0.1
MDJ PcS PcS 15 43 08.0 +1.1
MDJ S **S 15 44 25.8 -0.3**
MDJ ScS ScS 15 47 32.5 +0.8
MDJ pmax pmax
comp=Z,12nm,2.4s,mb4.4
MDJ pmax pmax
comp=Z,430nm,8.2s
MDJ LR LR
comp=N,2μm,21.1s
MDJ LR LR
comp=E,1μm,15.8s
MDJ LR LR
comp=Z,2μm,15.8s
VLA Vladivostok 47.24 40 *e*P **P 15 37 42.8 -0.6**
VLA pmax pmax
comp=Z,72nm,1.7s,mb5.3
ATD Arta Tunnel 48.06 276 P **P 15 37 52.5 +2.3**
comp=Z,37nm,1.0s,mb5.4,baz=289,slow=22,SNR=10
ATD LR LR 15 55 29.3
comp=Z,696nm,18.9s,MS4.7,baz=259,slow=33
BHD Baghdad 48.81 305 *i* P **P 15 37 50.7 -5.1**
BHD *i* PP PP 15 39 49.0 -0.2
BHD *i* S **S 15 44 45.6 -12**
BHD *i* PS 15 45 00.6
MAJO Matsushiro 48.87 51 PFAKE 15 38 10.0 +14
MAJO LR LR
comp=Z,2μm,19.0s,MS5.1
MAT Matsushiro 48.87 51 P **P 15 37 56.6 +0.4**
MAT S **S 15 45 00.0 +1.9**
MJAR Matsushiro Arr 48.87 51 P **P 15 37 56.9 +0.7**
comp=Z,2.4nm,0.8s,mb4.3,baz=225,slow=7.0,SNR=16
MJAR PcP PcP 15 39 20.9 +0.5
comp=Z,1.3nm,0.6s,baz=236,slow=4.1,SNR=4.6
MJAR ScP ScP 15 43 14.8 +1.0
comp=Z,1.9nm,1.0s,baz=242,slow=3.0,SNR=6.6
MJAR LR LR 16 00 57.1
comp=Z,2μm,18.1s,MS5.1,baz=265,slow=39
MJAR Matsushiro Arr 48.87 51 P **P 15 37 56.9 +0.7**
MJAR 15 39 20.9
MJAR Matsushiro Arr 48.87 51 P **P 15 37 56.9 +0.7**
MJAR PcP PcP 15 39 20.9 +0.5
MJAR ScP ScP 15 43 14.8 +1.0
MJAR LR LR 16 00 57.1
KLBR Kellerberrin 49.00 150 *e*P **P 15 37 57.0 -0.1**
comp=Z,36nm,0.9s,mb5.4
KLBR *e*pP pP 15 38 05.7 -0.1
JHJ Hachijo jima 2 49.09 55 LR LR 15 57 48.4
comp=Z,771nm,20.3s,MS4.7,baz=236,slow=35
NWAO Narrogin (SRO) 49.85 152 P **P 15 38 04.3 +0.7**
comp=Z,42nm,1.0s,mb5.4,baz=325,slow=7.6,SNR=5.4
NWAO Narrogin (SRO) 49.85 152 P **P 15 38 04.3 +0.7**
NWAO LR LR
comp=Z,2μm,19.0s,MS5.2
CBIJ Chichi jima 49.87 64 LR LR 16 01 18.4
comp=Z,651nm,18.2s,MS4.7,baz=84,slow=39
MAK Makhachkala 49.98 318 *e*P **P 15 38 04.4 -0.1**
MAK *e* 15 39 26.0
MAK *e* 15 39 59.8
MAK *e*S **S 15 45 15.7 +2.2**
MAK *e* 15 47 50.6
MAK *e*SS SS 15 48 47.3 +0.6
MAK pmax pmax
comp=Z,287nm,1.3s,mb6.1
KLR Kul'dur 50.49 33 *e*P **P 15 38 05.0 -3.2**
KLR *e*S **S 15 45 20.0 -0.3**
KLR *e* 15 47 52.0
KLR *e*SS SS 15 48 50.5 -4.0
KLR pmax pmax
comp=E,90nm,2.0s
KLR pmax pmax
comp=Z,120nm,2.0s,mb5.6
KLR MLR MLR
comp=E,6μm,14.5s
KLR MLR MLR
comp=Z,8μm,14.5s,MS5.8
GNI Garni 50.74 313 LR LR 16 03 04.5
comp=Z,916nm,19.2s,MS4.8,baz=100,slow=40
GNI Garni 50.74 313 *d iP* **P 15 38 11.9 +1.6**
GNI pmax pmax
comp=Z,293nm,1.5s
GNI MLR MLR
comp=Z,1μm,23.0s
GNI Garni 50.74 313 *e*P **P 15 38 12.8 +2.4**
comp=Z,232nm,1.2s,mb6.0
GNI LR LR
comp=Z,983nm,19.0s,MS4.8
GNI Garni 50.74 313 P **P 15 38 13.2 +2.9**
SNR=21
GNI P 15 38 13.2
SNR=21
DGRG David-gareji 50.79 315 P **P 15 38 12.0 +1.3**
DGRG S **S 15 45 39.7 +15**
MTA Mtatsminda 51.29 315 P **P 15 38 15.6 +1.2**
MTA S **S 15 45 46.8 +15**
TBLG Delisi 51.34 315 P **P 15 38 16.8 +2.0**
GUMO Guam 51.76 81 PFAKE 15 38 30.0 +12
GUMO LR LR
comp=Z,908nm,19.0s,MS4.8
SVE Sverdlovsk 51.78 339 *e*P **P 15 38 18.7 +0.9**
SVE *e*S **S 15 45 38.2 +0.3**
SVE *e* 15 48 09.2
SVE pmax pmax
comp=Z,131nm,1.4s,mb5.7
SVE MLR MLR
comp=Z,2μm,18.0s,MS5.3
WRA Warramunga Arr 51.83 126 P **P 15 38 17.6 -1.2**
comp=Z,20nm,0.7s,mb5.2,baz=306,slow=8.4,SNR=125
WRA ScP ScP 15 43 26.9 +0.2
comp=Z,3.1nm,1.1s,baz=331,slow=5.0,SNR=4.8
WRA S **S 15 45 35.8 -3.9**
comp=Z,4.5nm,1.0s,baz=300,slow=15,SNR=9.2
WRA LR LR 16 02 07.6
comp=Z,1μm,21.5s,MS4.8,baz=290,slow=38
WRA Warramunga Arr 51.83 126 P **P 15 38 17.6 -1.2**
WRA S **S 15 45 35.8 -3.9**
WRAB Tennant Creek 51.84 126 P **P 15 38 17.0 -1.8**
comp=Z,689nm,0.8s,mb6.6,SNR=25
WRAB Tennant Creek 51.84 126 *e*P **P 15 38 17.8 -1.0**
WRAB pmax pmax
comp=Z,73nm,0.7s,mb5.7
WRAB MLR MLR
comp=Z,2μm,21.0s,MS5.0
WRAB Tennant Creek 51.84 126 *e*P **P 15 38 17.8 -1.0**
comp=Z,73nm,0.7s,mb5.7
WRAB LR LR
comp=Z,2μm,21.0s,MS5.0
GOR Gori 51.87 315 P **P 15 38 21.0 +2.2**
HABR Khabarovsk 51.89 35 *de*P **P 15 38 18.3 -0.5**
HABR *e**PP pP 15 38 26.8 -0.7
HABR 15 40 15.6
HABR *e*PPP 15 41 17.2
HABR *e*S **S 15 45 40.0 +0.3**
HABR *e**SS sS 15 45 55.6 +1.5
HABR *e* 15 48 04.2
HABR *e*SS SS 15 49 17.4 +0.7
HABR *e*SSS 15 50 59.9
HABR pmax pmax
comp=Z,66nm,1.6s,mb5.3
HABR MLR MLR
comp=Z,1μm,21.0s,MS5.0
ARU Arti 52.24 337 P **P 15 38 21.5 +0.2**
comp=Z,308nm,1.1s,mb6.2,SNR=18
ARU Arti 52.24 337 *d iP* **P 15 38 21.8 +0.5**
ARU *e* 15 39 29.5
ARU *e* 15 40 20.7
ARU PPP 15 41 21.3
ARU S **S 15 45 46.9 +2.6**
ARU 15 48 07.7
ARU pmax pmax
comp=Z,114nm,1.7s,mb5.5
ARU MLR MLR
comp=Z,3μm,18.0s,MS5.4
ARU Arti 52.24 337 *e*P **P 15 38 20.9 -0.4**
comp=Z,64nm,1.1s,mb5.5
ARU *e* pP 15 38 29.8 -0.2
ARU LR LR
comp=Z,3μm,20.0s,MS5.4
ZEI Tsey 52.32 316 *e*P **P 15 38 23.0 +0.9**
ZEI *e* 15 40 23.8
ZEI *e*S **S 15 45 51.1 +5.3**
ZEI pmax pmax
comp=Z,39nm,0.9s,mb5.3
CLNS Chul'man 52.42 22 *e*P **P 15 38 22.3 -0.3**
CLNS *e**PP pP 15 38 28.8 -2.5
CLNS *e* 15 39 31.0
CLNS *e* 15 40 19.0
CLNS *e*PPP 15 41 25.5
CLNS *e*S **S 15 45 48.8 +2.1**
CLNS *e* 15 48 00.1
CLNS *e*SS SS 15 49 27.6 +2.8
CLNS pmax pmax
comp=N,13nm,0.8s
CLNS pmax pmax
comp=Z,30nm,0.9s,mb5.2
CLNS pmax pmax
comp=E,12nm,1.0s
CLNS pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
CLNS pmax pmax
comp=N,8.0nm,0.9s
CLNS pmax pmax
comp=E,3.0nm,1.0s
CLNS smax
comp=E,10.0nm,1.3s
CLNS smax
comp=N,15nm,1.2s
CLNS MLR MLR
comp=N,868nm,14.0s,MS5.1
CLNS MLR MLR
comp=Z,1μm,12.0s,MS5.1
CLNS MLR MLR
comp=E,641nm,13.0s,MS5.1
ONI Oni 52.55 316 P **P 15 38 25.4 +1.5**
ONI S **S 15 45 54.3 +5.3**
OPO Ambohidratompo 52.94 237 P **P 15 38 28.8 +1.8**
comp=E,3.4nm,0.8s,mb4.3,baz=52,slow=7.1,SNR=6.5
ABPO Ambohimpanom 53.13 236 *e*P **P 15 38 30.8 +2.4**
ABPO pmax pmax
comp=Z,49nm,1.1s,mb5.3
ABPO MLR MLR
comp=Z,2μm,19.0s,MS5.2
ABPO Ambohimpanom 53.13 236 *e*P **P 15 38 30.8 +2.4**
comp=Z,49nm,1.1s,mb5.3
ABPO LR LR
comp=Z,2μm,19.0s,MS5.2
ASAR Alice Springs 53.56 130 P **P 15 38 30.9 -0.6**
comp=Z,12nm,0.8s,mb4.8,baz=305,slow=7.2,SNR=119
ASAR PcP PcP 15 39 38.6 +0.6
comp=Z,3.6nm,0.6s,baz=319,slow=4.1,SNR=4.5
ASAR ScP ScP 15 43 34.8 +0.6
comp=Z,1.2nm,1.0s,baz=295,slow=4.8,SNR=4.5
ASAR S **S 15 45 58.9 -4.3**
comp=Z,2.3nm,0.9s,baz=314,slow=15,SNR=9.5
ASAR Alice Springs 53.56 130 P **P 15 38 31.0 -0.5**
ASAR 15 39 38.6
ASAR S **S 15 45 58.9 -4.3**
KIV Kislovodsk 53.59 317 P **P 15 38 32.2 +0.8**
comp=Z,793nm,0.8s,mb6.7,SNR=19
KIV Kislovodsk 53.59 317 *d iP* **P 15 38 32.5 +1.1**
KIV *e**PP pP 15 38 40.6 +0.4
KIV *e**SP sP 15 38 46.9 +3.3
KIV pmax pmax
comp=Z,173nm,1.0s,mb5.9
KIV Kislovodsk 53.59 317 *e*P **P 15 38 33.0 +1.6**
comp=Z,170nm,1.1s,mb5.9
KIV LR LR
comp=Z,694nm,20.0s,MS4.7
GOF Gofitskoye 53.79 319 *e*P sP 15 38 48.7 +3.7
GOF pmax pmax
comp=Z,76nm,1.3s,mb5.5
FORT Forrest 54.09 141 *e*P **P 15 38 35.4 +0.2**
comp=Z,20nm,1.1s,mb5.0
ERM Erimo 54.31 46 *i* P **P 15 38 39.4 +2.6**
ERM Erimo 54.31 46 PFAKE 15 38 50.0 +13
ERM LR LR
comp=Z,2μm,19.0s,MS5.1
ASAJ Asahikawa 54.66 43 LR LR 16 03 38.6
comp=Z,2μm,18.1s,MS5.2,baz=115,slow=38
SOKR Solikamsk 55.18 339 *d iP* **P 15 38 43.4 +0.7**
SOKR S **S 15 46 24.5 +0.5**
SOKR pmax pmax
comp=Z,150nm,1.9s,mb5.7
SOKR MLR MLR
comp=Z,3μm,18.0s,MS5.4
SOC Sochi 55.46 316 *d iP* **P 15 38 45.0 -0.1**
SOC *e**PP pP 15 38 53.3 -0.5
SOC *e*S **S 15 46 27.6 -0.7**
SOC *e* 15 48 26.2
SOC *e*SS SS 15 50 09.4 -3.9
SOC pmax pmax
comp=Z,96nm,1.2s,mb5.7
KMBO Kilima Mbogo 55.62 261 P **P 15 38 49.2 +2.5**
comp=Z,12nm,1.0s,mb4.9,baz=27,slow=10,SNR=16
KMBO LR LR 16 00 03.8
comp=Z,1μm,18.7s,MS5.0,baz=275,slow=33
KMBO Kilima Mbogo 55.62 261 P **P 15 38 49.2 +2.5**
KMBO LR LR 16 00 03.8
KMBO Kilima Mbogo 55.62 261 P **P 15 38 49.4 +2.7**
SNR=7.7
KMBO P 15 38 49.4
SNR=7.7
YSS Yuzh-Sakhalins 55.83 40 *e*P **P 15 38 47.5 -0.1**
YSS pmax pmax
comp=Z,29nm,0.8s,mb5.4
YSS MLR MLR
comp=Z,485nm,19.0s,MS4.6
YSS Yuzh-Sakhalins 55.83 40 *e*P **P 15 38 47.5 -0.2**
comp=Z,29nm,0.8s,mb5.4
YSS LR LR
comp=Z,485nm,19.0s,MS4.6
MMAI Mount Meron Ar 56.11 302 P **P 15 38 51.0 +1.1**
comp=Z,10.0nm,0.8s,mb4.9,baz=106,slow=8.8,SNR=11
MMAI PcP PcP 15 39 50.2 +2.5
comp=Z,6.9nm,1.0s,baz=116,slow=5.2,SNR=4.2
MMAI LR LR 16 05 04.3
comp=Z,1μm,19.5s,MS5.0,baz=115,slow=38
YUK Yuzh-Kuril'sk 56.84 44 *i iP* **P 15 38 57.6 +2.7**
YUK *i* 15 41 01.1
YUK *i* S **S 15 46 52.1 +5.5**
YUK pmax pmax
comp=Z,430nm,1.6s,mb6.2
YUK pmax pmax
comp=N,170nm,1.7s
YUK pmax pmax
comp=E,130nm,1.7s
YUK smax
comp=N,580nm,3.9s
YUK smax
comp=E,260nm,3.9s
YUK MLR MLR
comp=N,430nm,18.8s,MS5.2
YUK MLR MLR
comp=E,2μm,18.8s,MS5.2
YUK MLR MLR
comp=Z,1μm,18.8s,MS5.1
ANN Anapa 57.41 317 *e*P **P 15 38 52.4 -6.5**
ANN *e*SS SS 15 50 43.1 -0.8
ANN pmax pmax
comp=Z,264nm,10.1s
ANN MLR MLR
comp=Z,770nm,16.0s,MS4.9
YAK Yakutsk 57.87 20 *d iP* **P 15 39 01.4 -0.4**
YAK *e**PP pP 15 39 08.1 -2.5
YAK *e* 15 39 53.2
YAK *e* 15 41 10.1
YAK *e*PPP 15 42 35.8
YAK *e*S **S 15 46 58.7 -0.9**
YAK *e**SS sS 15 47 11.8 -2.2
YAK *e* 15 48 45.6
YAK *e*SS SS 15 50 52.7 +2.2
YAK pmax pmax
comp=Z,40nm,0.9s,mb5.5
YAK pmax pmax
comp=N,18nm,1.4s
YAK pmax pmax
comp=E,19nm,1.3s
YAK pmax pmax
comp=Z,72nm,3.2s
YAK smax
comp=N,448nm,2.4s
YAK smax
comp=E,439nm,1.9s
YAK Yakutsk 57.87 20 *e*P **P 15 39 01.0 -0.9**
comp=E,59nm,0.8s,mb5.7
YAK LR LR
comp=Z,1μm,19.0s,MS5.1
CSS Prodhromos 58.12 304 *e*P **P 15 39 02.8 -1.4**
comp=Z,40nm,1.3s,mb5.3
CSS LR LR
comp=Z,915nm,20.0s,MS4.9
VORD Divnogorie 58.47 324 *e*P **P 15 39 06.1 -0.1**
VORD *e*S **S 15 47 06.5 -1.2**
VORD smax
comp=N,3.0nm,7.0s
VORD smax
comp=Z,1.0nm,7.9s
VORD smax
comp=E,2.0nm,8.6s
VSR Storozhevoye 58.64 324 *d iP* **P 15 39 07.1 -0.3**
VSR *e**PP pP 15 39 14.0 -2.2
VSR *e*S **S 15 47 08.4 -1.6**
VSR *e* 15 48 50.1
VSR pmax pmax
comp=E,30nm,0.9s
VSR pmax pmax
comp=Z,50nm,0.9s,mb5.5
VSR pmax pmax
comp=N,10.0nm,0.7s
VSR smax
comp=N,220nm,3.5s
VSR smax
comp=Z,90nm,3.8s
VSR smax
comp=E,120nm,2.8s
VSR MLR MLR
comp=N,1μm,17.0s,MS5.2
VSR MLR MLR
comp=Z,1μm,17.0s,MS5.0
VSR MLR MLR
comp=E,630nm,16.0s,MS5.2
BR131 Keskin Array S 58.78 310 *e*P **P 15 39 07.5 -1.1**
comp=E,22nm,0.8s,mb5.2
BR131 LR LR
comp=Z,390nm,19.0s,MS4.5
BRTR Keskin Array B 58.78 310 P **P 15 39 08.0 -0.6**
comp=Z,24nm,0.8s,mb5.2,baz=120,slow=7.2,SNR=113
BRTR LR LR 16 08 22.8
comp=Z,268nm,18.6s,MS4.4,baz=280,slow=40
VOR Voronezh 58.83 325 *e*P **P 15 39 10.0 +1.3**
VOR pmax pmax

comp=Z,240nm,2.0s,mb5.9
SIM Simferopol' 59.71 316 *d* iP **P 15 39 16.7 +1.8**
SIM *e*S **S 15 47 25.0 +1.0**
SIM pmax pmax
comp=Z,38nm,0.9s,mb5.4
SIM pmax pmax
comp=Z,280nm,11.9s
ISP Isparta 60.82 307 ⇓P **P 15 39 22.1 -0.6**
ISP Isparta 60.82 307 PFAKE 15 39 40.0 +17
ISP LR LR
comp=Z,800nm,22.0s,MS4.8
ISP Isparta 60.82 307 P **P 15 39 21.4 -1.3**
ISP Isparta 60.82 307 ⇓*i*P **P 15 39 22.1 -0.6**
MOS Moscow 61.34 328 *e*P **P 15 39 25.5 -0.4**
MOS *e*S **S 15 47 40.8 -3.7**
MOS *i* 15 47 56.3
MOS *e* 15 49 13.0
MOS pmax pmax
comp=Z,600nm,1.9s,mb6.4
MOS pmax pmax
comp=Z,257nm,1.6s,mb6.1
OBN Obninsk 61.64 328 P **P 15 39 28.9 +1.0**
comp=Z,502nm,1.1s,mb6.6,SNR=9.9
OBN Obninsk 61.64 328 *d* iP **P 15 39 27.9 0.0**
OBN *e**PP pP 15 39 36.4 -0.3
OBN *e* 15 41 41.8
OBN *e*S **S 15 47 49.0 +0.7**
OBN pmax pmax
comp=Z,240nm,1.7s,mb6.0
OBN MLR MLR
comp=Z,900nm,17.0s,MS5.0
OBN Obninsk 61.64 328 *e*P **P 15 39 28.2 +0.4**
comp=Z,341nm,1.5s,mb6.3
OBN LR LR
comp=Z,1μm,19.0s,MS5.0
CTA Charters Tower 61.73 120 *e*P **P 15 39 29.8 +0.7**
comp=Z,34nm,3.4s
CTA *e*pP pP 15 39 37.5 -0.5
CTAO Charters Tower 61.73 120 *e*P **P 15 39 29.3 +0.2**
CTAO pmax pmax
comp=Z,32nm,1.0s,mb5.4
CTAO MLR MLR
comp=Z,1μm,20.0s,MS5.1
CTAO Charters Tower 61.73 120 *e*P **P 15 39 29.3 +0.2**
comp=Z,32nm,1.0s,mb5.4
CTAO LR LR
comp=Z,1μm,20.0s,MS5.1
PAF Port-aux-Franc 62.96 196 PFAKE 15 39 50.0 +13
PAF LR LR
comp=Z,2μm,19.0s,MS5.3
KARP Karpathos 63.20 304 *e*P **P 15 39 39.2 +0.4**
TLCR 63.41 315 ⇓P **P 15 39 40.4 +0.4**
TLCR 63.41 315 ⇓*i*P **P 15 39 40.4 +0.4**
TIRR Tirgusor 63.55 314 *e*P **P 15 39 40.1 -0.8**
TIRR pmax pmax
comp=Z,20nm,0.9s,mb5.2
TIRR Tirgusor 63.55 314 *e*P **P 15 39 40.1 -0.8**
comp=Z,20nm,0.9s,mb5.1
TIRR Tirgusor 63.55 314 ⇑*i*P **P 15 39 41.1 +0.2**
PSN Preselentsi 63.57 313 P **P 15 39 40.8 -0.2**
BLCB Balcova 63.61 307 P **P 15 39 41.0 -0.4**
KIS Kishinev 63.79 317 *e*P **P 15 39 41.0 -1.4**
comp=Z,200nm,1.2s,mb6.0
KIS Kishinev 63.79 317 *e*PP PP 15 42 07.0 +4.2
KIS Kishinev 63.79 317 *e*S **S 15 48 13.0 -2.6**
KIS LRM 16 10 56.0
comp=Z,700nm,20.0s
KIS Kishinev 63.79 317 *e*P **P 15 39 41.0 -1.4**
KIS *e* pP 15 39 48.0 -3.3
KIS *e* 15 42 07.0
KIS *e*PPP 15 43 31.0
KIS *e*S **S 15 48 13.0 -2.6**
KIS pmax pmax
comp=Z,180nm,1.2s,mb6.0
KIS MLR MLR
comp=E,600nm,18.0s,MS5.0
KIS MLR MLR
comp=Z,400nm,18.0s,MS4.6
KIS MLR MLR
comp=N,700nm,17.0s,MS5.0
KIS MLR MLR
comp=Z,700nm,20.0s
STKA Stephens Creek 63.80 134 *e*P **P 15 39 42.5 -0.2**
comp=Z,19nm,0.9s,mb5.1
STKA *e*pP pP 15 39 51.9 +0.3
STKA Stephens Creek 63.80 134 P **P 15 39 42.4 -0.3**
comp=Z,19nm,0.9s,mb5.1,baz=316,slow=7.1,SNR=23
STKA LR LR 16 08 37.2
comp=Z,1μm,21.7s,MS5.0,baz=292,slow=37
CFR Carcaliu 63.88 315 ⇓P **P 15 39 43.4 +0.4**
CFR Carcaliu 63.88 315 ⇓*i*P **P 15 39 43.4 +0.4**
PRD Provadia 64.05 313 P **P 15 39 43.5 -0.7**
LEOM Leova 64.07 316 P **P 15 39 44.9 +0.7**
LEOM Leova 64.07 316 ⇑*i*P **P 15 39 45.0 +0.8**
PRK Paraskevi 64.32 308 P **P 15 39 45.0 -1.0**
PRK Paraskevi 64.32 308 *e*P **P 15 39 45.5 -0.5**
AKASG Malin Array Be 64.41 321 P **P 15 39 45.3 -1.1**
comp=Z,15nm,0.8s,mb5.0,baz=91,slow=4.8,SNR=69
AKASG LR LR 16 12 17.9
comp=Z,852nm,18.2s,MS5.0,baz=90,slow=40
AKASG Malin Array Be 64.41 321 *c e*P **P 15 39 45.7 -0.7**
AKASG pmax pmax
comp=Z,15nm,0.8s
AKBB Malin Array Si 64.41 321 *e*P **P 15 39 45.7 -0.7**
KIEV Kiev 64.41 321 *e*P **P 15 39 45.8 -0.6**
KIEV pmax pmax
comp=Z,15nm,0.8s,mb5.1
KIEV MLR MLR
comp=Z,1μm,21.0s,MS5.0
KIEV Kiev 64.41 321 *e*P **P 15 39 45.8 -0.7**
comp=Z,15nm,0.8s,mb5.1
KIEV LR LR
comp=Z,1μm,21.0s,MS5.0
NPS Neapolis 64.44 304 *e*P **P 15 39 47.9 +1.0**
JMB Yambol 64.52 312 P **P 15 39 47.0 -0.3**
JMB Yambol 64.52 312 P **P 15 39 47.2 -0.1**
LAST Lasithi 64.54 304 P **P 15 39 47.1 -0.5**
LAST Lasithi 64.54 304 *e*P **P 15 39 47.0 -0.6**
PETR 64.61 316 ⇑*i*P **P 15 39 48.5 +0.7**
ALN Alexandroupoli 64.70 310 P **P 15 39 48.2 -0.3**
ALN Alexandroupoli 64.70 310 *e*P **P 15 39 46.2 -2.3**
TIXI Tiksi 64.72 12 *e*P **P 15 39 47.4 -0.7**
TIXI pmax pmax
comp=Z,46nm,1.0s,mb5.5
TIXI MLR MLR
comp=Z,1μm,20.0s,MS5.0
TIXI Tiksi 64.72 12 *e*P **P 15 39 47.4 -0.7**
comp=Z,46nm,1.0s,mb5.5
TIXI LR LR
comp=Z,1μm,20.0s,MS5.0
VRI Vrincioaia 64.98 316 ⇑⇑P **P 15 39 50.9 +0.7**
VRI Vrincioaia 64.98 316 ⇑*i*P **P 15 39 50.9 +0.7**
IDI Anoyia 65.03 304 *e*P **P 15 39 51.3 +0.6**
PLOR Plostina 65.03 316 ⇓P **P 15 39 51.1 +0.5**
PLOR Plostina 65.03 316 ⇓*i*P **P 15 39 51.1 +0.5**
RDO Rodhopi 65.11 310 P **P 15 39 50.0 -1.2**
RDO Rodhopi 65.11 310 *e*P **P 15 39 51.0 -0.2**
SZH Strazhica 65.11 313 P **P 15 39 50.2 -0.9**
LIA Limnos Island 65.23 309 P **P 15 39 51.3 -0.7**
LIA Limnos Island 65.23 309 *e*P **P 15 39 51.4 -0.6**
DIM Dimitrovgrad 65.23 311 P **P 15 39 51.8 -0.1**
KDZ Kurdzhali 65.27 311 P **P 15 39 51.5 -0.7**
MLR Muntele Rosu 65.46 315 ⇑P **P 15 39 54.0 +0.7**
MLR Muntele Rosu 65.46 315 P **P 15 39 54.3 +1.0**
MLR Muntele Rosu 65.46 315 ⇑*i*P **P 15 39 54.0 +0.7**
PVL Pavlikeni 65.54 313 P **P 15 39 54.1 +0.2**
VAM Vamos 65.60 304 *e*P **P 15 39 54.9 +0.4**
GVD Gavdhos 65.66 303 *e*P **P 15 39 53.6 -1.3**
comp=Z,221nm,1.3s,mb6.0
GVD Gavdhos 65.66 303 P **P 15 39 53.6 -1.2**
GVD Gavdhos 65.66 303 *e*P **P 15 39 54.6 -0.2**
RZN Rozhen 65.79 311 P **P 15 39 53.9 -1.7**
KARN Karanos 65.83 304 P **P 15 39 55.1 -0.8**
KARN Karanos 65.83 304 *e*P **P 15 39 56.2 +0.3**
PLD Plovdiv 65.85 311 P **P 15 39 54.4 -1.6**
PLD Plovdiv 65.85 311 P **P 15 39 54.6 -1.4**
KAVA Kavala 65.86 310 P **P 15 39 56.7 +0.7**
PTL Penteli 66.07 307 *e*P **P 15 39 56.7 -0.7**
AOS Alonnisos 66.16 308 P **P 15 39 56.7 -1.3**
MICGM Minsk 66.18 325 *e*P **P 15 39 55.0 -2.8**
OUR Ouranopolis 66.19 309 P **P 15 39 56.9 -1.3**
MNK Minsk 66.21 325 *e*P **P 15 39 55.0 -3.0**
PGB Panagyurishte 66.30 312 P **P 15 39 58.2 -0.6**
BURAR Bucovina Array 66.32 317 ⇑P **P 15 39 59.6 +0.8**
BURAR Bucovina Array 66.32 317 ⇑*i*P **P 15 39 59.6 +0.8**
BUR08 Bucovina Ar. S 66.33 317 *e*P **P 15 39 59.2 +0.2**
PAIG Paliouri 66.38 309 P **P 15 39 58.3 -1.1**
NVR Nevrokopi 66.39 310 *e*P **P 15 39 59.0 -0.4**
DID Didima 66.52 306 P **P 15 39 57.7 -2.6**
DID Didima 66.52 306 *e*P **P 15 39 58.6 -1.7**
KYTH Kithira 66.60 305 *e*P **P 15 39 59.6 -1.3**
PLG Polygyros 66.60 309 P **P 15 39 59.0 -1.8**
PLG Polygyros 66.60 309 *e*P **P 15 40 00.7 -0.1**
XOR Xorichti 66.70 308 P **P 15 39 59.6 -1.9**
VLI Veliai 66.71 305 *e*P **P 15 39 59.4 -2.1**
SOH Sokhos 66.72 310 P **P 15 40 00.2 -1.3**
LTK Loutraki 66.77 307 *e*P **P 15 40 00.0 -1.9**
ATAL Atalanti 66.78 307 P **P 15 39 58.9 -3.1**
LKR Lokris 66.80 307 *e*P **P 15 40 00.2 -1.9**
PETK Petropavlovsk- 66.88 37 P **P 15 40 02.2 -0.1**
comp=Z,3.3nm,0.9s,mb4.3,baz=328,slow=1.4,SNR=5.0
PETK LR LR 16 11 53.7
comp=Z,1μm,18.6s,MS5.1,baz=252,slow=38
PETK Petropavlovsk- 66.88 37 P **P 15 40 02.2 -0.1**
PETK LR LR 16 11 53.7
HORT Hortiatis 66.89 309 P **P 15 40 01.4 -1.2**
NACGM Naroch 66.90 325 *e* **P 15 40 01.0 -1.4**
THE Thessaloniki 66.99 310 P **P 15 40 02.0 -1.3**
IDID Didziasalis 67.03 326 *e*P **P 15 40 03.5 +0.4**
IDID AMB AMB 15 40 05.0
comp=Z,31nm,1.1s,mb5.3
KKB Krupnik 67.03 311 P **P 15 40 02.1 -1.4**
DSF Desfina 67.15 307 P **P 15 40 01.3 -3.0**
JOF Joensuu 67.16 334 *e*P **P 15 40 03.7 -0.2**
JOF pmax pmax
comp=Z,94nm,0.9s,mb5.8
JOF Joensuu 67.16 334 *e*p **P 15 40 03.7 -0.2**
comp=Z,94nm,0.9s,mb5.8
JOF Joensuu 67.16 334 *e*p **P 15 40 03.7 -0.2**
comp=Z,94nm,0.9s,mb5.8
VLX Vlachokerasia 67.19 306 P **P 15 40 03.1 -1.5**
VLX Vlachokerasia 67.19 306 *e*P **P 15 40 04.6 0.0**
GUR Goura 67.26 307 P **P 15 40 02.8 -2.2**
GUR Goura 67.26 307 *e*P **P 15 40 04.1 -0.9**
IIGN Ignalina 67.32 326 *e*P **P 15 40 05.5 +0.4**
IIGN AMB AMB 15 40 07.0
comp=Z,28nm,1.3s,mb5.1
AGG Agios Georgios 67.34 308 P **P 15 40 02.4 -3.1**
AGG Agios Georgios 67.34 308 *e*P **P 15 40 03.8 -1.7**
VAY Valandovo 67.36 310 P **P 15 40 03.9 -1.7**
IZAR Zarasai 67.41 326 *e*P **P 15 40 05.9 +0.3**
IZAR AMB AMB 15 40 07.4
comp=Z,27nm,1.1s,mb5.2
PET Petropavlovsk 67.42 37 *e*P **P 15 40 08.0 +2.3**
PET *e*S S 15 48 58.5 -1.3
PET pmax pmax
comp=Z,23nm,1.3s,mb5.0
PET MLR MLR
comp=Z,2μm,14.0s,MS5.5
PET MLR MLR
comp=Z,2μm,16.0s
PET Petropavlovsk 67.42 37 PFAKE 15 40 20.0 +14
PET LR LR
comp=Z,2μm,20.0s,MS5.3
ISAL Salakas 67.43 326 *e*P **P 15 40 06.1 +0.4**
ISAL AMB AMB 15 40 07.6
comp=Z,26nm,1.3s,mb5.1
KALE Kalithea 67.45 307 P **P 15 40 03.9 -2.3**
LVV L'vov 67.47 319 ⇑*i*P **P 15 40 05.4 -0.7**
LVV *e* 15 40 29.0
LVV *e* 15 42 37.2
LVV *e*S S 15 48 57.2 -3.3
LVV *e*PS 15 49 26.0
BMR Baia Mare 67.47 317 ⇑P **P 15 40 06.5 +0.3**
BMR Baia Mare 67.47 317 P **P 15 40 07.4 +1.2**
BMR Baia Mare 67.47 317 ⇑*i*P **P 15 40 06.5 +0.3**
TRIZ Trizonia 67.50 307 P **P 15 40 04.8 -1.7**
ITM Ithomi 67.54 306 P **P 15 40 04.9 -1.9**
ITM Ithomi 67.54 306 *e*P **P 15 40 05.9 -0.9**
LAKA Lakka 67.57 307 P **P 15 40 05.0 -2.0**
DEV Deva 67.63 315 ⇑P **P 15 40 07.7 +0.5**
DEV Deva 67.63 315 ⇑*i*P **P 15 40 07.7 +0.5**
THL Klokotos Trika 67.63 308 P **P 15 40 04.8 -2.5**
THL Klokotos Trika 67.63 308 *e*P **P 15 40 05.3 -2.0**
EFP Efpalio 67.64 307 P **P 15 40 05.4 -2.0**
EFP Efpalio 67.64 307 *e*P **P 15 40 06.5 -0.9**
PYL PYLOS 67.67 305 P **P 15 40 05.4 -2.3**
PYL PYLOS 67.67 305 *e*P **P 15 40 06.3 -1.4**
VSU Vasula 67.85 329 *d i*P **P 15 40 08.7 +0.3**
VSU pmax pmax
comp=Z,78nm,1.0s,mb5.7
KZN Kozani 67.87 309 P **P 15 40 06.9 -2.0**
KZN Kozani 67.87 309 *e*P **P 15 40 07.6 -1.3**
DRGR 67.88 316 ⇑P **P 15 40 09.3 +0.6**
DRGR 67.88 316 P **P 15 40 09.5 +0.7**
DRGR 67.88 316 ⇑*i*P **P 15 40 09.3 +0.6**
EIDS Eidsvold 67.98 123 *e*P **P 15 40 13.0 +3.3**
comp=Z,21nm,1.0s,mb5.1
FNA Florina 68.21 310 P **P 15 40 09.2 -1.8**
APA Apatity 68.24 339 ⇓*i*P **P 15 40 11.8 +1.2**
APA *i* 15 40 30.0
APA *i* 15 42 40.0
APA *i* PPP 15 44 20.0
APA *i* S S 15 49 10.0 +0.9
APA pmax pmax
comp=Z,67nm,1.0s,mb5.6
APA MLR MLR
comp=Z,2μm,18.0s,MS5.4
LSZ Lusaka 68.24 249 *e*P **P 15 40 12.6 +1.1**
LSZ pmax pmax
comp=Z,28nm,1.0s,mb5.2
LSZ MLR MLR
comp=Z,1μm,21.0s,MS5.1
LSZ Lusaka 68.24 249 *e*P **P 15 40 12.6 +1.0**
comp=Z,28nm,1.0s,mb5.2
LSZ LR LR
comp=Z,1μm,21.0s,MS5.1
LSZ Lusaka 68.24 249 ⇓P **P 15 40 12.1 +0.6**
SNR=8.6
LSZ ⇓P 15 40 12.1
SNR=8.6
SKO Skopje 68.26 311 P **P 15 40 10.4 -0.8**
KWP Kalwaria Pacla 68.29 319 *e*P **P 15 40 11.6 +0.3**
KWP Kalwaria Pacla 68.29 319 *e*P **P 15 40 11.7 +0.4**
comp=Z,53nm,0.9s,mb5.6
KWP LR LR
comp=Z,725nm,20.0s,MS4.9
KWP Kalwaria Pacla 68.29 319 ⇓*i*P **P 15 40 12.3 +1.0**
UZH Uzhgorod 68.41 318 *e*P **P 15 40 12.0 -0.1**
UZH *e*S S 15 49 10.0 -1.8
BZS Buzias 68.49 315 ⇓P **P 15 40 12.0 -0.6**
BZS Buzias 68.49 315 P **P 15 40 12.7 +0.1**
BZS Buzias 68.49 315 ⇓*i*P **P 15 40 12.0 -0.6**
KFL Anninata 68.50 307 P **P 15 40 12.3 -0.5**
JAN Janina 68.53 308 *e*P **P 15 40 12.4 -0.6**
LKD2 Lefkada island 68.63 307 P **P 15 40 12.5 -1.1**
VLS Valsamata 68.65 307 P **P 15 40 11.9 -1.9**
VLS Valsamata 68.65 307 *e*P **P 15 40 12.5 -1.3**
OHR Ohrid 68.67 310 P **P 15 40 10.8 -3.0**
SUW Suwalki 68.75 324 *e*P **P 15 40 13.4 -0.7**
SUW *e* pP 15 40 21.4 -1.6
SUW Suwalki 68.75 324 *e*P **P 15 40 13.8 -0.3**
comp=Z,153nm,1.2s,mb5.8
IGT Igoumenitsa 68.92 308 P **P 15 40 13.8 -1.7**
CRVS Cervenica-Dubn 68.99 318 *e*P **P 15 40 16.5 +0.8**
CRVS pmax pmax
comp=Z,59nm,1.3s,mb5.4
CRVS Cervenica-Dubn 68.99 318 *e*P **P 15 40 16.5 +0.8**
comp=Z,59nm,1.3s,mb5.4
CRVS Cervenica-Dubn 68.99 318 *e*P **P 15 40 16.5 +0.8**
FINES FINESS Array B 69.00 332 P **P 15 40 15.3 -0.2**
comp=Z,30nm,0.8s,mb5.3,baz=104,slow=8.0,SNR=94
FINES LR LR 16 15 55.2
comp=Z,905nm,19.1s,MS5.0,baz=108,slow=41
KAF Kangasniemi 69.09 333 *e*P **P 15 40 15.7 -0.3**
KAF pmax pmax
comp=Z,24nm,0.8s,mb5.2
KAF Kangasniemi 69.09 333 *e*p **P 15 40 15.7 -0.3**
comp=Z,24nm,0.8s,mb5.2
KAF Kangasniemi 69.09 333 *e*p **P 15 40 15.7 -0.3**
comp=Z,24nm,0.8s,mb5.2
STHS Stebnicka Huta 69.20 319 *e*P **P 15 40 17.6 +0.6**
STHS pmax pmax
comp=Z,11nm,0.4s,mb5.1
STHS Stebnicka Huta 69.20 319 *e*P **P 15 40 17.6 +0.6**
comp=Z,11nm,0.4s,mb5.1
STHS Stebnicka Huta 69.20 319 *e*P **P 15 40 17.6 +0.6**
TIR Tirane 69.39 310 PFAKE 15 40 30.0 +12
TIR LR LR
comp=Z,509nm,19.0s,MS4.8
TIR Tirane 69.39 310 P **P 15 40 15.9 -2.4**
DIVS Divibare 69.49 313 P **P 15 40 17.8 -1.1**
KECS Kecovo 69.58 318 *e*P **P 15 40 19.7 +0.4**
KECS pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
KECS Kecovo 69.58 318 *e*P **P 15 40 19.7 +0.4**
comp=Z,8.6nm,0.9s,mb4.7
KECS Kecovo 69.58 318 *e*P **P 15 40 19.7 +0.4**
TOO Toolangi 69.58 137 *e*P **P 15 40 20.9 +1.4**
TOO *e*pP pP 15 40 29.0 +0.6
NIE Niedzica 69.81 319 *e*P **P 15 40 21.7 +1.0**
PSZ Piszkesteto 69.91 317 *e*P **P 15 40 20.8 -0.6**
PSZ pmax pmax
comp=Z,48nm,1.5s,mb5.2
PSZ MLR MLR
comp=Z,350nm,19.0s,MS4.6
PSZ Piszkesteto 69.91 317 *e*P **P 15 40 20.8 -0.6**
comp=Z,48nm,1.5s,mb5.2
PSZ LR LR
comp=Z,350nm,19.0s,MS4.6
PSZ Piszkesteto 69.91 317 ⇓*e*P **P 15 40 21.4 0.0**
PSZ Piszkesteto 69.91 317 ⇓*i*P **P 15 40 21.5 +0.1**
OJC Ojcow 70.23 319 *e*P **P 15 40 21.5 -1.8**
OJC *e*PcP PcP 15 40 42.9 -2.1
OJC *e*S S 15 49 31.7 -1.5
OJC L 16 15 59.9
comp=Z,0.9nm,16.7s
ARMA Armidale 70.56 128 *e*P **P 15 40 26.5 +0.9**
ARMA *e*pP pP 15 40 36.5 +1.9
ARMA Armidale 70.56 128 *e*P **P 15 40 23.7 -2.0**
comp=Z,51nm,0.9s,mb5.5
ARMA *e* 15 40 35.2
PKSM Moragy 70.61 315 ⇓P **P 15 40 25.5 -0.2**
PKSM Moragy 70.61 315 P **P 15 40 25.8 +0.1**
PKSM Moragy 70.61 315 ⇓*i*P **P 15 40 25.5 -0.2**
HNR Honiara 70.64 104 *e*P **P 15 40 30.9 +4.4**
comp=Z,191nm,0.8s,mb6.1
HNR LR LR
comp=Z,528nm,20.0s,MS4.8
VYHS Vyhne 70.68 318 *e*P **P 15 40 25.8 -0.2**
VYHS pmax pmax
comp=Z,33nm,2.0s,mb4.9
VYHS Vyhne 70.68 318 *e*P **P 15 40 25.8 -0.2**
comp=Z,33nm,2.0s,mb4.9
VYHS Vyhne 70.68 318 *e*P **P 15 40 25.8 -0.2**
CAN Canberra 70.86 133 *e*P **P 15 40 23.7 -3.6**
CAN *e* 15 40 36.1
CAN pmax pmax
comp=Z,58nm,1.8s,mb5.2
CAN MLR MLR
comp=Z,2μm,22.0s,MS5.2
CAN Canberra 70.86 133 *e*P **P 15 40 23.7 -3.7**
comp=Z,58nm,1.8s,mb5.2
CAN *e* 15 40 36.1
CAN LR LR
comp=Z,2μm,22.0s,MS5.2
CNB Canberra Magne 71.12 133 *e*P **P 15 40 26.1 -2.8**
CNB *e*pP pP 15 40 38.1 +0.2
KEV Kevo 71.25 341 *e*P **P 15 40 29.5 +0.4**
KEV *e* pP 15 40 38.1 0.0
KEV pmax pmax
comp=Z,29nm,0.9s,mb5.2
KEV MLR MLR
comp=Z,2μm,21.0s,MS5.3
KEV Kevo 71.25 341 *e*P **P 15 40 29.5 +0.4**
comp=Z,29nm,0.9s,mb5.2
KEV *e* pP 15 40 38.1 +0.1
KEV LR LR
comp=Z,2μm,21.0s,MS5.3
OKC Ostrava-Krasne 71.25 319 *e*P **P 15 40 29.9 +0.4**
OKC *e* pP 15 40 36.9 -1.6
OKC *e*S S 15 49 43.4 -1.7
OKC MLR MLR
comp=Z,600nm,15.4s,MS5.0
OKC Ostrava-Krasne 71.25 319 *e*P **P 15 40 29.9 +0.4**
OKC *e*pP pP 15 40 36.9 -1.6
OKC *e*S S 15 49 43.4 -1.7
OKC AMS AMS 16 19 30.0
comp=Z,600nm,15.4s
MORC Moravsky Berou 71.64 319 *e*P **P 15 40 31.4 -0.4**
MORC pmax pmax
comp=Z,156nm,1.9s,mb5.6
MORC Moravsky Berou 71.64 319 *e*P **P 15 40 31.4 -0.5**
comp=Z,156nm,1.9s,mb5.6
MORC Moravsky Berou 71.64 319 ⇓*i*P **P 15 40 32.3 +0.5**
ARCES ARCESS Array B 71.67 340 P **P 15 40 32.0 +0.4**
comp=Z,20nm,0.8s,mb5.1,baz=93,slow=7.4,SNR=49
TIP Timpagrande 71.68 308 *e*P **P 15 40 31.8 -0.6**
comp=Z,27nm,1.1s,mb5.1
TIP LR LR
comp=Z,471nm,19.0s,MS4.8
ZST Bratislava 71.80 317 *e*P **P 15 40 33.5 +0.6**
ZST pmax pmax
comp=Z,26nm,1.0s,mb5.1
ZST Bratislava 71.80 317 *e*P **P 15 40 33.5 +0.6**
comp=Z,26nm,1.0s,mb5.1
ZST Bratislava 71.80 317 *e*P **P 15 40 33.5 +0.6**
GKP Gorka Klasztor 72.15 323 *e*P **P 15 40 34.8 -0.1**
GKP Gorka Klasztor 72.15 323 ⇓*e*P **P 15 40 34.7 -0.1**
VRAC Vranov 72.22 318 ⇓P **P 15 40 35.5 +0.2**
VRAC Vranov 72.22 318 P **P 15 40 36.0 +0.7**
VRAC Vranov 72.22 318 ⇓*i*P **P 15 40 35.5 +0.2**
CEL Celeste 72.35 307 *e*P **P 15 40 36.5 +0.1**
comp=Z,110nm,1.1s,mb5.7
CEL LR LR
comp=Z,321nm,19.0s,MS4.6
CUC Castrocucco 72.42 309 *e*P **P 15 40 35.6 -1.1**
comp=Z,24nm,1.1s,mb5.0
CUC LR LR
comp=Z,364nm,20.0s,MS4.7
DPC Dobruska-Polom 72.47 319 *e*P **P 15 40 37.6 +0.8**
DPC *e* pP 15 40 44.5 -1.3
DPC MLR MLR
comp=Z,600nm,15.0s,MS5.0
DPC Dobruska-Polom 72.47 319 *e*P **P 15 40 37.6 +0.8**
DPC *e*pP pP 15 40 44.5 -1.3
DPC AMS AMS 16 23 50.0
comp=Z,600nm,15.0s
KSP Ksiaz 72.52 320 *e*P **P 15 40 37.8 +0.7**
KSP *e* pP 15 40 45.3 -0.8
KSP Ksiaz 72.52 320 ⇓*e*P **P 15 40 37.3 +0.2**
KSP *e**PP pP 15 40 44.8 -1.3
KSP *e*S S 15 49 59.0 -0.6
KSP MLR MLR
comp=Z,2μm,16.3s,MS5.5
CSNA Conrad Observa 72.62 317 ⇓*i*P **P 15 40 38.1 +0.3**
comp=Z,14nm,1.1s,mb4.8
UPC Upice 72.67 320 *e*P **P 15 40 38.7 +0.7**
UPC *e* pP 15 40 46.5 -0.5
UPC Upice 72.67 320 *e*P **P 15 40 38.7 +0.7**
UPC *e*pP pP 15 40 46.5 -0.5
ARSA Arzberg 72.81 316 ⇑*i*P **P 15 40 39.7 +0.7**
comp=Z,50nm,1.9s,mb5.1,SNR=24
BOJS Bojanci 72.94 314 *e*P **P 15 40 39.1 -0.6**
BOJS *i* pP 15 40 46.9 -1.8
BOJS *e*S S 15 50 09.8 +5.2
TREC Trest 72.94 318 *e*P **P 15 40 39.8 +0.2**
TREC MLR MLR
comp=Z,700nm,14.5s,MS5.1
TREC Trest 72.94 318 *e*P **P 15 40 39.8 +0.2**
TREC AMS AMS 16 20 30.0
comp=Z,700nm,14.5s
SOKA Soboth 73.13 316 ⇑*i*P **P 15 40 41.1 +0.3**
comp=Z,46nm,1.3s,mb5.3
OBKA Obir 73.46 315 *i*P **P 15 40 43.2 +0.5**
comp=Z,44nm,1.3s,mb5.2,SNR=16
LJU Ljubljana 73.46 315 *i*P **P 15 40 42.1 -0.6**
LJU *e*S S 15 50 18.1 +7.6
WDD Wield Dalam 73.49 304 PFAKE 15 41 00.0 +17
WDD LR LR
comp=Z,325nm,20.0s,MS4.6
PRU Pruhonice 73.59 319 *e*P **P 15 40 44.5 +1.1**
PRU *e* pP 15 40 52.1 -0.3
PRU *e*S S 15 50 10.6 -1.2
PRU MLR MLR
comp=Z,700nm,14.3s,MS5.1
PRU Pruhonice 73.59 319 *e*P **P 15 40 44.5 +1.1**
PRU *e*pP pP 15 40 52.1 -0.3
PRU *e*S S 15 50 10.6 -1.2
PRU AMS AMS 16 22 10.0
comp=Z,700nm,14.3s

PVCC Panska Ves 73.59 320 *eP* **P 15 40 43.7 +0.2**
PVCC *e* pP 15 40 50.9 -1.6
PVCC MLR MLR
comp=Z,700nm,15.9s,MS5.0
PVCC Panska Ves 73.59 320 *eP* **P 15 40 43.7 +0.2**
PVCC *ep*P pP 15 40 50.9 -1.6
PVCC AMS AMS 16 23 10.0
comp=Z,700nm,15.9s
BSD Bornholm Skovb 73.67 324 *i* P **P 15 40 42.9 -0.9**
comp=Z,21nm,1.0s,MS5.0
MOA Molln 73.69 317⇑ *iP* **P 15 40 43.8 -0.3**
comp=Z,20nm,1.2s,mb4.9,SNR=8.5
JAVS Javornik 73.78 315 *i* P **P 15 40 43.7 -1.0**
LBTB Lobatse 73.79 240 *eP* **P 15 40 45.8 +0.8**
LBTB pmax pmax
comp=Z,47nm,1.1s,mb5.3
LBTB MLR MLR
comp=Z,1µm,19.0s,MS5.2
LBTB Lobatse 73.79 240 *eP* **P 15 40 45.8 +0.7**
comp=Z,47nm,1.1s,mb5.3
LBTB LR LR
comp=Z,1µm,19.0s,MS5.2
SKDS Skadanscina 73.81 314 *i* P **P 15 40 42.9 -2.0**
VOY Vojsko 73.90 315 *eP* **P 15 40 45.2 -0.2**
VOY *e* pP 15 40 52.4 -2.0
TRI Trieste 73.99 314 PFAKE 15 41 00.0 +14
TRI LR LR
comp=Z,367nm,22.0s,MS4.6
BRG Berggiesshubel 74.01 320 *eP* **P 15 40 46.2 +0.3**
comp=Z,80nm,1.8s,mb5.3
BRG Berggiesshubel 74.01 320 *i* P **P 15 40 46.4 +0.5**
comp=Z,80nm,1.8s,mb5.4
BRG *i* pP 15 40 54.0 -0.9
comp=Z,35nm,1.7s
BRG S S 15 50 21.0 +4.5
BRG
comp=N,600nm,15.2s
BRG
comp=E,464nm,14.9s
BRG
comp=Z,772nm,14.8s
MYKA Terra Mystica 74.09 315⇓ *iP* **P 15 40 46.5 +0.1**
comp=Z,42nm,2.2s,mb5.0
GEC2 GERESS Array S 74.09 318 *eP* **P 15 40 46.6 +0.2**
comp=Z,38nm,1.1s,mb5.2
BILL Bilibino 74.11 22⇑ *eP* **P 15 40 46.3 +0.1**
BILL *e**PP pP 15 40 54.0 -1.2
BILL *e*S S 15 50 17.0 -0.1
BILL *e*SS SS 15 55 02.7 +0.6
BILL pmax pmax
comp=Z,31nm,1.7s,mb5.0
BILL MLR MLR
comp=Z,2µm,22.0s,MS5.5
BILL Bilibino 74.11 22 *eP* **P 15 40 45.8 -0.3**
comp=Z,104nm,1.8s,mb5.5
BILL LR LR
comp=Z,2µm,20.0s,MS5.5
RUE Ruedersdorf 74.18 322 *eP* **P 15 40 46.8 -0.1**
comp=Z,31nm,0.9s,mb5.2
KHC Kasperske Hory 74.18 318 *eP* **P 15 40 46.2 -0.7**
KHC pmax pmax
comp=Z,20nm,1.2s,mb4.9
KHC Kasperske Hory 74.18 318 *eP* **P 15 40 46.2 -0.7**
comp=Z,20nm,1.2s,mb4.9
KHC Kasperske Hory 74.18 318 *eP* **P 15 40 46.9 0.0**
KHC *ep*P pP 15 40 54.0 -2.0
KHC *e*S S 15 50 18.1 -0.4
KHC AMS AMS 16 23 50.0
comp=Z,800nm,15.4s
AQU L'Aquila 74.24 311 PFAKE 15 41 00.0 +13
AQU LR LR
comp=Z,420nm,19.0s,MS4.8
KBA Koelnbreinsper 74.30 316 *i* P **P 15 40 47.5 -0.1**
comp=Z,24nm,1.4s,mb4.9,SNR=7.5
CLL Collm 74.62 320 *eP* **P 15 40 49.3 -0.1**
comp=Z,63nm,1.6s,mb5.3
CLL Collm 74.62 320⇓ *iP* **P 15 40 49.1 -0.3**
CLL *i* pP 15 40 57.6 -0.8
CLL *e*S S 15 50 30.0 +6.7
CLL pmax pmax
comp=Z,64nm,1.6s,mb5.3
CLL MLR MLR
comp=Z,800nm,18.8s,MS5.0
CLL Collm 74.62 320⇓ *iP* **P 15 40 49.1 -0.3**
comp=Z,64nm,1.6s,mb5.3
CLL *i* sP sP 15 40 57.6 -4.2
CLL *e* 15 41 00.0
CLL *e*PcP PcP 15 41 04.0 +0.3
CLL *e*S S 15 50 30.0 +6.7
CLL *e*PPS 15 51 08.0
CLL *e*SS SS 15 55 24.0 +14
CLL *e*SSS 15 58 48.0
CLL *e*SSSS 16 00 06.0
CLL LV 16 18 00.0
comp=Z,800nm,18.8s
WET Wettzell 74.64 318 *eP* **P 15 40 49.8 +0.2**
comp=Z,40nm,1.3s,mb5.2
RJOB Jochberg 74.68 317 *eP* **P 15 40 49.2 -0.6**
comp=Z,23nm,1.1s,mb5.0
TANN Tannenbergstha 74.94 319 *eP* **P 15 40 51.6 +0.3**
comp=Z,38nm,1.5s,mb5.1
NKC Novy Kostel 74.94 319 *eP* **P 15 40 52.0 +0.7**
NKC *e* pP 15 40 59.7 -0.6
NKC MLR MLR
comp=Z,800nm,14.3s,MS5.2
NKC Novy Kostel 74.94 319 *eP* **P 15 40 52.0 +0.7**
NKC *ep*P pP 15 40 59.7 -0.6
NKC AMS AMS 16 23 30.0
comp=Z,800nm,14.3s
BOSA Boshof 75.35 237 P **P 15 40 55.3 +1.3**
comp=Z,39nm,0.9s,mb5.3,baz=81,slow=6.9,SNR=35
BOSA LR LR 16 10 55.6
comp=Z,2µm,18.6s,MS5.4,baz=76,slow=33
WTTA Wattenberg 75.46 316⇑ *iP* **P 15 40 53.5 -0.9**
comp=Z,36nm,1.2s,mb5.2,SNR=13
MOX Moxa 75.48 320 *eP* **P 15 40 54.7 +0.3**
comp=Z,61nm,1.6s,mb5.3
MOX *e* pP 15 41 02.0 -1.4
MOX
comp=Z,800nm,17.0s
MOX Moxa 75.48 320 *eP* **P 15 40 54.6 +0.2**
comp=Z,62nm,1.6s,mb5.3
FUR Furstenfeldbru 75.70 317 *eP* **P 15 40 55.4 -0.3**
comp=Z,44nm,1.3s,mb5.2
GRF Grafenberg Arr 75.73 319 *eP* **P 15 40 56.4 +0.5**
comp=Z,102nm,1.4s,mb5.6
GRF *ep*P pP 15 41 03.7 -1.2
GRF *e*L 16 19 12.7
comp=Z,660nm,20.5s
GRF Grafenberg Arr 75.73 319 *eP* **P 15 40 56.4 +0.5**
GRF *e**PP pP 15 41 03.7 -1.2
GRF pmax pmax
comp=Z,102nm,1.4s,mb5.6
GRF MLR MLR
comp=Z,700nm,20.5s,MS5.0
MOTA Moosalm 75.82 316⇓ *iP* **P 15 40 55.9 -0.6**
comp=Z,24nm,0.9s,mb5.1,SNR=17
NOA NORSAR Array B 76.01 330 P **P 15 40 56.8 -0.4**
comp=Z,14nm,0.8s,mb4.9,baz=93,slow=5.6,SNR=50
NOA LR LR 16 21 45.6
comp=Z,584nm,18.1s,MS4.9,baz=90,slow=42
RETA Reutte 76.05 316 *i* P **P 15 40 57.3 -0.5**
comp=Z,56nm,1.3s,mb5.3,SNR=19
FETA Feichten 76.08 316 *i* P **P 15 40 57.9 0.0**
comp=Z,28nm,1.1s,mb5.1,SNR=15
FX1 Attu Island--F 76.12 38 P **P 15 40 57.6 -0.4**
comp=Z,23nm,0.8s,mb5.2,baz=256,slow=7.0,SNR=3.9
NAO01 NORSAR Array S 76.16 330 *eP* **P 15 40 57.3 -0.8**
comp=Z,21nm,0.9s,mb5.1
NAO01 LR LR
comp=Z,1µm,19.0s,MS5.2
CLZ Clausthal 76.26 321 *eP* **P 15 40 59.1 +0.2**
comp=Z,40nm,1.1s,mb5.3
BSEG Bad Segeberg 76.30 323 *eP* **P 15 40 59.5 +0.5**
comp=Z,86nm,1.3s,mb5.5
VLC Villacollemand 76.40 313 PFAKE 15 41 10.0 +10
VLC LR LR
comp=Z,455nm,21.0s,MS4.8
NRDL Niedersach Rie 76.42 321 *eP* **P 15 41 00.3 +0.5**
comp=Z,125nm,1.9s,mb5.5
UBBA Unterbreizbach 76.50 320 *eP* **P 15 41 00.3 0.0**
comp=Z,136nm,2.6s,mb5.4
DAVA Damuels 76.66 316 *i* P **P 15 41 01.2 0.0**
comp=Z,52nm,1.1s,mb5.4,SNR=20
KONO Kongsberg 76.76 329 *eP* **P 15 41 00.9 -0.6**
KONO pmax pmax
comp=Z,112nm,1.6s,mb5.5
KONO MLR MLR
comp=Z,829nm,20.0s,MS5.0
KONO Kongsberg 76.76 329 *eP* **P 15 41 00.9 -0.6**
comp=Z,112nm,1.6s,mb5.5
KONO LR LR
comp=Z,829nm,20.0s,MS5.0
MUD Monster U'grnd 76.96 326 *i* P **P 15 41 03.1 +0.4**
comp=Z,25nm,1.0s,mb5.1
MUD
comp=Z,710nm,18.0s
TUE Stuetta 77.05 315 *eP* **P 15 41 02.7 -0.8**
comp=Z,137nm,1.9s,mb5.6
TUE LR LR
comp=Z,654nm,19.0s,MS5.0
STU Stuttgart 77.07 318 *eP* **P 15 41 03.5 0.0**
comp=Z,140nm,2.2s,mb5.5
STU Stuttgart 77.07 318 *eP* **P 15 41 03.4 -0.1**
STU pmax pmax
comp=Z,37nm,1.1s,mb5.2
STU Stuttgart 77.07 318 *eP* **P 15 41 03.4 -0.1**
comp=Z,37nm,1.1s,mb5.2
TOD Tromm 77.30 319 *eP* **P 15 41 04.7 -0.1**
SPAK Spaichingen-Ko 77.37 317 *eP* **P 15 41 05.1 -0.1**
VSL Villasalto 77.39 308 PFAKE 15 41 20.0 +14
VSL LR LR
comp=Z,182nm,19.0s,MS4.4
KBS Kingsbay 77.42 349 PFAKE 15 41 20.0 +15
KBS LR LR
comp=Z,970nm,19.0s,MS5.1
PGF Pioggiola 77.49 311 *eP* **P 15 41 05.2 -0.8**
comp=Z,57nm,1.3s,mb5.0
PGF Pioggiola 77.49 311 *eP* **P 15 41 05.2 -0.8**
PGF pmax pmax
comp=Z,28nm,1.3s,mb5.0
PGF Pioggiola 77.49 311 *eP* **P 15 41 05.2 -0.8**
comp=Z,28nm,1.3s,mb5.0
TNS Taunus Mts 77.51 319 *eP* **P 15 41 06.2 +0.3**
comp=Z,46nm,1.2s,mb5.3
BFO Black Forest 77.66 317 P **P 15 41 07.4 +0.6**
comp=Z,90nm,1.0s,mb5.7,SNR=8.3
BFO Black Forest 77.66 317 *eP* **P 15 41 06.4 -0.4**
comp=Z,33nm,1.3s,mb5.1
BFO Black Forest 77.66 317 *eP* **P 15 41 06.5 -0.3**
BFO pmax pmax
comp=Z,27nm,1.3s,mb5.0
BFO MLR MLR
comp=Z,448nm,19.0s,MS4.8
BFO Black Forest 77.66 317 *eP* **P 15 41 06.5 -0.4**
comp=Z,27nm,1.3s,mb5.0
BFO LR LR
comp=Z,448nm,19.0s,MS4.8
KEST Kesra 77.70 304 P **P 15 41 07.7 +0.4**
comp=Z,15nm,0.9s,mb4.9,baz=311,slow=1.4,SNR=32
KEST LR LR 16 20 08.0
comp=Z,278nm,18.4s,MS4.6,baz=9.9,slow=39
IBBN Ibbenburen 77.87 321 *eP* **P 15 41 08.2 +0.3**
comp=Z,98nm,1.4s,mb5.5
FELD Feldberg im Sc 77.90 317 *eP* **P 15 41 08.1 -0.1**
LANF Langenberg 77.98 318 *eP* **P 15 41 09.0 +0.4**
ABH Alteburg 78.11 319 *eP* **P 15 41 09.5 +0.3**
LIBD Limburg 78.16 317 *eP* **P 15 41 09.5 -0.1**
CASY Casey 78.20 172 *eP* **P 15 41 09.8 +0.5**
CASY Casey 78.20 172 *eP* **P 15 41 08.3 -1.0**
comp=Z,15nm,1.2s,mb4.8
CASY LR LR
comp=Z,2µm,20.0s,MS5.4
BUG Bochum--Univer 78.21 320 *eP* **P 15 41 09.9 +0.1**
comp=Z,71nm,1.5s,mb5.4
BBS Basel-Blauen 78.26 316 *eP* **P 15 41 09.8 -0.4**
CDF Champ du Feu 78.36 317 *eP* **P 15 41 10.0 -0.7**
comp=Z,57nm,1.2s,mb5.1
CDF Champ du Feu 78.36 317 *eP* **P 15 41 10.0 -0.7**
CDF pmax pmax
comp=Z,28nm,1.2s,mb5.1
CDF Champ du Feu 78.36 317 *eP* **P 15 41 10.0 -0.7**
comp=Z,28nm,1.2s,mb5.1
ECH Echery 78.45 317 *eP* **P 15 41 11.0 -0.2**
ECH MLR MLR
comp=Z,414nm,20.0s,MS4.8
WTSB Winterswijk 78.47 321 *eP* **P 15 41 11.8 +0.6**
comp=Z,52nm,1.7s,mb5.2
MOF Molkenrain 78.49 317 *eP* **P 15 41 11.0 -0.4**
SBF Sospel 78.55 313 *eP* **P 15 41 11.1 -0.7**
comp=Z,70nm,1.1s,mb5.2
SBF Sospel 78.55 313 *eP* **P 15 41 11.1 -0.7**
SBF pmax pmax
comp=Z,35nm,1.1s,mb5.2
SBF Sospel 78.55 313 *eP* **P 15 41 11.1 -0.7**
comp=Z,35nm,1.1s,mb5.2
TOUF Mont Tournerai 78.67 313 *eP* **P 15 41 12.6 +0.1**
HINF Hinteralfeld 78.68 317 *eP* **P 15 41 11.3 -1.2**
LOMF Lomont 78.73 316 *eP* **P 15 41 12.2 -0.5**
MVIF Mont Vial 78.75 313 *eP* **P 15 41 13.3 +0.4**
LPG La Plagne 78.91 314 *eP* **P 15 41 13.7 -0.1**
comp=Z,86nm,0.9s,mb5.4
LPG La Plagne 78.91 314 *eP* **P 15 41 13.7 -0.1**
LPG pmax pmax
comp=Z,43nm,0.9s,mb5.4
LPG La Plagne 78.91 314 *eP* **P 15 41 13.7 -0.1**
comp=Z,43nm,0.9s,mb5.4
LPL La Plagne 78.92 314 *eP* **P 15 41 13.8 -0.1**
comp=Z,95nm,1.0s,mb5.4
LPL La Plagne 78.92 314 *eP* **P 15 41 13.8 -0.1**
LPL pmax pmax
comp=Z,48nm,1.0s,mb5.4
LPL La Plagne 78.92 314 *eP* **P 15 41 13.8 -0.1**
comp=Z,48nm,1.0s,mb5.4
CALN Calern 78.95 313 *eP* **P 15 41 14.3 +0.3**
MBDF Montbardon 78.96 314 *eP* **P 15 41 13.1 -1.0**
comp=Z,36nm,0.9s,mb5.0
MBDF Montbardon 78.96 314 *eP* **P 15 41 13.1 -1.0**
MBDF pmax pmax
comp=Z,18nm,0.9s,mb5.0
MBDF Montbardon 78.96 314 *eP* **P 15 41 13.1 -1.0**
comp=Z,18nm,0.9s,mb5.0
BNI Bardonecchia 79.00 314 *eP* **P 15 41 14.0 -0.3**
BNI pmax pmax
comp=Z,36nm,1.1s,mb5.2
BNI MLR MLR
comp=Z,470nm,20.0s,MS4.8
BNI Bardonecchia 79.00 314 *eP* **P 15 41 14.0 -0.3**
comp=Z,36nm,1.1s,mb5.2
BNI LR LR
comp=Z,470nm,20.0s,MS4.8
HAU Haudompre 79.01 317 *eP* **P 15 41 13.5 -0.8**
comp=Z,89nm,1.0s,mb5.3
HAU *e*MLR MLR
comp=Z,556nm,20.0s,MS4.6
HAU Haudompre 79.01 317 *eP* **P 15 41 13.5 -0.8**
HAU pmax pmax
comp=Z,45nm,1.0s,mb5.3
HAU MLR MLR
comp=Z,560nm,20.0s,MS4.9
HAU Haudompre 79.01 317 *eP* **P 15 41 13.5 -0.8**
comp=Z,45nm,1.0s,mb5.3
HAU LR LR
comp=Z,560nm,20.0s,MS4.9
WLF Walferdange 79.02 319 P **P 15 41 14.6 +0.3**
comp=Z,39nm,2.1s,mb5.0
WLF Walferdange 79.02 319 *eP* **P 15 41 14.9 +0.6**
comp=Z,138nm,1.9s,mb5.6
WLF Walferdange 79.02 319 *eP* **P 15 41 15.0 +0.7**
WLF pmax pmax
comp=Z,68nm,1.6s,mb5.3
WLF MLR MLR
comp=Z,499nm,20.0s,MS4.8
WLF Walferdange 79.02 319 *eP* **P 15 41 15.0 +0.7**
comp=Z,68nm,1.6s,mb5.3
WLF LR LR
comp=Z,499nm,20.0s,MS4.8
MEM Membach 79.05 320 P **P 15 41 15.0 +0.5**
comp=Z,14nm,1.8s,mb4.6
TSUM Tsumeb 79.07 248 *eP* **P 15 41 17.1 +2.0**
comp=Z,10nm,1.0s,mb4.7
TSUM LR LR
comp=Z,1µm,20.0s,MS5.3
HGN Heimansgroeve 79.09 320 *eP* **P 15 41 14.0 -0.7**
comp=Z,25nm,1.7s,mb4.9
FRF La Foret Royal 79.14 312 *eP* **P 15 41 14.6 -0.5**
comp=Z,90nm,1.3s,mb5.2
FRF La Foret Royal 79.14 312 *eP* **P 15 41 14.6 -0.5**
FRF pmax pmax
comp=Z,45nm,1.3s,mb5.2
FRF La Foret Royal 79.14 312 *eP* **P 15 41 14.6 -0.5**
comp=Z,45nm,1.3s,mb5.2
LMR La Mourre 79.26 312 *eP* **P 15 41 15.1 -0.6**
comp=Z,96nm,1.5s,mb5.2
LMR La Mourre 79.26 312 *eP* **P 15 41 15.1 -0.6**
LMR pmax pmax
comp=Z,48nm,1.5s,mb5.2
LMR La Mourre 79.26 312 *eP* **P 15 41 15.1 -0.6**
comp=Z,48nm,1.5s,mb5.2
CABF La Chapelle 79.29 316 *eP* **P 15 41 15.7 -0.1**
comp=Z,88nm,1.1s,mb5.3
CABF La Chapelle 79.29 316 *eP* **P 15 41 15.7 -0.1**
CABF pmax pmax
comp=Z,44nm,1.1s,mb5.3
CABF La Chapelle 79.29 316 *eP* **P 15 41 15.7 -0.1**
comp=Z,44nm,1.1s,mb5.3
OG25 Le Caire 79.48 313 *eP* **P 15 41 17.1 +0.2**
BCLA Clavier 79.51 320 P **P 15 41 17.5 +0.5**
comp=Z,13nm,1.5s,mb4.7
ORIF Oris-en-Rattie 79.57 314 *eP* **P 15 41 16.6 -0.8**
comp=Z,37nm,1.0s,mb5.0
ORIF *e*MLR MLR
comp=Z,654nm,22.8s,MS4.6
ORIF Oris-en-Rattie 79.57 314 *eP* **P 15 41 16.6 -0.8**
ORIF pmax pmax
comp=Z,18nm,1.0s,mb5.0
ORIF Oris-en-Rattie 79.57 314 *eP* **P 15 41 16.6 -0.8**
comp=Z,18nm,1.0s,mb5.0
MEZF Maizieres J'vi 79.83 318 *eP* **P 15 41 18.2 -0.5**
comp=Z,77nm,1.0s,mb5.3
MEZF Maizieres J'vi 79.83 318 *eP* **P 15 41 18.2 -0.5**
comp=Z,77nm,1.0s,mb5.6
GIVF Givet 79.84 319 *eP* **P 15 41 18.3 -0.5**
comp=Z,76nm,1.4s,mb5.1
GIVF Givet 79.84 319 *eP* **P 15 41 18.3 -0.5**
GIVF pmax pmax
comp=Z,38nm,1.4s,mb5.1
GIVF Givet 79.84 319 *eP* **P 15 41 18.3 -0.5**
comp=Z,38nm,1.4s,mb5.1
SMRF Simiane la Rot 79.88 313 *eP* **P 15 41 19.1 0.0**
comp=Z,136nm,1.5s,mb5.4
SMRF Simiane la Rot 79.88 313 *eP* **P 15 41 19.1 0.0**
comp=Z,136nm,1.5s,mb5.7
DOU Dourbes 79.99 319 P **P 15 41 20.3 +0.7**
comp=Z,12nm,1.5s,mb4.6
DZM Mont Dzumac 80.08 115 *eP* **P 15 41 25.1 +4.6**
comp=Z,84nm,1.4s,mb5.5
DZM *e*LR LR 16 06 26.7
comp=Z,1µm,23.9s
DZM Mont Dzumac 80.08 115 *eP* **P 15 41 24.4 +3.8**
comp=Z,17nm,0.9s,mb5.0
SNF Seneffe 80.15 320 P **P 15 41 21.1 +0.7**
BAIF Baives 80.24 319 *eP* **P 15 41 20.7 -0.2**
comp=Z,56nm,1.1s,mb5.1
BAIF Baives 80.24 319 *eP* **P 15 41 20.7 -0.2**
BAIF pmax pmax
comp=Z,28nm,1.1s,mb5.1
BAIF Baives 80.24 319 *eP* **P 15 41 20.7 -0.2**
comp=Z,28nm,1.1s,mb5.1
SUR Sutherland 80.25 234 PFAKE 15 41 30.0 +8.7
SUR LR LR
comp=Z,1µm,20.0s,MS5.3
VIVF Saint-Julien-l 80.43 314 *eP* **P 15 41 21.7 -0.4**
comp=Z,92nm,1.0s,mb5.4
VIVF Saint-Julien-l 80.43 314 *eP* **P 15 41 21.7 -0.4**
VIVF pmax pmax
comp=Z,46nm,1.0s,mb5.4
VIVF Saint-Julien-l 80.43 314 *eP* **P 15 41 21.7 -0.4**
comp=Z,46nm,1.0s,mb5.4
SSB Saint Sauveur 80.48 314 *eP* **P 15 41 21.5 -0.8**
SSB *e* pP 15 41 30.7 -0.7
SSB pmax pmax
comp=Z,39nm,1.0s,mb5.3
SSB MLR MLR
comp=Z,401nm,20.0s,MS4.8
SSB Saint Sauveur 80.48 314 *eP* **P 15 41 21.5 -0.8**
comp=Z,39nm,1.0s,mb5.3
SSB *e* pP 15 41 30.7 -0.7
SSB LR LR
comp=Z,401nm,20.0s,MS4.8
LOR Lormes 80.75 316 *eP* **P 15 41 23.1 -0.6**
comp=Z,178nm,1.4s,mb5.5
LOR *e*MLR MLR
comp=Z,543nm,20.2s,MS4.6
LOR Lormes 80.75 316 *eP* **P 15 41 23.1 -0.6**
LOR pmax pmax
comp=Z,89nm,1.4s,mb5.5
LOR MLR MLR
comp=Z,540nm,20.3s,MS4.9
LOR Lormes 80.75 316 *eP* **P 15 41 23.1 -0.6**
comp=Z,89nm,1.4s,mb5.5
LOR LR LR
comp=Z,540nm,20.3s,MS4.9
SMF Signal de Mont 80.83 316 *eP* **P 15 41 23.5 -0.6**
comp=Z,77nm,1.1s,mb5.2
SMF Signal de Mont 80.83 316 *eP* **P 15 41 23.5 -0.6**
SMF pmax pmax
comp=Z,39nm,1.1s,mb5.2
SMF Signal de Mont 80.83 316 *eP* **P 15 41 23.5 -0.6**
comp=Z,38nm,1.1s,mb5.2
SSF Saint Saulge 81.01 316 *eP* **P 15 41 24.5 -0.6**
comp=Z,164nm,1.6s,mb5.4
SSF Saint Saulge 81.01 316 *eP* **P 15 41 24.5 -0.6**
SSF pmax pmax
comp=Z,82nm,1.6s,mb5.4
SSF Saint Saulge 81.01 316 *eP* **P 15 41 24.5 -0.6**
comp=Z,82nm,1.6s,mb5.4
PLDF La Plantade 81.05 315 *eP* **P 15 41 26.9 +1.5**
MAW Mawson 81.06 191 P **P 15 41 25.9 +1.1**
comp=Z,7.1nm,0.9s,mb4.6,baz=354,slow=5.0,SNR=11
MAW LR LR 16 14 06.5
comp=Z,759nm,19.0s,MS5.1,baz=27,slow=33
LASF Ste Croix 81.10 313 *eP* **P 15 41 25.7 +0.1**
comp=Z,159nm,1.3s,mb5.5
AVF Avril sur Loir 81.14 316 *eP* **P 15 41 25.1 -0.7**
comp=Z,90nm,1.2s,mb5.3
AVF Avril sur Loir 81.14 316 *eP* **P 15 41 25.1 -0.7**
AVF pmax pmax
comp=Z,45nm,1.2s,mb5.3
AVF Avril sur Loir 81.14 316 *eP* **P 15 41 25.1 -0.7**
comp=Z,45nm,1.2s,mb5.3
AGO Saint Agoulin 81.38 315 *eP* **P 15 41 28.3 +1.2**
LBL Lubilhac 81.40 314 *eP* **P 15 41 28.7 +1.5**
PYM Petit Puy Mans 81.50 315 *eP* **P 15 41 29.4 +1.6**
BGF Bois d'Agland 81.52 316 *eP* **P 15 41 27.6 -0.2**
comp=Z,204nm,1.5s,mb5.5
BGF Bois d'Agland 81.52 316 *eP* **P 15 41 27.6 -0.2**
BGF pmax pmax
comp=Z,102nm,1.5s,mb5.5
BGF Bois d'Agland 81.52 316 *eP* **P 15 41 27.6 -0.2**
comp=Z,102nm,1.5s,mb5.5
HYF Humbligny 81.57 316 *eP* **P 15 41 28.0 -0.1**
TCF Toulx Ste Croi 81.99 316 *eP* **P 15 41 30.2 -0.1**
comp=Z,128nm,1.4s,mb5.3
TCF Toulx Ste Croi 81.99 316 *eP* **P 15 41 30.2 -0.1**
TCF pmax pmax
comp=Z,64nm,1.4s,mb5.4
TCF Toulx Ste Croi 81.99 316 *eP* **P 15 41 30.2 -0.1**
comp=Z,64nm,1.4s,mb5.4
EJON La Jonquera 82.00 312 P **P 15 41 29.5 -1.0**
comp=Z,128nm,2.3s,mb5.5
CAF Calviac 82.27 314 *eP* **P 15 41 31.8 0.0**
comp=Z,61nm,1.1s,mb5.1
CAF Calviac 82.27 314 *eP* **P 15 41 31.8 0.0**
CAF pmax pmax
comp=Z,31nm,1.1s,mb5.2
CAF Calviac 82.27 314 *eP* **P 15 41 31.8 0.0**
comp=Z,30nm,1.1s,mb5.1
MTLF Montolieu 82.37 313 *eP* **P 15 41 32.2 -0.2**
comp=Z,74nm,1.1s,mb5.2
MTLF Montolieu 82.37 313 *eP* **P 15 41 32.2 -0.2**
MTLF pmax pmax
comp=Z,37nm,1.0s,mb5.3
MTLF Montolieu 82.37 313 *eP* **P 15 41 32.2 -0.2**
comp=Z,37nm,1.0s,mb5.3
ETOS Mallorca 82.41 309 P **P 15 41 32.2 -0.5**
comp=Z,121nm,1.4s,mb5.6
CFON Fontmartina 82.42 311 P **P 15 41 32.6 -0.1**
comp=Z,283nm,2.7s,mb5.7
TAM Tamanrasset 82.53 292 *eP* **P 15 41 35.1 +1.5**
TAM pmax pmax
comp=Z,39nm,1.1s,mb5.3
TAM MLR MLR
comp=Z,1µm,21.0s,MS5.2
TAM Tamanrasset 82.53 292 *eP* **P 15 41 35.1 +1.5**
comp=Z,38nm,1.1s,mb5.3
TAM LR LR
comp=Z,1µm,21.0s,MS5.2
RJF Les Rejaudoux 82.60 315 *eP* **P 15 41 33.6 +0.1**
comp=Z,216nm,1.6s,mb5.6

RJF *e*MLR MLR
comp=Z,844nm,19.2s,MS4.8
RJF Les Rejaudoux 82.60 315 *e*P **P 15 41 33.6 +0.1**
RJF pmax pmax
comp=Z,108nm,1.6s,mb5.6
RJF MLR MLR
comp=Z,840nm,19.3s,MS5.1
RJF Les Rejaudoux 82.60 315 *e*P **P 15 41 33.6 +0.1**
comp=Z,108nm,1.6s,mb5.6
RJF LR LR
comp=Z,840nm,19.3s,MS5.1
CLLI Llivia 82.67 312 P **P 15 41 34.4 +0.5**
LFF La Frestale 83.20 314 *e*P **P 15 41 36.8 +0.2**
comp=Z,182nm,1.6s,mb5.5
LFF La Frestale 83.20 314 *e*P **P 15 41 36.8 +0.2**
LFF pmax pmax
comp=Z,91nm,1.6s,mb5.5
LFF La Frestale 83.20 314 *e*P **P 15 41 36.8 +0.2**
comp=Z,91nm,1.6s,mb5.5
LDF La Druitiere 83.23 318 *e*P **P 15 41 36.2 -0.5**
comp=Z,187nm,1.5s,mb5.6
LDF La Druitiere 83.23 318 *e*P **P 15 41 36.2 -0.5**
LDF pmax pmax
comp=Z,93nm,1.5s,mb5.6
LDF La Druitiere 83.23 318 *e*P **P 15 41 36.2 -0.5**
comp=Z,93nm,1.5s,mb5.6
MLS Moulis 83.24 312 *e*P **P 15 41 36.8 -0.1**
CSOR Sort 83.30 312 P **P 15 41 37.6 +0.5**
comp=Z,88nm,1.3s,mb5.6
FLN La Foliniere 83.44 318 *e*P **P 15 41 37.3 -0.5**
comp=Z,98nm,1.3s,mb5.4
FLN *e*MLR MLR
comp=Z,848nm,18.8s,MS4.8
FLN La Foliniere 83.44 318 *e*P **P 15 41 37.3 -0.5**
FLN pmax pmax
comp=Z,49nm,1.3s,mb5.4
FLN MLR MLR
comp=Z,850nm,18.8s,MS5.1
FLN La Foliniere 83.44 318 *e*P **P 15 41 37.3 -0.5**
comp=Z,49nm,1.3s,mb5.4
FLN LR LR
comp=Z,850nm,18.8s,MS5.1
EPOB Poblet 83.49 311 P **P 15 41 38.1 -0.1**
comp=Z,173nm,1.8s,mb5.8
MFF Saint Martin d 83.56 316 *e*P **P 15 41 37.9 -0.5**
comp=Z,86nm,1.1s,mb5.5
MFF Saint Martin d 83.56 316 *e*P **P 15 41 37.9 -0.5**
MFF pmax pmax
comp=Z,43nm,1.1s,mb5.5
MFF Saint Martin d 83.56 316 *e*P **P 15 41 37.9 -0.5**
comp=Z,43nm,1.1s,mb5.5
EIBI Ibiza 83.64 308 P **P 15 41 40.0 +0.9**
comp=Z,95nm,2.3s,mb5.5
GRR Gorron 83.75 318 *e*P **P 15 41 39.1 -0.3**
EPF Esparros 83.77 312 *e*P **P 15 41 38.8 -0.8**
comp=Z,19nm,1.1s,mb4.8
EPF Esparros 83.77 312 *e*P **P 15 41 38.8 -0.8**
EPF pmax pmax
comp=Z,9.0nm,1.1s,mb4.8
EPF Esparros 83.77 312 *e*P **P 15 41 38.8 -0.8**
comp=Z,9.3nm,1.1s,mb4.8
EBIE Bielsa 83.97 312 P **P 15 41 40.3 -0.3**
comp=Z,88nm,1.4s,mb5.7
ESK Eskdalemuir 84.00 325 *i* P **P 15 41 41.9 +1.4**
ESK Eskdalemuir 84.00 325 *e*P **P 15 41 40.4 -0.1**
comp=Z,440nm,2.8s,mb6.1
ESK LR LR
comp=Z,773nm,21.0s,MS5.1
VIEF Viey 84.03 312 *e*P **P 15 41 41.8 +0.9**
DAG Danmarks Havn 84.05 347⇓ *i* P **P 15 41 40.6 +0.2**
comp=Z,7.0nm,1.0s,mb4.8
ERTA Horta de San J 84.11 310 P **P 15 41 41.1 -0.3**
comp=Z,204nm,2.6s,mb5.8
ETSF Etsaut 84.45 312 *e*P **P 15 41 43.2 +0.1**
comp=Z,42nm,1.1s,mb5.2
ETSF Etsaut 84.45 312 *e*P **P 15 41 43.2 +0.1**
ETSF pmax pmax
comp=Z,21nm,1.1s,mb5.2
ETSF Etsaut 84.45 312 *e*P **P 15 41 43.2 +0.1**
comp=Z,21nm,1.1s,mb5.2
ESAC San Caprasio 84.58 311 P **P 15 41 44.2 +0.4**
comp=Z,120nm,1.5s,mb5.8
EMOS Mosqueruela 84.81 310 P **P 15 41 45.7 +0.7**
comp=Z,230nm,1.4s,mb6.1
SGMF Saint Gilles 84.89 318 *e*P **P 15 41 44.7 -0.5**
comp=Z,50nm,1.2s,mb5.2
SGMF Saint Gilles 84.89 318 *e*P **P 15 41 44.7 -0.5**
SGMF pmax pmax
comp=Z,25nm,1.3s,mb5.2
SGMF Saint Gilles 84.89 318 *e*P **P 15 41 44.7 -0.5**
comp=Z,25nm,1.3s,mb5.2
SJPF Ste Jean 84.89 313 *e*P **P 15 41 45.4 +0.1**
comp=Z,68nm,1.3s,mb5.3
SJPF Ste Jean 84.89 313 *e*P **P 15 41 45.4 +0.1**
SJPF pmax pmax
comp=Z,34nm,1.3s,mb5.3
SJPF Ste Jean 84.89 313 *e*P **P 15 41 45.4 +0.1**
comp=Z,34nm,1.3s,mb5.3
EBEN Beniarda 84.90 308 P **P 15 41 46.1 +0.6**
comp=Z,100nm,2.3s,mb5.5
EALK Alkurruntz 85.08 313 P **P 15 41 46.0 -0.2**
comp=Z,61nm,1.3s,mb5.6
ECHE Chera 85.32 309 P **P 15 41 48.9 +1.4**
ECHE pmax pmax
comp=Z,13nm,0.6s,mb5.2
ECHE Chera 85.32 309 P **P 15 41 48.9 +1.4**
comp=Z,13nm,0.6s,mb5.2
ROSF Rostrenen 85.34 318 *e*P **P 15 41 47.0 -0.5**
comp=Z,60nm,1.3s,mb5.3
ROSF Rostrenen 85.34 318 *e*P **P 15 41 47.0 -0.5**
ROSF pmax pmax
comp=Z,30nm,1.3s,mb5.3
ROSF Rostrenen 85.34 318 *e*P **P 15 41 47.0 -0.5**
comp=Z,30nm,1.3s,mb5.3
QUIF Quistinic 85.35 318 *e*P **P 15 41 46.6 -0.9**
comp=Z,46nm,1.2s,mb5.2
QUIF Quistinic 85.35 318 *e*P **P 15 41 46.6 -0.9**
QUIF pmax pmax
comp=Z,23nm,1.2s,mb5.2
QUIF Quistinic 85.35 318 *e*P **P 15 41 46.6 -0.9**
comp=Z,23nm,1.2s,mb5.2
ECRI Cripan 85.91 312 P **P 15 41 51.0 +0.6**
ETOR Torete 85.92 311 P **P 15 41 51.3 +0.8**
comp=Z,4.3nm,1.9s,mb4.3
ETOB Tobarra 85.93 308 P **P 15 41 52.3 +1.7**
comp=Z,97nm,2.1s,mb5.7
ALE Alert 85.97 357 P **P 15 41 50.6 +0.6**
comp=Z,71nm,0.8s,mb6.0,SNR=5.3
EVIA Vianos 86.67 309 P **P 15 41 54.7 +0.5**
EVIA pmax pmax
comp=Z,27nm,1.3s,mb5.3
EVIA Vianos 86.67 309 P **P 15 41 54.7 +0.5**
comp=Z,27nm,1.3s,mb5.3
EHUE Huescar 86.90 308 P **P 15 41 55.7 +0.3**
EHUE pmax pmax
comp=Z,95nm,2.1s,mb5.7
EHUE Huescar 86.90 308 P **P 15 41 55.7 +0.3**
comp=Z,95nm,2.1s,mb5.7
EQES Quesada 87.27 308 P **P 15 41 57.0 -0.2**
comp=Z,226nm,2.8s,mb5.9
ESDC Sonseca Array 87.57 310 P **P 15 41 58.5 -0.1**
comp=Z,0.2nm,0.3s,mb3.8,baz=55,slow=4.3,SNR=4.1
ESDC LR LR 16 27 03.9
comp=Z,236nm,19.1s,MS4.6,baz=65,slow=40
ESDC Sonseca Array 87.57 310 P **P 15 41 58.4 -0.2**
comp=Z,20nm,1.0s,mb5.3
ESLA Sonseca Array 87.57 310 *e*P **P 15 41 58.7 +0.1**
comp=Z,1.6nm,1.0s,mb4.2
ESLA LR LR
comp=Z,µm,19.0s,MS5.5
SYO Syowa Base 87.65 197⇑ *e*O 15 42 00.0
EBAN Banos Encina 87.75 308 P **P 15 41 59.0 -0.5**
EBAN pmax pmax
comp=Z,28nm,1.3s,mb5.3
EBAN Banos Encina 87.75 308 P **P 15 41 59.0 -0.5**
comp=Z,28nm,1.3s,mb5.3
ECOG Cogollos-Vega 87.77 307 P **P 15 41 59.5 -0.1**
comp=Z,1.0nm,1.4s,mb3.9
EGUA Guajares 87.86 307 P **P 15 42 00.2 +0.2**
comp=Z,210nm,0.9s,mb6.4
PAB San Pablo 87.89 310 PFAKE 15 42 10.0 +10
PAB LR LR
comp=Z,330nm,20.0s,MS4.7
ELUQ Luque 88.25 308 P **P 15 42 01.9 0.0**
EADA Adamuz 88.36 308 P **P 15 42 03.3 +0.9**
comp=Z,89nm,2.8s,mb5.5
EMIJ Mijas 88.86 307 P **P 15 42 02.7 -2.1**
comp=Z,120nm,3.0s
EPLA Plasencia 89.08 311 P **P 15 42 07.3 +1.6**
EPLA pmax pmax
comp=Z,29nm,2.1s,mb5.2
EPLA Plasencia 89.08 311 P **P 15 42 07.3 +1.6**
comp=Z,29nm,2.1s,mb5.2
EJIF Jimena Fronter 89.43 307 P **P 15 42 06.9 -0.6**
EJIF pmax pmax
comp=Z,124nm,1.5s,mb6.0
EJIF Jimena Fronter 89.43 307 P **P 15 42 06.9 -0.6**
comp=Z,124nm,1.5s,mb6.0
MVO Moncorvo 89.52 312 P **P 15 42 09.2 +1.4**
MVO Moncorvo 89.52 312 *e*P **P 15 42 09.2 +1.4**
comp=Z,48nm,1.9s,mb5.5
ESPR Espera 89.64 307 P **P 15 42 09.5 +1.1**
comp=Z,112nm,2.8s,mb5.7
RPZ Rata Peaks 89.75 135 LR LR 16 24 10.1
comp=Z,µm,18.8s,MS5.3,baz=196,slow=37
SFS San Fernando 90.01 307 PFAKE 15 42 20.0 +10
SFS LR LR
comp=Z,µm,20.0s,MS5.3
EMIN Mina Concepcio 90.06 308 P **P 15 42 11.3 +0.9**
comp=Z,126nm,2.7s,mb5.8
MTE Manteigas 90.08 311 PFAKE 15 42 20.0 +10
MTE LR LR
comp=Z,405nm,19.0s,MS4.9
MTE Manteigas 90.08 311 *e*P **P 15 42 12.0 +1.6**
comp=Z,43nm,2.2s,mb5.4
EBAD Badajoz 90.09 309 P **P 15 42 11.6 +1.1**
comp=Z,96nm,2.2s,mb5.7
TTA Tatalina 90.10 25 *e*P **P 15 42 11.1 +1.1**
PMRV Marv??o 90.21 310 *e*P **P 15 42 11.2 +0.2**
comp=Z,29nm,2.4s,mb5.2
PBAR Barrancos 90.25 309 *e*P **P 15 42 12.6 +1.4**
comp=Z,77nm,1.5s,mb5.8
PESTR Estremoz 90.50 310 *e*P **P 15 42 13.1 +0.7**
comp=Z,24nm,2.1s,mb5.2
SUMG Summit 90.70 347 *e*P **P 15 42 14.1 +1.5**
comp=Z,27nm,0.9s,mb5.6
SUMG Summit 90.70 347 *i* P **P 15 42 13.1 +0.5**
comp=Z,20nm,1.0s,mb5.4
SUMG
comp=Z,840nm,21.0s
EGRO El Granado 90.75 308 P **P 15 42 14.8 +1.3**
comp=Z,203nm,2.3s,mb6.0
SDPT Sand Point 90.89 33 *e*P **P 15 42 12.3 -1.5**
comp=Z,32nm,0.8s,mb5.7
EVO Evora 90.90 309⇓ *i* P **P 15 42 15.6 +1.3**
comp=Z,44nm,1.2s,mb5.4
EVO *e*MLR MLR
comp=Z,508nm,20.5s,MS4.6
EVO Evora 90.90 309 *e*P **P 15 42 15.6 +1.3**
comp=Z,35nm,1.3s,mb5.5
PBEJ Beja 90.92 309 *e*P **P 15 42 16.0 +1.6**
comp=Z,42nm,1.3s,mb5.6
PTOM Tomar 90.92 311 *e*P **P 15 42 16.1 +1.7**
comp=Z,75nm,1.2s,mb5.9
PVAQ Vaqueiros 90.96 308 *e*P **P 15 42 15.9 +1.3**
comp=Z,59nm,1.5s,mb5.7
SVW2 Sparrevohn 91.06 27 *e*P **P 15 42 15.8 +1.3**
PBDV Barranco-do-Ve 91.16 308 *e*P **P 15 42 17.3 +1.8**
comp=Z,64nm,1.2s,mb5.8
BPAW Bear Paw Mtn. 91.59 23 *e*P **P 15 42 17.1 +0.3**
comp=Z,57nm,1.2s,mb5.8
BPAW *e* pP 15 42 25.7 -0.4
PPLA Purkeypile 91.69 24 *e*P **P 15 42 17.5 +0.1**
comp=Z,46nm,1.4s,mb5.6
SNZO South Karori 91.79 132 PFAKE 15 42 30.0 +12
SNZO LR LR
comp=Z,µm,20.0s,MS5.5
PFVI Vila Bisbo 91.88 308 *e*P **P 15 42 20.4 +1.5**
TRF Thorofare Moun 92.17 23 *e*P **P 15 42 19.6 0.0**
comp=Z,16nm,0.8s,mb5.4
COLA College 92.36 22 *e*P **P 15 42 19.9 -0.5**
COLA pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
COLA MLR MLR
comp=Z,933nm,20.0s,MS5.2
COLA College 92.36 22 *e*P **P 15 42 19.9 -0.5**
comp=Z,8.0nm,0.9s,mb5.0
COLA LR LR
comp=Z,933nm,20.0s,MS5.2
MCK McKinley 92.56 23 *e*P **P 15 42 21.5 +0.1**
MCK pmax pmax
comp=Z,23nm,0.9s,mb5.6
MCK McKinley 92.56 23 *e*P **P 15 42 21.5 +0.2**
comp=Z,23nm,0.9s,mb5.6
RSO Reloubt South 92.58 27 *e*P **P 15 42 21.9 +0.4**
URZ Urewera 92.96 128 LR LR 16 25 02.1
comp=Z,µm,21.9s,MS5.3,baz=104,slow=36
PMR Palmer 93.58 25 *e*P **P 15 42 26.7 +0.6**
PMR pmax pmax
comp=Z,15nm,1.1s,mb5.3
PMR Palmer 93.58 25 *e*P **P 15 42 26.7 +0.6**
comp=Z,15nm,1.1s,mb5.3
RC01 Rabbit Creek A 93.58 25 *e*P **P 15 42 25.9 -0.3**
comp=Z,75nm,1.3s,mb6.0
OHAK Old Harbor 93.81 30 *e*P **P 15 42 27.2 0.0**
comp=Z,20nm,0.8s,mb5.6
KDAK Kodiak Island 93.89 29 LR LR 16 30 27.2
comp=Z,µm,19.1s,MS5.5,baz=309,slow=39
KDAK Kodiak Island 93.89 29 *e*P **P 15 42 26.2 -1.4**
KDAK pmax pmax
comp=Z,67nm,1.5s,mb5.8
KDAK MLR MLR
comp=Z,µm,19.0s,MS5.5
KDAK Kodiak Island 93.89 29 *e*P **P 15 42 26.2 -1.4**
comp=Z,66nm,1.5s,mb5.8
KDAK LR LR
comp=Z,µm,19.0s,MS5.5
PAX Paxson 94.28 23 *e*P **P 15 42 29.7 +0.4**
PAX pmax pmax
comp=Z,33nm,1.6s,mb5.5
PAX Paxson 94.28 23 *e*P **P 15 42 29.7 +0.3**
comp=Z,33nm,1.6s,mb5.5
EGAK Eagle 94.76 20 *e*P **P 15 42 31.5 0.0**
comp=Z,4.9nm,0.9s,mb4.9
EGAK LR LR
comp=Z,µm,19.0s,MS5.4
MENT Mentasta 94.96 22 *e*P **P 15 42 33.5 +1.1**
DBIC Dimbokro 95.33 278 LR LR 16 27 01.6
comp=Z,552nm,18.1s,MS5.1,baz=48,slow=36
DBIC Dimbokro 95.33 278 PFAKE 15 42 50.0 +15
DBIC LR LR
comp=Z,501nm,19.0s,MS5.0
BMRM Bremner River 95.75 24 *e*P **P 15 42 37.0 +0.8**
comp=Z,31nm,1.1s,mb5.5
SBA Scott Base 97.44 168 PFAKE 15 42 50.0 +6.7
SBA LR LR
comp=Z,949nm,19.0s,MS5.3
SFJD Kangerlussuaq 97.66 346 PFAKE 15 43 00.0 +15
SFJD LR LR
comp=Z,710nm,21.0s,MS5.1
QSPA South Pole Qui 100.80 180 PFAKE 15 43 10.0 +11
QSPA LR LR
comp=Z,µm,20.0s,MS5.5
YKA Yellowknife Ar 103.98 12 PP PP 15 47 26.3 -3.3
comp=Z,0.2nm,0.4s,baz=337,slow=7.4,SNR=3.1
SACV Santiago Islan 111.12 291 PFAKE 15 48 00.0 +15
SACV LR LR
comp=Z,280nm,20.0s,MS4.8
SCHQ Schefferville 112.09 347 PP PP 15 48 30.6 +1.7
comp=Z,4.2nm,0.8s,baz=16,slow=9.2,SNR=5.2
SCHQ Schefferville 112.09 347 PFAKE 15 48 00.0 +14
SCHQ LR LR
comp=Z,µm,22.0s,MS5.6
FFC Flin Flon 113.57 9 PFAKE 15 48 00.0 +12
FFC LR LR
comp=Z,849nm,20.0s,MS5.3
NLWA Neilton Lookou 113.80 26 PFAKE 15 48 00.0 +11
NLWA LR LR
comp=Z,µm,19.0s,MS5.4
NEW Newport 115.72 21 PFAKE 15 48 00.0 +7.3
NEW LR LR
comp=Z,731nm,19.0s,MS5.3
COR Corvallis 116.23 27 PFAKE 15 48 10.0 +16
COR LR LR
comp=Z,642nm,22.0s,MS5.2
HAWA Hanford 116.38 24 PFAKE 15 48 10.0 +16
HAWA LR LR
comp=Z,765nm,21.0s,MS5.3
C15A Salmond Ranch, 117.64 18⇑PKiKP PKiKP 15 47 55.7 -0.8
baz=117
HUMO Hull Mountain 117.92 29 PFAKE 15 48 10.0 +13
HUMO LR LR
comp=Z,846nm,20.0s,MS5.4
MSO Missoula 118.05 20 PFAKE 15 48 10.0 +13
MSO LR LR
comp=Z,619nm,20.0s,MS5.2
F11A Grangeville 118.09 22⇓PKiKP PKiKP 15 47 57.1 -0.2
baz=118
EGMT Eagleton 118.26 16 *e*PKPdf PKPdf 15 47 54.7 -2.9
EGMT LR LR
comp=Z,786nm,21.0s,MS5.3
G11A Walters Elk Ra 118.46 22⇓PKiKP PKiKP 15 47 57.5 -0.6
baz=118
BMO Blue Mountains 118.53 23 PFAKE 15 48 10.0 +12
BMO LR LR
comp=Z,846nm,19.0s,MS5.4
YBH Yreka Blue Hor 118.71 29 PFAKE 15 48 10.0 +11
YBH LR LR
comp=Z,907nm,20.0s,MS5.4
ULM Lac du Bonnet 118.72 6 PFAKE 15 48 10.0 +12
ULM LR LR
comp=Z,891nm,22.0s,MS5.3
F13A Darby 118.82 21⇓PKiKP PKiKP 15 47 57.9 -0.9
baz=118
H11A Donnelly 119.15 22⇓PKiKP PKiKP 15 47 59.8 +0.3
baz=119
DGMT Dagmar 119.19 12 PFAKE 15 48 10.0 +11
DGMT LR LR
comp=Z,997nm,20.0s,MS5.4
E17A Martinsdale 119.35 18⇑PKiKP PKiKP 15 47 59.9 +0.1
baz=119
WDC Whiskeytown Da 119.68 30 PFAKE 15 48 10.0 +9.5
WDC LR LR
comp=Z,666nm,21.0s,MS5.2
MOD Modoc 119.69 27 *e*PKPdf PKPdf 15 48 01.5 +1.0
MOD LR LR
comp=Z,µm,21.0s,MS5.5
BOZ Bozeman (W) 119.85 19 PFAKE 15 48 10.0 +9.3
BOZ LR LR
comp=Z,542nm,19.0s,MS5.2
H13A Challis 119.91 21⇑PKiKP PKiKP 15 48 01.0 +0.1
baz=120
WVOR Wild Horse Val 119.99 26 PFAKE 15 48 10.0 +8.9
WVOR LR LR
comp=Z,460nm,20.0s,MS5.1
I12A Atlanta 120.25 22⇓PKiKP PKiKP 15 48 01.7 0.0
baz=120
PPT Papeete 120.27 104 *e*LR LR 16 25 02.8
comp=Z,390nm,22.0s
MFID Camas Ranch 120.31 23⇑PKiKP PKiKP 15 48 02.7 +0.9
baz=120
LAO LASA Array 120.41 14 PFAKE 15 48 10.0 +8.2
LAO LR LR
comp=Z,835nm,20.0s,MS5.4
TBI Tubuai 120.46 111 *e*PS PS 15 59 24.1 +3.3
TBI *e*SS SS 16 05 56.5 -0.9
comp=Z,252nm,24.2s
TBI *e*LR LR 16 25 18.0
comp=Z,297nm,30.2s
TBI
comp=Z,456nm,24.0s
HOPS Hopland 120.62 31 PFAKE 15 48 10.0 +7.6
HOPS LR LR
comp=Z,915nm,20.0s,MS5.4
AGMN Agassiz Nation 120.65 6 PFAKE 15 48 10.0 +7.8
AGMN LR LR
comp=Z,987nm,20.0s,MS5.5
HLID Hailey 120.72 22⇑PKiKP PKiKP 15 48 03.6 +1.1
baz=120
HLID Hailey 120.72 22 *e*PKPdf PKPdf 15 48 02.7 +0.2
HLID LR LR
comp=Z,937nm,19.0s,MS5.5
J12A Stokes Ranch, 120.73 23⇑PKiKP PKiKP 15 48 03.7 +1.1
baz=120
J13A Cove Ranch, Pi 120.95 22⇓PKiKP PKiKP 15 48 03.2 +0.1
baz=121
RLMT Red Lodge 121.04 17 PFAKE 15 48 10.0 +7.0
RLMT LR LR
comp=Z,962nm,20.0s,MS5.4
LKWY Lake 121.20 18 PFAKE 15 48 20.0 +17
LKWY LR LR
comp=Z,2µm,19.0s,MS5.7
BEKR Beckworth 121.28 29⇑PKiKP PKiKP 15 48 03.3 -0.5
baz=121
EYMN Ely 121.33 3 PFAKE 15 48 10.0 +6.5
EYMN LR LR
comp=Z,902nm,22.0s,MS5.4
MCCM Marconi Confer 121.36 32 PFAKE 15 48 20.0 +16
MCCM LR LR
comp=Z,651nm,19.0s,MS5.3
PKME Peaks-Kenny Pk 121.56 344 PFAKE 15 48 20.0 +16
PKME LR LR
comp=Z,µm,19.0s,MS5.7
J15A Blackfoot 121.57 21⇓PKiKP PKiKP 15 48 03.6 -0.6
baz=121
REDW Red Top Meadow 122.14 19 *e*PKPdf PKPdf 15 48 05.8 +0.6
BMN Battle Mountai 122.24 26 PFAKE 15 48 20.0 +15
BMN LR LR
comp=Z,µm,19.0s,MS5.5
K16A Soda Springs 122.36 20⇑PKiKP PKiKP 15 48 05.7 -0.1
baz=122
M12A Wells 122.37 24⇓PKiKP PKiKP 15 48 06.8 +0.9
baz=122
AHID Auburn Hatcher 122.59 20 PFAKE 15 48 20.0 +14
AHID LR LR
comp=Z,µm,21.0s,MS5.5
CMB Columbia Colle 122.70 30 PFAKE 15 48 20.0 +14
CMB LR LR
comp=Z,658nm,21.0s,MS5.3
N12A Clover Valley, 122.80 24⇑PKiKP PKiKP 15 48 08.0 +1.2
baz=122
N12A Clover Valley, 122.80 24 *e*PKPdf PKPdf 15 48 08.2 +1.6
ELK Elko 122.81 24 PFAKE 15 48 20.0 +13
ELK LR LR
comp=Z,µm,20.0s,MS5.5
BW06 Boulder Array 123.09 19 PFAKE 15 48 20.0 +13
BW06 LR LR
comp=Z,818nm,19.0s,MS5.4
PDAR Pinedale Array 123.09 19 PKP PKPdf 15 48 07.2 +0.2
comp=Z,1.9nm,0.6s,baz=54,slow=1.6,SNR=6.0
SAO San Andreas Ge 123.15 32 PFAKE 15 48 20.0 +13
SAO LR LR
comp=Z,778nm,21.0s,MS5.3
O11A Cowboy Ranch, 123.15 25⇓PKiKP PKiKP 15 48 08.1 +0.6
baz=123
LBNH Lisbon 123.17 346 PFAKE 15 48 20.0 +13
LBNH LR LR
comp=Z,µm,19.0s,MS5.9
COWI Conover 123.24 1 PFAKE 15 48 20.0 +13
COWI LR LR
comp=Z,908nm,19.0s,MS5.5
RSSD Black Hills 123.35 14 PFAKE 15 48 20.0 +13
RSSD LR LR
comp=Z,µm,20.0s,MS5.5
LONY Lake Ozonia 123.38 348 PFAKE 15 48 20.0 +12
LONY LR LR
comp=Z,µm,19.0s,MS5.6
NVAR Mina Array Bea 123.39 28 PKP PKPdf 15 48 09.3 +1.6
comp=Z,4.9nm,0.9s,baz=251,slow=1.9,SNR=26
O12A Currie 123.41 24⇓PKiKP PKiKP 15 48 07.5 -0.5
baz=123
HWUT Hardware Ranch 123.45 21 *e*PKPdf PKPdf 15 48 08.0 +0.2
HWUT LR LR
comp=Z,µm,19.0s,MS5.5
PMSA Palmer Station 123.66 192 PFAKE 15 48 20.0 +13
PMSA LR LR
comp=Z,µm,22.0s,MS5.5
NCB Newcomb 123.94 348 PFAKE 15 48 20.0 +11
NCB LR LR
comp=Z,2µm,19.0s,MS5.9
P12A McGill 124.02 25⇓PKiKP PKiKP 15 48 09.2 0.0
baz=124
TPH Tonopah 124.17 28 PFAKE 15 48 20.0 +11
TPH LR LR
comp=Z,µm,20.0s,MS5.6
DUG Dugway 124.23 23 *e*PKIKP PKPdf 15 48 10.0 +0.7
DUG MLR MLR
comp=Z,µm,21.0s,MS5.5
P13A Bates Ranch, G 124.40 24⇓PKiKP PKiKP 15 48 10.1 +0.2
baz=124
S10A Tonopah Range, 124.58 27⇓PKiKP PKiKP 15 48 09.9 -0.4
baz=124
DAU Daniels Canyon 124.62 21 *e*PKIKP PKPdf 15 48 08.7 -1.3
P14A Drum Mountains 124.66 23⇑PKiKP PKiKP 15 48 10.1 -0.4
baz=124
R11A Troy Canyon, C 124.67 26⇑PKiKP PKiKP 15 48 11.2 +0.7
baz=124
Q13A Wheeler Ranch, 124.82 25⇓PKiKP PKiKP 15 48 10.5 -0.3
baz=124
N19A John Jarvie Ra 124.90 19⇑PKiKP PKiKP 15 48 10.6 -0.3
baz=125

GRAC	Grapevine Rang	124.98	29	⇓PKiKP	PKiKP	15 48 11.3	+0.1
	baz=125						
O17A	Robinson Place	124.99	21	⇑PKiKP	PKiKP	15 48 11.4	+0.3
	baz=125						
ECSD	EROS Data Cent	125.07	8	*e*PKPdf	PKPdf	15 48 10.5	-0.3
ECSD				LR	LR		
	comp=Z,1μm,21.0s,MS5.5						
Q14A	Sevier Lake (B	125.09	24	⇑PKiKP	PKiKP	15 48 10.7	-0.6
	baz=125						
S11A	Rachel	125.19	27	⇑PKiKP	PKiKP	15 48 11.6	+0.1
	baz=125						
N20A	Spence Gulch,	125.25	19	⇑PKiKP	PKiKP	15 48 11.5	-0.1
	baz=125						
Q15A	Fillmore	125.44	23	⇑PKiKP	PKiKP	15 48 11.8	-0.2
	baz=125						
DAC	Darwin (Calif)	125.45	29	PFAKE		15 48 20.0	+8.2
DAC				LR	LR		
	comp=Z,1μm,20.0s,MS5.5						
R13A	O'Grain Ranch,	125.50	25	⇑PKiKP	PKiKP	15 48 12.5	+0.3
	baz=125						
ISA	Isabella	125.51	30	⇓PKiKP	PKiKP	15 48 11.2	-1.1
	baz=125						
P18A	Preston Nutter	125.67	21	⇑PKiKP	PKiKP	15 48 12.7	+0.3
	baz=125						
MPMC	Manual Prospec	125.68	29	⇓PKiKP	PKiKP	15 48 13.0	+0.4
	baz=125						
T11A	Corn Creek, Al	125.76	27	⇓PKiKP	PKiKP	15 48 12.6	-0.2
	baz=125						
MVU	Marysvale	125.93	23	PFAKE		15 48 20.0	+7.4
MVU				LR	LR		
	comp=Z,562nm,20.0s,MS5.2						
U10A	Ash Meadows, A	125.93	28	⇑PKiKP	PKiKP	15 48 13.8	+0.7
	baz=126						
MSU	Marysvale	125.94	23	*e*PKIKP	PKPdf	15 48 14.3	+1.7
Q16A	Castle Valley	125.96	22	⇓PKiKP	PKiKP	15 48 13.4	+0.3
	baz=126						
BINY	Binghamton	125.99	349	PFAKE		15 48 20.0	+7.4
BINY				LR	LR		
	comp=Z,2μm,19.0s,MS5.8						
LRMC	Laurel Mountai	126.05	30	⇓PKiKP	PKiKP	15 48 13.1	-0.3
	baz=126						
P19A	Cripple Cowboy	126.10	20	⇓PKiKP	PKiKP	15 48 13.4	0.0
	baz=126						
Q18A	Rafter H Ranch	126.18	21	⇑PKiKP	PKiKP	15 48 12.1	-1.4
	baz=126						
CCUT	Cedar City	126.29	25	*e*PKPdf	PKPdf	15 48 15.2	+1.9
SHOC	Shoshone	126.38	28	⇑PKiKP	PKiKP	15 48 14.2	+0.2
	baz=126						
JFWS	Jewell Farm	126.40	2	PFAKE		15 48 20.0	+6.6
JFWS				LR	LR		
	comp=Z,740nm,19.0s,MS5.4						
R16A	Teasdale	126.40	23	⇑PKiKP	PKiKP	15 48 14.8	+0.9
	baz=126						
T13A	Saint George	126.51	26	⇑PKiKP	PKiKP	15 48 13.8	-0.4
	baz=126						
Q19A	Hogan Spring (	126.61	21	⇑PKiKP	PKiKP	15 48 13.8	-0.5
	baz=126						
GSC	Goldstone	126.62	29	⇑PKiKP	PKiKP	15 48 14.7	+0.2
	baz=126						
GSC	Goldstone	126.62	29	*e*PKPdf	PKPdf	15 48 15.3	+1.3
ERPA	Erie	126.71	352	PFAKE		15 48 30.0	+16
ERPA				LR	LR		
	comp=Z,2μm,20.0s,MS5.7						
U12A	Valley of Fire	126.73	27	⇓PKiKP	PKiKP	15 48 15.0	+0.3
	baz=126						
OGNE	Ogallala	126.82	13	PFAKE		15 48 30.0	+16
OGNE				LR	LR		
	comp=Z,980nm,19.0s,MS5.5						
S16A	Weppner Ranch,	126.85	23	⇑PKiKP	PKiKP	15 48 14.6	-0.3
	baz=126						
AAM	Ann Arbor	126.89	356	PFAKE		15 48 30.0	+16
AAM				LR	LR		
	comp=Z,1μm,20.0s,MS5.5						
R18A	Canyonlands Na	126.90	21	⇑PKiKP	PKiKP	15 48 15.1	+0.1
	baz=127						
TUQ	Turquoise Moun	126.93	28	⇑PKiKP	PKiKP	15 48 15.8	+0.7
	baz=127						
ISCO	Idaho Springs	126.99	17	PFAKE		15 48 30.0	+15
ISCO				LR	LR		
	comp=Z,726nm,19.0s,MS5.4						
U13A	Pakoon Wash	127.00	26	⇑PKiKP	PKiKP	15 48 14.1	-1.1
	baz=127						
T15A	Red Dirt Ranch	127.15	24	⇑PKiKP	PKiKP	15 48 15.8	+0.3
	baz=127						
V12A	Nelson	127.18	27	⇓PKiKP	PKiKP	15 48 15.4	-0.2
	baz=127						
SCIA	State Center	127.23	5	PFAKE		15 48 30.0	+15
SCIA				LR	LR		
	comp=Z,1μm,21.0s,MS5.6						
U14A	Mt Trumbull	127.33	25	⇓PKiKP	PKiKP	15 48 15.7	-0.2
	baz=127						
V13A	Grand Canyon W	127.46	27	⇓PKiKP	PKiKP	15 48 15.9	-0.2
	baz=127						
Q22A	Crested Butte,	127.47	18	⇑PKiKP	PKiKP	15 48 16.7	+0.6
	baz=127						
S18A	Hurst Farm, Bl	127.48	22	⇓PKiKP	PKiKP	15 48 15.6	-0.5
	baz=127						
GMRC	Granite Mounta	127.59	29	⇓PKiKP	PKiKP	15 48 16.3	-0.1
	baz=127						
PV01	Paradox Valley	127.59	20	*e*PKPdf	PKPdf	15 48 16.8	+1.0
LDFC	Landfair	127.60	28	*e*PKPdf	PKPdf	15 48 17.3	+1.4
U15A	North Rim	127.69	25	⇑PKiKP	PKiKP	15 48 17.1	+0.5
	baz=127						
S19A	Harvey Farm, M	127.74	21	⇑PKiKP	PKiKP	15 48 16.4	-0.2
	baz=127						
T17A	Navajo Res., N	127.79	23	⇓PKiKP	PKiKP	15 48 16.9	+0.1
	baz=127						
SSPA	Standing Stone	127.85	350	PFAKE		15 48 30.0	+14
SSPA				LR	LR		
	comp=Z,2μm,19.0s,MS5.9						
T18A	Mexican Hat	128.01	22	⇓PKiKP	PKiKP	15 48 17.6	+0.4
	baz=128						
V14A	Boquillas Ranc	128.03	26	⇑PKiKP	PKiKP	15 48 18.1	+0.8
	baz=128						
W13A	Hualapai Mount	128.14	27	⇑PKiKP	PKiKP	15 48 18.2	+0.6
	baz=128						
RCBR	Riachuelo	128.15	271	PFAKE		15 48 30.0	+13
RCBR				LR	LR		
	comp=Z,545nm,20.0s,MS5.2						
PFO	Pinyon Flat Ob	128.15	30	PFAKE		15 48 30.0	+13
PFO				LR	LR		
	comp=Z,597nm,20.0s,MS5.3						
U17A	Shonto	128.19	23	⇓PKiKP	PKiKP	15 48 18.9	+1.3
	baz=128						
S21A	Coal Bank Pass	128.28	20	⇑PKiKP	PKiKP	15 48 18.7	+0.9
	baz=128						
IRM	Iron Mountain	128.34	29	⇓PKiKP	PKiKP	15 48 17.8	-0.2
	baz=128						
MVCO	Mesa Verde	128.44	21	PFAKE		15 48 30.0	+13
MVCO				LR	LR		
	comp=Z,735nm,19.0s,MS5.4						
S22A	4UR Ranch, Cre	128.51	19	⇑PKiKP	PKiKP	15 48 16.5	-1.7
	baz=128						
BC3	Big Chuckawall	128.60	29	⇓PKiKP	PKiKP	15 48 18.9	+0.4
	baz=128						
U18A	Rough Rock, Ch	128.65	23	⇓PKiKP	PKiKP	15 48 19.1	+0.6
	baz=128						
HDIL	Hopedale	128.78	1	PFAKE		15 48 30.0	+12
HDIL				LR	LR		
	comp=Z,741nm,19.0s,MS5.4						
WUAZ	Wupatki	128.85	24	PFAKE		15 48 30.0	+12
WUAZ				LR	LR		
	comp=Z,1μm,19.0s,MS5.5						
ACSO	Alum Creek Sta	128.89	355	PFAKE		15 48 30.0	+12
ACSO				LR	LR		
	comp=Z,1μm,19.0s,MS5.6						
SDCO	Great Sand Dun	128.93	18	*e*PKPdf	PKPdf	15 48 16.9	-1.4
SDCO				LR	LR		
	comp=Z,742nm,22.0s,MS5.3						
V17A	Tonalea, Kykot	128.99	24	⇑PKiKP	PKiKP	15 48 19.3	+0.1
	baz=129						
U19A	Dine' College,	129.01	22	⇓PKiKP	PKiKP	15 48 19.2	-0.1
	baz=129						
SWSC	Sam W. Stewart	129.02	30	⇑PKiKP	PKiKP	15 48 19.7	+0.3
	baz=129						
DVTC	Desert V Tower	129.09	31	⇑PKiKP	PKiKP	15 48 19.8	+0.3
	baz=129						
MCWV	Mont Chateau	129.10	352	PFAKE		15 48 30.0	+11
MCWV				LR	LR		
	comp=Z,3μm,19.0s,MS6.0						
X14A	Yava	129.11	27	⇑PKiKP	PKiKP	15 48 19.4	-0.1
	baz=129						
S24A	Houchin Ranch,	129.11	18	⇓PKiKP	PKiKP	15 48 20.1	+0.7
	baz=129						
W16A	Flagstaff	129.15	25	⇑PKiKP	PKiKP	15 48 19.0	-0.6
	baz=129						
T22A	Edith	129.16	19	⇓PKiKP	PKiKP	15 48 19.1	-0.4
	baz=129						
U20A	Newcomb	129.18	21	⇓PKiKP	PKiKP	15 48 19.8	+0.2
	baz=129						
V18A	Ganado	129.25	23	⇓PKiKP	PKiKP	15 48 19.2	-0.6
	baz=129						
S25A	Robets Cordova	129.32	17	⇑PKiKP	PKiKP	15 48 19.9	+0.1
	baz=129,SNR=5.9						
CBKS	Cedar Bluff	129.35	12	PFAKE		15 48 30.0	+11
CBKS				LR	LR		
	comp=Z,889nm,21.0s,MS5.4						
U21A	Nageezi	129.44	20	⇓PKiKP	PKiKP	15 48 19.7	-0.4
	baz=129						
KSU1	Kansas State U	129.62	9	PFAKE		15 48 30.0	+10
KSU1				LR	LR		
	comp=Z,765nm,20.0s,MS5.4						
Y15A	Casa Rosa Ranc	129.79	26	⇑PKiKP	PKiKP	15 48 21.2	+0.3
	baz=130						
T25A	Trinidad	129.81	17	⇓PKiKP	PKiKP	15 48 19.0	-1.9
	baz=130						
Z13A	Yuma Proving G	129.83	28	⇑PKiKP	PKiKP	15 48 18.6	-2.4
	baz=130						
U23A	El Rito	130.02	19	⇑PKiKP	PKiKP	15 48 20.8	-0.5
	baz=130						
CBN	Corbin	130.12	349	PFAKE		15 48 30.0	+9.4
CBN				LR	LR		
	comp=Z,2μm,20.0s,MS5.8						
V22A	San Miguel Ran	130.16	20	⇑PKiKP	PKiKP	15 48 20.6	-1.0
	baz=130,SNR=5.6						
W20A	Ramah	130.31	22	⇓PKiKP	PKiKP	15 48 21.6	-0.3
	baz=130						
U25A	Circle Dot Ran	130.50	17	⇓PKiKP	PKiKP	15 48 20.1	-2.1
	baz=130,SNR=9.3						
X19A	St. Johns	130.63	23	⇑PKiKP	PKiKP	15 48 21.9	-0.6
	baz=130						
Y17A	Roosevelt	130.64	25	⇓PKiKP	PKiKP	15 48 21.0	-1.6
	baz=130						
Y18A	Canyon Day Jun	130.91	24	⇓PKiKP	PKiKP	15 48 22.1	-1.0
	baz=131						
WCI	Wyandotte Cave	131.09	358	PFAKE		15 48 30.0	+7.6
WCI				LR	LR		
	comp=Z,1μm,20.0s,MS5.6						
ANMO	Albuquerque	131.19	20	SKPbc	SKPbc	15 51 47.8	+2.1
	comp=Z,4.3nm,1.1s,baz=344,slow=4.5,SNR=5.3						
ANMO	Albuquerque	131.19	20	PFAKE		15 48 30.0	+7.3
ANMO				LR	LR		
	comp=Z,755nm,19.0s,MS5.4						
CCM	Cathedral Cave	131.20	3	PFAKE		15 48 30.0	+7.3
CCM				LR	LR		
	comp=Z,921nm,20.0s,MS5.5						
LAZ	Ladron	131.45	21	*e*PKPdf	PKPdf	15 48 15.2	-8.1
BBSR	BB Station	131.49	333	PFAKE		15 48 30.0	+6.6
BBSR				LR	LR		
	comp=Z,858nm,20.0s,MS5.5						
BLA	Blacksburg	131.59	352	PFAKE		15 48 40.0	+17
BLA				LR	LR		
	comp=Z,2μm,19.0s,MS5.9						
LENM	Lemitar	131.72	21	*e*PKPdf	PKPdf	15 48 25.5	+1.7
TUC	Tucson	131.86	26	*e*PKIKP	PKPdf	15 48 18.2	-5.9
TUC				MLR	MLR		
	comp=Z,1μm,19.0s,MS5.6						
AMTX	Amarillo	132.67	15	PFAKE		15 48 40.0	+14
AMTX				LR	LR		
	comp=Z,1μm,20.0s,MS5.6						
CNNC	Cliffs of the	133.09	349	PFAKE		15 48 40.0	+14
CNNC				LR	LR		
	comp=Z,3μm,19.0s,MS6.0						
WVT	Waverly	133.21	360	PFAKE		15 48 40.0	+13
WVT				LR	LR		
	comp=Z,2μm,19.0s,MS5.8						
WMOK	Wichita Mounta	133.49	12	PFAKE		15 48 40.0	+13
WMOK				LR	LR		
	comp=Z,855nm,21.0s,MS5.4						
TKL	Tuckaleechee C	133.50	355	*e*PKIKP	PKPdf	15 48 20.7	-6.4
RKT	Rikitea	133.77	112	*e*LR	LR	16 31 22.7	
	comp=Z,466nm,23.5s						
MIAR	Mount Ida	134.50	6	PFAKE		15 48 40.0	+11
MIAR				LR	LR		
	comp=Z,891nm,22.0s,MS5.4						
MNTX	Cornudas Mount	134.51	21	PFAKE		15 48 40.0	+11
MNTX				LR	LR		
	comp=Z,657nm,20.0s,MS5.3						
OXF	Oxford	134.81	2	PFAKE		15 48 40.0	+10
OXF				LR	LR		
	comp=Z,1μm,20.0s,MS5.7						
NATX	Nacogdoches	137.11	8	PFAKE		15 48 50.0	+16
NATX				LR	LR		
	comp=Z,714nm,21.0s,MS5.4						
TXAR	Lajitas Array	137.26	20	PKP	PKPdf	15 48 35.3	+1.0
	comp=Z,3.8nm,1.1s,baz=82,slow=0.5,SNR=5.5						
TXAR				PP	PP	15 51 17.0	-0.6
	comp=Z,0.8nm,0.9s,baz=331,slow=7.7,SNR=2.3						
JCT	Junction City	137.34	15	PFAKE		15 48 50.0	+16
JCT				LR	LR		
	comp=Z,663nm,19.0s,MS5.4						
HKT	Hockley	138.70	10	PFAKE		15 48 50.0	+13
HKT				LR	LR		
	comp=Z,973nm,19.0s,MS5.6						
SPB	Sao Paulo	139.30	247	PFAKE		15 48 50.0	+12
SPB				LR	LR		
	comp=Z,646nm,20.0s,MS5.4						
KVTX	Kingsville	140.61	14	PFAKE		15 48 50.0	+10
KVTX				LR	LR		
	comp=Z,1μm,19.0s,MS5.7						
ANWB	Willy Bob	141.49	317	PFAKE		15 48 50.0	+7.7
ANWB				LR	LR		
	comp=Z,635nm,20.0s,MS5.4						
FDF	Fort de France	143.08	313	PFAKE		15 49 00.0	+15
FDF				LR	LR		
	comp=Z,1μm,20.0s,MS5.7						
GRTK	Grand Turk	143.72	333	PFAKE		15 49 00.0	+14
GRTK				LR	LR		
	comp=Z,1μm,19.0s,MS5.7						
SJG	San Juan	143.92	323	PKP	PKPdf	15 48 47.7	+1.2
	comp=Z,8.7nm,0.3s,baz=3.1,slow=16,SNR=3.8						
SJG	San Juan	143.92	323	PKP	PKPdf	15 48 47.7	+1.2
SJG				LR	LR		
	comp=Z,688nm,19.0s,MS5.4						
TRQA	Tornquist	144.25	217	PFAKE		15 49 00.0	+13
TRQA				LR	LR		
	comp=Z,816nm,21.0s,MS5.5						
GRGR	Grenville	145.15	310	PFAKE		15 49 00.0	+12
GRGR				LR	LR		
	comp=Z,720nm,20.0s,MS5.4						
SDDR	Presa de Saban	145.97	331	*e*PKPdf	PKPdf	15 48 50.7	+0.6
SDDR				LR	LR		
	comp=Z,2μm,19.0s,MS5.8						
PLCA	Paso Flores	146.50	205	PKPbc	PKPbc	15 48 52.5	+0.8
	comp=Z,17nm,0.8s,baz=116,slow=3.1,SNR=25						
PLCA	Paso Flores	146.50	205	PKPbc	PKPbc	15 48 52.5	+0.8
PLCA				LR	LR		
	comp=Z,963nm,20.0s,MS5.6						
GTBY	Guantanamo Bay	146.79	337	PFAKE		15 49 00.0	+8.6
GTBY				LR	LR		
	comp=Z,988nm,20.0s,MS5.6						
CPUP	Villa Florida	147.16	238	PKPbc	PKPbc	15 48 52.2	-1.9
	comp=Z,11nm,0.9s,baz=95,slow=2.4,SNR=13						
CPUP	Villa Florida	147.16	238	PKPbc	PKPbc	15 48 52.2	-1.9
CPUP				LR	LR		
	comp=Z,94nm,19.0s,MS4.6						
PCRV	Puerto La Cruz	148.63	311	PKPbc	PKPbc	15 48 57.0	-1.4
	comp=Z,30nm,0.9s,baz=38,slow=1.4,SNR=7.5						
TEIG	Tepich	149.06	0	PFAKE		15 49 10.0	+15
TEIG				LR	LR		
	comp=Z,673nm,22.0s,MS5.4						
MTDJ	Mount Denham	149.22	340	PFAKE		15 49 10.0	+15
MTDJ				LR	LR		
	comp=Z,878nm,21.0s,MS5.5						
CMIG	Matias Romero	151.38	14	PKPbc	PKPbc	15 49 05.3	+0.4
	comp=Z,18nm,0.8s,baz=326,slow=3.6,SNR=2.8						
CMIG				PKPab	PKPab	15 49 13.5	+0.6
	comp=Z,17nm,0.7s,baz=244,slow=8.4,SNR=3.0						
CMIG	Matias Romero	151.38	14	PKPbc	PKPbc	15 49 05.3	+0.4
CMIG				PKPab	PKPab	15 49 13.5	+0.6
SIV	San Ignacio	153.24	256	PKP	PKPdf	15 49 02.0	+0.4
	comp=Z,1.1nm,0.9s,baz=174,slow=4.5						
SIV				PKPbc	PKPbc	15 49 08.7	-0.4
	comp=Z,3.3nm,0.8s,baz=122,slow=4.3,SNR=5.0						
SIV				PKPab	PKPab	15 49 22.2	+1.3
	comp=Z,10nm,1.0s,baz=106,slow=5.2,SNR=7.2						
TGUH	Tegucigalpa,Un	155.18	358	PFAKE		15 49 20.0	+16
TGUH				LR	LR		
	comp=Z,534nm,22.0s,MS5.3						
BCIP	Isla Barro Col	158.42	337	PFAKE		15 49 20.0	+11
BCIP				LR	LR		
	comp=Z,834nm,19.0s,MS5.6						
ROSC	El Rosal	159.18	318	PKP	PKPdf	15 49 10.0	+0.4
	comp=Z,12nm,0.9s,baz=102,slow=19,SNR=3.7						
ROSC				PKPab	PKPab	15 49 48.1	+1.8
	comp=Z,10nm,0.7s,baz=90,slow=16,SNR=5.2						
LPAZ	La Paz	159.86	252	PKP	PKPdf	15 49 11.0	+0.8
	comp=Z,3.1nm,0.9s,baz=67,slow=6.1,SNR=9.5						
LPAZ				PKPab	PKPab	15 49 50.2	+0.8
	comp=Z,10nm,1.0s,baz=83,slow=5.0,SNR=12						
LPAZ	La Paz	159.86	252	PKP	PKPdf	15 49 11.0	+0.8
LPAZ				PKPab	PKPab	15 49 50.2	+0.8
LPAZ				LR	LR		
	comp=Z,866nm,20.0s,MS5.6						
OTAV	Otavalo	165.34	318	*e*PKPdf	PKPdf	15 49 16.4	+0.7
OTAV				LR	LR		
	comp=Z,473nm,20.0s						
NNA	Nana	168.90	263	PFAKE		15 49 30.0	+12
NNA				LR	LR		
	comp=Z,421nm,19.0s						
PAYG	Puerto Ayora	169.60	12	PFAKE		15 49 30.0	+11
PAYG				LR	LR		
	comp=Z,693nm,19.0s						

NEIC ***28*** *15:39:59.1±0.7, 10°.41N×91°.15E, h10km, mb4.2/2, Error ellipse: s-maj=16.6km s-min=14.0km az=75.0*
IDC ***28*** *15:40:00.8±1.5, 10°.79N×91°.92E, h0km, mb3.8/8, mb1 3.9/9, mb1mx3.7/25, mbtmp3.7/9, ML3.5/1, Error ellipse: s-maj=57.5km s-min=15.9km az=62.0*
ISCJB ***28*** *15:40:02.0±0.8, 10°.57N±0°.10×91°.5E±0°.2, h33km, mb3.8/10, Error ellipse: s-maj=24.3km s-min=12.2km az=159.6*

ISC 28 15:40:04.0±0.8, 10°.54N±0°.10×91°.5E±0°.2, h35km, n14, σ0s75/14, mb3.8/10, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	10.69	42	*e*Pn	Pn	15 42 34.5	-0.2
	2.6nm,0.6s						
CMAR	Chiang Mai Arr	10.69	42	Pn	Pn	15 42 28.8	-5.9
	0.1nm,0.3s,baz=233,slow=17,SNR=2.7						
PALK	Pallekele	11.11	254	*e*Pn	Pn	15 42 31.5	-9.0
	344nm,0.9s						
MK31	Makanchi Array	36.96	350	*e*P	P	15 47 09.0	-0.7
MKAR	Makanchi Array	36.96	350	P	P	15 47 10.0	+0.2
	1.3nm,0.8s,mb3.8,baz=127,slow=8.5,SNR=7.7						
SONM	Songino Array	39.24	16	P	P	15 47 27.9	-1.1
	0.3nm,0.5s,mb3.3,baz=199,slow=9.9,SNR=2.6						
KURK	Kurchatov	41.42	348	P	P	15 47 46.8	-0.2
	0.8nm,0.8s,mb3.4,baz=173,slow=7.5,SNR=3.7						
ZALV	Zalesovo Beam	43.62	354	P	P	15 48 05.5	+0.7
	0.5nm,0.4s,mb3.6,baz=162,slow=5.7,SNR=2.4						
FITZ	Fitzroy Crossi	44.14	130	P	P	15 48 09.6	+0.1
	3.0nm,0.5s,mb4.3,baz=322,slow=6.1,SNR=15						
BVAR	Borovoye Array	45.64	342	P	P	15 48 22.4	+1.4
	0.5nm,0.8s,mb3.5,baz=163,slow=10,SNR=2.7						
WRA	Warramunga Arr	51.95	126	P	P	15 49 10.2	+0.3
	0.8nm,0.3s,mb4.1,baz=300,slow=10,SNR=25						
WRAB	Tennant Creek	51.96	126	*e*P	P	15 49 09.7	-0.3
	3.8nm,0.8s,mb4.4						
ASAR	Alice Springs	53.65	130	P	P	15 49 23.4	+1.0
	0.9nm,0.5s,mb3.9,baz=304,slow=7.1,SNR=33						
MAW	Mawson	80.62	191	*e*P	P	15 52 11.5	-1.1
	1.0nm,0.6s,mb3.9						

IDC 28 15:42:24.4±7.2, 10°.56N×92°.50E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.5/23, mbtmp3.7/5, Error ellipse: s-maj=364.9km s-min=20.7km az=61.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	37.14	348	P	P	15 49 36.6	-0.2
	0.7nm,0.8s,baz=151,slow=8.8,SNR=3.3						
FITZ	Fitzroy Crossi	43.38	131	P	P	15 50 29.2	+0.3
	2.9nm,0.8s,baz=250,slow=5.0,SNR=4.5						
ZALV	Zalesovo Beam	43.71	353	P	P	15 50 31.2	+0.2
	0.3nm,0.3s,baz=164,slow=7.5,SNR=2.4						
WRA	Warramunga Arr	51.14	126	P	P	15 51 28.9	-0.5
	0.9nm,0.6s,baz=306,slow=8.5,SNR=8.8						
ASAR	Alice Springs	52.88	130	P	P	15 51 42.6	+0.2
	0.4nm,0.8s,baz=305,slow=6.8,SNR=5.9						

NEIC ***28*** *15:42:19.0, 13°.80N×93°.28W, h25km, MD5.1(MEX), After MEX.*
IDC ***28*** *15:42:59.7±1.5, 14°.30N×93°.05W, h0km, mb4.1/7, mb1 4.4/9, mb1mx4.2/18, mbtmp4.2/9, ML3.8/2, MS4.1/1, Ms1 4.0/1, ms1mx3.0/24, Error ellipse: s-maj=34.6km s-min=24.9km az=31.0*
CASC ***28*** *15:43:03.8±2.0, 13°.90N×93°.03W, h68km±115km, MD4.2*
MEX ***28*** *15:43:03.9±1.1, 14°.14N×93°.27W, h16km±104km, MD4.5*
ISCJB ***28*** *15:43:03.3±0.7, 14°.26N±0°.05×93°.11W±0°.05, h36km±6km, mb4.1/10, Error ellipse: s-maj=10.3km s-min=4.7km az=37.8*

ISC 28 15:43:04.7±0.7, 14°.26N±0°.05×93°.08W±0°.04, h36km±6km, n140, σ1s06/143, mb4.1/10, 36C-39D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	Jato	1.40	87	*e*P	Pn	15 43 28.2	+0.4
PCIG		1.44	355	*i* P	Pn	15 43 26.5	-1.9
PCIG				*e*S	Sn	15 43 46.2	+0.1
TP2	Tecpan 2	2.06	75	*e*P	Pn	15 43 37.7	+0.8
FUG	Fuego 3	2.18	85	*e*P	Pn	15 43 38.0	-0.5
FUG				*e*S	Sn	15 44 07.0	+2.7
TGIG		2.50	359	*i* P	Pn	15 43 43.8	+0.8
TGIG				*e*S	Sn	15 44 13.6	+1.3
APG	El Apazote	2.64	73	Pn	Pn	15 43 45.4	+0.5
	13nm,0.3s,baz=249,slow=4.7,SNR=29						
NBG	Las Nubes	2.67	83	*e*P	Pn	15 43 46.7	+1.5
HUIG	Huatulco	3.29	298	*i* P	Pn	15 43 51.2	-2.5
HUIG				*i* S	Sn	15 44 26.7	-5.0
RBDL	Robledal	3.29	92	*e*P	Pn	15 43 52.9	-0.9
CMIG	Matias Romero	3.31	329	Pn	Pn	15 43 53.0	-1.0
	12nm,0.3s,baz=134,slow=11,SNR=8.8						
CMIG				Sn	Sn	15 44 34.1	+2.0
	47nm,0.3s,baz=267,slow=15,SNR=9.4						
CMIG	Matias Romero	3.31	329	*e*P	Pn	15

226A	Malaga, Loving baz=19	20.39 332	⇑P	P	15 47 39.2 +0.8
UALR	University of	20.44 2	eP	P	15 47 39.0 0.0
CLNB	Carlsbad	20.46 333	eP	P	15 47 40.3 +1.1
324A	Moseley Ranch, baz=20,SNR=9.0	20.54 328	⇓P	P	15 47 40.8 +0.7
127A	Arkansas Junct baz=20	20.59 335	⇑P	P	15 47 40.0 -0.6
GDL2	Guadalupe Moun	20.62 332	eP	P	15 47 43.0 +2.0
MNTX	Cornudas Mount	20.69 329	eP	P	15 47 42.2 +0.5
ROSC	El Rosal 8.5nm,0.9s,baz=286,slow=23,SNR=5.0	20.70 115 P		P	15 47 44.8 +2.8
225A	Deer Hill, Car baz=20,SNR=7.5	20.76 331	⇑P	P	15 47 41.8 -0.7
126A	Clayton Basin, baz=20,SNR=6.6	20.84 333	⇓P	P	15 47 43.7 +0.3
GOGA	Godfrey	20.97 23	eP	P	15 47 42.2 -2.5
WMOK	Wichita Mounta	21.03 347	eP	P	15 47 43.9 -1.4
224A	Cornudas Mount baz=20,SNR=15	21.07 329	⇓P	P	15 47 46.1 +0.3
Z27A	Tatum baz=20,SNR=32	21.09 336	⇓P	P	15 47 45.5 -0.5
125A	Gardner Draw, baz=20,SNR=19	21.14 332	⇓P	P	15 47 47.1 +0.5
Z26A	Caprock baz=20,SNR=17	21.36 334	⇑P	P	15 47 49.2 +0.3
MSTX	Muleshoe baz=20	21.50 338	⇓P	P	15 47 49.1 -1.3
124A	Stringfield Ra baz=20,SNR=15	21.55 331	⇑P	P	15 47 51.5 +0.6
Y27A	Causey baz=20	21.57 337	⇑P	P	15 47 50.2 -1.0
Z25A	Roswell baz=21,SNR=7.5	21.69 333	⇑P	P	15 47 52.0 -0.4
Y26A	Elida baz=21,SNR=23	21.86 335	⇓P	P	15 47 53.9 -0.5
123A	Bell Site, Whi baz=21	21.89 329	⇓P	P	15 47 56.0 +1.4
222A	Williams Famil baz=21,SNR=6.7	21.90 327	⇓P	P	15 47 55.6 +0.8
AMTX	Amarillo	21.95 341	eP	P	15 47 54.8 -0.5
Z24A	Sheeppen Canyo baz=21	22.02 332	⇓P	P	15 47 57.2 +1.2
320A	Kipp Ranch, An baz=21	22.13 323	⇑P	P	15 47 58.0 +0.8
221A	Mesquite Ranch baz=21	22.20 325	⇑P	P	15 47 59.7 +1.8
Y25A	Mesa, Roswell baz=21,SNR=14	22.23 334	⇑P	P	15 47 57.5 -0.7
WVT	Waverly	22.28 11	eP	P	15 47 57.6 -1.1
Z23A	Rita Site, Whi baz=21,SNR=8.0	22.38 330	⇑P	P	15 48 00.5 +0.6
X26A	CR and CF Fran baz=21	22.41 336	⇑P	P	15 47 59.3 -0.8
220A	Playas Peak, P baz=22,SNR=6.7	22.54 324	⇑P	P	15 48 03.1 +1.5
Y24A	Capitan baz=22,SNR=14	22.55 332	⇑P	P	15 48 02.3 +0.6
W27A	Bowe Ranch, En baz=22,SNR=5.6	22.58 338	⇑P	P	15 48 00.7 -1.2
121A	Cookes Peak, D baz=22	22.60 326	⇓P	P	15 48 04.0 +1.8
319A	Douglas baz=22	22.60 322	⇑P	P	15 48 03.8 +1.6
Z22A	Elephant Butte baz=22,SNR=7.4	22.74 329	⇑P	P	15 48 04.0 +0.4
Y23A	Lovelace Mesa, baz=22,SNR=10	22.84 331	⇓P	P	15 48 04.9 +0.1
TKL	Tuckaleechee C 2.2nm,0.6s,mb3.8,baz=180,slow=6.1,SNR=3.2	22.89 20 P		P	15 48 04.2 -1.0
219A	White Tail Can baz=22,SNR=6.9	23.04 323	⇑P	P	15 48 08.0 +1.2
120A	U Bar Ranch, L baz=22	23.08 325	⇑P	P	15 48 07.9 +0.7
318A	Bisbee baz=22	23.08 321	⇑P	P	15 48 08.8 +1.5
W25A	X Bar L Ranch, baz=22,SNR=15	23.25 336	⇓P	P	15 48 09.4 +0.4
Y22A	Socorro baz=22,SNR=6.1	23.28 330	⇓P	P	15 48 10.8 +1.4
BNM	Barren Site	23.29 331	eP	P	15 48 10.8 +1.3
LPM	Los Pinos Moun	23.43 331	eP	P	15 48 11.4 +0.6
X23A	Hourglass Bar baz=22	23.44 332	⇓P	P	15 48 10.4 -0.6
Z20A	Nine Sixteen R baz=22,SNR=6.0	23.48 326	⇓P	P	15 48 12.2 +0.8
218A	Dragoon baz=23	23.49 322	⇓P	P	15 48 12.0 +0.6
119A	Ashpeak Ranch, baz=23,SNR=6.4	23.62 324	⇓P	P	15 48 11.5 -1.1
W24A	Lazy 6 Ranch, baz=23,SNR=5.6	23.63 334	⇓P	P	15 48 11.6 -1.0
CCM	Cathedral Cave	23.76 4	eP	P	15 48 10.4 -3.4
V25A	Rancho No Teng baz=23,SNR=13	23.85 336	⇓P	P	15 48 14.8 +0.1
ANMO	Albuquerque	23.87 332 P		P	15 48 15.6 +0.7
	2.8nm,0.9s,mb3.7,baz=159,slow=11,SNR=8.0				
ANMO	Albuquerque	23.87 332	eP	P	15 48 15.3 +0.4
118A	Homack Ranch, baz=23	23.91 323	⇑P	P	15 48 15.7 +0.4
Y20A	Horse Springs, baz=23,SNR=8.3	23.98 327	⇓P	P	15 48 17.4 +1.5
U26A	Atchley Ranch, baz=23,SNR=7.5	24.02 338	⇑P	P	15 48 15.1 -1.1
X21A	Alamocita Cree baz=23,SNR=10	24.10 329	⇓P	P	15 48 16.8 -0.2
117A	Oracle baz=23,SNR=5.3	24.32 322	⇑P	P	15 48 19.0 0.0
216A	Three Points, baz=24	24.38 320	⇓P	P	15 48 20.4 +0.9
CBKS	Cedar Bluff	25.16 348	eP	P	15 48 25.3 -1.2
SDCO	Great Sand Dun	25.86 337	eP	P	15 48 34.2 +1.2
PV04	Paradox Valley	27.82 333	eP	P	15 48 50.6 0.0
DAC	Darwin (Calif)	31.01 319	eP	P	15 49 13.5 -5.4
PDAR	Pinedale Array 1.2nm,0.8s,mb3.8,baz=146,slow=6.6,SNR=2.3	31.76 337 P		P	15 49 24.9 -0.5
L14A	Malta baz=32	32.72 332	⇑P	P	15 49 34.6 +0.8
REDW	Red Top Meadow	32.77 336	eP	P	15 49 34.6 +0.3
SNOW	Snow King Moun	32.81 336	eP	P	15 49 36.1 +1.5
NVAR	Mina Array Bea 3.1nm,0.8s,mb4.3,baz=138,slow=8.9,SNR=7.8	32.82 322	P	P	15 49 36.6 +1.9
NVAR			PcP	PcP	15 52 20.5 +1.3
	0.3nm,0.5s,baz=83,slow=2.2,SNR=3.9				
TPAW	Teton Pass	32.91 336	eP	P	15 49 36.0 +0.5
M12A	Wells baz=32	33.04 329	⇑P	P	15 49 37.9 +1.2
L11A	Cat Creek Ranc baz=33	34.02 329	⇓P	P	15 49 44.8 -0.5
F17A	Fitzpatrick Pl baz=34,SNR=6.5	34.85 338	⇑P	P	15 49 53.4 +1.0
H13A	Challis baz=34	35.17 333	⇓P	P	15 49 53.3 -1.8
F15A	Butte baz=34	35.48 336	⇓P	P	15 49 57.7 -0.1
D17A	Six Diamond Ra baz=35	35.94 339	⇓P	P	15 50 00.9 -0.7
ULM	Lac du Bonnet 4.6nm,0.6s,mb4.6,baz=141,slow=6.0,SNR=3.1	35.96 357 P		P	15 50 00.6 -1.2
G12A	Big Creek, Yel baz=35	36.08 333	⇓P	P	15 50 02.6 -0.3
J08A	Circle Bar Ran baz=35	36.26 328	⇓P	P	15 50 04.3 -0.2
F12A	Elk City baz=36	36.55 334	⇓P	P	15 50 06.1 -0.8
E13A	Victor baz=36	36.65 335	⇑P	P	15 50 06.9 -0.8
D13A	Huson baz=36	37.29 336	⇓P	P	15 50 13.3 +0.2
F10A	Beach Ranch, E baz=37,SNR=5.9	37.59 332	⇓P	P	15 50 15.9 +0.2
A14A	Double T Ranch baz=37	38.45 338	⇓P	P	15 50 22.6 -0.3
C11A	Tepee Creek (N baz=38	38.61 335	⇑P	P	15 50 24.4 0.0
SCHQ	Schefferville comp=Z,194nm,18.4s,baz=281,slow=38	45.35 21 LR		LR	16 11 48.0
YKA	Yellowknife Ar 8.1nm,0.7s,mb4.8,baz=151,slow=7.4,SNR=40	50.54 347 P		P	15 51 58.9 -0.3
YKA	Yellowknife Ar	50.54 347	P	P	15 51 58.9 -0.3
TRF	Thorofare Moun	62.96 335	eP	P	15 53 25.9 -1.5
ESDC	Sonseca Array 0.2nm,0.3s,mb3.5,baz=281,slow=5.2,SNR=5.1	80.38 52 P		P	15 55 09.8 -2.8
ESDC	Sonseca Array	80.38 52	P	P	15 55 09.8 -2.8
BILL	Bilibino	80.83 338	eP	P	15 55 12.8 -1.6
NB2	NORSAR Subarra comp=Z,0.4nm,0.6s,mb3.7,baz=288,slow=5.1	84.42 28	P	P	15 55 32.5 -0.7
NOA	NORSAR Array B comp=Z,0.5nm,0.8s,mb3.7,baz=296,slow=5.1,SNR=4.7	84.42 28	P	P	15 55 33.1 -0.1
ARCES	ARCESS Array B comp=Z,1.5nm,0.7s,mb4.3,baz=316,slow=8.5,SNR=3.9	86.22 18	P	P	15 55 40.2 -1.9
ARCES	ARCESS Array B	86.22 18	P	P	15 55 40.2 -1.9
TIXI	Tiksi	89.79 348	eP	P	15 55 58.0 -1.1
FINES	FINESS Array B comp=Z,1.6nm,0.9s,mb4.3,baz=307,slow=3.8,SNR=6.2	90.71 25	P	P	15 56 01.8 -1.7
WRA	Warramunga Arr comp=Z,0.4nm,0.8s,baz=88,slow=2.6,SNR=5.3	134.44 256	PKP	PKPdf	16 02 19.9 +0.1
WRA	Warramunga Arr	134.44 256	PKP	PKPdf	16 02 19.9 +0.1
ASAR	Alice Springs comp=Z,0.2nm,0.8s,baz=82,slow=2.2,SNR=3.1	134.76 251	PKP	PKPdf	16 02 21.0 +0.6
CMAR	Chiang Mai Arr comp=Z,3.6nm,0.8s,baz=338,slow=3.4,SNR=13	145.40 340	PKPbc	PKPbc	16 02 39.0 -0.6

IDC 28 15:44:45.4±8.5, 10°.54N×91°.40E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/23, mbtmp3.6/4, Error ellipse: s-maj=431.6km s-min=25.9km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array 0.3nm,0.7s,baz=171,slow=10,SNR=2.6	36.95	350	P	P	15 51 56.2	0.0
FITZ	Fitzroy Crossi 1.7nm,0.7s,baz=281,slow=19,SNR=3.9	44.18	130	P	P	15 52 56.6	+0.2
WRA	Warramunga Arr 0.6nm,0.5s,baz=303,slow=9.5,SNR=5.6	52.00	126	P	P	15 53 56.3	-0.6
ASAR	Alice Springs 0.4nm,0.8s,baz=306,slow=6.5,SNR=5.5	53.69	130	P	P	15 54 09.7	+0.4

IDC 28 15:47:52.8±1.3, 10°.83N×91°.93E, h0km, mb3.8/8, mb1 3.9/9, mb1mx3.6/25, mbtmp3.7/9, ML3.1/1, Error ellipse: s-maj=50.8km s-min=16.3km az=61.0
NEIC 28 15:47:54.9±0.7, 10°.91N×92°.10E, h10km, mb4.0/1, Error ellipse: s-maj=21.6km s-min=9.3km az=67.0
ISCJB 28 15:47:56.6±0.9, 11°.0N±0°.1×92°.2E±0°.2, h33km, mb3.8/9, Error ellipse: s-maj=27.8km s-min=12.8km az=154.3
ISC 28 15:47:58.6±0.9, 11°.0N±0°.1×92°.1E±0°.2, h35km, n13, σ0s61/13, mb3.8/9, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr 0.1nm,0.3s,baz=233,slow=15,SNR=2.8	9.96	41	Pn	Pn	15 50 18.6	-0.7
MK31	Makanchi Array	36.69	349	eP	P	15 55 02.2	+0.2
MKAR	Makanchi Array 1.2nm,0.7s,mb3.8,baz=126,slow=8.2,SNR=10	36.69	349	P	P	15 55 02.7	+0.6
MKAR	Makanchi Array	36.69	349	P	P	15 55 02.7	+0.6
SONM	Songino Array 0.3nm,0.4s,mb3.3,baz=238,slow=4.6,SNR=2.6	38.68	15	P	P	15 55 20.2	+1.3
KURK	Kurchatov 0.3nm,0.4s,mb3.3,baz=177,slow=7.4,SNR=5.0	41.18	347	P	P	15 55 39.3	-0.3
ZALV	Zalesovo Beam 0.3nm,0.4s,mb3.4,baz=148,slow=8.7,SNR=3.8	43.28	354	P	P	15 55 56.5	-0.2
ZALV	Zalesovo Beam	43.28	354	P	P	15 55 56.5	-0.2
FITZ	Fitzroy Crossi 2.2nm,0.4s,mb4.2,baz=93,slow=17,SNR=14	43.90	131	P	P	15 56 02.1	0.0
WRA	Warramunga Arr 2.2nm,0.7s,mb4.2,baz=306,slow=8.4,SNR=16	51.66	126	P	P	15 57 02.2	0.0
WRAB	Tennant Creek 0.7nm,0.3s,mb4.1	51.66	126	eP	P	15 57 02.2	-0.1
ASAR	Alice Springs 0.7nm,0.5s,mb3.9,baz=304,slow=7.2,SNR=32	53.40	130	P	P	15 57 15.4	+0.3
FINES	FINESS Array B 1.6nm,1.0s,mb3.9,baz=107,slow=1.5,SNR=2.8	69.08	332	P	P	15 58 59.6	-1.1

CSEM 28 15:51:19.4±0.2, 38°.88N×40°.29E, h10km, MD3.1, Error ellipse: s-maj=5.2km s-min=4.5km az=93.0
ISK 28 15:51:19.2, 38°.86N×40°.28E, h16km, MD3.1
ISCJB 28 15:51:19.6±0.8, 38°.88N±0°.03×40°.27E±0°.04, h8km±6km, Error ellipse: s-maj=5.8km s-min=5.0km az=24.3
DDA 28 15:51:20.9, 38°.73N×40°.25E, h7km±3km, Md2.9
ISC 28 15:51:20.8±0.6, 38°.85N±0°.03×40°.25E±0°.04, h16km±5km, n22, σ0s92/35, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTK	Pertek	0.67	274	ePG	Pg	15 51 33.1	-0.9
PTK				eSG	Sg	15 51 43.4	+0.5
PTK	Pertek	0.67	274	ePg	Pg	15 51 33.1	-0.9
PTK				eSg	Sg	15 51 43.4	+0.5
BNGL	BINGOL	0.71	81	i P	Pg	15 51 35.0	+0.3
BNGL				i S	Sg	15 51 45.9	+1.8
SVRC	Sivrice-ELAZID	0.88	238	ePG	Pg	15 51 37.0	-0.8
SVRC				eSG	Sg	15 51 50.1	+0.7
SVRC	Sivrice-ELAZID	0.88	238	ePg	Pg	15 51 37.0	-0.9
SVRC				eSg	Sg	15 51 50.1	+0.7
DIYA	Diyarbakir	0.93	186	i P	Pb	15 51 38.3	-0.3
DIYA				i S	Sb	15 51 50.9	+0.2
DIYA	Diyarbakir	0.93	186	i P	Pb	15 51 38.3	-0.3
DIYA				i S	Sb	15 51 50.9	+0.2
DIY	Diyarbakir	0.95	181	ePG	Pg	15 51 38.1	-1.2
DIY				eSG	Sg	15 51 51.7	-0.1
DIY	Diyarbakir	0.95	181	ePg	Pg	15 51 38.1	-1.2
DIY				eSg	Sg	15 51 51.7	-0.1
EZC	Erzincan	0.96	339	ePN	Pn	15 51 40.9	+1.2
ELZG	Elazig	1.05	251	i P	Pb	15 51 41.1	+0.4
ELZG				i S	Sb	15 51 56.0	+1.8
ELZG	Elazig	1.05	251	i P	Pb	15 51 41.1	+0.4
ELZG				i S	Sb	15 51 56.0	+1.8
BTMT	Batman	1.17	124	ePN	Pn	15 51 40.5	-2.1
BEST	Besiri	1.25	140	i P	Pn	15 51 43.5	-0.1
BEST				i S	Sb	15 52 00.3	+0.4
EZM	Erzurum	1.36	39	ePN	Pn	15 51 44.6	-0.6
MYA	Malataya	1.52	250	ePN	Pn	15 51 46.9	-0.6
MYA	Malataya	1.52	250	ePn	Pn	15 51 46.9	-0.5
MARD	Mardin	1.59	165	i P	Pn	15 51 48.4	+0.1
MARD				i S	Sn	15 52 09.6	+1.0
GUMT	Gumushane	1.71	340	ePN	Pn	15 51 49.1	-0.9
GUMT	Gumushane	1.71	340	ePn	Pn	15 51 49.1	-0.9
URFA	Urfa	1.80	219	ePN	Pn	15 51 50.5	-0.7
URFA	Urfa	1.80	219	ePn	Pn	15 51 50.5	-0.8

IDC 28 15:53:18.3±2.1, 10°.91N×92°.10E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.4/24, mbtmp3.5/5, ML3.2/1, Error ellipse: s-maj=71.1km s-min=24.3km az=67.0
NEIC 28 15:53:19.7±1.2, 10°.92N×92°.11E, h10km, mb3.8/1, Error ellipse: s-maj=30.0km s-min=13.9km az=81.0
ISCJB 28 15:53:21.7±1.6, 11°.0N±0°.1×92°.3E±0°.3, h33km, mb3.6/5, Error ellipse: s-maj=38.9km s-min=18.0km az=171.4
ISC 28 15:53:23.7±1.6, 11°.0N±0°.1×92°.2E±0°.3, h35km, n8, σ0s18/8, mb3.6/5, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr 0.1nm,0.3s,baz=235,slow=18,SNR=2.9	9.89	40	Pn	Pn	15 55 43.5	0.0
CMAR	Chiang Mai Arr	9.89	40	Pn	Pn	15 55 43.5	0.0
MKAR	Makanchi Array 0.2nm,0.5s,mb3.2,baz=153,slow=8.6,SNR=3.0	36.68	349	P	P	16 00 27.1	0.0
FITZ	Fitzroy Crossi 1.7nm,0.7s,mb3.9,baz=0.0,slow=5.1,SNR=3.9	43.86	131	P	P	16 01 26.8	-0.2
WRA	Warramunga Arr 0.6nm,0.5s,mb3.8,baz=305,slow=8.7,SNR=12	51.62	126	P	P	16 02 27.2	+0.1
WRA	Warramunga Arr	51.62	126	P	P	16 02 27.2	+0.1
WRAB	Tennant Creek 0.6nm,0.5s,mb3.8	51.62	126	eP	P	16 02 26.9	-0.2
ASAR	Alice Springs 0.2nm,0.5s,mb3.3,baz=308,slow=7.0,SNR=7.6	53.36	131	P	P	16 02 40.3	+0.3

IDC 28 15:54:32.2±1.9, 10°.64N×91°.57E, h0km, mb3.5/7, mb1 3.6/7, mb1mx3.4/23, mbtmp3.5/7, MS4.4/1, Ms1 4.4/1, ms1mx3.0/26, Error ellipse: s-maj=82.1km s-min=19.8km az=61.0
NEIC 28 15:54:33.0±2.4, 10°.58N×91°.57E, h10km, mb3.9/1, Error ellipse: s-maj=104.0km s-min=16.2km az=62.0
ISCJB 28 15:54:34.6±1.6, 10°.6N±0°.3×91°.6E±0°.4, h33km, mb3.5/8, Error ellipse: s-maj=71.4km s-min=15.9km az=150.0
ISC 28 15:54:37.1±1.6, 10°.6N±0°.3×91°.6E±0°.4, h35km, n9, σ0s93/8, mb3.5/8, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array 0.7nm,0.8s,mb3.5,baz=141,slow=7.8,SNR=5.2	36.91	349	P	P	16 01 41.6	-0.8
SONM	Songino Array 0.3nm,0.8s,mb3.1,baz=210,slow=8.3,SNR=2.4	39.12	16	P	P	16 02 01.4	+0.3
KURK	Kurchatov 0.3nm,0.5s,mb3.2,baz=170,slow=7.2,SNR=3.2	41.38	348	P	P	16 02 19.5	-0.2
ZALV	Zalesovo Beam 0.6nm,0.4s,mb3.7,baz=161,slow=11,SNR=3.4	43.55	354	P	P	16 02 37.8	+0.4
WRA	Warramunga Arr 0.2nm,0.4s,mb3.4,baz=300,slow=10,SNR=3.1	51.88	126	P	P	16 03 42.9	+0.5
WRAB	Tennant Creek 0.9nm,0.6s,mb3.9	51.88	126	eP	P	16 03 40.1	-2.4
ASAR	Alice Springs 0.3nm,0.7s,mb3.3,baz=308,slow=6.9,SNR=3.2	53.58	130	P	P	16 03 56.0	+1.1
FINES	FINESS Array B 1.1nm,0.8s,mb3.8,baz=142,slow=7.0,SNR=3.7	69.13	332	P	P	16 05 39.9	+0.3
SPITS	Spitsbergen Ar comp=Z,197nm,18.1s,baz=215,slow=44	76.65	348	LR	LR	16 50 23.6	

ISCJB 28 15:55:05.4±1.5, 10°.71N±0°.04×91°.74E±0°.04, h8km±9km, mb4.7/93, MS4.4/6, Error ellipse: s-maj=6.6km s-min=6.0km az=146.8
BJI 28 15:55:06.0, 10°.42N×91°.75E, h26km, mB5.3/9, mb4.8/26, Ms4.6/4, Ms7 4.4/4
IDC 28 15:55:06.0±0.4, 10°.71N×91°.67E, h0km, mb4.5/24, mb1 4.5/26, mb1mx4.5/31, mbtmp4.5/26, ML4.1/2, MS4.3/4, Ms1 4.3/4, ms1mx3.6/35, Error ellipse: s-maj=16.1km s-min=11.2km az=59.0
NEIC 28 15:55:07.3±0.2, 10°.68N×91°.67E, h10km, mb4.8/31, Error ellipse: s-maj=6.8km s-min=4.7km az=221.0
MOS 28 15:55:09.0±0.9, 10°.71N×91°.81E, h33km, mb5.0/39, Error ellipse: s-maj=10.6km s-min=5.0km az=121.8
SZGRF 28 15:55:09.5, 11°.09N×92°.50E, h33km, mb4.7, Andaman Islands, India, region
ISC 28 15:55:08.2±1.7, 10°.71N±0°.04×91°.68E±0°.04, h13km±10km, n224, σ0s86/217, mb4.7/93, MS4.4/6, 11C-9D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	Kulim 35nm,1.3s	10.38	121	ePn	Pn	15 57 35.7	-1.1
CM31	Chiang Mai Arr 6.6nm,0.6s	10.43	42	eP	Pn	15 57 37.1	-0.3
CMAR	Chiang Mai Arr 0.4nm,0.3s,baz=235,slow=15,SNR=11	10.43	42	Pn	Pn	15 57 37.2	-0.2
CMAR				Sn	Sn	15 59 33.6	-0.5
	0.0nm,0.3s,baz=229,slow=27,SNR=5.3						
CMAR				LR	LR	16 01 40.3	
	comp=Z,830nm,19.6s,baz=343,slow=38						
CMAR	Chiang Mai Arr	10.43	42	P	Pn	15 57 37.3	-0.1
CMAR						15 59 33.6	
PSI	Prapat 1.4nm,0.3s,baz=207,slow=6.8,SNR=3.9	10.64	137	Pn	Pn	15 57 40.4	0.0
PSI				LR	LR	16 02 24.4	
	comp=Z,2μm,19.6s,baz=263,slow=41						
CHTO	Chiang Mai	10.69	40	eP	Pn	15 57 42.1	+1.1
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CHTO	Chiang Mai comp=Z,9.2nm,0.9s	10.69	40	ePn	Pn	15 57 42.0	+1.1
PALK	Pallekele	11.37	253	eP	Pn	15 57 49.6	-0.8
SHL	Shillong	14.78	1	ePKP	Pn	15 58 38.0	+1.0
SHL				eS	Sn	16 01 20.0	-0.7
NGP	Nagpur	15.97	312	ePKP	Pn	15 58 50.5	-2.1
NGP				ex	x	15 59 11.9	
	comp=Z,26nm,1.2s						
NGP				eS	Sn	16 01 39.3	-10
ODAN	Odare	16.57	346	eP	Pn	15 59 00.0	-0.3
RAMN	Ramite	16.85	344	eP	Pn	15 59 03.7	-0.2
TAPN	Taplejung	16.97	348	eP	Pn	15 59 04.0	-1.4
JIRN	Jiri	17.64	344	eP	Pn	15 59 12.8	-0.9
KMI	Kunming	17.77	35	⇑P	Pn	15 59 16.8	+1.5
KMI				pP	pP	15 59 23.5	+3.7
KMI				pmax	pmax		
	comp=Z,14nm,1.1s						
PKI	Pulchoki comp=Z,55nm,0.5s	17.79	341	eP	Pn	15 59 14.6	-0.9
PKIN	Phulchoki comp=Z,67nm,0.5s	17.80	341	eP	Pn	15 59 15.5	-0.1
DMN	Daman comp=Z,38nm,0.5s	17.92	341	eP	Pn	15 59 17.7	+0.6
GUN	Gumba	17.96	343	eP	Pn	15 59 15.7	-2.0
KKN	Kakani	18.03	341	eP	Pn	15 59 18.4	-0.1
KSM	Kuching comp=Z,35nm,0.8s	20.65	115	ePn	P	15 59 47.6	-0.1
NDI	New Delhi	22.44	325	ePKP	P	16 00 06.0	-0.8
SDNR	Sundarnagar	24.77	329	ePKP	P	16 00 30.5	+0.8
LZH	Lanzhou	27.57	22	eP	P	16 01 00.5	+5.6
LZH				pP	pP	16 01 06.5	+7.5
LZH				sP	sP	16 01 10.0	+9.3
LZH				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.7						
GTA	Gaotai	29.49	13	⇓P	P	16 01 13.8	+1.8
GTA				pP	pP	16 01 19.5	+3.4
GTA				sP	sP	16 01 22.5	+4.8
GTA				PcP	PcP	16 04 19.3	+1.9
GTA				S	S	16 06 04.5	-1.6
GTA				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.8						
GTA				pmax	pmax		
	comp=Z,240nm,6.3s						
GTA				LR	LR		
	comp=N,490nm,15.3s,MS4.4						
GTA				LR	LR		
	comp=E,600nm,15.9s,MS4.4						
GTA				LR	LR		
	comp=Z,620nm,12.9s,MS4.4						
KSH	Kashi	31.92	337	P	P	16 01 32.5	-0.9
WMQ	Urumqi	33.17	355	eP	P	16 01 46.0	+1.7
WMQ				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.0						
UCH	Uchtor SNR=9.1	34.81	337	P	P	16 02 00.4	+1.8
KBK	Karagaybulak SNR=7.7	35.02	338	P	P	16 02 00.9	+0.5
TKM2	Tokmak 2 SNR=6.5	35.02	339	P	P	16 02 01.3	+0.9
AAK	Ala-Archa SNR=6.2	35.17	338	P	P	16 02 04.5	+2.8
AAK	Ala-Archa comp=Z,6.9nm,0.7s,mb4.7,baz=137,slow=5.8,SNR=15	35.17	338	P	P	16 02 03.3	+1.6
EKS2	Erkin-Say SNR=13	35.47	337	P	P	16 02 06.3	+2.1
EKS2	Erkin-Say	35.47	337	eP	P	16 02 05.9	+1.7
EKS2				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.1						
EKS2	Erkin-Say	35.47	337	eP	P	16 02 05.9	+1.7
	comp=Z,16nm,0.7s,mb5.1						
USP	Ospenovka SNR=9.2	35.72	338	P	P	16 02 07.7	+1.3
MK31	Makanchi Array	36.84	349	eP	P	16 02 15.6	-0.3
MKAR	Makanchi Array comp=Z,13nm,0.7s,mb4.9,baz=130,slow=8.4,SNR=59	36.84	349	P	P	16 02 16.2	+0.3
MKAR				PcP	PcP	16 04 37.5	-0.2
	comp=Z,1.8nm,0.7s,baz=99,slow=4.7,SNR=5.1						
SONM	Songino Array comp=Z,8.0nm,0.8s,mb4.5,baz=204,slow=7.7,SNR=46	39.03	16	P	P	16 02 34.7	+0.3
SONM				PcP	PcP	16 04 44.6	+0.1
	comp=Z,1.5nm,0.7s,baz=199,slow=3.9,SNR=4.4						
ULN	Ulaanbaatar	39.23	16	eP	P	16 02 36.6	+0.5
ULN				pmax	pmax		

FITZ LR LR 16 23 26.2
comp=Z,400nm,18.4s,MS4.4,baz=307,slow=39
NVS Novosibirsk 44.53 353 *eP* **P 16 03 17.1 -2.2**
RDF Al-Radifah 44.99 300 *eP* **P 16 03 24.2 +0.7**
RDF AMb AMB 16 03 25.9
comp=Z,20nm,1.1s,mb4.9
NAY Al-Naaiem 45.34 301 *eP* **P 16 03 26.6 +0.4**
NAY AMb AMB 16 03 28.7
comp=Z,10nm,0.7s,mb4.7
MIB Mutribah 45.40 301 *eP* **P 16 03 27.1 +0.4**
MIB AMb AMB 16 03 29.5
comp=Z,20nm,0.9s,mb5.0
BVAR Borovoye Array 45.55 342 P **P 16 03 26.8 -0.7**
comp=Z,3.3nm,0.8s,mb4.3,baz=142,slow=7.5,SNR=16
BRVK Borovoye 45.62 342⇓ *iP* **P 16 03 28.9 +0.9**
BRVK pmax pmax
comp=Z,18nm,2.5s,mb4.6
KAKA Kakadu 46.68 119 *eP* **P 16 03 37.4 +0.5**
AKTK Aktyubinsk 48.32 332 P **P 16 03 49.3 +0.2**
AKTO Aktyubinsk 48.32 332 P **P 16 03 49.3 +0.2**
comp=Z,6.0nm,0.7s,mb4.8,baz=122,slow=7.1,SNR=23
MJAR Matsushiro Arr 49.16 51 P **P 16 03 56.5 +0.7**
comp=Z,0.8nm,0.8s,mb3.8,baz=222,slow=5.8,SNR=6.0
MJAR PcP PcP 16 05 19.3 +0.1
comp=Z,1.4nm,0.5s,baz=240,slow=2.5,SNR=8.0
GNI Garni 50.74 314*c iP* **P 16 04 10.8 +3.0**
GNI pmax pmax
comp=Z,15nm,1.0s
WRA Warramunga Arr 51.87 126 P **P 16 04 16.0 -0.5**
comp=Z,2.2nm,0.5s,mb4.4,baz=300,slow=10.0,SNR=26
WRAB Tennant Creek 51.88 126 *eP* **P 16 04 16.3 -0.3**
WRAB pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
WRAB Tennant Creek 51.88 126 *eP* **P 16 04 16.3 -0.3**
comp=Z,9.2nm,0.6s,mb4.9
SVE Sverdlovsk 51.90 339 *eP* **P 16 04 16.9 +0.7**
SVE pmax pmax
comp=Z,24nm,0.7s,mb5.2
ZEI Tsey 52.33 316 *eP* **P 16 04 21.7 +2.0**
ZEI pmax pmax
comp=Z,6.0nm,0.4s,mb4.9
ARU Arti 52.36 337*d iP* **P 16 04 19.5 -0.1**
ARU *e* 16 06 15.6
ARU S **S 16 11 45.3 +0.5**
ARU SS SS 16 15 22.5 -0.1
ARU pmax pmax
comp=Z,15nm,1.0s,mb4.9
ARU Arti 52.36 337 *eP* **P 16 04 18.3 -1.4**
comp=Z,12nm,0.8s,mb4.9
ASAR Alice Springs 53.58 130 P **P 16 04 28.2 -0.9**
comp=Z,4.0nm,0.8s,mb4.4,baz=308,slow=6.8,SNR=17
ASAR PcP PcP 16 05 36.0 +0.1
comp=Z,2.2nm,1.0s,baz=298,slow=3.4,SNR=4.1
KIV Kislovodsk 53.60 317⇓ *eP* **P 16 04 31.0 +1.9**
KIV pmax pmax
comp=Z,25nm,0.7s,mb5.2
KIV MLR MLR
comp=Z,200nm,15.0s,MS4.3
KIV Kislovodsk 53.60 317 *eP* **P 16 04 30.0 +0.9**
comp=Z,24nm,0.8s,mb5.2
ASAJ Asahikawa 54.95 43 P **P 16 04 39.8 +0.9**
comp=Z,2.1nm,0.7s,mb4.3,baz=230,slow=6.3,SNR=3.1
SOKR Solikamsk 55.30 339*c iP* **P 16 04 42.9 +1.8**
SOKR pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
YAK Yakutsk 58.14 20 *eP* **P 16 05 00.6 -0.6**
YAK pmax pmax
comp=Z,12nm,0.8s,mb5.0
VSR Storozhevoye 58.69 324 *eP* **P 16 05 04.8 -0.5**
VSR pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
VSR pmax pmax
comp=N,4.0nm,0.6s
VSR pmax pmax
comp=E,3.0nm,0.4s
BRTR Keskin Array B 58.76 310 P **P 16 05 05.2 -0.9**
comp=E,3.6nm,0.7s,mb4.5,baz=120,slow=7.4,SNR=18
BR131 Keskin Array S 58.76 310 *eP* **P 16 05 04.4 -1.6**
comp=E,3.4nm,0.7s,mb4.5
OBN Obninsk 61.70 328⇑ *eP* **P 16 05 26.9 +1.0**
OBN *e* 16 07 42.7
OBN pmax pmax
comp=Z,51nm,1.7s,mb5.4
OBN MLR MLR
comp=Z,300nm,21.0s,MS4.4
STKA Stephens Creek 63.80 133 P **P 16 05 41.4 +1.1**
comp=Z,2.4nm,0.3s,mb4.7,baz=345,slow=13,SNR=4.3
AKASG Malin Array Be 64.44 321 P **P 16 05 42.8 -1.3**
comp=Z,4.8nm,0.6s,mb4.7,baz=89,slow=4.9,SNR=13
AKBB Malin Array Si 64.44 321 *eP* **P 16 05 42.8 -1.4**
TIXI Tiksi 64.97 12 *eP* **P 16 05 44.4 -2.8**
TIXI pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
TIXI Tiksi 64.97 12 *eP* **P 16 05 45.6 -1.7**
comp=Z,9.3nm,1.0s,mb4.8
VRI Vrincioaia 64.99 316⇓ P **P 16 05 49.4 +1.5**
PLOR Plostina 65.04 316⇑ P **P 16 05 49.0 +0.8**
MLR Muntele Rosu 65.46 315⇑ P **P 16 05 51.6 +0.7**
VOIR 66.08 315⇓ P **P 16 05 56.5 +1.6**
BURAR Bucovina Array 66.33 317⇓ P **P 16 05 57.1 +0.6**
BUR08 Bucovina Ar. S 66.35 317 *eP* **P 16 05 56.0 -0.6**
JOF Joensuu 67.26 334 *eP* **P 16 06 01.7 -0.4**
JOF pmax pmax
comp=Z,21nm,0.6s,mb5.3
JOF Joensuu 67.26 334 *ep* **P 16 06 01.7 -0.4**
comp=Z,21nm,0.6s,mb5.3
DRGR 67.89 316⇑ P **P 16 06 06.6 +0.2**
VSU Vasula 67.93 329⇑ *eP* **P 16 06 06.3 -0.1**
VSU pmax pmax
comp=Z,19nm,0.7s,mb5.2
LSZ Lusaka 67.98 249 *eP* **P 16 06 08.6 +1.2**
LSZ pmax pmax
comp=Z,8.0nm,1.4s,mb4.6
LSZ Lusaka 67.98 249 *eP* **P 16 06 08.6 +1.1**
comp=Z,7.8nm,1.4s,mb4.5
BZS Buzias 68.49 315⇑ P **P 16 06 11.2 +1.0**
CRVS Cervenica-Dubn 69.02 318 *eP* **P 16 06 14.9 +1.5**
CRVS pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
CRVS Cervenica-Dubn 69.02 318 *eP* **P 16 06 14.9 +1.5**
comp=Z,7.1nm,1.2s,mb4.5
FINES FINESS Array B 69.09 332 P **P 16 06 13.3 -0.3**
comp=Z,14nm,0.7s,mb5.0,baz=104,slow=8.0,SNR=46
FINES FINESS Array B 69.09 332 P **P 16 06 13.3 -0.3**
KAF Kangasniemi 69.18 333 *eP* **P 16 06 13.5 -0.7**
KAF pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
KAF Kangasniemi 69.18 333 *ep* **P 16 06 13.5 -0.7**
comp=Z,2.4nm,0.4s,mb4.5
OJC Ojcow 70.26 320 *eP* **P 16 06 19.8 -1.2**
PKSM Moragy 70.62 315⇑ P **P 16 06 23.0 -0.3**
VYHS Vyhne 70.69 318 *eP* **P 16 06 23.8 +0.1**
VYHS pmax pmax
comp=Z,14nm,2.4s,mb4.5
VYHS Vyhne 70.69 318 *eP* **P 16 06 23.8 +0.1**
comp=Z,14nm,2.4s,mb4.5
OKC Ostrava-Krasne 71.28 319 *eP* **P 16 06 27.6 +0.4**
OKC Ostrava-Krasne 71.28 319 *eP* **P 16 06 27.6 +0.4**
MORC Moravsky Berou 71.66 319⇑ P **P 16 06 30.5 +0.9**
ARCES ARCESS Array B 71.80 340 P **P 16 06 30.3 +0.3**
comp=Z,5.7nm,0.6s,mb4.7,baz=85,slow=5.8,SNR=30
ZST Bratislava 71.82 317 *eP* **P 16 06 30.9 +0.3**
ZST pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
ZST Bratislava 71.82 317 *eP* **P 16 06 30.9 +0.3**
comp=Z,6.3nm,0.9s,mb4.5
DPC Dobruska-Polom 72.49 319 *eP* **P 16 06 34.4 -0.1**
DPC Dobruska-Polom 72.49 319 *eP* **P 16 06 34.4 -0.1**
KSP Ksiaz 72.55 320 *eP* **P 16 06 34.8 -0.1**
UPC Upice 72.70 320 *eP* **P 16 06 36.8 +1.0**
UPC Upice 72.70 320 *eP* **P 16 06 36.8 +1.0**
PRU Pruhonice 73.61 319 *eP* **P 16 06 41.5 +0.3**
PRU Pruhonice 73.61 319 *eP* **P 16 06 41.5 +0.3**
PVCC Panska Ves 73.62 320 *eP* **P 16 06 41.2 0.0**
PVCC Panska Ves 73.62 320 *eP* **P 16 06 41.2 0.0**
BRG Berggiesshubel 74.04 320 *eP* **P 16 06 42.9 -0.7**
comp=Z,5.0nm,0.7s,mb4.5
GEC2 GERESS Array S 74.11 318 *eP* **P 16 06 43.3 -0.8**
comp=Z,5.0nm,0.7s,mb4.5
KHC Kasperske Hory 74.20 318 *eP* **P 16 06 43.2 -1.5**
KHC pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
KHC Kasperske Hory 74.20 318 *eP* **P 16 06 43.2 -1.4**
comp=Z,3.7nm,0.6s,mb4.5
KHC Kasperske Hory 74.20 318 *eP* **P 16 06 43.8 -0.9**

RUE Ruedersdorf 74.22 322 *eP* **P 16 06 44.2 -0.5**
BILL Bilibino 74.38 22⇓ *eP* **P 16 06 45.5 +0.2**
BILL pmax pmax
comp=Z,10.0nm,2.5s,mb4.3
CLL Collm 74.65 320 *eP* **P 16 06 46.7 -0.5**
comp=Z,8.0nm,1.2s,mb4.5
CLL Collm 74.65 320 *i P* **P 16 06 46.7 -0.5**
CLL pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
CLL MLR MLR
comp=Z,300nm,18.1s,MS4.6
WET Wettzell 74.66 318 *eP* **P 16 06 47.0 -0.3**
comp=Z,5.0nm,0.8s,mb4.5
RJOB Jochberg 74.69 317 *eP* **P 16 06 46.0 -1.5**
comp=Z,4.0nm,0.8s,mb4.4
GUNZ Gunzen 75.05 319 *eP* **P 16 06 49.4 -0.1**
WERD Werda 75.06 319 *eP* **P 16 06 49.3 -0.3**
BOSA Boshof 75.07 237 P **P 16 06 51.1 +1.1**
comp=Z,9.4nm,0.8s,mb4.8,baz=19,slow=4.5,SNR=15
MOX Moxa 75.51 320 *eP* **P 16 06 51.6 -0.6**
comp=Z,6.0nm,0.7s,mb4.6
GRF Grafenberg Arr 75.75 319 *eP* **P 16 06 53.4 -0.2**
comp=Z,12nm,0.7s,mb4.9
GRF Grafenberg Arr 75.75 319 *eP* **P 16 06 53.4 -0.2**
GRF pmax pmax
comp=Z,12nm,0.7s,mb4.9
NB2 NORSAR Subarra 76.09 330 P **P 16 06 54.2 -1.1**
comp=Z,5.9nm,0.7s,mb4.6,baz=97,slow=5.3
NOA NORSAR Array B 76.09 330 P **P 16 06 54.4 -0.8**
comp=Z,5.1nm,0.7s,mb4.6,baz=94,slow=5.7,SNR=34
NOA NORSAR Array B 76.09 330 P **P 16 06 54.4 -0.9**
CLZ Clausthal 76.30 321 *eP* **P 16 06 56.4 -0.3**
comp=Z,12nm,0.7s,mb4.9
BSEG Bad Segeberg 76.34 323 *eP* **P 16 06 57.4 +0.5**
comp=Z,14nm,1.0s,mb4.8
UBBA Unterbreizbach 76.53 320 *eP* **P 16 06 58.2 +0.2**
comp=Z,3.0nm,0.7s,mb4.3
SPITS Spitsbergen Ar 76.59 348 P **P 16 06 58.2 +0.3**
comp=Z,16nm,0.7s,mb5.0,baz=90,slow=12,SNR=6.7
SPITS Spitsbergen Ar 76.59 348 P **P 16 06 58.2 +0.3**
PGF Pioggiola 77.48 311 *eP* **P 16 07 03.0 -0.5**
comp=Z,8.2nm,0.7s,mb4.4
PGF Pioggiola 77.48 311 *eP* **P 16 07 03.0 -0.5**
PGF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
PGF Pioggiola 77.48 311 *eP* **P 16 07 03.0 -0.5**
comp=Z,4.1nm,0.7s,mb4.5
TNS Taunus Mts 77.54 319 *eP* **P 16 07 03.5 -0.2**
comp=Z,8.0nm,0.9s,mb4.7
KEST Kesra 77.65 304 P **P 16 07 04.9 +0.3**
comp=Z,3.1nm,0.8s,mb4.3,baz=64,slow=3.3,SNR=3.9
BUG Bochum--Univer 78.24 320 *eP* **P 16 07 07.7 +0.1**
comp=Z,3.0nm,0.6s,mb4.4
CDF Champ du Feu 78.38 317 *eP* **P 16 07 07.9 -0.5**
comp=Z,7.8nm,0.8s,mb4.4
CDF Champ du Feu 78.38 317 *eP* **P 16 07 07.9 -0.5**
CDF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
CDF Champ du Feu 78.38 317 *eP* **P 16 07 07.9 -0.5**
comp=Z,3.9nm,0.8s,mb4.4
LPG La Plagne 78.92 314 *eP* **P 16 07 11.5 +0.1**
comp=Z,16nm,0.7s,mb4.8
LPG La Plagne 78.92 314 *eP* **P 16 07 11.5 +0.1**
LPG pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
LPG La Plagne 78.92 314 *eP* **P 16 07 11.5 +0.1**
comp=Z,8.1nm,0.7s,mb4.8
LPL La Plagne 78.93 314 *eP* **P 16 07 11.6 +0.1**
comp=Z,18nm,0.7s,mb4.8
LPL La Plagne 78.93 314 *eP* **P 16 07 11.6 +0.1**
LPL pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
LPL La Plagne 78.93 314 *eP* **P 16 07 11.6 +0.1**
comp=Z,9.1nm,0.7s,mb4.8
MBDF Montbardon 78.95 314 *eP* **P 16 07 10.8 -0.9**
comp=Z,5.3nm,0.7s,mb4.3
MBDF Montbardon 78.95 314 *eP* **P 16 07 10.8 -0.9**
MBDF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
MBDF Montbardon 78.95 314 *eP* **P 16 07 10.8 -0.9**
comp=Z,2.7nm,0.7s,mb4.3
BNI Bardonecchia 79.00 314 *eP* **P 16 07 11.7 -0.2**
BNI pmax pmax
comp=Z,13nm,1.1s,mb4.8
BNI Bardonecchia 79.00 314 *eP* **P 16 07 11.7 -0.2**
comp=Z,13nm,1.1s,mb4.8
HAU Haudompre 79.02 317 *eP* **P 16 07 11.5 -0.5**
comp=Z,18nm,0.8s,mb4.8
FRF La Foret Royal 79.13 312 *eP* **P 16 07 12.2 -0.5**
comp=Z,30nm,1.2s,mb4.8
FRF La Foret Royal 79.13 312 *eP* **P 16 07 12.2 -0.5**
FRF pmax pmax
comp=Z,15nm,1.2s,mb4.8
FRF La Foret Royal 79.13 312 *eP* **P 16 07 12.2 -0.5**
comp=Z,15nm,1.2s,mb4.8
LMR La Mourre 79.25 312 *eP* **P 16 07 12.9 -0.4**
CABF La Chapelle 79.30 316 *eP* **P 16 07 13.5 0.0**
comp=Z,15nm,0.8s,mb4.7
ORIF Oris-en-Rattie 79.57 314 *eP* **P 16 07 14.4 -0.6**
comp=Z,7.4nm,0.8s,mb4.4
ORIF Oris-en-Rattie 79.57 314 *eP* **P 16 07 14.4 -0.6**
ORIF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
ORIF Oris-en-Rattie 79.57 314 *eP* **P 16 07 14.4 -0.6**
comp=Z,3.7nm,0.8s,mb4.4
MEZF Maizieres J'vi 79.85 318 *eP* **P 16 07 16.4 -0.1**
comp=Z,8.5nm,0.6s,mb4.6
GIVF Givet 79.87 319 *eP* **P 16 07 16.3 -0.2**
SMRF Simiane la Rot 79.87 313 *eP* **P 16 07 16.2 -0.5**
comp=Z,10nm,0.8s,mb4.5
SMRF Simiane la Rot 79.87 313 *eP* **P 16 07 16.2 -0.5**
comp=Z,10nm,0.8s,mb4.8
BAIF Baives 80.27 319 *eP* **P 16 07 18.7 0.0**
comp=Z,12nm,0.8s,mb4.6
BAIF Baives 80.27 319 *eP* **P 16 07 18.7 0.0**
BAIF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
BAIF Baives 80.27 319 *eP* **P 16 07 18.7 0.0**
comp=Z,6.0nm,0.8s,mb4.6
VIVF Saint-Julien-l 80.43 314 *eP* **P 16 07 19.6 -0.1**
comp=Z,26nm,0.8s,mb4.9
SSB Saint Sauveur 80.48 314 *eP* **P 16 07 18.7 -1.3**
SSB pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
SSB Saint Sauveur 80.48 314 *eP* **P 16 07 18.7 -1.3**
comp=Z,9.6nm,0.8s,mb4.8
LOR Lormes 80.76 316 *eP* **P 16 07 21.0 -0.4**
comp=Z,12nm,0.7s,mb4.6
SMF Signal de Mont 80.83 316 *eP* **P 16 07 21.4 -0.4**
comp=Z,17nm,0.7s,mb4.8
SSF Saint Saulge 81.02 316 *eP* **P 16 07 22.4 -0.4**
comp=Z,7.8nm,0.8s,mb4.4
LASF Ste Croix 81.09 313 *eP* **P 16 07 23.5 +0.3**
comp=Z,20nm,0.9s,mb4.8
AVF Avril sur Loir 81.15 316 *eP* **P 16 07 22.0 -1.5**
comp=Z,10.0nm,0.6s,mb4.6
BGF Bois d'Agland 81.53 316 *eP* **P 16 07 25.6 +0.1**
TCF Toulx Ste Croi 82.00 316 *eP* **P 16 07 27.9 -0.1**
comp=Z,7.8nm,0.8s,mb4.4
CAF Calviac 82.27 314 *eP* **P 16 07 29.7 +0.3**
comp=Z,7.4nm,0.8s,mb4.4
MTLF Montolieu 82.36 313 *eP* **P 16 07 30.0 0.0**
comp=Z,20nm,1.0s,mb4.7
MTLF Montolieu 82.36 313 *eP* **P 16 07 30.0 0.0**
MTLF pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
MTLF Montolieu 82.36 313 *eP* **P 16 07 30.0 0.0**
comp=Z,9.8nm,1.0s,mb4.7
TAM Tamanrasset 82.42 292 *eP* **P 16 07 31.9 +1.2**
TAM pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
TAM Tamanrasset 82.42 292 *eP* **P 16 07 31.9 +1.2**
comp=Z,3.6nm,0.8s,mb4.3
RJF Les Rejaudoux 82.60 315 *eP* **P 16 07 31.5 +0.3**
comp=Z,14nm,0.8s,mb4.8
LFF La Frestale 83.20 314 *eP* **P 16 07 34.5 +0.2**
LDF La Druitiere 83.25 318 *eP* **P 16 07 34.1 -0.4**
comp=Z,30nm,1.1s,mb5.0
LDF La Druitiere 83.25 318 *eP* **P 16 07 34.1 -0.4**
LDF pmax pmax
comp=Z,15nm,1.1s,mb4.9
LDF La Druitiere 83.25 318 *eP* **P 16 07 34.1 -0.4**
comp=Z,15nm,1.1s,mb4.9
FLN La Foliniere 83.47 318 *eP* **P 16 07 35.2 -0.4**
comp=Z,24nm,0.9s,mb4.9
FLN La Foliniere 83.47 318 *eP* **P 16 07 35.2 -0.4**
FLN pmax pmax
comp=Z,12nm,0.9s,mb4.9
FLN La Foliniere 83.47 318 *eP* **P 16 07 35.2 -0.4**
comp=Z,12nm,0.9s,mb4.9
MFF Saint Martin d 83.57 316 *eP* **P 16 07 35.9 -0.2**
comp=Z,19nm,0.7s,mb5.0
MFF Saint Martin d 83.57 316 *eP* **P 16 07 35.9 -0.2**
MFF pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
MFF Saint Martin d 83.57 316 *eP* **P 16 07 35.9 -0.2**
comp=Z,9.5nm,0.7s,mb5.0
GRR Gorron 83.77 318 *eP* **P 16 07 36.7 -0.4**
ESDC Sonseca Array 87.55 310 P **P 16 07 56.0 -0.2**
comp=Z,0.5nm,0.5s,mb4.0,baz=76,slow=4.3,SNR=3.6
ESDC Sonseca Array 87.55 310 P **P 16 07 56.0 -0.2**
SVW2 Sparrevohn 91.33 27 *eP* **P 16 08 14.9 +1.5**
KDAK Kodiak Island 94.17 29 P **P 16 08 26.8 +0.2**
comp=Z,3.3nm,0.7s,mb4.9,baz=280,slow=9.1,SNR=3.7
PDAR Pinedale Array 123.35 19 PKP PKPdf 16 14 05.9 +0.7
comp=Z,0.7nm,0.6s,baz=0.0,slow=0.7,SNR=4.5
NVAR Mina Array Bea 123.67 28 PKP PKPdf 16 14 06.8 +0.8
comp=Z,0.8nm,0.7s,baz=241,slow=1.1,SNR=4.7
MSU Marysvale 126.21 23 *e*PKIKP PKPdf 16 14 11.4 +0.5
TXAR Lajitas Array 137.53 20 PKP PKPdf 16 14 33.5 +1.0
comp=Z,0.5nm,0.7s,baz=350,slow=1.1,SNR=4.4
PLCA Paso Flores 146.22 205 PKPbc PKPbc 16 14 49.2 +0.6
comp=Z,3.9nm,0.7s,baz=155,slow=2.3,SNR=7.9
PLCA Paso Flores 146.22 205 PKPbc PKPbc 16 14 49.2 +0.6
CPUP Villa Florida 146.88 238 PKPbc PKPbc 16 14 51.1 +0.1
comp=Z,2.2nm,0.6s,baz=93,slow=7.7,SNR=9.6
PCRV Puerto La Cruz 148.62 311 PKPbc PKPbc 16 14 54.9 -1.1
comp=Z,9.1nm,0.6s,baz=10,slow=2.1,SNR=5.8
CFAA Coronel Fontan 152.11 219 PKPbc PKPbc 16 15 03.7 -0.2
comp=Z,0.7nm,0.6s,baz=132,slow=2.4,SNR=7.9
CFAA Coronel Fontan 152.11 219 PKPbc PKPbc 16 15 03.7 -0.3
SIV San Ignacio 152.99 256 PKPbc PKPbc 16 15 05.4 -0.9
comp=Z,1.0nm,0.4s,baz=135,slow=8.6,SNR=7.7
SIV PKPab PKPab 16 15 18.0 +0.4
comp=Z,1.8nm,0.7s,baz=113,slow=8.8,SNR=7.2
LPAZ La Paz 159.61 252 PKPab PKPab 16 15 48.2 +2.2
comp=Z,1.5nm,0.7s,baz=90,slow=3.8,SNR=5.4

MAN 28 16:04:34,10°.14N×126°.03E,h27km,mb5.0,ML3.9,MS4.0, 1C,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**1.23**	**199**	*eP*	Pn	16 04 55.8	+0.4
BESP	**Borongan**	**1.57**	**338**	*eP*	Pn	16 05 01.1	+1.0
CGP	**Cagayan de Oro**	**2.13**	**218**⇑	*eP*	Pn	16 05 08.2	+0.4
CGP				*eS*	Sn	16 05 34.8	+1.5
BUKP	**Musuan**	**2.44**	**203**	*eP*	Pn	16 05 13.7	+1.6
GUIM	**Jordan**	**3.42**	**278**	*eP*	Pn	16 05 27.6	+2.0
PVCP	**Virac**	**3.90**	**332**	*eP*	Pn	16 05 34.1	+2.0

IDC 28 16:06:29.6±4.6,0°.88S×139°.60E,h0km,mb3.5/2, mb1 3.7/3,mb1mx3.4/15,mbtmp3.5/3,ML3.7/1,Error ellipse: s-maj=182.6km s-min=30.5km az=85.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.63**	**195**	P	Pn	16 11 00.1	-1.1
0.2nm,0.3s,baz=16,slow=13,SNR=6.8							
ASAR	**Alice Springs**	**23.31**	**193**	P	P	16 11 39.7	+0.2
1.2nm,0.6s,baz=25,slow=9.5,SNR=22							
MKAR	**Makanchi Array**	**68.90**	**322**	P	P	16 17 36.2	-0.1
0.4nm,0.8s,baz=134,slow=7.0,SNR=3.5							

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*IDC **28** 16:16:57.4±1.1, 10°.63N×91°.61E, h0km, mb3.9/6, mb1 4.0/7, mb1mx3.6/24, mbtmp3.8/7, ML3.4/1, Error ellipse: s-maj=48.0km s-min=19.2km az=51.0*
*NEIC **28** 16:16:59.8±1.2, 10°.69N×91°.84E, h10km, mb3.9/1, Error ellipse: s-maj=30.8km s-min=14.3km az=81.0*
*ISCJB **28** 16:17:00.8±0.9, 10°.8N±0°.1×91°.9E±0°.2, h33km, mb3.9/7, Error ellipse: s-maj=25.3km s-min=16.0km az=151.7*
ISC 28 16:17:02.9±0.9,10°.7N±0°.1×91°.8E±0°.2,h35km,n9,σ0s68/9, mb3.9/7,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.34**	**41**	Pn	**Pn**	**16 19 28.3**	**-0.5**
0.1nm,0.3s,baz=236,slow=15,SNR=3.4							
MKAR	**Makanchi Array**	**36.83**	**349**	P	**P**	**16 24 08.6**	**+1.0**
0.2nm,0.6s,mb3.2,baz=139,slow=8.0,SNR=3.6							
FITZ	**Fitzroy Crossi**	**44.02**	**130**	P	**P**	**16 25 07.2**	**-0.3**
3.8nm,0.9s,mb4.1,baz=338,slow=6.3,SNR=7.9							
WRA	**Warramunga Arr**	**51.81**	**126**	P	**P**	**16 26 08.0**	**+0.2**
0.7nm,0.3s,mb4.0,baz=300,slow=10,SNR=25							
WRA	**Warramunga Arr**	**51.81**	**126**	P	**P**	**16 26 08.0**	**+0.2**
WRAB	**Tennant Creek**	**51.81**	**126**	*eP*	**P**	**16 26 07.5**	**-0.3**
1.1nm,0.7s,mb3.9							
ASAR	**Alice Springs**	**53.52**	**130**	P	**P**	**16 26 21.1**	**+0.7**
0.7nm,0.6s,mb3.8,baz=302,slow=7.1,SNR=21							
FINES	**FINESS Array B**	**69.11**	**332**	P	**P**	**16 28 05.7**	**+0.4**
1.4nm,0.9s,mb3.9,baz=230,slow=27,SNR=2.8							
KEST	**Kesra**	**77.71**	**304**	P	**P**	**16 28 55.2**	**-1.3**
1.9nm,0.4s,mb4.4,baz=11,slow=4.4,SNR=4.3							

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*IDC **28** 16:18:30.4±1.3, 10°.79N×91°.84E, h0km, mb3.9/9, mb1 4.0/10, mb1mx3.7/25, mbtmp3.9/10, ML3.6/1, Error ellipse: s-maj=51.7km s-min=15.8km az=60.0*
*NEIC **28** 16:18:31.9±0.6, 10°.81N×91°.87E, h10km, mb3.9/1, Error ellipse: s-maj=18.7km s-min=8.2km az=64.0*
*ISCJB **28** 16:18:33.7±0.8, 10°.9N±0°.1×92°.0E±0°.2, h33km, mb3.9/11, Error ellipse: s-maj=25.5km s-min=12.1km az=150.7*
ISC 28 16:18:35.7±0.8,10°.9N±0°.1×91°.9E±0°.2,h35km,n16, σ0s30/16,mb3.9/11,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.15**	**41**	Pn	**Pn**	**16 20 58.8**	**-0.3**
0.2nm,0.3s,baz=236,slow=15,SNR=7.1							
MK31	**Makanchi Array**	**36.74**	**349**	*eP*	**P**	**16 25 39.7**	**+0.1**
MKAR	**Makanchi Array**	**36.74**	**349**	P	**P**	**16 25 39.9**	**+0.3**
2.5nm,0.7s,mb4.2,baz=136,slow=8.7,SNR=18							
MKAR	**Makanchi Array**	**36.74**	**349**	P	**P**	**16 25 39.9**	**+0.3**
SONM	**Songino Array**	**38.82**	**16**	P	**P**	**16 25 57.8**	**+0.7**
0.6nm,0.5s,mb3.6,baz=188,slow=8.8,SNR=3.8							
KURK	**Kurchatov**	**41.22**	**347**	P	**P**	**16 26 16.8**	**-0.3**
1.1nm,0.6s,mb3.7,baz=173,slow=7.3,SNR=7.5							
ZALV	**Zalesovo Beam**	**43.35**	**354**	P	**P**	**16 26 34.5**	**+0.1**
1.0nm,0.5s,mb3.8,baz=172,slow=9.4,SNR=7.7							
ZALV	**Zalesovo Beam**	**43.35**	**354**	P	**P**	**16 26 34.5**	**+0.1**
FITZ	**Fitzroy Crossi**	**43.99**	**131**	P	**P**	**16 26 39.8**	**-0.2**
3.8nm,0.7s,mb4.2,baz=297,slow=3.5,SNR=8.7							
BVAR	**Borovoye Array**	**45.49**	**342**	P	**P**	**16 26 51.3**	**-0.2**
0.8nm,0.7s,mb3.7,baz=239,slow=38,SNR=3.7							
WRA	**Warramunga Arr**	**51.76**	**126**	P	**P**	**16 27 40.1**	**-0.1**
1.1nm,0.5s,mb4.0,baz=300,slow=10,SNR=13							
WRAB	**Tennant Creek**	**51.77**	**126**	*eP*	**P**	**16 27 40.2**	**0.0**
0.7nm,0.5s,mb3.9							
ASAR	**Alice Springs**	**53.49**	**130**	P	**P**	**16 27 53.4**	**+0.4**
0.5nm,0.5s,mb3.7,baz=305,slow=7.0,SNR=11							
JOF	**Joensuu**	**67.23**	**334**	*ep*	**P**	**16 29 25.9**	**-0.4**
1.7nm,0.5s,mb4.3							
JOF	**Joensuu**	**67.23**	**334**	*ep*	**P**	**16 29 25.9**	**-0.4**
1.7nm,0.5s,mb4.3							
FINES	**FINESS Array B**	**69.07**	**332**	P	**P**	**16 29 37.9**	**0.0**
0.6nm,0.5s,mb3.8,baz=100,slow=7.9,SNR=6.1							

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*IDC **28** 16:20:38.2±3.3, 14°.15N×93°.19W, h0km, mb3.7/3, mb1 4.1/6, mb1mx3.8/21, mbtmp3.7/6, ML3.5/3, Error ellipse: s-maj=69.3km s-min=25.8km az=12.0*
*ISCJB **28** 16:20:41.1±1.6, 14°.30N±0°.06×93°.22W±0°.04, h28km±13km, mb3.9/5, Error ellipse: s-maj=11.0km s-min=5.1km az=16.3*
*CASC **28** 16:20:42.2±1.3, 14°.19N×93°.18W, h45km±189km, MD4.0, mb3.9(NEIC)*
*NEIC **28** 16:20:43.6±2.1, 14°.27N×93°.01W, h35km, mb3.9/3, Error ellipse: s-maj=33.0km s-min=19.7km az=177.0*
*MEX **28** 16:20:44.3±1.3, 14°.32N×93°.25W, h16km±28km, MD4.2*
ISC 28 16:20:41.7±2.1,14°.29N±0°.07×93°.19W±0°.03,h20km±14km, n26,σ1s08/34,mb3.9/5,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.09**	**56**	*i P*	**Pb**	**16 21 00.9**	**-1.0**
THIG				*i* S	**Sb**	**16 21 15.9**	**+0.4**

PCIG		1.40	359	*i* P	Pn	16 21 06.1	-0.1
PCIG				*i* S	Sn	16 21 20.8	-3.3
JAT	Jato	1.51	89	*e*P	Pn	16 21 07.2	-0.4
TP2	Tecpan 2	2.16	77	*e*P	Pn	16 21 16.9	+0.4
FUG	Fuego 3	2.28	86	*e*P	Pn	16 21 17.0	-1.3
TGIG		2.47	2	*i* P	Pn	16 21 21.1	+0.2
TGIG				*i* S	Sn	16 21 49.5	-1.0
IXG	Ixpaco	2.66	92	*e*P	Pn	16 21 22.2	-1.3
IXG				*e*S	Sn	16 21 54.5	-0.6
APG	El Apazote	2.73	75	Pn	Pn	16 21 24.4	0.0
	5.7nm,0.3s,baz=188,slow=2.2,SNR=46						
APG				Sn	Sn	16 22 00.3	+3.4
	17nm,0.3s,baz=79,slow=22,SNR=5.4						
NBG	Las Nubes	2.77	84	*e*P	Pn	16 21 25.7	+0.7
HUIG	Huatulco	3.18	298	*e*P	Pn	16 21 29.7	-0.9
HUIG				*i* S	Sn	16 22 06.6	-1.4
CMIG	Matias Romero	3.22	330	Pn	Pn	16 21 31.8	+0.6
	5.6nm,0.3s,baz=139,slow=12,SNR=57						
CMIG				Sn	Sn	16 22 17.3	+8.2
	21nm,0.3s,baz=59,slow=18,SNR=12						
MRL	Marmol	3.47	77	*e*P	Pn	16 21 34.7	0.0
VHO	Vista Hermosa	4.39	309	*e*P	Pn	16 21 47.3	0.0
VHO				*i* S	Sn	16 22 38.0	+0.1
PNIG	Pinotepa	5.20	294	*e*P	Pn	16 21 58.0	-0.4
PNIG				*i* S	Sn	16 22 56.7	-1.2
TEIG	Tepich	7.54	38	*e*Pn	Pn	16 22 29.8	-0.8
TXAR	Lajitas Array	17.83	329	P	Pn	16 24 51.2	+2.4
	0.0nm,0.3s,baz=152,slow=11,SNR=13						
TXAR	Lajitas Array	17.83	329	P	Pn	16 24 51.2	+2.4
MIAR	Mount Ida	20.17	359	*e*P	P	16 25 15.3	+0.4
	4.8nm,1.0s						
AMTX	Amarillo	21.89	341	*e*P	P	16 25 36.0	+2.5
	8.8nm,0.6s,mb4.4						
PDAR	Pinedale Array	31.69	337	P	P	16 27 04.4	+0.6
	0.5nm,1.0s,mb3.3,baz=147,slow=4.1,SNR=2.6						
NVAR	Mina Array Bea	32.72	322	P	P	16 27 14.6	+1.5
	0.8nm,0.8s,mb3.7,baz=147,slow=8.9,SNR=4.4						
NVAR	Mina Array Bea	32.72	322	P	P	16 27 14.6	+1.5
MCMT	McKenzie Canyo	34.71	335	*e*P	P	16 27 32.7	+2.4
	0.8nm,0.8s,mb3.7						
YKA	Yellowknife Ar	50.48	347	P	P	16 29 37.8	-0.2
	2.5nm,0.7s,mb4.3,baz=151,slow=7.6,SNR=11						
YKA	Yellowknife Ar	50.48	347	P	P	16 29 37.8	-0.2
CMAR	Chiang Mai Arr	145.33	339	PKPbc	PKPbc	16 40 18.4	-0.4
	0.8nm,0.8s,baz=350,slow=4.0,SNR=6.9						

NEIC ***28*** *16:22:53.4±1.7, 10°.89N×92°.06E, h10km, mb4.0/1, Error ellipse: s-maj=76.6km s-min=11.0km az=63.0*
ISCJB ***28*** *16:22:55.6±1.4, 11°.0N±0°.2×92°.3E±0°.4, h33km, mb3.8/10, Error ellipse: s-maj=67.7km s-min=12.8km az=151.0*
IDC ***28*** *16:22:56.8±1.6, 10°.98N×92°.24E, h26km±5km, mb3.6/9, mb1 3.8/9, mb1mx3.5/24, mbtmp3.6/9, Error ellipse: s-maj=72.8km s-min=13.8km az=61.0*
ISC 28 16:22:58.0±1.4, 11°.0N±0°.2×92°.3E±0°.4, h35km, (h27km±1.2km:pP-P), n10, σ0s59/10, mb3.8/10, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	36.66	348	P		P	16 30 01.0	-0.3
	0.5nm,0.7s,mb3.5,baz=129,slow=9.6,SNR=4.3							
MKAR				pP		pP	16 30 08.9	-2.5
	1.5nm,0.6s,baz=130,slow=8.9,SNR=13							
SONM	Songino Array	38.57	15	P		P	16 30 18.0	+0.6
	0.3nm,0.5s,mb3.3,baz=230,slow=9.3,SNR=3.3							
SONM				pP		pP	16 30 26.1	-1.6
	0.3nm,0.4s,baz=202,slow=10,SNR=3.4							
KURK	Kurchatov	41.16	347	P		P	16 30 37.8	-1.1
	0.4nm,0.6s,mb3.2,baz=165,slow=7.2,SNR=3.6							
KURK				pP		pP	16 30 45.9	-3.2
	1.0nm,0.6s,baz=171,slow=7.4,SNR=5.0							
ZALV	Zalesovo Beam	43.24	354	P		P	16 30 55.9	+0.1
	0.3nm,0.4s,mb3.4,baz=163,slow=10,SNR=2.6							
ZALV				pP		pP	16 31 03.8	-2.3
	0.9nm,0.4s,baz=175,slow=8.5,SNR=4.5							
FITZ	Fitzroy Crossi	43.81	131	P		P	16 31 00.9	0.0
	4.6nm,0.7s,mb4.3,baz=286,slow=8.2,SNR=15							
WRA	Warramunga Arr	51.55	126	P		P	16 32 01.1	+0.2
	1.4nm,0.5s,mb4.1,baz=300,slow=10,SNR=5.0							
WRA				pP		pP	16 32 09.4	-2.1
	2.1nm,0.6s,baz=305,slow=8.7,SNR=7.9							
WRAB	Tennant Creek	51.56	126	*e*P		P	16 32 00.1	-0.9
	1.5nm,0.7s,mb4.0							
ASAR	Alice Springs	53.31	131	P		P	16 32 14.3	+0.5
	0.9nm,0.6s,mb3.9,baz=305,slow=7.1,SNR=36							
STKA	Stephens Creek	63.56	134	P		P	16 33 25.4	0.0
	2.1nm,0.9s,mb4.2,baz=130,slow=20,SNR=3.9							
FINES	FINESS Array B	69.11	332	P		P	16 34 01.2	+0.9
	0.7nm,0.7s,mb3.7,baz=329,slow=36,SNR=2.3							

NEIC ***28*** *16:28:35.7±0.4, 14°.38N×92°.84W, h35km, mb4.5/76, Error ellipse: s-maj=9.5km s-min=5.7km az=216.0*
BJI ***28*** *16:28:37.6, 14°.40N×92°.80W, h35km, mB5.2/5, Ms5.1/5, Ms7 4.8/6*
IDC ***28*** *16:28:38.4±3.8, 14°.28N×92°.82W, h62km±30km, mb3.9/12, mb1 4.2/14, mb1mx3.9/25, mbtmp4.0/14, ML3.8/2, MS4.1/2, Ms1 4.1/2, ms1mx3.7/19, Error ellipse: s-maj=39.2km s-min=17.8km az=39.0*
ISCJB ***28*** *16:28:41.1±1.1, 14°.64N±0°.07×92°.72W±0°.07, h92km±10km, mb4.4/76, Error ellipse: s-maj=13.5km s-min=7.2km az=135.2*
ISC 28 16:28:42.6±1.0, 14°.67N±0°.06×92°.71W±0°.07, h86km±9km, n144, σ0s99/130, mb4.4/76, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
APG	El Apazote	2.20	81	P		Pn	16 29 16.2	-1.1
	8.6nm,0.3s,baz=237,slow=5.6,SNR=21							
CMIG	Matias Romero	3.19	319	P		Pn	16 29 24.2	-6.4
	16nm,0.3s,baz=138,slow=10,SNR=48							
CMIG				LR		LR	16 31 09.1	
	comp=Z,2μm,18.6s,baz=145,slow=44							
CMIG	Matias Romero	3.19	319	P		Pn	16 29 24.2	-6.4
CMIG				LR		LR	16 31 09.1	
TGUH	Tegucigalpa,Un	5.30	96	Pn		Pn	16 29 53.0	-6.4
CNGN	Cerro Negro	6.23	110	*e*P		Pn	16 30 11.0	-0.9
MOMN	Momotombo	6.41	110	*e*P		Pn	16 30 15.7	+1.3
COPN	Copaltepe	6.45	112	*e*P		Pn	16 30 16.8	+1.9
CSAN		6.60	111	*e*P		Pn	16 30 19.6	+2.6
TEIG	Tepich	6.96	37	*e*Pn		Pn	16 30 22.1	+0.2
APON	Apoyo	7.02	112	*i* P		Pn	16 30 23.7	+0.9
SOR	Soroa	12.23	47	*e*P		Pn	16 31 33.0	-0.7
	baz=234							
HKT	Hockley	15.48	350	*e*Pn		Pn	16 32 15.0	-1.0
	64nm,1.9s							
DWPF	Disney	16.99	36	Pn		Pn	16 32 34.4	-0.4
	19nm,0.8s							
JCT	Junction City	17.04	339	*e*P		Pn	16 32 34.4	-0.9
	68nm,1.2s							
BRAL	Brewton	17.07	17	Pn		Pn	16 32 41.1	+5.2
	106nm,1.1s							
TXAR	Lajitas Array	17.76	327	P		Pn	16 32 43.9	-0.3
	0.1nm,0.3s,baz=152,slow=11,SNR=40							
TXAR	Lajitas Array	17.76	327	P		Pn	16 32 43.9	-0.3
LRAL	Lakeview Retre	19.01	15	P		Pn	16 32 56.5	-2.7
	12nm,1.1s							
MIAR	Mount Ida	19.81	358	*e*P		Pn	16 33 05.9	-2.6
	38nm,0.9s							
OXF	Oxford	19.98	8	*e*P		P	16 33 15.4	+7.3
	52nm,1.1s							
UALR	University of	20.02	1	*e*P		P	16 33 09.9	+1.3
	27nm,0.9s							
OTAV	Otavalo	20.11	134	P		P	16 33 07.2	-2.4
	9.0nm,1.2s							
CLNB	Carlsbad	20.26	332	*e*P		P	16 33 11.6	+0.4
	7.2nm,0.9s							
GDL2	Guadalupe Moun	20.44	331	*e*P		P	16 33 12.8	-0.3
GOGA	Godfrey	20.46	23	*e*P		P	16 33 13.8	+0.5
	40nm,1.1s							
MNTX	Cornudas Mount	20.54	328	*e*P		P	16 33 13.2	-1.0
	9.5nm,0.8s							
ROSC	El Rosal	20.55	116	*e*P		P	16 33 14.4	-0.1
WMOK	Wichita Mounta	20.72	346	*e*P		P	16 33 15.4	-0.6
	5.5nm,0.9s							
AMTX	Amarillo	21.69	340	*e*P		P	16 33 25.2	-1.2
	36nm,0.7s,mb4.8							
WVT	Waverly	21.81	11	P		P	16 33 27.7	0.0
	9.2nm,0.9s,mb4.1							
TKL	Tuckaleechee C	22.39	19	P		P	16 33 35.6	+1.7
	2.8nm,0.6s,mb3.8,baz=136,slow=17,SNR=4.1							
BNM	Barren Site	23.12	329	*e*P		P	16 33 41.3	0.0
	72nm,1.2s,mb4.9							
SIUC	Southern Illin	23.16	7	*e*P		P	16 33 41.2	-0.4
	26nm,1.5s,mb4.3							
LPM	Los Pinos Moun	23.25	330	*e*P		P	16 33 43.4	+0.9
LENM	Lemitar	23.30	329	*e*P		P	16 33 43.5	+0.6
CCM	Cathedral Cave	23.33	3	*e*P		P	16 33 42.4	-0.7
	12nm,0.9s,mb4.2							
LAZ	Ladron	23.57	329	*e*P		P	16 33 46.1	+0.7
	31nm,1.3s,mb4.5							
ANMO	Albuquerque	23.69	331	P		P	16 33 46.7	+0.3
	4.6nm,0.9s,mb3.8,baz=144,slow=9.8,SNR=12							
ANMO	Albuquerque	23.69	331	P		P	16 33 46.7	+0.2
TUC	Tucson	24.08	320	*e*P		P	16 33 48.9	-1.2
	21nm,1.2s,mb4.3							
WCI	Wyandotte Cave	24.14	12	P		P	16 33 46.9	-3.7
	6.2nm,0.8s,mb4.0							
KSU1	Kansas State U	24.58	353	*e*P		P	16 33 54.2	-0.3
CBKS	Cedar Bluff	24.84	347	*e*P		P	16 33 56.9	0.0
	26nm,0.9s,mb4.7							
SDCO	Great Sand Dun	25.64	336	*e*P		P	16 34 05.5	+1.3
	14nm,1.2s,mb4.3							
HDIL	Hopedale	25.96	6	*e*P		P	16 34 06.9	-0.1
	9.6nm,0.7s,mb4.3							
MVCO	Mesa Verde	26.48	331	*e*P		P	16 34 12.3	+0.5
	11nm,0.9s,mb4.3							
WUAZ	Wupatki	26.68	324	*e*P		P	16 34 11.6	-2.0
	6.8nm,0.9s,mb4.2							
SCIA	State Center	27.14	359	P		P	16 34 16.3	-1.3
	23nm,0.7s,mb4.8							
PV01	Paradox Valley	27.27	332	*e*P		P	16 34 19.6	+0.8
ISCO	Idaho Springs	27.47	338	*e*P		P	16 34 21.9	+1.2
	5.0nm,1.2s,mb3.9							
PV04	Paradox Valley	27.63	332	*e*P		P	16 34 23.0	+0.9
JFWS	Jewell Farm	28.23	4	*e*P		P	16 34 27.0	-0.3
	7.6nm,0.7s,mb4.3							
LDFC	Landfair	28.61	319	*e*P		P	16 34 29.6	-1.3
PHWY	Pilot Hill	28.75	340	*e*P		P	16 34 32.3	+0.3
	3.1nm,0.9s,mb3.9							
SRU	San Rafael	28.96	331	*e*P		P	16 34 33.8	-0.1
	3.0nm,1.0s,mb3.9							
ECSD	EROS Data Cent	29.16	354	*e*P		P	16 34 34.4	-1.2
	5.5nm,1.0s,mb4.1							
CCUT	Cedar City	29.25	325	*e*P		P	16 34 37.5	+1.0
	8.5nm,1.1s,mb4.3							
RWWY	Rawlins	29.71	338	*e*P		P	16 34 41.9	+1.4
	9.7nm,0.8s,mb4.5							
DAU	Daniels Canyon	30.33	331	*e*P		P	16 34 44.7	-1.3
CTU	Camp Tracy	30.79	331	*e*P		P	16 34 50.2	+0.2
RSSD	Black Hills	30.90	344	*e*P		P	16 34 51.7	+0.7
	3.2nm,0.7s,mb4.2							
DUG	Dugway	30.91	329	*e*P		P	16 34 49.8	-1.3
BINY	Binghamton	31.00	25	P		P	16 34 52.2	+0.3
	7.0nm,1.0s,mb4.3							
HWUT	Hardware Ranch	31.43	332	*e*P		P	16 34 55.0	-0.6
	5.9nm,1.2s,mb4.2							
BW06	Boulder Array	31.53	336	*e*P		P	16 34 56.5	0.0
	12nm,1.3s,mb4.5							
PDAR	Pinedale Array	31.53	336	P		P	16 34 56.6	+0.1
	1.4nm,0.9s,mb3.7,baz=134,slow=8.4,SNR=8.5							
BGU	Big Grassy Mou	31.58	330	*e*P		P	16 34 56.5	-0.5
	4.2nm,1.1s,mb4.1							
HVU	Hansel Valley	32.12	331	*e*P		P	16 35 02.6	+1.0
	7.9nm,1.0s,mb4.4							
SADO	Sadowa	32.14	18	P		P	16 35 04.7	+2.9
	6.6nm,1.0s,mb4.3,baz=288,slow=5.8,SNR=3.1							
N12A	Clover Valley,	32.53	328	*e*P		P	16 35 05.9	+0.5
	4.4nm,0.9s,mb4.3							
REDW	Red Top Meadow	32.55	335	*e*P		P	16 35 06.3	+0.9
	30nm,1.2s,mb5.0							
ELK	Elko	32.56	327	P		P	16 35 07.0	+1.4
	2.4nm,0.8s,mb4.1,baz=133,slow=5.6,SNR=9.4							
SNOW	Snow King Moun	32.59	335	*e*P		P	16 35 07.2	+1.4
	23nm,0.9s,mb5.0							
LOHW	Long Hollow	32.66	336	*e*P		P	16 35 07.2	+0.8
	7.1nm,0.9s,mb4.5							
TPAW	Teton Pass	32.70	335	*e*P		P	16 35 07.8	+1.1
	23nm,1.2s,mb4.9							
NVAR	Mina Array Bea	32.72	321	P		P	16 35 08.2	+1.2
	3.7nm,0.8s,mb4.3,baz=143,slow=9.4,SNR=24							
RRI2	Red Ridge	32.73	334	*e*P		P	16 35 08.5	+1.5
	21nm,1.3s,mb4.8							
IMW	Indian Meadow	33.03	335	*e*P		P	16 35 11.0	+1.4
	3.7nm,0.7s,mb4.3							
BMN	Battle Mountai	33.41	325	P		P	16 35 13.2	+0.2
	6.0nm,0.8s,mb4.5							
RLMT	Red Lodge	33.44	339	*e*P		P	16 35 13.3	+0.1
	7.7nm,1.0s,mb4.5							
WAKR	Walker	33.46	320	*e*P		P	16 35 12.6	-0.9
LONY	Lake Ozonia	33.59	24	*e*P		P	16 35 14.4	-0.1
	3.3nm,0.8s,mb4.2							
AGMN	Agassiz Nation	33.63	356	*e*P		P	16 35 14.0	-0.8
	7.8nm,0.8s,mb4.6							
CMB	Columbia Colle	33.78	319	*e*P		P	16 35 09.1	-7.1
	36nm,2.1s,mb4.8							
GCMT	Greycliff	34.16	339	*e*P		P	16 35 19.3	-0.1
	6.6nm,0.9s,mb4.5							
PAHR	Pah Rah Range	34.18	322	*e*P		P	16 35 20.2	+0.5
	19nm,1.2s,mb4.8							
HLID	Hailey	34.26	331	*e*P		P	16 35 21.1	+0.8
	3.9nm,0.8s,mb4.3							
MCMT	McKenzie Canyo	34.57	334	*e*P		P	16 35 25.0	+2.0
BOZ	Bozeman (W)	34.76	336	*e*P		P	16 35 24.8	+0.2
	4.3nm,1.1s,mb4.2							
DLMT	Dillon	34.91	335	*e*P		P	16 35 27.1	+1.2
	10nm,0.9s,mb4.7							
DGMT	Dagmar	35.01	347	*e*P		P	16 35 27.4	+0.6
	8.3nm,0.7s,mb4.7							
LRM	Limekiln Ridge	35.22	336	*e*P		P	16 35 29.0	+0.4
WVOR	Wild Horse Val	35.56	326	*e*P		P	16 35 31.3	-0.2
	17nm,1.2s,mb4.9							
ULM	Lac du Bonnet	35.58	357	P		P	16 35 31.0	-0.5
	4.8nm,0.7s,mb4.6,baz=186,slow=7.0,SNR=3.1							
ULM	Lac du Bonnet	35.58	357	*e*P		P	16 35 30.5	-1.1
HRY	Holter Researc	35.73	337	*e*P		P	16 35 33.8	+0.9
MOD	Modoc	36.12	324	*e*P		P	16 35 36.0	-0.4
	7.0nm,1.0s,mb4.5							
EGMT	Eagleton	36.13	341	*e*P		P	16 35 36.9	+0.6
	15nm,1.0s,mb4.9							
CHMT	Chamberlain Mo	36.44	336	*e*P		P	16 35 39.3	+0.3
BMO	Blue Mountains	36.60	330	*e*P		P	16 35 39.5	-0.9
	5.1nm,1.2s,mb4.3							
MSO	Missoula	36.64	335	*e*P		P	16 35 41.0	+0.3
	3.5nm,0.9s,mb4.3							
SWMT	Swartz Lake	37.22	336	*e*P		P	16 35 45.4	-0.2
JTMT	Jette	37.52	336	*e*P		P	16 35 48.6	+0.5
BSMT	Bassoo Peak	37.81	336	*e*P		P	16 35 48.9	-1.6
NEW	Newport	39.10	334	P		P	16 36 00.5	-0.9
	2.2nm,0.7s,mb4.1							
HOOD	Mount Hood Mea	39.12	327	*e*P		P	16 36 02.1	+0.6
	94nm,1.2s,mb5.5							
OD2	Odessa Site #2	39.13	332	*e*P		P	16 36 01.5	-0.2
LON	Longmire	40.16	329	*e*P		P	16 36 09.7	-0.6
	5.1nm,1.1s,mb4.3							
FFC	Flin Flon	40.62	352	*e*P		P	16 36 13.5	-0.3
	5.2nm,1.0s,mb4.3							
JCW	Jim Creek	41.22	330	*e*P		P	16 36 17.3	-1.6
NLWA	Neilton Lookou	41.64	328	*e*P		P	16 36 21.6	-0.7
	19nm,1.3s,mb4.7							
EDM	Edmonton	41.78	341	*e*P		P	16 36 23.6	+0.2
PGC	Sidney	42.27	330	*e*P		P	16 36 20.0	-7.5
	0.9nm,1.1s,mb3.4							
SIV	San Ignacio	43.65	133	P		P	16 36 34.9	-4.1
	2.9nm,1.0s,mb4.0,baz=299,slow=9.5,SNR=4.8							
YKA	Yellowknife Ar	50.22	347	P		P	16 37 30.1	+0.6
	12nm,0.8s,mb4.9,baz=150,slow=7.5,SNR=57							
YKA	Yellowknife Ar	50.22	347	P		P	16 37 30.1	+0.6
CPUP	Villa Florida	53.34	140	P		P	16 37 51.9	-1.3
	7.7nm,1.0s,mb4.7							
RKT	Rikitea	55.86	228	*e*LR		LR	16 54 17.4	
	514nm,25.0s							
RKT				*e*T			17 37 40.8	
	2.5nm,0.3s							
HYT	Haines Junctio	56.23	335	*e*P		P	16 38 11.2	-2.4
INK	Inuvik	59.61	344	*e*P		P	16 38 37.1	0.0
	9.5nm,0.9s,mb4.8							
EGAK	Eagle	59.84	338	*e*P		P	16 38 37.4	-1.4
	7.6nm,1.3s,mb4.6							
MCK	McKinley	62.30	335	*e*P		P	16 38 55.3	-0.1
	9.8nm,1.1s,mb4.8							
TRF	Thorofare Moun	62.74	335	*e*P		P	16 38 58.4	0.0
	17nm,1.2s,mb4.8							
PPLA	Purkeypile	63.33	334	*e*P		P	16 39 01.4	-0.9
	10nm,1.3s,mb4.6							
PPT	Papeete	64.59	242	*e*LR		LR	16 58 16.7	
	308nm,24.0s							
TTA	Tatalina	65.00	333	*e*P		P	16 39 11.9	-1.3
TBI	Tubuai	67.14	237	*e*LR		LR	16 59 26.8	
	219nm,25.0s,baz=59							
ESDC	Sonseca Array	79.84	52	P		P	16 40 42.0	+0.1
	0.7nm,0.7s,mb3.6,baz=278,slow=7.5,SNR=3.5							
BILL	Bilibino	80.59	338	*e*P		P	16 40 45.7	+0.4
	5.1nm,0.9s,mb4.3							
NOA	NORSAR Array B	83.89	28	P		P	16 41 03.4	+0.7
	1.8nm,1.0s,mb3.8,baz=290,slow=4.9,SNR=4.0							
NOA	NORSAR Array B	83.89	28	P		P	16 41 03.4	+0.7
ARCES	ARCESS Array B	85.72	18	P		P	16 41 12.7	+1.0
	2.2nm,0.8s,mb4.1,baz=354,slow=7.6,SNR=6.1							
TIXI	Tiksi	89.46	348	*e*P		P	16 41 28.8	-0.8
	3.3nm,0.8s,mb4.4							
PETK	Petropavlovsk-	89.71	325	LR		LR	17 24 26.9	
	comp=Z,71nm,18.1s,baz=271,slow=37							
HHC	Hu-ho-hao-te	120.35	339	*e*PKP		PKPdf	16 47 23.5	-0.7
HHC				sPKP			16 47 38.0	
HHC				PP		PP	16 48 54.5	+4.4
HHC				PKS			16 50 58.5	
HHC				SKS		SKSdf	16 54 30.5	+1.7
HHC				SS		SS	17 05 18.5	+7.4
HHC				AMB		AMB		
	comp=Z,51nm,6.5s							
HHC				LR		LR		
	comp=N,130nm,16.6s							
HHC				LR		LR		
	comp=E,220nm,17.8s							
HHC				LR		LR		
	comp=Z,130nm,22.6s							
WMQ	Urumqi	121.80	360	*e*PKP		PKPdf	16 47 32.0	+5.1
NJ2	Nanjing	124.57	327	*e*PKP		PKPdf	16 47 36.5	+3.9
LZH	Lanzhou	127.15	343	*e*PKP		PKPdf	16 47 42.0	+4.6
LZH				sPKP			16 47 56.5	
LZH				LR		LR		
	comp=N,150nm,18.3s							
LZH				LR		LR		
	comp=Z,240nm,20.5s							
CD2	Chengdu	132.00	341	*e*PKP		PKPdf	16 47 50.3	+3.5
CD2				sPKP			16 48 03.0	
CD2				PP		PP	16 50 14.3	+7.0
CD2				PKS			16 51 25.3	
CD2				SKS		SKSdf	16 54 56.5	+5.7
CD2				SKKS		SKKSac	16 57 01.0	+3.9
CD2				SS		SS	17 07 43.3	+6.7
CD2				AMB		AMB		
	comp=Z,160nm,10.2s							
CD2				LR		LR		
	comp=N,150nm,16.2s							
CD2				LR		LR		
	comp=Z,200nm,14.3s							
GYA	Guiyang	134.99	335	Pdif		Pdif	16 44 54.3	+0.7
GYA				PKP		PKPdf	16 47 54.8	+2.3
GYA				sPKP			16 48 11.0	
GYA				PP		PP	16 50 32.0	+5.4
GYA				PKS			16 51 30.5	
GYA				SKKS		SKKSac	16 57 18.8	+3.4
GYA				AMB		AMB		
	comp=Z,110nm,8.0s							
GYA				LR		LR		
	comp=N,120nm,20.2s							
GYA				LR		LR		
	comp=E,110nm,21.5s							
GYA				LR		LR		
	comp=Z,130nm,22.1s							
KMI	Kunming	137.68	339	PKP		PKPdf	16 47 59.3	+1.7
KMI				sPKP			16 48 14.5	
KMI				LR		LR		
	comp=Z,44nm,28.8s							
CHTO	Chiang Mai	144.81	341	*e*PKPdf		PKPdf	16 48 07.6	-2.9
CM31	Chiang Mai Arr	145.14	340	*e*PKPdf		PKPdf	16 48 09.6	-1.5
CMAR	Chiang Mai Arr	145.14	340	PKPbc		PKPbc	16 48 10.3	-0.4
	comp=Z,4.4nm,0.8s,baz=342,slow=4.1,SNR=30							

GCMT ***28*** *16:28:51.8±0.4, 14°.16N×93°.17W, h18km±1km, MW5.1, Moment Tensor Solution. s37,c47; s76,c100; Moment tensor: Scale 10^16Nm; Mrr4.24±.26; Mθθ-3.33±.17; Mφφ-0.90±.21; Mrθ2.83±.37; Mrφ1.11±.11; Mθφ-1.17±.47; Best double couple: M0:5.00000×10^16 NP1:φs291.00000°, δ26.00000°, λ89.00000°. NP2:φs112.00000°, δ64.00000°, λ91.00000°. Principal axes: T 5.2800, Plg71.0000°, Azm23.0000°; N -0.4700, Plg0.0000°, Azm292.0000°; P -4.8000, Plg19.0000°, Azm202.0000°; Data Used: II IU IC G CN.*
NEIC ***28*** *16:28:55.9±0.3, 14°.33N×92°.70W, h35km, mb4.9/111, MS4.7/6 Error ellipse: s-maj=7.7km s-min=4.2km az=221.0*
SZGRF ***28*** *16:28:57.6, 14°.61N×92°.78W, h29km, mb5.1, MS4.7, Near coast of Chiapas, Mexico*
ISCJB ***28*** *16:28:59.7±0.6, 14°.54N±0°.04×92°.68W±0°.03, h75km±5km, mb4.7/125, Error ellipse: s-maj=8.2km s-min=3.4km az=36.1*
IDC ***28*** *16:29:00.8±2.0, 14°.40N×92°.70W, h75km±17km,

comp=E,51nm,0.9s
CLNB Carlsbad 20.42 332 eP P 16 33 32.4 0.0
comp=E,12nm,0.7s
ROSC El Rosal 20.44 116 P P 16 33 34.4 +1.6
comp=E,23nm,0.8s,baz=118,slow=7.0,SNR=12
ROSC El Rosal 20.44 116 eP P 16 33 36.0 +3.3
127A Arkansas Junct 20.54 333 ⇓P P 16 33 32.9 -0.7
baz=21
324A Moseley Ranch, 20.54 327 ⇓P P 16 33 33.3 -0.3
baz=21
GDL2 Guadalupe Moun 20.59 331 P P 16 33 34.1 -0.2
MNTX Cornudas Mount 20.69 328 eP P 16 33 34.3 -1.0
comp=E,31nm,0.9s
225A Deer Hill, Car 20.74 330 ⇓P P 16 33 35.4 -0.4
baz=21
126A Clayton Basin, 20.80 332 ⇑P P 16 33 35.8 -0.8
baz=21
WMOK Wichita Mounta 20.87 346 eP P 16 33 36.3 -1.0
comp=E,16nm,0.8s
SDDR Presa de Saban 20.93 75 P P 16 33 37.5 -0.5
comp=E,16nm,0.8s
Z27A Tatum 21.02 335 ⇑P P 16 33 38.2 -0.7
baz=21
224A Cornudas Mount 21.06 328 ⇓P P 16 33 38.2 -1.1
baz=21
125A Gardner Draw, 21.11 331 ⇑P P 16 33 39.2 -0.6
baz=21
Z26A Caprock 21.31 333 ⇑P P 16 33 41.2 -0.8
baz=22
MSTX Muleshoe 21.42 336 ⇑P P 16 33 42.3 -0.8
baz=22
HALT Halls 21.50 7 eP P 16 33 44.4 +0.4
Z25A Roswell 21.65 332 ⇑P P 16 33 44.9 -0.7
baz=22
AMTX Amarillo 21.84 340 eP P 16 33 46.7 -1.0
comp=E,92nm,0.6s,mb5.3
123A Bell Site, Whi 21.88 328 ⇑P P 16 33 47.0 -1.1
baz=22
222A Williams Famil 21.92 325 ⇓P P 16 33 48.1 -0.4
baz=22
Z24A Sheeppen Canyo 22.00 331 ⇑P P 16 33 48.9 -0.3
baz=22
Z23A Rita Site, Whi 22.36 329 ⇑P P 16 33 52.8 -0.4
baz=23
W27A Bowe Ranch, En 22.50 337 ⇓P P 16 33 54.1 -0.5
baz=23,SNR=6.7
TKL Tuckaleechee C 22.50 19 P P 16 33 56.7 +2.1
comp=E,12nm,1.0s,mb4.2,baz=216,slow=0.6,SNR=6.0
TKL Tuckaleechee C 22.50 19 P P 16 33 56.7 +2.1
Y24A Capitan 22.52 331 ⇑P P 16 33 54.6 -0.2
baz=23
121A Cookes Peak, D 22.62 325 ⇑P P 16 33 55.3 -0.6
baz=23
319A Douglas 22.66 321 ⇑P P 16 33 55.3 -1.0
baz=23
219A White Tail Can 23.08 322 ⇓P P 16 33 59.9 -0.8
baz=23
318A Bisbee 23.14 320 ⇓P P 16 34 00.8 -0.4
baz=23
W25A X Bar L Ranch, 23.18 335 ⇓P P 16 34 01.1 -0.5
baz=23
SIUC Southern Illin 23.30 7 eP P 16 34 01.4 -1.1
comp=E,39nm,1.0s,mb4.7
CCM Cathedral Cave 23.47 3 eP P 16 34 03.4 -0.7
comp=E,31nm,0.9s,mb4.6
218A Dragoon 23.54 320 ⇑P P 16 34 04.4 -0.4
baz=24
119A Ashpeak Ranch, 23.66 323 ⇑P P 16 34 06.0 +0.1
baz=24
V25A Rancho No Teng 23.78 335 ⇑P P 16 34 07.4 +0.4
baz=24
ANMO Albuquerque 23.84 331 P P 16 34 09.8 +2.2
comp=E,14nm,0.9s,mb4.3,baz=146,slow=9.1,SNR=8.1
U26A Atchley Ranch, 23.93 338 ⇑P P 16 34 09.9 +1.5
baz=24,SNR=6.1
118A Homack Ranch, 23.96 322 ⇑P P 16 34 08.4 -0.2
baz=24
Z19A T-Link Ranch, 24.02 324 ⇑P P 16 34 08.9 -0.3
baz=24
U25A Circle Dot Ran 24.19 336 ⇓P P 16 34 11.2 +0.5
baz=24
TUC Tucson 24.23 320 eP P 16 34 11.3 +0.2
comp=E,38nm,1.1s,mb4.6
WCI Wyandotte Cave 24.27 12 eP P 16 34 11.1 -0.3
comp=E,22nm,0.9s,mb4.5
117A Oracle 24.38 321 ⇓P P 16 34 12.4 -0.1
baz=24
Y19A Nutrioso 24.50 325 ⇑P P 16 34 14.9 +1.3
baz=25
CNNC Cliffs of the 24.53 30 eP P 16 34 14.3 +0.5
comp=E,49nm,1.0s,mb4.9
X20A Quemado 24.53 327 ⇓P P 16 34 15.6 +1.7
baz=25
KSU1 Kansas State U 24.73 353 eP P 16 34 15.1 -0.5
comp=E,70nm,0.7s,mb5.2
T25A Trinidad 24.84 337 ⇓P P 16 34 18.9 +2.3
baz=25
X19A St. Johns 24.87 326 ⇑P P 16 34 18.1 +1.1
baz=25
CBKS Cedar Bluff 24.99 347 eP P 16 34 17.2 -0.7
comp=E,83nm,1.0s,mb4.6
VWCC Virginia Weste 25.29 24 eP P 16 34 20.4 -0.2
S25A Robets Cordova 25.31 338 ⇓P P 16 34 22.4 +1.5
baz=26,SNR=5.2
ATAH Atahualpa 25.75 146 P P 16 34 25.1 0.0
comp=E,3.7nm,0.5s,mb4.0,baz=69,slow=12,SNR=2.9
ATAH LR LR 16 42 47.6
comp=E,421nm,18.9s,baz=86,slow=32
SDCO Great Sand Dun 25.79 336 eP P 16 34 26.0 +0.8
comp=E,40nm,1.2s,mb4.7
HDIL Hopedale 26.10 6 eP P 16 34 27.3 -0.7
comp=E,26nm,0.9s,mb4.7
Q25A Bedland, Calha 26.36 339 ⇑P P 16 34 31.3 +0.9
baz=27,SNR=5.6
MVCO Mesa Verde 26.64 331 eP P 16 34 33.8 +0.9
comp=E,32nm,0.8s,mb4.9
WUAZ Wupatki 26.83 325 ⇓P P 16 34 34.9 +0.2
baz=27
WUAZ Wupatki 26.83 325 eP P 16 34 34.7 +0.1
comp=E,23nm,1.0s,mb4.7
P25A Willow Gulch B 26.87 340 ⇓P P 16 34 35.5 +0.5
baz=27
T18A Mexican Hat 27.25 329 ⇑P P 16 34 38.4 +0.1
baz=28
SCIA State Center 27.29 359 eP P 16 34 34.3 -4.3
comp=E,55nm,0.8s,mb5.1
Q22A Crested Butte, 27.31 335 ⇑P P 16 34 39.7 +0.8
baz=28
PV01 Paradox Valley 27.42 332 eP P 16 34 40.3 +0.4
Q21A Lamborn Mesa, 27.56 334 ⇓P P 16 34 41.7 +0.6
baz=28
W14A Seligman 27.60 322 ⇓P P 16 34 41.4 -0.2
baz=28
T17A Navajo Res., N 27.61 327 ⇓P P 16 34 42.6 +0.9
baz=28
ISCO Idaho Springs 27.63 338 eP P 16 34 42.1 +0.4
comp=E,16nm,1.2s,mb4.4
S18A Hurst Farm, Bl 27.74 329 ⇓P P 16 34 43.1 +0.4
baz=28
V14A Boquillas Ranc 27.91 323 ⇑P P 16 34 44.2 -0.1
baz=28
W13A Hualapai Mount 28.01 321 ⇑P P 16 34 44.9 -0.3
baz=28
BC3 Big Chuckawall 28.10 317 ⇓P P 16 34 45.8 -0.2
baz=28
JFWS Jewell Farm 28.37 4 eP P 16 34 48.4 +0.2
comp=E,22nm,0.7s,mb4.8
Q19A Hogan Spring (28.40 332 ⇑P P 16 34 48.8 +0.2
baz=29
U14A Mt Trumbull 28.50 324 ⇑P P 16 34 49.4 -0.1
baz=29
V13A Grand Canyon W 28.58 322 ⇓P P 16 34 49.7 -0.5
baz=29
R17A Hanksville Air 28.66 329 ⇑P P 16 34 51.1 +0.2
baz=29
BELC Belle Mtn. Jos 28.67 317 ⇑P P 16 34 50.3 -0.8
baz=29
N22A Wattenberg Ran 28.82 338 ⇓P P 16 34 53.2 +0.9
baz=29
PHWY Pilot Hill 28.91 340 eP P 16 34 53.0 -0.1
comp=E,17nm,1.2s,mb4.5
GMRC Granite Mounta 28.92 318 ⇑P P 16 34 53.0 -0.3
baz=29
U13A Pakoon Wash 28.95 323 ⇑P P 16 34 53.6 +0.1
baz=29
SRU San Rafael 29.11 331 eP P 16 34 54.8 -0.1
comp=E,8.0nm,1.0s,mb4.3
U12A Valley of Fire 29.30 322 ⇑P P 16 34 57.0 +0.4
baz=30
ECSD EROS Data Cent 29.31 354 eP P 16 34 55.1 -1.4
comp=E,12nm,0.8s,mb4.6
CCUT Cedar City 29.40 325 eP P 16 34 58.4 +0.9
comp=E,14nm,1.0s,mb4.5
S14A Cedar City 29.44 326 ⇑P P 16 34 58.0 +0.1
baz=30
N20A Spence Gulch, 29.54 336 ⇓P P 16 34 59.7 +1.0
baz=30
M21A Separation Pea 29.85 338 ⇓P P 16 35 02.5 +1.1
baz=30,SNR=5.4
RWWY Rawlins 29.87 338 eP P 16 35 02.4 +0.8
comp=E,30nm,1.0s,mb4.9
L22A Ellis Ranch, M 29.89 339 ⇓P P 16 35 02.4 +0.6
baz=30
BFSC Mount Baldy Ra 29.93 315 ⇓P P 16 35 01.8 -0.5
baz=30
M20A Sweetwater, Wa 30.06 336 ⇓P P 16 35 03.9 +0.6
baz=30
O17A Robinson Place 30.07 332 ⇓P P 16 35 04.1 +0.6
baz=30
L21A Rawlins 30.16 338 ⇓P P 16 35 05.2 +1.0
baz=30,SNR=5.6
N18A Larsen Ranch, 30.24 334 ⇑P P 16 35 05.0 +0.2
baz=30
DAU Daniels Canyon 30.49 331 eP P 16 35 07.7 +0.6
EDW2 Edwards Air Fo 30.52 316 ⇑P P 16 35 06.3 -1.2
baz=31
L20A Wamsutter 30.57 337 ⇓P P 16 35 07.9 +0.1
baz=31
Q13A Wheeler Ranch, 30.77 326 ⇑P P 16 35 09.8 +0.2
baz=31
RSSD Black Hills 31.06 344 eP P 16 35 12.2 +0.1
comp=E,7.5nm,0.8s,mb4.5
BINY Binghamton 31.11 24 eP P 16 35 12.7 +0.1
comp=E,13nm,0.8s,mb4.7
L18A Fontenelle, Gr 31.18 334 ⇑P P 16 35 13.6 +0.5
baz=31
GRAC Grapevine Rang 31.39 320 ⇑P P 16 35 14.9 -0.2
baz=32
HWUT Hardware Ranch 31.58 332 eP P 16 35 17.1 +0.4
comp=E,15nm,1.2s,mb4.6
PDAR Pinedale Array 31.68 336 P P 16 35 18.1 +0.5
comp=E,3.7nm,0.9s,mb4.1,baz=135,slow=8.6,SNR=11
BGU Big Grassy Mou 31.73 330 eP P 16 35 17.2 -0.8
comp=E,7.7nm,0.9s,mb4.4
J18A Kendall Valley 32.24 336 ⇓P P 16 35 23.0 +0.6
baz=32
SADO Sadowa 32.26 18 P P 16 35 22.0 -0.6
comp=E,3.7nm,0.8s,mb4.2,baz=100,slow=7.0,SNR=3.1
N13A Wendover, West 32.26 329 eP P 16 35 23.6 +1.0
comp=E,21nm,1.0s,mb4.8
HVU Hansel Valley 32.27 331 eP P 16 35 23.6 +0.8
comp=E,16nm,0.9s,mb4.7
M14A Sheep Mountain 32.33 330 ⇓P P 16 35 23.6 +0.3
baz=32
M13A Montello 32.62 329 ⇑P P 16 35 26.1 +0.3
baz=33,SNR=5.6
N12A Clover Valley, 32.69 328 ⇑P P 16 35 26.8 +0.4
baz=33
N12A Clover Valley, 32.69 328 eP P 16 35 26.5 +0.2
comp=E,8.8nm,1.0s,mb4.5
L14A Malta 32.69 331 ⇑P P 16 35 27.1 +0.7
baz=33
REDW Red Top Meadow 32.70 335 eP P 16 35 27.0 +0.5
comp=E,106nm,1.5s,mb5.5
ELK Elko 32.71 327 P P 16 35 27.5 +0.9
comp=E,6.0nm,0.8s,mb4.5,baz=115,slow=6.2,SNR=13
ELK PcP PcP 16 38 10.9 +0.3
comp=E,1.0nm,0.5s,baz=235,slow=1.8,SNR=4.4
SNOW Snow King Moun 32.75 335 eP P 16 35 27.7 +0.8
comp=E,42nm,0.7s,mb5.4
LOHW Long Hollow 32.81 336 eP P 16 35 28.1 +0.7
comp=E,19nm,0.9s,mb4.9
NVAR Mina Array Bea 32.87 321 P P 16 35 29.1 +1.0
comp=E,14nm,0.9s,mb4.8,baz=142,slow=9.2,SNR=19
NVAR PcP PcP 16 38 12.2 +1.0
comp=E,2.6nm,0.8s,baz=143,slow=4.2,SNR=4.6
K15A Arbon 32.87 332 ⇑P P 16 35 28.7 +0.7
baz=33
RRI2 Red Ridge 32.88 335 eP P 16 35 29.1 +1.0
comp=E,45nm,1.3s,mb5.1
J16A Bone 32.95 334 ⇑P P 16 35 29.5 +0.9
baz=33
M12A Wells 33.03 328 ⇓P P 16 35 30.4 +1.0
baz=33,SNR=7.5
K14A Jones Ranch, D 33.05 332 ⇓P P 16 35 30.0 +0.4
baz=33
IMW Indian Meadow 33.18 336 eP P 16 35 31.2 +0.6
comp=E,9.3nm,0.6s,mb4.8
NCB Newcomb 33.30 25 eP P 16 35 31.2 -0.4
comp=E,7.9nm,0.8s,mb4.6
M11A Holland Ranch, 33.50 328 ⇑P P 16 35 33.7 +0.3
baz=34,SNR=5.6
BMN Battle Mountai 33.56 325 eP P 16 35 34.4 +0.4
comp=E,20nm,1.3s,mb4.8
RLMT Red Lodge 33.59 339 ⇑P P 16 35 34.5 +0.3
baz=34
RLMT Red Lodge 33.59 339 eP P 16 35 34.5 +0.3
comp=E,31nm,1.3s,mb5.0
LONY Lake Ozonia 33.70 24 eP P 16 35 34.3 -0.9
comp=E,8.9nm,0.8s,mb4.7
AGMN Agassiz Nation 33.78 356 eP P 16 35 34.9 -0.9
comp=E,19nm,0.9s,mb4.9
H16A Russell Place, 33.98 336 ⇑P P 16 35 38.2 +0.6
baz=34
J13A Cove Ranch, Pi 34.18 332 ⇑P P 16 35 39.5 +0.2
baz=34
I14A Mackay 34.27 333 ⇓P P 16 35 40.2 +0.1
baz=34
FRNY Flat Rock 34.27 24 eP P 16 35 38.2 -1.9
comp=E,9.9nm,1.0s,mb4.6
GCMT Greycliff 34.31 339 eP P 16 35 40.4 0.0
comp=E,14nm,1.0s,mb4.7
HLID Hailey 34.41 332 ⇑P P 16 35 41.5 +0.1
baz=35
HLID Hailey 34.41 332 eP P 16 35 41.6 +0.2
comp=E,11nm,0.9s,mb4.7
F18A Big Timber 34.42 339 ⇓P P 16 35 42.1 +0.7
baz=35,SNR=5.1
MCMT McKenzie Canyo 34.73 334 eP P 16 35 45.5 +1.5
BOZ Bozeman (W) 34.91 337 eP P 16 35 46.1 +0.5
comp=E,9.5nm,0.9s,mb4.6
I12A Atlanta 34.93 331 ⇓P P 16 35 46.2 +0.4
baz=35,SNR=5.1
MFID Camas Ranch 34.97 330 ⇑P P 16 35 46.8 +0.6
baz=35
F16A Kennard Place, 35.02 337 ⇓P P 16 35 47.1 +0.5
baz=35
DLMT Dillon 35.06 335 eP P 16 35 48.2 +1.3
comp=E,25nm,0.9s,mb5.0
E18A Harlowton 35.07 339 ⇓P P 16 35 47.7 +0.8
baz=35,SNR=5.4
DGMT Dagmar 35.17 347 eP P 16 35 46.5 -1.2
comp=E,19nm,0.9s,mb4.9
LCCM Lewis and Clar 35.17 336 P P 16 35 49.2 +1.4
LRM Limekiln Ridge 35.38 336 eP P 16 35 50.1 +0.5
H12A Diamond D Ranc 35.38 332 ⇑P P 16 35 50.2 +0.6
baz=36,SNR=5.2
I11A Placerville 35.41 330 ⇓P P 16 35 50.8 +0.9
baz=36
D18A Linhart Farms, 35.58 340 ⇓P P 16 35 51.9 +0.6
baz=36,SNR=5.7
E16A East Helena 35.67 337 ⇑P P 16 35 52.4 +0.3
baz=36
WVOR Wild Horse Val 35.71 326 eP P 16 35 52.3 -0.2
comp=E,32nm,1.2s,mb5.1
ULM Lac du Bonnet 35.73 356 P P 16 35 51.5 -1.0
comp=E,8.6nm,0.7s,mb4.8,baz=184,slow=11,SNR=5.2
ULM PcP PcP 16 38 19.2 +0.2
comp=E,3.2nm,0.6s,baz=21,slow=0.3,SNR=2.9
ULM Lac du Bonnet 35.73 356 eP P 16 35 50.7 -1.8
D17A Six Diamond Ra 35.84 339 ⇓P P 16 35 54.3 +0.7
baz=36
HRY Holter Researc 35.88 337 eP P 16 35 53.8 -0.2
E15A Deer Lodge 35.95 336 ⇓P P 16 35 55.0 +0.4
baz=36
H11A Donnelly 36.03 331 ⇑P P 16 35 54.9 -0.3
baz=36
G12A Big Creek, Yel 36.04 332 ⇑P P 16 35 55.8 +0.5
baz=36
F13A Darby 36.12 334 ⇓P P 16 35 56.4 +0.4
baz=36,SNR=5.7
J08A Circle Bar Ran 36.26 328 ⇓P P 16 35 57.1 -0.1
baz=36
MOD Modoc 36.27 324 eP P 16 35 56.6 -0.7
comp=E,11nm,0.9s,mb4.8
C17A Wharram Farm, 36.28 339 ⇑P P 16 35 57.7 +0.4
baz=36,SNR=5.9
EGMT Eagleton 36.28 341 ⇓P P 16 35 57.5 +0.2
baz=36,SNR=6.1
EGMT Eagleton 36.28 341 eP P 16 35 57.5 +0.2
comp=E,54nm,1.1s,mb5.4
H10A Noah's Angus R 36.29 330 ⇑P P 16 35 57.4 -0.1
baz=36
I09A Lost Marbles R 36.33 329 ⇑P P 16 35 58.1 +0.3
baz=36
F12A Elk City 36.50 333 ⇑P P 16 35 59.3 +0.1
baz=37
E13A Victor 36.59 335 ⇑P P 16 36 00.2 +0.2
baz=37,SNR=5.6
CHMT Chamberlain Mo 36.59 336 eP P 16 36 00.3 +0.3
G11A Walters Elk Ra 36.68 332 ⇑P P 16 36 00.8 0.0
baz=37
BMO Blue Mountains 36.75 330 eP P 16 36 00.2 -1.2
comp=E,16nm,1.4s,mb4.8
C16A Fuhringer Ranc 36.77 338 ⇑P P 16 36 02.4 +0.9
baz=37,SNR=5.5
H09A Durkee 36.79 330 ⇓P P 16 36 01.6 -0.1
baz=37
MSO Missoula 36.80 335 eP P 16 36 01.7 0.0
comp=E,9.5nm,0.8s,mb4.8
D14A Greenough 36.83 336 ⇓P P 16 36 02.1 +0.1
baz=37
SLMT Seeley Lake 36.96 336 eP P 16 36 02.7 -0.4
A18A Metzger Ranch, 37.10 341 ⇓P P 16 36 04.9 +0.6
baz=37,SNR=5.5
E12A Beaver Dam Sad 37.15 334 ⇑P P 16 36 04.8 +0.1
baz=37
D13A Huson 37.22 335 ⇑P P 16 36 05.6 +0.3
baz=37
G09A Cove 37.29 330 ⇑P P 16 36 06.0 +0.1
baz=38,SNR=5.6
SWMT Swartz Lake 37.37 336 eP P 16 36 06.3 -0.3
C14A Swan Lake 37.49 336 ⇑P P 16 36 07.3 -0.2
baz=38
B15A Bradely Ranch, 37.49 338 ⇓P P 16 36 07.5 -0.2
baz=38
F10A Beach Ranch, E 37.55 332 ⇑P P 16 36 07.9 -0.3
baz=38
D12A Red Ives Fores 37.56 334 ⇑P P 16 36 08.1 0.0
baz=38
YBH Yreka Blue Hor 37.57 322 P P 16 36 06.9 -1.4
comp=E,1.9nm,0.7s,mb4.1,baz=49,slow=3.8,SNR=5.3
YBH PcP PcP 16 38 24.9 0.0
comp=E,1.2nm,0.8s,baz=323,slow=3.1,SNR=3.8
JTMT Jette 37.68 336 eP P 16 36 09.2 0.0
A16A West Butte Ran 37.70 340 ⇑P P 16 36 09.4 +0.1
baz=38
BSMT Bassoo Peak 37.96 336 eP P 16 36 11.5 -0.1
C11A Tepee Creek (N 38.55 334 ⇓P P 16 36 16.8 +0.2
baz=39
LPAZ La Paz 39.04 141 P P 16 36 19.3 -1.6
comp=E,1.2nm,0.6s,mb3.9,baz=302,slow=8.1,SNR=6.5
H04A Detroit Lake 39.13 326 ⇑P P 16 36 20.9 -0.5
baz=39
NEW Newport 39.25 334 eP P 16 36 21.5 -0.9
comp=E,6.6nm,1.0s,mb4.4
HOOD Mount Hood Mea 39.27 327 eP P 16 36 23.1 +0.6
comp=E,219nm,1.0s
OD2 Odessa Site #2 39.29 332 eP P 16 36 22.6 -0.1
LON Longmire 40.32 329 eP P 16 36 30.7 -0.5
comp=E,8.7nm,0.9s,mb4.6
FFC Flin Flon 40.77 352 eP P 16 36 34.7 -0.1
comp=E,16nm,1.0s,mb4.8
JCW Jim Creek 41.37 330 eP P 16 36 38.6 -1.3
NLWA Neilton Lookou 41.79 328 P P 16 36 43.4 +0.1
comp=E,37nm,1.4s,mb4.9
EDM Edmonton 41.94 341 epP P 16 36 44.5 +0.1
PGC Sidney 42.42 330 eP P 16 36 46.0 -2.5
comp=E,1.9nm,1.3s,mb3.7
SIV San Ignacio 43.51 133 P P 16 36 56.4 -1.2
comp=E,5.3nm,0.8s,mb4.3,baz=308,slow=9.4,SNR=13
SIV PcP PcP 16 38 44.5 +0.1
comp=E,2.5nm,0.8s,baz=238,slow=3.0,SNR=2.7
SCHQ Schefferville 44.95 21 P P 16 37 07.9 -0.7
comp=E,4.3nm,0.9s,mb4.2,baz=238,slow=10,SNR=4.6
SCHQ PcP PcP 16 38 48.2 -0.5
comp=E,4.9nm,0.7s,baz=197,slow=1.8,SNR=7.2
SCHQ LR LR 16 57 56.6
comp=E,2µm,18.1s,baz=231,slow=38
YKA Yellowknife Ar 50.37 347 P P 16 37 50.8 +0.4
comp=E,30nm,0.7s,mb5.3,baz=151,slow=7.3,SNR=42
CFAA Coronel Fontan 51.50 153 P P 16 37 57.8 -1.5
comp=E,0.8nm,0.8s,mb3.8,baz=288,slow=5.8,SNR=4.0
CPUP Villa Florida 53.19 140 P P 16 38 09.2 -2.7
comp=E,2.3nm,0.8s,mb4.2,baz=301,slow=17,SNR=3.6
CPUP Villa Florida 53.19 140 eP P 16 38 08.9 -3.0
comp=E,17nm,0.9s,mb5.1
PLCA Paso Flores 58.67 160 P P 16 38 50.3 -0.5
comp=E,6.7nm,1.1s,mb4.6,baz=335,slow=4.4,SNR=4.1
BMRM Bremner River 59.42 334 eP P 16 38 56.5 +0.7
comp=E,18nm,1.0s,mb5.1
INK Inuvik 59.76 344 eP P 16 38 58.2 +0.2
comp=E,29nm,1.0s,mb5.3
EGAK Eagle 59.99 338 eP P 16 38 58.9 -0.8
comp=E,10nm,0.9s,mb4.8
PAX Paxson 60.72 335 eP P 16 39 04.6 0.0
comp=E,13nm,1.0s,mb4.9
MCK McKinley 62.46 335 eP P 16 39 16.3 0.0
comp=E,16nm,1.0s,mb5.0
COLA College 62.53 337 eP P 16 39 16.3 -0.5
comp=E,14nm,1.1s,mb4.8
TRF Thorofare Moun 62.90 335 eP P 16 39 19.6 +0.3
comp=E,32nm,0.9s,mb5.2
PPLA Purkeypile 63.48 334 eP P 16 39 22.8 -0.4
comp=E,38nm,1.4s,mb5.1
SVW2 Sparrevohn 64.41 331 eP P 16 39 27.7 -1.5
TTA Tatalina 65.15 333 eP P 16 39 32.9 -1.1
UNV Unalaska Valle 68.88 322 eP P 16 39 56.4 -1.4
comp=E,28nm,1.1s,mb5.0
EVO Evora 76.96 53 eP P 16 40 42.8 -3.1
comp=E,22nm,1.1s,mb4.5
EVO eMLR MLR
comp=Z,287nm,20.2s
QUIF Quistinic 79.03 43 eP P 16 40 56.2 -1.0
SPITS Spitsbergen Ar 79.70 11 P P 16 40 58.8 -1.5
comp=Z,1.3nm,0.3s,mb4.3,baz=27,slow=15,SNR=4.1
ESDC Sonseca Array 79.89 52 P P 16 41 01.8 -0.2
comp=Z,2.9nm,0.7s,mb4.2,baz=288,slow=5.5,SNR=14
GRR Gorron 80.47 42 eP P 16 41 04.2 -0.8
comp=Z,14nm,0.7s,mb4.6
GRR Gorron 80.47 42 eP P 16 41 04.2 -0.8
comp=Z,6.8nm,0.7s,mb4.6
FLN La Foliniere 80.64 42 eP P 16 41 05.3 -0.6
comp=Z,18nm,0.9s,mb4.6
FLN eMLR MLR
comp=Z,359nm,19.0s
FLN La Foliniere 80.64 42 eP P 16 41 05.3 -0.6
comp=Z,8.8nm,0.9s,mb4.6
FLN LR LR
comp=Z,360nm,19.0s
BILL Bilibino 80.74 338 eP P 16 41 06.3 +0.3
comp=Z,22nm,1.0s,mb4.9
LDF La Druitiere 80.91 42 eP P 16 41 06.6 -0.7
comp=Z,24nm,1.1s,mb4.7
LDF La Druitiere 80.91 42 eP P 16 41 06.6 -0.7
comp=Z,12nm,1.1s,mb4.6
MFF Saint Martin d 81.30 44 eP P 16 41 08.5 -0.9
comp=Z,8.0nm,0.9s,mb4.3
MFF Saint Martin d 81.30 44 eP P 16 41 08.5 -0.9
comp=Z,4.0nm,0.9s,mb4.2
ETSF Etsaut 81.78 48 eP P 16 41 11.7 -0.3
comp=Z,7.9nm,0.8s,mb4.3
ETSF Etsaut 81.78 48 eP P 16 41 11.7 -0.3
comp=Z,4.0nm,0.8s,mb4.3
LFF La Frestale 82.26 46 eP P 16 41 13.8 -0.7
comp=Z,11nm,0.6s,mb4.5
LFF La Frestale 82.26 46 eP P 16 41 13.8 -0.7
comp=Z,5.4nm,0.6s,mb4.5
EPF Esparros 82.39 48 eP P 16 41 14.7 -0.6
comp=Z,15nm,1.0s,mb4.5
EPF Esparros 82.39 48 eP P 16 41 14.7 -0.6
comp=Z,7.3nm,1.0s,mb4.5
RJF Les Rejaudoux 82.71 45 eP P 16 41 16.0 -0.9
comp=Z,4.8nm,0.6s,mb4.2
RJF eMLR MLR
comp=Z,318nm,21.2s
RJF Les Rejaudoux 82.71 45 eP P 16 41 16.0 -0.9
comp=Z,2.4nm,0.6s,mb4.2
RJF LR LR
comp=Z,320nm,21.3s
TCF Toulx Ste Croi 82.95 44 eP P 16 41 17.3 -0.8
comp=Z,6.5nm,0.8s,mb4.2
TCF Toulx Ste Croi 82.95 44 eP P 16 41 17.3 -0.8
comp=Z,3.3nm,0.8s,mb4.2

CAF	**Calviac**	**83.17**	**45**	*e*P	**P**	**16 41 18.3**	**-1.0**
	comp=Z,5.5nm,0.7s,mb4.2						
CAF	**Calviac**	**83.17**	**45**	*e*P	**P**	**16 41 18.3**	**-1.0**
	comp=Z,2.8nm,0.7s,mb4.2						
BGF	**Bois d'Agland**	**83.32**	**44**	*e*P	**P**	**16 41 19.7**	**-0.3**
BAIF	**Baives**	**83.34**	**40**	*e*P	**P**	**16 41 19.7**	**-0.3**
AVF	**Avril sur Loir**	**83.60**	**43**	*e*P	**P**	**16 41 21.0**	**-0.4**
	comp=Z,6.4nm,0.8s,mb4.2						
AVF	**Avril sur Loir**	**83.60**	**43**	*e*P	**P**	**16 41 21.0**	**-0.4**
	comp=Z,3.2nm,0.8s,mb4.2						
SSF	**Saint Saulge**	**83.64**	**43**	*e*P	**P**	**16 41 20.5**	**-1.1**
	comp=Z,9.0nm,0.8s,mb4.4						
SSF	**Saint Saulge**	**83.64**	**43**	*e*P	**P**	**16 41 20.5**	**-1.1**
	comp=Z,4.5nm,0.8s,mb4.3						
MTLF	**Montolieu**	**83.66**	**47**	*e*P	**P**	**16 41 21.2**	**-0.6**
	comp=Z,7.0nm,0.8s,mb4.2						
MTLF	**Montolieu**	**83.66**	**47**	*e*P	**P**	**16 41 21.2**	**-0.6**
	comp=Z,3.5nm,0.8s,mb4.2						
LOR	**Lormes**	**83.82**	**43**	*e*P	**P**	**16 41 21.7**	**-0.8**
	comp=Z,9.4nm,0.9s,mb4.3						
LOR				*e*MLR	MLR		
	comp=Z,322nm,21.5s						
LOR	**Lormes**	**83.82**	**43**	*e*P	**P**	**16 41 21.7**	**-0.8**
	comp=Z,4.7nm,0.9s,mb4.3						
LOR				LR	LR		
	comp=Z,320nm,21.5s						
SMF	**Signal de Mont**	**83.96**	**44**	*e*P	**P**	**16 41 22.1**	**-1.2**
	comp=Z,5.3nm,0.6s,mb4.2						
SMF	**Signal de Mont**	**83.96**	**44**	*e*P	**P**	**16 41 22.1**	**-1.2**
	comp=Z,2.7nm,0.6s,mb4.2						
NB2	**NORSAR Subarra**	**83.99**	**28**	P	**P**	**16 41 24.1**	**+1.0**
	comp=Z,17nm,1.4s,mb4.7,baz=288,slow=5.1						
NOA	**NORSAR Array B**	**83.99**	**28**	P	**P**	**16 41 24.4**	**+1.3**
	comp=Z,4.4nm,0.8s,mb4.3,baz=291,slow=4.8,SNR=12						
MEZF	**Maizieres J'vi**	**84.27**	**41**	*e*P	**P**	**16 41 24.3**	**-0.5**
	comp=Z,14nm,0.7s,mb4.6						
MEZF	**Maizieres J'vi**	**84.27**	**41**	*e*P	**P**	**16 41 24.3**	**-0.5**
	comp=Z,14nm,0.7s,mb4.9						
LASF	**Ste Croix**	**84.63**	**46**	*e*P	**P**	**16 41 26.6**	**-0.1**
	comp=Z,15nm,1.1s,mb4.5						
VIVF	**Saint-Julien-l**	**84.99**	**45**	*e*P	**P**	**16 41 27.6**	**-0.9**
HAU	**Haudompre**	**85.24**	**42**	*e*P	**P**	**16 41 29.2**	**-0.5**
	comp=Z,18nm,0.8s,mb4.7						
HAU				*e*MLR	MLR		
	comp=Z,302nm,20.5s						
HAU	**Haudompre**	**85.24**	**42**	*e*P	**P**	**16 41 29.2**	**-0.5**
	comp=Z,9.1nm,0.8s,mb4.8						
HAU				LR	LR		
	comp=Z,300nm,20.5s						
CABF	**La Chapelle**	**85.46**	**43**	*e*P	**P**	**16 41 31.8**	**+1.0**
	comp=Z,26nm,1.2s,mb4.7						
CABF	**La Chapelle**	**85.46**	**43**	*e*P	**P**	**16 41 31.8**	**+1.0**
	comp=Z,13nm,1.2s,mb4.7						
HINF	**Hinteralfeld**	**85.62**	**42**	*e*P	**P**	**16 41 30.8**	**-0.8**
	comp=Z,5.8nm,0.7s,mb4.3						
HINF	**Hinteralfeld**	**85.62**	**42**	*e*P	**P**	**16 41 30.8**	**-0.8**
	comp=Z,2.9nm,0.7s,mb4.3						
CDF	**Champ du Feu**	**85.72**	**41**	*e*P	**P**	**16 41 32.9**	**+0.8**
	comp=Z,8.9nm,0.9s,mb4.4						
CDF	**Champ du Feu**	**85.72**	**41**	*e*P	**P**	**16 41 32.9**	**+0.8**
	comp=Z,4.4nm,0.9s,mb4.4						
ORIF	**Oris-en-Rattie**	**85.80**	**45**	*e*P	**P**	**16 41 32.5**	**0.0**
	comp=Z,6.0nm,0.6s,mb4.4						
ORIF				*e*MLR	MLR		
	comp=Z,329nm,20.5s						
ORIF	**Oris-en-Rattie**	**85.80**	**45**	*e*P	**P**	**16 41 32.5**	**0.0**
	comp=Z,3.0nm,0.6s,mb4.4						
ARCES	**ARCESS Array B**	**85.84**	**18**	P	**P**	**16 41 33.1**	**+0.9**
	comp=Z,4.6nm,0.8s,mb4.5,baz=285,slow=4.6,SNR=13						
SMRF	**Simiane la Rot**	**85.85**	**46**	*e*P	**P**	**16 41 33.3**	**+0.5**
	comp=Z,6.7nm,0.8s,mb4.3						
SMRF	**Simiane la Rot**	**85.85**	**46**	*e*P	**P**	**16 41 33.3**	**+0.5**
	comp=Z,6.7nm,0.8s,mb4.6						
TIC	**Toumodi**	**86.08**	**84**	*e*P	**P**	**16 41 34.8**	**+0.3**
	comp=Z,8.4nm,0.2s,mb5.3						
TIC	**Toumodi**	**86.08**	**84**	*e*P	**P**	**16 41 34.8**	**+0.3**
	comp=Z,8.4nm,0.2s,mb5.3						
LIC	**Lamto**	**86.17**	**85**	*e*P	**P**	**16 41 35.9**	**+0.9**
	comp=Z,29nm,0.9s,mb4.9						
LIC				*e*MLR	MLR		
	comp=Z,285nm,19.5s						
LIC	**Lamto**	**86.17**	**85**	*e*P	**P**	**16 41 35.4**	**+0.4**
	comp=Z,53nm,1.1s,mb5.4						
LIC	**Lamto**	**86.17**	**85**	*e*P	**P**	**16 41 35.9**	**+0.9**
	comp=Z,14nm,0.9s,mb4.9						
LIC				LR	LR		
	comp=Z,140nm,19.5s						
LPL	**La Plagne**	**86.20**	**44**	*e*P	**P**	**16 41 35.3**	**+0.8**
LPG	**La Plagne**	**86.22**	**44**	*e*P	**P**	**16 41 34.9**	**+0.3**
	comp=Z,14nm,1.2s,mb4.5						
LPG	**La Plagne**	**86.22**	**44**	*e*P	**P**	**16 41 34.9**	**+0.3**
	comp=Z,7.1nm,1.2s,mb4.5						
DBIC	**Dimbokro**	**86.23**	**84**	P	**P**	**16 41 36.0**	**+0.7**
	comp=Z,7.4nm,0.9s,mb4.6,baz=253,slow=6.8,SNR=6.5						
DBIC	**Dimbokro**	**86.23**	**84**	*e*P	**P**	**16 41 36.0**	**+0.7**
	comp=Z,7.9nm,0.9s,mb4.6						
KIC	**Kosan Boka**	**86.42**	**84**	*e*P	**P**	**16 41 36.4**	**+0.2**
	comp=Z,36nm,1.0s,mb5.3						
KIC	**Kosan Boka**	**86.42**	**84**	*e*P	**P**	**16 41 36.4**	**+0.2**
	comp=Z,36nm,1.0s,mb5.2						
MBDF	**Montbardon**	**86.46**	**45**	*e*P	**P**	**16 41 36.0**	**+0.2**
	comp=Z,16nm,0.9s,mb4.6						
MBDF	**Montbardon**	**86.46**	**45**	*e*P	**P**	**16 41 36.0**	**+0.2**
	comp=Z,7.8nm,0.9s,mb4.6						
LMR	**La Mourre**	**86.68**	**46**	*e*P	**P**	**16 41 36.7**	**-0.2**
	comp=Z,55nm,1.2s,mb5.1						
LMR	**La Mourre**	**86.68**	**46**	*e*P	**P**	**16 41 36.7**	**-0.2**
	comp=Z,27nm,1.2s,mb5.1						
FRF	**La Foret Royal**	**86.71**	**46**	*e*P	**P**	**16 41 37.3**	**+0.3**
	comp=Z,22nm,1.0s,mb4.8						
FRF	**La Foret Royal**	**86.71**	**46**	*e*P	**P**	**16 41 37.3**	**+0.3**
	comp=Z,11nm,1.0s,mb4.7						
GRF	**Grafenberg Arr**	**87.78**	**39**	*e*P	**P**	**16 41 43.1**	**+1.1**
	comp=Z,16nm,1.7s,mb4.8						
GRF				*e*pP	pP	16 41 51.6	-11
GRF				*e*L		17 17 45.5	
	comp=Z,283nm,20.6s						
CLL	**Collm**	**88.28**	**37**	*e*P	**P**	**16 41 45.0**	**+0.6**
CLL				Lm		17 21 00.0	
	comp=N,200nm,20.2s						
CLL				Lm		17 21 00.0	
	comp=E,200nm,20.3s						
CLL				Lm		17 21 00.0	
	comp=Z,300nm,21.3s						
PGF	**Pioggiola**	**88.66**	**46**	*e*P	**P**	**16 41 46.8**	**+0.4**
	comp=Z,34nm,1.2s,mb4.9						
PGF	**Pioggiola**	**88.66**	**46**	*e*P	**P**	**16 41 46.8**	**+0.4**
	comp=Z,17nm,1.2s,mb5.0						
TIXI	**Tiksi**	**89.62**	**348**	*e*P	**P**	**16 41 49.6**	**-0.7**
	comp=Z,9.6nm,0.8s,mb5.0						
PETK	**Petropavlovsk-**	**89.86**	**325**	P	**P**	**16 41 51.2**	**-0.5**
	comp=Z,3.2nm,0.9s,mb4.4,baz=92,slow=7.4,SNR=3.5						
PETK	**Petropavlovsk-**	**89.86**	**325**	P	**P**	**16 41 51.2**	**-0.5**
FINES	**FINESS Array B**	**90.29**	**25**	P	**P**	**16 41 54.1**	**+0.5**
	comp=Z,2.0nm,0.5s,mb4.5,baz=304,slow=2.1,SNR=20						
KEST	**Kesra**	**91.08**	**53**	P	**P**	**16 41 58.3**	**+0.4**
	comp=Z,1.7nm,0.8s,mb4.2,baz=240,slow=2.0,SNR=3.2						
KEST				LR	LR	17 17 41.5	
	comp=Z,72nm,18.1s,baz=225,slow=32						
JOF	**Joensuu**	**91.49**	**22**	*e*p	**P**	**16 41 58.6**	**-0.5**
	comp=Z,3.6nm,0.8s,mb4.5						
JOF	**Joensuu**	**91.49**	**22**	*e*p	**P**	**16 41 58.6**	**-0.5**
	comp=Z,3.6nm,0.8s,mb4.5						
TAM	**Tamanrasset**	**91.78**	**66**	*e*P	**P**	**16 42 03.5**	**+2.1**
	comp=Z,2.3nm,0.8s,mb4.5						
VYHS	**Vyhne**	**92.86**	**38**	*e*P	**P**	**16 42 07.5**	**+1.7**
	comp=Z,5.3nm,1.6s,mb4.6						
VYHS	**Vyhne**	**92.86**	**38**	*e*P	**P**	**16 42 07.5**	**+1.7**
KECS	**Kecovo**	**93.85**	**38**	*e*P	**P**	**16 42 12.7**	**+2.4**
	comp=Z,2.1nm,0.9s,mb4.5						
KECS	**Kecovo**	**93.85**	**38**	*e*P	**P**	**16 42 12.7**	**+2.4**
CRVS	**Cervenica-Dubn**	**94.23**	**37**	*e*P	**P**	**16 42 13.7**	**+1.6**
	comp=Z,29nm,3.2s						
CRVS	**Cervenica-Dubn**	**94.23**	**37**	*e*P	**P**	**16 42 13.7**	**+1.6**
SONM	**Songino Array**	**115.63**	**346**	PKP	PKPdf	16 47 34.8	-0.1
	comp=Z,0.7nm,0.8s,baz=110,slow=3.4,SNR=3.4						
MKAR	**Makanchi Array**	**118.80**	**4**	PKP	PKPdf	16 47 40.2	-0.8
	comp=Z,0.7nm,0.7s,baz=38,slow=6.1,SNR=6.0						
MKAR	**Makanchi Array**	**118.80**	**4**	PKP	PKPdf	16 47 40.2	-0.8
BOSA	**Boshof**	**121.15**	**115**	PKP	PKPdf	16 47 46.0	0.0
	comp=Z,2.6nm,0.7s,baz=255,slow=17,SNR=2.8						
EKS2	**Erkin-Say**	**121.75**	**12**	*e*PKPdf	PKPdf	16 47 47.7	+0.8
WRA	**Warramunga Arr**	**134.91**	**256**	PKP	PKPdf	16 48 11.0	-1.4
	comp=Z,1.2nm,0.9s,baz=86,slow=2.3,SNR=7.2						
WRA	**Warramunga Arr**	**134.91**	**256**	PKP	PKPdf	16 48 11.0	-1.4
ASAR	**Alice Springs**	**135.24**	**51**	PKP	PKPdf	16 48 11.2	-1.7
	comp=Z,0.7nm,1.1s,baz=103,slow=3.8,SNR=4.0						
FITZ	**Fitzroy Crossi**	**143.12**	**259**	PKP	PKPdf	16 48 26.7	-0.8
	comp=Z,2.4nm,0.9s,baz=116,slow=17,SNR=2.5						
CHTO	**Chiang Mai**	**144.96**	**341**	*e*PKPdf	PKPdf	16 48 28.9	-1.8
CM31	**Chiang Mai Arr**	**145.29**	**340**	*e*PKPdf	PKPdf	16 48 31.0	-0.2
CMAR	**Chiang Mai Arr**	**145.29**	**340**	PKPbc	PKPbc	16 48 30.9	-0.2
	comp=Z,16nm,0.9s,baz=340,slow=3.9,SNR=32						

IDC ***28*** *16:45:00.4±2.2, 5.79S×148.06E, h0km, mb4.1/6, mb1 4.2/7, mb1mx3.9/16, mbtmp4.1/7, ML4.2/1, MS3.9/1, Ms1 3.9/1, ms1mx2.9/19, Error ellipse: s-maj=78.0km s-min=20.2km az=112.0*
ISCJB ***28*** *16:45:05.3±2.4, 5.7S±0.2×147.6E±0.5, h33km, mb3.9/7, Error ellipse: s-maj=83.4km s-min=13.7km az=22.3*
NEIC ***28*** *16:45:07.7±2.4, 5.66S×147.54E, h35km, mb3.7/2, Error ellipse: s-maj=84.4km s-min=13.8km az=112.0*
ISC 28 16:45:07.9±2.5, 5.7S±0.2×147.5E±0.6, h35km, n10, σ1.9 06/10, mb3.9/7, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRAB	**Tennant Creek**	**19.06**	**221**	*e*P	**Pn**	**16 49 27.3**	**-1.0**
	2.0nm,0.3s						
WRA	**Warramunga Arr**	**19.07**	**221**	P	**Pn**	**16 49 28.4**	**0.0**
	0.7nm,0.3s,baz=50,slow=11,SNR=20						
ASAR	**Alice Springs**	**22.14**	**215**	P	**P**	**16 50 01.3**	**+0.7**
	6.4nm,0.5s,mb4.3,baz=53,slow=9.0,SNR=135						
ASAR				PcP	PcP	16 53 54.4	-2.8
	0.9nm,0.7s,baz=32,slow=2.5,SNR=6.9						
FITZ	**Fitzroy Crossi**	**24.62**	**238**	P	**P**	**16 50 27.7**	**+2.5**
	6.8nm,0.6s,mb4.4,baz=65,slow=8.1,SNR=22						
MBWA	**Marble Bar**	**30.96**	**238**	P	**P**	**16 51 21.0**	**-1.0**
	0.6nm,0.6s,mb3.6						
MJAR	**Matsushiro Arr**	**42.88**	**349**	P	**P**	**16 53 03.6**	**+0.6**
	1.5nm,1.0s,mb3.7,baz=169,slow=8.2,SNR=4.6						
PETK	**Petropavlovsk-**	**59.20**	**7**	P	**P**	**16 55 05.3**	**+0.1**
	3.4nm,0.9s,mb4.4,baz=147,slow=8.5,SNR=3.6						
PETK				LR	LR	17 15 01.6	
	comp=Z,99nm,21.0s,baz=266,slow=30						
MKAR	**Makanchi Array**	**77.54**	**320**	P	**P**	**16 57 00.6**	**+0.4**
	0.2nm,0.3s,mb3.5,baz=166,slow=5.1,SNR=7.9						
MKAR	**Makanchi Array**	**77.54**	**320**	P	**P**	**16 57 00.6**	**+0.4**
ZALV	**Zalesovo Beam**	**78.99**	**328**	P	**P**	**16 57 06.4**	**-1.6**
	0.5nm,0.5s,mb3.7,baz=90,slow=7.4,SNR=4.2						

ISCJB ***28*** *16:56:19.9±0.4, 31.89N±0.03×104.60E±0.05, h10km, mb3.6/8, Error ellipse: s-maj=6.9km s-min=4.4km az=17.6*
IDC ***28*** *16:56:21.2±0.9, 31.95N×104.34E, h0km, mb3.6/8, mb1 3.7/10, mb1mx3.5/27, mbtmp3.5/10, ML3.0/2, MS3.3/1, Ms1 3.3/1, ms1mx2.3/26, Error ellipse: s-maj=38.0km s-min=16.2km az=58.0*
NEIC ***28*** *16:56:22.5±0.7, 31.96N×104.51E, h10km, mb3.7/1, Error ellipse: s-maj=20.2km s-min=7.8km az=88.0*
BJI ***28*** *16:56:24.1, 31.94N×104.27E, h12km, mb3.6/1, ML3.5/15, Ms3.5/4, Ms7 3.3/2*
ISC 28 16:56:22.1±0.4, 31.93N±0.03×104.48E±0.05, h10km, n18, σ1.8 28/25, mb3.6/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.19**	**212**	Pg	**Pg**	**16 56 43.0**	**-1.9**
CD2				Sg	**Sg**	**16 56 58.5**	**-1.8**
CD2				smax			
	comp=N,1μm,0.7s						
LZH	**Lanzhou**	**4.18**	**353**	Pn	**Pn**	**16 57 29.5**	**+3.5**
LZH				Pg	**Pg**	**16 57 41.8**	**-0.5**
LZH				Sn	**Sn**	**16 58 18.0**	**+3.1**
LZH				Sg	**Sg**	**16 58 34.3**	**-2.2**
LZH				smax			
	comp=N,190nm,1.1s						
LZH				smax			
	comp=E,140nm,1.0s						
LZH				LR	LR		
	comp=E,610nm,6.9s						
LZH				LR	LR		
	comp=Z,620nm,8.1s						
XAN	**Xi'an**	**4.29**	**59**	Pg	**Pg**	**16 57 41.5**	**-2.7**
XAN				Sg	**Sg**	**16 58 38.8**	**-0.9**
XAN				smax			
	comp=N,150nm,0.6s						
XAN				smax			
	comp=E,66nm,0.5s						
GYA	**Guiyang**	**5.77**	**160**	Pn	**Pn**	**16 57 51.8**	**+4.0**
GYA				Pg	**Pg**	**16 58 12.5**	**-0.2**
GYA				Sn	**Sn**	**16 58 53.3**	**-0.8**
GYA				Sg	**Sg**	**16 59 19.8**	**-7.6**
GYA				smax			
	comp=N,70nm,0.9s						
GYA				smax			
	comp=E,80nm,0.8s						
CM31	**Chiang Mai Arr**	**14.31**	**202**	*e*Pn	**Pn**	**16 59 46.0**	**+1.1**
	comp=E,1.4nm,0.5s						
CMAR	**Chiang Mai Arr**	**14.31**	**202**	Pn	**Pn**	**16 59 45.9**	**+1.0**
	comp=E,0.1nm,0.3s,baz=192,slow=35,SNR=3.0						
SONM	**Songino Array**	**15.96**	**5**	Pn	**Pn**	**17 00 07.0**	**+0.4**
	comp=E,0.0nm,0.3s,baz=110,slow=43,SNR=3.4						
KSRS	**Korea Array**	**20.03**	**68**	P	**P**	**17 00 57.3**	**+2.2**
	comp=E,1.2nm,0.9s,baz=108,slow=32,SNR=2.9						
MK31	**Makanchi Array**	**22.58**	**317**	*e*P	**P**	**17 01 22.7**	**+0.2**
MKAR	**Makanchi Array**	**22.58**	**317**	P	**P**	**17 01 23.2**	**+0.7**
	comp=E,1.5nm,0.7s,mb3.5,baz=98,slow=17,SNR=15						
ZALV	**Zalesovo Beam**	**26.13**	**333**	P	**P**	**17 01 55.9**	**-0.2**
	comp=E,0.6nm,0.4s,mb3.4,baz=139,slow=12,SNR=5.1						
KURK	**Kurchatov**	**26.79**	**322**	P	**P**	**17 02 02.1**	**+0.1**
	comp=E,0.7nm,0.9s,mb3.2,baz=121,slow=11,SNR=7.2						
BVAR	**Borovoye Array**	**32.35**	**321**	LR	LR	17 18 07.9	
	comp=E,50nm,20.9s,baz=135,slow=40						
FINES	**FINESS Array B**	**57.07**	**326**	P	**P**	**17 06 08.1**	**0.0**
	comp=E,0.6nm,0.4s,mb4.0,baz=84,slow=7.6,SNR=15						
WRAB	**Tennant Creek**	**58.98**	**147**	*e*P	**P**	**17 06 22.4**	**+0.4**
	comp=E,0.4nm,0.7s,mb3.6						
WRA	**Warramunga Arr**	**58.98**	**147**	P	**P**	**17 06 22.8**	**+0.9**
	comp=E,0.7nm,0.6s,mb3.9,baz=340,slow=7.9,SNR=12						
ASAR	**Alice Springs**	**62.03**	**149**	P	**P**	**17 06 44.5**	**+1.8**
	comp=E,0.3nm,0.5s,mb3.6,baz=334,slow=6.8,SNR=12						
NOA	**NORSAR Array B**	**64.14**	**327**	P	**P**	**17 06 55.5**	**-0.8**
	comp=E,0.4nm,0.5s,mb3.7,baz=74,slow=6.6,SNR=3.7						

IDC ***28*** *16:58:40.8±2.7, 10.66N×91.53E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.6/24, mbtmp3.8/7, Error ellipse: s-maj=113.3km s-min=17.7km az=63.0*
NEIC ***28*** *16:58:41.7±0.8, 10.61N×91.44E, h10km, mb3.8/1, Error ellipse: s-maj=21.7km s-min=9.5km az=67.0*
ISCJB ***28*** *16:58:43.7±1.1, 10.7N±0.1×91.6E±0.2, h33km, mb3.7/8, Error ellipse: s-maj=30.2km s-min=13.2km az=156.6*
ISC 28 16:58:45.6±1.1, 10.7N±0.1×91.5E±0.2, h35km, n12, σ0.9 44/12, mb3.7/8, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**10.56**	**42**	*e*P	**Pn**	**17 01 14.5**	**-0.1**
MK31	**Makanchi Array**	**36.86**	**349**	*e*P	**P**	**17 05 50.4**	**-0.2**
MKAR	**Makanchi Array**	**36.86**	**349**	P	**P**	**17 05 50.7**	**+0.2**
	0.9nm,0.8s,mb3.7,baz=148,slow=7.8,SNR=7.0						
MKAR	**Makanchi Array**	**36.86**	**349**	P	**P**	**17 05 50.7**	**+0.2**
SONM	**Songino Array**	**39.12**	**16**	P	**P**	**17 06 10.1**	**+0.5**
	0.9nm,0.8s,mb3.5,baz=201,slow=7.7,SNR=6.0						
KURK	**Kurchatov**	**41.33**	**348**	P	**P**	**17 06 27.6**	**-0.2**
	0.3nm,0.6s,mb3.1,baz=163,slow=7.3,SNR=3.9						
ZALV	**Zalesovo Beam**	**43.51**	**354**	P	**P**	**17 06 45.5**	**-0.1**
	1.0nm,0.6s,mb3.7,baz=178,slow=10,SNR=5.2						
FITZ	**Fitzroy Crossi**	**44.17**	**130**	P	**P**	**17 06 51.2**	**-0.1**
	0.9nm,0.6s,mb3.7,baz=225,slow=5.7,SNR=5.1						
WRA	**Warramunga Arr**	**51.97**	**126**	P	**P**	**17 07 51.7**	**+0.1**
	0.7nm,0.5s,mb3.9,baz=307,slow=8.3,SNR=12						
WRA	**Warramunga Arr**	**51.97**	**126**	P	**P**	**17 07 51.7**	**+0.1**
WRAB	**Tennant Creek**	**51.97**	**126**	*e*P	**P**	**17 07 50.8**	**-0.9**
	0.5nm,0.4s,mb3.8						
ASAR	**Alice Springs**	**53.67**	**130**	P	**P**	**17 08 05.0**	**+0.9**
	2.0nm,0.8s,mb4.1,baz=304,slow=6.6,SNR=23						

ROM ***28*** *17:03:50.4±0.2, 41.86N×15.58E, h2km, Md2.5/16, Ml2.4/9, Error ellipse: s-maj=2.2km s-min=0.8km az=11.0*
ISCJB ***28*** *17:03:50.4±0.5, 41.89N±0.04×15.60E±0.03, h9km±8km, Error ellipse: s-maj=6.7km s-min=3.8km az=178.6*
CSEM ***28*** *17:03:51.0±0.2, 41.88N±0.04×15.61E, h5km, ML2.9/4, Error ellipse: s-maj=3.6km s-min=2.3km az=15.0*
ISC 28 17:03:51.3±0.5, 41.88N±0.04×15.59E±0.03, h5km±10km, n38, σ0.6 63/55, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGRT	**San Giovanni R**	**0.17**	**136**	Pg	**Pg**	**17 03 54.3**	**-0.3**
SGRT				Sg	**Sg**	**17 03 56.7**	**-0.2**
	870nm,0.3s						
SGRT	**San Giovanni R**	**0.17**	**136**	Pg	**Pg**	**17 03 54.3**	**-0.3**
SGRT				Sg	**Sg**	**17 03 56.7**	**-0.2**
	870nm,0.3s						
RGNG	**Rignano Grg**	**0.20**	**180**	Pg	**Pg**	**17 03 54.8**	**-0.5**
RGNG				Sg	**Sg**	**17 03 57.5**	**-0.5**
RGNG	**Rignano Grg**	**0.20**	**180**	Pg	**Pg**	**17 03 54.8**	**-0.5**
RGNG				Sg	**Sg**	**17 03 57.5**	**-0.5**
MSAG	**Monte S. Angel**	**0.29**	**124**	Pg	**Pg**	**17 03 56.6**	**-0.4**
MSAG				Sg	**Sg**	**17 04 01.6**	**+0.8**
	498nm,0.4s						
MSAG	**Monte S. Angel**	**0.29**	**124**	Pg	**Pg**	**17 03 56.6**	**-0.4**
MSAG				Sg	**Sg**	**17 04 01.6**	**+0.8**
	498nm,0.4s						
MS1	**Monte Sant'Ang**	**0.32**	**123**	*e*Pg	**Pg**	**17 03 56.6**	**-0.8**
MS1				*e*Sg	**Sg**	**17 04 03.2**	**+1.6**
FG2	**Serracapriola**	**0.33**	**257**	Pg	**Pg**	**17 03 57.6**	**0.0**
FG2				Sg	**Sg**	**17 04 01.9**	**+0.1**
	637nm,0.2s						
FG2	**Serracapriola**	**0.33**	**257**	Pg	**Pg**	**17 03 57.6**	**0.0**
FG2				Sg	**Sg**	**17 04 01.9**	**+0.1**
	637nm,0.2s						
MELA	**Melanico ??? S**	**0.38**	**244**	Pg	**Pg**	**17 03 58.5**	**-0.2**
MELA				Sg	**Sg**	**17 04 04.7**	**+1.0**
	553nm,0.3s						
MELA	**Melanico ??? S**	**0.38**	**244**	Pg	**Pg**	**17 03 58.5**	**-0.2**
MELA				Sg	**Sg**	**17 04 04.7**	**+1.0**
	553nm,0.3s						
MOCO	**Biccari - m.te**	**0.60**	**212**	Pg	**Pg**	**17 04 02.6**	**-0.2**
	39nm,0.3s						
FG5	**Orsara di Pugl**	**0.64**	**202**	Pg	**Pg**	**17 04 03.8**	**+0.2**
	57nm,0.2s						
FG5	**Orsara di Pugl**	**0.64**	**202**	Pg	**Pg**	**17 04 03.8**	**+0.2**
	57nm,0.2s						
SGTA	**Sant Agata di**	**0.76**	**193**	Pg	**Pg**	**17 04 06.3**	**+0.5**
	111nm,0.5s						
SGTA	**Sant Agata di**	**0.76**	**193**	Pg	**Pg**	**17 04 06.3**	**+0.5**
	111nm,0.5s						
BSSO	**Busso**	**0.81**	**246**	Pg	**Pg**	**17 04 07.4**	**+0.5**
BSSO	**Busso**	**0.81**	**246**	Pg	**Pg**	**17 04 07.4**	**+0.5**
CAFE	**Carife**	**0.89**	**197**	Pg	**Pg**	**17 04 08.0**	**-0.3**
CAFE	**Carife**	**0.89**	**197**	Pg	**Pg**	**17 04 08.0**	**-0.3**
VULT	**Monte Vulture**	**0.92**	**179**	Pg	**Pg**	**17 04 09.3**	**+0.4**
	225nm,0.3s						
VULT	**Monte Vulture**	**0.92**	**179**	Pg	**Pg**	**17 04 09.3**	**+0.4**
	225nm,0.3s						
MRVN	**Minervino Murg**	**0.94**	**150**	Pg	**Pg**	**17 04 09.0**	**-0.2**
	94nm,0.3s						
MRVN	**Minervino Murg**	**0.94**	**150**	Pg	**Pg**	**17 04 09.0**	**-0.2**
	94nm,0.3s						
SNAL	**S. Angelo Dei**	**0.99**	**197**	Pg	**Pg**	**17 04 10.2**	**-0.1**
SNAL	**S. Angelo Dei**	**0.99**	**197**	Pg	**Pg**	**17 04 10.2**	**-0.1**
CSSN	**Cassano Irpino**	**1.10**	**203**	Pg	**Pg**	**17 04 12.3**	**-0.1**
	15nm,0.3s						
CSSN	**Cassano Irpino**	**1.10**	**203**	Pg	**Pg**	**17 04 12.3**	**-0.1**
	15nm,0.3s						
MRLC	**Muro Lucano**	**1.12**	**184**	Pg	**Pg**	**17 04 12.4**	**-0.4**
	91nm,0.5s						
MRLC	**Muro Lucano**	**1.12**	**184**	Pg	**Pg**	**17 04 12.4**	**-0.4**
	91nm,0.5s						
AMUR	**Altamura**	**1.24**	**141**	Pg	**Pg**	**17 04 13.7**	**-1.3**
	61nm,0.3s						
AMUR	**Altamura**	**1.24**	**141**	Pg	**Pg**	**17 04 13.7**	**-1.3**
	61nm,0.3s						
BAI	**Bari**	**1.24**	**128**

comp=Z,15nm,0.3s
KKN Kakani 17.93 341 *e*P **Pn 17 21 07.6 +0.3**
QIZ Qiongzhong 19.09 63 P **Pn 17 21 21.3 -0.1**
QIZ S **Sn 17 24 56.5 +1.9**
QIZ LR LR
comp=N,370nm,17.6s
QIZ LR LR
comp=Z,560nm,17.9s
KSM Kuching 20.51 116 P **P 17 21 35.3 -0.7**
KSM Kuching 20.51 116 *e*Pn **P 17 21 34.4 -1.7**
comp=Z,41nm,1.0s
GYA Guiyang 20.81 40 P **P 17 21 38.8 -0.4**
GYA pP 17 21 48.5
GYA PP 17 22 01.3
GYA S **S 17 25 26.8 -3.2**
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,50nm,4.1s
GYA LR LR
comp=N,450nm,15.6s,MS4.1
GYA LR LR
comp=E,430nm,14.8s,MS4.1
GYA LR LR
comp=Z,470nm,15.9s,MS4.0
SBUM Sibu 21.81 111 P **P 17 21 49.5 -0.6**
BTM Bintulu 22.32 108 P **P 17 21 56.3 +0.7**
CD2 Chengdu 22.74 27‖ *i*P **P 17 21 59.3 -0.5**
CD2 pP 17 22 07.3
CD2 sP sP 17 22 09.8 -1.9
CD2 PP 17 22 28.5
CD2 S **S 17 26 02.3 -4.7**
CD2 pmax pmax
comp=Z,40nm,1.2s,mb4.7
CD2 pmax pmax
comp=Z,120nm,4.8s
CD2 LR LR
comp=N,360nm,15.6s,MS4.0
CD2 LR LR
comp=E,330nm,16.8s,MS4.0
CD2 LR LR
comp=Z,410nm,16.4s,MS4.0
DDI Dehra Dun 23.25 328 *ex* **P 17 22 05.0 -0.1**
KKM Kota Kinabalu 24.49 99 P **P 17 22 17.7 +0.7**
KKM Kota Kinabalu 24.49 99 P **P 17 22 15.9 -1.1**
comp=Z,33nm,1.3s,mb4.6
KDM Kudat 24.91 97 P **P 17 22 20.4 -0.4**
SDKM Sandakan 25.53 100 P **P 17 22 26.3 -0.1**
TSM Tawau 26.52 102 P **P 17 22 34.7 -0.6**
MYLDM Lahad Datu 26.90 100 P **P 17 22 41.6 +2.8**
TGY Tagaytay City 28.49 81 P **P 17 22 52.5 -0.5**
comp=Z,37nm,0.3s,mb5.5,baz=216,slow=19,SNR=4.1
GTA Gaotai 29.25 13‖ *e*P **P 17 23 00.5 +1.0**
GTA pP pP 17 23 08.0 -0.2
GTA sP sP 17 23 11.3 -0.5
GTA PcP PcP 17 26 07.3 +1.2
GTA S **S 17 27 52.0 +1.5**
GTA sS sS 17 28 04.0 -0.8
GTA pmax pmax
comp=Z,2.0nm,1.4s,mb3.6
GTA pmax pmax
comp=Z,37nm,6.0s
GTA LR LR
comp=N,91nm,17.1s,MS3.8
GTA LR LR
comp=E,160nm,18.6s,MS3.8
GTA LR LR
comp=Z,140nm,18.0s,MS3.6
KBL Kabul 31.47 322 *e*P **P 17 23 18.7 -0.4**
KBL *e**PP pP 17 23 28.1 +0.3
KBL pmax pmax
comp=Z,8.0nm,1.0s,mb4.5
KBL Kabul 31.47 322 *e*P **P 17 23 18.7 -0.5**
comp=Z,7.9nm,1.0s,mb4.5
KBL *e*pP pP 17 23 28.1 +0.3
KSH Kashi 31.84 336 P **P 17 23 21.5 -0.9**
KSH pP pP 17 23 28.8 -2.3
KSH sP sP 17 23 32.3 -2.4
KSH PP PP 17 24 25.5 -9.1
KSH PcP PcP 17 26 14.8 +1.9
KSH S **S 17 28 26.3 -4.8**
KSH ScP ScP 17 29 55.0 +0.6
KSH PcS PcS 17 29 58.0 +0.6
KSH ScS ScS 17 33 51.3 -1.3
KSH pmax pmax
comp=Z,8.0nm,0.7s,mb4.7
KSH pmax pmax
comp=Z,83nm,4.1s
KSH LR LR
comp=N,74nm,4.1s
KSH LR LR
comp=E,110nm,6.2s
KSH LR LR
comp=Z,150nm,5.1s
NJ2 Nanjing 32.56 46 *e*P **P 17 23 31.8 +3.0**
NJ2 pP pP 17 23 39.0 +1.5
NJ2 sP sP 17 23 42.5 +1.4
NJ2 PP PP 17 24 40.8 -1.9
NJ2 S **S 17 28 41.0 -1.5**
NJ2 sS sS 17 28 59.0 +2.1
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
NJ2 pmax pmax
comp=Z,100nm,10.1s
NJ2 LR LR
comp=N,650nm,21.6s,MS4.3
NJ2 LR LR
comp=E,210nm,21.7s,MS4.3
NJ2 LR LR
comp=Z,920nm,17.0s,MS4.5
WMQ Urumqi 33.01 354 *e*P **P 17 23 33.0 +0.4**
WMQ pP pP 17 23 43.0 +1.7
WMQ sP sP 17 23 47.0 +2.1
WMQ PP PP 17 24 44.0 -3.5
WMQ S **S 17 28 48.0 -1.2**
WMQ pmax pmax
comp=Z,20nm,1.0s,mb5.0
WMQ pmax pmax
comp=Z,86nm,3.0s
WMQ LR LR
comp=N,310nm,12.0s,MS4.3
WMQ LR LR
comp=E,260nm,12.0s,MS4.3
WMQ LR LR
comp=Z,320nm,12.0s,MS4.2
HHC Hu-ho-hao-te 34.50 27 *e*P **P 17 23 46.0 +0.4**
HHC pP pP 17 23 55.8 +1.5
HHC sP sP 17 23 59.8 +1.9
HHC PP PP 17 25 02.5 -1.6
HHC PcP PcP 17 26 21.5 +1.2
HHC S **S 17 29 12.8 +0.5**
HHC sS sS 17 29 26.5 -0.2
HHC ScP ScP 17 30 03.3 -0.3
HHC PcS PcS 17 30 07.3 +0.7
HHC ScS ScS 17 34 04.8 -1.5
HHC pmax pmax
comp=Z,11nm,0.6s,mb5.0
HHC pmax pmax
comp=Z,90nm,7.5s
HHC LR LR
comp=N,200nm,13.1s,MS4.2
HHC LR LR
comp=E,150nm,10.9s,MS4.2
HHC LR LR
comp=Z,170nm,14.3s,MS3.9
UCH Uchtor 34.74 337 *e*P **P 17 23 49.0 +1.4**
UCH *e**PP pP 17 23 56.8 +0.5
UCH pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
UCH Uchtor 34.74 337 *e*P **P 17 23 49.0 +1.5**
comp=Z,4.5nm,0.8s,mb4.5
UCH *e*pP pP 17 23 56.8 +0.5
TKM2 Tokmak 2 34.94 339 *e*P **P 17 23 49.4 +0.1**
TKM2 *e**PP pP 17 23 59.1 +1.1
TKM2 pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
TKM2 Tokmak 2 34.94 339 *e*P **P 17 23 49.4 +0.1**
comp=Z,2.6nm,0.9s,mb4.2
TKM2 *e*pP pP 17 23 59.0 +1.0
AAK Ala-Archa 35.09 337 P **P 17 23 51.5 +0.8**
comp=Z,2.0nm,0.4s,mb4.4,baz=36,slow=2.1,SNR=12
EKS2 Erkin-Say 35.39 337 *e*P **P 17 23 54.4 +1.2**
EKS2 *e**PP pP 17 24 02.8 +0.8
EKS2 pmax pmax
comp=Z,11nm,0.8s,mb4.8
EKS2 Erkin-Say 35.39 337 *e*P **P 17 23 54.4 +1.2**
comp=Z,11nm,0.8s,mb4.8
EKS2 *e*pP pP 17 24 02.8 +0.9
BJI Beijing 36.11 32 P **P 17 24 00.8 +1.4**
BJI S **S 17 29 37.5 +0.4**
BJI pmax pmax
comp=Z,13nm,0.6s,mb5.0
BJI pmax pmax
comp=Z,30nm,3.2s
BJI LR LR
comp=N,260nm,22.9s,MS4.2
BJI LR LR
comp=E,370nm,22.9s,MS4.2
BJI LR LR
comp=Z,270nm,18.6s,MS4.0
MK31 Makanchi Array 36.70 349 *e*P **P 17 24 04.0 -0.4**
MK31 *e**PP pP 17 24 12.5 -0.6
MKAR Makanchi Array 36.70 349 P **P 17 24 04.5 +0.1**
comp=Z,5.9nm,0.8s,mb4.5,baz=123,slow=8.8,SNR=39
MKAR Makanchi Array 36.70 349 P **P 17 24 04.5 +0.1**
SONM Songino Array 38.78 16 P **P 17 24 22.5 +0.6**
comp=Z,0.5nm,0.4s,mb3.6,baz=211,slow=7.9,SNR=7.0
SONM PcP PcP 17 26 33.5 +0.5
comp=Z,0.5nm,1.0s,baz=182,slow=4.3,SNR=2.8
ULN Ulaanbaatar 38.99 16 P **P 17 24 26.1 +2.4**
ULN pmax pmax
comp=Z,2.0nm,0.7s,mb4.0
ULN Ulaanbaatar 38.99 16 P **P 17 24 26.1 +2.5**
comp=Z,1.6nm,0.7s,mb3.9
KURK Kurchatov 41.19 347 P **P 17 24 41.3 -0.5**
comp=Z,4.8nm,1.0s,mb4.1,baz=164,slow=7.5,SNR=26
KURK LR LR 17 45 07.2
comp=Z,323nm,19.3s,MS4.2,baz=320,slow=41
KURK Kurchatov 41.19 347 *d* *i*P **P 17 24 41.8 -0.1**
KURK pmax pmax
comp=Z,11nm,1.0s,mb4.4
KURK Kurchatov 41.19 347 *e*P **P 17 24 41.7 -0.2**
comp=Z,11nm,1.1s,mb4.4
KURK *e*pP pP 17 24 50.2 -0.5
KSRS Korea Array 41.74 45 P **P 17 24 46.5 -0.1**
comp=Z,1.9nm,0.9s,mb3.7,baz=240,slow=7.1,SNR=5.5
KSRS LR LR 17 43 53.1
comp=Z,181nm,18.8s,MS4.0,baz=28,slow=39
TLY Talaya 41.78 11 *e*P **P 17 24 47.5 +0.8**
TLY *e* 17 26 45.4
TLY *e* 17 34 02.2
TLY pmax pmax
comp=Z,4.0nm,1.0s,mb4.0
MBWA Marble Bar 41.96 139 *e*P **P 17 24 48.8 +0.3**
comp=Z,20nm,1.2s,mb4.6
ZAA0 Zalesovo Array 43.32 354 *e*P **P 17 24 59.0 -0.2**
ZAA0 *e*pP pP 17 25 07.1 -1.0
ZALV Zalesovo Beam 43.32 354 P **P 17 24 59.2 0.0**
comp=Z,1.2nm,0.4s,mb4.0,baz=167,slow=9.1,SNR=16
ZALV Zalesovo Beam 43.32 354 P **P 17 24 59.2 0.0**
CN2 Changchun 43.74 35 *e*P **P 17 25 10.5 +7.7**
CN2 pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
FITZ Fitzroy Crossi 44.01 131 *e*P **P 17 25 03.6 -1.7**
comp=Z,42nm,0.9s,mb5.2
FITZ Fitzroy Crossi 44.01 131 P **P 17 25 03.8 -1.5**
comp=Z,24nm,0.9s,mb4.9,baz=311,slow=4.7,SNR=34
FITZ LR LR 17 45 20.9
comp=Z,172nm,21.8s,MS3.9,baz=14,slow=39
FITZ Fitzroy Crossi 44.01 131 *e*P **P 17 25 03.9 -1.4**
comp=Z,30nm,1.0s,mb5.0
RDF Al-Radifah 45.11 300 *e*P **P 17 25 13.9 0.0**
RDF AMb AMB 17 25 15.6
comp=Z,27nm,0.7s,mb5.2
BVAR Borovoye Array 45.45 342 P **P 17 25 16.0 -0.3**
comp=Z,0.9nm,0.5s,mb3.9,baz=155,slow=7.8,SNR=13
BVAR ScP ScP 17 30 45.4 -0.5
comp=Z,0.5nm,0.8s,baz=130,slow=5.8,SNR=3.5
MIB Mutribah 45.51 301 *e*P **P 17 25 16.9 -0.2**
MIB AMb AMB 17 25 18.4
comp=Z,22nm,1.5s,mb4.9
BRVK Borovoye 45.52 342‖ *e*P **P 17 25 16.4 -0.3**
BRVK pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
BRVK Borovoye 45.52 342 *e*P **P 17 25 16.1 -0.6**
comp=Z,5.1nm,1.3s,mb4.3
BRVK *e*pP pP 17 25 24.2 -1.4
MJAR Matsushiro Arr 48.85 51 P **P 17 25 42.8 -0.2**
comp=Z,0.9nm,0.8s,mb3.9,baz=229,slow=7.0,SNR=6.4
MJAR LR LR 17 47 45.8
comp=Z,117nm,19.2s,MS3.9,baz=260,slow=38
GNI Garni 50.79 313 *e*P **P 17 25 58.4 +0.7**
GNI pmax pmax
comp=Z,32nm,1.2s
GNI Garni 50.79 313 *e*P **P 17 25 58.4 +0.6**
comp=Z,32nm,1.2s,mb5.1
WRA Warramunga Arr 51.78 126 P **P 17 26 04.4 -1.1**
comp=Z,6.3nm,0.7s,mb4.6,baz=307,slow=8.3,SNR=84
WRAB Tennant Creek 51.79 126 *e*P **P 17 26 04.4 -1.1**
WRAB pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
WRAB Tennant Creek 51.79 126 *e*P **P 17 26 04.3 -1.1**
comp=Z,9.8nm,0.8s,mb4.8
SVE Sverdlovsk 51.81 339‖ *e*P **P 17 26 05.7 +0.6**
SVE pmax pmax
comp=Z,12nm,0.8s,mb4.9
HABR Khabarovsk 51.88 35 P **P 17 26 12.8 +7.0**
HABR *SP sP 17 26 18.1 -0.3
HABR *e* 17 28 02.0
HABR PPP 17 29 04.2
HABR *SS sS 17 33 41.9 +0.4
HABR *e* 17 35 50.1
HABR *e*SSS 17 38 46.3
HABR pmax pmax
comp=Z,20nm,1.9s,mb4.7
HABR pmax pmax
comp=N,13nm,1.9s
HABR pmax pmax
comp=E,28nm,1.7s
HABR MLR MLR
comp=Z,129nm,20.0s,MS4.0
ARU Arti 52.28 337 *d* *i*P **P 17 26 08.6 0.0**
ARU 17 28 05.8
ARU S **S 17 33 34.2 +2.5**
ARU SS SS 17 37 11.4 +1.9
ARU pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
ARU Arti 52.28 337 *e*P **P 17 26 08.5 -0.1**
comp=Z,4.8nm,0.8s,mb4.5
ARU *e*pP pP 17 26 16.8 -0.9
ZEI Tsey 52.36 316 *e*P **P 17 26 10.2 +0.7**
ZEI pmax pmax
comp=Z,5.0nm,0.3s,mb4.9
ASAR Alice Springs 53.52 130 P **P 17 26 17.6 -0.6**
comp=Z,4.7nm,0.9s,mb4.4,baz=302,slow=7.5,SNR=46
KIV Kislovodsk 53.63 317 *e*P **P 17 26 19.3 +0.5**
KIV *e**PP pP 17 26 27.2 -0.7
KIV pmax pmax
comp=Z,15nm,0.8s,mb5.0
KIV Kislovodsk 53.63 317 *e*P **P 17 26 19.2 +0.4**
comp=Z,15nm,0.8s,mb5.0
KIV *e*pP pP 17 26 27.2 -0.7
KMBO Kilima Mbogo 55.66 261 *e*P **P 17 26 35.8 +1.8**
KMBO pmax pmax
comp=Z,9.0nm,1.3s
KMBO Kilima Mbogo 55.66 261 *e*P **P 17 26 35.8 +1.8**
comp=Z,9.3nm,1.3s,mb4.7
YSS Yuzh-Sakhalins 55.82 40 P **P 17 26 37.2 +2.6**
YSS pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
YSS Yuzh-Sakhalins 55.82 40 P **P 17 26 37.2 +2.6**
comp=Z,7.1nm,0.9s,mb4.7
VSR Storozhevoye 58.68 324 *e*P **P 17 26 54.1 -0.7**
VSR pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
VSR pmax pmax
comp=N,5.0nm,0.8s
VSR pmax pmax
comp=E,10.0nm,1.0s
BR131 Keskin Array S 58.83 310 *e*P **P 17 26 54.6 -1.3**
comp=E,1.2nm,0.7s,mb4.0
BR131 *e*pP pP 17 27 03.4 -1.7
BRTR Keskin Array B 58.83 310 P **P 17 26 54.9 -1.1**
comp=E,2.7nm,0.8s,mb4.3,baz=120,slow=7.3,SNR=16
BRTR LR LR 17 55 17.8
comp=E,66nm,21.6s,MS3.7,baz=193,slow=39
SIM Simferopol' 59.76 316 *e*P **P 17 27 03.0 +0.7**
SIM pmax pmax
comp=Z,8.0nm,0.5s,mb5.0
OBN Obninsk 61.68 328‖ *e*P **P 17 27 15.7 +0.5**
OBN *e* 17 27 55.9
OBN pmax pmax
comp=Z,25nm,1.7s,mb5.1
OBN Obninsk 61.68 328 P **P 17 27 15.1 -0.1**
STKA Stephens Creek 63.75 134 P **P 17 27 30.9 +1.5**
AKASG Malin Array Be 64.45 321 P **P 17 27 32.3 -1.4**
comp=Z,0.7nm,0.4s,mb4.0,baz=91,slow=4.9,SNR=8.1
AKASG Malin Array Be 64.45 321 *i* P **P 17 27 32.7 -1.0**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
TIXI Tiksi 64.74 12 *e*P **P 17 27 33.3 -1.9**
TIXI pmax pmax
comp=Z,4.0nm,1.1s,mb4.4
TIXI Tiksi 64.74 12 *e*P **P 17 27 33.9 -1.3**
comp=Z,5.0nm,0.9s,mb4.5
VRI Vrincioaia 65.03 316⇑ P **P 17 27 38.0 +0.4**
VRI Vrincioaia 65.03 316⇑ *i*P **P 17 27 38.0 +0.4**
PLOR Plostina 65.08 316⇓ P **P 17 27 38.4 +0.5**
PLOR Plostina 65.08 316⇓ *i*P **P 17 27 38.4 +0.5**
MLR Muntele Rosu 65.50 315⇓ P **P 17 27 41.5 +0.8**
MLR Muntele Rosu 65.50 315⇓ *i*P **P 17 27 41.5 +0.8**
BURAR Bucovina Array 66.36 317⇑ P **P 17 27 46.2 +0.1**
BURAR Bucovina Array 66.36 317⇑ *i*P **P 17 27 46.2 +0.1**
BUR08 Bucovina Ar. S 66.38 317 P **P 17 27 45.7 -0.5**
BUR08 *e* *e* pP 17 27 54.2 -1.3
PETK Petropavlovsk- 66.87 37 LR LR 17 59 41.0
comp=Z,69nm,18.5s,MS3.9,baz=343,slow=38
JOF Joensuu 67.20 334 *e*P **P 17 27 50.1 -1.1**
JOF pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
JOF Joensuu 67.20 334 *e*p **P 17 27 50.1 -1.1**
comp=Z,5.7nm,0.6s,mb4.8
JOF Joensuu 67.20 334 *e*p **P 17 27 50.1 -1.1**
comp=Z,5.7nm,0.6s,mb4.8
VSU Vasula 67.89 329 *i* P **P 17 27 55.5 -0.1**
VSU pmax pmax
comp=Z,16nm,1.0s,mb5.0
LSZ Lusaka 68.27 249 *e*P **P 17 27 59.2 +0.5**
CRVS Cervenica-Dubn 69.04 318 *e*P **P 17 28 03.2 +0.2**
CRVS pmax pmax
comp=Z,8.0nm,1.4s,mb4.5
CRVS Cervenica-Dubn 69.04 318 *e*P **P 17 28 03.2 +0.2**
comp=Z,8.4nm,1.4s,mb4.5
CRVS Cervenica-Dubn 69.04 318 *e*P **P 17 28 03.2 +0.2**
FINES FINESS Array B 69.04 332 P **P 17 28 02.5 -0.2**
comp=Z,4.6nm,0.8s,mb4.5,baz=98,slow=7.4,SNR=16
FINES LR LR 17 59 43.3
comp=Z,86nm,19.7s,MS4.0,baz=97,slow=37
KAF Kangasniemi 69.13 333 *e*P **P 17 28 01.0 -2.3**
KAF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
KAF Kangasniemi 69.13 333 *e*p **P 17 28 01.0 -2.3**
comp=Z,3.6nm,0.6s,mb4.5
KAF Kangasniemi 69.13 333 *e*p **P 17 28 01.0 -2.3**
comp=Z,3.6nm,0.6s,mb4.5
OJC Ojcow 70.28 319 *e*P **P 17 28 08.3 -2.3**
VYHS Vyhne 70.72 318 *e*P **P 17 28 12.8 -0.5**
VYHS pmax pmax
comp=Z,36nm,3.6s
VYHS Vyhne 70.72 318 *e*P **P 17 28 12.8 -0.5**
comp=Z,36nm,3.6s
VYHS Vyhne 70.72 318 *e*P **P 17 28 12.8 -0.5**
OKC Ostrava-Krasne 71.30 319 *e*P **P 17 28 16.9 +0.1**
OKC Ostrava-Krasne 71.30 319 *e*P **P 17 28 16.9 +0.1**
ARCES ARCESS Array B 71.70 340 P **P 17 28 19.1 +0.2**
comp=Z,3.1nm,1.0s,mb4.2,baz=101,slow=10,SNR=6.2
ZST Bratislava 71.85 317 *e*P **P 17 28 20.7 +0.5**
ZST Bratislava 71.85 317 *e*P **P 17 28 20.7 +0.5**
DPC Dobruska-Polom 72.51 319 *e*P **P 17 28 24.1 0.0**
DPC Dobruska-Polom 72.51 319 *e*P **P 17 28 24.1 0.0**
UPC Upice 72.72 320 *e*P **P 17 28 26.1 +0.8**
UPC Upice 72.72 320 *e*P **P 17 28 26.1 +0.8**
PRU Pruhonice 73.63 319 *e*P **P 17 28 30.9 +0.2**
PRU Pruhonice 73.63 319 *e*P **P 17 28 30.9 +0.2**
LBTB Lobatse 73.81 240 *e*P **P 17 28 32.9 +0.7**
LBTB pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
LBTB Lobatse 73.81 240 *e*P **P 17 28 32.9 +0.6**
comp=Z,9.4nm,1.0s,mb4.7
BRG Berggiesshubel 74.05 320 *i* P **P 17 28 32.7 -0.5**
comp=Z,3.3nm,1.1s,mb4.2
BILL Bilibino 74.12 22⇑‖ *e*P **P 17 28 33.1 -0.1**
BILL *e* 17 31 16.4
BILL pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
KHC Kasperske Hory 74.23 318 *e*P **P 17 28 33.8 -0.4**
KHC Kasperske Hory 74.23 318 *e*P **P 17 28 33.8 -0.4**
CLL Collm 74.66 320 *e*P **P 17 28 36.0 -0.7**
CLL *e* pP 17 28 44.0 -2.1
CLL pmax pmax
comp=Z,8.0nm,1.3s,mb4.5
CLL Collm 74.66 320 *e*P **P 17 28 36.0 -0.7**
comp=Z,8.0nm,1.3s,mb4.5
CLL *e*pP pP 17 28 44.0 -2.1
BOSA Boshof 75.38 237 P **P 17 28 42.2 +1.0**
comp=Z,11nm,1.0s,mb4.7,baz=75,slow=3.6,SNR=8.2
BOSA LR LR 18 01 38.6
comp=Z,128nm,19.0s,MS4.2,baz=339,slow=36
BOSA Boshof 75.38 237 *e*P **P 17 28 41.7 +0.5**
BOSA pmax pmax
comp=Z,18nm,1.1s,mb4.9
BOSA Boshof 75.38 237 *e*P **P 17 28 41.7 +0.5**
comp=Z,18nm,1.1s,mb4.9
MOX Moxa 75.52 320 *e*P **P 17 28 41.6 -0.1**
GRF Grafenberg Arr 75.77 319 *e*P **P 17 28 42.9 -0.2**
comp=Z,6.0nm,1.2s,mb4.4
GRF Grafenberg Arr 75.77 319 *e*P **P 17 28 42.9 -0.2**
GRF pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
NOA NORSAR Array B 76.05 330 P **P 17 28 43.7 -0.8**
comp=Z,2.8nm,0.9s,mb4.2,baz=94,slow=5.5,SNR=6.3
NOA LR LR 18 06 26.7
comp=Z,32nm,18.5s,MS3.7,baz=125,slow=39
LPG La Plagne 78.96 314 *e*P **P 17 29 00.6 -0.5**
comp=Z,9.4nm,0.8s,mb4.5
LPG La Plagne 78.96 314 *e*P **P 17 29 00.6 -0.5**
LPG pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
LPG La Plagne 78.96 314 *e*P **P 17 29 00.6 -0.5**
comp=Z,4.7nm,0.8s,mb4.5
LPL La Plagne 78.97 314 *e*P **P 17 29 00.6 -0.5**
comp=Z,8.7nm,0.7s,mb4.5
LPL La Plagne 78.97 314 *e*P **P 17 29 00.6 -0.5**
LPL pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
LPL La Plagne 78.97 314 *e*P **P 17 29 00.6 -0.5**
comp=Z,4.3nm,0.6s,mb4.6
VIVF Saint-Julien-l 80.48 314 *e*P **P 17 29 08.7 -0.7**
comp=Z,16nm,1.0s,mb4.6
VIVF Saint-Julien-l 80.48 314 *e*P **P 17 29 08.7 -0.7**
VIVF pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
VIVF Saint-Julien-l 80.48 314 *e*P **P 17 29 08.7 -0.7**
comp=Z,7.9nm,1.0s,mb4.6
AVF Avril sur Loir 81.19 316 *e*P **P 17 29 12.0 -1.1**
TAM Tamanrasset 82.58 292 *e*P **P 17 29 22.2 +1.3**
TAM pmax pmax
comp=Z,12nm,1.4s,mb4.7
TAM Tamanrasset 82.58 292 *e*P **P 17 29 22.2 +1.3**
comp=Z,12nm,1.4s,mb4.7
MFF Saint Martin d 83.60 316 *e*P **P 17 29 24.8 -0.9**
ESDC Sonseca Array 87.62 310 P **P 17 29 45.8 -0.1**
comp=Z,0.3nm,0.5s,mb3.8,baz=79,slow=4.0,SNR=4.1
NVAR Mina Array Bea 123.39 28 PKP PKPdf 17 35 55.7 +0.9
comp=Z,0.8nm,0.8s,baz=292,slow=2.6,SNR=3.0
TXAR Lajitas Array 137.27 20 PKP PKPdf 17 36 23.5 +2.2
comp=Z,0.4nm,0.7s,baz=243,slow=1.4,SNR=3.7
PLCA Paso Flores 146.50 204 PKPbc PKPbc 17 36 37.9 -0.8
comp=Z,4.4nm,0.9s,baz=187,slow=1.7,SNR=5.6
LPAZ La Paz 159.90 252 PKPab PKPab 17 37 37.1 +0.5
comp=Z,1.7nm,0.9s,baz=84,slow=6.4,SNR=4.9

BJI ***28*** *17:20:28.0, 22.°06S×178.°48W, h622km, mB4.8/5, mb4.6/11*
IDC ***28*** *17:20:29.0±1.2, 22.°09S×179.°40W, h590km±13km, mb3.8/16, mb1 3.9/17, mb1mx3.9/20, mbtmp3.8/17, Error ellipse: s-maj=16.0km s-min=12.0km az=130.0*
NEIC ***28*** *17:20:29.1±0.6, 22.°15S×179.°34W, h600km±7km, mb4.7/25, Error ellipse: s-maj=10.8km s-min=8.2km az=118.0*
ISCJB ***28*** *17:20:29.4±0.6, 22.°22S±0.°06×179.°53W±0.°08, h608km±7km, mb4.5/37, Error ellipse: s-maj=11.7km s-min=8.6km az=11.7*
SZGRF ***28*** *17:20:32.3, 22.°25S×180.°00W, h625km, South of Fiji*

Islands

ISC 28 17:20:30.2±0.6, 22°17S±0°06×179°51W±0°08, h601km±6km, n164, σ0°99/70, mb4.5/37, 16C-18D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu** 336nm,0.4s	**4.97**	**332**	⇑*i*P	**P**	**17 22 03.3**	**+0.3**
MSVF				*e*S	**S**	**17 23 18.7**	**+0.1**
RAO	**Raoul Island** 165nm,0.3s,baz=55,slow=12,SNR=5.4	**7.20**	**169**	P	**P**	**17 22 21.7**	**-0.2**
AFI	**Afiamalu** 12nm,0.3s,baz=232,slow=4.9,SNR=11	**11.02**	**43**	P	**P**	**17 22 55.7**	**-3.5**
AFI	1.6nm,0.3s,baz=201,slow=23,SNR=3.6			S	**S**	**17 24 51.6**	**-10**
AFI	**Afiamalu**	**11.02**	**43**	*e*P	**P**	**17 22 55.0**	**-4.2**
AFI				*e*S	**S**	**17 24 49.8**	**-12**
URZ	**Urewera** 11nm,0.3s,baz=276,slow=3.2,SNR=67	**16.30**	**190**	P	**P**	**17 23 47.5**	**-2.6**
URZ	3.9nm,0.3s,baz=227,slow=23,SNR=16			S	**S**	**17 26 26.7**	**-6.1**
URZ	**Urewera** 35nm,0.4s	**16.30**	**190**	*e*P	**P**	**17 23 47.1**	**-2.9**
URZ	9.9nm,1.1s,baz=119,slow=9.2,SNR=3.9			*e*S	**S**	**17 26 25.6**	**-7.2**
SNZO	**South Karori** 218nm,1.4s	**19.70**	**193**	*e*P	**P**	**17 24 19.6**	**-1.3**
RPZ	**Rata Peaks** 9.6nm,0.4s,mb4.7,baz=154,slow=6.7,SNR=14	**22.87**	**198**	P	**P**	**17 24 48.5**	**-0.7**
EIDS	**Eidsvold** 12nm,0.4s,mb4.9	**27.08**	**257**	*e*P	**P**	**17 25 27.1**	**+0.4**
ARMA	**Armidale**	**27.09**	**246**	*e*P	**P**	**17 25 28.6**	**+1.9**
ARMA	**Armidale** 29nm,0.3s,mb5.4	**27.09**	**246**	*e*P	**P**	**17 25 28.5**	**+1.8**
CNB	**Canberra Magne**	**30.14**	**237**	*e*P	**P**	**17 25 54.5**	**+1.5**
CTA	**Charters Tower** 15nm,0.4s,mb5.0	**31.96**	**267**	*e*P	**P**	**17 26 09.3**	**+0.6**
CTA	**Charters Tower** 17nm,0.4s,mb5.0,baz=91,slow=11,SNR=100	**31.96**	**267**	P	**P**	**17 26 09.3**	**+0.6**
CTA	9.9nm,1.1s,baz=119,slow=9.2,SNR=3.9			PcP	PcP	17 28 39.9	-0.2
CTA	**Charters Tower**	**31.96**	**267**	P	**P**	**17 26 09.3**	**+0.5**
CTA				PcP	PcP	17 28 39.9	-0.2
CTAO	**Charters Tower** 17nm,0.4s,mb5.0	**31.96**	**267**	*e*P	**P**	**17 26 09.1**	**+0.4**
TOO	**Toolangi**	**33.79**	**235**	*e*P	**P**	**17 26 24.7**	**+0.9**
STKA	**Stephens Creek** 6.9nm,0.4s,mb4.7	**35.81**	**246**	*e*P	**P**	**17 26 41.5**	**+0.8**
STKA	**Stephens Creek**	**35.81**	**246**	P	**P**	**17 26 41.5**	**+0.9**
STKA	**Stephens Creek** 12nm,0.5s,mb4.7,baz=95,slow=10,SNR=72	**35.81**	**246**	⇓*i*P	**P**	**17 26 41.5**	**+0.8**
ASAR	**Alice Springs** 3.0nm,0.6s,mb4.0	**42.79**	**259**	P	**P**	**17 27 36.9**	**+0.3**
ASAR	35nm,0.8s,mb4.9,baz=90,slow=9.2,SNR=143			PcP	PcP	17 29 13.9	+0.1
ASAR	4.4nm,0.7s,baz=107,slow=3.6,SNR=9.0			S	**S**	**17 33 16.8**	**-1.8**
WRAB	**Tennant Creek** 6.1nm,0.9s,baz=95,slow=14,SNR=24	**43.00**	**264**	⇓*i*P	**P**	**17 27 37.6**	**-0.7**
WRA	**Warramunga Arr** 43nm,0.9s,mb5.0	**43.00**	**264**	P	**P**	**17 27 37.9**	**-0.4**
WRA	12nm,0.3s,mb4.9,baz=93,slow=8.6,SNR=312			PcP	PcP	17 29 15.1	+0.4
WRA	3.9nm,0.8s,baz=99,slow=4.1,SNR=6.0			ScP	ScP	17 32 11.9	+2.6
WRA	3.1nm,1.0s,baz=95,slow=4.3,SNR=6.5			S	**S**	**17 33 18.3**	**-3.4**
KAKA	**Kakadu** 29nm,0.3s,mb5.3	**46.63**	**273**	⇓*i*P	**P**	**17 28 05.7**	**-0.4**
KAKA	**Kakadu** 45nm,0.3s,mb5.5	**46.63**	**273**	*e*P	**P**	**17 28 05.5**	**-0.6**
FORT	**Forrest** 28nm,0.7s,mb4.9	**47.36**	**248**	*e*P	**P**	**17 28 10.9**	**-0.4**
FITZ	**Fitzroy Crossi** 26nm,1.0s,mb4.6	**51.43**	**264**	⇓*i*P	**P**	**17 28 41.5**	**+0.1**
FITZ	**Fitzroy Crossi** 6.0nm,0.3s,mb4.5,baz=77,slow=5.7,SNR=51	**51.43**	**264**	P	**P**	**17 28 41.6**	**+0.2**
FITZ	1.9nm,1.0s,baz=90,slow=20,SNR=2.8			S	**S**	**17 35 17.9**	**+0.1**
KLBR	**Kellerberrin** 39nm,1.0s,mb4.6	**56.09**	**246**	*e*P	**P**	**17 29 13.9**	**0.0**
SBA	**Scott Base** 17nm,1.2s,mb4.2	**56.13**	**183**	*e*P	**P**	**17 29 16.2**	**+2.9**
MBWA	**Marble Bar** 36nm,0.7s,mb4.7	**56.13**	**259**	⇓*i*P	**P**	**17 29 13.7**	**-0.7**
NWAO	**Narrogin (SRO)** 6.4nm,0.3s,mb4.3,baz=108,slow=8.9,SNR=19	**56.38**	**244**	P	**P**	**17 29 16.0**	**+0.1**
NWAO	**Narrogin (SRO)** 17nm,0.9s,mb4.3	**56.38**	**244**	*e*P	**P**	**17 29 15.2**	**-0.7**
CASY	**Casey** 18nm,0.9s,mb4.3	**61.86**	**206**	⇓*i*P	**P**	**17 29 52.0**	**+0.2**
QSPA	**South Pole Qui** 30nm,1.1s,mb4.6	**67.91**	**180**	⇓*e*P	**P**	**17 30 30.6**	**+1.2**
QSPA				*e*pP	pP	17 32 31.7	+2.1
KKM	**Kota Kinabalu** 9.0nm,0.5s,mb4.5	**68.84**	**286**	*e*P	**P**	**17 30 36.1**	**-0.1**
MJAR	**Matsushiro Arr** 4.0nm,0.8s,mb4.0,baz=160,slow=6.1,SNR=21	**70.73**	**325**	P	**P**	**17 30 46.2**	**-0.7**
MAJO	**Matsushiro** 5.6nm,0.9s,mb4.1	**70.74**	**325**	*e*P	**P**	**17 30 46.5**	**-0.4**
MAT	**Matsushiro**	**70.74**	**325**	P	**P**	**17 30 46.3**	**-0.6**
KSM	**Kuching** 26nm,0.9s,mb4.8	**72.27**	**279**	*e*P	**P**	**17 30 56.0**	**-0.4**
SSLB	**Suanglung** 11nm,0.7s,mb4.5	**73.74**	**305**	*e*P	**P**	**17 31 02.9**	**-1.6**
YSS	**Yuzh-Sakhalins**	**76.77**	**334**	*e*P	**P**	**17 31 21.5**	**+0.8**
KSRS	**Korea Array** 2.0nm,0.9s,mb3.5,baz=125,slow=4.7,SNR=6.9	**77.22**	**320**	P	**P**	**17 31 24.1**	**+0.7**
PETK	**Petropavlovsk-** 11nm,0.8s,mb4.3,baz=119,slow=6.5,SNR=26	**77.53**	**346**	P	**P**	**17 31 24.4**	**-0.3**
MAW	**Mawson** 6.6nm,0.9s,mb4.0,baz=121,slow=6.3,SNR=11	**79.53**	**200**	P	**P**	**17 31 35.8**	**+0.6**
MAW	**Mawson** 2.3nm,1.0s,mb3.5	**79.53**	**200**	*e*P	**P**	**17 31 35.8**	**+0.5**
KULM	**Kulim** 10.0nm,0.8s,mb4.4	**82.62**	**279**	*e*P	**P**	**17 31 52.1**	**0.0**
CN2	**Changchun**	**82.77**	**323**	*e*P	**P**	**17 31 52.5**	**+0.3**
CN2	comp=Z,10.0nm,1.0s,mb4.3			*e*pmax	pmax		
NVAR	**Mina Array Bea** comp=Z,0.2nm,0.4s,baz=222,slow=10.0,SNR=3.6	**83.19**	**44**	P	**P**	**17 31 55.3**	**+0.9**
PSI	**Prapat** comp=Z,7.0nm,0.8s,mb4.3,baz=0.9,slow=0.6,SNR=8.9	**83.25**	**276**	P	**P**	**17 31 54.5**	**-0.8**
SYO	**Syowa Base**	**84.80**	**193**	⇓*i*P	**P**	**17 32 00.0**	**-1.8**
TRF	**Thorofare Moun** comp=Z,12nm,0.8s,mb4.7	**88.37**	**13**	*e*P	**P**	**17 32 16.9**	**-1.7**
MCK	**McKinley** comp=Z,5.5nm,0.7s,mb4.5	**88.90**	**13**	*e*P	**P**	**17 32 20.9**	**-0.1**
TXAR	**Lajitas Array** comp=Z,0.2nm,0.8s,baz=211,slow=4.4,SNR=5.6	**89.13**	**58**	P	**P**	**17 32 24.9**	**+1.9**
CM31	**Chiang Mai Arr** comp=Z,15nm,1.0s,mb4.8	**89.35**	**290**	*e*P	**P**	**17 32 25.5**	**+1.3**
CMAR	**Chiang Mai Arr** comp=Z,11nm,0.9s,mb4.7,baz=133,slow=3.3,SNR=62	**89.35**	**290**	P	**P**	**17 32 25.8**	**+1.6**
CHTO	**Chiang Mai** comp=Z,13nm,0.9s,mb4.8	**89.49**	**290**	*e*P	**P**	**17 32 25.6**	**+0.8**
BILL	**Biiibino** comp=Z,3.9nm,0.9s,mb4.3	**90.55**	**355**	*e*P	**P**	**17 32 27.8**	**-0.7**
PDAR	**Pinedale Array** comp=Z,0.6nm,0.8s,mb3.5,baz=222,slow=2.0,SNR=4.4	**91.13**	**44**	P	**P**	**17 32 32.5**	**+0.7**
PDAR	**Pinedale Array**	**91.13**	**44**	P	**P**	**17 32 32.5**	**+0.7**
YAK	**Yakutsk** comp=Z,10nm,0.8s,mb4.9	**93.13**	**339**	*e*P	**P**	**17 32 39.5**	**-1.1**
SONM	**Songino Array** comp=Z,0.2nm,0.4s,mb3.7,baz=116,slow=6.6,SNR=2.6	**96.09**	**319**	P	**P**	**17 32 54.6**	**+0.3**
ZAA0	**Zalesovo Array**	**110.90**	**321**	*e*PKPdf	PKiKP	17 37 53.8	-1.8
ZALV	**Zalesovo Beam** comp=Z,0.6nm,0.3s,baz=159,slow=2.1,SNR=5.2	**110.90**	**321**	PKiKP	PKiKP	17 37 53.6	-2.0
MK31	**Makanchi Array**	**111.31**	**313**	*e*PKPdf	PKiKP	17 37 54.3	-2.3
MKAR	**Makanchi Array** comp=Z,0.8nm,0.6s,baz=69,slow=4.6,SNR=8.0	**111.31**	**313**	PKiKP	PKiKP	17 37 55.1	-1.5
KURK	**Kurchatov** comp=Z,1.4nm,0.7s,baz=103,slow=1.8,SNR=6.5	**114.25**	**317**	PKP	PKiKP	17 38 00.2	-1.9
KURK	**Kurchatov**	**114.25**	**317**	PKP	PKiKP	17 38 00.2	-1.9
BVAR	**Borovoye Array** comp=Z,2.2nm,0.3s,baz=118,slow=2.6,SNR=41	**119.43**	**319**	PKP	PKPdf	17 38 10.9	-1.1
KBL	**Kabul**	**119.44**	**298**	*e*PKPdf	PKPdf	17 38 12.5	-0.1
BRVK	**Borovoye**	**119.50**	**319**	*e*PKPdf	PKPdf	17 38 10.7	-1.5
BOSA	**Boshof** comp=Z,4.2nm,1.1s,baz=270,slow=1.0,SNR=3.1	**124.15**	**206**	PKP	PKPdf	17 38 22.3	+0.3
ARU	**Arti**	**125.75**	**324**	*e*PKPdf	PKPdf	17 38 23.1	-1.0
ARCES	**ARCESS Array B** comp=Z,2.2nm,0.6s,baz=70,slow=1.5,SNR=25	**130.29**	**349**	PKP	PKPdf	17 38 31.4	-0.9
ARCES	comp=Z,3.3nm,0.9s,baz=72,slow=4.0,SNR=7.6			SKPab		17 41 01.2	
ARCES	**ARCESS Array B**	**130.29**	**349**	PKP	PKPdf	17 38 31.4	-0.9
ARCES				SKPab		17 41 01.2	
JOF	**Joensuu** comp=Z,4.7nm,0.6s	**134.26**	**341**	*e*p	PKPdf	17 38 38.3	-1.7
JOF	**Joensuu** comp=Z,4.7nm,0.6s	**134.26**	**341**	*e*p	PKPdf	17 38 38.3	-1.7
KAF	**Kangasniemi** comp=Z,1.3nm,0.3s	**136.34**	**343**	*e*p	PKPdf	17 38 41.3	-2.5
KAF	**Kangasniemi** comp=Z,1.3nm,0.3s	**136.34**	**343**	*e*p	PKPdf	17 38 41.3	-2.5
FINES	**FINESS Array B** comp=Z,1.5nm,0.8s,baz=46,slow=2.8,SNR=7.2	**136.95**	**342**	PKhKP		17 38 33.9	
FINES	comp=Z,1.8nm,0.6s,baz=25,slow=2.0,SNR=8.4			PKP	PKPdf	17 38 45.6	+0.6
FINES	comp=Z,1.3nm,0.9s,baz=46,slow=4.0,SNR=3.5			SKP		17 41 22.7	
FINES	**FINESS Array B**	**136.95**	**342**	PKP		17 38 33.9	
FINES				PKP	PKPdf	17 38 45.6	+0.6
FINES				SKP		17 41 22.7	
KMBO	**Kilima Mbogo** comp=Z,1.7nm,0.7s,baz=180,slow=20,SNR=4.0	**137.32**	**242**	PKP	PKPdf	17 38 47.3	+0.1
NOA	**NORSAR Array B** comp=Z,1.8nm,0.9s,baz=16,slow=4.9,SNR=7.1	**140.44**	**352**	PKhKP		17 38 44.7	
AKASG	**Malin Array Be** comp=Z,4.5nm,0.3s,baz=41,slow=4.3,SNR=43	**143.75**	**329**	PKP	PKPdf	17 38 55.4	-2.2
SUW	**Suwalki**	**143.86**	**337**	*e*PKP	PKPdf	17 38 56.4	-1.2
SUW	**Suwalki**	**143.86**	**337**	*e*PKPdf	PKPdf	17 38 56.4	-1.2
MUD	**Monsted U'grnd** comp=Z,10nm,1.0s	**145.16**	**352**	*i* P	PKPdf	17 38 59.7	-0.1
BSD	**Bornholm Skovb** comp=Z,24nm,0.9s	**145.37**	**345**	*i* P	PKPdf	17 39 00.1	-0.1
BR131	**Keskin Array S**	**146.86**	**310**	*e*PKPdf	PKPbc	17 39 05.7	-0.4
BRTR	**Keskin Array B** comp=Z,5.9nm,0.8s,baz=130,slow=3.8,SNR=33	**146.86**	**310**	PKPbc	PKPbc	17 39 05.7	-0.5
LEOM	**Leova**	**146.94**	**324**	⇑*i*P	PKPdf	17 39 03.4	+0.3
MMAI	**Mount Meron Ar** comp=Z,9.2nm,0.5s,baz=75,slow=7.8,SNR=25	**147.36**	**297**	PKPbc	PKPbc	17 39 08.1	+0.4
TLCR		**147.38**	**322**	⇓*i*P	PKPbc	17 39 07.0	-0.3
BSEG	**Bad Segeberg**	**147.41**	**349**	*e*PKPbc	PKPbc	17 39 06.9	-0.2
KWP	**Kalwaria Pacla**	**147.46**	**333**	*e*PKP	PKPbc	17 39 07.4	0.0
KWP	**Kalwaria Pacla**	**147.46**	**333**	⇓*i*P	PKPbc	17 39 07.0	-0.4
BUR08	**Bucovina Ar. S**	**147.76**	**328**	*e*PKPbc	PKPbc	17 39 08.2	-0.1
BURAR	**Bucovina Array**	**147.77**	**328**	⇓*i*P	PKPbc	17 39 08.7	+0.5
TIRR	**Tirgusor**	**148.03**	**321**	⇑*i*P	PKPbc	17 39 08.7	-0.3
VRI	**Vrincioaia**	**148.14**	**324**	⇓*i*P	PKPbc	17 39 08.6	-0.6
OJC	**Ojcow**	**148.16**	**336**	*e*PKP	PKPbc	17 39 07.0	-2.1
PLOR	**Plostina**	**148.19**	**324**	⇑*i*P	PKPbc	17 39 08.9	-0.5
STHS	**Stebnicka Huta**	**148.23**	**334**	*e*PKP	PKPbc	17 39 09.7	+0.4
STHS	**Stebnicka Huta**	**148.23**	**334**	*e*PKP	PKPbc	17 39 09.7	+0.4
CRVS	**Cervenica-Dubn**	**148.54**	**333**	*e*PKP	PKPbc	17 39 10.1	0.0
CRVS	**Cervenica-Dubn**	**148.54**	**333**	*e*PKP	PKPbc	17 39 10.1	0.0
NIE	**Niedzica**	**148.60**	**335**	*e*PKP	PKPbc	17 39 10.8	+0.5
CSS	**Prodhromos**	**148.61**	**301**	*e*PKPbc	PKPbc	17 39 09.0	-1.8
MLR	**Muntele Rosu**	**148.80**	**324**	⇓*i*P	PKPbc	17 39 10.0	-0.9
KSP	**Ksiaz**	**148.82**	**341**	*e*PKP	PKPbc	17 39 11.0	+0.3
NRDL	**Niedersach Rie**	**148.83**	**349**	*e*PKPbc	PKPbc	17 39 10.3	-0.4
OKC	**Ostrava-Krasne**	**149.07**	**338**	⇑*e*PKP	PKPbc	17 39 11.3	-0.1
UPC	**Upice**	**149.21**	**341**	⇑*e*PKP	PKPbc	17 39 11.8	+0.1
DPC	**Dobruska-Polom**	**149.25**	**340**	⇑*e*PKP	PKPbc	17 39 12.1	+0.3
DPC				*e*PKPAB	PKPab	17 39 19.7	+0.8
DPC				*e*pPKP	pPKPdf	17 41 33.4	+7.4
KECS	**Kecovo**	**149.27**	**334**	*e*PKP	PKPbc	17 39 12.5	+0.6
KECS	**Kecovo**	**149.27**	**334**	*e*PKP	PKPbc	17 39 12.5	+0.6
CLL	**Collm**	**149.32**	**345**	*e*PKPbc	PKPbc	17 39 11.5	-0.4
CLL				*e*PKPab	PKPab	17 39 18.3	-0.9
CLL	**Collm** comp=Z,34nm,0.9s	**149.32**	**345**	⇓*i*PKPbc	PKPbc	17 39 11.8	-0.1
CLL				*e*		17 39 16.0	
CLL	comp=Z,13nm,0.9s			⇑*i*PKPab	PKPab	17 39 18.7	-0.5
CLL				*e*pPKPab	pPKPab	17 41 33.0	+1.3
MORC	**Moravsky Berou**	**149.33**	**338**	*e*PKPbc	PKPbc	17 39 11.5	-0.5
MORC	**Moravsky Berou**	**149.33**	**338**	⇑*i*P	PKPbc	17 39 11.9	-0.1
IBBN	**Ibbenburen**	**149.39**	**351**	*e*PKPbc	PKPbc	17 39 12.0	-0.1
IBBN				*e*PKPab	PKPab	17 39 19.2	-0.2
CLZ	**Clausthal**	**149.40**	**348**	*e*PKPbc	PKPbc	17 39 12.4	+0.3
CLZ				*e*PKPab	PKPab	17 39 19.4	-0.1
BRG	**Berggiesshubel**	**149.48**	**343**	*e*PKPbc	PKPbc	17 39 12.1	-0.2
BRG	**Berggiesshubel** comp=Z,17nm,0.9s	**149.48**	**343**	*i* P	PKPbc	17 39 12.2	-0.1
DRGR		**149.56**	**329**	⇓*i*P	PKPbc	17 39 12.3	-0.3
PVCC	**Panska Ves**	**149.62**	**342**	⇑*e*PKP	PKPbc	17 39 12.6	0.0
PVCC				*e*PKPAB	PKPab	17 39 20.5	+0.1
VYHS	**Vyhne**	**149.93**	**335**	*e*PKP	PKPbc	17 39 13.1	-0.3
VYHS	**Vyhne**	**149.93**	**335**	*e*PKP	PKPbc	17 39 13.1	-0.3
PSZ	**Piszkesteto**	**149.96**	**333**	⇓*e*PKP	PKPbc	17 39 13.2	-0.4
PSZ	**Piszkesteto**	**149.96**	**333**	⇑*i*P	PKPbc	17 39 14.0	+0.4
PRU	**Pruhonice**	**150.11**	**342**	⇑*e*PKP	PKPbc	17 39 14.0	+0.2
PRU				*e*PKPAB	PKPab	17 39 22.8	+0.3
PRU				*e*pPKP	pPKPdf	17 41 36.2	+8.8
MOX	**Moxa** comp=Z,20nm,1.3s	**150.27**	**346**	*e*PKP	PKPbc	17 39 13.8	-0.4
MOX	**Moxa**	**150.27**	**346**	*e*PKPbc	PKPbc	17 39 13.9	-0.3
MOX				*e*PKPab	PKPab	17 39 22.6	-0.5
TANN	**Tannenbergstha**	**150.28**	**344**	*e*PKPbc	PKPbc	17 39 13.5	-0.7
TANN				*e*PKPab	PKPab	17 39 22.9	-0.3
BUG	**Bochum--Univer**	**150.31**	**351**	*e*PKPbc	PKPbc	17 39 13.7	-0.5
TREC	**Trest**	**150.43**	**340**	⇑*e*PKP	PKPbc	17 39 14.4	-0.2
NKC	**Novy Kostel**	**150.45**	**344**	⇑*e*PKP	PKPbc	17 39 14.7	+0.1
BZS	**Buzias**	**150.94**	**329**	⇓*i*P	PKPbc	17 39 15.3	-0.6
KHC	**Kasperske Hory**	**151.15**	**342**	*e*PKPbc	PKPbc	17 39 15.7	-0.6
KHC				*e*PKPab	PKPab	17 39 27.1	+0.2
KHC				*e*pPKPdf	pPKPdf	17 41 35.1	+6.1
KHC	**Kasperske Hory**	**151.15**	**342**	⇑*e*PKP	PKPbc	17 39 16.1	-0.1
KHC				*e*PKPAB	PKPab	17 39 26.9	0.0
KHC				*e*pPKP	pPKPdf	17 41 36.1	+7.0
GRF	**Grafenberg Arr**	**151.25**	**345**	*e*PKPbc	PKPbc	17 39 15.9	-0.5
GRF				*e*PKPab	PKPab	17 39 27.0	-0.3
GRF				*e*pPKPbc	pPKPbc	17 41 38.4	+4.0
GRF	**Grafenberg Arr**	**151.25**	**345**	*e*PKP	PKPbc	17 39 15.9	-0.5
GRF				*e*PKP	PKPab	17 39 27.1	-0.2
GRF				pPKPbc	pPKPbc	17 41 38.4	+4.0
TNS	**Taunus Mts**	**151.31**	**349**	*e*PKPbc	PKPbc	17 39 16.4	-0.1
WET	**Wettzell**	**151.34**	**343**	*e*PKPab	PKPab	17 39 27.7	0.0
GEC2	**GERESS Array S**	**151.38**	**342**	*e*PKPbc	PKPbc	17 39 16.3	-0.4
CSNA	**Conrad Observa** comp=Z,8.7nm,0.9s	**151.49**	**338**	⇑*i*PKPdf	PKPbc	17 39 16.8	-0.2
PKSM	**Moragy**	**151.84**	**333**	⇓*i*P	PKPbc	17 39 17.3	-0.6
GIVF	**Givet** comp=Z,20nm,0.9s	**151.91**	**354**	*e*PKP1	PKPbc	17 39 17.4	-0.5
BAIF	**Baiwes**	**152.01**	**355**	*e*PKP1	PKPbc	17 39 17.7	-0.4
WLF	**Walferdange**	**152.19**	**352**	*e*PKPbc	PKPbc	17 39 18.7	+0.2
STU	**Stuttgart**	**152.56**	**347**	*e*PKPbc	PKPbc	17 39 19.0	-0.4
RJOB	**Jochberg**	**152.64**	**342**	*e*PKPab	PKPab	17 39 33.7	+0.4
FUR	**Furstenfeldbru**	**152.66**	**344**	*e*PKPab	PKPab	17 39 33.5	+0.2
BFO	**Black Forest**	**153.15**	**348**	*e*PKPbc	PKPbc	17 39 20.3	-0.3
BFO				*e*PKPab	PKPab	17 39 34.9	-0.5
CDF	**Champ du Feu** comp=Z,4.5nm,0.8s	**153.25**	**350**	*e*PKP1	PKPbc	17 39 20.3	-0.6
FLN	**La Foliniere** comp=Z,5.3nm,0.5s	**153.45**	**1**	*e*PKP1	PKPbc	17 39 20.4	-0.9
MEZF	**Maizieres J'vi**	**153.47**	**353**	*e*PKP1	PKPbc	17 39 21.7	+0.4
SGMF	**Saint Gilles**	**153.85**	**5**	*e*PKP1	PKPbc	17 39 21.0	-1.1
LOR	**Lormes** comp=Z,1.6nm,0.4s	**154.81**	**355**	*e*PKP1	PKPdf	17 39 22.4	+7.4
MFF	**Saint Martin d**	**155.62**	**1**	*e*PKP1	PKPdf	17 39 25.0	+8.9
TCF	**Toulx Ste Croi** comp=Z,1.2nm,0.4s	**155.90**	**357**	*e*PKP1	PKPdf	17 39 25.7	+9.3
ESDC	**Sonseca Array** comp=Z,0.1nm,0.3s,baz=340,slow=2.1,SNR=4.2	**162.14**	**11**	PKPab	PKPab	17 40 12.6	-2.1
ESDC	**Sonseca Array**	**162.14**	**11**	PKPab	PKPab	17 40 12.6	-2.1
DBIC	**Dimbokro** comp=Z,2.3nm,0.9s,baz=146,slow=3.6,SNR=3.0	**163.75**	**161**	PKPab	PKPab	17 40 23.4	+1.0

*IDC **28** 17:27:13.8±1.2, 10°60N×91°52E, h0km, mb3.7/9, mb1 3.7/10, mb1mx3.6/25, mbtmp3.6/10, ML3.1/1, Error ellipse: s-maj=46.4km s-min=17.5km az=59.0*
*NEIC **28** 17:27:16.9±0.5, 10°92N×92°08E, h10km, mb4.1/1, Error ellipse: s-maj=15.6km s-min=11.2km az=51.0*
*ISCJB **28** 17:27:18.1±0.6, 10°8N±0°1×92°0E±0°1, h33km, mb3.6/10, Error ellipse: s-maj=17.6km s-min=13.1km az=141.6*

ISC 28 17:27:20.5±0.6, 10°9N±0°1×92°0E±0°1, h35km, n13, σ0°63/13, mb3.6/10, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr** 0.0nm,0.3s,baz=240,slow=15,SNR=3.0	**10.07**	**41**	Pn	**Pn**	**17 29 48.6**	**+5.9**
PALK	**Pallekele**	**11.74**	**253**	Pn	**Pn**	**17 30 06.1**	**+0.5**
MKAR	**Makanchi Array** 0.8nm,0.7s,mb3.7,baz=131,slow=8.3,SNR=5.8	**36.73**	**349**	P	**P**	**17 34 24.3**	**0.0**
MKAR	**Makanchi Array**	**36.73**	**349**	P	**P**	**17 34 24.3**	**0.0**
SONM	**Songino Array** 0.3nm,0.7s,mb3.1,baz=205,slow=6.4,SNR=3.0	**38.76**	**15**	P	**P**	**17 34 42.4**	**+0.9**
KURK	**Kurchatov** 0.7nm,0.8s,mb3.4,baz=159,slow=8.2,SNR=3.8	**41.21**	**347**	P	**P**	**17 35 01.4**	**-0.3**
ZALV	**Zalesovo Beam** 0.6nm,0.4s,mb3.6,baz=178,slow=7.4,SNR=5.1	**43.33**	**354**	P	**P**	**17 35 19.8**	**+0.9**
FITZ	**Fitzroy Crossi** 3.4nm,0.9s,mb4.0,baz=168,slow=13,SNR=4.3	**43.94**	**131**	P	**P**	**17 35 24.5**	**+0.1**
WRA	**Warramunga Arr** 0.3nm,0.7s,mb3.3,baz=300,slow=9.9,SNR=4.5	**51.71**	**126**	P	**P**	**17 36 24.7**	**+0.2**
WRAB	**Tennant Creek** 1.5nm,0.6s,mb4.1	**51.71**	**126**	P	**P**	**17 36 24.1**	**-0.5**
WRAB				*e*	pP	17 36 34.1	-1.0
ASAR	**Alice Springs** 0.6nm,0.8s,mb3.6,baz=304,slow=7.3,SNR=6.2	**53.44**	**130**	P	**P**	**17 36 37.5**	**+0.2**
FINES	**FINESS Array B** 0.9nm,0.7s,mb3.8,baz=103,slow=8.2,SNR=4.7	**69.09**	**332**	P	**P**	**17 38 21.9**	**-0.8**
NOA	**NORSAR Array B** 0.4nm,0.6s,mb3.5,baz=95,slow=5.4,SNR=3.1	**76.10**	**330**	P	**P**	**17 39 03.1**	**-1.2**

*IDC **28** 17:37:35.0±1.9, 10°94N×91°96E, h0km, mb3.6/6, mb1 3.7/7, mb1mx3.4/24, mbtmp3.5/7, ML2.8/1, Error ellipse: s-maj=66.4km s-min=19.0km az=67.0*
*NEIC **28** 17:37:36.0±0.8, 10°93N×91°95E, h10km, mb4.1/2, Error ellipse: s-maj=25.8km s-min=11.0km az=73.0*
*ISCJB **28** 17:37:38.1±1.0, 11°0N±0°1×92°1E±0°2, h33km, mb3.7/8, Error ellipse: s-maj=30.5km s-min=13.1km az=161.7*

ISC 28 17:37:40.0±1.0, 11°0N±0°1×92°0E±0°2, h35km, n11, σ0°88/11, mb3.7/8, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr** 0.0nm,0.3s,baz=237,slow=15,SNR=2.9	**9.99**	**41**	Pn	**Pn**	**17 40 00.2**	**-1.0**
MKAR	**Makanchi Array** 0.4nm,0.6s,mb3.4,baz=138,slow=7.7,SNR=6.5	**36.63**	**349**	P	**P**	**17 44 43.2**	**+0.2**
SONM	**Songino Array** 0.3nm,0.4s,mb3.4,baz=181,slow=5.8,SNR=3.6	**38.67**	**16**	P	**P**	**17 45 01.6**	**+1.4**
KURK	**Kurchatov** 2.1nm,1.1s,mb3.7	**41.12**	**347**	P	**P**	**17 45 19.9**	**-0.6**
ZALV	**Zalesovo Beam** 0.5nm,0.4s,mb3.6,baz=188,slow=10.0,SNR=3.7	**43.24**	**354**	P	**P**	**17 45 37.6**	**-0.1**
FITZ	**Fitzroy Crossi** 1.4nm,0.8s,mb3.8,baz=301,slow=12,SNR=6.7	**44.00**	**131**	P	**P**	**17 45 44.7**	**+0.4**
NWAO	**Narrogin (SRO)**	**49.85**	**152**	*e*P	**P**	**17 46 27.8**	**-2.0**
WRA	**Warramunga Arr** 0.5nm,0.3s,mb3.9,baz=300,slow=10.0,SNR=34	**51.76**	**126**	P	**P**	**17 46 44.7**	**+0.3**
WRA	**Warramunga Arr**	**51.76**	**126**	P	**P**	**17 46 44.7**	**+0.2**
WRAB	**Tennant Creek** 6.7nm,1.1s,mb4.5	**51.76**	**126**	*e*P	**P**	**17 46 45.1**	**+0.6**
ASAR	**Alice Springs** 0.5nm

PCIG				*i* S		Sn	18 19 46.7	-0.5
TGIG		**2.49**	**360**	*i* P		**Pn**	18 19 44.5	+0.3
TGIG				*i* S		Sn	18 20 14.4	+1.0
APG	**El Apazote**	**2.66**	**74**	Pn		**Pn**	18 19 46.8	+0.4
5.8nm,0.3s,baz=243,slow=11,SNR=16								
APG				Sn		Sn	18 20 21.7	+4.3
11nm,0.3s,baz=168,slow=19,SNR=4.0								
CMIG	**Matias Romero**	**3.29**	**329**	Pn		**Pn**	18 19 55.0	-0.1
3.9nm,0.3s,baz=129,slow=9.7,SNR=14								
CMIG				Sn		Sn	18 20 37.3	+4.2
6.7nm,0.3s,baz=99,slow=16,SNR=6.5								
VHO	**Vista Hermosa**	**4.47**	**309**	*i* P		**Pn**	18 20 10.6	-0.8
VHO				*i* S		Sn	18 21 02.0	-0.2
PNIG	**Pinotepa**	**5.29**	**294**	*e*P		**Pn**	18 20 20.9	-1.7
PNIG				*i* S		Sn	18 21 22.1	-0.2
TEIG	**Tepich**	**7.50**	**37**	*e*Pn		**Pn**	18 20 52.9	-0.3
17nm,0.4s								
TEIG				*e*Sn		Sn	18 22 06.7	-10
TXAR	**Lajitas Array**	**17.90**	**329**	P		**Pn**	18 23 14.9	+2.6
0.0nm,0.3s,baz=150,slow=10,SNR=9.5								
GDL2	**Guadalupe Moun**	**20.60**	**332**	*e*P		**P**	18 23 47.2	+5.0
6.0nm,0.9s								
TKL	**Tuckaleechee C**	**22.89**	**20**	LR		LR	18 35 57.4	
comp=Z,45nm,19.0s,MS2.9,baz=65,slow=44								
PDAR	**Pinedale Array**	**31.74**	**337**	P		**P**	18 25 28.1	+1.3
0.4nm,0.7s,mb3.4,baz=134,slow=11,SNR=2.4								
NVAR	**Mina Array Bea**	**32.80**	**322**	P		**P**	18 25 37.5	+1.4
0.5nm,0.3s,mb3.9,baz=169,slow=5.1,SNR=3.7								
YKA	**Yellowknife Ar**	**50.52**	**347**	P		**P**	18 28 01.0	+0.4
1.9nm,0.7s,mb4.1,baz=153,slow=7.5,SNR=6.5								
NOA	**NORSAR Array B**	**84.42**	**28**	LR		LR	19 11 16.7	
comp=Z,15nm,18.7s,MS3.4,baz=290,slow=37								
CMAR	**Chiang Mai Arr**	**145.38**	**340**	PKPbc		PKPbc	18 38 40.6	-0.5
0.7nm,0.7s,baz=335,slow=4.2,SNR=7.8								

*IDC **28** 18:23:21.9±1.6, 40.°95N×142.°16E, h150km±17km, mb3.2/3, mb1 3.1/5, mb1mx2.8/25, mbtmp2.9/5, Error ellipse: s-maj=60.6km s-min=15.6km az=97.0*
*ISCJB **28** 18:23:21.7±0.7, 41.°56N±0.°04×140.°17E±0.°09, h178km±4km, mb3.4/3, Error ellipse: s-maj=10.9km s-min=5.9km az=13.7*
*JMA **28** 18:23:23.0±0.1, 41.°59N×140.°13E, h172km±1km, M2.7*

ISC 28 18:23:22.6±0.7, 41.°56N±0.°04×140.°16E±0.°09, h176km±4km, n19, σ0°55/33, mb3.4/3, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSR	**Shiriuchi**	**0.20**	**99**	P		**Pn**	**18 23 46.1**	**+0.2**
JSR				*e*S		**Sn**	**18 24 03.7**	**-0.1**
JSI2	**Shiura 2**	**0.54**	**159**	P		**Pn**	**18 23 47.5**	**+0.4**
JSI2				*e*S		**Sn**	**18 24 06.1**	**+0.3**
JYM2	**Yakumo 2**	**0.58**	**16**	P		**Pn**	**18 23 47.3**	**+0.1**
JYM2				*e*S		**Sn**	**18 24 06.0**	**-0.2**
JOT	**Ohata**	**0.69**	**105**	P		**Pn**	**18 23 48.1**	**+0.3**
JOT				*e*S		**Sn**	**18 24 06.9**	**-0.2**
JOSM	**Okushiri--Mats**	**0.73**	**316**	P		**Pn**	**18 23 47.7**	**-0.3**
JOSM				*e*S		**Sn**	**18 24 06.3**	**-1.3**
JKB	**Kayabe**	**0.73**	**63**	P		**Pn**	**18 23 48.3**	**+0.3**
JKB				*e*S		**Sn**	**18 24 07.4**	**-0.2**
JIW	**Iwasaki**	**0.97**	**187**	P		**Pn**	**18 23 50.2**	**+0.5**
JIW				*e*S		**Sn**	**18 24 10.7**	**+0.2**
JANG	**Nango**	**1.57**	**139**	P		**Pn**	**18 23 54.8**	**-0.1**
JANG				*e*S		**Sn**	**18 24 19.2**	**-0.5**
JEW	**Eniwo**	**1.60**	**36**	P		**Pn**	**18 23 55.7**	**+0.6**
JEW				*e*S		**Sn**	**18 24 20.9**	**+0.6**
JSK	**Shakotan**	**1.81**	**7**	P		**Pn**	**18 23 57.3**	**+0.1**
JSK				*e*S		**Sn**	**18 24 24.0**	**-0.1**
JNBK	**Urakawa-nobuka**	**2.06**	**69**	P		**Pn**	**18 24 00.5**	**+0.5**
JNBK				*e*S		**Sn**	**18 24 28.7**	**-0.3**
JOM	**Ohasama**	**2.26**	**157**	P		**Pn**	**18 24 02.2**	**-0.1**
JOM				*e*S		**Sn**	**18 24 32.4**	**-0.5**
JFR	**Furan**	**2.41**	**48**	P		**Pn**	**18 24 04.6**	**+0.6**
JFR				*e*S		**Sn**	**18 24 35.8**	**-0.3**
JHR	**Hokuryu**	**2.47**	**27**	P		**Pn**	**18 24 05.6**	**+1.0**
ASAJ	**Asahikawa**	**3.12**	**34**	P		**Pn**	**18 24 12.8**	**+0.4**
1.9nm,0.3s,baz=234,slow=12,SNR=27								
ASAJ				S		**Sn**	**18 24 50.0**	**-1.3**
1.2nm,0.3s,baz=81,slow=33,SNR=20								
MJAR	**Matsushiro Arr**	**5.24**	**197**	P		**Pn**	**18 24 40.4**	**+0.8**
0.2nm,0.3s,baz=15,slow=13,SNR=5.1								
WRA	**Warramunga Arr**	**61.43**	**186**	P		**P**	**18 33 19.4**	**-0.8**
0.3nm,0.5s,mb3.4,baz=3.7,slow=7.1,SNR=12								
FINES	**FINESS Array B**	**64.38**	**331**	P		**P**	**18 33 49.5**	**+10**
0.5nm,0.5s,mb3.6,baz=48,slow=8.5,SNR=8.2								
ASAR	**Alice Springs**	**65.15**	**186**	P		**P**	**18 33 43.9**	**-0.8**
0.5nm,1.1s,mb3.3,baz=9.4,slow=8.9,SNR=3.7								

IDC 28 18:31:36.2±1.9, 12.°47N×145.°00E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.7/23, mbtmp3.6/7, Error ellipse: s-maj=70.3km s-min=20.0km az=87.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**24.74**	**347**	P		18 36 59.8	+0.4
0.6nm,0.9s,baz=166,slow=11,SNR=3.9							
WRA	**Warramunga Arr**	**33.87**	**198**	P		18 38 20.4	-0.3
2.0nm,0.6s,baz=21,slow=9.7,SNR=30							
ASAR	**Alice Springs**	**37.52**	**197**	P		18 38 52.4	+0.4
0.5nm,0.6s,baz=30,slow=11,SNR=15							
CMAR	**Chiang Mai Arr**	**44.70**	**284**	P		18 39 51.3	-0.1
0.8nm,0.7s,baz=79,slow=6.9,SNR=5.8							
MKAR	**Makanchi Array**	**62.39**	**316**	P		18 42 00.9	+0.1
0.3nm,0.5s,baz=127,slow=5.4,SNR=10							
BVAR	**Borovoye Array**	**70.89**	**322**	P		18 42 55.1	+0.1
0.3nm,0.3s,baz=97,slow=8.7,SNR=5.7							
FINES	**FINESS Array B**	**92.23**	**335**	P		18 44 47.1	-0.7
0.7nm,0.9s,baz=67,slow=5.0,SNR=6.0							

*IDC **28** 18:49:41.3±0.9, 9.°76S×124.°31E, h0km, mb4.0/7, mb1 4.3/10, mb1mx4.1/19, mbtmp4.1/10, ML4.5/3, MS3.4/2, Ms1 3.4/2, ms1mx2.8/22, Error ellipse: s-maj=42.5km s-min=16.2km az=69.0*
*NEIC **28** 18:49:47.0±1.5, 9.°90S×124.°37E, h47km±18km, mb4.2/2, Error ellipse: s-maj=17.4km s-min=11.7km az=53.0*
*ISCJB **28** 18:49:48.5±1.4, 10.°12S±0.°07×124.°44E±0.°08, h99km±17km, mb3.9/8, Error ellipse: s-maj=15.5km s-min=8.8km az=139.2*
*DJA **28** 18:49:50, 10.°04S×124.°26E, h57km, mb4.8/15*

ISC 28 18:49:49.4±1.4, 10.°13S±0.°08×124.°39E±0.°08, h88km±18km, n25, σ1°13/34, mb3.9/8, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNA	**Kununurra**	**7.03**	**143**	*e*P		**Pn**	**18 51 31.5**	**+1.8**
KNA				*e*S		**Sn**	**18 52 47.4**	**-0.7**
245nm,0.5s								
FITZ	**Fitzroy Crossi**	**8.02**	**171**	*e*P		**Pn**	**18 51 44.8**	**+1.7**
FITZ				*e*S		**Sn**	**18 53 10.0**	**-2.2**
141nm,0.4s								
FITZ	**Fitzroy Crossi**	**8.02**	**171**	Pn		**Pn**	**18 51 45.0**	**+1.8**
7.4nm,0.3s,baz=16,slow=10,SNR=158								
FITZ				Sn		**Sn**	**18 53 10.0**	**-2.2**
11nm,0.3s,baz=130,slow=4.9,SNR=27								
KAKA	**Kakadu**	**8.30**	**109**	*e*P		**Pn**	**18 51 48.6**	**+1.5**
KAKA				*e*S		**Sn**	**18 53 18.0**	**-1.2**
108nm,0.3s								
KAKA	**Kakadu**	**8.30**	**109**	*e*Pn		**Pn**	**18 51 48.0**	**+0.9**
59nm,0.4s								
KAKA				*e*Sn		**Sn**	**18 53 12.6**	**-6.7**
MBWA	**Marble Bar**	**11.84**	**202**	*e*P		**Pn**	**18 52 36.8**	**+1.5**
MBWA	**Marble Bar**	**11.84**	**202**	*e*Pn		**Pn**	**18 52 34.8**	**-0.4**
MBWA				*e*Sn		**Sn**	**18 54 37.2**	**-8.3**
WRA	**Warramunga Arr**	**13.69**	**137**	Pn		**Pn**	**18 52 59.2**	**-0.5**
2.0nm,0.3s,baz=306,slow=12,SNR=71								
WRA				Sn		**Sn**	**18 55 24.7**	**-5.6**
5.3nm,0.3s,baz=314,slow=24,SNR=9.6								
WRAB	**Tennant Creek**	**13.69**	**137**	*e*Pn		**Pn**	**18 52 59.1**	**-0.7**
6.7nm,0.5s								
WRAB				*e*Sn		**Sn**	**18 55 18.9**	**-12**
ASAR	**Alice Springs**	**16.24**	**147**	Pn		**Pn**	**18 53 33.8**	**+1.5**
1.7nm,0.3s,baz=318,slow=11,SNR=165								
ASAR				Sn		**Sn**	**18 56 27.9**	**-4.2**
2.2nm,0.3s,baz=321,slow=24,SNR=12								
KKM	**Kota Kinabalu**	**18.01**	**333**	*e*Pn		**Pn**	**18 53 53.3**	**-0.8**
14nm,0.5s								
KSM	**Kuching**	**18.15**	**309**	*e*Pn		**Pn**	**18 53 54.2**	**-1.5**
NWAO	**Narrogin (SRO)**	**23.62**	**195**	P		**P**	**18 54 57.2**	**+4.7**
16nm,1.0s,mb4.3,baz=17,slow=11,SNR=3.3								
NWAO	**Narrogin (SRO)**	**23.62**	**195**	P		**P**	**18 54 57.2**	**+4.7**

STKA	**Stephens Creek**	**26.87**	**146**	P		**P**	**18 55 28.0**	**+6.0**
3.2nm,1.0s,mb3.8,baz=302,slow=13,SNR=2.2								
STKA				LR		LR	19 06 44.8	
comp=Z,132nm,21.8s,baz=206,slow=38								
KULM	**Kulim**	**28.17**	**302**	Pn		**P**	**18 55 34.0**	**+0.2**
CMAR	**Chiang Mai Arr**	**37.91**	**318**	P		**P**	**18 56 58.2**	**-0.2**
0.9nm,0.4s,mb3.9,baz=142,slow=6.6,SNR=13								
CMAR				LR		LR	19 12 25.1	
comp=Z,29nm,19.4s,baz=230,slow=36								
CHTO	**Chiang Mai**	**38.17**	**319**	*e*P		**P**	**18 57 00.1**	**-0.5**
2.1nm,0.8s,mb4.0								
MJAR	**Matsushiro Arr**	**48.21**	**15**	P		**P**	**18 58 21.4**	**+0.2**
0.7nm,0.6s,mb3.7,baz=188,slow=8.3,SNR=7.8								
MAJO	**Matsushiro**	**48.21**	**15**	P		**P**	**18 58 18.7**	**-2.5**
SONM	**Songino Array**	**59.88**	**346**	P		**P**	**18 59 46.4**	**+0.5**
0.6nm,0.6s,mb3.8,baz=160,slow=8.8,SNR=4.6								
MK31	**Makanchi Array**	**67.98**	**330**	*e*P		**P**	**19 00 39.3**	**+0.3**
MKAR	**Makanchi Array**	**67.98**	**330**	P		**P**	**19 00 39.6**	**+0.6**
1.2nm,0.6s,mb3.9,baz=128,slow=8.5,SNR=13								
KBL	**Kabul**	**68.68**	**313**	P		**P**	**19 00 44.5**	**+0.8**
ZALV	**Zalesovo Beam**	**72.08**	**337**	P		**P**	**19 01 04.6**	**+0.7**
0.4nm,0.3s,mb3.7,baz=126,slow=7.3,SNR=2.6								

IDC 28 19:04:29.3±2.0, 10.°69N×92.°02E, h0km, mb3.4/5, mb1 3.4/6, mb1mx3.3/23, mbtmp3.3/6, ML2.9/1, Error ellipse: s-maj=66.4km s-min=21.9km az=66.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.22**	**40**	Pn		19 06 56.4	-0.9
0.0nm,0.3s,baz=238,slow=14,SNR=2.4							
MKAR	**Makanchi Array**	**36.92**	**349**	P		19 11 40.2	+0.4
0.3nm,0.6s,baz=147,slow=8.1,SNR=3.4							
SONM	**Songino Array**	**38.95**	**15**	P		19 11 58.0	+1.0
0.2nm,0.6s,baz=206,slow=9.7,SNR=2.3							
ZALV	**Zalesovo Beam**	**43.52**	**354**	P		19 12 33.4	-1.1
0.2nm,0.3s,baz=174,slow=2.8,SNR=2.7							
WRA	**Warramunga Arr**	**51.59**	**126**	P		19 13 37.8	0.0
0.2nm,0.5s,baz=306,slow=8.5,SNR=7.4							
ASAR	**Alice Springs**	**53.32**	**130**	P		19 13 50.5	-0.1
0.4nm,0.8s,baz=302,slow=5.7,SNR=4.9							

IDC 28 19:14:43.5±2.2, 10.°85N×92.°00E, h0km, mb3.3/3, mb1 3.4/4, mb1mx3.2/23, mbtmp3.2/4, ML2.9/1, Error ellipse: s-maj=70.7km s-min=26.6km az=66.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.12**	**41**	Pn		19 17 10.2	+0.1
0.0nm,0.3s,baz=229,slow=11,SNR=3.0							
MKAR	**Makanchi Array**	**36.76**	**349**	P		19 21 52.6	0.0
0.3nm,0.7s,baz=142,slow=12,SNR=2.6							
WRA	**Warramunga Arr**	**51.71**	**126**	P		19 23 52.5	-0.3
0.4nm,0.6s,baz=306,slow=8.5,SNR=5.4							
ASAR	**Alice Springs**	**53.44**	**130**	P		19 24 05.9	+0.2
0.3nm,0.9s,baz=310,slow=7.2,SNR=3.2							

IDC 28 19:22:41.5±19.0, 33.°09N×68.°16E, h0km, mb3.7/1, mb1 3.4/3, mb1mx3.1/25, mbtmp3.4/3, ML3.2/2, 2C-1D, Error ellipse: s-maj=275.5km s-min=127.2km az=13.0, Southeastern Afghanistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**10.17**	**10**	⇑Pn		19 24 58.2	-11
0.3nm,0.3s,baz=190,slow=12,SNR=7.3							
KK31				⇓Sn		Sn	19 26 26.0	-37
0.4nm,0.3s,baz=190,slow=22,SNR=4.1							
KK31				⇑Lg			19 27 05.8	
1.2nm,0.5s,baz=189,slow=28,SNR=3.6							
MKAR	**Makanchi Array**	**17.42**	**34**	P		Pn	19 26 46.5	+0.7
0.1nm,0.3s,baz=204,slow=9.0,SNR=4.4							
BVAR	**Borovoye Array**	**19.99**	**4**	P		Pn	19 27 15.4	-1.7
0.1nm,0.3s,baz=173,slow=12,SNR=3.7							
ZALV	**Zalesovo Beam**	**23.98**	**25**	P		P	19 27 57.5	-0.1
0.9nm,0.4s,baz=222,slow=11,SNR=6.2							

*IDC **28** 19:35:12.8±1.0, 10.°90N×91.°61E, h0km, mb3.8/11, mb1 3.8/12, mb1mx3.7/24, mbtmp3.7/12, ML3.3/1, Error ellipse: s-maj=38.7km s-min=15.9km az=55.0*
*ISCJB **28** 19:35:12.0±3.9, 11.°02N±0.°08×91.°86E±0.°08, h4km±25km, mb3.8/14, Error ellipse: s-maj=15.0km s-min=12.5km az=139.2*
*NEIC **28** 19:35:14.8±0.6, 10.°99N×91.°79E, h10km, mb3.9/2, Error ellipse: s-maj=12.1km s-min=10.1km az=48.0*

ISC 28 19:35:13.5±4.7, 10.°97N±0.°08×91.°78E±0.°08, h2km±29km, n21, σ0°77/22, mb3.8/14, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**10.17**	**42**	*e*Pn		**Pn**	**19 37 40.7**	**+0.1**
CMAR	**Chiang Mai Arr**	**10.17**	**42**	Pn		**Pn**	**19 37 41.3**	**+0.7**
0.1nm,0.3s,baz=222,slow=14,SNR=2.8								
CHTO	**Chiang Mai**	**10.43**	**41**	Pn		**Pn**	**19 37 42.6**	**-1.5**
CHTO				*e*Sn		**Sn**	**19 39 41.6**	**0.0**
UCH	**Uchtor**	**34.60**	**337**	*e*P		**P**	**19 42 05.6**	**+1.7**
0.9nm,0.7s,mb3.8								
EKS2	**Erkin-Say**	**35.26**	**337**	*e*P		**P**	**19 42 10.8**	**+1.2**
1.7nm,0.7s,mb4.1								
MK31	**Makanchi Array**	**36.60**	**349**	*e*P		**P**	**19 42 20.8**	**-0.2**
MKAR	**Makanchi Array**	**36.60**	**349**	P		**P**	**19 42 21.5**	**+0.5**
1.4nm,0.8s,mb3.9,baz=134,slow=8.7,SNR=10								
SONM	**Songino Array**	**38.75**	**16**	P		**P**	**19 42 39.7**	**+0.5**
0.8nm,0.7s,mb3.5,baz=207,slow=6.9,SNR=7.4								
ZAA0	**Zalesovo Array**	**43.22**	**354**	P		**P**	**19 43 15.6**	**-0.4**
ZALV	**Zalesovo Beam**	**43.22**	**354**	P		**P**	**19 43 15.9**	**0.0**
0.9nm,0.4s,mb3.9,baz=162,slow=8.8,SNR=6.7								
FITZ	**Fitzroy Crossi**	**44.18**	**130**	P		**P**	**19 43 24.2**	**0.0**
1.7nm,0.7s,mb3.9,baz=317,slow=8.7,SNR=4.5								
BVAR	**Borovoye Array**	**45.33**	**342**	P		**P**	**19 43 32.8**	**-0.1**
0.3nm,0.3s,mb3.6,baz=173,slow=5.8,SNR=3.5								
WRA	**Warramunga Arr**	**51.95**	**126**	P		**P**	**19 44 24.1**	**-0.3**
0.1nm,0.3s,mb3.7,baz=300,slow=10,SNR=12								
ASAR	**Alice Springs**	**53.68**	**130**	P		**P**	**19 44 37.9**	**+0.8**
0.4nm,0.7s,mb3.5,baz=308,slow=7.9,SNR=7.3								
BRTR	**Keskin Array B**	**58.66**	**310**	P		**P**	**19 45 11.2**	**-1.4**
0.6nm,0.8s,mb3.7,baz=131,slow=8.9,SNR=6.3								
JOF	**Joensuu**	**67.06**	**334**	*e*p		**P**	**19 46 07.9**	**-0.2**
1.4nm,0.5s,mb4.2								
JOF	**Joensuu**	**67.06**	**334**	*e*p		**P**	**19 46 07.9**	**-0.2**
1.4nm,0.5s,mb4.2								
FINES	**FINESS Array B**	**68.90**	**332**	P		**P**	**19 46 19.2**	**-0.4**
1.2nm,0.7s,mb4.0,baz=104,slow=12,SNR=5.2								
ARCES	**ARCESS Array B**	**71.58**	**340**	P		**P**	**19 46 36.4**	**+0.5**
0.9nm,0.6s,mb3.9,baz=79,slow=7.5,SNR=9.8								
ARCES	**ARCESS Array B**	**71.58**	**340**	P		**P**	**19 46 36.4**	**+0.5**
NOA	**NORSAR Array B**	**75.90**	**330**	P		**P**	**19 47 00.2**	**-1.3**
0.5nm,0.8s,mb3.5,baz=72,slow=8.6,SNR=3.5								

*IDC **28** 19:47:51.7±2.1, 17.°82S×178.°55W, h561km±27km, mb3.5/10, mb1 3.8/11, mb1mx3.5/20, mbtmp3.6/11, Error ellipse: s-maj=34.5km s-min=12.9km az=155.0*
*NEIC **28** 19:47:52.9±0.7, 17.°95S×178.°49W, h585km±9km, mb4.1/12, Error ellipse: s-maj=16.8km s-min=9.7km az=154.0*
*ISCJB **28** 19:47:53.4±1.1, 18.°0S±0.°1×178.°6W±0.°1, h603km±13km, mb4.0/21, Error ellipse: s-maj=19.8km s-min=13.5km az=146.4*

ISC 28 19:47:54.4±1.0, 18.°0S±0.°1×178.°6W±0.°1, h600km±11km, n34, σ0°80/34, mb4.0/21, 1C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.22**	**273**	⇑*i*P		**P**	**19 49 14.3**	**-0.5**
MSVF				*e*S		**S**	**19 50 23.6**	**+3.3**
AFI	**Afiamalu**	**7.68**	**59**	P		**P**	**19 49 46.2**	**-4.6**
3.5nm,0.3s,baz=220,slow=16,SNR=2.7								
URZ	**Urewera**	**20.57**	**190**	P		**P**	**19 51 53.3**	**+0.1**
3.3nm,0.4s,baz=333,slow=9.0,SNR=2.4								
EIDS	**Eidsvold**	**29.10**	**250**	*e*P		**P**	**19 53 08.3**	**-0.2**
8.7nm,0.8s,mb4.4								
ARMA	**Armidale**	**29.78**	**240**	*e*P		**P**	**19 53 15.0**	**+0.7**
CNB	**Canberra Magne**	**33.27**	**232**	*e*P		**P**	**19 53 44.2**	**+0.3**
CTA	**Charters Tower**	**33.28**	**261**	*e*P		**P**	**19 53 44.1**	**-0.1**
5.7nm,0.6s,mb4.4								
CTA	**Charters Tower**	**33.28**	**261**	P		**P**	**19 53 44.2**	**0.0**
8.3nm,0.7s,mb4.5,baz=98,slow=12,SNR=13								
CTAO	**Charters Tower**	**33.28**	**261**	*e*P		**P**	**19 53 44.1**	**-0.1**
9.5nm,0.7s,mb4.5								

TOO	**Toolangi**	**37.02**	**231**	*e*P		**P**	**19 54 15.2**	**+0.4**
STKA	**Stephens Creek**	**38.47**	**241**	*e*P		**P**	**19 54 27.0**	**+0.3**
4.6nm,0.4s,mb4.4								
STKA	**Stephens Creek**	**38.47**	**241**	P		**P**	**19 54 27.2**	**+0.5**
8.7nm,0.6s,mb4.5,baz=92,slow=8.6,SNR=22								
STKA	**Stephens Creek**	**38.47**	**241**	*e*P		**P**	**19 54 26.9**	**+0.3**
4.3nm,1.0s,mb3.9								
WRAB	**Tennant Creek**	**44.46**	**260**	*e*P		**P**	**19 55 12.9**	**-1.0**
11nm,1.1s,mb4.3								
WRA	**Warramunga Arr**	**44.47**	**260**	P		**P**	**19 55 13.5**	**-0.5**
6.9nm,0.7s,mb4.3,baz=95,slow=7.1,SNR=104								
ASAR	**Alice Springs**	**44.62**	**254**	P		**P**	**19 55 15.2**	**0.0**
39nm,0.6s,mb5.1,baz=87,slow=8.7,SNR=793								
KAKA	**Kakadu**	**47.42**	**269**	*e*P		**P**	**19 55 36.0**	**-0.4**
15nm,0.4s,mb4.9								
KAKA	**Kakadu**	**47.42**	**269**	*e*P		**P**	**19 55 36.0**	**-0.4**
34nm,0.6s,mb5.1								
FITZ	**Fitzroy Crossi**	**52.86**	**261**	*e*P		**P**	**19 56 15.3**	**-0.7**
2.8nm,0.4s,mb4.0								
FITZ	**Fitzroy Crossi**	**52.86**	**261**	P		**P**	**19 56 16.1**	**+0.1**
1.9nm,0.5s,mb3.7,baz=90,slow=14,SNR=12								
MBWA	**Marble Bar**	**57.91**	**256**	*e*P		**P**	**19 56 50.2**	**-0.6**
9.3nm,0.8s,mb4.0								
SBA	**Scott Base**	**60.36**	**184**	P		**P**	**19 57 07.3**	**+1.1**
1.2nm,0.7s,mb3.2								
CASY	**Casey**	**66.02**	**205**	*e*P		**P**	**19 57 42.0**	**-0.5**
2.4nm,1.0s,mb3.6								
KKM	**Kota Kinabalu**	**68.60**	**284**	*e*P		**P**	**19 57 59.3**	**+0.1**
2.8nm,0.7s,mb3.8								
QSPA	**South Pole Qui**	**72.09**	**180**	*e*P		**P**	**19 58 18.6**	**+0.1**
19nm,1.2s,mb4.5								
KSM	**Kuching**	**72.53**	**277**	*e*P		**P**	**19 58 23.2**	**+0.8**
11nm,0.9s,mb4.4								
ISA	**Isabella**	**77.97**	**46**	P		**P**	**19 58 51.6**	**-0.3**
2.5nm,0.8s,mb3.7								
CMB	**Columbia Colle**	**77.98**	**43**	*e*P		**P**	**19 58 51.7**	**-0.3**
5.0nm,0.9s,mb3.8								
NVAR	**Mina Array Bea**	**79.57**	**44**	P		**P**	**19 59 00.4**	**0.0**
1.8nm,0.8s,mb3.5,baz=225,slow=9.1,SNR=7.4								
MAW	**Mawson**	**83.76**	**200**	P		**P**	**19 59 19.0**	**-2.2**
0.3nm,0.8s,mb2.9								
TXAR	**Lajitas Array**	**86.16**	**58**	P		**P**	**19 59 34.5**	**+1.0**
2.0nm,0.8s,mb3.8,baz=220,slow=5.9,SNR=22								
PDAR	**Pinedale Array**	**87.50**	**43**	P		**P**	**19 59 39.0**	**-0.4**
1.1nm,0.6s,mb3.7,baz=229,slow=2.8,SNR=8.9								
CMAR	**Chiang Mai Arr**	**88.75**	**290**	P		**P**	**19 59 47.6**	**+1.8**
0.7nm,0.8s,mb3.5,baz=148,slow=1.6,SNR=5.9								
MMAI	**Mount Meron Ar**	**146.04**	**303**	PKPbc		PKPbc	20 06 28.8	+0.2
1.2nm,0.6s,baz=94,slow=4.3,SNR=3.0								

*ISCJB **28** 19:56:22.4±0.5, 47.°68S±0.°08×103.°0E±0.°2, h10km, mb4.3/18, MS4.0/7, Error ellipse: s-maj=15.1km s-min=10.3km az=19.0*
*IDC **28** 19:56:23.3±0.6, 47.°77S×103.°24E, h0km, mb4.2/10, mb1 4.3/10, mb1mx4.2/17, mbtmp4.2/10, MS3.9/7, Ms1 3.9/7, ms1mx3.6/17, Error ellipse: s-maj=26.5km s-min=16.5km az=135.0*
*NEIC **28** 19:56:24.2±0.3, 47.°67S×102.°92E, h10km, mb4.5/13, Error ellipse: s-maj=12.0km s-min=9.1km az=111.0*

ISC 28 19:56:24.3±0.5, 47.°70S±0.°08×103.°0E±0.°2, h10km, n46, σ0°93/24, mb4.3/18, MS4.0/7, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CASY	**Casey**	**19.05**	**171**	*e*P		**Pn**	**20 00 48.1**	**+1.1**
24nm,1.5s								
MAW	**Mawson**	**28.49**	**211**	P		**P**	**20 02 19.6**	**+0.4**
1.3nm,0.7s,mb3.7,baz=44,slow=9.8,SNR=3.3					

ISC 28 20:13:25.7±0.9, 35°99N±0°04×29°54E±0°04, h3km±5km, n76, σ1°10/99, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSL	**Kastellorizon**	**0.17**	**13**	*e*P	**Pg**	**20 13 27.8**	**-1.2**
AKAS	**Kas**	**0.26**	**13**	*i* P	**Pg**	**20 13 29.5**	**-1.1**
AKAS				*i* S	**Sg**	**20 13 32.8**	**-1.1**
AKAS	**Kas**	**0.26**	**13**	*i* P	**Pg**	**20 13 29.5**	**-1.1**
AKAS				*i* S	**Sg**	**20 13 32.8**	**-1.2**
ELL	**Elmali**	**0.82**	**21**	*e*PG	**Pg**	**20 13 40.4**	**-1.0**
ELL				*e*SG	**Sg**	**20 13 55.0**	**+3.0**
ELL	**Elmali**	**0.82**	**21**	*e*Pg	**Pg**	**20 13 40.4**	**-1.0**
ELL				*e*Sg	**Sg**	**20 13 55.0**	**+3.0**
ARG	**Arkhangelos**	**1.16**	**282**	P	**Pg**	**20 13 48.6**	**+0.6**
ARG				S	**Sg**	**20 14 05.3**	**+2.2**
ARG	**Arkhangelos**	**1.16**	**282**	*e*P	**Pg**	**20 13 48.7**	**+0.7**
ARG	**Arkhangelos**	**1.16**	**282**	P	**Pg**	**20 13 48.6**	**+0.6**
ARG				S	**Sg**	**20 14 05.3**	**+2.2**
GLHS	**Glhisar (BURDU**	**1.17**	**359**	*e*PN	**Pn**	**20 13 47.6**	**-1.3**
GLHS				*e*SN	**Sn**	**20 14 06.2**	**+0.9**
GLHS	**Glhisar (BURDU**	**1.17**	**359**	*e*Pn	**Pn**	**20 13 47.6**	**-1.3**
GLHS				*e*Sn	**Sn**	**20 14 06.2**	**+0.9**
KORT	**Korkueli**	**1.21**	**33**	*i* P	**Pg**	**20 13 48.6**	**-0.3**
KORT				*i* S	**Sg**	**20 14 10.6**	**+6.1**
KORT	**Korkueli**	**1.21**	**33**	*i* P	**Pg**	**20 13 48.6**	**-0.2**
GOLH	**Golhisar**	**1.25**	**1**	*i* P	**Pg**	**20 13 49.8**	**+0.1**
GOLH				*i* S	**Sg**	**20 14 11.1**	**+5.3**
GOLH	**Golhisar**	**1.25**	**1**	*i* P	**Pg**	**20 13 49.8**	**+0.2**
ANTB	**Antalya**	**1.28**	**44**	*e*PN	**Pn**	**20 13 49.9**	**-0.5**
ANTB	**Antalya**	**1.28**	**44**	*e*Pn	**Pn**	**20 13 49.9**	**-0.5**
YER	**Yerkesik**	**1.53**	**319**	*e*PN	**Pn**	**20 13 53.0**	**-0.8**
YER	**Yerkesik**	**1.53**	**319**	*e*Pn	**Pn**	**20 13 53.0**	**-0.8**
BCK	**Bucak**	**1.70**	**30**	*e*PN	**Pn**	**20 13 56.1**	**0.0**
BCK	**Bucak**	**1.70**	**30**	*e*Pn	**Pn**	**20 13 56.1**	**-0.1**
DAT	**Datca**	**1.75**	**296**	*e*PN	**Pn**	**20 13 55.8**	**-1.0**
DAT	**Datca**	**1.75**	**296**	*e*Pn	**Pn**	**20 13 55.8**	**-1.0**
DNZL	**Cakiroluk**	**1.75**	**347**	*i* P	**Pn**	**20 13 58.1**	**+1.3**
DNZL				*i* S	**Sn**	**20 14 24.5**	**+5.0**
DNZL	**Cakiroluk**	**1.75**	**347**	*i* P	**Pn**	**20 13 58.1**	**+1.3**
DENT	**Denizli**	**1.81**	**347**	*e*PN	**Pn**	**20 13 57.5**	**-0.2**
DENT	**Denizli**	**1.81**	**347**	*e*Pn	**Pn**	**20 13 57.5**	**-0.2**
MLSB	**Milas**	**1.93**	**313**	*e*PN	**Pn**	**20 13 59.4**	**+0.1**
MLSB	**Milas**	**1.93**	**313**	*e*Pn	**Pn**	**20 13 59.4**	**+0.1**
ISP	**Isparta**	**2.00**	**23**	*e*PN	**Pn**	**20 14 00.9**	**+0.7**
ISP	**Isparta**	**2.00**	**23**	P	**Pn**	**20 14 02.3**	**+2.0**
ISP				S	**Sn**	**20 14 27.8**	**+2.1**
NIS1	**Nisyros Isl.**	**2.00**	**289**	P	**Pn**	**20 14 00.6**	**+0.3**
NIS1				S	**Sn**	**20 14 23.3**	**-2.5**
NIS1	**Nisyros Isl.**	**2.00**	**289**	P	**Pn**	**20 14 00.6**	**+0.3**
NIS1				S	**Sn**	**20 14 23.3**	**-2.5**
BODT	**Bodrum**	**2.09**	**302**	*e*PN	**Pn**	**20 14 00.2**	**-1.3**
BODT	**Bodrum**	**2.09**	**302**	*e*Pn	**Pn**	**20 14 00.3**	**-1.2**
AYDN	**Tasoluk**	**2.14**	**322**	*i* P	**Pn**	**20 14 03.9**	**+1.7**
AYDN				*i* S	**Sn**	**20 14 34.2**	**+5.0**
AYDN	**Tasoluk**	**2.14**	**322**	*i* P	**Pn**	**20 14 03.9**	**+1.7**
KHL	**Karahalli**	**2.33**	**360**	*e*PN	**Pn**	**20 14 04.8**	**0.0**
KHL	**Karahalli**	**2.33**	**360**	*e*Pn	**Pn**	**20 14 04.8**	**-0.1**
HDMB	**Hadim**	**2.57**	**67**	*e*PN	**Pn**	**20 14 07.9**	**-0.2**
HDMB	**Hadim**	**2.57**	**67**	*e*Pn	**Pn**	**20 14 07.9**	**-0.2**
KULA	**Kula-Manisa**	**2.62**	**345**	*e*PN	**Pn**	**20 14 08.6**	**-0.2**
KULA	**Kula-Manisa**	**2.62**	**345**	*e*Pn	**Pn**	**20 14 08.6**	**-0.2**
SHUT	**Suhut-Afyon**	**2.69**	**17**	*e*PN	**Pn**	**20 14 10.2**	**+0.4**
SHUT	**Suhut-Afyon**	**2.69**	**17**	*e*Pn	**Pn**	**20 14 10.2**	**+0.4**
ZKR	**Zakros**	**2.84**	**253**	P	**Pn**	**20 14 12.5**	**+0.6**
ZKR				S	**Sn**	**20 14 47.4**	**+0.8**
ZKR	**Zakros**	**2.84**	**253**	*e*P	**Pn**	**20 14 12.1**	**+0.2**
ZKR	**Zakros**	**2.84**	**253**	P	**Pn**	**20 14 12.5**	**+0.6**
ZKR				S	**Sn**	**20 14 47.4**	**+0.8**
LEF	**Lefka**	**2.87**	**107**	*e*PN	**Pn**	**20 14 10.2**	**-2.0**
LEF	**Lefka**	**2.87**	**107**	*e*Pn	**Pn**	**20 14 10.2**	**-2.0**
KONT	**Konya--Tatoy**	**2.99**	**48**	*e*PN	**Pn**	**20 14 14.2**	**+0.3**
KONT	**Konya--Tatoy**	**2.99**	**48**	*e*Pn	**Pn**	**20 14 14.2**	**+0.3**
IZM	**Izmir**	**3.02**	**324**	*e*PN	**Pn**	**20 14 13.3**	**-0.9**
ALT	**Altintas**	**3.10**	**8**	*e*PN	**Pn**	**20 14 15.6**	**+0.2**
ALT	**Altintas**	**3.10**	**8**	*e*Pn	**Pn**	**20 14 15.6**	**+0.2**
BLCB	**Balcova**	**3.12**	**321**	*e*PN	**Pn**	**20 14 14.6**	**-1.0**
BLCB	**Balcova**	**3.12**	**321**	*e*Pn	**Pn**	**20 14 14.6**	**-1.0**
LADK	**Ladik-KONYA**	**3.16**	**45**	*e*PN	**Pn**	**20 14 16.8**	**+0.5**
LADK	**Ladik-KONYA**	**3.16**	**45**	*e*Pn	**Pn**	**20 14 16.8**	**+0.5**
AKS	**Akhisar**	**3.20**	**335**	*e*PN	**Pn**	**20 14 16.2**	**-0.5**
AKS	**Akhisar**	**3.20**	**335**	*e*Pn	**Pn**	**20 14 16.2**	**-0.6**
NPS	**Neapolis**	**3.28**	**258**	*e*P	**Pn**	**20 14 19.2**	**+1.4**
IKL	**Isikli**	**3.37**	**84**	*e*PN	**Pn**	**20 14 18.7**	**-0.4**
IKL	**Isikli**	**3.37**	**84**	*e*Pn	**Pn**	**20 14 18.7**	**-0.4**
LAST	**Lasithi**	**3.41**	**257**	P	**Pn**	**20 14 20.9**	**+1.3**
LAST				S	**Sn**	**20 14 59.6**	**-0.9**
LAST	**Lasithi**	**3.41**	**257**	*e*P	**Pn**	**20 14 21.0**	**+1.4**
LAST	**Lasithi**	**3.41**	**257**	P	**Pn**	**20 14 20.9**	**+1.3**
LAST				S	**Sn**	**20 14 59.6**	**-0.9**
KIZT	**Kizilcal**	**3.44**	**32**	*e*PN	**Pn**	**20 14 20.9**	**+0.8**
KIZT	**Kizilcal**	**3.44**	**32**	*e*Pn	**Pn**	**20 14 20.9**	**+0.8**
CHOS	**Chios island**	**3.67**	**312**	P	**Pn**	**20 14 23.9**	**+0.7**
CHOS				S	**Sn**	**20 15 05.3**	**-1.7**
CHOS	**Chios island**	**3.67**	**312**	P	**Pn**	**20 14 23.9**	**+0.7**
CHOS				S	**Sn**	**20 15 05.3**	**-1.7**
SVRH	**Sivrihisar-ESK**	**3.80**	**24**	*e*PN	**Pn**	**20 14 25.9**	**+0.9**
SVRH	**Sivrihisar-ESK**	**3.80**	**24**	*e*Pn	**Pn**	**20 14 25.9**	**+0.9**
IDI	**Anoyia**	**3.85**	**261**	*e*P	**Pn**	**20 14 26.3**	**+0.6**
KARN	**Karanos**	**4.61**	**264**	P	**Pn**	**20 14 36.8**	**+0.6**
KARN				S	**Sn**	**20 15 27.9**	**-2.3**
KARN	**Karanos**	**4.61**	**264**	*e*P	**Pn**	**20 14 38.3**	**+2.1**
KARN	**Karanos**	**4.61**	**264**	P	**Pn**	**20 14 36.8**	**+0.6**
KARN				S	**Sn**	**20 15 27.9**	**-2.3**

*ISCJB **28** 20:17:54.7±2.1, 10°79N±0°04×91°76E±0°04, h2km±13km, mb4.3/58, Error ellipse: s-maj=7.8km s-min=7.1km az=32.8*
*SZGRF **28** 20:17:55.5, 10°04N×92°58E, h33km, mb4.5, Andaman Islands, India, region*
*BJI **28** 20:17:56.9, 10°48N×91°86E, h35km, mB4.8/2, mb4.5/9, Ms3.9/2, Ms7 3.7/2*
*IDC **28** 20:17:56.3±0.6, 10°76N×91°76E, h0km, mb4.2/23, mb1 4.2/24, mb1mx4.2/30, mbtmp4.1/24, ML4.0/1, MS3.3/1, Ms1 3.3/1, ms1mx2.4/34, Error ellipse: s-maj=19.3km s-min=12.4km az=52.0*
*MOS **28** 20:17:59.1±1.0, 10°75N×91°81E, h33km, mb4.7/24, Error ellipse: s-maj=10.0km s-min=5.9km az=115.0*
*NEIC **28** 20:17:59.6±2.4, 10°75N×91°76E, h22km±17km, mb4.4/26, Error ellipse: s-maj=7.4km s-min=5.7km az=56.0*

ISC 28 20:17:58.0±2.6, 10°76N±0°05×91°75E±0°05, h10km±16km, n128, σ0°96/130, mb4.3/58, 5C-3D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.34**	**41**	Pn	**Pn**	**20 20 26.8**	**+0.3**
	0.3nm,0.3s,baz=235,slow=14,SNR=5.6						
CMAR				Sn	**Sn**	**20 22 24.3**	**+1.9**
	0.1nm,0.3s,baz=235,slow=29,SNR=3.1						
CHTO	**Chiang Mai**	**10.60**	**40**	*e*P	**Pn**	**20 20 31.9**	**+1.9**
CHTO				*e*		20 22 22.0	
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CHTO	**Chiang Mai**	**10.60**	**40**	*e*Pn	**Pn**	**20 20 31.9**	**+1.9**
	comp=Z,2.6nm,0.8s						
CHTO				*e*Sn	**Sn**	**20 22 22.0**	**-6.8**
PALK	**Pallekele**	**11.45**	**253**	Pn	**Pn**	**20 20 41.7**	**+0.1**
PALK				*e*Sn	**Sn**	**20 22 35.7**	**-14**
HYB	**Hyderabad**	**14.40**	**299**	*i* P	**Pn**	**20 21 29.0**	**+7.0**
HYB				*e*S	**Sn**	**20 24 03.5**	**+1.6**
ODAN	**Odare**	**16.53**	**346**	*e*P	**Pn**	**20 21 48.7**	**-1.3**
	comp=Z,28nm,0.8s						
TAPN	**Taplejung**	**16.93**	**348**	*e*P	**Pn**	**20 21 53.9**	**-1.2**
	comp=Z,25nm,0.7s						
PKI	**Pulchoki**	**17.75**	**341**	*e*P	**Pn**	**20 22 01.3**	**-4.0**
	comp=Z,22nm,0.6s						
PKIN	**Phulchoki**	**17.76**	**341**	*e*P	**Pn**	**20 22 01.3**	**-4.1**
DMN	**Daman**	**17.89**	**340**	*e*P	**Pn**	**20 22 02.7**	**-4.2**
LSA	**Lhasa**	**18.85**	**358**	P	**Pn**	**20 22 17.5**	**-1.2**
KSM	**Kuching**	**20.61**	**115**	*e*P	**P**	**20 22 39.0**	**+1.4**
	comp=Z,14nm,1.1s						
COCO	**West Island**	**23.36**	**167**	P	**P**	**20 23 04.3**	**-2.6**
	comp=Z,497nm,1.5s						
KKM	**Kota Kinabalu**	**24.64**	**99**	*e*P	**P**	**20 23 19.2**	**+0.2**
	comp=Z,16nm,1.1s,mb4.5						
KBL	**Kabul**	**31.46**	**322**	*e*P	**P**	**20 24 20.3**	**+0.6**
KBL				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
KBL	**Kabul**	**31.46**	**322**	*e*P	**P**	**20 24 20.3**	**+0.6**
	comp=Z,3.9nm,0.9s,mb4.2						
UCH	**Uchtor**	**34.79**	**337**	*e*P	**P**	**20 24 50.2**	**+1.5**
UCH				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
UCH	**Uchtor**	**34.79**	**337**	*e*P	**P**	**20 24 50.2**	**+1.5**
	comp=Z,2.4nm,0.9s,mb4.1						
TKM2	**Tokmak 2**	**34.99**	**339**	*e*P	**P**	**20 24 50.4**	**0.0**
TKM2				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.0						
TKM2	**Tokmak 2**	**34.99**	**339**	*e*P	**P**	**20 24 50.4**	**-0.1**
	comp=Z,2.2nm,1.1s,mb4.0						
AAK	**Ala-Archa**	**35.14**	**338**	P	**P**	**20 24 53.0**	**+1.3**
	comp=Z,1.0nm,0.3s,mb4.3,baz=10,slow=8.0,SNR=11						
EKS2	**Erkin-Say**	**35.44**	**337**	*e*P	**P**	**20 24 56.0**	**+1.7**
EKS2				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
EKS2	**Erkin-Say**	**35.44**	**337**	*e*P	**P**	**20 24 56.0**	**+1.7**
	comp=Z,6.7nm,0.9s,mb4.6						
MK31	**Makanchi Array**	**36.80**	**349**	*e*P	**P**	**20 25 06.3**	**+0.5**
MKAR	**Makanchi Array**	**36.80**	**349**	P	**P**	**20 25 06.3**	**+0.4**
	comp=Z,6.3nm,0.8s,mb4.5,baz=128,slow=9.4,SNR=49						
SONM	**Songino Array**	**38.95**	**16**	P	**P**	**20 25 24.9**	**+0.8**
	comp=Z,3.2nm,0.9s,mb4.0,baz=198,slow=8.5,SNR=20						
ULN	**Ulaanbaatar**	**39.16**	**16**	*e*P	**P**	**20 25 26.3**	**+0.5**
ULN				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.8						
ULN	**Ulaanbaatar**	**39.16**	**16**	*e*P	**P**	**20 25 26.2**	**+0.5**
	comp=Z,1.9nm,1.0s,mb3.8						
KURK	**Kurchatov**	**41.27**	**347**	P	**P**	**20 25 43.1**	**-0.2**
	comp=Z,4.0nm,0.9s,mb4.1,baz=172,slow=7.5,SNR=29						
KURK				PcP	PcP	20 27 41.5	-0.4
	comp=Z,0.2nm,0.6s,baz=164,slow=3.1,SNR=4.3						
KURK	**Kurchatov**	**41.27**	**347**	P	**P**	**20 25 43.1**	**-0.2**
KURK				PcP	PcP	20 27 41.5	-0.4
TLY	**Talaya**	**41.94**	**11**	*e*P	**P**	**20 25 46.7**	**-2.0**
TLY				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.9						
TLY	**Talaya**	**41.94**	**11**	*e*P	**P**	**20 25 46.7**	**-2.0**
	comp=Z,2.3nm,0.7s,mb3.9						
KSRS	**Korea Array**	**41.96**	**45**	P	**P**	**20 25 48.2**	**-0.9**
	comp=Z,1.6nm,1.0s,mb3.6,baz=356,slow=18,SNR=3.2						
ZAA0	**Zalesovo Array**	**43.43**	**354**	*e*P	**P**	**20 26 00.6**	**-0.1**
ZALV	**Zalesovo Beam**	**43.43**	**354**	P	**P**	**20 26 01.1**	**+0.3**
	comp=Z,5.7nm,0.8s,mb4.4,baz=170,slow=9.9,SNR=32						
FITZ	**Fitzroy Crossi**	**44.07**	**130**	P	**P**	**20 26 05.5**	**-0.9**
	comp=Z,2.2nm,0.9s,mb3.9,baz=301,slow=3.8,SNR=4.0						
BVAR	**Borovoye Array**	**45.52**	**342**	P	**P**	**20 26 16.8**	**-0.7**
	comp=Z,1.7nm,0.9s,mb4.0,baz=140,slow=7.8,SNR=8.2						
BRVK	**Borovoye**	**45.58**	**342**	⇓*e*P	**P**	**20 26 18.4**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
AKTK	**Aktyubinsk**	**48.30**	**332**	P	**P**	**20 26 39.2**	**-0.1**
AKTO	**Aktyubinsk**	**48.30**	**332**	P	**P**	**20 26 39.2**	**-0.1**
	comp=Z,2.0nm,0.8s,mb4.2,baz=130,slow=9.4,SNR=6.6						
MJAR	**Matsushiro Arr**	**49.07**	**51**	P	**P**	**20 26 45.5**	**0.0**
	comp=Z,0.5nm,0.7s,mb3.6,baz=268,slow=39,SNR=2.9						
GNI	**Garni**	**50.75**	**314**	LR	LR	20 51 42.4	
	comp=Z,31nm,19.8s,baz=66,slow=40						
GNI	**Garni**	**50.75**	**314**	*e*P	**P**	**20 26 59.2**	**+1.0**
GNI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
GNI	**Garni**	**50.75**	**314**	*e*P	**P**	**20 26 59.2**	**+1.0**
	comp=Z,10nm,1.1s,mb4.7						
WRA	**Warramunga Arr**	**51.85**	**126**	P	**P**	**20 27 05.4**	**-1.4**
	comp=Z,0.8nm,0.6s,mb3.9,baz=307,slow=8.4,SNR=17						
WRAB	**Tennant Creek**	**51.86**	**126**	*e*P	**P**	**20 27 06.6**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
WRAB	**Tennant Creek**	**51.86**	**126**	*e*P	**P**	**20 27 06.5**	**-0.2**
	comp=Z,2.7nm,0.5s,mb4.4						
SVE	**Sverdlovsk**	**51.87**	**339**	⇓*e*P	**P**	**20 27 07.3**	**+1.0**
SVE				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
ARU	**Arti**	**52.33**	**337**	*d i*P	**P**	**20 27 09.5**	**-0.2**
ARU				*e*		20 29 07.2	
ARU				S	**S**	**20 34 33.2**	**-1.8**
ARU				SS	SS	20 38 06.0	-6.7
ARU				pmax	pmax		
	comp=Z,13nm,1.7s,mb4.6						
ARU	**Arti**	**52.33**	**337**	*e*P	**P**	**20 27 09.9**	**+0.2**
	comp=Z,2.2nm,0.9s,mb4.1						
ZEI	**Tsey**	**52.33**	**316**	*e*P	**P**	**20 27 10.8**	**+0.8**
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.8						
ASAR	**Alice Springs**	**53.57**	**130**	P	**P**	**20 27 19.4**	**0.0**
	comp=Z,2.1nm,0.9s,mb4.1,baz=305,slow=6.7,SNR=13						
ASAR				PcP	PcP	20 28 26.1	0.0
	comp=Z,0.8nm,0.8s,baz=318,slow=5.4,SNR=3.1						
KIV	**Kislovodsk**	**53.61**	**317**	⇓*e*P	**P**	**20 27 20.4**	**+1.0**
KIV				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
KIV	**Kislovodsk**	**53.61**	**317**	*e*P	**P**	**20 27 20.0**	**+0.6**
	comp=Z,8.8nm,0.9s,mb4.7						
VORD	**Divnogorie**	**58.51**	**324**	*e*P	**P**	**20 27 53.1**	**-1.2**
VSR	**Storozhevoye**	**58.68**	**324**	*e*P	**P**	**20 27 54.6**	**-1.0**
VSR				pmax	pmax		
	comp=E,6.0nm,0.7s						
VSR				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
VSR				pmax	pmax		
	comp=N,2.0nm,0.6s						
BR131	**Keskin Array S**	**58.77**	**310**	*e*P	**P**	**20 27 55.0**	**-1.4**
	comp=N,1.2nm,0.7s,mb4.0						
BRTR	**Keskin Array B**	**58.77**	**310**	P	**P**	**20 27 55.6**	**-0.7**
	comp=N,1.8nm,0.8s,mb4.2,baz=120,slow=7.4,SNR=12						
OBN	**Obninsk**	**61.69**	**328**	⇑*e*P	**P**	**20 28 16.4**	**+0.3**
OBN				*e*		20 28 58.3	
OBN				pmax	pmax		
	comp=Z,15nm,1.7s,mb4.8						
OBN	**Obninsk**	**61.69**	**328**	*e*P	**P**	**20 28 15.8**	**-0.3**
STKA	**Stephens Creek**	**63.79**	**134**	P	**P**	**20 28 31.7**	**+1.2**
	comp=Z,6.5nm,1.0s,mb4.6,baz=272,slow=12,SNR=3.1						
STKA	**Stephens Creek**	**63.79**	**134**	*e*P	**P**	**20 28 30.7**	**+0.2**
STKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
STKA	**Stephens Creek**	**63.79**	**134**	*e*P	**P**	**20 28 30.7**	**+0.2**
	comp=Z,1.4nm,0.9s,mb4.0						
AKASG	**Malin Array Be**	**64.44**	**321**	P	**P**	**20 28 33.5**	**-0.9**
	comp=Z,0.5nm,0.2s,mb4.1,baz=86,slow=5.4,SNR=7.8						
TIXI	**Tiksi**	**64.90**	**12**	*e*P	**P**	**20 28 35.0**	**-2.1**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
TIXI	**Tiksi**	**64.90**	**12**	*e*P	**P**	**20 28 36.0**	**-1.1**
	comp=Z,2.4nm,0.8s,mb4.3						
VRI	**Vrincioaia**	**65.00**	**316**	⇓P	**P**	**20 28 38.8**	**+0.6**
PLOR	**Plostina**	**65.05**	**316**	⇑P	**P**	**20 28 38.8**	**+0.3**
MLR	**Muntele Rosu**	**65.47**	**315**	P	**P**	**20 28 41.7**	**+0.4**
	comp=Z,6.6nm,0.9s,mb4.7,baz=130,slow=3.6,SNR=13						
BURAR	**Bucovina Array**	**66.34**	**317**	⇑P	**P**	**20 28 46.3**	**-0.5**
BUR08	**Bucovina Ar. S**	**66.35**	**317**	*e*P	**P**	**20 28 46.5**	**-0.4**
IDID	**Didziasalis**	**67.07**	**326**	*e*P	**P**	**20 28 51.2**	**-0.2**
IDID				AMB	AMB	20 28 52.3	
	comp=Z,4.4nm,1.1s,mb4.4						
JOF	**Joensuu**	**67.24**	**334**	*e*P	**P**	**20 28 52.0**	**-0.3**
JOF				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
JOF	**Joensuu**	**67.24**	**334**	*e*p	**P**	**20 28 52.0**	**-0.3**
	comp=Z,11nm,0.8s,mb4.9						
IIGN	**Ignalina**	**67.37**	**326**	*e*P	**P**	**20 28 53.1**	**-0.2**
IIGN				AMB	AMB	20 28 54.2	
	comp=Z,2.8nm,0.8s,mb4.4						
IZAR	**Zarasai**	**67.46**	**326**	*e*P	**P**	**20 28 53.6**	**-0.2**
IZAR				AMB	AMB	20 28 54.9	
	comp=Z,4.8nm,0.7s,mb4.7						
ISAL	**Salakas**	**67.48**	**326**	*e*P	**P**	**20 28 53.6**	**-0.3**
ISAL				AMB	AMB	20 28 54.9	
	comp=Z,2.9nm,0.9s,mb4.3						
LSZ	**Lusaka**	**68.06**	**249**	*e*P	**P**	**20 28 59.5**	**+1.2**
LSZ				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2						
LSZ	**Lusaka**	**68.06**	**249**	*e*P	**P**	**20 28 59.5**	**+1.3**
	comp=Z,2.2nm,0.9s,mb4.2						
CRVS	**Cervenica-Dubn**	**69.02**	**318**	*e*P	**P**	**20 29 03.9**	**+0.2**
CRVS				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
CRVS	**Cervenica-Dubn**	**69.02**	**318**	*e*P	**P**	**20 29 03.9**	**+0.2**
	comp=Z,3.6nm,1.1s,mb4.2						
FINES	**FINESS Array B**	**69.07**	**332**	P	**P**	**20 29 03.8**	**0.0**
	comp=Z,4.9nm,0.8s,mb4.5,baz=104,slow=8.0,SNR=22						
KAF	**Kangasniemi**	**69.16**	**333**	*e*P	**P**	**20 29 02.4**	**-1.9**
KAF				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
KAF	**Kangasniemi**	**69.16**	**333**	*e*p	**P**	**20 29 02.4**	**-1.9**
	comp=Z,9.8nm,1.1s,mb4.7						
OJC	**Ojcow**	**70.26**	**320**	*e*P	**P**	**20 29 09.1**	**-2.2**
VYHS	**Vyhne**	**70.70**	**318**	*e*P	**P**	**20 29 13.7**	**-0.3**
ARCES	**ARCESS Array B**	**71.77**	**340**	P	**P**	**20 29 20.4**	**+0.3**
	comp=Z,2.1nm,0.9s,mb4.1,baz=88,slow=6.2,SNR=8.5						
DPC	**Dobruska-Polom**	**72.49**	**319**	*e*P	**P**	**20 29 25.5**	**+0.7**
DPC				*e*		20 29 43.0	
DPC	**Dobruska-Polom**	**72.49**	**319**	*e*P	**P**	**20 29 25.5**	**+0.7**
DPC				*e*PCP	PcP	20 29 43.0	+0.4
UPC	**Upice**	**72.70**	**320**	*e*P	**P**	**20 29 21.0**	**-5.1**
LBTB	**Lobatse**	**73.59**	**240**	*e*P	**P**	**20 29 33.3**	**+1.5**
LBTB				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
LBTB	**Lobatse**	**73.59**	**240**	*e*P	**P**	**20 29 33.3**	**+1.5**
	comp=Z,1.8nm,0.7s,mb4.1						
PRU	**Pruhonice**	**73.61**	**319**	*e*P	**P**	**20 29 31.9**	**+0.4**
PRU	**Pruhonice**	**73.61**	**319**	*e*P	**P**	**20 29 31.9**	**+0.4**
KHC	**Kasperske Hory**	**74.20**	**318**	*e*P	**P**	**20 29 33.5**	**-1.5**
KHC				*e*		20 29 52.6	
KHC	**Kasperske Hory**	**74.20**	**318**	*e*P	**P**	**20 29 33.5**	**-1.5**
KHC				*e*PCP	PcP	20 29 52.6	+2.7
CLL	**Collm**	**74.64**	**320**	*e*P	**P**	**20 29 37.0**	**-0.5**
CLL				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
HFS	**Hagfors**	**74.79**	**330**	P	**P**	**20 29 37.4**	**-0.7**
	comp=Z,3.3nm,0.8s,mb4.3,baz=95,slow=11,SNR=6.8						
BOSA	**Boshof**	**75.16**	**237**	P	**P**	**20 29 42.2**	**+1.3**
	comp=Z,2.9nm,1.0s,mb4.2,baz=106,slow=7.0,SNR=4.1						
BOSA	**Boshof**	**75.16**	**237**	P	**P**	**20 29 42.2**	**+1.3**
GRF	**Grafenberg Arr**	**75.75**	**319**	*e*P	**P**	**20 29 44.2**	**+0.3**
	comp=Z,4.0nm,0.9s,mb4.3						
GRF	**Grafenberg Arr**	**75.75**	**319**	*e*P	**P**	**20 29 44.2**	**+0.3**
GRF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
NB2	**NORSAR Subarra**	**76.07**	**330**	P	**P**	**20 29 44.7**	**-0.8**
	comp=Z,1.0nm,0.7s,mb3.9,baz=97,slow=5.3						
NOA	**NORSAR Array B**	**76.07**	**330**	P	**P**	**20 29 44.9**	**-0.6**
	comp=Z,1.5nm,0.7s,mb4.0,baz=94,slow=5.7,SNR=8.8						
NOA	**NORSAR Array B**	**76.07**	**330**	P	**P**	**20 29 44.9**	**-0.6**
KEST	**Kesra**	**77.67**	**304**	P	**P**	**20 29 55.4**	**+0.4**
	comp=Z,2.3nm,0.9s,mb4.1,baz=290,slow=4.5,SNR=4.0						
KEST	**Kesra**	**77.67**	**304**	P	**P**	**20 29 55.4**	**+0.4**
CASY	**Casey**	**78.07**	**172**	*e*P	**P**	**20 29 57.9**	**+1.5**
	comp=Z,2.8nm,0.7s,mb4.3						
LPG	**La Plagne**	**78.92**	**314**	*e*P	**P**	**20 30 01.6**	**-0.2**
	comp=Z,5.2

comp=Z,108nm,0.9s,mb5.5,SNR=5.4
WRAB Tennant Creek 28.31 247 *e*P **P 21 20 03.8 -0.5**
WRAB pmax pmax
comp=Z,31nm,1.2s,mb4.8
WRAB Tennant Creek 28.31 247 *e*P **P 21 20 03.8 -0.5**
comp=Z,31nm,1.2s,mb4.8
WRA Warramunga Arr 28.32 247 P **P 21 20 03.9 -0.6**
comp=Z,12nm,0.8s,mb4.6,baz=76,slow=9.2,SNR=72
STKA Stephens Creek 28.57 218 *e*P **P 21 20 07.0 +0.6**
comp=Z,4.1nm,0.9s,mb4.2
STKA Stephens Creek 28.57 218 P **P 21 20 06.0 -0.4**
comp=Z,4.8nm,0.9s,mb4.2,baz=6.3,slow=11,SNR=5.1
STKA LR LR 21 31 20.4
comp=Z,2µm,19.1s,MS4.6,baz=34,slow=36
KAKA Kakadu 29.06 262 *e*P **P 21 20 09.8 -1.2**
comp=Z,6.4nm,0.6s,mb4.5
ASAR Alice Springs 29.89 240 P **P 21 20 17.1 -1.2**
comp=Z,3.2nm,0.6s,mb4.2,baz=62,slow=10,SNR=50
TOO Toolangi 30.93 206 *e*P **P 21 20 28.0 +0.7**
URZ Urewera 30.93 156 LR LR 21 30 31.2
comp=Z,225nm,19.7s,MS3.8,baz=165,slow=32
FITZ Fitzroy Crossi 36.03 253 *e*P **P 21 21 10.7 -1.3**
comp=Z,19nm,0.6s,mb5.2
FITZ Fitzroy Crossi 36.03 253 P **P 21 21 11.4 -0.5**
comp=Z,16nm,0.7s,mb5.0,baz=86,slow=6.6,SNR=56
FITZ LR LR 21 35 58.2
comp=Z,179nm,19.6s,MS3.9,baz=78,slow=36
FITZ Fitzroy Crossi 36.03 253 *e*P **P 21 21 10.8 -1.2**
comp=Z,13nm,0.7s,mb5.0
FORT Forrest 37.51 232 *e*P **P 21 21 24.4 +0.1**
comp=Z,24nm,0.8s,mb5.0
CBIJ Chichi jima 41.89 333 LR LR 21 36 54.7
comp=Z,99nm,19.8s,MS3.7,baz=114,slow=32
MBWA Marble Bar 41.97 250 *e*P **P 21 22 00.5 -1.0**
MBWA Marble Bar 41.97 250 *e*P **P 21 22 00.8 -0.7**
comp=Z,12nm,0.8s,mb4.6
MORW Morawa 46.77 240 *e*P **P 21 22 39.8 0.0**
NWAO Narrogin (SRO) 46.85 234 P **P 21 22 41.5 +1.2**
comp=Z,27nm,1.0s,mb5.1,baz=149,slow=14,SNR=4.6
NWAO Narrogin (SRO) 46.85 234 P **P 21 22 41.6 +1.2**
NWAO pmax pmax
comp=Z,27nm,1.0s
NWAO Narrogin (SRO) 46.85 234 *e*P **P 21 22 40.3 -0.1**
PPT Papeete 47.43 104 *e*LR LR 21 36 19.4
comp=Z,287nm,21.8s
PPT Papeete 47.43 104 LR LR 21 38 37.2
comp=Z,240nm,18.5s,MS4.2,baz=277,slow=31
TBI Tubuai 48.00 112 *e*S **S 21 29 45.3 +1.5**
comp=Z,90nm,25.8s
TBI *e*LQ 21 34 31.6
comp=Z,492nm,28.2s
TBI *e*LR LR 21 36 33.8
comp=Z,242nm,25.8s
KKM Kota Kinabalu 48.42 288 *e*P **P 21 22 51.2 -1.6**
comp=Z,17nm,0.9s,mb5.1
MJAR Matsushiro Arr 51.73 336 P **P 21 23 16.4 -1.0**
comp=Z,2.3nm,0.8s,mb4.2,baz=167,slow=8.4,SNR=10
MJAR PcP PcP 21 24 30.0 -0.2
comp=Z,2.7nm,1.0s,baz=164,slow=4.4,SNR=4.1
MAJO Matsushiro 51.73 336 *e*P **P 21 23 15.9 -1.6**
MAJO pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
MAJO Matsushiro 51.73 336 *e*P **P 21 23 15.9 -1.5**
comp=Z,5.9nm,1.0s,mb4.5
MAT Matsushiro 51.73 336 P **P 21 23 16.0 -1.5**
TPUB Ta-pu 52.50 310 *e*P **P 21 23 22.0 -1.4**
comp=Z,25nm,0.8s,mb5.2
SSLB Suanglung 52.54 311 *e*P **P 21 23 23.1 -0.6**
comp=Z,17nm,0.6s,mb5.2
YHNB Yeheng 52.74 312 *e*P **P 21 23 24.8 -0.4**
comp=Z,48nm,1.1s,mb5.3
ASAJ Asahikawa 56.99 343 P **P 21 23 56.2 +0.7**
comp=Z,29nm,0.9s,mb5.3,baz=220,slow=10,SNR=22
ASAJ Asahikawa 56.99 343 P **P 21 23 56.2 +0.7**
ASAJ pmax pmax
comp=Z,29nm,0.9s
TAOE Nuku Hiva Isla 56.99 94 *e*LR LR 21 40 43.6
comp=Z,201nm,24.9s
KSRS Korea Array 57.27 328 P **P 21 23 57.8 +0.1**
comp=Z,2.4nm,1.0s,mb4.2,baz=147,slow=7.1,SNR=6.5
KSRS LR LR 21 44 49.8
comp=Z,115nm,20.7s,MS4.0,baz=297,slow=32
NJ2 Nanjing 58.97 317 *e*P **P 21 24 11.8 +2.1**
NJ2 pmax pmax
comp=Z,30nm,0.5s,mb5.6
YSS Yuzh-Sakhalins 59.57 345 *e*P **P 21 24 13.9 +0.4**
YSS pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
YSS Yuzh-Sakhalins 59.57 345 *e*P **P 21 24 13.9 +0.5**
comp=Z,7.3nm,0.6s,mb4.9
RKT Rikitea 61.28 111 *e*LR LR 21 42 40.9
comp=Z,311nm,25.2s
HABR Khabarovsk 63.22 340 *e*P **P 21 24 36.7 -1.4**
HABR *PP pP 21 24 50.3 -2.9
HABR *S* **S 21 33 04.5 -1.0**
HABR *e* 21 33 21.0
HABR *e*SS sS 21 33 28.4 -2.5
HABR *e* 21 34 24.3
HABR *e*SS SS 21 37 11.8 -1.1
HABR pmax pmax
comp=Z,35nm,1.9s,mb5.2
HABR pmax pmax
comp=E,31nm,2.1s
HABR pmax pmax
comp=N,21nm,2.0s
HABR MLR MLR
comp=Z,89nm,18.0s,MS4.0
CN2 Changchun 63.30 331 *e*P **P 21 24 39.0 +0.3**
CN2 pmax pmax
comp=Z,10.0nm,1.3s,mb4.8
PETK Petropavlovsk- 63.30 357 P **P 21 24 38.4 -0.1**
comp=Z,14nm,0.9s,mb5.1,baz=146,slow=6.4,SNR=17
PETK LR LR 21 45 42.7
comp=Z,112nm,21.7s,MS4.0,baz=213,slow=30
GYA Guiyang 65.00 306 *e*P **P 21 24 52.0 +1.7**
GYA pP pP 21 25 05.8 +0.4
GYA sP sP 21 25 12.5 +0.9
GYA PP PP 21 27 17.0 +3.0
GYA ScP 21 29 21.0
GYA S **S 21 33 28.5 0.0**
GYA sS sS 21 33 53.3 -0.7
GYA SS SS 21 37 42.0 +0.4
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,120nm,5.8s
GYA LR LR
comp=N,650nm,19.6s,MS5.0
GYA LR LR
comp=E,630nm,20.8s,MS5.0
GYA LR LR
comp=Z,570nm,19.9s,MS4.8
BJI Beijing 65.66 323 P **P 21 24 54.3 +0.1**
BJI pP pP 21 25 08.3 -1.1
BJI sP sP 21 25 14.8 -0.8
BJI S S 21 33 37.5 +1.4
BJI sS sS 21 33 55.3 -6.3
BJI SS SS 21 37 47.0 -4.4
BJI pmax pmax
comp=Z,13nm,0.8s,mb5.0
BJI pmax pmax
comp=Z,44nm,3.9s
BJI LR LR
comp=N,160nm,16.3s,MS4.4
BJI LR LR
comp=E,140nm,16.9s,MS4.4
BJI LR LR
comp=Z,81nm,20.4s,MS3.9
CASY Casey 65.73 200 *e*P **P 21 24 50.8 -3.5**
CASY Casey 65.73 200 *e*P **P 21 24 53.7 -0.6**
comp=Z,8.5nm,1.3s,mb4.6
SBA Scott Base 67.55 179 *e*P **P 21 25 06.7 +1.0**
SBA pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
SBA Scott Base 67.55 179 *e*P **P 21 25 06.7 +1.0**
comp=Z,9.7nm,1.1s,mb4.8
KMI Kunming 67.63 303 P **P 21 25 08.5 +1.4**
KMI PP PP 21 27 40.5 +3.5
KMI S S 21 33 57.5 -3.0
KMI SS SS 21 38 21.0 -1.5
KMI pmax pmax
comp=Z,5.0nm,1.3s,mb4.4
KMI pmax pmax
comp=Z,45nm,3.8s
KMI LR LR
comp=N,140nm,14.7s,MS4.5
KMI LR LR
comp=E,140nm,12.2s,MS4.5
KMI LR LR
comp=Z,130nm,13.8s,MS4.3
CMAR Chiang Mai Arr 68.47 295 P **P 21 25 13.6 +1.0**
comp=Z,1.9nm,0.7s,mb4.3,baz=131,slow=5.3,SNR=9.4
CMAR LR LR 21 52 26.0
comp=Z,43nm,18.3s,MS3.7,baz=125,slow=33
HHC Hu-ho-hao-te 68.95 321 *e*P **P 21 25 15.5 +0.5**
HHC pP pP 21 25 35.5 +5.2
HHC PcP PcP 21 25 39.5 +0.5
HHC PP PP 21 27 51.8 +3.7
HHC ScP 21 29 34.8
HHC PcS 21 29 42.8
HHC S S 21 34 12.5 -3.0
HHC ScS ScS 21 35 05.8 -5.2
HHC pmax pmax
comp=Z,11nm,0.7s,mb4.9
HHC pmax pmax
comp=Z,45nm,4.9s
HHC LR LR
comp=N,130nm,17.8s,MS4.4
HHC LR LR
comp=E,120nm,16.6s,MS4.4
HHC LR LR
comp=Z,110nm,16.7s,MS4.2
CD2 Chengdu 69.27 309 *e*P **P 21 25 19.3 +2.0**
CD2 PP PP 21 27 55.3 +4.2
CD2 S S 21 34 18.0 -1.8
CD2 SS SS 21 38 47.5 -0.2
CD2 pmax pmax
comp=Z,20nm,0.8s,mb5.1
CD2 pmax pmax
comp=Z,100nm,5.2s
CD2 LR LR
comp=E,240nm,13.2s
CD2 LR LR
comp=Z,110nm,14.4s,MS4.2
LZH Lanzhou 71.58 314 *e*P **P 21 25 32.0 +0.7**
LZH pP pP 21 25 47.5 +0.9
LZH sP sP 21 25 51.5 -1.3
LZH PP PP 21 28 13.3 +2.4
LZH sS sS 21 35 10.0 -2.4
LZH pmax pmax
comp=Z,27nm,1.2s,mb5.0
LZH pmax pmax
comp=Z,130nm,7.6s
LZH LR LR
comp=N,460nm,17.0s
LZH LR LR
comp=Z,600nm,18.5s,MS4.9
CIT Chita 74.74 331 *e*P **P 21 25 50.6 +1.1**
ULN Ulaanbaatar 75.60 325 *e*P **P 21 25 55.5 +0.9**
ULN pmax pmax
comp=Z,27nm,1.3s,mb5.0
ULN Ulaanbaatar 75.60 325 *e*P **P 21 25 55.5 +0.9**
comp=Z,27nm,1.3s,mb5.0
GTA Gaotai 75.94 315 ⇑*e*P **P 21 25 57.3 +0.6**
GTA pP pP 21 26 10.3 -1.9
GTA sP sP 21 26 15.8 -2.5
GTA PP PP 21 28 49.5 +1.6
GTA S S 21 35 35.5 0.0
GTA sS sS 21 35 57.5 -4.1
GTA SKS 21 35 59.0
GTA pmax pmax
comp=Z,9.0nm,1.4s,mb4.5
GTA pmax pmax
comp=Z,77nm,5.4s
GTA LR LR
comp=N,91nm,14.4s,MS4.3
GTA LR LR
comp=E,76nm,14.7s,MS4.3
GTA LR LR
comp=Z,88nm,15.6s,MS4.2
SONM Songino Array 75.95 325 P **P 21 25 57.3 +0.7**
comp=Z,8.6nm,0.8s,mb4.8,baz=143,slow=5.8,SNR=57
SONM LR LR 21 55 10.6
comp=Z,88nm,21.8s,MS4.0,baz=125,slow=32
YAK Yakutsk 76.42 345 *e*P **P 21 25 58.1 -0.8**
YAK pmax pmax
comp=E,5.0nm,1.3s
YAK pmax pmax
comp=Z,25nm,1.0s,mb5.1
YAK pmax pmax
comp=N,13nm,1.8s
YAK Yakutsk 76.42 345 *e*P **P 21 25 58.8 -0.1**
comp=N,29nm,0.9s,mb5.2
OHAK Old Harbor 76.65 23 *e*P **P 21 26 00.7 +0.4**
comp=N,41nm,1.4s,mb5.2
BILL Bilibino 78.23 2 *c i*P **P 21 26 08.9 0.0**
BILL *e* pP 21 26 19.8 -4.7
BILL pmax pmax
comp=Z,47nm,1.2s,mb5.3
BILL Bilibino 78.23 2 *e*P **P 21 26 09.1 +0.2**
comp=Z,34nm,1.0s,mb5.2
SVW2 Sparrevohn 78.63 20 *e*P **P 21 26 11.9 +0.6**
TLY Talaya 79.52 327 *e*P **P 21 26 15.9 -0.5**
TLY *e*S S 21 36 18.1 +4.5
TLY *e*SS SS 21 41 13.9 -8.8
TLY pmax pmax
comp=Z,12nm,0.9s,mb4.8
TLY MLR MLR
comp=Z,77nm,19.0s,MS4.1
TLY Talaya 79.52 327 *e*P **P 21 26 16.7 +0.3**
comp=Z,11nm,0.9s,mb4.8
QSPA South Pole Qui 79.66 180 *e*P **P 21 26 16.1 -0.7**
comp=Z,8.8nm,1.1s,mb4.6
TTA Tatalina 79.85 18 *e*P **P 21 26 18.4 +0.5**
TRF Thorofare Moun 82.05 20 *e*P **P 21 26 28.8 -0.8**
comp=Z,4.4nm,0.8s,mb4.4
MCK McKinley 82.69 20 *e*P **P 21 26 32.4 -0.5**
MCK pmax pmax
comp=Z,27nm,1.1s,mb5.2
MCK McKinley 82.69 20 *e*P **P 21 26 32.4 -0.6**
comp=Z,27nm,1.1s,mb5.2
COLA College 83.80 19 *e*P **P 21 26 38.0 -0.6**
COLA pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
COLA College 83.80 19 *e*P **P 21 26 38.0 -0.6**
comp=Z,9.6nm,0.9s,mb4.9
MAW Mawson 83.99 202 *e*P **P 21 26 38.6 -1.1**
comp=Z,4.4nm,0.9s,mb4.6
MAW Mawson 83.99 202 P **P 21 26 39.6 -0.1**
comp=Z,4.2nm,0.8s,mb4.6,baz=107,slow=7.5,SNR=7.1
MAW LR LR 22 00 54.4
comp=Z,75nm,19.9s,MS4.1,baz=252,slow=33
MAW Mawson 83.99 202 P **P 21 26 39.6 -0.1**
MAW pmax pmax
comp=Z,4.0nm,0.8s
MAW MLR MLR
comp=Z,75nm,19.9s
MAW Mawson 83.99 202 *e*P **P 21 26 39.2 -0.5**
comp=Z,1.1nm,0.8s,mb4.0
DIB Dawson Inlet, 84.09 33 T 22 59 35.2
SNR=69
TIXI Tiksi 84.73 350 *e*P **P 21 26 42.4 -0.8**
TIXI pmax pmax
comp=Z,14nm,1.2s,mb5.0
TIXI Tiksi 84.73 350 *e*P **P 21 26 43.0 -0.2**
comp=Z,15nm,1.3s,mb5.0
HYT Haines Junctio 85.29 25 *e*P **P 21 26 47.4 +1.2**
SAO San Andreas Ge 85.55 52 *e*P **P 21 26 47.8 -0.3**
SAO pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
SAO San Andreas Ge 85.55 52 *e*P **P 21 26 47.8 -0.3**
comp=Z,6.2nm,0.9s,mb4.8
WDC Whiskeytown Da 85.83 48 *e*P **P 21 26 50.3 +0.9**
WDC pmax pmax
comp=Z,8.0nm,1.3s,mb4.8
WDC Whiskeytown Da 85.83 48 *e*P **P 21 26 50.3 +0.9**
comp=Z,8.3nm,1.3s,mb4.8
EGAK Eagle 86.01 21 *e*P **P 21 26 50.6 +0.9**
comp=Z,26nm,1.0s,mb5.4
WMQ Urumqi 86.01 316 *e*P **P 21 26 52.0 +1.8**
WMQ pP pP 21 27 05.0 -0.9
WMQ sP sP 21 27 11.0 -1.0
WMQ PP PP 21 30 14.0 +3.0
WMQ S S 21 37 22.0 +2.0
WMQ pmax pmax
comp=Z,30nm,1.1s,mb5.4
WMQ LR LR
comp=N,50nm,20.0s,MS4.0
WMQ LR LR
comp=E,41nm,20.0s,MS4.0
WMQ LR LR
comp=Z,40nm,20.0s,MS3.8
PKM Peak Mountain 86.32 54 ⇑P **P 21 26 52.7 +0.7**
baz=86
CMB Columbia Colle 86.71 51 *e*P **P 21 26 54.1 +0.3**
CMB pmax pmax
comp=Z,7.0nm,1.1s,mb4.8
CMB Columbia Colle 86.71 51 *e*P **P 21 26 54.1 +0.3**
comp=Z,7.1nm,1.1s,mb4.8
WAKR Walker 87.56 50 *e*P **P 21 26 59.2 +1.3**
ISA Isabella 87.58 53 ⇑P **P 21 26 57.9 -0.2**
baz=88
K05A Summer Lake 87.63 46 ⇓P **P 21 26 58.2 +0.1**
baz=88
EDW2 Edwards Air Fo 87.77 54 ⇓P **P 21 26 58.8 -0.2**
baz=88
BFSC Mount Baldy Ra 87.88 55 ⇑P **P 21 26 59.4 -0.1**
baz=88
MTUM Tungsten Hills 87.93 52 *e*P **P 21 27 00.9 +1.2**
LRMC Laurel Mountai 88.15 54 ⇑P **P 21 27 01.1 +0.3**
baz=88
NVAR Mina Array Bea 88.40 51 P **P 21 27 03.0 +1.1**
comp=Z,4.9nm,0.8s,mb4.8,baz=230,slow=8.2,SNR=21
MPMC Manual Prospec 88.45 53 ⇑P **P 21 27 02.3 +0.2**
baz=89
MONP Monument Peak 88.57 56 ⇑P **P 21 27 03.4 +0.6**
baz=89,SNR=6.3
DVTC Desert V Tower 88.78 57 ⇑P **P 21 27 03.4 -0.4**
baz=89
GSC Goldstone 88.81 54 ⇑P **P 21 27 03.7 -0.2**
baz=89
FURC Furnace Creek, 89.04 53 ⇑P **P 21 27 04.9 -0.1**
baz=89,SNR=9.9
SWSC Sam W. Stewart 89.09 56 ⇓P **P 21 27 05.4 +0.1**
baz=89
WVOR Wild Horse Val 89.16 47 *e*P **P 21 27 06.3 +0.9**
WVOR pmax pmax
comp=Z,18nm,1.6s,mb5.2
WVOR Wild Horse Val 89.16 47 *e*P **P 21 27 06.2 +0.9**
comp=Z,18nm,1.6s,mb5.2
BELC Belle Mtn. Jos 89.16 55 ⇓P **P 21 27 06.1 +0.5**
baz=89,SNR=5.7
U10A Ash Meadows, A 89.44 53 ⇓P **P 21 27 06.4 -0.4**
baz=90
J08A Circle Bar Ran 89.51 46 ⇓P **P 21 27 07.7 +0.7**
baz=90
BC3 Big Chuckawall 89.53 56 ⇓P **P 21 27 06.8 -0.5**
baz=90
S10A Tonopah Range, 89.58 51 ⇓P **P 21 27 07.0 -0.5**
baz=90,SNR=8.4
GMRC Granite Mounta 89.61 55 ⇓P **P 21 27 07.1 -0.5**
baz=90,SNR=5.8
IRM Iron Mountain 89.88 55 ⇓PcP PcP 21 27 10.1 -0.1
baz=90,SNR=7.2
R10A Warm Springs 89.89 51 ⇑P **P 21 27 09.2 +0.3**
baz=90
Q10A Clear Creek Ra 89.94 51 ⇑P **P 21 27 08.7 -0.4**
baz=90
V11A Goodsprings 90.02 54 ⇓P **P 21 27 09.9 +0.3**
baz=90,SNR=8.3
S11A Rachel 90.17 52 ⇓P **P 21 27 09.6 -0.7**
baz=90
I09A Lost Marbles R 90.17 45 ⇑P **P 21 27 10.2 +0.1**
baz=90
N10A Dunphy 90.29 49 ⇑P **P 21 27 10.6 -0.1**
baz=90
Y12C Blythe 90.31 56 ⇑P **P 21 27 11.0 +0.1**
baz=90
H09A Durkee 90.40 45 ⇓P **P 21 27 10.5 -0.6**
baz=91
M10A I.L. Ranch, Tu 90.45 48 ⇓P **P 21 27 10.8 -0.7**
baz=91
R11A Troy Canyon, C 90.45 51 ⇓P **P 21 27 11.5 -0.1**
baz=91,SNR=15
V12A Nelson 90.46 54 ⇑P **P 21 27 11.4 -0.2**
baz=91
T11A Corn Creek, Al 90.49 52 ⇑P **P 21 27 12.2 +0.5**
baz=91,SNR=14
MK31 Makanchi Array 90.50 317 *e*P **P 21 27 11.4 -0.2**
MKAR Makanchi Array 90.50 317 P **P 21 27 11.2 -0.4**
comp=Z,2.6nm,0.8s,mb4.6,baz=79,slow=12,SNR=16
K10A MacKenzie Ranc 90.51 47 ⇑P **P 21 27 11.9 +0.3**
baz=91,SNR=9.3
Q11A Duckwater 90.51 51 ⇑PcP PcP 21 27 12.9 +0.1
baz=91
L10A Juniper Basin 90.63 47 ⇑PcP PcP 21 27 13.4 0.0
baz=91
BMO Blue Mountains 90.69 45 *e*P **P 21 27 13.0 +0.5**
BMO pmax pmax
comp=Z,12nm,1.7s,mb5.0
BMO Blue Mountains 90.69 45 *e*P **P 21 27 13.0 +0.6**
comp=Z,12nm,1.7s,mb5.0
113A Mohawk Valley, 90.72 57 ⇑P **P 21 27 13.3 +0.4**
baz=91
O11A Cowboy Ranch, 90.79 49 ⇑P **P 21 27 13.4 +0.3**
baz=91,SNR=7.5
O11A ⇓PcP PcP 21 27 14.5 +0.4
baz=91
ZALV Zalesovo Beam 90.85 325 P **P 21 27 11.9 -1.1**
comp=Z,1.4nm,0.8s,mb4.3,baz=108,slow=4.8,SNR=8.1
U12A Valley of Fire 90.86 53 ⇓PcP PcP 21 27 14.5 +0.1
baz=91,SNR=7.8
S12A Delamar Landin 90.86 52 ⇑P **P 21 27 13.9 +0.5**
baz=91,SNR=6.6
Y13A Salome 90.89 56 ⇑P **P 21 27 13.9 +0.3**
baz=91,SNR=5.4
Y13A ⇑PcP PcP 21 27 14.7 +0.1
baz=91
Z13A Yuma Proving G 90.90 57 ⇓PcP PcP 21 27 14.8 +0.1
baz=91,SNR=5.6
G10A Bishop Farm, J 90.92 44 ⇑P **P 21 27 13.9 +0.4**
baz=91,SNR=6.1
M11A Holland Ranch, 90.98 48 ⇑PcP PcP 21 27 15.5 +0.6
baz=91,SNR=9.8
F10A Beach Ranch, E 91.01 44 ⇓P **P 21 27 14.3 +0.4**
baz=91
H10A Noah's Angus R 91.01 45 ⇓P **P 21 27 13.8 -0.2**
baz=91,SNR=6.0
W13A Hualapai Mount 91.10 55 ⇑P **P 21 27 15.1 +0.4**
baz=91
K11A Parker Ranch, 91.11 47 ⇑P **P 21 27 15.0 +0.5**
baz=91
K11A ⇓PcP PcP 21 27 15.8 +0.4
baz=91,SNR=10
L11A Cat Creek Ranc 91.17 47 ⇑P **P 21 27 15.3 +0.5**
baz=91
V13A Grand Canyon W 91.17 54 ⇑PcP PcP 21 27 15.7 -0.2
baz=91,SNR=15
Q12A Willow Creek R 91.18 51 ⇑PcP PcP 21 27 16.0 +0.2
baz=91,SNR=7.9
R12A Pony Springs, 91.20 51 ⇑P **P 21 27 15.2 +0.2**
baz=91,SNR=6.3
P12A McGill 91.21 50 ⇓P **P 21 27 15.4 +0.4**
baz=91
U13A Pakoon Wash 91.31 53 ⇓P **P 21 27 15.2 -0.4**
baz=92,SNR=8.6
214A Organ Pipe Nat 91.35 58 ⇑P **P 21 27 15.5 -0.4**
baz=92
MFID Camas Ranch 91.39 46 ⇑P **P 21 27 16.0 +0.2**
baz=92
N12A Clover Valley, 91.41 49 ⇓P **P 21 27 16.0 +0.1**
baz=92,SNR=9.9
N12A ⇓PcP PcP 21 27 17.2 +0.4
baz=92
N12A Clover Valley, 91.41 49 *e*P **P 21 27 16.8 +0.9**
comp=Z,16nm,1.0s,mb5.3
N12A *e*pP pP 21 27 31.3 -0.4
I11A Placerville 91.41 46 ⇑P **P 21 27 15.6 -0.3**
baz=92,SNR=6.9
T13A Saint George 91.47 53 ⇑P **P 21 27 15.9 -0.4**
baz=92
T13A ⇑PcP PcP 21 27 17.6 +0.4
baz=92
O12A Currie 91.50 49 ⇑P **P 21 27 16.7 +0.3**
baz=92,SNR=8.3
O12A ⇑PcP PcP 21 27 17.6 +0.4
baz=92
G11A Walters Elk Ra 91.53 44 ⇓P **P 21 27 15.6 -0.8**
baz=92
H11A Donnelly 91.55 45 ⇓P **P 21 27 16.4 -0.1**
baz=92
M12A Wells 91.62 48 ⇓P **P 21 27 17.2 +0.3**
baz=92,SNR=8.2
NEW Newport 91.62 41 *e*P **P 21 27 17.1 +0.4**
NEW pmax pmax
comp=Z,4.0nm,0.8s
NEW Newport 91.62 41 *e*P **P 21 27 17.1 +0.4**
comp=Z,4.3nm,0.8s,mb4.8
S13A Holt Ranch, En 91.62 52 ⇑P **P 21 27 16.4 -0.6**
baz=92,SNR=12

S13A ⇑PcP PcP 21 27 18.2 +0.4
baz=92
R13A O'Grain Ranch, 91.66 52 ⇓P **P 21 27 16.4 -0.8**
baz=92
R13A ⇓PcP PcP 21 27 18.4 +0.4
baz=92,SNR=8.5
L12A House Creek Ra 91.70 48 ⇓P **P 21 27 16.4 -0.8**
baz=92
L12A ⇑PcP PcP 21 27 18.3 +0.2
baz=92,SNR=5.9
F11A Grangeville 91.72 44 ⇓P **P 21 27 16.5 -0.7**
baz=92
W14A Seligman 91.77 55 ⇓P **P 21 27 16.8 -0.9**
baz=92
X14A Yava 91.78 55 ⇓P **P 21 27 17.6 -0.1**
baz=92
Q13A Wheeler Ranch, 91.78 51 ⇓PcP PcP 21 27 18.9 +0.4
baz=92,SNR=8.6
V14A Boquillas Ranc 91.83 54 ⇓PcP PcP 21 27 19.2 +0.4
baz=92,SNR=6.1
J12A Stokes Ranch, 91.88 47 ⇑PcP PcP 21 27 19.4 +0.6
baz=92,SNR=18
P13A Bates Ranch, G 91.89 50 ⇓P **P 21 27 17.4 -0.8**
baz=92
P13A ⇑PcP PcP 21 27 18.9 -0.1
baz=92,SNR=16
K12A Draper Farm, C 91.89 47 ⇓P **P 21 27 18.0 -0.1**
baz=92
K12A ⇑PcP PcP 21 27 19.4 +0.5
baz=92,SNR=7.6
U14A Mt Trumbull 91.93 53 ⇑P **P 21 27 18.5 +0.1**
baz=92,SNR=12
I12A Atlanta 91.97 46 ⇓P **P 21 27 18.8 +0.4**
baz=92
ARUT Antelope Range 91.99 52 *eP* **P 21 27 19.5 +0.8**
ARUT pmax pmax
comp=Z,5.0nm,1.1s,mb4.8
ARUT Antelope Range 91.99 52 *eP* **P 21 27 19.4 +0.8**
comp=Z,5.2nm,1.1s,mb4.8
CCUT Cedar City 92.01 52 *eP* **P 21 27 19.8 +1.0**
comp=Z,8.0nm,1.1s,mb5.0
N13A Wendover, West 92.03 49 *eP* **P 21 27 20.6 +1.8**
comp=Z,13nm,1.0s,mb5.2
C11A Tepee Creek (N 92.09 42 ⇓P **P 21 27 18.5 -0.3**
baz=92
G12A Big Creek, Yel 92.12 45 ⇑P **P 21 27 18.7 -0.4**
baz=92,SNR=18
E12A Beaver Dam Sad 92.23 43 ⇓P **P 21 27 19.4 -0.2**
baz=92
F12A Elk City 92.30 44 ⇓P **P 21 27 19.8 -0.1**
baz=92,SNR=9.4
H12A Diamond D Ranc 92.33 45 ⇑P **P 21 27 20.0 0.0**
baz=92,SNR=5.5
Q14A Sevier Lake (B 92.35 51 ⇑P **P 21 27 20.7 +0.4**
baz=92,SNR=13
HLID Hailey 92.43 46 ⇓P **P 21 27 20.4 -0.1**
baz=93,SNR=10
HLID Hailey 92.43 46 *eP* **P 21 27 21.1 +0.5**
comp=Z,5.4nm,1.0s,mb4.8
K13A Stover Farm, H 92.48 47 ⇑P **P 21 27 19.8 -1.0**
baz=93
D12A Red Ives Fores 92.52 43 ⇓P **P 21 27 20.5 -0.4**
baz=93
J13A Cove Ranch, Pi 92.57 47 ⇑P **P 21 27 21.4 +0.2**
baz=93
J13A ⇑PcP PcP 21 27 22.6 +0.7
baz=93,SNR=7.2
V15A Kaibab Nationa 92.61 54 ⇓PcP PcP 21 27 22.2 -0.1
baz=93
P14A Drum Mountains 92.63 50 ⇑PcP PcP 21 27 22.4 +0.2
baz=93,SNR=6.5
U15A North Rim 92.63 54 ⇓P **P 21 27 19.8 -1.9**
baz=93,SNR=6.1
I13A Wildhorse Cree 92.71 46 ⇑PcP PcP 21 27 23.0 +0.5
baz=93,SNR=19
H13A Challis 92.75 45 ⇑P **P 21 27 22.3 +0.3**
baz=93
N14A Grayback Hills 92.78 49 ⇓P **P 21 27 22.6 +0.3**
baz=93,SNR=5.5
M14A Sheep Mountain 92.79 48 ⇑P **P 21 27 22.4 +0.2**
baz=93
M14A ⇑PcP PcP 21 27 23.3 +0.4
baz=93,SNR=9.0
G13A Cobalt 92.87 45 ⇓P **P 21 27 22.6 +0.1**
baz=93,SNR=13
F13A Darby 92.94 44 ⇑P **P 21 27 22.8 -0.1**
baz=93,SNR=10
L14A Malta 92.97 48 ⇑P **P 21 27 22.9 -0.2**
baz=93,SNR=6.0
J14A Carey 93.02 47 ⇑P **P 21 27 23.4 +0.1**
baz=93
MSU Marysvale 93.11 52 *eP* **P 21 27 25.6 +1.8**
C13A Hot Springs 93.16 42 ⇓P **P 21 27 22.9 -0.9**
baz=93
E13A Victor 93.17 44 ⇓P **P 21 27 23.7 -0.2**
baz=93
I14A Mackay 93.19 46 ⇓P **P 21 27 24.1 0.0**
baz=93
H14A Leadore 93.38 45 ⇑PcP PcP 21 27 26.1 +0.7
baz=94,SNR=8.0
G14A Jackson 93.44 45 ⇓PcP PcP 21 27 26.0 +0.3
baz=94
KSH Kashi 93.46 309 *eP* **P 21 27 27.5 +2.1**
KSH pP pP 21 27 41.0 -0.2
KSH sP sP 21 27 46.3 -1.0
KSH PP PP 21 31 15.5 +5.0
KSH SKS 21 37 56.5
KSH S S 21 38 27.5 -1.9
KSH sS sS 21 38 52.8 -3.5
KSH SS SS 21 44 52.0 +4.5
KSH pmax pmax
comp=Z,2.0nm,0.6s,mb4.7
KSH pmax pmax
comp=Z,110nm,4.4s
KSH LR LR
comp=N,73nm,4.3s
KSH LR LR
comp=E,41nm,4.1s
KSH LR LR
comp=Z,61nm,5.0s
V17A Tonalea, Kykot 93.68 55 ⇑P **P 21 27 26.2 -0.3**
baz=94
KURK Kurchatov 93.76 321 P **P 21 27 25.7 -0.8**
comp=Z,1.4nm,1.0s,mb4.3,baz=106,slow=3.3,SNR=9.0
KURK LR LR 22 09 55.3
comp=Z,56nm,19.8s,MS4.0,baz=55,slow=36
KURK Kurchatov 93.76 321 P **P 21 27 25.7 -0.8**
KURK pmax pmax
comp=Z,1.0nm,1.0s,mb4.2
KURK MLR MLR
comp=Z,56nm,19.8s,MS4.0
KURK Kurchatov 93.76 321 *eP* **P 21 27 25.3 -1.2**
comp=Z,3.6nm,1.1s,mb4.7
MCMT McKenzie Canyo 93.78 45 *eP* **P 21 27 26.9 +0.1**
comp=Z,0.8nm,0.8s,mb4.2
H15A Lima 93.89 46 ⇑P **P 21 27 27.0 -0.3**
baz=94,SNR=7.5
T17A Navajo Res., N 93.91 53 ⇓P **P 21 27 27.5 -0.1**
baz=94
B14A Marquette Ranc 94.15 42 ⇓P **P 21 27 26.9 -1.5**
baz=94
E15A Deer Lodge 94.22 44 ⇑P **P 21 27 28.1 -0.6**
baz=94
R17A Hanksville Air 94.22 52 ⇑P **P 21 27 29.1 +0.1**
baz=94
C15A Salmond Ranch, 94.48 42 ⇓P **P 21 27 27.8 -2.1**
baz=95
G16A Moss Hill, Enn 94.58 45 ⇓P **P 21 27 29.6 -0.8**
baz=95
BOZ Bozeman (W) 94.78 45 *eP* **P 21 27 32.4 +1.1**
BOZ pmax pmax
comp=Z,11nm,1.8s,mb5.0
BOZ Bozeman (W) 94.78 45 *eP* **P 21 27 32.4 +1.0**
comp=Z,11nm,1.8s,mb5.0
R19A Curley Farm, L 95.33 52 ⇑P **P 21 27 32.7 -1.4**
baz=96
F17A Fitzpatrick Pl 95.49 44 ⇑P **P 21 27 34.4 -0.1**
baz=96
B17A L&G Farms, Che 95.77 42 ⇓P **P 21 27 35.7 -0.1**
baz=96
PDAR Pinedale Array 95.79 48 P **P 21 27 35.5 -0.5**
comp=Z,0.2nm,0.5s,mb3.9,baz=301,slow=45,SNR=2.5
YKA Yellowknife Ar 96.04 28 P **P 21 27 35.4 -1.2**
comp=Z,0.9nm,0.6s,mb4.4,baz=253,slow=4.1,SNR=5.0
YKA Yellowknife Ar 96.04 28 P **P 21 27 35.4 -1.2**
E18A Harlowton 96.10 44 ⇓P **P 21 27 37.6 +0.2**
baz=96
U21A Nageezi 96.32 54 ⇓P **P 21 27 38.4 -0.2**
baz=96
EGMT Eagleton 96.42 42 *eP* **P 21 27 39.1 +0.4**
comp=Z,6.6nm,0.9s,mb5.1
BVAR Borovoye Array 99.14 322 P **P 21 27 50.1 -0.7**
comp=Z,0.7nm,0.7s,mb4.3,baz=104,slow=6.3,SNR=7.1
BRVK Borovoye 99.21 322 *ceP* **P 21 27 49.5 -1.6**
BRVK pmax pmax
comp=Z,3.0nm,1.4s,mb4.6
528A Cox Ranch, San 99.58 61 ⇑P Pdif 21 27 51.9 -0.9
baz=100
ARCES ARCESS Array B 114.70 345 PKP PKiKP 21 32 49.0 -0.3
comp=Z,1.6nm,0.4s,baz=78,slow=1.9,SNR=12
ARCES ARCESS Array B 114.70 345 PKP PKiKP 21 32 49.0 -0.3
JOF Joensuu 116.88 337 *e*PKIKP PKPdf 21 32 52.3 -1.4
JOF pmax pmax
comp=Z,4.0nm,0.7s
JOF Joensuu 116.88 337 *ep* PKPdf 21 32 52.3 -1.4
comp=Z,3.5nm,0.7s
KIV Kislovodsk 118.12 314 *i* PKIKP PKPdf 21 32 55.7 -0.9
KIV *e*SS SS 21 50 25.9 +2.8
KIV pmax pmax
comp=Z,2.0nm,0.8s
KAF Kangasniemi 119.24 338 *e*PKIKP PKPdf 21 32 56.9 -1.3
KAF pmax pmax
comp=Z,3.0nm,0.6s
KAF Kangasniemi 119.24 338 *ep* PKPdf 21 32 56.9 -1.3
comp=Z,2.6nm,0.6s
FINES FINESS Array B 119.74 337 PKP PKPdf 21 32 59.4 +0.2
comp=Z,2.8nm,0.9s,baz=329,slow=2.2,SNR=5.3
AKASG Malin Array Be 124.23 326 PKP PKPdf 21 33 07.7 -0.4
comp=Z,2.0nm,0.7s,baz=58,slow=2.1,SNR=6.7
AKASG Malin Array Be 124.23 326 PKP PKPdf 21 33 07.7 -0.4
NOA NORSAR Array B 125.01 343 PKP PKPdf 21 33 09.1 -0.2
comp=Z,3.7nm,0.8s,baz=40,slow=1.9,SNR=16
CRVS Cervenica-Dubn 129.44 327 *e*PKIKP PKPdf 21 33 18.8 +0.6
OKC Ostrava-Krasne 130.57 330 *e*PKIKP PKPdf 21 33 23.0 +2.7
OKC Ostrava-Krasne 130.57 330 *e*PKPdf PKPdf 21 33 23.0 +2.7
VYHS Vyhne 131.07 328 *e*PKIKP PKPdf 21 33 22.3 +1.0
DPC Dobruska-Polom 131.11 331 *e*PKIKP PKPdf 21 33 22.6 +1.3
DPC *e* 21 33 42.1
DPC Dobruska-Polom 131.11 331 *e*PKPdf PKPdf 21 33 22.6 +1.3
DPC *ep*PKP pPKPdf 21 33 42.1 +4.4
UPC Upice 131.15 332 *e*PKIKP PKPdf 21 33 22.4 +1.0
UPC Upice 131.15 332 *e*PKPdf PKPdf 21 33 22.4 +1.0
PVCC Panska Ves 131.80 333 *e*PKIKP PKPdf 21 33 23.1 +0.5
PVCC Panska Ves 131.80 333 *e*PKPdf PKPdf 21 33 23.1 +0.5
BRG Berggiesshubel 131.84 333 *e*PKPdf PKPdf 21 33 23.8 +1.1
BRG Berggiesshubel 131.84 333 *i* P PKPdf 21 33 22.8 +0.1
comp=Z,5.5nm,1.3s
CLL Collm 131.93 334 *e*PKPdf PKPdf 21 33 24.2 +1.4
CLL Collm 131.93 334 *e*PKIKP PKPdf 21 33 23.0 +0.2
CLL pmax pmax
comp=Z,6.0nm,1.1s
CLL MLR MLR
comp=Z,100nm,18.9s,MS4.5
PRU Pruhonice 132.19 332 *e*PKIKP PKPdf 21 33 24.6 +1.2
PRU Pruhonice 132.19 332 *e*PKPdf PKPdf 21 33 24.6 +1.2
GUNZ Gunzen 132.91 334 *e*PKPdf PKPdf 21 33 26.5 +1.8
WERN Wernitzgruen 132.95 334 *e*PKPdf PKPdf 21 33 26.5 +1.7
NKC Novy Kostel 132.96 334 *e*PKPdf PKPdf 21 33 26.3 +1.5
KHC Kasperske Hory 133.24 332 *e*PKPdf PKPdf 21 33 25.2 -0.2
KHC Kasperske Hory 133.24 332 *e*PKPdf PKPdf 21 33 26.0 +0.6
KHC *ex* x 21 33 34.8
KHC *ep*PKP pPKPdf 21 33 44.0 +2.2
GRF Grafenberg Arr 133.89 334 *e*PKPdf PKPdf 21 33 26.6 0.0
CDF Champ du Feu 136.53 336 *e*PKIKP PKPdf 21 33 30.2 -1.3
HAU Haudompre 137.23 336 *e*PKIKP PKPdf 21 33 31.7 -1.2
MEZF Maizieres J'vi 137.34 337 *e*PKIKP PKPdf 21 33 32.4 -0.6
CABF La Chapelle 138.46 335 *e*PKIKP PKPdf 21 33 34.6 -0.6
comp=Z,27nm,1.2s
MLS Moulis 143.49 336 *e*P PKPdf 21 33 41.7 -2.6
EPF Esparros 143.72 337 *e*PKIKP PKPdf 21 33 42.2 -2.5
comp=Z,10.0nm,0.9s
RESF Ens 143.91 337 *e*P PKPdf 21 33 44.7 -0.4
REYF Montagne du Re 143.96 338 *e*P PKPdf 21 33 43.7 -1.5
VIEF Viey 143.96 337 *e*P PKPdf 21 33 44.6 -0.6
ETSF Etsaut 144.17 338 *e*PKIKP PKPdf 21 33 44.7 -0.8
comp=Z,64nm,0.9s
SJPF Ste Jean 144.22 339 *e*PKIKP PKPdf 21 33 44.5 -1.1
comp=Z,27nm,1.0s
KEST Kesra 144.57 320 *e*PKPdf PKPdf 21 33 45.6 -0.9
PBRG Braganca 147.13 344 *e*PKP PKPbc 21 33 53.3 +0.5
MVO Moncorvo 147.81 344 *e*PKP PKPbc 21 33 55.2 +0.5
PVRL Vila Real 147.88 345 *e*PKP PKPbc 21 33 56.0 +1.1
PTO Porto 148.22 346 *e*PKP PKPbc 21 33 56.8 +1.0
ESDC Sonseca Array 148.22 339 PKP PKPdf 21 33 53.2 +0.7
comp=Z,4.0nm,0.7s,baz=21,slow=2.9,SNR=23
ESDC PKPbc PKPbc 21 33 56.1 +0.2
comp=Z,3.9nm,0.7s,baz=13,slow=2.7,SNR=19
ESLA Sonseca Array 148.22 339 *e*PKPbc PKPbc 21 33 56.2 +0.3
PVIS Viseu 148.45 345 *e*PKP PKPbc 21 33 57.6 +1.2
PAB San Pablo 148.47 340 *e*PKIKP PKPdf 21 33 53.6 +0.7
PAB *e* 21 33 57.1
MTE Manteigas 148.66 345 *e*PKP PKPbc 21 33 57.6 +0.7
PMRV Marv??o 149.53 344 *e*PKP PKPbc 21 33 59.9 +0.7
PTOM Tomar 149.62 345 *e*PKP PKPbc 21 34 00.2 +0.8
PESTR Estremoz 150.10 344 *e*PKP PKPbc 21 34 01.1 +0.5
EVO Evora 150.53 344 *e*PKP PKPbc 21 34 02.4 +0.8
PBAR Barrancos 150.59 342 *e*PKP PKPbc 21 34 01.9 +0.1
PBEJ Beja 150.97 343 *e*PKP PKPbc 21 34 03.4 +0.7
PCVE Castro Verde 151.38 343 *e*PKP PKPbc 21 34 05.5 +1.9
PBDV Barranco-do-Ve 151.71 343 *e*PKP PKPbc 21 34 06.0 +1.6

IDC 28 21:16:56.2±6.7, 6°.77S×148°.18E, h0^{km}, mb3.9/2, mb1 4.1/3, mb1mx3.7/15, mbtmp3.9/3, ML3.8/1, Error ellipse: s-maj=105.0km s-min=73.5km az=172.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.76**	**224**	P	Pn	21 21 16.0	-1.3
0.3nm,0.3s,baz=52,slow=11,SNR=5.4							
ASAR	**Alice Springs**	**21.69**	**218**	P	P	21 21 48.3	-0.5
2.0nm,0.5s,baz=50,slow=8.9,SNR=12							
STKA	**Stephens Creek**	**25.72**	**193**	P	P	21 22 29.5	+1.1
1.9nm,0.5s,baz=4.5,slow=12,SNR=2.2							

*DDA **28** 21:17:43.4, 35°.26N×27°.57E, h20^{km}±3^{km}, Md3.1*
*ATH **28** 21:17:45.4, 35°.33N×27°.56E, h17^{km}±1^{km}, MD3.1/5*
*NEIC **28** 21:17:45.4, 35°.33N×27°.56E, h17^{km}, MD3.1(ATH), After ATH.*
*ISCJB **28** 21:17:45.1±1.8, 35°.39N±0°.07×27°.57E±0°.05, h6^{km}±12^{km}, Error ellipse: s-maj=13.4km s-min=4.7km az=154.2*
*CSEM **28** 21:17:46.4±0.6, 35°.44N×27°.54E, h20^{km}, MD3.1, Error ellipse: s-maj=20.3km s-min=6.8km az=153.0*
ISC 28 21:17:46.2±1.7, 35°.38N±0°.08×27°.58E±0°.06, h11^{km}±7^{km}, n26, σ1°.9±15/46, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.38**	**296**	*e*Pb	**Pg**	**21 17 53.2**	**-0.5**
KARP				*e*Sb	**Sg**	**21 17 59.5**	**+0.7**
KARP	**Karpathos**	**0.38**	**296**	*e*PB	**Pg**	**21 17 53.2**	**-0.5**
KARP				*e*SB	**Sg**	**21 17 59.5**	**+0.7**
KARP	**Karpathos**	**0.38**	**296**	*e*Pb	**Pg**	**21 17 53.2**	**-0.5**
KARP				*e*Sb	**Sg**	**21 17 59.5**	**+0.7**
ARG	**Arkhangelos**	**0.94**	**28**	*e*Pn	**Pn**	**21 18 04.5**	**-0.8**
ARG				*e*Sn	**Sn**	**21 18 18.1**	**-0.6**
ARG	**Arkhangelos**	**0.94**	**28**	*e*PN	**Pn**	**21 18 04.5**	**-0.8**
ARG				*e*SN	**Sn**	**21 18 18.1**	**-0.6**
ARG	**Arkhangelos**	**0.94**	**28**	*e*Pn	**Pn**	**21 18 04.5**	**-0.8**
ARG				*e*Sn	**Sn**	**21 18 18.1**	**-0.6**
ZKR	**Zakros**	**1.15**	**257**	*e*Pn	**Pn**	**21 18 06.3**	**-1.8**
ZKR				*e*Sn	**Sn**	**21 18 22.3**	**-1.5**
ZKR	**Zakros**	**1.15**	**257**	*e*PN	**Pn**	**21 18 06.3**	**-1.8**
ZKR				*e*SN	**Sn**	**21 18 22.3**	**-1.5**
ZKR	**Zakros**	**1.15**	**257**	*e*Pn	**Pn**	**21 18 06.3**	**-1.8**
ZKR				*e*Sn	**Sn**	**21 18 22.3**	**-1.5**
NPS	**Neapolis**	**1.61**	**266**	*e*Pn	**Pn**	**21 18 14.9**	**+0.4**
NPS				*e*Sn	**Sn**	**21 18 35.6**	**+0.3**
NPS	**Neapolis**	**1.61**	**266**	*e*PN	**Pn**	**21 18 14.9**	**+0.4**
NPS				*e*SN	**Sn**	**21 18 35.6**	**+0.3**
NPS	**Neapolis**	**1.61**	**266**	*e*Pn	**Pn**	**21 18 14.9**	**+0.4**
NPS				*e*Sn	**Sn**	**21 18 35.6**	**+0.3**
BDRM	**Kayabasi**	**1.68**	**356**	*i* P	**Pn**	**21 18 15.2**	**-0.3**
BDRM	**Kayabasi**	**1.68**	**356**	*i* P	**Pn**	**21 18 15.2**	**-0.3**
TURN	**Turunc**	**1.70**	**29**	*i* P	**Pn**	**21 18 13.7**	**-2.1**
TURN				*i* S	**Sn**	**21 18 36.2**	**-1.3**
TURN	**Turunc**	**1.70**	**29**	*i* P	**Pn**	**21 18 13.6**	**-2.1**
TURN				*i* S	**Sn**	**21 18 36.2**	**-1.2**
LAST	**Lasithi**	**1.73**	**263**	*e*Pn	**Pn**	**21 18 17.1**	**+0.9**
LAST	**Lasithi**	**1.73**	**263**	*e*PN	**Pn**	**21 18 17.1**	**+0.9**
LAST	**Lasithi**	**1.73**	**263**	*e*Pn	**Pn**	**21 18 17.1**	**+0.9**
AKAS	**Kas**	**1.85**	**62**	*i* P	**Pn**	**21 18 18.6**	**+0.9**
AKAS				*i* S	**Sn**	**21 18 43.1**	**+1.9**
AKAS	**Kas**	**1.85**	**62**	*i* P	**Pn**	**21 18 18.6**	**+0.8**
AKAS				*i* S	**Sn**	**21 18 43.1**	**+2.0**
IDI	**Anoyia**	**2.20**	**268**	*e*Pn	**Pn**	**21 18 22.9**	**+0.3**
IDI				*e*S	**Sn**	**21 18 51.0**	**+1.1**
IDI	**Anoyia**	**2.20**	**268**	*e*PN	**Pn**	**21 18 23.3**	**+0.7**
IDI	**Anoyia**	**2.20**	**268**	*e*Pn	**Pn**	**21 18 22.9**	**+0.3**
IDI				*e*S	**Sn**	**21 18 51.0**	**+1.2**
AYDN	**Tasoluk**	**2.29**	**6**	*i* P	**Pn**	**21 18 24.9**	**+1.1**
AYDN				*i* S	**Sn**	**21 18 55.3**	**+3.4**
AYDN	**Tasoluk**	**2.29**	**6**	*i* P	**Pn**	**21 19 24.6**	**+1.1**
AYDN				*i* S	**Sn**	**21 18 55.3**	**+3.4**

IDC 28 21:18:35.9±34.0, 7°.16N×122°.79E, h0^{km}, mb4.1/4, mb1 4.3/4, mb1mx3.7/23, mbtmp4.1/4, Error ellipse: s-maj=589.3km s-min=147.6km az=154.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**25.26**	**174**	P	P	21 24 03.6	-0.4
1.4nm,0.7s,baz=0,slow=11,SNR=3.3							
WRA	**Warramunga Arr**	**29.23**	**157**	P	P	21 24 40.0	+0.3
2.0nm,0.4s,baz=337,slow=9.7,SNR=17							
ASAR	**Alice Springs**	**32.51**	**161**	P	P	21 25 08.8	+0.2
1.3nm,0.5s,baz=340,slow=7.2,SNR=22							
STKA	**Stephens Creek**	**42.77**	**156**	P	P	21 26 35.2	-0.1
3.8nm,0.8s,baz=291,slow=16,SNR=5.8							

*ISCJB **28** 21:18:43.5±1.6, 5°.6S±0°.2×102°.9E±0°.1, h33^{km}, mb4.0/4, Error ellipse: s-maj=26.3km s-min=13.2km az=25.0*
*DJA **28** 21:18:53, 5°.36S×103°.59E, h33^{km}, MLv4.0/10*
ISC 28 21:18:46.3±1.6, 5°.6S±0°.2×103°.1E±0°.1, h35^{km}, n13, σ0°.80/13, mb4.0/4, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**1.20**	**354**	P	**Pn**	**21 19 13.1**	**+6.5**
MDSI	**Maura Dua**	**1.53**	**46**	P	**Pn**	**21 19 11.6**	**+0.5**
KLSI		**1.85**	**62**	P	**Pn**	**21 19 15.0**	**-0.6**
KLI	**Kotabumi**	**1.90**	**69**	P	**Pn**	**21 19 16.2**	**0.0**
KSI	**Kapahiang**	**1.96**	**346**	P	**Pn**	**21 19 24.2**	**+7.1**
BLSI	**Bandar Lampung**	**2.16**	**85**	P	**Pn**	**21 19 19.6**	**-0.3**
RBSI	**Rajabasa**	**2.66**	**96**	P	**Pn**	**21 19 27.1**	**+0.4**
CGJI	**Cibinong**	**2.80**	**112**	P	**Pn**	**21 19 28.6**	**0.0**
LEM	**Lembang**	**4.68**	**106**	P	**Pn**	**21 19 59.0**	**+4.5**
SONM	**Songino Array**	**53.25**	**3**	P	**P**	**21 28 02.0**	**+0.7**
1.5nm,0.5s,mb4.1,baz=181,slow=8.5,SNR=4.3							
MKAR	**Makanchi Array**	**55.29**	**343**	P	**P**	**21 28 10.2**	**-6.0**
0.7nm,0.5s,mb3.9,baz=126,slow=8.5,SNR=4.5							
KURK	**Kurchatov**	**59.89**	**342**	P	**P**	**21 28 46.5**	**-2.0**
1.0nm,0.8s,mb3.9,baz=169,slow=7.0,SNR=5.0							
BVAR	**Borovoye Array**	**64.58**	**339**	P	**P**	**21 29 20.7**	**+0.8**
0.9nm,0.4s,mb4.1,baz=139,slow=9.4,SNR=11							

*DJA **28** 21:19:53, 0°.11N×96°.41E, h8^{km}, MLv4.4/8*
*IDC **28** 21:19:53.3±1.2, 4°.13N×99°.44E, h0^{km}, mb4.0/9, mb1 4.1/9, mb1mx3.8/23, mbtmp4.0/9, Error ellipse: s-maj=67.9km s-min=15.7km az=54.0*
*ISCJB **28** 21:19:55.9±1.0, 0°.25N±0°.08×96°.5E±0°.1, h33^{km}, mb4.0/5, Error ellipse: s-maj=16.4km s-min=9.8km az=147.4*
ISC 28 21:19:57.9±1.0, 0°.23N±0°.09×96°.6E±0°.1, h35^{km}, n18, σ1°.16/18, mb4.0/5, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**2.97**	**121**	P	**Pn**	**21 20 42.3**	**-0.4**
SISI	**Saibi**	**2.97**	**121**	P	**Pn**	**21 20 42.2**	**-0.5**
MNSI	**Mandailing Nat**	**3.08**	**79**	P	**Pn**	**21 20 43.8**	**-0.4**
MNSI	**Mandailing Nat**	**3.08**	**79**	P	**Pn**	**21 20 43.6**	**-0.6**
PPI	**Padang Panjang**	**3.91**	**100**	P	**Pn**	**21 20 54.8**	**-0.7**
PPI	**Padang Panjang**	**3.91**	**100**	P	**Pn**	**21 20 55.3**	**-0.2**
PDSI	**Padang**	**4.07**	**106**	P	**Pn**	**21 20 56.6**	**-1.2**
BKNI	**Bangkinang**	**4.49**	**89**	P	**Pn**	**21 21 07.7**	**+4.1**
PPSI	**Pulau Pagai**	**4.56**	**131**	P	**Pn**	**21 21 03.2**	**-1.3**
SDSI	**Sungai Dareh**	**5.01**	**103**	P	**Pn**	**21 21 11.7**	**+1.0**
791nm43nm,0.7s							
BSI	**Banda Aceh**	**5.38**	**347**	P	**Pn**	**21 21 15.9**	**+0.1**
0.4nm30nm,0.7s							
IPM	**Ipoh**	**6.15**	**47**	P	**Pn**	**21 21 27.1**	**+0.7**
0.1nm25nm,0.8s							
KULM	**Kulim**	**6.49**	**39**	P	**Pn**	**21 21 30.9**	**-0.1**
FITZ	**Fitzroy Crossi**	**33.91**	**124**	P	**P**	**21 26 39.4**	**+1.5**
2.5nm,0.6s,mb4.3,baz=276,slow=9.6,SNR=6.6							
WRA	**Warramunga Arr**	**42.09**	**121**	P	**P**	**21 27 45.7**	**-1.2**
2.4nm,0.8s,mb3.9,baz=301,slow=9.2,SNR=12							
ASAR	**Alice Springs**	**43.34**	**126**	P	**P**	**21 27 58.8**	**+1.8**
1.2nm,0.6s,mb3.8,baz=298,slow=8.1,SNR=11							
STKA	**Stephens Creek**	**53.20**	**131**	P	**P**	**21 29 15.7**	**+2.7**
1.3nm,0.6s,mb4.0,baz=299,slow=0.8,SNR=4.1							
BRTR	**Keskin Array B**	**69.28**	**313**	P	**P**	**21 31 00.5**	**-1.3**
1.0nm,0.8s,mb3.8,baz=117,slow=7.1,SNR=6.0							

*BJI **28** 21:20:59.8, 10°.58N×92°.14E, h24^{km}, mb4.2/1*
*NEIC **28** 21:21:03.0±0.7, 10°.89N×91°.93E, h10^{km}, mb4.1/3, Error ellipse: s-maj=20.4km s-min=13.9km az=39.0*
*ISCJB **28** 21:21:07.6±0.9, 12°.0N±0°.2×93°.4E±0°.2, h33^{km}, mb3.9/11, Error ellipse: s-maj=38.2km s-min=13.1km az=143.6*
*IDC **28** 21:21:08.7±0.8, 12°.03N×93°.36E, h26^{km}±4^{km}, mb3.8/9, mb1 4.0/9, mb1mx3.7/23, mbtmp3.8/9, MS3.3/1, Ms1 3.3/1, ms1mx2.4/32, Error ellipse: s-maj=45.5km s-min=13.7km az=53.0*
ISC 28 21:21:10.0±0.9, 12°.1N±0°.2×93°.5E±0°.2, h35^{km}, (h27^{km}±2.7^{km}:pP-P), n18, σ1°.14/15, mb3.9/11, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**17.68**	**353**	P	**Pn**	**21 25 22.3**	**+8.8**
AAK	**Ala-Archa**	**34.63**	**335**	LR	LR	21 44 32.8	
comp=Z,46nm,19.1s,baz=9.6,slow=41							
EKS2	**Erkin-Say**	**34.95**	**334**	*e*P	**P**	**21 28 00.6**	**+2.0**
1.6nm,0.9s,mb4.0							
KSRS	**Korea Array**	**39.86**	**45**	P	**P**	**21 28 41.2**	**+0.9**
0.8nm,0.6s,mb3.6,baz=219,slow=9.4,SNR=5.0							
ZAA0	**Zalesovo Array**	**42.34**	**352**	*e*P	**P**	**21 28 58.6**	**-1.8**
ZALV	**Zalesovo Beam**	**42.34**	**352**	P	**P**	**21 28 59.1**	**-1.3**
3.8nm,0.7s,mb4.1,baz=147,slow=4.4,SNR=16							
FITZ	**Fitzroy Crossi**	**43.67**	**133**	P	**P**	**21 29 11.0**	**-0.7**
6.9nm,0.7s,mb4.5,baz=303,slow=5.2,SNR=12							
FITZ				pP	pP	21 29 19.8	-2.2
8.9nm,1.0s,baz=300,slow=8.1,SNR=7.5							
FITZ	**Fitzroy Crossi**	**43.67**	**133**	*e*P	**P**	**21 29 10.7**	**-1.0**
5.7nm,0.7s,mb4.4							
FITZ				pP	pP	21 29 19.8	-2.2
BRVK	**Borovoye**	**44.90**	**340**	*e*P	**P**	**21 29 20.8**	**-0.2**
1.0nm,0.5s,mb3.9							
WRA	**Warramunga Arr**	**51.29**	**128**	P	**P**	**21 30 11.4**	**+0.5**
2.2nm,0.7s,mb4.2,baz=307,slow=8.3,SNR=13							
WRA				PcP	PcP	21 31 26.7	+1.0
0.9nm,0.4s,baz=300,slow=10.0,SNR=7.3							
WRA	**Warramunga Arr**	**51.29**	**128**	P	**P**	**21 30 11.4**	**+0.5**
WRA				PcP	PcP	21 31 26.7	+1.0
ASAR	**Alice Springs**	**53.15**	**132**	P	**P**	**21 30 24.7**	**0.0**
0.9nm,0.8s,mb3.8,baz=307,slow=7.1,SNR=7.3							
AKASG	**Malin Array Be**	**64.49**	**321**	P	**P**	**21 31 42.7**	**-0.5**
0.8nm,0.5s,mb4.0,baz=93,slow=4.8,SNR=4.3							
AKASG				pP	pP	21 31 50.8	-3.1
1.9nm,0.5s,ba

mb4.1/20, MS3.7/3, Error ellipse: s-maj=8.5km s-min=6.6km az=40.7
*BJI **28** 21:29:52.1, 0.01N×96.90E, h28km, mB4.8/3, mb4.4/5*
*DJA **28** 21:29:53, 0.25N×96.55E, h73km, MLv4.5/8*
*IDC **28** 21:29:54.8±0.7, 0.12N×96.54E, h28km±3km, mb3.9/17, mb1 4.0/19, mb1mx3.9/26, mbtmp3.9/19, ML3.7/2, MS3.6/4, Ms1 3.6/4, ms1mx3.1/27, Error ellipse: s-maj=25.3km s-min=12.9km az=52.0*
*NEIC **28** 21:29:55.3±0.4, 0.21N×96.69E, mb4.0/2, Error ellipse: s-maj=11.8km s-min=8.3km az=55.0*

ISC 28 21:29:53.0±2.4, 0.16N±0.05×96.62E±0.05, h15km±15km, h31km±.3km: pP-P, n64, σ0.86/64, mb4.1/20, MS3.7/3, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	Saibi	2.88	121	P	Pn	21 30 37.4	-0.9
MNSI	Mandailing Nat	3.02	78	P	Pn	21 30 39.3	-1.1
MNSI				S	Sn	21 31 14.9	-1.5
TPTI		3.13	10	P	Pn	21 30 41.8	0.0
PSI	Prapat	3.49	41	Pn	Pn	21 30 45.4	-1.4
	4.2nm,0.3s,baz=197,slow=13,SNR=22						
PSI				LR	LR	21 32 26.5	
	comp=Z,673nm,20.8s,baz=227,slow=43						
PSI	Prapat	3.49	41	Pn	Pn	21 30 45.4	-1.4
PSI				LR	LR	21 32 26.5	
PPI	Padang Panjang	3.82	99	P	Pn	21 30 51.1	-0.3
TSI	Tuntungan	3.84	30	S	Sn	21 31 36.4	-0.2
PDSI	Padang	3.98	106	P	Pn	21 30 53.0	-0.6
BKNI	Bangkinang	4.42	88	P	Pn	21 30 59.5	-0.1
PPSI	Pulau Pagai	4.46	131	P	Pn	21 30 59.3	-0.8
SDSI	Sungai Dareh	4.93	103	P	Pn	21 31 07.0	+0.4
	0.2nm780nm58nm,0.8s						
BSI	Banda Aceh	5.46	346	P	Pn	21 31 11.1	-2.8
	0.6nm2μm37nm,0.5s						
BSI				S	Sn	21 32 10.9	-5.7
	0.6nm2μm37nm,0.5s						
FRIM	Kepong	5.86	59	P	Pn	21 31 19.5	+0.1
IPM	Ipoh	6.14	46	P	Pn	21 31 23.1	-0.2
IPM	Ipoh	6.14	46	P	Pn	21 31 23.1	-0.2
	46nm,0.8s						
KULM	Kulim	6.49	38	P	Pn	21 31 27.3	-0.8
KULM	Kulim	6.49	38	ePn	Pn	21 31 26.2	-1.9
	43nm,0.9s						
KULM	Kulim	6.49	38	P	Pn	21 31 26.9	-1.2
	50nm,1.0s						
KGM	Kluang	6.94	75	P	Pn	21 31 35.5	+1.2
KSI	Kapahiang	7.07	122	P	Pn	21 31 35.2	-0.8
	206nm,1.0s						
MYKOM	Kota Tinggi	7.41	77	P	Pn	21 31 41.3	+0.6
KTGM	Kuala Trenggan	8.28	52	P	Pn	21 31 52.5	-0.2
MDSI	Maura Dua	8.85	122	P	Pn	21 32 00.0	-0.4
	972nm40nm,0.8s						
KLSI		9.42	121	P	Pn	21 32 07.7	-0.6
KSM	Kuching	13.75	84	P	Pn	21 33 08.9	+1.3
SBUM	Sibu	15.76	82	P	Pn	21 33 36.3	+1.7
BTM	Bintulu	16.73	79	P	Pn	21 33 48.6	+1.6
CM31	Chiang Mai Arr	18.32	7	eP	Pn	21 34 07.6	+0.8
	4.7nm,0.8s						
CMAR	Chiang Mai Arr	18.32	7	P	Pn	21 34 07.7	+0.9
	0.1nm,0.3s,baz=195,slow=11,SNR=24						
KKM	Kota Kinabalu	20.41	73	P	P	21 34 30.9	+1.1
KDM	Kudat	21.25	71	P	P	21 34 39.2	+0.3
SDKM	Sandakan	21.25	75	P	P	21 34 39.7	+0.8
TSM	Tawau	21.62	79	P	P	21 34 43.9	+1.0
FITZ	Fitzroy Crossi	33.81	124	P	P	21 36 35.4	+0.5
	3.1nm,0.8s,mb4.3,baz=291,slow=4.2,SNR=13						
WRA	Warramunga Arr	41.99	121	P	P	21 37 43.6	-0.4
	2.8nm,0.7s,mb4.0,baz=302,slow=9.1,SNR=20						
ASAR	Alice Springs	43.24	126	P	P	21 37 54.3	+0.2
	2.5nm,0.8s,mb4.0,baz=300,slow=8.3,SNR=23						
TKM2	Tokmak 2	46.56	339	P	P	21 38 19.9	-0.3
TKM2				e		21 38 30.1	
KSRS	Korea Array	47.03	34	P	P	21 38 23.2	-0.7
	1.4nm,0.7s,mb4.0,baz=217,slow=9.4,SNR=4.4						
KSRS				LR	LR	22 01 26.0	
	comp=Z,33nm,18.1s,MS3.3,baz=115,slow=40						
EKS2	Erkin-Say	47.03	337	eP	P	21 38 25.3	+1.4
	2.2nm,0.8s,mb4.1						
EKS2				epP	pP	21 38 34.4	+6.0
MK31	Makanchi Array	48.11	347	eP	P	21 38 32.6	+0.5
MK31				e		21 38 42.0	
MKAR	Makanchi Array	48.11	347	P	P	21 38 32.9	+0.7
	1.9nm,0.5s,mb4.3,baz=133,slow=9.6,SNR=22						
MKAR				pP	pP	21 38 41.9	+5.1
	4.8nm,0.7s,baz=125,slow=9.5,SNR=17						
MKAR	Makanchi Array	48.11	347	P	P	21 38 32.9	+0.7
MKAR				pP	pP	21 38 41.9	+5.1
SONM	Songino Array	48.24	9	P	P	21 38 34.0	+0.8
	1.5nm,0.7s,mb4.1,baz=188,slow=9.5,SNR=12						
SONM				pP	pP	21 38 42.9	+5.2
	1.7nm,0.9s,baz=194,slow=9.1,SNR=6.9						
KURK	Kurchatov	52.65	346	P	P	21 39 06.3	-0.1
	1.3nm,0.5s,mb4.1,baz=164,slow=7.0,SNR=6.0						
KURK				pP	pP	21 39 15.2	+4.1
	1.9nm,0.5s,baz=164,slow=7.2,SNR=9.0						
KURK	Kurchatov	52.65	346	P	P	21 39 06.3	-0.1
KURK				pP	pP	21 39 15.2	+4.1
MJAR	Matsushiro Arr	52.84	42	P	P	21 39 07.2	-1.0
	0.9nm,0.8s,mb3.8,baz=223,slow=6.4,SNR=5.7						
STKA	Stephens Creek	53.10	131	P	P	21 39 11.4	+1.2
	1.7nm,0.6s,mb4.2,baz=311,slow=8.8,SNR=6.5						
ZAA0	Zalesovo Array	54.49	351	eP	P	21 39 20.0	+0.1
ZAA0				e		21 39 29.2	
ZALV	Zalesovo Beam	54.49	351	P	P	21 39 20.5	+0.6
	6.1nm,0.4s,mb4.9,baz=170,slow=6.9,SNR=32						
ZALV				pP	pP	21 39 29.4	+4.8
	8.4nm,0.5s,baz=169,slow=7.4,SNR=17						
BVAR	Borovoye Array	57.04	341	P	P	21 39 37.6	-0.6
	1.0nm,0.6s,mb4.0,baz=140,slow=9.7,SNR=6.3						
BVAR				pP	pP	21 39 46.5	+3.6
	1.5nm,0.5s,baz=139,slow=8.1,SNR=7.7						
BVAR				LR	LR	22 06 05.5	
	comp=Z,69nm,20.2s,MS3.8,baz=217,slow=38						
AKTK	Aktyubinsk	59.88	333	P	P	21 39 57.9	-0.2
AKTO	Aktyubinsk	59.88	333	P	P	21 39 57.9	-0.2
	0.9nm,0.6s,mb4.0,baz=120,slow=12,SNR=2.2						
BRTR	Keskin Array B	69.38	313	P	P	21 40 59.9	-0.6
	0.6nm,0.7s,mb3.6,baz=117,slow=7.4,SNR=4.5						
BRTR				pP	pP	21 41 08.8	+3.6
	1.4nm,0.8s,baz=136,slow=7.5,SNR=8.5						
AKASG	Malin Array Be	75.73	323	P	P	21 41 37.3	-0.7
	1.4nm,0.5s,mb4.1,baz=92,slow=5.0,SNR=4.7						
AKASG				pP	pP	21 41 46.2	+3.4
	3.4nm,0.5s,baz=86,slow=5.4,SNR=6.9						
BUR08	Bucovina Ar. S	77.44	319	eP	P	21 41 48.7	+0.9
JOF	Joensuu	78.83	335	ep	P	21 42 02.2	+7.0
	2.0nm,0.7s,mb4.2						
JOF	Joensuu	78.83	335	ep	P	21 42 02.2	+7.0
	2.0nm,0.7s,mb4.2						
FINES	FINESS Array B	80.65	333	P	P	21 42 04.7	-0.4
	1.0nm,0.6s,mb3.9,baz=107,slow=3.8,SNR=9.4						
FINES				pP	pP	21 42 13.7	+3.8
	1.9nm,0.6s,baz=94,slow=6.0,SNR=6.0						
FINES				LR	LR	22 24 14.3	
	comp=Z,60nm,18.8s,MS4.0,baz=216,slow=40						
KAF	Kangasniemi	80.75	333	ep	P	21 42 05.2	-0.4
	1.1nm,0.4s,mb4.1						
KAF	Kangasniemi	80.75	333	ep	P	21 42 05.2	-0.4
	1.1nm,0.4s,mb4.1						
ARCES	ARCESS Array B	83.31	340	P	P	21 42 19.3	+0.4
	0.5nm,0.4s,mb3.9,baz=104,slow=4.9,SNR=17						
ARCES				pP	pP	21 42 28.1	+4.3
	0.9nm,0.5s,baz=99,slow=4.9,SNR=3.3						
NOA	NORSAR Array B	87.63	331	P	P	21 42 38.9	-1.7
	0.5nm,0.8s,mb3.8,baz=212,slow=23,SNR=3.8						
NOA				pP	pP	21 42 48.6	+3.2
	0.9nm,0.8s,baz=95,slow=4.9,SNR=5.0						
TXAR	Lajitas Array	144.85	32	PKP	PKPdf	21 49 29.6	-0.6
	1.1nm,0.7s,baz=281,slow=2.2,SNR=13						
JCT	Junction City	145.76	26	eP	PKPdf	21 49 32.0	+0.2

*ISCJB **28** 21:30:47.2±0.4, 38.10N±0.03×74.13E±0.07, h153km±7km, mb3.3/4, Error ellipse: s-maj=9.5km s-min=4.6km az=177.4*
*NEIC **28** 21:30:49.8±0.7, 38.19N×74.08E, h161km±7km, Error ellipse: s-maj=12.8km s-min=8.2km az=113.0*
*NNC **28** 21:30:49.4±6.3, 38.54N×73.79E, h0km, mb4.0, mpv3.8, Error ellipse: s-maj=52.3km s-min=36.1km az=171.0*
*IDC **28** 21:30:50.0±5.5, 38.23N×74.17E, h162km±46km, mb3.2/4, mb1 3.3/10, mb1mx3.1/29, mbtmp3.2/10, Error ellipse: s-maj=59.1km s-min=22.8km az=41.0*

ISC 28 21:30:48.1±0.4, 38.08N±0.03×74.17E±0.07, h147km±7km, n37, σ1.34/45, mb3.3/4, 3C-3D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	2.01	44	Pg	Pn	21 31 21.0	-2.1
KSH				Sg	Sn	21 31 43.5	-6.5
KSH				smax			
	comp=N,440nm,0.7s						
KSH				smax			
	comp=E,390nm,0.6s						
AML	Almayashu	4.07	355	ePn	Pn	21 31 50.1	+1.1
AML				eS	Sn	21 32 33.8	-2.6
KZA	Kyzart	4.08	11	P	Pn	21 31 50.5	+1.3
	SNR=14						
UCH	Uchtor	4.15	4	P	Pn	21 31 51.4	+1.2
	SNR=23						
UCH	Uchtor	4.15	4	ePn	Pn	21 31 51.4	+1.2
UCH				e		21 32 15.3	
UCH				eS	Sn	21 32 38.3	-0.2
ULHL	Ulahol	4.46	20	P	Pn	21 31 55.5	+1.4
	SNR=9.6						
AAK	Ala-Archa	4.56	3	P	Pn	21 31 56.7	+1.3
	SNR=5.2						
AAK	Ala-Archa	4.56	3	P	Pn	21 31 56.6	+1.1
	comp=E,0.0nm,0.3s,baz=175,slow=8.1,SNR=13						
EKS2	Erkin-Say	4.59	356	P	Pn	21 31 57.4	+1.5
	SNR=16						
EKS2	Erkin-Say	4.59	356	ePn	Pn	21 31 56.9	+1.1
EKS2				eS	Sn	21 32 47.4	-1.3
KBK	Karagaybulak	4.61	7	P	Pn	21 31 57.8	+1.6
	SNR=21						
CHMS	Chumysh	4.94	5	P	Pn	21 32 01.5	+1.1
	SNR=5.7						
TKM2	Tokmak 2	4.96	12	⇓Pn	Pn	21 32 01.5	+0.7
	comp=E,19nm,0.6s						
TKM2				⇑Sn	Sn	21 32 55.4	-2.1
	comp=E,19nm,0.7s						
TKM2	Tokmak 2	4.96	12	P	Pn	21 32 02.1	+1.3
	SNR=37						
TKM2	Tokmak 2	4.96	12	ePn	Pn	21 32 02.0	+1.2
TKM2				eS	Sn	21 32 56.2	-1.3
USP	Ospenovka	5.19	3	P	Pn	21 32 04.8	+0.9
	SNR=5.5						
KBL	Kabul	5.44	231	ePn	Pn	21 32 09.4	+2.2
	comp=E,25nm,0.3s						
KBL				eS	Sn	21 33 08.7	-0.3
KK31	Karatay Array	5.74	332	⇑Pn	Pn	21 32 10.1	-1.1
	comp=E,5.0nm,0.6s,baz=153,slow=13,SNR=50						
KK31				⇓Sn	Sn	21 33 09.7	-6.4
	comp=E,12nm,0.3s,baz=160,slow=27,SNR=7.3						
THN	Thein Dam	5.77	167	ePKP	Pn	21 32 14.0	+2.3
THN				eS	Sn	21 33 16.6	-0.4
SDNR	Sundarnagar	6.95	160	eS	Sn	21 33 43.5	-1.9
KLP	Kalpa	7.34	152	eS	Sn	21 33 52.0	-2.6
KLP				AML	AML	21 34 02.3	
	comp=N,71nm,0.7s						
KLP				AML	AML	21 34 02.4	
	comp=E,100nm,0.6s						
DDI	Dehra Dun	8.38	156	ex	Sn	21 34 21.0	+1.4
JOSI	Joshimath	8.72	148	eS	Sn	21 34 24.6	-3.4
JOSI				AML	AML	21 34 28.2	
	comp=E,88nm,0.4s						
JOSI				AML	AML	21 34 29.1	
	comp=N,80nm,0.6s						
KHET	Khetri	10.07	172	eS	Sn	21 34 53.1	-7.3
MK31	Makanchi Array	10.57	32	⇑P	Pn	21 33 16.1	+0.6
	comp=N,1.7nm,0.6s,baz=183,slow=9.7,SNR=9.6						
MKAR	Makanchi Array	10.57	32	P	Pn	21 33 15.6	+0.2
	comp=N,0.2nm,0.3s,baz=181,slow=9.5,SNR=9.0						
KURK	Kurchatov	13.03	13	P	Pn	21 33 43.9	-3.6
	comp=N,0.1nm,0.3s,baz=201,slow=11,SNR=6.3						
AB31	Akbulak array	15.16	322	⇓P	Pn	21 34 13.4	-1.0
	comp=N,0.3nm,0.3s,baz=131,slow=13,SNR=18						
BVAR	Borovoye Array	15.18	351	P	Pn	21 34 13.1	-1.5
	comp=N,0.2nm,0.3s,baz=167,slow=14,SNR=19						
AKTK	Aktyubinsk	16.88	322	P	Pn	21 34 34.4	-1.0
AKTO	Aktyubinsk	16.88	322	P	Pn	21 34 34.4	-1.0
	comp=N,0.2nm,0.3s,baz=132,slow=13,SNR=5.1						
ZALV	Zalesovo Beam	17.48	21	P	Pn	21 34 42.1	-0.4
	comp=N,1.3nm,0.3s,baz=214,slow=11,SNR=27						
SHL	Shillong	19.51	125	ex	x	21 35 25.0	
FINES	FINESS Array B	37.64	324	P	P	21 37 48.1	-0.2
	comp=N,0.7nm,0.9s,mb3.3,baz=140,slow=33,SNR=2.0						
ARCES	ARCESS Array B	40.69	336	P	P	21 38 12.7	-0.8
	comp=N,1.0nm,0.8s,mb3.5,baz=99,slow=7.9,SNR=6.0						
WRA	Warramunga Arr	80.73	124	P	P	21 42 45.5	+0.6
	comp=N,0.8nm,0.7s,mb3.4,baz=325,slow=4.9,SNR=7.6						
ASAR	Alice Springs	83.13	127	P	P	21 42 58.8	+1.3
	comp=N,0.3nm,0.9s,mb3.0,baz=320,slow=4.4,SNR=1.7						

*IDC **28** 21:39:42.4±1.4, 0.10N×96.64E, h0km, mb3.8/7, mb1 3.8/9, mb1mx3.6/23, mbtmp3.7/9, ML3.5/2, Error ellipse: s-maj=46.4km s-min=20.1km az=58.0*
*DJA **28** 21:39:43, 0.15N×96.41E, h30km, MLv3.8/3*
*ISCJB **28** 21:39:45.8±0.8, 0.24N±0.07×96.73E±0.09, h33km, mb3.8/7, Error ellipse: s-maj=15.0km s-min=7.8km az=145.0*
*NEIC **28** 21:39:47.9±0.7, 0.18N×96.76E, h35km, Error ellipse: s-maj=19.4km s-min=12.1km az=63.0*

ISC 28 21:39:48.0±0.8, 0.24N±0.08×96.78E±0.09, h35km, n20, σ0.89/19, mb3.8/7, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	Saibi	2.78	124	P	Pn	21 40 29.8	-0.3
MNSI	Mandailing Nat	2.85	79	P	Pn	21 40 30.9	-0.1
TPTI		3.03	8	P	Pn	21 40 31.3	-2.1
PSI	Prapat	3.33	40	Pn	Pn	21 40 36.8	-0.7
	1.5nm,0.3s,baz=201,slow=14,SNR=7.8						
PPI	Padang Panjang	3.68	101	P	Pn	21 40 43.3	+0.9
TSI	Tuntungan	3.70	29	P	Pn	21 40 43.0	+0.3
PDSI	Padang	3.85	107	P	Pn	21 40 45.3	+0.5
PPSI	Pulau Pagai	4.39	133	P	Pn	21 40 50.5	-1.7
SDSI	Sungai Dareh	4.79	104	P	Pn	21 40 58.9	+1.2
	12nm,0.7s						
KULM	Kulim	6.33	38	P	Pn	21 41 18.3	-0.6
CMAR	Chiang Mai Arr	18.23	7	P	Pn	21 43 59.7	+1.4
	0.1nm,0.3s,baz=194,slow=11,SNR=9.2						
WRA	Warramunga Arr	41.90	121	P	P	21 47 34.6	-0.7
	0.7nm,0.7s,mb3.4,baz=302,slow=9.2,SNR=6.8						
ASAR	Alice Springs	43.16	126	P	P	21 47 46.0	+0.4
	0.6nm,0.7s,mb3.4,baz=302,slow=8.2,SNR=8.3						
MKAR	Makanchi Array	48.07	347	P	P	21 48 24.5	+0.5
	0.7nm,0.6s,mb3.9,baz=128,slow=9.7,SNR=12						
SONM	Songino Array	48.14	9	P	P	21 48 25.5	+1.0
	0.6nm,0.7s,mb3.7,baz=193,slow=5.9,SNR=5.3						
ZAA0	Zalesovo Array	54.44	351	eP	P	21 49 10.9	-0.7
ZALV	Zalesovo Beam	54.44	351	P	P	21 49 11.7	+0.1
	2.6nm,0.5s,mb4.4,baz=175,slow=6.3,SNR=16						
FINES	FINESS Array B	80.65	333	P	P	21 51 56.6	-0.4
	0.6nm,0.8s,mb3.6,baz=97,slow=7.9,SNR=3.5						
ARCES	ARCESS Array B	83.29	340	P	P	21 52 11.4	+0.7
	0.8nm,0.7s,mb3.9,baz=86,slow=5.0,SNR=5.1						
TXAR	Lajitas Array	144.70	32	PKP	PKPdf	21 59 22.2	+0.5
	0.1nm,0.5s,baz=236,slow=1.2,SNR=4.7						

*IDC **28** 21:59:51.1±2.9, 5.58S×152.45E, h0km, mb4.0/10, mb1 4.2/10, mb1mx4.0/18, mbtmp4.0/10, MS3.4/2, Ms1 3.4/2, ms1mx3.0/20, Error ellipse: s-maj=88.8km s-min=20.4km az=115.0*
*ISCJB **28** 21:59:55.2±2.1, 5.65S±0.2×152.3E±0.4, h33km, mb4.0/11, MS3.4/2, Error ellipse: s-maj=62.8km s-min=14.5km az=26.3*
*NEIC **28** 21:59:56.8±1.5, 5.61S×152.31E, h35km, mb4.2/1, Error ellipse: s-maj=46.2km s-min=10.9km az=117.0*

ISC 28 21:59:56.8±2.1, 5.6S±0.2×152.3E±0.4, h35km, n15, σ0.58/13, mb4.0/11, MS3.4/2, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	20.86	249	eP	P	22 04 35.3	-0.6
	43nm,0.4s						
WRAB	Tennant Creek	22.55	229	eP	P	22 04 53.7	-0.3
	7.1nm,0.8s,mb4.2						
WRA	Warramunga Arr	22.57	229	P	P	22 04 53.9	-0.3
	2.2nm,0.6s,mb3.8,baz=53,slow=9.8,SNR=30						
ASAR	Alice Springs	25.24	223	P	P	22 05 20.8	+1.1
	7.1nm,1.0s,mb4.2,baz=59,slow=9.4,SNR=68						
STKA	Stephens Creek	27.99	200	LR	LR	22 16 44.0	
	comp=Z,89nm,18.6s,MS3.4,baz=25,slow=36						
FITZ	Fitzroy Crossi	28.87	242	P	P	22 05 52.2	-0.2
	5.5nm,0.5s,mb4.6,baz=56,slow=8.0,SNR=28						
MJAR	Matsushiro Arr	43.98	344	LR	LR	22 22 49.0	
	comp=Z,45nm,20.3s,MS3.4,baz=245,slow=31						
CMAR	Chiang Mai Arr	57.81	296	P	P	22 09 46.5	+1.3
	0.5nm,0.8s,mb3.6,baz=122,slow=5.6,SNR=4.1						
PETK	Petropavlovsk-	58.68	4	P	P	22 09 50.4	-0.1
	1.0nm,0.5s,mb4.1,baz=144,slow=6.3,SNR=4.9						
PETK	Petropavlovsk-	58.68	4	P	P	22 09 50.4	-0.1
SONM	Songino Array	66.77	328	P	P	22 10 44.7	+0.1
	0.8nm,0.5s,mb4.0,baz=141,slow=5.4,SNR=7.1						
MKAR	Makanchi Array	80.64	319	P	P	22 12 06.0	0.0
	0.5nm,0.6s,mb3.7,baz=86,slow=13,SNR=6.1						
ZALV	Zalesovo Beam	81.58	326	P	P	22 12 10.4	-0.4
	1.1nm,0.5s,mb4.1,baz=122,slow=6.0,SNR=6.3						
KURK	Kurchatov	84.13	322	P	P	22 12 24.2	+0.1
	0.3nm,0.4s,mb3.8,baz=98,slow=5.5,SNR=5.8						
BVAR	Borovoye Array	89.62	323	P	P	22 12 50.2	-0.7
	0.5nm,0.5s,mb4.1,baz=118,slow=7.0,SNR=5.5						

*CSEM **28** 22:27:51.7±0.4, 36.49N×21.70E, h2km, ML2.7/4, Error ellipse: s-maj=8.6km s-min=4.6km az=61.0*
*ATH **28** 22:27:52.1, 36.48N×21.74E, h4km, MD2.9/3*

THE 28 22:27:52.9, 36.55N×21.74E, h0km±3km, ML2.7/4, Error ellipse: s-maj=4.3km s-min=1.9km az=262.0, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.34	360	P	Pg	22 27 58.4	-1.1
PYL				S	Sg	22 28 05.4	+1.4
PYL	PYLOS	0.34	360	ePG	Pg	22 28 00.1	+0.6
PYL				eSG	Sg	22 28 05.8	+1.8
PYL	PYLOS	0.34	360	eSg	Sg	22 28 05.8	+1.8
PYL	PYLOS	0.34	360	P	Pg	22 27 58.4	-1.1
PYL	PYLOS	0.34	360	ePg	Pg	22 28 00.1	+0.6
PYL				S	Sg	22 28 05.4	+1.4
ITM	Ithomi	0.65	13	P	Pg	22 28 04.7	-0.6
ITM				S	Sg	22 28 14.5	+0.8
ITM	Ithomi	0.65	13	ePG	Pg	22 28 05.7	+0.4
ITM				eSG	Sg	22 28 15.6	+1.9
ITM	Ithomi	0.65	13	P	Pg	22 28 04.7	-0.6
ITM	Ithomi	0.65	13	ePg	Pg	22 28 05.7	+0.4
ITM				S	Sg	22 28 14.5	+0.8
ITM				eSg	Sg	22 28 15.6	+1.9
VLX	Vlachokerasia	0.96	32	P	Pg	22 28 10.9	-0.5
VLX				S	Sg	22 28 25.1	+1.2
VLX	Vlachokerasia	0.96	32	ePG	Pg	22 28 11.1	-0.3
VLX				eSG	Sg	22 28 25.8	+1.9
VLX	Vlachokerasia	0.96	32	P	Pg	22 28 10.9	-0.5
VLX	Vlachokerasia	0.96	32	ePg	Pg	22 28 11.1	-0.3
VLX				S	Sg	22 28 25.1	+1.2
VLX				eSg	Sg	22 28 25.8	+1.9
VLI	Veliai	0.97	80	ePG	Pg	22 28 11.3	-0.3
VLI				eSG	Sg	22 28 24.8	+0.6
VLI	Veliai	0.97	80	ePg	Pg	22 28 11.3	-0.3
VLI				eSg	Sg	22 28 24.8	+0.6
KYTH	Kithira	1.08	104	ePG	Pg	22 28 12.1	-1.4
KYTH	Kithira	1.08	104	ePg	Pg	22 28 12.1	-1.4
LAKA	Lakka	1.70	6	P	Pn	22 28 23.3	-0.5
LAKA				S	Sn	22 28 46.5	+0.3
LAKA	Lakka	1.70	6	P	Pn	22 28 23.3	-0.5
LAKA				S	Sn	22 28 46.5	+0.3
TRIZ	Trizonia	1.83	8	P	Pn	22 28 25.3	-0.3
TRIZ				S	Sn	22 28 49.6	+0.1
TRIZ	Trizonia	1.83	8	P	Pn	22 28 25.3	-0.3
TRIZ				S	Sn	22 28 49.6	+0.1
KALE	Kalithea	1.86	10	P	Pn	22 28 26.0	-0.1
KALE				S	Sn	22 28 51.5	+1.2
KALE	Kalithea	1.86	10	P	Pn	22 28 26.0	-0.1
KALE				S	Sn	22 28 51.5	+1.2
DSF	Desfina	1.96	18	P	Pn	22 28 27.7	+0.3
DSF	Desfina	1.96	18	P	Pn	22 28 27.7	+0.3
KARN	Karanos	2.10	122	P	Pn	22 28 29.1	-0.2
KARN	Karanos	2.10	122	P	Pn	22 28 29.1	-0.2
AGG	Agios Georgios	2.51	11	P	Pn	22 28 34.1	-0.9
AGG	Agios Georgios	2.51	11	P	Pn	22 28 34.1	-0.9
THL	Klokotos Trika	3.02	4	P	Pn	22 28 40.0	-1.9
THL				S	Sn	22 29 20.4	+1.6
THL	Klokotos Trika	3.02	4	P	Pn	22 28 40.0	-1.9
THL				S	Sn	22 29 20.4	+1.6

*IDC **28** 22:38:55.7±2.8, 17.83S×176.62W, h0km, mb4.1/4, mb1 4.3/4, mb1mx3.9/17, mbtmp4.1/4, Error ellipse: s-maj=157.0km s-min=32.2km az=146.0*
*NEIC **28** 22:39:02.0±0.8, 17.54S×176.89W, h35km, mb4.2/2, Error ellipse: s-maj=31.8km s-min=20.6km az=153.0*

ISC 28 22:39:03.8±5.9, 17.7S±0.9×177.1W±0.6, h35km, n12, σ0.69/6, mb4.2/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.83	241	P	P	22 46 33.5	-0.4
	1.9nm,0.5s,mb4.1,baz=94,slow=12,SNR=7.6						
WRAB	Tennant Creek	45.91	259	eP	P	22 47 23.2	-0.2
	2.4nm,1.0s,mb4.1						
WR

0.1nm,0.3s,baz=254,slow=11,SNR=3.0
FINES FINESS Array B 30.86 325 P **P 22 52 51.2 +0.8**
0.7nm,0.8s,baz=112,slow=14,SNR=4.5

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*NEIC **28** 22:53:05.3, 18°.55N×71°.17W, h78km, MD4.0(RSPR), After RSPR.*
RSPR 28 22:53:05.3, 18°.55N×71°.17W, h78km±20km, MD4.0/5, MD4.0/5, 4C, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDDR	**Presa de Saban**	**0.44**	**346**	↑eP	Pn	22 53 17.9	-0.5
SDDR	**Presa de Saban**	**0.44**	**346**	eS	Sn	22 53 28.2	+0.2
SDDR	**Presa de Saban**	**0.44**	**346**	ePg	Pn	22 53 17.7	-0.7
SDDR				eSg	Sn	22 53 26.7	-1.3
PCDR	**Punta Cana, DR**	**2.65**	**90**	↑eP	Pn	22 53 48.4	+2.5
PCDR	**Punta Cana, DR**	**2.65**	**90**	eS	Sn	22 54 23.6	+6.5
AGPR	**Aguadilla, PR**	**3.86**	**91**	ePn	Pn	22 54 10.2	+7.9
GTBY	**Guantanamo Bay**	**3.96**	**291**	ePn	Pn	22 54 06.3	+2.6
SJG	**San Juan**	**4.79**	**94**	ePn	Pn	22 54 23.9	+8.9
HUMP	**Col San Antoni**	**5.07**	**94**	↑eP	Pn	22 54 19.9	+1.0
HUMP				eS	Sn	22 55 18.0	+1.8
MTP	**Monte Pirata**	**5.36**	**94**	↑eP	Pn	22 54 23.6	+0.8
MTP	**Monte Pirata**	**5.36**	**94**	eS	Sn	22 55 23.9	+0.7
MTP	**Monte Pirata**	**5.36**	**94**	ePn	Pn	22 54 23.0	+0.2

PRE 28 22:58:27.0±1.7, 20°.92S×33°.22E, h5km, ML3.5, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSNA	**Messina**	**3.30**	**244**	eP	Pn	22 59 21.6	+2.3
MSNA				eS	Sn	23 00 00.2	+1.3
MSNA				AML	AML	23 00 17.6	
	comp=Z,47nm,0.4s						
POGA	**Pongola**	**6.59**	**193**	eP	Pn	23 00 04.2	-0.4
POGA				eS	Sn	23 01 16.9	-3.2
POGA				AML	AML	23 02 00.2	
	comp=Z,11nm,0.6s						
PRYS	**Parys**	**8.03**	**221**	eP	Pn	23 00 25.7	+1.4
PRYS				eS	Sn	23 01 51.9	-3.7
PRYS				AML	AML	23 02 43.8	
	comp=Z,5.4nm,0.7s						
LBTB	**Lobatse**	**8.12**	**238**	eP	Pn	23 00 26.2	+0.6
LBTB				eS	Sn	23 01 53.5	-4.4
LBTB				AML	AML	23 02 45.8	
	comp=Z,5.1nm,0.6s						

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*IDC **28** 23:18:25.5±1.8, 2°.15S×138°.95E, h0km, mb3.7/4, mb1 4.0/6, mb1mx3.8/16, mbtmp3.9/6, ML4.3/1, Error ellipse: s-maj=57.5km s-min=23.2km az=79.0*
*DJA **28** 23:18:27, 1°.88S×139°.00E, h30km, MLv4.2/3*
*ISCJB **28** 23:18:28.6±0.9, 2°.33S±0°.08×138°.77E±0°.09, h29km±10km, mb3.7/3, Error ellipse: s-maj=17.0km s-min=10.0km az=144.2*
*NEIC **28** 23:18:31.4±1.4, 2°.28S×138°.80E, h35km, mb4.0/1, Error ellipse: s-maj=28.9km s-min=18.8km az=84.0*
ISC 28 23:18:30.0±0.9, 2°.28S±0°.07×138°.78E±0°.10, h25km±11km, n14, σ0°.96/20, mb3.7/3, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.30**	**347**	P	**Pb**	**23 18 35.7**	**-1.3**
SMPI				S	**Sb**	**23 18 42.8**	**+1.1**
JAY	**Jayapura**	**1.94**	**97**	P	**Pn**	**23 18 56.1**	**-5.3**
BAKI	**Biak**	**2.88**	**292**	P	**Pn**	**23 19 13.5**	**-0.9**
BAKI				S	**Sn**	**23 19 48.5**	**+0.2**
KAKA	**Kakadu**	**12.12**	**211**	ePn	**Pn**	**23 21 20.9**	**-0.3**
	26nm,0.5s						
KAKA				eS	**Sn**	**23 23 34.9**	**-0.7**
KAKA	**Kakadu**	**12.12**	**211**	P	**Pn**	**23 21 21.3**	**+0.1**
	222nm27nm,0.7s						
WRAB	**Tennant Creek**	**18.07**	**194**	ePn	**Pn**	**23 22 40.0**	**+0.5**
	8.9nm,0.8s						
WRAB	**Tennant Creek**	**18.07**	**194**	P	**Pn**	**23 22 42.1**	**+2.6**
WRA	**Warramunga Arr**	**18.08**	**194**	P	**Pn**	**23 22 39.4**	**-0.3**
	0.8nm,0.3s,baz=18,slow=12,SNR=22						
WRA				S	**Sn**	**23 25 51.2**	**-10**
	0.1nm,0.3s,baz=12,slow=23,SNR=5.5						
CTA	**Charters Tower**	**19.15**	**158**	P	**Pn**	**23 22 51.9**	**-0.7**
	0.6nm,0.3s,baz=341,slow=12,SNR=7.2						
FITZ	**Fitzroy Crossi**	**20.33**	**218**	P	**P**	**23 23 06.5**	**+1.9**
	1.5nm,0.8s,baz=0.0,slow=9.1,SNR=3.1						
FITZ				S	**S**	**23 26 46.5**	**-4.9**
	2.1nm,0.8s,baz=156,slow=10.0,SNR=3.7						
FITZ	**Fitzroy Crossi**	**20.33**	**218**	eP	**P**	**23 23 06.9**	**+2.3**
FITZ				S	**S**	**23 26 46.5**	**-4.9**
ASAR	**Alice Springs**	**21.78**	**192**	P	**P**	**23 23 19.7**	**-0.4**
	2.2nm,0.7s,mb3.7,baz=21,slow=9.2,SNR=22						
STKA	**Stephens Creek**	**29.56**	**175**	P	**P**	**23 24 33.6**	**+0.7**
	1.0nm,0.4s,mb3.9,baz=342,slow=14,SNR=3.0						
MKAR	**Makanchi Array**	**69.49**	**322**	P	**P**	**23 29 36.0**	**-0.4**
	0.5nm,0.8s,mb3.5,baz=99,slow=9.5,SNR=2.7						

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*IDC **28** 23:19:05.3±0.7, 10°.98N×91°.78E, h0km, mb4.0/15, mb1 4.2/16, mb1mx4.0/27, mbtmp4.0/16, MS3.3/1, Ms1 3.3/1, ms1mx2.3/29, Error ellipse: s-maj=27.1km s-min=14.9km az=57.0*
*NEIC **28** 23:19:07.5±3.7, 10°.94N×91°.75E, h14km±23km, mb4.3/3, Error ellipse: s-maj=9.0km s-min=8.4km az=220.0*
ISC 28 23:19:06.0±4.5, 10°.96N±0°.08×91°.74E±0°.08, h3km±28km, n30, σ0°.68/30, mb4.0/18, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.20**	**42**	Pn	**Pn**	**23 21 34.1**	**+0.7**
	baz=240,slow=12,SNR=3.3						
CHTO	**Chiang Mai**	**10.46**	**41**	ePn	**Pn**	**23 21 37.6**	**+0.7**
	0.5nm,0.4s						
PSI	**Prapat**	**10.79**	**138**	LR	LR	23 26 38.7	
	comp=Z,144nm,20.0s,baz=208,slow=42						
PALK	**Pallekele**	**11.49**	**252**	ePn	**Pn**	**23 21 51.0**	**-0.2**
PALK				eS	**Sn**	**23 23 52.9**	**-7.3**
ODAN	**Odare**	**16.34**	**346**	eP	**Pn**	**23 22 56.0**	**-0.5**
	16nm,0.7s						
TAPN	**Taplejung**	**16.74**	**347**	eP	**Pn**	**23 22 55.1**	**-6.5**
	21nm,0.8s						
PKI	**Pulchoki**	**17.57**	**341**	eP	**Pn**	**23 23 11.4**	**-0.5**
PKIN	**Phulchoki**	**17.57**	**341**	eP	**Pn**	**23 23 11.6**	**-0.4**
	7.8nm,0.4s						
DMN	**Daman**	**17.70**	**340**	eP	**Pn**	**23 23 13.4**	**-0.2**
	18nm,0.8s						
EKS2	**Erkin-Say**	**35.26**	**337**	P	**P**	**23 26 03.4**	**+1.6**
	2.8nm,0.9s,mb4.2						
MKAR	**Makanchi Array**	**36.60**	**349**	P	**P**	**23 26 13.5**	**+0.2**
	2.1nm,0.8s,mb4.0,baz=124,slow=10.0,SNR=14						
SONM	**Songino Array**	**38.77**	**16**	P	**P**	**23 26 31.7**	**0.0**
	1.1nm,0.8s,mb3.6,baz=215,slow=7.2,SNR=8.5						
KURK	**Kurchatov**	**41.08**	**347**	P	**P**	**23 26 50.5**	**-0.3**
	1.7nm,0.9s,mb3.7,baz=171,slow=7.4,SNR=8.4						
ZALV	**Zalesovo Beam**	**43.23**	**354**	P	**P**	**23 27 07.7**	**-0.6**
	0.8nm,0.4s,mb3.8,baz=180,slow=9.4,SNR=4.2						
ZALV	**Zalesovo Beam**	**43.23**	**354**	P	**P**	**23 27 07.7**	**-0.6**
FITZ	**Fitzroy Crossi**	**44.20**	**130**	P	**P**	**23 27 16.2**	**-0.4**
	3.5nm,0.7s,mb4.2,baz=276,slow=9.9,SNR=3.9						
BVAR	**Borovoye Array**	**45.33**	**342**	P	**P**	**23 27 23.9**	**-1.3**
	0.6nm,0.6s,mb3.6,baz=152,slow=14,SNR=4.9						
AKTK	**Aktyubinsk**	**48.12**	**332**	P	**P**	**23 27 47.2**	**+0.1**
AKTO	**Aktyubinsk**	**48.12**	**332**	P	**P**	**23 27 47.2**	**+0.1**
	1.5nm,0.5s,mb4.2,baz=122,slow=11,SNR=5.5						
WRA	**Warramunga Arr**	**51.98**	**126**	P	**P**	**23 28 16.3**	**-0.5**
	0.6nm,0.4s,mb3.9,baz=301,slow=10,SNR=8.8						
WRAB	**Tennant Creek**	**51.98**	**126**	eP	**P**	**23 28 16.6**	**-0.2**
	7.3nm,1.0s,mb4.6						
KIV	**Kislovodsk**	**53.46**	**317**	eP	**P**	**23 28 28.6**	**+1.2**
	2.6nm,0.7s,mb4.3						
ASAR	**Alice Springs**	**53.70**	**130**	P	**P**	**23 28 29.1**	**-0.4**
	0.6nm,0.5s,mb3.8,baz=303,slow=7.1,SNR=5.1						
ASAR				PcP	PcP	23 29 34.8	-1.0
	0.7nm,0.7s,baz=299,slow=3.8,SNR=3.0						
BRTR	**Keskin Array B**	**58.64**	**310**	P	**P**	**23 29 04.0**	**-0.6**
	1.5nm,0.8s,mb4.1,baz=113,slow=7.6,SNR=15						
MLR	**Muntele Rosu**	**65.33**	**315**	P	**P**	**23 29 49.8**	**+0.4**
	2.9nm,0.9s,mb4.3,baz=107,slow=14,SNR=6.1						
FINES	**FINESS Array B**	**68.89**	**332**	P	**P**	**23 30 11.7**	**-0.2**
	2.3nm,0.8s,mb4.2,baz=101,slow=7.2,SNR=8.5						
ARCES	**ARCESS Array B**	**71.58**	**340**	P	**P**	**23 30 28.6**	**+0.4**
	1.0nm,0.6s,mb3.9,baz=90,slow=5.6,SNR=13						
BOSA	**Boshof**	**75.25**	**236**	P	**P**	**23 30 52.3**	**+1.8**
	5.0nm,0.9s,mb4.4,baz=58,slow=9.5,SNR=5.0						
NB2	**NORSAR Subarra**	**75.90**	**330**	P	**P**	**23 30 52.8**	**-0.9**
	comp=Z,0.5nm,0.7s,mb3.5,baz=96,slow=5.6						
NOA	**NORSAR Array B**	**75.90**	**330**	P	**P**	**23 30 53.1**	**-0.6**
	comp=Z,0.8nm,0.8s,mb3.7,baz=94,slow=5.7,SNR=4.4						

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*IDC **28** 23:29:00.5±0.5, 26°.14N×44°.90W, h0km, mb4.4/26, mb1 4.6/26, mb1mx4.5/33, mbtmp4.4/26, MS4.1/20, Ms1 4.1/20, ms1mx4.0/24, Error ellipse: s-maj=15.6km s-min=12.1km az=148.0*
*ISCJB **28** 23:29:00.2±0.3, 26°.11N±0°.06×44°.89W±0°.02, h10km, mb4.6/132, MS4.2/34, Error ellipse: s-maj=8.0km s-min=3.0km az=176.0*
*MOS **28** 23:29:00.7±0.9, 26°.15N×44°.84W, h10km, mb4.9/66, Error ellipse: s-maj=7.3km s-min=4.9km az=46.2*
*BJI **28** 23:29:01.0, 26°.10N×44°.80W, h10km, mB5.2/2, Ms4.9/3, Ms7 4.7/3*
*NEIC **28** 23:29:02.3±0.2, 26°.11N×44°.82W, h10km, mb4.7/94, Error ellipse: s-maj=5.7km s-min=2.8km az=177.0*
*GCMT **28** 23:29:06.0±0.2, 26°.22N×44°.88W, h12km, MW5.0, Moment Tensor Solution. s31,c36; s79,c125; Moment tensor: Scale 10^{16}Nm; M_{rr}=3.75±.09; $M_{\theta\theta}$0.28±.09; $M_{\phi\phi}$3.46±.08; $M_{r\theta}$0.25±.33; $M_{\theta\phi}$0.71±.08; $M_{\phi r}$2.05±.28; Best double couple: M_0=4.20000×10^{16} NP1:ϕ_s14.00000°, δ30.00000°, λ-86.00000°. NP2:ϕ_s190.00000°, δ60.00000°, λ-92.00000°. Principal axes: T 4.1500, Plg15.0000°, Azm281.0000°; N 0.1400, Plg2.0000°, Azm191.0000°; P -4.2900, Plg75.0000°, Azm93.0000°; Data Used: II IU IC G CN.*
ISC 28 23:29:02.3±0.3, 26°.12N±0°.06×44°.86W±0°.02, h10km, (h16km±2.6km: pP-P), n431, σ0°.73/407, mb4.6/132, MS4.2/34, 79C-72D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMLA	**Cha da Macela**	**20.06**	**50**	eLQ		23 37 33.7	
CMLA				eLR	LR	23 38 11.4	
MTP	**Monte Pirata**	**20.75**	**252**	eP	**P**	**23 33 42.1**	**-1.1**
	86nm,1.3s						
MPR	**Mayaguez**	**22.06**	**254**	eP	**P**	**23 34 03.3**	**+5.9**
PCRV	**Puerto La Cruz**	**24.53**	**233**	LR	LR	23 42 54.5	
	comp=Z,186nm,19.1s,MS3.6,baz=62,slow=34						
BLA	**Blacksburg**	**32.05**	**299**	eP	**P**	**23 35 30.5**	**+1.3**
BLA				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.9						
BLA	**Blacksburg**	**32.05**	**299**	eP	**P**	**23 35 30.5**	**+1.2**
	comp=Z,18nm,1.0s,mb4.9						
MCWV	**Mont Chateau**	**32.12**	**304**	eP	**P**	**23 35 30.9**	**+1.1**
	comp=Z,18nm,0.9s,mb4.9						
SCHQ	**Schefferville**	**32.92**	**337**	LR	LR	23 47 14.8	
	comp=Z,268nm,21.3s,MS3.9,baz=334,slow=33						
RCBR	**Riachuelo**	**32.92**	**163**	eP	**P**	**23 35 36.1**	**-0.9**
	comp=Z,23nm,1.1s,mb5.0						
EVO	**Evora**	**33.29**	**59**	eP	**P**	**23 35 40.8**	**+0.7**
	comp=Z,39nm,1.5s,mb4.8						
EVO				eMLR	MLR		
	comp=Z,777nm,21.2s,MS4.1						
TKL	**Tuckaleechee C**	**34.54**	**296**	P	**P**	**23 35 50.8**	**-0.1**
	comp=Z,11nm,1.2s,mb4.7,baz=98,slow=9.8,SNR=4.8						
TKL	**Tuckaleechee C**	**34.54**	**296**	P	**P**	**23 35 51.7**	**+0.7**
ROSC	**El Rosal**	**35.24**	**238**	LR	LR	23 49 35.9	
	comp=Z,286nm,18.1s,MS4.1,baz=203,slow=35						
ESDC	**Sonseca Array**	**36.59**	**58**	P	**P**	**23 36 08.1**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=254,slow=9.2,SNR=3.4						
ESDC				LR	LR	23 47 51.5	
	comp=Z,263nm,18.6s,MS4.0,baz=240,slow=31						
ESDC	**Sonseca Array**	**36.59**	**58**	P	**P**	**23 36 08.1**	**-0.5**
ESDC				LR	LR	23 47 51.5	
WCI	**Wyandotte Cave**	**36.81**	**300**	eP	**P**	**23 36 11.4**	**+1.0**
WCI				pmax	pmax		
	comp=Z,41nm,2.0s,mb4.9						
WCI	**Wyandotte Cave**	**36.81**	**300**	eP	**P**	**23 36 11.4**	**+1.0**
	comp=Z,41nm,2.0s,mb4.9						
WVT	**Waverly**	**37.85**	**296**	eP	**P**	**23 36 20.3**	**+1.0**
WVT				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.2						
WVT	**Waverly**	**37.85**	**296**	eP	**P**	**23 36 20.3**	**+1.0**
	comp=Z,5.1nm,0.9s,mb4.2						
ROSF	**Rostrenen**	**39.21**	**44**	eP	**P**	**23 36 28.0**	**-2.5**
	comp=Z,67nm,1.5s,mb4.8						
ROSF	**Rostrenen**	**39.21**	**44**	eP	**P**	**23 36 28.0**	**-2.5**
ROSF				pmax	pmax		
	comp=Z,33nm,1.5s,mb4.8						
ROSF	**Rostrenen**	**39.21**	**44**	eP	**P**	**23 36 28.0**	**-2.5**
	comp=Z,33nm,1.5s,mb4.8						
SJPF	**Ste Jean**	**39.23**	**53**	eP	**P**	**23 36 30.6**	**-0.1**
	comp=Z,79nm,1.6s,mb4.9						
SJPF	**Ste Jean**	**39.23**	**53**	eP	**P**	**23 36 30.6**	**-0.1**
SJPF				pmax	pmax		
	comp=Z,39nm,1.6s,mb4.9						
SJPF	**Ste Jean**	**39.23**	**53**	eP	**P**	**23 36 30.6**	**-0.1**
	comp=Z,39nm,1.6s,mb4.9						
SGMF	**Saint Gilles**	**39.64**	**45**	eP	**P**	**23 36 34.0**	**-0.1**
	comp=Z,97nm,1.6s,mb5.0						
SGMF	**Saint Gilles**	**39.64**	**45**	eP	**P**	**23 36 34.0**	**-0.1**
SGMF				pmax	pmax		
	comp=Z,48nm,1.6s,mb5.0						
SGMF	**Saint Gilles**	**39.64**	**45**	eP	**P**	**23 36 34.0**	**-0.1**
	comp=Z,48nm,1.6s,mb5.0						
ETSF	**Etsaut**	**39.67**	**54**	eP	**P**	**23 36 34.0**	**-0.4**
	comp=Z,32nm,1.5s,mb4.5						
ETSF	**Etsaut**	**39.67**	**54**	eP	**P**	**23 36 34.0**	**-0.4**
ETSF				pmax	pmax		
	comp=Z,16nm,1.5s,mb4.5						
ETSF	**Etsaut**	**39.67**	**54**	eP	**P**	**23 36 34.0**	**-0.4**
	comp=Z,16nm,1.5s,mb4.5						
EPF	**Esparros**	**40.34**	**53**	eP	**P**	**23 36 40.4**	**+0.4**
	comp=Z,50nm,1.7s,mb4.7						
EPF	**Esparros**	**40.34**	**53**	eP	**P**	**23 36 40.4**	**+0.4**
EPF				pmax	pmax		
	comp=Z,25nm,1.7s,mb4.7						
EPF	**Esparros**	**40.34**	**53**	eP	**P**	**23 36 40.4**	**+0.4**
	comp=Z,25nm,1.7s,mb4.7						
JFWS	**Jewell Farm**	**40.46**	**306**	eP	**P**	**23 36 41.5**	**+0.5**
JFWS				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.7						
JFWS	**Jewell Farm**	**40.46**	**306**	eP	**P**	**23 36 41.5**	**+0.5**
	comp=Z,11nm,0.7s,mb4.7						
CCM	**Cathedral Cave**	**40.68**	**299**	eP	**P**	**23 36 43.2**	**+0.3**
CCM				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4						
CCM	**Cathedral Cave**	**40.68**	**299**	eP	**P**	**23 36 43.2**	**+0.3**
	comp=Z,10nm,1.0s,mb4.4						
FRB	**Frobisher Bay**	**40.69**	**344**	P	**P**	**23 36 42.0**	**-0.5**
	comp=Z,7.8nm,0.8s,mb4.4,baz=140,slow=8.1,SNR=7.4						
MFF	**Saint Martin d**	**40.74**	**48**	eP	**P**	**23 36 41.3**	**-2.0**
	comp=Z,82nm,2.0s,mb4.7						
MFF	**Saint Martin d**	**40.74**	**48**	eP	**P**	**23 36 41.3**	**-2.0**
MFF				pmax	pmax		
	comp=Z,41nm,2.0s,mb4.7						
MFF	**Saint Martin d**	**40.74**	**48**	eP	**P**	**23 36 41.3**	**-2.0**
	comp=Z,41nm,2.0s,mb4.7						
LFF	**La Frestale**	**40.98**	**51**	eP	**P**	**23 36 44.0**	**-1.2**
	comp=Z,39nm,1.4s,mb4.6						
LFF	**La Frestale**	**40.98**	**51**	eP	**P**	**23 36 44.0**	**-1.2**
LFF				pmax	pmax		
	comp=Z,20nm,1.4s,mb4.5						
LFF	**La Frestale**	**40.98**	**51**	eP	**P**	**23 36 44.0**	**-1.2**
	comp=Z,20nm,1.4s,mb4.5						
FLN	**La Foliniere**	**41.11**	**45**	eP	**P**	**23 36 45.9**	**-0.4**
	comp=Z,17nm,0.9s,mb4.4						
FLN				eMLR	MLR		
	comp=Z,389nm,20.5s,MS4.0						
FLN	**La Foliniere**	**41.11**	**45**	eP	**P**	**23 36 45.9**	**-0.4**
FLN				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.3						
FLN				MLR	MLR		
	comp=Z,390nm,20.5s,MS4.3						
FLN	**La Foliniere**	**41.11**	**45**	eP	**P**	**23 36 45.9**	**-0.4**
	comp=Z,8.3nm,0.9s,mb4.4						
FLN				LR	LR		
	comp=Z,390nm,20.5s,MS4.3						
LDF	**La Druitiere**	**41.29**	**45**	eP	**P**	**23 36 46.6**	**-1.1**
	comp=Z,64nm,1.7s,mb4.7						
LDF	**La Druitiere**	**41.29**	**45**	eP	**P**	**23 36 46.6**	**-1.1**
LDF				pmax	pmax		
	comp=Z,32nm,1.7s,mb4.7						
LDF	**La Druitiere**	**41.29**	**45**	eP	**P**	**23 36 46.6**	**-1.1**
	comp=Z,32nm,1.7s,mb4.7						
UALR	**University of**	**41.52**	**294**	eP	**P**	**23 36 50.5**	**+0.7**
	comp=Z,43nm,1.6s,mb4.8						
RJF	**Les Rejaudoux**	**41.59**	**50**	eP	**P**	**23 36 49.9**	**-0.4**
	comp=Z,31nm,1.4s,mb4.4						
RJF				eMLR	MLR		
	comp=Z,651nm,19.0s,MS4.2						
RJF	**Les Rejaudoux**	**41.59**	**50**	eP	**P**	**23 36 49.9**	**-0.4**
RJF				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.5						
RJF				MLR	MLR		
	comp=Z,650nm,19.0s,MS4.5						
RJF	**Les Rejaudoux**	**41.59**	**50**	eP	**P**	**23 36 49.9**	**-0.4**
	comp=Z,16nm,1.4s,mb4.5						
RJF				LR	LR		
	comp=Z,650nm,19.0s,MS4.5						
MTLF	**Montolieu**	**41.74**	**53**	eP	**P**	**23 36 51.3**	**-0.3**
	comp=Z,26nm,1.3s,mb4.4						
MTLF	**Montolieu**	**41.74**	**53**	eP	**P**	**23 36 51.3**	**-0.3**
MTLF				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.4						
MTLF	**Montolieu**	**41.74**	**53**	eP	**P**	**23 36 51.3**	**-0.3**
	comp=Z,13nm,1.3s,mb4.4						
CAF	**Calviac**	**41.90**	**51**	eP	**P**	**23 36 52.6**	**-0.2**
	comp=Z,20nm,1.3s,mb4.3						
CAF	**Calviac**	**41.90**	**51**	eP	**P**	**23 36 52.6**	**-0.2**
CAF				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.3						
CAF	**Calviac**	**41.90**	**51**	eP	**P**	**23 36 52.6**	**-0.2**
	comp=Z,10nm,1.3s,mb4.3						
TCF	**Toulx Ste Croi**	**42.26**	**49**	eP	**P**	**23 36 55.4**	**-0.3**
	comp=Z,72nm,1.9s,mb4.7						
TCF	**Toulx Ste Croi**	**42.26**	**49**	eP	**P**	**23 36 55.4**	**-0.3**
TCF				pmax	pmax		
	comp=Z,36nm,1.9s,mb4.7						
TCF	**Toulx Ste Croi**	**42.26**	**49**	eP	**P**	**23 36 55.4**	**-0.3**
	comp=Z,36nm,1.9s,mb4.7						
TIC	**Toumodi**	**42.60**	**110**	eP	**P**	**23 36 58.9**	**0.0**
	comp=Z,49nm,0.2s						
DBIC	**Dimbokro**	**42.73**	**110**	P	**P**	**23 36 59.5**	**-0.4**
	comp=Z,10nm,0.8s,mb4.6,baz=281,slow=9.3,SNR=9.5						
DBIC				LR	LR	23 51 31.2	
	comp=Z,637nm,20.7s,MS4.5,baz=271,slow=32						
DBIC	**Dimbokro**	**42.73**	**110**	eP	**P**	**23 36 59.6**	**-0.3**
DBIC				e		23 37 06.8	
DBIC				pmax	pmax		
	comp=Z,33nm,1.4s						
DBIC	**Dimbokro**	**42.73**	**110**	eP	**P**	**23 36 59.6**	**-0.3**
	comp=Z,33nm,1.4s,mb4.9						
DBIC				e		23 37 06.8	
LIC	**Lamto**	**42.81**	**110**	↑iP	**P**	**23 37 00.7**	**+0.1**
	comp=Z,72nm,1.2s,mb5.0,baz=306						
LIC				eMLR	MLR		
	comp=Z,929nm,20.8s,MS4.4						
LIC	**Lamto**	**42.81**	**110**	eP	**P**	**23 37 00.4**	**-0.2**
	comp=Z,76nm,1.2s,mb5.3						
LIC	**Lamto**	**42.81**	**110**	↑iP	**P**	**23 37 00.7**	**+0.1**
	comp=Z,36nm,1.2s,mb5.0						
LIC				LR	LR		
	comp=Z,460nm,20.8s,MS4.3						
KIC	**Kosan Boka**	**42.98**	**110**	eP	**P**	**23 37 01.8**	**-0.2**
	comp=Z,41nm,1.0s,mb5.1						
LASF	**Ste Croix**	**43.03**	**53**	eP	**P**	**23 37 02.3**	**+0.3**
	comp=Z,29nm,1.3s,mb4.5						
AVF	**Avril sur Loir**	**43.13**	**49**	eP	**P**	**23 37 02.9**	**+0.1**
	comp=Z,38nm,1.6s,mb4.6						
AVF	**Avril sur Loir**	**43.13**	**49**	eP	**P**	**23 37 02.9**	**+0.1**
AVF				pmax	pmax		
	comp=Z,19nm,1.6s,mb4.6						
AVF	**Avril sur Loir**	**43.13**	**49**	eP	**P**	**23 37 02.9**	**+0.1**
	comp=Z,19nm,1.6s,mb4.6						
SSF	**Saint Saulge**	**43.29**	**48**	eP	**P**	**23 37 03.8**	**-0.3**
	comp=Z,19nm,1.3s,mb4.4						
SSF	**Saint Saulge**	**43.29**	**48**	eP	**P**	**23 37 03.8**	**-0.3**
SSF				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.4						
SSF	**Saint Saulge**	**43.29**	**48**	eP	**P**	**23 37 03.8**	**-0.3**
	comp=Z,9.7nm,1.3s,mb4.4						
SMF	**Signal de Mont**	**43.44**	**49**	eP	**P**	**23 37 05.3**	**0.0**
	comp=Z,54nm,1.4s,mb4.8						
SMF	**Signal de Mont**	**43.44**	**49**	eP	**P**	**23 37 05.3**	**0.0**
SMF				pmax	pmax		
	comp=Z,27nm,1.4s,mb4.8						
SMF	**Signal de Mont**	**43.44**	**49**	eP	**P**	**23 37 05.3**	**0.0**
	comp=Z,27nm,1.4s,mb4.8						
LOR	**Lormes**	**43.57**	**48**	eP	**P**	**23 37 06.3**	**0.0**
	comp=Z,14nm,1.2s,mb4.3						
LOR				eMLR	MLR		
	comp=Z,211nm,20.2s,MS3.7						
LOR	**Lormes**	**43.57**	**48**	eP	**P**	**23 37 06.3**	**0.0**
LOR				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.2						
LOR				MLR	MLR		
	comp=Z,210nm,20.3s,MS4.0						
LOR	**Lormes**	**43.57**	**48**	eP	**P**	**23 37 06.3**	**0.0**
	comp=Z,7.3nm,1.3s,mb4.2						
LOR				LR	LR		
	comp=Z,210nm,20.3s,MS4.0						
VIVF	**Saint-Julien-l**	**43.72**	**52**	eP	**P**	**23 37 08.1**	**+0.5**
	comp=Z,40nm,1.7s,mb4.6						
VIVF	**Saint-Julien-l**	**43.72**	**52**	eP	**P**	**23 37 08.1**	**+0.5**
VIVF				pmax	pmax		
	comp=Z,20nm,1.7s,mb4.6						
VIVF	**Sa

comp=Z,250nm,21.8s,MS4.1
WLF Walferdange 45.55 45 P **P 23 37 22.3 +0.2**
MEM Membach 45.66 44 P **P 23 37 23.2 +0.3**
HINF Hinteralfeld 45.66 48 *eP* **P 23 37 23.1 +0.1**
comp=Z,8.2nm,1.1s,mb4.3
HINF Hinteralfeld 45.66 48 *eP* **P 23 37 23.1 +0.1**
HINF pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
HINF Hinteralfeld 45.66 48 *eP* **P 23 37 23.1 +0.1**
comp=Z,4.1nm,1.1s,mb4.3
ULM Lac du Bonnet 45.67 316 P **P 23 37 22.5 -0.5**
comp=Z,5.8nm,0.6s,mb4.7,baz=85,slow=10,SNR=5.0
ULM LR LR 23 54 13.1
comp=Z,317nm,19.3s,MS4.3,baz=211,slow=33
ULM Lac du Bonnet 45.67 316 P **P 23 37 22.5 -0.5**
ULM LR LR 23 54 13.1
TAM Tamanrasset 45.76 83 *eP* **P 23 37 25.8 +1.7**
TAM pmax pmax
comp=Z,8.0nm,1.3s,mb4.5
TAM Tamanrasset 45.76 83 *eP* **P 23 37 25.8 +1.7**
comp=Z,7.8nm,1.3s,mb4.5
CDF Champ du Feu 46.04 47 *eP* **P 23 37 25.8 -0.2**
comp=Z,23nm,1.3s,mb4.6
CDF Champ du Feu 46.04 47 *eP* **P 23 37 25.8 -0.2**
CDF pmax pmax
comp=Z,11nm,1.3s,mb4.6
CDF Champ du Feu 46.04 47 *eP* **P 23 37 25.8 -0.2**
comp=Z,11nm,1.3s,mb4.6
SCO Scoresbysund 46.32 10 *i* P **P 23 37 28.4 +0.5**
comp=Z,8.3nm,0.8s,mb4.7
SUMG Summit 46.64 3 *eP* **P 23 37 31.2 +0.9**
SUMG pmax pmax
comp=Z,10.0nm,0.8s
SUMG Summit 46.64 3 *eP* **P 23 37 31.2 +0.8**
comp=Z,9.8nm,0.8s,mb4.8
SUMG Summit 46.64 3 *i* P **P 23 37 30.5 +0.2**
comp=Z,9.3nm,0.7s,mb4.8
BFO Black Forest 46.72 47 *eP* **P 23 37 31.1 -0.3**
BFO pmax pmax
comp=Z,16nm,1.4s,mb4.8
BFO Black Forest 46.72 47 *eP* **P 23 37 31.1 -0.2**
comp=Z,16nm,1.4s,mb4.8
WMOK Wichita Mounta 46.81 294 *eP* **P 23 37 32.9 +0.6**
WMOK pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
WMOK Wichita Mounta 46.81 294 *eP* **P 23 37 32.9 +0.5**
comp=Z,10nm,1.1s,mb4.7
KEST Kesra 46.97 65 P **P 23 37 33.6 +0.1**
comp=Z,5.1nm,1.0s,mb4.4,baz=287,slow=2.9,SNR=9.8
KEST LR LR 23 54 50.7
comp=Z,66nm,18.2s,MS3.6,baz=240,slow=33
FCC Fort Churchill 47.19 327 *eP* **P 23 37 34.9 0.0**
comp=Z,0.2nm,0.8s
DAVA Damuels 47.62 49⇑ *iP* **P 23 37 36.0 -2.4**
comp=Z,6.3nm,0.8s,mb4.7
LPAZ La Paz 47.84 211 P **P 23 37 41.2 +0.8**
comp=Z,8.1nm,0.8s,mb4.8,baz=24,slow=8.8,SNR=33
LPAZ LR LR 23 56 49.8
comp=Z,217nm,20.0s,MS4.1,baz=10,slow=35
LPAZ La Paz 47.84 211 *eP* **P 23 37 41.6 +1.2**
LPAZ pmax pmax
comp=Z,8.0nm,0.9s
LPAZ La Paz 47.84 211 *eP* **P 23 37 41.6 +1.3**
comp=Z,8.4nm,0.9s,mb4.8
GRF Grafenberg Arr 48.80 46 *eP* **P 23 37 45.5 -1.9**
comp=Z,7.0nm,1.2s,mb4.6
GRF *eL* 23 54 13.7
comp=Z,169nm,20.6s
GRF Grafenberg Arr 48.80 46 *eP* **P 23 37 45.5 -1.9**
GRF pmax pmax
comp=Z,7.0nm,1.2s,mb4.6
GRF MLR MLR
comp=Z,200nm,20.6s,MS4.1
MOX Moxa 49.17 45 *eP* **P 23 37 56.9 +6.6**
comp=Z,12nm,1.6s,mb4.7
MOX
comp=Z,200nm,19.0s
AMTX Amarillo 49.18 295 *eP* **P 23 37 50.7 +0.1**
comp=Z,33nm,1.4s,mb5.2
NKC Novy Kostel 49.65 45 *eP* **P 23 38 00.7 +6.7**
NKC Novy Kostel 49.65 45 *eP* **P 23 38 00.7 +6.7**
CLL Collm 50.13 44 *eP* **P 23 38 00.0 +2.4**
CLL *i* pP 23 38 03.2 +2.4
CLL *eS* **S 23 45 17.0 +7.9**
CLL MLR MLR
comp=Z,300nm,22.7s,MS4.2
CLL Collm 50.13 44 *e*(P) **P 23 38 00.0 +2.4**
CLL *i* sP sP 23 38 03.2 +1.2
comp=Z,11nm,1.5s
CLL *eS* **S 23 45 17.0 +7.9**
CLL *eSS* SS 23 48 48.0 +5.9
FFC Flin Flon 50.23 321 *i P* **P 23 37 58.4 +0.1**
FFC Flin Flon 50.23 321 *eP* **P 23 37 57.7 -0.6**
comp=Z,5.4nm,0.7s,mb4.7
KHC Kasperske Hory 50.27 47 *eP* **P 23 37 58.6 -0.1**
KHC pmax pmax
comp=Z,21nm,1.6s,mb4.9
KHC Kasperske Hory 50.27 47 *eP* **P 23 37 58.6 0.0**
comp=Z,21nm,1.6s,mb4.9
KHC Kasperske Hory 50.27 47 *eP* **P 23 37 58.0 -0.7**
KHC *epP* pP 23 38 05.0 +3.2
Y27A Causey 50.51 293 ⇑P **P 23 37 58.7 -2.1**
baz=50
428A Kincaid Ranch, 50.59 289 ⇓P **P 23 38 01.0 -0.4**
baz=50,SNR=6.4
Z27A Tatum 50.63 293 ⇓P **P 23 38 02.0 +0.3**
baz=51
BRG Berggiesshubel 50.67 44 *e*(P) **P 23 38 05.1 +3.4**
comp=Z,1.5nm,1.0s,mb3.9
P25A Willow Gulch B 50.77 301 ⇓P **P 23 38 03.3 +0.7**
baz=51
528A Cox Ranch, San 50.78 289 ⇓P **P 23 38 02.8 -0.1**
baz=51
VAE Valguarnera 50.90 62 LR LR 23 54 30.5
comp=Z,141nm,21.7s,MS3.9,baz=96,slow=30
PRU Pruhonice 50.97 46 *eP* **P 23 38 03.1 -0.8**
PRU Pruhonice 50.97 46 *eP* **P 23 38 03.1 -0.8**
628A Black Gap, Mar 50.99 288 ⇑P **P 23 38 02.7 -1.8**
baz=51
PVCC Panska Ves 51.03 45 *eP* **P 23 38 04.6 +0.2**
PVCC *e* 23 38 11.3
PVCC Panska Ves 51.03 45 *eP* **P 23 38 04.6 +0.2**
PVCC *epP* pP 23 38 11.3 +3.7
NB2 NORSAR Subarra 51.20 31 P **P 23 38 05.4 -0.1**
comp=Z,7.4nm,1.0s,mb4.6,baz=253,slow=7.9
NOA NORSAR Array B 51.20 31 P **P 23 38 06.0 +0.6**
comp=Z,3.4nm,0.8s,mb4.3,baz=254,slow=7.8,SNR=12
NOA LR LR 23 56 17.2
comp=Z,208nm,19.1s,MS4.2,baz=250,slow=32
U25A Circle Dot Ran 51.22 297 ⇓P **P 23 38 03.7 -2.4**
baz=51,SNR=6.1
Z26A Caprock 51.27 293 ⇓P **P 23 38 06.0 -0.5**
baz=51
ARSA Arzberg 51.45 49⇓ *iP* **P 23 38 06.1 -1.5**
comp=Z,11nm,1.3s,mb4.6
527A Woodward Ranch 51.48 289 ⇑P **P 23 38 06.9 -1.2**
baz=51
X25A Clemmons Ranch 51.66 295 ⇑P **P 23 38 09.2 -0.1**
baz=52
TXAR Lajitas Array 51.69 288 P **P 23 38 08.8 -0.9**
comp=Z,1.0nm,0.5s,mb4.0,baz=90,slow=6.3,SNR=4.1
TXAR LR LR 00 00 00.0
comp=Z,82nm,20.6s,MS3.8,baz=190,slow=36
426A McDonald Obser 51.74 290 ⇑P **P 23 38 09.8 -0.3**
baz=52
Y25A Mesa, Roswell 51.77 294 ⇓P **P 23 38 10.4 +0.2**
baz=52
526A Mary Lane Ranc 51.91 289 ⇑P **P 23 38 11.4 0.0**
baz=52
125A Gardner Draw, 51.93 292 ⇑P **P 23 38 11.0 -0.4**
baz=52
UPC Upice 51.95 45 *eP* **P 23 38 11.2 -0.1**
UPC *e* 23 38 17.5
UPC Upice 51.95 45 *eP* **P 23 38 11.2 -0.1**
UPC *epP* pP 23 38 17.5 +3.0
DPC Dobruska-Polom 52.13 45 *eP* **P 23 38 12.4 -0.3**
DPC *e* 23 38 19.1
DPC Dobruska-Polom 52.13 45 *eP* **P 23 38 12.4 -0.3**
DPC *epP* pP 23 38 19.1 +3.2
VRAC Vranov 52.25 47 P **P 23 38 12.8 -0.8**
comp=Z,2.1nm,0.7s,mb4.2,baz=264,slow=6.8,SNR=4.1
DAG Danmarks Havn 52.28 7⇓ *iP* **P 23 38 13.9 +0.5**
comp=Z,2.2nm,0.8s,mb4.1
325A Bean Ranch, Si 52.41 291 ⇑P **P 23 38 15.1 0.0**
baz=52
N22A Wattenberg Ran 52.44 303 ⇑P **P 23 38 14.9 -0.2**
baz=52
324A Moseley Ranch, 52.83 291 ⇓P **P 23 38 18.2 0.0**
baz=53
Y23A Lovelace Mesa, 52.88 294 ⇑P **P 23 38 18.1 -0.5**
baz=53
MORC Moravsky Berou 52.89 46 *eP* **P 23 38 19.4 +1.1**
MORC pmax pmax
comp=Z,17nm,1.8s,mb4.7
MORC Moravsky Berou 52.89 46 *eP* **P 23 38 19.4 +1.1**
comp=Z,18nm,1.8s,mb4.7
R22A Saguache, Gunn 52.89 299 ⇓pP pP 23 38 20.9 -0.8
baz=53
RWWY Rawlins 52.95 304 *eP* **P 23 38 19.7 +0.8**
comp=Z,8.5nm,1.0s,mb4.6
Q22A Crested Butte, 52.95 300 ⇓pP pP 23 38 20.9 -1.2
baz=53
ANMO Albuquerque 53.06 295 *eP* **P 23 38 21.4 +1.6**
ANMO pmax pmax
comp=Z,5.0nm,1.3s
ANMO Albuquerque 53.06 295 *eP* **P 23 38 21.4 +1.6**
comp=Z,5.5nm,1.3s,mb4.3
M21A Separation Pea 53.07 304 ⇑P **P 23 38 19.3 -0.5**
baz=53
Z23A Rita Site, Whi 53.14 293 ⇓P **P 23 38 20.6 +0.2**
baz=53
T22A Edith 53.15 298 ⇑pP pP 23 38 22.5 -1.0
baz=53,SNR=8.8
U22A Llaves 53.19 297 ⇑pP pP 23 38 23.4 -0.4
baz=53
OKC Ostrava-Krasne 53.28 46 *eP* **P 23 38 20.9 -0.3**
OKC Ostrava-Krasne 53.28 46 *eP* **P 23 38 20.9 -0.3**
P21A Newcastle 53.30 301 ⇑pP pP 23 38 23.6 -1.1
baz=53
BNM Barren Site 53.32 294 *eP* **P 23 38 21.8 +0.1**
comp=Z,3.5nm,1.0s,mb4.2
CPUP Villa Florida 53.51 194 P **P 23 38 22.4 -0.7**
comp=Z,1.9nm,0.7s,mb4.1,baz=350,slow=6.9,SNR=6.2
CPUP LR LR 23 59 08.9
comp=Z,78nm,21.2s,MS3.7,baz=92,slow=34
VYHS Vyhne 53.71 48 *eP* **P 23 38 23.4 -0.9**
VYHS pmax pmax
comp=Z,3.0nm,1.4s,mb4.0
VYHS Vyhne 53.71 48 *eP* **P 23 38 23.4 -0.9**
comp=Z,2.5nm,1.4s,mb4.0
VYHS Vyhne 53.71 48 *eP* **P 23 38 23.4 -0.9**
K20A Yellowstone Ra 53.72 305 ⇑P **P 23 38 24.4 -0.2**
baz=54
Z22A Elephant Butte 53.74 293 ⇑P **P 23 38 25.1 +0.3**
baz=54,SNR=8.7
O20A White River Ci 53.85 302 ⇑P **P 23 38 24.6 -0.9**
baz=54
K19A Absolon Red Bu 54.08 305 ⇑P **P 23 38 26.7 -0.5**
baz=54
Y21A Point of Rocks 54.20 294 ⇑P **P 23 38 27.6 -0.6**
baz=54
X21A Alamocita Cree 54.22 295 ⇓P **P 23 38 27.5 -0.8**
baz=54,SNR=6.4
RLMT Red Lodge 54.26 308 *eP* **P 23 38 29.3 +0.9**
comp=Z,6.6nm,1.0s,mb4.5
P19A Cripple Cowboy 54.47 301 ⇑P **P 23 38 29.7 -0.3**
baz=54
EGMT Eagleton 54.51 312 ⇓P **P 23 38 30.4 +0.2**
baz=54,SNR=7.0
EGMT Eagleton 54.51 312 *eP* **P 23 38 30.5 +0.3**
comp=Z,12nm,0.9s,mb4.9
GCMT Greycliff 54.51 309 *eP* **P 23 38 31.4 +1.2**
comp=Z,6.6nm,1.1s,mb4.6
F18A Big Timber 54.54 309 ⇓P **P 23 38 31.0 +0.6**
baz=54,SNR=7.1
D18A Linhart Farms, 54.56 311 ⇓P **P 23 38 30.6 0.0**
baz=54
BW06 Boulder Array 54.61 305 ⇓P **P 23 38 30.7 -0.3**
baz=54,SNR=11
BW06 Boulder Array 54.61 305 *eP* **P 23 38 31.0 0.0**
comp=Z,6.8nm,1.0s,mb4.6
PDAR Pinedale Array 54.61 305 P **P 23 38 31.1 0.0**
comp=Z,3.1nm,0.8s,mb4.4,baz=80,slow=8.1,SNR=24
PDAR LR LR 00 00 35.2
comp=Z,360nm,18.2s,MS4.5,baz=98,slow=35
E18A Harlowton 54.65 310 ⇓P **P 23 38 31.7 +0.4**
baz=55,SNR=7.8
W20A Ramah 54.69 296 ⇑P **P 23 38 31.7 0.0**
baz=55
Q19A Hogan Spring (54.76 301 ⇑P **P 23 38 32.4 +0.2**
baz=55
Y20A Horse Springs, 54.79 294 ⇓P **P 23 38 32.6 +0.1**
baz=55
KECS Kecovo 54.80 48 *eP* **P 23 38 39.0 +6.7**
KECS pmax pmax
comp=Z,3.0nm,1.1s,mb4.2
KECS Kecovo 54.80 48 *eP* **P 23 38 39.0 +6.7**
comp=Z,2.7nm,1.1s,mb4.2
KECS Kecovo 54.80 48 *epP* pP 23 38 39.0 +3.5
N18A Larsen Ranch, 54.85 303 ⇓P **P 23 38 31.7 -1.1**
baz=55,SNR=7.3
RES Resolute Bay 54.87 346 *eP* **P 23 38 33.1 +0.7**
J18A Kendall Valley 54.91 306 ⇓P **P 23 38 32.7 -0.5**
baz=55
K18A Toltan Ranch, 54.98 305 ⇓P **P 23 38 33.2 -0.5**
baz=55
L18A Fontenelle, Gr 55.03 304 ⇓P **P 23 38 33.2 -0.9**
baz=55
U19A Dine' College, 55.08 297 ⇓P **P 23 38 34.6 +0.1**
baz=55
C17A Wharram Farm, 55.20 311 ⇑P **P 23 38 35.0 -0.2**
baz=55
F17A Fitzpatrick Pl 55.20 309 ⇑P **P 23 38 34.6 -0.6**
baz=55
220A Playas Peak, P 55.29 292 ⇑P **P 23 38 34.9 -1.2**
baz=55
LOHW Long Hollow 55.31 306 *eP* **P 23 38 36.6 +0.5**
comp=Z,11nm,1.5s,mb4.7
E17A Martinsdale 55.31 310 ⇑P **P 23 38 35.4 -0.6**
baz=55,SNR=5.9
R18A Canyonlands Na 55.32 300 ⇑P **P 23 38 37.1 +0.9**
baz=55,SNR=6.0
P18A Preston Nutter 55.44 302 ⇑P **P 23 38 37.3 +0.3**
baz=55,SNR=7.2
CRVS Cervenica-Dubn 55.44 47 *eP* **P 23 38 36.2 -0.7**
CRVS Cervenica-Dubn 55.44 47 *eP* **P 23 38 36.2 -0.7**
Y19A Nutrioso 55.50 295 ⇑P **P 23 38 37.4 -0.2**
baz=55
REDW Red Top Meadow 55.51 306 P **P 23 38 33.3 -4.2**
comp=Z,6.9nm,1.2s,mb4.6
IMW Indian Meadow 55.53 307 *eP* **P 23 38 38.5 +0.8**
comp=Z,24nm,1.5s,mb5.0
TPAW Teton Pass 55.57 306 *eP* **P 23 38 38.5 +0.5**
comp=Z,11nm,1.3s,mb4.7
U18A Rough Rock, Ch 55.59 298 ⇑P **P 23 38 38.0 -0.2**
baz=56
U18A ⇑pP pP 23 38 40.5 -0.9
baz=56
BZS Buzias 55.69 51 ⇑P **P 23 38 39.5 +0.8**
BZS Buzias 55.69 51⇑ *iP* **P 23 38 39.5 +0.8**
A16A West Butte Ran 55.72 313 ⇓P **P 23 38 38.1 -0.8**
baz=56
SRU San Rafael 55.72 301 ⇑P **P 23 38 39.5 +0.4**
baz=56,SNR=7.2
SRU San Rafael 55.72 301 *eP* **P 23 38 39.7 +0.6**
SRU pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
SRU San Rafael 55.72 301 *eP* **P 23 38 39.7 +0.7**
comp=Z,7.0nm,0.9s,mb4.7
O17A Robinson Place 55.74 302 ⇓P **P 23 38 39.7 +0.4**
baz=56
RRI2 Red Ridge 55.85 306 *eP* **P 23 38 40.0 0.0**
comp=Z,6.8nm,0.8s,mb4.7
C16A Fuhringer Ranc 55.86 311 ⇓P **P 23 38 39.4 -0.5**
baz=56
219A White Tail Can 55.88 292 ⇑P **P 23 38 40.4 +0.1**
baz=56
BOZ Bozeman (W) 55.89 309 *eP* **P 23 38 40.4 +0.2**
BOZ pmax pmax
comp=Z,45nm,2.9s,mb5.0
BOZ Bozeman (W) 55.89 309 *eP* **P 23 38 40.4 +0.2**
comp=Z,45nm,2.9s,mb5.0
R17A Hanksville Air 55.95 300 ⇑P **P 23 38 40.9 +0.1**
baz=56,SNR=8.6
UZH Uzhgorod 56.00 48 *eP* **P 23 38 41.0 +0.1**
UZH *i* 23 38 48.0
J16A Bone 56.07 306 ⇑P **P 23 38 41.3 -0.2**
baz=56
T17A Navajo Res., N 56.24 298 ⇓pP pP 23 38 45.0 -1.1
baz=56,SNR=6.1
KWP Kalwaria Pacla 56.24 46 ⇓P **P 23 38 49.9 +7.3**
KWP Kalwaria Pacla 56.24 46⇓ *iP* **P 23 38 49.9 +7.3**
Q16A Castle Valley 56.24 301 ⇑P **P 23 38 42.8 0.0**
baz=56
B15A Bradely Ranch, 56.38 312 ⇓P **P 23 38 43.2 -0.5**
baz=56,SNR=7.5
D15A Lincoln 56.42 311 ⇑P **P 23 38 43.6 -0.3**
baz=56
C15A Salmond Ranch, 56.44 311 ⇓P **P 23 38 43.4 -0.6**
baz=56
V17A Tonalea, Kykot 56.46 297 ⇑P **P 23 38 43.9 -0.5**
baz=56
A15A Johnson Ranch, 56.47 313 ⇓P **P 23 38 43.5 -0.8**
baz=56
E15A Deer Lodge 56.54 310 ⇑P **P 23 38 44.8 0.0**
baz=56
R16A Teasdale 56.58 300 ⇓P **P 23 38 45.1 -0.1**
baz=56
DLMT Dillon 56.59 309 *eP* **P 23 38 46.3 +1.1**
comp=Z,4.0nm,1.0s,mb4.4
318A Bisbee 56.60 292 ⇓pP pP 23 38 47.4 -1.4
baz=56
J15A Blackfoot 56.65 306 ⇑P **P 23 38 45.6 0.0**
baz=57
S16A Weppner Ranch, 56.75 299 ⇑P **P 23 38 46.4 0.0**
baz=57
EDM Edmonton 56.77 318 *eP* **P 23 38 46.5 +0.2**
L15A Malad City 56.77 305 ⇑P **P 23 38 45.3 -1.3**
baz=57
SPUT South Promonto 56.90 304 *eP* **P 23 38 47.8 +0.3**
comp=Z,12nm,1.1s,mb4.8
A14A Double T Ranch 56.92 313 ⇑P **P 23 38 46.7 -0.8**
baz=57
WUAZ Wupatki 56.94 297 *eP* **P 23 38 49.8 +1.9**
comp=Z,14nm,1.3s,mb4.8
MSU Marysvale 57.08 300 *eP* **P 23 38 49.7 +0.9**
D14A Greenough 57.09 311 ⇑P **P 23 38 48.5 -0.2**
baz=57
H14A Leadore 57.20 308 ⇓P **P 23 38 48.8 -0.8**
baz=57
DUG Dugway 57.32 302 ⇑P **P 23 38 51.0 +0.5**
baz=57
DUG Dugway 57.32 302 *eP* **P 23 38 50.9 +0.4**
DUG pmax pmax
comp=Z,12nm,1.4s,mb4.7
DUG Dugway 57.32 302 *eP* **P 23 38 50.9 +0.4**
comp=Z,12nm,1.4s,mb4.7
BGU Big Grassy Mou 57.38 303 *eP* **P 23 38 51.4 +0.5**
comp=Z,9.1nm,1.1s,mb4.7
SWMT Swartz Lake 57.39 311 *eP* **P 23 38 50.9 +0.1**
L14A Malta 57.40 305 ⇑P **P 23 38 50.5 -0.5**
baz=57
J14A Carey 57.45 306 ⇑P **P 23 38 51.6 +0.3**
baz=57
T15A Red Dirt Ranch 57.48 299 ⇓P **P 23 38 51.3 -0.3**
baz=57
N14A Grayback Hills 57.51 303 ⇑P **P 23 38 52.1 +0.3**
baz=57,SNR=18
V15A Kaibab Nationa 57.53 297 ⇓P **P 23 38 52.3 +0.3**
baz=58
M14A Sheep Mountain 57.54 304 ⇓P **P 23 38 52.1 +0.1**
baz=58
P14A Drum Mountains 57.60 302 ⇓P **P 23 38 52.9 +0.4**
baz=58,SNR=7.7
YKA Yellowknife Ar 57.84 329 P **P 23 38 52.9 -0.9**
comp=Z,3.4nm,0.8s,mb4.5,baz=94,slow=7.7,SNR=10
Q14A Sevier Lake (B 57.85 301 ⇓P **P 23 38 54.7 +0.4**
baz=58
J13A Cove Ranch, Pi 57.91 306 ⇓P **P 23 38 54.4 -0.2**
baz=58
BUR08 Bucovina Ar. S 58.00 49 *eP* **P 23 38 55.8 +0.6**
BURAR Bucovina Array 58.02 49 ⇑P **P 23 38 55.9 +0.7**
BURAR Bucovina Array 58.02 49⇑ *iP* **P 23 38 55.9 +0.7**
HLID Hailey 58.07 307 ⇓P **P 23 38 56.1 +0.4**
baz=58,SNR=7.2
HLID Hailey 58.07 307 *eP* **P 23 38 56.5 +0.9**
comp=Z,6.6nm,1.3s,mb4.5
CCUT Cedar City 58.16 299 *eP* **P 23 38 57.4 +1.0**
comp=Z,5.3nm,1.0s,mb4.5
ARUT Antelope Range 58.18 300 *eP* **P 23 38 58.0 +1.4**
ARUT pmax pmax
comp=Z,6.0nm,1.2s,mb4.5
ARUT Antelope Range 58.18 300 *eP* **P 23 38 58.0 +1.4**
comp=Z,6.1nm,1.2s,mb4.5
ISAL Salakas 58.22 39 *eP* **P 23 38 56.4 -0.1**
U14A Mt Trumbull 58.22 298 ⇓P **P 23 38 56.3 -0.6**
baz=58,SNR=8.5
U14A ⇓pP pP 23 38 58.9 -1.1
baz=58
H12A Diamond D Ranc 58.27 308 ⇓P **P 23 38 56.8 -0.2**
baz=58
IIGN Ignalina 58.27 39 *eP* **P 23 38 56.9 0.0**
IZAR Zarasai 58.28 39 *eP* **P 23 38 56.9 0.0**
V14A Boquillas Ranc 58.31 297 ⇑P **P 23 38 57.4 0.0**
baz=58
FINES FINESS Array B 58.33 32 P **P 23 38 56.8 -0.4**
comp=Z,3.9nm,0.9s,mb4.4,baz=222,slow=2.6,SNR=9.2
FINES LR LR 00 01 04.4
comp=Z,196nm,18.7s,MS4.2,baz=38,slow=33
P13A Bates Ranch, G 58.35 302 ⇓P **P 23 38 57.8 +0.1**
baz=58,SNR=11
F12A Elk City 58.41 309 ⇑P **P 23 38 58.3 +0.3**
baz=58
Q13A Wheeler Ranch, 58.43 301 ⇑pP pP 23 39 00.1 -1.4
baz=58
KAF Kangasniemi 58.48 31 *eP* **P 23 38 55.9 -2.3**
KAF pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
KAF Kangasniemi 58.48 31 *ep* **P 23 38 55.9 -2.3**
comp=Z,7.4nm,1.1s,mb4.6
KAF Kangasniemi 58.48 31 *ep* **P 23 38 55.9 -2.3**
comp=Z,7.4nm,1.1s,mb4.6
R13A O'Grain Ranch, 58.52 300 ⇑P **P 23 38 58.4 -0.6**
baz=58
R13A ⇑pP pP 23 39 01.0 -1.1
baz=58
G12A Big Creek, Yel 58.53 309 ⇓P **P 23 38 58.4 -0.5**
baz=58
S13A Holt Ranch, En 58.55 300 ⇑P **P 23 38 58.3 -0.8**
baz=58
I12A Atlanta 58.55 307 ⇑P **P 23 38 58.0 -1.1**
baz=58
Y14A Wickenburg 58.56 295 ⇓P **P 23 38 59.5 +0.1**
baz=58
IDID Didziasalis 58.57 39 *eP* **P 23 38 59.0 0.0**
J12A Stokes Ranch, 58.60 306 ⇓P **P 23 38 59.2 -0.2**
baz=58
L12A House Creek Ra 58.69 305 ⇑P **P 23 38 59.9 -0.2**
baz=59
114A Black Gap (USA 58.72 294 ⇑P **P 23 39 00.7 +0.2**
baz=59
M12A Wells 58.72 304 ⇑P **P 23 39 00.4 +0.1**
baz=59
MLR Muntele Rosu 58.73 51 P **P 23 39 01.1 +0.9**
comp=Z,5.7nm,0.7s,mb4.7,baz=208,slow=3.9,SNR=14
MLR Muntele Rosu 58.73 51⇓ *iP* **P 23 39 01.1 +0.9**
O12A Currie 58.77 303 ⇑P **P 23 39 00.7 +0.1**
baz=59
214A Organ Pipe Nat 58.84 293 ⇓pP pP 23 39 02.9 -1.6
baz=59
C11A Tepee Creek (N 58.88 312 ⇓P **P 23 39 00.8 -0.5**
baz=59
ARCES ARCESS Array B 58.93 23 P **P 23 39 00.9 -0.3**
comp=Z,3.1nm,0.7s,mb4.5,baz=256,slow=4.9,SNR=18
H11A Donnelly 59.07 308 ⇓P **P 23 39 02.7 +0.1**
baz=59
MFID Camas Ranch 59.11 307 ⇑P **P 23 39 02.9 -0.1**
baz=59
VRI Vrincioaia 59.23 50 ⇓P **P 23 39 04.4 +0.7**
VRI Vrincioaia 59.23 50⇓ *iP* **P 23 39 04.4 +0.7**
L11A Cat Creek Ranc 59.23 305 ⇓P **P 23 39 02.5 -1.3**
baz=59
U12A Valley of Fire 59.29 298 ⇑P **P 23 39 03.8 -0.5**
baz=59
K11A Parker Ranch, 59.35 306 ⇑P **P 23 39 04.7 +0.1**
baz=59
NEW Newport 59.42 312 *eP* **P 23 39 05.3 +0.3**
NEW pmax pmax
comp=Z,13nm,0.9s
NEW Newport 59.42 312 *eP* **P 23 39 05.3 +0.3**
comp=Z,12nm,0.9s,mb4.9
O11A Cowboy Ranch, 59.48 303 ⇓P **P 23 39 05.7 +0.1**
baz=59
IDI Anoyia 59.58 63 P **P 23 39 07.3 +0.9**
comp=Z,13nm,0.9s,mb4.9,baz=279,slow=8.3,SNR=4.3
T11A Corn Creek, Al 59.67 299 ⇓pP pP 23 39 08.5 -1.6
baz=60
Q11A Duckwater 59.71 301 ⇓pP pP 23 39 09.9 -0.5
baz=60
F10A Beach Ranch, E 59.76 310 ⇓P **P 23 39 06.9 -0.5**
baz=60

L10A Juniper Basin 59.77 305 ⇑P P 23 39 07.5 -0.1
baz=60,SNR=11
K10A MacKenzie Ranc 59.95 306 ⇓P P 23 39 08.6 -0.2
baz=60
BMO Blue Mountains 59.96 308 *e*P **P 23 39 07.4 -1.4**
BMO pmax pmax
comp=Z,4.0nm,1.4s,mb4.3
BMO Blue Mountains 59.96 308 *e*P **P 23 39 07.4 -1.4**
comp=Z,4.4nm,1.4s,mb4.3
IRM Iron Mountain 60.26 296 ⇑P P 23 39 11.4 +0.4
baz=60
E09A Wood Farm, Sta 60.32 310 ⇓P P 23 39 11.3 +0.1
baz=60
AKASG Malin Array Be 60.35 45 P **P 23 39 10.2 -1.1**
comp=Z,4.0nm,0.7s,mb4.5,baz=277,slow=5.8,SNR=16
AKASG LR LR 00 03 37.2
comp=Z,155nm,19.5s,MS4.2,baz=280,slow=34
LNOR Lincton Mounta 60.50 310 *e*P **P 23 39 12.8 +0.3**
GMRC Granite Mounta 60.53 297 ⇑P P 23 39 12.7 -0.2
baz=60
S10A Tonopah Range, 60.61 300 ⇓P P 23 39 13.5 +0.1
baz=60
D08A Wollman Farm, 60.77 311 ⇓P P 23 39 14.4 +0.1
baz=61,SNR=7.4
JOF Joensuu 60.82 31 *e*P **P 23 39 10.6 -3.7**
JOF pmax pmax
comp=Z,7.0nm,1.1s,mb4.7
JOF Joensuu 60.82 31 *e*p **P 23 39 10.6 -3.7**
comp=Z,7.3nm,1.1s,mb4.7
JOF Joensuu 60.82 31 *e*p **P 23 39 10.6 -3.7**
comp=Z,7.3nm,1.1s,mb4.7
H08A Prairie City 60.97 308 ⇓P P 23 39 15.3 -0.4
baz=61
BELC Belle Mtn. Jos 60.98 296 ⇑P P 23 39 15.9 0.0
baz=61
J08A Circle Bar Ran 61.02 307 ⇑P P 23 39 16.3 +0.2
baz=61
HAWA Hanford 61.28 310 *e*P **P 23 39 17.8 0.0**
comp=Z,7.1nm,0.8s,mb4.8
WVOR Wild Horse Val 61.30 306 *e*P **P 23 39 18.9 +0.9**
WVOR pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
WVOR Wild Horse Val 61.30 306 *e*P **P 23 39 18.9 +1.0**
comp=Z,5.3nm,0.9s,mb4.7
GSC Goldstone 61.33 298 *e*P **P 23 39 19.7 +1.4**
GSC pmax pmax
comp=Z,3.0nm,0.9s,mb4.4
GSC Goldstone 61.33 298 *e*P **P 23 39 19.7 +1.4**
comp=Z,2.7nm,0.9s,mb4.4
CFAA Coronel Fontan 61.59 203 P **P 23 39 19.9 +0.1**
comp=Z,0.3nm,0.7s,mb3.6,baz=12,slow=9.3,SNR=4.4
CFAA Coronel Fontan 61.59 203 P **P 23 39 19.9 +0.1**
MPMC Manual Prospec 61.70 299 ⇑P P 23 39 21.0 +0.2
baz=62
NVAR Mina Array Bea 61.82 301 P **P 23 39 21.4 -0.2**
comp=Z,1.3nm,0.9s,mb4.1,baz=88,slow=6.5,SNR=6.5
ISA Isabella 62.57 298 *e*P **P 23 39 27.9 +1.3**
ISA pmax pmax
comp=Z,9.0nm,1.1s,mb4.8
ISA Isabella 62.57 298 *e*P **P 23 39 27.9 +1.2**
comp=Z,8.8nm,1.1s,mb4.8
MOD Modoc 62.61 306 *e*P **P 23 39 27.8 +1.0**
comp=Z,8.2nm,0.9s,mb4.9
K05A Summer Lake 62.88 307 ⇓P P 23 39 28.6 0.0
baz=63
OBN Obninsk 64.19 39⇓ *e*P **P 23 39 37.0 0.0**
OBN pmax pmax
comp=Z,18nm,1.2s,mb5.0
OBN MLR MLR
comp=Z,100nm,17.0s,MS4.1
YBH Yreka Blue Hor 64.41 306 *e*P **P 23 39 38.5 -0.2**
YBH pmax pmax
comp=Z,116nm,2.8s
YBH Yreka Blue Hor 64.41 306 *e*P **P 23 39 38.5 -0.2**
comp=Z,116nm,2.8s,mb5.4
BR131 Keskin Array S 65.36 56 *e*P **P 23 39 45.1 +0.2**
BRTR Keskin Array B 65.36 56 P **P 23 39 45.0 +0.1**
comp=Z,4.1nm,0.7s,mb4.6,baz=264,slow=5.4,SNR=35
BRTR LR LR 00 05 18.0
comp=Z,98nm,21.0s,MS4.0,baz=75,slow=33
INK Inuvik 65.53 336 *e*P **P 23 39 44.7 -0.8**
INK pmax pmax
comp=Z,8.0nm,1.0s
INK Inuvik 65.53 336 *e*P **P 23 39 44.7 -0.8**
comp=Z,7.8nm,1.0s,mb4.7
VSR Storozhevoye 66.47 43 *e*P **P 23 39 50.8 -1.1**
VSR pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
VSR pmax pmax
comp=N,2.0nm,0.4s
VSR pmax pmax
comp=E,8.0nm,1.5s
VORD Divnogorie 66.60 43 *e*P **P 23 39 53.7 +1.0**
DAWY Dawson 68.78 332 *e*P **P 23 40 06.5 +0.2**
EIL Elat 69.27 66 P **P 23 40 10.5 +0.7**
comp=E,5.0nm,0.9s,mb4.5,baz=320,slow=7.9,SNR=5.5
EIL Elat 69.27 66 P **P 23 40 10.5 +0.7**
ASF Jabal al Asfar 70.04 63 P **P 23 40 15.2 +0.6**
comp=E,0.7nm,0.3s,mb4.1,baz=190,slow=9.3,SNR=3.6
PLCA Paso Flores 70.66 200 P **P 23 40 18.2 +0.2**
comp=E,6.4nm,0.8s,mb4.6,baz=14,slow=6.8,SNR=13
PLCA LR LR 00 11 54.8
comp=E,112nm,18.3s,MS4.2,baz=282,slow=36
KIV Kislovodsk 70.69 50⇑ *e*P **P 23 40 19.6 +1.2**
KIV pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
KIV Kislovodsk 70.69 50 *e*P **P 23 40 18.9 +0.5**
comp=Z,14nm,1.0s,mb4.9
COLD Coldfoot 71.90 337 *e*P **P 23 40 25.6 +0.4**
comp=Z,5.1nm,1.0s,mb4.4
ZEI Tsey 71.91 51 *e*P **P 23 40 26.3 +0.6**
ZEI pmax pmax
comp=Z,7.0nm,0.4s,mb4.9
MCK McKinley 72.86 333 *e*P **P 23 40 31.8 +0.8**
GNI Garni 73.38 53 *ce*P **P 23 40 36.3 +1.7**
GNI pmax pmax
comp=Z,25nm,2.5s
GNI Garni 73.38 53 *e*P **P 23 40 35.4 +0.8**
comp=Z,17nm,0.9s,mb5.0
TRF Thorofare Moun 73.52 333 *e*P **P 23 40 35.3 +0.4**
comp=Z,18nm,1.5s,mb4.8
PPLA Purkeypile 74.54 333 *e*P **P 23 40 41.5 +0.6**
comp=Z,22nm,1.4s,mb4.9
ARU Arti 75.64 34 *d i*P **P 23 40 46.1 -1.2**
ARU S S 23 50 20.3 -8.1
ARU pmax pmax
comp=Z,12nm,1.7s,mb4.5
ARU Arti 75.64 34 *e*P **P 23 40 46.9 -0.5**
comp=Z,16nm,1.5s,mb4.7
SVE Sverdlovsk 76.49 33⇓ *e*P **P 23 40 52.7 +0.5**
SVE pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
SVW2 Sparrevohn 76.81 332 *e*P **P 23 40 55.5 +1.5**
AKTK Aktyubinsk 77.97 40 P **P 23 41 00.8 +0.2**
AKTO Aktyubinsk 77.97 40 P **P 23 41 00.8 +0.2**
comp=Z,6.1nm,1.0s,mb4.5,baz=297,slow=7.4,SNR=12
TIXI Tiksi 82.41 2 *e*P **P 23 41 23.7 -0.5**
TIXI pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
TIXI Tiksi 82.41 2 *e*P **P 23 41 24.2 +0.1**
comp=Z,7.7nm,0.9s,mb4.6
BRVK Borovoye 83.19 33 *d i*P **P 23 41 28.9 +0.3**
BRVK pmax pmax
comp=Z,17nm,2.5s,mb4.6
BRVK MLR MLR
comp=Z,109nm,16.0s,MS4.3
BRVK Borovoye 83.19 33 *e*P **P 23 41 29.2 +0.6**
comp=Z,5.3nm,0.9s,mb4.6
BVAR Borovoye Array 83.27 33 P **P 23 41 29.6 +0.6**
comp=Z,2.6nm,0.7s,mb4.4,baz=298,slow=3.1,SNR=18
BILL Bilibino 83.33 349⇑ *e*P **P 23 41 29.4 +0.4**
BILL pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
BILL Bilibino 83.33 349 *e*P **P 23 41 28.8 -0.2**
comp=Z,12nm,1.1s,mb4.8
BOSA Boshof 86.54 124 LR LR 00 12 48.7
comp=Z,162nm,19.6s,MS4.4,baz=336,slow=30
KURK Kurchatov 88.70 32 P **P 23 41 55.6 -0.3**
comp=Z,1.2nm,0.7s,mb4.3,baz=309,slow=5.2,SNR=8.1
KURK LR LR 00 22 24.9
comp=Z,62nm,19.0s,MS4.0,baz=280,slow=36
KURK Kurchatov 88.70 32 *ce*P **P 23 41 57.4 +1.5**
KURK pmax pmax
comp=Z,4.0nm,1.2s,mb4.6
ZALV Zalesovo Beam 89.21 27 P **P 23 41 58.2 0.0**
comp=Z,2.9nm,0.8s,mb4.7,baz=305,slow=5.2,SNR=6.9
PETK Petropavlovsk- 98.70 346 LR LR 00 25 26.2
comp=Z,73nm,19.3s,MS4.2,baz=62,slow=34
HHC Hu-ho-hao-te 109.87 19 *e*Pdif Pdif 23 43 27.5 -4.0
HHC PP PP 23 48 04.5 -0.5
HHC SKS SKSdf 23 54 40.5 -5.7
HHC S Sdif 23 55 36.3 -8.4
HHC LR LR
comp=N,63nm,21.4s,MS4.5
HHC LR LR
comp=E,110nm,21.4s,MS4.5
HHC LR LR
comp=Z,49nm,23.8s,MS4.0
LZH Lanzhou 111.44 27 *e*PKP PKiKP 23 47 37.5 +0.5
LZH sPKP 23 47 42.3
LZH LR LR
comp=N,170nm,18.2s
LZH LR LR
comp=Z,240nm,20.3s,MS4.8
CD2 Chengdu 115.84 30 *e*PKP PKPdf 23 47 44.0 -1.6
CD2 sPKP 23 47 51.0
CD2 PP PP 23 48 52.0 +4.1
CD2 PKS 23 51 19.3
CD2 SKS SKSdf 23 54 51.3 -6.8
CD2 SKKS SKKSac 23 55 39.5 -11
CD2 AMB AMB
comp=Z,100nm,8.4s
CD2 LR LR
comp=N,130nm,16.2s
CD2 LR LR
comp=Z,160nm,17.2s,MS4.7
NJ2 Nanjing 120.11 16 *e*PKP PKPdf 23 47 49.8 -4.0
KMI Kunming 120.22 34 PKP PKPdf 23 47 53.0 -1.2
KMI sPKP 23 48 00.5
GYA Guiyang 120.96 30 *e*Pdif Pdif 23 44 19.3 -1.5
GYA PKP PKPdf 23 47 53.8 -1.8
GYA PP PP 23 49 25.5 +2.1
GYA AMB AMB
comp=Z,110nm,7.9s
CMAR Chiang Mai Arr 123.43 42 PKP PKPdf 23 47 59.8 -0.7
comp=Z,0.6nm,0.3s,baz=283,slow=2.9,SNR=3.5

CASC 28 23:32:59.2±2.1, 9°.36N×82°.76W, h5km, MD3.7, 1C-1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNI	**Changuinola**	**0.25**	**78**	*e*P	Pg	23 33 04.5	+0.5
CNI				*e*S	Sg	23 33 09.3	+1.9
CTCR	**Cotoan**	**0.46**	**180⇓**	*i*P	Pg	23 33 08.9	+0.7
CTCR				*e*S	Sg	23 33 16.2	+2.0
BAR1		**0.56**	**258⇑**	*i*P	Pg	23 33 10.1	+0.3
BRU2	**Volcan**	**0.57**	**173**	*i*P	Pg	23 33 10.7	+0.5
BRU2				*e*S	Sg	23 33 19.5	+1.9
ACR	**Cerro Adams**	**0.81**	**210**	*e*P	Pg	23 33 15.2	+0.4
ACR				*e*S	Sg	23 33 28.6	+3.3
BUS	**Buena Vista**	**1.00**	**281**	*e*P	Pg	23 33 18.1	-0.3
URSC	**Urasca**	**1.11**	**295**	*e*P	Pg	23 33 19.3	-1.2
QCR	**Quepos**	**1.39**	**273**	*e*P	Pn	23 33 24.9	-0.3
QCR				*e*S	Sb	23 33 42.4	-1.2
LAJ	**Bijagual**	**1.43**	**290**	*e*P	Pn	23 33 31.5	+5.7
LAJ				*e*S	Sb	23 33 56.0	+11
PRS1	**Puriscal**	**1.65**	**292**	*e*P	Pn	23 33 28.9	+0.1
PRS1				*e*S	Sn	23 33 52.9	+2.5
CGA2	**Cerro Gallo 2**	**1.80**	**291**	*e*P	Pn	23 33 31.2	+0.3
CGA2				*e*S	Sn	23 33 54.0	-0.2

IDC 28 23:38:09.0±1.3, 10°.60N×91°.43E, h0km, mb3.6/7, mb1 3.7/7, mb1mx3.5/23, mbtmp3.6/7, Error ellipse: s-maj=55.1km s-min=20.5km az=54.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.89**	**350**	P	P	23 45 19.6	+0.3
	1.1nm,0.8s,baz=118,slow=9.8,SNR=5.1						
SONM	**Songino Array**	**39.19**	**16**	P	P	23 45 38.1	-0.6
	0.2nm,0.3s,baz=189,slow=8.6,SNR=3.9						
KURK	**Kurchatov**	**41.36**	**348**	P	P	23 45 56.4	-0.2
	0.4nm,0.8s,baz=166,slow=6.5,SNR=3.0						
WRA	**Warramunga Arr**	**52.02**	**126**	P	P	23 47 20.8	+0.1
	0.6nm,0.9s,baz=302,slow=9.7,SNR=3.1						
ASAR	**Alice Springs**	**53.71**	**130**	P	P	23 47 33.1	0.0
	0.6nm,0.7s,baz=303,slow=6.8,SNR=5.1						
BRTR	**Keskin Array B**	**58.63**	**310**	P	P	23 48 07.8	-0.3
	0.3nm,0.7s,baz=98,slow=7.4,SNR=3.0						
FINES	**FINESS Array B**	**69.06**	**332**	P	P	23 49 16.9	+0.4
	1.1nm,0.8s,baz=141,slow=9.0,SNR=3.4						

*IDC **28** 23:55:18.3±0.5, 31°.98N×104°.42E, h0km, mb4.3/19, mb1 4.4/21, mb1mx4.3/28, mbtmp4.3/21, ML3.8/2, MS3.3/4, Ms1 3.3/4, ms1mx2.8/34, Error ellipse: s-maj=19.8km s-min=12.0km az=54.0*
*BJI **28** 23:55:19.4, 32°.08N×104°.69E, h13km, mB4.3/11, mb4.5/17, ML4.4/22, Ms4.2/27, Ms7 3.9/25*
*NEIC **28** 23:55:19.8±0.3, 32°.11N×104°.69E, h10km, mb4.6/28, Error ellipse: s-maj=8.9km s-min=5.4km az=83.0*
*ISCJB **28** 23:55:19.3±1.0, 32°.04N±0°.03×104°.52E±0°.04, h15km±6km, mb4.5/61, MS3.6/6, Error ellipse: s-maj=5.4km s-min=4.2km az=163.6*
*MOS **28** 23:55:21.8±1.1, 32°.05N×104°.45E, h33km, mb4.8/22, Error ellipse: s-maj=12.0km s-min=6.8km az=109.8*
*SZGRF **28** 23:55:31.4, 32°.59N×103°.42E, h33km, mb4.7, Sichuan, China*

ISC 28 23:55:18.7±0.7, 32°.08N±0°.02×104°.59E±0°.03, h0km±4km, n169, σ1$07/185, mb4.6/61, MS3.6/6, 23C-9D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.37**	**211**	Pg	**Pg**	**23 55 46.0**	**+1.1**
CD2				Sg	**Sg**	**23 56 05.0**	**+2.4**
CD2				smax			
	comp=N,13μm,0.7s						
LZH	**Lanzhou**	**4.04**	**351**	Pn	**Pn**	**23 56 25.0**	**+3.3**
LZH				Pg	**Pg**	**23 56 35.5**	**-0.6**
LZH				Sn	**Sn**	**23 57 12.0**	**+2.3**
LZH				Sg	**Sg**	**23 57 28.3**	**-0.2**
LZH				smax			
	comp=N,1μm,0.9s						
LZH				smax			
	comp=E,1μm,0.8s						
LZH				LR	LR		
	comp=N,2μm,7.6s						
LZH				LR	LR		
	comp=Z,2μm,9.5s						
XAN	**Xi'an**	**4.13**	**61**	Pn	**Pn**	**23 56 23.5**	**+0.5**
XAN				Pg	**Pg**	**23 56 35.0**	**-2.8**
XAN				Sn	**Sn**	**23 57 07.5**	**-4.4**
XAN				Sg	**Sg**	**23 57 30.5**	**-0.9**
XAN				smax			
	comp=N,970nm,0.6s						
XAN				smax			
	comp=E,370nm,0.5s						
GYA	**Guiyang**	**5.89**	**162**	Pn	**Pn**	**23 56 48.0**	**+0.8**
GYA				Sn	**Sn**	**23 57 54.5**	**-0.9**
GYA				Sg	**Sg**	**23 58 20.5**	**-7.5**
GYA				smax			
	comp=N,340nm,0.9s						
GYA				smax			
	comp=E,350nm,1.0s						
GYA				LR	LR		
	comp=N,390nm,2.3s						
GYA				LR	LR		
	comp=E,280nm,2.0s						
GYA				LR	LR		
	comp=Z,480nm,2.0s						
KMI	**Kunming**	**7.12**	**194**	Pn	**Pn**	**23 57 05.3**	**+1.2**
KMI				Sn	**Sn**	**23 58 22.0**	**-3.7**
KMI				smax			
	comp=N,67nm,1.5s						
KMI				smax			
	comp=E,92nm,1.5s						
KMI				LR	LR		
	comp=N,500nm,3.8s						
KMI				LR	LR		
	comp=E,580nm,3.8s						
KMI				LR	LR		
	comp=Z,320nm,5.7s						
GTA	**Gaotai**	**8.28**	**333⇓**	*e*P	**Pn**	**23 57 21.3**	**+1.4**
GTA				pP		23 57 24.5	
GTA				sP		23 57 27.3	
GTA				S	**Sn**	**23 58 55.5**	**+1.5**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,48nm,3.6s						
GTA				LR	LR		
	comp=N,420nm,10.8s						
GTA				LR	LR		
	comp=E,380nm,12.3s						
GTA				LR	LR		
	comp=Z,260nm,10.5s						
WHN	**Wuhan**	**8.49**	**98**	P	**Pn**	**23 57 25.8**	**+2.9**
WHN				S	**Sn**	**23 58 53.0**	**-6.4**
WHN				LR	LR		
	comp=N,1μm,4.2s						
WHN				LR	LR		
	comp=E,1μm,5.2s						
WHN				LR	LR		
	comp=Z,1μm,10.0s						
HHC	**Hu-ho-hao-te**	**10.39**	**31**	*e*P	**Pn**	**23 57 51.0**	**+2.1**
HHC				pP		23 57 55.5	
HHC				sP		23 57 58.0	
HHC				PP		23 57 59.5	
HHC				S	**Sn**	**23 59 47.5**	**+1.5**
HHC				pmax	pmax		
	comp=Z,13nm,0.9s						
HHC				pmax	pmax		
	comp=Z,55nm,4.9s						
HHC				LR	LR		
	comp=N,410nm,6.9s						
HHC				LR	LR		
	comp=E,680nm,8.3s						
HHC				LR	LR		
	comp=Z,420nm,7.9s						
LSA	**Lhasa**	**11.79**	**262**	Pg	**Pn**	**23 58 08.0**	**0.0**
LSA				Sg	Px	23 59 02.0	
LSA				smax			
	comp=N,10.0nm,1.1s						
LSA				smax			
	comp=E,2μm,0.8s						
LSA	**Lhasa**	**11.79**	**262**	P	**Pn**	**23 58 08.5**	**+0.5**
NJ2	**Nanjing**	**12.10**	**86**	*e*P	**Pn**	**23 58 12.3**	**-0.1**
NJ2				pP		23 58 15.5	
NJ2				sP		23 58 18.5	
NJ2				PP		23 58 21.8	
NJ2				S	**Sn**	**00 00 26.0**	**-2.1**
NJ2				pmax	pmax		
	comp=Z,40nm,10.6s						
NJ2				LR	LR		
	comp=N,310nm,13.5s						
NJ2				LR	LR		
	comp=E,830nm,11.9s						
NJ2				LR	LR		
	comp=Z,790nm,11.7s						
QIZ	**Qiongzhong**	**13.83**	**159**	P	**Pn**	**23 58 38.5**	**+2.4**
QIZ				S	**Sn**	**00 01 12.0**	**+1.6**
QIZ				LR	LR		
	comp=N,270nm,12.0s						
QIZ				LR	LR		
	comp=Z,370nm,10.3s						
CHTO	**Chiang Mai**	**14.16**	**202**	*e*Pn	**Pn**	**23 58 43.6**	**+3.1**
CHTO				*e*		23 58 48.9	
CM31	**Chiang Mai Arr**	**14.49**	**202**	*e*Pn	**Pn**	**23 58 46.2**	**+1.2**
CM31				*e*		23 58 52.6	
CMAR	**Chiang Mai Arr**	**14.49**	**202**	Pn	**Pn**	**23 58 44.3**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=12,slow=11,SNR=9.9						
TAPN	**Taplejung**	**15.40**	**257**	*e*P	**Pn**	**23 58 55.3**	**-2.0**
	comp=Z,32nm,0.8s						
SONM	**Songino Array**	**15.79**	**4**	Pn	**Pn**	**23 59 03.9**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=178,slow=11,SNR=6.3						
SONM				LR	LR	00 05 34.9	
	comp=Z,130nm,21.1s,baz=176,slow=39						
ODAN	**Odare**	**15.85**	**255**	*e*P	**Pn**	**23 59 01.0**	**-2.2**
	comp=Z,68nm,0.9s						
ULN	**Ulaanbaatar**	**15.87**	**6**	*e*P	**Pn**	**23 59 00.2**	**-3.1**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ULN	**Ulaanbaatar**	**15.87**	**6**	*e*Pn	**Pn**	**23 59 00.2**	**-3.1**
	comp=Z,5.1nm,0.9s						
ULN				*e*		23 59 07.5	
RAMN	**Ramite**	**16.47**	**257**	*e*P	**Pn**	**23 59 08.6**	**-2.5**
GUN	**Gumba**	**16.73**	**260**	*e*P	**Pn**	**23 59 12.6**	**-1.8**
	comp=Z,58nm,0.8s						
PKI	**Pulchoki**	**17.23**	**260**	*e*P	**Pn**	**23 59 18.1**	**-2.7**
	comp=Z,43nm,0.6s						
PKIN	**Phulchoki**	**17.24**	**260**	*e*P	**Pn**	**23 59 19.0**	**-1.9**
	comp=Z,58nm,0.7s						
KKN	**Kakani**	**17.27**	**261**	*e*P	**Pn**	**23 59 19.2**	**-2.0**
	comp=Z,29nm,0.7s						
DMN	**Daman**	**17.48**	**260**	*e*P	**Pn**	**23 59 21.7**	**-2.1**
	comp=Z,34nm,0.8s						
WMQ	**Urumqi**	**17.70**	**316**	*e*P	**Pn**	**23 59 27.0**	**+0.5**
WMQ				sP	sP	23 59 34.0	+6.4
WMQ				PP		23 59 42.0	
WMQ				S	**Sn**	**00 02 42.0**	**-2.3**
WMQ				SS		00 03 04.0	
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
WMQ				LR	LR		
	comp=N,84nm,6.0s						
WMQ				LR	LR		
	comp=E,110nm,6.0s						
WMQ				LR	LR		
	comp=Z,94nm,6.0s						
TLY	**Talaya**	**19.59**	**358**	*e*P	**Pn**	**23 59 49.3**	**-0.2**
TLY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TLY				MLR	MLR		
	comp=Z,150nm,11.0s						
KSRS	**Korea Array**	**19.89**	**68**	P	**Pn**	**23 59 52.9**	**-0.2**
	comp=Z,5.0nm,0.7s,baz=250,slow=10,SNR=14						
KSRS				LR	LR	00 08 43.6	
	comp=Z,49nm,20.1s,baz=260,slow=40						
MK31	**Makanchi Array**	**22.53**	**317**	*e*P	**P**	**00 00 20.3**	**+0.4**
MKAR	**Makanchi Array**	**22.53**	**317**	P	**P**	**00 00 20.3**	**+0.4**
	comp=Z,5.2nm,0.8s,mb4.1,baz=94,slow=17,SNR=29						
MKAR	**Makanchi Array**	**22.53**	**317**	P	**P**	**00 00 20.3**	**+0.4**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MKAR	**Makanchi Array**	**22.53**	**317**	P	**P**	**00 00 20.3**	**+0.4**
KSH	**Kashi**	**24.30**	**296**	P	**P**	**00 00 41.8**	**+4.1**
KSH				pP		00 00 46.0	
KSH				sP	sP	00 00 48.8	+11
KSH				PP		00 01 18.0	
KSH				PcP	PcP	00 04 20.8	+3.2
KSH				S	**S**	**00 04 59.8**	**+2.2**
KSH				sS	sS	00 05 06.5	+8.8
KSH				SS		00 05 55.3	
KSH				ScP	ScP	00 07 57.5	+0.1
KSH				PcS	PcS	00 07 59.3	+1.9
KSH				ScS	ScS	00 11 44.3	-0.5
KSH				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.4						
KSH				LR	LR		
	comp=N,84nm,4.2s						
KSH				LR	LR		
	comp=E,100nm,5.7s						
KSH				LR	LR		
	comp=Z,100nm,5.5s						
TKM2	**Tokmak 2**	**25.30**	**304**	*e*P	**P**	**00 00 48.0**	**+1.2**
	comp=Z,14nm,1.4s,mb4.5						
UCH	**Uchtor**	**25.90**	**302**	*e*P	**P**	**00 00 54.5**	**+2.3**
	comp=Z,10nm,1.1s,mb4.4						
ZAA0	**Zalesovo Array**	**26.03**	**333**	*e*P	**P**	**00 00 53.5**	**+0.2**
ZALV	**Zalesovo Beam**	**26.03**	**333**	P	**P**	**00 00 53.4**	**+0.2**
	comp=Z,22nm,0.6s,mb5.0,baz=130,slow=10.0,SNR=108						
ZALV	**Zalesovo Beam**	**26.03**	**333**	P	**P**	**00 00 53.4**	**+0.1**
ZALV				pmax	pmax		
	comp=Z,22nm,0.6s,mb5.0						
ZALV	**Zalesovo Beam**	**26.03**	**333**	P	**P**	**00 00 53.4**	**+0.2**
KLR	**Kul'dur**	**26.59**	**42**	*e*P	**P**	**00 01 01.7**	**+3.4**
KLR				MLR	MLR		
	comp=Z,800nm,12.0s,MS4.5						
KURK	**Kurchatov**	**26.72**	**322**	P	**P**	**00 00 59.2**	**-0.3**
	comp=Z,3.7nm,0.7s,mb4.2,baz=130,slow=8.9,SNR=35						
KURK				PcP	PcP	00 04 21.9	-1.0
	comp=Z,1.3nm,0.6s,baz=120,slow=2.2,SNR=5.3						
KURK	**Kurchatov**	**26.72**	**322**	*d i*P	**P**	**00 00 59.7**	**+0.1**
KURK				pmax	pmax		
	comp=Z,10.0nm,1.5s,mb4.3						
KURK				MLR	MLR		
	comp=Z,75nm,18.0s,MS3.3						
KURK	**Kurchatov**	**26.72**	**322**	*e*P	**P**	**00 00 59.8**	**+0.3**
	comp=Z,5.0nm,0.8s,mb4.3						
MJAR	**Matsushiro Arr**	**28.04**	**72**	P	**P**	**00 01 14.9**	**+3.3**
	comp=Z,0.8nm,0.4s,mb3.9,baz=289,slow=3.8,SNR=4.6						
MJAR				LR	LR	00 12 32.7	

comp=Z,52nm,19.5s,MS3.1,baz=280,slow=37
MJAR Matsushiro Arr 28.04 72 P **P** **00 01 14.9 +3.4**
MJAR pmax pmax
comp=Z,1.0nm,0.4s
MJAR MLR MLR
comp=Z,52nm,19.5s
HABR Khabarovsk 28.18 46 *e*P **P** **00 01 19.9 +7.2**
HABR PPP 00 02 07.6
HABR 00 04 23.8
HABR S **S** **00 05 58.2 -0.8**
HABR pmax pmax
comp=N,21nm,2.3s
HABR pmax pmax
comp=E,28nm,2.3s
HABR pmax pmax
comp=Z,24nm,1.9s,mb4.7
HABR MLR MLR
comp=Z,99nm,19.0s,MS3.4
PSI Prapat 29.61 192 P **P** **00 01 24.9 -0.8**
comp=Z,3.0nm,0.3s,mb4.5,baz=195,slow=13,SNR=7.5
PSI LR LR 00 15 02.4
comp=Z,96nm,20.3s,MS3.4,baz=276,slow=40
PSI Prapat 29.61 192 P **P** **00 01 24.9 -0.7**
PSI pmax pmax
comp=Z,3.0nm,0.3s,mb4.6
PSI MLR MLR
comp=Z,96nm,20.3s,MS3.4
KBL Kabul 29.71 284 *e*P **P** **00 01 28.4 +1.9**
comp=Z,12nm,1.2s,mb4.6
BVAR Borovoye Array 32.29 321 P **P** **00 01 48.9 0.0**
comp=Z,1.0nm,0.5s,mb4.0,baz=114,slow=9.9,SNR=13
BVAR PcP PcP 00 04 36.0 -1.1
comp=Z,0.7nm,0.5s,baz=150,slow=1.2,SNR=6.3
BRVK Borovoye 32.36 321 *c*e*P **P** **00 01 50.5 +0.9**
BRVK pmax pmax
comp=Z,6.0nm,1.7s,mb4.2
BRVK MLR MLR
comp=Z,126nm,18.0s,MS3.6
BRVK Borovoye 32.36 321 *e*P **P** **00 01 49.8 +0.2**
comp=Z,4.5nm,1.1s,mb4.3
SVE Sverdlovsk 38.97 323⇑*e*P **P** **00 02 47.4 +1.2**
SVE pmax pmax
comp=Z,13nm,1.2s,mb4.4
ARU Arti 39.92 321 *c i*P **P** **00 02 54.2 0.0**
ARU S **S** **00 09 00.7 +0.8**
ARU SS SS 00 11 52.8 -3.2
ARU pmax pmax
comp=Z,21nm,1.0s,mb4.7
ARU Arti 39.92 321 *e*P **P** **00 02 54.6 +0.4**
comp=Z,16nm,0.8s,mb4.7
PETK Petropavlovsk- 43.20 45 P **P** **00 03 21.7 +0.5**
comp=Z,3.4nm,0.8s,mb4.1,baz=238,slow=5.7,SNR=2.9
PETK Petropavlovsk- 43.20 45 P **P** **00 03 21.7 +0.5**
PETK pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
ZEI Tsey 48.42 301 *e*P **P** **00 04 02.6 0.0**
ZEI pmax pmax
comp=Z,6.0nm,0.4s,mb5.1
KIV Kislovodsk 49.13 303 *i*P **P** **00 04 08.7 +0.7**
KIV pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
KIV Kislovodsk 49.13 303 *e*P **P** **00 04 08.7 +0.8**
comp=Z,9.1nm,1.0s,mb4.8
VSR Storozhevoye 50.73 312 *e*P **P** **00 04 19.7 -0.3**
VSR pmax pmax
comp=Z,7.0nm,0.5s,mb4.8
VSR pmax pmax
comp=N,6.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,0.9s
JOF Joensuu 54.42 327 *e*P **P** **00 04 46.2 -1.0**
JOF pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
JOF Joensuu 54.42 327 *e*p **P** **00 04 46.2 -1.0**
comp=Z,2.2nm,0.4s,mb4.5
JOF Joensuu 54.42 327 *e*p **P** **00 04 46.2 -1.0**
comp=Z,2.2nm,0.4s,mb4.5
SIM Simferopol' 54.99 305 *e*P **P** **00 04 52.0 +0.4**
SIM pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
ARCES ARCESS Array B 56.54 336 P **P** **00 05 01.8 -0.6**
comp=Z,3.6nm,0.4s,mb4.8,baz=84,slow=7.6,SNR=90
ARCES ARCESS Array B 56.54 336 P **P** **00 05 01.8 -0.5**
ARCES pmax pmax
comp=Z,4.0nm,0.4s
ARCES ARCESS Array B 56.54 336 P **P** **00 05 01.8 -0.6**
BR131 Keskin Array S 56.62 299 *e*P **P** **00 05 03.1 -0.3**
comp=Z,0.8nm,0.5s,mb4.0
BRTR Keskin Array B 56.62 299 P **P** **00 05 03.0 -0.4**
comp=Z,1.4nm,0.7s,mb4.1,baz=104,slow=6.3,SNR=11
BRTR Keskin Array B 56.62 299 P **P** **00 05 03.0 -0.4**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
KAF Kangasniemi 56.80 327 *e*P **P** **00 05 02.7 -1.6**
KAF pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
KAF Kangasniemi 56.80 327 *e*p **P** **00 05 02.7 -1.6**
comp=Z,2.8nm,0.5s,mb4.5
KAF Kangasniemi 56.80 327 *e*p **P** **00 05 02.7 -1.6**
comp=Z,2.8nm,0.5s,mb4.5
FINES FINESS Array B 56.99 326 P **P** **00 05 05.2 -0.5**
comp=Z,6.7nm,0.8s,mb4.7,baz=84,slow=7.7,SNR=33
FINES FINESS Array B 56.99 326 P **P** **00 05 05.2 -0.4**
FINES pmax pmax
comp=Z,7.0nm,0.8s
AKASG Malin Array Be 57.02 313 P **P** **00 05 05.0 -1.0**
comp=Z,5.0nm,0.5s,mb4.8,baz=67,slow=7.5,SNR=13
AKASG Malin Array Be 57.02 313 *c*e*P **P** **00 05 05.3 -0.8**
AKASG pmax pmax
comp=Z,5.0nm,0.5s
IDID Didziasalis 57.60 319 *e*P **P** **00 05 10.2 +0.2**
IDID AMB AMB 00 05 10.7
comp=Z,3.4nm,0.8s,mb4.4
IZAR Zarasai 57.79 319 *e*P **P** **00 05 11.3 -0.1**
IZAR AMB AMB 00 05 11.9
comp=Z,1.9nm,1.0s,mb4.1
IIGN Ignalina 57.88 319 *e*P **P** **00 05 12.3 +0.2**
IIGN AMB AMB 00 05 12.8
comp=Z,3.8nm,0.6s,mb4.6
ISAL Salakas 57.89 319 *e*P **P** **00 05 12.1 -0.1**
ISAL AMB AMB 00 05 12.8
comp=Z,2.9nm,0.7s,mb4.4
WRAB Tennant Creek 59.06 147 *e*P **P** **00 05 20.3 -0.3**
comp=Z,12nm,1.0s,mb4.9
WRA Warramunga Arr 59.06 147 P **P** **00 05 20.3 -0.4**
comp=Z,4.6nm,0.8s,mb4.6,baz=339,slow=7.7,SNR=46
WRA Warramunga Arr 59.06 147 P **P** **00 05 20.3 -0.3**
WRA pmax pmax
comp=Z,5.0nm,0.8s
VRI Vrincioaia 59.81 308⇓*i*P **P** **00 05 26.3 +0.7**
PLOR Plostina 59.87 308⇑*i*P **P** **00 05 26.9 +0.9**
BURAR Bucovina Array 60.32 310⇓*i*P **P** **00 05 29.2 +0.1**
BUR08 Bucovina Ar. S 60.32 310 *e*P **P** **00 05 28.9 -0.2**
MLR Muntele Rosu 60.44 308⇑*i*P **P** **00 05 30.1 +0.1**
LVV L'vov 60.47 313 *e*P **P** **00 05 29.9 -0.2**
VOIR 61.06 308⇓*i*P **P** **00 05 34.3 +0.1**
KWP Kalwaria Pacla 61.34 313 *e*P **P** **00 05 36.3 +0.3**
KWP Kalwaria Pacla 61.34 313 *e*P **P** **00 05 36.0 -0.1**
comp=Z,25nm,1.0s,mb5.3
KWP Kalwaria Pacla 61.34 313⇓*i*P **P** **00 05 36.7 +0.7**
TRPA Tarpa 61.89 311⇑*i*P **P** **00 05 41.6 +1.8**
ASAR Alice Springs 62.12 149 P **P** **00 05 41.4 -0.1**
comp=Z,2.2nm,0.7s,mb4.5,baz=339,slow=6.5,SNR=14
ASAR Alice Springs 62.12 149 P **P** **00 05 41.4 0.0**
ASAR pmax pmax
comp=Z,2.0nm,0.7s
STHS Stebnicka Huta 62.32 313 *e*P **P** **00 05 42.9 +0.3**
comp=Z,2.7nm,0.8s,mb4.5
NIE Niedzica 62.90 313 *e*P **P** **00 05 46.9 +0.4**
OJC Ojcow 62.96 314 *e*P **P** **00 05 45.4 -1.5**
BZS Buzias 63.29 309⇑*i*P **P** **00 05 49.1 -0.1**
NB2 NORSAR Subarra 64.06 327 P **P** **00 05 52.3 -1.6**
comp=Z,3.5nm,0.7s,mb4.7,baz=72,slow=6.9
NOA NORSAR Array B 64.06 327 P **P** **00 05 53.0 -1.0**
comp=Z,3.4nm,0.7s,mb4.7,baz=73,slow=6.7,SNR=18
NOA NORSAR Array B 64.06 327 P **P** **00 05 53.0 -0.9**
NOA pmax pmax
comp=Z,3.0nm,0.7s
OKC Ostrava-Krasne 64.09 314 *e*P **P** **00 05 54.3 -0.1**
OKC Ostrava-Krasne 64.09 314 *e*P **P** **00 05 54.3 -0.1**
VYHS Vyhne 64.12 312 *e*P **P** **00 05 54.7 +0.1**
comp=Z,3.4nm,1.3s,mb4.4
MORC Moravsky Berou 64.48 314 *e*P **P** **00 05 54.6 -2.3**
comp=Z,5.8nm,1.1s,mb4.7
MORC Moravsky Berou 64.48 314⇓*i*P **P** **00 05 57.5 +0.6**
DPC Dobruska-Polom 65.02 315 *e*P **P** **00 06 01.1 +0.7**

DPC Dobruska-Polom 65.02 315 *e*P **P** **00 06 01.1 +0.7**
UPC Upice 65.15 315 *e*P **P** **00 06 01.6 +0.4**
UPC Upice 65.15 315 *e*P **P** **00 06 01.6 +0.4**
ZST Bratislava 65.31 313 *e*P **P** **00 06 02.6 +0.3**
TREC Trest 65.90 314 *e*P **P** **00 06 06.5 +0.3**
TREC Trest 65.90 314 *e*P **P** **00 06 06.5 +0.3**
CSNA Conrad Observa 66.18 313⇑*i*P **P** **00 06 08.5 +0.5**
comp=Z,3.7nm,1.0s,mb4.5
PRU Pruhonice 66.22 315 *e*P **P** **00 06 08.9 +0.7**
PRU Pruhonice 66.22 315 *e*P **P** **00 06 08.9 +0.7**
BRG Berggiesshubel 66.24 316 *e*P **P** **00 06 08.0 -0.3**
comp=Z,2.8nm,0.8s,mb4.6
CLL Collm 66.62 317 *i*P **P** **00 06 09.3 -1.5**
CLL *e* 00 06 22.0
CLL pmax pmax
comp=Z,3.0nm,0.9s,mb4.5
CLL Collm 66.62 317 *i*P **P** **00 06 09.3 -1.5**
comp=Z,3.0nm,0.9s,mb4.5
KHC Kasperske Hory 67.12 315 *e*P **P** **00 06 14.0 0.0**
KHC Kasperske Hory 67.12 315 *e*P **P** **00 06 14.0 0.0**
PERS Pernice 67.14 312 *i*P **P** **00 06 13.8 -0.3**
SOKA Soboth 67.18 312⇑*i*P **P** **00 06 14.2 -0.2**
comp=Z,5.5nm,0.8s,mb4.8
PPLA Purkeypile 67.61 29 *e*P **P** **00 06 16.9 +0.1**
comp=Z,6.9nm,0.9s,mb4.9
VISS Visnje 67.64 311 *i*P **P** **00 06 17.1 -0.2**
VOY Vojsko 68.16 311⇓*e*P **P** **00 06 19.8 -0.8**
VOY *e* 00 06 55.6
VOY *e* 00 07 37.8
GRF Grafenberg Arr 68.31 316 *e*P **P** **00 06 21.8 +0.4**
comp=Z,6.0nm,1.2s,mb4.7
GRF Grafenberg Arr 68.31 316 *e*P **P** **00 06 21.8 +0.4**
comp=Z,6.0nm,1.2s,mb4.7
TIP Timpagrande 69.05 304 *e*P **P** **00 06 26.0 -0.2**
comp=Z,5.1nm,0.7s,mb4.9
WTTA Wattenberg 69.07 313⇑*i*P **P** **00 06 25.9 -0.4**
comp=Z,4.5nm,0.5s,mb5.0
MOTA Moosalm 69.36 314⇓*i*P **P** **00 06 27.5 -0.6**
comp=Z,4.4nm,0.9s,mb4.7
KDAK Kodiak Island 69.80 34 *i*P **P** **00 06 30.2 -0.3**
MEM Membach 70.93 318 P **P** **00 06 37.2 -0.4**
INK Inuvik 71.10 19 *e*P **P** **00 06 37.0 -1.3**
comp=Z,2.3nm,0.8s,mb4.4
CDF Champ du Feu 71.20 316⇑*i*P **P** **00 06 38.8 -0.5**
comp=Z,4.8nm,0.5s,mb4.6
CDF Champ du Feu 71.20 316⇑*i*P **P** **00 06 38.8 -0.5**
comp=Z,2.4nm,0.5s,mb4.6
WLF Walferdange 71.28 317 P **P** **00 06 40.1 +0.3**
comp=Z,7.6nm,1.2s,mb4.7
WLF Walferdange 71.28 317 *e*P **P** **00 06 38.7 -1.0**
comp=Z,10nm,1.1s,mb4.9
BCLA Clavier 71.42 318 P **P** **00 06 40.6 +0.1**
KMBO Kilima Mbogo 71.53 257 *e*P **P** **00 06 42.5 +0.6**
comp=Z,5.8nm,0.9s,mb4.7
SNF Seneffe 71.95 319 P **P** **00 06 43.7 0.0**
comp=Z,13nm,3.2s
DOU Dourbes 71.97 318 P **P** **00 06 44.0 +0.1**
STKA Stephens Creek 72.61 148 P **P** **00 06 46.8 -1.0**
comp=Z,2.3nm,0.8s,mb4.3,baz=324,slow=8.7,SNR=2.6
LPG La Plagne 72.88 313⇑*i*P **P** **00 06 49.8 +0.4**
comp=Z,34nm,0.5s,mb5.4
LPG La Plagne 72.88 313⇑*i*P **P** **00 06 49.8 +0.4**
comp=Z,17nm,0.5s,mb5.4
LPL La Plagne 72.88 313⇑*i*P **P** **00 06 49.7 +0.3**
comp=Z,34nm,0.4s,mb5.5
LPL La Plagne 72.88 313⇑*i*P **P** **00 06 49.7 +0.3**
comp=Z,17nm,0.4s,mb5.5
BNI Bardonecchia 73.14 313 *e*P **P** **00 06 50.7 -0.2**
comp=Z,5.2nm,0.7s,mb4.8
SMF Signal de Mont 74.09 315⇑*i*P **P** **00 06 55.8 -0.7**
comp=Z,14nm,0.8s,mb4.7
SMF Signal de Mont 74.09 315⇑*i*P **P** **00 06 55.8 -0.7**
comp=Z,6.9nm,0.8s,mb4.7
AVF Avril sur Loir 74.31 316⇑*i*P **P** **00 06 57.2 -0.6**
comp=Z,13nm,0.9s,mb4.7
AVF Avril sur Loir 74.31 316⇑*i*P **P** **00 06 57.2 -0.6**
comp=Z,6.4nm,0.9s,mb4.7
TCF Toulx Ste Croi 75.25 316⇑*i*P **P** **00 07 02.9 -0.3**
comp=Z,6.7nm,0.7s,mb4.5
TCF Toulx Ste Croi 75.25 316⇑*i*P **P** **00 07 02.9 -0.3**
comp=Z,3.3nm,0.7s,mb4.5
KEST Kesra 75.86 303 P **P** **00 07 07.0 0.0**
comp=Z,0.8nm,0.7s,mb4.0,baz=76,slow=8.3,SNR=4.1
YKA Yellowknife Ar 80.64 17 P **P** **00 07 32.5 -0.4**
comp=Z,2.2nm,0.7s,mb4.3,baz=330,slow=4.8,SNR=7.8
YKA Yellowknife Ar 80.64 17 P **P** **00 07 32.5 -0.4**
YKA pmax pmax
comp=Z,2.0nm,0.7s
YKA Yellowknife Ar 80.64 17 P **P** **00 07 32.5 -0.4**
ESDC Sonseca Array 82.67 312 P **P** **00 07 44.1 +0.1**
comp=Z,0.9nm,0.6s,mb4.2,baz=42,slow=5.6,SNR=14
LSZ Lusaka 86.89 250 *e*P **P** **00 08 05.2 -0.4**
comp=Z,5.2nm,0.9s,mb4.8
FFC Flin Flon 90.57 15 *i*P **P** **00 08 22.6 +0.1**
OTAV Otavalo 147.73 6 *e*PKPbc PKPbc 00 15 06.4 +0.5
LPAZ La Paz 162.94 335 PKP PKPdf 00 15 23.4 0.0
comp=Z,0.6nm,0.9s,baz=45,slow=1.4,SNR=2.6
LPAZ La Paz 162.94 335 PKIKP PKPdf 00 15 23.4 0.0
LPAZ pmax pmax
comp=Z,1.0nm,0.9s

MAN 29 00:07:41, 8°.06N×123°.30E, h32km, mb4.3, ML3.2, MS3.0, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAGZ	**Pagadian**	**0.23**	**159**	*e*P	Pb	00 07 49.2	+1.4
PAGZ				*e*S	Sb	00 07 55.3	+3.0
IPIL	**Ipil**	**0.77**	**249**	*e*P	Pn	00 07 57.0	+1.3
IPIL				*e*S	Sn	00 08 07.1	+0.9
SNPH	**Sibulan**	**1.27**	**357**	*e*P	Pn	00 08 02.5	-0.1
SNPH				*e*S	Sn	00 08 40.8	+22
CGP	**Cagayan de Oro**	**1.43**	**74**⇑	*i*P	Pn	00 08 08.6	+3.9
CGP				*i* S	Sn	00 08 30.5	+7.9
ZMPH	**Zamboanga City**	**1.65**	**228**⇓	*i*P	Pn	00 08 03.1	-4.7
ZMPH				*i* S	Sn	00 08 22.1	-5.8
BUKP	**Musuan**	**1.75**	**96**	*e*P	Pn	00 08 09.8	+0.6
BUKP				*e*S	Sn	00 08 26.4	-4.0

IDC 29 00:16:43.7±2.8, 10°.24N×91°.56E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.4/24, mbtmp3.5/6, Error ellipse: s-maj=114.7km s-min=20.3km az=63.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**37.27**	**349**	P	P	00 23 57.2	0.0
	0.8nm,0.6s,baz=123,slow=9.5,SNR=6.8						
SONM	**Songino Array**	**39.50**	**16**	P	P	00 24 15.7	-0.3
	0.2nm,0.5s,baz=207,slow=9.1,SNR=2.4						
KURK	**Kurchatov**	**41.74**	**348**	P	P	00 24 33.9	-0.5
	0.2nm,0.4s,baz=165,slow=7.7,SNR=2.7						
FITZ	**Fitzroy Crossi**	**43.88**	**130**	P	P	00 24 52.2	0.0
	1.5nm,0.9s,baz=309,slow=12,SNR=2.1						
WRA	**Warramunga Arr**	**51.70**	**125**	P	P	00 25 53.3	+0.3
	0.2nm,0.3s,baz=301,slow=9.9,SNR=6.9						
ASAR	**Alice Springs**	**53.38**	**130**	P	P	00 26 05.2	-0.2
	0.4nm,0.8s,baz=302,slow=7.5,SNR=2.7						

BJI ***29*** *00:32:08.4, 10°.79N×91°.77E, h12km, mB5.0/30, mb4.8/52, Ms4.8/50, Ms7 4.6/46*

ISCJB ***29*** *00:32:09.4±0.8, 10°.98N±0°.03×91°.72E±0°.02, h10km±5km, mb4.8/162, MS4.5/62, Error ellipse: s-maj=5.1km s-min=3.6km az=17.3*

IDC ***29*** *00:32:09.7±0.4, 11°.03N×91°.76E, h0km, mb4.6/21, mb1 4.6/23, mb1mx4.6/26, mbtmp4.5/23, ML4.1/2, MS4.3/22, Ms1 4.3/22, ms1mx4.2/32, Error ellipse: s-maj=16.2km s-min=11.0km az=52.0*

MOS ***29*** *00:32:12.9±0.8, 11°.07N×91°.84E, h33km, mb5.2/76, MS4.4/23, Error ellipse: s-maj=8.3km s-min=4.3km az=122.7*

NEIC ***29*** *00:32:13.4±1.7, 11°.00N×91°.73E, h24km±11km, mb4.9/76, Error ellipse: s-maj=5.8km s-min=4.4km az=222.0*

SZGRF ***29*** *00:32:14.4, 10°.55N×90°.84E, h33km, mb4.8, MS4.3, Andaman Islands, India, region*

GCMT ***29*** *00:32:16.1±0.3, 11°.07N×91°.87E, h15km±1km, MW5.0, Moment Tensor Solution. s20,c26; s62,c94; Moment tensor: Scale 10^16^Nm; M_{rr}-1.97±.21; $M_{\theta\theta}$-0.83±.13; $M_{\phi\phi}$2.80±.14; $M_{r\theta}$1.15±.50; $M_{\theta\phi}$1.90±.09; $M_{\phi r}$-2.41±.42;*

Best double couple: $M_0$4.10000×10^16^ NP1:$\phi_0$237.00000°, δ41.00000°, λ-29.00000°. NP2:$\phi_0$350.00000°, δ71.00000°, λ-128.00000°. Principal axes: T 4.1800, Plg18.0000°, Azm107.0000°; N -0.1300, Plg35.0000°, Azm4.0000°; P -4.0500, Plg49.0000°, Azm219.0000°; Data Used: II G IU IC CN.

DJA ***29*** *00:32:23, 11°.34N×92°.02E, h101km, mb5.0/32*

ISC 29 00:32:13.2±0.8, 10°.98N±0°.03×91°.72E±0°.02, h22km±5km, h21km±2.2km: pP-P, n450, σ0°.96/460, mb4.8/162, MS4.5/62, 23C-28D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**10.20**	**42**	*e*Pn	**Pn**	**00 34 39.2**	**+0.9**
	25nm,0.7s						
CM31				*e*S	**Sn**	**00 36 25.9**	**-6.1**
CMAR	**Chiang Mai Arr**	**10.20**	**42**	Pn	**Pn**	**00 34 37.1**	**-1.2**
	0.9nm,0.3s,baz=236,slow=14,SNR=15						
CHTO	**Chiang Mai**	**10.45**	**41**	*e*P	**Pn**	**00 34 41.5**	**-0.3**
CHTO				*e*S	**Sn**	**00 36 45.9**	**+7.5**
CHTO	**Chiang Mai**	**10.45**	**41**	⇑P	**Pn**	**00 34 42.0**	**+0.2**
	SNR=6.1						
CHTO				⇑P		00 34 42.0	
	SNR=6.1						
KULM	**Kulim**	**10.49**	**122**	P	**Pn**	**00 34 42.3**	**-0.1**
KULM	**Kulim**	**10.49**	**122**	*e*Pn	**Pn**	**00 34 42.1**	**-0.3**
	39nm,1.0s						
VIS	**Vishakhapatnam**	**10.53**	**310**	*e*PKP	**Pn**	**00 34 42.3**	**-0.6**
PSI	**Prapat**	**10.82**	**138**	Pn	**Pn**	**00 34 48.1**	**+1.2**
	0.5nm,0.3s,baz=328,slow=14,SNR=5.6						
IPM	**Ipoh**	**11.26**	**124**	P	**Pn**	**00 34 53.2**	**+0.4**
PALK	**Pallekele**	**11.48**	**252**	*e*P	**Pn**	**00 34 55.9**	**-0.1**
PALK				pmax	pmax		
	comp=Z,153nm,1.0s						
PALK	**Pallekele**	**11.48**	**252**	*e*Pn	**Pn**	**00 34 55.9**	**-0.1**
	comp=Z,153nm,1.0s						
PALK				*e*S	**Sn**	**00 36 56.8**	**-6.9**
FRIM	**Kepong**	**12.48**	**127**	P	**Pn**	**00 35 11.1**	**+1.5**
HYB	**Hyderabad**	**14.27**	**298**	*i*P	**Pn**	**00 35 34.0**	**-0.1**
HYB				*e*S	**Sn**	**00 38 12.0**	**+0.2**
KGM	**Kluang**	**14.56**	**127**	P	**Pn**	**00 35 39.3**	**+1.3**
TRD	**Trivandrum**	**14.75**	**262**⇑	*e*PKP	Px	00 35 52.0	
TRD				*e*S	Sx	00 38 35.0	
MYKOM	**Kota Tinggi**	**15.12**	**126**	P	**Pn**	**00 35 46.3**	**+0.8**
NGP	**Nagpur**	**15.81**	**311**	*e*PKP	**Pn**	**00 35 52.9**	**-1.7**
NGP				*ex*	x	00 38 40.5	
ODAN	**Odare**	**16.31**	**346**	*e*P	**Pn**	**00 35 59.3**	**-1.6**
	comp=Z,62nm,0.7s						
RAMN	**Ramite**	**16.60**	**344**	*e*P	**Pn**	**00 36 02.8**	**-1.8**
	comp=Z,128nm,0.7s						
TAPN	**Taplejung**	**16.71**	**348**	*e*P	**Pn**	**00 36 05.3**	**-0.7**
	comp=Z,119nm,0.8s						
AKL	**Akola**	**17.12**	**306**	*e*PKP	**Pn**	**00 36 10.6**	**-0.5**
AKL				AMb	AMB	00 36 18.1	
	comp=Z,87nm,1.3s						
KMI	**Kunming**	**17.52**	**35**	⇓P	**Pn**	**00 36 17.0**	**+0.8**
KMI				pP	pP	00 36 19.8	-3.5
KMI				sP	sP	00 36 21.5	-4.7
KMI				PP		00 36 31.8	
KMI				S	**Sn**	**00 39 31.3**	**+0.6**
KMI				sS	sS	00 39 35.8	-12
KMI				SS		00 39 53.3	
KMI				PcP	PcP	00 40 57.3	+1.2
KMI				pmax	pmax		
	comp=Z,58nm,1.2s						
KMI				LR	LR		
	comp=N,3μm,16.5s						
KMI				LR	LR		
	comp=E,2μm,16.0s						
KMI				LR	LR		
	comp=Z,2μm,16.0s						
PKI	**Pulchoki**	**17.54**	**341**	*e*P	**Pn**	**00 36 16.3**	**0.0**
	comp=Z,104nm,0.7s						
PKIN	**Phulchoki**	**17.54**	**341**	*e*P	**Pn**	**00 36 16.5**	**+0.1**
	comp=Z,114nm,0.5s						
DMN	**Daman**	**17.67**	**340**	*e*P	**Pn**	**00 36 18.5**	**+0.5**
	comp=Z,138nm,0.7s						
GUN	**Gumba**	**17.71**	**343**	*e*P	**Pn**	**00 36 18.6**	**+0.1**
KKN	**Kakani**	**17.78**	**341**	*e*P	**Pn**	**00 36 20.0**	**+0.7**
	comp=Z,59nm,0.7s						
KAD	**Karad**	**18.12**	**292**	*e*PKP	**Pn**	**00 36 24.1**	**+0.5**
KAD				AMb	AMB	00 36 33.4	
	comp=Z,118nm,1.4s						
BHPL	**Bhopal**	**18.29**	**314**	*e*PKP	**Pn**	**00 36 25.0**	**-0.7**
BHPL				AMb	AMB	00 36 37.8	
	comp=Z,93nm,2.4s						
BHPL				*ex*	x	00 39 45.7	
LSA	**Lhasa**	**18.63**	**358**	P	**Pn**	**00 36 30.8**	**+1.1**
LSA				S	**Sn**	**00 39 59.5**	**+2.0**
POO	**Poona**	**18.83**	**296**	*e*PKP	**Pn**	**00 36 31.4**	**-0.9**
POO				AMb	AMB	00 36 42.9	
	comp=Z,105nm,0.7s						
QIZ	**Qiongzhong**	**19.23**	**63**	P	**Pn**	**00 36 36.0**	**-1.1**
QIZ				sP	sP	00 36 40.5	-4.7
QIZ				S	**Sn**	**00 40 08.8**	**-3.5**
QIZ				pmax	pmax		
	comp=Z,14nm,1.5s						
QIZ				pmax	pmax		
	comp=Z,600nm,9.7s						
QIZ				LR	LR		
	comp=N,2μm,17.3s						
QIZ				LR	LR		
	comp=Z,2μm,18.4s						
KSM	**Kuching**	**20.74**	**116**	P	**P**	**00 36 52.7**	**+0.1**
KSM	**Kuching**	**20.74**	**116**	*e*P	**P**	**00 36 51.8**	**-0.7**
	comp=Z,130nm,1.2s						
GYA	**Guiyang**	**20.88**	**40**⇑	*i*P	**P**	**00 36 53.5**	**-0.4**
GYA				S	**S**	**00 40 42.5**	**-3.3**
GYA				PcP	PcP	00 41 01.0	-1.0
GYA				SS		00 41 13.5	
GYA				pmax	pmax		
	comp=Z,20nm,0.9s						
GYA				pmax	pmax		
	comp=Z,90nm,2.8s						
GYA				LR	LR		
	comp=N,2μm,18.0s,MS4.7						
GYA				LR	LR		
	comp=E,2μm,17.1s,MS4.7						
GYA				LR	LR		
	comp=Z,3μm,20.2s,MS4.7						
PTH	**Pithoragarh**	**21.36**	**332**	*ex*	**P**	**00 37 02.0**	**+2.9**
SBUM	**Sibu**	**22.04**	**111**	P	**P**	**00 37 06.0**	**-0.5**
NDI	**New Delhi**	**22.23**	**324**	*e*PKP	**P**	**00 37 07.0**	**-1.5**
NDI				*ex*	x	00 41 06.0	
AJM	**Ajmer**	**22.30**	**316**	*ex*	**P**	**00 37 11.0**	**+1.8**
CD2	**Chengdu**	**22.76**	**28**⇓	*i*P	**P**	**00 37 13.3**	**-0.7**
CD2				pP		00 37 17.5	
CD2				sP	sP	00 37 20.8	-2.4
CD2				PP		00 37 42.3	
CD2				PcP	PcP	00 41 06.3	+0.7
CD2				S	**S**	**00 41 17.3**	**-4.7**
CD2				sS	sS	00 41 24.0	-8.6
CD2				SS		00 42 00.5	
CD2				PcS	PcS	00 44 43.8	-0.8
CD2				pmax	pmax		
	comp=Z,180nm,1.0s,mb5.5						
CD2				pmax	pmax		
	comp=Z,250nm,5.8s						
CD2				LR	LR		
	comp=N,1μm,15.6s,MS4.7						
CD2				LR	LR		
	comp=E,2μm,16.8s,MS4.7						
CD2				LR	LR		
	comp=Z,300nm,15.6s,MS3.8						
DDI	**Dehra Dun**	**23.06**	**329**	*e*PKP	**P**	**00 37 16.4**	**-0.8**
DDI				*ex*	x	00 41 39.0	
SDNR	**Sundarnagar**	**24.56**	**328**	*ex*	**P**	**00 37 33.5**	**+2.0**
KKM	**Kota Kinabalu**	**24.71**	**99**	P	**P**	**00 37 33.3**	**+0.3**
KKM	**Kota Kinabalu**	**24.71**	**99**	*e*P	**P**	**00 37 32.6**	**-0.4**
	comp=Z,36nm,1.1s,mb4.8						
BHK	**Bhakra**	**24.78**	**327**	*e*PKP	**P**	**00 37 33.0**	**-0.5**
KDM	**Kudat**	**25.13**	**97**	P	**P**	**00 37 36.3**	**-0.6**
SDKM	**Sandakan**	**25.75**	**100**	P	**P**	**00 37 42.5**	**0.0**
THN	**Thein Dam**	**25.94**	**328**	*ex*	**P**	**00 37 39.8**	**-4.3**
TSM	**Tawau**	**26.74**	**102**	P	**P**	**00 37 51.8**	**+0.2**
MYLDM	**Lahad Datu**	**27.12**	**100**	P	**P**	**00 37 55.0**	**+0.1**
LZH	**Lanzhou**	**27.30**	**22**	*e*P	**P**	**00 37 57.0**	**+0.8**
LZH				pP	pP	00 38 00.3	-2.6
LZH				sP	sP	00 38 03.0	-2.7
LZH				PP		00 38 44.3	
LZH				S	**S**	**00 42 34.0**	**-0.6**
LZH				SS		00 43 49.0	
LZH				pmax	pmax		

comp=Z,36nm,1.2s,mb4.8
LZH pmax pmax
comp=Z,180nm,4.5s
LZH LR LR
comp=E,2μm,16.0s
LZH LR LR
comp=Z,2μm,18.2s,MS4.8
XAN Xi'an 27.82 32 P **P** **00 37 58.8 -2.2**
XAN pP pP 00 38 03.5 -4.2
XAN sP sP 00 38 06.3 -4.1
XAN PP 00 38 47.8
XAN PcP PcP 00 41 16.3 -0.6
XAN S **S** **00 42 39.3 -3.6**
XAN SS 00 44 01.3
XAN ScP ScP 00 44 54.3 -2.2
XAN PcS PcS 00 44 56.0 -2.9
XAN ScS ScS 00 48 41.5 -7.2
XAN pmax pmax
comp=Z,2.0nm,1.1s
XAN pmax pmax
comp=Z,49nm,12.0s
XAN LR LR
comp=N,710nm,17.2s,MS4.4
XAN LR LR
comp=E,300nm,15.7s,MS4.4
XAN LR LR
comp=Z,230nm,17.5s,MS3.8
WHN Wuhan 28.64 44 P **P** **00 38 07.0 -1.3**
WHN LR LR
comp=N,3μm,17.8s,MS5.0
WHN LR LR
comp=E,2μm,18.7s,MS5.0
WHN LR LR
comp=Z,3μm,19.3s,MS4.8
TGY Tagaytay City 28.68 81 P **P** **00 38 08.6 -0.2**
comp=Z,78nm,0.4s,mb5.8,baz=257,slow=11,SNR=4.7
QZH Quanzhou 29.01 58 *e*P **P** **00 38 12.3 +0.6**
QZH S **S** **00 43 01.5 -0.3**
QZH LR LR
comp=N,4μm,21.9s
QZH LR LR
comp=E,2μm,15.3s
QZH LR LR
comp=Z,2μm,19.4s,MS4.7
GTA Gaotai 29.21 13⇓*e*P **P** **00 38 14.3 +1.1**
GTA pP pP 00 38 18.5 -1.5
GTA sP sP 00 38 21.3 -1.4
GTA S **S** **00 43 06.8 +2.2**
GTA sS sS 00 43 14.0 -1.7
GTA SS SS 00 44 38.0 -31
GTA pmax pmax
comp=Z,19nm,1.5s,mb4.6
GTA pmax pmax
comp=Z,69nm,5.7s
GTA LR LR
comp=N,550nm,17.4s,MS4.5
GTA LR LR
comp=E,710nm,16.2s,MS4.5
GTA LR LR
comp=Z,600nm,18.9s,MS4.2
YULB Yu-li 30.76 62 *e*P **P** **00 38 27.4 +0.2**
comp=Z,26nm,1.0s,mb5.0
KBL Kabul 31.27 322 *e*P **P** **00 38 32.0 +0.5**
KBL pmax pmax
comp=Z,19nm,1.1s,mb4.8
KBL Kabul 31.27 322 *e*P **P** **00 38 32.0 +0.5**
comp=Z,19nm,1.1s,mb4.8
KSH Kashi 31.68 336⇓*i*P **P** **00 38 34.3 -0.7**
KSH pP pP 00 38 38.8 -3.0
KSH sP sP 00 38 41.3 -3.2
KSH PP PP 00 39 38.0 -8.8
KSH PcP PcP 00 41 27.8 +1.1
KSH S **S** **00 43 39.8 -3.5**
KSH ScP ScP 00 45 09.3 +0.5
KSH PcS PcS 00 45 11.0 -0.1
KSH SS SS 00 45 27.5 -32
KSH ScS ScS 00 49 05.3 -1.5
KSH pmax pmax
comp=Z,13nm,0.8s,mb4.8
KSH pmax pmax
comp=Z,64nm,2.8s,mb5.0
KSH LR LR
comp=N,470nm,13.8s,MS4.7
KSH LR LR
comp=E,1μm,17.5s,MS4.7
KSH LR LR
comp=Z,420nm,15.0s,MS4.2
NJ2 Nanjing 32.65 46 *e*P **P** **00 38 43.5 -0.2**
NJ2 pP pP 00 38 47.3 -3.1
NJ2 sP sP 00 38 49.0 -4.2
NJ2 PP PP 00 39 50.3 -7.3
NJ2 S **S** **00 43 58.0 -0.6**
NJ2 pmax pmax
comp=Z,40nm,1.0s,mb5.3
NJ2 pmax pmax
comp=Z,190nm,3.5s
NJ2 LR LR
comp=N,1μm,15.6s,MS4.8
NJ2 LR LR
comp=E,940nm,19.5s,MS4.8
NJ2 LR LR
comp=Z,7μm,18.0s,MS5.4
WMQ Urumqi 32.90 355 *e*P **P** **00 38 46.0 +0.3**
WMQ sP sP 00 38 53.0 -2.2
WMQ PP PP 00 39 56.0 -4.3
WMQ S **S** **00 44 02.0 -0.2**
WMQ SS SS 00 46 02.0 -22
WMQ pmax pmax
comp=Z,30nm,1.0s,mb5.2
WMQ LR LR
comp=N,520nm,12.0s,MS4.9
WMQ LR LR
comp=E,1μm,12.0s,MS4.9
WMQ LR LR
comp=Z,350nm,12.0s,MS4.3
SSE Sheshan 33.84 49 *e*P **P** **00 38 54.5 +0.4**
SSE pP pP 00 39 03.8 +3.0
SSE sP sP 00 39 08.0 +4.4
SSE S **S** **00 44 17.3 +0.2**
SSE sS sS 00 44 32.5 +4.3
SSE pmax pmax
comp=Z,22nm,0.7s,mb5.2
SSE pmax pmax
comp=Z,150nm,4.2s
SSE LR LR
comp=N,970nm,19.0s,MS4.6
SSE LR LR
comp=E,560nm,19.0s,MS4.6
SSE LR LR
comp=Z,890nm,17.1s,MS4.6
HHC Hu-ho-hao-te 34.51 27 *e*P **P** **00 39 00.5 +0.7**
HHC pP pP 00 39 05.0 -1.6
HHC sP sP 00 39 07.5 -1.8
HHC PP PP 00 40 16.8 -1.4
HHC PcP PcP 00 41 36.8 +2.2
HHC S **S** **00 44 29.0 +1.7**
HHC sS sS 00 44 34.8 -3.6
HHC ScP ScP 00 45 19.8 +1.1
HHC PcS PcS 00 45 22.0 +1.1
HHC SS SS 00 46 37.3 -20
HHC ScS ScS 00 49 20.8 -0.6
HHC pmax pmax
comp=Z,18nm,0.8s,mb5.0
HHC pmax pmax
comp=Z,96nm,5.1s
HHC LR LR
comp=N,690nm,13.9s,MS4.7
HHC LR LR
comp=E,910nm,16.2s,MS4.7
HHC LR LR
comp=Z,750nm,15.6s,MS4.5
UCH Uchtor 34.57 337 P **P** **00 39 02.2 +1.9**
SNR=9.7
TKM2 Tokmak 2 34.78 339 P **P** **00 39 03.1 +1.1**
SNR=7.6
TKM2 Tokmak 2 34.78 339 *e*P **P** **00 39 03.0 +1.0**
TKM2 pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
TKM2 Tokmak 2 34.78 339 *e*P **P** **00 39 03.0 +0.9**
comp=Z,5.3nm,0.8s,mb4.5
KBK Karagaybulak 34.78 338 P **P** **00 39 03.8 +1.8**
SNR=7.6
AML Almayashu 34.81 336 P **P** **00 38 50.6 -12**
SNR=6.9
AAK Ala-Archa 34.93 338 P **P** **00 39 05.4 +2.1**
SNR=6.3
AAK Ala-Archa 34.93 338 LR LR 00 55 56.3
comp=Z,1μm,20.0s,MS4.6,baz=144,slow=41
FRU Bishkek 35.05 338 *e*P **P** **00 39 04.0 -0.4**
FRU pmax pmax
comp=Z,40nm,1.8s,mb5.0
EKS2 Erkin-Say 35.23 337 P **P** **00 39 07.7 +1.8**
SNR=15
EKS2 Erkin-Say 35.23 337 *e*P **P** **00 39 07.6 +1.7**
EKS2 pmax pmax
comp=Z,15nm,0.9s,mb4.9
EKS2 Erkin-Say 35.23 337 *e*P **P** **00 39 07.6 +1.7**
comp=Z,15nm,0.9s,mb4.9
USP Ospenovka 35.47 338 P **P** **00 39 09.1 +1.1**
SNR=12
BJI Beijing 36.15 33 P **P** **00 39 14.0 +0.1**
BJI S **S** **00 44 53.8 +1.4**
BJI pmax pmax
comp=Z,16nm,1.0s,mb4.9
BJI pmax pmax
comp=Z,220nm,4.2s
BJI LR LR
comp=N,840nm,18.8s,MS4.8
BJI LR LR
comp=E,1μm,18.0s,MS4.8
BJI LR LR
comp=Z,810nm,17.2s,MS4.6
MKAR Makanchi Array 36.57 349 P **P** **00 39 17.6 +0.2**
comp=Z,8.8nm,0.7s,mb4.7,baz=128,slow=9.3,SNR=45
MK31 Makanchi Array 36.58 349 *e*P **P** **00 39 17.7 +0.3**
SONM Songino Array 38.75 16 P **P** **00 39 36.1 +0.3**
comp=Z,10.0nm,0.8s,mb4.6,baz=200,slow=6.5,SNR=47
SONM LR LR 00 58 06.1
comp=Z,520nm,18.2s,MS4.4,baz=35,slow=40
ULN Ulaanbaatar 38.96 16 *e*P **P** **00 39 37.8 +0.3**
ULN pmax pmax
comp=Z,12nm,0.9s,mb4.6
ULN Ulaanbaatar 38.96 16 *e*P **P** **00 39 37.8 +0.2**
comp=Z,12nm,0.9s,mb4.6
ULN Ulaanbaatar 38.96 16 ⇑P **P** **00 39 39.1 +1.6**
SNR=11
ULN ⇑P 00 39 39.1
SNR=11
KURK Kurchatov 41.05 347 P **P** **00 39 55.5 +0.6**
comp=Z,102nm,1.1s,mb5.4,SNR=17
KURK Kurchatov 41.05 347 *e*P **P** **00 39 55.0 +0.1**
KURK pmax pmax
comp=Z,22nm,1.1s,mb4.7
KURK Kurchatov 41.05 347 *e*P **P** **00 39 55.0 +0.1**
comp=Z,22nm,1.1s,mb4.7
KURK Kurchatov 41.05 347 P **P** **00 39 55.4 +0.5**
SNR=15
KURK P 00 39 55.4
SNR=15
MOY Mondy 41.27 9 *e*P **P** **00 39 59.6 +3.0**
SNY Shenyang 41.49 37 ⇓P **P** **00 39 55.0 -3.6**
SNY S **S** **00 46 11.5 -1.4**
SNY pmax pmax
comp=Z,16nm,2.8s,mb4.2
SNY LR LR
comp=N,100nm,2.9s
SNY LR LR
comp=E,130nm,3.0s
SNY LR LR
comp=Z,750nm,17.0s,MS4.6
TLY Talaya 41.73 11*c i*P **P** **00 40 02.7 +2.3**
TLY *e* 00 41 35.1
TLY *e* 00 41 53.2
TLY *e*PPP 00 42 08.8
TLY *e*S **S** **00 46 15.5 -0.7**
TLY pmax pmax
comp=Z,21nm,1.6s,mb4.5
TLY MLR MLR
comp=Z,533nm,18.0s,MS4.5
TLY Talaya 41.73 11 *e*P **P** **00 40 02.8 +2.4**
comp=Z,12nm,1.0s,mb4.5
TLY Talaya 41.73 11 ⇑P **P** **00 40 03.5 +3.1**
SNR=8.5
TLY ⇑P 00 40 03.5
SNR=8.5
KSRS Korea Array 41.83 45 P **P** **00 40 00.2 -1.3**
comp=Z,11nm,1.1s,mb4.4,baz=244,slow=8.4,SNR=16
KSRS LR LR 00 59 47.9
comp=Z,814nm,18.3s,MS4.6,baz=238,slow=40
IRK Irkutsk 42.38 11 *e*P **P** **00 40 07.3 +1.5**
IRK pmax pmax
comp=Z,26nm,0.9s,mb4.9
ZAA0 Zalesovo Array 43.20 354 *e*P **P** **00 40 12.3 -0.1**
ZALV Zalesovo Beam 43.20 354 P **P** **00 40 12.2 -0.2**
comp=Z,3.9nm,0.6s,mb4.3,baz=170,slow=9.0,SNR=24
ZALV LR LR 01 02 11.9
comp=Z,317nm,18.9s,MS4.2,baz=349,slow=42
CN2 Changchun 43.79 36 *e*P **P** **00 40 17.0 -0.3**
CN2 *e*pP pP 00 40 21.5 -2.7
CN2 *e*sP sP 00 40 24.0 -2.9
CN2 *e*S **S** **00 46 46.3 -0.5**
CN2 pmax pmax
comp=Z,20nm,1.0s,mb4.8
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,600nm,15.0s,MS4.8
CN2 LR LR
comp=E,600nm,15.0s,MS4.8
CN2 LR LR
comp=Z,600nm,14.0s,MS4.7
FITZ Fitzroy Crossi 44.23 130⇑*i*P **P** **00 40 19.6 -1.6**
comp=Z,53nm,0.6s,mb5.5
FITZ Fitzroy Crossi 44.23 130 P **P** **00 40 19.9 -1.3**
comp=Z,25nm,0.9s,mb5.0,baz=311,slow=5.2,SNR=35
FITZ LR LR 01 00 38.2
comp=Z,421nm,20.5s,MS4.3,baz=308,slow=39
FITZ Fitzroy Crossi 44.23 130 *e*P **P** **00 40 20.4 -0.8**
comp=Z,26nm,0.6s,mb5.1
NVS Novosibirsk 44.26 353 *e*P **P** **00 40 18.7 -2.2**
NVS pmax pmax
comp=Z,38nm,2.1s,mb4.8
NVS pmax pmax
comp=N,32nm,2.0s
CIT Chita 44.59 19 *e*P **P** **00 40 22.9 -0.7**
KNA Kununurra 45.28 125 *e*P **P** **00 40 27.3 -2.3**
comp=N,14nm,0.8s,mb4.8
BVAR Borovoye Array 45.30 342 P **P** **00 40 29.1 -0.1**
comp=N,7.0nm,1.0s,mb4.5,baz=142,slow=7.5,SNR=36
BRVK Borovoye 45.36 342 P **P** **00 40 29.8 +0.1**
comp=N,51nm,0.7s,mb5.5,SNR=6.4
BRVK Borovoye 45.36 342*d i*P **P** **00 40 29.2 -0.5**
BRVK pmax pmax
comp=Z,10.0nm,1.2s,mb4.5
BRVK MLR MLR
comp=Z,409nm,17.0s,MS4.4
BRVK Borovoye 45.36 342 *e*P **P** **00 40 29.4 -0.3**
comp=Z,7.6nm,0.8s,mb4.6
BRVK Borovoye 45.36 342 ⇑P **P** **00 40 30.1 +0.4**
SNR=7.6
BRVK ⇑P 00 40 30.1
SNR=7.6
MDJ Mudanjiang 46.68 37 P **P** **00 40 42.3 +2.1**
MDJ pP pP 00 40 45.3 -1.9
MDJ S **S** **00 47 28.3 -0.2**
MDJ pmax pmax
comp=Z,7.0nm,1.6s,mb4.3
MDJ pmax pmax
comp=Z,85nm,5.6s
MDJ LR LR
comp=N,490nm,20.5s,MS4.5
MDJ LR LR
comp=E,340nm,20.5s,MS4.5
MDJ LR LR
comp=Z,620nm,17.6s,MS4.6
KAKA Kakadu 46.78 119 *e*P **P** **00 40 40.8 -0.7**
comp=Z,12nm,0.5s,mb5.1
ATD Arta Tunnel 47.89 276 LR LR 01 00 40.0
comp=Z,169nm,18.2s,MS4.1,baz=283,slow=36
MAJO Matsushiro 48.95 51 *e*P **P** **00 40 57.4 -0.6**
MAJO pmax pmax
comp=Z,34nm,1.5s,mb5.2
MAJO Matsushiro 48.95 51 *e*P **P** **00 40 57.4 -0.6**
comp=Z,34nm,1.5s,mb5.2
MAT Matsushiro 48.95 51 P **P** **00 40 57.1 -0.9**
MAT S **S** **00 48 05.0 +4.0**
MJAR Matsushiro Arr 48.95 51 P **P** **00 40 57.3 -0.7**
comp=Z,2.0nm,0.8s,mb4.2,baz=261,slow=7.4,SNR=7.1
MJAR PcP PcP 00 42 24.0 +1.9
comp=Z,1.2nm,0.6s,baz=228,slow=2.0,SNR=3.2
MJAR LR LR 01 03 32.1
comp=Z,265nm,19.2s,MS4.2,baz=245,slow=38
MJAR Matsushiro Arr 48.95 51 P **P** **00 40 57.3 -0.7**
MJAR 00 42 24.0
MAK Makhachkala 49.82 318 *e*P **P** **00 41 04.9 +0.4**
MAK *e* 00 42 20.7
MAK *e* 00 43 00.0
MAK *e*S **S** **00 48 08.9 -4.1**
MAK pmax pmax
comp=Z,134nm,1.1s,mb5.9
KLR Kul'dur 50.52 33 *e*P **P** **00 41 05.2 -4.5**
KLR MLR MLR
comp=Z,2μm,14.5s,MS5.1
GNI Garni 50.57 313*d i*P **P** **00 41 11.4 +1.1**
GNI pmax pmax
comp=Z,70nm,1.7s
GNI Garni 50.57 313 *e*P **P** **00 41 12.2 +1.9**
comp=Z,32nm,1.0s,mb5.2
GNI Garni 50.57 313 P **P** **00 41 12.9 +2.6**
SNR=6.7
GNI P 00 41 12.9
SNR=6.7
MTA Mtatsminda 51.12 315 P **P** **00 41 15.7 +1.3**
TBLG Delisi 51.17 315 *e*P **P** **00 41 16.4 +1.6**
TBLG Delisi 51.17 315 P **P** **00 41 16.4 +1.6**
SVE Sverdlovsk 51.65 339⇓*e*P **P** **00 41 18.9 +0.8**
SVE *e*S **S** **00 48 41.0 +3.1**
SVE *e*SS SS 00 52 15.4 +1.1
SVE *e*SSS 00 53 50.6
SVE pmax pmax
comp=Z,28nm,1.0s,mb5.2
SVE MLR MLR
comp=Z,602nm,21.0s,MS4.6
GUMO Guam 51.92 81 LR LR 01 05 29.1
comp=Z,131nm,18.3s,MS4.0,baz=268,slow=38
KEH Kehvi 51.95 316 P **P** **00 41 20.5 -0.1**
WRA Warramunga Arr 52.01 126 P **P** **00 41 20.6 -0.6**
comp=Z,3.3nm,0.4s,mb4.6,baz=299,slow=10.0,SNR=77
WRA PcP PcP 00 42 33.6 +0.1
comp=Z,1.4nm,0.4s,baz=315,slow=3.0,SNR=6.1
WRA LR LR 01 06 29.5
comp=Z,205nm,19.1s,MS4.2,baz=300,slow=40
WRA Warramunga Arr 52.01 126 P **P** **00 41 20.7 -0.6**
WRA 00 42 33.6
WRAB Tennant Creek 52.01 126 P **P** **00 41 20.9 -0.4**
comp=Z,175nm,0.6s,SNR=16
WRAB Tennant Creek 52.01 126 *e*P **P** **00 41 20.7 -0.6**
WRAB pmax pmax
comp=Z,17nm,0.6s,mb5.2
WRAB Tennant Creek 52.01 126 *e*P **P** **00 41 20.7 -0.6**
comp=Z,17nm,0.6s,mb5.1
ARU Arti 52.12 337*d i*P **P** **00 41 21.5 0.0**
ARU *e* 00 42 30.9
ARU *e* 00 43 18.7
ARU *e*PPP 00 44 23.4
ARU S **S** **00 48 45.9 +1.6**
ARU 00 51 07.8
ARU SS SS 00 52 16.0 -5.7
ARU SSS 00 54 04.9
ARU pmax pmax
comp=Z,16nm,1.0s,mb4.9
ARU MLR MLR
comp=Z,715nm,18.0s,MS4.8
ARU Arti 52.12 337 *e*P **P** **00 41 21.6 0.0**
comp=Z,14nm,1.0s,mb4.9
ZEI Tsey 52.15 316 *e*P **P** **00 41 22.6 +0.5**
ZEI pmax pmax
comp=Z,26nm,0.9s,mb5.2
ONI Oni 52.39 316 P **P** **00 41 25.1 +1.3**
ABPO Ambohimpanom 53.03 236 *e*P **P** **00 41 31.4 +2.5**
ABPO pmax pmax
comp=Z,35nm,1.5s,mb5.1
ABPO Ambohimpanom 53.03 236 *e*P **P** **00 41 31.4 +2.5**
comp=Z,35nm,1.5s,mb5.1
KIV Kislovodsk 53.42 317 *e*P **P** **00 41 32.0 +0.6**
KIV *e* 00 42 35.1
KIV *e*S **S** **00 49 03.1 +0.5**
KIV pmax pmax
comp=Z,33nm,1.0s,mb5.2
KIV Kislovodsk 53.42 317 *e*P **P** **00 41 32.3 +0.8**
comp=Z,31nm,0.9s,mb5.2
KIV Kislovodsk 53.42 317 P **P** **00 41 32.9 +1.4**
SNR=11
KIV P 00 41 32.9
SNR=11
GOF Gofitskoye 53.63 319 *e*P sP 00 41 47.1 +4.5
GOF pmax pmax
comp=Z,20nm,0.8s,mb5.1
ASAR Alice Springs 53.73 130 P **P** **00 41 33.1 -0.8**
comp=Z,4.6nm,0.8s,mb4.4,baz=304,slow=6.5,SNR=43
ASAR PcP PcP 00 42 41.3 +1.3
comp=Z,2.7nm,0.7s,baz=303,slow=4.2,SNR=2.4
SOKR Solikamsk 55.06 339*c i*P **P** **00 41 44.1 +1.0**
SOKR pmax pmax
comp=Z,20nm,1.3s,mb5.0
SOKR MLR MLR
comp=Z,780nm,25.0s,MS4.7
SOC Sochi 55.30 316 *e*P **P** **00 41 42.9 -2.2**
SOC *e**PP pP 00 41 52.4 +0.3
SOC *e**SP sP 00 41 56.9 +2.1
SOC *e* 00 42 41.8
SOC *e* 00 43 44.4
SOC *e*PPP 00 45 05.4
SOC *e*S **S** **00 49 25.0 -2.9**
SOC *e* 00 51 25.3
SOC *e*SS SS 00 53 14.1 +1.7
SOC pmax pmax
comp=Z,14nm,0.9s,mb5.0
SOC MLR MLR
comp=Z,255nm,22.0s,MS4.3
YSS Yuzh-Sakhalins 55.88 40 *e*P **P** **00 41 48.0 -1.2**
YSS *e* pP 00 41 55.0 -1.3
YSS *e*S **S** **00 49 28.0 -7.6**
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.3
YSS MLR MLR
comp=Z,500nm,18.0s,MS4.6
YSS MLR MLR
comp=N,500nm,16.0s
YSS Yuzh-Sakhalins 55.88 40 *e*P **P** **00 41 49.0 -0.2**
comp=N,21nm,0.8s,mb5.2
MMAI Mount Meron Ar 55.93 302 P **P** **00 41 50.9 +1.1**
comp=N,2.0nm,0.8s,mb4.2,baz=102,slow=12,SNR=3.0
MMAI LR LR 01 08 10.8
comp=N,252nm,20.3s,MS4.3,baz=140,slow=39
YAK Yakutsk 57.86 20 *e*P **P** **00 42 03.2 +0.2**
YAK *e**PP pP 00 42 11.6 +1.5
YAK *e* 00 42 50.5
YAK *e* 00 44 10.6
YAK *e*S **S** **00 50 03.1 +1.9**
YAK *e**SS sS 00 50 10.5 -2.4
YAK *e*SS SS 00 53 57.1 +5.0
YAK pmax pmax
comp=Z,24nm,1.1s,mb5.1
YAK pmax pmax
comp=N,10.0nm,1.1s
YAK pmax pmax
comp=E,8.0nm,1.0s
YAK pmax pmax
comp=Z,13nm,0.4s,mb5.3
YAK pmax pmax
comp=N,4.0nm,0.5s
YAK pmax pmax
comp=E,2.0nm,0.4s
YAK smax
comp=E,21nm,1.6s
YAK smax
comp=N,58nm,3.0s
YAK MLR MLR
comp=N,484nm,16.0s,MS4.8
YAK MLR MLR
comp=Z,463nm,16.0s,MS4.7
YAK MLR MLR
comp=E,358nm,17.0s,MS4.8
VORD Divnogorie 58.31 324 *e*P **P** **00 42 05.8 -0.6**
VSR Storozhevoye 58.49 324 *e*P **P** **00 42 06.8 -0.8**
VSR pmax pmax
comp=Z,20nm,1.0s,mb5.1
VSR pmax pmax
comp=N,5.0nm,0.7s
VSR pmax pmax
comp=E,5.0nm,0.8s
VSR MLR MLR
comp=N,70nm,8.0s
VSR MLR MLR
comp=Z,60nm,8.0s
VSR MLR MLR

comp=E,120nnm,14.0s
BR131 Keskin Array S 58.61 310 *e*P **P 00 42 08.0 -0.6**
comp=E,8.0nm,0.9s,mb4.8
BRTR Keskin Array B 58.61 310 P **P 00 42 07.8 -0.9**
comp=E,7.7nm,0.8s,mb4.8,baz=120,slow=7.1,SNR=57
BRTR LR LR 01 09 55.5
comp=E,112nm,21.9s,MS3.9,baz=94,slow=39
SIM Simferopol' 59.54 316 P **P 00 42 16.6 +1.6**
SIM S **S 00 50 28.3 +4.6**
SIM pmax pmax
comp=Z,13nm,0.9s,mb5.0
SIM MLR MLR
comp=Z,90nm,13.4s,MS4.1
MOS Moscow 61.20 328 *e*P **P 00 42 24.0 -2.1**
MOS pmax pmax
comp=Z,36nm,1.0s,mb5.5
OBN Obninsk 61.49 328⇓*i*P **P 00 42 28.1 0.0**
OBN *i* pP 00 42 36.6 +1.4
OBN *i* 00 43 11.5
OBN *e* 00 44 41.9
OBN *e*S **S 00 50 57.1 +8.9**
OBN pmax pmax
comp=Z,37nm,1.2s,mb5.4
CTA Charters Tower 61.91 120 P **P 00 42 32.4 +0.9**
comp=Z,1.7nm,0.3s,mb4.7,baz=317,slow=3.3,SNR=2.2
LEOM Leova 63.90 316 P **P 00 42 44.4 0.0**
LEOM Leova 63.90 316⇓*i*P **P 00 42 44.3 -0.1**
STKA Stephens Creek 63.97 134 *e*P **P 00 42 45.2 +0.2**
comp=Z,8.7nm,0.9s,mb4.8
STKA Stephens Creek 63.97 134 P **P 00 42 45.6 +0.7**
comp=Z,8.2nm,0.6s,mb4.5,baz=40,slow=2.5,SNR=5.7
STKA LR LR 01 12 04.5
comp=Z,384nm,18.1s,MS4.6,baz=230,slow=37
STKA Stephens Creek 63.97 134 *e*P **P 00 42 45.8 +0.8**
STKA pmax pmax
comp=Z,2.0nm,0.8s
STKA Stephens Creek 63.97 134 *e*P **P 00 42 45.8 +0.8**
comp=Z,2.2nm,0.8s,mb4.2
AKASG Malin Array Be 64.25 321 P **P 00 42 45.4 -1.1**
comp=Z,6.5nm,0.9s,mb4.7,baz=93,slow=4.9,SNR=22
AKASG LR LR 01 15 04.7
comp=Z,199nm,19.9s,MS4.3,baz=100,slow=40
AKBB Malin Array Si 64.25 321 *e*P **P 00 42 45.8 -0.8**
KIEV Kiev 64.26 321 *e*P **P 00 42 45.5 -1.1**
KIEV pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
KIEV Kiev 64.26 321 *e*P **P 00 42 45.5 -1.2**
comp=Z,7.0nm,0.9s,mb4.7
TIXI Tiksi 64.69 12 *e*P **P 00 42 48.6 -0.5**
TIXI pmax pmax
comp=Z,30nm,1.2s,mb5.2
TIXI Tiksi 64.69 12 *e*P **P 00 42 48.4 -0.7**
comp=Z,17nm,0.8s,mb5.1
VRI Vrincioaia 64.82 316 P **P 00 42 51.1 +0.7**
VRI Vrincioaia 64.82 316⇑*i*P **P 00 42 51.4 +1.0**
PLOR Plostina 64.87 316 P **P 00 42 51.6 +0.9**
PLOR Plostina 64.87 316⇓*i*P **P 00 42 51.7 +1.0**
TESR 64.99 316 P **P 00 42 51.5 0.0**
TESR 64.99 316⇓*i*P **P 00 42 51.3 -0.2**
MLR Muntele Rosu 65.29 315 ⇓P **P 00 42 54.2 +0.7**
MLR Muntele Rosu 65.29 315⇓*i*P **P 00 42 54.2 +0.7**
VOIR 65.91 315 ⇓P **P 00 42 58.0 +0.6**
VOIR 65.91 315⇑*i*P **P 00 42 58.9 +1.5**
BURAR Bucovina Array 66.15 317 P **P 00 42 59.5 +0.5**
BURAR Bucovina Array 66.15 317⇓*i*P **P 00 42 59.4 +0.4**
BUR08 Bucovina Ar. S 66.17 317 *e*P **P 00 42 59.3 +0.2**
CMSA Cobar Meteorol 66.76 131 *e*P **P 00 43 03.4 +0.3**
IDID Didziasalis 66.88 326 *e*P **P 00 43 03.7 +0.3**
IDID AMB AMB 00 43 04.8
comp=Z,9.3nm,1.1s,mb4.7
PETK Petropavlovsk- 66.92 37 LR LR 01 17 25.0
comp=Z,232nm,18.5s,MS4.4,baz=240,slow=41
JOF Joensuu 67.03 334 *e*P **P 00 43 03.3 -1.0**
JOF pmax pmax
comp=Z,9.0nm,0.5s,mb5.1
JOF Joensuu 67.03 334 *e*p **P 00 43 03.3 -1.0**
comp=Z,9.1nm,0.5s,mb5.1
JOF Joensuu 67.03 334 *e*p **P 00 43 03.3 -1.0**
comp=Z,9.1nm,0.5s,mb5.1
IIGN Ignalina 67.17 326 *e*P **P 00 43 05.5 +0.2**
IIGN AMB AMB 00 43 06.7
comp=Z,7.3nm,1.1s,mb4.6
VAY Valandovo 67.18 310 *i* P **P 00 43 03.8 -1.9**
IZAR Zarasai 67.26 326 *e*P **P 00 43 06.0 +0.2**
IZAR AMB AMB 00 43 07.2
comp=Z,8.0nm,1.2s,mb4.6
ISAL Salakas 67.28 326 *e*P **P 00 43 06.2 +0.2**
ISAL AMB AMB 00 43 07.4
comp=Z,7.0nm,1.2s,mb4.6
DEV Deva 67.46 315 ⇓P **P 00 43 08.3 +0.9**
DEV Deva 67.46 315⇓*i*P **P 00 43 08.3 +0.9**
PET Petropavlovsk 67.47 37 *e*P **P 00 43 04.6 -2.6**
PET *e*S S 00 51 56.9 -5.2
PET pmax pmax
comp=Z,100nm,19.7s
PET MLR MLR
comp=Z,500nm,17.0s,MS4.8
VSU Vasula 67.71 329 *i* P **P 00 43 08.1 -0.6**
VSU pmax pmax
comp=Z,17nm,1.1s,mb5.0
DRGR 67.71 316 ⇓P **P 00 43 10.1 +1.2**
DRGR 67.71 316⇓*i*P **P 00 43 10.1 +1.2**
LSZ Lusaka 68.11 249 *e*P **P 00 43 13.7 +1.8**
LSZ pmax pmax
comp=Z,20nm,1.2s,mb5.0
LSZ Lusaka 68.11 249 *e*P **P 00 43 13.7 +1.7**
comp=Z,20nm,1.2s,mb5.0
APA Apatity 68.11 339⇓*i*P **P 00 43 11.0 -0.1**
APA *e*S S 00 52 16.0 +6.6
APA pmax pmax
comp=Z,26nm,1.0s,mb5.2
APA MLR MLR
comp=Z,500nm,19.0s,MS4.8
KWP Kalwaria Pacla 68.13 319 *e*P **P 00 43 11.0 -0.5**
KWP Kalwaria Pacla 68.13 319 *e*P **P 00 43 11.4 -0.1**
KWP pmax pmax
comp=Z,18nm,1.0s,mb5.1
KWP Kalwaria Pacla 68.13 319 *e*P **P 00 43 11.4 -0.1**
comp=Z,18nm,1.0s,mb5.0
KWP Kalwaria Pacla 68.13 319⇓*i*P **P 00 43 11.4 -0.1**
KRUS Krusevo 68.18 310⇑*i*P **P 00 43 10.2 -1.8**
UZH Uzhgorod 68.25 318 *e*P **P 00 43 12.0 -0.3**
OHR Ohrid 68.50 310⇑*e*P **P 00 43 11.8 -2.2**
SUW Suwalki 68.60 324 *e*P **P 00 43 13.7 -0.7**
SUW Suwalki 68.60 324 *e*P **P 00 43 13.9 -0.5**
SUW pmax pmax
comp=Z,33nm,0.9s,mb5.3
SUW Suwalki 68.60 324 *e*P **P 00 43 13.9 -0.5**
comp=Z,32nm,0.9s,mb5.3
CRVS Cervenica-Dubn 68.83 318 *e*P **P 00 43 16.0 +0.1**
CRVS pmax pmax
comp=Z,13nm,1.2s,mb4.7
CRVS Cervenica-Dubn 68.83 318 *e*P **P 00 43 16.0 +0.1**
comp=Z,13nm,1.2s,mb4.7
CRVS Cervenica-Dubn 68.83 318 *e*P **P 00 43 16.0 +0.1**
FINES FINESS Array B 68.86 332 P **P 00 43 15.8 0.0**
comp=Z,11nm,0.9s,mb4.8,baz=96,slow=7.7,SNR=31
FINES LR LR 01 19 59.6
comp=Z,338nm,18.4s,MS4.6,baz=112,slow=42
KAF Kangasniemi 68.95 333 *e*P **P 00 43 15.3 -1.1**
KAF pmax pmax
comp=Z,19nm,1.0s,mb5.0
KAF Kangasniemi 68.95 333 *e*p **P 00 43 15.3 -1.1**
comp=Z,19nm,1.0s,mb5.0
KAF Kangasniemi 68.95 333 *e*p **P 00 43 15.3 -1.1**
comp=Z,19nm,1.0s,mb5.0
STHS Stebnicka Huta 69.04 319 *e*P **P 00 43 17.3 +0.1**
STHS pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
STHS Stebnicka Huta 69.04 319 *e*P **P 00 43 17.3 +0.1**
comp=Z,3.6nm,1.2s,mb4.2
STHS Stebnicka Huta 69.04 319 *e*P **P 00 43 17.3 +0.1**
KECS Kecovo 69.42 318 *e*P **P 00 43 19.8 +0.2**
KECS pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
KECS Kecovo 69.42 318 *e*P **P 00 43 19.8 +0.2**
comp=Z,3.5nm,0.9s,mb4.3
KECS Kecovo 69.42 318 *e*P **P 00 43 19.8 +0.2**
NIE Niedzica 69.64 319 *e*P **P 00 43 21.4 +0.5**
PSZ Piszkesteto 69.75 317 *e*P **P 00 43 21.9 +0.3**
PSZ pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
PSZ Piszkesteto 69.75 317 *e*P **P 00 43 21.9 +0.3**
comp=Z,7.2nm,1.0s,mb4.6
PSZ Piszkesteto 69.75 317⇑*i*P **P 00 43 22.0 +0.4**

OJC Ojcow 70.07 319 *e*P **P 00 43 21.3 -2.2**
OJC *e*pP pP 00 43 30.9 +0.2
PKSM Moragy 70.45 315 P **P 00 43 25.5 -0.4**
PKSM Moragy 70.45 315⇑*i*P **P 00 43 25.7 -0.2**
VYHS Vyhne 70.51 318 *e*P **P 00 43 26.0 -0.3**
VYHS pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
VYHS Vyhne 70.51 318 *e*P **P 00 43 26.0 -0.3**
comp=Z,3.1nm,1.1s,mb4.2
VYHS Vyhne 70.51 318 *e*P **P 00 43 26.0 -0.3**
OKC Ostrava-Krasne 71.09 319 *e*P **P 00 43 29.9 +0.1**
OKC MLR MLR
comp=Z,200nm,20.6s,MS4.4
OKC Ostrava-Krasne 71.09 319 *e*P **P 00 43 29.9 +0.1**
OKC AMS AMS 01 19 30.0
comp=Z,200nm,20.6s
MORC Moravsky Berou 71.47 319 ⇓P **P 00 43 32.2 +0.1**
MORC Moravsky Berou 71.47 319 *e*P **P 00 43 32.0 0.0**
comp=Z,11nm,1.1s,mb4.7
MORC Moravsky Berou 71.47 319⇓*i*P **P 00 43 32.2 +0.1**
TIP Timpagrande 71.51 308 *e*P **P 00 43 32.6 0.0**
comp=Z,13nm,1.2s,mb4.7
ARCES ARCESS Array B 71.55 340 P **P 00 43 32.8 +0.6**
comp=Z,5.3nm,0.8s,mb4.5,baz=83,slow=6.1,SNR=31
ARE0 ARCESS Array S 71.55 340 *e*P **P 00 43 32.9 +0.7**
ZST Bratislava 71.64 317 *e*P **P 00 43 33.0 -0.1**
ZST pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
ZST Bratislava 71.64 317 *e*P **P 00 43 33.0 -0.1**
comp=Z,8.8nm,1.0s,mb4.6
ZST Bratislava 71.64 317 *e*P **P 00 43 33.0 -0.1**
KOGS Kog 72.11 315 *i* P **P 00 43 35.6 -0.4**
CEL Celeste 72.18 307 *e*P **P 00 43 37.2 +0.6**
comp=Z,21nm,0.9s,mb5.1
CUC Castrocucco 72.25 309 *e*P **P 00 43 35.8 -1.2**
comp=Z,11nm,1.1s,mb4.7
DPC Dobruska-Polom 72.31 319 *e*P **P 00 43 37.5 +0.4**
DPC MLR MLR
comp=Z,200nm,14.9s,MS4.5
DPC Dobruska-Polom 72.31 319 *e*P **P 00 43 37.5 +0.4**
DPC AMS AMS 01 21 20.0
comp=Z,200nm,14.9s
KSP Ksiaz 72.36 320 *e*P **P 00 43 37.8 +0.4**
KSP Ksiaz 72.36 320 *e*P **P 00 43 37.5 +0.1**
CSNA Conrad Observa 72.46 317⇑*i*P **P 00 43 37.3 -0.7**
comp=Z,4.7nm,1.1s,mb4.3
UPC Upice 72.51 320 *e*P **P 00 43 38.9 +0.6**
UPC Upice 72.51 320 *e*P **P 00 43 38.9 +0.6**
GROS Grobnik 72.63 315 *i* P **P 00 43 38.7 -0.4**
ARSA Arzberg 72.65 316⇑*i*P **P 00 43 39.5 +0.3**
comp=Z,14nm,1.8s,mb4.6
BOJS Bojanci 72.77 314 *i* P **P 00 43 39.4 -0.5**
TREC Trest 72.78 318 *e*P **P 00 43 40.1 +0.2**
TREC MLR MLR
comp=Z,200nm,13.9s,MS4.5
TREC Trest 72.78 318 *e*P **P 00 43 40.1 +0.2**
TREC AMS AMS 01 24 00.0
comp=Z,200nm,13.9s
SOKA Soboth 72.96 316⇓*i*P **P 00 43 41.2 +0.2**
comp=Z,13nm,1.2s,mb4.8
LJU Ljubljana 73.29 315 *i* P **P 00 43 43.1 +0.1**
PRU Pruhonice 73.43 319 *e*P **P 00 43 44.4 +0.7**
PRU MLR MLR
comp=Z,100nm,16.4s,MS4.2
PRU Pruhonice 73.43 319 *e*P **P 00 43 44.4 +0.7**
PRU AMS AMS 01 20 40.0
comp=Z,100nm,16.4s
PVCC Panska Ves 73.44 320 *e*P **P 00 43 44.5 +0.7**
PVCC MLR MLR
comp=Z,200nm,13.8s,MS4.6
PVCC Panska Ves 73.44 320 *e*P **P 00 43 44.5 +0.7**
PVCC AMS AMS 01 23 20.0
comp=Z,200nm,13.8s
MOA Molln 73.53 317⇑*i*P **P 00 43 44.1 -0.3**
comp=Z,6.1nm,1.1s,mb4.4
LBTB Lobatse 73.68 240 *e*P **P 00 43 47.6 +2.0**
LBTB pmax pmax
comp=Z,21nm,1.1s,mb5.0
LBTB Lobatse 73.68 240 *e*P **P 00 43 47.6 +2.0**
comp=Z,20nm,1.1s,mb5.0
BRG Berggiesshubel 73.85 320 *e*P **P 00 43 45.7 -0.5**
comp=Z,6.0nm,1.0s,mb4.5
BRG Berggiesshubel 73.85 320 *i* P **P 00 43 46.4 +0.2**
comp=Z,9.7nm,1.3s,mb4.6
BRG S S 00 53 28.0 +11
GEC2 GERESS Array S 73.93 318 *e*P **P 00 43 46.1 -0.6**
comp=Z,10.0nm,1.1s,mb4.7
KHC Kasperske Hory 74.02 318 *e*P **P 00 43 47.0 -0.2**
KHC pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
KHC Kasperske Hory 74.02 318 *e*P **P 00 43 47.0 -0.2**
comp=Z,3.6nm,0.8s,mb4.3
KHC Kasperske Hory 74.02 318 *e*P **P 00 43 47.0 -0.2**
KHC AMS AMS 01 21 10.0
comp=Z,200nm,16.9s
BILL Bilibino 74.11 22⇓*e*P **P 00 43 47.7 +0.3**
BILL *e*S S 00 53 20.8 +1.9
BILL *e*SS SS 00 58 07.3 +3.5
BILL pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
BILL MLR MLR
comp=Z,500nm,21.0s,MS4.8
CLL Collm 74.46 320 *e*P **P 00 43 48.8 -0.9**
comp=Z,11nm,1.2s,mb4.7
CLL Collm 74.46 320 *i* P **P 00 43 49.4 -0.3**
CLL *i* pP pP 00 43 54.7 -2.3
CLL *e* 00 44 06.0
CLL *e*S S 00 53 29.0 +5.6
CLL pmax pmax
comp=Z,11nm,1.2s,mb4.7
CLL Collm 74.46 320 *i* P **P 00 43 49.4 -0.3**
comp=Z,11nm,1.2s,mb4.7
CLL *i* pP pP 00 43 54.7 -2.3
CLL *e*(PcP) PcP 00 44 06.0 +1.8
CLL *e*S S 00 53 29.0 +5.6
CLL *e*SSS 01 01 24.0
WET Wettzell 74.48 318 *e*P **P 00 43 49.3 -0.6**
comp=Z,10.0nm,1.3s,mb4.6
RJOB Jochberg 74.51 317 *e*P **P 00 43 48.7 -1.4**
comp=Z,12nm,1.4s,mb4.6
TANN Tannenbergstha 74.78 319 *e*P **P 00 43 50.9 -0.7**
comp=Z,9.0nm,1.3s,mb4.5
NKC Novy Kostel 74.78 319 *e*P **P 00 43 52.2 +0.6**
NKC Novy Kostel 74.78 319 *e*P **P 00 43 52.2 +0.6**
NKC AMS AMS 01 23 10.0
BOSA Boshof 75.25 236 P **P 00 43 56.0 +1.2**
comp=Z,19nm,0.9s,mb5.0,baz=80,slow=7.1,SNR=13
BOSA LR LR 01 13 26.6
comp=Z,316nm,19.1s,MS4.6,baz=257,slow=33
WTTA Wattenberg 75.30 316 *i* P **P 00 43 53.9 -0.8**
comp=Z,10nm,1.1s,mb4.7,SNR=5.1
MOX Moxa 75.32 320 *e*P **P 00 43 54.7 0.0**
comp=Z,13nm,1.5s,mb4.6
MOX pmax pmax
comp=Z,200nm,18.0s
MOX Moxa 75.32 320 *e*P **P 00 43 54.2 -0.5**
comp=Z,14nm,1.6s,mb4.6
FUR Furstenfeldbru 75.54 317 *e*P **P 00 43 54.9 -1.1**
comp=Z,10.0nm,1.3s,mb4.6
GRF Grafenberg Arr 75.57 319 *e*P **P 00 43 56.0 -0.2**
comp=Z,15nm,1.0s,mb4.9
GRF *e*L 01 24 10.5
comp=Z,162nm,18.9s
GRF Grafenberg Arr 75.57 319 *e*P **P 00 43 56.0 -0.2**
GRF pmax pmax
comp=Z,15nm,1.0s,mb4.9
GRF MLR MLR
comp=Z,200nm,18.9s,MS4.4
MOTA Moosalm 75.66 316⇑*i*P **P 00 43 55.8 -0.9**
comp=Z,9.2nm,0.9s,mb4.7
NB2 NORSAR Subarra 75.86 330 P **P 00 43 56.7 -0.9**
comp=Z,8.1nm,1.1s,mb4.6,baz=91,slow=5.9
NOA NORSAR Array B 75.86 330 P **P 00 43 57.0 -0.7**
comp=Z,4.1nm,0.9s,mb4.4,baz=94,slow=5.8,SNR=15
NOA LR LR 01 24 13.0
comp=Z,226nm,18.3s,MS4.5,baz=90,slow=41
NOA NORSAR Array B 75.86 330 P **P 00 43 57.0 -0.7**
NOA LR LR 01 24 13.0
RETA Reutte 75.89 316 *i* P **P 00 43 57.8 -0.2**
comp=Z,16nm,1.2s,mb4.8,SNR=7.4
FETA Feichten 75.92 316 *i* P **P 00 43 58.0 -0.2**
comp=Z,9.4nm,1.0s,mb4.7,SNR=7.7
NAO01 NORSAR Array S 76.02 330 *e*P **P 00 43 57.4 -1.1**
comp=Z,3.1nm,0.8s,mb4.3
CLZ Clausthal 76.11 321 *e*P **P 00 43 58.5 -0.7**
comp=Z,10.0nm,1.0s,mb4.7

BSEG Bad Segeberg 76.14 323 *e*P **P 00 43 59.2 -0.2**
comp=Z,20nm,1.1s,mb5.0
NRDL Niedersach Rie 76.27 321 *e*P **P 00 43 59.7 -0.4**
comp=Z,10.0nm,1.1s,mb4.7
DAVA Damuels 76.49 316⇓*i*P **P 00 44 01.2 -0.3**
comp=Z,16nm,1.1s,mb4.9
MUD Monsted U'grnd 76.81 326 *i* P **P 00 44 04.7 +1.6**
TUE Stuetta 76.89 315 *e*P **P 00 44 03.8 +0.1**
comp=Z,7.1nm,0.9s,mb4.6
PGF Pioggiola 77.32 311 *e*P **P 00 44 05.5 -0.8**
comp=Z,13nm,1.0s,mb4.5
PGF Pioggiola 77.32 311 *e*P **P 00 44 05.5 -0.8**
PGF pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
PGF Pioggiola 77.32 311 *e*P **P 00 44 05.5 -0.8**
comp=Z,6.3nm,1.0s,mb4.5
TNS Taunus Mts 77.35 319 *e*P **P 00 44 05.7 -0.6**
comp=Z,10.0nm,1.2s,mb4.6
BFO Black Forest 77.50 317 *e*P **P 00 44 05.9 -1.3**
comp=Z,8.0nm,1.2s,mb4.5
KEST Kesra 77.52 304 P **P 00 44 07.8 +0.3**
comp=Z,3.9nm,0.9s,mb4.3,baz=330,slow=1.5,SNR=10
KEST LR LR 01 22 56.4
comp=Z,69nm,19.3s,MS4.0,baz=302,slow=39
KEST Kesra 77.52 304 *e*P **P 00 44 07.9 +0.4**
IBBN Ibbenburen 77.71 321 *e*P **P 00 44 07.8 -0.4**
comp=Z,17nm,1.2s,mb4.8
BUG Bochum-Univer 78.05 320 *e*P **P 00 44 09.5 -0.6**
comp=Z,12nm,1.2s,mb4.7
CDF Champ du Feu 78.20 317 *e*P **P 00 44 10.3 -0.7**
comp=Z,13nm,1.0s,mb4.5
CDF Champ du Feu 78.20 317 *e*P **P 00 44 10.3 -0.7**
CDF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
CDF Champ du Feu 78.20 317 *e*P **P 00 44 10.3 -0.7**
comp=Z,6.7nm,1.0s,mb4.5
CASY Casey 78.29 172 *e*P **P 00 44 10.7 -0.3**
SBF Sospel 78.38 313 *e*P **P 00 44 11.3 -0.8**
comp=Z,29nm,1.1s,mb4.8
SBF Sospel 78.38 313 *e*P **P 00 44 11.3 -0.8**
SBF pmax pmax
comp=Z,14nm,1.1s,mb4.8
SBF Sospel 78.38 313 *e*P **P 00 44 11.3 -0.8**
comp=Z,14nm,1.1s,mb4.8
HINF Hinteralfeld 78.52 317 *e*P **P 00 44 11.7 -1.1**
LPG La Plagne 78.75 314 *e*P **P 00 44 14.0 -0.1**
comp=Z,32nm,1.2s,mb4.8
LPG La Plagne 78.75 314 *e*P **P 00 44 14.0 -0.1**
LPG pmax pmax
comp=Z,16nm,1.2s,mb4.8
LPG La Plagne 78.75 314 *e*P **P 00 44 14.0 -0.1**
comp=Z,16nm,1.2s,mb4.8
LPL La Plagne 78.76 314 *e*P **P 00 44 14.1 -0.1**
comp=Z,27nm,1.0s,mb4.8
LPL La Plagne 78.76 314 *e*P **P 00 44 14.1 -0.1**
LPL pmax pmax
comp=Z,14nm,1.0s,mb4.8
LPL La Plagne 78.76 314 *e*P **P 00 44 14.1 -0.1**
comp=Z,14nm,1.0s,mb4.8
MBDF Montbardon 78.79 314 *e*P **P 00 44 13.3 -1.1**
comp=Z,26nm,1.3s,mb4.7
MBDF Montbardon 78.79 314 *e*P **P 00 44 13.3 -1.1**
MBDF pmax pmax
comp=Z,13nm,1.3s,mb4.7
MBDF Montbardon 78.79 314 *e*P **P 00 44 13.3 -1.1**
comp=Z,13nm,1.3s,mb4.7
BNI Bardonecchia 78.83 314 *e*P **P 00 44 14.2 -0.4**
BNI pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
BNI Bardonecchia 78.83 314 *e*P **P 00 44 14.2 -0.4**
comp=Z,10nm,1.2s,mb4.6
HAU Haudompre 78.84 317 *e*P **P 00 44 13.9 -0.7**
comp=Z,23nm,1.0s,mb4.8
HAU *e*MLR MLR
comp=Z,174nm,21.5s,MS4.1
HAU Haudompre 78.84 317 *e*P **P 00 44 13.9 -0.7**
HAU pmax pmax
comp=Z,12nm,1.0s,mb4.8
HAU MLR MLR
comp=Z,170nm,21.5s,MS4.3
HAU Haudompre 78.84 317 *e*P **P 00 44 13.9 -0.7**
comp=Z,12nm,1.0s,mb4.8
HAU LR LR
comp=Z,170nm,21.5s,MS4.3
WLF Walferdange 78.86 319 P **P 00 44 14.4 -0.2**
comp=Z,13nm,2.1s,mb4.5
WLF Walferdange 78.86 319 *e*P **P 00 44 14.4 -0.3**
comp=Z,22nm,1.3s,mb4.9
MEM Membach 78.89 320 P **P 00 44 15.0 +0.2**
FRF La Foret Royal 78.97 312 *e*P **P 00 44 14.8 -0.6**
comp=Z,31nm,1.3s,mb4.8
FRF La Foret Royal 78.97 312 *e*P **P 00 44 14.8 -0.6**
FRF pmax pmax
comp=Z,16nm,1.3s,mb4.8
FRF La Foret Royal 78.97 312 *e*P **P 00 44 14.8 -0.6**
comp=Z,16nm,1.3s,mb4.8
LMR La Mourre 79.09 312 *e*P **P 00 44 15.4 -0.7**
comp=Z,50nm,1.6s,mb4.9
LMR La Mourre 79.09 312 *e*P **P 00 44 15.4 -0.7**
LMR pmax pmax
comp=Z,25nm,1.6s,mb4.9
LMR La Mourre 79.09 312 *e*P **P 00 44 15.4 -0.7**
comp=Z,25nm,1.6s,mb4.9
CABF La Chapelle 79.12 316 *e*P **P 00 44 16.0 -0.2**
comp=Z,34nm,1.2s,mb4.9
CABF La Chapelle 79.12 316 *e*P **P 00 44 16.0 -0.2**
CABF pmax pmax
comp=Z,17nm,1.2s,mb4.8
CABF La Chapelle 79.12 316 *e*P **P 00 44 16.0 -0.2**
comp=Z,17nm,1.2s,mb4.8
BCLA Clavier 79.35 319 P **P 00 44 17.5 +0.1**
comp=Z,11nm,2.4s,mb4.3
ORIF Oris-en-Rattie 79.41 314 *e*P **P 00 44 17.5 -0.3**
comp=Z,8.9nm,0.8s,mb4.4
ORIF *e*MLR MLR
comp=Z,204nm,21.8s,MS4.1
ORIF Oris-en-Rattie 79.41 314 *e*P **P 00 44 17.5 -0.3**
ORIF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
ORIF Oris-en-Rattie 79.41 314 *e*P **P 00 44 17.5 -0.3**
comp=Z,4.4nm,0.8s,mb4.4
SMRF Simiane la Rot 79.71 313 *e*P **P 00 44 19.5 +0.1**
DOU Dourbes 79.83 319 P **P 00 44 20.1 +0.2**
SNF Seneffe 80.00 320 P **P 00 44 21.1 +0.3**
BAIF Baives 80.08 319 *e*P **P 00 44 21.0 -0.3**
comp=Z,31nm,1.2s,mb4.8
BAIF Baives 80.08 319 *e*P **P 00 44 21.0 -0.3**
BAIF pmax pmax
comp=Z,16nm,1.2s,mb4.8
BAIF Baives 80.08 319 *e*P **P 00 44 21.0 -0.3**
comp=Z,16nm,1.2s,mb4.8
VIVF Saint-Julien-I 80.27 314 *e*P **P 00 44 22.0 -0.4**
comp=Z,20nm,0.9s,mb4.8
VIVF Saint-Julien-I 80.27 314 *e*P **P 00 44 22.0 -0.4**
VIVF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
VIVF Saint-Julien-I 80.27 314 *e*P **P 00 44 22.0 -0.4**
comp=Z,10nm,0.9s,mb4.8
SSB Saint Sauveur 80.32 314 *e*P **P 00 44 22.8 +0.1**
SSB pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
SSB Saint Sauveur 80.32 314 *e*P **P 00 44 22.8 +0.1**
comp=Z,9.1nm,0.9s,mb4.7
LOR Lormes 80.58 316 *e*P **P 00 44 23.4 -0.7**
comp=Z,30nm,1.1s,mb4.8
LOR *e*MLR MLR
comp=Z,148nm,21.8s,MS4.0
LOR Lormes 80.58 316 *e*P **P 00 44 23.4 -0.7**
LOR pmax pmax
comp=Z,15nm,1.1s,mb4.8
LOR MLR MLR
comp=Z,150nm,21.8s,MS4.3
LOR Lormes 80.58 316 *e*P **P 00 44 23.4 -0.7**
comp=Z,15nm,1.1s,mb4.8
LOR LR LR
comp=Z,150nm,21.8s,MS4.3
SMF Signal de Mont 80.66 316 *e*P **P 00 44 23.7 -0.8**
comp=Z,14nm,0.9s,mb4.6
SMF Signal de Mont 80.66 316 *e*P **P 00 44 23.7 -0.8**
SMF pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
SMF Signal de Mont 80.66 316 *e*P **P 00 44 23.7 -0.8**
comp=Z,7.2nm,0.9s,mb4.6
SSF Saint Saulge 80.85 316 *e*P **P 00 44 24.9 -0.6**
comp=Z,34nm,1.4s,mb4.8
SSF Saint Saulge 80.85 316 *e*P **P 00 44 24.9 -0.6**
SSF pmax pmax

comp=Z,17nm,1.4s,mb4.8
SSF Saint Saulge 80.85 316 *e*P **P 00 44 24.9 -0.6**
comp=Z,17nm,1.4s,mb4.8
LASF Ste Croix 80.93 313 *e*P **P 00 44 26.0 0.0**
comp=Z,35nm,1.2s,mb4.9
AVF Avril sur Loir 80.98 316 *e*P **P 00 44 25.5 -0.7**
comp=Z,13nm,1.0s,mb4.5
AVF Avril sur Loir 80.98 316 *e*P **P 00 44 25.5 -0.7**
AVF pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
AVF Avril sur Loir 80.98 316 *e*P **P 00 44 25.5 -0.7**
comp=Z,6.3nm,1.0s,mb4.5
MAW Mawson 81.10 191 *e*P **P 00 44 27.4 +1.2**
comp=Z,2.8nm,0.9s,mb4.2
MAW Mawson 81.10 191 P **P 00 44 27.3 +1.1**
comp=Z,3.5nm,0.9s,mb4.3,baz=47,slow=9.9,SNR=5.3
MAW LR LR 01 17 02.5
comp=Z,172nm,18.4s,MS4.4,baz=182,slow=33
BGF Bois d'Agland 81.35 316 *e*P **P 00 44 27.9 -0.3**
comp=Z,31nm,1.1s,mb4.8
BGF Bois d'Agland 81.35 316 *e*P **P 00 44 27.9 -0.3**
BGF pmax pmax
comp=Z,16nm,1.1s,mb4.9
BGF Bois d'Agland 81.35 316 *e*P **P 00 44 27.9 -0.3**
comp=Z,16nm,1.1s,mb4.8
HYF Humbligny 81.41 316 *e*P **P 00 44 28.5 0.0**
TCF Toulx Ste Croi 81.82 316 *e*P **P 00 44 30.5 -0.2**
comp=Z,19nm,1.2s,mb4.6
TCF Toulx Ste Croi 81.82 316 *e*P **P 00 44 30.5 -0.2**
TCF pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
TCF Toulx Ste Croi 81.82 316 *e*P **P 00 44 30.5 -0.2**
comp=Z,9.5nm,1.2s,mb4.6
CAF Calviac 82.10 314 *e*P **P 00 44 32.2 0.0**
comp=Z,15nm,1.1s,mb4.5
CAF Calviac 82.10 314 *e*P **P 00 44 32.2 0.0**
CAF pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
CAF Calviac 82.10 314 *e*P **P 00 44 32.2 0.0**
comp=Z,7.4nm,1.1s,mb4.5
MTLF Montolieu 82.20 313 *e*P **P 00 44 32.6 -0.1**
comp=Z,19nm,0.9s,mb4.7
MTLF Montolieu 82.20 313 *e*P **P 00 44 32.6 -0.1**
MTLF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
MTLF Montolieu 82.20 313 *e*P **P 00 44 32.6 -0.1**
comp=Z,9.4nm,0.9s,mb4.7
TAM Tamanrasset 82.36 292 *e*P **P 00 44 35.6 +1.6**
TAM *e* 00 47 43.8
TAM pmax pmax
comp=Z,14nm,1.1s,mb4.8
TAM Tamanrasset 82.36 292 *e*P **P 00 44 35.6 +1.7**
comp=Z,14nm,1.1s,mb4.8
TAM *e*PP PP 00 47 43.8 +0.9
RJF Les Rejaudoux 82.43 315 *e*P **P 00 44 34.0 +0.1**
comp=Z,37nm,1.3s,mb4.9
RJF *e*MLR MLR
comp=Z,120nm,18.5s,MS4.0
RJF Les Rejaudoux 82.43 315 *e*P **P 00 44 34.0 +0.1**
RJF pmax pmax
comp=Z,19nm,1.3s,mb4.9
RJF MLR MLR
comp=Z,120nm,18.5s,MS4.3
RJF Les Rejaudoux 82.43 315 *e*P **P 00 44 34.0 +0.1**
comp=Z,19nm,1.3s,mb4.9
RJF LR LR
comp=Z,120nm,18.5s,MS4.3
LFF La Frestale 83.03 314 *e*P **P 00 44 37.1 +0.1**
comp=Z,33nm,1.2s,mb4.9
LFF La Frestale 83.03 314 *e*P **P 00 44 37.1 +0.1**
LFF pmax pmax
comp=Z,17nm,1.2s,mb5.0
LFF La Frestale 83.03 314 *e*P **P 00 44 37.1 +0.1**
comp=Z,16nm,1.2s,mb4.9
LDF La Druitiere 83.07 318 *e*P **P 00 44 36.5 -0.7**
comp=Z,42nm,1.3s,mb5.0
LDF La Druitiere 83.07 318 *e*P **P 00 44 36.5 -0.7**
LDF pmax pmax
comp=Z,21nm,1.3s,mb5.0
LDF La Druitiere 83.07 318 *e*P **P 00 44 36.5 -0.7**
comp=Z,21nm,1.3s,mb5.0
FLN La Foliniere 83.28 318 *e*P **P 00 44 37.6 -0.6**
comp=Z,43nm,1.3s,mb5.0
FLN *e*MLR MLR
comp=Z,148nm,19.0s,MS4.1
FLN La Foliniere 83.28 318 *e*P **P 00 44 37.6 -0.6**
FLN pmax pmax
comp=Z,22nm,1.3s,mb5.0
FLN MLR MLR
comp=Z,150nm,19.0s,MS4.4
FLN La Foliniere 83.28 318 *e*P **P 00 44 37.6 -0.6**
comp=Z,22nm,1.3s,mb5.0
FLN LR LR
comp=Z,150nm,19.0s,MS4.4
MFF Saint Martin d 83.39 316 *e*P **P 00 44 38.4 -0.4**
comp=Z,21nm,0.9s,mb4.9
MFF Saint Martin d 83.39 316 *e*P **P 00 44 38.4 -0.4**
MFF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
MFF Saint Martin d 83.39 316 *e*P **P 00 44 38.4 -0.4**
comp=Z,10nm,0.9s,mb4.9
GRR Gorron 83.59 318 *e*P **P 00 44 39.3 -0.5**
EPF Esparros 83.61 312 *e*P **P 00 44 39.1 -0.9**
comp=Z,8.7nm,1.1s,mb4.5
EPF Esparros 83.61 312 *e*P **P 00 44 39.1 -0.9**
EPF pmax pmax
comp=Z,4.0nm,1.1s,mb4.5
EPF Esparros 83.61 312 *e*P **P 00 44 39.1 -0.9**
comp=Z,4.3nm,1.1s,mb4.5
ETSF Etsaut 84.28 312 *e*P **P 00 44 43.8 +0.3**
comp=Z,16nm,1.0s,mb4.8
ETSF Etsaut 84.28 312 *e*P **P 00 44 43.8 +0.3**
ETSF pmax pmax
comp=Z,8.0nm,1.0s,mb4.8
ETSF Etsaut 84.28 312 *e*P **P 00 44 43.8 +0.3**
comp=Z,7.9nm,1.0s,mb4.8
SJPF Ste Jean 84.72 313 *e*P **P 00 44 45.8 +0.1**
comp=Z,24nm,1.2s,mb4.9
SJPF Ste Jean 84.72 313 *e*P **P 00 44 45.8 +0.1**
SJPF pmax pmax
comp=Z,12nm,1.2s,mb4.9
SJPF Ste Jean 84.72 313 *e*P **P 00 44 45.8 +0.1**
comp=Z,12nm,1.2s,mb4.9
QUIF Quistinic 85.19 318 *e*P **P 00 44 47.0 -1.0**
ESDC Sonseca Array 87.40 310 P **P 00 44 58.5 -0.6**
comp=Z,2.2nm,0.9s,mb4.4,baz=61,slow=4.8,SNR=9.0
ESDC Sonseca Array 87.40 310 P **P 00 44 58.5 -0.6**
RPZ Rata Peaks 89.92 135 LR LR 01 23 37.9
comp=Z,371nm,19.2s,MS4.8,baz=190,slow=34
PMRV Marv??o 90.04 310 *e*P **P 00 45 12.5 +1.0**
comp=Z,23nm,1.7s,mb5.2
PBAR Barrancos 90.08 309 *e*P **P 00 45 13.0 +1.3**
comp=Z,34nm,2.1s,mb5.3
SUMG Summit 90.59 347 *e*P **P 00 45 13.5 +0.1**
SUMG pmax pmax
comp=Z,17nm,1.1s
SUMG Summit 90.59 347 *e*P **P 00 45 13.5 +0.2**
comp=Z,17nm,1.1s,mb5.3
SUMG Summit 90.59 347 *i*P **P 00 45 14.1 +0.7**
comp=Z,13nm,1.0s,mb5.2
PBEJ Beja 90.75 309 *e*P **P 00 45 16.5 +1.7**
comp=Z,34nm,1.9s,mb5.4
PVAQ Vaqueiros 90.78 308 *e*P **P 00 45 16.3 +1.3**
comp=Z,36nm,1.7s,mb5.4
PBDV Barranco-do-Ve 90.99 308 *e*P **P 00 45 19.4 +3.4**
comp=Z,39nm,1.7s,mb5.5
SVW2 Sparrevohn 91.07 27 *e*P **P 00 45 18.4 +2.6**
PPLA Purkeypile 91.69 24 *e*P **P 00 45 20.9 +2.2**
comp=Z,16nm,1.3s,mb5.2
MCK McKinley 92.56 23 *e*P **P 00 45 24.4 +1.8**
MCK pmax pmax
comp=Z,18nm,1.2s,mb5.4
MCK McKinley 92.56 23 *e*P **P 00 45 24.4 +1.8**
comp=Z,18nm,1.2s,mb5.4
URZ Urewera 93.13 128 LR LR 01 26 47.0
comp=Z,338nm,21.5s,MS4.8,baz=108,slow=35
DBIC Dimbokro 95.16 278 LR LR 01 30 33.9
comp=Z,144nm,19.0s,MS4.5,baz=49,slow=37
PDAR Pinedale Array 123.08 19 PKP PKPdf 00 51 07.2 -1.1
comp=Z,0.3nm,0.4s,baz=334,slow=6.0,SNR=3.2
NVAR Mina Array Bea 123.41 28 PKP PKPdf 00 51 07.0 -2.0
comp=Z,0.6nm,0.7s,baz=304,slow=1.6,SNR=3.3
ECSD EROS Data Cent 125.02 7 *e*PKPdf PKPdf 00 51 11.9 -0.1
MSU Marysvale 125.94 23 *e*PKIKP PKPdf 00 51 15.7 +1.8
TXAR Lajitas Array 137.26 20 PKP PKPdf 00 51 36.7 +1.2
comp=Z,0.8nm,1.0s,baz=204,slow=2.7,SNR=4.0
TXAR Lajitas Array 137.26 20 PKP PKPdf 00 51 36.7 +1.2
JCT Junction City 137.31 15 *e*PKIKP PKPdf 00 51 35.9 +0.3
SDDR Presa de Saban 145.83 330 *e*PKPdf PKPdf 00 51 52.3 +1.1
PLCA Paso Flores 146.49 205 PKPbc PKPbc 00 51 53.0 0.0
comp=Z,7.1nm,0.9s,baz=135,slow=5.6,SNR=9.1
PLCA Paso Flores 146.49 205 *e*PKPbc PKPbc 00 51 54.1 +1.1
CPUP Villa Florida 147.06 238 PKPbc PKPbc 00 51 54.7 -0.4
comp=Z,4.3nm,0.9s,baz=95,slow=5.2,SNR=7.1
CPUP Villa Florida 147.06 238 PKPbc PKPbc 00 51 54.7 -0.4
LPAZ La Paz 159.73 253 PKP PKPdf 00 52 11.1 -0.2
comp=Z,0.8nm,0.8s,baz=71,slow=2.0,SNR=4.3
LPAZ PKPab PKPab 00 52 51.9 +1.8
comp=Z,4.5nm,1.0s,baz=82,slow=4.9,SNR=9.1
LPAZ La Paz 159.73 253 PKP PKPdf 00 52 11.1 -0.2
LPAZ PKPab PKPab 00 52 51.9 +1.8

IDC 29 00:40:02.8±1.6, 32°.72S×178°.89W, h0km, mb3.8/4, mb1 4.0/5, mb1mx3.8/18, mbtmp3.8/5, ML3.6/1, Error ellipse: s-maj=39.4km s-min=34.9km az=72.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.42**	**209**	Pn	Pn	00 41 36.9	-1.7
	1.4nm,0.3s,baz=285,slow=5.5,SNR=14						
URZ				Sn	Sn	00 42 48.0	-4.5
	1.3nm,0.3s,baz=197,slow=20,SNR=4.1						
ASAR	**Alice Springs**	**42.29**	**270**	P	P	00 47 58.7	+0.5
	0.9nm,0.8s,baz=109,slow=7.7,SNR=7.5						
WRA	**Warramunga Arr**	**43.49**	**275**	P	P	00 48 08.2	+0.2
	1.1nm,0.6s,baz=114,slow=7.8,SNR=17						
FITZ	**Fitzroy Crossi**	**51.64**	**272**	P	P	00 49 10.9	-0.6
	1.7nm,0.9s,baz=152,slow=14,SNR=2.9						
QSPA	**South Pole Qui**	**57.39**	**180**	P	P	00 49 53.1	+0.7
	0.9nm,0.7s,baz=63,slow=3.8,SNR=3.3						
FINES	**FINESS Array B**	**147.04**	**338**	PKPbc	PKPbc	00 59 45.9	-0.8
	0.5nm,0.5s,baz=53,slow=5.4,SNR=6.2						
NOA	**NORSAR Array B**	**150.91**	**350**	PKPbc	PKPbc	00 59 56.3	-0.3
	0.2nm,0.5s,baz=14,slow=4.2,SNR=3.3						

*NEIC **29** 00:42:16.5, 32°.31S×71°.15W, h54km, MD3.8(GUC), After GUC.*

GUC 29 00:42:16.5±0.7, 32°.31S×71°.15W, h54km±7km, MD3.8, ML3.0, 12C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACH	**Jahuel**	**0.60**	**128**	⇓*i*P	Pn	00 42 30.1	+1.0
JACH				*i* S	Sn	00 42 39.6	+1.4
JACH	**Jahuel**	**0.60**	**128**	⇓*i*P	Pn	00 42 30.1	+1.0
JACH				*i* S	Sn	00 42 39.6	+1.4
ROCH	**El Roble**	**0.67**	**170**	*e*P	Pn	00 42 30.9	+0.9
ROCH				*i* S	Sn	00 42 41.6	+1.8
ROCH	**El Roble**	**0.67**	**170**	*e*P	Pn	00 42 30.9	+0.9
ROCH				*i* S	Sn	00 42 41.6	+1.8
IHA	**Instituto Hidr**	**0.82**	**210**	⇑*i*P	Pn	00 42 32.4	+0.4
IHA				*i* S	Sn	00 42 44.1	+0.8
IHA	**Instituto Hidr**	**0.82**	**210**	⇑*i*P	Pn	00 42 32.4	+0.4
IHA				*i* S	Sn	00 42 44.1	+0.8
PEL	**Peldehue**	**0.92**	**155**	⇓*i*P	Pn	00 42 33.9	+0.7
PEL				*i* S	Sn	00 42 46.6	+1.1
PEL				AML	AML	00 42 47.5	
	comp=E,626nm,0.4s						
CMCH	**Combarbala**	**1.14**	**6**	⇑*i*P	Pn	00 42 36.8	+0.5
CMCH				*i* S	Sn	00 42 52.2	+1.3
CMCH	**Combarbala**	**1.14**	**6**	⇑*i*P	Pn	00 42 36.8	+0.5
CMCH				*i* S	Sn	00 42 52.2	+1.3
CMCH				AML	AML	00 42 56.5	
	comp=E,588nm,1.0s						
CLCH	**Cerro Calan**	**1.20**	**155**	⇑*i*P	Pn	00 42 37.7	+0.7
CLCH				*i* S	Sn	00 42 53.4	+1.2
CLCH				AML	AML	00 42 54.5	
	comp=N,497nm,0.5s						
FCH	**Farellones**	**1.25**	**145**	⇑*i*P	Pn	00 42 38.4	+0.8
FCH				*i* S	Sn	00 42 55.8	+2.4
FCH				AML	AML	00 43 00.6	
	comp=N,267nm,0.6s						
ANTU	**Antumapu**	**1.33**	**161**	*e*P	Pn	00 42 39.2	+0.5
ANTU				*i* S	Sn	00 42 56.2	+0.9
ANTU	**Antumapu**	**1.33**	**161**	*e*P	Pn	00 42 39.2	+0.5
ANTU				*i* S	Sn	00 42 56.2	+0.9
ANTU				AML	AML	00 42 56.5	
	comp=N,385nm,0.1s						
TACH	**Talagante**	**1.35**	**172**	⇑*i*P	Pn	00 42 39.7	+0.7
TACH				*i* S	Sn	00 42 57.0	+1.2
TACH	**Talagante**	**1.35**	**172**	⇑*i*P	Pn	00 42 39.7	+0.7
TACH				*i* S	Sn	00 42 57.0	+1.2
PCH	**Pirque**	**1.41**	**158**	⇑*i*P	Pn	00 42 40.4	+0.6
PCH				*i* S	Sn	00 42 58.5	+1.2
PCH	**Pirque**	**1.41**	**158**	⇑*i*P	Pn	00 42 40.4	+0.6
PCH				*i* S	Sn	00 42 58.5	+1.2
CHCH	**Chadas Angostu**	**1.67**	**166**	*e*P	Pn	00 42 44.1	+0.8
CHCH				*i* S	Sn	00 43 05.0	+1.4
CHCH	**Chadas Angostu**	**1.67**	**166**	*e*P	Pn	00 42 44.1	+0.8
CHCH				*i* S	Sn	00 43 05.0	+1.4
LMEL	**Las Melosas**	**1.73**	**153**	⇑*i*P	Pn	00 42 45.4	+1.3
LMEL				*i* S	Sn	00 43 07.2	+2.2
LMEL	**Las Melosas**	**1.73**	**153**	⇑*i*P	Pn	00 42 45.4	+1.3
LMEL				*i* S	Sn	00 43 07.2	+2.2
LMEL				AML	AML	00 43 09.9	
	comp=N,393nm,0.2s						
CACH	**El Canelo**	**1.86**	**166**	*e*P	Pn	00 42 47.5	+1.5
CACH				*i* S	Sn	00 43 10.8	+2.5
CACH	**El Canelo**	**1.86**	**166**	*e*P	Pn	00 42 47.5	+1.5
CACH				*i* S	Sn	00 43 10.8	+2.5
LCO	**Las Campanas**	**3.31**	**7**	*e*Pn	Pn	00 43 07.7	+1.9
LCO				*e*S	Sn	00 43 42.7	-1.3

*DJA **29** 00:43:50, 0°.07N×96°.44E, h14km, MLv4.5/6*
*IDC **29** 00:43:50.0±0.8, 0°.11N×96°.58E, h0km, mb4.0/14, mb1 4.1/16, mb1mx4.0/24, mbtmp3.9/16, ML3.8/2, Error ellipse: s-maj=31.3km s-min=14.3km az=52.0*
*NEIC **29** 00:43:55.5±0.4, 0°.18N×96°.76E, h35km, mb4.5/7, Error ellipse: s-maj=12.4km s-min=8.6km az=50.0*
*ISCJB **29** 00:43:55.5±1.4, 0°.24N±0°.06×96°.87E±0°.10, h47km±12km, mb4.1/25, Error ellipse: s-maj=17.1km s-min=7.9km az=158.4*

ISC 29 00:43:56.3±1.4, 0°.21N±0°.06×96°.8E±0°.1, h38km±12km, h27km±5.5km: pP-P, n62, σ0°.89/48, mb4.1/25, 4C-1D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**2.76**	**124**	P	**Pn**	**00 44 37.0**	**-1.1**
MNSI	**Mandailing Nat**	**2.85**	**78**	P	**Pn**	**00 44 39.0**	**-0.3**
TPTI		**3.06**	**7**	P	**Pn**	**00 44 43.9**	**+1.8**
PSI	**Prapat**	**3.34**	**40**	Pn	**Pn**	**00 44 45.4**	**-0.7**
	2.9nm,0.3s,baz=267,slow=10,SNR=6.9						
PPI	**Padang Panjang**	**3.67**	**100**	P	**Pn**	**00 44 50.8**	**+0.3**
PDSI	**Padang**	**3.83**	**107**	P	**Pn**	**00 44 52.5**	**-0.4**
BKNI	**Bangkinang**	**4.25**	**88**	P	**Pn**	**00 45 01.8**	**+3.2**
SDSI	**Sungai Dareh**	**4.77**	**104**	P	**Pn**	**00 45 06.9**	**+1.1**
	0.3nm56nm,0.6s						
BSI	**Banda Aceh**	**5.46**	**344**	P	**Pn**	**00 45 10.8**	**-4.4**
	62nm,0.9s						
KULM	**Kulim**	**6.35**	**37**	*e*Pn	**Pn**	**00 45 26.7**	**-0.8**
	26nm,0.7s						
KULM				*e*S	**Sn**	**00 46 38.0**	**-0.8**
KULM	**Kulim**	**6.35**	**37**	P	**Pn**	**00 45 26.9**	**-0.5**
	43nm,1.0s						
KSI	**Kapahiang**	**6.95**	**124**	P	**Pn**	**00 45 35.4**	**-0.3**
	169nm,0.9s						
MDSI	**Maura Dua**	**8.73**	**122**	P	**Pn**	**00 45 59.6**	**-0.5**
CMAR	**Chiang Mai Arr**	**18.26**	**7**	P	**Pn**	**00 48 07.2**	**+0.3**
	0.3nm,0.3s,baz=194,slow=12,SNR=9.8						
KKM	**Kota Kinabalu**	**20.23**	**73**	*e*Pn	**P**	**00 48 29.6**	**+1.1**
	7.7nm,0.6s						
FITZ	**Fitzroy Crossi**	**33.70**	**124**	P	**P**	**00 50 33.9**	**-0.3**
	2.6nm,0.8s,mb4.2,baz=246,slow=1.7,SNR=11						
FITZ	**Fitzroy Crossi**	**33.70**	**124**	*e*P	**P**	**00 50 34.0**	**-0.1**
GTA	**Gaotai**	**39.11**	**4**	*e*P	**P**	**00 51 30.0**	**+10**
GTA				pP	pP	00 51 33.8	+3.0
GTA				sP	sP	00 51 35.0	-0.3
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
WRA	**Warramunga Arr**	**41.87**	**121**	P	**P**	**00 51 42.7**	**-0.5**
	comp=Z,2.2nm,0.7s,mb3.9,baz=301,slow=9.2,SNR=19						
WRA	**Warramunga Arr**	**41.87**	**121**	P	**P**	**00 51 42.7**	**-0.5**
WRAB	**Tennant Creek**	**41.88**	**121**	*e*P	**P**	**00 51 43.4**	**+0.1**
	comp=Z,3.0nm,0.9s,mb3.9						
ASAR	**Alice Springs**	**43.14**	**126**	P	**P**	**00 51 54.1**	**+0.7**
	comp=Z,1.4nm,0.6s,mb3.9,baz=300,slow=8.2,SNR=18						
TKM2	**Tokmak 2**	**46.58**	**339**	*e*P	**P**	**00 52 20.7**	**+0.1**
	comp=Z,7.1nm,0.9s,mb4.6						
TKM2				*e*	pP	00 52 30.8	-0.7
KSRS	**Korea Array**	**46.89**	**34**	P	**P**	**00 52 23.7**	**+0.6**
	comp=Z,1.0nm,0.7s,mb3.8,baz=174,slow=20,SNR=3.1						
EKS2	**Erkin-Say**	**47.05**	**337**	*e*P	**P**	**00 52 25.6**	**+1.4**
	comp=Z,6.9nm,0.7s,mb4.7						
EKS2				*e*	pP	00 52 34.5	-0.6
MKAR	**Makanchi Array**	**48.10**	**347**	P	**P**	**00 52 32.2**	**-0.1**
	comp=Z,1.5nm,0.6s,mb4.2,baz=134,slow=9.2,SNR=9.6						
SONM	**Songino Array**	**48.16**	**9**	P	**P**	**00 52 32.4**	**-0.3**
	comp=Z,0.7nm,0.7s,mb3.8,baz=169,slow=8.9,SNR=4.9						
KURK	**Kurchatov**	**52.64**	**346**	*e*P	**P**	**00 53 07.5**	**+0.9**
	comp=Z,4.2nm,1.0s,mb4.3						
KURK				*e*	pP	00 53 15.9	-1.7
STKA	**Stephens Creek**	**53.01**	**131**	P	**P**	**00 53 10.1**	**+0.4**
	comp=Z,2.0nm,0.7s,mb4.2,baz=320,slow=12,SNR=3.7						
STKA	**Stephens Creek**	**53.01**	**131**	P	**P**	**00 53 10.1**	**+0.4**
ZAA0	**Zalesovo Array**	**54.47**	**351**	*e*P	**P**	**00 53 17.7**	**-2.2**
ZALV	**Zalesovo Beam**	**54.47**	**351**	P	**P**	**00 53 20.1**	**+0.2**
	comp=Z,3.3nm,0.4s,mb4.6,baz=175,slow=7.0,SNR=16						
BVAR	**Borovoye Array**	**57.05**	**341**	P	**P**	**00 53 37.2**	**-1.2**
	comp=Z,0.7nm,0.6s,mb3.9,baz=146,slow=9.0,SNR=5.6						
BRTR	**Keskin Array B**	**69.48**	**313**	P	**P**	**00 55 00.7**	**-0.4**
	comp=Z,0.2nm,0.6s,mb3.2,baz=138,slow=9.9,SNR=4.4						
TIRR	**Tirgusor**	**74.55**	**316**	⇑*i*P	pP	00 55 42.8	-0.1
AKASG	**Malin Array Be**	**75.79**	**323**	P	**P**	**00 55 37.0**	**-1.4**
	comp=Z,1.4nm,0.5s,mb4.2,baz=97,slow=5.0,SNR=5.6						
VRI	**Vrincioaia**	**76.06**	**317**	⇑*i*P	**P**	**00 55 48.8**	**+8.8**
MLR	**Muntele Rosu**	**76.50**	**317**	⇑*i*P	**P**	**00 55 43.8**	**+1.2**
BURAR	**Bucovina Array**	**77.50**	**319**	⇓*i*P	**P**	**00 55 57.8**	**+10**
BUR08	**Bucovina Ar. S**	**77.51**	**319**	*e*P	**P**	**00 55 48.2**	**0.0**
BUR08				*e*PcP	PcP	00 55 57.6	-0.8
IDID	**Didziasalis**	**78.58**	**327**	*e*P	PcP	00 56 02.4	-0.5
IDID				AMB	AMB	00 56 03.1	
	comp=Z,2.2nm,0.8s,mb4.1						
JOF	**Joensuu**	**78.86**	**335**	*ep*	**P**	**00 56 02.9**	**+7.6**
	comp=Z,1.7nm,0.6s,mb4.2						
JOF	**Joensuu**	**78.86**	**335**	*ep*	**P**	**00 56 02.9**	**+7.6**
	comp=Z,1.7nm,0.6s,mb4.2						
IIGN	**Ignalina**	**78.87**	**327**	*e*P	PcP	00 56 04.0	-0.1
IIGN				AMB	AMB	00 56 04.9	
	comp=Z,1.9nm,0.6s,mb4.2						
IZAR	**Zarasai**	**78.97**	**327**	*e*P	PcP	00 56 04.8	+0.2
IZAR				AMB	AMB	00 56 06.2	
	comp=Z,5.1nm,0.7s,mb4.5						
ISAL	**Salakas**	**78.99**	**327**	*e*P	PcP	00 56 04.9	+0.3
ISAL				AMB	AMB	00 56 05.4	
	comp=Z,1.6nm,0.6s,mb4.1						
KWP	**Kalwaria Pacla**	**79.57**	**321**	⇑*i*P	pP	00 56 11.8	+0.8
FINES	**FINESS Array B**	**80.68**	**333**	P	**P**	**00 56 04.1**	**-1.2**
	comp=Z,1.2nm,0.6s,mb4.0,baz=108,slow=4.2,SNR=8.5						
KAF	**Kangasniemi**	**80.78**	**333**	*ep*	**P**	**00 56 13.3**	**+7.6**
	comp=Z,3.2nm,0.5s,mb4.5						
KAF	**Kangasniemi**	**80.78**	**333**	*ep*	**P**	**00 56 13.3**	**+7.6**
	comp=Z,3.2nm,0.5s,mb4.5						
ARCES	**ARCESS Array B**	**83.33**	**340**	P	**P**	**00 56 18.6**	**-0.3**
	comp=Z,0.4nm,0.5s,mb3.7,baz=98,slow=5.0,SNR=8.8						
NB2	**NORSAR Subarra**	**87.67**	**331**	P	PcP	00 56 49.1	+6.5
	comp=Z,0.7nm,0.7s,baz=98,slow=4.6						
NOA	**NORSAR Array B**	**87.67**	**331**	P	**P**	**00 56 41.6**	**+0.9**
	comp=Z,0.2nm,0.6s,mb3.5,baz=84,slow=7.2,SNR=2.5						
NOA	**NORSAR Array B**	**87.67**	**331**	P	**P**	**00 56 41.6**	**+0.9**
LPG	**La Plagne**	**89.88**	**315**	*e*P	pP	00 56 58.9	-4.4
	comp=Z,11nm,1.1s						
LPG	**La Plagne**	**89.88**	**315**	*e*P	pP	00 56 58.9	-4.4
	comp=Z,5.4nm,1.1s						
LPL	**La Plagne**	**89.89**	**315**	*e*P	pP	00 57 00.1	-3.2
	comp=Z,7.2nm,0.9s						
LPL	**La Plagne**	**89.89**	**315**	*e*P	pP	00 57 00.1	-3.2
	comp=Z,3.6nm,0.9s						
HDIL	**Hopedale**	**139.05**	**7**	*e*PKPdf	PKPdf	01 03 17.2	-2.2
CPUP	**Villa Florida**	**144.00**	**222**	PKP	PKPdf	01 03 27.2	-1.5
	comp=Z,0.6nm,0.5s,baz=122,slow=9.0,SNR=4.1						
TXAR	**Lajitas Array**	**144.72**	**32**	PKP	PKPdf	01 03 27.9	-2.0
	comp=Z,0.3nm,0.7s,baz=270,slow=1.0,SNR=4.7						
JCT	**Junction City**	**145.64**	**26**	*e*PKPdf	PKPdf	01 03 30.9	-0.5

*DDA **29** 00:57:36.9, 37°.00N×29°.22E, h24km±2km, Md3.1, Ml3.3*
*ISK **29** 00:57:37.1, 37°.03N×29°.18E, h8km, MD3.5*
*CSEM **29** 00:57:37.2±0.1, 37°.01N×29°.15E, h2km, MD3.5, Error ellipse: s-maj=2.0km s-min=1.4km az=6.0*
*ISCJB **29** 00:57:37.3±0.6, 37°.01N±0°.02×29°.19E±0°.03, h4km±5km, Error ellipse: s-maj=4.1km s-min=3.5km az=172.9*

ISC 29 00:57:37.9±0.5, 37°.02N±0°.02×29°.19E±0°.02, h4km±4km, n96, σ0°.86/118, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.29**	**61**	PG	**Pg**	**00 57 43.2**	**-0.2**
GLHS				*e*SG	**Sg**	**00 57 48.2**	**+1.0**
GLHS	**Glhisar (BURDU**	**0.29**	**61**	*i* Pg	**Pg**	**00 57 43.2**	**-0.2**
GLHS				*e*Sg	**Sg**	**00 57 48.2**	**+1.0**
GOLH	**Golhisar**	**0.37**	**54**	*i* P	**Pg**	**00 57 44.9**	**-0.1**
GOLH				*i* S	**Sg**	**00 57 50.9**	**+1.0**
GOLH	**Golhisar**	**0.37**	**54**	*i* P	**Pg**	**00 57 44.9**	**-0.2**
GOLH				*i* S	**Sg**	**00 57 50.9**	**+1.0**
TURN	**Turunc**	**0.49**	**253**	*i* P	**Pg**	**00 57 51.6**	**+4.4**
TURN				*i* S	**Sg**	**00 58 02.4**	**+8.8**
ELL	**Elmali**	**0.64**	**115**	*e*PG	**Pg**	**00 57 49.1**	**-1.0**
ELL				*e*SG	**Sg**	**00 57 59.5**	**+1.1**
ELL	**Elmali**	**0.64**	**115**	*e*Pg	**Pg**	**00 57 49.1**	**-1.0**
ELL				*e*Sg	**Sg**	**00 57 59.6**	**+1.2**
DNZL	**Cakiroluk**	**0.68**	**351**	*i* P	**Pg**	**00 57 50.4**	**-0.6**
DNZL	**Cakiroluk**	**0.68**	**351**	*i* P	**Pg**	**00 57 50.4**	**-0.6**
YER	**Yerkesik**	**0.73**	**280**	*e*PG	**Pg**	**00 57 51.7**	**-0.3**
YER	**Yerkesik**	**0.73**	**280**	*e*Pg	**Pg**	**00 57 51.7**	**-0.2**
DENT	**Denizli**	**0.75**	**351**	*e*PG	**Pg**	**00 57 51.6**	**-0.7**
DENT	**Denizli**	**0.75**	**351**	*e*Pg	**Pg**	**00 57 51.6**	**-0.6**
AKAS	**Kas**	**0.85**	**156**	*i* P	**Pg**	**00 57 53.4**	**-0.8**
AKAS				*i* S	**Sg**	**00 58 10.6**	**+5.3**
AKAS	**Kas**	**0.85**	**156**	*i* P	**Pg**	**

DEMI				*i* S	Sn	00 58 41.3	+1.9
GDZ	**Gediz**	**2.08**	**6**	*i* P	Pn	00 58 13.2	-0.4
GDZ				*i* S	Sn	00 58 38.8	-1.2
GDZ	**Gediz**	**2.08**	**6**	*i* P	Pn	00 58 13.2	-0.4
GDZ				*i* S	Sn	00 58 38.8	-1.2
AKHS	**Akhisar**	**2.15**	**330**	*i* P	Pn	00 58 13.8	-0.8
AKHS	**Akhisar**	**2.15**	**330**	*i* P	Pn	00 58 13.8	-0.8
AKS	**Akhisar**	**2.15**	**330**	*e*PN	Pn	00 58 14.2	-0.4
AKS	**Akhisar**	**2.15**	**330**	*e*PN	Pn	00 58 14.2	-0.4
ALT	**Altintas**	**2.16**	**19**	*e*PN	Pn	00 58 14.3	-0.4
ALT	**Altintas**	**2.16**	**19**	*e*PN	Pn	00 58 14.3	-0.4
BLCB	**Balcova**	**2.18**	**309**	*e*PN	Pn	00 58 14.5	-0.5
BLCB	**Balcova**	**2.18**	**309**	*e*PN	Pn	00 58 14.5	-0.5
KARP	**Karpathos**	**2.20**	**229**	*e*P	Pn	00 58 16.1	+0.9
GAZI	**Gazipasa**	**2.64**	**106**	*i* P	Pn	00 58 17.3	-3.9
GAZI	**Gazipasa**	**2.64**	**106**	*i* P	Pn	00 58 17.3	-3.9
KONT	**Konya--Tatoy**	**2.69**	**69**	*e*PN	Pn	00 58 22.1	+0.2
KONT	**Konya--Tatoy**	**2.69**	**69**	*e*PN	Pn	00 58 22.2	+0.2
LADK	**Ladik-KONYA**	**2.79**	**64**	*e*PN	Pn	00 58 23.5	+0.2
LADK	**Ladik-KONYA**	**2.79**	**64**	*e*PN	Pn	00 58 23.5	+0.2
ESKT	**Eskisehir**	**2.82**	**27**	*e*PN	Pn	00 58 23.9	+0.1
ESKT	**Eskisehir**	**2.82**	**27**	*e*PN	Pn	00 58 23.9	+0.1
KIZT	**Kizilcal**	**2.83**	**48**	*e*PN	Pn	00 58 24.1	+0.2
KIZT	**Kizilcal**	**2.83**	**48**	*e*PN	Pn	00 58 24.1	+0.2
APE	**Apeiranthos**	**2.92**	**272**	*e*P	Pn	00 58 25.7	+0.5
ZKR	**Zakros**	**3.06**	**233**	*e*P	Pn	00 58 28.9	+1.8
GONE	**Gonen-Balikesi**	**3.25**	**339**	*e*PN	Pn	00 58 29.6	0.0
GONE	**Gonen-Balikesi**	**3.25**	**339**	*e*PN	Pn	00 58 29.6	0.0
KCT	**Karacabey**	**3.31**	**349**	*e*PN	Pn	00 58 30.3	-0.2
KCT	**Karacabey**	**3.31**	**349**	*e*PN	Pn	00 58 30.3	-0.2
NPS	**Neapolis**	**3.38**	**240**	*e*P	Pn	00 58 32.4	+0.9
LASI	**Lasithi**	**3.53**	**239**	*e*P	Pn	00 58 34.6	+1.1
LEF	**Lefka**	**3.55**	**126**	*e*PN	Pn	00 58 33.9	+0.2
LEF	**Lefka**	**3.55**	**121**	*e*PN	Pn	00 58 33.9	+0.1
YLV	**Yalova**	**3.55**	**2**	*e*PN	Pn	00 58 34.4	+0.7
YLV	**Yalova**	**3.55**	**2**	*e*PN	Pn	00 58 34.4	+0.6
GULT	**Gulveren**	**3.57**	**17**	*e*PN	Pn	00 58 34.1	+0.1
GULT	**Gulveren**	**3.57**	**17**	*e*PN	Pn	00 58 34.1	+0.1
SULT	**Sultanhani-AKS**	**3.64**	**70**	*e*PN	Pn	00 58 35.8	+0.8
SULT	**Sultanhani-AKS**	**3.64**	**70**	*e*PN	Pn	00 58 35.8	+0.8
IKL	**Isikli**	**3.70**	**101**	*e*PN	Pn	00 58 36.8	+0.9
IKL	**Isikli**	**3.70**	**101**	*e*PN	Pn	00 58 36.8	+0.9
IDI	**Anoyia**	**3.88**	**245**	*e*P	Pn	00 58 39.3	+1.0
LFK	**Lefkose**	**3.92**	**115**	*e*PN	Pn	00 58 39.5	+0.6
LFK	**Lefkose**	**3.92**	**115**	*e*PN	Pn	00 58 39.5	+0.6
KARA	**Karaisali**	**4.70**	**85**	*e*PN	Pn	00 58 50.9	+1.3
KARA	**Karaisali**	**4.70**	**85**	*e*PN	Pn	00 58 50.9	+1.4

NEIC ***29*** *01:00:35.3±0.5, 1°.22N×127°.27E, h100km, mb3.9/2, Error ellipse: s-maj=35.1km s-min=8.7km az=74.0*
ISCJB ***29*** *01:00:41.4±0.8, 1°.20N±0°.08×127°.33E±0°.08, h177km±8km, mb3.7/10, Error ellipse: s-maj=15.1km s-min=10.0km az=135.2*
IDC ***29*** *01:00:43.9±11.0, 1°.07N×127°.29E, h186km±116km, mb3.3/8, mb1 3.4/9, mb1mx3.2/20, mbtmp3.3/9, MS3.6/1, Ms1 3.6/1, ms1mx2.6/20, Error ellipse: s-maj=46.6km s-min=24.9km az=67.0*
DJA ***29*** *01:00:53.0°.59N×126°.85E, h30km, MLv4.1/8*
ISC 29 01:00:42.5±0.8, 1°.12N±0°.07×127°.33E±0°.08, h171km±8km, n23, σ0s83/25, mb3.7/10, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.34**	**175**	P	**Pn**	**01 01 05.7**	**0.0**
LBMI	**Labuha**	**1.75**	**175**	P	**Pn**	**01 01 16.9**	**+0.6**
MNI	**Manado**	**2.52**	**277**	P	**Pn**	**01 01 28.7**	**+3.8**
MNI				S	**Sn**	**01 01 56.4**	**-1.3**
KMSI	**Cibinong**	**3.40**	**261**	P	**Pn**	**01 01 36.1**	**+0.4**
KMSI				S	**Sn**	**01 02 16.9**	**-0.1**
NLAI	**Namlea**	**4.33**	**183**	P	**Pn**	**01 01 54.5**	**+6.8**
NLAI				S	**Sn**	**01 02 36.1**	**-2.5**
AAI	**Ambon**	**4.85**	**170**	P	**Pn**	**01 02 00.8**	**+6.4**
LUWI	**Luwuk**	**5.04**	**245**	P	**Pn**	**01 01 57.6**	**+0.7**
APSI	**Ampana**	**6.03**	**251**	P	**Pn**	**01 02 09.6**	**-0.3**
	0.3nm2μm58nm,0.5s						
KDI	**Kendari**	**6.90**	**223**	P	**Pn**	**01 02 23.2**	**+1.9**
	0.1nm10nm,0.7s						
TTSI	**Tana Toraja**	**8.57**	**241**	P	**Pn**	**01 02 44.0**	**+0.5**
FITZ	**Fitzroy Crossi**	**19.17**	**185**	P	**P**	**01 04 52.7**	**-0.4**
	0.1nm,0.3s,baz=75,slow=10,SNR=3.1						
WRAB	**Tennant Creek**	**22.02**	**162**	*e*P	**P**	**01 05 23.5**	**+0.1**
	1.0nm,0.4s,mb3.6						
WRA	**Warramunga Arr**	**22.03**	**162**	P	**P**	**01 05 23.6**	**+0.1**
	0.8nm,0.3s,mb3.6,baz=340,slow=11,SNR=19						
ASAR	**Alice Springs**	**25.45**	**166**	P	**P**	**01 05 54.6**	**0.0**
	0.4nm,0.5s,mb3.2,baz=347,slow=7.7,SNR=7.7						
JHJ	**Hachijo jima 2**	**33.91**	**19**	LR	LR	01 19 07.9	
	comp=Z,97nm,21.2s,baz=83,slow=32						
STKA	**Stephens Creek**	**35.49**	**159**	P	**P**	**01 07 22.7**	**-0.1**
	1.4nm,0.7s,mb3.7,baz=323,slow=10,SNR=2.4						
SONM	**Songino Array**	**49.95**	**342**	P	**P**	**01 09 18.1**	**-0.8**
	0.3nm,0.5s,mb3.2,baz=146,slow=6.3,SNR=3.3						
PETK	**Petropavlovsk-**	**57.62**	**21**	P	**P**	**01 10 15.2**	**+0.7**
	1.0nm,0.6s,mb3.8,baz=164,slow=2.3,SNR=5.0						
MK31	**Makanchi Array**	**60.04**	**326**	*e*P	**P**	**01 10 30.9**	**-0.3**
MKAR	**Makanchi Array**	**60.04**	**326**	P	**P**	**01 10 32.1**	**+0.9**
	0.8nm,0.3s,mb4.0,baz=164,slow=6.3,SNR=14						
KURK	**Kurchatov**	**64.26**	**328**	*e*P	**P**	**01 10 59.1**	**-0.2**
	1.8nm,0.6s,mb4.1						
BVAR	**Borovoye Array**	**69.83**	**327**	P	**P**	**01 11 34.1**	**-0.2**
	0.4nm,0.4s,mb3.5,baz=111,slow=7.9,SNR=3.9						
ARCES	**ARCESS Array B**	**93.09**	**340**	P	**P**	**01 13 35.4**	**-1.1**
	0.8nm,0.6s,mb4.0,baz=90,slow=5.3,SNR=8.8						

IDC ***29*** *01:05:47.0±1.9, 34°.06N×141°.58E, h0km, mb3.5/3, mb1 3.7/5, mb1mx3.4/25, mbtmp3.6/5, ML3.5/2, MS3.8/1, Ms1 3.8/1, ms1mx2.6/32, Error ellipse: s-maj=36.7km s-min=21.7km az=62.0*
ISCJB ***29*** *01:05:47.6±1.5, 34°.09N±0°.05×141°.72E±0°.08, h25km±12km, mb3.6/5, Error ellipse: s-maj=12.0km s-min=7.1km az=162.2*
JMA ***29*** *01:05:48.5±0.4, 34°.09N×141°.66E, h32km±2km, M2.9*
NEIC ***29*** *01:05:52.7±6.5, 34°.03N×141°.34E, h35km, mb3.9/2, Error ellipse: s-maj=246.0km s-min=13.3km az=64.0*
ISC 29 01:05:48.1±1.4, 34°.08N±0°.05×141°.60E±0°.09, h10km±9km, n18, σ0s66/22, mb3.6/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.77**	**318**	P	**Pg**	**01 06 03.3**	**+0.3**
BSO3	**Boso 3**	**1.15**	**309**	P	**Pb**	**01 06 09.7**	**-0.4**
BSO4	**Boso 4**	**1.38**	**311**	P	**Pn**	**01 06 13.4**	**0.0**
KTR	**Katsuura**	**1.50**	**316**	*e*S	**Sn**	**01 06 33.4**	**-1.3**
JHJ2	**Mitsune**	**1.77**	**237**	P	**Pn**	**01 06 18.9**	**+0.1**
JHJ2				*e*S	**Sn**	**01 06 41.1**	**-0.3**
JHJ	**Hachijo jima 2**	**1.79**	**238**	Pn	**Pn**	**01 06 19.0**	**-0.1**
	48nm,0.3s,baz=53,slow=23,SNR=5.8						
JHJ				Sn	**Sn**	**01 06 42.6**	**+0.7**
	39nm,0.3s,baz=67,slow=22,SNR=6.7						
JIM2	**Oshima 3**	**1.90**	**290**	P	**Pn**	**01 06 19.8**	**-0.8**
JOD2	**Odawara 2**	**2.38**	**300**	P	**Pn**	**01 06 26.8**	**-0.4**
JOD2				*e*S	**Sn**	**01 06 56.4**	**0.0**
MJAR	**Matsushiro Arr**	**3.70**	**313**	Pn	**Pn**	**01 06 45.3**	**-0.1**
	2.1nm,0.3s,baz=123,slow=9.5,SNR=13						
MJAR				Sn	**Sn**	**01 07 30.0**	**+0.9**
	1.4nm,0.3s,baz=16,slow=9.5,SNR=4.3						
MAJO	**Matsushiro**	**3.70**	**312**	*e*Pn	**Pn**	**01 06 46.2**	**+0.8**
MAT	**Matsushiro**	**3.70**	**312**	P	**Pn**	**01 06 45.8**	**+0.4**
MAT				*e*S	**Sn**	**01 07 29.0**	**-0.1**
CBIJ	**Chichi jima**	**6.98**	**176**	Pn	**Pn**	**01 07 29.7**	**-0.8**
	3.0nm,0.3s,baz=282,slow=20,SNR=2.7						
ULN	**Ulaanbaatar**	**29.22**	**309**	*e*P	**P**	**01 11 50.4**	**+0.5**
	1.1nm,0.6s,mb3.8						
SONM	**Songino Array**	**29.64**	**308**	P	**P**	**01 11 54.0**	**+0.4**
	0.5nm,0.5s,mb3.5,baz=101,slow=7.9,SNR=3.6						
KURK	**Kurchatov**	**47.91**	**310**	*e*P	**P**	**01 14 25.9**	**-0.5**
	2.0nm,0.9s,mb4.2						
CTA	**Charters Tower**	**54.05**	**175**	LR	LR	01 38 58.4	
	comp=Z,88nm,18.8s,baz=230,slow=37						
WRA	**Warramunga Arr**	**54.16**	**188**	P	**P**	**01 15 12.8**	**-0.9**
	0.3nm,0.5s,mb3.5,baz=4.4,slow=7.6,SNR=8.9						
ASAR	**Alice Springs**	**57.89**	**188**	P	**P**	**01 15 41.9**	**+1.6**
	0.1nm,0.5s,mb3.1,baz=0.1,slow=5.8,SNR=4.2						

NEIC ***29*** *01:14:16.8±0.8, 10°.58N×91°.38E, h10km, mb4.3/2, Error ellipse: s-maj=23.3km s-min=12.2km az=58.0*
IDC ***29*** *01:14:16.3±1.1, 10°.78N×91°.68E, h0km, mb3.9/10, mb1 4.0/10, mb1mx3.8/23, mbtmp3.9/10, Error ellipse: s-maj=55.2km s-min=15.5km az=56.0*
ISCJB ***29*** *01:14:18.6±0.8, 10°.6N±0°.1×91°.5E±0°.1, h33km, mb3.9/12, Error ellipse: s-maj=23.1km s-min=12.0km az=147.7*
ISC 29 01:14:20.8±0.8, 10°.6N±0°.1×91°.5E±0°.1, h35km, n16, σ0s97/16, mb3.9/12, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.64**	**42**	Pn	**Pn**	**01 16 52.2**	**+1.4**
	0.3nm,0.3s,baz=234,slow=16,SNR=4.7						
MK31	**Makanchi Array**	**36.88**	**350**	*e*P	**P**	**01 21 23.8**	**-2.1**
MKAR	**Makanchi Array**	**36.88**	**350**	P	**P**	**01 21 25.3**	**-0.5**
	1.1nm,0.5s,mb3.9,baz=127,slow=9.5,SNR=5.6						
SONM	**Songino Array**	**39.17**	**16**	P	**P**	**01 21 43.6**	**-1.6**
	0.8nm,0.9s,mb3.5,baz=220,slow=6.1,SNR=3.7						
KURK	**Kurchatov**	**41.35**	**348**	*e*P	**P**	**01 22 03.5**	**+0.4**
	4.8nm,1.1s,mb4.0						
ZALV	**Zalesovo Beam**	**43.54**	**354**	P	**P**	**01 22 20.1**	**-0.8**
	1.2nm,0.5s,mb3.9,baz=188,slow=10,SNR=7.3						
FITZ	**Fitzroy Crossi**	**44.20**	**130**	P	**P**	**01 22 26.6**	**-0.1**
	2.6nm,0.4s,mb4.4,baz=335,slow=4.4,SNR=12						
BVAR	**Borovoye Array**	**45.57**	**342**	P	**P**	**01 22 37.7**	**+0.6**
	0.2nm,0.4s,mb3.4,baz=124,slow=7.2,SNR=3.0						
WRA	**Warramunga Arr**	**52.01**	**126**	P	**P**	**01 23 26.8**	**-0.3**
	1.2nm,0.3s,mb4.3,baz=300,slow=10.0,SNR=42						
WRA	**Warramunga Arr**	**52.01**	**126**	P	**P**	**01 23 26.8**	**-0.3**
WRAB	**Tennant Creek**	**52.01**	**126**	*e*P	**P**	**01 23 26.6**	**-0.5**
	2.4nm,0.5s,mb4.4						
ASAR	**Alice Springs**	**53.70**	**130**	P	**P**	**01 23 40.0**	**+0.5**
	3.0nm,0.7s,mb4.3,baz=305,slow=7.0,SNR=30						
ASAR				PcP	PcP	01 24 46.8	+1.3
	0.8nm,0.7s,baz=292,slow=2.8,SNR=5.4						
BRTR	**Keskin Array B**	**58.64**	**310**	P	**P**	**01 24 15.2**	**+0.6**
	0.4nm,0.8s,mb3.5,baz=110,slow=9.3,SNR=4.7						
FINES	**FINESS Array B**	**69.06**	**332**	P	**P**	**01 25 23.5**	**+0.7**
	1.4nm,0.9s,mb3.9,baz=96,slow=7.6,SNR=2.6						
FINES	**FINESS Array B**	**69.06**	**332**	P	**P**	**01 25 23.5**	**+0.7**
ARCES	**ARCESS Array B**	**71.80**	**340**	P	**P**	**01 25 40.9**	**+1.5**
	0.9nm,0.7s,mb3.8,baz=69,slow=6.6,SNR=6.3						

NEIC ***29*** *01:33:16.7±0.7, 10°.57N×91°.54E, h10km, mb4.1/5, Error ellipse: s-maj=20.2km s-min=11.1km az=56.0*
IDC ***29*** *01:33:16.0±1.1, 10°.79N×91°.82E, h0km, mb3.8/11, mb1 3.9/11, mb1mx3.7/24, mbtmp3.8/11, Error ellipse: s-maj=57.4km s-min=15.1km az=57.0*
ISCJB ***29*** *01:33:18.4±0.7, 10°.6N±0°.1×91°.6E±0°.1, h33km, mb3.8/15, Error ellipse: s-maj=21.0km s-min=11.4km az=146.1*
ISC 29 01:33:20.6±0.7, 10°.6N±0°.1×91°.6E±0°.1, h35km, n18, σ0s88/18, mb3.8/15, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.54**	**41**	Pn	**Pn**	**01 35 51.2**	**+1.9**
	baz=141,slow=9.2,SNR=2.3						
EKS2	**Erkin-Say**	**35.52**	**337**	*e*P	**P**	**01 40 15.9**	**+1.7**
	2.7nm,0.9s,mb4.2						
EKS2				*e*pP	pP	01 40 23.5	-0.8
MK31	**Makanchi Array**	**36.91**	**349**	*e*P	**P**	**01 40 25.6**	**-0.4**
MK31				*e*pP	pP	01 40 33.6	-2.6
MKAR	**Makanchi Array**	**36.91**	**349**	P	**P**	**01 40 25.7**	**-0.3**
	1.3nm,0.8s,mb3.8,baz=133,slow=8.5,SNR=8.9						
SONM	**Songino Array**	**39.13**	**16**	P	**P**	**01 40 42.7**	**-2.0**
	0.5nm,0.8s,mb3.3,baz=186,slow=12,SNR=3.0						
ULN	**Ulaanbaatar**	**39.34**	**16**	*e*P	**P**	**01 40 45.7**	**-0.8**
	0.9nm,0.3s,mb4.0						
KURK	**Kurchatov**	**41.38**	**348**	P	**P**	**01 41 03.0**	**-0.4**
	0.7nm,0.6s,mb3.5,baz=168,slow=7.5,SNR=4.8						
KURK	**Kurchatov**	**41.38**	**348**	*e*P	**P**	**01 41 03.3**	**0.0**
	3.4nm,1.1s,mb3.9						
ZALV	**Zalesovo Beam**	**43.56**	**354**	P	**P**	**01 41 20.2**	**-0.7**
	0.4nm,0.3s,mb3.6,baz=164,slow=9.8,SNR=2.7						
FITZ	**Fitzroy Crossi**	**44.08**	**130**	P	**P**	**01 41 25.6**	**0.0**
	5.5nm,0.7s,mb4.4,baz=326,slow=4.9,SNR=17						
BVAR	**Borovoye Array**	**45.62**	**342**	P	**P**	**01 41 36.6**	**-0.7**
	0.2nm,0.5s,mb3.3,baz=66,slow=35,SNR=2.2						
WRA	**Warramunga Arr**	**51.88**	**126**	P	**P**	**01 42 25.9**	**-0.1**
	2.3nm,0.6s,mb4.3,baz=306,slow=8.3,SNR=47						
WRAB	**Tennant Creek**	**51.88**	**126**	*e*P	**P**	**01 42 25.7**	**-0.3**
	3.1nm,0.6s,mb4.4						
ASAR	**Alice Springs**	**53.58**	**130**	P	**P**	**01 42 38.9**	**+0.3**
	1.3nm,0.6s,mb4.1,baz=305,slow=6.9,SNR=26						
ASAR				PcP	PcP	01 43 45.9	+1.0
	0.4nm,0.6s,baz=310,slow=3.6,SNR=4.9						
BRTR	**Keskin Array B**	**58.76**	**310**	P	**P**	**01 43 15.9**	**+0.6**
	0.3nm,0.7s,mb3.5,baz=126,slow=9.6,SNR=3.7						
FINES	**FINESS Array B**	**69.13**	**332**	P	**P**	**01 44 23.7**	**+0.6**
	0.5nm,0.7s,mb3.6,baz=74,slow=10,SNR=3.9						
PSZ	**Piszkesteto**	**69.94**	**317**	*e*P	**P**	**01 44 28.4**	**0.0**
	1.6nm,0.6s,mb4.1						
ARCES	**ARCESS Array B**	**71.86**	**340**	P	**P**	**01 44 40.3**	**+0.7**
	0.4nm,0.7s,mb3.5,baz=98,slow=6.5,SNR=3.2						

IDC ***29*** *01:43:56.2±0.8, 17°.18S×174°.63E, h0km, mb4.4/12, mb1 4.6/12, mb1mx4.5/17, mbtmp4.4/12, MS3.8/17, Ms1 3.8/17, ms1mx3.8/19, Error ellipse: s-maj=28.7km s-min=19.1km az=138.0*
ISCJB ***29*** *01:43:56.4±4.6, 17°.29S±0°.09×174°.86E±0°.06, h14km±28km, mb4.4/20, MS3.8/14, Error ellipse: s-maj=15.3km s-min=9.0km az=1.4*
NEIC ***29*** *01:44:01.1±0.4, 17°.28S×174°.81E, h35km, mb4.7/9, Error ellipse: s-maj=13.0km s-min=10.4km az=155.0*
GCMT ***29*** *01:44:02.8±0.3, 17°.20S×174°.74E, h24km±1km, MW4.9, Moment Tensor Solution. s24,c28; s68,c89; Moment tensor: Scale 10^16^Nm; Mrr-0.45±.19; Mθθ0.37±.15; Mφφ0.08±.13; Mrθ-0.06±.21; Mrφ2.89±.10; Mθφ0.03±.17; Best double couple: M0=2.90000×10^16^ NP1:φ=181.00000°, δ89.00000°, λ-179.00000°. NP2:φ=91.00000°, δ89.00000°, λ-1.00000°. Principal axes: T 3.1200, Plg0.0000°, Azm136.0000°; N -0.4400, Plg88.0000°, Azm239.0000°; P -2.6700, Plg2.0000°, Azm46.0000°; Data Used: IU II IC G CN.*
ISC 29 01:43:58.0±5.2, 17°.26S±0°.09×174°.89E±0°.06, h13km±32km, n59, σ1s18/34, mb4.4/21, MS3.9/14, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.05**	**99**	*e*Pn	**Pn**	**01 44 45.7**	**-0.2**
MSVF				*e*Sn	**Sn**	**01 45 20.9**	**-1.4**
DZM	**Mont Dzumac**	**9.29**	**238**	*e*Pn	**Pn**	**01 46 12.2**	**+0.6**
	149nm,1.1s						
DZM				*e*LR	LR	01 48 16.3	
	1μm,26.1s						
DZM	**Mont Dzumac**	**9.29**	**238**	*e*P	**Pn**	**01 46 12.1**	**+0.4**
DZM	**Mont Dzumac**	**9.29**	**238**	*e*Pn	**Pn**	**01 46 11.0**	**-0.6**
	47nm,0.8s						
AFI	**Afiamalu**	**13.27**	**77**	LR	LR	01 51 12.1	
	comp=Z,371nm,19.4s,baz=259,slow=32						
RAO	**Raoul Island**	**13.63**	**152**	LR	LR	01 51 19.9	
	comp=Z,922nm,20.1s,baz=279,slow=32						
HNR	**Honiara**	**16.48**	**296**	LR	LR	01 53 12.2	
	comp=Z,248nm,18.6s,baz=143,slow=34						
URZ	**Urewera**	**21.01**	**175**	P	**P**	**01 48 42.8**	**+1.5**
	17nm,0.8s,mb4.4,baz=327,slow=7.5,SNR=4.8						
URZ				LR	LR	01 55 23.4	
	comp=Z,354nm,21.2s,MS3.7,baz=6.1,slow=32						
EIDS	**Eidsvold**	**23.58**	**246**	*e*P	**P**	**01 49 10.1**	**+1.4**
ARMA	**Armidale**	**24.92**	**234**	*e*P	**P**	**01 49 20.8**	**-0.2**
RPZ	**Rata Peaks**	**26.57**	**186**	LR	LR	01 58 57.3	
	comp=Z,305nm,19.1s,MS3.9,baz=181,slow=34						
CTA	**Charters Tower**	**27.26**	**260**	*e*P	**P**	**01 49 46.2**	**+4.0**
	5.3nm,0.7s,mb4.2						
CTA	**Charters Tower**	**27.26**	**260**	P	**P**	**01 49 44.3**	**+2.1**
	5.6nm,0.9s,mb4.1,baz=71,slow=16,SNR=3.2						
CTA				LR	LR	01 58 39.8	
	comp=Z,139nm,21.0s,MS3.5,baz=67,slow=33						
CTAO	**Charters Tower**	**27.26**	**260**	*e*P	**P**	**01 49 46.1**	**+3.9**
	10nm,1.0s,mb4.3						
CMSA	**Cobar Meteorol**	**30.04**	**236**	*e*P	**P**	**01 50 05.6**	**-1.2**
COEN	**Coen**	**30.71**	**272**	*e*P	**P**	**01 50 11.4**	**-1.5**
	64nm,0.9s,mb5.5						
STKA	**Stephens Creek**	**33.44**	**238**	*e*P	**P**	**01 50 39.0**	**+2.2**
	13nm,0.9s,mb4.9						
STKA	**Stephens Creek**	**33.44**	**238**	P	**P**	**01 50 35.1**	**-1.6**
	17nm,0.9s,mb5.0,baz=56,slow=7.0,SNR=15						
STKA				LR	LR	02 03 48.9	
	comp=Z,246nm,19.0s,MS3.9,baz=28,slow=36						
PPT	**Papeete**	**33.87**	**96**	*e*LQ		01 58 19.5	
	1μm,27.8s						
PPT				*e*LR	LR	01 59 47.2	
	273nm,27.8s						
PPT	**Papeete**	**33.87**	**96**	LR	LR	02 00 14.2	
	comp=Z,109nm,21.5s,MS3.5,baz=251,slow=29						
TBI	**Tubuai**	**33.91**	**106**	*e*LQ		01 58 17.1	
	594nm,31.2s						
TBI				*e*LR	LR	01 59 55.2	
	424nm,31.5s,baz=276						
WRAB	**Tennant Creek**	**38.46**	**260**	*e*P	**P**	**01 51 19.6**	**-0.2**
	5.3nm,0.8s,mb4.3						
WRA	**Warramunga Arr**	**38.47**	**260**	P	**P**	**01 51 17.1**	**-2.9**
	2.8nm,0.9s,mb4.0,baz=92,slow=9.2,SNR=14						
ASAR	**Alice Springs**	**38.83**	**254**	P	**P**	**01 51 21.6**	**-1.4**
	20nm,0.9s,mb4.8,baz=82,slow=9.1,SNR=31						
RKT	**Rikitea**	**47.23**	**106**	*e*LR	LR	02 06 05.3	
	315nm,30.2s						
MBWA	**Marble Bar**	**52.02**	**256**	*e*P	**P**	**01 53 08.5**	**+0.9**
	6.9nm,0.7s,mb4.7						
SBA	**Scott Base**	**60.75**	**182**	*e*P	**P**	**01 54 07.8**	**-1.2**
	7.8nm,1.1s,mb4.8						
MJAR	**Matsushiro Arr**	**63.75**	**328**	P	**P**	**01 54 28.1**	**-1.5**
	1.7nm,0.9s,mb4.1,baz=170,slow=7.4,SNR=4.7						
MJAR				LR	LR	02 17 27.7	
	comp=Z,62nm,20.9s,MS3.8,baz=160,slow=32						
MAJO	**Matsushiro**	**63.75**	**328**	*e*P	**P**	**01 54 28.4**	**-1.3**
CASY	**Casey**	**64.09**	**204**	*e*P	**P**	**01 54 32.3**	**+0.9**
CASY	**Casey**	**64.09**	**204**	*e*P	**P**	**01 54 32.4**	**+0.9**
	7.4nm,1.2s,mb4.6						
RPN	**Rapa Nui**	**69.94**	**113**	LR	LR	02 17 27.6	
	comp=Z,131nm,18.8s,MS4.2,baz=328,slow=29						
KSRS	**Korea Array**	**70.10**	**322**	LR	LR	02 25 47.8	
	comp=Z,43nm,18.2s,MS3.7,baz=335,slow=36						
PETK	**Petropavlovsk-**	**71.64**	**349**	P	**P**	**01 55 18.6**	**-0.3**
	4.7nm,1.0s,mb4.4,baz=144,slow=5.2,SNR=3.2						
QSPA	**South Pole Qui**	**72.78**	**180**	*e*P	**P**	**01 55 24.9**	**-0.7**
	9.4nm,1.0s,mb4.7						
YBH	**Yreka Blue Hor**	**82.19**	**42**	P	**P**	**01 56 19.7**	**+0.9**
	2.2nm,0.9s,mb4.1,baz=203,slow=1.4,SNR=6.1						
MAW	**Mawson**	**82.24**	**201**	P	**P**	**01 56 19.2**	**+0.6**
	1.7nm,0.6s,mb4.1,baz=65,slow=2.3,SNR=4.1						
MAW				LR	LR	02 24 48.9	
	comp=Z,71nm,21.0s,MS4.0,baz=181,slow=30						
CMAR	**Chiang Mai Arr**	**82.68**	**292**	P	**P**	**01 56 22.6**	**+0.8**
	1.9nm,0.3s,mb4.5,baz=117,slow=4.3,SNR=4.6						
CMAR				LR	LR	02 31 20.3	
	comp=Z,25nm,19.0s,MS3.6,baz=277,slow=34						
NVAR	**Mina Array Bea**	**83.51**	**47**	P	**P**	**01 56 26.5**	**+0.8**
	1.3nm,0.8s,mb4.1,baz=223,slow=10.0,SNR=8.7						
HLID	**Hailey**	**88.44**	**43**	*e*P	**P**	**01 56 50.9**	**+0.9**
	7.9nm,1.7s,mb4.7						
ULN	**Ulaanbaatar**	**88.59**	**321**	*e*P	**P**	**01 56 52.6**	**+2.1**
	1.3nm,0.6s,mb4.4						
SONM	**Songino Array**	**88.97**	**321**	P	**P**	**01 56 52.1**	**-0.3**
	0.4nm,0.5s,mb4.0,baz=72,slow=4.7,SNR=3.5						
SONM				LR	LR	02 34 51.2	
	comp=Z,30nm,19.2s,MS3.7,baz=143,slow=34						
TXAR	**Lajitas Array**	**91.12**	**60**	P	**P**	**01 57 04.2**	**+1.3**
	0.5nm,0.8s,mb3.9,baz=212,slow=4.4,SNR=5.0	

SOH			S	Sn	02 05 57.7	+0.9
SOH			eSg	Sg	02 06 00.9	+0.8
AOS	**Alonnisos**	**1.86 230**	P	Pn	02 05 32.1	-1.2
AOS	**Alonnisos**	**1.86 230**	P	Pn	02 05 32.1	-1.2
HORT	**Hortiatis**	**2.00 277**	P	Pn	02 05 34.7	-0.6
HORT			S	Sn	02 06 00.5	-0.2
HORT	**Hortiatis**	**2.00 277**	P	Pn	02 05 34.7	-0.6
HORT			S	Sn	02 06 00.5	-0.2
CHOS	**Chios island**	**2.02 172**	ePN	Pn	02 05 37.4	+1.9
CHOS			eSN	Sn	02 06 03.3	+2.3
CHOS	**Chios island**	**2.02 172**	ePn	Pn	02 05 37.4	+1.9
JMB	**Yambol**	**2.18 17**	P	Pn	02 05 37.6	-0.1
JMB			S	Sn	02 06 05.9	+0.8
JMB	**Yambol**	**2.18 17**	P	Pn	02 05 37.6	-0.1
JMB			S	Sn	02 06 05.9	+0.8
DURS	**Dursunbey**	**2.27 109**	eP	Pn	02 05 41.6	+2.7
DURS			eS	Sn	02 06 10.9	+3.7
DURS	**Dursunbey**	**2.27 109**	eP	Pn	02 05 41.7	+2.8
DURS			eS	Sn	02 06 10.9	+3.7
AGG	**Agios Georgios**	**2.94 243**	P	Pn	02 05 47.5	-0.7
AGG	**Agios Georgios**	**2.94 243**	P	Pn	02 05 47.5	-0.7

*IDC **29** 02:17:18.7±1.7, 10°.80N×91°.53E, h0km, mb3.5/6, mb1 3.6/7, mb1mx3.4/23, mbtmp3.5/7, Error ellipse: s-maj=57.9km s-min=20.9km az=63.0*
*NEIC **29** 02:17:20.4±0.7, 10°.84N×91°.54E, h10km, mb3.8/2, Error ellipse: s-maj=20.0km s-min=10.2km az=64.0*
*ISCJB **29** 02:17:22.3±1.0, 10°.9N±0°.1×91°.7E±0°.2, h33km, mb3.5/8, Error ellipse: s-maj=28.6km s-min=14.6km az=153.7*

ISC 29 02:17:24.4±1.0, 10°.9N±0°.1×91°.6E±0°.2, h35km, n10, σ0s39/10, mb3.5/8, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.33**	**42**	Pn	**Pn**	**02 19 50.0**	**-0.2**
	baz=223,slow=17,SNR=4.1						
MK31	**Makanchi Array**	**36.65**	**349**	eP	**P**	**02 24 27.8**	**+0.3**
MKAR	**Makanchi Array**	**36.65**	**349**	P	**P**	**02 24 28.0**	**+0.5**
	0.7nm,0.8s,mb3.5,baz=150,slow=6.7,SNR=4.0						
SONM	**Songino Array**	**38.87**	**16**	P	**P**	**02 24 46.5**	**+0.3**
	0.2nm,0.3s,mb3.3,baz=194,slow=8.6,SNR=2.3						
KURK	**Kurchatov**	**41.12**	**347**	eP	**P**	**02 25 04.1**	**-0.8**
	0.7nm,0.7s,mb3.4						
ZALV	**Zalesovo Beam**	**43.29**	**354**	P	**P**	**02 25 22.5**	**0.0**
	0.4nm,0.4s,mb3.5,baz=179,slow=12,SNR=2.3						
WRA	**Warramunga Arr**	**52.03**	**126**	P	**P**	**02 26 30.4**	**-0.4**
	0.2nm,0.3s,mb3.5,baz=301,slow=10,SNR=14						
WRAB	**Tennant Creek**	**52.03**	**126**	eP	**P**	**02 26 31.2**	**+0.4**
	1.3nm,0.5s,mb4.1						
ASAR	**Alice Springs**	**53.74**	**130**	P	**P**	**02 26 43.5**	**+0.1**
	0.1nm,0.4s,mb3.1,baz=305,slow=7.0,SNR=4.7						
ARCES	**ARCESS Array B**	**71.61**	**340**	P	**P**	**02 28 41.5**	**-0.3**
	0.7nm,0.7s,mb3.7,baz=111,slow=6.6,SNR=4.1						

*ROM **29** 02:19:41.2±0.3, 39°.26N×17°.69E, h25km±3km, Md2.7/18, Ml2.3/12, Error ellipse: s-maj=6.0km s-min=2.2km az=140.0*
*CSEM **29** 02:19:42.1±0.2, 39°.49N×17°.48E, h20km, MD2.7/18, Error ellipse: s-maj=5.0km s-min=3.3km az=16.0*
*THE **29** 02:19:47.9, 39°.20N×17°.87E, h31km±71km, ML3.0/2, Error ellipse: s-maj=71.5km s-min=3.0km az=0.0*

ISC 29 02:19:43.3±0.7, 39°.34N±0°.03×17°.58E±0°.03, h30km±7km, n66, σ1s29/97, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LADO	**San Nicola del**	**0.47**	**264**	Pg	**Pb**	**02 19 51.9**	**-1.3**
	148nm,0.2s						
LADO	**San Nicola del**	**0.47**	**264**	Pg	**Pb**	**02 19 51.9**	**-1.3**
	148nm,0.2s						
TIP	**Timpagrande**	**0.65**	**256**	Pg	**Pb**	**02 19 55.0**	**-1.3**
TIP				Sg	**Sb**	**02 20 06.5**	**+1.4**
	48nm,0.7s						
TIP	**Timpagrande**	**0.65**	**256**	Pg	**Pb**	**02 19 55.0**	**-1.3**
SERS	**Sersale**	**0.75**	**247**	Pg	**Pb**	**02 19 57.1**	**-0.8**
SERS				Sg	**Sb**	**02 20 08.1**	**+0.3**
	34nm,0.5s						
SERS	**Sersale**	**0.75**	**247**	Pg	**Pb**	**02 19 57.1**	**-0.8**
SERS				Sg	**Sb**	**02 20 08.1**	**+0.3**
	34nm,0.5s						
SCTE	**Santa Cesarea**	**1.01**	**43**	Pg	**Pn**	**02 20 00.4**	**-1.0**
SCTE				Sg	**Sn**	**02 20 14.3**	**-0.2**
SCTE	**Santa Cesarea**	**1.01**	**43**	Pg	**Pn**	**02 20 00.4**	**-1.0**
SCTE				Sg	**Sn**	**02 20 14.3**	**-0.2**
CARO	**Carolei**	**1.06**	**266**	Pg	**Pn**	**02 20 00.9**	**-1.1**
	30nm,0.5s						
CARO	**Carolei**	**1.06**	**266**	Pg	**Pn**	**02 20 00.9**	**-1.1**
	30nm,0.5s						
ORI	**Oriolo Calabro**	**1.13**	**310**	Pg	**Pn**	**02 20 02.1**	**-1.0**
	470nm,0.4s						
ORI	**Oriolo Calabro**	**1.13**	**310**	Pg	**Pn**	**02 20 02.1**	**-1.0**
	470nm,0.4s						
TAR1	**Taranto**	**1.21**	**349**	ePn	**Pn**	**02 20 03.2**	**-1.0**
CRAC	**Craco**	**1.35**	**320**	Pg	**Pn**	**02 20 06.8**	**+0.7**
CRAC				Sg	**Sn**	**02 20 26.5**	**+3.5**
	115nm,0.5s						
CRAC	**Craco**	**1.35**	**320**	Pg	**Pn**	**02 20 06.8**	**+0.7**
PE1	**Pezze di Greco**	**1.47**	**355**	ePn	**Pn**	**02 20 07.9**	**+0.1**
MATE	**Matera**	**1.47**	**333**	Pg	**Pn**	**02 20 07.4**	**-0.4**
	52nm,0.5s						
MATE	**Matera**	**1.47**	**333**	Pg	**Pn**	**02 20 07.4**	**-0.4**
	52nm,0.5s						
NOCI	**Noci**	**1.50**	**345**	Pg	**Pn**	**02 20 06.1**	**-2.1**
NOCI	**Noci**	**1.50**	**345**	Pg	**Pn**	**02 20 06.1**	**-2.1**
JOPP	**Joppolo**	**1.51**	**242**	Pg	**Pn**	**02 20 08.0**	**-0.2**
JOPP				Sg	**Sn**	**02 20 26.7**	**-0.1**
CUC	**Castrocucco**	**1.51**	**296**	Pg	**Pn**	**02 20 08.8**	**+0.5**
CUC				Sg	**Sn**	**02 20 32.0**	**+5.1**
	29nm,0.5s						
CUC	**Castrocucco**	**1.51**	**296**	Pg	**Pn**	**02 20 08.8**	**+0.5**
MIGL	**Miglionico**	**1.54**	**326**	Pg	**Pn**	**02 20 09.8**	**+1.1**
MIGL				Sg	**Sn**	**02 20 30.2**	**+2.6**
MIGL	**Miglionico**	**1.54**	**326**	Pg	**Pn**	**02 20 09.8**	**+1.1**
SIRI	**Monte Sirino -**	**1.56**	**303**	Pg	**Pn**	**02 20 08.9**	**-0.1**
	31nm,0.4s						
SIRI	**Monte Sirino -**	**1.56**	**303**	Pg	**Pn**	**02 20 08.9**	**-0.1**
	31nm,0.4s						
SG1	**Sgolgore (BA)**	**1.65**	**336**	ePn	**Pn**	**02 20 11.7**	**+1.5**
MTSN	**Montesano sull**	**1.69**	**304**	Pg	**Pn**	**02 20 11.6**	**+0.9**
	27nm,0.5s						
MTSN	**Montesano sull**	**1.69**	**304**	Pg	**Pn**	**02 20 11.6**	**+0.9**
	27nm,0.5s						
MCEL	**Monticello**	**1.69**	**306**	Pg	**Pn**	**02 20 10.3**	**-0.4**
MCEL				Sg	**Sn**	**02 20 35.5**	**+4.2**
MCEL	**Monticello**	**1.69**	**306**	Pg	**Pn**	**02 20 10.3**	**-0.4**
CEL	**Celeste**	**1.70**	**231**	Pg	**Pn**	**02 20 10.9**	**0.0**
CEL				Sg	**Sn**	**02 20 32.1**	**+0.5**
	13nm,0.3s						
AMUR	**Altamura**	**1.74**	**335**	Pg	**Pn**	**02 20 09.5**	**-1.9**
KEK	**Kerkira**	**1.76**	**77**	P	**Pn**	**02 20 11.9**	**+0.2**
KEK				S	**Sn**	**02 20 33.7**	**+0.6**
KEK	**Kerkira**	**1.76**	**77**	P	**Pn**	**02 20 11.9**	**+0.2**
KEK				S	**Sn**	**02 20 33.7**	**+0.6**
BAI	**Bari**	**1.85**	**343**	ePn	**Pn**	**02 20 10.8**	**-2.1**
MPAZ	**Palizzi**	**1.85**	**222**	Pg	**Pn**	**02 20 13.0**	**+0.1**
	12nm,0.4s						
IGT	**Igoumenitsa**	**2.14**	**84**	P	**Pn**	**02 20 17.6**	**+0.6**
IGT				S	**Sn**	**02 20 42.9**	**+0.4**
IGT	**Igoumenitsa**	**2.14**	**84**	P	**Pn**	**02 20 17.6**	**+0.6**
IGT				S	**Sn**	**02 20 42.9**	**+0.4**
LKD2	**Lefkada island**	**2.46**	**102**	P	**Pn**	**02 20 21.7**	**+0.3**
LKD2				S	**Sn**	**02 20 49.0**	**-1.4**
LKD2	**Lefkada island**	**2.46**	**102**	P	**Pn**	**02 20 21.7**	**+0.3**
LKD2				S	**Sn**	**02 20 49.0**	**-1.4**
VLS	**Valsamata**	**2.62**	**115**	P	**Pn**	**02 20 25.4**	**+1.8**
VLS				S	**Sn**	**02 20 51.8**	**-2.6**
VLS	**Valsamata**	**2.62**	**115**	P	**Pn**	**02 20 25.4**	**+1.8**
FNA	**Florina**	**3.25**	**62**	P	**Pn**	**02 20 34.2**	**+1.9**
FNA				S	**Sn**	**02 21 10.6**	**+0.6**
FNA	**Florina**	**3.25**	**62**	P	**Pn**	**02 20 34.2**	**+1.9**
FNA				S	**Sn**	**02 21 10.6**	**+0.6**
THL	**Klokotos Trika**	**3.44**	**85**	P	**Pn**	**02 20 36.3**	**+1.4**
THL				S	**Sn**	**02 21 13.5**	**-1.1**
THL	**Klokotos Trika**	**3.44**	**85**	P	**Pn**	**02 20 36.3**	**+1.4**
THL				S	**Sn**	**02 21 13.5**	**-1.1**
STON	**Ston**	**3.53**	**1**	ePn	**Pn**	**02 20 33.4**	**-2.7**
STON				Sn	**Sn**	**02 21 12.1**	**-4.7**
STON	**Ston**	**3.53**	**1**	ePn	**Pn**	**02 20 33.4**	**-2.7**
STON				Sn	**Sn**	**02 21 12.0**	**-4.8**
LAKA	**Lakka**	**3.61**	**106**	P	**Pn**	**02 20 38.7**	**+1.5**
LAKA	**Lakka**	**3.61**	**106**	P	**Pn**	**02 20 38.7**	**+1.5**
TRIZ	**Trizonia**	**3.64**	**104**	P	**Pn**	**02 20 40.0**	**+2.4**
TRIZ	**Trizonia**	**3.64**	**104**	P	**Pn**	**02 20 40.0**	**+2.4**
KALE	**Kalithea**	**3.69**	**103**	P	**Pn**	**02 20 39.5**	**+1.3**
KALE	**Kalithea**	**3.69**	**103**	P	**Pn**	**02 20 39.5**	**+1.3**
AGG	**Agios Georgios**	**3.71**	**93**	P	**Pn**	**02 20 39.1**	**+0.6**
AGG				S	**Sn**	**02 21 21.1**	**0.0**
AGG	**Agios Georgios**	**3.71**	**93**	P	**Pn**	**02 20 39.1**	**+0.6**
AGG				S	**Sn**	**02 21 21.1**	**0.0**
ITM	**Ithomi**	**4.04**	**121**	P	**Pn**	**02 20 44.8**	**+1.7**
ITM				S	**Sn**	**02 21 27.7**	**-1.8**
ITM	**Ithomi**	**4.04**	**121**	P	**Pn**	**02 20 44.8**	**+1.7**
PYL	**PYLOS**	**4.09**	**125**	P	**Pn**	**02 20 44.5**	**+0.7**
PYL				S	**Sn**	**02 21 28.2**	**-2.4**
PYL	**PYLOS**	**4.09**	**125**	P	**Pn**	**02 20 44.5**	**+0.7**
DID	**Didima**	**4.81**	**111**	P	**Pn**	**02 20 55.8**	**+2.2**
DID				S	**Sn**	**02 21 46.0**	**-2.2**
DID	**Didima**	**4.81**	**111**	P	**Pn**	**02 20 55.8**	**+2.2**
NVLJ	**Novalja**	**5.60**	**340**	ePn	**Pn**	**02 21 02.9**	**-1.6**
NVLJ				Sn	**Sn**	**02 22 01.7**	**-6.0**
NVLJ	**Novalja**	**5.60**	**340**	ePn	**Pn**	**02 21 02.8**	**-1.7**
NVLJ				Sn	**Sn**	**02 22 01.6**	**-6.1**

IDC 29 02:20:28.7±1.8, 17°.36S×178°.15W, h0km, mb4.0/6, mb1 4.3/6, mb1mx4.0/16, mbtmp4.0/6, Error ellipse: s-maj=165.6km s-min=21.2km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.11**	**241**	P	P	02 27 58.2	+0.3
	3.7nm,0.7s,baz=78,slow=8.4,SNR=4.4						
WRA	**Warramunga Arr**	**44.97**	**259**	P	P	02 28 45.6	-0.4
	0.9nm,0.5s,baz=95,slow=6.8,SNR=32						
ASAR	**Alice Springs**	**45.17**	**254**	P	P	02 28 47.6	0.0
	7.9nm,0.6s,baz=89,slow=8.3,SNR=124						
NVAR	**Mina Array Bea**	**78.86**	**44**	P	P	02 32 35.4	+1.6
	0.4nm,0.7s,baz=241,slow=7.1,SNR=3.6						
TXAR	**Lajitas Array**	**85.50**	**58**	P	P	02 33 08.4	-0.4
	0.3nm,0.8s,baz=215,slow=7.7,SNR=3.9						
PDAR	**Pinedale Array**	**86.79**	**43**	P	P	02 33 13.9	-1.0
	0.4nm,0.5s,baz=228,slow=5.8,SNR=3.8						

*NEIC **29** 02:35:14.8, 36°.64S×73°.34W, h40km, MG3.6(GUC), After GUC.*

GUC 29 02:35:14.8±0.3, 36°.64S×73°.34W, h40km±2km, ML3.6, 2C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COCH	**Cobquecura**	**0.67**	**42**	⇓iP	Pn	02 35 28.0	+0.1
COCH				i S	Sn	02 35 38.0	+0.7
COCH	**Cobquecura**	**0.67**	**42**	⇓iP	Pn	02 35 28.0	+0.1
COCH				i S	Sn	02 35 38.0	+0.7
COCH				AML	AML	02 35 40.5	
	comp=E,2μm,0.5s						
CCHI	**Chillan**	**1.02**	**88**	⇓iP	Pn	02 35 33.2	+0.6
CCHI				i S	Sn	02 35 47.1	+1.5
CCHI	**Chillan**	**1.02**	**88**	⇓iP	Pn	02 35 33.2	+0.6
CCHI				i S	Sn	02 35 47.1	+1.5
CCHI				AML	AML	02 35 52.2	
	comp=E,3μm,0.7s						
TALC	**Talca**	**1.86**	**49**	⇑iP	Pn	02 35 47.6	+3.6
TALC				i S	Sn	02 36 10.7	+4.4
TALC	**Talca**	**1.86**	**49**	⇑iP	Pn	02 35 47.6	+3.6
TALC				i S	Sn	02 36 10.7	+4.4
TALC				AML	AML	02 36 18.2	
	comp=E,2μm,0.4s						
TMU	**Temuco**	**2.17**	**165**	i S	Sn	02 36 15.8	+1.7
CLCH	**Cerro Calan**	**3.97**	**36**	eP	Pn	02 36 14.5	+1.4
FCH	**Farellones**	**4.14**	**38**	eP	Pn	02 36 17.1	+1.6
PLCA	**Paso Flores**	**4.63**	**153**	ePn	Pn	02 36 26.3	+4.1

*NEIC **29** 02:41:38.4±1.2, 4°.05S×129°.47E, h105km±12km, mb4.6/18, Error ellipse: s-maj=11.2km s-min=6.0km az=55.0*
*ISCJB **29** 02:41:38.7±0.4, 4°.06S±0°.03×129°.51E±0°.03, h128km±4km, mb4.4/23, Error ellipse: s-maj=6.1km s-min=4.6km az=137.4*
*IDC **29** 02:41:39.9±2.8, 4°.03S×129°.40E, h115km±26km, mb4.1/11, mb1 4.1/12, mb1mx4.0/20, mbtmp4.1/12, MS3.6/2, Ms1 3.6/2, ms1mx2.7/24, Error ellipse: s-maj=26.1km s-min=12.0km az=66.0*
*DJA **29** 02:41:41.3, 3°.84S×129°.49E, h102km, mb4.7/20*

ISC 29 02:41:39.6±0.4, 4°.06S±0°.03×129°.51E±0°.03, h117km±4km, n76, σ1s03/90, mb4.4/23, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**1.37**	**286**	P	**Pn**	**02 42 04.9**	**-0.5**
AAI				S	**Sn**	**02 42 23.3**	**-1.7**
NLAI	**Namlea**	**2.54**	**289**	P	**Pn**	**02 42 21.2**	**+1.3**
NLAI				S	**Sn**	**02 42 51.2**	**+0.3**
TLE	**Tual**	**3.57**	**116**	P	**Pn**	**02 42 37.0**	**+3.5**
TLE				S	**Sn**	**02 43 19.0**	**+3.9**
LBMI	**Labuha**	**3.95**	**329**	P	**Pn**	**02 42 38.6**	**+0.1**
LBMI				S	**Sn**	**02 43 20.5**	**-3.7**
TNTI	**Ternate**	**5.26**	**336**	P	**Pn**	**02 42 55.7**	**-0.4**
	0.6nm161nm,0.8s						
TNTI				S	**Sn**	**02 43 52.9**	**-2.8**
	0.6nm161nm,0.8s						
KDI	**Kendari**	**6.88**	**271**	P	**Pn**	**02 43 18.0**	**0.0**
	0.1nm37nm,0.8s						
BAKI	**Biak**	**7.18**	**67**	P	**Pn**	**02 43 24.2**	**+2.1**
	0.4nm1μm83nm,1.0s						
BAKI				S	**Sn**	**02 44 40.9**	**-1.2**
	0.4nm1μm83nm,1.0s						
MNI	**Manado**	**7.19**	**319**	P	**Pn**	**02 43 22.7**	**+0.4**
	1.2nm172nm,0.8s						
MNI				S	**Sn**	**02 44 37.0**	**-5.5**
	1.2nm172nm,0.8s						
KMSI	**Cibinong**	**7.20**	**310**	P	**Pn**	**02 43 23.1**	**+0.8**
	2.2nm6μm139nm,0.6s						
KMSI				S	**Sn**	**02 44 38.6**	**-4.0**
	2.2nm6μm139nm,0.6s						
LUWI	**Luwuk**	**7.37**	**294**	P	**Pn**	**02 43 25.1**	**+0.4**
	0.4nm2μm72nm,0.5s						
LUWI				S	**Sn**	**02 44 46.5**	**-0.4**
	0.4nm2μm72nm,0.5s						
APSI	**Ampana**	**8.46**	**292**	P	**Pn**	**02 43 37.1**	**-2.3**
	870nm71nm,0.9s						
APSI				S	**Sn**	**02 45 14.7**	**+1.5**
	870nm71nm,0.9s						
MMRI	**Maumere**	**8.54**	**238**	P	**Pn**	**02 43 40.8**	**+0.3**
	29nm,1.8s						
MRSI	**Marisa**	**8.81**	**301**	P	**Pn**	**02 43 43.4**	**-0.8**
	612nm61nm,0.7s						
KAKA	**Kakadu**	**9.07**	**162**	eP	**Pn**	**02 43 47.0**	**-0.7**
	33nm,0.5s						
KAKA				eS	**Sn**	**02 45 22.6**	**-5.4**
KAKA	**Kakadu**	**9.07**	**162**	ePn	**Pn**	**02 43 46.8**	**-0.9**
	99nm,0.5s						
KAKA				eSn	**Sn**	**02 45 22.8**	**-5.2**
SMPI	**Sarmi**	**9.41**	**78**	P	**Pn**	**02 43 54.0**	**+1.6**
	2μm28nm,0.9s						
BKSI	**Bulukumba**	**9.44**	**262**	P	**Pn**	**02 43 54.4**	**+1.6**
	15nm,1.3s						
SPSI	**Sidrap Palu**	**9.72**	**270**	P	**Pn**	**02 43 57.4**	**+0.8**
	18nm,1.0s						
TTSI	**Tana Toraja**	**9.73**	**276**	P	**Pn**	**02 43 58.5**	**+1.8**
PCI	**Palu**	**10.16**	**288**	P	**Pn**	**02 44 02.8**	**+0.3**
	43nm,0.9s						
WSI	**Waingapu**	**10.71**	**238**	S	Sx	02 46 25.7	
KNA	**Kununurra**	**11.64**	**184**	P	**Pn**	**02 44 21.7**	**-0.4**
FITZ	**Fitzroy Crossi**	**14.46**	**195**	eP	**Pn**	**02 44 56.9**	**-1.9**
	8.6nm,0.4s						
FITZ				i		02 45 02.8	
FITZ	**Fitzroy Crossi**	**14.46**	**195**	P	**Pn**	**02 44 57.3**	**-1.5**
	1.3nm,0.3s,baz=34,slow=9.7,SNR=40						
FITZ				S	**Sn**	**02 47 37.3**	**-1.2**
	0.5nm,0.3s,baz=323,slow=20,SNR=3.0						
FITZ	**Fitzroy Crossi**	**14.46**	**195**	P	**Pn**	**02 45 02.5**	**+3.7**
	2μm82nm,1.0s						
WRAB	**Tennant Creek**	**16.46**	**164**	ePn	**Pn**	**02 45 22.3**	**-1.5**
	39nm,0.8s						
WRAB				eSn	**Sn**	**02 48 18.6**	**-8.3**
WRAB	**Tennant Creek**	**16.46**	**164**	P	**Pn**	**02 45 24.4**	**+0.6**
	56nm,0.9s						
WRA	**Warramunga Arr**	**16.47**	**164**	P	**Pn**	**02 45 22.6**	**-1.3**
	6.2nm,0.3s,baz=342,slow=13,SNR=145						
WRA				S	**S**	**02 48 14.2**	**-13**
	1.9nm,0.3s,baz=343,slow=24,SNR=5.9						
WRA	**Warramunga Arr**	**16.47**	**164**	P	**Pn**	**02 45 22.6**	**-1.3**
WRA				S	**S**	**02 48 14.2**	**-13**
KKM	**Kota Kinabalu**	**16.65**	**307**	eP	**Pn**	**02 45 25.3**	**-0.8**
	38nm,1.1s						
KKM	**Kota Kinabalu**	**16.65**	**307**	P	**Pn**	**02 45 26.5**	**+0.4**
	408nm35nm,1.3s						
COEN	**Coen**	**16.68**	**127**	eP	**Pn**	**02 45 27.6**	**+1.1**
	60nm,0.6s						
COEN				eSn	**Sn**	**02 48 20.5**	**-12**
COEN	**Coen**	**16.68**	**127**	P	**Pn**	**02 45 30.6**	**+4.1**
	57nm,1.1s						
SBUM	**Sibu**	**18.45**	**290**	P	**P**	**02 45 47.6**	**+1.2**
	24nm,0.8s						
MBWA	**Marble Bar**	**19.47**	**208**	eP	**P**	**02 45 56.6**	**-0.8**
MBWA	**Marble Bar**	**19.47**	**208**	eP	**P**	**02 45 56.5**	**-0.8**
	29nm,1.0s						
MBWA	**Marble Bar**	**19.47**	**208**	P	**P**	**02 46 01.0**	**+3.6**
	36nm,1.0s						
ASAR	**Alice Springs**	**19.95**	**168**	P	**P**	**02 46 04.1**	**+1.6**
	110nm,0.5s,baz=347,slow=10,SNR=1755						
ASAR				S	**S**	**02 49 32.6**	**-7.9**
	0.8nm,0.7s,baz=353,slow=22,SNR=3.1						
ASAR				ScP	ScP	02 53 40.0	-0.3
	1.6nm,0.8s,baz=346,slow=2.1,SNR=5.4						
KSM	**Kuching**	**19.96**	**286**	eP	**P**	**02 46 03.0**	**+0.2**
	52nm,1.0s						
KSM	**Kuching**	**19.96**	**286**	P	**P**	**02 46 03.3**	**+0.5**
CTA	**Charters Tower**	**22.80**	**136**	eP	**P**	**02 46 31.1**	**-1.5**
	9.1nm,0.9s,mb4.1						
CTA	**Charters Tower**	**22.80**	**136**	P	**P**	**02 46 34.4**	**+1.8**
	5.5nm,0.5s,mb4.2,baz=301,slow=11,SNR=6.7						
CTA	**Charters Tower**	**22.80**	**136**	P	**P**	**02 46 34.4**	**+1.8**
CTAO	**Charters Tower**	**22.80**	**136**	eP	**P**	**02 46 31.4**	**-1.2**
	15nm,0.9s,mb4.3						
FORT	**Forrest**	**26.61**	**183**	eP	**P**	**02 47 07.0**	**-0.1**
	14nm,0.5s,mb4.7						
FORT	**Forrest**	**26.61**	**183**	eP	**P**	**02 47 07.1**	**0.0**
	18nm,0.5s,mb4.8						
STKA	**Stephens Creek**	**29.91**	**159**	eP	**P**	**02 47 37.4**	**+1.0**
	2.6nm,0.3s,mb4.3						
STKA	**Stephens Creek**	**29.91**	**159**	P	**P**	**02 47 37.5**	**+1.1**
	6.7nm,0.7s,mb4.4,baz=332,slow=8.5,SNR=16						
STKA	**Stephens Creek**	**29.91**	**159**	P	**P**	**02 47 37.5**	**+1.1**
KULM	**Kulim**	**30.29**	**288**	eP	**P**	**02 47 39.7**	**-0.4**
	7.1nm,0.7s,mb4.4						
PSI	**Prapat**	**31.32**	**282**	P	**P**	**02 47 48.0**	**-1.1**
	5.5nm,0.7s,mb4.4,baz=109,slow=8.9,SNR=8.0						
CMAR	**Chiang Mai Arr**	**37.52**	**308**	P	**P**	**02 48 43.3**	**+0.8**
	4.2nm,0.5s,mb4.5,baz=135,slow=7.3,SNR=18						
CHTO	**Chiang Mai**	**37.72**	**308**	eP	**P**	**02 48 44.6**	**+0.4**
	11nm,1.0s,mb4.6						
JHJ	**Hachijo jima 2**	**38.24**	**14**	LR	LR	03 03 22.5	
	comp=Z,689nm,21.5s,baz=125,slow=34						
MAJO	**Matsushiro**	**41.20**	**11**	eP	**P**	**02 49 12.0**	**-0.8**
	2.9nm,0.6s,mb4.3						
MJAR	**Matsushiro Arr**	**41.20**	**11**	P	**P**	**02 49 12.2**	**-0.6**
	1.0nm,0.4s,mb4.0,baz=184,slow=8.8,SNR=6.0						
MJAR	**Matsushiro Arr**	**41.20**	**11**	P	**P**	**02 49 12.2**	**-0.6**
KSRS	**Korea Array**	**41.33**	**358**	P	**P**	**02 49 14.5**	**+0.7**
	2.1nm,1.1s,mb3.9,baz=177,slow=8.5,SNR=4.4						
KSRS				LR	LR	03 07 14.7	
	comp=Z,13nm,19.8s,baz=135,slow=37						
ULN	**Ulaanbaatar**	**55.34**	**342**	eP	**P**	**02 51 01.9**	**+0.8**
	4.2nm,0.8s,mb4.5						
SONM	**Songino Array**	**55.52**	**341**	P	**P**	**02 51 02.9**	**+0.4**
	1.2nm,0.4s,mb4.3,baz=158,slow=6.9,SNR=13						
CASY	**Casey**	**63.51**	**188**	eP	**P**	**02 51 56.9**	**-0.1**
	1.8nm,0.6s,mb4.1						
MKAR	**Makanchi Array**	**65.52**	**326**	P	**P**	**02 52 10.6**	**+0.1**
	2.6nm,0.3s,mb4.5,baz=136,slow=7.3,SNR=36						
MK31	**Makanchi Array**	**65.52**	**326**	eP	**P**	**02 52 10.2**	**-0.3**
YAK	**Yakutsk**	**65.91**	**0**	eP	**P**	**02 52 12.3**	**-0.2**
	13nm,0.4s,mb5.1						
TKM2	**Tokmak 2**	**67.43**	**320**	eP	**P**	**02 52 22.4**	**-0.3**
	2.8nm,0.7s,mb4.2						
EKS2	**Erkin-Say**	**68.48**	**319**	eP	**P**	**02 52 29.6**	**+0.3**
	1.6nm,0.7s,mb4.0						
KBL	**Kabul**	**68.52**	**309**	eP	**P**	**02 52 28.7**	**-1.0**
	3.6nm,0.6s,mb4.4						
ZAA0	**Zalesovo Array**	**68.75**	**334**	eP	**P**	**02 52 30.0**	**-0.7**
ZALV	**Zalesovo Beam**	**68.75**	**334**	P	**P**	**02 52 30.1**	**-0.6**
	2.6nm,0.6s,mb4.2,baz=116,slow=5.9,SNR=16						
KURK	**Kurchatov**	**69.78**	**328**	eP	**P**	**02 52 37.0**	**-0.1**
	10.0nm,0.6s,mb4.8						
BVAR	**Borovoye Array**	**

MNSI	Mandailing Nat	2.92	77	P	Pn	03 13 49.9	+0.1
MNSI				S	Sn	03 14 24.3	0.0
TPTI		3.15	8	P	Pn	03 13 52.6	-0.3
PSI	Prapat	3.45	39	Pn	Pn	03 13 55.9	-1.1
3.4nm,0.3s,baz=201,slow=8.8,SNR=11							
PPI	Padang Panjang	3.71	99	P	Pn	03 14 00.9	+0.3
PDSI	Padang	3.87	105	P	Pn	03 14 02.9	+0.1
BKNI	Bangkinang	4.31	87	P	Pn	03 14 17.2	+8.3
PPSI	Pulau Pagai	4.35	131	P	Pn	03 14 08.5	-1.0
SDSI	Sungai Dareh	4.81	103	P	Pn	03 14 17.2	+1.4
BSI	Banda Aceh	5.53	345	P	Pn	03 14 21.7	-3.9
0.5nm1μm56nm,0.8s							
BSI				S	Sn	03 15 21.8	-6.7
0.5nm1μm56nm,0.8s							
IPM	Ipoh	6.09	45	P	Pn	03 14 33.1	-0.3
25nm,0.7s							
KULM	Kulim	6.45	37	*e*Pn	Pn	03 14 37.5	-0.9
17nm,0.6s							
KULM	Kulim	6.45	37	P	Pn	03 14 36.9	-1.5
26nm,0.9s							
KSI	Kapahiang	6.96	123	P	Pn	03 14 45.6	+0.3
138nm,0.9s							
MYKOM	Kota Tinggi	7.31	77	P	Pn	03 14 49.0	-1.1
16nm,0.8s							
MNAI	Manna	7.65	126	P	Pn	03 14 55.4	+0.6
306nm,1.4s							
MDSI	Maura Dua	8.73	122	P	Pn	03 15 09.5	-0.2
CMAR	Chiang Mai Arr	18.35	7	P	Pn	03 17 18.9	+1.2
0.5nm,0.3s,baz=194,slow=12,SNR=7.7							
CHTO	Chiang Mai	18.70	7	*e*P	Pn	03 17 23.5	+1.4
2.7nm,0.5s							
KKM	Kota Kinabalu	20.32	73	*e*P	P	03 17 39.9	+0.6
42nm,1.2s							
FITZ	Fitzroy Crossi	33.70	124	P	P	03 19 45.0	+0.6
5.8nm,0.8s,mb4.5,baz=276,slow=7.1,SNR=8.9							
GTA	Gaotai	39.20	4	*e*P	P	03 20 41.0	+10
GTA				pP	pP	03 20 44.8	+6.5
GTA				pmax	pmax		
comp=Z,4.0nm,0.8s,mb4.2							
WRA	Warramunga Arr	41.88	121	P	P	03 20 54.1	+0.6
comp=Z,3.5nm,0.8s,mb4.0,baz=302,slow=9.1,SNR=26							
WRAB	Tennant Creek	41.88	121	*e*P	P	03 20 54.0	+0.5
comp=Z,4.1nm,0.8s,mb4.1							
ASAR	Alice Springs	43.13	126	P	P	03 21 04.4	+0.7
comp=Z,2.1nm,0.6s,mb4.0,baz=301,slow=7.9,SNR=21							
TKM2	Tokmak 2	46.64	339	*e*P	P	03 21 32.7	+1.4
comp=Z,3.9nm,1.1s,mb4.2							
TKM2				*e*pP	pP	03 21 39.8	+1.2
KSRS	Korea Array	46.99	34	P	P	03 21 34.3	+0.1
comp=Z,0.9nm,0.8s,mb3.8,baz=226,slow=8.2,SNR=3.5							
EKS2	Erkin-Say	47.10	337	*e*P	P	03 21 35.7	+0.8
comp=Z,2.7nm,0.7s,mb4.3							
EKS2				*e*pP	pP	03 21 44.8	+2.5
MK31	Makanchi Array	48.17	347	*e*P	P	03 21 45.9	+2.8
MK31				*e*pP	pP	03 21 52.5	+2.0
MKAR	Makanchi Array	48.17	347	P	P	03 21 43.1	0.0
comp=Z,1.7nm,0.6s,mb4.3,baz=118,slow=9.8,SNR=8.2							
SONM	Songino Array	48.26	9	P	P	03 21 43.9	+0.2
comp=Z,0.6nm,0.6s,mb3.8,baz=190,slow=9.0,SNR=4.0							
KURK	Kurchatov	52.71	346	*e*P	P	03 22 17.7	+0.3
comp=Z,1.2nm,0.6s,mb4.0							
KURK				*e*pP	pP	03 22 26.5	+1.7
MAJO	Matsushiro	52.80	42	*e*P	P	03 22 18.9	+0.6
comp=Z,2.9nm,0.6s,mb4.4							
STKA	Stephens Creek	52.99	131	P	P	03 22 19.8	0.0
comp=Z,6.4nm,0.9s,mb4.5,baz=313,slow=6.4,SNR=5.2							
ZAA0	Zalesovo Array	54.54	351	*e*P	P	03 22 30.3	-0.5
ZAA0				*e*pP	pP	03 22 39.6	+1.4
ZALV	Zalesovo Beam	54.54	351	P	P	03 22 30.3	-0.4
comp=Z,4.6nm,0.5s,mb4.8,baz=174,slow=6.4,SNR=16							
BVAR	Borovoye Array	57.11	341	P	P	03 22 48.4	-0.7
comp=Z,0.9nm,0.6s,mb4.0,baz=146,slow=9.0,SNR=6.9							
BRVK	Borovoye	57.17	341	*e*P	P	03 22 49.8	+0.2
comp=Z,2.3nm,0.5s,mb4.5							
BR131	Keskin Array S	69.49	313	*e*P	P	03 24 11.6	+0.1
comp=Z,0.9nm,0.6s,mb3.9							
BR131				*e*pP	pP	03 24 19.5	+0.3
BRTR	Keskin Array B	69.49	313	P	P	03 24 10.2	-1.3
comp=Z,0.7nm,0.6s,mb3.8,baz=126,slow=6.9,SNR=6.5							
AKASG	Malin Array Be	75.82	323	P	P	03 24 47.8	-1.1
comp=Z,0.5nm,0.2s,mb4.0,baz=85,slow=5.7,SNR=4.4							
BUR08	Bucovina Ar. S	77.54	319	*e*P	P	03 24 59.1	+0.4
IDID	Didziasalis	78.62	327	*e*P	P	03 25 12.4	+7.9
IDID				AMB	AMB	03 25 14.7	
comp=Z,3.0nm,0.9s,mb4.2							
IIGN	Ignalina	78.91	327	*e*P	P	03 25 14.2	+8.1
IIGN				AMB	AMB	03 25 15.5	
comp=Z,3.8nm,0.8s,mb4.4							
IZAR	Zarasai	79.01	327	*e*P	P	03 25 14.8	+8.2
IZAR				AMB	AMB	03 25 16.7	
comp=Z,2.7nm,0.9s,mb4.2							
ISAL	Salakas	79.03	327	*e*P	P	03 25 14.6	+7.8
ISAL				AMB	AMB	03 25 16.0	
comp=Z,2.6nm,0.9s,mb4.2							
FINES	FINESS Array B	80.73	333	P	P	03 25 14.7	-1.2
comp=Z,1.4nm,0.6s,mb4.0,baz=90,slow=5.7,SNR=8.2							
PSZ	Piszkesteto	81.10	318	*e*P	P	03 25 18.1	0.0
comp=Z,2.0nm,0.8s,mb4.1							
ARCES	ARCESS Array B	83.39	340	P	P	03 25 29.4	-0.3
comp=Z,1.4nm,0.8s,mb4.0,baz=102,slow=6.5,SNR=9.4							
NB2	NORSAR Subarra	87.71	331	P	P	03 25 50.5	-0.8
comp=Z,4.7nm,1.1s,mb4.6,baz=92,slow=5.3							
NOA	NORSAR Array B	87.71	331	P	P	03 25 51.1	-0.2
comp=Z,0.5nm,0.8s,mb3.8,baz=95,slow=4.9,SNR=2.7							
LPG	La Plagne	89.90	315	*e*P	P	03 26 01.1	-0.9
comp=Z,8.6nm,1.0s,mb4.7							
LPG	La Plagne	89.90	315	*e*P	P	03 26 01.1	-0.9
comp=Z,4.3nm,1.0s,mb4.7							
LPL	La Plagne	89.91	315	*e*P	P	03 26 01.0	-1.1
TXAR	Lajitas Array	144.82	32	PKPbc	PKPdf	03 32 39.5	-1.1
comp=Z,0.6nm,0.7s,baz=311,slow=2.0,SNR=6.9							
JCT	Junction City	145.74	26	*e*PKPbc	PKPbc	03 32 41.9	-0.5

CASC 29 03:30:35.5±0.9, 8°.83N×83°.99W, h19km±6km, MD3.5, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QCR	Quepos	0.62	344	*e*P	Pb	03 30 47.5	-0.1
QCR				*e*S	Sb	03 30 56.9	+0.9
BUS	Buena Vista	0.76	18	*e*P	Pb	03 30 49.9	-0.2
BUS				*e*S	Sb	03 31 01.8	+1.7
BAR1		0.79	58	*e*P	Pb	03 30 50.3	-0.3
BAR1				*e*S	Sb	03 31 01.8	+0.9
ACR	Cerro Adams	0.83	102	*e*P	Pb	03 30 50.7	-0.7
ACR				*e*S	Sb	03 31 02.4	+0.2
URSC	Urasca	1.02	12	*e*P	Pb	03 30 54.3	-0.3
URSC				*e*S	Sb	03 31 08.4	+0.7
PRS1	Puriscal	1.19	345	*e*P	Pn	03 30 55.5	-1.7
PRS1				*e*S	Sb	03 31 10.2	-2.3
CTCR	Cotoan	1.22	87	*e*S	Sb	03 31 09.7	-3.7
BRU2	Volcan	1.29	91	*e*P	Pn	03 31 05.7	+7.3
BRU2				*e*S	Sn	03 31 16.2	+1.0

IDC 29 03:36:13.9±5.4, 0°.74N×97°.46E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.4/22, mbtmp3.5/5, Error ellipse: s-maj=277.0km s-min=21.9km az=55.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	41.57	122	P	P	03 44 04.0	+0.2
0.3nm,0.7s,baz=302,slow=8.9,SNR=2.7							
ASAR	Alice Springs	42.91	127	P	P	03 44 14.4	-0.2
0.3nm,0.7s,baz=304,slow=8.7,SNR=3.3							
MKAR	Makanchi Array	47.75	346	P	P	03 44 52.4	-0.2
0.7nm,0.8s,baz=131,slow=10,SNR=4.5							
KURK	Kurchatov	52.30	345	P	P	03 45 26.4	-0.7
0.2nm,0.4s,baz=163,slow=6.5,SNR=2.6							
ZALV	Zalesovo Beam	54.05	351	P	P	03 45 40.6	+0.6
1.5nm,0.4s,baz=167,slow=7.2,SNR=5.5							
TXAR	Lajitas Array	143.92	32	PKP	PKPdf	03 55 50.0	-2.1
0.2nm,0.7s,baz=4.2,slow=3.7,SNR=3.5							

IDC 29 04:08:22.2±1.9, 32°.30N×105°.06E, h0km, mb3.5/3, mb1 3.7/3, mbmx3.3/23, mbtmp3.5/3, Error ellipse: s-maj=416.5km s-min=30.6km az=62.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARCES	ARCESS Array B	56.51	335	P	P	04 18 05.7	0.0
0.9nm,0.9s,baz=96,slow=8.3,SNR=3.9							
WRA	Warramunga Arr	59.03	148	P	P	04 18 23.8	-0.2
0.3nm,0.5s,baz=340,slow=7.8,SNR=7.5							
ASAR	Alice Springs	62.10	150	P	P	04 18 45.2	+0.3
0.2nm,0.4s,baz=328,slow=6.5,SNR=5.4							

BJI ***29*** *04:14:32.8, 10°.68N×91°.59E, h11km, mB5.1/33, mb4.8/51, Ms5.0/58, Ms7 4.8/53*

IDC ***29*** *04:14:33.3±0.4, 10°.78N×91°.74E, h0km, mb4.6/28, mb1 4.6/30, mb1mx4.6/33, mbtmp4.5/30, ML4.2/2, MS4.6/33, Ms1 4.6/33, ms1mx4.5/38, Error ellipse: s-maj=14.2km s-min=10.6km az=64.0*

ISCJB ***29*** *04:14:34.2±0.8, 10°.69N±0°.03×91°.69E±0°.02, h18km±5km, mb4.8/162, MS4.8/83, Error ellipse: s-maj=4.8km s-min=4.0km az=15.3*

MOS ***29*** *04:14:36.4±0.9, 10°.76N×91°.73E, h33km, mb5.1/71, MS4.7/33, Error ellipse: s-maj=9.0km s-min=4.1km az=120.8*

NEIC ***29*** *04:14:37.0±2.4, 10°.75N×91°.64E, h23km±16km, mb4.9/78, Error ellipse: s-maj=7.8km s-min=4.8km az=50.0*

GCMT ***29*** *04:14:38.6±0.2, 10°.81N×91°.96E, h12km, MW5.2, Moment Tensor Solution. s65,c94; s84,c135; Moment tensor: Scale 10^{16}Nm; M_{rr}-5.75±.11; $M_{\theta\theta}$0.51±.10; $M_{\phi\phi}$5.24±.10; $M_{r\theta}$2.49±.35; $M_{\theta\phi}$1.77±.09; $M_{\phi r}$-5.37±.29; Best double couple: $M_0$8.20000×10^{16} NP1:ϕ_s216.00000°, δ29.00000°, λ-49.00000°. NP2:ϕ_s351.00000°, δ68.00000°, λ-110.00000°. Principal axes: T 7.5000, Plg21.0000°, Azm97.0000°; N 1.3800, Plg19.0000°, Azm359.0000°; P -8.8800, Plg61.0000°, Azm231.0000°; Data Used: II IU IC G CN.*

SZGRF ***29*** *04:14:41.8, 10°.64N×90°.74E, h33km, mb4.9, MS4.6, Andaman Islands, India, region*

DJA ***29*** *04:14:49, 10°.91N×91°.78E, h132km, mb4.9/30*

ISC 29 04:14:38.5±0.8, 10°.76N±0°.03×91°.72E±0°.02, h33km±5km, h24km±2.1km: pP-P, n463, σ1$09/471, mb4.8/162, MS4.8/83, 27C-17D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	Port Blair	1.34	48	*ex*	x	04 16 28.1	
CM31	Chiang Mai Arr	10.36	42	*e*Pn	Pn	04 17 06.3	+1.4
CM31				*e*Sn	Sn	04 18 56.0	-3.9
CMAR	Chiang Mai Arr	10.36	42	Pn	Pn	04 17 04.5	-0.4
1.1nm,0.3s,baz=235,slow=14,SNR=14							
CMAR				Sn	Sn	04 18 56.9	-3.0
0.8nm,0.3s,baz=234,slow=23,SNR=3.3							
CMAR				LR	LR	04 21 32.8	
comp=Z,3μm,19.9s,baz=223,slow=41							
CMAR	Chiang Mai Arr	10.36	42	P	Pn	04 17 04.5	-0.4
CMAR						04 18 56.9	
KULM	Kulim	10.38	121	*e*Pn	Pn	04 17 05.5	+0.4
31nm,1.0s							
CHTO	Chiang Mai	10.62	40	*e*Pn	Pn	04 17 13.9	+5.5
CHTO				*e*Sn	Sn	04 18 58.6	-7.7
PSI	Prapat	10.66	137	Pn	Pn	04 17 07.8	-1.2
0.7nm,0.3s,baz=212,slow=13,SNR=3.6							
VIS	Vishakhapatnam	10.68	311	*e*PKP	Pn	04 17 07.0	-2.1
VIS				*e*S	Sn	04 18 57.5	-10
VIS				*i* x	x	04 18 58.7	
BWNR	Bhubaneshwar	11.06	330	*e*PKP	Pn	04 17 15.0	+0.6
BWNR				*e*S	Sn	04 19 12.0	-5.0
AGT	Agartala	13.06	358	*ex*	Pn	04 17 37.0	-4.7
AGT				*ex*	x	04 18 44.0	
HYB	Hyderabad	14.38	299	*i* P	Pn	04 18 00.0	+0.2
HYB				*e*S	Sn	04 20 40.0	+1.8
TRD	Trivandrum	14.72	263⇑	*ex*	x	04 18 15.5	
TRD				*ex*	x	04 21 12.5	
SHL	Shillong	14.73	1	*e*PKP	Pn	04 18 05.0	+0.5
SHL				*e*S	Sn	04 20 40.0	-6.6
NGP	Nagpur	15.96	312	*e*PKP	Pn	04 18 19.0	-1.6
NGP				AMb	AMB	04 18 26.6	
comp=Z,87nm,0.9s							
NGP				*ex*	x	04 21 05.0	
ODAN	Odare	16.53	346	*e*P	Pn	04 18 27.5	-0.3
JBP	Jabalpur	16.66	319	*e*PKP	Pn	04 18 28.5	-1.1
JBP				*ex*	x	04 18 36.8	
comp=Z,83nm,1.5s							
JBP				*i* x	x	04 21 23.2	
RAMN	Ramite	16.81	344	*e*P	Pn	04 18 30.9	-0.5
comp=Z,110nm,0.5s							
TAPN	Taplejung	16.93	348	*e*P	Pn	04 18 33.2	+0.3
comp=Z,135nm,0.8s							
AKL	Akola	17.25	307	*i* P	Pn	04 18 36.0	-1.0
AKL				*ex*	x	04 18 41.8	
comp=Z,99nm,1.3s							
AKL				*i* x	x	04 21 42.8	
JIRN	Jiri	17.60	344	*e*P	Pn	04 18 41.6	+0.4
KMI	Kunming	17.70	35	P	Pn	04 18 43.0	+0.5
KMI				PP		04 18 58.0	
KMI				S	Sn	04 21 59.5	+0.6
KMI				SS		04 22 21.5	
KMI				pmax	pmax		
comp=Z,37nm,0.9s							
KMI				pmax	pmax		
comp=Z,830nm,12.3s							
KMI				LR	LR		
comp=N,5μm,17.5s							
KMI				LR	LR		
comp=E,3μm,17.5s							
KMI				LR	LR		
comp=Z,5μm,17.5s							
PKI	Pulchoki	17.75	341	*e*P	Pn	04 18 43.5	+0.5
comp=Z,72nm,0.6s							
DMN	Daman	17.88	341	*e*P	Pn	04 18 45.0	+0.3
comp=Z,101nm,0.6s							
GUN	Gumba	17.92	343	*e*P	Pn	04 18 45.9	+0.7
KKN	Kakani	17.99	341	*e*P	Pn	04 18 45.8	-0.2
KAD	Karad	18.21	293	*e*PKP	Pn	04 18 47.5	-1.3
KAD				AMb	AMB	04 18 53.3	
comp=Z,68nm,1.4s							
BHPL	Bhopal	18.44	314	*e*PKP	Pn	04 18 50.4	-1.2
BHPL				AMb	AMB	04 18 57.3	
comp=Z,91nm,1.0s							
LSA	Lhasa	18.85	358	P	Pn	04 18 55.5	-1.0
LSA				S	Sn	04 22 25.0	-1.6
POO	Poona	18.93	296	*e*PKP	Pn	04 18 56.1	-1.3
POO				AMb	AMB	04 19 00.8	
comp=Z,104nm,1.1s							
QIZ	Qiongzhong	19.34	63	P	Pn	04 19 00.3	-2.1
QIZ				pP	pP	04 19 04.3	-5.6
QIZ				S	Sn	04 22 37.0	-1.4
QIZ				sS	sS	04 22 45.0	-7.3
QIZ				pmax	pmax		
comp=Z,20nm,1.6s							
QIZ				pmax	pmax		
comp=Z,790nm,12.7s							
QIZ				LR	LR		
comp=N,4μm,16.2s							
QIZ				LR	LR		
comp=Z,4μm,14.0s							
KSM	Kuching	20.64	115	*e*P	P	04 19 15.1	-0.3
comp=Z,47nm,0.9s							
GYA	Guiyang	21.05	40	P	P	04 19 20.3	+0.6
GYA				PP		04 19 43.3	
GYA				S	S	04 23 11.8	-0.6
GYA				PcP	PcP	04 23 26.0	+0.1
GYA				SS		04 23 44.8	
GYA				pmax	pmax		
comp=Z,30nm,1.0s,mb4.6							
GYA				pmax	pmax		
comp=Z,300nm,10.8s							
GYA				LR	LR		
comp=N,2μm,17.7s,MS4.8							
GYA				LR	LR		
comp=E,3μm,18.9s,MS4.8							
GYA				LR	LR		
comp=Z,4μm,20.8s,MS4.8							
PTH	Pithoragarh	21.56	332	*ex*	P	04 19 27.5	+2.3
NDI	New Delhi	22.41	325	*e*PKP	P	04 19 35.0	+0.7
NDI				*ex*	x	04 23 43.0	
AJM	Ajmer	22.46	316	*e*PKP	P	04 19 34.1	-0.8
AJM				AMb	AMB	04 19 40.4	
comp=Z,148nm,1.4s,mb5.2							
CD2	Chengdu	22.96	27⇑	*i* P	P	04 19 39.8	-0.2
CD2				pP		04 19 44.0	
CD2				sP	sP	04 19 47.0	-6.1
CD2				PP		04 20 09.8	
CD2				PcP	PcP	04 23 30.8	+1.2
CD2				S	S	04 23 45.5	-2.6
CD2				sS	sS	04 23 52.3	-11
CD2				SS		04 24 29.8	
CD2				PcS	PcS	04 27 08.5	-0.2
CD2				pmax	pmax		
comp=Z,130nm,1.0s,mb5.3							
CD2				pmax	pmax		
comp=Z,200nm,5.2s							
CD2				LR	LR		
comp=N,3μm,16.8s,MS5.0							
CD2				LR	LR		
comp=E,3μm,14.4s,MS5.0							
CD2				LR	LR		
comp=Z,2μm,13.2s,MS4.8							
GZH	Guangzhou	24.01	57	P	P	04 19 54.0	+3.6
GZH				S	S	04 24 11.0	+5.6
GZH				LR	LR		
comp=N,2μm,15.1s,MS4.9							
GZH				LR	LR		
comp=E,2μm,13.7s,MS4.9							
GZH				LR	LR		
comp=Z,3μm,13.1s,MS4.9							
KKM	Kota Kinabalu	24.67	99	*e*P	P	04 19 57.5	+0.9
comp=Z,50nm,1.2s,mb4.9							
SDNR	Sundarnagar	24.75	329	*ex*	P	04 19 58.9	+1.9
BHK	Bhakra	24.97	328	*ex*	pP	04 20 06.0	-2.5
LZH	Lanzhou	27.51	22	⇓P	P	04 20 22.8	+0.9
LZH				pP	pP	04 20 25.8	-5.6
LZH				sP	sP	04 20 27.5	-8.0
LZH				PP		04 21 11.0	
LZH				S	S	04 25 02.0	+1.3
LZH				sS	sS	04 25 08.5	-8.0
LZH				SS		04 26 20.0	
LZH				pmax	pmax		
comp=Z,60nm,1.1s,mb5.1							
LZH				pmax	pmax		
comp=Z,310nm,9.6s							
LZH				LR	LR		
comp=N,2μm,14.8s							
LZH				LR	LR		
comp=Z,4μm,18.3s,MS5.0							
XAN	Xi'an	28.02	32	P	P	04 20 25.0	-1.5
XAN				pP	pP	04 20 29.5	-6.5
XAN				sP	sP	04 20 31.8	-8.2
XAN				PP	PP	04 21 13.5	-17
XAN				PcP	PcP	04 23 39.5	-1.5
XAN				S	S	04 25 04.3	-4.5
XAN				ScP	ScP	04 27 21.5	+1.9
XAN				ScS	ScS	04 31 12.3	+0.3
XAN				pmax	pmax		
comp=Z,4.0nm,1.1s,mb4.0							
XAN				LR	LR		
comp=N,2μm,18.2s,MS4.8							
XAN				LR	LR		
comp=E,370nm,17.0s,MS4.8							
XAN				LR	LR		
comp=Z,560nm,18.8s,MS4.2							
TGY	Tagaytay City	28.71	80	LR	LR	04 32 44.0	
comp=Z,10nm,18.1s,baz=78,slow=38							
QZH	Quanzhou	29.13	57⇓	*i* P	P	04 20 40.5	+3.9
QZH				S	S	04 25 28.0	+1.4
QZH				LR	LR		
comp=N,1μm,12.4s,MS5.1							
QZH				LR	LR		
comp=E,2μm,11.5s,MS5.1							
QZH				LR	LR		
comp=Z,3μm,18.2s							
GTA	Gaotai	29.43	13	⇓P	P	04 20 40.0	+1.0
GTA				pP	pP	04 20 44.5	-4.0
GTA				sP	sP	04 20 47.0	-5.6
GTA				PcP	PcP	04 23 46.3	+1.9
GTA				S	S	04 25 33.3	+2.4
GTA				sS	sS	04 25 40.0	-6.7
GTA				SS	SS	04 27 06.8	-30
GTA				pmax	pmax		
comp=Z,17nm,1.8s,mb4.5							
GTA				pmax	pmax		
comp=Z,230nm,6.0s							
GTA				LR	LR		
comp=N,1μm,15.9s,MS4.8							
GTA				LR	LR		
comp=E,1μm,16.8s,MS4.8							
GTA				LR	LR		
comp=Z,1μm,17.4s,MS4.7							
SSLB	Suanglung	30.70	61	*e*P	P	04 20 52.2	+1.8
comp=Z,23nm,0.8s,mb5.1							
YULB	Yu-li	30.86	62	*e*P	P	04 20 54.1	+2.2
comp=Z,37nm,0.9s,mb5.2							
KBL	Kabul	31.44	322	*e*P	P	04 20 57.8	+0.9
KBL				pmax	pmax		
comp=Z,18nm,1.1s,mb4.8							
KBL	Kabul	31.44	322	*e*P	P	04 20 57.8	+0.9
comp=Z,18nm,1.1s,mb4.8							
KSH	Kashi	31.88	337	P	P	04 21 00.0	-0.7
KSH				pP	pP	04 21 04.5	-5.7
KSH				sP	sP	04 21 07.0	-7.2
KSH				PP	PP	04 22 04.8	-8.3
KSH				PcP	PcP	04 23 52.5	+1.7
KSH				S	S	04 26 07.5	-1.9
KSH				sS	sS	04 26 14.8	-10
KSH				ScP	ScP	04 27 34.0	+2.0
KSH				PcS	PcS	04 27 35.8	+0.4
KSH				SS	SS	04 27 56.5	-30
KSH				ScS	ScS	04 31 30.5	+0.2
KSH				pmax	pmax		
comp=Z,16nm,0.8s,mb4.9							
KSH				pmax	pmax		
comp=Z,82nm,2.9s,mb5.0							
KSH				LR	LR		
comp=N,880nm,11.6s,MS4.9							
KSH				LR	LR		
comp=E,1μm,11.4s,MS4.9							
KSH				LR	LR		
comp=Z,580nm,10.7s,MS4.5							
NJ2	Nanjing	32.80	46	*e*P	P	04 21 07.5	-1.3
NJ2				sP	sP	04 21 13.5	-8.9
NJ2				PP	PP	04 22 14.3	-9.1
NJ2				S	S	04 26 21.0	-2.9
NJ2				pmax	pmax		
comp=Z,10.0nm,0.5s,mb5.0							
NJ2				pmax	pmax		
comp=Z,190nm,5.2s							
NJ2				LR	LR		
comp=N,2μm,13.7s,MS5.1							
NJ2				LR	LR		
comp=E,2μm,13.3s,MS5.1							
NJ2				LR	LR		
comp=Z,3μm,14.6s,MS5.1							
WMQ	Urumqi	33.12	355	P	P	04 21 12.0	+0.5
WMQ				sP	sP	04 21 19.0	-6.1
WMQ				PP	PP	04 22 23.0	-3.8
WMQ				S	S	04 26 29.0	+0.4
WMQ				SS	SS	04 28 30.0	-22
WMQ				pmax	pmax		
comp=Z,32nm,1.0s,mb5.2							
WMQ				LR	LR		
comp=N,1μm,12.0s,MS5.2							
WMQ				LR	LR		
comp=E,2μm,12.0s,MS5.2							
WMQ				LR	LR		
comp=Z,1μm,12.0s,MS4.8							
SSE	Sheshan	33.98	49	*e*P	P	04 21 18.5	-0.6
SSE				pP	pP	04 21 27.0	-1.7
SSE				sP	sP	04 21 30.3	-2.4
SSE				S	S	04 26 40.5	-1.7
SSE				sS	sS	04 26 55.8	-2.3
SSE				pmax	pmax		
comp=Z,17nm,0.7s,mb5.1							
SSE				pmax	pmax		
comp=Z,130nm,3.7s							
SSE				LR	LR		
comp=N,1μm,16.8s,MS4.8							
SSE				LR	LR		
comp=E,660nm,16.8s,MS4.8							
SS

HHC ScS ScS 04 31 45.8 +0.9
HHC pmax pmax
comp=Z,15nm,0.9s,mb4.9
HHC pmax pmax
comp=Z,180nm,4.7s
HHC LR LR
comp=N,970nm,13.8s,MS4.8
HHC LR LR
comp=E,760nm,12.4s,MS4.8
HHC LR LR
comp=Z,1μm,14.6s,MS4.7
UCH Uchtor 34.78 337 P **P 04 21 27.8 +1.9**
SNR=13
UCH Uchtor 34.78 337 *e*P **P 04 21 27.4 +1.5**
UCH pmax pmax
comp=Z,12nm,0.9s,mb4.8
UCH Uchtor 34.78 337 *e*P **P 04 21 27.4 +1.6**
comp=Z,12nm,0.9s,mb4.8
TKM2 Tokmak 2 34.99 339 P **P 04 21 30.6 +2.9**
SNR=6.7
TKM2 Tokmak 2 34.99 339 *e*P **P 04 21 28.9 +1.2**
TKM2 pmax pmax
comp=Z,22nm,1.3s,mb4.9
TKM2 Tokmak 2 34.99 339 *e*P **P 04 21 28.9 +1.2**
comp=Z,22nm,1.3s,mb4.9
KBK Karagaybulak 34.99 338 P **P 04 21 31.1 +3.4**
SNR=9.9
AML Almayashu 35.01 336 *e*P **P 04 21 26.3 -1.6**
AML pmax pmax
comp=Z,97nm,1.0s,mb5.7
AML Almayashu 35.01 336 *e*P **P 04 21 26.3 -1.6**
comp=Z,97nm,1.0s,mb5.7
AAK Ala-Archa 35.13 338 P **P 04 21 32.6 +3.7**
SNR=14
AAK Ala-Archa 35.13 338 P **P 04 21 29.5 +0.6**
comp=Z,19nm,1.0s,mb5.0,baz=161,slow=7.5,SNR=32
AAK LR LR 04 38 34.4
comp=Z,2μm,20.6s,MS4.9,baz=144,slow=41
FRU Bishkek 35.26 338 *e*P **P 04 21 31.0 +1.0**
FRU pmax pmax
comp=Z,60nm,1.9s,mb5.2
CHMS Chumysh 35.36 338 P **P 04 21 33.6 +2.8**
SNR=7.1
EKS2 Erkin-Say 35.43 337 P **P 04 21 33.6 +2.2**
SNR=18
EKS2 Erkin-Say 35.43 337 *e*P **P 04 21 32.4 +0.9**
EKS2 pmax pmax
comp=Z,26nm,1.0s,mb5.1
EKS2 Erkin-Say 35.43 337 *e*P **P 04 21 32.4 +0.9**
comp=Z,26nm,1.0s,mb5.1
USP Ospenovka 35.68 338 P **P 04 21 34.9 +1.3**
SNR=19
BJI Beijing 36.34 32 P **P 04 21 39.5 +0.2**
BJI S **S 04 27 19.0 +0.8**
BJI pmax pmax
comp=Z,32nm,1.2s,mb5.1
BJI pmax pmax
comp=Z,280nm,3.7s
BJI LR LR
comp=N,3μm,17.8s,MS5.2
BJI LR LR
comp=E,2μm,18.9s,MS5.2
BJI LR LR
comp=Z,3μm,18.9s,MS5.0
MK31 Makanchi Array 36.79 349 *e*P **P 04 21 42.2 -0.9**
MKAR Makanchi Array 36.79 349 P **P 04 21 42.8 -0.3**
comp=Z,23nm,1.0s,mb5.0,baz=132,slow=8.6,SNR=36
MKAR LR LR 04 41 06.5
comp=Z,1μm,19.4s,MS4.7,baz=162,slow=43
SONM Songino Array 38.97 16 P **P 04 22 01.9 +0.5**
comp=Z,16nm,1.1s,mb4.7,baz=199,slow=7.3,SNR=35
SONM LR LR 04 41 28.1
comp=Z,1μm,18.1s,MS4.7,baz=190,slow=42
ULN Ulaanbaatar 39.17 16 *e*P **P 04 22 03.5 +0.4**
ULN pmax pmax
comp=Z,14nm,1.1s,mb4.6
ULN Ulaanbaatar 39.17 16 *e*P **P 04 22 03.5 +0.3**
comp=Z,14nm,1.1s,mb4.6
IBAF Bafgh 39.30 307 *e*P **P 04 22 06.2 +1.7**
IPAR Pars 40.68 304 *e*P **P 04 22 18.5 +2.6**
ISAD Sadrabad 40.91 307 *e*P **P 04 22 19.4 +1.6**
KURK Kurchatov 41.27 347 P **P 04 22 21.9 +1.4**
comp=Z,151nm,1.2s,mb5.5,SNR=10
KURK Kurchatov 41.27 347 P **P 04 22 20.0 -0.5**
comp=Z,24nm,1.1s,mb4.7,baz=162,slow=7.5,SNR=49
KURK LR LR 04 42 41.0
comp=Z,1μm,21.3s,MS4.7,baz=165,slow=41
KURK Kurchatov 41.27 347 *d i*P **P 04 22 21.0 +0.5**
KURK pmax pmax
comp=Z,38nm,1.2s,mb4.9
KURK MLR MLR
comp=Z,2μm,23.0s,MS4.8
KURK Kurchatov 41.27 347 *e*P **P 04 22 20.9 +0.5**
comp=Z,38nm,1.2s,mb4.9
MOY Mondy 41.49 9 *e*P **P 04 22 23.9 +1.7**
SNY Shenyang 41.67 36 ⇑P **P 04 22 23.0 -0.9**
SNY S **S 04 28 35.3 -3.1**
SNY SS SS 04 31 47.0 +2.4
SNY pmax pmax
comp=Z,22nm,2.6s,mb4.3
SNY LR LR
comp=N,1μm,17.4s,MS5.0
SNY LR LR
comp=E,1μm,15.9s,MS5.0
SNY LR LR
comp=Z,1μm,14.7s,MS4.9
TLY Talaya 41.95 11 *d i*P **P 04 22 25.5 -0.5**
TLY *e* 04 24 11.1
TLY *e*PPP 04 24 22.7
TLY *e*S **S 04 28 44.9 +2.6**
TLY pmax pmax
comp=Z,12nm,1.1s,mb4.4
TLY MLR MLR
comp=Z,728nm,17.0s,MS4.6
KSRS Korea Array 41.98 45 P **P 04 22 27.5 +0.9**
comp=Z,3.9nm,0.9s,mb4.0,baz=246,slow=9.8,SNR=12
KSRS LR LR 04 43 03.3
comp=Z,1μm,18.8s,MS4.9,baz=239,slow=41
IRK Irkutsk 42.60 11 *e*P **P 04 22 33.5 +2.2**
IRK pmax pmax
comp=Z,23nm,2.2s,mb4.5
IPIR Pirpir 43.39 307 *e*P **P 04 22 39.8 +1.8**
ZAA0 Zalesovo Array 43.43 354 *e*P **P 04 22 37.4 -0.6**
ZALV Zalesovo Beam 43.43 354 P **P 04 22 37.8 -0.2**
comp=Z,5.6nm,0.4s,mb4.6,baz=174,slow=10.0,SNR=32
ZALV LR LR 04 45 20.0
comp=Z,679nm,18.0s,MS4.6,baz=350,slow=42
CN2 Changchun 43.97 35 *e*P **P 04 22 44.3 +1.8**
CN2 *e*pP pP 04 22 48.8 -3.6
CN2 *e*sP sP 04 22 51.3 -5.0
CN2 *e*S **S 04 29 11.0 -1.2**
CN2 pmax pmax
comp=Z,20nm,1.1s,mb4.8
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,1μm,15.0s,MS5.1
CN2 LR LR
comp=E,1μm,15.0s,MS5.1
CN2 LR LR
comp=Z,1μm,17.0s,MS4.8
FITZ Fitzroy Crossi 44.09 130 *e*P **P 04 22 42.5 -1.3**
comp=Z,46nm,0.8s,mb5.3
FITZ Fitzroy Crossi 44.09 130 P **P 04 22 42.5 -1.2**
comp=Z,4.8nm,0.6s,mb4.4,baz=303,slow=6.7,SNR=30
FITZ LR LR 04 43 04.6
comp=Z,1μm,20.9s,MS4.8,baz=304,slow=39
FITZ Fitzroy Crossi 44.09 130 *e*P **P 04 22 42.5 -1.3**
comp=Z,36nm,0.9s,mb5.1
NVS Novosibirsk 44.48 353 *e*P **P 04 22 45.4 -1.0**
NVS *e*S **S 04 29 20.5 +1.2**
NVS pmax pmax
comp=Z,50nm,2.1s,mb4.9
NVS pmax pmax
comp=N,97nm,2.5s
NVS smax
comp=E,41nm,1.8s
NVS smax
comp=N,19nm,1.9s
KNA Kununurra 45.16 125 *e*P **P 04 22 59.2 +6.9**
comp=N,31nm,0.9s,mb5.1
BVAR Borovoye Array 45.52 342 P **P 04 22 54.9 +0.2**
comp=N,3.3nm,0.6s,mb4.4,baz=154,slow=8.2,SNR=25
BRVK Borovoye 45.58 342‖ *e*P **P 04 22 56.1 +0.9**
BRVK pmax pmax
comp=Z,13nm,1.2s,mb4.7
BRVK MLR MLR
comp=Z,755nm,16.0s,MS4.7
BRVK Borovoye 45.58 342 *e*P **P 04 22 56.2 +1.0**
comp=Z,11nm,1.1s,mb4.7
KAKA Kakadu 46.67 119 *e*P **P 04 23 06.7 +2.4**
comp=Z,19nm,0.5s,mb5.3
MDJ Mudanjiang 46.86 37 P **P 04 23 06.0 +0.6**
MDJ sP sP 04 23 10.0 -9.2
MDJ PP PP 04 24 56.5 +0.6
MDJ S **S 04 29 55.0 +1.1**
MDJ pmax pmax
comp=Z,10.0nm,1.7s,mb4.5
MDJ pmax pmax
comp=Z,190nm,9.6s
MDJ LR LR
comp=N,940nm,19.6s,MS5.0
MDJ LR LR
comp=E,1μm,19.6s,MS5.0
MDJ LR LR
comp=Z,1μm,19.6s,MS5.0
VLA Vladivostok 47.46 40 P **P 04 23 07.0 -3.1**
VLA MLR MLR
comp=Z,2μm,18.4s,MS5.0
ATD Arta Tunnel 47.91 276 P **P 04 23 15.9 +1.8**
comp=Z,10nm,0.7s,mb5.0,baz=288,slow=20,SNR=4.4
ATD LR LR 04 39 32.5
comp=Z,334nm,20.1s,MS4.3,baz=85,slow=31
AKTK Aktyubinsk 48.29 332 P **P 04 23 15.4 -1.0**
AKTO Aktyubinsk 48.29 332 P **P 04 23 15.4 -1.0**
comp=Z,5.2nm,0.5s,mb4.8,baz=113,slow=7.9,SNR=19
BHD Baghdad 48.77 305 *e*P **P 04 23 21.8 +1.4**
BHD *i* S **S 04 30 18.8 -2.5**
MAT Matsushiro 49.09 51 P **P 04 23 22.9 0.0**
MAT S **S 04 30 23.0 -2.8**
MJAR Matsushiro Arr 49.10 51 P **P 04 23 22.9 0.0**
comp=Z,1.4nm,0.7s,mb4.1,baz=247,slow=5.9,SNR=5.3
MJAR LR LR 04 46 09.1
comp=Z,489nm,18.2s,MS4.5,baz=250,slow=39
NWAO Narrogin (SRO) 49.80 152 P **P 04 23 26.9 -1.2**
comp=Z,11nm,0.9s,mb4.9,baz=338,slow=19,SNR=2.5
NWAO Narrogin (SRO) 49.80 152 P **P 04 23 27.4 -0.8**
NWAO *e* pP 04 23 35.1 -3.0
NWAO pmax pmax
comp=Z,94nm,1.4s
NWAO Narrogin (SRO) 49.80 152 P **P 04 23 27.4 -0.7**
comp=Z,94nm,1.4s,mb5.6
NWAO *e* pP 04 23 35.1 -2.9
MAK Makhachkala 49.99 318 *e*P **P 04 23 28.8 -0.7**
MAK *e* 04 24 47.8
MAK *e* 04 25 27.9
MAK *e*PPP 04 26 26.1
MAK *e*S **S 04 30 38.9 +0.8**
MAK *e* 04 33 20.6
MAK *e*SSS 04 35 38.3
MAK pmax pmax
comp=Z,171nm,1.7s,mb5.8
MAK MLR MLR
comp=Z,579nm,14.0s,MS4.7
CBIJ Chichi jima 50.09 64 LR LR 04 45 05.1
comp=Z,253nm,18.2s,MS4.3,baz=295,slow=37
KLR Kul'dur 50.71 33 *e*P **P 04 23 31.2 -3.7**
KLR *e*S **S 04 30 42.5 -5.4**
KLR *e* 04 33 17.5
KLR MLR MLR
comp=N,1μm,13.0s,MS5.5
KLR MLR MLR
comp=E,2μm,13.0s,MS5.5
KLR MLR MLR
comp=Z,4μm,13.0s,MS5.6
GNI Garni 50.73 314 *i* P **P 04 23 36.3 +1.1**
GNI pmax pmax
comp=Z,51nm,1.2s
GNI MLR MLR
comp=Z,447nm,20.0s
GNI Garni 50.73 314 *e*P **P 04 23 36.8 +1.6**
comp=Z,49nm,1.1s,mb5.3
DGRG David-gareji 50.78 315 P **P 04 23 37.4 +1.8**
MTA Mtatsminda 51.28 315 P **P 04 23 41.7 +2.4**
TBLG Delisi 51.33 316 *e*P **P 04 23 40.9 +1.2**
TBLG Delisi 51.33 316 P **P 04 23 41.0 +1.3**
SVE Sverdlovsk 51.86 339⇑*e*P **P 04 23 44.0 +0.6**
SVE *e*S **S 04 31 08.9 +5.3**
SVE *e*SS SS 04 34 42.7 +2.2
SVE pmax pmax
comp=Z,42nm,1.2s,mb5.2
SVE MLR MLR
comp=Z,1μm,22.0s,MS4.9
WRA Warramunga Arr 51.88 126 P **P 04 23 43.2 -0.8**
comp=Z,3.0nm,0.6s,mb4.4,baz=300,slow=10.0,SNR=54
WRA S **S 04 31 00.7 -4.1**
comp=Z,1.3nm,1.0s,baz=297,slow=15,SNR=4.6
WRA LR LR 04 48 55.1
comp=Z,656nm,20.0s,MS4.7,baz=290,slow=40
WRA Warramunga Arr 51.88 126 P **P 04 23 43.2 -0.8**
WRA S **S 04 31 00.7 -4.1**
WRA Warramunga Arr 51.88 126 P **P 04 23 43.2 -0.8**
WRA S **S 04 31 00.7 -4.1**
WRA LR LR 04 48 55.1
WRAB Tennant Creek 51.88 126 P **P 04 23 43.0 -1.1**
comp=Z,237nm,0.5s,SNR=17
WRAB Tennant Creek 51.88 126 *e*P **P 04 23 43.2 -0.9**
WRAB pmax pmax
comp=Z,20nm,0.6s,mb5.2
WRAB Tennant Creek 51.88 126 *e*P **P 04 23 43.2 -0.8**
comp=Z,20nm,0.6s,mb5.2
KEH Kehvi 52.11 316 P **P 04 23 45.7 +0.2**
HABR Khabarovsk 52.11 35 P **P 04 23 44.3 -1.1**
HABR *e*SP sP 04 23 58.1 -1.2
HABR *e* 04 24 54.8
HABR *e* 04 25 42.7
HABR *e*PPP 04 26 45.6
HABR S **S 04 31 07.7 +0.4**
HABR *e*SS sS 04 31 24.6 +0.9
HABR *e* 04 33 31.0
HABR *e*SS SS 04 34 46.8 +2.0
HABR SSS 04 36 31.3
HABR MLR MLR
comp=Z,483nm,21.0s,MS4.5
ZEI Tsey 52.31 316 *e*P **P 04 23 48.3 +1.3**
ZEI pmax pmax
comp=Z,16nm,1.0s,mb4.9
ARU Arti 52.32 337 *d i*P **P 04 23 47.2 +0.4**
ARU *e* 04 24 57.7
ARU *e* 04 25 44.3
ARU *e*PPP 04 26 49.3
ARU S **S 04 31 13.7 +3.8**
ARU 04 33 31.0
ARU SSS 04 36 35.8
ARU pmax pmax
comp=Z,27nm,1.2s,mb5.0
ARU MLR MLR
comp=Z,1μm,19.0s,MS5.0
ARU Arti 52.32 337 *e*P **P 04 23 46.5 -0.3**
comp=Z,25nm,1.1s,mb5.1
CLNS Chul'man 52.63 22 *e*P **P 04 23 50.5 +1.4**
CLNS *e*PP pP 04 24 05.5 +6.4
CLNS *e* 04 24 58.1
CLNS *e* 04 25 47.9
CLNS *e*PPP 04 26 54.3
CLNS *e*S **S 04 31 13.8 -0.3**
CLNS pmax pmax
comp=Z,21nm,1.2s,mb4.9
CLNS pmax pmax
comp=E,10.0nm,0.7s
CLNS pmax pmax
comp=N,15nm,1.0s
CLNS pmax pmax
comp=N,2.0nm,0.7s
CLNS pmax pmax
comp=E,5.0nm,0.9s
CLNS pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
CLNS smax
comp=N,273nm,13.5s
CLNS smax
comp=E,221nm,9.9s
CLNS MLR MLR
comp=E,371nm,18.0s,MS4.8
CLNS MLR MLR
comp=Z,805nm,15.0s,MS4.9
CLNS MLR MLR
comp=N,522nm,10.0s,MS4.8
OPO Ambohidratompo 52.72 237 P **P 04 23 51.7 +1.4**
comp=N,2.7nm,0.9s,mb4.2,baz=108,slow=10,SNR=4.2
ASAR Alice Springs 53.59 130 P **P 04 23 55.8 -0.9**
comp=N,9.5nm,0.7s,mb4.8,baz=308,slow=6.5,SNR=29
ASAR S **S 04 31 27.2 -0.8**
comp=N,0.9nm,0.8s,baz=304,slow=13,SNR=5.1
KIV Kislovodsk 53.59 317 *e*P **P 04 23 57.4 +1.0**
KIV *e* 04 26 00.7
KIV *e*S **S 04 31 29.1 +1.5**
KIV pmax pmax
comp=Z,52nm,3.6s
KIV pmax pmax
comp=Z,43nm,1.1s,mb5.3
KIV Kislovodsk 53.59 317 *e*P **P 04 23 57.1 +0.7**
ASAJ Asahikawa 54.88 43 P **P 04 24 04.8 -1.0**
comp=Z,1.2nm,0.4s,mb4.3,baz=316,slow=17,SNR=3.6
SOKR Solikamsk 55.27 339 *c i*P **P 04 24 10.0 +1.7**
SOKR S **S 04 31 53.0 +3.3**
SOKR pmax pmax
comp=Z,30nm,1.2s,mb5.2
SOKR MLR MLR
comp=Z,1μm,23.0s,MS4.8
KMBO Kilima Mbogo 55.43 261 *e*P **P 04 24 12.2 +1.9**
KMBO pmax pmax
comp=Z,44nm,2.1s
KMBO Kilima Mbogo 55.43 261 *e*P **P 04 24 12.2 +1.9**
comp=Z,44nm,2.1s,mb5.1
SOC Sochi 55.46 316 *e*P **P 04 24 08.0 -2.0**
SOC *e**PP pP 04 24 17.2 -2.8
SOC *e* 04 26 12.7
SOC *e*PPP 04 27 24.5
SOC *e*S **S 04 31 51.3 -1.5**
SOC *e* 04 33 56.5
SOC pmax pmax
comp=Z,21nm,0.9s,mb5.2
SOC MLR MLR
comp=Z,469nm,20.0s,MS4.6
MMAI Mount Meron Ar 56.05 303 LR LR 04 51 33.1
comp=Z,396nm,18.9s,MS4.5,baz=95,slow=40
YSS Yuzh-Sakhalins 56.05 40 *e*P **P 04 24 14.5 +0.3**
YSS *e* pP 04 24 26.0 +1.8
YSS *e*S **S 04 32 00.0 -0.6**
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.3
YSS MLR MLR
comp=Z,700nm,14.0s,MS4.9
YSS Yuzh-Sakhalins 56.05 40 *e*P **P 04 24 16.1 +1.9**
comp=Z,19nm,0.7s,mb5.2
ANN Anapa 57.41 317 *e**PP **P 04 24 21.3 -2.6**
ANN pmax pmax
comp=Z,53nm,1.1s,mb5.5
ANN Anapa 57.41 317 *e*P **P 04 24 11.3 -13**
YAK Yakutsk 58.07 20 *e*P **P 04 24 28.5 +0.3**
YAK *e* 04 25 20.0
YAK *e* 04 26 36.9
YAK *e*S **S 04 32 28.6 +1.9**
YAK *e**SS sS 04 32 37.9 -5.4
YAK *e* 04 34 13.9
YAK pmax pmax
comp=E,10.0nm,1.4s
YAK pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
YAK pmax pmax
comp=N,9.0nm,1.0s
YAK pmax pmax
comp=E,4.0nm,0.8s
YAK pmax pmax
comp=Z,11nm,0.8s,mb4.9
YAK pmax pmax
comp=N,5.0nm,0.9s
YAK smax
comp=N,54nm,3.0s
YAK smax
comp=E,33nm,2.7s
YAK MLR MLR
comp=N,669nm,16.0s,MS5.0
YAK MLR MLR
comp=Z,989nm,14.0s,MS5.1
YAK MLR MLR
comp=E,638nm,15.0s,MS5.0
VSR Storozhevoye 58.67 324 *e*P **P 04 24 33.1 +0.5**
VSR *e*S **S 04 32 35.3 +0.5**
VSR pmax pmax
comp=N,8.0nm,0.7s
VSR pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
VSR pmax pmax
comp=E,10.0nm,0.6s
VSR smax
comp=N,260nm,9.7s
VSR smax
comp=Z,60nm,8.7s
VSR smax
comp=E,70nm,7.2s
VSR MLR MLR
comp=Z,520nm,17.0s,MS4.7
VSR MLR MLR
comp=N,230nm,11.0s
VSR MLR MLR
comp=E,450nm,20.0s
BR131 Keskin Array S 58.75 310 *e*P **P 04 24 32.9 -0.5**
BRTR Keskin Array B 58.75 310 P **P 04 24 32.5 -0.9**
comp=E,7.8nm,1.1s,mb4.7,baz=120,slow=5.8,SNR=20
BRTR LR LR 04 52 55.3
comp=E,222nm,18.4s,MS4.3,baz=91,slow=39
SIM Simferopol' 59.70 316 P **P 04 24 37.4 -2.5**
SIM pmax pmax
comp=Z,91nm,10.2s
BBOO Buckleboo 60.54 137 *e*P **P 04 24 40.1 -5.6**
comp=Z,3.2nm,0.4s,mb4.8
MOS Moscow 61.39 329 *e*P **P 04 24 51.7 +0.6**
MOS *e* 04 25 33.7
MOS *e*S **S 04 33 19.2 +10**
MOS pmax pmax
comp=Z,68nm,1.3s,mb5.6
OBN Obninsk 61.68 328⇑*i*P **P 04 24 54.0 +0.9**
OBN *i* pP 04 25 01.9 -1.3
OBN *i* 04 25 07.3
OBN *i* S **S 04 33 18.0 +4.7**
OBN *e*SS SS 04 37 18.4 +3.3
OBN pmax pmax
comp=Z,48nm,1.2s,mb5.5
OBN Obninsk 61.68 328 *e*P **P 04 24 53.5 +0.4**
CTA Charters Tower 61.80 120 P **P 04 24 57.6 +3.2**
comp=Z,9.8nm,1.0s,mb4.9,baz=291,slow=15,SNR=3.9
CTA LR LR 04 55 59.9
comp=Z,330nm,18.9s,MS4.5,baz=103,slow=40
CTAO Charters Tower 61.80 120 *e*P **P 04 24 55.8 +1.3**
CTAO pmax pmax
comp=Z,32nm,1.2s,mb5.3
CTAO Charters Tower 61.80 120 *e*P **P 04 24 55.8 +1.3**
comp=Z,32nm,1.2s,mb5.3
TIRR Tirgusor 63.54 314⇑P **P 04 25 05.3 -0.4**
TIRR Tirgusor 63.54 314⇑*i*P **P 04 25 05.3 -0.4**
KIS Kishinev 63.79 317 *e*P **P 04 25 07.0 -0.4**
KIS LRM 05 04 40.0
comp=Z,300nm,16.0s
KIS Kishinev 63.79 317 *e*P **P 04 25 07.0 -0.4**
KIS *e* 04 33 40.0
STKA Stephens Creek 63.81 134 *e*P **P 04 25 08.1 +0.4**
comp=Z,8.4nm,0.6s,mb5.0
STKA Stephens Creek 63.81 134 P **P 04 25 08.5 +0.8**
comp=Z,2.5nm,0.3s,mb4.7,baz=332,slow=8.1,SNR=9.2
STKA LR LR 04 53 58.1
comp=Z,799nm,20.6s,MS4.9,baz=298,slow=37
STKA Stephens Creek 63.81 134 *e*P **P 04 25 08.2 +0.5**
STKA pmax pmax
comp=Z,8.0nm,1.3s
STKA Stephens Creek 63.81 134 *e*P **P 04 25 08.2 +0.5**
comp=Z,7.8nm,1.3s,mb4.6
AKASG Malin Array Be 64.42 321 P **P 04 25 10.4 -1.0**
comp=Z,3.2nm,0.5s,mb4.6,baz=90,slow=5.0,SNR=20
AKASG LR LR 05 00 48.3
comp=Z,517nm,18.2s,MS4.8,baz=95,slow=43
AKASG Malin Array Be 64.42 321 *i* P **P 04 25 10.3 -1.1**
AKASG pmax pmax
comp=Z,3.0nm,0.5s
AKBB Malin Array Si 64.42 321 *e*P **P 04 25 10.4 -1.0**
KIEV Kiev 64.43 321 *e*P **P 04 25 10.2 -1.3**
KIEV pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
KIEV Kiev 64.43 321 *e*P **P 04 25 10.2 -1.2**
comp=Z,8.3nm,1.0s,mb4.7
TIXI Tiksi 64.91 12 *e*P **P 04 25 13.8 -0.4**
TIXI *e*S **S 04 33 53.4 +0.2**
TIXI pmax pmax
comp=Z,30nm,1.5s,mb5.1
TIXI MLR MLR
comp=Z,700nm,15.0s,MS5.0
TIXI Tiksi 64.91 12 *e*P **P 04 25 13.2 -1.1**

comp=Z,32nm,1.3s,mb5.2
IDI Anoyia 64.98 304 LR LR 05 01 00.2
comp=Z,145nm,18.3s,MS4.2,baz=79,slow=43
VRI Vrincioaia 64.98 316 P **P 04 25 16.2 +1.1**
VRI Vrincioaia 64.98 316⇑ *i*P **P 04 25 16.2 +1.1**
PLOR Plostina 65.03 316⇓P **P 04 25 16.3 +0.8**
PLOR Plostina 65.03 316⇓ *i*P **P 04 25 16.3 +0.8**
TESR 65.15 316 P **P 04 25 16.2 0.0**
MLR Muntele Rosu 65.45 315⇑P **P 04 25 19.2 +1.0**
MLR Muntele Rosu 65.45 315 P **P 04 25 19.7 +1.5**
MLR Muntele Rosu 65.45 315⇑ *i*P **P 04 25 19.2 +1.0**
VOIR 66.06 315⇑P **P 04 25 21.2 -1.0**
VOIR 66.06 315⇑ *i*P **P 04 25 21.2 -1.0**
BURAR Bucovina Array 66.32 317⇑P **P 04 25 24.2 +0.4**
BURAR Bucovina Array 66.32 317⇑ *i*P **P 04 25 24.2 +0.4**
BUR01 Bucovina Ar. S 66.32 317 P **P 04 25 25.9 +2.1**
BUR08 Bucovina Ar. S 66.33 317 *e*P **P 04 25 24.0 +0.1**
CMSA Cobar Meteorol 66.61 131 *e*P **P 04 25 26.0 +0.1**
RMQ Roma 66.62 125 *e*P **P 04 25 33.4 +7.4**
comp=Z,13nm,0.6s,mb5.1
IDID Didziasalis 67.06 326 *e*P **P 04 25 27.8 -0.5**
IDID AMB AMB 04 25 31.5
comp=Z,12nm,1.1s,mb4.8
PETK Petropavlovsk- 67.10 37 LR LR 05 00 35.4
comp=Z,533nm,18.1s,MS4.8,baz=243,slow=41
JOF Joensuu 67.23 334 *e*P **P 04 25 28.2 -1.1**
JOF pmax pmax
comp=Z,11nm,0.5s,mb5.1
JOF Joensuu 67.23 334 *e*p **P 04 25 28.2 -1.1**
comp=Z,11nm,0.5s,mb5.1
JOF Joensuu 67.23 334 *e*p **P 04 25 28.2 -1.1**
comp=Z,11nm,0.5s,mb5.1
VAY Valandovo 67.33 310⇑ *e*P **P 04 25 29.9 -0.4**
IIGN Ignalina 67.36 326 *e*P **P 04 25 29.8 -0.4**
IIGN AMB AMB 04 25 33.3
comp=Z,8.5nm,0.9s,mb4.8
IZAR Zarasai 67.44 326 *e*P **P 04 25 30.2 -0.5**
IZAR AMB AMB 04 25 33.9
comp=Z,8.4nm,1.2s,mb4.6
ISAL Salakas 67.46 326 *e*P **P 04 25 30.1 -0.8**
ISAL AMB AMB 04 25 32.9
comp=Z,8.0nm,1.1s,mb4.7
LVV L'vov 67.48 320 *e*P **P 04 25 31.5 +0.4**
GZR Gura Zlata 67.64 315 P **P 04 25 37.8 +5.6**
PET Petropavlovsk 67.64 37 *e*P **P 04 25 31.2 -0.9**
PET *e*S S 04 34 24.9 -2.0
PET *e*PS 04 34 50.5
PET *e*SSS 04 41 48.1
PET pmax pmax
comp=Z,500nm,4.3s
PET pmax pmax
comp=Z,200nm,16.2s
PET MLR MLR
comp=Z,700nm,19.0s,MS4.9
DRGR 67.88 316⇓P **P 04 25 32.9 -0.8**
DRGR 67.88 316⇓ *i*P **P 04 25 32.9 -0.8**
VSU Vasula 67.90 329 *d i*P **P 04 25 33.3 -0.3**
LSZ Lusaka 68.03 249 P **P 04 25 35.1 -0.1**
comp=Z,3.6nm,0.7s,mb4.5,baz=84,slow=4.7,SNR=8.4
LSZ Lusaka 68.03 249 *e*P **P 04 25 36.2 +1.1**
LSZ pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
LSZ Lusaka 68.03 249 *e*P **P 04 25 36.2 +1.1**
comp=Z,8.2nm,1.1s,mb4.7
BIA Bitola 68.24 310 *e*P **P 04 25 32.3 -3.8**
KWP Kalwaria Pacla 68.30 319 *e*P **P 04 25 37.0 +0.8**
KWP Kalwaria Pacla 68.30 319 *e*P **P 04 25 35.7 -0.6**
KWP pmax pmax
comp=Z,23nm,1.1s,mb5.1
KWP Kalwaria Pacla 68.30 319 *e*P **P 04 25 35.7 -0.5**
comp=Z,22nm,1.1s,mb5.1
KWP Kalwaria Pacla 68.30 319⇓ *i*P **P 04 25 36.4 +0.1**
APA Apatity 68.33 339⇓ *i*P **P 04 25 37.2 +1.1**
APA *i* 04 25 54.0
APA *i* 04 28 06.0
APA *i* S S 04 34 36.0 +1.4
APA *e*SS SS 04 38 56.0 -2.0
APA MLR MLR
comp=Z,900nm,20.0s,MS5.0
OHR Ohrid 68.64 310 *e*P **P 04 25 35.8 -2.8**
SUW Suwalki 68.78 324 *e*P **P 04 25 38.7 -0.5**
SUW Suwalki 68.78 324 *e*P **P 04 25 38.8 -0.4**
SUW pmax pmax
comp=Z,56nm,1.0s,mb5.5
SUW Suwalki 68.78 324 *e*P **P 04 25 38.8 -0.3**
comp=Z,56nm,1.0s,mb5.5
CRVS Cervenica-Dubn 69.00 318 *e*P **P 04 25 41.8 +1.2**
CRVS pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
CRVS Cervenica-Dubn 69.00 318 *e*P **P 04 25 41.8 +1.2**
comp=Z,10.0nm,1.3s,mb4.6
CRVS Cervenica-Dubn 69.00 318 *e*P **P 04 25 41.8 +1.2**
FINES FINESS Array B 69.06 332 P **P 04 25 40.0 -0.8**
comp=Z,5.2nm,0.5s,mb4.7,baz=111,slow=6.6,SNR=55
FINES LR LR 05 01 31.4
comp=Z,542nm,18.7s,MS4.8,baz=108,slow=41
KAF Kangasniemi 69.15 333 *e*P **P 04 25 40.9 -0.4**
KAF pmax pmax
comp=Z,25nm,1.1s,mb5.1
KAF Kangasniemi 69.15 333 *e*p **P 04 25 40.9 -0.4**
comp=Z,25nm,1.1s,mb5.1
KAF Kangasniemi 69.15 333 *e*p **P 04 25 40.9 -0.4**
comp=Z,25nm,1.1s,mb5.1
STHS Stebnicka Huta 69.21 319 *e*P **P 04 25 42.8 +0.9**
comp=Z,4.0nm,1.1s,mb4.3
STHS Stebnicka Huta 69.21 319 *e*P **P 04 25 42.8 +0.9**
KECS Kecovo 69.59 318 *e*P **P 04 25 44.1 -0.2**
comp=Z,3.9nm,1.1s,mb4.2
KECS Kecovo 69.59 318 *e*P **P 04 25 44.1 -0.2**
NIE Niedzica 69.81 319 *e*P **P 04 25 46.1 +0.4**
PSZ Piszkesteto 69.92 317⇑P **P 04 25 46.2 -0.1**
PSZ Piszkesteto 69.92 317 *e*P **P 04 25 46.0 -0.3**
comp=Z,6.4nm,1.0s,mb4.5
PSZ Piszkesteto 69.92 317⇑ *e*P **P 04 25 46.3 0.0**
PSZ Piszkesteto 69.92 317⇑ *i*P **P 04 25 46.2 -0.1**
OJC Ojcow 70.24 320 *e*P **P 04 25 46.1 -2.2**
ARMA Armidale 70.60 128 *e*P **P 04 25 52.5 +1.7**
PKSM Moragy 70.61 315⇑P **P 04 25 50.1 -0.5**
PKSM Moragy 70.61 315⇑ *i*P **P 04 25 50.1 -0.5**
VYHS Vyhne 70.68 318 *e*P **P 04 25 51.5 +0.5**
comp=Z,2.1nm,0.9s,mb4.1
VYHS Vyhne 70.68 318 *e*P **P 04 25 51.5 +0.5**
CAN Canberra 70.88 133 *e*P **P 04 25 53.2 +0.8**
CAN pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
CAN Canberra 70.88 133 *e*P **P 04 25 53.1 +0.8**
comp=Z,7.8nm,0.6s,mb4.8
OKC Ostrava-Krasne 71.26 319 *e*P **P 04 25 55.0 +0.5**
OKC *e**PP pP 04 26 03.2 -1.6
OKC *e*S S 04 35 11.2 +1.5
OKC MLR MLR
comp=Z,300nm,18.7s,MS4.6
OKC Ostrava-Krasne 71.26 319 *e*P **P 04 25 55.0 +0.5**
OKC *e*pP pP 04 26 03.2 -1.6
OKC *e*S S 04 35 11.2 +1.5
OKC AMS AMS 05 09 30.0
comp=Z,300nm,18.7s
MORC Moravsky Berou 71.64 319 *e*P **P 04 25 56.3 -0.5**
MORC pmax pmax
comp=Z,11nm,1.1s,mb4.7
MORC Moravsky Berou 71.64 319 *e*P **P 04 25 56.3 -0.5**
comp=Z,11nm,1.1s,mb4.7
MORC Moravsky Berou 71.64 319⇑ *i*P **P 04 25 57.0 +0.2**
TIP Timpagrande 71.65 308 *e*P **P 04 25 57.6 +0.6**
comp=Z,6.9nm,1.1s,mb4.5
ARCES ARCESS Array B 71.76 340 P **P 04 25 56.7 -0.4**
comp=Z,4.7nm,0.7s,mb4.5,baz=86,slow=6.8,SNR=67
ARE0 ARCESS Array S 71.76 340 *e*P **P 04 25 53.0 -4.1**
ZST Bratislava 71.81 317 *e*P **P 04 25 58.0 +0.2**
ZST pmax pmax
comp=Z,11nm,1.2s,mb4.7
ZST Bratislava 71.81 317 *e*P **P 04 25 58.0 +0.2**
comp=Z,11nm,1.2s,mb4.7
ZST Bratislava 71.81 317 *e*P **P 04 25 58.0 +0.2**
VRAC Vranov 72.22 318 LR LR 05 03 13.7
comp=Z,195nm,19.1s,MS4.4,baz=91,slow=40
CEL Celeste 72.31 307 *e*P **P 04 26 00.8 -0.3**
comp=Z,23nm,1.0s,mb5.1
DPC Dobruska-Polom 72.47 319 *e*P **P 04 26 02.2 +0.4**
DPC *e**PP pP 04 26 11.1 -1.0
DPC *e* 04 28 45.5
DPC *e*S S 04 35 24.9 +1.3
DPC MLR MLR
comp=Z,300nm,13.4s,MS4.7
DPC Dobruska-Polom 72.47 319 *e*P **P 04 26 02.2 +0.4**
DPC *e*pP pP 04 26 11.1 -1.0
DPC *e*PP PP 04 28 45.5 +2.5
DPC *e*S S 04 35 24.9 +1.3
DPC AMS AMS 05 06 50.0
comp=Z,300nm,13.4s
KSP Ksiaz 72.53 320 *e*P **P 04 26 02.5 +0.4**
KSP Ksiaz 72.53 320 *e*P **P 04 26 02.0 -0.1**
UPC Upice 72.68 320 *e*P **P 04 26 04.4 +1.4**
UPC Upice 72.68 320 *e*P **P 04 26 04.4 +1.4**
TREC Trest 72.94 318 *e*P **P 04 26 05.2 +0.6**
TREC MLR MLR
comp=Z,300nm,16.0s,MS4.7
TREC Trest 72.94 318 *e*P **P 04 26 05.2 +0.6**
TREC *e*XS sS 04 35 40.4 -5.7
TREC AMS AMS 05 07 10.0
comp=Z,300nm,16.0s
LBTB Lobatse 73.57 240 *e*P **P 04 26 09.5 +0.8**
LBTB pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
LBTB Lobatse 73.57 240 *e*P **P 04 26 09.5 +0.9**
comp=Z,7.8nm,0.6s,mb4.8
PRU Pruhonice 73.59 319 *e*P **P 04 26 09.0 +0.6**
PRU *e* 04 28 55.7
PRU *e*S S 04 35 36.8 +0.4
PRU MLR MLR
comp=Z,300nm,16.2s,MS4.7
PRU Pruhonice 73.59 319 *e*P **P 04 26 09.0 +0.6**
PRU *e*PP PP 04 28 55.7 +3.1
PRU *e*S S 04 35 36.8 +0.4
PRU AMS AMS 05 07 30.0
comp=Z,300nm,16.2s
PVCC Panska Ves 73.61 320 *e*P **P 04 26 07.5 -0.9**
PVCC *e* 04 28 49.5
PVCC *e*S S 04 35 43.5 +7.0
PVCC MLR MLR
comp=Z,400nm,16.5s,MS4.8
PVCC Panska Ves 73.61 320 *e*P **P 04 26 07.5 -0.9**
PVCC *e*PP PP 04 28 49.5 -3.2
PVCC *e*S S 04 35 43.5 +7.0
PVCC AMS AMS 05 09 00.0
comp=Z,400nm,16.5s
TRO Tromso 74.01 340 *e*P **P 04 26 10.8 +0.4**
TRO AMS AMS 05 01 57.6
comp=Z,833nm,14.2s,MS5.2
TRO Tromso 74.01 340 *e*P **P 04 26 11.7 +1.3**
BRG Berggiesshubel 74.02 320 *e*P **P 04 26 11.0 +0.1**
comp=Z,10.0nm,1.2s,mb4.6
BRG Berggiesshubel 74.02 320 *e*P **P 04 26 11.2 +0.3**
comp=Z,2.5nm,0.7s,mb4.2
BRG S S 04 35 46.0 +4.9
BRG
comp=N,244nm,16.4s
BRG
comp=E,244nm,15.2s
BRG
comp=Z,244nm,10.4s
GEC2 GERESS Array S 74.10 318 *e*P **P 04 26 11.4 0.0**
comp=Z,9.0nm,1.0s,mb4.7
KHC Kasperske Hory 74.19 318 *e*P **P 04 26 11.3 -0.6**
KHC *e**PP pP 04 26 20.5 -1.7
KHC *e*S S 04 35 50.7 +7.6
KHC pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
KHC MLR MLR
comp=Z,300nm,20.3s,MS4.6
KHC Kasperske Hory 74.19 318 *e*P **P 04 26 11.3 -0.6**
comp=Z,6.2nm,1.1s,mb4.5
KHC Kasperske Hory 74.19 318 *e*P **P 04 26 11.6 -0.3**
KHC *e*pP pP 04 26 20.5 -1.7
KHC *e*PP PP 04 28 47.8 -10
KHC *e*S S 04 35 50.7 +7.6
KHC AMS AMS 05 04 20.0
comp=Z,300nm,20.3s
KBA Koelnbreinsper 74.29 316⇓ *i*P **P 04 26 12.1 -0.5**
comp=Z,6.3nm,1.1s,mb4.5
BILL Bilibino 74.32 22⇓ *e*P **P 04 26 13.2 +0.9**
BILL *i* pP 04 26 20.3 -2.3
BILL *i* S S 04 35 48.4 +4.5
BILL *e*SS SS 04 40 31.8 +2.0
BILL pmax pmax
comp=Z,17nm,2.5s,mb4.5
BILL MLR MLR
comp=Z,2μm,22.0s,MS5.2
BILL Bilibino 74.32 22 *e*P **P 04 26 13.5 +1.2**
comp=Z,3.8nm,0.4s,mb4.7
CLL Collm 74.63 320 *e*P **P 04 26 14.2 -0.2**
comp=Z,8.0nm,1.0s,mb4.6
CLL Collm 74.63 320 *i*P **P 04 26 13.8 -0.6**
CLL *i* pP pP 04 26 21.5 -3.3
CLL *e*S S 04 35 49.0 +1.1
CLL pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
CLL MLR MLR
comp=Z,400nm,18.0s,MS4.8
CLL Collm 74.63 320 *i*P **P 04 26 13.8 -0.6**
comp=Z,8.0nm,1.0s,mb4.6
CLL *i* pP pP 04 26 21.5 -3.3
CLL *e*PP PP 04 28 58.0 -3.3
CLL *e*PPP 04 30 48.0
CLL *e*S S 04 35 49.0 +1.1
CLL *e*PS 04 36 28.0
CLL *e*SS SS 04 40 24.0 -11
CLL *e* 04 41 48.0
CLL *e*SSS 04 44 06.0
CLL *e* 04 45 00.0
CLL *e*(SSSS) 04 46 30.0
CLL LmH 05 05 00.0
comp=Z,400nm,18.0s
WET Wettzell 74.65 318 *e*P **P 04 26 14.7 +0.1**
comp=Z,16nm,1.4s,mb4.8
RJOB Jochberg 74.68 317 *e*P **P 04 26 14.2 -0.6**
comp=Z,7.0nm,1.1s,mb4.5
HFS Hagfors 74.78 330 LR LR 05 06 35.4
comp=Z,464nm,18.2s,MS4.8,baz=93,slow=42
TANN Tannenbergstha 74.95 319 *e*P **P 04 26 15.7 -0.6**
comp=Z,7.0nm,1.2s,mb4.5
NKC Novy Kostel 74.95 319 *e*P **P 04 26 17.6 +1.3**
NKC *e*S S 04 35 56.2 +4.6
NKC MLR MLR
comp=Z,500nm,17.5s,MS4.9
NKC Novy Kostel 74.95 319 *e*P **P 04 26 17.6 +1.3**
NKC *e*S S 04 35 56.2 +4.6
NKC AMS AMS 05 08 20.0
comp=Z,500nm,17.5s
BOSA Boshof 75.13 237 P **P 04 26 18.8 +1.1**
comp=Z,10.0nm,0.7s,mb4.9,baz=93,slow=4.9,SNR=17
BOSA LR LR 04 55 45.2
comp=Z,612nm,18.8s,MS4.9,baz=252,slow=33
BOSA Boshof 75.13 237 *e*P **P 04 26 18.6 +0.9**
BOSA pmax pmax
comp=Z,35nm,1.3s,mb5.1
BOSA Boshof 75.13 237 *e*P **P 04 26 18.6 +0.9**
comp=Z,35nm,1.3s,mb5.1
WTTA Wattenberg 75.46 316⇑ *i*P **P 04 26 18.2 -1.1**
comp=Z,13nm,1.2s,mb4.7
MOX Moxa 75.49 320 *e*P **P 04 26 19.2 -0.2**
comp=Z,6.0nm,0.6s,mb4.7
MOX
comp=Z,400nm,17.0s
MOX Moxa 75.49 320 *e*P **P 04 26 19.1 -0.3**
comp=Z,15nm,1.4s,mb4.7
GRF Grafenberg Arr 75.74 319 *e*P **P 04 26 21.2 +0.4**
comp=Z,28nm,1.2s,mb5.1
GRF *e*S S 04 36 05.1 +4.8
GRF *e*L 05 10 58.7
comp=Z,291nm,18.9s
GRF Grafenberg Arr 75.74 319 *e*P **P 04 26 21.2 +0.4**
GRF *e*S S 04 36 05.1 +4.8
GRF pmax pmax
comp=Z,28nm,1.2s,mb5.1
GRF MLR MLR
comp=Z,300nm,18.9s,MS4.6
MOTA Moosalm 75.82 316⇑ *i*P **P 04 26 20.5 -0.8**
comp=Z,9.2nm,1.0s,mb4.7,SNR=7,7
RETA Reutte 76.05 316⇑ *i*P **P 04 26 21.7 -0.9**
comp=Z,15nm,1.2s,mb4.8,SNR=10
NB2 NORSAR Subarra 76.06 330 P **P 04 26 21.6 -0.8**
comp=Z,7.9nm,0.9s,mb4.6,baz=93,slow=5.3
NOA NORSAR Array B 76.06 330 P **P 04 26 21.0 -1.4**
comp=Z,5.1nm,0.9s,mb4.5,baz=94,slow=5.6,SNR=17
NOA LR LR 05 07 33.8
comp=Z,323nm,18.6s,MS4.7,baz=90,slow=42
NOA NORSAR Array B 76.06 330 P **P 04 26 21.0 -1.4**
NOA LR LR 05 07 33.8
FETA Feichten 76.08 316 *i*P **P 04 26 22.4 -0.5**
comp=Z,11nm,1.2s,mb4.7,SNR=6.0
NAO01 NORSAR Array S 76.21 330 *e*P **P 04 26 23.2 -0.1**
comp=Z,12nm,1.2s,mb4.7
CLZ Clausthal 76.28 321 *e*P **P 04 26 23.8 -0.1**
comp=Z,10.0nm,1.0s,mb4.7
BSEG Bad Segeberg 76.32 323 *e*P **P 04 26 24.6 +0.5**
comp=Z,21nm,1.1s,mb5.0
NRDL Niedersach Rie 76.44 322 *e*P **P 04 26 24.8 0.0**
comp=Z,26nm,1.4s,mb5.0
DAVA Damuels 76.66 316⇑ *i*P **P 04 26 25.6 -0.5**
comp=Z,22nm,1.3s,mb4.9,SNR=8.7
DAVOX Davos/Dischmat 76.67 316 LR LR 05 08 23.0
comp=Z,269nm,18.8s,MS4.6,baz=76,slow=42
KONO Kongsberg 76.81 329 *e*P **P 04 26 29.3 +2.6**
KONO *e*S S 04 36 12.7 +1.0
KONO AMS AMS 05 07 51.8
comp=Z,451nm,19.0s,MS4.8
KONO Kongsberg 76.81 329 *e*P **P 04 26 24.2 -2.5**
KONO *e* 04 26 30.2
KONO LR LR
comp=Z,450nm,19.0s,MS4.8
STU Stuttgart 77.08 318 *e*P **P 04 26 27.9 -0.5**
comp=Z,5.0nm,0.7s,mb4.5
STU Stuttgart 77.08 318 *e*P **P 04 26 28.2 -0.2**
PGF Pioggiola 77.47 311 *e*P **P 04 26 29.7 -1.1**
TNS Taunus Mts 77.52 319 *e*P **P 04 26 30.9 0.0**
comp=Z,21nm,1.4s,mb4.9
KBS Kingsbay 77.55 349 *e*S S 04 36 20.7 +1.5
KBS AMS AMS 05 09 53.6
comp=Z,505nm,19.7s,MS4.8
KBS Kingsbay 77.55 349 *e*P **P 04 26 35.0 +4.5**
KBS MLR MLR
comp=Z,500nm,19.7s,MS4.8
KEST Kesra 77.65 304 P **P 04 26 32.4 +0.5**
comp=Z,6.4nm,1.0s,mb4.5,baz=315,slow=6.6,SNR=10
KEST LR LR 05 06 44.4
comp=Z,130nm,18.3s,MS4.3,baz=358,slow=40
KEST Kesra 77.65 304 *e*P **P 04 26 32.2 +0.3**
BFO Black Forest 77.67 317 *e*P **P 04 26 31.6 -0.1**
comp=Z,8.0nm,1.1s,mb4.6
BFO Black Forest 77.67 317 *e*P **P 04 26 31.8 +0.1**
BFO pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
BFO Black Forest 77.67 317 *e*P **P 04 26 31.8 +0.1**
comp=Z,6.2nm,1.0s,mb4.5
CASY Casey 78.07 172 *e*P **P 04 26 33.1 -0.3**
comp=Z,6.5nm,1.1s,mb4.5
BUG Bochum–Univer 78.22 320 *e*P **P 04 26 34.9 +0.1**
comp=Z,8.0nm,1.0s,mb4.6
CDF Champ du Feu 78.36 317 *e*P **P 04 26 34.5 -1.1**
comp=Z,10nm,0.9s,mb4.5
CDF Champ du Feu 78.36 317 *e*P **P 04 26 34.5 -1.1**
CDF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
CDF Champ du Feu 78.36 317 *e*P **P 04 26 34.5 -1.1**
comp=Z,5.3nm,0.9s,mb4.5
SBF Sospel 78.53 313 *e*P **P 04 26 35.5 -1.1**
HINF Hinteralfeld 78.68 317 *e*P **P 04 26 35.8 -1.6**
comp=Z,3.2nm,0.6s,mb4.2
HINF Hinteralfeld 78.68 317 *e*P **P 04 26 35.8 -1.6**
HINF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
HINF Hinteralfeld 78.68 317 *e*P **P 04 26 35.8 -1.6**
comp=Z,1.6nm,0.6s,mb4.1
LPG La Plagne 78.90 314 *e*P **P 04 26 38.2 -0.5**
comp=Z,11nm,0.7s,mb4.6
LPG La Plagne 78.90 314 *e*P **P 04 26 38.2 -0.5**
LPG pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
LPG La Plagne 78.90 314 *e*P **P 04 26 38.2 -0.5**
comp=Z,5.3nm,0.7s,mb4.6
LPL La Plagne 78.92 314 *e*P **P 04 26 38.2 -0.5**
comp=Z,32nm,0.9s,mb4.9
LPL La Plagne 78.92 314 *e*P **P 04 26 38.2 -0.5**
LPL pmax pmax
comp=Z,16nm,0.9s,mb5.0
LPL La Plagne 78.92 314 *e*P **P 04 26 38.2 -0.5**
comp=Z,16nm,0.9s,mb5.0
MBDF Montbardon 78.94 314 *e*P **P 04 26 37.4 -1.5**
comp=Z,5.8nm,0.6s,mb4.4
MBDF Montbardon 78.94 314 *e*P **P 04 26 37.4 -1.5**
MBDF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
MBDF Montbardon 78.94 314 *e*P **P 04 26 37.4 -1.5**
comp=Z,2.9nm,0.6s,mb4.4
BER Bergen 78.95 330 *e*S S 04 36 34.5 -0.2
BNI Bardonecchia 78.99 314 *e*P **P 04 26 38.9 -0.2**
BNI pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
BNI Bardonecchia 78.99 314 *e*P **P 04 26 38.9 -0.2**
comp=Z,9.9nm,1.0s,mb4.7
HAU Haudompre 79.01 317 *e*P **P 04 26 38.0 -1.2**
comp=Z,8.6nm,0.6s,mb4.6
HAU *e*MLR MLR
comp=Z,258nm,18.2s,MS4.3
HAU Haudompre 79.01 317 *e*P **P 04 26 38.0 -1.2**
HAU pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
HAU MLR MLR
comp=Z,260nm,18.3s,MS4.6
HAU Haudompre 79.01 317 *e*P **P 04 26 38.0 -1.2**
comp=Z,4.3nm,0.6s,mb4.6
HAU LR LR
comp=Z,260nm,18.3s,MS4.6
WLF Walferdange 79.03 319 P **P 04 26 39.5 +0.3**
comp=Z,8.8nm,1.7s,mb4.4
WLF Walferdange 79.03 319 *e*P **P 04 26 39.9 +0.7**
comp=Z,14nm,1.3s,mb4.7
WLF Walferdange 79.03 319 *e*P **P 04 26 38.8 -0.4**
WLF pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
WLF Walferdange 79.03 319 *e*P **P 04 26 38.8 -0.4**
comp=Z,10nm,1.1s,mb4.7
MEM Membach 79.06 320 P **P 04 26 40.1 +0.7**
FRF La Foret Royal 79.12 312 *e*P **P 04 26 38.8 -1.1**
comp=Z,18nm,1.1s,mb4.6
FRF La Foret Royal 79.12 312 *e*P **P 04 26 38.8 -1.1**
FRF pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
FRF La Foret Royal 79.12 312 *e*P **P 04 26 38.8 -1.1**
comp=Z,9.1nm,1.1s,mb4.6
LMR La Mourre 79.24 312 *e*P **P 04 26 39.4 -1.2**
CABF La Chapelle 79.28 316 *e*P **P 04 26 40.2 -0.5**
comp=Z,10nm,0.7s,mb4.5
CABF La Chapelle 79.28 316 *e*P **P 04 26 40.2 -0.5**
CABF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
CABF La Chapelle 79.28 316 *e*P **P 04 26 40.2 -0.5**
comp=Z,5.2nm,0.7s,mb4.5
ORIF Oris-en-Rattie 79.56 314 *e*P **P 04 26 40.9 -1.4**
comp=Z,8.4nm,0.9s,mb4.4
ORIF *e*MLR MLR
comp=Z,263nm,20.0s,MS4.3
ORIF Oris-en-Rattie 79.56 314 *e*P **P 04 26 40.9 -1.4**
ORIF pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
ORIF Oris-en-Rattie 79.56 314 *e*P **P 04 26 40.9 -1.4**
comp=Z,4.2nm,0.9s,mb4.4
MEZF Maizieres J'vi 79.83 318 *e*P **P 04 26 42.7 -1.0**
comp=Z,35nm,1.2s,mb4.9
MEZF Maizieres J'vi 79.83 318 *e*P **P 04 26 42.7 -1.0**
comp=Z,35nm,1.2s,mb5.2
SMRF Simiane la Rot 79.86 313 *e*P **P 04 26 43.3 -0.6**
comp=Z,14nm,1.1s,mb4.5
SMRF Simiane la Rot 79.86 313 *e*P **P 04 26 43.3 -0.6**
comp=Z,14nm,1.1s,mb4.8
DOU Dourbes 80.00 319 P **P 04 26 44.4 -0.1**
comp=Z,8.9nm,2.9s,mb4.2
DZM Mont Dzumac 80.16 115 *e*LR LR 04 51 37.2
comp=Z,631nm,22.9s
SNF Seneffe 80.17 320 P **P 04 26 46.4 +0.9**
comp=Z,12nm,2.5s,mb4.4
BAIF Baives 80.25 319 *e*P **P 04 26 45.1 -0.8**
comp=Z,21nm,1.1s,mb4.7
BAIF Baives 80.25 319 *e*P **P 04 26 45.1 -0.8**
BAIF pmax pmax
comp=Z,11nm,1.1s,mb4.7
BAIF Baives 80.25 319 *e*P **P 04 26 45.1 -0.8**
comp=Z,11nm,1.1s,mb4.7
VIVF Saint-Julien-I 80.42 314 *e*P **P 04 26 46.2 -0.7**
comp=Z,18nm,0.9s,mb4.7
VIVF Saint-Julien-I 80.42 314 *e*P **P 04 26 46.2 -0.7**
VIVF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
VIVF Saint-Julien-I 80.42 314 *e*P **P 04 26 46.2 -0.7**
comp=Z,9.1nm,0.9s,mb4.7

SSB Saint Sauveur 80.47 314 *e*P **P 04 26 47.0 -0.2**
SSB pmax pmax
comp=Z,14nm,1.0s,mb4.8
SSB Saint Sauveur 80.47 314 *e*P **P 04 26 47.0 -0.2**
comp=Z,14nm,1.0s,mb4.9
LOR Lormes 80.75 316 *e*P **P 04 26 47.5 -1.1**
comp=Z,10nm,0.6s,mb4.6
LOR *e*MLR MLR
comp=Z,228nm,19.0s,MS4.2
LOR Lormes 80.75 316 *e*P **P 04 26 47.5 -1.1**
LOR pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
LOR MLR MLR
comp=Z,230nm,19.0s,MS4.5
LOR Lormes 80.75 316 *e*P **P 04 26 47.5 -1.1**
comp=Z,5.1nm,0.6s,mb4.6
LOR LR LR
comp=Z,230nm,19.0s,MS4.5
SMF Signal de Mont 80.82 316 *e*P **P 04 26 47.9 -1.1**
comp=Z,7.4nm,0.6s,mb4.5
SMF Signal de Mont 80.82 316 *e*P **P 04 26 47.9 -1.1**
SMF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
SMF Signal de Mont 80.82 316 *e*P **P 04 26 47.9 -1.1**
comp=Z,3.7nm,0.6s,mb4.5
MAW Mawson 80.88 191 P **P 04 26 49.6 +0.9**
comp=Z,2.8nm,0.8s,mb4.2,baz=28,slow=8.6,SNR=5.5
MAW LR LR 04 59 32.9
comp=Z,304nm,18.4s,MS4.7,baz=25,slow=33
SSF Saint Saulge 81.01 316 *e*P **P 04 26 49.0 -1.0**
comp=Z,4.5nm,0.6s,mb4.3
SSF Saint Saulge 81.01 316 *e*P **P 04 26 49.0 -1.0**
SSF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
SSF Saint Saulge 81.01 316 *e*P **P 04 26 49.0 -1.0**
comp=Z,3.3nm,0.6s,mb4.3
LASF Ste Croix 81.08 313 *e*P **P 04 26 50.1 -0.4**
comp=Z,45nm,1.3s,mb4.9
AVF Avril sur Loir 81.14 316 *e*P **P 04 26 49.6 -1.1**
comp=Z,6.2nm,0.6s,mb4.4
AVF Avril sur Loir 81.14 316 *e*P **P 04 26 49.6 -1.1**
AVF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
AVF Avril sur Loir 81.14 316 *e*P **P 04 26 49.6 -1.1**
comp=Z,3.1nm,0.6s,mb4.4
BGF Bois d'Agland 81.51 316 *e*P **P 04 26 52.1 -0.6**
comp=Z,12nm,0.8s,mb4.6
BGF Bois d'Agland 81.51 316 *e*P **P 04 26 52.1 -0.6**
BGF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
BGF Bois d'Agland 81.51 316 *e*P **P 04 26 52.1 -0.6**
comp=Z,6.2nm,0.8s,mb4.6
TCF Toulx Ste Croi 81.98 316 *e*P **P 04 26 54.6 -0.6**
comp=Z,24nm,1.4s,mb4.7
TCF Toulx Ste Croi 81.98 316 *e*P **P 04 26 54.6 -0.6**
TCF pmax pmax
comp=Z,12nm,1.4s,mb4.6
TCF Toulx Ste Croi 81.98 316 *e*P **P 04 26 54.6 -0.6**
comp=Z,12nm,1.4s,mb4.6
CAF Calviac 82.26 314 *e*P **P 04 26 56.2 -0.5**
comp=Z,23nm,1.2s,mb4.7
CAF Calviac 82.26 314 *e*P **P 04 26 56.2 -0.5**
CAF pmax pmax
comp=Z,11nm,1.2s,mb4.7
CAF Calviac 82.26 314 *e*P **P 04 26 56.2 -0.5**
comp=Z,11nm,1.2s,mb4.7
MTLF Montolieu 82.35 313 *e*P **P 04 26 56.6 -0.6**
comp=Z,25nm,1.0s,mb4.8
MTLF Montolieu 82.35 313 *e*P **P 04 26 56.6 -0.6**
MTLF pmax pmax
comp=Z,13nm,1.0s,mb4.8
MTLF Montolieu 82.35 313 *e*P **P 04 26 56.6 -0.6**
comp=Z,13nm,1.0s,mb4.8
TAM Tamanrasset 82.44 292 *e*P **P 04 26 59.2 +1.1**
TAM pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
TAM Tamanrasset 82.44 292 *e*P **P 04 26 59.2 +1.2**
comp=Z,8.5nm,1.2s,mb4.5
RJF Les Rejaudoux 82.59 315 *e*P **P 04 26 58.1 -0.3**
comp=Z,27nm,1.2s,mb4.9
RJF *e*MLR MLR
comp=Z,239nm,20.5s,MS4.2
RJF Les Rejaudoux 82.59 315 *e*P **P 04 26 58.1 -0.3**
RJF pmax pmax
comp=Z,13nm,1.2s,mb4.8
RJF MLR MLR
comp=Z,240nm,20.5s,MS4.5
RJF Les Rejaudoux 82.59 315 *e*P **P 04 26 58.1 -0.3**
comp=Z,13nm,1.2s,mb4.8
RJF LR LR
comp=Z,240nm,20.5s,MS4.5
LFF La Frestale 83.19 314 *e*P **P 04 27 01.1 -0.4**
JMIC Jan Mayen 83.22 341 *e*SKS 04 37 26.6
JMIC Jan Mayen 83.22 341 LR LR 05 08 06.7
comp=Z,314nm,18.7s,MS4.7,baz=76,slow=39
LDF La Druitiere 83.24 318 *e*P **P 04 27 00.6 -1.1**
comp=Z,28nm,1.1s,mb4.9
LDF La Druitiere 83.24 318 *e*P **P 04 27 00.6 -1.1**
LDF pmax pmax
comp=Z,14nm,1.1s,mb4.9
LDF La Druitiere 83.24 318 *e*P **P 04 27 00.6 -1.1**
comp=Z,14nm,1.1s,mb4.9
FLN La Foliniere 83.45 318 *e*P **P 04 27 01.7 -1.1**
comp=Z,10nm,0.9s,mb4.6
FLN *e*MLR MLR
comp=Z,340nm,19.8s,MS4.4
FLN La Foliniere 83.45 318 *e*P **P 04 27 01.7 -1.1**
FLN pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
FLN MLR MLR
comp=Z,340nm,19.8s,MS4.7
FLN La Foliniere 83.45 318 *e*P **P 04 27 01.7 -1.1**
comp=Z,5.3nm,0.9s,mb4.6
FLN LR LR
comp=Z,340nm,19.8s,MS4.7
MFF Saint Martin d 83.55 316 *e*P **P 04 27 02.4 -0.9**
comp=Z,26nm,1.1s,mb5.0
MFF Saint Martin d 83.55 316 *e*P **P 04 27 02.4 -0.9**
MFF pmax pmax
comp=Z,13nm,1.1s,mb5.0
MFF Saint Martin d 83.55 316 *e*P **P 04 27 02.4 -0.9**
comp=Z,13nm,1.1s,mb5.0
GRR Gorron 83.75 318 *e*P **P 04 27 03.3 -1.0**
EPF Esparros 83.76 312 *e*P **P 04 27 03.2 -1.3**
QUIF Quistinic 85.36 318 *e*P **P 04 27 11.3 -1.1**
comp=Z,47nm,1.4s,mb5.1
QUIF Quistinic 85.36 318 *e*P **P 04 27 11.3 -1.1**
QUIF pmax pmax
comp=Z,24nm,1.4s,mb5.1
QUIF Quistinic 85.36 318 *e*P **P 04 27 11.3 -1.1**
comp=Z,24nm,1.4s,mb5.1
SYO Syowa Base 87.46 197⇑ *e*P **P 04 27 23.2 +1.0**
ESDC Sonseca Array 87.55 310 P **P 04 27 23.3 0.0**
comp=Z,2.0nm,0.9s,mb4.3,baz=49,slow=5.3,SNR=7.2
ESDC LR LR 05 11 48.2
comp=Z,79nm,19.3s,MS4.1,baz=100,slow=39
MDT Midelt 89.50 303 LR LR 05 10 31.9
comp=Z,292nm,18.8s,MS4.7,baz=257,slow=38
RPZ Rata Peaks 89.76 135 LR LR 05 10 16.2
comp=Z,725nm,20.6s,MS5.1,baz=201,slow=37
SUMG Summit 90.81 347 *i* P **P 04 27 38.7 +0.7**
comp=Z,7.8nm,1.1s,mb5.0
SVW2 Sparrevohn 91.27 27 *e*P **P 04 27 41.7 +1.3**
BPAW Bear Paw Mtn. 91.79 23 *e*P **P 04 27 43.6 +0.9**
comp=Z,25nm,1.3s,mb5.4
MCK McKinley 92.76 23 *e*P **P 04 27 47.9 +0.7**
MCK pmax pmax
comp=Z,17nm,1.2s,mb5.3
MCK McKinley 92.76 23 *e*P **P 04 27 47.9 +0.7**
comp=Z,17nm,1.2s,mb5.3
URZ Urewera 92.99 128 LR LR 05 09 27.8
comp=Z,680nm,21.4s,MS5.1,baz=280,slow=35
INK Inuvik 94.88 15 P **P 04 27 54.8 -2.1**
comp=Z,2.1nm,0.9s,mb4.6,baz=306,slow=9.7,SNR=2.5
INK Inuvik 94.88 15 *e*P **P 04 27 56.8 -0.1**
DIV Divide 95.40 24 *e*P **P 04 28 00.2 +0.8**
comp=Z,18nm,1.0s,mb5.5
AFI Afiamalu 98.77 103 LR LR 05 12 27.6
comp=Z,206nm,18.7s,MS4.7,baz=161,slow=35
PPT Papeete 120.39 104 *e*PP PP 04 34 43.1 -11
comp=Z,78nm,22.8s
PPT *e*SP SP 04 44 41.5 +0.3
comp=Z,73nm,23.8s
PPT *e*LR LR 05 10 12.3
comp=Z,243nm,22.8s
TBI Tubuai 120.56 111 *e*PS PS 04 44 42.2 -4.5
comp=Z,168nm,24.5s
TBI *e*LR LR 05 10 19.3
comp=Z,333nm,25.0s
HLID Hailey 120.93 22 *e*PKPdf PKPdf 04 33 28.2 +0.5
BW06 Boulder Array 123.29 19 *e*PKPdf PKPdf 04 33 32.5 +0.2
PDAR Pinedale Array 123.29 19 PKP PKPdf 04 33 32.3 0.0
comp=Z,1.4nm,1.1s,baz=0.0,slow=1.5,SNR=8.0
NVAR Mina Array Bea 123.60 28 PKP PKPdf 04 33 34.2 +1.1
comp=Z,3.5nm,1.1s,baz=264,slow=1.5,SNR=11
NVAR Mina Array Bea 123.60 28 PKP PKPdf 04 33 34.2 +1.1
HWUT Hardware Ranch 123.66 21‖ *e*PKP PKPdf 04 33 33.7 +0.6
DUG Dugway 124.44 23 *e*PKIKP PKPdf 04 33 36.3 +1.7
ECSD EROS Data Cent 125.24 7 *e*PKPdf PKPdf 04 33 35.9 -0.2
MSU Marysvale 126.14 23 *e*PKIKP PKPdf 04 33 39.6 +1.7
RKT Rikitea 133.86 112 *e*LR LR 05 16 35.8
comp=Z,287nm,25.2s
MNTX Cornudas Mount 134.72 21 *e*PKPdf PKPdf 04 33 53.8 -0.6
TXAR Lajitas Array 137.47 20 PKP PKPdf 04 34 01.9 +2.4
comp=Z,1.0nm,0.8s,baz=70,slow=0.4,SNR=7.4
TXAR Lajitas Array 137.47 20 PKP PKPdf 04 34 01.9 +2.4
JCT Junction City 137.53 15 *e*PKIKP PKPdf 04 34 00.7 +1.1
PLCA Paso Flores 146.29 205 PKPbc PKPbc 04 34 16.6 +0.6
comp=Z,3.6nm,0.7s,baz=210,slow=7.1,SNR=9.4
PLCA Paso Flores 146.29 205 *e*PKPbc PKPbc 04 34 16.4 +0.4
CPUP Villa Florida 146.94 238 PKPbc PKPbc 04 34 17.3 -1.1
comp=Z,2.9nm,0.6s,baz=115,slow=3.8,SNR=9.3
CPUP Villa Florida 146.94 238 *e*PKPbc PKPbc 04 34 17.2 -1.2
LPAZ La Paz 159.66 252 PKPab PKPab 04 35 15.0 +1.6
comp=Z,2.8nm,0.9s,baz=85,slow=9.4,SNR=7.2

*IDC **29** 04:23:06.7±3.0, 11°.26N×91°.81E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.5/23, mbtmp3.7/6, MS4.3/1, Ms1 4.3/1, ms1mx3.0/35, Error ellipse: s-maj=128.1km s-min=20.5km az=63.0*
*NEIC **29** 04:23:08.2±1.1, 11°.28N×91°.81E, h10km, mb4.1/3, Error ellipse: s-maj=45.6km s-min=8.7km az=56.0*
*ISCJB **29** 04:23:09.9±1.6, 11°.3N±0°.3×92°.0E±0°.4, h33km, mb3.8/8, Error ellipse: s-maj=65.5km s-min=12.2km az=146.5*
ISC 29 04:23:12.1±1.6, 11°.3N±0°.3×91°.9E±0°.4, h35km, n11, σ0s53/10, mb3.8/8, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	Kulim	10.52	124	*e*Pn	Pn	04 25 39.7	-0.8
EKS2	Erkin-Say	34.99	336	*e*P	P	04 30 00.6	-0.5
3.1nm,0.7s,mb4.3							
MKAR	Makanchi Array	36.28	349	P	P	04 30 12.2	+0.2
0.4nm,0.7s,mb3.4,baz=141,slow=8.3,SNR=3.4							
SONM	Songino Array	38.38	16	P	P	04 30 30.3	+0.5
0.2nm,0.4s,mb3.2,baz=209,slow=4.8,SNR=2.2							
KURK	Kurchatov	40.77	347	P	P	04 30 49.1	-0.5
0.4nm,0.7s,mb3.2,baz=144,slow=6.1,SNR=3.5							
KURK	Kurchatov	40.77	347	*e*P	P	04 30 49.3	-0.4
1.1nm,0.5s,mb3.7							
FITZ	Fitzroy Crossi	44.31	131	P	P	04 31 18.5	-0.4
3.1nm,1.0s,mb4.0,baz=309,slow=11,SNR=3.5							
GNI	Garni	50.48	313	LR	LR	04 54 32.3	
comp=Z,266nm,18.6s,baz=77,slow=37							
WRA	Warramunga Arr	52.05	126	P	P	04 32 18.8	0.0
1.2nm,0.6s,mb4.0,baz=307,slow=8.3,SNR=12							
WRAB	Tennant Creek	52.06	126	*e*P	P	04 32 19.3	+0.6
2.1nm,0.7s,mb4.2							
ASAR	Alice Springs	53.81	131	P	P	04 32 32.4	+0.8
1.5nm,0.9s,mb3.9,baz=303,slow=6.6,SNR=5.6							

IDC 29 04:24:34.4±6.1, 10°.32N×91°.22E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/22, mbtmp3.6/5, Error ellipse: s-maj=301.9km s-min=21.7km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	37.14	350	P	P	04 31 45.7	-1.0
0.3nm,0.6s,baz=127,slow=9.2,SNR=2.5							
KURK	Kurchatov	41.59	348	P	P	04 32 24.1	+0.2
0.3nm,0.7s,baz=160,slow=8.4,SNR=3.0							
ZALV	Zalesovo Beam	43.82	355	P	P	04 32 41.9	0.0
0.3nm,0.3s,baz=184,slow=11,SNR=2.9							
WRA	Warramunga Arr	52.02	125	P	P	04 33 45.3	-0.7
0.7nm,0.7s,baz=300,slow=10.0,SNR=11							
ASAR	Alice Springs	53.68	130	P	P	04 33 59.0	+0.7
1.5nm,0.8s,baz=304,slow=6.4,SNR=7.3							

*CSEM **29** 04:33:28.9±0.3, 34°.29N×34°.34E, h2km, Mw2.7, Error ellipse: s-maj=12.3km s-min=4.1km az=31.0*
*ISCJB **29** 04:33:28.4±1.4, 34°.31N±0°.08×34°.36E±0°.05, h1km±10km, Error ellipse: s-maj=14.6km s-min=4.6km az=25.9*
*GRAL **29** 04:33:31.8±0.6, 34°.37N×34°.42E, h14km±8km, MD3.0*
*NIC **29** 04:33:33.2±0.2, 34°.68N×34°.45E, h55km, ML3.1, MW2.7*
*NEIC **29** 04:33:36.3±2.6, 34°.63N×34°.10E, h25km±11km, ML3.1(NIC), Error ellipse: s-maj=27.5km s-min=8.3km az=159.0*
ISC 29 04:33:28.8±0.9, 34°.32N±0°.07×34°.37E±0°.06, h3km±7km, n30, σ1s04/43, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHNC	Paralimni	0.73	338	P	Pg	04 33 44.5	+1.6
2.3nm,0.3s							
PHNC				S	Sg	04 33 53.5	+1.0
PHNC	Paralimni	0.73	338	P	Pg	04 33 44.5	+1.6
2.3nm,0.3s							
PHNC				S	Sg	04 33 53.5	+1.0
CSS	Prodhromos	1.07	307	P	Pg	04 33 50.4	+1.0
CSS				S	Sg	04 34 03.4	+0.1
CSS	Prodhromos	1.07	307	P	Pg	04 33 50.4	+1.0
CSS				S	Sg	04 34 03.4	+0.1
BHL	Bhannes	1.14	111	*e*P	Pg	04 33 51.1	+0.4
BHL				*e*S	Sg	04 34 05.4	0.0
BHL	Bhannes	1.14	111	*e*P	Pg	04 33 51.1	+0.4
BHL				*e*S	Sg	04 34 05.4	-0.1
LFK	Lefkose	1.18	324	*e*PG	Pg	04 33 51.1	-0.3
LFK				*e*SG	Sg	04 34 04.1	-2.6
LFK	Lefkose	1.18	324	Pg	Pg	04 33 51.0	-0.4
LFK				Sg	Sg	04 34 05.0	-1.7
LFK	Lefkose	1.18	324	Pg	Pg	04 33 51.0	-0.4
LFK				*e*Sg	Sg	04 34 04.1	-2.6
EREN	Erenkoy	1.22	352	Pn	Pn	04 33 53.4	+0.7
EREN	Erenkoy	1.22	352	Pn	Pn	04 33 53.4	+0.6
MAMC	Mammari	1.27	312	P	Pg	04 33 53.3	+0.1
MAMC	Mammari	1.27	312	P	Pg	04 33 53.3	+0.1
HWQ	Hawqa	1.30	92	*e*P	Pg	04 33 53.5	-0.3
HWQ				*e*S	Sg	04 34 09.4	-1.2
HWQ	Hawqa	1.30	92	*e*P	Pg	04 33 53.5	-0.3
HWQ				*e*S	Sg	04 34 09.4	-1.3
LEF	Lefka	1.46	303	*e*PG	Pg	04 33 55.3	-1.4
LEF	Lefka	1.46	303	Pn	Pn	04 33 55.5	-0.6
LEF	Lefka	1.46	303	*e*Pg	Pg	04 33 55.3	-1.5
LEF	Lefka	1.46	303	Pn	Pn	04 33 55.5	-0.6
RCY	Rachaya	1.46	124	*e*P	Pn	04 33 56.7	+0.6
RCY	Rachaya	1.46	124	*e*P	Pn	04 33 56.7	+0.5
ALFC	Alevga	1.68	300	P	Pn	04 33 59.5	+0.3
1.2nm,0.2s							
ALFC				S	Sn	04 34 19.6	-1.6
ALFC	Alevga	1.68	300	P	Pn	04 33 59.5	+0.3
1.2nm,0.2s							
ALFC				S	Sn	04 34 19.6	-1.6
PPCY	Paphos	1.77	289	P	Pn	04 34 01.4	+1.1
PPCY	Paphos	1.77	289	P	Pn	04 34 01.4	+1.1
IKL	Isikli	1.99	344	Pn	Pn	04 34 04.0	+0.6
IKL	Isikli	1.99	344	Pn	Pn	04 34 04.0	+0.6
HTY	Hatay	2.30	38	Pn	Pn	04 34 11.6	+3.9
HTY	Hatay	2.30	38	Pn	Pn	04 34 11.6	+3.9
MERS	Mersin	2.54	3	*e*PG	Pn	04 34 07.5	-3.5

*IDC **29** 04:33:40.8±2.2, 10°.93N×91°.75E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.6/22, mbtmp3.7/7, Error ellipse: s-maj=100.0km s-min=19.1km az=61.0*
*NEIC **29** 04:33:42.3±1.4, 10°.93N×91°.75E, h10km, mb4.0/2, Error ellipse: s-maj=63.4km s-min=11.7km az=61.0*
*ISCJB **29** 04:33:43.6±1.8, 10°.9N±0°.3×91°.7E±0°.5, h33km, mb3.8/8, Error ellipse: s-maj=79.5km s-min=14.6km az=150.5*
ISC 29 04:33:46.0±1.8, 10°.9N±0°.3×91°.7E±0°.5, h35km, n11, σ0s61/11, mb3.8/8, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	Makanchi Array	36.63	349	*e*P	P	04 40 49.4	+0.4
MKAR	Makanchi Array	36.63	349	P	P	04 40 49.5	+0.4
1.1nm,0.6s,mb3.9,baz=136,slow=8.9,SNR=12							
SONM	Songino Array	38.80	16	P	P	04 41 07.7	+0.4
0.3nm,0.3s,mb3.5,baz=186,slow=7.0,SNR=3.8							
KURK	Kurchatov	41.11	347	P	P	04 41 26.4	-0.1
0.6nm,0.5s,mb3.5,baz=165,slow=7.2,SNR=3.5							
KURK	Kurchatov	41.11	347	*e*P	P	04 41 26.6	+0.1
0.8nm,0.6s,mb3.5							
ZALV	Zalesovo Beam	43.26	354	P	P	04 41 42.4	-1.5
1.6nm,0.5s,mb4.0,baz=178,slow=9.2,SNR=8.9							
ZALV	Zalesovo Beam	43.26	354	P	P	04 41 42.4	-1.5
WRA	Warramunga Arr	51.95	126	P	P	04 42 51.4	-0.5
0.3nm,0.3s,mb3.7,baz=300,slow=10,SNR=17							
WRAB	Tennant Creek	51.96	126	*e*P	P	04 42 51.9	-0.1
2.1nm,0.6s,mb4.2							
ASAR	Alice Springs	53.68	130	P	P	04 43 05.2	+0.6
0.3nm,0.6s,mb3.4,baz=300,slow=7.4,SNR=3.8							
ARCES	ARCESS Array B	71.61	340	P	P	04 45 03.6	+0.2
1.7nm,0.9s,mb4.0,baz=81,slow=7.7,SNR=4.1							

*IDC **29** 04:38:56.3±0.6, 10°.73N×91°.63E, h0km, mb4.1/18, mb1 4.2/19, mb1mx4.1/27, mbtmp4.1/19, ML3.9/1, Error ellipse: s-maj=23.4km s-min=13.6km az=59.0*
*BJI **29** 04:38:56.8, 10°.64N×91°.84E, h21km, mB5.1/2, mb4.4/10*
*MOS **29** 04:38:59.3±0.8, 10°.72N×91°.76E, h33km, mb4.6/20, Error ellipse: s-maj=13.1km s-min=7.3km az=112.7*
*NEIC **29** 04:39:00.4±2.2, 10°.76N×91°.70E, h25km±16km, mb4.3/15, Error ellipse: s-maj=8.5km s-min=5.7km az=47.0*
ISC 29 04:39:01.4±3.1, 10°.74N±0°.07×91°.72E±0°.07, h32km±23km, h23km±1.1km: pP-P, n81, σ0s71/79, mb4.3/43, 4C-4D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	Kulim	10.37	121	*e*Pn	Pn	04 41 28.2	+0.3
CMAR	Chiang Mai Arr	10.38	41	Pn	Pn	04 41 26.9	-1.1
0.2nm,0.3s,baz=237,slow=14,SNR=6.0							
PALK	Pallekele	11.41	253	*e*P	Pn	04 41 42.4	+0.1
KSM	Kuching	20.63	115	*e*P	P	04 43 38.3	-0.1
6.6nm,0.5s							
KKM	Kota Kinabalu	24.67	99	*e*P	P	04 44 21.3	+1.7
4.6nm,0.6s,mb4.2							
LZH	Lanzhou	27.52	22	*e*P	P	04 44 45.0	-0.1
LZH				pP	pP	04 44 50.3	-4.2
LZH				sP	sP	04 44 53.5	-4.9
LZH				pmax	pmax		
comp=Z,18nm,1.4s,mb4.5							
GTA	Gaotai	29.45	13	⇑P	P	04 45 03.3	+1.1
GTA				pP	pP	04 45 10.3	-1.3
GTA				sP	sP	04 45 14.0	-1.5
GTA				pmax	pmax		
comp=Z,9.0nm,0.8s,mb4.5							
UCH	Uchtor	34.80	337	*e*P	P	04 45 49.3	+0.2
UCH				pmax	pmax		
comp=Z,3.0nm,1.0s,mb4.2							
UCH	Uchtor	34.80	337	*e*P	P	04 45 49.3	+0.2
comp=Z,2.6nm,1.0s,mb4.1							
TKM2	Tokmak 2	35.00	339	*e*P	P	04 45 52.4	+1.5
TKM2				pmax	pmax		
comp=Z,3.0nm,0.9s,mb4.2							
TKM2	Tokmak 2	35.00	339	*e*P	P	04 45 52.4	+1.5
comp=Z,2.8nm,0.9s,mb4.2							
AAK	Ala-Archa	35.15	338	P	P	04 45 52.3	+0.2
comp=Z,1.2nm,0.3s,mb4.3,baz=115,slow=22,SNR=6.8							
EKS2	Erkin-Say	35.45	337	*e*P	P	04 45 55.7	+1.0
EKS2				pmax	pmax		
comp=Z,4.0nm,0.9s,mb4.3							
EKS2	Erkin-Say	35.45	337	*e*P	P	04 45 55.7	+1.0
comp=Z,4.4nm,0.9s,mb4.4							
MK31	Makanchi Array	36.81	349	*e*P	P	04 46 06.4	+0.1
MK31				*e*PP	pP	04 46 13.2	-2.6
MKAR	Makanchi Array	36.81	349	P	P	04 46 06.1	-0.2
comp=Z,4.0nm,0.7s,mb4.3,baz=132,slow=8.8,SNR=24							
SONM	Songino Array	38.98	16	P	P	04 46 24.4	-0.2
comp=Z,4.5nm,1.1s,mb4.1,baz=199,slow=9.1,SNR=21							
ULN	Ulaanbaatar	39.19	16	*e*P	P	04 46 26.3	0.0
ULN				pmax	pmax		
comp=Z,2.0nm,0.8s,mb3.9							
ULN	Ulaanbaatar	39.19	16	*e*P	P	04 46 26.3	0.0
comp=Z,1.9nm,0.8s,mb3.9							
KURK	Kurchatov	41.29	347	P	P	04 46 43.1	-0.6
comp=Z,2.9nm,0.8s,mb4.0,baz=163,slow=7.2,SNR=15							
KURK				PcP	PcP	04 48 41.4	-0.5
comp=Z,0.4nm,0.6s,baz=158,slow=2.8,SNR=3.9							
KURK	Kurchatov	41.29	347	*e*P	P	04 46 43.1	-0.6
KURK				*e*PP	pP	04 46 50.0	-3.2
KURK						04 48 41.4	
KURK				pmax	pmax		
comp=Z,9.0nm,1.1s,mb4.3							
KURK	Kurchatov	41.29	347	*e*P	P	04 46 43.1	-0.5
comp=Z,9.0nm,1.1s,mb4.3							
KURK				*e*pP	pP	04 46 50.0	-3.2
KURK				PcP	PcP	04 48 41.4	-0.5
KSRS	Korea Array	42.00	45	P	P	04 46 49.4	-0.3
comp=Z,3.2nm,1.1s,mb3.9,baz=235,slow=10,SNR=6.7							
ZALV	Zalesovo Beam	43.45	354	P	P	04 47 00.6	-0.6
comp=Z,3.4nm,0.7s,mb4.2,baz=171,slow=10,SNR=21							
FITZ	Fitzroy Crossi	44.07	130	P	P	04 47 06.3	-0.4
comp=Z,6.0nm,0.7s,mb4.4,baz=301,slow=4.8,SNR=11							
BVAR	Borovoye Array	45.53	342	P	P	04 47 17.5	-0.4
comp=Z,0.6nm,0.6s,mb3.7,baz=175,slow=19,SNR=4.4							
BRVK	Borovoye	45.59	342‖	*e*P	P	04 47 18.9	+0.6
BRVK				pmax	pmax		
comp=Z,6.0nm,2.5s,mb4.1							
BRVK	Borovoye	45.59	342	*e*P	P	04 47 18.8	+0.5
comp=Z,2.1nm,0.6s,mb4.2							
AKTK	Aktyubinsk	48.30	332	P	P	04 47 38.8	-0.8
AKTO	Aktyubinsk	48.30	332	P	P	04 47 38.8	-0.8
comp=Z,0.9nm,0.5s,mb4.0,baz=104,slow=9.0,SNR=3.9							
WRA	Warramunga Arr	51.86	126	P	P	04 48 07.0	0.0
comp=Z,2.1nm,0.6s,mb4.3,baz=304,slow=8.4,SNR=10							
WRAB	Tennant Creek	51.87	126	*e*P	P	04 48 06.9	-0.1
WRAB				pmax	pmax		
comp=Z,4.0nm,0.6s,mb4.5							
WRAB	Tennant Creek	51.87	126	*e*P	P	04 48 06.9	-0.1
comp=Z,4.3nm,0.6s,mb4.6							
SVE	Sverdlovsk	51.88	339‖	*e*P	P	04 48 07.3	+0.7
SVE				pmax	pmax		
comp=Z,13nm,1.5s,mb4.6							
ZEI	Tsey	52.33	316	*e*P	P	04 48 17.4	+7.2
ZEI				pmax	pmax		
comp=Z,4.0nm,0.4s,mb4.7							
ARU	Arti	52.34	337	*d i*P	P	04 48 10.6	+0.6
ARU						04 50 07.4	
ARU				S	S	04 55 39.3	+6.0
ARU				SS	SS	04 59 14.8	+3.6
ARU				pmax	pmax		
comp=Z,8.0nm,1.7s,mb4.4							
ASAR	Alice Springs	53.58	130	P	P	04 48 19.7	+0.1
comp=Z,6.4nm,0.8s,mb4.6,baz=308,slow=6.9,SNR=23							
KIV	Kislovodsk	53.60	317	*e*P	P	04 48 20.9	+1.3
KIV				pmax	pmax		
comp=Z,7.0nm,0.9s,mb4.6							
KMBO	Kilima Mbogo	55.43	261	*c e*P	P	04 48 29.1	-4.3
KMBO				pmax	pmax		
comp=Z,10.0nm,0.5s							
BRTR	Keskin Array B	58.76	310	P	P	04 48 56.6	+0.1
comp=Z,0.8nm,0.7s,mb3.8,baz=123,slow=8.0,SNR=5.8							
OBN	Obninsk	61.70	328‖	*e*P	P	04 49 16.7	+0.4
OBN				pmax	pmax		
comp=Z,13nm,1.7s,mb4.8							
AKASG	Malin Array Be	64.44	321	P	P	04 49 32.2	-2.4
comp=Z,1.4nm,0.8s,mb4.0,baz=83,slow=5.8,SNR=5.7							
AKASG	Malin Array Be	64.44	321	*c e*P	P	04 49 33.7	-0.9
AKASG				pmax	pmax		
comp=Z,1.0nm,0.8s							
AKASG	Malin Array Be	64.44	321	P	P	04 49 32.2	-2.4
KIEV	Ki

comp=Z,1.6nm,1.1s,mb4.0
FINES FINESS Array B 69.08 332 P **P** 04 50 03.8 -0.1
comp=Z,2.6nm,0.8s,mb4.2,baz=83,slow=6.0,SNR=10
KAF Kangasniemi 69.17 333 *e*P **P** 04 50 03.0 -1.5
KAF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
KAF Kangasniemi 69.17 333 *e*p **P** 04 50 03.0 -1.5
comp=Z,4.9nm,0.9s,mb4.4
MORC Moravsky Berou 71.66 319 *e*P **P** 04 50 19.7 -0.2
MORC *e**PP pP 04 50 26.3 -3.8
MORC pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
MORC Moravsky Berou 71.66 319 *e*P **P** 04 50 19.7 -0.2
comp=Z,1.8nm,0.9s,mb4.0
MORC *e*pP pP 04 50 26.3 -3.8
ARCES ARCESS Array B 71.78 340 P **P** 04 50 20.1 -0.2
comp=Z,1.1nm,0.8s,mb3.8,baz=90,slow=6.1,SNR=9.6
BILL Bilibino 74.33 22⇑ *e*P **P** 04 50 35.1 -0.3
BILL pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
HFS Hagfors 74.79 330 P **P** 04 50 38.4 +0.2
comp=Z,1.6nm,0.7s,mb4.0,baz=106,slow=10.0,SNR=4.6
BOSA Boshof 75.12 237 P **P** 04 50 39.3 -1.4
comp=Z,1.7nm,0.6s,mb4.1,baz=124,slow=11,SNR=2.4
NB2 NORSAR Subarra 76.08 330 P **P** 04 50 44.6 -1.0
comp=Z,2.2nm,0.8s,mb4.1,baz=94,slow=5.9
NOA NORSAR Array B 76.08 330 P **P** 04 50 44.7 -0.9
comp=Z,1.4nm,0.8s,mb3.9,baz=94,slow=5.8,SNR=5.9
NOA NORSAR Array B 76.08 330 P **P** 04 50 44.7 -0.9
LPG La Plagne 78.92 314 *e*P **P** 04 51 02.5 +0.7
LPL La Plagne 78.93 314 *e*P **P** 04 51 02.5 +0.6
comp=Z,7.2nm,0.8s,mb4.3
LPL La Plagne 78.93 314 *e*P **P** 04 51 02.5 +0.6
LPL pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
LPL La Plagne 78.93 314 *e*P **P** 04 51 02.5 +0.6
comp=Z,3.6nm,0.8s,mb4.3
VIVF Saint-Julien-I 80.44 314 *e*P **P** 04 51 10.5 +0.4
comp=Z,14nm,1.0s,mb4.5
VIVF Saint-Julien-I 80.44 314 *e*P **P** 04 51 10.5 +0.4
VIVF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
VIVF Saint-Julien-I 80.44 314 *e*P **P** 04 51 10.5 +0.4
comp=Z,7.2nm,1.0s,mb4.6
SMF Signal de Mont 80.84 316 *e*P **P** 04 51 12.3 +0.1
MTLF Montolieu 82.37 313 *e*P **P** 04 51 21.0 +0.7
comp=Z,8.1nm,0.9s,mb4.3
MTLF Montolieu 82.37 313 *e*P **P** 04 51 21.0 +0.7
MTLF pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
MTLF Montolieu 82.37 313 *e*P **P** 04 51 21.0 +0.7
comp=Z,4.1nm,0.9s,mb4.4
MFF Saint Martin d 83.57 316 *e*P **P** 04 51 26.8 +0.3
comp=Z,9.9nm,0.9s,mb4.6
MFF Saint Martin d 83.57 316 *e*P **P** 04 51 26.8 +0.3
MFF pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
MFF Saint Martin d 83.57 316 *e*P **P** 04 51 26.8 +0.3
comp=Z,4.9nm,0.9s,mb4.6
NVAR Mina Array Bea 123.62 28 PKP PKPdf 04 57 58.1 +1.9
comp=Z,0.3nm,0.7s,baz=208,slow=1.7,SNR=4.2
PLCA Paso Flores 146.27 205 PKPbc PKPbc 04 58 40.1 +1.1
comp=Z,1.5nm,0.8s,baz=51,slow=7.9,SNR=4.3
CPUP Villa Florida 146.93 238 PKPbc PKPbc 04 58 41.1 -0.3
comp=Z,0.4nm,0.4s,baz=72,slow=6.4,SNR=3.1

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*ISCJB **29** 04:39:32.0±1.2,20°.3S±0°.1×177°.7W±0°.1, h450km±15km, mb4.2/18, Error ellipse: s-maj=25.6km s-min=10.7km az=140.0*
*IDC **29** 04:39:34.7±2.2,20°.50S×177°.57W, h479km±25km, mb3.5/11, mb1 3.7/13, mb1mx3.6/20, mbtmp3.5/13, Error ellipse: s-maj=26.7km s-min=13.5km az=151.0*
*NEIC **29** 04:39:35.3±1.2,20°.54S×177°.50W, h496km±11km, mb4.4/9, Error ellipse: s-maj=24.3km s-min=12.0km az=151.0*
ISC 29 04:39:33.8±1.5, 20°.4S±0°.1×177°.6W±0°.1, h463km±19km, n40, σ0s76/32, mb4.2/18, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.88**	**303**	*e*Pn		**P**		**04 41 04.1**	**+6.3**
	14nm,0.4s								
AFI	**Afiamalu**	**8.56**	**42**	P		**P**		**04 41 35.4**	**-0.2**
	6.3nm,0.3s,baz=18,slow=10,SNR=4.5								
AFI				S		**S**		**04 43 09.8**	**-5.7**
	6.2nm,0.3s,baz=186,slow=22,SNR=7.8								
URZ	**Urewera**	**18.35**	**193**	P		**P**		**04 43 17.9**	**-1.3**
	2.0nm,0.3s,baz=333,slow=2.8,SNR=6.6								
EIDS	**Eidsvold**	**29.20**	**254**	*e*P		**P**		**04 44 57.5**	**+0.9**
ARMA	**Armidale**	**29.41**	**244**	*e*P		**P**		**04 44 59.8**	**+1.4**
CTA	**Charters Tower**	**33.84**	**264**	*e*P		**P**		**04 45 37.3**	**+0.7**
	6.3nm,0.6s,mb4.2								
CTA	**Charters Tower**	**33.84**	**264**	P		**P**		**04 45 37.5**	**+0.9**
	5.6nm,0.3s,mb4.4,baz=97,slow=12,SNR=14								
CTAO	**Charters Tower**	**33.84**	**264**	*e*P		**P**		**04 45 37.1**	**+0.5**
	14nm,0.7s,mb4.5								
CMSA	**Cobar Meteorol**	**34.63**	**244**	*e*P		**P**		**04 45 43.5**	**+0.4**
COEN	**Coen**	**37.92**	**273**	*e*P		**P**		**04 46 11.3**	**+0.7**
	81nm,1.1s,mb5.1								
STKA	**Stephens Creek**	**38.13**	**244**	*e*P		**P**		**04 46 12.6**	**+0.4**
	8.1nm,1.9s,mb3.8								
STKA	**Stephens Creek**	**38.13**	**244**	P		**P**		**04 46 12.5**	**+0.3**
	1.2nm,0.5s,mb3.6,baz=97,slow=12,SNR=3.4								
ASAR	**Alice Springs**	**44.87**	**257**	P		**P**		**04 47 06.1**	**+0.1**
	15nm,0.5s,mb4.6,baz=93,slow=8.0,SNR=182								
ASAR				S		**S**		**04 53 05.0**	**-4.2**
	1.9nm,0.9s,baz=96,slow=16,SNR=8.1								
WRAB	**Tennant Creek**	**44.95**	**262**	*e*P		**P**		**04 47 05.9**	**-0.7**
	7.1nm,0.3s,mb4.6								
WRA	**Warramunga Arr**	**44.95**	**262**	P		**P**		**04 47 06.0**	**-0.6**
	7.7nm,0.3s,mb4.6,baz=97,slow=7.6,SNR=478								
KAKA	**Kakadu**	**48.32**	**271**	*e*P		**P**		**04 47 32.2**	**-0.1**
	8.4nm,0.3s,mb4.5								
KAKA	**Kakadu**	**48.32**	**271**	*e*P		**P**		**04 47 31.8**	**-0.5**
	37nm,0.6s,mb4.9								
KNA	**Kununurra**	**50.99**	**266**	*e*P		**P**		**04 47 52.0**	**0.0**
	12nm,0.5s,mb4.5								
FITZ	**Fitzroy Crossi**	**53.38**	**262**	P		**P**		**04 48 09.1**	**-0.2**
	2.4nm,0.5s,mb3.8,baz=119,slow=7.7,SNR=11								
MBWA	**Marble Bar**	**58.21**	**257**	*e*P		**P**		**04 48 41.7**	**-1.3**
	4.2nm,0.5s,mb4.0								
KKM	**Kota Kinabalu**	**70.08**	**285**	*e*P		**P**		**04 49 58.1**	**-0.7**
	6.3nm,0.6s,mb4.3								
MJAR	**Matsushiro Arr**	**70.36**	**323**	P		**P**		**04 49 59.4**	**-0.6**
	2.5nm,0.5s,mb4.0,baz=157,slow=6.1,SNR=13								
MJAR	**Matsushiro Arr**	**70.36**	**323**	P		**P**		**04 49 59.4**	**-0.6**
MAJO	**Matsushiro**	**70.36**	**323**	*e*P		**P**		**04 49 58.7**	**-1.4**
	4.6nm,0.6s,mb4.2								
KSM	**Kuching**	**73.74**	**278**	*e*P		**P**		**04 50 20.0**	**-0.4**
	7.2nm,0.6s,mb4.4								
KSRS	**Korea Array**	**77.06**	**318**	P		**P**		**04 50 38.7**	**+0.4**
	1.0nm,0.7s,mb3.4,baz=140,slow=5.8,SNR=3.0								
YBH	**Yreka Blue Hor**	**80.02**	**38**	P		**P**		**04 50 54.7**	**+0.6**
	0.5nm,0.4s,mb3.4,baz=241,slow=7.2,SNR=3.7								
NVAR	**Mina Array Bea**	**80.73**	**43**	P		**P**		**04 50 58.4**	**+0.5**
	0.3nm,0.7s,baz=236,slow=7.4,SNR=3.3								
TXAR	**Lajitas Array**	**86.72**	**57**	P		**P**		**04 51 28.6**	**+0.5**
	0.5nm,0.7s,mb3.3,baz=215,slow=5.9,SNR=6.9								
CMAR	**Chiang Mai Arr**	**90.42**	**289**	P		**P**		**04 51 46.5**	**+1.1**
	1.1nm,0.3s,mb4.1,baz=107,slow=2.9,SNR=5.9								
MKAR	**Makanchi Array**	**111.40**	**313**	PKiKP		PKiKP		04 57 12.2	-2.3
	0.4nm,0.6s,baz=84,slow=4.2,SNR=2.9								
BVAR	**Borovoye Array**	**119.25**	**320**	PKP		PKPdf		04 57 27.3	-2.0
	1.0nm,0.5s,baz=138,slow=1.7,SNR=5.4								
ARCES	**ARCESS Array B**	**128.91**	**350**	PKP		PKPdf		04 57 45.7	-1.6
	1.0nm,0.8s,baz=46,slow=3.5,SNR=5.3								
FINES	**FINESS Array B**	**135.80**	**344**	PKP		PKPdf		04 57 57.6	-2.9
	1.1nm,0.9s,baz=119,slow=2.4,SNR=3.4								
AKASG	**Malin Array Be**	**143.12**	**331**	PKhKP				04 58 09.6	
	2.0nm,0.5s,baz=43,slow=4.3,SNR=11								
AKASG	**Malin Array Be**	**143.12**	**331**	PKP				04 58 09.6	
EKA	**Eskdalemuir Ar**	**144.90**	**5**	PKP		PKPdf		04 58 15.8	-1.2
	1.5nm,0.9s,baz=340,slow=2.2,SNR=3.5								
BRTR	**Keskin Array B**	**147.04**	**313**	PKPbc		PKPbc		04 58 22.8	-1.3
	0.9nm,0.5s,baz=131,slow=4.3,SNR=5.3								
CLL	**Collm**	**148.07**	**347**	⇓*i* PKPbc		PKPbc		04 58 25.1	-1.2
	comp=Z,5.0nm,0.7s								
MMAI	**Mount Meron Ar**	**148.08**	**300**	PKPbc		PKPbc		04 58 25.1	-1.9
	comp=Z,1.3nm,0.4s,baz=88,slow=4.5,SNR=4.5								

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*BJI **29** 04:47:51.5,9°.96N×91°.70E, h27km, mb4.2/6*
*IDC **29** 04:47:55.2±0.8, 10°.53N×91°.48E, h0km, mb4.0/13, mb1 4.1/14, mb1mx3.9/25, mbtmp4.0/14, ML4.2/1, Error ellipse: s-maj=37.1km s-min=13.8km az=56.0*
*NEIC **29** 04:47:56.6±0.5, 10°.50N×91°.45E, h10km, mb4.2/4, Error ellipse: s-maj=16.5km s-min=7.8km az=54.0*
*ISCJB **29** 04:47:59.3±7.5, 10°.6N±0°.2×91°.6E±0°.3, h42km±64km, mb4.0/16, Error ellipse: s-maj=54.7km s-min=11.8km az=146.8*
ISC 29 04:48:03.3±5.0, 10°.6N±0°.2×91°.7E±0°.3, h59km±42km, n25, σ0s61/24, mb4.0/16, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.50**	**41**	Pn		**Pn**		**04 50 31.4**	**+0.2**
	0.5nm,0.3s,baz=240,slow=16,SNR=4.2								
KSM	**Kuching**	**20.64**	**115**	*e*P		**P**		**04 52 37.9**	**-0.2**
	6.9nm,0.6s								
GTA	**Gaotai**	**29.57**	**13**	*e*P		**P**		**04 54 02.5**	**0.0**
GTA				pP		pP		04 54 10.3	-6.9
GTA				sP		sP		04 54 14.0	-10
GTA				pmax		pmax			
	comp=Z,4.0nm,1.2s,mb4.0								
EKS2	**Erkin-Say**	**35.53**	**337**	*e*P		**P**		**04 54 55.1**	**+0.6**
	comp=Z,2.7nm,0.8s,mb4.2								
MK31	**Makanchi Array**	**36.91**	**349**	*e*P		**P**		**04 55 06.1**	**-0.2**
MKAR	**Makanchi Array**	**36.91**	**349**	P		**P**		**04 55 06.2**	**-0.1**
	comp=Z,1.6nm,0.7s,mb4.0,baz=167,slow=8.4,SNR=8.3								
SONM	**Songino Array**	**39.11**	**16**	P		**P**		**04 55 24.9**	**+0.1**
	comp=Z,1.7nm,0.8s,mb3.8,baz=201,slow=7.7,SNR=8.3								
KURK	**Kurchatov**	**41.38**	**347**	P		**P**		**04 55 43.0**	**-0.6**
	comp=Z,0.6nm,0.4s,mb3.6,baz=171,slow=7.4,SNR=4.8								
KURK	**Kurchatov**	**41.38**	**347**	*e*P		**P**		**04 55 42.6**	**-0.9**
	comp=Z,3.9nm,1.1s,mb4.0								
ZALV	**Zalesovo Beam**	**43.55**	**354**	P		**P**		**04 56 00.9**	**-0.2**
	comp=Z,1.5nm,0.6s,mb3.9,baz=171,slow=10,SNR=9.8								
FITZ	**Fitzroy Crossi**	**44.05**	**130**	P		**P**		**04 56 04.9**	**-0.7**
	comp=Z,5.3nm,0.8s,mb4.3,baz=293,slow=3.8,SNR=13								
FITZ	**Fitzroy Crossi**	**44.05**	**130**	P		**P**		**04 56 04.6**	**-1.0**
	comp=Z,20nm,0.9s,mb4.8								
WRA	**Warramunga Arr**	**51.85**	**126**	P		**P**		**04 57 05.8**	**0.0**
	comp=Z,1.4nm,0.5s,mb4.2,baz=300,slow=9.9,SNR=27								
WRA	**Warramunga Arr**	**51.85**	**126**	P		**P**		**04 57 05.8**	**0.0**
WRAB	**Tennant Creek**	**51.85**	**126**	*e*P		**P**		**04 57 05.4**	**-0.4**
	comp=Z,3.0nm,0.6s,mb4.4								
ASAR	**Alice Springs**	**53.55**	**130**	P		**P**		**04 57 18.2**	**-0.1**
	comp=Z,4.5nm,0.8s,mb4.4,baz=306,slow=6.3,SNR=27								
ASAR				PcP		PcP		04 58 25.1	+0.6
	comp=Z,1.1nm,0.7s,baz=307,slow=3.3,SNR=4.3								
BRTR	**Keskin Array B**	**58.79**	**310**	P		**P**		**04 57 55.2**	**-0.3**
	comp=Z,0.2nm,0.6s,mb3.3,baz=125,slow=7.6,SNR=2.7								
STKA	**Stephens Creek**	**63.77**	**133**	P		**P**		**04 58 31.3**	**+2.0**
	comp=Z,3.0nm,0.9s,mb4.3,baz=310,slow=16,SNR=3.6								
FINES	**FINESS Array B**	**69.15**	**332**	P		**P**		**04 59 03.4**	**+0.3**
	comp=Z,1.4nm,0.7s,mb4.0,baz=111,slow=5.8,SNR=5.9								
ARCES	**ARCESS Array B**	**71.86**	**340**	P		**P**		**04 59 20.2**	**+0.7**
	comp=Z,2.0nm,0.9s,mb4.0,baz=81,slow=7.5,SNR=7.2								
HFS	**Hagfors**	**74.86**	**330**	P		**P**		**04 59 37.7**	**+0.4**
	comp=Z,2.6nm,1.0s,mb4.1,baz=102,slow=14,SNR=3.4								
NB2	**NORSAR Subarra**	**76.14**	**330**	P		**P**		**04 59 44.2**	**-0.5**
	comp=Z,0.9nm,0.7s,mb3.8,baz=94,slow=5.9								
NOA	**NORSAR Array B**	**76.14**	**330**	P		**P**		**04 59 43.7**	**-1.0**
	comp=Z,0.5nm,0.7s,mb3.6,baz=95,slow=5.7,SNR=3.7								
NOA	**NORSAR Array B**	**76.14**	**330**	P		**P**		**04 59 43.7**	**-1.0**
NVAR	**Mina Array Bea**	**123.75**	**28**	PKP		PKPdf		05 06 56.7	+1.9
	comp=Z,0.3nm,0.6s,baz=306,slow=2.1,SNR=3.5								

DJA 29 04:52:38,3°.08S×127°.92E, h58km, mb4.2/9, Seram

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.66**	**156**	P		P	Pn	04 52 51.2	-0.5
AAI				S		S	Sn	04 53 07.2	+5.5
NLAI	**Namlea**	**0.83**	**259**	P		P	Pn	04 52 52.2	-1.6
LBMI	**Labuha**	**2.46**	**350**	P		P	Pn	04 53 15.9	+0.1
LBMI				S		S	Sn	04 53 46.1	+1.4
SWI	**Sorong**	**4.00**	**57**	P		P	Pn	04 53 37.9	+1.1
SWI				S		S	Sn	04 54 22.1	-0.3
KDI	**Kendari**	**5.36**	**260**	P		P	Pn	04 53 57.1	+1.6
	0.1nm716nm9.0nm,0.8s								
LUWI	**Luwuk**	**5.53**	**291**	P		P	Pn	04 53 57.7	-0.1
	0.2nm46nm,1.1s								
APSI	**Ampana**	**6.63**	**289**	P		P	Pn	04 54 13.8	+1.0
	0.1nm8μm35nm,0.9s								
MMRI	**Maumere**	**7.90**	**225**	P		P	Pn	04 54 22.5	-7.8
BKSI	**Bulukumba**	**8.09**	**254**	P		P	Pn	04 54 28.7	-4.2
	496nm23nm,1.2s								
BAKI	**Biak**	**8.39**	**77**	P		P	Pn	04 54 28.9	-8.2
MPSI	**Mapaga**	**8.71**	**293**	P		P	Pn	04 54 43.8	+2.4
	830nm,1.0s								
SMPI	**Sarmi**	**10.83**	**85**	P		P	Pn	04 55 12.0	+1.6
	13nm,1.8s								
KNA	**Kununurra**	**12.62**	**176**	P		P	Pn	04 55 35.9	+1.1
	16nm,1.1s								
WRAB	**Tennant Creek**	**17.89**	**160**	P		P	Pn	04 56 40.4	-2.5

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*IDC **29** 05:10:11.3±1.1,33°.31S×68°.78W, h0km, mb3.8/2, mb1 4.1/5, mb1mx3.9/14, mbtmp3.9/5, ML4.0/3, Error ellipse: s-maj=39.4km s-min=15.5km az=101.0*
*ISCJB **29** 05:10:15.7±0.7,33°.21S±0°.05×68°.44W±0°.04, h41km±13km, mb3.7/2, Error ellipse: s-maj=8.9km s-min=6.1km az=173.0*
*GUC **29** 05:10:16.5±0.7,33°.21S×68°.69W, h24km±5km, MD4.2, ML3.5*
*NEIC **29** 05:10:16.5,33°.21S×68°.69W, h24km, ML3.5(GUC), After GUC.*
NEIC Felt [III] in the epicentral area.
ISC 29 05:10:17.5±0.6,33°.20S±0°.05×68°.51W±0°.04, h39km±13km, n38, σ0s75/51, mb3.7/2, 10C-3D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FCH	**Farellones**	**1.50**	**264**	⇓*i* P		**Pn**		**05 10 39.8**	**-2.0**
FCH				*i* S		**Sn**		**05 10 58.6**	**-1.6**
FCH				AML		AML		05 11 00.1	
	comp=N,1μm,0.2s								
LMEL	**Las Melosas**	**1.56**	**245**	⇓*i* P		**Pn**		**05 10 42.0**	**-0.7**
LMEL				*i* S		**Sn**		**05 11 01.1**	**-0.5**
LMEL	**Las Melosas**	**1.56**	**245**	⇓*i* P		**Pn**		**05 10 42.0**	**-0.7**
LMEL				*i* S		**Sn**		**05 11 01.1**	**-0.5**
LMEL				AML		AML		05 11 01.8	
	comp=N,1μm,0.3s								
CFAA	**Coronel Fontan**	**1.60**	**8**	Pn		**Pn**		**05 10 45.0**	**+1.7**
	comp=N,11nm,0.3s,baz=173,slow=8.1,SNR=663								
CFAA				Lg				05 11 06.5	
	comp=N,158nm,0.3s,baz=207,slow=2.3,SNR=85								
CFAA	**Coronel Fontan**	**1.60**	**8**	Pn		**Pn**		**05 10 45.0**	**+1.7**
CFAA				Lg				05 11 06.5	
SJCH	**San Jose de Ma**	**1.61**	**253**	*e*P		**Pn**		**05 10 42.7**	**-0.7**
SJCH				*e*S		**Sn**		**05 11 02.7**	**-0.1**
SJCH	**San Jose de Ma**	**1.61**	**253**	*e*P		**Pn**		**05 10 42.7**	**-0.7**
SJCH				*e*S		**Sn**		**05 11 02.7**	**-0.1**
SJCH				AML		AML		05 11 05.2	
	comp=N,835nm,0.3s								
CLCH	**Cerro Calan**	**1.71**	**263**	⇑*i* P		**Pn**		**05 10 44.3**	**-0.5**
CLCH				*i* S		**Sn**		**05 11 05.6**	**+0.1**
CLCH				AML		AML		05 11 12.1	
	comp=E,1μm,0.6s								
FSR	**Penalolen**	**1.71**	**260**	*e*P		**Pn**		**05 10 44.7**	**-0.1**
FSR				*i* S		**Sn**		**05 11 05.6**	**+0.1**
FSR	**Penalolen**	**1.71**	**260**	*e*P		**Pn**		**05 10 44.7**	**-0.1**
FSR				*i* S		**Sn**		**05 11 05.6**	**+0.1**
FSR				AML		AML		05 11 06.4	
	comp=E,294nm,0.3s								
PCH	**Pirque**	**1.73**	**255**	⇑*i* P		**Pn**		**05 10 44.9**	**-0.2**
PCH				*i* S		**Sn**		**05 11 06.6**	**+0.7**
PCH	**Pirque**	**1.73**	**255**	⇑*i* P		**Pn**		**05 10 44.9**	**-0.2**
PCH				*i* S		**Sn**		**05 11 06.6**	**+0.7**
ANTU	**Antumapu**	**1.82**	**258**	*e*P		**Pn**		**05 10 46.3**	**+0.1**
ANTU				*i* S		**Sn**		**05 11 08.5**	**+0.4**
ANTU	**Antumapu**	**1.82**	**258**	*e*P		**Pn**		**05 10 46.3**	**+0.1**
ANTU				*i* S		**Sn**		**05 11 08.5**	**+0.4**
ANTU				AML		AML		05 11 12.5	
	comp=E,1μm,0.5s								
SAN	**Santiago**	**1.82**	**261**	*e*P		**Pn**		**05 10 46.4**	**+0.1**
SAN				*e*S		**Sn**		**05 11 08.8**	**+0.6**
SAN	**Santiago**	**1.82**	**261**	*e*P		**Pn**		**05 10 46.4**	**+0.1**
SAN				*e*S		**Sn**		**05 11 08.8**	**+0.6**
JACH	**Jahuel**	**1.83**	**286**	⇑*i* P		**Pn**		**05 10 46.1**	**-0.2**
JACH	**Jahuel**	**1.83**	**286**	⇑*i* P		**Pn**		**05 10 46.1**	**-0.2**
PEL	**Peldehue**	**1.83**	**271**	⇑*i* P		**Pn**		**05 10 46.0**	**-0.3**
PEL				*i* S		**Sn**		**05 11 08.5**	**+0.3**
PEL				AML		AML		05 11 11.1	
	comp=N,2μm,0.3s								
CHCH	**Chadas Angostu**	**1.94**	**247**	⇑*i* P		**Pn**		**05 10 48.3**	**+0.4**
CHCH	**Chadas Angostu**	**1.94**	**247**	⇑*i* P		**Pn**		**05 10 48.3**	**+0.4**
CACH	**El Canelo**	**1.97**	**242**	⇑*i* P		**Pn**		**05 10 49.0**	**+0.6**
CACH				*i* S		**Sn**		**05 11 13.5**	**+1.7**
CACH	**El Canelo**	**1.97**	**242**	⇑*i* P		**Pn**		**05 10 49.0**	**+0.6**
CACH				*i* S		**Sn**		**05 11 13.5**	**+1.7**
ROCH	**El Roble**	**2.11**	**275**	*e*P		**Pn**		**05 10 51.0**	**+0.7**
ROCH	**El Roble**	**2.11**	**275**	*e*P		**Pn**		**05 10 51.0**	**+0.7**
LCO	**Las Campanas**	**4.58**	**335**	*e*Pn		**Pn**		**05 11 23.9**	**-0.3**
TRQA	**Tornquist**	**7.19**	**134**	*e*Pn		**Pn**		**05 12 00.9**	**+0.8**
	comp=N,17nm,0.3s								
TRQA				*e*Sn		**Sn**		**05 13 19.6**	**-0.9**
PLCA	**Paso Flores**	**7.70**	**192**	Lg				05 14 14.5	
	comp=N,0.7nm,0.3s,baz=300,slow=16,SNR=5.1								
CPUP	**Villa Florida**	**11.87**	**58**	Pn		**Pn**		**05 13 04.2**	**0.0**
	comp=N,0.3nm,0.3s,baz=251,slow=18,SNR=4.0								
CPUP				Lg				05 16 38.1	
	comp=N,1.3nm,0.3s,baz=156,slow=20,SNR=2.0								
LPAZ	**La Paz**	**16.84**	**1**	Pn		**Pn**		**05 14 09.9**	**-0.4**
	comp=N,0.1nm,0.3s,baz=183,slow=5.8,SNR=11								
SIV	**San Ignacio**	**18.40**	**23**	P		**Pn**		**05 14 29.4**	**-0.2**
	comp=N,0.4nm,0.3s,baz=211,slow=12,SNR=24								
TXAR	**Lajitas Array**	**70.55**	**328**	P		**P**		**05 21 27.8**	**-0.6**
	comp=N,0.3nm,0.6s,mb3.4,baz=155,slow=8.1,SNR=4.4								
TXAR	**Lajitas Array**	**70.55**	**328**	P		**P**		**05 21 27.8**	**-0.6**
LBTB	**Lobatse**	**79.94**	**113**	P		**P**		**05 22 23.6**	**+0.9**
	comp=N,1.1nm,0.5s,mb4.0,baz=270,slow=3.0,SNR=3.9								
WRA	**Warramunga Arr**	**122.83**	**206**	PKP		PKPdf		05 29 08.8	-1.0
	comp=N,0.2nm,0.4s,baz=153,slow=1.5,SNR=6.1								
BVAR	**Borovoye Array**	**144.68**	**43**	PKP		PKPdf		05 29 49.9	+0.6
	comp=N,0.4nm,0.4s,baz=295,slow=1.6,SNR=4.1								
ZALV	**Zalesovo Beam**	**151.94**	**34**	PKPbc		PKPbc		05 30 08.3	+0.6
	comp=N,2.9nm,0.4s,baz=318,slow=2.6,SNR=14								
ZALV	**Zalesovo Beam**	**151.94**	**34**	PKPbc		PKPbc		05 30 08.3	+0.6

IDC 29 05:18:34.3±2.1, 6°.89S×129°.33E, h0km, mb3.7/1, mb1 3.6/4, mb1mx3.4/18, mbtmp3.4/4, ML3.4/3, Error ellipse: s-maj=87.5km s-min=27.8km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.71**	**198**	Pn		Pn		05 21 22.1	-0.6
	0.3nm,0.3s,baz=32,slow=11,SNR=12								
FITZ				Sn		Sn		05 23 18.4	-16
	0.9nm,0.3s,baz=155,slow=16,SNR=7.1								
WRA	**Warramunga Arr**	**13.85**	**160**	Pn		Pn		05 21 52.5	+0.5
	0.2nm,0.3s,baz=343,slow=13,SNR=14								
WRA				Sn		Sn		05 24 13.8	-13
	0.6nm,0.3s,baz=336,slow=21,SNR=11								
ASAR	**Alice Springs**	**17.25**	**166**	P		Pn		05 22 36.9	+0.2
	0.1nm,0.3s,baz=340,slow=9.9,SNR=4.3								
ASAR				S		Sn		05 25 38.2	-11
	0.2nm,0.3s,baz=316,slow=16,SNR=5.7								
MKAR	**Makanchi Array**	**67.78**	**327**	P		P		05 29 34.0	+0.1
	0.5nm,0.6s,baz=145,slow=5.3,SNR=3.4								

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*NEIC **29** 05:28:50.3±3.4,24°.20N×122°.51E, h10km, Error ellipse: s-maj=38.6km s-min=16.6km az=85.0*
*TAP **29** 05:29:00.3,24°.24N×121°.71E, h43km, ML3.6, C*
*JMA **29** 05:29:00.4±0.3,24°.34N×121°.76E, h69km, M2.6*
*ISCJB **29** 05:29:00.9±0.2,24°.24N±0°.01×121°.77E±0°.02, h35km±6km, Error ellipse: s-maj=3.0km s-min=2.1km az=33.0*
ISC 29 05:29:01.2±0.3, 24°.25N±0°.01×121°.76E±0°.02, h33km±1km, n62, σ0s78/117, 9C-2D, Taiwan

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

NSY				*e*S	Sn	05 29 29.9	-0.1
	baz=282						
YULB	**Yu-li**	**0.95 207**		*e*Pn	Pn	05 29 16.1	-2.2
YULB				*e*Sn	Sn	05 29 30.7	0.0
TWF1	**Yuli**	**0.99 206**	⇑	P	Pn	05 29 16.0	-2.8
	baz=212						
TCU	**Taichung**	**1.00 264**		P	Pn	05 29 18.6	-0.2
	baz=265						
TCU				S	Sn	05 29 31.8	0.0
	baz=265						
TWY	**Chenhua**	**1.03 352**		*e*P	Pn	05 29 20.0	+0.6
	baz=340						
TWY				*e*S	Sn	05 29 32.9	+0.2
	baz=340						
WNT	**Mingjian**	**1.05 250**		*e*P	Pn	05 29 19.6	0.0
	baz=250						
WNT				*e*S	Sn	05 29 33.9	+0.7
	baz=250						
YOJ	**Yonaguni jima**	**1.16 79**		P	Pn	05 29 20.9	-0.2
YOJ				S	Sn	05 29 36.2	+0.4
CHN5	**Tsauling**	**1.19 237**	⇑	*i*P	Pn	05 29 21.3	-0.1
	baz=238						
CHN5				*e*S	Sn	05 29 37.3	+0.8
	baz=238						
WGK	**Gukeng**	**1.23 243**		*e*P	Pn	05 29 22.3	+0.2
	baz=244						
WGK				*e*S	Sn	05 29 38.0	+0.4
	baz=244						
ELDTW	**Lidau**	**1.26 213**		*e*P	Pn	05 29 20.6	-1.9
	baz=208						
ELDTW				*e*S	Sn	05 29 38.8	+0.5
	baz=208						
CHN4	**Tsaushan**	**1.40 230**		*e*P	Pn	05 29 24.7	+0.3
	baz=232						
CHN4				*e*S	Sn	05 29 42.6	+1.0
	baz=232						
TPUB	**Ta-pu**	**1.40 228**		*e*Pn	Pn	05 29 24.5	0.0
TPUB				*e*Sn	Sn	05 29 42.7	+0.8
WTCT	**Ta-ch'eng**	**1.41 254**		*e*P	Pn	05 29 25.0	+0.5
	baz=256						
WTCT				*e*S	Sn	05 29 41.6	-0.3
	baz=256						
STYT	**Tauyuan**	**1.42 221**		*e*P	Pn	05 29 24.2	-0.5
	baz=222						
STYT				*e*S	Sn	05 29 42.2	-0.1
	baz=222						
CHY	**Chiayi**	**1.44 239**		*e*P	Pn	05 29 25.0	+0.1
	baz=240						
CHY				*e*S	Sn	05 29 43.8	+1.1
	baz=240						
WTP	**Ta-pu**	**1.45 227**		*e*P	Pn	05 29 24.9	-0.2
	baz=228						
WTP				*e*S	Sn	05 29 43.4	+0.4
	baz=228						
TWK	**Hsinying**	**1.52 230**		P	Pn	05 29 26.4	+0.3
	baz=232						
TWK				*e*S	Sn	05 29 45.0	+0.2
	baz=232						
CHN1	**Nanshi**	**1.55 227**		P	Pn	05 29 26.6	+0.2
	baz=229						
CHN1				S	Sn	05 29 46.2	+0.8
	baz=229						
TWG	**Pinlang**	**1.56 204**		*e*Pn	Pn	05 29 22.6	-4.0
TWG				*e*Sn	Sn	05 29 44.1	-1.5
TWG	**Pinlang**	**1.56 204**		*e*P	Pn	05 29 27.2	+0.6
	baz=198						
TWG				*e*S	Sn	05 29 44.2	-1.4
	baz=198						
SGST	**Jiashian**	**1.59 223**		P	Pn	05 29 27.1	+0.2
	baz=217						
SGST				S	Sn	05 29 47.3	+0.9
	baz=217						
TTN	**Taitung**	**1.59 201**		*e*P	Pn	05 29 27.7	+0.6
	baz=203						
TTN				*e*S	Sn	05 29 46.4	-0.1
	baz=203						
CHN8	**Yiju**	**1.68 238**		*e*P	Pn	05 29 28.4	+0.1
	baz=229						
CHN8				*e*S	Sn	05 29 49.4	+0.7
	baz=229						
SCLT	**Jiali**	**1.79 234**		*e*P	Pn	05 29 30.6	+0.8
	baz=224						
SCLT				*e*S	Sn	05 29 52.1	+0.7
	baz=224						
IRIF	**Iriomote-Funau**	**1.80 87**		P	Pn	05 29 29.4	-0.5
IRIF				S	Sn	05 29 51.9	+0.3
ECL	**Taimali**	**1.80 204**		*e*P	Pn	05 29 30.3	+0.3
	baz=198						
ECL				*e*S	Sn	05 29 50.5	-1.2
	baz=198						
TAI1	**Yung-k'ang**	**1.85 230**		*e*P	Pn	05 29 30.4	-0.3
	baz=232						
TAI1				*e*S	Sn	05 29 52.7	-0.2
	baz=232						
HATJ	**Hateruma jima**	**1.88 95**		S	Sn	05 29 54.0	+0.5
TWM1	**Shoushan**	**1.88 221**		*e*P	Pn	05 29 32.3	+1.3
	baz=224						
EAST	**Anshuo**	**2.04 204**		*e*P	Pn	05 29 34.0	+0.7
	baz=198						
JKRS	**Kuro-shima**	**2.05 90**		P	Pn	05 29 33.7	+0.3
JKRS				S	Sn	05 29 58.2	+0.3
PNG	**Penghu**	**2.13 252**		*e*P	Pn	05 29 33.8	-0.7
	baz=253						
PNG				*e*S	Sn	05 29 56.7	-3.1
	baz=253						
SCZT	**Fangliau**	**2.14 210**		*e*P	Pn	05 29 35.8	+1.2
	baz=213						
SCZT				*e*S	Sn	05 30 00.9	+0.8
	baz=213						
JIJ	**Ishigaki jima**	**2.18 87**		P	Pn	05 29 34.8	-0.3
JIJ				S	Sn	05 30 00.1	-0.8
JTJ	**Tarama**	**2.71 81**		S	Sn	05 30 14.0	-0.1

*IDC **29** 05:43:55.5±1.8, 10.°65N×91.°58E, h0km, mb3.9/8, mb1 4.0/8, mb1mx3.7/23, mbtmp3.9/8, Error ellipse: s-maj=82.1km s-min=17.1km az=61.0*
*NEIC **29** 05:43:56.9±1.2, 10.°70N×91.°55E, h10km, mb4.1/1, Error ellipse: s-maj=57.2km s-min=10.8km az=60.0*
*ISCJB **29** 05:43:58.2±1.6, 10.°7N±0.°3×91.°5E±0.°4, h33km, mb3.9/9, Error ellipse: s-maj=70.0km s-min=13.2km az=150.1*
ISC 29 05:44:00.6±1.5, 10.°7N±0.°3×91.°6E±0.°4, h35km, n11, σ0.9/69/11, mb3.9/9, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**36.83**	**349**	*e*P			**P**	**05 51 03.3**	**-1.9**
MKAR	**Makanchi Array**	**36.83**	**349**	P			**P**	**05 51 05.8**	**+0.6**
	1.2nm,0.7s,mb3.8,baz=188,slow=9.4,SNR=5.3								
SONM	**Songino Array**	**39.07**	**16**	P			**P**	**05 51 24.5**	**+0.4**
	1.6nm,0.9s,mb3.7,baz=198,slow=9.3,SNR=6.7								
KURK	**Kurchatov**	**41.30**	**348**	P			**P**	**05 51 42.8**	**+0.2**
	0.6nm,0.5s,mb3.5,baz=166,slow=7.9,SNR=4.5								
ZALV	**Zalesovo Beam**	**43.47**	**354**	P			**P**	**05 52 00.3**	**+0.1**
	1.3nm,0.6s,mb3.9,baz=157,slow=8.0,SNR=8.4								
FITZ	**Fitzroy Crossi**	**44.17**	**130**	P			**P**	**05 52 05.7**	**-0.6**
	0.8nm,0.5s,mb3.7,baz=281,slow=16,SNR=3.3								
WRA	**Warramunga Arr**	**51.97**	**126**	P			**P**	**05 53 06.2**	**-0.3**
	1.0nm,0.7s,mb3.8,baz=306,slow=8.4,SNR=9.3								
WRAB	**Tennant Creek**	**51.97**	**126**	*e*P			**P**	**05 53 07.3**	**+0.7**
	1.2nm,0.5s,mb4.1								
ASAR	**Alice Springs**	**53.67**	**130**	P			**P**	**05 53 19.2**	**+0.1**
	2.1nm,0.8s,mb4.1,baz=302,slow=6.2,SNR=14								
FINES	**FINESS Array B**	**69.04**	**332**	P			**P**	**05 55 02.9**	**+0.5**
	1.8nm,0.9s,mb4.0,baz=104,slow=8.0,SNR=4.3								
FINES	**FINESS Array B**	**69.04**	**332**	P			**P**	**05 55 02.9**	**+0.5**

*ATH **29** 05:46:29.8, 36.°29N×21.°94E, h32km±2km, MD3.5/13*
*NEIC **29** 05:46:29.8, 36.°29N×21.°94E, h32km, MD3.5(ATH), After ATH.*
*CSEM **29** 05:46:30.8±0.3, 36.°31N×21.°91E, h30km, ML3.1/5, Error ellipse: s-maj=9.9km s-min=3.7km az=52.0*
*ISCJB **29** 05:46:30.3±0.8, 36.°31N±0.°05×21.°85E±0.°08, h59km±10km, Error ellipse: s-maj=12.1km s-min=4.8km az=143.7*
*THE **29** 05:46:31.1, 36.°33N×21.°86E, h48km±7km, ML3.1/5, Error ellipse: s-maj=7.2km s-min=1.4km az=39.0*
ISC 29 05:46:31.1±0.8, 36.°29N±0.°05×21.°84E±0.°07, h43km±24km, n69, σ0.9/94/101, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.61 353**		P			**Pn**	**05 46 42.3**	**-1.1**
PYL				S			**Sn**	**05 46 51.4**	**-0.8**
PYL	**PYLOS**	**0.61 353**		*e*PN			**Pn**	**05 46 42.2**	**-1.2**
PYL				*e*SN			**Sn**	**05 46 52.7**	**+0.5**
PYL	**PYLOS**	**0.61 353**		P			**Pn**	**05 46 42.3**	**-1.1**
PYL				S			**Sn**	**05 46 51.4**	**-0.8**
PYL				*e*Sn			**Sn**	**05 46 52.7**	**+0.5**
ITM	**Ithomi**	**0.89**	**4**	*e*Pb			**Pn**	**05 46 46.3**	**-0.9**
ITM				*e*Sn			**Sn**	**05 46 59.8**	**+0.9**
ITM	**Ithomi**	**0.89**	**4**	P			**Pn**	**05 46 46.6**	**-0.6**
ITM				S			**Sn**	**05 46 59.2**	**+0.3**
ITM	**Ithomi**	**0.89**	**4**	*e*PB			**Pn**	**05 46 46.3**	**-0.9**
ITM				*e*SN			**Sn**	**05 46 59.8**	**+0.9**
ITM	**Ithomi**	**0.89**	**4**	*e*Pb			**Pn**	**05 46 46.3**	**-0.9**
ITM	**Ithomi**	**0.89**	**4**	P			**Pn**	**05 46 46.6**	**-0.6**
ITM				S			**Sn**	**05 46 59.2**	**+0.3**
ITM				*e*Sn			**Sn**	**05 46 59.8**	**+0.9**
KYTH	**Kithira**	**0.97**	**90**	*e*Pn			**Pn**	**05 46 47.0**	**-1.2**
KYTH	**Kithira**	**0.97**	**90**	*e*PN			**Pn**	**05 46 47.0**	**-1.2**
KYTH	**Kithira**	**0.97**	**90**	*e*Pn			**Pn**	**05 46 47.0**	**-1.2**
VLX	**Vlachokerasia**	**1.16**	**22**	P			**Pn**	**05 46 50.3**	**-0.6**
VLX				S			**Sn**	**05 47 05.7**	**+0.1**
VLX	**Vlachokerasia**	**1.16**	**22**	*e*PN			**Pn**	**05 46 50.5**	**-0.4**
VLX				*e*SN			**Sn**	**05 47 05.9**	**+0.3**
VLX	**Vlachokerasia**	**1.16**	**22**	*e*Pn			**Pn**	**05 46 50.5**	**-0.4**
VLX				S			**Sn**	**05 47 05.7**	**+0.1**
DID	**Didima**	**1.65**	**42**	P			**Pn**	**05 46 58.1**	**+0.5**
DID	**Didima**	**1.65**	**42**	*e*PN			**Pn**	**05 46 58.3**	**+0.7**
DID	**Didima**	**1.65**	**42**	P			**Pn**	**05 46 58.1**	**+0.5**
GUR	**Goura**	**1.69**	**14**	*e*PN			**Pn**	**05 46 59.0**	**+0.9**
GUR	**Goura**	**1.69**	**14**	*e*Pn			**Pn**	**05 46 59.0**	**+0.9**
RLS	**Riolos of Patr**	**1.79**	**351**	*e*Pn			**Pn**	**05 47 00.7**	**+1.2**
RLS	**Riolos of Patr**	**1.79**	**351**	*e*PN			**Pn**	**05 47 00.7**	**+1.2**
RLS	**Riolos of Patr**	**1.79**	**351**	*e*Pn			**Pn**	**05 47 00.7**	**+1.2**
KARN	**Karanos**	**1.90**	**117**	P			**Pn**	**05 47 01.1**	**+0.1**
KARN				S			**Sn**	**05 47 24.8**	**+1.0**
KARN	**Karanos**	**1.90**	**117**	*e*PB			**Pn**	**05 47 01.4**	**+0.4**
KARN	**Karanos**	**1.90**	**117**	P			**Pn**	**05 47 01.1**	**+0.1**
KARN	**Karanos**	**1.90**	**117**	*e*Pb			**Pn**	**05 47 01.4**	**+0.4**
KARN				S			**Sn**	**05 47 24.8**	**+1.0**
LAKA	**Lakka**	**1.95**	**3**	P			**Pn**	**05 47 03.0**	**+1.3**
LAKA	**Lakka**	**1.95**	**3**	P			**Pn**	**05 47 03.0**	**+1.3**
LTK	**Loutraki**	**1.95**	**27**	*e*PB			**Pn**	**05 47 03.5**	**+1.8**
LTK	**Loutraki**	**1.95**	**27**	*e*Pb			**Pn**	**05 47 03.5**	**+1.8**
TRIZ	**Trizonia**	**2.08**	**5**	P			**Pn**	**05 47 03.5**	**0.0**
TRIZ	**Trizonia**	**2.08**	**5**	P			**Pn**	**05 47 03.5**	**0.0**
VAM	**Vamos**	**2.11**	**114**	*e*Pn			**Pn**	**05 47 03.6**	**-0.2**
VAM	**Vamos**	**2.11**	**114**	*e*PN			**Pn**	**05 47 03.6**	**-0.2**
VAM	**Vamos**	**2.11**	**114**	*e*Pn			**Pn**	**05 47 03.6**	**-0.2**
KALE	**Kalithea**	**2.11**	**6**	P			**Pn**	**05 47 04.2**	**+0.3**
KALE	**Kalithea**	**2.11**	**6**	P			**Pn**	**05 47 04.2**	**+0.3**
VLS	**Valsamata**	**2.13**	**332**	P			**Pn**	**05 47 04.8**	**+0.6**
VLS				S			**Sn**	**05 47 29.2**	**-0.2**
VLS	**Valsamata**	**2.13**	**332**	P			**Pn**	**05 47 04.8**	**+0.6**
VLS				S			**Sn**	**05 47 29.2**	**-0.2**
EFP	**Efpalio**	**2.14**	**1**	*e*PB			**Pn**	**05 47 06.3**	**+2.1**
EFP	**Efpalio**	**2.14**	**1**	*e*Pb			**Pn**	**05 47 06.3**	**+2.1**
DSF	**Desfina**	**2.19**	**14**	P			**Pn**	**05 47 03.8**	**-1.1**
DSF				S			**Sn**	**05 47 29.6**	**-1.2**
DSF	**Desfina**	**2.19**	**14**	P			**Pn**	**05 47 03.8**	**-1.1**
DSF				S			**Sn**	**05 47 29.6**	**-1.2**
ATAL	**Atalanti**	**2.58**	**21**	P			**Pn**	**05 47 09.4**	**-0.9**
ATAL	**Atalanti**	**2.58**	**21**	P			**Pn**	**05 47 09.4**	**-0.9**
LKD2	**Lefkada island**	**2.67**	**340**	P			**Pn**	**05 47 12.5**	**+1.0**
LKD2				S			**Sn**	**05 47 43.5**	**+0.9**
LKD2	**Lefkada island**	**2.67**	**340**	P			**Pn**	**05 47 12.5**	**+1.0**
LKD2				S			**Sn**	**05 47 43.5**	**+0.9**
AGG	**Agios Georgios**	**2.76**	**8**	*e*Pn			**Pn**	**05 47 14.3**	**+1.6**
AGG	**Agios Georgios**	**2.76**	**8**	P			**Pn**	**05 47 12.5**	**-0.2**
AGG				S			**Sn**	**05 47 44.2**	**-0.6**
AGG	**Agios Georgios**	**2.76**	**8**	*e*PN			**Pn**	**05 47 14.3**	**+1.6**
AGG	**Agios Georgios**	**2.76**	**8**	P			**Pn**	**05 47 12.5**	**-0.2**
AGG	**Agios Georgios**	**2.76**	**8**	*e*Pn			**Pn**	**05 47 14.3**	**+1.6**
AGG				S			**Sn**	**05 47 44.2**	**-0.6**
APE	**Apeiranthos**	**3.07**	**74**	P			**Pn**	**05 47 15.7**	**-1.3**
APE	**Apeiranthos**	**3.07**	**74**	P			**Pn**	**05 47 15.7**	**-1.3**
LAST	**Lasithi**	**3.17**	**110**	P			**Pn**	**05 47 17.6**	**-0.7**
LAST	**Lasithi**	**3.17**	**110**	P			**Pn**	**05 47 17.6**	**-0.7**
THL	**Klokotos Trika**	**3.27**	**2**	P			**Pn**	**05 47 20.2**	**+0.4**
THL				S			**Sn**	**05 47 57.4**	**-0.1**
THL	**Klokotos Trika**	**3.27**	**2**	*e*PN			**Pn**	**05 47 20.3**	**+0.5**
THL	**Klokotos Trika**	**3.27**	**2**	P			**Pn**	**05 47 20.2**	**+0.4**
THL				S			**Sn**	**05 47 57.4**	**-0.1**
IGT	**Igoumenitsa**	**3.45**	**340**	P			**Pn**	**05 47 22.6**	**+0.3**
IGT				S			**Sn**	**05 48 01.4**	**-0.5**
IGT	**Igoumenitsa**	**3.45**	**340**	P			**Pn**	**05 47 22.6**	**+0.3**
IGT				S			**Sn**	**05 48 01.4**	**-0.5**
KEK	**Kerkira**	**3.78**	**335**	P			**Pn**	**05 47 26.5**	**-0.3**
KEK				S			**Sn**	**05 48 08.9**	**-1.1**
KEK	**Kerkira**	**3.78**	**335**	P			**Pn**	**05 47 26.5**	**-0.3**
KEK				S			**Sn**	**05 48 08.9**	**-1.1**
KZN	**Kozani**	**4.01**	**359**	P			**Pn**	**05 47 29.7**	**-0.3**
KZN				S			**Sn**	**05 48 16.2**	**+0.5**
KZN	**Kozani**	**4.01**	**359**	P			**Pn**	**05 47 29.7**	**-0.3**
KZN				S			**Sn**	**05 48 16.2**	**+0.5**
FNA	**Florina**	**4.50**	**356**	P			**Pn**	**05 47 36.6**	**-0.1**
FNA	**Florina**	**4.50**	**356**	P			**Pn**	**05 47 36.6**	**-0.1**
STON	**Ston**	**7.31**	**335**	*e*Pn			**Pn**	**05 48 12.4**	**-2.8**
STON				Sn			**Sn**	**05 49 29.0**	**-7.8**
NVLJ	**Novalja**	**9.82**	**329**	*i* Pn			**Pn**	**05 48 46.1**	**-3.6**
NVLJ				Sn			**Sn**	**05 50 29.2**	**-9.2**

*ISK **29** 05:55:48.7, 40.°57N×34.°81E, h5km, MD3.0*
*DDA **29** 05:55:49.7, 40.°53N×34.°79E, h16km, Md2.9*
*CSEM **29** 05:55:50.0±0.3, 40.°56N×34.°79E, h8km, MD2.9, Error ellipse: s-maj=7.2km s-min=5.7km az=143.0*
*ISCJB **29** 05:55:50.6±0.6, 40.°53N±0.°03×34.°80E±0.°05, h11km±4km, Error ellipse: s-maj=6.3km s-min=5.5km az=30.1*
ISC 29 05:55:50.6±0.6, 40.°54N±0.°03×34.°79E±0.°05, h9km±4km, n18, σ1.9/07/30, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CTKT	**Corum**	**0.08**	**1**	*i* P			**Pg**	**05 55 53.2**	**+0.3**
CTKT				*i* S			**Sg**	**05 55 55.8**	**+1.4**
CTKT	**Corum**	**0.08**	**1**	*i* P			**Pg**	**05 55 53.2**	**+0.3**
CTKT				*i* S			**Sg**	**05 55 55.8**	**+1.3**
CORM	**Corum**	**0.38**	**199**	*e*PG			**Pg**	**05 55 57.9**	**-0.2**
CORM				*e*SG			**Sg**	**05 56 04.5**	**+1.4**
CORM	**Corum**	**0.38**	**199**	*e*Pg			**Pg**	**05 55 57.9**	**-0.2**
CORM				*e*Sg			**Sg**	**05 56 04.5**	**+1.4**
CDAG	**Cicekdag**	**0.97**	**199**	*i* P			**Pg**	**05 56 08.4**	**-0.8**
CDAG				*i* S			**Sg**	**05 56 21.8**	**0.0**
CDAG	**Cicekdag**	**0.97**	**199**	*i* P			**Pg**	**05 56 08.4**	**-0.8**
CDAG				*i* S			**Sg**	**05 56 21.8**	**0.0**
ELDT	**Eldivan**	**1.04**	**268**	*i* P			**Pg**	**05 56 09.5**	**-1.1**
ELDT				*i* S			**Sg**	**05 56 23.7**	**-0.4**
ELDT	**Eldivan**	**1.04**	**268**	*i* P			**Pg**	**05 56 09.5**	**-1.1**
ELDT				*i* S			**Sg**	**05 56 23.7**	**-0.4**
KVT	**Kavak**	**1.10**	**60**	*e*PG			**Pg**	**05 56 09.8**	**-1.9**
KVT	**Kavak**	**1.10**	**60**	*e*Pg			**Pg**	**05 56 09.8**	**-1.9**
DIKM	**Dikmen**	**1.17**	**18**	*e*PN			**Pn**	**05 56 11.4**	**-1.7**
DIKM	**Dikmen**	**1.17**	**18**	*e*Pn			**Pn**	**05 56 11.4**	**-1.7**
BALT	**Daday**	**1.45**	**314**	*i* P			**Pn**	**05 56 17.2**	**+0.1**
BALT				*i* S			**Sn**	**05 56 37.7**	**+1.5**
BALT	**Daday**	**1.45**	**314**	*i* P			**Pn**	**05 56 17.2**	**+0.1**
BALT				*i* S			**Sn**	**05 56 37.7**	**+1.4**
ERBA	**Erbaa**	**1.50**	**84**	*e*P			**Pn**	**05 56 17.0**	**-0.7**
ERBA				*e*S			**Sn**	**05 56 39.0**	**+1.5**
ERBA	**Erbaa**	**1.50**	**84**	*e*P			**Pn**	**05 56 17.0**	**-0.8**
ERBA				*e*S			**Sn**	**05 56 39.0**	**+1.5**
SVSK	**Karacayir**	**1.80**	**109**	*e*PN			**Pn**	**05 56 22.5**	**+0.6**
SVSK	**Karacayir**	**1.80**	**109**	*e*Pn			**Pn**	**05 56 22.5**	**+0.6**

IDC 29 06:31:44.9±6.6, 19.°72S×177.°78W, h538km±72km, mb3.0/6, mb1 3.3/6, mb1mx3.1/16, mbtmp3.0/6, Error ellipse: s-maj=66.3km s-min=24.5km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**44.90**	**256**	P			**P**	06 39 12.3	+0.4
	0.9nm,0.6s,baz=96,slow=7.7,SNR=14								
ASAR				PcP			PcP	06 40 41.8	-0.2
	0.6nm,0.5s,baz=97,slow=4.8,SNR=5.3								
WRA	**Warramunga Arr**	**44.92**	**261**	P			P	06 39 11.5	-0.6
	0.5nm,0.5s,baz=97,slow=7.8,SNR=17								
PETK	**Petropavlovsk-**	**75.57**	**345**	P			P	06 42 34.5	+0.2
	3.1nm,0.9s,baz=162,slow=10,SNR=4.0								
NVAR	**Mina Array Bea**	**80.32**	**43**	P			P	06 43 00.7	+0.5
	0.5nm,0.6s,baz=230,slow=7.7,SNR=4.6								
TXAR	**Lajitas Array**	**86.46**	**57**	P			P	06 43 31.3	+0.4
	0.5nm,0.7s,baz=219,slow=7.7,SNR=8.7								
PDAR	**Pinedale Array**	**88.25**	**43**	P			P	06 43 38.6	-0.3
	0.5nm,0.5s,baz=248,slow=1.6,SNR=5.4								
BVAR	**Borovoye Array**	**118.61**	**320**	PKP			PKPdf	06 49 31.1	-0.5
	0.5nm,0.5s,baz=29,slow=3.4,SNR=3.6								
ARCES	**ARCESS Array B**	**128.19**	**350**	PKP			PKPdf	06 49 49.1	-0.4
	1.1nm,1.0s,baz=17,slow=1.3,SNR=8.5								
FINES	**FINESS Array B**	**135.08**	**344**	PKhKP				06 49 58.5	
	2.0nm,0.9s,baz=152,slow=21,SNR=3.6								
AKASG	**Malin Array Be**	**142.43**	**332**	PKhKP				06 50 12.4	
	0.5nm,0.4s,baz=40,slow=5.8,SNR=6.1								
BRTR	**Keskin Array B**	**146.46**	**313**	PKPbc			PKPbc	06 50 25.9	-0.2
	0.8nm,0.5s,baz=142,slow=4.8,SNR=4.7								

*ISCJB **29** 06:35:28.7±0.2, 47.°22N±0.°01×10.°36E±0.°02, h10km, Error ellipse: s-maj=2.1km s-min=1.7km az=142.3*
*CSEM **29** 06:35:29.5±0.1, 47.°17N×10.°39E, h6km, ML2.3/14, Error ellipse: s-maj=2.7km s-min=2.1km az=137.0*
*VIE **29** 06:35:29.4±0.1, 47.°18N×10.°38E, h12km±2km, mb1.4/9, ML2.1/12, Error ellipse: s-maj=1.1km s-min=0.8km az=152.0 9 km SSE of Holzgau*
*NEIC **29** 06:35:29.9±0.6, 47.°15N×10.°42E, h10km, ML2.5(LDG), ML1.8(ZUR), ML2.3(SZGRF), Error ellipse: s-maj=7.0km s-min=5.8km az=118.0*
*ROM **29** 06:35:29.8±0.6, 47.°19N×10.°40E, h10km, Md2.5/8, Ml1.5/3, Error ellipse: s-maj=6.2km s-min=5.7km az=38.0*
*ZUR **29** 06:35:29.3, 47.°19N×10.°40E, h5km, ML1.8/3*
*BGR **29** 06:35:30.7±0.4, 47.°15N×10.°39E, h10km, ML2.4/11, Error ellipse: s-maj=5.6km s-min=3.3km az=17.0*
*LDG **29** 06:35:30.2±0.2, 47.°12N×10.°44E, h10km, Ml2.5/5, Error ellipse: s-maj=5.3km s-min=4.5km az=178.0*
*PRU **29** 06:35:30.2, 47.°13N×10.°37E, h0km*
ISC 29 06:35:30.1±0.2, 47.°18N±0.°01×10.°37E±0.°02, h8km±3km, n94, σ1.9/03/169, 11C-7D, Austria

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FETA	**Feichten**	**0.29 122**	⇓	*e*Pg			**Pg**	**06 35 35.6**	**-0.1**
	17nm,0.2s,SNR=88								
FETA			⇓	*i*Sg			**Sg**	**06 35 39.7**	**+0.1**
	45nm,0.3s								
FETA	**Feichten**	**0.29 122**		Pg			**Pg**	**06 35 35.6**	**-0.2**
	17nm,0.2s,SNR=88								
FETA				Sg			**Sg**	**06 35 39.7**	**+0.1**
	45nm,0.3s								
DAVA	**Damuels**	**0.35 288**		*e*Pg			**Pg**	**06 35 37.0**	**+0.1**
	SNR=18								
DAVA				*e*Sg			**Sg**	**06 35 41.7**	**+0.1**
DAVA	**Damuels**	**0.35 288**		Pg			**Pg**	**06 35 36.9**	**0.0**
DAVA				Sg			**Sg**	**06 35 42.5**	**+0.9**
DAVA	**Damuels**	**0.35 288**	⇓	*e*Pg			**Pg**	**06 35 37.0**	**0.0**
	5.7nm,0.1s,SNR=48								
DAVA			⇓	*i*Sg			**Sg**	**06 35 41.9**	**+0.3**
	29nm,0.2s								
DAVA	**Damuels**	**0.35 288**		Pg			**Pg**	**06 35 36.9**	**0.0**
DAVA				Sg			**Sg**	**06 35 41.9**	**+0.3**
	29nm,0.2s								
RETA	**Reutte**	**0.41**	**41**	⇑ *e*Pg			**Pg**	**06 35 37.2**	**-0.8**
	3.8nm,0.1s,SNR=13								
RETA			⇑	*i*Sg			**Sg**	**06 35 43.1**	**-0.3**
	12nm,0.2s								
RETA	**Reutte**	**0.41**	**41**	Pg			**Pg**	**06 35 37.2**	**-0.8**
	3.8nm,0.1s,SNR=13								
RETA				Sg			**Sg**	**06 35 43.1**	**-0.3**
	12nm,0.2s								
DAVOX	**Davos/Dischmat**	**0.52 220**		Pg			**Pg**	**06 35 40.2**	**+0.1**
DAVOX				Sg			**Sg**	**06 35 48.5**	**+1.6**
DAVOX	**Davos/Dischmat**	**0.52 220**		*e*Pg			**Pg**	**06 35 39.9**	**-0.2**
	196nm,0.5s								
DAVOX				*e*Sg			**Sg**	**06 35 48.2**	**+1.3**
	196nm,0.5s								
DAVOX	**Davos/Dischmat**	**0.52 220**		*e*Pg			**Pg**	**06 35 39.9**	**-0.2**
	196nm,0.5s								
DAVOX				*e*Sg			**Sg**	**06 35 48.2**	**+1.3**
	196nm,0.5s								
MOTA	**Moosalm**	**0.53**	**71**	*e*Pg			**Pg**	**06 35 39.3**	**-1.0**
	SNR=23

BFO				*e*Sg		**Sg**	**06 36 30.1**	**+2.3**
BFO	**Black Forest**	**1.80**	**311**	Pn		**Pn**	**06 36 01.8**	**+0.5**
KBA	**Koelnbreinsper**	**2.03**	**92**	*e*Pn		**Pn**	**06 36 02.0**	**-2.5**
KBA				*e*Pg		**Pg**	**06 36 08.0**	**-1.0**
	SNR=5.6							
KBA				*e*Sg		**Sg**	**06 36 37.5**	**+2.1**
KBA	**Koelnbreinsper**	**2.03**	**92**	Pn		**Pn**	**06 36 07.7**	**+3.2**
KBA				Sg		**Sg**	**06 36 37.9**	**+2.6**
KBA	**Koelnbreinsper**	**2.03**	**92**	⇑*i*Pg		**Pg**	**06 36 08.0**	**-1.0**
	4.1nm,0.3s							
KBA				⇑*i*Sn		**Sn**	**06 36 29.5**	**-0.6**
KBA				⇑*i*Sg		**Sg**	**06 36 37.5**	**+2.2**
	7.7nm,0.5s							
KBA	**Koelnbreinsper**	**2.03**	**92**	Pn		**Pn**	**06 36 02.0**	**-2.5**
KBA	**Koelnbreinsper**	**2.03**	**92**	Pg		**Pg**	**06 36 08.0**	**-1.0**
	4.1nm,0.3s							
KBA				Sn		**Sn**	**06 36 29.5**	**-0.6**
KBA				Sg		**Sg**	**06 36 37.5**	**+2.2**
CDF	**Champ du Feu**	**2.42**	**302**	*e*Pg		**Pg**	**06 36 16.4**	**-0.1**
CDF				*e*Sn		**Sn**	**06 36 38.2**	**-1.6**
CDF				*e*Sg		**Sg**	**06 36 48.3**	**+0.4**
	7.7nm,0.4s							
CDF	**Champ du Feu**	**2.42**	**302**	*e*Pn		**Pn**	**06 36 09.2**	**-0.7**
CDF				*e*Pg		**Pg**	**06 36 16.4**	**-0.1**
CDF				*e*Sn		**Sn**	**06 36 38.2**	**-1.6**
CDF				*e*Sg		**Sg**	**06 36 48.3**	**+0.4**
	3.8nm,0.4s							
CDF	**Champ du Feu**	**2.42**	**302**	*e*Pn		**Pn**	**06 36 09.2**	**-0.7**
CDF	**Champ du Feu**	**2.42**	**302**	*e*Pg		**Pg**	**06 36 16.4**	**-0.1**
CDF				*e*Sn		**Sn**	**06 36 38.2**	**-1.6**
CDF				*e*Sg		**Sg**	**06 36 48.3**	**+0.4**
	3.9nm,0.4s							
HINF	**Hinteralfeld**	**2.47**	**286**	*e*Pg		**Pg**	**06 36 16.9**	**-0.5**
HINF				*e*Sn		**Sn**	**06 36 39.2**	**-1.7**
HINF				*e*Sg		**Sg**	**06 36 49.3**	**0.0**
	3.9nm,0.4s							
HINF	**Hinteralfeld**	**2.47**	**286**	*e*P		**Pn**	**06 36 12.2**	**+1.7**
HINF				*e*Pg		**Pg**	**06 36 16.9**	**-0.5**
HINF				*e*Sn		**Sn**	**06 36 39.2**	**-1.7**
HINF				*e*Sg		**Sg**	**06 36 49.3**	**0.0**
HINF	**Hinteralfeld**	**2.47**	**286**	*e*P		**Pn**	**06 36 12.2**	**+1.7**
HINF	**Hinteralfeld**	**2.47**	**286**	*e*Pg		**Pg**	**06 36 16.9**	**-0.5**
HINF				*e*Sn		**Sn**	**06 36 39.2**	**-1.7**
HINF				*e*Sg		**Sg**	**06 36 49.3**	**0.0**
	2.0nm,0.4s							
GRA1	**Grafenberg Arr**	**2.58**	**12**	Pn		**Pn**	**06 36 11.0**	**-1.0**
GRA1	**Grafenberg Arr**	**2.58**	**12**	Pg		**Pg**	**06 36 18.9**	**-0.6**
	SNR=2.5							
GRA1				Sg		**Sg**	**06 36 52.5**	**-0.4**
GRF	**Grafenberg Arr**	**2.58**	**12**	*e*Pn		**Pn**	**06 36 11.0**	**-1.0**
GRF				*e*Pg		**Pg**	**06 36 18.9**	**-0.5**
	SNR=2.5							
GRF				*e*Sg		**Sg**	**06 36 52.5**	**-0.4**
WET	**Wettzell**	**2.59**	**40**	*e*Pn		**Pn**	**06 36 12.4**	**+0.3**
WET				*e*Sn		**Sn**	**06 36 44.6**	**+0.9**
WET				*e*Sg		**Sg**	**06 36 52.6**	**-0.5**
WET	**Wettzell**	**2.59**	**40**	*e*Pn		**Pn**	**06 36 12.2**	**+0.1**
WET	**Wettzell**	**2.59**	**40**	*e*Pn		**Pn**	**06 36 12.2**	**+0.1**
WET				Sn		**Sn**	**06 36 44.6**	**+0.9**
WET				Sg		**Sg**	**06 36 52.6**	**-0.5**
MOA	**Molln**	**2.72**	**74**	*e*Sg		**Sg**	**06 36 58.3**	**+0.8**
MOA	**Molln**	**2.72**	**74**	Sg		**Sg**	**06 36 58.3**	**+0.8**
GEC2	**GERESS Array S**	**2.79**	**52**	*e*Pn		**Pn**	**06 36 15.9**	**+0.9**
GEC2				*e*Sn		**Sn**	**06 36 50.5**	**+1.7**
GEC2	**GERESS Array S**	**2.79**	**52**	Pn		**Pn**	**06 36 15.9**	**+1.0**
GEC2				Sn		**Sn**	**06 36 50.5**	**+1.7**
HAU	**Haudompre**	**2.85**	**288**	*e*Sg		**Sg**	**06 37 01.1**	**-0.3**
	6.2nm,0.5s							
HAU	**Haudompre**	**2.85**	**288**	*e*Sg		**Sg**	**06 37 01.1**	**-0.3**
	3.1nm,0.5s							
KHC	**Kasperske Hory**	**2.90**	**47**	*e*PN		**Pn**	**06 36 16.8**	**+0.3**
KHC				*e*PG		**Pg**	**06 36 23.2**	**-2.5**
KHC				*e*SN		**Sn**	**06 36 52.3**	**+0.7**
KHC				*e*SG		**Sg**	**06 37 02.5**	**-0.8**
	comp=Z,8.6nm,0.7s							
KHC	**Kasperske Hory**	**2.90**	**47**	Pn		**Pn**	**06 36 16.8**	**+0.3**
CABF	**La Chapelle**	**2.99**	**261**	*e*Pg		**Pg**	**06 36 25.9**	**-1.4**
CABF				*e*Sg		**Sg**	**06 37 05.4**	**-0.7**
	comp=Z,4.0nm,0.5s							
CABF	**La Chapelle**	**2.99**	**261**	*e*Pg		**Pg**	**06 36 25.9**	**-1.4**
CABF				*e*Sg		**Sg**	**06 37 05.4**	**-0.7**
	comp=Z,2.0nm,0.5s							
TNS	**Taunus Mts**	**3.30**	**338**	*e*Sg		**Sg**	**06 37 18.5**	**+2.4**
TNS	**Taunus Mts**	**3.30**	**338**	Sg		**Sg**	**06 37 18.5**	**+2.4**
NKC	**Novy Kostel**	**3.35**	**23**	*e*PG		**Pg**	**06 36 31.8**	**-2.5**
NKC				*e*SG		**Sg**	**06 37 17.2**	**-0.5**
	comp=Z,5.7nm,0.7s							
NKC	**Novy Kostel**	**3.35**	**23**	Pg		**Pg**	**06 36 31.8**	**-2.5**
NKC				Sg		**Sg**	**06 37 17.2**	**-0.5**
	comp=Z,5.7nm,0.7s							
GUNZ	**Gunzen**	**3.44**	**21**	*e*Pg		**Pg**	**06 36 35.4**	**-0.6**
	SNR=4.1							
GUNZ				*e*Sg		**Sg**	**06 37 20.0**	**-0.5**
GUNZ	**Gunzen**	**3.44**	**21**	Pg		**Pg**	**06 36 35.4**	**-0.6**
	SNR=4.1							
GUNZ				Sg		**Sg**	**06 37 20.0**	**-0.5**
WERD	**Werda**	**3.51**	**21**	*e*Sg		**Sg**	**06 37 21.7**	**-1.1**
WERD	**Werda**	**3.51**	**21**	Sg		**Sg**	**06 37 21.7**	**-1.1**
TANN	**Tannenbergstha**	**3.52**	**22**	*e*Sg		**Sg**	**06 37 22.8**	**-0.3**
TANN	**Tannenbergstha**	**3.52**	**22**	Sg		**Sg**	**06 37 22.8**	**-0.3**
MOX	**Moxa**	**3.57**	**13**	*e*SG		**Sg**	**06 37 23.5**	**-1.0**
MOX	**Moxa**	**3.57**	**13**	*e*Pg		**Pg**	**06 36 38.8**	**+0.5**
	SNR=1.5							
MOX				*e*Sg		**Sg**	**06 37 24.2**	**-0.3**
MOX	**Moxa**	**3.57**	**13**	Pg		**Pg**	**06 36 38.8**	**+0.5**
	SNR=1.5							
MOX				Sg		**Sg**	**06 37 24.2**	**-0.3**
PRU	**Pruhonice**	**3.95**	**43**	*e*SG		**Sg**	**06 37 37.4**	**+0.7**
PRU	**Pruhonice**	**3.95**	**43**	Sg		**Sg**	**06 37 37.4**	**+0.7**
CLL	**Collm**	**4.48**	**22**	*i* Sg		**Sg**	**06 37 55.2**	**+1.4**
	comp=Z,5.0nm,0.9s							
DPC	**Dobruska-Polom**	**5.06**	**49**	*e*SG		**Sg**	**06 38 12.1**	**-0.2**
DPC	**Dobruska-Polom**	**5.06**	**49**	Sg		**Sg**	**06 38 12.1**	**-0.2**

JMA 29 06:52:50.2, 38°.69N×140°.79E, h7km±1km, M1.5, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOU	**Okura**	**0.34**	**197**	P	Pg	06 52 57.0	+0.2
JOU				*e*S	Sg	06 53 01.8	+0.6
JYK	**Kaneyama**	**0.41**	**304**	P	Pg	06 52 58.4	+0.3
JYK				*e*S	Sg	06 53 03.9	+0.5
JMK	**Ichinoseki**	**0.43**	**52**	P	Pg	06 52 58.5	0.0
JMK				*e*S	Sg	06 53 04.4	+0.4
JIO	**Ouri**	**0.50**	**118**	P	Pg	06 52 59.7	-0.1
JIO				*e*S	Sg	06 53 06.5	+0.2
JYS	**Shiratake**	**0.74**	**231**	P	Pg	06 53 04.4	0.0
JYS				S	Sg	06 53 14.3	+0.4
JMM	**Marumori**	**0.82**	**180**	P	Pg	06 53 05.8	-0.2
JMM				S	Sg	06 53 16.3	-0.4
JYA	**Atsumi**	**0.85**	**264**	P	Pg	06 53 06.4	-0.1
JOM	**Ohasama**	**0.87**	**26**	P	Pg	06 53 06.7	-0.3
JOM				*e*S	Sg	06 53 18.3	-0.1

NIED ***29*** *06:53:00, 38°.90N×140°.80E, h5km, Mw4.1 Best double couple: M0 1.82000×10^15 NP1:ϕs320.00000°, δ87.00000°, λ31.00000°. NP2:ϕs228.00000°, δ59.00000°, λ176.00000°.*
IDC ***29*** *06:53:22.7±0.6, 38°.94N×140°.77E, h0km, mb3.9/15, mb1 4.0/18, mb1mx4.0/28, mbtmp3.9/18, ML3.7/3, MS3.4/6, Ms1 3.4/6, ms1mx2.9/30, Error ellipse: s-maj=18.0km s-min=13.6km az=103.0*
ISCJB ***29*** *06:53:23.7±0.6, 38°.89N±0°.02×140°.75E±0°.03, h13km±4km, mb3.9/16, MS3.6/3, Error ellipse: s-maj=4.3km s-min=3.4km az=29.3*
NEIC ***29*** *06:53:24.2, 38°.89N×140°.73E, h7km, mb4.6/2, MW4.1(NIED), After JMA.*
NEIC Recorded [3 JMA] in Miyagi; [2 JMA] in Iwate and Yamagata; [1 JMA] in Akita and Fukushima.
JMA ***29*** *06:53:24.2, 38°.89N×140°.73E, h7km±1km, M4.3 Broadband fault plane solution: P waves. NP1: ϕs216.00000°, δ67.00000°, λ156.00000°. NP2: ϕs316.00000°, δ68.00000°, λ25.00000°. Principal axes: T Plg33.0000°, Azm177.0000°; N Plg57.0000°, Azm354.0000°; P Plg1.0000°, Azm86.0000°;*
JMA Felt III J1.
MOS ***29*** *06:53:26.1±0.8, 38°.90N×140°.63E, h33km, mb4.3/10 Error ellipse: s-maj=14.9km s-min=8.8km az=84.5*

ISC 29 06:53:24.2±0.4, 38°.88N±0°.02×140°.75E±0°.03, h5km±3km, n54, σ1ϑ03/66, mb3.9/16, MS3.6/3, 4C-4D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.30**	**277**	⇓P	**Pg**	**06 53 30.1**	**0.0**
JYK				S	**Sg**	**06 53 34.3**	**+0.2**
JMK	**Ichinoseki**	**0.38**	**79**	⇓P	**Pg**	**06 53 31.5**	**0.0**
JMK				S	**Sg**	**06 53 36.9**	**+0.5**
JOU	**Okura**	**0.52**	**187**	⇑P	**Pg**	**06 53 34.4**	**+0.3**
JOU				*e*S	**Sg**	**06 53 41.8**	**+0.9**
JRG	**Rokugo**	**0.52**	**351**	⇑P	**Pg**	**06 53 34.2**	**-0.1**
JRG				*e*S	**Sg**	**06 53 41.8**	**+0.7**
JIO	**Ouri**	**0.64**	**132**	P	**Pg**	**06 53 36.0**	**-0.4**
JIO				S	**Sg**	**06 53 44.6**	**-0.1**
JOM	**Ohasama**	**0.73**	**36**	⇓P	**Pg**	**06 53 37.8**	**-0.4**
JOM				S	**Sg**	**06 53 47.9**	**+0.2**
JYS	**Shirataka**	**0.85**	**219**	⇑P	**Pg**	**06 53 40.2**	**-0.2**
JYS				S	**Sg**	**06 53 51.9**	**+0.5**
JYA	**Atsumi**	**0.86**	**251**	⇓P	**Pg**	**06 53 40.2**	**-0.4**
JYA				S	**Sg**	**06 53 51.8**	**+0.1**
JMM	**Marumori**	**1.01**	**178**	⇑P	**Pg**	**06 53 42.3**	**-1.3**
JMM				S	**Sg**	**06 53 55.8**	**-0.9**
MAJO	**Matsushiro**	**3.08**	**222**	*e*P	**Pn**	**06 54 14.0**	**+0.6**
MAT	**Matsushiro**	**3.08**	**222**	P	**Pn**	**06 54 14.1**	**+0.7**
MAT				*e*S	**Sn**	**06 54 56.7**	**+6.1**
MJAR	**Matsushiro Arr**	**3.08**	**222**	Pn	**Pn**	**06 54 14.5**	**+1.0**
	4.3nm,0.3s,baz=20,slow=27,SNR=28						
MJAR				Pg	**Pg**	**06 54 21.1**	**-2.2**
	9.9nm,0.3s,baz=25,slow=15,SNR=43						
MJAR				Sn	**Sn**	**06 54 53.6**	**+3.0**
	6.0nm,0.3s,baz=326,slow=14,SNR=4.9						
MJAR				LR	LR	06 55 40.6	
	comp=Z,610nm,19.0s,baz=30,slow=44						
MJAR	**Matsushiro Arr**	**3.08**	**222**	P	**Pn**	**06 54 14.5**	**+1.1**
MJAR						06 54 53.7	
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.3s						
MJAR				smax			
	comp=N,6.0nm,0.3s						
ERM	**Erimo**	**3.63**	**30**	*e*Pn	**Pn**	**06 54 22.6**	**+1.6**
ERM				*e*Sn	**Sn**	**06 55 05.6**	**+1.4**
ASAJ	**Asahikawa**	**5.41**	**14**	Pn	**Pn**	**06 54 46.6**	**+1.1**
	comp=N,1.5nm,0.3s,baz=203,slow=15,SNR=9.5						
ASAJ				LR	LR	06 56 58.2	
	comp=N,212nm,18.1s,baz=8.5,slow=40						
ASAJ	**Asahikawa**	**5.41**	**14**	P	**Pn**	**06 54 46.6**	**+1.1**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,212nm,18.1s						
JHJ	**Hachijo jima 2**	**5.80**	**188**	Pn	**Pn**	**06 54 52.5**	**+1.7**
	comp=Z,12nm,0.3s,baz=37,slow=20,SNR=3.5						
JHJ				Sn	**Sn**	**06 55 59.7**	**+2.0**
	comp=Z,22nm,0.3s,baz=105,slow=20,SNR=3.2						
YSS	**Yuzh-Sakhalins**	**8.20**	**10**	*e*P	**Pn**	**06 55 27.0**	**+3.3**
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS	**Yuzh-Sakhalins**	**8.20**	**10**	*e*Pn	**Pn**	**06 55 25.1**	**+1.3**
	comp=Z,22nm,0.8s						
KSRS	**Korea Array**	**10.20**	**266**	Pn	**Pn**	**06 55 52.6**	**+1.5**
	comp=Z,0.9nm,0.3s,baz=78,slow=15,SNR=12						
KSRS				Sn	**Sn**	**06 57 50.3**	**+4.5**
	comp=Z,0.7nm,0.3s,baz=76,slow=24,SNR=6.5						
KSRS				LR	LR	06 59 12.2	
	comp=Z,102nm,21.4s,baz=155,slow=34						
KSRS	**Korea Array**	**10.20**	**266**	P	**Pn**	**06 55 52.7**	**+1.6**
KSRS						06 57 50.3	
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS				smax			
	comp=N,1.0nm,0.3s						
KLR	**Kul'dur**	**12.19**	**331**	*e*P	**Pn**	**06 56 18.9**	**+0.5**
SONM	**Songino Array**	**26.35**	**301**	P	**P**	**06 59 00.9**	**0.0**
	comp=N,0.3nm,0.6s,mb3.0,baz=98,slow=11,SNR=3.3						
ZALV	**Zalesovo Beam**	**40.30**	**311**	P	**P**	**07 01 00.9**	**-1.1**
	comp=N,2.2nm,0.6s,mb4.0,baz=89,slow=7.9,SNR=6.1						
ZALV	**Zalesovo Beam**	**40.30**	**311**	P	**P**	**07 01 00.9**	**-1.1**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
MKAR	**Makanchi Array**	**42.71**	**300**	P	**P**	**07 01 22.2**	**+0.3**
	comp=Z,1.2nm,0.7s,mb3.7,baz=95,slow=6.7,SNR=8.8						
MKAR	**Makanchi Array**	**42.71**	**300**	P	**P**	**07 01 22.2**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURK	**Kurchatov**	**44.39**	**307**	P	**P**	**07 01 34.3**	**-1.1**
	comp=Z,7.1nm,0.8s,mb4.5,baz=82,slow=8.2,SNR=16						
KURK	**Kurchatov**	**44.39**	**307**	*e*P	**P**	**07 01 33.9**	**-1.5**
KURK				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
KURK	**Kurchatov**	**44.39**	**307**	*e*P	**P**	**07 01 33.9**	**-1.5**
	comp=Z,8.6nm,0.8s,mb4.5						
BVAR	**Borovoye Array**	**48.95**	**311**	P	**P**	**07 02 09.5**	**-1.6**
	comp=Z,0.7nm,0.7s,mb3.8,baz=79,slow=8.0,SNR=4.5						
BVAR	**Borovoye Array**	**48.95**	**311**	P	**P**	**07 02 09.5**	**-1.6**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AAK	**Ala-Archa**	**49.17**	**297**	LR	LR	07 24 34.3	
	comp=Z,48nm,18.1s,MS3.5,baz=65,slow=38						
INK	**Inuvik**	**52.99**	**28**	P	**P**	**07 02 42.1**	**+0.8**
	comp=Z,1.6nm,0.8s,mb4.0,baz=52,slow=2.1,SNR=3.6						
INK	**Inuvik**	**52.99**	**28**	P	**P**	**07 02 42.1**	**+0.8**
INK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARU	**Arti**	**54.64**	**318**	*e*P	**P**	**07 02 53.1**	**-0.4**
ARU				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
ARU	**Arti**	**54.64**	**318**	*e*P	**P**	**07 02 53.0**	**-0.4**
	comp=Z,4.9nm,0.9s,mb4.5						
WRA	**Warramunga Arr**	**58.82**	**187**	P	**P**	**07 03 22.5**	**-1.0**
	comp=Z,3.9nm,0.8s,mb4.5,baz=4.3,slow=7.3,SNR=37						
WRA	**Warramunga Arr**	**58.82**	**187**	P	**P**	**07 03 22.5**	**-1.0**
WRA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ARCES	**ARCESS Array B**	**62.09**	**339**	P	**P**	**07 03 44.0**	**-1.3**
	comp=Z,0.6nm,0.8s,mb3.8,baz=84,slow=8.3,SNR=2.1						
ARCES	**ARCESS Array B**	**62.09**	**339**	P	**P**	**07 03 44.0**	**-1.3**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**62.55**	**187**	P	**P**	**07 03 48.1**	**-0.7**
	comp=Z,1.8nm,0.8s,mb4.3,baz=355,slow=4.2,SNR=14						
ASAR	**Alice Springs**	**62.55**	**187**	P	**P**	**07 03 48.2**	**-0.6**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FINES	**FINESS Array B**	**66.94**	**332**	P	**P**	**07 04 16.0**	**-1.2**
	comp=Z,1.3nm,0.8s,mb4.0,baz=84,slow=14,SNR=3.4						
FINES	**FINESS Array B**	**66.94**	**332**	P	**P**	**07 04 16.0**	**-1.2**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NB2	**NORSAR Subarra**	**72.28**	**337**	P	**P**	**07 04 49.1**	**-1.0**
	comp=Z,1.0nm,0.8s,mb3.8,baz=40,slow=6.2						
NOA	**NORSAR Array B**	**72.28**	**337**	P	**P**	**07 04 49.7**	**-0.5**
	comp=Z,0.4nm,0.8s,mb3.4,baz=32,slow=6.9,SNR=2.5						
NOA				LR	LR	07 39 08.3	
	comp=Z,31nm,18.2s,MS3.6,baz=15,slow=38						
AKASG	**Malin Array Be**	**72.52**	**322**	P	**P**	**07 04 49.9**	**-1.8**
	comp=Z,1.4nm,0.6s,mb4.1,baz=46,slow=6.3,SNR=5.7						
AKASG	**Malin Array Be**	**72.52**	**322**	P	**P**	**07 04 49.9**	**-1.8**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NVAR	**Mina Array Bea**	**74.31**	**53**	P	**P**	**07 05 02.5**	**-0.1**
	comp=Z,0.7nm,0.7s,mb3.7,baz=266,slow=5.6,SNR=7.6						
PDAR	**Pinedale Array**	**76.75**	**45**	P	**P**	**07 05 15.1**	**-1.4**
	comp=Z,0.5nm,0.6s,mb3.6,baz=217,slow=0.7,SNR=4.9						
ATD	**Arta Tunnel**	**88.91**	**284**	LR	LR	07 47 48.6	
	comp=Z,26nm,21.5s,MS3.6,baz=248,slow=37						
TXAR	**Lajitas Array**	**89.41**	**52**	P	**P**	**07 06 21.4**	**-0.8**
	comp=Z,0.4nm,0.9s,mb3.8,baz=259,slow=9.6,SNR=3.3						
LPAZ	**La Paz**	**146.16**	**56**	PKPbc	PKPbc	07 13 06.5	+0.7
	comp=Z,2.1nm,0.9s,baz=337,slow=5.5,SNR=7.4						

ISCJB ***29*** *07:11:58.3±0.8, 3°.3N±0°.1×123°.3E±0°.2, h511km±9km, mb3.4/6, Error ellipse: s-maj=23.7km s-min=15.9km az=176.7*
IDC ***29*** *07:12:04.6±11.0, 3°.07N×122°.95E, h591km±200km, mb2.7/6, mb1 2.9/6, mb1mx2.7/22, mbtmp2.7/6, Error ellipse: s-maj=86.1km s-min=20.5km az=89.0*
DJA ***29*** *07:12:32, 1°.86N×119°.64E, h30km, MLv4.2/6*
ISC 29 07:11:59.4±0.8, 3°.3N±0°.1×123°.3E±0°.2, h503km±9km, n17, σ1ϑ09/17, mb3.3/6, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	**Manado**	**2.35**	**140**	P	**S**	**07 14 00.1**	**-1.0**
MRSI	**Marisa**	**3.08**	**207**	P	**P**	**07 13 12.0**	**+0.9**
LUWI	**Luwuk**	**4.30**	**187**	S	**S**	**07 14 25.9**	**-0.5**
APSI	**Ampana**	**4.46**	**202**	P	**P**	**07 13 23.4**	**+1.6**
TNTI	**Ternate**	**4.73**	**121**	P	**S**	**07 14 24.3**	**-8.9**
	87nm,0.6s,0.4nm						
PCI	**Palu**	**5.40**	**220**	P	**P**	**07 13 30.6**	**+0.4**
LBMI	**Labuha**	**5.69**	**133**	P	**S**	**07 14 28.5**	**-21**
TTSI	**Tana Toraja**	**7.17**	**209**	P	**P**	**07 13 46.0**	**-1.4**
SPSI	**Sidrap Palu**	**8.00**	**206**	P	**P**	**07 13 55.1**	**-0.8**
	2μm62nm,0.6s						
BNSI	**Bone**	**8.25**	**203**	P	**P**	**07 14 00.0**	**+1.5**
	0.2nm38nm,0.7s						
SBUM	**Sibu**	**11.12**	**266**	P	**P**	**07 14 19.4**	**-9.3**
	0.0nm5.0nm,1.1s						
FITZ	**Fitzroy Crossi**	**21.34**	**174**	P	**P**	**07 16 09.3**	**-0.8**
	3.2nm,1.1s,mb3.8,baz=336,slow=13,SNR=4.5						
WRA	**Warramunga Arr**	**25.46**	**155**	P	**P**	**07 16 47.0**	**+0.1**
	1.2nm,0.3s,mb3.8,baz=337,slow=9.6,SNR=31						
ASAR	**Alice Springs**	**28.67**	**159**	P	**P**	**07 17 15.8**	**+0.7**
	0.7nm,0.5s,mb3.4,baz=339,slow=7.9,SNR=18						
KSRS	**Korea Array**	**34.30**	**7**	P	**P**	**07 18 04.8**	**+1.7**
	0.5nm,0.4s,mb3.3,baz=184,slow=9.0,SNR=2.7						
SONM	**Songino Array**	**46.75**	**344**	P	**P**	**07 19 42.2**	**-0.4**
	0.2nm,0.5s,mb2.8,baz=161,slow=9.2,SNR=2.8						
MKAR	**Makanchi Array**	**56.06**	**327**	P	**P**	**07 20 48.1**	**-2.0**
	0.2nm,0.4s,mb2.8,baz=139,slow=7.9,SNR=4.1						

IDC ***29*** *07:23:49.5±0.7, 3°.68S×100°.85E, h0km, mb4.5/19, mb1 4.6/20, mb1mx4.5/25, mbtmp4.5/20, ML4.0/1, MS4.0/11, Ms1 4.0/11, ms1mx3.6/28, Error ellipse: s-maj=23.3km s-min=10.1km az=47.0*
BJI ***29*** *07:23:49.4, 4°.33S×100°.79E, h41km, mB4.9/27, mb4.9/39, Ms4.7/32, Ms7 4.4/29*
ISCJB ***29*** *07:23:51.6±0.8, 3°.80S±0°.03×100°.63E±0°.03, h26km±5km, mb4.9/70, MS4.3/27, Error ellipse: s-maj=6.9km s-min=3.7km az=135.1*
MOS ***29*** *07:23:53.1±1.0, 3°.58S×100°.89E, h33km, mb5.1/22, Error ellipse: s-maj=14.2km s-min=6.9km az=106.5*
DJA ***29*** *07:23:53, 3°.82S×100°.56E, h24km, Mw5.2/18*
NEIC ***29*** *07:23:54.5±0.3, 3°.69S×100°.80E, mb4.8/17, Error ellipse: s-maj=11.0km s-min=6.4km az=53.0*
ISC 29 07:23:53.5±0.8, 3.78S±0°.03×100°.64E±0°.03, h24km±6km, h33km±1.0km: pP-P, n210, σ1ϑ08/208, mb4.9/70, MS4.3/27, 10C-4D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**1.19**	**328**	P	**Pn**	**07 24 14.2**	**-0.5**
KRJI	**Kerinci**	**1.87**	**26**	P	**Pn**	**07 24 24.1**	**+0.2**
KRJI				S	**Sn**	**07 24 50.0**	**+3.2**
KSI	**Kapahiang**	**1.95**	**86**	P	**Pn**	**07 24 25.3**	**+0.2**
MNAI	**Manna**	**2.38**	**104**	P	**Pn**	**07 24 30.8**	**-0.2**
MNAI				S	**Sn**	**07 25 04.2**	**+4.8**
PDSI	**Padang**	**2.86**	**356**	P	**Pn**	**07 24 36.3**	**-1.3**
SISI	**Saibi**	**2.89**	**327**	P	**Pn**	**07 24 37.9**	**-0.1**
SDSI	**Sungai Dareh**	**2.94**	**16**	P	**Pn**	**07 24 38.2**	**-0.5**
PPI	**Padang Panjang**	**3.31**	**356**	P	**Pn**	**07 24 42.9**	**-0.9**
MDSI	**Maura Dua**	**3.59**	**101**	P	**Pn**	**07 24 48.3**	**+0.6**
LWLI	**Liwa**	**3.62**	**110**	P	**Pn**	**07 24 48.8**	**+0.7**
RGRI	**Rengat**	**3.81**	**26**	P	**Pn**	**07 24 51.3**	**+0.7**
BKNI	**Bangkinang**	**4.10**	**6**	P	**Pn**	**07 24 54.7**	**0.0**
KLSI		**4.17**	**103**	P	**Pn**	**07 24 56.9**	**+1.2**
KASI	**Kota Agung**	**4.21**	**114**	P	**Pn**	**07 24 55.5**	**-0.7**
KASI				S	**Sn**	**07 25 47.1**	**+2.4**
MNSI	**Mandailing Nat**	**4.67**	**347**	P	**Pn**	**07 25 01.9**	**-0.6**
RBSI	**Rajabasa**	**5.48**	**112**	P	**Pn**	**07 25 14.4**	**+0.8**
	0.9nm2μm228nm,1.1s						
PPBI	**Pangkal Pinang**	**5.72**	**74**	P	**Pn**	**07 25 17.6**	**+0.7**
	1.3nm56nm,0.8s						
CGJI	**Cibinong**	**5.76**	**119**	P	**Pn**	**07 25 16.7**	**-0.8**
MYKOM	**K

comp=E,160nm,13.1s,MS4.1
QIZ LR LR
comp=Z,380nm,18.0s,MS3.9
MBWA Marble Bar 25.35 135 P **P** **07 29 19.9 +1.1**
comp=Z,29nm,2.4s,mb4.4
TGY Tagaytay City 26.85 48 P **P** **07 29 29.2 -3.2**
comp=Z,78nm,0.4s,mb5.6,baz=110,slow=11,SNR=4.3
FITZ Fitzroy Crossi 28.31 122 *e*P **P** **07 29 45.0 -0.5**
comp=Z,24nm,0.9s,mb4.8
FITZ Fitzroy Crossi 28.31 122 P **P** **07 29 44.7 -0.8**
comp=Z,6.6nm,0.8s,mb4.3,baz=291,slow=6.2,SNR=9.4
FITZ Fitzroy Crossi 28.31 122 *e*P **P** **07 29 45.0 -0.4**
comp=Z,11nm,0.8s,mb4.5
FITZ Fitzroy Crossi 28.31 122 P **P** **07 29 45.2 -0.3**
comp=Z,32nm,0.8s,mb5.0
KMI Kunming 28.80 4 P **P** **07 29 50.0 +0.2**
KMI pP pP 07 29 59.3 +2.4
KMI sP sP 07 30 03.3 +3.4
KMI PP PP 07 30 43.0 -12
KMI PcP PcP 07 33 00.3 +0.9
KMI S **S** **07 34 35.3 -3.0**
KMI ScP ScP 07 36 37.5 -2.0
KMI PcS PcS 07 36 41.5 -0.7
KMI ScS ScS 07 40 29.8 -3.4
KMI pmax pmax
comp=Z,13nm,1.0s,mb4.6
KMI pmax pmax
comp=Z,74nm,4.7s
KMI LR LR
comp=N,480nm,14.2s,MS4.4
KMI LR LR
comp=E,400nm,14.2s,MS4.4
KMI LR LR
comp=Z,680nm,14.2s,MS4.4
KNA Kununurra 30.11 115 P **P** **07 29 59.1 -2.4**
comp=Z,663nmcomp=Z,36nm,1.0s,mb5.0
SHL Shillong 30.39 344 *e*PKP **P** **07 30 05.5 +1.7**
GYA Guiyang 30.62 11 P **P** **07 30 05.3 -0.6**
GYA pP pP 07 30 15.0 +2.0
GYA PP PP 07 31 05.3 -10
GYA PcP PcP 07 33 04.8 +0.7
GYA S **S** **07 35 03.8 -3.0**
GYA SS SS 07 36 53.3 -25
GYA pmax pmax
comp=Z,20nm,1.0s,mb4.9
GYA pmax pmax
comp=Z,120nm,6.2s
GYA LR LR
comp=N,730nm,16.1s,MS4.6
GYA LR LR
comp=E,840nm,14.3s,MS4.6
GYA LR LR
comp=Z,1µm,17.4s,MS4.6
KAKA Kakadu 32.66 108 *e*P **P** **07 30 21.0 -3.0**
comp=Z,5.8nm,0.6s,mb4.7
KAKA Kakadu 32.66 108 *e*P **P** **07 30 21.1 -2.8**
ODAN Odare 33.05 338 *e*P **P** **07 30 28.0 +0.8**
comp=Z,112nm,1.0s,mb5.8
TAPN Taplejung 33.37 339 *e*P **P** **07 30 31.6 +1.6**
comp=Z,178nm,0.9s
PKI Pulchoki 34.46 336 *e*P **P** **07 30 39.3 -0.2**
comp=Z,25nm,0.8s,mb5.2
LSA Lhasa 34.51 345 P **P** **07 30 40.8 +0.9**
GUN Gumba 34.57 337 *e*P **P** **07 30 41.7 +1.3**
comp=Z,60nm,0.5s,mb5.8
DMN Daman 34.62 335 *e*P **P** **07 30 41.5 +0.6**
comp=Z,34nm,0.8s,mb5.3
CD2 Chengdu 34.62 5 *e*P **P** **07 30 41.5 +0.6**
CD2 pP pP 07 30 51.3 +3.2
CD2 sP sP 07 30 55.5 +4.5
CD2 PP PP 07 31 59.3 -0.4
CD2 S **S** **07 36 09.0 0.0**
CD2 sS sS 07 36 25.0 +4.1
CD2 SS SS 07 38 23.3 -17
CD2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
CD2 pmax pmax
comp=Z,30nm,5.2s
CD2 LR LR
comp=N,440nm,14.4s,MS4.7
CD2 LR LR
comp=E,1µm,15.6s,MS4.7
CD2 LR LR
comp=Z,640nm,15.6s,MS4.5
KKN Kakani 34.71 336 *e*P **P** **07 30 42.4 +0.8**
comp=Z,43nm,0.7s,mb5.5
WHN Wuhan 36.56 20 ⇓P **P** **07 30 57.3 -0.2**
WHN LR LR
comp=N,2µm,18.0s
WHN LR LR
comp=E,540nm,11.5s
WHN LR LR
comp=Z,1µm,16.4s,MS4.8
WRA Warramunga Arr 36.56 119 P **P** **07 30 56.8 -0.9**
comp=Z,7.0nm,0.7s,mb4.6,baz=301,slow=11,SNR=45
WRA S **S** **07 36 36.2 -2.9**
comp=Z,1.6nm,0.9s,baz=293,slow=17,SNR=5.9
WRA LR LR 07 46 34.7
comp=Z,166nm,19.6s,MS3.8,baz=300,slow=38
WRA Warramunga Arr 36.56 119 P **P** **07 30 56.8 -0.9**
WRA S **S** **07 36 36.2 -2.9**
WRAB Tennant Creek 36.56 119 *e*P **P** **07 30 57.1 -0.6**
WRAB pmax pmax
comp=Z,14nm,0.9s,mb4.8
WRAB Tennant Creek 36.56 119 *e*P **P** **07 30 57.1 -0.7**
comp=Z,14nm,0.9s,mb4.8
WRAB Tennant Creek 36.56 119 P **P** **07 30 56.6 -1.1**
comp=Z,20nm,1.5s,mb4.7
ASAR Alice Springs 37.70 125 P **P** **07 31 07.4 0.0**
comp=Z,3.5nm,0.7s,mb4.2,baz=299,slow=8.1,SNR=30
ASAR S **S** **07 36 58.2 +1.7**
comp=Z,2.0nm,0.8s,baz=299,slow=15,SNR=5.0
NJ2 Nanjing 39.62 25 *e*P **P** **07 31 23.8 +0.5**
NJ2 pP pP 07 31 33.5 +2.9
NJ2 sP sP 07 31 37.3 +3.8
NJ2 PP PP 07 32 58.0 +3.4
NJ2 S **S** **07 37 23.0 -2.0**
NJ2 sS sS 07 37 39.5 +2.4
NJ2 pmax pmax
comp=Z,20nm,0.6s,mb5.0
NJ2 pmax pmax
comp=Z,130nm,4.0s
NJ2 LR LR
comp=N,420nm,22.6s
NJ2 LR LR
comp=E,540nm,16.4s
LZH Lanzhou 39.77 4 ⇑P **P** **07 31 24.5 0.0**
LZH pP pP 07 31 34.3 +2.5
LZH sP sP 07 31 38.5 +3.8
LZH PP PP 07 33 01.5 +5.3
LZH *e*S **S** **07 37 27.8 +0.6**
LZH sS sS 07 37 43.8 +4.6
LZH SS SS 07 40 19.3 -4.5
LZH pmax pmax
comp=Z,49nm,1.1s,mb5.2
LZH pmax pmax
comp=Z,140nm,4.5s
LZH LR LR
comp=E,450nm,12.9s
LZH LR LR
comp=Z,740nm,17.0s,MS4.6
GTA Gaotai 42.98 359 ⇑P **P** **07 31 50.8 0.0**
GTA pP pP 07 32 00.5 +2.4
GTA sP sP 07 32 04.5 +3.4
GTA PP PP 07 33 34.3 +3.4
GTA PcP PcP 07 33 41.0 0.0
GTA S **S** **07 38 15.0 +0.2**
GTA SS SS 07 41 21.5 -5.9
GTA pmax pmax
comp=Z,19nm,1.2s,mb4.7
GTA pmax pmax
comp=Z,130nm,4.8s
GTA LR LR
comp=N,300nm,15.9s,MS4.5
GTA LR LR
comp=E,460nm,18.3s,MS4.5
GTA LR LR
comp=Z,370nm,16.5s,MS4.4
MTSU Mount Surprise 45.04 112 *e*P **P** **07 32 07.0 -0.7**
comp=Z,30nm,0.8s,mb5.2
HHC Hu-ho-hao-te 45.53 12 *e*P **P** **07 32 11.3 +0.2**
HHC pP pP 07 32 21.3 +2.8
HHC sP sP 07 32 25.3 +3.9
HHC PcP PcP 07 33 49.5 -0.2
HHC PP PP 07 33 59.0 +0.9
HHC ScP ScP 07 37 38.3 -2.9
HHC PcS PcS 07 37 42.0 -1.6
HHC S **S** **07 38 51.5 -0.3**
HHC sS sS 07 39 08.5 +4.6
HHC ScS ScS 07 42 02.5 -3.7
HHC SS SS 07 42 08.5 -7.7
HHC pmax pmax
comp=Z,24nm,0.9s,mb5.1
HHC pmax pmax
comp=Z,140nm,4.0s
HHC LR LR
comp=N,360nm,14.7s,MS4.5
HHC LR LR
comp=E,230nm,13.5s,MS4.5
HHC LR LR
comp=Z,370nm,15.0s,MS4.4
BJI Beijing 45.88 17 P **P** **07 32 13.5 -0.5**
BJI S **S** **07 38 58.8 +1.9**
BJI pmax pmax
comp=Z,25nm,0.8s,mb5.2
BJI pmax pmax
comp=Z,76nm,3.7s
BJI LR LR
comp=N,450nm,15.9s,MS4.6
BJI LR LR
comp=E,260nm,15.7s,MS4.6
BJI LR LR
comp=Z,250nm,20.0s,MS4.2
CTA Charters Tower 47.28 114 *e*P **P** **07 32 24.8 -0.5**
comp=Z,14nm,1.1s,mb4.8
CTAO Charters Tower 47.28 114 P **P** **07 32 24.4 -0.9**
comp=Z,26nm,1.2s,mb5.0
STKA Stephens Creek 47.50 131 *e*P **P** **07 32 27.5 +0.6**
comp=Z,7.7nm,0.6s,mb4.8
STKA Stephens Creek 47.50 131 P **P** **07 32 27.5 +0.6**
comp=Z,3.1nm,0.6s,mb4.4,baz=306,slow=8.8,SNR=5.7
STKA LR LR 07 53 37.2
comp=Z,267nm,21.9s,MS4.2,baz=270,slow=38
STKA Stephens Creek 47.50 131 *e*P **P** **07 32 26.8 -0.1**
comp=Z,2.5nm,0.8s,mb4.2
KSRS Korea Array 48.23 29 P **P** **07 32 31.8 -0.6**
comp=Z,21nm,1.0s,mb5.1,baz=218,slow=8.3,SNR=44
KSH Kashi 48.71 335 P **P** **07 32 35.5 -0.5**
KSH pP pP 07 32 45.3 +1.9
KSH sP sP 07 32 49.3 +3.0
KSH PcP PcP 07 34 02.0 +1.0
KSH PP PP 07 34 27.5 -1.8
KSH ScP ScP 07 37 52.8 -1.8
KSH PcS PcS 07 37 56.5 -0.6
KSH S **S** **07 39 32.5 -4.7**
KSH ScS ScS 07 42 22.8 -4.4
KSH SS SS 07 42 57.5 -10
KSH pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
KSH pmax pmax
comp=Z,110nm,6.2s
KSH LR LR
comp=N,480nm,8.9s
KSH LR LR
comp=E,230nm,7.5s
KSH LR LR
comp=Z,78nm,5.1s
WMQ Urumqi 48.80 348 P **P** **07 32 38.0 +1.4**
WMQ pP pP 07 32 48.0 +4.0
WMQ sP sP 07 32 52.0 +5.0
WMQ PP PP 07 34 32.0 +1.9
WMQ S **S** **07 39 38.0 -0.3**
WMQ ScS ScS 07 42 25.0 -2.6
WMQ SS SS 07 43 04.0 -5.3
WMQ pmax pmax
comp=Z,38nm,1.0s,mb5.4
WMQ pmax pmax
comp=Z,97nm,5.0s
WMQ LR LR
comp=N,150nm,15.0s,MS4.5
WMQ LR LR
comp=E,320nm,15.0s,MS4.5
WMQ LR LR
comp=Z,130nm,15.0s,MS4.0
CMSA Cobar Meteorol 50.50 128 *e*P **P** **07 32 50.7 +0.8**
UCH Uchtor 51.57 335 P **P** **07 32 59.0 +1.3**
SNR=7.2
UCH Uchtor 51.57 335 *e*P **P** **07 32 58.7 +1.0**
UCH pmax pmax
comp=Z,20nm,1.4s,mb4.8
UCH Uchtor 51.57 335 *e*P **P** **07 32 58.7 +1.0**
comp=Z,20nm,1.4s,mb4.9
SONM Songino Array 51.65 5 P **P** **07 32 58.7 +0.6**
comp=Z,17nm,0.8s,mb5.0,baz=186,slow=9.4,SNR=94
TKM2 Tokmak 2 51.71 337 P **P** **07 32 59.6 +0.9**
SNR=13
TKM2 Tokmak 2 51.71 337 *e*P **P** **07 32 59.5 +0.8**
TKM2 pmax pmax
comp=Z,23nm,0.9s,mb5.1
TKM2 Tokmak 2 51.71 337 *e*P **P** **07 32 59.5 +0.7**
comp=Z,23nm,0.9s,mb5.1
ULN Ulaanbaatar 51.74 5 *e*P **P** **07 32 59.3 +0.5**
ULN pmax pmax
comp=Z,17nm,0.9s,mb5.0
ULN Ulaanbaatar 51.74 5 *e*P **P** **07 32 59.3 +0.5**
comp=Z,17nm,0.9s,mb5.0
ULN Ulaanbaatar 51.74 5 P **P** **07 32 59.5 +0.7**
KBK Karagaybulak 51.75 336 P **P** **07 33 00.2 +1.2**
SNR=6.2
AAK Ala-Archa 51.92 336 P **P** **07 32 59.2 -1.1**
comp=Z,1.5nm,0.4s,mb4.3,baz=282,slow=9.5,SNR=5.8
JHJ Hachijo jima 2 52.13 42 LR LR 07 52 44.7
comp=Z,351nm,18.1s,MS4.4,baz=282,slow=33
EKS2 Erkin-Say 52.24 335 P **P** **07 33 03.5 +0.8**
SNR=18
EKS2 Erkin-Say 52.24 335 *e*P **P** **07 33 03.6 +1.0**
EKS2 pmax pmax
comp=Z,18nm,0.8s,mb5.0
EKS2 Erkin-Say 52.24 335 *e*P **P** **07 33 03.5 +0.9**
comp=Z,16nm,0.8s,mb5.0
CN2 Changchun 52.36 23 *e*P **P** **07 33 10.0 +6.5**
CN2 *e*S **S** **07 40 30.0 +2.2**
CN2 pmax pmax
comp=Z,30nm,0.8s,mb5.3
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,300nm,20.0s,MS4.5
CN2 LR LR
comp=E,300nm,20.0s,MS4.5
CN2 LR LR
comp=Z,200nm,14.0s
USP Ospenovka 52.44 336 P **P** **07 33 04.6 +0.5**
SNR=8.1
MK31 Makanchi Array 52.91 344 *e*P **P** **07 33 07.6 +0.1**
MKAR Makanchi Array 52.91 344 P **P** **07 33 07.6 +0.1**
comp=Z,12nm,0.8s,mb4.9,baz=152,slow=8.0,SNR=47
MKAR Makanchi Array 52.91 344 P **P** **07 33 07.6 +0.1**
MAJO Matsushiro 53.26 38 *e*P **P** **07 33 08.5 -1.8**
MAJO pmax pmax
comp=Z,13nm,0.8s,mb4.9
MAJO Matsushiro 53.26 38 *e*P **P** **07 33 08.5 -1.8**
comp=Z,13nm,0.8s,mb4.9
MAT Matsushiro 53.26 38 P **P** **07 33 08.2 -2.1**
MJAR Matsushiro Arr 53.26 38 P **P** **07 33 07.9 -2.5**
comp=Z,9.5nm,0.8s,mb4.8,baz=219,slow=7.6,SNR=21
MJAR LR LR 07 56 33.3
comp=Z,64nm,19.0s,MS3.7,baz=240,slow=37
MDJ Mudanjiang 54.71 25 P **P** **07 33 21.0 +0.3**
MDJ pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
MDJ pmax pmax
comp=Z,100nm,7.5s
MDJ LR LR
comp=N,92nm,24.9s,MS4.0
MDJ LR LR
comp=E,130nm,21.1s,MS4.0
MDJ LR LR
comp=Z,150nm,22.1s,MS4.0
ARMA Armidale 54.86 125 *e*P **P** **07 33 24.1 +1.9**
TLY Talaya 55.31 2 *e*P **P** **07 33 25.2 +0.3**
TLY *e*PPP 07 36 41.2
TLY pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
TLY MLR MLR
comp=Z,341nm,16.0s,MS4.5
TLY Talaya 55.31 2 *e*P **P** **07 33 25.6 +0.7**
comp=Z,7.4nm,0.9s,mb4.7
IRK Irkutsk 55.90 3 *e*P **P** **07 33 29.5 +0.3**
IRK *e* pP 07 33 37.4 +0.7
IRK pmax pmax
comp=Z,26nm,2.3s,mb4.8
KURK Kurchatov 57.49 344 LR LR 08 02 46.5
comp=Z,127nm,20.0s,MS4.0,baz=180,slow=41
KURK Kurchatov 57.49 344 *c*e*P **P** **07 33 40.6 +0.1**
KURK pmax pmax
comp=Z,25nm,1.0s,mb5.2
KURK Kurchatov 57.49 344 *e*P **P** **07 33 40.3 -0.2**
comp=Z,20nm,0.9s,mb5.2
ZAA0 Zalesovo Array 59.03 349 *e*P **P** **07 33 50.7 -0.4**
ZAA0 *e*pP pP 07 34 01.5 +2.8
ZALV Zalesovo Beam 59.03 349 P **P** **07 33 50.8 -0.4**
comp=Z,23nm,0.9s,mb5.2,baz=160,slow=4.7,SNR=77
KLR Kul'dur 59.30 23 *e*P **P** **07 33 48.7 -4.5**
HABR Khabarovsk 60.07 26 *e*P **P** **07 33 55.2 -3.3**
HABR *e* 07 34 40.5
HABR 07 36 08.2
HABR *e*PPP 07 37 30.4
HABR S **S** **07 42 05.0 -5.0**
HABR *e**SS sS 07 42 29.0 +6.5
HABR 07 43 40.7
HABR *e*SS SS 07 46 03.5 -3.8
HABR MLR MLR
comp=Z,122nm,16.0s,MS4.1
NVS Novosibirsk 60.18 348 *e*P **P** **07 33 57.7 -1.4**
NVS pmax pmax
comp=Z,18nm,1.6s,mb4.8
NVS pmax pmax
comp=N,17nm,1.5s
BVAR Borovoye Array 62.07 340 P **P** **07 34 11.2 -0.7**
comp=N,9.6nm,0.6s,mb5.1,baz=145,slow=8.6,SNR=45
BRVK Borovoye 62.13 340 *c*e*P **P** **07 34 11.8 -0.6**
BRVK pmax pmax
comp=Z,6.0nm,0.6s,mb4.9
BRVK Borovoye 62.13 340 *e*P **P** **07 34 11.7 -0.7**
comp=Z,8.5nm,0.7s,mb5.0
YSS Yuzh-Sakhalins 62.65 31 ⇑*e*P **P** **07 34 15.0 -1.0**
YSS *e* pP 07 34 22.5 -1.1
YSS *e* 07 34 33.5
YSS pmax pmax
comp=Z,60nm,1.0s,mb5.7
YSS Yuzh-Sakhalins 62.65 31 *e*P **P** **07 34 14.9 -1.1**
comp=Z,33nm,0.8s,mb5.5
AKTO Aktyubinsk 65.22 332 LR LR 08 09 41.1
comp=Z,78nm,18.6s,MS3.9,baz=343,slow=42
SVE Sverdlovsk 68.56 338 ⇑*e*P **P** **07 34 54.4 +0.4**
SVE pmax pmax
comp=Z,22nm,1.0s,mb5.0
ZEI Tsey 68.98 319 *e*P **P** **07 34 57.6 +0.7**
ZEI pmax pmax
comp=Z,9.0nm,0.4s,mb5.0
ARU Arti 69.09 337 *c i*P **P** **07 34 57.0 -0.3**
ARU *e* 07 37 25.8
ARU S S 07 44 00.6 -0.4
ARU SS SS 07 48 31.0 +3.5
ARU pmax pmax
comp=Z,11nm,1.0s,mb4.7
ARU Arti 69.09 337 *e*P **P** **07 34 56.9 -0.4**
comp=Z,8.4nm,0.9s,mb4.7
YAK Yakutsk 69.30 14 *e*P **P** **07 34 52.8 -5.6**
YAK *e* 07 35 04.3
YAK pmax pmax
comp=Z,17nm,0.9s,mb5.0
YAK pmax pmax
comp=E,7.0nm,1.1s
YAK pmax pmax
comp=N,6.0nm,1.0s
YAK MLR MLR
comp=E,177nm,16.0s,MS4.5
YAK MLR MLR
comp=N,62nm,14.0s,MS4.5
KIV Kislovodsk 70.30 319 *e*P **P** **07 35 05.9 +0.9**
KIV *e*S S 07 44 13.0 -2.9
KIV pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
KIV MLR MLR
comp=Z,38nm,18.0s,MS3.7
MMAI Mount Meron Ar 71.60 306 LR LR 08 06 42.8
comp=Z,163nm,19.0s,MS4.3,baz=120,slow=36
PETK Petropavlovsk- 74.04 32 P **P** **07 35 25.9 -1.3**
comp=Z,2.7nm,0.7s,mb4.3,baz=190,slow=6.0,SNR=5.0
ANN Anapa 74.09 319 *e**PP **P** **07 35 28.6 +0.9**
ANN pmax pmax
comp=Z,62nm,1.0s,mb5.5
ANN Anapa 74.09 319 *e*P **P** **07 35 14.0 -14**
BR131 Keskin Array S 74.99 313 *e*P **P** **07 35 32.9 -0.1**
comp=Z,3.5nm,0.8s,mb4.3
BRTR Keskin Array B 74.99 313 P **P** **07 35 32.8 -0.3**
comp=Z,2.6nm,0.7s,mb4.2,baz=132,slow=6.5,SNR=14
BOSA Boshof 75.37 242 P **P** **07 35 36.8 +1.2**
comp=Z,2.9nm,1.1s,mb4.1,baz=51,slow=13,SNR=3.5
BOSA LR LR 08 02 05.6
comp=Z,100nm,20.5s,MS4.1,baz=159,slow=30
VSR Storozhevoye 75.60 325 *e*P **P** **07 35 35.5 -0.7**
VSR pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
VSR pmax pmax
comp=N,10.0nm,1.4s
VSR pmax pmax
comp=E,7.0nm,0.5s
OBN Obninsk 78.64 328 *e*P **P** **07 35 51.9 -1.3**
OBN *i* 07 36 02.2
OBN pmax pmax
comp=Z,13nm,1.2s,mb4.7
AKASG Malin Array Be 81.28 322 P **P** **07 36 06.8 -0.8**
comp=Z,0.3nm,0.3s,baz=88,slow=5.1,SNR=5.8
AKASG Malin Array Be 81.28 322 P **P** **07 36 06.8 -0.8**
VRI Vrincioaia 81.59 317 ⇑*i*P **P** **07 36 10.5 +1.1**
MLR Muntele Rosu 82.03 317 ⇓*i*P **P** **07 36 12.3 +0.6**
BURAR Bucovina Array 83.01 319 ⇓*i*P **P** **07 36 18.2 +1.4**
BUR08 Bucovina Ar. S 83.03 319 *e*P **P** **07 36 18.1 +1.2**
BUR08 *e*pP pP 07 36 27.2 +2.5
JOF Joensuu 84.09 334 *e*P **P** **07 36 19.4 -2.6**
JOF pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
JOF Joensuu 84.09 334 *e*p **P** **07 36 19.4 -2.6**
comp=Z,2.6nm,0.8s,mb4.4
JOF Joensuu 84.09 334 *e*p **P** **07 36 19.4 -2.6**
comp=Z,2.6nm,0.8s,mb4.4
BILL Bilibino 84.59 20 ⇑*e*P **P** **07 36 22.8 -1.7**
BILL pmax pmax
comp=Z,4.0nm,1.2s,mb4.4
APA Apatity 84.97 339 ⇓*i*P **P** **07 36 27.0 +0.6**
APA MLR MLR
comp=Z,200nm,15.0s,MS4.6
BZS Buzias 85.03 316 ⇑*i*P **P** **07 36 27.2 +0.1**
CRVS Cervenica-Dubn 85.73 319 *e*P **P** **07 36 31.5 +0.9**
CRVS pmax pmax
comp=Z,39nm,3.2s
CRVS Cervenica-Dubn 85.73 319 *e*P **P** **07 36 31.5 +0.9**
comp=Z,39nm,3.2s
CRVS Cervenica-Dubn 85.73 319 *e*P **P** **07 36 31.5 +0.9**
STHS Stebnicka Huta 85.97 320 *e*P **P** **07 36 32.8 +1.1**
STHS pmax pmax
comp=Z,2.0nm,0.8s,mb4.4
STHS Stebnicka Huta 85.97 320 *e*P **P** **07 36 32.8 +1.1**
comp=Z,2.0nm,0.8s,mb4.4
STHS Stebnicka Huta 85.97 320 *e*P **P** **07 36 32.8 +1.1**
FINES FINESS Array B 85.98 332 P **P** **07 36 31.4 -0.1**
comp=Z,2.1nm,0.8s,mb4.4,baz=107,slow=12,SNR=7.3
KAF Kangasniemi 86.05 333 *e*P **P** **07 36 28.8 -3.1**
KAF pmax pmax
comp=Z,4.0nm,0.8s,mb4.7
KAF Kangasniemi 86.05 333 *e*p **P** **07 36 28.8 -3.1**
comp=Z,4.0nm,0.8s,mb4.7
KAF Kangasniemi 86.05 333 *e*p **P** **07 36 28.8 -3.1**
comp=Z,4.0nm,0.8s,mb4.7
ARCES ARCESS Array B 88.36 340 P **P** **07 36 43.4 +0.5**
comp=Z,2.8nm,0.7s,mb4.6,baz=107,slow=4.1,SNR=15
NB2 NORSAR Subarra 93.00 331 P **P** **07 37 04.3 -0.4**
comp=Z,2.6nm,1.1s,mb4.6,baz=91,slow=5.1
NOA NORSAR Array B 93.00 331 P **P** **07 37 04.7 0.0**
comp=Z,0.5nm,0.8s,mb4.0,baz=22,slow=20,SNR=2.7
TORD Torodi Ar. Bea 99.56 283 LR LR 08 17 51.3
comp=Z,76nm,19.3s,MS4.2,baz=155,slow=32
DLMT Dillon 129.41 30 *e*PKPdf PKPdf 07 43 00.8 +0.5
PDAR Pinedale Array 132.80 30 PKP PKPdf 07 43 05.0 -1.8
comp=Z,0.3nm,0.7s,baz=197,slow=3.1,SNR=3.7
WMOK Wichita Mounta 144.31 28 *e*PKIKP PKPdf 07 43 25.3 -2.8
SIUC Southern Illin 145.04 14 *e*PKPbc PKPbc 07 43 28.1 -0.5
WCI Wyandotte Cave 145.13 10 *e*PKIKP PKPdf 07 43 28.2 -1.2
USIN University of 145.14 12 *e*PKPdf PKPdf 07 43 28.1 -1.4
TXAR Lajitas Array 145.69 40 PKPbc PKPbc 07 43 31.4 +0.4
comp=Z,18nm,0.8s,baz=280,slow=1.3,SNR=166
PARMO Parma 145.91 15 *e*PKPbc PKPbc 07 43 31.0 -0.4
MIAR Mount Ida 146.66 22 *e*PKP2 PKPab 07 43 33.3 -1.5

ELN	**Prospectdale**	**146.69**	**2**	*e*PKPbc	PKPbc	07 43 32.7	-1.0
WVT	**Waverly**	**146.87**	**13**	*e*PKP2	PKPab	07 43 33.7	-1.8
JCT	**Junction City**	**147.16**	**34**	*e*PKP2	PKPab	07 43 35.2	-1.7
TKL	**Tuckaleechee C**	**148.02**	**7**	*e*PKPbc	PKPbc	07 43 36.6	-0.8
TKL				*e*PKPab	PKPab	07 43 39.5	-0.5
CPCT	**Cooper Cave**	**148.13**	**8**	*e*PKPdf	PKPdf	07 43 34.0	-0.5
CPCT				*e*PKPbc	PKPbc	07 43 37.2	-0.6
SWET	**Sewanee**	**148.13**	**10**	*e*PKPdf	PKPdf	07 43 34.0	-0.6
SWET				*e*PKPbc	PKPbc	07 43 36.7	-1.1
GOGA	**Godfrey**	**150.27**	**7**	*e*PKIKP	PKPbc	07 43 43.0	-0.2

IDC 29 07:32:41.4±4.4, 10°.68N×91°.52E, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.6/23, mbtmp3.9/5, Error ellipse: s-maj=161.8km s-min=23.1km az=69.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**39.10**	**16**	P	P	07 40 10.5	+0.2
	0.5nm,0.8s,baz=223,slow=5.9,SNR=3.4						
ZALV	**Zalesovo Beam**	**43.49**	**354**	P	P	07 40 46.1	-0.2
	0.5nm,0.5s,baz=180,slow=9.7,SNR=3.1						
FITZ	**Fitzroy Crossi**	**44.18**	**130**	P	P	07 40 52.0	-0.4
	2.6nm,0.8s,baz=294,slow=12,SNR=4.9						
WRA	**Warramunga Arr**	**51.99**	**126**	P	P	07 41 52.4	-0.4
	1.0nm,0.5s,baz=306,slow=8.4,SNR=34						
ASAR	**Alice Springs**	**53.69**	**130**	P	P	07 42 05.8	+0.5
	3.5nm,0.8s,baz=305,slow=6.8,SNR=26						

*NEIC **29** 07:33:51.4±0.9, 10°.49N×91°.15E, h10km, mb4.3/2, Error ellipse: s-maj=25.2km s-min=11.3km az=69.0*

IDC 29 07:33:49.9±1.8, 10°.47N×91°.13E, h0km, mb3.7/7, mb1 3.8/8, mb1mx3.6/25, mbtmp3.6/8, MS4.0/1, Ms1 4.0/1, ms1mx2.7/29, Error ellipse: s-maj=62.4km s-min=17.5km az=64.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.97**	**43**	Pn	Pn	07 36 27.9	-0.3
	baz=236,slow=15,SNR=2.7						
MKAR	**Makanchi Array**	**36.97**	**350**	P	P	07 41 01.5	+0.6
	0.7nm,0.8s,baz=148,slow=8.5,SNR=2.4						
SONM	**Songino Array**	**39.41**	**16**	P	P	07 41 21.7	+0.3
	0.4nm,0.7s,baz=185,slow=8.7,SNR=2.5						
SONM				LR	LR	07 58 50.2	
	comp=Z,215nm,21.4s,baz=248,slow=38						
KURK	**Kurchatov**	**41.43**	**348**	P	P	07 41 36.6	-1.5
	0.2nm,0.3s,baz=154,slow=7.2,SNR=2.3						
ZALV	**Zalesovo Beam**	**43.66**	**355**	P	P	07 41 56.3	+0.1
	0.3nm,0.5s,baz=163,slow=10,SNR=2.4						
FITZ	**Fitzroy Crossi**	**44.35**	**130**	P	P	07 42 01.9	-0.3
	1.7nm,0.7s,baz=217,slow=5.1,SNR=2.6						
WRA	**Warramunga Arr**	**52.18**	**125**	P	P	07 43 02.4	-0.4
	0.5nm,0.3s,baz=299,slow=10.0,SNR=12						
WRAB	**Tennant Creek**	**52.18**	**125**	*e*P	P	07 43 02.3	-0.5
	2.5nm,0.9s						
ASAR	**Alice Springs**	**53.85**	**130**	P	P	07 43 15.7	+0.6
	2.3nm,0.8s,baz=307,slow=7.1,SNR=7.2						

DJA 29 08:04:44, 11°.00S×114°.35E, h55km, MLv4.2/8, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DNP	**Denpasar**	**2.46**	**20**	P	Pn	08 05 25.1	+3.4
NBBI	**Negara**	**2.63**	**6**	P	Pn	08 05 24.7	+0.7
NBBI				S	Sn	08 05 57.8	+3.1
BYJI	**Banyuwangi**	**2.77**	**0**	P	Pn	08 05 26.1	+0.2
BYJI				S	Sn	08 06 01.1	+2.9
GMJI	**Gumukmas**	**2.85**	**342**	P	Pn	08 05 29.4	+2.3
KHKI	**Kahang-Kahang**	**2.90**	**25**	P	Pn	08 05 25.5	-2.2
SRBI	**Singaraja**	**3.02**	**16**	P	Pn	08 05 28.7	-0.7
KRKI	**Karangkates**	**3.39**	**326**	P	Pn	08 05 35.3	+0.9
PWJI	**Pagerwojo**	**3.88**	**319**	P	Pn	08 05 41.7	+0.5
PWJI				S	Sn	08 06 27.7	+2.2
SJI	**Sawahan**	**4.13**	**322**	P	Pn	08 05 46.0	+1.5
PCJI	**Pacitan**	**4.19**	**311**	P	Pn	08 05 45.9	+0.5
PCJI				S	Sn	08 06 34.9	+1.8
UGM	**Wanagama**	**4.86**	**309**	P	Pn	08 05 54.3	-0.4
UGM				S	Sn	08 06 53.8	+4.1
SMRI	**Semarang**	**5.51**	**315**	P	Pn	08 05 59.2	-4.3
TTSI	**Tana Toraja**	**9.59**	**35**	P	Pn	08 06 59.8	+0.4
	2μm8.5nm,1.0s						
CGJI	**Cibinong**	**9.60**	**296**	P	Pn	08 07 00.6	+1.0

*IDC **29** 08:22:04.2±1.0, 10°.63N×91°.41E, h0km, mb4.2/14, mb1 4.2/15, mb1mx4.0/26, mbtmp4.1/15, Error ellipse: s-maj=37.8km s-min=14.1km az=59.0*

*NEIC **29** 08:22:05.8±0.5, 10°.60N×91°.48E, h10km, mb4.2/3, Error ellipse: s-maj=14.6km s-min=6.2km az=55.0*

*BJI **29** 08:22:07.8, 11°.01N×92°.05E, h10km, mB4.8/3, mb4.3/11*

*ISCJB **29** 08:22:07.6±0.7, 10°.66N±0°.09×91°.6E±0°.1, h33km, mb4.1/18, Error ellipse: s-maj=19.4km s-min=8.9km az=146.8*

ISC 29 08:22:07.3±9.4, 10°.6N±0°.1×91°.5E±0°.2, h18km±57km, n28, σ0°.69/27, mb4.1/18, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	**Kulim**	**10.48**	**120**	Pn	**Pn**	**08 24 35.8**	**-0.9**
CMAR	**Chiang Mai Arr**	**10.58**	**42**	Pn	**Pn**	**08 24 38.9**	**+0.8**
	baz=237,slow=16,SNR=3.5						
LZH	**Lanzhou**	**27.69**	**22**	*e*P	**P**	**08 27 53.5**	**-0.9**
LZH				pP	pP	08 27 58.0	-1.9
LZH				sP	sP	08 28 01.3	-0.9
LZH				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.5						
GTA	**Gaotai**	**29.60**	**13**	*e*P	**P**	**08 28 12.0**	**+0.7**
GTA				pP	pP	08 28 19.5	+2.7
GTA				sP	sP	08 28 22.8	+3.7
GTA				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.3						
DAV	**Davao City (W)**	**33.82**	**93**	P	**P**	**08 28 48.4**	**-0.4**
	comp=Z,169nm,0.4s						
AAK	**Ala-Archa**	**35.18**	**338**	P	**P**	**08 29 01.2**	**+1.0**
	comp=Z,1.2nm,0.4s,mb4.2,baz=212,slow=15,SNR=6.0						
MK31	**Makanchi Array**	**36.88**	**349**	*e*P	**P**	**08 29 15.3**	**+0.6**
MKAR	**Makanchi Array**	**36.88**	**349**	P	**P**	**08 29 14.2**	**-0.5**
	comp=Z,4.5nm,0.9s,mb4.3,baz=165,slow=8.3,SNR=21						
SONM	**Songino Array**	**39.14**	**16**	P	**P**	**08 29 34.0**	**+0.3**
	comp=Z,2.9nm,0.9s,mb4.0,baz=200,slow=9.4,SNR=19						
ULN	**Ulaanbaatar**	**39.35**	**17**	*e*P	**P**	**08 29 35.2**	**-0.2**
	comp=Z,1.1nm,0.4s,mb3.9						
KURK	**Kurchatov**	**41.35**	**348**	P	**P**	**08 29 49.8**	**-2.2**
	comp=Z,3.8nm,0.5s,mb4.3,baz=125,slow=8.7,SNR=5.0						
KURK	**Kurchatov**	**41.35**	**348**	*e*P	**P**	**08 29 52.9**	**+0.9**
KSRS	**Korea Array**	**42.21**	**45**	P	**P**	**08 29 58.5**	**-0.7**
	comp=Z,1.5nm,1.0s,mb3.6,baz=225,slow=33,SNR=4.2						
ZAA0	**Zalesovo Array**	**43.53**	**354**	*e*P	**P**	**08 30 10.1**	**+0.4**
ZALV	**Zalesovo Beam**	**43.53**	**354**	P	**P**	**08 30 10.1**	**+0.4**
	comp=Z,3.7nm,0.7s,mb4.2,baz=170,slow=9.0,SNR=19						
FITZ	**Fitzroy Crossi**	**44.15**	**130**	P	**P**	**08 30 15.3**	**+0.2**
	comp=Z,4.1nm,1.0s,mb4.1,baz=304,slow=2.5,SNR=4.5						
BVAR	**Borovoye Array**	**45.58**	**342**	P	**P**	**08 30 25.4**	**-0.6**
	comp=Z,0.4nm,0.5s,mb3.6,baz=152,slow=9.4,SNR=4.9						
WRA	**Warramunga Arr**	**51.95**	**126**	P	**P**	**08 31 15.8**	**+0.2**
	comp=Z,0.7nm,0.6s,mb3.8,baz=300,slow=9.9,SNR=17						
WRA	**Warramunga Arr**	**51.95**	**126**	P	**P**	**08 31 15.8**	**+0.2**
WRAB	**Tennant Creek**	**51.96**	**126**	*e*P	**P**	**08 31 15.6**	**0.0**
	comp=Z,4.8nm,0.7s,mb4.5						
ASAR	**Alice Springs**	**53.65**	**130**	P	**P**	**08 31 28.6**	**+0.6**
	comp=Z,2.9nm,0.8s,mb4.2,baz=301,slow=6.4,SNR=17						
STKA	**Stephens Creek**	**63.86**	**133**	P	**P**	**08 32 40.0**	**+1.0**
	comp=Z,1.5nm,0.6s,mb4.2,baz=181,slow=12,SNR=4.2						
STKA	**Stephens Creek**	**63.86**	**133**	*e*P	**P**	**08 32 39.9**	**+0.9**
	comp=Z,1.7nm,1.2s,mb4.0						
FINES	**FINESS Array B**	**69.08**	**332**	P	**P**	**08 33 10.9**	**-1.0**
	comp=Z,2.3nm,0.8s,mb4.1,baz=95,slow=4.6,SNR=6.5						
ARCES	**ARCESS Array B**	**71.81**	**340**	P	**P**	**08 33 28.2**	**-0.2**
	comp=Z,0.8nm,0.8s,mb3.7,baz=77,slow=11,SNR=4.2						
NB2	**NORSAR Subarra**	**76.08**	**330**	P	**P**	**08 33 53.8**	**+0.3**
	comp=Z,1.6nm,0.8s,mb4.0,baz=94,slow=5.9						
NOA	**NORSAR Array B**	**76.08**	**330**	P	**P**	**08 33 52.8**	**-0.7**
	comp=Z,1.2nm,0.9s,mb3.8,baz=93,slow=6.1,SNR=3.9						
NVAR	**Mina Array Bea**	**123.80**	**28**	PKP	PKPdf	08 41 04.8	+0.3
	comp=Z,0.3nm,0.7s,baz=338,slow=2.4,SNR=3.8						

*IDC **29** 08:27:57.0±4.1, 40°.07N×28°.60E, h0km, mb3.7/5, mb1 3.7/7, mb1mx3.5/26, mbtmp3.6/7, ML3.2/2, Error ellipse: s-maj=64.8km s-min=14.5km az=36.0*

*THE **29** 08:27:59.3, 40°.39N×29°.28E, h0km±2km, ML4.3/7, Error ellipse: s-maj=5.1km s-min=1.9km az=81.0*

*DDA **29** 08:28:01.3, 40°.41N×29°.00E, h7km±3km, Md3.6*

*NEIC **29** 08:28:01.0, 40°.46N×29°.02E, h5km, MD3.9(ATH), ML3.7(ISK), After ISK.*

*ISCJB **29** 08:28:01.3±0.3, 40°.44N±0°.02×29°.01E±0°.02, h9km±3km, mb3.6/5, Error ellipse: s-maj=3.0km s-min=2.5km az=23.3*

*CSEM **29** 08:28:01.6±0.1, 40°.41N×29°.00E, h5km, ML3.8, Error ellipse: s-maj=2.0km s-min=1.8km az=2.0*

*ISK **29** 08:28:01.1, 40°.41N×29°.00E, h7km, ML3.8*

*ATH **29** 08:28:13.6, 40°.29N×27°.88E, h36km, MD3.9/6*

ISC 29 08:28:01.6±0.3, 40°.42N±0°.02×29°.00E±0°.02, h4km±2km, n199, σ0°.86/235, mb3.6/5, 8C-4D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEMT	**Gemlik**	**0.14**	**83**	PG	**Pg**	**08 28 04.9**	**+0.4**
GEMT				*e*SG	**Sg**	08 28 07.3	+0.8
GEMT	**Gemlik**	**0.14**	**83**	*i* Pg	**Pg**	**08 28 04.9**	**+0.4**
GEMT				*e*Sg	**Sg**	08 28 07.3	+0.8
ARMT	**Armutlu**	**0.18**	**324**	PG	**Pg**	**08 28 05.8**	**+0.6**
ARMT				*e*SG	**Sg**	08 28 08.5	+0.9
ARMT	**Armutlu**	**0.18**	**324**	*i* Pg	**Pg**	**08 28 05.8**	**+0.6**
ARMT				*e*Sg	**Sg**	08 28 08.5	+0.9
YLV	**Yalova**	**0.32**	**62**	*e*PG	**Pg**	**08 28 08.1**	**+0.2**
YLV				*e*SG	**Sg**	08 28 12.3	+0.3
YLV	**Yalova**	**0.32**	**62**	*e*Pg	**Pg**	**08 28 08.1**	**+0.3**
YLV				*e*Sg	**Sg**	08 28 12.3	+0.3
KCT	**Karacabey**	**0.52**	**253**	*e*PG	**Pg**	**08 28 11.8**	**+0.2**
KCT	**Karacabey**	**0.52**	**253**	*e*Pg	**Pg**	**08 28 11.8**	**+0.3**
ADVT	**Abdulvahap**	**0.56**	**88**	*e*PG	**Pg**	**08 28 12.6**	**+0.2**
ADVT	**Abdulvahap**	**0.56**	**88**	*e*Pg	**Pg**	**08 28 12.6**	**+0.1**
ISK	**Istanbul-Kandi**	**0.65**	**4**	*e*PG	**Pg**	**08 28 14.1**	**0.0**
ISK	**Istanbul-Kandi**	**0.65**	**4**	*e*Pg	**Pg**	**08 28 14.1**	**0.0**
HRT	**Hereke**	**0.65**	**51**	*e*PG	**Pg**	**08 28 13.9**	**-0.2**
HRT	**Hereke**	**0.65**	**51**	*e*Pg	**Pg**	**08 28 13.9**	**-0.2**
CAVI	**Cavuskoy**	**0.68**	**108**	*e*PG	**Pg**	**08 28 14.5**	**-0.2**
CAVI	**Cavuskoy**	**0.68**	**108**	*e*Pg	**Pg**	**08 28 14.5**	**-0.2**
BGKT	**Bogazkoy**	**0.78**	**347**	*e*PG	**Pg**	**08 28 16.6**	**-0.1**
BGKT	**Bogazkoy**	**0.78**	**347**	*e*Pg	**Pg**	**08 28 16.6**	**0.0**
BNT	**Bandirma**	**0.83**	**266**	*e*PG	**Pg**	**08 28 17.4**	**-0.1**
KLYT	**Kilyos**	**0.83**	**2**	*e*PG	**Pg**	**08 28 17.8**	**+0.1**
KLYT	**Kilyos**	**0.83**	**2**	*e*Pg	**Pg**	**08 28 17.8**	**+0.1**
ELBA	**Catalca**	**0.85**	**329**	*i* P	**Pg**	**08 28 17.9**	**+0.1**
ELBA				*i* S	**Sg**	08 28 29.5	+0.6
ELBA	**Catalca**	**0.85**	**329**	*i* P	**Pg**	**08 28 18.0**	**+0.1**
ELBA				*i* S	**Sg**	08 28 29.5	+0.6
SILT	**Sile**	**0.88**	**33**	*e*PG	**Pg**	**08 28 18.5**	**0.0**
SILT	**Sile**	**0.88**	**33**	*e*Pg	**Pg**	**08 28 18.5**	**-0.1**
CTKS	**Kestanelik-??a**	**0.90**	**336**	*e*PG	**Pg**	**08 28 18.8**	**-0.1**
CTKS	**Kestanelik-??a**	**0.90**	**336**	*e*Pg	**Pg**	**08 28 18.8**	**-0.1**
DURS	**Dursunbey**	**0.91**	**206**	*i* P	**Pg**	**08 28 18.7**	**-0.4**
DURS				*i* S	**Sg**	08 28 32.3	+1.4
DURS	**Dursunbey**	**0.91**	**206**	*i* P	**Pg**	**08 28 18.7**	**-0.4**
DURS				*i* S	**Sg**	08 28 32.3	+1.4
SLVT	**Silivri**	**1.01**	**324**	*e*PG	**Pg**	**08 28 21.1**	**+0.1**
SLVT	**Silivri**	**1.01**	**324**	*e*Pg	**Pg**	**08 28 21.1**	**+0.1**
GPA	**Golpazari**	**1.01**	**97**	*e*PG	**Pg**	**08 28 20.9**	**-0.1**
GPA	**Golpazari**	**1.01**	**97**	*e*Pg	**Pg**	**08 28 20.9**	**-0.1**
SPNC	**Sapanca-Adapaz**	**1.03**	**75**	*e*PG	**Pg**	**08 28 21.3**	**-0.2**
SPNC	**Sapanca-Adapaz**	**1.03**	**75**	*e*Pg	**Pg**	**08 28 21.3**	**-0.1**
GULT	**Gulveren**	**1.16**	**89**	*e*PN	**Pn**	**08 28 23.2**	**-1.4**
GULT	**Gulveren**	**1.16**	**89**	*e*Pn	**Pn**	**08 28 23.2**	**-1.4**
BALB	**Balikesir**	**1.16**	**228**	*e*PN	**Pn**	**08 28 23.5**	**-1.1**
BALB	**Balikesir**	**1.16**	**228**	*e*Pn	**Pn**	**08 28 23.5**	**-1.1**
CTYL	**Yal??k??y-??at**	**1.19**	**333**	*e*PN	**Pn**	**08 28 23.9**	**-1.0**
CTYL	**Yal??k??y-??at**	**1.19**	**333**	*e*Pn	**Pn**	**08 28 24.0**	**-1.0**
BORA	**Eskisehir**	**1.24**	**115**	*i* P	**Pg**	**08 28 24.3**	**-1.0**
BORA				*i* S	**Sg**	08 28 41.6	+0.2
BORA	**Eskisehir**	**1.24**	**115**	*i* P	**Pg**	**08 28 24.3**	**-1.1**
BORA				*i* S	**Sg**	08 28 41.6	+0.2
TKR	**Tekirdag**	**1.25**	**298**	*e*PN	**Pn**	**08 28 25.1**	**-0.8**
TKR	**Tekirdag**	**1.25**	**298**	*e*Pn	**Pn**	**08 28 25.1**	**-0.8**
BALY	**Balya**	**1.26**	**238**	*i* P	**Pg**	**08 28 24.9**	**-0.9**
BALY				*i* S	**Sg**	08 28 42.1	+0.1
BALY	**Balya**	**1.26**	**238**	*i* P	**Pg**	**08 28 24.9**	**-0.8**
BALY				*i* S	**Sg**	08 28 42.1	+0.1
KRBG	**Karabiga-Canak**	**1.30**	**269**	*e*PN	**Pn**	**08 28 25.5**	**-1.0**
KRBG	**Karabiga-Canak**	**1.30**	**269**	*e*Pn	**Pn**	**08 28 25.5**	**-1.0**
MFT	**Murefte**	**1.36**	**286**	*e*PN	**Pn**	**08 28 26.5**	**-0.8**
MFT	**Murefte**	**1.36**	**286**	*e*Pn	**Pn**	**08 28 26.5**	**-0.9**
GDZ	**Gediz**	**1.38**	**164**	*i* P	**Pn**	**08 28 27.1**	**-0.5**
GDZ				*i* S	**Sg**	08 28 47.8	+1.9
GDZ	**Gediz**	**1.38**	**164**	*i* P	**Pn**	**08 28 27.1**	**-0.5**
GDZ				*i* S	**Sg**	08 28 47.8	+1.9
DEMI	**Demirci**	**1.39**	**189**	*i* P	**Pn**	**08 28 27.2**	**-0.6**
DEMI				*i* S	**Sb**	08 28 45.8	-0.5
DEMI	**Demirci**	**1.39**	**189**	*i* P	**Pn**	**08 28 27.2**	**-0.6**
DEMI				*i* S	**Sb**	08 28 45.8	-0.4
RKY	**Sarkoy-Tekirda**	**1.41**	**282**	*e*PN	**Pn**	**08 28 28.1**	**0.0**
RKY	**Sarkoy-Tekirda**	**1.41**	**282**	*e*Pn	**Pn**	**08 28 28.1**	**0.0**
HENT	**Hendek**	**1.50**	**74**	*i* P	**Pn**	**08 28 28.8**	**-0.5**
HENT	**Hendek**	**1.50**	**74**	*i* P	**Pn**	**08 28 28.8**	**-0.5**
ALT	**Altintas**	**1.61**	**147**	*e*PN	**Pn**	**08 28 30.6**	**-0.2**
ALT	**Altintas**	**1.61**	**147**	*e*Pn	**Pn**	**08 28 30.6**	**-0.2**
ESKT	**Eskisehir**	**1.68**	**122**	*e*PN	**Pn**	**08 28 32.0**	**+0.2**
ESKT	**Eskisehir**	**1.68**	**122**	*i* P	**Pn**	**08 28 31.1**	**-0.6**
ESKT	**Eskisehir**	**1.68**	**122**	*e*Pn	**Pn**	**08 28 32.0**	**+0.2**
SEYT	**Eskypehyr**	**1.68**	**122**	*i* P	**Pn**	**08 28 31.1**	**-0.7**
MDU	**Mudurnu**	**1.69**	**88**	*e*PN	**Pn**	**08 28 32.0**	**+0.1**
MDU	**Mudurnu**	**1.69**	**88**	*e*Pn	**Pn**	**08 28 32.0**	**+0.1**
LPK	**Lapseki**	**1.71**	**269**	*e*PN	**Pn**	**08 28 31.9**	**-0.3**
LPK	**Lapseki**	**1.71**	**269**	*e*Pn	**Pn**	**08 28 31.9**	**-0.3**
AKHS	**Akhisar**	**1.79**	**211**	*i* P	**Pn**	**08 28 32.3**	**-1.0**
AKHS	**Akhisar**	**1.79**	**211**	*i* P	**Pn**	**08 28 32.3**	**-1.0**
AKS	**Akhisar**	**1.79**	**211**	*e*PN	**Pn**	**08 28 32.4**	**-0.9**
AKS	**Akhisar**	**1.79**	**211**	*e*Pn	**Pn**	**08 28 32.4**	**-0.9**
KULA	**Kula-Manisa**	**1.92**	**188**	*e*PN	**Pn**	**08 28 35.5**	**+0.4**
KULA	**Kula-Manisa**	**1.92**	**188**	*e*Pn	**Pn**	**08 28 35.5**	**+0.4**
KDZE	**Karadeniz Ereo**	**2.06**	**63**	*e*PN	**Pn**	**08 28 37.4**	**+0.4**
KDZE	**Karadeniz Ereo**	**2.06**	**63**	*e*Pn	**Pn**	**08 28 37.4**	**+0.4**
KHAL	**Karahalli**	**2.08**	**169**	*i* P	**Pn**	**08 28 37.0**	**-0.3**
KHAL	**Karahalli**	**2.08**	**169**	*i* P	**Pn**	**08 28 37.0**	**-0.3**
AYVA	**Ayvalik**	**2.10**	**239**	*i* P	**Pn**	**08 28 37.8**	**+0.4**
AYVA	**Ayvalik**	**2.10**	**239**	*i* P	**Pn**	**08 28 37.8**	**+0.3**
KHL	**Karahalli**	**2.13**	**169**	*e*PN	**Pn**	**08 28 37.9**	**-0.1**
KHL	**Karahalli**	**2.13**	**169**	*e*Pn	**Pn**	**08 28 37.9**	**-0.1**
EZN	**Ezine**	**2.13**	**255**	*e*PN	**Pn**	**08 28 38.0**	**0.0**
EZN	**Ezine**	**2.13**	**255**	*e*Pn	**Pn**	**08 28 38.0**	**0.0**
SVRH	**Sivrihisar-ESK**	**2.17**	**116**	*e*PN	**Pn**	**08 28 38.1**	**-0.4**
SVRH	**Sivrihisar-ESK**	**2.17**	**116**	*e*Pn	**Pn**	**08 28 38.1**	**-0.4**
ENEZ	**Enez**	**2.19**	**279**	*e*PN	**Pn**	**08 28 39.1**	**+0.3**
ENEZ	**Enez**	**2.19**	**279**	*e*Pn	**Pn**	**08 28 39.1**	**+0.3**
SHUT	**Suhut-Afyon**	**2.22**	**147**	*e*PN	**Pn**	**08 28 39.7**	**+0.6**
SHUT	**Suhut-Afyon**	**2.22**	**147**	*e*Pn	**Pn**	**08 28 39.7**	**+0.6**
EDRB	**Edirne**	**2.22**	**311**	*e*PN	**Pn**	**08 28 39.7**	**+0.5**
EDRB	**Edirne**	**2.22**	**311**	*e*Pn	**Pn**	**08 28 39.7**	**+0.5**
BOLV	**Bolvadin**	**2.27**	**138**	*i* P	**Pn**	**08 28 40.8**	**+0.9**
BOLV				*i* S	**Sg**	08 29 14.5	-0.1
BOLV	**Bolvadin**	**2.27**	**138**	*i* P	**Pn**	**08 28 40.8**	**+0.9**
BOLV				*i* S	**Sg**	08 29 14.5	-0.1
ALN	**Alexandroupoli**	**2.30**	**283**	*e*Pb	**Pn**	**08 28 39.5**	**-0.8**
ALN	**Alexandroupoli**	**2.30**	**283**	P	**Pn**	**08 28 39.8**	**-0.5**
ALN				S	**Sg**	08 29 13.0	-2.5
ALN	**Alexandroupoli**	**2.30**	**283**	*e*PB	**Pn**	**08 28 39.5**	**-0.8**
ALN	**Alexandroupoli**	**2.30**	**283**	*e*Pb	**Pn**	**08 28 39.5**	**-0.8**
ALN	**Alexandroupoli**	**2.30**	**283**	P	**Pn**	**08 28 39.8**	**-0.5**
ALN				S	**Sg**	08 29 13.0	-2.5
GADA	**Gvkgeada**	**2.38**	**266**	*e*PN	**Pn**	**08 28 42.1**	**+0.7**
GADA	**Gvkgeada**	**2.38**	**266**	*e*Pn	**Pn**	**08 28 42.1**	**+0.7**
PRK	**Paraskevi**	**2.41**	**242**	*e*Pn	**Pn**	**08 28 41.1**	**-0.6**
PRK	**Paraskevi**	**2.41**	**242**	P	**Pn**	**08 28 41.3**	**-0.4**
PRK				S	**Sn**	08 29 11.4	-0.2
PRK	**Paraskevi**	**2.41**	**242**	*e*PN	**Pn**	**08 28 41.1**	**-0.6**
PRK	**Paraskevi**	**2.41**	**242**	*e*Pn	**Pn**	**08 28 41.1**	**-0.6**
PRK	**Paraskevi**	**2.41**	**242**	P	**Pn**	**08 28 41.3**	**-0.4**
PRK				S	**Sn**	08 29 11.4	-0.2
KDAG	**Bornova**	**2.42**	**214**	*i* P	**Pn**	**08 28 40.2**	**-1.7**
KDAG	**Bornova**	**2.42**	**214**	*i* P	**Pn**	**08 28 40.2**	**-1.7**
IZM	**Izmir**	**2.42**	**214**	*e*PN	**Pn**	**08 28 43.1**	**+1.1**
IZM	**Izmir**	**2.42**	**214**	*e*Pn	**Pn**	**08 28 43.1**	**+1.1**
BLCB	**Balcova**	**2.53**	**217**	*e*PN	**Pn**	**08 28 42.9**	**-0.6**
BLCB	**Balcova**	**2.53**	**217**	P	**Pn**	**08 28 42.1**	**-1.4**
BLCB				S	**Sn**	08 29 17.0	+2.2
BLCB	**Balcova**	**2.53**	**217**	P	**Pn**	**08 28 42.1**	**-1.4**
BLCB	**Balcova**	**2.53**	**217**	*e*Pn	**Pn**	**08 28 42.9**	**-0.6**
BLCB				S	**Sn**	08 29 17.0	+2.2
KIZT	**Kizilcal**	**2.70**	**124**	*e*PN	**Pn**	**08 28 45.7**	**-0.1**
KIZT	**Kizilcal**	**2.70**	**124**	*e*Pn	**Pn**	**08 28 45.7**	**-0.1**
SIGR	**SIGRI**	**2.71**	**245**	P	**Pn**	**08 28 46.2**	**+0.3**
SIGR	**SIGRI**	**2.71**	**245**	P	**Pn**	**08 28 46.2**	**+0.3**
RDO	**Rodhopi**	**2.73**	**287**	*e*Pb	**Pn**	**08 28 47.3**	**+1.1**
RDO	**Rodhopi**	**2.73**	**287**	P	**Pn**	**08 28 46.0**	**-0.2**
RDO	**Rodhopi**	**2.73**	**287**	*e*PB	**Pn**	**08 28 47.3**	**+1.1**
RDO	**Rodhopi**	**2.73**	**287**	P	**Pn**	**08 28 46.0**	**-0.2**
RDO	**Rodhopi**	**2.73**	**287**	*e*Pb	**Pn**	**08 28 47.3**	**+1.1**
JMB	**Yambol**	**2.74**	**319**	P	**Pn**	**08 28 46.5**	**+0.2**
JMB				S	**Sn**	08 29 21.2	+1.4
JMB	**Yambol**	**2.74**	**319**	P	**Pn**	**08 28 46.9**	**+0.6**
JMB	**Yambol**	**2.74**	**319**	P	**Pn**	**08 28 46.5**	**+0.2**
JMB				S	**Sn**	08 29 21.2	+1.4
ISP	**Isparta**	**2.85**	**155**	*e*PN	**Pn**	**08 28 49.2**	**+1.3**
ISP	**Isparta**	**2.85**	**155**	P	**Pn**	**08 28 43.0**	**-4.8**
SAFT	**Safranbolu**	**2.92**	**72**	*e*PN	**Pn**	**08 28 49.1**	**+0.3**
SAFT	**Safranbolu**	**2.92**	**72**	*e*Pn	**Pn**	**08 28 49.1**	**+0.3**
LIA	**Limnos Island**	**2.97**	**261**	*e*Pb	**Pn**	**08 28 49.4**	**-0.1**
LIA	**Limnos Island**	**2.97**	**261**	P	**Pn**	**08 28 49.8**	**+0.3**
LIA				S	**Sn**	08 29 29.7	+4.1
LIA	**Limnos Island**	**2.97**	**261**	*e*PB	**Pn**	**08 28 49.4**	**-0.1**
LIA	**Limnos Island**	**2.97**	**261**	P	**Pn**	**08 28 49.8**	**+0.3**
LIA				S	**Sn**	08 29 29.7	+4.1
PRD	**Provadia**	**3.03**	**337**	*e*P	**Pg**	**08 29 00.7**	**+1.1**
PRD				Pg	**Pg**	08 29 05.4	+5.8
CHOS	**Chios island**	**3.05**	**229**	P	**Pn**	**08 28 49.8**	**-0.8**
CHOS				S	**Sn**	08 29 29.3	+1.7
CHOS	**Chios island**	**3.05**	**229**	P	**Pn**

MKAR Lg 08 48 23.2
TKM2 Tokmak 2 12.24 310 P **Pn** **08 44 54.0 +0.4**
SNR=15
TKM2 Tokmak 2 12.24 310 *e*P **Pn** **08 44 53.8 +0.3**
TKM2 pmax pmax
comp=Z,33nm,1.2s
TKM2 Tokmak 2 12.24 310 *e*Pn **Pn** **08 44 53.8 +0.3**
comp=Z,33nm,1.2s
LZH Lanzhou 12.56 84 *e*P **Pn** **08 44 56.3 -1.7**
LZH pP 08 45 00.8
LZH sP 08 45 04.3
LZH PP 08 45 06.5
LZH *e*S **Sn** **08 47 18.0 -0.4**
LZH sS 08 47 25.3
LZH *e*SS 08 47 33.5
LZH pmax pmax
comp=Z,25nm,1.2s
LZH pmax pmax
comp=Z,150nm,4.6s
LZH LR LR
comp=N,2μm,9.4s
LZH LR LR
comp=Z,3μm,10.8s
UCH Uchtor 12.60 305 P **Pn** **08 44 58.8 +0.3**
SNR=6.3
UCH Uchtor 12.60 305 *e*Pn **Pn** **08 44 58.5 +0.1**
comp=Z,11nm,1.0s
AAK Ala-Archa 12.80 307 P **Pn** **08 45 02.0 +0.8**
SNR=8.2
AAK Ala-Archa 12.80 307 Pn **Pn** **08 45 01.3 +0.1**
comp=Z,0.0nm,0.3s,baz=142,slow=6.7,SNR=18
AAK LR LR 08 50 54.2
comp=Z,2μm,20.8s,baz=110,slow=42
AAK Ala-Archa 12.80 307 P **Pn** **08 45 01.3 +0.1**
AAK pmax pmax
comp=Z,1.0nm,0.3s
AAK MLR MLR
comp=Z,2μm,20.8s
AML Almayashu 13.11 304 *e*Pn **Pn** **08 45 05.7 +0.3**
comp=Z,14nm,0.6s
EKS2 Erkin-Say 13.28 306 P **Pn** **08 45 08.8 +1.0**
SNR=24
EKS2 Erkin-Say 13.28 306 *e*Pn **Pn** **08 45 08.4 +0.6**
comp=Z,23nm,1.1s
KK31 Karatay Array 15.65 304 Pn **Pn** **08 45 31.3 -8.5**
comp=Z,1.3nm,0.3s,baz=175,slow=12,SNR=51
KK31 ‖Sn 08 46 42.1
comp=Z,1.2nm,0.3s,baz=183,slow=14,SNR=7.4
KMI Kunming 16.25 126 P **Pn** **08 45 50.0 +2.4**
KMI S **Sn** **08 48 48.0 -0.3**
KMI pmax pmax
comp=Z,13nm,1.3s
KMI LR LR
comp=N,740nm,7.7s
KMI LR LR
comp=E,740nm,10.8s
KMI LR LR
comp=Z,930nm,10.5s
KURK Kurchatov 16.60 338 Pn **Pn** **08 45 49.6 -2.3**
comp=Z,0.1nm,0.3s,baz=143,slow=11,SNR=14
KURK Lg 08 50 47.3
comp=Z,0.0nm,0.3s,baz=321,slow=41,SNR=1.8
KURK LR LR 08 52 57.6
comp=Z,637nm,19.8s,baz=150,slow=40
XAN Xi'an 16.95 90 P **Pn** **08 45 57.8 +1.3**
XAN pP pP 08 46 02.5 +2.9
XAN sP sP 08 46 05.0 +4.9
XAN PP 08 46 15.5
XAN S **Sn** **08 49 12.5 +7.2**
XAN pmax pmax
comp=Z,7.0nm,1.5s
XAN pmax pmax
comp=Z,17nm,3.9s
XAN LR LR
comp=N,1μm,19.0s
XAN LR LR
comp=E,230nm,19.0s
XAN LR LR
comp=Z,270nm,12.8s
SONM Songino Array 18.07 42 P **Pn** **08 46 11.0 +0.7**
comp=Z,0.1nm,0.3s,baz=232,slow=13,SNR=21
SONM Lg 08 51 28.4
comp=Z,0.2nm,0.3s,baz=236,slow=23,SNR=4.1
SONM LR LR 08 53 43.3
comp=Z,811nm,21.7s,baz=73,slow=39
GYA Guiyang 18.15 115 P **Pn** **08 46 10.5 -1.0**
GYA PP 08 46 27.5
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,30nm,2.7s
GYA LR LR
comp=N,390nm,14.9s
GYA LR LR
comp=E,1μm,11.5s
GYA LR LR
comp=Z,1μm,11.2s
ZAA0 Zalesovo Array 18.43 353 *e*Pn **Pn** **08 46 14.2 -0.5**
ZALV Zalesovo Beam 18.43 353 P **Pn** **08 46 14.5 -0.2**
comp=Z,0.3nm,0.3s,baz=174,slow=12,SNR=16
ZALV LR LR 08 53 55.2
comp=Z,434nm,20.9s,baz=175,slow=39
ULN Ulaanbaatar 18.45 43 *e*P **Pn** **08 46 16.0 +1.1**
ULN pmax pmax
comp=Z,18nm,1.4s
ULN Ulaanbaatar 18.45 43 *e*P **Pn** **08 46 16.0 +1.0**
comp=Z,18nm,1.4s
NVS Novosibirsk 19.48 351 *e*P **Pn** **08 46 25.5 -1.9**
NVS pmax pmax
comp=Z,24nm,1.8s
NVS pmax pmax
comp=E,14nm,1.5s
CM31 Chiang Mai Arr 19.55 149 *e*P **Pn** **08 46 26.4 -2.0**
comp=E,2.7nm,0.4s
CMAR Chiang Mai Arr 19.55 149 P **Pn** **08 46 27.9 -0.6**
comp=E,0.4nm,0.3s,baz=334,slow=11,SNR=9.4
CMAR LR LR 08 54 46.2
comp=E,393nm,21.8s,baz=332,slow=39
BVAR Borovoye Array 21.48 329 P **P** **08 46 47.6 -0.3**
comp=E,3.3nm,0.7s,mb3.8,baz=133,slow=11,SNR=11
BVAR Borovoye Array 21.48 329 P **P** **08 46 47.6 -0.3**
BVAR pmax pmax
comp=Z,3.0nm,0.7s
BRVK Borovoye 21.55 329 *ce*P **P** **08 46 48.9 +0.3**
BRVK pmax pmax
comp=Z,13nm,1.0s,mb4.3
BRVK Borovoye 21.55 329 *e*P **P** **08 46 47.9 -0.7**
comp=Z,17nm,1.0s,mb4.4
WHN Wuhan 22.33 96 P **P** **08 46 58.8 +1.6**
WHN S **S** **08 51 03.0 -0.5**
WHN LR LR
comp=N,3μm,14.4s,MS4.9
WHN LR LR
comp=E,2μm,13.9s,MS4.9
WHN LR LR
comp=Z,2μm,9.5s
BJI Beijing 22.34 70 P **P** **08 47 07.3 +10**
BJI S **S** **08 51 11.8 +8.3**
BJI pmax pmax
comp=Z,13nm,1.2s,mb4.2
BJI pmax pmax
comp=Z,77nm,3.6s
BJI LR LR
comp=N,2μm,18.1s,MS4.7
BJI LR LR
comp=E,920nm,17.1s,MS4.7
BJI LR LR
comp=Z,680nm,25.4s
AKTK Aktyubinsk 26.40 313 P **P** **08 47 37.6 +1.7**
AKTK LR LR 08 59 27.2
AKTO Aktyubinsk 26.40 313 P **P** **08 47 37.6 +1.7**
comp=Z,2.5nm,0.8s,mb3.8,baz=108,slow=10,SNR=7.7
AKTO LR LR 08 59 27.2
comp=Z,579nm,18.9s,MS4.2,baz=314,slow=40
AKTO Aktyubinsk 26.40 313 P **P** **08 47 37.6 +1.7**
AKTO pmax pmax
comp=Z,3.0nm,0.8s,mb3.9
AKTO MLR MLR
comp=Z,579nm,18.9s,MS4.2
KSRS Korea Array 31.66 75 P **P** **08 48 21.3 -1.6**
comp=Z,0.6nm,0.4s,mb3.8,baz=270,slow=10.0,SNR=4.5
KSRS LR LR 09 03 44.4
comp=Z,40nm,20.8s,MS3.1,baz=281,slow=41
KSRS Korea Array 31.66 75 P **P** **08 48 21.3 -1.6**
KSRS pmax pmax
comp=Z,1.0nm,0.4s,mb4.0
KSRS MLR MLR
comp=Z,40nm,20.8s,MS3.1
DGRG David-gareji 33.84 293 P **P** **08 48 42.3 +0.4**
ONI Oni 35.18 295 P **P** **08 48 55.4 +1.9**
MOS Moscow 39.62 317 *e*P **P** **08 49 29.8 -1.1**
MJAR Matsushiro Arr 39.91 74 P **P** **08 49 33.5 -0.1**
comp=Z,0.5nm,0.3s,mb3.7,baz=180,slow=14,SNR=4.2
MJAR LR LR 09 06 54.0
comp=Z,240nm,18.5s,MS4.1,baz=280,slow=38
MJAR Matsushiro Arr 39.91 74 P **P** **08 49 33.5 -0.1**
MJAR pmax pmax
comp=Z,1.0nm,0.3s
MJAR MLR MLR
comp=Z,240nm,18.5s
OBN Obninsk 40.13 316‖ *e*P **P** **08 49 34.6 -0.6**
OBN pmax pmax
comp=Z,21nm,1.4s,mb4.7
OBN MLR MLR
comp=Z,100nm,15.0s,MS3.8
BR131 Keskin Array S 42.93 292 *e*P **P** **08 49 58.5 +0.1**
comp=Z,0.8nm,0.5s,mb3.7
BRTR Keskin Array B 42.93 292 P **P** **08 50 00.2 +1.9**
comp=Z,1.6nm,0.8s,mb3.8,baz=107,slow=6.7,SNR=6.6
BRTR Keskin Array B 42.93 292 P **P** **08 50 00.2 +1.9**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
JOF Joensuu 44.03 326 *e*P **P** **08 50 05.6 -1.3**
JOF pmax pmax
comp=Z,6.0nm,1.0s,mb4.3
JOF Joensuu 44.03 326 *e*p **P** **08 50 05.6 -1.3**
comp=Z,5.9nm,1.0s,mb4.3
JOF Joensuu 44.03 326 *e*p **P** **08 50 05.6 -1.3**
comp=Z,5.9nm,1.0s,mb4.3
AKASG Malin Array Be 44.46 309 P **P** **08 50 09.4 -1.1**
comp=Z,0.4nm,0.3s,mb3.6,baz=76,slow=6.7,SNR=6.8
AKASG LR LR 09 10 46.0
comp=Z,434nm,19.9s,MS4.4,baz=85,slow=39
IDID Didziasalis 45.76 315 *e*P **P** **08 50 20.3 -0.5**
IDID AMB AMB 08 50 21.4
comp=Z,2.7nm,0.6s,mb4.4
IZAR Zarasai 46.03 316 *e*P **P** **08 50 22.8 -0.1**
IZAR AMB AMB 08 50 24.3
comp=Z,6.1nm,0.5s,mb4.8
IIGN Ignalina 46.06 315 *e*P **P** **08 50 22.8 -0.3**
IIGN AMB AMB 08 50 23.7
comp=Z,4.9nm,1.1s,mb4.3
ISAL Salakas 46.11 316 *e*P **P** **08 50 22.8 -0.7**
ISAL AMB AMB 08 50 24.0
comp=Z,4.0nm,1.1s,mb4.3
KAF Kangasniemi 46.22 325 *e*P **P** **08 50 20.3 -4.0**
KAF pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
KAF Kangasniemi 46.22 325 *e*p **P** **08 50 20.3 -4.0**
comp=Z,4.5nm,1.0s,mb4.3
KAF Kangasniemi 46.22 325 *e*p **P** **08 50 20.3 -4.0**
comp=Z,4.5nm,1.0s,mb4.3
FINES FINESS Array B 46.28 324 P **P** **08 50 24.1 -0.6**
comp=Z,2.8nm,1.0s,mb4.2,baz=151,slow=4.4,SNR=4.7
FINES LR LR 09 09 23.4
comp=Z,112nm,20.4s,MS3.8,baz=278,slow=36
FINES FINESS Array B 46.28 324 P **P** **08 50 24.2 -0.6**
FINES pmax pmax
comp=Z,3.0nm,1.0s
FINES MLR MLR
comp=Z,112nm,20.4s
ARCES ARCESS Array B 47.61 335 P **P** **08 50 36.0 +0.9**
comp=Z,1.3nm,0.9s,mb4.0,baz=87,slow=7.5,SNR=6.9
ARCES ARCESS Array B 47.61 335 P **P** **08 50 36.0 +0.9**
ARCES pmax pmax
comp=Z,1.0nm,0.9s
PETK Petropavlovsk- 50.47 47 LR LR 09 13 05.2
comp=Z,131nm,18.4s,MS4.0,baz=25,slow=37
HFS Hagfors 52.38 322 P **P** **08 51 10.9 -0.6**
comp=Z,1.4nm,0.5s,mb4.2,baz=72,slow=9.8,SNR=6.9
HFS Hagfors 52.38 322 P **P** **08 51 10.9 -0.5**
HFS pmax pmax
comp=Z,1.0nm,0.5s
BILL Bilibino 52.97 27‖ *e*P **P** **08 51 18.2 +2.5**
BILL pmax pmax
comp=Z,9.0nm,1.7s,mb4.4
BILL MLR MLR
comp=Z,300nm,13.0s,MS4.5
NB2 NORSAR Subarra 53.46 324 P **P** **08 51 18.2 -1.2**
comp=Z,3.5nm,0.8s,mb4.3,baz=82,slow=7.4
NOA NORSAR Array B 53.46 324 P **P** **08 51 18.9 -0.5**
comp=Z,1.4nm,0.6s,mb4.0,baz=82,slow=7.3,SNR=7.4
NOA LR LR 09 13 33.3
comp=Z,117nm,18.8s,MS4.0,baz=90,slow=35
GRF Grafenberg Arr 56.00 310 *e*P **P** **08 51 38.2 +0.2**
CDF Champ du Feu 58.87 310 *e*P **P** **08 51 57.5 -0.7**
comp=Z,14nm,1.3s,mb4.5
CDF Champ du Feu 58.87 310 *e*P **P** **08 51 57.5 -0.7**
CDF pmax pmax
comp=Z,7.0nm,1.3s,mb4.5
CDF Champ du Feu 58.87 310 *e*P **P** **08 51 57.5 -0.7**
comp=Z,6.9nm,1.3s,mb4.5
HINF Hinteralfeld 59.34 309 *e*P **P** **08 52 00.7 -0.8**
comp=Z,7.8nm,1.0s,mb4.4
HINF Hinteralfeld 59.34 309 *e*P **P** **08 52 00.7 -0.8**
HINF pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
HINF Hinteralfeld 59.34 309 *e*P **P** **08 52 00.7 -0.8**
comp=Z,3.9nm,1.0s,mb4.4
HAU Haudompre 59.59 310 *e*P **P** **08 52 02.8 -0.4**
LPG La Plagne 60.24 307 *e*P **P** **08 52 07.7 -0.1**
comp=Z,7.8nm,0.8s,mb4.5
LPG La Plagne 60.24 307 *e*P **P** **08 52 07.7 -0.1**
LPG pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
LPG La Plagne 60.24 307 *e*P **P** **08 52 07.7 -0.1**
comp=Z,3.9nm,0.8s,mb4.5
LPL La Plagne 60.25 307 *e*P **P** **08 52 07.8 0.0**
comp=Z,29nm,1.3s,mb4.8
LPL La Plagne 60.25 307 *e*P **P** **08 52 07.8 0.0**
LPL pmax pmax
comp=Z,14nm,1.3s,mb4.8
LPL La Plagne 60.25 307 *e*P **P** **08 52 07.8 0.0**
comp=Z,14nm,1.3s,mb4.8
KEST Kesra 62.37 296 LR LR 09 25 05.3
comp=Z,48nm,18.5s,MS3.7,baz=202,slow=42
RJF Les Rejaudoux 63.70 308 *e*P **P** **08 52 30.7 -0.4**
FITZ Fitzroy Crossi 64.10 140 LR LR 09 22 00.0
comp=Z,130nm,19.9s,MS4.1,baz=44,slow=38
COLD Coldfoot 68.31 21 *e*P **P** **08 53 01.4 +1.1**
comp=Z,2.8nm,1.0s,mb4.2
ESDC Sonseca Array 69.90 305 LR LR 09 27 44.3
comp=Z,98nm,19.4s,MS4.1,baz=350,slow=39
WRA Warramunga Arr 70.40 134 P **P** **08 53 13.5 -0.3**
comp=Z,2.3nm,1.0s,mb4.1,baz=328,slow=6.3,SNR=8.7
WRA Warramunga Arr 70.40 134 P **P** **08 53 13.5 -0.4**
WRA pmax pmax
comp=Z,2.0nm,1.0s
WRA Warramunga Arr 70.40 134 P **P** **08 53 13.5 -0.3**
ASAR Alice Springs 73.08 137 P **P** **08 53 29.9 0.0**
comp=Z,1.4nm,0.8s,mb3.9,baz=334,slow=7.2,SNR=5.1
ASAR Alice Springs 73.08 137 P **P** **08 53 29.9 0.0**
ASAR pmax pmax
comp=Z,1.0nm,0.8s
TORD Torodi Ar. Bea 79.79 279 P **P** **08 54 08.9 +0.6**
comp=Z,0.5nm,0.9s,mb3.5,baz=30,slow=4.1,SNR=4.0
TORD LR LR 09 32 36.8
comp=Z,110nm,19.5s,MS4.2,baz=145,slow=38
YKA Yellowknife Ar 80.43 11 P **P** **08 54 12.4 +1.5**
comp=Z,1.0nm,0.8s,mb3.8,baz=338,slow=4.9,SNR=3.7
YKA Yellowknife Ar 80.43 11 P **P** **08 54 12.4 +1.5**
YKA pmax pmax
comp=Z,1.0nm,0.8s
BOSA Boshof 87.30 232 LR LR 09 31 41.0
comp=Z,83nm,18.6s,MS4.2,baz=350,slow=34
FFC Flin Flon 89.52 6 *i* P **P** **08 54 59.1 +2.4**
SIV San Ignacio 146.43 298 PKPbc PKPbc 09 01 41.9 +0.7
comp=Z,0.7nm,0.8s,baz=70,slow=5.2,SNR=3.9
CPUP Villa Florida 149.28 278 PKPbc PKPbc 09 01 46.8 -2.0
comp=Z,0.9nm,0.6s,baz=14,slow=11,SNR=5.2
LPAZ La Paz 151.50 307 PKPbc PKPbc 09 01 53.1 -1.1
comp=Z,1.1nm,0.9s,baz=114,slow=1.4,SNR=2.9

*ROM **29** 08:47:06.0±0.4, 44°.21N×12°.58E, h6km±3km, Md2.8/36, Ml2.4/26, Error ellipse: s-maj=3.3km s-min=2.6km az=60.0*
*CSEM **29** 08:47:06.7±0.1, 44°.19N×12°.54E, h15km, ML2.9/15, Error ellipse: s-maj=2.9km s-min=2.3km az=62.0*
*GEN **29** 08:47:06.4, 44°.11N×12°.62E, h0km, ML2.5*
*VIE **29** 08:47:07.9±0.5, 44°.32N×12°.58E, h10km, mb1.9/3, ML2.7/3, Error ellipse: s-maj=4.2km s-min=3.4km az=97.0*
*ISCJB **29** 08:47:07.1±0.4, 44°.23N±0°.02×12°.49E±0°.03, h24km±4km, Error ellipse: s-maj=3.9km s-min=3.2km az=179.8*
*NEIC **29** 08:47:07.2, 44°.15N×12°.64E, h10km, ML2.6(LDG), ML2.0(LJU), After LDG.*
*LDG **29** 08:47:07.2±0.2, 44°.15N×12°.64E, h10km, Ml2.6/9, Error ellipse: s-maj=4.9km s-min=3.0km az=52.0*
ISC 29 08:47:07.1±0.3, **44°.21N**±0°.02×**12°.52E**±0°.02, **h17**km±2km, **n104**, σ1**°01**/154, **2C-4D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
RSM	**Repubblica di**	**0.28**	**191**	Pg	Pg	**Pg**	**08 47 12.8**	**-0.6**
RSM	47nm,0.2s			Sg	Sg	**Sg**	**08 47 17.6**	**0.0**
RSM	**Repubblica di**	**0.28**	**191**	Pg	Pg	**Pg**	**08 47 12.8**	**-0.6**
RSM	47nm,0.2s			Sg	Sg	**Sg**	**08 47 17.6**	**0.0**
FSSB	**Fossombrone**	**0.55**	**160**	Pg	Pg	**Pg**	**08 47 16.6**	**-1.5**
FSSB	358nm,0.3s			Sg	Sg	**Sg**	**08 47 26.1**	**+0.7**
FSSB	**Fossombrone**	**0.55**	**160**	Pg	Pg	**Pg**	**08 47 16.6**	**-1.5**
FSSB	358nm,0.3s			Sg	Sg	**Sg**	**08 47 26.1**	**+0.7**
SFI	**Santa Sofia**	**0.58**	**238**	Pg	Pg	**Pg**	**08 47 17.5**	**-1.1**
SFI	170nm,0.3s			Sg	Sg	**Sg**	**08 47 26.8**	**+0.5**
PARC	**Parchiule**	**0.60**	**200**	Pg	Pg	**Pg**	**08 47 17.8**	**-1.2**
PARC	103nm,0.4s			Sg	Sg	**Sg**	**08 47 26.9**	**-0.1**
PARC	**Parchiule**	**0.60**	**200**	Pg	Pg	**Pg**	**08 47 17.8**	**-1.2**
PARC	103nm,0.4s			Sg	Sg	**Sg**	**08 47 26.9**	**-0.1**
CMPO	**Campotto Po**	**0.64**	**306**	Pg	Pg	**Pg**	**08 47 22.9**	**+3.2**
ASQU	**Asqua**	**0.67**	**232**	Pg	Pg	**Pg**	**08 47 19.2**	**-1.1**
ASQU	256nm,0.4s			Sg	Sg	**Sg**	**08 47 31.4**	**+2.1**
ASQU	**Asqua**	**0.67**	**232**	Pg	Pg	**Pg**	**08 47 19.2**	**-1.1**
PIEI	**Pieia**	**0.67**	**179**	Pg	Pg	**Pg**	**08 47 18.7**	**-1.7**
PIEI	177nm,0.4s			Sg	Sg	**Sg**	**08 47 30.4**	**+1.1**
PIEI	**Pieia**	**0.67**	**179**	Pg	Pg	**Pg**	**08 47 18.7**	**-1.7**
PIEI	177nm,0.4s			Sg	Sg	**Sg**	**08 47 30.4**	**+1.1**
SENI	**Senigallia**	**0.72**	**134**	Pg	Pg	**Pg**	**08 47 23.5**	**+2.3**
CRE	**Caprese Michel**	**0.72**	**215**	Pg	Pg	**Pg**	**08 47 21.6**	**+0.3**
	110nm,0.5s							
CRE	**Caprese Michel**	**0.72**	**215**	Pg	Pg	**Pg**	**08 47 21.6**	**+0.3**
	110nm,0.5s							
BADI	**Badiali**	**0.73**	**196**	Pg	Pg	**Pg**	**08 47 20.2**	**-1.2**
BADI	125nm,0.4s			Sg	Sg	**Sg**	**08 47 31.1**	**0.0**
BADI	**Badiali**	**0.73**	**196**	Pg	Pg	**Pg**	**08 47 20.2**	**-1.2**
BADI	125nm,0.4s			Sg	Sg	**Sg**	**08 47 31.1**	**0.0**
ARVD	**Arcevia**	**0.77**	**157**	Pg	Pg	**Pg**	**08 47 20.4**	**-1.8**
	66nm,0.2s							
ARVD	**Arcevia**	**0.77**	**157**	Pg	Pg	**Pg**	**08 47 20.4**	**-1.8**
	66nm,0.2s							
MTRZ	**Monterenzio**	**0.78**	**283**	Pg	Pg	**Pg**	**08 47 23.8**	**+1.5**
	209nm,0.5s							
MTRZ	**Monterenzio**	**0.78**	**283**	Pg	Pg	**Pg**	**08 47 23.8**	**+1.5**
	209nm,0.5s							
SEI	**Scarperia**	**0.85**	**260**	Pg	Pg	**Pg**	**08 47 23.8**	**0.0**
	260nm,0.3s							
SEI	**Scarperia**	**0.85**	**260**	Pg	Pg	**Pg**	**08 47 23.8**	**0.0**
	260nm,0.3s							
MURB	**Monte Urbino**	**0.95**	**180**	Pg	Pg	**Pg**	**08 47 24.6**	**-0.9**
	304nm,0.3s							
MURB	**Monte Urbino**	**0.95**	**180**	Pg	Pg	**Pg**	**08 47 24.6**	**-0.9**
	304nm,0.3s							
CING	**Cingoli**	**0.97**	**150**	Pg	Pg	**Pg**	**08 47 25.8**	**-0.1**
	61nm,0.6s							
CING	**Cingoli**	**0.97**	**150**	Pg	Pg	**Pg**	**08 47 25.8**	**-0.1**
	61nm,0.6s							
CAFI	**Castiglion Fio**	**0.97**	**205**	Pg	Pg	**Pg**	**08 47 25.3**	**-0.6**
	135nm,0.6s							
CAFI	**Castiglion Fio**	**0.97**	**205**	Pg	Pg	**Pg**	**08 47 25.3**	**-0.6**
	135nm,0.6s							
SNTG	**Esanatoglia**	**1.00**	**162**	Pg	Pg	**Pg**	**08 47 25.5**	**-1.1**
	32nm,0.3s							
SNTG	**Esanatoglia**	**1.00**	**162**	Pg	Pg	**Pg**	**08 47 25.5**	**-1.1**
	32nm,0.3s							
FNVD	**Fontana Vidola**	**1.01**	**268**	Pg	Pg	**Pg**	**08 47 28.8**	**+2.1**
	131nm,0.4s							
AOI	**Ancona**	**1.02**	**130**	Pg	Pg	**Pg**	**08 47 27.4**	**+0.5**
	145nm,0.3s							
AOI	**Ancona**	**1.02**	**130**	Pg	Pg	**Pg**	**08 47 27.4**	**+0.5**
	145nm,0.3s							
ASS	**Assisi**	**1.15**	**175**	Pg	Pg	**Pg**	**08 47 27.9**	**-1.5**
	21nm,0.1s							
ASS	**Assisi**	**1.15**	**175**	Pg	Pg	**Pg**	**08 47 27.9**	**-1.5**
	21nm,0.1s							
CRMI	**Carmignano**	**1.20**	**250**	Pg	Pg	**Pg**	**08 47 29.7**	**-0.6**
CRMI	42nm,0.5s			Sg	Sg	**Sg**	**08 47 47.5**	**+1.6**
CRMI	**Carmignano**	**1.20**	**250**	Pg	Pg	**Pg**	**08 47 29.7**	**-0.6**
CRMI	42nm,0.5s			Sg	Sg	**Sg**	**08 47 47.5**	**+1.6**
PZZT	**Monte Pizzetto**	**1.20**	**267**	Pg	Pg	**Pg**	**08 47 31.5**	**+1.2**
	73nm,0.5s							
PZZT	**Monte Pizzetto**	**1.20**	**267**	Pg	Pg	**Pg**	**08 47 31.5**	**+1.2**
	73nm,0.5s							
CESI	**CESI - Serrava**	**1.24**	**167**	Pg	Pn	**Pn**	**08 47 29.3**	**-0.2**
	32nm,0.4s							
CESI	**CESI - Serrava**	**1.24**	**167**	Pg	Pn	**Pn**	**08 47 29.3**	**-0.2**
	32nm,0.4s							
FDMO	**Fiordimonte**	**1.24**	**161**	Pg	Pn	**Pn**	**08 47 29.5**	**-0.1**
	48nm,0.5s							
FDMO	**Fiordimonte**	**1.24**	**161**	Pg	Pn	**Pn**	**08 47 29.5**	**-0.1**
	48nm,0.5s							
MGAB	**Montegabbione**	**1.33**	**193**	Pg	Pg	**Pg**	**08 47 32.1**	**-0.7**
MGAB	94nm,0.5s			Sg	Sg	**Sg**	**08 47 50.6**	**+0.4**
MGAB	**Montegabbione**	**1.33**	**193**	Pg	Pg	**Pg**	**08 47 32.1**	**-0.7**
MGAB	94nm,0.5s			Sg	Sg	**Sg**	**08 47 50.6**	**+0.4**
BDI	**Bagni Di Lucca**	**1.40**	**265**	Pg	Pg	**Pg**	**08 47 33.2**	**-0.8**
	55nm,1.0s							
BDI	**Bagni Di Lucca**	**1.40**	**265**	Pg	Pg	**Pg**	**08 47 33.2**	**-0.8**
	55nm,1.0s							
SACS	**San Casciano d**	**1.43**	**198**	Pg	Pn	**Pn**	**08 47 33.0**	**+0.8**
	38nm,0.7s							
NRCA	**Norcia**	**1.44**	**162**	Pg	Pn	**Pn**	**08 47 32.8**	**+0.4**
	17nm,0.5s							
NRCA	**Norcia**	**1.44**	**162**	Pg	Pn	**Pn**	**08 47 32.8**	**+0.4**
	17nm,0.5s							
MAIM	**Mastiano**	**1.50**	**259**	Pg	Pn	**Pn**	**08 47 34.1**	**+1.0**
	34nm,0.7s							
MAIM	**Mastiano**	**1.50**	**259**	P	Pn	**Pn**	**08 47 34.0**	**+0.9**
MAIM				S	Sn	**Sn**	**08 47 52.7**	**+0.5**
PII	**Pisa**	**1.52**	**252**	Pg	Pn	**Pn**	**08 47 34.5**	**+1.0**
	23nm,0.2s							
PII	**Pisa**	**1.52**	**252**	Pg	Pn	**Pn**	**08 47 34.5**	**+1.0**
	23nm,0.2s							
ARCI	**Arcidosso**	**1.56**	**210**	Pg	Pn	**Pn**	**08 47 35.1**	**+1.1**
	24nm,0.8s							
ARCI	**Arcidosso**	**1.56**	**210**	Pg	Pn	**Pn**	**08 47 35.1**	**+1.1**
	24nm,0.8s							
SKDS	**Skadanscina**	**1.71**	**38**	*i* Pn	Pn	**Pn**	**08 47 35.5**	**-0.5**
SKDS								
	comp=Z,19nm,0.2s							
NVLJ	**Novalja**	**1.72**	**77**	*e*Pn	Pn	**Pn**	**08 47 36.5**	**+0.3**
NVLJ				Sn	Sn	**Sn**	**08 47 58.3**	**+0.6**
NVLJ	**Novalja**	**1.72**	**77**	*e*Pn	Pn	**Pn**	**08 47 36.5**	**+0.3**
NVLJ				Sn	Sn	**Sn**	**08 47 58.3**	**+0.6**
TRI	**Trieste**	**1.74**	**30**	Pg	Pn	**Pn**	**08 47 35.9**	**-0.6**
TERO	**Teramo**	**1.77**	**153**	Pg	Pn	**Pn**	**08 47 37.8**	**+0.9**
CTI	**Castel Tesino**	**1.94**	**342**	Pg	Pn	**Pn**	**08 47 39.9**	**+0.7**
MAGA	**Magasa**	**2.06**	**320**	Pg	Pn	**Pn**	**08 47 41.3**	**+0.4**
	comp=Z,93nm,0.4s							
VOY	**Vojsko**	**2.06**	**28**	*e*Pn	Pg	**Pg**	**08 47 45.3**	**-1.5**
VOY				*e*Sn	Sg	**Sg**	**08 48 13.3**	**-0.2**
VOY				*e*			08 48 14.2	
VOY	**Vojsko**	**2.06**	**28**	*e*Pn	Pg	**Pg**	**08 47 45.3**	**-1.5**
SC2M	**Scurtabo**	**2.15**	**276**	P	Pn	**Pn**	**08 47 43.9**	**+1.7**
CADS	**Cadrg**	**2.19**	**23**	*i* Pn	Pn	**Pn**	**08 47 42.6**	**-0.1**
CADS				*i* Sn	Sn	**Sn**	**08 48 09.0**	**-0.4**
CADS								
	comp=Z,8.0nm,0.2s							
CADS	**Cadrg**	**2.19**	**23**	*i* Pn	Pn	**Pn**	**08 47 42.6**	**-0.1**
CADS				*i* Sn	Sn	**Sn**	**08 48 09.0**	**-0.4**
CADS	**Cadrg**	**2.19**	**23**	*i* Pn	Pn	**Pn**	**08 47 42.6**	**-0.1**
CADS				*i* Sn	Sn	**Sn**	**08 48 09.0**	**-0.4**
CRNS	**Crni Vrh**	**2.24**	**33**	*i* Pn	Pg	**Pg**	**08 47 48.8**	**-1.2**
CRNS				*i* Sn	Sn	**Sn**	**08 48 12.1**	**+1.6**
CRNS								
	comp=Z,7.0nm,0.1s							

MABI	Malga Bissina	2.33	323	Pg	Pn	08 47 45.6	+1.0
	comp=Z,6.0nm,0.5s						
ABTA	Abfaltersbach	2.54	360	⇓iPn	Pn	08 47 48.0	+0.6
ABTA				⇓iSn	Sn	08 48 18.5	+0.6
ABTA				⇑iSg	Sg	08 48 28.7	0.0
	comp=Z,10nm,0.7s						
ABTA	Abfaltersbach	2.54	360	Pn	Pn	08 47 48.0	+0.6
ABTA				Sn	Sn	08 48 18.5	+0.6
ABTA				Sg	Sg	08 48 28.7	0.0
	comp=Z,10nm,0.7s						
OBKA	Obir	2.71	31	⇓iPn	Pn	08 47 50.5	+0.8
OBKA				⇑iSn	Sn	08 48 21.6	-0.4
OBKA				⇓iSg	Sg	08 48 34.1	0.0
	comp=Z,19nm,0.4s						
OBKA	Obir	2.71	31	Pn	Pn	08 47 50.5	+0.7
OBKA				Sn	Sn	08 48 21.6	-0.5
OBKA				Sg	Sg	08 48 34.1	0.0
	comp=Z,19nm,0.4s						
PCP	Piancastagn	2.87	278	P	Pn	08 47 53.5	+1.5
PGF	Pioggiola	3.06	238	ePn	Pn	08 47 55.0	+0.4
PGF				eSn	Sn	08 48 29.2	-1.6
	comp=Z,4.7nm,0.5s						
PGF	Pioggiola	3.06	238	ePn	Pn	08 47 55.0	+0.4
PGF				eSn	Sn	08 48 29.2	-1.6
	comp=Z,2.3nm,0.5s						
IMI	Imperia	3.35	266	P	Pn	08 47 58.7	+0.1
SBF	Sospel	3.69	266	ePn	Pn	08 48 03.8	+0.6
SBF				eSn	Sn	08 48 45.3	-0.9
	comp=Z,4.9nm,0.4s						
SBF	Sospel	3.69	266	ePn	Pn	08 48 03.8	+0.6
SBF				eSn	Sn	08 48 45.3	-0.9
	comp=Z,2.5nm,0.4s						
STON	Ston	3.99	108	ePn	Pn	08 48 08.1	+0.6
STON				Sn	Sn	08 48 53.8	0.0
STON	Ston	3.99	108	ePn	Pn	08 48 08.1	+0.6
STON				Sn	Sn	08 48 53.8	0.0
MBDF	Montbardon	4.15	279	ePn	Pn	08 48 09.7	+0.1
MBDF				eSn	Sn	08 48 56.1	-1.6
	comp=Z,1.8nm,0.4s						
MBDF	Montbardon	4.15	279	ePn	Pn	08 48 09.7	+0.1
MBDF				eSn	Sn	08 48 56.1	-1.6
	comp=Z,0.9nm,0.4s						
FRF	La Foret Royal	4.30	263	ePn	Pn	08 48 12.1	+0.5
FRF				eSn	Sn	08 48 59.5	-1.8
	comp=Z,1.2nm,0.3s						
FRF	La Foret Royal	4.30	263	ePn	Pn	08 48 12.1	+0.5
FRF				eSn	Sn	08 48 59.5	-1.8
	comp=Z,0.6nm,0.3s						
LPG	La Plagne	4.30	289	ePn	Pn	08 48 11.8	+0.1
LPG				eSn	Sn	08 49 00.6	-0.8
	comp=Z,1.7nm,0.3s						
LPG	La Plagne	4.30	289	ePn	Pn	08 48 11.8	+0.1
LPG				eSn	Sn	08 49 00.6	-0.8
	comp=Z,0.9nm,0.3s						
LMR	La Mourre	4.44	261	ePn	Pn	08 48 14.0	+0.4
LMR	La Mourre	4.44	261	ePn	Pn	08 48 14.0	+0.4
CABF	La Chapelle	5.13	300	ePn	Pn	08 48 23.9	+0.9
CABF	La Chapelle	5.13	300	ePn	Pn	08 48 23.9	+0.9
HINF	Hinteralfeld	5.35	314	ePn	Pn	08 48 26.4	+0.3
HINF				eSn	Sn	08 49 25.7	-1.5
	comp=Z,1.7nm,0.4s						
HINF	Hinteralfeld	5.35	314	ePn	Pn	08 48 26.4	+0.3
HINF				eSn	Sn	08 49 25.7	-1.5
	comp=Z,0.9nm,0.4s						
CDF	Champ du Feu	5.56	321	ePn	Pn	08 48 29.8	+0.9
CDF				eSn	Sn	08 49 30.6	-1.7
	comp=Z,1.1nm,0.3s						
CDF	Champ du Feu	5.56	321	ePn	Pn	08 48 29.8	+0.9
VIVF	Saint-Julien-l	5.65	279	ePn	Pn	08 48 30.0	-0.2
VIVF	Saint-Julien-l	5.65	279	ePn	Pn	08 48 30.0	-0.2
HAU	Haudompre	5.73	314	ePn	Pn	08 48 31.7	+0.4
HAU				eSn	Sn	08 49 34.9	-1.7
	comp=Z,1.7nm,0.2s						
HAU	Haudompre	5.73	314	ePn	Pn	08 48 31.7	+0.4
HAU				eSn	Sn	08 49 34.9	-1.7
	comp=Z,0.9nm,0.2s						
LOR	Lormes	6.79	300	ePn	Pn	08 48 45.5	-0.3
	baz=117						
LOR				eSn	Sn	08 49 59.9	-2.8
	comp=Z,1.7nm,0.3s						
LOR	Lormes	6.79	300	ePn	Pn	08 48 45.5	-0.3
	baz=117						

IDC 29 08:53:51.3±1.4, 14°.52S×174°.12W, h0km, mb3.7/3, mb1 4.0/4, mb1mx3.7/17, mbtmp3.7/4, ML1.7/1, Error ellipse: s-maj=134.6km s-min=20.4km az=161.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.35	75	Pn	Pn	08 54 30.0	-1.1
	11nm,0.3s,baz=345,slow=7.1,SNR=12						
AFI				Sn	Sn	08 54 60.0	-0.8
	25nm,0.3s,baz=91,slow=22,SNR=12						
WRA	Warramunga Arr	49.38	256	P	P	09 02 43.1	+0.1
	0.1nm,0.4s,baz=84,slow=8.5,SNR=5.4						
ASAR	Alice Springs	49.73	251	P	P	09 02 45.0	-0.7
	1.9nm,0.7s,baz=88,slow=7.7,SNR=18						
PDAR	Pinedale Array	82.08	42	P	P	09 06 15.5	+1.8
	0.3nm,0.8s,baz=218,slow=4.2,SNR=4.1						

CASC 29 08:56:34.8±1.6, 8°.90N×82°.85W, h18km±6km, MD3.5, 3C-2D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTCR	Cotoan	0.09	92	⇑iP	Pg	08 56 38.9	+0.5
CTCR				eS	Sg	08 56 41.8	+0.9
BRU2	Volcan	0.19	123	⇑iP	Pg	08 56 40.5	+0.9
BRU2				eS	Sg	08 56 44.9	+2.0
ACR	Cerro Adams	0.40	232	⇓eP	Pg	08 56 42.8	-0.2
ACR				eS	Sg	08 56 48.8	+0.3
BAR1		0.57	307	eP	Pg	08 56 45.5	-0.6
BAR1				eS	Sg	08 56 53.0	-0.7
CNI	Changuinola	0.61	33	⇑iP	Pg	08 56 46.4	-0.5
CNI				eS	Sg	08 56 54.5	-0.7
BUS	Buena Vista	1.11	306	eP	Pn	08 56 54.9	-0.5
BUS				eS	Sb	08 57 10.9	+1.4
URSC	Urasca	1.30	316	eP	Pn	08 56 58.3	+0.2
PRS1	Puriscal	1.80	307	⇓eP	Pn	08 57 05.3	+0.4
PRS1				eS	Sn	08 57 27.8	+0.5

*CSEM **29** 09:03:29.9±0.2, 38°.18N×26°.58E, h2km, ML3.1/2, Error ellipse: s-maj=5.2km s-min=4.2km az=51.0*
*THE **29** 09:03:29.5, 38°.17N×26°.63E, h8km±2km, ML3.1/2, Error ellipse: s-maj=2.3km s-min=1.0km az=37.0*
*ISCJB **29** 09:03:29.8±0.6, 38°.18N±0°.03×26°.59E±0°.04, h3km±6km, Error ellipse: s-maj=5.1km s-min=4.1km az=151.6*
*DDA **29** 09:03:30.1, 38°.20N×26°.63E, h7km±3km, Md2.8*

ISC 29 09:03:30.1±0.5, 38°.17N±0°.03×26°.58E±0°.04, h5km±6km, n20, σ0.95/40, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	Izmir	0.19	4	iP	Pg	09 03 33.3	-0.6
URLA				iS	Sg	09 03 37.1	+0.7
URLA	Izmir	0.19	4	iP	Pg	09 03 33.3	-0.5
URLA				iS	Sg	09 03 37.1	+0.7
BLCB	Balcova	0.42	60	P	Pg	09 03 36.6	-1.7
BLCB				S	Sg	09 03 43.3	-0.5
BLCB	Balcova	0.42	60	P	Pg	09 03 36.6	-1.7
BLCB				S	Sg	09 03 43.3	-0.5
CHOS	Chios island	0.46	298	P	Pg	09 03 39.5	+0.5
CHOS				S	Sg	09 03 46.4	+1.3
CHOS	Chios island	0.46	298	P	Pg	09 03 39.5	+0.5
CHOS				S	Sg	09 03 46.4	+1.3
KDAG	Bornova	0.59	67	iP	Pg	09 03 40.6	-0.8
KDAG				iS	Sg	09 03 49.1	0.0
KDAG	Bornova	0.59	67	iP	Pg	09 03 40.6	-0.8
KDAG				iS	Sg	09 03 49.1	0.0
GCAM	G?zelcaml?	0.70	132	iP	Pg	09 03 43.5	0.0
GCAM				iS	Sg	09 03 53.7	+1.0
GCAM	G?zelcaml?	0.70	132	iP	Pg	09 03 43.5	-0.1
GCAM				iS	Sg	09 03 53.7	+1.0
PRK	Paraskevi	1.10	348	P	Pg	09 03 50.8	-0.4
PRK				S	Sg	09 04 06.2	+0.8
PRK	Paraskevi	1.10	348	P	Pg	09 03 50.8	-0.4
PRK				S	Sg	09 04 06.2	+0.8
SIGR	SIGRI	1.18	332	P	Pg	09 03 51.5	-1.3
SIGR				S	Sg	09 04 08.2	+0.1
SIGR	SIGRI	1.18	332	P	Pg	09 03 51.5	-1.3
SIGR				S	Sg	09 04 08.2	+0.1
BDRM	Kayabasi	1.30	148	iP	Pn	09 03 55.4	+0.5
BDRM				iS	Sb	09 04 13.6	+1.6
BDRM	Kayabasi	1.30	148	iP	Pn	09 03 55.4	+0.5
BDRM				iS	Sb	09 04 13.6	+1.6
APE	Apeiranthos	1.38	217	P	Pn	09 03 54.7	-1.3
APE				S	Sb	09 04 12.9	-1.4
APE	Apeiranthos	1.38	217	P	Pn	09 03 54.7	-1.3
APE				S	Sb	09 04 12.9	-1.4
BALY	Balya	1.76	27	iP	Pn	09 04 02.8	+1.5
BALY				iS	Sn	09 04 23.9	-0.2
BALY	Balya	1.76	27	iP	Pn	09 04 02.8	+1.5
BALY				iS	Sn	09 04 23.9	-0.2

*NEIC **29** 09:07:56.5, 35°.44N×23°.04E, h27km, MD3.5(ATH), After ATH.*
*CSEM **29** 09:07:56.5, 35°.44N×23°.04E, h27km, MD3.5, After ATH*

ATH 29 09:07:56.5, 35°.44N×23°.04E, h27km±3km, MD3.5/10, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARN	Karanos	0.72	93	ePN	Pn	09 08 11.1	+0.3
KARN				eSN	Sn	09 08 21.5	+0.5
KARN	Karanos	0.72	93	ePn	Pn	09 08 11.1	+0.3
KYTH	Kithira	0.84	360	ePb	Pb	09 08 12.1	-0.4
KYTH	Kithira	0.84	360	ePB	Pb	09 08 12.1	-0.4
KYTH	Kithira	0.84	360	ePb	Pb	09 08 12.1	-0.4
VAM	Vamos	0.95	92	ePn	Pn	09 08 15.2	+1.2
VAM	Vamos	0.95	92	ePN	Pn	09 08 15.2	+1.2
VAM				eSN	Sn	09 08 28.6	+2.0
VAM	Vamos	0.95	92	ePn	Pn	09 08 15.2	+1.2
VLI	Veliai	1.28	356	ePb	Pb	09 08 19.7	-0.2
VLI	Veliai	1.28	356	ePB	Pb	09 08 19.7	-0.2
VLI				eSN	Sn	09 08 38.3	+3.5
VLI	Veliai	1.28	356	ePb	Pb	09 08 19.7	-0.2
PYL	PYLOS	1.79	325	ePN	Pn	09 08 28.5	+2.9
PYL	PYLOS	1.79	325	ePn	Pn	09 08 28.5	+2.9
ITM	Ithomi	1.96	333	ePb	Pb	09 08 30.7	-0.7
ITM	Ithomi	1.96	333	ePB	Pb	09 08 30.7	-0.7
ITM	Ithomi	1.96	333	ePb	Pb	09 08 30.7	-0.7
LAST	Lasithi	2.01	97	ePn	Pn	09 08 30.2	+1.5
LAST	Lasithi	2.01	97	ePN	Pn	09 08 30.2	+1.5
LAST	Lasithi	2.01	97	ePn	Pn	09 08 30.2	+1.5
DID	Didima	2.07	4	ePN	Pn	09 08 31.2	+1.8
DID	Didima	2.07	4	ePn	Pn	09 08 31.2	+1.8
GUR	Goura	2.55	348	ePN	Pn	09 08 37.8	+1.7
GUR	Goura	2.55	348	ePn	Pn	09 08 37.8	+1.7
LTK	Loutraki	2.58	359	ePN	Pn	09 08 39.3	+2.9
LTK	Loutraki	2.58	359	ePn	Pn	09 08 39.3	+2.9

DJA 29 09:08:34, 1°.11S×123°.25E, h121km, MLv3.6/11, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	Luwuk	0.48	278	P	Pn	09 08 55.1	+3.2
LUWI				S	Sn	09 09 08.1	+2.6
APSI	Ampana	1.61	277	P	Pn	09 09 04.8	+2.0
APSI				S	Sn	09 09 38.4	+14
KMSI	Cibinong	1.83	24	P	Pn	09 09 05.9	+0.5
MRSI	Marisa	2.05	320	P	Pn	09 09 09.8	+1.6
KDI	Kendari	2.90	193	P	Pn	09 09 20.2	+1.2
MNI	Manado	2.99	32	P	Pn	09 09 22.0	+1.7
PCI	Palu	3.42	273	P	Pn	09 09 25.4	-0.5
MPSI	Mapaga	3.65	293	P	Pn	09 09 28.4	-0.5
LBMI	Labuha	4.28	84	P	Pn	09 09 37.4	+0.1
SPSI	Sidrap Palu	4.49	231	P	Pn	09 09 41.4	+1.3

*MEX **29** 09:42:19.0±0.6, 13°.80N×93°.28W, h26km±25km, MD5.1*
*NEIC **29** 09:42:19.5±0.3, 14°.18N×92°.72W, h6km, mb5.3/180, MS5.0/165, MW5.4, Error ellipse: s-maj=6.2km s-min=3.9km az=214.0, Moment Tensor Solution. s60 Moment tensor: Scale 10^{17}Nm; M_{rr}1.42; $M_{\theta\theta}$-1.14; $M_{\phi\phi}$-0.28; $M_{r\theta}$0.38; $M_{r\phi}$0.37; $M_{\theta\phi}$0.37; Best double couple: $M_0$1.40000×10^{17} NP1:ϕ_s305.00000°, δ42.00000°, λ113.00000°. NP2:ϕ_s95.00000°, δ52.00000°, λ71.00000°. Principal axes: T 1.5700, Plg73.0000°, Azm306.0000°; N -0.2700, Plg15.0000°, Azm106.0000°; P -1.3000, Plg5.0000°, Azm198.0000°;*
*ISCJB **29** 09:42:22.9±0.2, 14°.28N±0°.03×92°.93W±0°.02, h33km, mb5.2/212, MS5.0/202 Error ellipse: s-maj=4.6km s-min=1.8km az=31.3*
*MOS **29** 09:42:22.9±1.2, 14°.35N×92°.77W, h33km, mb5.4/58, MS5.0/46, Error ellipse: s-maj=7.5km s-min=4.2km az=96.1*
*GCMT **29** 09:42:24.5±0.1, 14°.16N×93°.31W, h12km, MW5.5, Moment Tensor Solution. s87,c149; s91,c179; Moment tensor: Scale 10^{17}Nm; M_{rr}1.19±.02; $M_{\theta\theta}$-0.97±.02; $M_{\phi\phi}$-0.22±.02; $M_{r\theta}$1.30±.04; $M_{r\phi}$0.46±.02; $M_{\theta\phi}$-0.78±.05; Best double couple: $M_0$1.90000×10^{17} NP1:ϕ_s291.00000°, δ19.00000°, λ82.00000°. NP2:ϕ_s120.00000°, δ71.00000°, λ93.00000°. Principal axes: T 1.9300, Plg64.0000°, Azm34.0000°; N -0.0100, Plg3.0000°, Azm299.0000°; P -1.9200, Plg26.0000°, Azm208.0000°; Data Used: II IU IC G CN.*
*CASC **29** 09:42:25.2±2.2, 14°.38N×92°.90W, h102km±38km, MD4.6, ML4.3, mb5.3(NEIC)*
*SZGRF **29** 09:42:26.1, 14°.61N×92°.78W, h33km, mb5.2, MS5.2, Near coast of Chiapas, Mexico*
*IDC **29** 09:42:26.5±3.4, 14°.45N×92°.70W, h49km±31km, mb4.3/19, mb1 4.5/20, mb1mx4.4/23, mbtmp4.3/20, ML4.7/1, MS4.9/24, Ms1 4.9/24, ms1mx4.8/32, Error ellipse: s-maj=24.5km s-min=10.7km az=62.0*

ISC 29 09:42:25.0±0.2, 14°.30N±0°.03×92°.87W±0°.02, h35km, n1067, σ1.02/1036, mb5.2/212, MS5.0/202, 256C-235D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.84	44	eP	Pn	09 42 41.7	+1.4
THIG				eS	Sn	09 42 58.6	+7.2
JAT	Jato	1.19	89	⇑eP	Pn	09 42 47.9	+2.7
PCIG		1.43	346	eP	Pn	09 42 46.7	-1.8
PCIG				eS	Sn	09 43 10.3	+4.1
TP2	Tecpan 2	1.85	75	⇑eP	Pn	09 42 57.7	+3.4
FUG	Fuego 3	1.97	86	eP	Pn	09 42 58.2	+2.3
PCG	Pacaya	2.19	87	eP	Pn	09 43 01.3	+2.4
APG	El Apazote	2.43	73	P	Pn	09 43 04.3	+2.1
	54nm,0.3s,baz=248,slow=6.8,SNR=366						
NBG	Las Nubes	2.46	83	eP	Pn	09 43 06.8	+4.2
TGIG		2.47	354	eP	Pn	09 43 03.9	+1.1
TGIG				eS	Sn	09 43 36.2	+4.4
RBDL	Robledal	3.09	93	eP	Pn	09 43 13.7	+2.3
RTR	El Retiro	3.15	97	eP	Pn	09 43 14.6	+2.4
MRL	Marmol	3.17	76	eP	Pn	09 43 15.8	+3.5
SBLS	San Blas	3.18	98	eP	Pn	09 43 15.0	+2.4
SNJE	San Jose	3.19	97	eP	Pn	09 43 14.9	+2.1
CMIG	Matias Romero	3.38	325	P	Pn	09 43 13.2	-2.2
	25nm,0.3s,baz=149,slow=11,SNR=379						
CMIG				S	Sn	09 43 55.3	+1.0
	353nm,0.3s,baz=49,slow=8.7,SNR=10						
CMIG	Matias Romero	3.38	325	eP	Pn	09 43 11.2	-4.2
CMIG				eS	Sn	09 43 52.0	-2.3
HUIG	Huatulco	3.45	295	eP	Pn	09 43 07.9	-8.4
HUIG				eS	Sn	09 43 46.7	-9.3
BOQS	Boqueron	3.53	99	eP	Pn	09 43 19.2	+1.9
SNET	Serv Nac Est T	3.58	99	eP	Pn	09 43 17.6	-0.5
SNET				eS	Sn	09 44 03.0	+3.8
LBRS	Las Brisas	3.75	98	eP	Pn	09 43 22.2	+1.8
LFRS	El Faro	3.76	100	eP	Pn	09 43 22.2	+1.7
TUIG	Tuzandepetl	4.00	338	eP	Pn	09 43 21.0	-2.8
TUIG				eS	Sn	09 44 11.4	+2.0
VSM	San Miguel	4.55	100	eP	Pn	09 43 32.8	+1.5
CAHU	Cacacuatique	4.55	96	eP	Pn	09 43 33.1	+1.7
BLLM	Bellamira	4.58	100	eP	Pn	09 43 34.1	+2.3
VHO	Vista Hermosa	4.63	307	eP	Pn	09 43 26.7	-5.8
VHO				eS	Sn	09 44 19.4	-5.7
SCIG	Sabancuy	4.91	19	eP	Pn	09 43 39.0	+2.7
SCIG				eS	Sn	09 44 39.3	+7.3
CNCH	Conchagua	5.00	101	eP	Pn	09 43 39.6	+2.1
TGUH	Tegucigalpa,Un	5.43	92	ePn	Pn	09 43 45.4	+1.8
TGUH	Tegucigalpa,Un	5.43	92	eP	Pn	09 43 41.8	-1.8
TGUH				eS	Sn	09 45 07.0	+22
TGUH				AML	AML	09 45 21.6	
	comp=E,600nm,0.7s						
PNIG	Pinotepa	5.48	293	eP	Pn	09 43 36.6	-7.6
PNIG				eS	Sn	09 44 35.4	-11
CRIN	San Cristobal	5.88	105	eP	Pn	09 43 50.1	+0.4
CRIN				AML	AML	09 45 37.0	
	comp=N,483nm,0.7s						
LEON	Leon	6.11	107	eP	Pn	09 43 53.4	+0.5
CNGN	Cerro Negro	6.26	106	eP	Pn	09 43 59.9	+4.9
MOMN	Momotombo	6.44	106	eP	Pn	09 43 59.3	+1.9
COPN	Copaltepe	6.46	108	eP	Pn	09 43 59.1	+1.4
CSAN		6.62	108	eP	Pn	09 44 01.9	+2.0
MGAN	Managua	6.79	108	eP	Pn	09 44 05.1	+2.8
HUEN		6.80	106	eP	Pn	09 44 03.5	+1.2
BOAB	BOACO BROADBAN	7.25	104	eP	Pn	09 44 06.0	-2.5
TEIG	Tepich	7.34	36	ePn	Pn	09 44 10.9	+1.1
TEIG	Tepich	7.34	36	eP	Pn	09 44 09.7	-0.1
JTS	JuntasAbangare	8.70	116	Pn	Pn	09 44 32.0	+3.5
	comp=N,598nm,1.0s,SNR=14						
JCR	Jicaral	8.78	119	eP	Pn	09 44 32.8	+3.2
CGA2	Cerro Gallo 2	9.25	116	eP	Pn	09 44 40.3	+4.3
PRS1	Puriscal	9.40	116	eP	Pn	09 44 42.3	+4.2
LAJ	Bijagual	9.62	116	eP	Pn	09 44 40.6	-0.5
QCR	Quepos	9.80	119	eP	Pn	09 44 47.4	+3.8
URSC	Urasca	9.94	116	eP	Pn	09 44 48.8	+3.4
BUS	Buena Vista	10.09	117	eP	Pn	09 44 50.6	+3.2
BAR1		10.62	117	eP	Pn	09 44 57.6	+2.8
ACR	Cerro Adams	11.04	120	eP	Pn	09 45 03.7	+3.2
KVTX	Kingsville	13.98	341	ePn	Pn	09 45 43.4	+2.8
PAYG	Puerto Ayora	15.10	170	eP	Pn	09 45 57.5	+1.7
	comp=N,112nm,1.2s						
MTDJ	Mount Denham	15.23	73	eP	Pn	09 46 03.1	+5.6
	comp=N,370nm,1.4s						
HKT	Hockley	15.81	351	eP	Pn	09 46 04.5	-0.5
HKT				pmax	pmax		
	comp=Z,891nm,2.1s						
HKT	Hockley	15.81	351	eP	Pn	09 46 04.5	-0.5
	comp=Z,891nm,2.1s						
JCT	Junction City	17.32	340	eP	Pn	09 46 22.3	-1.8
JCT				pmax	pmax		
	comp=Z,113nm,1.0s						
JCT	Junction City	17.32	340	eP	Pn	09 46 22.3	-1.8
	comp=Z,113nm,1.0s						
DWPF	Disney	17.37	36	eP	Pn	09 46 25.5	+0.8
	comp=Z,130nm,1.1s						
NATX	Nacogdoches	17.45	355	eP	Pn	09 46 26.0	+0.3
	comp=Z,1μm,2.5s						
NATX				eS	S	09 49 41.0	-5.3
BRAL	Brewton	17.47	17	eP	Pn	09 46 30.9	+5.0
	comp=Z,3μm,2.3s						
628A	Black Gap, Mar	17.72	330	⇑P	Pn	09 46 27.4	-1.7
	baz=18,SNR=149						
627A	Terlingua Ranc	17.94	329	⇑P	Pn	09 46 29.8	-1.9
	baz=18,SNR=340						
627A				⇑S	S	09 50 06.9	+11
	baz=18						
VBMS	Vicksburg	17.96	6	eP	Pn	09 46 32.7	+0.8
	comp=Z,169nm,1.0s						
TXAR	Lajitas Array	17.99	328	P	Pn	09 46 32.3	0.0
	comp=Z,0.6nm,0.3s,baz=150,slow=13,SNR=70						
TXAR				LR	LR	09 53 36.1	
	comp=Z,1μm,18.9s,baz=195,slow=37						
528A	Cox Ranch, San	18.24	332	⇓P	Pn	09 46 34.9	-0.5
	baz=18,SNR=157						
528A				⇑S	S	09 50 12.8	+10
	baz=18						
626A	Big Bend Ranch	18.41	327	⇓P	Pn	09 46 37.0	-0.5
	baz=19,SNR=145						
626A				⇓S	S	09 50 13.3	+7.6
	baz=19						
527A	Woodward Ranch	18.62	330	⇓P	Pn	09 46 39.5	-0.5
	baz=19,SNR=116						
527A				⇓S	S	09 50 18.4	+8.4
	baz=19						
428A	Kincaid Ranch,	18.67	333	⇓P	Pn	09 46 40.5	-0.1
	baz=19,SNR=68						
526A	Mary Lane Ranc	18.79	328	⇓P	Pn	09 46 42.1	+0.1
	baz=19,SNR=104						
427A	Hayter Ranch,	19.10	331	⇑P	Pn	09 46 45.0	-0.8
	baz=19,SNR=64						
427A				⇓S	S	09 50 29.9	+10
	baz=19						
426A	McDonald Obser	19.25	330	⇓P	Pn	09 46 47.3	-0.3
	baz=20,SNR=117						
426A				⇓S	S	09 50 31.0	+8.2
	baz=20						
328A	Wristen Ranch,	19.29	333	⇓P	Pn	09 46 47.5	-0.5
	baz=20,SNR=92						
328A				⇓S	S	09 50 32.6	+9.1
	baz=20						
LRAL	Lakeview Retre	19.40	15	eP	Pn	09 46 48.4	-0.9
	comp=Z,113nm,1.4s						
327A	Balmorhea Ranc	19.58	332	⇓P	Pn	09 46 50.9	-0.7
	baz=20						
327A				⇓S	S	09 50 35.5	+6.1
	baz=20						
326A	Caldwell Ranch	19.76	331	P	Pn	09 46 52.7	-1.0
	baz=20,SNR=91						
326A				⇑S	S	09 50 38.8	+5.8
	baz=20						
OTAV	Otavalo	19.97	133	eP	Pn	09 46 56.8	+0.4
	comp=Z,44nm,1.3s						
227A	Bennet, Jal	20.04	333	⇑P	P	09 46 55.6	+0.5
	baz=20,SNR=62						
227A				⇑S	S	09 50 45.9	+7.5
	baz=20						
MIAR	Mount Ida	20.16	358	eP	P	09 46 55.4	-1.0
MIAR				eS	S	09 50 30.7	-10
MIAR				pmax	pmax		
	comp=Z,168nm,1.0s						
MIAR				MLR	MLR		
	comp=Z,1μm,19.0s						
MIAR	Mount Ida	20.16	358	eP	P	09 46 55.4	-1.0
	comp=Z,168nm,1.0s						
MIAR				eS	S	09 50 30.7	-10
MIAR				LR	LR		
	comp=Z,1μm,19.0s						
325A	Bean Ranch, Si	20.29	329	⇓P	P	09 46 57.2	-0.6
	baz=20,SNR=27						
325A				⇑S	S	09 50 48.8	+5.2
	baz=20						
OXF	Oxford	20.36	8	eP	P	09 47 02.1	+3.6
OXF				pmax	pmax		
	comp=Z,305nm,1.2s						
OXF				MLR	MLR		
	comp=Z,3μm,20.0s,MS4.7						
OXF	Oxford	20.36	8	eP	P	09 47 02.1	+3.6
	comp=Z,305nm

126A **Clayton Basin,** 20.90 333 ⇓P P 09 47 03.7 -0.7
baz=21,SNR=75
126A ⇓S S 09 50 56.9 +1.3
baz=21
WMOK **Wichita Mounta** 21.04 346 *e*P P 09 47 03.8 -2.0
WMOK *e*S S 09 50 55.0 -3.1
WMOK pmax pmax
comp=Z,84nm,1.2s,mb5.0
WMOK **Wichita Mounta** 21.04 346 *e*P P 09 47 03.8 -2.0
comp=Z,84nm,1.2s,mb5.0
WMOK *e*S S 09 50 55.0 -3.1
Z27A **Tatum** 21.14 335 ⇓P P 09 47 06.2 -0.7
baz=21,SNR=210
Z27A ⇑S S 09 51 00.1 0.0
baz=21
224A **Cornudas Mount** 21.14 329 ⇓P P 09 47 06.4 -0.5
baz=21,SNR=111
224A ⇓S S 09 50 59.0 -1.2
baz=21
CPRX **Cap Rock** 21.16 334 *e*P P 09 47 07.3 +0.2
comp=Z,172nm,1.0s,mb5.3
SDDR **Presa de Saban** 21.19 74 PFAKE 09 47 20.0 +12
SDDR LR LR
comp=Z,7μm,19.0s,MS5.1
125A **Gardner Draw,** 21.20 332 ⇓P P 09 47 07.3 -0.3
baz=21
125A ⇓S S 09 51 01.1 -0.3
baz=21
HBAR **Harrisburg** 21.25 5 *e*P P 09 47 08.5 +0.4
Z26A **Caprock** 21.42 334 ⇓P P 09 47 09.4 -0.5
baz=22,SNR=210
Z26A ⇓S S 09 51 05.4 -0.3
baz=22
MSTX **Muleshoe** 21.54 337 ⇓P P 09 47 10.3 -1.0
baz=22,SNR=37
223A **Chaparral, Ant** 21.55 327 ⇓P P 09 47 10.5 -0.8
baz=22
223A ⇓S S 09 51 14.2 +6.0
baz=22
124A **Stringfield Ra** 21.61 330 ⇑P P 09 47 12.0 -0.1
baz=22,SNR=231
124A ⇑S S 09 51 09.7 +0.2
baz=22
Y27A **Causey** 21.61 336 ⇓P P 09 47 11.3 -0.8
baz=22,SNR=80
Y27A ⇑S S 09 51 09.9 +0.4
baz=22
SWET **Sewanee** 21.74 15 *e*P P 09 47 14.2 +0.8
Z25A **Roswell** 21.75 332 P P 09 47 12.9 -0.5
baz=22,SNR=100
Z25A ⇓S S 09 51 12.2 +0.1
baz=22
HALT **Halls** 21.75 8 *e*P P 09 47 15.1 +1.6
GRTK **Grand Turk** 21.87 68 PFAKE 09 47 20.0 +5.0
GRTK LR LR
comp=Z,3μm,19.0s,MS4.7
Y26A **Elida** 21.91 335 ⇓P P 09 47 14.4 -0.8
baz=22
123A **Bell Site, Whi** 21.96 328 ⇓P P 09 47 15.3 -0.4
baz=22,SNR=15
123A ⇑S S 09 51 16.4 +0.1
baz=22
COW **Cow Castle Cre** 21.98 28 *e*P P 09 47 17.6 +1.6
AMTX **Amarillo** 21.98 340 *e*P P 09 47 15.1 -0.8
comp=Z,213nm,0.8s,mb5.6
AMTX LR LR
comp=Z,2μm,19.0s,MS4.5
222A **Williams Famil** 21.98 326 ⇑P P 09 47 16.2 +0.2
baz=22
NHSC **New Hope** 21.99 29 *e*P P 09 47 18.7 +2.6
comp=Z,326nm,1.1s,mb5.7
NHSC LR LR
comp=Z,11μm,19.0s,MS5.3
Z24A **Sheeppen Canyo** 22.09 331 ⇑P P 09 47 17.3 +0.2
baz=22,SNR=143
GLAT **Glass** 22.11 8 *e*P P 09 47 16.8 -0.5
WVT **Waverly** 22.20 11 *e*P P 09 47 16.9 -1.4
WVT pmax pmax
comp=Z,58nm,1.1s,mb4.9
WVT **Waverly** 22.20 11 *e*P P 09 47 16.9 -1.4
comp=Z,58nm,1.1s,mb4.9
320A **Kipp Ranch, An** 22.22 322 ⇓P P 09 47 18.9 +0.3
baz=22,SNR=55
UTMT **University of** 22.24 9 *e*P P 09 47 17.0 -1.6
comp=Z,157nm,1.0s,mb5.4
X27A **F and S Farms,** 22.26 337 ⇑P P 09 47 18.2 -0.8
baz=22,SNR=33
Y25A **Mesa, Roswell** 22.28 333 ⇑P P 09 47 19.0 -0.1
baz=22,SNR=153
Y25A ⇑S S 09 51 17.1 -5.4
baz=22
221A **Mesquite Ranch** 22.28 325 ⇓P P 09 47 19.3 +0.1
baz=22,SNR=20
221A ⇑S S 09 51 23.9 +1.4
baz=22
CPCT **Cooper Cave** 22.36 18 *e*P P 09 47 19.3 -0.6
122A **Conniff Cattle** 22.39 327 ⇓P P 09 47 20.2 -0.1
baz=23,SNR=20
PARMO **Parma** 22.44 7 *e*P P 09 47 20.6 -0.2
Z23A **Rita Site, Whi** 22.45 330 ⇓P P 09 47 20.9 0.0
baz=23,SNR=80
Z23A ⇓S S 09 51 30.6 +4.9
baz=23
X26A **CR and CF Fran** 22.45 336 ⇓P P 09 47 20.3 -0.7
baz=23,SNR=110
JSC **Jenkinsville** 22.49 26 *e*P P 09 47 21.1 -0.3
Y24A **Capitan** 22.61 332 ⇑P P 09 47 22.7 0.0
baz=23,SNR=155
Y24A ⇓S S 09 51 24.1 -4.5
baz=23
W27A **Bowe Ranch, En** 22.62 338 ⇓P P 09 47 21.6 -1.1
baz=23,SNR=114
W27A ⇓S S 09 51 30.8 +2.1
baz=23
220A **Playas Peak, P** 22.63 323 ⇓P P 09 47 23.0 +0.1
baz=23,SNR=51
220A ⇓S S 09 51 40.9 +12
baz=23
121A **Cookes Peak, D** 22.68 326 ⇑P P 09 47 23.9 +0.5
baz=23,SNR=136
121A ⇑S S 09 51 29.9 +0.1
baz=23
319A **Douglas** 22.70 321 ⇑P P 09 47 23.5 -0.2
baz=23,SNR=45
319A ⇑S S 09 51 24.0 -6.0
baz=23
TKL **Tuckaleechee C** 22.78 19 P P 09 47 23.4 -1.1
comp=Z,13nm,1.0s,mb4.3,baz=193,slow=13,SNR=9.6
TKL LR LR 09 58 15.0
comp=Z,4μm,18.4s,MS4.9,baz=201,slow=42
TKL **Tuckaleechee C** 22.78 19 *e*P P 09 47 24.1 -0.4
X25A **Clemmons Ranch** 22.78 334 ⇑P P 09 47 24.4 -0.1
baz=23,SNR=31
X25A ⇑S S 09 51 31.7 +0.4
baz=23
Z22A **Elephant Butte** 22.81 328 ⇑P P 09 47 24.4 -0.3
baz=23,SNR=32
Z22A ⇓S S 09 51 33.6 +1.8
baz=23
Y23A **Lovelace Mesa,** 22.91 331 ⇓P P 09 47 25.8 0.0
baz=23,SNR=104
Y23A ⇓S S 09 51 36.3 +2.9
baz=23
W26A **Owens Ranch, T** 22.91 337 ⇓P P 09 47 25.1 -0.7
baz=23,SNR=43
W26A ⇓S S 09 51 35.5 +2.1
baz=23
219A **White Tail Can** 23.13 322 ⇓P P 09 47 28.2 0.0
baz=23
X24A **Lazy VL Ranch,** 23.15 333 ⇑P P 09 47 27.8 -0.5
baz=23
X24A ⇑S S 09 51 39.1 +1.8
baz=23
120A **U Bar Ranch, L** 23.16 324 ⇑P P 09 47 28.6 +0.1
baz=23,SNR=53
120A ⇓S S 09 51 34.7 -3.0
baz=23
318A **Bisbee** 23.18 320 ⇑P P 09 47 28.1 -0.6
baz=23,SNR=63
318A ⇑S S 09 51 35.3 -2.6
baz=23
Z21A **St. Cloud Mine** 23.22 327 ⇑P P 09 47 29.2 +0.2
baz=24
Z21A ⇑S S 09 51 38.5 +0.1
baz=24
W25A **X Bar L Ranch,** 23.30 335 ⇓P P 09 47 29.4 -0.5
baz=24,SNR=114
W25A ⇑S S 09 51 43.1 +3.4
baz=24
Y22A **Socorro** 23.35 329 ⇑P P 09 47 30.4 -0.1
baz=24,SNR=76
Y22A ⇑S S 09 51 45.5 +4.9
baz=24
BNM **Barren Site** 23.36 330 *e*P P 09 47 31.7 +1.2
comp=Z,156nm,1.4s,mb5.2
Y22D **IRIS PASSCAL I** 23.44 330 ⇓P P 09 47 31.7 +0.4
baz=24,SNR=14
Y22D ⇓S S 09 51 44.3 +2.2
baz=24
LPM **Los Pinos Moun** 23.49 330 *e*P P 09 47 32.4 +0.6
X23A **Hourglass Bar** 23.50 332 ⇓P P 09 47 32.1 +0.2
baz=24
X23A ⇓S S 09 51 49.0 +5.9
baz=24
V26A **Tequesquite Ra** 23.54 337 ⇓P P 09 47 31.4 -0.8
baz=24,SNR=101
V26A ⇑S S 09 51 44.9 +1.2
baz=24
SIUC **Southern Illin** 23.54 7 *e*P P 09 47 30.2 -2.0
comp=Z,212nm,1.3s,mb5.4
Z20A **Nine Sixteen R** 23.56 325 ⇓P P 09 47 32.9 +0.5
baz=24,SNR=90
Z20A ⇑S S 09 51 48.8 +4.7
baz=24
218A **Dragoon** 23.58 321 ⇓P P 09 47 32.5 -0.2
baz=24,SNR=30
W24A **Lazy 6 Ranch,** 23.68 334 ⇑P P 09 47 33.0 -0.5
baz=24,SNR=67
W24A ⇑S S 09 51 49.3 +3.3
baz=24
FVM **French Village** 23.68 5 *e*P P 09 47 32.2 -1.3
FVM pmax pmax
comp=Z,105nm,1.5s,mb5.0
FVM **French Village** 23.68 5 *e*P P 09 47 32.1 -1.4
comp=Z,105nm,1.5s,mb5.0
CCM **Cathedral Cave** 23.70 3 *e*P P 09 47 30.9 -2.8
CCM pmax pmax
comp=Z,99nm,1.2s,mb5.1
CCM MLR MLR
comp=Z,2μm,19.0s,MS4.5
CCM **Cathedral Cave** 23.70 3 *e*P P 09 47 30.9 -2.8
comp=Z,99nm,1.2s,mb5.1
CCM LR LR
comp=Z,2μm,19.0s,MS4.5
119A **Ashpeak Ranch,** 23.71 324 ⇑P P 09 47 34.2 +0.4
baz=24,SNR=44
119A ⇓S S 09 51 52.8 +6.3
baz=24
Y21A **Point of Rocks** 23.76 328 ⇑P P 09 47 35.1 +0.8
baz=24,SNR=44
Y21A ⇑S S 09 51 44.1 -3.2
baz=24
LAZ **Ladron** 23.81 330 *e*P P 09 47 35.8 +1.1
comp=Z,66nm,1.1s,mb5.0
X22A **Bernardo** 23.83 330 ⇓P P 09 47 36.1 +1.2
baz=24,SNR=20
X22A ⇑S S 09 51 58.2 +10
baz=24
V25A **Rancho No Teng** 23.90 336 ⇓P P 09 47 35.6 +0.1
baz=24,SNR=124
V25A ⇓S S 09 51 56.7 +7.2
baz=24
ANMO **Albuquerque** 23.93 332 P P 09 47 36.2 +0.4
comp=Z,18nm,1.0s,mb4.5,baz=148,slow=12,SNR=28
ANMO LR LR 09 59 19.7
comp=Z,1μm,19.2s,MS4.5,baz=7.6,slow=42
ANMO **Albuquerque** 23.93 332 *e*P P 09 47 36.0 +0.2
ANMO pmax pmax
comp=Z,22nm,1.4s
ANMO MLR MLR
comp=Z,2μm,19.0s
ANMO **Albuquerque** 23.93 332 *e*P P 09 47 36.0 +0.2
comp=Z,22nm,1.4s,mb4.4
ANMO LR LR
comp=Z,2μm,19.0s,MS4.6
W23A **Werner Place,** 23.97 332 ⇓P P 09 47 35.9 -0.3
baz=24,SNR=26
118A **Homack Ranch,** 24.00 322 ⇓P P 09 47 36.6 +0.1
baz=24,SNR=76
USIN **University of** 24.02 10 *e*P P 09 47 34.3 -2.3
comp=Z,33nm,0.8s,mb4.8
Y20A **Hope Springs,** 24.05 327 ⇓P P 09 47 37.5 +0.5
baz=24,SNR=158
Y20A ⇓S S 09 52 06.4 +14
baz=24
U26A **Atchley Ranch,** 24.06 338 ⇑P P 09 47 36.9 -0.1
baz=24,SNR=119
U26A ⇓S S 09 52 01.9 +10
baz=24
Z19A **T-Link Ranch,** 24.07 325 ⇑P P 09 47 37.2 +0.1
baz=24,SNR=11
Z19A ⇑S S 09 52 00.5 +8.2
baz=24
X21A **Alamocita Cree** 24.17 329 ⇑P P 09 47 38.6 +0.6
baz=24,SNR=133
X21A ⇓S S 09 52 06.6 +13
baz=24
W22A **Albuquerque** 24.22 331 ⇑P P 09 47 38.6 +0.2
baz=24,SNR=10.0
TUC **Tucson** 24.27 321 *e*P P 09 47 38.6 -0.3
TUC pmax pmax
comp=Z,104nm,1.2s,mb5.1
TUC **Tucson** 24.27 321 *e*P P 09 47 38.6 -0.3
comp=Z,104nm,1.2s,mb5.1
U25A **Circle Dot Ran** 24.31 337 ⇑P P 09 47 39.7 +0.4
baz=25,SNR=103
U25A ⇑S S 09 52 09.9 +14
baz=25
SLM **Saint Louis** 24.35 5 *e*P P 09 47 38.9 -0.7
SLM pmax pmax
comp=Z,105nm,1.3s,mb5.1
SLM **Saint Louis** 24.35 5 *e*P P 09 47 38.9 -0.6
comp=Z,105nm,1.3s,mb5.1
Z18A **Geronimo** 24.36 323 ⇑P P 09 47 40.6 +0.8
baz=25
117A **Oracle** 24.42 321 ⇓P P 09 47 40.3 0.0
baz=25,SNR=34
117A ⇑S S 09 52 10.7 +13
baz=25
V23A **Ortiz Mt. (NFS** 24.47 333 ⇓P P 09 47 41.5 +0.8
baz=25,SNR=72
V23A ⇑S S 09 52 14.6 +16
baz=25
216A **Three Points,** 24.48 319 P P 09 47 41.1 +0.2
baz=25,SNR=39
216A ⇓S S 09 52 11.3 +12
baz=25
WCI **Wyandotte Cave** 24.53 13 *e*P P 09 47 40.0 -1.3
WCI *e* 09 47 57.0
WCI pmax pmax
comp=Z,88nm,1.1s,mb5.2
WCI **Wyandotte Cave** 24.53 13 *e*P P 09 47 40.0 -1.3
comp=Z,88nm,1.1s,mb5.2
WCI *e* 09 47 57.0
Y19A **Nutrioso** 24.56 326 ⇓P P 09 47 42.2 +0.6
baz=25,SNR=54
Y19A ⇑S S 09 52 09.3 +9.1
baz=25
X20A **Quemado** 24.61 328 ⇓P P 09 47 41.6 -0.4
baz=25,SNR=89
X20A ⇑S S 09 52 13.2 +12
baz=25
W21A **San Fidel** 24.63 330 ⇑P P 09 47 42.6 +0.3
baz=25
W21A ⇓S S 09 52 15.2 +14
baz=25
U24A **Moreno Valley** 24.66 335 ⇑P P 09 47 42.3 -0.2
baz=25,SNR=57
U24A ⇓S S 09 52 14.9 +13
baz=25
OLIL **Olney** 24.70 9 *e*P P 09 47 42.1 -0.6
comp=Z,87nm,0.9s,mb5.3
Z17A **San Carlos Hig** 24.77 323 ⇑P P 09 47 43.3 -0.2
baz=25,SNR=18
Z17A ⇓S S 09 52 16.5 +13
baz=25
CNNC **Cliffs of the** 24.83 30 *e*P P 09 47 43.4 -0.6
comp=Z,89nm,1.0s,mb5.2
CNNC LR LR
comp=Z,11μm,19.0s,MS5.4
Y18A **Canyon Day Jun** 24.86 324 ⇑P P 09 47 44.6 +0.3
baz=25,SNR=32
Y18A ⇓S S 09 52 13.0 +7.9
baz=25
KSU1 **Kansas State U** 24.92 353 *e*P P 09 47 44.6 -0.2
comp=Z,156nm,1.0s,mb5.5
KSU1 LR LR
comp=Z,2μm,20.0s,MS4.6
X19A **St. Johns** 24.93 326 ⇑P P 09 47 44.9 -0.1
baz=25
X19A ⇑S S 09 52 20.2 +14
baz=25
V22A **San Miguel Ran** 24.94 332 ⇑P P 09 47 45.7 +0.7
baz=25,SNR=5.8
V22A ⇑S S 09 52 07.8 +1.6
baz=25
T25A **Trinidad** 24.96 338 ⇑P P 09 47 46.3 +1.1
baz=25,SNR=22
U23A **El Rito** 24.97 334 ⇓P P 09 47 46.0 +0.7
baz=25,SNR=60
U23A ⇓S S 09 52 13.8 +7.1
baz=25
116A **Eloy** 25.01 320 ⇑P P 09 47 44.2 -1.4
baz=25,SNR=20
116A ⇑S S 09 52 12.6 +5.2
baz=25
W20A **Ramah** 25.06 329 ⇑P P 09 47 47.0 +0.8
baz=25,SNR=37
W20A ⇑S S 09 52 22.6 +14
baz=25
CBKS **Cedar Bluff** 25.16 347 *e*P P 09 47 46.7 -0.2
CBKS pmax pmax
comp=Z,212nm,1.1s,mb5.6
CBKS MLR MLR
comp=Z,1μm,21.0s,MS4.4
CBKS **Cedar Bluff** 25.16 347 *e*P P 09 47 46.7 -0.2
comp=Z,212nm,1.1s,mb5.6
CBKS LR LR
comp=Z,1μm,21.0s,MS4.4
V21A **Milan** 25.18 331 ⇑P P 09 47 47.6 +0.4
baz=25,SNR=6.4
V21A ⇑S S 09 52 10.9 +0.8
baz=25
ELN **Prospectdale** 25.25 23 *e*P P 09 47 47.5 -0.4
Y17A **Roosevelt** 25.27 323 ⇓P P 09 47 47.8 -0.2
baz=26,SNR=8.2
Y17A ⇓S S 09 52 19.0 +7.5
baz=26
U22A **Llaves** 25.30 333 ⇓P P 09 47 49.1 +0.9
baz=26,SNR=34
U22A ⇓S S 09 52 17.0 +5.1
baz=26
214A **Organ Pipe Nat** 25.32 317 P P 09 47 48.5 -0.1
baz=26,SNR=31
Z16A **Peralta Trail,** 25.37 322 ⇓P P 09 47 48.5 -0.4
baz=26,SNR=23
BLA **Blacksburg** 25.37 24 PFAKE 09 48 00.0 +11
BLA LR LR
comp=Z,7μm,19.0s,MS5.2
X18A **Snowflake** 25.37 326 ⇑P P 09 47 49.4 +0.4
baz=26,SNR=20
X18A ⇓S S 09 52 22.1 +9.0
baz=26
BLO **Bloomington** 25.40 12 *e*P P 09 47 48.9 -0.2
BLO pmax pmax
comp=Z,72nm,1.3s,mb5.0
BLO **Bloomington** 25.40 12 *e*P P 09 47 48.9 -0.2
comp=Z,72nm,1.3s,mb5.0
115A **Sonoran Desert** 25.43 319 ⇑P P 09 47 49.2 -0.2
baz=26,SNR=22
115A ⇑S S 09 52 20.5 +6.4
baz=26
S25A **Robets Cordova** 25.43 338 ⇑P P 09 47 50.1 +0.6
baz=26,SNR=86
S25A ⇑S S 09 52 16.0 +1.9
baz=26
T23A **Casias Ranch,** 25.50 335 P P 09 47 51.1 +1.0
baz=26,SNR=48
T23A ⇓S S 09 52 23.2 +8.0
baz=26
W19A **Sanders** 25.51 327 ⇓P P 09 47 50.8 +0.6
baz=26,SNR=20
W19A ⇓S S 09 52 29.1 +14
baz=26
VWCC **Virginia Weste** 25.57 24 *e*P P 09 47 50.7 -0.1
V20A **Brimhall** 25.58 330 ⇑P P 09 47 51.1 +0.3
baz=26,SNR=10
V20A ⇑S S 09 52 26.8 +10
baz=26
ATAH **Atahualpa** 25.69 145 P P 09 47 54.0 +2.0
comp=Z,27nm,1.0s,mb4.7,baz=319,slow=6.5,SNR=14
ATAH LR LR 09 56 16.6
comp=Z,1μm,18.1s,MS4.5,baz=328,slow=32
W18A **Petrified Fore** 25.70 327 ⇑P P 09 47 52.6 +0.7
baz=26
W18A ⇓S S 09 52 30.1 +12
baz=26
U21A **Nageezi** 25.70 332 ⇑P P 09 47 52.6 +0.7
baz=26,SNR=18
S24A **Houchin Ranch,** 25.70 337 ⇓P P 09 47 52.9 +1.0
baz=26,SNR=43
S24A ⇑S S 09 52 29.3 +11
baz=26
X17A **Forest Lakes** 25.71 324 P P 09 47 52.8 +0.8
baz=26,SNR=26
Y16A **Circle Bar Ran** 25.77 322 ⇑P P 09 47 52.7 +0.1
baz=26,SNR=19
Y16A ⇑S S 09 52 31.6 +12
baz=26
Z15A **Gila River Ind** 25.78 320 ⇑P P 09 47 51.3 -1.4
baz=26
V19A **Window Rock** 25.80 329 ⇓P P 09 47 53.0 +0.2
baz=26,SNR=10
V19A ⇑S S 09 52 30.3 +10
baz=26
T22A **Edith** 25.85 334 ⇑P P 09 47 53.6 +0.4
baz=26,SNR=51
T22A ⇓S S 09 52 29.3 +8.6
baz=26
114A **Black Gap (USA** 25.88 319 ⇑P P 09 47 52.6 -1.0
baz=26,SNR=15
114A ⇑S S 09 52 35.5 +14
baz=26
SDCO **Great Sand Dun** 25.91 337 *e*P P 09 47 54.6 +0.8
comp=Z,115nm,1.3s,mb5.2
SDCO LR LR
comp=Z,2μm,19.0s,MS4.6
SJG **San Juan** 25.92 78 PFAKE 09 48 00.0 +5.9
SJG LR LR
comp=Z,2μm,19.0s,MS4.7
U20A **Newcomb** 26.06 330 ⇑P P 09 47 55.5 +0.3
baz=26
S23A **Nye Farm, Mont** 26.07 336 ⇑P P 09 47 56.1 +0.9
baz=26,SNR=18
T21A **Navajo Lake** 26.11 333 ⇓P P 09 47 56.9 +1.3
baz=26,SNR=30
X16A **Lo Mia Camp, P** 26.13 323 ⇑P P 09 47 55.0 -0.8
baz=26,SNR=32
X16A ⇓S S 09 52 40.6 +15
baz=26
R24A **Sanders Place,** 26.18 338 ⇓P P 09 47 55.7 -0.6
baz=26,SNR=24
R24A ⇑S S 09 52 34.4 +8.5
baz=26
W17A **Winslow** 26.20 325 ⇑P P 09 47 55.7 -0.7
baz=26
W17A ⇓S S 09 52 44.8 +19
baz=26
V18A **Ganado** 26.25 327 ⇓P P 09 47 56.9 -0.1
baz=26,SNR=11
V18A ⇑S S 09 52 41.7 +15
baz=26
Z14A **Wintersburg** 26.32 320 ⇑P P 09 47 57.1 -0.4
baz=27,SNR=8.2
Z14A ⇓S S 09 52 40.2 +12
baz=27
U19A **Dine' College,** 26.33 329 ⇑P P 09 47 57.6 -0.1
baz=27,SNR=29
U19A ⇓S S 09 52 39.5 +11
baz=27
Y15A **Casa Rosa Ranc** 26.34 321 ⇑P P 09 47 57.5 -0.2
baz=27,SNR=38
HDIL **Hopedale** 26.34 6 *e*P P 09 47 56.4 -1.2
comp=Z,55nm,0.9s,mb5.1
HDIL LR LR
comp=Z,2μm,21.0s,MS4.7
S22A **4UR Ranch, Cre** 26.44 335 ⇑P P 09 47 58.7 +0.1
baz=27,SNR=65
113A **Mohawk Valley,** 26.46 318 ⇑P P 09 47 57.2 -1.6
baz=27,SNR=13
113A ⇑S S 09 52 29.1 -1.3
baz=27
Q25A **Bedland, Calha** 26.49 340 ⇑P P 09 47 57.7 -1.3
baz=27,SNR=38

V17A **Tonalea, Kykot** 26.64 326 ⇑P P 09 48 00.3 -0.1
baz=27,SNR=22
X15A **Humboldt** 26.64 322 ⇑P P 09 48 00.4 0.0
baz=27,SNR=19
X15A ⇑S S 09 52 40.9 +7.6
baz=27
Z13A **Yuma Proving G** 26.66 318 ⇓P P 09 47 59.2 -1.5
baz=27,SNR=21
W16A **Flagstaff** 26.67 324 ⇑P P 09 48 00.1 -0.5
baz=27,SNR=5.2
T19A **Beclabito** 26.67 330 ⇓P P 09 48 00.1 -0.6
baz=27,SNR=8.1
T19A ⇑S S 09 52 42.5 +8.9
baz=27
MVCO **Mesa Verde** 26.73 331 ⇑P P 09 48 01.4 +0.2
baz=27,SNR=33
MVCO **Mesa Verde** 26.73 331 eP P 09 48 02.1 +0.9
comp=Z,276nm,1.9s,mb5.5
MVCO LR LR
comp=Z,2µm,21.0s,MS4.7
Y14A **Wickenburg** 26.73 320 ⇑P P 09 48 00.7 -0.6
baz=27,SNR=20
U18A **Rough Rock, Ch** 26.77 328 ⇓P P 09 47 59.7 -1.9
baz=27,SNR=13
S21A **Coal Bank Pass** 26.78 333 ⇓P P 09 48 01.1 -0.5
baz=27,SNR=18
S21A ⇑S S 09 52 41.1 +5.8
baz=27
R22A **Saguache, Gunn** 26.82 335 ⇑P P 09 48 02.8 +0.8
baz=27,SNR=41
R22A ⇑S S 09 52 35.2 -0.7
baz=27
JSRW **J. Sargeant Re** 26.84 27 eP P 09 48 01.3 -0.8
112A **Yuma** 26.86 316 ⇓P P 09 48 01.1 -1.3
baz=27
WUAZ **Wupatki** 26.89 325 ⇑P P 09 48 01.2 -1.4
baz=27,SNR=12
WUAZ **Wupatki** 26.89 325 eP P 09 48 03.4 +0.7
comp=Z,74nm,1.2s,mb5.1
P25A **Willow Gulch B** 27.01 341 ⇓P P 09 48 01.3 -2.4
baz=27,SNR=18
X14A **Yava** 27.02 321 ⇑P P 09 48 01.4 -2.5
baz=27,SNR=19
W15A **Williams** 27.15 323 ⇑P P 09 48 05.5 +0.5
baz=27,SNR=6.5
Y13A **Salome** 27.17 319 ⇑P P 09 48 03.9 -1.3
baz=27,SNR=18
P24A **Kohler Place,** 27.26 339 ⇑P P 09 48 05.8 -0.1
baz=28,SNR=9.0
R21A **Cimarron** 27.27 334 ⇑P P 09 48 05.3 -0.7
baz=28,SNR=9.0
U17A **Shonto** 27.31 328 ⇑P P 09 48 06.7 +0.2
baz=28
T18A **Mexican Hat** 27.33 329 ⇑P P 09 48 06.6 0.0
baz=28,SNR=22
GLA **Glamis** 27.33 317 ⇑P P 09 48 06.4 -0.3
baz=28
GLA **Glamis** 27.33 317 eP P 09 48 07.4 +0.7
GLA pmax pmax
comp=Z,82nm,1.4s,mb5.1
GLA **Glamis** 27.33 317 eP P 09 48 07.4 +0.7
comp=Z,82nm,1.4s,mb5.1
Q22A **Crested Butte,** 27.43 336 ⇑P P 09 48 07.9 +0.4
baz=28,SNR=16
S19A **Harvey Farm, M** 27.46 331 ⇑P P 09 48 08.4 +0.6
baz=28,SNR=38
R20A **Redvale** 27.48 333 ⇑P P 09 48 09.1 +1.2
baz=28,SNR=44
R20A ⇑S S 09 52 44.1 -2.2
baz=28
CBN **Corbin** 27.48 27 eP P 09 48 08.0 0.0
comp=Z,74nm,0.3s,mb5.7
CBN LR LR
comp=Z,7µm,19.0s,MS5.3
SCIA **State Center** 27.50 359 eP P 09 48 07.4 -0.7
comp=Z,77nm,1.2s,mb5.2
SCIA LR LR
comp=Z,2µm,19.0s,MS4.7
PV01 **Paradox Valley** 27.52 332 eP P 09 48 09.8 +1.5
comp=Z,9µm,1.4s
V15A **Kaibab Nationa** 27.55 324 ⇓P P 09 48 08.7 +0.1
baz=28,SNR=28
Y12C **Blythe** 27.57 318 ⇑P P 09 48 08.7 -0.2
baz=28
W14A **Seligman** 27.65 322 ⇑P P 09 48 10.3 +0.8
baz=28,SNR=14
Q21A **Lamborn Mesa,** 27.67 335 ⇑P P 09 48 10.4 +0.7
baz=28,SNR=22
PDMCI **Parker Dam,Lak** 27.68 320 ⇑P P 09 48 10.2 +0.4
baz=28,SNR=10
T17A **Navajo Res., N** 27.69 328 ⇓P P 09 48 10.5 +0.6
baz=28,SNR=21
OGNE **Ogallala** 27.72 345 eP P 09 48 11.1 +1.0
comp=Z,200nm,1.3s,mb5.6
OGNE LR LR
comp=Z,865nm,20.0s,MS4.3
SMCO **Snowmass** 27.72 336 eP P 09 48 11.6 +1.5
comp=Z,103nm,1.3s,mb5.3
MCWV **Mont Chateau** 27.73 22 PFAKE 09 48 20.0 +10
MCWV LR LR
comp=Z,8µm,20.0s,MS5.3
ISCO **Idaho Springs** 27.75 339 eP P 09 48 11.6 +1.2
ISCO pmax pmax
comp=Z,107nm,1.6s,mb5.2
ISCO MLR MLR
comp=Z,913nm,19.0s,MS4.4
ISCO **Idaho Springs** 27.75 339 eP P 09 48 11.6 +1.2
comp=Z,107nm,1.6s,mb5.2
ISCO LR LR
comp=Z,913nm,19.0s,MS4.4
S18A **Hurst Farm, Bl** 27.82 330 ⇓P P 09 48 11.7 +0.7
baz=28,SNR=16
S18A ⇓S S 09 52 46.4 -5.4
baz=28
PV04 **Paradox Valley** 27.88 332 eP P 09 48 12.4 +0.9
PCRV **Puerto La Cruz** 27.88 95 P P 09 48 11.6 -0.3
comp=Z,1.8nm,0.5s,baz=256,slow=11,SNR=2.9
SWSC **Sam W. Stewart** 27.92 316 ⇓P P 09 48 12.2 +0.3
baz=28,SNR=8.0
PV10 **Paradox Valley** 27.93 332 eP P 09 48 12.1 +0.1
comp=Z,757nm,1.1s,mb6.2
V14A **Boquillas Ranc** 27.95 323 ⇑P P 09 48 12.6 +0.3
baz=28,SNR=25
R19A **Curley Farm, L** 27.96 332 ⇓P P 09 48 12.8 +0.6
baz=28,SNR=17
R19A ⇓S S 09 52 55.0 +1.1
baz=28
DVTC **Desert V Tower** 27.96 315 ⇑P P 09 48 12.5 +0.2
baz=28
T16A **Glen Canyon Da** 28.04 327 ⇑P P 09 48 13.5 +0.5
baz=28,SNR=6.6
W13A **Hualapai Mount** 28.05 321 ⇑P P 09 48 13.4 +0.3
baz=28,SNR=25
U15A **North Rim** 28.06 325 ⇓P P 09 48 13.4 +0.2
baz=28,SNR=28
Q20A **Ridgley Place,** 28.07 334 ⇑P P 09 48 13.8 +0.5
baz=28,SNR=14
BC3 **Big Chuckawall** 28.12 317 ⇓P P 09 48 13.7 0.0
baz=28,SNR=29
S17A **Black Ridge (B** 28.18 329 ⇓P P 09 48 14.8 +0.6
baz=28,SNR=20
P21A **Newcastle** 28.21 336 ⇑P P 09 48 15.6 +1.2
baz=28,SNR=10
IRM **Iron Mountain** 28.23 318 ⇑P P 09 48 14.8 +0.1
baz=28,SNR=23
MONP **Monument Peak** 28.31 315 ⇓P P 09 48 13.3 -2.1
baz=28
R18A **Canyonlands Na** 28.33 331 ⇑P P 09 48 14.5 -1.0
baz=29,SNR=15
BAR **Barrett** 28.37 314 eP P 09 48 16.0 +0.1
comp=Z,41nm,1.5s,mb4.8
Q19A **Hogan Spring (** 28.50 333 ⇓P P 09 48 16.5 -0.5
baz=29,SNR=25
T15A **Red Dirt Ranch** 28.54 326 ⇓P P 09 48 17.2 -0.2
baz=29,SNR=29
U14A **Mt Trumbull** 28.55 324 P P 09 48 18.4 +0.9
baz=29,SNR=22
P20A **De Beque** 28.57 334 ⇓P P 09 48 17.7 0.0
baz=29,SNR=18
JFWS **Jewell Farm** 28.60 4 eP P 09 48 17.0 -0.9
JFWS pmax pmax
comp=Z,36nm,0.8s,mb5.2
JFWS MLR MLR
comp=Z,2µm,20.0s,MS4.8
JFWS **Jewell Farm** 28.60 4 eP P 09 48 17.0 -0.9
comp=Z,36nm,0.8s,mb5.2
JFWS LR LR
comp=Z,2µm,20.0s,MS4.8

V13A **Grand Canyon W** 28.62 322 ⇓P P 09 48 18.8 +0.6
baz=29,SNR=32
S16A **Weppner Ranch,** 28.65 328 ⇓P P 09 48 18.8 +0.4
baz=29,SNR=20
BELC **Belle Mtn. Jos** 28.69 317 ⇓P P 09 48 19.0 +0.2
baz=29,SNR=8.2
R17A **Hanksville Air** 28.74 330 ⇑P P 09 48 18.9 -0.3
baz=29,SNR=28
PFO **Pinyon Flat Ob** 28.76 316 ⇑P P 09 48 19.2 -0.1
baz=29
PFO **Pinyon Flat Ob** 28.76 316 eP P 09 48 19.9 +0.5
PFO pmax pmax
comp=Z,180nm,2.6s,mb5.3
PFO MLR MLR
comp=Z,3µm,20.0s,MS4.9
PFO **Pinyon Flat Ob** 28.76 316 eP P 09 48 19.9 +0.5
comp=Z,180nm,2.6s,mb5.3
PFO LR LR
comp=Z,3µm,20.0s,MS4.9
109C **Camp Elliot, M** 28.79 314 ⇑P P 09 48 16.8 -2.8
baz=29
W12A **Cal Nev Ari** 28.79 320 ⇓P P 09 48 20.0 +0.4
baz=29,SNR=10.0
LDFC **Landfair** 28.79 320 eP P 09 48 21.4 +1.7
comp=Z,43nm,0.9s,mb5.2
O21A **Pagoda** 28.81 336 ⇓P P 09 48 20.6 +0.9
baz=29,SNR=12
P19A **Cripple Cowboy** 28.93 334 ⇓P P 09 48 18.3 -2.5
baz=29,SNR=9.0
N22A **Wattenberg Ran** 28.94 338 ⇑P P 09 48 20.3 -0.6
baz=29,SNR=26
GMRC **Granite Mounta** 28.95 319 ⇑P P 09 48 21.0 -0.1
baz=29,SNR=15
T14A **Hurricane** 28.95 325 ⇑P P 09 48 21.4 +0.3
baz=29,SNR=22
U13A **Pakoon Wash** 29.00 323 ⇑P P 09 48 21.9 +0.4
baz=29,SNR=28
AAM **Ann Arbor** 29.01 14 eP P 09 48 23.0 +1.5
AAM pmax pmax
comp=Z,32nm,1.4s,mb4.9
AAM MLR MLR
comp=Z,4µm,20.0s,MS5.0
AAM **Ann Arbor** 29.01 14 eP P 09 48 23.0 +1.5
comp=Z,32nm,1.4s,mb4.9
AAM LR LR
comp=Z,4µm,20.0s,MS5.0
Q18A **Rafter H Ranch** 29.01 332 ⇓P P 09 48 21.5 -0.1
baz=29,SNR=18
S15A **Panguitch** 29.01 327 ⇑P P 09 48 21.7 +0.1
baz=29,SNR=25
R16A **Teasdale** 29.02 329 ⇓P P 09 48 22.2 +0.5
baz=29,SNR=26
PHWY **Pilot Hill** 29.04 340 eP P 09 48 22.8 +1.0
comp=Z,44nm,1.1s,mb5.1
O20A **White River Ci** 29.05 335 ⇓P P 09 48 22.3 +0.5
baz=29,SNR=16
V12A **Nelson** 29.06 321 ⇓P P 09 48 22.1 +0.1
baz=29,SNR=31
SRU **San Rafael** 29.20 331 ⇓P P 09 48 23.6 +0.3
baz=30,SNR=11
SRU **San Rafael** 29.20 331 eP P 09 48 24.3 +1.0
SRU pmax pmax
comp=Z,41nm,1.4s,mb5.0
SRU **San Rafael** 29.20 331 eP P 09 48 24.3 +1.1
comp=Z,41nm,1.4s,mb5.0
MURC **Mueta** 29.26 315 ⇑P P 09 48 23.7 -0.2
baz=30
N21A **Black Mountain** 29.30 337 ⇓P P 09 48 25.2 +1.1
baz=30,SNR=48
SSPA **Standing Stone** 29.32 24 eP P 09 48 23.0 -1.2
comp=Z,33nm,1.5s,mb4.8
SSPA LR LR
comp=Z,6µm,19.0s,MS5.2
U12A **Valley of Fire** 29.34 323 P P 09 48 24.9 +0.4
baz=30,SNR=25
Q16A **Castle Valley** 29.36 330 ⇓P P 09 48 25.2 +0.6
baz=30,SNR=28
R15A **Junction** 29.37 328 ⇓P P 09 48 24.6 -0.2
baz=30,SNR=7.9
T13A **Saint George** 29.39 324 ⇑P P 09 48 25.7 +0.8
baz=30,SNR=17
HEC **Hector,Ludlow** 29.41 318 ⇑P P 09 48 25.8 +0.6
baz=30,SNR=13
MVL **Millersville** 29.41 26 eP P 09 48 24.5 -0.6
comp=Z,322nm,3.0s
BBRC **Big Bear Solar** 29.45 317 ⇑P P 09 48 26.0 +0.4
baz=30
CCUT **Cedar City** 29.46 326 eP P 09 48 27.3 +1.7
comp=Z,37nm,1.2s,mb5.0
V11A **Goodsprings** 29.48 321 ⇓P P 09 48 24.0 -1.9
baz=30,SNR=11
P18A **Preston Nutter** 29.49 332 ⇓P P 09 48 24.9 -0.9
baz=30
ECSD **EROS Data Cent** 29.50 354 eP P 09 48 24.5 -1.4
comp=Z,52nm,1.2s,mb5.1
ECSD LR LR
comp=Z,1µm,22.0s,MS4.5
S14A **Cedar City** 29.51 326 P P 09 48 27.0 +1.0
baz=30,SNR=33
TUQ **Turquoise Moun** 29.53 320 ⇓P P 09 48 26.2 -0.1
baz=30,SNR=21
MSU **Marysvale** 29.55 328 eP P 09 48 27.4 +1.1
O19A **Miners Draw (B** 29.55 334 ⇓P P 09 48 26.1 -0.2
baz=30,SNR=11
MVU **Marysvale** 29.56 328 PFAKE 09 48 40.0 +14
MVU LR LR
comp=Z,6µm,20.0s,MS5.2
P17A **Butcher Ranch,** 29.59 331 ⇑P P 09 48 26.8 +0.1
baz=30,SNR=11
N20A **Spence Gulch,** 29.65 336 ⇑P P 09 48 26.3 -0.9
baz=30,SNR=36
TMUT **Trail Mountain** 29.67 330 eP P 09 48 28.7 +1.2
comp=Z,33nm,1.3s,mb4.9
ARUT **Antelope Range** 29.68 326 eP P 09 48 28.8 +1.3
ARUT pmax pmax
comp=Z,55nm,1.1s,mb5.2
ARUT **Antelope Range** 29.68 326 eP P 09 48 28.8 +1.3
comp=Z,55nm,1.1s,mb5.2
S13A **Holt Ranch, En** 29.76 325 ⇑P P 09 48 29.5 +1.2
baz=30,SNR=22
R14A **James Farms, M** 29.82 327 ⇑P P 09 48 28.9 +0.1
baz=30
U11A **Corn Creek** 29.84 322 ⇓P P 09 48 28.7 -0.2
baz=30
ERPA **Erie** 29.87 19 PFAKE 09 48 40.0 +11
ERPA LR LR
comp=Z,6µm,19.0s,MS5.2
RRX **Edison Barstow** 29.88 318 ⇓P P 09 48 28.4 -0.9
baz=30
O18A **Roosevelt** 29.90 333 ⇓P P 09 48 30.0 +0.6
baz=30,SNR=27
BFSC **Mount Baldy Ra** 29.93 316 ⇑P P 09 48 28.6 -1.2
baz=30
M21A **Separation Pea** 29.98 338 ⇓P P 09 48 30.6 +0.5
baz=30,SNR=30
CIS **Catalina Islan** 29.98 314 ⇓P P 09 48 29.2 -1.0
baz=30
RWWY **Rawlins** 29.99 338 eP P 09 48 32.3 +2.1
comp=Z,136nm,1.1s,mb5.6
RWWY e pP 09 48 39.8 -0.5
GSC **Goldstone** 30.01 318 ⇑P P 09 48 30.6 +0.1
baz=30
GSC **Goldstone** 30.01 318 eP P 09 48 31.4 +0.9
GSC pmax pmax
comp=Z,116nm,2.4s,mb5.2
GSC **Goldstone** 30.01 318 eP P 09 48 31.4 +0.9
comp=Z,116nm,2.4s,mb5.2
Q15A **Fillmore** 30.02 329 ⇑P P 09 48 31.2 +0.7
baz=30
L22A **Ellis Ranch, M** 30.02 340 ⇓P P 09 48 30.9 +0.4
baz=30,SNR=7.2
ANWB **Willy Bob** 30.05 79 PFAKE 09 48 40.0 +9.0
ANWB LR LR
comp=Z,2µm,22.0s,MS4.7
SHOC **Shoshone** 30.05 320 ⇓P P 09 48 31.0 +0.1
baz=30,SNR=5.7
N19A **John Jarvie Ra** 30.07 335 ⇑P P 09 48 30.9 -0.1
baz=30,SNR=11
FMP **Fort Macarthur** 30.07 314 ⇓P P 09 48 31.6 +0.5
baz=30
P16A **Fountain Green** 30.14 330 ⇑P P 09 48 32.1 +0.6
baz=30,SNR=11
O17A **Robinson Place** 30.17 332 ⇑P P 09 48 32.4 +0.6
baz=30,SNR=29
M20A **Sweetwater, Wa** 30.18 337 ⇓P P 09 48 30.7 -1.2
baz=30,SNR=9.8
MWC **Mount Wilson** 30.20 315 eP P 09 48 33.1 +0.9
MWC pmax pmax
comp=Z,204nm,2.5s,mb5.4
MWC **Mount Wilson** 30.20 315 eP P 09 48 33.0 +0.9
comp=Z,204nm,2.5s,mb5.4
R13A **O'Grain Ranch,** 30.25 326 ⇓P P 09 48 32.2 -0.4
baz=30,SNR=29
PASC **Pasadena Art C** 30.25 315 eP P 09 48 33.0 +0.4
comp=Z,75nm,1.1s,mb5.3
L21A **Rawlins** 30.29 338 ⇓P P 09 48 32.6 -0.2
baz=30,SNR=15
T11A **Corn Creek, Al** 30.30 323 ⇑P P 09 48 32.7 -0.2
baz=30
S12A **Delamar Landin** 30.33 324 ⇓P P 09 48 33.9 +0.6
baz=31,SNR=11
N18A **Larsen Ranch,** 30.34 334 ⇓P P 09 48 33.7 +0.3
baz=31,SNR=28
DECC **Green Verdugo** 30.40 315 ⇓P P 09 48 34.1 +0.2
baz=31
P15A **Leamington** 30.41 330 ⇓P P 09 48 33.9 0.0
baz=31
U10A **Ash Meadows, A** 30.41 321 ⇑P P 09 48 34.3 +0.3
baz=31,SNR=9.1
MPU **Maple Canyon** 30.44 331 eP P 09 48 35.3 +1.0
comp=Z,88nm,1.8s,mb5.2
GRGR **Grenville** 30.45 90 PFAKE 09 48 40.0 +5.4
GRGR LR LR
comp=Z,2µm,19.0s,MS4.8
Q14A **Sevier Lake (B** 30.47 328 ⇑P P 09 48 35.0 +0.5
baz=31,SNR=15
O16A **Springville** 30.53 331 ⇑P P 09 48 35.6 +0.6
baz=31,SNR=12
EDW2 **Edwards Air Fo** 30.53 317 ⇓P P 09 48 34.9 -0.2
baz=31
NNA **Nana** 30.57 148 LR LR 09 58 16.5
comp=Z,1µm,20.9s,MS4.5,baz=335,slow=31
NNA **Nana** 30.57 148 PFAKE 09 48 40.0 +4.4
NNA LR LR
comp=Z,1µm,19.0s,MS4.6
M19A **Rock Springs** 30.57 336 ⇑P P 09 48 34.1 -1.3
baz=31
DAU **Daniels Canyon** 30.58 332 eP P 09 48 37.0 +1.5
NLU **North Lily Min** 30.60 330 eP P 09 48 37.2 +1.6
comp=Z,110nm,2.1s,mb5.3
L20A **Wamsutter** 30.68 337 ⇓P P 09 48 36.4 0.0
baz=31,SNR=15
FDF **Fort de France** 30.70 85 PFAKE 09 48 50.0 +13
FDF LR LR
comp=Z,4µm,19.0s,MS5.1
R12A **Pony Springs,** 30.70 325 ⇑P P 09 48 36.8 +0.2
baz=31,SNR=20
FURC **Furnace Creek,** 30.77 320 ⇑P P 09 48 36.2 -1.0
baz=31,SNR=10.0
P14A **Drum Mountains** 30.82 329 ⇑P P 09 48 38.4 +0.8
baz=31,SNR=21
N17A **Moffit Pass** 30.82 333 ⇑P P 09 48 36.2 -1.3
baz=31
JLU **Jordanelle** 30.82 332 eP P 09 48 38.5 +0.9
comp=Z,73nm,1.9s,mb5.2
BLG **Laguna Peak** 30.82 314 ⇑P P 09 48 38.0 +0.3
baz=31
Q13A **Wheeler Ranch,** 30.84 327 ⇑P P 09 48 38.3 +0.6
baz=31,SNR=31
S11A **Rachel** 30.88 323 ⇓P P 09 48 38.6 +0.5
baz=31,SNR=19
M18A **Lyman** 30.88 334 ⇑P P 09 48 37.5 -0.6
baz=31,SNR=7.7
MPMC **Manual Prospec** 30.91 319 P P 09 48 38.8 +0.3
baz=31,SNR=20
CTU **Camp Tracy** 31.03 331 eP P 09 48 41.0 +1.5
comp=Z,41nm,1.4s,mb5.1
N16A **Rees Ranch, Co** 31.04 332 ⇓P P 09 48 40.1 +0.6
baz=31,SNR=8.0
O15A **The Old Anders** 31.05 330 ⇓P P 09 48 40.3 +0.7
baz=31,SNR=5.3
DAC **Darwin (Calif)** 31.11 319 PFAKE 09 48 50.0 +10
DAC LR LR
comp=Z,4µm,20.0s,MS5.0
DUG **Dugway** 31.15 330 ⇑P P 09 48 41.0 +0.6
baz=31,SNR=13
DUG **Dugway** 31.15 330 eP P 09 48 41.8 +1.3
DUG pmax pmax
comp=Z,159nm,2.5s,mb5.4
DUG MLR MLR
comp=Z,2µm,19.0s,MS4.9
DUG **Dugway** 31.15 330 eP P 09 48 41.8 +1.4
comp=Z,159nm,2.5s,mb5.4
DUG LR LR
comp=Z,2µm,19.0s,MS4.9
BSC **Santa Cruz Isl** 31.16 314 ⇑P P 09 48 40.4 -0.2
baz=31
L19A **Farson** 31.16 336 ⇑P P 09 48 39.8 -0.7
baz=31,SNR=12
NOQ **North Oquirrh** 31.17 331 eP P 09 48 42.3 +1.6
comp=Z,81nm,1.6s,mb5.3
M17A **Scullys Gap (B** 31.18 334 ⇑P P 09 48 41.0 +0.3
baz=31,SNR=18
P13A **Bates Ranch, G** 31.20 327 ⇓P P 09 48 41.7 +0.7
baz=31,SNR=31
RSSD **Black Hills** 31.21 344 eP P 09 48 41.4 +0.4
RSSD MLR MLR
comp=Z,849nm,20.0s,MS4.4
ARVC **Arvin** 31.23 316 ⇓P P 09 48 41.5 +0.1
baz=32,SNR=10.0
K20A **Yellowstone Ra** 31.25 338 ⇑P P 09 48 41.2 -0.1
baz=32,SNR=8.7
R11A **Troy Canyon, C** 31.27 324 ⇓P P 09 48 42.3 +0.7
baz=32,SNR=18
L18A **Fontenelle, Gr** 31.28 335 ⇓P P 09 48 42.2 +0.5
baz=32,SNR=19
ISA **Isabella** 31.31 317 ⇑P P 09 48 41.7 -0.2
baz=32,SNR=11
ISA **Isabella** 31.31 317 eP P 09 48 42.6 +0.6
ISA e 09 51 35.3
ISA pmax pmax
comp=Z,114nm,2.3s,mb5.3
ISA **Isabella** 31.31 317 eP P 09 48 42.6 +0.6
comp=Z,114nm,2.3s,mb5.3
ISA ePcP PcP 09 51 35.3 -0.3
PAL **Palisades** 31.32 28 eP P 09 48 41.4 -0.5
PAL pmax pmax
comp=Z,44nm,1.4s,mb5.1
PAL **Palisades** 31.32 28 eP P 09 48 41.4 -0.5
comp=Z,44nm,1.4s,mb5.1
Q12A **Willow Creek R** 31.33 326 ⇓P P 09 48 42.8 +0.7
baz=32,SNR=8.7
BBSR **BB Station** 31.36 50 PFAKE 09 48 50.0 +7.6
BBSR LR LR
comp=Z,2µm,20.0s,MS4.8
BINY **Binghamton** 31.40 24 eP P 09 48 41.0 -1.6
comp=Z,40nm,1.4s,mb5.1
BINY LR LR
comp=Z,5µm,20.0s,MS5.2
GRAC **Grapevine Rang** 31.43 320 ⇓P P 09 48 43.2 +0.2
baz=32,SNR=21
N15A **Stansbury Isla** 31.55 331 ⇑P P 09 48 44.5 +0.6
baz=32,SNR=17
S10A **Tonopah Range,** 31.56 323 P P 09 48 45.0 +0.9
baz=32,SNR=28
K19A **Absolon Red Bu** 31.58 337 ⇑P P 09 48 43.7 -0.5
baz=32
R10A **Warm Springs** 31.64 323 ⇑P P 09 48 45.9 +1.1
baz=32,SNR=17
Q11A **Duckwater** 31.65 325 ⇑P P 09 48 45.7 +0.8
baz=32,SNR=25
HWUT **Hardware Ranch** 31.68 333 eP P 09 48 46.0 +0.9
comp=Z,450nm,2.8s,mb5.8
HWUT ePcP PcP 09 51 35.8 -0.6
HWUT LR LR
comp=Z,2µm,19.0s,MS4.8
O13A **Hicks Ranch, I** 31.68 328 ⇑P P 09 48 46.3 +1.1
baz=32,SNR=5.9
P12A **McGill** 31.69 326 ⇓P P 09 48 45.2 0.0
baz=32,SNR=15
PKM **Peak Mountain** 31.78 315 ⇑P P 09 48 44.5 -1.6
baz=32
L17A **Cokeville** 31.78 334 ⇓P P 09 48 46.0 0.0
baz=32,SNR=29
BW06 **Boulder Array** 31.80 336 ⇑P P 09 48 46.0 -0.2
baz=32,SNR=19
BW06 **Boulder Array** 31.80 336 eP P 09 48 46.3 +0.1
comp=Z,31nm,1.2s,mb5.0
BW06 LR LR
comp=Z,2µm,19.0s,MS4.7
PDAR **Pinedale Array** 31.80 336 P P 09 48 46.5 +0.3
comp=Z,6.1nm,0.9s,mb4.4,baz=141,slow=9.6,SNR=42
PDAR PcP PcP 09 51 36.0 -0.7
comp=Z,2.1nm,1.0s,baz=90,slow=1.8,SNR=3.4
PDAR LR LR 10 04 16.7
comp=Z,1µm,19.2s,MS4.6,baz=156,slow=41

BGU Big Grassy Mou 31.82 330 *eP* **P 09 48 47.0 +0.6**
comp=Z,30nm,1.4s,mb4.9
N14A Grayback Hills 31.84 330 ⇓P **P 09 48 47.1 +0.6**
baz=32,SNR=19
COWI Conover 31.85 5 PFAKE 09 49 00.0 +13
COWI LR LR
comp=Z,2µm,19.0s,MS4.9
K18A Toltan Ranch, 31.88 336 ⇓P **P 09 48 47.6 +0.7**
baz=32,SNR=58
L16A Fish Haven 31.95 333 ⇑P **P 09 48 47.5 0.0**
baz=32,SNR=27
M15A Larsen Ranch, 31.96 332 ⇓P **P 09 48 47.7 +0.1**
baz=32,SNR=15
TIN Tinemaha 32.00 320 ⇓P **P 09 48 47.5 -0.5**
baz=32
TPH Tonopah 32.03 322 PFAKE 09 49 00.0 +12
TPH LR LR
comp=Z,4µm,20.0s,MS5.1
Q10A Clear Creek Ra 32.06 324 ⇑P **P 09 48 49.1 +0.6**
baz=32,SNR=23
SMMC Simmler 32.13 315 ⇓P **P 09 48 49.0 -0.1**
baz=32
O12A Currie 32.18 328 ⇓P **P 09 48 49.3 -0.2**
baz=32,SNR=34
RCTC Rector, Farmer 32.19 318 ⇑P **P 09 48 50.3 +0.6**
baz=32,SNR=11
P11A Circle Ranch, 32.20 326 ⇑P **P 09 48 50.6 +0.8**
baz=32,SNR=5.0
K17A Gardner Place, 32.33 335 ⇑P **P 09 48 50.4 -0.5**
baz=33,SNR=32
N13A Wendover, West 32.34 329 *eP* **P 09 48 52.8 +1.9**
comp=Z,33nm,0.9s,mb5.2
J18A Kendall Valley 32.36 336 ⇑P **P 09 48 51.1 0.0**
baz=33,SNR=30
HVU Hansel Valley 32.36 332 *eP* **P 09 48 52.4 +1.3**
HVU pmax pmax
comp=Z,397nm,2.4s,mb5.8
HVU Hansel Valley 32.36 332 *eP* **P 09 48 52.4 +1.3**
comp=Z,397nm,2.4s,mb5.8
L15A Malad City 32.36 332 ⇓P **P 09 48 51.5 +0.4**
baz=33,SNR=24
BBGH Gun Hill 32.36 88 PFAKE 09 49 00.0 +8.5
BBGH LR LR
comp=Z,4µm,22.0s,MS5.1
MTUM Tungsten Hills 32.39 320 *eP* **P 09 48 52.9 +1.4**
M14A Sheep Mountain 32.41 331 ⇓P **P 09 48 52.4 +0.8**
baz=33,SNR=57
AHID Auburn Hatcher 32.42 335 *eP* **P 09 48 52.0 +0.4**
comp=Z,113nm,1.5s,mb5.5
AHID LR LR
comp=Z,2µm,22.0s,MS4.8
O11A Cowboy Ranch, 32.56 327 ⇑P **P 09 48 53.7 +0.8**
baz=33
P10A Eureka 32.64 325 ⇑P **P 09 48 54.4 +0.8**
baz=33
K16A Soda Springs 32.68 334 ⇓P **P 09 48 53.7 -0.2**
baz=33
I18A Diamond G Ranc 32.70 337 P **P 09 48 54.9 +0.8**
baz=33,SNR=14
M13A Montello 32.70 330 ⇑P **P 09 48 54.4 +0.3**
baz=33,SNR=46
M13A Montello 32.70 330 *eP* **P 09 48 55.1 +1.0**
comp=Z,57nm,1.1s,mb5.4
MLAC Mammoth Lakes 32.73 320 ⇓P **P 09 48 55.2 +0.8**
baz=33,SNR=5.4
J17A Brown Place, J 32.76 336 ⇓P **P 09 48 54.5 -0.1**
baz=33,SNR=74
N12A Clover Valley, 32.76 328 ⇑P **P 09 48 55.0 +0.4**
baz=33,SNR=13
N12A Clover Valley, 32.76 328 *eP* **P 09 48 56.0 +1.4**
N12A *e*PP PP 09 50 13.9 +4.9
L14A Malta 32.78 331 ⇓P **P 09 48 54.5 -0.2**
baz=33,SNR=34
ELK Elko 32.78 328 *eP* **P 09 48 55.5 +0.7**
ELK *e* 09 51 38.0
ELK pmax pmax
comp=Z,19nm,0.9s
ELK MLR MLR
comp=Z,3µm,21.0s
ELK Elko 32.78 328 *eP* **P 09 48 55.5 +0.7**
comp=Z,19nm,0.9s,mb5.0
ELK *e*PcP PcP 09 51 38.0 -1.6
ELK LR LR
comp=Z,3µm,21.0s,MS5.0
TRY Troy 32.80 27 *eP* **P 09 48 54.2 -0.8**
REDW Red Top Meadow 32.81 335 *eP* **P 09 48 55.5 +0.5**
comp=Z,155nm,1.0s,mb5.9
SNOW Snow King Moun 32.86 336 *eP* **P 09 48 56.2 +0.8**
comp=Z,208nm,1.0s,mb6.0
NVAR Mina Array Bea 32.91 322 P **P 09 48 56.8 +0.9**
comp=Z,18nm,0.8s,mb5.0,baz=143,slow=9.0,SNR=116
NVAR PcP PcP 09 51 40.6 +0.7
comp=Z,3.8nm,1.0s,baz=134,slow=5.2,SNR=4.1
LOHW Long Hollow 32.92 336 *eP* **P 09 48 56.5 +0.5**
comp=Z,62nm,0.9s,mb5.5
TPAW Teton Pass 32.96 335 *eP* **P 09 48 57.4 +1.1**
comp=Z,128nm,1.1s,mb5.8
K15A Arbon 32.97 333 ⇓P **P 09 48 56.8 +0.4**
baz=33,SNR=20
RRI2 Red Ridge 32.99 335 *eP* **P 09 48 58.1 +1.5**
comp=Z,189nm,1.6s,mb5.8
J16A Bone 33.05 335 ⇑P **P 09 48 57.6 +0.5**
baz=33,SNR=18
N11A Elko Archery C 33.09 327 ⇑P **P 09 48 58.5 +0.9**
baz=33,SNR=8.4
M12A Wells 33.11 329 ⇓P **P 09 48 58.2 +0.5**
baz=33,SNR=45
O10A Cortez Mining, 33.13 326 ⇓P **P 09 48 58.6 +0.8**
baz=33,SNR=7.7
DCID1 Drake Creek 33.14 335 *eP* **P 09 48 59.4 +1.5**
comp=Z,361nm,2.1s,mb5.9
K14A Jones Ranch, D 33.15 332 ⇓P **P 09 48 58.4 +0.4**
baz=33,SNR=28
L13A Double Diamond 33.15 331 ⇓P **P 09 48 58.5 +0.5**
baz=33,SNR=16
I17A Pilgrim Ck. 33.17 336 ⇑P **P 09 48 59.4 +1.2**
baz=33,SNR=7.6
IMW Indian Meadow 33.30 336 *eP* **P 09 49 00.3 +1.1**
comp=Z,25nm,0.8s,mb5.2
IMW *e*PcP PcP 09 51 41.4 +0.6
N10A Dunphy 33.43 326 ⇓P **P 09 49 01.3 +0.8**
baz=34
I16A Newdale 33.50 335 ⇑P **P 09 49 01.9 +0.9**
baz=34,SNR=20
J15A Blackfoot 33.50 334 P **P 09 49 01.9 +0.8**
baz=34,SNR=18
EYMN Ely 33.56 2 *eP* **P 09 49 00.4 -1.2**
comp=Z,20nm,1.1s,mb5.0
EYMN LR LR
comp=Z,1µm,22.0s,MS4.6
M11A Holland Ranch, 33.57 328 ⇑P **P 09 49 02.3 +0.6**
baz=34,SNR=12
H17A Grant Village 33.57 337 ⇑P **P 09 49 01.1 -0.5**
baz=34,SNR=7.2
NCB Newcomb 33.59 25 *eP* **P 09 49 00.4 -1.4**
comp=Z,18nm,1.0s,mb5.0
NCB LR LR
comp=Z,4µm,19.0s,MS5.2
BMN Battle Mountai 33.62 325 *eP* **P 09 49 02.3 +0.2**
BMN pmax pmax
comp=Z,20nm,0.9s,mb5.0
BMN MLR MLR
comp=Z,1µm,21.0s,MS4.6
BMN Battle Mountai 33.62 325 *eP* **P 09 49 02.3 +0.2**
comp=Z,20nm,0.9s,mb5.0
BMN LR LR
comp=Z,1µm,21.0s,MS4.6
WAKR Walker 33.65 321 *eP* **P 09 49 03.7 +1.3**
K13A Stover Farm, H 33.65 331 P **P 09 49 02.7 +0.4**
baz=34,SNR=12
LKWY Lake 33.65 337 *eP* **P 09 49 03.2 +0.9**
LKWY pmax pmax
comp=Z,47nm,1.0s,mb5.4
LKWY MLR MLR
comp=Z,3µm,21.0s,MS5.0
LKWY Lake 33.65 337 *eP* **P 09 49 03.2 +0.9**
comp=Z,47nm,1.0s,mb5.4
LKWY LR LR
comp=Z,3µm,21.0s,MS5.0
L12A House Creek Ra 33.71 330 ⇓P **P 09 49 03.0 +0.1**
baz=34,SNR=16
RLMT Red Lodge 33.72 339 ⇑P **P 09 49 03.0 +0.1**
baz=34,SNR=26
RLMT Red Lodge 33.72 339 *eP* **P 09 49 03.7 +0.8**
comp=Z,62nm,1.2s,mb5.4
RLMT LR LR
comp=Z,2µm,20.0s,MS4.7
YFT Old Faithful 33.72 337 *eP* **P 09 49 04.8 +1.8**
comp=Z,65nm,1.1s,mb5.5
SAO San Andreas Ge 33.91 316 *eP* **P 09 49 04.9 +0.2**
SAO pmax pmax
comp=Z,20nm,1.1s,mb5.0
SAO MLR MLR
comp=Z,2µm,20.0s,MS4.8
SAO San Andreas Ge 33.91 316 *eP* **P 09 49 04.9 +0.2**
comp=Z,20nm,1.1s,mb5.0
SAO LR LR
comp=Z,2µm,20.0s,MS4.8
J14A Carey 33.92 333 ⇓P **P 09 49 05.2 +0.5**
baz=34,SNR=22
CMB Columbia Colle 33.95 319 *eP* **P 09 49 05.2 +0.1**
CMB pmax pmax
comp=Z,130nm,2.5s,mb5.4
CMB MLR MLR
comp=Z,2µm,19.0s,MS5.0
CMB Columbia Colle 33.95 319 *eP* **P 09 49 05.2 +0.1**
comp=Z,130nm,2.5s,mb5.4
CMB LR LR
comp=Z,2µm,19.0s,MS5.0
YMR Madison River 33.95 337 *eP* **P 09 49 06.3 +1.4**
comp=Z,140nm,1.2s,mb5.8
AGMN Agassiz Nation 33.98 356 *eP* **P 09 49 03.5 -1.7**
comp=Z,35nm,1.0s,mb5.2
AGMN LR LR
comp=Z,2µm,20.0s,MS4.8
LONY Lake Ozonia 33.98 24 *eP* **P 09 49 02.7 -2.5**
comp=Z,25nm,1.1s,mb5.1
LONY LR LR
comp=Z,5µm,19.0s,MS5.2
G18A Lazy EL Ranch, 33.99 339 ⇓P **P 09 49 04.9 -0.4**
baz=34,SNR=23
I15A Monteview 34.01 334 ⇑P **P 09 49 06.1 +0.6**
baz=34
M10A I.L. Ranch, Tu 34.02 327 ⇓P **P 09 49 06.6 +1.0**
baz=34,SNR=21
K12A Draper Farm, C 34.03 330 ⇓P **P 09 49 06.2 +0.6**
baz=34,SNR=16
L11A Cat Creek Ranc 34.09 329 ⇓P **P 09 49 05.4 -0.8**
baz=34,SNR=43
H16A Russell Place, 34.09 336 P **P 09 49 07.0 +0.8**
baz=34,SNR=40
LAO LASA Array 34.17 344 *eP* **P 09 49 06.7 -0.2**
comp=Z,95nm,1.3s,mb5.6
LAO LR LR
comp=Z,1µm,20.0s,MS4.7
QLMT Earthquake Lak 34.27 336 *eP* **P 09 49 10.1 +2.4**
J13A Cove Ranch, Pi 34.27 332 ⇑P **P 09 49 07.6 -0.1**
baz=34,SNR=18
WCN Washoe City 34.34 322 ⇓P **P 09 49 06.6 -1.8**
baz=35,SNR=22
I14A Mackay 34.37 333 ⇑P **P 09 49 08.1 -0.5**
baz=35,SNR=38
PAHR Pah Rah Range 34.37 322 *eP* **P 09 49 09.8 +1.1**
comp=Z,276nm,2.5s,mb5.7
L10A Juniper Basin 34.39 328 ⇑P **P 09 49 08.6 -0.1**
baz=35,SNR=25
G17A Pierce Place, 34.42 337 ⇓P **P 09 49 09.2 +0.2**
baz=35,SNR=14
GCMT Greycliff 34.44 339 *eP* **P 09 49 09.0 -0.1**
comp=Z,40nm,1.1s,mb5.3
HLID Hailey 34.51 332 ⇑P **P 09 49 08.8 -1.0**
baz=35,SNR=45
HLID Hailey 34.51 332 *eP* **P 09 49 10.0 +0.2**
comp=Z,36nm,1.1s,mb5.2
HLID LR LR
comp=Z,3µm,20.0s,MS5.0
F18A Big Timber 34.55 339 ⇑P **P 09 49 09.8 -0.3**
baz=35,SNR=42
H15A Lima 34.58 335 ⇓P **P 09 49 10.4 0.0**
baz=35,SNR=45
J12A Stokes Ranch, 34.59 331 ⇑P **P 09 49 08.4 -2.1**
baz=35,SNR=11
I13A Wildhorse Cree 34.65 333 ⇑P **P 09 49 08.0 -3.1**
baz=35
K11A Parker Ranch, 34.68 329 ⇑P **P 09 49 10.1 -1.2**
baz=35,SNR=12
G16A Moss Hill, Enn 34.75 336 ⇓P **P 09 49 12.4 +0.6**
baz=35,SNR=34
LBNH Lisbon 34.77 27 PFAKE 09 49 20.0 +7.9
LBNH LR LR
comp=Z,8µm,19.0s,MS5.5
MCMT McKenzie Canyo 34.84 335 *eP* **P 09 49 14.3 +1.7**
comp=Z,32nm,1.1s,mb5.2
H14A Leadore 34.88 334 ⇑P **P 09 49 12.7 -0.3**
baz=35
F17A Fitzpatrick Pl 34.89 338 ⇑P **P 09 49 13.5 +0.4**
baz=35,SNR=108
G15A Dillon 34.97 336 ⇓P **P 09 49 14.2 +0.4**
baz=35,SNR=64
I12A Atlanta 35.02 331 ⇑P **P 09 49 13.3 -0.9**
baz=35,SNR=48
BOZ Bozeman (W) 35.03 337 ⇓P **P 09 49 12.7 -1.6**
baz=35,SNR=44
BOZ Bozeman (W) 35.03 337 *eP* **P 09 49 14.2 -0.1**
BOZ pmax pmax
comp=Z,31nm,1.1s,mb5.2
BOZ MLR MLR
comp=Z,1µm,20.0s,MS4.6
BOZ Bozeman (W) 35.03 337 *eP* **P 09 49 14.2 -0.1**
comp=Z,31nm,1.1s,mb5.2
BOZ LR LR
comp=Z,1µm,20.0s,MS4.6
BEKR Beckworth 35.05 322 ⇑P **P 09 49 14.9 +0.3**
baz=35,SNR=21
MFID Camas Ranch 35.06 330 ⇑P **P 09 49 14.6 +0.1**
baz=35,SNR=18
K10A MacKenzie Ranc 35.10 329 ⇑P **P 09 49 14.8 -0.1**
baz=35,SNR=9.0
F16A Kennard Place, 35.15 337 ⇑P **P 09 49 15.9 +0.7**
baz=35,SNR=29
DLMT Dillon 35.17 336 *eP* **P 09 49 16.4 +0.9**
comp=Z,82nm,1.2s,mb5.5
E18A Harlowton 35.20 339 ⇑P **P 09 49 15.9 +0.2**
baz=35,SNR=52
H13A Challis 35.22 333 P **P 09 49 16.6 +0.6**
baz=36,SNR=89
LCCM Lewis and Clar 35.28 337 P **P 09 49 17.4 +0.9**
DGMT Dagmar 35.33 347 ⇑P **P 09 49 16.8 0.0**
baz=36,SNR=12
DGMT Dagmar 35.33 347 *eP* **P 09 49 16.6 -0.2**
comp=Z,32nm,0.9s,mb5.2
DGMT LR LR
comp=Z,1µm,19.0s,MS4.7
OHCM Honcut 35.42 320 *eP* **P 09 49 18.8 +1.1**
G14A Jackson 35.43 335 ⇓P **P 09 49 18.8 +1.1**
baz=36,SNR=6.8
E17A Martinsdale 35.44 338 ⇓P **P 09 49 18.0 +0.2**
baz=36,SNR=26
H12A Diamond D Ranc 35.48 333 ⇑P **P 09 49 18.0 -0.2**
baz=36,SNR=58
LRM Limekiln Ridge 35.49 336 *eP* **P 09 49 18.9 +0.7**
I11A Placerville 35.49 331 P **P 09 49 18.8 +0.5**
baz=36,SNR=89
J10A Berg Farm, Mel 35.52 329 ⇑P **P 09 49 18.4 -0.2**
baz=36
F15A Butte 35.53 336 P **P 09 49 19.1 +0.6**
baz=36,SNR=32
MCCM Marconi Confer 35.62 317 *eP* **P 09 49 19.7 +0.2**
comp=Z,68nm,1.5s,mb5.4
MCCM LR LR
comp=Z,1µm,19.0s,MS4.7
G13A Cobalt 35.63 334 ⇓P **P 09 49 20.1 +0.7**
baz=36,SNR=17
D18A Linhart Farms, 35.71 340 ⇓P **P 09 49 20.5 +0.4**
baz=36,SNR=30
WVOR Wild Horse Val 35.77 327 *eP* **P 09 49 21.1 +0.4**
WVOR pmax pmax
comp=Z,34nm,1.0s,mb5.2
WVOR Wild Horse Val 35.77 327 *eP* **P 09 49 21.1 +0.4**
comp=Z,34nm,1.0s,mb5.2
E16A East Helena 35.80 338 ⇓P **P 09 49 20.8 0.0**
baz=36,SNR=43
F14A Wisdom 35.85 335 ⇓P **P 09 49 21.8 +0.4**
baz=36,SNR=9.3
ULM Lac du Bonnet 35.93 357 P **P 09 49 20.1 -1.8**
comp=Z,25nm,0.9s,mb5.2,baz=180,slow=8.2,SNR=15
ULM LR LR 10 07 55.9
comp=Z,2µm,19.2s,MS4.8,baz=174,slow=43
ULM Lac du Bonnet 35.93 357 *eP* **P 09 49 19.9 -2.0**
comp=Z,24nm,0.9s,mb5.1
ULM LR LR
comp=Z,2µm,20.0s,MS4.9
D17A Six Diamond Ra 35.97 339 ⇑P **P 09 49 22.3 0.0**
baz=36,SNR=41
HRY Holter Researc 36.00 338 *eP* **P 09 49 23.4 +0.8**
I10A Payette 36.03 330 ⇑P **P 09 49 23.3 +0.5**
baz=36,SNR=22
E15A Deer Lodge 36.07 337 ⇑P **P 09 49 23.2 0.0**
baz=36,SNR=28
H11A Donnelly 36.12 332 ⇑P **P 09 49 23.7 0.0**
baz=36,SNR=59
G12A Big Creek, Yel 36.14 333 ⇓P **P 09 49 24.2 +0.4**
baz=36
D16A Dana Ranch, Ca 36.17 338 ⇑P **P 09 49 24.3 +0.2**
baz=36,SNR=22
HOPS Hopland 36.22 318 *eP* **P 09 49 26.6 +2.0**
comp=Z,168nm,2.4s,mb5.5
HOPS LR LR
comp=Z,3µm,20.0s,MS5.0
F13A Darby 36.23 334 ⇑P **P 09 49 25.0 +0.4**
baz=36,SNR=26
MOD Modoc 36.33 325 *eP* **P 09 49 25.1 -0.4**
comp=Z,29nm,0.9s,mb5.2
MOD LR LR
comp=Z,3µm,19.0s,MS5.1
J08A Circle Bar Ran 36.34 328 P **P 09 49 26.1 +0.6**
baz=37,SNR=27
H10A Noah's Angus R 36.38 331 ⇓P **P 09 49 24.8 -1.0**
baz=37,SNR=12
E14A Clinton 36.39 336 ⇓P **P 09 49 25.8 -0.2**
baz=37,SNR=14
I09A Lost Marbles R 36.41 329 ⇓P **P 09 49 25.7 -0.4**
baz=37,SNR=69
C17A Wharram Farm, 36.41 340 ⇑P **P 09 49 25.7 -0.4**
baz=37,SNR=43
EGMT Eagleton 36.42 341 ⇓P **P 09 49 25.9 -0.2**
baz=37,SNR=45
EGMT Eagleton 36.42 341 *eP* **P 09 49 26.6 +0.4**
comp=Z,225nm,1.4s,mb5.9
EGMT LR LR
comp=Z,506nm,20.0s,MS4.3
D15A Lincoln 36.54 337 ⇑P **P 09 49 27.0 -0.2**
baz=37,SNR=22
F12A Elk City 36.60 333 ⇓P **P 09 49 27.3 -0.4**
baz=37,SNR=52
E13A Victor 36.70 335 P **P 09 49 28.3 -0.3**
baz=37,SNR=56
CHMT Chamberlain Mo 36.71 336 *eP* **P 09 49 28.8 +0.2**
PKME Peaks-Kenny Pk 36.75 28 PFAKE 09 49 40.0 +11
PKME LR LR
comp=Z,5µm,19.0s,MS5.3
B18A Beardsley Farm 36.76 341 ⇓P **P 09 49 28.1 -0.9**
baz=37,SNR=17
G11A Walters Elk Ra 36.77 332 ⇑P **P 09 49 27.3 -1.9**
baz=37
WDC Whiskeytown Da 36.81 321 *eP* **P 09 49 27.6 -2.0**
WDC pmax pmax
comp=Z,15nm,1.4s,mb4.6
WDC MLR MLR
comp=Z,2µm,19.0s,MS4.9
WDC Whiskeytown Da 36.81 321 *eP* **P 09 49 27.6 -2.0**
comp=Z,15nm,1.4s,mb4.6
WDC LR LR
comp=Z,2µm,19.0s,MS4.9
BMO Blue Mountains 36.84 331 *eP* **P 09 49 29.3 -0.4**
comp=Z,55nm,1.8s,mb5.1
BMO LR LR
comp=Z,2µm,19.0s,MS4.8
H09A Durkee 36.87 330 ⇓P **P 09 49 29.0 -1.0**
baz=37,SNR=9.7
C16A Fuhringer Ranc 36.90 339 ⇑P **P 09 49 29.8 -0.4**
baz=37,SNR=50
MSO Missoula 36.91 336 *eP* **P 09 49 30.0 -0.3**
comp=Z,28nm,1.1s,mb5.0
MSO LR LR
comp=Z,2µm,22.0s,MS4.8
KCPM Cahto Peak 36.94 319 *eP* **P 09 49 32.9 +2.2**
comp=Z,108nm,2.1s,mb5.3
D14A Greenough 36.95 336 ⇓P **P 09 49 29.8 -0.9**
baz=37,SNR=35
B17A L&G Farms, Che 37.00 340 ⇓P **P 09 49 30.6 -0.5**
baz=37
SLMT Seeley Lake 37.07 337 *eP* **P 09 49 31.6 -0.2**
G10A Bishop Farm, J 37.08 331 ⇑P **P 09 49 31.0 -0.8**
baz=37,SNR=18
F11A Grangeville 37.10 333 ⇓P **P 09 49 31.3 -0.6**
baz=37,SNR=12
C15A Salmond Ranch, 37.18 338 ⇑P **P 09 49 33.1 +0.4**
baz=37,SNR=22
K05A Summer Lake 37.20 325 ⇑P **P 09 49 32.5 -0.4**
baz=37
A18A Metzger Ranch, 37.24 341 ⇓P **P 09 49 33.1 0.0**
baz=38,SNR=59
E12A Beaver Dam Sad 37.25 334 ⇑P **P 09 49 32.4 -0.8**
baz=38
H08A Prairie City 37.26 329 ⇓P **P 09 49 33.2 -0.2**
baz=38,SNR=14
D13A Huson 37.33 336 ⇑P **P 09 49 33.3 -0.6**
baz=38,SNR=33
G09A Cove 37.38 331 ⇓P **P 09 49 33.5 -0.8**
baz=38,SNR=26
B16A M & M Farms, S 37.41 339 ⇓P **P 09 49 34.1 -0.5**
baz=38,SNR=22
SWMT Swartz Lake 37.49 336 *eP* **P 09 49 35.5 +0.3**
C14A Swan Lake 37.60 337 ⇓P **P 09 49 36.2 0.0**
baz=38
YBH Yreka Blue Hor 37.61 322 *eP* **P 09 49 34.9 -1.5**
YBH MLR MLR
comp=Z,3µm,19.0s
B15A Bradely Ranch, 37.62 338 ⇑P **P 09 49 36.1 -0.2**
baz=38,SNR=22
F10A Beach Ranch, E 37.64 332 ⇓P **P 09 49 36.4 -0.2**
baz=38,SNR=54
D12A Red Ives Fores 37.66 335 ⇑P **P 09 49 36.1 -0.7**
baz=38
KHMM Horse Mountain 37.72 321 *eP* **P 09 49 38.5 +1.2**
comp=Z,27nm,0.9s,mb5.0
YBMT Yellow Bay 37.78 337 *eP* **P 09 49 38.1 +0.3**
JTMT Jette 37.79 336 *eP* **P 09 49 38.0 +0.2**
comp=Z,25nm,1.0s,mb4.9
A16A West Butte Ran 37.83 340 ⇑P **P 09 49 37.9 -0.3**
baz=38
C13A Hot Springs 37.85 336 ⇓P **P 09 49 37.0 -1.3**
baz=38,SNR=13
B14A Marquette Ranc 37.92 338 ⇑P **P 09 49 38.2 -0.7**
baz=38,SNR=14
G08A Pilot Rock 37.96 330 ⇓P **P 09 49 37.3 -1.9**
baz=38
LNOR Lincton Mounta 38.06 331 *eP* **P 09 49 40.4 +0.3**
LNOR pmax pmax
comp=Z,4.0nm,0.4s,mb4.5
LNOR Lincton Mounta 38.06 331 *eP* **P 09 49 40.4 +0.3**
comp=Z,4.3nm,0.4s,mb4.5
BSMT Bassoo Peak 38.08 336 *eP* **P 09 49 40.7 +0.5**
C12B Naegeli Ranch, 38.24 335 ⇑P **P 09 49 40.1 -1.5**
baz=38,SNR=6.9
A15A Johnson Ranch, 38.24 339 ⇑P **P 09 49 41.3 -0.3**
baz=38,SNR=32
HUMO Hull Mountain 38.29 323 PFAKE 09 49 50.0 +7.9
HUMO LR LR
comp=Z,3µm,20.0s,MS5.1
B13A Whitefish 38.38 337 ⇓P **P 09 49 42.7 0.0**
baz=39,SNR=13
E09A Wood Farm, Sta 38.47 332 ⇑P **P 09 49 43.1 -0.5**
baz=39
A14A Double T Ranch 38.48 338 ⇓P **P 09 49 42.7 -0.9**
baz=39,SNR=36
C11A Tepee Creek (N 38.66 335 ⇓P **P 09 49 45.1 0.0**
baz=39
WALA Waterton Lakes 38.73 338 *eP* **P 09 49 46.5 +0.8**
comp=Z,2.8nm,1.6s
G06A Carlson Farm, 38.76 328 ⇓P **P 09 49 45.7 -0.2**
baz=39
A13A Flathead Natio 38.82 337 ⇑P **P 09 49 46.4 -0.1**
baz=39
F07A Phinny Hill Vi 38.87 330 ⇓P **P 09 49 46.2 -0.7**
baz=39
E08A Dider Farm, El 38.88 331 ⇓P **P 09 49 45.9 -1.1**
baz=39
B12A Libby 38.89 336 ⇓P **P 09 49 47.6 +0.6**
baz=39,SNR=8.0
LPAZ La Paz 39.00 140 P **P 09 49 49.3 +1.0**
comp=Z,1.5nm,0.8s,baz=317,slow=9.3,SNR=8.2
LPAZ LR LR 10 04 45.6
comp=Z,978nm,21.2s,MS4.6,baz=331,slow=34
LPAZ La Paz 39.00 140 *eP* **P 09 49 48.4 +0.1**
LPAZ pmax pmax
comp=Z,7.0nm,1.2s
LPAZ MLR MLR
comp=Z,1µm,22.0s
LPAZ La Paz 39.00 140 *eP* **P 09 49 48.4 +0.1**
comp=Z,6.7nm,1.2s,mb4.2
LPAZ LR LR
comp=Z,1µm,22.0s,MS4.8

HAWA Hanford 39.03 330 *e*P **P 09 49 46.8 -1.5**
comp=Z,11nm,0.9s,mb4.6
HAWA LR LR

H04A Detroit Lake 39.20 326 ⇑P **P 09 49 48.8 -0.9**
baz=39,SNR=11
D08A Wollman Farm, 39.23 332 ⇓P **P 09 49 48.4 -1.5**
baz=40
KEBM Edson Butte 39.26 323 *e*P **P 09 49 51.5 +1.3**
comp=Z,235nm,1.2s,mb5.8
A12A Yaak River Ran 39.29 336 ⇓P **P 09 49 50.5 +0.1**
baz=40
E07A Sunnyside 39.31 330 ⇑P **P 09 49 50.3 -0.3**
baz=40
HOOD Mount Hood Mea 39.34 328 *e*P **P 09 49 52.4 +1.5**
comp=Z,280nm,1.0s,mb6.0
NEW Newport 39.36 334 *e*P **P 09 49 50.7 -0.2**
NEW pmax pmax
comp=Z,9.0nm,0.9s
NEW MLR MLR
comp=Z,3μm,22.0s
NEW Newport 39.36 334 *e*P **P 09 49 50.7 -0.2**
comp=Z,9.4nm,0.9s,mb4.5
NEW LR LR
comp=Z,3μm,22.0s,MS5.1
OD2 Odessa Site #2 39.38 332 *e*P **P 09 49 51.8 +0.6**
VLL Laurance Lake 39.45 328 P **P 09 49 53.5 +1.7**
COR Corvallis 39.74 326 PFAKE 09 50 10.0 +16
COR LR LR
comp=Z,2μm,20.0s,MS4.8
TBM Table Mountain 40.10 330 P **P 09 49 58.6 +1.4**
ETW Entiat 40.29 331 *e*P **P 09 49 59.7 +1.0**
B08A Colville Reser 40.38 333 ⇓P **P 09 49 59.0 -0.5**
baz=41,SNR=5.3
LON Longmire 40.40 329 *e*P **P 09 49 59.7 +0.1**
LON pmax pmax
comp=Z,24nm,1.1s,mb4.8
LON Longmire 40.40 329 *e*P **P 09 49 59.7 +0.1**
comp=Z,24nm,1.1s,mb4.8
WRW Wenatchee Ridg 40.73 331 P **P 09 50 03.2 +0.9**
D05A Enumclaw 40.79 329 ⇑P **P 09 50 02.5 -0.3**
baz=41
FFC Flin Flon 40.95 352 *i* P **P 09 50 03.6 -0.5**
FFC Flin Flon 40.95 352 *e*P **P 09 50 03.0 -1.0**
comp=Z,59nm,1.2s,mb5.1
FFC LR LR
comp=Z,1μm,19.0s,MS4.7
RPW Rockport 41.45 331 *e*P **P 09 50 08.3 +0.1**
GNW Green Mountain 41.46 329 *e*P **P 09 50 07.9 -0.5**
comp=Z,9.8nm,1.2s,mb4.3
JCW Jim Creek 41.46 331 *e*P **P 09 50 08.1 -0.3**
B06A Marblemount 41.48 331 ⇓P **P 09 50 08.0 -0.5**
baz=42
NLWA Neilton Lookou 41.87 328 ⇓P **P 09 50 11.8 +0.1**
baz=42,SNR=5.4
NLWA Neilton Lookou 41.87 328 *e*P **P 09 50 11.7 0.0**
comp=Z,101nm,1.7s,mb5.2
NLWA LR LR
comp=Z,3μm,20.0s,MS5.2
EDM Edmonton 42.08 342 *e*P **P 09 50 12.7 -0.6**
A05A Maple Falls 42.10 331 ⇑P **P 09 50 12.8 -0.8**
baz=42,SNR=7.7
PGC Sidney 42.51 330 *e*P **P 09 50 17.4 +0.5**
comp=Z,2.6nm,1.1s
SIV San Ignacio 43.51 133 P **P 09 50 24.8 -0.6**
comp=Z,6.6nm,0.9s,mb4.4,baz=304,slow=8.9,SNR=33
SIV PcP PcP 09 52 14.3 +1.3
comp=Z,5.9nm,1.0s,baz=303,slow=5.7,SNR=4.3
FCC Fort Churchill 44.39 359 *e*P **P 09 50 30.7 -1.2**
comp=Z,0.8nm,0.9s
SCHQ Schefferville 45.24 21 P **P 09 50 36.7 -2.0**
comp=Z,6.9nm,1.0s,mb4.4,baz=212,slow=9.5,SNR=6.0
SCHQ PcP PcP 09 52 18.2 -0.1
comp=Z,6.0nm,0.8s,baz=108,slow=1.4,SNR=4.7
SCHQ LR LR 10 11 35.4
comp=Z,5μm,18.4s,MS5.5,baz=216,slow=39
SCHQ Schefferville 45.24 21 *e*P **P 09 50 36.6 -2.0**
comp=Z,10nm,1.1s,mb4.6
SCHQ LR LR
comp=Z,6μm,20.0s,MS5.5
LCO Las Campanas 48.09 154 PFAKE 09 51 10.0 +8.6
LCO LR LR
comp=Z,563nm,19.0s,MS4.6
YKA Yellowknife Ar 50.54 347 P **P 09 51 19.0 -0.6**
comp=Z,49nm,0.8s,mb5.5,baz=150,slow=7.5,SNR=116
CFAA Coronel Fontan 51.40 153 P **P 09 51 26.7 +0.1**
comp=Z,1.3nm,0.9s,baz=326,slow=5.3,SNR=14
CFAA Coronel Fontan 51.40 153 P **P 09 51 26.7 +0.1**
CRAG Craig 51.46 332 *e*P **P 09 51 27.5 +0.9**
comp=Z,27nm,1.0s,mb5.1
DLBC Dease Lake 52.04 336 LR LR 10 18 22.9
comp=Z,2μm,18.2s,MS5.1,baz=129,slow=42
DLBC Dease Lake 52.04 336 *e*P **P 09 51 31.7 +0.7**
FRB Frobisher Bay 52.21 13 LR LR 10 15 44.4
comp=Z,975nm,19.4s,MS4.8,baz=199,slow=38
TAOE Nuku Hiva Isla 52.24 247 *e*S **S 09 58 55.9 -0.1**
comp=Z,774nm,24.7s
TAOE *e*LR LR 10 06 18.2
comp=Z,1μm,26.6s
CPUP Villa Florida 53.16 139 P **P 09 51 38.0 -1.7**
comp=Z,2.5nm,0.8s,mb4.2,baz=300,slow=8.5,SNR=6.5
CPUP LR LR 10 14 13.3
comp=Z,443nm,18.7s,MS4.5,baz=318,slow=36
CPUP Villa Florida 53.16 139 *e*P **P 09 51 37.5 -2.2**
CPUP *e**PP pP 09 51 52.7 +2.5
CPUP pmax pmax
comp=Z,20nm,0.9s
CPUP Villa Florida 53.16 139 *e*P **P 09 51 37.5 -2.1**
comp=Z,20nm,0.9s,mb5.0
CPUP *e*pP pP 09 51 52.7 +2.5
SKAG Skagway 54.81 335 *e*P **P 09 51 52.1 +0.9**
comp=Z,87nm,1.8s,mb5.5
RKT Rikitea 55.51 228 *e*S **S 09 59 38.2 -1.8**
comp=Z,477nm,27.2s
RKT *e*LR LR 10 08 18.2
comp=Z,2μm,27.0s
PNL Peninsula 56.63 334 *e*P **P 09 52 04.8 +0.4**
comp=Z,95nm,1.5s,mb5.6
SPB Sao Paulo 58.24 130 PFAKE 09 52 30.0 +14
SPB LR LR
comp=Z,990nm,20.0s,MS4.9
PLCA Paso Flores 58.54 160 LR LR 10 12 46.8
comp=Z,808nm,18.1s,MS4.9,baz=102,slow=31
PLCA Paso Flores 58.54 160 PFAKE 09 52 30.0 +12
PLCA LR LR
comp=Z,768nm,19.0s,MS4.8
SFJD Kangerlussuaq 59.48 18 LR LR 10 19 55.6
comp=Z,5μm,18.2s,MS5.7,baz=204,slow=38
SFJD Kangerlussuaq 59.48 18 PFAKE 09 52 40.0 +16
SFJD LR LR
comp=Z,4μm,19.0s,MS5.6
BMRM Bremner River 59.52 334 *e*P **P 09 52 25.1 +0.6**
comp=Z,32nm,1.0s,mb5.3
BMRM *e*pP pP 09 52 43.1 +7.9
TRQA Tornquist 59.60 152 *e*P **P 09 52 24.2 -1.2**
comp=Z,24nm,1.5s,mb5.0
TRQA LR LR
comp=Z,798nm,21.0s,MS4.8
INK Inuvik 59.91 344 LR LR 10 21 46.0
comp=Z,1μm,20.4s,MS5.1,baz=144,slow=39
INK Inuvik 59.91 344 *e*P **P 09 52 26.4 -0.7**
INK pmax pmax
comp=Z,101nm,1.3s
INK Inuvik 59.91 344 *e*P **P 09 52 26.4 -0.7**
comp=Z,100nm,1.3s,mb5.7
RCBR Riachuelo 59.94 105 PFAKE 09 52 40.0 +12
RCBR LR LR
comp=Z,1μm,20.0s,MS5.1
DIV Divide 60.10 333 *e*P **P 09 52 28.8 +0.3**
comp=Z,24nm,1.1s,mb5.1
EGAK Eagle 60.12 338 *e*P **P 09 52 27.9 -0.7**
comp=Z,23nm,1.0s,mb5.2
EGAK LR LR
comp=Z,1μm,21.0s,MS5.1
PAX Paxson 60.83 335 *e*P **P 09 52 33.4 -0.1**
PAX pmax pmax
comp=Z,39nm,1.1s,mb5.5
PAX Paxson 60.83 335 *e*P **P 09 52 33.4 -0.1**
comp=Z,39nm,1.1s,mb5.5
SEW Seward 61.32 332 *e*P **P 09 52 36.8 -0.1**
comp=Z,70nm,1.8s,mb5.5
PMR Palmer 61.77 333 *e*P **P 09 52 39.5 -0.3**
PMR pmax pmax
comp=Z,255nm,2.8s,mb5.9
PMR MLR MLR
comp=Z,1μm,18.0s,MS5.0
PMR Palmer 61.77 333 *e*P **P 09 52 39.5 -0.3**
comp=Z,255nm,2.8s,mb5.9
PMR LR LR
comp=Z,1μm,18.0s,MS5.0
RC01 Rabbit Creek A 61.83 333 *e*P **P 09 52 40.6 +0.3**
comp=Z,38nm,0.9s,mb5.5
KDAK Kodiak Island 62.02 328 LR LR 10 19 52.1
comp=Z,788nm,18.8s,MS4.9,baz=122,slow=36
KDAK Kodiak Island 62.02 328 PFAKE 09 52 50.0 +8.4
KDAK LR LR
comp=Z,719nm,19.0s,MS4.8
OHAK Old Harbor 62.20 328 *e*P **P 09 52 41.1 -1.8**
comp=Z,121nm,2.0s,mb5.7
OHAK LR LR
comp=Z,800nm,19.0s,MS4.9
MCK McKinley 62.57 335 *e*P **P 09 52 45.0 -0.2**
MCK pmax pmax
comp=Z,58nm,1.2s,mb5.6
MCK McKinley 62.57 335 *e*P **P 09 52 45.0 -0.2**
comp=Z,58nm,1.2s,mb5.6
COLA College 62.65 337 *e*P **P 09 52 45.0 -0.7**
COLA pmax pmax
comp=Z,21nm,0.9s,mb5.3
COLA MLR MLR
comp=Z,1μm,22.0s,MS5.0
COLA College 62.65 337 *e*P **P 09 52 45.0 -0.7**
comp=Z,21nm,0.9s,mb5.3
COLA LR LR
comp=Z,1μm,22.0s,MS5.0
RSO Redoubt South 62.98 331 *e*P **P 09 52 47.6 -0.4**
TRF Thorofare Moun 63.01 335 *e*P **P 09 52 47.8 -0.3**
comp=Z,71nm,1.1s,mb5.7
BPAW Bear Paw Mtn. 63.55 335 *e*P **P 09 52 48.6 -3.1**
comp=Z,52nm,1.3s,mb5.4
PPLA Purkeypile 63.59 334 *e*P **P 09 52 51.3 -0.7**
comp=Z,76nm,1.4s,mb5.5
PPT Papeete 64.28 242 *e*S **S 10 01 36.6 +3.5**
comp=Z,2μm,31.8s
PPT *e*LR LR 10 11 55.8
comp=Z,988nm,25.0s
PPT Papeete 64.28 242 LR LR 10 12 34.2
comp=Z,519nm,21.0s,MS4.7,baz=84,slow=28
SVW2 Sparrevohn 64.50 331 *e*P **P 09 52 57.0 -1.0**
COLD Coldfoot 64.54 339 *e*P **P 09 52 58.4 +0.2**
comp=Z,37nm,1.3s,mb5.2
CHGN Chignik 64.69 326 *e*P **P 09 52 58.4 -0.9**
TTA Tatalina 65.25 333 *e*P **P 09 53 02.0 -0.8**
TTA pmax pmax
comp=Z,6.0nm,0.4s,mb5.0
TTA Tatalina 65.25 333 *e*P **P 09 53 02.0 -0.8**
comp=Z,6.4nm,0.4s,mb5.0
SUMG Summit 66.17 16 *e*P **P 09 53 07.8 -0.8**
comp=Z,58nm,1.8s,mb5.3
SACV Santiago Islan 66.75 80 PFAKE 09 53 20.0 +6.7
SACV LR LR
comp=Z,713nm,20.0s,MS4.9
TBI Tubuai 66.81 237 *e*S S 10 02 03.5 -0.3
comp=Z,305nm,23.0s
TBI *e*LR LR 10 13 04.0
comp=Z,1μm,29.0s,baz=62
FALS False Pass 67.23 324 *e*P **P 09 53 14.1 -1.6**
comp=Z,64nm,1.0s,mb5.6
UNV Unalaska Valle 68.92 322 *e*P **P 09 53 25.6 -0.7**
comp=Z,56nm,1.2s,mb5.4
BORG Borgarnes 69.30 26 LR LR 10 24 46.3
comp=Z,1μm,18.2s,MS5.2,baz=237,slow=37
ALE Alert 69.33 4 P **P 09 53 27.2 -1.2**
comp=Z,118nm,1.2s,mb5.7,SNR=7.7
JMIC Jan Mayen 74.74 20 *e*P **P 09 54 04.1 +3.1**
JMIC *e*SKS 10 04 13.2
PMAFR Mafra 76.22 53 *e*S SKSac 10 04 35.9 +17
PMAFR Mafra 76.22 53 *e*LR LR 10 18 14.7
LIS Lisbon 76.36 53 *e*P **P 09 54 10.2 -0.7**
LIS AMS AMS 10 15 07.0
comp=E,1μm,17.2s
PFVI Vila Bisbo 76.82 55 *e*LR LR 10 18 46.0
comp=E,738nm,18.0s
PVIS Viseu 77.05 51 *e*P **P 09 54 13.3 -1.4**
comp=E,32nm,1.6s,mb5.0
EVOP Sao Brissos 77.18 53 *e*P **P 09 54 15.0 -0.5**
EVOP *e*S S 10 03 59.7 -2.9
EVOP AMS AMS 10 27 12.4
comp=Z,740nm,18.3s,MS5.0
EVOP Sao Brissos 77.18 53 *e*P **P 09 54 15.0 -0.5**
EVOP *e*S S 10 03 59.7 -2.9
EVO Evora 77.26 53 *e*P **P 09 54 11.8 -4.2**
comp=Z,24nm,1.1s,mb4.7
EVO *e*MLR MLR
comp=Z,1μm,22.5s,MS4.8
MTE Manteigas 77.36 51 PFAKE 09 54 30.0 +14
MTE LR LR
comp=Z,867nm,20.0s,MS5.1
MTE Manteigas 77.36 51 *e*P **P 09 54 15.8 -0.7**
comp=Z,35nm,1.2s,mb5.2
MTE Manteigas 77.36 51 *e*SS SS 10 09 23.9 +21
MTE *e*LR LR 10 18 53.6
comp=Z,833nm,20.0s
PCVE Castro Verde 77.37 54 *e*S SKSac 10 04 43.9 +17
PCVE Castro Verde 77.37 54 *e*LR LR 10 19 13.2
comp=Z,779nm,18.0s
PBDV Barranco-do-Ve 77.51 55 *e*S S 10 04 06.4 +0.1
PBDV Barranco-do-Ve 77.51 55 *e*LR LR 10 19 15.9
comp=Z,772nm,20.0s
PESTR Estremoz 77.54 53 *e*S S 10 04 15.0 +8.5
PESTR Estremoz 77.54 53 *e*LR LR 10 18 32.2
comp=Z,628nm,18.0s
PMRV Marv??o 77.61 52 *e*P **P 09 54 17.1 -0.8**
comp=Z,24nm,1.8s,mb4.8
PMRV Marv??o 77.61 52 *e*S SKSac 10 04 37.1 +8.2
PMRV Marv??o 77.61 52 *e*LR LR 10 19 10.7
comp=Z,803nm,18.0s
MVO Moncorvo 77.64 50 *e*P **P 09 54 16.8 -1.2**
comp=Z,33nm,2.1s,mb4.9
MVO Moncorvo 77.64 50 *e*LR LR 10 19 24.9
comp=Z,889nm,18.0s
PVAQ Vaqueiros 77.66 54 *e*P **P 09 54 16.6 -1.6**
comp=Z,45nm,2.1s,mb5.0
PVAQ Vaqueiros 77.66 54 *e*S SKSac 10 04 38.3 +8.9
PVAQ Vaqueiros 77.66 54 *e*LR LR 10 19 21.7
comp=Z,918nm,18.0s
PBAR Barrancos 78.07 53 *e*P **P 09 54 21.6 +1.1**
comp=Z,21nm,1.8s,mb4.8
PBAR Barrancos 78.07 53 *e*SS SS 10 09 21.8 +7.8
PBAR *e*LR LR 10 18 49.9
comp=Z,636nm,18.0s
ESK Eskdalemuir 78.19 36 PFAKE 09 54 30.0 +9.3
ESK LR LR
comp=Z,2μm,20.0s,MS5.4
KBS Kingsbay 78.87 11 *e*P **P 09 54 26.2 +2.0**
KBS *e*SKS 10 04 37.0
KBS AMS AMS 10 31 57.4
comp=Z,1μm,18.5s,MS5.3
KBS Kingsbay 78.87 11 *e*P **P 09 54 26.0 +1.8**
KBS pmax pmax
comp=Z,183nm,2.1s,mb5.6
KBS MLR MLR
comp=Z,2μm,19.0s,MS5.3
KBS Kingsbay 78.87 11 *e*P **P 09 54 25.9 +1.8**
comp=Z,183nm,2.1s,mb5.6
KBS LR LR
comp=Z,2μm,19.0s,MS5.3
SFS San Fernando 79.00 55 PFAKE 09 54 40.0 +14
SFS LR LR
comp=Z,668nm,22.0s,MS4.9
ROSF Rostrenen 79.20 43 *e*P **P 09 54 23.1 -3.3**
QUIF Quistinic 79.34 43 *e*P **P 09 54 24.8 -2.4**
SGMF Saint Gilles 79.68 43 *e*P **P 09 54 25.6 -3.5**
comp=Z,14nm,0.9s,mb4.6
SGMF Saint Gilles 79.68 43 *e*P **P 09 54 25.6 -3.5**
SGMF pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
SGMF Saint Gilles 79.68 43 *e*P **P 09 54 25.6 -3.5**
comp=Z,7.1nm,0.9s,mb4.6
PAB San Pablo 79.92 52 PFAKE 09 54 40.0 +9.4
PAB LR LR
comp=Z,909nm,19.0s,MS5.1
ESDC Sonseca Array 80.19 52 P **P 09 54 30.8 -1.2**
comp=Z,2.4nm,0.8s,mb4.2,baz=288,slow=5.7,SNR=10
ESDC LR LR 10 30 07.6
comp=Z,591nm,18.1s,MS5.0,baz=285,slow=36
ESLA Sonseca Array 80.19 52 PFAKE 09 54 40.0 +8.0
ESLA LR LR
comp=Z,4μm,20.0s,MS5.8
GRR Gorron 80.77 42 *e*P **P 09 54 32.7 -2.3**
BILL Bilibino 80.86 338 ⇑*i*P **P 09 54 35.0 -0.1**
BILL *e* 09 57 40.7
BILL *e*S S 10 04 49.9 +9.1
BILL *e*SS SS 10 09 58.9 +4.6
BILL pmax pmax
comp=Z,100nm,2.0s,mb5.4
BILL Bilibino 80.86 338 *e*P **P 09 54 34.9 -0.2**
comp=Z,62nm,1.3s,mb5.4
BILL LR LR
comp=Z,685nm,20.0s,MS5.0
FLN La Foliniere 80.95 42 *e*P **P 09 54 33.8 -2.1**
FLN *e*MLR MLR
comp=Z,1μm,19.5s,MS5.0
FLN La Foliniere 80.95 42 *e*P **P 09 54 33.8 -2.1**
FLN LR LR
comp=Z,1μm,19.5s,MS5.3
LDF La Druitiere 81.21 42 *e*P **P 09 54 35.2 -2.1**
comp=Z,19nm,1.1s,mb4.6
LDF La Druitiere 81.21 42 *e*P **P 09 54 35.2 -2.1**
LDF pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
LDF La Druitiere 81.21 42 *e*P **P 09 54 35.2 -2.1**
comp=Z,9.5nm,1.1s,mb4.6
FOO Floro 81.27 29 *e*P **P 09 54 41.0 +3.7**
FOO *e*SKS 10 04 53.4
FOO AMS AMS 10 24 14.0
comp=Z,797nm,27.9s,MS4.9
SJPF Ste Jean 81.56 48 *e*P **P 09 54 36.6 -2.7**
MFF Saint Martin d 81.60 44 *e*P **P 09 54 37.0 -2.4**
comp=Z,19nm,1.1s,mb4.6
MFF Saint Martin d 81.60 44 *e*P **P 09 54 37.0 -2.4**
MFF pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
MFF Saint Martin d 81.60 44 *e*P **P 09 54 37.0 -2.4**
comp=Z,9.5nm,1.1s,mb4.6
BER Bergen 81.70 30 *e*P **P 09 54 40.2 +0.6**
BER *e*SKS 10 04 57.9
BER AMS AMS 10 30 44.5
comp=Z,804nm,21.5s,MS5.0
ETSF Etsaut 82.08 48 *e*P **P 09 54 40.3 -1.7**
comp=Z,35nm,1.4s,mb4.8
ETSF Etsaut 82.08 48 *e*P **P 09 54 40.3 -1.7**
ETSF pmax pmax
comp=Z,18nm,1.4s,mb4.8
ETSF Etsaut 82.08 48 *e*P **P 09 54 40.3 -1.7**
comp=Z,18nm,1.4s,mb4.8
LFF La Frestale 82.56 46 *e*P **P 09 54 42.4 -2.1**
EPF Esparros 82.70 48 *e*P **P 09 54 43.3 -1.9**
RJF Les Rejaudoux 83.01 45 *e*P **P 09 54 44.5 -2.3**
RJF *e*MLR MLR
comp=Z,922nm,20.5s,MS4.8
RJF Les Rejaudoux 83.01 45 *e*P **P 09 54 44.5 -2.3**
RJF LR LR
comp=Z,920nm,20.5s,MS5.1
TCF Toulx Ste Croi 83.26 44 *e*P **P 09 54 45.8 -2.3**
comp=Z,9.8nm,1.0s,mb4.5
TCF Toulx Ste Croi 83.26 44 *e*P **P 09 54 45.8 -2.3**
TCF pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
TCF Toulx Ste Croi 83.26 44 *e*P **P 09 54 45.8 -2.3**
comp=Z,4.9nm,1.0s,mb4.5
CAF Calviac 83.48 45 *e*P **P 09 54 46.9 -2.3**
UCC Uccle 83.55 39 P **P 09 54 48.9 -0.6**
SNF Seneffe 83.58 40 P **P 09 54 48.9 -0.7**
comp=Z,11nm,2.2s,mb4.6
BGF Bois d'Agland 83.62 44 *e*P **P 09 54 47.6 -2.3**
BAIF Baives 83.64 40 *e*P **P 09 54 47.9 -2.1**
DOU Dourbes 83.87 40 P **P 09 54 49.9 -1.3**
comp=Z,8.6nm,2.2s,mb4.5
DOU XP sP 09 54 53.2 -13
AVF Avril sur Loir 83.90 43 *e*P **P 09 54 48.7 -2.7**
SSF Saint Saulge 83.94 43 *e*P **P 09 54 49.0 -2.5**
comp=Z,15nm,1.1s,mb4.7
SSF Saint Saulge 83.94 43 *e*P **P 09 54 49.0 -2.5**
SSF pmax pmax
comp=Z,7.0nm,1.1s,mb4.7
SSF Saint Saulge 83.94 43 *e*P **P 09 54 49.0 -2.5**
comp=Z,7.4nm,1.1s,mb4.7
KONO Kongsberg 83.96 30 *e*P **P 09 54 50.9 -0.5**
KONO *e*SKS 10 05 18.5
KONO AMS AMS 10 30 08.5
comp=Z,728nm,22.3s,MS5.0
KONO Kongsberg 83.96 30 *e*P **P 09 54 50.9 -0.5**
KONO *e* 10 05 24.1
KONO LR LR
comp=Z,730nm,22.3s,MS5.0
MTLF Montolieu 83.96 47 *e*P **P 09 54 49.7 -2.0**
GIVF Givet 84.02 40 *e*P **P 09 54 50.1 -1.8**
TRO Tromso 84.03 19 *e*P **P 09 54 49.7 -1.8**
TRO AMb AMB 09 54 54.3
comp=Z,63nm,3.7s
TRO *e*SKS 10 05 19.9
TRO AMS AMS 10 32 00.1
comp=Z,2μm,18.3s,MS5.4
TRO Tromso 84.03 19 *e*P **P 09 54 49.7 -1.9**
TRO pmax pmax
comp=Z,63nm,3.7s
TRO MLR MLR
comp=Z,2μm,18.3s,MS5.4
TRO Tromso 84.03 19 *e*P **P 09 54 49.7 -1.8**
comp=Z,63nm,3.7s
TRO LR LR
comp=Z,2μm,18.3s,MS5.4
LOR Lormes 84.12 43 *e*P **P 09 54 50.4 -2.1**
LOR *e*MLR MLR
comp=Z,1μm,18.2s,MS5.0
LOR Lormes 84.12 43 *e*P **P 09 54 50.4 -2.1**
LOR LR LR
comp=Z,1μm,18.3s,MS5.3
NAO01 NORSAR Array S 84.19 29 PFAKE 09 55 00.0 +7.5
NAO01 LR LR
comp=Z,1μm,21.0s,MS5.2
BCLA Clavier 84.23 40 P **P 09 54 52.0 -0.9**
comp=Z,13nm,2.1s,mb4.7
SMF Signal de Mont 84.27 43 *e*P **P 09 54 50.5 -2.7**
NB2 NORSAR Subarra 84.28 28 P **P 09 54 52.3 -0.7**
comp=Z,185nm,2.5s,mb5.8,baz=291,slow=4.8
NOA NORSAR Array B 84.28 28 P **P 09 54 52.2 -0.8**
comp=Z,6.1nm,0.9s,mb4.8,baz=291,slow=4.8,SNR=14
NOA LR LR 10 30 51.2
comp=Z,1μm,21.7s,MS5.2,baz=285,slow=34
BEBN Eben Emael 84.36 39 P **P 09 54 52.8 -0.8**
HGN Heimansgroeve 84.52 39 *e*P **P 09 54 52.9 -1.6**
comp=Z,32nm,2.5s,mb5.0
MEZF Maizieres J'vi 84.58 41 *e*P **P 09 54 52.9 -1.9**
comp=Z,78nm,1.5s,mb5.3
MEZF Maizieres J'vi 84.58 41 *e*P **P 09 54 52.9 -1.9**
comp=Z,78nm,1.5s,mb5.6
MEM Membach 84.61 39 P **P 09 54 54.4 -0.5**
comp=Z,8.9nm,1.3s,mb4.7
MEM AP pP 09 54 56.1 -10
WTSB Winterswijk 84.71 38 *e*P **P 09 54 52.8 -2.6**
comp=Z,41nm,1.7s,mb5.3
MUD Monsted U'grnd 84.73 33 *i* P **P 09 54 55.3 0.0**
MUD
comp=Z,1μm,19.0s
LASF Ste Croix 84.93 46 *e*P **P 09 54 54.2 -2.4**
WLF Walferdange 84.96 40 P **P 09 54 56.3 -0.4**
comp=Z,24nm,2.0s,mb5.0
WLF XP sP 09 54 58.8 -13
WLF Walferdange 84.96 40 *e*P **P 09 54 57.8 +1.1**
comp=Z,63nm,1.6s,mb5.5
WLF Walferdange 84.96 40 *e*P **P 09 54 58.0 +1.3**
WLF pmax pmax
comp=Z,110nm,2.0s,mb5.6
WLF MLR MLR
comp=Z,2μm,19.0s,MS5.4
WLF Walferdange 84.96 40 *e*P **P 09 54 58.0 +1.3**
comp=Z,110nm,2.0s,mb5.6
WLF LR LR
comp=Z,2μm,19.0s,MS5.4
SSB Saint Sauveur 85.09 45 PFAKE 09 55 10.0 +13
SSB LR LR
comp=Z,707nm,19.0s,MS5.1
IBBN Ibbenburen 85.18 37 *e*P **P 09 54 58.7 +1.0**
comp=Z,33nm,1.3s,mb5.3
VIVF Saint-Julien-l 85.29 45 *e*P **P 09 54 57.3 -1.1**
HAU Haudompre 85.55 42 *e*P **P 09 54 57.7 -1.9**
HAU *e*MLR MLR
comp=Z,999nm,20.2s,MS4.9
HAU Haudompre 85.55 42 *e*P **P 09 54 57.7 -1.9**
HAU LR LR
comp=Z,1μm,20.3s,MS5.2
CABF La Chapelle 85.77 43 *e*P **P 09 55 01.0 +0.2**
comp=Z,58nm,1.5s,mb5.3
CABF La Chapelle 85.77 43 *e*P **P 09 55 01.0 +0.2**
CABF pmax pmax
comp=Z,29nm,1.5s,mb5.3

CABF	**La Chapelle**	**85.77**	**43**	*e*P	**P**	**09 55 01.0**	**+0.2**
	comp=Z,29nm,1.5s,mb5.3						
HINF	**Hinteralfeld**	**85.93**	**42**	*e*P	**P**	**09 54 59.5**	**-2.0**
ECH	**Echery**	**86.01**	**41**	*e*P	**P**	**09 55 02.3**	**+0.4**
ECH				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.9						
ECH				MLR	MLR		
	comp=Z,781nm,20.0s,MS5.1						
ECH	**Echery**	**86.01**	**41**	*e*P	**P**	**09 55 02.3**	**+0.4**
	comp=Z,7.5nm,1.0s,mb4.9						
ECH				LR	LR		
	comp=Z,781nm,20.0s,MS5.1						
CDF	**Champ du Feu**	**86.03**	**41**	*e*P	**P**	**09 55 00.2**	**-1.8**
ARCES	**ARCESS Array B**	**86.11**	**18**	P	**P**	**09 55 01.7**	**-0.3**
	comp=Z,4.1nm,0.7s,mb4.8,baz=288,slow=4.9,SNR=15						
ARCES	**ARCESS Array B**	**86.11**	**18**	P	**P**	**09 55 01.7**	**-0.3**
BSEG	**Bad Segeberg**	**86.14**	**35**	*e*P	**P**	**09 55 02.7**	**+0.2**
	comp=Z,28nm,1.2s,mb5.4						
SMRF	**Simiane la Rot**	**86.15**	**46**	*e*P	**P**	**09 55 01.7**	**-1.0**
TNS	**Taunus Mts**	**86.22**	**39**	*e*P	**P**	**09 55 03.5**	**+0.6**
	comp=Z,48nm,1.3s,mb5.6						
TIC	**Toumodi**	**86.31**	**84**	*e*P	**P**	**09 55 02.9**	**-1.2**
	comp=Z,154nm,1.8s,mb5.9						
TIC	**Toumodi**	**86.31**	**84**	*e*P	**P**	**09 55 02.9**	**-1.2**
TIC				pmax	pmax		
	comp=Z,154nm,1.8s,mb5.9						
LIC	**Lamto**	**86.40**	**85**	*e*P	**P**	**09 55 01.7**	**-2.8**
	comp=Z,119nm,1.4s,mb5.6						
LIC				*e*MLR	MLR		
	comp=Z,532nm,18.2s,MS4.7						
LIC	**Lamto**	**86.40**	**85**	*e*P	**P**	**09 55 04.0**	**-0.5**
	comp=Z,109nm,1.4s,mb5.9						
LIC	**Lamto**	**86.40**	**85**	*e*P	**P**	**09 55 01.7**	**-2.8**
	comp=Z,60nm,1.4s,mb5.6						
LIC				LR	LR		
	comp=Z,270nm,18.3s,MS4.7						
KEV	**Kevo**	**86.44**	**18**	PFAKE		09 55 10.0	+6.4
KEV				LR	LR		
	comp=Z,1μm,21.0s,MS5.3						
NRDL	**Niedersach Rie**	**86.49**	**37**	*e*P	**P**	**09 55 04.5**	**+0.3**
	comp=Z,27nm,1.5s,mb5.3						
LPL	**La Plagne**	**86.51**	**44**	*e*P	**P**	**09 55 02.5**	**-1.9**
LPG	**La Plagne**	**86.53**	**44**	*e*P	**P**	**09 55 02.9**	**-1.6**
	comp=Z,102nm,1.6s,mb5.5						
LPG	**La Plagne**	**86.53**	**44**	*e*P	**P**	**09 55 02.9**	**-1.6**
LPG				pmax	pmax		
	comp=Z,51nm,1.6s,mb5.5						
LPG	**La Plagne**	**86.53**	**44**	*e*P	**P**	**09 55 02.9**	**-1.6**
	comp=Z,51nm,1.6s,mb5.5						
BNI	**Bardonecchia**	**86.61**	**44**	*e*P	**P**	**09 55 06.2**	**+1.3**
BNI				pmax	pmax		
	comp=Z,50nm,1.7s,mb5.5						
BNI				MLR	MLR		
	comp=Z,967nm,20.0s,MS5.2						
BNI	**Bardonecchia**	**86.61**	**44**	*e*P	**P**	**09 55 06.2**	**+1.3**
	comp=Z,50nm,1.7s,mb5.5						
BNI				LR	LR		
	comp=Z,967nm,20.0s,MS5.2						
KIC	**Kosan Boka**	**86.65**	**84**	*e*P	**P**	**09 55 04.7**	**-1.0**
	comp=Z,67nm,1.3s,mb5.7						
COP	**Copenhagen**	**86.71**	**33**	*i*P	**P**	**09 55 04.6**	**-0.6**
COP							
	comp=Z,440nm,18.0s						
BFO	**Black Forest**	**86.72**	**41**	*e*P	**P**	**09 55 04.8**	**-0.6**
	comp=Z,20nm,1.6s,mb5.1						
BFO	**Black Forest**	**86.72**	**41**	PFAKE		09 55 20.0	+15
BFO				LR	LR		
	comp=Z,1μm,19.0s,MS5.3						
MBDF	**Montbardon**	**86.76**	**45**	*e*P	**P**	**09 55 04.5**	**-1.2**
	comp=Z,11nm,0.8s,mb4.8						
MBDF	**Montbardon**	**86.76**	**45**	*e*P	**P**	**09 55 04.5**	**-1.2**
MBDF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.8						
MBDF	**Montbardon**	**86.76**	**45**	*e*P	**P**	**09 55 04.5**	**-1.2**
	comp=Z,5.3nm,0.8s,mb4.8						
CLZ	**Clausthal**	**86.86**	**37**	*e*P	**P**	**09 55 06.2**	**+0.2**
	comp=Z,58nm,2.0s,mb5.5						
UBBA	**Unterbreizbach**	**86.97**	**38**	*e*P	**P**	**09 55 06.4**	**-0.2**
	comp=Z,482nm,4.9s						
LMR	**La Mourre**	**86.98**	**46**	*e*P	**P**	**09 55 04.9**	**-1.9**
	comp=Z,88nm,1.5s,mb5.5						
LMR	**La Mourre**	**86.98**	**46**	*e*P	**P**	**09 55 04.9**	**-1.9**
LMR				pmax	pmax		
	comp=Z,44nm,1.5s,mb5.5						
LMR	**La Mourre**	**86.98**	**46**	*e*P	**P**	**09 55 04.9**	**-1.9**
	comp=Z,44nm,1.5s,mb5.5						
FRF	**La Foret Royal**	**87.01**	**46**	*e*P	**P**	**09 55 05.4**	**-1.6**
	comp=Z,72nm,1.4s,mb5.4						
FRF	**La Foret Royal**	**87.01**	**46**	*e*P	**P**	**09 55 05.4**	**-1.6**
FRF				pmax	pmax		
	comp=Z,36nm,1.4s,mb5.4						
FRF	**La Foret Royal**	**87.01**	**46**	*e*P	**P**	**09 55 05.4**	**-1.6**
	comp=Z,36nm,1.4s,mb5.4						
STU	**Stuttgart**	**87.13**	**40**	*e*P	**P**	**09 55 07.9**	**+0.5**
	comp=Z,47nm,1.8s,mb5.4						
SBF	**Sospel**	**87.47**	**45**	*e*P	**P**	**09 55 07.3**	**-1.9**
TUE	**Stuetta**	**87.96**	**43**	*e*P	**P**	**09 55 12.1**	**+0.6**
	comp=Z,18nm,1.3s,mb5.1						
TUE				LR	LR		
	comp=Z,773nm,20.0s,MS5.1						
MOX	**Moxa**	**88.00**	**38**	*e*P	**P**	**09 55 12.0**	**+0.5**
	comp=Z,43nm,2.2s,mb5.3						
MOX				*e*S	S	10 05 45.0	-7.6
MOX							
	comp=Z,800nm,19.0s						
MOX	**Moxa**	**88.00**	**38**	*e*P	**P**	**09 55 10.8**	**-0.7**
	comp=Z,44nm,2.0s,mb5.3						
GRF	**Grafenberg Arr**	**88.08**	**39**	*e*P	**P**	**09 55 11.6**	**-0.4**
	comp=Z,46nm,1.6s,mb5.5						
GRF				*e*L		10 31 05.1	
	comp=Z,920nm,20.6s						
GRF	**Grafenberg Arr**	**88.08**	**39**	*e*P	**P**	**09 55 11.6**	**-0.4**
GRF				pmax	pmax		
	comp=Z,46nm,1.6s,mb5.5						
GRF				MLR	MLR		
	comp=Z,900nm,20.6s,MS5.2						
BSD	**Bornholm Skovb**	**88.23**	**33**	*i*P	**P**	**09 55 11.2**	**-1.3**
BSD				*i*S	S	10 05 47.8	-6.8
BSD							
	comp=Z,1μm,18.0s						
CLL	**Collm**	**88.58**	**37**	*i*P	**P**	**09 55 15.3**	**+1.0**
CLL				*e*	pP	09 55 23.0	-2.4
CLL				*e*S	S	10 05 47.0	-11
CLL				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.8						
CLL	**Collm**	**88.58**	**37**	*i* (P)	**P**	**09 55 15.3**	**+1.0**
	comp=Z,5.0nm,1.1s,mb4.8						
CLL				*e*	pP	09 55 23.0	-2.4
CLL				*e*PP	PP	09 58 43.0	+0.5
CLL				*e*SKSac	SKSac	10 05 47.0	+6.1
CLL				*e*		10 06 19.0	
CLL				*e*PS		10 07 12.0	
CLL				*e*SSS		10 15 30.0	
CLL				Lm		10 35 00.0	
	comp=Z,900nm,21.3s						
TANN	**Tannenbergstha**	**88.58**	**38**	*e*P	**P**	**09 55 13.9**	**-0.4**
	comp=Z,22nm,1.7s,mb5.2						
NKC	**Novy Kostel**	**88.64**	**38**	*e*P	**P**	**09 55 15.3**	**+0.7**
NKC				MLR	MLR		
	comp=Z,1μm,17.6s,MS5.3						
NKC	**Novy Kostel**	**88.64**	**38**	*e*P	**P**	**09 55 15.3**	**+0.7**
NKC				AMS	AMS	10 36 40.0	
	comp=Z,1μm,17.6s						
PGF	**Pioggiola**	**88.96**	**46**	*e*P	**P**	**09 55 14.5**	**-1.8**
WET	**Wettzell**	**89.29**	**39**	*e*P	**P**	**09 55 17.0**	**-0.6**
	comp=Z,14nm,1.5s,mb5.1						
BRG	**Berggiesshubel**	**89.30**	**37**	*e*P	**P**	**09 55 18.2**	**+0.6**
	comp=Z,5.0nm,1.1s,mb4.8						
BRG	**Berggiesshubel**	**89.30**	**37**	*i*P	**P**	**09 55 18.5**	**+0.8**
	comp=Z,5.7nm,1.2s,mb4.8						
BRG				S	S	10 05 52.0	-13
BRG							
	comp=N,391nm,15.5s						
BRG							
	comp=E,680nm,19.5s						
BRG							
	comp=Z,621nm,15.5s						
VLC	**Villacollemand**	**89.40**	**44**	PFAKE		09 55 30.0	+12
VLC				LR	LR		
	comp=Z,618nm,21.0s,MS5.0						
PET	**Petropavlovsk**	**89.42**	**325**	*e*P	**P**	**09 55 21.2**	**+3.0**
PET				*e*		09 58 55.8	
PET				*e*S	S	10 06 08.2	+2.3
PET				*e*PS	PS	10 07 10.3	-4.7
PET				*e*PPS		10 07 35.0	
PET				*e*SS	SS	10 12 06.8	+6.0
PET				pmax	pmax		
	comp=Z,400nm,10.9s						
PET				pmax	pmax		
	comp=Z,300nm,15.9s						
PET				pmax	pmax		
	comp=Z,400nm,13.0s						
PET				pmax	pmax		
	comp=Z,200nm,12.9s						
PET				MLR	MLR		
	comp=Z,200nm,17.0s,MS4.6						
PET				MLR	MLR		
	comp=Z,300nm,16.0s						
PET	**Petropavlovsk**	**89.42**	**325**	PFAKE		09 55 30.0	+12
PET				LR	LR		
	comp=Z,349nm,19.0s,MS4.8						
KHC	**Kasperske Hory**	**89.72**	**39**	*e*P	**P**	**09 55 20.2**	**+0.5**
KHC				*e*S	S	10 05 58.8	-10
KHC				*e*PS	PS	10 07 22.7	+4.2
KHC				MLR	MLR		
	comp=Z,600nm,17.0s,MS5.1						
KHC	**Kasperske Hory**	**89.72**	**39**	*e*P	**P**	**09 55 20.1**	**+0.4**
	comp=Z,7.6nm,1.3s,mb4.9						
KHC	**Kasperske Hory**	**89.72**	**39**	*e*P	**P**	**09 55 20.2**	**+0.5**
KHC				*e*SKS		10 05 58.8	
KHC				*e*PS	PS	10 07 22.7	+4.2
KHC				AMS	AMS	10 38 40.0	
	comp=Z,600nm,17.0s						
RJOB	**Jochberg**	**89.75**	**41**	*e*P	**P**	**09 55 18.3**	**-1.5**
	comp=Z,16nm,1.9s,mb5.0						
LVZ	**Lovozero**	**89.78**	**17**	PFAKE		09 55 30.0	+10
LVZ				LR	LR		
	comp=Z,1μm,20.0s,MS5.4						
TIXI	**Tiksi**	**89.79**	**348**	*e*P	**P**	**09 55 18.3**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,40nm,1.6s,mb5.5						
TIXI	**Tiksi**	**89.79**	**348**	*e*P	**P**	**09 55 18.1**	**-1.5**
	comp=Z,33nm,1.2s,mb5.5						
TIXI				LR	LR		
	comp=Z,864nm,20.0s,MS5.2						
PVCC	**Panska Ves**	**89.80**	**38**	*e*P	**P**	**09 55 21.4**	**+1.4**
PVCC				MLR	MLR		
	comp=Z,900nm,19.5s,MS5.2						
PVCC	**Panska Ves**	**89.80**	**38**	*e*P	**P**	**09 55 21.4**	**+1.4**
PVCC				AMS	AMS	10 35 40.0	
	comp=Z,900nm,19.5s						
GEC2	**GERESS Array S**	**89.90**	**39**	*e*P	**P**	**09 55 20.7**	**+0.2**
	comp=Z,5.0nm,1.0s,mb4.8						
PETK	**Petropavlovsk-**	**89.92**	**325**	P	**P**	**09 55 19.7**	**-0.8**
	comp=Z,2.2nm,0.9s,mb4.5,baz=105,slow=39,SNR=3.2						
PETK				LR	LR	10 33 43.9	
	comp=Z,149nm,21.5s,MS4.4,baz=250,slow=34						
PRU	**Pruhonice**	**89.98**	**38**	*e*P	**P**	**09 55 22.9**	**+2.0**
PRU				*e*SKKS	SKKSac	10 06 02.3	-0.1
PRU				*e*PS	PS	10 07 28.6	+7.3
PRU				AMS	AMS	10 37 10.0	
	comp=Z,1μm,17.7s						
FUNA	**Funafuti**	**90.09**	**261**	PFAKE		09 55 30.0	+7.9
FUNA				LR	LR		
	comp=Z,18μm,20.0s						
VSL	**Villasalto**	**90.21**	**49**	PFAKE		09 55 30.0	+7.9
VSL				LR	LR		
	comp=Z,614nm,19.0s,MS5.1						
KAF	**Kangasniemi**	**90.32**	**24**	*e*p	**P**	**09 55 17.8**	**-4.4**
KAF	**Kangasniemi**	**90.32**	**24**	*e*p	**P**	**09 55 17.8**	**-4.4**
FINES	**FINESS Array B**	**90.58**	**25**	P	**P**	**09 55 21.2**	**-2.2**
	comp=Z,7.8nm,1.1s,mb4.9,baz=303,slow=2.3,SNR=9.4						
FINES				LR	LR	10 37 58.5	
	comp=Z,1μm,18.1s,MS5.3,baz=290,slow=37						
UPC	**Upice**	**90.65**	**37**	*e*P	**P**	**09 55 24.9**	**+0.9**
KSP	**Ksiaz**	**90.68**	**37**	*e*P	**P**	**09 55 23.5**	**-0.6**
KSP				*e*		10 05 52.0	
KSP				*e*PS	PS	10 07 30.5	+1.5
KSP				MLR	MLR		
	comp=Z,3μm,21.2s,MS5.7						
ROBS	**Robic**	**90.74**	**42**	*e*P	**P**	**09 55 25.1**	**+0.6**
TREC	**Trest**	**90.82**	**38**	*e*P	**P**	**09 55 25.3**	**+0.5**
TREC				MLR	MLR		
	comp=Z,900nm,18.0s,MS5.2						
TREC	**Trest**	**90.82**	**38**	*e*P	**P**	**09 55 25.3**	**+0.5**
TREC				AMS	AMS	10 38 00.0	
	comp=Z,900nm,18.0s						
DPC	**Dobruska-Polom**	**90.90**	**37**	*e*P	**P**	**09 55 26.1**	**+1.0**
DPC				*e*PS	PS	10 07 36.2	+4.8
DPC				MLR	MLR		
	comp=Z,900nm,19.2s,MS5.2						
DPC	**Dobruska-Polom**	**90.90**	**37**	*e*P	**P**	**09 55 26.1**	**+1.0**
DPC				*e*SKS		10 06 04.1	
DPC				*e*PS	PS	10 07 36.2	+4.8
DPC				AMS	AMS	10 35 20.0	
	comp=Z,900nm,19.2s						
TRI	**Trieste**	**91.11**	**42**	PFAKE		09 55 40.0	+14
TRI				LR	LR		
	comp=Z,976nm,20.0s,MS5.2						
TORD	**Torodi Ar. Bea**	**91.12**	**76**	P	**P**	**09 55 26.2**	**-0.7**
	comp=Z,1.0nm,0.8s,mb4.2,baz=298,slow=5.7,SNR=5.8						
TORD				LR	LR	10 34 14.6	
	comp=Z,581nm,19.9s,MS5.0,baz=270,slow=34						
TORD	**Torodi Ar. Bea**	**91.12**	**76**	P	**P**	**09 55 26.2**	**-0.7**
TORD				LR	LR	10 34 14.6	
KEST	**Kesra**	**91.38**	**53**	P	**P**	**09 55 26.3**	**-1.4**
	comp=Z,2.6nm,1.0s,mb4.5,baz=187,slow=5.1,SNR=6.2						
JOF	**Joensuu**	**91.78**	**22**	*e*p	**P**	**09 55 22.4**	**-6.5**
JOF	**Joensuu**	**91.78**	**22**	*e*p	**P**	**09 55 22.4**	**-6.5**
TAM	**Tamanrasset**	**92.06**	**66**	PFAKE		09 55 40.0	+8.9
TAM				LR	LR		
	comp=Z,701nm,21.0s,MS5.1						
AQU	**L'Aquila**	**92.09**	**45**	PFAKE		09 55 40.0	+9.2
AQU				LR	LR		
	comp=Z,997nm,20.0s,MS5.3						
OKC	**Ostrava-Krasne**	**92.18**	**37**	*e*P	**P**	**09 55 31.2**	**+0.1**
OKC				*e*PS	PS	10 07 52.0	+6.3
OKC				MLR	MLR		
	comp=Z,1μm,18.0s,MS5.3						
OKC	**Ostrava-Krasne**	**92.18**	**37**	*e*P	**P**	**09 55 31.2**	**+0.1**
OKC				*e*SKKS	SKKSac	10 06 14.0	-4.8
OKC				*e*PS	PS	10 07 52.0	+6.3
OKC				AMS	AMS	10 40 30.0	
	comp=Z,1μm,18.0s						
GOLS	**Golise**	**92.19**	**41**	*e*P	**P**	**09 55 32.3**	**+1.1**
ZST	**Bratislava**	**92.24**	**39**	*e*P	**P**	**09 55 33.1**	**+1.7**
ZST				pmax	pmax		
	comp=Z,23nm,1.6s,mb5.3						
ZST	**Bratislava**	**92.24**	**39**	*e*P	**P**	**09 55 33.1**	**+1.7**
	comp=Z,23nm,1.6s,mb5.3						
GCIS	**Gornji Cirnik**	**92.25**	**42**	*e*P	**P**	**09 55 32.5**	**+1.0**
OJC	**Ojcow**	**92.97**	**36**	*e*P	**P**	**09 55 33.9**	**-0.8**
VYHS	**Vyhne**	**93.16**	**38**	*e*P	**P**	**09 55 36.4**	**+0.8**
VYHS				pmax	pmax		
	comp=Z,28nm,2.5s,mb5.2						
VYHS	**Vyhne**	**93.16**	**38**	*e*P	**P**	**09 55 36.4**	**+0.8**
	comp=Z,28nm,2.5s,mb5.2						
NIE	**Niedzica**	**93.63**	**37**	*e*P	**P**	**09 55 39.1**	**+1.3**
IZAR	**Zarasai**	**93.68**	**30**	*e*P	**P**	**09 55 37.1**	**-0.7**
IZAR				AMB	AMB	09 55 40.1	
	comp=Z,6.4nm,1.1s,mb5.0						
ISAL	**Salakas**	**93.72**	**30**	*e*P	**P**	**09 55 37.5**	**-0.5**
ISAL				AMB	AMB	09 55 39.1	
	comp=Z,5.5nm,1.1s,mb4.9						
IIGN	**Ignalina**	**93.88**	**30**	*e*P	**P**	**09 55 38.1**	**-0.7**
IIGN				AMB	AMB	09 55 39.8	
	comp=Z,5.9nm,1.3s,mb4.9						
PSZ	**Piszkesteto**	**94.05**	**38**	PFAKE		09 55 50.0	+10
PSZ				LR	LR		
	comp=Z,507nm,20.0s,MS5.0						
IDID	**Didziasalis**	**94.15**	**30**	*e*P	**P**	**09 55 39.4**	**-0.7**
IDID				AMB	AMB	09 55 40.9	
	comp=Z,3.4nm,0.9s,mb4.8						
KECS	**Kecovo**	**94.15**	**38**	*e*P	**P**	**09 55 41.7**	**+1.5**
KECS				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.6						
KECS	**Kecovo**	**94.15**	**38**	*e*P	**P**	**09 55 41.7**	**+1.5**
	comp=Z,2.6nm,1.1s,mb4.6						
NACGM	**Naroch**	**94.39**	**30**	*e*LR	LR	10 28 38.0	
CRVS	**Cervenica-Dubn**	**94.53**	**37**	*e*P	**P**	**09 55 42.5**	**+0.6**
CRVS				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.7						
CRVS	**Cervenica-Dubn**	**94.53**	**37**	*e*P	**P**	**09 55 42.5**	**+0.6**
	comp=Z,2.7nm,1.0s,mb4.6						
CUC	**Castrocucco**	**94.67**	**47**	PFAKE		09 55 50.0	+7.2
CUC				LR	LR		
	comp=Z,619nm,19.0s,MS5.1						
KWP	**Kalwaria Pacla**	**94.91**	**36**	PFAKE		09 55 50.0	+6.4
KWP				LR	LR		
	comp=Z,694nm,20.0s,MS5.1						
UZH	**Uzhgorod**	**95.15**	**37**	*e*P	**P**	**09 55 45.7**	**+0.9**
UZH				*e*S	S	10 06 55.0	-2.4
UZH				MLR	MLR		
	comp=N,250nm,18.0s,MS5.2						
UZH				MLR	MLR		
	comp=E,650nm,18.0s,MS5.2						
UZH				MLR	MLR		
	comp=Z,500nm,18.0s,MS5.0						
WDD	**Wield Dalam**	**95.29**	**51**	PFAKE		09 56 00.0	+14
WDD				LR	LR		
	comp=Z,452nm,20.0s,MS4.9						
CEL	**Celeste**	**95.40**	**48**	PFAKE		09 56 00.0	+14
CEL				LR	LR		
	comp=Z,586nm,19.0s,MS5.1						
LVV	**L'vov**	**95.57**	**35**	*e*P	**P**	**09 55 46.9**	**+0.3**
LVV				MLR	MLR		
	comp=N,600nm,18.0s,MS5.4						
LVV				MLR	MLR		
	comp=E,900nm,18.0s,MS5.4						
LVV				MLR	MLR		
	comp=Z,1μm,18.0s,MS5.3						
TIP	**Timpagrande**	**95.66**	**47**	PFAKE		09 56 00.0	+13
TIP				LR	LR		
	comp=Z,751nm,21.0s,MS5.1						
TIR	**Tirane**	**96.92**	**44**	PFAKE		09 56 00.0	+7.0
TIR				LR	LR		
	comp=Z,826nm,19.0s,MS5.2						
KIEV	**Kiev**	**97.93**	**33**	PFAKE		09 56 10.0	+13
KIEV				LR	LR		
	comp=Z,796nm,19.0s,MS5.2						
AKASG	**Malin Array Be**	**97.94**	**33**	LR	LR	10 43 42.6	
	comp=Z,781nm,18.6s,MS5.2,baz=310,slow=38						
OBN	**Obninsk**	**98.79**	**27**	*e*P	**P**	**09 56 02.1**	**+1.0**
OBN				*e*		10 00 01.7	
OBN				*e*SS	SS	10 14 27.4	+14
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.9						
OBN				MLR	MLR		
	comp=Z,800nm,19.0s,MS5.2						
OBN	**Obninsk**	**98.79**	**27**	PFAKE		09 56 10.0	+8.9
OBN				LR	LR		
	comp=Z,876nm,21.0s,MS5.2						
ERM	**Erimo**	**103.89**	**320**	PFAKE		09 56 40.0	+16
ERM				LR	LR		
	comp=Z,238nm,20.0s,MS4.7						
SIM	**Simferopol'**	**103.96**	**36**	P	Pdif	09 56 27.9	+3.8
SIM						10 00 46.7	
SIM				pmax	pmax		
	comp=Z,21nm,8.3s						
QSPA	**South Pole Qui**	**104.25**	**180**	PFAKE		09 56 40.0	+15
QSPA				LR	LR		
	comp=Z,550nm,20.0s,MS5.1						
DZM	**Mont Dzumac**	**104.98**	**251**	*e*LR	LR	10 31 16.6	
	comp=Z,576nm,22.5s						
ARU	**Arti**	**105.59**	**16**	PFAKE		10 01 00.0	+16
ARU				LR	LR		
	comp=Z,1μm,20.0s,MS5.5						
ISP	**Isparta**	**105.82**	**43**	PFAKE		10 01 00.0	+15
ISP				LR	LR		
	comp=Z,533nm,19.0s,MS5.1						
SBA	**Scott Base**	**106.08**	**193**	PFAKE		10 01 00.0	+15
SBA				LR	LR		
	comp=Z,240nm,20.0s,MS4.7						
BR131	**Keskin Array S**	**106.77**	**40**	PFAKE		10 01 00.0	+13
BR131				LR	LR		
	comp=Z,344nm,19.0s,MS4.9						
KIV	**Kislovodsk**	**109.27**	**32**	PFAKE		10 01 00.0	+8.4
KIV				LR	LR		
	comp=Z,313nm,20.0s,MS4.9						
CSS	**Prodhromos**	**109.28**	**45**	PFAKE		10 01 00.0	+8.1
CSS				LR	LR		
	comp=Z,320nm,21.0s,MS4.9						
MDJ	**Mudanjiang**	**109.81**	**329**	Pdif	Pdif	09 56 49.5	-0.6
MDJ				AMB	AMB		
	comp=Z,140nm,9.8s						
MDJ				LR	LR		
	comp=N,170nm,45.8s,MS4.3						
MDJ				LR	LR		
	comp=E,80nm,49.5s,MS4.3						
MDJ				LR	LR		
	comp=Z,220nm,38.5s						
MAJO	**Matsushiro**	**110.18**	**318**	PFAKE		10 01 00.0	+6.4
MAJO				LR	LR		
	comp=Z,291nm,20.0s,MS4.8						
BRVK	**Borovoye**	**111.36**	**11**	PFAKE		10 01 10.0	+15
BRVK				LR	LR		
	comp=Z,1μm,19.0s,MS5.5						
BVAR	**Borovoye Array**	**111.41**	**11**	PKiKP	PKiKP	10 00 56.3	+0.9
	comp=Z,0.8nm,0.9s,baz=132,slow=2.1,SNR=3.7						
BVAR				PP	PP	10 01 36.4	+1.3
	comp=Z,0.5nm,0.6s,baz=234,slow=38,SNR=2.9						
ZALV	**Zalesovo Beam**	**112.00**	**1**	PP	PP	10 01 39.0	-0.2
	comp=Z,3.3nm,1.0s,baz=332,slow=8.6,SNR=10.0						
MAK	**Makhachkala**	**112.42**	**30**	*i*P	Pdif	09 56 58.5	-3.2
MAK				*e*PPP		10 04 03.5	
MAK				*i*		10 07 29.3	
MAK				*i*		10 08 03.2	
MAK				*e*SP	SP	10 11 08.2	-4.5
TLY	**Talaya**	**112.74**	**349**	PFAKE		10 01 10.0	+12
TLY				LR	LR		
	comp=Z,716nm,19.0s,MS5.3						
GNI	**Garni**	**113.02**	**34**	PFAKE		10 01 10.0	+11
GNI				LR	LR		
	comp=Z,451nm,19.0s,MS5.1						
TSUM	**Tsumeb**	**113.60**	**105**	PFAKE		10 01 10.0	+10
TSUM				LR	LR		
	comp=Z,548nm,19.0s,MS5.2						
KURK	**Kurchatov**	**114.83**	**6**	PFAKE		10 01 10.0	+8.0
KURK				LR	LR		
	comp=Z,859nm,20.0s,MS5.3						
ULN	**Ulaanbaatar**	**115.61**	**345**	PFAKE		10 01 10.0	+6.4
ULN				LR	LR		
	comp=Z,687nm,19.0s,MS5.3						
SONM	**Songino Array**	**115.80**	**346**	PKP	PKPdf	10 01 01.5	-2.5
	comp=Z,0.2nm,0.5s,baz=346,slow=3.0,SNR=2.6						
SONM				PP	PP	10 02 06.8	+0.6
	comp=Z,2.7nm,1.0s,baz=7.9,slow=4.0,SNR=8.9						
INCN	**Inchon**	**116.51**	**326**	PFAKE		10 01 20.0	+14
INCN				LR	LR		
	comp=Z,341nm,20.0s,MS5.0						
MKAR	**Makanchi Array**	**119.03**	**4**	PKP	PKPdf	10 01 08.8	-1.4
	comp=Z,1.5nm,0.9s,baz=260,slow=4.8,SNR=6.2						
BJI	**Beijing**	**119.

WMQ LR LR
comp=E,500nm,20.0s,MS5.5
WMQ LR LR
comp=Z,890nm,20.0s,MS5.4
AAK Ala-Archa 122.17 11 PFAKE 10 01 30.0 +14
AAK LR LR
comp=Z,687nm,19.0s,MS5.3
AML Almayashu 122.50 12 PFAKE 10 01 30.0 +13
AML LR LR
comp=Z,800nm,21.0s,MS5.3
LSZ Lusaka 123.16 99 PFAKE 10 01 30.0 +11
LSZ LR LR
comp=Z,378nm,19.0s,MS5.1
CTAO Charters Tower 123.47 255 PFAKE 10 01 30.0 +11
CTAO LR LR
comp=Z,484nm,22.0s,MS5.1
MAW Mawson 124.43 169 PKP PKPdf 10 01 20.4 +0.5
comp=Z,0.8nm,0.4s,baz=28,slow=8.7,SNR=3.5
NJ2 Nanjing 124.79 327 *e*PKP PKPdf 10 01 17.5 -4.2
NJ2 PP PP 10 03 10.0 +1.5
NJ2 LR LR
comp=N,260nm,19.5s,MS5.1
NJ2 LR LR
comp=E,230nm,16.6s,MS5.1
GTA Gaotai 125.27 348 *e*PKP PKPdf 10 01 23.5 +1.1
GTA PP PP 10 03 18.8 +7.7
GTA PKS 10 04 58.8
GTA SKS SKSdf 10 08 30.3 -1.5
GTA SKKS SKKSac 10 10 07.0 -1.2
GTA SS SS 10 20 11.0 +5.7
GTA AMB AMB
comp=Z,210nm,8.4s
GTA LR LR
comp=N,190nm,18.6s,MS5.0
GTA LR LR
comp=E,230nm,18.3s,MS5.0
GTA LR LR
comp=Z,320nm,20.1s,MS5.0
KSH Kashi 125.46 11 *e*PKP PKPdf 10 01 24.3 +1.5
KSH PKS 10 04 59.8
KSH AMB AMB
comp=Z,240nm,5.9s
KSH LR LR
comp=N,330nm,13.8s
KSH LR LR
comp=E,130nm,8.5s
KSH LR LR
comp=Z,66nm,4.0s
CASY Casey 125.76 191 PFAKE 10 01 30.0 +7.6
CASY LR LR
comp=Z,359nm,20.0s,MS5.0
LZH Lanzhou 127.45 343 *e*PKP PKPdf 10 01 24.3 -2.4
LZH PP PP 10 03 26.5 +0.8
LZH AMB AMB
comp=Z,170nm,7.4s
LZH LR LR
comp=E,800nm,18.4s
LZH LR LR
comp=Z,900nm,20.3s,MS5.4
STKA Stephens Creek 127.47 241 PKP PKPdf 10 01 25.6 -1.2
comp=Z,2.6nm,0.8s,baz=333,slow=24,SNR=4.2
WHN Wuhan 128.29 330 *e*PKP PKPdf 10 01 22.5 -5.9
WHN PP PP 10 03 31.8 +0.2
WHN SS SS 10 20 51.5 +7.7
WHN LR LR
comp=N,2μm,24.8s
WHN LR LR
comp=E,500nm,11.2s
WHN LR LR
comp=Z,1μm,19.5s
TATO Taipei 128.55 319 PFAKE 10 01 40.0 +11
TATO LR LR
comp=Z,373nm,19.0s,MS5.1
YHNB Yeheng 128.84 319 PFAKE 10 01 40.0 +10
YHNB LR LR
comp=Z,330nm,19.0s,MS5.0
KMBO Kilima Mbogo 129.00 80 PFAKE 10 01 40.0 +10
KMBO LR LR
comp=Z,425nm,22.0s,MS5.1
CD2 Chengdu 132.29 341 *e*PKP PKPdf 10 01 37.0 +1.0
CD2 PP PP 10 03 59.3 +2.1
CD2 SKS SKSdf 10 08 43.0 -2.1
CD2 SKKS SKKSac 10 10 49.5 -2.8
CD2 SS SS 10 21 34.5 +2.1
CD2 AMB AMB
comp=Z,310nm,9.6s
CD2 LR LR
comp=N,200nm,30.0s,MS5.2
CD2 LR LR
comp=E,560nm,26.4s,MS5.2
CD2 LR LR
comp=Z,330nm,24.0s,MS5.0
WRAB Tennant Creek 134.64 256 PFAKE 10 01 50.0 +9.4
WRAB LR LR
comp=Z,394nm,21.0s,MS5.1
WRA Warramunga Arr 134.65 256 PKP PKPdf 10 01 39.6 -1.1
comp=Z,4.2nm,0.8s,baz=82,slow=2.0,SNR=19
ASAR Alice Springs 134.97 251 PKhKP PKPpre 10 01 32.8
comp=Z,0.9nm,0.9s,baz=120,slow=3.7,SNR=5.5
ASAR PKP PKPdf 10 01 40.2 -0.9
comp=Z,2.0nm,0.8s,baz=98,slow=1.3,SNR=10
ASAR Alice Springs 134.97 251 PKP PKPdf 10 01 40.2 -0.9
GYA Guiyang 135.25 335 Pdif Pdif 09 58 40.3 -2.9
GYA PKP PKPdf 10 01 39.8 -1.9
GYA PP PP 10 04 19.3 +3.0
GYA PKS 10 05 15.5
GYA AMB AMB
comp=Z,520nm,7.8s
GYA LR LR
comp=N,530nm,20.1s,MS5.3
GYA LR LR
comp=E,440nm,22.3s,MS5.3
GYA LR LR
comp=Z,510nm,21.4s,MS5.2
DAV Davao City (W) 136.34 297 PFAKE 10 02 00.0 +16
DAV LR LR
comp=Z,226nm,19.0s,MS4.9
KMI Kunming 137.96 339 Pdif Pdif 09 58 56.0 +0.8
KMI PP PP 10 04 37.5 +4.3
KMI PKS 10 05 23.5
KMI SKS SKSdf 10 08 51.0 -4.2
KMI AMB AMB
comp=Z,220nm,7.5s
KMI LR LR
comp=N,510nm,20.8s,MS5.4
KMI LR LR
comp=E,410nm,19.5s,MS5.4
KMI LR LR
comp=Z,670nm,20.8s,MS5.4
QIZ Qiongzhong 140.03 325 PKP PKPdf 10 01 49.0 -1.7
QIZ PP PP 10 04 55.3 +8.9
QIZ AMB AMB
comp=Z,100nm,4.1s
QIZ LR LR
comp=N,310nm,21.5s
QIZ LR LR
comp=Z,500nm,20.1s,MS5.3
ABPO Ambohimpanom 141.54 103 PFAKE 10 02 00.0 +6.7
ABPO LR LR
comp=Z,330nm,20.0s,MS5.1
FITZ Fitzroy Crossi 142.88 259 *e*PKPdf PKPdf 10 01 55.9 +0.1
KKM Kota Kinabalu 144.77 303 PFAKE 10 02 10.0 +11
KKM LR LR
comp=Z,436nm,21.0s,MS5.2
CHTO Chiang Mai 145.09 340 *e*PKIKP PKPdf 10 01 58.0 -1.7
CHTO MLR MLR
comp=Z,415nm,19.0s,MS5.2
CM31 Chiang Mai Arr 145.43 340 *e*PKPdf PKPdf 10 01 59.2 -1.0
CMAR Chiang Mai Arr 145.43 340 PKPbc PKPbc 10 01 59.0 -1.1
comp=Z,24nm,1.0s,baz=345,slow=4.3,SNR=82
HYB Hyderabad 147.37 15 *i* PKP PKPdf 10 02 05.0 +1.5
KSM Kuching 152.20 302 *e*PKPbc PKPbc 10 02 15.9 -2.1
KSM LR LR
comp=Z,207nm,19.0s,MS5.0
KULM Kulim 156.36 325 PFAKE 10 02 30.0 +13
KULM LR LR
comp=Z,255nm,19.0s,MS5.1
COCO West Island 170.32 281 PFAKE 10 02 40.0 +10
COCO LR LR
comp=Z,674nm,19.0s

CSEM ***29*** *09:43:09.9±0.1, 38.°10N×30.°17E, h5km, MD3.0, Error ellipse: s-maj=1.4km s-min=1.3km az=39.0*
DDA ***29*** *09:43:09.8, 38.°11N×30.°16E, h4km±4km, Md3.1*

ISK ***29*** *09:43:09.6, 38.°09N×30.°17E, h7km, MD3.0*
ISCJB ***29*** *09:43:09.8±0.5, 38.°08N±0.°02×30.°17E±0.°03, h4km±5km, Error ellipse: s-maj=3.9km s-min=3.3km az=136.1*
ISC 29 09:43:10.3±0.4, 38.°07N±0.°02×30.°17E±0.°03, h6km±4km, n58, σ0.°80/80, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ISP	**Isparta**	**0.37**	**132**	*e*PG	**Pg**	**09 43 17.6**	**+0.1**
ISP				*e*SG	**Sg**	**09 43 23.7**	**+1.2**
SHUT	**Suhut-Afyon**	**0.56**	**32**	*e*PG	**Pg**	**09 43 20.6**	**-0.6**
SHUT				*e*SG	**Sg**	**09 43 29.1**	**+0.5**
SHUT	**Suhut-Afyon**	**0.56**	**32**	*e*Pg	**Pg**	**09 43 20.6**	**-0.6**
SHUT				*e*Sg	**Sg**	**09 43 29.1**	**+0.6**
KHL	**Karahalli**	**0.57**	**296**	*e*PG	**Pg**	**09 43 20.5**	**-0.8**
KHL				*e*SG	**Sg**	**09 43 29.4**	**+0.7**
KHL	**Karahalli**	**0.57**	**296**	*e*Pg	**Pg**	**09 43 20.5**	**-0.8**
KHL				*e*Sg	**Sg**	**09 43 29.4**	**+0.7**
KHAL	**Karahalli**	**0.61**	**299**	*i* P	**Pg**	**09 43 21.2**	**-0.9**
KHAL				*i* S	**Sg**	**09 43 31.1**	**+1.0**
KHAL	**Karahalli**	**0.61**	**299**	*i* P	**Pg**	**09 43 21.2**	**-0.9**
KHAL				*i* S	**Sg**	**09 43 31.1**	**+1.0**
BCK	**Bucak**	**0.69**	**152**	*e*PG	**Pg**	**09 43 23.7**	**0.0**
BCK	**Bucak**	**0.69**	**152**	*e*Pg	**Pg**	**09 43 23.7**	**0.0**
SUTC	**Sutluce-Ispart**	**0.89**	**132**	*e*PG	**Pg**	**09 43 27.4**	**0.0**
SUTC	**Sutluce-Ispart**	**0.89**	**132**	*e*Pg	**Pg**	**09 43 27.4**	**+0.1**
BOLV	**Bolvadin**	**0.89**	**43**	*i* P	**Pg**	**09 43 26.5**	**-0.9**
BOLV				*i* S	**Sg**	**09 43 39.9**	**+1.0**
BOLV	**Bolvadin**	**0.89**	**43**	*i* P	**Pg**	**09 43 26.5**	**-0.9**
BOLV				*i* S	**Sg**	**09 43 39.9**	**+1.0**
DENT	**Denizli**	**0.96**	**251**	*e*PG	**Pg**	**09 43 28.7**	**0.0**
DENT	**Denizli**	**0.96**	**251**	*e*Pg	**Pg**	**09 43 28.7**	**0.0**
GOLH	**Golhisar**	**0.97**	**210**	*i* P	**Pg**	**09 43 29.2**	**+0.4**
GOLH				*i* S	**Sg**	**09 43 46.7**	**+5.3**
GOLH	**Golhisar**	**0.97**	**210**	*i* P	**Pg**	**09 43 29.2**	**+0.3**
DNZL	**Cakiroluk**	**0.97**	**247**	*i* P	**Pg**	**09 43 29.1**	**+0.2**
DNZL				*i* S	**Sg**	**09 43 47.1**	**+5.6**
DNZL	**Cakiroluk**	**0.97**	**247**	*i* P	**Pg**	**09 43 29.1**	**+0.2**
ALT	**Altintas**	**0.98**	**357**	*e*PG	**Pg**	**09 43 27.5**	**-1.7**
ALT				*e*SG	**Sg**	**09 43 42.2**	**+0.3**
ALT	**Altintas**	**0.98**	**357**	*e*Pg	**Pg**	**09 43 27.5**	**-1.7**
ALT				*e*Sg	**Sg**	**09 43 42.2**	**+0.3**
GLHS	**Glhisar (BURDU**	**1.06**	**211**	*e*PG	**Pg**	**09 43 30.1**	**-0.6**
GLHS	**Glhisar (BURDU**	**1.06**	**211**	*e*Pg	**Pg**	**09 43 30.1**	**-0.6**
KORT	**Korkueli**	**1.08**	**172**	*i* P	**Pg**	**09 43 30.9**	**-0.2**
KORT				*i* S	**Sg**	**09 43 50.6**	**+5.6**
KORT	**Korkueli**	**1.08**	**172**	*i* P	**Pg**	**09 43 30.9**	**-0.2**
GDZ	**Gediz**	**1.15**	**332**	*i* P	**Pg**	**09 43 31.0**	**-1.4**
GDZ				*i* S	**Sg**	**09 43 47.5**	**+0.2**
GDZ	**Gediz**	**1.15**	**332**	*i* P	**Pg**	**09 43 31.0**	**-1.4**
GDZ				*i* S	**Sg**	**09 43 47.5**	**+0.2**
KULA	**Kula-Manisa**	**1.27**	**291**	*e*PN	**Pn**	**09 43 33.5**	**-1.1**
KULA	**Kula-Manisa**	**1.27**	**291**	*e*Pn	**Pn**	**09 43 33.5**	**-1.1**
ELL	**Elmali**	**1.34**	**189**	*e*PN	**Pn**	**09 43 35.8**	**+0.2**
ELL	**Elmali**	**1.34**	**189**	*e*Pn	**Pn**	**09 43 35.8**	**+0.2**
DEMI	**Demirci**	**1.50**	**311**	*i* P	**Pn**	**09 43 36.8**	**-0.9**
DEMI				*i* S	**Sn**	**09 44 00.3**	**+2.8**
DEMI	**Demirci**	**1.50**	**311**	*i* P	**Pn**	**09 43 36.8**	**-0.9**
DEMI				*i* S	**Sn**	**09 44 00.3**	**+2.7**
ESKT	**Eskisehir**	**1.54**	**20**	*e*PN	**Pn**	**09 43 37.9**	**-0.4**
ESKT	**Eskisehir**	**1.54**	**20**	*i* P	**Pn**	**09 43 37.5**	**-0.8**
ESKT				*i* S	**Sn**	**09 43 59.2**	**+0.6**
ESKT	**Eskisehir**	**1.54**	**20**	*e*Pn	**Pn**	**09 43 37.9**	**-0.4**
SEYT	**Eskypehyr**	**1.54**	**20**	*i* P	**Pn**	**09 43 37.5**	**-0.8**
SEYT				*i* S	**Sn**	**09 43 59.2**	**+0.6**
KIZT	**Kizilcal**	**1.56**	**58**	*e*PN	**Pn**	**09 43 38.6**	**0.0**
KIZT	**Kizilcal**	**1.56**	**58**	*e*Pn	**Pn**	**09 43 38.7**	**+0.1**
SVRH	**Sivrihisar-ESK**	**1.73**	**37**	*e*PN	**Pn**	**09 43 40.6**	**-0.3**
SVRH	**Sivrihisar-ESK**	**1.73**	**37**	*e*Pn	**Pn**	**09 43 40.6**	**-0.3**
KONT	**Konya--Tatoy**	**1.73**	**94**	*e*PN	**Pn**	**09 43 41.5**	**+0.5**
KONT	**Konya--Tatoy**	**1.73**	**94**	*e*Pn	**Pn**	**09 43 41.5**	**+0.5**
LADK	**Ladik-KONYA**	**1.73**	**85**	*e*PN	**Pn**	**09 43 41.3**	**+0.4**
LADK	**Ladik-KONYA**	**1.73**	**85**	*e*Pn	**Pn**	**09 43 41.3**	**+0.3**
YER	**Yerkesik**	**1.77**	**239**	*e*PN	**Pn**	**09 43 42.0**	**+0.5**
YER	**Yerkesik**	**1.77**	**239**	*e*Pn	**Pn**	**09 43 42.0**	**+0.5**
AKS	**Akhisar**	**2.02**	**294**	*e*PN	**Pn**	**09 43 44.9**	**0.0**
AKS	**Akhisar**	**2.02**	**294**	*e*Pn	**Pn**	**09 43 44.9**	**0.0**
DURS	**Dursunbey**	**2.02**	**320**	*i* P	**Pn**	**09 43 44.6**	**-0.4**
DURS				*i* S	**Sg**	**09 44 19.4**	**+4.1**
DURS	**Dursunbey**	**2.02**	**320**	*i* P	**Pn**	**09 43 44.6**	**-0.3**
HDMB	**Hadim**	**2.15**	**120**	*e*PN	**Pn**	**09 43 46.7**	**0.0**
HDMB	**Hadim**	**2.15**	**120**	*e*Pn	**Pn**	**09 43 46.7**	**0.0**
ULDT	**Uludag**	**2.22**	**339**	*i* P	**Pn**	**09 43 47.1**	**-0.5**
ULDT	**Uludag**	**2.22**	**339**	*i* P	**Pn**	**09 43 47.2**	**-0.4**
IZM	**Izmir**	**2.31**	**279**	*e*PN	**Pn**	**09 43 48.6**	**-0.4**
BALY	**Balya**	**2.60**	**311**	*i* P	**Pn**	**09 43 52.7**	**-0.1**
BALY				*i* S	**Sg**	**09 44 35.8**	**+2.1**
BALY	**Balya**	**2.60**	**311**	*i* P	**Pn**	**09 43 52.7**	**-0.1**

SKO ***29*** *09:57:12.6, 41.°78N×22.°86E, h15km, M2.0, ML2.2*
ISCJB ***29*** *09:57:12.3±0.7, 41.°80N±0.°02×22.°87E±0.°05, h0km±7km, Error ellipse: s-maj=6.1km s-min=3.3km az=169.0*
CSEM ***29*** *09:57:13.2±0.1, 41.°78N×22.°88E, h2km, ML3.1/5, Error ellipse: s-maj=4.0km s-min=2.1km az=66.0*
THE ***29*** *09:57:14.5, 41.°72N×22.°93E, h3km±2km, ML3.1/5, Error ellipse: s-maj=2.5km s-min=0.8km az=267.0*
BEO ***29*** *09:57:14.7±0.6, 41.°78N×22.°80E, h4km±3km, ML2.4/6*
ISC 29 09:57:13.3±0.5, 41.°78N±0.°02×22.°89E±0.°04, h2km±5km, n35, σ0.°64/68, 2C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.52**	**207**	⇑*i*Pg	**Pg**	**09 57 23.5**	**+0.3**
VAY				*i* Sg	**Sg**	**09 57 30.6**	**+0.7**
VAY	**Valandovo**	**0.52**	**207**	⇑*i*Pg	**Pg**	**09 57 23.6**	**+0.4**
VAY				*i* Sg	**Sg**	**09 57 30.7**	**+0.8**
VAY				*e*Lg		09 57 31.6	
	comp=N,124nm,0.2s						
VAY				*e*Lg		09 57 31.6	
	comp=E,77nm,0.2s						
VAY	**Valandovo**	**0.52**	**207**	P	**Pg**	**09 57 23.3**	**+0.1**
VAY				S	**Sg**	**09 57 30.7**	**+0.8**
VAY	**Valandovo**	**0.52**	**207**	P	**Pg**	**09 57 23.3**	**+0.1**
VAY				*i* Sg	**Sg**	**09 57 30.6**	**+0.7**
SOH	**Sokhos**	**1.02**	**160**	P	**Pg**	**09 57 33.0**	**+0.1**
SOH				S	**Sg**	**09 57 45.8**	**-0.3**
SOH	**Sokhos**	**1.02**	**160**	P	**Pg**	**09 57 33.0**	**+0.1**
SOH				S	**Sg**	**09 57 45.8**	**-0.3**
THE	**Thessaloniki**	**1.15**	**177**	P	**Pg**	**09 57 35.2**	**-0.1**
THE				S	**Sg**	**09 57 50.1**	**-0.1**
THE	**Thessaloniki**	**1.15**	**177**	P	**Pg**	**09 57 35.2**	**-0.1**
THE				S	**Sg**	**09 57 50.1**	**-0.1**
HORT	**Hortiatis**	**1.20**	**172**	P	**Pg**	**09 57 36.1**	**-0.1**
HORT				S	**Sg**	**09 57 52.3**	**+0.7**
HORT	**Hortiatis**	**1.20**	**172**	P	**Pg**	**09 57 36.1**	**-0.1**
HORT				S	**Sg**	**09 57 52.3**	**+0.7**
BARS	**Barje**	**1.30**	**323**	*i* Pg	**Pg**	**09 57 38.2**	**-0.1**
BARS				*e*Sg	**Sg**	**09 57 54.6**	**-0.6**
BARS	**Barje**	**1.30**	**323**	*i* Pg	**Pg**	**09 57 38.2**	**-0.1**
BARS				*e*Sg	**Sg**	**09 57 54.6**	**-0.6**
PLD	**Plovdiv**	**1.39**	**76**	P	**Pn**	**09 57 39.5**	**-0.2**
PLD				S	**Sg**	**09 57 58.7**	**+0.6**
PLD	**Plovdiv**	**1.39**	**76**	P	**Pn**	**09 57 39.5**	**-0.2**
PLD				S	**Sg**	**09 57 58.7**	**+0.6**
KAVA	**Kavala**	**1.46**	**122**	P	**Pn**	**09 57 40.5**	**-0.1**
KAVA				S	**Sb**	**09 57 59.8**	**-0.2**
KAVA	**Kavala**	**1.46**	**122**	P	**Pn**	**09 57 40.5**	**-0.1**
KAVA				S	**Sb**	**09 57 59.8**	**-0.2**
PLG	**Polygyros**	**1.47**	**163**	P	**Pn**	**09 57 40.4**	**-0.4**
PLG				S	**Sb**	**09 58 00.0**	**-0.4**
PLG	**Polygyros**	**1.47**	**163**	P	**Pn**	**09 57 40.4**	**-0.4**
PLG				S	**Sb**	**09 58 00.0**	**-0.4**
ZAPS	**Zavoj**	**1.50**	**353**	*i* Pg	**Pg**	**09 57 41.8**	**-0.3**
ZAPS				*i* Sg	**Sg**	**09 58 03.1**	**+1.6**
OUR	**Ouranopolis**	**1.67**	**150**	P	**Pn**	**09 57 42.6**	**-0.9**
OUR				S	**Sn**	**09 58 05.4**	**0.0**
OUR	**Ouranopolis**	**1.67**	**150**	P	**Pn**	**09 57 42.6**	**-0.9**
OUR				S	**Sn**	**09 58 05.4**	**0.0**
NISS		**1.76**	**337**	*i* Pn	**Pn**	**09 57 45.9**	**+1.1**
NISS				*i* Sg	**Sg**	**09 58 09.8**	**-0.1**
NISS		**1.76**	**337**	*i* Pn	**Pn**	**09 57 45.9**	**+1.1**
NISS				*i* Sg	**Sg**	**09 58 09.8**	**-0.1**
RDO	**Rodhopi**	**2.09**	**107**	P	**Pn**	**09 57 48.5**	**-0.8**
RDO				S	**Sn**	**09 58 16.7**	**+0.8**
RDO	**Rodhopi**	**2.09**	**107**	P	**Pn**	**09 57 48.5**	**-0.8**
RDO				S	**Sn**	**09 58 16.7**	**+0.8**
BOLS	**Boljevac**	**2.16**	**342**	*e*Pg	**Pg**	**09 57 53.8**	**-0.8**
BOLS				*e*Sg	**Sg**	**09 58 21.9**	**-0.7**
BOLS	**Boljevac**	**2.16**	**342**	*e*Pg	**Pg**	**09 57 53.8**	**-0.8**
BOLS				*e*Sg	**Sg**	**09 58 21.9**	**-0.7**
ALN	**Alexandroupoli**	**2.54**	**109**	P	**Pn**	**09 57 56.0**	**+0.5**
ALN				S	**Sn**	**09 58 26.9**	**-0.1**
ALN	**Alexandroupoli**	**2.54**	**109**	P	**Pn**	**09 57 56.0**	**+0.5**
ALN				S	**Sn**	**09 58 26.9**	**-0.1**
GRUS	**Gruza**	**2.64**	**324**	*i* Pn	**Pn**	**09 57 56.2**	**-0.7**
GRUS	**Gruza**	**2.64**	**324**	*i* Pn	**Pn**	**09 57 56.2**	**-0.7**
DIVS	**Divibare**	**3.14**	**318**	*e*Pn	**Pn**	**09 58 05.6**	**+1.8**
DIVS				*e*Sn	**Sn**	**09 58 42.1**	**+0.3**
DIVS	**Divibare**	**3.14**	**318**	*e*Pn	**Pn**	**09 58 05.6**	**+1.8**
DIVS				*e*Sn	**Sn**	**09 58 42.1**	**+0.3**
BZS	**Buzias**	**3.94**	**347**	*e*Pn	**Pn**	**09 58 14.0**	**-0.8**
BZS				*i* Sg	**Sg**	**09 59 19.6**	**-0.3**
BZS	**Buzias**	**3.94**	**347**	*e*Pn	**Pn**	**09 58 14.0**	**-0.8**
BZS				*i* Sg	**Sg**	**09 59 19.6**	**-0.3**

SOF ***29*** *09:58:46.7, 41.°77N×22.°91E, h13km, MD2.6*
ISCJB ***29*** *09:58:46.3±0.6, 41.°81N±0.°03×22.°83E±0.°06, h6km±11km, Error ellipse: s-maj=7.4km s-min=5.1km az=163.5*
CSEM ***29*** *09:58:47.3±0.2, 41.°79N×22.°88E, h2km, ML2.3, Error ellipse: s-maj=6.0km s-min=4.9km az=31.0*
SKO ***29*** *09:58:48.0, 41.°79N×22.°86E, h0km, M1.9, ML2.1*
BEO ***29*** *09:58:49.1±0.6, 41.°78N×22.°67E, h2km±4km, ML2.3/3*
ISC 29 09:58:47.0±0.6, 41.°79N±0.°03×22.°85E±0.°06, h12km±9km, n21, σ0.°78/29, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KKB	**Krupnik**	**0.19**	**66**	Pg	**Pg**	**09 58 51.0**	**-0.1**
KKB	**Krupnik**	**0.19**	**66**	Pg	**Pg**	**09 58 51.0**	**-0.1**
VAY	**Valandovo**	**0.51**	**204**	*i* Pg	**Pg**	**09 58 57.0**	**0.0**
VAY				*i* Sg	**Sg**	**09 59 04.0**	**+0.2**
VAY	**Valandovo**	**0.51**	**204**	*i* Pg	**Pg**	**09 58 57.5**	**+0.4**
VAY				*i* Sg	**Sg**	**09 59 04.1**	**+0.3**
VAY				*e*Lg		09 59 04.9	
	comp=E,72nm,0.2s						
VAY				*e*Lg		09 59 04.9	
	comp=N,77nm,0.2s						
VAY	**Valandovo**	**0.51**	**204**	*i* Pg	**Pg**	**09 58 57.0**	**0.0**
VAY				*i* Sg	**Sg**	**09 59 04.0**	**+0.2**
MMB	**Musomiste**	**0.69**	**107**	Pg	**Pg**	**09 59 00.1**	**-0.2**
MMB	**Musomiste**	**0.69**	**107**	Pg	**Pg**	**09 59 00.1**	**-0.2**
PGB	**Panagyurishte**	**1.24**	**52**	P	**Pn**	**09 59 09.9**	**-0.2**
PGB	**Panagyurishte**	**1.24**	**52**	P	**Pn**	**09 59 09.9**	**-0.2**
BARS	**Barje**	**1.28**	**324**	*i* Pg	**Pg**	**09 59 11.5**	**-0.1**
BARS				*i* Sg	**Sg**	**09 59 28.0**	**-0.2**
BARS	**Barje**	**1.28**	**324**	*i* Pg	**Pg**	**09 59 11.5**	**-0.1**
BARS				*i* Sg	**Sg**	**09 59 28.0**	**-0.2**
RZN	**Rozhen**	**1.40**	**94**	Pg	**Pg**	**09 59 13.8**	**0.0**
RZN	**Rozhen**	**1.40**	**94**	Pg	**Pg**	**09 59 13.8**	**0.0**
ZAPS	**Zavoj**	**1.49**	**354**	*i* Pg	**Pg**	**09 59 16.5**	**+0.9**
ZAPS				*i* Sg	**Sg**	**09 59 36.3**	**+1.3**
MPEP	**Malo Peshtene**	**1.70**	**22**	Pg	**Pg**	**09 59 19.3**	**-0.2**
NISS		**1.75**	**338**	*e*Pn	**Pg**	**09 59 19.9**	**-0.5**
NISS				*e*Sg	**Sg**	**09 59 42.5**	**-0.6**
NISS		**1.75**	**338**	*e*Pn	**Pg**	**09 59 19.9**	**-0.5**
NISS				*e*Sg	**Sg**	**09 59 42.5**	**-0.6**
GRUS	**Gruza**	**2.62**	**324**	*e*Pn	**Pb**	**09 59 31.9**	**-2.0**
GRUS	**Gruza**	**2.62**	**324**	*e*Pn	**Pb**	**09 59 31.9**	**-2.0**
DIVS	**Divibare**	**3.12**	**319**	*e*Pn	**Pn**	**09 59 37.5**	**+1.5**
DIVS	**Divibare**	**3.12**	**319**	*e*Pn	**Pn**	**09 59 37.5**	**+1.5**

IDC 29 10:03:59.7±2.8, 14.°03N×93.°18W, h0km, mb3.9/4, mb1 4.1/7, mb1mx3.8/23, mbtmp3.8/7, ML3.5/3, MS4.1/1, Ms1 4.1/1, ms1mx3.4/29, Error ellipse: s-maj=56.5km s-min=25.4km az=15.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APG	**El Apazote**	**2.80**	**69**	Pn	Pn	10 04 46.4	+0.6
	7.5nm,0.3s,baz=245,slow=4.4,SNR=12						
APG				Sn	Sn	10 05 23.4	+3.1
	13nm,0.3s,baz=61,slow=6.0,SNR=4.4						
CMIG	**Matias Romero**	**3.46**	**332**	Pn	Pn	10 04 54.4	-0.5
	3.8nm,0.3s,baz=145,slow=11,SNR=7.8						
CMIG				Sn	Sn	10 05 38.8	+2.2
	9.7nm,0.3s,baz=64,slow=7.2,SNR=4.9						
TXAR	**Lajitas Array**	**18.07**	**329**	P	Pn	10 08 13.4	+1.1
	0.1nm,0.3s,baz=152,slow=11,SNR=7.7						
ROSC	**El Rosal**	**20.69**	**114**	LR	LR	10 15 58.9	
	comp=Z,517nm,18.3s,baz=9.2,slow=35						
ANMO	**Albuquerque**	**24.04**	**332**	P	P	10 09 16.8	+0.3
	0.4nm,0.3s,baz=158,slow=4.5,SNR=3.9						
NVAR	**Mina Array Bea**	**32.94**	**322**	P	P	10 10 37.6	+1.6
	0.8nm,0.8s,baz=135,slow=8.4,SNR=7.5						
YKA	**Yellowknife Ar**	**50.74**	**347**	P	P	10 13 00.0	-1.1
	2.7nm,0.7s,baz=151,slow=7.2,SNR=9.5						
INK	**Inuvik**	**60.09**	**344**	P	P	10 14 07.4	-1.0
	1.4nm,0.6s,baz=163,slow=2.3,SNR=3.4						
CMAR	**Chiang Mai Arr**	**145.58**	**339**	PKPbc	PKPbc	10 23 40.6	-0.4
	1.2nm,0.6s,baz=344,slow=3.3,SNR=5.0						

IDC 29 10:06:29.8±2.7, 13.°95N×93.°20W, h0km, mb3.9/3, mb1 4.1/6, mb1mx3.7/22, mbtmp3.8/6, ML3.6/3, MS3.7/2, Ms1 3.8/2, ms1mx3.2/30, Error ellipse: s-maj=54.6km s-min=26.1km az=13.0, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APG	**El Apazote**	**2.85**	**68**	Pn	Pn	10 07 17.5	+1.0
	6.4nm,0.3s,baz=274,slow=5.9,SNR=14						
APG				LR	LR	10 07 52.9	
	comp=Z,467nm,18.4s,baz=105,slow=29						
APG				Sn	Sn	10 07 53.5	+2.0
	12nm,0.3s,baz=20,slow=17,SNR=3.3						
CMIG	**Matias Romero**	**3.52**	**333**	Pn	Pn	10 07 24.1	-1.7
	6.5nm,0.3s,baz=150,slow=12,SNR=9.2						
CMIG				Sn	Sn	10 08 09.9	+1.8
	15nm,0.3s,baz=80,slow=20,SNR=4.3						
TXAR	**Lajitas Array**	**18.12**	**329**	P	Pn	10 10 43.8	+0.9
	0.0nm,0.3s,baz=148,slow=11,SNR=6.8						
NVAR	**Mina Array Bea**	**32.99**	**322**	P	P	10 13 08.4	+1.9
	0.6nm,0.8s,baz=141,slow=8.7,SNR=5.2						
YKA	**Yellowknife Ar**	**50.81**	**347**	P	P	10 15 30.8	-0.9
	2.4nm,0.7s,baz=152,slow=7.3,SNR=6.8						
PLCA	**Paso Flores**	**58.32**	**160**	LR	LR	10 37 06.3	
	comp=Z,186nm,18.7s,baz=285,slow=32						
INK	**Inuvik**	**60.16**	**344**	P	P	10 16 38.9	0.0
	1.3nm,0.8s,baz=128,slow=5.7,SNR=3.5						
CMAR	**Chiang Mai Arr**	**145.64**	**339**	PKPbc	PKPbc	10 26 09.7	-1.6
	0.9nm,0.6s,baz=339,slow=4.9,SNR=5.3						

**IDC 29 10:15:30.7±5.0, 14.°68N×92.°98W, h0km, mb3.5/3, mb1 3.9/6, mb1mx3.7/21, mbtmp3.5/6, ML3.3/3, Error ellipse: s-

ellipse: s-maj=7.6km s-min=6.3km az=53.0

ISC 29 10:53:34.4±2.7, 10.84N±0.07×91.84E±0.07, h35km±19km, h29km±.9km: pP-P, n58, σ0$65/55, mb4.2/25, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**10.23**	**41**	Pn	**Pn**	**10 55 58.4**	**-0.4**
CMAR	**Chiang Mai Arr**	**10.23**	**41**	Pn	**Pn**	**10 55 58.6**	**-0.2**
	0.4nm,0.3s,baz=235,slow=15,SNR=7.2						
CMAR				Sn	**Sn**	**10 58 00.8**	**+8.6**
	0.3nm,0.3s,baz=233,slow=33,SNR=3.3						
CMAR				LR	LR	11 00 18.6	
	comp=Z,89nm,19.7s,baz=220,slow=40						
CMAR	**Chiang Mai Arr**	**10.23**	**41**	Pn	**Pn**	**10 55 58.6**	**-0.2**
CMAR				Sn	**Sn**	**10 58 00.8**	**+8.6**
CMAR				LR	LR	11 00 18.6	
PALK	**Pallekele**	**11.55**	**253**	*e*Pn	**Pn**	**10 56 17.3**	**+0.4**
	18nm,0.3s						
PALK				*e*Sn	**Sn**	**10 58 13.0**	**-12**
ODAN	**Odare**	**16.48**	**346**	*e*P	**Pn**	**10 57 21.6**	**-1.3**
RAMN	**Ramite**	**16.77**	**344**	*e*P	**Pn**	**10 57 25.1**	**-1.5**
TAPN	**Taplejung**	**16.88**	**347**	*e*P	**Pn**	**10 57 27.6**	**-0.4**
PKI	**Pulchoki**	**17.70**	**341**	*e*P	**Pn**	**10 57 38.6**	**+0.3**
PKIN	**Phulchoki**	**17.71**	**341**	*e*P	**Pn**	**10 57 38.6**	**+0.2**
DMN	**Daman**	**17.84**	**340**	*e*P	**Pn**	**10 57 40.7**	**+0.8**
GUN	**Gumba**	**17.88**	**343**	*e*P	**Pn**	**10 57 40.8**	**+0.4**
KKN	**Kakani**	**17.95**	**341**	*e*P	**Pn**	**10 57 42.1**	**+0.8**
LSA	**Lhasa**	**18.77**	**358**	P	**Pn**	**10 57 58.8**	**+7.5**
KSM	**Kuching**	**20.57**	**116**	*e*P	**P**	**10 58 10.1**	**-0.4**
	6.0nm,0.6s						
GTA	**Gaotai**	**29.32**	**13**	*e*P	**P**	**10 59 37.0**	**+3.2**
GTA				pP	pP	10 59 44.5	+0.8
GTA				sP	sP	10 59 48.5	+0.6
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb3.9						
AAK	**Ala-Archa**	**35.10**	**338**	P	**P**	**11 00 24.8**	**+0.5**
	comp=Z,1.2nm,0.3s,mb4.3,baz=284,slow=8.5,SNR=3.9						
EKS2	**Erkin-Say**	**35.40**	**337**	*e*P	**P**	**11 00 28.6**	**+1.6**
	comp=Z,2.1nm,0.8s,mb4.1						
EKS2				*e*	pP	11 00 36.8	-0.2
MK31	**Makanchi Array**	**36.73**	**349**	*e*P	**P**	**11 00 38.5**	**+0.2**
MK31				*e*	pP	11 00 47.4	-0.9
MKAR	**Makanchi Array**	**36.73**	**349**	P	**P**	**11 00 38.0**	**-0.2**
	comp=Z,4.0nm,0.7s,mb4.3,baz=169,slow=8.2,SNR=30						
MKAR				PcP	PcP	11 03 00.7	+0.4
	comp=Z,0.6nm,0.5s,baz=235,slow=5.8,SNR=4.6						
SONM	**Songino Array**	**38.86**	**16**	P	**P**	**11 00 55.9**	**-0.3**
	comp=Z,1.0nm,0.9s,mb3.6,baz=187,slow=7.5,SNR=5.1						
SONM				PcP	PcP	11 03 08.1	+1.3
	comp=Z,0.5nm,0.5s,baz=213,slow=5.6,SNR=4.0						
KURK	**Kurchatov**	**41.22**	**347**	P	**P**	**11 01 15.9**	**+0.2**
	comp=Z,0.8nm,0.3s,mb3.8,baz=186,slow=24,SNR=5.5						
KURK				PcP	PcP	11 03 15.1	+0.9
	comp=Z,0.5nm,0.3s,baz=160,slow=3.0,SNR=2.9						
KURK	**Kurchatov**	**41.22**	**347**	*e*P	**P**	**11 01 16.4**	**+0.7**
	comp=Z,1.7nm,0.6s,mb3.9						
KURK				*e*	pP	11 01 24.6	-1.3
KSRS	**Korea Array**	**41.85**	**45**	P	**P**	**11 01 22.3**	**+1.1**
	comp=Z,0.9nm,0.7s,mb3.5,baz=236,slow=8.9,SNR=3.7						
KSRS				LR	LR	11 21 51.6	
	comp=Z,65nm,19.6s,baz=350,slow=41						
ZAA0	**Zalesovo Array**	**43.36**	**354**	*e*P	**P**	**11 01 33.3**	**+0.2**
ZALV	**Zalesovo Beam**	**43.36**	**354**	P	**P**	**11 01 33.1**	**0.0**
	comp=Z,2.1nm,0.5s,mb4.1,baz=173,slow=9.1,SNR=14						
FITZ	**Fitzroy Crossi**	**44.05**	**130**	P	**P**	**11 01 39.1**	**-0.1**
	comp=Z,3.2nm,0.7s,mb4.2,baz=217,slow=1.5,SNR=21						
FITZ	**Fitzroy Crossi**	**44.05**	**130**	*e*P	**P**	**11 01 38.9**	**-0.3**
	comp=Z,8.5nm,0.9s,mb4.5						
BVAR	**Borovoye Array**	**45.47**	**342**	P	**P**	**11 01 49.7**	**-0.4**
	comp=Z,0.7nm,0.5s,mb3.8,baz=146,slow=9.6,SNR=4.8						
AKTK	**Aktyubinsk**	**48.27**	**332**	P	**P**	**11 02 12.0**	**0.0**
AKTO	**Aktyubinsk**	**48.27**	**332**	P	**P**	**11 02 12.0**	**0.0**
	comp=Z,1.1nm,0.5s,mb4.2,baz=110,slow=8.7,SNR=6.3						
WRA	**Warramunga Arr**	**51.83**	**126**	P	**P**	**11 02 39.2**	**-0.2**
	comp=Z,1.7nm,0.5s,mb4.2,baz=306,slow=8.3,SNR=67						
WRA				PcP	PcP	11 03 52.6	+0.4
	comp=Z,0.7nm,0.5s,baz=314,slow=3.0,SNR=5.2						
WRA	**Warramunga Arr**	**51.83**	**126**	P	**P**	**11 02 39.2**	**-0.3**
WRA				PcP	PcP	11 03 52.6	+0.5
WRAB	**Tennant Creek**	**51.84**	**126**	*e*P	**P**	**11 02 39.2**	**-0.2**
	comp=Z,3.8nm,0.8s,mb4.4						
ASAR	**Alice Springs**	**53.55**	**130**	P	**P**	**11 02 52.6**	**+0.5**
	comp=Z,6.4nm,0.7s,mb4.7,baz=305,slow=6.8,SNR=112						
ASAR				PcP	PcP	11 03 59.2	+0.6
	comp=Z,1.5nm,0.6s,baz=312,slow=3.6,SNR=7.7						
STKA	**Stephens Creek**	**63.79**	**134**	P	**P**	**11 04 03.8**	**+0.6**
	comp=Z,3.0nm,0.6s,mb4.5,baz=328,slow=7.9,SNR=11						
FINES	**FINESS Array B**	**69.04**	**332**	P	**P**	**11 04 36.2**	**-0.1**
	comp=Z,3.9nm,0.9s,mb4.4,baz=121,slow=7.1,SNR=13						
FINES				PcP	PcP	11 05 01.1	+0.8
	comp=Z,0.9nm,0.7s,baz=103,slow=6.8,SNR=3.5						
FINES	**FINESS Array B**	**69.04**	**332**	P	**P**	**11 04 36.2**	**-0.1**
FINES				PcP	PcP	11 05 01.1	+0.8
HFS	**Hagfors**	**74.76**	**329**	P	**P**	**11 05 10.0**	**-0.7**
	comp=Z,2.2nm,0.7s,mb4.2,baz=90,slow=7.4,SNR=5.0						
BOSA	**Boshof**	**75.27**	**237**	P	**P**	**11 05 14.4**	**+0.2**
	comp=Z,2.8nm,0.7s,mb4.3,baz=107,slow=7.7,SNR=5.0						
NB2	**NORSAR Subarra**	**76.04**	**330**	P	**P**	**11 05 17.3**	**-0.7**
	comp=Z,0.2nm,0.6s,mb3.2,baz=94,slow=6.2						
NOA	**NORSAR Array B**	**76.04**	**330**	P	**P**	**11 05 17.6**	**-0.4**
	comp=Z,1.2nm,0.7s,mb4.0,baz=93,slow=5.7,SNR=6.6						
KEST	**Kesra**	**77.69**	**304**	P	**P**	**11 05 27.9**	**0.0**
	comp=Z,2.1nm,1.0s,mb4.0,baz=90,slow=11,SNR=4.1						
LPG	**La Plagne**	**78.93**	**314**	*e*P	**P**	**11 05 34.3**	**-0.2**
	comp=Z,5.2nm,0.6s,mb4.3						
LPG	**La Plagne**	**78.93**	**314**	*e*P	**P**	**11 05 34.3**	**-0.2**
	comp=Z,2.6nm,0.6s,mb4.3						
LPL	**La Plagne**	**78.94**	**314**	*e*P	**P**	**11 05 34.4**	**-0.2**
	comp=Z,7.7nm,0.7s,mb4.4						
LPL	**La Plagne**	**78.94**	**314**	*e*P	**P**	**11 05 34.4**	**-0.2**
	comp=Z,3.8nm,0.7s,mb4.4						
VIVF	**Saint-Julien-l**	**80.45**	**314**	*e*P	**P**	**11 05 42.3**	**-0.5**
	comp=Z,9.0nm,0.8s,mb4.4						
VIVF	**Saint-Julien-l**	**80.45**	**314**	*e*P	**P**	**11 05 42.3**	**-0.5**
	comp=Z,4.5nm,0.8s,mb4.5						
SMF	**Signal de Mont**	**80.84**	**316**	*e*P	**P**	**11 05 44.0**	**-0.8**
	comp=Z,8.7nm,0.8s,mb4.4						
SMF	**Signal de Mont**	**80.84**	**316**	*e*P	**P**	**11 05 44.0**	**-0.8**
	comp=Z,4.3nm,0.8s,mb4.4						
MFF	**Saint Martin d**	**83.57**	**316**	*e*P	**P**	**11 05 58.6**	**-0.5**
	comp=Z,5.8nm,0.6s,mb4.6						
MFF	**Saint Martin d**	**83.57**	**316**	*e*P	**P**	**11 05 58.6**	**-0.5**
	comp=Z,2.9nm,0.6s,mb4.6						
PDAR	**Pinedale Array**	**123.17**	**19**	PKP	PKPdf	11 12 28.6	+0.8
	comp=Z,0.3nm,0.6s,baz=34,slow=3.4,SNR=3.4						
PDAR	**Pinedale Array**	**123.17**	**19**	PKP	PKPdf	11 12 28.6	+0.8
NVAR	**Mina Array Bea**	**123.48**	**28**	PKP	PKPdf	11 12 30.1	+1.6
	comp=Z,0.5nm,0.6s,baz=317,slow=2.1,SNR=7.0						
TXAR	**Lajitas Array**	**137.35**	**20**	PKP	PKPdf	11 12 57.4	+2.4
	comp=Z,0.2nm,0.6s,baz=225,slow=0.8,SNR=3.2						
PLCA	**Paso Flores**	**146.41**	**205**	PKPbc	PKPbc	11 13 12.7	+0.7
	comp=Z,1.2nm,0.6s,baz=200,slow=7.7,SNR=5.3						
CPUP	**Villa Florida**	**147.08**	**238**	PKPbc	PKPbc	11 13 14.7	+0.3
	comp=Z,0.3nm,0.4s,baz=84,slow=8.6,SNR=4.2						

*HLW **29** 11:00:13.5, 35°.55N×22°.63E, h14km±22km, Md4.0, Ml3.9*
*MOS **29** 11:00:13.5±1.4, 35°.49N×22°.34E, h33km, mb4.2/19, Error ellipse: s-maj=6.6km s-min=3.5km az=101.6*
*PDG **29** 11:00:15.8±0.2, 35°.60N×21°.23E, h18km±11km, ML4.4/9, Error ellipse: s-maj=207.7km s-min=56.1km az=90.0*
*ISCJB **29** 11:00:15.4±0.3, 35°.51N±0°.02×22°.35E±0°.03, h68km±4km, mb3.8/23, Error ellipse: s-maj=4.2km s-min=2.8km az=39.6*
*THE **29** 11:00:15.4, 35°.48N×22°.44E, h118km±4km, ML4.6/9, Error ellipse: s-maj=4.9km s-min=1.4km az=53.0*
*CSEM **29** 11:00:16.6±0.2, 35°.50N×22°.34E, h60km, mb4.0/17, Error ellipse: s-maj=4.9km s-min=3.2km az=35.0*
*ATH **29** 11:00:16.3, 35°.51N×22°.42E, h40km±4km, MD4.2/20, ML3.9*
*NEIC **29** 11:00:16.3, 35°.51N×22°.42E, h40km, mb3.9/12, MD4.2(ATH), After ATH.*
*IDC **29** 11:00:17.1±1.3, 35°.54N×22°.54E, h51km±14km, mb3.7/16, mb1 3.8/20, mb1mx3.7/34, mbtmp3.7/20, ML3.8/4, Error ellipse: s-maj=18.1km s-min=8.5km az=9.0*

ISC 29 11:00:16.6±0.3, 35.49N±0°.02×22.35E±0°.02, h58km±4km, n434, σ1$24/492, mb3.9/23, 34C-11D, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.97**	**35**	⇓*i*P	**Pn**	**11 00 34.4**	**+0.3**
KYTH	**Kithira**	**0.97**	**35**	⇓*i*P	**Pn**	**11 00 34.4**	**+0.3**
KYTH	**Kithira**	**0.97**	**35**	⇓*i*P	**Pn**	**11 00 34.4**	**+0.3**
KARN	**Karanos**	**1.29**	**94**	P	**Pn**	**11 00 38.9**	**+0.6**
KARN				S	**Sn**	**11 00 57.0**	**+2.4**
KARN	**Karanos**	**1.29**	**94**	*e*P	**Pn**	**11 00 38.9**	**+0.6**
KARN				*e*S	**Sn**	**11 00 54.6**	**0.0**
KARN	**Karanos**	**1.29**	**94**	*e*P	**Pn**	**11 00 38.9**	**+0.6**
KARN				*e*S	**Sn**	**11 00 54.6**	**0.0**
VLI	**Veliai**	**1.31**	**21**	*e*P	**Pn**	**11 00 39.5**	**+0.8**
VLI				*e*S	**Sn**	**11 00 56.5**	**+1.2**
VLI	**Veliai**	**1.31**	**21**	*e*P	**Pn**	**11 00 39.5**	**+0.8**
VLI				*e*S	**Sn**	**11 00 56.5**	**+1.2**
VLI	**Veliai**	**1.31**	**21**	*e*P	**Pn**	**11 00 39.5**	**+0.8**
VLI				*e*S	**Sn**	**11 00 56.5**	**+1.2**
PYL	**PYLOS**	**1.48**	**341**	P	**Pn**	**11 00 41.3**	**+0.3**
PYL	**PYLOS**	**1.48**	**341**	*e*P	**Pn**	**11 00 41.8**	**+0.8**
PYL	**PYLOS**	**1.48**	**341**	*e*P	**Pn**	**11 00 41.8**	**+0.8**
VAM	**Vamos**	**1.52**	**93**	*e*P	**Pn**	**11 00 41.7**	**+0.3**
VAM				*e*S	**Sn**	**11 01 00.2**	**0.0**
VAM	**Vamos**	**1.52**	**93**	*e*P	**Pn**	**11 00 41.7**	**+0.3**
VAM				*e*S	**Sn**	**11 01 00.2**	**0.0**
VAM	**Vamos**	**1.52**	**93**	*e*P	**Pn**	**11 00 41.7**	**+0.3**
VAM				*e*S	**Sn**	**11 01 00.2**	**0.0**
GVD	**Gavdhos**	**1.57**	**114**	*e*P	**Pn**	**11 00 42.0**	**-0.1**
GVD	**Gavdhos**	**1.57**	**114**	*e*P	**Pn**	**11 00 42.0**	**-0.1**
GVD	**Gavdhos**	**1.57**	**114**	*e*P	**Pn**	**11 00 42.0**	**-0.1**
ITM	**Ithomi**	**1.72**	**349**	*e*P	**Pn**	**11 00 45.9**	**+1.7**
ITM	**Ithomi**	**1.72**	**349**	P	**Pn**	**11 00 45.0**	**+0.8**
ITM				S	**Sn**	**11 01 10.6**	**+5.6**
ITM	**Ithomi**	**1.72**	**349**	*e*P	**Pn**	**11 00 45.9**	**+1.7**
ITM	**Ithomi**	**1.72**	**349**	P	**Pn**	**11 00 45.0**	**+0.8**
ITM				S	**Sn**	**11 01 10.6**	**+5.6**
VLX	**Vlachokerasia**	**1.88**	**1**	P	**Pn**	**11 00 50.3**	**+4.0**
VLX	**Vlachokerasia**	**1.88**	**1**	P	**Pn**	**11 00 50.3**	**+4.0**
SIVA	**Sivas**	**2.07**	**102**	*e*P	**Pn**	**11 00 49.7**	**+0.7**
SIVA	**Sivas**	**2.07**	**102**	P	**Pn**	**11 00 49.5**	**+0.5**
SIVA	**Sivas**	**2.07**	**102**	*e*P	**Pn**	**11 00 49.7**	**+0.7**
SIVA	**Sivas**	**2.07**	**102**	*e*P	**Pn**	**11 00 49.7**	**+0.7**
IDI	**Anoyia**	**2.09**	**95**	P	**Pn**	**11 00 49.3**	**+0.1**
	20nm,0.3s,baz=274,slow=14,SNR=95						
IDI				S	**Sn**	**11 01 11.3**	**-2.8**
	74nm,0.3s,baz=294,slow=14,SNR=9.7						
IDI	**Anoyia**	**2.09**	**95**	*e*P	**Pn**	**11 00 49.8**	**+0.6**
IDI	**Anoyia**	**2.09**	**95**	*e*P	**Pn**	**11 00 49.8**	**+0.6**
IDI	**Anoyia**	**2.09**	**95**	*e*P	**Pn**	**11 00 49.8**	**+0.6**
DID	**Didima**	**2.14**	**19**	P	**Pn**	**11 00 50.2**	**+0.4**
DID				S	**Sn**	**11 01 17.1**	**+1.9**
DID	**Didima**	**2.14**	**19**	*e*P	**Pn**	**11 00 50.2**	**+0.4**
DID	**Didima**	**2.14**	**19**	*e*P	**Pn**	**11 00 50.2**	**+0.4**
DID				S	**Sn**	**11 01 17.1**	**+1.9**
GUR	**Goura**	**2.44**	**360**	P	**Pn**	**11 00 55.9**	**+1.9**
GUR	**Goura**	**2.44**	**360**	*e*P	**Pn**	**11 00 56.3**	**+2.3**
GUR	**Goura**	**2.44**	**360**	*e*P	**Pn**	**11 00 56.3**	**+2.3**
NAIG	**Nisos Aigina**	**2.44**	**22**	*e*P	**Pn**	**11 00 54.7**	**+0.7**
NAIG	**Nisos Aigina**	**2.44**	**22**	*e*P	**Pn**	**11 00 54.7**	**+0.7**
NAIG	**Nisos Aigina**	**2.44**	**22**	*e*P	**Pn**	**11 00 54.7**	**+0.7**
LTK	**Loutraki**	**2.58**	**11**	P	**Pn**	**11 00 56.4**	**+0.6**
LTK	**Loutraki**	**2.58**	**11**	*e*P	**Pn**	**11 00 57.8**	**+2.0**
LTK	**Loutraki**	**2.58**	**11**	P	**Pn**	**11 00 56.4**	**+0.6**
LAST	**Lasithi**	**2.58**	**96**	*e*P	**Pn**	**11 00 57.0**	**+1.1**
LAST	**Lasithi**	**2.58**	**96**	*e*P	**Pn**	**11 00 57.0**	**+1.1**
LAST	**Lasithi**	**2.58**	**96**	*e*P	**Pn**	**11 00 57.0**	**+1.1**
THR5	**Thira Island,**	**2.61**	**68**	P	**Pn**	**11 00 56.0**	**-0.2**
THR5	**Thira Island,**	**2.61**	**68**	P	**Pn**	**11 00 56.0**	**-0.2**
THR6	**Thira Island,**	**2.62**	**70**	P	**Pn**	**11 00 56.3**	**-0.2**
THR6	**Thira Island,**	**2.62**	**70**	P	**Pn**	**11 00 56.3**	**-0.2**
VLY	**Voula,Athens**	**2.63**	**26**	*e*P	**Pn**	**11 00 56.5**	**-0.1**
VLY	**Voula,Athens**	**2.63**	**26**	*e*P	**Pn**	**11 00 56.5**	**-0.1**
VLY	**Voula,Athens**	**2.63**	**26**	*e*P	**Pn**	**11 00 56.5**	**-0.1**
THR3	**Thira Island,**	**2.64**	**69**	P	**Pn**	**11 00 56.5**	**-0.3**
THR3	**Thira Island,**	**2.64**	**69**	P	**Pn**	**11 00 56.5**	**-0.3**
RLS	**Riolos of Patr**	**2.66**	**345**	*e*P	**Pn**	**11 00 58.6**	**+1.7**
RLS	**Riolos of Patr**	**2.66**	**345**	*e*P	**Pn**	**11 00 58.6**	**+1.7**
RLS	**Riolos of Patr**	**2.66**	**345**	*e*P	**Pn**	**11 00 58.6**	**+1.7**
THR1	**Thera Island**	**2.68**	**70**	P	**Pn**	**11 00 56.9**	**-0.3**
THR1	**Thera Island**	**2.68**	**70**	P	**Pn**	**11 00 56.9**	**-0.3**
NPS	**Neapolis**	**2.68**	**94**	*e*P	**Pn**	**11 00 57.8**	**+0.5**
NPS	**Neapolis**	**2.68**	**94**	*e*P	**Pn**	**11 00 57.8**	**+0.5**
NPS	**Neapolis**	**2.68**	**94**	*e*P	**Pn**	**11 00 57.8**	**+0.5**
THR2	**Thira island,**	**2.68**	**68**	P	**Pn**	**11 00 56.5**	**-0.8**
THR2	**Thira island,**	**2.68**	**68**	P	**Pn**	**11 00 56.5**	**-0.8**
ATH	**Athens Observa**	**2.71**	**24**	*e*P	**Pn**	**11 00 58.2**	**+0.5**
ATH	**Athens Observa**	**2.71**	**24**	*e*P	**Pn**	**11 00 58.2**	**+0.5**
ATH	**Athens Observa**	**2.71**	**24**	*e*P	**Pn**	**11 00 58.2**	**+0.5**
ATHU	**Athens Univers**	**2.73**	**25**	P	**Pn**	**11 00 58.1**	**+0.2**
ATHU	**Athens Univers**	**2.73**	**25**	P	**Pn**	**11 00 58.1**	**+0.2**
LAKA	**Lakka**	**2.76**	**354**	P	**Pn**	**11 01 01.0**	**+2.7**
LAKA	**Lakka**	**2.76**	**354**	P	**Pn**	**11 01 01.0**	**+2.7**
XRY	**Khrisi**	**2.81**	**102**	*e*P	**Pn**	**11 01 00.3**	**+1.2**
XRY	**Khrisi**	**2.81**	**102**	*e*P	**Pn**	**11 01 00.3**	**+1.2**
XRY	**Khrisi**	**2.81**	**102**	*e*P	**Pn**	**11 01 00.3**	**+1.2**
PTL	**Penteli**	**2.83**	**25**	*e*P	**Pn**	**11 00 59.3**	**0.0**
PTL	**Penteli**	**2.83**	**25**	*e*P	**Pn**	**11 00 59.3**	**0.0**
PTL	**Penteli**	**2.83**	**25**	*e*P	**Pn**	**11 00 59.3**	**0.0**
TRIZ	**Trizonia**	**2.88**	**356**	P	**Pn**	**11 01 01.6**	**+1.6**
TRIZ	**Trizonia**	**2.88**	**356**	P	**Pn**	**11 01 01.6**	**+1.6**
KFL	**Anninata**	**2.90**	**335**	P	**Pn**	**11 01 00.8**	**+0.6**
KALE	**Kalithea**	**2.90**	**357**	P	**Pn**	**11 01 01.6**	**+1.3**
KALE	**Kalithea**	**2.90**	**357**	P	**Pn**	**11 01 01.6**	**+1.3**
DSF	**Desfina**	**2.92**	**3**	P	**Pn**	**11 01 00.5**	**0.0**
DSF				S	**Sn**	**11 01 35.7**	**+1.3**
DSF	**Desfina**	**2.92**	**3**	P	**Pn**	**11 01 00.5**	**0.0**
DSF				S	**Sn**	**11 01 35.7**	**+1.3**
EFP	**Efpalio**	**2.95**	**353**	P	**Pn**	**11 01 03.1**	**+2.1**
EFP				S	**Sn**	**11 01 38.2**	**+3.0**
EFP	**Efpalio**	**2.95**	**353**	*e*P	**Pn**	**11 01 04.1**	**+3.1**
EFP	**Efpalio**	**2.95**	**353**	*e*P	**Pn**	**11 01 04.1**	**+3.1**
EFP				S	**Sn**	**11 01 38.2**	**+3.0**
APE	**Apeiranthos**	**3.02**	**58**	⇑P	**Pn**	**11 01 01.1**	**-0.8**
APE	**Apeiranthos**	**3.02**	**58**	*e*P	**Pn**	**11 01 03.8**	**+1.9**
APE	**Apeiranthos**	**3.02**	**58**	P	**Pn**	**11 01 01.3**	**-0.6**
APE				S	**Sn**	**11 01 34.9**	**-1.9**
APE	**Apeiranthos**	**3.02**	**58**	⇑*i*P	**Pn**	**11 01 01.1**	**-0.8**
APE	**Apeiranthos**	**3.02**	**58**	*e*P	**Pn**	**11 01 03.8**	**+1.9**
APE	**Apeiranthos**	**3.02**	**58**	P	**Pn**	**11 01 01.3**	**-0.6**
APE				S	**Sn**	**11 01 34.9**	**-1.9**
VLS	**Valsamata**	**3.03**	**333**	P	**Pn**	**11 01 02.1**	**+0.1**
VLS	**Valsamata**	**3.03**	**333**	P	**Pn**	**11 01 02.3**	**+0.3**
VLS				S	**Sn**	**11 01 36.0**	**-1.0**
VLS	**Valsamata**	**3.03**	**333**	P	**Pn**	**11 01 02.1**	**+0.1**
VLS				S	**Sn**	**11 01 36.0**	**-1.0**
ZKR	**Zakros**	**3.19**	**96**	*e*P	**Pn**	**11 01 05.8**	**+1.6**
ZKR	**Zakros**	**3.19**	**96**	*e*P	**Pn**	**11 01 05.8**	**+1.6**
ZKR	**Zakros**	**3.19**	**96**	*e*P	**Pn**	**11 01 05.8**	**+1.6**
LKR	**Lokris**	**3.20**	**9**	*e*P	**Pn**	**11 01 05.2**	**+0.9**
LKR	**Lokris**	**3.20**	**9**	P	**Pn**	**11 01 04.9**	**+0.6**
LKR	**Lokris**	**3.20**	**9**	*e*P	**Pn**	**11 01 05.2**	**+0.9**
LKR	**Lokris**	**3.20**	**9**	P	**Pn**	**11 01 04.9**	**+0.6**
ATAL	**Atalanti**	**3.24**	**9**	P	**Pn**	**11 01 05.5**	**+0.6**
ATAL				S	**Sn**	**11 01 41.0**	**-1.3**
ATAL	**Atalanti**	**3.24**	**9**	P	**Pn**	**11 01 05.5**	**+0.6**
ATAL				S	**Sn**	**11 01 41.0**	**-1.3**
AGG	**Agios Georgios**	**3.52**	**360**	*e*P	**Pn**	**11 01 10.7**	**+1.9**
AGG	**Agios Georgios**	**3.52**	**360**	P	**Pn**	**11 01 10.1**	**+1.3**
AGG				S	**Sn**	**11 01 50.5**	**+1.3**
AGG	**Agios Georgios**	**3.52**	**360**	*e*P	**Pn**	**11 01 10.7**	**+1.9**
AGG	**Agios Georgios**	**3.52**	**360**	*e*P	**Pn**	**11 01 10.7**	**+1.9**
AGG				S	**Sn**	**11 01 50.5**	**+1.3**
LKD2	**Lefkada island**	**3.56**	**338**	P	**Pn**	**11 01 10.2**	**+1.0**
LKD2	**Lefkada island**	**3.56**	**338**	P	**Pn**	**11 01 10.2**	**+1.0**
LTBQ	**Tobruq**	**3.67**	**159**	*i* P	**Pn**	**11 01 12.4**	**+1.6**
	SNR=23						
AOS	**Alonnisos**	**3.87**	**18**	P	**Pn**	**11 01 15.0**	**+1.5**
AOS	**Alonnisos**	**3.87**	**18**	P	**Pn**	**11 01 12.8**	**-0.7**
AOS	**Alonnisos**	**3.87**	**18**	P	**Pn**	**11 01 12.8**	**-0.7**
NEO	**Neokhori**	**3.87**	**10**	*e*P	**Pn**	**11 01 14.3**	**+0.7**
NEO	**Neokhori**	**3.87**	**10**	*e*P	**Pn**	**11 01 14.3**	**+0.7**
NEO	**Neokhori**	**3.87**	**10**	*e*P	**Pn**	**11 01 14.3**	**+0.7**
XOR	**Xorichti**	**3.93**	**10**	P	**Pn**	**11 01 15.7**	**+1.4**
XOR	**Xorichti**	**3.93**	**10**	P	**Pn**	**11 01 15.5**	**+1.2**
XOR	**Xorichti**	**3.93**	**10**	P	**Pn**	**11 01 15.5**	**+1.2**
KARP	**Karpathos**	**3.93**	**88**	*e*P	**Pn**	**11 01 14.9**	**+0.5**
KARP	**Karpathos**	**3.93**	**88**	*e*P	**Pn**	**11 01 14.9**	**+0.5**
KARP	**Karpathos**	**3.93**	**88**	*e*P	**Pn**	**11 01 14.9**	**+0.5**
NIS1	**Nisyros Isl.**	**4.07**	**73**	P	**Pn**	**11 01 15.4**	**-0.9**
NIS1	**Nisyros Isl.**	**4.07**	**73**	P	**Pn**	**11 01 15.4**	**-0.9**
THL	**Klokotos Trika**	**4.08**	**356**	P	**Pn**	**11 01 17.1**	**+0.8**
THL				S	**Sn**	**11 02 03.9**	**+1.2**
THL	**Klokotos Trika**	**4.08**	**356**	*e*P	**Pn**	**11 01 17.3**	**+1.0**
THL	**Klokotos Trika**	**4.08**	**356**	*e*P	**Pn**	**11 01 17.3**	**+1.0**
THL				S	**Sn**	**11 02 03.9**	**+1.2**
CHOS	**Chios island**	**4.15**	**45**	P	**Pn**	**11 01 16.8**	**-0.5**
CHOS	**Chios island**	**4.15**	**45**	*e*P	**Pn**	**11 01 17.8**	**+0.5**
CHOS	**Chios island**	**4.15**	**45**	P	**Pn**	**11 01 16.8**	**-0.5**
SMG	**Samos**	**4.24**	**57**	*e*P	**Pn**	**11 01 18.9**	**+0.3**
SMG	**Samos**	**4.24**	**57**	*e*P	**Pn**	**11 01 18.9**	**+0.3**
SMG	**Samos**	**4.24**	**57**	*e*P	**Pn**	**11 01 18.9**	**+0.3**
JAN	**Janina**	**4.32**	**345**	*e*P	**Pn**	**11 01 20.6**	**+0.9**
JAN	**Janina**	**4.32**	**345**	*e*P	**Pn**	**11 01 20.6**	**+0.9**
JAN	**Janina**	**4.32**	**345**	*e*P	**Pn**	**11 01 20.6**	**+0.9**
IGT	**Igoumenitsa**	**4.34**	**339**	P	**Pn**	**11 01 19.5**	**-0.5**
IGT				S	**Sn**	**11 02 07.0**	**-2.2**
IGT	**Igoumenitsa**	**4.34**	**339**	P	**Pn**	**11 01 19.5**	**-0.5**
IGT				S	**Sn**	**11 02 07.0**	**-2.2**
BDRM	**Kayabasi**	**4.41**	**68**	*i* P	**Pn**	**11 01 20.9**	**0.0**
BDRM	**Kayabasi**	**4.41**	**68**	*i* P	**Pn**	**11 01 20.9**	**0.0**
PAIG	**Paliouri**	**4.55**	**13**	P	**Pn**	**11 01 23.1**	**+0.2**
PAIG	**Paliouri**	**4.55**	**13**	P	**Pn**	**11 01 23.3**	**+0.4**
PAIG	**Paliouri**	**4.55**	**13**	P	**Pn**	**11 01 23.3**	**+0.4**
SLUM		**4.65**	**148**	P	**Pn**	**11 01 22.4**	**-1.9**
	baz=151						
SLUM				AMP		11 02 00.0	
	comp=E,190μm,0.3s,logA/T=5.8,baz=151						
SLUM		**4.

IVA *e*Sn **Sn** **11 03 24.4 -5.1**
IVA Berane 7.61 346 ⇑*i*Pn **Pn** **11 02 03.9 -0.8**
BRY Bratogost 7.96 339 ⇑*i*Pn **Pn** **11 02 07.9 -1.7**
BRY *e*Sn **Sn** **11 03 31.3 -6.9**
BRY Bratogost 7.96 339 ⇑*i*Pn **Pn** **11 02 07.9 -1.7**
GAZI Gazipasa 8.13 82 *e*P **Pn** **11 02 07.5 -4.4**
UPM Unac-Piva 8.15 342 *e*Pn **Pn** **11 02 10.8 -1.3**
UPM *e*Sn **Sn** **11 03 36.0 -6.6**
UPM Unac-Piva 8.15 342 *e*Pn **Pn** **11 02 10.8 -1.3**
PLE Pljevlja 8.15 345 ⇑*i*Pn **Pn** **11 02 10.6 -1.6**
PLE *e*Sn **Sn** **11 03 37.2 -5.6**
PLE Pljevlja 8.15 345 ⇑*i*Pn **Pn** **11 02 10.6 -1.6**
STON Ston 8.20 335 *e*Pn **Pn** **11 02 09.4 -3.5**
STON Sn **Sn** **11 03 33.5 -11**
LSHF Shwairf 8.75 233 *i* P **Pn** **11 02 19.2 -1.2**
SNR=22
DIVS Divibare 8.78 349 P **Pn** **11 02 18.2 -2.6**
DIVS Divibare 8.78 349 P **Pn** **11 02 18.2 -2.6**
AWBH 9.06 140 P **Pn** **11 02 22.6 -2.1**
baz=141
AWBH 9.06 140 P **Pn** **11 02 22.6 -2.1**
KOT Kottamia 9.72 122 P **Pn** **11 02 31.4 -2.3**
baz=123
HSAF As Saff 9.73 124 P **Pn** **11 02 31.9 -1.9**
baz=125
HSAF As Saff 9.73 124 P **Pn** **11 02 31.9 -1.9**
AQU L'Aquila 9.77 317 ⇑P **Pn** **11 02 35.8 +1.6**
AQU L'Aquila 9.77 317 ⇑*i*P **Pn** **11 02 35.8 +1.6**
AQU L'Aquila 9.77 317 P **Pn** **11 02 35.8 +1.6**
GZR Gura Zlata 9.90 2 ⇓P **Pn** **11 02 35.5 -0.5**
GZR Gura Zlata 9.90 2 ⇓*i*P **Pn** **11 02 35.5 -0.5**
GZR Gura Zlata 9.90 2 ⇓*i*P **Pn** **11 02 35.5 -0.5**
BR131 Keskin Array S 9.91 61 *e*Pn **Pn** **11 02 37.8 +1.6**
comp=E,3.9nm,0.8s
BR131 Keskin Array S 9.91 61 *e*Pn **Pn** **11 02 37.8 +1.7**
comp=E,3.9nm,0.8s
BRTR Keskin Array B 9.91 61 P **Pn** **11 02 35.5 -0.7**
comp=E,0.3nm,0.3s,baz=241,slow=15,SNR=12
BRTR Keskin Array B 9.91 61 P **Pn** **11 02 35.5 -0.6**
BZS Buzias 10.13 357 ⇑P **Pn** **11 02 38.5 -0.7**
BZS Buzias 10.13 357 ⇑*i*P **Pn** **11 02 38.5 -0.7**
BZS Buzias 10.13 357 ⇑*i*P **Pn** **11 02 38.5 -0.7**
VOIR 10.15 11 ⇑P **Pn** **11 02 38.8 -0.6**
VOIR 10.15 11 ⇑*i*P **Pn** **11 02 38.8 -0.6**
VOIR 10.15 11 ⇑*i*P **Pn** **11 02 38.8 -0.6**
MLR Muntele Rosu 10.36 14 P **Pn** **11 02 41.8 -0.5**
comp=E,0.3nm,0.3s,baz=144,slow=18,SNR=3.5
MLR Muntele Rosu 10.36 14 ⇑*i*P **Pn** **11 02 41.5 -0.8**
MLR Muntele Rosu 10.36 14 ⇑*i*P **Pn** **11 02 41.5 -0.8**
NVLJ Novalja 10.71 330 *e*Pn **Pn** **11 02 45.1 -2.1**
NVLJ Sn **Sn** **11 04 34.3 -11**
NVLJ Novalja 10.71 330 *e*Pn **Pn** **11 02 45.1 -2.1**
VRI Vrincioaia 10.88 16 ⇑P **Pn** **11 02 49.1 -0.3**
VRI Vrincioaia 10.88 16 ⇑*i*P **Pn** **11 02 49.1 -0.3**
VRI Vrincioaia 10.88 16 ⇑*i*P **Pn** **11 02 49.1 -0.3**
VOY Vojsko 12.32 331 *e*Pn **Pn** **11 03 07.8 -1.2**
VOY *e*Sn **Sn** **11 05 13.3 -11**
VOY Vojsko 12.32 331 Pn **Pn** **11 03 07.8 -1.2**
OBKA Obir 12.47 334 ⇓*i*Pn **Pn** **11 03 09.0 -2.1**
OBKA Obir 12.47 334 Pn **Pn** **11 03 09.0 -2.1**
PGF Pioggiola 12.54 308 *e*P **Pn** **11 03 08.6 -3.4**
CRVS Cervenica-Dubn 13.42 357 *e*P **Pn** **11 03 24.8 +0.8**
CRVS Cervenica-Dubn 13.42 357 *e*PN **Pn** **11 03 24.8 +0.8**
CRVS Cervenica-Dubn 13.42 357 *e*P **Pn** **11 03 24.8 +0.8**
MOA Molln 13.73 337 ⇑*i*Pn **Pn** **11 03 25.8 -2.5**
MOA ⇑*i*Sn **Sn** **11 05 49.9 -9.1**
MOA Molln 13.73 337 Pn **Pn** **11 03 25.8 -2.5**
STHS Stebnicka Huta 13.94 357 *e*P **Pn** **11 03 36.5 +5.5**
STHS Stebnicka Huta 13.94 357 *e*P **Pn** **11 03 36.5 +5.5**
STHS Stebnicka Huta 13.94 357 *e*P **Pn** **11 03 36.5 +5.5**
DAVOX Davos/Dischmat 14.65 324 P **Pn** **11 03 42.1 +1.7**
comp=E,0.3nm,0.3s,baz=170,slow=17,SNR=2.9
DAVOX S **Sn** **11 06 13.7 -7.8**
comp=E,0.3nm,0.3s,baz=311,slow=20,SNR=3.6
MBDF Montbardon 15.05 313 *e*P **Pn** **11 03 43.0 -2.5**
comp=E,8.7nm,0.7s
MBDF Montbardon 15.05 313 *e*P **Pn** **11 03 43.0 -2.5**
MBDF pmax pmax
comp=Z,4.0nm,0.7s
MBDF Montbardon 15.05 313 *e*P **Pn** **11 03 43.0 -2.5**
comp=Z,4.3nm,0.7s
KHC Kasperske Hory 15.08 337 *e*P **Pn** **11 03 52.0 +6.1**
KHC pmax pmax
comp=Z,3.0nm,0.8s
KHC Kasperske Hory 15.08 337 *e*P **Pn** **11 03 52.0 +6.1**
comp=Z,2.8nm,0.8s
KHC Kasperske Hory 15.08 337 *e*P **Pn** **11 03 51.8 +5.9**
KHC Kasperske Hory 15.08 337 *e*P **Pn** **11 03 52.0 +6.1**
comp=Z,3.0nm,0.8s
DPC Dobruska-Polom 15.48 345 *e*P **Pn** **11 03 58.1 +7.0**
KIEV Kiev 15.99 16 *e*P **Pn** **11 03 58.4 +0.9**
KIEV pmax pmax
comp=Z,5.0nm,0.7s
KIEV Kiev 15.99 16 *e*P **Pn** **11 03 58.4 +0.8**
comp=Z,5.0nm,0.7s
KIEV Kiev 15.99 16 *e*P **Pn** **11 03 58.4 +0.9**
comp=Z,5.0nm,0.7s
AKASG Malin Array Be 16.00 16 P **Pn** **11 03 54.4 -3.3**
comp=Z,0.7nm,0.3s,baz=205,slow=11,SNR=5.8
AKASG Malin Array Be 16.00 16 P **Pn** **11 03 54.4 -3.3**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKBB Malin Array Si 16.00 16 *e*P **Pn** **11 03 54.1 -3.6**
CABF La Chapelle 16.51 317 *e*P **Pn** **11 04 02.3 -1.8**
BRG Berggiesshubel 16.53 341 *e*P **Pn** **11 04 14.9 +11**
comp=Z,0.8nm,0.5s
BRG *i* 11 04 23.8
comp=Z,1.8nm,0.8s
HINF Hinterlafeld 16.86 322 *e*P **Pn** **11 04 07.2 -1.3**
HINF Hinterlafeld 16.86 322 *e*P **Pn** **11 04 07.2 -1.3**
CDF Champ du Feu 17.06 324 *e*P **Pn** **11 04 10.1 -0.8**
comp=Z,7.0nm,0.9s
CDF Champ du Feu 17.06 324 *e*P **Pn** **11 04 10.1 -0.8**
CDF pmax pmax
comp=Z,4.0nm,0.9s
CDF Champ du Feu 17.06 324 *e*P **Pn** **11 04 10.1 -0.8**
comp=Z,3.5nm,0.9s
CDF Champ du Feu 17.06 324 *e*P **Pn** **11 04 10.1 -0.8**
comp=Z,3.5nm,0.9s
CLL Collm 17.18 340 *e*P **Pn** **11 04 13.0 +0.6**
CLL Collm 17.18 340 *e*P **Pn** **11 04 13.0 +0.6**
CLL *e*pP pP 11 04 22.0 -3.8
CLL *e* 11 04 31.0
CLL Collm 17.18 340 *e*P **Pn** **11 04 13.0 +0.6**
SMF Signal de Mont 17.81 314 *e*P **Pn** **11 04 21.3 +1.1**
SMF Signal de Mont 17.81 314 *e*P **Pn** **11 04 21.3 +1.1**
CAF Calviac 18.09 308 *e*P **Pn** **11 04 25.0 +1.4**
CAF Calviac 18.09 308 *e*P **Pn** **11 04 25.0 +1.4**
LOR Lormes 18.14 316 *e*P **Pn** **11 04 25.5 +1.3**
LOR Lormes 18.14 316 *e*P **Pn** **11 04 25.5 +1.3**
AVF Avril sur Loir 18.17 314 *e*P **Pn** **11 04 25.4 +0.8**
AVF Avril sur Loir 18.17 314 *e*P **Pn** **11 04 25.4 +0.8**
MEZF Maizieres J'vi 18.23 321 *e*P **Pn** **11 04 26.3 +1.1**
comp=Z,8.9nm,0.6s
MEZF Maizieres J'vi 18.23 321 *e*P **Pn** **11 04 26.3 +1.1**
comp=Z,8.9nm,0.6s
MEZF Maizieres J'vi 18.23 321 *e*P **Pn** **11 04 26.3 +1.1**
comp=Z,4.4nm,0.6s
SSF Saint Saulge 18.23 315 *e*P **Pn** **11 04 26.7 +1.5**
SSF Saint Saulge 18.23 315 *e*P **Pn** **11 04 26.7 +1.5**
BGF Bois d'Agland 18.35 313 *e*P **Pn** **11 04 27.6 +0.9**
BGF Bois d'Agland 18.35 313 *e*P **Pn** **11 04 27.6 +0.9**
ETSF Etsaut 19.20 300 *e*P **Pn** **11 04 37.1 +0.2**
comp=Z,5.4nm,0.7s
ETSF Etsaut 19.20 300 *e*P **Pn** **11 04 37.1 +0.2**
ETSF pmax pmax
comp=Z,3.0nm,0.7s
ETSF Etsaut 19.20 300 *e*P **Pn** **11 04 37.1 +0.2**
comp=Z,2.7nm,0.7s
ETSF Etsaut 19.20 300 *e*P **Pn** **11 04 37.1 +0.2**
comp=Z,2.7nm,0.7s
GIVF Givet 19.38 324 *e*P **Pn** **11 04 36.6 -2.5**
GIVF Givet 19.38 324 *e*P **Pn** **11 04 36.6 -2.5**
BAIF Baives 19.65 323 *e*P **Pn** **11 04 42.2 0.0**
BAIF Baives 19.65 323 *e*P **Pn** **11 04 42.2 0.0**
SJPF Ste Jean 19.72 300 *e*P **Pn** **11 04 44.1 +0.9**
IIGN Ignalina 20.04 6 *e*P **P** **11 04 43.0 -1.5**
IIGN Ignalina 20.04 6 *e*P **P** **11 04 43.0 -1.5**
SNR=41
IDID Didziasalis 20.06 7 *e*P **P** **11 04 42.8 -1.9**
IDID Didziasalis 20.06 7 *e*P **P** **11 04 42.8 -1.9**
SNR=41
MFF Saint Martin d 20.20 310 *e*P **P** **11 04 45.7 -0.7**
comp=Z,5.4nm,0.7s
MFF Saint Martin d 20.20 310 *e*P **P** **11 04 45.7 -0.7**
MFF pmax pmax
comp=Z,3.0nm,0.7s
MFF Saint Martin d 20.20 310 *e*P **P** **11 04 45.7 -0.7**
comp=Z,2.7nm,0.7s
MFF Saint Martin d 20.20 310 *e*P **P** **11 04 45.7 -0.7**
comp=Z,2.7nm,0.7s
ISAL Salakas 20.25 6 *e*P **P** **11 04 45.5 -1.3**
ISAL Salakas 20.25 6 *e*P **P** **11 04 45.5 -1.3**
SNR=41
IZAR Zarasai 20.44 6 *e*P **P** **11 04 48.0 -0.8**
IZAR Zarasai 20.44 6 *e*P **P** **11 04 48.0 -0.8**
SNR=41
LDF La Druitiere 21.11 315 *e*P **P** **11 04 57.7 +1.5**
comp=Z,7.8nm,0.6s,mb3.9
LDF La Druitiere 21.11 315 *e*P **P** **11 04 57.7 +1.5**
LDF pmax pmax
comp=Z,4.0nm,0.6s,mb3.9
LDF La Druitiere 21.11 315 *e*P **P** **11 04 57.7 +1.5**
comp=Z,3.9nm,0.6s,mb3.9
LDF La Druitiere 21.11 315 *e*P **P** **11 04 57.7 +1.5**
comp=Z,3.9nm,0.6s,mb3.9
ESDC Sonseca Array 21.23 289 P **P** **11 04 59.7 +2.1**
comp=Z,1.4nm,0.7s,mb3.4,baz=85,slow=11,SNR=8.5
ESDC Sonseca Array 21.23 289 P **P** **11 04 59.7 +2.1**
ESDC Sonseca Array 21.23 289 P **P** **11 04 59.7 +2.1**
FLN La Foliniere 21.40 315 *e*P **P** **11 05 00.5 +1.2**
comp=Z,14nm,0.7s,mb4.1
FLN La Foliniere 21.40 315 *e*P **P** **11 05 00.5 +1.2**
FLN pmax pmax
comp=Z,7.0nm,0.7s,mb4.1
FLN La Foliniere 21.40 315 *e*P **P** **11 05 00.5 +1.2**
comp=Z,7.1nm,0.7s,mb4.1
FLN La Foliniere 21.40 315 *e*P **P** **11 05 00.5 +1.2**
comp=Z,7.1nm,0.7s,mb4.1
GRR Gorron 21.44 314 *e*P **P** **11 04 59.9 +0.2**
GRR Gorron 21.44 314 *e*P **P** **11 04 59.9 +0.2**
OBN Obninsk 21.95 22 ⇑*e*P **P** **11 05 05.2 +0.2**
OBN pmax pmax
comp=Z,7.0nm,0.8s,mb4.1
OBN Obninsk 21.95 22 *e*P **P** **11 05 05.2 +0.2**
comp=Z,7.0nm,0.8s,mb4.1
SGMF Saint Gilles 22.39 312 *e*P **P** **11 05 10.0 +0.2**
SGMF Saint Gilles 22.39 312 *e*P **P** **11 05 10.0 +0.2**
MDT Midelt 22.45 271 P **P** **11 05 14.0 +3.4**
comp=Z,1.5nm,0.8s,mb3.5,baz=111,slow=4.1,SNR=3.0
QUIF Quistinic 22.62 311 *e*P **P** **11 05 12.5 +0.3**
QUIF Quistinic 22.62 311 *e*P **P** **11 05 12.5 +0.3**
ROSF Rostrenen 22.86 312 *e*P **P** **11 05 15.2 +0.5**
comp=Z,18nm,0.9s,mb4.2
ROSF Rostrenen 22.86 312 *e*P **P** **11 05 15.2 +0.5**
ROSF pmax pmax
comp=Z,9.0nm,0.9s,mb4.2
ROSF Rostrenen 22.86 312 *e*P **P** **11 05 15.2 +0.5**
comp=Z,9.1nm,0.9s,mb4.2
ROSF Rostrenen 22.86 312 *e*P **P** **11 05 15.2 +0.5**
comp=Z,9.1nm,0.9s,mb4.2
HFS Hagfors 25.29 350 P **P** **11 05 38.7 +1.5**
comp=Z,1.3nm,0.4s,mb3.8,baz=153,slow=10.0,SNR=8.1
HFS Hagfors 25.29 350 P **P** **11 05 38.7 +1.5**
HFS pmax pmax
comp=Z,1.0nm,0.4s
HFS Hagfors 25.29 350 P **P** **11 05 38.7 +1.5**
comp=Z,1.0nm,0.4s,mb3.7
FINES FINESS Array B 26.08 4 P **P** **11 05 44.6 +0.3**
comp=Z,1.4nm,0.6s,mb3.6,baz=170,slow=11,SNR=5.5
FINES FINESS Array B 26.08 4 P **P** **11 05 44.7 +0.4**
FINES pmax pmax
comp=Z,1.0nm,0.6s
FINES FINESS Array B 26.08 4 P **P** **11 05 44.7 +0.4**
comp=Z,1.0nm,0.6s,mb3.5
EKA Eskdalemuir Ar 26.47 326 P **P** **11 05 51.1 +3.2**
comp=Z,2.1nm,0.6s,mb3.9,baz=125,slow=9.2,SNR=9.0
EKA Eskdalemuir Ar 26.47 326 P **P** **11 05 51.2 +3.3**
EKA pmax pmax
comp=Z,2.0nm,0.6s
NB2 NORSAR Subarra 26.54 348 P **P** **11 05 50.9 +2.4**
comp=Z,1.2nm,0.7s,mb3.5,baz=162,slow=10
NB2 NORSAR Subarra 26.54 348 P **P** **11 05 50.9 +2.4**
comp=Z,1.2nm,0.7s,mb3.5,baz=162,slow=9.9,SNR=4.7
NOA NORSAR Array B 26.54 348 P **P** **11 05 51.5 +3.0**
comp=Z,0.8nm,0.6s,mb3.5,baz=160,slow=10.0,SNR=5.9
NOA NORSAR Array B 26.54 348 P **P** **11 05 51.5 +3.0**
NOA pmax pmax
comp=Z,1.0nm,0.6s
KAF Kangasniemi 26.76 4 *e*P **P** **11 05 46.5 -4.0**
KAF pmax pmax
comp=Z,2.0nm,0.6s,mb3.8
KAF Kangasniemi 26.76 4 *e*p **P** **11 05 46.5 -4.0**
comp=Z,1.5nm,0.6s,mb3.7
TORD Torodi Ar. Bea 29.02 225 P **P** **11 06 13.4 +2.4**
comp=Z,0.5nm,0.5s,mb3.5,baz=37,slow=9.8,SNR=15
TORD Torodi Ar. Bea 29.02 225 P **P** **11 06 13.4 +2.4**
AKTK Aktyubinsk 29.74 49 P **P** **11 06 16.2 -0.9**
AKTK Aktyubinsk 29.74 49 P **P** **11 06 16.2 -0.9**
comp=Z,1.0nm,0.5s,mb3.8
AKTO Aktyubinsk 29.74 49 P **P** **11 06 16.2 -0.9**
comp=Z,1.2nm,0.5s,mb3.9,baz=262,slow=11,SNR=5.7
AKTO Aktyubinsk 29.74 49 P **P** **11 06 16.2 -0.9**
AKTO pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
ARU Arti 32.19 38 *e*P **P** **11 06 37.7 -0.9**
ARU pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
ARU Arti 32.19 38 *e*P **P** **11 06 37.7 -0.9**
comp=Z,3.0nm,0.6s,mb4.3
ARU Arti 32.19 38 *e*P **P** **11 06 37.7 -0.9**
comp=Z,3.0nm,0.6s,mb4.3
ARCES ARCESS Array B 34.14 2 P **P** **11 06 55.8 +0.3**
comp=Z,0.6nm,0.3s,mb4.0,baz=187,slow=9.3,SNR=9.7
ARCES ARCESS Array B 34.14 2 P **P** **11 06 55.8 +0.3**
ARCES pmax pmax
comp=Z,1.0nm,0.3s
ARCES ARCESS Array B 34.14 2 P **P** **11 06 55.8 +0.3**
comp=Z,1.0nm,0.3s,mb4.2
BVAR Borovoye Array 37.80 47 P **P** **11 07 26.3 -0.6**
comp=Z,0.9nm,0.6s,mb3.7,baz=264,slow=5.3,SNR=7.1
BVAR Borovoye Array 37.80 47 P **P** **11 07 26.3 -0.6**
BVAR pmax pmax
comp=Z,1.0nm,0.6s
BVAR Borovoye Array 37.80 47 P **P** **11 07 26.3 -0.6**
comp=Z,1.0nm,0.6s,mb3.7
KURK Kurchatov 42.76 51 P **P** **11 08 07.0 -1.0**
comp=Z,1.4nm,0.4s,mb4.0,baz=275,slow=8.7,SNR=9.6
KURK Kurchatov 42.76 51 *e*P **P** **11 08 08.1 +0.1**
KURK pmax pmax
comp=Z,2.0nm,0.7s,mb4.0
KURK Kurchatov 42.76 51 *e*P **P** **11 08 08.1 +0.1**
comp=Z,1.8nm,0.7s,mb3.9
KURK Kurchatov 42.76 51 *e*P **P** **11 08 08.1 +0.1**
comp=Z,2.0nm,0.7s,mb4.0
SPITS Spitsbergen Ar 42.87 358 P **P** **11 08 08.4 -0.1**
comp=Z,2.8nm,0.7s,mb4.1,baz=137,slow=15,SNR=3.1
SPITS Spitsbergen Ar 42.87 358 P **P** **11 08 08.4 -0.1**
SPITS pmax pmax
comp=Z,3.0nm,0.7s
SPITS Spitsbergen Ar 42.87 358 P **P** **11 08 08.4 -0.1**
comp=Z,3.0nm,0.7s,mb4.1
MK31 Makanchi Array 45.51 56 *e*P **P** **11 08 29.9 -0.2**
MK31 Makanchi Array 45.51 56 *e*P **P** **11 08 29.9 -0.2**
MKAR Makanchi Array 45.51 56 P **P** **11 08 29.8 -0.3**
comp=Z,3.0nm,0.6s,mb4.4,baz=274,slow=7.5,SNR=28
MKAR Makanchi Array 45.51 56 P **P** **11 08 29.8 -0.3**
MKAR pmax pmax
comp=Z,3.0nm,0.6s
ZALV Zalesovo Beam 46.44 46 P **P** **11 08 36.7 -0.6**
comp=Z,1.3nm,0.3s,mb4.3,baz=271,slow=11,SNR=6.2
ZALV Zalesovo Beam 46.44 46 P **P** **11 08 36.7 -0.6**
ZALV pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
ZALV Zalesovo Beam 46.44 46 P **P** **11 08 36.7 -0.6**
ZALV Zalesovo Beam 46.44 46 P **P** **11 08 36.7 -0.6**
comp=Z,1.0nm,0.3s,mb4.2
SONM Songino Array 61.05 50 P **P** **11 10 25.0 +0.9**
comp=Z,0.8nm,0.6s,mb4.1,baz=282,slow=8.2,SNR=7.3
SONM Songino Array 61.05 50 P **P** **11 10 25.0 +0.9**
SONM pmax pmax
comp=Z,1.0nm,0.6s
SONM Songino Array 61.05 50 P **P** **11 10 25.0 +0.9**
comp=Z,1.0nm,0.6s,mb4.1
KSRS Korea Array 79.89 51 P **P** **11 12 20.2 +1.1**
comp=Z,0.7nm,0.5s,mb3.9,baz=294,slow=4.8,SNR=3.9
KSRS Korea Array 79.89 51 P **P** **11 12 20.2 +1.1**
KSRS pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
KSRS Korea Array 79.89 51 P **P** **11 12 20.2 +1.1**
comp=Z,1.0nm,0.5s,mb4.0
ASAR Alice Springs 120.37 99 PKP PKPdf **11 19 02.8 +1.3**
comp=Z,0.1nm,0.6s,baz=285,slow=18,SNR=3.0

IDC 29 11:11:32.5±1.4, 10°.56N×91°.39E, h0km, mb3.8/9, mb1 3.9/9, mb1mx3.7/21, mbtmp3.8/9, Error ellipse: s-maj=70.1km s-min=19.0km az=57.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VIS	**Vishakhapatnam**	**10.57**	**313**	*e*PKP	Pn	11 14 06.2	+0.8
VIS				AMb	AMB	11 14 08.2	
comp=Z,30nm,0.8s							
MKAR	**Makanchi Array**	**36.93**	**350**	P	P	11 18 43.2	+0.2
comp=Z,1.6nm,0.7s,baz=178,slow=8.5,SNR=12							
SONM	**Songino Array**	**39.24**	**16**	P	P	11 19 02.3	-0.3
comp=Z,0.3nm,0.5s,baz=198,slow=9.2,SNR=3.2							
KURK	**Kurchatov**	**41.39**	**348**	P	P	11 19 20.0	-0.4
comp=Z,0.3nm,0.3s,baz=165,slow=7.9,SNR=4.4							
ZALV	**Zalesovo Beam**	**43.59**	**354**	P	P	11 19 37.9	-0.3
comp=Z,1.1nm,0.5s,baz=177,slow=12,SNR=5.5							
WRA	**Warramunga Arr**	**52.02**	**126**	P	P	11 20 43.8	-0.4
comp=Z,0.3nm,0.5s,baz=306,slow=8.6,SNR=11							
ASAR	**Alice Springs**	**53.71**	**130**	P	P	11 20 57.0	+0.4
comp=Z,0.4nm,0.7s,baz=304,slow=7.1,SNR=8.0							
FINES	**FINESS Array B**	**69.08**	**332**	P	P	11 22 39.9	-0.2
comp=Z,1.5nm,0.7s,baz=114,slow=9.0,SNR=6.9							
ARCES	**ARCESS Array B**	**71.84**	**340**	P	P	11 22 57.8	+1.1
comp=Z,0.5nm,0.5s,baz=76,slow=5.6,SNR=6.1							
NOA	**NORSAR Array B**	**76.07**	**330**	P	P	11 23 20.8	-0.9
comp=Z,0.6nm,0.8s,baz=95,slow=5.6,SNR=3.5							

IDC 29 11:12:47.9±1.4, 10°.91N×91°.80E, h0km, mb4.0/9, mb1 4.1/9, mb1mx3.8/22, mbtmp4.0/9, Error ellipse: s-maj=72.1km s-min=15.8km az=61.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VIS	**Vishakhapatnam**	**10.64**	**310**	*e*S	Pn	11 15 22.1	+0.4
MKAR	**Makanchi Array**	**36.66**	**349**	P	P	11 19 56.8	+0.6
3.0nm,0.8s,baz=173,slow=8.2,SNR=14							
SONM	**Songino Array**	**38.80**	**16**	P	P	11 20 14.5	+0.2
1.0nm,0.5s,baz=198,slow=9.1,SNR=6.1							
KURK	**Kurchatov**	**41.14**	**347**	P	P	11 20 32.9	-0.8
4.0nm,1.1s,baz=165,slow=7.7,SNR=5.3							
ZALV	**Zalesovo Beam**	**43.29**	**354**	P	P	11 20 50.5	-0.7
1.6nm,0.4s,baz=177,slow=8.6,SNR=8.0							
FITZ	**Fitzroy Crossi**	**44.12**	**130**	P	P	11 20 57.9	-0.4
2.3nm,0.6s,baz=332,slow=1.6,SNR=6.8							
WRA	**Warramunga Arr**	**51.90**	**126**	P	P	11 21 58.4	-0.2
0.3nm,0.3s,baz=300,slow=10.0,SNR=11							
WRA				PcP	PcP	11 23 11.1	-0.4
0.5nm,0.7s,baz=318,slow=3.0,SNR=7.7							
ASAR	**Alice Springs**	**53.62**	**130**	P	P	11 22 11.8	+0.4
1.1nm,0.7s,baz=307,slow=6.4,SNR=6.7							
ASAR				PcP	PcP	11 23 18.3	+0.4
0.6nm,0.7s,baz=308,slow=4.1,SNR=4.2							
FINES	**FINESS Array B**	**68.97**	**332**	P	P	11 23 54.6	-0.1
1.2nm,0.8s,baz=132,slow=13,SNR=4.0							
ARCES	**ARCESS Array B**	**71.65**	**340**	P	P	11 24 11.2	+0.2
1.1nm,0.6s,baz=91,slow=6.3,SNR=6.5							

IDC 29 11:16:40.4±3.2, 10°.80N×91°.82E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.6/20, mbtmp3.8/5, Error ellipse: s-maj=134.4km s-min=21.3km az=64.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.77**	**349**	P	P	11 23 50.0	+0.4
1.3nm,0.8s,baz=184,slow=9.5,SNR=6.9							
SONM	**Songino Array**	**38.90**	**16**	P	P	11 24 07.9	+0.3
0.5nm,0.5s,baz=201,slow=7.9,SNR=3.9							
ZALV	**Zalesovo Beam**	**43.39**	**354**	P	P	11 24 43.9	-0.7
0.9nm,0.5s,baz=165,slow=12,SNR=5.1							
WRA	**Warramunga Arr**	**51.82**	**126**	P	P	11 25 50.3	-0.3
0.6nm,0.5s,baz=307,slow=8.4,SNR=11							
ASAR	**Alice Springs**	**53.54**	**130**	P	P	11 26 03.5	+0.2
1.8nm,0.8s,baz=306,slow=6.7,SNR=19							

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*ATH **29** 11:29:13.8, 37°.92N×21°.49E, h24km±1km, MD3.2/14*
*NEIC **29** 11:29:13.8, 37°.92N×21°.49E, h24km, MD3.2(ATH), After ATH.*
*ISCJB **29** 11:29:13.5±0.6, 37°.92N±0°.02×21°.45E±0°.03, h6km±4km, Error ellipse: s-maj=3.9km s-min=3.5km az=138.6*
*CSEM **29** 11:29:14.6±0.2, 37°.92N×21°.49E, h20km, MD3.2, Error ellipse: s-maj=4.9km s-min=4.1km az=53.0*
*THE **29** 11:29:14.4, 37°.94N×21°.49E, h4km±1km, ML2.9/7, Error ellipse: s-maj=1.2km s-min=0.6km az=214.0*

ISC 29 11:29:14.3±0.4, 37°.92N±0°.02×21°.46E±0°.03, h15km±3km, n63, σ1°.07/100, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.14**	**2**	*e*Pb	**Pg**	**11 29 18.7**	**+0.6**
RLS				*e*Sb	**Sg**	**11 29 22.2**	**+1.5**
RLS	**Riolos of Patr**	**0.14**	**2**	*e*PB	**Pg**	**11 29 18.7**	**+0.6**
RLS				*e*SB	**Sg**	**11 29 22.2**	**+1.5**
RLS	**Riolos of Patr**	**0.14**	**2**	*e*Pb	**Pg**	**11 29 18.7**	**+0.6**
RLS				*e*Sb	**Sg**	**11 29 22.2**	**+1.5**
UPR	**University Cam**	**0.45**	**35**	*e*PB	**Pg**	**11 29 23.6**	**+0.3**
UPR				*e*SB	**Sg**	**11 29 29.8**	**+0.5**
UPR	**University Cam**	**0.45**	**35**	*e*Pb	**Pg**	**11 29 23.6**	**+0.3**
UPR				*e*Sb	**Sg**	**11 29 29.8**	**+0.5**
LAKA	**Lakka**	**0.52**	**51**	P	**Pg**	**11 29 23.9**	**-0.7**
LAKA				S	**Sg**	**11 29 31.4**	**-0.2**
LAKA	**Lakka**	**0.52**	**51**	P	**Pg**	**11 29 23.9**	**-0.7**
LAKA				S	**Sg**	**11 29 31.4**	**-0.2**
EFP	**Efpalio**	**0.62**	**34**	*e*PN	**Pn**	**11 29 25.7**	**-2.9**
EFP				*e*SN	**Sg**	**11 29 34.8**	**+0.1**
TRIZ	**Trizonia**	**0.66**	**47**	P	**Pg**	**11 29 26.2**	**-1.0**
TRIZ				S	**Sg**	**11 29 35.8**	**-0.2**
TRIZ	**Trizonia**	**0.66**	**47**	P	**Pg**	**11 29 26.2**	**-1.0**
TRIZ				S	**Sg**	**11 29 35.8**	**-0.2**
GUR	**Goura**	**0.70**	**88**	P	**Pg**	**11 29 27.3**	**-0.7**
GUR	**Goura**	**0.70**	**88**	*e*PN	**Pn**	**11 29 26.8**	**-2.9**
GUR				*e*SN	**Sg**	**11 29 37.1**	**-0.1**
GUR	**Goura**	**0.70**	**88**	*e*Pn	**Pn**	**11 29 26.8**	**-2.9**
GUR	**Goura**	**0.70**	**88**	P	**Pg**	**11 29 27.3**	**-0.7**
GUR				*e*Sn	**Sg**	**11 29 37.1**	**-0.1**
KALE	**Kalithea**	**0.72**	**48**	P	**Pg**	**11 29 27.2**	**-1.1**
KALE	**Kalithea**	**0.72**	**48**	P	**Pg**	**11 29 27.2**	**-1.1**
VLS	**Valsamata**	**0.73**	**291**	*e*Pn	**Pn**	**11 29 28.0**	**-2.2**
VLS				*e*Sn	**Sn**	**11 29 40.2**	**-1.0**
VLS	**Valsamata**	**0.73**	**291**	P	**Pg**	**11 29 27.9**	**-0.8**
VLS				S	**Sg**	**11 29 39.7**	**+1.3**
VLS	**Valsamata**	**0.73**	**291**	*e*PN	**Pn**	**11 29 28.0**	**-2.2**
VLS				*e*SN	**Sn**	**11 29 40.2**	**-1.0**
VLS	**Valsamata**	**0.73**	**291**	P	**Pg**	**11 29 27.9**	**-0.8**
VLS				S	**Sg**	**11 29 39.7**	**+1.3**
VLS				*e*Sn	**Sn**	**11 29 40.2**	**-1.0**
ITM	**Ithomi**	**0.82**	**153**	*e*Pn	**Pg**	**11 29 30.1**	**-0.2**
ITM	**Ithomi**	**0.82**	**153**	P	**Pg**	**11 29 30.1**	**-0.2**
ITM				S

LKD2	**Lefkada island**	**1.08**	**324**	P	**Pb**	**11 29 33.9**	**-0.8**
LKD2				S	**Sb**	**11 29 49.9**	**+1.3**
LKD2	**Lefkada island**	**1.08**	**324**	P	**Pb**	**11 29 33.9**	**-0.8**
LKD2				S	**Sb**	**11 29 49.9**	**+1.3**
LTK	**Loutraki**	**1.20**	**84**	P	**Pn**	**11 29 35.6**	**-0.9**
LTK	**Loutraki**	**1.20**	**84**	*e*PN	**Pn**	**11 29 35.7**	**-0.8**
LTK	**Loutraki**	**1.20**	**84**	*e*Pn	**Pn**	**11 29 35.7**	**-0.8**
AGG	**Agios Georgios**	**1.30**	**31**	*e*Pn	**Pn**	**11 29 38.2**	**+0.2**
AGG	**Agios Georgios**	**1.30**	**31**	P	**Pn**	**11 29 38.1**	**+0.1**
AGG				S	**Sb**	**11 29 55.4**	**+0.4**
AGG	**Agios Georgios**	**1.30**	**31**	*e*PN	**Pn**	**11 29 38.2**	**+0.2**
AGG	**Agios Georgios**	**1.30**	**31**	P	**Pn**	**11 29 38.1**	**+0.1**
AGG				S	**Sb**	**11 29 55.4**	**+0.4**
LKR	**Lokris**	**1.42**	**58**	*e*Pn	**Pn**	**11 29 39.7**	**+0.1**
LKR	**Lokris**	**1.42**	**58**	P	**Pn**	**11 29 39.7**	**+0.1**
LKR				S	**Sn**	**11 29 59.6**	**+1.6**
LKR	**Lokris**	**1.42**	**58**	*e*PN	**Pn**	**11 29 39.7**	**+0.1**
LKR	**Lokris**	**1.42**	**58**	P	**Pn**	**11 29 39.7**	**+0.1**
LKR				S	**Sn**	**11 29 59.6**	**+1.6**
ATAL	**Atalanti**	**1.45**	**57**	P	**Pn**	**11 29 39.4**	**-0.7**
ATAL				S	**Sn**	**11 29 59.6**	**+0.7**
ATAL	**Atalanti**	**1.45**	**57**	P	**Pn**	**11 29 39.4**	**-0.7**
ATAL				S	**Sn**	**11 29 59.6**	**+0.7**
DID	**Didima**	**1.47**	**106**	P	**Pn**	**11 29 40.8**	**+0.5**
DID				S	**Sn**	**11 30 01.1**	**+1.9**
DID	**Didima**	**1.47**	**106**	*e*PN	**Pn**	**11 29 40.4**	**+0.1**
DID	**Didima**	**1.47**	**106**	*e*Pn	**Pn**	**11 29 40.4**	**+0.1**
DID	**Didima**	**1.47**	**106**	P	**Pn**	**11 29 40.8**	**+0.5**
DID				S	**Sn**	**11 30 01.1**	**+1.9**
THL	**Klokotos Trika**	**1.70**	**15**	P	**Pn**	**11 29 44.4**	**+0.9**
THL				S	**Sn**	**11 30 06.7**	**+1.6**
THL	**Klokotos Trika**	**1.70**	**15**	*e*PN	**Pn**	**11 29 44.4**	**+0.9**
THL	**Klokotos Trika**	**1.70**	**15**	P	**Pn**	**11 29 44.4**	**+0.9**
THL				S	**Sn**	**11 30 06.7**	**+1.6**
IGT	**Igoumenitsa**	**1.84**	**332**	P	**Pn**	**11 29 46.6**	**+1.2**
IGT	**Igoumenitsa**	**1.84**	**332**	P	**Pn**	**11 29 46.6**	**+1.2**
KEK	**Kerkira**	**2.21**	**325**	P	**Pn**	**11 29 50.8**	**+0.2**
KEK	**Kerkira**	**2.21**	**325**	P	**Pn**	**11 29 50.8**	**+0.2**

CSEM ***29*** *11:42:54.9±0.1, 40°.62N×27°.58E, h12km, MD2.5, Error ellipse: s-maj=1.8km s-min=1.5km az=18.0*
DDA ***29*** *11:42:54.4, 40°.61N×27°.61E, h7km±4km, Md2.5*
ISK ***29*** *11:42:54.6, 40°.60N×27°.57E, h15km, MD2.2*
ISCJB ***29*** *11:42:54.7±0.6, 40°.62N±0°.04×27°.62E±0°.04, h1km±14km, Error ellipse: s-maj=6.5km s-min=5.7km az=178.5*

ISC 29 11:42:55.1±0.6, 40°.63N±0°.04×27°.60E±0°.05, h12km±12km, n16, σ0°31/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MFT	**Murefte**	**0.29**	**304**	*e*PG	**Pg**	**11 43 01.0**	**0.0**
MFT				*e*SG	**Sg**	**11 43 05.4**	**+0.4**
MFT	**Murefte**	**0.29**	**304**	*e*Pg	**Pg**	**11 43 01.0**	**0.0**
MFT				*e*Sg	**Sg**	**11 43 05.4**	**+0.4**
SART	**Tekirdag**	**0.32**	**281**	*i* P	**Pg**	**11 43 01.6**	**-0.1**
SART				*i* S	**Sg**	**11 43 06.3**	**+0.2**
SART	**Tekirdag**	**0.32**	**281**	*i* P	**Pg**	**11 43 01.6**	**-0.1**
SART				*i* S	**Sg**	**11 43 06.3**	**+0.3**
KRBG	**Karabiga-Canak**	**0.33**	**225**	*e*PG	**Pg**	**11 43 01.3**	**-0.4**
KRBG	**Karabiga-Canak**	**0.33**	**225**	*e*Pg	**Pg**	**11 43 01.3**	**-0.4**
RKY	**Sarkoy-Tekirda**	**0.33**	**281**	*e*PG	**Pg**	**11 43 01.3**	**-0.4**
RKY	**Sarkoy-Tekirda**	**0.33**	**281**	*e*Pg	**Pg**	**11 43 01.3**	**-0.4**
ELBA	**Catalca**	**0.82**	**50**	*i* P	**Pg**	**11 43 11.0**	**0.0**
ELBA				*i* S	**Sg**	**11 43 21.6**	**-0.1**
ELBA	**Catalca**	**0.82**	**50**	*i* P	**Pg**	**11 43 11.0**	**0.0**
ELBA				*i* S	**Sg**	**11 43 21.6**	**-0.1**
BALY	**Balya**	**0.88**	**179**	*i* P	**Pg**	**11 43 11.6**	**-0.6**
BALY				*i* S	**Sg**	**11 43 24.3**	**+0.6**
BALY	**Balya**	**0.88**	**179**	*i* P	**Pg**	**11 43 11.6**	**-0.6**
BALY				*i* S	**Sg**	**11 43 24.3**	**+0.6**
ARMT	**Armutlu**	**0.96**	**93**	*e*PG	**Pg**	**11 43 13.9**	**+0.2**
ARMT	**Armutlu**	**0.96**	**93**	*e*Pg	**Pg**	**11 43 13.9**	**+0.2**
DURS	**Dursunbey**	**1.23**	**146**	*i* P	**Pn**	**11 43 18.2**	**+0.2**
DURS				*i* S	**Sb**	**11 43 33.9**	**0.0**
DURS	**Dursunbey**	**1.23**	**146**	*i* P	**Pn**	**11 43 18.2**	**+0.2**
DURS				*i* S	**Sb**	**11 43 33.9**	**0.0**

KRSC 29 11:44:28.2±0.8, 55°.35N×166°.23E, h19km±19km, ML3.8, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.21**	**225**	*i* P	Pg	11 44 35.0	+1.7
BKI				*i* S	Sg	11 44 40.6	+3.8
KBTR	**Krutoberegovo**	**2.11**	**295**	*e*P	Pn	11 45 01.9	-0.5
KBTR				S	Sn	11 45 26.9	-1.2
MKZ	**Mys Kozlova**	**2.71**	**255**	*e*P	Pn	11 45 12.3	+1.6
MKZ				*e*S	Sn	11 45 43.7	+0.7
BZGR	**Bezymyannyi-Gr**	**3.19**	**283**	P	Pn	11 45 20.4	+3.1
BZGR				S	Sn	11 45 58.5	+3.8
KLY	**Klyuchi**	**3.29**	**289**	S	Sn	11 45 58.2	+1.0
KRSR	**Krestovskiy**	**3.31**	**288**	P	Pn	11 45 21.4	+2.4
KRSR				S	Sn	11 46 00.0	+2.2
KMNR	**Kamenistaya**	**3.43**	**279**	P	Pn	11 45 23.2	+2.7
KMNR				S	Sn	11 46 03.8	+3.2
KPT	**Kopyto**	**3.46**	**283**	P	Pn	11 45 23.9	+3.0
KPT				S	Sn	11 46 04.6	+3.3
KOZ	**Kozyrevsk**	**3.67**	**284**	P	Pn	11 45 26.8	+3.0
KOZ				S	Sn	11 46 09.8	+3.4
SRDR	**Sredinnyy**	**3.80**	**287**	P	Pn	11 45 28.1	+2.5
SRDR				S	Sn	11 46 11.8	+2.1
SPN	**Mys Shipunski**	**4.29**	**241**	P	Pn	11 45 34.5	+2.2
SPN				S	Sn	11 46 23.0	+1.3
NLC	**Nalytchevo**	**4.59**	**244**	*e*P	Pn	11 45 39.1	+2.6
NLC				*e*S	Sn	11 46 31.1	+1.9
AVH	**Avacha**	**4.86**	**248**	*e*P	Pn	11 45 43.9	+3.7
AVH				*e*S	Sn	11 46 40.3	+4.5
PET	**Petropavlovsk**	**5.02**	**245**	P	Pn	11 45 45.9	+3.5
PET				*e*S	Sn	11 46 43.0	+3.1
GNL	**Ganaly**	**5.11**	**254**	*e*P	Pn	11 45 48.1	+4.6
GNL				S	Sn	11 46 46.0	+4.1
MIPR	**Malaya Ipel'ka**	**6.40**	**245**	P	Pn	11 46 04.9	+3.6

IDC 29 11:51:57.1±2.2, 6°.20S×147°.50E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.6/16, mbtmp3.6/5, ML3.6/1, MS4.2/1, Ms1 4.2/1, ms1mx2.9/23, Error ellipse: s-maj=69.2km s-min=24.8km az=108.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.71**	**222**	P	Pn	11 56 17.9	+0.3
	0.2nm,0.3s,baz=50,slow=12,SNR=27						
WRA				PcP	PcP	12 00 45.8	-0.1
	0.0nm,0.3s,baz=25,slow=1.9,SNR=8.1						
ASAR	**Alice Springs**	**21.74**	**216**	P	P	11 56 50.9	+0.6
	0.9nm,0.3s,baz=52,slow=8.6,SNR=22						
FITZ	**Fitzroy Crossi**	**24.39**	**239**	P	P	11 57 17.9	+0.6
	2.4nm,0.5s,baz=74,slow=8.9,SNR=31						
AFI	**Afiamalu**	**40.77**	**104**	LR	LR	12 11 46.5	
	comp=Z,332nm,21.4s,baz=174,slow=29						
SONM	**Songino Array**	**64.82**	**331**	P	P	12 02 37.0	-0.8
	0.2nm,0.3s,baz=108,slow=9.3,SNR=2.2						
MKAR	**Makanchi Array**	**77.97**	**320**	P	P	12 03 57.4	+0.2
	0.1nm,0.3s,baz=94,slow=9.6,SNR=4.7						

ATH ***29*** *12:00:27.6, 36°.00N×21°.77E, h17km±3km, MD3.5/10*
CSEM ***29*** *12:00:29.0±0.8, 36°.02N×21°.90E, h2km, MD3.5, Error ellipse: s-maj=20.1km s-min=6.5km az=59.0*
THE ***29*** *12:00:30.1, 36°.07N×21°.92E, h0km±5km, Error ellipse: s-maj=11.4km s-min=2.0km az=241.0*

ISC 29 12:00:28.2±1.6, 36°.00N±0°.06×21°.8E±0°.1, h4km±7km, n33, σ1°32/51, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.90**	**357**	P	**Pg**	**12 00 44.6**	**-0.8**
PYL				S	**Sg**	**12 00 58.3**	**+1.3**
PYL	**PYLOS**	**0.90**	**357**	*e*PN	**Pn**	**12 00 44.7**	**-2.8**
PYL				*e*SN	**Sn**	**12 00 57.4**	**-3.5**
PYL	**PYLOS**	**0.90**	**357**	P	**Pg**	**12 00 44.6**	**-0.8**
PYL				*e*Sn	**Sn**	**12 00 57.4**	**-3.5**
PYL				S	**Sg**	**12 00 58.3**	**+1.3**
KYTH	**Kithira**	**1.04**	**74**	*e*PN	**Pn**	**12 00 48.1**	**-1.5**
KYTH	**Kithira**	**1.04**	**74**	*e*Pn	**Pn**	**12 00 48.1**	**-1.5**
VLI	**Veliai**	**1.17**	**52**	*e*PN	**Pn**	**12 00 49.7**	**-1.6**
VLI	**Veliai**	**1.17**	**52**	*e*Pn	**Pn**	**12 00 49.7**	**-1.6**
ITM	**Ithomi**	**1.18**	**5**	P	**Pg**	**12 00 49.8**	**-1.1**
ITM				S	**Sg**	**12 01 06.6**	**+0.4**
ITM	**Ithomi**	**1.18**	**5**	*e*PN	**Pn**	**12 00 50.0**	**-1.5**
ITM				*e*SN	**Sn**	**12 01 05.8**	**-2.2**
ITM	**Ithomi**	**1.18**	**5**	P	**Pg**	**12 00 49.8**	**-1.1**
ITM				*e*Sn	**Sn**	**12 01 05.8**	**-2.2**
ITM				S	**Sg**	**12 01 06.6**	**+0.4**
VLX	**Vlachokerasia**	**1.45**	**19**	P	**Pn**	**12 00 54.5**	**-0.6**
VLX				S	**Sn**	**12 01 15.7**	**+1.2**
VLX	**Vlachokerasia**	**1.45**	**19**	*e*PN	**Pn**	**12 00 54.4**	**-0.7**
VLX				*e*SN	**Sn**	**12 01 14.5**	**0.0**
VLX	**Vlachokerasia**	**1.45**	**19**	P	**Pn**	**12 00 54.5**	**-0.6**
VLX				*e*Sn	**Sn**	**12 01 14.5**	**0.0**
VLX				S	**Sn**	**12 01 15.7**	**+1.2**
KARN	**Karanos**	**1.83**	**108**	P	**Pn**	**12 01 00.7**	**+0.3**
KARN				S	**Sn**	**12 01 25.1**	**+1.2**
KARN	**Karanos**	**1.83**	**108**	*e*PN	**Pn**	**12 01 00.4**	**+0.1**
KARN	**Karanos**	**1.83**	**108**	*e*Pn	**Pn**	**12 01 00.4**	**+0.1**
KARN	**Karanos**	**1.83**	**108**	P	**Pn**	**12 01 00.7**	**+0.3**
KARN				S	**Sn**	**12 01 25.1**	**+1.2**
DID	**Didima**	**1.90**	**37**	P	**Pn**	**12 01 02.0**	**+0.7**
DID				S	**Sn**	**12 01 24.8**	**-0.9**
DID	**Didima**	**1.90**	**37**	*e*PN	**Pn**	**12 01 02.3**	**+1.0**
DID	**Didima**	**1.90**	**37**	P	**Pn**	**12 01 02.0**	**+0.7**
DID	**Didima**	**1.90**	**37**	*e*Pn	**Pn**	**12 01 02.3**	**+1.0**
DID				S	**Sn**	**12 01 24.8**	**-0.9**
GUR	**Goura**	**1.98**	**13**	*e*PN	**Pn**	**12 01 03.5**	**+1.0**
GUR	**Goura**	**1.98**	**13**	*e*Pn	**Pn**	**12 01 03.5**	**+1.0**
LTK	**Loutraki**	**2.23**	**25**	P	**Pn**	**12 01 07.5**	**+1.7**
LTK	**Loutraki**	**2.23**	**25**	*e*PN	**Pn**	**12 01 06.4**	**+0.6**
LTK	**Loutraki**	**2.23**	**25**	*e*Pn	**Pn**	**12 01 06.4**	**+0.6**
LTK	**Loutraki**	**2.23**	**25**	P	**Pn**	**12 01 07.5**	**+1.7**
LAKA	**Lakka**	**2.24**	**4**	P	**Pn**	**12 01 07.2**	**+1.2**
LAKA				S	**Sn**	**12 01 35.9**	**+1.8**
LAKA	**Lakka**	**2.24**	**4**	P	**Pn**	**12 01 07.2**	**+1.2**
LAKA				S	**Sn**	**12 01 35.9**	**+1.8**
EFP	**Efpalio**	**2.42**	**2**	*e*PN	**Pn**	**12 01 09.7**	**+1.1**
EFP	**Efpalio**	**2.42**	**2**	*e*Pn	**Pn**	**12 01 09.7**	**+1.1**
AGG	**Agios Georgios**	**3.05**	**8**	P	**Pn**	**12 01 18.9**	**+1.8**
AGG	**Agios Georgios**	**3.05**	**8**	P	**Pn**	**12 01 18.9**	**+1.8**

IDC ***29*** *12:02:17.0±0.7, 52°.43N×173°.53W, h0km, mb3.9/10, mb1 4.1/12, mb1mx3.8/30, mbtmp3.9/12, ML3.4/2, MS3.3/4, Ms1 3.3/4, ms1mx2.9/41, Error ellipse: s-maj=27.2km s-min=12.6km az=174.0*
BJI ***29*** *12:02:19.5, 52°.75N×173°.84W, h10km, mB4.7/7, mb4.5/10, Ms4.2/5, Ms7 4.0/4*
ISCJB ***29*** *12:02:20.2±1.9, 52°.1N±0°.1×173°.46W±0°.07, h29km±14km, mb4.2/15, MS3.6/6, Error ellipse: s-maj=18.1km s-min=5.6km az=164.1*
NEIC ***29*** *12:02:21.0, 52°.23N×173°.62W, h2km, mb4.1/10, ML3.8(AEIC), After AEIC.*

ISC 29 12:02:22.0±2.0, 52°.2N±0°.1×173°.52W±0°.07, h28km±15km, h14km±1.2km: pP-P, n43, σ1°06/43, mb4.2/15, MS3.6/6, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**1.56**	**269**	*e*Pn	**Pn**	**12 02 47.6**	**-0.3**
GSTR				*e*Sn	**Sn**	**12 03 08.2**	**+1.1**
OKFG	**Magazine Ridge**	**3.64**	**67**	P	**Pn**	**12 03 17.0**	**+0.6**
AMKA	**Amchitka**	**4.52**	**263**	P	**Pn**	**12 03 28.4**	**-0.1**
AMKA				S	**Sn**	**12 04 20.7**	**+0.6**
UNV	**Unalaska Valle**	**4.57**	**65**	P	**Pn**	**12 03 29.8**	**+0.6**
AKGG	**Akutan Green G**	**4.97**	**63**	P	**Pn**	**12 03 33.4**	**-1.4**
AKUT	**Akutan**	**5.07**	**64**	*e*Pn	**Pn**	**12 03 35.1**	**-1.0**
FALS	**False Pass**	**6.61**	**62**	Pn	**Pn**	**12 03 56.4**	**-0.9**
FX1	**Attu Island--F**	**8.16**	**280**	**Pn**	**Pn**	**12 04 15.6**	**-2.9**
	1.9nm,0.3s,baz=253,slow=18,SNR=16						
SDPT	**Sand Point**	**8.37**	**62**	*e*Pn	**Pn**	**12 04 20.8**	**-0.6**
CHGN	**Chignik**	**9.77**	**59**	*e*Pn	**Pn**	**12 04 42.0**	**+1.5**
KDAK	**Kodiak Island**	**13.26**	**57**	Pn	**Pn**	**12 05 24.4**	**-3.7**
	0.2nm,0.3s,baz=211,slow=5.9,SNR=2.0						
KDAK	**Kodiak Island**	**13.26**	**57**	*e*Pn	**Pn**	**12 05 29.5**	**+1.4**
SVW2	**Sparrevohn**	**13.29**	**41**	*e*Pn	**Pn**	**12 05 25.0**	**-3.6**
TTA	**Tatalina**	**14.26**	**34**	*e*Pn	**Pn**	**12 05 40.3**	**-1.5**
	13nm,1.1s						
SEW	**Seward**	**15.53**	**50**	*e*P	**Pn**	**12 05 59.0**	**+0.2**
	2.6nm,0.6s						
PPLA	**Purkeypile**	**15.63**	**38**	*e*P	**Pn**	**12 06 01.1**	**+1.1**
	28nm,1.2s						
TRF	**Thorofare Moun**	**16.66**	**38**	*e*P	**Pn**	**12 06 13.4**	**+0.3**
	12nm,1.1s						
BPAW	**Bear Paw Mtn.**	**16.76**	**36**	*e*P	**Pn**	**12 06 16.2**	**+1.8**
	13nm,1.2s						
MCK	**McKinley**	**17.32**	**38**	*e*P	**Pn**	**12 06 21.3**	**-0.1**
	15nm,1.3s						
PETK	**Petropavlovsk-**	**17.45**	**285**	LR	LR	12 12 24.5	
	comp=Z,32nm,19.9s,baz=303,slow=35						
COLA	**College**	**18.32**	**36**	*e*P	**Pn**	**12 06 33.4**	**-0.3**
	21nm,1.8s						
COLD	**Coldfoot**	**18.96**	**28**	*e*P	**Pn**	**12 06 42.3**	**+0.9**
	8.7nm,1.2s						
PNL	**Peninsula**	**20.36**	**55**	*e*P	**P**	**12 06 56.9**	**+0.9**
	39nm,0.8s						
EGAK	**Eagle**	**20.83**	**40**	*e*P	**P**	**12 07 00.1**	**-0.8**
	34nm,1.4s						
DAWY	**Dawson**	**21.31**	**43**	*e*P	**P**	**12 07 06.7**	**+0.5**
INK	**Inuvik**	**24.96**	**34**	P	**P**	**12 07 40.4**	**-2.2**
	5.7nm,1.1s,mb4.0,baz=251,slow=10,SNR=6.4						
INK				LR	LR	12 18 22.4	
	comp=Z,56nm,20.1s,MS3.1,baz=280,slow=39						
INK	**Inuvik**	**24.96**	**34**	*e*P	**P**	**12 07 44.4**	**+1.8**
	8.7nm,1.1s,mb4.2						
INK				LR	LR	12 18 22.4	
MJAR	**Matsushiro Arr**	**37.13**	**265**	P	**P**	**12 09 30.4**	**+0.4**
	0.9nm,0.8s,mb3.6,baz=66,slow=12,SNR=3.4						
MDJ	**Mudanjiang**	**37.66**	**282**	P	**P**	**12 09 34.0**	**-0.3**
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
MDJ				pmax	pmax		
	comp=Z,62nm,7.0s						
MDJ				LR	LR		
	comp=N,41nm,30.8s,MS3.1						
MDJ				LR	LR		
	comp=E,22nm,27.6s,MS3.1						
NVAR	**Mina Array Bea**	**40.22**	**87**	P	**P**	**12 09 56.5**	**+0.7**
	comp=E,0.7nm,0.9s,mb3.4,baz=294,slow=8.8,SNR=4.3						
KSRS	**Korea Array**	**42.88**	**274**	LR	LR	12 28 29.0	
	comp=E,27nm,18.0s,MS3.2,baz=91,slow=37						
PDAR	**Pinedale Array**	**42.95**	**76**	P	**P**	**12 10 17.9**	**-0.3**
	comp=E,0.5nm,0.5s,mb3.5,baz=297,slow=5.9,SNR=4.9						
HHC	**Hu-ho-hao-te**	**50.59**	**289**	*e*P	**P**	**12 11 17.3**	**-0.7**
HHC				pP	pP	12 11 21.8	-4.8
HHC				sP	sP	12 11 24.3	-5.6
HHC				PcP	PcP	12 12 36.0	+0.7
HHC				PP	PP	12 13 13.5	-0.2
HHC				ScP	ScP	12 16 30.5	+1.4
HHC				PcS	PcS	12 16 31.5	-1.1
HHC				S	**S**	**12 18 29.3**	**-1.2**
HHC				ScS	ScS	12 21 05.0	-1.5
HHC				SS	SS	12 21 58.8	-5.5
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
HHC				pmax	pmax		
	comp=Z,69nm,6.1s						
HHC				LR	LR		
	comp=N,64nm,15.5s,MS4.1						
HHC				LR	LR		
	comp=E,120nm,14.3s,MS4.1						
HHC				LR	LR		
	comp=Z,62nm,16.7s,MS3.7						
TXAR	**Lajitas Array**	**55.31**	**86**	P	**P**	**12 11 52.5**	**-0.4**
	comp=Z,0.9nm,0.6s,mb4.0,baz=285,slow=3.6,SNR=9.2						
SCHQ	**Schefferville**	**57.32**	**41**	LR	LR	12 38 04.8	
	comp=Z,94nm,21.0s,MS3.9,baz=28,slow=38						
KURK	**Kurchatov**	**60.80**	**316**	P	**P**	**12 12 28.8**	**-2.3**
	comp=Z,0.2nm,0.3s,mb3.8,baz=41,slow=7.1,SNR=3.1						
CD2	**Chengdu**	**61.99**	**285**	*e*P	**P**	**12 12 40.0**	**+0.6**
CD2				pP	pP	12 12 44.5	-3.6
CD2				sP	sP	12 12 47.3	-4.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.1						
CD2				pmax	pmax		
	comp=Z,30nm,5.2s						
BVAR	**Borovoye Array**	**62.36**	**322**	P	**P**	**12 12 38.1**	**-3.4**
	comp=Z,0.5nm,0.4s,mb4.0,baz=42,slow=4.5,SNR=3.8						
GYA	**Guiyang**	**63.47**	**280**	P	**P**	**12 12 50.5**	**+1.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb5.0						
KMI	**Kunming**	**66.83**	**281**	P	**P**	**12 13 13.0**	**+1.9**
KMI				pP	pP	12 13 16.3	-3.6
KMI				sP	sP	12 13 17.3	-6.0
KMI				PP	PP	12 15 42.0	+3.8
KMI				S	S	12 22 03.3	+1.6
KMI				SS	SS	12 26 22.3	+2.7
KMI				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.4						
KMI				pmax	pmax		
	comp=Z,66nm,4.9s						
KMI				LR	LR		
	comp=N,87nm,8.4s						
KMI				LR	LR		
	comp=E,57nm,8.4s						
KMI				LR	LR		
	comp=Z,86nm,10.5s,MS4.2						
WRA	**Warramunga Arr**	**84.91**	**228**	P	**P**	**12 14 53.2**	**-0.9**
	comp=Z,0.7nm,0.5s,mb4.1,baz=32,slow=5.6,SNR=17						
FITZ	**Fitzroy Crossi**	**87.57**	**236**	P	**P**	**12 15 07.0**	**-0.3**
	comp=Z,0.8nm,0.4s,mb4.3,baz=0.0,slow=5.1,SNR=9.2						
ASAR	**Alice Springs**	**88.34**	**227**	P	**P**	**12 15 10.7**	**-0.1**
	comp=Z,2.2nm,0.6s,mb4.6,baz=20,slow=5.2,SNR=54						

MAN 29 12:14:13, 7°.07N×126°.09E, h35km, mb4.6, ML3.5, MS3.4, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.20**	**127**	*e*P	Pn	12 14 21.3	+1.5
MATI				*e*S	Sn	12 14 29.7	+5.2
DMPH	**Davao City--Mi**	**0.58**	**272**	||*i*P	Pn	12 14 24.8	+0.1
DMPH				*i* S	Sn	12 14 35.0	+1.9
KCP	**Kidapawan**	**1.00**	**267**	||*i*P	Pn	12 14 32.3	+1.8
KCP				*e*S	Sn	12 14 45.0	+1.6
BUKP	**Musuan**	**1.30**	**308**	*e*P	Pn	12 14 36.4	+1.6
BUKP				*e*S	Sn	12 14 51.1	+0.2

CASC 29 12:27:45.9±1.7, 12°.94N×88°.63W, h63km±21km, MD3.8, ML3.4, 1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSM	**San Miguel**	**0.60**	**35**	*e*P	Pn	12 27 59.5	+0.3
BLLM	**Bellamira**	**0.63**	**37**	*e*P	Pn	12 27 59.6	0.0
BLLM				*e*S	Sn	12 28 10.3	+0.7
SNVI	**San Vicente**	**0.70**	**343**	*e*P	Pn	12 28 00.4	0.0
LFRS	**El Faro**	**0.80**	**328**	||*i*P	Pn	12 28 01.4	-0.1
CNCH	**Conchagua**	**0.85**	**67**	*e*P	Pn	12 28 02.0	-0.1
LBRS	**Las Brisas**	**0.89**	**333**	*e*P	Pn	12 28 03.1	+0.4
CAHU	**Cacacuatique**	**0.92**	**26**	*e*P	Pn	12 28 03.7	+0.6
LFU	**La Fuente**	**0.93**	**330**	*e*P	Pn	12 28 03.6	+0.3
SNET	**Serv Nac Est T**	**0.95**	**322**	*e*P	Pn	12 28 04.7	+1.3
BOQS	**Boqueron**	**1.01**	**322**	*e*P	Pn	12 28 04.5	+0.2
BOQS				*e*S	Sn	12 28 18.5	+0.6
SBLS	**San Blas**	**1.32**	**313**	*e*P	Pn	12 28 08.8	+0.6
CRIN	**San Cristobal**	**1.56**	**99**	*e*P	Pn	12 28 11.2	-0.3
MTO2	**Montecristo 2**	**1.62**	**334**	*e*P	Pn	12 28 12.9	+0.6
TGUH	**Tegucigalpa,Un**	**1.73**	**50**	*e*P	Pn	12 28 13.9	+0.2
LEON	**Leon**	**1.77**	**107**	*e*P	Pn	12 28 13.2	-1.1
TELN	**Telica**	**1.79**	**101**	*e*P	Pn	12 28 14.2	-0.4
MOMN	**Momotombo**	**2.11**	**104**	*e*P	Pn	12 28 19.1	+0.3
COPN	**Copaltepe**	**2.13**	**111**	*e*P	Pn	12 28 20.0	+0.8
COPN				AML	AML	12 28 53.4	
	comp=Z,300nm,0.5s						
CSAN		**2.28**	**109**	*e*P	Pn	12 28 20.8	-0.5

IDC ***29*** *12:35:27.8±6.2, 1°.70S×99°.41E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.4/20, mbtmp3.5/4, Error ellipse: s-maj=316.2km s-min=24.0km az=54.0*
DJA ***29*** *12:35:30, 1°.69S×99°.64E, h10km, MLv3.8/5*
ISCJB ***29*** *12:35:30.6±1.1, 1°.8S±0°.1×99°.32E±0°.08, h33km, mb3.4/4, Error ellipse: s-maj=15.0km s-min=11.6km az=7.1*

ISC 29 12:35:33.3±1.1, 1°.9S±0°.1×99°.42E±0°.09, h35km, n13, σ1°00/13, mb3.4/4, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**0.62**	**328**	P	**Pn**	**12 35 38.8**	**-6.8**
PPSI	**Pulau Pagai**	**1.07**	**147**	P	**Pn**	**12 35 59.0**	**+7.2**
PDSI	**Padang**	**1.40**	**48**	P	**Pn**	**12 35 52.5**	**-3.9**
PPI	**Padang Panjang**	**1.70**	**35**	P	**Pn**	**12 35 55.7**	**-4.8**
SDSI	**Sung

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**6.43**	**158**	P	**Pn**	**12 49 07.8**	**+6.2**
LSA				S	**Sb**	**12 50 36.3**	**+0.6**
LSA				LR	LR		
	comp=N,10μm,7.7s						
LSA				LR	LR		
	comp=E,76μm,12.8s						
LSA				LR	LR		
	comp=Z,10μm,10.2s						
GUN	**Gumba**	**8.07**	**196**	*e*P	**Pn**	**12 49 26.4**	**+2.2**
	comp=Z,274nm,1.2s						
WMQ	**Urumqi**	**8.12**	**356**	P	**Pn**	**12 49 25.0**	**+0.2**
WMQ				S	**Sn**	**12 50 53.0**	**-3.3**
WMQ				smax			
	comp=N,2μm,1.0s						
WMQ				smax			
	comp=E,2μm,1.0s						
KKN	**Kakani**	**8.33**	**199**	*e*P	**Pn**	**12 49 28.9**	**+1.1**
	comp=E,267nm,1.3s						
TAPN	**Taplejung**	**8.36**	**184**	*e*P	**Pn**	**12 49 29.8**	**+1.7**
	comp=E,367nm,1.1s						
PKIN	**Phulchoki**	**8.51**	**198**	*e*P	**Pn**	**12 49 31.1**	**+0.9**
	comp=E,113nm,0.9s						
PKI	**Pulchoki**	**8.51**	**198**	*e*P	**Pn**	**12 49 30.8**	**+0.6**
	comp=E,242nm,1.2s						
DMN	**Daman**	**8.55**	**200**	*e*P	**Pn**	**12 49 31.3**	**+0.5**
	comp=E,221nm,1.0s						
ODAN	**Odare**	**8.87**	**186**	*e*P	**Pn**	**12 49 35.1**	**0.0**
	comp=E,358nm,1.0s						
RAMN	**Ramite**	**8.87**	**190**	*e*P	**Pn**	**12 49 35.2**	**0.0**
	comp=E,400nm,1.1s						
PTH	**Pithoragarh**	**9.24**	**231**	*ex*	**Pn**	**12 49 41.8**	**+1.6**
GTA	**Gaotai**	**9.78**	**64**	⇑P	**Pn**	**12 49 47.3**	**-0.3**
GTA				pP		12 49 51.0	
GTA				sP		12 49 53.5	
GTA				S	**Sn**	**12 51 37.0**	**-0.3**
GTA				pmax	pmax		
	comp=Z,13nm,1.0s						
GTA				pmax	pmax		
	comp=Z,260nm,4.5s						
GTA				LR	LR		
	comp=N,73μm,16.5s						
GTA				LR	LR		
	comp=E,16μm,14.4s						
GTA				LR	LR		
	comp=Z,14μm,12.6s						
DDI	**Dehra Dun**	**10.21**	**241**	⇑*i*P	**Pn**	**12 49 51.0**	**-2.6**
DDI				*ex*	x	12 53 04.5	
SDNR	**Sundarnagar**	**10.42**	**249**	*e*PKP	**Pn**	**12 49 55.5**	**-0.8**
SHL	**Shillong**	**10.55**	**163**	*ex*	**Pn**	**12 50 00.0**	**+1.9**
SHL				*ex*	x	12 53 07.0	
KSH	**Kashi**	**10.56**	**295**	⇓*i*P	**Pn**	**12 50 02.0**	**+3.7**
KSH				pP		12 50 05.3	
KSH				sP		12 50 08.3	
KSH				PP		12 50 10.5	
KSH				S	**Sn**	**12 52 02.0**	**+5.5**
KSH				sS		12 52 07.0	
KSH				SS		12 52 15.3	
KSH				pmax	pmax		
	comp=Z,380nm,1.9s						
KSH				pmax	pmax		
	comp=Z,940nm,2.7s						
KSH				LR	LR		
	comp=N,5μm,9.5s						
KSH				LR	LR		
	comp=E,12μm,10.4s						
KSH				LR	LR		
	comp=Z,8μm,8.0s						
BHK	**Bhakra**	**10.88**	**250**	*ex*	**Pn**	**12 50 03.8**	**+1.2**
THN	**Thein Dam**	**11.02**	**256**	*e*PKP	**Pn**	**12 50 01.9**	**-2.7**
ULHL	**Ulahol**	**11.49**	**308**	P	**Pn**	**12 50 11.0**	**+0.1**
	SNR=75						
AAA	**Alma-Ata**	**11.62**	**314**	*i* P	**Pn**	**12 50 12.6**	**-0.2**
AAA				*i* S	**Sn**	**12 52 22.7**	**+0.3**
AAA				pmax	pmax		
	comp=Z,4μm,3.6s						
AAA				smax			
	comp=E,3μm,6.1s						
AAA				MLR	MLR		
	comp=Z,23μm,16.0s						
NDI	**New Delhi**	**11.78**	**237**	*e*PKP	**Pn**	**12 50 13.0**	**-2.0**
NDI				*ex*	x	12 54 04.0	
MK31	**Makanchi Array**	**11.98**	**339**	*e*P	**Pn**	**12 50 15.4**	**-2.3**
MKAR	**Makanchi Array**	**11.98**	**339**	Pn	**Pn**	**12 50 15.1**	**-2.6**
	comp=Z,4.6nm,0.3s,baz=155,slow=15,SNR=130						
MKAR				Lg		12 53 54.4	
	comp=Z,0.3nm,0.3s,baz=164,slow=31,SNR=2.2						
MKAR				LR	LR	12 55 39.7	
	comp=Z,11μm,18.9s,baz=154,slow=41						
AGT	**Agartala**	**12.04**	**167**	*e*PKP	**Pn**	**12 50 17.0**	**-1.7**
AGT				*ex*	x	12 51 40.0	
KZA	**Kyzart**	**12.05**	**306**	P	**Pn**	**12 50 19.3**	**+0.6**
	SNR=26						
TKM2	**Tokmak 2**	**12.24**	**310**	P	**Pn**	**12 50 21.8**	**+0.5**
	SNR=97						
TKM2	**Tokmak 2**	**12.24**	**310**	*e*P	**Pn**	**12 50 21.1**	**-0.2**
TKM2				pmax	pmax		
	comp=Z,215nm,1.3s						
TKM2	**Tokmak 2**	**12.24**	**310**	*e*Pn	**Pn**	**12 50 21.1**	**-0.2**
	comp=Z,215nm,1.3s						
KBK	**Karagaybulak**	**12.52**	**308**	P	**Pn**	**12 50 26.1**	**+1.0**
	SNR=12						
LZH	**Lanzhou**	**12.53**	**84**	⇑P	**Pn**	**12 50 23.5**	**-1.7**
LZH				pP		12 50 30.8	
LZH				PP		12 50 34.0	
LZH				sP		12 50 35.5	
LZH				S	**Sn**	**12 52 43.5**	**-1.1**
LZH				sS		12 52 55.0	
LZH				SS		12 52 58.5	
LZH				pmax	pmax		
	comp=Z,87nm,1.2s						
LZH				pmax	pmax		
	comp=Z,410nm,4.1s						
LZH				LR	LR		
	comp=N,23μm,9.2s						
LZH				LR	LR		
	comp=Z,24μm,10.0s						
CHCP	**Chirah Chowk**	**12.63**	**265**	P	**Pn**	**12 50 24.6**	**-2.0**
AAK	**Ala-Archa**	**12.81**	**307**	Pn	**Pn**	**12 50 29.0**	**0.0**
	comp=Z,723nm,0.9s,SNR=28						
AAK	**Ala-Archa**	**12.81**	**307**	P	**Pn**	**12 50 29.1**	**+0.1**
	SNR=43						
AAK	**Ala-Archa**	**12.81**	**307**	Pn	**Pn**	**12 50 26.5**	**-2.5**
	comp=Z,0.0nm,0.3s,baz=120,slow=8.6,SNR=69						
AAK				LR	LR	12 56 23.0	
	comp=Z,14μm,21.7s,baz=113,slow=42						
AAK	**Ala-Archa**	**12.81**	**307**	P	**Pn**	**12 50 26.5**	**-2.5**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AAK				MLR	MLR		
	comp=Z,14μm,21.7s						
CHMS	**Chumysh**	**12.82**	**309**	P	**Pn**	**12 50 28.7**	**-0.5**
	SNR=14						
FRU	**Bishkek**	**12.82**	**308**	*e*P	**Pn**	**12 50 28.0**	**-1.2**
FRU				pmax	pmax		
	comp=Z,400nm,2.2s						
USP	**Ospenovka**	**13.11**	**309**	P	**Pn**	**12 50 33.5**	**+0.3**
	SNR=6,7						
AML	**Almayashu**	**13.12**	**304**	*e*Pn	**Pn**	**12 50 33.8**	**+0.6**
	comp=Z,206nm,1.5s						
CAL	**Calcutta**	**13.13**	**180**	*ex*	x	12 53 16.7	
CAL				*ex*	x	12 54 25.4	
EKS2	**Erkin-Say**	**13.29**	**306**	P	**Pn**	**12 50 35.4**	**-0.2**
	SNR=70						
EKS2	**Erkin-Say**	**13.29**	**306**	*e*Pn	**Pn**	**12 50 35.9**	**+0.3**
	comp=Z,130nm,1.1s						
CEP	**Cherat**	**13.69**	**267**	P	**Pn**	**12 50 37.8**	**-3.3**
CD2	**Chengdu**	**13.70**	**106**	⇑*i*P	**Pn**	**12 50 41.5**	**+0.2**
CD2				pP		12 50 44.8	
CD2				sP		12 50 48.0	
CD2				PP		12 50 53.0	
CD2				S	**Sn**	**12 53 15.5**	**+2.2**
CD2				sS		12 53 20.5	
CD2				SS		12 53 31.5	
CD2				pmax	pmax		
	comp=Z,40nm,1.4s						
CD2				pmax	pmax		
	comp=Z,620nm,5.4s						
CD2				LR	LR		
	comp=N,26μm,11.4s						
CD2				LR	LR		
	comp=E,28μm,11.4s						
CD2				LR	LR		
	comp=Z,16μm,10.8s						
JBP	**Jabalpur**	**14.48**	**213**	⇓*i*P	**Pn**	**12 50 48.9**	**-3.1**
JBP				*ex*	x	12 51 01.1	
	comp=Z,234nm,1.2s						
JBP				*ex*	x	12 53 11.8	
AJM	**Ajmer**	**14.94**	**236**	*e*PKP	**Pn**	**12 50 55.4**	**-2.8**
AJM				AMb	AMB	12 50 59.4	
	comp=Z,58nm,1.4s						
BHPL	**Bhopal**	**15.66**	**220**	*e*PKP	**Pn**	**12 51 04.9**	**-2.8**
BHPL				AMb	AMB	12 51 12.3	
	comp=Z,82nm,1.1s						
KBL	**Kabul**	**15.89**	**271**	*e*P	**Pn**	**12 51 08.8**	**-1.8**
KBL				pmax	pmax		
	comp=Z,157nm,1.3s						
KBL	**Kabul**	**15.89**	**271**	*e*P	**Pn**	**12 51 08.8**	**-1.7**
	comp=Z,157nm,1.3s						
KMI	**Kunming**	**16.24**	**127**	⇑P	**Pn**	**12 51 13.5**	**-1.6**
KMI				PP		12 51 26.5	
KMI				S	**Sn**	**12 54 13.5**	**-1.6**
KMI				SS		12 54 33.3	
KMI				PcP	PcP	12 56 08.5	-0.8
KMI				pmax	pmax		
	comp=Z,45nm,1.1s						
KMI				pmax	pmax		
	comp=Z,670nm,5.3s						
KMI				LR	LR		
	comp=N,9μm,8.7s						
KMI				LR	LR		
	comp=E,8μm,9.0s						
KMI				LR	LR		
	comp=Z,8μm,9.7s						
KURK	**Kurchatov**	**16.58**	**338**	Pn	**Pn**	**12 51 17.6**	**-1.7**
	comp=Z,709nm,0.9s,SNR=37						
KURK	**Kurchatov**	**16.58**	**338**	Pn	**Pn**	**12 51 12.9**	**-6.4**
	comp=Z,0.6nm,0.3s,baz=141,slow=12,SNR=76						
KURK				Lg		12 56 01.3	
	baz=161,slow=20,SNR=3.4						
KURK				LR	LR	12 58 25.8	
	comp=Z,10μm,19.4s,baz=145,slow=40						
KURK	**Kurchatov**	**16.58**	**338**	*ce*P	**Pn**	**12 51 16.0**	**-3.3**
KURK				pmax	pmax		
	comp=Z,190nm,1.2s						
KURK	**Kurchatov**	**16.58**	**338**	*e*P	**Pn**	**12 51 15.4**	**-3.9**
	comp=Z,116nm,0.9s						
KURK	**Kurchatov**	**16.58**	**338**	⇓P	**Pn**	**12 51 17.3**	**-2.0**
	SNR=68						
KURK				⇓P		12 51 17.3	
	SNR=68						
NGP	**Nagpur**	**16.66**	**212**	*e*PKP	**Pn**	**12 51 18.1**	**-2.4**
NGP				*e*S	**Sn**	**12 54 24.1**	**-1.3**
XAN	**Xi'an**	**16.92**	**90**	P	**Pn**	**12 51 21.5**	**-2.3**
XAN				S	**Sn**	**12 54 30.0**	**-1.6**
XAN				pmax	pmax		
	comp=Z,25nm,1.1s						
XAN				pmax	pmax		
	comp=Z,62nm,4.1s						
XAN				LR	LR		
	comp=N,15μm,18.3s						
XAN				LR	LR		
	comp=E,3μm,20.5s						
XAN				LR	LR		
	comp=Z,3μm,12.4s						
BTO	**Baotou**	**17.68**	**67**	*e*P	**Pn**	**12 51 28.5**	**-4.6**
BTO				S	**Sn**	**12 54 48.8**	**-1.0**
BTO				LR	LR		
	comp=N,16μm,17.6s						
BTO				LR	LR		
	comp=E,5μm,14.7s						
AKL	**Akola**	**17.99**	**217**	*e*PKP	**Pn**	**12 51 35.1**	**-1.9**
AKL				*ex*	x	12 51 39.1	
	comp=Z,251nm,1.6s						
AKL				*i* x	x	12 58 30.5	
SONM	**Songino Array**	**18.02**	**42**	P	**Pn**	**12 51 37.2**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=232,slow=9.9,SNR=34						
SONM				S	**Sn**	**12 54 54.8**	**-3.4**
	comp=Z,0.2nm,0.3s,baz=254,slow=24,SNR=2.7						
SONM				Lg		12 56 53.3	
	comp=Z,0.1nm,0.3s,baz=231,slow=30,SNR=3.9						
SONM				LR	LR	12 59 08.6	
	comp=Z,8μm,20.4s,baz=230,slow=39						
SONM	**Songino Array**	**18.02**	**42**	P	**Pn**	**12 51 37.2**	**-0.1**
SONM				S	**Sn**	**12 54 54.8**	**-3.3**
SONM				MLR	MLR		
	comp=Z,8μm,20.4s						
GYA	**Guiyang**	**18.14**	**116**	P	**Pn**	**12 51 36.5**	**-2.4**
GYA				PP		12 51 51.5	
GYA				S	**Sn**	**12 54 58.0**	**-3.1**
GYA				SS		12 55 20.8	
GYA				PcP	PcP	12 56 10.8	-1.5
GYA				pmax	pmax		
	comp=Z,100nm,1.0s						
GYA				LR	LR		
	comp=N,6μm,9.3s						
GYA				LR	LR		
	comp=E,9μm,12.7s						
GYA				LR	LR		
	comp=Z,7μm,11.5s						
MOY	**Mondy**	**18.32**	**26**	*e*P	**Pn**	**12 51 41.9**	**+1.0**
MOY				pmax	pmax		
	comp=Z,327nm,2.7s						
ULN	**Ulaanbaatar**	**18.40**	**43**	*e*P	**Pn**	**12 51 42.2**	**+0.2**
ULN				pmax	pmax		
	comp=Z,122nm,1.1s						
ULN	**Ulaanbaatar**	**18.40**	**43**	*e*P	**Pn**	**12 51 42.2**	**+0.2**
	comp=Z,122nm,1.1s						
ULN	**Ulaanbaatar**	**18.40**	**43**	P	**Pn**	**12 51 43.1**	**+1.1**
	SNR=66						
ULN				P		12 51 43.1	
	SNR=66						
ULN	**Ulaanbaatar**	**18.40**	**43**	P	**Pn**	**12 51 43.1**	**+1.1**
	SNR=66						
ULN				P		12 51 43.1	
	SNR=66						
ZAA0	**Zalesovo Array**	**18.41**	**353**	*e*P	**Pn**	**12 51 38.5**	**-3.4**
ZALV	**Zalesovo Beam**	**18.41**	**353**	P	**Pn**	**12 51 37.3**	**-4.6**
	comp=Z,2.5nm,0.3s,baz=176,slow=11,SNR=68						
ZALV				S	**Sn**	**12 55 07.9**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=180,slow=18,SNR=2.2						
ZALV				LR	LR	12 59 31.7	
	comp=Z,8μm,18.4s,baz=172,slow=39						
ZALV	**Zalesovo Beam**	**18.41**	**353**	P	**Pn**	**12 51 37.3**	**-4.7**
ZALV				S	**Sn**	**12 55 07.9**	**+0.7**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ZALV				MLR	MLR		
	comp=Z,8μm,18.4s						
VIS	**Vishakhapatnam**	**18.48**	**195**	*e*PKP	**Pn**	**12 51 42.2**	**-0.9**
VIS				AMb	AMB	12 51 47.4	
	comp=Z,199nm,1.5s						
QUE	**Quetta**	**18.82**	**259**	*e*P	**Pn**	**12 51 52.0**	**+4.9**
QUE				*e*S	x	12 52 20.0	
HHC	**Hu-ho-hao-te**	**18.87**	**67**	*e*P	**Pn**	**12 51 48.5**	**+0.7**
HHC				pP	pP	12 51 52.3	+1.4
HHC				sP	sP	12 51 55.8	+3.1
HHC				PP		12 52 05.3	
HHC				S	**Sn**	**12 55 17.0**	**-1.8**
HHC				sS	sS	12 55 23.3	-4.1
HHC				SS		12 55 41.5	
HHC				PcP	PcP	12 56 14.8	+1.4
HHC				pmax	pmax		
	comp=Z,23nm,0.6s						
HHC				LR	LR		
	comp=N,26μm,13.2s						
HHC				LR	LR		
	comp=E,11μm,13.2s						
HHC				LR	LR		
	comp=Z,12μm,14.6s						
CHTO	**Chiang Mai**	**19.24**	**148**	*e*P	**Pn**	**12 51 51.1**	**-1.2**
CHTO				pmax	pmax		
	comp=Z,259nm,2.1s						
CHTO	**Chiang Mai**	**19.24**	**148**	*e*P	**Pn**	**12 51 51.1**	**-1.2**
	comp=Z,259nm,2.1s						
CHTO	**Chiang Mai**	**19.24**	**148**	⇑P	**Pn**	**12 51 51.6**	**-0.7**
	SNR=23						
CHTO				⇑P		12 51 51.6	
	SNR=23						
CHTO	**Chiang Mai**	**19.24**	**148**	⇑P	**Pn**	**12 51 51.6**	**-0.7**
	SNR=23						
CHTO				⇑P		12 51 51.6	
	SNR=23						
TLY	**Talaya**	**19.33**	**30**	Pn	**Pn**	**12 51 55.5**	**+2.3**
	comp=Z,148nm,1.0s,SNR=20						
TLY	**Talaya**	**19.33**	**30**	*c i* P	**Pn**	**12 51 54.9**	**+1.7**
TLY				*e*S	**Sn**	**12 55 34.9**	**+5.3**
TLY				pmax	pmax		
	comp=Z,36nm,1.1s						
TLY				MLR	MLR		
	comp=Z,10μm,17.0s						
TLY	**Talaya**	**19.33**	**30**	*e*P	**Pn**	**12 51 53.1**	**-0.1**
	comp=Z,29nm,1.0s						
TLY	**Talaya**	**19.33**	**30**	P	**Pn**	**12 51 54.1**	**+0.9**
	SNR=37						
TLY				P		12 51 54.1	
	SNR=37						
TLY	**Talaya**	**19.33**	**30**	P	**Pn**	**12 51 54.1**	**+0.9**
	SNR=37						
TLY				P		12 51 54.1	
	SNR=37						
TIY	**Taiyuan**	**19.36**	**77**	*e*P	**Pn**	**12 51 56.0**	**+2.3**
TIY				S	**Sn**	**12 55 28.8**	**-1.8**
TIY				LR	LR		
	comp=N,4μm,7.2s						
TIY				LR	LR		
	comp=E,8μm,8.8s						
TIY				LR	LR		
	comp=Z,7μm,9.2s						
NVS	**Novosibirsk**	**19.46**	**351**	*e*P	**Pn**	**12 51 50.5**	**-4.2**
NVS				*i* S	**Sn**	**12 55 31.5**	**-1.2**
NVS				pmax	pmax		
	comp=Z,130nm,1.6s						
NVS				pmax	pmax		
	comp=N,40nm,1.2s						
NVS				pmax	pmax		
	comp=E,123nm,1.5s						
NVS				smax			
	comp=N,126nm,1.6s						
NVS				smax			
	comp=E,190nm,1.6s						
CM31	**Chiang Mai Arr**	**19.56**	**149**	*e*P	**Pn**	**12 51 56.4**	**+0.2**
	comp=E,57nm,1.0s						
CMAR	**Chiang Mai Arr**	**19.56**	**149**	P	**Pn**	**12 51 53.6**	**-2.5**
	comp=E,0.8nm,0.3s,baz=318,slow=9.8,SNR=46						
CMAR				PcP	PcP	12 56 15.3	+0.5
	comp=E,0.1nm,0.3s,baz=310,slow=3.1,SNR=4.8						
CMAR				LR	LR	13 00 13.2	
	comp=E,5μm,21.4s,baz=333,slow=39						
IRK	**Irkutsk**	**20.01**	**29**	⇑*i*P	**P**	**12 52 02.0**	**+2.5**
IRK				pmax	pmax		
	comp=Z,233nm,1.8s						
HYB	**Hyderabad**	**20.22**	**208**	*i* P	**P**	**12 52 01.0**	**-1.0**
HYB				*e*S	**S**	**12 55 52.0**	**+3.4**
POO	**Poona**	**21.42**	**221**	*e*PKP	**P**	**12 52 13.5**	**-1.5**
POO				AMb	AMB	12 52 25.1	
	comp=Z,128nm,1.4s,mb5.1						
BVAR	**Borovoye Array**	**21.47**	**329**	P	**P**	**12 52 14.9**	**-0.3**
	comp=Z,47nm,0.8s,mb4.8,baz=135,slow=11,SNR=76						
BVAR				S	**S**	**12 56 13.0**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=164,slow=21,SNR=2.5						
BVAR	**Borovoye Array**	**21.47**	**329**	P	**P**	**12 52 14.9**	**-0.4**
BVAR				S	**S**	**12 56 13.0**	**+0.1**
BVAR				pmax	pmax		
	comp=Z,47nm,0.8s						
BVAR				smax			
	comp=N,1.0nm,0.8s						
BRVK	**Borovoye**	**21.54**	**329**	P	**P**	**12 52 15.3**	**-0.7**
	comp=N,552nm,0.9s,mb6.0,SNR=39						
BRVK	**Borovoye**	**21.54**	**329**	*ce*P	**P**	**12 52 14.7**	**-1.3**
BRVK				pmax	pmax		
	comp=Z,143nm,1.2s,mb5.3						
BRVK	**Borovoye**	**21.54**	**329**	*e*P	**P**	**12 52 16.0**	**0.0**
	comp=Z,117nm,1.0s,mb5.3						
BRVK				LR	LR		
	comp=Z,9μm,20.0s,MS5.2						
BRVK	**Borovoye**	**21.54**	**329**	P	**P**	**12 52 15.7**	**-0.3**
	SNR=81						
BRVK				P		12 52 15.7	
	SNR=81						
BRVK	**Borovoye**	**21.54**	**329**	P	**P**	**12 52 15.7**	**-0.3**
	SNR=81						
BRVK				P		12 52 15.7	
	SNR=81						
BJI	**Beijing**	**22.30**	**70**	P	**P**	**12 52 26.5**	**+2.2**
BJI				S	**S**	**12 56 33.3**	**+3.9**
BJI				pmax	pmax		
	comp=Z,49nm,0.8s,mb5.0						
BJI				pmax	pmax		
	comp=Z,230nm,4.2s						
BJI				LR	LR		
	comp=N,23μm,21.1s,MS5.8						
BJI				LR	LR		
	comp=E,30μm,16.3s,MS5.8						
BJI				LR	LR		
	comp=Z,26μm,20.3s,MS5.7						
WHN	**Wuhan**	**22.30**	**96**	⇓P	**P**	**12 52 25.0**	**+0.6**
WHN				sP	sP	12 52 38.8	+8.8
WHN				S	**S**	**12 56 27.0**	**-2.6**
WHN				LR	LR		
	comp=N,30μm,8.0s						
WHN				LR	LR		
	comp=E,15μm,15.2s						
WHN				LR	LR		
	comp=Z,25μm,10.1s						
IMYA	**Miami**	**22.87**	**280**	*e*P	**P**	**12 52 30.3**	**-0.1**
TIA	**Tai'an**	**23.22**	**80**	*e*P	**P**	**12 52 34.0**	**-0.1**
TIA				pmax	pmax		
	comp=Z,27nm,1.0s,mb4.6						
TIA				LR	LR		
	comp=N,8μm,10.0s,MS5.4						
TIA				LR	LR		
	comp=E,3μm,13.0s,MS5.4						
ISRO	**Mashad**	**23.38**	**280**	*e*P	**P**	**12 52 35.2**	**-0.6**
IMOG	**Moghan**	**23.51**	**280**	*e*P	**P**	**12 52 39.5**	**+2.4**
IKRD	**Kardeh**	**24.09**	**281**	*e*P	**P**	**12 52 35.4**	**-7.0**
ABKT	**Ailbek**	**24.30**	**284**	P	**P**	**12 52 46.6**	**+2.3**
	comp=E,258nm,1.7s,mb5.4,SNR=26						
ISFR	**Sfrayin**	**24.47**	**282**	*e*P	**P**	**12 52 48.1**	**+2.2**
GZH	**Guangzhou**	**25.03**	**113**	P	**P**	**12 52 45.3**	**-5.8**
GZH				S	**S**	**12 57 09.0**	**-5.9**
GZH				LR	LR		
	comp=N,10μm,13.8s,MS5.5						
GZH				LR	LR		
	comp=E,7μm,14.0s,MS5.5						
GZH				LR	LR		
	comp=Z,8μm,10.9s,MS5.5						
QIZ	**Qiongzhong**	**25.18**	**126**	P	**P**	**12 52 53.0**	**+0.5**
QIZ				pP	pP	12 52 56.3	-0.3
QIZ				S	**S**	**12 57 18.0**	**+0.6**
QIZ				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.4						
QIZ				pmax	pmax		
	comp=Z,390nm,7.6s						
QIZ				LR	LR		
	comp=N,9μm,14.3s,MS5.4						
QIZ				LR	LR		
	comp=E,5μm,15.9s,MS5.4						
QIZ				LR	LR		
	comp=Z,8μm,9.9s						
NJ2	**Nanjing**	**25.49**	**89**	*e*P	**P**	**12 52 55.0**	**-0.3**
NJ2				pP	pP	12 53 00.0	+0.7
NJ2				sP	sP	12 53 01.8	+0.8
NJ2				PP		12 53 34.5	
NJ2				S	**S**	**12 57 20.0**	**-2.2**
NJ2				sS	sS	12 57 26.5	-2.4
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.5						
NJ2				pmax	pmax		
	comp=Z,330nm,4.3s						
NJ2				LR	LR		
	comp=N,2μm,15.1s,MS5.0						
NJ2				LR	LR		
	comp=E,3μm,14.7s,MS5.0						
NJ2				LR	LR		
	comp=Z,46μm,16.4s,MS6.1						
HKC	**Hong Kong Obse**	**26.11**	**114**	P	**P**	**12 53 02.0**	**+1.1**
AKTK	**Aktyubinsk**	**26.40**	**313**	P	**P**	**12 53 03.0**	**-0.2**
AKTK				LR	LR	13 04 56.4	
AKTO	**Aktyubinsk**	**26.40**	**313**	P	**P**	**12 53 03.0**	**-0.2**
	comp=Z,16nm,0.8s,mb4.6,baz=110,slow=10,SNR=32						
AKTO				LR	LR	13 04 56.4	
	comp=Z,4μm,19.8s,MS5.0,baz=120,slow=40						
AKTO	**Aktyubinsk**	**26.40**	**313**	P	**P**	**12 53 03.1**	**-0.2**
AKTO				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.6						
AKTO				MLR	MLR		
	comp=Z,4μm,19.8s,MS5.0						
DL2	**Dalian**	**26.54**	**73**	P	**P**	**12 53 06.5**	**+1.9**
DL2				S	**S**	**12 57 44.5**	**+5.9**
DL2				pmax	pmax		
	comp=Z,30nm,1.2s,mb4.7						
DL2				pmax	pmax		
	comp=Z,120nm,3.5s						
DL2				LR	LR		
	comp=N,4μm,13.8s,MS5.3						

DL2 LR LR
comp=E,5μm,14.9s,MS5.3
DL2 LR LR
comp=Z,5μm,16.2s,MS5.1
IBAF Bafgh 27.57 271 *e*P **P** **12 53 14.0 0.0**
SSE Sheshan 27.68 90 *e*P **P** **12 53 17.0 +2.0**
SSE pP pP 12 53 25.5 +6.5
SSE sP sP 12 53 29.5 +8.8
SSE S **S** **12 57 57.0 +0.3**
SSE pmax pmax
comp=Z,26nm,0.9s,mb4.9
SSE pmax pmax
comp=Z,140nm,4.3s
SSE LR LR
comp=N,7μm,17.1s,MS5.3
SSE LR LR
comp=E,3μm,17.1s,MS5.3
SSE LR LR
comp=Z,3μm,11.5s
IGLO Ghaloghah 27.86 282 *e*P **P** **12 53 19.2 +2.6**
SNY Shenyang 27.96 67 ⇓P **P** **12 53 20.5 +3.1**
SNY S **S** **12 58 06.5 +5.5**
SNY pmax pmax
comp=Z,23nm,0.7s,mb4.9
SNY LR LR
comp=N,21μm,15.3s,MS5.8
SNY LR LR
comp=E,5μm,16.2s,MS5.8
SNY LR LR
comp=Z,10μm,18.6s,MS5.4
IKIA Kiasar 28.02 281 *e*P **P** **12 53 23.7 +5.7**
QZH Quanzhou 28.08 104 *e*P **P** **12 53 20.0 +1.4**
QZH S **S** **12 58 04.5 +1.4**
QZH LR LR
comp=N,26μm,14.8s,MS6.0
QZH LR LR
comp=E,24μm,17.8s,MS6.0
QZH LR LR
comp=Z,9μm,12.8s,MS5.6
SVE Sverdlovsk 28.20 327⇑ *e*P **P** **12 53 20.0 +0.7**
SVE *e*S **S** **12 58 03.6 -0.8**
SVE pmax pmax
comp=Z,127nm,1.4s,mb5.4
SVE MLR MLR
comp=Z,5μm,19.0s,MS5.2
ICHK Chekchek 28.32 273 *e*P **P** **12 53 21.9 +1.2**
IMEH Mehriz 28.41 271 *e*P **P** **12 53 22.2 +0.7**
ARU Arti 28.91 325 P **P** **12 53 25.1 -0.6**
comp=Z,229nm,0.9s,mb5.9,SNR=11
ARU Arti 28.91 325*c* *i*P **P** **12 53 25.3 -0.4**
ARU *e* 12 54 14.6
ARU *e*PPP 12 54 26.7
ARU *e* 12 56 32.3
ARU S **S** **12 58 13.4 -2.2**
ARU SSS 12 59 55.4
ARU pmax pmax
comp=Z,92nm,1.7s,mb5.2
ARU MLR MLR
comp=Z,7μm,17.0s,MS5.3
ARU Arti 28.91 325 *e*P **P** **12 53 25.5 -0.2**
comp=Z,38nm,0.9s,mb5.1
ARU LR LR
comp=Z,575nm,21.0s,MS4.2
CN2 Changchun 29.41 63 *e*P **P** **12 53 31.5 +1.2**
CN2 *e*pP pP 12 53 36.0 +1.7
CN2 *e*sP sP 12 53 38.8 +2.8
CN2 *e*S **S** **12 58 30.0 +6.3**
CN2 pmax pmax
comp=Z,20nm,1.0s,mb4.8
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,3μm,10.0s,MS5.3
CN2 LR LR
comp=E,2μm,10.0s,MS5.3
CN2 LR LR
comp=Z,2μm,12.0s,MS5.0
IDMV Damavand 29.45 281 *e*P **P** **12 53 32.2 +1.5**
ASHO Ashiyiah 29.91 257 ⇓P **P** **12 53 35.8 +0.9**
SNR=6.8
INCN Inchon 30.61 75 *e*P **P** **12 53 42.9 +1.9**
comp=Z,33nm,1.0s,mb5.1
INCN LR LR
comp=Z,3μm,21.0s,MS5.0
SOKR Solikamsk 31.46 329*c* *i*P **P** **12 53 47.0 -1.2**
SOKR SS SS 13 01 04.3 -5.7
SOKR pmax pmax
comp=Z,100nm,1.2s,mb5.5
SOKR MLR MLR
comp=Z,5μm,17.0s,MS5.3
KSRS Korea Array 31.63 75 P **P** **12 53 49.6 -0.3**
comp=Z,8.1nm,1.0s,mb4.5,baz=274,slow=7.9,SNR=15
KSRS LR LR 13 09 01.4
comp=Z,848nm,18.1s,MS4.5,baz=278,slow=41
KSRS Korea Array 31.63 75 P **P** **12 53 49.7 -0.2**
KSRS pmax pmax
comp=Z,8.0nm,1.0s,mb4.5
KSRS MLR MLR
comp=Z,848nm,18.1s,MS4.5
MAK Makhachkala 32.20 296 *e*P **P** **12 53 51.1 -3.8**
MAK *e* 12 54 58.8
MAK *e*S **S** **12 59 03.6 -3.8**
MAK *e*SS SS 13 00 57.9 -28
MAK pmax pmax
comp=Z,104nm,1.1s,mb5.6
MAK MLR MLR
comp=Z,8μm,20.0s,MS5.4
KULM Kulim 32.31 157 P **P** **12 53 56.4 +0.3**
KULM Kulim 32.31 157 *e*P **P** **12 53 55.9 -0.2**
comp=Z,51nm,1.1s,mb5.3
KULM LR LR
comp=Z,2μm,20.0s,MS4.8
CLNS Chul'man 32.32 38 *e*P **P** **12 53 57.9 +2.1**
CLNS *e**PP pP 12 54 12.8 +13
CLNS *e* 12 55 01.5
CLNS *e* 12 56 43.6
CLNS *e*S **S** **12 59 08.1 -0.9**
CLNS *e*SS SS 13 01 10.7 -17
CLNS pmax pmax
comp=N,8.0nm,0.8s
CLNS pmax pmax
comp=E,8.0nm,1.1s
CLNS pmax pmax
comp=Z,14nm,1.0s,mb4.8
CLNS pmax pmax
comp=E,4.0nm,1.0s
CLNS pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
CLNS pmax pmax
comp=N,5.0nm,0.8s
CLNS smax
comp=E,211nm,11.2s
CLNS smax
comp=N,36nm,9.9s
CLNS MLR MLR
comp=E,3μm,11.0s,MS5.3
CLNS MLR MLR
comp=Z,6μm,14.0s,MS5.4
CLNS MLR MLR
comp=N,2μm,12.0s,MS5.3
MDJ Mudanjiang 32.42 61 P **P** **12 53 57.0 +0.2**
MDJ pP pP 12 54 00.5 -0.4
MDJ S **S** **12 59 14.5 +3.7**
MDJ pmax pmax
comp=Z,20nm,1.9s,mb4.6
MDJ pmax pmax
comp=Z,87nm,5.3s
MDJ LR LR
comp=N,5μm,17.4s,MS5.2
MDJ LR LR
comp=E,2μm,21.5s,MS5.2
MDJ LR LR
comp=Z,2μm,21.5s,MS4.9
KTGM Kuala Trenggan 33.14 152 P **P** **12 54 04.6 +1.3**
IPM Ipoh 33.19 157 P **P** **12 54 03.7 -0.1**
DGRG David-gareji 33.86 293 P **P** **12 54 11.1 +1.7**
IAZR Azarshahr 33.87 286 *e*P **P** **12 54 12.0 +2.5**
ISHB Shabestar 34.05 287 *e*P **P** **12 54 11.7 +0.6**
VLA Vladivostok 34.10 64 *e*P **P** **12 54 12.2 +0.7**
VLA pmax pmax
comp=Z,26nm,0.9s,mb5.2
VLA MLR MLR
comp=Z,8μm,14.4s,MS5.6
PSI Prapat 34.17 161 P **P** **12 54 11.0 -1.3**
comp=Z,10nm,0.9s,mb4.7,baz=318,slow=7.7,SNR=14
PSI PcP PcP 12 56 49.0 -0.3
comp=Z,5.4nm,0.9s,baz=311,slow=11,SNR=4.7
PSI LR LR 13 11 42.7
comp=Z,1μm,18.6s,MS4.6,baz=145,slow=43
PSI Prapat 34.17 161 P **P** **12 54 11.0 -1.3**
PSI 12 56 49.0
PSI pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
PSI MLR MLR
comp=Z,1μm,18.6s,MS4.6
KLR Kul'dur 34.23 53 *e*P **P** **12 54 09.0 -3.5**
KLR *e*S **S** **12 59 42.0 +3.2**
KLR *e*SSS 13 02 09.5
KLR MLR MLR
comp=E,7μm,13.0s
KLR MLR MLR
comp=Z,12μm,13.0s,MS5.8
MTA Mtatsminda 34.27 293 P **P** **12 54 16.0 +3.0**
TBLG Delisi 34.31 294 *i* P **P** **12 54 17.1 +3.8**
TBLG Delisi 34.31 294 P **P** **12 54 17.1 +3.8**
GNI Garni 34.46 291*c* *e*P **P** **12 54 17.2 +2.5**
GNI pmax pmax
comp=Z,99nm,1.7s
GNI Garni 34.46 291 *e*P **P** **12 54 16.1 +1.4**
comp=Z,86nm,1.1s,mb5.6
GNI LR LR
comp=Z,2μm,19.0s,MS4.9
FRIM Kepong 34.55 156 P **P** **12 54 16.7 +1.0**
KBD Kabd 34.78 271 *e*P **P** **12 54 16.6 -0.9**
KBD AMb AMB 12 54 22.9
comp=Z,57nm,1.7s,mb5.2
ZEI Tsey 34.86 295 *e*P **P** **12 54 21.6 +3.5**
ZEI pmax pmax
comp=Z,65nm,1.9s,mb5.2
KEH Kehvi 34.86 295 P **P** **12 54 18.1 0.0**
RDF Al-Radifah 34.99 271 *e*P **P** **12 54 18.9 -0.5**
RDF AMb AMB 12 54 24.7
comp=Z,105nm,1.8s,mb5.5
NAY Al-Naaiem 35.12 271 *e*P **P** **12 54 19.3 -1.2**
NAY AMb AMB 12 54 25.8
comp=Z,66nm,1.3s,mb5.4
ONI Oni 35.20 295 P **P** **12 54 22.4 +1.4**
DYDN Diyadin 35.34 290 *i* P **P** **12 54 25.5 +3.2**
DIGO Kars 35.47 291 *i* P **P** **12 54 26.7 +3.3**
KIV Kislovodsk 35.68 298 *e*P **P** **12 54 25.5 +0.4**
KIV *e* 12 55 47.6
KIV *e*S **S** **13 00 00.2 -1.0**
KIV pmax pmax
comp=Z,12nm,1.1s,mb4.7
KIV MLR MLR
comp=Z,608nm,14.0s,MS4.5
KIV Kislovodsk 35.68 298 *e*P **P** **12 54 24.9 -0.2**
comp=Z,9.0nm,0.6s,mb4.9
KIV LR LR
comp=Z,1μm,20.0s,MS4.7
BHD Baghdad 36.14 279 *e*P **P** **12 54 29.0 -0.2**
BHD *e*S **S** **13 00 09.0 +0.4**
TGY Tagaytay City 36.26 118 P **P** **12 54 30.7 +0.4**
comp=Z,44nm,0.3s,mb5.8,baz=293,slow=13,SNR=5.7
TGY LR LR 13 09 25.3
comp=Z,12nm,18.6s,baz=352,slow=36
KGM Kluang 36.27 154 P **P** **12 54 31.4 +0.9**
HABR Khabarovsk 36.34 55 *e*P **P** **12 54 29.7 -1.0**
HABR *e**PP pP 12 54 39.3 +4.5
HABR 12 55 52.0
HABR *e* 12 56 54.1
HABR *e*S **S** **13 00 08.5 -2.7**
HABR *e**SS sS 13 00 24.7 +6.7
HABR *e*SS SS 13 02 37.4 -12
HABR 13 04 45.6
HABR pmax pmax
comp=Z,77nm,3.1s
HABR pmax pmax
comp=E,72nm,3.4s
HABR pmax pmax
comp=N,23nm,1.6s
HABR MLR MLR
comp=Z,3μm,16.0s,MS5.2
DDEM Demirkent 36.63 292 *i* P **P** **12 54 34.6 +1.3**
DBAD Bademkaya 36.66 293 *i* P **P** **12 54 35.0 +1.4**
MYKOM Kota Tinggi 36.67 154 P **P** **12 54 34.9 +1.0**
YAK Yakutsk 36.79 31 *e*P **P** **12 54 35.6 +1.2**
YAK *e* 12 56 00.3
YAK *e* 12 56 50.2
YAK *e*S **S** **13 00 19.9 +2.1**
YAK *e*SS SS 13 02 51.8 -6.7
YAK *e*SSS 13 03 13.9
YAK *e* 13 04 40.7
YAK pmax pmax
comp=Z,37nm,1.1s,mb5.1
YAK pmax pmax
comp=N,8.0nm,1.4s
YAK pmax pmax
comp=E,15nm,1.4s
YAK pmax pmax
comp=N,7.0nm,0.9s
YAK pmax pmax
comp=Z,33nm,1.5s,mb4.9
YAK pmax pmax
comp=E,43nm,1.6s
YAK smax
comp=N,66nm,3.2s
YAK smax
comp=E,118nm,4.6s
YAK MLR MLR
comp=Z,3μm,12.0s,MS5.2
YAK MLR MLR
comp=N,1μm,16.0s,MS5.2
YAK MLR MLR
comp=E,3μm,11.0s,MS5.2
YAK Yakutsk 36.79 31 *e*P **P** **12 54 35.7 +1.3**
comp=E,29nm,0.7s,mb5.2
ERZM Erzurum 37.06 291 *i* P **P** **12 54 40.6 +3.6**
BNGL BINGOL 37.39 289 *i* P **P** **12 54 43.2 +3.4**
KOPT Kop Dagi 37.71 291 *i* P **P** **12 54 44.6 +2.1**
SOC Sochi 37.85 297 *e*P **P** **12 54 43.6 0.0**
SOC *e**PP pP 12 54 51.8 +4.1
SOC *e**SP sP 12 54 56.0 +6.6
SOC *e* 12 56 12.2
SOC *e*PPP 12 56 28.6
SOC *e* 12 57 01.7
SOC *e*S **S** **13 00 31.0 -3.3**
SOC *e**SS sS 13 00 49.5 +8.4
SOC *e*SS SS 13 03 02.9 -17
SOC *e* 13 04 46.5
SOC pmax pmax
comp=Z,52nm,1.1s,mb5.2
MARD Mardin 37.99 287 *i* P **P** **12 54 46.7 +1.8**
VORD Divnogorie 38.09 309 *e*P **P** **12 54 44.9 -0.6**
VSR Storozhevoye 38.19 310 *e*P **P** **12 54 45.7 -0.6**
VSR pmax pmax
comp=Z,60nm,1.2s,mb5.2
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,30nm,0.8s
VSR MLR MLR
comp=Z,3μm,15.0s,MS5.2
VSR MLR MLR
comp=N,2μm,17.0s,MS5.1
VSR MLR MLR
comp=E,2μm,14.0s,MS5.1
KDM Kudat 38.74 131 P **P** **12 54 54.4 +3.1**
KKM Kota Kinabalu 39.05 133 P **P** **12 54 58.1 +4.1**
KKM Kota Kinabalu 39.05 133 *e*P **P** **12 54 54.7 +0.8**
comp=E,211nm,1.1s,mb5.8
ELZG Elazig 39.13 289 *i* P **P** **12 54 56.8 +2.4**
ANN Anapa 39.38 299 *e*P **P** **12 54 57.3 +0.9**
ANN *e* 12 56 29.3
ANN *e* 12 57 02.7
ANN *e*S **S** **13 00 57.9 +0.5**
ANN pmax pmax
comp=Z,82nm,1.7s,mb5.2
BTM Bintulu 39.60 139 P **P** **12 55 01.1 +2.6**
MOS Moscow 39.62 317 *e*P **P** **12 54 56.9 -1.4**
MOS *e* 12 56 26.6
MOS *e*S **S** **13 00 58.8 -1.9**
MOS pmax pmax
comp=Z,633nm,1.5s,mb6.1
MOS pmax pmax
comp=Z,406nm,1.3s,mb6.0
MOS MLR MLR
comp=E,2μm,13.0s
MOS MLR MLR
comp=Z,3μm,13.0s,MS5.3
KSM Kuching 39.68 144 P **P** **12 55 01.4 +2.2**
KSM Kuching 39.68 144 *e*P **P** **12 54 59.9 +0.7**
comp=Z,95nm,1.3s,mb5.4
SBUM Sibu 39.78 141 P **P** **12 55 02.9 +2.9**
MAJO Matsushiro 39.87 74 *e*P **P** **12 55 01.5 +0.9**
MAJO pmax pmax
comp=Z,17nm,1.2s,mb4.7
MAJO MLR MLR
comp=Z,3μm,20.0s,MS5.1
MAJO Matsushiro 39.87 74 *e*P **P** **12 55 01.5 +0.9**
comp=Z,17nm,1.2s,mb4.7
MAJO LR LR
comp=Z,3μm,20.0s,MS5.1
MAT Matsushiro 39.87 74 P **P** **12 54 59.8 -0.8**
MAT S **S** **13 01 07.0 +2.0**
MJAR Matsushiro Arr 39.87 74 P **P** **12 55 01.2 +0.6**
comp=Z,7.1nm,1.1s,mb4.3,baz=284,slow=10,SNR=11
MJAR LR LR 13 12 19.9
comp=Z,3μm,18.1s,MS5.2,baz=280,slow=37
MJAR Matsushiro Arr 39.87 74 P **P** **12 55 01.2 +0.6**
MJAR pmax pmax
comp=Z,7.0nm,1.1s
MJAR MLR MLR
comp=Z,3μm,18.1s
SDKM Sandakan 39.96 132 P **P** **12 55 05.1 +3.5**
OBN Obninsk 40.13 316 P **P** **12 55 02.4 -0.1**
comp=Z,579nm,0.9s,mb6.3,SNR=8.3
OBN Obninsk 40.13 316⇓ *i*P **P** **12 55 02.4 -0.1**
OBN *i* 12 56 38.3
OBN *i* S **S** **13 01 07.0 -1.4**
OBN *i* SS SS 13 03 54.5 -11
OBN pmax pmax
comp=Z,235nm,1.6s,mb5.7
OBN MLR MLR
comp=Z,3μm,16.0s,MS5.3
OBN Obninsk 40.13 316 *e*P **P** **12 55 02.2 -0.4**
comp=Z,218nm,1.4s,mb5.7
OBN LR LR
comp=Z,3μm,20.0s,MS5.1
GZT Gaziantep 40.48 288 *i* P **P** **12 55 07.7 +2.0**
MYLDM Lahad Datu 41.12 131 P **P** **12 55 14.3 +3.1**
TSM Tawau 41.43 132 P **P** **12 55 14.3 +0.6**
YSS Yuzh-Sakhalins 41.56 57 *e*P **P** **12 55 13.0 -1.4**
YSS *e*S **S** **13 01 34.0 +4.1**
YSS MLR MLR
comp=Z,2μm,18.0s,MS4.9
YSS Yuzh-Sakhalins 41.56 57 *e*P **P** **12 55 13.5 -0.9**
comp=Z,14nm,1.0s,mb4.5
TIXI Tiksi 41.64 18 *e*P **P** **12 55 14.4 -0.4**
TIXI *e* 12 56 53.0
TIXI *e*S **S** **13 01 31.1 +0.6**
TIXI *e*SS SS 13 04 37.5 +2.1
TIXI pmax pmax
comp=Z,23nm,1.1s,mb4.7
TIXI MLR MLR
comp=Z,4μm,13.0s,MS5.5
TIXI Tiksi 41.64 18 *e*P **P** **12 55 14.7 -0.1**
comp=Z,17nm,0.9s,mb4.7
TIXI *e* 12 55 28.4
SIM Simferopol' 41.71 300 P **P** **12 55 17.9 +2.2**
SIM 12 56 55.4
SIM S **S** **13 01 37.2 +5.0**
SIM SS SS 13 04 28.7 -8.9
SIM pmax pmax
comp=Z,25nm,0.9s,mb4.8
SIM MLR MLR
comp=Z,2μm,16.5s,MS5.2
ASAJ Asahikawa 41.75 61 P **P** **12 55 16.4 +0.4**
comp=Z,14nm,0.8s,mb4.6,baz=264,slow=10,SNR=9.8
ASAJ LR LR 13 13 18.8
comp=Z,5μm,18.7s,MS5.4,baz=280,slow=37
ASAJ Asahikawa 41.75 61 P **P** **12 55 16.4 +0.4**
ASAJ pmax pmax
comp=Z,14nm,0.8s
ASAJ MLR MLR
comp=Z,5μm,18.7s
JHJ Hachijo jima 2 42.07 78 LR LR 13 14 41.0
comp=Z,2μm,18.4s,MS5.0,baz=30,slow=39
ASF Jabal al Asfar 42.48 281 P **P** **12 55 25.2 +3.1**
comp=Z,1.2nm,0.4s,baz=98,slow=1.9,SNR=7.6
ASF Jabal al Asfar 42.48 281 P **P** **12 55 25.2 +3.0**
ASF pmax pmax
comp=Z,1.0nm,0.4s
BR131 Keskin Array S 42.94 292 *e*P **P** **12 55 27.7 +1.9**
comp=Z,13nm,0.8s,mb4.7
BR131 LR LR
comp=Z,751nm,20.0s,MS4.6
BRTR Keskin Array B 42.94 292 P **P** **12 55 25.5 -0.3**
comp=Z,9.5nm,1.0s,mb4.5,baz=86,slow=6.3,SNR=27
BRTR LR LR 13 18 05.5
comp=Z,770nm,18.8s,MS4.6,baz=184,slow=43
BRTR Keskin Array B 42.94 292 P **P** **12 55 25.5 -0.3**
BRTR pmax pmax
comp=Z,10.0nm,1.0s
BRTR MLR MLR
comp=Z,770nm,18.8s
SGKT Sivrigoynuk 43.94 294 *i* P **P** **12 55 34.9 +1.0**
JOF Joensuu 44.02 326 *e*P **P** **12 55 33.3 -0.9**
JOF pmax pmax
comp=Z,104nm,1.0s,mb5.5
JOF Joensuu 44.02 326 *e*p **P** **12 55 33.3 -0.9**
comp=Z,104nm,1.0s,mb5.5
JOF Joensuu 44.02 326 *e*p **P** **12 55 33.3 -0.9**
comp=Z,104nm,1.0s,mb5.5
APA Apatity 44.29 333⇓ *i*P **P** **12 55 37.0 +0.7**
APA pmax pmax
comp=Z,34nm,1.4s,mb4.9
DAV Davao City (W) 44.39 121 PFAKE 12 55 50.0 +12
DAV LR LR
comp=Z,2μm,20.0s,MS5.1
AKASG Malin Array Be 44.47 309 P **P** **12 55 36.6 -1.3**
comp=Z,23nm,1.0s,mb4.8,baz=78,slow=6.4,SNR=54
AKASG PP PP 12 57 20.8 -0.7
comp=Z,2.1nm,0.7s,baz=76,slow=9.0,SNR=5.1
AKASG LR LR 13 16 14.7
comp=Z,4μm,19.7s,MS5.3,baz=90,slow=39
AKASG Malin Array Be 44.47 309 P **P** **12 55 36.6 -1.3**
AKASG 12 57 20.8
AKASG pmax pmax
comp=Z,23nm,1.0s
AKASG MLR MLR
comp=Z,4μm,19.7s
AKBB Malin Array Si 44.47 309 *e*P **P** **12 55 37.3 -0.6**
KIEV Kiev 44.48 309 *e*P **P** **12 55 37.3 -0.7**
KIEV pmax pmax
comp=Z,60nm,1.3s,mb5.2
KIEV MLR MLR
comp=Z,4μm,20.0s,MS5.3
KIEV Kiev 44.48 309 *e*P **P** **12 55 37.3 -0.7**
comp=Z,60nm,1.3s,mb5.2
KIEV LR LR
comp=Z,4μm,20.0s,MS5.3
KIS Kishinev 45.12 304 *e*P **P** **12 55 43.0 -0.2**
KIS *e*S **S** **13 02 14.0 -8.0**
KIS *e*SS SS 13 05 44.0 -0.1
KIS *e*LQ 13 12 58.0
KIS LRM 13 17 30.0
comp=Z,2μm,17.0s
KIS Kishinev 45.12 304 *e*P **P** **12 55 43.0 -0.2**
KIS *e* 12 57 30.0
KIS MLR MLR
comp=Z,2μm,17.0s,MS5.1
KIS MLR MLR
comp=N,1μm,15.0s
KIS MLR MLR
comp=Z,2μm,16.0s
MICGM Minsk 45.12 314⇓ *i*P **P** **12 55 40.0 -3.1**
MNK Minsk 45.15 314⇓ *i*P **P** **12 55 40.0 -3.3**
MNK *e* 12 57 26.0
MNK *e* 12 57 32.0
MNK *e*S **S** **13 02 14.0 -8.2**
MNK pmax pmax
comp=Z,280nm,1.0s,mb6.0
MNK pmax pmax
comp=E,410nm,1.0s
MNK MLR MLR
comp=N,5μm,10.0s,MS5.8
MNK MLR MLR
comp=Z,5μm,12.0s,MS5.7
MNK MLR MLR
comp=E,5μm,12.0s,MS5.8
TLCR 45.40 301⇓P **P** **12 55 45.0 -0.4**
TLCR 45.40 301⇓ *i*P **P** **12 55 45.0 -0.4**
DGAR Diego Garcia 45.45 202 PFAKE 12 56 00.0 +14
DGAR LR LR
comp=Z,2μm,21.0s,MS4.9

LEOM	Leova	45.58 303	P	P	12 55 48.2	+1.4
NACGM	Naroch	45.75 315	eP	P	12 55 44.0	-4.1
IDID	Didziasalis	45.76 315	eP	P	12 55 48.4	+0.3
IDID			AMB	AMB	12 55 50.4	
	comp=Z,30nm,1.1s,mb5.1					
ISP	Isparta	45.77 291	eP	P	12 55 49.5	+1.0
ISP			pmax	pmax		
	comp=Z,69nm,1.5s,mb5.4					
ISP	Isparta	45.77 291	eP	P	12 55 49.5	+1.0
	comp=Z,69nm,1.5s,mb5.4					
TIRR	Tirgusor	45.81 300	eP	P	12 55 49.5	+0.8
TIRR			pmax	pmax		
	comp=Z,191nm,2.4s,mb5.6					
TIRR	Tirgusor	45.81 300	eP	P	12 55 49.5	+0.9
	comp=Z,191nm,2.4s,mb5.6					
IZAR	Zarasai	46.03 316	eP	P	12 55 50.3	+0.1
IZAR			AMB	AMB	12 55 52.6	
	comp=Z,39nm,1.2s,mb5.2					
IIGN	Ignalina	46.06 315	eP	P	12 55 50.7	+0.2
IIGN			AMB	AMB	12 55 52.9	
	comp=Z,47nm,1.2s,mb5.3					
ISAL	Salakas	46.11 316	eP	P	12 55 51.0	+0.2
ISAL			AMB	AMB	12 55 53.3	
	comp=Z,46nm,1.0s,mb5.3					
KAF	Kangasniemi	46.22 325	eP	P	12 55 50.3	-1.3
KAF			pmax	pmax		
	comp=Z,59nm,1.1s,mb5.4					
KAF	Kangasniemi	46.22 325	ep	P	12 55 50.3	-1.3
	comp=Z,59nm,1.1s,mb5.4,baz=94,slow=7.8					
KAF	Kangasniemi	46.22 325	ep	P	12 55 50.3	-1.3
	comp=Z,59nm,1.1s,mb5.4,baz=94,slow=7.8					
GDZ	Gediz	46.22 293	i P	P	12 55 52.1	+0.1
FINES	FINESS Array B	46.27 324	P	P	12 55 51.9	-0.2
	comp=Z,16nm,0.8s,mb5.0,baz=100,slow=9.9,SNR=42					
FINES			LR	LR	13 17 16.5	
	comp=Z,2μm,19.1s,MS5.1,baz=91,slow=39					
FINES	FINESS Array B	46.27 324	P	P	12 55 51.9	-0.2
FINES			pmax	pmax		
	comp=Z,16nm,0.8s					
FINES			MLR	MLR		
	comp=Z,2μm,19.1s					
VRI	Vrincioaia	46.72 302	⇓P	P	12 55 56.8	+1.0
VRI	Vrincioaia	46.72 302	P	P	12 55 57.0	+1.1
VRI	Vrincioaia	46.72 302	⇓iP	P	12 55 56.8	+1.0
PLOR	Plostina	46.78 302	⇑P	P	12 55 57.3	+1.0
PLOR	Plostina	46.78 302	⇑iP	P	12 55 57.3	+1.0
KEV	Kevo	47.12 335	eP	P	12 55 57.8	-0.8
KEV			pmax	pmax		
	comp=Z,60nm,1.4s,mb5.3					
KEV			MLR	MLR		
	comp=Z,3μm,21.0s,MS5.3					
KEV	Kevo	47.12 335	eP	P	12 55 57.8	-0.8
	comp=Z,60nm,1.4s,mb5.3					
KEV			LR	LR		
	comp=Z,3μm,21.0s,MS5.3					
MLR	Muntele Rosu	47.33 302	P	P	12 56 00.9	+0.3
	comp=Z,19nm,0.8s,mb5.0,baz=159,slow=2.5,SNR=23					
MLR			LR	LR	13 19 22.3	
	comp=Z,5μm,20.3s,MS5.4,baz=63,slow=40					
MLR	Muntele Rosu	47.33 302	P	P	12 56 00.9	+0.3
MLR			pmax	pmax		
	comp=Z,19nm,0.8s					
MLR			MLR	MLR		
	comp=Z,5μm,20.3s					
MLR	Muntele Rosu	47.33 302	P	P	12 56 01.9	+1.3
MLR	Muntele Rosu	47.33 302	⇑iP	P	12 56 01.6	+1.0
BURAR	Bucovina Array	47.45 305	⇑P	P	12 56 01.3	-0.2
BURAR	Bucovina Array	47.45 305	⇑iP	P	12 56 01.3	-0.2
BUR08	Bucovina Ar. S	47.45 305	eP	P	12 56 01.1	-0.4
ARCES	ARCESS Array B	47.59 335	P	P	12 56 00.8	-1.5
	comp=Z,14nm,0.9s,mb5.0,baz=86,slow=7.0,SNR=38					
ARCES	ARCESS Array B	47.59 335	P	P	12 56 00.8	-1.5
ARCES			pmax	pmax		
	comp=Z,14nm,0.9s					
ARCES	ARCESS Array B	47.59 335	P	P	12 56 00.8	-1.5
ARE0	ARCESS Array S	47.59 335	eP	P	12 56 01.3	-1.0
LVV	L'vov	47.88 308	eP	P	12 56 04.1	-0.7
LVV			e		12 57 59.5	
LVV			eS	S	13 02 57.9	-3.5
LVV			ePS		13 03 08.3	
LVV			MLR	MLR		
	comp=Z,2μm,15.0s,MS5.2					
LVV			MLR	MLR		
	comp=N,2μm,14.0s,MS5.4					
LVV			MLR	MLR		
	comp=E,2μm,13.0s,MS5.4					
SUW	Suwalki	47.90 314	eP	P	12 56 03.6	-1.2
SUW			epP	pP	12 56 08.3	-0.7
SUW			eS	S	13 02 51.7	-10
SUW			LMZ		13 17 31.9	
	comp=E,4μm,19.2s					
SUW	Suwalki	47.90 314	eP	P	12 56 04.0	-0.9
	comp=E,109nm,1.1s,mb5.8					
VOIR		47.96 302	⇑P	P	12 56 06.1	+0.6
VOIR		47.96 302	P	P	12 56 07.1	+1.6
VOIR		47.96 302	⇑iP	P	12 56 06.1	+0.6
KTK1	Kautokeino	48.30 334	AMS	AMS	13 18 18.0	
	comp=Z,4μm,13.0s,MS5.6					
KWP	Kalwaria Pacla	48.75 308	eP	P	12 56 11.5	-0.1
KWP			epP	pP	12 56 15.3	-0.4
KWP			LMZ		13 18 23.4	
	comp=Z,2μm,25.1s					
KWP	Kalwaria Pacla	48.75 308	eP	P	12 56 11.4	-0.1
KWP			pmax	pmax		
	comp=Z,77nm,1.1s,mb5.7					
KWP			MLR	MLR		
	comp=Z,3μm,20.0s,MS5.2					
KWP	Kalwaria Pacla	48.75 308	eP	P	12 56 11.4	-0.2
	comp=Z,77nm,1.1s,mb5.6					
KWP			LR	LR		
	comp=Z,3μm,20.0s,MS5.2					
KWP	Kalwaria Pacla	48.75 308	⇑iP	P	12 56 12.3	+0.8
TRPA	Tarpa	49.13 306	⇑iP	P	12 56 14.3	-0.1
UZH	Uzhgorod	49.20 307	eP	P	12 56 15.7	+0.8
UZH			e		12 56 24.3	
UZH			e		12 56 32.5	
UZH			e		12 58 10.5	
UZH			eS	S	13 03 20.0	-0.1
UZH			ePS		13 03 33.0	
UZH			eSS	SS	13 06 45.5	-5.5
UZH			MLR	MLR		
	comp=N,2μm,17.0s,MS5.4					
UZH			MLR	MLR		
	comp=E,3μm,17.0s,MS5.4					
UZH			MLR	MLR		
	comp=Z,2μm,17.0s,MS5.1					
DRGR		49.28 304	P	P	12 56 16.4	+0.8
GZR	Gura Zlata	49.53 302	P	P	12 56 18.5	+0.9
CRVS	Cervenica-Dubn	49.69 307	eP	P	12 56 19.5	+0.8
CRVS			pmax	pmax		
	comp=Z,8.0nm,1.5s,mb4.5					
CRVS	Cervenica-Dubn	49.69 307	eP	P	12 56 19.5	+0.8
	comp=Z,8.1nm,1.5s,mb4.5					
CRVS	Cervenica-Dubn	49.69 307	eP	P	12 56 19.5	+0.8
STHS	Stebnicka Huta	49.73 308	eP	P	12 56 19.1	+0.1
STHS			pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8					
STHS	Stebnicka Huta	49.73 308	eP	P	12 56 19.1	+0.1
	comp=Z,10.0nm,0.9s,mb4.8					
STHS	Stebnicka Huta	49.73 308	eP	P	12 56 19.1	+0.1
TRO	Tromso	49.89 335	eP	P	12 56 20.1	+0.1
TRO			eS	S	13 03 31.4	+2.1
TRO			eSS	SS	13 07 05.0	+3.6
TRO			AMS	AMS	13 19 11.0	
	comp=Z,3μm,15.5s,MS5.4					
BZS	Buzias	50.28 303	⇓P	P	12 56 22.3	-0.9
BZS	Buzias	50.28 303	P	P	12 56 25.1	+1.9
BZS	Buzias	50.28 303	⇓iP	P	12 56 22.3	-0.9
NIE	Niedzica	50.33 308	eP	P	12 56 24.6	+1.1
KECS	Kecovo	50.40 307	eP	P	12 56 24.4	+0.3
KECS			pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4					
KECS	Kecovo	50.40 307	eP	P	12 56 24.4	+0.3
	comp=Z,3.8nm,1.0s,mb4.4					
KECS	Kecovo	50.40 307	eP	P	12 56 24.4	+0.3
PETK	Petropavlovsk-	50.42 47	P	P	12 56 25.3	+1.1
	comp=Z,5.4nm,0.8s,mb4.6,baz=267,slow=3.0,SNR=7.9					
PETK			LR	LR	13 19 21.7	
	comp=Z,2μm,18.3s,MS5.1,baz=273,slow=38					
PETK	Petropavlovsk-	50.42 47	P	P	12 56 25.3	+1.1
PETK			pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6					
PETK			MLR	MLR		
	comp=Z,2μm,18.3s,MS5.1					
OJC	Ojcow	50.50 309	eP	P	12 56 22.5	-2.3
OJC			ePP	PP	12 58 17.6	-2.8
OJC			eS	S	13 03 32.8	-5.5
OJC			L		13 19 31.1	
	comp=Z,3.6nm,20.1s					
MSEY	Mahe Island	50.67 224	PFAKE		12 56 40.0	+14
MSEY			LR	LR		
	comp=Z,1μm,22.0s,MS4.9					
VAY	Valandovo	50.71 297	eP	P	12 56 28.8	+2.2
IDI	Anoyia	50.87 289	P	P	12 56 27.9	0.0
	comp=Z,9.3nm,1.0s,mb4.7,baz=52,slow=12,SNR=3.2					
PSZ	Piszkesteto	50.91 306	eP	P	12 56 28.8	+0.8
PSZ			pmax	pmax		
	comp=Z,20nm,1.3s,mb4.9					
PSZ			MLR	MLR		
	comp=Z,3μm,19.0s,MS5.2					
PSZ	Piszkesteto	50.91 306	eP	P	12 56 28.8	+0.8
	comp=Z,20nm,1.3s,mb4.9					
PSZ			LR	LR		
	comp=Z,3μm,19.0s,MS5.2					
PSZ	Piszkesteto	50.91 306	⇓eP	P	12 56 28.4	+0.4
PET	Petropavlovsk	51.01 47	eP	P	12 56 25.9	-2.7
PET			eS	S	13 03 37.5	-7.7
PET			eSS	SS	13 07 21.8	+2.0
PET			pmax	pmax		
	comp=Z,100nm,18.2s					
PET			MLR	MLR		
	comp=Z,2μm,12.0s,MS5.3					
PET			MLR	MLR		
	comp=Z,2μm,13.0s					
SKO	Skopje	51.34 299	eP	P	12 56 34.0	+2.7
VYHS	Vyhne	51.47 307	eP	P	12 56 33.0	+0.8
VYHS			pmax	pmax		
	comp=Z,20nm,1.4s,mb4.8					
VYHS	Vyhne	51.47 307	eP	P	12 56 33.0	+0.8
	comp=Z,20nm,1.4s,mb4.8					
VYHS	Vyhne	51.47 307	eP	P	12 56 33.0	+0.8
GKP	Gorka Klasztor	51.51 313	eP	P	12 56 32.5	+0.2
GKP			epP	pP	12 56 36.4	-0.2
GKP			LMZ		13 19 57.8	
	comp=Z,4μm,19.4s					
OKC	Ostrava-Krasne	51.62 309	eP	P	12 56 33.6	+0.3
OKC			eS	S	13 03 58.4	+4.6
OKC			MLR	MLR		
	comp=Z,2μm,14.2s,MS5.3					
OKC	Ostrava-Krasne	51.62 309	eP	P	12 56 33.6	+0.3
OKC			eS	S	13 03 58.4	+4.6
OKC			eSS	SS	13 07 41.2	+12
OKC			AMS	AMS	13 20 10.0	
	comp=Z,2μm,14.2s					
MORC	Moravsky Berou	52.02 309	eP	P	12 56 35.8	-0.4
MORC			pmax	pmax		
	comp=Z,35nm,1.4s,mb5.1					
MORC	Moravsky Berou	52.02 309	eP	P	12 56 35.8	-0.4
	comp=Z,35nm,1.4s,mb5.1					
MORC	Moravsky Berou	52.02 309	⇑iP	P	12 56 36.1	-0.1
STOK	Stokkvaagen	52.08 330	eP	P	12 56 37.0	+0.6
PKSM	Moragy	52.15 304	⇑P	P	12 56 35.9	-1.3
PKSM	Moragy	52.15 304	⇑iP	P	12 56 35.9	-1.3
HFS	Hagfors	52.37 322	P	P	12 56 38.1	-0.6
	comp=Z,60nm,1.0s,mb5.5,baz=90,slow=7.7,SNR=46					
HFS	Hagfors	52.37 322	P	P	12 56 38.1	-0.6
HFS			pmax	pmax		
	comp=Z,60nm,1.0s					
BSD	Bornholm Skovb	52.52 316	i P	P	12 56 38.0	-1.9
	comp=Z,21nm,1.0s,mb5.0					
BSD						
	comp=Z,1μm,22.0s					
KSP	Ksiaz	52.56 311	eP	P	12 56 41.0	+0.8
KSP			epP	pP	12 56 46.2	+1.7
KSP			eS	S	13 04 07.6	+1.0
KSP			LMZ		13 20 37.5	
	comp=Z,4μm,22.5s					
KSP	Ksiaz	52.56 311	eP	P	12 56 40.0	-0.3
KSP			eS	S	13 04 05.5	-1.2
KSP			eSS	SS	13 07 40.0	-4.4
KSP			MLR	MLR		
	comp=Z,4μm,22.5s,MS5.4					
KBS	Kingsbay	52.63 346	e	S	13 04 16.3	+9.4
KBS			AMS	AMS	13 23 53.8	
	comp=Z,2μm,16.1s,MS5.3					
KBS	Kingsbay	52.63 346	PFAKE		12 56 50.0	+10
KBS			LR	LR		
	comp=Z,2μm,21.0s,MS5.2					
DPC	Dobruska-Polom	52.65 310	eP	P	12 56 41.7	+0.8
DPC			eS	S	13 04 09.1	+1.2
DPC			MLR	MLR		
	comp=Z,3μm,22.0s,MS5.3					
DPC	Dobruska-Polom	52.65 310	eP	P	12 56 41.7	+0.8
DPC			eS	S	13 04 09.1	+1.2
DPC			eSS	SS	13 07 52.4	+6.5
DPC			AMS	AMS	13 20 30.0	
	comp=Z,3μm,22.0s					
NSS	Namsos	52.66 328	eP	P	12 56 39.0	-1.8
NSS			AMS	AMS	13 20 33.4	
	comp=Z,4μm,19.6s,MS5.4					
NSS	Namsos	52.66 328	eP	P	12 56 38.7	-2.1
NSS			LR	LR		
	comp=Z,4μm,19.6s,MS5.4					
ZST	Bratislava	52.67 307	eP	P	12 56 41.1	0.0
ZST			pmax	pmax		
	comp=Z,17nm,1.7s,mb4.7					
ZST	Bratislava	52.67 307	eP	P	12 56 41.1	0.0
	comp=Z,17nm,1.7s,mb4.7					
ZST	Bratislava	52.67 307	eP	P	12 56 41.1	0.0
VRAC	Vranov	52.73 309	P	P	12 56 41.4	-0.1
	comp=Z,7.8nm,0.8s,mb4.7,baz=58,slow=8.3,SNR=17					
VRAC	Vranov	52.73 309	P	P	12 56 41.4	-0.1
VRAC			pmax	pmax		
	comp=Z,8.0nm,0.8s					
VRAC	Vranov	52.73 309	⇑iP	P	12 56 41.7	+0.2
UPC	Upice	52.81 310	eP	P	12 56 42.7	+0.6
UPC	Upice	52.81 310	eP	P	12 56 42.7	+0.6
BILL	Bilibino	52.93 27	⇑iP	P	12 56 44.7	+2.0
BILL			e		12 57 55.0	
BILL			eS	S	13 04 18.5	+7.3
BILL			pmax	pmax		
	comp=Z,32nm,1.0s,mb5.2					
BILL			MLR	MLR		
	comp=Z,3μm,17.0s,MS5.5					
BILL	Bilibino	52.93 27	eP	P	12 56 44.5	+1.7
	comp=Z,31nm,1.1s,mb5.2					
BILL			LR	LR		
	comp=Z,3μm,20.0s,MS5.4					
TREC	Trest	53.43 309	eP	P	12 56 50.7	+4.0
TREC			eS	S	13 04 23.5	+5.0
TREC			MLR	MLR		
	comp=Z,2μm,15.7s,MS5.3					
TREC	Trest	53.43 309	eP	P	12 56 50.7	+4.0
TREC			eS	S	13 04 23.5	+5.0
TREC			ex	x	13 08 11.6	
TREC			AMS	AMS	13 23 30.0	
	comp=Z,2μm,15.7s					
NB2	NORSAR Subarra	53.45 324	P	P	12 56 45.8	-0.9
	comp=Z,43nm,0.8s,mb5.4,baz=80,slow=7.4					
NOA	NORSAR Array B	53.45 324	P	P	12 56 45.6	-1.1
	comp=Z,33nm,0.8s,mb5.3,baz=82,slow=7.3,SNR=93					
NOA			LR	LR	13 20 59.6	
	comp=Z,1μm,18.0s,MS5.1,baz=75,slow=38					
NOA	NORSAR Array B	53.45 324	P	P	12 56 45.6	-1.1
NOA			pmax	pmax		
	comp=Z,33nm,0.8s					
NOA			MLR	MLR		
	comp=Z,1μm,18.0s					
CONA	Conrad Observa	53.54 307	i P	P	12 56 47.9	+0.4
	comp=Z,32nm,1.2s,mb5.1,SNR=19					
NAO01	NORSAR Array S	53.64 324	eP	P	12 56 47.3	-0.8
	comp=Z,41nm,0.9s,mb5.4					
NAO01			LR	LR		
	comp=Z,1μm,19.0s,MS5.0					
KOGS	Kog	53.68 305	eP	P	12 56 49.1	+0.6
PVCC	Panska Ves	53.70 310	eP	P	12 56 50.2	+1.5
PVCC			MLR	MLR		
	comp=Z,2μm,21.0s,MS5.1					
PVCC	Panska Ves	53.70 310	eP	P	12 56 50.2	+1.5
PVCC			AMS	AMS	13 20 40.0	
	comp=Z,2μm,21.0s					
COP	Copenhagen	53.79 317	i P	P	12 56 48.1	-1.2
	comp=Z,24nm,1.0s,mb5.1					
COP						
	comp=Z,870nm,18.0s					
PRU	Pruhonice	53.85 310	eP	P	12 56 50.4	+0.6
PRU			eS	S	13 04 25.8	+1.6
PRU			MLR	MLR		
	comp=Z,3μm,19.2s,MS5.3					
PRU	Pruhonice	53.85 310	eP	P	12 56 50.4	+0.6
PRU			eS	S	13 04 25.8	+1.6
PRU			eSS	SS	13 08 19.5	+15
PRU			AMS	AMS	13 21 00.0	
	comp=Z,3μm,19.2s					
PRA	Prague	53.90 310	P	P	12 56 51.0	+0.9
ARSA	Arzberg	53.94 306	i P	P	12 56 51.3	+0.8
	comp=Z,16nm,1.4s,mb4.8,SNR=12					
BRG	Berggiesshubel	54.00 311	eP	P	12 56 50.5	-0.4
	comp=Z,30nm,1.4s,mb5.0					
BRG	Berggiesshubel	54.00 311	i P	P	12 56 50.8	0.0
	comp=Z,31nm,1.4s,mb5.0					
BRG			i		12 57 07.0	
BRG			S	S	13 04 29.0	+2.8
BRG						
	comp=N,2μm,14.8s					
BRG						
	comp=E,2μm,14.8s					
BRG						
	comp=Z,1μm,16.5s					
SOKA	Soboth	54.42 306	⇓iP	P	12 56 54.0	0.0
	comp=Z,31nm,1.4s,mb5.1					
CLL	Collm	54.47 312	eP	P	12 56 53.5	-0.7
	comp=Z,32nm,1.3s,mb5.1					
CLL	Collm	54.47 312	⇓iP	P	12 56 54.0	-0.2
CLL			i		12 57 00.1	
CLL			eS	S	13 04 35.0	+2.5
CLL			pmax	pmax		
	comp=Z,33nm,1.3s,mb5.1					
CLL			MLR	MLR		
	comp=Z,2μm,18.9s,MS5.3					
CLL	Collm	54.47 312	⇓iP	P	12 56 54.0	-0.2
	comp=Z,33nm,1.3s,mb5.1					
CLL			i (sP)	sP	12 57 00.1	0.0
CLL			ePP	PP	12 58 56.0	-0.2
CLL			ePPP		13 00 00.0	
CLL			eS	S	13 04 35.0	+2.5
CLL			eSS	SS	13 08 24.0	+10
CLL			LmH		13 18 00.0	
	comp=N,4μm,18.2s					
CLL			LmH		13 18 00.0	
	comp=E,1μm,20.3s					
CLL			LmV		13 23 00.0	
	comp=Z,2μm,18.9s					
KONO	Kongsberg	54.49 322	eP	P	12 56 55.7	+1.4
KONO			eS	S	13 04 31.8	-0.7
KONO			eSS	SS	13 08 17.6	+3.1
KONO			AMS	AMS	13 21 08.2	
	comp=Z,2μm,12.5s,MS5.3					
KONO	Kongsberg	54.49 322	eP	P	12 56 54.1	-0.2
KONO			pmax	pmax		
	comp=Z,86nm,1.4s,mb5.5					
KONO			MLR	MLR		
	comp=Z,1μm,21.0s,MS5.0					
KONO	Kongsberg	54.49 322	eP	P	12 56 54.1	-0.2
	comp=Z,86nm,1.4s,mb5.5					
KONO			LR	LR		
	comp=Z,1μm,21.0s,MS5.0					
MOA	Molln	54.59 307	⇑iP	P	12 56 56.1	+0.9
	comp=Z,14nm,1.2s,mb4.9,SNR=6.6					
BOJS	Bojanci	54.62 304	eP	P	12 56 55.0	-0.4
GEC2	GERESS Array S	54.68 309	eP	P	12 56 55.8	0.0
	comp=Z,49nm,1.5s,mb5.3					
KHC	Kasperske Hory	54.68 309	eP	P	12 56 56.2	+0.4
KHC			e	pP	12 57 01.5	+1.4
KHC			eS	S	13 04 34.1	-1.3
KHC			MLR	MLR		
	comp=Z,2μm,16.0s,MS5.4					
KHC	Kasperske Hory	54.68 309	eP	P	12 56 56.1	+0.3
	comp=Z,41nm,1.7s,mb5.2					
KHC	Kasperske Hory	54.68 309	eP	P	12 56 56.2	+0.4
KHC			epP	pP	12 57 01.5	+1.4
KHC			eS	S	13 04 34.1	-1.3
KHC			eSS	SS	13 08 24.1	+6.2
KHC			AMS	AMS	13 23 50.0	
	comp=Z,2μm,16.0s					
MOL	Molde	54.90 326	AMS	AMS	13 22 02.5	
	comp=Z,4μm,20.2s,MS5.5					
TANN	Tannenbergstha	55.03 311	eP	P	12 56 58.0	-0.3
	comp=Z,31nm,1.4s,mb5.2					
GUMO	Guam	55.05 99	PFAKE		12 57 10.0	+11
GUMO			LR	LR		
	comp=Z,859nm,19.0s,MS4.8					
NKC	Novy Kostel	55.09 311	eP	P	12 57 00.6	+1.8
NKC			MLR	MLR		
	comp=Z,3μm,19.0s,MS5.3					
NKC	Novy Kostel	55.09 311	eP	P	12 57 00.6	+1.8
NKC			AMS	AMS	13 20 50.0	
	comp=Z,3μm,19.0s					
WET	Wettzell	55.12 309	eP	P	12 56 58.9	-0.1
	comp=Z,31nm,1.5s,mb5.1					
KNDS	Knezji Dol	55.20 305	eP	P	12 57 00.6	+1.0
KNDS			eS	S	13 04 46.4	+4.0
KNDS			e		13 09 14.7	
BSEG	Bad Segeberg	55.39 315	eP	P	12 57 00.9	0.0
	comp=Z,44nm,1.2s,mb5.4					
MUD	Monsted U'grnd	55.41 319	i P	P	12 57 02.7	+1.8
	comp=Z,23nm,1.0s,mb5.2					
MUD						
	comp=Z,2μm,18.0s					
CADS	Cadrg	55.41 306	eP	P	12 56 59.6	-1.5
MOX	Moxa	55.49 311	eP	P	12 57 02.6	+1.0
	comp=Z,39nm,1.6s,mb5.2					
MOX			eS	S	13 04 52.0	+5.8
MOX						
	comp=Z,2μm,19.0s					
MOX	Moxa	55.49 311	eP	P	12 57 01.2	-0.4
	comp=Z,26nm,1.3s,mb5.1					
TRI	Trieste	55.55 305	eP	P	12 57 01.9	-0.3
TRI			pmax	pmax		
	comp=Z,26nm,1.0s,mb5.2					
TRI	Trieste	55.55 305	eP	P	12 57 01.9	-0.3
	comp=Z,26nm,1.0s,mb5.2					
RJOB	Jochberg	55.58 308	eP	P	12 57 02.1	-0.2
	comp=Z,25nm,1.6s,mb5.0					
NRDL	Niedersach Rie	55.89 314	eP	P	12 57 04.4	-0.1
	comp=Z,72nm,1.3s,mb5.5					
CLZ	Clausthal	55.91 313	eP	P	12 57 04.3	-0.3
	comp=Z,41nm,1.1s,mb5.4					
GRF	Grafenberg Arr	56.00 310	eP	P	12 57 05.4	+0.1
	comp=Z,69nm,1.4s,mb5.5					
GRF			eS	S	13 04 49.6	-3.5
GRF			eL		13 23 00.3	
	comp=Z,3μm,20.9s					
GRF	Grafenberg Arr	56.00 310	eP	P	12 57 05.4	+0.1
GRF			eS	S	13 04 49.6	-3.5
GRF			pmax	pmax		
	comp=Z,69nm,1.4s,mb5.5					
GRF			MLR	MLR		
	comp=Z,3μm,20.9s,MS5.4					
CUC	Castrocucco	56.01 298	eP	P	12 57 05.5	0.0
	comp=Z,16nm,0.9s,mb5.1					
FOO	Floro	56.26 325	eS	S	13 04 58.7	+2.5
FOO			AMS	AMS	13 22 42.8	
	comp=Z,4μm,14.6s,MS5.6					
BER	Bergen	56.42 324	eS	S	13 04 59.1	+0.8
BER			e		13 05 06.7	
BER			eSS	SS	13 08 46.1	+1.4
BER			AMS	AMS	13 23 24.1	
	comp=Z,2μm,13.6s,MS5.4					
FUR	Furstenfeldbru	56.42 308	eP	P	12 57 08.5	+0.1
	comp=Z,88nm,1.7s,mb5.5					
UBBA	Unterbreizbach	56.42 312	eP	P	12 57 07.6	-0.7
	comp=Z,28nm,1.5s,mb5.1					
WTTA	Wattenberg	56.47 307	⇑iP	P	12 57 08.7	0.0
	comp=Z,28nm,1.3s,mb5.1,SNR=9.9					
CEL	Celeste	56.57 296	eP	P	12 57 09.6	0.0
	comp=Z,30nm,1.1s,mb5.2					
MOTA	Moosalm	56.79 308	⇓iP	P	12 57 11.7	+0.8
	comp=Z,25nm,1.0s,mb5.2,SNR=8.4					
AQU	L'Aquila	56.89 301	eP	P	12 57 12.9	+1.1
AQU			pmax	pmax		
	comp=Z,22nm,0.9s,mb5.2					
AQU			MLR	MLR		
	comp=Z,2μm,21.0s,MS5.2					
AQU	L'Aquila	56.89 301	eP	P	12 57 12.9	+1.1
	comp=Z,22nm,0.9s,mb5.2					
AQU			LR	LR		
	comp=Z,2μm,21.0s,MS5.2					
RETA	Reutte	56.96 308	⇓iP	P	12 57 12.7	+0.5
	comp=Z,39nm,1.5s,mb5.2,SNR=13					
FETA	Feichten	57.13 307	⇑iP	P	12 57 13.4	0.0
	comp=Z,27nm,1.7s,mb5.0,SNR=8.5					
IBBN	Ibbenburen	57.32 314	eP	P	12 57 14.2	-0.5
	comp=Z,32nm,1.3s,mb5.2					
TOD	Tromm	57.53 311	eP	P	12 57 15.4	-0.8
STU	Stuttgart	57.55 310	e

comp=Z,52nm,1.4s,mb5.4
STU Stuttgart 57.55 310 *e*P **P 12 57 15.8 -0.5**
STU pmax pmax
comp=Z,24nm,1.1s,mb5.1
STU Stuttgart 57.55 310 *e*P **P 12 57 15.8 -0.5**
comp=Z,24nm,1.1s,mb5.1
TNS Taunus Mts 57.55 311 *e*P **P 12 57 15.9 -0.4**
comp=Z,31nm,1.2s,mb5.2
DAVA Damuels 57.59 308 ⇑*i*P **P 12 57 17.6 +0.9**
comp=Z,24nm,1.2s,mb5.1,SNR=9.9
DAVOX Davos/Dischmat 57.76 307 P **P 12 57 18.5 +0.6**
comp=Z,8.2nm,1.0s,mb4.7,baz=81,slow=5.3,SNR=14
WTSB Winterswijk 57.99 314 *e*P **P 12 57 19.4 0.0**
comp=Z,37nm,1.4s,mb5.2
SPAK Spaichingen-Ko 58.02 309 *e*P **P 12 57 20.5 +0.8**
TUE Stuetta 58.21 307 *e*P **P 12 57 21.1 +0.1**
comp=Z,17nm,1.0s,mb5.0
BFO Black Forest 58.24 309 P **P 12 57 22.7 +1.5**
comp=Z,81nm,1.2s,mb5.6,SNR=7.3
BFO Black Forest 58.24 309 *e*P **P 12 57 20.4 -0.8**
comp=Z,32nm,1.4s,mb5.2
BFO Black Forest 58.24 309 *e*P **P 12 57 20.4 -0.8**
BFO pmax pmax
comp=Z,29nm,1.3s,mb5.2
BFO MLR MLR
comp=Z,2μm,19.0s,MS5.3
BFO Black Forest 58.24 309 *e*P **P 12 57 20.4 -0.7**
comp=Z,28nm,1.3s,mb5.1
BFO LR LR
comp=Z,2μm,19.0s,MS5.3
LANF Langenberg 58.35 310 *e*P **P 12 57 22.7 +0.8**
FELD Feldberg im Sc 58.59 309 *e*P **P 12 57 24.4 +0.7**
CDF Champ du Feu 58.87 310 *e*P **P 12 57 24.6 -1.0**
comp=Z,67nm,1.3s,mb5.2
CDF Champ du Feu 58.87 310 *e*P **P 12 57 24.6 -1.0**
CDF pmax pmax
comp=Z,33nm,1.3s,mb5.2
CDF Champ du Feu 58.87 310 *e*P **P 12 57 24.6 -1.0**
comp=Z,33nm,1.3s,mb5.2
JMIC Jan Mayen 58.88 338 AMS AMS 13 23 31.7
comp=Z,1μm,16.9s,MS5.2
HGN Heimansgroeve 58.90 313 *e*P **P 12 57 25.3 -0.5**
comp=Z,20nm,1.8s,mb4.8
MEM Membach 58.90 312 P **P 12 57 27.3 +1.6**
comp=Z,14nm,1.4s,mb4.8
ECH Echery 59.01 310 *e*P **P 12 57 27.1 +0.5**
ECH Echery 59.01 310 *e*P **P 12 57 26.8 +0.2**
ECH pmax pmax
comp=Z,19nm,1.1s,mb5.0
ECH MLR MLR
comp=Z,2μm,20.0s,MS5.2
ECH Echery 59.01 310 *e*P **P 12 57 26.8 +0.3**
comp=Z,19nm,1.1s,mb5.0
ECH LR LR
comp=Z,2μm,20.0s,MS5.2
WLF Walferdange 59.13 311 P **P 12 57 27.7 +0.3**
comp=Z,21nm,1.8s,mb4.9
WLF Walferdange 59.13 311 *e*P **P 12 57 27.4 0.0**
comp=Z,31nm,1.2s,mb5.2
WLF Walferdange 59.13 311 *e*P **P 12 57 28.1 +0.7**
WLF pmax pmax
comp=Z,25nm,1.1s,mb5.2
WLF Walferdange 59.13 311 *e*P **P 12 57 28.1 +0.7**
comp=Z,25nm,1.1s,mb5.2
MOF Molkenrain 59.15 309 *e*P **P 12 57 28.5 +0.9**
DAG Danmarks Havn 59.30 345 *i*P **P 12 57 28.0 -0.2**
HINF Hinteralfeld 59.34 309 *e*P **P 12 57 27.8 -1.1**
comp=Z,88nm,1.5s,mb5.3
HINF Hinteralfeld 59.34 309 *e*P **P 12 57 27.8 -1.1**
HINF pmax pmax
comp=Z,44nm,1.5s,mb5.3
HINF Hinteralfeld 59.34 309 *e*P **P 12 57 27.8 -1.1**
comp=Z,44nm,1.5s,mb5.3
BCLA Clavier 59.39 312 P **P 12 57 30.8 +1.6**
comp=Z,12nm,1.3s,mb4.8
LOMF Lomont 59.52 309 *e*P **P 12 57 30.7 +0.6**
HAU Haudompre 59.59 310 *e*P **P 12 57 29.3 -1.3**
comp=Z,45nm,1.4s,mb5.0
HAU *e*MLR MLR
comp=Z,3μm,20.2s,MS5.1
HAU Haudompre 59.59 310 *e*P **P 12 57 29.3 -1.3**
HAU pmax pmax
comp=Z,23nm,1.4s,mb5.0
HAU MLR MLR
comp=Z,3μm,20.3s,MS5.4
HAU Haudompre 59.59 310 *e*P **P 12 57 29.3 -1.3**
comp=Z,22nm,1.4s,mb5.0
HAU LR LR
comp=Z,3μm,20.3s,MS5.4
GIVF Givet 59.79 312 *e*P **P 12 57 31.2 -0.7**
comp=Z,118nm,1.4s,mb5.4
GIVF Givet 59.79 312 *e*P **P 12 57 31.2 -0.7**
GIVF pmax pmax
comp=Z,59nm,1.4s,mb5.4
GIVF Givet 59.79 312 *e*P **P 12 57 31.2 -0.7**
comp=Z,59nm,1.4s,mb5.4
PGF Pioggiola 59.86 303 *e*P **P 12 57 31.3 -1.2**
comp=Z,31nm,1.2s,mb4.9
PGF Pioggiola 59.86 303 *e*P **P 12 57 31.3 -1.2**
PGF pmax pmax
comp=Z,15nm,1.2s,mb4.9
PGF Pioggiola 59.86 303 *e*P **P 12 57 31.3 -1.2**
comp=Z,15nm,1.2s,mb4.9
DOU Dourbes 59.93 312 P **P 12 57 34.4 +1.5**
SNF Seneffe 59.97 313 P **P 12 57 33.3 +0.2**
comp=Z,12nm,1.6s,mb4.7
KMBO Kilima Mbogo 60.06 244 *e*P **P 12 57 33.1 -1.2**
KMBO pmax pmax
comp=Z,56nm,1.8s
KMBO MLR MLR
comp=Z,868nm,21.0s
KMBO Kilima Mbogo 60.06 244 *e*P **P 12 57 33.1 -1.2**
comp=Z,56nm,1.8s,mb5.3
KMBO LR LR
comp=Z,868nm,21.0s,MS4.9
BAIF Baives 60.17 312 *e*P **P 12 57 33.9 -0.6**
comp=Z,90nm,1.5s,mb5.3
BAIF Baives 60.17 312 *e*P **P 12 57 33.9 -0.6**
BAIF pmax pmax
comp=Z,45nm,1.5s,mb5.3
BAIF Baives 60.17 312 *e*P **P 12 57 33.9 -0.6**
comp=Z,45nm,1.5s,mb5.3
MEZF Maizieres J'vi 60.22 310 *e*P **P 12 57 34.3 -0.6**
comp=Z,134nm,1.5s,mb5.4
MEZF Maizieres J'vi 60.22 310 *e*P **P 12 57 34.3 -0.6**
comp=Z,134nm,1.5s,mb5.8
LPG La Plagne 60.25 307 *e*P **P 12 57 34.9 -0.3**
comp=Z,86nm,1.1s,mb5.4
LPG La Plagne 60.25 307 *e*P **P 12 57 34.9 -0.3**
LPG pmax pmax
comp=Z,44nm,1.1s,mb5.4
LPG La Plagne 60.25 307 *e*P **P 12 57 34.9 -0.3**
comp=Z,44nm,1.1s,mb5.4
LPL La Plagne 60.26 307 *e*P **P 12 57 34.9 -0.3**
comp=Z,116nm,1.2s,mb5.5
LPL La Plagne 60.26 307 *e*P **P 12 57 34.9 -0.3**
LPL pmax pmax
comp=Z,58nm,1.2s,mb5.5
LPL La Plagne 60.26 307 *e*P **P 12 57 34.9 -0.3**
comp=Z,58nm,1.2s,mb5.5
CABF La Chapelle 60.27 308 *e*P **P 12 57 34.0 -1.2**
comp=Z,53nm,1.4s,mb5.1
CABF La Chapelle 60.27 308 *e*P **P 12 57 34.0 -1.2**
CABF pmax pmax
comp=Z,26nm,1.4s,mb5.1
CABF La Chapelle 60.27 308 *e*P **P 12 57 34.0 -1.2**
comp=Z,26nm,1.4s,mb5.1
SAOF Saorge 60.29 305 *e*P **P 12 57 36.1 +0.7**
AUTN L'Aution 60.37 305 *e*P **P 12 57 37.1 +1.1**
SBF Sospel 60.42 305 *e*P **P 12 57 35.1 -1.2**
comp=Z,71nm,0.9s,mb5.4
SBF Sospel 60.42 305 *e*P **P 12 57 35.1 -1.2**
SBF pmax pmax
comp=Z,36nm,0.9s,mb5.4
SBF Sospel 60.42 305 *e*P **P 12 57 35.1 -1.2**
comp=Z,36nm,0.9s,mb5.4
BNI Bardonecchia 60.47 306 *e*P **P 12 57 36.4 -0.2**
BNI pmax pmax
comp=Z,23nm,1.1s,mb5.1
BNI MLR MLR
comp=Z,1μm,22.0s,MS5.0
BNI Bardonecchia 60.47 306 *e*P **P 12 57 36.4 -0.2**
comp=Z,23nm,1.1s,mb5.1
BNI LR LR
comp=Z,1μm,22.0s,MS5.0
TOUF Mont Tournerai 60.48 305 *e*P **P 12 57 37.9 +1.1**
MBDF Montbardon 60.53 306 *e*P **P 12 57 35.4 -1.7**
comp=Z,25nm,0.9s,mb5.0
MBDF Montbardon 60.53 306 *e*P **P 12 57 35.4 -1.7**
MBDF pmax pmax
comp=Z,13nm,0.9s,mb5.1
MBDF Montbardon 60.53 306 *e*P **P 12 57 35.4 -1.7**
comp=Z,13nm,0.9s,mb5.0
MVIF Mont Vial 60.59 305 *e*P **P 12 57 38.2 +0.7**
ORIF Oris-en-Rattie 61.04 306 *e*P **P 12 57 39.1 -1.5**
comp=Z,36nm,1.0s,mb5.2
ORIF *e*MLR MLR
comp=Z,2μm,22.2s,MS5.0
ORIF Oris-en-Rattie 61.04 306 *e*P **P 12 57 39.1 -1.5**
ORIF pmax pmax
comp=Z,18nm,1.0s,mb5.2
ORIF Oris-en-Rattie 61.04 306 *e*P **P 12 57 39.1 -1.5**
comp=Z,18nm,1.0s,mb5.2
FRF La Foret Royal 61.06 305 *e*P **P 12 57 39.2 -1.5**
comp=Z,40nm,1.4s,mb5.1
FRF La Foret Royal 61.06 305 *e*P **P 12 57 39.2 -1.5**
FRF pmax pmax
comp=Z,20nm,1.4s,mb5.0
FRF La Foret Royal 61.06 305 *e*P **P 12 57 39.2 -1.5**
comp=Z,20nm,1.4s,mb5.0
LMR La Mourre 61.24 305 *e*P **P 12 57 40.6 -1.3**
comp=Z,49nm,1.3s,mb5.2
LMR La Mourre 61.24 305 *e*P **P 12 57 40.6 -1.3**
LMR pmax pmax
comp=Z,25nm,1.3s,mb5.2
LMR La Mourre 61.24 305 *e*P **P 12 57 40.6 -1.3**
comp=Z,25nm,1.3s,mb5.2
LOR Lormes 61.43 309 *e*P **P 12 57 41.4 -1.7**
comp=Z,48nm,1.3s,mb5.2
LOR *e*MLR MLR
comp=Z,2μm,20.8s,MS5.0
LOR Lormes 61.43 309 *e*P **P 12 57 41.4 -1.7**
LOR pmax pmax
comp=Z,24nm,1.3s,mb5.2
LOR MLR MLR
comp=Z,2μm,20.8s,MS5.3
LOR Lormes 61.43 309 *e*P **P 12 57 41.4 -1.7**
comp=Z,24nm,1.3s,mb5.2
LOR LR LR
comp=Z,2μm,20.8s,MS5.3
SMRF Simiane la Rot 61.61 305 *e*P **P 12 57 43.5 -0.9**
comp=Z,64nm,1.7s,mb5.2
SMRF Simiane la Rot 61.61 305 *e*P **P 12 57 43.5 -0.9**
comp=Z,64nm,1.7s,mb5.5
SMF Signal de Mont 61.68 309 *e*P **P 12 57 43.5 -1.4**
comp=Z,71nm,1.1s,mb5.4
SMF Signal de Mont 61.68 309 *e*P **P 12 57 43.5 -1.4**
SMF pmax pmax
comp=Z,36nm,1.1s,mb5.4
SMF Signal de Mont 61.68 309 *e*P **P 12 57 43.5 -1.4**
comp=Z,36nm,1.1s,mb5.4
SSF Saint Saulge 61.73 309 *e*P **P 12 57 43.7 -1.5**
comp=Z,36nm,1.1s,mb5.1
SSF Saint Saulge 61.73 309 *e*P **P 12 57 43.7 -1.5**
SSF pmax pmax
comp=Z,18nm,1.1s,mb5.1
SSF Saint Saulge 61.73 309 *e*P **P 12 57 43.7 -1.5**
comp=Z,18nm,1.1s,mb5.1
SSB Saint Sauveur 61.77 307 *e*P **P 12 57 45.6 +0.1**
SSB pmax pmax
comp=Z,11nm,1.2s,mb4.9
SSB Saint Sauveur 61.77 307 *e*P **P 12 57 45.6 +0.1**
comp=Z,11nm,1.2s,mb4.9
VIVF Saint-Julien-l 61.85 307 *e*P **P 12 57 44.9 -1.2**
comp=Z,41nm,1.2s,mb5.1
VIVF Saint-Julien-l 61.85 307 *e*P **P 12 57 44.9 -1.2**
VIVF pmax pmax
comp=Z,20nm,1.2s,mb5.1
VIVF Saint-Julien-l 61.85 307 *e*P **P 12 57 44.9 -1.2**
comp=Z,20nm,1.2s,mb5.1
AVF Avril sur Loir 61.94 309 *e*P **P 12 57 45.2 -1.4**
comp=Z,66nm,1.2s,mb5.3
AVF Avril sur Loir 61.94 309 *e*P **P 12 57 45.2 -1.4**
AVF pmax pmax
comp=Z,33nm,1.2s,mb5.3
AVF Avril sur Loir 61.94 309 *e*P **P 12 57 45.2 -1.4**
comp=Z,33nm,1.2s,mb5.3
PLDF La Plantade 62.09 308 *e*P **P 12 57 47.8 +0.2**
EKA Eskdalemuir Ar 62.34 320 P **P 12 57 48.4 -0.7**
comp=Z,4.7nm,1.0s,mb4.6,baz=66,slow=7.1,SNR=11
ESK Eskdalemuir 62.37 320 PFAKE 12 58 00.0 +11
ESK LR LR
comp=Z,2μm,19.0s,MS5.3
AGO Saint Agoulin 62.37 308 *e*P **P 12 57 50.8 +1.3**
KEST Kesra 62.38 296 P **P 12 57 50.0 +0.2**
comp=Z,2.8nm,1.2s,mb4.3,baz=167,slow=5.7,SNR=5.0
KEST LR LR 13 29 55.2
comp=Z,440nm,19.8s,MS4.6,baz=182,slow=41
KEST Kesra 62.38 296 *e*P **P 12 57 52.3 +2.6**
KEST 12 58 03.6
PYM Petit Puy Mans 62.57 308 *e*P **P 12 57 51.5 +0.7**
LASF Ste Croix 62.70 306 *e*P **P 12 57 50.8 -1.0**
comp=Z,66nm,1.4s,mb5.3
TCF Toulx Ste Croi 62.86 309 *e*P **P 12 57 51.8 -1.0**
comp=Z,112nm,1.3s,mb5.5
TCF Toulx Ste Croi 62.86 309 *e*P **P 12 57 51.8 -1.0**
TCF pmax pmax
comp=Z,56nm,1.3s,mb5.5
TCF Toulx Ste Croi 62.86 309 *e*P **P 12 57 51.8 -1.0**
comp=Z,56nm,1.3s,mb5.5
SCO Scoresbysund 63.12 339 *i*P **P 12 57 56.6 +2.5**
SCO
comp=Z,1μm,21.0s
LDF La Druitiere 63.35 312 *e*P **P 12 57 54.4 -1.6**
comp=Z,32nm,1.0s,mb5.1
LDF La Druitiere 63.35 312 *e*P **P 12 57 54.4 -1.6**
LDF pmax pmax
comp=Z,16nm,1.0s,mb5.1
LDF La Druitiere 63.35 312 *e*P **P 12 57 54.4 -1.6**
comp=Z,16nm,1.0s,mb5.1
FLN La Foliniere 63.50 312 *e*P **P 12 57 56.4 -0.6**
comp=Z,63nm,1.4s,mb5.2
FLN *e*MLR MLR
comp=Z,3μm,19.0s,MS5.1
FLN La Foliniere 63.50 312 *e*P **P 12 57 56.4 -0.6**
FLN pmax pmax
comp=Z,31nm,1.4s,mb5.2
FLN MLR MLR
comp=Z,2μm,19.0s,MS5.4
FLN La Foliniere 63.50 312 *e*P **P 12 57 56.4 -0.6**
comp=Z,32nm,1.4s,mb5.2
FLN LR LR
comp=Z,2μm,19.0s,MS5.4
CAF Calviac 63.52 308 *e*P **P 12 57 56.3 -0.8**
comp=Z,36nm,1.3s,mb4.9
CAF Calviac 63.52 308 *e*P **P 12 57 56.3 -0.8**
CAF pmax pmax
comp=Z,18nm,1.3s,mb4.9
CAF Calviac 63.52 308 *e*P **P 12 57 56.3 -0.8**
comp=Z,18nm,1.3s,mb4.9
KAKA Kakadu 63.65 131 *e*P **P 12 57 58.0 -0.3**
comp=Z,14nm,1.0s,mb5.0
KAKA Kakadu 63.65 131 *e*P **P 12 57 56.0 -2.3**
comp=Z,39nm,1.0s,mb5.4
RJF Les Rejaudoux 63.71 308 *e*P **P 12 57 57.8 -0.6**
comp=Z,87nm,1.3s,mb5.3
RJF *e*MLR MLR
comp=Z,2μm,22.2s,MS4.9
RJF Les Rejaudoux 63.71 308 *e*P **P 12 57 57.8 -0.6**
RJF pmax pmax
comp=Z,43nm,1.3s,mb5.3
RJF MLR MLR
comp=Z,2μm,22.3s,MS5.2
RJF Les Rejaudoux 63.71 308 *e*P **P 12 57 57.8 -0.6**
comp=Z,44nm,1.3s,mb5.3
RJF LR LR
comp=Z,2μm,22.3s,MS5.2
KNA Kununurra 63.88 136 *e*P **P 12 57 59.6 -0.1**
comp=Z,24nm,0.9s,mb5.2
MBWA Marble Bar 63.88 147 *e*P **P 12 57 58.6 -1.0**
comp=Z,27nm,0.9s,mb5.3
MBWA LR LR
comp=Z,725nm,20.0s,MS4.9
GRR Gorron 63.88 312 *e*P **P 12 57 57.9 -1.6**
comp=Z,47nm,1.1s,mb5.1
GRR Gorron 63.88 312 *e*P **P 12 57 57.9 -1.6**
GRR pmax pmax
comp=Z,24nm,1.1s,mb5.1
GRR Gorron 63.88 312 *e*P **P 12 57 57.9 -1.6**
comp=Z,24nm,1.1s,mb5.1
MTLF Montolieu 64.09 306 *e*P **P 12 57 59.9 -1.1**
comp=Z,30nm,1.5s,mb4.8
MTLF Montolieu 64.09 306 *e*P **P 12 57 59.9 -1.1**
MTLF pmax pmax
comp=Z,15nm,1.5s,mb4.8
MTLF Montolieu 64.09 306 *e*P **P 12 57 59.9 -1.1**
comp=Z,15nm,1.5s,mb4.8
FITZ Fitzroy Crossi 64.10 140 *e*P **P 12 58 00.5 -0.7**
comp=Z,12nm,0.6s,mb5.1
FITZ Fitzroy Crossi 64.10 140 P **P 12 58 00.9 -0.3**
comp=Z,6.6nm,0.6s,mb4.9,baz=335,slow=4.0,SNR=25
FITZ LR LR 13 29 46.5
comp=Z,415nm,21.8s,MS4.6,baz=332,slow=40
FITZ Fitzroy Crossi 64.10 140 *e*P **P 12 58 00.5 -0.7**
comp=Z,42nm,1.6s,mb5.2
MFF Saint Martin d 64.21 310 *e*P **P 12 58 00.2 -1.5**
comp=Z,29nm,1.1s,mb4.9
MFF Saint Martin d 64.21 310 *e*P **P 12 58 00.2 -1.5**
MFF pmax pmax
comp=Z,15nm,1.1s,mb4.9
MFF Saint Martin d 64.21 310 *e*P **P 12 58 00.2 -1.5**
comp=Z,15nm,1.1s,mb4.9
LFF La Frestale 64.36 308 *e*P **P 12 58 01.9 -0.8**
comp=Z,60nm,1.3s,mb5.2
LFF La Frestale 64.36 308 *e*P **P 12 58 01.9 -0.8**
LFF pmax pmax
comp=Z,30nm,1.3s,mb5.2
LFF La Frestale 64.36 308 *e*P **P 12 58 01.9 -0.8**
comp=Z,30nm,1.3s,mb5.2
MBAR Mbarara 64.58 249 PFAKE 12 58 20.0 +15
MBAR LR LR
comp=Z,18μm,21.0s,MS6.2
SGMF Saint Gilles 64.97 312 *e*P **P 12 58 05.3 -1.3**
comp=Z,104nm,1.4s,mb5.4
SGMF Saint Gilles 64.97 312 *e*P **P 12 58 05.3 -1.3**
SGMF pmax pmax
comp=Z,52nm,1.4s,mb5.4
SGMF Saint Gilles 64.97 312 *e*P **P 12 58 05.3 -1.3**
comp=Z,52nm,1.4s,mb5.4
ROSF Rostrenen 65.36 313 *e*P **P 12 58 07.9 -1.2**
comp=Z,76nm,1.4s,mb5.2
ROSF Rostrenen 65.36 313 *e*P **P 12 58 07.9 -1.2**
ROSF pmax pmax
comp=Z,38nm,1.4s,mb5.2
ROSF Rostrenen 65.36 313 *e*P **P 12 58 07.9 -1.2**
comp=Z,38nm,1.4s,mb5.2
EPF Esparros 65.46 306 *e*P **P 12 58 08.0 -1.9**
comp=Z,13nm,1.1s,mb4.6
EPF Esparros 65.46 306 *e*P **P 12 58 08.0 -1.9**
EPF pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
EPF Esparros 65.46 306 *e*P **P 12 58 08.0 -1.9**
comp=Z,6.5nm,1.1s,mb4.6
QUIF Quistinic 65.48 312 *e*P **P 12 58 08.4 -1.5**
comp=Z,53nm,1.3s,mb5.1
QUIF Quistinic 65.48 312 *e*P **P 12 58 08.4 -1.5**
QUIF pmax pmax
comp=Z,27nm,1.3s,mb5.1
QUIF Quistinic 65.48 312 *e*P **P 12 58 08.4 -1.5**
comp=Z,26nm,1.3s,mb5.1
SUMG Summit 65.98 345 *e*P **P 12 58 13.2 +0.4**
comp=Z,23nm,1.3s,mb5.0
SUMG Summit 65.98 345 *i*P **P 12 58 13.0 +0.2**
comp=Z,12nm,1.0s,mb4.9
SUMG
comp=Z,2μm,20.0s
ETSF Etsaut 66.11 307 *e*P **P 12 58 13.2 -0.9**
comp=Z,34nm,1.1s,mb5.0
ETSF Etsaut 66.11 307 *e*P **P 12 58 13.2 -0.9**
ETSF pmax pmax
comp=Z,17nm,1.1s,mb5.0
ETSF Etsaut 66.11 307 *e*P **P 12 58 13.2 -0.9**
comp=Z,17nm,1.1s,mb5.0
ABPO Ambohimpanom 66.96 223 PFAKE 12 58 30.0 +10
ABPO LR LR
comp=Z,889nm,20.0s,MS5.0
COLD Coldfoot 68.27 21 *e*P **P 12 58 28.2 +0.8**
comp=Z,20nm,1.0s,mb5.1
ESDC Sonseca Array 69.90 305 P **P 12 58 37.2 -0.8**
comp=Z,6.3nm,1.1s,mb4.5,baz=53,slow=6.8,SNR=11
ESDC LR LR 13 32 15.5
comp=Z,926nm,20.3s,MS5.0,baz=25,slow=38
ESLA Sonseca Array 69.90 305 PFAKE 12 58 50.0 +12
ESLA LR LR
comp=Z,7μm,21.0s,MS5.9
BPAW Bear Paw Mtn. 70.12 24 *e*P **P 12 58 40.1 +1.2**
comp=Z,34nm,1.2s,mb5.2
WRAB Tennant Creek 70.40 134 P **P 12 58 40.6 -0.5**
comp=Z,126nm,0.9s,mb5.8,SNR=5.8
WRAB Tennant Creek 70.40 134 *e*P **P 12 58 40.3 -0.8**
WRAB pmax pmax
comp=Z,27nm,1.1s,mb5.1
WRAB Tennant Creek 70.40 134 *e*P **P 12 58 40.3 -0.8**
comp=Z,27nm,1.1s,mb5.1
WRA Warramunga Arr 70.40 134 P **P 12 58 40.8 -0.4**
comp=Z,18nm,1.0s,mb5.0,baz=327,slow=6.3,SNR=42
WRA Warramunga Arr 70.40 134 P **P 12 58 40.8 -0.4**
WRA pmax pmax
comp=Z,18nm,1.0s
SVW2 Sparrevohn 70.46 28 *e*P **P 12 58 43.9 +2.9**
PPLA Purkeypile 70.52 25 *e*P **P 12 58 42.7 +1.4**
comp=Z,105nm,1.4s,mb5.6
COLA College 70.58 22 *e*P **P 12 58 42.2 +0.5**
COLA pmax pmax
comp=Z,33nm,1.1s,mb5.2
COLA MLR MLR
comp=Z,1μm,19.0s,MS5.2
COLA College 70.58 22 *e*P **P 12 58 42.2 +0.5**
comp=Z,33nm,1.1s,mb5.2
COLA LR LR
comp=Z,1μm,19.0s,MS5.2
TRF Thorofare Moun 70.79 24 *e*P **P 12 58 43.7 +0.7**
comp=Z,8.2nm,1.0s,mb4.6
MCK McKinley 71.03 23 *e*P **P 12 58 46.5 +2.0**
MCK pmax pmax
comp=Z,12nm,1.2s,mb4.7
MCK McKinley 71.03 23 *e*P **P 12 58 46.5 +2.0**
comp=Z,12nm,1.2s,mb4.7
INK Inuvik 71.68 15 P **P 12 58 48.4 +0.1**
comp=Z,16nm,1.0s,mb4.9,baz=305,slow=6.5,SNR=14
INK Inuvik 71.68 15 P **P 12 58 48.4 +0.1**
INK pmax pmax
comp=Z,16nm,1.0s
INK Inuvik 71.68 15 *e*P **P 12 58 48.7 +0.4**
comp=Z,21nm,1.1s,mb5.0
MTE Manteigas 71.89 307 PFAKE 12 59 00.0 +10
MTE LR LR
comp=Z,1μm,22.0s,MS5.1
PMR Palmer 72.45 25 *e*P **P 12 58 53.2 +0.2**
PMR pmax pmax
comp=Z,109nm,2.0s,mb5.4
PMR MLR MLR
comp=Z,800nm,17.0s,MS5.1
PMR Palmer 72.45 25 *e*P **P 12 58 53.2 +0.2**
comp=Z,109nm,2.0s,mb5.4
PMR LR LR
comp=Z,800nm,17.0s,MS5.1
EGAK Eagle 72.61 20 *e*P **P 12 58 53.8 -0.1**
comp=Z,25nm,1.1s,mb5.1
SFJD Kangerlussuaq 72.97 344 *i*P **P 12 58 53.9 -2.1**
comp=Z,18nm,0.9s,mb5.0
SFJD
comp=Z,1μm,21.0s
ASAR Alice Springs 73.08 137 P **P 12 58 56.6 -0.6**
comp=Z,9.0nm,0.8s,mb4.7,baz=328,slow=6.3,SNR=48
ASAR Alice Springs 73.08 137 P **P 12 58 56.6 -0.6**
ASAR pmax pmax
comp=Z,9.0nm,0.9s
EVO Evora 73.19 305 *e*P **P 12 58 56.8 -1.0**
comp=Z,125nm,1.9s,mb5.2
EVO *e*MLR MLR
comp=Z,2μm,22.5s,MS4.9
SEW Seward 73.38 26 *e*P **P 12 58 58.9 +0.4**
comp=Z,49nm,1.2s,mb5.3
DAWY Dawson 73.65 20 *e*P **P 12 58 59.9 -0.2**
KDAK Kodiak Island 73.78 29 P **P 12 59 01.9 +0.9**
comp=Z,17nm,1.0s,mb4.9,baz=281,slow=4.5,SNR=8.9
KDAK Kodiak Island 73.78 29 *e*P **P 12 59 00.7 -0.3**
KDAK pmax pmax
comp=Z,45nm,1.4s,mb5.2
KDAK MLR MLR
comp=Z,2μm,20.0s,MS5.5
KDAK Kodiak Island 73.78 29 *e*P **P 12 59 00.7 -0.2**
comp=Z,45nm,1.4s,mb5.2
KDAK LR LR
comp=Z,2μm,20.0s,MS5.5
OHAK Old Harbor 73.88 30 *e*P **P 12 59 02.6 +1.1**
comp=Z,59nm,1.4s,mb5.3
OHAK LR LR
comp=Z,2μm,17.0s,MS5.5
MDT Midelt 73.90 299 P **P 12 59 03.1 +1.0**

comp=Z,1.6nm,0.9s,baz=349,slow=5.2,SNR=2.8
BMRM Bremner River 74.43 24 eP **P 12 59 05.8 +1.2**
comp=Z,41nm,1.3s,mb5.2
MTSU Mount Surprise 75.29 125 eP **P 12 59 10.2 0.0**
comp=Z,81nm,1.4s,mb5.5
LSZ Lusaka 76.23 240 eP **P 12 59 14.4 -1.2**
LSZ pmax pmax
comp=Z,18nm,0.9s,mb5.0
LSZ MLR MLR
comp=Z,976nm,20.0s,MS5.1
LSZ Lusaka 76.23 240 eP **P 12 59 14.4 -1.3**
comp=Z,18nm,0.9s,mb5.0
LSZ LR LR
comp=Z,976nm,20.0s,MS5.1
LSZ Lusaka 76.23 240 ⇓P **P 12 59 15.0 -0.7**
SNR=6.1
LSZ ⇓P 12 59 15.0
SNR=6.1
LSZ Lusaka 76.23 240 ⇓P **P 12 59 15.0 -0.7**
SNR=6.1
LSZ ⇓P 12 59 15.0
SNR=6.1
CTA Charters Tower 77.96 126 eP **P 12 59 25.3 0.0**
comp=Z,9.7nm,1.0s,mb4.7
CTA Charters Tower 77.96 126 P **P 12 59 25.4 +0.1**
comp=Z,15nm,1.1s,mb4.8,baz=270,slow=2.0,SNR=4.1
CTA Charters Tower 77.96 126 P **P 12 59 25.4 +0.1**
CTA pmax pmax
comp=Z,15nm,1.1s
CTAO Charters Tower 77.96 126 eP **P 12 59 24.3 -1.0**
CTAO pmax pmax
comp=Z,42nm,1.4s,mb5.2
CTAO MLR MLR
comp=Z,449nm,19.0s,MS4.8
CTAO Charters Tower 77.96 126 eP **P 12 59 24.3 -1.0**
comp=Z,42nm,1.4s,mb5.2
CTAO LR LR
comp=Z,449nm,19.0s,MS4.8
SKAG Skagway 78.50 21 eP **P 12 59 30.2 +2.4**
comp=Z,52nm,1.2s,mb5.3
SKAG LR LR
comp=Z,800nm,18.0s,MS5.1
YKA Yellowknife Ar 80.39 11 P **P 12 59 38.3 +0.3**
comp=Z,13nm,1.0s,mb4.8,baz=342,slow=5.1,SNR=21
YKA Yellowknife Ar 80.39 11 P **P 12 59 38.3 +0.3**
YKA pmax pmax
comp=Z,13nm,1.0s
YKA Yellowknife Ar 80.39 11 P **P 12 59 38.3 +0.3**
HNR Honiara 80.82 109 PFAKE 12 59 50.0 +9.0
HNR LR LR
comp=Z,624nm,22.0s,MS4.9
DLBC Dease Lake 80.86 19 P **P 12 59 42.8 +2.2**
comp=Z,22nm,1.2s,mb5.0,baz=335,slow=14,SNR=7.9
DLBC Dease Lake 80.86 19 eP **P 12 59 42.6 +2.1**
STKA Stephens Creek 83.72 137 eP **P 12 59 54.6 -1.2**
comp=Z,6.2nm,0.4s,mb5.1
STKA Stephens Creek 83.72 137 P **P 12 59 54.6 -1.2**
comp=Z,6.7nm,1.0s,mb4.7,baz=314,slow=14,SNR=5.9
STKA LR LR 13 40 50.9
comp=Z,478nm,20.2s,MS4.9,baz=95,slow=38
LBTB Lobatse 84.66 234 eP **P 13 00 00.0 -0.8**
LBTB pmax pmax
comp=Z,26nm,1.3s,mb5.2
LBTB MLR MLR
comp=Z,760nm,19.0s,MS5.1
LBTB Lobatse 84.66 234 eP **P 13 00 00.0 -0.7**
comp=Z,26nm,1.3s,mb5.2
LBTB LR LR
comp=Z,760nm,19.0s,MS5.1
CMLA Cha da Macela 84.67 313 PFAKE 13 00 10.0 +9.2
CMLA LR LR
comp=Z,1μm,19.0s,MS5.2
EIDS Eidsvold 84.82 126 eP **P 13 00 01.9 +0.3**
comp=Z,21nm,1.2s,mb5.2
CMSA Cobar Meteorol 85.81 134 eP **P 13 00 06.2 -0.2**
FCC Fort Churchill 85.86 1 eP **P 13 00 06.0 -0.3**
comp=Z,0.8nm,1.2s
TSUM Tsumeb 86.41 243 eP **P 13 00 09.0 -0.6**
comp=Z,19nm,1.3s,mb5.2
SCHQ Schefferville 87.34 346 P **P 13 00 12.2 -1.4**
comp=Z,6.3nm,1.0s,mb4.8,baz=359,slow=3.7,SNR=5.7
SCHQ LR LR 13 41 41.8
comp=Z,1μm,21.2s,MS5.4,baz=30,slow=37
SCHQ Schefferville 87.34 346 eP **P 13 00 12.2 -1.5**
comp=Z,5.5nm,0.9s,mb4.8
BOSA Boshof 87.34 232 P **P 13 00 12.9 -1.0**
comp=Z,18nm,1.1s,mb5.2,baz=54,slow=5.0,SNR=10
BOSA LR LR 13 42 12.3
comp=Z,601nm,18.1s,MS5.0,baz=43,slow=38
BOSA Boshof 87.34 232 P **P 13 00 12.9 -1.1**
BOSA pmax pmax
comp=Z,18nm,1.1s,mb5.2
BOSA MLR MLR
comp=Z,601nm,18.1s,MS5.0
BOSA Boshof 87.34 232 eP **P 13 00 13.0 -1.0**
comp=Z,41nm,1.3s,mb5.5
BOSA LR LR
comp=Z,789nm,21.0s,MS5.1
DBIC Dimbokro 88.79 277 LR LR 13 44 12.0
comp=Z,1μm,19.3s,MS5.3,baz=41,slow=38
DBIC Dimbokro 88.79 277 PFAKE 13 00 30.0 +8.7
DBIC LR LR
comp=Z,1μm,20.0s,MS5.2
EDM Edmonton 89.44 13 eP **P 13 00 24.1 +0.5**
FFC Flin Flon 89.48 6 P **P 13 00 23.3 -0.5**
comp=Z,133nm,1.1s,mb6.2,SNR=13
FFC Flin Flon 89.48 6 eP **P 13 00 22.8 -1.0**
FFC pmax pmax
comp=Z,27nm,1.1s,mb5.5
FFC MLR MLR
comp=Z,1μm,21.0s,MS5.2
FFC Flin Flon 89.48 6 eP **P 13 00 22.8 -1.0**
comp=Z,27nm,1.1s,mb5.5
FFC LR LR
comp=Z,1μm,21.0s,MS5.2
JOHN Johnston Islan 89.81 70 PFAKE 13 00 40.0 +14
JOHN LR LR
comp=Z,588nm,19.0s,MS5.0
CAN Canberra 90.44 135 PFAKE 13 00 40.0 +12
CAN LR LR
comp=Z,771nm,20.0s,MS5.1
RPW Rockport 92.06 19 eP **P 13 00 37.8 +1.8**
comp=Z,6.9nm,1.5s,mb4.8
JCW Jim Creek 92.18 20 eP **P 13 00 38.1 +1.6**
comp=Z,60nm,1.5s,mb5.7
NLWA Neilton Lookou 92.36 21 PFAKE 13 00 50.0 +13
NLWA LR LR
comp=Z,562nm,20.0s,MS5.0
B08A Colville Reser 92.72 18 ⇑P **P 13 00 38.1 -0.9**
baz=92
D05A Enumclaw 93.08 20 ⇑P **P 13 00 41.7 +1.0**
baz=93
WALA Waterton Lakes 93.30 14 eP **P 13 00 42.8 +1.1**
comp=Z,0.3nm,1.4s
A13A Flathead Natio 93.31 15 ⇑P **P 13 00 41.9 +0.1**
baz=93
NEW Newport 93.34 17 eP **P 13 00 43.6 +1.7**
NEW pmax pmax
comp=Z,6.0nm,1.0s
NEW Newport 93.34 17 eP **P 13 00 43.6 +1.7**
comp=Z,6.3nm,1.0s,mb5.0
A14A Double T Ranch 93.48 14 ⇑P **P 13 00 42.1 -0.4**
baz=93
DZM Mont Dzumac 93.48 115 eLR LR 13 31 01.4
comp=Z,953nm,26.2s
B12A Libby 93.50 16 ⇑P **P 13 00 42.8 +0.2**
baz=93
A15A Johnson Ranch, 93.61 14 ⇓P **P 13 00 42.7 -0.3**
baz=93,SNR=24
B13A Whitefish 93.83 15 ⇑P **P 13 00 44.8 +0.7**
baz=94,SNR=17
A16A West Butte Ran 93.85 13 ⇓P **P 13 00 43.1 -1.1**
baz=94
C11A Tepee Creek (N 93.94 16 ⇑P **P 13 00 44.2 -0.5**
baz=94
B14A Marquette Ranc 94.09 14 ⇑P **P 13 00 44.7 -0.6**
baz=94,SNR=5.8
A18A Metzger Ranch, 94.19 12 ⇓P **P 13 00 44.0 -1.7**
baz=94,SNR=6.9
C12B Naegeli Ranch, 94.25 16 ⇓pP pP 13 00 47.7 -2.7
baz=94
BSMT Bassoo Peak 94.26 15 eP **P 13 00 48.0 +1.9**
comp=Z,14nm,1.2s,mb5.3
B15A Bradely Ranch, 94.28 14 ⇓P **P 13 00 45.6 -0.6**
baz=94,SNR=17
ULM Lac du Bonnet 94.33 3 LR LR 13 46 48.3
comp=Z,966nm,19.7s,MS5.3,baz=3.5,slow=38

B16A M & M Farms, S 94.35 13 ⇑P **P 13 00 45.7 -0.8**
baz=94
JTMT Jette 94.47 15 eP **P 13 00 49.1 +2.0**
comp=Z,17nm,1.1s,mb5.4
C13A Hot Springs 94.47 15 ⇓pP pP 13 00 48.8 -2.8
baz=94,SNR=9.7
C14A Swan Lake 94.56 15 ⇑P **P 13 00 46.7 -0.8**
baz=94
B17A L&G Farms, Che 94.63 13 ⇑pP pP 13 00 49.0 -3.2
baz=94,SNR=9.6
E09A Wood Farm, Sta 94.73 18 ⇓pP pP 13 00 50.1 -2.7
baz=94
SWMT Swartz Lake 94.75 15 eP **P 13 00 49.6 +1.2**
comp=Z,9.9nm,1.2s,mb5.1
C15A Salmond Ranch, 94.78 14 ⇑P **P 13 00 47.7 -0.8**
baz=94,SNR=13
C16A Fuhringer Ranc 94.93 13 ⇓P **P 13 00 47.0 -2.1**
baz=95
D13A Huson 95.05 15 ⇓pP pP 13 00 51.4 -2.8
baz=95
COR Corvallis 95.06 22 PFAKE 13 01 00.0 +10
COR LR LR
comp=Z,786nm,21.0s,MS5.2
EGMT Eagleton 95.07 12 eP **P 13 00 49.4 -0.4**
comp=Z,6.0nm,0.7s,mb5.1
SLMT Seeley Lake 95.11 15 eP **P 13 00 50.5 +0.5**
comp=Z,9.9nm,1.2s,mb5.1
D14A Greenough 95.27 15 ⇑pP pP 13 00 52.0 -3.2
baz=95
MSO Missoula 95.41 15 PFAKE 13 01 00.0 +8.6
MSO LR LR
comp=Z,752nm,21.0s,MS5.1
DGMT Dagmar 95.44 8 ⇑P **P 13 00 49.9 -1.6**
baz=95,SNR=5.9
DGMT ⇑pP pP 13 00 52.9 -3.0
baz=95
DGMT Dagmar 95.44 8 eP **P 13 00 50.9 -0.6**
comp=Z,29nm,1.1s,mb5.6
DGMT LR LR
comp=Z,860nm,19.0s,MS5.2
CHMT Chamberlain Mo 95.48 15 eP **P 13 00 52.1 +0.5**
comp=Z,4.9nm,1.4s,mb4.7
D16A Dana Ranch, Ca 95.70 14 ⇑P **P 13 00 51.1 -1.6**
baz=95
E13A Victor 95.73 15 ⇓P **P 13 00 51.8 -1.1**
baz=95
E13A ⇑pP pP 13 00 54.1 -3.2
baz=95
D17A Six Diamond Ra 95.75 13 ⇓pP pP 13 00 54.3 -3.0
baz=96,SNR=8.1
F11A Grangeville 95.80 17 ⇓pP pP 13 00 54.5 -3.1
baz=96
D18A Linhart Farms, 95.86 12 ⇑pP pP 13 00 55.0 -2.9
baz=96
E14A Clinton 95.90 15 ⇓pP pP 13 00 55.0 -3.1
baz=96
G09A Cove 95.98 18 ⇓pP pP 13 00 55.7 -2.7
baz=96
E15A Deer Lodge 96.07 14 ⇓P **P 13 00 53.4 -1.0**
baz=96
G10A Bishop Farm, J 96.13 18 ⇑P **P 13 00 53.4 -1.3**
baz=96
F12A Elk City 96.14 16 ⇑P **P 13 00 53.1 -1.6**
baz=96
E16A East Helena 96.16 14 ⇑pP pP 13 00 56.0 -3.2
baz=96
G11A Walters Elk Ra 96.24 17 ⇑pP pP 13 00 56.5 -3.1
baz=96
AGMN Agassiz Nation 96.28 3 eP **P 13 00 54.3 -1.0**
comp=Z,6.3nm,1.0s,mb5.0
F13A Darby 96.32 16 ⇓pP pP 13 00 56.6 -3.3
baz=96
E17A Martinsdale 96.38 13 ⇓pP pP 13 00 57.7 -2.6
baz=96,SNR=5.8
E18A Harlowton 96.45 13 ⇓pP pP 13 00 57.6 -3.0
baz=96
BMO Blue Mountains 96.49 18 PFAKE 13 01 10.0 +14
BMO LR LR
comp=Z,513nm,20.0s,MS5.0
F15A Butte 96.66 15 ⇓P **P 13 00 56.3 -0.8**
baz=96
F15A ⇑pP pP 13 00 58.7 -2.9
baz=96
LRM Limekiln Ridge 96.69 15 eP **P 13 00 58.1 +0.9**
comp=Z,45nm,1.7s,mb5.6
LAO LASA Array 96.92 10 PFAKE 13 01 10.0 +12
LAO LR LR
comp=Z,906nm,20.0s,MS5.2
H11A Donnelly 96.95 17 ⇓pP pP 13 00 59.8 -3.1
baz=97
F17A Fitzpatrick Pl 96.95 13 ⇑pP pP 13 01 00.1 -2.8
baz=97
HUMO Hull Mountain 96.95 23 PFAKE 13 01 10.0 +12
HUMO LR LR
comp=Z,492nm,19.0s,MS5.0
BOZ Bozeman (W) 97.02 14 ⇓pP pP 13 01 00.6 -2.6
baz=97
BOZ Bozeman (W) 97.02 14 PFAKE 13 01 10.0 +11
BOZ LR LR
comp=Z,877nm,20.0s,MS5.2
F18A Big Timber 97.13 13 ⇑P **P 13 00 57.7 -1.5**
baz=97
F18A ⇑pP pP 13 01 00.5 -3.1
baz=97
G15A Dillon 97.31 15 ⇑pP pP 13 01 01.7 -2.8
baz=97
G16A Moss Hill, Enn 97.38 14 ⇑P **P 13 00 59.1 -1.2**
baz=97
G16A ⇑pP pP 13 01 01.9 -2.9
baz=97
H14A Leadore 97.64 16 ⇑P **P 13 01 00.2 -1.3**
baz=97
H14A ⇑pP pP 13 01 03.3 -2.7
baz=97
H15A Lima 97.80 15 ⇓pP pP 13 01 03.5 -3.2
baz=98
RLMT Red Lodge 97.97 13 PFAKE 13 01 10.0 +7.0
RLMT LR LR
comp=Z,994nm,21.0s,MS5.3
I12A Atlanta 98.02 17 ⇑pP pP 13 01 05.1 -2.6
baz=98
LKWY Lake 98.30 13 PFAKE 13 01 20.0 +16
LKWY LR LR
comp=Z,2μm,22.0s,MS5.5
SACV Santiago Islan 98.37 295 PFAKE 13 01 20.0 +15
SACV LR LR
comp=Z,665nm,21.0s,MS5.1
MOD Modoc 98.41 21 PFAKE 13 01 20.0 +15
MOD LR LR
comp=Z,941nm,20.0s,MS5.3
LBNH Lisbon 98.44 346 PFAKE 13 01 20.0 +15
LBNH LR LR
comp=Z,974nm,21.0s,MS5.3
J12A Stokes Ranch, 98.54 17 ⇓pP pP 13 01 07.3 -2.8
baz=98
LONY Lake Ozonia 98.57 348 PFAKE 13 01 20.0 +14
LONY LR LR
comp=Z,1μm,22.0s,MS5.3
J13A Cove Ranch, Pi 98.62 16 ⇓pP pP 13 01 07.9 -2.5
baz=98
J15A Blackfoot 99.00 15 ⇑pPdiff 13 01 09.3
baz=99
NCB Newcomb 99.13 347 PFAKE 13 01 20.0 +12
NCB LR LR
comp=Z,1μm,21.0s,MS5.3
L11A Cat Creek Ranc 99.40 18 ⇓pPdiff 13 01 10.9
baz=99
AHID Auburn Hatcher 99.89 14 PFAKE 13 01 20.0 +8.3
AHID LR LR
comp=Z,737nm,20.0s,MS5.2
HOPS Hopland 100.18 24 PFAKE 13 01 20.0 +7.1
HOPS LR LR
comp=Z,615nm,19.0s,MS5.1
BW06 Boulder Array 100.19 13 PFAKE 13 01 20.0 +7.0
BW06 LR LR
comp=Z,948nm,20.0s,MS5.3
K20A Yellowstone Ra 100.52 12 ⇓pPdiff 13 01 15.8
baz=100
BMN Battle Mountai 100.64 20 PFAKE 13 01 30.0 +15
BMN LR LR
comp=Z,820nm,20.0s,MS5.2
ECSD EROS Data Cent 100.80 4 PFAKE 13 01 30.0 +14
ECSD LR LR
comp=Z,835nm,20.0s,MS5.2
HWUT Hardware Ranch 100.91 15 PFAKE 13 01 30.0 +14
HWUT LR LR
comp=Z,960nm,20.0s,MS5.3

MCCM Marconi Confer 101.01 25 PFAKE 13 01 30.0 +13
MCCM LR LR
comp=Z,460nm,20.0s,MS5.0
BINY Binghamton 101.16 348 PFAKE 13 01 30.0 +13
BINY LR LR
comp=Z,1μm,20.0s,MS5.5
JFWS Jewell Farm 101.74 359 PFAKE 13 01 30.0 +10
JFWS LR LR
comp=Z,2μm,22.0s,MS5.5
ERPA Erie 101.82 351 PFAKE 13 01 30.0 +10
ERPA LR LR
comp=Z,956nm,19.0s,MS5.3
CMB Columbia Colle 101.92 23 PFAKE 13 01 30.0 +9.3
CMB LR LR
comp=Z,570nm,20.0s,MS5.1
AAM Ann Arbor 102.02 354 PFAKE 13 01 30.0 +8.9
AAM LR LR
comp=Z,1μm,22.0s,MS5.4
SAO San Andreas Ge 102.74 24 PFAKE 13 01 40.0 +16
SAO LR LR
comp=Z,608nm,22.0s,MS5.1
CASY Casey 103.09 171 PFAKE 13 01 40.0 +14
CASY LR LR
comp=Z,525nm,19.0s,MS5.1
MVU Marysvale 103.73 17 PFAKE 13 01 40.0 +11
MVU LR LR
comp=Z,679nm,22.0s,MS5.1
HDIL Hopedale 104.08 358 PFAKE 13 01 40.0 +10
HDIL LR LR
comp=Z,2μm,20.0s,MS5.7
MCWV Mont Chateau 104.22 351 PFAKE 13 01 40.0 +9.1
MCWV LR LR
comp=Z,2μm,21.0s,MS5.6
DAC Darwin (Calif) 104.40 21 PFAKE 13 01 40.0 +8.3
DAC LR LR
comp=Z,713nm,21.0s,MS5.2
MAW Mawson 104.80 190 PFAKE 13 01 40.0 +6.5
MAW LR LR
comp=Z,1μm,21.0s,MS5.4
CBN Corbin 105.28 348 PFAKE 13 06 00.0 +10
CBN LR LR
comp=Z,2μm,22.0s,MS5.5
KSU1 Kansas State U 105.41 4 PFAKE 13 06 00.0 +10
KSU1 LR LR
comp=Z,838nm,20.0s,MS5.3
CBKS Cedar Bluff 105.46 7 PFAKE 13 06 00.0 +10
CBKS LR LR
comp=Z,892nm,19.0s,MS5.3
SDCO Great Sand Dun 105.78 11 PFAKE 13 06 00.0 +9.4
SDCO LR LR
comp=Z,1μm,20.0s,MS5.4
CCM Cathedral Cave 106.60 360 PFAKE 13 06 00.0 +7.9
CCM LR LR
comp=Z,2μm,22.0s,MS5.5
PFO Pinyon Flat Ob 107.22 22 PFAKE 13 06 10.0 +17
PFO LR LR
comp=Z,470nm,19.0s,MS5.1
BBSR BB Station 107.73 336 PFAKE 13 06 10.0 +16
BBSR LR LR
comp=Z,925nm,21.0s,MS5.3
ANMO Albuquerque 108.34 13 PFAKE 13 06 10.0 +15
ANMO LR LR
comp=Z,783nm,22.0s,MS5.2
AMTX Amarillo 109.14 9 PFAKE 13 06 10.0 +13
AMTX LR LR
comp=Z,1μm,22.0s,MS5.4
OXF Oxford 110.11 358 PFAKE 13 06 10.0 +11
OXF LR LR
comp=Z,2μm,20.0s,MS5.6
NHSC New Hope 110.71 350 PFAKE 13 06 10.0 +10
NHSC LR LR
comp=Z,1μm,19.0s,MS5.5
GOGA Godfrey 110.82 353 PFAKE 13 06 10.0 +10
GOGA LR LR
comp=Z,1μm,22.0s,MS5.5
LRAL Lakeview Retre 111.48 356 PFAKE 13 06 10.0 +8.6
LRAL LR LR
comp=Z,1μm,20.0s,MS5.6
MNTX Cornudas Mount 111.71 13 PFAKE 13 06 10.0 +8.1
MNTX LR LR
comp=Z,804nm,22.0s,MS5.3
324A Moseley Ranch, 111.94 13 ⇑pPKiKP 13 06 04.1
baz=112
325A Bean Ranch, Si 112.10 12 ⇑pPKiKP 13 06 04.9
baz=112
NATX Nacogdoches 112.82 3 PFAKE 13 06 20.0 +16
NATX LR LR
comp=Z,1μm,20.0s,MS5.4
BRAL Brewton 113.49 356 PFAKE 13 06 20.0 +15
BRAL LR LR
comp=Z,1μm,21.0s,MS5.5
626A Big Bend Ranch 114.02 12 ⇓pPKiKP 13 06 08.4
baz=114
627A Terlingua Ranc 114.24 11 ⇓pPKiKP 13 06 09.3
baz=114
TXAR Lajitas Array 114.31 12 PKP PKiKP 13 06 08.1 +1.1
comp=Z,1.0nm,0.8s,baz=347,slow=5.1,SNR=7.3
TXAR PKKPab PKKPab 13 16 52.3 -3.8
comp=Z,0.8nm,0.8s,baz=132,slow=5.4,SNR=6.1
HKT Hockley 114.56 4 PFAKE 13 06 20.0 +13
HKT LR LR
comp=Z,1μm,20.0s,MS5.5
DWPF Disney 115.80 350 PFAKE 13 06 20.0 +10
DWPF LR LR
comp=Z,1μm,21.0s,MS5.5
KVTX Kingsville 116.80 6 PFAKE 13 06 20.0 +8.2
KVTX LR LR
comp=Z,880nm,20.0s,MS5.4
ANWB Willy Bob 119.86 327 PFAKE 13 06 30.0 +12
ANWB LR LR
comp=Z,473nm,20.0s,MS5.1
GRTK Grand Turk 119.88 338 PFAKE 13 06 30.0 +12
GRTK LR LR
comp=Z,672nm,20.0s,MS5.3
FDF Fort de France 122.14 325 PFAKE 13 06 30.0 +7.7
FDF LR LR
comp=Z,945nm,21.0s,MS5.4
GTBY Guantanamo Bay 122.50 342 PFAKE 13 06 30.0 +7.1
GTBY LR LR
comp=Z,558nm,20.0s,MS5.2
GRGR Grenville 124.63 324 PFAKE 13 06 40.0 +13
GRGR LR LR
comp=Z,531nm,21.0s,MS5.2
MTDJ Mount Denham 124.73 344 PFAKE 13 06 40.0 +13
MTDJ LR LR
comp=Z,757nm,22.0s,MS5.3
PPT Papeete 125.87 86 eSS SS 13 25 31.5 +8.0
comp=Z,491nm,26.5s
PPT eLR LR 13 45 59.7
comp=Z,787nm,24.8s
TAOE Nuku Hiva Isla 128.41 71 eLR LR 13 47 02.9
comp=Z,368nm,26.2s
TBI Tubuai 128.82 93 eLQ 13 41 59.2
comp=Z,742nm,39.2s
TBI eLR LR 13 47 27.9
comp=Z,442nm,26.8s
BCIP Isla Barro Col 134.00 344 PFAKE 13 07 00.0 +15
BCIP LR LR
comp=Z,477nm,22.0s,MS5.2
ROSC El Rosal 136.51 335 PKP PKPdf 13 06 50.2 +0.6
comp=Z,14nm,1.0s,baz=76,slow=21,SNR=6.5
RKT Rikitea 140.49 84 eLR LR 13 52 43.7
comp=Z,592nm,23.5s
OTAV Otavalo 142.19 338 ePKPdf PKPdf 13 07 00.6 +0.6
CPUP Villa Florida 149.31 278 PKP PKPdf 13 07 11.0 -0.6
comp=Z,5.8nm,0.7s,baz=50,slow=2.2,SNR=14
CPUP PKPbc PKPbc 13 07 14.7 -1.3
comp=Z,5.8nm,0.7s,baz=39,slow=3.6,SNR=16
CPUP Villa Florida 149.31 278 PKP PKPdf 13 07 11.0 -0.6
CPUP PKPbc PKPbc 13 07 14.7 -1.3
LPAZ La Paz 151.51 307 PKP PKPdf 13 07 14.7 -0.7
comp=Z,8.2nm,1.1s,baz=22,slow=4.3,SNR=13
LPAZ PKPbc PKPbc 13 07 20.6 -0.9
comp=Z,13nm,1.1s,baz=24,slow=6.1,SNR=11
LPAZ La Paz 151.51 307 PKIKP PKPdf 13 07 14.7 -0.7
LPAZ 13 07 20.7
LPAZ pmax pmax
comp=Z,8.0nm,1.1s
LPAZ La Paz 151.51 307 ePKPdf PKPdf 13 07 15.5 +0.2
LPAZ ePKPbc PKPbc 13 07 23.1 +1.6
LPAZ LR LR
comp=Z,960nm,20.0s,MS5.6
NNA Nana 152.87 327 PFAKE 13 07 30.0 +13
NNA LR LR
comp=Z,475nm,19.0s,MS5.3
LCO Las Campanas 161.14 285 PFAKE 13 07 40.0 +12

LCO				LR	LR			
	comp=Z,1μm,19.0s							
PLCA	**Paso Flores**	**162.73**	**247**	PKP	PKPdf	13 07 29.3	+0.5	
	comp=Z,4.6nm,0.9s,baz=10,slow=4.5,SNR=5.7							
PLCA	**Paso Flores**	**162.73**	**247**	PKIKP	PKPdf	13 07 29.3	+0.5	
PLCA				pmax	pmax			
	comp=Z,5.0nm,1.0s							

NIED ***29*** *12:50:00,39°.00N×140°.90E,h5km,Mw3.6 Best double couple: M0:2.60000×10^14 NP1:φs54.00000°,δ47.00000°, λ71.00000°. NP2:φs261.00000°,δ46.00000°,λ110.00000°.*
JMA 29 12:50:14.2,38°.99N×140°.86E,h8km±1km,M3.5,3C-4D Broadband fault plane solution: P waves. NP1: φs20.00000°,δ57.00000°,λ33.00000°. **NP2:**φs271.00000°, δ63.00000°,λ142.00000°. **Principal axes:** T Plg45.0000°, Azm233.0000°; N Plg45.0000°, Azm61.0000°; P Plg4.0000°, Azm327.0000°; **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.28**	**98**	⇓P	Pg	12 50 19.7	-0.1
JMK				eS	Sg	12 50 23.8	+0.2
JYK	**Kaneyama**	**0.40**	**260**	⇑P	Pg	12 50 22.2	+0.3
JYK				eS	Sg	12 50 27.3	+0.1
JRG	**Rokugo**	**0.44**	**337**	⇓P	Pg	12 50 22.9	+0.1
JRG				S	Sg	12 50 29.4	+0.8
JOM	**Ohasama**	**0.59**	**35**	⇑P	Pg	12 50 25.3	-0.3
JOM				S	Sg	12 50 33.2	0.0
OFUJ	**Ofunato**	**0.64**	**82**	⇑P	Pg	12 50 26.1	-0.4
JOU	**Okura**	**0.64**	**194**	⇓P	Pg	12 50 26.7	+0.1
JOU				S	Sg	12 50 35.3	+0.4
JIO	**Ouri**	**0.66**	**144**	⇓P	Pg	12 50 26.5	-0.4
JIO				S	Sg	12 50 35.4	0.0
JYA	**Atsumi**	**0.98**	**246**	P	Pg	12 50 33.3	+0.3
JYS	**Shirataka**	**0.99**	**219**	P	Pg	12 50 33.1	-0.1
JYS				eS	Sg	12 50 46.5	+0.5
MAT	**Matsushiro**	**3.22**	**222**	P	Pn	12 51 06.6	+1.5
MAT				S	Sn	12 51 52.6	+9.0

TEH ***29*** *13:11:08.6,30°.48N×49°.41E,h28km*
ISCJB ***29*** *13:11:14.0±2.2,30°.92N±0°.08×49°.89E±0°.07,h18km±23km, Error ellipse: s-maj=16.3km s-min=5.5km az=144.0*
CSEM ***29*** *13:11:14.3±0.4,31°.19N×49°.41E,h2km,ML2.7,Error ellipse: s-maj=17.4km s-min=5.5km az=106.0*
KISR ***29*** *13:11:14.3±0.8,30°.64N×49°.48E,h34km±109km,ML2.7*
ISC 29 13:11:14.6±3.0,30°.96N±0°.07×49°.85E±0°.07,h14km±21km, n17,σ0s75/24,Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**1.46**	**322**	*e*Pg	**Pg**	**13 11 34.5**	**-8.1**
IPIR	**Pirpir**	**1.94**	**27**	*e*Pn	**Pn**	**13 11 47.5**	**+0.4**
IPIR				*e*		13 12 17.4	
	comp=N,2μm,0.2s						
IGAR	**Gharneh**	**2.36**	**52**	*e*Pn	**Pn**	**13 11 53.6**	**+0.7**
IGAR				*e*		13 12 01.6	
	comp=Z,621nm,0.1s						
KBD	**Kabd**	**2.58**	**227**	*e*P	**Pn**	**13 11 56.5**	**+0.5**
KBD	**Kabd**	**2.58**	**227**	*e*P	**Pn**	**13 11 56.5**	**+0.6**
QRN	**Al-Qurain**	**2.77**	**218**	*e*P	**Pn**	**13 11 58.1**	**-0.4**
QRN				*e*S	**Sn**	**13 12 32.1**	**+0.3**
QRN				AML	AML	13 12 34.9	
	comp=Z,26nm,0.2s						
IKLH	**Kolahrood**	**2.77**	**31**	*e*Pn	**Pn**	**13 11 59.7**	**+1.1**
IKLH				*e*Sn	**Sb**	**13 12 37.0**	**-0.8**
IKLH				*e*		13 12 43.6	
	comp=N,1μm,0.3s						
NAY	**Al-Naaiem**	**2.83**	**234**	*e*P	**Pn**	**13 11 59.4**	**0.0**
NAY				*e*S	**Sn**	**13 12 33.0**	**-0.2**
NAY				AML	AML	13 12 39.5	
	comp=Z,18nm,0.4s						
NAY	**Al-Naaiem**	**2.83**	**234**	*e*P	**Pn**	**13 11 59.4**	**0.0**
NAY				*e*S	**Sn**	**13 12 33.0**	**-0.3**
RDF	**Al-Radifah**	**2.84**	**225**	*e*P	**Pn**	**13 11 59.8**	**+0.3**
RDF				*e*S	**Sn**	**13 12 33.3**	**-0.3**
RDF				AML	AML	13 12 38.8	
	comp=Z,28nm,0.4s						
RDF	**Al-Radifah**	**2.84**	**225**	*e*P	**Pn**	**13 11 59.8**	**+0.2**
RDF				*e*S	**Sn**	**13 12 33.3**	**-0.3**
	comp=Z,28nm,0.4s						
IZEF	**Zefreh**	**2.86**	**47**	*e*Pn	**Pn**	**13 12 01.0**	**+1.2**
IZEF				*e*		13 12 48.7	
	comp=N,232nm,0.2s						
ASAO	**Ashtian**	**3.58**	**2**	*e*Pn	**Pn**	**13 12 08.9**	**-0.8**
GHVR	**GHOM**	**3.72**	**19**	*e*Pn	**Pn**	**13 12 12.0**	**+0.4**
ICHK	**Chekchek**	**4.09**	**71**	*e*Pn	**Pn**	**13 12 15.4**	**-1.3**
IMEH	**Mehriz**	**4.10**	**83**	*e*Pn	**Pn**	**13 12 15.7**	**-1.2**
IMEH				*e*Sn	**Sn**	**13 13 05.1**	**+0.4**
SNGE	**Sanandaj**	**4.63**	**334**	*e*Pn	**Pn**	**13 12 20.0**	**-4.1**

BJI ***29*** *13:21:06.1,10°.57N×91°.62E,h24km,mb4.3/5*
IDC ***29*** *13:21:07.7±0.5,10°.90N×91°.77E,h0km,mb4.2/16, mb1 4.2/17,mb1mx4.1/25,mbtmp4.1/17,ML3.9/1,Error ellipse: s-maj=23.5km s-min=12.0km az=63.0*
NEIC ***29*** *13:21:09.2±0.3,10°.84N×91°.68E,h10km,mb4.4/1,Error ellipse: s-maj=9.7km s-min=7.3km az=79.0*
ISCJB ***29*** *13:21:10.5±0.5,10°.90N±0°.06×91°.73E±0°.07,h33km, mb4.1/18,Error ellipse: s-maj=11.2km s-min=7.6km az=143.5*
ISC 29 13:21:12.7±0.5,10°.87N±0°.06×91°.68E±0°.06,h35km,n46, σ0s91/42,mb4.1/18,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**10.31**	**42**	P	**Pn**	**13 23 38.5**	**+0.4**
CMAR	**Chiang Mai Arr**	**10.31**	**42**	Pn	**Pn**	**13 23 37.4**	**-0.7**
	0.3nm,0.3s,baz=235,slow=16,SNR=4.8						
CHTO	**Chiang Mai**	**10.56**	**41**	*e*P	**Pn**	**13 23 41.7**	**0.0**
VIS	**Vishakhapatnam**	**10.57**	**311**	*e*PKP	**Pn**	**13 23 41.5**	**-0.3**
VIS				*ex*	x	13 25 27.8	
MDRS	**Chennai**	**11.39**	**282**	*e*PKP	**Pn**	**13 23 51.2**	**-1.8**
MDRS				AMb	AMB	13 23 58.4	
	comp=Z,48nm,0.2s						
MDRS				*e*S	**Sn**	**13 25 49.6**	**-10**
NGP	**Nagpur**	**15.85**	**312**	*ex*	x	13 27 36.6	
ODAN	**Odare**	**16.41**	**346**	*e*P	**Pn**	**13 25 01.1**	**+0.8**
	comp=Z,7.5nm,0.4s						
RAMN	**Ramite**	**16.69**	**344**	*e*P	**Pn**	**13 25 06.8**	**+2.9**
	comp=Z,27nm,0.4s						
TAPN	**Taplejung**	**16.81**	**348**	*e*P	**Pn**	**13 24 57.5**	**-7.9**
	comp=Z,4.5nm,0.4s						
AKL	**Akola**	**17.15**	**307**	*ex*	x	13 28 11.4	
AKL				AML	AML	13 29 56.0	
	comp=N,7.8nm,0.1s						
AKL				AML	AML	13 29 56.0	
	comp=E,5.8nm,0.1s						
PKI	**Pulchoki**	**17.63**	**341**	*e*P	**Pn**	**13 25 14.3**	**-1.2**
	comp=E,4.8nm,0.3s						
PKIN	**Phulchoki**	**17.64**	**341**	*e*P	**Pn**	**13 25 14.1**	**-1.6**
	comp=E,8.3nm,0.4s						
DMN	**Daman**	**17.76**	**341**	*e*P	**Pn**	**13 25 16.5**	**-0.7**
	comp=E,5.5nm,0.4s						
KKN	**Kakani**	**17.87**	**341**	*e*P	**Pn**	**13 25 14.6**	**-4.0**
	comp=E,3.4nm,0.3s						
BHPL	**Bhopal**	**18.33**	**314**	*e*PKP	**Pn**	**13 25 24.6**	**+0.3**
BHPL				AMb	AMB	13 25 31.9	
	comp=Z,16nm,1.5s						
BHPL				*e*S	**S**	**13 28 52.1**	**+0.1**
GTA	**Gaotai**	**29.33**	**13**	*e*P	**P**	**13 27 13.3**	**+1.2**
GTA				pP	pP	13 27 19.5	-2.6
GTA				sP	sP	13 27 22.3	-4.1
GTA				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.4						
MK31	**Makanchi Array**	**36.67**	**349**	*e*P	**P**	**13 28 16.5**	**+0.5**
MKAR	**Makanchi Array**	**36.67**	**349**	P	**P**	**13 28 16.5**	**+0.5**
	comp=Z,4.0nm,0.7s,mb4.3,baz=176,slow=8.5,SNR=28						
MKAR				PcP	PcP	13 30 38.1	-0.2
	comp=Z,0.6nm,0.6s,baz=211,slow=4.2,SNR=4.2						
SONM	**Songino Array**	**38.87**	**16**	P	**P**	**13 28 35.0**	**+0.4**
	comp=Z,1.7nm,0.8s,mb3.8,baz=198,slow=8.8,SNR=12						
KURK	**Kurchatov**	**41.15**	**347**	P	**P**	**13 28 53.3**	**-0.1**
	comp=Z,2.3nm,0.8s,mb3.8,baz=172,slow=7.6,SNR=14						
KURK	**Kurchatov**	**41.15**	**347**	*e*P	**P**	**13 28 54.1**	**+0.6**
KSRS	**Korea Array**	**41.93**	**45**	P	**P**	**13 28 58.7**	**-1.4**
	comp=Z,0.7nm,0.6s,mb3.5,baz=234,slow=9.2,SNR=3.3						
ZAA0	**Zalesovo Array**	**43.31**	**354**	*e*P	**P**	**13 29 10.7**	**-0.3**
ZALV	**Zalesovo Beam**	**43.31**	**354**	P	**P**	**13 29 11.2**	**+0.2**
	comp=Z,3.4nm,0.6s,mb4.3,baz=170,slow=9.0,SNR=14						

FITZ	**Fitzroy Crossi**	**44.19**	**130**	P	**P**	**13 29 17.6**	**-0.9**	
	comp=Z,4.8nm,0.6s,mb4.4,baz=301,slow=5.7,SNR=30							
BVAR	**Borovoye Array**	**45.40**	**342**	P	**P**	**13 29 27.8**	**+0.2**	
	comp=Z,0.8nm,0.6s,mb3.8,baz=123,slow=7.6,SNR=5.5							
NWAO	**Narrogin (SRO)**	**49.92**	**152**	P	**P**	**13 30 03.5**	**+0.6**	
	comp=Z,7.5nm,0.6s,mb4.9,baz=340,slow=12,SNR=4.0							
NWAO	**Narrogin (SRO)**	**49.92**	**152**	*e*P	**P**	**13 30 03.7**	**+0.7**	
WRA	**Warramunga Arr**	**51.98**	**126**	P	**P**	**13 30 18.2**	**-0.5**	
	comp=Z,1.1nm,0.3s,mb4.2,baz=300,slow=10,SNR=58							
WRA				PcP	PcP	13 31 31.3	+0.3	
	comp=Z,1.1nm,0.7s,baz=313,slow=3.0,SNR=5.9							
WRA	**Warramunga Arr**	**51.98**	**126**	P	**P**	**13 30 18.2**	**-0.5**	
WRA				PcP	PcP	13 31 31.3	+0.3	
WRAB	**Tennant Creek**	**51.98**	**126**	*e*P	**P**	**13 30 18.3**	**-0.4**	
	comp=Z,3.1nm,0.6s,mb4.4							
ASAR	**Alice Springs**	**53.69**	**130**	P	**P**	**13 30 31.2**	**-0.2**	
	comp=Z,3.3nm,0.6s,mb4.4,baz=304,slow=7.1,SNR=58							
ASAR				PcP	PcP	13 31 37.7	+0.3	
	comp=Z,1.7nm,0.6s,baz=311,slow=3.7,SNR=9.4							
BRTR	**Keskin Array B**	**58.65**	**310**	P	**P**	**13 31 06.8**	**+0.3**	
	comp=Z,0.9nm,0.9s,mb3.8,baz=118,slow=7.1,SNR=4.6							
STKA	**Stephens Creek**	**63.92**	**134**	P	**P**	**13 31 42.7**	**+0.4**	
	comp=Z,1.6nm,0.5s,mb4.3,baz=250,slow=13,SNR=8.0							
STKA	**Stephens Creek**	**63.92**	**134**	*e*P	**P**	**13 31 42.8**	**+0.4**	
FINES	**FINESS Array B**	**68.94**	**332**	P	**P**	**13 32 14.3**	**+0.4**	
	comp=Z,1.6nm,0.8s,mb4.0,baz=114,slow=9.4,SNR=6.7							
ARCES	**ARCESS Array B**	**71.64**	**340**	P	**P**	**13 32 31.3**	**+1.0**	
	comp=Z,2.0nm,0.7s,mb4.2,baz=86,slow=6.3,SNR=18							
ARCES	**ARCESS Array B**	**71.64**	**340**	*e*P	**P**	**13 32 31.3**	**+1.0**	
BOSA	**Boshof**	**75.16**	**236**	P	**P**	**13 32 54.4**	**+2.6**	
	comp=Z,3.3nm,0.9s,mb4.3,baz=72,slow=6.4,SNR=3.6							
BOSA	**Boshof**	**75.16**	**236**	P	**P**	**13 32 54.4**	**+2.6**	
NB2	**NORSAR Subarra**	**75.94**	**330**	P	**P**	**13 32 55.5**	**-0.2**	
	comp=Z,0.6nm,0.6s,mb3.7,baz=95,slow=5.6							
NOA	**NORSAR Array B**	**75.94**	**330**	P	**P**	**13 32 54.8**	**-0.9**	
	comp=Z,1.0nm,0.8s,mb3.8,baz=94,slow=5.9,SNR=4.8							
PDAR	**Pinedale Array**	**123.19**	**19**	PKP	PKPdf	13 40 06.3	+0.3	
	comp=Z,0.4nm,0.6s,baz=132,slow=2.2,SNR=3.7							
NVAR	**Mina Array Bea**	**123.52**	**28**	PKP	PKPdf	13 40 08.3	+1.5	
	comp=Z,0.6nm,0.6s,baz=323,slow=1.8,SNR=6.8							
CPUP	**Villa Florida**	**146.97**	**238**	PKPbc	PKPbc	13 40 51.9	-0.4	
	comp=Z,1.6nm,0.7s,baz=116,slow=8.5,SNR=5.0							
CFAA	**Coronel Fontan**	**152.24**	**219**	PKPbc	PKPbc	13 41 06.7	+1.4	
	comp=Z,0.2nm,0.5s,baz=79,slow=5.2,SNR=4.4							

JMA ***29*** *13:25:11.5±0.5,46°.72N×141°.65E,h0km,M2.8*
SKHL 29 13:25:11.2±0.4,46°.61N×141°.70E,h10km,mb3.8/2,1C, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YSS	**Yuzh-Sakhalins**	**0.80**	**64**	⇑*i*Pg	Pg	13 25 26.9	+0.2
YSS				AMB	AMB	13 25 27.3	
	35nm,0.3s						
YSS				*e*Sg	Sg	13 25 37.6	+0.5
YSS				A		13 25 38.3	
	212nm,0.4s						
YSS				A		13 25 38.3	
	353nm,0.4s						
JWK2	**Keihoku**	**1.30**	**174**	P	Pn	13 25 38.2	+2.8
JWK2				*e*S	Sb	13 25 57.6	+5.2
JRR	**Rishiri**	**1.50**	**191**	*e*S	Sn	13 26 03.8	+6.2
JSE	**Soyaes**	**1.76**	**159**	*e*S	Sn	13 26 09.9	+5.7
JYG	**Yagishiri**	**2.19**	**185**	*e*S	Sn	13 26 22.0	+7.2
UGL	**Uglegorsk**	**2.48**	**6**	*e*Pg	Pg	13 26 00.5	+1.8
UGL				AMB	AMB	13 26 03.0	
	48nm,0.8s						
UGL				*e*Sg	Sg	13 26 35.0	+4.1
UGL				A		13 26 37.5	
	93nm,0.7s						

IDC ***29*** *13:26:17.9±4.5,9°.10N×85°.51W,h0km,mb3.7/2,mb1 4.3/2, mb1mx3.6/18,mbtmp3.7/2,Error ellipse: s-maj=468.6km s-min=63.1km az=59.0*
ISCJB ***29*** *13:26:18.4±1.1,9°.50N±0°.07×84°.66W±0°.05,h22km±7km, mb3.6/4,Error ellipse: s-maj=13.2km s-min=5.3km az=30.5*
CASC ***29*** *13:26:19.0±1.4,9°.51N×84°.63W,h23km±4km,MD3.9, mb3.7(NEIC)*
NEIC ***29*** *13:26:20.9±1.3,9°.42N×84°.67W,h35km,mb3.7/2, MD3.5(HDC),Error ellipse: s-maj=40.9km s-min=14.2km az=206.0*
NEIC Felt at Jaco.
ISC 29 13:26:18.2±1.2,9°.51N±0°.07×84°.65W±0°.05,h13km±7km, n28,σ0s63/29,mb3.6/4,3C-6D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGA2	**Cerro Gallo 2**	**0.54**	**20**	⇓*e*P	**Pg**	**13 26 29.4**	**+0.6**
JCR	**Jicaral**	**0.56**	**307**	⇑*e*P	**Pg**	**13 26 29.6**	**+0.3**
PRS1	**Puriscal**	**0.58**	**35**	⇓*e*P	**Pg**	**13 26 28.4**	**-1.2**
LAJ	**Bijagual**	**0.63**	**56**	⇑*i*P	**Pg**	**13 26 24.2**	**-6.3**
SJS	**Escuela Geolog**	**0.73**	**54**	⇑*e*P	**Pg**	**13 26 33.0**	**+0.6**
SJS				*e*S	**Sg**	**13 26 41.4**	**-0.6**
BUS	**Buena Vista**	**0.88**	**87**	⇓*e*P	**Pg**	**13 26 36.1**	**+0.8**
URSC	**Urasca**	**0.92**	**69**	⇓*i*P	**Pb**	**13 26 36.3**	**+0.3**
CASO	**Castillo**	**0.92**	**355**	*i*P	**Pb**	**13 26 35.7**	**-0.3**
A490	**San Lazaro**	**1.10**	**314**	*i*P	**Pb**	**13 26 38.1**	**-0.9**
VCR	**Vina de Mar**	**1.14**	**302**	*e*P	**Pb**	**13 26 39.4**	**-0.5**
COLC	**Colonia**	**1.27**	**335**	*i*P	**Pn**	**13 26 41.5**	**-0.1**
GUAB	**Guayabo de Bag**	**1.32**	**334**	*i*P	**Pn**	**13 26 41.8**	**-0.5**
MESS	**Mesas**	**1.33**	**336**	*i*P	**Pn**	**13 26 42.4**	**-0.1**
MESS				*i*S	**Sb**	**13 27 00.2**	**+0.1**
BAR1		**1.35**	**101**	⇓*e*P	**Pn**	**13 26 42.9**	**+0.2**
GPS2	**Hotel Rinc^±n**	**1.41**	**331**	*i*P	**Pn**	**13 26 43.8**	**+0.2**
GPS3	**Bodega del ICE**	**1.42**	**330**	*i*P	**Pn**	**13 26 43.6**	**-0.1**
GPS1	**Guardaparques**	**1.43**	**331**	*i*P	**Pn**	**13 26 43.7**	**-0.1**
LAPC	**Finca la Perla**	**1.47**	**328**	*i*P	**Pn**	**13 26 44.0**	**-0.3**
GB1A	**Borinquen Arri**	**1.49**	**331**	*i*P	**Pn**	**13 26 44.8**	**+0.1**
ACR	**Cerro Adams**	**1.69**	**120**	⇓*e*P	**Pn**	**13 26 46.8**	**-0.6**
ACR				*e*S	**Sn**	**13 27 08.0**	**-1.0**
BCIP	**Isla Barro Col**	**4.76**	**94**	*e*P	**Pn**	**13 27 30.3**	**+0.6**
JCT	**Junction City**	**25.20**	**328**	*e*P	**P**	**13 31 43.9**	**+0.3**
MIAR	**Mount Ida**	**26.23**	**343**	*e*P	**P**	**13 31 53.1**	**+0.3**
	2.4nm,0.7s,mb3.8						
TXAR	**Lajitas Array**	**26.58**	**321**	P	**P**	**13 31 55.5**	**-0.6**
	0.7nm,0.5s,mb3.5,baz=142,slow=10,SNR=7.8						
WMOK	**Wichita Mounta**	**28.25**	**335**	*e*P	**P**	**13 32 13.1**	**+2.1**
	1.0nm,0.8s,mb3.5						
NVAR	**Mina Array Bea**	**41.71**	**319**	P	**P**	**13 34 07.5**	**+0.6**
	1.1nm,0.8s,mb3.6,baz=133,slow=7.5,SNR=10						
NVAR				PcP	PcP	13 36 04.8	+1.4
	0.5nm,0.7s,baz=142,slow=5.3,SNR=4.2						
ASAR	**Alice Springs**	**140.61**	**244**	PKhKP		13 45 43.5	
	0.2nm,0.6s,baz=108,slow=3.0,SNR=3.0						
ASAR				PKP	PKPdf	13 45 47.7	-0.5
	0.2nm,0.7s,baz=134,slow=1.6,SNR=4.6						
WRA	**Warramunga Arr**	**140.98**	**250**	PKP	PKPdf	13 45 48.6	-0.4
	0.4nm,0.8s,baz=98,slow=2.3,SNR=5.0						

IDC 29 13:45:55.4±12.0,10°.62N×91°.42E,h0km,mb3.6/4, mb1 3.8/4,mb1mx3.4/22,mbtmp3.6/4,Error ellipse: s-maj=628.7km s-min=26.0km az=60.0,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.88**	**350**	P	P	13 53 05.5	0.0
	0.3nm,0.6s,baz=158,slow=6.8,SNR=2.7						
FITZ	**Fitzroy Crossi**	**44.23**	**130**	P	P	13 54 06.6	-0.1
	2.5nm,0.8s,baz=275,slow=12,SNR=3.7						
WRA	**Warramunga Arr**	**52.04**	**126**	P	P	13 55 06.9	-0.2
	0.6nm,0.5s,baz=302,slow=10,SNR=11						
ASAR	**Alice Springs**	**53.73**	**130**	P	P	13 55 19.8	+0.2
	0.3nm,0.6s,baz=303,slow=7.2,SNR=5.9						

IDC ***29*** *13:52:25.4±1.4,0°.95N×96°.32E,h0km,mb3.8/5,mb1 3.8/6, mb1mx3.6/21,mbtmp3.7/6,ML2.8/1,Error ellipse: s-maj=52.8km s-min=23.3km az=48.0*
ISCJB ***29*** *13:52:29.0±1.1,1°.0N±0°.1×96°.5E±0°.1,h33km,mb3.7/5, Error ellipse: s-maj=20.7km s-min=19.8km az=158.1*
NEIC ***29*** *13:52:31.1±1.2,0°.91N×96°.47E,h35km,Error ellipse: s-maj=23.1km s-min=19.0km az=70.0*
ISC 29 13:52:31.2±1.1,1°.0N±0°.1×96°.5E±0°.1,h35km,n9,σ1s03/9, mb3.7/5,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**3.03**	**53**	Pn	**Pn**	**13 53 15.5**	**-1.2**
	1.1nm,0.3s,baz=196,slow=18,SNR=3.6						
KULM	**Kulim**	**5.96**	**44**	*e*P	**Pn**	**13 53 57.3**	**+0.3**
CMAR	**Chiang Mai Arr**	**17.53**	**8**	P	**Pn**	**13 56 36.1**	**+3.2**
	0.1nm,0.3s,baz=196,slow=13,SNR=3.6						
WRA	**Warramunga Arr**	**42.53**	**121**	P	**P**	**14 00 24.7**	**+1.0**
	0.8nm,0.9s,mb3.5,baz=304,slow=9.1,SNR=2.4						
ASAR	**Alice Springs**	**43.84**	**126**	P	**P**	**14 00 34.0**	**-0.2**
	0.5nm,0.8s,mb3.3,baz=298,slow=8.1,SNR=5.7						
ZALV	**Zalesovo Beam**	**53.66**	**351**	P	**P**	**14 01 49.9**	**+0.8**
	2.1nm,0.6s,mb4.2,baz=167,slow=5.9,SNR=5.8						
ZALV	**Zalesovo Beam**	**53.66**	**351**	P	**P**	**14 01 49.9**	**+0.8**
FINES	**FINESS Array B**	**79.86**	**333**	P	**P**	**14 04 34.9**	**-1.0**
	0.9nm,0.7s,mb3.8,baz=97,slow=5.6,SNR=2.8						
ARCES	**ARCESS Array B**	**82.50**	**340**	P	**P**	**14 04 49.0**	**-0.7**
	0.6nm,0.6s,mb3.7,baz=93,slow=5.2,SNR=4.1						

ISCJB ***29*** *13:57:50.7±0.6,50°.05N±0°.04×78°.54E±0°.09,h10km,Error ellipse: s-maj=8.8km s-min=3.9km az=156.0*
NEIC ***29*** *13:57:52.9±1.0,50°.06N×78°.63E,h10km,Error ellipse: s-maj=17.7km s-min=10.3km az=69.0*
IDC ***29*** *13:57:52.2±0.8,50°.10N×78°.79E,h0km,mb1 3.0/3, mb1mx3.0/25,mbtmp3.0/3,ML3.1/3,Error ellipse: s-maj=11.8km s-min=5.8km az=58.0*
ISC 29 13:57:52.7±0.7,50°.06N±0°.05×78°.7E±0°.1,h10km,n10, σ1s23/20,4C,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**0.66**	**357**	⇑P	**Pg**	**13 58 04.0**	**-1.4**
	17nm,0.4s						
KURK				⇑S	**Sg**	**13 58 13.0**	**-0.9**
	42nm,0.7s						
KURK				⇑Rg		13 58 17.9	
	92nm,1.1s						
KURK	**Kurchatov**	**0.66**	**357**	Pg	**Pg**	**13 58 02.4**	**-2.9**
	8.3nm,0.3s,baz=163,slow=19,SNR=117						
KURK				Lg		13 58 11.0	
	5.5nm,0.3s,baz=162,slow=33,SNR=35						
KURK	**Kurchatov**	**0.66**	**357**	*e*Pg	**Pg**	**13 58 03.9**	**-1.5**
KURK				Lg		13 58 11.1	
KURK				*e*Sg	**Sg**	**13 58 13.3**	**-0.7**
MK31	**Makanchi Array**	**4.06**	**142**	Pn	**Pn**	**13 58 54.9**	**0.0**
	0.2nm,0.2s,baz=268,slow=17,SNR=31						
MK31				⇑Pg	**Pb**	**13 59 02.0**	**-2.3**
	2.0nm,0.4s,baz=321,slow=16,SNR=20						
MK31				Lg		13 59 55.8	
	4.8nm,0.5s,baz=332,slow=27,SNR=16						
MK31	**Makanchi Array**	**4.06**	**142**	*e*Pn	**Pn**	**13 58 54.8**	**0.0**
MK31				*e*Sg	**Sb**	**13 59 52.6**	**-0.7**
MKAR	**Makanchi Array**	**4.06**	**142**	Pn	**Pn**	**13 58 54.8**	**0.0**
	0.6nm,0.3s,baz=323,slow=10,SNR=42						
MKAR				Pg	**Pb**	**13 59 03.4**	**-0.8**
	1.8nm,0.3s,baz=330,slow=16,SNR=31						
MKAR				Sn	**Sn**	**13 59 44.7**	**+2.4**
	1.0nm,0.3s,baz=315,slow=22,SNR=4.2						
MKAR				Lg		13 59 55.3	
	2.8nm,0.3s,baz=346,slow=28,SNR=13						
MKAR	**Makanchi Array**	**4.06**	**142**	Pn	**Pn**	**13 58 54.8**	**0.0**
MKAR				Pg	**Pb**	**13 59 03.4**	**-0.8**
MKAR				Sn	**Sn**	**13 59 44.7**	**+2.3**
MKAR				Lg		13 59 55.3	
ZAA0	**Zalesovo Array**	**5.44**	**42**	*e*Pn	**Pn**	**13 59 14.9**	**+1.3**
ZALV	**Zalesovo Beam**	**5.44**	**42**	Pn	**Pn**	**13 59 15.2**	**+1.5**
	1.9nm,0.3s,baz=230,slow=14,SNR=20						
ZALV				Lg		14 00 36.6	
	0.2nm,0.3s,baz=239,slow=28,SNR=3.1						
BVAR	**Borovoye Array**	**5.96**	**303**	Pn	**Pn**	**13 59 21.7**	**+0.8**
	0.3nm,0.3s,baz=136,slow=13,SNR=7.0						
BVAR				Pg	**Pb**	**13 59 31.0**	**-5.5**
	0.7nm,0.3s,baz=105,slow=14,SNR=6.9						
BVAR				Sn	**Sn**	**14 00 29.3**	**+0.2**
	0.6nm,0.3s,baz=111,slow=23,SNR=7.5						
BVAR				Lg		14 00 55.3	
	0.3nm,0.3s,baz=106,slow=20,SNR=3.6						

MEX 29 14:28:12.4±1.1,17°.48N×94°.77W,h148km±24km,MD4.3, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**1.72**	**114**	*e*P	Pn	14 28 43.0	-1.2
TGIG				*e*S	Sn	14 29 06.3	-2.3
VHO	**Vista Hermosa**	**1.92**	**258**

IGT	**Igoumenitsa**	**3.18**	**339**	P	**Pn**	**14 34 40.8**	**-1.4**
IGT				S	**Sn**	**14 35 19.3**	**-0.2**
IGT	**Igoumenitsa**	**3.18**	**339**	P	**Pn**	**14 34 40.8**	**-1.4**
IGT				S	**Sn**	**14 35 19.3**	**-0.2**

*ISCJB **29** 15:37:03.7±0.4, 38°.93N±0°.02×41°.31E±0°.02, h1km±3km, mb3.7/11, Error ellipse: s-maj=3.1km s-min=2.0km az=138.1*
*DDA **29** 15:37:04.0, 38°.97N×41°.28E, h13km±1km, Md3.8*
*ISK **29** 15:37:04.0, 38°.92N×41°.31E, h8km, ML3.8*
*CSEM **29** 15:37:04.8±0.1, 38°.95N×41°.29E, h2km, ML3.8, Error ellipse: s-maj=4.5km s-min=3.5km az=159.0*
*IDC **29** 15:37:04.3±1.1, 38°.89N×41°.26E, h0km, mb3.7/7, mb1 3.8/12, mb1mx3.7/26, mbtmp3.7/12, ML3.2/3, Error ellipse: s-maj=22.5km s-min=10.7km az=166.0*
*NEIC **29** 15:37:05.7±5.0, 38°.99N×41°.23E, h4km±36km, mb4.0/4, ML3.9(ISK), Error ellipse: s-maj=14.4km s-min=9.4km az=160.0*
*NSSC **29** 15:37:08, 38°.85N×42°.36E, h39km*

ISC 29 15:37:04.6±0.3, 38°.91N±0°.02×41°.31E±0°.02, h1km±3km, n132, σ1§11/176, mb3.8/11, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNGL	**BINGOL**	**0.13**	**291**	*i* P	**Pg**	**15 37 07.0**	**-0.2**
BNGL				*i* S	**Sg**	**15 37 09.5**	**+0.7**
BINT	**Bingol**	**0.64**	**268**	PG	**Pg**	**15 37 17.6**	**+0.8**
BINT				*e*SG	**Sg**	**15 37 26.3**	**+1.2**
BINT	**Bingol**	**0.64**	**268**	*i* Pg	**Pg**	**15 37 17.6**	**+0.8**
BINT				*e*Sg	**Sg**	**15 37 26.3**	**+1.2**
BTMT	**Batman**	**0.73**	**169**	PG	**Pg**	**15 37 19.5**	**+0.9**
TATV	**Tatvan**	**0.85**	**118**	*e*P	**Pg**	**15 37 20.2**	**-0.7**
TATV	**Tatvan**	**0.85**	**118**	*e*P	**Pg**	**15 37 20.2**	**-0.7**
ERZM	**Erzurum**	**1.00**	**3**	*i* P	**Pg**	**15 37 22.2**	**-1.6**
ERZM				*i* S	**Sg**	**15 37 29.5**	**-7.2**
ERZM	**Erzurum**	**1.00**	**3**	*i* P	**Pg**	**15 37 22.2**	**-1.6**
EZM	**Erzurum**	**1.00**	**3**	PG	**Pg**	**15 37 22.5**	**-1.3**
EZM	**Erzurum**	**1.00**	**3**	*i* Pg	**Pg**	**15 37 22.5**	**-1.3**
BEST	**Besiri**	**1.01**	**182**	*i* P	**Pg**	**15 37 24.9**	**+0.8**
BEST				*i* S	**Sg**	**15 37 41.2**	**+4.0**
HOMI	**Horasan**	**1.23**	**22**	*i* P	**Pg**	**15 37 26.4**	**-1.7**
HOMI				*i* S	**Sg**	**15 37 45.0**	**+0.9**
TUTA	**Tutak**	**1.27**	**67**	*i* P	**Pg**	**15 37 28.0**	**-1.0**
TUTA				*i* S	**Sg**	**15 37 46.0**	**+0.5**
TUTA	**Tutak**	**1.27**	**67**	*i* P	**Pg**	**15 37 28.0**	**-1.0**
TUTA				*i* S	**Sg**	**15 37 46.0**	**+0.5**
KOPT	**Kop Dagi**	**1.27**	**331**	*i* P	**Pg**	**15 37 27.2**	**-1.9**
KOPT				*i* S	**Sg**	**15 37 46.5**	**+0.9**
KOPT	**Kop Dagi**	**1.27**	**331**	*i* P	**Pg**	**15 37 27.2**	**-1.9**
KOPT				*i* S	**Sg**	**15 37 46.5**	**+0.9**
DIY	**Diyarbakir**	**1.32**	**220**	*e*PN	**Pn**	**15 37 29.4**	**-0.8**
DIY				*e*SN	**Sn**	**15 37 47.8**	**-0.6**
DIY	**Diyarbakir**	**1.32**	**220**	*e*Pn	**Pn**	**15 37 29.4**	**-0.7**
DIY				*e*Sn	**Sn**	**15 37 47.8**	**-0.5**
DIYA	**Diyarbakir**	**1.35**	**224**	*i* P	**Pg**	**15 37 30.5**	**0.0**
DIYA				*i* S	**Sg**	**15 37 49.8**	**+1.8**
DIYA	**Diyarbakir**	**1.35**	**224**	*i* P	**Pg**	**15 37 30.5**	**0.0**
DIYA				*i* S	**Sg**	**15 37 49.8**	**+1.7**
PTK	**Pertek**	**1.49**	**270**	*e*PN	**Pn**	**15 37 30.9**	**-1.6**
PTK	**Pertek**	**1.49**	**270**	*e*Pn	**Pn**	**15 37 30.9**	**-1.7**
MARD	**Mardin**	**1.64**	**195**	*i* P	**Pn**	**15 37 35.0**	**+0.4**
MARD				*i* S	**Sg**	**15 37 57.8**	**+0.4**
SVRC	**Sivrice-ELAZID**	**1.65**	**252**	*e*PN	**Pn**	**15 37 34.1**	**-0.6**
SVRC	**Sivrice-ELAZID**	**1.65**	**252**	*e*Pn	**Pn**	**15 37 34.2**	**-0.5**
VANB	**Van**	**1.66**	**100**	*e*PN	**Pn**	**15 37 34.4**	**-0.4**
VANB	**Van**	**1.66**	**100**	*e*Pn	**Pn**	**15 37 34.4**	**-0.4**
TVAN	**Van**	**1.69**	**102**	*i* P	**Pg**	**15 37 36.6**	**-0.3**
TVAN				*i* S	**Sg**	**15 37 59.5**	**+0.8**
TVAN	**Van**	**1.69**	**102**	*i* P	**Pg**	**15 37 36.6**	**-0.3**
TVAN				*i* S	**Sg**	**15 37 59.5**	**+0.7**
ELZG	**Elazig**	**1.86**	**258**	*i* P	**Pn**	**15 37 37.8**	**+0.2**
ELZG				*i* S	**Sg**	**15 38 05.3**	**+0.8**
ELZG	**Elazig**	**1.86**	**258**	*i* P	**Pn**	**15 37 37.8**	**+0.2**
ELZG				*i* S	**Sg**	**15 38 05.3**	**+0.9**
DYDN	**Diyadin**	**1.96**	**70**	*i* P	**Pg**	**15 37 40.0**	**-2.1**
DYDN				*i* S	**Sg**	**15 38 06.0**	**-1.5**
DYDN	**Diyadin**	**1.96**	**70**	*i* P	**Pg**	**15 37 40.0**	**-2.1**
DYDN				*i* S	**Sg**	**15 38 06.0**	**-1.5**
DDEM	**Demirkent**	**2.01**	**10**	*i* P	**Pn**	**15 37 39.8**	**0.0**
DDEM				*i* S	**Sg**	**15 38 10.6**	**+1.3**
DDEM	**Demirkent**	**2.01**	**10**	*i* P	**Pn**	**15 37 39.8**	**+0.1**
DDEM				*i* S	**Sg**	**15 38 10.6**	**+1.3**
CLDR	**Caldiran**	**2.05**	**83**	*e*PN	**Pn**	**15 37 40.2**	**0.0**
CLDR	**Caldiran**	**2.05**	**83**	*e*Pn	**Pn**	**15 37 40.2**	**0.0**
GUMT	**Gumushane**	**2.10**	**318**	*e*PN	**Pn**	**15 37 40.2**	**-0.6**
GUMT	**Gumushane**	**2.10**	**318**	*e*Pn	**Pn**	**15 37 40.2**	**-0.7**
DBAD	**Bademkaya**	**2.13**	**8**	*i* P	**Pn**	**15 37 41.6**	**+0.2**
DBAD				*i* S	**Sg**	**15 38 14.1**	**+1.1**
DBAD	**Bademkaya**	**2.13**	**8**	*i* P	**Pn**	**15 37 41.6**	**+0.3**
KARS	**Kars**	**2.20**	**38**	*e*PN	**Pn**	**15 37 42.3**	**+0.1**
KARS	**Kars**	**2.20**	**38**	*e*Pn	**Pn**	**15 37 42.3**	**+0.1**
KEMA	**Kemaliye**	**2.22**	**280**	*i* P	**Pn**	**15 37 41.8**	**-0.8**
KEMA				*i* S	**Sg**	**15 38 15.0**	**-0.9**
KEMA	**Kemaliye**	**2.22**	**280**	*i* P	**Pn**	**15 37 41.8**	**-0.7**
KEMA				*i* S	**Sg**	**15 38 15.0**	**-0.9**
PZAR	**Pazar-Rize**	**2.29**	**352**	*e*PN	**Pn**	**15 37 43.6**	**+0.1**
PZAR	**Pazar-Rize**	**2.29**	**352**	*e*Pn	**Pn**	**15 37 43.6**	**+0.1**
HAKT	**HAKKARI**	**2.32**	**125**	*i* P	**Pb**	**15 37 46.1**	**-1.1**
HAKT				*i* S	**Sg**	**15 38 25.7**	**+6.5**
HAKT	**HAKKARI**	**2.32**	**125**	*i* P	**Pb**	**15 37 46.1**	**-1.2**
MYA	**Malataya**	**2.33**	**256**	*e*PN	**Pn**	**15 37 44.3**	**+0.2**
MYA	**Malataya**	**2.33**	**256**	*e*Pn	**Pn**	**15 37 44.3**	**+0.2**
HKR	**Hakkari**	**2.33**	**124**	*e*PN	**Pn**	**15 37 44.1**	**0.0**
HKR	**Hakkari**	**2.33**	**124**	*e*Pn	**Pn**	**15 37 44.1**	**0.0**
KTUT	**Trabzon**	**2.39**	**331**	*e*PN	**Pn**	**15 37 44.6**	**-0.4**
KTUT	**Trabzon**	**2.39**	**331**	*e*Pn	**Pn**	**15 37 44.6**	**-0.3**
URFA	**Urfa**	**2.44**	**234**	*e*PN	**Pn**	**15 37 45.0**	**-0.7**
URFA	**Urfa**	**2.44**	**234**	*e*Pn	**Pn**	**15 37 45.0**	**-0.6**
BCA	**Borcka**	**2.55**	**5**	*e*PN	**Pn**	**15 37 45.9**	**-1.1**
BCA	**Borcka**	**2.55**	**5**	*e*Pn	**Pn**	**15 37 45.9**	**-1.2**
SFNV	**Sufian**	**2.66**	**201**	⇑P	**Pb**	**15 37 54.0**	**+1.0**
SFNV				⇑S	**Sb**	**15 38 27.0**	**+0.9**
SFNV	**Sufian**	**2.66**	**201**	⇑*i*P	**Pb**	**15 37 54.1**	**+1.1**
SFNV				⇑*i*S	**Sb**	**15 38 27.4**	**+1.3**
DARE	**Darende-Malaty**	**2.73**	**272**	*e*PN	**Pb**	**15 37 52.6**	**-1.6**
ATAB	**Bozova**	**2.77**	**240**	*i* P	**Pb**	**15 37 53.9**	**-1.1**
ATAB				*i* S	**Sg**	**15 38 33.9**	**+0.2**
ATAB	**Bozova**	**2.77**	**240**	*i* P	**Pb**	**15 37 53.8**	**-1.1**
ESPY	**Espiye-Giresun**	**2.82**	**316**	*e*PN	**Pn**	**15 37 51.4**	**+0.5**
ESPY	**Espiye-Giresun**	**2.82**	**316**	*e*Pn	**Pn**	**15 37 51.4**	**+0.6**
GNI	**Garni**	**2.93**	**64**	*e*PN	**Pn**	**15 37 52.7**	**+0.4**
GNI	**Garni**	**2.93**	**64**	Pn	**Pn**	**15 37 53.3**	**+1.0**
	8.3nm,0.3s,baz=287,slow=1.7,SNR=19						
GNI				Pg	**Pg**	**15 38 00.8**	**0.0**
	9.7nm,0.3s,baz=289,slow=1.8,SNR=16						
GNI	**Garni**	**2.93**	**64**	*e*Pn	**Pn**	**15 37 53.4**	**+1.0**
GNI				Pg	**Pg**	**15 38 00.8**	**0.0**
GNI	**Garni**	**2.93**	**64**	*e*Pn	**Pn**	**15 37 52.7**	**+0.3**
GNI	**Garni**	**2.93**	**64**	Pg	**Pg**	**15 38 00.9**	**+0.1**
SVSK	**Karacayir**	**3.49**	**288**	*e*PN	**Pn**	**15 38 00.4**	**+0.4**
SVSK	**Karacayir**	**3.49**	**288**	*e*Pn	**Pn**	**15 38 00.4**	**+0.4**
GAZ	**Gaziantep**	**3.67**	**243**	*e*PN	**Pn**	**15 38 03.0**	**+0.5**
GAZ	**Gaziantep**	**3.67**	**243**	*e*Pn	**Pn**	**15 38 03.0**	**+0.6**
KMRS	**Kahramanmaras**	**3.74**	**249**	*e*PN	**Pn**	**15 38 03.1**	**-0.4**
KMRS	**Kahramanmaras**	**3.74**	**249**	*e*Pn	**Pn**	**15 38 03.1**	**-0.4**
GOR	**Gori**	**3.75**	**34**	P	**Pn**	**15 38 04.5**	**+1.0**
SLMH	**Al Salmeh**	**3.80**	**226**	⇑P	**Pb**	**15 38 12.0**	**-0.4**
SLMH				⇑S	**Sb**	**15 39 00.0**	**+1.1**
SLMH	**Al Salmeh**	**3.80**	**226**	⇑*i*P	**Pb**	**15 38 12.2**	**-0.2**
SLMH				⇑*i*S	**Sb**	**15 39 00.4**	**+1.5**
TBLG	**Delisi**	**3.85**	**42**	P	**Pn**	**15 38 05.8**	**+0.8**
MTA	**Mtatsminda**	**3.85**	**43**	P	**Pn**	**15 38 05.8**	**+0.7**
MTA				S	**Sg**	**15 39 19.9**	**+11**
KEH	**Kehvi**	**3.94**	**30**	P	**Pn**	**15 38 05.3**	**-0.9**
JHLN	**Al Jahlan**	**3.95**	**216**	⇑P	**Pb**	**15 38 14.0**	**-1.1**
JHLN				⇑S	**Sb**	**15 39 02.0**	**-1.4**
JHLN	**Al Jahlan**	**3.95**	**216**	⇑*i*P	**Pb**	**15 38 14.4**	**-0.7**
JHLN				⇑*i*S	**Sb**	**15 39 02.0**	**-1.4**
DGRG	**David-gareji**	**4.02**	**50**	P	**Pn**	**15 38 09.1**	**+1.8**
DGRG				S	**Sg**	**15 39 19.9**	**+6.1**
ONI	**Oni**	**4.03**	**23**	P	**Pn**	**15 38 07.6**	**+0.2**
ONI				S	**Sg**	**15 39 17.0**	**+3.1**
DRWC	**Darouich**	**4.33**	**240**	⇑P	**Pb**	**15 38 22.0**	**+0.6**
DRWC				⇑S	**Sb**	**15 39 15.0**	**+0.9**
DRWC	**Darouich**	**4.33**	**240**	⇑*i*P	**Pb**	**15 38 22.7**	**+1.3**
DRWC				⇑*i*S	**Sb**	**15 39 15.2**	**+1.1**
KOZT	**Kozan**	**4.54**	**253**	*e*PN	**Pn**	**15 38 15.4**	**+0.9**
BTCH	**Batrach**	**4.80**	**235**	⇑P	**Pb**	**15 38 28.0**	**-1.5**
BTCH				⇑S	**Sb**	**15 39 26.0**	**-1.8**
BTCH	**Batrach**	**4.80**	**235**	⇑*i*P	**Pb**	**15 38 28.5**	**-1.0**
BTCH				⇑*i*S	**Sb**	**15 39 26.0**	**-1.8**
KIV	**Kislovodsk**	**5.15**	**11**	*e*P	**Pn**	**15 38 24.1**	**+1.3**
	20nm,0.8s						
KIV	**Kislovodsk**	**5.15**	**11**	*e*P	**Pn**	**15 38 24.1**	**+1.3**
	20nm,0.8s						
KARA	**Karaisali**	**5.20**	**254**	*e*PN	**Pn**	**15 38 25.1**	**+1.6**
KARA	**Karaisali**	**5.20**	**254**	*e*Pn	**Pn**	**15 38 25.1**	**+1.6**
SLNF	**Slenfeh**	**5.23**	**232**	⇑*i*P	**Pb**	**15 38 34.3**	**-2.5**
SLNF				⇑*i*S	**Sb**	**15 39 38.0**	**-2.1**
CORM	**Corum**	**5.31**	**286**	*e*PN	**Pn**	**15 38 26.8**	**+1.7**
CORM	**Corum**	**5.31**	**286**	*e*Pn	**Pn**	**15 38 26.8**	**+1.7**
BR131	**Keskin Array S**	**6.00**	**280**	*e*Pn	**Pn**	**15 38 34.9**	**+0.4**
	4.4nm,0.8s						
BR131	**Keskin Array S**	**6.00**	**280**	*e*Pn	**Pn**	**15 38 34.9**	**+0.4**
	4.4nm,0.8s						
BRTR	**Keskin Array B**	**6.00**	**280**	Pn	**Pn**	**15 38 35.4**	**+0.9**
	0.2nm,0.3s,baz=99,slow=14,SNR=14						
BRTR	**Keskin Array B**	**6.00**	**280**	Pn	**Pn**	**15 38 35.4**	**+0.9**
ASF	**Jabal al Asfar**	**7.62**	**209**	Pn	**Pn**	**15 38 57.9**	**+1.2**
	0.9nm,0.3s,baz=296,slow=11,SNR=10						
ASF				Lg		15 41 02.2	
	0.4nm,0.3s,baz=86,slow=21,SNR=3.1						
AKASG	**Malin Array Be**	**14.56**	**328**	Pn	**Pn**	**15 40 30.4**	**-1.2**
	0.7nm,0.3s,baz=131,slow=13,SNR=5.4						
AKASG	**Malin Array Be**	**14.56**	**328**	Pn	**Pn**	**15 40 30.4**	**-1.2**
AKTK	**Aktyubinsk**	**16.51**	**40**	Pn	**Pn**	**15 40 55.1**	**-2.2**
AKTO	**Aktyubinsk**	**16.51**	**40**	Pn	**Pn**	**15 40 55.1**	**-2.2**
	0.1nm,0.3s,baz=238,slow=10,SNR=10						
ARU	**Arti**	**20.93**	**27**	P	**P**	**15 41 48.9**	**+0.4**
	3.5nm,0.7s						
ARU	**Arti**	**20.93**	**27**	P	**P**	**15 41 48.9**	**+0.4**
	3.5nm,0.7s						
BRVK	**Borovoye**	**24.40**	**45**	*e*P	**P**	**15 42 27.2**	**+2.9**
	3.2nm,0.8s,mb3.9						
BVAR	**Borovoye Array**	**24.45**	**45**	P	**P**	**15 42 25.2**	**+0.6**
	0.9nm,0.8s,mb3.4,baz=240,slow=8.4,SNR=5.5						
BVAR	**Borovoye Array**	**24.45**	**45**	P	**P**	**15 42 25.2**	**+0.5**
FINES	**FINESS Array B**	**24.45**	**342**	P	**P**	**15 42 25.1**	**+0.4**
	3.0nm,0.8s,mb3.9,baz=154,slow=14,SNR=11						
FINES	**FINESS Array B**	**24.45**	**342**	P	**P**	**15 42 25.1**	**+0.4**
EKS2	**Erkin-Say**	**24.79**	**71**	*e*P	**P**	**15 42 29.3**	**+1.4**
	3.4nm,0.9s,mb4.1						
EKS2	**Erkin-Say**	**24.79**	**71**	*e*P	**P**	**15 42 29.3**	**+1.4**
	3.4nm,0.9s,mb4.1						
JOF	**Joensuu**	**24.80**	**349**	*e*p	**P**	**15 42 26.5**	**-1.2**
	3.4nm,0.7s,mb4.2						
JOF	**Joensuu**	**24.80**	**349**	*e*p	**P**	**15 42 26.5**	**-1.2**
	3.4nm,0.7s,mb4.2						
JOF	**Joensuu**	**24.80**	**349**	*e*P	**P**	**15 42 26.5**	**-1.2**
	3.4nm,0.7s,mb4.2						
KEST	**Kesra**	**25.55**	**273**	P	**P**	**15 42 35.7**	**+0.9**
	2.6nm,1.0s,mb3.8,baz=336,slow=3.6,SNR=4.0						
TKM2	**Tokmak 2**	**26.11**	**70**	P	**P**	**15 42 42.1**	**+2.2**
	3.2nm,1.0s,mb3.9						
TKM2	**Tokmak 2**	**26.11**	**70**	P	**P**	**15 42 42.1**	**+2.2**
	3.2nm,1.0s,mb3.9						
KURK	**Kurchatov**	**28.68**	**53**	P	**P**	**15 43 03.1**	**+0.2**
	0.9nm,0.9s,mb3.6,baz=265,slow=8.9,SNR=4.9						
KURK	**Kurchatov**	**28.68**	**53**	P	**P**	**15 43 03.1**	**+0.2**
MKAR	**Makanchi Array**	**30.78**	**62**	P	**P**	**15 43 22.4**	**+0.9**
	0.8nm,0.8s,mb3.7,baz=269,slow=8.6,SNR=3.4						
MKAR	**Makanchi Array**	**30.78**	**62**	P	**P**	**15 43 22.4**	**+0.9**
ARCES	**ARCESS Array B**	**31.84**	**350**	P	**P**	**15 43 29.3**	**-1.3**
	1.1nm,0.9s,mb3.8,baz=148,slow=14,SNR=4.2						
ARCES	**ARCESS Array B**	**31.84**	**350**	P	**P**	**15 43 29.3**	**-1.3**
ARCES	**ARCESS Array B**	**31.84**	**350**	P	**P**	**15 43 29.3**	**-1.3**
ESDC	**Sonseca Array**	**34.76**	**286**	P	**P**	**15 43 54.8**	**-1.6**
	0.1nm,0.2s,mb3.3,baz=72,slow=9.2,SNR=4.6						
ESDC	**Sonseca Array**	**34.76**	**286**	P	**P**	**15 43 54.8**	**-1.6**

*ISCJB **29** 15:45:33.8±1.3, 24°.99N±0°.04×122°.66E±0°.05, h4km±8km, mb3.8/8, MS3.6/5, Error ellipse: s-maj=8.2km s-min=5.7km az=136.9*
*TAP **29** 15:45:35.8, 24°.88N×122°.54E, h6km±2km, ML3.7, D*
*NEIC **29** 15:45:35.9±0.6, 24°.87N×122°.54E, h10km, mb4.4/1, Error ellipse: s-maj=10.0km s-min=7.8km az=110.0*
*IDC **29** 15:45:35.9±1.1, 24°.43N×121°.56E, h0km, mb3.7/7, mb1 3.9/8, mb1mx3.7/23, mbtmp3.8/8, ML3.6/1, MS3.6/6, Ms1 3.6/6, ms1mx3.3/24, Error ellipse: s-maj=65.1km s-min=17.6km az=66.0*

ISC 29 15:45:36.0±0.8, 24°.94N±0°.04×122°.58E±0°.04, h8km±4km, n64, σ1§02/63, mb3.8/8, MS3.6/5, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.54**	**277**	*i* P	**Pg**	**15 45 47.1**	**+0.6**
	baz=284						
TWB1				*e*S	**Sg**	**15 45 54.9**	**+1.3**
	baz=284						
YOJ	**Yonaguni jima**	**0.62**	**141**	*i* P	**Pg**	**15 45 48.3**	**+0.4**
	baz=134						
YOJ				*e*S	**Sg**	**15 45 57.5**	**+1.6**
	baz=134						
NWF	**Wu-fen Shan**	**0.74**	**280**	P	**Pg**	**15 45 50.5**	**+0.3**
	baz=285						
TWC	**Suao**	**0.74**	**244**	P	**Pg**	**15 45 49.8**	**-0.5**
	baz=246						
TWC				*e*S	**Sg**	**15 46 00.3**	**+0.3**
	baz=246						
ILA	**Ilan**	**0.78**	**257**	*e*P	**Pg**	**15 45 51.8**	**+0.8**
	baz=260						
TWE	**Neicheng**	**0.86**	**255**	*i* P	**Pg**	**15 45 52.0**	**-0.5**
	baz=258						
TWA	**Mucha**	**0.91**	**273**	P	**Pg**	**15 45 53.2**	**-0.2**
	baz=276						
ENA	**Nanau**	**0.92**	**236**	P	**Pg**	**15 45 53.1**	**-0.6**
	baz=237						
TWY	**Chenhua**	**0.95**	**291**	*e*P	**Pg**	**15 45 54.4**	**+0.2**
	baz=294						
TAP1	**Taipei**	**0.97**	**276**	*e*P	**Pg**	**15 45 54.5**	**0.0**
	baz=279						
ENTT	**Nioudou**	**0.97**	**252**	*e*P	**Pg**	**15 45 54.2**	**-0.5**
	baz=254						
TATO	**Taipei**	**0.99**	**272**	*e*Pg	**Pg**	**15 45 54.2**	**-0.9**
TWS1	**Kuangyinshan**	**1.07**	**279**	*e*P	**Pg**	**15 45 56.3**	**-0.2**
	baz=282						
YHNB	**Yeheng**	**1.13**	**256**	*e*Pg	**Pg**	**15 45 56.7**	**-1.0**
NSK	**Sanguang**	**1.14**	**257**	P	**Pg**	**15 45 57.1**	**-0.8**
	baz=259						
NACB	**Ninganchiao**	**1.18**	**230**	*e*Pg	**Pg**	**15 45 57.6**	**-1.1**
NNS	**Nan Shan**	**1.21**	**246**	P	**Pb**	**15 45 58.1**	**-1.0**
	baz=247						
TWD	**Chiawan**	**1.24**	**227**	*e*P	**Pn**	**15 45 59.2**	**-0.4**
	baz=227						
NCU	**National Centr**	**1.27**	**272**	*e*P	**Pn**	**15 45 59.1**	**-0.9**
	baz=274						
HWA	**Hwalien**	**1.31**	**223**	*e*P	**Pn**	**15 45 59.2**	**-1.3**
	baz=223						
WHF	**Hehuan Shan**	**1.44**	**237**	*i* P	**Pn**	**15 46 02.2**	**-0.1**
	baz=237						
TWT	**Tachien**	**1.45**	**242**	P	**Pn**	**15 46 02.8**	**+0.3**
	baz=243						
NSTT	**Nanjuang**	**1.47**	**258**	*e*P	**Pn**	**15 46 02.4**	**-0.4**
	baz=259						
ESL	**Shilin**	**1.54**	**223**	*e*P	**Pn**	**15 46 02.9**	**-0.7**
	baz=223						
NSY	**Sanyi**	**1.74**	**253**	*e*P	**Pn**	**15 46 08.3**	**+1.9**
	baz=254						
TWQ1	**Liyutan**	**1.75**	**251**	*e*P	**Pn**	**15 46 08.8**	**+2.2**
	baz=251						
EHY	**Hungye**	**1.83**	**219**	*e*P	**Pn**	**15 46 06.7**	**-1.0**
	baz=218						
SMLT	**Sun Moon Lake**	**1.86**	**236**	*e*P	**Pn**	**15 46 09.3**	**+1.2**
	baz=236						
SSLB	**Suanglung**	**1.88**	**233**	*e*Pg	**Pg**	**15 46 08.5**	**-3.5**
TYC	**Yuchr**	**1.88**	**237**	*e*P	**Pn**	**15 46 09.3**	**+0.9**
	baz=237						
TCU	**Taichung**	**1.91**	**246**	*e*P	**Pn**	**15 46 11.3**	**+2.5**
	baz=246						
YULB	**Yu-li**	**1.94**	**218**	*e*P	**Pn**	**15 46 07.6**	**-1.6**
TWF1	**Yuli**	**1.97**	**217**	*e*P	**Pn**	**15 46 08.7**	**-0.9**
	baz=216						
CHN5	**Tsauling**	**2.19**	**233**	*e*P	**Pn**	**15 46 14.6**	**+1.9**
	baz=233						
ELDTW	**Lidau**	**2.26**	**220**	*e*P	**Pn**	**15 46 12.8**	**-0.8**
	baz=219						
TPUB	**Ta-pu**	**2.42**	**228**	*e*P	**Pn**	**15 46 17.1**	**+1.3**
CHY	**Chiayi**	**2.44**	**234**	*e*P	**Pn**	**15 46 15.4**	**-0.6**
	baz=234						
WTP	**Ta-pu**	**2.47**	**227**	*e*P	**Pn**	**15 46 16.9**	**+0.4**
	baz=227						
TWG	**Pinlang**	**2.52**	**214**	*e*P	**Pn**	**15 46 14.8**	**-2.5**
TWG	**Pinlang**	**2.52**	**214**	*e*P	**Pn**	**15 46 16.8**	**-0.4**
	baz=213						
TWK	**Hsinying**	**2.54**	**229**	*e*P	**Pn**	**15 46 20.2**	**+2.8**
	baz=229						
CHN1	**Nanshi**	**2.57**	**227**	*e*P	**Pn**	**15 46 18.9**	**+1.1**
	baz=227						
SGST	**Jiashian**	**2.60**	**225**	*e*P	**Pn**	**15 46 19.6**	**+1.3**
	baz=224						
ECL	**Taimali**	**2.77**	**213**	*e*P	**Pn**	**15 46 20.0**	**-0.6**
	baz=212						
SSD	**Sandimen**	**2.82**	**220**	*e*P	**Pn**	**15 46 22.6**	**+1.3**
	baz=219						
TWM1	**Shoushan**	**2.89**	**224**	*e*P	**Pn**	**15 46 23.7**	**+1.4**
	baz=223						
EAST	**Anshuo**	**3.00**	**212**	*e*P	**Pn**	**15 46 24.1**	**+0.2**
	baz=211						
SCZT	**Fangliau**	**3.13**	**216**	*e*P	**Pn**	**15 46 25.7**	**+0.1**
	baz=215						
TWK1	**Hengchun**	**3.40**	**209**	*e*P	**Pn**	**15 46 27.8**	**-1.5**
	baz=208						
KSRS	**Korea Array**	**13.28**	**19**	Pn	**Pn**	**15 48 58.4**	**+14**
	0.3nm,0.3s,baz=195,slow=12,SNR=12						
KSRS				LR	LR	15 54 41.1	
	comp=Z,111nm,19.1s,baz=190,slow=39						
CMAR	**Chiang Mai Arr**	**22.88**	**258**	PcP	PcP	15 54 30.2	-0.8
	0.5nm,0.8s,baz=19,slow=1.5,SNR=4.1						
SONM	**Songino Array**	**26.20**	**335**	P	**P**	**15 51 12.1**	**+1.2**
	0.5nm,0.6s,mb3.2,baz=150,slow=8.7,SNR=7.0						
SONM				LR	LR	16 02 29.1	
	comp=Z,149nm,20.2s,MS3.5,baz=270,slow=39						
PETK	**Petropavlovsk-**	**38.53**	**34**	LR	LR	16 08 37.8	
	comp=Z,34nm,20.0s,MS3.2,baz=1.5,slow=35						
MK31	**Makanchi Array**	**38.70**	**315**	*e*P	**P**	**15 52 59.9**	**-0.3**
MKAR	**Makanchi Array**	**38.70**	**315**	P	**P**	**15 53 00.4**	**+0.1**
	1.3nm,0.7s,mb3.8,baz=104,slow=10,SNR=8.4						
MKAR				LR	LR	16 08 37.5	
	comp=Z,80nm,18.4s,MS3.6,baz=357,slow=36						
ZALV	**Zalesovo Beam**	**40.32**	**326**	P	**P**	**15 53 12.3**	**-1.3**
	0.9nm,0.5s,mb3.8,baz=110,slow=7.2,SNR=5.8						
KURK	**Kurchatov**	**42.34**	**319**	P	**P**	**15 53 30.4**	**0.0**
	0.8nm,0.9s,mb3.4,baz=112,slow=8.6,SNR=6.3						
WRAB	**Tennant Creek**	**46.05**	**165**	*e*P	**P**	**15 53 59.2**	**-1.1**
WRA	**Warramunga Arr**	**46.06**	**165**	P	**P**	**15 53 59.6**	**-0.7**
	1.2nm,0.7s,mb4.0,baz=347,slow=8.6,SNR=13						
BVAR	**Borovoye Array**	**47.91**	**320**	P	**P**	**15 54 14.4**	**-0.1**
	1.0nm,0.6s,mb4.0,baz=105,slow=9.3,SNR=8.0						
BRVK	**Borovoye**	**47.98**	**320**	*e*P	**P**	**15 54 14.8**	**-0.3**
	3.2nm,0.8s,mb4.4						
ASAR	**Alice Springs**

mb1 3.6/3, mb1mx3.3/14, mbtmp3.4/3, Error ellipse: s-maj=345.0km s-min=32.4km az=77.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.53**	**177**	Pn	Pn	16 31 37.2	-0.5
	0.2nm,0.3s,baz=360,slow=13,SNR=33						
WRA				Sn	Sn	16 34 07.0	-13
	0.3nm,0.3s,baz=356,slow=23,SNR=5.9						
ASAR	**Alice Springs**	**18.23**	**179**	P	Pn	16 32 25.6	+0.3
	0.1nm,0.3s,baz=348,slow=8.9,SNR=16						
ASAR				S	Sn	16 35 35.5	-14
	0.1nm,0.3s,baz=2.1,slow=28,SNR=3.6						
MKAR	**Makanchi Array**	**68.90**	**325**	P	P	16 39 17.5	+0.1
	0.4nm,0.8s,baz=128,slow=7.2,SNR=4.6						

NEIC 29 16:34:13.0, 20°.35N×156°.37W, h22km, MD3.6(HVO), After HVO., Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POHA	**Pohakuloa**	**0.98**	**127**	*eP*	Pb	16 34 28.4	-2.9
POHA				*eS*	Sb	16 34 39.8	-4.0
PUH	**Pauahi**	**1.45**	**132**	*ePn*	Pn	16 34 40.0	+2.1
HON	**Honolulu**	**1.81**	**303**	*ePn*	Pn	16 34 39.6	-3.2
KIP	**Kipapa**	**1.88**	**305**	*ePn*	Pn	16 34 40.6	-3.2
KIP				*eSn*	Sn	16 35 02.2	-4.6

ISK ***29*** *16:49:03.4, 38°.63N×27°.25E, h13km, MD2.7*
DDA ***29*** *16:49:04.6, 38°.51N×27°.25E, h6km±1km, Md2.8*
CSEM ***29*** *16:49:05.0±0.2, 38°.53N×27°.30E, h12km, MD2.7, Error ellipse: s-maj=6.7km s-min=4.3km az=90.0*
ISCJB ***29*** *16:49:05.1±0.6, 38°.53N±0°.03×27°.30E±0°.06, h12km±5km, Error ellipse: s-maj=8.2km s-min=4.6km az=175.9*
ISC 29 16:49:05.2±0.6, 38°.52N±0°.03×27°.26E±0°.06, h17km±4km, n26, σ1s10/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IZM	**Izmir**	**0.13**	**178**	*ePG*	**Pg**	**16 49 09.4**	**+0.4**
IZM				*eSG*	**Sg**	**16 49 12.5**	**+1.0**
IZM	**Izmir**	**0.13**	**178**	*ePg*	**Pg**	**16 49 09.4**	**+0.4**
IZM				*eSg*	**Sg**	**16 49 12.5**	**+0.9**
BLCB	**Balcova**	**0.22**	**231**	*ePG*	**Pg**	**16 49 09.5**	**-0.8**
BLCB	**Balcova**	**0.22**	**231**	*ePg*	**Pg**	**16 49 09.5**	**-0.8**
AKHS	**Akhisar**	**0.56**	**51**	*i P*	**Pg**	**16 49 15.4**	**-1.0**
AKHS				*i S*	**Sg**	**16 49 24.9**	**+1.0**
AKHS	**Akhisar**	**0.56**	**51**	*i P*	**Pg**	**16 49 15.4**	**-1.0**
AKHS				*i S*	**Sg**	**16 49 24.9**	**+1.0**
AKS	**Akhisar**	**0.56**	**51**	*ePG*	**Pg**	**16 49 13.2**	**-3.2**
AKS	**Akhisar**	**0.56**	**51**	*ePg*	**Pg**	**16 49 13.2**	**-3.2**
GCAM	**G?zelcaml?**	**0.82**	**181**	*i P*	**Pb**	**16 49 20.0**	**-1.0**
GCAM				*i S*	**Sb**	**16 49 31.6**	**-0.2**
GCAM	**G?zelcaml?**	**0.82**	**181**	*i P*	**Pb**	**16 49 20.0**	**-1.0**
GCAM				*i S*	**Sb**	**16 49 31.6**	**-0.2**
AYVA	**Ayvalik**	**0.90**	**331**	*i P*	**Pb**	**16 49 22.5**	**+0.1**
AYVA				*i S*	**Sb**	**16 49 35.8**	**+1.8**
AYVA	**Ayvalik**	**0.90**	**331**	*i P*	**Pb**	**16 49 22.5**	**+0.1**
AYVA				*i S*	**Sb**	**16 49 35.8**	**+1.8**
AYDN	**Tasoluk**	**0.99**	**150**	*i P*	**Pb**	**16 49 24.1**	**+0.1**
AYDN				*i S*	**Sb**	**16 49 37.9**	**+1.2**
AYDN	**Tasoluk**	**0.99**	**150**	*i P*	**Pb**	**16 49 24.0**	**+0.1**
AYDN				*i S*	**Sb**	**16 49 37.9**	**+1.2**
KULA	**Kula-Manisa**	**1.10**	**90**	*ePN*	**Pn**	**16 49 24.9**	**-0.9**
KULA				*eSN*	**Sn**	**16 49 41.0**	**+0.3**
KULA	**Kula-Manisa**	**1.10**	**90**	*ePn*	**Pn**	**16 49 24.9**	**-0.9**
KULA				*eSn*	**Sn**	**16 49 41.0**	**+0.4**
BALB	**Balikesir**	**1.22**	**23**	*ePN*	**Pn**	**16 49 25.9**	**-1.5**
BALB	**Balikesir**	**1.22**	**23**	*ePn*	**Pn**	**16 49 26.0**	**-1.4**
BALY	**Balya**	**1.25**	**13**	*i P*	**Pn**	**16 49 27.6**	**-0.3**
BALY				*i S*	**Sb**	**16 49 45.9**	**+1.8**
BALY	**Balya**	**1.25**	**13**	*i P*	**Pn**	**16 49 27.6**	**-0.3**
BALY				*i S*	**Sb**	**16 49 45.9**	**+1.8**
MLSB	**Milas**	**1.29**	**161**	*ePN*	**Pn**	**16 49 28.8**	**+0.3**
MLSB	**Milas**	**1.29**	**161**	*ePn*	**Pn**	**16 49 28.8**	**+0.3**
GONE	**Gonen-Balikesi**	**1.56**	**12**	*ePN*	**Pn**	**16 49 29.9**	**-2.2**
GONE	**Gonen-Balikesi**	**1.56**	**12**	*ePn*	**Pn**	**16 49 30.0**	**-2.1**
YER	**Yerkesik**	**1.61**	**149**	*ePN*	**Pn**	**16 49 33.6**	**+0.8**
YER	**Yerkesik**	**1.61**	**149**	*ePn*	**Pn**	**16 49 33.6**	**+0.8**

TRN ***29*** *16:53:25.6, 19°.01N×64°.72W, h14km*
NEIC ***29*** *16:53:26.9, 19°.14N×64°.49W, h16km, MD3.6(RSPR), After RSPR.*
RSPR ***29*** *16:53:26.9, 19°.14N×64°.49W, h16km±14km, MD3.5/7, MD3.5/7*
ISC 29 16:53:25.7±1.8, 19°.13N±0°.09×64°.6W±0°.2, h15km±19km, n20, σ0s41/32, 17C-2D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.71**	**179⇑**	*iP*	**Pg**	**16 53 39.6**	**0.0**
TBVI	**Tortola**	**0.71**	**179⇑**	*iP*	**Pg**	**16 53 39.6**	**0.0**
STVI	**Saint Thomas**	**0.83**	**202⇓**	*eP*	**Pb**	**16 53 41.7**	**-0.2**
STVI				*eS*	**Sb**	**16 53 53.2**	**+0.3**
STVI	**Saint Thomas**	**0.83**	**202⇓**	*eP*	**Pb**	**16 53 41.7**	**-0.2**
STVI				*eS*	**Sb**	**16 53 53.2**	**+0.3**
MTP	**Monte Pirata**	**1.35**	**221⇑**	*eP*	**Pn**	**16 53 49.6**	**-0.4**
MTP				*eS*	**Sn**	**16 54 06.7**	**-0.9**
MTP	**Monte Pirata**	**1.35**	**221⇑**	*eP*	**Pn**	**16 53 49.6**	**-0.4**
MTP				*eS*	**Sn**	**16 54 06.7**	**-0.9**
CDVI	**St. Croix**	**1.38**	**186⇑**	*eP*	**Pn**	**16 53 50.8**	**+0.5**
CDVI	**St. Croix**	**1.38**	**186⇑**	*eP*	**Pn**	**16 53 50.8**	**+0.5**
CBYP	**Canovanas**	**1.45**	**234⇑**	*eP*	**Pn**	**16 53 50.9**	**-0.4**
CBYP				*eS*	**Sn**	**16 54 10.0**	**0.0**
CBYP	**Canovanas**	**1.45**	**234⇑**	*eP*	**Pn**	**16 53 50.9**	**-0.4**
CBYP				*eS*	**Sn**	**16 54 10.0**	**0.0**
HUMP	**Col San Antoni**	**1.52**	**230⇑**	*eP*	**Pn**	**16 53 52.1**	**-0.2**
HUMP				*eS*	**Sn**	**16 54 12.0**	**+0.2**
HUMP	**Col San Antoni**	**1.52**	**230⇑**	*eP*	**Pn**	**16 53 52.1**	**-0.2**
HUMP				*eS*	**Sn**	**16 54 12.0**	**+0.2**
SJG	**San Juan**	**1.76**	**235⇑**	*eP*	**Pn**	**16 53 55.4**	**-0.3**
SJG				*eS*	**Sn**	**16 54 18.5**	**+0.7**
SJG	**San Juan**	**1.76**	**235⇑**	*eP*	**Pn**	**16 53 55.4**	**-0.3**
SJG				*eS*	**Sn**	**16 54 18.2**	**+0.4**
SJG	**San Juan**	**1.76**	**235⇑**	*eP*	**Pn**	**16 53 55.4**	**-0.3**
SJG	**San Juan**	**1.76**	**235⇑**	*eP*	**Pn**	**16 53 55.4**	**-0.3**
SJG				*eS*	**Sn**	**16 54 18.2**	**+0.4**
SJG				*eS*	**Sn**	**16 54 18.5**	**+0.7**
CELP	**Cerrillos**	**2.13**	**241⇑**	*eP*	**Pn**	**16 54 00.8**	**+0.1**
CELP	**Cerrillos**	**2.13**	**241⇑**	*eP*	**Pn**	**16 54 00.8**	**+0.1**
AOPR	**Arecibo Observ**	**2.16**	**249⇑**	*eP*	**Pn**	**16 54 01.7**	**+0.6**
AOPR	**Arecibo Observ**	**2.16**	**249⇑**	*eP*	**Pn**	**16 54 01.7**	**+0.6**

MEX ***29*** *16:53:20.7±0.7, 13°.91N×93°.37W, h16km±17km, MD4.7*
NEIC ***29*** *16:53:20.0, 13°.92N×93°.38W, h16km, mb4.8/101, MS5.0/1, MD4.7(MEX), After MEX.*
SZGRF ***29*** *16:53:23.3, 14°.02N×93°.41W, h33km, mb4.9, Near coast of Chiapas, Mexico*
ISCJB ***29*** *16:53:24.7±0.7, 14°.31N±0°.05×92°.94W±0°.04, h50km±5km, mb4.7/105, MS4.6/13, Error ellipse: s-maj=8.9km s-min=3.6km az=34.4*
GCMT ***29*** *16:53:25.6±0.3, 14°.17N×93°.27W, h12km, MW5.1, Moment Tensor Solution. s49,c61; s86,c137; Moment tensor: Scale 10^{16}Nm; M_{rr}4.30±.13; $M_{\theta\theta}$-3.46±.10; $M_{\phi\phi}$-0.83±.15; $M_{r\theta}$4.92±.35; $M_{\theta\phi}$1.82±.10; $M_{\phi r}$-0.81±.46; Best double couple: $M_0$6.60000×10^{16} NP1:ϕ_s309.00000°, δ22.00000°, λ114.00000°. NP2:ϕ_s104.00000°, δ70.00000°, λ81.00000°. Principal axes: T 6.6900, Plg64.0000°, Azm359.0000°; N -0.1400, Plg9.0000°, Azm107.0000°; P -6.5400, Plg24.0000°, Azm201.0000°; Data Used: II IU IC CN G.*
IDC ***29*** *16:53:27.2±4.3, 14°.47N×92°.73W, h47km±40km, mb4.1/17, mb1 4.3/18, mb1mx4.2/23, mbtmp4.1/18, ML4.1/1, MS4.3/8, Ms1 4.3/8, ms1mx4.1/27 Error ellipse: s-maj=30.6km s-min=14.6km az=60.0*
CASC ***29*** *16:53:52.6±2.0, 13°.57N×90°.74W, h0km±385km, ML3.4, mb4.8(NEIC)*
ISC 29 16:53:26.7±0.6, 14°.36N±0°.04×92°.90W±0°.04, h48km±4km, n529, σ0s72/516, mb4.7/104, MS4.6/13, 151C-169D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.82**	**48**	*eP*	**Pn**	**16 53 42.3**	**+0.4**
THIG				*eS*	**Sn**	**16 54 00.0**	**+7.0**
PCIG		**1.37**	**347**	*eP*	**Pn**	**16 53 47.3**	**-2.1**
PCIG				*eS*	**Sn**	**16 54 07.8**	**+1.4**
TGIG		**2.41**	**355**	*eP*	**Pn**	**16 54 03.8**	**+0.1**
TGIG				*eS*	**Sn**	**16 54 36.6**	**+4.7**
APG	**El Apazote**	**2.44**	**75**	P	**Pn**	**16 54 06.5**	**+2.4**
	22nm,0.3s,baz=263,slow=8.1,SNR=84						
APG				Lg		16 54 46.6	
	124nm,0.3s,baz=255,slow=16,SNR=6.0						
RBDL	**Robledal**	**3.12**	**94**	*eP*	**Pn**	**16 54 14.2**	**+0.7**
SBLS	**San Blas**	**3.22**	**99**	*eP*	**Pn**	**16 54 15.2**	**+0.4**
SNJE	**San Jose**	**3.23**	**98**	*eP*	**Pn**	**16 54 15.2**	**+0.3**
CMIG	**Matias Romero**	**3.32**	**325**	P	**Pn**	**16 54 12.2**	**-3.9**
	12nm,0.3s,baz=146,slow=10,SNR=73						
CMIG				S	**Sn**	**16 54 54.9**	**+0.6**
	129nm,0.3s,baz=149,slow=18,SNR=10						
CMIG	**Matias Romero**	**3.32**	**325**	P	**Pn**	**16 54 12.2**	**-3.9**
CMIG				S	**Sn**	**16 54 54.9**	**+0.6**
HUIG	**Huatulco**	**3.40**	**295**	*eP*	**Pn**	**16 54 08.4**	**-8.8**
HUIG				*i S*	**Sn**	**16 54 44.5**	**-12**
BOQS	**Boqueron**	**3.57**	**100**	*eP*	**Pn**	**16 54 18.3**	**-1.2**
BOQS				AML	AML	16 55 19.8	
	comp=Z,596nm,0.6s						
TUIG	**Tuzandepetl**	**3.93**	**338**	*eP*	**Pn**	**16 54 21.8**	**-2.7**
TUIG				*i S*	**Sn**	**16 55 09.2**	**-0.3**
SNVI	**San Vicente**	**4.01**	**100**	*eP*	**Pn**	**16 54 26.5**	**+0.9**
VHO	**Vista Hermosa**	**4.57**	**307**	*eP*	**Pn**	**16 54 26.3**	**-7.0**
VHO				*eS*	**Sn**	**16 55 17.0**	**-8.1**
CAHU	**Cacacuatique**	**4.59**	**97**	*eP*	**Pn**	**16 54 33.9**	**+0.4**
CNCH	**Conchagua**	**5.04**	**102**	*eP*	**Pn**	**16 54 39.9**	**+0.2**
PNIG	**Pinotepa**	**5.43**	**292**	*eP*	**Pn**	**16 54 35.5**	**-10**
PNIG				*eS*	**Sn**	**16 55 35.2**	**-11**
TGUH	**Tegucigalpa,Un**	**5.46**	**92**	*eP*	**Pn**	**16 54 45.6**	**0.0**
	comp=Z,255nm,1.0s						
TPIG	**Tehuac#an**	**5.88**	**314**	*i P*	**Pn**	**16 54 45.2**	**-6.1**
TPIG				*i S*	**Sn**	**16 55 52.9**	**-4.6**
CRIN	**San Cristobal**	**5.92**	**106**	*eP*	**Pn**	**16 54 50.1**	**-1.8**
APYN	**Apoyeque**	**6.72**	**108**	*eP*	**Pn**	**16 55 03.0**	**+0.2**
TEIG	**Tepich**	**7.31**	**36**	*ePn*	**Pn**	**16 55 11.9**	**+1.0**
	comp=Z,342nm,0.8s						
HKT	**Hockley**	**15.75**	**351**	*eP*	**Pn**	**16 57 02.3**	**-3.0**
	comp=Z,171nm,2.0s						
JCT	**Junction City**	**17.25**	**340**	*eP*	**Pn**	**16 57 22.2**	**-2.0**
	comp=Z,76nm,1.3s						
DWPF	**Disney**	**17.34**	**36**	*eP*	**Pn**	**16 57 27.7**	**+2.4**
	comp=Z,81nm,1.2s						
NATX	**Nacogdoches**	**17.39**	**355**	*eP*	**Pn**	**16 57 25.0**	**-1.0**
	comp=Z,36nm,0.9s						
628A	**Black Gap, Mar**	**17.66**	**330**	⇑P	**Pn**	**16 57 28.4**	**-0.9**
	baz=18,SNR=73						
627A	**Terlingua Ranc**	**17.88**	**329**	⇑P	**Pn**	**16 57 31.6**	**-0.3**
	baz=18,SNR=161						
VBMS	**Vicksburg**	**17.91**	**7**	*eP*	**Pn**	**16 57 33.4**	**+1.1**
	comp=Z,22nm,0.6s						
TXAR	**Lajitas Array**	**17.92**	**328**	P	**Pn**	**16 57 32.1**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=152,slow=11,SNR=47						
TXAR				LR	LR	17 04 35.6	
	comp=Z,498nm,18.4s,baz=265,slow=37						
528A	**Cox Ranch, San**	**18.18**	**332**	⇑P	**Pn**	**16 57 35.6**	**0.0**
	baz=18,SNR=77						
626A	**Big Bend Ranch**	**18.34**	**327**	⇓P	**Pn**	**16 57 37.8**	**+0.2**
	baz=18,SNR=42						
527A	**Woodward Ranch**	**18.55**	**330**	⇓P	**Pn**	**16 57 39.8**	**-0.3**
	baz=19,SNR=49						
428A	**Kincaid Ranch,**	**18.61**	**333**	⇑P	**Pn**	**16 57 41.1**	**+0.3**
	baz=19,SNR=38						
526A	**Mary Lane Ranc**	**18.73**	**328**	⇑P	**Pn**	**16 57 41.3**	**-0.9**
	baz=19,SNR=32						
427A	**Hayter Ranch,**	**19.04**	**331**	⇓P	**Pn**	**16 57 46.0**	**+0.1**
	baz=19,SNR=55						
426A	**McDonald Obser**	**19.19**	**330**	⇓P	**Pn**	**16 57 46.5**	**-1.3**
	baz=19,SNR=58						
328A	**Wristen Ranch,**	**19.23**	**333**	⇑P	**Pn**	**16 57 47.5**	**-0.7**
	baz=19,SNR=35						
LRAL	**Lakeview Retre**	**19.35**	**15**	*eP*	**Pn**	**16 57 46.8**	**-2.8**
	comp=Z,22nm,1.1s						
326A	**Caldwell Ranch**	**19.70**	**331**	⇓P	**Pn**	**16 57 52.5**	**-1.4**
	baz=20,SNR=12						
227A	**Bennet, Jal**	**19.98**	**333**	⇑P	**Pn**	**16 57 55.4**	**-1.7**
	baz=20,SNR=18						
OTAV	**Otavalo**	**20.03**	**133**	P	**P**	**16 57 54.3**	**-1.5**
	comp=Z,39nm,1.8s						
MIAR	**Mount Ida**	**20.11**	**358**	*eP*	**P**	**16 57 54.7**	**-1.7**
	comp=Z,99nm,1.1s						
325A	**Bean Ranch, Si**	**20.23**	**329**	⇓P	**P**	**16 57 57.2**	**-0.6**
	baz=20,SNR=16						
UALR	**University of**	**20.33**	**1**	*eP*	**P**	**16 57 59.5**	**+0.7**
	comp=Z,82nm,1.1s						
226A	**Malaga, Loving**	**20.38**	**332**	⇑P	**P**	**16 58 00.1**	**+0.7**
	baz=20,SNR=28						
CLNB	**Carlsbad**	**20.45**	**332**	*eP*	**P**	**16 58 00.3**	**+0.2**
	comp=Z,14nm,0.9s						
324A	**Moseley Ranch,**	**20.55**	**328**	⇑P	**P**	**16 58 00.8**	**-0.4**
	baz=21,SNR=34						
127A	**Arkansas Junct**	**20.57**	**334**	⇓P	**P**	**16 58 00.9**	**-0.6**
	baz=21,SNR=23						
ROSC	**El Rosal**	**20.58**	**115**	P	**P**	**16 58 05.9**	**+4.1**
	comp=Z,15nm,0.4s,baz=293,slow=17,SNR=13						
ROSC	**El Rosal**	**20.58**	**115**	*eP*	**P**	**16 58 04.8**	**+3.1**
GDL2	**Guadalupe Moun**	**20.62**	**331**	*eP*	**P**	**16 58 02.5**	**+0.5**
	comp=Z,149nm,1.1s						
MNTX	**Cornudas Mount**	**20.70**	**329**	*eP*	**P**	**16 58 02.2**	**-0.6**
	comp=Z,20nm,0.9s						
225A	**Deer Hill, Car**	**20.76**	**330**	⇓P	**P**	**16 58 03.1**	**-0.5**
	baz=21						
GOGA	**Godfrey**	**20.81**	**23**	*eP*	**P**	**16 58 03.6**	**-0.5**
	comp=Z,100nm,1.3s						
126A	**Clayton Basin,**	**20.84**	**333**	⇑P	**P**	**16 58 04.0**	**-0.4**
	baz=21,SNR=38						
WMOK	**Wichita Mounta**	**20.97**	**346**	*eP*	**P**	**16 58 05.2**	**-0.6**
	comp=Z,9.7nm,0.8s						
Z27A	**Tatum**	**21.07**	**335**	⇓P	**P**	**16 58 06.3**	**-0.6**
	baz=21,SNR=155						
224A	**Cornudas Mount**	**21.07**	**329**	⇑P	**P**	**16 58 06.7**	**-0.2**
	baz=21,SNR=38						
125A	**Gardner Draw,**	**21.13**	**332**	⇓P	**P**	**16 58 07.2**	**-0.3**
	baz=21,SNR=63						
HBAR	**Harrisburg**	**21.20**	**5**	*eP*	**P**	**16 58 09.4**	**+1.2**
Z26A	**Caprock**	**21.35**	**334**	⇓P	**P**	**16 58 09.5**	**-0.4**
	baz=21,SNR=65						
MSTX	**Muleshoe**	**21.47**	**337**	⇓P	**P**	**16 58 10.7**	**-0.5**
	baz=22,SNR=11						
223A	**Chaparral, Ant**	**21.48**	**327**	⇑P	**P**	**16 58 10.6**	**-0.7**
	baz=22						
124A	**Stringfield Ra**	**21.55**	**330**	⇓P	**P**	**16 58 11.8**	**-0.2**
	baz=22,SNR=66						
Y27A	**Causey**	**21.55**	**336**	⇓P	**P**	**16 58 11.1**	**-0.9**
	baz=22,SNR=27						
GNAR	**Gosnell**	**21.67**	**6**	P	**P**	**16 58 14.3**	**+1.0**
Z25A	**Roswell**	**21.68**	**332**	⇓P	**P**	**16 58 13.1**	**-0.3**
	baz=22,SNR=35						
SWET	**Sewanee**	**21.69**	**16**	*eP*	**P**	**16 58 13.9**	**+0.3**
Y26A	**Elida**	**21.85**	**335**	⇑P	**P**	**16 58 15.1**	**-0.1**
	baz=22						
123A	**Bell Site, Whi**	**21.89**	**328**	⇑P	**P**	**16 58 15.2**	**-0.5**
	baz=22						
AMTX	**Amarillo**	**21.91**	**340**	*eP*	**P**	**16 58 15.2**	**-0.7**
	comp=Z,74nm,0.8s,mb5.2						
222A	**Williams Famil**	**21.92**	**326**	⇑P	**P**	**16 58 15.9**	**-0.1**
	baz=22,SNR=19						
COW	**Cow Castle Cre**	**21.94**	**28**	P	**P**	**16 58 16.4**	**+0.2**
NHSC	**New Hope**	**21.96**	**30**	P	**P**	**16 58 18.6**	**+2.2**
	comp=Z,226nm,1.4s,mb5.4						
Z24A	**Sheeppen Canyo**	**22.02**	**331**	⇑P	**P**	**16 58 17.5**	**+0.5**
	baz=22,SNR=49						
WVT	**Waverly**	**22.15**	**11**	*eP*	**P**	**16 58 18.6**	**+0.2**
	comp=Z,19nm,1.0s,mb4.5						
320A	**Kipp Ranch, An**	**22.16**	**322**	⇑P	**P**	**16 58 18.1**	**-0.4**
	baz=22,SNR=7.7						
X27A	**F and S Farms,**	**22.20**	**337**	⇑P	**P**	**16 58 18.7**	**-0.3**
	baz=22,SNR=15						
Y25A	**Mesa, Roswell**	**22.21**	**333**	⇓P	**P**	**16 58 19.2**	**+0.1**
	baz=22,SNR=29						
221A	**Mesquite Ranch**	**22.22**	**325**	⇑P	**P**	**16 58 19.6**	**+0.4**
	baz=22,SNR=15						
CPCT	**Cooper Cave**	**22.31**	**18**	P	**P**	**16 58 22.8**	**+2.7**
122A	**Conniff Cattle**	**22.32**	**327**	⇓P	**P**	**16 58 20.7**	**+0.4**
	baz=22						
Z23A	**Rita Site, Whi**	**22.38**	**330**	⇑P	**P**	**16 58 21.0**	**+0.1**
	baz=22,SNR=26						
X26A	**CR and CF Fran**	**22.39**	**336**	⇓P	**P**	**16 58 20.7**	**-0.2**
	baz=22,SNR=31						
JSC	**Jenkinsville**	**22.45**	**26**	*eP*	**P**	**16 58 22.0**	**+0.4**
JSC				*e*		16 58 35.1	
Y24A	**Capitan**	**22.55**	**332**	⇑P	**P**	**16 58 22.9**	**+0.3**
	baz=23,SNR=51						
W27A	**Bowe Ranch, En**	**22.56**	**338**	⇓P	**P**	**16 58 22.4**	**-0.3**
	baz=23,SNR=32						
220A	**Playas Peak, P**	**22.57**	**323**	⇓P	**P**	**16 58 22.8**	**-0.1**
	baz=23,SNR=22						
121A	**Cookes Peak, D**	**22.62**	**326**	⇓P	**P**	**16 58 23.6**	**+0.2**
	baz=23,SNR=34						
319A	**Douglas**	**22.63**	**321**	⇓P	**P**	**16 58 23.7**	**+0.1**
	baz=23,SNR=14						
X25A	**Clemmons Ranch**	**22.72**	**334**	⇑P	**P**	**16 58 24.6**	**+0.2**
	baz=23						
TKL	**Tuckaleechee C**	**22.73**	**20**	P	**P**	**16 58 24.7**	**+0.1**
	comp=Z,3.1nm,0.9s,mb3.7,baz=198,slow=8.9,SNR=3.3						
TKL				LR	LR	17 09 15.2	
	comp=Z,1μm,18.2s,MS4.5,baz=202,slow=42						
TKL	**Tuckaleechee C**	**22.73**	**20**	P	**P**	**16 58 25.5**	**+0.9**
Z22A	**Elephant Butte**	**22.74**	**328**	⇑P	**P**	**16 58 24.9**	**+0.2**
	baz=23,SNR=14						
Y23A	**Lovelace Mesa,**	**22.84**	**331**	⇑P	**P**	**16 58 25.2**	**-0.6**
	baz=23,SNR=41						
W26A	**Owens Ranch, T**	**22.84**	**337**	⇑P	**P**	**16 58 24.9**	**-0.8**
	baz=23,SNR=6.6						
219A	**White Tail Can**	**23.06**	**322**	⇓P	**P**	**16 58 26.5**	**-1.6**
	baz=23,SNR=15						
X24A	**Lazy VL Ranch,**	**23.08**	**333**	⇑P	**P**	**16 58 27.7**	**-0.6**
	baz=23,SNR=9.0						
120A	**U Bar Ranch, L**	**23.10**	**324**	⇑P	**P**	**16 58 27.2**	**-1.3**
	baz=23,SNR=12						
318A	**Bisbee**	**23.11**	**320**	⇑P	**P**	**16 58 27.3**	**-1.4**
	baz=23,SNR=20						
Z21A	**St. Cloud Mine**	**23.15**	**327**	⇑P	**P**	**16 58 28.4**	**-0.6**
	baz=23,SNR=16						
W25A	**X Bar L Ranch,**	**23.23**	**335**	⇓P	**P**	**16 58 29.3**	**-0.5**
	baz=23,SNR=45						
Y22A	**Socorro**	**23.29**	**329**	⇑P	**P**	**16 58 30.3**	**-0.1**
	baz=23,SNR=14						
BNM	**Barren Site**	**23.29**	**330**	*eP*	**P**	**16 58 30.4**	**0.0**
	comp=Z,38nm,1.1s,mb4.7						
X23A	**Hourglass Bar**	**23.44**	**332**	⇓P	**P**	**16 58 31.7**	**-0.1**
	baz=24,SNR=17						
LENM	**Lemitar**	**23.47**	**330**	*eP*	**P**	**16 58 32.3**	**+0.2**
	comp=Z,25nm,1.1s,mb4.5						
V26A	**Tequesquite Ra**	**23.48**	**337**	⇑P	**P**	**16 58 32.1**	**-0.1**
	baz=24,SNR=8.9						
SIUC	**Southern Illin**	**23.49**	**7**	*eP*	**P**	**16 58 30.9**	**-1.3**
Z20A	**Nine Sixteen R**	**23.50**	**325**	⇑P	**P**	**16 58 32.4**	**0.0**
	baz=24						
218A	**Dragoon**	**23.52**	**321**	⇑P	**P**	**16 58 33.1**	**+0.5**
	baz=24						
W24A	**Lazy 6 Ranch,**	**23.62**	**334**	P	**P**	**16 58 33.9**	**+0.4**
	baz=24,SNR=28						
119A	**Ashpeak Ranch,**	**23.64**	**324**	⇑P	**P**	**16 58 34.1**	**+0.4**
	baz=24,SNR=18						
CCM	**Cathedral Cave**	**23.64**	**3**	*eP*	**P**	**16 58 32.3**	**-1.4**
	comp=Z,31nm,1.1s,mb4.7						
Y21A	**Point of Rocks**	**23.70**	**328**	⇓P	**P**	**16 58 34.5**	**+0.2**
	baz=24,SNR=9.4						
LAZ	**Ladron**	**23.74**	**330**	*eP*	**P**	**16 58 35.4**	**+0.8**
	comp=Z,31nm,1.2s,mb4.6						
V25A	**Rancho No Teng**	**23.83**	**336**	⇓P	**P**	**16 58 35.6**	**+0.2**
	baz=24,SNR=43						
ANMO	**Albuquerque**	**23.87**	**332**	P	**P**	**16 58 36.0**	**+0.3**
	comp=Z,6.6nm,1.0s,mb4.0,baz=151,slow=12,SNR=11						
ANMO				LR	LR	17 10 19.2	
	comp=Z,420nm,19.0s,MS3.9,baz=5.8,slow=42						
ANMO	**Albuquerque**	**23.87**	**332**	*eP*	**P**	**16 58 35.6**	**-0.1**
	comp=Z,4.6nm,0.9s,mb3.9						
118A	**Homack Ranch,**	**23.94**	**322**	⇓P	**P**	**16 58 37.0**	**+0.6**
	baz=24,SNR=21						
USIN	**University of**	**23.96**	**10**	*eP*	**P**	**16 58 36.6**	**0.0**
	comp=Z,38nm,1.1s,mb4.7						
Y20A	**Horse Springs,**	**23.99**	**327**	⇓P	**P**	**16 58 38.0**	**+1.1**
	baz=24,SNR=37						
U26A	**Atchley Ranch,**	**23.99**	**338**	⇓P	**P**	**16 58 37.1**	**+0.3**

baz=26,SNR=9.1
HDIL Hopedale 26.29 6 eP P 16 58 56.2 -1.4
comp=Z,15nm,0.8s,mb4.6
S22A 4UR Ranch, Cre 26.37 335 ⇓P P 16 58 59.3 +0.8
baz=26,SNR=16
113A Mohawk Valley, 26.40 318 ⇑P P 16 58 57.8 -0.9
baz=26,SNR=6.0
Q25A Bedland, Calha 26.43 340 ⇑P P 16 58 59.2 +0.3
baz=26,SNR=11
V17A Tonalea, Kykot 26.58 326 ⇓P P 16 59 00.6 +0.2
baz=27,SNR=9.9
X15A Humboldt 26.58 322 ⇓P P 16 58 60.0 -0.4
baz=27,SNR=7.0
Z13A Yuma Proving G 26.60 318 ⇑P P 16 59 00.6 0.0
baz=27,SNR=6.5
W16A Flagstaff 26.60 324 ⇓P P 16 59 00.7 +0.1
baz=27
T19A Beclabito 26.61 330 ⇑P P 16 59 00.2 -0.4
baz=27
MVCO Mesa Verde 26.66 331 ⇑P P 16 59 01.7 +0.6
baz=27,SNR=10
MVCO Mesa Verde 26.66 331 eP P 16 59 01.7 +0.6
comp=Z,40nm,1.1s,mb4.9
Y14A Wickenburg 26.67 320 ⇓P P 16 59 00.6 -0.6
baz=27
U18A Rough Rock, Ch 26.70 328 ⇓P P 16 59 01.8 +0.4
baz=27
S21A Coal Bank Pass 26.71 333 ⇓P P 16 59 02.3 +0.7
baz=27,SNR=6.4
R22A Saguache, Gunn 26.75 335 ⇓P P 16 59 02.5 +0.6
baz=27,SNR=12
WUAZ Wupatki 26.82 325 ⇓P P 16 59 03.3 +0.8
baz=27,SNR=9.6
WUAZ Wupatki 26.82 325 eP P 16 59 03.0 +0.4
comp=Z,22nm,1.1s,mb4.6
X14A Yava 26.96 321 ⇓P P 16 59 04.0 +0.2
baz=27,SNR=5.5
W15A Williams 27.08 323 ⇑P P 16 59 06.0 +1.1
baz=27
Y13A Salome 27.11 319 ⇓P P 16 59 04.8 -0.3
baz=27,SNR=5.3
R21A Cimarron 27.20 334 ⇓P P 16 59 06.0 +0.1
baz=27
U17A Shonto 27.25 328 ⇑P P 16 59 06.5 +0.2
baz=27
T18A Mexican Hat 27.26 329 ⇑P P 16 59 06.4 -0.1
baz=27,SNR=7.6
GLA Glamis 27.27 317 ⇑P P 16 59 06.3 -0.3
baz=27
GLA Glamis 27.27 317 eP P 16 59 05.7 -0.9
comp=Z,8.6nm,0.8s,mb4.3
Q22A Crested Butte, 27.36 336 ⇑P P 16 59 07.3 0.0
baz=27
S19A Harvey Farm, M 27.39 331 ⇓P P 16 59 07.7 +0.1
baz=28
PV01 Paradox Valley 27.45 332 eP P 16 59 08.8 +0.7
comp=Z,2µm,1.2s
V15A Kaibab Nationa 27.49 324 ⇑P P 16 59 09.1 +0.6
baz=28,SNR=6.7
Y12C Blythe 27.51 318 ⇑P P 16 59 09.1 +0.4
baz=28
W14A Seligman 27.59 322 ⇓P P 16 59 09.8 +0.4
baz=28
Q21A Lamborn Mesa, 27.61 335 ⇑P P 16 59 10.4 +0.9
baz=28
PDMCI Parker Dam,Lak 27.62 320 ⇓P P 16 59 09.8 +0.1
baz=28
T17A Navajo Res., N 27.62 328 ⇑P P 16 59 09.9 +0.2
baz=28,SNR=5.8
SMCO Snowmass 27.66 336 eP P 16 59 10.8 +0.8
comp=Z,34nm,1.2s,mb4.8
OGNE Ogallala 27.66 345 eP P 16 59 10.7 +0.7
comp=Z,95nm,1.4s,mb5.2
ISCO Idaho Springs 27.69 339 eP P 16 59 10.0 -0.3
comp=Z,18nm,1.3s,mb4.5
S18A Hurst Farm, Bl 27.76 330 ⇓P P 16 59 10.9 0.0
baz=28,SNR=9.6
PV04 Paradox Valley 27.81 332 eP P 16 59 12.2 +0.8
V14A Boquillas Ranc 27.89 323 ⇑P P 16 59 12.4 +0.3
baz=28,SNR=9.9
R19A Curley Farm, L 27.89 332 ⇓P P 16 59 11.9 -0.2
baz=28
T16A Glen Canyon Da 27.98 327 ⇑P P 16 59 13.2 +0.3
baz=28
W13A Hualapai Mount 27.99 321 ⇑P P 16 59 13.1 +0.1
baz=28
U15A North Rim 27.99 325 ⇓P P 16 59 13.1 +0.1
baz=28,SNR=7.7
BC3 Big Chuckawall 28.05 317 ⇑P P 16 59 13.1 -0.5
baz=28,SNR=7.7
S17A Black Ridge (B 28.11 329 ⇓P P 16 59 14.1 0.0
baz=28
IRM Iron Mountain 28.17 318 ⇓P P 16 59 14.4 -0.2
baz=28,SNR=6.0
R18A Canyonlands Na 28.26 331 ⇑P P 16 59 14.7 -0.7
baz=28
Q19A Hogan Spring (28.43 333 ⇓P P 16 59 17.2 +0.3
baz=28,SNR=6.8
T15A Red Dirt Ranch 28.47 326 ⇑P P 16 59 17.7 +0.4
baz=28,SNR=6.8
U14A Mt Trumbull 28.48 324 ⇓P P 16 59 17.7 +0.3
baz=28,SNR=5.7
P20A De Beque 28.51 334 ⇓P P 16 59 18.3 +0.7
baz=29,SNR=5.8
V13A Grand Canyon W 28.56 322 ⇑P P 16 59 17.9 -0.1
baz=29,SNR=8.4
S16A Weppner Ranch, 28.58 328 ⇓P P 16 59 18.2 0.0
baz=29
BELC Belle Mtn. Jos 28.62 317 ⇑P P 16 59 18.4 -0.3
baz=29
R17A Hanksville Air 28.68 330 ⇓P P 16 59 19.4 +0.3
baz=29,SNR=9.0
PFO Pinyon Flat Ob 28.69 316 ⇓P P 16 59 18.9 -0.4
baz=29
O21A Pagoda 28.74 336 ⇓P P 16 59 20.0 +0.3
baz=29
P19A Cripple Cowboy 28.87 334 ⇑P P 16 59 20.7 0.0
baz=29
N22A Wattenberg Ran 28.88 338 ⇑P P 16 59 21.0 +0.2
baz=29,SNR=7.9
GMRC Granite Mounta 28.89 319 ⇓P P 16 59 20.1 -0.9
baz=29
U13A Pakoon Wash 28.93 323 ⇑P P 16 59 20.7 -0.7
baz=29,SNR=11
Q18A Rafter H Ranch 28.95 332 ⇑P P 16 59 21.4 -0.1
baz=29
S15A Panguitch 28.95 327 ⇓P P 16 59 21.4 -0.1
baz=29
PHWY Pilot Hill 28.98 340 eP P 16 59 22.5 +0.8
comp=Z,11nm,1.1s,mb4.5
V12A Nelson 28.99 321 ⇑P P 16 59 22.0 +0.1
baz=29,SNR=6.9
N21A Black Mountain 29.23 337 ⇑P P 16 59 24.2 +0.2
baz=29,SNR=15
U12A Valley of Fire 29.28 323 ⇓P P 16 59 24.7 +0.3
baz=29,SNR=5.7
Q16A Castle Valley 29.29 330 ⇓P P 16 59 25.0 +0.4
baz=29,SNR=8.8
T13A Saint George 29.32 324 ⇓P P 16 59 25.1 +0.2
baz=29
CCUT Cedar City 29.40 326 eP P 16 59 26.7 +1.2
comp=Z,14nm,1.3s,mb4.5
V11A Goodsprings 29.42 321 ⇑P P 16 59 25.4 -0.4
baz=29
P18A Preston Nutter 29.42 332 ⇓P P 16 59 26.1 +0.4
baz=30
ECSD EROS Data Cent 29.44 355 eP P 16 59 23.8 -2.1
comp=Z,17nm,1.1s,mb4.7
TUQ Turquoise Moun 29.47 320 ⇑P P 16 59 26.1 0.0
baz=30
MSU Marysvale 29.48 328 eP P 16 59 26.6 +0.4
comp=Z,6.8nm,1.3s,mb4.2
O19A Miners Draw (B 29.48 334 ⇓P P 16 59 26.2 0.0
baz=30
P17A Butcher Ranch, 29.53 331 ⇓P P 16 59 26.3 -0.3
baz=30
N20A Spence Gulch, 29.58 336 ⇓P P 16 59 27.6 +0.5
baz=30,SNR=11
ARUT Antelope Range 29.61 326 eP P 16 59 28.7 +1.4
comp=Z,11nm,0.8s,mb4.6
S13A Holt Ranch, En 29.69 325 ⇑P P 16 59 28.8 +0.6
baz=30,SNR=12
O18A Roosevelt 29.84 333 ⇑P P 16 59 29.9 +0.5
baz=30,SNR=5.2
M21A Separation Pea 29.91 338 ⇓P P 16 59 30.7 +0.7
baz=30,SNR=24
RWWY Rawlins 29.93 338 eP P 16 59 30.6 +0.5
comp=Z,23nm,0.9s,mb4.9
L22A Ellis Ranch, M 29.96 340 ⇑P P 16 59 30.7 +0.3
baz=30
N19A John Jarvie Ra 30.00 335 ⇓P P 16 59 29.9 -0.9
baz=30
O17A Robinson Place 30.10 332 ⇓P P 16 59 32.2 +0.5
baz=30,SNR=8.5
M20A Sweetwater, Wa 30.12 337 ⇑P P 16 59 32.5 +0.7
baz=30,SNR=6.7
R13A O'Grain Ranch, 30.18 326 ⇓P P 16 59 33.0 +0.6
baz=30,SNR=8.7
L21A Rawlins 30.23 338 ⇓P P 16 59 33.6 +0.8
baz=30,SNR=13
T11A Corn Creek, Al 30.23 323 ⇓P P 16 59 33.2 +0.3
baz=30
N18A Larsen Ranch, 30.28 334 ⇑P P 16 59 34.0 +0.8
baz=30,SNR=6.9
P15A Leamington 30.34 329 ⇑P P 16 59 34.9 +1.1
baz=30
U10A Ash Meadows, A 30.35 321 ⇓P P 16 59 33.9 -0.1
baz=30
Q14A Sevier Lake (B 30.41 328 ⇑P P 16 59 35.0 +0.6
baz=30,SNR=6.9
O16A Springville 30.46 331 ⇓P P 16 59 34.7 -0.2
baz=30
EDW2 Edwards Air Fo 30.47 317 ⇑P P 16 59 34.8 -0.2
baz=30
DAU Daniels Canyon 30.52 332 eP P 16 59 36.4 +1.0
comp=Z,11nm,1.2s,mb4.6
L20A Wamsutter 30.62 337 ⇓P P 16 59 36.5 +0.3
baz=31
R12A Pony Springs, 30.64 325 ⇓P P 16 59 37.5 +1.0
baz=31
TPNV Topopah Spring 30.65 321 ⇓P P 16 59 36.5 0.0
baz=31
FURC Furnace Creek, 30.71 320 ⇓P P 16 59 37.2 +0.1
baz=31
P14A Drum Mountains 30.75 329 ⇑P P 16 59 37.5 +0.1
baz=31,SNR=5.8
BLG Laguna Peak 30.76 314 ⇑P P 16 59 37.0 -0.6
baz=31
S11A Rachel 30.81 323 ⇓P P 16 59 38.5 +0.5
baz=31
M18A Lyman 30.82 334 ⇑P P 16 59 38.7 +0.7
baz=31
MPMC Manual Prospec 30.85 319 ⇑P P 16 59 38.4 0.0
baz=31,SNR=6.7
CTU Camp Tracy 30.96 331 eP P 16 59 40.2 +0.9
comp=Z,25nm,1.4s,mb4.8
L19A Farson 31.09 336 ⇓P P 16 59 40.4 0.0
baz=31
M17A Scullys Gap (B 31.11 334 ⇓P P 16 59 40.9 +0.3
baz=31
P13A Bates Ranch, G 31.14 327 ⇑P P 16 59 40.9 +0.1
baz=31,SNR=11
RSSD Black Hills 31.15 344 eP P 16 59 41.2 +0.3
comp=Z,5.6nm,0.8s,mb4.5
K20A Yellowstone Ra 31.18 338 ⇑P P 16 59 41.1 -0.1
baz=31
R11A Troy Canyon, C 31.20 324 ⇓P P 16 59 41.3 -0.1
baz=31,SNR=7.1
L18A Fontenelle, Gr 31.22 335 ⇓P P 16 59 41.6 +0.1
baz=31,SNR=5.3
ISA Isabella 31.25 317 ⇓P P 16 59 42.0 +0.1
baz=31
GRAC Grapevine Rang 31.36 320 ⇓P P 16 59 43.1 +0.2
baz=31
SBC Santa Barbara 31.39 314 ⇑P P 16 59 43.3 +0.1
baz=31
CWC Cottonwood Cre 31.46 319 ⇓P P 16 59 43.7 0.0
baz=32
S10A Tonopah Range, 31.50 323 ⇓P P 16 59 43.3 -0.7
baz=32,SNR=6.7
K19A Alson Red Bu 31.51 337 ⇑P P 16 59 44.0 -0.1
baz=32
R10A Warm Springs 31.57 323 ⇓P P 16 59 43.8 -0.9
baz=32
Q11A Duckwater 31.59 325 ⇓P P 16 59 45.5 +0.7
baz=32,SNR=6.8
HWUT Hardware Ranch 31.61 333 P P 16 59 45.5 +0.5
comp=Z,11nm,1.2s,mb4.6
P12A McGill 31.62 326 ⇓P P 16 59 45.8 +0.7
baz=32
L17A Cokeville 31.71 334 ⇓P P 16 59 45.6 -0.3
baz=32
BW06 Boulder Array 31.74 336 ⇓P P 16 59 45.8 -0.2
baz=32
PDAR Pinedale Array 31.74 336 P P 16 59 45.9 -0.2
comp=Z,1.8nm,0.9s,mb3.9,baz=133,slow=6.3,SNR=13
PDAR PcP PcP 17 02 37.1 +0.4
comp=Z,0.8nm,1.0s,baz=158,slow=0.5,SNR=2.7
PDAR LR LR 17 15 16.3
comp=Z,437nm,18.6s,MS4.2,baz=313,slow=41
BGU Big Grassy Mou 31.75 330 eP P 16 59 46.9 +0.6
comp=Z,12nm,1.4s,mb4.5
N14A Grayback Hills 31.77 330 ⇑P P 16 59 45.9 -0.5
baz=32,SNR=9.9
K18A Toltan Ranch, 31.82 336 ⇑P P 16 59 47.3 +0.5
baz=32,SNR=15
L16A Fish Haven 31.88 333 ⇑P P 16 59 47.7 +0.3
baz=32,SNR=8.1
M15A Larsen Ranch, 31.90 332 ⇑P P 16 59 47.7 +0.2
baz=32
O12A Currie 32.11 328 ⇑P P 16 59 49.6 +0.2
baz=32
RCTC Rector, Farmer 32.13 318 ⇓P P 16 59 49.7 0.0
baz=32
K17A Gardner Place, 32.27 335 ⇑P P 16 59 51.6 +0.9
baz=32
N13A Wendover, West 32.27 329 ⇑P P 16 59 51.0 +0.2
baz=32
J18A Kendall Valley 32.29 336 ⇓P P 16 59 50.9 0.0
baz=32,SNR=10
HVU Hansel Valley 32.30 332 eP P 16 59 51.9 +0.9
comp=Z,17nm,1.2s,mb4.8
L15A Malad City 32.30 332 ⇑P P 16 59 51.2 +0.2
baz=32
M14A Sheep Mountain 32.35 331 ⇓P P 16 59 52.0 +0.6
baz=32,SNR=18
O11A Cowboy Ranch, 32.49 326 ⇑P P 16 59 53.1 +0.3
baz=32,SNR=9.6
I18A Diamond G Ranc 32.63 337 ⇓P P 16 59 54.5 +0.6
baz=33,SNR=6.4
M13A Montello 32.63 330 ⇑P P 16 59 54.3 +0.4
baz=33,SNR=17
M13A Montello 32.63 330 eP P 16 59 54.6 +0.6
comp=Z,29nm,1.4s,mb5.0
J17A Brown Place, J 32.69 336 ⇓P P 16 59 55.4 +0.9
baz=33,SNR=18
N12A Clover Valley, 32.69 328 ⇓P P 16 59 55.5 +1.0
baz=33,SNR=5.6
N12A Clover Valley, 32.69 328 P P 16 59 55.6 +1.1
comp=Z,8.3nm,1.0s,mb4.6
L14A Malta 32.71 331 ⇓P P 16 59 54.2 -0.4
baz=33,SNR=11
REDW Red Top Meadow 32.75 335 eP P 16 59 55.5 +0.5
comp=Z,58nm,1.3s,mb5.3
SNOW Snow King Moun 32.79 336 eP P 16 59 56.1 +0.8
comp=Z,49nm,0.9s,mb5.4
NVAR Mina Array Bea 32.85 322 P P 16 59 57.1 +1.3
comp=Z,5.6nm,0.9s,mb4.5,baz=144,slow=9.6,SNR=37
NVAR PcP PcP 17 02 41.0 +1.1
comp=Z,0.8nm,0.8s,baz=151,slow=3.9,SNR=3.5
LOHW Long Hollow 32.86 336 eP P 16 59 56.6 +0.7
comp=Z,38nm,1.4s,mb5.1
TPAW Teton Pass 32.90 335 eP P 16 59 57.1 +0.8
comp=Z,42nm,1.1s,mb5.3
K15A Arbon 32.91 333 ⇑P P 16 59 56.2 -0.1
baz=33,SNR=8.0
RRI2 Red Ridge 32.93 335 eP P 16 59 58.0 +1.6
comp=Z,30nm,1.2s,mb5.1
J16A Bone 32.99 335 ⇓P P 16 59 57.6 +0.5
baz=33
M12A Wells 33.05 329 ⇑P P 16 59 58.0 +0.4
baz=33,SNR=11
K14A Jones Ranch, D 33.08 332 ⇓P P 16 59 56.7 -1.1
baz=33
L13A Double Diamond 33.09 331 ⇑P P 16 59 56.8 -1.1
baz=33
IMW Indian Meadow 33.23 336 eP P 16 59 59.4 +0.3
comp=Z,19nm,1.3s,mb4.9
I16A Newdale 33.43 335 ⇑P P 17 00 00.5 -0.4
baz=34
J15A Blackfoot 33.44 334 ⇓P P 17 00 00.7 -0.2
baz=34,SNR=8.9
M11A Holland Ranch, 33.51 328 ⇓P P 17 00 01.3 -0.3
baz=34,SNR=8.9
H17A Grant Village 33.51 337 ⇓P P 17 00 01.5 -0.1
baz=34
L12A House Creek Ra 33.65 330 ⇑P P 17 00 02.1 -0.7
baz=34,SNR=5.8
RLMT Red Lodge 33.65 339 ⇑P P 17 00 02.3 -0.5
baz=34,SNR=6.4
RLMT Red Lodge 33.65 339 eP P 17 00 03.2 +0.4
comp=Z,30nm,1.5s,mb5.0
J14A Carey 33.85 333 ⇓P P 17 00 03.7 -0.8
baz=34,SNR=6.1
AGMN Agassiz Nation 33.92 356 eP P 17 00 04.1 -1.0
comp=Z,20nm,1.1s,mb5.0
G18A Lazy EL Ranch, 33.93 339 ⇑P P 17 00 04.0 -1.2
baz=34,SNR=6.6
M10A I.L. Ranch, Tu 33.96 327 ⇓P P 17 00 04.8 -0.7
baz=34
K12A Draper Farm, C 33.96 330 ⇑P P 17 00 05.6 +0.1
baz=34
L11A Cat Creek Ranc 34.03 329 ⇓P P 17 00 05.4 -0.7
baz=34,SNR=18
H16A Russell Place, 34.03 336 ⇓P P 17 00 06.8 +0.8
baz=34,SNR=10
LAO LASA Array 34.11 344 eP P 17 00 06.4 -0.3
comp=Z,18nm,1.0s,mb5.0
QLMT Earthquake Lak 34.20 336 P P 17 00 09.0 +1.4
comp=Z,3.8nm,0.5s,mb4.6
J13A Cove Ranch, Pi 34.21 332 ⇓P P 17 00 07.9 +0.2
baz=34,SNR=7.3
I14A Mackay 34.30 333 ⇑P P 17 00 08.0 -0.5
baz=34,SNR=8.7
L10A Juniper Basin 34.32 328 ⇑P P 17 00 08.7 0.0
baz=34,SNR=5.2
GCMT Greycliff 34.38 339 eP P 17 00 09.0 0.0
comp=Z,12nm,1.1s,mb4.8
HLID Hailey 34.44 332 ⇓P P 17 00 09.3 -0.4
baz=34,SNR=15
HLID Hailey 34.44 332 eP P 17 00 10.3 +0.6
comp=Z,15nm,1.1s,mb4.8
F18A Big Timber 34.49 339 ⇓P P 17 00 10.2 +0.1
baz=35,SNR=14
H15A Lima 34.52 335 ⇑P P 17 00 09.8 -0.5
baz=35,SNR=7.1
J12A Stokes Ranch, 34.52 331 ⇓P P 17 00 08.3 -2.1
baz=35
I13A Wildhorse Cree 34.59 333 ⇓P P 17 00 11.1 +0.2
baz=35,SNR=10.0
K11A Parker Ranch, 34.61 329 ⇓P P 17 00 11.1 -0.1
baz=35
G16A Moss Hill, Enn 34.68 336 ⇑P P 17 00 12.8 +1.0
baz=35,SNR=8.6
MCMT McKenzie Canyo 34.77 335 eP P 17 00 13.9 +1.4
comp=Z,12nm,1.1s,mb4.7
H14A Leadore 34.82 334 ⇓P P 17 00 13.4 +0.5
baz=35,SNR=12
F17A Fitzpatrick Pl 34.82 338 ⇑P P 17 00 13.9 +0.9
baz=35,SNR=29
G15A Dillon 34.90 336 ⇑P P 17 00 14.0 +0.4
baz=35,SNR=10.0
I12A Atlanta 34.95 331 ⇓P P 17 00 14.5 +0.4
baz=35,SNR=18
BOZ Bozeman (W) 34.97 337 ⇓P P 17 00 14.4 +0.2
baz=35,SNR=13
BOZ Bozeman (W) 34.97 337 eP P 17 00 14.2 0.0
comp=Z,9.4nm,1.1s,mb4.6
BEKR Beckworth 34.99 322 ⇓P P 17 00 14.2 -0.3
baz=35
MFID Camas Ranch 34.99 330 ⇓P P 17 00 14.2 -0.3
baz=35
K10A MacKenzie Ranc 35.03 329 ⇑P P 17 00 14.5 -0.3
baz=35
F16A Kennard Place, 35.08 337 ⇑P P 17 00 14.7 -0.5
baz=35
DLMT Dillon 35.11 336 eP P 17 00 16.2 +0.8
comp=Z,26nm,1.2s,mb5.0
E18A Harlowton 35.13 339 ⇓P P 17 00 15.5 -0.1
baz=35,SNR=14
H13A Challis 35.16 333 ⇓P P 17 00 16.0 +0.1
baz=35,SNR=30
LCCM Lewis and Clar 35.22 337 P P 17 00 17.4 +1.1
DGMT Dagmar 35.27 347 ⇑P P 17 00 16.3 -0.5
baz=35
E17A Martinsdale 35.37 338 ⇑P P 17 00 17.4 -0.3
baz=35,SNR=9.5
H12A Diamond D Ranc 35.41 333 ⇑P P 17 00 18.1 +0.1
baz=36,SNR=23
LRM Limekiln Ridge 35.43 336 eP P 17 00 19.0 +0.9
comp=Z,136nm,1.2s,mb5.8
I11A Placerville 35.43 331 ⇓P P 17 00 18.6 +0.4
baz=36,SNR=18
F15A Butte 35.46 336 ⇑P P 17 00 19.0 +0.6
baz=36,SNR=11
G13A Cobalt 35.57 334 ⇓P P 17 00 20.2 +0.9
baz=36,SNR=7.2
D18A Linhart Farms, 35.65 340 ⇑P P 17 00 21.0 +1.0
baz=36,SNR=12
WVOR Wild Horse Val 35.71 327 eP P 17 00 20.9 +0.3
comp=Z,25nm,1.3s,mb5.0
E16A East Helena 35.73 338 ⇑P P 17 00 21.0 +0.3
baz=36,SNR=7.5
F14A Wisdom 35.79 335 ⇑P P 17 00 21.3 +0.1
baz=36
ULM Lac du Bonnet 35.87 357 P P 17 00 19.8 -2.1
comp=Z,6.4nm,0.8s,mb4.6,baz=184,slow=8.8,SNR=5.3
ULM LR LR 17 18 04.7
comp=Z,521nm,19.2s,MS4.3,baz=308,slow=41
D17A Six Diamond Ra 35.91 339 ⇑P P 17 00 22.7 +0.5
baz=36,SNR=20
E15A Deer Lodge 36.00 337 ⇑P P 17 00 22.9 -0.1
baz=36
H11A Donnelly 36.06 332 ⇑P P 17 00 23.4 -0.1
baz=36,SNR=19
G12A Big Creek, Yel 36.07 333 ⇓P P 17 00 23.9 +0.2
baz=36
D16A Dana Ranch, Ca 36.11 338 ⇑P P 17 00 23.8 -0.1
baz=36,SNR=10.0
F13A Darby 36.16 334 ⇑P P 17 00 23.8 -0.7
baz=36,SNR=10
LBCM Butte Creek Ri 36.19 322 P P 17 00 25.4 +0.6
MOD Modoc 36.26 324 eP P 17 00 25.4 0.0
comp=Z,8.5nm,1.1s,mb4.6
J08A Circle Bar Ran 36.27 328 ⇓P P 17 00 24.5 -0.8
baz=36,SNR=7.5
H10A Noah's Angus R 36.31 331 ⇓P P 17 00 25.4 -0.4
baz=36,SNR=6.1
E14A Clinton 36.33 336 ⇑P P 17 00 25.9 0.0
baz=36
I09A Lost Marbles R 36.34 329 ⇓P P 17 00 25.6 -0.4
baz=36,SNR=15
C17A Wharram Farm, 36.35 340 ⇓P P 17 00 25.9 -0.1
baz=36,SNR=17
EGMT Eagleton 36.36 341 ⇑P P 17 00 26.0 -0.1
baz=36,SNR=16
EGMT Eagleton 36.36 341 eP P 17 00 26.8 +0.7
comp=Z,42nm,1.2s,mb5.2
D15A Lincoln 36.47 337 ⇓P P 17 00 26.4 -0.6
baz=36,SNR=7.4
F12A Elk City 36.53 333 ⇑P P 17 00 27.9 +0.3
baz=37,SNR=24
E13A Victor 36.63 335 ⇑P P 17 00 28.9 +0.5
baz=37,SNR=14
CHMT Chamberlain Mo 36.64 336 eP P 17 00 28.6 +0.1
comp=Z,3.7nm,0.9s,mb4.2
B18A Beardsley Farm 36.69 341 ⇓P P 17 00 28.9 0.0
baz=37
G11A Walters Elk Ra 36.71 332 ⇓P P 17 00 28.8 -0.2
baz=37,SNR=20
BMO Blue Mountains 36.77 331 P P 17 00 28.9 -0.7
comp=Z,9.8nm,1.4s,mb4.5
H09A Durkee 36.81 330 ⇑P P 17 00 29.8 -0.1
baz=37
C16A Fuhringer Ranc 36.83 339 ⇓P P 17 00 30.3 +0.2
baz=37,SNR=17
MSO Missoula 36.84 336 eP P 17 00 29.2 -1.0
comp=Z,7.5nm,1.0s,mb4.5
D14A Greenough 36.88 336 ⇓P P 17 00 30.0 -0.6
baz=37,SNR=10
G10A Bishop Farm, J 37.02 331 ⇓P P 17 00 30.6 -1.2
baz=37,SNR=5.6
F11A Grangeville 37.03 333 ⇑P P 17 00 31.0 -0.8
baz=37
C15A Salmond Ranch, 37.12 338 ⇓P P 17 00 32.0 -0.6
baz=37
A18A Metzger Ranch, 37.18 341 ⇑P P 17 00 32.7 -0.3
baz=37,SNR=18
E12A Beaver Dam Sad 37.19 334 ⇑P P 17 00 32.1 -1.0
baz=37,SNR=10
H08A Prairie City 37.20 329 ⇓P P 17 00 31.7 -1.5
baz=37
D13A Huson 37.27 336 ⇑P P 17 00 33.1 -0.7
baz=37,SNR=11

G09A	Cove	37.32	331	⇓P		P	17 00 33.1 -1.1
	baz=37,SNR=11						
B16A	M & M Farms, S	37.34	339	⇓P		P	17 00 34.3 -0.1
	baz=37,SNR=9.6						
SWMT	Swartz Lake	37.42	336	*e*P		P	17 00 35.1 -0.1
	comp=Z,6.3nm,1.0s,mb4.4						
C14A	Swan Lake	37.54	337	⇑P		P	17 00 35.2 -0.9
	baz=38						
B15A	Bradely Ranch,	37.56	338	⇑P		P	17 00 35.4 -0.8
	baz=38						
F10A	Beach Ranch, E	37.58	332	⇓P		P	17 00 35.9 -0.6
	baz=38,SNR=15						
D12A	Red Ives Fores	37.60	335	⇑P		P	17 00 35.2 -1.4
	baz=38						
JTMT	Jette	37.73	336	*e*P		P	17 00 36.8 -0.9
	comp=Z,5.9nm,0.9s,mb4.3						
C13A	Hot Springs	37.79	336	⇑P		P	17 00 38.5 +0.3
	baz=38						
B14A	Marquette Ranc	37.85	338	⇓P		P	17 00 38.5 -0.3
	baz=38						
G08A	Pilot Rock	37.89	330	⇓P		P	17 00 39.1 0.0
	baz=38						
BSMT	Bassoo Peak	38.01	336	*e*P		P	17 00 40.7 +0.6
	comp=Z,3.3nm,1.0s,mb4.0						
A15A	Johnson Ranch,	38.18	339	⇑P		P	17 00 41.0 -0.5
	baz=38,SNR=14						
B13A	Whitefish	38.31	337	⇑P		P	17 00 41.9 -0.8
	baz=38						
A14A	Double T Ranch	38.42	338	⇑P		P	17 00 43.4 -0.1
	baz=38,SNR=9.8						
C11A	Tepee Creek (N	38.60	335	⇓P		P	17 00 44.8 -0.2
	baz=39,SNR=10						
G06A	Carlson Farm,	38.69	328	⇑P		P	17 00 45.9 +0.1
	baz=39						
B12A	Libby	38.83	336	⇑P		P	17 00 46.7 -0.2
	baz=39						
LPAZ	La Paz	39.07	140	P		P	17 00 51.0 +1.8
	comp=Z,1.0nm,0.8s,mb3.6,baz=342,slow=11,SNR=7.5						
LPAZ				LR	LR		17 15 37.6
	comp=Z,356nm,22.0s,MS4.2,baz=147,slow=34						
H04A	Detroit Lake	39.13	326	⇓P		P	17 00 49.2 -0.3
	baz=39						
D08A	Wollman Farm,	39.17	332	⇓P		P	17 00 49.5 -0.3
	baz=39						
HOOD	Mount Hood Mea	39.27	328	*e*P		P	17 00 51.1 +0.3
	comp=Z,149nm,1.2s,mb5.6						
NEW	Newport	39.29	334	*e*P		P	17 00 49.6 -1.2
	comp=Z,8.5nm,1.2s,mb4.3						
OD2	Odessa Site #2	39.32	332	*e*P		P	17 00 51.0 -0.1
	comp=Z,26nm,1.3s,mb4.8						
NAC	Naches	39.84	330	P		P	17 00 56.4 +1.1
LON	Longmire	40.33	329	P		P	17 00 59.6 +0.1
FFC	Flin Flon	40.89	352	*e*P		P	17 01 03.5 -0.5
	comp=Z,25nm,1.4s,mb4.7						
EDM	Edmonton	42.02	342	*e*P		P	17 01 12.1 -1.1
SCHQ	Scheffer ville	45.19	21	LR		LR	17 22 35.7
	comp=Z,1um,18.3s,MS5.0,baz=310,slow=39						
YKA	Yellowknife Ar	50.48	347	P		P	17 02 19.5 0.0
	comp=Z,20nm,0.8s,mb5.2,baz=150,slow=7.5,SNR=47						
DLBC	Dease Lake	51.97	336	P		P	17 02 32.7 +1.9
	comp=Z,6.8nm,0.8s,mb4.6,baz=138,slow=7.0,SNR=8.7						
DLBC	Dease Lake	51.97	336	*e*P		P	17 02 31.7 +0.9
CPUP	Villa Florida	53.22	139	P		P	17 02 40.0 -0.5
	comp=Z,1.4nm,0.7s,mb4.0,baz=295,slow=9.7,SNR=4.2						
RKT	Rikitea	55.52	228	*e*LR		LR	17 19 06.2
	comp=Z,639nm,27.2s						
RKT				*e*T			18 02 17.6
	comp=Z,1.8nm,0.3s						
PLCA	Paso Flores	58.60	160	P		P	17 03 20.1 +1.4
	comp=Z,4.3nm,1.0s,mb4.4,baz=338,slow=9.7,SNR=3.2						
DAWY	Dawson	59.02	338	*e*P		P	17 03 21.1 -0.2
BMRM	Bremner River	59.46	334	P		P	17 03 24.3 -0.1
	comp=Z,26nm,1.4s,mb5.1						
INK	Inuvik	59.85	344	P		P	17 03 27.2 +0.2
	comp=Z,13nm,1.0s,mb4.9,baz=142,slow=6.7,SNR=13						
INK	Inuvik	59.85	344	*e*P		P	17 03 26.8 -0.2
	comp=Z,31nm,1.3s,mb5.2						
EGAK	Eagle	60.05	338	*e*P		P	17 03 27.8 -0.7
	comp=Z,14nm,1.1s,mb4.9						
PAX	Paxson	60.77	335	*e*P		P	17 03 32.8 -0.5
	comp=Z,18nm,1.3s,mb5.0						
PMOR	Pomariorio Ree	61.72	244	*e*T			18 09 59.8
	comp=Z,2.3nm,0.3s						
KDAK	Kodiak Island	61.95	328	P		P	17 03 41.8 +0.3
	comp=Z,3.2nm,0.8s,mb4.5,baz=142,slow=5.6,SNR=3.7						
MCK	McKinley	62.51	335	*e*P		P	17 03 44.9 -0.1
	comp=Z,27nm,1.2s,mb5.3						
COLA	College	62.58	337	*e*P		P	17 03 44.8 -0.7
	comp=Z,8.3nm,1.0s,mb4.8						
TRF	Thorofare Moun	62.94	335	*e*P		P	17 03 47.8 -0.1
	comp=Z,44nm,1.3s,mb5.4						
PPLA	Purkeypile	63.52	334	*e*P		P	17 03 51.7 -0.1
	comp=Z,37nm,1.6s,mb5.2						
PPT	Papeete	64.28	242	*e*LR		LR	17 22 57.0
	comp=Z,620nm,26.2s						
COLD	Coldfoot	64.48	339	*e*P		P	17 03 58.4 +0.4
	comp=Z,18nm,1.3s,mb4.9						
TBI	Tubuai	66.82	237	*e*LR		LR	17 24 16.5
	comp=Z,392nm,33.8s						
KBS	Kingsbay	78.82	11	*e*P		P	17 05 26.3 +2.2
KBS				AMS	AMS		17 33 02.6
	comp=Z,734nm,18.5s,MS5.0						
KBS	Kingsbay	78.82	11	*e*P		P	17 05 29.8 +5.7
KBS				LR	LR		
	comp=Z,730nm,18.5s,MS5.0						
ROSF	Rostrenen	79.17	43	*e*P		P	17 05 25.8 -0.7
ESDC	Sonseca Array	80.18	52	P		P	17 05 31.4 -0.8
	comp=Z,2.5nm,0.8s,mb4.2,baz=287,slow=5.2,SNR=16						
GRR	Gorron	80.75	42	*e*P		P	17 05 34.7 -0.4
	comp=Z,17nm,0.9s,mb4.7						
GRR	Gorron	80.75	42	*e*P		P	17 05 34.7 -0.4
	comp=Z,8.7nm,0.9s,mb4.7						
BILL	Billbino	80.80	338	*e*P		P	17 05 35.0 +0.1
	comp=Z,21nm,1.2s,mb4.9						
FLN	La Foliniere	80.92	42	*e*P		P	17 05 35.7 -0.3
	comp=Z,9.0nm,0.8s,mb4.5						
FLN	La Foliniere	80.92	42	*e*P		P	17 05 35.7 -0.3
	comp=Z,4.5nm,0.8s,mb4.5						
LDF	La Druitiere	81.19	42	*e*P		P	17 05 36.3 -1.1
SJPF	Ste Jean	81.54	48	*e*P		P	17 05 38.4 -1.0
MFF	Saint Martin d	81.58	44	*e*P		P	17 05 38.9 -0.6
	comp=Z,12nm,1.0s,mb4.5						
MFF	Saint Martin d	81.58	44	*e*P		P	17 05 38.9 -0.6
	comp=Z,6.1nm,1.0s,mb4.5						
ETSF	Etsaut	82.06	48	*e*P		P	17 05 41.4 -0.7
	comp=Z,8.3nm,0.8s,mb4.4						
ETSF	Etsaut	82.06	48	*e*P		P	17 05 41.4 -0.7
	comp=Z,4.2nm,0.8s,mb4.4						
LFF	La Frestale	82.54	46	*e*P		P	17 05 43.4 -1.2
	comp=Z,9.0nm,0.7s,mb4.6						
LFF	La Frestale	82.54	46	*e*P		P	17 05 43.4 -1.2
	comp=Z,4.5nm,0.7s,mb4.6						
EPF	Esparros	82.68	48	*e*P		P	17 05 44.4 -0.9
	comp=Z,7.5nm,0.8s,mb4.5						
EPF	Esparros	82.68	48	*e*P		P	17 05 44.4 -0.9
	comp=Z,3.8nm,0.8s,mb4.5						
TCF	Toulx Ste Croi	83.24	44	*e*P		P	17 05 47.6 -0.6
	comp=Z,4.9nm,0.7s,mb4.3						
TCF	Toulx Ste Croi	83.24	44	*e*P		P	17 05 47.6 -0.6
	comp=Z,2.5nm,0.7s,mb4.3						
NSS	Namsos	83.41	25	*e*SKS		SKSac	17 16 11.8 +4.8
AVF	Avril sur Loir	83.88	43	*e*P		P	17 05 50.7 -0.8
	comp=Z,9.8nm,1.0s,mb4.6						
AVF	Avril sur Loir	83.88	43	*e*P		P	17 05 50.7 -0.8
	comp=Z,4.9nm,1.0s,mb4.6						
SSF	Saint Saulge	83.92	43	*e*P		P	17 05 50.9 -0.7
	comp=Z,5.8nm,0.7s,mb4.5						
SSF	Saint Saulge	83.92	43	*e*P		P	17 05 50.9 -0.7
	comp=Z,2.9nm,0.7s,mb4.5						
KONO	Kongsberg	83.92	30	*e*P		P	17 05 54.5 +3.1
KONO				AMS	AMS		17 46 34.3
	comp=Z,474nm,12.4s,MS5.1						
KONO	Kongsberg	83.92	30	*e*P		P	17 05 54.9 +3.4
KONO				LR	LR		
	comp=Z,470nm,12.4s,MS5.1						
MTLF	Montolieu	83.94	47	*e*P		P	17 05 50.7 -1.2
	comp=Z,6.3nm,0.9s,mb4.4						
MTLF	Montolieu	83.94	47	*e*P		P	17 05 50.7 -1.2
	comp=Z,3.2nm,0.9s,mb4.5						
TRO	Tromso	83.99	19	*e*S		S	17 16 17.5 +5.8
LOR	Lormes	84.10	43	*e*P		P	17 05 51.4 -1.2
NB2	NORSAR Subarra	84.24	28	PKPdf		P	17 05 53.7 +0.7
	comp=Z,2.5nm,1.0s,mb4.3,baz=44,slow=1.9						
NB2	NORSAR Subarra	84.24	28	PKPdf		P	17 05 53.7 +0.7
	baz=44,slow=1.9						
NOA	NORSAR Array B	84.24	28	P		P	17 05 53.4 +0.4
	comp=Z,2.2nm,0.8s,mb4.3,baz=290,slow=5.2,SNR=7.7						
LASF	Ste Croix	84.91	46	*e*P		P	17 05 55.5 -1.2
	comp=Z,22nm,1.3s,mb4.8						
HINF	Hinteralfeld	85.90	42	*e*P		P	17 06 00.7 -0.9
ARCES	ARCESS Array B	86.07	18	P		P	17 06 02.4 +0.4
	comp=Z,2.2nm,0.8s,mb4.5,baz=326,slow=5.9,SNR=8.7						
LIC	Lamto	86.42	85	*e*P		P	17 06 03.5 -1.3
	comp=Z,133nm,1.6s,mb5.6						
LIC	Lamto	86.42	85	*e*P		P	17 06 03.5 -1.3
	comp=Z,67nm,1.6s,mb5.6						
GRF	Grafenberg Arr	88.06	39	*e*P		P	17 06 12.8 +0.8
	comp=Z,16nm,1.8s,mb5.0						
TIXI	Tiksi	89.72	348	*e*P		P	17 06 19.5 +0.1
	comp=Z,14nm,1.1s,mb5.2						
FINES	FINESS Array B	90.54	25	P		P	17 06 23.1 -0.3
	comp=Z,2.3nm,1.0s,mb4.5,baz=297,slow=8.4,SNR=4.9						
KEST	Kesra	91.37	53	P		P	17 06 27.0 -0.8
	comp=Z,0.7nm,0.8s,mb4.0,baz=270,slow=20,SNR=3.1						
CN2	Changchun	112.36	331	*e*PKP	PKiKP		17 11 58.5 +0.9
CN2				PP	PP		17 12 48.3 +5.7
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
MK31	Makanchi Array	118.98	4	PKPdf	PKPdf		17 12 09.5 -0.7
MKAR	Makanchi Array	118.98	4	PKP	PKPdf		17 12 11.1 +0.9
	comp=Z,0.7nm,0.8s,baz=30,slow=2.0,SNR=4.1						
HHC	Hu-ho-hao-te	120.57	339	*e*PKP	PKPdf		17 12 13.0 -0.5
HHC				PP	PP		17 13 43.3 +3.5
HHC				PKS			17 15 48.3
HHC				SKS	SKSdf		17 19 20.3 -1.5
HHC				SKKS	SKKSac		17 20 32.5 -4.3
HHC				SS	SS		17 30 07.3 +2.0
HHC				AMB	AMB		
	comp=Z,120nm,6.3s						
HHC				LR	LR		
	comp=N,230nm,16.6s,MS5.1						
HHC				LR	LR		
	comp=E,320nm,15.5s,MS5.1						
HHC				LR	LR		
	comp=Z,400nm,15.5s,MS5.2						
BOSA	Boshof	121.30	115	PKP	PKPdf		17 12 14.1 -1.1
	comp=Z,2.8nm,0.9s,baz=262,slow=7.1,SNR=2.8						
WMQ	Urumqi	122.10	359	*e*PKP	PKPdf		17 12 17.0 +0.7
NJ2	Nanjing	124.72	327	*e*PKP	PKPdf		17 12 14.5 -7.2
GTA	Gaotai	125.21	348	*e*PKP	PKPdf		17 12 23.3 +0.9
GTA				PP	PP		17 14 16.8 +5.8
GTA				SKS	SKSdf		17 19 30.0 -0.6
GTA				SKKS	SKKSac		17 21 04.8 -1.9
GTA				SS	SS		17 31 08.0 +4.2
GTA				AMB	AMB		
	comp=Z,61nm,7.5s						
GTA				LR	LR		
	comp=N,200nm,16.5s,MS5.0						
GTA				LR	LR		
	comp=E,160nm,17.7s,MS5.0						
GTA				LR	LR		
	comp=Z,280nm,17.7s,MS5.0						
WRA	Warramunga Arr	134.64	256	PKP	PKPdf		17 12 40.2 -0.6
	comp=Z,0.6nm,0.7s,baz=85,slow=2.5,SNR=8.9						
ASAR	Alice Springs	134.96	251	PKP	PKPdf		17 12 41.2 0.0
	comp=Z,0.6nm,1.0s,baz=106,slow=3.0,SNR=4.7						
GYA	Guiyang	135.19	335	*e*Pdif	Pdif		17 09 40.3 -2.8
GYA				PKP	PKPdf		17 12 40.0 -1.7
GYA				PP	PP		17 15 18.5 +2.4
GYA				PKS			17 16 14.3
GYA				SS	SS		17 33 06.8 -0.2
GYA				AMB	AMB		
	comp=Z,140nm,7.6s						
GYA				LR	LR		
	comp=N,120nm,20.3s,MS4.7						
GYA				LR	LR		
	comp=E,110nm,21.7s,MS4.7						
GYA				LR	LR		
	comp=Z,130nm,22.5s,MS4.6						
KMI	Kunming	137.90	339	PKP	PKPdf		17 12 45.3 -1.4
KMI				PP	PP		17 15 35.3 +2.3
KMI				AMB	AMB		
	comp=Z,51nm,5.3s						
KMI				LR	LR		
	comp=N,220nm,18.0s,MS5.0						
KMI				LR	LR		
	comp=E,150nm,16.0s,MS5.0						
KMI				LR	LR		
	comp=Z,290nm,20.7s,MS5.0						
CHTO	Chiang Mai	145.03	340	*e*PKP	PKPdf		17 12 58.2 -1.5
CM31	Chiang Mai Arr	145.36	340	*e*PKP	PKPdf		17 12 59.6 -0.6
CMAR	Chiang Mai Arr	145.36	340	PKPbc	PKPbc		17 13 00.0 -0.1
	comp=Z,9.1nm,0.8s,baz=342,slow=3.9,SNR=41						
HYB	Hyderabad	147.32	15	*i* PKP	PKPab		17 13 06.0 -1.7

*CASC **29** 16:59:19.1±1.3, 13°.93N×94°.82W, h6km, MD4.2, mb4.3(NEIC)*
*ISCJB **29** 16:59:40.1±1.9, 14°.24N±0°.05×93°.28W±0°.03, h13km±13km, mb4.0/11, Error ellipse: s-maj=8.9km s-min=5.4km az=10.7*
*MEX **29** 16:59:41.3±1.0, 14°.06N×93°.29W, h14km±26km, MD4.3*
*NEIC **29** 16:59:47.0±2.2, 14°.63N×92°.88W, h42km±16km, mb4.3/8, Error ellipse: s-maj=24.9km s-min=11.6km az=212.0*
*IDC **29** 16:59:47.7±5.4, 14°.84N×92°.59W, h46km±48km, mb3.7/7, mb1 3.9/8, mb1mx3.7/20, mbtmp3.7/8, ML4.2/1, MS3.3/1, Ms1 3.3/1, ms1mx2.9/30, Error ellipse: s-maj=59.6km s-min=23.7km az=37.0*

ISC 29 16:59:40.6±2.0, 14°.32N±0°.07×93°.23W±0°.05, h1km±11km, n141, σ1°01/144, mb4.0/11, 39C-64D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		1.10	58	*e*P	Pg	17 00 01.6	-0.1
THIG				*i* S	Sg	17 00 17.1	+1.1
PCIG		1.38	0	*e*P	Pn	17 00 05.4	-1.6
PCIG				*i* S	Sg	17 00 24.7	-0.3
JAT	Jato	1.54	90	*e*P	Pn	17 00 08.9	-0.3
TP2	Tecpan 2	2.18	77	*e*P	Pn	17 00 19.5	+1.4
FUG	Fuego 3	2.31	86	*e*P	Pn	17 00 18.4	-1.4
TGIG		2.45	2	*e*P	Pn	17 00 22.5	+0.8
TGIG				*i* S	Sn	17 00 55.0	+2.6
PCG	Pacaya	2.54	88	*e*P	Pn	17 00 23.2	+0.2
APG	El Apazote	2.76	75	P	Pn	17 00 25.2	-0.7
	30nm,0.3s,baz=234,slow=5.1,SNR=52						
APG				Lg		17 01 05.7	
	52nm,0.3s,baz=203,slow=15,SNR=7.0						
NBG	Las Nubes	2.80	84	*e*P	Pn	17 00 27.2	+0.6
HUIG	Huatulco	3.14	298	*e*P	Pn	17 00 28.5	-2.7
HUIG				*i* S	Sn	17 01 06.1	-3.2
CMIG	Matias Romero	3.19	330	P	Pn	17 00 32.1	+0.2
	14nm,0.3s,baz=139,slow=12,SNR=17						
CMIG				LR	LR	17 02 05.6	
	comp=Z,512nm,20.5s,baz=145,slow=44						
MRL	Marmol	3.50	77	*e*P	Pn	17 00 36.4	+0.1
VHO	Vista Hermosa	4.35	309	*i* P	Pn	17 00 46.2	-1.7
VHO				*i* S	Sn	17 01 37.3	-2.0
PNIG	Pinotepa	5.16	294	*i* P	Pn	17 00 57.1	-1.9
PNIG				*i* S	Sn	17 01 51.0	-8.2
TEIG	Tepich	7.54	38	*e*Pn	Pn	17 01 30.6	-1.2
627A	Terlingua Ranc	17.75	330	⇓P	Pn	17 03 48.7	-0.5
	baz=17,SNR=5.6						
TXAR	Lajitas Array	17.79	329	P	Pn	17 03 50.9	+1.2
	0.2nm,0.3s,baz=121,slow=14,SNR=9.1						
626A	Big Bend Ranch	18.21	328	⇓P	Pn	17 03 55.2	+0.5
	baz=18,SNR=5.0						
527A	Woodward Ranch	18.43	330	⇓P	Pn	17 03 57.7	+0.2
	baz=18,SNR=5.9						
526A	Mary Lane Ranc	18.60	329	⇓P	Pn	17 04 00.7	+1.2
	baz=18						
426A	McDonald Obser	19.07	330	⇑P	Pn	17 04 04.8	-0.4
	baz=19						
328A	Wristen Ranch,	19.12	334	⇓P	Pn	17 04 05.6	-0.4
	baz=19						
326A	Caldwell Ranch	19.59	332	⇑P	Pn	17 04 09.8	-1.6
	baz=19						
MIAR	Mount Ida	20.14	359	P	P	17 04 13.8	-2.4
	17nm,0.9s						
CLNB	Carlsbad	20.34	333	*e*P	P	17 04 19.5	+1.0
	2.5nm,0.7s						
324A	Moseley Ranch,	20.42	329	⇓P	P	17 04 19.4	+0.1
	baz=20						
GDL2	Guadalupe Moun	20.50	332	*e*P	P	17 04 21.3	+1.1
	26nm,1.2s						
225A	Deer Hill, Car	20.64	331	⇑P	P	17 04 21.9	+0.2
	baz=20						
126A	Clayton Basin,	20.73	333	⇑P	P	17 04 23.0	+0.3
	baz=20						
ROSC	El Rosal	20.85	115	P	P	17 04 22.9	-1.2
	6.2nm,0.3s,baz=277,slow=13,SNR=4.0						
WMOK	Wichita Mounta	20.94	347	P	P	17 04 22.5	-2.4
224A	Cornudas Mount	20.95	330	⇓P	P	17 04 24.1	-0.9
	baz=20						
Z27A	Tatum	20.98	336	⇑P	P	17 04 24.6	-0.7
	baz=20,SNR=17						
125A	Gardner Draw,	21.02	332	⇑P	P	17 04 24.9	-0.9
	baz=21,SNR=8.1						
Z26A	Caprock	21.25	334	⇓P	P	17 04 27.9	-0.4
	baz=21,SNR=12						
MSTX	Muleshoe	21.39	338	⇑P	P	17 04 28.7	-1.1
	baz=21						
124A	Stringfield Ra	21.43	331	⇓P	P	17 04 31.0	+0.8
	baz=21,SNR=7.7						
Y27A	Causey	21.46	337	⇓P	P	17 04 29.1	-1.4
	baz=21						
Z25A	Roswell	21.57	333	⇓P	P	17 04 32.3	+0.5
	baz=21						
222A	Williams Famil	21.78	327	⇑P	P	17 04 35.0	+1.1
	baz=22						
AMTX	Amarillo	21.85	341	*e*P	P	17 04 34.0	-0.7
	21nm,0.7s,mb4.7						
Z24A	Sheeppen Canyo	21.91	332	⇓P	P	17 04 35.3	0.0
	baz=22,SNR=7.6						
320A	Kipp Ranch, An	22.00	323	⇓P	P	17 04 38.2	+1.9
	baz=22						
221A	Mesquite Ranch	22.07	325	⇑P	P	17 04 39.4	+2.3
	baz=22						
Y25A	Mesa, Roswell	22.11	334	⇑P	P	17 04 37.3	-0.2
	baz=22						
X27A	F and S Farms,	22.12	338	⇓P	P	17 04 36.4	-1.1
	baz=22						
Z23A	Rita Site, Whi	22.26	330	⇓P	P	17 04 38.6	-0.5
	baz=22,SNR=5.4						
X26A	CR and CF Fran	22.30	336	⇑P	P	17 04 39.6	+0.1
	baz=22						
220A	Playas Peak, P	22.41	324	⇓P	P	17 04 41.3	+0.5
	baz=22						
Y24A	Capitan	22.44	333	⇓P	P	17 04 41.0	0.0
	baz=22						
319A	Douglas	22.47	322	⇓P	P	17 04 43.2	+1.9
	baz=22						
121A	Cookes Peak, D	22.48	326	⇑P	P	17 04 41.9	+0.5
	baz=22,SNR=10						
W27A	Bowe Ranch, En	22.48	338	⇓P	P	17 04 40.0	-1.4
	baz=22						
Y23A	Lovelace Mesa,	22.73	331	⇓P	P	17 04 43.5	-0.5
	baz=22						
318A	Bisbee	22.95	321	⇓P	P	17 04 47.7	+1.2
	baz=23						
Z21A	St. Cloud Mine	23.02	328	⇓P	P	17 04 46.2	-0.9
	baz=23						
W25A	X Bar L Ranch,	23.14	336	⇓P	P	17 04 46.5	-1.9
	baz=23						
218A	Dragoon	23.35	322	⇓P	P	17 04 50.7	-0.1
	baz=23						
Z20A	Nine Sixteen R	23.36	326	⇓P	P	17 04 51.8	+1.0
	baz=23						
Y21A	Point of Rocks	23.57	329	⇓P	P	17 04 52.4	-0.5
	baz=23						
ANMO	Albuquerque	23.76	332	P	P	17 04 54.3	-0.4
	1.9nm,0.8s,mb3.7,baz=158,slow=14,SNR=3.7						
118A	Homack Ranch,	23.78	323	⇓P	P	17 04 55.6	+0.7
	baz=24						
Y20A	Horse Springs,	23.85	327	⇑P	P	17 04 56.7	+1.2
	baz=24,SNR=6.4						
X21A	Alamocita Cree	23.98	329	⇑P	P	17 04 56.5	-0.2
	baz=24						
TUC	Tucson	24.04	321	*e*P	P	17 04 58.6	+1.3
	7.4nm,1.3s,mb4.1						
117A	Oracle	24.19	322	⇓P	P	17 04 58.8	+0.1
	baz=24						
X20A	Quemado	24.41	328	⇑P	P	17 05 01.5	+0.8
	baz=24						
X19A	St. Johns	24.73	327	⇓P	P	17 05 04.8	+1.2
	baz=24						
W20A	Ramah	24.87	329	⇑P	P	17 05 06.4	+1.5
	baz=24						
SDCO	Great Sand Dun	25.76	337	*e*P	P	17 05 13.1	+0.2
T21A	Navajo Lake	25.94	333	⇓P	P	17 05 15.6	+1.1
	baz=26						
V17A	Tonalea, Kykot	26.44	326	⇓P	P	17 05 19.6	+0.5
	baz=26						
S21A	Coal Bank Pass	26.61	334	⇑P	P	17 05 20.7	+0.1
	baz=26						
R22A	Saguache, Gunn	26.66	336	⇓P	P	17 05 20.7	-0.4
	baz=26						
PV01	Paradox Valley	27.34	333	P	P	17 05 27.3	+0.1
U13A	Pakoon Wash	28.78	324	⇓P	P	17 05 41.2	+1.2
	baz=28						
T13A	Saint George	29.17	325	⇑P	P	17 05 45.1	+1.6
	baz=29						
ARUT	Antelope Range	29.47	326	P	P	17 05 46.8	+0.6
	2.1nm,0.9s,mb4.0						
S10A	Tonopah Range,	31.34	323	⇑P	P	17 06 04.0	+1.3
	baz=31						
Q11A	Duckwater	31.44	325	⇓P	P	17 06 05.4	+1.9
	baz=31						
PDAR	Pinedale Array	31.65	337	P	P	17 06 04.8	-0.6
	0.7nm,0.9s,mb3.6,baz=133,slow=7.9,SNR=3.7						
BW06	Boulder Array	31.65	337	⇑P	P	17 06 04.6	-0.8
	baz=31						
N14A	Grayback Hills	31.65	330	⇑P	P	17 06 06.0	+0.6
	baz=31						
K18A	Toltan Ranch,	31.73	336	⇓P	P	17 06 06.3	+0.2
	baz=31						
L16A	Fish Haven	31.78	334	⇑P	P	17 06 06.7	+0.1
	baz=31						
O12A	Currie	31.98	328	⇑P	P	17 06 09.1	+0.8
	baz=32						
M14A	Sheep Mountain	32.23	331	⇑P	P	17 06 11.6	+1.1
	baz=32						
M13A	Montello	32.51	330	⇓P	P	17 06 13.6	+0.6

G12A	Big Creek, Yel	35.97	333	⇑P		P	17 06 43.3 +0.4
	baz=36						
D16A	Dana Ranch, Ca	36.03	339	⇓P		P	17 06 43.0 -0.3
	baz=36						
F13A	Darby	36.07	335	⇓P		P	17 06 43.6 -0.2
	baz=36						
J08A	Circle Bar Ran	36.14	328	⇑P		P	17 06 45.3 +0.9
	baz=36						
I09A	Lost Marbles R	36.22	330	P		P	17 06 45.4 +0.3
	baz=36,SNR=5.3						
C17A	Wharram Farm,	36.28	340	⇑P		P	17 06 45.4 -0.1
	baz=36						
EGMT	Eagleton	36.30	341	⇓P		P	17 06 45.6 -0.1
	baz=36						
F12A	Elk City	36.43	334	⇑P		P	17 06 46.6 -0.2
	baz=36						
E13A	Victor	36.54	335	⇑P		P	17 06 46.8 -1.0
	baz=36						
G11A	Walters Elk Ra	36.60	332	⇑P		P	17 06 46.6 -1.7
	baz=36						
C16A	Fuhringer Ranc	36.76	339	⇑P		P	17 06 48.6 -1.1
	baz=36						
D14A	Greenough	36.80	337	⇑P		P	17 06 49.5 -0.4
	baz=36						
E12A	Beaver Dam Sad	37.09	334	⇓P		P	17 06 51.9 -0.5
	baz=37						
A18A	Metzger Ranch,	37.12	342	⇓P		P	17 06 52.0 -0.7
	baz=36						
G09A	Cove	37.20	331	⇑P		P	17 06 52.5 -0.9
	baz=37						
B16A	M & M Farms, S	37.27	340	⇓P		P	17 06 52.0 -2.0
	baz=37						
F10A	Beach Ranch, E	37.47	332	⇓P		P	17 06 55.2 -0.5
	baz=37,SNR=5.9						
D12A	Red Ives Fores	37.50	335	⇓P		P	17 06 54.9 -1.1
	baz=37						
C11A	Tepee Creek (N	38.50	335	⇓P		P	17 07 04.1 -0.3
	baz=38						
ESDC	Sonseca Array	80.45	51	P		P	17 11 50.4 -4.0
	0.6nm,0.6s,mb3.7,baz=283,slow=5.6,SNR=5.5						
NOA	NORSAR Array B	84.43	28	P		P	17 12 12.4 -2.4
	0.5nm,0.7s,mb3.9,baz=290,slow=5.2,SNR=3.4						
FINES	FINESS Array B	90.71	25	P		P	17 12 41.9 -3.1
	0.4nm,0.6s,mb4.0,baz=270,slow=1.4,SNR=3.4						
WRA	Warramunga Arr	134.32	256	PKP		PKPdf	17 19 03.1 +1.9
	0.5nm,0.9s,baz=83,slow=1.7,SNR=3.9						
ASAR	Alice Springs	134.65	251	PKP		PKPdf	17 19 02.9 +1.1
	0.5nm,1.0s,baz=83,slow=3.2,SNR=3.5						
CMAR	Chiang Mai Arr	145.29	339	PKPbc		PKPbc	17 19 18.8 -2.1
	2.1nm,0.8s,baz=336,slow=3.9,SNR=12						

IDC ***29*** *17:02:15.1±0.6, 52°.07N×170°.00W, h0km, mb4.7/26, mb1 4.8/28, mb1mx4.8/31, mbtmp4.7/28, ML3.8/1, MS4.8/20, Ms1 4.8/20, ms1mx4.5/41, Error ellipse: s-maj=18.4km s-min=9.3km az=176.0*

BJI ***29*** *17:02:18.5, 52°.46N×170°.14W, h26km, mB5.2/35, mb5.1/47, Ms5.2/44, Ms7 5.0/42*

NEIC ***29*** *17:02:18.9±1.4, 51°.92N×169°.92W, h26km±9km, mb5.0/108, MS5.0/6, Error ellipse: s-maj=8.3km s-min=4.2km az=176.0*

ISCJB ***29*** *17:02:19.3±0.1, 51°.93N±0°.03×169°.95W±0°.02, h41km, mb5.0/209, MS4.9/59, Error ellipse: s-maj=4.4km s-min=2.0km az=10.9*

GCMT ***29*** *17:02:20.9±0.1, 51°.82N×169°.92W, h16km, MW5.4, Moment Tensor Solution. s83,c147; s99,c214; Moment tensor: Scale 10^17^Nm; Mrr1.09±.02; Mθθ-0.81±.02; Mφφ-0.28±.02; Mrθ1.19±.06; Mθφ-0.47±.01; Mφr0.31±.04; Best double couple: M0 1.60000×10^17^ NP1:φs230.00000°, δ22.00000°, λ70.00000°. NP2:φs71.00000°, δ70.00000°, λ98.00000°. Principal axes: T 1.6700, Plg65.0000°, Azm354.0000°; N -0.0500, Plg7.0000°, Azm248.0000°; P -1.6100, Plg24.0000°, Azm155.0000°; Data Used: II IU IC G CN. Surface waves from 103 sta.*

MOS ***29*** *17:02:20.9±1.0, 52°.36N×170°.26W, h33km, mb5.3/76, MS4.9/28 Error ellipse: s-maj=11.9km s-min=4.4km az=94.1*

SZGRF ***29*** *17:02:31.9, 53°.77N×170°.59W, h47km, mb5.0, MS4.9, Fox Islands, Aleutian Islands, United States*

ISC 29 17:02:21.4±0.1, 51°.99N±0°.03×169°.94W±0°.02, h43km, h43km±1.3km; pP-P, n739, σ0°98/733, mb5.0/209, MS4.9/59, 151C-124D, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKFG	Magazine Ridge	1.88	40	P	Pn	17 02 49.4	-1.6
OKFG				S	Sn	17 03 14.8	+1.2
UNV	Unalaska Valle	2.79	47	S	Sn	17 03 36.8	+0.9
AKLV	Akutan Long Va	3.24	46	P	Pn	17 03 08.8	-0.9
AKGG	Akutan Green G	3.25	46	P	Pn	17 03 09.2	-0.6
AKUT	Akutan	3.31	48	eP	Pn	17 03 09.5	-1.1
GSTR	Great Sitkin T	3.78	274	ePn	Pn	17 03 16.9	-0.2
FALS	False Pass	4.84	51	P	Pn	17 03 31.6	-0.1
AMKA	Amchitka	6.72	269	eP	Pn	17 03 56.8	-0.6
AMKA				S	Sn	17 05 14.4	+1.9
FX1	Attu Island--F	10.36	282	Pn	Pn	17 04 46.5	-0.7
	2.7nm,0.3s,baz=127,slow=20,SNR=32						
FX1				LR	LR	17 08 29.3	
	comp=Z,5μm,20.0s,baz=118,slow=36						
OHAK	Old Harbor	10.98	55	eP	Pn	17 04 51.8	-3.8
	23nm,0.3s						
KDAK	Kodiak Island	11.54	53	Pn	Pn	17 04 59.7	-3.6
	8.2nm,0.3s,baz=240,slow=7.6,SNR=43						
KDAK				Sn	Sn	17 07 04.2	-6.5
	0.7nm,0.3s,baz=218,slow=12,SNR=2.6						
KDAK	Kodiak Island	11.54	53	ceP	Pn	17 04 59.1	-4.2
SVW2	Sparrevohn	12.06	35	eP	Pn	17 05 11.8	+1.5
SEW	Seward	13.99	47	ePn	Pn	17 05 32.4	-4.4
	34nm,0.5s						
PPLA	Purkeypile	14.45	34	ePn	Pn	17 05 43.1	+0.1
	120nm,1.4s						
MID	Middleton Isla	15.18	51	eP	Pn	17 05 49.2	-3.4
MID				pmax	pmax		
	comp=Z,96nm,1.1s						
MID	Middleton Isla	15.18	51	eP	Pn	17 05 49.2	-3.4
	comp=Z,96nm,1.1s						
TRF	Thorofare Moun	15.47	35	ePn	Pn	17 05 56.4	+0.1
BPAW	Bear Paw Mtn.	15.66	32	ePn	Pn	17 05 59.0	+0.4
	comp=Z,60nm,0.7s						
DIV	Divide	16.07	46	ePn	Pn	17 05 59.0	-5.0
	comp=Z,54nm,0.8s						
MCK	McKinley	16.12	35	eP	Pn	17 06 04.0	-0.6
MCK				pmax	pmax		
	comp=Z,28nm,1.0s						
MCK	McKinley	16.12	35	ePn	Pn	17 06 04.0	-0.6
	comp=Z,28nm,1.0s						
BMRM	Bremner River	16.53	47	ePn	Pn	17 06 05.2	-4.6
	comp=Z,152nm,1.2s						
PAX	Paxson	17.02	40	eP	Pn	17 06 12.5	-3.4
PAX				pmax	pmax		
	comp=Z,16nm,0.7s						
PAX	Paxson	17.02	40	ePn	Pn	17 06 12.5	-3.4
	comp=Z,16nm,0.7s						
COLA	College	17.20	33	eP	Pn	17 06 16.0	-2.1
COLA				pmax	pmax		
	comp=Z,44nm,1.1s						
COLA	College	17.20	33	ePn	Pn	17 06 16.0	-2.1
	comp=Z,44nm,1.1s						
MENT	Mentasta	17.71	42	ePn	Pn	17 06 23.8	-0.7
COLD	Coldfoot	18.11	25	eP	Pn	17 06 31.2	+2.0
	comp=Z,18nm,0.8s						
PNL	Peninsula	18.66	54	eP	Pn	17 06 33.8	-2.2
	comp=Z,86nm,0.8s						
PEA0B	Petropavlovsk-	19.62	286	eP	Pn	17 06 45.4	-2.2
PETK	Petropavlovsk-	19.62	286	P	Pn	17 06 45.4	-2.2
	comp=Z,17nm,0.3s,baz=84,slow=14,SNR=386						
PETK				LR	LR	17 12 40.9	
	comp=Z,940nm,21.8s,baz=89,slow=32						
BILL	Bilibino	19.78	333	eP	Pn	17 06 47.1	-2.2
BILL				eS	S	17 10 26.1	-1.6
BILL				pmax	pmax		
	comp=Z,20nm,1.2s						
BILL				MLR	MLR		
	comp=Z,4μm,15.0s						
BILL	Bilibino	19.78	333	eP	Pn	17 06 47.8	-1.5
	comp=Z,58nm,1.0s						
SIT	Sitka	20.57	62	eP	P	17 06 56.6	+0.5
SIT				pmax	pmax		
	comp=Z,72nm,1.5s						
SIT				MLR	MLR		
	comp=Z,3μm,17.0s,MS4.8						
SIT	Sitka	20.57	62	eP	P	17 06 56.6	+0.5
	comp=Z,72nm,1.5s						
SIT				LR	LR		
	comp=Z,3μm,17.0s,MS4.8						
DIB	Dawson Inlet,	22.63	72	T		17 30 40.6	
DLBC	Dease Lake	23.39	58	P	P	17 07 26.4	+0.3
	comp=Z,14nm,0.5s,mb4.6,baz=267,slow=9.1,SNR=26						
DLBC				ScP	ScP	17 14 48.9	+3.5
	comp=Z,3.5nm,0.8s,baz=326,slow=7.3,SNR=6.6						
INK	Inuvik	23.86	33	P	P	17 07 28.1	-2.1
	comp=Z,16nm,0.4s,mb4.8,baz=243,slow=8.6,SNR=33						
YSS	Yuzh-Sakhalins	30.71	280	eP	P	17 08 32.0	+0.1
YSS				eS	S	17 13 34.0	+2.5
YSS				MLR	MLR		
	comp=Z,2μm,20.0s,MS4.8						
YKA	Yellowknife Ar	30.76	48	P	P	17 08 32.0	-0.1
	comp=Z,7.9nm,0.6s,mb4.8,baz=270,slow=7.6,SNR=22						
YKA	Yellowknife Ar	30.76	48	P	P	17 08 32.0	-0.1
B08A	Colville Reser	32.08	76	⇑P	P	17 08 44.1	+0.1
	baz=32						
ASAJ	Asahikawa	32.19	275	LR	LR	17 22 03.9	
	comp=Z,1μm,19.4s,MS4.6,baz=71,slow=37						
RSW	Rattlesnake Hi	32.83	79	eP	P	17 08 51.1	+0.6
TIXI	Tiksi	32.88	329	eP	P	17 08 50.2	-0.5
TIXI				eS	S	17 14 05.7	+0.8
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
TIXI				MLR	MLR		
	comp=Z,2μm,17.0s,MS4.9						
ERM	Erimo	32.97	271	eP	P	17 08 54.2	+2.4
YAK	Yakutsk	33.16	311	eP	P	17 08 52.5	-0.7
YAK				ePP	pP	17 09 05.7	+0.9
YAK				ePPP		17 10 13.2	
YAK				e		17 11 36.1	
YAK				eS	S	17 14 07.8	-1.5
YAK				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.9						
YAK				pmax	pmax		
	comp=E,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.1s						
YAK				smax			
	comp=N,40nm,2.8s						
YAK				smax			
	comp=E,69nm,3.5s						
YAK				MLR	MLR		
	comp=Z,2μm,16.0s,MS5.0						
YAK				MLR	MLR		
	comp=N,2μm,19.0s,MS5.0						
YAK				MLR	MLR		
	comp=E,2μm,17.0s,MS5.0						
YBH	Yreka Blue Hor	33.34	89	LR	LR	17 21 17.1	
	comp=E,2μm,18.1s,MS4.8,baz=53,slow=34						
E09A	Wood Farm, Sta	33.65	78	⇓P	P	17 08 59.8	+2.1
	baz=34						
K05A	Summer Lake	33.91	86	⇓P	P	17 09 02.9	+2.9
	baz=34						
H08A	Prairie City	34.32	82	⇓P	P	17 09 06.2	+2.7
	baz=34						
F10A	Beach Ranch, E	34.47	79	⇓P	P	17 09 05.2	+0.5
	baz=34						
G09A	Cove	34.48	80	⇓P	P	17 09 05.4	+0.5
	baz=34						
HABR	Khabarovsk	34.65	287	ceP	P	17 09 05.5	-0.8
HABR				eXPP	pP	17 09 15.1	-2.9
HABR				eXSP	sP	17 09 19.5	-3.6
HABR						17 11 39.2	
HABR				eS	S	17 14 33.1	+0.3
HABR				eXSS	sS	17 14 49.6	-2.6
HABR				SS	SS	17 16 47.9	-16
HABR				eSSS		17 17 04.6	
HABR				pmax	pmax		
	comp=E,38nm,1.2s						
HABR				pmax	pmax		
	comp=Z,68nm,1.3s,mb5.4						
HABR				pmax	pmax		
	comp=N,20nm,1.5s						
HABR				MLR	MLR		
	comp=Z,759nm,18.0s,MS4.5						
G10A	Bishop Farm, J	34.87	80	⇓P	P	17 09 08.9	+0.6
	baz=35						
BMO	Blue Mountains	34.98	80	eP	P	17 09 07.6	-1.7
	comp=Z,17nm,1.7s,mb4.7						
F11A	Grangeville	35.16	78	⇑P	P	17 09 10.9	+0.2
	baz=35						
C13A	Hot Springs	35.24	75	⇓P	P	17 09 12.2	+0.8
	baz=35						
E12A	Beaver Dam Sad	35.25	77	⇑P	P	17 09 10.7	-0.8
	baz=35,SNR=9.8						
A14A	Double T Ranch	35.32	72	⇓P	P	17 09 11.4	-0.6
	baz=35,SNR=16						
G11A	Walters Elk Ra	35.34	79	⇓P	P	17 09 12.4	+0.2
	baz=35						
JTMT	Jette	35.38	74	eP	P	17 09 12.9	+0.3
	comp=Z,13nm,1.2s,mb4.7						
H10A	Noah's Angus R	35.46	80	⇑P	P	17 09 13.1	-0.3
	baz=35,SNR=11						
WVOR	Wild Horse Val	35.46	85	eP	P	17 09 15.9	+2.5
WVOR				pmax	pmax		
	comp=Z,38nm,1.4s,mb5.1						
WVOR	Wild Horse Val	35.46	85	eP	P	17 09 15.9	+2.6
	comp=Z,38nm,1.4s,mb5.1						
B14A	Marquette Ranc	35.69	73	⇓P	P	17 09 14.8	-0.5
	baz=36,SNR=11						
A15A	Johnson Ranch,	35.72	72	⇑P	P	17 09 14.9	-0.6
	baz=36,SNR=8.6						
F12A	Elk City	35.77	78	⇑P	P	17 09 15.0	-1.0
	baz=36,SNR=9.8						
H11A	Donnelly	35.85	80	⇓P	P	17 09 15.4	-1.2
	baz=36						
SLMT	Seeley Lake	36.09	75	eP	P	17 09 18.3	-0.4
	comp=Z,31nm,1.6s,mb5.0						
B15A	Bradely Ranch,	36.13	72	⇑P	P	17 09 17.9	-1.1
	baz=36						
D14A	Greenough	36.16	75	⇑P	P	17 09 18.5	-0.8
	baz=36						
KLR	Kul'dur	36.25	289	eP	P	17 09 14.0	-6.0
KLR				pmax	pmax		
	comp=E,43nm,1.4s						
KLR				pmax	pmax		
	comp=Z,48nm,1.4s,mb5.2						
KLR				MLR	MLR		
	comp=E,1μm,16.0s						
KLR				MLR	MLR		
	comp=Z,2μm,16.0s,MS5.0						
F13A	Darby	36.31	77	⇓P	P	17 09 19.8	-0.8
	baz=36						
K10A	MacKenzie Ranc	36.36	83	⇓P	P	17 09 21.2	+0.1
	baz=36						
C15A	Salmond Ranch,	36.36	73	⇑P	P	17 09 20.0	-1.0
	baz=36,SNR=18						
A16A	West Butte Ran	36.40	71	⇑P	P	17 09 21.2	-0.2
	baz=36						
E14A	Clinton	36.50	76	⇓P	P	17 09 21.7	-0.5
	baz=36						
B16A	M & M Farms, S	36.59	72	⇑P	P	17 09 21.8	-1.2
	baz=36,SNR=5.6						
H12A	Diamond D Ranc	36.63	79	⇓P	P	17 09 23.7	+0.4
	baz=36						
MFID	Camas Ranch	36.65	82	⇓P	P	17 09 22.2	-1.3
	baz=36						
G13A	Cobalt	36.73	78	⇑P	P	17 09 22.5	-1.7
	baz=36						
D15A	Lincoln	36.77	74	⇑P	P	17 09 22.0	-2.5
	baz=37						
C16A	Fuhringer Ranc	36.86	73	⇑P	P	17 09 24.4	-0.8
	baz=37						
I12A	Atlanta	36.87	81	⇑P	P	17 09 24.7	-0.7
	baz=37,SNR=5.9						
K11A	Parker Ranch,	36.88	83	⇓P	P	17 09 25.7	+0.3
	baz=37						
H13A	Challis	36.99	79	⇑P	P	17 09 25.8	-0.5
	baz=37						
J12A	Stokes Ranch,	37.18	81	⇑P	P	17 09 27.1	-0.9
	baz=37						
L11A	Cat Creek Ranc	37.38	83	⇓P	P	17 09 29.3	-0.4
	baz=37						
I13A	Wildhorse Cree	37.42	80	⇑P	P	17 09 29.2	-0.9
	baz=37,SNR=8.4						
HLID	Hailey	37.43	80	⇓P	P	17 09 29.1	-1.0
	baz=37						
A18A	Metzger Ranch,	37.44	70	⇑P	P	17 09 27.6	-2.5
	baz=37						
H14A	Leadore	37.50	78	⇑P	P	17 09 30.1	-0.6
	baz=37						
J13A	Cove Ranch, Pi	37.67	80	⇓P	P	17 09 32.2	+0.1
	baz=38,SNR=9.8						
MCMT	McKenzie Canyo	37.70	78	eP	P	17 09 32.4	-0.1
	comp=Z,4.9nm,0.6s,mb4.4						
G15A	Dillon	37.74	77	⇑P	P	17 09 32.3	-0.4
	baz=38,SNR=5.9						
D17A	Six Diamond Ra	37.80	73	⇓P	P	17 09 32.8	-0.4
	baz=38						
I14A	Mackay	37.82	79	⇓P	P	17 09 32.9	-0.5
	baz=38						
L12A	House Creek Ra	37.85	83	⇓P	P	17 09 34.3	+0.7
	baz=38						
EGMT	Eagleton	37.92	71	⇓P	P	17 09 34.0	-0.3
	baz=38,SNR=12						
BOZ	Bozeman (W)	38.01	76	⇓P	P	17 09 34.0	-0.9
	baz=38,SNR=8.6						
NVAR	Mina Array Bea	38.01	90	P	P	17 09 37.0	+1.8
	comp=Z,1.2nm,0.8s,mb3.7,baz=290,slow=8.0,SNR=6.6						
NVAR				ScP	ScP	17 15 37.2	+3.5
	comp=Z,0.5nm,0.4s,baz=239,slow=6.2,SNR=5.7						
E17A	Martinsdale	38.05	74	⇑P	P	17 09 36.1	+0.8
	baz=38						
J14A	Carey	38.11	80	⇓P	P	17 09 36.0	+0.1
	baz=38						
G16A	Moss Hill, Enn	38.12	76	⇓P	P	17 09 34.9	-1.1
	baz=38						
F17A	Fitzpatrick Pl	38.45	75	⇓P	P	17 09 37.6	-1.1
	baz=38						
L13A	Double Diamond	38.54	82	⇓P	P	17 09 40.1	+0.6
	baz=38						
E18A	Harlowton	38.56	74	⇓P	P	17 09 39.3	-0.3
	baz=38						
N12A	Clover Valley,	38.58	84	⇑P	P	17 09 40.5	+0.7
	baz=38						
J15A	Blackfoot	38.73	79	⇑P	P	17 09 40.9	-0.1
	baz=38						
H16A	Russell Place,	38.73	77	⇑P	P	17 09 40.6	-0.5
	baz=38						
M13A	Montello	38.82	83	⇓P	P	17 09 42.4	+0.6
	baz=39						
M13A	Montello	38.82	83	eP	P	17 09 41.5	-0.3
	comp=Z,9.0nm,1.1s,mb4.4						
Q10A	Clear Creek Ra	38.95	88	⇑P	P	17 09 43.2	+0.3
	baz=39						
F18A	Big Timber	39.02	74	⇑P	P	17 09 43.1	-0.3
	baz=39						
I16A	Newdale	39.04	78	⇑P	P	17 09 44.7	+1.1
	baz=39						
O12A	Currie	39.10	85	⇓P	P	17 09 44.7	+0.5
	baz=39						
GCMT	Greycliff	39.10	74	eP	P	17 09 40.6	-3.6
	comp=Z,3.2nm,0.7s,mb4.2						
FFC	Flin Flon	39.22	58	ceP	P	17 09 47.2	+2.2
M14A	Sheep Mountain	39.24	82	⇓P	P	17 09 46.1	+0.7
	baz=39						
VLA	Vladivostok	39.28	281	eP	P	17 09 46.2	+0.5
VLA				pmax	pmax		
	comp=Z,49nm,1.9s,mb4.9						
VLA				MLR	MLR		
	comp=Z,1μm,21.7s,MS4.8						
J16A	Bone	39.29	79	⇑P	P	17 09 44.7	-1.1
	baz=39						
H17A	Grant Village	39.30	77	⇓P	P	17 09 44.2	-1.6
	baz=39						
MAT	Matsushiro	39.33	268	P	P	17 09 45.0	-1.2
MAT				S	S	17 15 44.0	-0.1
MJAR	Matsushiro Arr	39.33	268	P	P	17 09 46.6	+0.4
	comp=Z,2.8nm,0.5s,mb4.2,baz=32,slow=5.9,SNR=11						
MJAR				PcP	PcP	17 11 55.1	+1.1
	comp=Z,2.6nm,0.9s,baz=63,slow=1.7,SNR=4.2						
MJAR				LR	LR	17 25 31.5	
	comp=Z,1μm,20.6s,MS4.8,baz=70,slow=36						
MJAR	Matsushiro Arr	39.33	268	P	P	17 09 46.6	+0.4
MJAR						17 11 55.1	
S10A	Tonopah Range,	39.38	89	⇑P	P	17 09 47.3	+0.7
	baz=39,SNR=9.2						
Q11A	Duckwater	39.40	87	⇓P	P	17 09 46.8	+0.1
	baz=39						
P12A	McGill	39.48	86	⇓P	P	17 09 48.3	+1.0
	baz=39						
K16A	Soda Springs	39.55	80	⇑P	P	17 09 49.3	+1.3
	baz=39,SNR=11						
RLMT	Red Lodge	39.70	75	⇑P	P	17 09 48.8	-0.3
	baz=40						
SNOW	Snow King Moun	39.71	78	eP	P	17 09 53.0	+3.7
	comp=Z,12nm,0.6s,mb4.8						
N14A	Grayback Hills	39.72	83	⇑P	P	17 09 49.5	+0.2
	baz=40						
R11A	Troy Canyon, C	39.74	88	⇑P	P	17 09 50.2	+0.6
	baz=40,SNR=6.0						
BGU	Big Grassy Mou	39.77	83	eP	P	17 09 51.0	+1.3
	comp=Z,12nm,1.1s,mb4.5						
Q12A	Willow Creek R	39.79	87	⇓P	P	17 09 50.9	+0.9
	baz=40						
J17A	Brown Place, J	39.79	78	⇑P	P	17 09 50.0	0.0
	baz=40						
MDJ	Mudanjiang	39.84	284	P	P	17 09 49.0	-1.4
MDJ				pP	pP	17 10 01.3	-0.9
MDJ				sP	sP	17 10 07.5	+0.3
MDJ				S	S	17 15 55.0	+3.3
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.7s,mb4.0						
MDJ				pmax	pmax		
	comp=Z,160nm,9.4s						
MDJ				LR	LR		
	comp=N,1μm,29.9s						
MDJ				LR	LR		
	comp=E,1μm,23.1s						
MDJ				LR	LR		
	comp=Z,1μm,23.1s						
P13A	Bates Ranch, G	40.04	85	⇑P	P	17 09 53.3	+1.3
	baz=40,SNR=7.8						
S11A	Rachel	40.08	89	⇑P	P	17 09 54.3	+1.9
	baz=40						
L16A	Fish Haven	40.12	80	⇑P	P	17 09 53.6	+1.0
	baz=40						
FURC	Furnace Creek,	40.14	91	⇑P	P	17 09 53.2	+0.4
	baz=40						
J18A	Kendall Valley	40.29	78	⇓P	P	17 09 54.8	+0.7
	baz=40						
DUG	Dugway	40.33	84	⇑P	P	17 09 53.3	-1.1
	baz=40						
Q13A	Wheeler Ranch,	40.34	86	⇑P	P	17 09 54.7	+0.2
	baz=40						
P14A	Drum Mountains	40.54	85	⇑P	P	17 09 57.2	+1.0
	baz=40						
K18A	Toltan Ranch,	40.60	79	⇓P	P	17 09 56.5	-0.2
	baz=40						
S12A	Delamar Landin	40.66	88	⇑P	P	17 09 57.0	-0.2
	baz=40						
T11A	Corn Creek, Al	40.66	89	⇓P	P	17 09 57.7	+0.5
	baz=40						
Q14A	Sevier Lake (B	40.78	86	⇓P	P	17 09 58.2	0.0
	baz=41						
BW06	Boulder Array	40.82	78	⇓P	P	17 09 58.2	-0.3
	baz=41,SNR=15						
PDAR	Pinedale Array	40.82	78	P	P	17 09 58.4	-0.1
	comp=Z,3.6nm,0.5s,mb4.2,baz=308,slow=2.9,SNR=26						
PDAR				LR	LR	17 27 32.8	
	comp=Z,877nm,18.0s,MS4.7,baz=326,slow=37						
R13A	O'Grain Ranch,	40.85	87	⇑P	P	17 10 00.1	+1.4
	baz=41						
SHOC	Shoshone	40.86	91	⇓P	P	17 10 01.2	+2.3
	baz=41						
M17A	Scullys Gap (B	40.90	81	⇓P	P	17 10 00.1	+1.0
	baz=41						
GSC	Goldstone	40.93	93	⇑P	P	17 10 01.5	+2.1
	baz=41						
NLU	North Lily Min	40.93	83	eP	P	17 09 57.0	-2.4
	comp=Z,16nm,1.1s,mb4.6						
P15A	Leamington	41.04	84	⇓P	P	17 10 00.9	+0.7
	baz=41						
O16A	Springville	41.13	83	⇑P	P	17 10 02.0	+0.9
	baz=41						
K19A	Absolon Red Bu	41.22	78	⇓P	P	17 10 01.1	-0.6
	baz=41,SNR=8.1						
S13A	Holt

baz=42
U13A Pakoon Wash 41.96 89 ⇑P P 17 10 08.8 +0.9
baz=42,SNR=11
GMRC Granite Mounta 41.98 92 ⇓P P 17 10 08.2 +0.2
baz=42
L20A Wamsutter 42.00 78 ⇓P P 17 10 07.4 -0.7
baz=42
O18A Roosevelt 42.01 82 ⇑P P 17 10 08.9 +0.6
baz=42
T14A Hurricane 42.09 88 ⇑P P 17 10 10.0 +1.1
baz=42
Q16A Castle Valley 42.12 84 ⇓P P 17 10 10.2 +1.1
baz=42,SNR=7.2
P18A Preston Nutter 42.25 83 ⇑P P 17 10 10.6 +0.4
baz=42
V13A Grand Canyon W 42.31 90 ⇓P P 17 10 11.6 +0.9
baz=42,SNR=6.3
R16A Teasdale 42.32 85 ⇑P P 17 10 12.2 +1.4
baz=42
SRU San Rafael 42.40 83 ⇓P P 17 10 11.4 0.0
baz=42
U14A Mt Trumbull 42.45 88 ⇓P P 17 10 11.2 -0.6
baz=42
O19A Miners Draw (B 42.53 81 ⇓P P 17 10 11.8 -0.7
baz=42,SNR=9.5
T15A Red Dirt Ranch 42.56 87 ⇑P P 17 10 13.0 +0.2
baz=42
S16A Weppner Ranch, 42.60 86 ⇓P P 17 10 13.2 +0.1
baz=42
L21A Rawlins 42.61 78 ⇓P P 17 10 12.5 -0.6
baz=42,SNR=11
Q18A Rafter H Ranch 42.64 83 ⇑P P 17 10 13.1 -0.3
baz=42
IRM Iron Mountain 42.70 93 ⇓P P 17 10 15.3 +1.4
baz=43
R17A Hanksville Air 42.71 84 ⇑P P 17 10 12.7 -1.2
baz=42,SNR=5.4
N20A Spence Gulch, 42.74 80 ⇑P P 17 10 13.4 -0.7
baz=42
CN2 Changchun 42.77 286 *e*P **P 17 10 14.8 +0.4**
CN2 pmax pmax
comp=Z,20nm,1.4s,mb4.7
CN2 pmax pmax
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,1μm,17.0s,MS5.0
CN2 LR LR
comp=E,1μm,17.0s,MS5.0
CN2 LR LR
comp=Z,2μm,20.0s,MS5.0
M21A Separation Pea 42.83 78 ⇓P P 17 10 14.9 +0.1
baz=43
W13A Hualapai Mount 42.87 90 ⇑P P 17 10 15.0 -0.2
baz=43
U15A North Rim 42.99 88 ⇑P P 17 10 16.7 +0.5
baz=43,SNR=13
V14A Boquillas Ranc 43.00 89 ⇑P P 17 10 14.6 -1.7
baz=43,SNR=6.9
P19A Cripple Cowboy 43.02 82 ⇑P P 17 10 16.0 -0.5
baz=43,SNR=11
O20A White River Ci 43.17 81 ⇑P P 17 10 16.7 -0.9
baz=43
R18A Canyonlands Na 43.23 84 ⇑P P 17 10 17.5 -0.7
baz=43
N21A Black Mountain 43.23 79 ⇓P P 17 10 17.6 -0.6
baz=43
W14A Seligman 43.29 90 ⇑P P 17 10 18.4 -0.3
baz=43
O21A Pagoda 43.59 80 ⇑P P 17 10 21.3 +0.3
baz=43
S18A Hurst Farm, Bl 43.60 85 ⇑P P 17 10 20.8 -0.4
baz=43,SNR=13
N22A Wattenberg Ran 43.85 79 ⇑P P 17 10 23.0 -0.2
baz=44
Q20A Ridgley Place, 43.86 82 ⇓P P 17 10 22.2 -1.0
baz=44
X14A Yava 43.90 90 ⇑P P 17 10 24.4 +0.8
baz=44,SNR=7.9
T18A Mexican Hat 44.03 85 ⇓P P 17 10 24.1 -0.5
baz=44,SNR=16
S19A Harvey Farm, M 44.10 84 ⇑P P 17 10 24.4 -0.7
baz=44,SNR=9.1
WUAZ Wupatki 44.15 88 ⇑P P 17 10 25.9 +0.3
baz=44
PV01 Paradox Valley 44.20 83 *e*P **P 17 10 25.8 -0.2**
comp=Z,2μm,0.9s
Z13A Yuma Proving G 44.27 92 ⇓P P 17 10 26.8 +0.2
baz=44
R20A Redvale 44.28 83 ⇓P P 17 10 26.7 0.0
baz=44
X15A Humboldt 44.29 90 ⇑P P 17 10 27.0 +0.3
baz=44
W16A Flagstaff 44.32 89 ⇓P P 17 10 27.0 0.0
baz=44
Q21A Lamborn Mesa, 44.38 82 ⇑P P 17 10 27.8 +0.5
baz=44
V17A Tonalea, Kykot 44.44 88 ⇓P P 17 10 27.9 +0.1
baz=44,SNR=8.2
Y15A Casa Rosa Ranc 44.58 91 ⇑P P 17 10 30.1 +1.0
baz=44
ULM Lac du Bonnet 44.64 61 P P 17 10 28.2 -1.1
comp=Z,14nm,0.8s,mb4.8,baz=308,slow=10,SNR=4.9
ULM LR LR 17 30 28.2
comp=Z,2μm,18.8s,MS5.1,baz=314,slow=38
T19A Beclabito 44.75 85 ⇓P P 17 10 30.1 -0.3
baz=45,SNR=12
X16A Lo Mia Camp, P 44.83 89 ⇑P P 17 10 30.6 -0.3
baz=45
V18A Ganado 44.91 87 ⇓P P 17 10 30.7 -1.0
baz=45
S21A Coal Bank Pass 44.98 83 ⇓P P 17 10 30.9 -1.2
baz=45
U19A Dine' College, 44.98 86 ⇓P P 17 10 30.3 -1.8
baz=45
SNY Shenyang 45.04 284 ⇑P P 17 10 32.3 -0.3
SNY S **S 17 17 03.8 -4.4**
SNY pmax pmax
comp=Z,24nm,1.4s,mb4.8
SNY LR LR
comp=N,1μm,19.2s,MS5.0
SNY LR LR
comp=E,1μm,21.0s,MS5.0
SNY LR LR
comp=Z,2μm,21.9s,MS5.0
114A Black Gap (USA 45.05 92 ⇑P P 17 10 33.0 +0.2
baz=45
KSRS Korea Array 45.10 277 P P 17 10 32.9 -0.3
comp=Z,12nm,0.8s,mb4.8,baz=54,slow=7.2,SNR=29
KSRS LR LR 17 29 02.5
comp=Z,824nm,19.6s,MS4.7,baz=53,slow=36
R22A Saguache, Gunn 45.25 82 ⇑P P 17 10 34.4 0.0
baz=45,SNR=7.1
S22A 4UR Ranch, Cre 45.51 82 ⇑P P 17 10 36.5 +0.1
baz=45
X18A Snowflake 45.67 88 ⇑P P 17 10 38.5 +0.8
baz=46
Y17A Roosevelt 45.67 90 ⇑P P 17 10 37.6 -0.1
baz=46
V20A Brimhall 45.76 86 ⇑P P 17 10 37.9 -0.5
baz=46
U21A Nageezi 45.85 84 ⇓P P 17 10 39.0 0.0
baz=46,SNR=13
T22A Edith 45.94 83 ⇓P P 17 10 39.7 0.0
baz=46
P25A Willow Gulch B 46.03 79 ⇑P P 17 10 41.5 +1.1
baz=46
Y18A Canyon Day Jun 46.12 89 ⇑P P 17 10 42.4 +1.2
baz=46
X19A St. Johns 46.15 88 ⇓P P 17 10 41.4 0.0
baz=46
W20A Ramah 46.18 86 ⇓P P 17 10 42.3 +0.6
baz=46
R24A Sanders Place, 46.26 81 ⇑P P 17 10 41.5 -0.8
baz=46
U22A Llaves 46.37 84 ⇑P P 17 10 41.9 -1.3
baz=46
117A Oracle 46.50 91 ⇓P P 17 10 44.2 0.0
baz=46
X20A Quemado 46.56 87 ⇓P P 17 10 44.5 -0.2
baz=46
S24A Houchin Ranch, 46.57 81 ⇑P P 17 10 44.5 -0.2
baz=46
U23A El Rito 46.81 83 ⇓P P 17 10 45.4 -1.3
baz=47
118A Homack Ranch, 46.93 90 ⇓P P 17 10 44.8 -2.8
baz=47
S25A Robets Cordova 47.03 81 ⇓P P 17 10 46.5 -1.8
baz=47,SNR=5.4
Y20A Horse Springs, 47.06 87 ⇓P P 17 10 46.6 -2.0
baz=47
X21A Alamocita Cree 47.07 86 ⇓P P 17 10 47.2 -1.4
baz=47,SNR=8.3
V23A Ortiz Mt. (NFS 47.20 84 ⇓P P 17 10 50.9 +1.3
baz=47
W22A Albuquerque 47.22 85 ⇑P P 17 10 50.9 +1.1
baz=47
119A Ashpeak Ranch, 47.25 89 ⇑P P 17 10 50.7 +0.6
baz=47
U24A Moreno Valley 47.32 83 ⇓P P 17 10 51.2 +0.6
baz=47
218A Dragoon 47.33 91 ⇑P P 17 10 51.1 +0.4
baz=47
T25A Trinidad 47.38 81 ⇓P P 17 10 50.7 -0.4
baz=47,SNR=8.7
Y21A Point of Rocks 47.42 87 ⇑P P 17 10 51.6 +0.2
baz=47,SNR=7.1
Z20A Nine Sixteen R 47.46 88 ⇓P P 17 10 52.2 +0.5
baz=47
LAZ Ladron 47.49 86 *e*P **P 17 10 52.0 0.0**
comp=Z,11nm,1.2s,mb4.7
X22A Bernardo 47.50 86 ⇑P P 17 10 52.9 +0.9
baz=47
ANMO Albuquerque 47.55 85 P P 17 10 53.4 +1.0
comp=Z,5.3nm,1.2s,mb4.5,baz=325,slow=9.6,SNR=7.2
ANMO LR LR 17 28 40.0
comp=Z,937nm,19.4s,MS4.8,baz=130,slow=33
318A Bisbee 47.73 91 ⇑P P 17 10 53.2 -0.6
baz=48,SNR=5.5
219A White Tail Can 47.80 90 ⇓P P 17 10 54.8 +0.4
baz=48
120A U Bar Ranch, L 47.82 89 ⇑P P 17 10 55.6 +1.1
baz=48
U25A Circle Dot Ran 47.86 82 ⇓P P 17 10 54.0 -0.8
baz=48
Z21A St. Cloud Mine 47.90 88 ⇑P P 17 10 55.8 +0.7
baz=48,SNR=6.7
Y22A Socorro 47.91 86 ⇓P P 17 10 55.0 -0.2
baz=48,SNR=6.9
ECSD EROS Data Cent 47.94 69 *e*P **P 17 10 53.1 -2.2**
comp=Z,6.5nm,0.6s,mb4.8
BNM Barren Site 47.98 86 *e*P **P 17 10 55.6 -0.1**
comp=Z,12nm,1.0s,mb4.9
W24A Lazy 6 Ranch, 48.02 84 ⇓P P 17 10 56.2 +0.1
baz=48
V25A Rancho No Teng 48.10 83 ⇓P P 17 10 56.5 -0.2
baz=48
U26A Atchley Ranch, 48.27 82 ⇑P P 17 10 58.0 0.0
baz=48
220A Playas Peak, P 48.32 90 ⇑P P 17 10 58.5 +0.1
baz=48,SNR=9.1
121A Cookes Peak, D 48.35 88 ⇓P P 17 10 59.4 +0.7
baz=48
Z22A Elephant Butte 48.37 87 ⇓P P 17 10 59.8 +1.1
baz=48
Y23A Lovelace Mesa, 48.48 86 ⇓P P 17 10 59.8 +0.2
baz=48,SNR=7.4
W25A X Bar L Ranch, 48.60 83 ⇑P P 17 11 00.6 +0.1
baz=48,SNR=9.7
V26A Tequesquite Ra 48.64 82 ⇓P P 17 11 01.3 +0.6
baz=48
320A Kipp Ranch, An 48.71 90 ⇑P P 17 11 02.2 +0.8
baz=49
122A Conniff Cattle 48.72 88 ⇓P P 17 11 02.8 +1.4
baz=49
Y24A Capitan 48.86 85 ⇓P P 17 11 02.3 -0.2
baz=49
222A Williams Famil 49.06 88 ⇑P P 17 11 04.5 +0.4
baz=49
W26A Owens Ranch, T 49.11 83 ⇓P P 17 11 05.1 +0.6
baz=49
Z24A Sheeppen Canyo 49.31 86 ⇑P P 17 11 05.8 -0.2
baz=49
Y25A Mesa, Roswell 49.32 85 ⇓P P 17 11 04.1 -1.9
baz=49,SNR=9.5
IRK Irkutsk 49.63 306 ⇓*i*P **P 17 11 06.8 -1.3**
IRK pmax pmax
comp=Z,44nm,1.1s,mb5.4
124A Stringfield Ra 49.68 86 ⇓P P 17 11 07.8 -1.0
baz=50
Z25A Roswell 49.74 85 ⇓P P 17 11 06.6 -2.6
baz=50
SPITS Spitsbergen Ar 50.04 358 P P 17 11 09.9 -1.0
baz=21,slow=8.3
SPITS PcP PcP 17 12 30.6 +0.5
comp=Z,4.7nm,0.5s,baz=41,slow=2.7,SNR=5.1
224A Cornudas Mount 50.06 87 ⇑P P 17 11 10.2 -1.5
baz=50
125A Gardner Draw, 50.20 86 ⇓P P 17 11 11.7 -1.0
baz=50
Z26A Caprock 50.20 85 ⇑P P 17 11 12.5 -0.2
baz=50
DAG Danmarks Havn 50.22 8 ⇓*i*P **P 17 11 11.1 -1.2**
comp=Z,19nm,0.5s,mb5.4
TLY Talaya 50.28 306 *e*P **P 17 11 12.3 -0.7**
TLY *e* 17 12 31.3
TLY *e* 17 13 09.1
TLY *e*PPP 17 14 05.0
TLY *e*S **S 17 18 39.3 +17**
TLY *e* 17 21 04.3
TLY pmax pmax
comp=Z,24nm,1.0s,mb5.2
Y27A Causey 50.29 84 ⇑P P 17 11 11.8 -1.6
baz=50,SNR=7.7
MNTX Cornudas Mount 50.41 87 *e*P **P 17 11 14.5 +0.2**
comp=Z,11nm,1.0s,mb4.8
225A Deer Hill, Car 50.47 87 ⇑P P 17 11 15.2 +0.4
baz=50
MSTX Muleshoe 50.47 83 ⇓P P 17 11 14.2 -0.6
baz=50,SNR=8.1
324A Moseley Ranch, 50.52 88 ⇑P P 17 11 14.8 -0.4
baz=50
BJI Beijing 50.55 287 P **P 17 11 14.0 -1.3**
BJI S **S 17 18 23.5 -2.8**
BJI SS SS 17 21 59.3 -0.9
BJI pmax pmax
comp=Z,15nm,0.6s,mb5.1
BJI pmax pmax
comp=Z,200nm,5.4s
BJI LR LR
comp=N,2μm,20.2s,MS5.1
BJI LR LR
comp=E,1μm,20.2s,MS5.1
BJI LR LR
comp=Z,1μm,19.8s,MS4.9
126A Clayton Basin, 50.60 85 ⇓P P 17 11 12.5 -3.2
baz=50
Z27A Tatum 50.64 84 ⇓P P 17 11 14.2 -1.9
baz=50
COWI Conover 50.71 63 *e*P **P 17 11 14.5 -2.0**
comp=Z,21nm,1.0s,mb5.0
325A Bean Ranch, Si 50.88 87 ⇑P P 17 11 17.1 -0.8
baz=51,SNR=13
226A Malaga, Loving 50.95 86 ⇑P P 17 11 16.9 -1.5
baz=51,SNR=7.1
SONM Songino Array 51.19 301 P **P 17 11 19.5 -0.4**
comp=Z,16nm,1.1s,mb4.9,baz=52,slow=5.6,SNR=61
SONM LR LR 17 35 09.9
comp=Z,2μm,18.1s,MS5.2,baz=54,slow=39
SUMG Summit 51.25 17 *i*P **P 17 11 20.5 +0.4**
comp=Z,58nm,1.0s,mb5.5
SUMG
comp=Z,1μm,19.0s
MOY Mondy 51.60 307 *e*P **P 17 11 22.4 -0.6**
MOY pmax pmax
comp=Z,25nm,1.5s,mb4.9
328A Wristen Ranch, 52.21 86 ⇑P P 17 11 27.0 -0.8
baz=52
427A Hayter Ranch, 52.22 87 ⇑P P 17 11 28.3 +0.4
baz=52
TIA Tai'an 52.48 283 *e*P **P 17 11 29.8 0.0**
527A Woodward Ranch 52.58 87 ⇑P P 17 11 30.5 0.0
baz=52
626A Big Bend Ranch 52.67 88 ⇑P P 17 11 30.4 -0.8
baz=52,SNR=7.9
HHC Hu-ho-hao-te 52.73 291 *e*P **P 17 11 32.5 +1.0**
HHC pP pP 17 11 42.5 -1.2
HHC sP sP 17 11 46.3 -2.4
HHC PcP PcP 17 12 42.5 +1.8
HHC PP PP 17 13 32.5 +1.8
HHC ScP ScP 17 16 35.5 +1.3
HHC PcS PcS 17 16 39.5 +0.3
HHC S **S 17 18 55.5 -0.7**
HHC sS sS 17 19 12.5 -3.9
HHC ScS ScS 17 21 16.5 -0.8
HHC SS SS 17 22 31.5 -3.1
HHC pmax pmax
comp=Z,13nm,0.7s,mb5.0
HHC pmax pmax
comp=Z,250nm,5.5s
HHC LR LR
comp=N,980nm,16.6s,MS5.0
HHC LR LR
comp=E,620nm,15.7s,MS5.0
HHC LR LR
comp=Z,740nm,18.1s,MS4.8
TXAR Lajitas Array 53.11 88 P **P 17 11 33.7 -0.8**
comp=Z,2.6nm,0.7s,mb4.3,baz=303,slow=6.1,SNR=17
TXAR LR LR 17 33 29.1
comp=Z,674nm,19.8s,MS4.7,baz=70,slow=35
627A Terlingua Ranc 53.20 88 ⇓P **P 17 11 35.0 -0.1**
baz=53,SNR=8.5
SSE Sheshan 53.48 275 ⇑P **P 17 11 38.5 +1.3**
SSE pP pP 17 11 47.5 -1.9
SSE sP sP 17 11 51.3 -3.1
SSE S **S 17 19 08.3 +1.6**
SSE sS sS 17 19 24.3 -2.6
SSE pmax pmax
comp=Z,34nm,1.3s,mb5.1
SSE pmax pmax
comp=Z,230nm,5.5s
SSE LR LR
comp=N,460nm,11.3s,MS4.9
SSE LR LR
comp=E,320nm,11.3s,MS4.9
SSE LR LR
comp=Z,640nm,16.9s
628A Black Gap, Mar 53.48 87 ⇓P **P 17 11 36.7 -0.6**
baz=53,SNR=10
BTO Baotou 53.77 292 *e*P **P 17 11 39.3 +0.1**
NJ2 Nanjing 54.25 278 *e*P **P 17 11 41.5 -1.3**
NJ2 pP pP 17 11 49.8 -5.2
NJ2 sP sP 17 11 55.0 -5.0
NJ2 PP PP 17 13 45.3 +0.6
NJ2 S **S 17 19 14.0 -3.1**
NJ2 sS sS 17 19 31.5 -5.9
NJ2 pmax pmax
comp=Z,30nm,1.0s,mb5.2
NJ2 pmax pmax
comp=Z,140nm,8.0s
NJ2 LR LR
comp=N,490nm,20.0s,MS4.8
NJ2 LR LR
comp=E,620nm,22.0s,MS4.8
NJ2 LR LR
comp=Z,750nm,21.0s,MS4.7
SCO Scoresbysund 55.67 12 *i*P **P 17 11 52.1 -0.4**
comp=Z,19nm,0.9s,mb5.1
SCO
comp=Z,2μm,18.0s
SCHQ Schefferville 55.95 43 P **P 17 11 54.3 -0.4**
comp=Z,8.2nm,0.5s,mb5.1,baz=319,slow=6.1,SNR=28
SCHQ LR LR 17 37 56.5
comp=Z,2μm,18.3s,MS5.2,baz=313,slow=38
SADO Sadowa 56.95 58 LR LR 17 38 00.4
comp=Z,816nm,18.8s,MS4.8,baz=164,slow=38
WCI Wyandotte Cave 57.44 68 *e*P **P 17 12 03.3 -2.3**
WCI pmax pmax
comp=Z,13nm,0.9s,mb5.0
WCI Wyandotte Cave 57.44 68 *e*P **P 17 12 03.3 -2.2**
comp=Z,14nm,0.9s,mb5.0
ZAA0 Zalesovo Array 57.47 317 *e*P **P 17 12 00.8 -4.6**
ZALV Zalesovo Beam 57.47 317 P **P 17 12 04.2 -1.3**
comp=Z,2.8nm,0.5s,mb4.6,baz=44,slow=7.0,SNR=13
ZALV PcP PcP 17 12 59.1 +0.4
comp=Z,4.6nm,0.5s,baz=56,slow=4.3,SNR=6.8
ZALV LR LR 17 40 52.1
comp=Z,638nm,18.6s,MS4.8,baz=52,slow=40
ZALV Zalesovo Beam 57.47 317 P **P 17 12 04.2 -1.3**
ZALV 17 12 59.1
NVS Novosibirsk 57.48 319 *e*P **P 17 12 04.4 -1.2**
NVS pmax pmax
comp=N,2.0nm,0.4s
NVS pmax pmax
comp=E,1.0nm,0.4s
NVS pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
KEV Kevo 57.94 353 *e*P **P 17 12 08.0 -0.6**
KEV pmax pmax
comp=Z,9.0nm,0.5s,mb5.1
KEV Kevo 57.94 353 *e*P **P 17 12 08.0 -0.6**
comp=Z,23nm,1.0s,mb5.2
KEV Kevo 57.94 353 *e*p **P 17 12 08.0 -0.6**
comp=Z,9.0nm,0.5s,mb5.1
KEV Kevo 57.94 353 *e*p **P 17 12 08.0 -0.6**
comp=Z,9.0nm,0.5s,mb5.1
WHN Wuhan 58.06 280 P **P 17 12 09.0 -1.0**
WHN S **S 17 20 02.5 -5.1**
WHN pmax pmax
comp=Z,600nm,4.4s
WHN LR LR
comp=N,2μm,10.6s,MS5.5
WHN LR LR
comp=E,2μm,13.6s,MS5.5
WHN LR LR
comp=Z,2μm,11.6s,MS5.5
ARCES ARCESS Array B 58.26 354 P **P 17 12 09.9 -0.9**
comp=Z,4.7nm,0.5s,mb4.8,baz=5.0,slow=6.8,SNR=37
ARE0 ARCESS Array S 58.26 354 *e*P **P 17 12 09.9 -0.9**
TRO Tromso 58.52 356 *e* **P 17 12 08.7 -4.0**
TRO AMS AMS 17 38 55.1
comp=Z,759nm,18.1s,MS4.9
TRO Tromso 58.52 356 *e*P **P 17 12 08.7 -3.9**
TRO MLR MLR
comp=Z,760nm,18.1s,MS4.9
TRO Tromso 58.52 356 *e*P **P 17 12 08.7 -4.0**
TRO LR LR
comp=Z,760nm,18.1s,MS4.9
SSLB Suanglung 58.85 269 *e*P **P 17 12 13.7 -1.9**
comp=Z,63nm,1.1s,mb5.6
KTK1 Kautokeino 58.92 354 *e* **P 17 12 17.0 +1.5**
KTK1 Kautokeino 58.92 354 *e*P **P 17 12 17.0 +1.5**
LONY Lake Ozonia 59.41 56 *e*P **P 17 12 17.0 -2.1**
comp=Z,10nm,0.8s,mb4.9
GTA Gaotai 60.34 297 ⇑P **P 17 12 26.5 +0.9**
GTA pP pP 17 12 38.8 +0.8
GTA PP PP 17 14 41.8 +3.2
GTA S **S 17 20 36.0 -0.9**
GTA SS SS 17 24 35.8 +1.6
GTA pmax pmax
comp=Z,15nm,1.4s,mb4.8
GTA pmax pmax
comp=Z,190nm,7.5s
GTA LR LR
comp=N,2μm,17.7s,MS5.4
GTA LR LR
comp=E,2μm,18.0s,MS5.4
GTA LR LR
comp=Z,2μm,17.4s,MS5.4
LZH Lanzhou 60.40 292 ⇑P **P 17 12 26.0 -0.1**
LZH pP pP 17 12 39.3 +0.8
LZH PP PP 17 14 41.5 +2.3
LZH S **S 17 20 34.3 -3.5**
LZH sS sS 17 20 56.0 -2.3
LZH SS SS 17 24 32.5 -2.9
LZH pmax pmax
comp=Z,36nm,1.0s,mb5.4
LZH pmax pmax
comp=Z,320nm,4.1s
LZH LR LR
comp=N,2μm,17.6s
LZH LR LR
comp=Z,2μm,18.0s,MS5.4
SSPA Standing Stone 60.47 61 *e*P **P 17 12 25.2 -1.2**
comp=Z,37nm,1.2s,mb5.3
TKL Tuckaleechee C 60.68 69 P **P 17 12 29.4 +1.4**
comp=Z,2.5nm,0.5s,mb4.6,baz=313,slow=1.3,SNR=5.6
ELN Prospectdale 61.29 66 *e*P **P 17 12 30.8 -1.4**
BLA Blacksburg 61.49 65 *e*P **P 17 12 32.6 -0.9**
BLA pmax pmax
comp=Z,26nm,0.8s,mb5.4
BLA Blacksburg 61.49 65 *e*P **P 17 12 32.6 -0.9**
comp=Z,26nm,0.8s,mb5.4
MOR8 Moi Rana 62.12 358 *e* **P 17 12 31.5 -5.8**
MOR8 Moi Rana 62.12 358 *e*P **P 17 12 33.6 -3.7**
KURK Kurchatov 62.42 318 *ce*P **P 17 12 40.3 +0.8**
KURK pmax pmax
comp=Z,22nm,1.2s,mb5.2
KURK Kurchatov 62.42 318 *e*P **P 17 12 37.6 -1.9**
comp=Z,15nm,0.8s,mb5.2
SOKR Solikamsk 62.57 335 ⇑*i*P **P 17 12 40.5 +0.2**
SOKR pmax pmax

comp=Z,40nm,1.3s,mb5.4
SOKR MLR MLR
comp=Z,1µm,18.0s,MS5.1
WMQ Urumqi 63.49 308 *e*P **P 17 12 49.0 +2.3**
WMQ pmax pmax
comp=Z,24nm,1.0s,mb5.3
WMQ Urumqi 63.49 308 *e*P **P 17 12 45.0 -1.7**
WMQ pmax pmax
comp=Z,24nm,1.0s,mb5.3
BVAR Borovoye Array 63.80 324 P **P 17 12 48.0 -0.7**
comp=Z,11nm,0.5s,mb5.2,baz=57,slow=6.7,SNR=56
MKAR Makanchi Array 63.81 313 P **P 17 12 47.4 -1.3**
comp=Z,2.1nm,0.3s,mb4.6,baz=31,slow=4.5,SNR=44
MKAR Makanchi Array 63.81 313 P **P 17 12 47.4 -1.4**
BRVK Borovoye 63.82 324 *ce*P **P 17 12 49.2 +0.5**
BRVK pmax pmax
comp=Z,38nm,1.2s,mb5.3
BRVK Borovoye 63.82 324 *e*P **P 17 12 47.8 -0.9**
comp=Z,44nm,1.1s,mb5.4
SVE Sverdlovsk 63.86 332⇑ *e*P **P 17 12 50.5 +1.6**
SVE pmax pmax
comp=Z,43nm,1.3s,mb5.3
CD2 Chengdu 64.15 288 *e*P **P 17 12 53.3 +2.0**
CD2 pP pP 17 13 06.0 +2.3
CD2 PP PP 17 15 16.0 +3.6
CD2 S **S 17 21 24.5 -0.6**
CD2 SS SS 17 25 35.0 +0.8
CD2 pmax pmax
comp=Z,30nm,0.6s,mb5.5
CD2 pmax pmax
comp=Z,120nm,5.2s
CD2 LR LR
comp=N,130nm,14.2s,MS4.4
CD2 LR LR
comp=E,120nm,16.2s,MS4.4
CD2 LR LR
comp=Z,100nm,14.0s,MS4.2
JOF Joensuu 64.22 349 *e*P **P 17 12 49.5 -1.7**
JOF pmax pmax
comp=Z,14nm,0.5s,mb5.2
JOF Joensuu 64.22 349 *ep* **P 17 12 49.5 -1.7**
comp=Z,14nm,0.5s,mb5.2
JOF Joensuu 64.22 349 *ep* **P 17 12 49.5 -1.7**
comp=Z,14nm,0.5s,mb5.2
ARU Arti 64.80 333 *c i*P **P 17 12 53.8 -1.3**
ARU *e* 17 15 17.7
ARU S **S 17 21 31.0 -1.3**
ARU pmax pmax
comp=Z,40nm,1.2s,mb5.3
ARU MLR MLR
comp=Z,2µm,18.0s,MS5.2
ARU Arti 64.80 333 *e*P **P 17 12 53.8 -1.2**
comp=Z,25nm,0.8s,mb5.3
KAF Kangasniemi 65.52 352 *e*P **P 17 12 57.9 -1.7**
KAF pmax pmax
comp=Z,13nm,0.5s,mb5.2
KAF Kangasniemi 65.52 352 *ep* **P 17 12 57.9 -1.7**
comp=Z,13nm,0.5s,mb5.2,baz=8.3,slow=6.0
KAF Kangasniemi 65.52 352 *ep* **P 17 12 57.9 -1.7**
comp=Z,13nm,0.5s,mb5.2,baz=8.3,slow=6.0
GYA Guiyang 65.67 282 P **P 17 13 01.8 +0.6**
GYA pP pP 17 13 14.8 +1.1
GYA sP sP 17 13 20.0 +1.4
GYA PcP PcP 17 13 32.0 -0.3
GYA PP PP 17 15 28.8 +3.1
GYA ScP 17 17 30.8
GYA S S 17 21 44.5 +0.7
GYA SS SS 17 26 01.5 +3.5
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
GYA pmax pmax
comp=Z,50nm,4.1s
GYA LR LR
comp=N,310nm,17.4s,MS4.7
GYA LR LR
comp=E,380nm,22.0s,MS4.7
GYA LR LR
comp=Z,530nm,22.9s,MS4.7
TAOE Nuku Hiva Isla 65.79 147 *e*LR LR 17 32 50.0
comp=Z,901nm,27.9s
FINES FINESS Array B 66.19 352 P **P 17 13 03.1 -0.9**
comp=Z,7.5nm,0.6s,mb4.9,baz=18,slow=7.9,SNR=36
FINES LR LR 17 46 06.7
comp=Z,835nm,20.4s,MS4.9,baz=351,slow=40
NOA NORSAR Array B 67.32 359 P **P 17 13 10.6 -0.6**
comp=Z,5.1nm,0.6s,mb4.7,baz=0.6,slow=6.3,SNR=24
BER Bergen 67.92 3 *e* **P 17 13 13.3 -1.6**
BER Bergen 67.92 3 *e*P **P 17 13 13.3 -1.6**
BER Bergen 67.92 3 *e*P **P 17 13 13.3 -1.6**
KONO Kongsberg 68.72 0 *e*P **P 17 13 19.9 -0.1**
KONO Kongsberg 68.72 0 *e* **P 17 13 19.9 -0.1**
KMI Kunming 69.02 284 P **P 17 13 23.0 +0.6**
KMI pP pP 17 13 37.5 +2.5
KMI PcP PcP 17 13 46.8 +0.4
KMI PP PP 17 15 58.0 +3.1
KMI ScP 17 17 44.8
KMI PcS 17 17 50.5
KMI S S 17 22 23.3 -0.8
KMI SKS 17 23 14.0
KMI ScS ScS 17 23 15.3 -4.2
KMI SS SS 17 26 51.3 +1.4
KMI pmax pmax
comp=Z,30nm,1.4s,mb5.0
KMI pmax pmax
comp=Z,220nm,5.5s
KMI LR LR
comp=N,530nm,13.6s,MS5.0
KMI LR LR
comp=E,460nm,17.0s,MS5.0
KMI LR LR
comp=Z,610nm,14.7s,MS5.0
VSU Vasula 69.07 351 *e*P **P 17 13 21.8 -0.4**
VSU pmax pmax
comp=Z,35nm,1.2s,mb5.2
QIZ Qiongzhong 69.26 275 P **P 17 13 24.3 +0.3**
QIZ S S 17 22 25.0 -2.1
QIZ pmax pmax
comp=Z,11nm,1.6s,mb4.5
QIZ pmax pmax
comp=Z,110nm,3.7s
QIZ LR LR
comp=N,440nm,16.4s
QIZ LR LR
comp=Z,400nm,16.0s,MS4.8
TKM2 Tokmak 2 69.81 315 *e*P **P 17 13 26.4 -0.6**
TKM2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
TKM2 Tokmak 2 69.81 315 *e*P **P 17 13 26.4 -0.6**
comp=Z,9.7nm,0.6s,mb4.9
MOS Moscow 70.24 344 *e*P **P 17 13 27.7 -1.7**
MOS *e* 17 13 44.4
AAK Ala-Archa 70.52 315 LR LR 17 47 12.1
comp=Z,2µm,19.0s,MS5.3,baz=18,slow=38
EKS2 Erkin-Say 70.81 316 *e*P **P 17 13 32.1 -1.1**
comp=Z,10.0nm,0.5s,mb5.0
OBN Obninsk 71.02 344⇑ *i*P **P 17 13 34.6 +0.4**
OBN *i* pP 17 13 45.3 -1.5
OBN *e* 17 16 10.5
OBN *e*S S 17 22 53.5 +6.9
OBN *e*SS SS 17 27 24.7 +5.8
OBN pmax pmax
comp=Z,50nm,1.2s,mb5.3
OBN Obninsk 71.02 344 *e*P **P 17 13 32.9 -1.2**
comp=Z,17nm,0.6s,mb5.2
PPT Papeete 71.50 160 *e*LR LR 17 34 50.3
comp=Z,2µm,33.8s
PPT Papeete 71.50 160 LR LR 17 43 13.3
comp=Z,489nm,18.2s,MS4.8,baz=324,slow=34
IZAR Zarasai 71.79 350 *e*P **P 17 13 38.4 -0.5**
MUD Monsted U'grnd 71.92 1 *i*P **P 17 13 40.4 +0.8**
MUD *i* 17 13 43.7
MUD
comp=Z,580nm,19.0s
ISAL Salakas 71.98 350 *e*P **P 17 13 40.1 +0.1**
ISAL AMB AMB 17 13 43.1
comp=Z,8.7nm,1.3s,mb4.5
IDID Didziasalis 72.17 350 *e*P **P 17 13 40.9 -0.2**
IDID AMB AMB 17 13 44.1
comp=Z,9.6nm,1.3s,mb4.6
IIGN Ignalina 72.19 350 *e*P **P 17 13 40.6 -0.6**
LSA Lhasa 72.30 296 P **P 17 13 41.8 -0.5**
KSH Kashi 72.37 312 P **P 17 13 46.0 +3.4**
KSH pP pP 17 13 59.0 +3.8
KSH PcP PcP 17 14 04.0 +3.7
KSH PP PP 17 16 29.3 +6.1
KSH S S 17 23 03.0 +0.3
KSH sS sS 17 23 27.0 +3.2
KSH SKS 17 23 42.0
KSH ScS ScS 17 23 45.3 -0.3
KSH SS SS 17 27 46.0 +5.5
KSH pmax pmax
comp=Z,16nm,0.7s,mb5.1
KSH pmax pmax
comp=Z,200nm,7.1s
KSH LR LR
comp=N,110nm,5.0s
KSH LR LR
comp=E,86nm,5.2s
KSH LR LR
comp=Z,98nm,4.6s
NACGM Naroch 72.57 350 *e* **P 17 13 40.0 -3.5**
COP Copenhagen 72.67 359 *i*P **P 17 13 47.9 +3.8**
COP
comp=Z,20nm,0.9s,mb5.1
COP
comp=Z,190nm,20.0s
MICGM Minsk 72.84 349⇓ *e*P **P 17 13 43.0 -2.1**
MNK Minsk 72.85 349⇓ *e*P **P 17 13 43.0 -2.2**
MNK pmax pmax
comp=Z,80nm,1.0s,mb5.6
BSD Bornholm Skovb 73.19 357 *i*P **P 17 13 46.4 -0.8**
comp=Z,2µm,1.8s
BSD
comp=Z,680nm,18.0s
SUW Suwalki 73.80 352 *e*P **P 17 13 49.6 -1.2**
SUW pmax pmax
comp=Z,75nm,1.0s,mb5.6
SUW Suwalki 73.80 352 *e*P **P 17 13 49.6 -1.2**
comp=Z,75nm,1.0s,mb5.6
VSR Storozhevoye 74.27 341 *e*P **P 17 13 52.5 -1.0**
VSR *e**SP sP 17 14 06.3 -4.8
VSR pmax pmax
comp=Z,20nm,0.5s,mb5.3
VSR pmax pmax
comp=N,2.0nm,0.3s
VSR pmax pmax
comp=E,2.0nm,0.4s
VSR MLR MLR
comp=Z,490nm,23.0s,MS4.7
VSR MLR MLR
comp=N,570nm,16.0s
VSR MLR MLR
comp=E,390nm,14.0s
BSEG Bad Segeberg 74.44 360 *e*P **P 17 13 54.6 +0.1**
comp=Z,18nm,1.3s,mb4.8
SHL Shillong 75.06 292 *ex* x 17 14 00.0
NRDL Niedersach Rie 75.89 360 *e*P **P 17 14 02.7 -0.2**
comp=Z,11nm,1.1s,mb4.7
TAPN Taplejung 76.02 296 *e*P **P 17 14 03.7 -0.4**
comp=Z,53nm,0.8s,mb5.5
IBBN Ibbenburen 76.06 1 *e*P **P 17 14 03.9 +0.1**
comp=Z,65nm,1.7s,mb5.3
CHTO Chiang Mai 76.08 283 *e*P **P 17 14 04.1 -0.4**
CHTO pmax pmax
comp=Z,27nm,1.3s,mb5.0
CHTO Chiang Mai 76.08 283 *e*P **P 17 14 04.1 -0.4**
comp=Z,28nm,1.3s,mb5.0
CM31 Chiang Mai Arr 76.36 282 *e*P **P 17 14 05.0 -1.1**
comp=Z,6.6nm,0.5s,mb4.8
CMAR Chiang Mai Arr 76.36 282 P **P 17 14 05.9 -0.1**
comp=Z,11nm,0.8s,mb4.9,baz=22,slow=6.3,SNR=27
CMAR LR LR 17 52 51.4
comp=Z,599nm,18.4s,MS4.9,baz=269,slow=40
AKASG Malin Array Be 76.40 348 P **P 17 14 04.4 -1.4**
comp=Z,8.8nm,0.5s,mb5.0,baz=15,slow=5.9,SNR=37
AKBB Malin Array Si 76.40 348 *e*P **P 17 14 04.2 -1.6**
KIEV Kiev 76.41 348 *e*P **P 17 14 04.1 -1.8**
KIEV pmax pmax
comp=Z,11nm,0.6s,mb5.0
KIEV Kiev 76.41 348 *e*P **P 17 14 04.1 -1.8**
comp=Z,11nm,0.6s,mb5.0
CLZ Clausthal 76.54 360 *e*P **P 17 14 06.9 +0.3**
comp=Z,10.0nm,0.8s,mb4.8
ODAN Odare 76.58 296 *e*P **P 17 14 06.9 -0.3**
comp=Z,91nm,1.4s,mb5.5
GUN Gumba 76.59 298 *e*P **P 17 14 07.6 +0.3**
comp=Z,44nm,0.4s,mb5.7
JIRN Jiri 76.62 298 *e*P **P 17 14 07.4 0.0**
BUG Bochum--Univer 76.92 2 *e*P **P 17 14 08.4 -0.3**
comp=Z,13nm,0.7s,mb5.0
RAMN Ramite 76.95 297 *e*P **P 17 14 07.3 -2.0**
comp=Z,68nm,0.6s,mb5.8
KKN Kakani 77.01 298 *e*P **P 17 14 09.0 -0.6**
comp=Z,32nm,0.6s,mb5.5
CLL Collm 77.05 358 *e*P **P 17 14 09.0 -0.4**
comp=Z,7.0nm,0.6s,mb4.8
CLL Collm 77.05 358 *e*P **P 17 14 09.0 -0.4**
CLL *i* pP 17 14 19.7 -2.5
CLL *i* pP 17 14 23.1 +0.9
CLL *e*S S 17 23 56.0 +1.5
CLL pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
CLL MLR MLR
comp=Z,500nm,17.8s,MS4.9
CLL Collm 77.05 358 *e*P **P 17 14 09.0 -0.4**
comp=Z,7.0nm,0.6s,mb4.8
CLL *i* sP sP 17 14 19.7 -7.3
CLL *i* PcP PcP 17 14 23.1 +2.9
CLL *i* 17 14 26.8
CLL *e*S S 17 23 56.0 +1.5
CLL *e*PS 17 24 39.0
CLL *e* 17 25 23.0
CLL *e*SS SS 17 28 58.0 +7.3
CLL *e*SSS 17 32 42.0
CLL *e* 17 34 54.0
PKI Pulchoki 77.11 298 *e*P **P 17 14 09.2 -1.0**
comp=Z,129nm,1.3s,mb5.7
PKIN Phulchoki 77.12 298 *e*P **P 17 14 09.6 -0.6**
comp=Z,82nm,1.3s,mb5.5
DMN Daman 77.25 298 *e*P **P 17 14 10.5 -0.5**
comp=Z,58nm,1.1s,mb5.4
KSP Ksiaz 77.41 356 *e*P **P 17 14 11.6 +0.1**
KSP Ksiaz 77.41 356 *e*P **P 17 14 11.2 -0.3**
KSP *e**PP pP 17 14 23.4 -0.8
KSP *e* 17 17 01.5
KSP *e* 17 24 13.0
KSP MLR MLR
comp=Z,2µm,19.2s,MS5.4
BRG Berggiesshubel 77.46 357 *e*P **P 17 14 11.6 -0.2**
comp=Z,26nm,1.5s,mb4.9
BRG Berggiesshubel 77.46 357 *i*P **P 17 14 12.5 +0.7**
comp=Z,26nm,1.5s,mb4.9
BRG *i* pP 17 14 25.4 +0.9
comp=Z,9.2nm,1.0s
BRG S S 17 24 04.0 +5.0
BRG
comp=N,287nm,16.9s
BRG
comp=E,331nm,22.3s
BRG
comp=Z,488nm,19.2s
UCC Uccle 77.47 4 P **P 17 14 11.4 -0.5**
HGN Heimansgroeve 77.56 3 *e*P **P 17 14 13.4 +1.0**
comp=Z,16nm,1.1s,mb4.9
UBBA Unterbreizbach 77.57 0 *e*P **P 17 14 12.1 -0.3**
comp=Z,21nm,1.6s,mb4.8
KLP Kalpa 77.71 306 *e*PKP **P 17 14 14.0 +0.5**
KLP AMb AMB 17 14 16.8
comp=Z,47nm,1.3s,mb5.2
MOX Moxa 77.73 359 *e*P **P 17 14 13.3 0.0**
comp=Z,15nm,1.0s,mb4.9
MOX *e* pP 17 14 23.5 -2.5
MOX *e*S S 17 24 05.0 +3.1
MOX
comp=Z,400nm,20.0s
UPC Upice 77.75 356 *e*P **P 17 14 14.2 +0.8**
UPC *e**PP pP 17 14 26.2 +0.1
UPC Upice 77.75 356 *e*P **P 17 14 14.2 +0.8**
UPC *e*sP sP 17 14 26.2 -4.8
SNF Seneffe 77.76 4 P **P 17 14 13.6 +0.2**
PVCC Panska Ves 77.79 357 *e*P **P 17 14 15.3 +1.7**
PVCC *e**PP pP 17 14 28.4 +2.1
PVCC MLR MLR
comp=Z,700nm,20.9s,MS5.0
PVCC Panska Ves 77.79 357 *e*P **P 17 14 15.3 +1.7**
PVCC *e*sP sP 17 14 28.4 -2.8
PVCC AMS AMS 17 51 50.0
comp=Z,700nm,20.9s
OJC Ojcow 77.83 354 *e*P **P 17 14 11.9 -1.9**
OJC *e*pP pP 17 14 21.4 -5.2
OJC *e*sP sP 17 14 25.5 -6.0
OJC *e*S S 17 24 01.4 -1.6
OJC L 17 51 19.1
comp=Z,1.2nm,19.9s
LVV L'vov 77.87 351 *e*P **P 17 14 13.9 -0.2**
LVV *e* pP 17 14 27.3 +0.5
BCLA Clavier 77.89 3 P **P 17 14 14.9 +0.8**
comp=Z,14nm,1.8s,mb4.6
DPC Dobruska-Polom 77.90 356 *e*P **P 17 14 14.8 +0.6**
DPC *e**PP pP 17 14 27.6 +0.6
DPC *e*S SKSac 17 24 20.4 -3.9
DPC MLR MLR
comp=Z,500nm,18.0s,MS4.9
DPC Dobruska-Polom 77.90 356 *e*P **P 17 14 14.8 +0.6**
DPC *e*sP sP 17 14 27.6 -4.2
DPC *e*SKS SKSac 17 24 20.4 -3.9
DPC *ex* x 17 29 37.7
DPC *ex* x 17 33 35.3
DPC AMS AMS 17 50 30.0
comp=Z,500nm,18.0s
TANN Tannenbergstha 77.95 358 *e*P **P 17 14 14.6 +0.1**
comp=Z,14nm,1.5s,mb4.7
NKC Novy Kostel 78.13 358 *e*P **P 17 14 16.5 +1.0**
NKC *e**PP pP 17 14 28.4 +0.1
NKC *e*S SKSac 17 24 25.7 -0.3
NKC MLR MLR
comp=Z,500nm,19.1s,MS4.9
NKC Novy Kostel 78.13 358 *e*P **P 17 14 16.5 +1.0**
NKC *e*sP sP 17 14 28.4 -4.7
NKC *e*SKS SKSac 17 24 25.7 -0.3
NKC *ex* x 17 33 46.0
NKC AMS AMS 17 54 20.0
comp=Z,500nm,19.1s
TNS Taunus Mts 78.16 1 *e*P **P 17 14 15.7 +0.1**
comp=Z,29nm,1.5s,mb5.0
DOU Dourbes 78.19 4 P **P 17 14 16.0 +0.2**
comp=Z,9.2nm,1.3s,mb4.5
GIVF Givet 78.19 3 *e*P **P 17 14 15.9 +0.1**
BAIF Baives 78.21 4 *e*P **P 17 14 15.7 -0.2**
comp=Z,11nm,0.7s,mb4.6
BAIF Baives 78.21 4 *e*P **P 17 14 15.7 -0.2**
BAIF pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
BAIF Baives 78.21 4 *e*P **P 17 14 15.7 -0.2**
comp=Z,5.6nm,0.7s,mb4.6
OKC Ostrava-Krasne 78.32 355 *e*P **P 17 14 17.4 +0.9**
OKC *e**PP pP 17 14 29.5 +0.2
OKC *e*S S 17 24 22.0 +14
OKC MLR MLR
comp=Z,600nm,20.7s,MS4.9
OKC Ostrava-Krasne 78.32 355 *e*P **P 17 14 17.4 +0.9**
OKC *e*sP sP 17 14 29.5 -4.7
OKC *e*XS sS 17 24 22.0 -7.5
OKC *ex* x 17 33 48.4
OKC AMS AMS 17 51 00.0
comp=Z,600nm,20.7s
PRU Pruhonice 78.33 357 *e*P **P 17 14 17.9 +1.3**
PRU *e**PP pP 17 14 30.0 +0.7
PRU *e*S SKSac 17 24 26.0 -1.4
PRU MLR MLR
comp=Z,800nm,19.6s,MS5.0
PRU Pruhonice 78.33 357 *e*P **P 17 14 17.9 +1.3**
PRU *e*sP sP 17 14 30.0 -4.2
PRU *e*SKS SKSac 17 24 26.0 -1.4
PRU *ex* x 17 29 48.9
PRU *ex* x 17 33 51.1
PRU AMS AMS 17 53 30.0
comp=Z,800nm,19.6s
MORC Moravsky Berou 78.41 355⇓ *e*P **P 17 14 16.7 -0.4**
MORC Moravsky Berou 78.41 355 *e*P **P 17 14 15.9 -1.1**
comp=Z,8.7nm,0.9s,mb4.7
MORC Moravsky Berou 78.41 355⇓ *i*P **P 17 14 16.7 -0.4**
STHS Stebnicka Huta 78.52 353 *e*P **P 17 14 18.7 +1.0**
STHS pmax pmax
comp=Z,12nm,1.3s,mb4.7
STHS Stebnicka Huta 78.52 353 *e*P **P 17 14 18.7 +1.0**
comp=Z,12nm,1.3s,mb4.7
STHS Stebnicka Huta 78.52 353 *e*P **P 17 14 18.7 +1.0**
WLF Walferdange 78.67 3 P **P 17 14 21.4 +2.9**
comp=Z,9.1nm,1.5s,mb4.5
WLF Walferdange 78.67 3 *e*P **P 17 14 18.9 +0.4**
comp=Z,11nm,0.9s,mb4.8
GRF Grafenberg Arr 78.69 359 *e*P **P 17 14 19.1 +0.5**
comp=Z,39nm,1.3s,mb5.2
GRF *ep*P pP 17 14 32.7 +1.3
GRF *e*L 17 50 12.8
comp=Z,564nm,18.8s
GRF Grafenberg Arr 78.69 359 *e*P **P 17 14 19.1 +0.5**
GRF *e**PP pP 17 14 32.7 +1.3
GRF pmax pmax
comp=Z,39nm,1.3s,mb5.2
GRF MLR MLR
comp=Z,600nm,18.8s,MS5.0
DDI Dehra Dun 78.79 305 *ex* x 17 14 18.5
VRAC Vranov 78.93 356 P **P 17 14 20.8 +0.9**
VRAC Vranov 78.93 356⇓ *i*P **P 17 14 20.2 +0.3**
TREC Trest 78.99 356 *e*P **P 17 14 20.5 +0.3**
TREC *e**PP pP 17 14 34.1 +1.1
TREC *e*S S 17 24 28.3 +13
TREC MLR MLR
comp=Z,600nm,19.4s,MS4.9
TREC Trest 78.99 356 *e*P **P 17 14 20.5 +0.3**
TREC *e*sP sP 17 14 34.1 -3.8
TREC *e*SKS 17 24 28.3
TREC AMS AMS 17 53 20.0
comp=Z,600nm,19.4s
CRVS Cervenica-Dubn 79.02 352 *e*P **P 17 14 21.3 +0.9**
CRVS pmax pmax
comp=Z,9.0nm,1.4s,mb4.5
CRVS Cervenica-Dubn 79.02 352 *e*P **P 17 14 21.3 +0.9**
comp=Z,8.6nm,1.4s,mb4.5
CRVS Cervenica-Dubn 79.02 352 *e*P **P 17 14 21.3 +0.9**
KHC Kasperske Hory 79.21 358 *e*P **P 17 14 22.2 +0.7**
KHC *e**PP pP 17 14 34.8 +0.6
KHC *e*S SKSac 17 24 39.3 +5.6
KHC MLR MLR
comp=Z,600nm,18.6s,MS5.0
KHC Kasperske Hory 79.21 358 *e*P **P 17 14 21.7 +0.2**
comp=Z,20nm,1.0s,mb5.0
KHC Kasperske Hory 79.21 358 *e*P **P 17 14 22.2 +0.7**
KHC *e*sP sP 17 14 34.8 -4.3
KHC *e*SKS SKSac 17 24 39.3 +5.6
KHC *ex* x 17 29 56.0
KHC *ex* x 17 33 51.8
KHC AMS AMS 17 55 10.0
comp=Z,600nm,18.6s
UZH Uzhgorod 79.21 352 *e*P **P 17 14 21.8 +0.3**
UZH *e* pP 17 14 36.0 +1.7
UZH *e* 17 17 15.8
UZH *e*S S 17 24 17.0 -0.9
UZH *e*SP 17 25 03.0
WET Wettzell 79.22 358 *e*P **P 17 14 21.9 +0.4**
comp=Z,21nm,1.5s,mb4.8
FLN La Foliniere 79.22 7 *e*P **P 17 14 21.7 +0.2**
comp=Z,14nm,0.6s,mb4.8
FLN *e*MLR MLR
comp=Z,714nm,19.0s,MS4.7
FLN La Foliniere 79.22 7 *e*P **P 17 14 21.7 +0.2**
FLN pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
FLN MLR MLR
comp=Z,710nm,19.0s,MS5.0
FLN La Foliniere 79.22 7 *e*P **P 17 14 21.7 +0.2**
comp=Z,7.1nm,0.6s,mb4.8
FLN LR LR
comp=Z,710nm,19.0s,MS5.0
LANF Langenberg 79.39 2 *e*P **P 17 14 23.4 +1.0**
ROSF Rostrenen 79.41 9 *e*P **P 17 14 22.5 0.0**
comp=Z,17nm,0.7s,mb4.8
ROSF Rostrenen 79.41 9 *e*P **P 17 14 22.5 0.0**
ROSF pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
ROSF Rostrenen 79.41 9 *e*P **P 17 14 22.5 0.0**
comp=Z,8.4nm,0.7s,mb4.8
LDF La Druitiere 79.42 7 *e*P **P 17 14 22.2 -0.4**
comp=Z,19nm,0.5s,mb5.0
LDF La Druitiere 79.42 7 *e*P **P 17 14 22.2 -0.4**
LDF pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
LDF La Druitiere 79.42 7 *e*P **P 17 14 22.2 -0.4**
comp=Z,9.6nm,0.5s,mb5.0
GEC2 GERESS Array S 79.50 358 *e*P **P 17 14 23.2 +0.2**
comp=Z,19nm,1.4s,mb4.8
KECS Kecovo 79.51 353 *e*P **P 17 14 23.4 +0.3**
KECS pmax pmax

comp=Z,5.0nm,0.9s,mb4.4
KECS Kecovo 79.51 353 *e*P **P 17 14 23.4 +0.3**
comp=Z,4.6nm,0.9s,mb4.4
KECS Kecovo 79.51 353 *e*P **P 17 14 23.4 +0.3**
SGMF Saint Gilles 79.55 9 *e*P **P 17 14 23.3 0.0**
comp=Z,13nm,0.5s,mb4.8
SGMF Saint Gilles 79.55 9 *e*P **P 17 14 23.3 0.0**
SGMF pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
SGMF Saint Gilles 79.55 9 *e*P **P 17 14 23.3 0.0**
comp=Z,6.4nm,0.5s,mb4.8
GRR Gorron 79.57 7 *e*P **P 17 14 23.3 -0.1**
comp=Z,20nm,0.7s,mb4.8
GRR Gorron 79.57 7 *e*P **P 17 14 23.3 -0.1**
GRR pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
GRR Gorron 79.57 7 *e*P **P 17 14 23.3 -0.1**
comp=Z,9.9nm,0.7s,mb4.8
KBL Kabul 79.60 314 *e*P **P 17 14 23.6 -0.2**
KBL pmax pmax
comp=Z,15nm,1.0s,mb4.9
KBL Kabul 79.60 314 *e*P **P 17 14 23.6 -0.3**
comp=Z,15nm,1.0s,mb4.9
STU Stuttgart 79.61 1 *e*P **P 17 14 23.7 0.0**
comp=Z,11nm,0.6s,mb5.0
VYHS Vyhne 79.61 354 *e*P **P 17 14 24.5 +0.8**
VYHS pmax pmax
comp=Z,21nm,1.9s,mb4.7
VYHS Vyhne 79.61 354 *e*P **P 17 14 24.5 +0.8**
comp=Z,21nm,1.9s,mb4.8
VYHS Vyhne 79.61 354 *e*P **P 17 14 24.5 +0.8**
TRPA Tarpa 79.69 352⇑*i*P **P 17 14 24.9 +0.8**
MEZF Maizieres J'vi 79.80 3 *e*P **P 17 14 24.9 +0.3**
QUIF Quistinic 79.83 9 *e*P **P 17 14 25.0 +0.1**
BURAR Bucovina Array 79.93 350⇑P **P 17 14 24.1 -1.3**
BURAR Bucovina Array 79.93 350⇑*i*P **P 17 14 24.1 -1.3**
CDF Champ du Feu 79.95 2 *e*P **P 17 14 25.9 +0.4**
comp=Z,12nm,0.7s,mb4.7
CDF Champ du Feu 79.95 2 *e*P **P 17 14 25.9 +0.4**
CDF pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
CDF Champ du Feu 79.95 2 *e*P **P 17 14 25.9 +0.4**
comp=Z,6.3nm,0.7s,mb4.7
ZST Bratislava 80.01 355 *e*P **P 17 14 28.3 +2.5**
ZST pmax pmax
comp=Z,14nm,1.1s,mb4.8
ZST Bratislava 80.01 355 *e*P **P 17 14 28.3 +2.5**
comp=Z,14nm,1.1s,mb4.8
ZST Bratislava 80.01 355 *e*P **P 17 14 28.3 +2.5**
MAK Makhachkala 80.02 333 *e*P **P 17 14 25.8 -0.2**
MAK *e* pP 17 14 35.8 -3.0
MAK *i* 17 17 29.0
MAK pmax pmax
comp=Z,180nm,1.8s,mb5.7
MAK MLR MLR
comp=Z,1μm,19.0s,MS5.2
BFO Black Forest 80.05 1 *e*P **P 17 14 26.1 +0.1**
comp=Z,16nm,1.2s,mb4.8
BFO Black Forest 80.05 1 *e*P **P 17 14 26.2 +0.2**
BFO pmax pmax
comp=Z,12nm,1.0s,mb4.8
BFO Black Forest 80.05 1 *e*P **P 17 14 26.2 +0.1**
comp=Z,12nm,1.0s,mb4.8
KIS Kishinev 80.09 347 *e*P **P 17 14 24.0 -2.2**
KIS *e* 17 17 30.0
KIS *e*S S 17 24 40.0 +13
PSZ Piszkesteto 80.11 353 *e*P **P 17 14 26.8 +0.4**
PSZ pmax pmax
comp=Z,16nm,1.0s,mb4.9
PSZ Piszkesteto 80.11 353 *e*P **P 17 14 26.8 +0.5**
comp=Z,16nm,1.0s,mb4.9
PSZ Piszkesteto 80.11 353 *e*P **P 17 14 28.1 +1.7**
PSZ Piszkesteto 80.11 353⇓*i*P **P 17 14 29.0 +2.6**
ECH Echery 80.14 2 *e*P **P 17 14 27.0 +0.5**
FUR Furstenfeldbru 80.22 359 *e*P **P 17 14 27.4 +0.5**
comp=Z,13nm,0.7s,mb5.0
SPAK Spaichingen-Ko 80.28 1 *e*P **P 17 14 28.7 +1.4**
HAU Haudompre 80.33 3 *e*P **P 17 14 27.9 +0.3**
comp=Z,13nm,0.7s,mb4.7
HAU *e*MLR MLR
comp=Z,896nm,19.0s,MS4.8
HAU Haudompre 80.33 3 *e*P **P 17 14 27.9 +0.3**
HAU pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
HAU MLR MLR
comp=Z,900nm,19.0s,MS5.1
HAU Haudompre 80.33 3 *e*P **P 17 14 27.9 +0.3**
comp=Z,6.4nm,0.7s,mb4.7
HAU LR LR
comp=Z,900nm,19.0s,MS5.1
CONA Conrad Observa 80.34 356⇑*i*P **P 17 14 28.4 +0.8**
comp=Z,26nm,1.3s,mb5.0
KIV Kislovodsk 80.36 337 *e*P **P 17 14 28.2 +0.4**
KIV *e*S S 17 24 30.0 -0.1
KIV pmax pmax
comp=Z,15nm,0.9s,mb4.9
KIV Kislovodsk 80.36 337 *e*P **P 17 14 28.8 +1.0**
comp=Z,27nm,0.9s,mb5.2
MOA Molln 80.47 357⇑*i*P **P 17 14 28.5 +0.1**
comp=Z,8.7nm,1.4s,mb4.5
FELD Feldberg im Sc 80.50 1 *e*P **P 17 14 28.7 +0.3**
MOF Molkenrain 80.51 2 *e*P **P 17 14 29.5 +1.0**
BISR Bishrakh 80.52 305 *e*x x 17 14 23.3
HINF Hinteralfeld 80.53 2 *e*P **P 17 14 28.8 +0.2**
comp=Z,18nm,0.6s,mb4.9
HINF Hinteralfeld 80.53 2 *e*P **P 17 14 28.8 +0.2**
HINF pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
HINF Hinteralfeld 80.53 2 *e*P **P 17 14 28.8 +0.2**
comp=Z,9.1nm,0.6s,mb4.9
RJOB Jochberg 80.62 358 *e*P **P 17 14 29.4 +0.3**
comp=Z,8.0nm,1.0s,mb4.6
RKT Rikitea 80.81 148 *e*LR LR 17 39 27.8
comp=Z,776nm,33.8s,baz=337
RETA Reutte 80.90 360⇑*i*P **P 17 14 31.0 +0.4**
comp=Z,8.7nm,0.6s,mb4.8
BBS Basel-Blauen 80.90 2 *e*P **P 17 14 31.4 +0.8**
SONA Sohna 80.96 305 *e*PKP **P 17 14 31.2 0.0**
SONA AMb AMB 17 14 32.9
comp=Z,22nm,1.1s,mb5.0
LOR Lormes 80.98 4 *e*P **P 17 14 31.9 +0.9**
comp=Z,25nm,0.7s,mb5.0
LOR *e*MLR MLR
comp=Z,735nm,19.0s,MS4.8
LOR Lormes 80.98 4 *e*P **P 17 14 31.9 +0.9**
LOR pmax pmax
comp=Z,12nm,0.7s,mb4.9
LOR MLR MLR
comp=Z,730nm,19.0s,MS5.0
LOR Lormes 80.98 4 *e*P **P 17 14 31.9 +0.9**
comp=Z,12nm,0.7s,mb5.0
LOR LR LR
comp=Z,730nm,19.0s,MS5.0
DRGR 81.00 351⇓P **P 17 14 32.1 +1.0**
DRGR 81.00 351⇓*i*P **P 17 14 32.1 +1.0**
LOMF Lomont 81.00 2 *e*P **P 17 14 32.4 +1.3**
ARSA Arzberg 81.03 356⇑*i*P **P 17 14 32.1 +0.8**
comp=Z,21nm,1.6s,mb4.8
MOTA Moosalm 81.04 359⇑*i*P **P 17 14 32.0 +0.6**
comp=Z,11nm,0.6s,mb5.0
WATA Walderalm 81.05 359⇓*i*P **P 17 14 32.7 +1.3**
comp=Z,6.2nm,0.6s,mb4.7
WTTA Wattenberg 81.12 359⇓*i*P **P 17 14 32.6 +0.8**
comp=Z,23nm,0.6s,mb5.3
SSF Saint Saulge 81.17 5 *e*P **P 17 14 32.4 +0.4**
comp=Z,29nm,0.5s,mb5.2
SSF Saint Saulge 81.17 5 *e*P **P 17 14 32.4 +0.4**
SSF pmax pmax
comp=Z,15nm,0.5s,mb5.2
SSF Saint Saulge 81.17 5 *e*P **P 17 14 32.4 +0.4**
comp=Z,14nm,0.5s,mb5.2
ZEI Tsey 81.17 335 *e*P **P 17 14 30.2 -1.9**
ZEI pmax pmax
comp=Z,15nm,0.5s,mb5.2
SIM Simferopol' 81.23 343 P **P 17 14 33.3 +0.9**
SIM pmax pmax
comp=Z,30nm,1.0s,mb5.2
SIM MLR MLR
comp=Z,840nm,15.4s,MS5.2
KBA Koelnbreinsper 81.27 358⇑*i*P **P 17 14 33.8 +1.2**
comp=Z,46nm,1.1s,mb5.3
AGRA Agra 81.35 303 *e*PKP **P 17 14 33.7 +0.4**
FETA Feichten 81.37 360⇑*i*P **P 17 14 34.0 +1.0**
comp=Z,19nm,0.9s,mb5.0
MFF Saint Martin d 81.40 7 *e*P **P 17 14 33.6 +0.3**
comp=Z,25nm,0.6s,mb5.0
MFF Saint Martin d 81.40 7 *e*P **P 17 14 33.6 +0.3**
MFF pmax pmax
comp=Z,13nm,0.6s,mb5.0
MFF Saint Martin d 81.40 7 *e*P **P 17 14 33.6 +0.3**
comp=Z,12nm,0.6s,mb5.0
SOC Sochi 81.41 339 *e*P **P 17 14 31.9 -1.5**
SOC *e*S S 17 24 37.4 -3.6
SOC pmax pmax
comp=Z,12nm,0.5s,mb5.1
AVF Avril sur Loir 81.43 5 *e*P **P 17 14 33.6 +0.2**
comp=Z,19nm,0.6s,mb4.9
AVF Avril sur Loir 81.43 5 *e*P **P 17 14 33.6 +0.2**
AVF pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
AVF Avril sur Loir 81.43 5 *e*P **P 17 14 33.6 +0.2**
comp=Z,9.3nm,0.6s,mb4.9
VRI Vrincioaia 81.47 348⇑P **P 17 14 34.8 +1.1**
VRI Vrincioaia 81.47 348⇑*i*P **P 17 14 34.8 +1.1**
SMF Signal de Mont 81.60 4 *e*P **P 17 14 34.6 +0.3**
comp=Z,24nm,0.5s,mb5.1
SMF Signal de Mont 81.60 4 *e*P **P 17 14 34.6 +0.3**
SMF pmax pmax
comp=Z,12nm,0.5s,mb5.1
SMF Signal de Mont 81.60 4 *e*P **P 17 14 34.6 +0.3**
comp=Z,12nm,0.5s,mb5.1
SOKA Soboth 81.62 357⇑*i*P **P 17 14 35.1 +0.7**
comp=Z,26nm,1.1s,mb5.1
ABTA Abfaltersbach 81.62 358⇑*i*P **P 17 14 34.7 +0.3**
comp=Z,12nm,0.6s,mb5.0
BGF Bois d'Agland 81.64 5 *e*P **P 17 14 34.7 +0.2**
comp=Z,26nm,0.8s,mb4.9
BGF Bois d'Agland 81.64 5 *e*P **P 17 14 34.7 +0.2**
BGF pmax pmax
comp=Z,14nm,0.8s,mb4.9
BGF Bois d'Agland 81.64 5 *e*P **P 17 14 34.7 +0.2**
comp=Z,14nm,0.8s,mb4.9
PERS Pernice 81.66 356 *e*P **P 17 14 35.0 +0.4**
CABF La Chapelle 81.72 3 *e*P **P 17 14 35.8 +0.8**
comp=Z,26nm,0.6s,mb5.0
CABF La Chapelle 81.72 3 *e*P **P 17 14 35.8 +0.8**
CABF pmax pmax
comp=Z,13nm,0.6s,mb5.0
CABF La Chapelle 81.72 3 *e*P **P 17 14 35.8 +0.8**
comp=Z,13nm,0.6s,mb5.0
KHET Khetri 81.75 306 *e*PKP **P 17 14 36.4 +0.9**
KOGS Kog 81.80 356 *e*P **P 17 14 35.7 +0.4**
OBKA Obir 81.81 357⇑*i*P **P 17 14 35.7 +0.3**
comp=Z,13nm,0.8s,mb4.9
TLCR 81.86 347⇑P **P 17 14 35.8 +0.1**
TLCR 81.86 347⇑*i*P **P 17 14 35.8 +0.1**
TCF Toulx Ste Croi 81.87 5 *e*P **P 17 14 35.8 0.0**
comp=Z,8.4nm,0.6s,mb4.5
TCF Toulx Ste Croi 81.87 5 *e*P **P 17 14 35.8 0.0**
TCF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
TCF Toulx Ste Croi 81.87 5 *e*P **P 17 14 35.8 0.0**
comp=Z,4.2nm,0.6s,mb4.5
TUE Stuetta 81.92 0 *e*P **P 17 14 34.9 -1.1**
comp=Z,20nm,0.9s,mb5.0
MLR Muntele Rosu 81.94 349⇑P **P 17 14 37.4 +1.3**
MLR Muntele Rosu 81.94 349 P **P 17 14 38.7 +2.5**
MLR Muntele Rosu 81.94 349⇑*i*P **P 17 14 37.4 +1.3**
CFR Carcaliu 81.96 347⇓P **P 17 14 37.8 +1.5**
CFR Carcaliu 81.96 347⇓*i*P **P 17 14 37.8 +1.5**
VOIR 82.10 349⇑P **P 17 14 38.5 +1.5**
VOIR 82.10 349 P **P 17 14 38.7 +1.8**
VOIR 82.10 349⇑*i*P **P 17 14 38.5 +1.5**
CADS Cadrg 82.11 357 *e*P **P 17 14 36.4 -0.6**
BZS Buzias 82.26 352 P **P 17 14 38.3 +0.5**
BZS Buzias 82.26 352⇑*i*P **P 17 14 38.0 +0.2**
LJU Ljubljana 82.27 357 *e*P **P 17 14 39.2 +1.3**
GZR Gura Zlata 82.38 351 P **P 17 14 39.4 +1.0**
GZR Gura Zlata 82.38 351⇑*i*P **P 17 14 38.3 -0.1**
PYM Petit Puy Mans 82.45 5 *e*P **P 17 14 40.2 +1.4**
TIRR Tirgusor 82.63 347⇓P **P 17 14 39.9 +0.1**
TIRR Tirgusor 82.63 347 *e*P **P 17 14 38.5 -1.3**
comp=Z,9.9nm,0.6s,mb5.0
TIRR Tirgusor 82.63 347⇓*i*P **P 17 14 39.9 +0.1**
BOJS Bojanci 82.78 356 *e*P **P 17 14 40.4 -0.2**
RJF Les Rejaudoux 82.81 6 *e*P **P 17 14 40.8 +0.1**
RJF *e*MLR MLR
comp=Z,880nm,18.2s,MS4.9
RJF Les Rejaudoux 82.81 6 *e*P **P 17 14 40.8 +0.1**
RJF LR LR
comp=Z,880nm,18.3s,MS5.2
LPL La Plagne 82.83 2 *e*P **P 17 14 41.2 +0.4**
LPG La Plagne 82.85 2 *e*P **P 17 14 41.4 +0.5**
SSB Saint Sauveur 82.99 4 *e*P **P 17 14 41.7 +0.1**
SSB pmax pmax
comp=Z,13nm,0.9s,mb5.0
SSB Saint Sauveur 82.99 4 *e*P **P 17 14 41.7 0.0**
comp=Z,13nm,0.9s,mb5.0
LFF La Frestale 83.12 7 *e*P **P 17 14 42.7 +0.4**
comp=Z,35nm,0.6s,mb5.3
LFF La Frestale 83.12 7 *e*P **P 17 14 42.7 +0.4**
LFF pmax pmax
comp=Z,17nm,0.6s,mb5.2
LFF La Frestale 83.12 7 *e*P **P 17 14 42.7 +0.4**
comp=Z,17nm,0.6s,mb5.3
CAF Calviac 83.22 6 *e*P **P 17 14 43.5 +0.7**
BNI Bardonecchia 83.29 2 *e*P **P 17 14 44.1 +0.9**
BNI pmax pmax
comp=Z,34nm,1.0s,mb5.3
BNI Bardonecchia 83.29 2 *e*P **P 17 14 44.1 +0.9**
comp=Z,34nm,1.0s,mb5.3
GNI Garni 83.40 334 *ce*P **P 17 14 45.0 +1.2**
GNI pmax pmax
comp=Z,17nm,1.2s
GNI Garni 83.40 334 *e*P **P 17 14 45.6 +1.8**
comp=Z,24nm,1.5s,mb5.0
ORIF Oris-en-Rattie 83.40 3 *e*P **P 17 14 44.9 +1.1**
comp=Z,24nm,0.8s,mb5.0
ORIF *e*MLR MLR
comp=Z,803nm,18.8s,MS4.8
ORIF Oris-en-Rattie 83.40 3 *e*P **P 17 14 44.9 +1.1**
ORIF pmax pmax
comp=Z,12nm,0.8s,mb5.0
ORIF Oris-en-Rattie 83.40 3 *e*P **P 17 14 44.9 +1.1**
comp=Z,12nm,0.8s,mb5.0
VIVF Saint-Julien-l 83.42 4 *e*P **P 17 14 44.1 +0.2**
comp=Z,21nm,0.9s,mb4.9
VIVF Saint-Julien-l 83.42 4 *e*P **P 17 14 44.1 +0.2**
VIVF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
VIVF Saint-Julien-l 83.42 4 *e*P **P 17 14 44.1 +0.2**
comp=Z,10nm,0.9s,mb4.9
MBDF Montbardon 83.62 2 *e*P **P 17 14 46.4 +1.5**
comp=Z,18nm,0.6s,mb5.1
MBDF Montbardon 83.62 2 *e*P **P 17 14 46.4 +1.5**
MBDF pmax pmax
comp=Z,9.0nm,0.6s,mb5.1
MBDF Montbardon 83.62 2 *e*P **P 17 14 46.4 +1.5**
comp=Z,8.9nm,0.6s,mb5.1
AJM Ajmer 83.65 305 *e*PKP **P 17 14 45.2 -0.1**
OG25 Le Caire 83.96 3 *e*P **P 17 14 47.6 +1.0**
STS Santiago 84.14 14 P **P 17 14 47.9 +0.4**
STS pmax pmax
comp=Z,58nm,1.6s,mb5.5
STS Santiago 84.14 14 P **P 17 14 47.9 +0.4**
comp=Z,58nm,1.6s,mb5.5
EARI Arriondas 84.17 11 P **P 17 14 47.2 -0.5**
comp=Z,6.0nm,0.6s,mb4.9
SMRF Simiane la Rot 84.33 3 *e*P **P 17 14 48.9 +0.4**
TOUF Mont Tournerai 84.34 2 *e*P **P 17 14 50.2 +1.6**
AUTN L'Aution 84.37 2 *e*P **P 17 14 50.4 +1.7**
SAOF Saorge 84.38 2 *e*P **P 17 14 50.1 +1.3**
ELAN Lanestosa 84.44 10 P **P 17 14 47.9 -1.2**
comp=Z,25nm,0.9s,mb5.3
MVIF Mont Vial 84.46 2 *e*P **P 17 14 50.4 +1.2**
LUCF Luceram 84.47 2 *e*P **P 17 14 51.7 +2.5**
SBF Sospel 84.50 2 *e*P **P 17 14 49.5 +0.1**
EALK Alkurruntz 84.64 8 P **P 17 14 50.3 +0.2**
comp=Z,9.2nm,0.5s,mb5.2
ELIZ Elizondo 84.69 8 P **P 17 14 51.7 +1.3**
ELIZ pmax pmax
comp=Z,26nm,1.2s,mb5.2
ELIZ Elizondo 84.69 8 P **P 17 14 51.7 +1.3**
comp=Z,26nm,1.2s,mb5.2
SJPF Ste Jean 84.77 8 *e*P **P 17 14 51.2 +0.4**
comp=Z,24nm,0.8s,mb5.1
SJPF Ste Jean 84.77 8 *e*P **P 17 14 51.2 +0.4**
SJPF pmax pmax
comp=Z,12nm,0.8s,mb5.1
SJPF Ste Jean 84.77 8 *e*P **P 17 14 51.2 +0.4**
comp=Z,12nm,0.8s,mb5.1
FRF La Foret Royal 84.78 2 *e*P **P 17 14 51.0 +0.2**
comp=Z,42nm,1.1s,mb5.2
FRF La Foret Royal 84.78 2 *e*P **P 17 14 51.0 +0.2**
FRF pmax pmax
comp=Z,21nm,1.1s,mb5.2
FRF La Foret Royal 84.78 2 *e*P **P 17 14 51.0 +0.2**
comp=Z,21nm,1.1s,mb5.2
MTLF Montolieu 84.81 6 *e*P **P 17 14 51.6 +0.7**
comp=Z,46nm,1.1s,mb5.2
MTLF Montolieu 84.81 6 *e*P **P 17 14 51.6 +0.7**
MTLF pmax pmax
comp=Z,23nm,1.1s,mb5.2
MTLF Montolieu 84.81 6 *e*P **P 17 14 51.6 +0.7**
comp=Z,23nm,1.1s,mb5.2
ERUA La Rua 84.82 13 P **P 17 14 51.9 +0.9**
ERUA pmax pmax
comp=Z,15nm,1.0s,mb5.1
ERUA La Rua 84.82 13 P **P 17 14 51.9 +0.9**
comp=Z,15nm,1.0s,mb5.1
BHPL Bhopal 84.87 302 *e*PKP **P 17 14 51.0 -0.5**
EPF Esparros 84.98 7 *e*P **P 17 14 52.2 +0.4**
LMR La Mourre 85.01 3 *e*P **P 17 14 51.8 -0.1**
ETSF Etsaut 85.04 8 *e*P **P 17 14 53.2 +1.1**
comp=Z,64nm,1.0s,mb5.4
ETSF Etsaut 85.04 8 *e*P **P 17 14 53.2 +1.1**
ETSF pmax pmax
comp=Z,32nm,1.0s,mb5.4
ETSF Etsaut 85.04 8 *e*P **P 17 14 53.2 +1.1**
comp=Z,32nm,1.0s,mb5.4
VIEF Viey 85.11 7 *e*P **P 17 14 53.4 +1.0**
MLS Moulis 85.11 7 *e*P **P 17 14 52.6 +0.1**
JASL Jaisalmer 85.12 309 *ex* x 17 14 49.8
ECRI Cripan 85.15 9 P **P 17 14 53.4 +0.7**
ECRI pmax pmax
comp=Z,9.0nm,0.5s,mb5.2
ECRI Cripan 85.15 9 P **P 17 14 53.4 +0.7**
comp=Z,9.4nm,0.5s,mb5.2
LRDF Laroque-de-Fa 85.23 6 *e*P **P 17 14 53.7 +0.7**
EBIE Bielsa 85.31 7 P **P 17 14 54.4 +1.0**
comp=Z,11nm,0.7s,mb5.1
CLLI Llivia 85.65 6 P **P 17 14 56.6 +1.4**
CSOR Sort 85.69 7 P **P 17 14 57.2 +1.8**
comp=Z,8.1nm,0.7s,mb5.1
NGP Nagpur 85.70 299 *e*PKP **P 17 14 55.8 0.0**
PGF Pioggiola 85.84 1 *e*P **P 17 14 56.2 +0.1**
comp=Z,68nm,1.0s,mb5.5
PGF Pioggiola 85.84 1 *e*P **P 17 14 56.2 +0.1**
PGF pmax pmax
comp=Z,34nm,1.0s,mb5.5
PGF Pioggiola 85.84 1 *e*P **P 17 14 56.2 +0.1**
comp=Z,34nm,1.0s,mb5.5
PVRL Vila Real 85.84 13 *e*P **P 17 14 58.1 +2.0**
comp=Z,32nm,1.7s,mb5.3
SKO Skopje 85.90 352 *i*P **P 17 14 52.6 -3.8**
AQU L'Aquila 85.99 358⇑P **P 17 14 56.4 -0.4**
AQU L'Aquila 85.99 358 *e*P **P 17 14 55.6 -1.3**
comp=Z,35nm,0.8s,mb5.6
AQU L'Aquila 85.99 358⇑*i*P **P 17 14 56.4 -0.4**
MVO Moncorvo 86.04 13 P **P 17 14 57.5 +0.4**
MVO Moncorvo 86.04 13 *e*P **P 17 14 57.6 +0.5**
comp=Z,25nm,1.3s,mb5.3
MVO Moncorvo 86.04 13 *e*LR LR 17 49 52.4
comp=Z,779nm,18.0s
ESAC San Caprasio 86.22 8 P **P 17 14 59.0 +1.0**
comp=Z,20nm,0.9s,mb5.3
BR131 Keskin Array S 86.38 342 *e*P **P 17 15 00.9 +2.1**
comp=Z,0.9nm,0.5s,mb4.3
BRTR Keskin Array B 86.38 342 P **P 17 14 59.5 +0.7**
comp=Z,1.4nm,0.5s,mb4.5,baz=25,slow=2.3,SNR=8.0
CFON Fontmartina 86.39 6 P **P 17 15 00.7 +1.8**
comp=Z,9.5nm,0.9s,mb5.0
VAY Valandovo 86.43 351 *i*P **P 17 14 59.3 +0.3**
WRA Warramunga Arr 86.49 231 P **P 17 14 57.9 -1.5**
comp=Z,2.2nm,0.8s,mb4.5,baz=35,slow=5.7,SNR=14
KRUS Krusevo 86.51 352 *i*P **P 17 15 00.9 +1.4**
EPOB Poblet 86.71 7 P **P 17 15 00.7 +0.3**
comp=Z,5.3nm,0.6s,mb5.0
MTE Manteigas 86.72 13 *e*S S 17 25 25.8 -8.6
MTE A 17 58 12.0
comp=Z,494nm,18.0s
OHR Ohrid 86.81 352 *i*P **P 17 15 00.4 -0.4**
ETOR Torete 86.97 9 P **P 17 15 02.3 +0.6**
ETOR pmax pmax
comp=Z,7.0nm,1.3s,mb4.7
ETOR Torete 86.97 9 P **P 17 15 02.3 +0.6**
comp=Z,6.9nm,1.3s,mb4.7
EPLA Plasencia 87.25 12 P **P 17 15 02.9 -0.2**
EPLA pmax pmax
comp=Z,29nm,0.9s,mb5.5
EPLA Plasencia 87.25 12 P **P 17 15 02.9 -0.2**
comp=Z,29nm,0.9s,mb5.5
PMRV Marv??o 87.69 13 *e*P **P 17 15 06.7 +1.5**
comp=Z,21nm,1.5s,mb5.1
PMRV Marv??o 87.69 13 A 17 56 31.3
comp=Z,548nm,18.0s
PMAFR Mafra 87.87 15 *e*S S 17 25 52.5 +7.0
PMAFR A 17 58 41.5
comp=Z,600nm,18.0s
ESDC Sonseca Array 87.90 11 P **P 17 15 06.2 +0.1**
comp=Z,2.0nm,0.5s,mb4.6,baz=344,slow=4.6,SNR=18
ESDC LR LR 17 59 32.1
comp=Z,335nm,18.0s,MS4.8,baz=340,slow=39
ESDC Sonseca Array 87.90 11 P **P 17 15 06.6 +0.4**
comp=Z,2.2nm,0.6s,mb4.6
ESLA Sonseca Array 87.90 11 *e*P **P 17 15 05.3 -0.9**
comp=Z,5.2nm,1.1s,mb4.7
PESTR Estremoz 88.22 14 *e*S S 17 25 55.7 +6.9
PESTR Estremoz 88.22 14 *e*LR LR 17 49 34.5
comp=Z,554nm,18.0s
ARMA Armidale 88.71 212 *e*P **P 17 15 04.8 -5.0**
PBAR Barrancos 88.97 13 *e*P **P 17 15 13.1 +1.8**
comp=Z,30nm,1.1s,mb5.5
PBAR Barrancos 88.97 13 *e*LR LR 17 50 26.4
comp=Z,615nm,18.0s
HYB Hyderabad 89.00 297 *i*P **P 17 15 07.5 -4.2**
EADA Adamuz 89.31 11 P **P 17 15 12.5 -0.4**
comp=Z,3.6nm,0.7s,mb4.8
FITZ Fitzroy Crossi 89.36 239 *e*P **P 17 15 09.2 -3.9**
comp=Z,4.8nm,0.9s,mb4.8
PCVE Castro Verde 89.36 14 *e*S S 17 25 58.5 -1.1
PCVE *e*SS SS 17 32 02.4 +9.2
PCVE A 17 57 10.6
comp=Z,573nm,18.0s
EBAN Banos Encina 89.41 11 P **P 17 15 13.0 -0.3**
PVAQ Vaquros 89.63 14 A 18 03 16.8
comp=Z,462nm,16.0s
ROSC El Rosal 89.67 83 P **P 17 15 15.1 +0.2**
comp=Z,12nm,0.3s,mb5.6,baz=281,slow=18,SNR=2.9
PFVI Vila Bisbo 89.73 15 A 17 58 54.9
comp=Z,737nm,20.0s
PBDV Barranco-do-Ve 89.76 14 *e*SS SS 17 32 19.0 +20
PBDV A 17 57 22.1
comp=Z,684nm,20.0s
EQES Quesada 89.85 10 P **P 17 15 15.7 +0.4**
comp=Z,7.4nm,1.1s,mb4.9
ASAR Alice Springs 89.88 230 P **P 17 15 14.8 -0.7**
comp=Z,5.4nm,0.8s,mb4.9,baz=26,slow=4.5,SNR=66
EHUE Huescar 89.89 10 P **P 17 15 16.7 +1.1**
EHUE pmax pmax
comp=Z,31nm,1.6s,mb5.4
EHUE Huescar 89.89 10 P **P 17 15 16.7 +1.1**
comp=Z,31nm,1.6s,mb5.4
ECOG Cogollos-Vega 90.31 11 P **P 17 15 18.7 +1.2**
ECOG pmax pmax
comp=Z,4.0nm,0.8s,mb4.8
ECOG Cogollos-Vega 90.31 11 P **P 17 15 18.7 +1.2**
comp=Z,3.9nm,0.8s,mb4.8
ELOJ Sierra Loja 90.37 11 P **P 17 15 18.0 +0.2**
comp=Z,55nm,1.5s,mb5.7
POO Poona 90.62 302 *e*PKP **P 17 15 19.0 -0.2**
STKA Stephens Creek 93.68 220 LR LR 17 57 09.7
comp=Z,444nm,18.8s,MS5.0,baz=28,slow=35
MAW Mawson 150.36 218 PKPbc PKPbc 17 22 06.5 +0.1
comp=Z,4.5nm,0.8s,baz=89,slow=2.7,SNR=6.7
BOSA Boshof 154.04 328 PKPbc PKPbc 17 22 16.6 +0.7
comp=Z,4.0nm,0.5s,baz=58,slow=3.3,SNR=18

ISCJB ***29*** *17:08:09.6±4.0,51°.6N±0°.2×173°.2W±0°.1,h28km±28km, mb3.8/11, Error ellipse: s-maj=28.1km s-min=11.3km az=170.4*
NEIC ***29*** *17:08:12.1±0.8,51°.48N×173°.11W,h35km,mb3.9/2, Error ellipse: s-maj=19.7km s-min=8.6km az=167.0*
IDC ***29*** *17:08:13.8±3.8,51°.49N×173°.19W,h51km±33km,mb3.5/10, mb1 3.7/13,mb1mx3.5/30,mbtmp3.5/13,ML3.4/3,Error*

ellipse: s-maj=33.7km s-min=18.1km az=169.0

ISC 29 17:08:12.5±1.7,51°.5N±0°.2×173°.1W±0°.1,h37km±14km,n20,
σ1°00/20,mb3.8/11,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UNV	Unalaska Valle	4.66	58	*e*Pn	Pn	17 09 18.4	-1.8
FX1	Attu Island--F	8.52	284	P	Pn	17 10 14.5	+1.3
	1.4nm,0.3s,baz=134,slow=3.5,SNR=8.9						
FX1	Attu Island--F	8.52	284	P	Pn	17 10 14.5	+1.3
KDAK	Kodiak Island	13.41	54	P	Pn	17 11 20.7	+0.6
	0.4nm,0.3s,baz=246,slow=10.0,SNR=2.9						
PETK	Petropavlovsk-	17.84	287	P	Pn	17 12 17.4	-0.2
	0.1nm,0.3s,baz=92,slow=13,SNR=3.1						
BILL	Bilibino	19.35	336	*e*P	Pn	17 12 33.6	-2.1
	2.1nm,0.8s						
EGAK	Eagle	21.15	39	*e*P	P	17 12 54.9	+0.9
	10nm,0.6s,mb4.3						
INK	Inuvik	25.33	34	P	P	17 13 35.9	+0.5
	1.5nm,0.4s,mb3.9,baz=239,slow=8.4,SNR=5.8						
YKA	Yellowknife Ar	32.54	47	P	P	17 14 40.9	+1.4
	0.4nm,0.5s,mb3.6,baz=273,slow=7.6,SNR=4.1						
YKA	Yellowknife Ar	32.54	47	P	P	17 14 40.9	+1.4
PDAR	Pinedale Array	42.87	76	P	P	17 16 06.9	0.0
	0.7nm,0.6s,mb3.5,baz=330,slow=5.2,SNR=4.1						
SONM	Songino Array	49.70	299	P	P	17 17 01.3	+0.9
	0.5nm,0.3s,mb4.0,baz=66,slow=6.4,SNR=3.2						
KURK	Kurchatov	61.41	317	P	P	17 18 25.1	+0.6
	0.5nm,0.6s,mb3.8,baz=43,slow=6.4,SNR=3.0						
KURK	Kurchatov	61.41	317	P	P	17 18 25.1	+0.6
MKAR	Makanchi Array	62.65	312	P	P	17 18 32.1	-0.7
	0.5nm,0.7s,mb3.8,baz=46,slow=5.4,SNR=7.5						
MKAR	Makanchi Array	62.65	312	P	P	17 18 32.1	-0.7
BVAR	Borovoye Array	62.99	323	P	P	17 18 35.2	+0.1
	1.6nm,0.5s,mb4.4,baz=51,slow=5.2,SNR=11						
AKASG	Malin Array Be	76.39	346	P	P	17 19 56.6	-0.9
	0.3nm,0.3s,mb3.7,baz=15,slow=6.4,SNR=3.7						
WRA	Warramunga Arr	84.68	229	P	P	17 20 41.0	-1.2
	0.7nm,1.1s,mb3.7,baz=11,slow=5.1,SNR=3.3						
ASAR	Alice Springs	88.09	227	P	P	17 20 59.0	0.0
	0.3nm,0.7s,mb3.6,baz=22,slow=8.0,SNR=4.1						

NIED ***29*** *17:16:00,28°.00N×142°.90E,h5km,Mw4.5 Best double couple: M0 6.74000×10^15 NP1:φ=223.00000°,δ82.00000°, λ-84.00000°. NP2:φ=4.00000°,δ10.00000°,λ-129.00000°.*
IDC ***29*** *17:16:43.9±0.7,27°.74N×142°.89E,h0km,mb4.0/14, mb1 4.1/16,mb1mx4.1/24,mbtmp4.0/16,ML3.9/2,MS4.5/2, Ms1 4.5/2,ms1mx3.5/37,Error ellipse: s-maj=22.1km s-min=15.0km az=92.0*
JMA ***29*** *17:16:44.2±0.1,27°.96N×142°.87E,h0km,M4.5*
ISCJB ***29*** *17:16:45.5±1.6,28°.01N±0°.03×142°.81E±0°.10, h13km±10km,mb4.2/20,Error ellipse: s-maj=14.5km s-min=4.4km az=9.9*
MOS ***29*** *17:16:46.4±1.3,27°.80N×142°.93E,h33km,mb4.5/15,Error ellipse: s-maj=25.3km s-min=8.3km az=114.7*
BJI ***29*** *17:16:46.7,27°.66N×142°.62E,h23km,mB4.8/2,mb4.3/10*
NEIC ***29*** *17:16:49.1±0.5,27°.75N×142°.77E,h35km,mb4.5/4, MW4.5(NIED),Error ellipse: s-maj=16.1km s-min=10.4km az=74.0*

ISC 29 17:16:46.6±1.7,27°.88N±0°.03×142°.93E±0°.08,h16km±10km,
n69,σ1°20/76,mb4.2/20,3C,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.02	220	P	Pb	17 17 04.8	-1.1
CBIJ				S	Sb	17 17 19.2	0.0
CBIJ	Chichi jima	1.02	220	Pn	Pn	17 17 04.5	-1.8
	72nm,0.3s,baz=43,slow=6.9,SNR=39						
CBIJ				Sn	Sn	17 17 21.7	+1.4
	156nm,0.3s,baz=90,slow=20,SNR=17						
JHHJ	Haha-jima-NKT	1.41	208	P	Pn	17 17 11.7	0.0
JHHJ				*e*S	Sn	17 17 31.4	+1.4
JHJ	Hachijo jima 2	5.88	333	LR	LR	17 20 14.0	
	comp=Z,1μm,21.9s,baz=102,slow=35						
JYO	Yokosk	7.83	340	P	Pn	17 18 41.3	+1.4
JYN	Shimob	8.46	335	P	Pn	17 18 51.2	+2.7
JYN				*e*S	Sn	17 20 28.8	+5.1
JHU	Hanno	8.53	340	P	Pn	17 18 48.9	-0.5
JHU				*e*S	Sn	17 20 22.8	-2.6
JRY	Ryogami san	8.80	338	P	Pn	17 18 53.4	+0.2
JRY				*e*S	Sn	17 20 31.3	-0.8
JHO	Hitachi	8.93	348	P	Pn	17 18 54.2	-0.7
JHO				*e*S	Sn	17 20 31.1	-4.1
JAG	Ashikaga	9.01	342	P	Pn	17 18 55.6	-0.5
JAG				*e*S	Sn	17 20 32.2	-5.0
ONAJ	Iwakimizuishiy	9.37	349	*e*S	Sn	17 20 38.8	-7.2
JNG	Nsakai	9.43	336	P	Pn	17 19 03.9	+2.1
MJAR	Matsushiro Arr	9.51	336	Pn	Pn	17 19 03.5	+0.5
	2.1nm,0.3s,baz=163,slow=12,SNR=19						
MJAR	Matsushiro Arr	9.51	336	P	Pn	17 19 03.5	+0.6
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MAJO	Matsushiro	9.52	336	*e*P	Pn	17 19 03.4	+0.5
MAJO				pmax	pmax		
	comp=Z,11nm,0.6s						
MAJO	Matsushiro	9.52	336	*e*Pn	Pn	17 19 03.4	+0.4
	comp=Z,11nm,0.6s						
MAT	Matsushiro	9.52	336	P	Pn	17 19 02.9	0.0
MAT	Matsushiro	9.52	336	P	Pn	17 19 03.9	+1.0
JFT	Otama	9.86	348	P	Pn	17 19 06.8	-0.8
JFT				*e*S	Sn	17 20 51.8	-6.1
JMM	Marumori	10.12	350	P	Pn	17 19 10.3	-0.9
JMM				*e*S	Sn	17 20 57.0	-7.3
KSRS	Korea Array	15.82	311	Pn	Pn	17 20 30.5	+1.9
	comp=Z,0.3nm,0.3s,baz=119,slow=11,SNR=7.2						
ASAJ	Asahikawa	16.20	359	Pn	Pn	17 20 32.0	-1.5
	comp=Z,0.3nm,0.3s,baz=151,slow=5.6,SNR=4.3						
VLA	Vladivostok	17.64	332	*e*P	Pn	17 20 51.8	+0.3
VLA				pmax	pmax		
	comp=Z,45nm,1.3s						
VLA				MLR	MLR		
	comp=Z,1μm,16.7s						
YSS	Yuzh-Sakhalins	19.04	360	*e*P	Pn	17 21 16.0	+7.3
YHNB	Yeheng	19.59	266	*e*P	Pn	17 21 14.0	-1.4
	comp=Z,7.7nm,0.7s						
KLR	Kul'dur	22.99	341	*e*P	P	17 21 45.6	-4.9
SONM	Songino Array	34.62	315	P	P	17 23 35.4	+0.6
	comp=Z,0.6nm,0.4s,mb3.8,baz=123,slow=8.4,SNR=6.1						
GTA	Gaotai	37.37	299	*e*P	P	17 23 58.0	-0.5
GTA				pP	pP	17 24 05.5	+2.1
GTA				sP	sP	17 24 08.5	+3.2
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
WRAB	Tennant Creek	48.25	191	*e*P	P	17 25 24.1	-2.7
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
WRAB	Tennant Creek	48.25	191	*e*P	P	17 25 24.1	-2.7
	comp=Z,6.4nm,0.6s,mb4.8						
WRA	Warramunga Arr	48.26	191	P	P	17 25 25.2	-1.7
	comp=Z,6.1nm,0.6s,mb4.8,baz=12,slow=8.5,SNR=61						
WRA	Warramunga Arr	48.26	191	P	P	17 25 25.3	-1.6
WRA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ZALV	Zalesovo Beam	49.34	319	P	P	17 25 35.5	+0.6
	comp=Z,0.7nm,0.3s,mb4.1,baz=99,slow=7.7,SNR=9.3						
ZALV	Zalesovo Beam	49.34	319	P	P	17 25 35.5	+0.6
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
NVS	Novosibirsk	50.37	320	*i* P	P	17 25 42.0	-0.7
MK31	Makanchi Array	50.49	309	*e*P	P	17 25 41.2	-2.6
MKAR	Makanchi Array	50.49	309	P	P	17 25 43.7	-0.1
	comp=Z,1.7nm,0.9s,mb4.1,baz=98,slow=8.7,SNR=7.0						
MKAR	Makanchi Array	50.49	309	P	P	17 25 43.7	-0.1
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MKAR	Makanchi Array	50.49	309	P	P	17 25 43.7	-0.1
ASAR	Alice Springs	51.98	191	P	P	17 25 53.0	-2.0
	comp=Z,0.5nm,0.5s,mb3.7,baz=11,slow=7.6,SNR=16						
ASAR	Alice Springs	51.98	191	P	P	17 25 53.1	-2.0
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURK	Kurchatov	52.91	314	P	P	17 26 02.6	+0.8
	comp=Z,6.3nm,0.7s,mb4.7,baz=90,slow=8.0,SNR=37						
KURK	Kurchatov	52.91	314	*ce*P	P	17 26 02.4	+0.6
KURK				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.7						
BVAR	Borovoye Array	57.92	317	P	P	17 26 39.2	+1.4
	comp=Z,1.7nm,0.4s,mb4.4,baz=88,slow=6.8,SNR=20						
BVAR	Borovoye Array	57.92	317	P	P	17 26 39.2	+1.4
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
BRVK	Borovoye	57.98	317	*ce*P	P	17 26 40.1	+1.9
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
SVE	Sverdlovsk	63.01	322	*e*P	P	17 27 13.5	+1.0
SVE				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.8						
ARU	Arti	64.21	322	*c i*P	P	17 27 20.5	0.0
ARU				*e*		17 29 38.4	
ARU				S	S	17 35 55.5	-1.6
ARU				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
ARU	Arti	64.21	322	*e*P	P	17 27 20.6	+0.2
	comp=Z,8.4nm,0.7s,mb4.9						
ARU				*e*		17 27 31.7	
ARCES	ARCESS Array B	73.02	341	P	P	17 28 15.3	+0.1
	comp=Z,0.8nm,0.7s,mb3.8,baz=46,slow=6.9,SNR=3.6						
ARCES	ARCESS Array B	73.02	341	P	P	17 28 15.3	+0.1
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES	ARCESS Array B	73.02	341	P	P	17 28 15.3	+0.1
FINES	FINESS Array B	77.54	334	P	P	17 28 41.4	+0.1
	comp=Z,0.9nm,0.5s,mb4.0,baz=63,slow=5.1,SNR=11						
FINES	FINESS Array B	77.54	334	P	P	17 28 41.4	+0.1
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	FINESS Array B	77.54	334	P	P	17 28 41.4	+0.1
NVAR	Mina Array Bea	79.52	52	P	P	17 28 53.4	+0.6
	comp=Z,0.4nm,0.5s,mb3.6,baz=275,slow=5.3,SNR=3.4						
FFC	Flin Flon	80.73	32	*e*P	P	17 28 59.7	+0.8
FFC				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
FFC	Flin Flon	80.73	32	*e*P	P	17 28 59.7	+0.8
	comp=Z,2.2nm,0.8s,mb4.1						
AKASG	Malin Array Be	82.38	324	P	P	17 29 07.0	-0.7
	comp=Z,0.5nm,0.4s,mb3.8,baz=51,slow=5.2,SNR=4.5						
AKASG	Malin Array Be	82.38	324	P	P	17 29 07.0	-0.7
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	82.38	324	P	P	17 29 07.0	-0.8
NOA	NORSAR Array B	83.13	339	P	P	17 29 11.5	0.0
	comp=Z,0.8nm,0.8s,mb3.8,baz=42,slow=5.2,SNR=3.3						
NOA	NORSAR Array B	83.13	339	P	P	17 29 11.5	+0.1
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
PDAR	Pinedale Array	83.19	45	P	P	17 29 14.0	+1.9
	comp=Z,0.4nm,0.8s,mb3.5,baz=328,slow=5.3,SNR=3.6						
BRTR	Keskin Array B	85.95	313	P	P	17 29 26.8	+0.6
	comp=Z,1.7nm,1.0s,mb4.2,baz=76,slow=5.2,SNR=4.9						
BRTR	Keskin Array B	85.95	313	P	P	17 29 26.8	+0.6
BRTR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ATD	Arta Tunnel	93.41	285	LR	LR	18 17 12.9	
	comp=Z,670nm,18.7s,baz=109,slow=39						
LPAZ	La Paz	149.08	75	PKPbc	PKPbc	17 36 37.2	+2.4
	comp=Z,1.5nm,0.8s,baz=337,slow=2.7,SNR=8.7						
LPAZ	La Paz	149.08	75	PKPbc	PKPbc	17 36 37.2	+2.4

CSEM ***29*** *17:23:51.8±0.6,36°.11N×21°.98E,h2km,MD3.4,Error ellipse: s-maj=12.2km s-min=6.5km az=37.0*
ATH ***29*** *17:23:51.5,36°.06N×21°.94E,h8km±4km,MD3.4/9*
THE ***29*** *17:23:51.2,36°.02N×21°.86E,h1km±4km,Error ellipse: s-maj=7.4km s-min=1.9km az=43.0*
ISCJB ***29*** *17:23:51.9±0.9,36°.09N±0°.05×21°.94E±0°.06,h10km,Error ellipse: s-maj=9.2km s-min=4.9km az=43.8*

ISC 29 17:23:52.4±0.9,36°.08N±0°.05×21°.94E±0°.06,h10km,n42,
σ0°77/52,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.83	349	P	Pg	17 24 06.8	-1.6
PYL	PYLOS	0.83	349	*e*PB	Pg	17 24 06.9	-1.5
PYL				*e*SB	Sg	17 24 19.5	+0.3
PYL	PYLOS	0.83	349	*e*Pb	Pg	17 24 06.9	-1.5
PYL				*e*Sb	Sg	17 24 19.5	+0.3
KYTH	Kithira	0.91	77	*e*PB	Pg	17 24 09.3	-0.6
KYTH	Kithira	0.91	77	*e*Pb	Pg	17 24 09.3	-0.6
VLI	Veliai	1.03	51	*e*PB	Pg	17 24 11.4	-0.7
VLI				*e*SB	Sg	17 24 25.5	0.0
VLI	Veliai	1.03	51	*e*Pb	Pg	17 24 11.4	-0.7
VLI				*e*Sb	Sg	17 24 25.5	0.0
ITM	Ithomi	1.10	359	P	Pg	17 24 12.1	-1.4
ITM	Ithomi	1.10	359	*e*PG	Pg	17 24 12.2	-1.3
ITM				*e*SB	Sg	17 24 28.7	+0.9
ITM	Ithomi	1.10	359	*e*Pg	Pg	17 24 12.2	-1.3
ITM				*e*Sb	Sg	17 24 28.7	+0.9
VLX	Vlachokerasia	1.34	15	P	Pn	17 24 16.3	-0.8
VLX	Vlachokerasia	1.34	15	*e*PG	Pn	17 24 16.4	-0.7
VLX	Vlachokerasia	1.34	15	P	Pn	17 24 16.3	-0.8
KARN	Karanos	1.74	112	P	Pn	17 24 22.6	-0.1
KARN				S	Sn	17 24 45.6	+0.6
KARN	Karanos	1.74	112	P	Pn	17 24 22.6	-0.1
KARN				S	Sn	17 24 45.6	+0.6
DID	Didima	1.76	36	P	Pn	17 24 23.6	+0.6
DID	Didima	1.76	36	*e*PG	Pn	17 24 23.9	+0.9
DID	Didima	1.76	36	P	Pn	17 24 23.6	+0.6
DID	Didima	1.76	36	*e*Pg	Pn	17 24 23.9	+0.9
GUR	Goura	1.88	10	*e*PN	Pb	17 24 26.5	-0.3
GUR	Goura	1.88	10	*e*Pn	Pb	17 24 26.5	-0.3
LTK	Loutraki	2.11	23	P	Pn	17 24 27.4	-0.3
LTK	Loutraki	2.11	23	*e*PG	Pb	17 24 30.4	-0.3
LTK	Loutraki	2.11	23	P	Pn	17 24 27.4	-0.3
LTK	Loutraki	2.11	23	*e*Pg	Pb	17 24 30.4	-0.3
LAKA	Lakka	2.16	1	P	Pn	17 24 29.5	+1.1
LAKA	Lakka	2.16	1	P	Pn	17 24 29.5	+1.1
TRIZ	Trizonia	2.29	3	P	Pn	17 24 30.8	+0.7
TRIZ	Trizonia	2.29	3	P	Pn	17 24 30.8	+0.7
KALE	Kalithea	2.31	4	P	Pn	17 24 32.0	+1.5
KALE	Kalithea	2.31	4	P	Pn	17 24 32.0	+1.5
EFP	Efpalio	2.34	359	*e*PN	Pb	17 24 33.7	-1.0
VLS	Valsamata	2.36	333	P	Pn	17 24 30.6	-0.5
VLS				S	Sn	17 25 00.7	+0.6
VLS	Valsamata	2.36	333	P	Pn	17 24 30.6	-0.5
VLS				S	Sn	17 25 00.7	+0.6
DSF	Desfina	2.38	11	P	Pn	17 24 32.0	+0.6
DSF	Desfina	2.38	11	P	Pn	17 24 32.0	+0.6
AGG	Agios Georgios	2.96	6	P	Pn	17 24 40.1	+0.8
AGG	Agios Georgios	2.96	6	P	Pn	17 24 40.1	+0.8
IGT	Igoumenitsa	3.68	340	P	Pn	17 24 48.7	-0.5
IGT	Igoumenitsa	3.68	340	P	Pn	17 24 48.7	-0.5
KEK	Kerkira	4.00	336	P	Pn	17 24 53.7	-0.1
KEK	Kerkira	4.00	336	P	Pn	17 24 53.7	-0.1

IDC 29 17:24:57.3±49.0,16°.40S×179°.26W,h0km,mb4.0/3,
mb1 4.2/3,mb1mx3.8/16,mbtmp4.0/3,Error ellipse:
s-maj=889.7km s-min=155.1km az=77.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.67	239	P	P	17 32 22.7	-0.2
	1.4nm,0.5s,baz=104,slow=8.3,SNR=3.5						
WRA	Warramunga Arr	44.12	258	P	P	17 33 08.0	+0.2
	0.6nm,0.5s,baz=92,slow=7.4,SNR=33						
ASAR	Alice Springs	44.43	253	P	P	17 33 10.1	-0.3
	2.8nm,0.5s,baz=87,slow=8.8,SNR=97						

TAP ***29*** *17:36:34.5,24°.89N×122°.56E,h1km,ML3.4,D*
ISCJB ***29*** *17:36:34.7±0.9,24°.99N±0°.04×122°.65E±0°.05,h18km±5km, mb3.5/7,Error ellipse: s-maj=9.2km s-min=5.7km az=136.5*
NEIC ***29*** *17:36:35.2±0.6,24°.95N×122°.53E,h10km,Error ellipse: s-maj=9.7km s-min=6.9km az=104.0*
IDC ***29*** *17:36:35.1±1.2,24°.55N×121°.63E,h0km,mb3.5/7, mb1 3.6/8,mb1mx3.5/24,mbtmp3.6/8,ML3.6/1,MS3.5/1, Ms1 3.5/1,ms1mx2.3/41,Error ellipse: s-maj=64.7km s-min=18.3km az=66.0*

ISC 29 17:36:34.9±0.8,24°.95N±0°.04×122°.60E±0°.04,h7km±4km,
n56,σ0°97/59,mb3.5/7,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.56	276	P	Pg	17 36 45.9	+0.1
	baz=283						
TWB1				*e*S	Sg	17 36 53.4	+0.3
	baz=283						
YOJ	Yonaguni jima	0.61	143	*i* P	Pg	17 36 46.8	+0.1
	baz=136						
YOJ				*e*S	Sg	17 36 55.0	+0.2
	baz=136						
NWF	Wu-fen Shan	0.76	279	P	Pg	17 36 50.2	+0.7
	baz=284						
TWC	Suao	0.77	244	P	Pg	17 36 49.4	-0.2
	baz=246						
TWE	Neicheng	0.88	255	P	Pg	17 36 51.8	-0.1
	baz=258						
TWA	Mucha	0.93	272	*e*P	Pg	17 36 54.0	+1.3
	baz=275						
ENA	Nanau	0.94	237	P	Pg	17 36 52.9	-0.1
	baz=238						
TWY	Chenhua	0.96	290	*e*P	Pg	17 36 53.7	+0.2
	baz=293						
TAP1	Taipei	0.98	275	*e*P	Pg	17 36 55.0	+1.2
	baz=279						
ENTT	Nioudou	0.99	252	P	Pg	17 36 54.4	+0.4
	baz=254						
TATO	Taipei	1.01	272	*e*P	Pg	17 36 53.6	-0.8
TATO				*e*P		17 36 56.1	
TATO				*e*S	Sg	17 37 05.9	-1.6
TWS1	Kuangyinshan	1.08	278	*e*P	Pg	17 36 55.5	-0.3
	baz=281						
YHNB	Yeheng	1.15	256	*e*P	Pg	17 36 56.0	-1.0
NSK	Sanguang	1.16	257	*e*P	Pg	17 36 56.6	-0.6
	baz=259						
NACB	Ninganchiao	1.20	230	*e*P	Pb	17 36 56.0	-1.9
NNS	Nan Shan	1.23	246	*e*P	Pb	17 36 57.8	-0.6
	baz=247						
TWD	Chiawan	1.26	227	P	Pn	17 36 58.3	-0.6
	baz=227						
HWA	Hwalien	1.33	223	*e*P	Pn	17 36 58.8	-1.1
	baz=223						
WHF	Hehuan Shan	1.46	237	*e*P	Pn	17 37 02.0	+0.4
	baz=237						
TWT	Tachien	1.47	242	*e*P	Pn	17 37 01.6	-0.2
	baz=243						
NSTT	Nanjuang	1.49	258	*e*P	Pn	17 37 02.3	+0.2
	baz=259						
ESL	Shilin	1.56	224	*e*P	Pn	17 37 02.4	-0.6
	baz=223						
NSY	Sanyi	1.76	253	*e*P	Pn	17 37 09.1	+3.3
	baz=253						
TWQ1	Liyutan	1.77	251	*e*P	Pn	17 37 08.4	+2.5
	baz=251						
EHY	Hungye	1.85	219	*e*P	Pn	17 37 06.8	-0.3
	baz=219						
SMLT	Sun Moon Lake	1.88	236	*e*P	Pn	17 37 09.4	+1.9
	baz=236						
SSLB	Suanglung	1.90	233	*e*P	Pn	17 37 08.0	+0.3
TYC	Yuchr	1.90	237	*e*P	Pn	17 37 08.4	+0.7
	baz=237						
YULB	Yu-li	1.96	218	*e*P	Pn	17 37 07.1	-1.4
TWF1	Yuli	1.99	217	*e*P	Pn	17 37 08.3	-0.6
	baz=216						
WNT	Mingjian	2.05	239	*e*P	Pn	17 37 12.7	+3.0
	baz=239						
CHN5	Tsauling	2.21	233	*e*P	Pn	17 37 13.9	+1.9
	baz=233						
WGK	Gukeng	2.25	236	*e*P	Pn	17 37 15.2	+2.7
	baz=236						
ELDTW	Lidau	2.28	220	*e*P	Pn	17 37 12.7	-0.2
	baz=219						
TPUB	Ta-pu	2.44	228	*e*Pn	Pn	17 37 15.2	+0.1
WTP	Ta-pu	2.49	227	*e*P	Pn	17 37 15.8	0.0
	baz=227						
TWG	Pinlang	2.54	214	*e*Pn	Pn	17 37 16.4	-0.2
TWG	Pinlang	2.54	214	*e*P	Pn	17 37 19.0	+2.4
	baz=213						
CHN1	Nanshi	2.59	228	*e*P	Pn	17 37 17.1	0.0
	baz=227						
SGST	Jiashian	2.62	225	*e*P	Pn	17 37 17.3	-0.4
	baz=225						
ECL	Taimali	2.79	213	*e*P	Pn	17 37 19.0	-0.9
	baz=212						
SSD	Sandimen	2.84	220	*e*P	Pn	17 37 22.1	+1.5
	baz=219						
EAST	Anshuo	3.02	213	*e*P	Pn	17 37 23.4	+0.3
	baz=212						
SCZT	Fangliau	3.15	216	*e*P	Pn	17 37 24.3	-0.6
	baz=215						
TWK1	Hengchun	3.42	209	*e*P	Pn	17 37 27.4	-1.2
	baz=208						
KSRS	Korea Array	13.26	19	Pn	Pn	17 39 55.9	+12
	0.3nm,0.3s,baz=196,slow=11,SNR=11						
KSRS				LR	LR	17 45 39.3	
	comp=Z,168nm,18.4s,baz=60,slow=39						
SONM	Songino Array	26.19	335	P	P	17 42 09.9	-0.2
	0.3nm,0.4s,mb3.1,baz=141,slow=9.3,SNR=3.4						
MK31	Makanchi Array	38.70	315	*e*P	P	17 43 58.9	-0.5
MKAR	Makanchi Array	38.70	315	P	P	17 43 58.9	-0.4
	0.5nm,0.8s,mb3.3,baz=103,slow=9.4,SNR=4.8						
MKAR	Makanchi Array	38.70	315	P	P	17 43 58.9	-0.4
ZALV	Zalesovo Beam	40.32	326	P	P	17 44 12.6	-0.2
	1.4nm,0.8s,mb3.7,baz=120,slow=8.5,SNR=2.9						
KURK	Kurchatov	42.35	319	P	P	17 44 28.9	-0.5
	1.0nm,0.9s,mb3.5,baz=109,slow=8.9,SNR=4.1						
KURK	Kurchatov	42.35	319	P	P	17 44 28.9	-0.5
WRA	Warramunga Arr	46.06	165	P	P	17 44 58.9	-0.6
	0.5nm,0.4s,mb3.8,baz=334,slow=11,SNR=9.4						
BVAR	Borovoye Array	47.91	320	P	P	17 45 12.7	-0.9
	0.2nm,0.4s,mb3.5,baz=114,slow=9.8,SNR=3.4						
ASAR	Alice Springs	49.56	166	P	P	17 45 27.4	+0.9
	0.7nm,1.1s,mb3.6,baz=339,slow=8.0,SNR=4.1						

IDC ***29*** *18:00:38.7±0.7,27°.95N×56°.57E,h0km,mb4.0/22, mb1 4.0/23,mb1mx4.0/29,mbtmp4.0/23,ML3.7/1,Error ellipse: s-maj=17.9km s-min=13.8km az=2.0*
ISCJB ***29*** *18:00:39.1±0.2,28°.13N±0°.03×56°.48E±0°.03,h10km, mb4.1/43,Error ellipse: s-maj=4.

HATD P 18 01 33.6
SNR=14
HATD P 18 01 33.6
SNR=14
HATD Hatta, Dubai 3.27 186 P Pn 18 01 32.6 +0.5
SNR=16
ASHO Ashiyiah 3.41 187 P Pn 18 01 34.8 +0.7
SNR=115
FAQ Al Faqa, Dubai 3.42 194 P Pn 18 01 35.5 +1.2
IPAR Pars 3.48 301 Pn Pn 18 01 39.0 +4.0
IPAR Pars 3.48 301 *e*Pn Pn 18 01 39.0 +4.0
IPAR *e* 18 03 12.2
comp=Z,3μm,0.3s
IPAR Pars 3.48 301 *e*Pn Pn 18 01 39.0 +4.0
IBAF Bafgh 3.58 347 Pn Pn 18 01 40.3 +3.9
IBAF Bafgh 3.58 347 *e*Pn Pn 18 01 40.3 +3.9
IBAF *e* 18 02 50.9
comp=Z,3μm,0.4s
IBAF Bafgh 3.58 347 *e*Pn Pn 18 01 40.3 +3.9
ASUD Al Ashush, Dub 3.60 197 ||P Pn 18 01 38.7 +2.0
ASUD ||P 18 01 38.7
ASUD P 18 01 38.8
SNR=20
ASUD P 18 01 38.8
SNR=20
ASUD Al Ashush, Dub 3.60 197 P Pn 18 01 38.7 +2.0
IMEH Mehriz 3.67 334 Pn Pn 18 01 42.1 +4.5
IMEH Mehriz 3.67 334 *e*Pn Pn 18 01 42.1 +4.5
IMEH *e* 18 02 57.3
comp=Z,2μm,0.3s
IMEH Mehriz 3.67 334 *e*Pn Pn 18 01 42.1 +4.5
ZHSF Zahedan 4.06 67 *e*Pn Pn 18 01 49.1 +6.2
ZHSF Zahedan 4.06 67 *e*Pn Pn 18 01 49.1 +6.1
ISAD Sadrabad 4.52 328 Pn Pn 18 01 54.5 +5.2
ISAD Sadrabad 4.52 328 *e*Pn Pn 18 01 54.5 +5.2
ISAD *e* 18 03 28.1
comp=Z,1μm,0.4s
ISAD Sadrabad 4.52 328 *e*Pn Pn 18 01 54.5 +5.2
ARQ Araqi 4.73 180 P Pn 18 01 53.0 +0.7
SNR=6.5
ARQ P 18 01 53.0
SNR=6.5
ARQ ||P 18 01 54.1
ARQ ||P 18 01 54.1
ARQ Araqi 4.73 180 P Pn 18 01 54.1 +1.9
IKOO Kooshah 4.84 26 *e*Pn Pn 18 01 58.8 +5.1
IKOO *e* 18 03 31.7
comp=Z,2μm,0.2s
IKOO Kooshah 4.84 26 *e*Pn Pn 18 01 58.8 +5.1
ITEG Tejag 5.17 22 *e*Pn Pn 18 02 04.1 +5.8
ITEG *e*Sg Sg 18 03 36.3 +9.3
ITEG *e* 18 03 48.6
comp=Z,3μm,0.8s
ITEG Tejag 5.17 22 *e*Pn Pn 18 02 04.1 +5.8
ITEG *e*Sg Sg 18 03 36.3 +9.3
IDAH Dahanechah 5.48 31 *e* Pg 18 02 28.0 +2.2
comp=Z,956nm,0.2s
IDAH *e*Pn Pn 18 02 07.8 +5.3
IGAR Gharneh 5.77 319 *e*Pn Pn 18 02 10.6 +4.2
IGAR *e* 18 02 15.6
comp=Z,580nm,0.1s
IZEF Zefreh 5.98 324 Pn Pn 18 02 12.6 +3.2
IZEF Zefreh 5.98 324 *e*Pn Pn 18 02 12.6 +3.2
IZEF *e* 18 02 13.8
comp=Z,485nm,0.2s
IZEF Zefreh 5.98 324 *e*Pn Pn 18 02 12.6 +3.2
BTHS 6.47 233 P Pn 18 02 16.3 +0.1
BTHS 6.47 233 P Pn 18 02 16.3 +0.1
BTHS S Sn 18 03 28.4 -1.7
IPIR Pirpir 6.66 315 Pn Pn 18 02 22.5 +3.9
IPIR Pirpir 6.66 315 *e*Pn Pn 18 02 22.6 +4.0
IPIR *e* 18 02 26.2
comp=Z,509nm,0.1s
IPIR Pirpir 6.66 315 *e*Pn Pn 18 02 22.6 +4.0
IKLH Kolahrood 6.71 322 Pn Pn 18 02 23.8 +4.4
IKLH Kolahrood 6.71 322 *e*Pn Pn 18 02 23.9 +4.5
IKLH *e* 18 02 43.7
comp=Z,242nm,0.2s
IKLH Kolahrood 6.71 322 *e*Pn Pn 18 02 23.9 +4.5
BOQSS 6.72 252 S Sn 18 03 34.7 -1.4
BOQSS 6.72 252 P Pn 18 02 20.4 +0.9
QRN Al-Qurain 7.57 277 *e*P Pn 18 02 31.8 +0.6
QRN AML AML 18 03 60.0
comp=Z,60nm,0.4s
RDF Al-Radifah 7.91 278 *e*P Pn 18 02 36.6 +0.8
RDF AML AML 18 04 07.4
comp=Z,20nm,0.4s
RDF Al-Radifah 7.91 278 *e*P Pn 18 02 36.6 +0.8
NAY Al-Naaiem 8.20 280 *e*P Pn 18 02 40.7 +0.8
NAY AML AML 18 04 13.4
comp=Z,15nm,0.7s
NAY Al-Naaiem 8.20 280 *e*P Pn 18 02 40.7 +0.8
ASAO Ashtian 8.48 321 *e*Pn Pn 18 02 47.6 +3.9
ASAO Ashtian 8.48 321 *e*Pn Pn 18 02 47.6 +3.9
LYLS 10.31 236 P Pn 18 03 07.0 -1.9
GNI Garni 15.45 324 Pn Pn 18 04 26.5 +7.7
comp=Z,0.4nm,0.3s,baz=120,slow=14,SNR=2.7
GNI Garni 15.45 324 *c*e*P Pn 18 04 26.0 +7.2
GNI pmax pmax
comp=Z,8.0nm,1.5s
GNI Garni 15.45 324 *e*Pn Pn 18 04 23.9 +5.2
comp=Z,5.5nm,0.7s
ASF Jabal al Asfar 17.42 288 Pn Pn 18 04 46.3 +2.3
comp=Z,0.3nm,0.3s,baz=320,slow=11,SNR=3.9
ZEI Tsey 17.85 328 *e*P Pn 18 04 57.0 +7.8
ZEI pmax pmax
comp=Z,8.0nm,0.5s
AML Almayashu 19.81 41 *e*P Pn 18 05 11.7 -1.3
comp=Z,7.9nm,0.6s
AML Almayashu 19.81 41 *e*P Pn 18 05 11.7 -1.2
comp=Z,7.9nm,0.6s
EKS2 Erkin-Say 20.20 39 *e*P P 18 05 15.9 +0.3
comp=Z,10nm,0.9s
EKS2 Erkin-Say 20.20 39 *e*P P 18 05 15.9 +0.3
comp=Z,10nm,0.9s
UCH Uchtor 20.34 41 *e*P P 18 05 15.8 -1.4
comp=Z,1.6nm,0.5s
AAK Ala-Archa 20.59 40 P P 18 05 21.1 +1.2
comp=Z,3.0nm,0.4s,baz=214,slow=11,SNR=5.7
AAK Ala-Archa 20.59 40 P P 18 05 21.1 +1.3
AAK pmax pmax
comp=Z,3.0nm,0.4s
AAK Ala-Archa 20.59 40 P P 18 05 21.1 +1.3
comp=Z,3.0nm,0.4s
TKM2 Tokmak 2 21.40 41 *e*P P 18 05 29.2 +0.6
TKM2 pmax pmax
comp=Z,3.0nm,0.7s,mb3.7
TKM2 Tokmak 2 21.40 41 *e*P P 18 05 29.2 +0.5
comp=Z,3.5nm,0.7s,mb3.8
TKM2 Tokmak 2 21.40 41 *e*P P 18 05 29.2 +0.6
comp=Z,3.5nm,0.7s,mb3.8
BR131 Keskin Array S 22.16 307 *e*P P 18 05 39.5 +2.6
comp=Z,2.5nm,0.6s,mb3.8
BR131 Keskin Array S 22.16 307 *e*P P 18 05 39.5 +2.6
comp=Z,2.5nm,0.6s,mb3.8
BRTR Keskin Array B 22.16 307 P P 18 05 39.4 +2.5
comp=Z,1.9nm,0.6s,mb3.7,baz=130,slow=13,SNR=9.8
BRTR Keskin Array B 22.16 307 P P 18 05 39.4 +2.5
BRTR pmax pmax
comp=Z,2.0nm,0.6s
BRTR Keskin Array B 22.16 307 P P 18 05 39.3 +2.4
AKTK Aktyubinsk 22.35 3 P P 18 05 40.5 +1.9
AKTK Aktyubinsk 22.35 3 P P 18 05 40.5 +1.8
AKTO Aktyubinsk 22.35 3 P P 18 05 40.5 +1.9
comp=Z,5.9nm,0.7s,mb4.1,baz=180,slow=14,SNR=14
AKTO Aktyubinsk 22.35 3 P P 18 05 40.6 +1.9
AKTO pmax pmax
comp=Z,6.0nm,0.7s,mb4.1
DMN Daman 25.29 84 *e*P P 18 06 07.4 -0.1
comp=Z,8.5nm,0.7s,mb4.4
KKN Kakani 25.42 84 *e*P P 18 06 07.1 -1.6
comp=Z,15nm,0.6s,mb4.7
PKIN Phulchoki 25.55 84 *e*P P 18 06 08.7 -1.2
comp=Z,8.1nm,0.5s,mb4.5
PKI Pulchoki 25.56 84 *e*P P 18 06 09.9 -0.1
comp=Z,12nm,0.5s,mb4.7
GUN Gumba 25.93 83 *e*P P 18 06 13.4 +0.1
comp=Z,52nm,1.0s,mb5.0
BRVK Borovoye 26.96 19 *c*e*P P 18 06 21.7 -0.6
BRVK pmax pmax
comp=Z,2.0nm,0.9s,mb3.6
BRVK Borovoye 26.96 19 *e*P P 18 06 22.2 -0.1
comp=Z,3.5nm,0.8s,mb3.9
BRVK Borovoye 26.96 19 *e*P P 18 06 22.2 -0.1
comp=Z,3.5nm,0.7s,mb4.0,baz=202,slow=8.9,SNR=24
BVAR Borovoye Array 26.96 19 P P 18 06 22.9 +0.6
comp=Z,3.5nm,0.7s,mb4.0,baz=202,slow=8.9,SNR=24
BVAR Borovoye Array 26.96 19 P P 18 06 22.9 +0.6
BVAR pmax pmax
comp=Z,4.0nm,0.7s
BVAR Borovoye Array 26.96 19 P P 18 06 22.9 +0.6
comp=Z,4.0nm,0.7s,mb4.1
MK31 Makanchi Array 27.52 40 *e*P P 18 06 27.5 0.0
MK31 Makanchi Array 27.52 40 *e*P P 18 06 27.5 0.0
MKAR Makanchi Array 27.52 40 P P 18 06 27.7 +0.3
comp=Z,2.2nm,0.6s,mb3.9,baz=224,slow=6.7,SNR=31
MKAR Makanchi Array 27.52 40 P P 18 06 27.7 +0.2
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MKAR Makanchi Array 27.52 40 P P 18 06 27.7 +0.2
comp=Z,2.0nm,0.6s,mb3.9
IDI Anoyia 27.74 293 P P 18 06 30.6 +1.0
comp=Z,4.1nm,0.8s,mb4.1,baz=100,slow=12,SNR=2.3
IDI Anoyia 27.74 293 P P 18 06 30.6 +1.0
KURK Kurchatov 28.14 31 P P 18 06 32.6 -0.3
comp=Z,2.8nm,0.8s,mb3.9,baz=230,slow=8.6,SNR=14
KURK Kurchatov 28.14 31 *c*e*P P 18 06 34.0 +1.1
KURK pmax pmax
comp=Z,4.0nm,1.7s,mb3.8
KURK Kurchatov 28.14 31 P P 18 06 32.7 -0.2
AKASG Malin Array Be 30.58 325 P P 18 06 54.7 +0.1
comp=Z,1.1nm,0.6s,mb3.9,baz=135,slow=8.6,SNR=6.2
AKASG Malin Array Be 30.58 325 P P 18 06 54.7 +0.1
AKASG pmax pmax
comp=Z,1.0nm,0.6s
AKASG Malin Array Be 30.58 325 P P 18 06 54.7 +0.1
AKASG Malin Array Be 30.58 325 P P 18 06 54.7 +0.1
comp=Z,1.0nm,0.6s,mb3.8
AKBB Malin Array Si 30.58 325 *e*P P 18 06 54.4 -0.2
AKBB Malin Array Si 30.58 325 *e*P P 18 06 54.4 -0.2
KIEV Kiev 30.58 325 *e*P P 18 06 54.3 -0.3
KIEV pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
KIEV Kiev 30.58 325 *e*P P 18 06 54.3 -0.3
comp=Z,2.8nm,0.6s,mb4.3
KIEV Kiev 30.58 325 *e*P P 18 06 54.3 -0.3
comp=Z,2.8nm,0.6s,mb4.3
NVS Novosibirsk 33.02 29 *i* P P 18 07 15.4 -0.6
NVS Novosibirsk 33.02 29 *i* P P 18 07 15.4 -0.6
ZAA0 Zalesovo Array 33.12 31 *e*P P 18 07 16.1 -0.8
ZAA0 Zalesovo Array 33.12 31 *e*P P 18 07 16.1 -0.8
ZALV Zalesovo Beam 33.12 31 P P 18 07 16.9 -0.1
comp=Z,7.1nm,0.5s,mb4.9,baz=241,slow=9.4,SNR=39
ZALV Zalesovo Beam 33.12 31 P P 18 07 16.9 0.0
ZALV pmax pmax
comp=Z,7.0nm,0.5s,mb4.8
GTA Gaotai 37.43 61 *e*P P 18 07 54.5 +0.3
GTA pP pP 18 08 03.3 +6.0
GTA sP sP 18 08 07.8 +9.3
GTA pmax pmax
comp=Z,3.0nm,1.2s,mb4.0
JOF Joensuu 38.52 342 *e*p P 18 07 53.1 -10
KHC Kasperske Hory 38.90 315 *e*P P 18 08 05.2 -1.2
KHC pmax pmax
comp=Z,2.0nm,0.7s,mb4.0
KHC Kasperske Hory 38.90 315 *e*P P 18 08 05.2 -1.2
comp=Z,1.9nm,0.7s,mb3.9
KHC Kasperske Hory 38.90 315 *e*P P 18 08 05.2 -1.2
comp=Z,1.9nm,0.7s,mb3.9
FINES FINESS Array B 39.02 337 P P 18 08 07.9 +0.7
comp=Z,1.0nm,0.5s,mb3.8,baz=152,slow=9.5,SNR=7.8
FINES FINESS Array B 39.02 337 P P 18 08 07.9 +0.6
FINES pmax pmax
comp=Z,1.0nm,0.5s
FINES FINESS Array B 39.02 337 P P 18 08 07.9 +0.6
comp=Z,1.0nm,0.5s,mb3.8
CMAR Chiang Mai Arr 39.99 94 P P 18 08 15.7 -0.2
comp=Z,0.2nm,0.5s,mb3.1,baz=298,slow=12,SNR=3.3
CMAR Chiang Mai Arr 39.99 94 P P 18 08 15.7 -0.2
KEST Kesra 40.42 293 P P 18 08 21.3 +2.0
comp=Z,0.4nm,0.4s,mb3.5,baz=30,slow=8.1,SNR=2.8
SBF Sospel 42.07 305 *e*P P 18 08 32.1 -0.7
SBF Sospel 42.07 305 *e*P P 18 08 32.1 -0.7
FRF La Foret Royal 42.62 305 *e*P P 18 08 36.4 -0.8
FRF La Foret Royal 42.62 305 *e*P P 18 08 36.4 -0.8
MBDF Montbardon 42.63 307 *e*P P 18 08 36.7 -0.6
MBDF Montbardon 42.63 307 *e*P P 18 08 36.7 -0.6
LPG La Plagne 42.73 308 *e*P P 18 08 37.5 -0.6
LPG La Plagne 42.73 308 *e*P P 18 08 37.5 -0.6
LPL La Plagne 42.74 308 *e*P P 18 08 37.9 -0.3
LPL La Plagne 42.74 308 *e*P P 18 08 37.9 -0.3
HINF Hinteralfeld 42.97 311 *e*P P 18 08 39.6 -0.4
comp=Z,3.0nm,0.5s,mb4.0
HINF Hinteralfeld 42.97 311 *e*P P 18 08 39.6 -0.4
HINF pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
HINF Hinteralfeld 42.97 311 *e*P P 18 08 39.6 -0.4
comp=Z,1.5nm,0.5s,mb4.0
HINF Hinteralfeld 42.97 311 *e*P P 18 08 39.6 -0.4
comp=Z,1.5nm,0.5s,mb4.0
SONM Songino Array 43.16 49 P P 18 08 41.7 +0.2
comp=Z,1.6nm,1.0s,mb3.7,baz=260,slow=8.6,SNR=8.5
SONM Songino Array 43.16 49 P P 18 08 41.7 +0.2
SONM pmax pmax
comp=Z,2.0nm,1.0s
SONM Songino Array 43.16 49 P P 18 08 41.7 +0.2
comp=Z,2.0nm,1.0s,mb3.8
ORIF Oris-en-Rattie 43.28 307 *e*P P 18 08 41.8 -0.8
ORIF Oris-en-Rattie 43.28 307 *e*P P 18 08 41.8 -0.8
VIVF Saint-Julien-l 44.13 307 *e*P P 18 08 48.6 -0.8
VIVF Saint-Julien-l 44.13 307 *e*P P 18 08 48.6 -0.8
MEZF Maizieres J'vi 44.27 312 *e*P P 18 08 50.5 +0.1
comp=Z,6.8nm,0.5s,mb4.4
MEZF Maizieres J'vi 44.27 312 *e*P P 18 08 50.5 +0.1
comp=Z,6.8nm,0.5s,mb4.6
MEZF Maizieres J'vi 44.27 312 *e*P P 18 08 50.5 +0.1
comp=Z,3.4nm,0.5s,mb4.4
NB2 NORSAR Subarra 44.62 331 P P 18 08 52.9 -0.2
comp=Z,2.0nm,0.8s,mb4.0,baz=117,slow=7.9
NB2 NORSAR Subarra 44.62 331 P P 18 08 52.9 -0.2
comp=Z,2.0nm,0.8s,mb4.0,SNR=4.1
NOA NORSAR Array B 44.62 331 P P 18 08 52.9 -0.2
comp=Z,1.0nm,0.9s,mb3.7,baz=118,slow=8.2,SNR=3.5
NOA NORSAR Array B 44.62 331 P P 18 08 52.9 -0.2
NOA pmax pmax
comp=Z,1.0nm,0.9s
NOA NORSAR Array B 44.62 331 P P 18 08 52.9 -0.2
comp=Z,1.0nm,0.9s,mb3.6
GIVF Givet 44.66 314 *e*P P 18 08 52.9 -0.7
GIVF Givet 44.66 314 *e*P P 18 08 52.9 -0.7
SMF Signal de Mont 44.86 309 *e*P P 18 08 54.4 -0.8
comp=Z,3.9nm,0.5s,mb4.2
SMF Signal de Mont 44.86 309 *e*P P 18 08 54.4 -0.8
SMF pmax pmax
comp=Z,2.0nm,0.5s,mb4.2
SMF Signal de Mont 44.86 309 *e*P P 18 08 54.4 -0.8
comp=Z,2.0nm,0.5s,mb4.2
SMF Signal de Mont 44.86 309 *e*P P 18 08 54.4 -0.8
comp=Z,2.0nm,0.5s,mb4.2
LOR Lormes 44.91 310 *e*P P 18 08 55.3 -0.3
comp=Z,2.5nm,0.5s,mb4.0
LOR Lormes 44.91 310 *e*P P 18 08 55.3 -0.3
LOR pmax pmax
comp=Z,1.0nm,0.5s,mb3.9
LOR Lormes 44.91 310 *e*P P 18 08 55.3 -0.3
comp=Z,1.3nm,0.5s,mb4.0
LOR Lormes 44.91 310 *e*P P 18 08 55.3 -0.3
comp=Z,1.2nm,0.5s,mb4.0
SSF Saint Saulge 45.13 310 *e*P P 18 08 56.3 -1.0
SSF Saint Saulge 45.13 310 *e*P P 18 08 56.3 -1.0
ARCES ARCESS Array B 45.18 345 P P 18 08 57.5 +0.1
comp=Z,0.7nm,0.7s,mb3.6,baz=141,slow=8.8,SNR=5.1
ARCES ARCESS Array B 45.18 345 P P 18 08 57.5 +0.1
ARCES pmax pmax
comp=Z,1.0nm,0.7s
ARCES ARCESS Array B 45.18 345 P P 18 08 57.5 +0.1
comp=Z,1.0nm,0.7s,mb3.8
BGF Bois d'Agland 45.53 309 *e*P P 18 09 00.1 -0.5
BGF Bois d'Agland 45.53 309 *e*P P 18 09 00.1 -0.5
MTLF Montolieu 45.83 304 *e*P P 18 09 02.9 -0.1
MTLF Montolieu 45.83 304 *e*P P 18 09 02.9 -0.1
TCF Toulx Ste Croi 45.95 308 *e*P P 18 09 03.6 -0.3
comp=Z,3.3nm,0.5s,mb4.3
TCF Toulx Ste Croi 45.95 308 *e*P P 18 09 03.6 -0.3
TCF pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
TCF Toulx Ste Croi 45.95 308 *e*P P 18 09 03.6 -0.3
comp=Z,1.6nm,0.4s,mb4.3
TCF Toulx Ste Croi 45.95 308 *e*P P 18 09 03.6 -0.3
comp=Z,1.6nm,0.5s,mb4.2
CAF Calviac 45.98 307 *e*P P 18 09 02.5 -1.7
CAF Calviac 45.98 307 *e*P P 18 09 02.5 -1.7
TAM Tamanrasset 46.05 275 *e*P P 18 09 05.5 +0.5
TAM pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
TAM Tamanrasset 46.05 275 *e*P P 18 09 05.5 +0.5
comp=Z,2.8nm,0.8s,mb4.2
TAM Tamanrasset 46.05 275 *e*P P 18 09 05.5 +0.5
comp=Z,2.8nm,0.8s,mb4.2
RJF Les Rejaudoux 46.39 307 *e*P P 18 09 06.9 -0.4
comp=Z,2.7nm,0.4s,mb4.2
RJF Les Rejaudoux 46.39 307 *e*P P 18 09 06.9 -0.4
RJF pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
RJF Les Rejaudoux 46.39 307 *e*P P 18 09 06.9 -0.4
comp=Z,1.4nm,0.4s,mb4.2
RJF Les Rejaudoux 46.39 307 *e*P P 18 09 06.9 -0.4
comp=Z,1.4nm,0.4s,mb4.2
MFF Saint Martin d 47.60 309 *e*P P 18 09 15.9 -0.9
MFF Saint Martin d 47.60 309 *e*P P 18 09 15.9 -0.9
LDF La Druitiere 47.69 311 *e*P P 18 09 16.5 -1.0
comp=Z,5.8nm,0.4s,mb4.7
LDF La Druitiere 47.69 311 *e*P P 18 09 16.5 -1.0
LDF pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
LDF La Druitiere 47.69 311 *e*P P 18 09 16.5 -1.0
comp=Z,2.9nm,0.4s,mb4.7
LDF La Druitiere 47.69 311 *e*P P 18 09 16.5 -1.0
comp=Z,2.9nm,0.4s,mb4.7
ETSF Etsaut 47.87 304 *e*P P 18 09 19.1 +0.2
ETSF Etsaut 47.87 304 *e*P P 18 09 19.1 +0.2
FLN La Foliniere 47.94 312 *e*P P 18 09 18.3 -1.1
comp=Z,3.8nm,0.5s,mb4.4
FLN La Foliniere 47.94 312 *e*P P 18 09 18.3 -1.1
FLN pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
FLN La Foliniere 47.94 312 *e*P P 18 09 18.3 -1.1
comp=Z,1.9nm,0.4s,mb4.5
FLN La Foliniere 47.94 312 *e*P P 18 09 18.3 -1.1
comp=Z,1.9nm,0.5s,mb4.4
GRR Gorron 48.17 311 *e*P P 18 09 20.5 -0.6
GRR Gorron 48.17 311 *e*P P 18 09 20.5 -0.6
SJPF Ste Jean 48.35 304 *e*P P 18 09 22.6 0.0
SJPF Ste Jean 48.35 304 *e*P P 18 09 22.6 0.0
SGMF Saint Gilles 49.29 311 *e*P P 18 09 29.3 -0.5
comp=Z,11nm,0.7s,mb4.7
SGMF Saint Gilles 49.29 311 *e*P P 18 09 29.3 -0.5
SGMF pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
SGMF Saint Gilles 49.29 311 *e*P P 18 09 29.3 -0.5
comp=Z,5.6nm,0.7s,mb4.7
SGMF Saint Gilles 49.29 311 *e*P P 18 09 29.3 -0.5
comp=Z,5.6nm,0.7s,mb4.7
QUIF Quistinic 49.69 310 *e*P P 18 09 32.3 -0.6
QUIF Quistinic 49.69 310 *e*P P 18 09 32.3 -0.6
ESDC Sonseca Array 50.64 300 P P 18 09 39.7 -0.5
comp=Z,0.1nm,0.3s,mb3.2,baz=70,slow=6.2,SNR=3.5
ESDC Sonseca Array 50.64 300 P P 18 09 39.7 -0.5
KSRS Korea Array 59.51 61 P P 18 10 42.7 -1.6
comp=Z,1.4nm,0.6s,mb4.2,baz=278,slow=6.7,SNR=10
KSRS Korea Array 59.51 61 P P 18 10 42.7 -1.6
KSRS pmax pmax
comp=Z,1.0nm,0.6s,mb4.0
KSRS Korea Array 59.51 61 P P 18 10 42.7 -1.6
comp=Z,1.0nm,0.6s,mb4.0
BOSA Boshof 63.82 211 P P 18 11 12.4 -0.9
comp=Z,1.2nm,0.4s,mb4.2,baz=45,slow=8.6,SNR=8.7
BOSA Boshof 63.82 211 P P 18 11 12.5 -0.9
BOSA pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
BOSA Boshof 63.82 211 P P 18 11 12.4 -1.0
BILL Bilibino 71.25 22 ||*e*P P 18 11 58.9 -0.9
BILL pmax pmax
comp=Z,3.0nm,1.7s,mb4.0
BILL Bilibino 71.25 22 *e*P P 18 11 58.9 -0.9
comp=Z,3.0nm,1.7s,mb4.0
SCHQ Schefferville 84.19 331 P P 18 13 12.0 -0.2
comp=Z,1.8nm,0.8s,mb4.3,baz=12,slow=9.2,SNR=4.4
SCHQ Schefferville 84.19 331 P P 18 13 12.0 -0.2
SCHQ Schefferville 84.19 331 P P 18 13 12.0 -0.2
EGAK Eagle 86.42 7 *e*P P 18 13 21.5 -1.7
comp=Z,5.3nm,1.2s,mb4.7
EGAK Eagle 86.42 7 *e*P P 18 13 21.5 -1.7
comp=Z,5.3nm,1.2s,mb4.7
WRA Warramunga Arr 89.08 113 P P 18 13 35.9 -0.7
comp=Z,1.2nm,1.0s,mb4.2,baz=310,slow=4.1,SNR=5.1
WRA Warramunga Arr 89.08 113 P P 18 13 35.9 -0.7
WRA pmax pmax
comp=Z,1.0nm,1.0s
WRA Warramunga Arr 89.08 113 P P 18 13 35.9 -0.7
comp=Z,1.0nm,1.0s,mb4.1
YKA Yellowknife Ar 89.45 356 P P 18 13 37.2 -0.5
comp=Z,0.8nm,0.6s,mb4.2,baz=0.7,slow=4.7,SNR=3.5
YKA Yellowknife Ar 89.45 356 P P 18 13 37.2 -0.5
YKA pmax pmax
comp=Z,1.0nm,0.6s
YKA Yellowknife Ar 89.45 356 P P 18 13 37.2 -0.5
comp=Z,1.0nm,0.6s,mb4.3
ASAR Alice Springs 90.60 117 P P 18 13 42.5 -1.2
comp=Z,0.4nm,0.8s,mb3.8,baz=301,slow=4.9,SNR=5.7
ASAR Alice Springs 90.60 117 P P 18 13 42.5 -1.2

*IDC **29** 18:01:46.2±1.0, 10°.92S×118°.67E, h0km, mb3.7/5, mb1 3.6/8, mb1mx3.5/20, mbtmp3.5/8, ML3.0/3, Error ellipse: s-maj=54.6km s-min=18.9km az=62.0*
*NEIC **29** 18:01:50.9±0.8, 11°.01S×118°.70E, h35km, mb3.4/1, Error ellipse: s-maj=37.1km s-min=12.3km az=56.0*
*ISCJB **29** 18:01:50.4±4.0, 10°.9S±0°.2×119°.1E±0°.2, h54km±39km, mb3.6/6, Error ellipse: s-maj=37.2km s-min=14.6km az=42.5*
ISC 29 18:01:54.4±3.8, 11°.0S±0°.2×119°.2E±0°.3, h75km±40km, n10, σ0°71/12, mb3.5/6, South of Sumba

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	9.44	139	Pn	Pn	Pn	18 04 07.6	+0.1
0.2nm,0.3s,baz=270,slow=20,SNR=16								
FITZ				Sn	Sn	Sn	18 05 47.2	-4.9
0.4nm,0.3s,baz=324,slow=18,SNR=3.5								
WRA	Warramunga Arr	17.10	123	P	Pn	Pn	18 05 53.7	+5.1
0.1nm,0.3s,baz=295,slow=13,SNR=5.8								
WRA				S		S	18 08 56.5	-7.2
0.1nm,0.3s,baz=293,slow=28,SNR=4.0								
ASAR	Alice Springs	18.86	134	P	Pn	Pn	18 06 13.2	+3.2
0.0nm,0.3s,baz=312,slow=9.9,SNR=6.0								
NWAO	Narrogin (SRO)	21.89	184	P		P	18 06 41.3	0.0
7.2nm,0.7s,mb4.1,baz=22,slow=15,SNR=5.2								
STKA	Stephens Creek	29.33	139	P		P	18 07 50.1	0.0
0.7nm,0.9s,mb3.3								
SONM	Songino Array	59.66	350	P		P	18 11 50.5	-0.3
0.2nm,0.5s,mb3.5,baz=157,slow=7.8,SNR=2.3								
MK31	Makanchi Array	66.30	333	*e*P		P	18 12 34.0	-0.8
MKAR	Makanchi Array	66.30	333	P		P	18 12 35.0	+0.2
0.4nm,0.4s,mb3.6,baz=154,slow=7.6,SNR=12								
KURK	Kurchatov	70.86	334	P		P	18 13 03.3	+0.2
0.3nm,0.6s,mb3.3,baz=141,slow=5.5,SNR=2.4								
ZALV	Zalesovo Beam	70.96	339	P		P	18 13 04.2	+0.5
0.5nm,0.6s,mb3.5,baz=129,slow=6.1,SNR=3.4								

*CSEM **29** 18:06:19.3±0.1, 41°.88N×22°.85E, h15km, ML2.9/4, Error ellipse: s-maj=2.5km s-min=1.5km az=71.0*
*THE **29** 18:06:20.7, 41°.78N×22°.98E, h9km±1km, ML2.9/4, Error ellipse: s-maj=2.6km s-min=1.0km az=301.0*
*SKO **29** 18:06:20.1, 41°.87N×22°.91E, h2km, M1.8, ML2.1*
*ISCJB **29** 18:06:20.5±0.6, 41°.83N±0°.02×22°.92E±0°.05, h19km±7km, Error ellipse: s-maj=6.2km s-min=3.6km az=161.6*
*BEO **29** 18:06:21.1±0.7, 41°.88N×22°.79E, h0km, ML2.2/4*
ISC 29 18:06:19.4±0.7, 41°.88N±0°.02×22°.86E±0°.09, h16km±10km, n33, σ0°45/61, 5C-2D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
VAY	Valandovo	0.59	201	||*i*Pg	Pg	18 06 31.5	+0.4
VAY				*i* Sg		Sg	18 06 39.3	+0.3
VAY	Valandovo	0.59	201	||*i*Pg	Pg	18 06 31.4	+0.3
VAY				*i* Sg		Sg	18 06 39.5	+0.5
VAY				*e*Lg			18 06 40.0	
comp=E,74nm,0.3s								
VAY				*e*Lg			18 06 41.1	
comp=N,59nm,0.3s								
VAY	Valandovo	0.59	201	P		Pg	18 06 31.4	+0.3
VAY				S		Sg	18 06 38.7	-0.3

VAY	**Valandovo**	**0.59 201**	P	**Pg**	**18 06 31.4 +0.3**
VAY			S	**Sg**	**18 06 38.7 -0.3**
VAY			*i* Sg	**Sg**	**18 06 39.3 +0.3**
SOH	**Sokhos**	**1.12 160**	P	**Pb**	**18 06 39.9 -0.5**
SOH			S	**Sb**	**18 06 53.6 -1.0**
SOH	**Sokhos**	**1.12 160**	P	**Pb**	**18 06 39.9 -0.5**
SOH			S	**Sb**	**18 06 53.6 -1.0**
BARS	**Barje**	**1.22 321** ⇑	*i* Pg	**Pg**	**18 06 42.8 -0.1**
BARS			*i* Sg	**Sg**	**18 06 58.9 +0.1**
BARS	**Barje**	**1.22 321** ⇑	*i* Pg	**Pg**	**18 06 42.8 -0.1**
BARS			*i* Sg	**Sg**	**18 06 58.9 +0.1**
THE	**Thessaloniki**	**1.25 176**	P	**Pn**	**18 06 42.3 +0.2**
THE			S	**Sb**	**18 06 58.7 +0.4**
THE	**Thessaloniki**	**1.25 176**	P	**Pn**	**18 06 42.3 +0.2**
THE			S	**Sb**	**18 06 58.7 +0.4**
HORT	**Hortiatis**	**1.29 172**	P	**Pn**	**18 06 43.1 +0.3**
HORT			S	**Sb**	**18 06 59.2 -0.4**
HORT	**Hortiatis**	**1.29 172**	P	**Pn**	**18 06 43.1 +0.3**
HORT			S	**Sb**	**18 06 59.2 -0.4**
PLD	**Plovdiv**	**1.40 80**	P	**Pn**	**18 06 44.4 +0.2**
PLD			S	**Sn**	**18 07 02.1 -0.2**
PLD	**Plovdiv**	**1.40 80**	P	**Pn**	**18 06 44.4 +0.2**
PLD			S	**Sn**	**18 07 02.1 -0.2**
ZAPS	**Zavoj**	**1.41 353** ⇓	*i* Pg	**Pg**	**18 06 46.6 +0.1**
ZAPS			*i* Sg	**Sg**	**18 07 05.4 +0.6**
KAVA	**Kavala**	**1.53 125**	P	**Pn**	**18 06 45.9 -0.1**
KAVA			S	**Sn**	**18 07 05.2 -0.3**
KAVA	**Kavala**	**1.53 125**	P	**Pn**	**18 06 45.9 -0.1**
KAVA			S	**Sn**	**18 07 05.2 -0.3**
PLG	**Polygyros**	**1.56 163**	P	**Pn**	**18 06 46.8 +0.3**
PLG			S	**Sn**	**18 07 06.9 +0.4**
PLG	**Polygyros**	**1.56 163**	P	**Pn**	**18 06 46.8 +0.3**
PLG			S	**Sn**	**18 07 06.9 +0.4**
NISS		**1.67 337** ⇑	*i* Pg	**Pg**	**18 06 51.1 -0.4**
NISS			*i* Sg	**Sg**	**18 07 12.8 -0.4**
NISS		**1.67 337** ⇑	*i* Pg	**Pg**	**18 06 51.1 -0.4**
NISS			*i* Sg	**Sg**	**18 07 12.8 -0.4**
OUR	**Ouranopolis**	**1.76 151**	P	**Pn**	**18 06 48.7 -0.5**
OUR			S	**Sn**	**18 07 12.1 +0.8**
OUR	**Ouranopolis**	**1.76 151**	P	**Pn**	**18 06 48.7 -0.5**
OUR			S	**Sn**	**18 07 12.1 +0.8**
PAIG	**Paliouri**	**2.04 162**	P	**Pn**	**18 06 53.2 +0.1**
PAIG			S	**Sn**	**18 07 17.3 -1.0**
PAIG	**Paliouri**	**2.04 162**	P	**Pn**	**18 06 53.2 +0.1**
PAIG			S	**Sn**	**18 07 17.3 -1.0**
RDO	**Rodhopi**	**2.14 109**	P	**Pn**	**18 06 55.2 +0.7**
RDO			S	**Sn**	**18 07 20.7 0.0**
RDO	**Rodhopi**	**2.14 109**	P	**Pn**	**18 06 55.2 +0.7**
RDO			S	**Sn**	**18 07 20.7 0.0**
XOR	**Xorichti**	**2.52 174**	P	**Pn**	**18 07 00.0 +0.3**
XOR	**Xorichti**	**2.52 174**	P	**Pn**	**18 07 00.0 +0.3**
ALN	**Alexandroupoli**	**2.59 111**	P	**Pn**	**18 07 01.0 +0.3**
ALN	**Alexandroupoli**	**2.59 111**	P	**Pn**	**18 07 01.0 +0.3**
BZS	**Buzias**	**3.85 347**	*i* Sg	**Sg**	**18 08 22.4 -0.5**
BZS	**Buzias**	**3.85 347**	*i* Sg	**Sg**	**18 08 22.4 -0.5**

*IDC **29** 18:08:50.5±0.8, 9.˚10N×125.˚95E, h0km, mb3.9/8, mb1 3.9/8, mb1mx3.7/23, mbtmp3.9/8, Error ellipse: s-maj=43.3km s-min=16.1km az=79.0*
*NEIC **29** 18:08:55.2±0.5, 9.˚15N×126.˚14E, h35km, mb3.6/2, Error ellipse: s-maj=29.3km s-min=10.1km az=76.0*
*MAN **29** 18:08:57, 9.˚19N×126.˚35E, h31km, mb5.1, ML4.1, MS4.3*
*ISCJB **29** 18:08:57.5±0.9, 9.˚16N±0.˚04×126.˚34E±0.˚07, h74km±9km, mb3.8/9, Error ellipse: s-maj=11.8km s-min=6.1km az=159.3*

ISC 29 18:08:58.6±0.8, 9.˚15N±0.˚04×126.˚34E±0.˚07, h64km±10km, n30, σ1s04/36, mb3.8/9, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.73 256**		*eP*	**Pn**	**18 09 11.3**	**-2.2**
CGP	**Cagayan de Oro**	**1.77 247**		⇓ *iP*	**Pn**	**18 09 25.9**	**-1.0**
CGP				*i* S	**Sn**	**18 09 48.4**	**-0.1**
BUKP	**Musuan**	**1.78 225**		*eP*	**Pn**	**18 09 28.1**	**+0.8**
BUKP				*eS*	**Sn**	**18 09 47.9**	**-1.0**
MATI	**Mati**	**2.19 182**		*eP*	**Pn**	**18 09 33.6**	**+0.9**
MATI				*eS*	**Sn**	**18 09 57.9**	**-0.8**
TBP	**Tagbilaran**	**2.50 283**		*eP*	**Pn**	**18 09 36.9**	**-0.1**
TBP				*eS*	**Sn**	**18 10 05.6**	**-0.9**
OCLP	**Ormoc**	**2.55 318**		*eP*	**Pn**	**18 09 38.3**	**+0.7**
LLP	**Lapu-Lapu**	**2.61 297**	⇑	*eP*	**Pn**	**18 09 38.9**	**+0.4**
LLP				*eS*	**Sn**	**18 10 09.3**	**+0.1**
SNPH	**Sibulan**	**3.07 274**	⇑	*eP*	**Pn**	**18 09 44.8**	**0.0**
SNPH				*eS*	**Sn**	**18 10 21.6**	**+1.3**
PAGZ	**Pagadian**	**3.20 246**		*eP*	**Pn**	**18 09 48.1**	**+1.6**
PAGZ				*eS*	Sn	18 09 56.7	-27
CNP	**Cataman**	**3.73 334**		*eP*	**Pn**	**18 09 53.2**	**-0.5**
IPIL	**Ipil**	**3.96 250**		*eP*	**Pn**	**18 09 59.7**	**+2.8**
GUIM	**Jordan**	**3.98 292**		*eP*	**Pn**	**18 09 56.8**	**-0.3**
PVCP	**Virac**	**4.92 334**		*eP*	**Pn**	**18 10 09.5**	**-0.5**
CUYO	**Cuyo Island**	**5.51 288**		*eP*	**Pn**	**18 10 19.2**	**+1.1**
ENPP	**El Nido**	**7.11 287**		*eP*	**Pn**	**18 10 40.8**	**+0.8**
BALP	**Baler**	**8.04 325**		*eP*	**Pn**	**18 10 49.6**	**-3.2**
FITZ	**Fitzroy Crossi**	**27.08 181**		P	**P**	**18 14 35.7**	**+0.3**
	1.7nm,0.9s,mb3.6,baz=23,slow=7.7,SNR=3.6						
WRAB	**Tennant Creek**	**29.95 165**		*eP*	**P**	**18 15 01.4**	**+0.4**
	3.0nm,1.0s,mb4.0						
WRA	**Warramunga Arr**	**29.96 165**		P	**P**	**18 15 00.5**	**-0.4**
	0.4nm,0.6s,mb3.3,baz=343,slow=8.8,SNR=8.2						
WRA	**Warramunga Arr**	**29.96 165**		P	**P**	**18 15 00.5**	**-0.4**
ASAR	**Alice Springs**	**33.44 167**		P	**P**	**18 15 31.6**	**+0.1**
	0.4nm,0.5s,mb3.6,baz=347,slow=7.5,SNR=12						
ASAJ	**Asahikawa**	**37.60 19**		P	**P**	**18 16 08.7**	**+1.7**
	1.1nm,0.3s,mb4.0,baz=228,slow=12,SNR=3.9						
STKA	**Stephens Creek**	**43.32 161**		P	**P**	**18 16 54.6**	**+0.3**
	4.1nm,1.1s,mb4.1,baz=356,slow=8.6,SNR=6.3						
STKA	**Stephens Creek**	**43.32 161**		*eP*	**P**	**18 16 53.4**	**-0.9**
	0.2nm,0.3s,mb3.3						
PETK	**Petropavlovsk-**	**50.63 24**		P	**P**	**18 17 52.4**	**+1.3**
	1.1nm,0.5s,mb4.0,baz=195,slow=2.4,SNR=8.4						
MK31	**Makanchi Array**	**52.96 323**		*eP*	**P**	**18 18 07.0**	**-1.6**
MKAR	**Makanchi Array**	**52.96 323**		P	**P**	**18 18 07.5**	**-1.1**
	0.9nm,0.7s,mb3.8,baz=118,slow=8.6,SNR=7.3						
MKAR	**Makanchi Array**	**52.96 323**		P	**P**	**18 18 07.5**	**-1.1**
KURK	**Kurchatov**	**57.03 326**		P	**P**	**18 18 36.5**	**-1.3**
	0.8nm,0.4s,mb4.1,baz=123,slow=7.4,SNR=10						
SVW2	**Sparrevohn**	**76.28 29**		*eP*	**P**	**18 20 40.0**	**-0.3**

*NEIC **29** 18:12:10.2, 31.˚53S×69.˚68W, h155km, MD3.7(GUC), After GUC.*

GUC 29 18:12:10.2±0.6, 31.˚53S×69.˚68W, h155km±9km, MD3.7, ML3.7, 14C-3D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**1.18 287**		*eP*	Pn	18 12 37.6	+0.6
CMCH				*i* S	Sn	18 12 58.2	+0.8
CMCH	**Combarbala**	**1.18 287**		*eP*	Pn	18 12 37.6	+0.6
CMCH				*i* S	Sn	18 12 58.2	+0.8
CMCH				AML	AML	18 12 59.7	
	comp=E,2μm,0.3s						
JACH	**Jahuel**	**1.38 214**		*eP*	Pn	18 12 39.5	+0.6
JACH				*i* S	Sn	18 13 01.7	+0.8
JACH	**Jahuel**	**1.38 214**		*eP*	Pn	18 12 39.5	+0.6
JACH				*i* S	Sn	18 13 01.7	+0.8
TLL	**Tololo Astrono**	**1.67 324**	⇑	*iP*	Pn	18 12 43.0	+1.1
TLL				*i* S	Sn	18 13 07.3	+1.2
TLL	**Tololo Astrono**	**1.67 324**	⇑	*iP*	Pn	18 12 43.0	+1.1
TLL				*i* S	Sn	18 13 07.3	+1.2
TLL				AML	AML	18 13 11.3	
	comp=N,206nm,0.3s						
PEL	**Peldehue**	**1.82 208**	⇓	*iP*	Pn	18 12 44.0	+0.5
PEL				*i* S	Sn	18 13 09.5	+0.4
PEL				AML	AML	18 13 10.9	
	comp=E,1μm,0.3s						
ROCH	**El Roble**	**1.82 218**		*eP*	Pn	18 12 44.6	+1.1
ROCH				*i* S	Sn	18 13 10.3	+1.0
ROCH	**El Roble**	**1.82 218**		*eP*	Pn	18 12 44.6	+1.1
ROCH				*i* S	Sn	18 13 10.3	+1.0
FCH	**Farellones**	**1.86 196**	⇑	*iP*	Pn	18 12 41.8	-2.1
FCH				*i* S	Sn	18 13 08.6	-1.4
FCH				AML	AML	18 13 14.1	
	comp=E,644nm,0.1s						
CLCH	**Cerro Calan**	**1.99 201**	⇑	*iP*	Pn	18 12 46.3	+0.9
CLCH				*i* S	Sn	18 13 13.4	+0.7
CLCH				AML	AML	18 13 14.9	
	comp=E,503nm,0.6s						
FSR	**Penalolen**	**2.07 200**		*eP*	Pn	18 12 47.1	+0.7
FSR				*i* S	Sn	18 13 14.9	+0.7
FSR	**Penalolen**	**2.07 200**		*eP*	Pn	18 12 47.1	+0.7
FSR				*i* S	Sn	18 13 14.9	+0.7
SAN	**Santiago**	**2.09 203**		*eP*	Pn	18 12 47.1	+0.5
SAN				*i* S	Sn	18 13 15.1	+0.5
SAN	**Santiago**	**2.09 203**		*eP*	Pn	18 12 47.1	+0.5
SAN				*i* S	Sn	18 13 15.1	+0.5
SAN				AML	AML	18 13 17.5	
	comp=N,267nm,0.2s						
SJCH	**San Jose de Ma**	**2.18 195**		*eP*	Pn	18 12 48.5	+0.9
SJCH				*i* S	Sn	18 13 17.4	+0.9
SJCH	**San Jose de Ma**	**2.18 195**		*eP*	Pn	18 12 48.5	+0.9
SJCH				*i* S	Sn	18 13 17.4	+0.9
SJCH				AML	AML	18 13 22.0	
	comp=E,183nm,0.2s						
ANTU	**Antumapu**	**2.18 201**	⇓	*iP*	Pn	18 12 48.4	+0.8
ANTU				*i* S	Sn	18 13 17.0	+0.4
ANTU	**Antumapu**	**2.18 201**	⇓	*iP*	Pn	18 12 48.4	+0.8
ANTU				*i* S	Sn	18 13 17.0	+0.4
ANTU				AML	AML	18 13 19.5	
	comp=E,590nm,0.2s						
PCH	**Pirque**	**2.20 198**	⇑	*iP*	Pn	18 12 48.7	+0.8
PCH				*i* S	Sn	18 13 18.0	+1.1
PCH	**Pirque**	**2.20 198**	⇑	*iP*	Pn	18 12 48.7	+0.8
PCH				*i* S	Sn	18 13 18.0	+1.1
LMEL	**Las Melosas**	**2.35 191**	⇑	*iP*	Pn	18 12 50.1	+0.5
LMEL				*i* S	Sn	18 13 25.6	+5.4
LMEL	**Las Melosas**	**2.35 191**	⇑	*iP*	Pn	18 12 50.1	+0.5
LMEL				*i* S	Sn	18 13 25.6	+5.4
LMEL				AML	AML	18 13 28.5	
	comp=N,340nm,0.2s						
TACH	**Talagante**	**2.37 206**	⇑	*iP*	Pn	18 12 50.3	+0.5
TACH				*i* S	Sn	18 13 21.1	+0.6
TACH	**Talagante**	**2.37 206**	⇑	*iP*	Pn	18 12 50.3	+0.5
TACH				*i* S	Sn	18 13 21.1	+0.6
CHCH	**Chadas Angostu**	**2.53 199**	⇑	*iP*	Pn	18 12 52.8	+0.9
CHCH	**Chadas Angostu**	**2.53 199**	⇑	*iP*	Pn	18 12 52.8	+0.9
LCO	**Las Campanas**	**2.66 340**		*ePn*	Pn	18 12 54.0	+0.5
LCO				*eSn*	Sn	18 13 22.8	-4.2
CACH	**El Canelo**	**2.69 196**	⇑	*iP*	Pn	18 12 54.8	+1.0
CACH				*i* S	Sn	18 13 28.9	+1.3
CACH	**El Canelo**	**2.69 196**	⇑	*iP*	Pn	18 12 54.8	+1.0
CACH				*i* S	Sn	18 13 28.9	+1.3
TRQA	**Tornquist**	**9.08 138**		*ePn*	Pn	18 14 15.1	-2.7

*IDC **29** 18:13:43.0±2.3, 5.˚89S×130.˚45E, h0km, mb3.8/1, mb1 3.6/4, mb1mx3.4/16, mbtmp3.5/4, ML3.0/3, Error ellipse: s-maj=96.9km s-min=28.0km az=77.0*
*ISCJB **29** 18:13:45.3±1.2, 6.˚0S±0.˚1×130.˚3E±0.˚3, h33km, mb3.6/2, Error ellipse: s-maj=42.4km s-min=13.8km az=162.9*
*NEIC **29** 18:13:47.4±1.1, 5.˚97S×130.˚40E, h35km, mb3.6/1, Error ellipse: s-maj=38.6km s-min=12.8km az=73.0*

ISC 29 18:13:47.5±1.2, 6.˚0S±0.˚1×130.˚4E±0.˚3, h35km, n7, σ0s87/9, mb3.6/2, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.91 201**		Pn	**Pn**	**18 16 48.2**	**-0.4**
	0.0nm,0.3s,baz=84,slow=19,SNR=1.9						
FITZ				Sn	**Sn**	**18 18 57.6**	**-14**
	0.2nm,0.3s,baz=63,slow=2.3,SNR=4.6						
WRAB	**Tennant Creek**	**14.40 165**		*eP*	**Pn**	**18 17 09.2**	**+0.2**
	1.0nm,0.3s						
WRA	**Warramunga Arr**	**14.40 165**		Pn	**Pn**	**18 17 09.5**	**+0.5**
	0.1nm,0.3s,baz=350,slow=13,SNR=6.6						
WRA				Sn	**Sn**	**18 19 37.0**	**-11**
	0.4nm,0.3s,baz=346,slow=23,SNR=9.9						
ASAR	**Alice Springs**	**17.91 169**		P	**Pn**	**18 17 54.9**	**+1.0**
	0.2nm,0.3s,baz=349,slow=11,SNR=9.0						
STKA	**Stephens Creek**	**27.82 159**		*eP*	**P**	**18 19 31.7**	**-1.9**
	1.3nm,1.0s,mb3.5						
MK31	**Makanchi Array**	**67.59 326**		*eP*	**P**	**18 24 40.2**	**-0.4**
MKAR	**Makanchi Array**	**67.59 326**		P	**P**	**18 24 41.4**	**+0.8**
	0.3nm,0.3s,mb3.8,baz=126,slow=7.0,SNR=7.6						

*ISCJB **29** 18:16:18.7±0.2, 51.˚50N±0.˚01×16.˚13E±0.˚02, h0km, mb3.7/9, Error ellipse: s-maj=1.9km s-min=1.8km az=31.2*
*IPEC **29** 18:16:19.2±0.2, 51.˚60N×16.˚28E, h0km, ML3.3/4, Error ellipse: s-maj=1.4km s-min=1.3km az=16.0*
*NEIC **29** 18:16:20.6±0.3, 51.˚53N×16.˚01E, h5km, ML3.5(STR), Error ellipse: s-maj=5.9km s-min=4.3km az=163.0*
*CSEM **29** 18:16:20.7±0.1, 51.˚51N×16.˚11E, h2km, ML4.0/13, Ms3.7, Error ellipse: s-maj=2.1km s-min=2.0km az=113.0*
*LDG **29** 18:16:20.2±0.1, 51.˚48N×16.˚12E, h1km, Ml4.0/7, Error ellipse: s-maj=4.1km s-min=3.1km az=176.0, Suspected Mining induced.*
*IDC **29** 18:16:21.2±0.7, 51.˚45N×15.˚89E, h0km, mb3.7/9, mb1 3.8/17, mb1mx3.8/29, mbtmp3.7/17, ML3.8/8, Error ellipse: s-maj=10.9km s-min=7.1km az=74.0*
*PRU **29** 18:16:21.7, 51.˚48N×16.˚15E, h0km, Felt In Harrachov*
*BGR **29** 18:16:22.2±0.5, 51.˚43N×16.˚13E, h1km, ML3.6, Error ellipse: s-maj=6.7km s-min=3.3km az=22.0*
*WAR **29** 18:16:22.3, 51.˚48N×16.˚11E, ML3.4, Mining Induced*
*VIE **29** 18:16:27.4, 51.˚29N×16.˚17E, h0km, mb3.1/10, ML3.2/11, Ms3.7/1, Error ellipse: s-maj=3.3km s-min=2.5km az=12.0 62 km WNW of Wroclaw Suspected Mining induced.*
*UPP **29** 18:16:27.4, 51.˚89N×15.˚39E, h0km, ML2.3, Suspected Mining explosion.*
*STR **29** 18:16:28.3±2.3, 51.˚46N×15.˚12E, h1km, Ml4.0, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 29 18:16:20.4±0.2, 51.˚52N±0.˚01×16.˚13E±0.˚02, h0km, n228, σ1s14/322, mb3.7/9, 16C-12D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.69 171**		*ePg*	**Pg**	**18 16 34.1**	**+0.6**
KSP				*eSg*	**Sg**	**18 16 43.1**	**+0.8**
KSP	**Ksiaz**	**0.69 171**		*i Pg*	**Pg**	**18 16 34.1**	**+0.6**
KSP				*i* Sg	**Sg**	**18 16 42.9**	**+0.5**
KSP				*eL*		18 16 46.0	
KSP	**Ksiaz**	**0.69 171**		*ePg*	**Pg**	**18 16 34.1**	**+0.5**
KSP				*eSg*	**Sg**	**18 16 42.9**	**+0.5**
KSP	**Ksiaz**	**0.69 171**		Pg	**Pg**	**18 16 34.1**	**+0.6**
KSP				Sg	**Sg**	**18 16 42.9**	**+0.5**
UPC	**Upice**	**1.02 184**		*ePG*	**Pg**	**18 16 40.2**	**+0.3**
UPC	**Upice**	**1.02 184**		Pg	**Pg**	**18 16 40.2**	**+0.3**
DPC	**Dobruska-Polom**	**1.18 174**		*ePg*	**Pg**	**18 16 43.1**	**+0.1**
DPC				*eSg*	**Sg**	**18 16 57.8**	**-0.4**
DPC	**Dobruska-Polom**	**1.18 174**		*ePG*	**Pg**	**18 16 43.0**	**0.0**
DPC				*eSG*	**Sg**	**18 16 57.5**	**-0.7**
	comp=Z,264nm,0.5s						
DPC	**Dobruska-Polom**	**1.18 174**		Pg	**Pg**	**18 16 43.1**	**+0.1**
DPC				Sg	**Sg**	**18 16 57.8**	**-0.4**
PVCC	**Panska Ves**	**1.40 225**		*ePG*	**Pg**	**18 16 47.2**	**0.0**
PVCC	**Panska Ves**	**1.40 225**		*ePn*	**Pn**	**18 16 47.1**	**-0.1**
	baz=45						
PVCC				*eSg*	**Sg**	**18 17 06.5**	**+1.2**
	baz=45						
BRG	**Berggiesshubel**	**1.52 246**		*ePn*	**Pn**	**18 16 48.5**	**-0.3**
BRG				*eSg*	**Sg**	**18 17 09.9**	**+0.7**
BRG	**Berggiesshubel**	**1.52 246**		PN	**Pn**	**18 16 48.4**	**-0.4**
BRG				PG	**Pg**	**18 16 49.7**	**+0.1**
BRG				SG	**Sg**	**18 17 09.7**	**+0.5**
	comp=Z,354nm,0.5s						
BRG	**Berggiesshubel**	**1.52 246**		Pn	**Pn**	**18 16 48.5**	**-0.3**
BRG				Sg	**Sg**	**18 17 09.9**	**+0.7**
RUE	**Ruedersdorf**	**1.74 304**		*ePn*	**Pn**	**18 16 51.7**	**-0.2**
RUE				*eSn*	**Sn**	**18 17 18.5**	**+3.7**
RUE	**Ruedersdorf**	**1.74 304**		*ePn*	**Pn**	**18 16 51.7**	**-0.2**
RUE				*eSn*	**Sn**	**18 17 18.5**	**+3.7**
PRU	**Pruhonice**	**1.83 214**		*ePN*	**Pn**	**18 16 53.4**	**+0.2**
PRU				*ePG*	**Pg**	**18 16 55.0**	**-0.6**
PRU				*eSG*	**Sg**	**18 17 18.9**	**-0.4**
	comp=Z,169nm,0.5s						
PRU	**Pruhonice**	**1.83 214**		Pn	**Pn**	**18 16 53.4**	**+0.2**
PRU	**Pruhonice**	**1.83 214**		Pg	**Pg**	**18 16 55.0**	**-0.6**
PRU				Sg	**Sg**	**18 17 18.9**	**-0.4**
	comp=Z,169nm,0.5s						
GKP	**Gorka Klasztor**	**1.88 21**		*ePn*	**Pn**	**18 16 56.2**	**+2.4**
GKP				*ePg*	**Pg**	**18 17 01.9**	**+5.4**
GKP				*eSg*	**Sg**	**18 17 25.3**	**+4.5**
GKP	**Gorka Klasztor**	**1.88 21**		*ePn*	**Pn**	**18 16 56.2**	**+2.4**
RAC	**Raciborz**	**1.94 137**		*ePn*	**Pn**	**18 16 54.4**	**-0.3**
RAC	**Raciborz**	**1.94 137**		*ePg*	**Pg**	**18 16 57.9**	**+0.2**
RAC				*eSg*	**Sg**	**18 17 23.6**	**+0.7**
MORC	**Moravsky Berou**	**1.96 152**		*ePn*	**Pn**	**18 16 54.4**	**-0.5**
MORC				*eSg*	**Sg**	**18 17 23.9**	**+0.5**
MORC	**Moravsky Berou**	**1.96 152**		*ePn*	**Pn**	**18 16 54.3**	**-0.6**
MORC				*eSn*	**Sn**	**18 17 18.3**	**-1.9**
MORC	**Moravsky Berou**	**1.96 152**	⇓	*iP*	**Pn**	**18 16 54.7**	**-0.2**
MORC	**Moravsky Berou**	**1.96 152**	⇓	*iP*	**Pn**	**18 16 54.7**	**-0.2**
MORC				*eSn*	**Sn**	**18 17 18.3**	**-1.9**
MORC				Sg	**Sg**	**18 17 23.9**	**+0.5**
CLL	**Collm**	**1.97 265**		*ePn*	**Pn**	**18 16 54.5**	**-0.6**
CLL				*i* Pg	**Pg**	**18 16 57.8**	**-0.4**
CLL				*i* Sg	**Sg**	**18 17 24.1**	**+0.4**
CLL	**Collm**	**1.97 265**		*ePn*	**Pn**	**18 16 55.0**	**0.0**
CLL				*i* Pg	**Pg**	**18 16 57.8**	**-0.4**
CLL				*i*		18 17 01.4	
CLL				*e*		18 17 13.0	
CLL				*i* Sg	**Sg**	**18 17 24.1**	**+0.4**
	comp=Z,147nm,0.6s						
CLL	**Collm**	**1.97 265**		Pn	**Pn**	**18 16 54.5**	**-0.5**
OKC	**Ostrava-Krasne**	**2.12 142**		*ePn*	**Pn**	**18 16 56.5**	**-0.6**
OKC	**Ostrava-Krasne**	**2.12 142**		*ePN*	**Pn**	**18 16 57.0**	**0.0**
OKC				*ePG*	**Pg**	**18 17 00.6**	**-0.4**
OKC				*eSG*	**Sg**	**18 17 26.6**	**-1.8**
	comp=Z,202nm,0.6s						
OKC	**Ostrava-Krasne**	**2.12 142**		Pn	**Pn**	**18 16 57.0**	**0.0**
VRAC	**Vranov**	**2.23 172**		Pn	**Pn**	**18 16 59.0**	**+0.4**
	comp=Z,7.4nm,0.3s,baz=332,slow=14,SNR=43						
VRAC				Lg		18 17 30.6	
	comp=Z,40nm,0.3s,baz=68,slow=19,SNR=14						
VRAC	**Vranov**	**2.23 172**	⇓	*iP*	**Pn**	**18 16 59.5**	**+0.9**
VRAC	**Vranov**	**2.23 172**		*ePn*	**Pn**	**18 16 58.8**	**+0.2**
VRAC	**Vranov**	**2.23 172**	⇓	*iP*	**Pn**	**18 16 59.5**	**+0.9**
VRAC				Lg		18 17 30.6	
VRAC				*eSg*	**Sg**	**18 17 31.1**	**-1.0**
	comp=Z,111nm,0.4s,baz=355						
KRUC	**Moravsky**	**2.47 176**		*ePn*	**Pn**	**18 17 02.2**	**+0.4**
	baz=358						
KRUC				*eSg*	**Sg**	**18 17 39.3**	**-0.3**
	comp=Z,89nm,0.5s,baz=358						
TANN	**Tannenbergstha**	**2.57 246**		*ePn*	**Pn**	**18 17 04.0**	**+0.8**
TANN	**Tannenbergstha**	**2.57 246**		Pn	**Pn**	**18 17 04.0**	**+0.8**
WERD	**Werda**	**2.64 248**		*ePn*	**Pn**	**18 17 04.5**	**+0.3**
WERD	**Werda**	**2.64 248**		Pn	**Pn**	**18 17 04.5**	**+0.2**
OJC	**Ojcow**	**2.66 118**		*ePn*	**Pn**	**18 17 01.5**	**-3.0**
OJC				*ePg*	**Pg**	**18 17 10.8**	**-0.6**
OJC				*eSg*	**Sg**	**18 17 46.4**	**+0.5**
OJC	**Ojcow**	**2.66 118**		*ePn*	**Pn**	**18 17 01.5**	**-3.0**
OJC	**Ojcow**	**2.66 118**		*ePg*	**Pg**	**18 17 10.8**	**-0.6**
OJC				Sg	**Sg**	**18 17 45.7**	**-0.2**
NKC	**Novy Kostel**	**2.66 243**		*ePN*	**Pn**	**18 17 05.0**	**+0.4**
NKC				*ePG*	**Pg**	**18 17 11.3**	**-0.2**
NKC				*eSG*	**Sg**	**18 17 46.7**	**+0.7**
	comp=Z,166nm,0.5s						
NKC	**Novy Kostel**	**2.66 243**		Pn	**Pn**	**18 17 05.0**	**+0.4**
NKC	**Novy Kostel**	**2.66 243**		Pg	**Pg**	**18 17 11.3**	**-0.2**
NKC				Sg	**Sg**	**18 17 46.7**	**+0.7**
	comp=Z,166nm,0.5s						
JAVC	**Velka Javorina**	**2.84 159**		*eSg*	**Sg**	**18 17 51.6**	**0.0**
	comp=Z,224nm,1.2s						
KHC	**Kasperske Hory**	**2.90 215**		*ePn*	**Pn**	**18 17 06.6**	**-1.2**
KHC	**Kasperske Hory**	**2.90 215**		*ePN*	**Pn**	**18 17 07.8**	**+0.1**
KHC				*ePG*	**Pg**	**18 17 14.1**	**-1.8**
KHC				*eSN*	**Sn**	**18 17 41.9**	**-1.3**
KHC				*eSG*	**Sg**	**18 17 52.8**	**-0.6**
	comp=Z,80nm,0.5s						
KHC	**Kasperske Hory**	**2.90 215**		Pn	**Pn**	**18 17 07.8**	**+0.1**
KHC	**Kasperske Hory**	**2.90 215**		Pg	**Pg**	**18 17 14.1**	**-1.8**
KHC				Sn	**Sn**	**18 17 41.9**	**-1.3**
KHC				Sg	**Sg**	**18 17 52.8**	**-0.6**
	comp=Z,80nm,0.5s						
MGBB	**Grossbuechelbe**	**2.93 240**	⇑	*iPn*	**Pn**	**18 17 08.4**	**+0.2**
MGBB	**Grossbuechelbe**	**2.93 240**		Pn	**Pn**	**18 17 08.4**	**+0.2**
MOX	**Moxa**	**2.98 255**		*ePN*	**Pn**	**18 17 09.0**	**+0.1**
MOX				*ePG*	**Pg**	**18 17 17.1**	**-0.4**
MOX

KWP Kalwaria Pacla 4.60 112 *e*Pn **Pn 18 17 31.6 +0.5**
KWP *e*Pg **Pg 18 17 46.0 -2.5**
KWP *e*Sg **Sg 18 19 04.7 +17**
KWP Kalwaria Pacla 4.60 112 *e*Pn **Pn 18 17 30.8 -0.4**
KWP Kalwaria Pacla 4.60 112 ⇑*i*P **Pg 18 17 45.7 -2.8**
KWP Kalwaria Pacla 4.60 112 *e*Pn **Pn 18 17 30.8 -0.3**
COP Copenhagen 4.72 334 *i* S **Sn 18 18 26.1 -2.0**
SNR=49
KBA Koelnbreinsper 4.80 203 ⇑*i*Pn **Pn 18 17 35.0 +1.0**
SNR=13
KBA ⇑*i*Sg **Sg 18 18 55.4 +0.8**
comp=Z,31nm,0.5s
KBA Koelnbreinsper 4.80 203 Pn **Pn 18 17 35.0 +1.1**
SNR=13
KBA Sg **Sg 18 18 55.4 +0.7**
comp=Z,31nm,0.5s
SUW Suwalki 4.96 57 *e*Pn **Pn 18 17 37.0 +1.0**
SUW *e*Pg **Pg 18 18 01.8 +6.5**
SUW *e*Sg **Sg 18 19 09.5 +10**
SUW Suwalki 4.96 57 *e*Pn **Pn 18 17 36.3 +0.3**
SUW Suwalki 4.96 57 *e*Pn **Pn 18 17 36.3 +0.3**
TOD Tromm 5.05 251 P **Pn 18 17 35.7 -1.6**
TOD S **Sn 18 18 32.5 -3.7**
TOD Tromm 5.05 251 P **Pn 18 17 35.7 -1.6**
TOD S **Sn 18 18 32.5 -3.7**
WATA Walderalm 5.13 217 ⇑*i*Pn **Pn 18 17 39.8 +1.3**
WATA ⇓*i*Sg **Sg 18 19 09.2 +3.9**
comp=Z,17nm,0.4s
WATA Walderalm 5.13 217 Pn **Pn 18 17 39.8 +1.3**
WATA Sg **Sg 18 19 09.2 +4.0**
comp=Z,17nm,0.4s
WTTA Wattenberg 5.17 216 ⇑*i*Pn **Pn 18 17 40.6 +1.6**
WTTA ⇑*i*Sg **Sg 18 19 07.7 +1.2**
comp=Z,31nm,0.5s
WTTA Wattenberg 5.17 216 Pn **Pn 18 17 40.6 +1.6**
WTTA Sg **Sg 18 19 07.7 +1.2**
comp=Z,31nm,0.5s
STU Stuttgart 5.24 241 *e*Pn **Pn 18 17 38.1 -1.8**
STU Stuttgart 5.24 241 *e*Pn **Pn 18 17 38.2 -1.7**
MOTA Moosalm 5.31 220 ⇑*i*Pn **Pn 18 17 41.5 +0.6**
SNR=14
MOTA Moosalm 5.31 220 Pn **Pn 18 17 41.5 +0.6**
SNR=14
ABTA Abfaltersbach 5.33 208 ⇑*i*Pn **Pn 18 17 42.2 +1.0**
SNR=9.2
ABTA Abfaltersbach 5.33 208 Pn **Pn 18 17 42.2 +1.0**
SNR=9.2
RETA Reutte 5.34 223 ⇑*i*Pn **Pn 18 17 41.5 +0.2**
SNR=11
RETA Reutte 5.34 223 Pn **Pn 18 17 41.5 +0.2**
SNR=11
VXJU Vaexsjoe 5.46 353 P **Pn 18 17 43.4 +0.5**
PKSM Moragy 5.56 162 ⇓*i*P **Pn 18 17 44.8 +0.4**
PKSM Moragy 5.56 162 ⇓*i*P **Pn 18 17 44.8 +0.4**
VOY Vojsko 5.69 196 *e*Pn **Pg 18 18 07.7 -1.7**
VOY *e*Sn **Sg 18 19 24.2 +1.2**
OSKU Oskarshamn 5.69 360 P **Pn 18 17 46.7 +0.6**
BYXU Byxelkrok 5.81 5 P **Pn 18 17 48.8 +1.1**
WTSB Winterswijk 5.81 278 *e*S **Sg 18 19 32.5 +5.4**
SPAK Spaichingen-Ko 5.86 237 P **Pn 18 17 47.4 -1.0**
SPAK Spaichingen-Ko 5.86 237 P **Pn 18 17 47.4 -1.0**
DAVA Damuels 5.88 226 ⇑*i*Pn **Pn 18 17 48.7 -0.1**
DAVA Damuels 5.88 226 Pn **Pn 18 17 48.7 0.0**
LANF Langenberg 5.91 248 P **Pn 18 17 49.1 -0.1**
LANF Langenberg 5.91 248 P **Pn 18 17 49.1 -0.1**
BFO Black Forest 5.96 241 *e*Pn **Pn 18 17 48.6 -1.2**
comp=Z,8.9nm,0.5s
BFO Black Forest 5.96 241 *e*Pn **Pn 18 17 48.6 -1.3**
comp=Z,8.9nm,0.5s
DAVOX Davos/Dischmat 6.27 223 Pn **Pn 18 17 53.3 -0.8**
comp=Z,1.0nm,0.3s,baz=54,slow=9.0,SNR=8.7
DAVOX Lg 18 19 35.6
comp=Z,1.4nm,0.3s,baz=184,slow=20,SNR=4.4
DAVOX Davos/Dischmat 6.27 223 Pn **Pn 18 17 53.3 -0.8**
GOTU Gotland 6.34 12 P **Pn 18 17 56.0 +1.0**
FELD Feldberg im Sc 6.41 238 P **Pn 18 17 56.6 +0.6**
FELD Feldberg im Sc 6.41 238 P **Pn 18 17 56.6 +0.6**
HGN Heimansgroeve 6.46 267 *e*S **Sg 18 19 49.9 +2.0**
CDF Champ du Feu 6.50 245 *e*Pn **Pn 18 17 55.8 -1.5**
CDF *e*Sg **Sg 18 19 42.6 -6.6**
comp=Z,31nm,0.6s
CDF Champ du Feu 6.50 245 *e*Pn **Pn 18 17 55.8 -1.5**
BUR08 Bucovina Ar. S 7.06 120 *e*Pn **Pn 18 18 06.0 +1.1**
BUR08 Bucovina Ar. S 7.06 120 *e*Pn **Pn 18 18 05.9 +1.0**
HINF Hinteralfeld 7.07 242 *e*Pn **Pn 18 18 02.3 -2.7**
HINF *e*Sg **Sg 18 20 01.1 -6.2**
comp=Z,32nm,0.8s
BURAR Bucovina Array 7.08 120 ⇓*i*P **Pn 18 18 06.0 +0.8**
BURAR Bucovina Array 7.08 120 ⇓*i*P **Pn 18 18 06.0 +0.8**
IIGN Ignalina 7.14 54 *e*P **Pg 18 18 37.3 +0.1**
IIGN Ignalina 7.14 54 *e*P **Pg 18 18 37.3 +0.1**
SNR=46
ISAL Salakas 7.21 52 *e*P **Pg 18 18 38.0 -0.4**
ISAL Salakas 7.21 52 *e*P **Pg 18 18 38.0 -0.4**
SNR=46
NACGM Naroch 7.24 58 *e* **Pn 18 18 05.0 -2.3**
HAU Haudompre 7.25 245 *e*Pn **Pn 18 18 04.7 -2.8**
HAU *e*Sg **Sg 18 20 05.1 -7.9**
comp=Z,29nm,0.8s
IZAR Zarasai 7.36 51 *e*P **Pg 18 18 41.0 -0.2**
IZAR Zarasai 7.36 51 *e*P **Pg 18 18 41.0 -0.2**
SNR=46
IDID Didziasalis 7.39 55 *e*P **Pg 18 18 39.8 -2.1**
IDID Didziasalis 7.39 55 *e*P **Pg 18 18 39.8 -2.1**
SNR=46
NYNU Nynaeshamn 7.58 7 P **Pn 18 18 12.6 +0.6**
MEZF Maizieres J'vi 7.75 251 *e*Pn **Pn 18 18 11.4 -3.0**
baz=68
SFTF Sexfontaines 7.90 250 *e*Pn **Pn 18 18 13.7 -2.7**
CABF La Chapelle 8.22 237 *e*Sg **Sg 18 20 35.9 -8.3**
comp=Z,139nm,1.5s
KIEV Kiev 8.28 91 *e*Pn **Pn 18 18 20.8 -0.8**
comp=Z,11nm,0.4s
KIEV Kiev 8.28 91 *e*Pn **Pn 18 18 20.8 -0.8**
comp=Z,11nm,0.4s
AKASG Malin Array Be 8.28 91 Pn **Pn 18 18 21.0 -0.7**
comp=Z,3.7nm,0.3s,baz=281,slow=12,SNR=17
AKASG Sn **Sn 18 19 51.4 -4.5**
comp=Z,2.2nm,0.3s,baz=263,slow=25,SNR=5.2
AKASG Lg 18 20 51.8
comp=Z,0.7nm,0.3s,baz=270,slow=25,SNR=3.9
AKASG Malin Array Be 8.28 91 Pn **Pn 18 18 21.0 -0.7**
AKBB Malin Array Si 8.28 91 *e*Pn **Pn 18 18 20.9 -0.7**
AKBB Malin Array Si 8.28 91 *e*Pn **Pn 18 18 20.9 -0.8**
NRTU Norrtaelje 8.30 9 P **Pn 18 18 22.0 +0.1**
BACU Backbrunna 8.37 3 P **Pn 18 18 23.6 +0.7**
LPL La Plagne 8.65 230 *e*P **Pn 18 18 28.2 +1.4**
LPL *e*Sg **Sg 18 20 51.2 -7.0**
comp=Z,49nm,1.6s
LPL La Plagne 8.65 230 *e*P **Pn 18 18 28.2 +1.4**
LPG La Plagne 8.66 230 *e*P **Pn 18 18 28.0 +1.1**
LPG *e*Sg **Sg 18 20 52.1 -6.2**
comp=Z,50nm,1.5s
LPG La Plagne 8.66 230 *e*P **Pn 18 18 28.0 +1.1**
FLYU Flymyra 8.69 6 P **Pn 18 18 27.2 0.0**
HFS Hagfors 8.74 352 Pn **Pn 18 18 28.0 +0.1**
comp=Z,0.6nm,0.3s,baz=172,slow=12,SNR=21
HFS Sn **Sn 18 20 04.2 -2.9**
comp=Z,0.7nm,0.3s,baz=157,slow=27,SNR=4.1
HFS Hagfors 8.74 352 Pn **Pn 18 18 28.0 +0.1**
OSTU Oestervaala 8.75 3 P **Pn 18 18 28.6 +0.6**
GRAU Graesoe 8.94 8 P **Pn 18 18 30.7 +0.1**
LOR Lormes 9.06 247 *e*Pn **Pn 18 18 29.7 -2.7**
baz=62
MBDF Montbardon 9.23 226 *e*Pn **Pn 18 18 31.5 -3.2**
MBDF Montbardon 9.23 226 *e*P **Pn 18 18 37.2 +2.5**
MBDF *e*Sg Sn 18 21 07.3 +48
comp=Z,32nm,1.3s
MBDF Montbardon 9.23 226 *e*P **Pn 18 18 37.2 +2.5**
SBF Sospel 9.64 221 *e*Pn **Pn 18 18 37.5 -2.8**
NB2 NORSAR Subarra 9.92 346 Pn **Pn 18 18 42.5 -1.6**
comp=Z,0.7nm,0.5s,baz=162,slow=14
NB2 NORSAR Subarra 9.92 346 Pn **Pn 18 18 42.5 -1.6**
comp=Z,0.7nm,0.5s,baz=162,slow=14,SNR=6.4
NOA NORSAR Array B 9.92 346 Pn **Pn 18 18 42.4 -1.7**
comp=Z,0.6nm,0.3s,baz=174,slow=13,SNR=12
NOA Sn **Sn 18 20 28.7 -7.4**
comp=Z,0.3nm,0.3s,baz=308,slow=20,SNR=2.6
NOA NORSAR Array B 9.92 346 Pn **Pn 18 18 42.4 -1.7**
FRF La Foret Royal 10.21 222 *e*P **Pn 18 18 49.1 +0.9**
FRF La Foret Royal 10.21 222 *e*P **Pn 18 18 49.1 +0.9**
FINES FINESS Array B 11.35 25 Pn **Pn 18 19 02.8 -0.8**
comp=Z,0.7nm,0.3s,baz=209,slow=11,SNR=28
FINES Sn **Sn 18 21 03.9 -7.1**
comp=Z,1.2nm,0.3s,baz=206,slow=19,SNR=8.4
FINES FINESS Array B 11.35 25 Pn **Pn 18 19 02.8 -0.8**
EKA Eskdalemuir Ar 12.11 296 Pn **Pn 18 19 11.7 -2.4**
baz=98,slow=14,SNR=9.5
ESK Eskdalemuir 12.14 296 *e*Pn **Pn 18 19 08.7 -5.6**
comp=Z,2.0nm,0.4s
BR131 Keskin Array S 16.95 127 *e*Pn **Pn 18 20 17.9 -0.9**
BR131 Keskin Array S 16.95 127 *e*Pn **Pn 18 20 17.9 -0.9**
ARCES ARCESS Array B 18.61 10 Pn **Pn 18 20 36.1 -3.1**
comp=Z,1.3nm,0.3s,baz=193,slow=12,SNR=21
ARE0 ARCESS Array S 18.61 10 *e*P **Pn 18 20 37.7 -1.4**
ARE0 ARCESS Array S 18.61 10 *e*P **Pn 18 20 37.7 -1.4**
ARU Arti 25.12 62 *e*P **P 18 21 46.1 -0.6**
ARU Arti 25.12 62 *e*P **P 18 21 46.1 -0.6**
AKTK Aktyubinsk 26.14 76 P **P 18 21 57.5 +1.5**
AKTK Aktyubinsk 26.14 76 P **P 18 21 57.5 +1.6**
AKTO Aktyubinsk 26.14 76 P **P 18 21 57.5 +1.5**
comp=Z,1.0nm,0.4s,mb3.8,baz=288,slow=13,SNR=6.8
BVAR Borovoye Array 32.57 66 P **P 18 22 55.4 +2.4**
comp=Z,1.0nm,0.6s,mb4.0,baz=287,slow=9.9,SNR=6.7
BVAR Borovoye Array 32.57 66 P **P 18 22 55.4 +2.4**
KURK Kurchatov 38.17 66 P **P 18 23 43.0 +1.7**
comp=Z,0.9nm,0.6s,mb3.6,baz=302,slow=8.9,SNR=9.1
KURK Kurchatov 38.17 66 P **P 18 23 43.0 +1.8**
ZALV Zalesovo Beam 40.18 59 P **P 18 23 59.2 +1.2**
comp=Z,0.7nm,0.7s,mb3.4,baz=287,slow=9.9,SNR=4.2
ZALV Zalesovo Beam 40.18 59 P **P 18 23 59.2 +1.2**
MKAR Makanchi Array 42.20 69 P **P 18 24 16.2 +1.5**
comp=Z,0.4nm,0.7s,mb3.3,baz=290,slow=8.9,SNR=3.0
SONM Songino Array 54.90 55 P **P 18 25 55.6 +3.1**
comp=Z,0.8nm,0.9s,mb3.7,baz=288,slow=9.5,SNR=6.4
YKA Yellowknife Ar 59.85 336 P **P 18 26 27.2 +0.1**
comp=Z,1.2nm,0.8s,mb4.0,baz=30,slow=7.1,SNR=2.9
YKA Yellowknife Ar 59.85 336 P **P 18 26 27.2 0.0**
CMAR Chiang Mai Arr 71.34 84 P **P 18 27 43.2 +1.1**
comp=Z,0.5nm,1.0s,mb3.6,baz=300,slow=7.2,SNR=3.9
CMAR Chiang Mai Arr 71.34 84 P **P 18 27 43.2 +1.2**
PDAR Pinedale Array 74.94 322 P **P 18 28 04.2 +1.2**
comp=Z,0.3nm,0.4s,mb3.6,baz=33,slow=10.0,SNR=3.8
PDAR Pinedale Array 74.94 322 P **P 18 28 04.2 +1.2**

NEIC ***29*** *18:19:00.9±2.1,21°.89N×143°.26E,h196km±19km,mb3.9/2, Error ellipse: s-maj=15.7km s-min=9.2km az=87.0*
IDC ***29*** *18:19:00.8±1.9,21°.89N×143°.22E,h193km±17km, mb3.5/15,mb1 3.6/17,mb1mx3.5/27,mbtmp3.5/17,Error ellipse: s-maj=19.7km s-min=11.7km az=86.0*
ISCJB ***29*** *18:19:00.1±1.7,21°.89N±0°.09×143°.2E±0°.2,h203km±14km, mb3.6/16,Error ellipse: s-maj=25.6km s-min=14.1km az=0.8*

ISC 29 18:19:00.9±1.7,21°.90N±0°.09×143°.3E±0°.2,h196km±13km, n30,σ0°89/28,mb3.6/16,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.26**	**349**	P	**Pn**	**18 20 19.4**	**+0.9**
	13nm,0.3s,baz=174,slow=10,SNR=11						
CBIJ				S	**Sn**	**18 21 18.9**	**-1.0**
	23nm,0.3s,baz=287,slow=19,SNR=9.8						
MJAR	**Matsushiro Arr**	**15.24**	**344**	P	**Pn**	**18 22 27.5**	**+1.4**
	0.6nm,0.3s,baz=159,slow=9.2,SNR=6.0						
MAJO	**Matsushiro**	**15.24**	**344**	*e*Pn	**Pn**	**18 22 24.8**	**-1.3**
	4.2nm,0.7s						
KSRS	**Korea Array**	**20.40**	**323**	P	**P**	**18 23 26.5**	**+3.8**
	0.7nm,0.4s,baz=143,slow=9.7,SNR=5.2						
SONM	**Songino Array**	**39.23**	**320**	P	**P**	**18 26 11.0**	**+0.9**
	0.4nm,0.4s,mb3.3,baz=117,slow=6.0,SNR=5.4						
CM31	**Chiang Mai Arr**	**41.65**	**273**	*e*P	**P**	**18 26 31.1**	**+0.8**
	1.8nm,0.4s,mb3.9						
CMAR	**Chiang Mai Arr**	**41.65**	**273**	P	**P**	**18 26 30.1**	**-0.1**
	0.3nm,0.5s,mb2.9,baz=76,slow=4.7,SNR=4.5						
WRA	**Warramunga Arr**	**42.50**	**192**	P	**P**	**18 26 36.7**	**-0.2**
	0.4nm,0.3s,mb3.4,baz=15,slow=9.6,SNR=28						
FITZ	**Fitzroy Crossi**	**43.34**	**205**	P	**P**	**18 26 43.6**	**-0.2**
	1.2nm,0.9s,mb3.3,baz=36,slow=8.7,SNR=3.1						
ASAR	**Alice Springs**	**46.20**	**192**	P	**P**	**18 27 05.8**	**-0.5**
	0.2nm,0.5s,mb2.7,baz=12,slow=6.9,SNR=5.7						
ZALV	**Zalesovo Beam**	**54.10**	**322**	P	**P**	**18 28 05.2**	**0.0**
	1.1nm,0.5s,mb3.7,baz=103,slow=9.0,SNR=6.1						
ZALV	**Zalesovo Beam**	**54.10**	**322**	P	**P**	**18 28 05.2**	**0.0**
MKAR	**Makanchi Array**	**54.62**	**313**	P	**P**	**18 28 09.1**	**0.0**
	0.2nm,0.3s,mb3.1,baz=90,slow=9.5,SNR=4.4						
MKAR				PcP	PcP	18 29 09.6	0.0
	0.5nm,0.5s,baz=81,slow=4.7,SNR=5.6						
KURK	**Kurchatov**	**57.38**	**317**	P	**P**	**18 28 29.6**	**+0.9**
	2.4nm,0.6s,mb4.0,baz=94,slow=7.5,SNR=7.5						
BVAR	**Borovoye Array**	**62.57**	**319**	P	**P**	**18 29 04.3**	**+0.5**
	2.4nm,0.5s,mb4.1,baz=84,slow=7.4,SNR=13						
AKTK	**Aktyubinsk**	**70.47**	**317**	P	**P**	**18 29 53.8**	**-0.2**
AKTO	**Aktyubinsk**	**70.47**	**317**	P	**P**	**18 29 53.8**	**-0.2**
	0.7nm,0.6s,mb3.5,baz=72,slow=13,SNR=5.0						
YKA	**Yellowknife Ar**	**76.23**	**28**	P	**P**	**18 30 27.7**	**+0.3**
	2.8nm,0.6s,mb4.1,baz=291,slow=5.9,SNR=7.9						
YKA	**Yellowknife Ar**	**76.23**	**28**	P	**P**	**18 30 27.7**	**+0.3**
ARCES	**ARCESS Array B**	**78.75**	**342**	P	**P**	**18 30 41.2**	**0.0**
	1.7nm,0.7s,mb3.8,baz=69,slow=7.8,SNR=9.7						
ARCES	**ARCESS Array B**	**78.75**	**342**	P	**P**	**18 30 41.2**	**0.0**
JOF	**Joensuu**	**80.17**	**334**	*e*p	**P**	**18 30 47.2**	**-1.7**
JOF	**Joensuu**	**80.17**	**334**	*e*p	**P**	**18 30 47.2**	**-1.7**
NVAR	**Mina Array Bea**	**82.95**	**52**	P	**P**	**18 31 05.5**	**+1.5**
	1.5nm,0.7s,mb3.9,baz=284,slow=5.6,SNR=8.9						
FINES	**FINESS Array B**	**83.03**	**334**	P	**P**	**18 31 03.2**	**-0.8**
	1.4nm,0.5s,mb4.0,baz=64,slow=5.4,SNR=16						
FINES	**FINESS Array B**	**83.03**	**334**	P	**P**	**18 31 03.2**	**-0.8**
HFS	**Hagfors**	**88.57**	**337**	P	**P**	**18 31 29.5**	**-1.6**
	0.8nm,0.6s,mb3.8,baz=90,slow=12,SNR=4.4						
PLCA	**Paso Flores**	**145.83**	**131**	PKPbc	PKPbc	18 38 17.4	+0.3
	2.7nm,0.6s,baz=239,slow=4.3,SNR=11						
PLCA	**Paso Flores**	**145.83**	**131**	PKPbc	PKPbc	18 38 17.4	+0.3
LPAZ	**La Paz**	**149.84**	**85**	PKPbc	PKPbc	18 38 29.6	+1.1
	2.0nm,0.4s,baz=349,slow=4.5,SNR=4.5						

ISCJB ***29*** *18:21:25.3±1.7,19°.6S±0°.1×177°.9W±0°.3,h544km±43km, mb3.8/8,Error ellipse: s-maj=47.1km s-min=19.8km az=15.9*
NEIC ***29*** *18:21:26.5±1.1,19°.61S×177°.75W,h561km±16km,mb3.8/2, Error ellipse: s-maj=25.0km s-min=14.5km az=122.0*
IDC ***29*** *18:21:32.5±2.7,19°.82S×177°.97W,h623km±33km,mb3.1/7, mb1 3.3/8,mb1mx3.1/18,mbtmp3.2/8,Error ellipse: s-maj=26.1km s-min=20.2km az=157.0*

ISC 29 18:21:26.9±1.5,19°.7S±0°.1×178°.0W±0°.3,h544km±39km, n18,σ0°84/14,mb3.8/8,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.24**	**47**	*e*P	**P**	**18 23 25.3**	**-1.7**
	6.4nm,0.6s						
AFI				*e*S	**S**	**18 25 06.6**	**+1.3**
URZ	**Urewera**	**19.03**	**192**	P	**P**	**18 25 13.4**	**-0.8**
	1.7nm,0.3s,baz=8.1,slow=7.1,SNR=10						
RPZ	**Rata Peaks**	**25.70**	**199**	P	**P**	**18 26 14.4**	**+0.5**
	13nm,1.1s,mb4.5,baz=22,slow=11,SNR=3.4						
STKA	**Stephens Creek**	**38.18**	**243**	P	**P**	**18 28 01.1**	**+1.0**
	1.9nm,0.8s,mb3.7,baz=100,slow=12,SNR=2.7						
STKA	**Stephens Creek**	**38.18**	**243**	P	**P**	**18 28 01.1**	**+1.0**
WRAB	**Tennant Creek**	**44.73**	**261**	*e*P	**P**	**18 28 51.7**	**-0.5**
	0.7nm,0.4s,mb3.5						
ASAR	**Alice Springs**	**44.73**	**256**	P	**P**	**18 28 52.6**	**+0.5**
	1.9nm,0.4s,mb3.9,baz=87,slow=8.4,SNR=80						
ASAR				PcP	PcP	18 30 21.1	-1.6
	0.4nm,0.4s,baz=104,slow=3.9,SNR=6.7						
ASAR				S	**S**	**18 34 44.8**	**-4.8**
	1.1nm,0.9s,baz=90,slow=15,SNR=7.9						
WRA	**Warramunga Arr**	**44.74**	**261**	P	**P**	**18 28 52.0**	**-0.2**
	1.4nm,0.5s,mb3.8,baz=94,slow=5.3,SNR=45						
WRA				PcP	PcP	18 30 21.3	-1.5
	0.3nm,0.5s,baz=97,slow=2.9,SNR=3.4						
WRA	**Warramunga Arr**	**44.74**	**261**	P	**P**	**18 28 52.0**	**-0.2**
WRA				PcP	PcP	18 30 21.3	-1.5
FITZ	**Fitzroy Crossi**	**53.16**	**262**	P	**P**	**18 29 54.8**	**+0.3**
	1.8nm,0.5s,mb3.6,baz=103,slow=4.8,SNR=16						
MJAR	**Matsushiro Arr**	**69.54**	**323**	P	**P**	**18 31 40.3**	**-0.9**
	0.7nm,0.5s,mb3.4,baz=152,slow=6.3,SNR=4.7						
CMAR	**Chiang Mai Arr**	**89.84**	**290**	P	**P**	**18 33 28.7**	**+0.4**
	0.8nm,0.8s,mb3.6,baz=102,slow=2.4,SNR=6.7						
BVAR	**Borovoye Array**	**118.44**	**320**	PKP	PKPdf	18 39 08.9	-3.6
	0.3nm,0.4s,baz=172,slow=1.3,SNR=3.6						
ARCES	**ARCESS Array B**	**128.09**	**350**	PKP	PKPdf	18 39 28.3	-2.3
	1.2nm,0.9s,baz=42,slow=1.5,SNR=8.6						
FINES	**FINESS Array B**	**134.97**	**344**	PKP	PKPdf	18 39 42.8	-0.9
	0.2nm,0.3s,baz=122,slow=1.8,SNR=5.1						
AKASG	**Malin Array Be**	**142.28**	**332**	PKhKP		18 39 51.1	
	0.9nm,0.4s,baz=40,slow=3.9,SNR=5.0						
BRTR Keskin Array B 146.28 313 PKPbc PKPbc 18 40 05.2 -1.6
0.9nm,0.7s,baz=141,slow=4.4,SNR=5.0
CLL Collm 147.24 347 *e*PKPbc PKPbc 18 40 07.0 -2.1

TAP ***29*** *18:25:51.0,24°.86N×122°.60E,h2km±1km,ML3.4,D*
IDC ***29*** *18:25:51.0±1.5,24°.45N×121°.21E,h0km,mb3.4/4, mb1 3.6/5,mb1mx3.3/23,mbtmp3.5/5,ML3.2/1,Error ellipse: s-maj=67.9km s-min=24.3km az=68.0*
NEIC ***29*** *18:25:51.2±1.1,24°.98N×122°.60E,h10km,Error ellipse: s-maj=14.6km s-min=12.3km az=21.0*
ISCJB ***29*** *18:25:51.7±1.0,24°.98N±0°.06×122°.68E±0°.06,h19km±6km, mb3.3/4,Error ellipse: s-maj=11.3km s-min=6.4km az=36.9*

ISC 29 18:25:51.9±1.0,24°.92N±0°.06×122°.62E±0°.05,h5km±5km, n38,σ1°05/41,mb3.3/4,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.58**	**142**	*e*P	**Pg**	**18 26 04.7**	**+1.7**
	baz=136						
YOJ				*e*S	**Sg**	**18 26 10.8**	**+0.3**
	baz=136						
TWB1	**Santiao Chiao**	**0.58**	**279**	P	**Pg**	**18 26 03.4**	**+0.2**
	baz=284						
TWB1				*e*S	**Sg**	**18 26 12.2**	**+1.5**
	baz=284						
TWC	**Suao**	**0.77**	**246**	P	**Pg**	**18 26 06.5**	**-0.2**
	baz=249						
TWC				*e*S	**Sg**	**18 26 16.9**	**+0.2**
	baz=249						
NWF	**Wu-fen Shan**	**0.78**	**281**	*e*P	**Pg**	**18 26 07.2**	**+0.3**
	baz=285						
TWE	**Neicheng**	**0.89**	**257**	P	**Pg**	**18 26 08.6**	**-0.4**
	baz=260						
ENA	**Nanau**	**0.94**	**239**	P	**Pg**	**18 26 09.3**	**-0.7**
	baz=240						
TWA	**Mucha**	**0.94**	**274**	*e*P	**Pg**	**18 26 10.3**	**+0.2**
	baz=277						
TWY	**Chenhua**	**0.99**	**291**	*e*P	**Pg**	**18 26 11.0**	**+0.1**
	baz=294						
ENTT	**Nioudou**	**1.00**	**254**	*e*P	**Pg**	**18 26 10.2**	**-0.9**
	baz=256						
TAP1	**Taipei**	**1.00**	**277**	*e*P	**Pg**	**18 26 12.6**	**+1.4**
	baz=280						
TATO	**Taipei**	**1.03**	**273**	*e*P	**Pg**	**18 26 10.8**	**-0.9**
TWS1	**Kuangyinshan**	**1.11**	**280**	*e*P	**Pg**	**18 26 14.7**	**+1.5**
	baz=282						
YHNB	**Yeheng**	**1.16**	**258**	*e*P	**Pg**	**18 26 12.8**	**-1.3**
NSK	**Sanguang**	**1.18**	**258**	P	**Pg**	**18 26 13.4**	**-1.1**
	baz=260						
NACB	**Ninganchiao**	**1.20**	**232**	*e*P	**Pg**	**18 26 13.3**	**-1.5**
NNS	**Nan Shan**	**1.23**	**247**	P	**Pg**	**18 26 14.1**	**-1.5**
	baz=249						
TWD	**Chiawan**	**1.26**	**228**	*e*P	**Pg**	**18 26 15.9**	**0.0**
	baz=229						
HWA	**Hwalien**	**1.32**	**225**	*e*P	**Pn**	**18 26 17.8**	**+0.8**
	baz=225						
WHF	**Hehuan Shan**	**1.46**	**238**	P	**Pn**	**18 26 19.0**	**+0.1**
	baz=239						
TWT	**Tachien**	**1.48**	**244**	*e*P	**Pn**	**18 26 19.9**	**+0.8**
	baz=245						
NSTT	**Nanjuang**	**1.50**	**259**	*e*P	**Pn**	**18 26 19.1**	**-0.4**
	baz=261						
ESL	**Shilin**	**1.55**	**225**	*e*P	**Pn**	**18 26 18.7**	**-1.4**
	baz=225						
TWQ1	**Liyutan**	**1.78**	**252**	*e*P	**Pn**	**18 26 24.5**	**+1.2**
	baz=252						
SMLT	**Sun Moon Lake**	**1.88**	**237**	P	**Pn**	**18 26 25.4**	**+0.7**
	baz=237						
SSLB	**Suanglung**	**1.90**	**234**	*e*P	**Pn**	**18 26 24.6**	**-0.4**
TYC	**Yuchr**	**1.90**	**238**	P	**Pn**	**18 26 25.9**	**+0.8**
	baz=238						
YULB	**Yu-li**	**1.94**	**219**	*e*Pn	**Pn**	**18 26 23.8**	**-1.8**
TWF1	**Yuli**	**1.98**	**218**	*e*P	**Pn**	**18 26 25.0**	**-1.0**
	baz=218						
WNT	**Mingjian**	**2.05**	**240**	*e*P	**Pn**	**18 26 28.8**	**+1.8**
	baz=240						
CHN5	**Tsauling**	**2.21**	**234**	P	**Pn**	**18 26 29.4**	**+0.2**
	baz=234						
TPUB	**Ta-pu**	**2.43**	**229**	*e*Pn	**Pn**	**18 26 32.8**	**+0.5**
WTP	**Ta-pu**	**2.48**	**228**	*e*P	**Pn**	**18 26 34.4**	**+1.4**
	baz=228						
CHN1	**Nanshi**	**2.58**	**228**	*e*P	**Pn**	**18 26 35.7**	**+1.4**
	baz=228						
KSRS	**Korea Array**	**13.29**	**19**	Pn	**Pn**	**18 29 13.7**	**+13**
	0.1nm,0.3s,baz=193,slow=10,SNR=5.6						
SONM	**Songino Array**	**26.23**	**335**	P	**P**	**18 31 26.6**	**-1.1**
	0.4nm,0.6s,mb3.1,baz=147,slow=8.8,SNR=3.9						
MKAR	**Makanchi Array**	**38.74**	**315**	P	**P**	**18 33 12.0**	**-5.0**
	0.2nm,0.5s,mb3.1,baz=148,slow=6.3,SNR=2.6						
ZALV	**Zalesovo Beam**	**40.35**	**326**	P	**P**	**18 33 27.6**	**-2.7**
	0.6nm,0.6s,mb3.5,baz=120,slow=8.5,SNR=3.4						
WRA	**Warramunga Arr**	**46.03**	**165**	P	**P**	**18 34 15.7**	**-0.9**
	0.4nm,0.7s,mb3.5,baz=347,slow=8.7,SNR=3.5						

NEIC ***29*** *18:38:52.6,33°.08S×71°.43W,h51km,MD3.7(GUC),After GUC.*

GUC 29 18:38:52.6±0.8,33°.08S×71°.43W,h51km±5km,MD3.7, ML3.0,13C-8D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHA	**Instituto Hidr**	**0.19**	**287**	⇑*i*P	Pn	18 39 01.0	+0.1
IHA				*i* S	Sn	18 39 07.4	+0.6
IHA	**Instituto Hidr**	**0.19**	**287**	⇑*i*P	Pn	18 39 01.0	+0.1
IHA				*i* S	Sn	18 39 07.4	+0.6
ROCH	**El Roble**	**0.36**

*JMA **29** 18:43:33.4, 34°.36N×139°.23E, h7km±1km, M2.8*
JMA Felt II J1.
*ISCJB **29** 18:43:33.4±0.5, 34°.35N±0°.03×139°.26E±0°.05, h13km±4km, mb3.3/3, Error ellipse: s-maj=7.9km s-min=4.3km az=155.2*
ISC 29 18:43:33.6±0.5, 34°.35N±0°.03×139°.26E±0°.05, h7km±5km, n15, σ0.995/23, mb3.3/3, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKO	**Kozu shima**	**0.20**	**213**	P	**Pg**	**18 43 37.6**	**+0.1**
JKO				eS	**Sg**	**18 43 41.1**	**+1.0**
JMY	**Miyakejima3**	**0.35**	**143**	P	**Pg**	**18 43 40.8**	**+0.5**
JMY				S	**Sg**	**18 43 46.4**	**+1.5**
JIM2	**Oshima 3**	**0.39**	**21**	P	**Pg**	**18 43 41.4**	**+0.2**
JIZS	**Izushimoda**	**0.48**	**319**	P	**Pg**	**18 43 42.4**	**-0.6**
JIZS				S	**Sg**	**18 43 49.2**	**-0.1**
KTJJ	**Kamata 2**	**0.59**	**344**	P	**Pg**	**18 43 44.6**	**-0.5**
KTJJ				S	**Sg**	**18 43 52.7**	**-0.1**
JOD2	**Odawara 2**	**0.92**	**351**	P	**Pg**	**18 43 50.3**	**-1.0**
BSO4	**Boso 4**	**1.09**	**54**	P	**Pg**	**18 43 54.0**	**-0.5**
TK03	**Tokai 3**	**1.09**	**261**	P	**Pg**	**18 43 54.0**	**-0.5**
SHZ3	**Shizuoka 3**	**1.12**	**310**	P	**Pg**	**18 43 54.1**	**-1.0**
SHZ3				S	**Sg**	**18 44 09.8**	**+0.1**
JHJ	**Hachijo jima 2**	**1.30**	**160**	Pn	**Pn**	**18 43 56.9**	**-1.3**
	34nm,0.3s,baz=239,slow=18,SNR=5.8						
JHJ				Sn	**Sn**	**18 44 14.1**	**-1.8**
	35nm,0.3s,baz=229,slow=23,SNR=5.9						
MJAR	**Matsushiro Arr**	**2.35**	**339**	Pn	**Pn**	**18 44 13.9**	**+1.3**
	3.8nm,0.3s,baz=169,slow=15,SNR=31						
MJAR				Sn	**Sn**	**18 44 46.6**	**+4.9**
	1.1nm,0.3s,baz=290,slow=22,SNR=6.7						
MAT	**Matsushiro**	**2.35**	**339**	P	**Pn**	**18 44 13.9**	**+1.3**
MAT				S	**Sn**	**18 44 45.1**	**+3.4**
KURK	**Kurchatov**	**46.26**	**310**	P	**P**	**18 52 00.0**	**+0.6**
	0.1nm,0.3s,mb3.2,baz=80,slow=7.6,SNR=2.5						
WRA	**Warramunga Arr**	**54.19**	**186**	P	**P**	**18 52 58.5**	**-1.3**
	0.5nm,0.9s,mb3.5,baz=1.5,slow=7.7,SNR=5.4						
ASAR	**Alice Springs**	**57.92**	**186**	P	**P**	**18 53 27.0**	**+0.5**
	0.4nm,1.0s,mb3.4,baz=6.1,slow=9.6,SNR=2.9						

IDC 29 18:46:34.1±1.3, 31°.33N×104°.63E, h0km, mb3.4/3, mb1 3.5/5, mb1mx3.2/26, mbtmp3.3/5, ML3.5/2, Error ellipse: s-maj=59.8km s-min=23.9km az=65.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.81**	**203**	Pn	Pn	18 49 51.9	+0.6
	0.1nm,0.3s,baz=9.2,slow=8.7,SNR=7.9						
SONM	**Songino Array**	**16.54**	**4**	Pn	Pn	18 50 28.5	+1.1
	0.1nm,0.3s,baz=181,slow=13,SNR=2.4						
KURK	**Kurchatov**	**27.34**	**323**	P	P	18 52 20.3	-0.3
	0.1nm,0.3s,baz=126,slow=9.5,SNR=3.4						
WRA	**Warramunga Arr**	**58.41**	**147**	P	P	18 56 31.4	-0.2
	0.4nm,0.8s,baz=338,slow=7.7,SNR=13						
ASAR	**Alice Springs**	**61.45**	**149**	P	P	18 56 52.9	+0.4
	0.3nm,0.8s,baz=335,slow=6.8,SNR=4.2						

*ISCJB **29** 19:11:16.0±1.1, 2°.7N±0°.3×128°.7E±0°.6, h33km, mb3.6/6, Error ellipse: s-maj=87.7km s-min=16.1km az=155.3*
*IDC **29** 19:11:16.9±1.7, 1°.43N×125°.91E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.4/19, mbtmp3.6/4, Error ellipse: s-maj=177.7km s-min=22.2km az=65.0*
*NEIC **29** 19:11:18.4±0.9, 2°.51N×128°.56E, h35km, mb3.8/2, Error ellipse: s-maj=71.9km s-min=13.0km az=66.0*
ISC 29 19:11:18.5±1.1, 2°.5N±0°.3×128°.6E±0.5, h35km, n10, σ0.945/10, mb3.6/6, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRAB	**Tennant Creek**	**23.02**	**166**	P	**P**	**19 16 19.8**	**-0.8**
	5.1nm,1.2s,mb3.8						
WRA	**Warramunga Arr**	**23.02**	**166**	P	**P**	**19 16 21.0**	**+0.4**
	0.3nm,0.4s,mb3.0,baz=338,slow=11,SNR=9.0						
WRA	**Warramunga Arr**	**23.02**	**166**	P	**P**	**19 16 21.0**	**+0.4**
ASAR	**Alice Springs**	**26.53**	**169**	P	**P**	**19 16 53.4**	**+0.4**
	0.4nm,0.9s,mb2.9,baz=344,slow=12,SNR=3.6						
ASAR	**Alice Springs**	**26.53**	**169**	P	**P**	**19 16 53.4**	**+0.4**
CTAO	**Charters Tower**	**28.39**	**143**	eP	**P**	**19 17 09.7**	**0.0**
	1.8nm,0.8s,mb3.8						
MKAR	**Makanchi Array**	**59.60**	**325**	P	**P**	**19 21 18.4**	**-0.4**
	0.3nm,0.7s,mb3.4,baz=145,slow=7.4,SNR=4.0						
MKAR	**Makanchi Array**	**59.60**	**325**	P	**P**	**19 21 18.4**	**-0.4**
KURK	**Kurchatov**	**63.75**	**327**	P	**P**	**19 21 47.1**	**+0.4**
	1.4nm,0.2s,mb4.6,baz=124,slow=6.4,SNR=2.8						
KURK	**Kurchatov**	**63.75**	**327**	P	**P**	**19 21 47.1**	**+0.4**

*IDC **29** 19:17:33.7±2.7, 43°.60N×105°.38W, h0km, mb3.7/5, mb1 3.8/7, mb1mx3.6/24, mbtmp3.7/7, ML3.4/2, MS3.0/1, Ms1 3.0/1, ms1mx2.4/38, Error ellipse: s-maj=79.0km s-min=8.9km az=153.0*
*ISCJB **29** 19:17:33.3±0.4, 43°.78N±0°.04×105°.20W±0°.05, h0km, mb4.1/6, Error ellipse: s-maj=5.6km s-min=4.8km az=41.6*
*NEIC **29** 19:17:35.2±0.3, 43°.78N×105°.21W, h0km, mb5.0/1, ML3.3, Error ellipse: s-maj=5.2km s-min=4.3km az=137.0, Suspected Mining explosion.*
NEIC 60 km [40 miles] SSE of Gillette.
ISC 29 19:17:35.2±0.4, 43°.78N±0°.04×105°.21W±0°.05, h0km, n48, σ0.997/47, mb4.1/6, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.91**	**68**	eP	**Pg**	**19 17 54.0**	**+1.4**
PHWY	**Pilot Hill**	**2.49**	**184**	eP	**Pn**	**19 18 17.2**	**+0.3**
RWWY	**Rawlins**	**2.56**	**216**	ePn	**Pn**	**19 18 17.9**	**0.0**
LAO	**LASA Array**	**2.99**	**346**	ePn	**Pn**	**19 18 23.9**	**0.0**
RLMT	**Red Lodge**	**3.20**	**296**	ePn	**Pn**	**19 18 25.8**	**-0.9**
BW06	**Boulder Array**	**3.34**	**254**	ePn	**Pn**	**19 18 27.3**	**-1.3**
PDAR	**Pinedale Array**	**3.34**	**254**	Pn	**Pn**	**19 18 28.8**	**+0.2**
PDAR				Lg		19 19 12.0	
PDAR	**Pinedale Array**	**3.34**	**254**	Pn	**Pn**	**19 18 28.8**	**+0.2**
	3.0nm,0.3s,baz=71,slow=16,SNR=41						
PDAR				Lg		19 19 12.0	
	14nm,0.3s,baz=70,slow=24,SNR=13						
OGNE	**Ogallala**	**3.68**	**139**	ePn	**Pn**	**19 18 33.8**	**+0.5**
GCMT	**Greycliff**	**3.76**	**304**	ePn	**Pn**	**19 18 34.6**	**+0.2**
LKWY	**Lake**	**3.82**	**284**	ePn	**Pn**	**19 18 36.4**	**+1.2**
LOHW	**Long Hollow**	**3.92**	**269**	ePn	**Pn**	**19 18 37.5**	**+0.9**
ISCO	**Idaho Springs**	**3.99**	**185**	ePn	**Pn**	**19 18 38.2**	**+0.6**
SNOW	**Snow King Moun**	**4.04**	**267**	ePn	**Pn**	**19 18 39.7**	**+1.4**
REDW	**Red Top Meadow**	**4.12**	**266**	ePn	**Pn**	**19 18 40.3**	**+0.9**
IMW	**Indian Meadow**	**4.15**	**274**	ePn	**Pn**	**19 18 40.6**	**+0.8**
TPAW	**Teton Pass**	**4.18**	**268**	ePn	**Pn**	**19 18 40.7**	**+0.5**
RRI2	**Red Ridge**	**4.46**	**267**	ePn	**Pn**	**19 18 44.3**	**+0.2**
DGMT	**Dagmar**	**4.74**	**8**	ePn	**Pn**	**19 18 49.8**	**+1.9**
BOZ	**Bozeman (W)**	**4.94**	**294**	ePn	**Pn**	**19 18 49.6**	**-1.1**
HWUT	**Hardware Ranch**	**5.17**	**247**	ePn	**Pn**	**19 18 52.8**	**-1.0**
	13nm,0.5s						
EGMT	**Eagleton**	**5.30**	**325**	ePn	**Pn**	**19 18 55.4**	**-0.1**
	29nm,0.5s						
LRM	**Limekiln Ridge**	**5.54**	**294**	ePn	**Pn**	**19 18 57.6**	**-1.3**
	17nm,0.4s						
DAU	**Daniels Canyon**	**5.62**	**235**	ePn	**Pn**	**19 19 00.2**	**+0.2**
	10.0nm,0.4s						
PV04	**Paradox Valley**	**6.07**	**209**	ePn	**Pn**	**19 19 05.7**	**-0.4**
SRU	**San Rafael**	**6.14**	**222**	ePn	**Pn**	**19 19 05.5**	**-1.6**
	9.6nm,0.4s						
PV01	**Paradox Valley**	**6.19**	**205**	ePn	**Pn**	**19 19 08.6**	**+0.7**
	260nm,0.4s						
ECSD	**EROS Data Cent**	**6.22**	**87**	ePn	**Pn**	**19 19 08.5**	**+0.3**
	5.8nm,0.4s						
TMUT	**Trail Mountain**	**6.35**	**227**	ePn	**Pn**	**19 19 08.3**	**-1.7**
	35nm,0.5s						
BGU	**Big Grassy Mou**	**6.46**	**246**	ePn	**Pn**	**19 19 10.6**	**-0.9**
	4.2nm,0.9s						
CHMT	**Chamberlain Mo**	**6.48**	**302**	ePn	**Pn**	**19 19 11.6**	**-0.2**
	2.1nm,0.3s						
HLID	**Hailey**	**6.68**	**271**	ePn	**Pn**	**19 19 16.6**	**+2.0**
	1.2nm,0.3s						
DUG	**Dugway**	**6.71**	**240**	ePn	**Pn**	**19 19 14.6**	**-0.3**
	3.6nm,0.4s						
YBMT	**Yellow Bay**	**7.38**	**307**	ePn	**Pn**	**19 19 24.9**	**+0.7**
	3.2nm,0.3s						
MSU	**Marysvale**	**7.44**	**227**	ePn	**Pn**	**19 19 25.0**	**0.0**
	5.4nm,0.7s						
N12A	**Clover Valley,**	**7.85**	**251**	ePn	**Pn**	**19 19 32.0**	**+1.4**
	3.2nm,0.5s						
ARUT	**Antelope Range**	**8.65**	**229**	ePn	**Pn**	**19 19 41.1**	**-0.4**
	2.5nm,0.4s						
ULM	**Lac du Bonnet**	**9.08**	**41**	Pn	**Pn**	**19 19 47.4**	**0.0**
ULM				Lg		19 22 21.8	
ULM	**Lac du Bonnet**	**9.08**	**41**	Pn	**Pn**	**19 19 47.4**	**0.0**
	1.1nm,0.3s,baz=243,slow=13,SNR=3.3						
ULM				Lg		19 22 21.8	
	0.9nm,0.3s,baz=139,slow=19,SNR=3.0						
WUAZ	**Wupatki**	**9.52**	**212**	ePn	**Pn**	**19 19 55.9**	**+2.4**
	3.2nm,0.7s						
FFC	**Flin Flon**	**11.15**	**10**	ePn	**Pn**	**19 20 15.2**	**-0.6**
	1.9nm,0.5s						
SADO	**Sadowa**	**18.67**	**78**	LR	LR	19 29 36.9	
	comp=Z,38nm,18.2s,baz=342,slow=38						
ARCES	**ARCESS Array B**	**61.36**	**18**	P	**P**	**19 27 51.7**	**-0.5**
	0.8nm,0.6s,mb4.1,baz=337,slow=5.9,SNR=9.4						
FINES	**FINESS Array B**	**67.97**	**23**	P	**P**	**19 28 35.0**	**-0.5**
	1.3nm,1.0s,mb4.1,baz=323,slow=8.7,SNR=3.8						
LPAZ	**La Paz**	**68.73**	**142**	ePn	**P**	**19 28 39.1**	**-1.7**
	7.5nm,0.8s,mb5.0						
ZALV	**Zalesovo Beam**	**82.27**	**354**	P	**P**	**19 29 57.1**	**-1.0**
	0.4nm,0.6s,mb3.8,baz=358,slow=5.0,SNR=3.5						
BVAR	**Borovoye Array**	**83.50**	**3**	P	**P**	**19 30 03.2**	**-1.3**
	0.3nm,0.5s,mb3.8,baz=340,slow=8.1,SNR=3.2						
SONM	**Songino Array**	**84.61**	**339**	P	**P**	**19 30 09.7**	**-0.6**
	0.3nm,0.6s,mb3.7,baz=8.0,slow=5.0,SNR=3.1						

*INMG **29** 19:31:28.1±3.0, 38°.10N×19°.36W, h10km, ML3.2, Error ellipse: s-maj=71.7km s-min=23.9km az=13.0*
CSEM 29 19:31:35.7±0.5, 38°.98N×18°.12W, h10km, ML4.1/15, Error ellipse: s-maj=11.6km s-min=7.8km az=157.0, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMAFR	**Mafra**	**6.89**	**87**	ePn	Pn	19 33 17.5	+0.8
PMAFR				eSn	Sn	19 34 39.4	+4.3
PMAFR				A		19 34 42.7	
	16nm,0.2s						
PMAFR	**Mafra**	**6.89**	**87**	P	Pn	19 33 17.5	+0.8
	1.4nm,0.3s,SNR=78						
PMAFR				S	Sn	19 34 37.4	+2.3
	SNR=7.9						
PTOM	**Tomar**	**7.56**	**82**	ePn	Pn	19 33 27.6	+1.7
PTOM				eSn	Sn	19 34 52.7	+1.1
PTOM				A		19 34 57.6	
	7.5nm,0.1s						
PTOM	**Tomar**	**7.56**	**82**	ePn	Pn	19 33 27.6	+1.7
PTOM				eSn	Sn	19 34 52.7	+1.1
	7.5nm,0.1s						
PFVI	**Vila Bisbo**	**7.56**	**101**	ePn	Pn	19 33 24.9	-1.0
PFVI				eSn	Sn	19 34 49.9	-1.7
PFVI				A		19 35 00.7	
	7.3nm,0.7s						
PFVI	**Vila Bisbo**	**7.56**	**101**	P	Pn	19 33 24.5	-1.4
	1.0nm,0.2s,SNR=7.9						
PFVI	**Vila Bisbo**	**7.56**	**101**	ePn	Pn	19 33 24.9	-1.0
PFVI				eSn	Sn	19 34 49.9	-1.7
	7.3nm,0.7s						
PFVI				S	Sn	19 34 50.7	-0.9
	SNR=7.9						
MOE	**Montemor**	**7.65**	**90**	ePn	Pn	19 33 26.7	-0.4
MOE				eSn	Sn	19 34 54.4	+0.6
MOE	**Montemor**	**7.65**	**90**	ePn	Pn	19 33 26.7	-0.4
MOE				eSn	Sn	19 34 54.4	+0.6
EVO	**Evora**	**7.91**	**90**	ePn	Pn	19 33 30.5	-0.2
EVO				eSn	Sn	19 35 01.4	+1.1
EVO				A		19 35 09.2	
	4.1nm,0.1s						
EVO	**Evora**	**7.91**	**90**	ePn	Pn	19 33 30.5	-0.2
EVO				eSn	Sn	19 35 01.4	+1.1
	4.1nm,0.1s						
EMAZ	**Mazaricos**	**7.97**	**57**	S	Sn	19 34 59.8	-2.0
	SNR=7.9						
PCVE	**Castro Verde**	**8.04**	**96**	ePn	Pn	19 33 33.0	+0.5
PCVE				eSn	Sn	19 35 03.8	+0.4
PCVE				A		19 35 11.3	
	3.5nm,0.4s						
PCVE	**Castro Verde**	**8.04**	**96**	ePn	Pn	19 33 33.0	+0.5
PCVE				eSn	Sn	19 35 03.8	+0.4
	3.5nm,0.4s						
PVIS	**Viseu**	**8.06**	**74**	eSn	Sn	19 35 05.0	+1.2
PVIS				A		19 35 08.5	
	8.8nm,0.1s						
PVIS	**Viseu**	**8.06**	**74**	eSn	Sn	19 35 05.0	+1.2
	8.8nm,0.1s						
PBEJ	**Beja**	**8.10**	**94**	ePn	Pn	19 33 33.0	-0.3
PBEJ				eSn	Sn	19 35 03.7	-1.1
PBEJ				A		19 35 09.7	
	3.0nm,0.3s						
PBEJ	**Beja**	**8.10**	**94**	ePn	Pn	19 33 33.0	-0.3
PBEJ				eSn	Sn	19 35 03.7	-1.1
	3.0nm,0.3s						
PCAB	**Cabril**	**8.18**	**67**	eSn	Sn	19 35 07.8	+1.0
PCAB				A		19 35 12.8	
	11nm,0.1s						
PCAB	**Cabril**	**8.18**	**67**	eSn	Sn	19 35 07.8	+1.0
	11nm,0.1s						
ELOB	**Lobios**	**8.20**	**66**	S	Sn	19 35 06.9	-0.4
	SNR=7.9						
PESTR	**Estremoz**	**8.21**	**87**	ePn	Pn	19 33 35.9	+1.1
PESTR				eSn	Sn	19 35 09.3	+1.7
PESTR				A		19 35 14.5	
	2.3nm,0.3s						
PBDV	**Barranco-do-Ve**	**8.22**	**99**	ePn	Pn	19 33 35.4	+0.5
PBDV				eSn	Sn	19 35 07.1	-0.7
PBDV				A		19 35 20.9	
	4.7nm,0.8s						
PBDV	**Barranco-do-Ve**	**8.22**	**99**	ePn	Pn	19 33 35.4	+0.5
PBDV				eSn	Sn	19 35 07.1	-0.7
	4.7nm,0.8s						
MTE	**Manteigas**	**8.28**	**77**	eSn	Sn	19 35 09.7	+0.4
MTE				A		19 35 16.0	
	7.7nm,0.5s						
MTE	**Manteigas**	**8.28**	**77**	eSn	Sn	19 35 09.7	+0.4
	7.7nm,0.5s						
PCBR	**Castelo Branco**	**8.29**	**81**	ePn	Pn	19 33 36.8	+0.9
PCBR				eSn	Sn	19 35 10.0	+0.5
PCBR				A		19 35 15.8	
	5.5nm,0.3s						
PVRL	**Vila Real**	**8.29**	**71**	eSn	Sn	19 35 10.7	+1.0
PVRL				A		19 35 13.8	
	9.1nm,0.1s						
PVRL	**Vila Real**	**8.29**	**71**	eSn	Sn	19 35 10.7	+1.0
	9.1nm,0.1s						
PMRV	**Marv??o**	**8.34**	**84**	ePn	Pn	19 33 37.2	+0.6
PMRV				eSn	Sn	19 35 11.5	+0.6
PMRV				A		19 35 15.3	
	4.3nm,0.3s						
EGRO	**El Granado**	**8.49**	**96**	P	Pn	19 33 38.9	+0.2
	1.4nm,0.1s,SNR=7.9						
EGRO				S	Sn	19 35 14.2	-0.4
	SNR=7.9						
EBAD	**Badajoz**	**8.67**	**88**	P	Pn	19 33 41.1	0.0
	1.4nm,0.2s,SNR=6.4						
EBAD				S	Sn	19 35 18.7	-0.2
	SNR=7.9						
PBAR	**Barrancos**	**8.72**	**92**	ePn	Pn	19 33 41.7	-0.1
PBAR				eSn	Sn	19 35 19.5	-0.6
PBAR				A		19 35 23.6	
	2.8nm,0.2s						
PBAR	**Barrancos**	**8.72**	**92**	ePn	Pn	19 33 41.7	-0.1
PBAR				eSn	Sn	19 35 19.5	-0.6
	2.8nm,0.2s						
MVO	**Moncorvo**	**8.78**	**72**	eSn	Sn	19 35 21.7	+0.1
MVO				A		19 35 26.4	
	8.5nm,0.2s						
MVO	**Moncorvo**	**8.78**	**72**	eSn	Sn	19 35 21.7	+0.1
	8.5nm,0.2s						
EMIN	**Mina Concepcio**	**9.07**	**94**	P	Pn	19 33 46.7	0.0
	0.5nm,0.1s,SNR=18						
EMIN				S	Sn	19 35 28.2	-0.6
	SNR=7.9						
PBRG	**Braganca**	**9.13**	**68**	A		19 35 35.2	
	3.2nm,0.3s						
ECAL	**Calabor**	**9.17**	**68**	P	Pn	19 33 47.7	-0.2
	0.5nm,0.2s,SNR=7.9						
ECAL				S	Sn	19 35 30.6	-0.5
	SNR=7.9						
EPON	**Pontenova**	**9.34**	**59**	S	Sn	19 35 32.9	-2.6
	SNR=7.9						
ESPR	**Espera**	**9.92**	**98**	P	Pn	19 33 58.8	+0.6
	2.8nm,0.8s,SNR=4.7						
ESPR				S	Sn	19 35 49.6	+0.1
	SNR=7.9						
EADA	**Adamuz**	**10.64**	**90**	P	Pn	19 34 08.3	+0.2
	0.6nm,0.3s,SNR=17						
EADA				S	Sn	19 36 07.2	0.0
	SNR=7.9						
EARI	**Arriondas**	**10.65**	**62**	S	Sn	19 36 07.2	-0.3
	SNR=7.9						

IDC 29 19:31:40.5±29.0, 21°.47S×177°.73W, h501km±279km, mb3.2/4, mb1 3.4/4, mb1mx3.1/16, mbtmp3.2/4, Error ellipse: s-maj=184.9km s-min=167.4km az=116.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.66**	**266**	P	P	19 37 39.4	+0.2
	2.6nm,0.4s,baz=90,slow=13,SNR=6.4						
ASAR	**Alice Springs**	**44.55**	**258**	P	P	19 39 07.7	+0.3
	1.6nm,0.6s,baz=98,slow=7.6,SNR=38						
WRA	**Warramunga Arr**	**44.72**	**263**	P	P	19 39 08.2	-0.6
	1.1nm,0.3s,baz=96,slow=7.6,SNR=69						
CMAR	**Chiang Mai Arr**	**90.67**	**289**	P	P	19 43 49.8	0.0
	0.4nm,0.7s,baz=96,slow=2.7,SNR=4.1						
BVAR	**Borovoye Array**	**119.98**	**320**	PKP	PKPdf	19 49 33.4	0.0
	0.4nm,0.4s,baz=116,slow=3.4,SNR=4.0						
ARCES	**ARCESS Array B**	**129.92**	**350**	PKP	PKPdf	19 49 52.2	+0.3
	0.7nm,0.7s,baz=45,slow=1.4,SNR=3.8						
AKASG	**Malin Array Be**	**143.98**	**331**	PKP	PKPdf	19 50 16.7	-1.6
	2.0nm,0.4s,baz=46,slow=4.4,SNR=7.2						
BRTR	**Keskin Array B**	**147.67**	**311**	PKPbc	PKPbc	19 50 28.4	0.0
	0.4nm,0.4s,baz=119,slow=4.6,SNR=3.5						

*IDC **29** 19:33:37.6±0.8, 44°.09N×129°.27W, h0km, mb4.2/19, mb1 4.3/23, mb1mx4.3/30, mbtmp4.2/23, ML3.9/4, MS4.7/30, Ms1 4.7/30, ms1mx4.6/38, Error ellipse: s-maj=23.2km s-min=11.1km az=35.0*
*BJI **29** 19:33:37.9, 44°.20N×129°.30W, h10km, mB5.0/18, mb4.8/22, Ms5.1/19, Ms7 4.8/20*
*ISCJB **29** 19:33:39.5±0.2, 44°.27N±0°.03×129°.15W±0°.03, h10km, mb4.7/86, MS4.7/34, Error ellipse: s-maj=5.0km s-min=2.6km az=34.1*
*NEIC **29** 19:33:40.9±0.3, 44°.25N×129°.25W, h10km, mb4.9/81, Error ellipse: s-maj=6.9km s-min=3.3km az=214.0*
*GCMT **29** 19:33:41.2±0.1, 44°.03N×129°.41W, h12km, MW5.4, Moment Tensor Solution. s81,c133; s15,c15; Moment tensor: Scale 10^{17}Nm; M_{rr}-0.25±.02; $M_{\theta\theta}$-0.88±.02; $M_{\phi\phi}$1.13±.02; $M_{r\theta}$0.08±.04; $M_{\theta\phi}$-0.90±.02; $M_{\phi r}$0.31±.04; Best double couple: $M_0$1.40000×10^{17} NP1:ϕ_s294.00000°, δ77.00000°, λ-179.00000°. NP2:ϕ_s204.00000°, δ89.00000°, λ-13.00000°. Principal axes: T 1.5100, Plg8.0000°, Azm250.0000°; N -0.2500, Plg77.0000°, Azm18.0000°; P -1.2600, Plg10.0000°, Azm158.0000°; Data Used: II IU IC G CN. Surface waves: sta=106, comp=203, per= 50.*
*SZGRF **29** 19:33:48.5, 44°.48N×130°.36W, h33km, mb4.6, MS5.1, Off coast of Oregon, United States*
ISC 29 19:33:40.9±0.2, 44°.24N±0°.03×129°.26W±0°.03, h10km, (h13km±1.7km: pP-P), n285, σ1.932/266, mb4.7/86, MS4.7/34, 1D, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**3.83**	**109**	ePn	**Pn**	**19 34 34.9**	**-4.9**
RNO	**Roman Nose**	**3.99**	**93**	P	**Pn**	**19 34 39.1**	**-2.9**
MPOR	**Mary's Peak**	**4.10**	**84**	P	**Pn**	**19 34 40.4**	**-3.2**
COR	**Corvallis**	**4.28**	**83**	∥iPn	**Pn**	**19 34 44.4**	**-1.7**
HSO	**Harness Mounta**	**4.51**	**97**	P	**Pn**	**19 34 47.3**	**-2.0**
HUMO	**Hull Mountain**	**4.87**	**107**	ePn	**Pn**	**19 34 50.3**	**-3.9**
HUMO				eSn	**Sn**	**19 35 46.7**	**-3.8**
SSOR	**Sweet Springs**	**4.89**	**80**	P	**Pn**	**19 34 53.6**	**-1.0**
NLWA	**Neilton Lookou**	**4.91**	**48**	ePn	**Pn**	**19 34 53.2**	**-1.5**
FL2	**Flat Top 2**	**5.25**	**66**	P	**Pn**	**19 34 58.5**	**-0.9**
KHMM	**Horse Mountain**	**5.29**	**128**	ePn	**Pn**	**19 34 57.5**	**-2.4**
MTMW	**Mount Mitchell**	**5.29**	**68**	P	**Pn**	**19 34 58.9**	**-1.0**
YBH	**Yreka Blue Hor**	**5.42**	**115**	Pn	**Pn**	**19 34 59.1**	**-2.6**
	3.0nm,0.3s,baz=311,slow=12,SNR=57						
YBH				Sn	**Sn**	**19 36 00.1**	**-3.9**
	2.0nm,0.3s,baz=279,slow=19,SNR=3.7						
YBH	**Yreka Blue Hor**	**5.42**	**115**	ePn	**Pn**	**19 34 58.7**	**-2.9**
YBH				eSn	**Sn**	**19 36 02.0**	**-2.0**
HOOD	**Mount Hood Mea**	**5.52**	**76**	ePn	**Pn**	**19 35 01.6**	**-1.4**
	470nm,0.7s						
VBEM	**Beaver Butte**	**5.53**	**79**	P	**Pn**	**19 35 03.3**	**0.0**
GNW	**Green Mountain**	**5.58**	**51**	ePn	**Pn**	**19 35 01.3**	**-2.6**
	78nm,0.7s						
LON	**Longmire**	**5.80**	**62**	ePn	**Pn**	**19 35 05.6**	**-1.4**
PGC	**Sidney**	**5.96**	**40**	ePn	**Pn**	**19 35 07.2**	**-1.9**
WDC	**Whiskeytown Da**	**6.17**	**124**	ePn	**Pn**	**19 35 10.5**	**-1.5**
KCPM	**Cahto Peak**	**6.21**	**135**	ePn	**Pn**	**19 35 09.3**	**-3.3**
JCW	**Jim Creek**	**6.44**	**50**	ePn	**Pn**	**19 35 14.8**	**-0.9**
RPW	**Rockport**	**6.81**	**49**	ePn	**Pn**	**19 35 19.8**	**-1.0**
MOD	**Modoc**	**6.96**	**107**	ePn	**Pn**	**19 35 23.1**	**+0.2**
HOPS	**Hopland**	**7.00**	**136**	ePn	**Pn**	**19 35 21.1**	**-2.3**
ETW	**Entiat**	**7.07**	**58**	ePn	**Pn**	**19 35 22.9**	**-1.5**
RSW	**Rattlesnake Hi**	**7.14**	**69**	ePn	**Pn**	**19 35 24.7**	**-0.7**
HAWA	**Hanford**	**7.18**	**69**	ePn	**Pn**	**19 35 25.3**	**-0.7**
OHCM	**Honcut**	**7.60**	**128**	ePn	**Pn**	**19

LKWY	Lake	13.49	82	*e*Pn		Pn	19 36 54.4	+2.2
	210nm,1.6s							
ARUT	Antelope Range	13.56	113	*e*Pn		Pn	19 36 54.4	+1.1
	65nm,1.3s							
JLU	Jordanelle	13.64	99	*e*Pn		Pn	19 36 56.4	+2.0
MPU	Maple Canyon	13.74	102	*e*Pn		Pn	19 36 55.8	+0.2
	12nm,1.1s							
CCUT	Cedar City	13.74	114	*e*Pn		Pn	19 36 57.7	+1.9
EDM	Edmonton	13.79	44	*e*Pn		Pn	19 36 55.4	-0.9
DAU	Daniels Canyon	13.85	100	*e*Pn		Pn	19 36 57.9	+0.7
GCMT	Greycliff	13.94	77	*e*Pn		Pn	19 36 58.7	+0.2
	80nm,0.9s							
MSU	Marysvale	14.03	108	*e*Pn		Pn	19 37 01.1	+1.4
EGMT	Eagleton	14.04	68	*e*Pn		Pn	19 36 58.8	-0.8
LDFC	Landfair	14.21	125	*e*Pn		Pn	19 37 01.6	-0.5
	311nm,1.4s							
DLBC	Dease Lake	14.22	358	Pn		Pn	19 37 07.0	+4.9
	0.2nm,0.3s,baz=174,slow=10,SNR=8.9							
DLBC				LR		LR	19 41 55.3	
	comp=Z,8μm,18.5s,baz=176,slow=35							
DLBC	Dease Lake	14.22	358	*e*Pn		Pn	19 37 07.0	+4.8
RLMT	Red Lodge	14.25	79	*e*Pn		Pn	19 37 04.9	+2.3
TMUT	Trail Mountain	14.34	104	*e*Pn		Pn	19 37 04.0	+0.2
	54nm,1.2s							
BW06	Boulder Array	14.37	89	*e*Pn		Pn	19 37 05.2	+0.9
PDAR	Pinedale Array	14.37	89	Pn		Pn	19 37 05.3	+1.0
	0.1nm,0.3s,baz=293,slow=13,SNR=18							
PDAR				LR		LR	19 42 42.5	
	comp=Z,6μm,20.0s,baz=284,slow=38							
PFO	Pinyon Flat Ob	14.54	133	*e*Pn		Pn	19 37 03.9	-2.8
SRU	San Rafael	14.90	104	*e*Pn		Pn	19 37 13.0	+1.5
BAR	Barrett	15.16	135	*e*Pn		Pn	19 37 13.2	-1.8
	131nm,1.9s							
GLA	Glamis	15.84	130	*e*Pn		Pn	19 37 23.0	-1.0
	116nm,1.8s							
WUAZ	Wupatki	16.23	116	*e*Pn		Pn	19 37 29.2	+0.3
	161nm,1.4s							
RWWY	Rawlins	16.33	91	*e*Pn		Pn	19 37 29.4	-0.7
	172nm,1.4s							
LAO	LASA Array	16.33	73	*e*Pn		Pn	19 37 29.5	-0.7
	106nm,1.0s							
PV04	Paradox Valley	16.35	104	*e*Pn		Pn	19 37 30.1	-0.4
PV01	Paradox Valley	16.70	104	*e*Pn		Pn	19 37 34.6	-0.4
	18μm,1.3s							
MVCO	Mesa Verde	17.20	107	*e*Pn		Pn	19 37 41.1	-0.1
	406nm,1.7s							
HYT	Haines Junctio	17.33	346	*e*Pn		Pn	19 37 40.9	-1.7
SMCO	Snowmass	17.37	99	*e*Pn		Pn	19 37 42.3	-1.0
	145nm,1.6s							
PHWY	Pilot Hill	17.70	91	*e*Pn		Pn	19 37 46.2	-1.2
	91nm,1.4s							
DGMT	Dagmar	17.78	67	*e*Pn		Pn	19 37 47.5	-0.8
	1μm,2.1s							
RSSD	Black Hills	18.07	82	*e*Pn		Pn	19 37 51.6	-0.4
	81nm,1.4s							
ISCO	Idaho Springs	18.10	96	*e*Pn		Pn	19 37 51.6	-0.7
	324nm,2.3s							
TUC	Tucson	18.72	123	*e*P		Pn	19 37 59.3	-0.7
	22nm,1.2s							
SDCO	Great Sand Dun	19.03	102	*e*P		Pn	19 38 03.3	-0.4
	78nm,1.3s							
BMRM	Bremner River	19.08	337	*e*P		Pn	19 38 05.9	+1.8
	19nm,1.2s							
LAZ	Ladron	19.68	112	*e*P		Pn	19 38 11.2	-0.3
	40nm,1.5s							
ANMO	Albuquerque	19.81	110	Pn		Pn	19 38 12.7	-0.4
	0.1nm,0.3s,baz=310,slow=12,SNR=12							
ANMO				LR		LR	19 45 48.4	
	comp=Z,1μm,18.5s,baz=128,slow=37							
KDAK	Kodiak Island	19.84	321	P		Pn	19 38 14.1	+0.9
	0.2nm,0.3s,baz=134,slow=13,SNR=2.3							
KDAK				LR		LR	19 43 42.9	
	comp=Z,4μm,22.0s,baz=133,slow=30							
KDAK	Kodiak Island	19.84	321	P		Pn	19 38 14.1	+0.9
KDAK				*e*Pn		Pn	19 38 17.5	+4.3
KDAK				LR		LR	19 43 42.9	
OHAK	Old Harbor	19.87	319	*e*P		Pn	19 38 16.2	+2.7
	82nm,2.2s							
LENM	Lemitar	19.93	113	*e*Pn		Pn	19 38 16.4	+2.0
BNM	Barren Site	20.17	112	*e*P		P	19 38 16.3	+1.0
	87nm,1.5s							
YKA	Yellowknife Ar	20.17	20	P		P	19 38 15.5	+0.3
	6.6nm,0.9s,baz=207,slow=11,SNR=7.6							
OGNE	Ogallala	20.27	90	*e*Pn		P	19 38 20.1	+3.6
	332nm,1.5s							
FFC	Flin Flon	20.46	50	P		P	19 38 17.0	-1.4
	603nm,1.3s,SNR=32							
FFC	Flin Flon	20.46	50	*e*P		P	19 38 17.5	-0.9
	174nm,1.2s							
DAWY	Dawson	20.68	347	*e*Pn		P	19 38 21.1	+0.4
RC01	Rabbit Creek A	20.80	331	*e*P		P	19 38 20.1	-1.8
	50nm,1.3s							
PMR	Palmer	20.96	333	*e*P		P	19 38 26.1	+2.4
	52nm,1.9s							
PAX	Paxson	20.97	339	*e*P		P	19 38 23.0	-0.8
	38nm,1.6s							
RSO	Redoubt South	21.48	327	*e*P		P	19 38 30.4	+1.0
EGAK	Eagle	21.63	346	*e*P		P	19 38 31.6	+0.7
	125nm,2.3s,mb4.9							
MNTX	Cornudas Mount	22.51	116	*e*P		P	19 38 40.2	-0.5
	50nm,1.4s,mb4.8							
MCK	McKinley	22.51	337	*e*P		P	19 38 40.5	+0.1
	24nm,1.1s,mb4.5							
CBKS	Cedar Bluff	22.68	94	*e*P		P	19 38 44.3	+1.9
	176nm,1.6s,mb5.2							
TRF	Thorofare Moun	22.69	335	*e*P		P	19 38 42.9	+0.6
	56nm,1.6s,mb4.8							
SDPT	Sand Point	22.81	310	*e*P		P	19 38 43.1	-0.5
	37nm,1.1s,mb4.7							
GDL2	Guadalupe Moun	22.86	113	*e*P		P	19 38 45.9	+1.6
PPLA	Purkeypile	22.89	333	*e*P		P	19 38 45.6	+1.2
	84nm,1.5s,mb5.0							
SVW2	Sparrevohn	22.98	326	*e*P		P	19 38 44.9	-0.3
AMTX	Amarillo	23.13	104	*e*P		P	19 38 46.9	-0.3
	68nm,1.1s,mb5.0							
COLA	College	23.14	340	*e*P		P	19 38 48.9	+2.0
	6.6nm,1.0s,mb4.0							
CLNB	Carlsbad	23.14	112	*e*P		P	19 38 46.7	-0.6
	28nm,1.9s,mb4.4							
ULM	Lac du Bonnet	23.31	63	P		P	19 38 46.8	-2.1
	45nm,1.1s,mb4.8,baz=279,slow=10,SNR=13							
ULM				LR		LR	19 48 01.2	
	comp=Z,4μm,19.5s,MS4.9,baz=242,slow=37							
ULM	Lac du Bonnet	23.31	63	*e*P		P	19 38 47.1	-1.8
	52nm,1.1s,mb4.9							
AGMN	Agassiz Nation	23.33	68	*e*P		P	19 38 47.4	-1.7
	131nm,1.4s,mb5.2							
ECSD	EROS Data Cent	23.41	80	*e*P		P	19 38 48.4	-1.6
	314nm,1.6s,mb5.5							
INK	Inuvik	24.23	356	P		P	19 38 57.1	-0.3
	4.2nm,1.0s,mb3.8,baz=135,slow=12,SNR=4.1							
INK				LR		LR	19 48 06.3	
	comp=Z,2μm,21.3s,MS4.6,baz=179,slow=36							
INK	Inuvik	24.23	356	*e*P		P	19 38 57.0	-0.4
	27nm,1.5s,mb4.5							
TXAR	Lajitas Array	25.19	118	P		P	19 39 05.5	-1.0
	2.5nm,0.6s,mb3.9,baz=325,slow=6.1,SNR=22							
TXAR				LR		LR	19 48 00.0	
	comp=Z,943nm,21.8s,MS4.3,baz=185,slow=34							
TXAR	Lajitas Array	25.19	118	P		P	19 39 05.5	-1.0
TXAR				LR		LR	19 48 00.0	
WMOK	Wichita Mounta	25.24	102	*e*P		P	19 39 06.7	-0.3
	72nm,1.1s,mb5.1							
AKUT	Akutan	25.57	306	*e*P		P	19 39 10.2	+0.4
	18nm,0.9s,mb4.6							
COLD	Coldfoot	25.61	341	*e*P		P	19 39 11.7	+1.6
	30nm,1.7s,mb4.5							
IMA2	Indian Mountai	25.61	337	*e*P		P	19 39 11.9	+1.8
FCC	Fort Churchill	25.90	43	*e*P		P	19 39 12.1	-0.6
	3.6nm,1.4s,mb3.7							
UNV	Unalaska Valle	25.96	305	*e*P		P	19 39 11.6	-1.7
	46nm,1.2s,mb4.9							
EYMN	Ely	26.27	68	*e*P		P	19 39 14.2	-2.0
	49nm,1.4s,mb4.8							
JCT	Junction City	26.98	111	*e*P		P	19 39 22.7	0.0
	41nm,1.2s,mb4.8							
JFWS	Jewell Farm	28.11	79	*e*P		P	19 39 33.6	+0.8
	74nm,1.5s,mb5.1							
COWI	Conover	28.14	72	*e*P		P	19 39 34.0	+1.0
	8.5nm,0.8s,mb4.4							
MIAR	Mount Ida	29.03	97	*e*P		P	19 39 44.3	+3.3
	49nm,1.2s,mb5.1							
CCM	Cathedral Cave	29.09	89	*e*P		P	19 39 41.5	-0.1
HDIL	Hopedale	29.54	83	*e*P		P	19 39 46.6	+1.1
	139nm,1.5s,mb5.5							
FVM	French Village	29.71	89	*e*P		P	19 39 48.4	+1.3
	56nm,1.6s,mb5.0							
HKT	Hockley	30.00	107	*e*P		P	19 39 51.2	+1.5
	50nm,1.5s,mb5.0							
OLIL	Olney	31.07	86	*e*P		P	19 40 00.3	+1.3
	148nm,1.5s,mb5.6							
USIN	University of	31.70	87	*e*P		P	19 40 06.2	+1.6
	157nm,1.6s,mb5.6							
OXF	Oxford	32.02	94	*e*P		P	19 40 06.1	-1.4
	185nm,1.3s,mb5.8							
BLO	Bloomington	32.03	84	*e*P		P	19 40 08.3	+0.8
	51nm,1.4s,mb5.2							
WVT	Waverly	32.39	90	*e*P		P	19 40 10.2	-0.4
	29nm,1.4s,mb4.9							
RES	Resolute Bay	34.11	16	P		P	19 40 25.6	+0.3
	baz=241,slow=10							
SWET	Sewanee	34.18	90	*e*P		P	19 40 27.1	+0.9
LRAL	Lakeview Retre	34.50	94	*e*P		P	19 40 30.1	+1.0
	24nm,1.5s,mb4.9							
CPCT	Cooper Cave	35.08	89	*e*P		P	19 40 35.7	+1.6
SADO	Sadowa	35.28	71	P		P	19 40 34.4	-1.3
	11nm,0.9s,mb4.8,baz=295,slow=12,SNR=5.5							
SADO				LR		LR	19 55 14.2	
	comp=Z,4μm,21.1s,MS5.2,baz=320,slow=37							
TKL	Tuckaleechee C	35.52	88	LR		LR	19 55 40.6	
	comp=Z,6μm,18.9s,MS5.4,baz=302,slow=37							
ALLY	Alegheny Colle	35.62	77	*e*P		P	19 40 40.0	+1.4
MCWV	Mont Chateau	36.59	80	*e*P		P	19 40 47.9	+0.9
	46nm,1.4s,mb5.1							
GOGA	Godfrey	36.84	91	*e*P		P	19 40 50.0	+0.8
	34nm,1.4s,mb5.0							
ELN	Prospectdale	36.97	84	*e*P		P	19 40 49.8	-0.5
BLA	Blacksburg	37.21	84	*e*P		P	19 40 50.1	-2.2
	32nm,1.1s,mb5.1							
VWCC	Virginia Weste	37.51	83	*e*P		P	19 40 55.9	+1.1
SSPA	Standing Stone	37.58	77	*e*P		P	19 40 54.0	-1.4
	69nm,1.6s,mb5.1							
FRB	Frobisher Bay	38.82	38	P		P	19 41 05.7	+0.2
	2.9nm,0.7s,mb4.1,baz=264,slow=13,SNR=1.8							
FRB				LR		LR	19 56 25.3	
	comp=Z,714nm,21.8s,MS4.5,baz=265,slow=35							
MVL	Millersville	38.91	77	*e*P		P	19 41 06.0	-0.6
	43nm,1.4s,mb5.0							
FRNY	Flat Rock	39.02	69	*e*P		P	19 41 08.3	+0.9
	84nm,1.8s,mb5.2							
ACCN	Adirondack Com	39.46	71	*e*P		P	19 41 13.9	+2.7
	78nm,1.9s,mb5.1							
CMIG	Matias Romero	39.60	122	P		P	19 41 10.6	-2.0
	25nm,1.2s,mb4.8,baz=328,slow=10,SNR=6.5							
CMIG				LR		LR	19 58 18.1	
	comp=Z,537nm,18.6s,MS4.4,baz=309,slow=38							
TRY	Troy	39.70	72	*e*P		P	19 41 16.2	+3.0
HNH	Hanover	40.29	70	*e*P		P	19 41 22.3	+4.3
BILL	Bilibino	40.47	328	*e*P		P	19 41 17.7	-1.6
	43nm,1.5s,mb5.0							
SCHQ	Schefferville	40.57	52	P		P	19 41 20.1	-0.1
	5.0nm,1.0s,mb4.1,baz=274,slow=13,SNR=3.8							
SCHQ				LR		LR	19 58 14.8	
	comp=Z,3μm,18.4s,MS5.2,baz=283,slow=36							
TEIG	Tepich	41.54	112	*e*P		P	19 41 26.6	-2.0
	10nm,0.8s,mb4.5							
TGUH	Tegucigalpa,Un	46.66	117	*e*P		P	19 42 15.2	+5.5
PETK	Petropavlovsk-	47.07	308	P		P	19 42 10.6	-1.9
	2.0nm,0.8s,mb4.1,baz=82,slow=12,SNR=2.5							
PETK				LR		LR	20 01 23.6	
	comp=Z,303nm,19.3s,MS4.3,baz=272,slow=35							
SUMG	Summit	48.70	24	*e*P		P	19 42 28.7	+3.8
TIXI	Tiksi	52.22	337	*e*P		P	19 42 51.0	-0.5
	11nm,1.3s,mb4.6							
TAOE	Nuku Hiva Isla	53.76	193	*e*LR		LR	19 58 38.1	
	932nm,24.7s							
TAOE				*e*T			20 40 40.4	
	123nm,0.3s							
PMOR	Pomariorio Ree	61.36	201	*e*T			20 50 09.0	
	52nm,0.2s							
VAH	Vaihoa	61.52	200	*e*T			20 50 21.0	
	32nm,0.4s							
ROSC	El Rosal	61.96	112	LR		LR	20 12 58.2	
	comp=Z,176nm,21.6s,MS4.2,baz=206,slow=38							
OTAV	Otavalo	62.80	119	*e*P		P	19 44 06.9	+0.1
	19nm,1.3s,mb5.1							
MEH	Mehetia	64.16	200	*e*T			20 53 39.0	
	118nm,0.3s							
TIAR	Tiarei	64.18	201	*e*T			20 53 40.3	
	66nm,0.2s							
PPT	Papeete	64.25	202	*e*LQ			20 00 20.7	
	4μm,28.8s							
PPT				*e*LR		LR	20 03 24.5	
	142nm,23.0s							
PPT				*e*T			20 53 45.6	
	16nm,0.3s							
PAE	Paea	64.34	202	*e*T			20 53 52.3	
	4.2nm,0.3s							
KEV	Kevo	64.99	9	*e*P		P	19 44 21.0	+0.6
	41nm,1.8s,mb5.2							
ARCES	ARCESS Array B	65.03	10	P		P	19 44 20.7	0.0
	1.0nm,0.7s,mb4.0,baz=357,slow=4.9,SNR=4.4							
MDJ	Mudanjiang	67.21	311	P		P	19 44 33.0	-2.1
MDJ				pP		pP	19 44 36.0	-2.3
MDJ				PcP		PcP	19 45 01.3	-1.7
MDJ				S		S	19 53 31.0	+1.5
MDJ				sS		sS	19 53 37.0	+2.1
MDJ				pmax		pmax		
	comp=Z,3.0nm,1.0s,mb4.3							
MDJ				pmax		pmax		
	comp=Z,47nm,5.3s							
MDJ				LR		LR		
	comp=N,390nm,44.5s,MS4.3							
MDJ				LR		LR		
	comp=E,240nm,44.5s,MS4.3							
MDJ				LR		LR		
	comp=Z,340nm,35.6s							
RKT	Rikitea	67.23	186	*e*LR		LR	20 04 50.6	
	comp=Z,1μm,27.5s							
RKT				*e*T			20 57 31.3	
	comp=Z,10nm,0.2s							
AFI	Afiamalu	69.61	224	LR		LR	20 07 01.0	
	comp=Z,422nm,19.5s,MS4.7,baz=294,slow=29							
TBI	Tubuai	69.76	200	*e*S		S	19 53 56.1	-4.0
	comp=Z,345nm,27.2s							
TBI				*e*LQ			20 02 29.8	
	comp=Z,1μm,29.8s							
TBI				*e*LR		LR	20 05 57.0	
	comp=Z,184nm,25.2s							
CN2	Changchun	69.99	312	*e*P		P	19 44 51.0	-1.4
CN2				*e*S		S	19 54 02.8	+0.2
CN2				pmax		pmax		
	comp=Z,10.0nm,0.5s,mb5.0							
CN2				pmax		pmax		
	comp=Z,200nm,5.0s							
CN2				LR		LR		
	comp=N,200nm,24.0s,MS4.6							
CN2				LR		LR		
	comp=E,400nm,24.0s,MS4.6							
CN2				LR		LR		
	comp=Z,200nm,19.0s,MS4.4							
NB2	NORSAR Subarra	70.27	19	P		P	19 44 56.0	+2.1
	comp=Z,9.0nm,1.2s,mb4.6,baz=333,slow=5.6							
NOA	NORSAR Array B	70.27	19	P		P	19 44 52.5	-1.3
	comp=Z,1.7nm,0.9s,mb4.0,baz=333,slow=5.8,SNR=4.8							
NOA				LR		LR	20 16 30.2	
	comp=Z,204nm,18.9s,MS4.4,baz=330,slow=36							
FINES	FINESS Array B	72.79	12	P		P	19 45 07.6	-1.4
	comp=Z,1.7nm,0.7s,mb4.1,baz=354,slow=11,SNR=6.0							
FINES				LR		LR	20 20 25.9	
	comp=Z,223nm,18.5s,MS4.5,baz=345,slow=38							
KSRS	Korea Array	72.90	306	P		P	19 45 10.7	+0.6
	comp=Z,1.4nm,1.0s,mb3.9,baz=69,slow=6.7,SNR=4.5							
NNA	Nana	73.41	126	*e*P		P	19 45 13.8	+0.5
	comp=Z,39nm,1.4s,mb5.2							
SONM	Songino Array	76.08	325	P		P	19 45 27.0	-1.4
	comp=Z,3.1nm,1.1s,mb4.2,baz=51,slow=3.5,SNR=14							
SONM				LR		LR	20 19 23.6	
	comp=Z,600nm,18.6s,MS4.9,baz=41,slow=36							
BJI	Beijing	77.52	314	P		P	19 45 35.0	-1.7
BJI				SS		SS	20 00 22.5	-3.2
BJI				pmax		pmax		
	comp=Z,4.0nm,0.5s,mb4.6							
BJI				pmax		pmax		
	comp=Z,71nm,3.6s							
BJI				LR		LR		
	comp=N,290nm,17.1s,MS4.8							
BJI				LR		LR		
	comp=E,240nm,15.2s,MS4.8							
BJI				LR		LR		
	comp=Z,160nm,25.8s							
BAIF	Baives	77.71	29	*e*P		P	19 45 38.1	+0.6
	comp=Z,34nm,1.4s,mb4.8							
BAIF	Baives	77.71	29	*e*P		P	19 45 38.1	+0.6
	comp=Z,17nm,1.4s,mb4.8							
ZAA0	Zalesovo Array	77.94	340	*e*P		P	19 45 36.8	-2.0
ZALV	Zalesovo Beam	77.94	340	P		P	19 45 37.2	-1.6
	comp=Z,1.7nm,0.7s,mb4.1,baz=18,slow=6.3,SNR=9.2							
ZALV				LR		LR	20 21 05.4	
	comp=Z,315nm,19.9s,MS4.6,baz=40,slow=36							
ZALV	Zalesovo Beam	77.94	340	P		P	19 45 37.2	-1.6
ZALV				LR		LR	20 21 05.4	
IZAR	Zarasai	78.25	14	*e*P		P	19 45 41.0	+0.6
ISAL	Salakas	78.40	14	*e*P		P	19 45 42.1	+0.8
ISAL				AMB		AMB	19 45 48.3	
	comp=Z,3.4nm,1.9s,mb4.0							
IIGN	Ignalina	78.63	14	*e*P		P	19 45 43.1	+0.6
IIGN				AMB		AMB	19 45 45.7	
	comp=Z,1.9nm,0.8s,mb4.1							
IDID	Didziasalis	78.75	14	*e*P		P	19 45 43.8	+0.6
IDID				AMB		AMB	19 45 49.9	
	comp=Z,3.1nm,1.4s,mb4.0							
HHC	Hu-ho-hao-te	79.21	318	*e*P		P	19 45 42.8	-3.2
HHC				pP		pP	19 45 47.5	-1.8
HHC				sP		sP	19 45 49.8	-0.7
HHC				PcP		PcP	19 45 51.5	-2.9
HHC				PP		PP	19 48 43.8	-1.1
HHC				S		S	19 55 40.0	-5.9
HHC				SKS			19 55 53.0	
HHC				ScS		ScS	19 56 00.8	-7.9
HHC				SS		SS	20 00 48.0	-3.1
HHC				pmax		pmax		
	comp=Z,11nm,0.7s,mb4.9							
HHC				pmax		pmax		
	comp=Z,42nm,4.2s							
HHC				LR		LR		
	comp=N,170nm,16.4s,MS4.9							
HHC				LR		LR		
	comp=E,440nm,16.9s,MS4.9							
HHC				LR		LR		
	comp=Z,380nm,20.9s,MS4.7							
ARU	Arti	79.48	356	*e*P		P	19 45 44.2	-3.0
	comp=Z,27nm,1.4s,mb5.0							
LOR	Lormes	79.95	30	*e*P		P	19 45 50.8	+0.9
SSF	Saint Saulge	79.99	31	*e*P		P	19 45 50.9	+0.7
	comp=Z,17nm,1.3s,mb4.5							
SSF	Saint Saulge	79.99	31	*e*P		P	19 45 50.9	+0.7
	comp=Z,8.3nm,1.3s,mb4.5							
CDF	Champ du Feu	80.16	28	*e*P		P	19 45 51.7	+0.7
	comp=Z,10nm,0.9s,mb4.5							
CDF	Champ du Feu	80.16	28	*e*P		P	19 45 51.7	+0.7
	comp=Z,5.3nm,0.9s,mb4.5							
AVF	Avril sur Loir	80.17	31	*e*P		P	19 45 51.8	+0.7
NKC	Novy Kostel	80.17	24	*e*P		P	19 45 54.2	+3.1
NKC				*e*S		S	19 55 59.1	+3.4
NKC				*e*SS		SS	20 01 11.0	+6.2
NKC				*e*x		x	20 06 24.8	
NKC				AMS		AMS	20 22 20.0	
	comp=Z,500nm,17.7s							
GRF	Grafenberg Arr	80.29	25	*e*P		P	19 45 55.3	+3.6
	comp=Z,15nm,1.9s,mb4.6							
GRF				*e*L			20 23 21.8	
	comp=Z,755nm,18.3s							
PVCC	Panska Ves	80.51	22	*e*P		P	19 45 57.1	+4.2
PVCC				*e*S		S	19 56 06.9	+7.7
PVCC				*e*x		x	20 06 32.6	
PVCC				AMS		AMS	20 23 50.0	
	comp=Z,500nm,17.5s							
HINF	Hinteralfeld	80.53	28	*e*P		P	19 45 53.5	+0.5
	comp=Z,18nm,1.3s,mb4.5							
HINF	Hinteralfeld	80.53	28	*e*P		P	19 45 53.5	+0.5
	comp=Z,9.1nm,1.3s,mb4.5							
RJF	Les Rejaudoux	80.72	33	*e*P		P	19 45 54.3	+0.2
UPC	Upice	80.92	22	*e*P		P	19 45 57.9	+2.9
PRU	Pruhonice	80.99	23	*e*P		P	19 46 00.3	+4.9
PRU				*e*S		S	19 56 10.0	+5.8
PRU				*e*x		x	20 01 30.6	
PRU				*e*x		x	20 06 38.5	
PRU				AMS		AMS	20 22 50.0	
	comp=Z,600nm,20.1s							
DPC	Dobruska-Polom	81.14	22	*e*P		P	19 46 00.9	+4.7
DPC				*e*S		S	19 56 12.1	+6.3
DPC				*e*SS		SS	20 01 24.5	+5.3
DPC				*e*x		x	20 07 20.0	
DPC				AMS		AMS	20 24 00.0	
	comp=Z,400nm,19.1s							
KHC	Kasperske Hory	81.49	24	*e*P		P	19 45 59.9	+1.8
	comp=Z,7.3nm,1.4s,mb4.4							
KHC	Kasperske Hory	81.49	24	*e*P		P	19 46 02.7	+4.6
	comp=Z,18nm,1.3s,mb4.5							
KHC				*e*S		S	19 56 14.8	+5.4
KHC				*e*SS		SS	20 01 34.7	+10
KHC				*e*x		x	20 06 49.7	
KHC				AMS		AMS	20 23 00.0	
	comp=Z,500nm,19.1s							
BRVK	Borovoye	81.64	348	P		P	19 45 57.8	-1.0
	comp=Z,60nm,0.9s,mb5.5,SNR=6.2							
BRVK	Borovoye	81.64	348	*e*P		P	19 45 54.3	-4.5
	comp=Z,37nm,1.5s,mb5.1							
BVAR	Borovoye Array	81.65	348	P		P	19 45 57.6	-1.3
	comp=Z,3.1nm,0.7s,mb4.3,baz=18,slow=4.4,SNR=17							
TREC	Trest	81.88	22	*e*P		P	19 46 05.0	+4.8
TREC				AMS		AMS	20 24 50.0	
	comp=Z,600nm,16.6s							
NJ2	Nanjing	81.97	307	*e*P		P	19 46

comp=Z,19nm,1.2s,mb5.2
LZH pmax pmax
comp=Z,100nm,8.6s
LZH LR LR
comp=N,470nm,17.8s
LZH LR LR
comp=Z,500nm,18.7s,MS4.9
DZM Mont Dzumac 88.32 237 *e*LR LR 20 14 31.4
comp=Z,1μm,22.4s
CD2 Chengdu 90.93 317 *e*P **P 19 46 44.5 -0.5**
CD2 pP pP 19 46 49.5 +1.1
CD2 sP sP 19 46 51.8 +2.2
CD2 PP PP 19 50 21.5 +1.2
CD2 SKS 19 57 13.5
CD2 S S 19 57 37.5 -4.8
CD2 sS sS 19 57 45.5 -2.3
CD2 SS SS 20 03 42.3 -1.6
CD2 pmax pmax
comp=Z,20nm,0.8s,mb5.5
CD2 pmax pmax
comp=Z,100nm,8.2s
CD2 LR LR
comp=N,150nm,16.2s
CD2 LR LR
comp=Z,140nm,14.8s,MS4.5
AAK Ala-Archa 90.94 343 LR LR 20 32 15.5
comp=Z,272nm,21.7s,MS4.7,baz=339,slow=39
KEST Kesra 91.97 33 LR LR 20 31 13.6
comp=Z,111nm,18.6s,MS4.3,baz=260,slow=38
BRTR Keskin Array B 95.00 13 LR LR 20 30 12.2
comp=Z,165nm,21.7s,MS4.5,baz=151,slow=36
CPUP Villa Florida 96.12 121 LR LR 20 36 39.7
comp=Z,148nm,18.0s,MS4.5,baz=60,slow=39
KMI Kunming 96.18 314 P **P 19 47 09.8 +0.5**
KMI pP pP 19 47 12.3 -0.3
KMI sP sP 19 47 13.5 -0.3
KMI PP PP 19 51 02.5 +1.0
KMI S S 19 58 24.0 -4.8
KMI SS SS 20 04 57.8 -1.3
KMI pmax pmax
comp=Z,5.0nm,1.1s,mb4.9
KMI pmax pmax
comp=Z,44nm,3.2s
KMI LR LR
comp=N,240nm,15.3s,MS4.8
KMI LR LR
comp=E,160nm,19.2s,MS4.8
KMI LR LR
comp=Z,210nm,17.9s,MS4.7
PLCA Paso Flores 99.68 139 LR LR 20 21 40.9
comp=Z,200nm,21.3s,MS4.6,baz=100,slow=29
CTA Charters Tower 99.94 252 LR LR 20 29 39.0
comp=Z,985nm,18.2s,MS5.3,baz=65,slow=34
CTAO Charters Tower 99.94 252 *e*P Pdif 19 47 26.4 +0.4
comp=Z,16nm,1.3s

*NEIC **29** 19:49:29.1, 32.°53S×70.°08W, h127km, MD3.1(GUC), After GUC.*

GUC 29 19:49:29.1±0.6, 32.°53S×70.°08W, h127km±4km, MD3.1, ML2.9, 13C-5D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACH	**Jahuel**	**0.46**	**251**	⇓*i*P	Pn	19 49 47.6	+0.1
JACH				*i* S	Sn	19 50 01.6	+0.1
JACH	**Jahuel**	**0.46**	**251**	⇓*i*P	Pn	19 49 47.6	+0.1
JACH				*i* S	Sn	19 50 01.6	+0.1
PEL	**Peldehue**	**0.79**	**220**	⇑*i*P	Pn	19 49 49.7	-0.2
PEL				*i* S	Sn	19 50 05.8	+0.2
PEL				AML	AML	19 50 07.9	
comp=N,368nm,0.3s							
FCH	**Farellones**	**0.81**	**192**	⇓*i*P	Pn	19 49 48.9	-1.1
FCH				*i* S	Sn	19 50 05.1	-0.8
ROCH	**El Roble**	**0.90**	**240**	*i* S	Sn	19 50 07.9	+0.8
CLCH	**Cerro Calan**	**0.94**	**204**	*e*P	Pn	19 49 51.1	0.0
CLCH				*i* S	Sn	19 50 08.0	0.0
CLCH				AML	AML	19 50 10.7	
comp=N,245nm,0.6s							
ANTU	**Antumapu**	**1.13**	**204**	⇑*i*P	Pn	19 49 53.0	0.0
ANTU				*i* S	Sn	19 50 11.5	+0.3
ANTU	**Antumapu**	**1.13**	**204**	⇑*i*P	Pn	19 49 53.0	0.0
ANTU				*i* S	Sn	19 50 11.5	+0.3
ANTU				AML	AML	19 50 13.1	
comp=E,311nm,0.7s							
PCH	**Pirque**	**1.14**	**198**	⇑*i*P	Pn	19 49 53.6	+0.4
PCH				*i* S	Sn	19 50 12.1	+0.7
PCH	**Pirque**	**1.14**	**198**	⇑*i*P	Pn	19 49 53.6	+0.4
PCH				*i* S	Sn	19 50 12.1	+0.7
LMEL	**Las Melosas**	**1.32**	**184**	*e*P	Pn	19 49 55.0	+0.1
LMEL				*i* S	Sn	19 50 15.4	+0.8
LMEL	**Las Melosas**	**1.32**	**184**	*e*P	Pn	19 49 55.0	+0.1
LMEL				*i* S	Sn	19 50 15.4	+0.8
LMEL				AML	AML	19 50 20.9	
comp=N,155nm,0.2s							
TACH	**Talagante**	**1.33**	**212**	⇑*i*P	Pn	19 49 55.2	+0.1
TACH				*i* S	Sn	19 50 15.4	+0.6
TACH	**Talagante**	**1.33**	**212**	⇑*i*P	Pn	19 49 55.2	+0.1
TACH				*i* S	Sn	19 50 15.4	+0.6
CHCH	**Chadas Angostu**	**1.48**	**199**	*e*P	Pn	19 49 57.0	+0.4
CHCH				*e*S	Sn	19 50 18.2	+0.5
CHCH	**Chadas Angostu**	**1.48**	**199**	*e*P	Pn	19 49 57.0	+0.4
CHCH				*e*S	Sn	19 50 18.2	+0.5
CMCH	**Combarbala**	**1.56**	**330**	⇑*i*P	Pn	19 49 58.4	+0.7
CMCH				*i* S	Sn	19 50 20.1	+0.6
CMCH	**Combarbala**	**1.56**	**330**	⇑*i*P	Pn	19 49 58.4	+0.7
CMCH				*i* S	Sn	19 50 20.1	+0.6
CMCH				AML	AML	19 50 22.2	
comp=E,284nm,0.9s							
CACH	**El Canelo**	**1.64**	**195**	⇓*i*P	Pn	19 49 59.5	+0.9
CACH				*i* S	Sn	19 50 22.6	+1.5
CACH	**El Canelo**	**1.64**	**195**	⇓*i*P	Pn	19 49 59.5	+0.9
CACH				*i* S	Sn	19 50 22.6	+1.5
LNV	**Longovilo**	**1.80**	**218**	⇑*i*P	Pn	19 50 00.3	-0.2
LNV				*i* S	Sn	19 50 24.4	-0.2
LNV	**Longovilo**	**1.80**	**218**	⇑*i*P	Pn	19 50 00.3	-0.2
LNV				*i* S	Sn	19 50 24.4	-0.2
TLL	**Tololo Astrono**	**2.44**	**345**	⇑*i*P	Pn	19 50 09.4	+1.0
TLL				*i* S	Sn	19 50 39.7	+1.1
TLL	**Tololo Astrono**	**2.44**	**345**	⇑*i*P	Pn	19 50 09.4	+1.0
TLL				*i* S	Sn	19 50 39.7	+1.1
TLL				AML	AML	19 50 43.3	
comp=N,32nm,0.6s							
LCO	**Las Campanas**	**3.55**	**351**	*e*Pn	Pn	19 50 22.9	+0.1

*IDC **29** 19:51:38.2±0.9, 31.°45N×103.°73E, h0km, mb3.7/9, mb1 3.8/11, mb1mx3.7/23, mbtmp3.6/11, ML3.2/2, Error ellipse: s-maj=55.8km s-min=16.4km az=61.0*
*BJI **29** 19:51:40.7, 31.°30N×103.°67E, h22km, ML3.7/17, Ms3.7/5, Ms7 3.6/4*
*NEIC **29** 19:51:41.5±0.5, 31.°52N×103.°33E, h10km, mb4.4/2, Error ellipse: s-maj=13.9km s-min=8.2km az=66.0*

ISC 29 19:51:39.5±1.0, 31.°45N±0.°04×103.°64E±0.°06, h2km±8km, n27, σ1.08/33, mb3.7/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.54**	**169**	Pg	**Pg**	**19 51 48.8**	**-1.1**
CD2				Sg	**Sg**	**19 51 57.5**	**+0.5**
CD2				smax			
comp=N,9μm,0.8s							
LZH	**Lanzhou**	**4.63**	**2**	Pg	**Pg**	**19 53 09.3**	**+1.1**
LZH				Sn	**Sb**	**19 53 58.5**	**+0.9**
LZH				Sg	**Sg**	**19 54 13.5**	**+5.2**
LZH				smax			
comp=N,77nm,0.8s							
LZH				smax			
comp=E,63nm,0.6s							
LZH				LR	LR		
comp=E,1μm,5.2s							
LZH				LR	LR		
comp=Z,1μm,6.6s							
XAN	**Xi'an**	**5.14**	**58**	Pn	**Pn**	**19 52 57.5**	**0.0**
XAN				Pg	**Pg**	**19 53 16.0**	**-2.1**
XAN				Sn	**Sn**	**19 53 58.5**	**+1.1**
XAN				Sg	**Sg**	**19 54 20.0**	**-4.8**
XAN				smax			
comp=N,70nm,1.0s							
XAN				smax			
comp=E,41nm,0.8s							
CM31	**Chiang Mai Arr**	**13.61**	**199**	*e*Pn	**Pn**	**19 54 55.9**	**+2.3**
comp=E,2.7nm,0.8s							
CMAR	**Chiang Mai Arr**	**13.61**	**199**	Pn	**Pn**	**19 54 54.2**	**+0.6**
comp=E,0.0nm,0.3s,baz=9.7,slow=9.8,SNR=3.6							
CMAR	**Chiang Mai Arr**	**13.61**	**199**	Pn	**Pn**	**19 54 54.2**	**+0.6**
GUN	**Gumba**	**15.84**	**262**	*e*P	**Pn**	**19 55 24.8**	**+1.3**
comp=E,25nm,0.7s							
PKI	**Pulchoki**	**16.34**	**261**	*e*P	**Pn**	**19 55 30.0**	**+0.1**
PKIN	**Phulchoki**	**16.34**	**261**	*e*P	**Pn**	**19 55 30.4**	**+0.4**
comp=E,7.4nm,0.4s							
KKN	**Kakani**	**16.38**	**262**	*e*P	**Pn**	**19 55 30.6**	**+0.1**
comp=E,29nm,0.8s							
SONM	**Songino Array**	**16.50**	**7**	Pn	**Pn**	**19 55 32.8**	**+0.8**
comp=E,0.1nm,0.3s,baz=188,slow=10,SNR=8.3							
DMN	**Daman**	**16.58**	**261**	*e*P	**Pn**	**19 55 33.1**	**+0.1**
comp=E,32nm,0.9s							
TPUB	**Ta-pu**	**17.12**	**114**	*e*Pn	**Pn**	**19 55 44.7**	**+4.9**
comp=E,19nm,0.4s							
YULB	**Yu-li**	**17.59**	**113**	*e*Pn	**Pn**	**19 55 51.0**	**+5.2**
comp=E,22nm,0.9s							
KSRS	**Korea Array**	**20.87**	**67**	P	**P**	**19 56 25.3**	**+2.5**
comp=E,1.6nm,0.5s,baz=253,slow=9.5,SNR=7.2							
MK31	**Makanchi Array**	**22.46**	**319**	*e*P	**P**	**19 56 36.4**	**-3.3**
MKAR	**Makanchi Array**	**22.46**	**319**	P	**P**	**19 56 39.3**	**-0.4**
comp=E,0.9nm,0.8s,mb3.2,baz=134,slow=10,SNR=7.1							
ZAA0	**Zalesovo Array**	**26.24**	**334**	*e*P	**P**	**19 57 15.0**	**-0.6**
ZALV	**Zalesovo Beam**	**26.24**	**334**	P	**P**	**19 57 15.1**	**-0.5**
comp=E,1.4nm,0.7s,mb3.6,baz=134,slow=11,SNR=7.6							
KURK	**Kurchatov**	**26.74**	**323**	P	**P**	**19 57 19.5**	**-0.7**
comp=E,1.8nm,0.6s,mb3.8,baz=128,slow=9.4,SNR=9.7							
BVAR	**Borovoye Array**	**32.28**	**322**	P	**P**	**19 58 09.2**	**-0.1**
comp=E,0.4nm,0.6s,mb3.4,baz=147,slow=8.2,SNR=3.5							
ARCES	**ARCESS Array B**	**56.79**	**336**	P	**P**	**20 01 23.7**	**-0.8**
comp=E,0.9nm,0.9s,mb3.8,baz=81,slow=6.8,SNR=6.7							
FINES	**FINESS Array B**	**57.06**	**326**	P	**P**	**20 01 25.4**	**-1.2**
comp=E,0.9nm,0.6s,mb4.0,baz=94,slow=7.4,SNR=6.6							
WRA	**Warramunga Arr**	**58.98**	**146**	P	**P**	**20 01 38.6**	**-1.9**
comp=E,0.7nm,0.6s,mb3.9,baz=336,slow=7.7,SNR=9.1							
WRA	**Warramunga Arr**	**58.98**	**146**	P	**P**	**20 01 38.6**	**-1.9**
ASAR	**Alice Springs**	**61.99**	**148**	P	**P**	**20 02 00.8**	**-0.3**
comp=E,0.5nm,0.7s,mb3.8,baz=339,slow=6.3,SNR=4.9							
NOA	**NORSAR Array B**	**64.16**	**327**	P	**P**	**20 02 14.5**	**-0.6**
comp=E,0.4nm,0.9s,mb3.5,baz=74,slow=5.9,SNR=3.3							

CASC 29 19:51:47.3±2.2, 11.°99N×87.°47W, h4km, MD4.0, ML3.5, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEON	**Leon**	**0.70**	**53**	*e*P	Pg	19 52 04.3	+3.5
TELN	**Telica**	**0.87**	**46**	*e*P	Pg	19 52 05.4	+1.3
COPN	**Copaltepe**	**0.88**	**78**	*e*P	Pg	19 52 05.7	+1.5
COPN				*e*S	Sg	19 52 17.8	+2.3
COPN				AML	AML	19 52 20.5	
comp=Z,771nm,0.1s							
CNGN	**Cerro Negro**	**0.91**	**56**	*e*P	Pg	19 52 04.8	+0.1
CNGN				*e*S	Sg	19 52 17.8	+1.3
MOMN	**Momotombo**	**1.00**	**65**	*e*P	Pg	19 52 06.0	-0.5
CSAN		**1.04**	**79**	*e*P	Pg	19 52 06.9	-0.4
APYN	**Apoyeque**	**1.12**	**77**	*e*P	Pg	19 52 07.3	-1.6
XAVN	**Gruta Xavier**	**1.13**	**82**	*e*P	Pg	19 52 07.7	-1.3
CRUN	**El Crucero**	**1.14**	**90**	*e*P	Pg	19 52 09.2	-0.1
TICN	**Ticuantepe**	**1.21**	**88**	*e*P	Pg	19 52 09.0	-1.6
TICN				*e*S	Sg	19 52 24.8	-1.5
TICN				AML	AML	19 52 27.2	
comp=Z,2μm,0.2s							
HUEN		**1.31**	**75**	*e*P	Pn	19 52 08.6	-3.8
CNCH	**Conchagua**	**1.32**	**344**	*e*P	Pn	19 52 11.4	-1.2
CNCH				*e*S	Sg	19 52 29.9	-0.1
BLLM	**Bellamira**	**1.62**	**333**	*e*P	Pn	19 52 16.6	-0.1
BLLM				*e*S	Sn	19 52 37.3	-0.8
VSM	**San Miguel**	**1.63**	**331**	*e*P	Pn	19 52 18.6	+1.8
LFRS	**El Faro**	**2.25**	**316**	*e*P	Pn	19 52 25.6	+0.3
LFRS				*e*S	Sn	19 52 54.3	+0.9
SBLS	**San Blas**	**2.79**	**311**	*e*P	Pn	19 52 34.1	+1.3
JCR	**Jicaral**	**3.15**	**132**	*e*P	Pn	19 52 37.7	+0.1
CGA2	**Cerro Gallo 2**	**3.54**	**123**	*e*P	Pn	19 52 42.5	-0.6
CGA2				*e*S	Sn	19 53 22.5	-3.0
PRS1	**Puriscal**	**3.69**	**122**	*e*P	Pn	19 52 44.7	-0.4
URSC	**Urasca**	**4.21**	**120**	*e*P	Pn	19 52 53.3	+1.0
BUS	**Buena Vista**	**4.38**	**123**	*e*P	Pn	19 52 54.5	-0.1
BAR1		**4.92**	**123**	*e*P	Pn	19 53 00.9	-1.1

*IDC **29** 19:55:17.4±0.5, 2.°37N×97.°07E, h0km, mb4.5/22, mb1 4.6/23, mb1mx4.5/26, mbtmp4.5/23, ML4.8/1, MS4.4/6, Ms1 4.4/6, ms1mx3.8/30, Error ellipse: s-maj=18.7km s-min=12.1km az=58.0*
*BJI **29** 19:55:19.8, 2.°19N×97.°00E, h42km, mB4.9/28, mb4.8/42, Ms4.7/36, Ms7 4.5/35*
*MOS **29** 19:55:20.6±0.9, 2.°42N×97.°21E, h33km, mb5.1/31, MS4.5/6, Error ellipse: s-maj=11.9km s-min=5.6km az=114.6*
*DJA **29** 19:55:21, 2.°29N×96.°78E, h36km, MLv4.9/8*
*NEIC **29** 19:55:22.5±0.2, 2.°34N×97.°04E, h35km, mb4.8/24, Error ellipse: s-maj=6.5km s-min=4.9km az=50.0*
*ISCJB **29** 19:55:22.0±0.6, 2.°32N±0.°03×97.°04E±0.°04, h47km±4km, mb4.7/82, MS4.5/23, Error ellipse: s-maj=6.3km s-min=4.2km az=151.5*

ISC 29 19:55:23.8±0.5, 2.°34N±0.°03×97.°04E±0.°03, h45km±4km, h35km±2.1km: pP-P, n219, σ0.98/233, mb4.7/82, MS4.5/23, 19C-12D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**0.93**	**9**	P	**Pn**	**19 55 39.8**	**-0.6**
TPTI				S	**Sn**	**19 55 53.3**	**+0.8**
TSI	**Tuntungan**	**1.91**	**53**	P	**Pn**	**19 55 57.8**	**+3.9**
PSI	**Prapat**	**1.94**	**76**	Pn	**Pn**	**19 55 54.8**	**+0.5**
16nm,0.3s,baz=271,slow=6.3,SNR=90							
PSI				Sn	**Sn**	**19 56 17.8**	**+0.3**
55nm,0.3s,baz=269,slow=15,SNR=8.0							
MNSI	**Mandailing Nat**	**2.97**	**121**	P	**Pn**	**19 56 09.1**	**+0.7**
BSI	**Banda Aceh**	**3.58**	**331**	P	**Pn**	**19 56 15.3**	**-1.5**
BSI				S	**Sn**	**19 56 55.8**	**-2.1**
SISI	**Saibi**	**4.18**	**151**	P	**Pn**	**19 56 25.0**	**-0.1**
SISI				S	**Sn**	**19 57 10.9**	**-1.8**
PPI	**Padang Panjang**	**4.36**	**130**	P	**Pn**	**19 56 29.4**	**+1.9**
IPM	**Ipoh**	**4.51**	**62**	P	**Pn**	**19 56 30.1**	**+0.5**
IPM	**Ipoh**	**4.51**	**62**	P	**Pn**	**19 56 30.9**	**+1.3**
KULM	**Kulim**	**4.65**	**51**	P	**Pn**	**19 56 32.2**	**+0.8**
KULM	**Kulim**	**4.65**	**51**	⇑*i*Pn	**Pn**	**19 56 32.1**	**+0.6**
KULM				*e*Sn	**Sn**	**19 57 23.5**	**-0.7**
KULM	**Kulim**	**4.65**	**51**	P	**Pn**	**19 56 32.2**	**+0.7**
FRIM	**Kepong**	**4.67**	**79**	P	**Pn**	**19 56 32.7**	**+0.9**
SDSI	**Sungai Dareh**	**5.46**	**126**	P	**Pn**	**19 56 44.1**	**+1.4**
KGM	**Kluang**	**6.29**	**93**	P	**Pn**	**19 56 55.6**	**+1.6**
KTGM	**Kuala Trenggan**	**6.77**	**64**	P	**Pn**	**19 57 01.4**	**+0.8**
MYKOM	**Kota Tinggi**	**6.83**	**94**	P	**Pn**	**19 57 03.5**	**+2.0**
MYKOM	**Kota Tinggi**	**6.83**	**94**	P	**Pn**	**19 57 03.0**	**+1.5**
0.4nm485nm47nm,0.9s							
MNAI	**Manna**	**8.91**	**138**	P	**Pn**	**19 57 29.0**	**-0.9**
214nm,1.3s							
MDSI	**Maura Dua**	**9.85**	**134**	P	**Pn**	**19 57 42.0**	**-0.8**
45nm,0.8s							
KLSI		**10.39**	**132**	P	**Pn**	**19 57 48.9**	**-1.3**
67nm,1.0s							
CM31	**Chiang Mai Arr**	**16.13**	**7**	*e*Pn	**Pn**	**19 59 06.9**	**-0.5**
CMAR	**Chiang Mai Arr**	**16.13**	**7**	Pn	**Pn**	**19 59 06.9**	**-0.5**
1.3nm,0.3s,baz=197,slow=11,SNR=44							
CMAR				Lg		20 03 37.8	
0.0nm,0.3s,baz=197,slow=31,SNR=4.0							
CMAR				LR	LR	20 05 54.4	
comp=Z,1μm,18.1s,baz=187,slow=40							
CHTO	**Chiang Mai**	**16.48**	**6**	*e*P	**Pn**	**19 59 10.9**	**-1.0**
CHTO				pmax	pmax		
comp=Z,17nm,1.0s							
CHTO	**Chiang Mai**	**16.48**	**6**	*e*Pn	**Pn**	**19 59 10.9**	**-0.9**
comp=Z,17nm,1.0s							
KKM	**Kota Kinabalu**	**19.48**	**79**	P	**Pn**	**19 59 47.4**	**-1.2**
comp=Z,57nm,1.4s							
QIZ	**Qiongzhong**	**20.79**	**36**	P	**P**	**20 00 02.0**	**+0.7**
QIZ				S	**S**	**20 03 53.5**	**+2.5**
QIZ				pmax	pmax		
comp=Z,15nm,0.9s							
QIZ				LR	LR		
comp=N,930nm,17.8s							
QIZ				LR	LR		
comp=Z,820nm,20.7s,MS4.1							
KMI	**Kunming**	**23.31**	**13**	⇓P	**P**	**20 00 28.0**	**0.0**
KMI				pP		20 00 37.5	
KMI				sP	sP	20 00 42.0	-2.7
KMI				PP		20 01 00.5	
KMI				S	**S**	**20 04 35.5**	**-1.7**
KMI				sS	sS	20 04 52.3	-4.6
KMI				SS		20 05 24.3	
KMI				pmax	pmax		
comp=Z,33nm,1.1s,mb4.7							
KMI				pmax	pmax		
comp=Z,160nm,5.5s							
KMI				LR	LR		
comp=N,980nm,17.2s,MS4.4							
KMI				LR	LR		
comp=E,440nm,13.9s,MS4.4							
KMI				LR	LR		
comp=Z,1μm,18.3s,MS4.4							
HYB	**Hyderabad**	**23.54**	**311**	*i* P	**P**	**20 00 32.5**	**+2.3**
HYB				*e*S	**S**	**20 04 48.0**	**+7.0**
SHL	**Shillong**	**23.62**	**348**	*e*PKP	**P**	**20 00 30.0**	**-0.9**
SHL				*e*S	**S**	**20 04 45.0**	**+2.8**
BNSI	**Bone**	**24.01**	**106**	P	**P**	**20 00 35.7**	**+1.1**
comp=Z,42nm,1.7s,mb4.6							
BKSI	**Bulukumba**	**24.29**	**108**	P	**P**	**20 00 36.6**	**-0.6**
GYA	**Guiyang**	**25.70**	**20**	P	**P**	**20 00 51.3**	**+1.5**
GYA				pP	pP	20 01 03.5	+1.8
GYA				sP	sP	20 01 08.5	+1.4
GYA				PP		20 01 32.8	
GYA				PcP	PcP	20 04 21.0	+1.6
GYA				S	**S**	**20 05 18.5**	**+2.9**
GYA				sS	sS	20 05 35.3	-0.3
GYA				SS		20 06 24.5	
GYA				pmax	pmax		
comp=Z,20nm,0.8s,mb4.7							
GYA				pmax	pmax		
comp=Z,120nm,4.8s							
GYA				LR	LR		
comp=N,510nm,19.0s,MS4.2							
GYA				LR	LR		
comp=E,480nm,18.2s,MS4.2							
GYA				LR	LR		
comp=Z,530nm,19.5s,MS4.1							
ODAN	**Odare**	**26.08**	**340**	*e*P	**P**	**20 00 52.9**	**-0.3**
comp=Z,119nm,0.9s,mb5.4							
TAPN	**Taplejung**	**26.42**	**341**	*e*P	**P**	**20 00 56.5**	**+0.1**
comp=Z,119nm,0.8s,mb5.5							
RAMN	**Ramite**	**26.44**	**339**	*e*P	**P**	**20 00 56.8**	**+0.3**
PKI	**Pulchoki**	**27.44**	**337**	*e*P	**P**	**20 01 05.1**	**-0.4**
PKIN	**Phulchoki**	**27.45**	**337**	*e*P	**P**	**20 01 05.6**	**0.0**
comp=Z,37nm,1.0s,mb4.9							
GUN	**Gumba**	**27.57**	**338**	*e*P	**P**	**20 01 06.8**	**+0.1**
comp=Z,95nm,0.8s,mb5.5							
DMN	**Daman**	**27.60**	**337**	*e*P	**P**	**20 01 06.7**	**-0.2**
comp=Z,47nm,0.8s,mb5.2							
KKN	**Kakani**	**27.69**	**337**	*e*P	**P**	**20 01 07.2**	**-0.6**
comp=Z,79nm,0.9s,mb5.3							
CD2	**Chengdu**	**29.12**	**12**	P	**P**	**20 01 21.0**	**+0.6**
CD2				pP	pP	20 01 30.5	-1.9
CD2				sP	sP	20 01 34.5	-3.3
CD2				PP	PP	20 02 15.0	-12
CD2				S	**S**	**20 06 09.8**	**+0.4**
CD2				sS	sS	20 06 25.8	-3.6
CD2				SS	SS	20 07 41.0	-33
CD2				pmax	pmax		
comp=Z,10.0nm,1.0s,mb4.5							
CD2				pmax	pmax		
comp=Z,40nm,5.2s							
CD2				LR	LR		
comp=N,1μm,20.4s,MS4.7							
CD2				LR	LR		
comp=E,1μm,15.6s,MS4.7							
CD2				LR	LR		
comp=Z,950nm,18.0s,MS4.5							
WHN	**Wuhan**	**32.49**	**29**	P	**P**	**20 01 48.3**	**-1.9**
WHN				LR	LR		
comp=N,1μm,16.7s,MS4.9							
WHN				LR	LR		
comp=E,1μm,15.1s,MS4.9							
WHN				LR	LR		
comp=Z,2μm,17.7s,MS4.8							
XAN	**Xi'an**	**33.43**	**18**	P	**P**	**20 01 56.3**	**-2.1**
XAN				pmax	pmax		
comp=Z,11nm,0.8s,mb4.8							
LZH	**Lanzhou**	**34.16**	**10**	*e*P	**P**	**20 02 04.0**	**-0.7**
LZH				pP	pP	20 02 13.8	-3.0
LZH				sP	sP	20 02 17.5	-4.6
LZH				PP	PP	20 03 20.0	-2.8
LZH				*e*S	**S**	**20 07 28.5**	**+0.5**
LZH				sS	sS	20 07 45.0	-3.2
LZH				*e*SS	SS	20 09 40.5	-17
LZH				pmax	pmax		
comp=Z,25nm,1.3s,mb5.0							
LZH				pmax	pmax		
comp=Z,100nm,4.6s							
LZH				LR	LR		
comp=N,690nm,15.3s							
LZH				LR	LR		
comp=Z,940nm,17.0s,MS4.6							
FITZ	**Fitzroy Crossi**	**34.73**	**127**	*e*P	**P**	**20 02 07.9**	**-2.0**
comp=Z,7.1nm,0.8s,mb4.7							
FITZ	**Fitzroy Crossi**	**34.73**	**127**	P	**P**	**20 02 08.7**	**-1.1**
comp=Z,2.1nm,0.8s,mb4.1,baz=249,slow=13,SNR=9.3							
NJ2	**Nanjing**	**35.99**	**32**	*e*P	**P**	**20 02 23.0**	**+2.5**
NJ2				pP	pP	20 02 32.5	-0.1
NJ2				sP	sP	20 02 37.5	-0.5
NJ2				S	**S**	**20 07 59.0**	**+2.8**
NJ2				sS	sS	20 08 15.5	-1.0
NJ2				pmax	pmax		
comp=Z,20nm,0.9s,mb5.0							
NJ2				pmax	pmax		
comp=Z,90nm,6.0s							
NJ2				LR	LR		
comp=N,270nm,16.0s,MS4.2							
NJ2				LR	LR		
comp=E,190nm,20.0s,MS4.2							
NJ2				LR	LR		
comp=Z,3μm,20.0s,MS5.1							
KNA	**Kununurra**	**36.16**	**121**	*e*P	**P**	**20 02 22.0**	**-0.2**
comp=Z,6.2nm,0.8s,mb4.6							
GTA	**Gaotai**	**36.98**	**4**	⇑P	**P**	**20 02 28.0**	**-0.8**
GTA				pP	pP	20 02 37.8	-3.2
GTA				sP	sP	20 02 41.8	-4.5
GTA				PP	PP	20 03 54.8	+1.0
GTA				S	**S**	**20 08 11.0**	**-0.1**
GTA				sS	sS	20 08 27.5	-4.0
GTA				SS	SS	20 10 40.3	-14
GTA				pmax	pmax		
comp=Z,7.0nm,0.9s,mb4.5							
GTA				pmax	pmax		
comp=Z,140nm,6.0s							
GTA				LR	LR		
comp=N,340nm,21.0s,MS4.4							
GTA				LR	LR		
comp=E,520nm,22.2s,MS4.4							
GTA				LR	LR		
comp=Z,480nm,21.6s,MS4.2							
KAKA	**Kakadu**	**38.20**	**114**	*e*P	**P**	**20 02 38.1**	**-1.4**
comp=Z,7.4nm,0.6s,mb4.6							
HHC	**Hu-ho-hao-te**	**40.52**	**17**	*e*P	**P**	**20 03 01.0**	**+2.5**
HHC				pP	pP	20 03 11.0	+0.3
HHC				sP	sP	20 03 15.0	-1.0
HHC				PP	PP	20 04 39.8	+7.3
HHC				PcP	PcP	20 05 03.3	+3.0
HHC				ScP	ScP	20 08 48.3	+2.0
HHC				PcS	PcS	20 08 52.0	+1.1
HHC				S	**S**	**20 09

comp=Z,110nm,3.8s
BJI LR LR
comp=N,310nm,17.3s,MS4.4
BJI LR LR
comp=E,390nm,19.8s,MS4.4
BJI LR LR
comp=Z,300nm,25.4s
KSH Kashi 41.67 335 *e*P **P 20 03 06.5 -1.5**
KSH pP pP 20 03 16.5 -3.8
KSH sP sP 20 03 20.5 -5.1
KSH PP PP 20 04 46.0 +1.0
KSH PcP PcP 20 05 05.0 +0.9
KSH ScP ScP 20 08 51.3 +0.4
KSH PcS PcS 20 08 55.0 -0.5
KSH S **S 20 09 18.3 -3.3**
KSH sS sS 20 09 35.3 -6.8
KSH SS SS 20 12 19.0 -9.4
KSH ScS ScS 20 13 05.5 -2.0
KSH pmax pmax
comp=Z,11nm,0.7s,mb4.6
KSH pmax pmax
comp=Z,100nm,4.7s
KSH LR LR
comp=N,120nm,8.8s
KSH LR LR
comp=E,600nm,15.1s
KSH LR LR
comp=Z,80nm,8.1s
WMQ Urumqi 42.13 350 *e*P **P 20 03 12.0 +0.4**
WMQ pP pP 20 03 22.0 -1.9
WMQ sP sP 20 03 26.0 -3.2
WMQ PP PP 20 04 53.0 +3.1
WMQ S **S 20 09 29.0 +0.8**
WMQ SS SS 20 12 32.0 -5.3
WMQ pmax pmax
comp=Z,28nm,1.0s,mb4.8
WMQ pmax pmax
comp=Z,96nm,4.0s
WMQ LR LR
comp=N,500nm,15.0s,MS4.7
WMQ LR LR
comp=E,530nm,15.0s,MS4.7
WMQ LR LR
comp=Z,400nm,15.0s,MS4.4
WRA Warramunga Arr 42.78 123 P **P 20 03 16.5 -0.8**
comp=Z,4.8nm,0.7s,mb4.3,baz=301,slow=9.1,SNR=29
WRAB Tennant Creek 42.79 123 *e*P **P 20 03 16.4 -1.0**
WRAB pmax pmax
comp=Z,15nm,1.1s,mb4.6
WRAB Tennant Creek 42.79 123 *e*P **P 20 03 16.4 -0.9**
comp=Z,15nm,1.1s,mb4.6
ASAR Alice Springs 44.22 128 P **P 20 03 28.2 -0.6**
comp=Z,2.0nm,0.8s,mb3.9,baz=295,slow=7.0,SNR=12
TKM2 Tokmak 2 44.71 338 P **P 20 03 33.1 +0.7**
SNR=5.4
TKM2 Tokmak 2 44.71 338 *e*P **P 20 03 32.5 +0.1**
TKM2 pmax pmax
comp=Z,12nm,0.9s,mb4.7
TKM2 Tokmak 2 44.71 338 *e*P **P 20 03 32.5 +0.1**
comp=Z,12nm,0.9s,mb4.7
KBK Karagaybulak 44.73 337 P **P 20 03 33.9 +1.3**
SNR=17
AML Almayashu 44.80 335 P **P 20 03 34.3 +1.1**
SNR=11
AML Almayashu 44.80 335 *e*P **P 20 03 33.7 +0.5**
AML pmax pmax
comp=Z,23nm,0.8s,mb5.1
AML Almayashu 44.80 335 *e*P **P 20 03 33.6 +0.4**
comp=Z,23nm,0.8s,mb5.1
AAK Ala-Archa 44.89 336 P **P 20 03 35.6 +1.6**
comp=Z,11nm,0.8s,mb4.7,baz=188,slow=2.0,SNR=10
KSRS Korea Array 45.01 35 P **P 20 03 34.0 -0.9**
comp=Z,3.0nm,0.6s,mb4.3,baz=230,slow=8.4,SNR=13
KSRS LR LR 20 23 53.9
comp=Z,408nm,18.6s,MS4.4,baz=43,slow=38
CHMS Chumysh 45.10 337 P **P 20 03 35.8 +0.3**
SNR=8.7
EKS2 Erkin-Say 45.21 336 P **P 20 03 37.5 +1.1**
SNR=10
EKS2 Erkin-Say 45.21 336 *e*P **P 20 03 37.0 +0.6**
EKS2 pmax pmax
comp=Z,15nm,0.8s,mb4.9
EKS2 Erkin-Say 45.21 336 *e*P **P 20 03 37.0 +0.6**
comp=Z,15nm,0.8s,mb4.9
USP Ospenovka 45.42 337 P **P 20 03 38.7 +0.6**
SNR=31
SONM Songino Array 46.03 9 P **P 20 03 42.6 -0.3**
comp=Z,3.3nm,0.4s,mb4.7,baz=190,slow=9.4,SNR=93
SONM PcP PcP 20 05 19.4 +0.6
comp=Z,2.4nm,0.5s,baz=187,slow=4.1,SNR=8.5
MK31 Makanchi Array 46.10 346 *e*P **P 20 03 43.1 -0.3**
MKAR Makanchi Array 46.10 346 P **P 20 03 43.0 -0.3**
comp=Z,25nm,0.9s,mb5.2,baz=166,slow=8.2,SNR=141
ULN Ulaanbaatar 46.17 9 *e*P **P 20 03 43.3 -0.6**
ULN pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
ULN Ulaanbaatar 46.17 9 *e*P **P 20 03 43.3 -0.6**
comp=Z,5.8nm,0.9s,mb4.5
CN2 Changchun 48.37 27 *e*P **P 20 04 02.8 +1.7**
CN2 *e*S **S 20 11 03.5 +5.1**
CN2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,500nm,22.0s,MS4.6
CN2 LR LR
comp=E,400nm,22.0s,MS4.6
CN2 LR LR
comp=Z,300nm,20.0s,MS4.3
MOY Mondy 49.27 3 *e*P **P 20 04 07.9 +0.1**
TLY Talaya 49.48 5 *e*P **P 20 04 09.5 0.0**
TLY pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
TLY Talaya 49.48 5 *e*P **P 20 04 09.2 -0.2**
comp=Z,8.4nm,0.9s,mb4.8
IRK Irkutsk 50.10 6 *e*P **P 20 04 14.1 -0.1**
IRK *e* pP 20 04 25.9 -0.8
IRK pmax pmax
comp=Z,20nm,1.6s,mb4.9
KURK Kurchatov 50.66 345 P **P 20 04 18.0 -0.4**
comp=Z,9.6nm,0.7s,mb4.9,baz=165,slow=6.8,SNR=35
KURK Kurchatov 50.66 345 *c*e**P P 20 04 18.6 +0.2**
KURK pmax pmax
comp=Z,33nm,1.2s,mb5.1
KURK Kurchatov 50.66 345 *e*P **P 20 04 18.3 -0.1**
comp=Z,27nm,1.1s,mb5.1
MDJ Mudanjiang 50.96 30 P **P 20 04 22.0 +1.2**
MDJ pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
MAT Matsushiro 50.97 43 P **P 20 04 19.8 -1.2**
MJAR Matsushiro Arr 50.97 43 P **P 20 04 20.1 -1.0**
comp=Z,7.1nm,1.0s,mb4.5,baz=218,slow=6.9,SNR=14
MJAR LR LR 20 27 40.4
comp=Z,180nm,18.6s,MS4.1,baz=220,slow=38
PMG Port Moresby 51.28 104 *e*P **P 20 04 22.9 -0.9**
PMG pmax pmax
comp=Z,6.0nm,0.6s
PMG Port Moresby 51.28 104 *e*P **P 20 04 22.9 -0.9**
comp=Z,6.4nm,0.6s,mb4.7
ZAA0 Zalesovo Array 52.41 351 *e*P **P 20 04 30.9 -0.6**
ZALV Zalesovo Beam 52.41 351 P **P 20 04 31.2 -0.3**
comp=Z,13nm,0.4s,mb5.2,baz=165,slow=6.0,SNR=119
CTA Charters Tower 53.16 117 *e*P **P 20 04 36.7 -0.9**
comp=Z,7.4nm,0.9s,mb4.6
CTA Charters Tower 53.16 117 P **P 20 04 37.8 +0.1**
comp=Z,8.9nm,0.9s,mb4.7,baz=281,slow=8.1,SNR=6.3
CTAO Charters Tower 53.16 117 *e*P **P 20 04 36.6 -1.0**
CTAO pmax pmax
comp=Z,15nm,1.0s,mb4.9
CTAO Charters Tower 53.16 117 *e*P **P 20 04 36.6 -1.0**
comp=Z,15nm,1.0s,mb4.9
OPO Ambohidratompo 53.25 245 P **P 20 04 39.3 +1.0**
comp=Z,2.9nm,0.8s,mb4.2,baz=59,slow=5.9,SNR=3.9
NVS Novosibirsk 53.53 350⇑ *i*P **P 20 04 38.7 -1.0**
NVS *i* S **S 20 12 09.1 -0.3**
NVS pmax pmax
comp=N,18nm,1.2s
NVS pmax pmax
comp=E,14nm,1.2s
NVS pmax pmax
comp=Z,25nm,1.2s,mb5.0
NVS smax
comp=N,21nm,1.8s
STKA Stephens Creek 54.24 133 *e*P **P 20 04 45.7 +0.4**
comp=N,3.3nm,0.6s,mb4.4
STKA Stephens Creek 54.24 133 P **P 20 04 45.6 +0.3**
comp=N,3.3nm,0.7s,mb4.4,baz=286,slow=10,SNR=3.7
STKA Stephens Creek 54.24 133 *e*P **P 20 04 44.7 -0.6**
STKA pmax pmax
comp=Z,2.0nm,0.8s
STKA Stephens Creek 54.24 133 *e*P **P 20 04 44.7 -0.6**
comp=Z,1.8nm,0.8s,mb4.0
BVAR Borovoye Array 55.12 341 P **P 20 04 50.6 -0.8**
comp=Z,18nm,0.8s,mb5.2,baz=142,slow=7.5,SNR=97
BVAR Borovoye Array 55.12 341 P **P 20 04 50.6 -0.8**
BRVK Borovoye 55.19 341 *c*e**P P 20 04 51.4 -0.4**
BRVK pmax pmax
comp=Z,25nm,1.0s,mb5.2
BRVK Borovoye 55.19 341 *e*P **P 20 04 50.9 -0.9**
comp=Z,22nm,0.9s,mb5.2
KLR Kul'dur 55.32 27 *e*P **P 20 04 48.7 -4.1**
HABR Khabarovsk 56.35 29 *e*P **P 20 04 57.6 -2.6**
HABR *e* 20 05 55.2
HABR S **S 20 12 44.8 -2.6**
HABR 20 12 57.5
HABR *e* 20 14 44.8
HABR *e*SS SS 20 16 34.0 -0.9
HABR pmax pmax
comp=E,10.0nm,0.7s
HABR pmax pmax
comp=N,6.0nm,0.7s
HABR pmax pmax
comp=Z,22nm,1.5s,mb5.0
HABR MLR MLR
comp=Z,190nm,22.0s,MS4.1
CMSA Cobar Meteorol 57.15 130 *e*P **P 20 05 06.8 +0.6**
ASAJ Asahikawa 57.86 37 LR LR 20 29 55.8
comp=Z,209nm,19.4s,MS4.3,baz=7.2,slow=36
EIDS Eidsvold 59.11 121 *e*P **P 20 05 20.4 +0.4**
YSS Yuzh-Sakhalins 59.51 35⇑ *e*P **P 20 05 22.0 -0.4**
YSS pmax pmax
comp=Z,50nm,1.0s,mb5.5
YSS MLR MLR
comp=Z,500nm,16.0s,MS4.7
YSS Yuzh-Sakhalins 59.51 35 *e*P **P 20 05 21.9 -0.5**
comp=Z,43nm,1.0s,mb5.4
GNI Garni 60.37 316 *e*P **P 20 05 29.0 +0.6**
GNI pmax pmax
comp=Z,9.0nm,1.2s
SVE Sverdlovsk 61.57 338 *e*P **P 20 05 36.0 -0.3**
SVE pmax pmax
comp=Z,31nm,0.9s,mb5.4
ZEI Tsey 62.04 318 *e*P **P 20 05 39.7 0.0**
ZEI pmax pmax
comp=Z,7.0nm,0.4s,mb5.1
ARU Arti 62.08 337 *c i*P **P 20 05 38.9 -0.8**
ARU *e* 20 07 56.6
ARU S **S 20 14 02.0 +0.8**
ARU SS SS 20 18 07.3 +2.7
ARU pmax pmax
comp=Z,13nm,1.0s,mb5.0
ARU Arti 62.08 337 *e*P **P 20 05 38.6 -1.0**
KIV Kislovodsk 63.34 319 *e*P **P 20 05 48.5 +0.1**
KIV pmax pmax
comp=Z,18nm,1.1s,mb5.1
KIV Kislovodsk 63.34 319 *e*P **P 20 05 48.0 -0.4**
comp=Z,15nm,0.8s,mb5.2
YAK Yakutsk 64.38 16 *e*P **P 20 05 53.6 -1.2**
YAK *e*PP pP 20 06 00.4 -7.3
YAK *e* 20 08 13.2
YAK *e*S **S 20 14 28.4 -1.3**
YAK *e*SS sS 20 14 45.2 -6.1
YAK *e* 20 15 35.1
YAK *e*SS SS 20 18 32.6 -7.7
YAK pmax pmax
comp=Z,51nm,0.9s,mb5.5
YAK pmax pmax
comp=E,18nm,1.5s
YAK pmax pmax
comp=N,22nm,1.3s
YAK pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
YAK pmax pmax
comp=N,3.0nm,0.7s
YAK pmax pmax
comp=E,5.0nm,0.9s
YAK smax
comp=E,1.0nm,0.2s
YAK smax
comp=N,20nm,1.7s
YAK MLR MLR
comp=Z,536nm,19.0s,MS4.8
YAK MLR MLR
comp=E,270nm,16.0s,MS4.7
YAK MLR MLR
comp=N,276nm,17.0s,MS4.7
YAK Yakutsk 64.38 16 *e*P **P 20 05 53.8 -1.0**
comp=N,59nm,0.9s,mb5.6
SOKR Solikamsk 64.97 339 *c i*P **P 20 05 58.6 -0.1**
SOKR pmax pmax
comp=Z,20nm,0.8s,mb5.2
ANN Anapa 67.14 318 *e*P **P 20 06 14.2 +1.2**
ANN *e*PP pP 20 06 24.5 -1.5
ANN *e* 20 08 41.9
ANN *e*S S 20 15 08.4 +4.3
ANN pmax pmax
comp=Z,28nm,1.1s,mb5.2
BRTR Keskin Array B 68.23 312 P **P 20 06 19.5 -0.4**
comp=Z,1.7nm,0.8s,mb4.2,baz=124,slow=7.7,SNR=7.8
VSR Storozhevoye 68.54 325 *e*P **P 20 06 22.4 +0.7**
VSR pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
VSR pmax pmax
comp=N,1.0nm,0.5s
VSR pmax pmax
comp=E,3.0nm,1.5s
MOS Moscow 71.28 329 *e*P **P 20 06 46.5 +8.2**
OBN Obninsk 71.57 328⇑ *e*P **P 20 06 40.3 +0.2**
OBN *e* 20 06 47.5
OBN pmax pmax
comp=Z,31nm,2.5s,mb4.8
TIXI Tiksi 72.10 10 *e*P **P 20 06 40.8 -2.2**
TIXI pmax pmax
comp=Z,20nm,2.1s,mb4.7
TIXI MLR MLR
comp=Z,192nm,17.0s,MS4.4
TIXI Tiksi 72.10 10 *e*P **P 20 06 42.0 -1.0**
comp=Z,7.0nm,0.9s,mb4.6
TIRR Tirgusor 73.19 316 ⇓ P **P 20 06 49.4 -0.6**
TIRR Tirgusor 73.19 316 ⇓ *i*P **P 20 06 49.3 -0.7**
MAW Mawson 73.78 193 P **P 20 06 54.1 +1.1**
comp=Z,1.3nm,0.5s,mb4.2,baz=0.0,slow=8.1,SNR=3.5
LBTB Lobatse 74.25 243 LR LR 20 34 49.2
comp=Z,328nm,19.3s,MS4.6,baz=69,slow=32
AKASG Malin Array Be 74.26 322 P **P 20 06 55.2 -0.9**
comp=Z,8.6nm,0.8s,mb4.8,baz=97,slow=4.5,SNR=19
VRI Vrincioaia 74.67 317 ⇓ P **P 20 06 59.4 +0.7**
VRI Vrincioaia 74.67 317 ⇓ *i*P **P 20 06 59.4 +0.7**
PLOR Plostina 74.72 317 ⇓ P **P 20 07 00.5 +1.5**
PLOR Plostina 74.72 317 ⇓ *i*P **P 20 07 00.5 +1.5**
MLR Muntele Rosu 75.13 316 ⇓ P **P 20 07 00.1 -1.2**
MLR Muntele Rosu 75.13 316 ⇓ *i*P **P 20 07 00.1 -1.2**
BOSA Boshof 75.20 240 P **P 20 07 02.1 0.0**
comp=Z,4.6nm,0.9s,mb4.4,baz=82,slow=7.1,SNR=4.9
BURAR Bucovina Array 76.06 319 ⇓ P **P 20 07 07.3 +0.7**
BURAR Bucovina Array 76.06 319 ⇓ *i*P **P 20 07 07.3 +0.7**
BUR08 Bucovina Ar. S 76.08 319 *e*P **P 20 07 06.7 0.0**
IDID Didziasalis 76.95 326 *e*P **P 20 07 10.9 -0.5**
IDID AMB AMB 20 07 12.3
comp=Z,3.7nm,0.8s,mb4.4
JOF Joensuu 77.05 335 *e*P **P 20 07 10.8 -1.1**
JOF pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
JOF Joensuu 77.05 335 *e*p **P 20 07 10.8 -1.1**
comp=Z,6.5nm,0.7s,mb4.7
JOF Joensuu 77.05 335 *e*p **P 20 07 10.8 -1.1**
comp=Z,6.5nm,0.7s,mb4.7
IIGN Ignalina 77.24 326 *e*P **P 20 07 12.7 -0.4**
IIGN AMB AMB 20 07 14.0
comp=Z,5.0nm,0.9s,mb4.4
IZAR Zarasai 77.33 327 *e*P **P 20 07 13.1 -0.4**
IZAR AMB AMB 20 07 14.3
comp=Z,3.2nm,0.8s,mb4.3
ISAL Salakas 77.35 327 *e*P **P 20 07 13.3 -0.4**
ISAL AMB AMB 20 07 14.5
comp=Z,2.4nm,0.8s,mb4.2
DRGR 77.59 317⇑ P **P 20 07 16.7 +1.5**
DRGR 77.59 317⇑ *i*P **P 20 07 16.6 +1.4**
APA Apatity 78.01 339 ⇓ *i*P **P 20 07 16.0 -1.1**
APA *i* pP 20 07 24.0 -6.4
APA *e* 20 10 14.0
APA MLR MLR
comp=Z,200nm,15.0s,MS4.6
KWP Kalwaria Pacla 78.09 320⇑ P **P 20 07 18.1 +0.1**
KWP Kalwaria Pacla 78.09 320 *e*P **P 20 07 17.8 -0.1**
comp=Z,13nm,1.1s,mb4.8
KWP Kalwaria Pacla 78.09 320⇑ *i*P **P 20 07 18.1 +0.1**
BZS Buzias 78.14 316⇑⇑ P **P 20 07 18.2 -0.1**
BZS Buzias 78.14 316⇑ *i*P **P 20 07 18.2 -0.1**
CRVS Cervenica-Dubn 78.77 319 *e*P **P 20 07 23.4 +1.7**
CRVS pmax pmax
comp=Z,57nm,3.4s
CRVS Cervenica-Dubn 78.77 319 *e*P **P 20 07 23.4 +1.7**
comp=Z,57nm,3.4s
CRVS Cervenica-Dubn 78.77 319 *e*P **P 20 07 23.4 +1.7**
FINES FINESS Array B 78.92 332 P **P 20 07 22.2 -0.1**
comp=Z,5.2nm,0.7s,mb4.5,baz=94,slow=5.1,SNR=25
KECS Kecovo 79.34 319 *e*P **P 20 07 29.2 +4.3**
KECS pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
KECS Kecovo 79.34 319 *e*P **P 20 07 29.2 +4.3**
comp=Z,1.7nm,0.9s,mb4.0
KECS Kecovo 79.34 319 *e*P **P 20 07 29.2 +4.3**
SUR Sutherland 79.65 237 LR LR 20 35 35.9
comp=Z,284nm,19.3s,MS4.6,baz=92,slow=30
OJC Ojcow 80.04 320 *e*P **P 20 07 31.7 +3.1**
BILL Bilibino 80.16 21 *e*P **P 20 07 28.6 -0.3**
BILL pmax pmax
comp=Z,7.0nm,1.6s,mb4.3
BILL MLR MLR
comp=Z,400nm,17.0s,MS4.8
PKSM Moragy 80.28 316⇑ P **P 20 07 30.1 +0.1**
PKSM Moragy 80.28 316⇑ *i*P **P 20 07 30.1 +0.1**
KEV Kevo 80.98 341 *e*P **P 20 07 29.4 -3.8**
KEV pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
KEV Kevo 80.98 341 *e*p **P 20 07 29.4 -3.8**
comp=Z,6.8nm,0.8s,mb4.6
KEV Kevo 80.98 341 *e*p **P 20 07 29.4 -3.8**
comp=Z,6.8nm,0.8s,mb4.6
OKC Ostrava-Krasne 81.05 320 *e*P **P 20 07 34.2 +0.2**
OKC Ostrava-Krasne 81.05 320 *e*P **P 20 07 34.2 +0.2**
ARCES ARCESS Array B 81.41 340 P **P 20 07 36.0 +0.4**
comp=Z,2.4nm,0.6s,mb4.3,baz=92,slow=5.1,SNR=26
DPC Dobruska-Polom 82.27 320 *e*P **P 20 07 41.6 +1.1**
DPC Dobruska-Polom 82.27 320 *e*P **P 20 07 41.6 +1.1**
AQU L'Aquila 83.72 312⇑ P **P 20 07 48.5 +0.3**
AQU L'Aquila 83.72 312⇑ *i*P **P 20 07 48.5 +0.3**
BRG Berggiesshubel 83.83 321 *e*P **P 20 07 54.1 +5.6**
comp=Z,3.0nm,1.1s,mb4.3
KHC Kasperske Hory 83.95 319 *e*P **P 20 07 49.4 +0.2**
KHC Kasperske Hory 83.95 319 *e*P **P 20 07 49.0 -0.1**
comp=Z,1.7nm,0.8s,mb4.2
KHC Kasperske Hory 83.95 319 *e*P **P 20 07 49.4 +0.2**
CLL Collm 84.45 321 *e*P **P 20 07 52.0 +0.4**
CLL Collm 84.45 321 *e*P **P 20 07 52.0 +0.4**
GRF Grafenberg Arr 85.51 319 *e*P **P 20 07 57.8 +0.8**
comp=Z,3.0nm,0.8s,mb4.6
GRF Grafenberg Arr 85.51 319 *e*P **P 20 07 57.8 +0.8**
GRF pmax pmax
comp=Z,3.0nm,0.8s,mb4.6
NB2 NORSAR Subarra 85.94 331 P **P 20 07 58.7 -0.2**
comp=Z,2.1nm,0.7s,mb4.5,baz=92,slow=5.1
NOA NORSAR Array B 85.94 331 P **P 20 07 59.0 +0.2**
comp=Z,3.8nm,0.8s,mb4.7,baz=94,slow=4.9,SNR=14
KEST Kesra 86.77 305 P **P 20 08 04.3 +0.7**
comp=Z,1.5nm,0.8s,mb4.2,baz=92,slow=3.2,SNR=6.4
BFO Black Forest 87.41 318 *e*P **P 20 08 05.8 -0.5**
CDF Champ du Feu 88.11 318 *e*P **P 20 08 09.7 0.0**
comp=Z,4.8nm,0.9s,mb4.4
CDF Champ du Feu 88.11 318 *e*P **P 20 08 09.7 0.0**
CDF pmax pmax
comp=Z,2.0nm,0.9s,mb4.3
CDF Champ du Feu 88.11 318 *e*P **P 20 08 09.7 0.0**
comp=Z,2.4nm,0.9s,mb4.4
LPG La Plagne 88.55 315 *e*P **P 20 08 12.5 +0.7**
comp=Z,9.0nm,0.8s,mb4.8
LPG La Plagne 88.55 315 *e*P **P 20 08 12.5 +0.7**
LPG pmax pmax
comp=Z,5.0nm,0.8s,mb4.9
LPG La Plagne 88.55 315 *e*P **P 20 08 12.5 +0.7**
comp=Z,4.5nm,0.8s,mb4.8
LPL La Plagne 88.56 315 *e*P **P 20 08 12.4 +0.5**
HAU Haudompre 88.74 318 *e*P **P 20 08 12.7 0.0**
CABF La Chapelle 88.97 316 *e*P **P 20 08 14.4 +0.6**
BAIF Baives 90.04 320 *e*P **P 20 08 18.9 +0.2**
comp=Z,9.8nm,0.8s,mb4.9
BAIF Baives 90.04 320 *e*P **P 20 08 18.9 +0.2**
BAIF pmax pmax
comp=Z,5.0nm,0.8s,mb4.9
BAIF Baives 90.04 320 *e*P **P 20 08 18.9 +0.2**
comp=Z,4.9nm,0.8s,mb4.9
LOR Lormes 90.46 317 *e*P **P 20 08 21.2 +0.5**
SMF Signal de Mont 90.51 317 *e*P **P 20 08 21.4 +0.4**
AVF Avril sur Loir 90.84 317 *e*P **P 20 08 23.1 +0.6**
RJF Les Rejaudoux 92.24 315 *e*P **P 20 08 30.0 +0.9**
SKAG Skagway 106.06 25 *e*P Pdif 20 09 33.2 +2.2
comp=Z,14nm,0.5s
NVAR Mina Array Bea 127.96 35 PKP PKPdf 20 14 26.8 +1.6
comp=Z,0.2nm,0.3s,baz=180,slow=0.7,SNR=4.0
PDAR Pinedale Array 129.09 25 PKP PKPdf 20 14 27.9 +0.8
comp=Z,0.6nm,0.6s,baz=300,slow=0.7,SNR=4.6
TXAR Lajitas Array 142.78 31 PKhKP PKPpre 20 14 49.3
comp=Z,0.4nm,0.5s,baz=356,slow=0.8,SNR=10.0
CPUP Villa Florida 145.72 224 PKPbc PKPbc 20 14 59.0 +0.4
comp=Z,3.1nm,0.7s,baz=112,slow=2.2,SNR=12
CPUP Villa Florida 145.72 224 PKPbc PKPbc 20 14 59.0 +0.4

IDC 29 20:08:24.8±3.2, 32°.27S×178°.23W, h0km, mb3.3/2, mb1 3.7/3, mb1mx3.6/16, mbtmp3.5/3, ML3.2/1, Error ellipse: s-maj=74.0km s-min=37.6km az=114.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.08**	**211**	Pn	Pn	20 10 10.3	+0.7
	0.4nm,0.3s,baz=62,slow=17,SNR=2.9						
URZ				Sn	Sn	20 11 29.5	-1.4
	0.4nm,0.3s,baz=165,slow=20,SNR=4.6						
ASAR	**Alice Springs**	**42.84**	**269**	P	P	20 16 24.9	+0.2
	0.3nm,0.8s,baz=104,slow=7.6,SNR=4.2						
WRA	**Warramunga Arr**	**44.00**	**274**	P	P	20 16 34.0	-0.1
	0.2nm,0.3s,baz=112,slow=8.1,SNR=9.6						
FINES	**FINESS Array B**	**146.82**	**339**	PKPbc	PKPbc	20 28 07.2	-0.9
	0.4nm,0.5s,baz=53,slow=5.4,SNR=4.8						

*ISK **29** 20:14:51.4, 38°.92N×41°.37E, h12km, MD3.2*
*CSEM **29** 20:14:52.1±0.1, 38°.93N×41°.36E, h12km, MD3.2, Error ellipse: s-maj=2.9km s-min=1.9km az=167.0*
*DDA **29** 20:14:52.0, 38°.95N×41°.31E, h25km±1km, Md3.3*
*ISCJB **29** 20:14:52.1±0.7, 38°.96N±0°.02×41°.34E±0°.03, h7km±6km, Error ellipse: s-maj=4.4km s-min=4.0km az=34.5*
ISC 29 20:14:52.8±0.5, 38°.96N±0°.02×41°.34E±0°.03, h10km±4km, n40, σ0°92/58, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BINT	**Bingol**	**0.67**	**263**	*e*PG	**Pg**	**20 15 05.6**	**-0.1**
BINT				*e*SG	**Sg**	**20 15 15.2**	**+0.7**
BINT	**Bingol**	**0.67**	**263**	*e*Pg	**Pg**	**20 15 05.6**	**-0.1**
BINT				*e*Sg	**Sg**	**20 15 15.2**	**+0.7**
BTMT	**Batman**	**0.77**	**171**	*e*PG	**Pg**	**20 15 07.4**	**-0.2**
BTMT				*e*SG	**Sg**	**20 15 19.1**	**+1.4**
TATV	**Tatvan**	**0.85**	**121**	*i* P	**Pg**	**20 15 08.1**	**-1.1**
TATV				*i* S	**Sg**	**20 15 20.3**	**+0.1**
TATV	**Tatvan**	**0.85**	**121**	*i* P	**Pg**	**20 15 08.1**	**-1.0**
TATV				*i* S	**Sg**	**20 15 20.3**	**+0.1**
ERZM	**Erzurum**	**0.95**	**1**	*i* P	**Pg**	**20 15 09.9**	**-1.1**
ERZM				*i* S	**Sg**	**20 15 24.5**	**+1.1**
ERZM	**Erzurum**	**0.95**	**1**	*i* P	**Pg**	**20 15 09.9**	**-1.1**
ERZM				*i* S	**Sg**	**20 15 24.5**	**+1.1**
EZM	**Erzurum**	**0.95**	**1**	*e*PG	**Pg**	**20 15 10.0**	**-1.1**
EZM	**Erzurum**	**0.95**	**1**	*e*Pg	**Pg**	**20 15 10.0**	**-1.0**
BEST	**Besiri**	**1.06**	**183**	*i* P	**Pg**	**20 15 12.3**	**-1.0**
BEST				*i* S	**Sg**	**20 15 27.9**	**+0.8**
TUTA	**Tutak**	**1.23**	**68**	*i* P	**Pn**	**20 15 15.6**	**-0.3**
TUTA				*i* S	**Sb**	**20 15 33.4**	**+1.6**
TUTA	**Tutak**	**1.23**	**68**	*i* P	**Pn**	**20 15 15.6**	**-0.3**
TUTA				*i* S	**Sb**	**20 15 33.4**	**+1.6**
DIYA	**Diyarbakir**	**1.41**	**223**	*i* P	**Pn**	**20 15 17.8**	**-0.6**
DIYA				*i* S	**Sn**	**20 15 37.4**	**+0.5**
DIYA	**Diyarbakir**	**1.41**	**223**	*i* P	**Pn**	**20 15 17.8**	**-0.6**

DIYA				*i* S	**Sn**	**20 15 37.4**	**+0.4**
AGRB	**Hanur-Agry**	**1.42**	**64**	*e*PN	**Pn**	**20 15 17.8**	**-0.8**
AGRB	**Hanur-Agry**	**1.42**	**64**	*e*Pn	**Pn**	**20 15 17.8**	**-0.8**
EZC	**Erzincan**	**1.42**	**304**	*e*PN	**Pn**	**20 15 22.4**	**+3.8**
PTK	**Pertek**	**1.52**	**268**	*e*PN	**Pn**	**20 15 19.1**	**-0.8**
PTK				*e*SN	**Sn**	**20 15 39.2**	**-0.6**
PTK	**Pertek**	**1.52**	**268**	*e*Pn	**Pn**	**20 15 19.1**	**-0.9**
PTK				*e*Sn	**Sn**	**20 15 39.2**	**-0.6**
VANB	**Van**	**1.64**	**102**	*e*PN	**Pn**	**20 15 19.6**	**-1.9**
VANB	**Van**	**1.64**	**102**	*e*Pn	**Pn**	**20 15 19.6**	**-2.0**
SVRC	**Sivrice-ELAZID**	**1.70**	**251**	*e*PN	**Pn**	**20 15 22.5**	**+0.2**
SVRC	**Sivrice-ELAZID**	**1.70**	**251**	*e*Pn	**Pn**	**20 15 22.5**	**+0.2**
MARD	**Mardin**	**1.70**	**195**	*i* P	**Pn**	**20 15 22.6**	**+0.2**
MARD				*i* S	**Sn**	**20 15 44.2**	**+0.1**
DDEM	**Demirkent**	**1.96**	**9**	*e*P	**Pn**	**20 15 26.9**	**+1.0**
DDEM				*i* S	**Sn**	**20 15 55.7**	**+5.1**
DDEM	**Demirkent**	**1.96**	**9**	*e*P	**Pn**	**20 15 27.0**	**+1.0**
CLDR	**Caldiran**	**2.01**	**84**	*e*PN	**Pn**	**20 15 25.8**	**-0.9**
CLDR	**Caldiran**	**2.01**	**84**	*e*Pn	**Pn**	**20 15 25.8**	**-0.9**
DBAD	**Bademkaya**	**2.08**	**7**	*i* P	**Pn**	**20 15 29.0**	**+1.4**
DBAD				*i* S	**Sn**	**20 16 00.2**	**+6.7**
DBAD	**Bademkaya**	**2.08**	**7**	*i* P	**Pn**	**20 15 29.0**	**+1.4**
GUMT	**Gumushane**	**2.08**	**317**	*e*PN	**Pn**	**20 15 28.3**	**+0.7**
GUMT	**Gumushane**	**2.08**	**317**	*e*Pn	**Pn**	**20 15 28.3**	**+0.7**
HAKT	**HAKKARI**	**2.33**	**126**	*e*P	**Pn**	**20 15 32.7**	**+1.7**
HAKT				*i* S	**Sn**	**20 16 08.3**	**+8.7**
HAKT	**HAKKARI**	**2.33**	**126**	*e*P	**Pn**	**20 15 32.7**	**+1.7**
CUKT	**Cukurca**	**2.47**	**133**	*e*PN	**Pn**	**20 15 32.6**	**-0.4**
CUKT	**Cukurca**	**2.47**	**133**	*e*Pn	**Pn**	**20 15 32.6**	**-0.4**
URFA	**Urfa**	**2.50**	**234**	*e*PN	**Pn**	**20 15 32.6**	**-0.8**
URFA	**Urfa**	**2.50**	**234**	*e*Pn	**Pn**	**20 15 32.6**	**-0.8**
GNI	**Garni**	**2.88**	**65**	*e*PN	**Pn**	**20 15 38.6**	**-0.1**
GNI				*e*P		21 04 10.6	
GNI	**Garni**	**2.88**	**65**	*e*Pn	**Pn**	**20 15 38.6**	**-0.1**

*ISCJB **29** 20:21:13.8±0.8, 51°.46N±0°.09×178°.13W±0°.05, h58km±6km, mb4.2/41, MS4.3/3, Error ellipse: s-maj=14.7km s-min=5.2km az=172.6*
*BJI **29** 20:21:14.0, 51°.40N×178°.20W, h59km, mB5.0/6, mb4.6/12, Ms4.6/6, Ms7 4.5/6*
*NEIC **29** 20:21:15.0±0.8, 51°.42N×178°.20W, h59km±7km, mb4.1/11, ML4.0(PMR), Error ellipse: s-maj=13.1km s-min=5.9km az=170.0*
*IDC **29** 20:21:17.3±3.0, 51°.52N×178°.21W, h74km±25km, mb3.6/22, mb1 3.7/23, mb1mx3.7/32, mbtmp3.6/23, MS3.0/1, Ms1 3.0/1, ms1mx2.4/40, Error ellipse: s-maj=19.2km s-min=12.5km az=167.0*

ISC 29 20:21:15.1±0.8, 51°.40N±0°.09×178°.11W±0°.05, h56km±6km, h37km±.7km: pP-P, n62, σ1§11/63, mb4.2/41, MS4.3/3,
Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**1.45**	**61**	*e*P	**Pn**	**20 21 39.4**	**+0.4**
AMKA	**Amchitka**	**1.62**	**270**	*e*P	**Pn**	**20 21 39.5**	**-1.8**
AMKA				S	**Sn**	**20 22 01.3**	**+0.2**
SMY	**Shemya**	**4.99**	**288**	*e*Pn	**Pn**	**20 22 25.9**	**-1.5**
FX1	**Attu Island--F**	**5.58**	**289**	P	**Pn**	**20 22 35.2**	**-0.2**
	8.5nm,0.3s,baz=184,slow=8.1,SNR=26						
FX1				S	**Sn**	**20 23 39.7**	**+1.7**
	4.5nm,0.3s,baz=30,slow=20,SNR=3.4						
FX1				LR	LR	20 24 38.7	
	comp=Z,164nm,21.0s,baz=233,slow=37						
FX1	**Attu Island--F**	**5.58**	**289**	P	**Pn**	**20 22 35.2**	**-0.2**
FX1				S	**Sn**	**20 23 39.7**	**+1.7**
FX1				LR	LR	20 24 38.7	
UNV	**Unalaska Valle**	**7.48**	**66**	*e*Pn	**Pn**	**20 23 03.9**	**+2.6**
	11nm,0.4s						
AKUT	**Akutan**	**7.97**	**65**	*e*Pn	**Pn**	**20 23 09.7**	**+1.7**
OHAK	**Old Harbor**	**15.56**	**58**	*e*P	**Pn**	**20 24 48.4**	**-2.2**
	4.2nm,0.7s						
KDAK	**Kodiak Island**	**16.05**	**57**	P	**Pn**	**20 24 55.2**	**-1.6**
	2.2nm,0.3s,baz=247,slow=9.3,SNR=11						
BILL	**Bilibino**	**18.35**	**341**	*e*P	**Pn**	**20 25 26.9**	**+1.7**
	7.7nm,1.0s						
EGAK	**Eagle**	**23.25**	**41**	*e*P	**P**	**20 26 16.6**	**-0.6**
	2.6nm,0.6s,mb3.8						
DAWY	**Dawson**	**23.79**	**43**	*e*P	**P**	**20 26 19.8**	**-2.5**
ASAJ	**Asahikawa**	**27.14**	**270**	P	**P**	**20 26 52.2**	**-0.5**
	5.6nm,0.9s,mb4.1,baz=81,slow=11,SNR=2.9						
INK	**Inuvik**	**27.19**	**35**	P	**P**	**20 26 52.6**	**-0.4**
	1.0nm,0.4s,mb3.7,baz=244,slow=8.7,SNR=3.5						
MJAR	**Matsushiro Arr**	**34.22**	**262**	P	**P**	**20 27 53.6**	**-1.5**
	0.9nm,0.6s,mb3.9,baz=56,slow=7.5,SNR=3.2						
MDJ	**Mudanjiang**	**35.00**	**280**	P	**P**	**20 28 01.5**	**-0.3**
MDJ				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
CN2	**Changchun**	**37.97**	**281**	*e*P	**P**	**20 28 29.0**	**+1.9**
CN2				*e*S	**S**	**20 34 17.0**	**+2.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.4s,mb4.9						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,400nm,21.0s,MS4.3						
CN2				LR	LR		
	comp=E,300nm,21.0s,MS4.3						
CN2				LR	LR		
	comp=Z,700nm,21.0s,MS4.4						
YBH	**Yreka Blue Hor**	**38.45**	**82**	P	**P**	**20 28 33.2**	**+2.0**
	comp=Z,0.6nm,0.6s,mb3.5,baz=0.0,slow=6.1,SNR=2.3						
NEW	**Newport**	**38.47**	**70**	*e*P	**P**	**20 28 31.7**	**+0.4**
	comp=Z,6.2nm,0.9s,mb4.3						
NEW				*e*pP	pP	20 28 42.1	-3.4
BSMT	**Bassoo Peak**	**40.04**	**69**	*e*P	**P**	**20 28 45.2**	**+0.8**
	comp=Z,3.2nm,0.7s,mb4.2						
KSRS	**Korea Array**	**40.07**	**271**	P	**P**	**20 28 45.2**	**+0.4**
	comp=Z,1.5nm,0.7s,mb3.9,baz=60,slow=7.9,SNR=7.6						
WVOR	**Wild Horse Val**	**40.57**	**79**	*e*P	**P**	**20 28 47.7**	**-1.1**
	comp=Z,3.0nm,0.9s,mb3.9						
MCMT	**McKenzie Canyo**	**42.76**	**72**	*e*P	**P**	**20 29 07.6**	**+0.9**
	comp=Z,1.3nm,0.6s,mb3.8						
BOZ	**Bozeman (W)**	**43.04**	**70**	*e*P	**P**	**20 29 09.6**	**+0.7**
	comp=Z,3.9nm,0.9s,mb4.1						
RLMT	**Red Lodge**	**44.72**	**70**	*e*P	**P**	**20 29 23.8**	**+1.3**
	comp=Z,4.7nm,1.0s,mb4.3						
RLMT				*e*pP	pP	20 29 33.7	-3.2
BJI	**Beijing**	**45.79**	**283**	P	**P**	**20 29 31.3**	**+0.3**
BJI				S	**S**	**20 36 12.5**	**+2.0**
BJI				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.8						
BJI				pmax	pmax		
	comp=Z,160nm,6.8s						
BJI				LR	LR		
	comp=N,83nm,18.3s,MS4.0						
BJI				LR	LR		
	comp=E,120nm,16.9s,MS4.0						
BJI				LR	LR		
	comp=Z,60nm,20.0s,MS3.5						
PDAR	**Pinedale Array**	**45.89**	**73**	P	**P**	**20 29 32.9**	**+1.2**
	comp=Z,2.4nm,0.5s,mb4.4,baz=322,slow=4.5,SNR=24						
SONM	**Songino Array**	**47.02**	**297**	P	**P**	**20 29 40.6**	**+0.1**
	comp=Z,0.2nm,0.4s,mb3.4,baz=85,slow=6.3,SNR=4.0						
SONM				PcP	PcP	20 31 11.9	0.0
	comp=Z,0.7nm,0.7s,baz=77,slow=3.2,SNR=6.9						
SPITS	**Spitsbergen Ar**	**50.38**	**356**	P	**P**	**20 30 05.0**	**-0.9**
	comp=Z,0.8nm,0.4s,mb4.1,baz=46,slow=11,SNR=4.3						
SPITS	**Spitsbergen Ar**	**50.38**	**356**	P	**P**	**20 30 05.0**	**-0.9**
ZALV	**Zalesovo Beam**	**54.33**	**314**	PcP	PcP	20 31 38.5	-0.2
	comp=Z,1.3nm,0.6s,baz=40,slow=3.9,SNR=8.1						
GTA	**Gaotai**	**55.96**	**292**	*e*P	**P**	**20 30 48.5**	**+1.1**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
ARCES	**ARCESS Array B**	**58.14**	**350**	P	**P**	**20 31 01.0**	**-1.3**
	comp=Z,0.7nm,0.5s,mb3.9,baz=28,slow=8.3,SNR=10						
TXAR	**Lajitas Array**	**58.22**	**82**	P	**P**	**20 31 03.5**	**0.0**
	comp=Z,0.5nm,0.5s,mb3.8,baz=306,slow=5.4,SNR=9.4						
KURK	**Kurchatov**	**59.32**	**314**	P	**P**	**20 31 10.7**	**-0.1**
	comp=Z,0.5nm,0.5s,mb3.8,baz=41,slow=6.7,SNR=5.0						
MKAR	**Makanchi Array**	**60.36**	**309**	P	**P**	**20 31 17.7**	**-0.3**
	comp=Z,0.3nm,0.4s,mb3.7,baz=58,slow=4.0,SNR=6.3						
GYA	**Guiyang**	**60.75**	**277**	P	**P**	**20 31 22.8**	**+1.8**
GYA				pP	pP	20 31 33.5	-2.5
GYA				sP	sP	20 31 39.5	-2.8
GYA				PcP	PcP	20 32 07.0	+2.6
GYA				PP	PP	20 33 39.0	+3.9
GYA				ScP	ScP	20 36 03.8	+3.0
GYA				S	**S**	**20 39 34.0**	**+0.2**
GYA				sS	sS	20 39 54.0	-5.2
GYA				SS	SS	20 43 33.8	+1.0
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb5.0						
GYA				pmax	pmax		
	comp=Z,80nm,5.3s						
GYA				LR	LR		
	comp=N,490nm,17.0s,MS4.8						
GYA				LR	LR		
	comp=E,460nm,18.2s,MS4.8						
GYA				LR	LR		
	comp=Z,470nm,16.5s,MS4.7						
BVAR	**Borovoye Array**	**61.15**	**320**	P	**P**	**20 31 22.8**	**-0.5**
	comp=Z,1.0nm,0.4s,mb4.3,baz=53,slow=5.9,SNR=10						
KMI	**Kunming**	**64.15**	**278**	P	**P**	**20 31 47.5**	**+3.8**
KMI				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
FINES	**FINESS Array B**	**65.86**	**348**	P	**P**	**20 31 53.0**	**-1.2**
	comp=Z,0.4nm,0.4s,mb3.8,baz=42,slow=2.4,SNR=6.6						
NOA	**NORSAR Array B**	**67.66**	**355**	P	**P**	**20 32 05.0**	**-0.6**
	comp=Z,0.3nm,0.5s,mb3.6,baz=5.9,slow=6.4,SNR=4.7						
CMAR	**Chiang Mai Arr**	**71.44**	**276**	P	**P**	**20 32 29.4**	**-0.2**
	comp=Z,0.4nm,0.5s,mb3.6,baz=17,slow=6.8,SNR=4.8						
TAPN	**Taplejung**	**71.60**	**291**	*e*P	**P**	**20 32 31.0**	**+0.5**
ODAN	**Odare**	**72.16**	**291**	*e*P	**P**	**20 32 34.1**	**+0.3**
GUN	**Gumba**	**72.25**	**292**	*e*P	**P**	**20 32 34.9**	**+0.6**
	comp=Z,34nm,0.4s						
KKN	**Kakani**	**72.69**	**293**	*e*P	**P**	**20 32 37.0**	**+0.1**
	comp=Z,14nm,0.5s,mb5.1						
PKI	**Pulchoki**	**72.78**	**293**	*e*P	**P**	**20 32 37.7**	**+0.2**
	comp=Z,7.2nm,0.5s,mb4.9						
PKIN	**Phulchoki**	**72.78**	**293**	*e*P	**P**	**20 32 37.9**	**+0.4**
	comp=Z,7.7nm,0.5s,mb4.9						
DMN	**Daman**	**72.92**	**293**	*e*P	**P**	**20 32 38.6**	**+0.3**
	comp=Z,3.5nm,0.4s,mb4.6						
AKASG	**Malin Array Be**	**75.66**	**342**	P	**P**	**20 32 52.7**	**-1.2**
	comp=Z,0.6nm,0.3s,mb4.0,baz=18,slow=7.4,SNR=2.8						
BUR08	**Bucovina Ar. S**	**79.32**	**344**	*e*P	**P**	**20 33 13.0**	**-1.3**
WRAB	**Tennant Creek**	**82.32**	**224**	P	**P**	**20 33 29.9**	**-0.7**
	comp=Z,1.0nm,0.8s,mb3.8						
WRA	**Warramunga Arr**	**82.33**	**224**	P	**P**	**20 33 29.9**	**-0.7**
	comp=Z,0.8nm,0.9s,mb3.6,baz=31,slow=5.8,SNR=5.1						
PSI	**Prapat**	**83.43**	**266**	P	**P**	**20 33 36.0**	**-0.6**
	comp=Z,5.1nm,0.8s,mb4.6,baz=20,slow=12,SNR=2.9						
FITZ	**Fitzroy Crossi**	**84.82**	**233**	P	**P**	**20 33 43.8**	**+0.3**
	comp=Z,1.7nm,0.8s,mb4.2,baz=91,slow=15,SNR=3.4						
BRTR	**Keskin Array B**	**85.10**	**336**	P	**P**	**20 33 43.9**	**-0.9**
	comp=Z,1.0nm,0.7s,mb4.0,baz=5.7,slow=2.5,SNR=5.2						
ASAR	**Alice Springs**	**85.80**	**223**	P	**P**	**20 33 48.1**	**0.0**
	comp=Z,0.8nm,0.7s,mb4.1,baz=25,slow=5.1,SNR=11						
STKA	**Stephens Creek**	**90.18**	**213**	*e*P	**P**	**20 34 06.0**	**-2.9**
	comp=Z,6.9nm,1.5s,mb4.8						
DBIC	**Dimbokro**	**121.87**	**8**	PKP	PKPdf	20 40 02.1	-1.0
	comp=Z,2.4nm,0.7s,baz=323,slow=5.1,SNR=4.9						
MAW	**Mawson**	**146.77**	**218**	PKPbc	PKPbc	20 40 49.8	+0.5
	comp=Z,1.9nm,0.4s,baz=36,slow=2.8,SNR=5.5						
LBTB	**Lobatse**	**148.01**	**316**	PKPbc	PKPbc	20 40 54.2	+0.2
	comp=Z,8.3nm,0.6s,baz=6.3,slow=2.2,SNR=20						
BOSA	**Boshof**	**151.28**	**313**	PKPbc	PKPbc	20 41 01.9	-0.1
	comp=Z,5.0nm,0.6s,baz=60,slow=1.9,SNR=19						

*IDC **29** 20:29:40.8±1.4, 2°.16N×96°.74E, h0km, mb3.8/9, mb1 3.8/11, mb1mx3.7/23, mbtmp3.7/11, ML3.4/2, Error ellipse: s-maj=36.7km s-min=18.5km az=43.0*
*NEIC **29** 20:29:45.9±0.8, 2°.19N×96°.79E, h35km, mb3.7/1, Error ellipse: s-maj=20.0km s-min=9.2km az=52.0*

ISC 29 20:29:41.1±5.9, 2°.2N±0°.1×96°.75E±0°.08, h2km±37km, n13, σ0§47/14, mb3.8/10, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.26**	**73**	Pn	**Pn**	**20 30 19.8**	**+0.3**
	3.7nm,0.3s,baz=292,slow=11,SNR=10.0						
PSI				Sn	**Sn**	**20 30 47.8**	**-0.2**
	8.4nm,0.3s,baz=239,slow=12,SNR=11						
CMAR	**Chiang Mai Arr**	**16.34**	**7**	Pn	**Pn**	**20 33 31.7**	**-0.1**
	0.1nm,0.3s,baz=198,slow=13,SNR=6.5						
WRA	**Warramunga Arr**	**42.92**	**123**	P	**P**	**20 37 41.6**	**0.0**
	0.4nm,0.4s,mb3.5,baz=302,slow=9.1,SNR=9.3						
WRAB	**Tennant Creek**	**42.92**	**123**	*e*P	**P**	**20 37 41.2**	**-0.4**
	0.7nm,0.4s,mb3.7						
ASAR	**Alice Springs**	**44.32**	**128**	P	**P**	**20 37 52.7**	**-0.2**
	0.3nm,0.8s,mb3.1,baz=305,slow=7.2,SNR=2.9						
MK31	**Makanchi Array**	**46.22**	**346**	*e*P	**P**	**20 38 07.5**	**0.0**
MKAR	**Makanchi Array**	**46.22**	**346**	P	**P**	**20 38 07.3**	**-0.2**
	0.6nm,0.4s,mb3.9,baz=162,slow=9.7,SNR=9.7						
SONM	**Songino Array**	**46.26**	**9**	P	**P**	**20 38 07.5**	**-0.3**
	0.4nm,0.3s,mb3.8,baz=190,slow=9.2,SNR=5.5						
KURK	**Kurchatov**	**50.76**	**345**	P	**P**	**20 38 41.8**	**-0.7**
	0.4nm,0.5s,mb3.6,baz=156,slow=7.3,SNR=5.5						
ZALV	**Zalesovo Beam**	**52.55**	**351**	P	**P**	**20 38 55.8**	**0.0**
	1.7nm,0.4s,mb4.3,baz=166,slow=6.5,SNR=11						
BVAR	**Borovoye Array**	**55.21**	**341**	P	**P**	**20 39 14.9**	**-0.4**
	0.9nm,0.6s,mb4.0,baz=140,slow=7.8,SNR=7.5						
PETK	**Petropavlovsk-**	**71.19**	**34**	P	**P**	**20 41 02.5**	**+1.1**
	1.6nm,0.8s,mb4.0,baz=257,slow=10,SNR=4.1						
ARCES	**ARCESS Array B**	**81.49**	**340**	P	**P**	**20 42 00.5**	**+0.9**
	0.9nm,0.7s,mb3.8,baz=77,slow=4.7,SNR=3.1						

*CSEM **29** 20:45:15.4±0.1, 42°.95N×0°.45W, h10km, ML2.2/8, Error ellipse: s-maj=2.9km s-min=1.9km az=4.0*
*STR **29** 20:45:15.4±0.2, 42°.88N×0°.51W, h5km, Ml2.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*MDD **29** 20:45:16.2±0.2, 42°.89N×0°.50W, h0km, mbLg1.7/22, Error ellipse: s-maj=2.5km s-min=1.5km az=2.0, PRXIMO*

LDG 29 20:45:15.9±0.1, 42°.93N×0°.49W, h2km, Md2.5/3, Ml2.1/5, 1C-1D, Error ellipse: s-maj=1.5km s-min=0.9km az=3.0, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETSF	**Etsaut**	**0.06**	**243**	*e*Pg	Pg	20 45 16.5	-0.6
ETSF				*e*Sg	Sg	20 45 16.8	-1.1
	2μm,0.3s						
ETSF	**Etsaut**	**0.06**	**243**	Pg	Pg	20 45 16.5	-0.6
ETSF				Lg		20 45 16.8	
	918nm,0.3s						
ETSF	**Etsaut**	**0.06**	**243**	*e*Sg	Sg	20 45 16.8	-1.1
	918nm,0.3s						
ETSF	**Etsaut**	**0.06**	**243**	*e*Pg	Pg	20 45 16.5	-0.6
FDAF	**Les Forges d'A**	**0.12**	**209**	Pg	Pg	20 45 17.4	-0.9
FDAF				Lg		20 45 18.7	
REYF	**Montagne du Re**	**0.16**	**25**	Pg	Pg	20 45 20.0	+1.0
REYF				Sg	Sg	20 45 23.2	+2.1
REYF	**Montagne du Re**	**0.16**	**25**	Pg	Pg	20 45 20.0	+1.0
REYF				Lg		20 45 23.2	
REYF	**Montagne du Re**	**0.16**	**25**	Sg	Sg	20 45 23.2	+2.1
REYF	**Montagne du Re**	**0.16**	**25**	Pg	Pg	20 45 20.0	+1.0
ATE	**Arette**	**0.23**	**315**	Pg	Pg	20 45 20.3	+0.1
ATE				Sg	Sg	20 45 24.2	+1.1
ATE	**Arette**	**0.23**	**315**	Pg	Pg	20 45 20.3	+0.1
ATE				Sg	Sg	20 45 24.2	+1.1
VIEF	**Viey**	**0.38**	**96**	Pg	Pg	20 45 22.9	-0.2
VIEF				Sg	Sg	20 45 28.1	+0.1
VIEF	**Viey**	**0.38**	**96**	Pg	Pg	20 45 23.1	0.0
VIEF				Lg		20 45 28.8	
VIEF	**Viey**	**0.38**	**96**	Pg	Pg	20 45 22.9	-0.2
VIEF				Sg	Sg	20 45 28.1	+0.1
LABF	**Labassere**	**0.43**	**73**	Pg	Pg	20 45 24.5	+0.4
LABF				Sg	Sg	20 45 30.6	+1.0
LABF	**Labassere**	**0.43**	**73**	Pg	Pg	20 45 24.6	+0.5
LABF				Lg		20 45 30.6	
LABF	**Labassere**	**0.43**	**73**	Sg	Sg	20 45 30.6	+1.0
LABF	**Labassere**	**0.43**	**73**	Pg	Pg	20 45 24.5	+0.4
ORDF	**Ordiarp**	**0.44**	**311**	Pg	Pg	20 45 24.9	+0.6
ORDF				Sg	Sg	20 45 31.3	+1.3
ORDF	**Ordiarp**	**0.44**	**311**	Pg	Pg	20 45 24.9	+0.6
ORDF				Lg		20 45 31.1	
ORDF	**Ordiarp**	**0.44**	**311**	Pg	Pg	20 45 24.9	+0.6
ORDF				Sg	Sg	20 45 31.3	+1.3
EBIE	**Bielsa**	**0.52**	**117**	⇑Pg	Pg	20 45 25.4	-0.5
	2.5nm,0.2s,SNR=18						
EBIE				Lg		20 45 32.9	
	14nm,0.4s,SNR=20						
EBIE	**Bielsa**	**0.52**	**117**	Pg	Pg	20 45 25.4	-0.5
	2.5nm,0.2s,SNR=18						
EBIE				Lg		20 45 32.9	
	14nm,0.4s,SNR=20						
SJPF	**Ste Jean**	**0.57**	**289**	*e*Pg	Pg	20 45 26.3	-0.6
SJPF				*e*Sg	Sg	20 45 34.4	+0.1
	26nm,0.3s						
SJPF	**Ste Jean**	**0.57**	**289**	Pg	Pg	20 45 26.3	-0.6
SJPF				Lg		20 45 34.4	
	13nm,0.3s						
SJPF	**Ste Jean**	**0.57**	**289**	*e*Pg	Pg	20 45 26.3	-0.6
SJPF				*e*Sg	Sg	20 45 34.4	+0.1
	13nm,0.3s						
EORO	**Oroz-Betelu**	**0.61**	**267**	Pg	Pg	20 45 27.3	-0.2
	4.5nm,0.1s,SNR=7.9						
EORO				Lg		20 45 36.3	
	26nm,0.3s,SNR=7.9						
EORO	**Oroz-Betelu**	**0.61**	**267**	Pg	Pg	20 45 27.3	-0.2
	4.5nm,0.1s,SNR=7.9						
EORO				Lg		20 45 36.3	
	26nm,0.3s,SNR=7.9						
EPF	**Esparros**	**0.61**	**80**	*e*Pg	Pg	20 45 27.8	+0.1
EPF				*e*Sg	Sg	20 45 36.1	+0.5
	20nm,0.2s						
EPF	**Esparros**	**0.61**	**80**	Pg	Pg	20 45 27.8	+0.1
EPF				Lg		20 45 36.1	
	9.8nm,0.2s						
EPF	**Esparros**	**0.61**	**80**	*e*Pg	Pg	20 45 27.8	+0.1
EPF				*e*Sg	Sg	20 45 36.1	+0.5
	9.8nm,0.2s						
RESF	**Ens**	**0.62**	**101**	Pg	Pg	20 45 27.2	-0.5
RESF				Sg	Sg	20 45 36.1	+0.4
RESF	**Ens**	**0.62**	**101**	Pg	Pg	20 45 27.4	-0.3
RESF				Lg		20 45 35.8	
RESF	**Ens**	**0.62**	**101**	Pg	Pg	20 45 27.2	-0.5
RESF				Sg	Sg	20 45 36.1	+0.4
IPRE	**Itoiz**	**0.65**	**260**	Lg		20 45 37.4	
	15nm,0.6s,SNR=5.4						
IPRE	**Itoiz**	**0.65**	**260**	Lg		20 45 37.4	
	15nm,0.6s,SNR=5.4						
OSSF	**Osses**	**0.66**	**300**	Pg	Pg	20 45 28.0	-0.5
OSSF				Sg	Sg	20 45 36.7	-0.3
OSSF	**Osses**	**0.66**	**300**	Pg	Pg	20 45 28.8	+0.3
OSSF				Lg		20 45 37.3	
OSSF	**Osses**	**0.66**	**300**	Pg	Pg	20 45 28.0	-0.5
OSSF				Sg	Sg	20 45 36.7	-0.3
IZUN	**Zunzarren**	**0.72**	**265**	Pg	Pg	20 45 29.3	-0.4
	0.9nm,0.1s,SNR=7.9						
IZUN				Lg		20 45 39.9	
	6.6nm,0.3s,SNR=7.9						
IZUN	**Zunzarren**	**0.72**	**265**	Pg	Pg	20 45 29.3	-0.3
	0.9nm,0.1s,SNR=7.9						
IZUN				Lg		20 45 39.9	
	6.6nm,0.3s,SNR=7.9						
IUNC	**Unciti**	**0.77**	**258**	Pg	Pg	20 45 31.8	+1.2
	8.2nm,0.6s,SNR=5.1						
IUNC				Lg		20 45 41.6	
	27nm,0.6s,SNR=8.9						
IUNC	**Unciti**	**0.77**	**258**	Pg	Pg	20 45 31.8	+1.3
	8.2nm,0.6s,SNR=5.1						
IUNC				Lg		20 45 42.5	
	27nm,0.6s,SNR=8.9						
IUSE	**Utxeti**	**0.78**	**272**	Lg		20 45 40.9	
	2.8nm,0.2s,SNR=5.0						
IUSE	**Utxeti**	**0.78**	**272**	Lg		20 45 40.9	
	2.8nm,0.2s,SNR=5.0						
ELIZ	**Elizondo**	**0.80**	**288**	Pg	Pg	20 45 30.5	-0.7
	6.5nm,0.2s,SNR=13						
ELIZ				Lg		20 45 41.9	
	15nm,0.4s						
ELIZ	**Elizondo**	**0.80**	**288**	Pg	Pg	20 45 30.5	-0.8
	6.5nm,0.2s,SNR=13						
ELIZ				Lg		20 45 41.9	
	15nm,0.4s						
EALK	**Alkurruntz**	**0.80**	**292**	Pg	Pg	20 45 31.2	-0.1
	2.6nm,0.3s,SNR=11						
EALK				Lg		20 45 41.4	
	11nm,0.1s,SNR=15						
EALK	**Alkurruntz**	**0.80**	**292**	Pg	Pg	20 45 31.2	-0.1
	2.6nm,0.3s,SNR=11						
EALK				Lg		20 45 41.4	
	11nm,0.1s,SNR=15						
EARA	**Aranguren**	**0.82**	**260**	Lg		20 45 43.6	
	15nm,0.4s,SNR=4.0						
EARA	**Aranguren**	**0.82**	**260**	Lg		20 45 43.6	
	15nm,0.4s,SNR=4.0						
MELF	**Melles**	**0.92**	**93**	Pg	Pg	20 45 32.5	-0.9
MELF	

2.2nm,0.3s
CAF Calviac 2.72 42 Pn Pn 20 45 58.7 -1.8
CAF Pg Pg 20 46 06.4 -1.6
CAF Sn Sn 20 46 30.1 -3.9
CAF Lg 20 46 41.5
1.1nm,0.3s
CAF Calviac 2.72 42 *e*Pn Pn 20 45 58.7 -1.8
CAF Calviac 2.72 42 *e*Pg Pg 20 46 06.4 -1.6
CAF *e*Sn Sn 20 46 30.1 -3.9
CAF *e*Sg Sg 20 46 41.5 -1.7
1.1nm,0.3s
RJF Les Rejaudoux 2.78 31 *e*Pg Pg 20 46 07.3 -1.9
RJF *e*Sn Sn 20 46 31.5 -4.0
RJF *e*Sg Sg 20 46 43.3 -1.9
1.9nm,0.2s
RJF Les Rejaudoux 2.78 31 Pg Pg 20 46 07.3 -1.9
RJF Sn Sn 20 46 31.5 -4.0
RJF Lg 20 46 43.3
0.9nm,0.2s
RJF Les Rejaudoux 2.78 31 *e*Pg Pg 20 46 07.3 -1.9
RJF *e*Sn Sn 20 46 31.5 -4.0
RJF *e*Sg Sg 20 46 43.3 -1.9
0.9nm,0.2s
LASF Ste Croix 3.36 69 *e*Pn Pn 20 46 06.6 -2.8
LASF Ste Croix 3.36 69 *e*Pg Pg 20 46 18.1 -2.2
LASF *e*Sn Sn 20 46 45.7 -4.1
LASF *e*Sg Sg 20 47 01.5 -2.4
0.8nm,0.3s
LASF Ste Croix 3.36 69 Pn Pn 20 46 06.6 -2.8
LASF Pg Pg 20 46 18.1 -2.2
LASF Sn Sn 20 46 45.7 -4.1
LASF Lg 20 47 01.5
0.4nm,0.3s
LASF Ste Croix 3.36 69 *e*Pn Pn 20 46 06.6 -2.8
LASF Ste Croix 3.36 69 *e*Pg Pg 20 46 18.1 -2.2
LASF *e*Sn Sn 20 46 45.7 -4.1
LASF *e*Sg Sg 20 47 01.5 -2.4
0.4nm,0.3s
EARI Arriondas 3.48 278 Sn Sn 20 46 53.0 +0.2
0.7nm,0.4s,SNR=7.9
EARI Arriondas 3.48 278 Sn Sn 20 46 53.0 +0.2
0.7nm,0.4s,SNR=7.9

BGS ***29*** *20:52:51.6±1.4, 43.°60N×138.°07E, h287km, mb5.6*
BJI ***29*** *20:52:59.7, 45.°04N×137.°76E, h317km, mB5.4/31, mb5.2/57*
NIED ***29*** *20:53:00, 45.°00N×137.°40E, h360km, Mw6.0 Best double couple: M0 1.27000×10^18 NP1:φs265.00000°, δ83.00000°, λ-136.00000°. NP2:φs168.00000°, δ46.00000°, λ-9.00000°.*
JMA ***29*** *20:53:01.4±0.3, 44.°98N×137.°43E, h344km±4km, M5.8*
JMA Felt I J1.
MOS ***29*** *20:53:01.4±1.0, 45.°21N×137.°44E, h307km, mb5.6/155, MS4.7/22, Error ellipse: s-maj=7.8km s-min=5.9km az=103.0*
ISCJB ***29*** *20:53:02.2±0.1, 45.°10N±0.°01×137.°40E±0.°01, h311km±1km, mb5.5/492, Error ellipse: s-maj=2.3km s-min=1.6km az=165.4*
SKHL ***29*** *20:53:02.4±1.6, 45.°00N×137.°51E, h319km±7km, mb6.5/6, mbh6.6/4, Ms5.6/3, msh6.9/6, (6.2)/9 (6.7)/3*
DJA ***29*** *20:53:03, 45.°10N×137.°50E, h303km, Mw5.8/61*
IDC ***29*** *20:53:03.0±0.4, 45.°15N×137.°41E, h306km±4km, mb5.4/34, mb1 5.4/39, mb1mx5.4/40, mbtmp5.4/39, Error ellipse: s-maj=6.5km s-min=5.8km az=81.0*
NEIC ***29*** *20:53:04.9±0.1, 45.°16N×137.°45E, h326km, mb5.6/293, ME6.0, MW5.9, MW5.9, Error ellipse: s-maj=3.3km s-min=2.3km az=175.0 Broadband fault plane solution: P waves. NP1:φs265.00000°, δ80.00000°, λ-150.00000°. NP2:φs169.00000°, δ61.00000°, λ-12.00000°. Principal axes: T Plg13.0000°, Azm34.0000°; N Plg0.0000°, Azm0.0000°; P Plg28.0000°, Azm131.0000°; Moment Tensor Solution. s107 Moment tensor: Scale 10^17 Nm; Mrr0.41; Mθθ-0.60; Mφφ0.19; Mrθ8.17; Mθφ-5.27; Mφr0.30; Best double couple: M0 9.70000×10^17 NP1:φs182.00000°, δ33.00000°, λ3.00000°. NP2:φs89.00000°, δ88.00000°, λ123.00000°. Principal axes: T 9.5000, Plg37.0000°, Azm28.0000°; N 0.5000, Plg32.0000°, Azm268.0000°; P -10.0000, Plg35.0000°, Azm151.0000°; Depth from broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt at Misawa, Japan. Recorded [1 JMA] in Aomori, Iwate and Miyagi, Honshu. Also recorded [1 JMA] in eastern and southern Hokkaido.
GCMT ***29*** *20:53:07.2±0.1, 45.°12N×137.°37E, h328km, MW6.0, Moment Tensor Solution. s105, c241; s72, c108; Moment tensor: Scale 10^18 Nm; Mrr0.00; Mθθ0.00; Mφφ0.00; Mrθ0.00; Mθφ0.00; Mφr0.00; Best double couple: M0 1.10000×10^18 NP1:φs168.00000°, δ38.00000°, λ-9.00000°. NP2:φs266.00000°, δ84.00000°, λ-127.00000°. Principal axes: T 1.2200, Plg29.0000°, Azm25.0000°; N -0.2400, Plg37.0000°, Azm270.0000°; P -0.9800, Plg39.0000°, Azm142.0000°; Data Used: II IU IC G CN.*
SZGRF ***29*** *20:53:13.7, 46.°56N×137.°00E, h315km, mb6.2, Primorye, Russia*

ISC 29 20:53:03.2±0.1, 45.°10N±0.°01×137.°41E±0.°01, h309km±1km, h319km±.6km:pP-P, n1941, σ0.°88/2014, mb5.5/492, 463C-277D, Primorye

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TEY	**Ternei**	**0.58**	**264**	⇑*i*P			**Pn**	**20 53 44.7**	**+1.8**
TEY					AMB		AMB	20 53 45.0	
	30μm,2.0s								
TEY					AMB		AMB	20 53 45.0	
	6μm,3.0s								
TEY				*i* S			**S**	**20 54 16.4**	**+1.8**
JRR	**Rishiri**	**2.76**	**88**	⇑P			**Pn**	**20 53 58.3**	**+1.1**
JSK	**Shakotan**	**2.81**	**127**	⇑P			**Pn**	**20 53 58.0**	**+0.3**
JSK				*e*S			**S**	**20 54 41.7**	**+0.4**
JYG	**Yagishiri**	**2.94**	**102**	⇑P			**Pn**	**20 53 59.0**	**+0.1**
JSH	**Shimam**	**3.10**	**141**	⇑P			**Pn**	**20 54 00.4**	**-0.2**
JSH				*e*S			**S**	**20 54 46.5**	**0.0**
JWK2	**Keihoku**	**3.18**	**84**	⇑P			**Pn**	**20 54 02.8**	**+1.6**
JWK2				*e*S			**S**	**20 54 50.8**	**+3.2**
JOSM	**Okushiri--Mats**	**3.36**	**153**	⇑P			**Pn**	**20 54 03.3**	**+0.1**
JOSM				*e*S			**S**	**20 54 51.5**	**+0.3**
JHR	**Hokuryu**	**3.37**	**112**	⇑P			**Pn**	**20 54 03.8**	**+0.6**
JHR				*e*S			**S**	**20 54 53.6**	**+2.3**
JSE	**Soyaes**	**3.67**	**90**	⇓P			**Pn**	**20 54 07.1**	**+0.9**
JSE				*e*S			**S**	**20 54 58.5**	**+1.7**
JEW	**Eniwo**	**3.68**	**126**	P			**Pn**	**20 54 06.8**	**+0.3**
JEW				*e*S			**S**	**20 54 58.5**	**+1.3**
HABR	**Khabarovsk**	**3.75**	**335**	*d iP*			**Pn**	**20 54 08.5**	**+1.5**
HABR				*e*S			**S**	**20 55 01.2**	**+3.1**
KHBR	**Khabarovsk**	**3.75**	**335**	⇓*i*P			**Pn**	**20 54 09.1**	**+2.1**
KHBR				*i* S			**S**	**20 55 01.8**	**+3.7**
ASAJ	**Asahikawa**	**3.83**	**103**	P			**Pn**	**20 54 08.3**	**+0.4**
	467nm,0.3s,baz=282,slow=9.9,SNR=966								
ASAJ				S			**S**	**20 55 01.2**	**+1.4**
	47nm,0.3s,baz=6.8,slow=26,SNR=7.6								
ASAJ	**Asahikawa**	**3.83**	**103**	P			**Pn**	**20 54 08.4**	**+0.4**
ASAJ				S			**S**	**20 55 01.3**	**+1.4**
ASAJ				pmax			pmax		
	comp=Z,467nm,0.3s								
ASAJ				smax					
	comp=N,47nm,0.3s								
JKK2	**Kamakawa 2**	**4.01**	**106**	P			**Pn**	**20 54 10.1**	**+0.2**
JKK2				*e*S			**S**	**20 55 04.3**	**+0.9**
GRTR	**Gornotajezhnoj**	**4.01**	**252**	⇓*e*P			**Pn**	**20 54 11.4**	**+1.4**
GRTR				*e*S			**S**	**20 55 05.7**	**+2.2**
JKB	**Kayabe**	**4.15**	**139**	P			**Pn**	**20 54 10.3**	**-1.2**
JKB				*e*S			**S**	**20 55 04.8**	**-1.5**
YSS	**Yuzh-Sakhalins**	**4.16**	**62**	⇓*i*P			**Pn**	**20 54 12.0**	**+0.6**
YSS				*i* S			**S**	**20 55 06.0**	**-0.2**
YSS				pmax			pmax		
	comp=Z,8μm,2.0s								
YSS				smax					
	comp=E,58μm,2.0s								
YSS				smax					
	comp=E,9μm,1.3s								
YSS				MLR			MLR		
	comp=Z,8μm,10.0s								
YSS	**Yuzh-Sakhalins**	**4.16**	**62**	*e*Pn			**Pn**	**20 54 12.1**	**+0.6**
YSS	**Yuzh-Sakhalins**	**4.16**	**62**	⇓*i*P			**Pn**	**20 54 12.0**	**+0.6**
YSS				⇓*i*P				20 54 12.0	
YSS				AMB			AMB	20 54 13.5	
	comp=Z,2μm,4.0s								
YSS				AMB			AMB	20 54 13.5	
	comp=Z,6μm,4.0s								
YSS				AMB			AMB	20 54 13.5	
	comp=Z,8μm,4.0s								
YSS				*i* S			**S**	**20 55 06.0**	**-0.2**
YSS				A				20 55 10.0	
	comp=Z,72μm,8.0s								
YSS				AMS			AMS	20 56 14.0	
	comp=Z,10μm,10.0s								
YSS				AMS			AMS	20 56 14.0	
	comp=Z,8μm,10.0s								
JFR	**Furan**	**4.20**	**116**	⇓P			**Pn**	**20 54 11.7**	**-0.3**
JFR				*e*S			**S**	**20 55 06.4**	**-0.8**
VLA	**Vladivostok**	**4.44**	**246**	*e*P			**Pn**	**20 54 16.4**	**+1.8**
VLA				*e**SP				20 55 11.8	
VLA				pmax			pmax		
	comp=Z,8.0nm,1.7s								
VLA				MLR			MLR		
	comp=Z,6μm,9.6s								
VLA	**Vladivostok**	**4.44**	**246**	*e*P			**Pn**	**20 54 16.4**	**+1.8**
VLA				*e*S			**S**	**20 55 11.8**	**-0.2**
JOT	**Ohata**	**4.56**	**143**	P			**Pn**	**20 54 14.0**	**-2.1**
JSI2	**Shiura 2**	**4.59**	**150**	S			**S**	**20 55 13.7**	**-1.6**
JTKR	**Abashiri--Toko**	**4.78**	**101**	⇓P			**Pn**	**20 54 18.2**	**-0.2**
JTKR				*e*S			**S**	**20 55 19.1**	**+0.2**
JNBK	**Urakawa-nobuka**	**4.79**	**124**	P			**Pn**	**20 54 17.5**	**-1.1**
JNBK				*e*S			**S**	**20 55 17.4**	**-1.8**
JIW	**Iwasaki**	**4.89**	**156**	⇑P			**Pn**	**20 54 18.6**	**-1.2**
JAR	**Ashorobuto**	**4.91**	**109**	⇓P			**Pn**	**20 54 19.5**	**-0.5**
JAR				*e*S			**S**	**20 55 20.4**	**-1.3**
JCH	**Churui**	**4.96**	**118**	⇓P			**Pn**	**20 54 17.9**	**-2.7**
JCH				*e*S			**S**	**20 55 16.7**	**-6.2**
JTM	**Tenmabayashi**	**5.07**	**147**	⇑P			**Pn**	**20 54 19.6**	**-2.3**
UGL	**Uglegorsk**	**5.09**	**37**	*ce*P			**Pn**	**20 54 24.0**	**+2.1**
UGL				S			**S**	**20 55 19.0**	**-6.4**
UGL				pmax			pmax		
	comp=Z,2μm,0.5s								
UGL				pmax			pmax		
	comp=N,456nm,0.4s								
UGL				pmax			pmax		
	comp=E,897nm,0.4s								
UGL				smax					
	comp=N,539μm,0.5s								
UGL				smax					
	comp=E,616μm,0.5s								
UGL				smax					
	comp=E,80μm,8.0s								
UGL	**Uglegorsk**	**5.09**	**37**	⇑*i*P			**Pn**	**20 54 24.0**	**+2.1**
UGL				AMB			AMB	20 54 27.0	
	comp=E,456nm,0.4s								
UGL				AMB			AMB	20 54 27.0	
	comp=E,897nm,0.4s								
UGL				AMB			AMB	20 54 27.0	
	comp=E,2μm,0.5s								
UGL				*e*S			**S**	**20 55 26.0**	**+0.6**
ERM	**Erimo**	**5.19**	**124**	*c iP*			**Pn**	**20 54 22.3**	**-0.9**
ERM	**Erimo**	**5.19**	**124**	*e*Pn			**Pn**	**20 54 20.7**	**-2.5**
JAH	**Hinai**	**5.45**	**153**	⇑P			**Pn**	**20 54 24.3**	**-2.0**
JOG2	**Oga 2**	**5.47**	**160**	⇑P			**Pn**	**20 54 25.4**	**-1.1**
MDJ	**Mudanjiang**	**5.58**	**268**	P			**Pn**	**20 54 29.8**	**+2.1**
MDJ				S			**S**	**20 55 38.0**	**+2.2**
MDJ				PcP			PcP	21 00 57.0	-0.1
MDJ				ScP			ScP	21 03 59.0	+0.6
MDJ				ScS			ScS	21 07 32.0	+0.9
MDJ				pmax			pmax		
	comp=Z,3μm,0.9s								
MDJ				pmax			pmax		
	comp=Z,3μm,4.8s								
JANG	**Nango**	**5.60**	**146**	P			**Pn**	**20 54 25.2**	**-2.8**
JANG				*e*S			**S**	**20 55 28.8**	**-7.6**
JRA	**Rausu**	**5.63**	**99**	⇓P			**Pn**	**20 54 28.2**	**-0.1**
JRA				*e*S			**S**	**20 55 38.0**	**+1.1**
JAK	**Akkeshi**	**5.65**	**109**	P			**Pn**	**20 54 25.9**	**-2.7**
JAK				*e*S			**S**	**20 55 32.0**	**-5.4**
KLR	**Kul'dur**	**5.66**	**319**	⇑*i*P			**Pn**	**20 54 26.0**	**-2.5**
KLR				*e*S			**S**	**20 55 31.0**	**-6.3**
KLR				pmax			pmax		
	comp=N,11μm,8.0s								
KLR				pmax			pmax		
	comp=E,10μm,8.0s								
KLR				pmax			pmax		
	comp=Z,22μm,8.0s								
KLR	**Kul'dur**	**5.66**	**319**	⇑*i*P			**Pn**	**20 54 26.0**	**-2.5**
KLR				AMB			AMB	20 54 34.0	
	comp=Z,11μm,8.0s								
KLR				AMB			AMB	20 54 34.0	
	comp=Z,10μm,8.0s								
KLR				AMB			AMB	20 54 34.0	
	comp=Z,22μm,8.0s								
KLR				*e*S			**S**	**20 55 31.0**	**-6.3**
GRNR	**Gornyy**	**5.72**	**354**	⇓*i*P			**Pn**	**20 54 30.7**	**+1.6**
GRNR				AMB			AMB	20 54 33.8	
	comp=Z,220nm,0.8s								
GRNR				*i* S			**S**	**20 55 39.1**	**+0.6**
GRNR				A				20 55 45.1	
	comp=Z,798nm,1.0s								
JTB	**Tobi-shima**	**6.11**	**164**	⇑P			**Pn**	**20 54 33.1**	**-0.9**
JTB				S			**S**	**20 55 43.9**	**-3.4**
JTH	**Tanohata**	**6.11**	**146**	⇑P			**Pn**	**20 54 30.9**	**-3.2**
YUK	**Yuzh-Kuril'sk**	**6.13**	**97**	⇓*i*P			**Pn**	**20 54 33.9**	**-0.3**
YUK				*i* S			**S**	**20 55 47.7**	**+0.1**
YUK				pmax			pmax		
	comp=N,2μm,0.6s								
YUK				pmax			pmax		
	comp=Z,7μm,0.6s								
YUK				pmax			pmax		
	comp=E,1μm,0.3s								
YUK				pmax			pmax		
	comp=Z,10μm,0.9s								
YUK				smax					
	comp=N,3μm,1.3s								
YUK				smax					
	comp=E,5μm,1.3s								
YUK				smax					
	comp=N,38μm,1.5s								
YUK				smax					
	comp=E,11μm,0.7s								
YUK				MLR			MLR		
	comp=Z,3μm,8.2s								
YUK	**Yuzh-Kuril'sk**	**6.13**	**97**	⇓*i*P			**Pn**	**20 54 33.9**	**-0.3**
YUK				AMB			AMB	20 54 36.0	
	comp=Z,4μm,3.0s								
YUK				AMB			AMB	20 54 36.0	
	comp=Z,18μm,3.0s								
YUK				AMB			AMB	20 54 36.0	
	comp=Z,22μm,3.0s								
YUK				AMB			AMB	20 54 36.4	
	comp=Z,2μm,0.5s								
YUK				AMB			AMB	20 54 36.4	
	comp=Z,2μm,0.5s								
YUK				AMB			AMB	20 54 36.4	
	comp=Z,6μm,0.5s								
YUK				*i* S			**S**	**20 55 46.0**	**-1.6**
YUK				A				20 55 53.0	
	comp=Z,35μm,2.0s								
YUK				A				20 55 53.0	
	comp=Z,45μm,2.0s								
YUK				A				20 55 54.9	
	comp=Z,11μm,0.7s								
YUK				AMS			AMS	20 57 13.8	
	comp=Z,3μm,8.2s								
NEM2	**Nemuro 2**	**6.23**	**103**	P			**Pn**	**20 54 32.5**	**-2.9**
NEM2				*e*S			**S**	**20 55 42.8**	**-7.0**
JYK	**Kaneyama**	**6.55**	**159**	⇑P			**Pn**	**20 54 37.1**	**-2.2**
JYA	**Atsumi**	**6.72**	**164**	⇑P			**Pn**	**20 54 39.9**	**-1.4**
TYV	**Tymovskoe**	**6.76**	**29**	⇑*i*P			**Pn**	**20 54 43.8**	**+2.3**
TYV				*e*S			**S**	**20 56 03.5**	**+2.4**
JMK	**Ichinoseki**	**6.76**	**154**	P			**Pn**	**20 54 38.9**	**-2.9**
JMK				*e*S			**S**	**20 55 55.2**	**-6.4**
OFUJ	**Ofunato**	**6.79**	**151**	⇓P			**Pn**	**20 54 39.2**	**-3.0**
JSD	**Sado**	**7.08**	**175**	⇑P			**Pn**	**20 54 45.0**	**-0.7**
JOU	**Okura**	**7.15**	**159**	⇑P			**Pn**	**20 54 44.0**	**-2.5**
JHG	**Hegura jima**	**7.25**	**183**	⇑P			**Pn**	**20 54 47.9**	**+0.2**
KUR	**Kuril'sk**	**7.39**	**85**	⇓*i*P			**Pn**	**20 54 49.0**	**-0.3**
KUR				*i* S			**S**	**20 56 14.0**	**-1.3**
KUR				pmax			pmax		
	comp=N,4μm,2.0s								
KUR				pmax			pmax		
	comp=E,10μm,2.0s								
KUR				pmax			pmax		
	comp=Z,14μm,2.0s								
KUR				pmax			pmax		
	comp=N,830nm,0.8s								
KUR				pmax			pmax		
	comp=E,70nm,0.8s								
KUR				pmax			pmax		
	comp=Z,3μm,0.8s								
KUR				smax					
	comp=N,32μm,1.5s								
KUR				smax					
	comp=E,23μm,1.5s								
KUR				smax					
	comp=N,153μm,5.0s								
KUR				smax					
	comp=E,48μm,5.0s								
KUR				MLR			MLR		
	comp=N,10μm,8.0s								
KUR				MLR			MLR		
	comp=E,13μm,8.0s								
KUR				MLR			MLR		
	comp=Z,15μm,8.0s								
KUR	**Kuril'sk**	**7.39**	**85**	⇓*i*P			**Pn**	**20 54 49.0**	**-0.3**
KUR				AMB			AMB	20 54 51.0	
	comp=Z,10μm,2.0s								
KUR				AMB			AMB	20 54 51.0	
	comp=Z,11μm,2.0s								
KUR				AMB			AMB	20 54 51.0	
	comp=Z,14μm,2.0s								
KUR				AMB			AMB	20 54 51.2	
	comp=Z,830nm,0.8s								
KUR				AMB			AMB	20 54 51.2	
	comp=Z,700nm,0.8s								
KUR				AMB			AMB	20 54 51.2	
	comp=Z,3μm,0.8s								
KUR				*i* S			**S**	**20 56 14.0**	**-1.3**
KUR				A				20 56 16.0	
	comp=Z,32μm,1.5s								
KUR				A				20 56 16.0	
	comp=Z,23μm,1.5s								
KUR				A				20 56 16.0	
	comp=Z,112μm,4.0s								
KUR				A				20 56 16.0	
	comp=Z,42μm,4.0s								
KUR				A				20 56 16.0	
	comp=Z,153μm,5.0s								
KUR				A				20 56 16.0	
	comp=Z,48μm,5.0s								
KUR				AMS			AMS	20 58 30.0	
	comp=Z,15μm,8.0s								
KUR				AMS			AMS	20 58 30.0	
	comp=Z,10μm,8.0s								
KUR				AMS			AMS	20 58 30.0	
	comp=Z,13μm,8.0s								
JNS	**Sasagawa**	**7.41**	**168**	P			**Pn**	**20 54 47.9**	**-1.8**
JSZ	**Suzu**	**7.64**	**180**	P			**Pn**	**20 54 52.3**	**-0.2**
JFY	**Yanaizu**	**7.87**	**167**	⇑P			**Pn**	**20 54 53.1**	**-2.2**
JHK	**Hiroka**	**7.93**	**171**	⇑P			**Pn**	**20 54 54.4**	**-1.6**
JJN	**Nakama**	**8.01**	**176**	P			**Pn**	**20 54 56.4**	**-0.5**
NKL	**Nikolayevsk**	**8.34**	**14**	⇑*i*P			**Pn**	**20 54 59.0**	**-1.7**
NKL				AMB			AMB	20 55 02.0	
	comp=Z,8μm,4.0s								
NKL				AMB			AMB	20 55 02.0	
	comp=Z,3μm,4.0s								
NKL				AMB			AMB	20 55 02.0	
	comp=Z,10μm,4.0s								
NKL				AMB			AMB	20 55 02.2	
	comp=Z,500nm,0.7s								
NKL				AMB			AMB	20 55 02.2	
	comp=Z,850nm,0.7s								
NKL				AMB			AMB	20 55 02.2	
	comp=Z,1μm,0.7s								
NKL				*i* S			**S**	**20 56 34.0**	**-2.3**
NKL				A				20 56 42.0	
	comp=Z,17μm,7.0s								
NKL				A				20 56 42.0	
	comp=Z,14μm,7.0s								
NKL				AMS			AMS	20 59 28.0	
	comp=Z,5μm,7.0s								
NKL				AMS			AMS	20 59 28.0	
	comp=Z,6μm,7.0s								
JKT	**Katashina**	**8.44**	**170**	⇑P			**Pn**	**20 55 00.1**	**-2.1**
EKMR	**Ekimchan**	**8.50**	**341**	*e*P			**Pn**	**20 54 59.5**	**-3.2**
EKMR				AMB			AMB	20 55 13.6	
	comp=Z,140nm,0.5s								
EKMR				AMB			AMB	20 55 13.6	
	comp=Z,50nm,0.5s								
EKMR				AMB			AMB	20 55 13.6	
	comp=Z,180nm,0.5s								
MAJO	**Matsushiro**	**8.56**	**176**	*e*P			**Pn**	**20 55 01.9**	**-1.8**
MAT	**Matsushiro**	**8.56**	**176**	P			**Pn**	**20 55 02.2**	**-1.5**
MAT				S			**S**	**20 56 37.0**	**-4.8**
MJAR	**Matsushiro Arr**	**8.57**	**176**	P			**Pn**	**20 55 03.1**	**-0.6**
	comp=Z,132nm,0.3s,baz=6.3,slow=12,SNR=384								
MJAR				S			**S**	**20 56 43.6**	**+1.8**
	comp=Z,15nm,0.3s,baz=185,slow=26,SNR=4.0								
MJAR				ScP			ScP	21 04 00.9	-0.3
	comp=Z,0.3nm,0.3s,baz=72,slow=0.4,SNR=7.6								
MJAR	**Matsushiro Arr**	**8.57**	**176**	P			**Pn**	**20 55 03.1**	**-0.7**
MJAR				S			**S**	**20 56 43.6**	**+1.8**
MJAR				pmax			pmax		
	comp=Z,132nm,0.3s								
MJAR				smax					
	comp=N,15nm,0.3s								
CN2	**Changchun**	**8.66**	**266**	*e*P			**Pn**	**20 55 05.5**	**+0.7**
CN2				*es*P				20 56 11.3	
CN2				*e*S			**S**	**20 56 45.8**	**+2.1**
CN2				pmax			pmax		
	comp=Z,200nm,3.0s								
CN2				LR			LR		
	comp=N,4μm,10.0s								
CN2				LR			LR		
	comp=E,8μm,10.0s								
CN2				LR			LR		
	comp=Z,4μm,11.0s								
JNG	**Nsakai**	**8.70**	**176**	P			**Pn**	**20 55 03.9**	**-1.4**
JAG	**Ashikaga**	**8.80**	**169**	⇑P			**Pn**	**20 55 03.5**	**-3.1**
JKG	**Kaga**	**8.85**	**186**	⇑P			**Pn**	**20 55 06.9**	**-0.3**
JGN	**Niukaw**	**8.86**	**181**	P			**Pn**	**20 55 06.1**	**-1.3**
JRY	**Ryogami san**	**9.14**	**172**	P			**Pn**	**20 55 07.7**	**-3.0**
OKH	**Okha**	**9.20**	**21**	⇑*i*P			**Pn**	**20 55 14.6**	**+3.5**
OKH				AMB			AMB	20 55 15.0	
	comp=Z,28μm,8.0s								
OKH				AMB			AMB	20 55 15.0	
	comp=Z,22μm,5.0s								
OKH				AMB			AMB	20 55 15.0	
	comp=Z,6μm,5.0s								
OKH				AMB			AMB	20 55 15.1	
	comp=Z,11μm,1.0s								
OKH				*e*S			**S**	**20 56 57.0**	**+1.6**
OKH				*i* S			**S**	**20 56 58.2**	**+2.8**
OKH				A				20 57 07.6	
	comp=Z,42μm,13.0s								
OKH				A				20 57 07.6	
	comp=Z,24μm,13.0s								
OKH				AMS			AMS	21 00 18.0	
	comp=Z,24μm,8.0s								
OKH				AMS			AMS	21 00 18.0	
	comp=Z,8μm,14.0s								
JNT	**Takato**	**9.23**	**176**	P			**Pn**	**20 55 09.8**	**-2.0**
JGM	**Miyama**	**9.40**	**183**	P			**Pn**	**20 55 13.0**	**-0.9**
SAI	**Saigo**	**9.41**	**201**	⇑P			**Pn**	**20 55 14.6**	**+0.6**
JFM	**Mihama**	**9.62**	**187**	P			**Pn**	**20 55 16.0**	**-0.6**
JAO	**Obara**	**9.82**	**181**	⇑P			**Pn**	**20 55 17.1**	**-1.9**
JKS	**Kasai**	**10.29**	**192**	P			**Pn**	**20 55 24.9**	**+0.1**
KSRS	**Korea Array**	**10.45**	**226**	P			**Pn**	**20 55 28.0**	**+1.3**
	comp=Z,24nm,0.3s,baz=43,slow=11,SNR=175								
KSRS				ScP			ScP	21 04 04.4	+1.0
	comp=Z,0.5nm,0.3s,baz=64,slow=1.2,SNR=17								
SNY	**Shenyang**	**10.57**	**257**	⇓P			**Pn**	**20 55 30.0**	**+1.8**
SNY				sP				20 56 41.0	
SNY				S			**S**	**20 57 29.0**	**+2.1**
SNY				ScS			ScS	21 07 37.5	-1.0
SNY				pmax			pmax		
	comp=Z,530nm,1.0s								
SNY				LR			LR		
	comp=N,4μm,7.5s								
SNY				LR			LR		
	comp=E,7μm,6.0s								
SNY				LR			LR		
	comp=Z,6μm,7.7s								

comp=Z,2μm,3.0s
ZEA AMB AMB 20 55 36.1
comp=Z,2μm,3.0s
ZEA AMB AMB 20 55 36.1
comp=Z,3μm,3.0s
ZEA eS S **20 57 33.3 -0.1**
ZEA A 20 57 42.0
comp=Z,9μm,11.0s
ZEA A 20 57 42.0
comp=Z,24μm,11.0s
ZEA AMS AMS 20 59 35.0
comp=Z,7μm,5.0s
ZEA AMS AMS 20 59 35.0
comp=Z,5μm,5.0s
ZEA AMS AMS 20 59 35.0
comp=Z,5μm,5.0s
JJS Sakaide 11.04 195 P **Pn** **20 55 33.6 -0.3**
BMKR Bomnak 11.09 333⇓ *i*P **Pn** **20 55 31.3 -2.9**
BMKR AMB AMB 20 55 33.5
comp=Z,752nm,0.8s
INCN Inchon 11.11 231 *e*Pn **Pn** **20 55 36.3 +1.6**
INCN Inchon 11.11 231 ⇑P **Pn** **20 55 36.7 +2.0**
SNR=46
INCN ⇑P 20 55 36.7
SNR=46
KROS Kirovskiy 11.52 328 *e*P **Pn** **20 55 35.6 -3.8**
KROS AMB AMB 20 55 40.5
comp=Z,79nm,0.5s
KROS AMB AMB 20 55 40.5
comp=Z,40nm,0.5s
KROS AMB AMB 20 55 40.5
comp=Z,140nm,0.5s
JET Tanbara 11.79 198 P **Pn** **20 55 43.2 +0.2**
JHJ Hachijo jima 2 12.10 170 P **Pn** **20 55 41.7 -5.0**
comp=Z,225nm,0.3s,baz=336,slow=20,SNR=46
JHJ S **S** **20 57 47.7 -14**
comp=Z,281nm,0.3s,baz=100,slow=23,SNR=6.9
DL2 Dalian 13.26 248 P **Pn** **20 56 01.5 +0.9**
DL2 sP 20 57 18.0
DL2 S **S** **20 58 28.8 +1.7**
DL2 pmax pmax
comp=Z,320nm,0.7s
DL2 pmax pmax
comp=Z,2μm,6.3s
SKR Severo-Kuril's 13.72 59 *e*P **Pn** **20 56 05.5 -0.5**
SKR *i*S **S** **20 58 32.0 -4.7**
SKR pmax pmax
comp=E,180nm,0.5s
SKR pmax pmax
comp=Z,490nm,0.5s
SKR pmax pmax
comp=N,560nm,1.0s
SKR pmax pmax
comp=Z,5μm,1.4s
SKR pmax pmax
comp=N,3μm,1.2s
SKR pmax pmax
comp=E,5μm,1.2s
SKR smax
comp=N,2μm,8.0s
SKR smax
comp=E,1μm,12.0s
SKR MLR MLR
comp=N,5μm,14.0s
SKR MLR MLR
comp=E,5μm,14.0s
SKR MLR MLR
comp=Z,10μm,14.0s
SKR Severo-Kuril's 13.72 59 *e*P **Pn** **20 56 05.5 -0.5**
SKR AMB AMB 20 56 10.5
comp=Z,560nm,1.0s
SKR AMB AMB 20 56 10.5
comp=Z,180nm,0.5s
SKR AMB AMB 20 56 10.5
comp=Z,490nm,0.5s
SKR AMB AMB 20 56 11.0
comp=Z,3μm,12.0s
SKR AMB AMB 20 56 11.0
comp=Z,5μm,12.0s
SKR AMB AMB 20 56 11.0
comp=Z,5μm,14.0s
SKR A 20 58 38.0
comp=Z,11μm,12.0s
SKR A 20 58 38.0
comp=Z,10μm,12.0s
SKR A 20 58 38.0
comp=Z,20μm,8.0s
SKR A 20 58 41.9
comp=Z,360nm,0.8s
SKR A 20 58 41.9
comp=Z,180nm,0.8s
SKR A 20 58 41.9
comp=Z,1μm,1.0s
CLNS Chul'man 14.13 331 *e*P **P** **20 56 11.2 +1.4**
CLNS *e*S **S** **20 58 39.4 -5.3**
CLNS pmax pmax
comp=N,438nm,1.3s
CLNS pmax pmax
comp=Z,543nm,1.0s
CLNS pmax pmax
comp=E,143nm,1.2s
CLNS smax
comp=E,14μm,12.1s
CLNS smax
comp=N,7μm,12.3s
CLNS MLR MLR
comp=E,979nm,12.0s
CLNS MLR MLR
comp=N,1μm,11.0s
CLNS MLR MLR
comp=Z,2μm,12.0s
CLNS Chul'man 14.13 331 *e*P **P** **20 56 11.2 +1.4**
OKHT Okhotsk 14.71 12⇑ *e*P **P** **20 56 17.5 +1.2**
PEA0B Petropavlovsk- 15.48 52 *e*P **P** **20 56 24.1 -0.6**
PETK Petropavlovsk- 15.48 52 P **P** **20 56 23.9 -0.8**
comp=Z,8.3nm,0.3s,baz=225,slow=4.9,SNR=112
PETK ScP ScP 21 04 12.1 +0.9
comp=Z,1.6nm,0.3s,baz=156,slow=0.8,SNR=8.4
PETK PKiKP PKiKP 21 09 01.0 +0.1
comp=Z,0.1nm,0.3s,baz=82,slow=3.1,SNR=3.7
PETK Petropavlovsk- 15.48 52 P **P** **20 56 23.9 -0.8**
PETK ScP ScP 21 04 12.1 +0.9
PET Petropavlovsk 15.98 53*c* *i*P **P** **20 56 27.9 -2.3**
PET *e*S **S** **20 59 11.8 -10**
PET pmax pmax
comp=Z,2μm,4.7s
PET pmax pmax
comp=Z,478nm,0.9s
PET pmax pmax
comp=Z,4μm,19.2s
PET smax
comp=N,3μm,6.6s
PET smax
comp=N,3μm,17.7s
PET MLR MLR
comp=Z,6μm,13.0s
PET MLR MLR
comp=Z,6μm,14.0s
PET Petropavlovsk 15.98 53 *e*P **P** **20 56 28.3 -1.9**
comp=Z,530nm,1.0s
PET Petropavlovsk 15.98 53⇑ *i*P **P** **20 56 27.9 -2.3**
PET AMB AMB 20 56 30.3
comp=Z,2μm,4.7s
PET AMB AMB 20 56 35.2
comp=Z,478nm,0.9s
PET *e*S **S** **20 59 11.8 -10**
PET A 20 59 16.3
comp=Z,3μm,6.6s
PET AMS AMS 21 03 03.7
comp=Z,6μm,14.0s
BJI Beijing 16.43 260 P **P** **20 56 35.5 +0.3**
BJI sP sP 20 57 59.0 -1.2
BJI S **S** **20 59 30.0 -1.3**
BJI pmax pmax
comp=Z,700nm,0.8s
BJI pmax pmax
comp=Z,730nm,3.9s
CIT Chita 17.20 302 *e*P **P** **20 56 43.3 -0.1**
CIT *e*S **S** **20 59 45.8 -0.5**
CIT pmax pmax
comp=Z,310nm,2.3s
YAK Yakutsk 17.55 348 *e*P **P** **20 56 45.9 -1.2**
YAK *e*S **S** **20 59 49.5 -3.5**
YAK pmax pmax
comp=N,1μm,0.8s
YAK pmax pmax
comp=E,185nm,0.6s
YAK pmax pmax
comp=Z,2μm,0.6s
YAK smax
comp=N,11μm,2.7s
YAK smax
comp=E,5μm,2.0s
YAK MLR MLR
comp=Z,4μm,16.0s
YAK MLR MLR
comp=N,2μm,13.0s
YAK Yakutsk 17.55 348 *e*P **P** **20 56 45.8 -1.4**
comp=N,2μm,0.8s
YAK Yakutsk 17.55 348 *e*P **P** **20 56 45.8 -1.3**
TIA Tai'an 17.73 247 ⇑P **P** **20 56 49.0 -0.4**
TIA S **S** **20 59 57.0 -0.1**
TIA pmax pmax
comp=Z,26nm,0.8s
TIA LR LR
comp=N,5μm,7.0s
TIA LR LR
comp=E,1μm,9.0s
CBIJ Chichi jima 18.36 166 P **P** **20 56 54.9 -1.4**
comp=E,502nm,0.3s,baz=356,slow=4.6,SNR=120
CBIJ S **S** **21 00 10.5 +0.9**
comp=E,136nm,0.3s,baz=291,slow=23,SNR=8.3
SSE Sheshan 18.88 228 ⇑P **P** **20 57 01.5 -0.2**
SSE sP sP 20 58 32.5 +5.1
SSE S **S** **21 00 16.8 -2.8**
SSE pmax pmax
comp=Z,27nm,1.3s
SSE pmax pmax
comp=Z,230nm,5.3s
SSE LR LR
comp=N,2μm,13.7s
SSE LR LR
comp=E,3μm,13.7s
SSE LR LR
comp=Z,3μm,14.7s
HHC Hu-ho-hao-te 19.35 266 *e*P **P** **20 57 06.0 -0.6**
HHC sP sP 20 58 34.8 +2.2
HHC S **S** **21 00 26.3 -2.1**
HHC PcP PcP 21 01 13.8 +0.3
HHC ScP ScP 21 04 17.8 -1.7
HHC PcS PcS 21 04 50.0 -0.8
HHC pmax pmax
comp=Z,67nm,1.0s
HHC pmax pmax
comp=Z,940nm,4.8s
HHC LR LR
comp=N,3μm,7.3s
HHC LR LR
comp=E,3μm,8.2s
HHC LR LR
comp=Z,3μm,10.0s
NJ2 Nanjing 19.44 234 *e*P **P** **20 57 05.5 -2.1**
NJ2 sP sP 20 58 34.0 +0.5
NJ2 S **S** **21 00 23.5 -6.8**
NJ2 PcP PcP 21 01 14.0 +0.2
NJ2 pmax pmax
comp=Z,90nm,1.0s
NJ2 pmax pmax
comp=Z,4μm,5.0s
NJ2 LR LR
comp=N,3μm,17.0s
NJ2 LR LR
comp=E,2μm,14.0s
NJ2 LR LR
comp=Z,5μm,16.0s
TIY Taiyuan 20.09 257 *e*P **P** **20 57 13.5 -0.8**
TIY sP sP 20 58 45.5 +4.8
TIY S **S** **21 00 40.5 -0.8**
TIY LR LR
comp=N,2μm,7.3s
TIY LR LR
comp=E,2μm,6.9s
BTO Baotou 20.53 267 *e*P **P** **20 57 17.3 -1.6**
ULN Ulaanbaatar 21.02 288 *e*P **P** **20 57 22.4 -0.9**
ULN pmax pmax
comp=Z,66nm,0.8s,mb5.0
ULN Ulaanbaatar 21.02 288 *e*P **P** **20 57 22.4 -1.0**
comp=Z,66nm,0.8s,mb5.0
SONM Songino Array 21.47 288 P **P** **20 57 26.8 -0.6**
comp=Z,212nm,1.0s,mb5.4,baz=78,slow=6.6,SNR=244
SONM PcP PcP 21 01 19.3 +1.8
comp=Z,31nm,0.9s,baz=119,slow=2.9,SNR=4.3
SONM ScP ScP 21 04 24.9 +0.4
comp=Z,12nm,0.6s,baz=124,slow=2.5,SNR=6.8
SONM P4KPbc 21 40 25.9
comp=Z,7.4nm,0.7s,baz=102,slow=3.3,SNR=51
SONM Songino Array 21.47 288 P **P** **20 57 26.8 -0.6**
SONM 21 01 19.3
SONM pmax pmax
comp=Z,212nm,1.0s
SONM Songino Array 21.47 288 P **P** **20 57 26.8 -0.6**
SONM PcP PcP 21 01 19.2 +1.8
SONM ScP ScP 21 04 24.9 +0.4
IRK Irkutsk 22.87 300⇑ *i*P **P** **20 57 38.7 -1.4**
IRK *e*S **S** **21 01 26.2 +0.2**
IRK pmax pmax
comp=Z,256nm,1.3s,mb5.4
WHN Wuhan 23.19 239 ⇓P **P** **20 57 42.3 -1.0**
WHN sP sP 20 59 19.3 +4.8
WHN S **S** **21 01 29.0 -2.6**
WHN ScP ScP 21 04 31.3 +2.1
WHN pmax pmax
comp=Z,84nm,0.8s,mb5.1
WHN pmax pmax
comp=Z,1μm,3.0s
WHN LR LR
comp=Z,4μm,10.0s
TLY Talaya 23.22 299*c* *i*P **P** **20 57 43.0 -0.3**
TLY *e* 20 59 16.3
TLY *e*S **S** **21 01 30.3 -1.3**
TLY pmax pmax
comp=Z,152nm,0.8s,mb5.4
TLY MLR MLR
comp=Z,809nm,18.0s
TLY Talaya 23.22 299 *e*P **P** **20 57 43.1 -0.2**
comp=Z,157nm,0.8s,mb5.4
TATO Taipei 23.85 218 *e*Pn **P** **20 57 49.6 +0.3**
comp=Z,288nm,0.9s,mb5.6
YHNB Yeheng 24.17 218 *e*P **P** **20 57 50.4 -1.8**
comp=Z,110nm,0.6s,mb5.4
FX1 Attu Island--F 24.51 59 P **P** **20 57 55.1 +0.2**
comp=Z,429nm,0.6s,mb6.1,baz=293,slow=2.9,SNR=161
FX1 PcP PcP 21 01 24.9 +1.2
comp=Z,41nm,0.5s,baz=315,slow=4.3,SNR=4.6
FX1 ScP ScP 21 04 33.2 +0.8
comp=Z,53nm,0.6s,baz=210,slow=1.5,SNR=9.0
FX1 ScS ScS 21 08 20.6 +0.2
comp=Z,27nm,0.9s,baz=59,slow=19,SNR=8.0
FX1 Attu Island--F 24.51 59 P **P** **20 57 55.1 +0.2**
FX1 21 01 24.9
FX1 21 08 20.6
FX1 pmax pmax
comp=Z,429nm,0.6s
MOY Mondy 24.87 298 *e*P **P** **20 57 58.3 +0.2**
MOY pmax pmax
comp=Z,188nm,1.4s,mb5.3
SMY Shemya 25.07 59 *e*P **P** **20 58 00.2 +0.3**
SMY pmax pmax
comp=Z,1μm,1.2s,mb6.2
SMY MLR MLR
comp=Z,900nm,17.0s
SMY Shemya 25.07 59 *e*P **P** **20 58 00.2 +0.3**
comp=Z,1μm,1.2s,mb6.2
SMY LR LR
comp=Z,900nm,17.0s
SSLB Suanglung 25.13 218 *e*P **P** **20 57 52.3 -8.5**
comp=Z,47nm,0.6s,mb5.1
QZH Quanzhou 25.22 223⇓ *i*P **P** **20 58 02.0 +0.4**
QZH pP 20 58 56.3
QZH S **S** **21 02 00.0 -3.6**
QZH pmax pmax
comp=Z,90nm,0.9s,mb5.2
QZH pmax pmax
comp=Z,1μm,7.6s
QZH LR LR
comp=N,3μm,11.1s
QZH LR LR
comp=E,4μm,11.2s
QZH LR LR
comp=Z,4μm,11.1s
YULB Yu-li 25.33 217 *e*P **P** **20 57 56.2 -6.3**
comp=Z,50nm,0.6s,mb5.1
TPUB Ta-pu 25.69 218 *e*P **P** **20 58 04.9 -0.9**
comp=Z,87nm,0.6s,mb5.4
TWG Pinlang 25.93 216 *e*P **P** **20 58 07.9 0.0**
comp=Z,112nm,0.6s,mb5.5
LZH Lanzhou 26.87 262 ⇓P **P** **20 58 16.8 +0.6**
LZH pP 20 59 16.0
LZH PP PP 20 59 21.3 -2.7
LZH sP sP 20 59 53.5 +3.0
LZH S **S** **21 02 29.5 0.0**
LZH pmax pmax
comp=Z,230nm,1.0s,mb5.6
LZH pmax pmax
comp=Z,580nm,5.1s
TIXI Tiksi 26.95 354 *e*P **P** **20 58 13.7 -2.7**
TIXI *e* 20 59 13.6
TIXI *i*S **S** **21 02 25.5 -4.3**
TIXI pmax pmax
comp=Z,187nm,0.9s,mb5.5
TIXI Tiksi 26.95 354 *e*P **P** **20 58 13.7 -2.7**
comp=Z,155nm,0.7s,mb5.5
BILL Bilibino 27.45 23⇑ *i*P **P** **20 58 19.0 -1.9**
BILL *i*S **S** **21 02 34.6 -3.2**
BILL pmax pmax
comp=Z,401nm,0.7s,mb6.0
BILL MLR MLR
comp=Z,2μm,16.0s
BILL Bilibino 27.45 23 *e*P **P** **20 58 19.0 -1.9**
comp=Z,238nm,0.4s,mb6.0
GTA Gaotai 28.22 272 ⇓P **P** **20 58 29.0 +0.9**
GTA pP 20 59 29.0
GTA sP sP 21 00 06.0 +3.3
GTA PcP PcP 21 01 34.5 +1.8
GTA S **S** **21 02 54.3 +3.7**
GTA ScP ScP 21 04 44.5 +0.8
GTA PcS PcS 21 05 17.3 +2.0
GTA ScS ScS 21 08 37.3 +0.3
GTA pmax pmax
comp=Z,59nm,2.0s,mb4.7
GTA pmax pmax
comp=Z,570nm,5.7s
GTA LR LR
comp=N,8μm,18.0s
GTA LR LR
comp=E,4μm,18.6s
GTA LR LR
comp=Z,3μm,18.3s
AMKA Amchitka 28.29 62 *e*P **P** **20 58 28.6 +0.1**
comp=Z,806nm,1.2s,mb6.0
CD2 Chengdu 29.82 253⇑ *i*P **P** **20 58 44.0 +1.7**
CD2 pP 20 59 44.8
CD2 PP PP 20 59 58.5 +1.7
CD2 sP sP 21 00 21.3 +4.3
CD2 PcP PcP 21 01 37.5 +0.5
CD2 S **S** **21 03 17.8 +2.0**
CD2 sS sS 21 05 06.3 +3.2
CD2 SS SS 21 05 28.0 -10
CD2 ScS ScS 21 08 42.5 -2.4
CD2 pmax pmax
comp=Z,130nm,0.7s,mb5.6
CD2 pmax pmax
comp=Z,310nm,5.2s
APYP Conner 30.33 212 *e*P **P** **20 58 46.6 -0.2**
GYA Guiyang 30.85 243⇑ *i*P **P** **20 58 50.3 -1.0**
GYA pP pP 20 59 51.8 +1.3
GYA PP PP 21 00 10.0 +1.8
GYA sP sP 21 00 29.8 +3.7
GYA PcP PcP 21 01 41.5 +1.7
GYA S **S** **21 03 32.0 +0.2**
GYA ScP ScP 21 04 50.8 -1.6
GYA sS sS 21 05 20.5 +1.2
GYA PcS PcS 21 05 23.3 -0.9
GYA SS SS 21 05 48.0 -11
GYA pmax pmax
comp=Z,100nm,0.7s,mb5.5
GYA LR LR
comp=N,2μm,10.6s
GYA LR LR
comp=E,2μm,13.7s
GYA LR LR
comp=Z,2μm,17.7s
CAUP Cauayan 30.97 210 *e*P **P** **20 58 54.8 +2.5**
GUMO Guam 32.04 166 *e*P **P** **20 59 01.0 -0.7**
GUMO pmax pmax
comp=Z,408nm,1.2s,mb5.8
GUMO Guam 32.04 166 *e*P **P** **20 59 01.0 -0.7**
comp=Z,408nm,1.2s,mb5.8
BALP Baler 32.17 210 *e*P **P** **20 59 04.0 +1.2**
BOLP Bolinao 32.19 213 *e*P **P** **20 59 03.3 +0.3**
SCZP Santa Cruz 32.74 212 *e*P **P** **20 59 08.1 +0.4**
POLP Polilio Island 32.98 208 *e*P **P** **20 59 12.7 +2.8**
PVCP Virac 33.36 204 *e*P **P** **20 59 14.4 +1.4**
GQP Guinayangan 33.59 207⇓ *e*P **P** **20 59 15.8 +0.7**
GAMB Gambell 33.80 38 *e*P **P** **20 59 13.4 -3.0**
comp=Z,38nm,0.5s,mb5.2
TGY Tagaytay City 33.91 210 P **P** **20 59 19.9 +2.1**
comp=Z,707nm,0.7s,mb6.3,baz=228,slow=3.9,SNR=36
TGY PcP PcP 21 01 50.5 +2.1
comp=Z,81nm,0.3s,baz=243,slow=2.3,SNR=3.3
TGY Tagaytay City 33.91 210 P **P** **20 59 19.9 +2.1**
TGY 21 01 50.5
TGY pmax pmax
comp=Z,707nm,0.7s
AUQP San Andres 34.06 206 *e*P **P** **20 59 23.0 +3.9**
BOAC Boac 34.20 208 *e*P **P** **20 59 21.8 +1.6**
CNP Catarman 34.25 203 *e*P **P** **20 59 22.2 +1.5**
KMI Kunming 34.30 246 P **P** **20 59 21.5 +0.4**
KMI pP pP 21 00 23.5 +2.5
KMI PP PP 21 00 49.0 +2.8
KMI sP sP 21 00 59.3 +2.8
KMI PcP PcP 21 01 52.0 +2.6
KMI S **S** **21 04 21.8 -3.2**
KMI sS sS 21 06 11.3 -2.1
KMI SS SS 21 06 55.5 -13
KMI ScS ScS 21 09 07.5 -0.4
KMI pmax pmax
comp=Z,130nm,0.9s,mb5.5
KMI pmax pmax
comp=Z,620nm,5.4s
KMI LR LR
comp=N,2μm,16.1s
KMI LR LR
comp=E,2μm,18.6s
KMI LR LR
comp=Z,1μm,13.6s
ZAA0 Zalesovo Array 34.54 304 *e*P **P** **20 59 21.9 -0.9**
ZALV Zalesovo Beam 34.54 304 P **P** **20 59 22.1 -0.7**
comp=Z,203nm,0.6s,mb5.9,baz=87,slow=8.3,SNR=196
ZALV PcP PcP 21 01 50.1 +0.5
comp=Z,169nm,0.7s,baz=81,slow=2.6,SNR=20
ZALV ScP ScP 21 05 05.4 +0.7
comp=Z,100nm,0.8s,baz=91,slow=3.3,SNR=21
ZALV ScS ScS 21 09 07.0 -1.3
comp=Z,6.3nm,0.9s,baz=93,slow=7.2,SNR=4.4
ZALV P3KPbc 21 30 13.9
comp=Z,2.3nm,0.8s,baz=255,slow=4.3,SNR=11
ZALV Zalesovo Beam 34.54 304 P **P** **20 59 22.1 -0.7**
ZALV 21 01 50.1
ZALV 21 09 07.0
ZALV pmax pmax
comp=Z,203nm,0.6s,mb5.8
ZALV Zalesovo Beam 34.54 304 P **P** **20 59 22.1 -0.7**
ZALV PcP PcP 21 01 50.1 +0.5
ZALV ScP ScP 21 05 05.4 +0.7
ZALV ScS ScS 21 09 07.0 -1.3
ZALV *e* 21 30 13.9
QIZ Qiongzhong 34.64 230 P **P** **20 59 24.3 +0.3**
QIZ pP pP 21 00 24.8 +0.8
QIZ sP sP 21 00 58.8 -0.7
QIZ S **S** **21 04 28.5 -1.7**
QIZ sS sS 21 06 22.3 +3.5
QIZ pmax pmax
comp=Z,19nm,0.8s,mb4.7
QIZ pmax pmax
comp=Z,500nm,8.3s
WMQ Urumqi 35.06 286 P **P** **20 59 29.0 +1.7**
WMQ pP pP 21 00 32.0 +4.5
WMQ sP sP 21 01 08.0 +5.0
WMQ S **S** **21 04 38.0 +1.8**
WMQ sS sS 21 06 29.0 +4.1
WMQ SS SS 21 07 19.0 -4.3
WMQ pmax pmax
comp=Z,120nm,1.0s,mb5.4
WMQ pmax pmax
comp=Z,2μm,4.0s
WMQ LR LR

comp=N,2µm,15.0s
WMQ LR LR
comp=E,1µm,15.0s
WMQ LR LR
comp=Z,1µm,15.0s
OTRP Odiongan 35.17 207 *eP* **P 20 59 30.3 +1.8**
NVS Novosibirsk 35.35 306‖ *iP* **P 20 59 28.7 -0.9**
NVS *i* 21 00 58.8
NVS *i* 21 01 52.6
NVS *i* S **S 21 04 40.0 -0.3**
NVS *i* 21 09 10.3
NVS pmax pmax
comp=N,48nm,1.0s
NVS pmax pmax
comp=E,45nm,1.0s
NVS pmax pmax
comp=Z,69nm,1.0s,mb5.1
NVS pmax pmax
comp=Z,48nm,0.8s,mb5.1
NVS pmax pmax
comp=N,107nm,2.2s
NVS pmax pmax
comp=E,158nm,2.2s
NVS smax
comp=N,165nm,1.7s
NVS smax
comp=E,163nm,1.4s
SJMP San Jose 35.37 208 *eP* **P 20 59 31.9 +1.6**
TNA Tin City 35.67 36 *eP* **P 20 59 29.9 -2.3**
comp=E,166nm,0.8s,mb5.6
BUSP Coron 36.12 209 *eP* **P 20 59 36.7 +0.2**
UNV Unalaska Valle 36.60 56 *eP* **P 20 59 38.0 -2.2**
comp=E,209nm,1.1s,mb5.5
GUIM Jordan 36.63 205 *eP* **P 20 59 42.1 +1.2**
CUYO Cuyo Island 36.91 207 *eP* **P 20 59 44.5 +1.3**
AKUT Akutan 36.98 55 *eP* **P 20 59 41.4 -1.9**
comp=E,246nm,1.1s,mb5.5
AKUT LR LR
comp=Z,1µm,20.0s
ENPP El Nido 37.13 210 *eP* **P 20 59 45.7 +0.7**
TBP Tagbilaran 37.16 202 *eP* **P 20 59 45.8 +0.5**
BUTP Butuan 37.41 199 *eP* **P 20 59 48.0 +0.6**
MK31 Makanchi Array 37.70 293 *eP* **P 20 59 49.4 -0.1**
MKAR Makanchi Array 37.70 293 P **P 20 59 49.2 -0.3**
comp=Z,76nm,0.7s,mb5.3,baz=89,slow=7.5,SNR=199
MKAR PcP PcP 21 02 00.8 +1.5
comp=Z,30nm,0.8s,baz=190,slow=0.7,SNR=4.6
MKAR ScP ScP 21 05 16.2 -0.4
comp=Z,8.0nm,0.5s,baz=64,slow=2.8,SNR=5.8
MKAR P3KPbc 21 30 00.2
comp=Z,1.9nm,0.9s,baz=242,slow=4.2,SNR=11
MKAR Makanchi Array 37.70 293 P **P 20 59 49.2 -0.3**
MKAR PcP PcP 21 02 00.8 +1.5
MKAR ScP ScP 21 05 16.2 -0.4
MKAR *e* 21 30 00.2
FALS False Pass 38.20 53 *eP* **P 20 59 52.4 -1.1**
comp=Z,99nm,0.7s,mb5.3
BUKP Musuan 38.59 200 *eP* **P 20 59 58.1 +0.9**
KURK Kurchatov 38.90 300 P **P 20 59 59.3 0.0**
comp=Z,225nm,0.4s,mb5.9,baz=76,slow=9.0,SNR=210
KURK PcP PcP 21 02 03.7 +0.7
comp=Z,61nm,0.7s,baz=76,slow=3.4,SNR=8.1
KURK ScP ScP 21 05 22.8 +1.6
comp=Z,16nm,0.6s,baz=75,slow=3.8,SNR=4.7
KURK Kurchatov 38.90 300 *ceP* **P 20 59 58.9 -0.4**
KURK pmax pmax
comp=Z,444nm,2.1s,mb5.5
KURK Kurchatov 38.90 300 P **P 20 59 59.2 -0.1**
SNR=98
KURK P 20 59 59.2
SNR=98
PAGZ Pagadian 39.05 202 *eP* **P 21 00 00.6 -0.3**
MATI Mati 39.22 198 *eP* **P 21 00 02.5 +0.1**
DAV Davao City (W) 39.25 199‖ *eP* **P 21 00 00.9 -1.7**
LSA Lhasa 39.28 263 P **P 21 00 01.5 -1.3**
LSA LR LR
comp=N,13µm,10.5s
LSA LR LR
comp=E,11µm,11.6s
LSA LR LR
comp=Z,12µm,12.3s
MIDW Midway 39.44 100 *eP* **P 21 00 04.3 +0.2**
comp=Z,191nm,0.9s,mb5.5
SDPT Sand Point 39.77 52 *eP* **P 21 00 04.3 -2.0**
comp=Z,123nm,0.6s,mb5.4
SDPT LR LR
comp=Z,2µm,19.0s
BATP Bataraza 39.94 211 *eP* **P 21 00 10.2 +1.9**
CHGN Chignik 40.71 50 *eP* **P 21 00 12.9 -1.1**
TTA Tatalina 40.84 40 *eP* **P 21 00 14.3 -0.7**
CHTO Chiang Mai 41.27 243 *eP* **P 21 00 19.6 +0.6**
CHTO pmax pmax
comp=Z,230nm,0.8s,mb5.5
CHTO Chiang Mai 41.27 243 *eP* **P 21 00 19.6 +0.6**
comp=Z,230nm,0.8s,mb5.5
CHTO Chiang Mai 41.27 243 P **P 21 00 20.1 +1.0**
SNR=63
CHTO P 21 00 20.1
SNR=63
SVW2 Sparrevohn 41.29 43 *eP* **P 21 00 17.9 -0.7**
SHL Shillong 41.31 258 *iP* **P 21 00 20.0 +0.7**
SHL *i* S **S 21 06 10.0 +0.1**
CM31 Chiang Mai Arr 41.54 243 *eP* **P 21 00 21.9 +0.8**
comp=Z,21nm,0.4s,mb4.7
CMAR Chiang Mai Arr 41.54 243 P **P 21 00 21.8 +0.7**
comp=Z,56nm,0.7s,mb4.9,baz=30,slow=7.3,SNR=211
CMAR pP pP 21 01 23.6 +0.4
comp=Z,37nm,0.9s,baz=32,slow=8.3,SNR=4.6
CMAR PcP PcP 21 02 12.4 +0.4
comp=Z,22nm,0.6s,baz=360,slow=1.8,SNR=11
CMAR ScP ScP 21 05 32.8 +0.8
comp=Z,17nm,0.9s,baz=15,slow=2.9,SNR=11
CMAR S **S 21 06 16.6 +3.2**
comp=Z,3.2nm,0.9s,baz=28,slow=16,SNR=5.9
CMAR PKiKP PKiKP 21 09 17.8 -0.4
comp=Z,2.3nm,0.7s,baz=313,slow=1.7,SNR=6.1
CMAR Chiang Mai Arr 41.54 243 P **P 21 00 21.8 +0.6**
CMAR *PP pP 21 01 23.6 +0.4
CMAR 21 02 12.5
CMAR S **S 21 06 16.6 +3.3**
CMAR *i* 21 09 17.8
CMAR pmax pmax
comp=Z,56nm,0.7s
CMAR smax
comp=N,3.0nm,0.9s
CMAR Chiang Mai Arr 41.54 243 P **P 21 00 21.8 +0.7**
CMAR pP pP 21 01 23.6 +0.4
CMAR PcP PcP 21 02 12.4 +0.4
CMAR ScP ScP 21 05 32.8 +0.8
CMAR S **S 21 06 16.6 +3.2**
KDM Kudat 42.03 211 P **P 21 00 26.9 +1.7**
PPLA Purkeypile 42.58 40 *eP* **P 21 00 27.7 -1.3**
comp=N,20nm,0.6s,mb4.5
RSO Redoubt South 42.77 43 *eP* **P 21 00 30.4 -0.1**
COLD Coldfoot 42.81 33 *eP* **P 21 00 28.4 -2.3**
comp=N,107nm,0.9s,mb5.1
AGT Agartala 42.84 256 *ex* **P 21 00 29.0 -2.6**
AGT *ex* x 21 01 09.0
BPAW Bear Paw Mtn. 42.91 38 *eP* **P 21 00 29.6 -2.1**
comp=N,6.8nm,0.3s,mb4.4
KKM Kota Kinabalu 43.06 212 *eP* **P 21 00 34.7 +1.3**
comp=N,154nm,1.1s,mb5.2
SDKM Sandakan 43.08 210 P **P 21 00 34.7 +1.1**
TAPN Taplejung 43.11 263 *eP* **P 21 00 34.2 +0.5**
comp=N,231nm,0.6s,mb5.6
BVAR Borovoye Array 43.15 306 P **P 21 00 33.5 -0.2**
comp=N,74nm,0.4s,mb5.3,baz=80,slow=10,SNR=145
BVAR PcP PcP 21 02 16.4 -0.5
comp=N,70nm,0.7s,baz=90,slow=3.0,SNR=10.0
BVAR S **S 21 06 36.1 +0.1**
comp=N,38nm,0.8s,baz=67,slow=15,SNR=12
BVAR ScS ScS 21 09 58.5 -0.3
comp=N,8.8nm,0.7s,baz=65,slow=3.8,SNR=6.8
BVAR P4KPbc 21 38 27.0
comp=N,0.6nm,0.4s,baz=77,slow=3.0,SNR=6.4
BVAR Borovoye Array 43.15 306 P **P 21 00 33.5 -0.1**
BVAR 21 02 16.4
BVAR S **S 21 06 36.1 +0.1**
BVAR 21 09 58.5
BVAR pmax pmax
comp=Z,74nm,0.4s
BVAR smax
comp=N,38nm,0.8s
BVAR Borovoye Array 43.15 306 P **P 21 00 33.5 -0.2**
BVAR PcP PcP 21 02 16.4 -0.5
BVAR S **S 21 06 36.1 +0.1**
BVAR ScS ScS 21 09 58.5 -0.3
BRVK Borovoye 43.20 306 *ceP* **P 21 00 33.8 -0.2**
BRVK pmax pmax
comp=Z,213nm,1.8s,mb5.1
BRVK Borovoye 43.20 306 *eP* **P 21 00 33.0 -1.0**
comp=Z,92nm,0.6s,mb5.2
BRVK *e*PcP PcP 21 02 17.4 +0.3
BRVK Borovoye 43.20 306 P **P 21 00 34.3 +0.3**
SNR=69
BRVK P 21 00 34.3
SNR=69
OHAK Old Harbor 43.24 48 *eP* **P 21 00 32.3 -2.0**
comp=Z,251nm,0.4s,mb5.8
OHAK LR LR
comp=Z,2µm,20.0s
TRF Thorofare Moun 43.33 39 *eP* **P 21 00 33.4 -1.6**
comp=Z,85nm,0.6s,mb5.2
ULHL Ulahol 43.41 289 P **P 21 00 37.3 +1.4**
SNR=26
KDAK Kodiak Island 43.46 47 P **P 21 00 34.6 -1.5**
comp=Z,150nm,0.6s,mb5.4,baz=299,slow=4.8,SNR=81
KDAK PcP PcP 21 02 19.7 +1.8
comp=Z,52nm,0.7s,baz=260,slow=3.9,SNR=4.1
KDAK ScP ScP 21 05 40.7 +1.6
comp=Z,40nm,0.9s,baz=309,slow=1.9,SNR=8.1
KDAK Kodiak Island 43.46 47 *ceP* **P 21 00 34.4 -1.7**
KDAK Kodiak Island 43.46 47 P **P 21 00 34.6 -1.5**
KDAK PcP PcP 21 02 19.7 +1.8
KDAK ScP ScP 21 05 40.7 +1.6
TKM2 Tokmak 2 43.55 290 P **P 21 00 38.1 +1.1**
SNR=456
TKM2 Tokmak 2 43.55 290 *eP* **P 21 00 38.0 +1.0**
TKM2 pmax pmax
comp=Z,648nm,0.7s,mb6.0
TKM2 Tokmak 2 43.55 290 *eP* **P 21 00 38.0 +1.0**
comp=Z,648nm,0.7s,mb6.0
ODAN Odare 43.63 263 *eP* **P 21 00 38.1 +0.2**
comp=Z,246nm,0.7s,mb5.6
MCK McKinley 43.87 38 *eP* **P 21 00 37.6 -1.6**
MCK pmax pmax
comp=Z,207nm,0.8s,mb5.4
MCK McKinley 43.87 38 *eP* **P 21 00 37.6 -1.6**
comp=Z,205nm,0.8s,mb5.4
JIRN Jiri 43.99 265 *eP* **P 21 00 41.2 +0.5**
comp=Z,453nm,0.7s,mb5.8
GUN Gumba 44.06 265 *eP* **P 21 00 41.4 +0.2**
comp=Z,520nm,0.5s,mb6.0
RC01 Rabbit Creek A 44.07 42 *eP* **P 21 00 38.6 -2.2**
comp=Z,111nm,0.6s,mb5.3
CHMS Chumysh 44.08 290 P **P 21 00 41.6 +0.5**
SNR=43
TSM Tawau 44.10 209 P **P 21 00 42.5 +0.9**
KBK Karagaybulak 44.10 290 P **P 21 00 42.2 +0.9**
SNR=236
COLA College 44.12 36 *eP* **P 21 00 39.4 -1.7**
COLA pmax pmax
comp=Z,220nm,0.5s,mb5.6
COLA College 44.12 36 *eP* **P 21 00 39.4 -1.7**
comp=Z,220nm,0.5s,mb5.6
RAMN Ramite 44.13 263 *eP* **P 21 00 42.0 +0.2**
comp=Z,752nm,0.7s,mb6.0
USP Ospenovka 44.14 291 P **P 21 00 42.1 +0.5**
SNR=122
KZA Kyzart 44.15 289 P **P 21 00 43.4 +1.7**
SNR=107
PMR Palmer 44.24 41 *eP* **P 21 00 39.8 -2.3**
PMR pmax pmax
comp=Z,91nm,0.9s,mb5.0
PMR MLR MLR
comp=Z,1µm,17.0s
PMR Palmer 44.24 41 *eP* **P 21 00 39.8 -2.3**
comp=Z,91nm,0.9s,mb5.0
PMR LR LR
comp=Z,1µm,17.0s
FRU Bishkek 44.24 290 *iP* **P 21 00 42.0 -0.5**
FRU *e* 21 02 22.0
FRU *e*S **S 21 06 52.0 0.0**
FRU pmax pmax
comp=Z,210nm,1.9s,mb5.0
FRU smax
comp=E,470nm,3.0s
AAK Ala-Archa 44.41 290 P **P 21 00 44.3 +0.5**
comp=E,107nm,0.5s,mb5.4,baz=110,slow=5.3,SNR=61
AAK ScP ScP 21 05 43.9 +0.6
comp=E,13nm,0.7s,baz=349,slow=1.5,SNR=4.4
AAK Ala-Archa 44.41 290 P **P 21 00 44.3 +0.5**
AAK ScP ScP 21 05 43.9 +0.6
SEW Seward 44.45 43 *eP* **P 21 00 41.7 -2.1**
comp=E,113nm,0.8s,mb5.2
KKN Kakani 44.55 265 *eP* **P 21 00 45.2 +0.1**
comp=E,406nm,0.6s,mb5.8
PKI Pulchoki 44.60 265 *eP* **P 21 00 45.4 0.0**
comp=E,446nm,0.9s,mb5.7
PKIN Phulchoki 44.60 265 *eP* **P 21 00 46.0 +0.5**
comp=E,180nm,0.5s,mb5.6
DMN Daman 44.79 265 *eP* **P 21 00 47.1 +0.2**
comp=E,382nm,0.8s,mb5.7
KSH Kashi 44.82 285 P **P 21 00 51.5 +4.5**
KSH pP pP 21 01 56.5 +6.4
KSH PcP PcP 21 02 26.0 +3.1
KSH sP sP 21 02 32.0 +7.2
KSH PP PP 21 02 42.8 +5.1
KSH ScP ScP 21 05 46.8 +1.7
KSH PcS PcS 21 06 19.0 +2.0
KSH S **S 21 07 06.0 +5.6**
KSH sS sS 21 09 02.0 +9.0
KSH ScS ScS 21 10 11.0 +1.1
KSH SS SS 21 10 29.3 +2.3
KSH pmax pmax
comp=Z,90nm,0.7s,mb5.1
KSH LR LR
comp=N,1µm,9.1s
KSH LR LR
comp=E,2µm,10.6s
KSH LR LR
comp=Z,710nm,9.6s
EKS2 Erkin-Say 44.88 290 P **P 21 00 48.1 +0.7**
SNR=103
EKS2 Erkin-Say 44.88 290 *eP* **P 21 00 47.8 +0.4**
comp=Z,118nm,0.5s,mb5.4
EKS2 *e*PcP PcP 21 02 23.9 +0.9
EKS2 *e*ScP ScP 21 05 45.9 +0.7
AML Almayashu 45.16 290 P **P 21 00 50.9 +1.2**
SNR=84
AML Almayashu 45.16 290 *eP* **P 21 00 50.6 +0.9**
comp=Z,162nm,0.6s,mb5.4
PAX Paxson 45.57 39 *eP* **P 21 00 50.7 -1.8**
PAX *e* 21 02 26.5
PAX pmax pmax
comp=Z,45nm,0.6s,mb5.0
PAX Paxson 45.57 39 *eP* **P 21 00 50.7 -1.8**
comp=Z,45nm,0.6s,mb5.0
PAX *e*PcP PcP 21 02 26.5 +1.4
DIV Divide 45.92 41 *eP* **P 21 00 54.4 -0.9**
comp=Z,206nm,0.8s,mb5.5
DIV *e*PcP pP 21 02 02.8 +4.2
MID Middleton Isla 46.15 44 *eP* **P 21 00 56.5 -0.5**
MID pmax pmax
comp=Z,296nm,0.9s,mb5.6
MID Middleton Isla 46.15 44 *eP* **P 21 00 56.5 -0.5**
comp=Z,296nm,0.9s,mb5.6
BMRM Bremner River 46.52 41 *eP* **P 21 00 58.4 -1.4**
comp=Z,124nm,0.7s,mb5.3
BTM Bintulu 46.88 214 P **P 21 01 05.5 +2.2**
EGAK Eagle 46.92 35 *eP* **P 21 01 01.1 -1.8**
comp=Z,190nm,1.3s,mb5.3
JOSI Joshimath 46.99 273 *e*PKP **P 21 01 04.9 +1.0**
PTH Pithoragarh 47.10 271 *e*PKP **P 21 01 04.8 0.0**
PTH *ex* PcP 21 02 32.5 +1.4
SVE Sverdlovsk 47.26 313‖ *eP* **P 21 01 05.5 -0.1**
SVE *e* pP 21 02 10.9 +1.6
SVE *e* 21 02 47.0
SVE *e*S **S 21 07 32.2 -2.1**
SVE *e* 21 10 21.7
SVE pmax pmax
comp=Z,387nm,0.8s,mb5.8
KLP Kalpa 47.36 275 *e*PKP **P 21 01 07.9 +1.1**
KLP AMb AMB 21 01 12.3
comp=Z,376nm,0.7s,mb5.8
DAWY Dawson 47.86 36 *eP* **P 21 01 08.6 -1.5**
SBUM Sibu 47.91 215 P **P 21 01 13.0 +1.9**
DDI Dehra Dun 48.18 273‖ *iP* **P 21 01 12.0 -1.1**
DDI *ex* x 21 07 13.0
SOKR Solikamsk 48.21 318 *c iP* **P 21 01 12.4 -0.4**
SOKR *PP pP 21 02 19.6 +2.7
SOKR *SP sP 21 02 54.3 +2.9
SOKR S **S 21 07 44.8 -2.9**
SOKR *i* 21 10 28.6
SOKR SS SS 21 11 18.7 -2.1
SOKR pmax pmax
comp=Z,190nm,1.0s,mb5.4
SOKR MLR MLR
comp=Z,1µm,18.0s
SDNR Sundarnagar 48.28 275 *e*PKP **P 21 01 13.9 +0.1**
SDNR *eS* **S 21 07 49.5 +0.1**
SMLA Simla 48.35 275 *iP* **P 21 01 14.3 -0.1**
ARU Arti 48.47 313 *c iP* **P 21 01 14.4 -0.4**
ARU *e**PP pP 21 02 20.3 +1.4
ARU *e* 21 02 34.8
ARU *e**SP sP 21 02 55.7 +2.2
ARU *e* 21 03 09.8
ARU S **S 21 07 50.9 -0.4**
ARU *SS sS 21 09 48.6 +3.1
ARU 21 10 31.4
ARU SS SS 21 11 27.2 +2.3
ARU pmax pmax
comp=Z,303nm,1.2s,mb5.5
ARU Arti 48.47 313 *eP* **P 21 01 14.1 -0.8**
comp=Z,463nm,1.4s,mb5.6
THN Thein Dam 48.64 277 *e*PKP **P 21 01 15.0 -1.5**
THN *ex* x 21 07 47.8
BHK Bhakra 48.72 276 *ex* **P 21 01 14.0 -3.1**
INK Inuvik 48.73 30 P **P 21 01 15.9 -0.7**
comp=Z,448nm,0.6s,mb6.0,baz=302,slow=8.2,SNR=189
INK S **S 21 07 52.6 -2.1**
comp=Z,16nm,0.9s,baz=90,slow=30,SNR=6.1
INK Inuvik 48.73 30 P **P 21 01 15.9 -0.7**
INK S **S 21 07 52.6 -2.1**
INK pmax pmax
comp=Z,448nm,0.6s
INK smax
comp=N,17nm,0.9s
KKR Kurukshetra 49.26 274 *e*PKP **P 21 01 20.3 -1.0**
PNL Peninsula 49.39 42 *eP* **P 21 01 20.6 -1.1**
comp=N,10.0nm,0.3s,mb4.6
KSM Kuching 49.58 217 P **P 21 01 25.3 +1.5**
KSM Kuching 49.58 217 *eP* **P 21 01 23.8 0.0**
comp=N,305nm,1.1s,mb5.5
KTGM Kuala Trenggan 49.62 227 P **P 21 01 26.0 +2.0**
BISR Bishrakh 49.64 272 *e*PKP **P 21 01 25.4 +1.3**
BISR AMb AMB 21 01 26.6
comp=Z,732nm,0.8s,mb6.1
NDI New Delhi 49.73 272 *e*PKP **P 21 01 24.0 -0.7**
NDI *eS* **S 21 08 08.0 -1.5**
SONA Sohna 50.08 272 *e*PKP **P 21 01 27.6 +0.2**
SONA AMb AMB 21 01 29.8
comp=Z,315nm,0.7s,mb5.8
AGRA Agra 50.08 270 *e*PKP **P 21 01 29.0 +1.6**
AGRA AMb AMB 21 01 29.9
comp=Z,314nm,0.6s,mb5.8
KULM Kulim 50.97 230 P **P 21 01 35.7 +1.6**
KULM Kulim 50.97 230 *eP* **P 21 01 35.1 +1.0**
comp=Z,75nm,0.6s,mb5.2
KULM *e*PcP PcP 21 02 43.5 -2.0
KHET Khetri 51.09 273 *e*PKP **P 21 01 34.7 -0.1**
AKTO Aktyubinsk 51.24 306 ScP ScP 21 06 12.8 +0.8
comp=Z,28nm,0.8s,baz=360,slow=5.4,SNR=7.7
AKTO S **S 21 08 32.3 +2.7**
comp=Z,4.7nm,0.7s,baz=195,slow=23,SNR=9.0
SKAG Skagway 51.38 41 *eP* **P 21 01 36.4 -0.1**
comp=Z,98nm,0.8s,mb5.2
SKAG LR LR
comp=Z,2µm,19.0s
KBL Kabul 52.12 284 *eP* **P 21 01 41.5 -0.9**
KBL pmax pmax
comp=Z,175nm,1.0s,mb5.3
KBL Kabul 52.12 284 *eP* **P 21 01 41.5 -0.9**
comp=Z,175nm,1.0s,mb5.3
FRIM Kepong 52.17 228 P **P 21 01 45.5 +2.5**
KBS Kingsbay 52.19 349 *e* **P 21 01 41.9 -0.2**
KBS *eP* 21 01 42.8
KBS *eS* **S 21 08 41.1 -0.6**
KBS Kingsbay 52.19 349 *eP* **P 21 01 42.0 -0.2**
KBS pmax pmax
comp=Z,222nm,0.6s,mb5.7
KBS Kingsbay 52.19 349 *eP* **P 21 01 42.0 -0.2**
comp=Z,222nm,0.6s,mb5.7
MYKOM Kota Tinggi 52.28 224 P **P 21 01 45.3 +1.6**
KGM Kluang 52.35 225 P **P 21 01 45.9 +1.7**
JOHN Johnston Islan 52.42 105 *eP* **P 21 01 44.9 +0.1**
comp=Z,316nm,0.8s,mb5.7
SIT Sitka 52.43 44 *eP* **P 21 01 45.2 +1.0**
SIT pmax pmax
comp=Z,341nm,0.9s,mb5.7
SIT MLR MLR
comp=Z,900nm,18.0s
SIT Sitka 52.43 44 *eP* **P 21 01 45.2 +1.0**
comp=Z,341nm,0.9s,mb5.7
SIT LR LR
comp=Z,900nm,18.0s
VIS Vishakhapatnam 52.44 257 *e*PKP **P 21 01 45.5 +0.7**
AJM Ajmer 52.88 272 *e*PKP **P 21 01 48.2 +0.3**
AJM AMb AMB 21 01 50.0
comp=Z,210nm,0.6s,mb5.7
HSP Hornsund 52.91 346 *eP* **P 21 01 47.5 0.0**
BHPL Bhopal 52.93 267 *e*PKP **P 21 01 48.4 +0.1**
BHPL AMb AMB 21 01 50.6
comp=Z,378nm,0.9s,mb5.7
LVZ Lovozero 53.55 333 P **P 21 01 52.2 0.0**
comp=Z,772nm,0.7s,mb6.1,SNR=30
LVZ Lovozero 53.55 333 *ceP* **P 21 01 51.5 -0.7**
LVZ pmax pmax
comp=Z,83nm,0.6s,mb5.2
BJO Bjornoya 53.85 343 *eP* **P 21 01 54.8 +0.5**
BJO AMb AMB 21 01 56.5
comp=Z,468nm,0.8s,mb5.9
BJO *eS* **S 21 09 06.7 +2.5**
BJO1 Bjornoya 53.89 343 *eP* **P 21 01 54.8 +0.2**
comp=Z,468nm,0.8s,mb5.9
PSI Prapat 53.98 230 P **P 21 01 56.5 +0.4**
comp=Z,89nm,0.9s,mb5.1,baz=5.7,slow=6.4,SNR=65
PSI PcP PcP 21 02 57.1 +0.3
comp=Z,24nm,0.6s,baz=348,slow=0.7,SNR=5.4
PSI ScP ScP 21 06 23.6 -1.0
comp=Z,31nm,0.8s,baz=359,slow=4.0,SNR=10
APA Apatity 54.12 333‖ *iP* **P 21 01 56.0 -0.3**
APA *i* pP 21 03 03.0 +1.0
APA *i **PP sP 21 03 40.0 +3.9
APA *i* S **S 21 09 04.0 -3.9**
APA *i **SS sS 21 11 08.0 +3.5
APA *i* SSS 21 15 16.0
APA pmax pmax
comp=Z,92nm,0.5s,mb5.4
CRAG Craig 54.27 45 *eP* **P 21 01 57.6 +0.1**
comp=Z,322nm,1.1s,mb5.6
CRAG LR LR
comp=Z,600nm,18.0s
DLBC Dease Lake 54.29 40 *eP* **P 21 01 58.4 +0.8**
KEV Kevo 54.84 336 *eP* **P 21 02 00.1 -1.3**
KEV pmax pmax
comp=Z,138nm,0.6s,mb5.6
KEV Kevo 54.84 336 *eP* **P 21 01 60.0 -1.5**
comp=Z,31nm,0.6s,mb4.9
KEV *e* pP 21 03 08.3 +1.1
KEV Kevo 54.84 336 *ep* **P 21 02 00.1 -1.3**
comp=Z,138nm,0.6s,mb5.6
KEV Kevo 54.84 336 *ep* **P 21 02 00.1 -1.3**
comp=Z,138nm,0.6s,mb5.6
ARCES ARCESS Array B 55.40 337 P **P 21 02 04.2 -1.1**
comp=Z,79nm,0.6s,mb5.4,baz=54,slow=8.8,SNR=293
ARCES ScP ScP 21 06 30.4 +0.5
comp=Z,13nm,0.7s,baz=48,slow=5.4,SNR=5.1
ARCES S **S 21 09 23.3 -1.4**
comp=Z,4.5nm,0.7s,baz=59,slow=14,SNR=4.3
ARCES PKPPKP 21 32 00.4
comp=Z,1.4nm,0.6s,baz=205,slow=2.3,SNR=8.4
ARCES ARCESS Array B 55.40 337 P **P 21 02 04.3 -1.1**
ARCES S **S 21 09 23.3 -1.5**
ARCES pmax pmax
comp=Z,79nm,0.6s
ARCES smax
comp=N,5.0nm,0.7s
ARCES ARCESS Array B 55.40 337 P **P 21 02 04.2 -1.1**
ARCES ScP ScP 21 06 30.4 +0.5
ARCES S **S 21 09 23.3 -1.4**
ARCES P'P' 21 32 00.4
ARE0 ARCESS Array S 55.40 337 *eP* **P 21 02 04.6 -0.7**
HYB Hyderabad 55.97 260 *eP* **P 21 02 11.0 +0.9**
HYB Hyderabad 55.97 260 *iP* **P 21 02 09.0 -1.1**

HYB eS S 21 09 32.0 -1.6
HYB eScS ScS 21 11 36.0 +8.8
KTK1 Kautokeino 56.36 337 eP P 21 02 11.6 -0.5
TRO Tromso 57.12 339⇑i P P 21 02 15.8 -1.6
TRO eS S 21 09 46.7 -0.5
KIP Kipapa 57.34 92c i P P 21 02 19.7 0.0
KIP Kipapa 57.34 92 eP P 21 02 19.6 -0.1
comp=N,96nm,0.6s,mb5.4
DAG Danmarks Havn 57.47 354⇓i P P 21 02 19.0 -0.7
comp=N,121nm,0.7s,mb5.4
DAG i 21 03 08.6
DAG Danmarks Havn 57.47 354⇓i P P 21 02 19.0 -0.7
comp=N,121nm,0.7s,mb5.4
DAG i 21 03 08.6
JOF Joensuu 57.47 329 eP P 21 02 18.0 -2.0
JOF pmax pmax
comp=Z,201nm,0.5s,mb5.8
JOF Joensuu 57.47 329 ep P 21 02 18.0 -2.0
comp=Z,201nm,0.5s,mb5.8
JOF Joensuu 57.47 329 ep P 21 02 18.0 -2.0
comp=Z,201nm,0.5s,mb5.8
ABKT Ailbek 57.58 293 P P 21 02 21.1 0.0
comp=Z,924nm,1.1s,mb6.1,SNR=50
KAKA Kakadu 57.71 186 eP P 21 02 21.5 -0.7
comp=Z,168nm,0.9s,mb5.5
KAKA epP pP 21 03 33.7 +4.9
KAKA Kakadu 57.71 186 eP P 21 02 21.6 -0.6
comp=Z,623nm,0.9s,mb6.0
KAKA ePcP PcP 21 03 11.9 +0.7
HNR Honiara 57.95 154 P P 21 02 24.5 +0.6
comp=Z,139nm,0.6s,mb5.5,baz=320,slow=2.0,SNR=7.4
HNR Honiara 57.95 154 P P 21 02 24.5 +0.6
HNR pmax pmax
comp=Z,139nm,0.6s,mb5.6
BHJ Bhuj 58.42 272 ePKP P 21 02 25.7 -1.5
BHJ AMb AMB 21 02 30.3
comp=Z,314nm,0.7s,mb5.9
YKA Yellowknife Ar 58.42 31 P P 21 02 25.7 -0.8
comp=Z,148nm,0.6s,mb5.6,baz=309,slow=6.2,SNR=87
YKA PcP PcP 21 03 13.9 +0.4
comp=Z,14nm,0.6s,baz=305,slow=3.2,SNR=4.2
YKA ScP ScP 21 06 44.5 +1.1
comp=Z,5.1nm,0.6s,baz=309,slow=4.4,SNR=5.1
YKA PKPPKP 21 31 59.3
comp=Z,2.4nm,0.8s,baz=157,slow=2.1,SNR=4.8
YKA Yellowknife Ar 58.42 31 P P 21 02 25.7 -0.8
YKA 21 03 13.9
YKA pmax pmax
comp=Z,148nm,0.6s
YKA Yellowknife Ar 58.42 31 P P 21 02 25.7 -0.8
YKA PcP PcP 21 03 13.9 +0.4
YKA ScP ScP 21 06 44.5 +1.1
YKA P'P' 21 31 59.4
POO Poona 58.52 265 ePKP P 21 02 28.1 +0.3
POO AMb AMB 21 02 30.3
comp=Z,291nm,1.0s,mb5.7
COEN Coen 59.00 173 eP P 21 02 30.9 -0.1
COEN Coen 59.00 173 eP P 21 02 30.0 -1.0
comp=Z,1μm,1.0s,mb6.4
COEN e pP 21 03 37.5 -0.5
MOS Moscow 59.07 319 eP P 21 02 29.7 -1.3
MOS e 21 03 16.7
MOS e*PP pP 21 03 39.5 +1.5
MOS e*SP sP 21 04 13.4 +1.7
MOS i 21 06 24.1
MOS eS S 21 10 10.1 -2.6
MOS e 21 10 30.4
MOS i 21 11 45.9
MOS i SSS 21 17 00.1
MOS pmax pmax
comp=Z,291nm,1.0s,mb5.7
MOS pmax pmax
comp=Z,700nm,1.7s,mb5.8
KAD Karad 59.10 264 ePKP P 21 02 31.0 -0.9
KAD ePKP 21 02 31.8
KAD AMb AMB 21 02 34.0
comp=Z,352nm,0.6s,mb5.9
LOF Lofoten 59.56 339 eP PcP 21 03 14.0 -3.9
LOF AMb AMB 21 03 17.6
comp=Z,77nm,0.4s,mb5.6
PUL Pulkovo 59.77 326ceP P 21 02 36.3 +0.6
PUL pmax pmax
comp=Z,138nm,0.6s,mb5.7
OBN Obninsk 59.92 319c i P P 21 02 35.8 -1.0
OBN i 21 04 53.4
OBN i S S 21 10 21.1 -2.5
OBN pmax pmax
comp=Z,80nm,0.6s,mb5.4
OBN MLR MLR
comp=Z,700nm,14.0s
OBN Obninsk 59.92 319 eP P 21 02 35.9 -0.9
comp=Z,161nm,0.4s,mb5.9
POHA Pohakuloa 60.18 91 eP P 21 02 38.8 -0.3
comp=Z,270nm,0.9s,mb5.8
FINES FINESS Array B 60.31 329 P P 21 02 38.5 -0.9
comp=Z,315nm,0.5s,mb6.1,baz=51,slow=7.8,SNR=572
FINES S S 21 10 26.2 -2.2
comp=Z,14nm,0.7s,baz=39,slow=14,SNR=10
FINES PKP2bc 21 32 08.5
comp=Z,3.7nm,1.0s,baz=197,slow=6.0,SNR=5.0
FINES FINESS Array B 60.31 329 P P 21 02 38.5 -0.9
FINES S S 21 10 26.2 -2.2
FINES pmax pmax
comp=Z,315nm,0.5s
FINES smax
comp=N,14nm,0.7s
FINES FINESS Array B 60.31 329 P P 21 02 38.5 -0.9
FINES S S 21 10 26.2 -2.2
FINES ⇑e 21 32 08.5
MOR8 Moi Rana 60.77 337 eP P 21 02 40.0 -2.3
MOR8 AMb AMB 21 02 43.6
comp=Z,443nm,0.7s,mb6.1
MOR8 Moi Rana 60.77 337 eP P 21 02 40.0 -2.3
comp=Z,443nm,0.7s,mb6.1
KONS Konsvik 60.88 338 eP P 21 02 43.6 +0.5
FLOS Flostrand 60.94 338 eP P 21 02 42.4 -1.1
VSR Storozhevoye 60.99 315c i P P 21 02 43.6 -0.5
VSR i *PP pP 21 03 53.1 +1.6
VSR i *SP sP 21 04 28.2 +3.0
VSR eS S 21 10 34.6 -2.6
VSR e 21 11 58.0
VSR pmax pmax
comp=Z,50nm,0.6s,mb5.2
VSR pmax pmax
comp=N,20nm,0.8s
VSR pmax pmax
comp=E,20nm,0.7s
VSR smax
comp=N,680nm,4.4s
VSR smax
comp=E,430nm,3.1s
VSR smax
comp=Z,140nm,3.1s
STOK Stokkvaagen 61.03 338 eP P 21 02 44.1 0.0
KNA Kununurra 61.06 190 eP P 21 02 44.4 -0.5
comp=Z,440nm,1.1s,mb5.9
KNA epP pP 21 03 58.3 +5.9
VORD Divnogorie 61.08 314 eP P 21 02 44.2 -0.5
VORD e*PP pP 21 03 53.7 +1.6
VORD i *SP sP 21 04 28.8 +3.0
VORD eS S 21 10 35.0 -3.3
VORD e 21 11 59.7
VORD smax
comp=N,10.0nm,4.0s
VORD smax
comp=Z,2.0nm,3.5s
VORD smax
comp=E,7.0nm,2.8s
MAK Makhachkala 61.30 303 eP P 21 02 46.9 +0.6
MAK e 21 03 28.1
MAK e*PP pP 21 03 52.5 -1.3
MAK e*SP sP 21 04 25.1 -2.3
MAK ePPP 21 06 44.0
MAK i S S 21 10 41.5 +0.1
MAK i 21 12 08.9
MAK eSS SS 21 14 50.6 +3.5
MAK pmax pmax
comp=Z,249nm,1.5s,mb5.5
MAK MLR MLR
comp=Z,1μm,20.0s
JMIC Jan Mayen 61.66 348 eP P 21 02 48.2 -0.1
JMIC eS S 21 10 49.2 +4.1
VSU Vasula 62.03 326c i P P 21 02 49.9 -0.9
SUMG Summit 62.60 359 i P P 21 02 54.7 +0.3
comp=Z,333nm,0.7s,mb6.1
SUMG i pP 21 04 05.6 +3.4
SUMG i S S 21 10 57.8 +1.2
SUMG i 21 13 02.0
SUMG LR LR
comp=Z,1μm,21.0s
SUMG Summit 62.60 359 i P P 21 02 54.7 +0.3
comp=Z,333nm,0.7s,mb6.1
SUMG i pP 21 04 05.6 +3.4
SUMG i S S 21 10 57.8 +1.2
SUMG i 21 13 02.0
SUMG
comp=Z,1μm,21.0s
NSS Namsos 62.69 337 eP P 21 02 53.3 -1.8
NSS eS S 21 10 59.9 +2.0
NSS eSKS 21 12 17.6
PGC Sidney 63.02 47 eP P 21 02 56.7 -0.8
comp=Z,10nm,0.8s,mb4.5
VGZ Gonzales 63.23 47 P P 21 02 58.9 0.0
OSD Olympics--Snow 63.40 48 P P 21 03 01.1 +1.0
VDB Vedder Mountai 63.48 46 P P 21 02 59.9 -0.6
DGRG David-gareji 63.48 303 P P 21 03 01.2 +0.6
DGRG S S 21 11 09.6 +1.2
A05A Maple Falls 63.50 46⇓P P 21 03 00.2 -0.4
baz=63,SNR=22
KIV Kislovodsk 63.51 306 eP P 21 03 01.5 +0.7
KIV e 21 03 35.2
KIV e*PP pP 21 04 11.3 +2.5
KIV e*SP sP 21 04 47.0 +4.7
KIV eS S 21 11 10.6 +1.9
KIV pmax pmax
comp=Z,285nm,0.7s,mb6.0
KIV Kislovodsk 63.51 306 eP P 21 03 01.2 +0.4
comp=Z,299nm,0.7s,mb6.0
KIV Kislovodsk 63.51 306 P P 21 03 01.9 +1.1
SNR=110
KIV P 21 03 01.9
SNR=110
ZEI Tsey 63.54 305 eP P 21 02 57.8 -3.2
ZEI e*PP pP 21 04 09.3 +0.3
ZEI e*SP sP 21 04 43.1 +0.6
ZEI eS S 21 11 07.3 -1.8
ZEI e 21 12 13.6
ZEI pmax pmax
comp=Z,91nm,0.8s,mb5.5
NLWA Neilton Lookou 63.58 49⇑P P 21 03 00.6 -0.5
baz=63,SNR=58
NLWA Neilton Lookou 63.58 49 eP P 21 03 02.0 +0.8
comp=Z,171nm,0.6s,mb5.9
MTA Mtatsminda 63.67 303 P P 21 03 02.4 +0.4
MTA S S 21 11 11.7 +0.9
TBLG Delisi 63.68 303 P P 21 03 02.9 +1.0
TBLG S S 21 11 12.9 +2.0
SCO Scoresbysund 63.77 352 i P P 21 03 01.4 -0.6
comp=Z,51nm,0.8s,mb5.2
SCO i pP 21 04 11.8 +1.7
SCO i S S 21 11 10.9 -0.1
SCO LR LR
comp=Z,200nm,18.0s
SCO Scoresbysund 63.77 352 i P P 21 03 01.4 -0.6
comp=Z,51nm,0.8s,mb5.2
SCO i pP 21 04 11.8 +1.7
SCO i S S 21 11 10.9 -0.1
SCO
comp=Z,190nm,18.0s
FITZ Fitzroy Crossi 63.80 192 eP P 21 03 02.5 -0.4
comp=Z,257nm,0.9s,mb5.9
FITZ epP pP 21 04 12.0 +1.0
FITZ Fitzroy Crossi 63.80 192 P P 21 03 02.6 -0.3
comp=Z,202nm,1.1s,mb5.7,baz=2.5,slow=5.4,SNR=138
FITZ pP pP 21 04 11.9 +0.9
comp=Z,25nm,0.9s,baz=64,slow=4.5,SNR=2.1
KEH Kehvi 63.80 304 P P 21 03 02.3 -0.5
GOR Gori 63.90 304 P P 21 03 04.3 +0.9
ONI Oni 63.91 305 P P 21 03 04.4 +1.0
ONI S S 21 11 15.8 +2.2
GNW Green Mountain 64.02 48 eP P 21 03 04.6 +0.5
comp=Z,56nm,1.2s,mb5.1
IZAR Zarasai 64.05 324 eP P 21 03 04.0 -0.1
IZAR AMB AMB 21 03 07.1
comp=Z,67nm,0.6s,mb5.5
IZAR epP pP 21 04 15.7 +3.4
IZAR esP sP 21 04 50.5 +4.8
JCW Jim Creek 64.09 47 eP P 21 03 04.4 -0.1
comp=Z,538nm,0.9s,mb6.2
B06A Marblemount 64.11 46⇑P P 21 03 04.5 -0.2
baz=64,SNR=37
IDID Didziasalis 64.14 324 eP P 21 03 04.7 0.0
IDID AMB AMB 21 03 07.9
comp=Z,58nm,0.6s,mb5.4
IDID epP pP 21 04 16.1 +3.3
IDID esP sP 21 04 51.0 +4.7
RPW Rockport 64.14 47 eP P 21 03 05.0 +0.2
comp=Z,48nm,0.6s,mb5.3
MICGM Minsk 64.20 322⇓i P P 21 03 02.0 -3.1
ISAL Salakas 64.22 324 eP P 21 03 05.3 +0.1
ISAL AMB AMB 21 03 08.5
comp=Z,88nm,0.7s,mb5.5
ISAL epP pP 21 04 16.7 +3.3
ISAL esP sP 21 04 51.5 +4.7
MNK Minsk 64.22 322⇓i P P 21 03 02.0 -3.2
MNK e*PP pP 21 04 12.0 -1.4
MNK e 21 04 46.0
MNK ePPP 21 07 04.0
MNK eS S 21 11 12.0 -5.1
MNK e*SS SKSac 21 12 20.0 -7.8
MNK pmax pmax
comp=Z,340nm,1.0s,mb5.9
MNK pmax pmax
comp=N,350nm,1.0s
MNK pmax pmax
comp=E,270nm,1.0s
MNK smax
comp=E,3μm,6.0s
MNK smax
comp=N,2μm,4.0s
IIGN Ignalina 64.33 324 eP P 21 03 06.1 +0.2
IIGN AMB AMB 21 03 09.2
comp=Z,132nm,0.6s,mb5.8
IIGN epP pP 21 04 17.5 +3.4
IIGN esP sP 21 04 52.1 +4.6
NACGM Naroch 64.40 323 eP P 21 03 03.0 -3.4
PNT Penticton 64.55 45 P P 21 03 07.3 -0.1
GNI Garni 64.66 302ceP P 21 03 09.6 +1.3
GNI pmax pmax
comp=Z,179nm,1.1s
GNI Garni 64.66 302 eP P 21 03 09.1 +0.8
comp=Z,130nm,0.8s,mb5.6
GNI Garni 64.66 302 P P 21 03 10.1 +1.9
SNR=39
GNI P 21 03 10.1
SNR=39
F03A Seaside 64.66 50⇑P P 21 03 08.9 +0.7
baz=64,SNR=12
D05A Enumclaw 64.70 48⇓P P 21 03 08.9 +0.4
baz=64,SNR=30
WRAB Tennant Creek 64.77 183 eP P 21 03 07.4 -1.7
WRAB pmax pmax
comp=Z,274nm,1.1s,mb5.8
WRAB Tennant Creek 64.77 183 eP P 21 03 07.4 -1.8
comp=Z,165nm,1.1s,mb5.6
WRA Warramunga Arr 64.78 183 P P 21 03 08.2 -1.0
comp=Z,92nm,0.6s,mb5.6,baz=0.0,slow=6.9,SNR=639
WRA pP pP 21 04 17.6 0.0
comp=Z,24nm,1.0s,baz=0.2,slow=7.2,SNR=1.8
WRA S S 21 11 30.4 +5.8
comp=Z,4.8nm,1.1s,baz=7.9,slow=5.6,SNR=5.0
WRA PKP2bc 21 31 56.2
comp=Z,8.2nm,0.7s,baz=193,slow=2.3,SNR=32
WRA Warramunga Arr 64.78 183 P P 21 03 08.2 -1.0
WRA *PP pP 21 04 17.6 0.0
WRA S S 21 11 30.4 +5.8
WRA pmax pmax
comp=Z,92nm,0.6s
WRA smax
comp=N,5.0nm,1.1s
WRA Warramunga Arr 64.78 183 P P 21 03 08.2 -1.0
WRA pP pP 21 04 17.6 0.0
WRA S S 21 11 30.4 +5.8
WRA ⇑e 21 31 56.2
EDM Edmonton 64.93 39 eP P 21 03 09.3 -0.5
HEBO Mount Hebo 65.01 50 eP P 21 03 11.7 +1.2
comp=N,105nm,0.6s,mb5.6
LON Longmire 65.07 48 eP P 21 03 10.8 0.0
LON pmax pmax
comp=Z,93nm,0.9s,mb5.4
LON Longmire 65.07 48 eP P 21 03 10.8 0.0
comp=Z,93nm,0.9s,mb5.4
FUNA Funafuti 65.26 133 eP P 21 03 13.5 +1.1
comp=Z,111nm,1.0s,mb5.5
F04A Amboy 65.27 49⇑P P 21 03 11.1 -1.1
baz=65,SNR=45
ETW Entiat 65.29 47 eP P 21 03 12.4 +0.2
comp=Z,239nm,1.0s,mb5.8
B08A Colville Reser 65.31 46⇓P P 21 03 12.2 -0.2
baz=65,SNR=86
CTA Charters Tower 65.37 171 eP P 21 03 11.0 -1.9
comp=Z,44nm,1.1s,mb5.0
CTA Charters Tower 65.37 171 P P 21 03 10.8 -2.1
comp=Z,43nm,1.0s,mb5.0,baz=352,slow=6.6,SNR=18
CTA Charters Tower 65.37 171 P P 21 03 10.8 -2.1
CTA pmax pmax
comp=Z,43nm,1.0s
CTA Charters Tower 65.37 171 P P 21 03 10.8 -2.1
CTAO Charters Tower 65.37 171 eP P 21 03 12.8 -0.1
CTAO pmax pmax
comp=Z,212nm,1.5s,mb5.5
CTAO Charters Tower 65.37 171 eP P 21 03 12.8 -0.1
comp=Z,212nm,1.5s,mb5.5
SOC Sochi 65.42 308 eP P 21 03 13.0 -0.1
SOC e*PP pP 21 04 23.1 +1.6
SOC e*SP sP 21 04 57.2 +2.3
SOC e 21 05 41.6
SOC eS S 21 11 33.1 +1.1
SOC eSSS 21 18 55.9
SOC pmax pmax
comp=Z,339nm,1.3s,mb5.8
SOC pmax pmax
comp=Z,123nm,0.6s,mb5.7
SOC MLR MLR
comp=Z,673nm,18.0s
MOL Molde 65.46 337 eP P 21 03 10.2 -2.8
MOL eS S 21 11 33.7 +1.9
MOL eSKS 21 12 39.3
HFA0 Hagfors New Ar 65.52 333 P P 21 03 11.0 -2.4
HFS Hagfors 65.52 333 S S 21 11 31.8 -0.9
comp=Z,5.8nm,0.7s,baz=57,slow=16,SNR=4.2
NB2 NORSAR Subarra 65.60 334 P P 21 03 12.8 -1.2
comp=Z,143nm,0.6s,mb5.9,baz=38,slow=6.5
NB2 NORSAR Subarra 65.60 334 P P 21 03 13.0 -1.0
NOA NORSAR Array B 65.60 334 P P 21 03 12.8 -1.2
comp=Z,133nm,0.6s,mb5.8,baz=39,slow=6.3,SNR=397
NOA pP pP 21 04 23.3 +0.8
comp=Z,26nm,0.8s,baz=37,slow=6.4,SNR=2.6
NOA S S 21 11 34.2 +0.6
comp=Z,1.8nm,0.7s,baz=38,slow=13,SNR=4.1
NOA PKPPKP 21 31 48.0
comp=Z,2.0nm,1.0s,baz=211,slow=3.4,SNR=3.8
NOA NORSAR Array B 65.60 334 P P 21 03 12.8 -1.2
NOA *PP pP 21 04 23.3 +0.9
NOA S S 21 11 34.2 +0.6
NOA pmax pmax
comp=Z,133nm,0.6s
NOA smax
comp=N,2.0nm,0.7s
NOA NORSAR Array B 65.60 334 P P 21 03 12.8 -1.2
NOA pP pP 21 04 23.3 +0.8
NOA S S 21 11 34.2 +0.6
NOA P'P' 21 31 48.0
COR Corvallis 65.66 51 eP P 21 03 15.5 +0.9
COR pmax pmax
comp=Z,266nm,1.0s,mb5.9
COR Corvallis 65.66 51 eP P 21 03 15.5 +0.9
comp=Z,266nm,1.0s,mb5.9
G04A Mulino 65.71 50⇑P P 21 03 13.9 -1.0
baz=65,SNR=28
NAO01 NORSAR Array S 65.86 334 eP P 21 03 14.3 -1.3
comp=Z,67nm,0.6s,mb5.5
ANN Anapa 65.90 310c i P P 21 03 15.2 -0.9
ANN i *PP pP 21 04 26.5 +1.8
ANN i 21 05 44.6
ANN i PPP 21 07 24.9
ANN i S S 21 11 37.5 -0.2
ANN pmax pmax
comp=Z,132nm,1.0s,mb5.6
DBAD Bademkaya 65.92 304 i P P 21 03 16.7 +0.4
DDEM Demirkent 65.96 304 i P P 21 03 17.3 +0.7
HOOD Mount Hood Mea 66.08 49 eP P 21 03 18.1 +0.9
comp=Z,508nm,0.7s,mb6.4
BANOM Banah 66.08 283⇓P P 21 03 18.0 +0.4
SNR=13
BANOM ⇓P 21 03 18.0
SNR=13
AKASG Malin Array Be 66.16 319 P P 21 03 16.9 -0.8
comp=Z,244nm,0.5s,mb6.2,baz=45,slow=6.8,SNR=209
AKASG pP pP 21 04 26.5 +0.2
comp=Z,118nm,0.8s,baz=46,slow=7.0,SNR=4.6
AKASG S S 21 11 40.0 -0.6
comp=Z,10nm,0.8s,baz=39,slow=13,SNR=11
AKASG PKPPKP 21 31 45.4
comp=Z,0.4nm,0.5s,baz=244,slow=4.1,SNR=6.2
AKASG Malin Array Be 66.16 319 P P 21 03 16.9 -0.8
AKASG *PP pP 21 04 26.5 +0.2
AKASG S S 21 11 40.0 -0.6
AKASG pmax pmax
comp=Z,244nm,0.5s
AKASG smax
comp=N,10.0nm,0.8s
AKASG Malin Array Be 66.16 319 P P 21 03 16.9 -0.8
AKASG pP pP 21 04 26.5 +0.2
AKASG S S 21 11 40.0 -0.6
AKASG P'P' 21 31 45.4
AKBB Malin Array Si 66.16 319 eP P 21 03 16.9 -0.8
AKBB eS S 21 11 39.2 -1.4
KIEV Kiev 66.17 319 eP P 21 03 16.8 -1.0
KIEV pmax pmax
comp=Z,250nm,0.6s,mb6.1
KIEV Kiev 66.17 319 eP P 21 03 16.8 -1.0
comp=Z,250nm,0.6s,mb6.1
H04A Detroit Lake 66.20 50⇑P P 21 03 17.6 -0.5
baz=66,SNR=20
E07A Sunnyside 66.22 47⇑P P 21 03 17.9 -0.2
baz=66,SNR=14
OD2 Odessa Site #2 66.27 46 eP P 21 03 17.9 -0.5
comp=Z,226nm,1.0s,mb5.8
WBK Wadi Bani Khal 66.36 279⇑P P 21 03 20.5 +1.1
SNR=16
WBK ⇑P 21 03 20.5
SNR=16
D08A Wollman Farm, 66.38 46⇓P P 21 03 18.5 -0.6
baz=66,SNR=66
TVAN Van 66.48 301 i P P 21 03 21.0 +1.1
NEW Newport 66.48 45 eP P 21 03 19.4 -0.4
NEW pmax pmax
comp=Z,153nm,1.0s
NEW Newport 66.48 45 eP P 21 03 19.4 -0.4
comp=Z,153nm,1.0s,mb5.7
HAWA Hanford 66.50 47 eP P 21 03 19.9 +0.1
comp=Z,198nm,1.0s,mb5.8
SUW Suwalki 66.53 324 eP P 21 03 19.0 -1.0
SUW ePcP 21 03 22.2
SUW epP pP 21 04 30.4 +1.8
SUW eS S 21 11 43.7 -1.3
SUW eSKS 21 12 42.8
SUW Suwalki 66.53 324 eP P 21 03 19.0 -0.9
SUW ePcP 21 03 22.2
SUW epP pP 21 04 30.5 +1.9
SUW eS S 21 11 43.7 -1.3
SUW eSKS 21 12 42.8
IRO Indian Ridge 66.61 51 P P 21 03 21.0 +0.4
F07A Phinny Hill Vi 66.62 48⇑P P 21 03 20.4 -0.2
baz=66,SNR=24
G06A Carlson Farm, 66.68 49⇑P P 21 03 21.4 +0.3
baz=66
E08A Dider Farm, El 66.68 47⇓P P 21 03 21.1 +0.1
baz=66,SNR=51
SMDO Samad 66.71 280 P P 21 03 23.1 +1.5
SNR=18
SMDO P 21 03 23.1
SNR=18
A12A Yaak River Ran 66.76 43⇑P P 21 03 21.8 +0.3
baz=66,SNR=28
ERZM Erzurum 66.82 304 i P P 21 03 23.1 +1.0
HOQ Hoqain 66.89 281 P P 21 03 23.2 +0.5
SNR=24
HOQ P 21 03 23.2
SNR=24
HATD Hatta, Dubai 66.90 282⇑P P 21 03 23.1 +0.4
SNR=32

HATD ⇑P 21 03 23.1
SNR=32
HAKT HAKKARI 66.92 300 *i* P **P 21 03 20.5 -2.2**
FOO Floro 66.94 337 *e*P **P 21 03 21.2 -1.1**
FOO *e*S S 21 11 49.6 +0.1
FOO *e*SKS 21 12 50.9
HYA Hoyanger 66.98 337 *e*P **P 21 03 23.3 +0.7**
HYA AMb AMB 21 03 26.7
comp=Z,101nm,0.7s,mb5.7
HYA Hoyanger 66.98 337 *e*P **P 21 03 23.3 +0.7**
comp=Z,101nm,0.7s,mb5.7
ASHO Ashiyiah 67.05 282 ⇓P **P 21 03 24.0 +0.3**
SNR=31
ASHO ⇓P 21 03 24.0
SNR=31
B12A Libby 67.10 44 ⇓P **P 21 03 24.0 +0.4**
baz=67,SNR=13
NAZ Nazwa, Dubai 67.12 283 ⇓P **P 21 03 23.9 -0.3**
SNR=11
NAZ ⇓P 21 03 23.9
SNR=11
JMDO Jabal Madar 67.12 279 P **P 21 03 24.8 +0.6**
SNR=10
JMDO P 21 03 24.8
SNR=10
HUMO Hull Mountain 67.13 52 *e*P **P 21 03 24.2 +0.3**
comp=Z,59nm,0.7s,mb5.4
E09A Wood Farm, Sta 67.14 47 ⇓P **P 21 03 23.7 -0.2**
baz=67,SNR=98
KONO Kongsberg 67.20 334 *e*P **P 21 03 23.2 -0.8**
KONO *e*S S 21 11 54.3 +1.6
KONO *e*SKS 21 12 51.7
KONO Kongsberg 67.20 334 *e*P **P 21 03 23.0 -1.0**
KONO pmax pmax
comp=Z,68nm,0.6s,mb5.5
KONO Kongsberg 67.20 334 *e*P **P 21 03 23.0 -1.0**
comp=Z,68nm,0.6s,mb5.5
C11A Tepee Creek (N 67.20 45 ⇓P **P 21 03 24.3 0.0**
baz=67
A13A Flathead Natio 67.36 43 ⇑P **P 21 03 24.9 -0.3**
baz=67
SUE Sulen 67.46 337 *e*P **P 21 03 25.3 -0.3**
LNOR Lincton Mounta 67.50 47 *e*P **P 21 03 26.8 +0.7**
LNOR pmax pmax
comp=Z,55nm,0.7s,mb5.4
LNOR Lincton Mounta 67.50 47 *e*P **P 21 03 26.8 +0.7**
comp=Z,55nm,0.7s,mb5.4
BSY Bisya 67.51 280 P **P 21 03 27.4 +0.8**
SNR=28
BSY P 21 03 27.4
SNR=28
WALA Waterton Lakes 67.51 42 *e*P **P 21 03 26.1 -0.1**
comp=Z,10.0nm,0.9s,mb4.5
G08A Pilot Rock 67.53 48 ⇑P **P 21 03 25.8 -0.6**
baz=67,SNR=35
SIM Simferopol' 67.58 312 *ce*P **P 21 03 28.1 +1.4**
SIM *e**PP pP 21 04 38.8 +3.2
SIM 21 05 13.2
SIM *e*S S 21 11 59.3 +1.5
SIM pmax pmax
comp=Z,119nm,0.8s,mb5.7
SIM MLR MLR
comp=Z,370nm,13.0s
ASUD Al Ashush, Dub 67.59 283 ⇓P **P 21 03 27.5 +0.5**
SNR=22
ASUD ⇓P 21 03 27.5
SNR=22
ARQ Araqi 67.60 281 ⇓P **P 21 03 27.6 +0.4**
SNR=18
ARQ ⇓P 21 03 27.6
SNR=18
C12B Naegeli Ranch, 67.68 44 ⇑P **P 21 03 26.8 -0.4**
baz=67,SNR=16
B13A Whitefish 67.72 43 ⇑P **P 21 03 27.3 -0.1**
baz=67,SNR=148
A14A Double T Ranch 67.81 42 ⇓P **P 21 03 27.7 -0.3**
baz=68,SNR=544
YBH Yreka Blue Hor 67.84 53 *e*P **P 21 03 28.9 +0.5**
YBH pmax pmax
comp=Z,94nm,0.9s
YBH Yreka Blue Hor 67.84 53 *e*P **P 21 03 28.9 +0.6**
comp=Z,94nm,0.9s,mb5.5
BER Bergen 67.86 337 *e*P **P 21 03 27.9 -0.2**
BER AMb AMB 21 03 31.5
comp=Z,149nm,0.2s,mb6.3
BER *e*S S 21 12 00.5 0.0
BER *e*SKS 21 12 57.5
ODD1 Odda 67.88 336 *e*P **P 21 03 27.2 -1.1**
ODD1 AMb AMB 21 03 30.6
comp=Z,116nm,0.8s,mb5.7
ODD1 Odda 67.88 336 *e*P **P 21 03 27.2 -1.1**
comp=Z,116nm,0.8s,mb5.7
MBWA Marble Bar 67.88 198 *e*P **P 21 03 28.0 -0.7**
comp=Z,154nm,0.7s,mb5.8
MBWA Marble Bar 67.88 198 ⇓P **P 21 03 28.6 -0.1**
SNR=11
MBWA ⇓P 21 03 28.6
SNR=11
BSMT Bassoo Peak 67.92 44 *e*P **P 21 03 29.3 +0.6**
comp=Z,245nm,1.0s,mb5.9
GRSN GIRESUNGRSN 67.96 306 *i* P **P 21 03 28.6 -0.5**
F10A Beach Ranch, E 67.97 47 ⇑P **P 21 03 28.6 -0.5**
baz=68,SNR=93
FCC Fort Churchill 68.12 26 *e*P **P 21 03 28.4 -1.4**
comp=Z,12nm,0.7s,mb4.7
A15A Johnson Ranch, 68.13 42 ⇓P **P 21 03 29.6 -0.4**
baz=68,SNR=556
C13A Hot Springs 68.14 44 ⇓P **P 21 03 30.5 +0.4**
baz=68,SNR=122
G09A Cove 68.16 47 ⇓P **P 21 03 30.4 +0.1**
baz=68,SNR=71
D12A Red Ives Fores 68.19 45 ⇓P **P 21 03 30.2 -0.2**
baz=68
K05A Summer Lake 68.20 51 ⇓P **P 21 03 31.5 +1.0**
baz=68,SNR=133
H08A Prairie City 68.20 48 ⇓P **P 21 03 30.9 +0.4**
baz=68
JTMT Jette 68.24 44 *e*P **P 21 03 31.1 +0.4**
comp=Z,105nm,0.7s,mb5.7
YBMT Yellow Bay 68.29 43 *e*P **P 21 03 31.9 +0.8**
comp=Z,166nm,1.0s,mb5.7
B14A Marquette Ranc 68.30 43 ⇑P **P 21 03 31.1 0.0**
baz=68,SNR=242
BLS5 Blasjo 68.33 335 *e*P **P 21 03 30.7 -0.3**
BLS5 AMb AMB 21 03 34.3
comp=Z,63nm,0.7s,mb5.5
BLS5 Blasjo 68.33 335 *e*P **P 21 03 30.7 -0.3**
comp=Z,63nm,0.7s,mb5.5
C14A Swan Lake 68.48 43 ⇓P **P 21 03 31.8 -0.4**
baz=68
G10A Bishop Farm, J 68.49 47 ⇑P **P 21 03 32.3 +0.1**
baz=68,SNR=55
ASAR Alice Springs 68.50 183 P **P 21 03 32.5 0.0**
comp=Z,164nm,0.7s,mb5.9,baz=357,slow=4.8,SNR=524
ASAR PP PP 21 06 07.1 -1.5
comp=Z,13nm,1.0s,baz=8.8,slow=9.6,SNR=4.0
ASAR PKP2ab 21 31 46.4
comp=Z,4.1nm,0.8s,baz=170,slow=3.0,SNR=13
E12A Beaver Dam Sad 68.52 45 ⇓P **P 21 03 32.6 +0.2**
baz=68
SWMT Swartz Lake 68.54 44 *e*P **P 21 03 32.9 +0.3**
comp=Z,194nm,0.8s,mb5.9
FFC Flin Flon 68.55 32 *ce*P **P 21 03 31.6 -0.8**
FFC Flin Flon 68.55 32 *e*P **P 21 03 31.4 -1.0**
comp=Z,295nm,0.8s,mb6.1
F11A Grangeville 68.58 46 ⇑P **P 21 03 32.6 -0.2**
baz=68,SNR=76
D13A Huson 68.60 44 ⇑P **P 21 03 32.8 -0.1**
baz=68,SNR=234
H09A Durkee 68.63 48 ⇑P **P 21 03 33.5 +0.3**
baz=68,SNR=24
B15A Bradely Ranch, 68.67 42 ⇑P **P 21 03 33.2 -0.2**
baz=68,SNR=654
A16A West Butte Ran 68.68 41 ⇓P **P 21 03 32.4 -1.0**
baz=68
BMO Blue Mountains 68.69 47 P **P 21 03 33.7 +0.2**
WDC Whiskeytown Da 68.70 54 *e*P **P 21 03 34.1 +0.4**
WDC pmax pmax
comp=Z,115nm,1.1s,mb5.5
WDC Whiskeytown Da 68.70 54 *e*P **P 21 03 34.1 +0.4**
comp=Z,115nm,1.1s,mb5.5
WAR Warsaw 68.71 324 *e*P **P 21 03 34.5 +1.0**
WAR *e*PcP 21 03 36.7
WAR *ep*P pP 21 04 46.3 +3.7
WAR *e*S S 21 12 10.7 -0.1
WAR Warsaw 68.71 324 *e*P **P 21 03 34.5 +1.0**
WAR *e*PcP 21 03 36.7
WAR *ep*P pP 21 04 46.3 +3.6
WAR *e*S S 21 12 10.7 -0.1
MARD Mardin 68.85 302 ⇑*i*P **P 21 03 35.3 +0.7**
G11A Walters Elk Ra 68.86 46 ⇑P **P 21 03 34.2 -0.4**
baz=68,SNR=268
KIS Kishinev 68.90 316 ⇑*i*P **P 21 03 33.0 -1.8**
comp=Z,500nm,2.0s,mb5.9
KIS *i* pP pP 21 04 43.0 -1.0
KIS Kishinev 68.90 316 *e*PP PP 21 06 12.0 +1.1
KIS Kishinev 68.90 316 *i* PPP 21 07 52.0
KIS *i* S S 21 12 10.0 -3.2
KIS *i* ScS ScS 21 13 02.0 -2.6
KIS *i* sS sS 21 14 20.0 +4.5
KIS *e*SS SS 21 16 40.0 -4.3
KIS LRM 21 35 20.0
comp=Z,800nm,16.0s
KIS Kishinev 68.90 316 ⇑*i*P **P 21 03 33.0 -1.8**
KIS *i* *PP pP 21 04 43.0 -1.0
KIS *e* 21 05 18.0
KIS *e* 21 06 12.0
KIS *i* PPP 21 07 52.0
KIS *i* S S 21 12 10.0 -3.2
KIS *i* 21 13 02.0
KIS *e*SS SS 21 16 40.0 -4.3
KIS pmax pmax
comp=Z,500nm,2.0s,mb5.9
KIS pmax pmax
comp=Z,600nm,6.0s
KIS MLR MLR
comp=Z,1μm,16.0s
KIS MLR MLR
comp=N,900nm,15.0s
KIS MLR MLR
comp=E,800nm,15.0s
KIS MLR MLR
comp=Z,800nm,16.0s
KIS Kishinev 68.90 316 P **P 21 03 34.7 -0.1**
KIS Kishinev 68.90 316 ⇑*i*P **P 21 03 35.7 +0.9**
KEMA Kemaliye 68.92 305 ⇑*i*P **P 21 03 35.9 +0.8**
BSD Bornholm Skovb 68.95 329 *i* P **P 21 03 33.2 -1.8**
comp=Z,179nm,0.8s,mb5.8
BSD *i* pP 21 04 45.0 +0.8
BSD *i* S S 21 12 09.9 -3.6
BSD Bornholm Skovb 68.95 329 *i* P **P 21 03 33.2 -1.8**
comp=Z,179nm,0.8s,mb5.8
BSD *i* pP 21 04 45.0 +0.8
BSD *i* S S 21 12 09.9 -3.6
BSD
comp=Z,540nm,17.0s
SLMT Seeley Lake 68.97 44 *e*P **P 21 03 35.2 0.0**
comp=Z,376nm,1.2s,mb6.0
ERBA Erbaa 68.98 307 ⇑*i*P **P 21 03 35.9 +0.5**
B16A M & M Farms, S 69.01 42 ⇑P **P 21 03 35.0 -0.4**
baz=69,SNR=443
C15A Salmond Ranch, 69.03 43 ⇓P **P 21 03 36.2 +0.7**
baz=69,SNR=784
MSO Missoula 69.04 44 *e*P **P 21 03 35.3 -0.3**
comp=Z,180nm,1.4s,mb5.6
I09A Lost Marbles R 69.06 48 ⇓P **P 21 03 36.2 +0.4**
baz=69,SNR=75
MOD Modoc 69.07 51 *e*P **P 21 03 35.9 0.0**
comp=Z,40nm,0.6s,mb5.3
D14A Greenough 69.08 44 ⇓P **P 21 03 35.6 -0.3**
baz=69,SNR=124
J08A Circle Bar Ran 69.09 49 ⇑P **P 21 03 36.6 +0.6**
baz=69,SNR=68
F12A Elk City 69.13 46 ⇓P **P 21 03 35.8 -0.4**
baz=69,SNR=424
H10A Noah's Angus R 69.16 47 ⇑P **P 21 03 36.1 -0.3**
baz=69,SNR=125
LVV L'vov 69.16 320 *e*P **P 21 03 35.7 -0.6**
LVV *e* pP 21 04 47.1 +1.5
LVV *i* S S 21 12 15.2 -0.9
LVV MLR MLR
comp=N,700nm,14.0s
LVV MLR MLR
comp=E,400nm,14.0s
LVV MLR MLR
comp=Z,500nm,14.0s
E13A Victor 69.19 45 ⇓P **P 21 03 35.9 -0.7**
baz=69,SNR=38
BORG Borgarnes 69.24 350 *e*P **P 21 03 37.8 +1.3**
BORG pmax pmax
comp=Z,82nm,0.8s
BORG Borgarnes 69.24 350 *e*P **P 21 03 37.8 +1.3**
comp=Z,82nm,0.8s,mb5.5
CHMT Chamberlain Mo 69.32 44 *e*P **P 21 03 37.2 -0.1**
comp=Z,56nm,0.7s,mb5.4
TOKA Tokat 69.37 307 ⇑*i*P **P 21 03 38.5 +0.7**
IAS Iasi 69.38 317 P **P 21 03 38.0 +0.3**
IAS Iasi 69.38 317 ⇓*i*P **P 21 03 38.6 +0.9**
COP Copenhagen 69.40 330 *i* P **P 21 03 36.9 -0.8**
comp=Z,85nm,0.8s,mb5.5
COP *i* pP 21 04 49.0 +2.0
COP *i* S S 21 12 11.5 -7.2
COP LR LR
comp=Z,220nm,18.0s
COP Copenhagen 69.40 330 *i* P **P 21 03 36.9 -0.8**
comp=Z,85nm,0.8s,mb5.5
COP *i* pP 21 04 49.0 +2.0
COP *i* S S 21 12 11.5 -7.2
COP
comp=Z,210nm,18.0s
SOFL Sornfelli, Far 69.41 343 ⇑*e*P **P 21 03 38.0 +0.4**
SOFL Sornfelli, Far 69.41 343 P **P 21 03 38.0 +0.4**
C16A Fuhringer Ranc 69.42 42 ⇑P **P 21 03 37.9 0.0**
baz=69,SNR=170
HOPS Hopland 69.44 55 *e*P **P 21 03 38.4 +0.1**
comp=Z,167nm,1.1s,mb5.7
H11A Donnelly 69.47 47 ⇓P **P 21 03 37.9 -0.3**
baz=69,SNR=55
I10A Payette 69.48 48 ⇓P **P 21 03 38.1 -0.3**
baz=69,SNR=114
GKP Gorka Klasztor 69.48 326 *e*P **P 21 03 37.6 -0.6**
GKP *e*PcP 21 03 41.0
GKP *ep*P pP 21 04 49.7 +2.2
GKP *e*S S 21 12 17.1 -2.6
GKP Gorka Klasztor 69.48 326 *e*P **P 21 03 37.6 -0.6**
GKP *e*PcP 21 03 41.0
GKP *ep*P pP 21 04 49.7 +2.2
GKP *e*S S 21 12 17.1 -2.6
A18A Metzger Ranch, 69.52 40 ⇑P **P 21 03 38.0 -0.5**
baz=69,SNR=156
B17A L&G Farms, Che 69.52 41 ⇓P **P 21 03 38.5 0.0**
baz=69,SNR=276
G12A Big Creek, Yel 69.53 46 ⇓P **P 21 03 38.4 -0.2**
baz=69,SNR=122
LEOM Leova 69.55 316 ⇑P **P 21 03 38.7 0.0**
LEOM Leova 69.55 316 ⇑*i*P **P 21 03 38.7 0.0**
E14A Clinton 69.55 44 ⇑P **P 21 03 38.6 -0.2**
baz=69,SNR=115
F13A Darby 69.57 45 ⇑P **P 21 03 37.8 -1.1**
baz=69,SNR=54
D15A Lincoln 69.59 43 ⇑P **P 21 03 38.6 -0.4**
baz=69,SNR=38
WVOR Wild Horse Val 69.63 50 *e*P **P 21 03 39.5 +0.2**
WVOR pmax pmax
comp=Z,144nm,1.1s,mb5.6
WVOR Wild Horse Val 69.63 50 *e*P **P 21 03 39.5 +0.2**
comp=Z,144nm,1.1s,mb5.6
KBD Kabd 69.80 291 *e*P **P 21 03 39.7 -0.8**
KBD AMb AMB 21 03 42.9
comp=Z,141nm,0.8s,mb5.8
LRW Lerwick 69.80 339 *e*P **P 21 03 39.7 -0.3**
LRW AMb AMB 21 03 42.5
comp=Z,713nm,1.6s,mb6.1
LRW Lerwick 69.80 339 P **P 21 03 39.7 -0.3**
LRW AMb AMB 21 03 42.5
comp=Z,713nm,1.6s,mb6.1
KWP Kalwaria Pacla 69.89 321 *e*P **P 21 03 41.2 +0.4**
KWP *e*PcP 21 03 44.6
KWP *ep*P pP 21 04 53.1 +3.0
KWP *e*S S 21 12 23.5 -1.1
KWP Kalwaria Pacla 69.89 321 ⇑*e*P **P 21 03 41.2 +0.4**
KWP *e*PcP 21 03 44.6
KWP *ep*P pP 21 04 53.1 +2.9
KWP *e*S S 21 12 23.5 -1.1
KWP Kalwaria Pacla 69.89 321 ⇓*i*P **P 21 03 41.0 +0.2**
B18A Beardsley Farm 69.93 41 ⇓P **P 21 03 40.9 -0.1**
baz=70,SNR=472
QRN Al-Qurain 69.93 291 *e*P **P 21 03 40.6 -0.8**
QRN AMb AMB 21 03 42.8
comp=Z,416nm,0.7s,mb6.3
E15A Deer Lodge 69.96 44 ⇑P **P 21 03 41.3 0.0**
baz=70,SNR=152
RGN Rugen 69.98 329 *e*P **P 21 03 41.1 -0.1**
comp=Z,245nm,1.1s,mb5.8
RGN *e*S S 21 12 24.1 -1.3
C17A Wharram Farm, 70.01 42 ⇑P **P 21 03 41.1 -0.4**
baz=70,SNR=228
F14A Wisdom 70.03 45 ⇓P **P 21 03 41.3 -0.4**
baz=70,SNR=43
I11A Placerville 70.04 47 ⇑P **P 21 03 41.6 -0.1**
baz=70,SNR=20
NAY Al-Naaiem 70.05 292 *e*P **P 21 03 40.9 -1.2**
NAY AMb AMB 21 03 43.6
comp=Z,167nm,0.8s,mb5.8
RDF Al-Radifah 70.05 291 *e*P **P 21 03 41.4 -0.7**
RDF AMb AMB 21 03 44.0
comp=Z,433nm,0.9s,mb6.2
D16A Dana Ranch, Ca 70.06 43 ⇑P **P 21 03 41.8 0.0**
baz=70,SNR=170
G13A Cobalt 70.11 46 ⇓P **P 21 03 41.3 -0.9**
baz=70,SNR=76
MCCM Marconi Confer 70.12 56 *e*P **P 21 03 41.8 -0.6**
comp=Z,121nm,0.8s,mb5.7
HRY Holter Researc 70.16 43 *e*P **P 21 03 42.9 +0.5**
comp=Z,305nm,0.8s,mb6.1
TLCR 70.16 315 ⇑P **P 21 03 42.5 0.0**
TLCR 70.16 315 ⇑*i*P **P 21 03 42.5 0.0**
H12A Diamond D Ranc 70.17 46 ⇑P **P 21 03 42.2 -0.3**
baz=70,SNR=284
BUR08 Bucovina Ar. S 70.19 318 *e*P **P 21 03 42.6 +0.1**
BURAR Bucovina Array 70.20 318 P **P 21 03 42.8 +0.2**
BURAR Bucovina Array 70.20 318 ⇓*i*P **P 21 03 42.6 0.0**
BUR01 Bucovina Ar. S 70.20 318 P **P 21 03 42.9 +0.3**
EGMT Eagleton 70.20 41 ⇑P **P 21 03 42.4 -0.3**
baz=70,SNR=448
EGMT Eagleton 70.20 41 *e*P **P 21 03 42.3 -0.4**
comp=Z,93nm,0.8s,mb5.6
BALT Daday 70.28 309 *i* P **P 21 03 44.1 +0.8**
K10A MacKenzie Ranc 70.34 49 ⇑P **P 21 03 44.0 +0.4**
baz=70,SNR=149
E16A East Helena 70.36 43 ⇑P **P 21 03 43.5 -0.1**
baz=70,SNR=65
D17A Six Diamond Ra 70.39 42 ⇓P **P 21 03 43.6 -0.2**
baz=70,SNR=143
BEKR Beckworth 70.41 53 ⇑P **P 21 03 44.1 0.0**
baz=70,SNR=137
F15A Butte 70.45 44 ⇑P **P 21 03 43.8 -0.4**
baz=70,SNR=225
MFID Camas Ranch 70.45 48 ⇑P **P 21 03 43.6 -0.7**
baz=70,SNR=190
H13A Challis 70.47 46 ⇑P **P 21 03 43.6 -0.7**
baz=70
LRM Limekiln Ridge 70.48 44 *e*P **P 21 03 44.3 -0.1**
comp=Z,945nm,1.0s,mb6.5
LRM *e* pP 21 04 58.1 +4.2
CFR Carcaliu 70.51 315 P **P 21 03 44.8 +0.2**
CFR Carcaliu 70.51 315 ⇓*i*P **P 21 03 44.6 0.0**
I12A Atlanta 70.55 47 ⇓P **P 21 03 44.9 0.0**
baz=70,SNR=141
PETR 70.58 316 ⇓*i*P **P 21 03 46.2 +1.2**
STHS Stebnicka Huta 70.70 322 *e*P **P 21 03 46.5 +0.9**
STHS pmax pmax
comp=Z,41nm,1.1s,mb5.0
STHS Stebnicka Huta 70.70 322 *e*P **P 21 03 46.5 +0.9**
comp=Z,41nm,1.1s,mb5.0
STHS Stebnicka Huta 70.70 322 *e*P **P 21 03 46.5 +0.9**
VRI Vrincioaia 70.72 316 P **P 21 03 46.3 +0.4**
VRI Vrincioaia 70.72 316 ⇓*i*P **P 21 03 46.0 +0.2**
OJC Ojcow 70.73 323 *e*P **P 21 03 43.9 -1.9**
OJC *ep*P pP 21 04 56.0 +0.6
OJC *e*S S 21 12 30.9 -3.3
OJC *e*SKSac SKSac 21 13 14.0 -3.3
GZT Gaziantep 70.73 304 *i* P **P 21 03 47.1 +1.0**
DLMT Dillon 70.74 45 *e*P **P 21 03 46.2 +0.3**
comp=Z,208nm,0.6s,mb5.9
DLMT *e* pP 21 05 00.8 +5.3
PLOR Plostina 70.77 316 ⇑P **P 21 03 46.5 +0.4**
PLOR Plostina 70.77 316 ⇑*i*P **P 21 03 46.5 +0.4**
D18A Linhart Farms, 70.78 42 ⇓P **P 21 03 46.3 +0.1**
baz=70,SNR=323
K11A Parker Ranch, 70.79 48 ⇑P **P 21 03 45.9 -0.4**
baz=70,SNR=56
E17A Martinsdale 70.80 43 ⇓P **P 21 03 46.9 +0.6**
baz=70,SNR=443
UZH Uzhgorod 70.81 321 *e*P **P 21 03 46.0 -0.3**
UZH *e* 21 04 04.6
UZH *e**PP pP 21 04 58.0 +2.1
UZH *e* 21 06 30.8
UZH *i* S S 21 12 36.0 +0.8
UZH *e*PS 21 13 12.8
UZH *i* SP 21 13 19.0
UZH *e*SSS 21 20 24.8
H14A Leadore 70.88 46 ⇓P **P 21 03 46.1 -0.7**
baz=71,SNR=72
TIRR Tirgusor 70.88 314 ⇑P **P 21 03 46.7 -0.1**
TIRR Tirgusor 70.88 314 *e*P **P 21 03 45.1 -1.7**
comp=Z,18nm,0.6s,mb4.9
TIRR Tirgusor 70.88 314 ⇑*i*P **P 21 03 46.7 -0.1**
F16A Kennard Place, 70.92 44 ⇓P **P 21 03 46.9 0.0**
baz=71,SNR=95
G15A Dillon 70.93 45 ⇑P **P 21 03 47.2 +0.1**
baz=71,SNR=379
J12A Stokes Ranch, 70.95 48 ⇓P **P 21 03 47.5 +0.2**
baz=71,SNR=71
BMR Baia Mare 70.96 319 ⇓*i*P **P 21 03 47.9 +0.7**
CRVS Cervenica-Dubn 70.98 321 *e*P **P 21 03 47.4 +0.1**
CRVS pmax pmax
comp=Z,28nm,1.0s,mb4.8
CRVS Cervenica-Dubn 70.98 321 *e*P **P 21 03 47.4 +0.1**
comp=Z,28nm,1.0s,mb4.8
CRVS *e*PP pP 21 04 57.3 +0.3
CRVS *e*S S 21 12 33.2 -4.0
CRVS *e*SS sS 21 14 37.2 -3.0
CRVS Cervenica-Dubn 70.98 321 *e*P **P 21 03 47.4 +0.1**
CRVS *ep*P pP 21 04 57.3 +0.3
CRVS *e*S S 21 12 33.2 -4.0
CRVS *es*S sS 21 14 37.2 -3.0
MCMT McKenzie Canyo 70.99 45 *e*P **P 21 03 47.8 +0.4**
comp=Z,32nm,0.8s,mb5.0
I13A Wildhorse Cree 70.99 46 ⇑P **P 21 03 47.8 +0.3**
baz=71,SNR=485
BOZ Bozeman (W) 71.01 44 ⇑P **P 21 03 47.9 +0.3**
baz=71,SNR=304
BOZ Bozeman (W) 71.01 44 *e*P **P 21 03 48.1 +0.5**
BOZ pmax pmax
comp=Z,161nm,1.0s,mb5.6
BOZ Bozeman (W) 71.01 44 *e*P **P 21 03 48.1 +0.5**
comp=Z,161nm,1.0s,mb5.6
L10A Juniper Basin 71.04 49 ⇓P **P 21 03 48.2 +0.4**
baz=71,SNR=79
TRPA Tarpa 71.07 320 ⇓*i*P **P 21 03 48.0 +0.2**
HLID Hailey 71.09 47 ⇑P **P 21 03 48.4 +0.3**
baz=71,SNR=67
HLID Hailey 71.09 47 *e*P **P 21 03 48.6 +0.6**
comp=Z,31nm,0.7s,mb5.0
NIE Niedzica 71.10 322 *i* P **P 21 03 48.7 +0.7**
NIE *ep*P pP 21 05 00.9 +3.2
WCN Washoe City 71.14 53 ⇑P **P 21 03 48.1 -0.4**
baz=71,SNR=50
CVD Cernavoda 71.17 314 ⇑P **P 21 03 49.4 +0.8**
CVD Cernavoda 71.17 314 ⇑*i*P **P 21 03 49.3 +0.7**
XMAS Kiritimati 71.18 107 *e*P **P 21 03 48.8 -0.2**
comp=Z,195nm,0.9s,mb5.7
E18A Harlowton 71.18 42 ⇑P **P 21 03 48.7 +0.2**
baz=71,SNR=104
EIDS Eidsvold 71.22 167 *e*P **P 21 03 48.9 0.0**
comp=Z,186nm,1.1s,mb5.6
G16A Moss Hill, Enn 71.22 44 ⇑P **P 21 03 49.0 +0.2**
baz=71,SNR=159
H15A Lima 71.24 45 ⇓P **P 21 03 48.7 -0.3**
baz=71,SNR=35
F17A Fitzpatrick Pl 71.30 43 ⇑P **P 21 03 49.8 +0.5**
baz=71,SNR=207
AMRR Amara 71.31 315 P **P 21 03 50.6 +1.2**
AMRR Amara 71.31 315 ⇓*i*P **P 21 03 50.0 +0.6**
I14A Mackay 71.32 46 ⇑P **P 21 03 48.9 -0.5**
baz=71,SNR=85
J13A Cove Ranch, Pi 71.33 47 ⇓P **P 21 03 50.2 +0.7**
baz=71,SNR=193
L11A Cat Creek Ranc 71.36 49 ⇑P **P 21 03 50.3 +0.6**
baz=71,SNR=172
MLR Muntele Rosu 71.37 316 ⇑*i*P **P 21 03 50.0 +0.3**
BR131 Keskin Array S 71.38 308 *e*P **P 21 03 49.9 +0.1**
comp=Z,36nm,0.6s,mb5.2
BRTR Keskin Array B 71.38 308 P **P 21 03 50.1 +0.2**
comp=Z,65nm,0.7s,mb5.4,baz=73,slow=2.4,SNR=99
BRTR PKPPKP 21 31 37.3

comp=Z,1.2nm,0.9s,baz=178,slow=9.3,SNR=3.9
M10A I.L. Ranch, Tu 71.39 50 ⇓P P 21 03 50.6 +0.7
baz=71,SNR=126
KUZU Kuzuini 71.42 304⇑ i P P 21 03 50.9 +0.8
RUE Ruedersdorf 71.43 328 eP P 21 03 49.8 -0.1
comp=Z,228nm,1.0s,mb5.8
RUE eS S 21 12 39.7 -2.4
K12A Draper Farm, C 71.48 48 ⇓P P 21 03 50.1 -0.3
baz=71,SNR=118
RAC Raciborz 71.51 324 eP P 21 03 51.1 +0.7
RAC e*PP pP 21 05 02.7 +2.5
RAC eS S 21 12 43.8 +0.7
BSEG Bad Segeberg 71.54 330 eP P 21 03 50.4 -0.1
comp=Z,140nm,0.9s,mb5.6
BSEG eS S 21 12 42.0 -1.3
PSN Preselentsi 71.55 314 P P 21 03 53.4 +2.6
CMB Columbia Colle 71.64 54 eP P 21 03 51.6 +0.1
CMB pmax pmax
comp=Z,234nm,1.1s,mb5.7
CMB Columbia Colle 71.64 54 eP P 21 03 51.6 +0.1
comp=Z,234nm,1.1s,mb5.7
SGKT Sivrigoynuk 71.67 309 i P P 21 03 51.6 0.0
G17A Pierce Place, 71.68 44 ⇑P P 21 03 52.2 +0.7
baz=71,SNR=75
KSP Ksiaz 71.71 325 eP P 21 03 51.8 +0.1
KSP ePcP 21 03 55.2
KSP epP pP 21 05 04.2 +2.8
KSP eS S 21 12 44.3 -1.1
KSP Ksiaz 71.71 325⇑ i P P 21 03 51.6 0.0
KSP e*PP pP 21 05 02.5 +1.1
KSP eS S 21 12 43.3 -2.1
KSP e 21 13 23.6
KSP Ksiaz 71.71 325⇑ i P P 21 03 51.6 0.0
KSP epP pP 21 05 02.5 +1.1
KSP eS S 21 12 43.3 -2.1
KSP eSKS 21 13 23.6
KSP eSS sS 21 14 43.7 -5.0
OKC Ostrava-Krasne 71.72 323 eP P 21 03 51.9 +0.2
OKC e*PP pP 21 05 03.9 +2.4
OKC e 21 05 37.0
OKC e 21 08 18.1
OKC eS S 21 12 45.7 +0.2
OKC Ostrava-Krasne 71.72 323 eP P 21 03 51.9 +0.2
OKC epP pP 21 05 03.9 +2.4
OKC e 21 05 37.0
OKC e 21 08 18.1
OKC e 21 09 58.3
OKC eS S 21 12 45.7 +0.2
OKC e 21 22 41.3
OKC Ostrava-Krasne 71.72 323 eP P 21 03 51.9 +0.2
OKC epP pP 21 05 03.9 +2.4
OKC ex x 21 05 37.0
OKC ex x 21 08 18.1
OKC ex x 21 09 58.3
OKC eS S 21 12 45.7 +0.2
OKC ex x 21 22 41.3
J14A Carey 71.72 47 ⇓P P 21 03 52.9 +1.1
baz=71,SNR=228
KECS Kecovo 71.73 321 eP P 21 03 52.0 +0.2
comp=Z,12nm,0.8s,mb4.6
KECS Kecovo 71.73 321 eP P 21 03 52.0 +0.2
F18A Big Timber 71.75 43 ⇑P P 21 03 51.6 -0.4
baz=71,SNR=262
I15A Monteview 71.76 46 ⇓P P 21 03 52.3 +0.2
baz=71,SNR=21
L12A House Creek Ra 71.77 48 P P 21 03 52.6 +0.5
baz=72,SNR=116
BMN Battle Mountai 71.78 51 eP P 21 03 52.8 +0.6
BMN pmax pmax
comp=Z,100nm,0.8s,mb5.5
BMN Battle Mountai 71.78 51 eP P 21 03 52.8 +0.6
comp=Z,100nm,0.8s,mb5.5
BBAL Bala 71.80 308 i P P 21 03 52.5 +0.1
SULR 71.81 316⇓ i P P 21 03 52.3 0.0
ORE Reay 71.84 340 eP P 21 03 52.1 -0.1
ORE Reay 71.84 340 P P 21 03 52.1 -0.1
VOIR 71.85 317 P P 21 03 53.0 +0.4
VOIR 71.85 317⇓ i P P 21 03 52.9 +0.4
M11A Holland Ranch, 71.86 49 ⇓P P 21 03 53.8 +1.2
baz=72,SNR=110
GCMT Greycliff 71.86 43 eP P 21 03 53.2 +0.6
comp=Z,149nm,0.9s,mb5.6
GCMT e pP 21 05 07.4 +5.0
NOUC Port Laguerre 71.88 152 eP P 21 03 52.8 -0.1
H16A Russell Place, 71.88 44 ⇓P P 21 03 53.2 +0.5
baz=72,SNR=186
SAO San Andreas Ge 71.89 56 eP P 21 03 52.4 -0.6
SAO pmax pmax
comp=Z,36nm,0.8s,mb5.0
SAO San Andreas Ge 71.89 56 eP P 21 03 52.4 -0.5
comp=Z,36nm,0.8s,mb5.0
DZM Mont Dzumac 71.89 152 eP P 21 03 55.9 +2.9
comp=Z,512nm,1.1s,mb6.1
DZM Mont Dzumac 71.89 152 eP P 21 03 53.3 +0.3
K13A Stover Farm, H 71.90 47 ⇓P P 21 03 53.7 +0.8
baz=72,SNR=28
LIKS Likavka 71.90 322 eP P 21 03 53.3 +0.5
LIKS pmax pmax
comp=Z,61nm,0.8s,mb5.3
LIKS Likavka 71.90 322 eP P 21 03 53.3 +0.5
comp=Z,61nm,0.8s,mb5.3
LIKS Likavka 71.90 322 eP P 21 03 53.3 +0.5
N10A Dunphy 71.97 50 ⇓P P 21 03 53.3 0.0
baz=72,SNR=11
DRGR 71.97 319 ⇓P P 21 03 53.5 +0.3
DRGR 71.97 319⇓ i P P 21 03 53.5 +0.3
SIBR Sibiu 72.00 317⇑ i P P 21 03 53.2 -0.2
MORC Moravsky Berou 72.02 324 P P 21 03 53.8 +0.3
MORC Moravsky Berou 72.02 324⇑ i P P 21 03 53.6 +0.2
YMR Madison River 72.04 44 eP P 21 03 54.7 +1.1
comp=Z,224nm,1.0s,mb5.8
DPC Dobruska-Polom 72.08 325 eP P 21 03 54.3 +0.5
DPC e*PP pP 21 05 06.9 +3.2
DPC e 21 05 39.9
DPC eS S 21 12 49.5 -0.1
DPC Dobruska-Polom 72.08 325 eP P 21 03 54.3 +0.5
DPC epP pP 21 05 06.9 +3.2
DPC e 21 05 39.9
DPC e 21 10 01.7
DPC eS S 21 12 49.5 -0.1
DPC e 21 22 25.7
DPC Dobruska-Polom 72.08 325 eP P 21 03 54.3 +0.5
DPC epP pP 21 05 06.9 +3.2
DPC ex x 21 05 39.9
DPC ex x 21 10 01.7
DPC eS S 21 12 49.5 -0.1
DPC ex x 21 22 25.7
UPC Upice 72.08 325 eP P 21 03 54.0 +0.2
UPC epP pP 21 05 06.6 +2.9
HLG Helgoland 72.17 332 eP P 21 03 54.4 +0.1
comp=Z,405nm,0.8s,mb6.1
HLG eS S 21 12 48.2 -2.3
J15A Blackfoot 72.22 46 ⇑P P 21 03 55.4 +0.6
baz=72,SNR=109
YURE YUREGIR 72.23 304 i P P 21 03 55.3 +0.3
G18A Lazy EL Ranch, 72.26 43 ⇑P P 21 03 54.6 -0.4
baz=72,SNR=32
YFT Old Faithful 72.26 44 eP P 21 03 56.8 +1.8
comp=Z,226nm,0.8s,mb5.8
O10A Cortez Mining, 72.27 50 ⇓P P 21 03 56.0 +0.9
baz=72,SNR=18
N11A Elko Archery C 72.31 50 ⇑P P 21 03 55.7 +0.3
baz=72,SNR=6.9
M12A Wells 72.33 49 ⇑P P 21 03 56.3 +0.8
baz=72,SNR=104
I16A Newdale 72.35 45 ⇑P P 21 03 56.7 +1.1
baz=72,SNR=226
RSC Scourie 72.35 340⇑ eP P 21 03 55.3 +0.1
RSC Scourie 72.35 340 P P 21 03 55.3 +0.1
L13A Double Diamond 72.37 48 ⇓P P 21 03 56.5 +0.8
baz=72,SNR=41
DGMT Dagmar 72.38 38 ⇓P P 21 03 54.8 -0.8
baz=72,SNR=172
DGMT Dagmar 72.38 38 eP P 21 03 55.0 -0.6
comp=Z,320nm,0.6s,mb6.1
LKWY Lake 72.39 44 eP P 21 03 57.4 +1.6
LKWY pmax pmax
comp=Z,105nm,0.8s,mb5.5
LKWY Lake 72.39 44 eP P 21 03 57.4 +1.7
comp=Z,105nm,0.8s,mb5.5
GULE Gulek 72.41 305⇑ i P P 21 03 56.7 +0.7
PSZ Piszkesteto 72.41 321 ⇓P P 21 03 56.2 +0.4
PSZ Piszkesteto 72.41 321⇑ eP P 21 03 56.4 +0.6
PSZ Piszkesteto 72.41 321⇓ i P P 21 03 56.2 +0.4
H17A Grant Village 72.43 44 ⇓P P 21 03 57.8 +1.8
baz=72,SNR=109
VYHS Vyhne 72.44 322 eP P 21 03 56.3 +0.3
comp=Z,18nm,0.9s,mb4.7
VYHS ePP pP 21 05 05.7 -0.2
VYHS eS S 21 12 49.9 -3.8
VYHS eSS sS 21 14 49.7 -7.6
VYHS Vyhne 72.44 322 eP P 21 03 56.3 +0.3
VYHS epP pP 21 05 05.7 -0.2
VYHS eS S 21 12 49.9 -3.8
VYHS e 21 14 49.7
K14A Jones Ranch, D 72.45 47 ⇓P P 21 03 56.8 +0.7
baz=72,SNR=178
YAYL Yayladag 72.49 304⇑ i P P 21 03 57.2 +0.8
MVH1 Achvaich 72.49 340⇑ eP P 21 03 56.0 -0.1
MVH1 Achvaich 72.49 340 P P 21 03 56.0 -0.1
RLMT Red Lodge 72.54 43 ⇑P P 21 03 56.9 +0.3
baz=72,SNR=144
RLMT Red Lodge 72.54 43 eP P 21 03 57.0 +0.3
comp=Z,490nm,1.5s,mb5.9
DEV Deva 72.55 318 ⇓P P 21 03 57.2 +0.5
DEV Deva 72.55 318⇓ i P P 21 03 57.2 +0.5
NVAR Mina Array Bea 72.56 53 P P 21 03 57.5 +0.7
comp=Z,108nm,0.6s,mb5.6,baz=294,slow=4.9,SNR=328
MCD Coleburn Disti 72.56 339 eP P 21 03 56.1 -0.4
MCD Coleburn Disti 72.56 339 P P 21 03 56.1 -0.4
IMW Indian Meadow 72.61 45 eP P 21 03 58.0 +0.9
comp=Z,291nm,1.3s,mb5.8
BRG Berggiesshubel 72.62 326 eP P 21 03 56.7 -0.3
comp=Z,232nm,1.7s,mb5.5
BRG eS S 21 12 54.0 -1.7
BRG Berggiesshubel 72.62 326 i P P 21 03 56.7 -0.3
comp=Z,23nm,0.8s,mb4.9
BRG i 21 03 59.7
comp=Z,74nm,0.6s
BRG i pP pP 21 05 10.9 +4.0
comp=Z,33nm,0.9s
BRG i 21 06 40.6
BRG S S 21 12 54.0 -1.7
MSVF Nonsavu 72.63 139 eP P 21 03 59.7 +2.3
comp=Z,311nm,1.2s,mb5.8
MSVF Nonsavu 72.63 139 P P 21 04 00.1 +2.7
comp=Z,1µm,1.3s,mb6.4,SNR=12
ELK Elko 72.63 49 eP P 21 03 57.6 +0.4
ELK pmax pmax
comp=Z,43nm,0.6s
ELK Elko 72.63 49 eP P 21 03 57.6 +0.4
CLL Collm 72.65 327 eP P 21 03 56.6 -0.5
comp=Z,247nm,0.7s,mb6.0
CLL eS S 21 12 53.6 -2.4
CLL Collm 72.65 327 i P P 21 03 56.7 -0.4
CLL i *PP pP 21 05 09.4 +2.3
CLL eS S 21 12 51.0 -5.0
CLL e 21 13 36.0
CLL pmax pmax
comp=Z,247nm,0.7s,mb6.0
CLL Collm 72.65 327 i P P 21 03 56.7 -0.4
comp=Z,247nm,0.7s,mb6.0
CLL i pP pP 21 05 09.4 +2.3
CLL eS S 21 12 51.0 -5.0
CLL eScS ScS 21 13 36.0 +1.7
CLL esS sS 21 15 01.0 +1.4
CLL Collm 72.65 327 i P P 21 03 56.7 -0.4
comp=Z,247nm,0.7s,mb6.0
CLL e 21 04 18.0
CLL i pP pP 21 05 09.4 +2.3
comp=Z,99nm,0.9s
CLL esP sP 21 05 48.0 +7.9
CLL epPP 21 07 45.0
CLL esPP 21 08 22.0
CLL ePPPP 21 09 39.0
CLL esPPP 21 10 08.0
CLL eS S 21 12 51.0 -5.0
comp=N,700nm,24.3s
CLL eS S 21 12 51.0 -5.0
comp=E,800nm,25.0s
CLL i SP 21 13 24.4
CLL eScS ScS 21 13 36.0 +1.7
CLL e 21 14 23.0
CLL esS sS 21 15 01.0 +1.4
CLL esScS 21 15 56.0
CLL eSS SS 21 17 30.0 -11
CLL e(SSS) 21 20 44.0
CLL i 21 22 27.0
comp=Z,12nm,2.0s
CLL esSSS 21 22 46.0
CLL i SKKPdf 21 26 21.7
CLL LmV 21 39 00.0
comp=Z,800nm,19.7s
PVCC Panska Ves 72.65 326 eP P 21 03 57.5 +0.4
PVCC e*PP pP 21 05 10.1 +3.0
PVCC e 21 05 43.3
PVCC eS S 21 12 55.9 -0.1
PVCC Panska Ves 72.65 326 eP P 21 03 57.5 +0.4
PVCC epP pP 21 05 10.1 +3.0
PVCC e 21 05 43.3
PVCC e 21 10 06.0
PVCC eS S 21 12 55.9 -0.1
PVCC e 21 22 47.9
PVCC Panska Ves 72.65 326 eP P 21 03 57.5 +0.4
PVCC epP pP 21 05 10.1 +3.0
PVCC ex x 21 05 43.3
PVCC ex x 21 10 06.0
PVCC eS S 21 12 55.9 -0.1
PVCC ex x 21 22 47.9
N12A Clover Valley, 72.67 49 ⇑P P 21 03 58.0 +0.5
baz=72,SNR=206
N12A Clover Valley, 72.67 49 eP P 21 03 58.2 +0.8
comp=Z,172nm,0.6s,mb5.9
K15A Arbon 72.68 47 ⇑P P 21 03 58.2 +0.8
baz=72,SNR=42
DCID1 Drake Creek 72.71 45 eP P 21 03 59.1 +1.5
comp=Z,251nm,1.1s,mb5.8
J16A Bone 72.72 46 ⇓P P 21 03 58.4 +0.7
baz=72,SNR=121
MME1 Meikle Cairn 72.73 339 eP P 21 03 56.2 -1.2
MME1 Meikle Cairn 72.73 339 P P 21 03 56.2 -1.2
P10A Eureka 72.76 51 ⇑P P 21 03 58.6 +0.6
baz=72,SNR=49
M13A Montello 72.77 48 ⇑P P 21 03 58.4 +0.3
baz=72,SNR=184
M13A Montello 72.77 48 eP P 21 03 58.5 +0.5
comp=Z,142nm,1.0s,mb5.5
VRAC Vranov 72.77 324 ⇓P P 21 03 58.3 +0.4
VRAC Vranov 72.77 324⇓ i P P 21 03 58.3 +0.4
NRDL Niedersach Rie 72.78 329 eP P 21 03 57.5 -0.3
comp=Z,106nm,0.8s,mb5.5
NRDL eS S 21 12 55.3 -2.1
I17A Pilgrim Ck. 72.78 45 ⇓P P 21 03 59.1 +1.1
baz=72,SNR=34
L14A Malta 72.78 47 ⇓P P 21 03 58.7 +0.7
baz=72,SNR=107
MLAC Mammoth Lakes 72.81 54 ⇑P P 21 03 58.8 +0.5
baz=72,SNR=16
LAO LASA Array 72.81 40 eP P 21 03 58.4 +0.2
comp=Z,212nm,1.1s,mb5.7
RRI2 Red Ridge 72.82 45 eP P 21 03 59.1 +0.8
comp=Z,229nm,0.9s,mb5.8
RRI2 e pP 21 05 14.5 +6.2
O11A Cowboy Ranch, 72.84 50 ⇑P P 21 03 58.8 +0.4
baz=72,SNR=43
TPAW Teton Pass 72.90 45 eP P 21 03 59.9 +1.1
comp=Z,70nm,0.7s,mb5.4
RRR Rubha Reidh 72.95 340 eP P 21 03 58.2 -0.5
RRR Rubha Reidh 72.95 340 P P 21 03 58.2 -0.5
MDO Dochfour 72.97 340⇑ eP P 21 03 58.7 -0.2
MDO Dochfour 72.97 340 P P 21 03 58.7 -0.2
GZR Gura Zlata 72.97 318 ⇓P P 21 03 59.3 +0.2
GZR Gura Zlata 72.97 318⇓ i P P 21 03 59.3 +0.2
LOHW Long Hollow 72.99 45 eP P 21 03 59.9 +0.6
comp=Z,199nm,1.4s,mb5.5
LOHW e pP 21 05 13.4 +4.1
ZIMR 72.99 315 ⇓P P 21 04 00.1 +0.9
ZIMR 72.99 315⇓ i P P 21 04 00.1 +0.9
SNOW Snow King Moun 73.02 45 eP P 21 04 00.5 +1.0
comp=Z,60nm,0.6s,mb5.4
REDW Red Top Meadow 73.04 45 eP P 21 04 00.4 +0.8
comp=Z,52nm,0.7s,mb5.3
REDW e pP 21 05 14.2 +4.6
K16A Soda Springs 73.06 46 ⇑P P 21 04 00.7 +1.1
baz=73,SNR=71
PRA Prague 73.06 326 P P 21 04 00.0 +0.4
PRA pP pP 21 05 12.0 +2.4
PRA S S 21 13 03.0 +2.3
PRA XS sS 21 15 08.0 +3.5
ESKT Eskisehir 73.07 309 i P P 21 03 59.2 -0.6
PRU Pruhonice 73.08 325 eP P 21 04 00.5 +0.8
PRU e*PP pP 21 05 12.8 +3.0
PRU e 21 05 46.3
PRU e 21 08 29.7
PRU eS S 21 13 02.0 +1.1
PRU Pruhonice 73.08 325 eP P 21 04 00.5 +0.8
PRU epP pP 21 05 12.8 +3.0
PRU e 21 05 46.3
PRU e 21 08 29.7
PRU e 21 10 11.1
PRU eS S 21 13 02.0 +1.1
PRU e 21 22 42.3
PRU Pruhonice 73.08 325 eP P 21 04 00.5 +0.8
PRU epP pP 21 05 12.8 +3.0
PRU ex x 21 05 46.3
PRU ex x 21 08 29.7
PRU ex x 21 10 11.1
PRU eS S 21 13 02.0 +1.1
PRU ex x 21 22 42.3
RRH Rhenigidale 73.10 341 eP P 21 03 59.3 -0.3
RRH Rhenigidale 73.10 341 P P 21 03 59.3 -0.3
M14A Sheep Mountain 73.10 48 P P 21 04 00.7 +0.7
baz=73,SNR=192
N13A Wendover, West 73.11 49 ⇓P P 21 04 00.7 +0.7
baz=73,SNR=40
N13A Wendover, West 73.11 49 eP P 21 04 00.7 +0.7
comp=Z,170nm,0.8s,mb5.7
WHFO Wadi Hawf 73.11 279 P P 21 03 59.9 -0.4
SNR=7.6
WHFO P 21 03 59.9
SNR=7.6
J17A Brown Place, J 73.11 45 ⇑P P 21 04 00.7 +0.7
baz=73,SNR=54
KAC Achnashellach 73.14 340 eP P 21 03 59.3 -0.6
KAC Achnashellach 73.14 340 P P 21 03 59.3 -0.6
P11A Circle Ranch, 73.19 51 ⇓P P 21 04 00.3 -0.3
baz=73,SNR=17
HVU Hansel Valley 73.20 47 eP P 21 04 00.7 +0.2
HVU pmax pmax
comp=Z,36nm,0.6s,mb5.2
HVU Hansel Valley 73.20 47 eP P 21 04 00.7 +0.2
comp=Z,36nm,0.6s,mb5.2
CLZ Clausthal 73.21 329 eP P 21 04 00.5 +0.1
comp=Z,309nm,0.7s,mb6.0
CLZ eS S 21 13 00.5 -1.7
JMB Yambol 73.23 314 P P 21 04 01.4 +0.7
JMB Yambol 73.23 314 P P 21 04 01.5 +0.8
O12A Currie 73.24 50 ⇑P P 21 04 00.9 +0.1
baz=73,SNR=103
TREC Trest 73.24 325 eP P 21 04 00.9 +0.3
TREC e*PP pP 21 05 13.8 +3.1
TREC e 21 08 30.4
TREC eS S 21 13 03.4 +0.7
TREC Trest 73.24 325 eP P 21 04 00.9 +0.3
TREC epP pP 21 05 13.8 +3.1
TREC ex x 21 05 46.3
TREC ex x 21 08 30.4
TREC ex x 21 10 10.0
TREC eS S 21 13 03.4 +0.7
TREC ex x 21 22 56.7
L15A Malad City 73.24 47 ⇓P P 21 04 01.1 +0.4
baz=73,SNR=119
I18A Diamond G Ranc 73.31 44 ⇓P P 21 04 01.8 +0.7
baz=73,SNR=53
PVL Pavlikeni 73.32 315 P P 21 04 02.4 +1.2
AHID Auburn Hatcher 73.35 46 eP P 21 04 01.8 +0.4
comp=Z,64nm,0.8s,mb5.3
Q10A Clear Creek Ra 73.35 52 ⇓P P 21 04 01.7 +0.3
baz=73,SNR=58
BZS Buzias 73.35 319 P P 21 04 01.2 -0.1
BZS Buzias 73.35 319⇓ i P P 21 04 01.1 -0.2
KPL Plockton 73.38 340 eP P 21 04 01.1 -0.2
KPL AMb AMB 21 04 04.5
comp=Z,132nm,1.0s,mb5.5
KPL Plockton 73.38 340 P P 21 04 01.1 -0.2
KPL AMb AMB 21 04 04.5
comp=Z,132nm,1.0s,mb5.5
ZST Bratislava 73.42 323 eP P 21 04 02.6 +1.0
ZST pmax pmax
comp=Z,25nm,1.0s,mb4.8
ZST Bratislava 73.42 323 eP P 21 04 02.6 +1.0
comp=Z,25nm,1.0s,mb4.8
ZST ePP pP 21 05 15.1 +3.3
ZST eS S 21 13 04.0 -0.7
ZST Bratislava 73.42 323 eP P 21 04 02.6 +1.0
ZST epP pP 21 05 15.0 +3.2
ZST eS S 21 13 04.0 -0.7
KSB Sheil Bridge 73.44 340 eP P 21 04 00.5 -1.1
KSB Sheil Bridge 73.44 340 P P 21 04 00.5 -1.1
K17A Gardner Place, 73.45 46 ⇓P P 21 04 02.2 +0.2
baz=73,SNR=15
RCTC Rector, Farmer 73.50 55 ⇑P P 21 04 03.2 +0.8
baz=73,SNR=16
FKH Fakeheh 73.55 302 eP P 21 04 03.5 +0.9
ULDT Uludag 73.56 311 i P P 21 04 02.5 -0.2
TANN Tannenbergstha 73.57 327 eP P 21 04 02.3 -0.2
comp=Z,79nm,1.2s,mb5.2
TANN eS S 21 13 05.0 -1.3
J18A Kendall Valley 73.57 45 ⇑P P 21 04 03.1 +0.4
baz=73,SNR=74
M15A Larsen Ranch, 73.60 47 ⇓P P 21 04 03.0 +0.1
baz=73,SNR=92
N14A Grayback Hills 73.65 48 ⇓P P 21 04 03.7 +0.5
baz=73,SNR=162
BGU Big Grassy Mou 73.68 48 eP P 21 04 03.6 +0.2
comp=Z,225nm,1.4s,mb5.6
MOX Moxa 73.71 327 eP P 21 04 02.9 -0.4
comp=Z,106nm,1.1s,mb5.4
MOX e pP 21 05 17.6 +4.1
MOX eS S 21 13 09.0 +1.2
MOX
comp=Z,500nm,19.0s
MOX Moxa 73.71 327 eP P 21 04 03.2 -0.1
comp=Z,145nm,1.2s,mb5.5
MOX eS S 21 13 06.1 -1.7
SPUT South Promonto 73.71 47 eP P 21 04 04.0 +0.5
comp=Z,100nm,1.0s,mb5.4
P12A McGill 73.71 50 ⇓P P 21 04 04.1 +0.6
baz=73
NKC Novy Kostel 73.72 327 eP P 21 04 03.8 +0.5
NKC e*PP pP 21 05 17.5 +4.0
NKC e 21 05 49.3
NKC eS S 21 13 08.0 +0.1
NKC Novy Kostel 73.72 327 eP P 21 04 03.8 +0.5
NKC epP pP 21 05 17.5 +4.0
NKC e 21 05 49.3
NKC e 21 10 14.3
NKC eS S 21 13 08.0 +0.1
NKC e 21 23 13.1
NKC Novy Kostel 73.72 327 eP P 21 04 03.8 +0.5
NKC epP pP 21 05 17.5 +4.0
NKC ex x 21 05 49.3
NKC ex x 21 10 14.3
NKC eS S 21 13 08.0 +0.1
NKC ex x 21 23 13.1
WIT Witteveen 73.72 331⇑ i P P 21 04 03.8 +0.4
comp=Z,325nm,1.1s,mb5.9
WIT Witteveen 73.72 331 *i* pP pP 21 05 17.1 +3.6
comp=Z,580nm,2.9s
L16A Fish Haven 73.73 46 ⇓P P 21 04 03.9 +0.3
baz=73,SNR=21
O13A Hicks Ranch, I 73.74 49 ⇑P P 21 04 04.1 +0.4
baz=73,SNR=22
SMMC Simmler 73.74 56 ⇑P P 21 04 04.1 +0.4
baz=74,SNR=18
Q11A Duckwater 73.75 51 ⇓P P 21 04 03.7 -0.1
baz=73,SNR=54
IBBN Ibbenburen 73.76 331 eP P 21 04 03.2 -0.4
comp=Z,189nm,0.8s,mb5.8
IBBN eS S 21 13 05.1 -3.3
R10A Warm Springs 73.78 52 ⇓P P 21 04 04.0 +0.1
baz=74,SNR=78
KAR1 Arisaig 73.80 340 eP P 21 04 03.4 -0.2
KAR1 Arisaig 73.80 340 P P 21 04 03.4 -0.2
EBH Black Hill 73.81 339⇑ eP P 21 04 03.7 -0.1
EBH e pP 21 05 17.1 +3.1
EBH Black Hill 73.81 339 P P 21 04 03.7 -0.1
EBH pP 21 05 17.1 +3.1
ESY Stoneypath 73.87 338 eP P 21 04 02.9 -1.2
ESY Stoneypath 73.87 338 P P 21 04 02.9 -1.2

S10A **Tonopah Range,** 73.88 52 ⇑P P 21 04 04.7 +0.2
baz=74,SNR=148
L17A **Cokeville** 73.95 46 ⇓P P 21 04 04.9 +0.1
baz=74,SNR=107
HWUT **Hardware Ranch** 73.95 47 eP P 21 04 05.4 +0.6
comp=Z,188nm,1.0s,mb5.7
N15A **Stansbury Isla** 73.97 48 ⇓P P 21 04 05.6 +0.6
baz=74
K18A **Toltan Ranch,** 73.98 45 ⇑P P 21 04 05.2 +0.2
baz=74,SNR=109
EDI **Edinburgh** 74.02 338 eP P 21 04 04.2 -0.8
EDI **Edinburgh** 74.02 338 P P 21 04 04.2 -0.8
Q12A **Willow Creek R** 74.06 50 ⇑P P 21 04 04.8 -0.7
baz=74,SNR=110
EAB **Aberfoyle** 74.08 339⇑eP P 21 04 04.5 -0.8
EAB e pP 21 05 18.8 +3.1
EAB **Aberfoyle** 74.08 339 P P 21 04 04.5 -0.8
EAB pP 21 05 18.8 +3.1
GRAC **Grapevine Rang** 74.09 53 P P 21 04 06.7 +1.0
baz=74,SNR=87
GDZ **Gediz** 74.12 310⇑iP P 21 04 05.9 0.0
BW06 **Boulder Array** 74.13 45 ⇓P P 21 04 05.7 -0.2
baz=74,SNR=369
BW06 **Boulder Array** 74.13 45 eP P 21 04 05.9 0.0
comp=Z,78nm,1.2s,mb5.2
BW06 e pP 21 05 18.6 +2.5
PDAR **Pinedale Array** 74.13 45 P P 21 04 06.0 +0.1
comp=Z,158nm,0.6s,mb5.8,baz=339,slow=1.1,SNR=593
PDAR PKPPKP 21 31 33.1
comp=Z,1.4nm,1.1s,baz=106,slow=3.2,SNR=4.5
PKM **Peak Mountain** 74.14 56 ⇑P P 21 04 06.2 +0.1
baz=74,SNR=43
R11A **Troy Canyon, C** 74.14 51 ⇑P P 21 04 04.8 -1.2
baz=74,SNR=139
KHC **Kasperske Hory** 74.14 325 eP P 21 04 06.3 +0.5
KHC e 21 04 12.0
KHC e*PP pP 21 05 19.2 +3.1
KHC e 21 05 51.1
KHC e 21 08 38.8
KHC **Kasperske Hory** 74.14 325 eP P 21 04 06.3 +0.5
KHC e 21 04 12.0
KHC epP pP 21 05 19.2 +3.1
KHC e 21 05 51.1
KHC e 21 08 38.8
KHC e 21 10 18.0
KHC eS S 21 13 13.6 +0.9
KHC e 21 22 26.8
KHC **Kasperske Hory** 74.14 325 eP P 21 04 06.3 +0.5
KHC ex x 21 04 12.0
KHC epP pP 21 05 19.2 +3.1
KHC ex x 21 05 51.1
KHC ex x 21 08 38.8
KHC ex x 21 10 18.0
KHC eS S 21 13 13.6 +0.9
KHC ex x 21 22 26.8
CONA **Conrad Observa** 74.15 323 iP P 21 04 06.7 +0.8
comp=Z,88nm,0.6s,mb5.5,SNR=172
EAU **Auchinoon** 74.16 338⇑eP P 21 04 05.6 -0.1
EAU **Auchinoon** 74.16 338 P P 21 04 05.6 -0.1
UBBA **Unterbreitzbach** 74.17 328 eP P 21 04 05.9 -0.1
comp=Z,306nm,1.8s,mb5.6
UBBA eS S 21 13 10.9 -2.1
P13A **Bates Ranch, G** 74.21 50 ⇓P P 21 04 06.6 +0.3
baz=74,SNR=160
BHL **Bhannes** 74.22 302 eP P 21 04 06.3 -0.3
PKSM **Moragy** 74.27 321⇑iP P 21 04 05.8 -0.8
DUG **Dugway** 74.32 48 ⇓P P 21 04 07.3 +0.3
baz=74,SNR=161
DUG **Dugway** 74.32 48 eP P 21 04 07.6 +0.6
DUG pmax pmax
comp=Z,184nm,1.1s,mb5.6
DUG **Dugway** 74.32 48 eP P 21 04 07.6 +0.6
comp=Z,184nm,1.1s,mb5.6
GEC2 **GERESS Array S** 74.32 325 eP P 21 04 06.8 -0.1
comp=Z,80nm,0.7s,mb5.5
GEC2 eS S 21 13 14.6 -0.1
NOQ **North Oquirrh** 74.36 48 eP P 21 04 08.0 +0.8
comp=Z,98nm,0.6s,mb5.6
ULM **Lac du Bonnet** 74.37 32 P P 21 04 06.0 -1.1
comp=Z,237nm,0.6s,mb6.0,baz=322,slow=6.5,SNR=108
WTSB **Winterswijk** 74.38 331⇑iP P 21 04 06.7 -0.4
comp=Z,56nm,1.1s,mb5.1
WTSB **Winterswijk** 74.38 331 iP pP 21 05 19.2 +1.8
comp=Z,153nm,3.0s
ISA **Isabella** 74.39 55 ⇓P P 21 04 05.8 -1.7
baz=74,SNR=49
ISA **Isabella** 74.39 55 eP P 21 04 06.4 -1.1
ISA pmax pmax
comp=Z,78nm,1.0s,mb5.3
ISA **Isabella** 74.39 55 eP P 21 04 06.4 -1.1
comp=Z,78nm,1.0s,mb5.3
PGB **Panagyurishte** 74.39 315 P P 21 04 07.5 +0.1
WET **Wettzell** 74.42 326 eP P 21 04 07.9 +0.5
comp=Z,161nm,0.8s,mb5.7
WET eS S 21 13 15.9 +0.2
RCY **Rachaya** 74.42 302 eP P 21 04 07.8 +0.1
K19A **Absolon Red Bu** 74.44 44 ⇑P P 21 04 07.1 -0.5
baz=74,SNR=31
O15A **The Old Anders** 74.44 48 ⇓P P 21 04 06.1 -1.6
baz=74,SNR=19
ISP **Isparta** 74.45 308 P P 21 04 08.4 +0.6
ISP **Isparta** 74.45 308 P P 21 04 05.5 -2.3
ISP **Isparta** 74.45 308⇓iP P 21 04 07.3 -0.5
PLD **Plovdiv** 74.45 315 P P 21 04 08.3 +0.6
PLD **Plovdiv** 74.45 315 P P 21 04 07.4 -0.3
PGBU **Glenifferbraes** 74.45 339 eP P 21 04 06.7 -0.8
PGBU AMb AMB 21 04 10.9
comp=Z,201nm,0.8s,mb5.8
PGBU **Glenifferbraes** 74.45 339 P P 21 04 06.7 -0.8
PGBU AMb AMB 21 04 10.9
comp=Z,201nm,0.8s,mb5.8
PMSU **Muirshiel** 74.49 339 eP P 21 04 07.7 0.0
PMSU **Muirshiel** 74.49 339 P P 21 04 07.7 0.0
PCA1 **Carrot** 74.49 339 eP P 21 04 07.0 -0.7
PCA1 **Carrot** 74.49 339 P P 21 04 07.0 -0.7
L18A **Fontenelle, Gr** 74.50 46 ⇑P P 21 04 08.3 +0.3
baz=74,SNR=186
M17A **Scullys Gap (B** 74.51 46 ⇑P P 21 04 08.0 -0.1
baz=74,SNR=134
CTU **Camp Tracy** 74.52 48 eP P 21 04 08.4 +0.3
comp=Z,86nm,1.0s,mb5.3
N16A **Rees Ranch, Co** 74.54 47 ⇑P P 21 04 08.6 +0.3
baz=74,SNR=38
S11A **Rachel** 74.55 52 ⇑P P 21 04 08.6 +0.3
baz=74,SNR=65
SVIS **Svilajnac** 74.55 318 P P 21 04 09.6 +1.3
ARVC **Arvin** 74.56 56 ⇑P P 21 04 06.8 -1.6
baz=74,SNR=17
ESK **Eskdalemuir** 74.56 338 eP P 21 04 07.8 -0.3
ESK AMb AMB 21 04 11.2
comp=Z,80nm,0.8s,mb5.4
ESK **Eskdalemuir** 74.56 338 P P 21 04 07.8 -0.3
ESK AMb AMB 21 04 11.2
comp=Z,80nm,0.8s,mb5.4
ESK **Eskdalemuir** 74.56 338 iP P 21 04 08.7 +0.6
ESK **Eskdalemuir** 74.56 338 eP P 21 04 07.7 -0.4
comp=Z,68nm,0.7s,mb5.4
Q13A **Wheeler Ranch,** 74.56 50 ⇓P P 21 04 09.0 +0.6
baz=74,SNR=206
AFI **Afiamalu** 74.57 129 P P 21 04 09.4 +0.7
comp=Z,68nm,0.9s,mb5.3,baz=172,slow=4.9,SNR=7.1
AFI **Afiamalu** 74.57 129 P P 21 04 09.4 +0.7
AFI pmax pmax
comp=Z,68nm,0.9s,mb5.3
P14A **Drum Mountains** 74.62 49 ⇓P P 21 04 09.3 +0.5
baz=74,SNR=46
GRF **Grafenberg Arr** 74.62 327 eP P 21 04 09.0 +0.4
comp=Z,471nm,0.8s,mb6.2
GRF epP pP 21 05 20.6 +1.6
GRF esP sP 21 05 52.1 +0.3
GRF eS S 21 13 17.6 -0.4
GRF **Grafenberg Arr** 74.62 327 eP P 21 04 09.0 +0.4
GRF e*PP pP 21 05 20.6 +1.6
GRF e*SP sP 21 05 52.1 +0.3
GRF eS S 21 13 17.6 -0.4
GRF pmax pmax
comp=Z,471nm,0.8s,mb6.2
ALN **Alexandroupoli** 74.65 313 P P 21 04 08.8 -0.1
ALN **Alexandroupoli** 74.65 313 eP P 21 04 08.9 0.0
BUG **Bochum--Univer** 74.65 330 eP P 21 04 08.3 -0.4
comp=Z,214nm,0.9s,mb5.8
BUG eS S 21 13 16.3 -1.9
ECK **Cauldkaine Hil** 74.66 338 eP P 21 04 07.7 -1.0
ECK **Cauldkaine Hil** 74.66 338 P P 21 04 07.7 -1.0

BALY **Balya** 74.66 311 iP P 21 04 08.1 -0.9
MPMC **Manual Prospec** 74.68 54 ⇓P P 21 04 09.4 +0.3
baz=74,SNR=251
R12A **Pony Springs,** 74.69 51 ⇑P P 21 04 09.6 +0.4
baz=74,SNR=90
XAL **Allendale** 74.69 337 eP P 21 04 08.4 -0.5
XAL **Allendale** 74.69 337 P P 21 04 08.4 -0.5
L19A **Farson** 74.72 45 ⇑P P 21 04 09.1 -0.1
baz=74,SNR=78
RDO **Rodhopi** 74.73 313 P P 21 04 09.8 +0.5
RDO **Rodhopi** 74.73 313 eP P 21 04 10.0 +0.7
JLU **Jordanelle** 74.74 47 eP P 21 04 09.9 +0.5
comp=Z,164nm,1.3s,mb5.5
FURC **Furnace Creek,** 74.75 54 ⇑P P 21 04 09.9 +0.4
baz=74,SNR=195
RZN **Rozhen** 74.75 314 P P 21 04 10.2 +0.7
MAMC **Mammari** 74.78 305 P P 21 04 10.3 +0.6
K20A **Yellowstone Ra** 74.81 44 ⇑P P 21 04 09.3 -0.4
baz=74,SNR=47
N17A **Moffit Pass** 74.81 47 ⇓P P 21 04 10.2 +0.3
baz=74,SNR=44
ARSA **Arzberg** 74.82 323 P P 21 04 10.3 +0.6
ARSA **Arzberg** 74.82 323 iP P 21 04 10.2 +0.5
comp=Z,90nm,1.2s,mb5.3,SNR=49
M18A **Lyman** 74.85 46 P P 21 04 10.6 +0.5
baz=74,SNR=121
CSS **Prodhromos** 74.86 304 P P 21 04 10.5 +0.3
CSS **Prodhromos** 74.86 304 P P 21 04 08.0 -2.2
BSC **Santa Cruz Isl** 74.88 57 ⇓P P 21 04 09.3 -1.0
baz=75
MOA **Molln** 74.88 324 P P 21 04 10.5 +0.5
MOA **Molln** 74.88 324⇑iP P 21 04 10.4 +0.3
comp=Z,90nm,0.7s,mb5.5,SNR=62
NLU **North Lily Min** 74.89 48 eP P 21 04 10.8 +0.5
comp=Z,110nm,0.9s,mb5.5
Q14A **Sevier Lake (B** 74.94 50 ⇓P P 21 04 11.2 +0.6
baz=75,SNR=225
LRMC **Laurel Mountai** 74.98 55 ⇑P P 21 04 10.7 -0.2
baz=75,SNR=10.0
OSI **Osito Adit** 74.98 56 ⇑P P 21 04 10.6 -0.3
baz=75
OSI **Osito Adit** 74.98 56 eP P 21 04 10.6 -0.3
comp=Z,122nm,0.9s,mb5.5
DAU **Daniels Canyon** 74.98 47 eP P 21 04 11.9 +1.1
DAU pmax pmax
comp=Z,47nm,0.5s,mb5.4
DAU **Daniels Canyon** 74.98 47 eP P 21 04 11.9 +1.1
comp=Z,47nm,0.5s,mb5.4
O16A **Springville** 75.00 48 ⇑P P 21 04 11.9 +1.0
baz=75,SNR=65
P15A **Leamington** 75.06 49 ⇓P P 21 04 07.8 -3.4
baz=75,SNR=80
S12A **Delamar Landin** 75.07 52 ⇓P P 21 04 11.7 +0.3
baz=75,SNR=56
GRUS **Gruza** 75.08 318 P P 21 04 10.9 -0.3
MPU **Maple Canyon** 75.08 48 eP P 21 04 11.7 +0.4
comp=Z,187nm,1.0s,mb5.7
U10A **Ash Meadows, A** 75.09 53 ⇓P P 21 04 11.5 0.0
baz=75,SNR=66
T11A **Corn Creek, Al** 75.13 52 P P 21 04 12.3 +0.6
baz=75,SNR=256
KORT **Korkueli** 75.13 308 iP P 21 04 11.0 -0.7
BLG **Laguna Peak** 75.13 57 ⇑P P 21 04 10.7 -1.0
baz=75,SNR=6.7
KOGS **Kog** 75.14 322 eP P 21 04 11.1 -0.5
KOGS epP pP 21 05 23.6 +1.6
KOGS esP sP 21 05 57.5 +2.6
KOGS eS S 21 13 22.4 -1.4
R13A **O'Grain Ranch,** 75.15 51 ⇓P P 21 04 12.0 +0.2
baz=75,SNR=42
ALFC **Alevga** 75.15 305 P P 21 04 12.9 +1.0
comp=Z,1.5nm,0.5s
GCD **Castle Douglas** 75.16 338 eP P 21 04 11.2 -0.3
GCD **Castle Douglas** 75.16 338 P P 21 04 11.2 -0.3
EDW2 **Edwards Air Fo** 75.22 55 ⇑P P 21 04 12.0 -0.3
baz=75,SNR=142
TNS **Taunus Mts** 75.23 329 eP P 21 04 11.9 -0.1
comp=Z,175nm,0.8s,mb5.7
TNS eS S 21 13 23.4 -1.3
DIVS **Divibare** 75.26 319 P P 21 04 12.4 +0.1
M19A **Rock Springs** 75.26 45 ⇑P P 21 04 12.5 +0.2
baz=75,SNR=17
L20A **Wamsutter** 75.30 45 ⇑P P 21 04 12.5 0.0
baz=75,SNR=59
HPK **Haverah Park** 75.32 336⇑eP P 21 04 12.0 -0.5
HPK AMb AMB 21 04 16.0
comp=Z,242nm,0.7s,mb5.9
HPK e pP 21 05 24.5 +1.5
HPK **Haverah Park** 75.32 336 P P 21 04 12.0 -0.5
HPK AMb AMB 21 04 16.0
comp=Z,242nm,0.7s,mb5.9
HPK pP 21 05 24.5 +1.5
MMB **Musomiste** 75.32 315 P P 21 04 12.9 +0.2
BARS **Barje** 75.35 317 P P 21 04 12.9 +0.1
XDE **Dent Fell** 75.36 338⇑eP P 21 04 11.6 -1.0
XDE **Dent Fell** 75.36 338 P P 21 04 11.6 -1.0
GAL1 **Galloway** 75.36 338 eP P 21 04 11.8 -0.8
GAL1 AMb AMB 21 04 15.6
comp=Z,163nm,0.7s,mb5.8
GAL1 **Galloway** 75.36 338 P P 21 04 11.8 -0.8
GAL1 AMb AMB 21 04 15.6
comp=Z,163nm,0.7s,mb5.8
P16A **Fountain Green** 75.36 48 ⇓P P 21 04 14.3 +1.4
baz=75,SNR=38
KAVA **Kavala** 75.36 314 P P 21 04 13.0 +0.1
N18A **Larsen Ranch,** 75.39 46 ⇑P P 21 04 12.6 -0.5
baz=75,SNR=85
O17A **Robinson Place** 75.41 47 ⇑P P 21 04 12.5 -0.7
baz=75,SNR=134
Q15A **Fillmore** 75.42 49 P P 21 04 14.2 +0.9
baz=75,SNR=75
NVR **Nevrokopi** 75.43 315 eP P 21 04 13.4 +0.1
KKB **Krupnik** 75.44 315 P P 21 04 13.5 +0.1
SNCC **San Nicolas Is** 75.46 57 ⇓P P 21 04 14.0 +0.3
baz=75,SNR=5.5
SNCC **San Nicolas Is** 75.46 57 eP P 21 04 13.5 -0.1
comp=Z,145nm,1.0s,mb5.6
DECC **Gren Verdugo** 75.47 56 ⇑P P 21 04 13.6 0.0
baz=75,SNR=11
PERS **Pernice** 75.48 323 eP P 21 04 13.6 +0.2
PERS iP pP 21 05 26.6 +2.6
PERS e 21 08 13.8
PERS e 21 08 50.0
SOKA **Soboth** 75.48 323⇑iP P 21 04 13.7 +0.3
comp=Z,186nm,1.4s,mb5.5
SHOC **Shoshone** 75.49 54 ⇓P P 21 04 14.0 +0.3
baz=75,SNR=32
PPCY **Paphos** 75.49 305 P P 21 04 12.9 -0.9
SIND **Sindeldorf** 75.52 328 P P 21 04 13.6 0.0
RJOB **Jochberg** 75.57 325 eP P 21 04 14.7 +0.7
comp=Z,226nm,0.9s,mb5.8
RJOB eS S 21 13 30.0 +1.5
PASC **Pasadena Art C** 75.61 56 eP P 21 04 14.1 -0.3
comp=Z,108nm,1.1s,mb5.4
TOD **Tromm** 75.61 328 eP P 21 04 13.9 -0.3
GSC **Goldstone** 75.61 54 ⇓P P 21 04 14.5 +0.1
baz=75,SNR=110
GSC **Goldstone** 75.61 54 eP P 21 04 14.3 -0.1
GSC pmax pmax
comp=Z,150nm,1.0s,mb5.6
GSC **Goldstone** 75.61 54 eP P 21 04 14.3 -0.1
comp=Z,150nm,1.0s,mb5.6
U11A **Corn Creek** 75.62 53 ⇓P P 21 04 14.6 +0.2
baz=75,SNR=26
S13A **Holt Ranch, En** 75.64 51 ⇑P P 21 04 14.8 +0.2
baz=75,SNR=100
MWC **Mount Wilson** 75.64 56 eP P 21 04 14.7 +0.1
MWC pmax pmax
comp=Z,187nm,1.1s,mb5.6
MWC **Mount Wilson** 75.64 56 eP P 21 04 14.7 0.0
comp=Z,187nm,1.1s,mb5.6
HGN **Heimansgroeve** 75.68 331⇑iP P 21 04 13.6 -1.0
comp=Z,48nm,1.0s,mb5.1
HGN **Heimansgroeve** 75.68 331 iP pP 21 05 26.6 +1.5
comp=Z,108nm,2.5s
HGN **Heimansgroeve** 75.68 331 iS S 21 13 29.8 +0.3
N19A **John Jarvie Ra** 75.70 46 ⇓P P 21 04 14.9 0.0
baz=75,SNR=129
BBLS **Lazići** 75.71 319 P P 21 04 15.5 +0.7
ARUT **Antelope Range** 75.72 51 eP P 21 04 14.3 -0.7
ARUT pmax pmax
comp=Z,84nm,1.1s,mb5.3
ARUT **Antelope Range** 75.72 51 eP P 21 04 14.3 -0.7
comp=Z,84nm,1.1s,mb5.3
PRK **Paraskevi** 75.73 312 P P 21 04 15.0 -0.1
PRK **Paraskevi** 75.73 312 eP P 21 04 14.5 -0.6

O18A **Roosevelt** 75.74 47 ⇑P P 21 04 16.3 +1.2
baz=75,SNR=40
BEBN **Eben Emael** 75.74 331 P P 21 04 14.4 -0.5
comp=Z,93nm,0.9s,mb5.4
BEBN AP pP 21 05 27.8 +2.3
SWS **Schriesheim-Wi** 75.75 328 P P 21 04 15.2 +0.3
LHO **Holmfirth** 75.75 336 eP P 21 04 14.2 -0.6
LHO **Holmfirth** 75.75 336 P P 21 04 14.2 -0.6
M20A **Sweetwater, Wa** 75.76 45 ⇓P P 21 04 15.7 +0.6
baz=75,SNR=41
RSSD **Black Hills** 75.77 41 eP P 21 04 14.6 -0.5
RSSD pmax pmax
comp=Z,90nm,0.6s,mb5.6
RSSD **Black Hills** 75.77 41 eP P 21 04 14.6 -0.5
comp=Z,90nm,0.6s,mb5.6
MEM **Membach** 75.78 330 P P 21 04 15.0 -0.1
comp=Z,112nm,1.0s,mb5.5
MEM AP pP 21 05 25.1 -0.6
L21A **Rawlins** 75.81 44 P P 21 04 15.5 +0.1
baz=76,SNR=136
KDAG **Bornova** 75.82 310 iP P 21 04 15.2 -0.4
OBKA **Obir** 75.82 323 P P 21 04 15.5 +0.1
OBKA **Obir** 75.82 323 iP P 21 04 15.6 +0.2
comp=Z,93nm,0.6s,mb5.6,SNR=74
TMUT **Trail Mountain** 75.82 48 eP P 21 04 16.2 +0.6
comp=Z,191nm,0.8s,mb5.8
LIA **Limnos Island** 75.83 313 P P 21 04 15.6 0.0
LIA **Limnos Island** 75.83 313 eP P 21 04 15.8 +0.2
FUR **Furstenfeldbru** 75.83 326 eP P 21 04 15.9 +0.5
comp=Z,264nm,0.8s,mb5.9
FUR eS S 21 13 31.2 -0.1
ABH **Alteburg** 75.84 329 eP P 21 04 15.4 -0.1
SISC **Sisak** 75.84 322 P P 21 04 17.4 +1.9
SISC **Sisak** 75.84 322 iP P 21 04 17.4 +1.9
BFSC **Mount Baldy Ra** 75.87 56 ⇑P P 21 04 15.9 0.0
baz=76,SNR=30
KBA **Koelnbreinsper** 75.87 324 iP P 21 04 16.2 +0.6
comp=Z,186nm,0.6s,mb5.9,SNR=193
MSU **Marysvale** 75.88 49 eP P 21 04 16.7 +0.8
MSU pmax pmax
comp=Z,185nm,1.0s,mb5.7
MSU **Marysvale** 75.88 49 eP P 21 04 16.7 +0.8
comp=Z,186nm,1.0s,mb5.7
S14A **Cedar City** 75.89 50 ⇓P P 21 04 16.3 +0.3
baz=76,SNR=38
HDH **Heidenheim-Cha** 75.91 327 P P 21 04 16.0 +0.1
KBI1 **Birley Grange** 75.92 336⇑eP P 21 04 15.2 -0.6
KBI1 e pP 21 05 28.4 +2.0
KBI1 **Birley Grange** 75.92 336 P P 21 04 15.2 -0.6
KBI1 pP 21 05 28.4 +2.0
CCUT **Cedar City** 75.94 51 eP P 21 04 16.8 +0.6
comp=Z,47nm,0.8s,mb5.2
P17A **Butcher Ranch,** 75.94 48 ⇓P P 21 04 16.6 +0.4
baz=76,SNR=90
AGMN **Agassiz Nation** 75.96 33 eP P 21 04 14.7 -1.5
comp=Z,184nm,1.1s,mb5.6
CRES **Cresnjev** 75.97 322 P P 21 04 16.1 -0.1
SIGR **SIGRI** 75.98 312 P P 21 04 16.5 +0.1
FORT **Forrest** 75.99 188 eP P 21 04 16.1 -0.3
comp=Z,204nm,0.5s,mb6.0
FORT **Forrest** 75.99 188 eP P 21 04 15.4 -1.0
comp=Z,457nm,0.9s,mb6.1
V11A **Goodsprings** 76.01 53 ⇓P P 21 04 16.8 +0.1
baz=76,SNR=70
CIS **Catalina Islan** 76.02 57 ⇓P P 21 04 17.2 +0.5
baz=76,SNR=5.6
T13A **Saint George** 76.02 51 ⇓P P 21 04 17.6 +0.9
baz=76,SNR=256
TUQ **Turquoise Moun** 76.02 54 P P 21 04 17.9 +1.2
baz=76,SNR=42
BLY **Banja Luka** 76.05 321 P P 21 04 19.0 +2.3
R15A **Junction** 76.05 50 ⇓P P 21 04 17.9 +1.1
baz=76,SNR=82
M21A **Separation Pea** 76.08 44 ⇓P P 21 04 16.6 -0.3
baz=76,SNR=140
P18A **Preston Nutter** 76.08 47 P P 21 04 17.8 +0.8
baz=76,SNR=279
U12A **Valley of Fire** 76.09 52 ⇑P P 21 04 17.7 +0.6
baz=76,SNR=86
RWWY **Rawlins** 76.09 44 eP P 21 04 16.4 -0.6
comp=Z,162nm,1.0s,mb5.6
MYKA **Terra Mystica** 76.10 324⇓iP P 21 04 16.8 -0.2
comp=Z,124nm,0.7s,mb5.7
VAY **Valandovo** 76.10 315⇑iP P 21 04 16.9 -0.2
VAY i pP 21 05 30.1 +2.3
VAY **Valandovo** 76.10 315 P P 21 04 16.8 -0.3
KTD **Kalmit** 76.11 329 eP P 21 04 16.6 -0.4
Q16A **Castle Valley** 76.12 48 ⇓P P 21 04 17.8 +0.6
baz=76,SNR=101
PLE **Pljevlja** 76.12 318⇑iP P 21 04 17.8 +0.6
PLE **Pljevlja** 76.12 318⇑iP P 21 04 17.9 +0.7
OUR **Ouranopolis** 76.13 314 P P 21 04 16.8 -0.4
STU **Stuttgart** 76.15 328 eP P 21 04 17.3 +0.1
comp=Z,222nm,0.9s,mb5.8
STU eS S 21 13 34.2 -0.5
STU **Stuttgart** 76.15 328 eP P 21 04 17.1 -0.1
STU pmax pmax
comp=Z,186nm,0.8s,mb5.8
STU **Stuttgart** 76.15 328 eP P 21 04 17.1 0.0
comp=Z,186nm,0.8s,mb5.8
O19A **Miners Draw (B** 76.17 46 ⇓P P 21 04 17.5 0.0
baz=76,SNR=115
SKO **Skopje** 76.17 316⇑iP P 21 04 18.4 +0.9
SKO i pP 21 05 31.4 +3.3
BCLA **Clavier** 76.19 331 P P 21 04 17.3 -0.1
comp=Z,82nm,1.1s,mb5.3
BCLA AP pP 21 05 30.3 +2.2
LJU **Ljubljana** 76.19 323 eP P 21 04 17.1 -0.4
LJU e*PP pP 21 05 30.4 +2.2
LJU e*SP sP 21 06 03.1 +2.1
LJU e 21 07 09.4
LJU eS S 21 13 33.6 -1.7
LJU **Ljubljana** 76.19 323 eP P 21 04 17.1 -0.5
LJU i 21 04 20.2
LJU epP pP 21 05 30.4 +2.1
LJU esP sP 21 06 03.1 +2.1
LJU ePP PP 21 07 09.4 -3.2
LJU e 21 08 55.0
LJU e 21 10 03.1
LJU e 21 10 40.7
LJU eS S 21 13 33.6 -1.7
TURN **Turunc** 76.20 309 iP P 21 04 21.6 +3.9
N20A **Spence Gulch,** 76.21 45 P P 21 04 18.5 +0.8
baz=76,SNR=313
KWE **Weaver Farm** 76.22 336 eP P 21 04 17.1 -0.4
KWE **Weaver Farm** 76.22 336 P P 21 04 17.1 -0.4
L22A **Ellis Ranch, M** 76.22 44 ⇓P P 21 04 17.5 -0.3
baz=76,SNR=72
HEC **Hector,Ludlow** 76.22 54 ⇓P P 21 04 18.3 +0.4
baz=76,SNR=53
IVA **Berane** 76.23 318⇑iP P 21 04 18.0 +0.2
GMM **Mts of Mourne** 76.24 339⇑eP P 21 04 16.1 -1.5
GMM **Mts of Mourne** 76.24 339 P P 21 04 16.1 -1.5
STNC **Stoke** 76.25 336 eP P 21 04 17.5 -0.2
STNC **Stoke** 76.25 336 P P 21 04 17.5 -0.2
ARMA **Armidale** 76.26 167 eP P 21 04 18.7 +0.8
ARMA **Armidale** 76.26 167 eP P 21 04 18.5 +0.7
comp=Z,307nm,1.1s,mb5.8
CWF **Charnwood Fore** 76.31 336 eP P 21 04 17.2 -0.8
CWF AMb AMB 21 04 21.2
comp=Z,204nm,0.7s,mb5.8
CWF e pP 21 05 29.3 +0.6
CWF **Charnwood Fore** 76.31 336 P P 21 04 17.2 -0.8
CWF AMb AMB 21 04 21.2
comp=Z,204nm,0.7s,mb5.8
CWF pP 21 05 29.3 +0.6
BOJS **Bojanci** 76.31 322 eP P 21 04 17.8 -0.3
BOJS epP pP 21 05 30.4 +1.6
BOJS esP sP 21 06 04.0 +2.3
BOJS e 21 08 19.6
BOJS e 21 08 56.2
BOJS e 21 10 03.9
BOJS e 21 15 03.6
BOJS e 21 15 45.8
SRU **San Rafael** 76.32 48 ⇑P P 21 04 18.4 0.0
baz=76,SNR=197
SRU **San Rafael** 76.32 48 eP P 21 04 18.3 -0.1
SRU pmax pmax
comp=Z,155nm,0.8s,mb5.7
SRU **San Rafael** 76.32 48 eP P 21 04 18.3 0.0
comp=Z,155nm,0.8s,mb5.7
BUCH **Bad Urach** 76.35 327 P P 21 04 18.5 +0.2
PLG **Polygyros** 76.37 314 P P 21 04 18.4 -0.2
PLG **Polygyros** 76.37 314 eP P 21 04 18.8 +0.2

HORT Hortiatis 76.38 314 P P 21 04 18.2 -0.4
CADS Cadrg 76.38 324 eP P 21 04 17.4 -1.2
CADS i pP pP 21 05 30.6 +1.3
CADS eS S 21 13 35.3 -2.0
CADS e 21 15 04.0
WATA Walderalm 76.39 325⇑iP P 21 04 18.9 +0.4
comp=Z,94nm,0.5s,mb5.7,SNR=96
LBG Lerchenberg 76.39 328 P P 21 04 18.9 +0.4
S15A Panguitch 76.39 50 ⇓P P 21 04 19.5 +0.8
baz=76,SNR=49
PTCC Patocco-Chiusa 76.40 324 P P 21 04 17.8 -0.9
comp=Z,49nm,0.5s,mb5.4
PVY Plav 76.41 318⇑iP P 21 04 18.2 -0.6
PVY Plav 76.41 318⇑iP P 21 04 18.3 -0.5
R16A Teasdale 76.42 49 ⇑P P 21 04 19.7 +0.7
baz=76,SNR=127
WTTA Wattenberg 76.42 325 i P P 21 04 19.3 +0.5
comp=Z,121nm,0.6s,mb5.7,SNR=99
V12A Nelson 76.42 53 ⇓P P 21 04 19.2 +0.2
baz=76,SNR=55
U13A Pakoon Wash 76.42 52 ⇑P P 21 04 19.6 +0.6
baz=76,SNR=185
T14A Hurricane 76.44 51 ⇑P P 21 04 18.5 -0.5
baz=76,SNR=36
UPM Unac-Piva 76.45 319⇑iP P 21 04 18.2 -0.8
UPM Unac-Piva 76.45 319⇑iP P 21 04 18.3 -0.7
SNF Seneffe 76.46 331 P P 21 04 18.4 -0.6
SNF AP pP 21 05 32.4 +2.7
VOY Vojsko 76.47 323 eP P 21 04 17.8 -1.3
VOY e 21 04 36.2
VOY epP pP 21 05 31.4 +1.6
ABTA Abfaltersbach 76.48 325⇑iP P 21 04 18.0 -1.1
comp=Z,18nm,0.5s,mb5.0,SNR=44
CEY Cerknica 76.48 323 P P 21 04 18.0 -1.1
CHOS Chios island 76.48 311 P P 21 04 19.0 -0.3
CHOS Chios island 76.48 311 eP P 21 04 19.2 -0.1
LANF Langenberg 76.50 329 eP P 21 04 18.5 -0.6
WLF Walferdange 76.53 330 P P 21 04 19.5 +0.3
WLF AP pP 21 05 33.0 +3.0
WLF Walferdange 76.53 330 eP P 21 04 19.2 -0.1
comp=Z,101nm,0.9s,mb5.5
WLF eS S 21 13 38.1 -0.6
WLF Walferdange 76.53 330 eP P 21 04 19.1 -0.2
WLF pmax pmax
comp=Z,74nm,0.8s,mb5.5
WLF Walferdange 76.53 330 eP P 21 04 19.1 -0.2
comp=Z,74nm,0.8s,mb5.5
Q18A Rafter H Ranch 76.53 48 P P 21 04 19.6 +0.1
baz=76,SNR=59
BCI Bajram Curri 76.54 317 PN P 21 04 20.1 +0.6
SMG Samos 76.56 310 eP P 21 04 19.7 0.0
WME Myndd Eilian 76.56 338⇑eP P 21 04 18.5 -0.9
WME Myndd Eilian 76.56 338 P P 21 04 18.5 -0.9
MOTA Moosalm 76.57 326 i P P 21 04 19.9 +0.3
comp=Z,307nm,1.0s,mb6.0,SNR=185
WPM1 Penmaenmawr 76.58 337⇑eP P 21 04 18.6 -0.9
WPM1 Penmaenmawr 76.58 337 P P 21 04 18.6 -0.9
PAIG Paliouri 76.58 314 P P 21 04 19.2 -0.6
RETA Reutte 76.59 326 i P P 21 04 19.9 +0.3
comp=Z,168nm,0.9s,mb5.8,SNR=170
MURC Murrieta 76.59 56 ⇓P P 21 04 19.9 -0.1
baz=76,SNR=15
GIVF Givet 76.62 331⇑iP P 21 04 19.2 -0.6
comp=Z,219nm,1.0s,mb5.5
GIVF epP pP 21 05 32.9 +2.3
GIVF Givet 76.62 331⇑iP P 21 04 19.2 -0.6
GIVF e*PP pP 21 05 32.9 +2.3
GIVF pmax pmax
comp=Z,109nm,1.0s,mb5.5
GIVF Givet 76.62 331⇑iP P 21 04 19.2 -0.6
comp=Z,109nm,1.0s,mb5.5
GIVF epP pP 21 05 32.9 +2.3
N21A Black Mountain 76.64 45 ⇓P P 21 04 20.3 +0.2
baz=76,SNR=145
GMRC Granite Mounta 76.64 54 ⇑P P 21 04 20.2 0.0
baz=76,SNR=143
KNDS Knezji Dol 76.67 323 eP P 21 04 19.4 -0.8
KNDS epP pP 21 05 32.5 +1.6
UBR Ueberruh 76.69 326 P P 21 04 20.9 +0.7
STKA Stephens Creek 76.70 176 ⇓iP P 21 04 20.8 +0.5
comp=Z,172nm,1.0s,mb5.7
STKA Stephens Creek 76.70 176 P P 21 04 20.9 +0.6
comp=Z,243nm,1.0s,mb5.9,baz=347,slow=7.0,SNR=48
NKY Niksic 76.70 318⇑iP P 21 04 18.6 -1.8
NKY Niksic 76.70 318⇑iP P 21 04 18.7 -1.7
DOU Dourbes 76.71 331 P P 21 04 19.2 -1.0
comp=Z,56nm,1.3s,mb5.1
DOU AP pP 21 05 33.2 +2.2
W12A Cal Nev Ari 76.72 53 ⇓P P 21 04 20.1 -0.5
baz=76
KRUS Krusevo 76.72 316⇑iP P 21 04 20.5 0.0
KRUS i pP 21 05 33.6 +2.2
R17A Hanksville Air 76.73 48 ⇑P P 21 04 20.7 +0.1
baz=76,SNR=104
P19A Cripple Cowboy 76.74 47 P P 21 04 21.0 +0.3
baz=76,SNR=203
O20A White River Ci 76.74 46 P P 21 04 20.9 +0.2
baz=76,SNR=118
GUT Gutenstein 76.75 327 P P 21 04 20.6 0.0
YLL Llanberis 76.76 337 eP P 21 04 19.4 -1.1
YLL Llanberis 76.76 337 P P 21 04 19.4 -1.1
YRC Rhoscolyn 76.77 338 eP P 21 04 19.9 -0.7
YRC Rhoscolyn 76.77 338 P P 21 04 19.9 -0.7
S16A Weppner Ranch, 76.77 50 ⇑P P 21 04 21.7 +0.8
baz=76,SNR=301
DMUB Kingscourt 76.79 339⇑iP P 21 04 22.7 +2.0
V13A Grand Canyon W 76.82 52 ⇓P P 21 04 21.7 +0.5
baz=76,SNR=84
BFO Black Forest 76.84 328 eP P 21 04 21.1 +0.1
comp=Z,175nm,0.8s,mb5.8
BFO eS S 21 13 41.4 -0.8
BFO Black Forest 76.84 328 eP P 21 04 20.4 -0.6
BFO pmax pmax
comp=Z,148nm,0.8s,mb5.8
BFO Black Forest 76.84 328 eP P 21 04 20.4 -0.7
comp=Z,148nm,0.8s,mb5.8
BRY Bratogost 76.85 319⇑iP P 21 04 19.8 -1.4
BRY Bratogost 76.85 319⇑iP P 21 04 19.9 -1.4
SPAK Spaichingen-Ko 76.85 327 eP P 21 04 21.2 +0.1
U14A Mt Trumbull 76.86 51 ⇓P P 21 04 21.7 +0.4
baz=77,SNR=197
T15A Red Dirt Ranch 76.86 50 ⇓P P 21 04 21.6 +0.2
baz=77,SNR=91
PUK Puka 76.87 317 PN P 21 04 20.0 -1.3
BAIF Baives 76.87 331⇑iP P 21 04 20.7 -0.5
comp=Z,110nm,0.7s,mb5.4
BAIF Baives 76.87 331⇑iP P 21 04 20.7 -0.5
BAIF pmax pmax
comp=Z,55nm,0.7s,mb5.4
BAIF Baives 76.87 331⇑iP P 21 04 20.7 -0.5
comp=Z,55nm,0.7s,mb5.4
TTG Podgorica 76.88 318⇑iP P 21 04 20.3 -1.1
TTG Podgorica 76.88 318⇑iP P 21 04 20.4 -1.0
ARG Arkhangelos 76.94 308 P P 21 04 22.2 +0.4
ARG Arkhangelos 76.94 308 eP P 21 04 22.4 +0.6
BIA Bitola 76.95 316⇑eP P 21 04 21.8 0.0
YRE Yr Eifl 76.97 337 eP P 21 04 20.7 -1.0
YRE Yr Eifl 76.97 337 P P 21 04 20.7 -1.0
TFO1 Folkestone 76.98 333⇑eP P 21 04 20.1 -1.7
TFO1 AMb AMB 21 04 25.0
comp=Z,446nm,0.9s,mb6.2
TFO1 Folkestone 76.98 333 P P 21 04 20.1 -1.7
TFO1 AMb AMB 21 04 25.0
comp=Z,446nm,0.9s,mb6.2
FETA Feichten 76.98 326 i P P 21 04 22.2 +0.3
comp=Z,144nm,1.2s,mb5.6,SNR=93
BELC Belle Mtn. Jos 77.00 55 ⇑P P 21 04 22.1 -0.1
baz=77,SNR=74
PFO Pinyon Flat Ob 77.02 55 ⇑P P 21 04 21.9 -0.4
baz=77,SNR=60
PFO Pinyon Flat Ob 77.02 55 eP P 21 04 22.4 +0.1
PFO e pP 21 05 34.8 +1.6
PFO pmax pmax
comp=Z,159nm,1.1s,mb5.7
PFO Pinyon Flat Ob 77.02 55 eP P 21 04 22.4 +0.1
comp=Z,151nm,1.1s,mb5.6
PFO e pP 21 05 34.8 +1.6
AOS Alonnisos 77.04 313 P P 21 04 22.1 -0.3
O21A Pagoda 77.07 45 ⇓P P 21 04 22.7 +0.2
baz=77,SNR=61
TREB Trebinje 77.08 319 P P 21 04 22.0 -0.5
Q19A Hogan Spring (77.09 47 ⇓P P 21 04 22.6 -0.1
baz=77,SNR=214
DAVA Damuels 77.10 326 P P 21 04 22.7 +0.2
DAVA Damuels 77.10 326 i P P 21 04 22.7 +0.2
comp=Z,175nm,0.7s,mb5.9,SNR=165
FNA Florina 77.10 316 P P 21 04 22.4 -0.3
SISB Singen-Schiene 77.13 327 P P 21 04 23.3 +0.6
MENF Mencas 77.13 333 eP P 21 04 21.1 -1.5
N22A Wattenberg Ran 77.14 44 ⇑P P 21 04 23.9 +1.0
baz=77,SNR=78
OHR Ohrid 77.14 316⇑iP P 21 04 21.8 -1.0
OHR i pP 21 05 35.6 +1.9
OHR Ohrid 77.14 316 P P 21 04 22.5 -0.4
P20A De Beque 77.14 46 ⇑P P 21 04 22.6 -0.3
baz=77,SNR=50
BUM Brajici-Budva 77.15 318⇑iP P 21 04 21.9 -1.0
BUM Brajici-Budva 77.15 318⇑iP P 21 04 21.9 -0.9
109C Camp Elliot, M 77.15 56 ⇑P P 21 04 22.2 -0.9
baz=77,SNR=11
CDF Champ du Feu 77.16 329⇑iP P 21 04 22.7 -0.1
comp=Z,248nm,0.9s,mb5.7
CDF epP pP 21 05 36.4 +2.7
CDF Champ du Feu 77.16 329⇑iP P 21 04 22.7 -0.1
CDF e*PP pP 21 05 36.4 +2.7
CDF pmax pmax
comp=Z,124nm,0.9s,mb5.6
CDF Champ du Feu 77.16 329⇑iP P 21 04 22.7 -0.1
comp=Z,124nm,0.9s,mb5.6
CDF epP pP 21 05 36.4 +2.7
STEIN Stein am Rhein 77.18 327⇑iP P 21 04 22.7 -0.2
NIS1 Nisyros Isl. 77.18 309 P P 21 04 22.1 -1.1
R18A Canyonlands Na 77.19 48 ⇑P P 21 04 22.8 -0.3
baz=77,SNR=284
NVLJ Novalja 77.22 322 P P 21 04 22.1 -1.2
NVLJ Novalja 77.22 322 i P P 21 04 22.1 -1.2
APPI Appiano 77.22 325 P P 21 04 24.1 +0.9
HCY Herceg Novi 77.22 318⇑iP P 21 04 22.6 -0.7
HCY Herceg Novi 77.22 318⇑iP P 21 04 22.7 -0.6
ULC Ulcinj 77.24 318⇑iP P 21 04 22.4 -1.0
ULC Ulcinj 77.24 318⇑iP P 21 04 22.5 -0.9
LIENZ Kamor/St.Gall 77.24 327⇑iP P 21 04 23.3 0.0
PHWY Pilot Hill 77.25 43 eP P 21 04 23.1 -0.3
comp=Z,226nm,1.5s,mb5.7
DSB Dublin 77.25 339 eP P 21 04 22.4 -0.9
comp=Z,89nm,0.7s,mb5.6
XOR Xorichti 77.25 314 P P 21 04 22.8 -0.7
LIBD Limburg 77.26 328 eP P 21 04 23.2 -0.2
S17A Black Ridge (B 77.26 49 ⇑P P 21 04 23.6 0.0
baz=77,SNR=126
KZN Kozani 77.27 315 P P 21 04 23.5 -0.1
KZN Kozani 77.27 315 eP P 21 04 24.0 +0.4
STON Ston 77.27 319 P P 21 04 21.8 -1.8
STON Ston 77.27 319 i P P 21 04 21.8 -1.8
FELD Feldberg im Sc 77.34 328 eP P 21 04 23.6 -0.2
U15A North Rim 77.34 51 ⇓P P 21 04 24.6 +0.6
baz=77,SNR=381
T16A Glen Canyon Da 77.36 50 ⇓P P 21 04 24.4 +0.3
baz=77,SNR=15
ECH Echery 77.37 328 eP P 21 04 23.9 -0.1
WILA Wila 77.37 327⇑iP P 21 04 23.7 -0.3
IRM Iron Mountain 77.38 54 ⇓P P 21 04 24.3 0.0
baz=77,SNR=141
CTI Castel Tesino 77.39 325 P P 21 04 23.3 -0.9
TIR Tirane 77.41 317 P P 21 04 24.5 +0.1
W13A Hualapai Mount 77.42 53 ⇓P P 21 04 23.9 -0.6
baz=77,SNR=64
V14A Boquillas Ranc 77.47 52 ⇑P P 21 04 25.3 +0.5
baz=77,SNR=198
PLONS Plons/SG 77.49 327⇑iP P 21 04 24.6 -0.1
DAVOX Davos/Dischmat 77.51 326⇑iP P 21 04 24.9 +0.1
KBN Korca 77.52 316 PN P 21 04 26.0 +1.1
SWN1 Swindon 77.53 335 eP P 21 04 24.8 0.0
SWN1 AMb AMB 21 04 28.5
comp=Z,626nm,1.2s,mb6.2
SWN1 Swindon 77.53 335 P P 21 04 24.8 0.0
SWN1 AMb AMB 21 04 28.5
comp=Z,626nm,1.2s,mb6.2
WOL Wolverton 77.53 335 eP P 21 04 24.4 -0.4
WOL AMb AMB 21 04 28.1
comp=Z,460nm,0.8s,mb6.3
WOL Wolverton 77.53 335 P P 21 04 24.4 -0.4
WOL AMb AMB 21 04 28.1
comp=Z,460nm,0.8s,mb6.3
MONP Monument Peak 77.55 56 ⇓P P 21 04 25.5 +0.2
baz=77,SNR=36
BAR Barrett 77.55 56 eP P 21 04 24.7 -0.6
comp=Z,111nm,1.0s,mb5.5
BRMO Bormio 77.56 326 P P 21 04 25.6 +0.5
BC3 Big Chuckawall 77.57 55 ⇓P P 21 04 25.5 +0.2
baz=77,SNR=67
SULZ Cheisacher 77.58 328⇑iP P 21 04 25.1 -0.1
R19A Curley Farm, L 77.59 48 ⇑P P 21 04 25.8 +0.4
baz=77,SNR=79
Q20A Ridgley Place, 77.60 47 ⇑P P 21 04 25.5 +0.1
baz=77,SNR=79
P21A Newcastle 77.60 46 ⇑P P 21 04 25.6 +0.2
baz=77,SNR=132
S18A Hurst Farm, Bl 77.65 49 ⇑P P 21 04 25.7 0.0
baz=77,SNR=299
MOF Molkenrain 77.68 328 eP P 21 04 25.3 -0.4
PV04 Paradox Valley 77.70 47 eP P 21 04 25.9 -0.1
THL Klokotos Trika 77.70 314 P P 21 04 24.3 -1.7
THL Klokotos Trika 77.70 314 eP P 21 04 24.7 -1.3
APE Apeiranthos 77.73 311 ⇑P P 21 04 27.1 +0.9
APE Apeiranthos 77.73 311 P P 21 04 25.1 -1.1
APE Apeiranthos 77.73 311⇑iP P 21 04 27.1 +0.9
APE Apeiranthos 77.73 311 eP P 21 04 25.3 -0.9
T17A Navajo Res., N 77.73 50 ⇓P P 21 04 25.9 -0.3
baz=77,SNR=32
BERNI Berninapass 77.76 326⇑iP P 21 04 26.3 +0.1
W14A Seligman 77.79 52 ⇓P P 21 04 26.9 +0.3
baz=78,SNR=147
LLS Linth-Limmern 77.80 327⇑iP P 21 04 26.5 +0.1
HINF Hinteralfeld 77.82 328⇑iP P 21 04 25.9 -0.6
comp=Z,72nm,0.6s,mb5.3
HINF Hinteralfeld 77.82 328⇑iP P 21 04 25.9 -0.6
HINF pmax pmax
comp=Z,36nm,0.6s,mb5.3
HINF Hinteralfeld 77.82 328⇑iP P 21 04 25.9 -0.6
comp=Z,36nm,0.6s,mb5.3
HAU Haudompre 77.84 329⇑iP P 21 04 26.1 -0.5
comp=Z,141nm,0.8s,mb5.5
HAU eMLR MLR
comp=Z,622nm,23.0s
HAU Haudompre 77.84 329⇑iP P 21 04 26.1 -0.5
HAU pmax pmax
comp=Z,71nm,0.8s,mb5.5
HAU MLR MLR
comp=Z,620nm,23.0s
HAU Haudompre 77.84 329⇑iP P 21 04 26.1 -0.5
comp=Z,71nm,0.8s,mb5.5
HAU LR LR
comp=Z,620nm,23.0s
ATAL Atalanti 77.84 313 P P 21 04 26.0 -0.8
MUO Muotathal 77.84 327⇑iP P 21 04 26.6 0.0
V15A Kaibab Nationa 77.85 51 ⇑P P 21 04 26.9 0.0
baz=78
MABI Malga Bissina 77.85 325 P P 21 04 26.0 -0.7
PDMCI Parker Dam,Lak 77.85 53 ⇓P P 21 04 26.5 -0.4
baz=78,SNR=56
BBS Basel-Blauen 77.86 328 eP P 21 04 26.6 -0.1
SWSC Sam W. Stewart 77.88 55 ⇓P P 21 04 26.5 -0.6
baz=78,SNR=26
LKR Lokris 77.89 313 P P 21 04 26.1 -0.9
LKR Lokris 77.89 313 eP P 21 04 26.3 -0.7
PTL Penteli 77.89 312 eP P 21 04 27.8 +0.8
MEZF Maizieres J'vi 77.89 330⇑iP P 21 04 26.7 -0.2
comp=Z,360nm,1.1s,mb5.7
MEZF epP pP 21 05 40.6 +2.7
MEZF Maizieres J'vi 77.89 330⇑iP P 21 04 26.7 -0.2
comp=Z,360nm,1.1s,mb6.0
MEZF epP pP 21 05 40.6 +2.7
BALST Balsthal 77.90 328⇑iP P 21 04 26.7 -0.2
DVTC Desert V Tower 77.90 56 ⇓P P 21 04 26.9 -0.3
baz=78,SNR=37
EYMN Ely 77.90 31 eP P 21 04 25.6 -1.3
comp=Z,233nm,0.8s,mb6.0
AGG Agios Georgios 77.95 314 P P 21 04 25.7 -1.7
AGG Agios Georgios 77.95 314 eP P 21 04 26.5 -0.9
KARP Karpathos 77.96 309 eP P 21 04 27.7 +0.2
TUE Stuetta 77.98 326 eP P 21 04 27.2 -0.1
comp=Z,129nm,0.9s,mb5.7
BNALP Bannalp 78.01 327⇑iP P 21 04 27.4 -0.1
BOURR Bourrignon 78.03 328⇑iP P 21 04 27.4 -0.2
Y12C Blythe 78.03 54 ⇓P P 21 04 28.3 +0.3
baz=78,SNR=94
Q21A Lamborn Mesa, 78.06 46 ⇑P P 21 04 28.4 +0.5
baz=78,SNR=60
S19A Harvey Farm, M 78.06 48 ⇓P P 21 04 28.0 0.0
baz=78,SNR=264
PV01 Paradox Valley 78.07 47 eP P 21 04 28.4 +0.4
comp=Z,14μm,0.8s
VLY Voula,Athens 78.07 312 eP P 21 04 28.4 +0.4
U17A Shonto 78.10 50 ⇑P P 21 04 28.1 -0.1
baz=78,SNR=111
SMCO Snowmass 78.10 46 eP P 21 04 28.8 +0.6
comp=Z,281nm,1.0s,mb6.0
T18A Mexican Hat 78.12 49 ⇓P P 21 04 28.1 -0.2
baz=78,SNR=271
R20A Redvale 78.13 47 ⇑P P 21 04 28.9 +0.6
baz=78,SNR=163
HASLI Hasliberg/Brie 78.21 327⇑iP P 21 04 28.4 -0.2
LOMF Lomont 78.22 328 eP P 21 04 28.3 -0.3
JAN Janina 78.22 315 eP P 21 04 29.0 +0.2
FUSIO Fusio 78.26 327⇑iP P 21 04 28.9 0.0
W15A Williams 78.27 52 ⇑P P 21 04 29.8 +0.6
baz=78,SNR=46
EVR Evrytania 78.30 314 eP P 21 04 30.5 +1.2
NAIG Nisos Aigina 78.30 312 eP P 21 04 28.7 -0.6
DSF Desfina 78.31 313 P P 21 04 27.8 -1.5
ISCO Idaho Springs 78.31 45 eP P 21 04 29.8 +0.5
ISCO pmax pmax
comp=Z,98nm,1.0s,mb5.5
ISCO Idaho Springs 78.31 45 eP P 21 04 29.8 +0.4
comp=Z,98nm,1.0s,mb5.5
SCHQ Schefferville 78.34 14 P P 21 04 29.1 -0.1
comp=Z,100nm,0.8s,mb5.6,baz=353,slow=6.3,SNR=75
SCHQ PKKPbc PKKPbc 21 23 22.4 0.0
comp=Z,5.7nm,0.6s,baz=198,slow=3.1,SNR=11
GLA Glamis 78.36 55 ⇓P P 21 04 30.1 +0.3
baz=78,SNR=46
GLA Glamis 78.36 55 eP P 21 04 29.8 +0.1
GLA pmax pmax
comp=Z,135nm,0.9s,mb5.7
GLA Glamis 78.36 55 eP P 21 04 29.8 +0.1
comp=Z,135nm,0.9s,mb5.7
Q22A Crested Butte, 78.38 46 ⇑P P 21 04 30.5 +0.8
baz=78,SNR=126
LTK Loutraki 78.38 313 P P 21 04 27.6 -2.1
LTK Loutraki 78.38 313 eP P 21 04 28.1 -1.6
Y13A Salome 78.38 54 ⇓P P 21 04 30.7 +0.9
baz=78,SNR=26
KLBR Kellerberrin 78.39 197 eP P 21 04 29.1 -0.5
comp=Z,178nm,1.2s,mb5.7
R21A Cimarron 78.42 47 ⇓P P 21 04 30.6 +0.7
baz=78,SNR=183
X14A Yava 78.44 53 ⇑P P 21 04 31.2 +1.1
baz=78,SNR=122
SRN Sarande 78.47 316 PN P 21 04 30.2 0.0
WIMIS Wimmis 78.49 327⇑iP P 21 04 29.7 -0.4
HEX Exmoor 78.51 336⇑eP P 21 04 29.7 -0.5
HEX Exmoor 78.51 336 P P 21 04 29.7 -0.5
WUAZ Wupatki 78.51 51 ⇓P P 21 04 31.0 +0.5
baz=78,SNR=90
WUAZ Wupatki 78.51 51 eP P 21 04 31.2 +0.8
comp=Z,190nm,1.3s,mb5.7
KALE Kalithea 78.53 314 P P 21 04 29.2 -1.3
IGT Igoumenitsa 78.57 315 P P 21 04 30.2 -0.5
TRIZ Trizonia 78.58 314 P P 21 04 29.5 -1.3
EFP Efpalio 78.62 314 P P 21 04 32.7 +1.7
EFP Efpalio 78.62 314 eP P 21 04 30.6 -0.4
DID Didima 78.62 312 P P 21 04 28.3 -2.8
DID Didima 78.62 312 eP P 21 04 28.3 -2.8
TORNY Torny/Romont 78.65 328⇑iP P 21 04 30.7 -0.3
U18A Rough Rock, Ch 78.66 49 ⇑P P 21 04 31.6 +0.3
baz=78,SNR=125
KEK Kerkira 78.70 316 P P 21 04 31.0 -0.4
KEK Kerkira 78.70 316 eP P 21 04 31.2 -0.2
LKBD Leukerbad 78.72 327⇑iP P 21 04 31.1 -0.3
LAKA Lakka 78.72 314 P P 21 04 30.9 -0.7
W16A Flagstaff 78.73 51 ⇓P P 21 04 30.9 -0.8
baz=78,SNR=46
V17A Tonalea, Kykot 78.75 50 ⇓P P 21 04 32.1 +0.4
baz=78,SNR=298
Y14A Wickenburg 78.76 53 ⇑P P 21 04 31.6 -0.3
baz=78,SNR=124
GUR Goura 78.77 313 P P 21 04 30.7 -1.1
GUR Goura 78.77 313 eP P 21 04 30.8 -1.0
UPR University Cam 78.79 314 eP P 21 04 32.3 +0.4
X15A Humboldt 78.79 52 ⇑P P 21 04 32.9 +0.8
baz=78,SNR=232
MVCO Mesa Verde 78.80 48 ⇑P P 21 04 32.4 +0.4
baz=78,SNR=135
MVCO Mesa Verde 78.80 48 eP P 21 04 31.8 -0.2
comp=Z,135nm,0.6s,mb5.8
ZKR Zakros 78.80 309 P P 21 04 31.7 -0.4
ZKR Zakros 78.80 309 eP P 21 04 32.4 +0.3
T19A Beclabito 78.81 49 ⇓P P 21 04 32.6 +0.6
baz=78,SNR=245
S21A Coal Bank Pass 78.83 47 ⇑P P 21 04 33.2 +1.0
baz=78,SNR=356
SENIN Lac Senin/Sane 78.86 327⇑iP P 21 04 32.0 -0.2
112A Yuma 78.88 55 ⇑P P 21 04 32.9 +0.3
baz=79,SNR=21
P24A Kohler Place, 78.88 44 ⇑P P 21 04 33.3 +0.9
baz=78,SNR=16
CING Cingoli 78.89 322 P P 21 04 32.3 -0.1
MGCD Mangrove Creek 78.92 168 eP P 21 04 33.6 +1.2
comp=Z,82nm,0.9s,mb5.5
Z13A Yuma Proving G 78.93 54 ⇑P P 21 04 32.9 +0.2
baz=79,SNR=248
R22A Saguache, Gunn 78.93 46 ⇓P P 21 04 34.1 +1.3
baz=79,SNR=126
LKD2 Lefkada island 78.98 315 P P 21 04 32.1 -0.8
AIGLE Aigle 79.01 328⇑iP P 21 04 32.4 -0.6
NPS Neapolis 79.02 309 eP P 21 04 32.4 -0.9
GRYON Gryon 79.03 327⇑iP P 21 04 32.8 -0.3
SGRT San Giovanni R 79.04 320 P P 21 04 33.0 -0.2
DIX Grande Dixence 79.06 327⇑iP P 21 04 33.4 +0.2
DYA Yadsworthy 79.11 336 eP P 21 04 32.2 -1.2
DYA AMb AMB 21 04 36.6
comp=Z,223nm,1.3s,mb5.7
DYA e pP 21 05 47.5 +2.8
DYA Yadsworthy 79.11 336 P P 21 04 32.2 -1.2
DYA AMb AMB 21 04 36.6
comp=Z,223nm,1.3s,mb5.7
DYA pP 21 05 47.5 +2.8
U19A Dine' College, 79.11 49 ⇑P P 21 04 34.4 +0.7
baz=79,SNR=52
CABF La Chapelle 79.11 328 eP P 21 04 33.2 -0.3
comp=Z,80nm,0.8s,mb5.2
CABF La Chapelle 79.11 328 eP P 21 04 33.2 -0.3
CABF pmax pmax
comp=Z,40nm,0.8s,mb5.2
CABF La Chapelle 79.11 328 eP P 21 04 33.2 -0.3
comp=Z,40nm,0.8s,mb5.2
RLS Riolos of Patr 79.12 314 eP P 21 04 33.8 +0.1
Y15A Casa Rosa Ranc 79.13 53 ⇑P P 21 04 34.6 +0.8
baz=79,SNR=63
FNVD Fontana Vidola 79.14 324 P P 21 04 34.6 +0.9
V18A Ganado 79.15 50 ⇑P P 21 04 34.0 +0.1
baz=79,SNR=112
OGNE Ogallala 79.16 42 eP P 21 04 33.4 -0.5
comp=Z,197nm,0.7s,mb6.0
LAST Lasithi 79.17 309 P P 21 04 34.1 0.0
LAST Lasithi 79.17 309 eP P 21 04 33.4 -0.7
VLX Vlachokerasia 79.17 313 P P 21 04 32.4 -1.6
VLX Vlachokerasia 79.17 313 eP P 21 04 32.9 -1.1
RGNG Rignano Grg 79.18 320 P P 21 04 33.6 -0.4
113A Mohawk Valley, 79.18 54 ⇓P P 21 04 34.1 0.0
baz=79,SNR=24
W17A Winslow 79.20 51 ⇓P P 21 04 34.7 +0.5
baz=79,SNR=20
Z14A Wintersburg 79.22 53 ⇑P P 21 04 35.0 +0.7
baz=79,SNR=10.0
CRE Caprese Michel 79.23 323 P P 21 04 34.7 +0.5
P25A Willow Gulch B 79.25 44 P P 21 04 34.8 +0.4
baz=79,SNR=43
S22A 4UR Ranch, Cre 79.26 47 ⇓P P 21 04 35.2 +0.7
baz=79,SNR=140
MURB Monte Urbino 79.28 322 P P 21 04 35.0 +0.5
X16A Lo Mia Camp, P 79.28 52 ⇑P P 21 04 35.5 +0.8
baz=79,SNR=173
BOB Bobbio (Coli) 79.34 325 P P 21 04 34.9 +0.1
ECSD EROS Data Cent 79.36 37 eP P 21 04 33.9 -1.0
comp=Z,192nm,0.8s,mb5.9
LOR Lormes 79.37 330⇑iP P 21 04 34.3 -0.6
comp=Z,347nm,0.8s,mb5.9
LOR epP pP 21 05 48.3 +2.1
LOR eMLR MLR
comp=Z,932nm,22.5s
LOR Lormes 79.37 330⇑iP P 21 04 34.3 -0.6

LOR e*PP pP 21 05 48.3 +2.1
LOR pmax pmax
comp=Z,173nm,0.8s,mb5.8
LOR MLR MLR
comp=Z,930nm,22.5s
LOR Lormes 79.37 330⇑iP P 21 04 34.3 -0.6
comp=Z,173nm,0.8s,mb5.8
LOR epP pP 21 05 48.3 +2.1
LOR LR LR
comp=Z,930nm,22.5s
VLI Veliai 79.37 312 eP P 21 04 34.2 -0.9
U20A Newcomb 79.41 49 ⇑P P 21 04 35.8 +0.4
baz=79,SNR=160
KFL Anninata 79.43 314 P P 21 04 36.8 +1.4
VLC Villacollemand 79.45 324 P P 21 04 35.0 -0.4
T21A Navajo Lake 79.47 48 ⇓P P 21 04 36.5 +0.9
baz=79,SNR=37
VLS Valsamata 79.48 314 P P 21 04 35.0 -0.7
VLS Valsamata 79.48 314 eP P 21 04 35.5 -0.2
FLN La Foliniere 79.54 333⇑iP P 21 04 34.9 -0.9
comp=Z,132nm,0.5s,mb5.6
FLN eMLR MLR
comp=Z,516nm,22.2s
FLN La Foliniere 79.54 333⇑iP P 21 04 34.9 -0.9
FLN pmax pmax
comp=Z,66nm,0.5s,mb5.6
FLN MLR MLR
comp=Z,520nm,22.3s
FLN La Foliniere 79.54 333⇑iP P 21 04 34.9 -0.9
comp=Z,66nm,0.5s,mb5.6
FLN LR LR
comp=Z,520nm,22.3s
ITM Ithomi 79.55 313 P P 21 04 34.7 -1.4
ITM Ithomi 79.55 313 eP P 21 04 34.5 -1.6
LDF La Druitiere 79.57 333⇑iP P 21 04 35.0 -0.9
comp=Z,159nm,0.6s,mb5.6
LDF epP pP 21 05 49.5 +2.2
LDF La Druitiere 79.57 333⇑iP P 21 04 35.0 -0.9
LDF e*PP pP 21 05 49.5 +2.2
LDF pmax pmax
comp=Z,80nm,0.6s,mb5.6
LDF La Druitiere 79.57 333⇑iP P 21 04 35.0 -0.9
comp=Z,80nm,0.6s,mb5.6
LDF epP pP 21 05 49.5 +2.2
AQU L'Aquila 79.62 321 ⇑P P 21 04 36.5 +0.2
AQU L'Aquila 79.62 321 P P 21 04 37.0 +0.7
AQU P 21 04 38.5
AQU L'Aquila 79.62 321⇑iP P 21 04 36.5 +0.2
V19A Window Rock 79.63 49 ⇓P P 21 04 37.7 +1.2
baz=79,SNR=15
FG5 Orsara di Pugl 79.64 320 P P 21 04 36.9 +0.5
SIVA Sivas 79.64 310 P P 21 04 36.2 -0.4
SIVA Sivas 79.64 310 eP P 21 04 36.5 -0.1
KYTH Kithira 79.65 312 eP P 21 04 36.6 0.0
Y16A Circle Bar Ran 79.66 52 ⇑P P 21 04 37.7 +0.9
baz=79,SNR=98
SSF Saint Saulge 79.67 330⇑iP P 21 04 35.9 -0.6
comp=Z,194nm,0.8s,mb5.6
SSF Saint Saulge 79.67 330⇑iP P 21 04 35.9 -0.6
SSF pmax pmax
comp=Z,97nm,0.8s,mb5.6
SSF Saint Saulge 79.67 330⇑iP P 21 04 35.9 -0.6
comp=Z,97nm,0.8s,mb5.6
Q25A Bedland, Calha 79.67 44 ⇑P P 21 04 36.1 -0.6
baz=79,SNR=66
RSL Roselend 79.68 327 eP P 21 04 36.1 -0.5
VAM Vamos 79.68 310 eP P 21 04 36.8 0.0
JSA Saint Aubin 79.69 334⇑eP P 21 04 35.7 -0.9
JSA AMb AMB 21 04 39.9
comp=Z,249nm,0.9s,mb6.0
JSA e pP 21 05 48.1 +0.2
JSA Saint Aubin 79.69 334 P P 21 04 35.7 -0.9
JSA AMb AMB 21 04 39.9
comp=Z,249nm,0.9s,mb6.0
JSA pP 21 05 48.1 +0.2
X17A Forest Lakes 79.70 51 ⇑P P 21 04 38.2 +1.3
baz=79,SNR=67
114A Black Gap (USA 79.70 54 ⇑P P 21 04 37.5 +0.6
baz=79,SNR=54
CCA1 Carnmenellis 79.70 337 eP P 21 04 34.8 -1.8
CCA1 AMb AMB 21 04 39.9
comp=Z,148nm,1.1s,mb5.6
CCA1 Carnmenellis 79.70 337 P P 21 04 34.8 -1.8
CCA1 AMb AMB 21 04 39.9
comp=Z,148nm,1.1s,mb5.6
W18A Petrified Fore 79.70 50 ⇓P P 21 04 37.8 +0.9
baz=79
Z15A Gila River Ind 79.72 53 ⇓P P 21 04 37.5 +0.5
baz=79
S23A Nye Farm, Mont 79.72 46 ⇑P P 21 04 38.3 +1.4
baz=79,SNR=29
R24A Sanders Place, 79.77 45 ⇑P P 21 04 38.0 +0.8
baz=79,SNR=126
T22A Edith 79.78 47 ⇓P P 21 04 37.8 +0.5
baz=80,SNR=112
LPL La Plagne 79.79 327⇑iP P 21 04 37.3 +0.1
comp=Z,280nm,0.9s,mb5.7
LPL epP pP 21 05 51.6 +3.1
LPL La Plagne 79.79 327⇑iP P 21 04 37.3 +0.1
LPL e*PP pP 21 05 51.6 +3.1
LPL pmax pmax
comp=Z,140nm,0.9s,mb5.7
LPL La Plagne 79.79 327⇑iP P 21 04 37.3 +0.1
comp=Z,140nm,0.9s,mb5.7
LPL epP pP 21 05 51.6 +3.1
NWAO Narrogin (SRO) 79.79 197 P P 21 04 36.8 -0.3
comp=Z,200nm,0.9s,mb5.8,baz=24,slow=6.0,SNR=33
NWAO Narrogin (SRO) 79.79 197 P P 21 04 36.8 -0.3
NWAO pmax pmax
comp=Z,200nm,0.9s
LPG La Plagne 79.80 327⇑iP P 21 04 37.5 +0.3
comp=Z,210nm,0.6s,mb5.8
LPG La Plagne 79.80 327⇑iP P 21 04 37.5 +0.3
LPG pmax pmax
comp=Z,105nm,0.6s,mb5.7
LPG La Plagne 79.80 327⇑iP P 21 04 37.5 +0.3
comp=Z,105nm,0.6s,mb5.7
HYF Humbligny 79.80 331 eP P 21 04 37.0 -0.2
MIDA Miranda 79.81 320 P P 21 04 37.7 +0.3
FIAM Fiamignano 79.82 321 P P 21 04 37.4 0.0
U21A Nageezi 79.83 48 ⇓P P 21 04 38.0 +0.5
baz=80,SNR=186
KARN Karanos 79.84 310 P P 21 04 37.3 -0.3
KARN Karanos 79.84 310 eP P 21 04 37.3 -0.3
PYL PYLOS 79.86 313 P P 21 04 36.2 -1.5
PYL PYLOS 79.86 313 eP P 21 04 36.2 -1.5
V20A Brimhall 79.88 49 ⇓P P 21 04 37.3 -0.5
baz=80,SNR=62
PSB1 Pescosannita 79.89 320 P P 21 04 37.9 +0.1
W19A Sanders 79.90 50 ⇓P P 21 04 39.4 +1.5
baz=80,SNR=27
SMF Signal de Mont 79.91 330⇑iP P 21 04 37.2 -0.6
comp=Z,250nm,0.8s,mb5.7
SMF epP pP 21 05 51.5 +2.3
SMF Signal de Mont 79.91 330⇑iP P 21 04 37.2 -0.6
SMF e*PP pP 21 05 51.5 +2.3
SMF pmax pmax
comp=Z,125nm,0.8s,mb5.7
SMF Signal de Mont 79.91 330⇑iP P 21 04 37.2 -0.6
comp=Z,125nm,0.8s,mb5.7
SMF epP pP 21 05 51.5 +2.3
SDCO Great Sand Dun 79.94 46 eP P 21 04 38.5 +0.4
comp=Z,68nm,0.9s,mb5.4
AVF Avril sur Loir 79.96 330⇑iP P 21 04 37.6 -0.4
comp=Z,339nm,0.6s,mb6.0
AVF Avril sur Loir 79.96 330⇑iP P 21 04 37.6 -0.4
AVF pmax pmax
comp=Z,169nm,0.6s,mb6.0
AVF Avril sur Loir 79.96 330⇑iP P 21 04 37.6 -0.4
comp=Z,169nm,0.6s,mb6.0
GRR Gorron 79.99 333⇑iP P 21 04 37.5 -0.7
comp=Z,300nm,0.9s,mb5.7
GRR epP pP 21 05 51.8 +2.2
GRR Gorron 79.99 333⇑iP P 21 04 37.5 -0.7
GRR e*PP pP 21 05 51.8 +2.2
GRR pmax pmax
comp=Z,150nm,0.9s,mb5.7
GRR Gorron 79.99 333⇑iP P 21 04 37.5 -0.7
comp=Z,150nm,0.9s,mb5.7
GRR epP pP 21 05 51.8 +2.2
X18A Snowflake 80.03 51 ⇑P P 21 04 39.1 +0.4
baz=80,SNR=64
CSSN Cassano Irpino 80.08 319 P P 21 04 38.7 -0.1
Z16A Peralta Trail, 80.09 52 ⇑P P 21 04 38.9 -0.1
baz=80,SNR=43
115A Sonoran Desert 80.11 53 ⇓P P 21 04 40.1 +1.0
baz=80,SNR=47
GUAR Guarcino 80.11 321 P P 21 04 38.7 -0.3
CERT Cerreto 80.13 321 P P 21 04 38.5 -0.6
QLNO Quiliano 80.15 326 P P 21 04 38.0 -1.1
Y17A Roosevelt 80.15 52 ⇑P P 21 04 39.5 +0.1
baz=80,SNR=103
GVD Gavdhos 80.17 310 P P 21 04 38.8 -0.6
GVD Gavdhos 80.17 310 eP P 21 04 38.6 -0.8
S24A Houchin Ranch, 80.17 46 ⇓P P 21 04 39.8 +0.4
baz=80,SNR=77
BNI Bardonecchia 80.20 327 eP P 21 04 38.7 -0.6
BNI pmax pmax
comp=Z,104nm,0.7s,mb5.7
BNI Bardonecchia 80.20 327 eP P 21 04 38.7 -0.6
comp=Z,104nm,0.7s,mb5.7
RFI Roccamonfina 80.20 320 P P 21 04 40.2 +0.7
T23A Casias Ranch, 80.21 47 ⇓P P 21 04 40.7 +1.1
baz=80,SNR=24
GDM Grand'Maison 80.28 327 eP P 21 04 39.7 -0.1
U22A Llaves 80.29 48 ⇓P P 21 04 40.3 +0.3
baz=80,SNR=48
V21A Milan 80.31 48 ⇑P P 21 04 41.1 +1.0
baz=80,SNR=16
214A Organ Pipe Nat 80.32 54 ⇓P P 21 04 40.5 +0.2
baz=80,SNR=86
COWI Conover 80.33 31 eP P 21 04 38.6 -1.4
comp=Z,51nm,0.8s,mb5.3
BGF Bois d'Agland 80.33 330⇑iP P 21 04 39.6 -0.4
comp=Z,73nm,0.7s,mb5.2
BGF Bois d'Agland 80.33 330⇑iP P 21 04 39.6 -0.4
BGF pmax pmax
comp=Z,37nm,0.7s,mb5.2
BGF Bois d'Agland 80.33 330⇑iP P 21 04 39.6 -0.4
comp=Z,36nm,0.7s,mb5.2
W20A Ramah 80.36 49 ⇑P P 21 04 41.1 +0.6
baz=80,SNR=95
CUC Castrocucco 80.40 318 P P 21 04 40.2 -0.3
MBDF Montbardon 80.43 327⇑iP P 21 04 40.1 -0.5
comp=Z,194nm,0.7s,mb5.7
MBDF epP pP 21 05 54.3 +2.2
MBDF Montbardon 80.43 327⇑iP P 21 04 40.1 -0.5
MBDF e*PP pP 21 05 54.3 +2.2
MBDF pmax pmax
comp=Z,97nm,0.7s,mb5.6
MBDF Montbardon 80.43 327⇑iP P 21 04 40.1 -0.5
comp=Z,97nm,0.7s,mb5.6
MBDF epP pP 21 05 54.3 +2.2
DOI San Damiano 80.43 326 P P 21 04 38.5 -2.1
X19A St. Johns 80.46 50 ⇓P P 21 04 40.4 -0.5
baz=80
TOLF Tolfa 80.47 322 P P 21 04 40.4 -0.5
116A Eloy 80.51 53 ⇓P P 21 04 41.7 +0.4
baz=80,SNR=30
Y18A Canyon Day Jun 80.54 51 ⇓P P 21 04 42.1 +0.8
baz=80,SNR=31
S25A Robets Cordova 80.55 45 ⇑P P 21 04 41.0 -0.3
baz=80,SNR=59
MAON Monte Argentar 80.55 323 P P 21 04 40.5 -0.8
PLDF La Plantade 80.56 329 eP P 21 04 41.9 +0.6
TIP Timpagrande 80.59 317 P P 21 04 41.7 +0.1
V22A San Miguel Ran 80.61 48 ⇓P P 21 04 41.0 -0.7
baz=80,SNR=55
ORIF Oris-en-Rattie 80.61 327⇑iP P 21 04 41.5 -0.1
comp=Z,202nm,0.8s,mb5.6
ORIF eMLR MLR
comp=Z,449nm,18.8s
ORIF Oris-en-Rattie 80.61 327⇑iP P 21 04 41.5 -0.1
ORIF pmax pmax
comp=Z,101nm,0.8s,mb5.6
ORIF Oris-en-Rattie 80.61 327⇑iP P 21 04 41.5 -0.1
comp=Z,101nm,0.8s,mb5.6
SURF Saint Ours 80.62 327 eP P 21 04 41.6 0.0
SGMF Saint Gilles 80.64 334⇑iP P 21 04 41.3 -0.3
comp=Z,225nm,0.8s,mb5.7
SGMF Saint Gilles 80.64 334⇑iP P 21 04 41.3 -0.3
SGMF pmax pmax
comp=Z,113nm,0.8s,mb5.7
SGMF Saint Gilles 80.64 334⇑iP P 21 04 41.3 -0.3
comp=Z,112nm,0.8s,mb5.7
Z17A San Carlos Hig 80.66 52 ⇓P P 21 04 39.9 -2.0
baz=80,SNR=23
AGO Saint Agoulin 80.67 330 eP P 21 04 42.6 +0.8
U23A El Rito 80.67 47 ⇓P P 21 04 42.8 +0.7
baz=80,SNR=164
CAN Canberra 80.73 170 eP P 21 04 42.1 +0.1
CAN pmax pmax
comp=Z,166nm,1.2s,mb5.6
CAN Canberra 80.73 170 eP P 21 04 42.1 +0.1
comp=Z,166nm,1.2s,mb5.6
SAOF Saorge 80.74 326 eP P 21 04 41.5 -0.8
CNB Canberra Magne 80.77 170 eP P 21 04 42.5 +0.3
AUTN L'Aution 80.79 326 eP P 21 04 41.8 -0.7
ROSF Rostrenen 80.79 335⇑iP P 21 04 42.2 -0.2
comp=Z,254nm,0.7s,mb5.8
ROSF Rostrenen 80.79 335⇑iP P 21 04 42.2 -0.2
ROSF pmax pmax
comp=Z,127nm,0.7s,mb5.8
ROSF Rostrenen 80.79 335⇑iP P 21 04 42.2 -0.2
comp=Z,127nm,0.7s,mb5.8
TCF Toulx Ste Croi 80.79 330⇑iP P 21 04 42.2 -0.3
comp=Z,174nm,1.0s,mb5.4
TCF epP pP 21 05 56.5 +2.5
TCF Toulx Ste Croi 80.79 330⇑iP P 21 04 42.2 -0.3
TCF e*PP pP 21 05 56.5 +2.5
TCF pmax pmax
comp=Z,87nm,1.0s,mb5.4
TCF Toulx Ste Croi 80.79 330⇑iP P 21 04 42.2 -0.3
comp=Z,87nm,1.0s,mb5.4
TCF epP pP 21 05 56.5 +2.5
X20A Quemado 80.81 50 ⇑P P 21 04 42.5 -0.3
baz=80
SSB Saint Sauveur 80.81 328 eP P 21 04 42.1 -0.5
W21A San Fidel 80.83 49 ⇑P P 21 04 43.5 +0.6
baz=80,SNR=16
Y19A Nutrioso 80.83 51 ⇓P P 21 04 43.1 +0.2
baz=80,SNR=57
TOUF Mont Tournerai 80.84 326 eP P 21 04 42.1 -0.7
SBF Sospel 80.89 326⇑iP P 21 04 42.2 -0.8
comp=Z,238nm,0.7s,mb5.7
SBF Sospel 80.89 326⇑iP P 21 04 42.2 -0.8
SBF pmax pmax
comp=Z,119nm,0.7s,mb5.7
SBF Sospel 80.89 326⇑iP P 21 04 42.2 -0.8
comp=Z,119nm,0.7s,mb5.7
LUCF Luceram 80.91 326 eP P 21 04 42.3 -0.8
T25A Trinidad 80.96 46 ⇑P P 21 04 43.6 +0.1
baz=81,SNR=82
PYM Petit Puy Mans 80.97 330 eP P 21 04 44.2 +0.8
MVIF Mont Vial 80.98 326 eP P 21 04 42.6 -0.9
REVF Revere 81.02 326 eP P 21 04 42.9 -0.8
117A Oracle 81.05 53 ⇓P P 21 04 44.1 0.0
baz=81,SNR=102
BST Brest 81.06 335 eP P 21 04 43.8 0.0
Z18A Geronimo 81.06 52 ⇓P P 21 04 45.0 +0.9
baz=81,SNR=8.6
216A Three Points, 81.06 53 ⇓P P 21 04 44.6 +0.4
baz=81,SNR=47
U24A Moreno Valley 81.08 47 ⇓P P 21 04 44.7 +0.6
baz=81,SNR=33
OCF Saint Nazaire 81.12 328 eP P 21 04 44.1 -0.1
OG26 St.-Nazaire-De 81.12 328 eP P 21 04 44.1 -0.1
V23A Ortiz Mt. (NFS 81.12 48 ⇑P P 21 04 45.7 +1.3
baz=81,SNR=61
VIVF Saint-Julien-l 81.12 328⇑iP P 21 04 44.1 -0.1
comp=Z,103nm,0.6s,mb5.4
VIVF Saint-Julien-l 81.12 328⇑iP P 21 04 44.1 -0.1
VIVF pmax pmax
comp=Z,52nm,0.6s,mb5.4
VIVF Saint-Julien-l 81.12 328⇑iP P 21 04 44.1 -0.1
comp=Z,52nm,0.6s,mb5.4
QUIF Quistinic 81.13 334⇑iP P 21 04 43.7 -0.5
comp=Z,173nm,0.8s,mb5.6
QUIF epP pP 21 05 59.1 +3.3
QUIF Quistinic 81.13 334⇑iP P 21 04 43.7 -0.5
QUIF e*PP pP 21 05 59.1 +3.3
QUIF pmax pmax
comp=Z,86nm,0.8s,mb5.5
QUIF Quistinic 81.13 334⇑iP P 21 04 43.7 -0.5
comp=Z,86nm,0.8s,mb5.5
QUIF epP pP 21 05 59.1 +3.3
VERF Verneugheol 81.16 330 eP P 21 04 43.9 -0.5
CALN Calern 81.20 326 eP P 21 04 43.9 -0.8
TUC Tucson 81.22 53 eP P 21 04 45.0 +0.1
TUC pmax pmax
comp=Z,64nm,1.0s,mb5.3
TUC Tucson 81.22 53 eP P 21 04 45.0 0.0
comp=Z,64nm,1.0s,mb5.3
X21A Alamocita Cree 81.26 49 ⇓P P 21 04 46.2 +1.0
baz=81,SNR=175
W22A Albuquerque 81.28 48 ⇑P P 21 04 46.1 +0.9
baz=81,SNR=11
MFF Saint Martin d 81.32 332⇑iP P 21 04 45.1 -0.1
comp=Z,262nm,0.8s,mb5.7
MFF Saint Martin d 81.32 332⇑iP P 21 04 45.1 -0.1
MFF pmax pmax
comp=Z,131nm,0.8s,mb5.7
MFF Saint Martin d 81.32 332⇑iP P 21 04 45.1 -0.1
comp=Z,131nm,0.8s,mb5.7
Z19A T-Link Ranch, 81.33 51 ⇓P P 21 04 45.8 +0.3
baz=81,SNR=19
LBL Lubilhac 81.33 329 eP P 21 04 46.1 +0.8
Y20A Horse Springs, 81.35 50 ⇑P P 21 04 46.6 +1.0
baz=81,SNR=154
PGF Pioggiola 81.35 324⇑iP P 21 04 44.9 -0.6
comp=Z,68nm,0.8s,mb5.1
PGF Pioggiola 81.35 324⇑iP P 21 04 44.9 -0.6
PGF pmax pmax
comp=Z,34nm,0.8s,mb5.1
PGF Pioggiola 81.35 324⇑iP P 21 04 44.9 -0.6
comp=Z,34nm,0.8s,mb5.1
118A Homack Ranch, 81.43 52 ⇓P P 21 04 46.2 +0.2
baz=81,SNR=163
FRNF Fournols 81.44 330 eP P 21 04 46.0 +0.1
FRF La Foret Royal 81.46 326⇑iP P 21 04 45.1 -0.9
FRF epP pP 21 05 59.7 +2.0
SMRF Simiane la Rot 81.53 327⇑iP P 21 04 46.2 -0.2
U25A Circle Dot Ran 81.53 46 P P 21 04 46.4 -0.1
baz=81,SNR=37
ANMO Albuquerque 81.59 48 eP P 21 04 47.6 +0.8
ANMO pmax pmax
comp=Z,19nm,1.0s
ANMO Albuquerque 81.59 48 eP P 21 04 47.5 +0.7
comp=Z,19nm,1.0s,mb4.8
W23A Werner Place, 81.59 48 ⇑P P 21 04 47.8 +0.9
baz=81,SNR=21
X22A Bernardo 81.63 49 ⇓P P 21 04 48.8 +1.7
baz=81,SNR=31
LAZ Ladron 81.64 49 eP P 21 04 48.2 +1.0
comp=Z,34nm,0.9s,mb5.1
Y21A Point of Rocks 81.66 50 ⇑P P 21 04 48.4 +1.2
baz=81,SNR=75
119A Ashpeak Ranch, 81.70 51 P P 21 04 48.4 +0.9
baz=81,SNR=51
LMR La Mourre 81.70 326⇑iP P 21 04 46.7 -0.6
comp=Z,108nm,0.6s,mb5.4
LMR epP pP 21 06 01.3 +2.3
LMR La Mourre 81.70 326⇑iP P 21 04 46.7 -0.6
LMR e*PP pP 21 06 01.3 +2.3
LMR pmax pmax
comp=Z,54nm,0.6s,mb5.5
LMR La Mourre 81.70 326⇑iP P 21 04 46.7 -0.6
comp=Z,54nm,0.6s,mb5.5
LMR epP pP 21 06 01.3 +2.3
CEL Celeste 81.73 317 P P 21 04 47.0 -0.5
Z20A Nine Sixteen R 81.83 51 ⇓P P 21 04 49.2 +1.1
baz=82
V25A Rancho No Teng 81.86 46 ⇓P P 21 04 48.5 +0.2
baz=82,SNR=74
U26A Atchley Ranch, 81.88 46 ⇑P P 21 04 48.5 +0.2
baz=82,SNR=35
218A Dragoon 81.88 52 ⇑P P 21 04 49.4 +1.0
baz=82,SNR=12
RJF Les Rejaudoux 81.89 330⇑iP P 21 04 48.0 -0.2
comp=Z,108nm,0.9s,mb5.3
RJF eMLR MLR
comp=Z,529nm,21.5s
RJF Les Rejaudoux 81.89 330⇑iP P 21 04 48.0 -0.2
RJF pmax pmax
comp=Z,54nm,0.9s,mb5.3
RJF MLR MLR
comp=Z,530nm,21.5s
RJF Les Rejaudoux 81.89 330⇑iP P 21 04 48.0 -0.2
comp=Z,54nm,0.9s,mb5.3
RJF LR LR
comp=Z,530nm,21.5s
LENM Lemitar 81.91 49 eP P 21 04 49.2 +0.7
comp=Z,29nm,0.8s,mb5.1
CBKS Cedar Bluff 81.92 42 eP P 21 04 47.7 -0.8
CBKS pmax pmax
comp=Z,120nm,0.7s,mb5.7
CBKS Cedar Bluff 81.92 42 eP P 21 04 47.7 -0.8
comp=Z,120nm,0.7s,mb5.7
W24A Lazy 6 Ranch, 81.94 47 ⇓P P 21 04 49.6 +0.9
baz=82,SNR=86
SLNA Salina 82.00 318 P P 21 04 48.0 -0.9
Y22D IRIS PASSCAL I 82.01 49 ⇓P P 21 04 50.4 +1.4
baz=82,SNR=6.4
X23A Hourglass Bar 82.01 48 ⇑P P 21 04 49.3 +0.2
baz=82,SNR=29
CAF Calviac 82.02 330⇑iP P 21 04 49.2 +0.3
comp=Z,178nm,0.8s,mb5.5
CAF Calviac 82.02 330⇑iP P 21 04 49.2 +0.3
CAF pmax pmax
comp=Z,89nm,0.8s,mb5.5
CAF Calviac 82.02 330⇑iP P 21 04 49.2 +0.3
comp=Z,89nm,0.8s,mb5.5
Y22A Socorro 82.09 49 ⇑P P 21 04 50.1 +0.6
baz=82,SNR=73
LASF Ste Croix 82.09 328⇑iP P 21 04 49.4 +0.1
comp=Z,71nm,0.8s,mb5.2
LASF epP pP 21 06 03.9 +2.8
BNM Barren Site 82.11 49 eP P 21 04 50.5 +1.0
comp=Z,54nm,0.7s,mb5.4
Z21A St. Cloud Mine 82.19 50 ⇓P P 21 04 50.7 +0.7
baz=82,SNR=144
120A U Bar Ranch, L 82.24 51 ⇓P P 21 04 50.9 +0.7
baz=82,SNR=65
SCIA State Center 82.28 36 eP P 21 04 50.0 -0.3
comp=Z,168nm,0.9s,mb5.8
219A White Tail Can 82.30 52 ⇑P P 21 04 51.3 +0.7
baz=82,SNR=172
318A Bisbee 82.31 53 ⇑P P 21 04 51.1 +0.4
baz=82,SNR=110
V26A Tequesquite Ra 82.32 46 ⇑P P 21 04 50.1 -0.5
baz=82,SNR=56
X24A Lazy VL Ranch, 82.42 48 ⇓P P 21 04 51.4 +0.3
baz=82,SNR=40
W25A X Bar L Ranch, 82.42 47 ⇑P P 21 04 51.4 +0.3
baz=82,SNR=134
LFF La Frestale 82.47 331⇑iP P 21 04 51.5 +0.3
comp=Z,117nm,0.6s,mb5.5
LFF epP pP 21 06 05.8 +2.7
LFF La Frestale 82.47 331⇑iP P 21 04 51.5 +0.3
LFF e*PP pP 21 06 05.8 +2.7
LFF pmax pmax
comp=Z,58nm,0.6s,mb5.5
LFF La Frestale 82.47 331⇑iP P 21 04 51.5 +0.3
comp=Z,58nm,0.6s,mb5.5
LFF epP pP 21 06 05.8 +2.7
Y23A Lovelace Mesa, 82.58 49 ⇓P P 21 04 52.7 +0.7
baz=82,SNR=110
TOO Toolangi 82.61 174 eP P 21 04 52.3 +0.6
Z22A Elephant Butte 82.61 50 ⇓P P 21 04 52.7 +0.5
baz=82,SNR=103
JFWS Jewell Farm 82.62 33 eP P 21 04 50.6 -1.4
JFWS pmax pmax
comp=Z,73nm,0.5s,mb5.8
JFWS Jewell Farm 82.62 33 eP P 21 04 50.6 -1.5
comp=Z,73nm,0.5s,mb5.8
USI Ustica 82.66 319 P P 21 04 51.9 -0.4
121A Cookes Peak, D 82.72 51 ⇓P P 21 04 53.5 +0.8
baz=82,SNR=123
319A Douglas 82.76 52 ⇑P P 21 04 53.5 +0.6
baz=82,SNR=54
220A Playas Peak, P 82.78 52 ⇓P P 21 04 53.3 +0.2
baz=82,SNR=78
X25A Clemmons Ranch 82.85 47 ⇑P P 21 04 54.3 +0.9
baz=82,SNR=26
W26A Owens Ranch, T 82.88 46 ⇓P P 21 04 53.9 +0.4
baz=83,SNR=26
Y24A Capitan 82.91 48 ⇓P P 21 04 54.3 +0.6
baz=83,SNR=46
DGI Dorgali Grotta 82.94 323 P P 21 04 53.4 -0.3
Z23A Rita Site, Whi 83.00 49 ⇓P P 21 04 54.5 +0.3
baz=83,SNR=41
SSY Sortino 83.01 317 P P 21 04 54.1 0.0
122A Conniff Cattle 83.02 50 ⇓P P 21 04 55.7 +1.5
baz=83,SNR=53
221A Mesquite Ranch 83.12 51 ⇓P P 21 04 55.7 +0.9
baz=83,SNR=9.7
KSU1 Kansas State U 83.13 39 eP P 21 04 54.2 -0.5
comp=Z,168nm,0.6s,mb6.0

HAVL **Avola** 83.14 317 P P 21 04 54.9 +0.1
HVZN **Vizzini** 83.16 317 P P 21 04 55.0 +0.1
320A **Kipp Ranch, An** 83.21 52 ⇑P P 21 04 55.5 +0.3
baz=83,SNR=18
W27A **Bowe Ranch, En** 83.26 46 P P 21 04 55.6 +0.2
baz=83,SNR=113
X26A **CR and CF Fran** 83.28 47 ⇑P P 21 04 55.5 0.0
baz=83,SNR=38
RAFF **Raffo Rosso** 83.29 318 P P 21 04 56.8 +1.2
HMDC **Modica** 83.30 317 P P 21 04 55.9 +0.3
Y25A **Mesa, Roswell** 83.31 48 ⇓P P 21 04 55.4 -0.3
baz=83,SNR=70
MTLF **Montolieu** 83.33 329⇑*i*P P 21 04 55.8 +0.2
comp=Z,111nm,1.2s,mb5.3
MTLF **Montolieu** 83.33 329⇑*i*P P 21 04 55.8 +0.2
MTLF pmax pmax
comp=Z,56nm,1.2s,mb5.3
MTLF **Montolieu** 83.33 329⇑*i*P P 21 04 55.8 +0.2
comp=Z,56nm,1.2s,mb5.3
Z24A **Sheeppen Canyo** 83.41 49 ⇓P P 21 04 56.7 +0.5
baz=83,SNR=92
222A **Williams Famil** 83.41 50 ⇑P P 21 04 56.8 +0.5
baz=83,SNR=65
123A **Bell Site, Whi** 83.46 50 ⇓P P 21 04 57.5 +1.0
baz=83,SNR=14
ERC **Erice** 83.47 319 P P 21 04 56.1 -0.3
LRDF **Laroque-de-Fa** 83.56 328 *e*P P 21 04 57.2 +0.4
X27A **F and S Farms,** 83.57 46 ⇑P P 21 04 57.6 +0.6
baz=83,SNR=28
VSL **Villasalto** 83.72 322 P P 21 04 57.2 -0.4
Y26A **Elida** 83.76 47 ⇑P P 21 04 58.2 +0.2
baz=83
Z25A **Roswell** 83.79 48 ⇓P P 21 04 58.1 -0.1
baz=84,SNR=131
124A **Stringfield Ra** 83.85 49 ⇑P P 21 04 57.6 -0.9
baz=84,SNR=95
EJON **La Jonquera** 83.85 328 P P 21 04 58.4 +0.1
comp=Z,66nm,0.8s,mb5.5
FILF **Fillols** 83.88 328 *e*P P 21 04 58.4 0.0
MLS **Moulis** 84.07 329 *e*P P 21 04 59.3 -0.1
AMTX **Amarillo** 84.10 45 *e*P P 21 04 59.7 +0.1
comp=Z,204nm,0.7s,mb6.1
Y27A **Causey** 84.13 47 ⇓P P 21 04 59.7 -0.1
baz=84,SNR=45
CLLI **Llivia** 84.17 329 P P 21 05 00.6 +0.7
Z26A **Caprock** 84.19 48 ⇑P P 21 04 59.8 -0.3
baz=84,SNR=131
SALF **Salau** 84.21 329 *e*P P 21 04 59.3 -0.8
VALF **Valcebollere** 84.22 328 *e*P P 21 05 00.6 +0.5
MSTX **Muleshoe** 84.27 46 ⇑P P 21 04 58.9 -1.6
baz=84,SNR=29
EPF **Esparros** 84.28 330⇑*i*P P 21 05 00.1 -0.3
comp=Z,137nm,0.7s,mb5.6
EPF *e*pP pP 21 06 14.7 +2.1
EPF **Esparros** 84.28 330⇑*i*P P 21 05 00.1 -0.3
EPF *e**PP pP 21 06 14.7 +2.1
EPF pmax pmax
comp=Z,69nm,0.7s,mb5.6
EPF **Esparros** 84.28 330⇑*i*P P 21 05 00.1 -0.3
comp=Z,69nm,0.7s,mb5.6
EPF *e*pP pP 21 06 14.7 +2.1
224A **Cornudas Mount** 84.29 49 ⇑P P 21 05 00.9 +0.2
baz=84,SNR=146
WDD **Wield Dalam** 84.30 317 *e*P P 21 05 00.5 -0.2
comp=Z,67nm,0.8s,mb5.5
125A **Gardner Draw,** 84.30 49 ⇓P P 21 05 00.7 0.0
baz=84,SNR=150
RESF **Ens** 84.48 330 *e*P P 21 05 03.3 +1.9
REYF **Montagne du Re** 84.50 330 *e*P P 21 05 01.7 +0.2
VIEF **Viey** 84.52 330 *e*P P 21 05 02.4 +0.8
Z27A **Tatum** 84.55 47 ⇓P P 21 05 01.4 -0.6
baz=84,SNR=74
CSOR **Sort** 84.57 329 P P 21 05 02.1 +0.2
comp=Z,68nm,0.6s,mb5.7
ORDF **Ordiarp** 84.57 331 *e*P P 21 05 01.1 -0.7
ATE **Arette** 84.60 331 *e*P P 21 05 03.3 +1.3
CFON **Fontmartina** 84.62 328 P P 21 05 02.2 +0.1
comp=Z,126nm,0.8s,mb5.8
225A **Deer Hill, Car** 84.64 49 ⇓P P 21 05 02.6 +0.2
baz=84,SNR=78
OSSF **Osses** 84.64 331 *e*P P 21 05 01.7 -0.5
126A **Clayton Basin,** 84.65 48 ⇓P P 21 05 02.5 0.0
baz=84,SNR=23
EBIE **Bielsa** 84.65 330 P P 21 05 03.2 +0.9
comp=Z,153nm,0.8s,mb5.9
MNTX **Cornudas Mount** 84.66 50 *e*P P 21 05 02.6 +0.1
comp=Z,88nm,1.3s,mb5.4
ETSF **Etsaut** 84.71 330⇑*i*P P 21 05 03.2 +0.6
comp=Z,287nm,0.7s,mb5.9
ETSF **Etsaut** 84.71 330⇑*i*P P 21 05 03.2 +0.6
ETSF pmax pmax
comp=Z,143nm,0.7s,mb5.9
ETSF **Etsaut** 84.71 330⇑*i*P P 21 05 03.2 +0.6
comp=Z,143nm,0.7s,mb5.9
SJPF **Ste Jean** 84.76 331⇑*i*P P 21 05 02.5 -0.3
comp=Z,85nm,0.8s,mb5.3
SJPF **Ste Jean** 84.76 331⇑*i*P P 21 05 02.5 -0.3
SJPF pmax pmax
comp=Z,43nm,0.8s,mb5.3
SJPF **Ste Jean** 84.76 331⇑*i*P P 21 05 02.5 -0.3
comp=Z,43nm,0.8s,mb5.3
EALK **Alkurruntz** 84.76 331 P P 21 05 03.4 +0.6
comp=Z,128nm,1.1s,mb5.7
324A **Moseley Ranch,** 84.80 50 ⇓P P 21 05 03.3 0.0
baz=84,SNR=49
ELIZ **Elizondo** 84.81 331 P P 21 05 03.4 +0.3
ELIZ pmax pmax
comp=Z,57nm,0.6s,mb5.6
ELIZ **Elizondo** 84.81 331 P P 21 05 03.4 +0.3
comp=Z,57nm,0.6s,mb5.6
127A **Arkansas Junct** 84.97 48 ⇓P P 21 05 04.0 -0.1
baz=85,SNR=13
226A **Malaga, Loving** 85.06 49 P P 21 05 04.5 0.0
baz=85,SNR=110
325A **Bean Ranch, Si** 85.13 50 ⇑P P 21 05 04.8 -0.1
baz=85,SNR=68
ELAN **Lanestosa** 85.39 332 P P 21 05 05.4 -0.5
comp=Z,165nm,1.0s,mb5.8
EPOB **Poblet** 85.48 329 P P 21 05 06.5 +0.1
comp=Z,124nm,1.2s,mb5.6
227A **Bennet, Jal** 85.53 48 ⇑P P 21 05 07.7 +0.9
baz=85,SNR=5.7
AAM **Ann Arbor** 85.57 29 *e*P P 21 05 06.8 0.0
AAM pmax pmax
comp=Z,50nm,0.7s,mb5.5
AAM **Ann Arbor** 85.57 29 *e*P P 21 05 06.8 -0.1
comp=Z,50nm,0.7s,mb5.5
ECRI **Cripan** 85.64 332 P P 21 05 07.4 +0.3
ECRI pmax pmax
comp=Z,38nm,0.5s,mb5.5
ECRI **Cripan** 85.64 332 P P 21 05 07.4 +0.2
comp=Z,38nm,0.5s,mb5.5
WMOK **Wichita Mounta** 85.65 43 *e*P P 21 05 07.1 -0.2
WMOK pmax pmax
comp=Z,118nm,1.1s,mb5.6
WMOK **Wichita Mounta** 85.65 43 *e*P P 21 05 07.1 -0.2
comp=Z,118nm,1.1s,mb5.6
326A **Caldwell Ranch** 85.71 49 ⇓P P 21 05 07.8 +0.1
baz=85,SNR=37
ESAC **San Caprasio** 85.72 330 P P 21 05 08.2 +0.7
comp=Z,416nm,0.9s,mb6.3
EARI **Arriondas** 85.90 334 P P 21 05 08.6 +0.2
comp=Z,501nm,2.3s,mb5.9
327A **Balmorhea Ranc** 85.93 49 ⇓P P 21 05 09.0 +0.2
baz=86,SNR=7.3
ERTA **Horta de San J** 86.10 329 P P 21 05 09.5 +0.1
comp=Z,287nm,2.0s,mb5.8
426A **McDonald Obser** 86.19 49 ⇓P P 21 05 09.7 -0.3
baz=86,SNR=62
ETOS **Mallorca** 86.19 327 P P 21 05 09.7 -0.2
comp=Z,252nm,1.9s,mb5.7
SLM **Saint Louis** 86.26 35 *e*P P 21 05 07.7 -2.5
SLM pmax pmax
comp=Z,153nm,0.9s,mb5.8
SLM **Saint Louis** 86.26 35 *e*P P 21 05 07.7 -2.5
comp=Z,153nm,0.9s,mb5.8
LONY **Lake Ozonia** 86.27 22 *e*P P 21 05 08.4 -1.7
comp=Z,33nm,1.0s,mb5.1
328A **Wristen Ranch,** 86.28 48 ⇓P P 21 05 10.4 -0.1
baz=86,SNR=56
CCM **Cathedral Cave** 86.33 36 *e*P P 21 05 09.9 -0.7
CCM pmax pmax
comp=Z,83nm,0.6s,mb5.7
CCM **Cathedral Cave** 86.33 36 *e*P P 21 05 09.8 -0.8
comp=Z,83nm,0.6s,mb5.7
427A **Hayter Ranch,** 86.38 49 ⇑P P 21 05 10.9 0.0
baz=86,SNR=55

EPON **Pontenova** 86.47 335 P P 21 05 10.3 -0.8
comp=Z,67nm,0.7s,mb5.6
526A **Mary Lane Ranc** 86.63 50 ⇓P P 21 05 12.4 +0.3
baz=86,SNR=57
FVM **French Village** 86.74 36 *e*P P 21 05 12.2 -0.3
FVM pmax pmax
comp=Z,50nm,0.6s,mb5.5
FVM **French Village** 86.74 36 *e*P P 21 05 12.2 -0.4
comp=Z,50nm,0.6s,mb5.5
527A **Woodward Ranch** 86.82 49 ⇓P P 21 05 13.0 -0.1
baz=86
KEST **Kesra** 86.84 320 P P 21 05 12.4 -0.7
comp=Z,3.4nm,0.5s,mb4.5,baz=202,slow=0.9,SNR=27
KEST PKKPbc PKKPbc 21 23 05.2 +2.4
comp=Z,0.9nm,1.0s,baz=99,slow=4.8,SNR=5.2
KEST **Kesra** 86.84 320 *e*P P 21 05 12.2 -0.9
KEST *e* pP 21 06 26.7 +0.9
428A **Kincaid Ranch,** 86.86 48 ⇑P P 21 05 13.8 +0.5
baz=86,SNR=181
EMOS **Mosqueruela** 86.91 329 P P 21 05 13.9 +0.6
comp=Z,94nm,0.8s,mb5.7
CMAH **Djebel Manchou** 86.96 322 P P 21 05 12.7 -0.9
ERPA **Erie** 86.96 27 *e*P P 21 05 13.9 +0.4
comp=Z,90nm,0.8s,mb5.7
626A **Big Bend Ranch** 87.00 50 ⇓P P 21 05 14.1 +0.2
baz=87,SNR=42
OLIL **Olney** 87.04 34 *e*P P 21 05 13.6 -0.4
comp=Z,107nm,1.0s,mb5.6
ETOR **Torete** 87.07 330 P P 21 05 14.9 +0.8
ETOR pmax pmax
comp=Z,57nm,0.5s,mb5.7
ETOR **Torete** 87.07 330 P P 21 05 14.9 +0.8
comp=Z,57nm,0.5s,mb5.7
ABSA **Djebel Ababsia** 87.23 322 P P 21 05 16.3 +1.4
528A **Cox Ranch, San** 87.25 49 ⇑P P 21 05 15.4 +0.3
baz=87,SNR=75
BLO **Bloomington** 87.27 33 *e*P P 21 05 14.4 -0.7
BLO pmax pmax
comp=Z,59nm,0.8s,mb5.5
BLO **Bloomington** 87.27 33 *e*P P 21 05 14.4 -0.7
comp=Z,59nm,0.8s,mb5.5
STS **Santiago** 87.29 336 P P 21 05 16.9 +1.8
STS pmax pmax
comp=Z,36nm,0.6s,mb5.4
STS **Santiago** 87.29 336 P P 21 05 16.9 +1.8
comp=Z,36nm,0.6s,mb5.4
LBNH **Lisbon** 87.31 21 *e*P P 21 05 14.9 -0.2
LBNH pmax pmax
comp=Z,44nm,1.0s,mb5.2
LBNH **Lisbon** 87.31 21 *e*P P 21 05 14.9 -0.2
comp=Z,44nm,1.0s,mb5.2
ERUA **La Rua** 87.32 335 P P 21 05 16.3 +1.1
EMAZ **Mazaricos** 87.36 336 P P 21 05 15.6 +0.2
comp=Z,49nm,0.7s,mb5.5
EIBI **Ibiza** 87.40 327 P P 21 05 17.7 +2.0
comp=Z,67nm,0.7s,mb5.6
TXAR **Lajitas Array** 87.42 50 P P 21 05 16.5 +0.5
comp=Z,13nm,0.6s,mb4.9,baz=285,slow=3.2,SNR=103
TXAR pP pP 21 06 30.9 +2.2
comp=Z,20nm,0.9s,baz=289,slow=3.8,SNR=4.5
TXAR PKKPbc PKKPbc 21 23 03.4 +2.1
comp=Z,5.2nm,0.9s,baz=163,slow=5.8,SNR=19
TXAR PKPPKP 21 31 10.1
comp=Z,1.1nm,1.0s,baz=130,slow=3.9,SNR=3.7
TXAR **Lajitas Array** 87.42 50 P P 21 05 16.5 +0.5
TXAR *PP pP 21 06 30.9 +2.1
TXAR pmax pmax
comp=Z,13nm,0.6s
CKFL **Kef-Lekhel** 87.45 322 P P 21 05 15.0 -1.0
SIUC **Southern Illin** 87.46 35 *e*P P 21 05 15.8 -0.2
comp=Z,248nm,0.8s,mb6.1
627A **Terlingua Ranc** 87.48 50 ⇓P P 21 05 15.8 -0.4
baz=87,SNR=34
ECAL **Calabor** 87.61 334 P P 21 05 16.9 +0.3
comp=Z,181nm,1.9s,mb5.6
CASM **Ain Smara** 87.67 322 P P 21 05 16.4 -0.6
DFRA **Djebel Bou Aff** 87.69 323 P P 21 05 17.0 -0.1
628A **Black Gap, Mar** 87.72 49 ⇓P P 21 05 16.9 -0.5
baz=87,SNR=33
PBRG **Braganca** 87.73 334 *e*P P 21 05 17.7 +0.5
comp=Z,57nm,1.8s,mb5.1
PBRG *e*pP pP 21 06 32.6 +2.6
USIN **University of** 87.87 34 *e*P P 21 05 17.6 -0.4
comp=Z,78nm,0.7s,mb5.7
EZAM **Zamans** 88.01 335 P P 21 05 18.1 -0.4
EZAM pmax pmax
comp=Z,29nm,0.6s,mb5.3
EZAM **Zamans** 88.01 335 P P 21 05 18.1 -0.4
comp=Z,29nm,0.6s,mb5.3
ELOB **Lobios** 88.08 335 P P 21 05 20.5 +1.7
comp=Z,71nm,1.3s,mb5.3
BINY **Binghamton** 88.11 24 *e*P P 21 05 17.9 -1.1
comp=Z,26nm,0.6s,mb5.2
PARMO **Parma** 88.14 36 *e*P P 21 05 19.7 +0.5
WCI **Wyandotte Cave** 88.18 33 *e*P P 21 05 19.0 -0.4
WCI pmax pmax
comp=Z,132nm,0.8s,mb5.8
WCI **Wyandotte Cave** 88.18 33 *e*P P 21 05 19.0 -0.4
comp=Z,132nm,0.8s,mb5.8
SET **Setif** 88.19 323 P P 21 05 18.0 -1.4
MIAR **Mount Ida** 88.26 40 *e*P P 21 05 19.9 +0.1
MIAR pmax pmax
comp=Z,65nm,0.7s,mb5.6
MIAR **Mount Ida** 88.26 40 *e*P P 21 05 19.9 +0.1
comp=Z,65nm,0.7s,mb5.6
EBEN **Beniarda** 88.28 328 P P 21 05 18.4 -1.4
comp=Z,100nm,1.8s,mb5.3
MVO **Moncorvo** 88.41 334 P P 21 05 20.5 +0.1
MVO **Moncorvo** 88.41 334 *e*P P 21 05 20.0 -0.4
comp=Z,52nm,1.7s,mb5.1
MVO *e*pP pP 21 06 35.2 +1.9
PVRL **Vila Real** 88.52 334 *e*P P 21 05 21.0 +0.1
comp=Z,74nm,0.6s,mb5.7
PVRL *e*pP pP 21 06 35.3 +1.4
JCT **Junction City** 88.56 47 *e*P P 21 05 20.8 -0.5
JCT pmax pmax
comp=Z,61nm,0.7s,mb5.5
JCT **Junction City** 88.56 47 *e*P P 21 05 20.8 -0.5
comp=Z,61nm,0.7s,mb5.5
UALR **University of** 88.62 39 *e*P P 21 05 21.3 -0.2
comp=Z,25nm,0.8s,mb5.1
GNAR **Gosnell** 88.62 37 *e*P P 21 05 23.1 +1.6
comp=Z,3μm,1.2s
GLAT **Glass** 88.67 36 *e*P P 21 05 22.5 +0.8
HBAR **Harrisburg** 88.70 37 *e*P P 21 05 22.1 +0.2
ESDC **Sonseca Array** 88.75 331 P P 21 05 21.9 -0.2
comp=Z,17nm,0.6s,mb5.0,baz=19,slow=4.0,SNR=69
ESDC pP pP 21 06 35.9 +0.8
comp=Z,12nm,0.8s,baz=27,slow=3.5,SNR=5.0
ESDC PKKPbc PKKPbc 21 22 59.9 +1.5
comp=Z,0.8nm,0.6s,baz=252,slow=1.4,SNR=8.9
ESDC **Sonseca Array** 88.75 331 P P 21 05 21.5 -0.5
comp=Z,13nm,0.6s,mb4.9
ESLA **Sonseca Array** 88.75 331 *e*P P 21 05 21.4 -0.6
comp=Z,3.7nm,0.7s
UTMT **University of** 88.78 36 *e*P P 21 05 22.9 +0.6
comp=Z,220nm,0.9s,mb6.0
ETOB **Tobarra** 88.82 329 P P 21 05 24.7 +2.4
comp=Z,30nm,0.7s,mb5.2
PTO **Porto** 88.91 335 *e*P P 21 05 23.4 +0.7
comp=Z,57nm,2.0s,mb5.0
HALT **Halls** 88.96 36 *e*P P 21 05 22.9 -0.2
SSPA **Standing Stone** 88.97 26 *e*P P 21 05 22.5 -0.5
comp=Z,68nm,1.0s,mb5.4
PAB **San Pablo** 89.00 331 *e*P P 21 05 21.9 -1.3
PAB pmax pmax
comp=Z,12nm,0.6s,mb4.9
PAB **San Pablo** 89.00 331 *e*P P 21 05 21.9 -1.3
comp=Z,12nm,0.6s,mb4.9
PVIS **Viseu** 89.08 334 *e*P P 21 05 23.1 -0.4
comp=Z,50nm,1.1s,mb5.3
PVIS *e*pP pP 21 06 38.3 +1.7
EPLA **Plasencia** 89.11 333 P P 21 05 22.5 -1.1
EPLA pmax pmax
comp=Z,97nm,0.7s,mb5.7
EPLA **Plasencia** 89.11 333 P P 21 05 22.4 -1.2
comp=Z,97nm,0.7s,mb5.7
EVIA **Vianos** 89.17 330 P P 21 05 24.4 +0.4
EVIA pmax pmax
comp=Z,85nm,0.6s,mb5.8
EVIA **Vianos** 89.17 330 P P 21 05 24.4 +0.4
comp=Z,84nm,0.6s,mb5.8
MCWV **Mont Chateau** 89.23 28 *e*P P 21 05 23.9 -0.3
comp=Z,136nm,0.9s,mb5.8
MTE **Manteigas** 89.27 334 *e*P P 21 05 23.0 -1.3
comp=Z,58nm,0.8s,mb5.5
MTE **Manteigas** 89.27 334 *e*P P 21 05 24.5 +0.1
comp=Z,80nm,0.8s,mb5.6
MTE *e*pP pP 21 06 41.3 +3.9
WVT **Waverly** 89.39 35 *e*P P 21 05 24.7 -0.4
WVT pmax pmax
comp=Z,64nm,0.7s,mb5.6
WVT **Waverly** 89.39 35 *e*P P 21 05 24.7 -0.4
comp=Z,64nm,0.7s,mb5.6
PCBR **Castelo Branco** 89.75 334 *e*P P 21 05 26.6 -0.1
comp=Z,35nm,2.0s,mb4.8
PCBR *e*pP pP 21 06 42.8 +3.0
EHUE **Huescar** 89.93 329 P P 21 05 27.6 +0.1
comp=Z,6.5nm,0.9s,mb4.5
EBAN **Banos Encina** 90.04 330 P P 21 05 28.7 +0.6
EBAN pmax pmax
comp=Z,15nm,0.5s,mb5.1
EBAN **Banos Encina** 90.04 330 P P 21 05 28.7 +0.6
comp=Z,15nm,0.5s,mb5.1
PMOR **Pomariorio Ree** 90.05 111 *e*P P 21 05 30.0 +1.7
comp=Z,222nm,1.1s,mb5.9
NATX **Nacogdoches** 90.06 42 *e*P P 21 05 29.0 +0.7
comp=Z,118nm,0.8s,mb5.8
PMRV **Marv??o** 90.10 333 *e*P P 21 05 28.1 -0.2
comp=Z,44nm,1.1s,mb5.2
PMRV *e*pP pP 21 06 42.8 +1.4
EQES **Quesada** 90.11 330 P P 21 05 28.4 0.0
comp=Z,58nm,1.2s,mb5.3
OXF **Oxford** 90.12 37 *e*P P 21 05 27.9 -0.6
OXF pmax pmax
comp=Z,180nm,1.1s,mb5.8
OXF **Oxford** 90.12 37 *e*P P 21 05 27.9 -0.6
comp=Z,180nm,1.1s,mb5.8
PTOM **Tomar** 90.25 334 *e*P P 21 05 26.3 -2.7
comp=Z,43nm,1.8s,mb5.0
EADA **Adamuz** 90.31 331 P P 21 05 31.1 +1.8
comp=Z,40nm,1.0s,mb5.2
URZ **Urewera** 90.36 150 P P 21 05 29.1 -0.1
comp=Z,47nm,0.7s,mb5.5,baz=31,slow=2.4,SNR=14
VAH **Vaihoa** 90.40 111 *e*P P 21 05 32.8 +2.9
comp=Z,93nm,1.1s,mb5.5
ENIJ **Nijar** 90.54 329 P P 21 05 31.1 +0.7
ENIJ pmax pmax
comp=Z,14nm,0.7s,mb4.9
ENIJ **Nijar** 90.54 329 P P 21 05 31.1 +0.7
comp=Z,14nm,0.7s,mb4.9
EBAD **Badajoz** 90.59 333 P P 21 05 32.2 +1.6
comp=Z,38nm,0.9s,mb5.2
PESTR **Estremoz** 90.68 333 *e*P P 21 05 30.7 -0.3
comp=Z,32nm,1.1s,mb5.1
PESTR *e*pP pP 21 06 45.7 +1.6
ELUQ **Luque** 90.75 330 P P 21 05 31.4 +0.1
ELUQ pmax pmax
comp=Z,33nm,0.8s,mb5.2
ELUQ **Luque** 90.75 330 P P 21 05 31.4 0.0
comp=Z,32nm,0.8s,mb5.2
ECOG **Cogollos-Vega** 90.76 330 P P 21 05 33.6 +2.2
ECOG pmax pmax
comp=Z,19nm,0.6s,mb5.1
ECOG **Cogollos-Vega** 90.76 330 P P 21 05 33.6 +2.3
comp=Z,19nm,0.6s,mb5.1
PPT **Papeete** 90.82 114 *e*P P 21 05 34.5 +2.7
comp=Z,89nm,1.2s,mb5.5
PPT *e*S S 21 15 40.9 -20
comp=Z,985nm,26.0s
PPT *e*LR LR 21 34 59.3
comp=Z,752nm,22.8s
EBER **Berja** 90.85 329 P P 21 05 30.7 -1.1
comp=Z,22nm,0.9s,mb5.0
PAE **Paea** 90.89 114 *e*P P 21 05 35.0 +2.9
comp=Z,38nm,1.2s,mb5.1
TAOE **Nuku Hiva Isla** 90.91 102 *e*LR LR 21 35 09.5
comp=Z,1μm,23.0s
SWET **Sewanee** 90.95 34 *e*P P 21 05 30.8 -1.5
comp=Z,65nm,0.8s,mb5.5
TIAR **Tiarei** 90.96 114 *e*P P 21 05 35.4 +2.9
comp=Z,209nm,1.0s,mb5.9
HKT **Hockley** 90.99 44 *e*P P 21 05 33.0 +0.4
HKT pmax pmax
comp=Z,40nm,1.6s,mb5.0
HKT **Hockley** 90.99 44 *e*P P 21 05 33.0 +0.4
comp=Z,40nm,1.6s,mb5.0
ERON **Agron** 91.08 330 P P 21 05 31.7 -1.1
ELOJ **Sierra Loja** 91.08 330 P P 21 05 34.2 +1.3
ELOJ pmax pmax
comp=Z,14nm,0.7s,mb4.9
ELOJ **Sierra Loja** 91.08 330 P P 21 05 34.2 +1.4
comp=Z,14nm,0.7s,mb4.9
ELN **Prospectdale** 91.11 30 *e*P P 21 05 32.3 -0.7
EVO **Evora** 91.12 334 *e*P P 21 05 33.5 +0.5
comp=Z,40nm,1.0s,mb4.9
EVO *e*MLR MLR
comp=Z,450nm,22.8s
EVO **Evora** 91.12 334 *e*P P 21 05 32.7 -0.3
comp=Z,40nm,1.7s,mb5.0
EVO *e*pP pP 21 06 47.9 +1.7
PMAFR **Mafra** 91.12 335 *e*P P 21 05 31.7 -1.3
comp=Z,82nm,1.4s,mb5.4
PBAR **Barrancos** 91.13 333 *e*P P 21 05 32.8 -0.3
comp=Z,33nm,1.9s,mb4.8
PBAR *e*pP pP 21 06 47.7 +1.4
EGUA **Guajares** 91.16 330 P P 21 05 33.1 -0.1
EGUA pmax pmax
comp=Z,62nm,0.6s,mb5.6
EGUA **Guajares** 91.16 330 P P 21 05 33.1 -0.1
comp=Z,62nm,0.6s,mb5.6
EVOP **Sao Brissos** 91.16 334 *e*P P 21 05 32.4 -0.8
EVOP AMb AMB 21 05 37.8
comp=Z,43nm,1.4s,mb5.1
EVOP *e*S SKSac 21 15 33.1 -2.0
EVOP *e*S SKSac 21 15 33.2 -1.9
CPCT **Cooper Cave** 91.30 33 *e*P P 21 05 33.0 -0.9
LIS **Lisbon** 91.30 334 *e*P P 21 05 33.0 -0.9
LIS AMb AMB 21 05 34.4
comp=Z,94nm,1.0s,mb5.6
LIS *e*S SKSac 21 15 34.5 -1.4
CBN **Corbin** 91.35 27 *e*P P 21 05 34.1 0.0
comp=Z,53nm,0.6s,mb5.5
EMIN **Mina Concepcio** 91.38 332 P P 21 05 33.8 -0.4
comp=Z,182nm,2.0s,mb5.6
TKL **Tuckaleechee C** 91.40 32 *e*P P 21 05 34.0 -0.4
PBEJ **Beja** 91.53 333 *e*P P 21 05 35.1 +0.2
comp=Z,46nm,1.5s,mb5.2
VBMS **Vicksburg** 91.59 39 *e*P P 21 05 37.5 +2.2
comp=Z,78nm,0.8s,mb5.7
EMIJ **Mijas** 91.82 330 P P 21 05 37.0 +0.7
comp=Z,39nm,1.8s,mb5.0
EGRO **El Granado** 91.86 333 P P 21 05 36.6 +0.2
comp=Z,74nm,1.2s,mb5.5
KVTX **Kingsville** 91.91 47 *e*P P 21 05 37.8 +1.0
comp=Z,91nm,0.9s,mb5.7
ESPR **Espera** 91.92 331 P P 21 05 38.1 +1.4
comp=Z,45nm,0.9s,mb5.4
PCVE **Castro Verde** 91.95 333 *e*P P 21 05 37.3 +0.4
comp=Z,70nm,1.7s,mb5.3
PVAQ **Vaqueiros** 92.05 333 *e*P P 21 05 37.4 0.0
comp=Z,38nm,1.4s,mb5.1
EJIF **Jimena Fronter** 92.17 331 P P 21 05 40.1 +2.2
EJIF pmax pmax
comp=Z,14nm,0.6s,mb5.1
EJIF **Jimena Fronter** 92.17 331 P P 21 05 40.1 +2.2
comp=Z,14nm,0.6s,mb5.1
LRAL **Lakeview Retre** 92.41 36 *e*P P 21 05 38.8 -0.3
comp=Z,15nm,0.7s,mb5.0
PFVI **Vila Bisbo** 92.66 334 *e*P P 21 05 42.1 +2.0
RPZ **Rata Peaks** 93.36 156 P P 21 05 43.0 +0.2
comp=Z,21nm,0.7s,mb5.2,baz=296,slow=4.4,SNR=3.9
GOGA **Godfrey** 93.50 33 *e*P P 21 05 43.3 -0.8
GOGA pmax pmax
comp=Z,35nm,0.8s,mb5.4
GOGA **Godfrey** 93.50 33 *e*P P 21 05 43.3 -0.8
comp=Z,35nm,0.8s,mb5.4
JSC **Jenkinsville** 93.56 31 *e*P P 21 05 44.0 -0.4
TBI **Tubuai** 95.12 118 *e*S S 21 16 36.7 -2.1
comp=Z,864nm,30.0s
TBI *e*LR LR 21 37 03.4
comp=Z,526nm,24.2s
KMBO **Kilima Mbogo** 97.97 276 P P 21 06 05.6 +1.0
comp=Z,7.2nm,0.7s,mb5.1,baz=8.7,slow=19,SNR=7.5
KMBO **Kilima Mbogo** 97.97 276 P P 21 06 05.6 +1.0
KMBO pmax pmax
comp=Z,7.0nm,0.7s
TAM **Tamanrasset** 99.47 316 *e*P Pdif 21 06 11.0 0.0
TAM pmax pmax
comp=Z,8.0nm,1.4s,mb4.9
TAM **Tamanrasset** 99.47 316 *e*P Pdif 21 06 11.0 -0.1
comp=Z,8.1nm,1.4s
OPO **Ambohidratompo** 103.07 257 Pdiff Pdif 21 06 26.6 -0.4
comp=Z,2.4nm,0.6s,baz=46,slow=4.5,SNR=6.2

OPO PP PP 21 10 45.7 -0.5
comp=Z,2.9nm,0.9s,baz=95,slow=11,SNR=3.4
CASY Casey 112.95 191 *e*PKP PKiKP 21 11 02.7 +0.5
CASY Casey 112.95 191 *e*PKP PKiKP 21 11 01.9 -0.3
LSZ Lusaka 114.20 272 PKP PKiKP 21 11 06.3 +0.2
comp=Z,14nm,0.6s,baz=32,slow=2.4,SNR=36
LSZ PP PP 21 12 02.9 -3.6
comp=Z,8.0nm,0.8s,baz=53,slow=7.9,SNR=5.2
LSZ PKKPbc PKKPbc 21 21 47.7 +2.5
comp=Z,1.4nm,0.5s,baz=192,slow=5.3,SNR=4.2
LSZ Lusaka 114.20 272 PKIKP PKiKP 21 11 06.3 +0.2
LSZ 21 12 02.9
LSZ pmax pmax
comp=Z,14nm,0.6s
LSZ pmax pmax
comp=Z,8.0nm,0.8s
LSZ Lusaka 114.20 272 PKP PKiKP 21 11 06.3 +0.2
LSZ PP PP 21 12 02.9 -3.6
LSZ PKKPbc PKKPbc 21 21 47.7 +2.5
DBIC Dimbokro 118.36 316 PKP PKPdf 21 11 13.9 -0.4
comp=Z,14nm,0.6s,baz=40,slow=2.6,SNR=6.2
DBIC PP PP 21 12 32.4 -2.1
comp=Z,15nm,0.8s,baz=352,slow=9.4,SNR=5.5
DBIC PKKPbc PKKPbc 21 21 33.8 +2.8
comp=Z,11nm,0.9s,baz=209,slow=6.6,SNR=9.9
DBIC Dimbokro 118.36 316 PKIKP PKPdf 21 11 13.9 -0.4
DBIC 21 12 32.4
DBIC pmax pmax
comp=Z,14nm,0.6s
DBIC pmax pmax
comp=Z,15nm,0.8s
DBIC Dimbokro 118.36 316 PKP PKPdf 21 11 13.9 -0.4
DBIC PP PP 21 12 32.4 -2.1
DBIC PKKPbc PKKPbc 21 21 33.8 +2.8
TIC Toumodi 118.46 316 *e*PKIKP PKPdf 21 11 15.1 +0.6
comp=Z,51nm,0.8s
KIC Kosan Boka 118.57 316 *e*PKIKP PKPdf 21 11 15.4 +0.6
comp=Z,36nm,0.8s
LIC Lamto 118.83 316 *e*PKIKP PKPdf 21 11 15.0 -0.2
LIC *e*MLR MLR
comp=Z,437nm,23.0s
LIC Lamto 118.83 316 *e*PKIKP PKPdf 21 11 15.7 +0.5
comp=Z,65nm,0.8s
LIC Lamto 118.83 316 *e*PKPdf PKPdf 21 11 15.0 -0.2
LIC LR LR
comp=Z,220nm,23.0s
LBTB Lobatse 122.39 266 PKP PKPdf 21 11 21.8 +0.1
comp=Z,40nm,0.7s,baz=78,slow=1.2,SNR=53
LBTB PKKPab PKKPab 21 21 18.8 +1.1
comp=Z,7.6nm,0.8s,baz=241,slow=5.2,SNR=10
ROSC El Rosal 122.74 39 PKP PKPdf 21 11 23.9 +1.1
comp=Z,11nm,0.4s,baz=104,slow=19,SNR=11
ROSC PP PP 21 13 06.0 +1.8
comp=Z,7.8nm,0.6s,baz=85,slow=22,SNR=7.4
SBA Scott Base 123.99 173 *e*PKIKP PKPdf 21 11 23.4 +0.2
TSUM Tsumeb 124.31 277 PKP PKPdf 21 11 25.8 +0.2
comp=Z,25nm,0.8s,baz=26,slow=3.1,SNR=42
OTAV Otavalo 124.83 46 *e*PKP PKPdf 21 11 27.2 +0.5
BOSA Boshof 124.83 263 PKKPab PKKPab 21 21 09.0 +1.9
comp=Z,6.1nm,0.6s,baz=223,slow=5.6,SNR=18
MAW Mawson 125.43 207 *e*PKP PKPdf 21 11 27.1 +1.0
comp=Z,42nm,0.8s
MAW Mawson 125.43 207 PKP PKPdf 21 11 26.4 +0.3
comp=Z,60nm,0.9s,baz=1.5,slow=2.0,SNR=56
MAW Mawson 125.43 207 PKIKP PKPdf 21 11 26.4 +0.3
MAW pmax pmax
comp=Z,60nm,0.9s
SUR Sutherland 130.13 262 PKP PKPdf 21 11 36.2 -0.1
comp=Z,7.5nm,0.7s,baz=76,slow=4.2,SNR=4.5
SUR SKPbc SKPbc 21 14 30.6 +1.0
comp=Z,18nm,0.9s,baz=68,slow=3.7,SNR=6.5
SUR Sutherland 130.13 262 PKP PKPdf 21 11 36.1 -0.1
SUR SKPbc SKPbc 21 14 30.6 +1.0
SYO Syowa Base 133.88 210‖ *e*P PKPdf 21 11 29.0 -13
SYO Syowa Base 133.88 210‖ *i*P PKPdf 21 11 42.4 +0.2
QSPA South Pole Qui 134.83 180 PKhKP PKPpre 21 11 28.2
comp=Z,21nm,0.9s,baz=317,slow=1.1,SNR=23
QSPA PKP PKPdf 21 11 44.9 +1.3
comp=Z,110nm,1.0s,baz=305,slow=1.5,SNR=29
QSPA PP PP 21 14 22.3 -0.4
comp=Z,32nm,1.1s,baz=16,slow=1.9,SNR=8.3
QSPA SKPbc SKPbc 21 14 44.0 -0.1
comp=Z,58nm,1.0s,baz=298,slow=1.5,SNR=9.2
QSPA PKKP 21 21 29.4
comp=Z,1.6nm,0.5s,baz=68,slow=1.6,SNR=5.2
QSPA South Pole Qui 134.83 180 PKP PKPdf 21 11 44.9 +1.3
QSPA PP PP 21 14 22.3 -0.4
QSPA SKPbc SKPbc 21 14 44.0 -0.2
QSPA PKKP 21 21 29.4
NNA Nana 135.93 52 *e*PKPdf PKPdf 21 11 48.3 +0.7
ARE Arequipa 142.54 50 *e*P PKPdf 21 11 56.0 -3.6
NVL N'lazarevskaya 143.38 207‖ *i*PKHKP PKPpre 21 11 51.7
MAIT Maitri 143.41 207 *e*PKPdif PKPdf 21 11 57.0 -2.5
LPAZ La Paz 144.15 45 PKP PKPdf 21 12 01.5 -0.9
comp=Z,25nm,0.9s,baz=14,slow=5.5,SNR=39
LPAZ SKPbc SKPbc 21 15 12.5 +1.0
comp=Z,25nm,1.1s,baz=354,slow=4.7,SNR=6.3
LPAZ SKKPbc 21 23 15.9
comp=Z,2.6nm,0.9s,baz=88,slow=2.9,SNR=4.4
VNA1 Neumayer--Stat 149.37 202 *e*PKPdf PKPdf 21 12 14.0 +4.5
LCO Las Campanas 152.60 64 *e*PKPdf PKPdf 21 12 16.6 +0.9
LCO *e*PKPbc PKPbc 21 12 25.2 +2.2
CPUP Villa Florida 157.84 37 PKP PKPdf 21 12 22.9 0.0
comp=Z,14nm,0.9s,baz=357,slow=2.1,SNR=26
CPUP PKPab PKPab 21 12 56.8 -0.6
comp=Z,24nm,0.6s,baz=318,slow=3.8,SNR=22
CPUP PP PP 21 16 37.1 -0.6
comp=Z,7.9nm,0.8s,baz=320,slow=5.2,SNR=4.7
CPUP Villa Florida 157.84 37 PKIKP PKPdf 21 12 22.9 0.0
CPUP 21 12 56.8
CPUP 21 16 37.1
CPUP pmax pmax
comp=Z,14nm,0.9s
CPUP pmax pmax
comp=Z,24nm,0.6s
CPUP pmax pmax
comp=Z,8.0nm,0.8s
PLCA Paso Flores 159.11 88 PKP PKPdf 21 12 24.4 +0.5
comp=Z,9.5nm,1.1s,baz=269,slow=0.8,SNR=8.4
PLCA PKPab PKPab 21 13 03.6 +0.9
comp=Z,42nm,1.0s,baz=282,slow=4.4,SNR=16
PLCA Paso Flores 159.11 88 PKIKP PKPdf 21 12 24.5 +0.6
PLCA 21 13 03.7
PLCA pmax pmax
comp=Z,10.0nm,1.1s
PLCA pmax pmax
comp=Z,42nm,1.0s
TRQA Tornquist 163.89 71 *e*PKPdf PKPdf 21 12 27.4 -1.6

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*ISCJB **29** 20:57:04.5±0.6, 31°.16S±0°.06×179°.6W±0°.1, h318km±6km, mb4.6/17, Error ellipse: s-maj=17.6km s-min=8.2km az=16.7*
*NEIC **29** 20:57:06.3±1.0, 31°.27S×179°.48W, h334km±10km, mb4.9/12, Error ellipse: s-maj=19.0km s-min=11.4km az=107.0*
*IDC **29** 20:57:07.8±1.3, 31°.00S×179°.53W, h345km±12km, mb4.0/9, mb1 4.1/9, mb1mx4.0/15, mbtmp4.0/9, Error ellipse: s-maj=18.9km s-min=14.7km az=100.0*
ISC 29 20:57:06.1±0.7, 31°.24S±0°.06×179°.6W±0°.1, h322km±8km, n53, σ1s42/29, mb4.6/17, 1D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.48**	**37**	P	**Pn**	**20 58 00.3**	**+1.6**
	1μm,0.3s,baz=109,slow=5.5,SNR=75						
RAO				S	**S**	**20 58 36.6**	**-4.3**
	540nm,0.3s,baz=66,slow=22,SNR=3.6						
URZ	**Urewera**	**7.50**	**200**	P	**Pn**	**20 58 54.5**	**+0.8**
	17nm,0.3s,baz=270,slow=2.2,SNR=52						
URZ				S	**S**	**21 00 20.8**	**-0.2**
	202nm,0.3s,baz=281,slow=21,SNR=18						
KHZ	**Kahutara**	**12.42**	**204**	*e*Pn	**Pn**	**20 59 50.8**	**-2.3**
	57nm,0.7s						
MSVF	**Nonsavu**	**13.61**	**351**	*e*P	**Pn**	**21 00 04.9**	**-2.7**
	33nm,0.8s						
RPZ	**Rata Peaks**	**14.47**	**208**	P	**P**	**21 00 14.9**	**-1.1**
	1.7nm,0.3s,baz=18,slow=3.2,SNR=7.2						
RPZ				S	**S**	**21 02 45.3**	**-8.2**
	13nm,0.3s,baz=352,slow=22,SNR=18						
DZM	**Mont Dzumac**	**15.42**	**303**	*e*P	**P**	**21 00 29.3**	**+2.6**
	20nm,0.7s						
AFI	**Afiamalu**	**18.70**	**24**	*e*P	**P**	**21 01 02.2**	**+0.1**
	37nm,0.7s						
STKA	**Stephens Creek**	**32.93**	**259**	P	**P**	**21 03 12.8**	**+1.6**
	27nm,0.7s,mb4.6,baz=92,slow=10.0,SNR=56						
STKA	**Stephens Creek**	**32.93**	**259**	*e*P	**P**	**21 03 12.1**	**+0.9**
	5.8nm,0.8s,mb3.9						
ASAR	**Alice Springs**	**41.67**	**269**	ScP	ScP	21 09 29.4	-3.6
	2.4nm,0.8s,baz=114,slow=3.2,SNR=4.1						
WRAB	**Tennant Creek**	**42.73**	**274**	*e*P	**P**	**21 04 23.2**	**-9.5**
	211nm,1.5s,mb5.0						
WRA	**Warramunga Arr**	**42.74**	**274**	P	**P**	**21 04 32.3**	**-0.4**
	3.4nm,0.4s,mb3.9,baz=113,slow=8.0,SNR=2.8						
SBA	**Scott Base**	**47.10**	**184**	*e*P	**P**	**21 05 09.0**	**+3.0**
	33nm,0.8s,mb4.6						
FITZ	**Fitzroy Crossi**	**50.96**	**271**	P	**P**	**21 05 36.3**	**+0.4**
	14nm,1.1s,mb4.1,baz=107,slow=17,SNR=3.3						
CASY	**Casey**	**53.74**	**208**	*e*P	**P**	**21 05 54.8**	**-0.6**
	20nm,0.7s,mb4.6						
QSPA	**South Pole Qui**	**58.87**	**180**	P	**P**	**21 06 33.2**	**+2.1**
	45nm,0.6s,mb5.1,baz=25,slow=1.3,SNR=500						
MAW	**Mawson**	**71.03**	**201**	P	**P**	**21 07 48.8**	**-0.2**
	3.8nm,0.6s,mb4.3,baz=148,slow=6.1,SNR=8.3						
TGY	**Tagaytay City**	**72.68**	**299**	P	**P**	**21 08 01.7**	**+2.2**
	66nm,0.4s,mb5.7,baz=210,slow=21,SNR=3.6						
SYO	**Syowa Base**	**75.98**	**194**‖	*e*P	**P**	**21 08 15.4**	**-2.2**
MJAR	**Matsushiro Arr**	**78.15**	**326**	P	**P**	**21 08 29.2**	**-0.8**
	0.4nm,0.4s,mb3.5,baz=105,slow=2.0,SNR=2.8						
TWG	**Pinlang**	**78.20**	**306**	*e*P	**P**	**21 08 31.7**	**+1.1**
	51nm,1.1s,mb5.2						
PLCA	**Paso Flores**	**82.95**	**134**	P	**P**	**21 08 56.4**	**+0.9**
	3.6nm,1.0s,mb4.2,baz=224,slow=8.0,SNR=3.8						
KSRS	**Korea Array**	**84.09**	**321**	P	**P**	**21 08 59.5**	**-1.5**
	0.9nm,0.6s,mb3.8,baz=128,slow=0.5,SNR=5.1						
AKUT	**Akutan**	**85.87**	**8**	*e*P	**P**	**21 09 10.3**	**+0.9**
	53nm,1.0s,mb5.3						
PETK	**Petropavlovsk-**	**86.29**	**347**	P	**P**	**21 09 10.5**	**-0.9**
	2.6nm,0.6s,mb4.3,baz=117,slow=6.6,SNR=7.6						
PPLA	**Purkeypile**	**96.35**	**12**	*e*P	**P**	**21 09 57.9**	**+0.1**
	34nm,1.2s,mb5.3						
TRF	**Thorofare Moun**	**97.21**	**13**	*e*P	**P**	**21 09 58.7**	**-3.0**
	18nm,1.1s,mb5.1						
KURK	**Kurchatov**	**120.61**	**314**	PKP	PKPdf	21 15 17.0	-2.3
	0.4nm,0.5s,baz=86,slow=1.9,SNR=2.8						
LSZ	**Lusaka**	**126.58**	**214**	PKP	PKPdf	21 15 31.1	-0.7
	1.6nm,0.7s,baz=79,slow=5.2,SNR=4.3						
AKTO	**Aktyubinsk**	**133.62**	**312**	SKPab		21 18 41.0	
	1.2nm,0.6s,baz=94,slow=6.4,SNR=5.6						
ARCES	**ARCESS Array B**	**139.10**	**347**	PKhKP		21 15 44.2	
	1.3nm,0.8s,baz=41,slow=1.9,SNR=5.4						
ARCES				PKP	PKPdf	21 15 51.8	-1.9
	0.7nm,0.5s,baz=26,slow=1.3,SNR=5.9						
ARCES				SKPbc	SKPbc	21 18 53.7	-4.0
	1.6nm,0.7s,baz=2.4,slow=2.9,SNR=5.3						
ARCES	**ARCESS Array B**	**139.10**	**347**	PKP	PKPdf	21 15 51.8	-1.9
ARCES				SKPbc	SKPbc	21 18 53.7	-4.0
JOF	**Joensuu**	**142.66**	**337**	*e*p	PKPdf	21 15 54.1	-6.1
JOF	**Joensuu**	**142.66**	**337**	*e*p	PKPdf	21 15 54.1	-6.1
FINES	**FINESS Array B**	**145.43**	**338**	PKPbc	PKPbc	21 16 03.8	-2.0
	9.1nm,0.4s,baz=49,slow=3.8,SNR=116						
NOA	**NORSAR Array B**	**149.35**	**350**	PKPbc	PKPbc	21 16 14.5	-1.8
	4.0nm,0.7s,baz=15,slow=4.1,SNR=12						
NOA				PKPab	PKPab	21 16 20.2	-1.9
	2.1nm,0.8s,baz=21,slow=3.8,SNR=6.2						
HFS	**Hagfors**	**149.76**	**347**	PKPbc	PKPbc	21 16 15.2	-2.1
	3.4nm,0.6s,baz=129,slow=2.1,SNR=20						
HFS				PKPab	PKPab	21 16 21.4	-2.5
	2.3nm,0.5s,baz=72,slow=4.8,SNR=11						
AKASG	**Malin Array Be**	**151.09**	**321**	PKPbc	PKPbc	21 16 18.9	-1.9
	0.8nm,0.5s,baz=57,slow=2.5,SNR=5.1						
BRTR	**Keskin Array B**	**151.74**	**297**	PKPbc	PKPbc	21 16 21.5	-1.1
	0.7nm,0.5s,baz=111,slow=2.3,SNR=4.1						
LIC	**Lamto**	**154.60**	**167**	*e*PKP2	PKPab	21 16 45.3	-0.2
	9.9nm,0.5s						
LIC	**Lamto**	**154.60**	**167**	*e*PKP2	PKPab	21 16 45.4	-0.1
	56nm,1.4s						
KIC	**Kosan Boka**	**154.79**	**168**	*e*PKP2	PKPab	21 16 46.2	-0.1
	18nm,0.8s						
TIC	**Tomodi**	**155.02**	**167**	*e*PKP2	PKPab	21 16 47.1	-0.2
	143nm,1.9s						
DBIC	**Dimbokro**	**155.07**	**168**	PKPab	PKPab	21 16 47.2	-0.3
	3.2nm,0.6s,baz=145,slow=7.4,SNR=4.0						
CLL	**Collm**	**157.88**	**339**	*e*PKPab	PKPab	21 16 57.0	-1.7
HAU	**Haudompre**	**162.65**	**346**	*e*PKP2	PKPab	21 17 17.4	-2.2
	2.4nm,0.4s						
SGMF	**Saint Gilles**	**162.86**	**7**	*e*PKP2	PKPab	21 17 18.4	-2.1
LOR	**Lormes**	**163.77**	**351**	*e*PKP2	PKPab	21 17 22.3	-2.3
SSF	**Saint Saulge**	**164.02**	**352**	*e*PKP2	PKPab	21 17 23.5	-2.1
	6.4nm,0.8s						
CABF	**La Chapelle**	**164.03**	**346**	*e*PKP2	PKPab	21 17 23.8	-1.9
AVF	**Avril sur Loir**	**164.30**	**352**	*e*PKP2	PKPab	21 17 24.5	-2.4
	4.2nm,0.8s						
SMF	**Signal de Mont**	**164.38**	**351**	*e*PKP2	PKPab	21 17 25.1	-2.2
	5.3nm,0.5s						
ESDC	**Sonseca Array**	**170.88**	**22**	PKPab	PKPab	21 17 54.2	-2.0
	0.5nm,0.3s,baz=309,slow=2.2,SNR=9.0						

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*ISCJB **29** 21:24:13.1±0.9, 51°.51N±0°.05×16°.16E±0°.04, h0km, Error ellipse: s-maj=7.0km s-min=3.1km az=15.6*
*CSEM **29** 21:24:15.9±0.7, 51°.43N×16°.12E, h2km, ML2.7/5, Error ellipse: s-maj=12.5km s-min=6.1km az=13.0*
*WAR **29** 21:24:16.8, 51°.47N×16°.11E, ML2.2, Mining Induced*
*PRU **29** 21:24:16.1, 51°.46N×16°.16E, h0km*
ISC 29 21:24:14.8±0.9, 51°.50N±0°.05×16°.16E±0°.04, h0km, n21, σ0s81/42, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.66**	**173**	*e*Pg	**Pg**	**21 24 28.5**	**+1.1**
KSP				*e*Sg	**Sg**	**21 24 37.4**	**+1.3**
KSP	**Ksiaz**	**0.66**	**173**	*i* Pg	**Pg**	**21 24 28.5**	**+1.1**
KSP				*e*Sg	**Sg**	**21 24 36.7**	**+0.7**
UPC	**Upice**	**1.00**	**185**	*e*PG	**Pg**	**21 24 34.5**	**+0.7**
UPC	**Upice**	**1.00**	**185**	Pg	**Pg**	**21 24 34.5**	**+0.7**
DPC	**Dobruska-Polom**	**1.16**	**175**	*e*PG	**Pg**	**21 24 37.3**	**+0.4**
DPC				*e*SG	**Sg**	**21 24 51.9**	**+0.1**
	comp=Z,8.0nm,0.3s						
DPC	**Dobruska-Polom**	**1.16**	**175**	Pg	**Pg**	**21 24 37.3**	**+0.4**
DPC				Sg	**Sg**	**21 24 51.9**	**+0.1**
	comp=Z,8.0nm,0.3s						
BRG	**Berggiesshubel**	**1.53**	**247**	PN	**Pn**	**21 24 43.4**	**+0.1**
BRG				PG	**Pg**	**21 24 44.1**	**+0.1**
BRG				SG	**Sg**	**21 25 04.5**	**+0.7**
	comp=Z,14nm,0.5s						
BRG	**Berggiesshubel**	**1.53**	**247**	*i* P	**Sb**	**21 25 04.4**	**+0.6**
	comp=Z,12nm,0.4s						
BRG							
	comp=N,409nm,15.3s						
BRG							
	comp=E,740nm,14.5s						
BRG							
	comp=Z,544nm,20.6s						
PRU	**Pruhonice**	**1.83**	**215**	*e*PG	**Pg**	**21 24 49.6**	**-0.2**
PRU				*e*SG	**Sg**	**21 25 13.8**	**+0.3**
	comp=Z,11nm,0.5s						
PRU	**Pruhonice**	**1.83**	**215**	Pg	**Pg**	**21 24 49.6**	**-0.2**
PRU				Sg	**Sg**	**21 25 13.8**	**+0.3**
	comp=Z,11nm,0.5s						
MORC	**Moravsky Berou**	**1.94**	**152**	*e*Pn	**Pn**	**21 24 49.5**	**+0.6**
MORC				*e*Sg	**Sg**	**21 25 16.2**	**-0.7**
CLL	**Collm**	**1.99**	**266**	*i* Pg	**Pg**	**21 24 52.3**	**-0.5**
CLL				*e*		21 24 55.0	
CLL				*e*Sg	**Sg**	**21 25 18.0**	**-0.5**
	comp=Z,7.0nm,0.4s						
OKC	**Ostrava-Krasne**	**2.09**	**142**	*e*PN	**Pn**	**21 24 48.8**	**-2.2**
OKC				*e*PG	**Pg**	**21 24 54.4**	**-0.4**
OKC				*e*SG	**Sg**	**21 25 22.2**	**+0.3**
	comp=Z,4.3nm,0.5s						
OKC	**Ostrava-Krasne**	**2.09**	**142**	Pg	**Pg**	**21 24 54.4**	**-0.4**
OKC				Sg	**Sg**	**21 25 22.2**	**+0.3**
	comp=Z,4.3nm,0.5s						
OJC	**Ojcow**	**2.64**	**118**	*e*Pg	**Pg**	**21 25 05.2**	**-0.1**
OJC				*e*Sg	**Sg**	**21 25 39.7**	**+0.2**
NKC	**Novy Kostel**	**2.67**	**243**	*e*PN	**Pn**	**21 25 00.2**	**+1.2**
NKC				*e*PG	**Pg**	**21 25 05.9**	**0.0**
NKC				*e*SG	**Sg**	**21 25 40.6**	**+0.1**
	comp=Z,8.1nm,0.3s						
NKC	**Novy Kostel**	**2.67**	**243**	Pn	**Pn**	**21 25 00.2**	**+1.2**
NKC	**Novy Kostel**	**2.67**	**243**	Pg	**Pg**	**21 25 05.9**	**0.0**
NKC				Sg	**Sg**	**21 25 40.6**	**+0.1**
	comp=Z,8.1nm,0.3s						
KHC	**Kasperske Hory**	**2.89**	**216**	*e*PN	**Pn**	**21 25 02.4**	**+0.4**
KHC				*e*PG	**Pg**	**21 25 08.1**	**-2.0**
KHC				*e*SN	**Sn**	**21 25 36.4**	**-1.0**
KHC				*e*SG	**Sg**	**21 25 45.9**	**-1.7**
	comp=Z,3.7nm,0.4s						
KHC	**Kasperske Hory**	**2.89**	**216**	Pn	**Pn**	**21 25 02.4**	**+0.4**
MOX	**Moxa**	**2.99**	**255**	*e*PG	**Pg**	**21 25 11.9**	**-0.1**
MOX				*e*SG	**Sg**	**21 25 51.4**	**+0.6**

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*JMA **29** 21:25:20.8±0.2, 24°.75N×122°.63E, h108km, M2.1*
*TAP **29** 21:25:20.4, 24°.71N×122°.57E, h112km, ML3.5, C*
*ISCJB **29** 21:25:20.4±0.6, 24°.66N±0°.03×122°.60E±0°.02, h108km±5km, Error ellipse: s-maj=5.4km s-min=3.0km az=169.0*
ISC 29 21:25:21.0±0.6, 24°.67N±0°.03×122°.60E±0°.02, h107km±5km, n45, σ0s71/86, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.43**	**118**	P	**Pn**	**21 25 37.2**	**+0.1**
YOJ				S	**Sn**	**21 25 49.8**	**+0.7**
TWB1	**Santiao Chiao**	**0.65**	**302**	P	**Pn**	**21 25 38.6**	**-0.1**
	baz=292						
TWB1				S	**Sn**	**21 25 52.1**	**+0.2**
	baz=292						
TWC	**Suao**	**0.68**	**265**	*i* P	**Pn**	**21 25 38.6**	**-0.4**
	baz=258						
TWC				S	**Sn**	**21 25 51.7**	**-0.7**
	baz=258						
ILA	**Ilan**	**0.78**	**278**	P	**Pn**	**21 25 39.5**	**-0.2**
	baz=275						
ILA				*e*S	**Sn**	**21 25 53.7**	**-0.2**
	baz=275						
ENA	**Nanau**	**0.82**	**253**	P	**Pn**	**21 25 40.1**	**0.0**
	baz=246						
ENA				S	**Sn**	**21 25 54.9**	**+0.5**
	baz=246						
NWF	**Wu-fen Shan**	**0.84**	**299**	P	**Pn**	**21 25 40.5**	**+0.1**
	baz=290						
NWF				S	**Sn**	**21 25 54.9**	**-0.1**
	baz=290						
TWE	**Neicheng**	**0.85**	**274**	*i* P	**Pn**	**21 25 40.4**	**0.0**
	baz=275						
TWE				S	**Sn**	**21 25 54.8**	**-0.3**
	baz=275						
ENTT	**Nioudou**	**0.94**	**269**	P	**Pn**	**21 25 41.6**	**+0.3**
	baz=268						
ENTT				S	**Sn**	**21 25 56.5**	**-0.1**
	baz=268						
TWA	**Mucha**	**0.97**	**289**	P	**Pn**	**21 25 41.4**	**-0.3**
	baz=279						
TWA				S	**Sn**	**21 25 56.7**	**-0.6**
	baz=279						
PCYT	**Pengchaiyu**	**1.07**	**334**	P	**Pn**	**21 25 42.7**	**0.0**
	baz=336						
IRIF	**Iriomote-Funau**	**1.08**	**107**	P	**Pn**	**21 25 42.7**	**-0.1**
IRIF				*e*S	**Sn**	**21 25 59.5**	**+0.2**
TWD	**Chiawan**	**1.08**	**238**	P	**Pn**	**21 25 42.1**	**-0.8**
	baz=231						
TWD				S	**Sn**	**21 25 59.3**	**-0.1**
	baz=231						
TWY	**Chenhua**	**1.09**	**304**	*e*P	**Pn**	**21 25 42.5**	**-0.4**
	baz=302						
NSK	**Sanguang**	**1.13**	**271**	*i* P	**Pn**	**21 25 43.5**	**+0.2**
	baz=262						
NSK				S	**Sn**	**21 26 00.1**	**0.0**
	baz=262						
HWA	**Hwalien**	**1.14**	**233**	*e*P	**Pn**	**21 25 43.2**	**-0.2**
	baz=227						
HWA				*e*S	**Sn**	**21 26 01.5**	**+1.1**
	baz=227						
NNS	**Nan Shan**	**1.14**	**259**	P	**Pn**	**21 25 43.7**	**+0.3**
	baz=252						
NNS				*e*S	**Sn**	**21 26 01.2**	**+0.8**
	baz=252						
TWS1	**Kuangyinshan**	**1.16**	**292**	*i* P	**Pn**	**21 25 43.5**	**-0.1**
	baz=284						
TWS1				S	**Sn**	**21 26 00.2**	**-0.5**
	baz=284						
HATJ	**Hateruma jima**	**1.26**	**119**	S	**Sn**	**21 26 03.9**	**+1.1**
NCU	**National Centr**	**1.32**	**284**	P	**Pn**	**21 25 45.6**	**+0.1**
	baz=282						
NCU				S	**Sn**	**21 26 04.5**	**+0.5**
	baz=282						
WHF	**Hehuan Shan**	**1.32**	**247**	*i* P	**Pn**	**21 25 46.0**	**+0.4**
	baz=245						
WHF				*e*S	**Sn**	**21 26 04.4**	**+0.3**
	baz=245						
JKRS	**Kuro-shima**	**1.35**	**108**	P	**Pn**	**21 25 46.3**	**+0.4**
JKRS				S	**Sn**	**21 26 05.1**	**+0.3**
ESL	**Shilin**	**1.36**	**232**	*i* P	**Pn**	**21 25 45.4**	**-0.6**
	baz=226						
ESL				S	**Sn**	**21 26 03.8**	**-1.1**
	baz=226						
TWT	**Tachien**	**1.36**	**253**	P	**Pn**	**21 25 46.9**	**+0.9**
	baz=246						
TWT				S	**Sn**	**21 26 05.5**	**+0.6**
	baz=246						
JIJ	**Ishigaki jima**	**1.44**	**102**	P	**Pn**	**21 25 46.7**	**-0.2**
JIJ				S	**Sn**	**21 26 05.2**	**-1.3**
NSTT	**Nanjuang**	**1.45**	**269**	P	**Pn**	**21 25 47.1**	**0.0**
	baz=267						
NSTT				S	**Sn**	**21 26 06.3**	**-0.6**
	baz=267						
EHY	**Hungye**	**1.64**	**226**	P	**Pn**	**21 25 48.7**	**-0.7**
	baz=224						
EHY				*e*S	**Sn**	**21 26 09.3**	**-1.6**
	baz=224						
NSY	**Sanyi**	**1.69**	**262**	*e*P	**Pn**	**21 25 50.5**	**+0.5**
	baz=260						
NSY				*e*S	**Sn**	**21 26 10.8**	**-1.3**
	baz=260						
TWQ1	**Liyutan**	**1.69**	**260**	P	**Pn**	**21 25 50.1**	**+0.1**
	baz=258						
TWQ1				*e*S	**Sn**	**21 26 11.9**	**-0.1**
	baz=258						
SMLT	**Sun Moon Lake**	**1.73**	**244**	P	**Pn**	**21 25 51.3**	**+0.8**
	baz=239						
SMLT				*e*S	**Sn**	**21 26 13.9**	**+1.0**
	baz=239						
TYC	**Yuchr**	**1.76**	**245**	P	**Pn**	**21 25 51.8**	**+1.0**
	baz=242						
TYC				S	**Sn**	**21 26 14.9**	**+1.4**
	baz=242						
TWF1	**Yuli**	**1.77**	**223**	P	**Pn**	**21 25 50.4**	**-0.5**
	baz=229						
TWF1				*e*S	**Sn**	**21 26 12.5**	**-1.2**
	baz=229						
JTJ	**Tarama**	**1.92**	**90**	P	**Pn**	**21 25 52.9**	**+0.1**
JTJ				S	**Sn**	**21 26 16.7**	**-0.3**
CHN5	**Tsauling**	**2.05**	**239**	P	**Pn**	**21 25 55.0**	**+0.4**
	baz=247						
CHN5				*e*S	**Sn**	**21 26 20.3**	**+0.2**
	baz=247						
ELDTW	**Lidau**	**2.06**	**225**	*e*P	**Pn**	**21 25 53.7**	**-1.0**
	baz=222						
ELDTW				*e*S	**Sn**	**21 26 19.4**	**-1.0**
	baz=222						
STYT	**Tauyuan**	**2.25**	**229**	P	**Pn**	**21 25 57.9**	**+0.8**
	baz=228			

baz=249
PNG eS Sn 21 26 40.5 -1.5
baz=249
JKE Kume jima 2 4.13 66 P Pn 21 26 21.4 -0.6

IDC 29 21:42:27.7±3.4, 12°51'S×167°97'E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.6/16, mbtmp3.6/4, Error ellipse: s-maj=120.0km s-min=43.3km az=137.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**33.08**	**253**	P	P	21 49 04.9	-0.5
	0.7nm,1.1s,baz=85,slow=9.0,SNR=3.9						
ASAR	**Alice Springs**	**34.14**	**246**	P	P	21 49 15.1	+0.4
	0.4nm,0.6s,baz=74,slow=9.0,SNR=6.7						
CMAR	**Chiang Mai Arr**	**74.69**	**293**	P	P	21 54 10.0	+0.2
	0.4nm,0.8s,baz=120,slow=3.2,SNR=3.3						
MKAR	**Makanchi Array**	**96.07**	**316**	P	P	21 55 56.9	-0.3
	0.3nm,0.6s,baz=88,slow=5.2,SNR=3.0						
ARCES	**ARCESS Array B**	**118.28**	**346**	PKP	PKPdf	22 01 16.4	0.0
	0.8nm,0.6s,baz=35,slow=3.3,SNR=6.3						

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*CASC **29** 21:51:49.1±1.3, 14°11'N×93°49'W, h20km±999km, MD4.3, mb4.3(NEIC)*
*NEIC **29** 21:51:50.0, 14°15'N×92°52'W, h45km, mb4.3/45, MD4.8(MEX), After MEX.*
*MEX **29** 21:51:52.6±0.9, 14°09'N×93°40'W, h14km±20km, MD4.6*
*IDC **29** 21:51:53.9±4.9, 14°16'N×93°03'W, h33km±33km, mb3.9/11, mb1 4.2/14, mb1mx4.1/21, mbtmp3.9/14, ML4.0/3, MS4.1/9, Ms1 4.1/9, ms1mx3.7/28, Error ellipse: s-maj=34.8km s-min=16.2km az=28.0*
*ISCJB **29** 21:51:55.9±0.8, 14°35'N±0°05×93°00'W±0°04, h56km±5km, mb4.3/47, MS4.1/10, Error ellipse: s-maj=10.4km s-min=4.7km az=32.9*
ISC 29 21:51:57.8±0.7, 14°42'N±0°06×92°93'W±0°05, h57km±5km, n271, σ1§27/272, mb4.3/47, MS4.1/10, 67C-56D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.81**	**53**	*e*P	**Pn**	**21 52 12.9**	**-0.4**
THIG				*i* S	**Sn**	**21 52 30.9**	**+6.2**
JAT	**Jato**	**1.26**	**94**	*e*P	**Pn**	**21 52 19.5**	**+0.3**
PCIG		**1.31**	**348**	*i* P	**Pn**	**21 52 17.1**	**-2.8**
PCIG				*i* S	**Sn**	**21 52 36.0**	**-0.4**
TP2	**Tecpan 2**	**1.89**	**79**	*e*P	**Pn**	**21 52 29.2**	**+1.5**
TP2				*e*S	**Sn**	**21 53 00.4**	**+10**
FUG	**Fuego 3**	**2.03**	**89**	*e*P	**Pn**	**21 52 30.0**	**+0.4**
TGIG		**2.35**	**356**	*e*P	**Pn**	**21 52 33.7**	**-0.4**
TGIG				*i* S	**Sn**	**21 53 03.7**	**+1.8**
IXG	**Ixpaco**	**2.42**	**95**	*e*P	**Pn**	**21 52 34.6**	**-0.3**
APG	**El Apazote**	**2.46**	**76**	Pn	**Pn**	**21 52 35.6**	**+0.1**
	23nm,0.3s,baz=249,slow=7.5,SNR=138						
APG				Lg		21 53 19.0	
	31nm,0.3s,baz=334,slow=18,SNR=4.8						
NBG	**Las Nubes**	**2.51**	**86**	*e*P	**Pn**	**21 52 38.4**	**+2.2**
MRL	**Marmol**	**3.20**	**78**	*e*P	**Pn**	**21 52 47.3**	**+1.6**
CMIG	**Matias Romero**	**3.26**	**325**	Pn	**Pn**	**21 52 42.8**	**-3.7**
	11nm,0.3s,baz=144,slow=11,SNR=59						
CMIG				Sn	**Sn**	**21 53 20.0**	**-3.9**
	61nm,0.3s,baz=94,slow=15,SNR=7.7						
CMIG	**Matias Romero**	**3.26**	**325**	Pn	**Pn**	**21 52 42.8**	**-3.6**
CMIG				Sn	**Sn**	**21 53 20.0**	**-3.9**
HUIG	**Huatulco**	**3.35**	**294**	*e*P	**Pn**	**21 52 39.2**	**-8.5**
HUIG				*i* S	**Sn**	**21 53 14.2**	**-12**
TUIG	**Tuzandepetl**	**3.87**	**339**	*e*P	**Pn**	**21 52 52.1**	**-2.8**
TUIG				*e*S	**Sn**	**21 53 36.9**	**-2.2**
VHO	**Vista Hermosa**	**4.51**	**306**	*i* P	**Pn**	**21 52 56.2**	**-7.4**
VHO				*i* S	**Sn**	**21 53 46.2**	**-8.7**
PNIG	**Pinotepa**	**5.38**	**292**	*e*P	**Pn**	**21 53 06.5**	**-9.1**
PNIG				*i* S	**Sn**	**21 54 04.5**	**-12**
TGUH	**Tegucigalpa,Un**	**5.50**	**93**	*e*Pn	Px	21 53 04.7	
TGUH				*e*Sn	Sx	21 54 07.2	
TPIG	**Tehuac#an**	**5.82**	**314**	*e*P	**Pn**	**21 53 15.9**	**-5.7**
TPIG				*e*S	**Sn**	**21 54 20.0**	**-7.1**
TEIG	**Tepich**	**7.29**	**37**	Pn	**Pn**	**21 53 35.5**	**-6.2**
TEIG				S	**Sn**	**21 55 06.9**	**+3.8**
HKT	**Hockley**	**15.69**	**351**	*e*Pn	**Pn**	**21 55 32.0**	**-3.3**
	62nm,1.9s						
JCT	**Junction City**	**17.19**	**340**	*e*Pn	**Pn**	**21 55 52.2**	**-1.9**
	14nm,0.8s						
JCT				*e*S	**S**	**21 59 12.2**	**+1.1**
DWPF	**Disney**	**17.32**	**36**	*e*Pn	**Pn**	**21 55 47.5**	**-8.2**
628A	**Black Gap, Mar**	**17.59**	**330**	⇑P	**Pn**	**21 55 58.7**	**-0.4**
	baz=18,SNR=22						
627A	**Terlingua Ranc**	**17.81**	**329**	⇓P	**Pn**	**21 56 01.8**	**0.0**
	baz=18,SNR=45						
TXAR	**Lajitas Array**	**17.86**	**328**	P	**Pn**	**21 56 03.0**	**+0.6**
	0.1nm,0.3s,baz=151,slow=9.1,SNR=30						
626A	**Big Bend Ranch**	**18.28**	**327**	⇓P	**Pn**	**21 56 06.1**	**-1.3**
	baz=19,SNR=12						
527A	**Woodward Ranch**	**18.49**	**330**	⇑P	**Pn**	**21 56 09.9**	**-0.1**
	baz=19,SNR=20						
428A	**Kincaid Ranch,**	**18.55**	**333**	⇑P	**Pn**	**21 56 10.8**	**+0.2**
	baz=19,SNR=7.6						
526A	**Mary Lane Ranc**	**18.66**	**328**	⇓P	**Pn**	**21 56 12.6**	**+0.5**
	baz=19,SNR=32						
427A	**Hayter Ranch,**	**18.98**	**331**	⇑P	**Pn**	**21 56 16.4**	**+0.6**
	baz=20,SNR=7.7						
426A	**McDonald Obser**	**19.13**	**330**	⇑P	**Pn**	**21 56 16.8**	**-0.8**
	baz=20,SNR=25						
328A	**Wristen Ranch,**	**19.16**	**333**	⇑P	**Pn**	**21 56 17.1**	**-0.9**
	baz=20,SNR=16						
LRAL	**Lakeview Retre**	**19.31**	**15**	*e*Pn	**Pn**	**21 56 25.7**	**+6.0**
326A	**Caldwell Ranch**	**19.64**	**331**	⇑P	**Pn**	**21 56 22.3**	**-1.3**
	baz=20,SNR=11						
227A	**Bennet, Jal**	**19.91**	**333**	⇑P	**Pn**	**21 56 25.7**	**-1.2**
	baz=20,SNR=6.5						
MIAR	**Mount Ida**	**20.05**	**358**	*e*P	**P**	**21 56 23.0**	**-3.3**
	30nm,1.0s						
MIAR				S	**S**	**22 00 06.5**	**-2.0**
OTAV	**Otavalo**	**20.09**	**133**	P	Px	21 56 15.3	
	6.5nm,1.2s						
OTAV				*e*S	Sx	21 59 56.6	
OXF	**Oxford**	**20.26**	**8**	P	**P**	**21 56 23.7**	**-4.9**
UALR	**University of**	**20.28**	**1**	P	**P**	**21 56 24.1**	**-4.7**
	17nm,0.8s						
UALR				*e*S	**S**	**22 00 12.4**	**-0.6**
226A	**Malaga, Loving**	**20.32**	**332**	⇓P	**P**	**21 56 30.0**	**+0.8**
	baz=21,SNR=10						
CLNB	**Carlsbad**	**20.39**	**332**	*e*P	**P**	**21 56 30.9**	**+1.0**
	5.5nm,0.9s						
324A	**Moseley Ranch,**	**20.48**	**328**	⇓P	**P**	**21 56 31.3**	**+0.3**
	baz=21,SNR=15						
GDL2	**Guadalupe Moun**	**20.55**	**331**	*e*P	**P**	**21 56 33.0**	**+1.3**
MNTX	**Cornudas Mount**	**20.64**	**329**	*e*P	**P**	**21 56 31.0**	**-1.7**
	8.0nm,0.8s						
ROSC	**El Rosal**	**20.64**	**116**	P	**P**	**21 56 36.1**	**+3.3**
	8.9nm,0.8s,baz=284,slow=15,SNR=7.1						
225A	**Deer Hill, Car**	**20.69**	**330**	⇑P	**P**	**21 56 34.6**	**+1.3**
	baz=21,SNR=12						
126A	**Clayton Basin,**	**20.77**	**333**	⇑P	**P**	**21 56 34.9**	**+0.7**
	baz=21,SNR=12						
GOGA	**Godfrey**	**20.77**	**23**	*e*P	**P**	**21 56 27.9**	**-6.2**
	14nm,1.0s						
WMOK	**Wichita Mounta**	**20.91**	**346**	*e*P	**P**	**21 56 32.4**	**-3.2**
	17nm,1.4s						
WMOK				*e*S	**S**	**22 00 24.9**	**-0.6**
Z27A	**Tatum**	**21.01**	**335**	⇑P	**P**	**21 56 37.2**	**+0.6**
	baz=22,SNR=48						
224A	**Cornudas Mount**	**21.01**	**329**	⇑P	**P**	**21 56 37.2**	**+0.5**
	baz=22,SNR=22						
125A	**Gardner Draw,**	**21.07**	**332**	⇓P	**P**	**21 56 38.0**	**+0.7**
	baz=22,SNR=30						
Z26A	**Caprock**	**21.29**	**334**	⇓P	**P**	**21 56 39.9**	**+0.2**
	baz=22,SNR=33						
MSTX	**Muleshoe**	**21.41**	**337**	⇓P	**P**	**21 56 40.9**	**-0.1**
	baz=22,SNR=8.4						
124A	**Stringfield Ra**	**21.48**	**330**	⇑P	**P**	**21 56 42.0**	**+0.2**
	baz=22,SNR=35						
Y27A	**Causey**	**21.48**	**336**	⇓P	**P**	**21 56 41.7**	**0.0**
	baz=22,SNR=12						
Z25A	**Roswell**	**21.62**	**332**	⇑P	**P**	**21 56 43.2**	**0.0**
	baz=22,SNR=11						
SWET	**Sewanee**	**21.65**	**16**	*e*P	**P**	**21 56 38.1**	**-5.4**
AMTX	**Amarillo**	**21.85**	**340**	*e*P	**P**	**21 56 43.1**	**-2.5**
	26nm,0.8s,mb4.7						
Z24A	**Sheeppen Canyo**	**21.96**	**331**	⇑P	**P**	**21 56 47.4**	**+0.6**
	baz=22,SNR=33						
320A	**Kipp Ranch, An**	**22.09**	**322**	⇓P	**P**	**21 56 48.9**	**+0.6**
	baz=23,SNR=7.5						
WVT	**Waverly**	**22.10**	**11**	*e*P	**P**	**21 56 44.0**	**-4.3**
X27A	**F and S Farms,**	**22.14**	**337**	⇓P	**P**	**21 56 48.5**	**-0.2**
	baz=23,SNR=12						
Y25A	**Mesa, Roswell**	**22.15**	**333**	⇑P	**P**	**21 56 49.1**	**+0.2**
	baz=23,SNR=20						
CPCT	**Cooper Cave**	**22.27**	**18**	*e*P	**P**	**21 56 44.5**	**-5.6**
Z23A	**Rita Site, Whi**	**22.32**	**330**	⇓P	**P**	**21 56 50.5**	**-0.1**
	baz=23,SNR=14						
X26A	**CR and CF Fran**	**22.32**	**336**	⇑P	**P**	**21 56 49.9**	**-0.8**
	baz=23,SNR=16						
Y24A	**Capitan**	**22.48**	**332**	⇓P	**P**	**21 56 52.4**	**0.0**
	baz=23,SNR=24						
W27A	**Bowe Ranch, En**	**22.49**	**338**	⇑P	**P**	**21 56 51.4**	**-1.1**
	baz=23,SNR=16						
220A	**Playas Peak, P**	**22.50**	**323**	⇓P	**P**	**21 56 52.4**	**-0.2**
	baz=23,SNR=14						
121A	**Cookes Peak, D**	**22.55**	**326**	⇓P	**P**	**21 56 53.3**	**+0.1**
	baz=23,SNR=22						
319A	**Douglas**	**22.57**	**321**	⇓P	**P**	**21 56 53.1**	**-0.2**
	baz=23,SNR=6.4						
Z22A	**Elephant Butte**	**22.68**	**328**	⇑P	**P**	**21 56 53.9**	**-0.6**
	baz=23,SNR=10						
TKL	**Tuckaleechee C**	**22.70**	**20**	P	**P**	**21 56 54.6**	**0.0**
	3.5nm,1.0s,mb3.8,baz=158,slow=10.0,SNR=4.7						
TKL				LR	LR	22 07 45.0	
	comp=Z,407nm,19.3s,MS3.9,baz=4.2,slow=41						
TKL	**Tuckaleechee C**	**22.70**	**20**	P	**P**	**21 56 49.3**	**-5.4**
TKL				LR	LR	22 07 45.0	
Y23A	**Lovelace Mesa,**	**22.78**	**331**	⇓P	**P**	**21 56 55.7**	**+0.2**
	baz=23,SNR=15						
219A	**White Tail Can**	**23.00**	**322**	⇓P	**P**	**21 56 57.7**	**-0.2**
	baz=24,SNR=8.7						
318A	**Bisbee**	**23.05**	**320**	⇑P	**P**	**21 56 58.3**	**-0.2**
	baz=24,SNR=7.4						
Z21A	**St. Cloud Mine**	**23.09**	**327**	⇓P	**P**	**21 56 59.3**	**+0.5**
	baz=24,SNR=8.8						
W25A	**X Bar L Ranch,**	**23.17**	**335**	⇑P	**P**	**21 56 58.0**	**-1.6**
	baz=24,SNR=15						
BNM	**Barren Site**	**23.23**	**330**	*e*P	**P**	**21 56 58.2**	**-2.0**
	10.0nm,1.1s,mb4.2						
LPM	**Los Pinos Moun**	**23.36**	**330**	*e*P	**P**	**21 56 58.0**	**-3.4**
LENM	**Lemitar**	**23.41**	**330**	*e*P	**P**	**21 56 58.3**	**-3.5**
V26A	**Tequesquite Ra**	**23.41**	**337**	⇑P	**P**	**21 57 00.2**	**-1.6**
	baz=24						
Z20A	**Nine Sixteen R**	**23.43**	**325**	⇓P	**P**	**21 57 01.3**	**-0.8**
	baz=24,SNR=10						
SIUC	**Southern Illin**	**23.44**	**7**	*e*P	**P**	**21 56 57.9**	**-4.1**
218A	**Dragoon**	**23.45**	**321**	⇑P	**P**	**21 57 01.1**	**-1.2**
	baz=24,SNR=6.5						
W24A	**Lazy 6 Ranch,**	**23.55**	**334**	⇓P	**P**	**21 57 03.0**	**-0.1**
	baz=24,SNR=9.8						
119A	**Ashpeak Ranch,**	**23.58**	**324**	⇑P	**P**	**21 57 03.4**	**0.0**
	baz=24,SNR=7.9						
CCM	**Cathedral Cave**	**23.59**	**3**	*e*P	**P**	**21 57 02.6**	**-0.9**
	7.7nm,0.7s,mb4.2						
CCM				*e*PcP	PcP	22 00 48.1	+1.0
Y21A	**Point of Rocks**	**23.64**	**328**	⇓P	**P**	**21 57 03.6**	**-0.3**
	baz=24,SNR=8.2						
LAZ	**Ladron**	**23.68**	**330**	*e*P	**P**	**21 57 02.7**	**-1.6**
	13nm,1.4s,mb4.2						
V25A	**Rancho No Teng**	**23.77**	**336**	⇓P	**P**	**21 57 05.4**	**+0.3**
	baz=24,SNR=13						
ANMO	**Albuquerque**	**23.80**	**332**	P	**P**	**21 57 06.1**	**+0.7**
	1.7nm,0.5s,mb3.7,baz=135,slow=11,SNR=9.0						
ANMO	**Albuquerque**	**23.80**	**332**	*e*P	**P**	**21 57 03.0**	**-2.4**
	2.3nm,1.1s,mb3.5						
118A	**Homack Ranch,**	**23.88**	**322**	⇑P	**P**	**21 57 05.1**	**-1.0**
	baz=24,SNR=9.9						
Y20A	**Horse Springs,**	**23.92**	**327**	⇑P	**P**	**21 57 07.6**	**+1.0**
	baz=24,SNR=18						
U26A	**Atchley Ranch,**	**23.93**	**338**	⇑P	**P**	**21 57 06.5**	**0.0**
	baz=24,SNR=17						
X21A	**Alamocita Cree**	**24.04**	**329**	⇑P	**P**	**21 57 08.8**	**+1.2**
	baz=24,SNR=18						
TUC	**Tucson**	**24.14**	**321**	*e*P	**P**	**21 57 05.6**	**-2.9**
	14nm,1.3s,mb4.2						
U25A	**Circle Dot Ran**	**24.18**	**337**	⇓P	**P**	**21 57 09.5**	**+0.6**
	baz=25,SNR=12						
117A	**Oracle**	**24.29**	**321**	⇓P	**P**	**21 57 09.8**	**-0.1**
	baz=25						
V23A	**Ortiz Mt. (NFS**	**24.34**	**333**	⇑P	**P**	**21 57 10.3**	**0.0**
	baz=25						
WCI	**Wyandotte Cave**	**24.44**	**13**	*e*P	**P**	**21 57 06.1**	**-5.1**
X20A	**Quemado**	**24.48**	**328**	⇑P	**P**	**21 57 12.3**	**+0.7**
	baz=25						
KSU1	**Kansas State U**	**24.80**	**353**	*e*P	**P**	**21 57 11.1**	**-3.4**
V22A	**San Miguel Ran**	**24.81**	**332**	⇑P	**P**	**21 57 14.8**	**+0.3**
	baz=25						
T25A	**Trinidad**	**24.83**	**338**	⇑P	**P**	**21 57 15.6**	**+0.8**
	baz=25,SNR=10.0						
S25A	**Robets Cordova**	**25.31**	**338**	⇑P	**P**	**21 57 19.6**	**+0.5**
	baz=26,SNR=14						
U21A	**Nageezi**	**25.57**	**332**	⇑P	**P**	**21 57 22.0**	**+0.5**
	baz=26						
S24A	**Houchin Ranch,**	**25.58**	**337**	⇑P	**P**	**21 57 22.7**	**+1.1**
	baz=26,SNR=5.5						
SDCO	**Great Sand Dun**	**25.78**	**337**	*e*P	**P**	**21 57 21.3**	**-2.0**
	23nm,1.6s,mb4.5						
X16A	**Lo Mia Camp, P**	**26.00**	**323**	⇑P	**P**	**21 57 26.8**	**+1.4**
	baz=26						
R24A	**Sanders Place,**	**26.06**	**338**	⇓P	**P**	**21 57 27.1**	**+1.2**
	baz=26,SNR=5.4						
S22A	**4UR Ranch, Cre**	**26.31**	**335**	⇑P	**P**	**21 57 29.5**	**+1.4**
	baz=27						
V17A	**Tonalea, Kykot**	**26.52**	**326**	⇓P	**P**	**21 57 31.3**	**+1.3**
	baz=27						
X15A	**Humboldt**	**26.52**	**322**	⇓P	**P**	**21 57 31.2**	**+1.1**
	baz=27						
MVCO	**Mesa Verde**	**26.60**	**331**	⇓P	**P**	**21 57 32.3**	**+1.5**
	baz=27						
MVCO	**Mesa Verde**	**26.60**	**331**	*e*P	**P**	**21 57 28.8**	**-2.0**
	14nm,1.1s,mb4.4						
Y14A	**Wickenburg**	**26.61**	**320**	⇑P	**P**	**21 57 31.5**	**+0.5**
	baz=27						
S21A	**Coal Bank Pass**	**26.65**	**333**	⇑P	**P**	**21 57 33.2**	**+1.9**
	baz=27						
R22A	**Saguache, Gunn**	**26.69**	**335**	⇑P	**P**	**21 57 33.4**	**+1.8**
	baz=27						
WUAZ	**Wupatki**	**26.76**	**325**	⇓P	**P**	**21 57 33.7**	**+1.5**
	baz=27						
WUAZ	**Wupatki**	**26.76**	**325**	*e*P	**P**	**21 57 29.4**	**-2.8**
	10.0nm,1.1s,mb4.3						
T18A	**Mexican Hat**	**27.20**	**329**	⇓P	**P**	**21 57 37.6**	**+1.4**
	baz=28						
GLA	**Glamis**	**27.21**	**317**	*e*P	**P**	**21 57 37.6**	**+1.3**
	7.0nm,1.0s,mb4.2						
PV01	**Paradox Valley**	**27.39**	**332**	*e*P	**P**	**21 57 35.9**	**-2.0**
	1μm,1.5s						
SMCO	**Snowmass**	**27.59**	**336**	*e*P	**P**	**21 57 37.4**	**-2.3**
	7.7nm,1.1s,mb4.2						
ISCO	**Idaho Springs**	**27.63**	**339**	*e*P	**P**	**21 57 37.2**	**-2.8**
PV04	**Paradox Valley**	**27.75**	**332**	*e*P	**P**	**21 57 43.3**	**+2.2**
JFWS	**Jewell Farm**	**28.49**	**4**	*e*P	**P**	**21 57 42.9**	**-4.8**
CCUT	**Cedar City**	**29.33**	**326**	*e*P	**P**	**21 57 57.6**	**+2.4**
	5.4nm,1.2s,mb4.2						
ECSD	**EROS Data Cent**	**29.39**	**355**	*e*P	**P**	**21 57 51.9**	**-3.7**
ECSD				*e*PcP	PcP	22 00 54.9	-5.6
RWWY	**Rawlins**	**29.86**	**338**	*e*P	**P**	**21 58 04.4**	**+4.6**
RSSD	**Black Hills**	**31.09**	**344**	*e*P	**P**	**21 58 06.5**	**-4.1**
	2.1nm,0.8s,mb4.0						
HWUT	**Hardware Ranch**	**31.55**	**333**	P	**P**	**21 58 11.3**	**-3.4**
PDAR	**Pinedale Array**	**31.67**	**336**	P	**P**	**21 58 16.4**	**+0.6**
	1.0nm,0.9s,mb3.7,baz=128,slow=9.6,SNR=5.9						
BGU	**Big Grassy Mou**	**31.69**	**330**	*e*P	**P**	**21 58 13.5**	**-2.4**
	2.8nm,1.0s,mb4.0						
K18A	**Toltan Ranch,**	**31.75**	**336**	⇓P	**P**	**21 58 17.6**	**+1.1**
	baz=32,SNR=5.9						
M14A	**Sheep Mountain**	**32.29**	**331**	⇑P	**P**	**21 58 22.0**	**+0.8**
	baz=33,SNR=7.6						
SADO	**Sadowa**	**32.44**	**18**	LR	LR	22 12 59.3	
	comp=Z,336nm,19.8s,MS4.0,baz=8,2,slow=39						
J17A	**Brown Place, J**	**32.63**	**336**	⇑P	**P**	**21 58 25.5**	**+1.3**
	baz=33						
L14A	**Malta**	**32.65**	**331**	⇑P	**P**	**21 58 25.5**	**+1.2**
	baz=33,SNR=7.9						
REDW	**Red Top Meadow**	**32.69**	**335**	*e*P	**P**	**21 58 21.4**	**-3.2**
SNOW	**Snow King Moun**	**32.73**	**336**	*e*P	**P**	**21 58 22.2**	**-2.9**
	22nm,0.8s,mb5.1						
NVAR	**Mina Array Bea**	**32.78**	**322**	P	**P**	**21 58 26.6**	**+1.0**
	3.4nm,0.8s,mb4.3,baz=141,slow=9.5,SNR=17						
NVAR				PcP	PcP	22 01 10.6	+0.9
	0.4nm,0.7s,baz=122,slow=3.4,SNR=3.1						
LOHW	**Long Hollow**	**32.80**	**336**	*e*P	**P**	**21 58 22.6**	**-3.0**
TPAW	**Teton Pass**	**32.83**	**335**	*e*P	**P**	**21 58 23.0**	**-2.9**
RRI2	**Red Ridge**	**32.86**	**335**	*e*P	**P**	**21 58 23.1**	**-3.1**
M12A	**Wells**	**32.98**	**329**	⇑P	**P**	**21 58 28.8**	**+1.5**
	baz=34						
IMW	**Indian Meadow**	**33.17**	**336**	P	**P**	**21 58 27.0**	**-1.8**
	4.0nm,0.7s,mb4.5						
I16A	**Newdale**	**33.37**	**335**	⇓P	**P**	**21 58 32.1**	**+1.5**
	baz=34						
J15A	**Blackfoot**	**33.37**	**334**	⇑P	**P**	**21 58 32.2**	**+1.5**
	baz=34						
RLMT	**Red Lodge**	**33.59**	**339**	*e*P	**P**	**21 58 29.6**	**-3.0**
J14A	**Carey**	**33.79**	**333**	⇓P	**P**	**21 58 35.1**	**+0.9**
	baz=34						
G18A	**Lazy EL Ranch,**	**33.86**	**339**	⇓P	**P**	**21 58 35.9**	**+1.0**
	baz=34						
AGMN	**Agassiz Nation**	**33.87**	**356**	*e*P	**P**	**21 58 30.1**	**-4.7**
L11A	**Cat Creek Ranc**	**33.96**	**329**	⇓P	**P**	**21 58 37.3**	**+1.5**
	baz=34,SNR=9.0						
J13A	**Cove Ranch, Pi**	**34.14**	**332**	⇑P	**P**	**21 58 38.6**	**+1.2**
	baz=35						
I14A	**Mackay**	**34.24**	**333**	⇓P	**P**	**21 58 39.6**	**+1.4**
	baz=35						
HLID	**Hailey**	**34.38**	**332**	⇓P	**P**	**21 58 39.9**	**+0.5**
	baz=35						
HLID	**Hailey**	**34.38**	**332**	*e*P	**P**	**21 58 36.6**	**-2.8**
	1.8nm,0.6s,mb4.2						
F18A	**Big Timber**	**34.43**	**339**	⇓P	**P**	**21 58 40.3**	**+0.5**
	baz=35						
H15A	**Lima**	**34.45**	**335**	⇓P	**P**	**21 58 42.3**	**+2.3**
	baz=35						
I13A	**Wildhorse Cree**	**34.52**	**333**	⇑P	**P**	**21 58 42.5**	**+1.9**
	baz=35						
G16A	**Moss Hill, Enn**	**34.62**	**336**	⇓P	**P**	**21 58 43.0**	**+1.6**
	baz=35						
H14A	**Leadore**	**34.75**	**334**	⇓P	**P**	**21 58 44.2**	**+1.6**
	baz=35						
F17A	**Fitzpatrick Pl**	**34.76**	**338**	⇓P	**P**	**21 58 43.4**	**+0.8**
	baz=35,SNR=15						
G15A	**Dillon**	**34.84**	**336**	⇓P	**P**	**21 58 44.8**	**+1.4**
	baz=35						
I12A	**Atlanta**	**34.89**	**331**	⇑P	**P**	**21 58 44.1**	**+0.3**
	baz=35,SNR=10.0						
BOZ	**Bozeman (W)**	**34.90**	**337**	⇑P	**P**	**21 58 44.0**	**+0.2**
	baz=35						
BOZ	**Bozeman (W)**	**34.90**	**337**	*e*P	**P**	**21 58 40.5**	**-3.4**
	5.5nm,1.4s,mb4.3						
DLMT	**Dillon**	**35.04**	**336**	*e*P	**P**	**21 58 43.4**	**-1.6**
E18A	**Harlowton**	**35.07**	**339**	⇓P	**P**	**21 58 45.1**	**-0.2**
	baz=36,SNR=8.4						
H13A	**Challis**	**35.09**	**333**	⇓P	**P**	**21 58 46.2**	**+0.7**
	baz=36						
H12A	**Diamond D Ranc**	**35.35**	**333**	⇓P	**P**	**21 58 48.4**	**+0.7**
	baz=36						
LRM	**Limekiln Ridge**	**35.37**	**336**	*e*P	**P**	**21 58 44.3**	**-3.6**
I11A	**Placerville**	**35.37**	**331**	⇑P	**P**	**21 58 49.4**	**+1.5**
	baz=36,SNR=8.3						
F15A	**Butte**	**35.40**	**336**	⇑P	**P**	**21 58 49.5**	**+1.4**
	baz=36,SNR=7.1						
G13A	**Cobalt**	**35.51**	**334**	⇑P	**P**	**21 58 50.0**	**+1.0**
	baz=36						
D18A	**Linhart Farms,**	**35.58**	**340**	⇑P	**P**	**21 58 50.8**	**+1.1**
	baz=36						
F14A	**Wisdom**	**35.72**	**335**	⇑P	**P**	**21 58 52.3**	**+1.4**
	baz=36						
ULM	**Lac du Bonnet**	**35.82**	**357**	P	**P**	**21 58 49.6**	**-2.0**
	6.4nm,0.8s,mb4.6,baz=178,slow=5.5,SNR=4.6						
ULM				LR	LR	22 17 26.8	
	comp=Z,179nm,20.3s,MS3.8,baz=198,slow=42						
ULM	**Lac du Bonnet**	**35.82**	**357**	P	**P**	**21 58 46.5**	**-5.1**
	5.3nm,0.8s,mb4.5						
ULM				LR	LR	22 17 26.8	
D17A	**Six Diamond Ra**	**35.84**	**339**	⇑P	**P**	**21 58 52.8**	**+0.9**
	baz=36						
H11A	**Donnelly**	**35.99**	**332**	⇑P	**P**	**21 58 53.9**	**+0.7**
	baz=36						
F13A	**Darby**	**36.10**	**334**	⇓P	**P**	**21 58 54.8**	**+0.6**
	baz=37						
J08A	**Circle Bar Ran**	**36.21**	**328**	⇓P	**P**	**21 58 55.9**	**+0.8**
	baz=37						
H10A	**Noah's Angus R**	**36.25**	**331**	⇑P	**P**	**21 58 55.3**	**-0.2**
	baz=37						
I09A	**Lost Marbles R**	**36.28**	**329**	⇑P	**P**	**21 58 56.4**	**+0.7**
	baz=37,SNR=12						
C17A	**Wharram Farm,**	**36.28**	**340**	⇓P

4.6nm,0.9s,mb4.5
TCF Toulx Ste Croi 83.22 44 *e*P **P 22 04 16.4 -1.8**
3.6nm,0.9s,mb4.1
TCF Toulx Ste Croi 83.22 44 *e*P **P 22 04 16.4 -1.8**
1.8nm,0.9s,mb4.1
BGF Bois d'Agland 83.59 44 *e*P **P 22 04 19.0 -1.0**
AVF Avril sur Loir 83.87 43 *e*P **P 22 04 20.0 -1.5**
SSF Saint Saulge 83.90 43 *e*P **P 22 04 20.4 -1.2**
4.2nm,0.8s,mb4.3
SSF Saint Saulge 83.90 43 *e*P **P 22 04 20.4 -1.2**
2.1nm,0.8s,mb4.3
MTLF Montolieu 83.93 47 *e*P **P 22 04 21.0 -0.9**
LOR Lormes 84.08 43 *e*P **P 22 04 21.8 -0.8**
NB2 NORSAR Subarra 84.21 28 P **P 22 04 23.6 +0.7**
comp=Z,4.5nm,1.1s,mb4.5,baz=292,slow=4.8
NOA NORSAR Array B 84.21 28 P **P 22 04 23.0 +0.1**
comp=Z,1.2nm,0.8s,mb4.0,baz=291,slow=5.1,SNR=5.1
NOA LR LR 22 40 09.8
comp=Z,81nm,20.8s,MS4.1,baz=295,slow=34
SMF Signal de Mont 84.23 43 *e*P **P 22 04 22.0 -1.3**
comp=Z,5.6nm,0.9s,mb4.4
SMF Signal de Mont 84.23 43 *e*P **P 22 04 22.0 -1.3**
comp=Z,2.8nm,0.9s,mb4.4
MEZF Maizieres J'vi 84.54 41 *e*P **P 22 04 24.8 0.0**
HAU Haudompre 85.50 42 *e*P **P 22 04 29.2 -0.5**
comp=Z,7.9nm,0.9s,mb4.7
HAU Haudompre 85.50 42 *e*P **P 22 04 29.2 -0.5**
comp=Z,4.0nm,0.9s,mb4.7
ARCES ARCESS Array B 86.03 18 P **P 22 04 32.2 +0.4**
comp=Z,1.9nm,0.7s,mb4.5,baz=285,slow=4.6,SNR=11
LPL La Plagne 86.47 44 *e*P **P 22 04 34.0 -0.5**
LPG La Plagne 86.49 44 *e*P **P 22 04 34.4 -0.2**
MBDF Montbardon 86.73 45 *e*P **P 22 04 35.9 +0.1**
LMR La Mourre 86.95 46 *e*P **P 22 04 36.5 -0.4**
comp=Z,4.6nm,0.9s,mb4.4
LMR La Mourre 86.95 46 *e*P **P 22 04 36.5 -0.4**
comp=Z,2.3nm,0.9s,mb4.4
FRF La Foret Royal 86.98 46 *e*P **P 22 04 36.7 -0.4**
comp=Z,5.9nm,0.8s,mb4.5
FRF La Foret Royal 86.98 46 *e*P **P 22 04 36.7 -0.4**
comp=Z,3.0nm,0.8s,mb4.6
FINES FINESS Array B 90.51 25 P **P 22 04 53.2 -0.1**
comp=Z,0.8nm,0.5s,mb4.3,baz=14,slow=3.9,SNR=7.6
FINES LR LR 22 43 36.3
comp=Z,82nm,19.6s,MS4.2,baz=63,slow=34
AKASG Malin Array Be 97.88 33 LR LR 22 52 45.6
comp=Z,86nm,19.2s,MS4.3,baz=285,slow=37
MDJ Mudanjiang 109.68 329 Pdif Pdif 22 06 14.5 -5.3
MKAR Makanchi Array 118.92 4 PKP PKPdf 22 10 39.7 -0.4
comp=Z,0.6nm,0.9s,baz=325,slow=2.3,SNR=3.9
HHC Hu-ho-hao-te 120.51 339 *e*PKP PKPdf 22 10 36.3 -7.0
HHC PP PP 22 12 08.3 -1.3
HHC PKS 22 14 11.8
HHC SKS SKSdf 22 17 43.3 -7.4
HHC SKKS SKKSac 22 18 57.0 -8.6
HHC SS SS 22 28 34.5 +0.7
HHC AMB AMB
comp=Z,53nm,5.9s
HHC LR LR
comp=N,120nm,16.6s,MS4.7
HHC LR LR
comp=E,91nm,16.7s,MS4.7
HHC LR LR
comp=Z,99nm,16.6s,MS4.5
WMQ Urumqi 122.05 359 *e*PKP PKPdf 22 10 42.0 -4.2
WRA Warramunga Arr 134.62 256 PKP PKPdf 22 11 09.4 -1.4
comp=Z,0.5nm,0.8s,baz=85,slow=2.1,SNR=6.0
CHTO Chiang Mai 144.97 340 *e*PKPdf PKPdf 22 11 28.3 -1.2
CM31 Chiang Mai Arr 145.30 340 *e*PKPdf PKPdf 22 11 29.7 -0.4
CMAR Chiang Mai Arr 145.30 340 PKPbc PKPbc 22 11 29.8 -0.1
comp=Z,5.2nm,0.9s,baz=338,slow=3.5,SNR=27

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*ISCJB **29** 21:59:02.5±1.0, 51°.49N±0°.05×16°.12E±0°.04, h0km, Error ellipse: s-maj=7.5km s-min=3.6km az=9.3*
*CSEM **29** 21:59:04.5±0.2, 51°.47N×16°.14E, h2km, ML2.6/5, Error ellipse: s-maj=4.6km s-min=2.3km az=12.0*
*PRU **29** 21:59:05.3, 51°.47N×16°.14E, h0km*
*WAR **29** 21:59:05.5, 51°.48N×16°.10E, ML2.2, Mining Induced*
ISC 29 21:59:03.9±1.0, 51°.50N±0°.05×16°.14E±0°.04, h0km, n20, σ0s57/36, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.67**	**172**	*e*Pg	**Pg**	**21 59 17.3**	**+0.6**
KSP				*e*Sg	**Sg**	**21 59 25.9**	**+0.6**
KSP	**Ksiaz**	**0.67**	**172**	*i* Pg	**Pg**	**21 59 17.3**	**+0.6**
KSP				*e*Sg	**Sg**	**21 59 25.5**	**+0.2**
UPC	**Upice**	**1.00**	**185**	*e*PG	**Pg**	**21 59 23.5**	**+0.5**
UPC	**Upice**	**1.00**	**185**	Pg	**Pg**	**21 59 23.5**	**+0.5**
DPC	**Dobruska-Polom**	**1.16**	**174**	*e*PG	**Pg**	**21 59 26.1**	**0.0**
DPC				*e*SG	**Sg**	**21 59 40.8**	**-0.3**
comp=Z,13nm,0.7s
DPC	**Dobruska-Polom**	**1.16**	**174**	Pg	**Pg**	**21 59 26.1**	**0.0**
DPC				Sg	**Sg**	**21 59 40.8**	**-0.3**
comp=Z,13nm,0.7s
PVCC	**Panska Ves**	**1.39**	**226**	*e*PG	**Pg**	**21 59 30.9**	**+0.3**
PVCC	**Panska Ves**	**1.39**	**226**	Pg	**Pg**	**21 59 30.9**	**+0.3**
BRG	**Berggiesshubel**	**1.52**	**246**	PG	**Pg**	**21 59 32.7**	**-0.3**
BRG				SG	**Sg**	**21 59 52.9**	**+0.2**
comp=Z,16nm,0.4s
PRU	**Pruhonice**	**1.82**	**214**	*e*PN	**Pn**	**21 59 36.6**	**+0.1**
PRU				*e*PG	**Pg**	**21 59 38.6**	**-0.3**
PRU				*e*SG	**Sg**	**22 00 02.6**	**+0.1**
comp=Z,5.5nm,0.4s
PRU	**Pruhonice**	**1.82**	**214**	Pn	**Pn**	**21 59 36.6**	**+0.1**
MORC	**Moravsky Berou**	**1.94**	**152**	*e*Pn	**Pn**	**21 59 38.0**	**-0.2**
OKC	**Ostrava-Krasne**	**2.10**	**142**	*e*PG	**Pg**	**21 59 44.4**	**+0.3**
OKC				*e*SG	**Sg**	**22 00 11.2**	**-0.1**
comp=Z,6.3nm,0.6s
OKC	**Ostrava-Krasne**	**2.10**	**142**	Pg	**Pg**	**21 59 44.4**	**+0.3**
OKC				Sg	**Sg**	**22 00 11.2**	**-0.1**
comp=Z,6.3nm,0.6s
OJC	**Ojcow**	**2.65**	**118**	*e*Pg	**Pg**	**21 59 54.3**	**-0.4**
OJC				*e*Sg	**Sg**	**22 00 29.4**	**+0.4**
NKC	**Novy Kostel**	**2.66**	**243**	*e*PN	**Pn**	**21 59 48.6**	**+0.6**
NKC				*e*PG	**Pg**	**21 59 54.8**	**-0.1**
NKC				*e*SG	**Sg**	**22 00 30.2**	**+0.8**
comp=Z,12nm,0.4s
NKC	**Novy Kostel**	**2.66**	**243**	Pn	**Pn**	**21 59 48.6**	**+0.6**
KHC	**Kasperske Hory**	**2.89**	**216**	*e*PN	**Pn**	**21 59 51.4**	**+0.3**
KHC				*e*PG	**Pg**	**21 59 57.0**	**-2.2**
KHC				*e*SN	**Sn**	**22 00 25.8**	**-0.7**
KHC				*e*SG	**Sg**	**22 00 36.3**	**-0.3**
comp=Z,3.0nm,0.5s
KHC	**Kasperske Hory**	**2.89**	**216**	Pn	**Pn**	**21 59 51.4**	**+0.3**
MOX	**Moxa**	**2.98**	**255**	*e*PG	**Pg**	**22 00 00.2**	**-0.8**
MOX				*e*SG	**Sg**	**22 00 40.2**	**+0.6**

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*ATH **29** 22:01:49.9, 38°.88N×23°.33E, h44km±1km, MD3.1/12, ML2.7*
*NEIC **29** 22:01:49.9, 38°.88N×23°.33E, h44km, MD3.1(ATH), After ATH.*
*CSEM **29** 22:01:50.3±0.1, 38°.82N×23°.30E, h12km, ML2.7/10, Error ellipse: s-maj=2.9km s-min=2.0km az=112.0*
*THE **29** 22:01:50.8, 38°.82N×23°.28E, h13km, ML2.7/10, Error ellipse: s-maj=1.0km s-min=0.5km az=298.0*
*ISCJB **29** 22:01:50.4±0.5, 38°.82N±0°.02×23°.31E±0°.03, h11km±3km, Error ellipse: s-maj=4.3km s-min=2.7km az=26.5*
ISC 29 22:01:50.7±0.4, 38°.81N±0°.02×23°.30E±0°.03, h15km±3km, n74, σ0s74/113, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATAL	**Atalanti**	**0.25**	**242**	P	**Pg**	**22 01 55.6**	**-0.6**
ATAL				S	**Sg**	**22 01 59.8**	**-0.1**
ATAL	**Atalanti**	**0.25**	**242**	P	**Pg**	**22 01 55.6**	**-0.6**
ATAL				S	**Sg**	**22 01 59.8**	**-0.1**
LKR	**Lokris**	**0.29**	**236**	*e*P	**Pg**	**22 02 00.1**	**+3.3**
LKR	**Lokris**	**0.29**	**236**	P	**Pg**	**22 01 56.3**	**-0.5**
LKR				S	**Sg**	**22 02 00.5**	**-0.4**
LKR	**Lokris**	**0.29**	**236**	*e*P	**Pg**	**22 02 00.1**	**+3.3**
LKR	**Lokris**	**0.29**	**236**	P	**Pg**	**22 01 56.3**	**-0.5**
LKR				S	**Sg**	**22 02 00.5**	**-0.4**
NEO	**Neokhori**	**0.50**	**353**	*e*P	**Pg**	**22 02 00.8**	**+0.2**
NEO				*e*S	**Sg**	**22 02 08.3**	**+1.0**
NEO	**Neokhori**	**0.50**	**353**	*e*P	**Pg**	**22 02 00.8**	**+0.2**
NEO				*e*S	**Sg**	**22 02 08.3**	**+1.0**
XOR	**Xorichti**	**0.56**	**351**	P	**Pg**	**22 02 01.5**	**-0.3**
XOR	**Xorichti**	**0.56**	**351**	P	**Pg**	**22 02 01.7**	**-0.1**
XOR				S	**Sg**	**22 02 09.6**	**+0.4**
XOR	**Xorichti**	**0.56**	**351**	P	**Pg**	**22 02 01.7**	**-0.1**
XOR				S	**Sg**	**22 02 09.6**	**+0.4**
AOS	**Alonnisos**	**0.57**	**51**	P	**Pg**	**22 02 01.5**	**-0.5**
AOS	**Alonnisos**	**0.57**	**51**	P	**Pg**	**22 02 01.5**	**-0.5**
AOS				S	**Sg**	**22 02 10.2**	**+0.5**
AOS	**Alonnisos**	**0.57**	**51**	P	**Pg**	**22 02 01.5**	**-0.5**
AOS				S	**Sg**	**22 02 10.2**	**+0.5**
DSF	**Desfina**	**0.73**	**237**	P	**Pg**	**22 02 03.8**	**-1.1**
DSF				S	**Sg**	**22 02 15.1**	**+0.6**
DSF	**Desfina**	**0.73**	**237**	P	**Pg**	**22 02 03.8**	**-1.1**
DSF				S	**Sg**	**22 02 15.1**	**+0.6**
AGG	**Agios Georgios**	**0.79**	**286**	*e*P	**Pg**	**22 02 05.5**	**-0.5**
AGG				*e*S	**Sg**	**22 02 17.5**	**+1.1**
AGG	**Agios Georgios**	**0.79**	**286**	P	**Pg**	**22 02 05.5**	**-0.5**
AGG				S	**Sg**	**22 02 17.2**	**+0.8**
AGG	**Agios Georgios**	**0.79**	**286**	*e*P	**Pg**	**22 02 05.5**	**-0.5**
AGG				*e*S	**Sg**	**22 02 17.5**	**+1.1**
AGG	**Agios Georgios**	**0.79**	**286**	P	**Pg**	**22 02 05.5**	**-0.5**
AGG				S	**Sg**	**22 02 17.2**	**+0.8**
LTK	**Loutraki**	**0.83**	**199**	P	**Pg**	**22 02 06.0**	**-0.9**
LTK	**Loutraki**	**0.83**	**199**	*e*P	**Pg**	**22 02 06.4**	**-0.5**
LTK				*e*S	**Sg**	**22 02 19.5**	**+1.7**
LTK	**Loutraki**	**0.83**	**199**	P	**Pg**	**22 02 06.0**	**-0.9**
LTK				*e*S	**Sg**	**22 02 19.5**	**+1.7**
PTL	**Penteli**	**0.88**	**150**	*e*P	**Pb**	**22 02 06.9**	**-0.8**
PTL	**Penteli**	**0.88**	**150**	*e*P	**Pb**	**22 02 06.9**	**-0.8**
PTL	**Penteli**	**0.88**	**150**	*e*P	**Pb**	**22 02 06.9**	**-0.8**
ATH	**Athens Observa**	**0.90**	**159**	*e*P	**Pb**	**22 02 08.0**	**-0.1**
ATH	**Athens Observa**	**0.90**	**159**	*e*P	**Pb**	**22 02 08.0**	**-0.1**
ATH	**Athens Observa**	**0.90**	**159**	*e*P	**Pb**	**22 02 08.0**	**-0.1**
KALE	**Kalithea**	**1.00**	**246**	P	**Pb**	**22 02 08.7**	**-1.1**
KALE				S	**Sb**	**22 02 23.3**	**+0.4**
KALE	**Kalithea**	**1.00**	**246**	P	**Pb**	**22 02 08.7**	**-1.1**
KALE				S	**Sb**	**22 02 23.3**	**+0.4**
VLY	**Voula,Athens**	**1.03**	**158**	*e*P	**Pb**	**22 02 10.1**	**-0.2**
VLY	**Voula,Athens**	**1.03**	**158**	*e*P	**Pb**	**22 02 10.1**	**-0.2**
VLY	**Voula,Athens**	**1.03**	**158**	*e*P	**Pb**	**22 02 10.1**	**-0.2**
NAIG	**Nisos Aigina**	**1.06**	**172**	*e*P	**Pb**	**22 02 10.5**	**-0.3**
NAIG	**Nisos Aigina**	**1.06**	**172**	*e*P	**Pb**	**22 02 10.5**	**-0.3**
NAIG	**Nisos Aigina**	**1.06**	**172**	*e*P	**Pb**	**22 02 10.5**	**-0.3**
TRIZ	**Trizonia**	**1.06**	**246**	P	**Pb**	**22 02 09.8**	**-1.0**
TRIZ				S	**Sb**	**22 02 25.8**	**+1.2**
TRIZ	**Trizonia**	**1.06**	**246**	P	**Pb**	**22 02 09.8**	**-1.0**
TRIZ				S	**Sb**	**22 02 25.8**	**+1.2**
PAIG	**Paliouri**	**1.15**	**15**	P	**Pn**	**22 02 12.2**	**-0.1**
PAIG	**Paliouri**	**1.15**	**15**	P	**Pn**	**22 02 12.0**	**-0.3**
PAIG				S	**Sb**	**22 02 28.0**	**+0.9**
PAIG	**Paliouri**	**1.15**	**15**	P	**Pn**	**22 02 12.0**	**-0.3**
PAIG				S	**Sb**	**22 02 28.0**	**+0.9**
GUR	**Goura**	**1.16**	**221**	P	**Pn**	**22 02 12.3**	**-0.1**
GUR	**Goura**	**1.16**	**221**	*e*P	**Pn**	**22 02 12.5**	**+0.1**
GUR				*e*S	**Sb**	**22 02 27.2**	**0.0**
GUR	**Goura**	**1.16**	**221**	P	**Pn**	**22 02 12.3**	**-0.1**
GUR				*e*S	**Sb**	**22 02 27.2**	**0.0**
EFP	**Efpalio**	**1.16**	**251**	*e*P	**Pn**	**22 02 13.0**	**+0.5**
EFP	**Efpalio**	**1.16**	**251**	*e*P	**Pn**	**22 02 13.0**	**+0.5**
LAKA	**Lakka**	**1.19**	**242**	P	**Pn**	**22 02 12.5**	**-0.3**
LAKA	**Lakka**	**1.19**	**242**	P	**Pn**	**22 02 12.5**	**-0.3**
THL	**Klokotos Trika**	**1.25**	**307**	P	**Pn**	**22 02 13.3**	**-0.4**
THL				S	**Sb**	**22 02 29.4**	**-0.6**
THL	**Klokotos Trika**	**1.25**	**307**	*e*P	**Pn**	**22 02 11.6**	**-2.1**
THL	**Klokotos Trika**	**1.25**	**307**	P	**Pn**	**22 02 13.3**	**-0.4**
THL				S	**Sb**	**22 02 29.4**	**-0.6**
DID	**Didima**	**1.30**	**182**	P	**Pn**	**22 02 13.6**	**-0.8**
DID				S	**Sb**	**22 02 32.0**	**+0.5**
DID	**Didima**	**1.30**	**182**	*e*P	**Pn**	**22 02 13.9**	**-0.5**
DID				*e*S	**Sb**	**22 02 31.5**	**0.0**
DID	**Didima**	**1.30**	**182**	*e*P	**Pn**	**22 02 13.9**	**-0.5**
DID				*e*S	**Sb**	**22 02 31.5**	**0.0**
PLG	**Polygyros**	**1.56**	**4**	P	**Pn**	**22 02 18.8**	**+0.8**
PLG	**Polygyros**	**1.56**	**4**	P	**Pn**	**22 02 17.4**	**-0.6**
PLG				S	**Sn**	**22 02 37.2**	**-0.8**
PLG	**Polygyros**	**1.56**	**4**	P	**Pn**	**22 02 17.4**	**-0.6**
PLG				S	**Sn**	**22 02 37.2**	**-0.8**
OUR	**Ouranopolis**	**1.61**	**19**	P	**Pn**	**22 02 18.5**	**-0.1**
OUR	**Ouranopolis**	**1.61**	**19**	P	**Pn**	**22 02 18.5**	**-0.1**
VLX	**Vlachokerasia**	**1.61**	**207**	P	**Pn**	**22 02 19.7**	**+1.0**
VLX				S	**Sn**	**22 02 40.0**	**+0.8**
VLX	**Vlachokerasia**	**1.61**	**207**	*e*P	**Pn**	**22 02 19.6**	**+0.9**
VLX	**Vlachokerasia**	**1.61**	**207**	P	**Pn**	**22 02 19.7**	**+1.0**
VLX				S	**Sn**	**22 02 40.0**	**+0.8**
HORT	**Hortiatis**	**1.79**	**355**	P	**Pn**	**22 02 20.8**	**-0.3**
HORT				S	**Sn**	**22 02 43.5**	**-0.1**
HORT	**Hortiatis**	**1.79**	**355**	P	**Pn**	**22 02 20.8**	**-0.3**
HORT				S	**Sn**	**22 02 43.5**	**-0.1**
LIA	**Limnos Island**	**1.82**	**53**	P	**Pn**	**22 02 21.2**	**-0.3**
LIA				S	**Sn**	**22 02 45.6**	**+1.4**
LIA	**Limnos Island**	**1.82**	**53**	P	**Pn**	**22 02 21.2**	**-0.3**
LIA				S	**Sn**	**22 02 45.6**	**+1.4**
ITM	**Ithomi**	**1.96**	**214**	P	**Pn**	**22 02 28.0**	**+4.5**
ITM	**Ithomi**	**1.96**	**214**	P	**Pn**	**22 02 23.3**	**-0.2**
ITM	**Ithomi**	**1.96**	**214**	P	**Pn**	**22 02 23.3**	**-0.2**
LKD2	**Lefkada island**	**2.07**	**270**	P	**Pn**	**22 02 24.4**	**-0.5**
LKD2	**Lefkada island**	**2.07**	**270**	P	**Pn**	**22 02 24.4**	**-0.5**
PYL	**PYLOS**	**2.28**	**213**	*e*P	**Pn**	**22 02 29.2**	**+1.4**
PYL	**PYLOS**	**2.28**	**213**	*e*P	**Pn**	**22 02 29.2**	**+1.4**

IDC 29 22:30:26.7±1.7, 0°.78N×126°.57E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.3/19, mbtmp3.4/4, Error ellipse: s-maj=178.3km s-min=21.8km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.96**	**160**	P	P	22 35 21.5	-0.7
0.7nm,0.5s,baz=338,slow=11,SNR=14
ASAR	**Alice Springs**	**25.33**	**164**	P	P	22 35 56.1	+0.8
0.4nm,0.3s,baz=345,slow=10,SNR=5.9
MKAR	**Makanchi Array**	**59.88**	**326**	P	P	22 40 34.5	+0.1
0.3nm,0.7s,baz=118,slow=7.6,SNR=4.7
KURK	**Kurchatov**	**64.14**	**328**	P	P	22 41 02.7	-0.1
0.2nm,0.5s,baz=134,slow=5.8,SNR=2.4

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*IDC **29** 22:34:27.1±2.2, 7°.22S×131°.06E, h0km, mb3.7/1, mb1 4.3/4, mb1mx3.8/15, mbtmp4.1/4, ML4.2/3, Error ellipse: s-maj=81.8km s-min=27.8km az=80.0*
*ISCJB **29** 22:34:36.6±3.1, 7°.6S±0°.1×131°.0E±0°.2, h107km±36km, mb4.1/2, Error ellipse: s-maj=29.6km s-min=23.4km az=1.6*
*NEIC **29** 22:34:38.1±2.0, 7°.63S×131°.06E, h106km±24km, mb4.2/3, Error ellipse: s-maj=23.8km s-min=15.0km az=99.0*
ISC 29 22:34:37.6±2.5, 7°.6S±0°.1×131°.0E±0°.2, h97km±29km, n12, σ0s78/13, mb4.1/2, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**5.29**	**164**	*e*Pn	**Pn**	**22 35 54.7**	**+0.4**
92nm,0.5s
KAKA				*e*Sn	**Sn**	**22 36 55.5**	**+1.5**
FITZ	**Fitzroy Crossi**	**11.67**	**206**	Pn	**Pn**	**22 37 21.2**	**+0.2**
1.5nm,0.3s,baz=38,slow=9.5,SNR=52
FITZ				Sn	Sx	22 39 26.2
2.9nm,0.3s,baz=173,slow=17,SNR=12
WRAB	**Tennant Creek**	**12.70**	**165**	*e*Pn	**Pn**	**22 37 33.2**	**-1.5**
4.8nm,0.6s
WRAB				*e*Sn	Sx	22 39 49.4
WRA	**Warramunga Arr**	**12.71**	**165**	Pn	**Pn**	**22 37 33.1**	**-1.7**
1.4nm,0.3s,baz=348,slow=14,SNR=44
WRA				Sn	Sx	22 39 51.0
2.1nm,0.3s,baz=348,slow=24,SNR=10
ASAR	**Alice Springs**	**16.23**	**170**	Pn	**Pn**	**22 38 20.3**	**+0.3**
0.8nm,0.3s,baz=345,slow=8.3,SNR=21
ASAR				Sn	Sx	22 41 16.3
0.4nm,0.3s,baz=356,slow=26,SNR=6.8
MBWA	**Marble Bar**	**17.32**	**218**	*e*P	**Pn**	**22 38 32.9**	**-0.4**
1.7nm,0.5s
NWAO	**Narrogin (SRO)**	**28.25**	**205**	*e*P	**P**	**22 40 21.8**	**+0.2**
YHNB	**Yeheng**	**33.40**	**344**	*e*P	**P**	**22 41 07.0**	**+0.1**
7.3nm,0.7s,mb4.6
MK31	**Makanchi Array**	**69.24**	**327**	*e*P	**P**	**22 45 34.2**	**+0.1**
MKAR	**Makanchi Array**	**69.24**	**327**	P	**P**	**22 45 34.4**	**+0.3**
0.3nm,0.4s,mb3.5,baz=127,slow=7.3,SNR=10
TKM2	**Tokmak 2**	**71.04**	**320**	*e*P	**P**	**22 45 45.8**	**+0.6**
KURK	**Kurchatov**	**73.52**	**328**	*e*P	**P**	**22 45 59.5**	**-0.2**

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*IDC **29** 22:43:57.7±1.4, 3°.58N×129°.31E, h0km, mb4.1/7, mb1 4.3/7, mb1mx3.9/20, mbtmp4.1/7, MS4.2/1, Ms1 4.2/1, ms1mx2.9/24, Error ellipse: s-maj=89.2km s-min=16.3km az=65.0*
*ISCJB **29** 22:44:00.9±0.7, 3°.54N±0°.08×129°.1E±0°.1, h33km, mb4.0/12, Error ellipse: s-maj=20.1km s-min=9.4km az=157.6*
*NEIC **29** 22:44:15.3±4.5, 3°.33N×128°.95E, h153km±42km, mb3.9/7, Error ellipse: s-maj=19.4km s-min=6.9km az=54.0*
ISC 29 22:44:03.1±0.7, 3°.50N±0°.08×129°.1E±0°.1, h35km, n24, σ0s80/23, mb4.0/12, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSM	**Kuching**	**18.89**	**264**	*e*P	**Pn**	**22 48 22.0**	**+0.5**
FITZ	**Fitzroy Crossi**	**21.73**	**189**	*e*P	**P**	**22 48 52.3**	**+0.8**
1.3nm,0.5s,mb3.6
WRAB	**Tennant Creek**	**23.85**	**168**	*e*P	**P**	**22 49 13.9**	**+0.6**
2.9nm,0.7s,mb3.8
WRA	**Warramunga Arr**	**23.85**	**168**	P	**P**	**22 49 13.3**	**0.0**
1.1nm,0.3s,mb3.7,baz=344,slow=10,SNR=31
WRA	**Warramunga Arr**	**23.85**	**168**	P	**P**	**22 49 13.3**	**0.0**
ASAR	**Alice Springs**	**27.40**	**170**	P	**P**	**22 49 45.1**	**-0.3**
1.1nm,0.4s,mb3.8,baz=352,slow=7.5,SNR=16
KULM	**Kulim**	**28.43**	**275**	P	**P**	**22 49 55.5**	**+0.7**
CMAR	**Chiang Mai Arr**	**33.05**	**299**	P	**P**	**22 50 36.5**	**+1.0**
1.4nm,0.7s,mb4.0,baz=110,slow=6.8,SNR=8.9
CHTO	**Chiang Mai**	**33.19**	**300**	*e*P	**P**	**22 50 37.3**	**+0.5**
1.9nm,0.4s,mb4.4
COCO	**West Island**	**35.66**	**244**	P	**P**	**22 50 57.0**	**-1.2**
STKA	**Stephens Creek**	**37.13**	**162**	P	**P**	**22 51 10.7**	**+0.2**
2.4nm,0.4s,mb4.4,baz=341,slow=7.4,SNR=9.9
STKA	**Stephens Creek**	**37.13**	**162**	*e*P	**P**	**22 51 10.5**	**0.0**
0.5nm,0.5s,mb3.6
NWAO	**Narrogin (SRO)**	**37.93**	**196**	P	**P**	**22 51 17.0**	**-0.3**
ULN	**Ulaanbaatar**	**48.11**	**340**	*e*P	**P**	**22 52 40.2**	**+0.8**
1.9nm,0.8s,mb4.2
PALK	**Pallekele**	**48.32**	**277**	P	**P**	**22 52 39.9**	**-1.8**
MK31	**Makanchi Array**	**59.12**	**324**	*e*P	**P**	**22 54 00.3**	**+0.2**
MKAR	**Makanchi Array**	**59.12**	**324**	P	**P**	**22 54 00.6**	**+0.5**
1.0nm,0.5s,mb4.1,baz=124,slow=8.2,SNR=14
TKM2	**Tokmak 2**	**61.50**	**318**	*e*P	**P**	**22 54 16.8**	**+0.3**
0.8nm,0.4s,mb4.2
ZALV	**Zalesovo Beam**	**61.89**	**332**	P	**P**	**22 54 19.1**	**+0.2**
0.3nm,0.4s,mb3.8,baz=119,slow=12,SNR=2.8
KURK	**Kurchatov**	**63.23**	**327**	P	**P**	**22 54 27.8**	**-0.1**
1.1nm,0.5s,mb4.2,baz=128,slow=5.9,SNR=11
KURK	**Kurchatov**	**63.23**	**327**	*e*P	**P**	**22 54 27.7**	**-0.1**
0.9nm,0.4s,mb4.2
ARU	**Arti**	**76.41**	**327**	*e*P	**P**	**22 55 47.6**	**-1.2**
OBN	**Obninsk**	**88.62**	**325**	*e*P	**P**	**22 56 50.7**	**-1.7**
SPITS	**Spitsbergen Ar**	**91.16**	**349**	LR	LR	23 46 44.1
comp=Z,119nm,18.8s,baz=25,slow=41

BJI 29 22:53:51.3, 49°.19N×122°.62E, h17km, ML4.1/8, Northeastern China

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CN2	**Changchun**	**5.73**	**159**	*e*Pg	Pg	22 55 35.5	-5.5
CN2				*e*Sg	Sg	22 56 46.3	-8.9
CN2				smax
comp=N,100nm,0.7s
CN2				smax
comp=E,100nm,0.7s

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*NIED **29** 22:53:00, 28°.90N×141°.90E, h14km, Mw4.8 Best double couple: M0 1.66000×10^16 NP1:φ0s142.00000°, δ88.00000°, λ-93.00000°. NP2:φ0s21.00000°, δ3.00000°, λ-31.00000°.*
*ISCJB **29** 22:53:58.6±0.1, 29°.04N±0°.02×142°.27E±0°.03, h33km, mb4.5/55, MS4.2/24, Error ellipse: s-maj=3.6km s-min=2.9km az=158.4*
*BJI **29** 22:53:58.8, 28°.96N×142°.25E, h34km, mB4.9/15, mb4.7/25, Ms4.4/19, Ms7 4.2/19*
*MOS **29** 22:53:59.4±1.0, 29°.12N×142°.24E, h33km, mb4.8/15, MS4.0/7, Error ellipse: s-maj=11.1km s-min=6.4km az=106.2*
*IDC **29** 22:54:00.2±4.2, 28°.96N×142°.30E, h33km±32km, mb4.2/21, mb1 4.3/24, mb1mx4.3/29, mbtmp4.2/24, ML4.0/3, MS4.1/12, Ms1 4.1/12, ms1mx3.8/31, Error ellipse: s-maj=17.0km s-min=12.7km az=83.0*
*NEIC **29** 22:54:01.0±0.5, 29°.00N×142°.29E, h36km±4km, mb4.9/24, MW4.8(NIED), Error ellipse: s-maj=5.4km s-min=3.4km az=154.0*
ISC 29 22:54:00.4±0.2, 29°.01N±0°.02×142°.33E±0°.03, h35km, (h36km±9km:pP-P), n259, σ0s93/274, mb4.5/55, MS4.2/24, 54C-42D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.91**	**184**	P	**Pn**	**22 54 29.1**	**-1.3**
CBIJ				S	**Sn**	**22 54 51.1**	**-2.1**
CBIJ	**Chichi jima**	**1.91**	**184**	Pn	**Pn**	**22 54 29.9**	**-0.6**
20nm,0.3s,baz=286,slow=11,SNR=27
CBIJ				Sn	**Sn**	**22 54 51.1**	**-2.1**
88nm,0.3s,baz=73,slow=23,SNR=21
JHHJ	**Haha-jima-NKT**	**2.37**	**183**	P	**Pn**	**22 54 36.4**	**-0.4**
JHHJ				*e*S	**Sn**	**22 55 03.4**	**-1.2**
JHJ	**Hachijo jima 2**	**4.65**	**333**	LR	LR	22 56 59.0
comp=Z,2μm,18.1s,baz=254,slow=38
BSO1	**Boso 1**	**5.75**	**349**	P	**Pn**	**22 55 20.7**	**-2.5**
BSO1				*e*S	**Sn**	**22 56 25.1**	**-2.8**
BSO3	**Boso 3**	**5.98**	**345**	P	**Pn**	**22 55 26.7**	**+0.3**
BSO3				*e*S	**Sn**	**22 56 32.0**	**-1.7**
BSO4	**Boso 4**	**6.20**	**345**	P	**Pn**	**22 55 28.6**	**-0.8**

comp=N,450nm,17.9s
MDJ LR LR
comp=E,490nm,16.8s
MDJ LR LR
comp=Z,440nm,16.8s
TATO Taipei 19.00 263 *e*P **Pn** **22 58 19.4 -0.6**
comp=Z,111nm,1.3s
NACB Ninganchiao 19.15 260 *e*P **Pn** **22 58 20.2 -1.6**
YHNB Yeheng 19.18 262 *e*P **Pn** **22 58 22.0 -0.3**
YULB Yu-li 19.67 258 *e*P **Pn** **22 58 27.1 -0.9**
comp=Z,78nm,1.1s
SSLB Suanglung 19.83 260 *e*P **Pn** **22 58 29.1 -0.8**
comp=Z,78nm,1.0s
TWG Pinlang 20.07 257 *e*P **P** **22 58 31.8 +0.9**
TPUB Ta-pu 20.28 259 *e*P **P** **22 58 34.4 +1.4**
comp=Z,79nm,1.3s
NJ2 Nanjing 20.44 284 *e*P **P** **22 58 35.0 +0.2**
NJ2 pP 22 58 44.3
NJ2 sP sP 22 58 48.8 +0.4
NJ2 PP 22 58 57.5
NJ2 S **S** **23 02 15.5 -6.3**
NJ2 sS sS 23 02 30.0 -6.5
NJ2 pmax pmax
comp=Z,20nm,0.8s
NJ2 pmax pmax
comp=Z,1μm,4.2s
NJ2 LR LR
comp=N,270nm,17.0s,MS4.0
NJ2 LR LR
comp=E,470nm,17.0s,MS4.0
NJ2 LR LR
comp=Z,550nm,20.0s,MS3.9
KLR Kul'dur 21.76 341 *e*P **P** **22 58 46.3 -2.5**
KLR *e*S **S** **23 02 48.5 +1.1**
BJI Beijing 24.11 304 P **P** **22 59 08.8 -4.0**
BJI S **S** **23 03 23.3 -4.9**
BJI pmax pmax
comp=Z,29nm,0.9s,mb4.7
BJI pmax pmax
comp=Z,110nm,3.6s
BJI LR LR
comp=N,360nm,18.0s,MS4.2
BJI LR LR
comp=E,630nm,18.0s,MS4.2
BJI LR LR
comp=Z,350nm,21.9s,MS3.8
WHN Wuhan 24.31 281 P **P** **22 59 15.0 +0.3**
WHN S **S** **23 03 35.5 +3.9**
WHN LR LR
comp=N,2μm,19.1s
WHN LR LR
comp=E,500nm,10.6s
WHN LR LR
comp=Z,500nm,21.3s,MS4.0
PETK Petropavlovsk- 26.61 21 LR LR 23 11 03.1
comp=Z,200nm,18.4s,MS3.7,baz=204,slow=38
HHC Hu-ho-hao-te 27.71 303 *e*P **P** **22 59 45.3 0.0**
HHC pP pP 22 59 54.8 -0.6
HHC sP sP 22 59 58.8 -0.8
HHC PP 23 00 33.8
HHC PcP PcP 23 03 02.3 +0.7
HHC S **S** **23 04 23.3 -2.0**
HHC SS 23 05 42.5
HHC ScP ScP 23 06 39.5 -0.1
HHC PcS PcS 23 06 43.3 -0.1
HHC ScS ScS 23 10 30.5 -1.1
HHC pmax pmax
comp=Z,18nm,0.7s,mb4.8
HHC LR LR
comp=N,310nm,13.2s,MS4.2
HHC LR LR
comp=E,380nm,14.9s,MS4.2
HHC LR LR
comp=Z,620nm,16.5s,MS4.3
QIZ Qiongzhong 31.20 259 P **P** **23 00 17.5 +1.0**
QIZ S **S** **23 05 21.3 +0.8**
QIZ pmax pmax
comp=Z,14nm,1.2s,mb4.7
QIZ pmax pmax
comp=Z,84nm,3.4s
QIZ LR LR
comp=N,190nm,15.7s
QIZ LR LR
comp=Z,280nm,17.6s,MS4.0
GYA Guiyang 31.60 274⇑ *i*P **P** **23 00 19.5 -0.4**
GYA pmax pmax
comp=Z,20nm,1.0s,mb4.9
SONM Songino Array 33.45 314 P **P** **23 00 37.2 +1.2**
comp=Z,7.7nm,1.0s,mb4.6,baz=112,slow=11,SNR=6.9
SONM LR LR 23 15 05.2
comp=Z,397nm,18.0s,MS4.2,baz=103,slow=38
YAK Yakutsk 34.07 349 *e*P pP 23 00 51.7 +0.5
YAK pmax pmax
comp=N,31nm,1.0s
YAK pmax pmax
comp=E,35nm,1.0s
YAK MLR MLR
comp=N,247nm,17.0s,MS4.1
YAK MLR MLR
comp=Z,240nm,19.0s,MS4.0
YAK MLR MLR
comp=E,151nm,14.0s,MS4.1
KMI Kunming 35.35 273 P **P** **23 00 53.5 +0.8**
KMI pP pP 23 01 04.5 +1.7
KMI sP sP 23 01 08.8 +1.8
KMI PP PP 23 02 14.0 +0.8
KMI S **S** **23 06 21.5 -3.3**
KMI sS sS 23 06 39.5 -2.1
KMI SS SS 23 08 42.3 -17
KMI pmax pmax
comp=Z,9.0nm,1.5s,mb4.5
KMI pmax pmax
comp=Z,110nm,3.1s
KMI LR LR
comp=N,160nm,16.0s,MS4.2
KMI LR LR
comp=E,280nm,18.1s,MS4.2
KMI LR LR
comp=Z,340nm,18.1s,MS4.1
GTA Gaotai 36.37 298 *e*P **P** **23 01 01.3 +0.1**
GTA pP pP 23 01 07.0 -4.3
GTA pmax pmax
comp=Z,6.0nm,1.5s,mb4.3
TLY Talaya 36.56 319 *e*P **P** **23 01 03.2 +0.6**
comp=Z,24nm,1.1s,mb5.0
TLY *e*PcP PcP 23 03 27.1 +1.6
MOY Mondy 38.09 318 *e*P **P** **23 01 13.9 -1.7**
MOY pmax pmax
comp=Z,37nm,1.7s,mb4.8
CHTO Chiang Mai 40.74 265 *e*P **P** **23 01 37.8 -0.3**
CHTO pmax pmax
comp=Z,16nm,1.3s,mb4.5
CHTO Chiang Mai 40.74 265 *e*P **P** **23 01 37.8 -0.4**
comp=Z,16nm,1.3s,mb4.5
CMAR Chiang Mai Arr 40.88 265 P **P** **23 01 40.0 +0.8**
comp=Z,1.2nm,0.5s,mb3.8,baz=56,slow=9.2,SNR=13
CMAR LR LR 23 18 23.2
comp=Z,191nm,20.8s,MS3.9,baz=53,slow=36
BILL Bilibino 41.57 13⇓ *e*P **P** **23 01 45.7 +1.4**
BILL *e* pP 23 01 56.4 +1.8
BILL pmax pmax
comp=Z,7.0nm,1.2s,mb4.2
BILL MLR MLR
comp=Z,200nm,17.0s,MS4.1
TIXI Tiksi 43.33 354 *e*P **P** **23 01 57.5 -1.1**
TIXI pmax pmax
comp=Z,8.0nm,1.3s,mb4.3
WMQ Urumqi 45.59 304 P **P** **23 02 18.0 +1.0**
WMQ pP pP 23 02 28.0 +0.6
WMQ sP sP 23 02 32.0 +0.5
WMQ PP PP 23 04 05.0 +1.0
WMQ S **S** **23 08 58.0 +1.0**
WMQ sS sS 23 09 14.0 0.0
WMQ SS SS 23 12 14.0 -7.1
WMQ pmax pmax
comp=Z,21nm,1.0s,mb5.0
WMQ pmax pmax
comp=Z,97nm,4.0s
WMQ LR LR
comp=N,220nm,16.0s,MS4.4
WMQ LR LR
comp=E,250nm,16.0s,MS4.4
WMQ LR LR
comp=Z,190nm,16.0s,MS4.1
KULM Kulim 45.92 247 *e*P **P** **23 02 20.8 +0.9**

ZAA0 Zalesovo Array 48.15 318 *e*P **P** **23 02 37.0 +0.1**
ZAA0 *e*PcP PcP 23 04 04.0 +0.1
ZALV Zalesovo Beam 48.15 318 P **P** **23 02 37.3 +0.5**
comp=Z,2.4nm,0.4s,mb4.6,baz=95,slow=8.4,SNR=16
ZALV PcP PcP 23 04 03.5 -0.4
comp=Z,1.4nm,0.6s,baz=123,slow=5.3,SNR=3.0
NVS Novosibirsk 49.17 319 *i* P **P** **23 02 45.0 +0.3**
WRAB Tennant Creek 49.26 190 *e*P **P** **23 02 44.0 -1.7**
WRAB pmax pmax
comp=Z,18nm,0.9s,mb5.1
WRAB Tennant Creek 49.26 190 *e*P **P** **23 02 44.0 -1.6**
comp=Z,18nm,0.9s,mb5.1
WRA Warramunga Arr 49.27 190 P **P** **23 02 44.4 -1.4**
comp=Z,12nm,0.8s,mb5.0,baz=13,slow=8.5,SNR=33
MK31 Makanchi Array 49.38 308 *e*P **P** **23 02 47.3 +0.9**
MK31 23 04 09.5
MKAR Makanchi Array 49.38 308 P **P** **23 02 46.4 0.0**
comp=Z,1.3nm,0.5s,mb4.2,baz=94,slow=8.1,SNR=25
MKAR PcP PcP 23 04 09.1 +0.6
comp=Z,0.9nm,0.5s,baz=79,slow=6.4,SNR=5.2
MKAR LR LR 23 24 33.7
comp=Z,241nm,20.2s,MS4.2,baz=88,slow=37
MKAR Makanchi Array 49.38 308 P **P** **23 02 46.4 0.0**
MKAR 23 04 09.1
MKAR Makanchi Array 49.38 308 P **P** **23 02 46.4 0.0**
MKAR PcP PcP 23 04 09.1 +0.6
MKAR LR LR 23 24 33.7
FITZ Fitzroy Crossi 49.53 201 P **P** **23 02 47.6 -0.2**
comp=Z,4.2nm,0.9s,mb4.5,baz=326,slow=4.1,SNR=4.4
FITZ Fitzroy Crossi 49.53 201 *e*P **P** **23 02 48.5 +0.8**
comp=Z,6.9nm,1.0s,mb4.6
SVW2 Sparrevohn 51.62 33 *e*pP pP 23 03 15.0 +1.4
KURK Kurchatov 51.76 313 P **P** **23 03 03.8 -0.5**
comp=Z,9.8nm,0.6s,mb4.9,baz=89,slow=7.2,SNR=51
KURK Kurchatov 51.76 313 *ce*P **P** **23 03 04.9 +0.6**
KURK pmax pmax
comp=Z,45nm,1.2s,mb5.3
KURK Kurchatov 51.76 313 *e*P **P** **23 03 05.0 +0.7**
comp=Z,54nm,1.3s,mb5.3
KDAK Kodiak Island 52.77 38 P **P** **23 03 12.5 +0.8**
comp=Z,5.0nm,0.7s,mb4.5,baz=267,slow=8.2,SNR=4.6
KDAK Kodiak Island 52.77 38 *i* P **P** **23 03 12.0 +0.3**
KDAK Kodiak Island 52.77 38 *e*P **P** **23 03 12.4 +0.7**
comp=Z,16nm,1.0s,mb4.9
ASAR Alice Springs 52.99 190 P **P** **23 03 13.9 +0.3**
comp=Z,1.1nm,0.8s,mb3.8,baz=16,slow=12,SNR=6.7
PPLA Purkeypile 53.47 31 *e*P **P** **23 03 17.6 +0.9**
comp=Z,20nm,1.2s,mb4.9
PPLA *e* pP 23 03 28.3 +1.1
TKM2 Tokmak 2 54.44 304 *e*P **P** **23 03 25.1 +0.9**
TKM2 *e* pP 23 03 36.4 +1.6
TKM2 pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
TKM2 Tokmak 2 54.44 304 *e*P **P** **23 03 25.1 +0.9**
comp=Z,2.2nm,0.6s,mb4.3
TKM2 *e* pP 23 03 36.4 +1.6
MCK McKinley 55.02 30 *e*P **P** **23 03 28.5 +0.5**
MCK *e* pP 23 03 39.0 +0.4
MCK pmax pmax
comp=Z,17nm,1.2s,mb5.0
MCK McKinley 55.02 30 *e*P **P** **23 03 28.5 +0.5**
comp=Z,17nm,1.2s,mb5.0
MCK *e* pP 23 03 39.0 +0.4
AML Almayashu 55.96 303 *e*P **P** **23 03 35.9 +0.7**
comp=Z,7.2nm,0.6s,mb4.9
AML *e*PcP PcP 23 04 34.0 +0.6
BVAR Borovoye Array 56.74 317 P **P** **23 03 41.2 +0.7**
comp=Z,3.2nm,0.4s,mb4.7,baz=93,slow=8.0,SNR=30
BRVK Borovoye 56.80 317 *ce*P **P** **23 03 42.1 +1.2**
BRVK pmax pmax
comp=Z,14nm,1.2s,mb4.9
BRVK Borovoye 56.80 317 *e*P **P** **23 03 41.0 +0.1**
comp=Z,13nm,1.1s,mb4.9
BMRM Bremner River 56.94 34 *e*P **P** **23 03 41.6 -0.2**
comp=Z,17nm,1.1s,mb5.0
EGAK Eagle 58.44 29 *e*P **P** **23 03 53.3 +1.0**
comp=Z,5.3nm,1.1s,mb4.5
EGAK *e* pP 23 04 03.7 +0.8
EGAK *e*PcP PcP 23 04 42.6 -0.1
DAWY Dawson 59.24 30 *e*P **P** **23 03 59.3 +1.5**
DAWY *e* pP 23 04 09.4 +0.9
HYT Haines Junctio 60.41 34 *e*P **P** **23 04 07.9 +2.0**
STKA Stephens Creek 60.55 181 P **P** **23 04 08.3 +1.2**
INK Inuvik 61.25 25 P **P** **23 04 12.3 +0.7**
comp=Z,5.9nm,0.9s,mb4.7,baz=272,slow=9.8,SNR=5.3
INK Inuvik 61.25 25 P **P** **23 04 12.3 +0.8**
INK pmax pmax
comp=Z,6.0nm,0.9s
INK Inuvik 61.25 25 *e*P **P** **23 04 12.7 +1.1**
comp=Z,44nm,1.8s,mb5.3
INK *e* pP 23 04 23.5 +1.2
KBL Kabul 61.30 296 P **P** **23 04 13.0 +0.5**
KBL *e* 23 04 54.7
ARU Arti 63.00 322 *c i* P **P** **23 04 23.8 +0.3**
ARU S **S** **23 12 54.7 +3.5**
ARU SS SS 23 16 55.3 -1.3
ARU pmax pmax
comp=Z,22nm,1.7s,mb5.0
ARU Arti 63.00 322 *e*P **P** **23 04 23.9 +0.4**
comp=Z,18nm,1.3s,mb5.0
ARU *e* pP 23 04 36.1 +1.9
DLBC Dease Lake 64.58 36 P **P** **23 04 35.6 +1.8**
comp=Z,2.1nm,0.7s,mb4.3,baz=284,slow=9.2,SNR=5.1
KBS Kingsbay 68.68 351 *i* P **P** **23 05 01.2 +1.5**
YKA Yellowknife Ar 70.41 29 P **P** **23 05 10.8 +0.2**
comp=Z,3.0nm,0.7s,mb4.3,baz=295,slow=6.4,SNR=5.7
PGC Sidney 71.44 44 *e*P **P** **23 05 18.4 +1.2**
comp=Z,2.1nm,1.4s,mb3.9
NLWA Neilton Lookou 71.67 46 ⇓P **P** **23 05 18.6 +0.1**
baz=72
NLWA Neilton Lookou 71.67 46 *e*P **P** **23 05 19.0 +0.4**
NLWA *e* pP 23 05 29.9 +0.5
ARCES ARCESS Array B 71.79 341 P **P** **23 05 18.7 -0.1**
comp=Z,2.5nm,0.9s,mb4.2,baz=48,slow=12,SNR=6.1
ARE0 ARCESS Array S 71.79 341 *e*P **P** **23 05 18.9 +0.1**
JCW Jim Creek 72.55 44 *e*P **P** **23 05 24.6 +0.8**
JOF Joensuu 73.44 334 *e*P **P** **23 05 26.2 -2.5**
JOF pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
JOF Joensuu 73.44 334 *e*p **P** **23 05 26.2 -2.5**
comp=Z,1.7nm,0.5s,mb4.2
YBH Yreka Blue Hor 74.74 51 *e*P **P** **23 05 37.8 +1.0**
D08A Wollman Farm, 74.88 44⇑P **P** **23 05 37.5 +0.1**
baz=75
OBN Obninsk 75.04 325 *e*P **P** **23 05 38.1 -0.1**
OBN *e* 23 08 22.0
OBN pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
OBN MLR MLR
comp=Z,200nm,20.0s,MS4.4
EDM Edmonton 75.22 37 *e*P **P** **23 05 40.1 +0.8**
WDC Whiskeytown Da 75.35 52 *e*P **P** **23 05 40.8 +0.5**
WDC pmax pmax
comp=Z,12nm,1.6s,mb4.6
WDC Whiskeytown Da 75.35 52 *e*P **P** **23 05 40.8 +0.5**
comp=Z,12nm,1.6s,mb4.6
NEW Newport 75.42 43 *e*P **P** **23 05 42.3 +1.8**
NEW *e* pP 23 05 53.2 +1.7
NEW pmax pmax
comp=Z,6.0nm,0.9s
NEW Newport 75.42 43 *e*P **P** **23 05 42.3 +1.8**
comp=Z,6.1nm,0.9s,mb4.5
NEW *e* pP 23 05 53.2 +1.8
K05A Summer Lake 75.53 49 ⇓P **P** **23 05 41.2 -0.1**
baz=75
VSR Storozhevoye 75.55 321 *e*P **P** **23 05 41.0 -0.2**
VSR pmax pmax
comp=N,5.0nm,1.1s
VSR pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
VSR pmax pmax
comp=E,7.0nm,0.8s
VSR MLR MLR
comp=N,130nm,18.0s,MS4.4
VSR MLR MLR
comp=Z,310nm,18.0s,MS4.7
VSR MLR MLR
comp=E,70nm,15.0s,MS4.4
G08A Pilot Rock 75.64 46 ⇓P **P** **23 05 41.3 -0.6**
baz=76
MOD Modoc 76.28 50 *e*P **P** **23 05 46.6 +1.0**
FINES FINESS Array B 76.30 334 P **P** **23 05 45.2 -0.1**
comp=E,1.9nm,0.7s,mb4.1,baz=63,slow=4.1,SNR=12
G10A Bishop Farm, J 76.79 45⇑P **P** **23 05 47.6 -0.9**
baz=77

KIV Kislovodsk 76.84 313 *e*P **P** **23 05 50.4 +1.7**
KIV pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
KIV MLR MLR
comp=Z,154nm,19.0s,MS4.3
KIV Kislovodsk 76.84 313 *e*P **P** **23 05 49.5 +0.8**
BMO Blue Mountains 76.88 46 *e*P **P** **23 05 49.9 +0.9**
comp=Z,10nm,1.4s,mb4.6
BMO *e* pP 23 06 00.2 +0.3
WALA Waterton Lakes 76.92 41 *e*P **P** **23 05 50.7 +1.6**
comp=Z,0.6nm,1.4s
BSMT Bassoo Peak 77.00 42 *e*P **P** **23 05 50.0 +0.5**
I09A Lost Marbles R 77.02 47⇑P **P** **23 05 49.2 -0.5**
baz=77
BEKR Beckworth 77.16 52⇓P **P** **23 05 50.0 -0.6**
baz=77,SNR=5.3
E12A Beaver Dam Sad 77.22 44⇑P **P** **23 05 50.3 -0.5**
baz=77
GNI Garni 77.22 309 LR LR 23 43 03.8
comp=Z,102nm,18.1s,MS4.2,baz=195,slow=38
A14A Double T Ranch 77.25 41⇑P **P** **23 05 50.7 -0.2**
baz=77,SNR=5.6
G11A Walters Elk Ra 77.27 45⇓P **P** **23 05 50.5 -0.6**
baz=77,SNR=6.5
JTMT Jette 77.35 42 *e*P **P** **23 05 52.2 +0.7**
H10A Noah's Angus R 77.36 46⇓P **P** **23 05 50.9 -0.7**
baz=77,SNR=7.1
SWMT Swartz Lake 77.63 42 *e*P **P** **23 05 54.0 +1.0**
SWMT *e* pP 23 06 05.8 +1.8
B14A Marquette Ranc 77.63 41⇓P **P** **23 05 53.1 0.0**
baz=77,SNR=5.3
A15A Johnson Ranch, 77.64 41⇓P **P** **23 05 52.9 -0.2**
baz=77,SNR=7.6
C14A Swan Lake 77.65 42⇑P **P** **23 05 53.1 -0.1**
baz=78
F12A Elk City 77.73 44⇑P **P** **23 05 53.4 -0.2**
baz=78
H11A Donnelly 77.76 46⇑P **P** **23 05 53.4 -0.5**
baz=78
PAHR Pah Rah Range 77.90 51 *e*P **P** **23 05 55.9 +1.1**
comp=Z,11nm,1.1s,mb4.7
CMB Columbia Colle 77.98 53 *e*P **P** **23 05 54.7 -0.5**
CMB *e* pP 23 06 06.2 0.0
B15A Bradely Ranch, 78.07 41⇑P **P** **23 05 54.9 -0.6**
baz=78,SNR=6.9
K10A MacKenzie Ranc 78.14 48⇓P **P** **23 05 55.5 -0.5**
baz=78,SNR=6.3
F13A Darby 78.28 44⇑P **P** **23 05 55.7 -1.0**
baz=78
C15A Salmond Ranch, 78.31 42⇓P **P** **23 05 56.4 -0.5**
baz=78
MFID Camas Ranch 78.50 47⇓P **P** **23 05 57.6 -0.4**
baz=78,SNR=8.3
B16A M & M Farms, S 78.51 41⇑P **P** **23 05 57.6 -0.4**
baz=78,SNR=5.4
H12A Diamond D Ranc 78.56 45⇓P **P** **23 05 57.9 -0.4**
baz=78
G13A Cobalt 78.68 45⇑P **P** **23 05 59.0 0.0**
baz=78,SNR=5.6
K11A Parker Ranch, 78.68 47⇓P **P** **23 05 58.5 -0.5**
baz=78,SNR=8.4
SUMG Summit 78.69 0 P **P** **23 05 59.3 +0.8**
L10A Juniper Basin 78.73 48⇓P **P** **23 05 58.7 -0.6**
baz=79
C16A Fuhringer Ranc 78.80 41⇓P **P** **23 05 59.3 -0.2**
baz=79,SNR=6.1
SOC Sochi 78.91 314 *e*P **P** **23 05 56.6 -3.6**
SOC *e*S S 23 15 54.3 -1.8
SOC *e*SSS 23 24 26.0
SOC MLR MLR
comp=Z,217nm,18.0s,MS4.5
H13A Challis 78.93 45⇑P **P** **23 05 59.9 -0.4**
baz=79
M10A I.L. Ranch, Tu 78.96 49⇑P **P** **23 06 00.4 -0.1**
baz=79
E15A Deer Lodge 78.98 43⇓P **P** **23 05 59.8 -0.8**
baz=79
B17A L&G Farms, Che 79.09 41⇓P **P** **23 06 01.0 -0.1**
baz=79,SNR=7.5
L11A Cat Creek Ranc 79.16 48⇓P **P** **23 06 02.2 +0.5**
baz=79,SNR=5.4
NVAR Mina Array Bea 79.25 52 P **P** **23 06 03.2 +1.0**
comp=Z,1.1nm,0.3s,mb4.2,baz=259,slow=4.2,SNR=4.5
A18A Metzger Ranch, 79.30 40⇓P **P** **23 06 02.1 -0.1**
baz=79,SNR=8.9
D16A Dana Ranch, Ca 79.31 42⇑P **P** **23 06 01.5 -0.9**
baz=79
HLID Hailey 79.33 46⇑P **P** **23 06 02.9 +0.4**
baz=79,SNR=5.4
HLID Hailey 79.33 46 *e*P **P** **23 06 03.7 +1.2**
HLID *e* pP 23 06 14.1 +0.6
I13A Wildhorse Cree 79.34 46⇑P **P** **23 06 02.6 0.0**
baz=79,SNR=5.1
F15A Butte 79.36 43⇓P **P** **23 06 02.0 -0.6**
baz=79,SNR=14
LRM Limekiln Ridge 79.40 43 *e*P **P** **23 06 03.8 +0.9**
LRM *e* pP 23 06 14.6 +0.7
H14A Leadore 79.45 45⇑P **P** **23 06 02.9 -0.2**
baz=79
C17A Wharram Farm, 79.46 41⇓P **P** **23 06 03.3 +0.1**
baz=79
M11A Holland Ranch, 79.49 48⇑P **P** **23 06 02.6 -0.9**
baz=79
DLMT Dillon 79.54 44 *e*P **P** **23 06 03.9 +0.2**
J13A Cove Ranch, Pi 79.56 46⇑P **P** **23 06 03.3 -0.5**
baz=79
B18A Beardsley Farm 79.62 40⇑P **P** **23 06 03.7 -0.2**
baz=79,SNR=5.1
IZAR Zarasai 79.62 329 *e*P **P** **23 06 04.0 +0.2**
IZAR AMB AMB 23 06 05.0
comp=Z,3.2nm,1.2s,mb4.1
L12A House Creek Ra 79.64 48⇓P **P** **23 06 04.0 -0.2**
baz=80
IDID Didziasalis 79.66 328 *e*P **P** **23 06 04.4 +0.3**
IDID AMB AMB 23 06 05.2
comp=Z,1.7nm,1.0s,mb3.9
G15A Dillon 79.71 44⇓P **P** **23 06 04.6 0.0**
baz=80
I14A Mackay 79.75 45⇑P **P** **23 06 04.4 -0.4**
baz=80,SNR=13
D17A Six Diamond Ra 79.75 42⇑P **P** **23 06 04.4 -0.4**
baz=80,SNR=6.7
ISAL Salakas 79.78 329 *e*P **P** **23 06 05.1 +0.3**
ISAL AMB AMB 23 06 06.0
comp=Z,4.6nm,1.1s,mb4.3
IIGN Ignalina 79.87 329 *e*P **P** **23 06 05.4 +0.2**
IIGN AMB AMB 23 06 06.4
comp=Z,1.9nm,1.0s,mb4.0
BOZ Bozeman (W) 79.98 43 *e*P **P** **23 06 06.8 +0.8**
J14A Carey 80.01 46⇑P **P** **23 06 06.1 -0.1**
baz=80,SNR=9.6
E17A Martinsdale 80.01 42⇑P **P** **23 06 06.1 -0.1**
baz=80
FFC Flin Flon 80.06 32 *ce*P **P** **23 06 08.0 +1.7**
FFC Flin Flon 80.06 32 *e*P **P** **23 06 07.3 +1.0**
FFC *e* pP 23 06 16.7 -0.5
M12A Wells 80.07 48⇑P **P** **23 06 06.5 -0.1**
baz=80
Q10A Clear Creek Ra 80.36 51⇑P **P** **23 06 08.1 -0.1**
baz=80
PPT Papeete 80.39 116 LR LR 23 34 57.5
comp=Z,74nm,21.0s,MS4.0,baz=300,slow=31
ISA Isabella 80.45 55 *e*P **P** **23 06 09.1 +0.4**
E18A Harlowton 80.51 42⇓P **P** **23 06 09.0 +0.1**
baz=80,SNR=5.4
M13A Montello 80.59 48⇓P **P** **23 06 08.2 -1.2**
baz=80
M13A Montello 80.59 48 *e*P **P** **23 06 10.4 +1.0**
K14A Jones Ranch, D 80.62 46⇑P **P** **23 06 09.0 -0.5**
baz=80
S10A Tonopah Range, 80.67 52⇑P **P** **23 06 09.2 -0.6**
baz=80
R10A Warm Springs 80.69 51⇓P **P** **23 06 09.3 -0.6**
baz=80
H16A Russell Place, 80.70 44⇑P **P** **23 06 09.4 -0.5**
baz=80
O12A Currie 80.76 49⇑P **P** **23 06 09.8 -0.5**
baz=81
FCC Fort Churchill 80.84 26 P **P** **23 06 11.0 +0.6**
I16A Newdale 80.99 45⇑P **P** **23 06 10.8 -0.7**
baz=81
P12A McGill 81.05 50⇓P **P** **23 06 11.5 -0.4**
baz=81
R11A Troy Canyon, C 81.15 51⇑P **P** **23 06 12.2 -0.3**
baz=81,SNR=7.1
AKASG Malin Array Be 81.16 324 P **P** **23 06 11.6 -0.6**
comp=Z,1.3nm,0.5s,mb4.1,baz=51,slow=6.2,SNR=5.2

AKASG	Malin Array Be	81.16	324	*c*eP		P	23 06 14.1	+1.9
AKASG				pmax		pmax		
	comp=Z,1.0nm,0.5s							
EDW2	Edwards Air Fo	81.17	55	⇓P		P	23 06 12.1	-0.5
	baz=81							
TPAW	Teton Pass	81.52	45	*e*P		P	23 06 16.4	+2.1
P13A	Bates Ranch, G	81.65	49	⇑P		P	23 06 14.7	-0.4
	baz=82,SNR=5.4							
REDW	Red Top Meadow	81.65	45	*e*P		P	23 06 16.6	+1.6
RLMT	Red Lodge	81.67	43	*e*P		P	23 06 16.9	+1.8
GSC	Goldstone	81.81	54	*e*P		P	23 06 16.3	+0.3
GSC				*e*		pP	23 06 25.8	-1.2
R12A	Pony Springs,	81.83	51	⇑P		P	23 06 15.2	-0.8
	baz=82,SNR=6.1							
NB2	NORSAR Subarra	81.89	338	P		P	23 06 15.4	-0.5
	comp=Z,1.6nm,0.7s,mb4.1,baz=41,slow=5.1							
NOA	NORSAR Array B	81.89	338	P		P	23 06 15.1	-0.8
	comp=Z,1.9nm,0.7s,mb4.2,baz=41,slow=5.2,SNR=10							
T11A	Corn Creek, Al	81.95	52	⇑P		P	23 06 15.3	-1.4
	baz=82							
DUG	Dugway	82.07	48	⇑P		P	23 06 16.8	-0.4
	baz=82,SNR=5.3							
DUG	Dugway	82.07	48	*e*P		P	23 06 18.6	+1.4
DUG				*e*		pP	23 06 28.4	+0.2
HWUT	Hardware Ranch	82.13	47	*e*P		P	23 06 19.0	+1.4
HWUT				*e*		pP	23 06 28.9	+0.4
P14A	Drum Mountains	82.21	49	⇑P		P	23 06 17.3	-0.7
	baz=82,SNR=7.0							
J18A	Kendall Valley	82.25	45	⇓P		P	23 06 17.8	-0.3
	baz=82							
Q14A	Sevier Lake (B	82.38	50	⇑P		P	23 06 18.3	-0.7
	baz=82,SNR=10							
S13A	Holt Ranch, En	82.71	51	⇑P		P	23 06 20.1	-0.5
	baz=82,SNR=5.4							
BW06	Boulder Array	82.77	45	⇑P		P	23 06 20.6	-0.3
	baz=83							
PDAR	Pinedale Array	82.77	45	P		P	23 06 20.8	-0.1
	comp=Z,1.1nm,0.6s,mb4.1,baz=298,slow=3.2,SNR=9.7							
PDAR				LR		LR	23 40 26.7	
	comp=Z,112nm,18.7s,MS4.3,baz=275,slow=34							
M17A	Scullys Gap (B	82.78	46	⇓P		P	23 06 20.9	0.0
	baz=83,SNR=5.7							
GMRC	Granite Mounta	82.89	54	⇑P		P	23 06 20.8	-0.8
	baz=83							
T13A	Saint George	82.97	52	⇓P		P	23 06 21.6	-0.4
	baz=83							
CCUT	Cedar City	83.07	51	*e*P		P	23 06 22.8	+0.3
MSU	Marysvale	83.36	50	*e*P		P	23 06 24.8	+0.8
O17A	Robinson Place	83.42	48	⇑P		P	23 06 24.0	-0.3
	baz=83							
N18A	Larsen Ranch,	83.67	46	⇓P		P	23 06 24.6	-1.0
	baz=84							
R16A	Teasdale	83.95	49	⇑P		P	23 06 26.6	-0.4
	baz=84,SNR=6.8							
SRU	San Rafael	84.14	48	*e*P		P	23 06 29.6	+1.6
SRU				*e*		pP	23 06 39.0	0.0
R17A	Hanksville Air	84.39	49	⇑P		P	23 06 28.0	-1.2
	baz=84							
N20A	Spence Gulch,	84.64	46	⇓P		P	23 06 29.9	-0.6
	baz=84,SNR=8.6							
BR131	Keskin Array S	84.80	313	*e*P		P	23 06 32.2	+0.9
BRTR	Keskin Array B	84.80	313	P		P	23 06 31.4	0.0
	comp=Z,2.4nm,0.8s,mb4.4,baz=96,slow=4.5,SNR=12							
P19A	Cripple Cowboy	84.85	47	⇓P		P	23 06 30.3	-1.2
	baz=85,SNR=7.3							
R18A	Canyonlands Na	84.94	49	⇓P		P	23 06 31.4	-0.7
	baz=85							
O20A	White River Ci	85.05	47	⇓P		P	23 06 31.0	-1.6
	baz=85							
Z13A	Yuma Proving G	85.12	55	⇓P		P	23 06 32.8	-0.3
	baz=85							
N21A	Black Mountain	85.15	46	⇓P		P	23 06 31.8	-1.3
	baz=85,SNR=7.2							
S18A	Hurst Farm, Bl	85.26	49	⇓P		P	23 06 32.4	-1.2
	baz=85							
RSSD	Black Hills	85.31	41	*e*P		P	23 06 34.7	+0.9
X15A	Humboldt	85.45	53	⇑P		P	23 06 33.7	-1.0
	baz=85							
WUAZ	Wupatki	85.50	52	⇓P		P	23 06 34.3	-0.6
	baz=85							
WUAZ	Wupatki	85.50	52	*e*P		P	23 06 36.9	+2.0
PV10	Paradox Valley	85.51	48	*e*P		P	23 06 36.2	+1.3
	comp=Z,260nm,0.1s							
PV10				*e*		pP	23 06 46.6	+0.6
T18A	Mexican Hat	85.64	50	⇑P		P	23 06 35.9	+0.3
	baz=86							
Q20A	Ridgley Place,	85.67	48	⇑P		P	23 06 34.3	-1.4
	baz=86,SNR=5.4							
ULM	Lac du Bonnet	85.78	33	LR		LR	23 43 25.8	
	comp=Z,137nm,19.0s,MS4.4,baz=240,slow=35							
214A	Organ Pipe Nat	86.38	55	⇓P		P	23 06 38.6	-0.7
	baz=86							
SMCO	Snowmass	86.40	47	*e*P		P	23 06 41.1	+1.8
SMCO				*e*		pP	23 06 51.2	+0.8
ISCO	Idaho Springs	86.90	46	*e*P		P	23 06 42.7	+1.0
AGMN	Agassiz Nation	87.09	35	*e*P		P	23 06 43.2	+0.7
CLL	Collm	88.45	331	*e*P		P	23 06 50.0	+1.1
CLL				*e*			23 07 05.0	
CLL				MLR		MLR		
	comp=Z,100nm,18.4s,MS4.3							
LPM	Los Pinos Moun	89.41	51	*e*P		P	23 06 49.5	-4.3
SCHQ	Schefferville	92.81	16	LR		LR	23 52 45.8	
	comp=Z,100nm,18.1s,MS4.3,baz=321,slow=38							
WMOK	Wichita Mounta	94.30	46	*e*P		P	23 07 17.5	+1.1
WMOK				*e*		pP	23 07 27.2	-0.3
TXAR	Lajitas Array	94.36	53	P		P	23 07 17.1	+0.3
	comp=Z,1.9nm,0.9s,mb4.5,baz=310,slow=6.0,SNR=11							
TXAR				LR		LR	23 50 20.3	
	comp=Z,107nm,18.9s,MS4.3,baz=195,slow=36							
LPAZ	La Paz	149.27	72	PKPbc		PKPbc	23 13 47.0	+0.9
	comp=Z,2.8nm,0.8s,baz=312,slow=4.4,SNR=18							
LPAZ	La Paz	149.27	72	*e*PKPbc		PKPbc	23 13 46.3	+0.2

IDC 29 22:54:34.2±6.6, 56°.25S×151°.05W, h0km, mb3.7/1, mb1 3.9/1, mb1mx3.6/12, mbtmp3.7/1, Error ellipse: s-maj=791.3km s-min=95.6km az=169.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	62.40	268	P	P	23 04 58.7	0.0
	0.6nm,0.7s,baz=145,slow=6.1,SNR=4.4						
MKAR	Makanchi Array	146.29	277	PKPbc	PKPbc	23 14 15.7	0.0
	1.1nm,0.7s,baz=123,slow=4.5,SNR=6.8						
ZALV	Zalesovo Beam	148.69	290	PKPbc	PKPbc	23 14 21.2	-0.8
	0.4nm,0.4s,baz=104,slow=3.0,SNR=3.0						
KURK	Kurchatov	150.47	280	PKPbc	PKPbc	23 14 25.9	-0.7
	0.8nm,0.8s,baz=121,slow=1.3,SNR=4.4						

IDC 29 23:02:48.5±5.5, 1°.70N×132°.76E, h20km±30km, mb3.8/8, mb1 3.9/8, mb1mx3.7/21, mbtmp3.8/8, Error ellipse: s-maj=104.7km s-min=17.1km az=79.0
NEIC 29 23:02:50.4±0.4, 1°.68N×132°.74E, h35km, mb4.4/5, Error ellipse: s-maj=15.3km s-min=4.9km az=74.0

ISC 29 23:02:48.6±8.8, 1°.7N±0°.1×132°.7E±0°.2, h21km±63km, n24, σ0s43/24, mb4.1/10, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	14.32	181	Pn	Pn	23 06 09.9	-0.2
FITZ	Fitzroy Crossi	20.88	199	P	P	23 07 29.6	+0.2
	2.9nm,0.6s,baz=40,slow=9.7,SNR=10						
FITZ	Fitzroy Crossi	20.88	199	*e*P	P	23 07 29.6	+0.1
	5.2nm,0.8s						
WRAB	Tennant Creek	21.55	176	*e*P	P	23 07 36.8	0.0
	9.7nm,0.8s,mb4.3						
WRAB				*e*		23 07 45.3	
WRA	Warramunga Arr	21.56	176	P	P	23 07 36.5	-0.3
	3.1nm,0.5s,mb4.0,baz=351,slow=12,SNR=21						
ASAR	Alice Springs	25.23	177	P	P	23 08 13.8	+0.6
	1.6nm,0.8s,mb3.6,baz=3.5,slow=10,SNR=13						
CTAO	Charters Tower	25.39	149	P	P	23 08 14.6	0.0
KULM	Kulim	32.22	277	*e*P	P	23 09 15.8	+0.1
STKA	Stephens Creek	34.43	167	*e*P	P	23 09 34.7	0.0
CHTO	Chiang Mai	37.22	299	*e*P	P	23 09 58.7	-0.1
NWAO	Narrogin (SRO)	37.42	202	*e*P	P	23 10 00.3	0.0
ULN	Ulaanbaatar	51.08	338	*e*P	P	23 11 49.4	0.0
SONM	Songino Array	51.30	337	P	P	23 11 51.8	+0.7
	0.4nm,0.6s,mb3.6,baz=155,slow=7.8,SNR=5.0						
SONM				PcP	PcP	23 13 05.8	-0.1
	0.3nm,0.5s,baz=166,slow=5.1,SNR=3.0						
SONM				ScP	ScP	23 17 01.5	+0.1
	0.2nm,0.5s,baz=134,slow=6.2,SNR=2.4						
PALK	Pallekele	52.14	278	*e*P	P	23 11 57.9	-0.1
MK31	Makanchi Array	62.70	323	*e*P	P	23 13 11.9	0.0
MKAR	Makanchi Array	62.70	323	P	P	23 13 12.3	+0.4
	0.7nm,0.5s,mb4.0,baz=119,slow=7.7,SNR=15						
MKAR	Makanchi Array	62.70	323	P	P	23 13 12.3	+0.4
ZALV	Zalesovo Beam	65.18	331	P	P	23 13 27.8	-0.4
	0.3nm,0.4s,mb3.7,baz=94,slow=6.5,SNR=4.5						
EKS2	Erkin-Say	66.42	316	*e*P	P	23 13 36.3	0.0
KURK	Kurchatov	66.72	326	P	P	23 13 38.0	0.0
	2.7nm,0.8s,mb4.3,baz=121,slow=5.8,SNR=19						
KURK	Kurchatov	66.72	326	*e*P	P	23 13 37.8	-0.3
	5.1nm,1.3s,mb4.4						
BVAR	Borovoye Array	72.32	326	P	P	23 14 13.0	+0.4
	3.8nm,0.8s,mb4.4,baz=111,slow=8.1,SNR=18						
BRVK	Borovoye	72.39	326	*e*P	P	23 14 13.4	+0.4
	3.4nm,0.6s,mb4.5						
ARU	Arti	79.87	327	*e*P	P	23 14 54.0	-1.5
	5.1nm,1.3s,mb4.3						

IDC 29 23:06:46.6±6.7, 56°.16S×150°.79W, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.6/12, mbtmp3.6/2, Error ellipse: s-maj=740.1km s-min=86.7km az=169.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	62.55	268	P	P	23 17 12.4	+0.3
	0.8nm,0.8s,baz=134,slow=6.6,SNR=4.8						
WRA	Warramunga Arr	65.27	271	P	P	23 17 29.9	-0.1
	0.5nm,0.9s,baz=141,slow=6.4,SNR=3.5						
MKAR	Makanchi Array	146.42	277	PKPbc	PKPbc	23 26 27.1	-1.3
	0.7nm,0.7s,baz=129,slow=4.8,SNR=8.2						
ZALV	Zalesovo Beam	148.80	290	PKPbc	PKPbc	23 26 34.6	0.0
	0.4nm,0.3s,baz=73,slow=4.8,SNR=2.8						

CSEM 29 23:40:08.2±0.2, 28°.07N×56°.63E, h12km, ML3.2, Error ellipse: s-maj=11.4km s-min=3.9km az=96.0
ISCJB 29 23:40:08.2±0.8, 28°.06N±0°.03×56°.56E±0°.09, h13km±6km, Error ellipse: s-maj=13.8km s-min=4.6km az=5.7
TEH 29 23:40:10.5, 28°.02N×56°.49E, h7km
OMAN 29 23:40:39.7±6.2, 25°.90N×56°.05E, h17km, Error ellipse: s-maj=5.5km s-min=0.3km az=296.0

ISC 29 23:40:08.9±0.7, 28°.04N±0°.03×56°.61E±0°.08, h10km±6km, n18, σ1s18/25, 3C-1D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBND	Bandar-abas	0.59	186	*e*Pg	Pg	23 40 20.5	+0.1
IBND				*e*Pg	Pg	23 40 20.9	+0.5
IBND				*e*		23 40 39.0	
	comp=Z,43μm,0.2s						
IBND				*e*		23 40 39.2	
	comp=Z,55μm,0.2s						
BNDS	Bandar-Abbas	0.74	211	*e*Pg	Pg	23 40 23.6	+0.3
BNDS				*e*Sg	Sg	23 40 33.7	+0.7
KRBR	Kerman	1.94	4	*e*Pg	Pg	23 40 44.8	-1.4
KRBR				*e*Sg	Sg	23 41 10.4	-1.0
BANOM	Banah	2.12	187	⇓P	Pn	23 40 44.5	0.0
	SNR=37						
BANOM				⇑P		23 40 46.5	
BANOM	Banah	2.12	187	Pn	Pn	23 40 43.5	-1.0
	SNR=37						
BANOM	Banah	2.12	187	P	Pn	23 40 44.5	0.0
	SNR=37						
BANOM				Sn	Sn	23 41 08.8	-2.2
GHIR	Ghir-Karzin	3.20	275	*e*Pn	Pn	23 40 58.6	-0.8
HATD	Hatta, Dubai	3.23	188	Pn	Pn	23 40 59.0	-0.7
ASHO	Ashiyiah	3.38	188	P	Pn	23 41 01.8	+0.1
	SNR=14						
ASHO	Ashiyiah	3.38	188	Pn	Pn	23 41 01.7	0.0
	SNR=14						
FAQ	Al Faqa, Dubai	3.40	196	Pn	Pn	23 41 01.8	-0.3
	SNR=12						
ASUD	Al Ashush, Dub	3.58	199	⇑P	Pn	23 41 04.8	+0.2
	SNR=54						
ASUD				⇑P		23 41 04.8	
	SNR=54						
ASUD	Al Ashush, Dub	3.58	199	P	Pn	23 41 04.8	+0.2
	SNR=54						
IBAF	Bafgh	3.65	346	*e*Pn	Pn	23 41 06.3	+0.7
IBAF				*e*		23 42 13.1	
	comp=Z,310nm,0.3s						
IMEH	Mehriz	3.76	333	*e*	Pg	23 41 28.0	+6.9
	comp=Z,269nm,0.2s						
IMEH				*e*Pn	Pn	23 41 08.4	+1.3
ISAD	Sadrabad	4.62	327	*e*Pn	Pn	23 41 20.5	+1.7
ISAD				*e*Sn	Sn	23 42 11.1	-1.4
ISAD				*e*		23 42 18.8	
	comp=Z,211nm,0.2s						
IKOO	Kooshah	4.84	25	*e*Pn	Pn	23 41 24.1	+2.2
IKOO				*e*		23 41 46.0	
	comp=N,323nm,0.1s						
IKOO				*e*Sg	Sg	23 42 43.3	-1.1
ITEG	Tejag	5.18	20	*e*Pn	Pn	23 41 29.0	+2.4
ITEG				*e*		23 43 10.8	
	comp=Z,304nm,0.5s						

DDA 29 23:54:45.5, 39°.78N×38°.50E, h7km±4km, Md3.1
ISK 29 23:54:45.4, 39°.82N×38°.51E, h14km, MD3.0
CSEM 29 23:54:46.0±0.2, 39°.79N×38°.55E, h8km, MD3.1, Error ellipse: s-maj=5.9km s-min=4.3km az=89.0
ISCJB 29 23:54:46.0±0.9, 39°.80N±0°.03×38°.55E±0°.05, h4km±8km, Error ellipse: s-maj=6.5km s-min=4.7km az=12.8

ISC 29 23:54:46.5±0.9, 39°.79N±0°.03×38°.56E±0°.06, h7km±7km, n24, σ1s21/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEMA	Kemaliye	0.52	185	*i* P	Pg	23 54 56.2	-0.3
KEMA				*i* S	Sg	23 55 04.4	+1.1
KEMA	Kemaliye	0.52	185	*i* P	Pg	23 54 56.2	-0.3
KEMA				*i* S	Sg	23 55 04.4	+1.1
EZC	Erzincan	0.97	92	*e*PG	Pg	23 54 59.0	-6.1
GUMT	Gumushane	0.97	46	*e*PG	Pg	23 55 05.3	+0.1
GUMT				*e*SG	Sg	23 55 18.3	+0.4
GUMT	Gumushane	0.97	46	*e*Pg	Pg	23 55 05.3	+0.1
GUMT				*e*Sg	Sg	23 55 18.3	+0.4
DARE	Darende-Malaty	1.02	215	*e*PN	Pn	23 55 11.8	+4.7
PTK	Pertek	1.10	144	*e*PN	Pn	23 55 07.8	-0.6
PTK	Pertek	1.10	144	*e*Pn	Pn	23 55 07.8	-0.5
ESPY	Espiye-Giresun	1.14	7	*e*PN	Pn	23 55 07.3	-1.4
ESPY				*e*SN	Sn	23 55 22.9	-1.7
ESPY	Espiye-Giresun	1.14	7	*e*Pn	Pn	23 55 07.3	-1.5
ESPY				*e*Sn	Sn	23 55 22.9	-1.7
SVSK	Karacayir	1.21	277	*e*PN	Pn	23 55 07.6	-2.1
SVSK	Karacayir	1.21	277	*e*Pn	Pn	23 55 07.6	-2.2
ELZG	Elazig	1.33	165	*i* P	Pn	23 55 10.9	-0.6
ELZG				*i* S	Sb	23 55 30.3	+1.3
ELZG	Elazig	1.33	165	*i* P	Pn	23 55 10.9	-0.6
ELZG				*i* S	Sb	23 55 30.3	+1.3
MYA	Malataya	1.46	184	*e*PN	Pn	23 55 12.3	-1.0
MYA	Malataya	1.46	184	*e*Pn	Pn	23 55 12.3	-1.0
MACK	Trabzon	1.48	38	*i* P	Pn	23 55 14.8	+1.2
MACK				*i* S	Sn	23 55 35.2	+2.1
MACK	Trabzon	1.48	38	*i* P	Pn	23 55 14.8	+1.3
SVRC	Sivrice-ELAZID	1.52	157	*e*PN	Pn	23 55 12.9	-1.2
SVRC	Sivrice-ELAZID	1.52	157	*e*Pn	Pn	23 55 12.9	-1.2
ERBA	Erbaa	1.64	303	*i* P	Pn	23 55 15.6	-0.2
ERBA				*i* S	Sn	23 55 38.2	+1.1
ERBA	Erbaa	1.64	303	*i* P	Pn	23 55 15.6	-0.2
ERBA				*i* S	Sn	23 55 38.2	+1.1
TOKA	Tokat	1.68	289	*i* P	Pn	23 55 16.1	-0.2
TOKA				*i* S	Sn	23 55 40.3	+2.2
TOKA	Tokat	1.68	289	*i* P	Pn	23 55 16.0	-0.3

DJA 30 00:12:47.4±10S×121°.48E, h33km, MLv3.8/8, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDI	Kendari	1.15	83	P	Pn	00 13 08.0	+1.3
BNSI	Bone	1.40	258	P	Pn	00 13 09.6	-0.7
SPSI	Sidrap Palu	1.71	274	P	Pn	00 13 16.1	+1.6
BKSI	Bulukumba	1.82	228	P	Pn	00 13 17.0	+1.0
TTSI	Tana Toraja	1.96	302	P	Pn	00 13 18.9	+0.9
APSI	Ampana	3.17	3	P	Pn	00 13 35.0	+0.4
LUWI	Luwuk	3.30	23	P	Pn	00 13 37.3	+0.9
PCI	Palu	3.57	333	P	Pn	00 13 42.2	+2.1

NEIC 30 00:41:56.4, 32°.41S×69°.35W, h24km, ML2.5(GUC), After GUC.

GUC 30 00:41:56.4±0.6, 32°.41S×69°.35W, h24km±5km, MD3.5, ML2.5, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FCH	Farellones	1.21	221	*e*P	Pn	00 42 15.8	-2.1
FCH				*i* S	Sn	00 42 32.8	-0.7
FCH				AML	AML	00 42 33.3	
	comp=E,122nm,0.3s						
CLCH	Cerro Calan	1.40	225	*e*P	Pn	00 42 21.4	+1.0
CLCH				*i* S	Sn	00 42 40.3	+2.1
CLCH				AML	AML	00 42 46.3	
	comp=N,102nm,0.6s						
PCH	Pirque	1.55	219	*e*P	Pn	00 42 24.3	+1.8
PCH				*e*S	Sn	00 42 45.3	+3.4
PCH	Pirque	1.55	219	*e*P	Pn	00 42 24.3	+1.8
PCH				*e*S	Sn	00 42 45.3	+3.4
LMEL	Las Melosas	1.60	206	*e*P	Pn	00 42 25.1	+1.9
LMEL				*i* S	Sn	00 42 46.7	+3.6
LMEL	Las Melosas	1.60	206	*e*P	Pn	00 42 25.1	+1.9
LMEL				*i* S	Sn	00 42 46.7	+3.6
LMEL				AML	AML	00 42 48.3	
	comp=N,37nm,0.2s						
TACH	Talagante	1.82	227	*e*P	Pn	00 42 29.0	+2.8
TACH				*e*S	Sn	00 42 53.1	+4.6
TACH	Talagante	1.82	227	*e*P	Pn	00 42 29.0	+2.8
TACH				*e*S	Sn	00 42 53.1	+4.6
CMCH	Combarbala	1.87	311	*e*P	Pn	00 42 29.2	+2.3
CMCH				*i* S	Sn	00 42 54.7	+4.8
CMCH	Combarbala	1.87	311	*e*P	Pn	00 42 29.2	+2.3
CMCH				*i* S	Sn	00 42 54.7	+4.8
TLL	Tololo Astrono	2.56	331	*e*P	Pn	00 42 41.6	+5.1
TLL				*i* S	Sn	00 43 15.7	+8.9
TLL	Tololo Astrono	2.56	331	*e*P	Pn	00 42 41.6	+5.1
TLL				*i* S	Sn	00 43 15.7	+8.9
TLL				AML	AML	00 43 21.4	
	comp=N,91nm,0.7s						
LCO	Las Campanas	3.58	341	*e*Pn	Pn	00 42 54.8	+4.3
LCO				*e*Sn	Sn	00 43 32.3	+0.2

IDC 30 00:45:36.0±1.7, 10°.81N×91°.82E, h0km, mb3.7/7, mb1 3.8/8, mb1mx3.6/23, mbtmp3.7/8, Error ellipse: s-maj=61.4km s-min=19.1km az=63.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	10.26	41	Pn	Pn	00 48 04.2	-0.3
	baz=237,slow=15,SNR=3.9						
MKAR	Makanchi Array	36.76	349	P	P	00 52 44.8	-0.4
	0.7nm,0.9s,baz=150,slow=8.1,SNR=4.4						
SONM	Songino Array	38.89	16	P	P	00 53 03.4	+0.3
	0.3nm,0.4s,baz=189,slow=8.6,SNR=4.1						
KURK	Kurchatov	41.24	347	P	P	00 53 22.5	-0.1
	0.4nm,0.3s,baz=167,slow=6.9,SNR=3.8						
ZALV	Zalesovo Beam	43.38	354	P	P	00 53 40.2	+0.2
	0.5nm,0.5s,baz=186,slow=7.1,SNR=3.3						
BVAR	Borovoye Array	45.49	342	P	P	00 53 56.4	-0.6
	0.1nm,0.5s,baz=141,slow=5.5,SNR=2.4						
WRA	Warramunga Arr	51.83	126	P	P	00 54 46.0	-0.2
	1.0nm,0.5s,baz=306,slow=8.4,SNR=19						
ASAR	Alice Springs	53.55	130	P	P	00 54 59.0	+0.1
	2.5nm,0.6s,baz=305,slow=6.7,SNR=23						

IDC 30 00:52:53.6±1.0, 44°.15N×129°.37W, h0km, mb4.2/14, mb1 4.2/19, mb1mx4.1/31, mbtmp4.1/19, ML3.5/5, MS3.9/13, Ms1 3.9/13, ms1mx3.6/27, Error ellipse: s-maj=30.5km s-min=13.0km az=43.0
ISCJB 30 00:52:54.1±0.3, 44°.20N±0°.04×129°.47W±0°.04, h10km, mb4.4/38, MS3.9/13, Error ellipse: s-maj=6.0km s-min=3.4km az=34.8
NEIC 30 00:52:55.5±0.4, 44°.18N×129°.56W, h10km, mb4.4/33, Error ellipse: s-maj=6.2km s-min=3.7km az=221.0
BJI 30 00:52:55.8, 44°.68N×130°.36W, h10km, mB4.8/5, mb4.9/11, Ms4.4/4, Ms7 4.1/4
SZGRF 30 00:53:02.1, 44°.68N×130°.05W, h33km, mb4.3, Off coast of Oregon, United States

ISC 30 00:52:55.4±0.3, 44°.17N±0°.04×129°.59W±0°.04, h10km, (h14km±1.4km:pP-P), n157, σ1s11/145, mb4.4/38, MS3.9/13, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEBO	Mount Hebo	4.29	74	*e*Pn	Pn	00 53 57.5	-3.2
COR	Corvallis	4.53	83	*e*Pn	Pn	00 54 01.0	-2.9
HUMO	Hull Mountain	5.08	106	*e*Pn	Pn	00 54 08.4	-3.1
NLWA	Neilton Lookou	5.13	49	*e*Pn	Pn	00 54 11.2	-1.0
SSOR	Sweet Springs	5.14	80	P	Pn	00 54 10.6	-1.8
IRO	Indian Ridge	5.29	89	P	Pn	00 54 13.2	-1.1
KHMM	Horse Mountain	5.44	125	*e*Pn	Pn	00 54 15.9	-0.5
YBH	Yreka Blue Hor	5.61	113	Pn	Pn	00 54 17.4	-1.4
	0.2nm,0.3s,baz=278,slow=8.0,SNR=15						
YBH	Yreka Blue Hor	5.61	113	*e*Pn	Pn	00 54 18.6	-0.2
HOOD	Mount Hood Mea	5.77	76	*e*Pn	Pn	00 54 19.7	-1.2
GNW	Green Mountain	5.81	52	*e*Pn	Pn	00 54 20.2	-1.4
	9.2nm,0.7s						
LON	Longmire	6.05	62	*e*Pn	Pn	00 54 23.1	-1.7
	26nm,0.8s						
PGC	Sidney	6.17	41	*e*Pn	Pn	00 54 26.4	-0.1
WDC	Whiskeytown Da	6.33	122	*e*Pn	Pn	00 54 29.3	+0.6
KCPM	Cahto Peak	6.34	133	*e*Pn	Pn	00 54 28.9	+0.2
JCW	Jim Creek	6.67	50	*e*Pn	Pn	00 54 32.8	-0.5
RPW	Rockport	7.04	50	*e*Pn	Pn	00 54 37.2	-1.2
HOPS	Hopland	7.11	134	*e*Pn	Pn	00 54 37.6	-1.8
MOD	Modoc	7.17	105	*e*Pn

MSU	Marysvale	14.24	107	*e*Pn		Pn	00 56 18.1	+1.1
EGMT	Eagleton	14.28	67	*e*Pn		Pn	00 56 15.7	-1.8
	44nm,1.2s							
DLBC	Dease Lake	14.29	359	Pn		Pn	00 56 18.3	+0.8
	0.1nm,0.3s,baz=150,slow=14,SNR=2.6							
DLBC				LR		LR	01 01 41.3	
	comp=Z,531nm,19.7s,baz=274,slow=37							
DLBC	Dease Lake	14.29	359	Pn		Pn	00 56 18.3	+0.8
DLBC				LR		LR	01 01 41.3	
LDFC	Landfair	14.37	124	*e*Pn		Pn	00 56 26.8	+8.0
RLMT	Red Lodge	14.50	79	Pn		Pn	00 56 20.6	+0.2
	28nm,1.0s							
TMUT	Trail Mountain	14.56	103	*e*Pn		Pn	00 56 22.7	+1.4
PDAR	Pinedale Array	14.62	89	Pn		Pn	00 56 22.2	+0.2
	0.1nm,0.3s,baz=290,slow=11,SNR=9.8							
PDAR				LR		LR	01 02 16.3	
	comp=Z,823nm,21.1s,baz=304,slow=39							
SRU	San Rafael	15.12	103	*e*Pn		Pn	00 56 29.3	+0.4
	48nm,0.9s							
GLA	Glamis	15.98	129	*e*Pn		Pn	00 56 39.4	-0.9
	20nm,1.2s							
WUAZ	Wupatki	16.42	116	*e*Pn		Pn	00 56 46.2	+0.4
	30nm,1.2s							
PV04	Paradox Valley	16.57	103	*e*Pn		Pn	00 56 47.1	-0.6
RWWY	Rawlins	16.57	91	*e*Pn		Pn	00 56 48.2	+0.5
	25nm,1.1s							
LAO	LASA Array	16.58	73	*e*Pn		Pn	00 56 47.6	-0.2
	33nm,1.0s							
PV01	Paradox Valley	16.92	104	*e*Pn		Pn	00 56 50.9	-1.2
	4μm,1.4s							
MVCO	Mesa Verde	17.42	106	*e*Pn		Pn	00 56 57.7	-0.6
	185nm,1.8s							
SMCO	Snowmass	17.60	99	*e*Pn		Pn	00 56 59.5	-1.0
	18nm,1.4s							
RSSD	Black Hills	18.32	81	*e*Pn		Pn	00 57 08.7	-0.8
	10.0nm,1.0s							
ISCO	Idaho Springs	18.33	95	*e*Pn		Pn	00 57 08.1	-1.5
	17nm,1.1s							
TUC	Tucson	18.88	122	*e*P		Pn	00 57 15.6	-0.7
	10nm,1.3s							
BMRM	Bremner River	19.05	337	P		Pn	00 57 18.4	+0.2
	7.4nm,0.7s							
SDCO	Great Sand Dun	19.26	101	*e*P		Pn	00 57 19.9	-1.0
	17nm,1.4s							
LAZ	Ladron	19.87	112	*e*P		Pn	00 57 27.6	-0.6
	12nm,1.1s							
ANMO	Albuquerque	20.02	109	P		P	00 57 27.9	-0.3
	0.0nm,0.3s,baz=314,slow=10,SNR=8.7							
ANMO	Albuquerque	20.02	109	*e*P		P	00 57 27.2	-0.9
	1.8nm,1.0s							
YKA	Yellowknife Ar	20.32	20	P		P	00 57 30.6	-0.7
	5.9nm,1.1s,baz=212,slow=9.3,SNR=3.3							
YKA	Yellowknife Ar	20.32	20	P		P	00 57 30.6	-0.7
BNM	Barren Site	20.36	112	*e*P		P	00 57 33.1	+1.1
	23nm,1.2s							
FFC	Flin Flon	20.69	50	*e*P		P	00 57 34.4	-1.0
	21nm,1.0s							
DAWY	Dawson	20.70	348	*e*P		P	00 57 36.6	+1.3
PMR	Palmer	20.91	333	*e*P		P	00 57 38.7	+1.1
	12nm,1.1s							
EGAK	Eagle	21.64	347	*e*P		P	00 57 46.1	+0.6
	10nm,1.2s,mb4.1							
MCK	McKinley	22.48	337	*e*P		P	00 57 55.5	+1.0
	11nm,1.1s,mb4.2							
MNTX	Cornudas Mount	22.70	115	*e*P		P	00 57 56.8	-0.3
	6.8nm,1.1s,mb4.0							
PPLA	Purkeypile	22.84	333	*e*P		P	00 57 59.9	+1.6
	26nm,1.3s,mb4.5							
SVW2	Sparrevohn	22.90	327	*e*P		P	00 58 00.5	+1.5
CBKS	Cedar Bluff	22.92	93	*e*P		P	00 57 58.9	-0.5
AMTX	Amarillo	23.35	104	*e*P		P	00 58 00.8	-3.0
	11nm,0.9s,mb4.3							
ULM	Lac du Bonnet	23.55	63	P		P	00 58 03.9	-2.0
	8.5nm,1.0s,mb4.1,baz=270,slow=8.4,SNR=4.0							
ULM				LR		LR	01 07 34.1	
	comp=Z,632nm,18.5s,MS4.1,baz=106,slow=38							
ULM	Lac du Bonnet	23.55	63	*e*P		P	00 58 04.6	-1.3
	36nm,1.4s,mb4.6							
AGMN	Agassiz Nation	23.58	68	*e*P		P	00 58 04.9	-1.3
	11nm,1.0s,mb4.2							
ECSD	EROS Data Cent	23.66	79	*e*P		P	00 58 04.8	-2.1
	19nm,1.2s,mb4.4							
INK	Inuvik	24.28	356	LR		LR	01 08 01.1	
	comp=Z,144nm,21.1s,MS3.4,baz=232,slow=37							
TXAR	Lajitas Array	25.37	117	P		P	00 58 22.3	-0.4
	7.5nm,1.1s,mb4.1,baz=304,slow=7.4,SNR=19							
TXAR	Lajitas Array	25.37	117	P		P	00 58 22.3	-0.4
WMOK	Wichita Mounta	25.46	101	*e*P		P	00 58 22.2	-1.3
	31nm,1.1s,mb4.8							
MIAR	Mount Ida	29.26	97	*e*P		P	00 58 57.3	-0.2
	12nm,1.5s,mb4.4							
OXF	Oxford	32.26	93	*e*P		P	00 59 23.7	-0.3
	52nm,1.0s,mb5.3							
RES	Resolute Bay	34.24	16	P		P	00 59 41.8	+1.0
	4.7nm,0.8s,mb4.5,baz=270,slow=20							
SCHQ	Schefferville	40.80	52	LR		LR	01 18 01.5	
	comp=Z,381nm,19.9s,MS4.3,baz=128,slow=37							
OTAV	Otavalo	62.98	119	*e*P		P	01 03 22.4	+0.1
	6.9nm,1.2s,mb4.7							
PPT	Papeete	64.10	201	*e*LR		LR	01 22 26.3	
	109nm,24.2s							
MDJ	Mudanjiang	67.07	310	P		P	01 03 48.0	-0.6
MDJ				pmax		pmax		
	comp=Z,5.0nm,0.6s,mb4.7							
MDJ				pmax		pmax		
	comp=Z,44nm,3.4s							
MJAR	Matsushiro Arr	67.08	299	LR		LR	01 31 00.4	
	comp=Z,57nm,19.2s,MS3.8,baz=120,slow=34							
RKT	Rikitea	67.14	185	*e*LR		LR	01 24 23.6	
	comp=Z,213nm,34.0s							
TBI	Tubuai	69.61	199	*e*LR		LR	01 25 37.6	
	comp=Z,98nm,26.8s							
CN2	Changchun	69.85	312	*e*P		P	01 04 04.5	-1.6
NOA	NORSAR Array B	70.42	19	P		P	01 04 08.5	-0.7
	comp=Z,1.8nm,1.0s,mb3.9,baz=330,slow=6.2,SNR=2.8							
NOA				LR		LR	01 34 58.6	
	comp=Z,38nm,18.1s,MS3.7,baz=320,slow=36							
FINES	FINESS Array B	72.91	12	P		P	01 04 23.8	-0.4
	comp=Z,6.3nm,1.0s,mb4.5,baz=329,slow=7.1,SNR=10							
FINES	FINESS Array B	72.91	12	P		P	01 04 23.8	-0.4
SONM	Songino Array	76.00	325	P		P	01 04 43.6	+1.2
	comp=Z,0.8nm,0.6s,mb3.8,baz=44,slow=4.9,SNR=8.2							
SONM				LR		LR	01 39 17.7	
	comp=Z,66nm,18.2s,MS4.0,baz=240,slow=37							
BJI	Beijing	77.40	314	P		P	01 04 47.0	-3.5
BJI				S		S	01 14 37.0	-3.8
BJI				pmax		pmax		
	comp=Z,5.0nm,0.9s,mb4.4							
ZALV	Zalesovo Beam	77.93	340	P		P	01 04 53.6	+0.4
	comp=Z,0.7nm,0.6s,mb3.8,baz=56,slow=5.6,SNR=5.0							
ZALV				LR		LR	01 43 06.3	
	comp=Z,36nm,18.5s,MS3.7,baz=46,slow=39							
IZAR	Zarasai	78.37	14	*e*P		P	01 04 55.3	-0.3
ISAL	Salakas	78.52	14	*e*P		P	01 04 56.1	-0.3
IIGN	Ignalina	78.75	14	*e*P		P	01 04 57.4	-0.2
IIGN				AMB		AMB	01 04 59.6	
	comp=Z,2.5nm,1.3s,mb4.0							
IDID	Didziasalis	78.87	14	*e*P		P	01 04 58.2	-0.2
IDID				AMB		AMB	01 05 00.1	
	comp=Z,2.0nm,1.4s,mb3.9							
HHC	Hu-ho-hao-te	79.10	317	*e*P		P	01 04 57.3	-2.6
HHC				pP		pP	01 05 02.0	-1.2
HHC				sP		sP	01 05 04.3	-0.1
HHC				PcP		PcP	01 05 06.5	-1.8
HHC				PP		PP	01 07 57.3	-1.2
HHC				S		S	01 14 53.5	-5.6
HHC				sS		sS	01 15 01.8	-2.8
HHC				SKS			01 15 07.8	
HHC				ScS		ScS	01 15 15.3	-7.0
HHC				SS		SS	01 20 00.8	-3.1
HHC				pmax		pmax		
	comp=Z,9.0nm,0.6s,mb4.9							
HHC				pmax		pmax		
	comp=Z,63nm,4.5s							
HHC				LR		LR		
	comp=N,75nm,17.8s,MS4.2							
HHC				LR		LR		
	comp=E,82nm,17.8s,MS4.2							
HHC				LR		LR		
	comp=Z,43nm,17.8s,MS3.8							
CLL	Collm	79.53	23	*e*P		P	01 05 02.0	0.0
CLL				*e*PP		PP	01 08 00.0	-1.6
CLL				*e*SSSS			01 26 18.0	
CLL				Lm			01 42 00.0	
	comp=N,100nm,20.1s							
CLL				Lm			01 42 00.0	
	comp=E,100nm,21.0s							
CLL				Lm			01 42 00.0	
	comp=Z,100nm,19.3s							
ARU	Arti	79.53	355	*e*P		P	01 05 01.6	-0.4
	comp=Z,12nm,1.3s,mb4.7							
BRG	Berggiesshubel	80.18	22	*e*P		P	01 05 05.8	+0.3
	comp=Z,2.7nm,1.1s,mb4.1							
GRF	Grafenberg Arr	80.45	25	*e*P		P	01 05 07.4	+0.4
	comp=Z,5.0nm,1.3s,mb4.3							
BRVK	Borovoye	81.65	348	*e*P		P	01 05 13.3	-0.1
	comp=Z,4.4nm,1.0s,mb4.3							
BVAR	Borovoye Array	81.67	348	P		P	01 05 14.0	+0.5
	comp=Z,1.0nm,0.6s,mb3.9,baz=46,slow=4.3,SNR=13							
LPAZ	La Paz	82.15	122	P		P	01 05 14.9	-1.5
	comp=Z,5.1nm,1.0s,mb4.4,baz=345,slow=5.2,SNR=17							
LPAZ	La Paz	82.15	122	*e*P		P	01 05 15.4	-1.0
	comp=Z,11nm,1.4s,mb4.6							
KURK	Kurchatov	82.36	342	P		P	01 05 17.9	+0.8
	comp=Z,3.3nm,1.0s,mb4.2,baz=20,slow=4.4,SNR=11							
KURK	Kurchatov	82.36	342	*e*P		P	01 05 17.0	-0.1
	comp=Z,6.6nm,1.2s,mb4.4							
ESDC	Sonseca Array	83.22	39	LR		LR	01 42 08.7	
	comp=Z,70nm,18.2s,MS4.1,baz=305,slow=36							
AKASG	Malin Array Be	83.73	13	P		P	01 05 23.6	-0.6
	comp=Z,0.9nm,0.6s,mb4.1,baz=340,slow=4.7,SNR=10							
MKAR	Makanchi Array	85.14	339	P		P	01 05 31.4	0.0
	comp=Z,0.4nm,0.8s,mb3.6,baz=34,slow=4.5,SNR=4.6							
MKAR				LR		LR	01 46 26.4	
	comp=Z,61nm,18.7s,MS4.0,baz=4.2,slow=38							
MKAR	Makanchi Array	85.14	339	P		P	01 05 31.4	0.0
MKAR				LR		LR	01 46 26.4	
AKTK	Aktyubinsk	85.54	355	P		P	01 05 33.6	+0.3
AKTO	Aktyubinsk	85.54	355	P		P	01 05 33.6	+0.3
	comp=Z,1.9nm,0.8s,mb4.4,baz=9.6,slow=4.7,SNR=4.1							
WMQ	Urumqi	86.29	334	*e*P		P	01 05 38.0	+0.8
LZH	Lanzhou	86.56	319	*e*P		P	01 05 40.3	+1.6
LZH				pP		pP	01 05 44.0	+2.0
LZH				sP		sP	01 05 46.5	+3.3
LZH				pmax		pmax		
	comp=Z,15nm,1.0s,mb5.2							
TKM2	Tokmak 2	90.41	342	*e*P		P	01 05 56.8	-0.1
	comp=Z,7.0nm,1.2s,mb4.9							
CD2	Chengdu	90.82	316	*e*P		P	01 05 57.0	-2.0
CD2				pP		pP	01 06 02.0	-0.3
CD2				sP		sP	01 06 04.8	+1.3
CD2				pmax		pmax		
	comp=Z,10.0nm,0.6s,mb5.3							
CD2				pmax		pmax		
	comp=Z,30nm,5.2s							
KEST	Kesra	92.16	32	LR		LR	01 48 51.0	
	comp=Z,26nm,18.5s,MS3.7,baz=304,slow=36							
GYA	Guiyang	92.90	312	P		P	01 06 07.3	-1.4
GYA				pmax		pmax		
	comp=Z,10.0nm,0.8s,mb5.3							
BRTR	Keskin Array B	95.13	13	LR		LR	01 51 16.1	
	comp=Z,31nm,18.1s,MS3.8,baz=142,slow=37							
KMI	Kunming	96.05	314	P		P	01 06 23.8	+0.7
KMI				pP		pP	01 06 26.8	+0.3
KMI				sP		sP	01 06 28.0	+0.3
KMI				PP		PP	01 10 18.0	+3.0
KMI				S		S	01 17 38.3	-3.8
KMI				pmax		pmax		
	comp=Z,6.0nm,0.8s,mb5.1							
KMI				pmax		pmax		
	comp=Z,62nm,3.4s							
KMI				LR		LR		
	comp=N,120nm,15.3s,MS4.6							
KMI				LR		LR		
	comp=E,95nm,17.3s,MS4.6							
KMI				LR		LR		
	comp=Z,100nm,17.2s,MS4.4							
LSZ	Lusaka	145.56	40	PKPbc		PKPbc	01 12 33.9	-0.3
	comp=Z,6.1nm,0.9s,baz=22,slow=3.2,SNR=7.9							
LSZ	Lusaka	145.56	40	*e*PKPdf		PKPdf	01 12 34.1	0.0
LBTB	Lobatse	152.20	55	PKPbc		PKPbc	01 12 49.5	-1.7
	comp=Z,5.3nm,1.0s,baz=286,slow=2.9,SNR=3.9							

*BJI **30** 00:53:33.0,44°.30N×129°.50W,h10km,mB4.7/3,mb4.8/4, Ms4.5/3,Ms7 4.4/3*
*ISCJB **30** 00:53:35.1±0.6,44°.41N±0°.05×129°.43W±0°.07,h10km, mb4.4/2,Error ellipse: s-maj=8.7km s-min=5.5km az=40.1*
*NEIC **30** 00:53:36.3±0.6,44°.33N×129°.52W,h10km,mb4.3/2,Error ellipse: s-maj=9.0km s-min=5.6km az=54.0*

ISC 30 00:53:36.2±0.5,44°.32N±0°.05×129°.56W±0°.07,h10km,n70, σ1$03/70,mb4.4/2,Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEBO	Mount Hebo	4.23	76	*e*P	Pn	00 54 37.6	-3.1
COR	Corvallis	4.49	84	*e*Pn	Pn	00 54 40.7	-3.5
HUMO	Hull Mountain	5.10	107	*e*Pn	Pn	00 54 47.8	-4.9
YBH	Yreka Blue Hor	5.65	115	*e*Pn	Pn	00 55 01.1	+0.9
GNW	Green Mountain	5.70	53	*e*Pn	Pn	00 54 59.5	-1.5
HOOD	Mount Hood Mea	5.71	77	*e*Pn	Pn	00 55 00.2	-0.8
LON	Longmire	5.96	63	*e*Pn	Pn	00 55 03.8	-0.6
PGC	Sidney	6.04	42	*e*Pn	Pn	00 55 04.4	-1.2
	4.1nm,1.3s						
WDC	Whiskeytown Da	6.39	123	*e*Pn	Pn	00 55 08.3	-2.1
JCW	Jim Creek	6.55	51	*e*Pn	Pn	00 55 12.2	-0.3
RPW	Rockport	6.92	51	*e*Pn	Pn	00 55 16.8	-0.9
MOD	Modoc	7.19	106	*e*Pn	Pn	00 55 22.1	+0.8
HOPS	Hopland	7.20	135	Pn	Pn	00 55 17.9	-3.6
WVOR	Wild Horse Val	8.18	100	*e*Pn	Pn	00 55 35.5	+0.6
BMO	Blue Mountains	8.76	82	*e*Pn	Pn	00 55 39.8	-3.0
CMB	Columbia Colle	9.34	129	*e*Pn	Pn	00 55 47.7	-3.0
NEW	Newport	9.46	61	*e*Pn	Pn	00 55 53.0	+0.5
BMN	Battle Mountai	9.92	109	*e*Pn	Pn	00 55 58.2	-0.6
BSMT	Bassoo Peak	10.85	66	*e*Pn	Pn	00 56 12.8	+1.3
HLID	Hailey	10.95	89	*e*Pn	Pn	00 56 14.3	+1.4
MSO	Missoula	11.23	72	*e*Pn	Pn	00 56 16.6	0.0
SLMT	Seeley Lake	11.59	70	*e*Pn	Pn	00 56 22.4	+0.8
CHMT	Chamberlain Mo	11.71	71	*e*Pn	Pn	00 56 24.5	+1.3
WALA	Waterton Lakes	11.74	61	Pn	Pn	00 56 23.9	+0.3
ISA	Isabella	12.12	132	*e*Pn	Pn	00 56 27.2	-1.6
	13nm,1.2s						
HVU	Hansel Valley	12.54	96	*e*Pn	Pn	00 56 39.3	+4.7
BGU	Big Grassy Mou	12.64	100	*e*Pn	Pn	00 56 36.4	+0.5
	5.6nm,1.0s						
BOZ	Bozeman (W)	12.76	78	*e*Pn	Pn	00 56 37.0	-0.7
GSC	Goldstone	13.30	128	*e*Pn	Pn	00 56 43.9	-1.1
IMW	Indian Meadow	13.39	85	*e*Pn	Pn	00 56 47.2	+1.0
	19nm,1.2s						
TPAW	Teton Pass	13.45	87	Pn	Pn	00 56 46.8	-0.1
REDW	Red Top Meadow	13.54	88	*e*Pn	Pn	00 56 48.9	+0.6
LOHW	Long Hollow	13.67	86	*e*Pn	Pn	00 56 51.1	+1.0
	41nm,1.4s						
ARUT	Antelope Range	13.79	113	*e*Pn	Pn	00 56 51.5	-0.2
	34nm,1.2s						
CCUT	Cedar City	13.97	113	Pn	Pn	00 56 54.1	-0.1
DAU	Daniels Canyon	14.08	100	*e*Pn	Pn	00 57 02.0	+6.4
EGMT	Eagleton	14.21	68	Pn	Pn	00 56 57.6	+0.3
MSU	Marysvale	14.27	108	Pn	Pn	00 56 58.6	+0.4
RLMT	Red Lodge	14.45	80	*e*Pn	Pn	00 57 07.7	+7.1
TMUT	Trail Mountain	14.57	104	*e*Pn	Pn	00 57 02.1	-0.2
SRU	San Rafael	15.13	104	*e*Pn	Pn	00 57 11.8	+1.9
GLA	Glamis	16.06	129	*e*Pn	Pn	00 57 23.1	+1.0
WUAZ	Wupatki	16.46	116	Pn	Pn	00 57 27.7	+0.5
LAO	LASA Array	16.52	74	*e*Pn	Pn	00 57 27.8	-0.1
RWWY	Rawlins	16.55	91	*e*Pn	Pn	00 57 28.7	+0.4
PV04	Paradox Valley	16.58	104	*e*Pn	Pn	00 57 29.1	+0.4
PV01	Paradox Valley	16.93	104	*e*Pn	Pn	00 57 32.2	-0.9
MVCO	Mesa Verde	17.44	107	*e*Pn	Pn	00 57 39.5	+0.1
SMCO	Snowmass	17.60	99	Pn	Pn	00 57 42.6	+1.1
ISCO	Idaho Springs	18.32	96	*e*Pn	Pn	00 57 49.0	-1.3
TUC	Tucson	18.94	123	*e*P	Pn	00 57 57.4	-0.6
SDCO	Great Sand Dun	19.26	102	*e*P	Pn	00 58 00.9	-0.9
	18nm,1.3s						
LAZ	Ladron	19.91	112	*e*P	Pn	00 58 08.6	-0.9
ANMO	Albuquerque	20.04	110	*e*P	P	00 58 11.1	+1.8
DAWY	Dawson	20.55	348	P	P	00 58 13.4	-1.2
FFC	Flin Flon	20.57	50	*e*P	P	00 58 14.1	-0.8
PMR	Palmer	20.79	333	*e*P	P	00 58 17.8	+0.7
MCK	McKinley	22.36	337	P	P	00 58 34.4	+0.4
PPLA	Purkeypile	22.72	333	P	P	00 58 38.6	+0.7
AMTX	Amarillo	23.36	104	*e*P	P	00 58 45.6	+0.7
	12nm,0.8s,mb4.4						
AGMN	Agassiz Nation	23.50	68	*e*P	P	00 58 46.3	+0.1
ECSD	EROS Data Cent	23.61	80	*e*P	P	00 58 46.1	-1.2
WMOK	Wichita Mounta	25.47	101	*e*P	P	00 59 04.0	-0.3
OXF	Oxford	32.25	94	*e*P	P	01 00 06.5	+1.8
MDJ	Mudanjiang	66.99	310	P	P	01 04 27.8	-1.2
MDJ				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
MDJ				pmax	pmax		
	comp=Z,58nm,6.6s						
BRVK	Borovoye	81.51	348	P	P	01 05 54.3	+0.9
LPAZ	La Paz	82.20	122	*e*P	P	01 05 59.1	+1.6
WMQ	Urumqi	86.17	334	*e*P	P	01 06 18.0	+0.6
TKM2	Tokmak 2	90.28	342	*e*P	P	01 06 37.0	0.0
KMI	Kunming	95.97	314	P	P	01 07 03.3	-0.3
KMI				pP	pP	01 07 06.0	-0.9
KMI				sP	sP	01 07 08.0	-0.1
KMI				PP	PP	01 10 57.3	+2.1
KMI				S	S	01 18 17.5	-4.7
KMI				SS	SS	01 24 50.5	-0.9
KMI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KMI				pmax	pmax		
	comp=Z,45nm,3.2s						
KMI				LR	LR		
	comp=N,68nm,17.4s						
KMI				LR	LR		
	comp=E,100nm,15.9s						
KMI				LR	LR		
	comp=Z,100nm,14.5s						

*IDC **30** 00:56:05.5±2.7,2°.43S×100°.93E,h0km,mb4.1/6, mb1 4.2/6,mb1mx3.8/20,mbtmp4.1/6,Error ellipse: s-maj=130.8km s-min=19.1km az=55.0*
*NEIC **30** 00:56:10.6±1.8,2°.51S×100°.88E,h40km±16km,mb4.3/3, Error ellipse: s-maj=18.0km s-min=7.8km az=225.0*
*ISCJB **30** 00:56:17.6±0.5,2°.20S±0°.05×101°.22E±0°.06,h113km±5km, mb4.0/9,Error ellipse: s-maj=10.3km s-min=8.1km az=146.6*
*DJA **30** 00:56:19,2°.19S×101°.21E,h16km,MLv3.8/7*

ISC 30 00:56:18.8±0.5,2°.20S±0°.05×101°.23E±0°.06,h104km±5km, n26,σ0$99/31,mb4.0/9,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	Kerinci	0.26	64	P	Pn	00 56 26.9	-6.8
KRJI				S	Sn	00 56 31.5	-13
SDSI	Sungai Dareh	1.28	9	P	Pn	00 56 42.2	-0.5
SDSI				S	Sn	00 56 59.8	-0.9
PPSI	Pulau Pagai	1.34	246	P	Pn	00 56 42.3	-1.1
PPSI				S	Sn	00 57 01.8	-0.2
PDSI	Padang	1.50	329	P	Pn	00 56 45.3	0.0
PDSI				S	Sn	00 57 04.3	-1.0
PPI	Padang Panjang	1.93	334	P	Pn	00 56 51.1	+0.5
KSI	Kapahiang	1.98	137	P	Pn	00 56 53.9	+2.6
SISI	Saibi	2.31	292	P	Pn	00 56 55.7	+0.1
SISI				S	Sn	00 57 24.5	+0.7
MNAI	Manna	2.75	141	P	Pn	00 57 05.6	+4.3
MNSI	Mandailing Nat	3.41	331	P	Pn	00 57 12.4	+2.3
MDSI	Maura Dua	3.71	128	P	Pn	00 57 14.8	+0.6
KULM	Kulim	7.47	356	Pn	Pn	00 58 01.0	-4.1
PALK	Pallekele	22.55	295	*e*P	P	01 01 05.6	-4.9
FITZ	Fitzroy Crossi	28.68	125	P	P	01 02 04.9	-1.2
WRA	Warramunga Arr	36.83	121	P	P	01 03 16.2	-0.9
	0.4nm,0.3s,mb3.8,baz=298,slow=8.8,SNR=10						
WRAB	Tennant Creek	36.84	121	*e*P	P	01 03 16.7	-0.4
	0.8nm,0.3s,mb4.1						
ASAR	Alice Springs	38.14	127	P	P	01 03 27.8	-0.3
	1.3nm,0.5s,mb4.0,baz=301,slow=7.7,SNR=18						
KBL	Kabul	47.42	323	*e*P	P	01 04 41.9	-1.0
STKA	Stephens Creek	48.10	132	P	P	01 04 48.5	+0.3
	2.3nm,0.7s,mb4.1,baz=306,slow=8.7,SNR=4.8						
SONM	Songino Array	50.04	5	P	P	01 05 04.3	+1.6
	0.9nm,0.5s,mb4.0,baz=183,slow=8.7,SNR=5.2						
UCH	Uchtor	50.40	334	P	P	01 05 04.8	-0.7
EKS2	Erkin-Say	51.08	334	*e*P	P	01 05 11.7	+1.2
	2.9nm,0.8s,mb4.4						
MKAR	Makanchi Array	51.56	343	P	P	01 05 14.0	-0.1
	0.3nm,0.5s,mb3.6,baz=148,slow=8.5,SNR=3.3						
BVAR	Borovoye Array	60.80	339	P	P	01 06 19.9	+0.2
	0.6nm,0.4s,mb4.0,baz=139,slow=8.2,SNR=5.2						
BRVK	Borovoye	60.87	339	*e*P	P	01 06 20.0	-0.1
	3.0nm,0.9s,mb4.3						
KMBO	Kilima Mbogo	63.96	270	*e*P	P	01 06 38.0	-3.5
YAK	Yakutsk	67.63	14	P	P	01 07 04.8	+0.6

DJA 30 01:06:38,8°.63S×116°.86E,h11km,MLv4.0/8,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHKI	Kahang-Kahang	1.27	282	P	Pn	01 06 59.7	-1.9
KHKI				S	Sb	01 07 19.4	+1.2
DNP	Denpasar	1.63	268	P	Pn	01 07 07.0	+0.3
DNP				S	Sn	01 07 28.8	+1.1
SRBI	Singaraja	1.72	288	P	Pn	01 07 07.7	-0.2
NBBI	Negara	2.23

TXAR Lajitas Array 137.37 20 PKP PKPdf 01 42 32.9 +1.9
comp=Z,0.2nm,0.5s,baz=318,slow=1.2,SNR=2.8

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*CSEM **30** 01:35:12.1±0.3, 43.°60N×12.°89E, h46km±3km, ML2.6/15, Error ellipse: s-maj=4.5km s-min=3.2km az=26.0*
*ROM **30** 01:35:13.4±0.1, 43.°65N×12.°91E, h33km±1km, Md2.6/26, Ml2.0/22, Error ellipse: s-maj=2.3km s-min=1.6km az=38.0*
*ISCJB **30** 01:35:13.4±0.5, 43.°69N±0.°03×12.°97E±0.°03, h32km±3km, Error ellipse: s-maj=5.2km s-min=3.6km az=16.7*
ISC 30 01:35:13.7±0.4, 43.°68N±0.°03×12.°95E±0.°03, h32km±2km, n59, σ0°86/94, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FSSB	**Fossombrone**	**0.12**	**276**	Pg	**Pb**	**01 35 19.1**	**-0.4**
FSSB				Sg	**Sb**	**01 35 24.1**	**+0.7**
594nm,0.4s							
FSSB	**Fossombrone**	**0.12**	**276**	Pg	**Pb**	**01 35 19.1**	**-0.4**
FSSB				Sg	**Sb**	**01 35 24.1**	**+0.7**
594nm,0.4s							
ARVD	**Arcevia**	**0.18**	**181**	Pg	**Pb**	**01 35 19.4**	**-0.6**
ARVD				Sg	**Sb**	**01 35 24.5**	**+0.3**
235nm,0.4s							
ARVD	**Arcevia**	**0.18**	**181**	Pg	**Pb**	**01 35 19.4**	**-0.6**
ARVD				Sg	**Sb**	**01 35 24.5**	**+0.3**
235nm,0.4s							
PIEI	**Pieia**	**0.33**	**245**	Pg	**Pb**	**01 35 20.5**	**-1.2**
PIEI				Sg	**Sb**	**01 35 26.9**	**-0.3**
124nm,0.2s							
PIEI	**Pieia**	**0.33**	**245**	Pg	**Pb**	**01 35 20.5**	**-1.2**
PIEI				Sg	**Sb**	**01 35 26.9**	**-0.3**
124nm,0.2s							
CING	**Cingoli**	**0.35**	**149**	Pg	**Pb**	**01 35 21.6**	**-0.4**
CING				Sg	**Sb**	**01 35 28.4**	**+0.7**
69nm,0.3s							
CING	**Cingoli**	**0.35**	**149**	Pg	**Pb**	**01 35 21.6**	**-0.4**
CING				Sg	**Sb**	**01 35 28.4**	**+0.7**
69nm,0.3s							
SNTG	**Esanatoglia**	**0.42**	**180**	Pg	**Pb**	**01 35 22.1**	**-0.9**
SNTG				Sg	**Sb**	**01 35 29.5**	**0.0**
52nm,0.2s							
SNTG	**Esanatoglia**	**0.42**	**180**	Pg	**Pb**	**01 35 22.1**	**-0.9**
SNTG				Sg	**Sb**	**01 35 29.5**	**0.0**
52nm,0.2s							
RSM	**Repubblica di**	**0.44**	**305**	Pg	**Pb**	**01 35 23.8**	**+0.5**
9.0nm,0.7s							
RSM	**Repubblica di**	**0.44**	**305**	Pg	**Pb**	**01 35 23.8**	**+0.5**
9.0nm,0.7s							
AOI	**Ancona**	**0.49**	**105**	Pg	**Pb**	**01 35 24.5**	**+0.4**
AOI				Sg	**Sb**	**01 35 33.4**	**+2.1**
65nm,0.3s							
AOI	**Ancona**	**0.49**	**105**	Pg	**Pb**	**01 35 24.5**	**+0.4**
AOI				Sg	**Sb**	**01 35 33.4**	**+2.1**
65nm,0.3s							
PARC	**Parchiule**	**0.51**	**267**	Pg	**Pb**	**01 35 23.4**	**-1.0**
PARC				Sg	**Sb**	**01 35 31.8**	**0.0**
88nm,0.2s							
PARC	**Parchiule**	**0.51**	**267**	Pg	**Pb**	**01 35 23.4**	**-1.0**
PARC				Sg	**Sb**	**01 35 31.8**	**0.0**
88nm,0.2s							
MURB	**Monte Urbino**	**0.52**	**217**	Pg	**Pb**	**01 35 23.2**	**-1.3**
MURB				Sg	**Sb**	**01 35 31.6**	**-0.3**
223nm,0.3s							
MURB	**Monte Urbino**	**0.52**	**217**	Pg	**Pb**	**01 35 23.2**	**-1.3**
MURB				Sg	**Sb**	**01 35 31.6**	**-0.3**
223nm,0.3s							
BADI	**Badiali**	**0.54**	**252**	Pg	**Pb**	**01 35 23.7**	**-1.1**
BADI				Sg	**Sb**	**01 35 32.7**	**+0.3**
76nm,0.2s							
BADI	**Badiali**	**0.54**	**252**	Pg	**Pb**	**01 35 23.7**	**-1.1**
BADI				Sg	**Sb**	**01 35 32.7**	**+0.3**
76nm,0.2s							
FDMO	**Fiordimonte**	**0.65**	**171**	Pg	**Pn**	**01 35 25.4**	**-1.2**
FDMO				Sg	**Sb**	**01 35 35.9**	**+0.5**
59nm,0.2s							
FDMO	**Fiordimonte**	**0.65**	**171**	Pg	**Pn**	**01 35 25.4**	**-1.2**
FDMO				Sg	**Sb**	**01 35 35.9**	**+0.5**
59nm,0.2s							
CESI	**CESI - Serrava**	**0.67**	**183**	Pg	**Pn**	**01 35 25.7**	**-1.2**
CESI				Sg	**Sb**	**01 35 36.2**	**+0.1**
72nm,0.4s							
CESI	**CESI - Serrava**	**0.67**	**183**	Pg	**Pn**	**01 35 25.7**	**-1.2**
CESI				Sg	**Sb**	**01 35 36.2**	**+0.1**
72nm,0.4s							
CRE	**Caprese Michel**	**0.72**	**266**	Pg	**Pn**	**01 35 27.3**	**-0.3**
CRE				Sg	**Sb**	**01 35 40.0**	**+2.5**
33nm,0.3s							
CRE	**Caprese Michel**	**0.72**	**266**	Pg	**Pn**	**01 35 27.3**	**-0.3**
CAFI	**Castiglion Fio**	**0.79**	**244**	Pg	**Pn**	**01 35 28.2**	**-0.4**
CAFI				Sg	**Sn**	**01 35 39.6**	**+0.3**
65nm,0.7s							
CAFI	**Castiglion Fio**	**0.79**	**244**	Pg	**Pn**	**01 35 28.2**	**-0.4**
CAFI				Sg	**Sn**	**01 35 39.6**	**+0.3**
65nm,0.7s							
SFI	**Santa Sofia**	**0.83**	**286**	Pg	**Pn**	**01 35 29.0**	**0.0**
19nm,0.5s							
SFI	**Santa Sofia**	**0.83**	**286**	Pg	**Pn**	**01 35 29.0**	**0.0**
19nm,0.5s							
ASQU	**Asqua**	**0.85**	**278**	Pg	**Pn**	**01 35 29.1**	**-0.2**
ASQU				Sg	**Sn**	**01 35 43.0**	**+2.4**
32nm,0.4s							
ASQU	**Asqua**	**0.85**	**278**	Pg	**Pn**	**01 35 29.1**	**-0.2**
ASQU				Sg	**Sn**	**01 35 43.0**	**+2.4**
32nm,0.4s							
NRCA	**Norcia**	**0.85**	**172**	Pg	**Pn**	**01 35 28.7**	**-0.7**
NRCA				Sg	**Sn**	**01 35 42.4**	**+1.7**
20nm,0.4s							
NRCA	**Norcia**	**0.85**	**172**	Pg	**Pn**	**01 35 28.7**	**-0.7**
NRCA				Sg	**Sn**	**01 35 42.4**	**+1.7**
20nm,0.4s							
OFFI	**Offida**	**0.92**	**144**	Pg	**Pn**	**01 35 31.0**	**+0.7**
OFFI	**Offida**	**0.92**	**144**	Pg	**Pn**	**01 35 31.0**	**+0.7**
MGAB	**Montegabbione**	**0.98**	**219**	Pg	**Pn**	**01 35 30.7**	**-0.4**
MGAB				Sg	**Sn**	**01 35 44.0**	**+0.2**
141nm,0.6s							
MGAB	**Montegabbione**	**0.98**	**219**	Pg	**Pn**	**01 35 30.7**	**-0.4**
MGAB				Sg	**Sn**	**01 35 44.0**	**+0.2**
141nm,0.6s							
LNSS	**Leonessa**	**1.08**	**176**	Pg	**Pn**	**01 35 32.4**	**-0.1**
92nm,0.6s							
LNSS	**Leonessa**	**1.08**	**176**	Pg	**Pn**	**01 35 32.4**	**-0.1**
92nm,0.6s							
SACS	**San Casciano d**	**1.12**	**223**	Pg	**Pn**	**01 35 32.5**	**-0.6**
21nm,0.5s							
TERO	**Teramo**	**1.16**	**155**	Pg	**Pn**	**01 35 33.6**	**0.0**
24nm,0.3s							
TERO	**Teramo**	**1.16**	**155**	Pg	**Pn**	**01 35 33.6**	**0.0**
24nm,0.3s							
CAMP	**Campotosto**	**1.19**	**163**	Pg	**Pn**	**01 35 34.9**	**+0.9**
CAMP	**Campotosto**	**1.19**	**163**	Pg	**Pn**	**01 35 34.9**	**+0.9**
MNS	**Montasola**	**1.31**	**189**	Pg	**Pn**	**01 35 35.5**	**-0.1**
18nm,0.5s							
MNS	**Montasola**	**1.31**	**189**	Pg	**Pn**	**01 35 35.5**	**-0.1**
18nm,0.5s							
LATE	**Laterza**	**1.35**	**219**	Pg	**Pn**	**01 35 35.4**	**-0.9**
2.0nm,0.4s							
LATE	**Laterza**	**1.35**	**219**	Pg	**Pn**	**01 35 35.4**	**-0.9**
2.0nm,0.4s							
FIAM	**Fiamignano**	**1.42**	**175**	Pg	**Pn**	**01 35 38.2**	**+1.1**
23nm,0.9s							
FIAM	**Fiamignano**	**1.42**	**175**	Pg	**Pn**	**01 35 38.2**	**+1.1**
23nm,0.9s							
CRMI	**Carmignano**	**1.44**	**275**	Pg	**Pn**	**01 35 38.2**	**+0.8**
CRMI	**Carmignano**	**1.44**	**275**	Pg	**Pn**	**01 35 38.2**	**+0.8**
FAGN	**Fagnano**	**1.49**	**161**	Pg	**Pn**	**01 35 39.2**	**+1.1**
FAGN	**Fagnano**	**1.49**	**161**	Pg	**Pn**	**01 35 39.2**	**+1.1**
NVLJ	**Novalja**	**1.65**	**57**	*i* Pn	**Pn**	**01 35 40.0**	**-0.2**
NVLJ				Sn	**Sn**	**01 36 00.3**	**+0.1**
NVLJ	**Novalja**	**1.65**	**57**	*i* Pn	**Pn**	**01 35 40.0**	**-0.3**
NVLJ				Sn	**Sn**	**01 36 00.3**	**0.0**
STON	**Ston**	**3.56**	**101**	*i* Pn	**Pn**	**01 36 06.5**	**-0.2**
STON				Sn	**Sn**	**01 36 46.0**	**-1.6**
STON	**Ston**	**3.56**	**101**	*i* Pn	**Pn**	**01 36 06.4**	**-0.2**
STON				Sn	**Sn**	**01 36 46.0**	**-1.6**

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*NIED **30** 01:38:00, 44.°00N×146.°70E, h135km, Mw3.7 Best double couple: M0=4.31000×10^14 NP1:φs=78.00000°, δ71.00000°, λ122.00000°. NP2:φs=195.00000°, δ37.00000°, λ33.00000°.*
*NEIC **30** 01:38:42.9±1.0, 44.°46N×146.°79E, h94km±10km, MG3.7(JMA), Error ellipse: s-maj=19.2km s-min=8.9km az=152.0*
*ISCJB **30** 01:38:43.3±0.5, 44.°10N±0.°05×146.°78E±0.°06, h131km±4km, mb3.8/14, Error ellipse: s-maj=9.3km s-min=6.0km az=154.9*
*MOS **30** 01:38:43.1±1.3, 44.°26N×146.°82E, h128km, mb4.5/2, Error ellipse: s-maj=16.0km s-min=12.6km az=101.9*
*SKHL **30** 01:38:44.8±0.1, 44.°16N×146.°82E, h124km±1km, mb4.7/2, msh6.2/1*
*IDC **30** 01:38:45.6±2.1, 44.°54N×146.°77E, h117km±19km, mb3.6/13, mb1 3.7/15, mb1mx3.6/27, mbtmp3.6/15, Error ellipse: s-maj=45.8km s-min=15.5km az=171.0*
*JMA **30** 01:38:45.8±0.3, 43.°96N×146.°74E, h118km±2km, M3.7*
ISC 30 01:38:44.4±0.5, 44.°08N±0.°05×146.°79E±0.°06, h126km±4km, n45, σ0°92/61, mb3.9/14, 4C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**0.67**	**267**	⇑*i* PN	**Pn**	**01 39 04.3**	**+0.2**
YUK				*i* S	**Sn**	**01 39 19.0**	**+0.1**
YUK				pmax	pmax		
comp=Z,790nm,0.8s							
YUK				pmax	pmax		
comp=N,125nm,0.2s							
YUK				pmax	pmax		
comp=E,220nm,0.2s							
YUK				pmax	pmax		
comp=Z,1μm,0.2s							
YUK				smax			
comp=N,6μm,0.6s							
YUK				smax			
comp=E,3μm,0.6s							
YUK				smax			
comp=N,7μm,0.6s							
YUK				smax			
comp=E,2μm,0.3s							
YUK	**Yuzh-Kuril'sk**	**0.67**	**267**	⇑*i* P	**Pn**	**01 39 04.3**	**+0.2**
YUK				AMB	AMB	01 39 04.5	
comp=E,2μm,1.0s							
YUK				AMB	AMB	01 39 04.6	
comp=E,380nm,0.2s							
YUK				AMB	AMB	01 39 04.6	
comp=E,760nm,0.2s							
YUK				AMB	AMB	01 39 04.6	
comp=E,2μm,0.2s							
YUK				*i* S	**Sn**	**01 39 19.0**	**+0.1**
YUK				A		01 39 19.2	
comp=E,18μm,1.0s							
YUK				A		01 39 19.2	
comp=E,10μm,1.0s							
YUK				A		01 39 19.9	
comp=E,10μm,0.6s							
YUK				A		01 39 19.9	
comp=E,6μm,0.6s							
NEM2	**Nemuro 2**	**1.04**	**227**	P	**Pn**	**01 39 07.0**	**-0.3**
NEM2				*e*S	**Sn**	**01 39 23.2**	**-1.4**
JRA	**Rausu**	**1.22**	**264**	P	**Pn**	**01 39 09.4**	**+0.4**
JRA				*e*S	**Sn**	**01 39 27.5**	**-0.2**
KUR	**Kuril'sk**	**1.38**	**33**	*e*P	**Pn**	**01 39 10.2**	**-0.6**
KUR				AMB	AMB	01 39 15.2	
comp=E,50nm,0.5s							
KUR				*i* S	**Sn**	**01 39 31.0**	**0.0**
JNK	**Nakash**	**1.58**	**253**	P	**Pn**	**01 39 13.4**	**+0.3**
JAK	**Akkeshi**	**1.87**	**235**	P	**Pn**	**01 39 16.3**	**-0.2**
JAK				*e*S	**Sn**	**01 39 39.6**	**-1.4**
JTKR	**Abashiri--Toko**	**2.08**	**268**	P	**Pn**	**01 39 19.7**	**+0.6**
JTKR				*e*S	**Sn**	**01 39 45.6**	**-0.1**
JAR	**Ashorobuto**	**2.33**	**251**	P	**Pn**	**01 39 23.0**	**+0.8**
JOB	**Onbets**	**2.45**	**242**	P	**Pn**	**01 39 24.3**	**+0.5**
JOB				*e*S	**Sn**	**01 39 53.2**	**-0.8**
JMP	**Maruseppu**	**2.48**	**270**	P	**Pn**	**01 39 24.8**	**+0.7**
JMP				*e*S	**Sn**	**01 39 55.1**	**+0.6**
JCH	**Churui**	**2.90**	**241**	P	**Pn**	**01 39 29.4**	**-0.1**
JCH				*e*S	**Sn**	**01 40 02.4**	**-1.9**
JKK2	**Kamakawa 2**	**2.93**	**267**	P	**Pn**	**01 39 31.0**	**+1.1**
JKK2				*e*S	**Sn**	**01 40 06.2**	**+1.3**
ASAJ	**Asahikawa**	**3.02**	**272**	P	**Pn**	**01 39 32.6**	**+1.5**
ASAJ	**Asahikawa**	**3.02**	**272**	P	**Pn**	**01 39 31.6**	**+0.4**
comp=E,8.0nm,0.3s,baz=71,slow=17,SNR=21							
ASAJ				S	**Sn**	**01 40 08.8**	**+1.6**
comp=E,5.0nm,0.3s,baz=91,slow=32,SNR=7.4							
ASAJ	**Asahikawa**	**3.02**	**272**	PN	**Pn**	**01 39 31.6**	**+0.5**
ASAJ				S	**Sn**	**01 40 08.8**	**+1.7**
ASAJ				pmax	pmax		
comp=Z,8.0nm,0.3s							
ASAJ				smax			
comp=N,5.0nm,0.3s							
JSE	**Soyaes**	**3.14**	**288**	P	**Pn**	**01 39 33.1**	**+0.5**
JSE				*e*S	**Sn**	**01 40 08.8**	**-1.0**
JFR	**Furan**	**3.19**	**255**	P	**Pn**	**01 39 34.7**	**+1.5**
ERM	**Erimo**	**3.37**	**234**	*d* PN	**Pn**	**01 39 36.7**	**+1.0**
ERM	**Erimo**	**3.37**	**234**	*e*Pn	**Pn**	**01 39 36.6**	**+0.9**
ERM				*e*S	**Sn**	**01 40 09.9**	**-5.4**
JNBK	**Urakawa-nobuka**	**3.46**	**240**	P	**Pn**	**01 39 36.1**	**-0.7**
YSS	**Yuzh-Sakhalins**	**4.04**	**317**	⇑*e*PN	**Pn**	**01 39 45.0**	**+0.5**
YSS	**Yuzh-Sakhalins**	**4.04**	**317**	⇑*e*P	**Pn**	**01 39 45.0**	**+0.5**
HABR	**Khabarovsk**	**9.24**	**302**	*e*PN	**Pn**	**01 40 52.7**	**-1.8**
HABR				*e*S	**Sn**	**01 42 35.3**	**-1.2**
HABR				pmax	pmax		
comp=Z,31nm,1.1s							
HABR				pmax	pmax		
comp=N,20nm,0.7s							
HABR				pmax	pmax		
comp=E,25nm,1.2s							
PETK	**Petropavlovsk-**	**11.55**	**35**	P	**Pn**	**01 41 20.1**	**-5.2**
comp=E,0.1nm,0.3s,baz=218,slow=9.0,SNR=3.7							
PETK	**Petropavlovsk-**	**11.55**	**35**	*e*PN	**Pn**	**01 41 21.0**	**-4.2**
SONM	**Songino Array**	**28.11**	**292**	P	**P**	**01 44 24.8**	**+0.7**
comp=E,0.4nm,0.7s,mb3.1,baz=90,slow=8.6,SNR=3.4							
MKAR	**Makanchi Array**	**44.20**	**297**	P	**P**	**01 46 40.8**	**+0.2**
comp=E,0.7nm,0.5s,mb3.6,baz=85,slow=7.9,SNR=6.3							
KURK	**Kurchatov**	**45.13**	**304**	P	**P**	**01 46 48.7**	**+0.7**
comp=E,0.7nm,0.4s,mb3.8,baz=77,slow=9.2,SNR=4.5							
KURK	**Kurchatov**	**45.13**	**304**	*e*P	**P**	**01 46 46.0**	**-1.9**
KURK				pmax	pmax		
comp=Z,1.0nm,0.9s,mb3.5							
KURK	**Kurchatov**	**45.13**	**304**	P	**P**	**01 46 48.7**	**+0.7**
INK	**Inuvik**	**46.25**	**30**	P	**P**	**01 46 56.6**	**+0.1**
comp=Z,1.2nm,0.3s,mb4.1,baz=298,slow=7.3,SNR=8.6							
RES	**Resolute Bay**	**54.73**	**17**	P	**P**	**01 47 59.0**	**-1.0**
comp=Z,2.2nm,0.5s,mb4.4,baz=314,slow=19							
YKA	**Yellowknife Ar**	**55.67**	**34**	P	**P**	**01 48 07.2**	**+0.3**
comp=Z,1.2nm,0.8s,mb4.0,baz=302,slow=7.7,SNR=3.5							
ARCES	**ARCESS Array B**	**58.85**	**339**	P	**P**	**01 48 28.2**	**-0.9**
comp=Z,1.1nm,0.8s,mb3.9,baz=44,slow=5.7,SNR=4.2							
JOF	**Joensuu**	**61.68**	**332**	*e*P	**P**	**01 48 46.6**	**-1.9**
JOF				pmax	pmax		
comp=Z,3.0nm,0.4s,mb4.7							
JOF	**Joensuu**	**61.68**	**332**	*e*p	**P**	**01 48 46.6**	**-1.9**
comp=Z,2.6nm,0.4s,mb4.6							
FINES	**FINESS Array B**	**64.47**	**333**	P	**P**	**01 49 06.4**	**-0.5**
comp=Z,2.8nm,0.5s,mb4.4,baz=43,slow=7.6,SNR=28							
NVAR	**Mina Array Bea**	**67.62**	**58**	P	**P**	**01 49 29.0**	**+1.5**
comp=Z,1.1nm,0.7s,mb3.8,baz=302,slow=5.6,SNR=5.1							
NB2	**NORSAR Subarra**	**69.20**	**339**	P	**P**	**01 49 36.4**	**-0.5**
comp=Z,1.6nm,0.5s,mb4.1,baz=32,slow=6.5							
NOA	**NORSAR Array B**	**69.20**	**339**	P	**P**	**01 49 36.3**	**-0.6**
comp=Z,1.6nm,0.7s,mb4.0,baz=33,slow=6.3,SNR=9.8							
PDAR	**Pinedale Array**	**69.89**	**50**	P	**P**	**01 49 41.4**	**-0.1**
comp=Z,0.6nm,0.6s,mb3.6,baz=20,slow=1.1,SNR=4.4							
AKASG	**Malin Array Be**	**71.16**	**323**	*e*P	**P**	**01 49 48.5**	**-0.6**
comp=Z,0.2nm,0.3s,mb3.4,baz=39,slow=5.9,SNR=5.4							
AKASG	**Malin Array Be**	**71.16**	**323**	*e*P	**P**	**01 49 50.1**	**+1.1**
TXAR	**Lajitas Array**	**82.68**	**56**	P	**P**	**01 50 54.8**	**+0.9**
comp=Z,0.3nm,0.5s,mb3.3,baz=304,slow=3.6,SNR=4.5							

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*CSEM **30** 01:44:37.5±0.1, 39.°27N×28.°02E, h15km, MD2.8, Error ellipse: s-maj=2.4km s-min=1.6km az=98.0*
*DDA **30** 01:44:37.6, 39.°26N×28.°04E, h7km±2km, Ml2.8*
*ISK **30** 01:44:37.0, 39.°28N×27.°98E, h13km, MD2.8*
*ISCJB **30** 01:44:37.9±0.4, 39.°26N±0.°03×28.°03E±0.°05, h21km±8km, Error ellipse: s-maj=6.1km s-min=4.4km az=9.0*
ISC 30 01:44:37.7±0.4, 39.°27N±0.°02×28.°02E±0.°04, h16km±5km, n30, σ0°43/42, 2C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.42**	**203**	⇑*i* P	**Pg**	**01 44 46.0**	**-0.2**
AKHS				*i* S	**Sg**	**01 44 52.6**	**+0.6**
AKHS	**Akhisar**	**0.42**	**203**	*i* P	**Pg**	**01 44 46.0**	**-0.2**
AKHS				*i* S	**Sg**	**01 44 52.6**	**+0.6**
AKS	**Akhisar**	**0.42**	**203**	*e*PG	**Pg**	**01 44 45.8**	**-0.4**
AKS				*e*SG	**Sg**	**01 44 52.3**	**+0.3**
AKS	**Akhisar**	**0.42**	**203**	*e*Pg	**Pg**	**01 44 45.8**	**-0.4**
AKS				*e*Sg	**Sg**	**01 44 52.3**	**+0.3**
DURS	**Dursunbey**	**0.48**	**46**	⇑*i* P	**Pg**	**01 44 47.2**	**-0.2**
DURS				*i* S	**Sg**	**01 44 54.2**	**+0.3**
DURS	**Dursunbey**	**0.48**	**46**	*i* P	**Pg**	**01 44 47.2**	**-0.2**
DURS				*i* S	**Sg**	**01 44 54.2**	**+0.3**
BALY	**Balya**	**0.56**	**327**	*e*P	**Pg**	**01 44 49.4**	**+0.5**
BALY				*e*S	**Sg**	**01 44 57.2**	**+0.7**
BALY	**Balya**	**0.56**	**327**	*e*P	**Pg**	**01 44 49.3**	**+0.4**
BALY				*e*S	**Sg**	**01 44 57.2**	**+0.7**
DEMI	**Demirci**	**0.58**	**112**	⇓*i* P	**Pg**	**01 44 49.3**	**0.0**
DEMI				*i* S	**Sg**	**01 44 57.1**	**0.0**
DEMI	**Demirci**	**0.58**	**112**	*i* P	**Pg**	**01 44 49.3**	**+0.1**
DEMI				*i* S	**Sg**	**01 44 57.1**	**0.0**
GONE	**Gonen-Balikesi**	**0.82**	**342**	*e*PG	**Pg**	**01 44 53.2**	**-0.5**
GONE				*e*SG	**Sg**	**01 45 04.2**	**-0.3**
GONE	**Gonen-Balikesi**	**0.82**	**342**	*e*Pg	**Pg**	**01 44 53.2**	**-0.5**
GONE				*e*Sg	**Sg**	**01 45 04.2**	**-0.3**
KULA	**Kula-Manisa**	**0.90**	**146**	*e*PG	**Pg**	**01 44 55.1**	**-0.1**
KULA	**Kula-Manisa**	**0.90**	**146**	*e*Pg	**Pg**	**01 44 55.1**	**-0.1**
KCT	**Karacabey**	**1.03**	**14**	*e*PG	**Pg**	**01 44 57.2**	**-0.5**
KCT	**Karacabey**	**1.03**	**14**	*e*Pg	**Pg**	**01 44 57.2**	**-0.4**
IZM	**Izmir**	**1.05**	**215**	*e*PG	**Pg**	**01 44 57.6**	**-0.5**
IZM	**Izmir**	**1.05**	**215**	*e*Pg	**Pg**	**01 44 57.6**	**-0.5**
BNT	**Bandirma**	**1.09**	**356**	*e*PG	**Pg**	**01 44 58.2**	**-0.6**
BNT	**Bandirma**	**1.09**	**356**	*e*Pg	**Pg**	**01 44 58.2**	**-0.6**
BLCB	**Balcova**	**1.17**	**221**	*e*PN	**Pn**	**01 44 59.2**	**-0.1**
BLCB	**Balcova**	**1.17**	**221**	*e*Pn	**Pn**	**01 44 59.2**	**-0.1**
EZN	**Ezine**	**1.43**	**294**	*e*PN	**Pn**	**01 45 02.5**	**-0.4**
EZN	**Ezine**	**1.43**	**294**	*e*Pn	**Pn**	**01 45 02.5**	**-0.4**
ARMT	**Armutlu**	**1.45**	**26**	*e*PN	**Pn**	**01 45 03.9**	**+0.7**
ARMT	**Armutlu**	**1.45**	**26**	*e*Pn	**Pn**	**01 45 03.9**	**+0.7**
ADVT	**Abdulvahap**	**1.76**	**48**	*e*PN	**Pn**	**01 45 07.3**	**-0.2**
ADVT	**Abdulvahap**	**1.76**	**48**	*e*Pn	**Pn**	**01 45 07.3**	**-0.2**
CTKS	**Kestanelik-??a**	**2.00**	**11**	*e*PN	**Pn**	**01 45 11.4**	**+0.6**
CTKS	**Kestanelik-??a**	**2.00**	**11**	*e*Pn	**Pn**	**01 45 11.4**	**+0.6**

CASC 30 01:49:27.9±1.8, 12.°97N×89.°05W, h16km±23km, MD3.7, ML2.8, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFRS	**El Faro**	**0.65**	**359**	*i* P	Pg	01 49 40.9	+0.2
LFRS				*e*S	Sg	01 49 50.4	+1.0
SNVI	**San Vicente**	**0.67**	**18**	*e*P	Pg	01 49 41.2	+0.1
LFU	**La Fuente**	**0.78**	**356**	*e*P	Pg	01 49 42.9	-0.3
BOQS	**Boqueron**	**0.80**	**344**	*e*P	Pb	01 49 43.4	0.0
BOQS				*e*S	Sg	01 49 54.3	+0.4
VSM	**San Miguel**	**0.89**	**59**	*e*P	Pb	01 49 44.9	0.0
VSM				*e*S	Sb	01 49 57.1	+0.5
BLLM	**Bellamira**	**0.92**	**59**	*e*P	Pb	01 49 44.9	-0.7
SBLS	**San Blas**	**1.03**	**327**	*e*P	Pb	01 49 47.0	-0.4
CAHU	**Cacacuatique**	**1.14**	**46**	*e*P	Pn	01 49 47.7	-1.6
CNCH	**Conchagua**	**1.23**	**75**	*e*P	Pn	01 49 49.2	-1.2
CNCH				*e*S	Sb	01 50 05.5	-0.8
COPN	**Copaltepe**	**2.53**	**108**	*e*P	Pn	01 50 08.1	-0.3
COPN				AML	AML	01 50 39.8	
comp=Z,61nm,0.1s							

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*CSEM **30** 01:52:30.3±0.6, 36.°07N×21.°85E, h2km, MD3.5, Error ellipse: s-maj=10.7km s-min=8.7km az=33.0*
*THE **30** 01:52:30.1, 36.°06N×21.°62E, h1km±4km, ML3.4/6, Error ellipse: s-maj=7.4km s-min=2.0km az=247.0*
*ISCJB **30** 01:52:30.6±0.7, 36.°11N±0.°03×21.°87E±0.°04, h10km, Error ellipse: s-maj=5.5km s-min=4.5km az=139.1*
*ATH **30** 01:52:32.2, 36.°15N×21.°94E, h13km±4km, MD3.5/9*
*NEIC **30** 01:52:32.2, 36.°15N×21.°94E, h13km, MD3.5(ATH), After ATH.*
ISC 30 01:52:30.7±1.2, 36.°10N±0.°04×21.°82E±0.°06, h2km±7km, n50, σ1°09/79, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.80**	**356**	P	**Pg**	**01 52 45.5**	**-0.5**
PYL				S	**Sg**	**01 52 57.9**	**+1.5**
PYL	**PYLOS**	**0.80**	**356**	*e*PB	**Pg**	**01 52 45.8**	**-0.2**
PYL				*e*SB	**Sg**	**01 52 57.8**	**+1.4**
PYL	**PYLOS**	**0.80**	**356**	P	**Pg**	**01 52 45.5**	**-0.5**
PYL	**PYLOS**	**0.80**	**356**	*e*Pb	**Pg**	**01 52 45.8**	**-0.2**
PYL				*e*Sb	**Sg**	**01 52 57.8**	**+1.4**
KYTH	**Kithira**	**1.00**	**79**	*e*Pn	**Pg**	**01 52 49.8**	**-0.1**
KYTH	**Kithira**	**1.00**	**79**	*e*PN	**Pg**	**01 52 49.8**	**-0.1**
KYTH	**Kithira**	**1.00**	**79**	*e*Pn	**Pg**	**01 52 49.8**	**-0.1**
ITM	**Ithomi**	**1.08**	**5**	*e*Pg	**Pg**	**01 52 51.2**	**-0.3**
ITM				*e*Sb	**Sg**	**01 53 06.3**	**+0.8**
ITM	**Ithomi**	**1.08**	**5**	P	**Pg**	**01 52 51.0**

mb4.4/57, MS3.7/11, Error ellipse: s-maj=7.6km s-min=6.9km az=28.4
NEIC ***30*** *02:10:04.8±0.3, 10.87N×91.73E, mb4.6/21, Error ellipse: s-maj=7.3km s-min=6.7km az=46.0*
MOS ***30*** *02:10:04.6±1.2, 10.90N×91.76E, h33km, mb4.8/27, Error ellipse: s-maj=11.0km s-min=7.2km az=112.1*
IDC ***30*** *02:10:04.8±0.5, 10.93N×91.70E, h19km±2km, mb4.1/18, mb1 4.2/19, mb1mx4.1/24, mbtmp4.1/19, MS3.7/8, Ms1 3.7/8, ms1mx3.4/27, Error ellipse: s-maj=21.3km s-min=10.1km az=54.0*

ISC 30 02:10:05.2±0.4, 10.94N±0.05×91.75E±0.05, h21km, h21km±.8km: pP-P, n137, σ1.05/133, mb4.4/57, MS3.7/11, 11C-2D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.21**	**42**	Pn	**Pn**	**02 12 29.9**	**-0.7**
	0.6nm,0.3s,baz=235,slow=15,SNR=4.7						
CHTO	**Chiang Mai**	**10.47**	**41**	P	**Pn**	**02 12 36.7**	**+2.6**
CHTO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CHTO	**Chiang Mai**	**10.47**	**41**	Pn	**Pn**	**02 12 36.7**	**+2.6**
	comp=Z,8.1nm,1.0s						
VIS	**Vishakhapatnam**	**10.58**	**311**	*e*PKP	**Pn**	**02 12 34.1**	**-1.6**
VIS				AMb	AMB	02 12 41.8	
	comp=Z,146nm,1.1s						
PALK	**Pallekele**	**11.50**	**252**	*e*P	**Pn**	**02 12 48.1**	**-0.2**
PALK				*e*S	**Sn**	**02 14 49.4**	**-6.8**
PALK				pmax	pmax		
	comp=Z,52nm,1.0s						
PALK	**Pallekele**	**11.50**	**252**	*e*Pn	**Pn**	**02 12 48.1**	**-0.2**
	comp=Z,52nm,1.0s						
PALK				*e*S	**Sn**	**02 14 49.4**	**-6.9**
TRD	**Trivandrum**	**14.78**	**262⇑**	*e*x	x	02 17 12.0	
NGP	**Nagpur**	**15.86**	**311**	*e*PKP	**Pn**	**02 13 48.2**	**+0.9**
ODAN	**Odare**	**16.36**	**346**	*e*P	**Pn**	**02 13 52.5**	**-1.2**
	comp=Z,22nm,0.4s						
RAMN	**Ramite**	**16.65**	**344**	*e*P	**Pn**	**02 13 55.8**	**-1.5**
	comp=Z,36nm,0.4s						
TAPN	**Taplejung**	**16.76**	**347**	*e*P	**Pn**	**02 13 55.2**	**-3.5**
	comp=Z,54nm,0.9s						
KMI	**Kunming**	**17.54**	**35**	P	**Pn**	**02 14 16.8**	**+8.3**
KMI				S	**Sn**	**02 17 24.3**	**+1.0**
KMI				pmax	pmax		
	comp=Z,11nm,1.2s						
KMI				LR	LR		
	comp=N,320nm,17.9s						
KMI				LR	LR		
	comp=E,340nm,14.6s						
KMI				LR	LR		
	comp=Z,200nm,16.6s						
PKI	**Pulchoki**	**17.58**	**341**	*e*P	**Pn**	**02 14 07.1**	**-1.9**
	comp=Z,21nm,0.5s						
PKIN	**Phulchoki**	**17.59**	**341**	*e*P	**Pn**	**02 14 07.1**	**-2.0**
	comp=Z,30nm,0.4s						
DMN	**Daman**	**17.72**	**340**	*e*P	**Pn**	**02 14 08.6**	**-2.1**
	comp=Z,41nm,0.6s						
GUN	**Gumba**	**17.76**	**343**	*e*P	**Pn**	**02 14 07.9**	**-3.3**
	comp=Z,25nm,0.5s						
KKN	**Kakani**	**17.83**	**341**	*e*P	**Pn**	**02 14 08.6**	**-3.5**
	comp=Z,19nm,0.5s						
BHPL	**Bhopal**	**18.34**	**314**	*e*PKP	**Pn**	**02 14 19.2**	**+0.8**
BHPL				AMb	AMB	02 14 26.1	
	comp=Z,23nm,1.1s						
LSA	**Lhasa**	**18.67**	**358**	P	**Pn**	**02 14 21.8**	**-0.6**
SONA	**Sohna**	**22.04**	**323**	*e*PKP	**P**	**02 14 59.9**	**+1.4**
SONA				AMb	AMB	02 15 00.8	
	comp=Z,13nm,0.2s,mb5.0						
BISR	**Bishrakh**	**22.07**	**325**	*e*x	**P**	**02 14 56.5**	**-2.4**
AJM	**Ajmer**	**22.35**	**316**	*e*PKP	**P**	**02 15 03.1**	**+1.3**
AJM				AMb	AMB	02 15 09.5	
	comp=Z,24nm,1.8s,mb4.3						
KHET	**Khetri**	**22.68**	**321**	*e*PKP	**P**	**02 15 06.4**	**+1.1**
KHET				AMb	AMB	02 15 14.9	
	comp=Z,20nm,1.1s,mb4.5						
DDI	**Dehra Dun**	**23.11**	**329**	*e*PKP	**P**	**02 15 11.8**	**+1.9**
KLP	**Kalpa**	**24.00**	**331**	*e*PKP	**P**	**02 15 19.0**	**+0.5**
KLP				AMb	AMB	02 15 23.1	
	comp=Z,13nm,0.9s,mb4.4						
LZH	**Lanzhou**	**27.33**	**22**	*e*P	**P**	**02 15 48.0**	**-0.6**
LZH				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.4						
GTA	**Gaotai**	**29.25**	**13**	*e*P	**P**	**02 16 06.5**	**+0.8**
GTA				pP	pP	02 16 12.5	+0.4
GTA				sP	sP	02 16 16.3	+1.6
GTA				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
TKM2	**Tokmak 2**	**34.83**	**339**	*e*P	**P**	**02 16 56.0**	**+1.4**
TKM2				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
TKM2	**Tokmak 2**	**34.83**	**339**	*e*P	**P**	**02 16 56.0**	**+1.4**
	comp=Z,4.8nm,1.0s,mb4.4						
AML	**Almayashu**	**34.86**	**336**	*e*P	**P**	**02 16 56.8**	**+1.9**
AML				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.9						
AML	**Almayashu**	**34.86**	**336**	*e*P	**P**	**02 16 56.8**	**+1.9**
	comp=Z,12nm,0.7s,mb5.0						
EKS2	**Erkin-Say**	**35.27**	**337**	*e*P	**P**	**02 16 58.5**	**0.0**
EKS2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
EKS2	**Erkin-Say**	**35.27**	**337**	*e*P	**P**	**02 16 58.5**	**0.0**
	comp=Z,10nm,0.8s,mb4.8						
BJI	**Beijing**	**36.17**	**33**	P	**P**	**02 17 06.5**	**+0.3**
BJI				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
BJI				LR	LR		
	comp=N,140nm,20.1s,MS3.9						
BJI				LR	LR		
	comp=E,180nm,20.8s,MS3.9						
MK31	**Makanchi Array**	**36.62**	**349**	*e*P	**P**	**02 17 10.6**	**+0.7**
MKAR	**Makanchi Array**	**36.62**	**349**	P	**P**	**02 17 10.3**	**+0.4**
	comp=E,5.1nm,0.8s,mb4.4,baz=170,slow=8.6,SNR=38						
MKAR				PcP	PcP	02 19 32.9	+0.1
	comp=E,1.1nm,0.7s,baz=150,slow=3.2,SNR=3.9						
MKAR				LR	LR	02 35 41.4	
	comp=E,80nm,19.5s,MS3.5,baz=168,slow=42						
MKAR	**Makanchi Array**	**36.62**	**349**	P	**P**	**02 17 10.4**	**+0.5**
MKAR						02 19 32.9	
SONM	**Songino Array**	**38.78**	**16**	P	**P**	**02 17 29.0**	**+0.8**
	comp=E,3.2nm,0.9s,mb4.0,baz=199,slow=9.5,SNR=14						
SONM				PcP	PcP	02 19 40.0	+0.6
	comp=E,0.6nm,0.8s,baz=178,slow=4.3,SNR=2.1						
KURK	**Kurchatov**	**41.10**	**347**	P	**P**	**02 17 47.5**	**+0.1**
	comp=E,4.2nm,0.9s,mb4.1,baz=164,slow=7.3,SNR=14						
KURK				PcP	PcP	02 19 45.4	-1.4
	comp=E,0.3nm,0.5s,baz=166,slow=4.8,SNR=3.7						
KURK	**Kurchatov**	**41.10**	**347**	*ce*P	**P**	**02 17 48.2**	**+0.8**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.2						
TLY	**Talaya**	**41.76**	**11**	*e*P	**P**	**02 17 49.6**	**-3.3**
TLY				*e*		02 19 28.6	
TLY				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.2						
TLY				MLR	MLR		
	comp=Z,50nm,15.0s,MS3.5						
TLY	**Talaya**	**41.76**	**11**	*e*P	**P**	**02 17 54.6**	**+1.8**
	comp=Z,4.2nm,0.9s,mb4.1						
KSRS	**Korea Array**	**41.83**	**45**	P	**P**	**02 17 53.1**	**-0.6**
	comp=Z,0.5nm,0.3s,mb3.6,baz=248,slow=6.4,SNR=3.5						
KSRS				LR	LR	02 37 16.0	
	comp=Z,61nm,20.0s,MS3.5,baz=56,slow=39						
ZAA0	**Zalesovo Array**	**43.25**	**354**	*e*P	**P**	**02 18 05.1**	**+0.2**
ZAA0				*e*pP	pP	02 18 11.2	-0.2
ZALV	**Zalesovo Beam**	**43.25**	**354**	P	**P**	**02 18 05.1**	**+0.2**
	comp=Z,2.3nm,0.4s,mb4.2,baz=169,slow=8.4,SNR=17						
ZALV				pP	pP	02 18 10.7	-0.7
	comp=Z,3.9nm,0.6s,baz=174,slow=11,SNR=9.3						
ZALV				LR	LR	02 39 46.6	
	comp=Z,63nm,18.4s,MS3.5,baz=233,slow=41						
ZALV	**Zalesovo Beam**	**43.25**	**354**	P	**P**	**02 18 05.1**	**+0.2**
ZALV				*PP	pP	02 18 10.7	-0.7
CN2	**Changchun**	**43.81**	**35**	*e*P	**P**	**02 18 09.5**	**-0.1**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.8						
FITZ	**Fitzroy Crossi**	**44.18**	**130**	P	**P**	**02 18 11.9**	**-1.0**
	comp=Z,8.7nm,0.6s,mb4.7,baz=323,slow=6.4,SNR=42						
FITZ	**Fitzroy Crossi**	**44.18**	**130**	*e*P	**P**	**02 18 11.8**	**-1.1**
	comp=Z,5.6nm,0.6s,mb4.5						
FITZ				*e*		02 18 19.9	
BVAR	**Borovoye Array**	**45.35**	**342**	P	**P**	**02 18 22.0**	**+0.2**
	comp=Z,1.2nm,0.6s,mb3.9,baz=148,slow=8.7,SNR=9.2						
BVAR				pP	pP	02 18 27.0	-1.3
	comp=Z,3.5nm,0.8s,baz=149,slow=6.9,SNR=9.8						
BRVK	**Borovoye**	**45.41**	**342**	*ce*P	**P**	**02 18 22.1**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.7s,mb4.1						
BRVK	**Borovoye**	**45.41**	**342**	*e*P	**P**	**02 18 22.0**	**-0.2**
	comp=Z,5.8nm,1.0s,mb4.4						
GNI	**Garni**	**50.62**	**314**	*ce*P	**P**	**02 19 04.2**	**+1.4**
GNI				pmax	pmax		
	comp=Z,15nm,1.0s						
WRA	**Warramunga Arr**	**51.96**	**126**	P	**P**	**02 19 12.1**	**-1.0**
	comp=Z,1.8nm,0.3s,mb4.5,baz=301,slow=10.0,SNR=29						
WRA				pP	pP	02 19 20.7	+1.0
	comp=Z,10nm,0.7s,baz=306,slow=8.4,SNR=29						
WRA				LR	LR	02 40 29.8	
	comp=Z,61nm,21.5s,MS3.6,baz=330,slow=35						
WRA	**Warramunga Arr**	**51.96**	**126**	P	**P**	**02 19 12.1**	**-1.0**
WRA				*PP	pP	02 19 20.7	+1.0
WRA	**Warramunga Arr**	**51.96**	**126**	P	**P**	**02 19 12.1**	**-1.0**
WRA				pP	pP	02 19 20.7	+1.0
WRA				LR	LR	02 40 29.8	
WRAB	**Tennant Creek**	**51.96**	**126**	*e*P	**P**	**02 19 12.3**	**-0.8**
WRAB				*e*		02 19 21.1	
WRAB				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.0						
WRAB	**Tennant Creek**	**51.96**	**126**	*e*P	**P**	**02 19 12.3**	**-0.8**
	comp=Z,16nm,0.8s,mb5.0						
WRAB				*e*		02 19 21.1	
ARU	**Arti**	**52.16**	**337**	*d*P	**P**	**02 19 13.0**	**-1.0**
ARU				S	**S**	**02 26 34.4**	**-2.8**
ARU				SS	SS	02 30 05.9	-8.8
ARU				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.4						
ARU	**Arti**	**52.16**	**337**	*e*P	**P**	**02 19 14.8**	**+0.8**
	comp=Z,7.8nm,1.0s,mb4.6						
ARU				*e*pP	pP	02 19 19.9	-0.8
ZEI	**Tsey**	**52.20**	**316**	*e*P	**P**	**02 19 13.7**	**-0.9**
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.4s,mb5.0						
KIV	**Kislovodsk**	**53.48**	**317**	*e*P	**P**	**02 19 25.2**	**+1.2**
KIV				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
KIV				MLR	MLR		
	comp=Z,31nm,17.0s,MS3.4						
KIV	**Kislovodsk**	**53.48**	**317**	P	**P**	**02 19 25.3**	**+1.3**
	comp=Z,13nm,0.8s,mb4.9						
KIV				*e*pP	pP	02 19 31.1	+0.5
ASAR	**Alice Springs**	**53.68**	**130**	P	**P**	**02 19 25.4**	**-0.4**
	comp=Z,4.2nm,0.8s,mb4.4,baz=308,slow=7.4,SNR=30						
ASAR				pP	pP	02 19 33.1	+0.7
	comp=Z,5.4nm,0.7s,baz=305,slow=6.8,SNR=14						
ASAR				PcP	PcP	02 20 32.0	+0.1
	comp=Z,2.4nm,0.8s,baz=306,slow=3.6,SNR=5.4						
YSS	**Yuzh-Sakhalins**	**55.90**	**40**	*e*P	**P**	**02 19 42.0**	**+0.5**
YSS				*e*	pP	02 19 47.0	-1.1
VSR	**Storozhevoye**	**58.54**	**324**	*e*P	**P**	**02 19 59.5**	**-0.6**
VSR				pmax	pmax		
	comp=N,2.0nm,0.5s						
VSR				pmax	pmax		
	comp=E,4.0nm,0.5s						
VSR				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.8						
BR131	**Keskin Array S**	**58.66**	**310**	*e*P	**P**	**02 19 59.8**	**-1.4**
BR131				*e*pP	pP	02 20 06.8	-1.0
BRTR	**Keskin Array B**	**58.66**	**310**	P	**P**	**02 20 00.6**	**-0.6**
	comp=Z,1.7nm,0.8s,mb4.2,baz=126,slow=7.9,SNR=12						
BRTR				pP	pP	02 20 06.7	-1.2
	comp=Z,2.8nm,0.8s,baz=133,slow=6.9,SNR=10.0						
BRTR				LR	LR	02 50 06.5	
	comp=Z,27nm,18.6s,MS3.4,baz=214,slow=41						
BRTR	**Keskin Array B**	**58.66**	**310**	P	**P**	**02 20 00.6**	**-0.5**
BRTR				*PP	pP	02 20 06.7	-1.1
OBN	**Obninsk**	**61.54**	**328**	*e*P	**P**	**02 20 19.4**	**-1.2**
OBN				*e*		02 21 08.2	
OBN				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.7						
STKA	**Stephens Creek**	**63.92**	**134**	P	**P**	**02 20 36.7**	**-0.1**
	comp=Z,4.0nm,0.8s,mb4.5,baz=323,slow=6.0,SNR=5.9						
STKA				LR	LR	02 51 57.5	
	comp=Z,157nm,18.3s,MS4.2,baz=278,slow=39						
STKA	**Stephens Creek**	**63.92**	**134**	P	**P**	**02 20 36.7**	**-0.1**
STKA				LR	LR	02 51 57.5	
AKASG	**Malin Array Be**	**64.30**	**321**	P	**P**	**02 20 37.9**	**-1.1**
	comp=Z,1.2nm,0.7s,mb4.0,baz=80,slow=5.9,SNR=6.2						
AKASG				pP	pP	02 20 44.0	-1.8
	comp=Z,4.1nm,1.0s,baz=88,slow=5.1,SNR=4.2						
AKASG	**Malin Array Be**	**64.30**	**321**	P	**P**	**02 20 37.9**	**-1.1**
AKASG				pP	pP	02 20 44.0	-1.8
TIXI	**Tiksi**	**64.73**	**12**	*e*P	**P**	**02 20 39.3**	**-2.2**
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.5s,mb4.5						
TIXI	**Tiksi**	**64.73**	**12**	*e*P	**P**	**02 20 41.0**	**-0.5**
	comp=Z,9.2nm,1.1s,mb4.7						
VRI	**Vrincioaia**	**64.87**	**316⇑**	*i*P	**P**	**02 20 43.9**	**+1.0**
PLOR	**Plostina**	**64.92**	**316⇑**	*i*P	**P**	**02 20 44.2**	**+1.0**
MLR	**Muntele Rosu**	**65.34**	**315⇑**	*i*P	**P**	**02 20 47.0**	**+1.0**
VOIR		**65.96**	**315⇑**	*i*P	**P**	**02 20 45.3**	**-4.6**
BURAR	**Bucovina Array**	**66.20**	**317⇑**	*i*P	**P**	**02 20 52.2**	**+0.7**
BUR08	**Bucovina Ar. S**	**66.22**	**317**	*e*P	**P**	**02 20 52.1**	**+0.5**
IDID	**Didziasalis**	**66.93**	**326**	*e*P	**P**	**02 20 56.4**	**+0.5**
IDID				*e*pP	pP	02 21 02.5	-0.2
IDID				AMB	AMB	02 21 03.3	
	comp=Z,4.2nm,1.2s,mb4.4						
PETK	**Petropavlovsk-**	**66.94**	**37**	LR	LR	02 54 46.4	
	comp=Z,47nm,18.4s,MS3.7,baz=43,slow=40						
JOF	**Joensuu**	**67.08**	**334**	*e*P	**P**	**02 20 56.5**	**-0.3**
JOF				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.0						
JOF	**Joensuu**	**67.08**	**334**	*e*p	**P**	**02 20 56.5**	**-0.3**
	comp=Z,13nm,0.8s,mb5.0						
JOF	**Joensuu**	**67.08**	**334**	*e*p	**P**	**02 20 56.5**	**-0.3**
	comp=Z,13nm,0.8s,mb5.0						
IIGN	**Ignalina**	**67.22**	**326**	*e*P	**P**	**02 20 58.1**	**+0.3**
IIGN				*e*pP	pP	02 21 03.6	-1.0
IIGN				AMB	AMB	02 21 05.2	
	comp=Z,4.2nm,1.2s,mb4.4						
IZAR	**Zarasai**	**67.31**	**326**	*e*P	**P**	**02 20 58.7**	**+0.3**
IZAR				*e*pP	pP	02 21 04.2	-0.9
IZAR				*e*pP	pP	02 21 04.6	-0.5
ISAL	**Salakas**	**67.33**	**326**	*e*P	**P**	**02 20 58.6**	**+0.2**
ISAL				*e*pP	pP	02 21 04.9	-0.4
ISAL				AMB	AMB	02 21 05.9	
	comp=Z,3.2nm,1.2s,mb4.2						
LVZ	**Lovozero**	**67.89**	**340**	*ce*P	**P**	**02 21 01.8**	**0.0**
LVZ				pmax	pmax		
	comp=Z,23nm,1.7s,mb4.9						
FINES	**FINESS Array B**	**68.91**	**332**	P	**P**	**02 21 08.4**	**+0.1**
	comp=Z,2.6nm,0.7s,mb4.2,baz=76,slow=8.0,SNR=12						
FINES				pP	pP	02 21 14.2	-1.0
	comp=Z,6.9nm,0.9s,baz=102,slow=8.8,SNR=13						
OJC	**Ojcow**	**70.12**	**319**	*e*P	**P**	**02 21 13.7**	**-2.3**
MORC	**Moravsky Berou**	**71.53**	**319**	*e*P	**P**	**02 21 24.0**	**-0.6**
MORC				*e*PP	pP	02 21 30.8	-0.6
MORC				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
MORC	**Moravsky Berou**	**71.53**	**319**	*e*P	**P**	**02 21 24.0**	**-0.6**
	comp=Z,3.7nm,1.0s,mb4.3						
MORC				*e*pP	pP	02 21 30.8	-0.6
ARCES	**ARCESS Array B**	**71.60**	**340**	P	**P**	**02 21 23.8**	**-0.8**
	comp=Z,1.7nm,0.6s,mb4.2,baz=90,slow=7.3,SNR=16						
ARCES				pP	pP	02 21 30.1	-1.4
	comp=Z,4.2nm,0.8s,baz=79,slow=6.3,SNR=7.1						
CEL	**Celeste**	**72.23**	**307**	*e*P	**P**	**02 21 29.7**	**+0.7**
	comp=Z,10nm,0.9s,mb4.8						
CEL				*e*pP	pP	02 21 35.6	-0.3
SOKA	**Soboth**	**73.01**	**316⇓**	*i*P	**P**	**02 21 33.4**	**-0.2**
	comp=Z,5.3nm,1.2s,mb4.4						
BRG	**Berggiesshubel**	**73.90**	**320**	*i*P	**P**	**02 21 44.6**	**+6.0**
	comp=Z,3.5nm,0.9s,mb4.3						
BRG	**Berggiesshubel**	**73.90**	**320**	*i*P	**P**	**02 21 44.6**	**+6.0**
BRG				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
BILL	**Bilibino**	**74.14**	**22**	*e*P	**P**	**02 21 41.8**	**+2.1**
BILL				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
CLL	**Collm**	**74.51**	**320**	*e*P	**P**	**02 21 42.0**	**-0.2**
CLL				*e*pP	pP	02 21 48.0	-1.0
CLL				*e*PcP	PcP	02 21 56.0	-0.6
CLL				*e*S	S	02 31 18.0	+1.8
CLL				*e*SS	SS	02 35 54.0	-8.8
CLL				*e*		02 36 48.0	
BOSA	**Boshof**	**75.25**	**236**	P	**P**	**02 21 47.8**	**+0.9**
	comp=Z,4.8nm,1.0s,mb4.4,baz=121,slow=5.9,SNR=3.8						
GRF	**Grafenberg Arr**	**75.62**	**319**	*e*P	**P**	**02 21 48.6**	**0.0**
	comp=Z,13nm,1.9s,mb4.5						
GRF	**Grafenberg Arr**	**75.62**	**319**	*e*P	**P**	**02 21 48.6**	**0.0**
GRF				pmax	pmax		
	comp=Z,13nm,1.9s,mb4.5						
NB2	**NORSAR Subarra**	**75.92**	**330**	P	**P**	**02 21 49.3**	**-0.8**
	comp=Z,3.5nm,0.9s,mb4.3,baz=92,slow=5.9						
NOA	**NORSAR Array B**	**75.92**	**330**	P	**P**	**02 21 49.8**	**-0.3**
	comp=Z,1.4nm,0.8s,mb4.0,baz=91,slow=5.7,SNR=6.0						
NOA				LR	LR	02 59 36.4	
	comp=Z,62nm,19.9s,MS3.9,baz=90,slow=39						
NOA	**NORSAR Array B**	**75.92**	**330**	P	**P**	**02 21 49.8**	**-0.3**
NOA				LR	LR	02 59 36.4	
DAVA	**Damuels**	**76.54**	**316⇑**	*i*P	**P**	**02 21 54.0**	**+0.1**
	comp=Z,10.0nm,1.1s,mb4.7						
KEST	**Kesra**	**77.57**	**304**	P	**P**	**02 22 00.3**	**+0.3**
	comp=Z,1.1nm,1.0s,mb3.7,baz=165,slow=20,SNR=3.4						
KEST	**Kesra**	**77.57**	**304**	*e*P	**P**	**02 22 00.2**	**+0.2**
KEST				*e*pP	pP	02 22 06.5	-0.4
LPG	**La Plagne**	**78.80**	**314**	*e*P	**P**	**02 22 06.4**	**-0.2**
	comp=Z,7.5nm,0.7s,mb4.4						
LPG	**La Plagne**	**78.80**	**314**	*e*P	**P**	**02 22 06.4**	**-0.2**
LPG				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
LPG	**La Plagne**	**78.80**	**314**	*e*P	**P**	**02 22 06.4**	**-0.2**
	comp=Z,3.8nm,0.7s,mb4.4						
LPL	**La Plagne**	**78.81**	**314**	*e*P	**P**	**02 22 06.4**	**-0.2**
	comp=Z,13nm,0.9s,mb4.5						
LPL	**La Plagne**	**78.81**	**314**	*e*P	**P**	**02 22 06.4**	**-0.2**
LPL				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
LPL	**La Plagne**	**78.81**	**314**	*e*P	**P**	**02 22 06.4**	**-0.2**
	comp=Z,6.6nm,0.9s,mb4.6						
VIVF	**Saint-Julien-l**	**80.32**	**314**	*e*P	**P**	**02 22 14.4**	**-0.5**
	comp=Z,13nm,0.9s,mb4.6						
VIVF	**Saint-Julien-l**	**80.32**	**314**	*e*P	**P**	**02 22 14.4**	**-0.5**
VIVF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
VIVF	**Saint-Julien-l**	**80.32**	**314**	*e*P	**P**	**02 22 14.4**	**-0.5**
	comp=Z,6.6nm,0.9s,mb4.6						
SSB	**Saint Sauveur**	**80.37**	**314**	*e*P	**P**	**02 22 14.9**	**-0.2**
SSB				*e*PP	pP	02 22 21.4	-0.6
SSB				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
SSB	**Saint Sauveur**	**80.37**	**314**	*e*P	**P**	**02 22 14.9**	**-0.2**
	comp=Z,4.2nm,0.8s,mb4.4						
SSB				*e*pP	pP	02 22 21.4	-0.6
SMF	**Signal de Mont**	**80.71**	**316**	*e*P	**P**	**02 22 16.1**	**-0.8**
	comp=Z,13nm,1.1s,mb4.5						
SMF	**Signal de Mont**	**80.71**	**316**	*e*P	**P**	**02 22 16.1**	**-0.8**
SMF				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
SMF	**Signal de Mont**	**80.71**	**316**	*e*P	**P**	**02 22 16.1**	**-0.8**
	comp=Z,6.4nm,1.1s,mb4.5						
TAM	**Tamanrasset**	**82.40**	**292**	*e*P	**P**	**02 22 27.9**	**+1.6**
TAM				*e*PP	pP	02 22 34.1	+0.8
TAM				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
TAM	**Tamanrasset**	**82.40**	**292**	*e*P	**P**	**02 22 27.9**	**+1.6**
	comp=Z,3.9nm,1.0s,mb4.3						
TAM				*e*pP	pP	02 22 34.1	+0.8
MFF	**Saint Martin d**	**83.44**	**316**	*e*P	**P**	**02 22 30.7**	**-0.6**
	comp=Z,18nm,1.0s,mb4.7						
MFF	**Saint Martin d**	**83.44**	**316**	*e*P	**P**	**02 22 30.7**	**-0.6**
MFF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
MFF	**Saint Martin d**	**83.44**	**316**	*e*P	**P**	**02 22 30.7**	**-0.6**
	comp=Z,9.1nm,1.0s,mb4.8						
ESDC	**Sonseca Array**	**87.45**	**310**	P	**P**	**02 22 51.8**	**+0.3**
	comp=Z,0.2nm,0.5s,mb3.6,baz=75,slow=5.1,SNR=4.2						
PDAR	**Pinedale Array**	**123.10**	**19**	PKP	PKPdf	02 29 00.1	-0.4
	comp=Z,0.2nm,0.3s,baz=98,slow=1.8,SNR=2.3						
PDAR				pPKP	pPKPdf	02 29 07.0	-0.7
	comp=Z,0.7nm,0.7s,baz=0.0,slow=1.5,SNR=4.1						
NVAR	**Mina Array Bea**	**123.43**	**28**	PKP	PKPdf	02 29 01.9	+0.6
	comp=Z,0.4nm,0.5s,baz=243,slow=0.9,SNR=4.8						
MSU	**Marysvale**	**125.96**	**23**	*e*PKIKP	PKPdf	02 29 08.0	+1.9
TXAR	**Lajitas Array**	**137.29**	**20**	PKP	PKPdf	02 29 27.9	+0.1
	comp=Z,0.6nm,1.0s,baz=158,slow=1.0,SNR=3.7						
CPUP	**Villa Florida**	**147.06**	**238**	PKPbc	PKPbc	02 29 46.3	-0.9
	comp=Z,0.7nm,0.5s,baz=103,slow=4.3,SNR=5.7						
CMIG	**Matias Romero**	**151.38**	**13**	PKPbc	PKPbc	02 29 58.1	-0.3
	comp=Z,3.0nm,0.9s,baz=314,slow=5.3,SNR=3.0						

NEIC ***30*** *02:21:51.4±9.1, 24.14N×109.56W, h10km, mb3.7/5, Error ellipse: s-maj=117.0km s-min=21.3km az=11.0*
IDC

ellipse: s-maj=79.2km s-min=10.7km az=71.0
*IDC **30** 03:27:34.9±10.0, 5°.55N×126°.99E, h200km±105km, mb3.5/10, mb1 3.5/10, mb1mx3.4/21, mbtmp3.5/10, Error ellipse: s-maj=58.0km s-min=14.3km az=78.0*

ISC 30 03:27:18.8±0.7, 5°.6N±0°.1×126°.7E±0°.4, h35km, n12, σ0s84/12, mb3.9/11, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**23.55**	**183**	P	**P**	**03 32 26.5**	**+0.3**
	1.1nm,0.4s,mb3.7,baz=23,slow=6.8,SNR=8.2						
WRAB	**Tennant Creek**	**26.44**	**164**	*e*P	**P**	**03 32 52.6**	**+0.1**
	1.3nm,0.5s,mb3.7						
WRA	**Warramunga Arr**	**26.44**	**164**	P	**P**	**03 32 52.5**	**0.0**
	0.4nm,0.5s,mb3.2,baz=347,slow=10,SNR=6.0						
ASAR	**Alice Springs**	**29.90**	**167**	P	**P**	**03 33 23.7**	**+0.3**
	0.5nm,0.5s,mb3.5,baz=337,slow=7.1,SNR=7.3						
KSRS	**Korea Array**	**31.75**	**2**	P	**P**	**03 33 40.3**	**+0.7**
	1.0nm,0.4s,mb4.0,baz=179,slow=9.7,SNR=6.9						
STKA	**Stephens Creek**	**39.85**	**160**	P	**P**	**03 34 48.6**	**-0.4**
	2.6nm,0.6s,mb4.1,baz=354,slow=13,SNR=5.2						
SONM	**Songino Array**	**45.56**	**341**	P	**P**	**03 35 35.4**	**+0.3**
	0.4nm,0.4s,mb3.7,baz=150,slow=6.0,SNR=3.3						
MK31	**Makanchi Array**	**56.05**	**325**	*e*P	**P**	**03 36 55.0**	**+0.9**
MKAR	**Makanchi Array**	**56.05**	**325**	P	**P**	**03 36 55.1**	**+1.0**
	0.9nm,0.3s,mb4.2,baz=120,slow=7.1,SNR=19						
ZALV	**Zalesovo Beam**	**58.95**	**333**	P	**P**	**03 37 13.4**	**-1.1**
	1.0nm,0.4s,mb4.2,baz=120,slow=8.7,SNR=3.7						
BVAR	**Borovoye Array**	**65.78**	**327**	P	**P**	**03 37 59.3**	**-0.9**
	0.6nm,0.4s,mb4.0,baz=138,slow=9.6,SNR=5.1						
ARCES	**ARCESS Array B**	**88.72**	**340**	P	**P**	**03 40 05.2**	**-3.2**
	1.1nm,0.9s,mb4.2,baz=54,slow=6.2,SNR=5.6						

*ISCJB **30** 03:41:08.5±0.9, 10°.7N±0°.2×91°.8E±0°.3, h27km, mb3.8/12, Error ellipse: s-maj=50.8km s-min=11.4km az=143.6*
*NEIC **30** 03:41:10.6±0.6, 10°.71N×91°.81E, mb4.3/2, Error ellipse: s-maj=35.2km s-min=7.9km az=54.0*
*IDC **30** 03:41:10.6±1.0, 10°.68N×91°.73E, h26km±5km, mb3.6/11, mb1 3.7/11, mb1mx3.5/24, mbtmp3.6/11, Error ellipse: s-maj=53.1km s-min=15.0km az=54.0*

ISC 30 03:41:11.0±0.9, 10°.7N±0°.2×91°.8E±0°.3, h29km, h29km±.6km: pP-P, n17, σ0s42/16, mb3.8/12, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**36.85**	**349**	*e*P	**P**	**03 48 16.7**	**+0.1**
MK31				*e*pP	pP	03 48 24.6	-0.5
MKAR	**Makanchi Array**	**36.85**	**349**	P	**P**	**03 48 16.7**	**+0.1**
	1.7nm,0.7s,mb4.0,baz=166,slow=8.1,SNR=16						
MKAR				pP	pP	03 48 24.6	-0.5
	1.6nm,0.6s,baz=170,slow=8.5,SNR=12						
MKAR	**Makanchi Array**	**36.85**	**349**	P	**P**	**03 48 16.7**	**+0.1**
MKAR				pP	pP	03 48 24.6	-0.5
KURK	**Kurchatov**	**41.33**	**347**	P	**P**	**03 48 53.7**	**-0.3**
	0.6nm,0.5s,mb3.5,baz=158,slow=7.6,SNR=3.6						
ZALV	**Zalesovo Beam**	**43.47**	**354**	P	**P**	**03 49 11.3**	**-0.1**
	0.7nm,0.7s,mb3.5,baz=176,slow=8.6,SNR=4.6						
FITZ	**Fitzroy Crossi**	**43.97**	**130**	P	**P**	**03 49 16.1**	**+0.2**
	2.4nm,0.8s,mb4.0,baz=331,slow=13,SNR=5.3						
FITZ	**Fitzroy Crossi**	**43.97**	**130**	*e*P	**P**	**03 49 16.2**	**+0.2**
	9.4nm,1.3s,mb4.4						
BVAR	**Borovoye Array**	**45.58**	**342**	P	**P**	**03 49 28.2**	**0.0**
	0.5nm,0.5s,mb3.7,baz=166,slow=7.5,SNR=3.2						
AKTK	**Aktyubinsk**	**48.37**	**332**	P	**P**	**03 49 50.7**	**+0.6**
AKTO	**Aktyubinsk**	**48.37**	**332**	P	**P**	**03 49 50.7**	**+0.6**
	0.9nm,0.6s,mb4.0,baz=85,slow=12,SNR=2.9						
WRA	**Warramunga Arr**	**51.76**	**126**	P	**P**	**03 50 16.8**	**+0.5**
	0.7nm,0.6s,mb3.8,baz=300,slow=10.0,SNR=15						
WRAB	**Tennant Creek**	**51.76**	**126**	*e*P	**P**	**03 50 15.5**	**-0.8**
	3.0nm,0.8s,mb4.3						
ASAR	**Alice Springs**	**53.48**	**130**	P	**P**	**03 50 29.1**	**+0.2**
	0.5nm,0.7s,mb3.5,baz=309,slow=6.8,SNR=3.1						
BRTR	**Keskin Array B**	**58.86**	**310**	P	**P**	**03 51 07.2**	**-0.1**
	0.3nm,0.4s,mb3.6,baz=133,slow=6.9,SNR=3.6						
BRTR				pP	pP	03 51 15.2	-1.0
	0.8nm,0.8s,baz=119,slow=6.4,SNR=4.6						
FINES	**FINESS Array B**	**69.14**	**332**	P	**P**	**03 52 14.4**	**0.0**
	1.6nm,1.0s,mb3.9,baz=165,slow=9.8,SNR=4.4						
FINES				pP	pP	03 52 23.1	-0.4
	1.2nm,0.6s,baz=102,slow=8.0,SNR=3.9						
ARCES	**ARCESS Array B**	**71.83**	**340**	pP	pP	03 52 39.4	-0.4
	0.7nm,0.6s,baz=95,slow=6.4,SNR=2.1						
HFS	**Hagfors**	**74.86**	**330**	P	**P**	**03 52 47.8**	**-0.9**
	1.1nm,0.7s,mb3.9,baz=96,slow=5.8,SNR=2.8						
HFS				pP	pP	03 52 57.0	-0.8
	1.0nm,0.6s,baz=104,slow=4.9,SNR=2.0						

*IDC **30** 04:05:56.7±0.6, 38°.47S×93°.43W, h0km, mb4.6/11, mb1 4.7/12, mb1mx4.6/17, mbtmp4.6/12, ML3.8/1, MS4.5/22, Ms1 4.5/22, ms1mx4.5/23, Error ellipse: s-maj=21.2km s-min=18.0km az=99.0*
*NEIC **30** 04:05:59.4±0.3, 38°.40S×93°.25W, h10km, mb5.0/68, Error ellipse: s-maj=10.5km s-min=7.3km az=223.0*
*ISCJB **30** 04:05:59.5±0.6, 38°.1S±0°.1×93°.09W±0°.08, h10km, mb4.8/74, MS4.6/25, Error ellipse: s-maj=16.8km s-min=7.4km az=20.3*
*GCMT **30** 04:06:00.2±0.2, 38°.46S×93°.30W, h12km, MW5.2, Moment Tensor Solution. s63,c93; s93,c163; Moment tensor: Scale 10^{16}Nm; M_{rr}-7.65±.14; $M_{\theta\theta}$0.35±.14; $M_{\phi\phi}$7.30±.14; $M_{r\theta}$2.83±.43; $M_{\theta\phi}$-3.10±.13; $M_{\phi r}$-0.29±.37; Best double couple: $M_0$8.60000×10^{16} NP1:ϕ_s176.00000°, δ43.00000°, λ-63.00000°. NP2:ϕ_s322.00000°, δ52.00000°, λ-113.00000°. Principal axes: T 8.5900, Plg5.0000°, Azm68.0000°; N -0.0100, Plg18.0000°, Azm336.0000°; P -8.5800, Plg71.0000°, Azm172.0000°; Data Used: II IU IC G CN.*

ISC 30 04:05:59.7±0.4, 38°.38S±0°.07×93°.20W±0°.07, h10km, n499, σ0s58/440, mb4.8/74, MS4.6/25, 179C-162D, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**17.58**	**305**	LR	LR	04 14 55.2	
	comp=Z,3μm,19.3s,baz=128,slow=31						
PLCA	**Paso Flores**	**17.62**	**105**	P	**Pn**	**04 10 06.6**	**+1.3**
	0.1nm,0.3s,baz=296,slow=8.1,SNR=6.2						
PLCA				LR	LR	04 15 11.9	
	comp=Z,3μm,19.9s,baz=268,slow=31						
PLCA	**Paso Flores**	**17.62**	**105**	*e*Pn	**Pn**	**04 10 07.4**	**+2.1**
	30nm,1.4s						
CLCH	**Cerro Calan**	**19.01**	**82**	*e*P	**Pn**	**04 10 21.6**	**-0.7**
FCH	**Farellones**	**19.23**	**82**	*e*P	**Pn**	**04 10 24.9**	**0.0**
LCO	**Las Campanas**	**20.88**	**70**	*e*P	**P**	**04 10 43.2**	**+1.2**
	30nm,1.0s						
CFAA	**Coronel Fontan**	**21.50**	**79**	P	**P**	**04 10 48.5**	**-0.2**
	3.6nm,1.0s,baz=242,slow=10,SNR=23						
CFAA				LR	LR	04 17 16.3	
	comp=Z,314nm,19.2s,MS3.7,baz=174,slow=31						
USHA	**Ushuaia**	**23.48**	**143**	LR	LR	04 18 28.6	
	comp=Z,846nm,18.9s,MS4.2,baz=100,slow=32						
TRQA	**Tornquist**	**24.48**	**99**	*e*P	**P**	**04 11 20.0**	**+1.1**
	45nm,1.3s,mb4.7						
LPAZ	**La Paz**	**31.13**	**52**	P	**P**	**04 12 19.9**	**+1.4**
	5.3nm,1.0s,mb4.3,baz=203,slow=7.8,SNR=16						
LPAZ				LR	LR	04 22 06.1	
	comp=Z,690nm,19.9s,MS4.3,baz=202,slow=31						
PMSA	**Palmer Station**	**31.49**	**156**	LR	LR	04 22 11.2	
	comp=Z,171nm,19.7s,MS3.7,baz=9.5,slow=31						
CPUP	**Villa Florida**	**32.40**	**79**	P	**P**	**04 12 28.9**	**-0.9**
	3.3nm,0.9s,mb4.2,baz=236,slow=10.0,SNR=7.0						
CPUP				LR	LR	04 24 19.0	
	comp=Z,2μm,18.9s,MS4.7,baz=236,slow=34						
CPUP	**Villa Florida**	**32.40**	**79**	*e*P	**P**	**04 12 28.9**	**-0.8**
	10nm,1.0s,mb4.6						
ATAH	**Atahualpa**	**33.87**	**27**	P	**P**	**04 12 44.2**	**+1.7**
	72nm,1.0s,mb5.6,baz=177,slow=4.4,SNR=24						
RKT	**Rikitea**	**38.64**	**281**	*e*LR	LR	04 24 00.0	
	2μm,28.8s,baz=121						
ROSC	**El Rosal**	**46.44**	**26**	P	**P**	**04 14 28.5**	**+1.7**
	3.3nm,0.3s,mb4.8,baz=98,slow=20,SNR=5.9						
ROSC				LR	LR	04 31 37.2	
	comp=Z,423nm,19.2s,MS4.4,baz=203,slow=33						
ROSC	**El Rosal**	**46.44**	**26**	*e*P	**P**	**04 14 28.6**	**+1.8**
TBI	**Tubuai**	**49.84**	**270**	*e*S	**S**	**04 21 58.6**	**-4.4**
	503nm,27.0s						
TBI				*e*LR	LR	04 29 04.3	
	4μm,27.0s,baz=122						
TAOE	**Nuku Hiva Isla**	**51.33**	**292**	*e*S	**S**	**04 22 29.0**	**+5.2**
	440nm,25.3s						
TAOE				*e*LR	LR	04 29 52.6	
	1μm,25.5s						
QSPA	**South Pole Qui**	**51.85**	**180**	P	**P**	**04 15 06.7**	**-0.8**
	6.8nm,1.0s,mb4.5,baz=137,slow=5.6,SNR=10						
TGUH	**Tegucigalpa,Un**	**52.45**	**7**	*e*P	**P**	**04 15 12.8**	**+0.2**
	21nm,0.9s,mb5.1						
PPT	**Papeete**	**53.08**	**277**	*e*S	**S**	**04 22 43.7**	**-4.0**
	705nm,24.8s						
PPT				*e*LR	LR	04 30 28.5	
	2μm,25.0s,baz=126						
PPT	**Papeete**	**53.08**	**277**	LR	LR	04 31 39.5	
	comp=Z,868nm,18.1s,MS4.8,baz=154,slow=29						
SBA	**Scott Base**	**54.89**	**195**	*e*P	**P**	**04 15 30.1**	**+0.3**
	24nm,1.4s,mb5.0						
SBA				*e*		04 15 36.6	
SBA				LR	LR		
	comp=Z,212nm,19.0s,MS4.2						
URZ	**Urewera**	**67.38**	**239**	LR	LR	04 39 33.9	
	comp=Z,830nm,18.3s,MS5.0,baz=112,slow=30						
SYO	**Syowa Base**	**67.40**	**163**	‖*iP*	**P**	**04 16 52.4**	**-2.4**
SYO	**Syowa Base**	**67.40**	**163**	‖*es*P	sP	04 16 58.0	-1.2
HKT	**Hockley**	**68.02**	**358**	*e*P	**P**	**04 16 58.9**	**-0.1**
	comp=Z,16nm,1.4s,mb4.9						
HKT				*e*PP	PP	04 19 26.2	-3.2
TXAR	**Lajitas Array**	**68.06**	**350**	P	**P**	**04 16 57.5**	**-1.9**
	comp=Z,5.1nm,1.0s,mb4.5,baz=163,slow=9.1,SNR=25						
TXAR				LR	LR	04 41 10.1	
	comp=Z,239nm,21.1s,MS4.4,baz=5.0,slow=31						
628A	**Black Gap, Mar**	**68.11**	**351**	⇑P	**P**	**04 16 59.7**	**0.0**
	baz=68,SNR=7.1						
627A	**Terlingua Ranc**	**68.14**	**350**	⇓P	**P**	**04 17 00.2**	**+0.4**
	baz=68,SNR=8.1						
626A	**Big Bend Ranch**	**68.34**	**350**	⇑P	**P**	**04 17 01.2**	**+0.1**
	baz=69,SNR=7.9						
RPZ	**Rata Peaks**	**68.36**	**231**	LR	LR	04 40 55.8	
	comp=Z,452nm,18.3s,MS4.7,baz=285,slow=31						
RAO	**Raoul Island**	**68.66**	**249**	LR	LR	04 38 57.0	
	comp=Z,2μm,20.4s,MS5.3,baz=324,slow=29						
528A	**Cox Ranch, San**	**68.77**	**351**	⇑P	**P**	**04 17 03.3**	**-0.5**
	baz=69						
JCT	**Junction City**	**68.78**	**354**	*e*P	**P**	**04 17 03.0**	**-0.8**
	comp=Z,19nm,1.1s,mb4.9						
526A	**Mary Lane Ranc**	**68.84**	**350**	⇑P	**P**	**04 17 04.3**	**+0.1**
	baz=69,SNR=8.0						
527A	**Woodward Ranch**	**68.86**	**350**	⇑P	**P**	**04 17 04.2**	**-0.1**
	baz=69,SNR=16						
428A	**Kincaid Ranch,**	**69.31**	**351**	⇑P	**P**	**04 17 06.4**	**-0.7**
	baz=70						
426A	**McDonald Obser**	**69.43**	**350**	⇓P	**P**	**04 17 07.1**	**-0.7**
	baz=70,SNR=7.4						
427A	**Hayter Ranch,**	**69.52**	**351**	⇑P	**P**	**04 17 08.1**	**-0.3**
	baz=70,SNR=8.7						
328A	**Wristen Ranch,**	**69.97**	**351**	⇑P	**P**	**04 17 10.6**	**-0.6**
	baz=70,SNR=7.2						
326A	**Caldwell Ranch**	**70.06**	**350**	⇓P	**P**	**04 17 10.7**	**-0.9**
	baz=70,SNR=5.6						
325A	**Bean Ranch, Si**	**70.25**	**349**	⇓P	**P**	**04 17 11.4**	**-1.4**
	baz=71						
324A	**Moseley Ranch,**	**70.40**	**349**	⇓P	**P**	**04 17 12.5**	**-1.2**
	baz=71,SNR=8.3						
MNTX	**Cornudas Mount**	**70.63**	**349**	*e*P	**P**	**04 17 14.1**	**-1.1**
	comp=Z,6.1nm,1.1s,mb4.4						
227A	**Bennet, Jal**	**70.66**	**351**	⇓P	**P**	**04 17 14.9**	**-0.4**
	baz=71						
226A	**Malaga, Loving**	**70.81**	**350**	⇓P	**P**	**04 17 14.8**	**-1.4**
	baz=71						
320A	**Kipp Ranch, An**	**70.81**	**346**	⇑P	**P**	**04 17 16.2**	**-0.1**
	baz=71,SNR=6.4						
225A	**Deer Hill, Car**	**70.96**	**350**	⇑P	**P**	**04 17 16.0**	**-1.2**
	baz=71						
319A	**Douglas**	**70.99**	**345**	⇓P	**P**	**04 17 16.9**	**-0.5**
	baz=71						
224A	**Cornudas Mount**	**71.03**	**349**	⇓P	**P**	**04 17 17.1**	**-0.4**
	baz=71,SNR=12						
223A	**Chaparral, Ant**	**71.10**	**348**	⇑P	**P**	**04 17 17.5**	**-0.5**
	baz=71						
318A	**Bisbee**	**71.20**	**345**	⇑P	**P**	**04 17 18.8**	**+0.2**
	baz=72,SNR=12						
LRAL	**Lakeview Retre**	**71.28**	**6**	*e*P	**P**	**04 17 18.9**	**-0.2**
	comp=Z,16nm,1.1s,mb4.9						
222A	**Williams Famil**	**71.31**	**348**	⇑P	**P**	**04 17 18.9**	**-0.3**
	baz=72						
127A	**Arkansas Junct**	**71.32**	**351**	⇑P	**P**	**04 17 18.5**	**-0.8**
	baz=72						
221A	**Mesquite Ranch**	**71.33**	**347**	⇓P	**P**	**04 17 18.3**	**-1.1**
	baz=72						
220A	**Playas Peak, P**	**71.36**	**346**	⇑P	**P**	**04 17 19.2**	**-0.4**
	baz=72,SNR=12						
125A	**Gardner Draw,**	**71.47**	**350**	⇑P	**P**	**04 17 19.8**	**-0.4**
	baz=72						
219A	**White Tail Can**	**71.59**	**346**	⇑P	**P**	**04 17 21.0**	**0.0**
	baz=72,SNR=5.7						
124A	**Stringfield Ra**	**71.63**	**349**	⇓P	**P**	**04 17 20.9**	**-0.3**
	baz=72,SNR=11						
123A	**Bell Site, Whi**	**71.69**	**348**	⇓P	**P**	**04 17 21.6**	**+0.1**
	baz=72						
121A	**Cookes Peak, D**	**71.84**	**347**	⇓P	**P**	**04 17 22.3**	**-0.2**
	baz=72						
Z27A	**Tatum**	**71.93**	**351**	⇓P	**P**	**04 17 22.5**	**-0.5**
	baz=72,SNR=7.4						
Z26A	**Caprock**	**71.98**	**351**	⇓P	**P**	**04 17 22.7**	**-0.7**
	baz=72						
GOGA	**Godfrey**	**71.99**	**9**	*e*P	**P**	**04 17 22.9**	**-0.5**
	comp=Z,24nm,1.3s,mb5.0						
120A	**U Bar Ranch, L**	**72.01**	**346**	⇓P	**P**	**04 17 23.2**	**-0.2**
	baz=72,SNR=11						
216A	**Three Points,**	**72.05**	**344**	⇓P	**P**	**04 17 23.5**	**-0.3**
	baz=72						
Z25A	**Roswell**	**72.09**	**350**	⇑P	**P**	**04 17 23.4**	**-0.5**
	baz=72						
TUC	**Tucson**	**72.20**	**344**	*e*P	**P**	**04 17 24.6**	**-0.1**
	comp=Z,13nm,1.3s,mb4.7						
Z24A	**Sheeppen Canyo**	**72.23**	**349**	⇓P	**P**	**04 17 24.5**	**-0.3**
	baz=72						
Z23A	**Rita Site, Whi**	**72.30**	**349**	⇑P	**P**	**04 17 25.1**	**-0.1**
	baz=73						
214A	**Organ Pipe Nat**	**72.32**	**343**	⇓P	**P**	**04 17 25.4**	**+0.1**
	baz=73,SNR=6.8						
119A	**Ashpeak Ranch,**	**72.35**	**346**	⇓P	**P**	**04 17 25.2**	**-0.4**
	baz=73						
118A	**Hermack Ranch,**	**72.36**	**345**	⇑P	**P**	**04 17 25.7**	**+0.1**
	baz=73,SNR=10.0						
Z22A	**Elephant Butte**	**72.41**	**348**	⇓P	**P**	**04 17 25.8**	**-0.1**
	baz=73						
117A	**Oracle**	**72.45**	**345**	⇓P	**P**	**04 17 25.5**	**-0.6**
	baz=73,SNR=5.5						
Y27A	**Causey**	**72.49**	**351**	⇓P	**P**	**04 17 25.3**	**-1.0**
	baz=73,SNR=15						
MSTX	**Muleshoe**	**72.53**	**352**	⇓P	**P**	**04 17 25.7**	**-0.9**
	baz=73,SNR=14						
Z20A	**Nine Sixteen R**	**72.55**	**346**	⇓P	**P**	**04 17 27.4**	**+0.6**
	baz=73,SNR=5.2						
MIAR	**Mount Ida**	**72.56**	**360**	*e*P	**P**	**04 17 26.3**	**-0.4**
	comp=Z,21nm,1.1s,mb5.0						
Z21A	**St. Cloud Mine**	**72.58**	**347**	⇑P	**P**	**04 17 26.9**	**0.0**
	baz=73,SNR=5.1						
Y26A	**Elida**	**72.61**	**351**	⇓P	**P**	**04 17 26.5**	**-0.5**
	baz=73						
AFI	**Afiamalu**	**72.61**	**266**	LR	LR	04 41 06.2	
	comp=Z,642nm,19.8s,MS4.9,baz=115,slow=29						
Y25A	**Mesa, Roswell**	**72.72**	**350**	⇓P	**P**	**04 17 27.1**	**-0.7**
	baz=73,SNR=6.3						
UALR	**University of**	**72.79**	**1**	*e*P	**P**	**04 17 26.6**	**-1.5**
	comp=Z,18nm,1.1s,mb4.9						
MAW	**Mawson**	**72.80**	**171**	P	**P**	**04 17 25.7**	**-2.2**
	comp=Z,6.2nm,0.8s,mb4.6,baz=193,slow=8.2,SNR=11						
MAW				LR	LR	04 47 24.9	
	comp=Z,147nm,20.1s,MS4.3,baz=214,slow=34						
MAW	**Mawson**	**72.80**	**171**	*e*P	**P**	**04 17 26.6**	**-1.3**
	comp=Z,2.0nm,0.9s,mb4.0						
Y24A	**Capitan**	**72.83**	**349**	⇓P	**P**	**04 17 28.4**	**+0.1**
	baz=73,SNR=16						
115A	**Sonoran Desert**	**72.90**	**343**	⇑P	**P**	**04 17 28.5**	**-0.3**
	baz=73						
Y23A	**Lovelace Mesa,**	**72.92**	**349**	⇓P	**P**	**04 17 28.4**	**-0.5**
	baz=73,SNR=12						
WMOK	**Wichita Mounta**	**72.93**	**355**	*e*P	**P**	**04 17 27.5**	**-1.5**
	comp=Z,7.5nm,1.4s,mb4.4						
Y22A	**Socorro**	**73.07**	**348**	⇑P	**P**	**04 17 29.6**	**-0.2**
	baz=73,SNR=6.0						
Z17A	**San Carlos Hig**	**73.09**	**345**	⇓P	**P**	**04 17 29.6**	**-0.4**
	baz=73						
114A	**Black Gap (USA**	**73.10**	**343**	⇓P	**P**	**04 17 30.0**	**+0.1**
	baz=73,SNR=5.2						
Y22D	**IRIS PASSCAL I**	**73.20**	**348**	⇑P	**P**	**04 17 29.9**	**-0.7**
	baz=74						
X26A	**CR and CF Fran**	**73.22**	**351**	⇑P	**P**	**04 17 29.5**	**-1.1**
	baz=74,SNR=9.6						
X27A	**F and S Farms,**	**73.23**	**351**	⇓P	**P**	**04 17 29.9**	**-0.9**
	baz=74						
Y21A	**Point of Rocks**	**73.26**	**347**	⇓P	**P**	**04 17 31.3**	**+0.4**
	baz=74,SNR=25						
Y20A	**Horse Springs,**	**73.29**	**347**	⇑P	**P**	**04 17 31.4**	**+0.3**
	baz=74,SNR=7.8						
112A	**Yuma**	**73.30**	**341**	⇑P	**P**	**04 17 30.7**	**-0.5**
	baz=74						
X25A	**Clemmons Ranch**	**73.31**	**350**	⇑P	**P**	**04 17 30.0**	**-1.1**
	baz=74						
AMTX	**Amarillo**	**73.31**	**353**	*e*P	**P**	**04 17 31.0**	**-0.2**
	comp=Z,28nm,1.2s,mb5.1						
113A	**Mohawk Valley,**	**73.32**	**342**	⇑P	**P**	**04 17 30.7**	**-0.6**
	baz=74						
Z16A	**Peralta Trail,**	**73.34**	**344**	⇑P	**P**	**04 17 31.0**	**-0.4**
	baz=74						
Y18A	**Canyon Day Jun**	**73.47**	**345**	⇓P	**P**	**04 17 32.3**	**+0.1**
	baz=74						
Y19A	**Nutrioso**	**73.50**	**346**	⇑P	**P**	**04 17 32.4**	**+0.2**
	baz=74,SNR=12						
Y17A	**Roosevelt**	**73.56**	**345**	⇓P	**P**	**04 17 32.7**	**0.0**
	baz=74,SNR=7.3						
LAZ	**Ladron**	**73.56**	**348**	*e*P	**P**	**04 17 33.7**	**+1.0**
	comp=Z,5.3nm,1.3s,mb4.3						
X23A	**Hourglass Bar**	**73.58**	**349**	⇓P	**P**	**04 17 32.7**	**0.0**
	baz=74						
X22A	**Bernardo**	**73.64**	**348**	⇑P	**P**	**04 17 33.1**	**-0.1**
	baz=74						
W27A	**Bowe Ranch, En**	**73.64**	**352**	⇑P	**P**	**04 17 33.0**	**-0.1**
	baz=74						
Z14A	**Wintersburg**	**73.70**	**343**	⇑P	**P**	**04 17 33.5**	**0.0**
	baz=74						
X21A	**Alamocita Cree**	**73.71**	**347**	⇓P	**P**	**04 17 33.3**	**-0.2**
	baz=74,SNR=16						
Z13A	**Yuma Proving G**	**73.71**	**342**	⇓P	**P**	**04 17 33.4**	**-0.2**
	baz=74,SNR=5.8						
W26A	**Owens Ranch, T**	**73.75**	**351**	⇑P	**P**	**04 17 33.1**	**-0.6**
	baz=74						
GLA	**Glamis**	**73.86**	**341**	⇓P	**P**	**04 17 34.4**	**-0.1**
	baz=74						
Y16A	**Circle Bar Ran**	**73.87**	**344**	⇓P	**P**	**04 17 34.6**	**+0.1**
	baz=74,SNR=5.8						
CPCT	**Cooper Cave**	**73.89**	**7**	*e*P	**P**	**04 17 33.2**	**-1.4**
X20A	**Quemado**	**73.93**	**347**	⇑P	**P**	**04 17 35.0**	**+0.2**
	baz=74						
X19A	**St. Johns**	**73.96**	**346**	⇑P	**P**	**04 17 35.0**	**0.0**
	baz=74						
W25A	**X Bar L Ranch,**	**73.96**	**350**	⇑P	**P**	**04 17 34.8**	**-0.3**
	baz=74						
ANMO	**Albuquerque**	**73.99**	**349**	*e*P	**P**	**04 17 35.6**	**+0.5**
	comp=Z,15nm,2.6s,mb4.5						
SWSC	**Sam W. Stewart**	**74.00**	**340**	⇑P	**P**	**04 17 35.2**	**-0.1**
	baz=74						
W24A	**Lazy 6 Ranch,**	**74.09**	**350**	⇑P	**P**	**04 17 35.5**	**-0.3**
	baz=74,SNR=12						
MONP	**Monument Peak**	**74.12**	**340**	⇓P	**P**	**04 17 35.5**	**-0.5**
	baz=74						
Y15A	**Casa Rosa Ranc**	**74.12**	**344**	⇓P	**P**	**04 17 35.7**	**-0.3**
	baz=74						
W23A	**Werner Place,**	**74.14**	**349**	⇓P	**P**	**04 17 36.3**	**+0.2**
	baz=74,SNR=8.7						
X17A	**Forest Lakes**	**74.17**	**345**	⇓P	**P**	**04 17 36.5**	**+0.3**
	baz=74,SNR=6.4						
X18A	**Snowflake**	**74.18**	**346**	⇑P	**P**	**04 17 36.5**	**+0.2**
	baz=74,SNR=7.0						
Y14A	**Wickenburg**	**74.26**	**343**	⇓P	**P**	**04 17 37.1**	**+0.3**
	baz=75,SNR=8.6						
WVT	**Waverly**	**74.30**	**5**	*e*P	**P**	**04 17 36.0**	**-0.9**
	comp=Z,32nm,1.6s,mb5.0						
109C	**Camp Elliot, M**	**74.31**	**339**	⇑P	**P**	**04 17 37.1**	**0.0**
	baz=75						
Y13A	**Salome**	**74.34**	**342**	⇓P	**P**	**04 17 37.6**	**+0.3**
	baz=75						
W21A	**San Fidel**	**74.34**	**348**	⇓P	**P**	**04 17 37.5**	**+0.3**
	baz=75						
X16A	**Lo Mia Camp, P**	**74.38**	**344**	⇑P	**P**	**04 17 37.7**	**+0.3**
	baz=75,SNR=8.0						
Y12C	**Blythe**	**74.44**	**342**	⇑P	**P**	**04 17 38.2**	**+0.3**
	baz=75,SNR=5.8						
V26A	**Tequesquite Ra**	**74.45**	**351**	⇓P	**P**	**04 17 37.3**	**-0.5**
	baz=75						
W20A	**Ramah**	**74.50**	**347**	⇑P	**P**	**04 17

comp=Z,23nm,1.0s,mb5.1
T21A Navajo Lake 76.15 348 ⇑P P 04 17 47.5 -0.1
baz=76
T19A Beclabito 76.25 347 ⇓P P 04 17 48.5 +0.3
baz=77,SNR=5.4
V13A Grand Canyon W 76.32 343 ⇓P P 04 17 48.8 +0.2
baz=77,SNR=6.3
U17A Shonto 76.33 346 ⇑P P 04 17 48.2 -0.4
baz=77
S25A Robets Cordova 76.37 351 ⇑P P 04 17 49.2 +0.4
baz=77,SNR=9.2
OSI Osito Adit 76.38 339 ⇑P P 04 17 48.6 -0.4
baz=77
TUQ Turquoise Moun 76.40 341 ⇑P P 04 17 48.9 -0.2
baz=77
V12A Nelson 76.41 342 ⇓P P 04 17 49.1 0.0
baz=77,SNR=5.8
EDW2 Edwards Air Fo 76.42 339 ⇑P P 04 17 49.0 -0.2
baz=77
S24A Houchin Ranch, 76.45 350 ⇓P P 04 17 49.7 +0.4
baz=77,SNR=15
U15A North Rim 76.50 344 ⇑P P 04 17 49.6 0.0
baz=77,SNR=8.9
WCI Wyandotte Cave 76.50 6 eP P 04 17 48.0 -1.5
comp=Z,20nm,0.9s,mb5.1
MVCO Mesa Verde 76.53 347 eP P 04 17 50.0 +0.3
comp=Z,21nm,1.4s,mb4.9
SDCO Great Sand Dun 76.59 350 eP P 04 17 49.7 -0.3
comp=Z,8.7nm,1.3s,mb4.5
V11A Goodsprings 76.66 342 ⇓P P 04 17 50.3 -0.2
baz=77
U14A Mt Trumbull 76.68 344 ⇑P P 04 17 50.9 +0.3
baz=77,SNR=7.8
T18A Mexican Hat 76.70 346 ⇓P P 04 17 50.9 +0.2
baz=77,SNR=9.4
T17A Navajo Res., N 76.74 346 ⇑P P 04 17 51.6 +0.7
baz=77,SNR=9.5
S22A 4UR Ranch, Cre 76.78 349 ⇓P P 04 17 51.8 +0.6
baz=77,SNR=8.2
S21A Coal Bank Pass 76.85 348 ⇑P P 04 17 51.9 +0.4
baz=77
U13A Pakoon Wash 76.85 343 ⇓P P 04 17 51.8 +0.2
baz=77
T16A Glen Canyon Da 76.87 345 ⇑P P 04 17 51.8 +0.2
baz=77
ARVC Arvin 76.89 339 ⇑P P 04 17 51.9 0.0
baz=77
PKM Peak Mountain 76.97 338 ⇑P P 04 17 52.5 +0.2
baz=77
U12A Valley of Fire 77.00 342 ⇓P P 04 17 52.3 -0.1
baz=77
R24A Sanders Place, 77.02 350 ⇓P P 04 17 52.7 +0.3
baz=77
CBKS Cedar Bluff 77.05 355 eP P 04 17 51.6 -1.0
comp=Z,25nm,1.3s,mb5.0
CBKS e 04 17 59.5
T15A Red Dirt Ranch 77.08 344 ⇓P P 04 17 53.1 +0.3
baz=77,SNR=8.6
S19A Harvey Farm, M 77.16 347 ⇓P P 04 17 53.2 0.0
baz=78,SNR=6.0
R22A Saguache, Gunn 77.24 349 ⇑P P 04 17 54.0 +0.2
baz=78
S18A Hurst Farm, Bl 77.26 346 ⇓P P 04 17 54.0 +0.2
baz=78,SNR=16
T14A Hurricane 77.28 344 ⇓P P 04 17 53.7 -0.2
baz=78
ISA Isabella 77.29 339 ⇓P P 04 17 53.9 -0.2
baz=78
ISA Isabella 77.29 339 eP P 04 17 54.0 0.0
comp=Z,18nm,1.4s,mb4.8
S17A Black Ridge (B 77.36 346 ⇑P P 04 17 54.6 +0.2
baz=78,SNR=5.6
MPMC Manual Prospec 77.40 340 ⇑P P 04 17 55.1 +0.4
baz=78
BLO Bloomington 77.42 5 eP P 04 17 53.4 -1.3
comp=Z,24nm,1.1s,mb5.0
T13A Saint George 77.42 343 ⇑P P 04 17 54.9 +0.1
baz=78,SNR=6.8
U10A Ash Meadows, A 77.43 341 ⇑P P 04 17 55.2 +0.3
baz=78
PV01 Paradox Valley 77.44 348 eP P 04 17 54.8 -0.1
comp=Z,1µm,1.4s
R20A Redvale 77.46 348 ⇑P P 04 17 54.9 0.0
baz=78,SNR=5.5
R21A Cimarron 77.50 348 ⇓P P 04 17 55.4 +0.2
baz=78
Q25A Bedland, Calha 77.58 351 ⇓P P 04 17 55.8 +0.2
baz=78
R19A Curley Farm, L 77.71 347 ⇑P P 04 17 56.1 -0.3
baz=78,SNR=5.7
S15A Panguitch 77.71 345 ⇓P P 04 17 56.9 +0.5
baz=78
PV04 Paradox Valley 77.75 347 eP P 04 17 56.9 +0.3
CCUT Cedar City 77.81 344 eP P 04 17 57.4 +0.5
comp=Z,14nm,1.1s,mb4.8
Q22A Crested Butte, 77.89 349 ⇓P P 04 17 57.8 +0.5
baz=78
R18A Canyonlands Na 77.92 347 ⇑P P 04 17 57.7 +0.2
baz=78,SNR=5.9
T11A Corn Creek, Al 77.94 342 ⇑P P 04 17 57.8 +0.1
baz=78,SNR=7.7
S13A Holt Ranch, En 77.95 343 ⇑P P 04 17 57.8 +0.1
baz=78,SNR=9.3
Q21A Lamborn Mesa, 77.96 349 ⇑P P 04 17 57.7 0.0
baz=78,SNR=7.3
S14A Cedar City 77.97 344 ⇑P P 04 17 58.8 +1.0
baz=78,SNR=6.7
R17A Hanksville Air 78.10 346 ⇓P P 04 17 58.5 -0.1
baz=78,SNR=7.8
R16A Teasdale 78.12 345 ⇓P P 04 17 59.2 +0.6
baz=78,SNR=6.5
P25A Willow Gulch B 78.16 351 ⇓P P 04 17 59.0 +0.2
baz=78
S12A Delamar Landin 78.20 343 ⇑P P 04 17 60.0 +0.9
baz=78,SNR=8.0
SMCO Snowmass 78.21 349 eP P 04 18 00.1 +1.0
comp=Z,14nm,1.2s,mb4.8
R15A Junction 78.21 345 ⇓P P 04 17 59.7 +0.5
baz=78
GRAC Grapevine Rang 78.25 340 ⇑P P 04 17 59.8 +0.4
baz=78
Q19A Hogan Spring (78.36 347 ⇓P P 04 18 00.3 +0.3
baz=79,SNR=6.3
S11A Rachel 78.45 342 ⇑P P 04 18 00.8 +0.3
baz=79
MSU Marysvale 78.48 345 eP P 04 18 00.8 +0.2
R13A O'Grain Ranch, 78.54 343 ⇑P P 04 18 01.2 +0.3
baz=79
P21A Newcastle 78.62 349 ⇓P P 04 18 01.6 +0.2
baz=79
Q18A Rafter H Ranch 78.66 347 ⇑P P 04 18 01.6 +0.1
baz=79
Q16A Castle Valley 78.67 346 ⇑P P 04 18 02.1 +0.4
baz=79,SNR=8.2
SRU San Rafael 78.73 346 ⇓P P 04 18 02.1 +0.1
baz=79
P20A De Beque 78.74 348 ⇓P P 04 18 02.6 +0.6
baz=79
R12A Pony Springs, 78.83 343 ⇑P P 04 18 02.9 +0.4
baz=79
S10A Tonopah Range, 78.92 341 ⇓P P 04 18 03.3 +0.2
baz=79
P19A Cripple Cowboy 78.97 348 ⇑P P 04 18 03.6 +0.3
baz=79,SNR=6.5
Q15A Fillmore 78.99 345 ⇓P P 04 18 03.8 +0.4
baz=79,SNR=6.2
TMUT Trail Mountain 79.04 346 eP P 04 18 03.6 -0.1
comp=Z,19nm,1.2s,mb4.9
R11A Troy Canyon, C 79.08 342 ⇑P P 04 18 04.3 +0.4
baz=79,SNR=9.0
P17A Butcher Ranch, 79.13 346 ⇓P P 04 18 04.0 -0.2
baz=79,SNR=5.9
Q14A Sevier Lake (B 79.17 344 ⇓P P 04 18 04.3 -0.1
baz=80,SNR=8.1
P18A Preston Nutter 79.19 347 ⇑P P 04 18 04.8 +0.3
baz=80
R10A Warm Springs 79.20 342 ⇓P P 04 18 04.9 +0.3
baz=80
MLAC Mammoth Lakes 79.24 340 ⇑P P 04 18 05.1 +0.3
baz=80
Q13A Wheeler Ranch, 79.30 344 ⇑P P 04 18 05.2 +0.1
baz=80
O21A Pagoda 79.30 349 ⇓P P 04 18 05.6 +0.5
baz=80
O20A White River Ci 79.34 348 ⇑P P 04 18 05.6 +0.4
baz=80,SNR=5.8
P16A Fountain Green 79.43 346 ⇑P P 04 18 06.1 +0.3
baz=80
P15A Leamington 79.52 345 ⇓P P 04 18 05.8 -0.5
baz=80
Q12A Willow Creek R 79.56 343 ⇓P P 04 18 06.4 -0.1
baz=80
Q11A Duckwater 79.57 342 ⇑P P 04 18 06.8 +0.2
baz=80,SNR=6.9
O19A Miners Draw (B 79.64 348 ⇑P P 04 18 06.9 0.0
baz=80
P14A Drum Mountains 79.70 345 ⇓P P 04 18 07.8 +0.5
baz=80,SNR=6.2
N22A Wattenberg Ran 79.73 350 ⇑P P 04 18 08.0 +0.6
baz=80
Q10A Clear Creek Ra 79.73 342 ⇓P P 04 18 07.8 +0.3
baz=80
O18A Roosevelt 79.76 347 ⇓P P 04 18 07.7 +0.1
baz=80,SNR=11
P13A Bates Ranch, G 79.78 344 ⇑P P 04 18 07.6 -0.1
baz=80,SNR=9.6
O17A Robinson Place 79.83 346 ⇑P P 04 18 08.1 +0.2
baz=80
N21A Black Mountain 79.84 349 ⇑P P 04 18 08.4 +0.4
baz=80
NVAR Mina Array Bea 79.84 340 P P 04 18 07.9 -0.2
comp=Z,6.8nm,1.0s,mb4.5,baz=171,slow=6.9,SNR=34
NLU North Lily Min 79.85 345 eP P 04 18 09.5 +1.4
comp=Z,17nm,1.4s,mb4.8
SCIA State Center 79.90 360 eP P 04 18 07.9 -0.4
comp=Z,37nm,1.4s,mb5.1
SCIA e 04 18 13.5
O16A Springville 79.98 346 ⇓P P 04 18 08.7 -0.1
baz=80
P12A McGill 79.99 343 ⇓P P 04 18 09.0 +0.1
baz=80
N20A Spence Gulch, 80.03 348 ⇓P P 04 18 09.1 +0.1
baz=80,SNR=12
CMB Columbia Colle 80.05 339 eP P 04 18 09.9 +0.6
comp=Z,8.9nm,1.3s,mb4.5
DAU Daniels Canyon 80.13 346 eP P 04 18 09.8 +0.2
WAKR Walker 80.22 339 eP P 04 18 10.2 +0.1
DUG Dugway 80.23 345 ⇓P P 04 18 10.4 +0.3
baz=80,SNR=12
DUG Dugway 80.23 345 eP P 04 18 10.0 -0.1
comp=Z,19nm,1.3s,mb4.9
N19A John Jarvie Ra 80.23 348 ⇑P P 04 18 10.0 -0.2
baz=81,SNR=8.6
O15A The Old Anders 80.24 345 ⇓P P 04 18 10.9 +0.7
baz=81
N18A Larsen Ranch, 80.40 347 ⇓P P 04 18 10.7 -0.3
baz=81
P10A Eureka 80.50 342 ⇑P P 04 18 11.3 -0.3
baz=81,SNR=5.3
N17A Moffit Pass 80.57 347 ⇓P P 04 18 11.6 -0.3
baz=81
M21A Separation Pea 80.64 349 ⇑P P 04 18 12.2 -0.1
baz=81
M20A Sweetwater, Wa 80.66 349 ⇑P P 04 18 12.4 0.0
baz=81
RWWY Rawlins 80.70 349 eP P 04 18 13.4 +0.8
comp=Z,12nm,1.1s,mb4.7
O12A Currie 80.71 343 ⇓P P 04 18 12.9 +0.1
baz=81
O11A Cowboy Ranch, 80.79 343 ⇓P P 04 18 13.4 +0.2
baz=81
M19A Rock Springs 80.82 348 ⇓P P 04 18 13.2 0.0
baz=81
N15A Stansbury Isla 80.84 345 ⇑P P 04 18 13.4 0.0
baz=81
M18A Lyman 80.90 347 ⇑P P 04 18 13.5 -0.2
baz=81
N14A Grayback Hills 80.94 345 ⇑P P 04 18 13.8 -0.1
baz=81
JFWS Jewell Farm 80.95 2 eP P 04 18 13.6 -0.3
comp=Z,13nm,1.0s,mb4.8
L21A Rawlins 81.00 349 ⇓P P 04 18 13.7 -0.5
baz=81
M17A Scullys Gap (B 81.05 347 ⇑P P 04 18 14.1 -0.4
baz=81
WCN Washoe City 81.05 339 ⇑P P 04 18 14.3 -0.2
baz=81
O10A Cortez Mining, 81.14 342 ⇑P P 04 18 14.9 -0.2
baz=82
L20A Wamsutter 81.18 349 ⇓P P 04 18 15.2 0.0
baz=82
PAHR Pah Rah Range 81.33 340 eP P 04 18 17.0 +1.0
comp=Z,18nm,1.5s,mb4.8
N12A Clover Valley, 81.34 343 ⇑P P 04 18 16.4 +0.4
baz=82,SNR=5.9
N12A Clover Valley, 81.34 343 eP P 04 18 16.8 +0.7
comp=Z,17nm,1.3s,mb4.8
HWUT Hardware Ranch 81.35 346 eP P 04 18 16.1 +0.1
comp=Z,59nm,2.3s,mb5.1
M15A Larsen Ranch, 81.38 345 ⇑P P 04 18 15.4 -0.8
baz=82,SNR=11
L18A Fontenelle, Gr 81.38 347 ⇑P P 04 18 15.7 -0.5
baz=82
L19A Farson 81.44 348 ⇑P P 04 18 16.4 -0.2
baz=82
M14A Sheep Mountain 81.60 345 ⇑P P 04 18 16.7 -0.7
baz=82
M13A Montello 81.63 344 ⇑P P 04 18 16.5 -1.1
baz=82
M13A Montello 81.63 344 eP P 04 18 17.8 +0.2
comp=Z,3.2nm,1.0s,mb4.2
L17A Cokeville 81.70 347 ⇑P P 04 18 17.3 -0.6
baz=82
L16A Fish Haven 81.72 346 ⇑P P 04 18 16.8 -1.2
baz=82,SNR=18
BEKR Beckworth 81.75 339 ⇓P P 04 18 18.0 -0.2
baz=82,SNR=9.3
ECSD EROS Data Cent 81.79 358 eP P 04 18 17.9 -0.4
comp=Z,13nm,1.1s,mb4.8
K20A Yellowstone Ra 81.82 349 ⇓P P 04 18 17.9 -0.6
baz=82,SNR=8.2
M12A Wells 81.85 344 ⇑P P 04 18 18.3 -0.4
baz=82
L15A Malad City 81.89 346 ⇓P P 04 18 18.2 -0.7
baz=82
M11A Holland Ranch, 82.06 343 ⇑P P 04 18 19.7 -0.1
baz=82
K19A Absolon Red Bu 82.06 348 ⇑P P 04 18 19.1 -0.7
baz=82
K18A Toltan Ranch, 82.07 348 ⇓P P 04 18 19.8 0.0
baz=82,SNR=5.3
L14A Malta 82.09 345 ⇑P P 04 18 19.9 -0.1
baz=82
BW06 Boulder Array 82.12 348 ⇑P P 04 18 19.8 -0.3
baz=82,SNR=12
BW06 Boulder Array 82.12 348 eP P 04 18 19.6 -0.5
comp=Z,18nm,1.3s,mb4.8
PDAR Pinedale Array 82.12 348 P P 04 18 19.1 -1.0
comp=Z,6.0nm,1.0s,mb4.5,baz=159,slow=4.5,SNR=32
PDAR LR LR 04 52 30.9
comp=Z,77nm,18.2s,MS4.1,baz=148,slow=34
M10A I.L. Ranch, Tu 82.32 343 ⇑P P 04 18 20.7 -0.5
baz=83
K17A Gardner Place, 82.34 347 ⇑P P 04 18 20.7 -0.6
baz=83
AHID Auburn Hatcher 82.38 347 eP P 04 18 22.1 +0.6
comp=Z,29nm,2.1s,mb4.8
K16A Soda Springs 82.54 346 ⇓P P 04 18 22.1 -0.2
baz=83,SNR=6.7
K14A Jones Ranch, D 82.56 345 ⇑P P 04 18 22.2 -0.2
baz=83
L12A House Creek Ra 82.57 344 ⇓P P 04 18 22.5 0.0
baz=83
J18A Kendall Valley 82.63 348 ⇓P P 04 18 22.3 -0.4
baz=83
RSSD Black Hills 82.70 352 eP P 04 18 23.9 +0.8
comp=Z,9.0nm,1.3s,mb4.6
L11A Cat Creek Ranc 82.75 343 ⇓P P 04 18 23.3 -0.1
baz=83,SNR=14
L10A Juniper Basin 82.83 343 ⇑P P 04 18 24.1 +0.2
baz=83
K13A Stover Farm, H 82.85 345 ⇑P P 04 18 24.1 +0.1
baz=83
J17A Brown Place, J 82.89 347 ⇑P P 04 18 24.4 +0.3
baz=83
REDW Red Top Meadow 82.92 347 eP P 04 18 25.0 +0.7
comp=Z,24nm,1.4s,mb5.0
J16A Bone 82.97 347 ⇑P P 04 18 24.8 +0.3
baz=83
RRI2 Red Ridge 82.99 347 eP P 04 18 25.5 +0.9
comp=Z,32nm,1.6s,mb5.1
SNOW Snow King Moun 83.00 347 eP P 04 18 25.7 +1.0
comp=Z,22nm,1.5s,mb5.0
K12A Draper Farm, C 83.01 344 ⇓P P 04 18 24.9 +0.1
baz=83
WDC Whiskeytown Da 83.03 338 eP P 04 18 24.5 -0.4
comp=Z,19nm,1.4s,mb4.9
TPAW Teton Pass 83.06 347 eP P 04 18 25.2 +0.2
comp=Z,15nm,1.1s,mb4.9
I18A Diamond G Ranc 83.07 348 ⇑P P 04 18 25.4 +0.3
baz=83
LOHW Long Hollow 83.12 347 eP P 04 18 25.5 +0.2
comp=Z,14nm,1.4s,mb4.8
J15A Blackfoot 83.24 346 ⇑P P 04 18 25.9 -0.1
baz=84,SNR=5.2
ACCN Adirondack Com 83.29 14 eP P 04 18 25.8 -0.4
comp=Z,28nm,1.3s,mb5.1
J14A Carey 83.38 345 ⇑P P 04 18 27.0 +0.4
baz=84
IMW Indian Meadow 83.45 347 eP P 04 18 27.0 0.0
comp=Z,17nm,1.4s,mb4.9
I16A Newdale 83.53 347 ⇑P P 04 18 27.7 +0.3
baz=84
J13A Cove Ranch, Pi 83.59 345 ⇓P P 04 18 27.8 +0.1
baz=84
MOD Modoc 83.63 340 eP P 04 18 29.1 +1.1
comp=Z,26nm,1.5s,mb5.2
J12A Stokes Ranch, 83.64 344 ⇓P P 04 18 27.9 -0.1
baz=84,SNR=5.9
KHMM Horse Mountain 83.66 337 eP P 04 18 29.3 +1.1
comp=Z,22nm,1.2s,mb5.2
HLID Hailey 83.79 345 ⇑P P 04 18 28.6 -0.1
baz=84,SNR=15
HLID Hailey 83.79 345 eP P 04 18 28.8 0.0
comp=Z,23nm,1.4s,mb5.1
I14A Mackay 83.95 345 ⇓P P 04 18 30.1 +0.5
baz=84,SNR=9.0
MFID Camas Ranch 83.96 344 ⇑P P 04 18 29.7 +0.1
baz=84
I13A Wildhorse Cree 84.07 345 ⇑P P 04 18 30.4 +0.3
baz=84,SNR=8.3
YBH Yreka Blue Hor 84.14 338 eP P 04 18 31.1 +0.5
I12A Atlanta 84.17 344 ⇑P P 04 18 30.8 +0.1
baz=84
J10A Berg Farm, Mel 84.18 343 ⇑P P 04 18 30.6 -0.2
baz=84
DZM Mont Dzumac 84.26 247 eLR LR 04 44 49.6
comp=Z,2µm,27.4s
H16A Russell Place, 84.29 347 ⇓P P 04 18 31.8 +0.5
baz=85
LONY Lake Ozonia 84.31 13 eP P 04 18 30.2 -1.2
comp=Z,23nm,1.1s,mb5.2
RLMT Red Lodge 84.37 349 ⇑P P 04 18 31.7 +0.1
baz=85
RLMT Red Lodge 84.37 349 eP P 04 18 32.6 +0.9
comp=Z,17nm,1.4s,mb5.0
H15A Lima 84.46 346 ⇓P P 04 18 32.3 +0.1
baz=85
I11A Placerville 84.46 344 ⇑P P 04 18 32.1 0.0
baz=85
J08A Circle Bar Ran 84.52 342 ⇓P P 04 18 32.9 +0.4
baz=85,SNR=6.9
K05A Summer Lake 84.56 340 ⇓P P 04 18 33.3 +0.6
baz=85,SNR=5.8
H14A Leadore 84.60 346 ⇑P P 04 18 33.1 +0.3
baz=85
G18A Lazy EL Ranch, 84.61 348 ⇑P P 04 18 33.2 +0.3
baz=85
MCMT McKenzie Canyo 84.70 346 eP P 04 18 34.8 +1.5
comp=Z,7.1nm,1.4s,mb4.6
H13A Challis 84.72 345 ⇑P P 04 18 33.7 +0.2
baz=85
I10A Payette 84.81 343 ⇓P P 04 18 33.9 0.0
baz=85
H12A Diamond D Ranc 84.83 345 ⇓P P 04 18 34.0 0.0
baz=85
G16A Moss Hill, Enn 84.89 347 ⇓P P 04 18 34.7 +0.4
baz=85,SNR=5.1
I09A Lost Marbles R 84.92 342 ⇓P P 04 18 34.3 -0.2
baz=85
G15A Dillon 84.96 346 ⇓P P 04 18 35.0 +0.4
baz=85,SNR=5.6
F18A Big Timber 85.20 349 ⇓P P 04 18 36.0 +0.2
baz=86
G13A Cobalt 85.22 345 ⇑P P 04 18 36.2 +0.2
baz=86
H11A Donnelly 85.22 344 ⇑P P 04 18 35.9 0.0
baz=86,SNR=5.2
BOZ Bozeman (W) 85.27 347 ⇓P P 04 18 36.1 -0.1
baz=86,SNR=6.1
BOZ Bozeman (W) 85.27 347 eP P 04 18 36.2 +0.1
comp=Z,13nm,1.5s,mb4.8
H10A Noah's Angus R 85.28 343 ⇓P P 04 18 36.2 0.0
baz=86
F17A Fitzpatrick Pl 85.36 348 ⇓P P 04 18 36.8 +0.2
baz=86,SNR=7.0
F16A Kennard Place, 85.40 347 ⇑P P 04 18 37.1 +0.3
baz=86
G12A Big Creek, Yel 85.48 344 ⇑P P 04 18 37.4 +0.1
baz=86,SNR=5.7
LAO LASA Array 85.48 351 eP P 04 18 35.7 -1.6
comp=Z,7.8nm,0.9s,mb4.8
LRM Limekiln Ridge 85.59 347 eP P 04 18 39.1 +1.4
F15A Butte 85.61 347 ⇑P P 04 18 38.1 +0.3
baz=86
H08A Prairie City 85.66 342 ⇑P P 04 18 38.6 +0.4
baz=86
F14A Wisdom 85.75 346 ⇑P P 04 18 39.3 +0.7
baz=86
E18A Harlowton 85.88 349 ⇓P P 04 18 39.6 +0.4
baz=86,SNR=8.0
E17A Martinsdale 85.93 348 ⇓P P 04 18 40.0 +0.5
baz=86,SNR=5.9
EYMN Ely 85.96 1 eP P 04 18 37.6 -1.9
comp=Z,5.3nm,0.9s,mb4.8
G10A Bishop Farm, J 86.03 343 ⇑P P 04 18 39.8 -0.2
baz=86
F12A Elk City 86.07 345 ⇓P P 04 18 39.9 -0.3
baz=86,SNR=7.4
E16A East Helena 86.14 347 ⇓P P 04 18 40.9 +0.4
baz=86,SNR=11
G09A Cove 86.17 343 ⇓P P 04 18 40.6 -0.1
baz=86
E15A Deer Lodge 86.20 347 ⇑P P 04 18 41.3 +0.5
baz=86,SNR=6.1
AGMN Agassiz Nation 86.33 358 eP P 04 18 40.5 -0.8
comp=Z,7.9nm,1.1s,mb4.9
E14A Clinton 86.35 346 ⇑P P 04 18 42.4 +0.9
baz=87
F11A Grangeville 86.38 344 ⇓P P 04 18 41.7 0.0
baz=87
G08A Pilot Rock 86.46 342 ⇑P P 04 18 42.2 +0.2
baz=87,SNR=5.7
D18A Linhart Farms, 86.47 349 ⇓P P 04 18 42.5 +0.4
baz=87,SNR=7.6
E13A Victor 86.51 346 ⇑P P 04 18 42.2 -0.1
baz=87
D17A Six Diamond Ra 86.57 348 ⇑P P 04 18 42.7 +0.1
baz=87,SNR=22
D16A Dana Ranch, Ca 86.60 348 ⇓P P 04 18 43.4 +0.6
baz=87,SNR=6.3
F10A Beach Ranch, E 86.70 343 ⇑P P 04 18 43.9 +0.7
baz=87
D15A Lincoln 86.78 347 ⇓P P 04 18 44.0 +0.4
baz=87
G06A Carlson Farm, 86.82 341 ⇑P P 04 18 44.5 +0.6
baz=87
MSO Missoula 86.83 346 eP P 04 18 45.6 +1.7
D14A Greenough 86.99 346 ⇑P P 04 18 45.1 +0.5
baz=87,SNR=9.3
C17A Wharram Farm, 87.05 348 ⇑P P 04 18 45.3 +0.4
baz=87,SNR=7.3
SLMT Seeley Lake 87.15 346 eP P 04 18 46.7 +1.3
D13A Huson 87.19 346 ⇓P P 04 18 45.4 -0.2
baz=88
EGMT Eagleton 87.28 349 ⇓P P 04 18 46.5 +0.5
baz=88,SNR=5.8
EGMT Eagleton 87.28 349 eP P 04 18 46.4 +0.4
comp=Z,24nm,1.4s,mb5.2
D12A Red Ives Fores 87.33 345 ⇑P P 04 18 46.0 -0.3
baz=88
C16A Fuhringer Ranc 87.38 348 ⇓P P 04 18 47.2 +0.7
baz=88
SWMT Swartz Lake 87.50 346 eP P 04 18 47.4 +0.3
C15A Salmond Ranch, 87.50 347 ⇓P P 04 18 47.2 +0.1
baz=88,SNR=5.8
E08A Dider Farm, El 87.61 342 ⇓P P 04 18 47.5 -0.1
baz=88
B18A Beardsley Farm 87.64 349 ⇓P P 04 18 48.1 +0.4
baz=88,SNR=9.6
B17A L&G Farms, Che 87.70 348 ⇑P P 04 18 48.4 +0.4
baz=88
C14A Swan Lake 87.70 346 ⇑P P 04 18 48.7 +0.7
baz=88

C13A	**Hot Springs**	87.77	346	⇑P	P	04 18 48.3	-0.1
	baz=88						
JTMT	**Jette**	87.78	346	*e*P	P	04 18 49.4	+1.0
	comp=Z,13nm,1.6s,mb4.9						
E07A	**Sunnyside**	87.86	342	⇓P	P	04 18 49.0	+0.1
	baz=88						
F04A	**Amboy**	87.94	340	⇑P	P	04 18 49.5	+0.3
	baz=88						
B16A	**M & M Farms, S**	87.96	348	⇑P	P	04 18 50.1	+0.8
	baz=88						
BSMT	**Bassoo Peak**	87.98	346	*e*P	P	04 18 50.1	+0.8
C12B	**Naegeli Ranch,**	87.98	345	⇑P	P	04 18 49.2	-0.2
	baz=88						
B15A	**Bradely Ranch,**	88.01	347	⇓P	P	04 18 50.0	+0.5
	baz=88						
A18A	**Metzger Ranch,**	88.16	349	⇑P	P	04 18 50.3	+0.1
	baz=88,SNR=6.5						
ULM	**Lac du Bonnet**	88.28	358	LR	LR	04 56 02.3	
	comp=Z,122nm,20.1s,MS4.3,baz=211,slow=34						
B13A	**Whitefish**	88.42	346	⇑P	P	04 18 51.9	+0.4
	baz=89						
A14A	**Double T Ranch**	88.80	347	⇓P	P	04 18 53.7	+0.4
	baz=89						
NEW	**Newport**	88.85	344	*e*P	P	04 18 54.3	+0.8
BOSA	**Boshof**	91.99	129	LR	LR	04 54 05.8	
	comp=Z,174nm,19.6s,MS4.5,baz=170,slow=31						
DBIC	**Dimbokro**	92.80	84	LR	LR	04 58 22.4	
	comp=Z,433nm,18.4s,MS4.9,baz=210,slow=34						
STKA	**Stephens Creek**	93.47	224	LR	LR	04 54 38.6	
	comp=Z,401nm,19.0s,MS4.9,baz=299,slow=31						
SCHQ	**Schefferville**	95.56	15	P	P	04 19 22.4	-2.0
	comp=Z,4.9nm,1.0s,mb4.9,baz=259,slow=5.2,SNR=3.3						
SCHQ				LR	LR	04 59 43.8	
	comp=Z,184nm,18.9s,MS4.6,baz=75,slow=34						
CTA	**Charters Tower**	99.46	235	LR	LR	04 57 05.9	
	comp=Z,280nm,18.0s,MS4.8,baz=118,slow=31						
GRF	**Grafenberg Arr**	126.68	52	*e*PKPdf	PKPdf	04 25 03.1	+0.4
GRF				*e*L		05 16 07.2	
	comp=Z,241nm,21.0s						
MOX	**Moxa**	127.21	51	*e*PKP	PKPdf	04 25 04.8	+1.1
MOX	**Moxa**	127.21	51	*e*PKPdf	PKPdf	04 25 02.9	-0.8
PLN	**Plauen**	127.49	51	*e*PKPdf	PKPdf	04 25 03.2	-1.1
WET	**Wettzell**	127.53	53	*e*PKPdf	PKPdf	04 25 03.3	-1.1
GUNZ	**Gunzen**	127.56	51	*e*PKPdf	PKPdf	04 25 03.4	-1.0
NKC	**Novy Kostel**	127.60	51	*e*PKPdf	PKPdf	04 25 04.4	-0.1
NKC				AMS	AMS	05 22 20.0	
	comp=Z,200nm,16.2s						
TANN	**Tannenbergstha**	127.66	51	*e*PKPdf	PKPdf	04 25 03.8	-0.8
GEC2	**GERESS Array S**	127.96	53	*e*PKPdf	PKPdf	04 25 03.9	-1.3
KHC	**Kasperske Hory**	127.97	53	*e*PKPdf	PKPdf	04 25 11.0	+5.8
KHC				AMS	AMS	05 18 40.0	
	comp=Z,200nm,27.3s						
CLL	**Collm**	128.24	50	*i* PKPdf	PKPdf	04 25 05.7	+0.1
	comp=Z,16nm,1.8s						
CLL				Lm		04 18 00.0	
	comp=N,100nm,20.4s						
CLL				Lm		04 18 00.0	
	comp=E,200nm,20.4s						
CLL				Lm		04 18 00.0	
	comp=Z,200nm,19.1s						
CLL				*i* sPKPdf		04 25 11.9	
CLL				*e*PPS		04 38 59.0	
CLL				*e*SS	SS	04 44 33.0	+7.6
CLL				*e*SSS		04 49 18.0	
BRG	**Berggiesshubel**	128.69	51	*i* PKP	PKPdf	04 25 06.4	-0.1
BRG	comp=Z,4.0nm,1.1s						
	comp=N,120nm,17.4s						
BRG							
	comp=E,155nm,21.0s						
BRG							
	comp=Z,189nm,22.9s						
PRU	**Pruhonice**	128.82	52	AMS	AMS	05 17 10.0	
	comp=Z,200nm,21.3s						
PVCC	**Panska Ves**	128.98	51	AMS	AMS	05 14 10.0	
	comp=Z,300nm,23.0s						
TREC	**Trest**	129.22	53	AMS	AMS	05 21 00.0	
	comp=Z,200nm,16.8s						
NOA	**NORSAR Array B**	129.44	38	PKP	PKPdf	04 25 07.4	-0.2
	comp=Z,1.0nm,0.9s,baz=273,slow=2.2,SNR=3.5						
DPC	**Dobruska-Polom**	130.02	52	*ex*	x	04 25 27.8	
DPC				AMS	AMS	05 24 30.0	
	comp=Z,200nm,21.4s						
PETK	**Petropavlovsk-**	130.41	312	PKP	PKPdf	04 25 08.6	-1.1
	comp=Z,3.4nm,0.9s,baz=329,slow=5.0,SNR=3.6						
OKC	**Ostrava-Krasne**	131.03	53	AMS	AMS	05 20 30.0	
	comp=Z,200nm,25.1s						
FINES	**FINESS Array B**	136.63	38	PKP	PKPdf	04 25 20.8	-0.3
	comp=Z,1.7nm,0.8s,baz=205,slow=8.4,SNR=4.1						
AKASG	**Malin Array Be**	138.17	54	PKP	PKPdf	04 25 23.2	-1.1
	comp=Z,0.2nm,0.3s,baz=263,slow=1.9,SNR=4.2						
HOMI	**Horasan**	145.45	73	*i* P	PKPdf	04 25 36.4	-1.3
DBAD	**Bademkaya**	145.49	71	*i* P	PKPdf	04 25 38.5	+0.8
DDEM	**Demirkent**	145.51	71	*i* P	PKPdf	04 25 38.6	+0.8
ARTV	**Artvin**	145.69	71	*i* P	PKPdf	04 25 38.9	+0.8
GNI	**Garni**	147.61	73	*e*PKPbc	PKPbc	04 25 45.1	+1.0
MDJ	**Mudanjiang**	147.63	295	PKPbc	PKPbc	04 25 40.8	-3.2
MDJ				PP	PP	04 29 09.0	-2.2
MDJ				SS	SS	04 48 13.5	-2.0
MDJ				AMB	AMB		
	comp=Z,44nm,5.9s						
MDJ				LR	LR		
	comp=N,57nm,28.6s,MS4.5						
MDJ				LR	LR		
	comp=E,120nm,31.2s,MS4.5						
MDJ				LR	LR		
	comp=Z,180nm,34.7s,MS4.6						
KSRS	**Korea Array**	147.73	281	PKPbc	PKPbc	04 25 43.3	-1.1
	comp=Z,9.6nm,1.0s,baz=113,slow=3.6,SNR=8.7						
CN2	**Changchun**	150.56	293	*e*PKPbc	PKPbc	04 25 49.5	-1.9
CN2				PP	PP	04 29 33.5	+5.2
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,200nm,16.0s,MS5.2						
CN2				LR	LR		
	comp=E,200nm,16.0s,MS5.2						
CN2				LR	LR		
	comp=Z,200nm,20.0s,MS4.9						
NJ2	**Nanjing**	153.15	266	*e*PKPbc	PKPdf	04 25 45.8	-4.5
NJ2				pPKP	pPKPdf	04 25 55.5	+1.8
NJ2				sPKP		04 25 59.0	
NJ2				PKPab	PKPab	04 26 07.5	-1.9
NJ2				PKS		04 29 19.0	
NJ2				PP	PP	04 29 41.0	-2.2
BJI	**Beijing**	157.22	283	PKP	PKPdf	04 25 55.3	-0.2
BJI				PP	PP	04 30 04.0	-1.9
BJI				AMB	AMB		
	comp=Z,54nm,4.1s						
BJI				LR	LR		
	comp=N,130nm,19.7s,MS4.9						
BJI				LR	LR		
	comp=E,160nm,23.5s,MS4.9						
BJI				LR	LR		
	comp=Z,190nm,24.7s,MS4.8						
GYA	**Guiyang**	159.49	240	PKP	PKPdf	04 25 58.0	-0.7
GYA				PKS		04 29 30.5	
GYA				PP	PP	04 30 18.8	+0.7
GYA				SKKS	SKKSac	04 37 06.0	-1.1
GYA				SS	SS	04 50 23.5	-1.3
GYA				AMB	AMB		
	comp=Z,120nm,7.9s						
GYA				LR	LR		
	comp=N,130nm,20.6s,MS4.9						
GYA				LR	LR		
	comp=E,120nm,22.7s,MS4.9						
GYA				LR	LR		
	comp=Z,110nm,21.9s,MS4.7						
HHC	**Hu-ho-hao-te**	160.77	285	*e*PKP	PKPdf	04 25 56.0	-3.7
HHC				PP	PP	04 30 24.8	-0.5
HHC				SS	SS	04 50 32.5	-6.4
HHC				LR	LR		
	comp=N,100nm,23.8s						
HHC				LR	LR		
	comp=E,130nm,22.6s						
HHC				LR	LR		
	comp=Z,150nm,22.6s						
KMI	**Kunming**	161.10	230	PKP	PKPdf	04 26 00.3	-0.2
KMI				pPKP	pPKPdf	04 26 03.5	-0.5
KMI				sPKP		04 26 04.8	
KMI				PKS		04 29 32.3	
KMI				PP	PP	04 30 30.5	+4.0
KMI				SKKS	SKKSac	04 37 15.0	-0.4
KMI				SS	SS	04 50 41.8	+0.5
KMI				AMB	AMB		
	comp=Z,54nm,8.3s						
KMI				LR	LR		
	comp=N,97nm,15.8s						
KMI				LR	LR		
	comp=E,120nm,26.0s						
KMI				LR	LR		
	comp=Z,190nm,26.9s						
BVAR	**Borovoye Array**	161.47	32	PKP	PKPdf	04 25 58.1	-1.9
	comp=Z,0.5nm,0.5s,baz=207,slow=2.9,SNR=4.9						
BVAR				PKPab	PKPab	04 26 44.0	-0.5
	comp=Z,1.1nm,0.8s,baz=333,slow=8.1,SNR=3.1						
SONM	**Songino Array**	162.89	310	PKP	PKPdf	04 25 57.8	-3.8
	comp=Z,0.2nm,0.3s,baz=145,slow=3.5,SNR=2.8						
SONM				PKPab	PKPab	04 26 48.8	-2.1
	comp=Z,1.1nm,0.9s,baz=89,slow=3.1,SNR=7.4						
CD2	**Chengdu**	164.19	247	*e*PKP	PKPdf	04 26 02.0	-1.4
CD2				pPKP	pPKPdf	04 26 06.5	-0.3
CD2				sPKP		04 26 09.8	
CD2				PKPab	PKPab	04 26 58.0	+0.8
CD2				PP	PP	04 30 45.3	+2.0
CD2				SKS	SKSdf	04 33 01.0	-6.9
CD2				SKKS	SKKSac	04 37 27.3	-3.8
CD2				SS	SS	04 51 10.3	-3.8
CD2				AMB	AMB		
	comp=Z,120nm,10.2s						
CD2				LR	LR		
	comp=N,180nm,18.6s						
CD2				LR	LR		
	comp=Z,160nm,16.2s						
ZALV	**Zalesovo Beam**	164.37	4	PKP	PKPdf	04 26 00.9	-1.8
	comp=Z,0.3nm,0.4s,baz=70,slow=1.7,SNR=2.3						
ZALV				PKPab	PKPab	04 26 55.5	-1.6
	comp=Z,1.6nm,0.8s,baz=1.9,slow=4.5,SNR=3.6						
LZH	**Lanzhou**	166.22	266	*e*PKP	PKPdf	04 25 59.5	-5.4
LZH				pPKP	pPKPdf	04 26 05.0	-3.4
LZH				sPKP		04 26 09.5	
LZH				PKS		04 29 32.3	
LZH				SKS	SKSdf	04 33 01.0	-8.0
LZH				SS	SS	04 51 28.0	-7.3
LZH				AMB	AMB		
	comp=Z,65nm,4.8s						
LZH				LR	LR		
	comp=N,230nm,17.0s						
LZH				LR	LR		
	comp=Z,280nm,18.1s						
KURK	**Kurchatov**	166.37	23	PKPab	PKPab	04 27 03.9	-2.2
	comp=Z,2.4nm,0.9s,baz=331,slow=4.9,SNR=7.2						
KURK	**Kurchatov**	166.37	23	*e*PKPdf	PKPdf	04 26 03.4	-1.2
KURK				*e*PKPab	PKPab	04 27 05.8	-0.2
MKAR	**Makanchi Array**	170.96	20	PKP	PKPdf	04 26 04.0	-3.7
	comp=Z,0.2nm,0.3s,baz=288,slow=1.4,SNR=2.3						
WMQ	**Urumqi**	174.52	353	*e*PKP	PKPdf	04 26 10.0	+0.7
WMQ				PP	PP	04 31 38.0	+4.0
WMQ				SKKS	SKKSac	04 38 23.0	+2.3
WMQ				SS	SS	04 52 57.0	+2.6
WMQ				LR	LR		
	comp=N,250nm,22.0s						
WMQ				LR	LR		
	comp=E,420nm,22.0s						
WMQ				LR	LR		
	comp=Z,270nm,22.0s						

IDC 30 04:28:05.7±28.0, 7°.13S×120°.33E, h517km±383km, mb2.8/3, mb1 2.8/4, mb1mx2.7/19, mbtmp2.7/4, Error ellipse: s-maj=243.5km s-min=70.0km az=70.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	18.63	135	P	P	04 31 51.0	0.0
	0.2nm,0.3s,baz=313,slow=10,SNR=13						
ASAR	**Alice Springs**	20.99	143	P	P	04 32 12.3	0.0
	0.3nm,0.4s,baz=318,slow=8.8,SNR=6.2						
STKA	**Stephens Creek**	31.62	144	P	P	04 33 45.9	0.0
	3.4nm,0.9s,baz=293,slow=7.7,SNR=3.2						
MKAR	**Makanchi Array**	63.42	332	P	P	04 37 44.4	+0.1
	0.4nm,0.6s,baz=127,slow=8.2,SNR=2.5						

IDC 30 04:30:13.9±2.1, 0°.62N×97°.11E, h0km, mb3.8/5, mb1 3.9/7, mb1mx3.7/22, mbtmp3.8/7, ML3.6/2, Error ellipse: s-maj=52.7km s-min=27.1km az=60.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	2.83	40	Pn	Pn	04 30 59.5	-0.9
	3.4nm,0.3s,baz=199,slow=6.2,SNR=10.0						
CMAR	**Chiang Mai Arr**	17.82	6	P	Pn	04 34 22.4	-1.2
	0.2nm,0.3s,baz=199,slow=12,SNR=4.6						
WRA	**Warramunga Arr**	41.81	121	P	P	04 38 05.6	-0.1
	0.8nm,1.0s,baz=300,slow=9.3,SNR=3.1						
KSRS	**Korea Array**	46.38	34	P	P	04 38 42.0	-0.1
	0.4nm,0.4s,baz=224,slow=10,SNR=4.7						
SONM	**Songino Array**	47.72	8	P	P	04 38 53.0	+0.6
	1.2nm,0.5s,baz=194,slow=10.0,SNR=6.4						
MKAR	**Makanchi Array**	47.78	346	P	P	04 38 54.2	+1.3
	0.9nm,0.7s,baz=160,slow=9.4,SNR=6.1						
ZALV	**Zalesovo Beam**	54.12	351	P	P	04 39 38.6	-1.9
	1.0nm,0.3s,baz=156,slow=9.2,SNR=3.7						

*ISCJB **30** 04:31:39.0±0.9, 32°.42N±0°.03×105°.49E±0°.05, h2km±6km, mb3.8/11, Error ellipse: s-maj=7.2km s-min=5.2km az=12.8*
*IDC **30** 04:31:40.1±1.0, 32°.40N×105°.28E, h0km, mb3.7/8, mb1 3.7/10, mb1mx3.6/26, mbtmp3.7/10, ML3.3/2, MS4.2/1, Ms1 4.2/1, ms1mx2.6/28, Error ellipse: s-maj=42.5km s-min=17.6km az=50.0*
*NEIC **30** 04:31:41.6±0.5, 32°.48N×105°.40E, h10km, mb4.4/3, Error ellipse: s-maj=22.3km s-min=9.7km az=61.0*
*BJI **30** 04:31:43.6, 32°.56N×105°.28E, h13km, mB4.5/1, mb4.1/1, ML3.6/15, Ms3.7/5, Ms7 3.4/6*

ISC 30 04:31:40.9±0.9, 32°.47N±0°.03×105°.45E±0°.04, h1km±6km, n25, σ1s15/35, mb3.9/11, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	2.12	223	Pn	**Pn**	04 32 18.5	+1.1
CD2				Pg	**Pg**	04 32 21.5	0.0
CD2				Sn	**Sn**	04 32 45.8	+1.4
CD2				Sg	**Sg**	04 32 49.5	+0.6
CD2				smax			
	comp=N,3μm,0.7s						
CD2				smax			
	comp=E,3μm,0.6s						
XAN	**Xi'an**	3.31	61	Pn	**Pn**	04 32 36.5	+2.7
XAN				Pg	**Pg**	04 32 45.0	+0.7
XAN				Sn	**Sn**	04 33 15.5	+1.7
XAN				Sg	**Sg**	04 33 25.5	-1.7
XAN				smax			
	comp=N,260nm,0.5s						
XAN				smax			
	comp=E,140nm,0.6s						
XAN				LR	LR		
	comp=N,250nm,8.5s						
XAN				LR	LR		
	comp=E,97nm,8.5s						
XAN				LR	LR		
	comp=Z,110nm,8.5s						
LZH	**Lanzhou**	3.84	340	*e*Pn	**Pn**	04 32 43.3	+2.1
LZH				Pg	**Pb**	04 32 49.0	-0.5
LZH				Sn	**Sn**	04 33 29.0	+2.0
LZH				Sg	**Sb**	04 33 37.5	+0.9
LZH				smax			
	comp=N,410nm,0.6s						
LZH				smax			
	comp=E,1μm,0.7s						
LZH				LR	LR		
	comp=E,770nm,5.7s						
LZH				LR	LR		
	comp=Z,900nm,6.9s						
GYA	**Guiyang**	6.08	170	Pn	**Pn**	04 33 14.5	+2.5
GYA				Pg	**Pg**	04 33 37.0	-0.5
GYA				Sn	**Sn**	04 34 21.5	-0.8
GYA				smax			
	comp=N,80nm,1.1s						
GYA				smax			
	comp=E,60nm,0.7s						
SONM	**Songino Array**	15.37	2	Pn	**Pn**	04 35 18.5	-0.4
	comp=E,0.1nm,0.3s,baz=181,slow=14,SNR=2.9						
KSRS	**Korea Array**	19.07	69	P	**Pn**	04 36 06.0	+0.6
	comp=E,0.2nm,0.3s,baz=266,slow=11,SNR=4.1						
MK31	**Makanchi Array**	22.75	316	*e*P	**P**	04 36 43.5	-0.9
MKAR	**Makanchi Array**	22.75	316	P	**P**	04 36 43.2	-1.1
	comp=E,1.8nm,0.7s,mb3.7,baz=120,slow=12,SNR=15						
ZALV	**Zalesovo Beam**	26.03	332	P	**P**	04 37 14.7	-0.6
	comp=E,0.5nm,0.3s,mb3.5,baz=148,slow=8.5,SNR=1.8						
KURK	**Kurchatov**	26.88	321	P	**P**	04 37 21.7	-1.3
	comp=E,0.6nm,0.7s,mb3.4,baz=128,slow=8.9,SNR=5.5						
AKTO	**Aktyubinsk**	39.06	312	P	**P**	04 39 09.0	-0.2
	comp=E,0.6nm,0.5s,mb3.5,baz=114,slow=16,SNR=3.3						
FITZ	**Fitzroy Crossi**	53.87	156	LR	LR	05 05 09.5	
	comp=E,238nm,21.4s,baz=74,slow=37						
FINES	**FINESS Array B**	57.08	326	P	**P**	04 41 27.3	-1.1
	comp=E,0.4nm,0.4s,mb3.8,baz=99,slow=13,SNR=2.8						
AKASG	**Malin Array Be**	57.29	313	P	**P**	04 41 28.6	-1.5
	comp=E,1.3nm,0.4s,mb4.3,baz=65,slow=8.3,SNR=4.9						
WRA	**Warramunga Arr**	59.00	148	P	**P**	04 41 40.7	-1.6
	comp=E,1.3nm,0.8s,mb4.0,baz=339,slow=7.4,SNR=5.3						
WRA	**Warramunga Arr**	59.00	148	P	**P**	04 41 40.7	-1.6
ASAR	**Alice Springs**	62.09	150	P	**P**	04 42 03.8	+0.4
	comp=E,0.5nm,0.8s,mb3.8,baz=327,slow=5.8,SNR=4.3						
LPG	**La Plagne**	73.15	313	*e*P	**P**	04 43 13.0	-0.1
	comp=E,3.7nm,0.5s,mb4.4						
LPG	**La Plagne**	73.15	313	*e*P	**P**	04 43 13.0	-0.1
	comp=E,1.9nm,0.5s,mb4.5						
LPL	**La Plagne**	73.15	313	*e*P	**P**	04 43 12.9	-0.2
	comp=E,3.9nm,0.6s,mb4.4						
LPL	**La Plagne**	73.15	313	*e*P	**P**	04 43 12.9	-0.2
	comp=E,2.0nm,0.6s,mb4.4						
PGF	**Pioggiola**	73.15	310	*e*P	**P**	04 43 12.6	-0.6
	comp=E,2.3nm,0.5s,mb4.2						
PGF	**Pioggiola**	73.15	310	*e*P	**P**	04 43 12.6	-0.6
	comp=E,1.1nm,0.5s,mb4.2						
SMF	**Signal de Mont**	74.33	315	*e*P	**P**	04 43 19.6	-0.4
TCF	**Toulx Ste Croi**	75.48	316	*e*P	**P**	04 43 25.9	-0.8

MAN 30 04:42:32, 12°.62N×123°.43E, h65km, mb4.0, ML2.8, MS2.5, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AUQP	**San Andres**	1.01	314	*e*P	Pn	04 42 52.5	+2.0
PVCP	**Virac**	1.20	36	*e*P	Pn	04 42 54.8	+1.9
CNP	**Catarman**	1.21	95	*e*P	Pn	04 42 54.5	+1.5
CNP				*e*S	Sn	04 43 11.5	+2.7
GQP	**Guinayangan**	1.59	323	⇑*e*P	Pn	04 42 59.9	+1.7
GUIM	**Jordan**	2.14	203	*e*P	Pn	04 43 12.0	+6.4
GUIM				*e*S	Sn	04 43 28.8	-2.3

MEX 30 05:03:47.6±0.5, 16°.84N×94°.73W, h70km±19km, MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGIG		1.54	92	*i* P	Pn	05 04 12.1	-1.0
TGIG				*i* S	Sn	05 04 30.5	-1.8
HUIG	**Huatulco**	1.70	232	*i* P	Pn	05 04 13.9	-1.3
HUIG				*i* S	Sn	05 04 34.5	-1.7
PCIG		1.83	128	*i* P	Pn	05 04 15.6	-1.5
PCIG				*i* S	Sn	05 04 37.2	-2.2
VHO	**Vista Hermosa**	1.94	277	*e*P	Pn	05 04 17.3	-1.0
VHO				*i* S	Sn	05 04 40.2	-1.6
TPIG	**Tehuac#an**	2.97	302	*e*P	Pn	05 04 29.4	-2.9
PNIG	**Pinotepa**	3.29	263	*i* P	Pn	05 04 34.8	-2.0
PNIG				*i* S	Sn	05 05 13.2	-1.5

IDC 30 05:21:40.5±3.6, 8°.74S×149°.08E, h0km, mb3.9/5, mb1 3.9/6, mb1mx3.8/16, mbtmp3.9/6, ML3.6/1, Error ellipse: s-maj=106.2km s-min=26.9km az=116.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	18.09	230	P	Pn	05 25 53.4	0.0
	0.2nm,0.3s,baz=56,slow=12,SNR=13						
ASAR	**Alice Springs**	20.77	223	P	P	05 26 24.6	+1.4
	0.9nm,0.8s,baz=56,slow=10.0,SNR=8.6						
FITZ	**Fitzroy Crossi**	24.60	245	P	P	05 27 01.1	-1.5
	1.1nm,0.4s,baz=62,slow=8.6,SNR=9.8						
MKAR	**Makanchi Array**	80.91	320	P	P	05 33 57.4	+0.7
	1.1nm,0.6s,baz=113,slow=5.9,SNR=11						
ZALV	**Zalesovo Beam**	82.41	328	P	P	05 34 04.2	-0.2
	0.5nm,0.3s,baz=116,slow=6.6,SNR=2.5						
KURK	**Kurchatov**	84.62	323	P	P	05 34 16.2	+0.4
	1.4nm,0.7s,baz=119,slow=3.8,SNR=6.0						

IDC 30 05:42:04.4±5.3, 56°.31S×151°.14W, h0km, mb3.8/2, mb1 4.0/2, mb1mx3.7/12, mbtmp3.8/2, Error ellipse: s-maj=560.4km s-min=80.0km az=170.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	62.35	268	P	P	05 52 28.9	+0.3
	1.2nm,0.7s,baz=141,slow=6.6,SNR=8.6						
WRA	**Warramunga Arr**	65.07	271	P	P	05 52 46.4	-0.2
	0.6nm,0.8s,baz=144,slow=5.8,SNR=13						
MKAR	**Makanchi Array**	146.24	277	PKPbc	PKPbc	06 01 45.0	-0.7
	1.1nm,0.7s,baz=132,slow=3.6,SNR=9.8						
ZALV	**Zalesovo Beam**	148.66	290	PKPbc	PKPbc	06 01 51.6	-0.5
	0.6nm,0.4s,baz=90,slow=2.9,SNR=2.7						

*IDC **30** 05:42:54.3±1.6, 1°.80N×122°.48E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.5/21, mbtmp3.7/4, Error ellipse: s-maj=136.6km s-min=23.4km az=64.0*
*ISCJB **30** 05:43:22.2±1.7, 0°.4N±0°.2×122°.2E±0°.3, h185km±8km, mb3.6/3, Error ellipse: s-maj=63.9km s-min=22.2km az=148.9*
*DJA **30** 05:43:26, 0°.34N×122°.07E, h158km, MLv2.8/3*

ISC 30 05:43:23.4±1.6, 0°.4N±0°.2×122°.3E±0°.3, h179km±8km, n7, σ0s51/9, mb3.6/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MRSI	**Marisa**	0.32	281	P	**Pn**	05 43 47.7	+0.2
MRSI				S	**Sn**	05 44 05.3	-0.6
APSI	**Ampana**	1.45	205	P	**Pn**	05 43 55.1	+0.3
LUWI	**Luwuk**	1.54	160	P	**Pn**	05 43 56.7	+1.1
LUWI				S	**Sn**	05 44 20.2	-0.4
FITZ	**Fitzroy Crossi**	18.70	170	P	**P**	05 47 28.0	-0.3
	1.7nm,0.5s,baz=18,slow=5.6,SNR=11						
WRA	**Warramunga Arr**	23.44	150	P	**P**	05 48 16.2	-0.5
	1.7nm,0.5s,mb3.7,baz=330,slow=11,SNR=26						
ASAR	**Alice Springs**	26.48	155	P	**P**	05 48 44.4	+0.2
	0.5nm,0.5s,mb3.4,baz=345,slow=14,SNR=9.9						
MKAR	**Makanchi Array**	57.87	329	P	**P**	05 52 40.3	-16
	0.4nm,0.4s,mb3.6,baz=118,slow=6.9,SNR=7.3						

*JMA **30** 06:13:53.1±0.3, 22°.89N×123°.01E, h75km, M2.9*

TAP 30 06:13:52.8, 22.76N×122.78E, h65km±1km, ML3.4, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LAY	**Lan-yu**	1.

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**1.71**	**7**	P	Pn	06 14 19.6	-0.8
YOJ				*e*S	Sn	06 14 38.7	-2.6
IRIF	**Iriomote-Funau**	**1.79**	**29**	P	Pn	06 14 19.8	-1.7
IRIF				*e*S	Sn	06 14 40.2	-3.1
EAST	**Anshuo**	**1.83**	**258**	P	Pn	06 14 22.6	+0.6
	baz=247						
EAST				*e*S	Sn	06 14 44.5	+0.4
	baz=247						
JKRS	**Kuro-shima**	**1.85**	**37**	P	Pn	06 14 20.7	-1.6
JKRS				S	Sn	06 14 40.9	-3.9
STYT	**Tauyuan**	**1.91**	**282**	P	Pn	06 14 23.9	+0.8
	baz=274						
STYT				*e*S	Sn	06 14 46.6	+0.4
	baz=274						
ENA	**Nanau**	**1.92**	**330**	*e*P	Pn	06 14 22.9	-0.3
	baz=330						
WHF	**Hehuan Shan**	**1.96**	**315**	*e*P	Pn	06 14 23.6	-0.2
	baz=314						
WHF				*e*S	Sn	06 14 46.7	-0.7
	baz=314						
SSD	**Sandimen**	**1.98**	**270**	*e*P	Pn	06 14 24.7	+0.6
	baz=270						
TWK1	**Hengchun**	**2.00**	**246**	P	Pn	06 14 24.9	+0.5
	baz=245						
TWK1				*e*S	Sn	06 14 47.6	-0.9
	baz=245						
JIJ	**Ishigaki jima**	**2.03**	**38**	P	Pn	06 14 22.3	-2.4
JIJ				S	Sn	06 14 44.5	-4.5
SCZT	**Fangliau**	**2.04**	**259**	*e*P	Pn	06 14 26.1	+1.3
	baz=249						
SCZT				*e*S	Sn	06 14 53.0	+3.7
	baz=249						
WTP	**Ta-pu**	**2.06**	**284**	*e*P	Pn	06 14 26.3	+1.3
	baz=288						
SMLT	**Sun Moon Lake**	**2.06**	**303**	*e*P	Pn	06 14 27.0	+1.9
	baz=309						
TWT	**Tachien**	**2.09**	**316**	*e*P	Pn	06 14 25.9	+0.3
	baz=314						
TWT				*e*S	Sn	06 14 50.2	-0.4
	baz=314						
TYC	**Yuchr**	**2.10**	**303**	*e*P	Pn	06 14 26.7	+0.9
	baz=308						
CHN5	**Tsauling**	**2.11**	**294**	*e*P	Pn	06 14 28.2	+2.5
	baz=292						
CHN5				*e*S	Sn	06 14 53.5	+2.6
	baz=292						
NNS	**Nan Shan**	**2.11**	**323**	*e*P	Pn	06 14 26.3	+0.5
	baz=322						
CHN1	**Nanshi**	**2.12**	**282**	*e*P	Pn	06 14 27.9	+1.9
	baz=280						
CHN1				*e*S	Sn	06 14 54.1	+2.9
	baz=280						
TWK	**Hsinying**	**2.17**	**284**	*e*P	Pn	06 14 28.7	+2.0
	baz=291						
TWK				*e*S	Sn	06 14 56.0	+3.5
	baz=291						
NSK	**Sanguang**	**2.31**	**326**	*e*P	Pn	06 14 28.5	-0.1
	baz=326						
NSK				*e*S	Sn	06 14 54.5	-1.4
	baz=326						
TWQ1	**Liyutan**	**2.43**	**311**	*e*P	Pn	06 14 31.8	+1.7
	baz=319						
NSTT	**Nanjuang**	**2.48**	**319**	*e*P	Pn	06 14 31.8	+1.0
	baz=319						
JTJ	**Tarama**	**2.57**	**43**	P	Pn	06 14 29.7	-2.4
JTJ				*e*S	Sn	06 14 58.2	-4.0

ISCJB ***30*** *06:15:58.7±1.4, 20.°9S±0.°1×178.°8W±0.°1, h535km±20km, mb4.4/17, Error ellipse: s-maj=25.0km s-min=11.7km az=145.4*

NEIC ***30*** *06:16:00.9±1.1, 21.°02S×178.°66W, h563km±12km, mb4.4/2, Error ellipse: s-maj=25.6km s-min=13.9km az=145.0*

IDC ***30*** *06:16:01.5±1.9, 20.°69S×178.°89W, h558km±21km, mb3.6/8, mb1 3.9/9, mb1mx3.7/15, mbtmp3.6/9, Error ellipse: s-maj=34.7km s-min=13.0km az=149.0*

ISC 30 06:16:00.8±1.1, 21.°0S±0.°1×178.°7W±0.°1, h556km±13km, n35, σ1°07/30, mb4.4/17, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.50**	**316**	*e*Pn	**P**	**06 17 29.5**	**+2.6**
AFI	**Afiamalu**	**9.66**	**44**	P	**P**	**06 18 14.0**	**-1.5**
	2.0nm,0.3s,baz=186,slow=19,SNR=3.4						
AFI				S	**S**	**06 19 57.2**	**-8.8**
	1.2nm,0.3s,baz=201,slow=22,SNR=2.4						
URZ	**Urewera**	**17.56**	**191**	P	**P**	**06 19 32.5**	**-1.7**
	0.6nm,0.3s,baz=353,slow=8.1,SNR=5.8						
URZ				S	**S**	**06 22 19.0**	**-9.0**
	0.1nm,0.3s,baz=45,slow=23,SNR=1.9						
ARMA	**Armidale**	**28.27**	**245**	*e*P	**P**	**06 21 10.7**	**+0.8**
CNB	**Canberra Magne**	**31.41**	**236**	*e*P	**P**	**06 21 37.8**	**+0.9**
CTA	**Charters Tower**	**32.81**	**265**	*e*P	**P**	**06 21 49.1**	**+0.1**
	17nm,0.6s,mb4.8						
CTAO	**Charters Tower**	**32.81**	**265**	*e*P	**P**	**06 21 49.2**	**+0.2**
	17nm,0.7s,mb4.7						
CMSA	**Cobar Meteorol**	**33.49**	**244**	*e*P	**P**	**06 21 54.8**	**+0.2**
COEN	**Coen**	**36.98**	**275**	*e*P	**P**	**06 22 24.0**	**+0.1**
STKA	**Stephens Creek**	**36.99**	**245**	*e*P	**P**	**06 22 24.1**	**+0.4**
	4.7nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**36.99**	**245**	P	**P**	**06 22 23.9**	**+0.3**
	5.3nm,0.5s,mb4.3,baz=75,slow=9.8,SNR=11						
BBOO	**Buckleboo**	**41.75**	**244**	*e*P	**P**	**06 23 01.4**	**-0.5**
	11nm,0.6s,mb4.6						
ASAR	**Alice Springs**	**43.78**	**257**	P	**P**	**06 23 17.6**	**-0.4**
	11nm,0.6s,mb4.5,baz=98,slow=7.7,SNR=138						
ASAR				PcP	PcP	06 24 51.7	-0.5
	1.5nm,0.6s,baz=101,slow=4.2,SNR=6.8						
ASAR				ScP	ScP	06 27 49.5	-1.8
	1.5nm,0.7s,baz=105,slow=4.6,SNR=11						
WRAB	**Tennant Creek**	**43.89**	**263**	*e*P	**P**	**06 23 17.8**	**-1.1**
	15nm,1.1s,mb4.4						
WRA	**Warramunga Arr**	**43.90**	**263**	P	**P**	**06 23 17.9**	**-1.0**
	12nm,0.9s,mb4.4,baz=96,slow=7.9,SNR=83						
KAKA	**Kakadu**	**47.35**	**272**	*e*P	**P**	**06 23 44.3**	**-0.9**
	15nm,0.7s,mb4.6						
KAKA	**Kakadu**	**47.35**	**272**	*e*P	**P**	**06 23 44.8**	**-0.5**
	43nm,0.9s,mb5.0						
FITZ	**Fitzroy Crossi**	**52.33**	**263**	*e*P	**P**	**06 24 21.2**	**-0.5**
	5.2nm,0.6s,mb4.0						
PETK	**Petropavlovsk-**	**76.61**	**346**	P	**P**	**06 26 53.4**	**-0.9**
	3.0nm,0.7s,mb3.9,baz=118,slow=6.4,SNR=3.9						
MAW	**Mawson**	**80.86**	**200**	P	**P**	**06 27 19.0**	**+2.2**
	62nm,1.0s,mb5.0,baz=194,slow=7.5,SNR=3.0						
NVAR	**Mina Array Bea**	**81.84**	**44**	P	**P**	**06 27 23.0**	**+0.7**
	1.3nm,0.5s,mb3.6,baz=226,slow=7.1,SNR=15						
TRF	**Thorofare Moun**	**87.09**	**12**	*e*P	**P**	**06 27 46.1**	**-1.1**
	5.9nm,0.8s,mb4.3						
TXAR	**Lajitas Array**	**87.87**	**58**	P	**P**	**06 27 53.0**	**+1.2**
	2.1nm,0.8s,mb3.9,baz=218,slow=6.3,SNR=22						
TXAR	**Lajitas Array**	**87.87**	**58**	P	**P**	**06 27 53.0**	**+1.2**
CMAR	**Chiang Mai Arr**	**89.69**	**290**	P	**P**	**06 28 01.4**	**+0.9**
	0.8nm,0.3s,mb4.0,baz=132,slow=3.6,SNR=6.9						
PDAR	**Pinedale Array**	**89.78**	**43**	P	**P**	**06 28 00.5**	**+0.2**
	1.7nm,0.7s,mb4.0,baz=217,slow=3.3,SNR=17						
HRY	**Holter Researc**	**90.34**	**39**	*e*P	**P**	**06 28 06.3**	**+3.5**
	103nm,1.7s,mb5.4						
COLD	**Coldfoot**	**90.50**	**11**	*e*P	**P**	**06 27 57.8**	**-5.3**
	72nm,1.2s,mb5.5						
BVAR	**Borovoye Array**	**119.06**	**320**	PKP	PKPdf	06 33 44.4	-2.1
	1.1nm,0.4s,baz=67,slow=5.0,SNR=6.9						
ARCES	**ARCESS Array B**	**129.31**	**349**	PKP	PKPdf	06 34 03.8	-1.8
	1.1nm,0.6s,baz=0.0,slow=1.2,SNR=8.7						
FINES	**FINESS Array B**	**136.09**	**343**	PKP	PKPdf	06 34 18.5	0.0
	1.2nm,0.6s,baz=116,slow=6.3,SNR=2.9						
AKASG	**Malin Array Be**	**143.15**	**330**	PKhKP		06 34 27.9	
	6.0nm,0.4s,baz=43,slow=4.2,SNR=42						
BRTR	**Keskin Array B**	**146.71**	**311**	PKPbc	PKPbc	06 34 40.0	-0.9
	2.3nm,0.6s,baz=138,slow=4.8,SNR=4.7						
BRTR	**Keskin Array B**	**146.71**	**311**	PKPbc	PKPbc	06 34 40.0	-0.9
CLL	**Collm**	**148.42**	**346**	*e*PKPbc	PKPbc	06 34 44.0	-0.8
CLL				LmV		06 42 00.0	
	comp=Z,200nm,20.7s						

SZGRF ***30*** *06:17:27.1, 59.°30S×22.°79W, h10km, mb7.0, South Sandwich Islands region*

IDC ***30*** *06:17:41.3±0.3, 58.°15S×21.°90W, h0km, mb5.8/24, mb1 5.8/24, mb1mx5.8/25, mbtmp5.8/24, MS6.6/19, Ms1 6.6/19, ms1mx6.6/24, Error ellipse: s-maj=11.4km s-min=8.3km az=159.0*

BJI ***30*** *06:17:42.8, 58.°20S×22.°10W, h19km, mB6.4/28, Ms6.8/61, Ms7 6.6/47*

ISCJB ***30*** *06:17:42.2±0.1, 58.°32S±0.°03×21.°98W±0.°06, h10km, mb6.0/112, MS6.7/275, Error ellipse: s-maj=5.0km s-min=3.9km az=41.0*

NEIC ***30*** *06:17:43.0±0.1, 58.°23S×22.°10W, h8km, mb6.1/82, ME7.6, MS6.7/204, MW7.0, MW6.9, Error ellipse: s-maj=7.3km s-min=6.7km az=9.0 Broadband fault plane solution: P waves. NP1:φs145.00000°, δ85.00000°, λ-178.00000°. NP2:φs55.00000°, δ88.00000°, λ-5.00000°. Principal axes: T Plg2.0000°, Azm100.0000°; N Plg0.0000°, Azm0.0000°; P Plg5.0000°, Azm10.0000°; Moment Tensor Solution. s33 Moment tensor: Scale 10^19 Nm; Mrr=0.03; Mθθ=2.26; Mφφ2.29; Mrθ0.22; Mθφ0.70; Mφr=0.08; Best double couple: M0=2.40000×10^19 NP1:φs233.00000°, δ85.00000°, λ-3.00000°. NP2:φs324.00000°, δ87.00000°, λ-175.00000°. Principal axes: T 2.4000, Plg1.0000°, Azm98.0000°; N -0.0100, Plg84.0000°, Azm357.0000°; P -2.3900, Plg5.0000°, Azm188.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

MOS ***30*** *06:17:46.4±1.1, 58.°32S×21.°75W, h33km, mb6.5/29, MS6.5/62 Error ellipse: s-maj=27.8km s-min=12.6km az=86.8*

DJA ***30*** *06:17:47, 58.°40S×21.°16W, h10km, Mw6.9/13*

GCMT ***30*** *06:17:51.6±0.1, 58.°33S×21.°77W, h26km, MW7.0, Moment Tensor Solution. s118,c288; s99,c276; Moment tensor: Scale 10^19Nm; Mrr0.06±.01; Mθθ-3.31±.01; Mφφ3.25±.01; Mrθ-0.39±.04; Mθφ0.93±.01; Mφr-0.20±.04; Best double couple: M0=3.40000×10^19 NP1:φs143.00000°, δ83.00000°, λ-179.00000°. NP2: φs53.00000°, δ89.00000°, λ-7.00000°. Principal axes: T 3.4000, Plg4.0000°, Azm98.0000°; N 0.0800, Plg83.0000°, Azm225.0000°; P -3.4800, Plg6.0000°, Azm8.0000°; Data Used: II IU IC G CN. LP body wave period 50 sec. Mantle waves from 116 sta. Surface waves: sta=116, comp=266, per= 50.*

ISC 30 06:17:43.8±0.1, 58.°28S±0.°03×21.°98W±0.°06, h10km, n1268, σ1°37/331, mb6.0/110, MS6.7/275, 237C-207D, East of South Sandwich Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.69**	**160**	*e*Pn	**Pn**	**06 20 55.5**	**-2.2**
VNA1				*e*		06 21 00.1	
VNA1				*e*		06 21 18.5	
VNA1				*e*		06 23 34.2	
MAIT	**Maitri**	**18.79**	**145**	*e*P	**Pn**	**06 22 01.7**	**-1.6**
MAIT				*e*S	**Sn**	**06 25 28.6**	**-4.6**
NVL	**N'lazarevskaya**	**18.82**	**145**	⇑*i*P	**Pn**	**06 21 59.7**	**-4.0**
NVL				*e*S	**Sn**	**06 25 28.6**	**-5.3**
NVL				pmax	pmax		
	comp=Z,724nm,1.0s						
NVL				MLR	MLR		
	comp=Z,107μm,14.0s						
PMSA	**Palmer Station**	**20.74**	**234**	P	**P**	**06 22 24.5**	**+0.4**
	comp=Z,670nm,1.0s,baz=82,slow=9.5,SNR=26						
PMSA				S	**S**	**06 26 16.6**	**+1.4**
	comp=Z,17nm,0.6s,baz=204,slow=24,SNR=1.3						
PMSA	**Palmer Station**	**20.74**	**234**	*e*P	**P**	**06 22 22.6**	**-1.6**
	comp=Z,1μm,1.0s						
PMSA				LR	LR		
	comp=Z,194μm,21.0s,MS6.5						
TRIS	**Tristan da Cun**	**22.16**	**21**	*e*P	**P**	**06 22 40.2**	**+0.6**
	comp=Z,8μm,1.7s,mb6.8						
TRIS				LR	LR		
	comp=Z,169μm,21.0s,MS6.4						
USHA	**Ushuaia**	**25.43**	**258**	P	**P**	**06 23 08.1**	**-3.2**
	comp=Z,108nm,0.7s,mb5.5,baz=85,slow=9.9,SNR=34						
USHA				S	**S**	**06 27 32.2**	**-5.5**
	comp=Z,32nm,1.0s,baz=145,slow=1.9,SNR=2.1						
USHA				LR	LR	06 31 20.0	
	comp=Z,211μm,18.0s,MS6.7,baz=83,slow=32						
SYO	**Syowa Base**	**28.04**	**138**	‖*e*P	**P**	**06 23 32.0**	**-2.6**
QSPA	**South Pole Qui**	**31.96**	**180**	P	**P**	**06 24 09.2**	**0.0**
	comp=Z,218nm,1.1s,mb5.9,baz=209,slow=6.3,SNR=128						
QSPA				PP	PP	06 25 02.2	-19
	comp=Z,316nm,0.6s,baz=110,slow=2.0,SNR=17						
QSPA				S	**S**	**06 29 18.0**	**-1.9**
	comp=Z,79nm,1.0s,baz=174,slow=23,SNR=1.3						
QSPA				LR	LR	06 36 26.4	
	comp=Z,184μm,19.7s,MS6.8,baz=14,slow=35						
QSPA	**South Pole Qui**	**31.96**	**180**	*e*P	**P**	**06 24 09.3**	**+0.1**
	comp=Z,17nm,1.1s,mb4.8						
QSPA				LR	LR		
	comp=Z,181μm,20.0s,MS6.8						
TRQA	**Tornquist**	**32.79**	**290**	*e*P	**P**	**06 24 12.8**	**-4.0**
	comp=Z,275nm,1.3s,mb6.0						
TRQA				LR	LR		
	comp=Z,85μm,19.0s,MS6.5						
LPA	**La Plata**	**33.37**	**299**	*ce*P	**P**	**06 24 22.0**	**+0.1**
LPA				*e*S	**S**	**06 29 42.0**	**-0.6**
LPA							
	comp=Z,155μm,21.0s						
PLCA	**Paso Flores**	**35.16**	**278**	P	**P**	**06 24 34.3**	**-3.2**
	comp=Z,311nm,0.8s,mb6.3,baz=141,slow=8.9,SNR=99						
PLCA				S	**S**	**06 29 53.8**	**-16**
	comp=Z,20nm,1.2s,baz=255,slow=8.0,SNR=1.8						
PLCA				LR	LR	06 38 47.4	
	comp=Z,118μm,18.2s,MS6.7,baz=125,slow=36						
PLCA	**Paso Flores**	**35.16**	**278**	*e*P	**P**	**06 24 34.3**	**-3.1**
PLCA				pmax	pmax		
	comp=Z,2μm,1.3s						
PLCA				MLR	MLR		
	comp=Z,111μm,19.0s						
PLCA	**Paso Flores**	**35.16**	**278**	*e*P	**P**	**06 24 34.3**	**-3.1**
	comp=Z,2μm,1.3s,mb6.9						
PLCA				LR	LR		
	comp=Z,111μm,19.0s,MS6.6						
ELIM	**Elim**	**36.37**	**68**	*e*P	**P**	**06 24 47.9**	**0.0**
OSCH	**Osorno**	**36.62**	**276**	*e*P	**P**	**06 24 47.1**	**-2.8**
MAW	**Mawson**	**36.64**	**140**	*e*P	**P**	**06 24 48.5**	**-1.3**
	comp=Z,174nm,1.0s,mb5.8						
MAW				*e*S	**S**	**06 30 32.8**	**+0.5**
MAW	**Mawson**	**36.64**	**140**	P	**P**	**06 24 49.3**	**-0.5**
	comp=Z,90nm,1.0s,mb5.5,baz=234,slow=8.9,SNR=32						
MAW				S	**S**	**06 30 29.4**	**-2.9**
	comp=Z,13nm,0.9s,baz=234,slow=8.4,SNR=1.6						
MAW				LR	LR	06 39 50.7	
	comp=Z,41μm,20.0s,MS6.2,baz=252,slow=36						
MAW	**Mawson**	**36.64**	**140**	P	**P**	**06 24 49.3**	**-0.5**
MAW				S	**S**	**06 30 29.4**	**-2.9**
MAW				pmax	pmax		
	comp=Z,90nm,1.0s						
MAW				smax			
	comp=N,13nm,0.9s						
MAW				MLR	MLR		
	comp=Z,41μm,20.0s						
MAW	**Mawson**	**36.64**	**140**	*e*P	**P**	**06 24 48.0**	**-1.8**
	comp=Z,99nm,1.2s,mb5.5						
MAW				LR	LR		
	comp=Z,109μm,21.0s,MS6.6						
SUR	**Sutherland**	**38.69**	**67**	P	**P**	**06 25 07.5**	**-0.1**
	comp=Z,82nm,0.8s,mb5.5,baz=213,slow=9.5,SNR=43						
SUR				S	**S**	**06 31 03.9**	**-0.2**
	comp=Z,14nm,1.0s,baz=165,slow=12,SNR=1.8						
SUR				LR	LR	06 38 53.9	
	comp=Z,44μm,18.6s,MS6.3,baz=216,slow=33						
SUR	**Sutherland**	**38.69**	**67**	*e*P	**P**	**06 25 07.5**	**0.0**
SUR				S	**S**	**06 31 03.9**	**-0.2**
SUR				LR	LR	06 38 53.9	
SUR	**Sutherland**	**38.69**	**67**	P	**P**	**06 25 08.2**	**+0.7**
	comp=Z,2μm,2.0s,mb6.5,SNR=10						
SUR	**Sutherland**	**38.69**	**67**	*e*P	**P**	**06 25 07.3**	**-0.2**
SUR				AMS	AMS	06 36 56.6	
	comp=Z,34μm,22.5s,MS6.1						
CAM4	**Nova Friburgo**	**38.84**	**329**	‖*i*P	**P**	**06 25 08.2**	**-0.6**
CAM4				*i*	pP	06 25 09.9	-2.0
CAM4				*i*		06 25 16.0	
CAM4				*i*		06 25 23.1	
CAM4				*i*		06 25 31.1	
CAM4				*i*		06 25 39.8	
CAM4				*i*		06 25 43.9	
CAM4				*i*		06 25 47.6	
CAM4				*i*		06 26 08.2	
CAM4				*i*		06 26 24.4	
CCHI	**Chillan**	**39.03**	**281**	⇑*i*P	**P**	**06 25 08.3**	**-2.1**
CCHI	**Chillan**	**39.03**	**281**	⇑*i*P	**P**	**06 25 08.3**	**-2.1**
SPB	**Sao Paulo**	**39.15**	**321**	*e*P	**P**	**06 25 11.1**	**-0.3**
	comp=Z,513nm,1.1s,mb6.2						
SPB				LR	LR		
	comp=Z,91nm,19.0s,MS6.6						
KOMG	**Komaggas**	**39.26**	**61**	*e*P	**P**	**06 25 11.2**	**-1.1**
KOMG				AMS	AMS	06 37 22.6	
	comp=Z,104μm,21.3s,MS6.6						
COCH	**Cobquecura**	**39.76**	**281**	*e*P	**P**	**06 25 16.7**	**+0.2**
COCH	**Cobquecura**	**39.76**	**281**	*e*P	**P**	**06 25 16.7**	**+0.2**
NICH	**Los Niches**	**39.83**	**284**	*e*P	**P**	**06 25 14.8**	**-2.2**
LMEL	**Las Melosas**	**40.22**	**286**	⇑*i*P	**P**	**06 25 15.9**	**-4.4**
LMEL	**Las Melosas**	**40.22**	**286**	⇑*i*P	**P**	**06 25 15.9**	**-4.4**
CPUP	**Villa Florida**	**40.42**	**307**	P	**P**	**06 25 20.1**	**-2.0**
	comp=Z,340nm,0.9s,mb6.1,baz=134,slow=7.7,SNR=101						
CPUP				LR	LR	06 39 19.8	
	comp=Z,120μm,20.4s,MS6.7,baz=140,slow=32						
CPUP	**Villa Florida**	**40.42**	**307**	*e*P	**P**	**06 25 19.5**	**-2.5**
CPUP				LR	LR		
	comp=Z,20μm,20.0s,MS6.0						
ANTU	**Antumapu**	**40.65**	**286**	*e*P	**P**	**06 25 21.3**	**-2.5**
FCH	**Farellones**	**40.67**	**286**	*e*P	**P**	**06 25 18.9**	**-5.1**
CLCH	**Cerro Calan**	**40.74**	**286**	⇑*i*P	**P**	**06 25 21.9**	**-2.6**
GRM	**Grahamstown**	**40.77**	**74**	P	**P**	**06 25 24.5**	**-0.3**
GRM	**Grahamstown**	**40.77**	**74**	⇑*i*P	**P**	**06 25 24.0**	**-0.8**
GRM				AMS	AMS	06 37 57.0	
	comp=Z,64μm,20.8s,MS6.5						
SOE	**Somerset East**	**40.77**	**72**	⇑*i*P	**P**	**06 25 24.3**	**-0.5**
SOE				AMS	AMS	06 37 22.8	
	comp=Z,37μm,24.0s,MS6.2						
PEL	**Peldehue**	**41.02**	**286**	*e*P	**P**	**06 25 23.7**	**-3.2**
CFAA	**Coronel Fontan**	**41.02**	**290**	P	**P**	**06 25 23.1**	**-3.8**
	comp=Z,15nm,0.8s,baz=143,slow=7.9,SNR=43						
CFAA				S	**S**	**06 31 28.9**	**-10**
	comp=Z,0.4nm,0.5s,baz=211,slow=8.2,SNR=2.2						
CFAA				LR	LR	06 42 02.9	
	comp=Z,16μm,18.9s,baz=14,slow=36						
PKA	**Prieska**	**41.86**	**67**	⇑*i*P	**P**	**06 25 32.7**	**-1.1**
PKA				AMS	AMS	06 38 41.9	
	comp=Z,18μm,21.6s,MS5.9						
UPI	**Upington**	**42.23**	**64**	*e*P	**P**	**06 25 36.0**	**-0.8**
UPI				AMS	AMS	06 39 31.7	
	comp=Z,65μm,21.1s,MS6.5						
HVD	**Gariep Dam**	**42.44**	**70**	*e*P	**P**	**06 25 38.1**	**-0.4**
HVD				AMS	AMS	06 39 34.3	
	comp=Z,65μm,20.4s,MS6.5						
CMCH	**Combarbala**	**42.75**	**288**	*e*P	**P**	**06 25 38.4**	**-2.6**
CMCH	**Combarbala**	**42.75**	**288**	*e*P	**P**	**06 25 38.4**	**-2.6**
TLL	**Tololo Astrono**	**43.47**	**289**	⇑*i*P	**P**	**06 25 46.1**	**-0.8**
TLL	**Tololo Astrono**	**43.47**	**289**	⇑*i*P	**P**	**06 25 46.0**	**-0.8**
BOSA	**Boshof**	**43.95**	**68**	P	**P**	**06 25 49.8**	**-1.0**
	comp=Z,92nm,0.6s,mb5.7,baz=202,slow=7.4,SNR=53						
BOSA	**Boshof**	**43.95**	**68**	P	**P**	**06 25 49.8**	**-1.0**
BOSA				pmax	pmax		
	comp=Z,92nm,0.6s,mb5.7						
BOSA	**Boshof**	**43.95**	**68**	*e*P	**P**	**06 25 48.8**	**-2.0**
	comp=Z,1μm,1.6s,mb6.4						
BOSA				LR	LR		
	comp=Z,52μm,19.0s,MS6.5						
BOSA	**Boshof**	**43.95**	**68**	*e*P	**P**	**06 25 49.1**	**-1.7**
BOSA				AMS	AMS	06 39 26.3	
	comp=Z,46μm,20.2s,MS6.4						
SBA	**Scott Base**	**44.01**	**183**	*e*P	**P**	**06 25 51.2**	**+0.5**
SBA				pmax	pmax		
	comp=Z,3μm,1.8s,mb6.7						
SBA				MLR	MLR		
	comp=Z,49μm,22.0s,MS6.4						
SBA	**Scott Base**	**44.01**	**183**	*e*P	**P**	**06 25 51.2**	**+0.5**
	comp=Z,3μm,1.8s,mb6.7						
SBA				LR	LR		
	comp=Z,49μm,22.0s,MS6.4						
LCO	**Las Campanas**	**44.36**	**290**	*e*P	**P**	**06 25 50.9**	**-3.2**
	comp=Z,426nm,1.0s,mb6.1						
LCO				LR	LR		
	comp=Z,104μm,21.0s,MS6.7						
SWZ	**Schweizer**	**45.18**	**67**	*e*P	**P**	**06 25 59.4**	**-1.2**
SWZ				AMS	AMS	06 40 42.5	
	comp=Z,38μm,19.9s,MS6.3						
SEK	**Senekal**	**45.37**	**71**	⇑*i*P	**P**	**06 26 01.2**	**-0.9**
SEK				AMS	AMS	06 41 09.6	
	comp=Z,70μm,20.4s,MS6.6						
PRYS	**Parys**	**46.39**	**69**	*e*P	**P**	**06 26 08.8**	**-1.3**
PRYS				AMS	AMS	06 41 11.8	
	comp=Z,43μm,21.6s,MS6.4						
MIR	**Mirnyy**	**46.47**	**150**	⇑*i*P	**P**	**06 26 10.0**	**-0.3**
MIR				*i*		06 28 01.0	
MIR				*e*S	**S**	**06 32 58.0**	**+0.3**
MIR				*e*SS	SS	06 35 58.0	-25
MIR				pmax	pmax		
	comp=Z,1μm,2.0s,mb6.5						
MIR				pmax	pmax		
	comp=N,2μm,7.0s						
MIR				pmax	pmax		
	comp=E,2μm,7.0s						
MIR				pmax	pmax		
	comp=Z,6μm,7.0s						
MIR				smax			
	comp=N,29μm,14.0s						
MIR				smax			
	comp=E,22μm,20.0s						
MIR				MLR	MLR		
	comp=N,59μm,16.0s,MS6.8						
MIR				MLR	MLR		
	comp=E,50μm,16.0s,MS6.8						
MIR				MLR	MLR		
	comp=Z,98μm,16.0s,MS6.9						
KLOF	**Kloof**	**46.99**	**69**	*e*P	**P**	**06 26 12.6**	**-2.3**
KLOF				AMS	AMS	06 41 40.0	
	comp=Z,33μm,22.3s,MS6.2						
KSR	**Koster**	**47.06**	**68**	*e*P	**P**	**06 26 14.3**	**-1.1**
KSR				AMS	AMS	06 39 21.5	
	comp=Z,40μm,19.2s,MS6.4						
LBTB	**Lobatse**	**47.13**	**66**	P	**P**	**06 26 13.8**	**-2.2**
	baz=223,slow=11						
LBTB				S	**S**	**06 33 06.5**	**-1.6**
	comp=Z,7.9nm,0.9s,baz=258,slow=15,SNR=2.0						
LBTB				LR	LR	06 42 24.4	
	comp=Z,57μm,20.1s,MS6.5,baz=226,slow=32						
LBTB	**Lobatse**	**47.13**	**66**	*e*P	**P**	**06 26 13.9**	**-2.0**
LBTB				*e*S	**S**	**06 33 06.8**	**-1.3**
LBTB				pmax	pmax		
	comp=Z,2μm,1.8s,mb6.7						
LBTB				MLR	MLR		
	comp=Z,54μm,20.0s,MS6

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LPAZ                                S     S     06 34 39.9 -3.4
     comp=Z,6.6nm,1.0s,baz=182,slow=16,SNR=2.1
LPAZ                                LR    LR    06 49 14.5
     comp=Z,53µm,18.8s,MS6.6,baz=148,slow=35
LPAZ                                PKPPKP      06 57 13.2
     comp=Z,2.7nm,1.1s,baz=324,slow=3.1,SNR=3.8
LPAZ                                PKP2bc      06 57 38.5
     comp=Z,4.2nm,1.0s,baz=21,slow=9.4,SNR=4.6
LPAZ La Paz          53.98 301      P     P     06 27 07.2 -0.5
LPAZ                                S     S     06 34 39.9 -3.4
LPAZ                                pmax  pmax
     comp=Z,435nm,0.6s
LPAZ                                smax
     comp=N,7.0nm,1.0s
LPAZ La Paz          53.98 301      eP    P     06 27 07.1 -0.7
     comp=N,3µm,1.5s,mb7.0
LPAZ                                LR    LR
     comp=Z,75µm,22.0s,MS6.7
DRV  Dumont d'Urvil  54.64 171      P     P     06 27 17.0 +5.0
DRV                                 S     S     06 34 55.0 +3.8
DRV                                 SS    SS    06 38 33.0  0.0
DRV                                 R           06 44 00.0
ARE  Arequipa        55.37 298      eP    P     06 27 16.0 -1.9
LSZ  Lusaka          56.71  62      eP    P     06 27 25.1 -2.3
LSZ                                 pmax  pmax
     comp=Z,150nm,0.7s,mb6.1
LSZ                                 MLR   MLR
     comp=Z,109µm,22.0s,MS6.9
LSZ  Lusaka          56.71  62      eP    P     06 27 25.1 -2.4
     comp=Z,38nm,0.7s,mb5.5
LSZ                                 LR    LR
     comp=Z,109µm,22.0s,MS6.9
LSZ  Lusaka          56.71  62      ⇓P    P     06 27 25.1 -2.3
     SNR=64
LSZ                                 ⇓P          06 27 25.1
     SNR=64
LSZ  Lusaka          56.71  62      eP    P     06 27 25.4 -2.1
NNA  Nana            61.79 295      P     P     06 28 01.6 -1.0
     comp=Z,399nm,1.0s,mb6.5,baz=155,slow=4.9,SNR=50
NNA  Nana            61.79 295      P     P     06 28 01.6 -1.0
NNA                                 LR    LR
     comp=Z,81µm,21.0s,MS6.9
ABPO Ambohimpanom    63.10  83      P     P     06 28 10.1 -1.3
ABPO                                pmax  pmax
     comp=Z,383nm,1.6s,mb6.3
ABPO                                MLR   MLR
     comp=Z,27µm,21.0s,MS6.4
ABPO Ambohimpanom    63.10  83      P     P     06 28 10.1 -1.3
     comp=Z,383nm,1.6s,mb6.3
ABPO                                LR    LR
     comp=Z,27µm,21.0s,MS6.4
LIC  Lamto           65.74  19      eP    P     06 28 25.6 -2.9
     comp=Z,396nm,0.9s,mb6.1,baz=194
LIC  Lamto           65.74  19      eP    P     06 28 26.5 -2.0
     comp=Z,1µm,1.6s,mb6.7
LIC  Lamto           65.74  19      eP    P     06 28 25.6 -2.9
     comp=Z,198nm,0.9s,mb6.1
RER  Riviere de l'E  65.83  91      eP    P     06 28 29.6 +0.5
     comp=Z,439nm,1.0s,mb6.4
RER                                 LR    LR
     comp=Z,19µm,19.0s,MS6.3
KIC  Kosan Boka      65.92  19      eP    P     06 28 26.8 -2.9
     comp=Z,348nm,0.8s,mb6.4
RPN  Rapa Nui        66.00 257      P     P     06 28 30.8 +0.6
     comp=Z,90nm,0.7s,mb5.9,baz=66,slow=12,SNR=4.4
RPN  Rapa Nui        66.00 257      eP    P     06 28 30.9 +0.7
RPN                                 pmax  pmax
     comp=Z,4µm,2.3s,mb7.0
RPN                                 MLR   MLR
     comp=Z,38µm,19.0s,MS6.6
RPN  Rapa Nui        66.00 257      eP    P     06 28 30.9 +0.6
     comp=Z,4µm,2.3s,mb7.0
RPN                                 LR    LR
     comp=Z,38µm,19.0s,MS6.6
TIC  Toumodi         66.15  18      eP    P     06 28 28.3 -2.9
     comp=Z,536nm,0.8s,mb6.6
TIC  Toumodi         66.15  18      eP    P     06 28 28.3 -2.9
TIC                                 pmax  pmax
     comp=Z,536nm,0.8s,mb6.6
DBIC Dimbokro        66.20  19      P     P     06 28 29.4 -2.1
     comp=Z,61nm,0.7s,mb5.7,baz=168,slow=7.4,SNR=45
DBIC                                S     S     06 37 17.7 -2.6
     comp=Z,6.7nm,1.0s,baz=172,slow=7.9,SNR=3.3
DBIC                                LR    LR    06 50 21.9
     comp=Z,76µm,21.2s,MS6.9,baz=169,slow=30
DBIC                                PKP2bc      06 57 08.9
     comp=Z,12nm,1.0s,baz=1.4,slow=4.3,SNR=5.0
DBIC Dimbokro        66.20  19      eP    P     06 28 29.4 -2.1
DBIC                                pmax  pmax
     comp=Z,195nm,0.8s
DBIC                                MLR   MLR
     comp=Z,86µm,21.0s
DBIC Dimbokro        66.20  19      eP    P     06 28 29.4 -2.1
     comp=Z,195nm,0.8s,mb6.2
DBIC                                LR    LR
     comp=Z,86µm,21.0s,MS6.9
DBIC Dimbokro        66.20  19      ⇓iP   P     06 28 28.0 -3.6
ATAH Atahualpa       66.75 296      P     P     06 28 35.8 +0.6
     comp=Z,283nm,1.0s,mb6.2,baz=141,slow=2.8,SNR=77
ATAH                                S     S     06 37 30.3 +3.2
     comp=Z,2.6nm,0.6s,baz=296,slow=16,SNR=2.4
MCQ  Macquarie Isla  67.57 181      eP    P     06 28 45.1 +5.3
MBAR Mbarara         70.80  57      P     P     06 29 02.6 +2.2
     comp=Z,272nm,1.0s,mb6.1,SNR=10
MBAR Mbarara         70.80  57      eP    P     06 29 00.8 +0.4
SACV Santiago Islan  73.00 358      P     P     06 29 15.1 +1.7
     comp=Z,906nm,0.9s,mb6.7,SNR=6.4
SACV Santiago Islan  73.00 358      eP    P     06 29 13.0 -0.4
     comp=Z,128nm,0.8s,mb5.9
SACV                                LR    LR
     comp=Z,38µm,19.0s,MS6.7
OTAV Otavalo         73.24 299      eP    P     06 29 14.3 -0.7
     comp=Z,471nm,1.1s,mb6.3
OTAV                                LR    LR
     comp=Z,40µm,20.0s,MS6.7
KMBO Kilima Mbogo    73.33  64      P     P     06 29 18.2 +2.6
     comp=Z,18nm,1.2s,mb4.9,baz=181,slow=24,SNR=19
KMBO                                S     S     06 38 49.2 +4.9
     comp=Z,1.2nm,0.7s,baz=0.0,slow=24,SNR=2.1
KMBO                                LR    LR    06 59 07.8
     comp=Z,66µm,18.9s,MS6.9,baz=208,slow=34
KMBO Kilima Mbogo    73.33  64      eP    P     06 29 18.1 +2.5
KMBO                                pmax  pmax
     comp=Z,182nm,1.5s
KMBO                                MLR   MLR
     comp=Z,62µm,20.0s
KMBO Kilima Mbogo    73.33  64      eP    P     06 29 18.1 +2.5
     comp=Z,182nm,1.5s,mb5.8
KMBO                                LR    LR
     comp=Z,62µm,20.0s,MS6.9
KMBO Kilima Mbogo    73.33  64      ⇓P    P     06 29 18.6 +3.0
     SNR=20
KMBO                                ⇓P          06 29 18.6
     SNR=20
KMBO Kilima Mbogo    73.33  64      ⇑iP   P     06 29 18.1 +2.6
TPP  Pointe-a-Pierr  75.51 320      eP    P     06 29 28.4 +0.3
ROSC El Rosal        75.51 305      P     P     06 29 28.0 -0.2
     comp=Z,203nm,0.8s,mb6.1,baz=157,slow=2.4,SNR=38
ROSC El Rosal        75.51 305      eP    P     06 29 27.2 -1.0
TBH  Brigand Hill    75.53 320      eP    P     06 29 30.6 +2.4
TRN  Trinidad (W)    75.80 320      eP    P     06 29 29.8  0.0
TCE  Chacachacare    75.97 320      eP    P     06 29 33.1 +2.4
BOT  Bacolet         76.06 321      eP    P     06 29 33.3 +2.1
TPR  Prospect        76.09 321      eP    P     06 29 31.3 -0.1
ODZ  Otahua Downs    76.50 189      eP    P     06 29 35.5 +2.0
     comp=Z,279nm,1.5s,mb6.0
GRGR Grenville       77.27 320      eP    P     06 29 38.4 +0.3
     comp=Z,1µm,1.1s,mb6.8
GRGR                                LR    LR
     comp=Z,42µm,20.0s,MS6.8
GRW  Mount Saint Ca  77.30 320      eP    P     06 29 41.7 +3.4
BBGH Gun Hill        77.53 323      P     P     06 29 40.0 +0.6
BBGH                                LR    LR
     comp=Z,78µm,22.0s,MS7.0
RPZ  Rata Peaks      77.79 190      P     P     06 29 40.3 -0.4
     comp=Z,102nm,0.9s,mb5.8,baz=143,slow=2.8,SNR=23
RPZ                                 LR    LR    07 04 07.5
     comp=Z,21µm,18.1s,MS6.5,baz=342,slow=36
RPZ  Rata Peaks      77.79 190      eP    P     06 29 42.1 +1.3
     comp=Z,200nm,0.9s,mb6.0
PAYG Puerto Ayora    78.16 288      eP    P     06 29 44.8 +1.6
     comp=Z,424nm,1.3s,mb6.2
PAYG                                LR    LR
     comp=Z,52µm,22.0s,MS6.8
KHZ  Kahutara        78.83 192      P     P     06 29 47.4 +0.8
     comp=Z,185nm,1.1s,mb5.9
MOO  Moorlands       79.23 172      eP    P     06 29 52.6 +3.9
MOO                                 eS    S     06 39 48.0 -0.4
MSEY Mahe Island     79.45  82      eP    P     06 29 51.1 +0.8
MSEY                                e           06 29 57.7
MSEY                                pmax  pmax
     comp=Z,124nm,1.2s,mb5.7
MSEY                                MLR   MLR
     comp=Z,17µm,20.0s,MS6.4
MSEY Mahe Island     79.45  82      eP    P     06 29 51.1 +0.8
     comp=Z,124nm,1.2s,mb5.7
MSEY                                ePcP  PcP   06 29 57.6 -0.7
MSEY                                LR    LR
     comp=Z,17µm,20.0s,MS6.4
FDF  Fort de France  79.53 322      eP    P     06 29 50.4 -0.1
FDF                                 pmax  pmax
     comp=Z,644nm,1.1s,mb6.5
FDF                                 MLR   MLR
     comp=Z,25µm,20.0s,MS6.5
FDF  Fort de France  79.53 322      eP    P     06 29 50.4 -0.2
     comp=Z,644nm,1.1s,mb6.5
FDF                                 LR    LR
     comp=Z,25µm,20.0s,MS6.5
FDF  Fort de France  79.53 322      eP    P     06 29 51.1 +0.6
SNZO South Karori    79.80 193      eP    P     06 29 52.7 +0.9
     comp=Z,547nm,1.2s,mb6.4
SNZO                                LR    LR
     comp=Z,37µm,20.0s,MS6.7
MGG  Marie-Galante   80.69 322      eP    P     06 29 59.5 +2.7
TBG  Guadaloupe-3    80.74 322      eP    P     06 29 57.0  0.0
HMG  Houelmont       80.88 321      eP    P     06 29 57.3 -0.5
PHG  Guadaloupe-2    80.89 322      eP    P     06 30 01.4 +3.6
BCG  Bois Riant Cap  80.95 322      eP    P     06 30 01.7 +3.6
DEG  La Desirade     80.98 322      eP    P     06 29 58.1 -0.2
LZG  Guadaloupe-1    81.05 321      eP    P     06 29 59.0 +0.3
SEG  Port Louis      81.21 322      eP    P     06 30 00.1 +0.6
BCIP Isla Barro Col  81.77 302      eP    P     06 30 03.3 +0.7
BCIP                                LR    LR
     comp=Z,41µm,22.0s,MS6.8
RKT  Rikitea         81.86 239      eP    P     06 30 05.2 +2.0
     comp=Z,228nm,1.1s,mb6.0
RKT                                 eS    S     06 40 17.3 +0.8
     comp=Z,54µm,29.2s
RKT                                 eSS   SS    06 45 35.6 +1.8
     comp=Z,28µm,28.8s
RKT                                 eLQ         06 52 14.8
     comp=Z,248µm,32.2s
RKT                                 eLR   LR    06 55 45.6
     comp=Z,189µm,25.5s,baz=150
RKT  Rikitea         81.86 239      eP    P     06 30 05.2 +2.0
RKT                                 eS    S     06 40 17.3 +0.8
RKT                                 eSS   SS    06 45 35.6 +1.8
RKT                                 pmax  pmax
     comp=Z,229nm,1.1s,mb6.0
RKT  Rikitea         81.86 239      eP    P     06 30 05.2 +2.0
     comp=Z,228nm,1.1s,mb6.0
RKT                                 eS    S     06 40 17.3 +0.8
RKT                                 eSS   SS    06 45 35.6 +1.8
RKT                                 eLQ         06 52 14.8
BPA  Boggy Peak      81.93 322      eP    P     06 30 04.4 +1.1
ANWB Willy Bob       82.48 322      eP    P     06 30 05.9 -0.3
     comp=Z,571nm,1.2s,mb6.4
ANWB                                LR    LR
     comp=Z,30µm,22.0s,MS6.6
URZ  Urewera         82.50 195      P     P     06 30 07.0 +0.8
     comp=Z,61nm,0.9s,mb5.5,baz=246,slow=1.5,SNR=14
URZ                                 S     S     06 40 16.8 -5.8
     comp=Z,5.9nm,0.8s,baz=205,slow=20,SNR=1.7
URZ  Urewera         82.50 195      eP    P     06 30 07.4 +1.2
     comp=Z,275nm,1.2s,mb6.1
ACR  Cerro Adams     82.83 299      eP    P     06 30 08.4 +0.3
NWAO Narrogin (SRO)  82.94 146      LR    LR    07 04 08.5
     comp=Z,123nm,19.8s,baz=197,slow=34
NWAO Narrogin (SRO)  82.94 146      eP    P     06 30 08.0 -0.6
NWAO                                pmax  pmax
     comp=Z,64nm,0.7s
NWAO                                MLR   MLR
     comp=Z,20µm,21.0s
NWAO Narrogin (SRO)  82.94 146      eP    P     06 30 08.0 -0.6
     comp=Z,64nm,0.7s,mb5.8
NWAO                                LR    LR
     comp=Z,20µm,21.0s,MS6.5
BAR1                 83.41 299      eP    P     06 30 10.4 -0.8
CDVI St. Croix       83.56 319      eP    P     06 30 11.7 -0.1
BUS  Buena Vista     83.89 299      eP    P     06 30 14.3 +0.6
TOO  Toolangi        83.93 170      eP    P     06 30 15.5 +1.9
TOO                                 eS    S     06 40 36.9 -0.2
TAM  Tamanrasset     83.95  25      eP    P     06 30 13.1 -0.6
TAM                                 pmax  pmax
     comp=Z,151nm,1.3s,mb6.0
TAM                                 MLR   MLR
     comp=Z,35µm,22.0s,MS6.7
TAM  Tamanrasset     83.95  25      eP    P     06 30 13.1 -0.6
     comp=Z,151nm,1.3s,mb6.0
TAM                                 LR    LR
     comp=Z,35µm,22.0s,MS6.7
QCR  Quepos          83.97 299      eP    P     06 30 12.5 -1.5
URSC Urasca          84.15 299      eP    P     06 30 14.2 -0.7
MTP  Monte Pirata    84.15 319      eP    P     06 30 13.9 -1.0
     comp=Z,233nm,1.2s,mb6.2
HUMP Col San Antoni  84.30 319      eP    P     06 30 14.3 -1.3
ICM  Isla Caja Muer  84.30 318      eP    P     06 30 15.4 -0.2
KLBR Kellerberrin    84.34 146      eP    P     06 30 16.4 +0.6
     comp=Z,405nm,1.4s,mb6.4
SJG  San Juan        84.37 318      P     P     06 30 13.5 -2.5
     comp=Z,81nm,0.9s,mb5.9,baz=56,slow=6.9,SNR=2.8
SJG                                 PP    PP    06 33 50.8 +20
     comp=Z,13nm,0.6s,baz=325,slow=18,SNR=5.6
SJG  San Juan        84.37 318      eP    P     06 30 13.6 -2.4
     comp=Z,95nm,1.0s,mb5.9
SJG                                 LR    LR
     comp=Z,35µm,20.0s,MS6.7
CBYP Canovanas       84.42 319      eP    P     06 30 13.2 -2.9
     comp=Z,134nm,0.8s,mb6.1
OBIP Obispado Ponce  84.47 318      eP    P     06 30 16.7 +0.2
CELP Cerrillos       84.49 318      eP    P     06 30 14.6 -2.0
PRS1 Puriscal        84.53 299      eP    P     06 30 16.2 -0.6
CRPR Cabo Rojo, PR   84.62 317      eP    P     06 30 16.0 -1.2
LSP  Las Mesas       84.77 317      eP    P     06 30 20.1 +2.2
LRS  Lares           84.79 318      eP    P     06 30 17.8 -0.2
MPR  Mayaguez        84.82 317      eP    P     06 30 20.3 +2.1
JTS  JuntasAbangare  85.09 298      P     P     06 30 20.6 +0.9
     comp=Z,2µm,1.2s,mb7.1,SNR=37
DESE Dese            85.19  60      eP    P     06 30 25.5 +5.3
DESE                                eS    S     06 41 06.4 +16
VCR  Vista de Mar    85.27 298      eP    P     06 30 18.9 -1.7
ADE  Adelaide        85.70 164      P     P     06 30 20.8 -1.8
CHIE El Hierro       85.75   4      P     P     06 30 26.3 +3.7
     comp=Z,6µm,5.4s
OUZ  Omahuta         85.94 193      eP    P     06 30 25.2 +1.4
     comp=Z,248nm,1.1s,mb6.3
DGAR Diego Garcia    86.08  98      PFAKE       06 30 30.0 +5.2
DGAR                                LR    LR
     comp=Z,26µm,20.0s,MS6.6
EOSO Osorio          86.19   6      P     P     06 30 28.1 +3.3
     comp=Z,119nm,1.0s,mb6.1
CCAN Las Canadas     86.29   5      P     P     06 30 29.8 +4.5
     comp=Z,148nm,1.2s,mb6.1
CAN  Canberra        86.44 173      eP    P     06 30 26.8 +0.5
CAN                                 pmax  pmax
     comp=Z,386nm,1.4s,mb6.4
CAN                                 MLR   MLR
     comp=Z,45µm,21.0s,MS6.8
CAN  Canberra        86.44 173      eP    P     06 30 26.8 +0.5
     comp=Z,386nm,1.4s,mb6.4
CAN                                 LR    LR
     comp=Z,45µm,21.0s,MS6.8
CNB  Canberra Magne  86.47 173      eP    P     06 30 29.0 +2.6
CNB                                 eS    S     06 40 56.3 -6.1
EHIG Higuera         86.58   4      P     P     06 30 30.3 +3.6
     comp=Z,153nm,1.2s,mb6.1
CFTV Fuerteventura   86.62   7      P     P     06 30 30.3 +3.4
     comp=Z,39nm,0.9s,mb5.6
EBAJ Bajamar         86.62   5      P     P     06 30 30.3 +3.4
     comp=Z,65nm,3.8s
SDDR Presa de Saban  87.05 314      eP    P     06 30 29.6 +0.4
     comp=Z,35nm,0.9s,mb5.6
SDDR                                LR    LR
     comp=Z,62µm,22.0s,MS7.0
EFAM Famara          87.36   7      P     P     06 30 32.5 +2.0
     comp=Z,667nm,7.3s
TBI  Tubuai          87.76 227      eP    P     06 30 34.7 +1.9
     comp=Z,360nm,1.0s,mb6.5
TBI                                 eS    S     06 41 15.1  0.0
     comp=Z,47µm,28.5s
TBI                                 eSS   SS    06 46 59.2 -1.2
     comp=Z,22µm,31.0s
TBI                                 eLQ         06 54 47.6
     comp=Z,47µm,32.0s
TBI                                 eLR   LR    06 58 29.6
     comp=Z,73µm,24.5s,baz=149
TBI  Tubuai          87.76 227      eP    P     06 30 34.7 +1.9
     comp=Z,360nm,1.0s,mb6.6
TBI                                 eS    S     06 41 15.1  0.0
TBI                                 eSS   SS    06 46 59.2 -1.2
TBI                                 eLQ         06 54 47.6
FORT Forrest         87.80 155      eP    P     06 30 33.0 +0.1
     comp=Z,288nm,0.7s,mb6.6
FORT                                eS    S     06 41 01.4 -14
FORT Forrest         87.80 155      eP    P     06 30 32.8 -0.1
RIV  Riverview       88.06 174      eP    P     06 30 36.0 +1.9
CMJ  Castle Mountai  88.29 309⇓     eP    P     06 30 39.6 +4.4
HOJ  Hope            88.33 309⇑     eP    P     06 30 33.5 -1.9
HOJ  Hope            88.33 309      iP    P     06 30 40.4 +5.1
GWJ  Greenwich       88.38 309⇓     eP    P     06 30 35.1 -0.6
GWJ  Greenwich       88.38 309      iP    P     06 30 38.4 +2.7
STH  Stony Hill      88.42 309⇑     eP    P     06 30 34.9 -0.9
STH  Stony Hill      88.42 309      iP    P     06 30 36.8 +1.0
MCJ  Malvern         88.64 308      eP    P     06 30 37.9 +1.0
MCJ  Malvern         88.64 308⇑     iP    P     06 30 40.8 +3.9
MTDJ Mount Denham    88.85 308      eP    P     06 30 37.5 -0.3
     comp=Z,952nm,1.9s,mb6.8
MTDJ                                LR    LR
     comp=Z,49µm,22.0s,MS6.9
BBJ  Bamboo Saint A  88.88 309⇓     eP    P     06 30 33.9 -4.0
BBJ  Bamboo Saint A  88.88 309⇑     iP    P     06 30 39.9 +1.9
STKA Stephens Creek  89.13 166      eP    P     06 30 38.9 -0.3
     comp=Z,61nm,0.8s,mb6.0
STKA                                ePP   PP    06 34 09.5 +1.1
STKA                                eS    SKSac 06 41 09.3 +0.3
STKA Stephens Creek  89.13 166      P     P     06 30 38.6 -0.6
     comp=Z,45nm,0.8s,mb5.9,baz=138,slow=5.3,SNR=24
STKA                                LR    LR    07 07 29.8
     comp=Z,199µm,21.7s,MS7.5,baz=187,slow=34
STKA Stephens Creek  89.13 166      eP    P     06 30 38.9 -0.3
     comp=Z,15nm,0.7s,mb5.4
NEJ  Negril          89.20 308⇑     iP    P     06 30 41.0 +1.5
GRTK Grand Turk      89.30 315      eP    P     06 30 39.9  0.0
     comp=Z,218nm,1.1s,mb6.4
GRTK                                LR    LR
     comp=Z,27µm,21.0s,MS6.7
GTBY Guantanamo Bay  89.39 311      eP    P     06 30 39.2 -1.1
     comp=Z,213nm,1.1s,mb6.4
GTBY                                LR    LR
     comp=Z,65µm,20.0s,MS7.0
TGUH Tegucigalpa,Un  89.46 298      eP    P     06 30 39.0 -1.8
     comp=Z,295nm,1.2s,mb6.5
TGUH                                LR    LR
     comp=Z,18µm,20.0s,MS6.5
RAO  Raoul Island    90.50 201      PFAKE       06 31 00.0 +14
RAO                                 LR    LR
     comp=Z,15µm,19.0s,MS6.4
FUL  Funchal         90.67   4      eP    P     06 30 47.9 +1.9
     comp=Z,322nm,1.7s,mb6.4
PMAR Madeira         90.76   4      ePP   PP    06 34 29.9 +7.4
ARMA Armidale        91.48 174      eP    P     06 30 51.7 +1.5
ARMA                                eS    SKSac 06 41 25.4 +2.8
ARMA Armidale        91.48 174      eP    P     06 30 51.6 +1.5
     comp=Z,100nm,1.4s,mb6.0
APG  El Apazote      91.79 296      P     P     06 30 51.5 -0.1
     comp=Z,57nm,0.9s,mb5.9,baz=181,slow=5.3,SNR=18
APG                                 PP    PP    06 34 33.1 +2.4
     comp=Z,38nm,1.2s,baz=120,slow=6.0,SNR=3.9
MEH  Mehetia         92.14 230      eP    P     06 30 55.4 +2.0
     comp=Z,289nm,1.1s,mb6.5
PPT  Papeete         93.02 229      eS    S     06 42 02.3 -1.4
     comp=Z,70µm,27.8s
PPT  Papeete         93.02 229      ePS   PS    06 43 19.2 +3.1
     comp=Z,8µm,30.0s
PPT                                 eSS   SS    06 48 19.0 +2.2
     comp=Z,56µm,29.0s
PPT                                 eLQ         06 57 00.8
     comp=Z,84µm,28.8s
PPT                                 eLR   LR    07 00 58.0
     comp=Z,170µm,25.5s,baz=157
PPT  Papeete         93.02 229      LR    LR    07 02 58.2
     comp=Z,50µm,21.9s,MS6.9,baz=152,slow=29
PPT  Papeete         93.02 229      PFAKE       06 31 10.0 +13
PPT                                 LR    LR
     comp=Z,3µm,19.0s,MS5.8
RAR  Rarotonga       93.42 219      eP    P     06 31 03.0 +3.7
RAR                                 MLR   MLR
     comp=Z,20µm,19.0s
COCO West Island     94.06 121      PFAKE       06 31 10.0 +7.7
COCO                                LR    LR
     comp=Z,14µm,20.0s,MS6.4
PMOR Pomariorio Ree  94.65 232      eP    P     06 31 06.6 +1.6
     comp=Z,196nm,1.2s,mb6.4
MBWA Marble Bar      94.72 145      eP    P     06 31 05.8 +0.6
     comp=Z,96nm,1.4s,mb6.0
MBWA                                LR    LR
     comp=Z,33µm,20.0s,MS6.8
PSMA Santa Maria     94.96 357      eP    P     06 31 10.6 +4.9
     comp=Z,268nm,1.7s,mb6.4
PSMN Pico do Norte,  94.96 358      eP    P     06 31 08.6 +2.9
RMQ  Roma            95.20 172      eP    P     06 31 07.6 +0.2
     comp=Z,74nm,1.1s,mb6.0
RMQ                                 ePP   PP    06 34 57.3 +1.1
TEIG Tepich          95.30 300      eP    P     06 31 05.9 -1.7
     comp=Z,353nm,1.2s,mb6.7
TEIG                                ePP   PP    06 34 58.7 +0.4
TEIG                                LR    LR
     comp=Z,23µm,21.0s,MS6.6
SFS  San Fernando    95.31  13      PFAKE       06 31 20.0 +13
SFS                                 LR    LR
     comp=Z,59µm,20.0s,MS7.1
ETRT Tiaret          95.34  19      P     P     06 31 12.5 +5.0
EJIF Jimena Fronter  95.39  13      P     P     06 31 09.4 +1.7
     comp=Z,62nm,4.3s
EMIJ Mijas           95.59  14      P     P     06 31 10.0 +1.4
     comp=Z,18nm,1.1s,mb5.4
PFVI Vila Bisbo      95.69  11      eP    P     06 31 09.5 +0.5
     comp=Z,157nm,1.4s,mb6.2
PFVI Vila Bisbo      95.69  11      eSKSac SKSac 06 41 44.2 -0.4
PFVI                                eSS   SS    06 49 10.3 +14
PFVI                                eLQ         06 58 30.4
PFVI                                eLR   LR    07 02 48.7
     comp=Z,30µm,20.0s
CMIG Matias Romero   95.71 293      P     P     06 31 08.4 -1.2
     comp=Z,36nm,1.0s,mb5.8,baz=173,slow=4.2,SNR=15
CMIG                                PP    PP    06 35 05.0 +3.6
     comp=Z,7.2nm,0.9s,baz=76,slow=4.1,SNR=3.8
PDA  Ponta Delgada   95.72 357      eP    P     06 31 10.2 +1.1
CMLA Cha da Macela   95.73 357      eP    P     06 31 10.2 +1.0
     comp=Z,47nm,0.9s,mb5.9
CMLA Cha da Macela   95.73 357      ePP   PP    06 35 00.7 -0.8
CMLA                                eLR   LR    07 01 44.8
CMLA Cha da Macela   95.73 357      eP    P     06 31 14.5 +5.3
CMLA                                pmax  pmax
     comp=Z,177nm,1.5s,mb6.3
CMLA                                MLR   MLR
     comp=Z,19µm,19.0s,MS6.6
CMLA Cha da Macela   95.73 357      eP    P     06 31 14.5 +5.3
     comp=Z,177nm,1.5s,mb6.3
CMLA                                LR    LR
     comp=Z,19µm,19.0s,MS6.6
BART Pico Bartolome  95.74 357      eP    P     06 31 12.1 +2.9
     comp=Z,392nm,1.3s,mb6.7
ESPR Espera          95.75  13      P     P     06 31 10.2 +0.9
     comp=Z,9.7nm,0.8s,mb5.3
EANR 'Ain N'Sour     95.85  19      P     P     06 31 15.0 +5.2
PBDV Barranco-do-Ve  95.89  11      eP    P     06 31 10.6 +0.7
     comp=Z,105nm,1.8s,mb6.0
PBDV Barranco-do-Ve  95.89  11      eSKSac SKSac 06 41 51.4 +5.8
PBDV                                eSS   SS    06 49 16.7 +18
PBDV                                eLQ         06 58 34.0
PBDV                                eLR   LR    07 03 05.9
     comp=Z,24µm,20.0s
ASAR Alice Springs   95.92 158      P     P     06 31 09.7 -1.1
     comp=Z,20nm,1.0s,mb5.5,baz=196,slow=3.5,SNR=37
ASAR                                PP    PP    06 35 09.2 +7.3
     comp=Z,21nm,1.0s,baz=185,slow=7.1,SNR=4.6
ASAR                                PKPPbc PKKPbc 06 47 59.2 +3.0
     comp=Z,1.9nm,0.7s,baz=20,slow=2.7,SNR=8.4
ASAR                                PKPPKP      06 56 07.0
     comp=Z,1.2nm,0.9s,baz=79,slow=2.0,SNR=4.9
ASAR Alice Springs   95.92 158      P     P     06 31 09.7 -1.0
ASAR                                            06 35 09.2
PVAQ Vaqueiros       96.08  11      eP    P     06 31 11.8 +1.0
     comp=Z,50nm,1.6s,mb5.7
PVAQ Vaqueiros       96.08  11      ePP   PP    06 35 05.3 +1.2
PVAQ                                eSKSac SKSac 06 41 48.1 +1.5
PVAQ                                eSS   SS    06 49 11.8 +10
PVAQ                                eLQ         06 58 37.1
```

PVAQ eLR LR 07 03 08.6
comp=Z,27µm,20.0s
EBER Berja 96.16 15 P **P 06 31 12.5 +1.3**
comp=Z,15nm,1.1s,mb5.3
EGRO El Granado 96.23 12 P **P 06 31 12.7 +1.2**
comp=Z,16nm,1.0s,mb5.4
ELOJ Sierra Loja 96.24 14 P **P 06 31 12.5 +1.0**
ELOJ pmax pmax
comp=Z,3.0nm,0.3s,mb5.2
ELOJ Sierra Loja 96.24 14 P **P 06 31 12.4 +0.9**
comp=Z,3.2nm,0.3s,mb5.2
EBNR Beni Rached 96.26 19 P **P 06 31 17.5 +5.9**
PCVE Castro Verde 96.27 11 eP **P 06 31 12.2 +0.6**
comp=Z,40nm,1.4s,mb5.7
PCVE Castro Verde 96.27 11 ePP PP 06 35 05.7 +0.1
PCVE eSKSac SKSac 06 41 49.0 +1.4
PCVE eSS SS 06 49 23.1 +19
PCVE eLQ 06 58 31.5
PCVE eLR LR 07 03 17.6
comp=Z,29µm,18.0s
ENIJ Nijar 96.33 16 P **P 06 31 12.5 +0.5**
ENIJ pmax pmax
comp=Z,9.0nm,0.4s,mb5.5
ENIJ Nijar 96.33 16 P **P 06 31 12.5 +0.5**
comp=Z,8.9nm,0.4s,mb5.5
EMHD Djebel Mahouad 96.42 20 P **P 06 31 19.2 +6.8**
ECOG Cogollos-Vega 96.44 15 P **P 06 31 13.0 +0.5**
ECOG pmax pmax
comp=Z,28nm,0.2s,mb6.3
ECOG Cogollos-Vega 96.44 15 P **P 06 31 13.0 +0.6**
comp=Z,28nm,0.2s,mb6.3
EIDS Eidsvold 96.47 174 eP **P 06 31 14.0 +0.8**
PID Ribeirinha 96.50 355 eP **P 06 31 10.7 -2.0**
PCAN Candelaria 96.54 355 eP **P 06 31 08.2 -4.7**
comp=Z,658nm,1.8s,mb6.8
EMIN Mina Concepcio 96.55 12 P **P 06 31 14.0 +1.1**
comp=Z,19nm,4.9s
PICO Pico 96.58 355 eP **P 06 31 08.4 -4.6**
PBEJ Beja 96.68 11 eP **P 06 31 14.6 +1.1**
comp=Z,50nm,1.9s,mb5.6
PMAN Manadas 96.69 355 eP **P 06 31 09.6 -3.9**
comp=Z,63nm,1.1s,mb6.0
TAOE Nuku Hiva Isla 96.70 241 ePP PP 06 35 08.4 -0.1
comp=Z,2µm,25.1s
TAOE eS S 06 42 32.6 -3.2
comp=Z,20µm,29.2s
TAOE eSS SS 06 49 11.4 +1.9
comp=Z,33µm,28.5s
TAOE eLQ 06 58 33.2
comp=Z,142µm,35.4s
TAOE eLR LR 07 02 38.5
comp=Z,172µm,25.2s
CKHR Kef el Ahmar 96.73 22 P **P 06 31 17.8 +4.0**
PBAR Barrancos 96.91 12 eP **P 06 31 13.6 -0.9**
comp=Z,39nm,1.3s,mb5.7
PBAR Barrancos 96.91 12 ePP PP 06 35 11.2 +0.6
PBAR eSKSac SKSac 06 41 34.0 -17
PBAR eSS SS 06 49 14.3 +1.1
PBAR eLQ 06 56 49.9
PBAR eLR LR 07 03 41.5
comp=Z,20µm,22.0s
ECAB El Cabril 97.00 13 P **P 06 31 15.7 +0.7**
comp=Z,75nm,5.8s
EQES Quesada 97.03 15 P **P 06 31 16.4 +1.4**
comp=Z,36nm,6.9s
EHUE Huescar 97.11 15 P **P 06 31 16.1 +0.6**
comp=Z,110nm,4.8s
BBSR BB Station 97.12 325 PFAKE 06 31 20.0 +4.3
BBSR LR LR
comp=Z,31µm,21.0s,MS6.8
EVOP Sao Brissos 97.15 11 eP **P 06 31 15.9 +0.3**
EVOP eS SKSac 06 41 52.6 +0.5
EVOP eS SKSac 06 41 52.9 +0.8
EVOP eSS SS 06 49 16.4 -0.2
EVOP eSS SS 06 49 17.1 +0.6
EVOP AMS AMS 07 08 15.9
comp=Z,30µm,22.2s,MS6.7
EVOP Sao Brissos 97.15 11 eP **P 06 31 15.9 +0.3**
EVOP eS SKSac 06 41 52.6 +0.5
EVOP eSS SS 06 49 17.2 +0.6
EVO Evora 97.16 11 eP **P 06 31 11.7 -4.0**
comp=Z,76nm,1.4s,mb5.6
EVO Evora 97.16 11 eP **P 06 31 12.2 -3.5**
comp=Z,38nm,2.4s,mb5.4
EVO Evora 97.16 11 ePP PP 06 35 11.0 -1.5
EADA Adamuz 97.19 14 P **P 06 31 16.5 +0.7**
comp=Z,5.3nm,0.9s,mb5.0
LIS Lisbon 97.23 10 eP **P 06 31 16.3 +0.3**
LIS eS SKSac 06 41 53.0 +0.4
LIS eSS SS 06 49 17.4 -0.4
LIS eSS SS 06 49 17.4 -0.4
LIS AMS AMS 07 07 50.6
comp=Z,27µm,24.1s,MS6.7
LIS Lisbon 97.23 10 eP **P 06 31 16.3 +0.3**
LIS eS SKSac 06 41 53.0 +0.5
LIS eSS SS 06 49 17.4 -0.4
KEST Kesra 97.27 25 P **P 06 31 15.4 -0.8**
comp=Z,7.5nm,1.0s,mb5.1,baz=244,slow=2.3,SNR=17
KEST LR LR 07 12 39.1
comp=Z,13µm,18.3s,MS6.4,baz=142,slow=34
KEST Kesra 97.27 25 eP **P 06 31 15.3 -0.9**
EBAN Banos Encina 97.29 14 P **P 06 31 17.2 +0.9**
EBAN pmax pmax
comp=Z,4.0nm,0.4s,mb5.2
EBAN Banos Encina 97.29 14 P **P 06 31 17.2 +0.9**
comp=Z,3.5nm,0.4s,mb5.1
DFRA Djebel Bou Aff 97.31 22 P **P 06 31 17.8 +1.4**
CKFL Kef-Lekhel 97.34 23 P **P 06 31 21.3 +4.8**
ABSA Djebel Ababsia 97.38 24 P **P 06 31 18.6 +1.9**
PMAFR Mafra 97.46 10 eSKSac SKSac 06 41 53.3 -0.4
PMAFR eSS SS 06 49 11.9 -9.1
PMAFR eLQ 06 58 59.6
PMAFR eLR LR 07 03 31.8
comp=Z,24µm,22.0s
EBAD Badajoz 97.49 12 P **P 06 31 18.4 +1.3**
comp=Z,7.4nm,0.8s,mb5.2
PESTR Estremoz 97.54 11 eP **P 06 31 17.9 +0.5**
comp=Z,47nm,2.0s,mb5.7
PESTR Estremoz 97.54 11 ePP PP 06 35 12.7 -2.7
PESTR eSKSac SKSac 06 41 54.1 0.0
PESTR eSS SS 06 49 32.8 +11
PESTR eLQ 06 59 14.5
PESTR eLR LR 07 03 49.3
comp=Z,28µm,18.0s
CMAH Djebel Manchou 97.70 23 P **P 06 31 20.1 +1.9**
EVIA Vianos 97.93 15 P **P 06 31 19.8 +0.7**
EVIA pmax pmax
comp=Z,5.0nm,0.5s,mb5.3
EVIA Vianos 97.93 15 P **P 06 31 19.8 +0.7**
comp=Z,4.7nm,0.5s,mb5.3
ETOB Tobarra 98.07 16 P **P 06 31 19.7 -0.1**
comp=Z,12nm,1.0s,mb5.4
PMRV Marv??o 98.11 11 eP **P 06 31 19.7 -0.2**
comp=Z,59nm,1.5s,mb5.9
PMRV Marv??o 98.11 11 ePP PP 06 35 18.9 -0.9
PMRV eSKSac SKSac 06 41 56.6 -0.4
PMRV eSS SS 06 49 44.5 +14
PMRV eLQ 06 57 50.2
PMRV eLR LR 07 04 02.2
comp=Z,25µm,16.0s
PTOM Tomar 98.20 11 eP **P 06 31 21.6 +1.3**
comp=Z,46nm,1.6s,mb5.8
PCBR Castelo Branco 98.51 11 eP **P 06 31 21.9 +0.2**
comp=Z,36nm,1.6s,mb5.7
PCBR Castelo Branco 98.51 11 ePP PP 06 35 19.4 -3.4
PAB San Pablo 98.58 14 eP **P 06 31 21.9 -0.1**
PAB pmax pmax
comp=Z,22nm,1.1s,mb5.6
PAB MLR MLR
comp=Z,23µm,19.0s,MS6.7
PAB San Pablo 98.58 14 eP **P 06 31 21.9 -0.1**
comp=Z,22nm,1.1s,mb5.6
PAB LR LR
comp=Z,23µm,19.0s,MS6.7
WDD Wield Dalam 98.65 29 PFAKE 06 31 30.0 +7.6
WDD LR LR
comp=Z,24µm,19.0s,MS6.7
ESDC Sonseca Array 98.75 14 P **P 06 31 21.8 -1.0**
comp=Z,0.4nm,0.3s,baz=142,slow=26,SNR=4.6
ESDC PKKPbc PKKPbc 06 47 53.9 +4.1
comp=Z,0.6nm,0.3s,baz=329,slow=3.3,SNR=4.8
ESDC LR LR 07 14 15.4
comp=Z,18µm,19.0s,MS6.6,baz=175,slow=34
ESDC Sonseca Array 98.75 14 P **P 06 31 23.8 +1.0**
comp=Z,3.5nm,0.8s,mb4.9
ESLA Sonseca Array 98.75 14 eP **P 06 31 24.1 +1.2**
ESLA LR LR
comp=Z,126µm,20.0s,MS7.4
EPLA Plasencia 98.88 12 P **P 06 31 25.2 +1.8**
EPLA pmax pmax
comp=Z,8.0nm,0.8s,mb5.3
EPLA Plasencia 98.88 12 P **P 06 31 25.2 +1.8**
comp=Z,7.5nm,0.8s,mb5.3
MTE Manteigas 99.06 11 PFAKE 06 31 30.0 +5.9
MTE LR LR
comp=Z,31µm,22.0s,MS6.8
MTE Manteigas 99.06 11 eP **P 06 31 25.3 +1.2**
comp=Z,53nm,1.7s,mb5.8
MTE Manteigas 99.06 11 ePP PP 06 35 24.6 -2.4
MTE eSKSac SKSac 06 42 01.3 -0.4
MTE eSS SS 06 49 39.4 -4.0
MTE eLQ 06 59 04.5
MTE eLR LR 07 04 37.7
comp=Z,30µm,22.0s
DWPF Disney 99.25 310 PFAKE 06 31 30.0 +4.6
DWPF LR LR
comp=Z,56µm,20.0s,MS7.1
FITZ Fitzroy Crossi 99.33 149 eP **P 06 31 28.6 +2.5**
comp=Z,8.5nm,0.5s,mb5.5
FITZ Fitzroy Crossi 99.33 149 PP PP 06 35 31.9 +3.7
comp=Z,10nm,1.0s,baz=195,slow=6.8,SNR=3.2
FITZ LR LR 07 13 38.3
comp=Z,20µm,20.2s,MS6.6,baz=195,slow=34
FITZ Fitzroy Crossi 99.33 149 eP **P 06 31 26.9 +0.8**
comp=Z,8.6nm,0.8s,mb5.3
FITZ ePP PP 06 35 33.6 +5.3
WRA Warramunga Arr 99.63 157 P Pdif 06 31 26.1 -1.4
comp=Z,6.4nm,0.9s,baz=196,slow=4.1,SNR=19
WRA PP PP 06 35 34.4 +4.0
comp=Z,7.3nm,0.9s,baz=186,slow=6.6,SNR=5.7
WRA PKKPbc PKKPbc 06 47 45.0 -1.1
comp=Z,1.9nm,0.6s,baz=1.7,slow=2.9,SNR=11
WRA LR LR 07 18 46.2
comp=Z,43µm,18.2s,MS7.0,baz=200,slow=37
WRA Warramunga Arr 99.63 157 P Pdif 06 31 26.1 -1.4
WRA 06 35 34.4
WRA Warramunga Arr 99.63 157 P Pdif 06 31 26.1 -1.4
WRA PP PP 06 35 34.4 +4.0
WRA PKKPbc PKKPbc 06 47 45.0 -1.1
WRA LR LR 07 18 46.2
WRAB Tennant Creek 99.64 157 eP Pdif 06 31 26.5 -1.1
WRAB MLR MLR
comp=Z,49µm,22.0s,MS7.0
DZM Mont Dzumac 99.64 188 ePP PP 06 35 18.8 -12
comp=Z,3µm,26.8s
DZM eSKSac SKSac 06 42 03.2 -2.9
comp=Z,11µm,29.3s
DZM Mont Dzumac 99.64 188 ePS PS 06 44 30.1 +2.2
comp=Z,13µm,28.3s
DZM eSS SS 06 49 54.1 +4.4
comp=Z,36µm,26.9s
DZM eLQ 06 59 49.4
comp=Z,33µm,34.5s
DZM eLR LR 07 04 02.8
comp=Z,31µm,23.6s
MVO Moncorvo 99.87 11 eP Pdif 06 31 27.5 -1.1
comp=Z,31nm,1.4s
MVO Moncorvo 99.87 11 ePP PP 06 35 26.9 -6.3
MVO eSKSac SKSac 06 42 08.1 +2.4
MVO eSS SS 06 49 52.4 -2.3
MVO eLQ 06 59 31.6
MVO eLR LR 07 04 47.0
comp=Z,29µm,20.0s
ETOR Torete 100.13 15 P Pdif 06 31 30.3 +0.5
ETOR pmax pmax
comp=Z,5.0nm,0.8s
ETOR Torete 100.13 15 P Pdif 06 31 30.3 +0.5
comp=Z,4.6nm,0.8s
GVD Gavdhos 100.45 37 ePdif Pdif 06 31 31.4 +0.2
PBRG Braganca 100.53 12 ePP PP 06 35 35.6 -2.6
ECAL Calabor 100.67 12 P Pdif 06 31 33.1 +0.9
comp=Z,51nm,2.1s
VSL Villasalto 100.88 24 ePdif Pdif 06 31 30.9 -2.3
comp=Z,16nm,1.0s
VSL LR LR
comp=Z,37µm,20.0s,MS6.9
CEL Celeste 101.26 30 PFAKE 06 31 40.0 +5.2
CEL LR LR
comp=Z,24µm,22.0s,MS6.7
CTA Charters Tower 101.31 169 eP Pdif 06 31 36.9 +1.9
comp=Z,10nm,0.9s
CTA ePP PP 06 35 46.2 +3.1
CTA Charters Tower 101.31 169 PP PP 06 35 42.0 -1.1
comp=Z,7.3nm,0.8s,baz=198,slow=5.6,SNR=3.1
CTAO Charters Tower 101.31 169 eP Pdif 06 31 35.2 +0.2
CTAO pmax pmax
comp=Z,27nm,1.1s
CTAO MLR MLR
comp=Z,119µm,22.0s,MS7.4
CTAO Charters Tower 101.31 169 ePdif Pdif 06 31 35.1 +0.1
comp=Z,27nm,1.1s
CTAO LR LR
comp=Z,119µm,22.0s,MS7.4
TRD Trivandrum 101.89 93⇑ex PP 06 35 56.0 +7.5
TIP Timpagrande 102.35 30 ePdif Pdif 06 31 40.0 +0.3
comp=Z,24nm,1.0s
TIP LR LR
comp=Z,28µm,22.0s,MS6.8
ETSF Etsaut 102.39 16 eP Pdif 06 31 36.7 -3.1
comp=Z,42nm,1.2s
ETSF Etsaut 102.39 16 eP Pdif 06 31 36.7 -3.1
ETSF pmax pmax
comp=Z,21nm,1.2s
ETSF Etsaut 102.39 16 eP Pdif 06 31 36.7 -3.1
comp=Z,21nm,1.2s
MSVF Nonsavu 102.47 200 PFAKE 06 31 50.0 +10
MSVF LR LR
comp=Z,24µm,22.0s,MS6.7
SJPF Ste Jean 102.50 15 eP Pdif 06 31 37.5 -2.8
comp=Z,55nm,1.5s
SJPF Ste Jean 102.50 15 eP Pdif 06 31 37.5 -2.8
SJPF pmax pmax
comp=Z,28nm,1.5s
SJPF Ste Jean 102.50 15 eP Pdif 06 31 37.5 -2.8
comp=Z,28nm,1.5s
CUC Castrocucco 102.88 29 ePdif Pdif 06 31 41.2 -0.8
comp=Z,6.7nm,0.8s
CUC LR LR
comp=Z,13µm,20.0s,MS6.5
NHSC New Hope 103.17 313 PFAKE 06 31 50.0 +6.7
NHSC LR LR
comp=Z,24µm,20.0s,MS6.7
CSS Prodhromos 103.73 44 PFAKE 06 31 50.0 +4.2
CSS LR LR
comp=Z,20µm,21.0s,MS6.6
AFI Afiamalu 103.92 210 PFAKE 06 32 00.0 +13
AFI LR LR
comp=Z,15µm,20.0s,MS6.5
BRAL Brewton 104.13 307 PFAKE 06 32 00.0 +12
BRAL LR LR
comp=Z,37µm,21.0s,MS6.9
CNNC Cliffs of the 104.20 316 PFAKE 06 32 00.0 +12
CNNC LR LR
comp=Z,30µm,22.0s,MS6.8
LASF Ste Croix 104.23 19 eP Pdif 06 31 46.0 -2.0
AQU L'Aquila 104.52 26 PFAKE 06 32 00.0 +11
AQU LR LR
comp=Z,33µm,21.0s,MS6.8
GOGA Godfrey 104.74 311 PFAKE 06 32 00.0 +10
GOGA LR LR
comp=Z,36µm,22.0s,MS6.9
TIR Tirane 105.22 31 PFAKE 06 36 20.0 +14
TIR LR LR
comp=Z,15µm,20.0s,MS6.5
ISP Isparta 105.30 41 PFAKE 06 36 20.0 +14
ISP LR LR
comp=Z,12µm,20.0s,MS6.5
MBDF Montbardon 105.39 21 eP Pdif 06 31 50.9 -2.2
SSB Saint Sauveur 105.52 19 ePKPdf PKiKP 06 36 05.8 -0.2
SSB LR LR
comp=Z,29µm,19.0s,MS6.8
VLC Villacollemand 105.56 24 PFAKE 06 36 20.0 +14
VLC LR LR
comp=Z,24µm,22.0s,MS6.7
BNI Bardonecchia 105.68 21 PFAKE 06 36 20.0 +14
BNI LR LR
comp=Z,35µm,19.0s,MS6.9
LRAL Lakeview Retre 105.86 308 PFAKE 06 36 20.0 +13
LRAL LR LR
comp=Z,42µm,20.0s,MS7.0
KVTX Kingsville 106.05 296 PFAKE 06 36 20.0 +12
KVTX LR LR
comp=Z,25µm,22.0s,MS6.7
CBN Corbin 106.65 317 PFAKE 06 36 20.0 +12
CBN LR LR
comp=Z,22µm,22.0s,MS6.7
VBMS Vicksburg 106.66 305 PFAKE 06 36 20.0 +11
VBMS LR LR
comp=Z,20µm,22.0s,MS6.6
TKL Tuckaleechee C 106.82 311 PP PP 06 36 14.5 -11
comp=Z,13nm,1.1s,baz=127,slow=11,SNR=4.2
CPCT Cooper Cave 106.94 311 ePKPdf PKiKP 06 36 09.3 +0.4
HKT Hockley 107.11 299 PFAKE 06 36 20.0 +11
HKT LR LR
comp=Z,11µm,20.0s,MS6.4
MDRS Chennai 107.44 93 ex PP 06 36 42.2 +12
TUE Stuetta 107.56 22 ePKPdf PKiKP 06 36 08.2 -1.5
TUE LR LR
comp=Z,21µm,19.0s,MS6.7
TRI Trieste 107.78 25 PFAKE 06 36 20.0 +10
TRI LR LR
comp=Z,23µm,20.0s,MS6.7
BR131 Keskin Array S 108.08 42 ePKPdf PKiKP 06 36 10.8 -0.1
BR131 LR LR
comp=Z,15µm,22.0s,MS6.5
BRTR Keskin Array B 108.08 42 Pdif Pdif 06 32 12.1 +6.9
comp=Z,2.1nm,0.8s,baz=182,slow=5.9,SNR=9.1
BRTR PP PP 06 36 26.1 -8.3
comp=Z,7.6nm,0.9s,baz=218,slow=7.8,SNR=6.2
BRTR PKKPbc PKKPbc 06 47 28.9 +7.2
comp=Z,2.4nm,0.8s,baz=146,slow=2.4,SNR=5.1
BRTR Keskin Array B 108.08 42 Pdif Pdif 06 32 12.1 +6.9
BRTR PP PP 06 36 26.1 -8.3
BRTR PKKPbc PKKPbc 06 47 28.9 +7.2
OXF Oxford 108.14 307 PFAKE 06 36 20.0 +8.8
OXF LR LR
comp=Z,45µm,22.0s,MS7.0
PSI Prapat 108.19 116 PKKPbc PKKPbc 06 47 26.7 +6.1
comp=Z,7.0nm,0.7s,baz=156,slow=3.9,SNR=4.9
JSA Saint Aubin 108.34 14 AMS AMS 07 09 59.8
comp=Z,23µm,70.5s
JSA Saint Aubin 108.34 14 AMS AMS 07 09 59.8
comp=Z,23µm,70.5s
FETA Feichten 108.37 23⇑ipPdiff 06 32 10.3
comp=Z,141nm,4.6s
FETA ⇑iPKiKP PKiKP 06 36 12.7 +1.5
comp=Z,446nm,3.5s
DAVA Damuels 108.45 22⇑ipPdiff 06 32 10.5
comp=Z,197nm,4.4s
DAVA ⇑iPKiKP PKiKP 06 36 10.4 -0.9
comp=Z,757nm,4.8s
ECH Echery 108.82 20 PFAKE 06 36 20.0 +8.0
ECH LR LR
comp=Z,24µm,20.0s,MS6.8
MCWV Mont Chateau 108.83 316 PFAKE 06 36 20.0 +7.7
MCWV LR LR
comp=Z,23µm,21.0s,MS6.7
WVT Waverly 108.87 309 PFAKE 06 36 20.0 +7.5
WVT LR LR
comp=Z,46µm,21.0s,MS7.0
IPIR Pirpir 108.97 58 eP Pdif 06 32 12.4 +3.3
CCA1 Carnmenellis 108.98 11 AMS AMS 07 14 58.1
comp=Z,24µm,21.3s,MS6.7
SOKA Soboth 108.98 26⇓iPdiff Pdif 06 32 09.1 0.0
comp=Z,161nm,5.3s
SOKA ⇓iPKiKP PKiKP 06 36 14.3 +1.9
comp=Z,911nm,5.4s
SSPA Standing Stone 108.99 318 PFAKE 06 36 20.0 +7.4
SSPA LR LR
comp=Z,21µm,22.0s,MS6.7
BFO Black Forest 109.15 21 ePP PP 06 36 36.0 -6.1
BFO eSdiff Sdif 06 44 22.1 +1.9
BFO eSS SS 06 51 55.2 -6.6
BFO Black Forest 109.15 21 PFAKE 06 36 20.0 +7.4
BFO LR LR
comp=Z,36µm,21.0s,MS6.9
DYA Yadsworthy 109.36 12 AMS AMS 07 10 59.4
comp=Z,27µm,31.2s,MS6.6
DYA Yadsworthy 109.36 12 AMS AMS 07 10 59.4
comp=Z,27µm,31.2s
JCT Junction City 109.41 297 eP Pdif 06 32 14.4 +3.4
JCT MLR MLR
comp=Z,13µm,21.0s,MS6.5
RJOB Jochberg 109.48 24 ePP PP 06 36 38.5 -6.0
RJOB eSdiff Sdif 06 44 21.2 -1.8
RJOB eSS SS 06 52 05.4 -1.0
FUR Furstenfeldbru 109.57 23 ePP PP 06 36 38.8 -6.3
FUR eSdiff Sdif 06 44 23.3 -0.4
IMEH Mehriz 109.59 62 eP Pdif 06 32 09.2 -2.6
GLAT Glass 109.60 308 ePKPdf PKiKP 06 36 13.4 -0.5
BINY Binghamton 109.73 320 PFAKE 06 36 20.0 +6.1
BINY LR LR
comp=Z,21µm,20.0s,MS6.7
STU Stuttgart 109.74 21 ePP PP 06 36 40.4 -5.9
STU eSdiff Sdif 06 44 26.9 +1.8
STU eSS SS 06 52 06.7 -3.0
IZEF Zefreh 109.80 59 eP Pdif 06 32 16.7 +3.9
HTL Hartland 109.85 12 AMS AMS 07 10 50.9
comp=Z,26µm,41.6s,MS6.5
HTL Hartland 109.85 12 AMS AMS 07 10 50.9
comp=Z,26µm,41.6s
MIAR Mount Ida 109.97 304 ePKPdf PKiKP 06 36 14.1 -0.5
MIAR LR LR
comp=Z,15µm,19.0s,MS6.6
WLF Walferdange 110.04 19 ePP PP 06 36 43.1 -5.4
WLF eSdiff Sdif 06 44 30.6 +3.0
WLF eSS SS 06 52 01.5 -12
WLF Walferdange 110.04 19 PFAKE 06 36 20.0 +5.8
WLF LR LR
comp=Z,25µm,19.0s,MS6.8
WCI Wyandotte Cave 110.05 311 PFAKE 06 36 20.0 +5.3
WCI LR LR
comp=Z,19µm,20.0s,MS6.7
628A Black Gap, Mar 110.06 294⇓SKSac SKSac 06 42 55.7 +3.2
baz=110
HYB Hyderabad 110.17 89 i Pdiff Pdif 06 32 14.0 -0.4
HYB ePP PP 06 36 50.0 +0.4
HYB eSKS SKSac 06 42 54.0 +0.5
HYB LR LR 07 10 00.0
comp=Z,40nm,30.0s
LBNH Lisbon 110.24 324 PFAKE 06 36 20.0 +5.2
LBNH LR LR
comp=Z,26µm,20.0s,MS6.8
627A Terlingua Ranc 110.28 293⇓P PKiKP 06 36 14.8 -0.6
baz=110
TXAR Lajitas Array 110.31 293 Pdiff Pdif 06 32 15.2 +0.2
comp=Z,2.0nm,1.1s,baz=111,slow=6.9,SNR=9.6
TXAR PKKPbc PKKPbc 06 47 20.5 +6.2
comp=Z,2.3nm,1.0s,baz=264,slow=1.3,SNR=5.2
PKME Peaks-Kenny Pk 110.38 326 PFAKE 06 36 20.0 +5.0
PKME LR LR
comp=Z,25µm,21.0s,MS6.8
VOIR 110.45 33⇓iP PKiKP 06 36 13.2 -2.0
WOL Wolverton 110.55 14 AMS AMS 07 11 37.1
comp=Z,22µm,35.0s,MS6.5
528A Cox Ranch, San 110.57 294⇑P PKiKP 06 36 15.0 -0.9
baz=111
TFO1 Folkestone 110.67 15 AMS AMS 07 11 11.8
comp=Z,35µm,38.6s,MS6.7
TFO1 Folkestone 110.67 15 AMS AMS 07 11 11.8
comp=Z,35µm,38.6s
NCB Newcomb 110.73 322 ePKPdf PKiKP 06 36 17.0 +1.2
NCB LR LR
comp=Z,42µm,22.0s,MS7.0
GEC2 GERESS Array S 110.73 24 ePP PP 06 36 47.5 -6.0
GEC2 eSdiff Sdif 06 44 32.0 -1.4
GEC2 eSS SS 06 52 14.2 -8.8
MLR Muntele Rosu 110.76 34⇑iP PKiKP 06 36 17.3 +1.5
WET Wettzell 110.83 24 ePP PP 06 36 48.3 -6.0
WET eSdiff Sdif 06 44 34.0 -0.3
WET eSS SS 06 52 12.1 -12
ZST Bratislava 110.89 27 ePP PP 06 36 52.2 -2.5
ZST eSS SS 06 52 21.7 -3.6
527A Woodward Ranch 110.96 293⇑P PKiKP 06 36 16.2 -0.4
baz=111
KHC Kasperske Hory 110.97 24 ex x 06 35 46.8
KHC ePP PP 06 36 47.0 -8.2
KHC eSKS SKSac 06 42 53.3 -2.0
KHC ePS PS 06 46 25.0 -0.2
KHC ePKKP PKKPbc 06 47 24.0 +11
KHC eSS SS 06 52 34.0 +7.7
KHC ex x 07 04 57.8
KHC AMS AMS 07 12 00.0
comp=Z,38µm,35.8s
TNS Taunus Mts 110.98 20 ePP PP 06 36 49.3 -6.0
TNS eSdiff Sdif 06 44 38.8 +3.3

TNS				*e*SS	SS	06 52 20.5	-5.9
GRF	**Grafenberg Arr**	**111.01**	**22**	*e*Pdiff	Pdif	06 32 26.4	+8.3
GRF				*e*PP	PP	06 36 49.3	-6.2
GRF				*e*Sdiff	Sdif	06 44 35.9	+0.2
GRF				*e*PS	PS	06 46 21.4	-4.1
GRF				*e*SS	SS	06 52 17.5	-9.3
GRF				*e*L		07 17 33.4	
	comp=Z,39µm,21.9s						
GRF	**Grafenberg Arr**	**111.01**	**22**	*e*Pdif	Pdif	06 32 26.4	+8.3
GRF				*e*PP	PP	06 36 49.3	-6.2
GRF				Sdif	Sdif	06 44 35.9	+0.2
GRF				*e*PS	PS	06 46 21.4	-4.1
GRF				*e*SS	SS	06 52 17.5	-9.3
GRF				LR	LR		
	comp=Z,39µm,21.9s,MS6.9						
ERPA	**Erie**	**111.04**	**317**	PFAKE		06 36 30.0	+14
ERPA				LR	LR		
	comp=Z,22µm,20.0s,MS6.7						
HGN	**Heimansgroeve**	**111.06**	**19**	*e*Pdif	Pdif	06 32 20.3	+1.9
KULM	**Kulim**	**111.19**	**116**	PFAKE		06 36 30.0	+12
KULM				LR	LR		
	comp=Z,17µm,20.0s,MS6.6						
FUNA	**Funafuti**	**111.23**	**203**	PFAKE		06 36 30.0	+12
FUNA				LR	LR		
	comp=Z,17µm,19.0s,MS6.7						
PSZ	**Piszkesteto**	**111.33**	**29**	PFAKE		06 36 30.0	+13
PSZ				LR	LR		
	comp=Z,20µm,19.0s,MS6.7						
PSZ	**Piszkesteto**	**111.33**	**29** ⇓	*i*P	PKiKP	06 36 27.0	+10
VRI	**Vrincioaia**	**111.33**	**34** ⇑	*i*P	PKiKP	06 36 23.1	+6.3
LONY	**Lake Ozonia**	**111.42**	**322**	PFAKE		06 36 30.0	+13
LONY				LR	LR		
	comp=Z,31µm,22.0s,MS6.8						
427A	**Hayter Ranch,**	**111.44**	**294**	⇓P	PKiKP	06 36 17.1	-0.4
	baz=112						
TREC	**Trest**	**111.55**	**25**	*e*PP	PP	06 36 54.4	-5.0
TREC				*e*PS	PS	06 46 35.9	+5.4
TREC				*e*x	x	06 47 43.1	
TREC				*e*x	x	06 52 46.8	
TREC				*e*x	x	07 05 21.8	
TREC				AMS	AMS	07 17 20.0	
	comp=Z,24µm,22.6s						
426A	**McDonald Obser**	**111.59**	**293**	⇓P	PKiKP	06 36 17.2	-0.7
	baz=112						
VYHS	**Vyhne**	**111.59**	**28**	*e*PP	PP	06 36 55.0	-4.7
VYHS				*e*PS	PS	06 46 28.7	-2.2
VYHS				*e*		06 47 37.0	
VYHS				*e*SS	SS	06 52 24.4	-10
NKC	**Novy Kostel**	**111.78**	**23**	*e*PP	PP	06 36 55.3	-5.7
NKC				*e*SKS	SKSac	06 42 57.7	-0.8
NKC				*e*PS	PS	06 46 32.7	+0.2
NKC				*e*PKKP	PKKPdf	06 47 33.0	+3.3
NKC				*e*x	x	06 52 51.1	
NKC				*e*x	x	07 05 18.9	
NKC				AMS	AMS	07 17 40.0	
	comp=Z,23µm,21.4s						
UBBA	**Unterbreizbach**	**111.85**	**21**	*e*PP	PP	06 36 55.1	-6.4
UBBA				*e*Sdiff	Sdif	06 44 45.5	+2.8
UBBA				*e*SS	SS	06 52 26.8	-11
CCM	**Cathedral Cave**	**111.94**	**307**	PFAKE		06 36 30.0	+12
CCM				LR	LR		
	comp=Z,54µm,20.0s,MS7.1						
CWF	**Charnwood Fore**	**111.94**	**13**	AMS	AMS	07 12 15.1	
	comp=Z,26µm,34.8s,MS6.6						
BUG	**Bochum--Univer**	**111.94**	**19**	*e*PP	PP	06 36 56.4	-5.8
BUG				*e*Sdiff	Sdif	06 44 48.1	+4.6
BUG				*e*SS	SS	06 52 33.4	-5.8
TANN	**Tannenbergstha**	**111.95**	**23**	*e*PP	PP	06 36 56.4	-5.9
TANN				*e*Sdiff	Sdif	06 44 45.2	+1.6
TANN				*e*SS	SS	06 52 30.9	-8.4
PRU	**Pruhonice**	**111.99**	**24**	*e*PP	PP	06 36 57.7	-4.8
PRU				*e*SKS	SKSac	06 42 58.7	-0.7
PRU				*e*PS	PS	06 46 37.1	+2.6
PRU				*e*x	x	06 47 43.5	
PRU				*e*SS	SS	06 52 41.8	+2.0
PRU				*e*x	x	07 05 24.5	
PRU				AMS	AMS	07 11 30.0	
	comp=Z,36µm,45.2s						
MOX	**Moxa**	**112.00**	**22**	*e*PP	PP	06 36 57.7	-4.9
	comp=Z,58nm,2.0s						
MOX				*e*PS	PS	06 46 39.0	+4.4
MOX				*e*SS	SS	06 52 56.0	+16
MOX							
	comp=Z,21µm,20.0s						
MOX	**Moxa**	**112.00**	**22**	*e*PP	PP	06 36 56.3	-6.3
MOX				*e*Sdiff	Sdif	06 44 46.1	+2.1
MOX				*e*SS	SS	06 52 31.1	-8.8
PRA	**Prague**	**112.05**	**24**	PP	PP	06 36 57.0	-5.9
PRA				PS	PS	06 46 36.0	+1.0
PRA				SS	SS	06 52 37.0	-3.6
PRA				AMS	AMS	07 12 00.0	
AKL	**Akola**	**112.07**	**86**	*e*PKP	PKiKP	06 36 17.0	-2.0
AKL				AMS	AMS	07 17 29.3	
	comp=Z,13µm,18.5s,MS6.5						
326A	**Caldwell Ranch**	**112.10**	**294**	⇑P	PKiKP	06 36 18.1	-0.6
	baz=112						
KSM	**Kuching**	**112.15**	**127**	PFAKE		06 36 30.0	+11
KSM				LR	LR		
	comp=Z,11µm,20.0s,MS6.4						
TRPA	**Tarpa**	**112.21**	**30** ⇓	*i*P	PKiKP	06 36 31.1	+13
WTSB	**Winterswijk**	**112.37**	**19**	*e*Pdif	Pdif	06 32 26.5	+2.3
WMOK	**Wichita Mounta**	**112.47**	**300**	*e*P	Pdif	06 32 28.4	+3.8
WMOK				MLR	MLR		
	comp=Z,15µm,21.0s,MS6.6						
BURAR	**Bucovina Array**	**112.48**	**32** ⇑	*i*P	PKiKP	06 36 28.6	+10
HNR	**Honiara**	**112.50**	**182**	PFAKE		06 36 30.0	+10
HNR				LR	LR		
	comp=Z,21µm,22.0s,MS6.7						
PVCC	**Panska Ves**	**112.50**	**24**	*e*PP	PP	06 37 00.7	-5.5
PVCC				*e*SKS	SKSac	06 43 02.1	+0.7
PVCC				*e*PS	PS	06 46 41.9	+2.7
PVCC				*e*x	x	06 47 46.8	
PVCC				*e*SS	SS	06 52 41.6	-5.1
PVCC				*e*x	x	07 05 36.1	
PVCC				AMS	AMS	07 18 10.0	
	comp=Z,22µm,20.9s						
AAM	**Ann Arbor**	**112.54**	**315**	PFAKE		06 36 30.0	+11
AAM				LR	LR		
	comp=Z,21µm,22.0s,MS6.7						
UZH	**Uzhgorod**	**112.61**	**30**	*i* PKIKP	PKiKP	06 36 22.2	+3.1
UZH				*i*		06 36 27.0	
UZH				*i*		06 37 08.2	
UZH				*e*PPP		06 43 22.0	
UZH				*e*		06 46 45.2	
UZH				*e*		06 47 51.8	
UZH				MLR	MLR		
	comp=N,6µm,19.0s,MS6.5						
UZH				MLR	MLR		
	comp=E,10µm,19.0s,MS6.5						
UZH				MLR	MLR		
	comp=Z,6µm,19.0s,MS6.2						
GNI	**Garni**	**112.66**	**50**	PFAKE		06 36 30.0	+10
GNI				LR	LR		
	comp=Z,23µm,20.0s,MS6.8						
OKC	**Ostrava-Krasne**	**112.67**	**27**	*e*PP	PP	06 37 04.3	-3.1
OKC				*e*SKS	SKSac	06 43 09.0	+6.9
OKC				*e*PS	PS	06 46 47.4	+6.6
OKC				*e*x	x	06 47 47.6	
OKC				*e*SS	SS	06 52 55.3	+6.4
OKC				*e*x	x	07 04 56.1	
OKC				AMS	AMS	07 17 20.0	
	comp=Z,16µm,24.4s						
BRG	**Berggiesshubel**	**112.70**	**24**	*e*PP	PP	06 37 01.6	-6.0
BRG				*e*Sdiff	Sdif	06 44 51.3	+1.5
BRG				*e*SS	SS	06 52 40.0	-9.2
BRG	**Berggiesshubel**	**112.70**	**24**	*i* PKP	PKiKP	06 36 19.2	0.0
	comp=Z,13nm,1.8s						
BRG				PP	PP	06 37 09.0	+1.4
BRG				SDIF	Sdif	06 44 59.0	+9.2
BRG				*e*PKKP	PKKPdf	06 47 29.5	+1.6
	comp=Z,20nm,1.5s						
BRG							
	comp=N,10µm,23.0s						
BRG							
	comp=E,10µm,24.4s						
BRG							
	comp=Z,19µm,24.0s						
BRG	**Berggiesshubel**	**112.70**	**24**	*i* PKIKP	PKiKP	06 36 19.2	0.0
BRG						06 37 09.0	
BRG				pmax	pmax		
	comp=Z,8.0nm,1.8s						
BRG				MLR	MLR		
	comp=N,6µm,23.0s,MS6.3						
BRG				MLR	MLR		
	comp=E,6µm,24.4s,MS6.3						
BRG				MLR	MLR		
	comp=Z,11µm,24.0s,MS6.4						
DPC	**Dobruska-Polom**	**112.73**	**25**	*e*PP	PP	06 37 02.3	-5.5
DPC				*e*SKS	SKSac	06 43 01.3	-1.0
DPC				*e*PS	PS	06 46 40.3	-1.0
DPC				*e*x	x	06 47 47.9	
DPC				*e*SS	SS	06 52 49.5	-0.1
DPC				*e*x	x	07 05 35.2	
DPC				AMS	AMS	07 18 30.0	
	comp=Z,26µm,22.5s						
UPC	**Upice**	**112.81**	**25**	*e*PP	PP	06 37 01.7	-6.7
UPC				*e*PKKP	PKKPbc	06 47 14.4	+7.8
IBBN	**Ibbenburen**	**112.86**	**19**	*e*PP	PP	06 37 02.7	-6.0
IBBN				*e*Sdiff	Sdif	06 44 55.6	+4.4
IBBN				*e*SS	SS	06 52 39.5	-12
CLZ	**Clausthal**	**112.89**	**21**	*e*PP	PP	06 37 03.4	-5.6
CLZ				*e*Sdiff	Sdif	06 44 54.6	+3.2
CLZ				*e*SS	SS	06 52 46.5	-5.3
CLL	**Collm**	**112.91**	**23**	*e*PP	PP	06 37 03.0	-6.1
CLL				*e*Sdiff	Sdif	06 44 53.0	+1.4
CLL				*e*SS	SS	06 52 42.3	-10
CLL	**Collm**	**112.91**	**23**	*e*PKP	PKiKP	06 36 21.0	+1.4
CLL				*e*		06 36 32.0	
CLL				*e*PP	PP	06 37 12.0	+2.9
CLL				*e*SKS	SKSac	06 43 05.0	+2.0
CLL				*e*Sdif	Sdif	06 44 58.0	+6.4
CLL				*e*PKKP	PKKPbc	06 47 09.0	+2.7
CLL				*e*PKKP	PKKPdf	06 47 27.0	-0.5
CLL				LR	LR		
	comp=Z,26µm,22.0s,MS6.8						
CLL	**Collm**	**112.91**	**23**	*e*Pdif	Pdif	06 32 26.0	-0.6
CLL				*e*PKiKP	PKiKP	06 36 21.0	+1.4
CLL				*e*		06 36 32.0	
CLL				*e*		06 37 04.0	
CLL				*e*PP	PP	06 37 12.0	+2.9
	comp=Z,138nm,2.2s						
CLL				*e*		06 37 18.0	
CLL				*e*PPP		06 39 36.0	
CLL				*e*SKSac	SKSac	06 43 05.0	+2.0
CLL				*e*SKKSac	SKKSac	06 44 13.0	+3.3
CLL				*e*Sdif	Sdif	06 44 58.0	+6.4
CLL				*e*PS	PS	06 46 46.0	+3.1
CLL				*e*PKKPbc	PKKPbc	06 47 09.0	+2.7
	comp=Z,9.0nm,0.9s						
CLL				*e*PKKPdf	PKKPdf	06 47 27.0	-0.5
CLL				*e*(PPS)		06 48 00.0	
CLL				*e*		06 50 35.0	
CLL				*e*SS	SS	06 52 40.0	-12
CLL				*e*PSS		06 53 14.0	
CLL				*e*PPPrev		06 54 51.0	
CLL				*e*PKPPKPdf		06 55 41.0	
CLL				*e*SSS		06 56 54.0	
CLL				*e*		06 59 48.0	
RAC	**Raciborz**	**112.92**	**27**	*e*P	Pdif	06 32 27.5	+0.9
RAC				*e*PS	PS	06 46 47.4	+4.4
RAC	**Raciborz**	**112.92**	**27**	*e*Pdif	Pdif	06 32 27.5	+0.9
RAC				*e*PP	PP	06 37 02.7	-6.4
RAC				*e*PS	PS	06 46 47.4	+4.4
RAC				LR	LR		
	comp=Z,17µm,20.0s,MS6.6						
VIS	**Vishakhapatnam**	**112.94**	**93**	*e*PKP	PKiKP	06 36 19.5	-1.3
KIS	**Kishinev**	**112.98**	**35**	*e*P	Pdif	06 32 25.0	-1.9
KIS	**Kishinev**	**112.98**	**35**	*e*PKP	PKiKP	06 36 20.0	+0.1
KIS	**Kishinev**	**112.98**	**35**	*e*P	Pdif	06 32 25.0	-1.9
KIS				*e*		06 36 20.0	
KIS				*e*		06 39 42.0	
KIS				*e*		06 43 00.0	
KIS				pmax	pmax		
	comp=Z,2µm,6.0s						
KIS				MLR	MLR		
	comp=E,5µm,18.0s,MS6.3						
KIS				MLR	MLR		
	comp=Z,9µm,18.0s,MS6.4						
KIS				MLR	MLR		
	comp=N,6µm,20.0s,MS6.3						
KIS				MLR	MLR		
	comp=Z,12µm,24.0s						
GDL2	**Guadalupe Moun**	**113.01**	**294**	*e*Pdif	Pdif	06 32 31.6	+4.5
MNTX	**Cornudas Mount**	**113.09**	**293**	PFAKE		06 36 30.0	+9.3
MNTX				LR	LR		
	comp=Z,16µm,20.0s,MS6.6						
HPK	**Haverah Park**	**113.09**	**13**	AMS	AMS	07 12 43.7	
	comp=Z,25µm,43.9s,MS6.5						
WIT	**Witteveen**	**113.16**	**18**	*e*Pdif	Pdif	06 32 28.8	+1.1
KSP	**Ksiaz**	**113.18**	**25**	*e*P	Pdif	06 32 26.0	-1.8
KSP				*e*SP	SP	06 46 47.0	+2.7
KSP				*e*SS	SS	06 52 50.0	-5.6
KSP	**Ksiaz**	**113.18**	**25**	*e*Pdif	Pdif	06 32 26.0	-1.8
KSP				*e*PP	PP	06 37 07.0	-4.0
KSP				*e*SP	SP	06 46 47.0	+2.7
KSP				*e*SS	SS	06 52 50.0	-5.6
KSP				LR	LR		
	comp=Z,52µm,21.6s,MS7.1						
HDIL	**Hopedale**	**113.25**	**310**	*e*PKPdf	PKiKP	06 36 21.1	+0.5
HDIL				LR	LR		
	comp=Z,32µm,22.0s,MS6.9						
OJC	**Ojcow**	**113.43**	**28**	*e*Pdiff	Pdif	06 32 26.9	-2.0
OJC				*e*PKiKP	PKiKP	06 36 22.1	+1.4
OJC				e		06 37 07.3	
OJC				*e*SP	SP	06 46 47.2	+0.6
OJC				*e*SS	SS	06 53 03.4	+4.5
OJC				L		07 22 23.8	
	comp=Z,16nm,21.1s						
OJC	**Ojcow**	**113.43**	**28**	*i* PKIKP	PKiKP	06 36 22.1	+1.4
OJC				*e*SP	SP	06 46 47.2	+0.6
OJC				*e*SS	SS	06 53 03.4	+4.5
OJC				MLR	MLR		
	comp=Z,16µm,21.1s,MS6.6						
OJC	**Ojcow**	**113.43**	**28**	*e*Pdif	Pdif	06 32 26.9	-2.0
OJC				*e*PKPdf	PKiKP	06 36 22.1	+1.4
OJC				*e*		06 37 07.3	
OJC				*e*SP	SP	06 46 47.2	+0.6
OJC				*e*SS	SS	06 53 03.4	+4.5
OJC				LR	LR		
	comp=Z,16µm,21.1s,MS6.6						
NRDL	**Niedersach Rie**	**113.47**	**21**	*e*PP	PP	06 37 07.4	-5.6
NRDL				*e*Sdiff	Sdif	06 44 59.4	+3.2
NRDL				*e*SS	SS	06 52 41.6	-18
NGP	**Nagpur**	**113.51**	**88**	*e*PKP	PKiKP	06 36 21.9	+0.1
NGP				*e*x	x	07 23 27.4	
	comp=Z,13µm,18.3s						
125A	**Gardner Draw,**	**113.53**	**294**	⇓P	PKiKP	06 36 19.8	-1.7
	baz=114						
KWP	**Kalwaria Pacla**	**113.63**	**30**	PFAKE		06 36 30.0	+8.9
KWP				LR	LR		
	comp=Z,24µm,19.0s,MS6.8						
GAL1	**Galloway**	**113.65**	**11**	AMS	AMS	07 16 49.9	
	comp=Z,24µm,21.2s,MS6.8						
SOC	**Sochi**	**113.66**	**44**	*e*P	Pdif	06 32 30.3	+0.4
SOC				*i*		06 36 19.9	
SOC				*e*		06 36 34.8	
SOC				*e*PPP		06 39 41.5	
SOC				*e*PS	PS	06 46 56.4	+6.5
SOC				*e*SS	SS	06 53 08.8	+6.7
SOC				*e*SSS		06 57 18.5	
SOC				pmax	pmax		
	comp=Z,34nm,1.0s						
MSTX	**Muleshoe**	**113.70**	**296**	⇓P	PKiKP	06 36 20.1	-1.7
	baz=114						
Y27A	**Causey**	**113.82**	**296**	⇓P	PKiKP	06 36 20.2	-1.8
	baz=114						
ANN	**Anapa**	**113.88**	**42**	*i* PKIKP	PKiKP	06 36 21.9	+0.2
ANN				*e*		06 37 16.5	
ANN				*e*PPP		06 39 40.9	
ANN				*e*		06 43 04.6	
ANN				*e*PS	PS	06 46 52.6	+0.6
ANN				*e*SS	SS	06 53 01.7	-3.4
ANN				*e*SSS		06 57 20.0	
ANN				pmax	pmax		
	comp=Z,52nm,1.3s						
AMTX	**Amarillo**	**113.94**	**298**	PFAKE		06 36 30.0	+7.8
AMTX				LR	LR		
	comp=Z,19µm,19.0s,MS6.7						
124A	**Stringfield Ra**	**113.95**	**294**	⇑P	PKiKP	06 36 20.9	-1.3
	baz=114						
XMAS	**Kiritimati**	**113.98**	**230**	PFAKE		06 36 30.0	+7.0
XMAS				LR	LR		
	comp=Z,22µm,21.0s,MS6.7						
Z25A	**Roswell**	**114.06**	**294**	⇑P	PKiKP	06 36 21.5	-1.0
	baz=114						
LVV	**L'vov**	**114.16**	**31**	*i* PKIKP	PKiKP	06 36 20.4	-1.7
LVV				*e*		06 43 01.4	
LVV				*e*PS	PS	06 46 53.6	-0.7
LVV				*e*SS	SS	06 53 00.2	-8.3
LVV				MLR	MLR		
	comp=Z,11µm,21.0s,MS6.4						
LVV				MLR	MLR		
	comp=N,6µm,23.0s,MS6.5						
LVV				MLR	MLR		
	comp=E,10µm,20.0s,MS6.5						
Y26A	**Elida**	**114.16**	**296**	⇓P	PKiKP	06 36 21.7	-0.9
	baz=114						
ESK	**Eskdalemuir**	**114.25**	**12**	AMS	AMS	07 19 07.9	
	comp=Z,29µm,19.1s,MS6.9						
ESK	**Eskdalemuir**	**114.25**	**12**	PFAKE		06 36 30.0	+7.9
ESK				LR	LR		
	comp=Z,34µm,20.0s,MS7.0						
320A	**Kipp Ranch, An**	**114.34**	**290**	⇑P	PKiKP	06 36 21.7	-1.3
	baz=114						
BHPL	**Bhopal**	**114.36**	**85**	*e*PKP	PKiKP	06 36 22.3	-1.1
BHPL				AMb	AMB	06 36 23.2	
	comp=Z,30nm,1.1s						
X27A	**F and S Farms,**	**114.41**	**297**	⇑P	PKiKP	06 36 22.0	-1.1
	baz=114						
Z24A	**Sheeppen Canyo**	**114.42**	**294**	⇓P	PKiKP	06 36 21.8	-1.3
	baz=114						
221A	**Mesquite Ranch**	**114.52**	**291**	⇑P	PKiKP	06 36 22.2	-1.2
	baz=115						
ZEI	**Tsey**	**114.55**	**48**	*e*PKIKP	PKiKP	06 36 22.8	-0.3
ZEI				*e*		06 37 18.6	
ZEI				pmax	pmax		
	comp=Z,30nm,1.3s						
Y25A	**Mesa, Roswell**	**114.58**	**295**	⇑P	PKiKP	06 36 22.6	-0.9
	baz=115						
QUE	**Quetta**	**114.60**	**72**	*e*P	PKiKP	06 36 16.0	-7.6
QUE				*e*S		06 40 34.0	
PGBU	**Glenifferbraes**	**114.61**	**11**	AMS	AMS	07 14 05.1	
	comp=Z,21µm,25.4s,MS6.6						
X26A	**CR and CF Fran**	**114.67**	**296**	⇓P	PKiKP	06 36 22.8	-0.8
	baz=115						
122A	**Conniff Cattle**	**114.70**	**292**	⇓P	PKiKP	06 36 22.8	-0.9
	baz=115						
W27A	**Bowe Ranch, En**	**114.73**	**297**	⇓P	PKiKP	06 36 22.8	-0.9
	baz=115						
319A	**Douglas**	**114.75**	**290**	⇓P	PKiKP	06 36 22.9	-1.0
	baz=115						
Z23A	**Rita Site, Whi**	**114.78**	**293**	⇑P	PKiKP	06 36 23.1	-0.7
	baz=115						
220A	**Playas Peak, P**	**114.80**	**291**	⇓P	PKiKP	06 36 23.2	-0.7
	baz=115						
EDI	**Edinburgh**	**114.85**	**12**	AMS	AMS	07 19 15.2	
	comp=Z,24µm,19.9s,MS6.8						
BSEG	**Bad Segeberg**	**114.88**	**20**	*e*PP	PP	06 37 16.6	-6.4
BSEG				*e*Sdiff	Sdif	06 45 09.9	+1.9
BSEG				*e*SS	SS	06 53 05.3	-13
Y24A	**Capitan**	**114.94**	**294**	⇑P	PKiKP	06 36 23.5	-0.6
	baz=115						
121A	**Cookes Peak, D**	**114.95**	**292**	⇓P	PKiKP	06 36 23.6	-0.6
	baz=115						
X25A	**Clemmons Ranch1**	**115.06**	**295**	⇓P	PKiKP	06 36 23.7	-0.6
	baz=115						
W26A	**Owens Ranch, T**	**115.09**	**296**	⇓P	PKiKP	06 36 23.5	-0.8
	baz=115						
KIV	**Kislovodsk**	**115.09**	**46**	*e*P	Pdif	06 32 36.0	-0.3
KIV				*i*		06 36 21.3	
KIV				*e*		06 37 25.7	
KIV				*e*		06 43 07.2	
KIV				*e*PS	PS	06 47 05.3	+2.3
KIV				*e*SS	SS	06 53 31.5	+11
KIV				pmax	pmax		
	comp=Z,15nm,1.1s						
KIV				MLR	MLR		
	comp=Z,10µm,19.0s,MS6.5						
KIV	**Kislovodsk**	**115.09**	**46**	PKPdf	PKiKP	06 36 23.5	-0.6
KIV				LR	LR		
	comp=Z,13µm,21.0s,MS6.5						
KSU1	**Kansas State U**	**115.11**	**304**	PFAKE		06 36 30.0	+5.7
KSU1				LR	LR		
	comp=Z,34µm,20.0s,MS7.0						
Z22A	**Elephant Butte**	**115.13**	**293**	⇑P	PKiKP	06 36 23.8	-0.7
	baz=115						
318A	**Bisbee**	**115.15**	**289**	⇓P	PKiKP	06 36 23.5	-1.1
	baz=115						
Y23A	**Lovelace Mesa,**	**115.24**	**294**	⇓P	PKiKP	06 36 23.5	-1.2
	baz=115						
219A	**White Tail Can**	**115.24**	**290**	⇓P	PKiKP	06 36 23.4	-1.4
	baz=115						
120A	**U Bar Ranch, L**	**115.38**	**291**	⇑P	PKPdf	06 36 23.9	-1.1
	baz=116						
W25A	**X Bar L Ranch,**	**115.52**	**296**	⇑P	PKPdf	06 36 24.5	-0.7
	baz=116						
Z21A	**St. Cloud Mine**	**115.52**	**292**	⇓P	PKPdf	06 36 24.3	-1.0
	baz=116,SNR=5.3						
AJM	**Ajmer**	**115.54**	**81**	*e*PKP	PKPdf	06 36 25.0	-0.5
218A	**Dragoon**	**115.61**	**290**	⇑P	PKPdf	06 36 24.6	-0.9
	baz=116,SNR=7.3						
JFWS	**Jewell Farm**	**115.62**	**311**	PFAKE		06 36 30.0	+4.9
JFWS				LR	LR		
	comp=Z,17µm,21.0s,MS6.6						
V26A	**Tequesquite Ra**	**115.67**	**297**	⇑P	PKPdf	06 36 24.6	-0.9
	baz=116						
Y22A	**Socorro**	**115.69**	**293**	⇓P	PKPdf	06 36 24.3	-1.2
	baz=116						
Z20A	**Nine Sixteen R**	**115.81**	**291**	⇓P	PKPdf	06 36 24.7	-1.1
	baz=116						
119A	**Ashpeak Ranch,**	**115.88**	**291**	⇑P	PKPdf	06 36 25.5	-0.4
	baz=116,SNR=5.9						
W24A	**Lazy 6 Ranch,**	**115.97**	**295**	⇓P	PKPdf	06 36 25.2	-0.8
	baz=116						
SCIA	**State Center**	**115.99**	**308**	*e*PKPdf	PKPdf	06 36 26.6	+0.7
SCIA				LR	LR		
	comp=Z,30µm,21.0s,MS6.9						
KPL	**Plockton**	**116.01**	**10**	AMS	AMS	07 21 05.7	
	comp=Z,31µm,19.1s,MS6.9						
Y21A	**Point of Rocks**	**116.09**	**293**	⇓P	PKPdf	06 36 25.6	-0.7
	baz=116						
V25A	**Rancho No Teng**	**116.10**	**296**	⇑P	PKPdf	06 36 25.2	-1.1
	baz=116						
118A	**Homack Ranch,**	**116.11**	**290**	⇓P	PKPdf	06 36 24.8	-1.6
	baz=116						
U26A	**Atchley Ranch,**	**116.14**	**297**	⇑P	PKPdf	06 36 25.2	-1.1
	baz=116						
MAK	**Makhachkala**	**116.14**	**50**	*i* PKIKP	PKPdf	06 36 29.0	+2.9
MAK				*e*		06 37 31.8	
MAK				*e*		06 43 13.4	
MAK				*e*PS	PS	06 47 19.6	+6.9
MAK				*e*SS	SS	06 53 27.1	-7.8
MAK				pmax	pmax		
	comp=Z,208nm,1.6s						
GOF	**Gofitskoye**	**116.16**	**46**	*e*PKIKP	PKPdf	06 36 31.1	+5.0
GOF				pmax	pmax		
	comp=Z,20nm,1.0s						
X22A	**Bernardo**	**116.17**	**294**	⇑P	PKPdf	06 36 25.2	-1.3
	baz=116						
TUC	**Tucson**	**116.25**	**289**	*e*PKIKP	PKPdf	06 36 26.8	+0.1
TUC				MLR	MLR		
	comp=Z,36µm,21.0s,MS7.0						
ANMO	**Alb

comp=Z,5.7nm,0.8s,baz=34,slow=4.1,SNR=13
AKASG Malin Array Be 116.41 34 PKIKP PKPdf 06 36 24.5 -1.9
AKASG 06 37 33.0
AKASG Malin Array Be 116.41 34 PKP PKPdf 06 36 24.5 -1.9
AKASG PP PP 06 37 33.0 -0.8
AKASG PKKPbc PKKPbc 06 46 54.3 +0.1
AKBB Malin Array Si 116.41 34 ePKIKP PKPdf 06 36 25.6 -0.8
117A Oracle 116.44 289 ⇑P PKPdf 06 36 25.5 -1.5
baz=116,SNR=10.0
U25A Circle Dot Ran 116.45 297 ⇓P PKPdf 06 36 25.6 -1.4
baz=117
X21A Alamocita Cree 116.50 293 ⇑P PKPdf 06 36 25.8 -1.3
baz=117
Z18A Geronimo 116.50 290 ⇑P PKPdf 06 36 26.1 -1.1
baz=117
V23A Ortiz Mt. (NFS 116.77 295 ⇑P PKPdf 06 36 26.1 -1.5
baz=117
Y19A Nutrioso 116.82 292 ⇑P PKPdf 06 36 26.6 -1.2
baz=117,SNR=6.4
U24A Moreno Valley 116.87 296 ⇑P PKPdf 06 36 26.6 -1.2
baz=117
BSD Bornholm Skovb 116.89 23 eP Pdif 06 32 45.9 +1.6
BSD e 06 36 54.5
BSD Bornholm Skovb 116.89 23 i P Pdif 06 32 45.9 +1.6
BSD e 06 36 54.5
BSD
comp=Z,14μm,18.0s
Z17A San Carlos Hig 116.89 290 ⇓P PKPdf 06 36 26.6 -1.3
baz=117
116A Eloy 116.91 289 ⇑P PKPdf 06 36 26.6 -1.4
baz=117,SNR=6.4
X20A Quemado 116.92 292 ⇑P PKPdf 06 36 26.7 -1.2
baz=117,SNR=7.5
COP Copenhagen 116.93 21 eP Pdif 06 32 39.6 -4.9
COP Copenhagen 116.93 21 i P Pdif 06 32 39.6 -4.9
214A Organ Pipe Nat 116.98 287 ⇓P PKPdf 06 36 26.4 -1.7
baz=117
T25A Trinidad 117.05 297 ⇓P PKPdf 06 36 26.4 -1.7
baz=117
Y18A Canyon Day Jun 117.06 291 ⇓P PKPdf 06 36 26.7 -1.5
baz=117,SNR=8.2
MUD Monsted U'grnd 117.08 19 i P Pdif 06 32 48.5 +3.4
MUD i 06 47 19.2
MUD
comp=Z,15μm,22.0s
X19A St. Johns 117.22 292 ⇑P PKPdf 06 36 26.7 -1.8
baz=117
U23A El Rito 117.24 295 ⇓P PKPdf 06 36 27.3 -1.2
baz=117
V22A San Miguel Ran 117.25 295 ⇑P PKPdf 06 36 27.3 -1.2
baz=117
115A Sonoran Desert 117.29 288 ⇓P PKPdf 06 36 27.1 -1.6
baz=117
W20A Ramah 117.39 293 ⇓P PKPdf 06 36 27.4 -1.4
baz=118,SNR=11
Y17A Roosevelt 117.39 290 ⇑P PKPdf 06 36 27.4 -1.4
baz=118,SNR=18
Z16A Peralta Trail, 117.40 289 ⇑P PKPdf 06 36 27.4 -1.4
baz=118
S25A Robets Cordova 117.49 298 ⇑P PKPdf 06 36 27.9 -1.0
baz=118
V21A Milan 117.52 294 ⇓P PKPdf 06 36 28.1 -0.9
baz=118
U22A Llaves 117.60 295 ⇓P PKPdf 06 36 28.3 -0.9
baz=118
X18A Snowflake 117.62 291 ⇑P PKPdf 06 36 28.3 -1.0
baz=118,SNR=18
114A Black Gap (USA 117.66 288 ⇓P PKPdf 06 36 28.5 -0.9
baz=118,SNR=8.7
Z15A Gila River Ind 117.72 289 ⇑P PKPdf 06 36 28.9 -0.6
baz=118
T23A Casias Ranch, 117.74 296 ⇓P PKPdf 06 36 29.0 -0.5
baz=118
W19A Sanders 117.81 292 ⇓P PKPdf 06 36 28.6 -1.0
baz=118,SNR=8.2
S24A Houchin Ranch, 117.83 297 ⇑P PKPdf 06 36 27.6 -2.0
baz=118
COWI Conover 117.85 314 ePKPdf PKPdf 06 36 28.0 -1.3
COWI LR LR
comp=Z,34μm,21.0s,MS6.9
Y16A Circle Bar Ran 117.86 290 ⇓P PKPdf 06 36 29.4 -0.3
baz=118,SNR=13
X17A Forest Lakes 117.89 291 ⇑P PKPdf 06 36 27.7 -2.1
baz=118,SNR=10
V20A Brimhall 117.91 293 ⇑P PKPdf 06 36 27.7 -2.0
baz=118
W18A Petrified Fore 117.99 292 ⇑P PKPdf 06 36 28.2 -1.8
baz=118
U21A Nageezi 118.03 294 ⇓P PKPdf 06 36 28.4 -1.6
baz=118,SNR=16
SDCO Great Sand Dun 118.06 297 ePKPdf PKPdf 06 36 28.9 -1.1
SDCO LR LR
comp=Z,20μm,21.0s,MS6.7
113A Mohawk Valley, 118.11 287 ⇑P PKPdf 06 36 28.8 -1.5
baz=118
V19A Window Rock 118.13 293 ⇑P PKPdf 06 36 28.9 -1.4
baz=118,SNR=6.3
T22A Edith 118.13 295 ⇓P PKPdf 06 36 28.9 -1.3
baz=118
Z14A Wintersburg 118.18 288 ⇓P PKPdf 06 36 28.7 -1.7
baz=118
R24A Sanders Place, 118.26 297 ⇓P PKPdf 06 36 29.0 -1.4
baz=118
S23A Nye Farm, Mont 118.26 296 ⇓P PKPdf 06 36 29.0 -1.3
baz=118
X16A Lo Mia Camp, P 118.27 290 ⇓P PKPdf 06 36 28.9 -1.6
baz=118,SNR=26
112A Yuma 118.34 287 ⇑P PKPdf 06 36 28.6 -2.2
baz=118
Y15A Casa Rosa Ranc 118.34 289 ⇑P PKPdf 06 36 28.6 -2.1
baz=118
U20A Newcomb 118.40 294 ⇓P PKPdf 06 36 29.0 -1.7
baz=118
Z13A Yuma Proving G 118.40 288 ⇑P PKPdf 06 36 28.7 -2.1
baz=118,SNR=9.5
Q25A Bedland, Calha 118.41 298 ⇑P PKPdf 06 36 28.9 -1.7
baz=118
SCHQ Schefferville 118.42 332 PKP PKPdf 06 36 29.2 -0.9
comp=Z,15nm,0.7s,baz=127,slow=1.7,SNR=14
SCHQ PKKPbc PKKPbc 06 46 50.2 +3.2
comp=Z,6.7nm,0.9s,baz=28,slow=2.5,SNR=4.4
SCHQ Schefferville 118.42 332 ePKPdf PKPdf 06 36 29.4 -0.6
SCHQ LR LR
comp=Z,40μm,19.0s,MS7.1
T21A Navajo Lake 118.42 295 ⇑P PKPdf 06 36 29.3 -1.4
baz=118
V18A Ganado 118.56 292 ⇑P PKPdf 06 36 29.7 -1.4
baz=119,SNR=20
NDI New Delhi 118.66 81 ePKP PKPdf 06 36 31.0 -0.5
Y14A Wickenburg 118.67 289 ⇑P PKPdf 06 36 29.4 -1.9
baz=119,SNR=17
U19A Dine' College, 118.67 293 ⇑P PKPdf 06 36 29.2 -2.0
baz=119,SNR=14
S22A 4UR Ranch, Cre 118.69 296 ⇓P PKPdf 06 36 29.4 -1.8
baz=119,SNR=12
KKM Kota Kinabalu 118.71 131 PFAKE 06 36 40.0 +7.9
KKM LR LR
comp=Z,9μm,22.0s,MS6.4
X15A Humboldt 118.72 290 ⇑P PKPdf 06 36 29.6 -1.8
baz=119,SNR=11
P25A Willow Gulch B 118.85 299 ⇓P PKPdf 06 36 29.5 -1.9
baz=119
W16A Flagstaff 118.85 291 ⇑P PKPdf 06 36 29.5 -2.1
baz=119,SNR=6.9
GLA Glamis 118.88 287 ⇓P PKPdf 06 36 29.9 -1.8
baz=119
GLA Glamis 118.88 287 ePKPdf PKPdf 06 36 32.1 +0.4
V17A Tonalea, Kykot 118.91 291 ⇑P PKPdf 06 36 29.4 -2.3
baz=119,SNR=22
ECSD EROS Data Cent 118.91 307 ePKPdf PKPdf 06 36 29.7 -1.7
ECSD LR LR
comp=Z,42μm,21.0s,MS7.0
Y13A Salome 118.98 288 ⇑P PKPdf 06 36 29.7 -2.2
baz=119
T19A Beclabito 119.01 294 ⇓P PKPdf 06 36 29.9 -2.0
baz=119
OGNE Ogallala 119.02 301 ePKPdf PKPdf 06 36 30.3 -1.5
OGNE LR LR
comp=Z,24μm,19.0s,MS6.8
X14A Yava 119.03 289 ⇑P PKPdf 06 36 30.1 -1.8
baz=119,SNR=13
R22A Saguache, Gunn 119.03 296 ⇓P PKPdf 06 36 30.0 -1.8
baz=119
MVCO Mesa Verde 119.06 294 ⇓P PKPdf 06 36 29.8 -2.1
baz=119,SNR=7.4
MVCO Mesa Verde 119.06 294 ePKPdf PKPdf 06 36 31.8 -0.2
MVCO LR LR
comp=Z,23μm,21.0s,MS6.8
S21A Coal Bank Pass 119.08 295 ⇑P PKPdf 06 36 30.1 -1.9
baz=119,SNR=21
U18A Rough Rock, Ch 119.09 293 ⇓P PKPdf 06 36 30.2 -1.8
baz=119,SNR=16
WUAZ Wupatki 119.11 291 ⇓P PKPdf 06 36 29.8 -2.3
baz=119,SNR=8.4
WUAZ Wupatki 119.11 291 ePKPdf PKPdf 06 36 31.5 -0.6
WUAZ LR LR
comp=Z,26μm,21.0s,MS6.8
KBL Kabul 119.14 71 ePKIKP PKPdf 06 36 32.4 +0.2
P24A Kohler Place, 119.19 298 ⇑P PKPdf 06 36 30.4 -1.7
baz=119
LRW Lerwick 119.20 12 AMS AMS 07 25 27.9
comp=Z,28μm,18.6s,MS6.9
Y12C Blythe 119.28 287 ⇓P PKPdf 06 36 31.1 -1.4
baz=119,SNR=11
SWSC Sam W. Stewart 119.28 286 ⇑P PKPdf 06 36 29.9 -2.6
baz=119
W15A Williams 119.28 290 ⇓P PKPdf 06 36 30.7 -1.7
baz=119
MNK Minsk 119.39 31 ePKIKP PKPdf 06 36 29.0 -3.0
NACGM Naroch 119.47 30 ePKP PKPdf 06 36 28.0 -4.1
BAR Barrett 119.52 285 ePKPdf PKPdf 06 36 32.2 -0.8
PDMCI Parker Dam,Lak 119.52 288 ⇓P PKPdf 06 36 31.9 -1.0
baz=120,SNR=9.0
R21A Cimarron 119.52 296 ⇑P PKPdf 06 36 32.0 -0.8
baz=120,SNR=16
MONP Monument Peak 119.56 285 ⇓P PKPdf 06 36 31.9 -1.2
baz=120
Q22A Crested Butte, 119.61 297 ⇑P PKPdf 06 36 31.6 -1.3
baz=120,SNR=17
U17A Shonto 119.62 292 ⇓P PKPdf 06 36 32.0 -1.1
baz=120,SNR=20
T18A Mexican Hat 119.66 293 ⇑P PKPdf 06 36 31.6 -1.5
baz=120,SNR=38
BC3 Big Chuckawall 119.67 287 ⇓P PKPdf 06 36 31.4 -1.8
baz=120,SNR=8.0
W14A Seligman 119.72 289 ⇑P PKPdf 06 36 32.1 -1.2
baz=120,SNR=20
IIGN Ignalina 119.73 29 eP PKPdf 06 36 32.9 +0.3
IIGN AMB AMB 06 36 38.8
comp=Z,15nm,1.6s
V15A Kaibab Nationa 119.75 291 ⇑P PKPdf 06 36 32.3 -1.0
baz=120
ISCO Idaho Springs 119.75 298 ePKIKP PKPdf 06 36 33.3 +0.1
ISCO MLR MLR
comp=Z,19μm,22.0s,MS6.7
R20A Redvale 119.78 295 ⇑P PKPdf 06 36 32.4 -0.9
baz=120,SNR=20
S19A Harvey Farm, M 119.79 294 ⇓P PKPdf 06 36 32.1 -1.2
baz=120,SNR=12
VORD Divnogorie 119.81 40 ePKIKP PKPdf 06 36 31.9 -1.0
VORD eSP SP 06 47 50.0 +5.4
PV01 Paradox Valley 119.83 295 ePKPdf PKPdf 06 36 30.4 -3.0
IDID Didziasalis 119.83 30 eP PKPdf 06 36 32.8 0.0
SMCO Snowmass 119.89 297 ePKPdf PKPdf 06 36 32.6 -0.9
ISAL Salakas 119.90 29 eP PKPdf 06 36 33.0 +0.1
ISAL AMB AMB 06 36 39.0
comp=Z,11nm,1.6s
Q21A Lamborn Mesa, 119.91 296 ⇑P PKPdf 06 36 32.3 -1.2
baz=120,SNR=12
109C Camp Elliot, M 119.91 285 ⇑P PKPdf 06 36 32.5 -1.2
baz=120
IRM Iron Mountain 119.92 287 ⇑P PKPdf 06 36 32.3 -1.4
baz=120,SNR=6.7
VSR Storozhevoye 119.98 39 ePKIKP PKPdf 06 36 32.5 -0.7
VSR e 06 43 32.0
VSR eSP SP 06 47 50.3 +4.2
VSR pmax pmax
comp=Z,30nm,1.3s
VSR pmax pmax
comp=N,10.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,0.9s
T17A Navajo Res., N 120.00 292 ⇓P PKPdf 06 36 32.4 -1.3
baz=120,SNR=63
W13A Hualapai Mount 120.03 289 ⇓P PKPdf 06 36 32.6 -1.3
baz=120,SNR=12
V14A Boquillas Ranc 120.06 290 ⇓P PKPdf 06 36 32.6 -1.3
baz=120,SNR=25
IZAR Zarasai 120.09 29 eP PKPdf 06 36 33.6 +0.3
IZAR AMB AMB 06 36 39.4
comp=Z,14nm,1.7s
NEE2 Needles Airpor 120.13 288 ⇓P PKPdf 06 36 32.7 -1.4
baz=120
PFO Pinyon Flat Ob 120.14 286 ⇓P PKPdf 06 36 32.5 -1.6
baz=120
PFO Pinyon Flat Ob 120.14 286 ePKIKP PKPdf 06 36 35.0 +0.8
PFO MLR MLR
comp=Z,19μm,22.0s,MS6.7
PFO Pinyon Flat Ob 120.14 286 ePKPdf PKPdf 06 36 35.0 +0.8
PFO LR LR
comp=Z,18μm,22.0s,MS6.7
S18A Hurst Farm, Bl 120.16 294 ⇑P PKPdf 06 36 32.6 -1.5
baz=120,SNR=13
PV04 Paradox Valley 120.19 295 ePKPdf PKPdf 06 36 34.0 -0.1
KONO Kongsberg 120.19 18 ePP PP 06 37 50.0 -10
KONO eSS SS 06 54 26.2 -0.6
KONO Kongsberg 120.19 18 PFAKE 06 36 40.0 +6.6
KONO LR LR
comp=Z,19μm,19.0s,MS6.8
BELC Belle Mtn. Jos 120.22 286 ⇑P PKPdf 06 36 32.7 -1.6
baz=120,SNR=15
BER Bergen 120.25 15 ePP PP 06 37 54.4 -5.9
BER eSS SS 06 54 28.4 +0.8
BER AMS AMS 07 22 41.4
comp=Z,21μm,18.1s,MS6.8
EYMN Ely 120.28 313 ePKPdf PKPdf 06 36 33.2 -0.8
EYMN LR LR
comp=Z,27μm,19.0s,MS6.9
R19A Curley Farm, L 120.28 294 ⇓P PKPdf 06 36 33.0 -1.3
baz=120,SNR=29
U15A North Rim 120.28 291 ⇑P PKPdf 06 36 33.2 -1.1
baz=120,SNR=12
T16A Glen Canyon Da 120.34 292 ⇑P PKPdf 06 36 32.8 -1.6
baz=120,SNR=10
Q20A Ridgley Place, 120.34 296 ⇓P PKPdf 06 36 32.9 -1.4
baz=120,SNR=14
P21A Newcastle 120.39 297 ⇑P PKPdf 06 36 33.0 -1.4
baz=120,SNR=12
BHK Bhakra 120.42 79 ePKP PKPdf 06 36 34.0 -0.8
VOR Voronezh 120.43 39 PKIKP PKPdf 06 36 37.0 +2.9
VOR pmax pmax
comp=Z,200nm,1.6s
S17A Black Ridge (B 120.51 293 ⇓P PKPdf 06 36 33.3 -1.4
baz=121,SNR=18
MURC Murrieta 120.52 285 ⇑P PKPdf 06 36 33.4 -1.5
baz=121
SOFL Sornfelli, Far 120.58 8 AMS AMS 07 20 31.8
comp=Z,29μm,21.0s,MS6.9
R18A Canyonlands Na 120.66 294 ⇓P PKPdf 06 36 33.6 -1.4
baz=121,SNR=19
GMRC Granite Mounta 120.67 287 ⇓P PKPdf 06 36 34.2 -0.9
baz=121,SNR=15
V13A Grand Canyon W 120.67 289 ⇑P PKPdf 06 36 33.9 -1.2
baz=121,SNR=8.1
W12A Cal Nev Ari 120.68 288 ⇓P PKPdf 06 36 33.6 -1.5
baz=121
SCI San Clemente I 120.72 284 ⇓P PKPdf 06 36 33.3 -1.9
baz=121
U14A Mt Trumbull 120.72 290 ⇑P PKPdf 06 36 33.6 -1.5
baz=121
SDNR Sundarnagar 120.78 79 ePKP PKPdf 06 36 35.5 +0.1
T15A Red Dirt Ranch 120.80 291 ⇓P PKPdf 06 36 33.7 -1.6
baz=121,SNR=5.8
Q19A Hogan Spring (120.81 295 ⇑P PKPdf 06 36 33.5 -1.8
baz=121,SNR=14
P20A De Beque 120.82 296 ⇑P PKPdf 06 36 34.1 -1.1
baz=121,SNR=18
THN Thein Dam 120.86 77 ePKP PKPdf 06 36 34.9 -0.7
PHWY Pilot Hill 120.87 299 ePKPdf PKPdf 06 36 35.3 0.0
BBRC Big Bear Solar 120.90 286 ⇑P PKPdf 06 36 33.9 -1.7
baz=121,SNR=12
N22A Wattenberg Ran 120.94 298 ⇑P PKPdf 06 36 33.4 -2.0
baz=121,SNR=21
O21A Pagoda 120.95 297 ⇓P PKPdf 06 36 33.5 -1.9
baz=121
S16A Weppner Ranch, 120.96 292 ⇑P PKPdf 06 36 33.8 -1.8
baz=121,SNR=14
CIS Catalina Islan 120.98 284 ⇓P PKPdf 06 36 33.8 -1.9
baz=121
V12A Nelson 121.00 289 ⇑P PKPdf 06 36 34.2 -1.6
baz=121,SNR=10
HEC Hector,Ludlow 121.05 287 ⇓P PKPdf 06 36 34.2 -1.6
baz=121
R17A Hanksville Air 121.08 294 ⇑P PKPdf 06 36 34.2 -1.6
baz=121,SNR=37
U13A Pakoon Wash 121.11 290 ⇑P PKPdf 06 36 34.6 -1.3
baz=121,SNR=28
HYA Hoyanger 121.12 16 eP PKPdf 06 36 36.8 +1.7
HYA AMB AMB 06 36 51.7
comp=Z,73nm,1.3s
FMP Fort Macarthur 121.16 284 ⇓P PKPdf 06 36 34.9 -1.2
baz=121
T14A Hurricane 121.17 291 ⇑P PKPdf 06 36 34.8 -1.3
baz=121,SNR=9.2
P19A Cripple Cowboy 121.20 296 ⇓P PKPdf 06 36 34.1 -1.9
baz=121
O20A White River Ci 121.25 297 ⇑P PKPdf 06 36 34.5 -1.5
baz=121,SNR=16
BFSC Mount Baldy Ra 121.25 285 ⇓P PKPdf 06 36 34.6 -1.6
baz=121,SNR=5.1
S15A Panguitch 121.30 292 ⇑P PKPdf 06 36 34.7 -1.6
baz=121,SNR=13
TUQ Turquoise Moun 121.32 288 ⇑P PKPdf 06 36 35.0 -1.3
baz=121,SNR=10
Q18A Rafter H Ranch 121.34 294 ⇑P PKPdf 06 36 34.8 -1.5
baz=122,SNR=14
R16A Teasdale 121.35 293 ⇑P PKPdf 06 36 34.7 -1.6
baz=122,SNR=55
FOO Floro 121.38 15 ePP PP 06 38 01.5 -6.5
FOO eSS SS 06 54 43.9 +1.9
FOO AMS AMS 07 23 57.8
comp=Z,24μm,26.4s,MS6.7
V11A Goodsprings 121.38 288 ⇑P PKPdf 06 36 34.6 -1.8
baz=122,SNR=17
N21A Black Mountain 121.40 297 ⇑P PKPdf 06 36 34.6 -1.7
baz=122,SNR=25
U12A Valley of Fire 121.40 289 ⇑P PKPdf 06 36 35.0 -1.5
baz=122,SNR=7.9
RRX Edison Barstow 121.42 286 ⇑P PKPdf 06 36 34.6 -2.0
baz=122
MWC Mount Wilson 121.45 285 ePKIKP PKPdf 06 36 37.4 +0.8
PASC Pasadena Art C 121.47 285 ePKPdf PKPdf 06 36 36.3 -0.4
SRU San Rafael 121.53 294 ⇓P PKPdf 06 36 34.9 -1.8
baz=122,SNR=18
SRU San Rafael 121.53 294 ePKPdf PKPdf 06 36 34.5 -2.2
NAO01 NORSAR Array S 121.53 18 ePKPdf PKPdf 06 36 35.3 -0.6
NAO01 LR LR
comp=Z,19μm,20.0s,MS6.7
T13A Saint George 121.55 290 ⇓P PKPdf 06 36 35.3 -1.4
baz=122
DECC Green Verdugo 121.61 285 ⇑P PKPdf 06 36 35.2 -1.7
baz=122
GSC Goldstone 121.66 287 ⇓P PKPdf 06 36 35.5 -1.5
baz=122,SNR=14
GSC Goldstone 121.66 287 ePKPdf PKPdf 06 36 37.2 +0.2
CM31 Chiang Mai Arr 121.66 107 ePKPdf PKPdf 06 36 37.9 +0.4
CM31 LR LR
comp=Z,9μm,19.0s,MS6.4
CMAR Chiang Mai Arr 121.66 107 PKP PKPdf 06 36 36.6 -0.9
comp=Z,26nm,0.7s,baz=233,slow=3.7,SNR=30
CMAR PKKPab PKKPab 06 46 38.6 +1.2
comp=Z,20nm,1.0s,baz=5.9,slow=3.3,SNR=23
CMAR SKKPbc 06 50 37.7
comp=Z,5.5nm,0.9s,baz=5.0,slow=4.7,SNR=5.8
R15A Junction 121.68 292 ⇓P PKPdf 06 36 35.7 -1.2
baz=122,SNR=12
Q16A Castle Valley 121.69 294 ⇑P PKPdf 06 36 35.3 -1.7
baz=122
CCUT Cedar City 121.70 291 ePKPdf PKPdf 06 36 37.8 +0.8
CCUT ePP PP 06 38 11.0 +0.5
S14A Cedar City 121.77 291 ⇑P PKPdf 06 36 35.4 -1.7
baz=122,SNR=9.2
NB2 NORSAR Subarra 121.77 18 PKPdf PKPdf 06 36 35.2 -1.2
comp=Z,43nm,1.1s,baz=202,slow=1.9
NB2 NORSAR Subarra 121.77 18 PKPdf PKPdf 06 36 35.2 -1.2
baz=202,slow=1.9
NB2 NORSAR Subarra 121.77 18 PKPdf PKPdf 06 36 35.0 -1.4
NOA NORSAR Array B 121.77 18 PKP PKPdf 06 36 35.6 -0.8
comp=Z,13nm,1.0s,baz=191,slow=1.8,SNR=18
NOA PKKPbc PKKPbc 06 46 36.4 +1.7
comp=Z,14nm,0.9s,baz=20,slow=2.8,SNR=28
NOA SKKPbc 06 50 12.7
comp=Z,1.7nm,0.9s,baz=39,slow=5.0,SNR=3.4
O19A Miners Draw (B 121.79 296 ⇓P PKPdf 06 36 34.9 -2.2
baz=122,SNR=42
P18A Preston Nutter 121.81 295 ⇓P PKPdf 06 36 35.3 -1.8
baz=122,SNR=33
N20A Spence Gulch, 121.81 297 ⇑P PKPdf 06 36 35.2 -1.9
baz=122
U11A Corn Creek 121.82 289 ⇑P PKPdf 06 36 34.8 -2.5
baz=122
SHOC Shoshone 121.86 288 ⇓P PKPdf 06 36 36.0 -1.3
baz=122,SNR=16
MVU Marysvale 121.88 292 PFAKE 06 36 50.0 +13
MVU LR LR
comp=Z,21μm,20.0s,MS6.8
L22A Ellis Ranch, M 121.89 299 ⇑P PKPdf 06 36 35.8 -1.5
baz=122,SNR=12
ARUT Antelope Range 121.92 291 ePKIKP PKPdf 06 36 37.4 0.0
ARUT e 06 38 12.6
P17A Butcher Ranch, 121.92 294 ⇓P PKPdf 06 36 35.8 -1.6
baz=122,SNR=9.9
EDW2 Edwards Air Fo 121.93 286 ⇓P PKPdf 06 36 35.3 -2.2
baz=122,SNR=25
DMN Daman 121.95 89 eP PKPdf 06 36 34.7 -3.1
comp=Z,181nm,0.9s
DMN Daman 121.95 89 eP PKKPab 06 46 35.8 +0.7
comp=Z,37nm,0.9s
CHTO Chiang Mai 121.96 107 ePKIKP PKPdf 06 36 36.7 -1.4
CHTO MLR MLR
comp=Z,11μm,19.0s,MS6.5
CHTO Chiang Mai 121.96 107 P PKPdf 06 36 37.3 -0.8
SNR=17
CHTO P 06 36 37.3
SNR=17
S13A Holt Ranch, En 121.97 291 ⇑P PKPdf 06 36 35.4 -2.1
baz=122,SNR=14
RWWY Rawlins 121.98 298 ePKPdf PKPdf 06 36 35.3 -2.1
M21A Separation Pea 121.99 298 ⇓P PKPdf 06 36 35.1 -2.3
baz=122,SNR=17
TMUT Trail Mountain 122.01 294 ePKPdf PKPdf 06 36 35.7 -1.8
BSC Santa Cruz Isl 122.07 284 ⇓P PKPdf 06 36 35.5 -2.3
baz=122
PKIN Phulchoki 122.08 89 eP PKPdf 06 36 35.4 -2.7
comp=Z,157nm,0.8s
PKI Pulchoki 122.08 89 eP PKPdf 06 36 35.4 -2.7
comp=Z,229nm,1.1s
PKI Pulchoki 122.08 89 eP PKKPab 06 46 35.0 +0.4
OSI Osito Adit 122.09 285 ⇓P PKPdf 06 36 36.1 -1.8
baz=122
OSI Osito Adit 122.09 285 PKPdf PKPdf 06 36 37.9 0.0
R14A James Farms, M 122.11 292 ⇓P PKPdf 06 36 36.4 -1.4
baz=122
AGT Agartala 122.18 96 ePKP PKPdf 06 36 36.0 -2.4
KKN Kakani 122.18 89 eP PKPdf 06 36 35.5 -2.8
comp=Z,126nm,0.7s
KKN Kakani 122.18 89 eP PKKPab 06 46 35.7 +1.6
comp=Z,28nm,0.9s
O18A Roosevelt 122.19 295 ⇓P PKPdf 06 36 36.4 -1.5
baz=122,SNR=38
RAMN Ramite 122.21 90 eP PKPdf 06 36 36.2 -2.1
comp=Z,353nm,0.9s
RAMN Ramite 122.21 90 eP PKKPab 06 46 35.4 +1.3
comp=Z,65nm,0.9s
LRMC Laurel Mountai 122.24 286 ⇓P PKPdf 06 36 36.3 -1.8
baz=122
L21A Rawlins 122.27 298 ⇑P PKPdf 06 36 36.1 -1.8
baz=122,SNR=28
AGMN Agassiz Nation 122.28 311 ePKPdf PKPdf 06 36 34.9 -2.9
AGMN ePP PP 06 38 11.6 -2.8
AGMN LR LR
comp=Z,27μm,22.0s,MS6.9
M20A Sweetwater, Wa 122.28 298 ⇑P PKPdf 06 36 36.5 -1.5
baz=122,SNR=16
N19A John Jarvie Ra 122.28 296 ⇓P PKPdf 06 36 36.1 -1.9
baz=122,SNR=9.1
U10A Ash Meadows, A 122.29 288 ⇓P PKPdf 06 36 36.3 -1.9
baz=122,SNR=27
Q15A Fillmore 122.35 293 ⇓P PKPdf 06 36 37.0 -1.2
baz=122,SNR=15
T11A Corn Creek, Al 122.38 289 ⇓P PKPdf 06 36 37.1 -1.2
baz=122,SNR=14
RSSD Black Hills 122.44 302 ePKIKP PKPdf 06 36 35.7 -2.5
RSSD MLR MLR
comp=Z,36μm,20.0s,MS7.0
OBN Obninsk 122.45 36 ⇑ i PKIKP PKPdf 06 36 37.4 -0.4
OBN i 06 36 46.4
OBN i 06 38 23.3
OBN i 06 43 37.9
OBN i PS PS 06 48 10.2 +1.1
OBN pmax pmax

comp=Z,33nm,1.3s
OBN Obninsk 122.45 36 PFAKE 06 36 50.0 +12
OBN LR LR
comp=Z,10μm,21.0s,MS6.4
SBC Santa Barbara 122.46 284 ⇓P PKPdf 06 36 37.3 -1.3
baz=122
P16A Fountain Green 122.47 294 ⇑P PKPdf 06 36 37.2 -1.3
baz=123,SNR=14
S12A Delamar Landin 122.48 290 ⇓P PKPdf 06 36 37.2 -1.3
baz=123,SNR=18
O17A Robinson Place 122.48 295 ⇑P PKPdf 06 36 37.0 -1.4
baz=123,SNR=42
R13A O'Grain Ranch, 122.49 291 ⇑P PKPdf 06 36 37.4 -1.1
baz=123,SNR=12
ARVC Arvin 122.55 285 ⇑P PKPdf 06 36 37.2 -1.6
baz=123
ODAN Odare 122.55 91 *e*P PKPdf 06 36 36.0 -3.0
comp=Z,277nm,1.2s
ODAN Odare 122.55 91 *e*P PKKPab 06 46 34.3 +1.6
comp=Z,30nm,0.8s
N18A Larsen Ranch, 122.58 296 ⇓P PKPdf 06 36 36.7 -1.9
baz=123,SNR=14
MPMC Manual Prospec 122.59 287 ⇓P PKPdf 06 36 37.0 -1.8
baz=123,SNR=24
FURC Furnace Creek, 122.60 288 ⇑P PKPdf 06 36 37.4 -1.4
baz=123,SNR=19
GUN Gumba 122.60 89 *e*P PKPdf 06 36 36.2 -2.9
comp=Z,307nm,1.0s
GUN Gumba 122.60 89 *e*P PKKPab 06 46 35.3 +2.9
comp=Z,96nm,1.1s
VSU Vasula 122.62 28 *i* PKIKP PKPdf 06 36 37.4 -0.7
VSU MLR MLR
comp=Z,18μm,19.0s,MS6.7
MOL Molde 122.66 16 *e*PP PP 06 38 14.8 -1.9
MOL *e*SS SS 06 54 56.1 -2.2
MOL AMS AMS 07 23 54.5
comp=Z,20μm,22.3s,MS6.7
BORG Borgarnes 122.71 0 PFAKE 06 36 50.0 +12
BORG LR LR
comp=Z,32μm,20.0s,MS7.0
P15A Leamington 122.74 293 ⇑P PKPdf 06 36 37.6 -1.4
baz=123,SNR=15
M19A Rock Springs 122.75 297 ⇓P PKPdf 06 36 37.2 -1.7
baz=123,SNR=7.7
L20A Wamsutter 122.76 298 ⇓P PKPdf 06 36 37.6 -1.3
baz=123,SNR=26
MPU Maple Canyon 122.78 294 *e*PKPdf PKPdf 06 36 39.1 +0.1
MPU *e*PP PP 06 38 19.6 +1.8
Q14A Sevier Lake (B 122.78 292 ⇓P PKPdf 06 36 37.3 -1.7
baz=123,SNR=25
ISA Isabella 122.78 286 ⇓P PKPdf 06 36 37.5 -1.6
baz=123,SNR=26
ISA Isabella 122.78 286 *e*PKPdf PKPdf 06 36 38.7 -0.5
ISA *e*PP PP 06 38 16.2 -1.7
DAC Darwin (Calif) 122.82 287 PFAKE 06 36 50.0 +11
DAC LR LR
comp=Z,14μm,22.0s,MS6.6
O16A Springville 122.86 294 ⇓P PKPdf 06 36 37.1 -2.1
baz=123
PKM Peak Mountain 122.87 284 ⇑P PKPdf 06 36 37.3 -2.1
baz=123
DAU Daniels Canyon 122.90 295 *e*PKIKP PKPdf 06 36 39.7 +0.5
R12A Pony Springs, 122.92 291 ⇓P PKPdf 06 36 38.2 -1.1
baz=123,SNR=18
NLU North Lily Min 122.94 294 *e*PKPdf PKPdf 06 36 38.7 -0.6
S11A Rachel 122.95 289 ⇑P PKPdf 06 36 38.5 -0.9
baz=123,SNR=12
N17A Moffit Pass 123.11 295 ⇑P PKPdf 06 36 38.1 -1.5
baz=123
DAV Davao City (W) 123.11 141 PFAKE 06 36 50.0 +9.5
DAV LR LR
comp=Z,11μm,21.0s,MS6.5
Q13A Wheeler Ranch, 123.11 292 ⇑P PKPdf 06 36 38.9 -0.8
baz=123,SNR=21
TAPN Taplejung 123.11 91 *e*P PKPdf 06 36 36.5 -3.6
comp=Z,115nm,0.9s
TAPN Taplejung 123.11 91 *e*P PKKPab 06 46 32.2 +1.9
comp=Z,43nm,1.1s
M18A Lyman 123.12 296 ⇓P PKPdf 06 36 38.7 -0.9
baz=123,SNR=8.4
P14A Drum Mountains 123.14 293 ⇑P PKPdf 06 36 39.3 -0.5
baz=123,SNR=12
JLU Jordanelle 123.14 295 *e*PKPdf PKPdf 06 36 38.6 -1.1
CWC Cottonwood Cre 123.19 287 ⇑P PKPdf 06 36 39.1 -0.8
baz=123,SNR=12
GRAC Grapevine Rang 123.27 288 ⇓P PKPdf 06 36 38.7 -1.3
baz=123,SNR=14
K20A Yellowstone Ra 123.27 298 ⇑P PKPdf 06 36 38.0 -1.8
baz=123,SNR=19
SMMC Simmler 123.29 284 ⇑P PKPdf 06 36 38.7 -1.4
baz=123
MOS Moscow 123.30 36 *e*PKIKP PKPdf 06 36 37.7 -1.8
MOS *e* 06 43 41.8
MOS *i* PS PS 06 48 23.5 +6.9
MOS *i* SS SS 06 54 59.5 -7.2
MOS *i* SSS 06 59 36.6
MOS MLR MLR
comp=Z,11μm,19.0s,MS6.5
MOS MLR MLR
comp=N,5μm,19.0s,MS6.5
MOS MLR MLR
comp=E,9μm,19.0s,MS6.5
L19A Farson 123.31 297 ⇑P PKPdf 06 36 38.4 -1.5
baz=123,SNR=13
CTU Camp Tracy 123.36 294 *e*PKPdf PKPdf 06 36 40.1 0.0
CTU *e*PP PP 06 38 24.1 +2.4
N16A Rees Ranch, Co 123.36 295 ⇑P PKPdf 06 36 38.7 -1.4
baz=124,SNR=15
O15A The Old Anders 123.38 294 ⇓P PKPdf 06 36 38.9 -1.3
baz=124,SNR=17
R11A Troy Canyon, C 123.42 290 ⇑P PKPdf 06 36 38.6 -1.7
baz=124,SNR=12
M17A Scullys Gap (B 123.44 296 ⇑P PKPdf 06 36 38.8 -1.4
baz=124,SNR=14
DUG Dugway 123.48 293 ⇑P PKPdf 06 36 38.7 -1.7
baz=124,SNR=28
DUG Dugway 123.48 293 *e*PKIKP PKPdf 06 36 38.4 -1.9
DUG *e* 06 38 24.3
DUG MLR MLR
comp=Z,19μm,21.0s,MS6.7
DUG Dugway 123.48 293 *e*PKPdf PKPdf 06 36 38.4 -2.0
DUG *e*PP PP 06 38 24.3 +1.7
DUG LR LR
comp=Z,19μm,21.0s,MS6.7
L18A Fontenelle, Gr 123.49 297 ⇓P PKPdf 06 36 38.8 -1.5
baz=124,SNR=13
P13A Bates Ranch, G 123.50 292 ⇑P PKPdf 06 36 39.0 -1.4
baz=124,SNR=25
NOQ North Oquirrh 123.50 294 *e*PKPdf PKPdf 06 36 40.8 +0.5
Q12A Willow Creek R 123.58 291 ⇑P PKPdf 06 36 39.1 -1.5
baz=124,SNR=43
S10A Tonopah Range, 123.59 289 ⇓P PKPdf 06 36 39.0 -1.6
baz=124,SNR=21
K19A Absolon Red Bu 123.63 298 ⇓P PKPdf 06 36 38.5 -2.1
baz=124,SNR=27
RCTC Rector, Farmer 123.68 286 ⇑P PKPdf 06 36 38.8 -2.0
baz=124
R10A Warm Springs 123.73 289 ⇑P PKPdf 06 36 39.3 -1.6
baz=124,SNR=18
TIN Tinemaha 123.74 287 ⇑P PKPdf 06 36 39.0 -2.0
baz=124
Q11A Duckwater 123.84 290 ⇑P PKPdf 06 36 39.7 -1.4
baz=124,SNR=28
ULM Lac du Bonnet 123.84 312 PKP PKPdf 06 36 38.6 -2.1
comp=Z,46nm,0.9s,baz=140,slow=0.9,SNR=19
ULM PP PP 06 38 23.0 -1.8
comp=Z,62nm,1.1s,baz=136,slow=6.1,SNR=5.7
ULM Lac du Bonnet 123.84 312 *e*PKPdf PKPdf 06 36 39.2 -1.5
ULM *e*PP PP 06 38 23.7 -1.2
ULM LR LR
comp=Z,32μm,21.0s,MS7.0
SHL Shillong 123.88 96 *e*PKP PKPdf 06 36 41.0 -0.6
comp=Z,9.0nm,1.0s
SHL *e*x x 06 43 40.0
N15A Stansbury Isla 123.88 294 ⇑P PKPdf 06 36 39.7 -1.4
baz=124
PDAR Pinedale Array 123.92 298 PKP PKPdf 06 36 39.0 -2.1
comp=Z,10nm,0.7s,baz=132,slow=2.2,SNR=18
PDAR PP PP 06 38 36.0 +11
comp=Z,13nm,1.1s,baz=116,slow=3.4,SNR=4.0
PDAR SKKPbc 06 50 19.8
comp=Z,1.5nm,0.9s,baz=306,slow=5.0,SNR=3.9
BW06 Boulder Array 123.92 298 ⇑P PKPdf 06 36 39.3 -1.8
baz=124,SNR=12
BW06 Boulder Array 123.92 298 *e*PKPdf PKPdf 06 36 36.9 -4.2
BW06 LR LR
comp=Z,20μm,20.0s,MS6.8

P12A McGill 123.95 291 ⇑P PKPdf 06 36 38.6 -2.6
baz=124
HWUT Hardware Ranch 123.97 295 *e*PKPdf PKPdf 06 36 37.0 -4.2
HWUT LR LR
comp=Z,21μm,19.0s,MS6.8
O13A Hicks Ranch, I 124.00 292 ⇓P PKPdf 06 36 39.8 -1.5
baz=124,SNR=17
L17A Cokeville 124.02 296 ⇑P PKPdf 06 36 39.5 -1.8
baz=124,SNR=8.6
TPH Tonopah 124.02 289 PFAKE 06 36 50.0 +8.5
TPH LR LR
comp=Z,14μm,21.0s,MS6.6
K18A Toltan Ranch, 124.05 297 ⇑P PKPdf 06 36 39.9 -1.4
baz=124,SNR=16
BGU Big Grassy Mou 124.15 294 *e*PKPdf PKPdf 06 36 40.0 -1.6
BGU *e*PP PP 06 38 31.1 +4.1
SPUT South Promonto 124.17 294 *e*PKPdf PKPdf 06 36 40.1 -1.5
SPUT *e*PP PP 06 38 22.9 -4.2
N14A Grayback Hills 124.17 294 ⇑P PKPdf 06 36 40.3 -1.3
baz=124,SNR=18
Q10A Clear Creek Ra 124.19 290 ⇑P PKPdf 06 36 40.7 -1.1
baz=124,SNR=22
L16A Fish Haven 124.22 296 ⇑P PKPdf 06 36 40.3 -1.4
baz=124,SNR=20
M15A Larsen Ranch, 124.29 295 ⇓P PKPdf 06 36 40.5 -1.3
baz=124,SNR=49
P11A Circle Ranch, 124.43 291 ⇑P PKPdf 06 36 40.9 -1.3
baz=124
J18A Kendall Valley 124.48 298 ⇑P PKPdf 06 36 40.6 -1.6
baz=125,SNR=14
O12A Currie 124.48 292 ⇑P PKPdf 06 36 41.0 -1.3
baz=125,SNR=21
MLAC Mammoth Lakes 124.49 287 ⇑P PKPdf 06 36 40.6 -1.7
baz=125
K17A Gardner Place, 124.55 297 ⇑P PKPdf 06 36 41.0 -1.3
baz=125,SNR=21
AHID Auburn Hatcher 124.64 296 *e*PKPdf PKPdf 06 36 43.2 +0.7
AHID LR LR
comp=Z,10μm,19.0s,MS6.5
N13A Wendover, West 124.67 293 ⇑P PKPdf 06 36 41.4 -1.2
baz=125,SNR=23
N13A Wendover, West 124.67 293 *e*PKPdf PKPdf 06 36 43.1 +0.5
L15A Malad City 124.67 295 ⇑P PKPdf 06 36 41.3 -1.3
baz=125,SNR=19
HVU Hansel Valley 124.69 295 *e*PKIKP PKPdf 06 36 41.9 -0.7
HVU *e* 06 38 31.0
M14A Sheep Mountain 124.75 294 ⇓P PKPdf 06 36 41.6 -1.1
baz=125,SNR=33
I18A Diamond G Ranc 124.76 298 ⇓P PKPdf 06 36 41.6 -1.0
baz=125,SNR=20
O11A Cowboy Ranch, 124.83 291 ⇓P PKPdf 06 36 41.5 -1.4
baz=125
P10A Eureka 124.83 290 ⇑P PKPdf 06 36 41.9 -1.1
baz=125
NVAR Mina Array Bea 124.84 288 PKP PKPdf 06 36 43.1 +0.1
comp=Z,15nm,0.8s,baz=154,slow=3.4,SNR=32
NVAR PKKPbc 06 46 30.4
comp=Z,1.3nm,0.9s,baz=318,slow=2.0,SNR=3.6
NVAR SKKPbc 06 49 52.3
comp=Z,2.8nm,1.0s,baz=256,slow=4.9,SNR=3.6
J17A Brown Place, J 124.92 297 ⇓P PKPdf 06 36 41.8 -1.2
baz=125,SNR=9.9
K16A Soda Springs 124.92 296 ⇑P PKPdf 06 36 41.8 -1.2
baz=125,SNR=17
REDW Red Top Meadow 124.98 297 *e*PKPdf PKPdf 06 36 43.1 0.0
REDW *e*PP PP 06 38 37.6 +5.0
SNOW Snow King Moun 125.01 297 *e*PKPdf PKPdf 06 36 42.4 -0.7
M13A Montello 125.04 293 ⇓P PKPdf 06 36 42.4 -0.9
baz=125,SNR=30
M13A Montello 125.04 293 *e*PKPdf PKPdf 06 36 42.3 -1.0
LOHW Long Hollow 125.06 297 *e*PKPdf PKPdf 06 36 41.6 -1.6
N12A Clover Valley, 125.07 292 ⇓P PKPdf 06 36 42.2 -1.2
baz=125,SNR=30
N12A Clover Valley, 125.07 292 *e*PKPdf PKPdf 06 36 43.5 +0.1
ELK Elko 125.09 292 *e*PKIKP PKPdf 06 36 43.9 +0.5
ELK MLR MLR
comp=Z,26μm,22.0s
ELK Elko 125.09 292 *e*PKPdf PKPdf 06 36 43.9 +0.5
FINES FINESS Array B 125.10 26 PKP PKPdf 06 36 41.9 -0.8
comp=Z,18nm,0.7s,baz=122,slow=2.5,SNR=24
FINES FINESS Array B 125.10 26 PKP PKPdf 06 36 41.9 -0.8
L14A Malta 125.10 294 ⇓P PKPdf 06 36 42.3 -1.1
baz=125,SNR=22
TPAW Teton Pass 125.13 297 *e*PKPdf PKPdf 06 36 42.7 -0.7
SAO San Andreas Ge 125.15 284 *e*PKIKP PKPdf 06 36 44.3 +0.6
SAO MLR MLR
comp=Z,14μm,22.0s,MS6.6
NSS Namsos 125.18 17 *e*PP PP 06 38 28.9 -4.7
NSS *e*SS SS 06 55 29.7 -0.3
NSS AMS AMS 07 30 31.1
comp=Z,17μm,15.5s,MS6.8
RRI2 Red Ridge 125.19 297 *e*PKPdf PKPdf 06 36 43.1 -0.4
RRI2 *e*PP PP 06 38 35.2 +1.2
K15A Arbon 125.26 295 ⇓P PKPdf 06 36 42.6 -1.1
baz=125,SNR=28
J16A Bone 125.27 297 ⇑P PKPdf 06 36 42.8 -0.9
baz=125,SNR=12
I17A Pilgrim Ck. 125.28 298 ⇓P PKPdf 06 36 42.9 -0.7
baz=125,SNR=8.0
DCID1 Drake Creek 125.32 297 *e*PKPdf PKPdf 06 36 44.1 +0.4
O10A Cortez Mining, 125.36 291 ⇑P PKPdf 06 36 42.6 -1.4
baz=126
N11A Elko Archery C 125.39 292 ⇑P PKPdf 06 36 42.8 -1.2
baz=126
LAO LASA Array 125.41 303 *e*PKPdf PKPdf 06 36 41.6 -2.2
LAO LR LR
comp=Z,27μm,20.0s,MS6.9
IMW Indian Meadow 125.43 297 *e*PKPdf PKPdf 06 36 43.8 -0.1
IMW *e*PP PP 06 38 38.7 +3.1
M12A Wells 125.44 293 ⇑P PKPdf 06 36 42.9 -1.2
baz=126,SNR=37
K14A Jones Ranch, D 125.46 295 ⇓P PKPdf 06 36 43.0 -1.0
baz=126,SNR=38
L13A Double Diamond 125.48 294 ⇓P PKPdf 06 36 43.1 -1.0
baz=126,SNR=32
CMB Columbia Colle 125.59 286 *e*PKIKP PKPdf 06 36 43.2 -1.3
CMB MLR MLR
comp=Z,14μm,22.0s,MS6.6
RLMT Red Lodge 125.59 300 ⇓P PKPdf 06 36 43.0 -1.2
baz=126,SNR=10
RLMT Red Lodge 125.59 300 *e*PKPdf PKPdf 06 36 42.1 -2.1
RLMT LR LR
comp=Z,35μm,19.0s,MS7.0
H17A Grant Village 125.64 298 ⇑P PKPdf 06 36 43.7 -0.6
baz=126,SNR=8.1
I16A Newdale 125.67 297 ⇑P PKPdf 06 36 43.5 -0.9
baz=126
LKWY Lake 125.69 298 *e*PKIKP PKPdf 06 36 46.2 +1.8
LKWY MLR MLR
comp=Z,34μm,19.0s,MS7.0
N10A Dunphy 125.69 291 ⇑P PKPdf 06 36 43.5 -1.0
baz=126
J15A Blackfoot 125.76 296 ⇓P PKPdf 06 36 43.8 -0.8
baz=126,SNR=44
YFT Old Faithful 125.80 298 *e*PKPdf PKPdf 06 36 45.1 +0.5
BMN Battle Mountai 125.83 290 *e*PKIKP PKPdf 06 36 43.8 -1.0
BMN *e* 06 38 38.1
BMN MLR MLR
comp=Z,18μm,21.0s,MS6.7
G18A Lazy EL Ranch, 125.87 300 ⇑P PKPdf 06 36 43.4 -1.3
baz=126,SNR=11
DGMT Dagmar 125.88 306 ⇑P PKPdf 06 36 43.5 -1.2
baz=126
DGMT Dagmar 125.88 306 *e*PKPdf PKPdf 06 36 42.9 -1.7
DGMT *e*PP PP 06 38 37.2 -1.3
DGMT LR LR
comp=Z,31μm,21.0s,MS7.0
M11A Holland Ranch, 125.88 292 ⇑P PKPdf 06 36 44.1 -0.8
baz=126,SNR=38
K13A Stover Farm, H 125.98 294 ⇓P PKPdf 06 36 44.0 -1.0
baz=126,SNR=14
YMR Madison River 126.03 298 *e*PKPdf PKPdf 06 36 43.8 -1.3
L12A House Creek Ra 126.05 293 ⇓P PKPdf 06 36 44.5 -0.7
baz=126
H16A Russell Place, 126.19 298 ⇓P PKPdf 06 36 44.6 -0.8
baz=126,SNR=5.1
J14A Carey 126.22 295 ⇑P PKPdf 06 36 45.1 -0.4
baz=126,SNR=22
WCN Washoe City 126.23 288 ⇑P PKPdf 06 36 45.1 -0.5
baz=126,SNR=15
I15A Monteview 126.24 297 ⇓P PKPdf 06 36 45.1 -0.4
baz=126,SNR=8.6
GCMT Greycliff 126.28 300 *e*PKPdf PKPdf 06 36 44.5 -1.0
GCMT *e*PP PP 06 38 38.4 -2.8
M10A I.L. Ranch, Tu 126.32 292 ⇓P PKPdf 06 36 44.7 -1.0
baz=126,SNR=13

K12A Draper Farm, C 126.36 294 ⇓P PKPdf 06 36 45.1 -0.7
baz=126,SNR=14
QLMT Earthquake Lak 126.37 298 *e*PKPdf PKPdf 06 36 47.5 +1.8
F18A Big Timber 126.39 300 ⇑P PKPdf 06 36 44.9 -0.8
baz=126,SNR=34
G17A Pierce Place, 126.42 299 ⇓P PKPdf 06 36 45.6 -0.2
baz=126,SNR=6.4
L11A Cat Creek Ranc 126.42 293 ⇑P PKPdf 06 36 45.2 -0.7
baz=126,SNR=33
AKTK Aktyubinsk 126.45 52 PKP PKPdf 06 36 44.4 -1.3
AKTK SKKPbc 06 50 04.7
AKTO Aktyubinsk 126.45 52 PKP PKPdf 06 36 44.4 -1.3
comp=Z,40nm,1.2s,baz=233,slow=3.1,SNR=37
AKTO SKKPbc 06 50 04.7
comp=Z,2.2nm,0.9s,baz=346,slow=5.6,SNR=4.4
KSH Kashi 126.49 72 PKP PKPdf 06 36 45.5 -0.6
KSH PKS 06 40 20.8
KSH SKS SKSdf 06 43 52.3 -5.2
KSH AMB AMB
comp=Z,1μm,8.5s
KSH LR LR
comp=N,5μm,16.6s,MS6.6
KSH LR LR
comp=E,8μm,16.4s,MS6.6
KSH LR LR
comp=Z,5μm,16.1s,MS6.3
J13A Cove Ranch, Pi 126.59 295 ⇓P PKPdf 06 36 45.0 -1.2
baz=127,SNR=24
I14A Mackay 126.64 296 ⇑P PKPdf 06 36 45.2 -1.1
baz=127,SNR=39
L10A Juniper Basin 126.70 292 ⇑P PKPdf 06 36 45.5 -0.9
baz=127,SNR=14
F17A Fitzpatrick Pl 126.82 299 ⇓P PKPdf 06 36 45.7 -0.8
baz=127,SNR=34
HLID Hailey 126.83 295 ⇑P PKPdf 06 36 45.9 -0.8
baz=127,SNR=13
HLID Hailey 126.83 295 *e*PKPdf PKPdf 06 36 46.6 0.0
HLID LR LR
comp=Z,16μm,22.0s,MS6.6
G16A Moss Hill, Enn 126.84 298 ⇓P PKPdf 06 36 45.7 -0.9
baz=127,SNR=36
J12A Stokes Ranch, 126.92 294 ⇓P PKPdf 06 36 45.7 -1.1
baz=127,SNR=46
MCCM Marconi Confer 126.94 284 *e*PKPdf PKPdf 06 36 48.9 +1.8
MCCM *e*PP PP 06 38 45.4 -0.3
MCCM LR LR
comp=Z,12μm,21.0s,MS6.6
I13A Wildhorse Cree 126.95 295 ⇓P PKPdf 06 36 46.0 -0.8
baz=127,SNR=18
BEKR Beckworth 126.97 288 ⇓P PKPdf 06 36 45.8 -1.2
baz=127
E18A Harlowton 126.97 300 ⇓P PKPdf 06 36 46.1 -0.7
baz=127,SNR=22
K11A Parker Ranch, 127.01 293 ⇑P PKPdf 06 36 46.1 -0.9
baz=127,SNR=31
MCMT McKenzie Canyo 127.03 297 *e*PKPdf PKPdf 06 36 47.7 +0.7
BOZ Bozeman (W) 127.08 298 ⇓P PKPdf 06 36 46.1 -0.9
baz=127,SNR=24
BOZ Bozeman (W) 127.08 298 *e*PKIKP PKPdf 06 36 45.4 -1.6
BOZ *e* 06 38 44.8
BOZ MLR MLR
comp=Z,28μm,21.0s,MS6.9
BOZ Bozeman (W) 127.08 298 *e*PKPdf PKPdf 06 36 45.4 -1.6
BOZ *e*PP PP 06 38 44.8 -1.7
BOZ LR LR
comp=Z,28μm,21.0s,MS6.9
MOR8 Moi Rana 127.09 18 *e*P PKPdf 06 36 45.6 -0.8
MOR8 AMB AMB 06 37 13.7
comp=Z,70nm,2.0s
G15A Dillon 127.11 297 ⇓P PKPdf 06 36 46.3 -0.9
baz=127,SNR=25
H14A Leadore 127.12 296 ⇓P PKPdf 06 36 46.2 -1.0
baz=127,SNR=53
F16A Kennard Place, 127.18 299 ⇓P PKPdf 06 36 46.5 -0.8
baz=127,SNR=19
DLMT Dillon 127.31 298 *e*PKPdf PKPdf 06 36 46.1 -1.4
AML Almayashu 127.32 69 PFAKE 06 37 00.0 +12
AML LR LR
comp=Z,25μm,21.0s,MS6.9
E17A Martinsdale 127.33 300 ⇑P PKPdf 06 36 46.7 -0.8
baz=127,SNR=25
I12A Atlanta 127.34 295 ⇑P PKPdf 06 36 46.3 -1.3
baz=128
MFID Camas Ranch 127.39 294 ⇓P PKPdf 06 36 46.7 -1.0
baz=128,SNR=15
D18A Linhart Farms, 127.40 301 ⇓P PKPdf 06 36 46.2 -1.4
baz=128,SNR=9.6
K10A MacKenzie Ranc 127.42 293 ⇑P PKPdf 06 36 46.3 -1.5
baz=128
QIZ Qiongzhong 127.48 117 PKP PKPdf 06 36 49.3 +0.7
QIZ PP PP 06 38 48.3 -0.7
QIZ SKS SKSdf 06 44 00.0 -0.3
QIZ SS SS 06 55 59.3 +0.2
QIZ LR LR
comp=N,11μm,26.8s,MS6.4
QIZ LR LR
comp=E,2μm,26.3s,MS6.4
QIZ LR LR
comp=Z,24μm,28.1s,MS6.7
H13A Challis 127.50 296 ⇓P PKPdf 06 36 46.5 -1.4
baz=128,SNR=34
LRM Limekiln Ridge 127.59 298 *e*PKPdf PKPdf 06 36 47.8 -0.2
JOF Joensuu 127.62 28 *e*PKIKP PKPdf 06 36 46.2 -1.3
JOF pmax pmax
comp=Z,151nm,1.0s
JOF Joensuu 127.62 28 *e*p PKPdf 06 36 46.2 -1.3
comp=Z,151nm,1.0s
JOF Joensuu 127.62 28 *e*p PKPdf 06 36 46.2 -1.3
comp=Z,151nm,1.0s
F15A Butte 127.62 298 ⇑P PKPdf 06 36 47.0 -1.1
baz=128,SNR=31
HOPS Hopland 127.68 285 *e*PKPdf PKPdf 06 36 49.4 +0.9
HOPS *e*PP PP 06 38 51.2 +0.7
HOPS LR LR
comp=Z,16μm,21.0s,MS6.7
E16A East Helena 127.76 299 ⇑P PKPdf 06 36 47.1 -1.2
baz=128,SNR=12
EKS2 Erkin-Say 127.76 68 P PKPdf 06 36 48.9 +0.5
SNR=20
EKS2 Erkin-Say 127.76 68 *e*PKPdf PKPdf 06 36 47.4 -1.0
EKS2 LR LR
comp=Z,29μm,22.0s,MS6.9
D17A Six Diamond Ra 127.77 300 ⇑P PKPdf 06 36 47.2 -1.1
baz=128,SNR=16
H12A Diamond D Ranc 127.77 295 ⇓P PKPdf 06 36 47.3 -1.1
baz=128,SNR=18
I11A Placerville 127.83 294 ⇓P PKPdf 06 36 47.3 -1.3
baz=128,SNR=17
J10A Berg Farm, Mel 127.86 293 ⇓P PKPdf 06 36 47.1 -1.5
baz=128
G13A Cobalt 127.88 296 ⇑P PKPdf 06 36 46.9 -1.7
baz=128,SNR=17
TGY Tagaytay City 127.91 132 PKP PKPdf 06 36 49.3 -0.3
comp=Z,115nm,0.3s,baz=167,slow=12,SNR=3.5
EGMT Eagleton 127.99 302 ⇓P PKPdf 06 36 47.2 -1.5
baz=128,SNR=22
EGMT Eagleton 127.99 302 *e*PKPdf PKPdf 06 36 48.0 -0.6
EGMT LR LR
comp=Z,39μm,22.0s,MS7.0
F14A Wisdom 128.01 297 ⇑P PKPdf 06 36 47.4 -1.4
baz=128
WVOR Wild Horse Val 128.03 291 *e*PKIKP PKPdf 06 36 48.5 -0.5
WVOR MLR MLR
comp=Z,17μm,22.0s,MS6.7
KZA Kyzart 128.05 70 P PKPdf 06 36 49.5 +0.4
SNR=20
D16A Dana Ranch, Ca 128.07 300 ⇓P PKPdf 06 36 47.7 -1.2
baz=128,SNR=29
AAK Ala-Archa 128.09 69 P PKPdf 06 36 49.0 -0.1
SNR=17
E15A Deer Lodge 128.12 298 ⇑P PKPdf 06 36 47.7 -1.3
baz=128,SNR=13
C17A Wharram Farm, 128.16 301 ⇓P PKPdf 06 36 47.5 -1.5
baz=128,SNR=32
B18A Beardsley Farm 128.28 302 ⇓P PKPdf 06 36 48.1 -1.1
baz=128,SNR=26
FRU Bishkek 128.30 69 *e*PKIKP PKPdf 06 36 48.0 -1.5
FRU pmax pmax
comp=Z,160nm,1.6s
KBK Karagaybulak 128.33 69 P PKPdf 06 36 49.0 -0.5
SNR=11
I10A Payette 128.37 294 ⇑P PKPdf 06 36 48.4 -1.2
baz=128,SNR=28
H11A Donnelly 128.44 295 ⇑P PKPdf 06 36 48.7 -0.9
baz=128,SNR=17
F13A Darby 128.45 297 ⇓P PKPdf 06 36 48.7 -1.0
baz=129,SNR=31

MOD	Modoc	128.47	289	*e*PKPdf	PKPdf	06 36 50.7	+0.9
MOD				LR	LR		
comp=Z,9μm,22.0s,MS6.4							
SCO	Scoresbysund	128.47	0	*i*	PKPdf	06 36 47.1	-1.8
SCO				*e*	PP	06 38 50.7	-4.6
CHMS	Chumysh	128.49	69	P	PKPdf	06 36 49.2	-0.6
SNR=7.9							
E14A	Clinton	128.51	298	⇓P	PKPdf	06 36 49.1	-0.7
baz=129,SNR=15							
D15A	Lincoln	128.53	299	⇑P	PKPdf	06 36 49.0	-0.7
baz=129,SNR=16							
USP	Ospenovka	128.57	68	P	PKPdf	06 36 49.4	-0.6
SNR=9.8							
WDC	Whiskeytown Da	128.60	287	*e*PKIKP	PKPdf	06 36 49.9	-0.2
WDC				MLR	MLR		
comp=Z,9μm,21.0s,MS6.4							
J08A	Circle Bar Ran	128.64	292	⇑P	PKPdf	06 36 49.1	-1.0
baz=129,SNR=23							
B17A	L&G Farms, Che	128.66	301	⇑P	PKPdf	06 36 48.7	-1.3
baz=129,SNR=27							
A18A	Metzger Ranch,	128.70	302	⇑P	PKPdf	06 36 48.5	-1.5
baz=129,SNR=25							
H10A	Noah's Angus R	128.71	294	⇑P	PKPdf	06 36 49.1	-1.1
baz=129,SNR=16							
C16A	Fuhringer Ranc	128.73	300	⇑P	PKPdf	06 36 48.8	-1.3
baz=129,SNR=30							
I09A	Lost Marbles R	128.74	293	⇓P	PKPdf	06 36 49.2	-1.0
baz=129,SNR=25							
CHMT	Chamberlain Mo	128.77	298	*e*PKPdf	PKPdf	06 36 50.0	-0.2
TKM2	Tokmak 2	128.85	69	P	PKPdf	06 36 49.7	-0.8
SNR=17							
TKM2	Tokmak 2	128.85	69	*e*PKIKP	PKPdf	06 36 49.9	-0.6
TKM2				MLR	MLR		
comp=Z,27μm,20.0s,MS6.9							
TKM2	Tokmak 2	128.85	69	*e*PKPdf	PKPdf	06 36 49.9	-0.6
TKM2				LR	LR		
comp=Z,27μm,20.0s,MS6.9							
F12A	Elk City	128.86	296	⇓P	PKPdf	06 36 49.2	-1.2
baz=129,SNR=11							
E13A	Victor	128.86	297	⇑P	PKPdf	06 36 49.7	-0.7
baz=129,SNR=27							
POHA	Pohakuloa	128.91	241	*e*PKPdf	PKPdf	06 36 54.5	+3.2
POHA				LR	LR		
comp=Z,48μm,22.0s,MS7.1							
D14A	Greenough	129.01	298	⇓P	PKPdf	06 36 48.7	-2.0
baz=129,SNR=20							
MSO	Missoula	129.03	298	*e*PKPdf	PKPdf	06 36 50.1	-0.6
MSO				LR	LR		
comp=Z,27μm,20.0s,MS6.9							
G11A	Walters Elk Ra	129.08	295	⇑P	PKPdf	06 36 49.1	-1.7
baz=129,SNR=14							
C15A	Salmond Ranch,	129.10	300	⇓P	PKPdf	06 36 49.0	-1.8
baz=129,SNR=13							
SLMT	Seeley Lake	129.12	299	*e*PKPdf	PKPdf	06 36 49.8	-1.1
KMI	Kunming	129.14	106	PKP	PKPdf	06 36 52.5	+0.8
KMI				sPKP		06 36 57.5	
KMI				PP	PP	06 39 03.8	+3.8
KMI				PKS		06 40 22.5	
KMI				SKS	SKSdf	06 44 02.0	-1.1
KMI				SKKS	SKKSac	06 45 54.5	-2.3
KMI				SS	SS	06 56 16.5	-3.5
KMI				AMB	AMB		
comp=Z,2μm,10.1s							
KMI				LR	LR		
comp=N,8μm,20.7s,MS6.5							
KMI				LR	LR		
comp=E,7μm,17.5s,MS6.5							
KMI				LR	LR		
comp=Z,14μm,31.0s							
B16A	M & M Farms, S	129.16	301	⇑P	PKPdf	06 36 48.6	-2.3
baz=129							
BMO	Blue Mountains	129.18	294	*e*PKIKP	PKPdf	06 36 50.9	-0.2
BMO				MLR	MLR		
comp=Z,24μm,21.0s,MS6.9							
JMIC	Jan Mayen	129.33	6	*e*P	PKPdf	06 36 51.6	+1.1
JMIC				AMS	AMS	07 27 02.8	
comp=Z,16μm,21.8s,MS6.7							
K05A	Summer Lake	129.37	290	⇑P	PKPdf	06 36 49.7	-1.8
baz=130							
F11A	Grangeville	129.38	296	⇑P	PKPdf	06 36 49.5	-1.9
baz=130,SNR=20							
G10A	Bishop Farm, J	129.41	295	⇑P	PKPdf	06 36 49.7	-1.8
baz=130,SNR=28							
D13A	Huson	129.46	298	⇓P	PKPdf	06 36 49.9	-1.6
baz=130,SNR=21							
B15A	Bradely Ranch,	129.48	300	⇓P	PKPdf	06 36 49.2	-2.3
baz=130,SNR=16							
E12A	Beaver Dam Sad	129.49	297	⇓P	PKPdf	06 36 49.5	-2.1
baz=130							
YBH	Yreka Blue Hor	129.54	288	*e*PKIKP	PKPdf	06 36 51.4	-0.5
YBH				MLR	MLR		
comp=Z,11μm,21.0s							
SWMT	Swartz Lake	129.55	299	*e*PKPdf	PKPdf	06 36 51.3	-0.4
SWMT				*e*PP	PP	06 39 05.0	+2.3
H08A	Prairie City	129.59	293	⇑P	PKPdf	06 36 50.2	-1.7
baz=130,SNR=14							
C14A	Swan Lake	129.62	299	⇓P	PKPdf	06 36 50.1	-1.7
baz=130							
FFC	Flin Flon	129.67	312	*e*PKIKP	PKPdf	06 36 50.4	-1.3
FFC				MLR	MLR		
comp=Z,31μm,20.0s,MS7.0							
G09A	Cove	129.72	294	⇑P	PKPdf	06 36 50.7	-1.3
baz=130,SNR=7.5							
FCC	Fort Churchill	129.80	320	*e*PKIKP	PKPdf	06 36 51.0	-0.8
YBMT	Yellow Bay	129.82	299	*e*PKPdf	PKPdf	06 36 51.9	-0.2
B14A	Marquette Ranc	129.84	300	⇑P	PKPdf	06 36 50.4	-1.8
baz=130,SNR=12							
D12A	Red Ives Fores	129.85	297	⇓P	PKPdf	06 36 50.4	-1.9
baz=130							
JTMT	Jette	129.86	299	*e*PKPdf	PKPdf	06 36 51.4	-0.8
C13A	Hot Springs	129.94	298	⇑P	PKPdf	06 36 50.8	-1.7
baz=130,SNR=12							
F10A	Beach Ranch, E	129.96	295	⇑P	PKPdf	06 36 50.9	-1.7
baz=130,SNR=14							
A15A	Johnson Ranch,	130.04	301	⇓P	PKPdf	06 36 50.9	-1.6
baz=130,SNR=10							
BSMT	Bassoo Peak	130.17	298	*e*PKPdf	PKPdf	06 36 51.7	-1.1
G08A	Pilot Rock	130.29	293	⇑P	PKPdf	06 36 52.0	-1.2
baz=130,SNR=33							
HUMO	Hull Mountain	130.31	288	*e*PKPdf	PKPdf	06 36 54.6	+1.3
HUMO				LR	LR		
comp=Z,15μm,22.0s,MS6.7							
A14A	Double T Ranch	130.35	300	⇓P	PKPdf	06 36 51.7	-1.5
baz=130,SNR=20							
BBOR	Butler Butte	130.38	289	P	PKPdf	06 36 52.9	-0.6
C12B	Naegeli Ranch,	130.38	298	⇓P	PKPdf	06 36 51.4	-1.8
baz=130,SNR=16							
LNOR	Lincton Mounta	130.39	294	*e*PKIKP	PKPdf	06 36 55.2	+1.9
B13A	Whitefish	130.40	299	⇑P	PKPdf	06 36 51.8	-1.5
baz=130,SNR=20							
WALA	Waterton Lakes	130.63	300	*e*PKPdf	PKPdf	06 36 53.5	-0.2
A13A	Flathead Natio	130.77	300	⇓P	PKPdf	06 36 52.4	-1.6
baz=131							
E09A	Wood Farm, Sta	130.79	295	⇑P	PKPdf	06 36 52.6	-1.5
baz=131,SNR=16							
C11A	Tepee Creek (N	130.84	297	⇑P	PKPdf	06 36 52.0	-2.1
baz=131							
TRO	Tromso	130.96	18	*e*P	PKPdf	06 36 52.2	-1.5
TRO				*e*PP	PP	06 39 11.4	-0.1
TRO				*e*SS	SS	06 56 35.0	-6.7
B12A	Libby	130.99	298	⇑P	PKPdf	06 36 53.0	-1.4
baz=131							
SUMG	Summit	131.07	353	*e*PKPdf	PKPdf	06 36 54.9	+1.0
G06A	Carlson Farm,	131.07	292	⇑P	PKPdf	06 36 53.3	-1.4
baz=131							
ARU	Arti	131.13	47	*i* PKIKP	PKPdf	06 36 51.8	-2.6
ARU				MLR	MLR		
comp=Z,15μm,22.0s,MS6.7							
ARU	Arti	131.13	47	*e*PKPdf	PKPdf	06 36 54.5	+0.1
ARU				LR	LR		
comp=Z,15μm,22.0s,MS6.7							
KTK1	Kautokeino	131.15	20	*e*P	PKPdf	06 36 53.2	-0.8
KTK1				*e*SS	SS	06 56 44.9	+0.9
KTK1				AMS	AMS	07 30 46.0	
comp=Z,26μm,23.0s,MS6.9							
KTK1	Kautokeino	131.15	20	*e*P	PKPdf	06 36 53.2	-0.8
KTK1				*e*		06 40 16.2	
F07A	Phinny Hill Vi	131.20	293	⇓P	PKPdf	06 36 53.6	-1.3
baz=131							
A12A	Yaak River Ran	131.35	299	⇓P	PKPdf	06 36 53.4	-1.6
baz=132							
HAWA	Hanford	131.37	294	*e*PKPdf	PKPdf	06 36 56.2	+1.1
HAWA				LR	LR		
comp=Z,23μm,19.0s,MS6.9							
RSW	Rattlesnake Hi	131.40	294	*e*PKPdf	PKPdf	06 36 55.9	+0.7
H04A	Detroit Lake	131.44	291	⇑P	PKPdf	06 36 53.8	-1.6
baz=132							
KIP	Kipapa	131.50	240	*e*PKIKP	PKPdf	06 36 56.0	-0.2
KIP				MLR	MLR		
comp=Z,21μm,22.0s,MS6.8							
D08A	Wollman Farm,	131.55	295	⇓P	PKPdf	06 36 54.4	-1.1
baz=132,SNR=14							
NEW	Newport	131.56	297	*e*PKIKP	PKPdf	06 36 54.8	-0.7
NEW				MLR	MLR		
comp=Z,36μm,19.0s							
HOOD	Mount Hood Mea	131.63	291	*e*PKPdf	PKPdf	06 36 56.3	+0.5
E07A	Sunnyside	131.64	294	⇑P	PKPdf	06 36 54.5	-1.2
baz=132							
OD2	Odessa Site #2	131.69	295	*e*PKPdf	PKPdf	06 36 56.4	+0.6
COR	Corvallis	131.92	290	*e*PKIKP	PKPdf	06 36 58.5	+2.2
COR				MLR	MLR		
comp=Z,15μm,20.0s,MS6.7							
G04A	Mulino	131.96	291	⇑P	PKPdf	06 36 55.2	-1.2
baz=132							
APA	Apatity	131.98	25	⇑*i*PKIKP	PKPdf	06 36 58.5	+2.8
APA				*i*		06 39 18.0	
APA				*i* PS	PS	06 49 30.0	-2.3
APA				*i* SS	SS	06 56 50.0	-4.2
APA				pmax	pmax		
comp=Z,6μm,0.8s							
ARCES	ARCESS Array B	132.01	20	PKhKP	PKPpre	06 36 41.2	
comp=Z,2.1nm,0.8s,baz=217,slow=3.2,SNR=8.1							
ARCES				PKP	PKPdf	06 36 53.6	-2.1
comp=Z,4.0nm,0.8s,baz=195,slow=1.3,SNR=12							
ARCES				SKKPbc		06 49 43.7	
comp=Z,5.7nm,1.0s,baz=36,slow=6.8,SNR=4.2							
ARCES	ARCESS Array B	132.01	20	PKHKP	PKPpre	06 36 41.3	
ARCES						06 36 53.6	
ARCES						06 36 58.0	
ARCES	ARCESS Array B	132.01	20	PKP	PKPpre	06 36 41.2	
ARCES				PKP	PKPdf	06 36 53.6	-2.1
ARCES				PKPdf	PKPdf	06 36 58.0	+2.3
ARCES				SKKPbc		06 49 43.7	
ARE0	ARCESS Array S	132.01	20	*e*PKPdf	PKPdf	06 36 56.2	+0.6
JOHN	Johnston Islan	132.07	224	PFAKE		06 37 10.0	+13
JOHN				LR	LR		
comp=Z,18μm,21.0s,MS6.8							
EPH	Ephrata	132.08	295	P	PKPdf	06 36 57.4	+0.9
SVE	Sverdlovsk	132.22	47	*i* PKIKP	PKPdf	06 36 55.5	-0.9
SVE				*e*		06 39 18.0	
SVE				pmax	pmax		
comp=Z,150nm,1.5s							
SVE				MLR	MLR		
comp=Z,20μm,23.0s,MS6.8							
GYA	Guiyang	132.22	109	Pdif	Pdif	06 33 52.8	+0.4
GYA				PKP	PKPdf	06 36 57.5	0.0
GYA				PP	PP	06 39 26.0	+6.0
GYA				PKS		06 40 32.8	
GYA				SKKS	SKKSac	06 46 15.8	0.0
GYA				SS	SS	06 57 01.3	+3.6
GYA				AMB	AMB		
comp=Z,2μm,17.8s							
GYA				LR	LR		
comp=N,5μm,26.4s,MS6.4							
GYA				LR	LR		
comp=E,10μm,25.8s,MS6.4							
GYA				LR	LR		
comp=Z,7μm,26.4s,MS6.2							
F04A	Amboy	132.45	292	⇓P	PKPdf	06 36 55.7	-1.6
baz=132							
KEV	Kevo	132.48	21	*e*PKIKP	PKPdf	06 36 56.1	-0.5
KEV				pmax	pmax		
comp=Z,37nm,1.0s							
KEV	Kevo	132.48	21	*e*PKPdf	PKPdf	06 36 57.5	+0.9
KEV				LR	LR		
comp=Z,25μm,19.0s,MS6.9							
KEV	Kevo	132.48	21	*e*p	PKPdf	06 36 56.1	-0.5
comp=Z,37nm,1.0s							
KEV	Kevo	132.48	21	*e*p	PKPdf	06 36 56.1	-0.5
comp=Z,37nm,1.0s							
LVZ	Lovozero	132.53	25	*c i*PKIKP	PKPdf	06 36 58.4	+1.7
LVZ				pmax	pmax		
comp=Z,62nm,1.2s							
LVZ	Lovozero	132.53	25	PFAKE		06 37 10.0	+13
LVZ				LR	LR		
comp=Z,27μm,19.0s,MS7.0							
GZH	Guangzhou	132.61	118	PKP	PKPdf	06 37 01.5	+3.2
GZH				SS	SS	06 56 59.5	-2.7
GZH				LR	LR		
comp=N,8μm,21.0s,MS6.5							
GZH				LR	LR		
comp=E,7μm,22.5s,MS6.5							
GZH				LR	LR		
comp=Z,17μm,20.5s,MS6.8							
ETW	Entiat	132.61	295	P	PKPdf	06 36 57.6	+0.2
B08A	Colville Reser	132.67	296	⇓P	PKPdf	06 36 56.1	-1.5
baz=133,SNR=17							
SOKR	Solikamsk	132.72	43	*c i*PKIKP	PKPdf	06 36 58.0	+0.7
SOKR						06 39 20.0	
SOKR				pmax	pmax		
comp=Z,80nm,2.0s							
LON	Longmire	132.73	293	*e*PKIKP	PKPdf	06 36 58.3	+0.6
F03A	Seaside	133.01	291	⇓P	PKPdf	06 36 57.5	-0.7
baz=133							
D05A	Enumclaw	133.12	293	⇓P	PKPdf	06 36 57.4	-1.1
baz=133							
EDM	Edmonton	133.32	304	*e*PKIKP	PKPdf	06 36 58.0	-0.6
EDM				*e*		06 39 27.1	
BRVK	Borovoye	133.59	56	*i* PKIKP	PKPdf	06 36 59.2	+0.1
BRVK				MLR	MLR		
comp=Z,22μm,22.0s,MS6.8							
BRVK	Borovoye	133.59	56	*e*PKPdf	PKPdf	06 37 00.0	+0.9
BRVK				LR	LR		
comp=Z,22μm,21.0s,MS6.8							
BRVK	Borovoye	133.59	56	⇓P	PKPdf	06 36 48.2	-11
SNR=14							
BRVK				⇓P		06 36 48.2	
SNR=14							
BVAR	Borovoye Array	133.62	56	PKhKP	PKPpre	06 36 45.0	
comp=Z,3.3nm,0.9s,baz=176,slow=4.5,SNR=12							
BVAR				PKP	PKPdf	06 36 59.0	-0.2
comp=Z,12nm,0.7s,baz=285,slow=0.8,SNR=14							
BVAR				SKKPbc		06 49 31.2	
comp=Z,4.5nm,0.8s,baz=57,slow=5.5,SNR=4.3							
BVAR	Borovoye Array	133.62	56	PKHKP	PKPpre	06 36 45.0	
BVAR						06 36 59.0	
RPW	Rockport	133.77	295	*e*PKPdf	PKPdf	06 36 58.5	-1.1
GNW	Green Mountain	133.79	293	*e*PKPdf	PKPdf	06 37 00.8	+1.1
GNW				*e*PP	PP	06 39 31.9	+1.9
JCW	Jim Creek	133.79	294	*e*PKPdf	PKPdf	06 37 02.2	+2.5
JCW				*e*PP	PP	06 39 29.0	-1.1
B06A	Marblemount	133.81	295	⇑P	PKPdf	06 36 58.1	-1.6
baz=134							
NLWA	Neilton Lookou	134.18	292	⇓P	PKPdf	06 36 59.5	-1.0
baz=134							
NLWA	Neilton Lookou	134.18	292	PKPdf	PKPdf	06 37 01.9	+1.4
NLWA				LR	LR		
comp=Z,26μm,22.0s,MS6.9							
GUMO	Guam	134.30	162	*e*PKIKP	PKPdf	06 37 03.1	+1.4
GUMO				MLR	MLR		
comp=Z,14μm,19.0s,MS6.7							
CD2	Chengdu	134.36	103	*e*PKP	PKPdf	06 37 00.5	-0.9
CD2				sPKP		06 37 08.5	
CD2				PP	PP	06 39 37.0	+3.3
CD2				PKS		06 40 35.5	
CD2				SKS	SKSdf	06 44 06.3	-5.9
CD2				SKKS	SKKSac	06 46 24.0	-4.7
CD2				SS	SS	06 57 22.0	-1.7
CD2				AMB	AMB		
comp=Z,3μm,10.2s							
CD2				LR	LR		
comp=N,8μm,26.2s,MS6.6							
CD2				LR	LR		
comp=E,14μm,26.4s,MS6.6							
CD2				LR	LR		
comp=Z,12μm,20.4s							
A05A	Maple Falls	134.43	295	⇓P	PKPdf	06 36 59.4	-1.5
baz=134							
OBC	Olympics--Boni	134.73	293	P	PKPdf	06 37 05.3	+3.8
DAG	Danmarks Havn	134.81	1	*e*P	PKPdf	06 36 58.0	-2.8
PGC	Sidney	134.84	294	*e*PKPdf	PKPdf	06 37 03.8	+2.2
MK31	Makanchi Array	134.94	70	*e*PKIKP	PKPdf	06 37 02.5	+0.6
MKAR	Makanchi Array	134.94	70	PKhKP	PKPpre	06 36 49.0	
comp=Z,0.5nm,0.5s,baz=245,slow=5.2,SNR=5.0							
MKAR				PKP	PKPdf	06 37 00.6	-1.3
comp=Z,30nm,1.0s,baz=243,slow=3.9,SNR=34							
MKAR				SKKPbc		06 49 12.6	
comp=Z,2.8nm,0.8s,baz=46,slow=3.7,SNR=3.7							
MKAR	Makanchi Array	134.94	70	PKHKP	PKPpre	06 36 49.0	
MKAR						06 37 00.6	
BJO	Bjornoya	135.31	15	*e*P	PKPdf	06 37 02.1	+0.3
BJO				*e*PP	PP	06 39 39.7	+0.5
BJO				*e*SS	SS	06 57 33.8	-0.4
BJO				AMS	AMS	07 23 23.9	
comp=Z,16μm,41.6s,MS6.4							
WMQ	Urumqi	135.61	77	*e*PKP	PKPdf	06 37 00.0	-3.2
WMQ				PP	PP	06 39 41.0	-0.6
WMQ				SKS	SKSdf	06 44 09.0	-4.8
WMQ				SKKS	SKKSac	06 46 31.0	-4.6
WMQ				SS	SS	06 57 36.0	-2.8
WMQ				AMB	AMB		
comp=Z,4μm,10.0s							
WMQ				LR	LR		
comp=N,56μm,22.0s,MS7.3							
WMQ				LR	LR		
comp=E,21μm,22.0s,MS7.3							
WMQ				LR	LR		
comp=Z,19μm,22.0s,MS6.8							
KURK	Kurchatov	135.82	64	PP	PP	06 39 46.4	+3.5
comp=Z,33nm,1.2s,baz=244,slow=5.5,SNR=7.0							
KURK				SKKPbc		06 49 12.0	
comp=Z,4.7nm,1.0s,baz=47,slow=4.6,SNR=3.5							
KURK	Kurchatov	135.82	64	*i* PKIKP	PKPdf	06 36 59.3	-4.1
KURK				MLR	MLR		
comp=Z,15μm,22.0s,MS6.7							
KURK	Kurchatov	135.82	64	*e*PKPdf	PKPdf	06 36 57.8	-5.6
KURK				*e*PP	PP	06 39 46.8	+3.9
KURK				LR	LR		
comp=Z,17μm,22.0s,MS6.7							
KURK	Kurchatov	135.82	64	⇓P	PKPdf	06 36 55.1	-8.3
SNR=33							
KURK				⇓P		06 36 55.1	
SNR=33							
TPUB	Ta-pu	136.04	126	*e*PKPdf	PKPdf	06 37 05.4	+0.7
YULB	Yu-li	136.41	127	*e*PKPdf	PKPdf	06 37 06.4	+1.0
QZH	Quanzhou	136.59	123	*i* PKP	PKPdf	06 37 06.0	+0.3
QZH				PP	PP	06 39 45.0	-2.6
QZH				LR	LR		
comp=N,11μm,17.3s,MS6.7							
QZH				LR	LR		
comp=E,6μm,16.4s,MS6.7							
QZH				LR	LR		
comp=Z,17μm,18.9s,MS6.8							
SSLB	Suanglung	136.61	127	*e*PKPdf	PKPdf	06 37 05.8	+0.1
YHNB	Yeheng	137.56	126	PFAKE		06 37 20.0	+12
YHNB				LR	LR		
comp=Z,13μm,20.0s,MS6.7							
TATO	Taipei	137.88	126	PFAKE		06 37 20.0	+12
TATO				LR	LR		
comp=Z,9μm,20.0s,MS6.5							
KBS	Kingsbay	138.44	9	*e*PKPdf	PKPdf	06 37 04.3	-3.3
KBS				*e*PP	PP	06 39 59.7	+1.0
KBS				*e*SS	SS	06 58 10.8	-0.7
KBS				AMS	AMS	07 33 59.8	
comp=Z,20μm,18.3s,MS6.9							
KBS	Kingsbay	138.44	9	*e*P	PKPdf	06 37 02.7	-4.8
KBS				LR	LR		
comp=Z,15μm,20.0s,MS6.7							
LZH	Lanzhou	138.45	98	*e*PKP	PKPdf	06 37 07.0	-1.8
LZH				sPKP		06 37 17.0	
LZH				PP	PP	06 40 02.0	+2.7
LZH				PKS		06 40 41.0	
LZH				SKS	SKSdf	06 44 13.0	-6.0
LZH				SKKS	SKKSac	06 46 48.0	-4.9
LZH				SS	SS	06 58 09.8	-2.7
LZH				AMB	AMB		
comp=Z,1μm,5.9s							
LZH				LR	LR		
comp=N,9μm,18.0s							
LZH				LR	LR		
comp=Z,11μm,20.4s,MS6.6							
WHN	Wuhan	139.38	114	⇑PKP	PKPdf	06 37 05.8	-4.8
WHN				LR	LR		
comp=N,14μm,17.0s,MS6.8							
WHN				LR	LR		
comp=E,7μm,17.7s,MS6.8							
WHN				LR	LR		
comp=Z,18μm,18.2s,MS6.8							
XAN	Xi'an	139.49	105	PKP	PKPdf	06 37 07.0	-3.7
XAN				PP	PP	06 40 03.0	-2.7
XAN				PKS		06 40 41.5	
XAN				SKS	SKSdf	06 44 16.3	-4.6
XAN				SKKS	SKKSac	06 46 52.8	-6.3
XAN				AMB	AMB		
comp=Z,680nm,16.3s							
XAN				LR	LR		
comp=N,6μm,23.7s,MS6.2							
XAN				LR	LR		
comp=E,2μm,27.7s,MS6.2							
XAN				LR	LR		
comp=Z,4μm,23.7s,MS6.0							
YKA	Yellowknife Ar	139.75	314	PKhKP	PKPpre	06 37 03.0	
comp=Z,9.1nm,0.8s,baz=108,slow=2.1,SNR=12							
YKA				PKP	PKPdf	06 37 08.8	-1.5
comp=Z,56nm,0.8s,baz=129,slow=1.9,SNR=25							
YKA				PP	PP	06 40 04.7	-2.4
comp=Z,36nm,1.0s,baz=124,slow=6.5,SNR=9.2							
YKA				SKKPbc		06 49 03.2	
comp=Z,2.6nm,0.9s,baz=318,slow=6.4,SNR=3.8							
YKA	Yellowknife Ar	139.75	314	PKHKP	PKPpre	06 37 03.0	
YKA						06 37 08.8	
YKA						06 40 04.7	
YKA	Yellowknife Ar	139.75	314	PKP	PKPpre	06 37 03.0	
YKA				PKP	PKPdf	06 37 08.8	-1.5
YKA				PP	PP	06 40 04.7	-2.4
YKA				SKKPbc		06 49 03.2	
WAKE	Wake Island	140.54	193	PFAKE		06 37 20.0	+6.9
WAKE				LR	LR		
comp=Z,9μm,19.0s,MS6.5							
NVS	Novosibirsk	140.61	62	*e*PKHKP	PKPpre	06 37 05.1	
NVS				pmax	pmax		
comp=Z,197nm,1.9s							
NVS				pmax	pmax		
comp=N,49nm,1.4s							
NVS				pmax	pmax		
comp=E,32nm,1.4s							
ZAA0	Zalesovo Array	140.81	64	*e*PKPdf	PKPpre	06 37 06.2	
ZALV	Zalesovo Beam	140.81	64	PKhKP	PKPpre	06 37 06.0	
comp=E,4.0nm,0.5s,baz=285,slow=2.9,SNR=12							
ZALV				PKP	PKPdf	06 37 12.2	-0.3
comp=E,14nm,0.7s,baz=244,slow=3.5,SNR=29							
ZALV				PP	PP	06 40 10.8	-3.0
comp=E,6.6nm,0.9s,baz=240,slow=4.8,SNR=2.6							
ZALV				SKKPbc		06 49 04.2	
comp=E,4.0nm,0.9s,baz=58,slow=3.9,SNR=3.7							
ZALV	Zalesovo Beam	140.81	64	PKHKP	PKPpre	06 37 06.0	
ZALV						06 37 12.2	
ZALV						06 40 10.9	
NJ2	Nanjing	142.77	118	*e*PKP	PKPdf	06 37 13.3	-3.4
NJ2				pPKP	pPKPdf	06 37 23.0	+2.9
NJ2				sPKP		06 37 26.5	
NJ2

HHC	**Hu-ho-hao-te**	**146.03 100**	*e*PKPbc	PKPbc	06 37 21.8	-1.1
HHC			pPKP	pPKPdf	06 37 32.5	+7.0
HHC			PP	PP	06 40 49.0	+3.8
HHC			PKS		06 40 55.0	
HHC			SKS	SKSdf	06 44 25.3	-5.3
HHC			SKKS	SKKSac	06 47 32.8	-3.7
HHC			SS	SS	06 59 40.5	+0.2
HHC			AMB	AMB		
	comp=Z,3μm,8.4s					
HHC			LR	LR		
	comp=N,8μm,24.1s,MS6.5					
HHC			LR	LR		
	comp=E,5μm,20.6s,MS6.5					
HHC			LR	LR		
	comp=Z,9μm,22.7s,MS6.5					
SKAG	**Skagway**	**146.82 301**	*e*PKPdf	PKPdf	06 37 20.9	-1.8
CBIJ	**Chichi jima**	**146.90 154**	PKPbc	PKPbc	06 37 23.4	-2.5
	comp=Z,229nm,1.0s,baz=243,slow=5.3,SNR=5.7					
MOY	**Mondy**	**147.50 76**	*e*PKIKP	PKPdf	06 37 22.7	-1.5
BJI	**Beijing**	**147.80 106**	PKPbc	PKPbc	06 37 25.3	-2.7
BJI			SS	SS	06 59 59.3	-1.0
BJI			AMB	AMB		
	comp=Z,4μm,14.2s					
BJI			LR	LR		
	comp=N,11μm,24.1s,MS6.6					
BJI			LR	LR		
	comp=E,6μm,23.4s,MS6.6					
BJI			LR	LR		
	comp=Z,10μm,25.5s,MS6.5					
SONM	**Songino Array**	**148.04 86**	PKP	PKPdf	06 37 23.2	-2.0
	comp=Z,43nm,0.8s,baz=216,slow=2.6,SNR=60					
SONM			PKPbc	PKPbc	06 37 27.1	-1.2
	comp=Z,72nm,0.8s,baz=214,slow=2.7,SNR=81					
ULN	**Ulaanbaatar**	**148.40 87**	*e*PKIKP	PKPdf	06 37 25.0	-0.8
ULN			*e*		06 37 29.0	
ULN			MLR	MLR		
	comp=Z,18μm,22.0s,MS6.8					
PNL	**Peninsula**	**148.76 300**	*e*PKPdf	PKPdf	06 37 22.9	-3.1
PNL			*e*PKPab	PKPab	06 37 33.0	-0.8
TLY	**Talaya**	**148.87 78***d*	*i*PKHKP	PKPpre	06 37 23.7	
TLY			*e*		06 44 32.9	
TLY			*e*		06 53 46.8	
TLY			pmax	pmax		
	comp=Z,416nm,2.1s					
TLY	**Talaya**	**148.87 78**	*e*PKPdf	PKPdf	06 37 24.9	-1.5
TLY			*e*PKPbc	PKPbc	06 37 30.0	-0.4
TLY			*e*PKPab	PKPab	06 37 34.0	-0.5
TLY			LR	LR		
	comp=Z,16μm,20.0s,MS6.8					
INK	**Inuvik**	**149.35 317**	PKP	PKPdf	06 37 24.0	-2.7
	comp=Z,168nm,1.1s,baz=92,slow=2.8,SNR=37					
INK	**Inuvik**	**149.35 317**	*e*PKPdf	PKPdf	06 37 23.6	-3.1
INK			*e*PKPbc	PKPbc	06 37 30.4	-0.7
INK			*e*PKPab	PKPab	06 37 34.6	-1.3
IRK	**Irkutsk**	**149.50 78**	*e*PKIKP	PKPdf	06 37 25.8	-1.6
IRK			pmax	pmax		
	comp=Z,482nm,1.4s					
DL2	**Dalian**	**149.64 114**⇑	*i*PKPbc	PKPdf	06 37 28.8	+0.7
DL2			PKPab	PKPab	06 37 40.8	+2.8
DL2			PP	PP	06 41 07.0	+0.7
DL2			SKKS	SKKSac	06 47 55.3	-1.5
DL2			SS	SS	07 00 22.8	+2.0
DL2			AMB	AMB		
	comp=Z,2μm,7.9s					
DL2			LR	LR		
	comp=N,5μm,18.2s,MS6.4					
DL2			LR	LR		
	comp=E,3μm,18.5s,MS6.4					
DL2			LR	LR		
	comp=Z,7μm,19.0s,MS6.5					
DAWY	**Dawson**	**150.40 308**	*e*PKPdf	PKPdf	06 37 25.3	-3.2
DAWY			*e*PKPbc	PKPbc	06 37 33.9	+0.1
DAWY			*e*PKPab	PKPab	06 37 40.0	-0.4
INCN	**Inchon**	**150.84 122**	*e*PKPbc	PKPbc	06 37 35.5	-0.1
INCN			LR	LR		
	comp=Z,14μm,21.0s,MS6.8					
EGAK	**Eagle**	**151.35 309**	*e*PKPdf	PKPdf	06 37 26.1	-3.8
EGAK			*e*PKPbc	PKPbc	06 37 35.4	-0.6
EGAK			LR	LR		
	comp=Z,19μm,20.0s,MS6.9					
KSRS	**Korea Array**	**151.39 124**	PKP	PKPdf	06 37 28.9	-2.0
	comp=Z,5.9nm,1.0s,baz=211,slow=1.7,SNR=20					
KSRS			PKPbc	PKPbc	06 37 36.0	-0.9
	comp=Z,49nm,1.0s,baz=200,slow=1.6,SNR=49					
KSRS			tx	tx	06 47 41.9	
	comp=Z,4.5nm,1.0s,baz=30,slow=4.5,SNR=4.8					
BMRM	**Bremner River**	**151.66 300**	*e*PKPdf	PKPdf	06 37 27.4	-3.0
BMRM			*e*PKPbc	PKPbc	06 37 35.8	-1.0
BMRM			*e*PKPab	PKPab	06 37 43.9	-1.8
MENT	**Mentasta**	**151.91 304**	*e*PKPdf	PKPdf	06 37 28.7	-2.1
MENT			*e*PKPbc	PKPbc	06 37 36.0	-1.3
MENT			*e*PKPab	PKPab	06 37 46.0	-0.6
MID	**Middleton Isla**	**151.91 296**	*e*PKIKP	PKPbc	06 37 35.7	-1.7
JHJ	**Hachijo jima 2**	**151.98 146**	PKPbc	PKPbc	06 37 38.5	0.0
	comp=Z,355nm,0.9s,baz=207,slow=2.3,SNR=3.1					
DIV	**Divide**	**152.25 300**	*e*PKPdf	PKPdf	06 37 31.7	+0.3
DIV			*e*PKPbc	PKPbc	06 37 37.5	-0.7
DIV			*e*PKPab	PKPab	06 37 48.7	+0.6
PAX	**Paxson**	**152.68 304**	*e*PKIKP	PKPbc	06 37 38.1	-0.9
SNY	**Shenyang**	**152.84 112**	⇓PKPbc	PKPdf	06 37 30.8	-2.1
SNY			PP	PP	06 41 23.5	-1.1
SNY			LR	LR		
	comp=N,6μm,23.0s,MS6.7					
SNY			LR	LR		
	comp=E,13μm,20.1s,MS6.7					
SNY			LR	LR		
	comp=Z,13μm,22.1s,MS6.7					
SEW	**Seward**	**153.62 297**	*e*PKPdf	PKPdf	06 37 33.9	+0.5
SEW			*e*PKPbc	PKPbc	06 37 41.2	+0.1
SEW			*e*PKPab	PKPab	06 37 53.4	-0.6
PMR	**Palmer**	**153.93 300**	*e*PKIKP	PKPbc	06 37 41.7	-0.1
RC01	**Rabbit Creek A**	**154.06 299**	*e*PKPbc	PKPbc	06 37 40.1	-2.0
COLA	**College**	**154.15 307**	*e*PKIKP	PKPdf	06 37 31.2	-2.8
COLA			*e*		06 37 41.5	
COLA			MLR	MLR		
	comp=Z,22μm,22.0s,MS6.9					
CIT	**Chita**	**154.23 85**	*e*PKIKP	PKPdf	06 37 32.2	-2.3
KDAK	**Kodiak Island**	**154.31 290**	PKP	PKPdf	06 37 32.9	-1.5
	comp=Z,3.9nm,0.8s,baz=253,slow=4.5,SNR=5.0					
KDAK			PKPbc	PKPbc	06 37 43.6	+0.9
	comp=Z,34nm,0.8s,baz=119,slow=1.8,SNR=19					
KDAK			PKPab	PKPab	06 37 54.5	-2.5
	comp=Z,82nm,0.7s,baz=122,slow=2.2,SNR=21					
KDAK	**Kodiak Island**	**154.31 290**	*e*PKPdf	PKPdf	06 37 32.0	-2.4
KDAK			*e*PKPbc	PKPbc	06 37 42.7	0.0
KDAK			LR	LR		
	comp=Z,19μm,20.0s,MS6.9					
MCK	**McKinley**	**154.38 305**	*e*PKIKP	PKPdf	06 37 31.7	-2.7
MCK			*e*		06 37 42.8	
OHAK	**Old Harbor**	**154.44 289**	*e*PKPbc	PKPbc	06 37 42.8	-0.3
MAJO	**Matsushiro**	**154.64 140**	*e*PKIKP	PKPdf	06 37 35.5	-0.1
MAJO			*e*		06 37 44.7	
MAJO			MLR	MLR		
	comp=Z,10μm,20.0s,MS6.7					
MJAR	**Matsushiro Arr**	**154.64 140**	PKP	PKPdf	06 37 35.0	-0.7
	comp=Z,6.6nm,1.1s,baz=222,slow=1.7,SNR=5.9					
MJAR			tx	tx	06 47 26.9	
	comp=Z,1.1nm,0.4s,baz=18,slow=3.1,SNR=4.9					
TRF	**Thorofare Moun**	**154.91 304**	*e*PKPbc	PKPbc	06 37 43.9	+0.1
CN2	**Changchun**	**155.23 112**	*e*PKP	PKPdf	06 37 34.3	-1.9
CN2			PP	PP	06 41 43.5	+5.4
CN2			SS	SS	07 01 21.8	-0.4
CN2			AMB	AMB		
	comp=Z,200nm,5.0s					
CN2			LR	LR		
	comp=N,11μm,21.0s,MS6.7					
CN2			LR	LR		
	comp=E,7μm,21.0s,MS6.7					
CN2			LR	LR		
	comp=Z,11μm,24.0s,MS6.6					
RSO	**Redoubt South**	**155.29 296**	*e*PKPdf	PKPdf	06 37 32.1	-3.6
BPAW	**Bear Paw Mtn.**	**155.34 305**	*e*PKPbc	PKPdf	06 37 43.9	+8.2
COLD	**Coldfoot**	**155.41 313**	*e*PKPdf	PKPdf	06 37 31.1	-4.6
COLD			*e*PKPbc	PKPdf	06 37 43.9	+8.2
PPLA	**Purkeypile**	**155.64 302**	*e*PKPdf	PKPdf	06 37 32.9	-3.2
CHGN	**Chignik**	**156.68 284**	*e*PKPdf	PKPdf	06 37 36.8	-0.9
SVW2	**Sparrevohn**	**156.80 297**	*e*PKPdf	PKPdf	06 37 34.0	-3.7
SDPT	**Sand Point**	**157.36 281**	*e*PKPdf	PKPdf	06 37 37.9	-0.7
TTA	**Tatalina**	**157.37 301**	*e*PKIKP	PKPdf	06 37 36.3	-2.1
VLA	**Vladivostok**	**157.75 122**	PKIKP	PKPdf	06 37 37.0	-2.5
VLA			*e*		06 37 49.6	
VLA			*e*		06 41 53.5	
VLA			pmax	pmax		
	comp=Z,141nm,1.6s					
MDJ	**Mudanjiang**	**157.84 116**	PKP	PKPdf	06 37 37.5	-2.0
MDJ			SKS	SKSdf	06 44 41.0	-3.9
MDJ			LR	LR		
	comp=N,13μm,30.4s					
MDJ			LR	LR		
	comp=E,14μm,42.0s					
MDJ			LR	LR		
	comp=Z,11μm,30.4s,MS6.5					
AKUT	**Akutan**	**159.61 274**	*e*PKPdf	PKPdf	06 37 41.5	+0.2
UNV	**Unalaska Valle**	**159.86 273**	*e*PKPdf	PKPdf	06 37 41.7	+0.1
ERM	**Erimo**	**161.21 144**	PFAKE		06 37 50.0	+6.5
ERM			LR	LR		
	comp=Z,19μm,22.0s					
TIXI	**Tiksi**	**162.08 30**	*e*PKP2	PKPab	06 38 31.4	+1.1
TIXI			pmax	pmax		
	comp=Z,119nm,1.9s					
TIXI	**Tiksi**	**162.08 30**	*e*PKPdf	PKPdf	06 37 41.4	-2.1
TIXI			LR	LR		
	comp=Z,28μm,22.0s					
KLR	**Kul'dur**	**162.12 109**	*e*PKIKP	PKPdf	06 37 37.8	-6.4
KLR			pmax	pmax		
	comp=Z,2μm,11.0s					
KLR			pmax	pmax		
	comp=Z,170nm,2.0s					
CLNS	**Chul'man**	**162.27 80**	*i* PKIKP	PKPdf	06 37 42.8	-1.3
CLNS			pmax	pmax		
	comp=Z,97nm,1.3s					
CLNS			pmax	pmax		
	comp=N,14nm,1.0s					
CLNS			pmax	pmax		
	comp=E,26nm,1.7s					
ASAJ	**Asahikawa**	**162.90 139**	PKP	PKPdf	06 37 44.0	-1.2
	comp=E,2.3nm,0.3s,baz=291,slow=8.6,SNR=4.3					
ASAJ			PKPab	PKPab	06 38 34.1	-0.4
	comp=E,28nm,1.1s,baz=264,slow=21,SNR=3.9					
ASAJ	**Asahikawa**	**162.90 139**	PKIKP	PKPdf	06 37 44.0	-1.2
ASAJ					06 38 34.1	
ASAJ			pmax	pmax		
	comp=Z,2.0nm,0.3s					
ASAJ			pmax	pmax		
	comp=Z,28nm,1.1s					
HABR	**Khabarovsk**	**163.22 116***ce*	PKIKP	PKPdf	06 37 44.5	-0.8
HABR			*e*		06 37 55.4	
HABR			*e*		06 38 35.5	
HABR					06 42 22.5	
HABR			*e*		06 44 46.6	
HABR			PPP		06 46 08.7	
HABR			*e*SS	SS	07 02 44.8	-2.0
HABR			SSS		07 09 06.8	
HABR			pmax	pmax		
	comp=N,21nm,1.2s					
HABR			pmax	pmax		
	comp=Z,150nm,1.7s					
HABR			pmax	pmax		
	comp=E,51nm,1.7s					
YUK	**Yuzh-Kuril'sk**	**163.86 147**⇓	*i*PKIKP	PKPdf	06 37 44.4	-1.7
YUK			*i*		06 44 49.9	
YSS	**Yuzh-Sakhalins**	**165.39 134***c*	*i*PKIKP	PKPdf	06 37 47.0	-0.3
YSS			*e*		06 42 28.0	
YSS			*e*PPP		06 46 24.0	
YSS			*e*SS	SS	07 03 07.0	-1.7
YSS			pmax	pmax		
	comp=Z,140nm,1.5s					
YSS			pmax	pmax		
	comp=Z,1μm,5.0s					
YSS	**Yuzh-Sakhalins**	**165.39 134**	*e*PKPdf	PKPdf	06 37 47.4	0.0
YSS			LR	LR		
	comp=Z,6μm,20.0s					
YAK	**Yakutsk**	**165.47 63**	*i* PKIKP	PKPdf	06 37 43.5	-3.4
YAK			*e*		06 37 52.8	
YAK			*e*		06 42 37.4	
YAK			pmax	pmax		
	comp=Z,26nm,1.0s					
YAK			pmax	pmax		
	comp=E,9.0nm,1.3s					
YAK			pmax	pmax		
	comp=N,4.0nm,0.9s					
YAK			pmax	pmax		
	comp=Z,31nm,0.5s					
YAK	**Yakutsk**	**165.47 63**	PFAKE		06 38 00.0	+13
YAK			LR	LR		
	comp=Z,14μm,20.0s					
BILL	**Biiibino**	**169.54 343**	*i* PKIKP	PKPdf	06 37 44.9	-4.7
BILL			*i*		06 39 01.7	
BILL			pmax	pmax		
	comp=Z,31nm,1.3s					
BILL	**Biiibino**	**169.54 343**	*e*PKPdf	PKPdf	06 37 45.6	-4.0
BILL			LR	LR		
	comp=Z,40μm,21.0s					
FX1	**Attu Island--F**	**169.87 244**	PKPab	PKPab	06 39 03.6	-1.5
	comp=Z,17nm,0.7s,baz=116,slow=14,SNR=5.7					
FX1	**Attu Island--F**	**169.87 244**	PKP2	PKPab	06 39 03.6	-1.5
FX1			pmax	pmax		
	comp=Z,17nm,0.7s					
SKR	**Severo-Kuril's**	**172.30 171**	*i* PKIKP	PKPdf	06 37 55.0	+3.4
SKR			*e*		06 43 14.0	
SKR			*e*		06 47 24.0	
SKR			*e*SSS		07 11 10.0	
SKR			pmax	pmax		
	comp=Z,400nm,1.5s					
PET	**Petropavlovsk**	**174.72 184**	*i* PKIKP	PKPdf	06 37 50.0	-2.4
PET			*e*		06 43 25.9	
PET			*e*PPP		06 47 30.8	
PET			*e*SS	SS	07 04 42.1	+1.7
PET			*e*SSS		07 11 42.9	
PET			pmax	pmax		
	comp=Z,2μm,5.1s					
PET			pmax	pmax		
	comp=Z,55nm,1.3s					
PET			pmax	pmax		
	comp=Z,2μm,13.1s					
PET			pmax	pmax		
	comp=Z,3μm,17.0s					
PET	**Petropavlovsk**	**174.72 184**	*e*PKPdf	PKPdf	06 37 53.8	+1.4
PET			LR	LR		
	comp=Z,25μm,22.0s					
PEA0B	**Petropavlovsk-**	**174.81 178**	*e*PKPdf	PKPdf	06 37 51.5	-0.9
PETK	**Petropavlovsk-**	**174.81 178**	PKP	PKPdf	06 37 51.5	-0.9
	comp=Z,49nm,1.1s,baz=90,slow=1.8,SNR=16					
PETK			PKPab	PKPab	06 39 28.1	+1.1
	comp=Z,37nm,1.0s,baz=159,slow=4.3,SNR=6.1					
PETK			PP	PP	06 43 24.7	+5.2
	comp=Z,18nm,1.1s,baz=176,slow=5.9,SNR=3.8					
PETK			tx	tx	06 46 53.5	
	comp=Z,15nm,1.0s,baz=88,slow=2.9,SNR=5.5					
PETK	**Petropavlovsk-**	**174.81 178**	PKP	PKPdf	06 37 51.5	-0.9
PETK			PKPab	PKPab	06 39 28.1	+1.1
PETK			PP	PP	06 43 24.7	+5.2

*IDC **30** 06:39:27.3±2.4, 9.°86N×123.°19E, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.6/21, mbtmp3.8/3, Error ellipse: s-maj=231.5km s-min=26.0km az=63.0*
*MAN **30** 06:39:30, 9.°41N×121.°98E, h23km, mb4.8, ML3.7, MS3.8*
*ISCJB **30** 06:39:31.6±0.8, 9.°41N±0.°06×121.°97E±0.°05, h38km±14km, mb3.9/3, Error ellipse: s-maj=11.1km s-min=7.0km az=40.6*

ISC 30 06:39:31.4±2.8, 9.°42N±0.°05×122.°00E±0.°05, h22km±25km, n14, σ0°92/18, mb3.9/3, 1C, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**1.22**	**93**⇑	*e*P	**Pn**	**06 39 51.9**	**-1.3**
SNPH				*i* S	**Sn**	**06 40 09.0**	**0.0**
GUIM	**Jordan**	**1.33**	**26**	*e*P	**Pn**	**06 39 53.8**	**-0.9**
GUIM				*e*S	**Sn**	**06 40 11.0**	**-0.8**
IPIL	**Ipil**	**1.72**	**161**	*e*P	**Pn**	**06 39 51.9**	**-8.2**
CUYO	**Cuyo Island**	**1.72**	**326**	*e*P	**Pn**	**06 39 59.4**	**-0.7**
TBP	**Tagbilaran**	**1.85**	**81**	*e*P	**Pn**	**06 40 02.4**	**+0.4**
PAGZ	**Pagadian**	**2.07**	**139**	*e*P	**Pn**	**06 40 05.5**	**+0.5**
PAGZ				*e*S	**Sn**	**06 40 30.4**	**+0.2**
LLP	**Lapu-Lapu**	**2.13**	**65**	*e*P	**Pn**	**06 40 06.0**	**+0.2**
LLP				*e*S	**Sn**	**06 40 31.8**	**+0.2**
OCLP	**Ormoc**	**3.04**	**57**	*e*P	**Pn**	**06 40 19.0**	**+0.8**
ENPP	**El Nido**	**3.10**	**305**	*e*P	**Pn**	**06 40 18.9**	**-0.1**
BUSP	**Coron**	**3.12**	**326**	*e*P	**Pn**	**06 40 18.7**	**-0.6**
BOAC	**Boac**	**4.02**	**358**	*e*P	**Pn**	**06 40 34.2**	**+2.5**
WRA	**Warramunga Arr**	**31.60**	**157**	P	**P**	**06 45 51.4**	**-1.4**
	0.7nm,0.8s,mb3.6,baz=339,slow=9.5,SNR=3.9						
ASAR	**Alice Springs**	**34.88**	**161**	P	**P**	**06 46 21.4**	**0.0**
	0.6nm,0.5s,mb3.8,baz=338,slow=7.3,SNR=6.0						
MKAR	**Makanchi Array**	**50.23**	**325**	P	**P**	**06 48 27.5**	**+1.7**
	2.2nm,0.9s,mb4.2,baz=141,slow=6.2,SNR=3.4						

GUC 30 06:50:13.3±0.6, 31.°55S×67.°55W, h150km, ML3.9, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FCH	**Farellones**	**2.92**	**232**	*e*P	Pn	06 51 00.6	+1.0
FCH				*i* S	Sn	06 51 35.0	-0.4
FCH				AML	AML	06 51 36.7	
	comp=N,97nm,0.2s						
CMCH	**Combarbala**	**2.98**	**276**	*e*P	Pn	06 51 01.1	+0.7
CMCH				*i* S	Sn	06 51 37.6	+0.8
CMCH				AML	AML	06 51 43.8	
	comp=N,1μm,0.8s						
TLL	**Tololo Astrono**	**3.12**	**295**	*e*P	Pn	06 51 07.2	+5.0
TLL				*e*S	Sn	06 51 45.4	+5.4
TLL				AML	AML	06 51 50.7	
	comp=N,250nm,0.5s						
CLCH	**Cerro Calan**	**3.13**	**233**	*e*P	Pn	06 51 03.5	+1.3
CLCH				*e*S	Sn	06 51 40.8	+0.7
CLCH				AML	AML	06 51 47.6	
	comp=E,156nm,1.2s						
LMEL	**Las Melosas**	**3.21**	**224**	*e*P	Pn	06 51 04.3	+1.1
LMEL				*e*S	Sn	06 51 43.0	+1.1
LMEL				AML	AML	06 51 47.3	
	comp=N,92nm,0.1s						

*IDC **30** 06:52:44.5±10.0, 6.°60S×128.°45E, h455km±151km, mb2.5/1, mb1 2.7/4, mb1mx2.6/17, mbtmp2.5/4, Error ellipse: s-maj=128.3km s-min=51.0km az=42.0*

NEIC 30 06:52:37.7±2.9, 6.°25S×128.°33E, h358km±35km, mb3.7/1, Error ellipse: s-maj=46.1km s-min=29.1km az=62.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**7.59**	**148**	*e*Pn	Pn	06 54 26.7	-0.5
FITZ	**Fitzroy Crossi**	**12.07**	**192**	P	P	06 55 20.5	+0.6
	0.1nm,0.3s,baz=51,slow=14,SNR=3.6						
FITZ				S	S	06 57 42.9	+8.8
	0.1nm,0.3s,baz=187,slow=7.1,SNR=2.2						
FITZ	**Fitzroy Crossi**	**12.07**	**192**	*e*Pn	Pn	06 55 20.4	+0.1
WRAB	**Tennant Creek**	**14.81**	**157**	*e*P	P	06 55 51.7	+1.8
	2.0nm,0.6s						
WRA	**Warramunga Arr**	**14.81**	**157**	P	P	06 55 49.3	-0.7
	0.4nm,0.3s,baz=331,slow=13,SNR=17						
WRA				S	S	06 58 22.7	-6.7
	0.1nm,0.3s,baz=339,slow=21,SNR=4.2						
ASAR	**Alice Springs**	**18.13**	**163**	P	P	06 56 24.8	-0.9
	0.1nm,0.3s,baz=337,slow=8.2,SNR=4.4						
MKAR	**Makanchi Array**	**66.70**	**327**	P	P	07 02 51.2	+0.1
	0.2nm,0.5s,baz=122,slow=7.5,SNR=3.0						

*IDC **30** 07:15:40.6±2.0, 14.°14N×93.°21W, h0km, mb3.7/5, mb1 4.0/8, mb1mx3.8/22, mbtmp3.7/8, ML3.3/2, MS4.7/1, Ms1 4.7/1, ms1mx4.4/29, Error ellipse: s-maj=47.3km s-min=19.7km az=29.0*
*ISCJB **30** 07:15:41.0±0.8, 14.°29N±0.°06×93.°37W±0.°04, h10km, mb3.8/7, Error ellipse: s-maj=8.7km s-min=4.8km az=6.2*
*MEX **30** 07:15:42.9±0.9, 14.°24N×93.°40W, h5km±14km, MD4.2*
*NEIC **30** 07:15:44.2±1.2, 14.°27N×93.°16W, h10km, mb3.7/4, Error ellipse: s-maj=27.0km s-min=13.0km az=213.0*

ISC 30 07:15:44.4±0.8, 14.°37N±0.°07×93.°23W±0.°04, h10km, n26, σ1°56/33, mb3.8/7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.08**	**60**	*i* P	**Pb**	**07 16 03.2**	**-1.9**
THIG				*i* S	**Sg**	**07 16 20.6**	**+1.5**
PCIG		**1.33**	**1**	*i* P	**Pn**	**07 16 06.5**	**-2.5**
PCIG				*i* S	**Sb**	**07 16 23.8**	**-2.7**
TGIG		**2.40**	**3**	*i* P	**Pn**	**07 16 23.9**	**+0.2**
TGIG				*i* S	**Sn**	**07 16 52.8**	**-0.3**
APG	**El Apazote**	**2.75**	**76**	Pn	**Pn**	**07 16 26.5**	**-2.1**
	5.1nm,0.3s,baz=245,slow=7.3,SNR=64						
APG				Sn	**Sn**	**07 17 02.1**	**+0.2**
	8.6nm,0.3s,baz=60,slow=22,SNR=4.2						
HUIG	**Huatulco**	**3.11**	**297**	*i* P	**Pn**	**07 16 28.9**	**-4.6**
HUIG				*i* S	**Sn**	**07 17 04.8**	**-5.8**
CMIG	**Matias Romero**	**3.14**	**330**	Pn	**Pn**	**07 16 34.6**	**+0.7**
	3.3nm,0.3s,baz=142,slow=10,SNR=35						
CMIG				Sn	**Sn**	**07 17 14.8**	**+3.3**
	7.8nm,0.3s,baz=94,slow=13,SNR=6.4						
CMIG				LR	LR	07 17 50.5	
	comp=Z,12μm,19.3s,baz=207,slow=39						
VHO	**Vista Hermosa**	**4.31**	**309**	*i* P	**Pn**	**07 16 47.3**	**-2.8**
VHO				*i* S	**Sn**	**07 17 36.0**	**-4.4**
SCIG	**Sabancuy**	**4.97**	**23**	*e*P	**Pn**	**07 17 00.4**	**+1.2**
PNIG	**Pinotepa**	**5.13**	**294**	*e*P	**Pn**	**07 16 57.0**	**-4.3**
PNIG				*i* S	**Sn**	**07 17 54.3**	**-6.3**
TPIG	**Tehuac#an**	**5.65**	**316**	*i* S	**Sn**	**07 18 12.1**	**-1.3**
TEIG	**Tepich**	**7.50**	**38**	*e*Pn	**Pn**	**07 17 34.0**	**+0.1**
	24nm,0.6s						
TXAR	**Lajitas Array**	**17.75**	**329**	P	**Pn**	**07 19 53.8**	**+2.1**
	0.1nm,0.3s,baz=151,slow=9.3,SNR=17						
ROSC	**El Rosal**	**20.88**	**115**	P	**P**	**07 20 25.2**	**-1.6**
	5.7nm,0.9s,baz=108,slow=10.0,SNR=4.2						
ROSC	**El Rosal**	**20.88**	**115**	*e*P	**P**	**07 20 26.3**	**-0.6**
WMOK	**Wichita Mounta**	**20.89**	**347**	*e*P	**P**	**07 20 28.4**	**+1.6**
	1.4nm,0.8s						
BNM	**Barren Site**	**23.13**	**331**	*e*P	**P**	**07 20 53.2**	**+2.5**
LAZ	**Ladron**	**23.58**	**330**	*e*P	**P**	**07 20 57.7**	**+2.3**
	1.7nm,1.1s,mb3.4						
ANMO	**Albuquerque**	**23.71**	**332**	P	**P**	**07 20 57.5**	**+0.9**
	0.6nm,0.6s,mb3.2,baz=207,slow=8.1,SNR=4.1						
ANMO	**Albuquerque**	**23.71**	**332**	P	**P**	**07 20 57.5**	**+0.8**
PDAR	**Pinedale Array**	**31.60**	**337**	P	**P**	**07 22 07.1**	**-0.2**
	0.2nm,0.3s,mb3.4,baz=147,slow=8.6,SNR=2.4						
REDW	**Red Top Meadow**	**32.61**	**336**	*e*P	**P**	**07 22 17.8**	**+1.7**
	6.6nm,1.2s,mb4.4						
NVAR	**Mina Array Bea**	**32.64**	**322**	P	**P**	**07 22 16.2**	**-0.3**
	0.8nm,0.7s,mb3.8,baz=132,slow=8.7,SNR=8.3						
NVAR	**Mina Array Bea**	**32.64**	**322**	P	**P**	**07 22 16.2**	**-0.3**
TPAW	**Teton Pass**	**32.76**	**336**	*e*P	**P**	**07 22 19.6**	**+2.2**
	1.1nm,0.6s,mb4.0						
YKA	**Yellowknife Ar**	**50.40**	**347**	P	**P**	**07 24 40.7**	**-0.9**
	3.9nm,0.7s,mb4.5,baz=155,slow=7.2,SNR=9.5						
CMAR	**Chiang Mai Arr**	**145.24**	**339**	PKPbc	PKPbc	07 35 19.4	-3.5
	1.3nm,0.4s,baz=328,slow=6.7,SNR=7.6						

**IDC 30 07:32:34.7±2.2, 58.°38S×

615nm,0.5s
KAKA eS Sn 07 50 25.7 -1.1
KAKA Kakadu 6.10 164 ePn Pn 07 49 19.2 +0.8
1μm,0.5s
KAKA eSn Sn 07 50 26.6 -0.2
KAKA Kakadu 6.10 164 P Pn 07 49 19.7 +1.4
6.5nm951nm,0.5s
BAKI Biak 7.77 44 P Pn 07 49 40.3 -0.8
0.6nm133nm,1.0s
KDI Kendari 8.53 289 P Pn 07 49 54.0 +2.5
51nm,1.2s
KNA Kununurra 9.08 192 P Pn 07 49 59.9 +1.0
986nm,0.6s
SMPI Sarmi 9.31 59 P Pn 07 50 03.0 +0.8
31nm,1.5s
TTSI Tana Toraja 11.47 289 P Px 07 50 44.2
FITZ Fitzroy Crossi 12.25 203 eP Pn 07 50 38.1 -3.9
59nm,0.3s
FITZ eS Sn 07 52 47.3 -9.4
FITZ Fitzroy Crossi 12.25 203 Pn Pn 07 50 39.1 -2.9
13nm,0.3s,baz=34,slow=10,SNR=104
FITZ Sn Sn 07 52 47.9 -8.8
34nm,0.3s,baz=236,slow=17,SNR=10
FITZ Fitzroy Crossi 12.25 203 P Pn 07 50 40.3 -1.7
123nm,0.7s
WRAB Tennant Creek 13.51 165 ePn Pn 07 50 55.9 -2.7
74nm,0.5s
WRAB eSn Sn 07 53 20.3 -6.8
WRAB Tennant Creek 13.51 165 P Pn 07 50 56.5 -2.0
123nm,1.1s
WRA Warramunga Arr 13.52 165 Pn Pn 07 50 55.7 -3.0
7.0nm,0.3s,baz=344,slow=14,SNR=193
WRA Sn Sn 07 53 21.5 -5.8
19nm,0.3s,baz=334,slow=22,SNR=15
WRA Warramunga Arr 13.52 165 Pn Pn 07 50 55.7 -3.0
WRA Sn Sn 07 53 21.5 -5.8
COEN Coen 14.17 121 eP Pn 07 51 07.4 +0.2
COEN Coen 14.17 121 ePn Pn 07 51 07.7 +0.5
155nm,0.5s
COEN eSn Sn 07 53 35.5 -7.7
COEN Coen 14.17 121 P Pn 07 51 07.5 +0.3
108nm,0.7s
QIS Mount Isa 16.16 149 eP Pn 07 51 31.6 -0.7
4.1nm,0.1s
ASAR Alice Springs 17.03 170 P Pn 07 51 42.6 -0.5
17nm,0.3s,baz=18,slow=12,SNR=475
ASAR S S 07 54 47.6 -8.7
2.8nm,0.3s,baz=351,slow=26,SNR=8.9
MBWA Marble Bar 17.77 216 eP Pn 07 51 51.7 -0.5
MBWA eS S 07 54 54.6 -16
MBWA Marble Bar 17.77 216 eP Pn 07 51 52.0 -0.1
13nm,0.5s
MBWA Marble Bar 17.77 216 P Pn 07 51 52.8 +0.6
30nm,1.0s
SJI Sawahan 18.80 266 P Pn 07 52 05.1 +0.5
8μm48nm,0.6s
CTA Charters Tower 20.04 133 eP P 07 52 20.8 +4.3
9.9nm,0.8s
CTA Charters Tower 20.04 133 P P 07 52 20.8 +4.3
12nm,0.7s,baz=310,slow=12,SNR=12
CTAO Charters Tower 20.04 133 eP P 07 52 21.0 +4.5
25nm,1.1s
CTAO Charters Tower 20.04 133 P P 07 52 20.5 +4.0
21nm,0.8s
SBUM Sibu 20.62 296 P P 07 52 23.2 +0.5
28nm,1.1s
MEEK Meekatharra 22.82 209 eP P 07 52 49.1 +3.0
FORT Forrest 23.96 186 eP P 07 52 59.4 +2.9
60nm,0.5s,mb5.2
FORT Forrest 23.96 186 eP P 07 52 60.0 +3.5
71nm,0.6s,mb5.2
CGJI Cibinong 24.84 269 P P 07 53 03.3 -1.3
50nm,0.8s,mb5.0
BBOO Buckleboo 26.34 170 eP P 07 53 20.3 +2.3
42nm,1.4s,mb4.7
STKA Stephens Creek 26.93 159 eP P 07 53 26.1 +2.8
3.2nm,0.4s,mb4.2
STKA Stephens Creek 26.93 159 P P 07 53 26.1 +2.8
3.9nm,0.6s,mb4.1,baz=321,slow=8.1,SNR=7.1
STKA Stephens Creek 26.93 159 eP P 07 53 26.4 +3.1
KLBR Kellerberrin 27.46 204 eP P 07 53 31.1 +3.1
114nm,1.8s,mb5.1
KLBR eS Sx 07 58 44.0
SDSI Sungai Dareh 29.77 280 P P 07 53 50.2 +1.4
PSI Prapat 33.13 286 P P 07 54 16.1 -2.3
7.5nm,0.7s,mb4.7,baz=169,slow=12,SNR=8.4
CMAR Chiang Mai Arr 40.15 309 P P 07 55 17.4 -0.5
6.3nm,0.6s,mb4.6,baz=134,slow=6.9,SNR=24
CMAR PcP PcP 07 57 22.8 +2.1
1.3nm,0.4s,baz=153,slow=2.8,SNR=4.6
JHJ Hachijo jima 2 40.64 12 LR LR 08 09 52.1
comp=Z,6μm,19.8s,baz=192,slow=33
MJAR Matsushiro Arr 43.70 9 P P 07 55 47.6 +1.1
0.9nm,0.7s,baz=163,slow=8.7,SNR=2.9
ODAN Odare 53.66 310 eP P 07 57 02.7 -0.4
33nm,0.7s,mb5.5
TAPN Taplejung 53.69 311 eP P 07 57 03.0 -0.2
30nm,0.7s,mb5.5
GTA Gaotai 54.15 331 eP P 07 57 06.5 +0.1
GTA pP pP 07 57 11.0 -18
GTA sP sP 07 57 14.5 -25
GTA pmax pmax
comp=Z,4.0nm,1.4s,mb4.3
RAMN Ramite 54.31 310 eP P 07 57 07.7 -0.1
comp=Z,72nm,0.6s,mb5.9
GUN Gumba 55.36 311 eP P 07 57 15.2 -0.1
comp=Z,57nm,0.6s,mb5.8
PKI Pulchoki 55.54 310 eP P 07 57 16.0 -0.6
comp=Z,23nm,0.7s,mb5.3
KKN Kakani 55.75 310 eP P 07 57 17.7 -0.4
comp=Z,26nm,0.5s,mb5.5
DMN Daman 55.79 310 eP P 07 57 17.4 -1.0
comp=Z,27nm,0.8s,mb5.3
SONM Songino Array 58.49 341 P P 07 57 37.7 +0.7
comp=Z,2.3nm,0.6s,mb4.4,baz=158,slow=6.5,SNR=3.8
MK31 Makanchi Array 68.46 326 eP P 07 58 43.0 +0.3
MKAR Makanchi Array 68.46 326 P P 07 58 43.1 +0.3
comp=Z,1.1nm,0.6s,mb4.8,baz=120,slow=8.1,SNR=138
ZALV Zalesovo Beam 71.73 333 P P 07 59 01.8 -0.9
comp=Z,3.4nm,0.5s,mb4.4,baz=120,slow=5.3,SNR=10
BVAR Borovoye Array 78.28 328 P P 07 59 40.0 -0.3
comp=Z,2.4nm,0.6s,mb4.1,baz=150,slow=6.3,SNR=17
PGF Pioggiola 117.71 315 ePKIKP PKPdf 08 06 27.3 +0.9
LPG La Plagne 118.28 319 ePKIKP PKPdf 08 06 28.0 +0.6
comp=Z,4.3nm,0.5s
LPL La Plagne 118.29 319 ePKIKP PKPdf 08 06 28.4 +1.0
comp=Z,4.9nm,0.5s
CABF La Chapelle 118.31 320 ePKIKP PKPdf 08 06 28.3 +0.9
comp=Z,7.1nm,0.6s
SBF Sospel 118.39 317 ePKIKP PKPdf 08 06 28.1 +0.5
comp=Z,15nm,0.8s
FRF La Foret Royal 119.03 316 ePKIKP PKPdf 08 06 29.3 +0.5
comp=Z,2.7nm,0.3s
LMR La Mourre 119.20 316 ePKIKP PKPdf 08 06 31.0 +1.8
SMRF Simiane la Rot 119.61 317 ePKIKP PKPdf 08 06 31.2 +1.2
comp=Z,7.3nm,0.8s
SSF Saint Saulge 119.77 321 ePKIKP PKPdf 08 06 31.1 +0.9
comp=Z,1.7nm,0.5s
VIVF Saint-Julien-l 119.89 318 ePKIKP PKPdf 08 06 30.6 +0.1
comp=Z,3.3nm,0.6s
TCF Toulx Ste Croi 120.90 321 ePKIKP PKPdf 08 06 33.4 +1.0
comp=Z,5.1nm,0.7s
MFF Saint Martin d 122.22 322 ePKIKP PKPdf 08 06 35.7 +0.8
comp=Z,7.7nm,0.6s
CPUP Villa Florida 146.14 167 PKPbc PKPbc 08 07 23.1 +2.1
comp=Z,1.1nm,0.6s,baz=191,slow=3.9,SNR=4.6
LPAZ La Paz 150.43 141 PKPbc PKPbc 08 07 36.5 +4.1
comp=Z,3.5nm,0.8s,baz=107,slow=1.0,SNR=10

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*IDC **30** 08:04:17.2±3.8, 3°.57S×140°.95E, h0km, mb3.7/3, mb1 4.2/4, mb1mx3.8/15, mbtmp4.0/4, ML4.6/1, Error ellipse: s-maj=113.9km s-min=30.0km az=94.0*
*NEIC **30** 08:04:24.1±1.9, 3°.58S×140.57E, h35km, mb4.0/1, Error ellipse: s-maj=47.3km s-min=17.2km az=95.0*
*ISCJB **30** 08:04:27.6±1.1, 3°.79S±0°.09×140°.7E±0°.1, h95km±15km, Error ellipse: s-maj=21.0km s-min=14.8km az=170.2*
*DJA **30** 08:04:29, 3°.80S×140°.63E, h60km, mb4.7/4*
ISC 30 08:04:28.6±1.1, 3°.82S±0°.08×140°.7E±0°.1, h82km±16km, n12, σ0°93/15, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**1.29**	**359**	P	**Pn**	**08 04 50.8**	**-0.5**
JAY				S	**Sn**	**08 05 09.0**	**+0.5**
SMPI	**Sarmi**	**2.71**	**312**	P	**Pn**	**08 05 09.5**	**-0.5**
SMPI				S	**Sn**	**08 05 42.5**	**+0.6**
KAKA	**Kakadu 12.05 222**			e**Pn**	**Pn**	**08 07 14.6**	**-2.8**
65nm,0.6s
KAKA eSn Sn 08 09 20.9 -9.0
KAKA Kakadu 12.05 222 P **Pn** 08 07 15.5 -1.9
540nm57nm,0.6s
KNA Kununurra 16.70 224 P **Pn** 08 08 18.4 +0.8
2μm69nm,0.5s
WRAB Tennant Creek 17.18 201 eP **Pn** 08 08 24.6 +1.1
9.4nm,0.8s
WRAB Tennant Creek 17.18 201 P **Pn** 08 08 25.8 +2.3
14nm,0.8s
WRA Warramunga Arr 17.20 201 P **Pn** 08 08 23.4 -0.2
2.1nm,0.3s,baz=26,slow=13,SNR=78
FITZ Fitzroy Crossi 20.49 225 P **P** 08 08 59.6 -0.4
1.5nm,0.5s,baz=35,slow=10,SNR=21
FITZ Fitzroy Crossi 20.49 225 P **P** 08 08 59.9 -0.1
ASAR Alice Springs 20.81 198 P **P** 08 09 04.0 +0.6
3.4nm,0.5s,baz=28,slow=10,SNR=46
ASAR pP 08 09 16.1
3.8nm,0.5s,baz=26,slow=10,SNR=13
MKAR Makanchi Array 71.89 322 P **P** 08 15 42.1 -0.8
0.2nm,0.3s,baz=110,slow=7.8,SNR=4.7

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*IDC **30** 08:06:37.4±2.1, 4°.59S×130°.02E, h0km, mb4.2/2, mb1 4.4/5, mb1mx4.0/18, mbtmp4.2/5, ML4.1/3, Error ellipse: s-maj=86.5km s-min=24.2km az=70.0*
*ISCJB **30** 08:06:37.7±1.4, 4°.6S±0°.1×130°.6E±0°.3, h33km, mb4.0/2, Error ellipse: s-maj=49.9km s-min=10.4km az=162.9*
*NEIC **30** 08:06:42.4±1.1, 4°.60S×130°.05E, h35km, Error ellipse: s-maj=40.3km s-min=11.0km az=71.0*
ISC 30 08:06:40.0±1.4, 4°.6S±0°.1×130°.6E±0°.3, h35km, n10, σ0°84/13, mb4.0/2, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi 14.26 200**			Pn	**Pn**	**08 10 00.2**	**+0.7**
0.7nm,0.3s,baz=37,slow=12,SNR=6.4
FITZ Fitzroy Crossi 14.26 200 ePn **Pn** 08 09 59.5 0.0
WRAB Tennant Creek 15.64 167 ePn **Pn** 08 10 23.5 +5.6
WRA Warramunga Arr 15.65 167 Pn **Pn** 08 10 23.0 +5.1
0.6nm,0.3s,baz=344,slow=12,SNR=8.5
WRA Sn **Sn** 08 13 09.1 -1.2
1.4nm,0.3s,baz=333,slow=23,SNR=6.4
WRA Warramunga Arr 15.65 167 Pn **Pn** 08 10 23.0 +5.1
WRA Sn **Sn** 08 13 09.1 -1.2
ASAR Alice Springs 19.19 171 P **Pn** 08 11 03.4 +1.4
1.4nm,0.3s,baz=347,slow=10.0,SNR=25
ASAR S **S** 08 14 21.4 -15
0.2nm,0.3s,baz=349,slow=21,SNR=15
CMAR Chiang Mai Arr 38.75 307 P **P** 08 14 00.6 -0.7
1.1nm,0.3s,mb4.0,baz=147,slow=7.0,SNR=5.2
MK31 Makanchi Array 66.61 326 eP **P** 08 17 26.8 +0.1
MKAR Makanchi Array 66.61 326 P **P** 08 17 26.7 -0.1
1.0nm,0.5s,mb4.1,baz=119,slow=8.9,SNR=12
MKAR Makanchi Array 66.61 326 P **P** 08 17 26.7 -0.1

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*IDC **30** 08:16:29.9±3.6, 50°.17N×87°.72E, h0km, ML3.1/3, Error ellipse: s-maj=43.6km s-min=13.4km az=100.0*
ISC 30 08:16:33.3±2.6, 50°.41N±0°.05×87°.4E±0°.3, h10km, n5, σ1°00/10, 2C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam 3.87 337**			Pn	**Pn**	**08 17 34.6**	**+1.9**
0.9nm,0.3s,baz=153,slow=13,SNR=8.7
ZALV Pg **Pg** 08 17 46.1 -1.2
0.5nm,0.3s,baz=158,slow=13,SNR=4.4
ZALV Sn **Sb** 08 18 27.9 -0.5
0.6nm,0.3s,baz=160,slow=23,SNR=3.4
ZALV Lg 08 18 42.7
1.0nm,0.3s,baz=151,slow=29,SNR=7.6
MK31 Makanchi Array 4.94 225 Pn **Pn** 08 17 46.7 -0.8
1.7nm,0.5s,baz=52,slow=13,SNR=47
MK31 ⇓Pg **Pb** 08 17 59.8 0.0
0.9nm,0.5s,baz=87,slow=6.4,SNR=5.0
MK31 ⇑Sn **Sn** 08 18 45.9 +1.3
0.8nm,0.4s,baz=48,slow=34,SNR=5.0
MK31 ⇓Lg 08 19 06.1
3.2nm,0.5s,baz=59,slow=32,SNR=3.5
MKAR Makanchi Array 4.94 225 Pn **Pn** 08 17 46.9 -0.5
0.8nm,0.3s,baz=60,slow=14,SNR=36
MKAR Sn **Sn** 08 18 43.4 -1.2
0.7nm,0.3s,baz=58,slow=26,SNR=6.7
MKAR Lg 08 19 07.0
1.1nm,0.3s,baz=47,slow=32,SNR=6.3
KURK Kurchatov 5.57 276 ⇑Pn **Pn** 08 17 57.1 +1.0
12nm,3.1s
KURK ⇓Lg 08 19 29.2
8.4nm,1.1s
BVAR Borovoye Array 10.84 290 Pn **Pn** 08 19 08.5 +0.1
0.2nm,0.3s,baz=93,slow=13,SNR=2.8

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*NEIC **30** 08:30:20.1, 32°.41S×71°.54W, h50km, MD3.7(GUC), After GUC.*
GUC 30 08:30:20.1±0.5, 32°.41S×71°.54W, h50km, MD3.7, ML3.0, 7C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACH	**Jahuel 0.84 109**			e**P**	Pn	08 30 36.7	+0.9
JACH *i* S Sn 08 30 48.6 +1.5
JACH Jahuel 0.84 109 e**P** Pn 08 30 36.7 +0.9
JACH *i* S Sn 08 30 48.6 +1.5
PEL Peldehue 1.03 136 ⇑*i* P Pn 08 30 39.1 +0.9
PEL *i* S Sn 08 30 53.1 +1.6
PEL AML AML 08 30 54.1
comp=N,2μm,0.2s
CLCH Cerro Calan 1.30 140 ⇑*i* P Pn 08 30 42.7 +0.9
CLCH *i* S Sn 08 30 59.4 +1.3
CLCH AML AML 08 31 02.1
comp=E,306nm,0.3s
CMCH Combarbala 1.31 21 ⇑*i* P Pn 08 30 42.6 +0.6
CMCH *i* S Sn 08 30 59.8 +1.4
CMCH Combarbala 1.31 21 ⇑*i* P Pn 08 30 42.6 +0.6
CMCH *i* S Sn 08 30 59.8 +1.4
CMCH AML AML 08 31 02.2
comp=E,1μm,0.6s
TACH Talagante 1.34 158 ⇓*i* P Pn 08 30 43.1 +0.7
TACH *i* S Sn 08 31 00.2 +1.1
TACH Talagante 1.34 158 ⇓*i* P Pn 08 30 43.1 +0.7
TACH *i* S Sn 08 31 00.2 +1.1
ANTU Antumapu 1.39 147 e**P** Pn 08 30 43.7 +0.6
ANTU *i* S Sn 08 31 01.4 +1.2
ANTU Antumapu 1.39 147 e**P** Pn 08 30 43.7 +0.6
ANTU *i* S Sn 08 31 01.4 +1.2
ANTU AML AML 08 31 02.8
comp=N,341nm,0.2s
FCH Farellones 1.40 132 ⇑*i* P Pn 08 30 45.5 +2.4
FCH *i* S Sn 08 31 04.4 +4.0
FCH AML AML 08 31 05.9
comp=E,464nm,0.3s
PCH Pirque 1.49 145 e**P** Pn 08 30 44.7 +0.3
PCH *i* S Sn 08 31 04.4 +1.7
PCH Pirque 1.49 145 e**P** Pn 08 30 44.7 +0.3
PCH *i* S Sn 08 31 04.4 +1.7
SJCH San Jose de Ma 1.58 141 e**P** Pn 08 30 46.7 +0.9
SJCH *i* S Sn 08 31 06.4 +1.4
SJCH San Jose de Ma 1.58 141 e**P** Pn 08 30 46.7 +0.9
SJCH *i* S Sn 08 31 06.4 +1.4
SJCH AML AML 08 31 07.4
comp=E,189nm,0.2s
CHCH Chadas Angostu 1.69 154 e**P** Pn 08 30 48.0 +0.8
CHCH e**S** Sn 08 31 08.8 +1.0
CHCH Chadas Angostu 1.69 154 e**P** Pn 08 30 48.0 +0.8
CHCH e**S** Sn 08 31 08.8 +1.0
LMEL Las Melosas 1.82 142 ⇑*i* P Pn 08 30 50.1 +1.1
LMEL *i* S Sn 08 31 12.6 +1.7
LMEL Las Melosas 1.82 142 ⇑*i* P Pn 08 30 50.1 +1.1
LMEL *i* S Sn 08 31 12.6 +1.7
LMEL AML AML 08 31 14.4
comp=N,234nm,0.3s
CACH El Canelo 1.88 156 e**P** Pn 08 30 51.1 +1.3
CACH *i* S Sn 08 31 14.8 +2.5
CACH El Canelo 1.88 156 e**P** Pn 08 30 51.1 +1.3
CACH *i* S Sn 08 31 14.8 +2.5
TLL Tololo Astrono 2.32 16 e**P** Pn 08 30 57.2 +1.5
TLL *i* S Sn 08 31 24.7 +1.6
TLL Tololo Astrono 2.32 16 e**P** Pn 08 30 57.2 +1.5
TLL *i* S Sn 08 31 24.7 +1.6
TLL AML AML 08 31 38.3
comp=E,55nm,0.5s

NNC 30 08:31:09.2±5.0, 53°.99N×85°.98E, h0km, mb3.7, mpv3.2, 3C-4D, Error ellipse: s-maj=46.1km s-min=22.5km az=63.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov 5.57 237**			⇓Pn	Pn	08 32 35.8	+2.6
2.6nm,0.8s
KURK ⇓Lg 08 34 15.2
12nm,1.3s
MK31 Makanchi Array 7.58 200 Pn Pn 08 33 03.2 +2.4
0.9nm,0.6s,baz=24,slow=13,SNR=22
MK31 Sn Sn 08 34 33.5 +6.1
0.5nm,0.5s,baz=28,slow=26,SNR=5.5
MK31 ⇑Lg 08 35 16.0
6.4nm,1.2s,baz=21,slow=33,SNR=3.7
VOSK Vostochnaya 9.06 268 ⇑Pn Pn 08 33 22.2 +1.1
0.9nm,0.5s
VOSK ⇑Sn Sn 08 35 00.3 -3.4
2.8nm,0.6s
ZRNK Zerenda 10.18 271 ⇓Pn Pn 08 33 37.6 +1.2
1.9nm,0.7s
ZRNK ⇓Sn Sn 08 35 31.3 +0.3
2.2nm,1.1s

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*ISCJB **30** 08:32:15.5±2.6, 9°.52N±0°.09×122°.4E±0°.3, h42km, Error ellipse: s-maj=44.5km s-min=9.6km az=168.7*
*MAN **30** 08:32:15, 9°.56N×122°.46E, h42km, mb4.3, ML3.1, MS2.9*
ISC 30 08:32:15.6±2.5, 9°.50N±0°.09×122°.4E±0°.3, h42km, n4, σ1°61/6, 1D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan 0.80 101**			⇓*i* P	**Pn**	**08 32 31.4**	**+0.9**
SNPH *i* S **Sn** 08 32 51.2 +10
GUIM Jordan 1.13 8 e**P** **Pn** 08 32 35.0 0.0
GUIM e**S** **Sn** 08 32 48.7 -0.7
PAGZ Pagadian 1.89 150 e**P** **Pn** 08 32 46.7 +1.3
PAGZ e**S** **Sn** 08 33 06.0 -1.9
BOLP Bolinao 7.27 340 e**P** Px 08 34 16.9

DJA 30 09:06:49.0±2.62N×98°.13E, h20km, MLv3.7/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat 1.46 83**			P	Pn	09 07 13.7	-0.5
MNSI S Sn 09 07 34.0 +1.2
SISI Saibi 2.16 154 P Pn 09 07 25.1 +1.2
PPI Padang Panjang 2.51 115 P Pn 09 07 27.0 -1.6
PDSI Padang 2.78 123 P Pn 09 07 34.4 +1.9
TPTI 2.79 340 P Pn 09 07 33.6 +1.1
SDSI Sungai Dareh 3.64 115 P Pn 09 07 45.8 +1.5

IDC 30 09:08:31.1±3.6, 28°.99S×178°.01W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.7/14, mbtmp3.7/3, Error ellipse: s-maj=80.5km s-min=12.0km az=51.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island 0.27 162**			Pn	Pg	09 08 42.4	+6.1
207nm,0.3s,baz=89,slow=20,SNR=12
RAO Sn Sg 09 08 50.0 +10
468nm,0.3s,baz=267,slow=22,SNR=13
STKA Stephens Creek 34.81 255 P P 09 15 23.2 -0.4
3.1nm,1.0s,baz=45,slow=7.1,SNR=3.0
ASAR Alice Springs 43.19 265 P P 09 16 34.0 +0.1
0.3nm,0.5s,baz=101,slow=6.5,SNR=6.9
WRA Warramunga Arr 44.05 271 P P 09 16 41.0 +0.1
0.3nm,0.5s,baz=110,slow=8.0,SNR=7.2

IDC 30 09:20:59.0±3.5, 3°.55N×127°.03E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/22, mbtmp3.6/4, Error ellipse: s-maj=113.3km s-min=57.2km az=89.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi 21.56 184**			P	P	09 25 51.0	+0.8
1.3nm,0.5s,baz=57,slow=9.2,SNR=6.6
WRA Warramunga Arr 24.43 163 P P 09 26 18.8 -0.7
0.4nm,0.4s,baz=342,slow=10,SNR=16
ASAR Alice Springs 27.87 166 P P 09 26 50.5 -0.1
0.2nm,0.4s,baz=338,slow=6.8,SNR=6.0
STKA Stephens Creek 37.86 160 P P 09 28 18.4 +0.6
0.8nm,0.3s,baz=0.0,slow=9.1,SNR=7.3
LPAZ La Paz 160.45 131 PKP PKPdf 09 41 01.5 -0.3
1.1nm,0.7s,baz=161,slow=5.9,SNR=5.7

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*NNC **30** 09:27:22.7±2.3, 51°.21N×75°.38E, h0km, mb3.1, mpv2.7, Error ellipse: s-maj=103.7km s-min=16.9km az=31.0*
*ISCJB **30** 09:27:22.4±0.6, 51°.6N±0°.1×75°.6E±0°.1, h10km, Error ellipse: s-maj=17.6km s-min=4.0km az=30.2*
*IDC **30** 09:27:23.7±1.0, 51°.70N×75°.66E, h0km, mb1 2.6/4, mb1mx2.5/28, mbtmp2.6/4, ML2.5/4, Error ellipse: s-maj=33.9km s-min=7.5km az=31.0*
ISC 30 09:27:24.4±0.6, 51°.7N±0°.1×75°.6E±0°.1, h10km, n9, σ1°43/15, 8C-3D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov 2.14 115**			⇑Pn	**Pn**	**09 28 00.5**	**+0.4**
1.9nm,0.4s
KURK ⇑Lg 09 28 30.2
15nm,0.6s
KURK Kurchatov 2.14 115 Pn **Pn** 09 27 59.6 -0.5
0.4nm,0.3s,baz=304,slow=19,SNR=12
KURK Lg 09 28 31.7
0.7nm,0.3s,baz=311,slow=32,SNR=22
VOSK Vostochnaya 3.02 292 ⇑Pn **Pn** 09 28 12.3 +0.1
1.8nm,0.5s
VOSK ⇑Sn **Sn** 09 28 48.8 +0.4
10nm,0.6s
BVAR Borovoye Array 3.46 295 Pn **Pn** 09 28 19.1 +0.9
0.4nm,0.3s,baz=109,slow=15,SNR=10
BVAR Sn **Sn** 09 29 00.6 +1.4
0.9nm,0.3s,baz=99,slow=23,SNR=5.8
BVAR Lg 09 29 15.9
0.9nm,0.3s,baz=78,slow=28,SNR=6.1
BRVK Borovoye 3.53 295 ⇓Pn **Pn** 09 28 16.5 -2.8
1.9nm,0.6s
BRVK ⇑Sn **Sn** 09 29 03.7 +2.7
8.8nm,0.6s
ZRNK Zerenda 4.23 290 ⇑Pn **Pb** 09 28 35.2 -3.6
1.3nm,0.8s
ZRNK ⇓Sn **Sb** 09 29 27.8 -2.2
7.2nm,0.6s
ZALV Zalesovo Beam 6.05 64 Pn **Pn** 09 28 53.9 +0.1
0.3nm,0.3s,baz=263,slow=11,SNR=3.1
MK31 Makanchi Array 6.57 135 ⇓Pn **Pn** 09 28 59.3 -1.7
0.3nm,0.6s,baz=320,slow=13,SNR=3.5
MK31 ⇑Sn **Sn** 09 30 16.6 +0.8
0.4nm,0.6s,baz=313,slow=25,SNR=5.5
MK31 ⇑Lg 09 30 44.4
2.3nm,0.6s,baz=64,slow=82,SNR=6.6
MKAR Makanchi Array 6.57 135 Pn **Pn** 09 28 59.5 -1.4
0.1nm,0.3s,baz=312,slow=12,SNR=3.7
MKAR Sn **Sn** 09 30 17.4 +1.6
0.2nm,0.3s,baz=318,slow=23,SNR=6.3
MKAR Lg 09 30 51.8
0.4nm,0.3s,baz=315,slow=29,SNR=12

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*CSEM **30** 09:39:20.5±0.1, 37°.23N×28°.21E, h13km±1km, MD2.6, Error ellipse: s-maj=1.8km s-min=1.2km az=176.0*
*DDA **30** 09:39:20.9, 37°.22N×28°.26E, h7km±3km, Md2.6*
*ISK **30** 09:39:20.4, 37°.24N×28°.19E, h5km, MD2.6*
*ISCJB **30** 09:39:20.5±0.7, 37°.20N±0°.06×28°.19E±0°.05, h14km±5km, Error ellipse: s-maj=10.0km s-min=6.4km az=19.3*
ISC 30 09:39:20.7±1.0, 37°.22N±0°.05×28°.21E±0°.04, h13km±11km, n12, σ0°18/20, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik 0.11 146**			e**PG**	**Pg**	**09 39 23.7**	**-0.1**
YER e**SG** **Sg** 09 39 26.0 0.0
YER Yerkesik 0.11 146 e**Pg** **Pg** 09 39 23.7 -0.1

YER				*e*Sg	**Sg**	**09 39 26.0**	**0.0**
MLSB	**Milas**	**0.35**	**282**	*e*PG	**Pg**	**09 39 27.6**	**-0.2**
MLSB				*e*SG	**Sg**	**09 39 32.8**	**+0.2**
MLSB	**Milas**	**0.35**	**282**	*e*Pg	**Pg**	**09 39 27.6**	**-0.2**
MLSB				*e*Sg	**Sg**	**09 39 32.8**	**+0.2**
TURN	**Turunc**	**0.47**	**138**	*i* P	**Pg**	**09 39 29.7**	**-0.3**
TURN				*i* S	**Sg**	**09 39 36.4**	**+0.2**
TURN	**Turunc**	**0.47**	**138**	*i* P	**Pg**	**09 39 29.7**	**-0.3**
TURN				*i* S	**Sg**	**09 39 36.4**	**+0.1**
DAT	**Datca**	**0.71**	**226**	*e*PG	**Pg**	**09 39 34.7**	**+0.3**
DAT	**Datca**	**0.71**	**226**	*e*Pg	**Pg**	**09 39 34.7**	**+0.3**
BODT	**Bodrum**	**0.74**	**258**	*e*PG	**Pg**	**09 39 34.8**	**-0.2**
BODT	**Bodrum**	**0.74**	**258**	*e*Pg	**Pg**	**09 39 34.8**	**-0.2**
DNZL	**Cakiroluk**	**0.81**	**55**	*i* P	**Pg**	**09 39 36.5**	**0.0**
DNZL				*i* S	**Sg**	**09 39 47.2**	**+0.1**
DNZL	**Cakiroluk**	**0.81**	**55**	*i* P	**Pg**	**09 39 36.5**	**+0.1**
DNZL				*i* S	**Sg**	**09 39 47.2**	**+0.1**

DJA 30 10:08:36, 2°.20S×120°.05E, h10km, MLv3.9/6, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTSI	**Tana Toraja**	**0.87**	**195**	P	Pg	10 08 50.9	-1.9
TTSI				S	Sg	10 09 02.9	-1.3
PCI	**Palu**	**1.30**	**351**	P	Pn	10 08 58.7	-1.6
PCI				S	Sb	10 09 17.1	-0.3
SPSI	**Sidrap Palu**	**1.77**	**189**	P	Pn	10 09 06.9	+0.1
APSI	**Ampana**	**2.05**	**51**	P	Pn	10 09 10.8	+0.3
BNSI	**Bone**	**2.19**	**179**	P	Pn	10 09 14.8	+2.4
LUWI	**Luwuk**	**2.95**	**67**	P	Pn	10 09 22.1	-0.9
BKSI	**Bulukumba**	**3.10**	**179**	P	Pn	10 09 27.0	+2.0
MRSI	**Marisa**	**3.26**	**35**	P	Pn	10 09 27.9	+0.6

DJA 30 10:12:29, 2°.13S×119°.97E, h10km, MLv4.1/7, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTSI	**Tana Toraja**	**0.92**	**189**	P	Pg	10 12 43.8	-3.0
TTSI				S	Sg	10 12 56.5	-2.3
PCI	**Palu**	**1.22**	**354**	P	Pn	10 12 51.9	-0.3
SPSI	**Sidrap Palu**	**1.83**	**186**	P	Pn	10 13 00.2	-0.4
SPSI				S	Sn	10 13 25.9	+2.0
APSI	**Ampana**	**2.07**	**54**	P	Pn	10 13 04.3	+0.5
BNSI	**Bone**	**2.26**	**177**	P	Pn	10 13 07.9	+1.5
BNSI				S	Sn	10 13 40.3	+5.9
BKSI	**Bulukumba**	**3.17**	**177**	P	Pn	10 13 21.9	+2.9
MRSI	**Marisa**	**3.25**	**37**	P	Pn	10 13 20.4	+0.3

*CSEM **30** 10:28:47.5±0.3, 39°.44N×28°.12E, h10km, MD2.9, Error ellipse: s-maj=8.9km s-min=4.4km az=37.0*
*DDA **30** 10:28:47.9, 39°.49N×28°.13E, h7km±6km, Md2.9*
*ISCJB **30** 10:28:47.5±0.6, 39°.44N±0°.04×28°.14E±0°.04, h10km, Error ellipse: s-maj=6.4km s-min=3.6km az=31.6*
ISC 30 10:28:47.6±1.1, 39°.45N±0°.05×28°.13E±0°.05, h19km±14km, n16, σ0°78/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.27**	**315**	*e*PG	**Pg**	**10 28 53.3**	**-0.4**
BALB				*e*SG	**Sg**	**10 28 59.1**	**+1.3**
BALB	**Balikesir**	**0.27**	**315**	*e*Pg	**Pg**	**10 28 53.3**	**-0.4**
BALB				*e*Sg	**Sg**	**10 28 59.1**	**+1.3**
DURS	**Dursunbey**	**0.31**	**61**	*i* P	**Pg**	**10 28 53.3**	**-1.1**
DURS				*i* S	**Sg**	**10 28 57.9**	**-1.0**
DURS	**Dursunbey**	**0.31**	**61**	*i* P	**Pg**	**10 28 53.3**	**-1.1**
DURS				*i* S	**Sg**	**10 28 57.9**	**-1.0**
BALY	**Balya**	**0.49**	**307**	*i* P	**Pg**	**10 28 57.2**	**-0.3**
BALY				*i* S	**Sg**	**10 29 04.5**	**+0.4**
BALY	**Balya**	**0.49**	**307**	*i* P	**Pg**	**10 28 57.2**	**-0.3**
BALY				*i* S	**Sg**	**10 29 04.5**	**+0.4**
DEMI	**Demirci**	**0.61**	**131**	*i* P	**Pg**	**10 28 59.0**	**-0.8**
DEMI				*i* S	**Sg**	**10 29 08.6**	**+0.6**
DEMI	**Demirci**	**0.61**	**131**	*i* P	**Pg**	**10 28 59.0**	**-0.8**
DEMI				*i* S	**Sg**	**10 29 08.6**	**+0.6**
GONE	**Gonen-Balikesi**	**0.69**	**331**	*e*PG	**Pg**	**10 28 60.0**	**-1.2**
GONE	**Gonen-Balikesi**	**0.69**	**331**	*e*Pg	**Pg**	**10 29 00.0**	**-1.1**
KULA	**Kula-Manisa**	**1.02**	**156**	*e*PN	**Pg**	**10 29 07.3**	**-0.1**
KULA	**Kula-Manisa**	**1.02**	**156**	*e*Pn	**Pg**	**10 29 07.3**	**-0.2**
ULDT	**Uludag**	**1.04**	**48**	*i* P	**Pg**	**10 29 08.1**	**+0.2**
ULDT				*i* S	**Sg**	**10 29 22.6**	**+1.0**
ULDT	**Uludag**	**1.04**	**48**	*i* P	**Pg**	**10 29 08.1**	**+0.3**
ULDT				*i* S	**Sg**	**10 29 22.6**	**+1.1**
GDZ	**Gediz**	**1.11**	**108**	*i* P	**Pg**	**10 29 10.1**	**+0.9**
GDZ				*i* S	**Sg**	**10 29 24.1**	**+0.3**
GDZ	**Gediz**	**1.11**	**108**	*i* P	**Pg**	**10 29 10.1**	**+0.9**
GDZ				*i* S	**Sg**	**10 29 24.1**	**+0.3**

IDC 30 10:31:48.4±4.3, 14°.79N×92°.61W, h0km, mb3.9/3, mb1 4.1/4, mb1mx3.7/20, mbtmp3.7/4, ML3.4/1, Error ellipse: s-maj=94.7km s-min=56.7km az=11.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**17.72**	**327**	P	Pn	10 35 58.5	+1.8
	0.0nm,0.3s,baz=150,slow=13,SNR=5.4						
NVAR	**Mina Array Bea**	**32.69**	**321**	P	P	10 38 22.6	0.0
	0.4nm,0.7s,baz=131,slow=6.6,SNR=5.1						
SCHQ	**Schefferville**	**44.70**	**21**	P	P	10 40 03.4	+0.4
	3.6nm,0.8s,baz=180,slow=6.1,SNR=3.1						
YKA	**Yellowknife Ar**	**50.13**	**347**	P	P	10 40 44.0	-1.2
	1.1nm,0.7s,baz=151,slow=7.3,SNR=3.4						
CMAR	**Chiang Mai Arr**	**145.06**	**341**	PKPbc	PKPbc	10 51 27.6	-0.4
	0.6nm,0.4s,baz=328,slow=3.2,SNR=3.7						

*IDC **30** 10:49:24.1±0.9, 20°.32N×121°.29E, h0km, mb4.0/10, mb1 4.1/11, mb1mx3.9/24, mbtmp4.0/11, ML3.5/1, MS3.4/1, Ms1 3.6/1, ms1mx2.9/24, Error ellipse: s-maj=32.5km s-min=15.8km az=67.0*
*ISCJB **30** 10:49:28.5±1.2, 20°.35N±0°.06×121°.56E±0°.07, h52km±12km, mb3.9/11, Error ellipse: s-maj=12.2km s-min=9.3km az=38.6*
*NEIC **30** 10:49:29.7±1.3, 20°.30N×121°.27E, h40km±14km, MG3.8(JMA), Error ellipse: s-maj=18.7km s-min=10.8km az=70.0*
*JMA **30** 10:49:29.3±0.4, 20°.23N×121°.94E, h125km, M3.8*
ISC 30 11:49:29.8±1.2, 20°.33N±0°.07×121°.49E±0°.07, h45km±12km, n27, σ0°92/35, mb3.9/11, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**2.50**	**351**	*e*Pn	**Pn**	**10 50 08.4**	**+0.3**
YULB	**Yu-li**	**3.05**	**357**	*e*Pn	**Pn**	**10 50 14.4**	**-1.1**
YULB				*e*Sn	**Sn**	**10 50 51.8**	**+1.0**
TPUB	**Ta-pu**	**3.06**	**345**	*e*Pn	**Pn**	**10 50 15.9**	**+0.3**
TPUB				*e*Sn	**Sn**	**10 50 55.8**	**+4.8**
SSLB	**Suanglung**	**3.47**	**352**	*e*Pn	**Pn**	**10 50 20.8**	**-0.5**
HATJ	**Hateruma jima**	**4.28**	**30**	P	**Pn**	**10 50 32.3**	**-0.1**
HATJ				S	**Sn**	**10 51 20.0**	**-1.1**
YHNB	**Yeheng**	**4.32**	**359**	*e*Pn	**Pn**	**10 50 34.9**	**+2.0**
YOJ	**Yonaguni jima**	**4.34**	**19**	P	**Pn**	**10 50 34.3**	**+1.0**
YOJ				*e*S	**Sn**	**10 51 24.6**	**+2.0**
IRIF	**Iriomote-Funau**	**4.49**	**27**	P	**Pn**	**10 50 35.5**	**+0.2**
IRIF				S	**Sn**	**10 51 25.9**	**-0.3**
JKRS	**Kuro-shima**	**4.53**	**31**	P	**Pn**	**10 50 36.1**	**+0.2**
JKRS				S	**Sn**	**10 51 27.5**	**+0.2**
JIJ	**Ishigaki jima**	**4.70**	**31**	P	**Pn**	**10 50 37.4**	**-0.8**
JIJ				S	**Sn**	**10 51 30.1**	**-1.4**
JTJ	**Tarama**	**5.21**	**34**	P	**Pn**	**10 50 44.4**	**-0.8**
JTJ				S	**Sn**	**10 51 43.6**	**-0.5**
KSRS	**Korea Array**	**17.95**	**17**	P	**Pn**	**10 53 36.5**	**+0.4**
	0.2nm,0.3s,baz=200,slow=12,SNR=6.0						
BJI	**Beijing**	**20.16**	**348**	P	**P**	**10 54 00.3**	**0.0**
BJI				pmax	pmax		
	comp=Z,16nm,0.8s						
BJI				pmax	pmax		
	comp=Z,89nm,5.4s						
CMAR	**Chiang Mai Arr**	**21.35**	**269**	P	**P**	**10 54 11.7**	**-1.7**
	comp=Z,1.4nm,0.6s,mb3.5,baz=78,slow=9.7,SNR=10						
CMAR				LR	LR	11 02 51.0	
	comp=Z,104nm,19.0s,baz=135,slow=38						
PSI	**Prapat**	**28.07**	**235**	P	**P**	**10 55 16.4**	**-0.9**
	comp=Z,1.7nm,0.5s,mb3.9,baz=34,slow=5.9,SNR=3.9						
SONM	**Songino Array**	**30.03**	**339**	P	**P**	**10 55 38.2**	**+3.9**
	comp=Z,0.6nm,0.6s,mb3.5,baz=149,slow=12,SNR=4.2						
MK31	**Makanchi Array**	**41.35**	**319**	*e*P	**P**	**10 57 11.0**	**-0.3**
MKAR	**Makanchi Array**	**41.35**	**319**	P	**P**	**10 57 11.4**	**+0.1**
	comp=Z,1.8nm,0.8s,mb3.8,baz=118,slow=9.4,SNR=16						
WRA	**Warramunga Arr**	**41.96**	**162**	P	**P**	**10 57 16.2**	**-0.3**
	comp=Z,3.4nm,0.8s,mb4.0,baz=343,slow=9.0,SNR=32						
ZALV	**Zalesovo Beam**	**43.65**	**329**	P	**P**	**10 57 29.2**	**-0.6**
	comp=Z,0.9nm,0.6s,mb3.7,baz=106,slow=9.4,SNR=3.8						
KURK	**Kurchatov**	**45.26**	**322**	P	**P**	**10 57 42.7**	**0.0**
	comp=Z,1.5nm,0.7s,mb3.9,baz=123,slow=7.5,SNR=6.9						
KURK	**Kurchatov**	**45.26**	**322**	P	**P**	**10 57 42.7**	**0.0**
ASAR	**Alice Springs**	**45.38**	**164**	P	**P**	**10 57 44.8**	**+0.9**
	comp=Z,1.8nm,0.6s,mb4.1,baz=344,slow=6.7,SNR=43						
STKA	**Stephens Creek**	**55.37**	**159**	P	**P**	**10 59 01.5**	**+2.2**
	comp=Z,2.8nm,0.8s,mb4.4,baz=332,slow=15,SNR=3.1						
STKA	**Stephens Creek**	**55.37**	**159**	P	**P**	**10 59 01.5**	**+2.2**
FINES	**FINESS Array B**	**74.91**	**330**	P	**P**	**11 01 06.2**	**+0.5**
	comp=Z,1.7nm,0.7s,mb4.1,baz=107,slow=6.4,SNR=4.7						
NOA	**NORSAR Array B**	**81.75**	**333**	P	**P**	**11 01 42.9**	**-0.6**
	comp=Z,1.2nm,0.8s,mb3.9,baz=62,slow=5.0,SNR=3.0						

*IDC **30** 10:59:51.8±0.8, 51°.78N×75°.56E, h0km, mb1 2.7/4, mb1mx2.6/29, mbtmp2.7/4, ML2.6/4, Error ellipse: s-maj=29.5km s-min=6.7km az=30.0*
*NNC **30** 10:59:53.4±2.0, 51°.21N×75°.52E, h0km, mb3.2, mpv2.8, Error ellipse: s-maj=86.3km s-min=14.7km az=30.0*
*ISCJB **30** 10:59:53.1±0.6, 51°.7N±0°.1×75°.8E±0°.1, h10km, Error ellipse: s-maj=17.4km s-min=4.8km az=31.4*
ISC 30 10:59:54.8±0.7, 51°.7N±0°.1×75°.8E±0°.1, h10km, n9, σ1°24/17, 6C-5D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**2.06**	**118**	⇓Pn	**Pn**	**11 00 29.1**	**-0.3**
	1.3nm,0.4s						
KURK				⇓Lg		11 00 58.5	
	11nm,0.6s						
KURK	**Kurchatov**	**2.06**	**118**	Pn	**Pn**	**11 00 29.6**	**+0.2**
	0.5nm,0.3s,baz=308,slow=22,SNR=11						
KURK				Pg	**Pg**	**11 00 31.1**	**-3.1**
	0.5nm,0.3s,baz=304,slow=19,SNR=14						
KURK				Lg		11 00 59.3	
	0.5nm,0.3s,baz=309,slow=28,SNR=5.9						
VOSK	**Vostochnaya**	**3.11**	**291**	⇑Pn	**Pn**	**11 00 43.5**	**-0.3**
	2.9nm,0.5s						
VOSK				⇑Sn	**Sn**	**11 01 20.8**	**-0.3**
	27nm,0.7s						
BVAR	**Borovoye Array**	**3.55**	**294**	Pn	**Pn**	**11 00 46.4**	**-3.4**
	0.3nm,0.3s,baz=91,slow=12,SNR=3.7						
BVAR				Pg	**Pg**	**11 00 50.9**	**-12**
	0.4nm,0.3s,baz=120,slow=17,SNR=11						
BVAR				Sn	**Sn**	**11 01 26.9**	**-4.8**
	0.6nm,0.3s,baz=112,slow=19,SNR=6.1						
BVAR				Lg		11 01 35.8	
	1.4nm,0.3s,baz=106,slow=26,SNR=8.7						
BRVK	**Borovoye**	**3.62**	**294**	⇓Pn	**Pn**	**11 00 51.6**	**+0.8**
	4.2nm,0.9s						
BRVK				⇑Sn	**Sn**	**11 01 37.0**	**+3.4**
	23nm,0.7s						
ZRNK	**Zerenda**	**4.33**	**289**	⇑Pn	**Pn**	**11 01 06.0**	**+5.4**
	0.9nm,0.5s						
ZRNK				⇓Sn	**Sn**	**11 02 00.1**	**+9.1**
	20nm,1.0s						
ZALV	**Zalesovo Beam**	**5.93**	**64**	Pn	**Pn**	**11 01 23.4**	**+0.8**
	0.4nm,0.3s,baz=268,slow=11,SNR=5.1						
MK31	**Makanchi Array**	**6.52**	**136**	⇑Pn	**Pn**	**11 01 29.6**	**-1.1**
	0.3nm,0.6s						
MK31				⇑Sn	**Sn**	**11 02 45.4**	**+0.4**
	0.7nm,0.8s,baz=325,slow=18,SNR=4.9						
MK31				⇓Lg		11 03 17.1	
	1.6nm,0.5s,baz=322,slow=29,SNR=6.6						
MKAR	**Makanchi Array**	**6.52**	**136**	Pn	**Pn**	**11 01 29.9**	**-0.8**
	0.1nm,0.3s,baz=312,slow=13,SNR=4.2						
MKAR				Sn	**Sn**	**11 02 47.0**	**+2.0**
	0.2nm,0.3s,baz=324,slow=18,SNR=6.6						
MKAR				Lg		11 03 19.3	
	0.6nm,0.3s,baz=323,slow=28,SNR=9.9						

IDC 30 11:06:06.1±2.8, 10°.63N×91°.74E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.5/23, mbtmp3.7/6, Error ellipse: s-maj=121.9km s-min=19.3km az=62.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.92**	**349**	P	P	11 13 16.6	0.0
	0.7nm,0.8s,baz=164,slow=8.0,SNR=6.7						
SONM	**Songino Array**	**39.08**	**16**	P	P	11 13 35.4	+0.5
	0.3nm,0.4s,baz=190,slow=5.9,SNR=3.7						
KURK	**Kurchatov**	**41.40**	**347**	P	P	11 13 54.2	+0.2
	0.3nm,0.3s,baz=159,slow=8.0,SNR=3.2						
ZALV	**Zalesovo Beam**	**43.55**	**354**	P	P	11 14 10.4	-1.1
	0.7nm,0.6s,baz=148,slow=11,SNR=3.1						
WRA	**Warramunga Arr**	**51.78**	**126**	P	P	11 15 15.8	-0.2
	0.7nm,0.5s,baz=305,slow=8.4,SNR=24						
ASAR	**Alice Springs**	**53.49**	**130**	P	P	11 15 28.8	+0.2
	1.6nm,0.8s,baz=306,slow=7.1,SNR=23						

IDC 30 11:18:36.1±2.9, 10°.66N×91°.56E, h31km±7km, mb3.2/4, mb1 3.3/4, mb1mx3.1/22, mbtmp3.2/4, Error ellipse: s-maj=119.5km s-min=18.7km az=64.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.86**	**349**	P	P	11 25 41.4	-0.2
	0.5nm,0.5s,baz=162,slow=8.1,SNR=6.8						
MKAR				pP	pP	11 25 50.8	+0.2
	0.2nm,0.5s,baz=157,slow=6.6,SNR=2.1						
SONM	**Songino Array**	**39.10**	**16**	P	P	11 26 00.4	-0.1
	0.5nm,0.5s,baz=206,slow=6.3,SNR=3.2						
WRA	**Warramunga Arr**	**51.94**	**126**	P	P	11 27 42.0	-0.6
	0.1nm,0.3s,baz=301,slow=9.9,SNR=11						
WRA				pP	pP	11 27 51.5	-0.3
	0.2nm,0.3s,baz=300,slow=10,SNR=2.3						
ASAR	**Alice Springs**	**53.64**	**130**	P	P	11 27 55.8	+0.7
	0.3nm,0.9s,baz=316,slow=5.1,SNR=3.0						
ASAR				pP	pP	11 28 04.8	+0.4
	0.3nm,0.5s,baz=305,slow=7.2,SNR=2.8						

*ISK **30** 11:23:40.6, 38°.31N×30°.87E, h5km, MD3.0*
*CSEM **30** 11:23:41.7±0.1, 38°.29N×30°.90E, h10km, MD3.0, Error ellipse: s-maj=2.2km s-min=1.6km az=73.0*
*DDA **30** 11:23:41.9, 38°.32N×30°.82E, h7km±4km, Md2.9*
*ISCJB **30** 11:23:41.7±0.6, 38°.30N±0°.03×30°.87E±0°.04, h6km±6km, Error ellipse: s-maj=6.0km s-min=4.2km az=165.9*
ISC 30 11:23:42.2±0.6, 38°.32N±0°.03×30°.88E±0°.05, h10km±6km, n29, σ0°64/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHUT	**Suhut-Afyon**	**0.35**	**313**	*e*PG	**Pg**	**11 23 48.9**	**-0.2**
SHUT				*e*SG	**Sg**	**11 23 54.4**	**+0.6**
SHUT	**Suhut-Afyon**	**0.35**	**313**	*e*Pg	**Pg**	**11 23 48.9**	**-0.3**
SHUT				*e*Sg	**Sg**	**11 23 54.4**	**+0.6**
BOLV	**Bolvadin**	**0.41**	**8**	*i* P	**Pg**	**11 23 50.6**	**+0.3**
BOLV				*i* S	**Sg**	**11 23 56.4**	**+0.7**
BOLV	**Bolvadin**	**0.41**	**8**	*i* P	**Pg**	**11 23 50.6**	**+0.3**
BOLV				*i* S	**Sg**	**11 23 56.4**	**+0.7**
ISP	**Isparta**	**0.56**	**210**	*e*PG	**Pg**	**11 23 52.5**	**-0.7**
ISP				*e*SG	**Sg**	**11 24 00.9**	**+0.2**
ISP	**Isparta**	**0.56**	**210**	*e*Pg	**Pg**	**11 23 52.5**	**-0.7**
ISP				*e*Sg	**Sg**	**11 24 00.9**	**+0.3**
SUTC	**Sutluce-Ispart**	**0.84**	**173**	*e*PG	**Pg**	**11 23 57.7**	**-0.8**
SUTC				*e*SG	**Sg**	**11 24 10.8**	**+1.4**
SUTC	**Sutluce-Ispart**	**0.84**	**173**	*e*Pg	**Pg**	**11 23 57.7**	**-0.8**
SUTC				*e*Sg	**Sg**	**11 24 10.8**	**+1.4**
ALT	**Altintas**	**0.95**	**321**	*e*PG	**Pg**	**11 23 59.5**	**-1.0**
ALT	**Altintas**	**0.95**	**321**	*e*Pg	**Pg**	**11 23 59.6**	**-1.0**
KHL	**Karahalli**	**1.06**	**271**	*e*PG	**Pg**	**11 24 01.7**	**-1.0**
KHL	**Karahalli**	**1.06**	**271**	*e*Pg	**Pg**	**11 24 01.7**	**-1.0**
KHAL	**Karahalli**	**1.09**	**273**	*i* P	**Pg**	**11 24 02.4**	**-0.8**
KHAL				*i* S	**Sg**	**11 24 18.0**	**+0.7**
KHAL	**Karahalli**	**1.09**	**273**	*i* P	**Pg**	**11 24 02.4**	**-0.8**
KHAL				*i* S	**Sg**	**11 24 18.0**	**+0.7**
LADK	**Ladik-KONYA**	**1.18**	**95**	*e*PN	**Pn**	**11 24 04.0**	**-0.7**
LADK	**Ladik-KONYA**	**1.18**	**95**	*e*Pn	**Pn**	**11 24 04.0**	**-0.7**
ESKT	**Eskisehir**	**1.20**	**359**	*i* P	**Pn**	**11 24 05.0**	**-0.1**
ESKT				*i* S	**Sb**	**11 24 20.7**	**+0.1**
SEYT	**Eskypehyr**	**1.20**	**359**	*i* P	**Pn**	**11 24 05.0**	**-0.1**
SEYT				*i* S	**Sb**	**11 24 20.7**	**0.0**
KONT	**Konya--Tatoy**	**1.23**	**107**	*e*PN	**Pn**	**11 24 05.0**	**-0.4**
KONT	**Konya--Tatoy**	**1.23**	**107**	*e*Pn	**Pn**	**11 24 05.0**	**-0.4**
SVRH	**Sivrihisar-ESK**	**1.24**	**24**	*e*PN	**Pn**	**11 24 05.4**	**-0.1**
SVRH	**Sivrihisar-ESK**	**1.24**	**24**	*e*Pn	**Pn**	**11 24 05.4**	**-0.1**
GDZ	**Gediz**	**1.34**	**306**	*i* P	**Pn**	**11 24 07.4**	**+0.5**
GDZ				*i* S	**Sb**	**11 24 24.6**	**+0.1**
GDZ	**Gediz**	**1.34**	**306**	*i* P	**Pn**	**11 24 07.4**	**+0.5**
GDZ				*i* S	**Sb**	**11 24 24.6**	**+0.1**
BORA	**Eskisehir**	**1.60**	**348**	*e*P	Px	11 23 56.7	
BORA				*e*S	Sx	11 24 10.9	
KULA	**Kula-Manisa**	**1.75**	**277**	*e*PN	**Pn**	**11 24 13.1**	**+0.6**
KULA	**Kula-Manisa**	**1.75**	**277**	*e*Pn	**Pn**	**11 24 13.1**	**+0.5**
HDMB	**Hadim**	**1.86**	**136**	*e*PN	**Pn**	**11 24 14.8**	**+0.8**
HDMB	**Hadim**	**1.86**	**136**	*e*Pn	**Pn**	**11 24 14.8**	**+0.8**

*IDC **30** 11:49:13.9±0.5, 14°.33N×92°.62W, h0km, mb4.6/21, mb1 4.7/23, mb1mx4.7/25, mbtmp4.6/23, ML4.1/2, MS4.4/18, Ms1 4.4/18, ms1mx4.3/27, Error ellipse: s-maj=22.1km s-min=12.2km az=60.0*
*MOS **30** 11:49:17.7±0.9, 14°.32N×92°.70W, h33km, mb5.1/64, MS4.6/7, Error ellipse: s-maj=8.5km s-min=4.5km az=99.6*
*BJI **30** 11:49:20.0, 14°.50N×93°.10W, h31km, mB5.2/10, Ms5.1/11, Ms7 4.7/11*
*ISCJB **30** 11:49:21.7±0.4, 14°.39N±0°.03×92°.67W±0°.02, h65km±3km, mb4.8/176, Error ellipse: s-maj=5.9km s-min=2.7km az=32.9*
*NEIC **30** 11:49:22.0, 14°.47N×93°.06W, h31km, mb5.0/160, MS4.6/4, After MEX.*
*MEX **30** 11:49:22.3±0.6, 14°.45N×93°.05W, h34km±28km, MD4.7*
ISC 30 11:49:23.6±0.4, 14°.41N±0°.03×92°.64W±0°.02, h65km±3km, n865, σ0°73/815, mb4.8/176, 206C-191D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.62**	**36**	*e*P	**Pn**	**11 49 36.2**	**-1.0**
THIG				*e*S	**Sn**	**11 49 47.7**	**+0.5**
PCIG		**1.41**	**337**	*e*P	**Pn**	**11 49 42.2**	**-5.0**
PCIG				*e*S	**Sn**	**11 49 56.8**	**-8.1**
APG	**El Apazote**	**2.19**	**74**	Pn	**Pn**	**11 49 59.5**	**+1.8**
	178nm,0.3s,baz=248,slow=7.4,SNR=621						
TGIG		**2.40**	**349**	*e*P	**Pn**	**11 49 56.2**	**-4.5**
TGIG				*e*S	**Sn**	**11 50 23.9**	**-5.0**
RBDL	**Robledal**	**2.88**	**95**	*e*P	**Pn**	**11 50 07.8**	**+0.8**
SBLS	**San Blas**	**2.98**	**101**	*e*P	**Pn**	**11 50 08.4**	**0.0**
SNJE	**San Jose**	**2.99**	**100**	*e*P	**Pn**	**11 50 09.2**	**+0.5**
BOQS	**Boqueron**	**3.33**	**101**	*e*P	**Pn**	**11 50 13.3**	**+0.1**
CMIG	**Matias Romero**	**3.43**	**321**	Pn	**Pn**	**11 50 08.2**	**-6.4**
	12nm,0.3s,baz=136,slow=10,SNR=213						
CMIG	**Matias Romero**	**3.43**	**321**	*e*P	**Pn**	**11 50 07.7**	**-7.0**
CMIG				*e*S	**Sn**	**11 50 44.3**	**-10**
HUIG	**Huatulco**	**3.61**	**292**	*e*P	**Pn**	**11 50 10.5**	**-6.6**
HUIG				*e*S	**Sn**	**11 50 45.6**	**-13**
SNVI	**San Vicente**	**3.77**	**102**	*e*P	**Pn**	**11 50 19.7**	**+0.4**
TUIG	**Tuzandepetl**	**3.99**	**335**	*e*P	**Pn**	**11 50 17.2**	**-5.2**
TUIG				*e*S	**Sn**	**11 50 59.6**	**-8.3**
CAHU	**Cacacuatique**	**4.34**	**98**	*e*P	**Pn**	**11 50 26.8**	**-0.4**
VSM	**San Miguel**	**4.35**	**102**	*e*P	**Pn**	**11 50 27.4**	**+0.2**
SCIG	**Sabancuy**	**4.75**	**17**	*e*P	**Pn**	**11 50 31.2**	**-1.4**
SCIG				*i* S	**Sn**	**11 51 26.8**	**+0.4**
VHO	**Vista Hermosa**	**4.75**	**304**	*e*P	**Pn**	**11 50 27.1**	**-5.5**
VHO				*e*S	**Sn**	**11 51 15.2**	**-11**
CNCH	**Conchagua**	**4.80**	**103**	*e*P	**Pn**	**11 50 33.0**	**-0.4**
CNCH				*e*S	**Sn**	**11 51 45.8**	**+18**
TGUH	**Tegucigalpa,Un**	**5.22**	**93**	*e*Pn	**Pn**	**11 50 39.9**	**+0.9**
TGUH	**Tegucigalpa,Un**	**5.22**	**93**	*e*P	**Pn**	**11 50 39.9**	**+0.8**
TGUH				AML	AML	11 52 19.3	
	comp=N,832nm,0.6s						
CNGN	**Cerro Negro**	**6.08**	**107**	*e*P	**Pn**	**11 50 52.8**	**+1.9**
MOMN	**Momotombo**	**6.26**	**108**	*e*P	**Pn**	**11 50 53.5**	**+0.1**
COPN	**Copaltepe**	**6.29**	**110**	*e*P	**Pn**	**11 50 53.5**	**-0.3**
CSAN		**6.44**	**109**	*e*P	**Pn**	**11 50 56.2**	**+0.3**
BOAB	**BOACO BROADBAN**	**7.06**	**105**	*e*P	**Pn**	**11 51 02.9**	**-1.4**
TEIG	**Tepich**	**7.13**	**35**	*e*Pn	**Pn**	**11 51 05.6**	**+0.4**
TEIG				*e*Sn	**Sn**	**11 52 25.2**	**+0.3**
TEIG	**Tepich**	**7

UALR **University of** 20.28 1 eP P 11 53 54.4 +0.5
comp=Z,70nm,0.8s
325A **Bean Ranch, Si** 20.32 328 ⇑P P 11 53 53.3 -1.1
baz=20,SNR=21
ROSC **El Rosal** 20.38 116 P P 11 53 59.3 +4.2
comp=Z,34nm,0.9s,baz=191,slow=0.6,SNR=32
ROSC **El Rosal** 20.38 116 eP P 11 53 59.1 +4.0
226A **Malaga, Loving** 20.46 331 ⇓P P 11 53 55.5 -0.4
baz=20,SNR=34
CLNB **Carlsbad** 20.53 332 eP P 11 53 56.3 -0.3
comp=Z,13nm,0.7s
324A **Moseley Ranch,** 20.64 327 ⇑P P 11 53 56.6 -1.2
baz=21,SNR=75
127A **Arkansas Junct** 20.64 334 ⇑P P 11 53 56.8 -1.0
baz=21,SNR=20
GOGA **Godfrey** 20.67 22 eP P 11 53 59.0 +0.9
GOGA pmax pmax
comp=Z,109nm,1.0s
GOGA **Godfrey** 20.67 22 eP P 11 53 59.0 +0.8
comp=Z,109nm,1.0s
GDL2 **Guadalupe Moun** 20.70 331 eP P 11 53 58.3 -0.1
MNTX **Cornudas Mount** 20.79 328 eP P 11 53 58.2 -1.3
comp=Z,31nm,0.9s
225A **Deer Hill, Car** 20.84 330 ⇓P P 11 53 59.4 -0.6
baz=21,SNR=36
126A **Clayton Basin,** 20.91 332 ⇑P P 11 53 59.3 -1.4
baz=21,SNR=32
SDDR **Presa de Saban** 20.95 75 eP P 11 54 02.0 +0.8
comp=Z,62nm,1.4s
WMOK **Wichita Mounta** 20.99 346 eP P 11 54 00.8 -0.7
WMOK pmax pmax
comp=Z,28nm,1.1s
WMOK **Wichita Mounta** 20.99 346 eP P 11 54 00.8 -0.7
comp=Z,28nm,1.1s
HBAR **Harrisburg** 21.13 4 P P 11 54 02.9 -0.1
Z27A **Tatum** 21.14 335 ⇑P P 11 54 02.0 -1.1
baz=21,SNR=127
224A **Cornudas Mount** 21.16 328 ⇓P P 11 54 02.3 -1.2
baz=21,SNR=64
125A **Gardner Draw,** 21.22 331 ⇑P P 11 54 03.1 -0.8
baz=21,SNR=106
Z26A **Caprock** 21.42 333 ⇓P P 11 54 05.0 -1.1
baz=21,SNR=89
MSTX **Muleshoe** 21.53 337 ⇓P P 11 54 05.8 -1.5
baz=22,SNR=27
223A **Chaparral, Ant** 21.58 327 ⇑P P 11 54 06.6 -1.3
baz=22
SWET **Sewanee** 21.58 15 eP P 11 54 08.1 +0.2
Y27A **Causey** 21.61 336 ⇓P P 11 54 06.4 -1.8
baz=22,SNR=33
HALT **Halls** 21.62 7 eP P 11 54 09.1 +0.8
124A **Stringfield Ra** 21.63 330 ⇑P P 11 54 08.0 -0.5
baz=22,SNR=86
Z25A **Roswell** 21.76 332 ⇑P P 11 54 09.0 -0.8
baz=22,SNR=44
COW **Cow Castle Cre** 21.78 28 eP P 11 54 12.7 +2.6
NHSC **New Hope** 21.80 29 eP P 11 54 13.5 +3.3
comp=Z,582nm,1.4s,mb5.7
Y26A **Elida** 21.91 334 ⇓P P 11 54 10.5 -1.0
baz=22,SNR=53
AMTX **Amarillo** 21.96 340 eP P 11 54 10.8 -1.1
comp=Z,87nm,0.8s,mb5.1
GLAT **Glass** 21.98 7 eP P 11 54 10.3 -1.8
123A **Bell Site, Whi** 21.99 328 ⇓P P 11 54 11.1 -1.2
baz=22,SNR=14
WVT **Waverly** 22.06 10 eP P 11 54 12.7 -0.2
WVT pmax pmax
comp=Z,26nm,0.7s,mb4.7
WVT **Waverly** 22.06 10 eP P 11 54 12.7 -0.2
comp=Z,26nm,0.7s,mb4.7
Z24A **Sheeppen Canyo** 22.10 331 ⇑P P 11 54 13.0 -0.5
baz=22,SNR=66
UTMT **University of** 22.11 8 eP P 11 54 12.5 -1.0
CPCT **Cooper Cave** 22.19 18 eP P 11 54 14.6 +0.3
X27A **F and S Farms,** 22.25 337 ⇑P P 11 54 13.5 -1.5
baz=22,SNR=16
320A **Kipp Ranch, An** 22.27 322 ⇑P P 11 54 14.7 -0.6
baz=22,SNR=28
Y25A **Mesa, Roswell** 22.29 333 ⇓P P 11 54 14.4 -1.0
baz=22,SNR=81
JSC **Jenkinsville** 22.31 25 eP P 11 54 16.0 +0.4
PARMO **Parma** 22.32 6 eP P 11 54 15.9 +0.3
221A **Mesquite Ranch** 22.33 324 ⇓P P 11 54 15.6 -0.3
baz=22,SNR=20
122A **Conniff Cattle** 22.42 327 ⇑P P 11 54 16.0 -0.8
baz=22,SNR=8.6
X26A **CR and CF Fran** 22.45 335 ⇓P P 11 54 16.1 -1.1
baz=22,SNR=33
Z23A **Rita Site, Whi** 22.47 329 ⇓P P 11 54 17.0 -0.4
baz=22,SNR=42
TKL **Tuckaleechee C** 22.61 19 P P 11 54 15.7 -3.1
comp=Z,12nm,1.0s,mb4.2,baz=217,slow=17,SNR=2.7
TKL LR LR 12 04 59.3
comp=Z,901nm,19.0s,baz=207,slow=42
TKL **Tuckaleechee C** 22.61 19 eP P 11 54 19.7 +0.9
TKL LR LR 12 04 59.3
W27A **Bowe Ranch, En** 22.61 337 ⇓P P 11 54 17.4 -1.4
baz=23,SNR=66
Y24A **Capitan** 22.63 331 ⇑P P 11 54 19.1 +0.1
baz=23,SNR=65
220A **Playas Peak, P** 22.68 323 ⇑P P 11 54 19.4 -0.2
baz=23,SNR=46
121A **Cookes Peak, D** 22.72 325 ⇑P P 11 54 19.8 -0.2
baz=23,SNR=50
319A **Douglas** 22.76 321 ⇓P P 11 54 20.0 -0.4
baz=23,SNR=16
X25A **Clemmons Ranch** 22.79 334 ⇓P P 11 54 20.1 -0.6
baz=23
Z22A **Elephant Butte** 22.84 328 ⇓P P 11 54 20.4 -0.8
baz=23,SNR=36
W26A **Owens Ranch, T** 22.90 336 ⇑P P 11 54 20.6 -1.3
baz=23,SNR=7.2
Y23A **Lovelace Mesa,** 22.93 330 ⇑P P 11 54 21.7 -0.4
baz=23,SNR=34
X24A **Lazy VL Ranch,** 23.16 332 ⇓P P 11 54 23.6 -0.9
baz=23
219A **White Tail Can** 23.18 322 ⇑P P 11 54 23.9 -0.8
baz=23,SNR=38
120A **U Bar Ranch, L** 23.21 324 ⇑P P 11 54 24.6 -0.4
baz=23,SNR=31
318A **Bisbee** 23.24 320 ⇓P P 11 54 24.4 -0.9
baz=23,SNR=31
Z21A **St. Cloud Mine** 23.25 327 ⇓P P 11 54 24.8 -0.6
baz=23,SNR=26
W25A **X Bar L Ranch,** 23.30 335 ⇓P P 11 54 25.2 -0.6
baz=23,SNR=69
Y22A **Socorro** 23.38 329 ⇓P P 11 54 26.4 -0.1
baz=23
BNM **Barren Site** 23.38 330 eP P 11 54 26.9 +0.4
comp=Z,21nm,0.9s,mb4.5
SIUC **Southern Illin** 23.41 7 eP P 11 54 26.2 -0.6
comp=Z,73nm,1.0s,mb5.0
Y22D **IRIS PASSCAL I** 23.46 329 ⇑P P 11 54 27.4 +0.1
baz=24
LPM **Los Pinos Moun** 23.51 330 eP P 11 54 27.9 +0.1
X23A **Hourglass Bar** 23.52 331 ⇓P P 11 54 27.7 -0.1
baz=24,SNR=26
V26A **Tequesquite Ra** 23.53 337 ⇑P P 11 54 27.6 -0.3
baz=24,SNR=32
FVM **French Village** 23.57 4 eP P 11 54 28.5 +0.3
FVM pmax pmax
comp=Z,252nm,2.9s,mb5.0
FVM **French Village** 23.57 4 eP P 11 54 28.5 +0.3
comp=Z,252nm,2.9s,mb5.0
CCM **Cathedral Cave** 23.59 3 eP P 11 54 26.2 -2.2
CCM pmax pmax
comp=Z,41nm,1.0s,mb4.7
CCM **Cathedral Cave** 23.59 3 eP P 11 54 26.1 -2.2
comp=Z,41nm,1.0s,mb4.7
Z20A **Nine Sixteen R** 23.61 325 ⇑P P 11 54 28.6 0.0
baz=24,SNR=38
218A **Dragoon** 23.64 321 ⇑P P 11 54 28.6 -0.3
baz=24,SNR=22
W24A **Lazy 6 Ranch,** 23.69 333 ⇓P P 11 54 29.4 0.0
baz=24,SNR=54
119A **Ashpeak Ranch,** 23.76 323 ⇓P P 11 54 30.1 +0.1
baz=24,SNR=29
Y21A **Point of Rocks** 23.80 328 ⇑P P 11 54 31.2 +0.8
baz=24,SNR=16
LAZ **Ladron** 23.83 329 eP P 11 54 31.2 +0.5
comp=Z,24nm,1.2s,mb4.4
X22A **Bernardo** 23.85 330 ⇑P P 11 54 31.8 +0.9
baz=24,SNR=8.3
USIN **University of** 23.88 10 eP P 11 54 32.7 +1.7
V25A **Rancho No Teng** 23.89 335 ⇑P P 11 54 31.5 +0.3
baz=24,SNR=68
ANMO **Albuquerque** 23.95 331 P P 11 54 31.2 -0.5
comp=Z,11nm,0.8s,mb4.2,baz=152,slow=11,SNR=43
ANMO LR LR 12 06 18.1
comp=Z,360nm,19.8s,baz=2.3,slow=43
ANMO **Albuquerque** 23.95 331 eP P 11 54 31.6 -0.1
comp=Z,2.7nm,0.8s,mb3.6
W23A **Werner Place,** 23.98 332 ⇓P P 11 54 32.2 +0.2
baz=24,SNR=18
U26A **Atchley Ranch,** 24.05 338 ⇑P P 11 54 32.7 +0.1
baz=24,SNR=90
118A **Homack Ranch,** 24.06 322 ⇓P P 11 54 32.7 -0.1
baz=24,SNR=42
Y20A **Horse Springs,** 24.09 326 ⇓P P 11 54 33.6 +0.6
baz=24,SNR=60
Z19A **T-Link Ranch,** 24.12 324 ⇑P P 11 54 33.5 +0.3
baz=24,SNR=5.2
X21A **Alamocita Cree** 24.19 328 ⇑P P 11 54 34.6 +0.6
baz=24,SNR=53
W22A **Albuquerque** 24.24 331 ⇓P P 11 54 34.8 +0.4
baz=24
U25A **Circle Dot Ran** 24.30 336 ⇑P P 11 54 35.4 +0.5
baz=24,SNR=63
TUC **Tucson** 24.33 320 eP P 11 54 35.1 -0.1
TUC pmax pmax
comp=Z,34nm,1.0s,mb4.6
TUC **Tucson** 24.33 320 eP P 11 54 35.1 -0.1
comp=Z,34nm,1.0s,mb4.6
WCI **Wyandotte Cave** 24.39 12 eP P 11 54 35.4 -0.3
WCI pmax pmax
comp=Z,43nm,0.9s,mb4.8
WCI **Wyandotte Cave** 24.39 12 eP P 11 54 35.4 -0.3
comp=Z,43nm,0.9s,mb4.8
Z18A **Geronimo** 24.41 323 ⇑P P 11 54 36.0 0.0
baz=24
117A **Oracle** 24.48 321 ⇓P P 11 54 36.5 -0.1
baz=24,SNR=23
V23A **Ortiz Mt. (NFS** 24.48 333 ⇓P P 11 54 37.2 +0.6
baz=24,SNR=57
216A **Three Points,** 24.55 319 ⇑P P 11 54 36.4 -0.8
baz=24,SNR=9.2
OLIL **Olney** 24.56 9 eP P 11 54 37.3 0.0
comp=Z,35nm,0.8s,mb4.8
Y19A **Nutrioso** 24.60 325 ⇓P P 11 54 38.0 +0.3
baz=25,SNR=21
X20A **Quemado** 24.64 327 ⇑P P 11 54 38.7 +0.7
baz=25,SNR=32
W21A **San Fidel** 24.66 329 ⇓P P 11 54 38.7 +0.5
baz=25
U24A **Moreno Valley** 24.66 335 ⇓P P 11 54 39.3 +1.2
baz=25
MPR **Mayaguez** 24.76 78 eP P 11 54 47.8 +8.5
Z17A **San Carlos Hig** 24.82 322 ⇑P P 11 54 39.7 0.0
baz=25,SNR=6.4
KSU1 **Kansas State U** 24.85 353 eP P 11 54 39.0 -0.8
comp=Z,125nm,0.8s,mb5.4
Y18A **Canyon Day Jun** 24.91 324 ⇓P P 11 54 40.0 -0.5
baz=25,SNR=18
V22A **San Miguel Ran** 24.95 332 ⇓P P 11 54 41.3 +0.5
baz=25,SNR=16
T25A **Trinidad** 24.95 337 ⇑P P 11 54 41.6 +0.7
baz=25,SNR=31
X19A **St. Johns** 24.97 326 ⇓P P 11 54 41.3 +0.2
baz=25,SNR=20
U23A **El Rito** 24.97 333 ⇑P P 11 54 41.4 +0.4
baz=25,SNR=62
116A **Eloy** 25.07 319 ⇓P P 11 54 41.2 -0.7
baz=25
ELN **Prospectdale** 25.07 23 eP P 11 54 41.7 -0.3
W20A **Ramah** 25.09 328 ⇑P P 11 54 42.3 +0.1
baz=25,SNR=14
CBKS **Cedar Bluff** 25.11 347 eP P 11 54 41.9 -0.3
CBKS pmax pmax
comp=Z,73nm,1.0s,mb5.1
CBKS **Cedar Bluff** 25.11 347 eP P 11 54 41.9 -0.3
comp=Z,73nm,1.0s,mb5.1
V21A **Milan** 25.20 330 ⇓P P 11 54 43.1 -0.1
baz=25,SNR=6.7
U22A **Llaves** 25.31 332 ⇓P P 11 54 44.4 +0.4
baz=25,SNR=16
Y17A **Roosevelt** 25.32 322 ⇓P P 11 54 43.6 -0.6
baz=25,SNR=7.3
VWCC **Virginia Weste** 25.39 24 eP P 11 54 45.2 +0.4
214A **Organ Pipe Nat** 25.40 317 ⇑P P 11 54 44.1 -0.8
baz=25,SNR=9.8
X18A **Snowflake** 25.41 325 ⇑P P 11 54 45.2 +0.2
baz=25,SNR=11
S25A **Robets Cordova** 25.42 338 ⇓P P 11 54 45.9 +0.8
baz=25,SNR=76
Z16A **Peralta Trail,** 25.42 321 ⇓P P 11 54 44.7 -0.4
baz=25
115A **Sonoran Desert** 25.49 319 ⇑P P 11 54 44.8 -1.0
baz=26,SNR=7.5
T23A **Casias Ranch,** 25.51 334 ⇑P P 11 54 46.3 +0.4
baz=26,SNR=12
W19A **Sanders** 25.54 327 ⇑P P 11 54 46.4 +0.2
baz=26
V20A **Brimhall** 25.60 329 ⇓P P 11 54 47.2 +0.4
baz=26
ATAH **Atahualpa** 25.65 146 P P 11 54 44.2 -3.1
comp=Z,3.3nm,0.6s,mb3.9,baz=110,slow=15,SNR=2.1
ATAH LR LR 12 03 21.9
comp=Z,585nm,18.6s,baz=326,slow=33
S24A **Houchin Ranch,** 25.70 337 ⇑P P 11 54 48.2 +0.6
baz=26,SNR=34
U21A **Nagezi** 25.72 331 ⇑P P 11 54 47.9 +0.1
baz=26,SNR=22
X17A **Forest Lakes** 25.75 324 ⇑P P 11 54 48.4 +0.3
baz=26,SNR=14
V19A **Window Rock** 25.83 328 ⇓P P 11 54 49.1 +0.3
baz=26
T22A **Edith** 25.86 333 ⇓P P 11 54 49.7 +0.6
baz=26,SNR=48
SDCO **Great Sand Dun** 25.90 336 eP P 11 54 50.3 +0.9
comp=Z,49nm,1.2s,mb4.8
114A **Black Gap (USA** 25.95 318 ⇑P P 11 54 49.2 -0.8
baz=26,SNR=7.3
S23A **Nye Farm, Mont** 26.07 335 ⇓P P 11 54 51.9 +1.0
baz=26,SNR=26
U20A **Newcomb** 26.09 330 ⇓P P 11 54 51.4 +0.3
baz=26
T21A **Navajo Lake** 26.12 332 ⇓P P 11 54 51.9 +0.5
baz=26,SNR=14
R24A **Sanders Place,** 26.17 337 ⇓P P 11 54 52.8 +0.9
baz=26,SNR=27
X16A **Lo Mia Camp, P** 26.18 323 ⇑P P 11 54 52.1 +0.1
baz=26,SNR=15
HDIL **Hopedale** 26.22 6 eP P 11 54 52.0 -0.2
comp=Z,31nm,0.9s,mb4.7
W17A **Winslow** 26.24 325 ⇓P P 11 54 52.6 0.0
baz=26
V18A **Ganado** 26.29 327 ⇓P P 11 54 53.1 +0.1
baz=26
U19A **Dine' College,** 26.36 329 ⇓P P 11 54 53.4 -0.2
baz=26,SNR=16
Z14A **Wintersburg** 26.38 319 ⇓P P 11 54 53.2 -0.6
baz=26
Y15A **Casa Rosa Ranc** 26.39 321 ⇓P P 11 54 53.6 -0.3
baz=26,SNR=22
S22A **4UR Ranch, Cre** 26.44 334 ⇑P P 11 54 54.7 +0.4
baz=26,SNR=59
Q25A **Bedford, Calha** 26.47 339 ⇓P P 11 54 54.5 -0.1
baz=26,SNR=15
113A **Mohawk Valley,** 26.53 317 ⇓P P 11 54 54.6 -0.7
baz=26
JSRW **J. Sargeant Re** 26.64 27 eP P 11 54 56.1 0.0
V17A **Tonalea, Kykot** 26.68 326 ⇑P P 11 54 56.6 +0.1
baz=27,SNR=15
T19A **Beclabito** 26.69 330 ⇓P P 11 54 56.5 -0.1
baz=27
X15A **Humboldt** 26.70 322 ⇓P P 11 54 56.5 -0.2
baz=27,SNR=10
W16A **Flagstaff** 26.71 324 ⇑P P 11 54 56.8 0.0
baz=27,SNR=7.1
Z13A **Yuma Proving G** 26.73 318 ⇑P P 11 54 56.1 -0.9
baz=27,SNR=12
MVCO **Mesa Verde** 26.74 331 ⇑P P 11 54 57.3 +0.2
baz=27,SNR=31
MVCO **Mesa Verde** 26.74 331 eP P 11 54 57.8 +0.7
comp=Z,90nm,1.4s,mb5.1
S21A **Coal Bank Pass** 26.79 333 ⇓P P 11 54 57.8 +0.4
baz=27,SNR=25
U18A **Rough Rock, Ch** 26.80 328 ⇑P P 11 54 57.7 +0.1
baz=27
Y14A **Wickenburg** 26.80 320 ⇑P P 11 54 57.0 -0.6
baz=27,SNR=7.9
R22A **Saguache, Gunn** 26.82 335 ⇓P P 11 54 58.2 +0.5
baz=27,SNR=24
WUAZ **Wupatki** 26.93 325 ⇑P P 11 54 58.8 0.0
baz=27,SNR=10
WUAZ **Wupatki** 26.93 325 eP P 11 54 59.5 +0.8
comp=Z,17nm,0.9s,mb4.6
P25A **Willow Gulch B** 26.99 340 ⇓P P 11 54 59.2 0.0
baz=27,SNR=9.8
X14A **Yava** 27.08 321 ⇓P P 11 54 59.6 -0.6
baz=27,SNR=9.2
W15A **Williams** 27.20 323 ⇓P P 11 55 01.5 +0.4
baz=27,SNR=5.6
Y13A **Salome** 27.23 319 ⇓P P 11 55 01.0 -0.5
baz=27
P24A **Kohler Place,** 27.24 339 ⇓P P 11 55 01.5 +0.1
baz=27
R21A **Cimarron** 27.27 334 ⇓P P 11 55 01.8 +0.1
baz=27,SNR=11
U17A **Shonto** 27.34 327 ⇑P P 11 55 02.6 +0.1
baz=27
T18A **Mexican Hat** 27.35 329 ⇓P P 11 55 02.6 0.0
baz=27,SNR=9.0
SCIA **State Center** 27.41 359 eP P 11 55 02.1 -0.8
comp=Z,22nm,0.6s,mb4.9
GLA **Glamis** 27.41 316 ⇑P P 11 55 02.7 -0.4
baz=27
GLA **Glamis** 27.41 316 eP P 11 55 02.6 -0.5
GLA pmax pmax
comp=Z,69nm,1.9s,mb4.9
GLA **Glamis** 27.41 316 eP P 11 55 02.5 -0.5
comp=Z,68nm,1.9s,mb4.9
Q22A **Crested Butte,** 27.42 335 ⇓P P 11 55 03.8 +0.7
baz=27,SNR=13
S19A **Harvey Farm, M** 27.48 331 ⇑P P 11 55 03.8 +0.2
baz=28,SNR=23
R20A **Redvale** 27.49 332 ⇑P P 11 55 04.7 +1.0
baz=28
PV01 **Paradox Valley** 27.53 332 eP P 11 55 05.0 +1.0
comp=Z,3μm,1.2s
V15A **Kaibab Nationa** 27.60 324 ⇑P P 11 55 05.1 +0.4
baz=28,SNR=16
Y12C **Blythe** 27.64 318 ⇑P P 11 55 05.0 -0.1
baz=28
PCRV **Puerto La Cruz** 27.67 96 P P 11 55 03.4 -2.3
comp=Z,4.9nm,0.7s,mb4.2,baz=342,slow=6.4,SNR=2.1
Q21A **Lamborn Mesa,** 27.67 334 ⇑P P 11 55 05.7 +0.3
baz=28,SNR=25
W14A **Seligman** 27.70 322 ⇑P P 11 55 05.7 0.0
baz=28,SNR=6.9
SMCO **Snowmass** 27.72 336 eP P 11 55 07.1 +1.4
comp=Z,41nm,1.2s,mb4.8
T17A **Navajo Res., N** 27.72 328 ⇓P P 11 55 06.1 +0.3
baz=28,SNR=7.3
ISCO **Idaho Springs** 27.74 338 eP P 11 55 06.6 +0.7
ISCO pmax pmax
comp=Z,57nm,1.9s,mb4.8
ISCO **Idaho Springs** 27.74 338 eP P 11 55 06.6 +0.7
comp=Z,57nm,1.9s,mb4.8
PDMCI **Parker Dam,Lak** 27.75 319 ⇓P P 11 55 05.5 -0.6
baz=28,SNR=5.1
S18A **Hurst Farm, Bl** 27.84 330 ⇓P P 11 55 06.9 -0.1
baz=28,SNR=12
PV04 **Paradox Valley** 27.89 332 eP P 11 55 07.8 +0.5
R19A **Curley Farm, L** 27.97 331 ⇑P P 11 55 08.3 +0.2
baz=28
SWSC **Sam W. Stewart** 28.00 315 ⇑P P 11 55 07.6 -0.7
baz=28
V14A **Boquillas Ranc** 28.01 323 ⇓P P 11 55 08.4 0.0
baz=28,SNR=14
DVTC **Desert V Tower** 28.05 314 ⇓P P 11 55 08.8 0.0
baz=28
T16A **Glen Canyon Da** 28.08 327 ⇓P P 11 55 09.2 +0.2
baz=28
Q20A **Ridgley Place,** 28.08 333 ⇓P P 11 55 09.3 +0.3
baz=28
U15A **North Rim** 28.10 325 ⇑P P 11 55 09.6 +0.4
baz=28,SNR=15
W13A **Hualapai Mount** 28.11 321 ⇑P P 11 55 09.3 -0.1
baz=28,SNR=5.1
BC3 **Big Chuckawall** 28.19 317 ⇑P P 11 55 09.9 -0.2
baz=28,SNR=13
P21A **Newcastle** 28.20 335 ⇑P P 11 55 10.7 +0.6
baz=28,SNR=9.4
S17A **Black Ridge (B** 28.20 328 ⇑P P 11 55 10.3 +0.2
baz=28,SNR=8.1
IRM **Iron Mountain** 28.30 318 ⇑P P 11 55 11.0 -0.1
baz=28,SNR=6.1
R18A **Canyonlands Na** 28.35 331 ⇑P P 11 55 11.6 +0.2
baz=28,SNR=11
NEE2 **Needles Airpor** 28.35 320 ⇑P P 11 55 11.2 -0.2
baz=28
MONP **Monument Peak** 28.40 314 ⇑P P 11 55 11.6 -0.3
baz=28
JFWS **Jewell Farm** 28.48 4 eP P 11 55 12.9 +0.4
JFWS pmax pmax
comp=Z,24nm,0.8s,mb4.8
JFWS **Jewell Farm** 28.48 4 eP P 11 55 12.9 +0.4
comp=Z,24nm,0.8s,mb4.8
Q19A **Hogan Spring (** 28.51 332 ⇓P P 11 55 12.7 -0.1
baz=28,SNR=27
SDMD **Soldier's Deli** 28.52 26 eP P 11 55 13.3 +0.4
comp=Z,23nm,1.0s,mb4.8
P20A **De Beque** 28.58 334 ⇑P P 11 55 13.7 +0.3
baz=29,SNR=15
T15A **Red Dirt Ranch** 28.58 326 ⇓P P 11 55 13.8 +0.3
baz=29,SNR=8.3
U14A **Mt Trumbull** 28.60 324 ⇑P P 11 55 14.1 +0.5
baz=29,SNR=11
V13A **Grand Canyon W** 28.68 322 ⇓P P 11 55 14.4 +0.1
baz=29,SNR=21
S16A **Weppner Ranch,** 28.68 328 ⇓P P 11 55 14.6 +0.3
baz=29
BELC **Belle Mtn. Jos** 28.76 317 ⇑P P 11 55 14.8 -0.3
baz=29,SNR=6.3
R17A **Hanksville Air** 28.77 330 ⇓P P 11 55 15.3 +0.2
baz=29,SNR=28
O21A **Pagoda** 28.80 336 ⇓P P 11 55 16.4 +1.0
baz=29,SNR=8.4
PFO **Pinyon Flat Ob** 28.84 316 ⇑P P 11 55 15.3 -0.5
baz=29
W12A **Cal Nev Ari** 28.85 320 ⇓P P 11 55 15.6 -0.3
baz=29
LDFC **Landfair** 28.86 319 eP P 11 55 16.5 +0.6
109C **Camp Elliot, M** 28.87 314 ⇑P P 11 55 15.3 -0.9
baz=29
N22A **Wattenberg Ran** 28.93 338 ⇓P P 11 55 17.8 +1.3
baz=29,SNR=20
P19A **Cripple Cowboy** 28.94 333 ⇓P P 11 55 16.8 +0.2
baz=29
T14A **Hurricane** 29.00 325 ⇑P P 11 55 17.4 +0.2
baz=29
GMRC **Granite Mounta** 29.02 318 ⇓P P 11 55 17.3 -0.1
baz=29,SNR=9.0
PHWY **Pilot Hill** 29.02 340 eP P 11 55 18.3 +1.0
comp=Z,13nm,1.1s,mb4.5
Q18A **Rafter H Ranch** 29.03 331 ⇓P P 11 55 17.7 +0.3
baz=29,SNR=18
O20A **White River Ci** 29.05 335 ⇑P P 11 55 18.3 +0.7
baz=29,SNR=14
R16A **Teasdale** 29.05 328 ⇓P P 11 55 18.0 +0.4
baz=29,SNR=8.6
U13A **Pakoon Wash** 29.05 323 ⇑P P 11 55 18.3 +0.6
baz=29,SNR=18
S15A **Panguitch** 29.05 327 ⇑P P 11 55 18.1 +0.5
baz=29,SNR=7.9
V12A **Nelson** 29.12 321 ⇑P P 11 55 18.1 -0.2
baz=29,SNR=17
SRU **San Rafael** 29.22 331 ⇓P P 11 55 19.6 +0.5
baz=29
SRU **San Rafael** 29.22 331 eP P 11 55 19.3 +0.2
SRU pmax pmax
comp=Z,12nm,1.2s,mb4.4
SRU **San Rafael** 29.22 331 eP P 11 55 19.3 +0.2
comp=Z,12nm,1.2s,mb4.4
MVL **Millersville** 29.22 26 eP P 11 55 19.3 +0.2
comp=Z,15nm,0.8s,mb4.7
N21A **Black Mountain** 29.29 337 ⇑P P 11 55 20.9 +1.1
baz=29,SNR=28
MURC **Murrieta** 29.34 315 ⇑P P 11 55 20.2 0.0
baz=29
Q16A **Castle Valley** 29.38 330 ⇑P P 11 55 21.1 +0.6
baz=29,SNR=11
U12A **Valley of Fire** 29.40 322 ⇓P P 11 55 20.7 0.0
baz=29,SNR=10
R15A **Junction** 29.40 327 ⇓P P 11 55 21.1 +0.4
baz=29
ECSD **EROS Data Cent** 29.43 354 eP P 11 55 19.7 -1.1
comp=Z,16nm,0.8s,mb4.7
T13A **Saint George** 29.43 324 ⇓P P 11 55 21.6 +0.5
baz=29,SNR=11
HEC **Hector,Ludlow** 29.48 318 ⇓P P 11 55 21.5 0.0
baz=30

CCUT **Cedar City** 29.50 325 eP P 11 55 22.1 +0.5
comp=Z,18nm,1.0s,mb4.7
P18A **Preston Nutter** 29.50 332 ⇑P P 11 55 22.1 +0.5
baz=30,SNR=13
BBRC **Big Bear Solar** 29.53 316 ⇓P P 11 55 22.0 +0.1
baz=30
S14A **Cedar City** 29.55 326 ⇑P P 11 55 22.4 +0.3
baz=30,SNR=12
V11A **Goodsprings** 29.55 320 ⇑P P 11 55 22.0 -0.1
baz=30
O19A **Miners Draw (B** 29.55 334 ⇑P P 11 55 22.5 +0.5
baz=30
MSU **Marysvale** 29.58 328 eP P 11 55 22.5 +0.2
TUQ **Turquoise Moun** 29.60 319 ⇓P P 11 55 22.3 -0.2
baz=30
P17A **Butcher Ranch,** 29.61 331 ⇓P P 11 55 23.0 +0.5
baz=30,SNR=8.9
N20A **Spence Gulch,** 29.65 336 ⇑P P 11 55 23.5 +0.6
baz=30,SNR=46
TMUT **Trail Mountain** 29.69 330 eP P 11 55 23.6 +0.3
comp=Z,5.4nm,1.0s,mb4.1
ARUT **Antelope Range** 29.71 325 eP P 11 55 24.6 +1.1
ARUT pmax pmax
comp=Z,30nm,1.0s,mb4.9
ARUT **Antelope Range** 29.71 325 eP P 11 55 24.6 +1.1
comp=Z,30nm,1.0s,mb4.9
S13A **Holt Ranch, En** 29.80 325 ⇓P P 11 55 24.7 +0.4
baz=30,SNR=21
R14A **James Farms, M** 29.86 327 ⇓P P 11 55 25.3 +0.5
baz=30
U11A **Corn Creek** 29.90 321 ⇑P P 11 55 25.4 +0.2
baz=30
O18A **Roosevelt** 29.91 333 ⇑P P 11 55 26.0 +0.8
baz=30,SNR=5.2
RRX **Edison Barstow** 29.95 317 ⇑P P 11 55 25.8 +0.2
baz=30
M21A **Separation Pea** 29.96 338 ⇓P P 11 55 26.5 +0.8
baz=30,SNR=21
RWWY **Rawlins** 29.98 338 eP P 11 55 26.3 +0.5
comp=Z,38nm,1.0s,mb5.0
L22A **Ellis Ranch, M** 30.00 339 ⇓P P 11 55 26.9 +0.8
baz=30
BFSC **Mount Baldy Ra** 30.02 316 ⇓P P 11 55 25.7 -0.6
baz=30
Q15A **Fillmore** 30.05 328 ⇑P P 11 55 26.7 +0.3
baz=30
CIS **Catalina Islan** 30.07 313 ⇑P P 11 55 26.4 -0.3
baz=30
N19A **John Jarvie Ra** 30.07 334 ⇓P P 11 55 26.7 +0.1
baz=30,SNR=14
GSC **Goldstone** 30.08 318 ⇑P P 11 55 26.8 0.0
baz=30
GSC **Goldstone** 30.08 318 eP P 11 55 26.4 -0.4
GSC pmax pmax
comp=Z,65nm,2.3s,mb4.8
GSC **Goldstone** 30.08 318 eP P 11 55 26.4 -0.4
comp=Z,65nm,2.3s,mb4.8
SHOC **Shoshone** 30.11 320 ⇓P P 11 55 27.0 -0.1
baz=30
P16A **Fountain Green** 30.16 330 ⇓P P 11 55 27.9 +0.5
baz=30
FMP **Fort Macarthur** 30.16 314 ⇓P P 11 55 27.5 0.0
baz=30
M20A **Sweetwater, Wa** 30.18 336 ⇑P P 11 55 27.9 +0.4
baz=30,SNR=11
O17A **Robinson Place** 30.18 332 ⇑P P 11 55 28.5 +0.9
baz=30,SNR=8.9
L21A **Rawlins** 30.28 338 ⇑P P 11 55 28.7 +0.3
baz=30,SNR=33
R13A **O'Grain Ranch,** 30.29 325 ⇑P P 11 55 29.8 +1.2
baz=30,SNR=12
T11A **Corn Creek, Al** 30.35 323 ⇑P P 11 55 29.6 +0.5
baz=30,SNR=5.8
N18A **Larsen Ranch,** 30.35 334 ⇓P P 11 55 29.4 +0.3
baz=30,SNR=17
S12A **Delamar Landin** 30.38 324 ⇓P P 11 55 30.1 +0.7
baz=30,SNR=7.7
P15A **Leamington** 30.43 329 ⇑P P 11 55 30.1 +0.3
baz=30
MPU **Maple Canyon** 30.46 330 eP P 11 55 30.0 -0.1
comp=Z,16nm,1.1s,mb4.6
U10A **Ash Meadows, A** 30.48 320 ⇓P P 11 55 30.4 +0.2
baz=30,SNR=5.3
DECC **Green Verdugo** 30.48 315 ⇓P P 11 55 30.3 -0.1
baz=30
Q14A **Sevier Lake (B** 30.50 327 ⇓P P 11 55 30.8 +0.4
baz=30,SNR=9.8
O16A **Springville** 30.55 331 ⇓P P 11 55 30.8 0.0
baz=31,SNR=6.4
M19A **Rock Springs** 30.57 335 ⇑P P 11 55 31.5 +0.5
baz=31
DAU **Daniels Canyon** 30.59 331 eP P 11 55 31.1 -0.2
EDW2 **Edwards Air Fo** 30.61 316 ⇑P P 11 55 31.0 -0.4
baz=31
L20A **Wamsutter** 30.68 337 ⇓P P 11 55 32.0 0.0
baz=31,SNR=7.2
N17A **Moffit Pass** 30.83 333 ⇓P P 11 55 34.1 +0.8
baz=31
JLU **Jordanelle** 30.84 331 eP P 11 55 34.5 +1.1
comp=Z,38nm,1.8s,mb4.8
FURC **Furnace Creek,** 30.84 320 ⇑P P 11 55 33.4 -0.1
baz=31,SNR=5.4
P14A **Drum Mountains** 30.84 328 ⇑P P 11 55 33.9 +0.4
baz=31,SNR=9.6
Q13A **Wheeler Ranch,** 30.87 326 ⇑P P 11 55 34.2 +0.5
baz=31,SNR=9.3
M18A **Lyman** 30.89 334 ⇓P P 11 55 33.7 -0.2
baz=31
BLG **Laguna Peak** 30.91 314 ⇓P P 11 55 34.4 +0.2
baz=31
S11A **Rachel** 30.93 323 ⇑P P 11 55 34.9 +0.6
baz=31,SNR=12
MPMC **Manual Prospec** 30.98 319 ⇓P P 11 55 34.5 -0.3
baz=31,SNR=12
CTU **Camp Tracy** 31.05 331 eP P 11 55 35.6 +0.3
comp=Z,10nm,0.9s,mb4.6
N16A **Rees Ranch, Co** 31.05 332 ⇑P P 11 55 35.9 +0.6
baz=31
O15A **The Old Anders** 31.07 330 ⇓P P 11 55 36.0 +0.6
baz=31
L19A **Farson** 31.16 336 ⇓P P 11 55 36.4 +0.3
baz=31,SNR=5.8
DUG **Dugway** 31.17 329 ⇑P P 11 55 36.8 +0.4
baz=31
RSSD **Black Hills** 31.17 344 eP P 11 55 36.5 +0.2
RSSD pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
RSSD **Black Hills** 31.17 344 eP P 11 55 36.5 +0.2
comp=Z,5.9nm,0.6s,mb4.5
M17A **Scullys Gap (B** 31.18 333 ⇑P P 11 55 36.5 +0.1
baz=31
BINY **Binghamton** 31.21 24 eP P 11 55 36.5 -0.1
comp=Z,28nm,1.1s,mb4.9
P13A **Bates Ranch, G** 31.23 327 ⇑P P 11 55 37.2 +0.3
baz=31,SNR=12
K20A **Yellowstone Ra** 31.24 337 ⇑P P 11 55 36.7 -0.2
baz=31,SNR=10
BSC **Santa Cruz Isl** 31.25 313 ⇓P P 11 55 37.2 +0.1
baz=31
L18A **Fontenelle, Gr** 31.29 335 ⇓P P 11 55 37.5 +0.2
baz=31,SNR=23
R11A **Troy Canyon, C** 31.31 324 ⇑P P 11 55 38.0 +0.4
baz=31,SNR=14
ARVC **Arvin** 31.31 316 ⇓P P 11 55 37.3 -0.3
baz=31
Q12A **Willow Creek R** 31.37 326 ⇑P P 11 55 38.6 +0.5
baz=31
ISA **Isabella** 31.39 317 ⇑P P 11 55 38.2 -0.1
baz=31
ISA **Isabella** 31.39 317 eP P 11 55 37.9 -0.4
ISA pmax pmax
comp=Z,30nm,1.7s,mb4.8
ISA **Isabella** 31.39 317 eP P 11 55 37.9 -0.4
comp=Z,30nm,1.7s,mb4.8
GRAC **Grapevine Rang** 31.49 320 ⇓P P 11 55 39.6 +0.4
baz=32,SNR=20
N15A **Stansbury Isla** 31.57 330 ⇑P P 11 55 40.3 +0.5
baz=32
K19A **Absolon Red Bu** 31.57 337 ⇑P P 11 55 39.6 -0.2
baz=32,SNR=12
CWC **Cottonwood Cre** 31.59 319 ⇓P P 11 55 40.2 +0.1
baz=32
S10A **Tonopah Range,** 31.61 322 ⇓P P 11 55 40.5 +0.2
baz=32,SNR=20
R10A **Warm Springs** 31.68 323 ⇓P P 11 55 41.5 +0.6
baz=32,SNR=8.3
HWUT **Hardware Ranch** 31.69 332 eP P 11 55 41.2 +0.3
comp=Z,14nm,0.9s,mb4.7

Q11A **Duckwater** 31.69 324 ⇓P P 11 55 41.6 +0.7
baz=32,SNR=6.2
O13A **Hicks Ranch, I** 31.71 328 ⇓P P 11 55 41.9 +0.8
baz=32
P12A **McGill** 31.72 326 ⇑P P 11 55 41.5 +0.3
baz=32,SNR=9.2
L17A **Cokeville** 31.78 334 ⇑P P 11 55 41.5 -0.2
baz=32,SNR=18
BW06 **Boulder Array** 31.80 336 ⇑P P 11 55 41.8 0.0
baz=32,SNR=13
BW06 **Boulder Array** 31.80 336 eP P 11 55 42.2 +0.4
comp=Z,11nm,1.1s,mb4.5
PDAR **Pinedale Array** 31.80 336 P P 11 55 41.4 -0.4
comp=Z,6.0nm,0.8s,mb4.3,baz=138,slow=9.6,SNR=36
PDAR PcP PcP 11 58 31.5 -0.2
comp=Z,1.8nm,1.0s,baz=149,slow=2.1,SNR=4.7
PDAR LR LR 12 09 43.1
comp=Z,299nm,19.1s,baz=158,slow=39
BGU **Big Grassy Mou** 31.84 330 eP P 11 55 42.4 +0.2
comp=Z,9.7nm,0.9s,mb4.5
N14A **Grayback Hills** 31.86 330 ⇑P P 11 55 43.1 +0.7
baz=32,SNR=19
PKM **Peak Mountain** 31.86 315 ⇓P P 11 55 42.0 -0.5
baz=32
K18A **Toltan Ranch,** 31.88 335 ⇑P P 11 55 43.4 +0.9
baz=32,SNR=24
L16A **Fish Haven** 31.96 333 ⇑P P 11 55 43.1 -0.1
baz=32,SNR=18
M15A **Larsen Ranch,** 31.98 331 ⇑P P 11 55 43.7 +0.2
baz=32
TIN **Tinemaha** 32.06 319 ⇑P P 11 55 44.2 0.0
baz=32
Q10A **Clear Creek Ra** 32.10 324 ⇑P P 11 55 45.3 +0.8
baz=32,SNR=13
O12A **Currie** 32.21 327 ⇓P P 11 55 46.0 +0.5
baz=32,SNR=20
SMMC **Simmler** 32.21 315 ⇑P P 11 55 45.4 -0.1
baz=32
P11A **Circle Ranch,** 32.24 325 ⇑P P 11 55 46.3 +0.6
baz=32
RCTC **Rector, Farmer** 32.27 317 ⇑P P 11 55 45.8 -0.2
baz=32
K17A **Gardner Place,** 32.34 334 ⇑P P 11 55 47.0 +0.5
baz=32,SNR=15
J18A **Kendall Valley** 32.35 336 ⇓P P 11 55 46.9 +0.2
baz=32,SNR=20
SADO **Sadowa** 32.37 18 P P 11 55 46.2 -0.5
comp=Z,2.0nm,0.5s,mb4.2,baz=221,slow=9.3,SNR=3.4
SADO **Sadowa** 32.37 18 P P 11 55 46.2 -0.5
N13A **Wendover, West** 32.37 329 ⇑P P 11 55 47.4 +0.5
baz=32,SNR=10
N13A **Wendover, West** 32.37 329 eP P 11 55 48.0 +1.2
comp=Z,21nm,1.0s,mb4.8
L15A **Malad City** 32.38 332 ⇑P P 11 55 47.0 +0.1
baz=32,SNR=26
HVU **Hansel Valley** 32.38 331 eP P 11 55 47.5 +0.6
HVU pmax pmax
comp=Z,18nm,0.9s,mb4.8
HVU **Hansel Valley** 32.38 331 eP P 11 55 47.5 +0.6
comp=Z,18nm,0.9s,mb4.8
AHID **Auburn Hatcher** 32.42 334 eP P 11 55 47.8 +0.4
comp=Z,137nm,1.8s,mb5.4
M14A **Sheep Mountain** 32.43 330 ⇑P P 11 55 48.1 +0.7
baz=32,SNR=27
O11A **Cowboy Ranch,** 32.60 326 ⇑P P 11 55 49.4 +0.6
baz=33
P10A **Eureka** 32.68 325 ⇑P P 11 55 50.3 +0.7
baz=33
K16A **Soda Springs** 32.69 334 ⇓P P 11 55 50.2 +0.6
baz=33,SNR=7.0
I18A **Diamond G Ranc** 32.69 337 ⇓P P 11 55 50.2 +0.6
baz=33,SNR=15
M13A **Montello** 32.72 329 ⇑P P 11 55 50.2 +0.3
baz=33,SNR=27
M13A **Montello** 32.72 329 eP P 11 55 50.7 +0.8
comp=Z,34nm,1.1s,mb5.1
J17A **Brown Place, J** 32.76 335 ⇑P P 11 55 50.8 +0.6
baz=33,SNR=47
N12A **Clover Valley,** 32.79 328 ⇓P P 11 55 51.2 +0.6
baz=33,SNR=5.4
N12A **Clover Valley,** 32.79 328 eP P 11 55 51.0 +0.5
comp=Z,16nm,1.3s,mb4.7
L14A **Malta** 32.79 331 ⇑P P 11 55 51.1 +0.6
baz=33,SNR=31
MLAC **Mammoth Lakes** 32.80 320 ⇓P P 11 55 50.8 +0.1
baz=33
REDW **Red Top Meadow** 32.81 335 eP P 11 55 51.4 +0.7
comp=Z,108nm,1.0s,mb5.6
SNOW **Snow King Moun** 32.86 335 eP P 11 55 52.0 +1.0
comp=Z,152nm,0.9s,mb5.8
LOHW **Long Hollow** 32.92 336 eP P 11 55 52.4 +0.8
comp=Z,43nm,0.9s,mb5.3
TPAW **Teton Pass** 32.96 335 eP P 11 55 52.7 +0.7
comp=Z,88nm,1.1s,mb5.5
NVAR **Mina Array Bea** 32.97 321 P P 11 55 52.6 +0.5
comp=Z,15nm,0.7s,mb4.9,baz=140,slow=9.2,SNR=169
NVAR PcP PcP 11 58 35.8 +0.8
comp=Z,3.2nm,0.9s,baz=142,slow=3.8,SNR=5.7
K15A **Arbon** 32.98 333 ⇑P P 11 55 52.4 +0.3
baz=33,SNR=13
RRI2 **Red Ridge** 32.99 335 eP P 11 55 53.4 +1.2
comp=Z,53nm,1.0s,mb5.3
J16A **Bone** 33.06 334 ⇓P P 11 55 53.0 +0.2
baz=33,SNR=12
N11A **Elko Archery C** 33.13 327 ⇓P P 11 55 54.1 +0.6
baz=33
M12A **Wells** 33.14 329 ⇑P P 11 55 54.1 +0.5
baz=33,SNR=28
K14A **Jones Ranch, D** 33.16 332 ⇑P P 11 55 53.6 -0.1
baz=33,SNR=8.8
I17A **Pilgrim Ck.** 33.17 336 ⇑P P 11 55 54.5 +0.7
baz=33
O10A **Cortez Mining,** 33.17 326 ⇓P P 11 55 54.3 +0.4
baz=33
L13A **Double Diamond** 33.17 330 ⇓P P 11 55 53.9 +0.1
baz=33
IMW **Indian Meadow** 33.29 336 eP P 11 55 55.5 +0.7
comp=Z,22nm,0.8s,mb5.0
NCB **Newcomb** 33.40 24 eP P 11 55 55.1 -0.7
comp=Z,13nm,0.8s,mb4.8
EYMN **Ely** 33.45 1 eP P 11 55 55.2 -1.0
comp=Z,6.9nm,0.8s,mb4.5
N10A **Dunphy** 33.47 326 ⇑P P 11 55 56.7 +0.2
baz=34
I16A **Newdale** 33.50 335 ⇑P P 11 55 57.2 +0.6
baz=34,SNR=8.8
J15A **Blackfoot** 33.51 333 ⇑P P 11 55 57.0 +0.3
baz=34,SNR=13
H17A **Grant Village** 33.57 336 ⇑P P 11 55 58.1 +0.9
baz=34,SNR=8.1
M11A **Holland Ranch,** 33.60 328 ⇑P P 11 55 58.1 +0.5
baz=34,SNR=12
LKWY **Lake** 33.64 337 eP P 11 55 59.6 +1.7
LKWY pmax pmax
comp=Z,189nm,2.1s,mb5.5
LKWY **Lake** 33.64 337 eP P 11 55 59.6 +1.7
comp=Z,189nm,2.1s,mb5.5
BMN **Battle Mountai** 33.66 325 eP P 11 55 58.8 +0.7
BMN pmax pmax
comp=Z,15nm,0.8s,mb4.9
BMN **Battle Mountai** 33.66 325 eP P 11 55 58.8 +0.6
comp=Z,15nm,0.8s,mb4.9
K13A **Stover Farm, H** 33.67 331 ⇓P P 11 55 57.8 -0.3
baz=34
RLMT **Red Lodge** 33.70 339 ⇑P P 11 55 58.5 +0.1
baz=34,SNR=7.8
RLMT **Red Lodge** 33.70 339 eP P 11 55 58.9 +0.5
comp=Z,47nm,1.6s,mb5.1
YFT **Old Faithful** 33.72 336 eP P 11 56 01.0 +2.4
comp=Z,44nm,1.1s,mb5.2
L12A **House Creek Ra** 33.73 329 ⇓P P 11 55 58.7 -0.1
baz=34,SNR=7.2
LONY **Lake Ozonia** 33.80 23 eP P 11 55 58.0 -1.3
comp=Z,16nm,0.9s,mb4.8
AGMN **Agassiz Nation** 33.90 356 eP P 11 55 58.9 -1.1
comp=Z,14nm,0.7s,mb4.9
J14A **Carey** 33.93 332 ⇑P P 11 56 00.9 +0.5
baz=34,SNR=9.1
YMR **Madison River** 33.95 336 eP P 11 56 01.9 +1.3
comp=Z,64nm,1.0s,mb5.4
G18A **Lazy EL Ranch,** 33.98 338 ⇑P P 11 56 00.7 -0.1
baz=34,SNR=13
SAO **San Andreas Ge** 33.99 316 eP P 11 56 00.0 -1.0
SAO pmax pmax
comp=Z,4.0nm,1.0s,mb4.2
SAO **San Andreas Ge** 33.99 316 eP P 11 55 60.0 -1.0
comp=Z,3.9nm,1.0s,mb4.2
I15A **Monteview** 34.02 334 ⇓P P 11 56 01.6 +0.4

baz=34
CMB **Columbia Colle** 34.02 319 eP P 11 56 00.8 -0.5
CMB pmax pmax
comp=Z,10.0nm,1.2s,mb4.5
CMB **Columbia Colle** 34.02 319 eP P 11 56 00.8 -0.5
comp=Z,9.6nm,1.2s,mb4.5
K12A **Draper Farm, C** 34.05 330 ⇓P P 11 56 01.5 0.0
baz=34,SNR=8.7
M10A **I.L. Ranch, Tu** 34.06 327 ⇓P P 11 56 02.0 +0.5
baz=34,SNR=10
H16A **Russell Place,** 34.09 336 ⇓P P 11 56 02.2 +0.5
baz=34,SNR=21
L11A **Cat Creek Ranc** 34.12 329 ⇓P P 11 56 02.2 +0.1
baz=34,SNR=30
LAO **LASA Array** 34.14 343 eP P 11 56 01.9 -0.2
comp=Z,39nm,1.5s,mb5.0
QLMT **Earthquake Lak** 34.27 336 eP P 11 56 05.3 +2.0
J13A **Cove Ranch, Pi** 34.29 332 ⇓P P 11 56 03.6 +0.1
baz=34,SNR=11
FRNY **Flat Rock** 34.37 24 eP P 11 56 03.6 -0.6
comp=Z,138nm,2.5s,mb5.3
I14A **Mackay** 34.38 333 ⇑P P 11 56 04.7 +0.4
baz=34,SNR=19
WCN **Washoe City** 34.40 321 ⇑P P 11 56 04.7 +0.1
baz=34,SNR=8.1
G17A **Pierce Place,** 34.41 337 ⇑P P 11 56 05.6 +1.0
baz=34
L10A **Juniper Basin** 34.42 328 ⇑P P 11 56 05.0 +0.3
baz=34,SNR=7.3
GCMT **Greycliff** 34.42 339 eP P 11 56 04.3 -0.3
comp=Z,15nm,0.9s,mb4.8
PAHR **Pah Rah Range** 34.43 322 eP P 11 56 05.8 +1.0
comp=Z,13nm,1.0s,mb4.7
HLID **Hailey** 34.52 332 ⇑P P 11 56 06.0 +0.5
baz=34,SNR=21
HLID **Hailey** 34.52 332 eP P 11 56 06.0 +0.4
comp=Z,14nm,0.9s,mb4.8
F18A **Big Timber** 34.54 339 ⇓P P 11 56 05.7 0.0
baz=35,SNR=34
J12A **Stokes Ranch,** 34.60 331 ⇑P P 11 56 06.1 -0.2
baz=35
I13A **Wildhorse Cree** 34.66 332 ⇓P P 11 56 07.0 +0.2
baz=35,SNR=18
K11A **Parker Ranch,** 34.70 329 ⇓P P 11 56 07.0 -0.1
baz=35,SNR=8.4
G16A **Moss Hill, Enn** 34.74 336 ⇑P P 11 56 07.9 +0.5
baz=35,SNR=24
MCMT **McKenzie Canyo** 34.84 335 eP P 11 56 09.5 +1.3
comp=Z,31nm,1.0s,mb5.1
F17A **Fitzpatrick Pl** 34.88 338 ⇑P P 11 56 09.2 +0.6
baz=35,SNR=77
H14A **Leadore** 34.89 334 ⇑P P 11 56 09.3 +0.6
baz=35,SNR=24
G15A **Dillon** 34.97 335 ⇓P P 11 56 10.2 +0.8
baz=35,SNR=36
BOZ **Bozeman (W)** 35.02 337 ⇑P P 11 56 10.1 +0.2
baz=35,SNR=30
BOZ **Bozeman (W)** 35.02 337 eP P 11 56 10.3 +0.5
BOZ pmax pmax
comp=Z,8.0nm,0.8s,mb4.6
BOZ **Bozeman (W)** 35.02 337 eP P 11 56 10.3 +0.4
comp=Z,7.7nm,0.8s,mb4.6
I12A **Atlanta** 35.04 331 ⇑P P 11 56 10.4 +0.4
baz=35,SNR=28
MFID **Camas Ranch** 35.08 330 ⇑P P 11 56 10.4 0.0
baz=35
BEKR **Beckworth** 35.11 322 ⇓P P 11 56 11.1 +0.4
baz=35,SNR=20
K10A **MacKenzie Ranc** 35.13 328 ⇑P P 11 56 11.0 +0.2
baz=35
F16A **Kennard Place,** 35.14 337 ⇓P P 11 56 11.7 +0.9
baz=35
DLMT **Dillon** 35.17 335 eP P 11 56 12.1 +0.9
comp=Z,41nm,0.9s,mb5.3
E18A **Harlowton** 35.18 339 ⇑P P 11 56 11.2 0.0
baz=35,SNR=17
H13A **Challis** 35.23 333 ⇑P P 11 56 12.3 +0.6
baz=35,SNR=49
DGMT **Dagmar** 35.28 347 ⇑P P 11 56 11.6 -0.4
baz=35,SNR=6.7
DGMT **Dagmar** 35.28 347 eP P 11 56 12.0 0.0
comp=Z,26nm,0.8s,mb5.1
E17A **Martinsdale** 35.42 338 ⇓P P 11 56 13.5 +0.3
baz=35,SNR=16
H12A **Diamond D Ranc** 35.49 332 ⇓P P 11 56 14.4 +0.6
baz=36,SNR=44
LRM **Limekiln Ridge** 35.49 336 eP P 11 56 14.6 +0.8
I11A **Placerville** 35.51 330 ⇓P P 11 56 14.6 +0.5
baz=36,SNR=50
F15A **Butte** 35.52 336 ⇑P P 11 56 14.4 +0.3
baz=36,SNR=37
J10A **Berg Farm, Mel** 35.55 329 ⇓P P 11 56 14.4 0.0
baz=36
G13A **Cobalt** 35.64 333 ⇓P P 11 56 15.4 +0.3
baz=36,SNR=14
D18A **Linhart Farms,** 35.69 340 ⇑P P 11 56 15.6 +0.1
baz=36,SNR=15
E16A **East Helena** 35.78 337 ⇑P P 11 56 16.6 +0.2
baz=36,SNR=37
WVOR **Wild Horse Val** 35.81 326 eP P 11 56 16.6 0.0
WVOR pmax pmax
comp=Z,32nm,1.3s,mb5.1
WVOR **Wild Horse Val** 35.81 326 eP P 11 56 16.6 -0.1
comp=Z,32nm,1.3s,mb5.1
ULM **Lac du Bonnet** 35.84 356 P P 11 56 15.0 -1.8
comp=Z,9.5nm,0.7s,mb4.8,baz=179,slow=8.8,SNR=7.9
ULM PcP PcP 11 58 42.3 -0.6
comp=Z,7.3nm,0.7s,baz=172,slow=3.7,SNR=4.2
ULM LR LR 12 14 49.1
comp=Z,491nm,19.3s,baz=348,slow=43
ULM **Lac du Bonnet** 35.84 356 eP P 11 56 15.4 -1.4
F14A **Wisdom** 35.85 335 ⇓P P 11 56 17.2 +0.3
baz=36,SNR=5.9
D17A **Six Diamond Ra** 35.95 339 ⇓P P 11 56 18.0 +0.2
baz=36,SNR=34
HRY **Holter Researc** 35.99 337 eP P 11 56 19.0 +0.9
I10A **Payette** 36.05 330 ⇓P P 11 56 18.9 +0.3
baz=36
E15A **Deer Lodge** 36.06 336 ⇑P P 11 56 18.9 +0.2
baz=36,SNR=14
H11A **Donnelly** 36.14 331 ⇓P P 11 56 19.2 -0.2
baz=36,SNR=19
D16A **Dana Ranch, Ca** 36.16 338 ⇑P P 11 56 19.7 +0.1
baz=36,SNR=16
F13A **Darby** 36.23 334 ⇑P P 11 56 20.4 +0.1
baz=36
LBCM **Butte Creek Ri** 36.31 322 P P 11 56 20.7 -0.2
J08A **Circle Bar Ran** 36.37 328 ⇓P P 11 56 21.6 +0.2
baz=36,SNR=17
MOD **Modoc** 36.37 324 eP P 11 56 21.6 +0.1
E14A **Clinton** 36.39 335 ⇓P P 11 56 21.2 -0.3
baz=36
C17A **Wharram Farm,** 36.39 339 ⇑P P 11 56 21.7 +0.2
baz=36,SNR=22
H10A **Noah's Angus R** 36.40 331 ⇓P P 11 56 21.0 -0.6
baz=36,SNR=9.4
EGMT **Eagleton** 36.40 341 ⇓P P 11 56 21.5 0.0
baz=36,SNR=20
EGMT **Eagleton** 36.40 341 eP P 11 56 21.9 +0.3
comp=Z,55nm,1.1s,mb5.4
I09A **Lost Marbles R** 36.43 329 ⇓P P 11 56 21.8 -0.1
baz=36,SNR=14
F12A **Elk City** 36.61 333 ⇑P P 11 56 23.4 0.0
baz=37,SNR=51
E13A **Victor** 36.70 335 ⇓P P 11 56 24.2 0.0
baz=37,SNR=31
CHMT **Chamberlain Mo** 36.70 336 eP P 11 56 24.2 +0.1
B18A **Beardsley Farm** 36.73 341 ⇓P P 11 56 24.7 +0.3
baz=37,SNR=16
G11A **Walters Elk Ra** 36.78 332 ⇑P P 11 56 24.6 -0.3
baz=37,SNR=25
BMO **Blue Mountains** 36.86 330 eP P 11 56 25.2 -0.4
comp=Z,11nm,1.2s,mb4.7
WDC **Whiskeytown Da** 36.87 321 eP P 11 56 23.5 -2.2
WDC pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
WDC **Whiskeytown Da** 36.87 321 eP P 11 56 23.5 -2.3
comp=Z,4.1nm,0.9s,mb4.4
C16A **Fuhringer Ranc** 36.88 338 ⇓P P 11 56 26.1 +0.4
baz=37,SNR=31
MSO **Missoula** 36.91 335 eP P 11 56 26.0 +0.1
comp=Z,22nm,1.0s,mb5.0
D14A **Greenough** 36.94 336 ⇑P P 11 56 25.8 -0.4
baz=37,SNR=19
B17A **L&G Farms, Che** 36.98 340 ⇓P P 11 56 26.2 -0.3
baz=37,SNR=11
KCPM **Cahto Peak** 37.01 319 eP P 11 56 27.9 +1.0
comp=Z,49nm,2.2s,mb5.0

SLMT **Seeley Lake** 37.07 336 *e*P P 11 56 27.2 -0.1
G10A **Bishop Farm, J** 37.10 331 ⇊P P 11 56 27.0 -0.6
baz=37,SNR=8.8
F11A **Grangeville** 37.11 332 ⇑P P 11 56 26.7 -0.9
baz=37
C15A **Salmond Ranch,** 37.17 338 ⇊P P 11 56 28.4 +0.2
baz=37,SNR=16
A18A **Metzger Ranch,** 37.22 341 ⇑P P 11 56 28.6 +0.1
baz=37,SNR=26
K05A **Summer Lake** 37.24 325 ⇑P P 11 56 28.9 +0.1
baz=37
E12A **Beaver Dam Sad** 37.26 334 ⇑P P 11 56 28.6 -0.3
baz=37
H08A **Prairie City** 37.29 329 ⇑P P 11 56 28.8 -0.4
baz=37,SNR=13
D13A **Huson** 37.33 335 ⇊P P 11 56 29.1 -0.5
baz=37,SNR=27
B16A **M & M Farms, S** 37.39 339 ⇊P P 11 56 30.1 +0.2
baz=37,SNR=10
G09A **Cove** 37.40 330 ⇑P P 11 56 29.3 -0.8
baz=37,SNR=20
SWMT **Swartz Lake** 37.48 336 *e*P P 11 56 30.8 0.0
C14A **Swan Lake** 37.60 337 ⇊P P 11 56 31.3 -0.4
baz=38
B15A **Bradely Ranch,** 37.61 338 ⇊P P 11 56 31.6 -0.2
baz=38,SNR=11
F10A **Beach Ranch, E** 37.66 332 ⇑P P 11 56 31.7 -0.6
baz=38,SNR=28
YBH **Yreka Blue Hor** 37.66 322 *e*P P 11 56 30.5 -1.9
YBH pmax pmax
comp=Z,3.0nm,0.7s
YBH **Yreka Blue Hor** 37.66 322 *e*P P 11 56 30.5 -1.9
comp=Z,3.4nm,0.7s,mb4.3
D12A **Red Ives Fores** 37.67 334 ⇑P P 11 56 31.7 -0.6
baz=38
KHMM **Horse Mountain** 37.78 320 *e*P P 11 56 33.1 -0.3
comp=Z,18nm,0.9s,mb4.9
YBMT **Yellow Bay** 37.78 336 *e*P P 11 56 33.9 +0.6
JTMT **Jette** 37.79 336 *e*P P 11 56 33.5 +0.2
C13A **Hot Springs** 37.85 336 ⇑P P 11 56 33.7 -0.2
baz=38,SNR=9.2
B14A **Marquette Ranc** 37.91 338 ⇑P P 11 56 34.5 +0.1
baz=38
G08A **Pilot Rock** 37.98 329 ⇑P P 11 56 34.3 -0.8
baz=38
BSMT **Bassoo Peak** 38.07 336 *e*P P 11 56 36.0 +0.2
LNOR **Lincton Mounta** 38.08 331 *e*P P 11 56 39.6 +3.8
LNOR e*P*P pP 11 56 48.9 -3.1
A15A **Johnson Ranch,** 38.23 339 ⇊P P 11 56 37.4 +0.4
baz=38,SNR=30
C12B **Naegeli Ranch,** 38.24 335 ⇑P P 11 56 37.1 -0.1
baz=38
BBOR **Butler Butte** 38.36 324 P P 11 56 37.2 -1.1
B13A **Whitefish** 38.37 336 ⇑P P 11 56 38.7 +0.4
baz=38,SNR=14
A14A **Double T Ranch** 38.47 338 ⇊P P 11 56 39.3 +0.2
baz=38,SNR=26
C11A **Tepee Creek (N** 38.66 334 ⇊P P 11 56 40.5 -0.2
baz=39
WALA **Waterton Lakes** 38.72 338 *e*P P 11 56 41.4 +0.2
comp=Z,1.0nm,1.4s,mb3.5
A13A **Flathead Natio** 38.81 337 ⇊P P 11 56 42.2 +0.3
baz=39
B12A **Libby** 38.89 336 ⇑P P 11 56 43.1 +0.5
baz=39
LPAZ **La Paz** 38.94 141 P P 11 56 42.1 -1.2
comp=Z,1.6nm,0.7s,mb4.0,baz=332,slow=7.7,SNR=8.1
LPAZ LR LR 12 11 18.6
comp=Z,305nm,20.2s,baz=320,slow=34
LPAZ **La Paz** 38.94 141 *e*P P 11 56 43.3 -0.1
LPAZ pmax pmax
comp=Z,6.0nm,1.3s
LPAZ **La Paz** 38.94 141 *e*P P 11 56 43.3 -0.1
comp=Z,6.4nm,1.3s,mb4.3
H04A **Detroit Lake** 39.23 326 ⇑P P 11 56 45.3 -0.2
baz=39,SNR=17
A12A **Yaak River Ran** 39.29 336 ⇑P P 11 56 46.5 +0.5
baz=39
KEBM **Edson Butte** 39.31 322 *e*P P 11 56 47.0 +0.7
comp=Z,105nm,1.2s,mb5.5
E07A **Sunnyside** 39.33 330 ⇑P P 11 56 46.7 +0.4
baz=39
NEW **Newport** 39.36 334 *e*P P 11 56 45.9 -0.6
HOOD **Mount Hood Mea** 39.37 327 *e*P P 11 56 46.6 0.0
comp=Z,155nm,1.1s,mb5.8
OD2 **Odessa Site #2** 39.40 332 P P 11 56 46.9 +0.1
VLL **Laurance Lake** 39.48 328 P P 11 56 49.4 +1.8
NAC **Naches** 39.92 330 P P 11 56 51.8 +0.5
F04A **Amboy** 40.18 328 ⇑P P 11 56 52.8 -0.6
baz=40
B08A **Colville Reser** 40.40 332 ⇊P P 11 56 54.8 -0.3
baz=40
LON **Longmire** 40.42 329 *e*P P 11 56 55.5 +0.1
LON pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
LON **Longmire** 40.42 329 *e*P P 11 56 55.5 +0.2
comp=Z,7.5nm,0.8s,mb4.6
FFC **Flin Flon** 40.88 352 *i*P P 11 56 59.0 0.0
FFC **Flin Flon** 40.88 352 *e*P P 11 56 58.5 -0.6
comp=Z,23nm,1.0s,mb5.0
JCW **Jim Creek** 41.48 330 *e*P P 11 57 03.4 -0.6
NLWA **Neilton Lookou** 41.90 328 *e*P P 11 57 08.6 +1.2
EDM **Edmonton** 42.05 341 *e*P P 11 57 08.5 -0.1
A05A **Maple Falls** 42.12 331 ⇊P P 11 57 08.8 -0.5
baz=42
FCC **Fort Churchill** 44.29 359 *e*P P 11 57 26.7 +0.1
SCHQ **Schefferville** 45.06 21 P P 11 57 31.6 -1.2
comp=Z,8.4nm,0.9s,mb4.5,baz=214,slow=8.3,SNR=5.6
SCHQ PcP PcP 11 59 13.3 +0.8
comp=Z,6.5nm,0.6s,baz=218,slow=3.4,SNR=7.8
SCHQ LR LR 12 18 28.6
comp=Z,2μm,18.7s,baz=237,slow=39
SCHQ **Schefferville** 45.06 21 *e*P P 11 57 31.2 -1.6
YKA **Yellowknife Ar** 50.49 347 P P 11 58 14.2 -0.5
comp=Z,31nm,0.7s,mb5.3,baz=149,slow=7.6,SNR=86
YKA PcP PcP 11 59 31.4 -0.4
comp=Z,1.0nm,0.7s,baz=156,slow=3.8,SNR=4.6
YKA **Yellowknife Ar** 50.49 347 P P 11 58 14.2 -0.5
YKA PcP PcP 11 59 31.4 -0.4
CFAA **Coronel Fontan** 51.39 153 LR LR 12 14 50.4
comp=Z,27nm,21.5s,baz=150,slow=30
CRAG **Craig** 51.47 332 *e*P P 11 58 22.7 +0.5
comp=Z,50nm,1.5s,mb5.3
DLBC **Dease Lake** 52.03 336 *e*P P 11 58 27.7 +1.4
TAOE **Nuku Hiva Isla** 52.48 247 *e*LR LR 12 13 19.0
comp=Z,290nm,25.6s
CPUP **Villa Florida** 53.09 140 P P 11 58 32.5 -2.1
comp=Z,1.4nm,0.6s,mb4.2,baz=310,slow=11,SNR=6.8
CPUP LR LR 12 21 07.6
comp=Z,168nm,19.6s,baz=322,slow=36
CPUP **Villa Florida** 53.09 140 P P 11 58 32.5 -2.1
CPUP LR LR 12 21 07.6
SKAG **Skagway** 54.81 335 *e*P P 11 58 47.0 +0.3
comp=Z,47nm,1.9s,mb5.2
RKT **Rikitea** 55.74 229 *e*LR LR 12 14 55.8
comp=Z,554nm,25.8s,baz=56
PNL **Peninsula** 56.64 334 *e*P P 11 59 00.6 +0.8
comp=Z,11nm,0.9s,mb4.9
PLCA **Paso Flores** 58.56 160 P P 11 59 13.1 -0.3
comp=Z,8.2nm,1.1s,mb4.7,baz=304,slow=5.8,SNR=3.8
PLCA **Paso Flores** 58.56 160 P P 11 59 13.1 -0.3
DAWY **Dawson** 59.07 338 *e*P P 11 59 16.4 -0.3
BMRM **Bremner River** 59.53 334 *e*P P 11 59 20.4 +0.5
comp=Z,14nm,0.9s,mb5.0
INK **Inuvik** 59.88 344 *e*P P 11 59 22.0 -0.2
INK pmax pmax
comp=Z,54nm,1.1s
INK **Inuvik** 59.88 344 *e*P P 11 59 22.0 -0.2
comp=Z,54nm,1.1s,mb5.5
EGAK **Eagle** 60.11 338 *e*P P 11 59 23.0 -0.8
comp=Z,22nm,1.3s,mb5.0
DIV **Divide** 60.11 333 *e*P P 11 59 24.5 +0.6
comp=Z,6.5nm,0.9s,mb4.7
MENT **Mentasta** 60.11 336 *e*P P 11 59 23.3 -0.6
RES **Resolute Bay** 60.29 359 *e*P P 11 59 23.9 -1.0
RES pmax pmax
comp=Z,17nm,0.8s,mb5.1
RES **Resolute Bay** 60.29 359 *e*P P 11 59 23.9 -1.0
comp=Z,17nm,0.8s,mb5.1
PAX **Paxson** 60.83 335 *e*P P 11 59 28.8 0.0
PAX pmax pmax
comp=Z,19nm,0.9s,mb5.1
PAX **Paxson** 60.83 335 *e*P P 11 59 28.8 0.0
comp=Z,19nm,0.9s,mb5.1
SEW **Seward** 61.33 331 *e*P P 11 59 31.9 -0.4
comp=Z,16nm,1.2s,mb4.9
PMR **Palmer** 61.77 333 *e*P P 11 59 34.7 -0.5
PMR pmax pmax
comp=Z,14nm,1.0s,mb5.0
PMR **Palmer** 61.77 333 *e*P P 11 59 34.7 -0.5
comp=Z,14nm,1.0s,mb4.9
RC01 **Rabbit Creek A** 61.84 332 *e*P P 11 59 35.6 0.0
comp=Z,14nm,0.8s,mb5.1
KDAK **Kodiak Island** 62.05 328 *e*P P 11 59 37.0 -0.1
KDAK pmax pmax
comp=Z,28nm,1.6s,mb5.0
KDAK **Kodiak Island** 62.05 328 *e*P P 11 59 37.0 -0.1
comp=Z,28nm,1.6s,mb5.0
OHAK **Old Harbor** 62.24 328 *e*P P 11 59 38.3 0.0
comp=Z,70nm,1.8s,mb5.4
MCK **McKinley** 62.57 335 *e*P P 11 59 39.9 -0.5
MCK pmax pmax
comp=Z,41nm,1.3s,mb5.2
MCK **McKinley** 62.57 335 *e*P P 11 59 39.9 -0.6
comp=Z,41nm,1.3s,mb5.2
COLA **College** 62.64 337 *e*P P 11 59 39.9 -1.0
COLA pmax pmax
comp=Z,13nm,0.8s,mb4.9
COLA **College** 62.64 337 *e*P P 11 59 39.9 -1.0
comp=Z,13nm,0.8s,mb4.9
RSO **Redoubt South** 63.00 331 *e*P P 11 59 43.0 -0.4
TRF **Thorofare Moun** 63.01 335 *e*P P 11 59 43.0 -0.3
comp=Z,36nm,1.0s,mb5.3
BPAW **Bear Paw Mtn.** 63.55 335 *e*P P 11 59 46.2 -0.7
comp=Z,85nm,1.9s,mb5.2
PPLA **Purkeypile** 63.59 334 *e*P P 11 59 46.5 -0.7
comp=Z,21nm,1.1s,mb4.9
SVW2 **Sparrevohn** 64.52 331 *e*P P 11 59 52.3 -1.0
PPT **Papeete** 64.52 242 *e*LR LR 12 18 44.1
comp=Z,357nm,26.2s,baz=58
PPT **Papeete** 64.52 242 LR LR 12 22 09.5
comp=Z,228nm,19.1s,baz=321,slow=31
COLD **Coldfoot** 64.53 339 *e*P P 11 59 53.7 +0.4
comp=Z,56nm,1.9s,mb5.1
CHGN **Chignik** 64.73 326 *e*P P 11 59 53.8 -1.0
TTA **Tatalina** 65.26 333 *e*P P 11 59 57.0 -1.1
TTA pmax pmax
comp=Z,14nm,0.8s,mb4.8
TTA **Tatalina** 65.26 333 *e*P P 11 59 57.0 -1.1
comp=Z,14nm,0.8s,mb4.8
SUMG **Summit** 66.01 16 *e*P P 12 00 02.6 -0.2
comp=Z,5.8nm,0.7s,mb4.5
TBI **Tubuai** 67.05 237 *e*LR LR 12 20 03.4
comp=Z,356nm,29.2s,baz=59
DAG **Danmarks Havn** 72.41 13⇑*i*P P 12 00 41.8 -0.6
comp=Z,2.1nm,0.5s,mb4.2
PMAFR **Mafra** 75.98 53 *e*LR LR 12 25 25.5
comp=Z,184nm,20.0s
PFVI **Vila Bisbo** 76.58 55 *e*LR LR 12 25 48.6
comp=Z,267nm,20.0s
PVIS **Viseu** 76.82 51 *e*P P 12 01 07.5 -1.0
comp=Z,21nm,2.0s,mb4.5
EVO **Evora** 77.03 53 *e*P P 12 01 08.2 -1.5
comp=Z,16nm,0.9s,mb4.5
EVO *e*MLR MLR
comp=Z,353nm,23.0s
MTE **Manteigas** 77.12 51 *e*P P 12 01 08.6 -1.6
comp=Z,24nm,1.7s,mb4.6
MTE **Manteigas** 77.12 51 *e*LR LR 12 25 20.0
comp=Z,273nm,20.0s
PCVE **Castro Verde** 77.13 54 *e*LR LR 12 28 15.0
comp=Z,202nm,22.0s
PCBR **Castelo Branco** 77.25 52 *e*P P 12 01 09.9 -1.1
comp=Z,25nm,2.3s,mb4.5
PBDV **Barranco-do-Ve** 77.28 55 *e*LR LR 12 26 11.3
comp=Z,211nm,20.0s
PESTR **Estremoz** 77.31 53 *e*LR LR 12 26 20.0
comp=Z,178nm,20.0s
PMRV **Marv??o** 77.38 52 *e*P P 12 01 10.4 -1.3
comp=Z,17nm,2.1s,mb4.4
PMRV **Marv??o** 77.38 52 *e*LR LR 12 26 15.0
comp=Z,238nm,20.0s
MVO **Moncorvo** 77.40 50 *e*P P 12 01 10.8 -1.0
comp=Z,18nm,1.4s,mb4.6
MVO **Moncorvo** 77.40 50 *e*LR LR 12 28 26.1
comp=Z,250nm,18.0s
PVAQ **Vaqueiros** 77.42 54 *e*P P 12 01 11.8 -0.2
comp=Z,29nm,1.9s,mb4.7
PVAQ **Vaqueiros** 77.42 54 *e*LR LR 12 26 43.4
comp=Z,225nm,20.0s
PBAR **Barrancos** 77.83 54 *e*P P 12 01 13.4 -0.9
comp=Z,19nm,1.5s,mb4.6
PBAR **Barrancos** 77.83 54 *e*LR LR 12 26 04.9
comp=Z,184nm,22.0s
ESK **Eskdalemuir** 77.98 36 *i*P P 12 01 14.7 0.0
ESK **Eskdalemuir** 77.98 36 *e*P P 12 01 12.9 -1.8
comp=Z,7.4nm,0.6s,mb4.6
ROSF **Rostrenen** 78.97 43 *e*P P 12 01 18.9 -1.4
comp=Z,102nm,1.8s,mb5.0
ROSF **Rostrenen** 78.97 43 *e*P P 12 01 18.9 -1.4
ROSF pmax pmax
comp=Z,51nm,1.8s,mb5.0
ROSF **Rostrenen** 78.97 43 *e*P P 12 01 18.9 -1.4
comp=Z,51nm,1.8s,mb5.0
QUIF **Quistinic** 79.11 43 *e*P P 12 01 20.0 -1.1
comp=Z,43nm,1.2s,mb4.8
QUIF **Quistinic** 79.11 43 *e*P P 12 01 20.0 -1.1
QUIF pmax pmax
comp=Z,21nm,1.2s,mb4.8
QUIF **Quistinic** 79.11 43 *e*P P 12 01 20.0 -1.1
comp=Z,21nm,1.2s,mb4.8
SGMF **Saint Gilles** 79.46 43 *e*P P 12 01 21.5 -1.5
SPITS **Spitsbergen Ar** 79.81 11 LR LR 12 39 45.3
comp=Z,515nm,19.1s,baz=280,slow=38
ESDC **Sonseca Array** 79.95 52 P P 12 01 25.3 -0.6
comp=Z,2.4nm,0.6s,mb4.2,baz=290,slow=6.0,SNR=14
ESDC **Sonseca Array** 79.95 52 P P 12 01 25.3 -0.6
GRR **Gorron** 80.55 42 *e*P P 12 01 27.8 -1.1
comp=Z,19nm,0.7s,mb4.7
GRR **Gorron** 80.55 42 *e*P P 12 01 27.8 -1.1
GRR pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
GRR **Gorron** 80.55 42 *e*P P 12 01 27.8 -1.1
comp=Z,9.7nm,0.7s,mb4.7
FLN **La Foliniere** 80.72 42 *e*P P 12 01 28.9 -0.9
comp=Z,36nm,1.1s,mb4.8
FLN *e*MLR MLR
comp=Z,396nm,21.5s
FLN **La Foliniere** 80.72 42 *e*P P 12 01 28.9 -0.9
FLN pmax pmax
comp=Z,18nm,1.1s,mb4.8
FLN MLR MLR
comp=Z,400nm,21.5s
FLN **La Foliniere** 80.72 42 *e*P P 12 01 28.9 -0.9
comp=Z,18nm,1.1s,mb4.8
FLN LR LR
comp=Z,400nm,21.5s
BILL **Bilibino** 80.85 338*c*i*P P 12 01 30.4 +0.3
BILL *i* 12 01 35.6
BILL *i* 12 04 35.3
BILL pmax pmax
comp=Z,48nm,1.7s,mb5.0
BILL **Bilibino** 80.85 338 *e*P P 12 01 29.4 -0.6
comp=Z,30nm,1.0s,mb5.1
LDF **La Druitiere** 80.99 42 *e*P P 12 01 30.3 -0.9
comp=Z,73nm,1.4s,mb5.0
LDF **La Druitiere** 80.99 42 *e*P P 12 01 30.3 -0.9
LDF pmax pmax
comp=Z,37nm,1.4s,mb5.0
LDF **La Druitiere** 80.99 42 *e*P P 12 01 30.3 -0.9
comp=Z,36nm,1.4s,mb5.0
SJPF **Ste Jean** 81.33 48 *e*P P 12 01 32.6 -0.5
comp=Z,12nm,0.8s,mb4.5
SJPF **Ste Jean** 81.33 48 *e*P P 12 01 32.6 -0.5
SJPF pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
SJPF **Ste Jean** 81.33 48 *e*P P 12 01 32.6 -0.5
comp=Z,5.8nm,0.8s,mb4.5
MFF **Saint Martin d** 81.37 44 *e*P P 12 01 32.2 -1.1
comp=Z,7.5nm,0.8s,mb4.3
MFF **Saint Martin d** 81.37 44 *e*P P 12 01 32.2 -1.1
MFF pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
MFF **Saint Martin d** 81.37 44 *e*P P 12 01 32.2 -1.1
comp=Z,3.8nm,0.8s,mb4.3
ETSF **Etsaut** 81.85 48 *e*P P 12 01 35.3 -0.6
comp=Z,6.6nm,0.7s,mb4.3
ETSF **Etsaut** 81.85 48 *e*P P 12 01 35.3 -0.6
ETSF pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
ETSF **Etsaut** 81.85 48 *e*P P 12 01 35.3 -0.6
comp=Z,3.3nm,0.7s,mb4.3
LFF **La Frestale** 82.33 46 *e*P P 12 01 37.4 -0.9
comp=Z,17nm,0.8s,mb4.6
LFF **La Frestale** 82.33 46 *e*P P 12 01 37.4 -0.9
LFF pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
LFF **La Frestale** 82.33 46 *e*P P 12 01 37.4 -0.9
comp=Z,8.6nm,0.8s,mb4.6
EPF **Esparros** 82.46 48 *e*P P 12 01 38.4 -0.7
comp=Z,13nm,0.8s,mb4.5
EPF **Esparros** 82.46 48 *e*P P 12 01 38.4 -0.7
EPF pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
EPF **Esparros** 82.46 48 *e*P P 12 01 38.4 -0.7
comp=Z,6.4nm,0.8s,mb4.5
RJF **Les Rejaudoux** 82.79 45 *e*P P 12 01 39.6 -1.1
comp=Z,9.4nm,0.8s,mb4.3
RJF *e*MLR MLR
comp=Z,302nm,20.2s
RJF **Les Rejaudoux** 82.79 45 *e*P P 12 01 39.6 -1.1
RJF pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
RJF MLR MLR
comp=Z,300nm,20.3s
RJF **Les Rejaudoux** 82.79 45 *e*P P 12 01 39.6 -1.1
comp=Z,4.7nm,0.8s,mb4.4
RJF LR LR
comp=Z,300nm,20.3s
TCF **Toulx Ste Croi** 83.03 44 *e*P P 12 01 40.7 -1.3
comp=Z,13nm,0.9s,mb4.5
TCF **Toulx Ste Croi** 83.03 44 *e*P P 12 01 40.7 -1.3
TCF pmax pmax
comp=Z,6.0nm,0.9s,mb4.4
TCF **Toulx Ste Croi** 83.03 44 *e*P P 12 01 40.7 -1.3
comp=Z,6.4nm,0.9s,mb4.5
CAF **Calviac** 83.25 45 *e*P P 12 01 42.0 -1.1
comp=Z,6.8nm,0.6s,mb4.3
CAF **Calviac** 83.25 45 *e*P P 12 01 42.0 -1.1
CAF pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
CAF **Calviac** 83.25 45 *e*P P 12 01 42.0 -1.1
comp=Z,3.4nm,0.6s,mb4.3
BGF **Bois d'Agland** 83.40 44 *e*P P 12 01 42.7 -1.1
comp=Z,9.5nm,0.4s,mb4.6
BGF **Bois d'Agland** 83.40 44 *e*P P 12 01 42.7 -1.1
BGF pmax pmax
comp=Z,5.0nm,0.4s,mb4.7
BGF **Bois d'Agland** 83.40 44 *e*P P 12 01 42.7 -1.1
comp=Z,4.8nm,0.4s,mb4.7
AVF **Avril sur Loir** 83.68 43 *e*P P 12 01 43.8 -1.5
comp=Z,15nm,0.9s,mb4.5
AVF **Avril sur Loir** 83.68 43 *e*P P 12 01 43.8 -1.5
AVF pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
AVF **Avril sur Loir** 83.68 43 *e*P P 12 01 43.8 -1.5
comp=Z,7.4nm,0.9s,mb4.5
SSF **Saint Saulge** 83.71 43 *e*P P 12 01 44.2 -1.2
comp=Z,13nm,0.8s,mb4.5
SSF **Saint Saulge** 83.71 43 *e*P P 12 01 44.2 -1.2
SSF pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
SSF **Saint Saulge** 83.71 43 *e*P P 12 01 44.2 -1.2
comp=Z,6.4nm,0.8s,mb4.5
MTLF **Montolieu** 83.73 47 *e*P P 12 01 44.8 -0.8
comp=Z,11nm,0.8s,mb4.4
MTLF **Montolieu** 83.73 47 *e*P P 12 01 44.8 -0.8
MTLF pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
MTLF **Montolieu** 83.73 47 *e*P P 12 01 44.8 -0.8
comp=Z,5.5nm,0.8s,mb4.4
LOR **Lormes** 83.90 43 *e*P P 12 01 45.4 -1.0
comp=Z,13nm,0.8s,mb4.5
LOR *e*MLR MLR
comp=Z,270nm,19.8s
LOR **Lormes** 83.90 43 *e*P P 12 01 45.4 -1.0
LOR pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
LOR MLR MLR
comp=Z,270nm,19.8s
LOR **Lormes** 83.90 43 *e*P P 12 01 45.4 -1.0
comp=Z,6.7nm,0.8s,mb4.5
LOR LR LR
comp=Z,270nm,19.8s
SMF **Signal de Mont** 84.04 43 *e*P P 12 01 45.7 -1.4
comp=Z,7.5nm,0.5s,mb4.5
SMF **Signal de Mont** 84.04 43 *e*P P 12 01 45.7 -1.4
SMF pmax pmax
comp=Z,4.0nm,0.5s,mb4.5
SMF **Signal de Mont** 84.04 43 *e*P P 12 01 45.7 -1.4
comp=Z,3.8nm,0.5s,mb4.5
NOA **NORSAR Array B** 84.09 28 P P 12 01 47.6 +0.6
comp=Z,6.3nm,0.9s,mb4.4,baz=290,slow=4.8,SNR=10
NOA LR LR 12 37 21.5
comp=Z,340nm,21.9s,baz=285,slow=34
LASF **Ste Croix** 84.70 46 *e*P P 12 01 50.2 -0.3
comp=Z,5.1nm,0.7s,mb4.3
VIVF **Saint-Julien-l** 85.06 45 *e*P P 12 01 52.4 +0.1
HAU **Haudompre** 85.32 42 *e*P P 12 01 52.8 -0.8
comp=Z,12nm,0.7s,mb4.7
HAU *e*MLR MLR
comp=Z,242nm,17.5s
HAU **Haudompre** 85.32 42 *e*P P 12 01 52.8 -0.8
HAU pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
HAU MLR MLR
comp=Z,240nm,17.5s
HAU **Haudompre** 85.32 42 *e*P P 12 01 52.8 -0.8
comp=Z,5.9nm,0.6s,mb4.7
HAU LR LR
comp=Z,240nm,17.5s
CABF **La Chapelle** 85.54 43 *e*P P 12 01 56.3 +1.6
HINF **Hinteralfeld** 85.70 42 *e*P P 12 01 54.6 -0.8
comp=Z,5.4nm,0.6s,mb4.3
HINF **Hinteralfeld** 85.70 42 *e*P P 12 01 54.6 -0.8
HINF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
HINF **Hinteralfeld** 85.70 42 *e*P P 12 01 54.6 -0.8
comp=Z,2.7nm,0.6s,mb4.3
ECH **Echery** 85.78 41 *e*P P 12 01 55.8 0.0
ECH pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
ECH **Echery** 85.78 41 *e*P P 12 01 55.8 -0.1
comp=Z,5.7nm,0.9s,mb4.5
CDF **Champ du Feu** 85.80 41 *e*P P 12 01 57.4 +1.5
ORIF **Oris-en-Rattie** 85.87 45 *e*P P 12 01 56.3 -0.1
comp=Z,9.2nm,0.7s,mb4.5
ORIF *e*MLR MLR
comp=Z,344nm,21.2s
ORIF **Oris-en-Rattie** 85.87 45 *e*P P 12 01 56.3 -0.1
ORIF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
ORIF **Oris-en-Rattie** 85.87 45 *e*P P 12 01 56.3 -0.1
comp=Z,4.6nm,0.7s,mb4.5
SMRF **Simiane la Rot** 85.92 46 *e*P P 12 01 56.9 +0.3
ARCES **ARCESS Array B** 85.95 18 P P 12 01 56.1 -0.1
comp=Z,4.1nm,0.6s,mb4.5,baz=286,slow=4.5,SNR=19
TIC **Toumodi** 86.08 84 *e*P P 12 01 57.7 -0.3
comp=Z,9.3nm,0.2s,mb5.3
TIC **Toumodi** 86.08 84 *e*P P 12 01 57.7 -0.3
TIC pmax pmax
comp=Z,9.0nm,0.2s,mb5.3
LIC **Lamto** 86.17 85 *e*P P 12 01 59.4 +1.0
comp=Z,41nm,1.0s,mb5.0,baz=269
LIC *e*MLR MLR
comp=Z,173nm,21.0s
LIC **Lamto** 86.17 85 *e*P P 12 01 59.5 +1.1
comp=Z,91nm,1.5s,mb5.5
LIC **Lamto** 86.17 85 *e*P P 12 01 59.4 +1.0
comp=Z,21nm,1.0s,mb5.0
LIC LR LR
comp=Z,90nm,21.0s
DBIC **Dimbokro** 86.23 84 P P 12 01 59.8 +1.0
comp=Z,8.8nm,0.8s,mb4.8,baz=246,slow=4.8,SNR=9.2
DBIC LR LR 12 35 33.7
comp=Z,148nm,21.1s,baz=260,slow=32
LPL **La Plagne** 86.28 44 *e*P P 12 01 59.6 +1.2
comp=Z,7.0nm,0.6s,mb4.4
LPL **La Plagne** 86.28 44 *e*P P 12 01 59.6 +1.2
LPL pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
LPL **La Plagne** 86.28 44 *e*P P 12 01 59.6 +1.2
comp=Z,3.5nm,0.6s,mb4.5
LPG **La Plagne** 86.30 44 *e*P P 12 01 59.7 +1.3
BNI **Bardonecchia** 86.38 44 *e*P P 12 01 58.9 +0.1
BNI pmax pmax
comp=Z,8.0nm,0.3s,mb5.1
BNI **Bardonecchia** 86.38 44 *e*P P 12 01 58.9 +0.1
comp=Z,7.8nm,0.3s,mb5.1
KIC **Kosan Boka** 86.42 84 *e*P P 12 02 00.7 +1.1
comp=Z,31nm,0.8s,mb5.3

MBDF	**Montbardon**	**86.53**	**45**	*eP*	**P**	**12 02 00.4**	**+0.8**
	comp=Z,10.0nm,0.5s,mb4.7						
MBDF	**Montbardon**	**86.53**	**45**	*eP*	**P**	**12 02 00.4**	**+0.8**
MBDF				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
MBDF	**Montbardon**	**86.53**	**45**	*eP*	**P**	**12 02 00.4**	**+0.8**
	comp=Z,5.0nm,0.5s,mb4.7						
LMR	**La Mourre**	**86.75**	**46**	*eP*	**P**	**12 02 00.3**	**-0.4**
	comp=Z,13nm,0.7s,mb4.7						
LMR	**La Mourre**	**86.75**	**46**	*eP*	**P**	**12 02 00.3**	**-0.4**
LMR				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
LMR	**La Mourre**	**86.75**	**46**	*eP*	**P**	**12 02 00.3**	**-0.4**
	comp=Z,6.6nm,0.7s,mb4.7						
FRF	**La Foret Royal**	**86.78**	**46**	*eP*	**P**	**12 02 00.4**	**-0.5**
	comp=Z,13nm,0.7s,mb4.7						
FRF	**La Foret Royal**	**86.78**	**46**	*eP*	**P**	**12 02 00.4**	**-0.5**
FRF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
FRF	**La Foret Royal**	**86.78**	**46**	*eP*	**P**	**12 02 00.4**	**-0.5**
	comp=Z,6.4nm,0.7s,mb4.7						
SBF	**Sospel**	**87.24**	**45**	*eP*	**P**	**12 02 04.3**	**+1.2**
	comp=Z,7.8nm,0.5s,mb4.6						
SBF	**Sospel**	**87.24**	**45**	*eP*	**P**	**12 02 04.3**	**+1.2**
SBF				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.6						
SBF	**Sospel**	**87.24**	**45**	*eP*	**P**	**12 02 04.3**	**+1.2**
	comp=Z,3.9nm,0.5s,mb4.6						
NKC	**Novy Kostel**	**88.42**	**38**	AMS	AMS	12 43 30.0	
	comp=Z,300nm,17.3s						
PGF	**Pioggiola**	**88.73**	**46**	*eP*	**P**	**12 02 09.6**	**-0.6**
	comp=Z,10.0nm,0.8s,mb4.6						
PGF	**Pioggiola**	**88.73**	**46**	*eP*	**P**	**12 02 09.6**	**-0.6**
PGF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
PGF	**Pioggiola**	**88.73**	**46**	*eP*	**P**	**12 02 09.6**	**-0.6**
	comp=Z,5.0nm,0.8s,mb4.6						
KHC	**Kasperske Hory**	**89.50**	**39**	*eP*	**P**	**12 02 14.8**	**+1.1**
KHC				MLR	MLR		
	comp=Z,300nm,20.0s						
KHC	**Kasperske Hory**	**89.50**	**39**	*eP*	**P**	**12 02 14.8**	**+1.1**
KHC				AMS	AMS	12 43 50.0	
	comp=Z,300nm,20.0s						
PVCC	**Panska Ves**	**89.58**	**38**	AMS	AMS	12 41 30.0	
	comp=Z,200nm,17.9s						
TIXI	**Tiksi**	**89.73**	**348**	*eP*	**P**	**12 02 13.2**	**-1.1**
TIXI				pmax	pmax		
	comp=Z,30nm,1.3s,mb5.3						
TIXI	**Tiksi**	**89.73**	**348**	*eP*	**P**	**12 02 13.5**	**-0.8**
	comp=Z,29nm,1.1s,mb5.3						
PRU	**Pruhonice**	**89.77**	**38**	AMS	AMS	12 44 10.0	
	comp=Z,300nm,14.9s						
PETK	**Petropavlovsk-**	**89.96**	**325**	P	**P**	**12 02 15.8**	**+0.1**
	comp=Z,3.6nm,0.9s,mb4.5,baz=93,slow=8.9,SNR=4.1						
PETK				LR	LR	12 40 52.2	
	comp=Z,60nm,21.0s,baz=230,slow=34						
FINES	**FINESS Array B**	**90.40**	**25**	P	**P**	**12 02 16.9**	**-0.7**
	comp=Z,1.9nm,0.6s,mb4.4,baz=300,slow=1.5,SNR=6.8						
FINES				LR	LR	12 44 42.8	
	comp=Z,259nm,18.8s,baz=331,slow=37						
TREC	**Trest**	**90.60**	**38**	AMS	AMS	12 44 40.0	
	comp=Z,300nm,21.0s						
DPC	**Dobruska-Polom**	**90.68**	**37**	*eP*	**P**	**12 02 19.7**	**+0.6**
DPC				MLR	MLR		
	comp=Z,300nm,19.0s						
DPC	**Dobruska-Polom**	**90.68**	**37**	*eP*	**P**	**12 02 19.7**	**+0.6**
DPC				AMS	AMS	12 42 10.0	
	comp=Z,300nm,19.0s						
TORD	**Torodi Ar. Bea**	**90.89**	**76**	P	**P**	**12 02 19.9**	**-0.9**
	comp=Z,1.4nm,0.6s,mb4.3,baz=289,slow=5.9,SNR=6.7						
KEST	**Kesra**	**91.15**	**53**	P	**P**	**12 02 21.8**	**+0.2**
	comp=Z,1.0nm,0.8s,mb4.0,baz=20,slow=2.7,SNR=4.0						
KEST	**Kesra**	**91.15**	**53**	*eP*	**P**	**12 02 20.7**	**-0.9**
VRAC	**Vranov**	**91.26**	**38**	LR	LR	12 45 59.1	
	comp=Z,285nm,18.3s,baz=270,slow=37						
TAM	**Tamanrasset**	**91.82**	**66**	*eP*	**P**	**12 02 26.4**	**+1.4**
TAM				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.6						
TAM	**Tamanrasset**	**91.82**	**66**	*eP*	**P**	**12 02 26.4**	**+1.4**
	comp=Z,3.3nm,0.8s,mb4.6						
OKC	**Ostrava-Krasne**	**91.96**	**37**	AMS	AMS	12 47 30.0	
	comp=Z,300nm,17.4s						
VAE	**Valguarnera**	**94.37**	**50**	LR	LR	12 42 45.0	
	comp=Z,487nm,18.5s,baz=301,slow=34						
AKASG	**Malin Array Be**	**97.73**	**33**	LR	LR	12 50 25.7	
	comp=Z,178nm,18.9s,baz=260,slow=38						
OBN	**Obninsk**	**98.60**	**27**	*eP*	**P**	**12 02 54.5**	**-0.7**
OBN				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb5.2						
OBN				MLR	MLR		
	comp=Z,200nm,18.0s						
DZM	**Mont Dzumac**	**105.22**	**251**	*e*LR	LR	12 37 56.6	
	comp=Z,166nm,25.9s						
BVAR	**Borovoye Array**	**111.27**	**11**	PKiKP	PKiKP	12 07 53.0	+3.1
	comp=Z,0.5nm,0.5s,baz=355,slow=11,SNR=3.9						
CN2	**Changchun**	**112.44**	**331**	*e*Pdif	Pdif	12 03 52.3	-4.5
CN2				PP	PP	12 08 37.5	-0.7
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,19.0s						
CN2				LR	LR		
	comp=E,200nm,19.0s						
CN2				LR	LR		
	comp=Z,200nm,22.0s						
KURK	**Kurchatov**	**114.71**	**6**	PKP	PKiKP	12 07 56.6	0.0
	comp=Z,1.5nm,0.6s,baz=336,slow=2.0,SNR=5.5						
SONM	**Songino Array**	**115.75**	**346**	PKP	PKPdf	12 07 58.9	+0.2
	comp=Z,1.1nm,0.7s,baz=117,slow=1.6,SNR=6.2						
KSRS	**Korea Array**	**115.86**	**325**	PKP	PKPdf	12 08 03.5	+4.3
	comp=Z,1.0nm,0.7s,baz=0.7,slow=1.2,SNR=4.7						
MK31	**Makanchi Array**	**118.92**	**4**	*e*PKIKP	PKPdf	12 08 04.0	-0.8
MKAR	**Makanchi Array**	**118.92**	**4**	PKP	PKPdf	12 08 04.1	-0.7
	comp=Z,1.6nm,0.8s,baz=354,slow=2.4,SNR=10						
MKAR	**Makanchi Array**	**118.92**	**4**	PKP	PKPdf	12 08 04.1	-0.7
BJI	**Beijing**	**119.56**	**335**	PKP	PKPdf	12 08 06.3	0.0
BJI				SS	SS	12 25 47.5	+1.5
BJI				AMB	AMB		
	comp=Z,170nm,4.7s						
BJI				LR	LR		
	comp=N,200nm,19.4s						
BJI				LR	LR		
	comp=E,130nm,18.9s						
BJI				LR	LR		
	comp=Z,96nm,19.8s						
HHC	**Hu-ho-hao-te**	**120.62**	**339**	*e*PKP	PKPdf	12 08 08.5	+0.2
HHC				PP	PP	12 09 39.5	+4.3
HHC				PKS		12 11 43.5	
HHC				SKS	SKSdf	12 15 15.5	+0.7
HHC				SKKS	SKKSac	12 16 27.5	-2.7
HHC				SS	SS	12 26 03.0	+3.6
HHC				AMB	AMB		
	comp=Z,53nm,5.7s						
HHC				LR	LR		
	comp=N,70nm,21.6s						
HHC				LR	LR		
	comp=E,91nm,21.6s						
HHC				LR	LR		
	comp=Z,110nm,22.8s						
BOSA	**Boshof**	**121.09**	**115**	PKP	PKPdf	12 08 09.5	+0.1
	comp=Z,11nm,0.8s,baz=243,slow=2.3,SNR=4.7						
LBTB	**Lobatse**	**121.33**	**111**	PKP	PKPdf	12 08 13.3	+3.3
	comp=Z,3.0nm,0.6s,baz=273,slow=16,SNR=6.6						
LBTB	**Lobatse**	**121.33**	**111**	PKP	PKPdf	12 08 13.3	+3.3
EKS2	**Erkin-Say**	**121.86**	**12**	*e*PKPdf	PKPdf	12 08 12.0	+1.4
WMQ	**Urumqi**	**122.06**	**360**	*e*PKP	PKPdf	12 08 15.0	+4.1
LSZ	**Lusaka**	**122.95**	**99**	PKP	PKPdf	12 08 17.8	+4.5
	comp=Z,1.3nm,0.5s,baz=231,slow=3.3,SNR=5.2						
LSZ	**Lusaka**	**122.95**	**99**	PKP	PKPdf	12 08 17.8	+4.5
NJ2	**Nanjing**	**124.82**	**327**	*e*PKP	PKPdf	12 08 19.3	+2.7
GTA	**Gaotai**	**125.22**	**348**	*e*PKP	PKPdf	12 08 21.5	+4.4
GTA				sPKP		12 08 29.3	
LZH	**Lanzhou**	**127.42**	**343**	PKP	PKPdf	12 08 24.8	+3.4
LZH				PP	PP	12 10 27.5	+6.8
LZH				SKS	SKSdf	12 15 31.0	+3.2
LZH				SKKS	SKKSac	12 17 15.0	+1.1
LZH				SS	SS	12 27 32.0	+7.0
LZH				AMB	AMB		
	comp=Z,71nm,4.5s						
LZH				LR	LR		
	comp=N,220nm,17.5s						
LZH				LR	LR		
	comp=Z,270nm,18.8s						
STKA	**Stephens Creek**	**127.71**	**241**	PKP	PKPdf	12 08 21.0	-1.1
	comp=Z,3.5nm,0.7s,baz=225,slow=5.7,SNR=6.6						
CD2	**Chengdu**	**132.27**	**341**	*e*PKP	PKPdf	12 08 29.0	-1.8
CD2				PP	PP	12 10 54.8	+2.5
CD2				PKS		12 12 04.0	
CD2				AMB	AMB		
	comp=Z,110nm,10.2s						
CD2				LR	LR		
	comp=N,150nm,16.2s						
CD2				LR	LR		
	comp=Z,130nm,18.2s						
WRA	**Warramunga Arr**	**134.89**	**256**	PKP	PKPdf	12 08 34.3	-1.6
	comp=Z,1.8nm,0.7s,baz=86,slow=2.1,SNR=25						
ASAR	**Alice Springs**	**135.21**	**251**	PKhKP		12 08 27.1	
	comp=Z,0.5nm,0.8s,baz=98,slow=4.8,SNR=4.4						
ASAR				PKP	PKPdf	12 08 34.6	-1.8
	comp=Z,1.1nm,0.8s,baz=98,slow=2.6,SNR=10						
ASAR	**Alice Springs**	**135.21**	**251**	PKP	PKPdf	12 08 34.6	-1.8
GYA	**Guiyang**	**135.25**	**335**	*e*Pdif	Pdif	12 05 36.8	-1.4
GYA				PKP	PKPdf	12 08 35.0	-1.5
GYA				PP	PP	12 11 14.0	+2.5
GYA				PKS		12 12 10.8	
GYA				SKKS	SKKSac	12 17 59.0	-3.4
GYA				AMB	AMB		
	comp=Z,110nm,7.6s						
GYA				LR	LR		
	comp=N,270nm,24.4s						
GYA				LR	LR		
	comp=E,170nm,25.0s						
GYA				LR	LR		
	comp=Z,140nm,25.2s						
KMI	**Kunming**	**137.95**	**339**	PKP	PKPdf	12 08 40.3	-1.2
KMI				PP	PP	12 11 31.5	+3.3
KMI				SS	SS	12 29 33.0	0.0
KMI				AMB	AMB		
	comp=Z,62nm,5.4s						
KMI				LR	LR		
	comp=N,180nm,22.1s						
KMI				LR	LR		
	comp=E,140nm,21.1s						
KMI				LR	LR		
	comp=Z,230nm,23.0s						
FITZ	**Fitzroy Crossi**	**143.11**	**259**	PKP	PKPdf	12 08 50.6	-0.4
	comp=Z,3.5nm,0.8s,baz=146,slow=4.2,SNR=5.9						
CHTO	**Chiang Mai**	**145.07**	**341**	*e*PKIKP	PKPdf	12 08 53.1	-1.3
CM31	**Chiang Mai Arr**	**145.41**	**340**	*e*PKPdf	PKPdf	12 08 54.8	-0.2
CMAR	**Chiang Mai Arr**	**145.41**	**340**	PKPbc	PKPbc	12 08 54.4	-0.6
	comp=Z,20nm,0.9s,baz=342,slow=4.2,SNR=97						
NWAO	**Narrogin (SRO)**	**147.18**	**231**	PKPbc	PKPbc	12 08 58.0	-1.9
	comp=Z,11nm,0.9s,baz=101,slow=5.5,SNR=2.5						
HYB	**Hyderabad**	**147.21**	**16**	*i* PKP	PKPab	12 09 01.5	-0.5
MBWA	**Marble Bar**	**148.49**	**253**	*e*PKPbc	PKPbc	12 09 01.4	-2.3
KSM	**Kuching**	**152.33**	**303**	*e*PKPbc	PKPbc	12 09 12.5	-0.7
PSI	**Prapat**	**159.42**	**325**	PKP	PKPdf	12 09 15.3	-0.4
	comp=Z,1.7nm,0.4s,baz=166,slow=4.2,SNR=2.8						
PSI				PKPab	PKPab	12 09 52.8	-0.7
	comp=Z,10.0nm,0.8s,baz=346,slow=4.4,SNR=11						
PSI	**Prapat**	**159.42**	**325**	PKP	PKPdf	12 09 15.3	-0.4
PSI				PKPab	PKPab	12 09 52.8	-0.7

IDC 30 11:57:27.6±1.7, 1°.16N×123°.34E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/21, mbtmp3.6/3, Error ellipse: s-maj=202.4km s-min=25.1km az=62.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.59**	**153**	P	P	12 02 40.0	-0.4
	1.4nm,0.5s,baz=330,slow=11,SNR=39						
ASAR	**Alice Springs**	**26.73**	**158**	P	P	12 03 09.4	+0.4
	0.1nm,0.3s,baz=335,slow=7.8,SNR=8.6						
MKAR	**Makanchi Array**	**57.81**	**328**	P	P	12 07 20.8	0.0
	0.3nm,0.3s,baz=118,slow=8.2,SNR=5.9						

IDC 30 11:58:06.8±2.0, 58°.36S×21°.68W, h0km, mb4.1/6, mb1 4.2/6, mb1mx4.0/16, mbtmp4.1/6, MS4.1/1, Ms1 4.1/1, ms1mx3.3/17, Error ellipse: s-maj=75.8km s-min=21.7km az=1.0, East of South Sandwich Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**35.33**	**278**	P	P	12 05 02.3	-1.1
	2.4nm,0.9s,baz=117,slow=14,SNR=3.8						
PLCA				LR	LR	12 20 00.1	
	comp=Z,269nm,18.2s,baz=110,slow=37						
CPUP	**Villa Florida**	**40.60**	**307**	P	P	12 05 47.6	-0.4
	1.7nm,0.6s,baz=124,slow=6.2,SNR=8.6						
BOSA	**Boshof**	**43.84**	**68**	P	P	12 06 13.8	-0.6
	2.6nm,1.1s,baz=252,slow=6.4,SNR=4.9						
LPAZ	**La Paz**	**54.15**	**301**	P	P	12 07 35.1	+1.5
	3.2nm,0.7s,baz=145,slow=6.7,SNR=16						
LSZ	**Lusaka**	**56.61**	**62**	P	P	12 07 51.4	+0.2
	0.9nm,0.5s,baz=215,slow=4.7,SNR=3.8						
TORD	**Torodi Ar. Bea**	**73.78**	**24**	P	P	12 09 42.8	+0.1
	1.3nm,0.8s,baz=208,slow=5.7,SNR=7.5						
SONM	**Songino Array**	**147.88**	**86**	PKPbc	PKPbc	12 17 52.9	+0.3
	0.6nm,0.5s,baz=224,slow=4.1,SNR=4.9						

*ISCJB **30** 12:11:10.9±0.6, 51°.45N±0°.03×6°.40E±0°.05, h0km, Error ellipse: s-maj=5.2km s-min=3.1km az=37.9*
*CSEM **30** 12:11:11.9±0.3, 51°.50N×6°.47E, h1km, ML3.1/13, Error ellipse: s-maj=7.0km s-min=4.3km az=134.0*
*BNS **30** 12:11:11.9±1.1, 51°.59N×6°.58E, h1km, ML2.6*
*LDG **30** 12:11:11.1±0.1, 51°.64N×6°.59E, h1km, Md3.0/1, Ml3.1/15, Error ellipse: s-maj=2.1km s-min=1.9km az=144.0, Suspected Mining induced.*
*BGR **30** 12:11:14.7±0.7, 51°.49N×6°.60E, h1km, ML2.7/6, Error ellipse: s-maj=11.1km s-min=4.4km az=125.0*
*BUG **30** 12:11:18.0, 51°.48N×6°.61E, h1km, ML2.5*

ISC 30 12:11:10.7±0.7, 51°.58N±0°.03×6°.45E±0°.04, h0km, n58, σ1°.27/103, 1D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAUG	**Laupendahl**	**0.39**	**126**	*e*Pg	**Pg**	**12 11 18.4**	**+0.2**
LAUG				*e*Sg	**Sg**	**12 11 22.9**	**-0.3**
	292nm,0.5s						
LAUG	**Laupendahl**	**0.39**	**126**	Pg	**Pg**	**12 11 18.4**	**+0.2**
LAUG				Sg	**Sg**	**12 11 22.9**	**-0.3**
	292nm,0.5s						
WTSB	**Winterswijk**	**0.44**	**30**	*e*Pg	**Pg**	**12 11 24.1**	**+4.9**
	36nm,0.3s						
WTSB	**Winterswijk**	**0.44**	**30**	*e*Pg	**Pg**	**12 11 24.1**	**+4.9**
	36nm,0.3s						
RODG	**Roetgen-Dahlhe**	**0.47**	**201**	*e*Sg	**Sg**	**12 11 28.6**	**+2.9**
RODG	**Roetgen-Dahlhe**	**0.47**	**201**	Sg	**Sg**	**12 11 28.6**	**+2.9**
BUG	**Bochum--Univer**	**0.54**	**105**	*e*Pg	**Pg**	**12 11 26.8**	**+5.8**
BUG				Sg	**Sg**	**12 11 33.1**	**+5.2**
HOBG	**Hohbusch**	**0.82**	**137**	*e*Pg	**Pg**	**12 11 26.9**	**+0.5**
HOBG	**Hohbusch**	**0.82**	**137**	Pg	**Pg**	**12 11 26.9**	**+0.5**
HGN	**Heimansgroeve**	**0.88**	**202**	*e*Pg	**Pg**	**12 11 30.1**	**+2.5**
	5.5nm,0.3s						
HGN	**Heimansgroeve**	**0.88**	**202**	*ex*	**Sg**	**12 11 34.3**	**-4.7**
HGN				*e*Sg	**Sg**	**12 11 42.6**	**+3.6**
HGN	**Heimansgroeve**	**0.88**	**202**	*e*Pg	**Pg**	**12 11 30.1**	**+2.5**
	5.5nm,0.3s						
HGN				*e*Sg	**Sg**	**12 11 42.6**	**+3.6**
DREG	**Dreilaegerbach**	**0.93**	**188**	*e*Pg	**Pg**	**12 11 29.8**	**+1.2**
DREG				*e*Pg	**Pg**	**12 11 29.8**	**+1.3**
	SNR=8.4						
DREG				*e*Sg	**Sg**	**12 11 43.3**	**+2.7**
DREG	**Dreilaegerbach**	**0.93**	**188**	Pg	**Pg**	**12 11 29.8**	**+1.3**
KLL	**Kalltalsperre**	**0.94**	**185**	*e*Pg	**Pg**	**12 11 30.0**	**+1.2**
KLL				*e*Sg	**Sg**	**12 11 44.4**	**+3.5**
	162nm,0.2s						
KLL	**Kalltalsperre**	**0.94**	**185**	Pg	**Pg**	**12 11 30.0**	**+1.3**
MEM	**Membach**	**1.01**	**196**	P	**Pg**	**12 11 32.4**	**+2.2**
STB	**Steinbach**	**1.02**	**166**	*e*Pg	**Pg**	**12 11 31.5**	**+1.3**
STB				*e*Sg	**Sg**	**12 11 45.1**	**+1.6**
	178nm,0.8s						
STB	**Steinbach**	**1.02**	**166**	Pg	**Pg**	**12 11 31.5**	**+1.2**
IBBN	**Ibbenburen**	**1.09**	**48**	*e*Sg	**Sg**	**12 11 50.1**	**+4.4**
IBBN	**Ibbenburen**	**1.09**	**48**	Sg	**Sg**	**12 11 50.2**	**+4.5**
HILG	**Hillesheim**	**1.30**	**173**	*e*Sg	**Sg**	**12 11 53.4**	**+0.9**
HILG	**Hillesheim**	**1.30**	**173**	Sg	**Sg**	**12 11 53.4**	**+0.9**
KOE	**Koeppel**	**1.42**	**144**	*e*Pg	**Pg**	**12 11 36.2**	**-1.6**
KOE	**Koeppel**	**1.42**	**144**	Pg	**Pg**	**12 11 36.2**	**-1.6**
GIVF	**Givet**	**1.80**	**215**	*e*Pn	**Pn**	**12 11 42.8**	**-0.2**
GIVF				*e*Sg	**Sg**	**12 12 11.2**	**+2.6**
	45nm,0.3s						
GIVF	**Givet**	**1.80**	**215**	*e*Pn	**Pn**	**12 11 42.8**	**-0.2**
GIVF				*e*Sg	**Sg**	**12 12 11.2**	**+2.6**
	23nm,0.3s						
TNS	**Taunus Mts**	**1.86**	**136**	*e*Pn	**Pn**	**12 11 45.9**	**+2.1**
	SNR=3.1						
TNS				*e*Sg	**Sg**	**12 12 10.2**	**-0.3**
WLF	**Walferdange**	**1.93**	**186**	*e*Sg	**Sg**	**12 12 12.0**	**-0.6**
WLF	**Walferdange**	**1.93**	**186**	Sg	**Sg**	**12 12 12.0**	**-0.7**
BAIF	**Baives**	**2.08**	**224**	*e*Pn	**Pn**	**12 11 46.8**	**-0.1**
BAIF				*e*Sg	**Sg**	**12 12 20.0**	**+2.4**
	28nm,0.4s						
BAIF	**Baives**	**2.08**	**224**	*e*Pn	**Pn**	**12 11 46.8**	**-0.1**
BAIF				*e*Sg	**Sg**	**12 12 20.0**	**+2.4**
	14nm,0.4s						
CLZ	**Clausthal**	**2.46**	**82**	*e*Pg	**Pg**	**12 11 59.1**	**+1.3**
	SNR=2.9						
CLZ				*e*Sg	**Sg**	**12 12 29.5**	**-0.1**
CLZ	**Clausthal**	**2.46**	**82**	Pg	**Pg**	**12 11 59.1**	**+1.3**
	SNR=2.9						
CLZ				Sg	**Sg**	**12 12 29.5**	**-0.1**
RFYF	**Reffroy**	**3.02**	**192**	*e*Pn	**Pn**	**12 11 59.2**	**-0.6**
	baz=19						
RFYF				*e*Sg	**Sg**	**12 12 48.7**	**+0.9**
	29nm,0.3s,baz=13						
RFYF	**Reffroy**	**3.02**	**192**	*e*Pn	**Pn**	**12 11 59.2**	**-0.6**
	baz=19						
RFYF				*e*Sg	**Sg**	**12 12 48.7**	**+0.9**
	14nm,0.3s,baz=13						
MEZF	**Maizieres J'vi**	**3.21**	**197**	*e*Pn	**Pn**	**12 12 01.7**	**-0.7**
	baz=26						
MEZF				*e*Sg	**Sg**	**12 12 54.6**	**+0.7**
	18nm,0.2s						
MEZF	**Maizieres J'vi**	**3.21**	**197**	*e*Pn	**Pn**	**12 12 01.7**	**-0.7**
	baz=26						
MEZF				*e*Sg	**Sg**	**12 12 54.6**	**+0.7**
	9.0nm,0.2s						
CDF	**Champ du Feu**	**3.22**	**170**	*e*Pn	**Pn**	**12 12 01.3**	**-1.2**
CDF				*e*Sg	**Sg**	**12 12 53.8**	**-0.3**
	8.7nm,0.3s						
CDF	**Champ du Feu**	**3.22**	**170**	*e*Pn	**Pn**	**12 12 01.3**	**-1.2**
CDF				*e*Sg	**Sg**	**12 12 53.8**	**-0.3**
	4.3nm,0.3s						
MOX	**Moxa**	**3.39**	**104**	*e*SG	**Sg**	**12 12 59.3**	**-0.3**
MOX	**Moxa**	**3.39**	**104**	Sg	**Sg**	**12 12 59.3**	**-0.3**
SFTF	**Sexfontaines**	**3.50**	**196**	*e*Pn	**Pn**	**12 12 06.0**	**-0.4**
SFTF				*e*Sg	**Sg**	**12 13 03.3**	**+0.1**
	13nm,0.3s						
SFTF	**Sexfontaines**	**3.50**	**196**	*e*Pn	**Pn**	**12 12 06.0**	**-0.4**
SFTF				*e*Sg	**Sg**	**12 13 03.3**	**+0.1**
	6.7nm,0.3s						
HAU	**Haudompre**	**3.58**	**181**	*e*Pn	**Pn**	**12 12 06.8**	**-0.7**
HAU				*e*Sn	**Sn**	**12 12 47.2**	**-3.2**
HAU				*e*Sg	**Sg**	**12 13 05.3**	**-0.4**
	18nm,0.3s						
HAU	**Haudompre**	**3.58**	**181**	*e*Pn	**Pn**	**12 12 06.8**	**-0.7**
HAU				*e*Sn	**Sn**	**12 12 47.2**	**-3.2**
HAU				*e*Sg	**Sg**	**12 13 05.3**	**-0.4**
	8.8nm,0.3s						
HINF	**Hinteralfeld**	**3.78**	**176**	*e*Pn	**Pn**	**12 12 09.2**	**-1.0**
HINF				*e*Sg	**Sg**	**12 13 11.0**	**-1.1**
	4.5nm,0.3s						
HINF	**Hinteralfeld**	**3.78**	**176**	*e*Pn	**Pn**	**12 12 09.2**	**-1.0**
HINF				*e*Sg	**Sg**	**12 13 11.0**	**-1.1**
	2.2nm,0.3s						
LOR	**Lormes**	**4.64**	**202**	*e*Pn	**Pn**	**12 12 21.5**	**-0.5**
LOR				*e*Sn	**Sn**	**12 13 14.1**	**-2.3**
LOR				*e*Sg	**Sg**	**12 13 39.2**	**-0.4**
	9.7nm,0.3s,baz=24						
LOR	**Lormes**	**4.64**	**202**	*e*Pn	**Pn**	**12 12 21.5**	**-0.5**
LOR				*e*Sn	**Sn**	**12 13 14.1**	**-2.3**
LOR				*e*Sg	**Sg**	**12 13 39.2**	**-0.4**
	4.8nm,0.3s,baz=24						
SSF	**Saint Saulge**	**4.92**	**204**	*e*Pn	**Pn**	**12 12 25.1**	**-0.7**
SSF				*e*Sn	**Sn**	**12 13 20.1**	**-3.2**
SSF				*e*Sg	**Sg**	**12 13 47.8**	**-0.8**
	7.0nm,0.4s						
SSF	**Saint Saulge**	**4.92**	**204**	*e*Pn	**Pn**	**12 12 25.1**	**-0.7**
SSF				*e*Sn	**Sn**	**12 13 20.1**	**-3.2**
SSF				*e*Sg	**Sg**	**12 13 47.8**	**-0.8**
	3.5nm,0.4s						
CABF	**La Chapelle**	**4.98**	**183**	*e*Pn	**Pn**	**12 12 26.0**	**-0.7**
CABF				*e*Sg	**Sg**	**12 13 48.9**	**-1.8**
	8.8nm,0.5s						
CABF	**La Chapelle**	**4.98**	**183**	*e*Pn	**Pn**	**12 12 26.0**	**-0.7**
CABF				*e*Sg	**Sg**	**12 13 48.9**	**-1.8**
	4.4nm,0.5s						
AVF	**Avril sur Loir**	**5.21**	**204**	*e*Pn	**Pn**	**12 12 29.0**	**-0.8**
AVF				*e*Sg	**Sg**	**12 13 57.0**	**-0.9**
	6.3nm,0.5s						
AVF	**Avril sur Loir**	**5.21**	**204**	*e*Pn	**Pn**	**12 12 29.0**	**-0.8**
AVF				*e*Sg	**Sg**	**12 13 57.0**	**-0.9**
	3.2nm,0.5s						
TCF	**Toulx Ste Croi**	**5.99**	**209**	*e*Pn	**Pn**	**12 12 40.0**	**-0.5**
TCF				*e*Sn	**Sn**	**12 13 45.2**	**-4.5**
TCF				*e*Sg	**Sg**	**12 14 21.5**	**-1.4**
	5.2nm,0.4s						
TCF	**Toulx Ste Croi**	**5.99**	**209**	*e*Pn	**

*THE **30** 13:14:57.6, 38.′14N×21.′64E, h17km±1km, ML2.8/7, Error ellipse: s-maj=1.2km s-min=0.4km az=59.0*
*ATH **30** 13:14:57.2, 38.′18N×21.′65E, h22km±2km, MD3.2/12*
*ISCJB **30** 13:14:57.6±0.4, 38.′18N±0.′03×21.′65E±0.′03, h24km±3km, Error ellipse: s-maj=5.6km s-min=4.0km az=172.6*
ISC 30 13:14:57.7±0.4, 38.′19N±0.′03×21.′64E±0.′03, h22km±4km, n45, σ0.′86/72, 3D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.15**	**50**	*e*PB	**Pb**	**13 15 02.3**	**-0.2**
UPR				*e*SB	**Sb**	**13 15 05.3**	**-0.5**
UPR	**University Cam**	**0.15**	**50**	*e*Pb	**Pb**	**13 15 02.3**	**-0.2**
UPR				*e*Sb	**Sb**	**13 15 05.3**	**-0.5**
RLS	**Riolos of Patr**	**0.18**	**226**	⇓*i*Pb	**Pb**	**13 15 02.5**	**-0.4**
RLS				*e*Sb	**Sb**	**13 15 06.3**	**-0.1**
RLS	**Riolos of Patr**	**0.18**	**226**	⇓*i*PB	**Pb**	**13 15 02.5**	**-0.4**
RLS				*e*SB	**Sb**	**13 15 06.3**	**-0.1**
RLS	**Riolos of Patr**	**0.18**	**226**	⇓*i*Pb	**Pb**	**13 15 02.5**	**-0.4**
RLS				*e*Sb	**Sb**	**13 15 06.3**	**-0.1**
LAKA	**Lakka**	**0.28**	**79**	P	**Pb**	**13 15 03.8**	**-0.3**
LAKA				S	**Sb**	**13 15 08.6**	**+0.1**
LAKA	**Lakka**	**0.28**	**79**	P	**Pb**	**13 15 03.8**	**-0.3**
LAKA				S	**Sb**	**13 15 08.6**	**+0.1**
EFP	**Efpalio**	**0.32**	**41**	P	**Pb**	**13 15 04.8**	**-0.1**
EFP				S	**Sb**	**13 15 10.6**	**+0.9**
EFP	**Efpalio**	**0.32**	**41**	*e*PB	**Pb**	**13 15 04.9**	**0.0**
EFP				*e*SB	**Sb**	**13 15 10.1**	**+0.4**
EFP	**Efpalio**	**0.32**	**41**	*e*Pb	**Pb**	**13 15 04.9**	**0.0**
EFP				*e*Sb	**Sb**	**13 15 10.1**	**+0.4**
EFP				S	**Sb**	**13 15 10.6**	**+0.9**
TRIZ	**Trizonia**	**0.39**	**62**	P	**Pb**	**13 15 05.7**	**-0.2**
TRIZ				S	**Sb**	**13 15 12.0**	**+0.5**
TRIZ	**Trizonia**	**0.39**	**62**	P	**Pb**	**13 15 05.7**	**-0.2**
TRIZ				S	**Sb**	**13 15 12.0**	**+0.5**
KALE	**Kalithea**	**0.45**	**62**	P	**Pb**	**13 15 06.7**	**-0.2**
KALE				S	**Sb**	**13 15 13.8**	**+0.6**
KALE	**Kalithea**	**0.45**	**62**	P	**Pb**	**13 15 06.7**	**-0.2**
KALE				S	**Sb**	**13 15 13.8**	**+0.6**
GUR	**Goura**	**0.61**	**114**	P	**Pb**	**13 15 08.9**	**-0.8**
GUR				S	**Sb**	**13 15 18.2**	**+0.4**
GUR	**Goura**	**0.61**	**114**	*e*PN	**Pn**	**13 15 09.0**	**-2.0**
GUR				*e*SN	**Sb**	**13 15 18.1**	**+0.3**
GUR	**Goura**	**0.61**	**114**	P	**Pb**	**13 15 08.9**	**-0.8**
GUR				S	**Sb**	**13 15 18.2**	**+0.4**
KFL	**Anninata**	**0.67**	**264**	P	**Pb**	**13 15 10.7**	**-0.1**
DSF	**Desfina**	**0.74**	**72**	P	**Pb**	**13 15 11.2**	**-0.6**
DSF				S	**Sb**	**13 15 22.9**	**+1.4**
DSF	**Desfina**	**0.74**	**72**	P	**Pb**	**13 15 11.2**	**-0.6**
DSF				S	**Sb**	**13 15 22.9**	**+1.4**
EVR	**Evrytania**	**0.74**	**10**	*e*Pn	**Pn**	**13 15 12.1**	**-0.7**
EVR				*e*Sn	**Sn**	**13 15 21.8**	**-1.6**
EVR	**Evrytania**	**0.74**	**10**	*e*PN	**Pn**	**13 15 12.1**	**-0.7**
EVR				*e*SN	**Sn**	**13 15 21.8**	**-1.6**
EVR	**Evrytania**	**0.74**	**10**	*e*Pn	**Pn**	**13 15 12.1**	**-0.7**
EVR				*e*Sn	**Sn**	**13 15 21.8**	**-1.6**
VLS	**Valsamata**	**0.82**	**270**	*e*Pb	**Pb**	**13 15 12.8**	**-0.5**
VLS				*e*Sn	**Sn**	**13 15 26.1**	**+0.7**
VLS	**Valsamata**	**0.82**	**270**	P	**Pb**	**13 15 12.8**	**-0.5**
VLS	**Valsamata**	**0.82**	**270**	*e*PB	**Pb**	**13 15 12.8**	**-0.5**
VLS				*e*SN	**Sn**	**13 15 26.1**	**+0.7**
VLS	**Valsamata**	**0.82**	**270**	P	**Pb**	**13 15 12.8**	**-0.5**
LKD2	**Lefkada island**	**0.98**	**308**	P	**Pb**	**13 15 15.8**	**-0.1**
LKD2				S	**Sb**	**13 15 30.8**	**+2.4**
LKD2	**Lefkada island**	**0.98**	**308**	P	**Pb**	**13 15 15.8**	**-0.1**
LKD2				S	**Sb**	**13 15 30.8**	**+2.4**
AGG	**Agios Georgios**	**1.00**	**33**	*e*Pb	**Pb**	**13 15 15.6**	**-0.7**
AGG	**Agios Georgios**	**1.00**	**33**	*e*PB	**Pb**	**13 15 15.6**	**-0.7**
AGG	**Agios Georgios**	**1.00**	**33**	*e*Pb	**Pb**	**13 15 15.6**	**-0.7**
VLX	**Vlachokerasia**	**1.00**	**144**	*e*PN	**Pn**	**13 15 16.1**	**-0.3**
VLX	**Vlachokerasia**	**1.00**	**144**	*e*Pn	**Pn**	**13 15 16.1**	**-0.3**
ITM	**Ithomi**	**1.03**	**167**	*e*Pn	**Pn**	**13 15 16.2**	**-0.6**
ITM	**Ithomi**	**1.03**	**167**	*e*PN	**Pn**	**13 15 16.2**	**-0.6**
ITM	**Ithomi**	**1.03**	**167**	*e*Pn	**Pn**	**13 15 16.2**	**-0.6**
LTK	**Loutraki**	**1.06**	**98**	*e*PN	**Pn**	**13 15 18.2**	**+1.0**
LTK	**Loutraki**	**1.06**	**98**	*e*Pn	**Pn**	**13 15 18.2**	**+1.0**
LKR	**Lokris**	**1.17**	**66**	*e*Pn	**Pn**	**13 15 18.8**	**+0.1**
LKR	**Lokris**	**1.17**	**66**	*e*PN	**Pn**	**13 15 18.8**	**+0.1**
LKR	**Lokris**	**1.17**	**66**	*e*Pn	**Pn**	**13 15 18.8**	**+0.1**
PYL	**PYLOS**	**1.29**	**176**	*e*PN	**Pn**	**13 15 21.2**	**+0.8**
PYL	**PYLOS**	**1.29**	**176**	*e*Pn	**Pn**	**13 15 21.2**	**+0.8**
DID	**Didima**	**1.44**	**118**	*e*PN	**Pn**	**13 15 24.5**	**+2.1**

*CSEM **30** 13:29:02.8±0.2, 37.′45N×35.′89E, h22km±1km, ML2.2, Error ellipse: s-maj=7.8km s-min=2.9km az=176.0*
*DDA **30** 13:29:02.4, 37.′40N×35.′91E, h7km±3km, Md3.1*
*ISK **30** 13:29:02.5, 37.′42N×35.′91E, h23km, ML2.2*
*ISCJB **30** 13:29:03.6±0.7, 37.′41N±0.′08×35.′87E±0.′04, h22km±8km, Error ellipse: s-maj=14.2km s-min=5.1km az=178.6*
ISC 30 13:29:03.5±0.6, 37.′39N±0.′08×35.′88E±0.′04, h17km±5km, n15, σ0.′63/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.10**	**335**	*e*PG	**Pg**	**13 29 07.0**	**-0.1**
KOZT				*e*SG	**Sg**	**13 29 10.2**	**+0.8**
KOZT	**Kozan**	**0.10**	**335**	*e*Pg	**Pg**	**13 29 07.0**	**-0.1**
KOZT				*e*Sg	**Sg**	**13 29 10.3**	**+0.8**
CEYT	**Ceyhan**	**0.39**	**196**	*e*PG	**Pg**	**13 29 11.9**	**+0.3**
CEYT	**Ceyhan**	**0.39**	**196**	*e*Pg	**Pg**	**13 29 11.9**	**+0.3**
KARA	**Karaisali**	**0.67**	**259**	*e*PG	**Pg**	**13 29 16.6**	**0.0**
KARA	**Karaisali**	**0.67**	**259**	*e*Pg	**Pg**	**13 29 16.7**	**0.0**
KMRS	**Kahramanmaras**	**0.82**	**82**	*e*PG	**Pg**	**13 29 18.4**	**-1.1**
KMRS				*e*SG	**Sg**	**13 29 30.1**	**-0.3**
KMRS	**Kahramanmaras**	**0.82**	**82**	*e*Pg	**Pg**	**13 29 18.4**	**-1.1**
KMRS				*e*Sg	**Sg**	**13 29 30.1**	**-0.2**
GULE	**Gulek**	**0.89**	**263**	*i* P	**Pb**	**13 29 19.5**	**-0.8**
GULE				*i* S	**Sb**	**13 29 32.5**	**+0.6**
GULE	**Gulek**	**0.89**	**263**	*i* P	**Pb**	**13 29 19.5**	**-0.9**
GULE				*i* S	**Sb**	**13 29 32.5**	**+0.6**
KUZU	**Kuzuini**	**1.14**	**122**	*i* P	**Pn**	**13 29 23.9**	**-0.6**
KUZU				*i* S	**Sb**	**13 29 39.6**	**+0.5**
KUZU	**Kuzuini**	**1.14**	**122**	*i* P	**Pn**	**13 29 23.9**	**-0.6**
KUZU				*i* S	**Sb**	**13 29 39.6**	**+0.5**
MERS	**Mersin**	**1.20**	**245**	*e*PN	**Pn**	**13 29 25.0**	**-0.5**
MERS	**Mersin**	**1.20**	**245**	*e*Pn	**Pn**	**13 29 25.0**	**-0.5**
GZT	**Gaziantep**	**1.34**	**91**	*i* P	**Pn**	**13 29 27.4**	**0.0**
GZT				*i* S	**Sn**	**13 29 45.9**	**+1.1**

IDC 30 13:39:30.9±3.7, 10.′67S×121.′09E, h0km, mb4.2/2, mb1 4.1/5, mb1mx3.7/20, mbtmp4.0/5, ML3.6/3, Error ellipse: s-maj=60.8km s-min=28.7km az=31.0, Savu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**8.60**	**150**	Pn	Pn	13 41 36.8	+0.1
	0.6nm,0.3s,baz=320,slow=9.1,SNR=20						
FITZ				Sn	Sn	13 43 18.0	+3.4
	2.2nm,0.3s,baz=172,slow=18,SNR=12						
WRA	**Warramunga Arr**	**15.75**	**127**	Pn	Pn	13 43 12.7	-1.5
	0.2nm,0.3s,baz=305,slow=14,SNR=18						
WRA				Sn	Sn	13 46 11.2	+1.7
	0.2nm,0.3s,baz=301,slow=26,SNR=5.6						
ASAR	**Alice Springs**	**17.79**	**138**	P	Pn	13 43 40.5	+0.4
	0.2nm,0.3s,baz=318,slow=12,SNR=33						
ASAR				S	Sn	13 47 00.3	+1.3
	0.2nm,0.3s,baz=303,slow=22,SNR=8.8						
NWAO	**Narrogin (SRO)**	**22.43**	**189**	P	P	13 44 31.8	+0.4
	4.1nm,0.5s,baz=16,slow=14,SNR=6.4						
STKA	**Stephens Creek**	**28.37**	**141**	P	P	13 45 26.6	-0.2
	3.4nm,1.0s,baz=315,slow=10.0,SNR=2.7						

*BJI **30** 13:40:07.3, 39.′66N×20.′10E, h61km, mB4.7/8, mb4.5/12, Ms4.5/5, Ms7 3.9/5*
*MOS **30** 13:40:09.4±1.1, 39.′37N×20.′78E, h33km, mb4.3/4, Error ellipse: s-maj=4.9km s-min=3.3km az=106.8*
*ISCJB **30** 13:40:10.4±0.1, 39.′41N±0.′01×20.′81E±0.′01, h68km±2km, mb4.2/32, Error ellipse: s-maj=2.3km s-min=1.7km az=29.1*
*SKO **30** 13:40:11.0, 39.′35N×21.′05E, h26km, M3.4, ML4.0*
*IDC **30** 13:40:10.8±1.7, 39.′46N×20.′95E, h50km±16km, mb4.0/20, mb1 4.1/28, mb1mx4.0/36, mbtmp4.0/28, ML4.2/8, MS3.3/15, Ms1 3.4/15, ms1mx3.2/35, Error ellipse: s-maj=12.6km s-min=10.6km az=142.0*
*PDG **30** 13:40:11.0±0.7, 39.′39N×20.′86E, h51km±5km, MD4.3/6, ML4.3/9, Error ellipse: s-maj=0.8km s-min=0.8km az=90.0*
*ATH **30** 13:40:10.6, 39.′39N×20.′84E, h56km±2km, MD4.1/17, ML4.1*
*NEIC **30** 13:40:11.7±0.2, 39.′39N×20.′86E, h59km±3km, mb4.2/6, MD4.3(PDG), Error ellipse: s-maj=3.0km s-min=2.1km az=196.0*
*CSEM **30** 13:40:11.8±0.1, 39.′42N×20.′84E, h60km, mb4.3/7, Error ellipse: s-maj=2.2km s-min=1.7km az=34.0*
*THE **30** 13:40:12.6, 39.′42N×20.′94E, h29km±2km, ML4.8/7, Error ellipse: s-maj=2.8km s-min=0.8km az=264.0*
*PRU **30** 13:40:12.5, 39.′69N×20.′53E, h0km, M4.2*
*SOF **30** 13:40:13.0, 39.′65N×21.′10E, h18km, MD4.0*
*TIR **30** 13:40:13.6±2.7, 39.′42N×20.′61E, h30km±624km, ML4.6*
*VIE **30** 13:40:18.5±1.3, 39.′79N×20.′19E, h80km, mb3.5/8, Ms3.7/8, Error ellipse: s-maj=12.9km s-min=6.9km az=96.0 174 km S of Tirana*
*HLW **30** 13:40:20.1, 38.′72N×22.′45E, h12km±17km, Md4.6, Ml4.5*
ISC 30 13:40:11.9±0.1, 39.′41N±0.′01×20.′83E±0.′01, h60km±2km, h61km±.2km; pP-P, n600, σ1.900/680, mb4.3/32, 43C-27D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.25**	**4**	⇓*i*P	**Pn**	**13 40 20.6**	**-1.1**
JAN				*e*S	**Sn**	**13 40 27.2**	**-1.5**
JAN	**Janina**	**0.25**	**4**	⇓*i*P	**Pn**	**13 40 20.6**	**-1.1**
JAN				*e*S	**Sn**	**13 40 27.2**	**-1.5**
IGT	**Igoumenitsa**	**0.40**	**288**	P	**Pn**	**13 40 22.4**	**-0.5**
IGT				S	**Sn**	**13 40 30.5**	**-0.4**
IGT	**Igoumenitsa**	**0.40**	**288**	P	**Pn**	**13 40 22.4**	**-0.5**
IGT				S	**Sn**	**13 40 30.5**	**-0.4**
LKD2	**Lefkada island**	**0.63**	**192**	P	**Pn**	**13 40 25.0**	**-0.3**
LKD2				S	**Sn**	**13 40 35.2**	**+0.1**
LKD2	**Lefkada island**	**0.63**	**192**	P	**Pn**	**13 40 25.0**	**-0.3**
LKD2				S	**Sn**	**13 40 35.2**	**+0.1**
LSK	**Leskovik**	**0.76**	**347**	*i* PG	**Pn**	**13 40 27.6**	**+0.7**
LSK				*i* SG	**Sn**	**13 40 39.6**	**+1.7**
LSK	**Leskovik**	**0.76**	**347**	*i* Pg	**Pn**	**13 40 27.6**	**+0.7**
	SNR=91						
LSK				*i* Sg	**Sn**	**13 40 39.6**	**+1.7**
	SNR=91						
SRN	**Sarande**	**0.80**	**307**	*i* PG	**Pn**	**13 40 27.6**	**+0.3**
SRN				*i* SG	**Sn**	**13 40 34.6**	**-4.0**
SRN	**Sarande**	**0.80**	**307**	*i* Pg	**Pn**	**13 40 27.6**	**+0.3**
	SNR=92						
KEK	**Kerkira**	**0.85**	**291**	P	**Pn**	**13 40 27.9**	**-0.1**
KEK	**Kerkira**	**0.85**	**291**	P	**Pn**	**13 40 28.4**	**+0.4**
KEK	**Kerkira**	**0.85**	**291**	*e*P	**Pn**	**13 40 28.4**	**+0.4**
KEK				*e*S	**Sn**	**13 40 39.7**	**-0.2**
KEK	**Kerkira**	**0.85**	**291**	P	**Pn**	**13 40 27.9**	**-0.1**
KEK				*e*S	**Sn**	**13 40 39.7**	**-0.2**
EVR	**Evrytania**	**0.91**	**122**	P	**Pn**	**13 40 28.9**	**+0.2**
EVR	**Evrytania**	**0.91**	**122**	⇓*i*P	**Pn**	**13 40 29.4**	**+0.7**
EVR				*e*S	**Sn**	**13 40 40.2**	**-0.9**
EVR	**Evrytania**	**0.91**	**122**	P	**Pn**	**13 40 28.9**	**+0.2**
EVR				*e*S	**Sn**	**13 40 40.2**	**-0.9**
THL	**Klokotos Trika**	**0.93**	**80**	P	**Pn**	**13 40 28.3**	**-0.7**
THL				S	**Sn**	**13 40 39.7**	**-2.0**
THL	**Klokotos Trika**	**0.93**	**80**	*e*P	**Pn**	**13 40 28.6**	**-0.4**
THL				*e*S	**Sn**	**13 40 41.4**	**-0.3**
THL	**Klokotos Trika**	**0.93**	**80**	*e*P	**Pn**	**13 40 28.6**	**-0.4**
THL				*e*S	**Sn**	**13 40 41.4**	**-0.3**
NEST	**Nestorio**	**1.02**	**10**	P	**Pn**	**13 40 31.2**	**+1.0**
NEST				S	**Sn**	**13 40 44.0**	**+0.2**
NEST	**Nestorio**	**1.02**	**10**	P	**Pn**	**13 40 31.2**	**+1.0**
NEST				S	**Sn**	**13 40 44.0**	**+0.2**
TPE	**Tepelena**	**1.09**	**325**	*i* PG	**Pn**	**13 40 33.6**	**+2.5**
TPE				*i* SG	**Sn**	**13 40 46.6**	**+1.3**
TPE	**Tepelena**	**1.09**	**325**	*i* Pg	**Pn**	**13 40 33.6**	**+2.5**
	SNR=90						
TPE				*i* Sg	**Sn**	**13 40 46.6**	**+1.3**
	SNR=90						
KZN	**Kozani**	**1.16**	**39**	P	**Pn**	**13 40 31.9**	**-0.1**
KZN				S	**Sn**	**13 40 46.1**	**-0.8**
KZN	**Kozani**	**1.16**	**39**	*e*P	**Pn**	**13 40 32.2**	**+0.2**
KZN				*e*S	**Sn**	**13 40 47.1**	**+0.2**
KZN	**Kozani**	**1.16**	**39**	P	**Pn**	**13 40 31.9**	**-0.1**
KZN				*e*S	**Sn**	**13 40 47.1**	**+0.2**
KBN	**Korca**	**1.22**	**359**	*i* PG	**Pn**	**13 40 34.7**	**+1.9**
KBN				*i* SG	**Sn**	**13 40 51.9**	**+3.6**
KBN	**Korca**	**1.22**	**359**	*i* Pg	**Pn**	**13 40 34.7**	**+1.9**
	SNR=90						
KBN				*i* Sg	**Sn**	**13 40 51.9**	**+3.6**
	SNR=90						
AGG	**Agios Georgios**	**1.23**	**108**	P	**Pn**	**13 40 32.8**	**-0.1**
AGG	**Agios Georgios**	**1.23**	**108**	P	**Pn**	**13 40 33.2**	**+0.3**
AGG				S	**Sn**	**13 40 47.1**	**-1.5**
AGG	**Agios Georgios**	**1.23**	**108**	*e*P	**Pn**	**13 40 33.4**	**+0.5**
AGG				*e*S	**Sn**	**13 40 48.1**	**-0.5**
AGG	**Agios Georgios**	**1.23**	**108**	P	**Pn**	**13 40 32.8**	**-0.1**
AGG				*e*S	**Sn**	**13 40 48.1**	**-0.5**
VLS	**Valsamata**	**1.24**	**189**	P	**Pn**	**13 40 32.3**	**-0.8**
VLS	**Valsamata**	**1.24**	**189**	*e*P	**Pn**	**13 40 32.3**	**-0.8**
VLS				*e*S	**Sn**	**13 40 48.8**	**-0.1**
VLS	**Valsamata**	**1.24**	**189**	P	**Pn**	**13 40 32.3**	**-0.8**
VLS				*e*S	**Sn**	**13 40 48.8**	**-0.1**
EFP	**Efpalio**	**1.29**	**139**	P	**Pn**	**13 40 34.3**	**+0.6**
EFP	**Efpalio**	**1.29**	**139**	*e*P	**Pn**	**13 40 34.3**	**+0.6**
EFP	**Efpalio**	**1.29**	**139**	P	**Pn**	**13 40 34.3**	**+0.6**
KFL	**Anninata**	**1.29**	**181**	P	**Pn**	**13 40 33.3**	**-0.5**
UPR	**University Cam**	**1.35**	**146**	P	**Pn**	**13 40 35.4**	**+0.9**
UPR	**University Cam**	**1.35**	**146**	*e*P	**Pn**	**13 40 34.9**	**+0.4**
UPR	**University Cam**	**1.35**	**146**	*e*P	**Pn**	**13 40 34.9**	**+0.4**
TRIZ	**Trizonia**	**1.42**	**137**	P	**Pn**	**13 40 36.1**	**+0.6**
TRIZ	**Trizonia**	**1.42**	**137**	P	**Pn**	**13 40 36.1**	**+0.6**
RLS	**Riolos of Patr**	**1.44**	**159**	P	**Pn**	**13 40 36.1**	**+0.4**
RLS	**Riolos of Patr**	**1.44**	**159**	*e*P	**Pn**	**13 40 35.7**	**0.0**
RLS	**Riolos of Patr**	**1.44**	**159**	*e*P	**Pn**	**13 40 35.7**	**0.0**
FNA	**Florina**	**1.44**	**17**	P	**Pn**	**13 40 36.2**	**+0.5**
FNA				S	**Sn**	**13 40 53.4**	**-0.2**
FNA	**Florina**	**1.44**	**17**	P	**Pn**	**13 40 35.9**	**+0.2**
FNA				S	**Sn**	**13 40 53.4**	**-0.2**
KALE	**Kalithea**	**1.44**	**134**	P	**Pn**	**13 40 36.5**	**+0.7**
KALE	**Kalithea**	**1.44**	**134**	P	**Pn**	**13 40 36.5**	**+0.7**
LAKA	**Lakka**	**1.47**	**142**	P	**Pn**	**13 40 36.7**	**+0.5**
LAKA	**Lakka**	**1.47**	**142**	P	**Pn**	**13 40 36.7**	**+0.5**
BIA	**Bitola**	**1.66**	**13**	P	**Pn**	**13 40 38.8**	**+0.2**
BIA	**Bitola**	**1.66**	**13**	*i* Pn	**Pn**	**13 40 39.4**	**+0.7**
BIA				*i* Sn	**Sn**	**13 41 00.3**	**+1.5**
BIA	**Bitola**	**1.66**	**13**	P	**Pn**	**13 40 39.1**	**+0.5**
BIA	**Bitola**	**1.66**	**13**	P	**Pn**	**13 40 38.8**	**+0.2**
DSF	**Desfina**	**1.66**	**126**	P	**Pn**	**13 40 38.6**	**-0.1**
DSF	**Desfina**	**1.66**	**126**	P	**Pn**	**13 40 38.6**	**-0.1**
OHR	**Ohrid**	**1.70**	**359**	⇓*i*Pn	**Pn**	**13 40 40.0**	**+0.7**
OHR				*e*Lg		13 41 07.3	
	comp=E,1μm,0.6s						
OHR				*e*Lg		13 41 11.4	
	comp=N,794nm,0.6s						
OHR	**Ohrid**	**1.70**	**359**	P	**Pn**	**13 40 39.9**	**+0.6**
OHR	**Ohrid**	**1.70**	**359**	P	**Pn**	**13 40 39.5**	**+0.2**
XOR	**Xorichti**	**1.83**	**91**	P	**Pn**	**13 40 40.2**	**-0.8**
XOR	**Xorichti**	**1.83**	**91**	P	**Pn**	**13 40 40.2**	**-0.8**
XOR	**Xorichti**	**1.83**	**91**	P	**Pn**	**13 40 40.2**	**-0.8**
ATAL	**Atalanti**	**1.85**	**112**	P	**Pn**	**13 40 41.2**	**-0.1**
ATAL	**Atalanti**	**1.85**	**112**	P	**Pn**	**13 40 41.2**	**-0.1**
LKR	**Lokris**	**1.85**	**113**	P	**Pn**	**13 40 40.8**	**-0.5**
LKR	**Lokris**	**1.85**	**113**	P	**Pn**	**13 40 40.9**	**-0.4**
LKR	**Lokris**	**1.85**	**113**	*e*P	**Pn**	**13 40 41.1**	**-0.2**
LKR	**Lokris**	**1.85**	**113**	*e*P	**Pn**	**13 40 41.1**	**-0.2**
NEO	**Neokhori**	**1.86**	**92**	P	**Pn**	**13 40 40.4**	**-1.0**
NEO	**Neokhori**	**1.86**	**92**	*e*P	**Pn**	**13 40 40.7**	**-0.7**
NEO	**Neokhori**	**1.86**	**92**	*e*P	**Pn**	**13 40 40.7**	**-0.7**
GUR	**Goura**	**1.89**	**141**	P	**Pn**	**13 40 42.2**	**+0.4**
GUR	**Goura**	**1.89**	**141**	*e*P	**Pn**	**13 40 42.2**	**+0.4**
GUR	**Goura**	**1.89**	**141**	P	**Pn**	**13 40 42.2**	**+0.4**
SCTE	**Santa Cesarea**	**1.94**	**291**	*e*P	**Pn**	**13 40 42.3**	**-0.2**
SCTE	**Santa Cesarea**	**1.94**	**291**	*e*P	**Pn**	**13 40 42.3**	**-0.2**
KRUS	**Krusevo**	**1.99**	**9**	*i* Pn	**Pn**	**13 40 43.2**	**+0.1**
THE	**Thessaloniki**	**2.05**	**53**	P	**Pn**	**13 40 44.0**	**0.0**
THE	**Thessaloniki**	**2.05**	**53**	P	**Pn**	**13 40 44.0**	**0.0**
TIR	**Tirane**	**2.07**	**340**	*e*P	**Pn**	**13 40 44.5**	**+0.2**
TIR	**Tirane**	**2.07**	**340**	P	**Pn**	**13 40 45.2**	**+0.9**
TIR	**Tirane**	**2.07**	**340**	*e*P	**Pn**	**13 40 45.4**	**+1.1**
TIR	**Tirane**	**2.07**	**340**	*e*P	**Pn**	**13 40 44.5**	**+0.2**
HORT	**Hortiatis**	**2.11**	**55**	P	**Pn**	**13 40 45.2**	**+0.4**
HORT	**Hortiatis**	**2.11**	**55**	P	**Pn**	**13 40 44.0**	**-0.8**
HORT				S	**Sn**	**13 41 09.9**	**-0.1**
HORT	**Hortiatis**	**2.11**	**55**	P	**Pn**	**13 40 45.2**	**+0.4**
HORT				S	**Sn**	**13 41 09.9**	**-0.1**
LTK	**Loutraki**	**2.17**	**129**	P	**Pn**	**13 40 45.1**	**-0.5**
LTK	**Loutraki**	**2.17**	**129**	*e*P	**Pn**	**13 40 45.2**	**-0.4**
LTK	**Loutraki**	**2.17**	**129**	*e*P	**Pn**	**13 40 45.3**	**-0.3**
PLG	**Polygyros**	**2.23**	**64**	P	**Pn**	**13 40 45.5**	**-1.0**
PLG	**Polygyros**	**2.23**	**64**	*e*P	**Pn**	**13 40 45.6**	**-0.9**
PLG	**Polygyros**	**2.23**	**64**	*e*P	**Pn**	**13 40 45.6**	**-0.9**
PAIG	**Paliouri**	**2.26**	**76**	P	**Pn**	**13 40 45.7**	**-1.2**
PAIG				S	**Sn**	**13 41 12.5**	**-1.1**
PAIG	**Paliouri**	**2.26**	**76**	P	**Pn**	**13 40 45.7**	**-1.2**
PAIG				S	**Sn**	**13 41 12.5**	**-1.1**
VAY	**Valandovo**	**2.33**	**34**	*i* Pn	**Pn**	**13 40 47.3**	**-0.5**
VAY				*i* Sn	**Sn**	**13 41 14.4**	**-0.9**
VAY				*e*Lg		13 41 14.7	
	comp=E,555nm,0.6s						
VAY				*e*Lg		13 41 14.9	
	comp=N,381nm,0.6s						
VAY	**Valandovo**	**2.33**	**34**	P	**Pn**	**13 40 47.6**	**-0.2**
VAY	**Valandovo**	**2.33**	**34**	P	**Pn**	**13 40 47.6**	**-0.2**
VLX	**Vlachokerasia**	**2.37**	**149**	P	**Pn**	**13 40 49.5**	**+1.1**
VLX	**Vlachokerasia**	**2.37**	**149**	*e*P	**Pn**	**13 40 49.3**	**+0.9**
VLX	**Vlachokerasia**	**2.37**	**149**	*e*P	**Pn**	**13 40 49.3**	**+0.9**
AOS	**Alonnisos**	**2.38**	**95**	P	**Pn**	**13 40 47.4**	**-1.1**
AOS	**Alonnisos**	**2.38**	**95**	P	**Pn**	**13 40 47.5**	**-1.0**
AOS	**Alonnisos**	**2.38**	**95**	P	**Pn**	**13 40 47.5**	**-1.0**
ITM	**Ithomi**	**2.39**	**158**	P	**Pn**	**13 40 49.0**	**+0.4**
ITM	**Ithomi**	**2.39**	**158**	P	**Pn**	**13 40 49.2**	**+0.6**
ITM	**Ithomi**	**2.39**	**158**	*e*P	**Pn**	**13 40 49.3**	**+0.7**
ITM	**Ithomi**	**2.39**	**158**	P	**Pn**	**13 40 49.0**	**+0.4**
SOH	**Sokhos**	**2.40**	**53**	P	**Pn**	**13 40 48.7**	**0.0**
SOH	**Sokhos**	**2.40**	**53**	*e*P	**Pn**	**13 40 48.3**	**-0.4**
SOH	**Sokhos**	**2.40**	**53**	P	**Pn**	**13 40 48.7**	**0.0**
OUR	**Ouranopolis**	**2.60**	**68**	P	**Pn**	**13 40 50.7**	**-0.8**
OUR	**Ouranopolis**	**2.60**	**68**	P	**Pn**	**13 40 50.7**	**-0.8**
SKO	**Skopje**	**2.60**	**10**	*i* Pn	**Pn**	**13 40 52.4**	**+0.9**
SKO				*e*Lg		13 41 22.0	
	comp=E,274nm,0.3s						
SKO				*e*Lg		13 41 22.7	
	comp=N,365nm,0.4s						
SKO	**Skopje**	**2.60**	**10**	P	**Pn**	**13 40 52.3**	**+0.7**
SKO	**Skopje**	**2.60**	**10**	P	**Pn**	**13 40 52.0**	**+0.4**
PYL	**PYLOS**	**2.61**	**164**	P	**Pn**	**13 40 51.5**	**-0.1**
PYL	**PYLOS**	**2.61**	**164**	*e*P	**Pn**	**13 40 51.4**	**-0.2**
PYL	**PYLOS**	**2.61**	**164**	*e*P	**Pn**	**13 40 51.4**	**-0.2**
NAIG	**Nisos Aigina**	**2.66**	**127**	*e*P	**Pn**	**13 40 51.7**	**-0.6**
NAIG	**Nisos Aigina**	**2.66**	**127**	*e*P	**Pn**	**13 40 51.7**	**-0.6**
ATH	**Athens Observa**	**2.68**	**121**	*e*P	**Pn**	**13 40 52.3**	**-0.2**
ATH	**Athens Observa**	**2.68**	**121**	*e*P	**Pn**	**13 40 52.3**	**-0.2**
DID	**Didima**	**2.68**	**134**	P	**Pn**	**13 40 52.4**	**-0.2**
DID	**Didima**	**2.68**	**134**	*e*P	**Pn**	**

PRK	Paraskevi	4.22	90	P	Pn	13 41 13.8	+0.1
PRK	Paraskevi	4.22	90	eP	Pn	13 41 13.9	+0.2
PRK	Paraskevi	4.22	90	P	Pn	13 41 13.8	+0.1
EZN	Ezine	4.27	83	eP	Pn	13 41 13.8	-0.5
ALN	Alexandroupoli	4.27	68	P	Pn	13 41 13.7	-0.6
ALN	Alexandroupoli	4.27	68	eP	Pn	13 41 14.4	+0.1
ALN	Alexandroupoli	4.27	68	eP	Pn	13 41 14.4	+0.1
ENEZ	Enez	4.30	70	eP	Pn	13 41 14.7	0.0
MRLC	Muro Lucano	4.31 290		P	Pn	13 41 15.4	+0.5
MRLC	Muro Lucano	4.31 290		P	Pn	13 41 15.4	+0.5
MS1	Monte Sant'Ang	4.37 303		ePn	Pn	13 41 16.4	+0.7
MS1				eSn	Sn	13 42 02.6	-2.7
APE	Apeiranthos	4.38 121	⇓	P	Pn	13 41 15.7	-0.1
APE	Apeiranthos	4.38 121		P	Pn	13 41 15.7	-0.1
APE	Apeiranthos	4.38 121	⇓	iP	Pn	13 41 15.7	-0.1
APE	Apeiranthos	4.38 121		eP	Pn	13 41 16.0	+0.2
APE	Apeiranthos	4.38 121		P	Pn	13 41 15.7	-0.1
SGO	Sicignano	4.39 287		P	Pn	13 41 17.0	+1.0
MSAG	Monte S. Angel	4.40 303		P	Pn	13 41 15.4	-0.7
MSAG	Monte S. Angel	4.40 303		P	Pn	13 41 15.4	-0.7
GRUS	Gruza	4.48 359		P	Pn	13 41 17.9	+0.7
GRUS	Gruza	4.48 359		ePn	Pn	13 41 15.2	-2.0
GRUS	Gruza	4.48 359		P	Pn	13 41 17.9	+0.7
BOLS	Boljevac	4.50	10	ePn	Pn	13 41 16.4	-1.0
MPEP	Malo Peshtene	4.51	28	P	Pn	13 41 19.6	+2.0
SGRT	San Giovanni R	4.53 303		P	Pn	13 41 17.8	0.0
SGRT	San Giovanni R	4.53 303		P	Pn	13 41 17.8	0.0
BBLS	Lazići	4.58 347		ePn	Pn	13 41 17.9	-0.7
RGNG	Rignano Grg	4.59 301		P	Pn	13 41 18.5	-0.2
RGNG	Rignano Grg	4.59 301		P	Pn	13 41 18.5	-0.2
FG5	Orsara di Pugl	4.64 296		P	Pn	13 41 20.3	+0.9
FG5	Orsara di Pugl	4.64 296		P	Pn	13 41 20.3	+0.9
LPK	Lapseki	4.66 76		eP	Pn	13 41 18.8	-0.9
CSSN	Cassano Irpino	4.68 290		P	Pn	13 41 21.6	+1.7
CSSN	Cassano Irpino	4.68 290		P	Pn	13 41 21.6	+1.7
KARN	Karanos	4.69 147		eP	Pn	13 41 20.6	+0.5
KARN	Karanos	4.69 147		eP	Pn	13 41 20.6	+0.5
DIVS	Divibare	4.73 353	⇓	iPn	Pn	13 41 19.9	-0.7
SLNA	Salina	4.75 262		P	Pn	13 41 21.2	+0.3
SLNA	Salina	4.75 262		P	Pn	13 41 21.2	+0.3
MRB1	Monte Rocchett	4.80 293		P	Pn	13 41 23.0	+1.5
MRB1	Monte Rocchett	4.80 293		P	Pn	13 41 23.0	+1.5
VAM	Vamos	4.81 145		eP	Pn	13 41 21.3	-0.5
VAM	Vamos	4.81 145		eP	Pn	13 41 21.3	-0.5
FG2	Serracapriola	4.93 301		P	Pn	13 41 23.4	0.0
FG2	Serracapriola	4.93 301		P	Pn	13 41 23.4	0.0
PSB1	Pescosannita	4.94 293		P	Pn	13 41 24.6	+1.1
PSB1	Pescosannita	4.94 293		P	Pn	13 41 24.6	+1.1
BLCB	Balcova	4.95 100		eP	Pn	13 41 23.9	+0.2
SMG	Samos	5.01 108		P	Pn	13 41 24.6	+0.2
SMG	Samos	5.01 108		eP	Pn	13 41 24.9	+0.5
SMG	Samos	5.01 108		P	Pn	13 41 24.6	+0.2
RKY	Sarkoy-Tekirda	5.04	73	eP	Pn	13 41 24.8	0.0
CIGN	Sant'Elia a Pi	5.04 298		P	Pn	13 41 25.6	+0.7
CIGN	Sant'Elia a Pi	5.04 298		P	Pn	13 41 25.6	+0.7
SSY	Sortino	5.06 245		P	Pn	13 41 22.3	-2.8
SSY	Sortino	5.06 245		P	Pn	13 41 22.3	-2.8
HAVL	Avola	5.11 243		P	Pn	13 41 22.4	-3.5
EDRB	Edirne	5.12	60	eP	Pn	13 41 26.2	+0.3
MFT	Murefte	5.14	72	eP	Pn	13 41 26.3	+0.1
IDI	Anoyia	5.23 141		P	Pn	13 41 25.4	-2.2
	comp=N,8.3nm,0.3s,baz=314,slow=15,SNR=31						
IDI				S	Sn	13 42 21.6	-4.9
	comp=N,34nm,0.3s,baz=80,slow=22,SNR=16						
IDI				LR	LR	13 43 52.8	
	comp=N,236nm,18.2s,baz=68,slow=43						
IDI	Anoyia	5.23 141		eP	Pn	13 41 27.4	-0.1
IDI	Anoyia	5.23 141		eP	Pn	13 41 27.4	-0.1
GVD	Gavdhos	5.25 149		ePn	Pn	13 41 27.0	-0.8
GVD				eSn	Sn	13 42 20.3	-6.6
GVD	Gavdhos	5.25 149		ePn	Pn	13 41 27.0	-0.8
HVZN	Vizzini	5.30 247		P	Pn	13 41 26.0	-2.4
HVZN	Vizzini	5.30 247		P	Pn	13 41 26.0	-2.4
SGG	Gregorio Mates	5.31 294		P	Pn	13 41 30.1	+1.6
SGG	Gregorio Mates	5.31 294		P	Pn	13 41 30.1	+1.6
GONE	Gonen-Balikesi	5.33	81	eP	Pn	13 41 29.4	+0.6
HMDC	Modica	5.35 245		P	Pn	13 41 26.8	-2.4
HMDC	Modica	5.35 245		P	Pn	13 41 26.8	-2.4
VAE	Valguarnera	5.39 251		P	Pn	13 41 30.9	+1.2
	comp=N,3.2nm,0.3s,baz=166,slow=8.3,SNR=2.4						
VAE				S	Sn	13 42 29.4	-1.0
	comp=N,26nm,0.3s,baz=360,slow=14,SNR=6.1						
VAE	Valguarnera	5.39 251		P	Pn	13 41 30.9	+1.2
VAE				S	Sn	13 42 29.4	-1.0
VAE	Valguarnera	5.39 251		P	Pn	13 41 30.9	+1.2
VAE				S	Sn	13 42 29.4	-1.0
AKS	Akhisar	5.46	93	eP	Pn	13 41 31.7	+1.2
MIDA	Miranda	5.48 296		P	Pn	13 41 31.7	+0.8
MIDA	Miranda	5.48 296		P	Pn	13 41 31.7	+0.8
CSLB	Castelbuono	5.50 257		P	Pn	13 41 30.9	-0.2
GIB	Gibilmanna	5.50 257		P	Pn	13 41 31.4	+0.2
RFI	Roccamonfina	5.56 292		P	Pn	13 41 33.4	+1.4
RFI	Roccamonfina	5.56 292		P	Pn	13 41 33.4	+1.4
RNI2	Rionero Sannit	5.58 298		P	Pn	13 41 33.8	+1.6
RNI2	Rionero Sannit	5.58 298		P	Pn	13 41 33.8	+1.6
BODT	Bodrum	5.61 113		eP	Pn	13 41 34.0	+1.3
SDI	San Donato	5.82 296		P	Pn	13 41 36.9	+1.4
DAT	Datca	5.96 115		eP	Pn	13 41 37.2	-0.2
BLY	Banja Luka	5.99 334		P	Pn	13 41 37.0	-0.8
BLY	Banja Luka	5.99 334		P	Pn	13 41 37.0	-0.8
USI	Ustica	5.99 266		P	Pn	13 41 37.5	-0.4
USI	Ustica	5.99 266		P	Pn	13 41 37.5	-0.4
VVLD	Villa Vallelon	6.01 296		P	Pn	13 41 39.4	+1.3
VVLD	Villa Vallelon	6.01 296		P	Pn	13 41 39.4	+1.3
CTYL	Yal??k??y-??at	6.05	68	eP	Pn	13 41 39.1	+0.3
WDD	Wield Dalam	6.12 237		ePn	Pn	13 41 38.2	-1.5
	comp=N,153nm,0.3s						
WDD	Wield Dalam	6.12 237		ePn	Pn	13 41 38.2	-1.5
	comp=N,153nm,0.3s						
GZR	Gura Zlata	6.15	13	⇑P	Pn	13 41 40.8	+0.7
GZR	Gura Zlata	6.15	13	⇑iP	Pn	13 41 40.8	+0.7
GZR	Gura Zlata	6.15	13	P	Pn	13 41 40.8	+0.7
KULA	Kula-Manisa	6.17	96	eP	Pn	13 41 41.4	+1.0
GUAR	Guarcino	6.20 295		P	Pn	13 41 42.9	+2.2
GUAR	Guarcino	6.20 295		P	Pn	13 41 42.9	+2.2
BZS	Buzias	6.23	5	⇑P	Pn	13 41 41.2	0.0
BZS	Buzias	6.23	5	⇑iP	Pn	13 41 41.2	0.0
BZS	Buzias	6.23	5	P	Pn	13 41 41.2	0.0
YER	Yerkesik	6.29 109		eP	Pn	13 41 42.8	+0.8
TERO	Teramo	6.34 303		P	Pn	13 41 43.1	+0.5
TERO	Teramo	6.34 303		P	Pn	13 41 43.1	+0.5
AQU	L'Aquila	6.35 300		P	Pn	13 41 42.8	0.0
AQU				pmax	pmax		
	comp=Z,40nm,0.5s						
AQU	L'Aquila	6.35 300		Pn	Pn	13 41 42.8	0.0
	comp=Z,40nm,0.5s						
AQU	L'Aquila	6.35 300		⇓iP	Pn	13 41 37.1	-5.7
AQU	L'Aquila	6.35 300		P	Pn	13 41 42.8	0.0
	comp=Z,40nm,0.5s						
CERT	Cerreto	6.48 296		P	Pn	13 41 45.6	+1.0
CERT	Cerreto	6.48 296		P	Pn	13 41 45.6	+1.0
FIAM	Fiamignano	6.51 299		P	Pn	13 41 47.7	+2.8
KLYT	Kilyos	6.54	71	eP	Pn	13 41 46.0	+0.6
YLV	Yalova	6.66	77	eP	Pn	13 41 47.7	+0.6
NRCA	Norcia	6.75 303		P	Pn	13 41 48.9	+0.6
NRCA	Norcia	6.75 303		P	Pn	13 41 48.9	+0.6
VOIR		6.79	26	⇑P	Pn	13 41 49.8	+1.1
VOIR		6.79	26	⇑iP	Pn	13 41 49.8	+1.1
VOIR		6.79	26	P	Pn	13 41 49.8	+1.1
NVLJ	Novalja	6.80 321		ePn	Pn	13 41 48.0	-0.9
NVLJ				Sn	Sn	13 42 59.5	-5.3
NVLJ	Novalja	6.80 321		ePn	Pn	13 41 48.0	-0.9
MNS	Montasola	6.85 298		P	Pn	13 41 51.9	+2.3
KHL	Karahalli	6.87	96	eP	Pn	13 41 50.6	+0.6
SISC	Sisak	6.90 333		ePn	Pn	13 41 50.5	+0.3
SISC	Sisak	6.90 333		ePn	Pn	13 41 50.5	+0.2
CING	Cingoli	6.97 307		P	Pn	13 41 50.9	-0.4
CING	Cingoli	6.97 307		P	Pn	13 41 50.9	-0.4
PKSM	Moragy	6.99 347	⇓	P	Pn	13 41 50.2	-1.3
PKSM	Moragy	6.99 347	⇓	iP	Pn	13 41 50.2	-1.3
PKSM	Moragy	6.99 347		P	Pn	13 41 50.2	-1.3
SNTG	Esanatoglia	7.07 305		P	Pn	13 41 52.6	0.0
SNTG	Esanatoglia	7.07 305		P	Pn	13 41 52.6	0.0
MLR	Muntele Rosu	7.16	30	⇑P	Pn	13 41 56.0	+2.1
MLR	Muntele Rosu	7.16	30	⇑iP	Pn	13 41 56.0	+2.1
ASS	Assisi	7.16 303		P	Pn	13 41 55.7	+1.8
ALT	Altintas	7.21	90	eP	Pn	13 41 55.6	+1.0
MURB	Monte Urbino	7.34 304		P	Pn	13 41 57.9	+1.6
MURB	Monte Urbino	7.34 304		P	Pn	13 41 57.9	+1.6
BOJS	Bojanci	7.36 328		iPn	Pn	13 41 55.3	-1.3
BOJS				eSn	Sn	13 43 10.7	-7.8
BOJS							
	comp=Z,107nm,0.3s						
BOJS	Bojanci	7.36 328		iPn	Pn	13 41 55.3	-1.3
BOJS				eSn	Sn	13 43 10.7	-7.8
BOJS	Bojanci	7.36 328		iPn	Pn	13 41 55.3	-1.2
FSSB	Fossombrone	7.40 308		P	Pn	13 41 56.5	-0.7
FSSB	Fossombrone	7.40 308		P	Pn	13 41 56.5	-0.7
PKS9	Tamasi	7.42 346		ePn	Pn	13 41 55.1	-2.2
MGAB	Montegabbione	7.45 301		P	Pn	13 41 59.4	+1.6
MGAB	Montegabbione	7.45 301		P	Pn	13 41 59.4	+1.6
PIEI	Pieia	7.47 306		P	Pn	13 41 57.6	-0.5
PIEI	Pieia	7.47 306		P	Pn	13 41 57.6	-0.5
GULT	Gulveren	7.52	79	eP	Pn	13 41 59.8	+1.0
TIRR	Tirgusor	7.58	46	⇑iP	Pn	13 41 57.3	-2.3
BADI	Badiali	7.64 305		P	Pn	13 42 02.8	+2.4
ELL	Elmali	7.64 107		eP	Pn	13 42 01.6	+1.2
PLOR	Plostina	7.74	32	⇑P	Pn	13 42 04.2	+2.4
PLOR	Plostina	7.74	32	⇑iP	Pn	13 42 04.2	+2.4
PLOR	Plostina	7.74	32	P	Pn	13 42 04.2	+2.4
ISP	Isparta	7.75	99	⇓P	Pn	13 42 04.4	+2.4
ISP	Isparta	7.75	99	⇓iP	Pn	13 42 04.4	+2.4
LTBQ	Tobrug	7.75 160		iP	Pn	13 42 02.0	-0.1
	comp=Z,106nm,1.9s,SNR=97						
VRI	Vrincioaia	7.78	32	⇑iP	Pn	13 42 04.4	+2.0
VRI	Vrincioaia	7.78	32	P	Pn	13 42 04.7	+2.3
PDKS	Podkum	7.91 329		iPn	Pn	13 42 02.6	-1.5
SKDS	Skadanscina	7.94 323		iPn	Pn	13 42 02.9	-1.6
SKDS				iSn	Sn	13 43 24.6	-8.1
SKDS							
	comp=Z,76nm,0.2s						
SFI	Santa Sofia	8.09 307		P	Pn	13 42 08.9	+2.4
LJU	Ljubljana	8.09 327		iPn	Pn	13 42 05.5	-1.1
LJU				iSn	Sn	13 43 30.2	-6.3
LJU	Ljubljana	8.09 327		iPn	Pn	13 42 05.5	-1.1
LJU				iSn	Sn	13 43 32.0	-4.5
LJU	Ljubljana	8.09 327		iP	Pn	13 42 05.5	-1.1
JAVS	Javornik	8.17 325		iPn	Pn	13 42 06.3	-1.4
JAVS				eSn	Sn	13 43 31.3	-7.3
JAVS							
	comp=Z,94nm,0.2s						
JAVS	Javornik	8.17 325		iPn	Pn	13 42 06.3	-1.4
JAVS				eSn	Sn	13 43 31.3	-7.3
JAVS	Javornik	8.17 325		iPn	Pn	13 42 06.3	-1.4
VOY	Vojsko	8.36 325		ePn	Pn	13 42 09.2	-1.0
VOY				eSn	Sn	13 43 36.6	-6.4
VOY	Vojsko	8.36 325		ePn	Pn	13 42 09.2	-1.0
SOKA	Soboth	8.41 332		⇑iPn	Pn	13 42 09.4	-1.6
	comp=Z,7.4nm,0.3s						
SOKA				⇓iSn	Sn	13 43 36.1	-8.3
	comp=Z,24nm,0.5s						
SOKA	Soboth	8.41 332		Pn	Pn	13 42 09.4	-1.6
	comp=Z,7.4nm,0.3s						
OBKA	Obir	8.46 329		⇑iPn	Pn	13 42 11.3	-0.3
	comp=Z,5.7nm,0.2s,SNR=13						
OBKA				⇑iSn	Sn	13 43 36.8	-8.7
	comp=Z,35nm,0.3s						
OBKA	Obir	8.46 329		Pn	Pn	13 42 11.3	-0.3
	comp=Z,5.7nm,0.2s,SNR=13						
LJBD	Adjabya	8.49 184		eP	Pn	13 42 11.8	-0.3
	SNR=96						
PSZ	Piszkesteto	8.54 356		⇓P	Pn	13 42 12.7	0.0
PSZ	Piszkesteto	8.54 356		ePn	Pn	13 42 11.7	-0.9
	comp=Z,11nm,0.8s						
PSZ	Piszkesteto	8.54 356		⇑ePn	Pn	13 42 12.7	0.0
PSZ				eSn	Sn	13 43 42.0	-5.4
PSZ	Piszkesteto	8.54 356		⇓iP	Pn	13 42 12.7	0.0
PSZ	Piszkesteto	8.54 356		ePn	Pn	13 42 11.7	-1.0
	comp=Z,11nm,0.8s						
PSZ	Piszkesteto	8.54 356		⇑eP	Pn	13 42 12.7	0.0
CADS	Cadrg	8.58 325		iPn	Pn	13 42 11.7	-1.5
CADS				iSn	Sn	13 43 41.5	-6.9
CADS							
	comp=Z,43nm,0.2s						
CADS	Cadrg	8.58 325		iPn	Pn	13 42 11.7	-1.5
CADS				iSn	Sn	13 43 41.5	-6.9
CADS	Cadrg	8.58 325		iPn	Pn	13 42 11.7	-1.5
SLUM		8.67 154		P	Pn	13 42 10.3	-4.3
ARSA	Arzberg	8.74 336		⇑iPn	Pn	13 42 13.3	-2.1
	comp=Z,3.8nm,0.3s						
ARSA				⇓iSn	Sn	13 43 43.7	-8.7
	comp=Z,5.0nm,0.3s						
ARSA	Arzberg	8.74 336		Pn	Pn	13 42 13.3	-2.1
	comp=Z,3.8nm,0.3s						
BURAR	Bucovina Array	8.80	20	⇑P	Pn	13 42 19.0	+2.7
BURAR	Bucovina Array	8.80	20	⇑iP	Pn	13 42 19.0	+2.7
VSL	Villasalto	8.86 274		P	Pn	13 42 17.1	0.0
VSL	Villasalto	8.86 274		P	Pn	13 42 17.1	0.0
PTCC	Patocco-Chiusa	8.88 324		P	Pn	13 42 16.2	-1.2
PTCC	Patocco-Chiusa	8.88 324		P	Pn	13 42 16.2	-1.2
MYKA	Terra Mystica	8.93 326		⇑iSn	Sn	13 43 51.9	-5.1
	comp=Z,39nm,0.6s						
LSRT	Sirt	8.98 204		eP	Pn	13 42 16.7	-2.1
	comp=Z,48nm,0.3s,SNR=96						
ZST	Bratislava	9.19 344		eSN	Sn	13 43 53.4	-10
VYHS	Vyhne	9.20 352		ePn	Pn	13 42 20.2	-1.5
VYHS				eSn	Sn	13 43 46.5	-17
VYHS	Vyhne	9.20 352		ePN	Pn	13 42 20.2	-1.5
VYHS				e		13 43 46.5	
VYHS	Vyhne	9.20 352		eP	Pn	13 42 20.2	-1.5
UZH	Uzhgorod	9.28	6	eP	Pn	13 42 25.0	+2.1
UZH				eS	Sn	13 44 10.0	+4.4
UZH	Uzhgorod	9.28	6	eP	Pn	13 42 25.0	+2.1
FVI	Forni Avoltri	9.29 323		P	Pn	13 42 22.5	-0.5
KBA	Koelnbreinsper	9.41 327		⇑iPn	Pn	13 42 24.6	0.0
	comp=Z,3.8nm,0.3s						
KBA				⇑iSn	Sn	13 44 02.5	-6.2
	comp=Z,20nm,0.4s						
KBA	Koelnbreinsper	9.41 327		Pn	Pn	13 42 24.6	0.0
	comp=Z,3.8nm,0.3s						
PGF	Pioggiola	9.48 293		eP	Pn	13 42 26.4	+0.8
	comp=Z,16nm,0.7s						
PGF	Pioggiola	9.48 293		eP	Pn	13 42 26.4	+0.8
PGF				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PGF	Pioggiola	9.48 293		eP	Pn	13 42 26.4	+0.8
	comp=Z,7.8nm,0.7s						
PGF	Pioggiola	9.48 293		eP	Pn	13 42 26.4	+0.8
	comp=Z,8.0nm,0.7s						
CRVS	Cervenica-Dubn	9.50	3	eP	Pn	13 42 26.1	+0.2
CRVS	Cervenica-Dubn	9.50	3	ePN	Pn	13 42 26.1	+0.2
CRVS	Cervenica-Dubn	9.50	3	eP	Pn	13 42 26.1	+0.2
ABTA	Abfaltersbach	9.53 323		⇑iPn	Pn	13 42 25.1	-1.1
	comp=Z,4.8nm,0.2s						
ABTA				⇑iSn	Sn	13 44 03.5	-8.2
	comp=Z,57nm,0.6s						
ABTA	Abfaltersbach	9.53 323		Pn	Pn	13 42 25.1	-1.1
	comp=Z,4.8nm,0.2s						
MOA	Molln	9.68 333		⇓iPn	Pn	13 42 28.6	+0.2
	comp=Z,11nm,0.3s,SNR=12						
MOA				⇓iSn	Sn	13 44 09.9	-5.6
	comp=Z,12nm,0.3s						
MOA	Molln	9.68 333		Pn	Pn	13 42 28.6	+0.3
	comp=Z,11nm,0.3s,SNR=12						
JAVC	Velka Javorina	9.72 348		P	Pn	13 42 29.6	+0.8
HMAT	Matruh	9.75 146		P	Pn	13 42 24.0	-5.3
KEST	Kesra	9.82 252		P	Pn	13 42 32.4	+2.0
	comp=Z,0.4nm,0.3s,baz=16,slow=2.9,SNR=27						
KEST				S	Sn	13 44 19.2	+0.1
	comp=Z,0.3nm,0.3s,baz=52,slow=21,SNR=6.1						
KEST	Kesra	9.82 252		ePn	Pn	13 42 32.2	+1.9
KEST	Kesra	9.82 252		ePn	Pn	13 42 32.2	+1.9
BR131	Keskin Array S	9.90	84	ePn	Pn	13 42 33.0	+1.6
	comp=Z,1.6nm,0.3s						
BR131	Keskin Array S	9.90	84	ePn	Pn	13 42 33.0	+1.6
	comp=Z,1.6nm,0.3s						
BRTR	Keskin Array B	9.90	84	P	Pn	13 42 32.4	+1.0
	comp=Z,0.7nm,0.3s,baz=267,slow=12,SNR=15						
BRTR	Keskin Array B	9.90	84	P	Pn	13 42 32.4	+1.0
TREC	Trest	10.60 341		AMS	AMS	13 47 10.0	
	comp=Z,300nm,22.5s						
OKC	Ostrava-Krasne	10.60 351		AMS	AMS	13 45 40.0	
	comp=Z,100nm,9.7s						
LSHF	Shwairf	10.84 212		eP	Pn	13 42 41.9	-2.4
	comp=Z,26nm,0.4s,SNR=95						
DAVOX	Davos/Dischmat	10.87 316		P	Pn	13 42 45.8	+1.2
	comp=Z,0.4nm,0.3s,baz=156,slow=20,SNR=2.1						
DAVOX				LR	LR	13 47 40.2	
	comp=Z,112nm,21.2s,baz=263,slow=41						
DAVOX	Davos/Dischmat	10.87 316		P	Pn	13 42 45.8	+1.2
SBF	Sospel	10.96 298		eP	Pn	13 42 46.7	+0.8
SBF	Sospel	10.96 298		eP	Pn	13 42 46.7	+0.8
KHC	Kasperske Hory	11.02 334		eP	Pn	13 42 46.5	0.0
KHC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KHC	Kasperske Hory	11.02 334		ePn	Pn	13 42 46.5	-0.1
	comp=Z,3.6nm,0.6s						
KHC	Kasperske Hory	11.02 334		eP	Pn	13 42 45.2	-1.3
KHC				ex	x	13 42 57.0	
KHC				ex	x	13 43 24.5	
KHC				eS	Sn	13 44 40.3	-7.8
KHC				AMS	AMS	13 47 30.0	
	comp=Z,400nm,23.7s						
KHC	Kasperske Hory	11.02 334		eP	Pn	13 42 46.5	0.0
	comp=Z,4.0nm,0.6s						
DPC	Dobruska-Polom	11.40 345		eS	Sn	13 44 49.6	-7.7
DPC				AMS	AMS	13 47 50.0	
	comp=Z,200nm,22.8s						
PRU	Pruhonice	11.48 339		AMS	AMS	13 47 40.0	
	comp=Z,300nm,17.1s						
MBDF	Montbardon	11.72 302		eP	Pn	13 42 56.0	-0.1
	comp=Z,8.2nm,0.6s						
MBDF	Montbardon	11.72 302		eP	Pn	13 42 56.0	-0.1
MBDF				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MBDF	Montbardon	11.72 302		eP	Pn	13 42 56.0	-0.1
	comp=Z,4.1nm,0.6s						
MBDF	Montbardon	11.72 302		eP	Pn	13 42 56.0	-0.1
	comp=Z,4.0nm,0.6s						
PVCC	Panska Ves	11.96 340		AMS	AMS	13 48 00.0	
	comp=Z,200nm,10.2s						
LPG	La Plagne	12.04 305		eP	Pn	13 43 01.4	+0.9
	comp=Z,3.5nm,0.3s						
LPG	La Plagne	12.04 305		eP	Pn	13 43 01.4	+0.9
LPG				pmax	pmax		
	comp=Z,2.0nm,0.3s						
LPG	La Plagne	12.04 305		eP	Pn	13 43 01.4	+0.9
	comp=Z,1.8nm,0.3s						
LPG	La Plagne	12.04 305		eP	Pn	13 43 01.4	+0.9
	comp=Z,2.0nm,0.3s						
LPL	La Plagne	12.06 305		eP	Pn	13 43 01.2	+0.4
	comp=Z,2.8nm,0.2s						
LPL	La Plagne	12.06 305		eP	Pn	13 43 01.2	+0.4
LPL				pmax	pmax		
	comp=Z,1.0nm,0.2s						
LPL	La Plagne	12.06 305		eP	Pn	13 43 01.2	+0.4
	comp=Z,1.4nm,0.2s						
LPL	La Plagne	12.06 305		eP	Pn	13 43 01.2	+0.4
	comp=Z,1.0nm,0.2s						
NKC	Novy Kostel	12.34 334		AMS	AMS	13 48 20.0	
	comp=Z,300nm,17.9s						
AKASG	Malin Array Be	12.75	25	P	Pn	13 43 09.2	-0.9
	comp=Z,0.6nm,0.3s,baz=210,slow=12,SNR=3.9						
AKASG	Malin Array Be	12.75	25	P	Pn	13 43 09.2	-0.9
AKASG	Malin Array Be	12.75	25	P	Pn	13 43 09.2	-0.9
KOT	Kottamia	13.08 133		P	Pn	13 43 08.3	-6.5
KOT				S	Sn	13 45 16.4	-22
CLL	Collm	13.10 338		e(P)	Pn	13 43 16.0	+1.1
CLL				e		13 43 42.0	
HINF	Hinteralfeld	13.14 314		eP	Pn	13 43 14.8	-0.8
	comp=Z,4.5nm,0.3s						
HINF	Hinteralfeld	13.14 314		eP	Pn	13 43 14.8	-0.8
HINF				pmax	pmax		
	comp=Z,2.0nm,0.3s						
HINF	Hinteralfeld	13.14 314		eP	Pn	13 43 14.8	-0.8
	comp=Z,2.3nm,0.3s						
HINF	Hinteralfeld	13.14 314		eP	Pn	13 43 14.8	-0.8
	comp=Z,2.0nm,0.3s						
HSAF	As Saff	13.16 135		P	Pn	13 43 09.6	-6.3
HHAG	Hagoal	13.22 132		P	Pn	13 43 09.9	-6.8
GLL	Jalalah	13.28 134		P	Pn	13 43 11.1	-6.4
MMAI	Mount Meron Ar	13.38 114		P	Pn	13 43 15.6	-3.3
	comp=Z,4.9nm,0.3s,baz=306,slow=11,SNR=11						
MMAI				LR	LR	13 49 38.0	
	comp=Z,117nm,20.1s,baz=310,slow=43						
AMAG	Maghara	13.38 127		P	Pn	13 43 12.6	-6.3
RSH		13.49 125		P	Pn	13 43 14.0	-6.3
SMF	Signal de Mont	14.36

FINES							13 48 57.0	
FINES	**FINESS Array B**	**22.30**	**7**	P	**P**		**13 45 02.5**	**-1.4**
FINES	**FINESS Array B**	**22.30**	**7**	PcP	PcP		13 48 57.0	-0.3
NB2	**NORSAR Subarra**	**22.47**	**348**	P	**P**		**13 45 05.0**	**-0.6**
comp=Z,7.5nm,0.6s,mb4.3,baz=160,slow=11								
NB2	**NORSAR Subarra**	**22.47**	**348**	P	**P**		**13 45 05.0**	**-0.6**
comp=Z,7.5nm,0.6s,mb4.3,baz=160,slow=11,SNR=1.0								
NOA	**NORSAR Array B**	**22.47**	**348**	P	**P**		**13 45 05.3**	**-0.3**
comp=Z,6.1nm,0.5s,mb4.2,baz=161,slow=11,SNR=22								
NOA				LR	LR		13 54 57.4	
comp=Z,54nm,20.2s,baz=135,slow=40								
NOA	**NORSAR Array B**	**22.47**	**348**	P	**P**		**13 45 05.4**	**-0.2**
EKA	**Eskdalemuir Ar**	**22.58**	**323**	P	**P**		**13 45 06.3**	**-0.6**
comp=Z,8.1nm,0.5s,mb4.4,baz=121,slow=10,SNR=54								
EKA	**Eskdalemuir Ar**	**22.58**	**323**	P	**P**		**13 45 06.3**	**-0.6**
JOF	**Joensuu**	**24.38**	**12**	*eP*	**P**		**13 45 22.8**	**-1.2**
JOF				pmax	pmax			
comp=Z,2.0nm,0.3s,mb4.0								
JOF	**Joensuu**	**24.38**	**12**	*ep*	**P**		**13 45 22.8**	**-1.2**
comp=Z,1.8nm,0.3s,mb4.0								
JOF	**Joensuu**	**24.38**	**12**	*ep*	**P**		**13 45 22.8**	**-1.2**
comp=Z,1.8nm,0.3s,mb4.0								
JOF	**Joensuu**	**24.38**	**12**	*eP*	**P**		**13 45 22.8**	**-1.2**
comp=Z,2.0nm,0.3s,mb4.0								
AKTK	**Aktyubinsk**	**28.26**	**55**	P	**P**		**13 45 58.5**	**-0.7**
AKTK				LR	LR		13 59 37.3	
AKTK	**Aktyubinsk**	**28.26**	**55**	P	**P**		**13 45 58.5**	**-0.7**
AKTO	**Aktyubinsk**	**28.26**	**55**	P	**P**		**13 45 58.5**	**-0.7**
comp=Z,2.1nm,0.4s,mb4.1,baz=262,slow=7.7,SNR=14								
AKTO				LR	LR		13 59 37.3	
comp=Z,40nm,18.9s,baz=110,slow=41								
ARCES	**ARCESS Array B**	**30.29**	**3**	P	**P**		**13 46 15.8**	**-1.1**
comp=Z,2.6nm,0.5s,mb4.2,baz=190,slow=11,SNR=48								
ARCES				PcP	PcP		13 49 15.2	-0.6
comp=Z,0.4nm,0.4s,baz=191,slow=1.8,SNR=5.6								
ARCES	**ARCESS Array B**	**30.29**	**3**	P	**P**		**13 46 15.8**	**-1.1**
ARCES	**ARCESS Array B**	**30.29**	**3**	PcP	PcP		13 49 15.2	-0.6
KEV	**Kevo**	**30.59**	**4**	*eP*	**P**		**13 46 18.1**	**-1.4**
KEV				pmax	pmax			
comp=Z,2.0nm,0.3s,mb4.4								
KEV	**Kevo**	**30.59**	**4**	*ep*	**P**		**13 46 18.1**	**-1.4**
comp=Z,1.9nm,0.3s,mb4.4								
KEV	**Kevo**	**30.59**	**4**	*ep*	**P**		**13 46 18.1**	**-1.4**
comp=Z,1.9nm,0.3s,mb4.4								
KEV	**Kevo**	**30.59**	**4**	*eP*	**P**		**13 46 18.1**	**-1.4**
comp=Z,2.0nm,0.3s,mb4.4								
TORD	**Torodi Ar. Bea**	**31.14**	**218**	P	**P**		**13 46 25.5**	**+0.6**
comp=Z,2.0nm,0.4s,mb4.3,baz=32,slow=9.2,SNR=42								
BVAR	**Borovoye Array**	**36.15**	**51**	P	**P**		**13 47 08.2**	**+0.1**
comp=Z,1.9nm,0.4s,mb4.4,baz=276,slow=8.3,SNR=12								
BVAR	**Borovoye Array**	**36.15**	**51**	P	**P**		**13 47 08.2**	**+0.1**
EKS2	**Erkin-Say**	**39.53**	**68**	*eP*	**P**		**13 47 37.6**	**+0.9**
comp=Z,3.2nm,0.5s,mb4.3								
EKS2	**Erkin-Say**	**39.53**	**68**	*eP*	**P**		**13 47 37.7**	**+1.0**
comp=Z,3.2nm,0.5s,mb4.3								
DBIC	**Dimbokro**	**39.96**	**222**	P	**P**		**13 47 41.2**	**+0.7**
comp=Z,2.1nm,0.5s,mb4.2,baz=18,slow=13,SNR=11								
DBIC				LR	LR		14 04 05.3	
comp=Z,73nm,20.7s,baz=206,slow=36								
DBIC	**Dimbokro**	**39.96**	**222**	P	**P**		**13 47 41.2**	**+0.7**
LIC	**Lamto**	**40.43**	**222**	*eP*	**P**		**13 47 45.2**	**+0.8**
comp=Z,7.6nm,0.5s,mb4.4								
LIC	**Lamto**	**40.43**	**222**	*eP*	**P**		**13 47 45.2**	**+0.8**
comp=Z,3.8nm,0.4s,mb4.5								
LIC	**Lamto**	**40.43**	**222**	*eP*	**P**		**13 47 45.2**	**+0.8**
comp=Z,3.8nm,0.4s,mb4.5								
KURK	**Kurchatov**	**41.36**	**54**	*i* P	**P**		**13 47 57.5**	**+5.8**
KURK				pmax	pmax			
comp=Z,2.0nm,1.1s,mb3.7								
KURK	**Kurchatov**	**41.36**	**54**	*eP*	**P**		**13 47 50.7**	**-1.0**
comp=Z,8.8nm,1.4s,mb4.2								
KURK	**Kurchatov**	**41.36**	**54**	*eP*	**P**		**13 47 50.7**	**-1.0**
comp=Z,8.8nm,1.4s,mb4.2								
KSH	**Kashi**	**42.00**	**72**	*eP*	**P**		**13 48 11.5**	**+14**
KSH				pP	pP		13 48 26.8	+14
KSH				sP	sP		13 48 34.0	+15
KSH				PP	PP		13 49 55.5	+20
KSH				PcP	PcP		13 49 58.5	+7.3
KSH				ScP	ScP		13 53 43.5	+7.2
KSH				PcS	PcS		13 53 50.0	+7.1
KSH				S	S		13 54 34.8	+23
KSH				sS	sS		13 55 02.3	+25
KSH				SS	SS		13 57 44.5	+24
KSH				ScS	ScS		13 58 02.5	+8.7
KSH				pmax	pmax			
comp=Z,9.0nm,1.3s,mb4.2								
KSH				pmax	pmax			
comp=Z,130nm,5.2s								
KSH				LR	LR			
comp=N,80nm,5.9s								
KSH				LR	LR			
comp=E,36nm,3.9s								
KSH				LR	LR			
comp=Z,51nm,5.1s								
MK31	**Makanchi Array**	**44.46**	**60**	*eP*	**P**		**13 48 16.1**	**-0.7**
MK31	**Makanchi Array**	**44.46**	**60**	*eP*	**P**		**13 48 16.1**	**-0.7**
MKAR	**Makanchi Array**	**44.46**	**60**	P	**P**		**13 48 16.1**	**-0.8**
comp=Z,2.1nm,0.4s,mb4.2,baz=278,slow=7.4,SNR=70								
MKAR				PcP	PcP		13 49 60.0	+0.6
comp=Z,0.5nm,0.6s,baz=277,slow=3.2,SNR=4.0								
MKAR	**Makanchi Array**	**44.46**	**60**	P	**P**		**13 48 16.1**	**-0.8**
MKAR				PcP	PcP		13 49 60.0	+0.6
ZAA0	**Zalesovo Array**	**44.70**	**49**	*eP*	**P**		**13 48 17.7**	**-0.9**
ZAA0	**Zalesovo Array**	**44.70**	**49**	*eP*	**P**		**13 48 17.7**	**-0.9**
ZALV	**Zalesovo Beam**	**44.70**	**49**	P	**P**		**13 48 17.9**	**-0.8**
comp=Z,11nm,0.4s,mb5.1,baz=280,slow=8.6,SNR=47								
ZALV				LR	LR		14 07 09.3	
comp=Z,18nm,18.6s,baz=238,slow=36								
ZALV	**Zalesovo Beam**	**44.70**	**49**	P	**P**		**13 48 17.9**	**-0.7**
WMQ	**Urumqi**	**48.96**	**62**	*eP*	**P**		**13 48 53.0**	**+1.0**
SCHQ	**Schefferville**	**57.73**	**317**	P	**P**		**13 49 56.0**	**-0.1**
comp=Z,3.3nm,0.5s,mb4.7,baz=51,slow=8.9,SNR=10								
SCHQ	**Schefferville**	**57.73**	**317**	P	**P**		**13 49 56.0**	**-0.1**
SONM	**Songino Array**	**59.50**	**51**	P	**P**		**13 50 07.7**	**-0.8**
comp=Z,0.2nm,0.5s,mb3.4,baz=279,slow=5.3,SNR=3.5								
SONM	**Songino Array**	**59.50**	**51**	P	**P**		**13 50 07.7**	**-0.9**
CD2	**Chengdu**	**66.10**	**69**	*eP*	**P**		**13 50 52.3**	**-0.4**
CD2				pP	pP		13 51 08.5	-0.5
CD2				sP	sP		13 51 15.5	-0.3
CD2				pmax	pmax			
comp=Z,10.0nm,0.6s,mb5.0								
CD2				pmax	pmax			
comp=Z,30nm,5.2s								
HHC	**Hu-ho-hao-te**	**66.15**	**56**	*eP*	**P**		**13 50 53.3**	**+0.4**
HHC				pP	pP		13 51 09.5	+0.3
HHC				sP	sP		13 51 16.5	+0.6
HHC				PcP	PcP		13 51 23.8	+1.0
HHC				PP	PP		13 53 21.3	+2.6
HHC				ScP			13 55 20.5	
HHC				PcS			13 55 26.5	
HHC				S	S		13 59 34.3	-2.5
HHC				sS	sS		14 00 01.5	-2.8
HHC				ScS	ScS		14 00 40.3	-3.6
HHC				SS	SS		14 03 50.3	-2.5
HHC				pmax	pmax			
comp=Z,18nm,0.6s,mb5.3								
HHC				pmax	pmax			
comp=Z,69nm,4.8s								
HHC				LR	LR			
comp=N,110nm,15.6s								
HHC				LR	LR			
comp=E,73nm,18.0s								
HHC				LR	LR			
comp=Z,70nm,18.0s								
BOSA	**Boshof**	**67.80**	**176**	P	**P**		**13 51 04.5**	**+1.3**
comp=Z,2.4nm,0.5s,mb4.5,baz=358,slow=5.6,SNR=15								
BOSA	**Boshof**	**67.80**	**176**	P	**P**		**13 51 04.5**	**+1.3**
KMI	**Kunming**	**68.55**	**75**	P	**P**		**13 51 09.8**	**+1.5**
KMI				pP	pP		13 51 26.0	+1.3
KMI				sP	sP		13 51 32.0	+0.6
KMI				PP	PP		13 53 43.0	+3.0
KMI				S	S		14 00 05.3	-0.8
KMI				sS	sS		14 00 32.3	-1.4
KMI				SS	SS		14 04 31.3	+0.6
KMI				pmax	pmax			
comp=Z,6.0nm,0.9s,mb4.5								
KMI				pmax	pmax			
comp=Z,53nm,4.0s								
KMI				LR	LR			
comp=N,110nm,16.4s								
KMI				LR	LR			
comp=E,120nm,17.7s								
KMI				LR	LR			
comp=Z,53nm,20.8s								
CMAR	**Chiang Mai Arr**	**69.49**	**83**	P	**P**		**13 51 12.1**	**-2.1**
comp=Z,0.4nm,0.5s,mb3.6,baz=287,slow=6.5,SNR=3.5								
CMAR	**Chiang Mai Arr**	**69.49**	**83**	P	**P**		**13 51 12.1**	**-2.1**
BJI	**Beijing**	**69.53**	**55**	P	**P**		**13 51 14.0**	**-0.1**
BJI				S	S		14 00 17.8	+0.5
BJI				pmax	pmax			
comp=Z,4.0nm,0.7s,mb4.5								
BJI				pmax	pmax			
comp=Z,69nm,3.2s								
GYA	**Guiyang**	**70.69**	**71**	P	**P**		**13 51 21.5**	**0.0**
GYA				pmax	pmax			
comp=Z,10.0nm,0.8s,mb4.8								
YKA	**Yellowknife Ar**	**72.32**	**340**	P	**P**		**13 51 31.0**	**+0.4**
comp=Z,1.8nm,0.6s,mb4.2,baz=38,slow=5.7,SNR=7.1								
YKA	**Yellowknife Ar**	**72.32**	**340**	P	**P**		**13 51 31.0**	**+0.4**
CN2	**Changchun**	**72.87**	**47**	*eP*	**P**		**13 51 34.8**	**+0.5**
MDJ	**Mudanjiang**	**74.66**	**45**	P	**P**		**13 51 43.5**	**-1.2**
MDJ				pmax	pmax			
comp=Z,4.0nm,0.8s,mb4.4								
MDJ				pmax	pmax			
comp=Z,49nm,5.0s								
ULM	**Lac du Bonnet**	**74.86**	**324**	P	**P**		**13 51 46.4**	**+0.6**
comp=Z,4.0nm,0.5s,mb4.6,baz=36,slow=5.2,SNR=3.6								
ULM	**Lac du Bonnet**	**74.86**	**324**	P	**P**		**13 51 46.3**	**+0.6**
DAWY	**Dawson**	**75.68**	**351**	*eP*	**P**		**13 51 51.2**	**+1.0**
DAWY	**Dawson**	**75.68**	**351**	*eP*	**P**		**13 51 51.2**	**+1.0**
TKL	**Tuckaleechee C**	**78.00**	**306**	*eP*	**P**		**13 52 04.1**	**+0.3**
TKL	**Tuckaleechee C**	**78.00**	**306**	*eP*	**P**		**13 52 04.1**	**+0.3**
KSRS	**Korea Array**	**78.37**	**51**	P	**P**		**13 52 04.8**	**-1.0**
comp=Z,0.6nm,0.5s,mb3.8,baz=310,slow=5.1,SNR=4.9								
KSRS	**Korea Array**	**78.37**	**51**	P	**P**		**13 52 04.8**	**-1.0**
KSRS				pmax	pmax			
comp=Z,1.0nm,0.5s,mb4.0								
KSRS	**Korea Array**	**78.37**	**51**	P	**P**		**13 52 04.8**	**-1.0**
comp=Z,1.0nm,0.5s,mb4.0								
RSO	**Redoubt South**	**80.35**	**357**	*eP*	**P**		**13 52 18.4**	**+2.3**
RSO	**Redoubt South**	**80.35**	**357**	*eP*	**P**		**13 52 18.4**	**+2.3**
ASAJ	**Asahikawa**	**81.67**	**38**	LR	LR		14 28 48.6	
comp=Z,46nm,20.1s,baz=326,slow=36								
PDAR	**Pinedale Array**	**86.67**	**326**	LR	LR		14 31 25.8	
comp=Z,49nm,22.0s,baz=178,slow=36								
TXAR	**Lajitas Array**	**94.30**	**314**	P	**P**		**13 53 26.1**	**+1.2**
comp=Z,0.2nm,0.5s,mb3.8,baz=56,slow=4.9,SNR=3.9								
TXAR	**Lajitas Array**	**94.30**	**314**	P	**P**		**13 53 26.1**	**+1.3**
CPUP	**Villa Florida**	**97.83**	**242**	LR	LR		14 40 20.1	
comp=Z,41nm,18.3s,baz=175,slow=37								
WRA	**Warramunga Arr**	**120.34**	**92**	PKP	PKPdf		13 58 55.5	-1.0
comp=Z,0.4nm,0.8s,baz=344,slow=1.1,SNR=4.9								
WRA	**Warramunga Arr**	**120.34**	**92**	PKIKP	PKPdf		13 58 55.5	-1.0
ASAR	**Alice Springs**	**122.06**	**96**	PKP	PKPdf		13 58 59.1	-0.6
comp=Z,0.3nm,0.5s,baz=305,slow=1.6,SNR=11								
ASAR	**Alice Springs**	**122.06**	**96**	PKIKP	PKPdf		13 58 59.2	-0.5

DDA ***30*** *13:49:01.7, 38.98N×43.02E, 7km±3km, Md3.1*
ISK ***30*** *13:49:02.6, 39.03N×43.07E, h16km, MD2.9*
CSEM ***30*** *13:49:02.2±0.2, 39.01N×42.99E, h10km, MD3.1, Error ellipse: s-maj=4.9km s-min=3.5km az=79.0*
ISCJB ***30*** *13:49:02.5±0.5, 39.00N±0.02×43.05E±0.04, h10km±5km, Error ellipse: s-maj=5.4km s-min=3.7km az=162.8*

ISC 30 13:49:02.7±0.5, 38.99N±0.02×43.02E±0.04, h4km±5km, n25, σ1=00/43, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUTA	**Tutak**	**0.44**	**339**	*i* P	**Pg**	**13 49 11.3**	**+0.1**
TUTA				*i* S	**Sg**	**13 49 17.9**	**+1.0**
TUTA	**Tutak**	**0.44**	**339**	*i* P	**Pg**	**13 49 11.3**	**+0.1**
TUTA				*i* S	**Sg**	**13 49 17.9**	**+0.9**
VANB	**Van**	**0.49**	**143**	*e*PG	**Pg**	**13 49 12.8**	**+0.7**
VANB				*e*SG	**Sg**	**13 49 20.7**	**+2.2**
VANB	**Van**	**0.49**	**143**	*e*Pg	**Pg**	**13 49 12.8**	**+0.7**
VANB				*e*Sg	**Sg**	**13 49 20.7**	**+2.3**
TVAN	**Van**	**0.55**	**146**	*i* P	**Pg**	**13 49 13.1**	**-0.1**
TVAN				*i* S	**Sg**	**13 49 20.2**	**-0.2**
TVAN	**Van**	**0.55**	**146**	*i* P	**Pg**	**13 49 13.1**	**-0.2**
TVAN				*i* S	**Sg**	**13 49 20.2**	**-0.2**
AGRB	**Hanur-Agry**	**0.59**	**358**	*e*PG	**Pg**	**13 49 13.8**	**-0.2**
AGRB				*e*SG	**Sg**	**13 49 22.0**	**+0.4**
AGRB	**Hanur-Agry**	**0.59**	**358**	*e*Pg	**Pg**	**13 49 13.8**	**-0.2**
AGRB				*e*Sg	**Sg**	**13 49 22.0**	**+0.4**
VANT	**Van**	**0.60**	**161**	*e*PG	**Pg**	**13 49 15.4**	**+1.2**
CLDR	**Caldiran**	**0.72**	**77**	*e*PG	**Pg**	**13 49 16.1**	**-0.3**
CLDR				*e*SG	**Sg**	**13 49 25.9**	**+0.1**
CLDR	**Caldiran**	**0.72**	**77**	*e*Pg	**Pg**	**13 49 16.1**	**-0.4**
CLDR				*e*Sg	**Sg**	**13 49 25.9**	**+0.1**
TATV	**Tatvan**	**0.76**	**231**	*i* P	**Pg**	**13 49 16.1**	**-1.1**
TATV				*i* S	**Sg**	**13 49 25.9**	**-1.2**
TATV	**Tatvan**	**0.76**	**231**	*i* P	**Pg**	**13 49 16.1**	**-1.1**
TATV				*i* S	**Sg**	**13 49 25.9**	**-1.1**
DYDN	**Diyadin**	**0.76**	**43**	*i* P	**Pg**	**13 49 16.3**	**-1.0**
DYDN				*i* S	**Sg**	**13 49 27.3**	**+0.1**
DYDN	**Diyadin**	**0.76**	**43**	*i* P	**Pg**	**13 49 16.3**	**-1.0**
DYDN				*i* S	**Sg**	**13 49 27.3**	**+0.1**
HAKT	**HAKKARI**	**1.53**	**159**	*e*P	**Pn**	**13 49 28.6**	**-2.2**
HAKT				*i* S	**Sn**	**13 49 51.6**	**+0.5**
HAKT	**HAKKARI**	**1.53**	**159**	*e*P	**Pn**	**13 49 28.6**	**-2.2**
HAKT				*i* S	**Sn**	**13 49 51.6**	**+0.5**
ERZM	**Erzurum**	**1.57**	**306**	*i* P	**Pn**	**13 49 31.7**	**+0.3**
ERZM				*i* S	**Sn**	**13 49 54.0**	**+1.8**
ERZM	**Erzurum**	**1.57**	**306**	*i* P	**Pn**	**13 49 31.7**	**+0.3**
EZM	**Erzurum**	**1.57**	**306**	*e*PN	**Pn**	**13 49 30.6**	**-0.8**
BEST	**Besiri**	**1.76**	**232**	*i* P	**Pn**	**13 49 34.2**	**+0.3**
BEST				*i* S	**Sn**	**13 49 57.2**	**+0.5**
GNI	**Garni**	**1.77**	**48**	*e*PN	**Pn**	**13 49 31.7**	**-2.3**
GNI	**Garni**	**1.77**	**48**	*e*Pn	**Pn**	**13 49 31.7**	**-2.4**
CUKT	**Cukurca**	**1.80**	**165**	*e*PN	**Pn**	**13 49 34.4**	**-0.1**
CUKT	**Cukurca**	**1.80**	**165**	*e*Pn	**Pn**	**13 49 34.4**	**-0.1**

DDA ***30*** *13:51:31.7, 36.97N×29.25E, h3km, Md3.4, Ml3.5*
ISK ***30*** *13:51:31.7, 37.00N×29.25E, h8km, MD3.2*
ISCJB ***30*** *13:51:32.0±0.5, 36.98N±0.02×29.24E±0.02, h4km±4km, Error ellipse: s-maj=4.0km s-min=3.2km az=5.0*
CSEM ***30*** *13:51:32.0±0.1, 36.95N×29.27E, h5km, MD3.2, Error ellipse: s-maj=2.1km s-min=1.4km az=7.0*

ISC 30 13:51:32.6±0.4, 36.99N±0.02×29.25E±0.03, h6km±4km, n69, σ1=01/94, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.26**	**50**	*e*PG	**Pg**	**13 51 37.4**	**-0.3**
GLHS				*e*SG	**Sg**	**13 51 41.2**	**0.0**
GLHS	**Glhisar (BURDU**	**0.26**	**50**	*e*Pg	**Pg**	**13 51 37.4**	**-0.3**
GLHS				*e*Sg	**Sg**	**13 51 41.2**	**0.0**
GOLH	**Golhisar**	**0.35**	**45**	*i* P	**Pg**	**13 51 39.3**	**-0.1**
GOLH				*i* S	**Sg**	**13 51 46.4**	**+2.3**
GOLH	**Golhisar**	**0.35**	**45**	*i* P	**Pg**	**13 51 39.3**	**-0.1**
GOLH				*i* S	**Sg**	**13 51 46.4**	**+2.4**
TURN	**Turunc**	**0.53**	**258**	*i* P	**Pg**	**13 51 47.1**	**+4.3**
TURN				*i* S	**Sg**	**13 51 59.6**	**+10**
TURN	**Turunc**	**0.53**	**258**	*i* P	**Pg**	**13 51 47.1**	**+4.3**
ELL	**Elmali**	**0.58**	**114**	*e*PG	**Pg**	**13 51 42.7**	**-1.1**
ELL				*e*SG	**Sg**	**13 51 52.0**	**+0.7**
ELL	**Elmali**	**0.58**	**114**	*e*Pg	**Pg**	**13 51 42.7**	**-1.1**
ELL				*e*Sg	**Sg**	**13 51 52.0**	**+0.7**
DNZL	**Cakiroluk**	**0.72**	**347**	*i* P	**Pg**	**13 51 45.4**	**-0.9**
DNZL				*i* S	**Sg**	**13 51 56.9**	**+1.2**
DNZL	**Cakiroluk**	**0.72**	**347**	*i* P	**Pg**	**13 51 45.4**	**-1.0**
DNZL				*i* S	**Sg**	**13 51 56.9**	**+1.2**
DENT	**Denizli**	**0.78**	**347**	*e*PG	**Pg**	**13 51 46.4**	**-1.2**
DENT	**Denizli**	**0.78**	**347**	*e*Pg	**Pg**	**13 51 46.4**	**-1.2**
YER	**Yerkesik**	**0.79**	**281**	*e*PG	**Pg**	**13 51 47.4**	**-0.2**
YER				*e*SG	**Sg**	**13 51 59.3**	**+1.4**
YER	**Yerkesik**	**0.79**	**281**	*e*Pg	**Pg**	**13 51 47.4**	**-0.3**
YER				*e*Sg	**Sg**	**13 51 59.3**	**+1.5**
AKAS	**Kas**	**0.81**	**159**	*i* P	**Pg**	**13 51 47.1**	**-1.0**
AKAS				*i* S	**Sg**	**13 52 01.3**	**+2.8**
AKAS	**Kas**	**0.81**	**159**	*i* P	**Pg**	**13 51 47.1**	**-1.0**
AKAS				*i* S	**Sg**	**13 52 01.3**	**+2.8**
KSL	**Kastellorizon**	**0.88**	**162**	*e*P	**Pg**	**13 51 48.7**	**-0.8**
KORT	**Korkueli**	**0.88**	**89**	*i* P	**Pg**	**13 51 47.8**	**-1.7**
KORT				*i* S	**Sg**	**13 52 03.7**	**+2.7**
KORT	**Korkueli**	**0.88**	**89**	*i* P	**Pg**	**13 51 47.8**	**-1.7**
KORT				*i* S	**Sg**	**13 52 03.7**	**+2.7**
ANTB	**Antalya**	**1.13**	**94**	*e*PN	**Pg**	**13 51 54.1**	**-0.2**
ANTB	**Antalya**	**1.13**	**94**	*e*Pn	**Pg**	**13 51 54.1**	**-0.2**
BCK	**Bucak**	**1.17**	**66**	*e*PN	**Pn**	**13 51 54.8**	**-0.8**
BCK	**Bucak**	**1.17**	**66**	*e*Pn	**Pn**	**13 51 54.8**	**-0.7**
ARG	**Arkhangelos**	**1.19**	**230**	*e*P	**Pg**	**13 51 53.5**	**-1.8**
MLSB	**Milas**	**1.21**	**285**	*e*PN	**Pn**	**13 51 54.8**	**-1.3**
MLSB	**Milas**	**1.21**	**285**	*e*Pn	**Pn**	**13 51 54.8**	**-1.3**
AYDN	**Tasoluk**	**1.28**	**302**	*i* P	**Pn**	**13 51 56.5**	**-0.5**
AYDN				*i* S	**Sb**	**13 52 14.9**	**+1.1**
AYDN	**Tasoluk**	**1.28**	**302**	*i* P	**Pn**	**13 51 56.5**	**-0.5**
AYDN				*i* S	**Sb**	**13 52 14.9**	**+1.1**
ISP	**Isparta**	**1.31**	**50**	*e*PN	**Pn**	**13 51 57.0**	**-0.5**
ISP	**Isparta**	**1.31**	**50**	*e*P	**Pn**	**13 51 56.7**	**-0.8**
ISP	**Isparta**	**1.31**	**50**	*e*Pn	**Pn**	**13 51 57.0**	**-0.5**
KHL	**Karahalli**	**1.35**	**9**	*e*PN	**Pn**	**13 51 57.4**	**-0.6**
KHL	**Karahalli**	**1.35**	**9**	*e*Pn	**Pn**	**13 51 57.4**	**-0.6**
DAT	**Datca**	**1.36**	**260**	*e*PN	**Pn**	**13 51 57.2**	**-1.0**
DAT	**Datca**	**1.36**	**260**	*e*Pn	**Pn**	**13 51 57.2**	**-1.0**
KHAL	**Karahalli**	**1.39**	**8**	*i* P	**Pn**	**13 51 58.6**	**0.0**
KHAL				*i* S	**Sb**	**13 52 18.3**	**+1.2**
KHAL	**Karahalli**	**1.39**	**8**	*i* P	**Pn**	**13 51 58.7**	**+0.1**
KHAL				*i* S	**Sb**	**13 52 18.3**	**+1.2**
BDRM	**Kayabasi**	**1.45**	**274**	*i* P	**Pn**	**13 51 59.2**	**-0.1**
BDRM				*i* S	**Sn**	**13 52 20.0**	**+1.4**
BDRM	**Kayabasi**	**1.45**	**274**	*i* P	**Pn**	**13 51 59.2**	**-0.1**
BDRM				*i* S	**Sn**	**13 52 20.0**	**+1.4**
SUTC	**Sutluce-Ispart**	**1.48**	**70**	*e*PN	**Pn**	**13 51 59.6**	**-0.2**
SUTC	**Sutluce-Ispart**	**1.48**	**70**	*e*Pn	**Pn**	**13 51 59.6**	**-0.2**
BODT	**Bodrum**	**1.55**	**273**	*e*PN	**Pn**	**13 52 00.4**	**-0.4**
BODT	**Bodrum**	**1.55**	**273**	*e*Pn	**Pn**	**13 52 00.4**	**-0.4**
KULA	**Kula-Manisa**	**1.59**	**343**	*e*PN	**Pn**	**13 52 00.1**	**-1.3**
KULA	**Kula-Manisa**	**1.59**	**343**	*e*Pn	**Pn**	**13 52 00.1**	**-1.2**
SHUT	**Suhut-Afyon**	**1.87**	**33**	*e*PN	**Pn**	**13 52 05.5**	**+0.3**
SHUT	**Suhut-Afyon**	**1.87**	**33**	*e*Pn	**Pn**	**13 52 05.5**	**+0.3**
SMG	**Samos**	**2.05**	**291**	*e*P	**Pn**	**13 52 07.5**	**-0.1**
DEMI	**Demirci**	**2.09**	**349**	*i* P	**Pn**	**13 52 08.3**	**+0.1**
DEMI				*i* S	**Sn**	**13 52 33.5**	**-1.1**
DEMI	**Demirci**	**2.09**	**349**	*i* P	**Pn**	**13 52 08.3**	**+0.1**
DEMI				*i* S	**Sn**	**13 52 33.5**	**-1.1**
IZM	**Izmir**	**2.11**	**312**	*e*PN	**Pn**	**13 52 08.9**	**+0.5**
ALT	**Altintas**	**2.17**	**18**	*e*PN	**Pn**	**13 52 09.5**	**+0.2**
ALT	**Altintas**	**2.17**	**18**	*e*Pn	**Pn**	**13 52 09.5**	**+0.2**
AKS	**Akhisar**	**2.20**	**329**	*e*PN	**Pn**	**13 52 09.5**	**-0.2**
AKS	**Akhisar**	**2.20**	**329**	*e*Pn	**Pn**	**13 52 09.5**	**-0.2**
BLCB	**Balcova**	**2.24**	**309**	*e*PN	**Pn**	**13 52 10.0**	**-0.2**
BLCB	**Balcova**	**2.24**	**309**	*e*Pn	**Pn**	**13 52 10.0**	**-0.2**
GAZI	**Gazipasa**	**2.58**	**106**	*i* P	**Pn**	**13 52 15.9**	**+0.9**
GAZI				*i* S	**Sn**	**13 52 50.2**	**+3.6**
GAZI	**Gazipasa**	**2.58**	**106**	*i* P	**Pn**	**13 52 15.9**	**+1.0**
GAZI				*i* S	**Sn**	**13 52 50.2**	**+3.6**
KONT	**Konya--Tatoy**	**2.66**	**68**	*e*PN	**Pn**	**13 52 16.2**	**+0.3**
KONT	**Konya--Tatoy**	**2.66**	**68**	*e*Pn	**Pn**	**13 52 16.2**	**+0.3**
LADK	**Ladik-KONYA**	**2.76**	**63**	*e*PN	**Pn**	**13 52 16.5**	**-0.9**
LADK	**Ladik-KONYA**	**2.76**	**63**

BSO1				S	S	14 29 11.5	+0.2
BSO3	**Boso 3**	**4.88**	**16**	P	P	14 28 04.6	+0.1
BSO3				S	S	14 29 09.8	-1.7
BSO4	**Boso 4**	**5.02**	**14**	P	P	14 28 06.5	+0.6
BSO4				S	S	14 29 14.4	+0.3
JOD2	**Odawara 2**	**5.14**	**2**	P	P	14 28 08.8	+1.7
JOD2				S	S	14 29 15.7	-0.5
JNY	**Yasuok**	**5.30**	**351**	P	P	14 28 10.9	+2.2
JHU	**Hanno**	**5.73**	**3**	P	P	14 28 12.9	-0.3
JHU				S	S	14 29 22.6	-4.7
JTO	**Tosashimizu**	**5.86**	**299**	P	P	14 28 15.2	+0.6
JRY	**Ryogami san**	**5.89**	**0**	P	P	14 28 15.7	+0.9
JRY				S	S	14 29 27.0	-3.2
JYT	**Yasato**	**6.20**	**10**	P	P	14 28 16.7	-1.3
JYT				S	S	14 29 31.5	-4.7
MJAR	**Matsushiro Arr**	**6.43**	**355**	P	P	14 28 20.7	+0.1
	0.9nm,0.3s,baz=166,slow=11,SNR=9.4						
MJAR				S	S	14 29 39.0	-1.7
	0.6nm,0.3s,baz=186,slow=18,SNR=5.3						
MAJO	**Matsushiro**	**6.44**	**355**	*e*P	P	14 28 20.9	+0.3
MAT	**Matsushiro**	**6.44**	**355**	P	P	14 28 21.0	+0.5
MAT				S	S	14 29 39.4	-1.4
KSRS	**Korea Array**	**11.68**	**312**	P	P	14 29 18.0	+0.1
	0.1nm,0.3s,baz=140,slow=9.9,SNR=5.3						
ERM	**Erimo**	**12.37**	**15**	P	P	14 29 26.6	+1.3
ASAJ	**Asahikawa**	**14.29**	**11**	P	P	14 29 48.0	+1.9
	0.4nm,0.3s,baz=135,slow=7.1,SNR=4.8						
CMAR	**Chiang Mai Arr**	**38.02**	**262**	P	P	14 33 21.0	-1.2
	0.8nm,0.4s,mb3.4,baz=72,slow=5.8,SNR=6.3						
MKAR	**Makanchi Array**	**46.32**	**308**	P	P	14 34 26.9	-0.8
	0.2nm,0.4s,mb2.8,baz=85,slow=9.7,SNR=4.4						
FITZ	**Fitzroy Crossi**	**49.60**	**197**	P	P	14 34 52.6	0.0
	0.5nm,0.3s,mb3.3,baz=40,slow=7.9						
WRAB	**Tennant Creek**	**49.95**	**186**	*e*P	P	14 34 54.9	-0.3
	1.1nm,0.5s,mb3.4						
WRA	**Warramunga Arr**	**49.96**	**186**	P	P	14 34 55.0	-0.3
	0.8nm,0.3s,mb3.6,baz=0.2,slow=7.8,SNR=64						
WRA				PcP	PcP	14 36 08.8	+0.8
	0.2nm,0.3s,baz=0.6,slow=3.9,SNR=5.1						
WRA	**Warramunga Arr**	**49.96**	**186**	P	P	14 34 55.0	-0.3
WRA				PcP	PcP	14 36 08.8	+0.8
ASAR	**Alice Springs**	**53.68**	**186**	P	P	14 35 22.4	0.0
	0.6nm,0.5s,mb3.1,baz=0.1,slow=6.1,SNR=25						
BVAR	**Borovoye Array**	**53.85**	**316**	P	P	14 35 22.7	-0.5
	1.3nm,0.4s,mb3.5,baz=88,slow=6.9,SNR=8.2						
STKA	**Stephens Creek**	**61.70**	**177**	P	P	14 36 17.9	+0.8
	3.5nm,0.7s,mb4.0,baz=294,slow=11,SNR=8.5						
STKA	**Stephens Creek**	**61.70**	**177**	*e*P	P	14 36 17.9	+0.8
ARCES	**ARCESS Array B**	**69.73**	**340**	P	P	14 37 07.5	+0.4
	3.1nm,1.1s,mb3.8,baz=67,slow=7.9,SNR=5.6						
FINES	**FINESS Array B**	**73.95**	**333**	P	P	14 37 31.8	-0.3
	0.5nm,0.3s,mb3.6,baz=81,slow=4.1,SNR=5.4						
NOA	**NORSAR Array B**	**79.72**	**337**	P	P	14 38 02.9	-0.9
	0.3nm,0.4s,mb3.3,baz=52,slow=6.2,SNR=2.5						
TORD	**Torodi Ar. Bea**	**120.41**	**310**	PKP	PKPdf	14 44 43.3	-1.2
	0.4nm,0.9s,baz=11,slow=2.9,SNR=3.6						

DJA 30 14:39:54, 3°.93S×122°.87E, h83km, MLv3.4/8, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDI	**Kendari**	**0.25**	**264**	P	Pn	14 40 03.8	-2.6
KDI				S	Sn	14 40 20.8	+5.3
LUWI	**Luwuk**	**2.87**	**358**	P	Pn	14 40 41.0	+3.3
BKSI	**Bulukumba**	**3.07**	**243**	P	Pn	14 40 41.4	+1.1
SPSI	**Sidrap Palu**	**3.09**	**269**	P	Pn	14 40 42.1	+1.4
APSI	**Ampana**	**3.24**	**338**	P	Pn	14 40 41.6	-1.1
NLAI	**Namlea**	**4.28**	**81**	P	Pn	14 40 59.3	+2.5
AAI	**Ambon**	**5.32**	**88**	P	Pn	14 41 09.9	-1.1
	0.3nm4μm78nm,0.7s						
GMJI	**Gumukmas**	**10.32**	**245**	P	Pn	14 42 20.7	+1.5

*JMA **30** 15:20:47.7±0.2, 24°.89N×122°.26E, h80km, M2.8*
*TAP **30** 15:20:48.6, 24°.77N×122°.25E, h79km, ML3.6, C*
*ISCJB **30** 15:20:48.8±0.5, 24°.72N±0°.03×122°.27E±0°.02, h76km±5km,*
Error ellipse: s-maj=5.0km s-min=2.9km az=167.0

ISC 30 15:20:49.3±0.5, 24°.73N±0°.03×122°.27E±0°.02, h74km±5km, n56, σ0°76/108, 1C-5D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.38**	**317**	⇓*i*P	**Pn**	**15 21 01.2**	**-0.3**
	baz=311						
TWB1				S	**Sn**	**15 21 09.8**	**-0.7**
	baz=311						
TWC	**Suao**	**0.40**	**252**	*i* P	**Pn**	**15 21 01.4**	**-0.3**
	baz=246						
TWC				S	**Sn**	**15 21 10.7**	**-0.1**
	baz=246						
ILA	**Ilan**	**0.47**	**274**	*e*P	**Pn**	**15 21 02.2**	**-0.1**
	baz=263						
ILA				S	**Sn**	**15 21 12.2**	**+0.3**
	baz=263						
TWE	**Neicheng**	**0.55**	**269**	⇓*i*P	**Pn**	**15 21 02.9**	**-0.1**
	baz=269						
TWE				S	**Sn**	**15 21 13.3**	**+0.2**
	baz=269						
NWF	**Wu-fen Shan**	**0.56**	**307**	⇓*i*P	**Pn**	**15 21 02.9**	**-0.1**
	baz=304						
NWF				S	**Sn**	**15 21 13.2**	**0.0**
	baz=304						
ENA	**Nanau**	**0.57**	**238**	*e*P	**Pn**	**15 21 03.3**	**+0.1**
	baz=233						
ENA				S	**Sn**	**15 21 14.0**	**+0.6**
	baz=233						
ENTT	**Nioudou**	**0.65**	**262**	⇓*i*P	**Pn**	**15 21 04.2**	**+0.2**
	baz=262						
ENTT				S	**Sn**	**15 21 15.3**	**+0.6**
	baz=262						
TWA	**Mucha**	**0.67**	**292**	*i* P	**Pn**	**15 21 03.8**	**-0.4**
	baz=282						
TWA				S	**Sn**	**15 21 14.7**	**-0.5**
	baz=282						
YOJ	**Yonaguni jima**	**0.73**	**112**	P	**Pn**	**15 21 04.6**	**-0.2**
YOJ				*e*S	**Sn**	**15 21 17.0**	**+0.7**
TAP1	**Taipei**	**0.74**	**294**	P	**Pn**	**15 21 04.5**	**-0.5**
	baz=291						
TAP1				S	**Sn**	**15 21 15.8**	**-0.8**
	baz=291						
TWY	**Chenhua**	**0.81**	**312**	*i* P	**Pn**	**15 21 05.5**	**-0.4**
	baz=309						
TWY				S	**Sn**	**15 21 17.9**	**-0.1**
	baz=309						
NSK	**Sanguang**	**0.83**	**266**	⇓*i*P	**Pn**	**15 21 05.8**	**-0.2**
	baz=268						
NSK				S	**Sn**	**15 21 18.4**	**0.0**
	baz=268						
TWS1	**Kuangyinshan**	**0.86**	**296**	⇑*i*P	**Pn**	**15 21 06.0**	**-0.3**
	baz=293						
TWS1				S	**Sn**	**15 21 18.8**	**-0.2**
	baz=293						
NNS	**Nan Shan**	**0.87**	**251**	P	**Pn**	**15 21 06.6**	**+0.2**
	baz=239						
NNS				S	**Sn**	**15 21 19.7**	**+0.5**
	baz=239						
TWD	**Chiawan**	**0.89**	**224**	*e*P	**Pn**	**15 21 06.7**	**0.0**
	baz=214						
TWD				*e*S	**Sn**	**15 21 19.6**	**-0.1**
	baz=214						
HWA	**Hwalien**	**0.96**	**219**	*e*P	**Pn**	**15 21 07.9**	**+0.2**
	baz=210						
HWA				*e*S	**Sn**	**15 21 21.9**	**+0.7**
	baz=210						
NCU	**National Centr**	**1.01**	**284**	*e*P	**Pn**	**15 21 07.9**	**-0.3**
	baz=289						
NCU				*e*S	**Sn**	**15 21 21.9**	**-0.3**
	baz=289						
WHF	**Hehuan Shan**	**1.09**	**238**	*e*P	**Pn**	**15 21 09.3**	**+0.2**
	baz=236						
WHF				*e*S	**Sn**	**15 21 24.5**	**+0.6**
	baz=236						
TWT	**Tachien**	**1.10**	**245**	*e*P	**Pn**	**15 21 10.1**	**+0.8**
	baz=235						
TWT				*e*S	**Sn**	**15 21 24.8**	**+0.5**
	baz=235						
NSTT	**Nanjuang**	**1.16**	**265**	P	**Pn**	**15 21 09.7**	**-0.3**
	baz=263						
NSTT				*e*S	**Sn**	**15 21 25.6**	**+0.1**
	baz=263						
HSN	**Hsinchu**	**1.18**	**274**	*e*P	**Pn**	**15 21 11.1**	**+0.8**
	baz=272						
HSN				*e*S	**Sn**	**15 21 25.7**	**-0.4**
	baz=272						
ESL	**Shilin**	**1.19**	**220**	*e*P	**Pn**	**15 21 09.0**	**-1.4**
	baz=227						
ESL				*e*S	**Sn**	**15 21 24.4**	**-1.8**
	baz=227						
IRIF	**Iriomote-Funau**	**1.39**	**106**	P	**Pn**	**15 21 12.4**	**-0.6**
IRIF				*e*S	**Sn**	**15 21 30.9**	**+0.1**
NSY	**Sanyi**	**1.41**	**257**	P	**Pn**	**15 21 13.4**	**+0.2**
	baz=256						
NSY				S	**Sn**	**15 21 31.8**	**+0.6**
	baz=256						
TWQ1	**Liyutan**	**1.42**	**255**	*e*P	**Pn**	**15 21 13.3**	**0.0**
	baz=253						
TWQ1				*e*S	**Sn**	**15 21 30.9**	**-0.5**
	baz=253						
EHY	**Hungye**	**1.50**	**216**	*e*P	**Pn**	**15 21 12.9**	**-1.4**
	baz=223						
EHY				*e*S	**Sn**	**15 21 30.9**	**-2.3**
	baz=223						
SMLT	**Sun Moon Lake**	**1.51**	**236**	*e*P	**Pn**	**15 21 15.6**	**+1.0**
	baz=235						
SMLT				*e*S	**Sn**	**15 21 34.2**	**+0.7**
	baz=235						
TYC	**Yuchr**	**1.53**	**238**	*e*P	**Pn**	**15 21 15.2**	**+0.4**
	baz=237						
TYC				*e*S	**Sn**	**15 21 34.9**	**+0.8**
	baz=237						
HATJ	**Hateruma jima**	**1.55**	**115**	P	**Pn**	**15 21 15.2**	**+0.1**
HATJ				*e*S	**Sn**	**15 21 36.0**	**+1.4**
TCU	**Taichung**	**1.56**	**249**	*e*P	**Pn**	**15 21 15.7**	**+0.4**
	baz=247						
TCU				*e*S	**Sn**	**15 21 35.1**	**+0.2**
	baz=247						
TWF1	**Yuli**	**1.64**	**213**	*e*P	**Pn**	**15 21 14.6**	**-1.6**
	baz=220						
JKRS	**Kuro-shima**	**1.66**	**107**	P	**Pn**	**15 21 16.2**	**-0.3**
JKRS				*e*S	**Sn**	**15 21 37.8**	**+0.7**
WNT	**Mingjian**	**1.68**	**240**	*e*P	**Pn**	**15 21 17.1**	**+0.3**
	baz=249						
WNT				*e*S	**Sn**	**15 21 38.3**	**+0.7**
	baz=249						
JIJ	**Ishigaki jima**	**1.75**	**102**	P	**Pn**	**15 21 17.0**	**-0.7**
JIJ				*e*S	**Sn**	**15 21 38.9**	**-0.3**
CHN5	**Tsauling**	**1.84**	**232**	P	**Pn**	**15 21 19.6**	**+0.7**
	baz=242						
CHN5				*e*S	**Sn**	**15 21 42.5**	**+1.0**
	baz=242						
WGK	**Gukeng**	**1.87**	**237**	*e*P	**Pn**	**15 21 20.0**	**+0.6**
	baz=244						
WGK				*e*S	**Sn**	**15 21 43.3**	**+1.0**
	baz=244						
ELDTW	**Lidau**	**1.92**	**217**	*e*P	**Pn**	**15 21 18.8**	**-1.2**
	baz=217						
ELDTW				*e*S	**Sn**	**15 21 41.9**	**-1.3**
	baz=217						
WTCT	**Ta-ch'eng**	**2.01**	**245**	*e*P	**Pn**	**15 21 21.9**	**+0.7**
	baz=244						
WTCT				*e*S	**Sn**	**15 21 44.7**	**-0.8**
	baz=244						
CHY	**Chiayi**	**2.09**	**234**	*e*P	**Pn**	**15 21 22.6**	**+0.4**
	baz=243						
CHY				*e*S	**Sn**	**15 21 47.4**	**+0.1**
	baz=243						
STYT	**Tauyuan**	**2.09**	**222**	*e*P	**Pn**	**15 21 22.9**	**+0.6**
	baz=222						
STYT				*e*S	**Sn**	**15 21 47.8**	**+0.5**
	baz=222						
WTP	**Ta-pu**	**2.12**	**226**	*e*P	**Pn**	**15 21 23.1**	**+0.4**
	baz=237						
WSF	**Szhu**	**2.16**	**240**	*e*P	**Pn**	**15 21 23.8**	**+0.5**
	baz=239						
WSF				*e*S	**Sn**	**15 21 49.4**	**+0.2**
	baz=239						
TWK	**Hsinying**	**2.19**	**229**	*e*P	**Pn**	**15 21 24.3**	**+0.7**
	baz=219						
TWK				*e*S	**Sn**	**15 21 50.4**	**+0.7**
	baz=219						
TWG	**Pinlang**	**2.19**	**210**	*e*P	**Pn**	**15 21 22.3**	**-1.4**
	baz=211						
TWG				*e*S	**Sn**	**15 21 48.4**	**-1.5**
	baz=211						
CHN1	**Nanshi**	**2.21**	**226**	*e*P	**Pn**	**15 21 24.5**	**+0.5**
	baz=227						
CHN1				*e*S	**Sn**	**15 21 50.7**	**+0.3**
	baz=227						
JTJ	**Tarama**	**2.21**	**92**	P	**Pn**	**15 21 24.2**	**+0.2**
JTJ				*e*S	**Sn**	**15 21 51.3**	**+0.9**
TTN	**Taitung**	**2.22**	**208**	*e*P	**Pn**	**15 21 24.3**	**+0.3**
	baz=215						
TTN				*e*S	**Sn**	**15 21 51.1**	**+0.5**
	baz=215						
SGST	**Jiashian**	**2.25**	**224**	P	**Pn**	**15 21 25.3**	**+0.8**
	baz=224						
SGST				*e*S	**Sn**	**15 21 51.8**	**+0.5**
	baz=224						
CHN8	**Yiju**	**2.33**	**234**	*e*P	**Pn**	**15 21 26.6**	**+1.0**
	baz=234						
CHN8				*e*S	**Sn**	**15 21 52.7**	**-0.5**
	baz=234						
ECL	**Taimali**	**2.44**	**210**	*e*P	**Pn**	**15 21 25.3**	**-1.8**
	baz=207						
ECL				*e*S	**Sn**	**15 21 53.1**	**-2.9**
	baz=207						
SSD	**Sandimen**	**2.48**	**218**	*e*P	**Pn**	**15 21 28.4**	**+0.9**
	baz=228						
SSD				*e*S	**Sn**	**15 21 57.3**	**+0.4**
	baz=228						
TWM1	**Shoushan**	**2.54**	**222**	*e*P	**Pn**	**15 21 29.2**	**+0.8**
	baz=223						
TWM1				*e*S	**Sn**	**15 21 59.1**	**+0.7**
	baz=223						
EAST	**Anshuo**	**2.68**	**209**	*e*P	**Pn**	**15 21 28.7**	**-1.5**
	baz=204						
EAST				*e*S	**Sn**	**15 22 00.1**	**-1.5**
	baz=204						
PNG	**Penghu**	**2.74**	**246**	*e*P	**Pn**	**15 21 29.8**	**-1.2**
	baz=244						
LAY	**Lan-yu**	**2.76**	**194**	*e*P	**Pn**	**15 21 29.7**	**-1.6**
	baz=193						
SCZT	**Fangliau**	**2.79**	**213**	*e*P	**Pn**	**15 21 32.7**	**+0.9**
	baz=226						
SCZT				*e*S	**Sn**	**15 22 04.6**	**+0.1**
	baz=226						

DJA 30 15:20:50, 3°.25S×127°.77E, h32km, MLv3.8/9, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.61**	**136**	P	Pb	15 21 04.4	+2.1
AAI				S	Sb	15 21 11.8	+1.2
NLAI	**Namlea**	**0.67**	**271**	P	Pn	15 21 04.8	+1.5
NLAI				S	Sb	15 21 13.8	+1.5
TNTI	**Ternate**	**4.01**	**354**	P	Pn	15 21 50.0	+0.7
KDI	**Kendari**	**5.19**	**262**	P	Pn	15 22 05.9	+0.4
	0.1nm14nm,1.6s						
LUWI	**Luwuk**	**5.46**	**294**	P	Pn	15 22 10.5	+1.4
	0.1nm32nm,1.1s						
TLE	**Tual**	**5.49**	**116**	P	Pn	15 22 09.8	+0.2
	0.5nm89nm,1.7s						
APSI	**Ampana**	**6.54**	**291**	P	Pn	15 22 25.2	+1.1
	0.1nm6μm21nm,1.0s						
MRSI	**Marisa**	**6.90**	**302**	P	Pn	15 22 26.9	-2.1
	0.0nm9.2nm,1.2s						
MMRI	**Maumere**	**7.67**	**226**	P	Pn	15 22 45.3	+5.7
BAKI	**Biak**	**8.58**	**76**	P	Pn	15 22 53.1	+1.1
	2μm18nm,1.6s						
WSI	**Waingapu**	**9.79**	**229**	P	Pn	15 23 09.1	+0.5

IDC 30 15:23:55.0±6.8, 11°.44N×141°.92E, h0km, mb3.5/3, mb1 3.6/3, mb1mx3.3/22, mbtmp3.5/3, Error ellipse: s-maj=309.0km s-min=32.0km az=82.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**32.06**	**194**	P	P	15 30 22.9	-0.9
	0.5nm,0.6s,baz=16,slow=8.7,SNR=7.6						
ASAR	**Alice Springs**	**35.76**	**193**	P	P	15 30 56.8	+0.9
	0.3nm,0.6s,baz=22,slow=11,SNR=5.9						
BVAR	**Borovoye Array**	**69.84**	**322**	P	P	15 35 07.6	+0.1
	0.3nm,0.3s,baz=104,slow=7.4,SNR=3.7						

IDC 30 15:27:18.6±8.0, 10°.66N×90°.38E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.3/23, mbtmp3.5/4, MS3.1/1, Ms1 3.1/1, ms1mx2.5/25, Error ellipse: s-maj=378.8km s-min=23.9km az=61.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.66**	**351**	P	P	15 34 27.3	+0.4
	0.4nm,0.5s,baz=160,slow=8.5,SNR=6.0						
ZALV	**Zalesovo Beam**	**43.40**	**355**	P	P	15 35 22.3	-0.5
	0.4nm,0.4s,baz=156,slow=11,SNR=3.1						
ZALV				LR	LR	15 54 47.8	
	comp=Z,24nm,18.3s,baz=66,slow=38						
WRA	**Warramunga Arr**	**52.89**	**125**	P	P	15 36 37.8	+1.1
	0.4nm,0.6s,baz=306,slow=8.4,SNR=6.8						
ASAR	**Alice Springs**	**54.54**	**129**	P	P	15 36 47.5	-1.2
	0.3nm,0.8s,baz=301,slow=7.3,SNR=5.0						

*JMA **30** 15:28:31.6±0.3, 25°.29N×124°.27E, h0km, M3.3*
*ISCJB **30** 15:28:35.0±0.7, 25°.24N±0°.05×124°.31E±0°.06, h33km,*
mb3.5/5, Error ellipse: s-maj=7.7km s-min=6.6km az=36.2
*IDC **30** 15:29:00.9±17.0, 25°.49N×124°.73E, h286km±229km,*
mb2.9/5, mb1 3.0/6, mb1mx2.8/25, mbtmp2.9/6, MS3.1/2,
Ms1 3.1/2, ms1mx2.3/9, Error ellipse: s-maj=209.6km
s-min=16.5km az=62.0

ISC 30 15:28:36.4±0.7, 25°.18N±0°.05×124°.33E±0°.06, h35km, n15, σ1°33/18, mb3.5/5, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTJ	**Tarama**	**0.64**	**147**	P	**Pn**	**15 28 46.6**	**-2.3**
JIJ	**Ishigaki jima**	**0.83**	**192**	P	**Pn**	**15 28 49.5**	**-2.1**
JIJ				S	**Sn**	**15 29 03.0**	**+0.4**
JMJ	**Miyako jima 2**	**0.95**	**112**	P	**Pn**	**15 28 52.3**	**-0.9**
JMJ				*e*S	**Sn**	**15 29 06.9**	**+1.4**
JKRS	**Kuro-shima**	**0.98**	**197**	P	**Pn**	**15 28 52.5**	**-1.2**
JKRS				*e*S	**Sn**	**15 29 07.9**	**+1.6**
IRIF	**Iriomote-Funau**	**1.00**	**213**	P	**Pn**	**15 28 52.4**	**-1.5**
IRIF				*e*S	**Sn**	**15 29 07.0**	**+0.2**
JOGS	**Gusukube**	**1.06**	**113**	P	**Pn**	**15 28 54.2**	**-0.6**
HATJ	**Hateruma jima**	**1.22**	**203**	P	**Pn**	**15 28 56.1**	**-0.8**
HATJ				*e*S	**Sn**	**15 29 14.8**	**+2.7**
YOJ	**Yonaguni jima**	**1.39**	**239**	P	**Pn**	**15 28 57.9**	**-1.4**
KSRS	**Korea Array**	**12.62**	**13**	P	Px	15 31 46.5	
	0.1nm,0.3s,baz=185,slow=13,SNR=4.1						
KSRS				LR	LR	15 36 58.4	
	comp=Z,88nm,18.1s,baz=195,slow=39						
MJAR	**Matsushiro Arr**	**16.42**	**43**	LR	LR	15 39 14.0	
	comp=Z,60nm,19.6s,baz=185,slow=38						
SONM	**Songino Array**	**26.69**	**332**	P	**P**	**15 34 13.1**	**+1.0**
	0.6nm,0.7s,mb3.2,baz=151,slow=9.4,SNR=3.7						
MKAR	**Makanchi Array**	**39.66**	**314**	P	**P**	**15 36 06.0**	**+1.1**
	0.5nm,0.7s,mb3.4,baz=92,slow=12,SNR=4.5						
ZALV	**Zalesovo Beam**	**41.02**	**325**	P	**P**	**15 36 16.0**	**+0.1**
	0.9nm,0.6s,mb3.6,baz=108,slow=9.5,SNR=5.0						
WRA	**Warramunga Arr**	**45.90**	**167**	P	**P**	**15 36 56.4**	**+0.8**
	0.5nm,0.5s,mb3.7,baz=348,slow=8.8,SNR=7.4						
ASAR	**Alice Springs**	**49.44**	**168**	P	**P**	**15 37 24.9**	**+1.9**
	0.3nm,0.7s,mb3.5,baz=358,slow=8.1,SNR=6.7						

IDC 30 15:52:31.7±2.5, 58°.61S×22°.02W, h0km, mb4.1/3, mb1 4.2/3, mb1mx3.9/15, mbtmp4.1/3, MS3.6/2, Ms1 3.6/2, ms1mx3.2/16, Error ellipse: s-maj=92.7km s-min=39.6km az=5.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAW	**Mawson**	**36.40**	**140**	LR	LR	16 14 09.7	
	comp=Z,84nm,19.2s,baz=327,slow=36						
BOSA	**Boshof**	**44.09**	**68**	P	P	16 00 43.3	+1.9
	4.3nm,1.1s,baz=233,slow=5.1,SNR=2.5						
LPAZ	**La Paz**	**54.13**	**301**	P	P	16 01 60.0	+1.7
	2.0nm,0.7s,baz=156,slow=5.1,SNR=2.6						
DBIC	**Dimbokro**	**66.52**	**19**	LR	LR	16 25 17.8	
	comp=Z,48nm,18.9s,baz=177,slow=30						
TORD	**Torodi Ar. Bea**	**74.08**	**24**	P	P	16 04 08.3	-0.9
	0.7nm,0.6s,baz=211,slow=5.9,SNR=6.2						
SONM	**Songino Array**	**148.08**	**87**	PKPbc	PKPbc	16 12 16.7	-1.4
	1.1nm,0.8s,baz=229,slow=2.8,SNR=5.2						

IDC 30 16:09:17.4±8.4, 10°.55N×91°.50E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/22, mbtmp3.3/3, Error ellipse: s-maj=428.3km s-min=27.4km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.96**	**349**	P	P	16 16 28.3	0.0
	0.2nm,0.6s,baz=168,slow=6.9,SNR=3.1						
WRA	**Warramunga Arr**	**51.93**	**126**	P	P	16 18 27.9	-0.5
	0.1nm,0.3s,baz=306,slow=8.5,SNR=4.6						
ASAR	**Alice Springs**	**53.62**	**130**	P	P	16 18 41.3	+0.4
	0.3nm,0.7s,baz=302,slow=7.1,SNR=8.5						

GUC 30 16:10:47.9±0.7, 22°.79S×68°.95W, h90km±16km, ML3.6, 3C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACH	**Maria Elena**	**0.96**	**308**	⇑*i*P	Pn	16 11 07.7	+0.6
MACH				*i* S	Sn	16 11 23.3	+1.8
CEN1	**Los Morros**	**1.30**	**243**	⇓*i*P	Pn	16 11 14.4	+3.3
CEN1				*i* S	Sn	16 11 33.7	+5.1
CEN1				AML	AML	16 11 38.5	
	comp=E,789nm,0.8s						
TOCH	**Tocopilla**	**1.35**	**301**	⇑*i*P	Pn	16 11 12.0	+0.3
TOCH				*i* S	Sn	16 11 30.7	+0.9
TOCH				AML	AML	16 11 37.6	
	comp=N,2μm,0.1s						
ANCH	**Antofagasta**	**1.61**	**236**	⇑*i*P	Pn	16 11 15.6	+0.6
ANCH				*i* S	Sn	16 11 36.7	+1.1
ANCH				AML	AML	16 11 42.0	
	comp=E,1μm,0.2s						

*IDC **30** 16:12:14.9±0.7, 32°.31N×105°.00E, h0km, mb4.1/13,*
mb1 4.2/16, mb1mx4.1/27, mbtmp4.0/16, ML3.5/3, MS4.2/2,
Ms1 4.2/2, ms1mx2.8/33, Error ellipse: s-maj=30.3km
s-min=13.6km az=54.0
*ISCJB **30** 16:12:14.0±1.1, 32°.28N±0°.04×105°.07E±0°.05, h6km±7km,*
mb4.2/24, Error ellipse: s-maj=7.7km s-min=5.8km
az=17.3
*NEIC **30** 16:12:16.5±0.3, 32°.32N×105°.03E, h10km, mb4.5/9, Error*
ellipse: s-maj=8.8km s-min=5.6km az=73.0
*BJI **30** 16:12:16.1, 32°.31N×105°.02E, h10km, mB4.3/5, mb3.8/6,*
ML3.8/16, Ms3.7/7, Ms7 3.5/8
*MOS **30** 16:12:17.6±0.9, 32°.31N×105°.08E, h33km, mb4.7/8, Error*
ellipse: s-maj=16.7km s-min=7.9km az=109.2

ISC 30 16:12:15.4±0.9, 32°.30N±0°.03×105°.07E±0°.04, h3km±6km, n56, σ0°90/67, mb4.2/24, 2D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.78**	**219**	Pn	**Pn**	**16 12 48.5**	**+1.4**
CD2

LZH LR LR
comp=Z,940nm,6.1s
KMI Kunming 7.43 197 Pg **Pb 16 14 26.3 +1.2**
KMI Sn **Sn 16 15 27.5 -2.2**
KMI smax
comp=N,28nm,1.1s
KMI smax
comp=E,31nm,0.9s
GTA Gaotai 8.28 330 *e*P **Pn 16 14 16.5 +0.1**
GTA pP 16 14 20.8
GTA sP 16 14 24.3
GTA S **Sn 16 16 01.8 +11**
GTA pmax pmax
comp=Z,2.0nm,0.8s
GTA pmax pmax
comp=Z,28nm,5.1s
GTA LR LR
comp=N,300nm,8.9s
GTA LR LR
comp=E,140nm,6.3s
GTA LR LR
comp=Z,320nm,11.0s
CMAR Chiang Mai Arr 14.85 203 Pn **Pn 16 15 45.7 -0.6**
comp=Z,0.1nm,0.3s,baz=15,slow=12,SNR=6.5
SONM Songino Array 15.55 3 Pn **Pn 16 15 54.6 -1.0**
comp=Z,0.2nm,0.3s,baz=177,slow=14,SNR=7.5
SONM LR LR 16 22 19.3
comp=Z,108nm,18.6s,baz=223,slow=39
ULN Ulaanbaatar 15.62 5 *e*P **Pn 16 15 56.5 0.0**
ULN pmax pmax
comp=Z,4.0nm,0.9s
ULN Ulaanbaatar 15.62 5 *e*P **Pn 16 15 56.5 0.0**
comp=Z,4.3nm,0.9s
KSRS Korea Array 19.42 68 P **Pn 16 16 43.0 -0.9**
comp=Z,0.2nm,0.3s,baz=255,slow=10,SNR=12
KZLR Kyzyl 20.90 341 *i* P **P 16 16 59.4 +0.6**
MK31 Makanchi Array 22.66 316 *e*P **P 16 17 17.5 -0.2**
MKAR Makanchi Array 22.66 316 P **P 16 17 17.4 -0.2**
comp=Z,2.1nm,0.6s,mb3.7,baz=117,slow=11,SNR=17
TKM2 Tokmak 2 25.53 303 *e*P **P 16 17 46.0 +0.8**
TKM2 pmax pmax
comp=Z,3.0nm,0.7s,mb3.9
TKM2 Tokmak 2 25.53 303 *e*P **P 16 17 46.0 +0.8**
comp=Z,2.8nm,0.7s,mb3.9
ZAA0 Zalesovo Array 26.03 332 *e*P **P 16 17 49.3 -0.4**
ZALV Zalesovo Beam 26.03 332 P **P 16 17 49.6 0.0**
comp=Z,1.8nm,0.5s,mb3.8,baz=132,slow=9.8,SNR=10
KURK Kurchatov 26.81 321 P **P 16 17 57.1 +0.3**
comp=Z,1.8nm,0.8s,mb3.7,baz=135,slow=8.5,SNR=18
KURK Kurchatov 26.81 321 ‖ *i*P **P 16 17 56.8 +0.1**
KURK pmax pmax
comp=Z,3.0nm,0.7s,mb3.9
KURK Kurchatov 26.81 321 *e*P **P 16 17 56.9 +0.1**
BVAR Borovoye Array 32.39 320 P **P 16 18 45.3 -0.9**
comp=Z,1.0nm,0.7s,mb3.8,baz=125,slow=10.0,SNR=7.1
BRVK Borovoye 32.46 320 *e*P **P 16 18 47.3 +0.5**
ARU Arti 40.01 321 *d i*P **P 16 19 51.7 +0.4**
ARU S **S 16 25 53.8 -3.6**
ARU SS SS 16 28 40.4 -14
ARU pmax pmax
comp=Z,8.0nm,0.7s,mb4.6
ARU Arti 40.01 321 *e*P **P 16 19 51.4 +0.1**
comp=Z,6.3nm,0.8s,mb4.4
TIXI Tiksi 41.43 11 P **P 16 20 01.5 -1.3**
JOF Joensuu 54.47 327 *e*P **P 16 21 42.9 -1.0**
JOF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
JOF Joensuu 54.47 327 *e*p **P 16 21 42.9 -1.0**
comp=Z,3.8nm,0.7s,mb4.4
KEV Kevo 55.98 336 *e*P **P 16 21 53.9 -0.8**
KEV pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
KEV Kevo 55.98 336 *e*p **P 16 21 53.9 -0.8**
comp=Z,4.0nm,0.5s,mb4.7
BRTR Keskin Array B 56.88 299 P **P 16 22 01.4 -0.2**
comp=Z,1.4nm,0.7s,mb4.1,baz=115,slow=7.0,SNR=7.4
FINES FINESS Array B 57.05 326 P **P 16 22 02.1 -0.3**
comp=Z,4.1nm,0.5s,mb4.7,baz=89,slow=7.4,SNR=23
AKASG Malin Array Be 57.18 313 P **P 16 22 02.7 -0.8**
comp=Z,2.0nm,0.4s,mb4.5,baz=66,slow=7.8,SNR=4.9
AKASG Malin Array Be 57.18 313 P **P 16 22 02.7 -0.9**
WRAB Tennant Creek 59.01 148 *e*P **P 16 22 17.5 +0.9**
WRAB pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
WRAB Tennant Creek 59.01 148 P **P 16 22 17.5 +0.8**
comp=Z,5.3nm,0.8s,mb4.6
WRA Warramunga Arr 59.02 148 P **P 16 22 16.6 0.0**
comp=Z,1.9nm,0.7s,mb4.2,baz=340,slow=7.3,SNR=21
ASAR Alice Springs 62.09 150 P **P 16 22 38.2 +0.6**
comp=Z,0.6nm,0.4s,mb4.1,baz=330,slow=6.4,SNR=23
NB2 NORSAR Subarra 64.10 327 P **P 16 22 49.4 -1.2**
comp=Z,4.9nm,0.5s,mb4.8,baz=72,slow=6.9
NOA NORSAR Array B 64.10 327 P **P 16 22 49.6 -0.9**
comp=Z,5.4nm,0.6s,mb4.8,baz=72,slow=6.9,SNR=20
BRG Berggiesshubel 66.37 316 *e*(P) **P 16 22 57.1 -8.4**
comp=Z,0.8nm,0.6s,mb3.9
BRG Berggiesshubel 66.37 316 *e*P **P 16 22 57.1 -8.4**
BRG pmax pmax
comp=Z,1.0nm,0.6s,mb4.0
BPAW Bear Paw Mtn. 67.17 28 *e*P **P 16 23 10.9 +0.6**
comp=Z,1.5nm,0.7s,mb4.1
INK Inuvik 70.76 20 *e*P **P 16 23 32.5 -0.1**
INK pmax pmax
comp=Z,2.0nm,0.7s
INK Inuvik 70.76 20 *e*P **P 16 23 32.5 -0.1**
comp=Z,2.1nm,0.7s,mb4.2
STKA Stephens Creek 72.56 148 P **P 16 23 44.5 +0.7**
comp=Z,7.1nm,1.1s,mb4.5,baz=328,slow=13,SNR=4.0
STKA Stephens Creek 72.56 148 *e*P **P 16 23 44.4 +0.5**
PGF Pioggiola 73.02 310 *e*P **P 16 23 46.6 -0.1**
LPG La Plagne 73.04 313 *e*P **P 16 23 47.1 +0.4**
comp=Z,9.3nm,0.6s,mb4.6
LPG La Plagne 73.04 313 *e*P **P 16 23 47.1 +0.4**
LPG pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
LPG La Plagne 73.04 313 *e*P **P 16 23 47.1 +0.4**
comp=Z,4.7nm,0.6s,mb4.6
LPL La Plagne 73.04 313 *e*P **P 16 23 47.1 +0.4**
comp=Z,6.5nm,0.5s,mb4.5
LPL La Plagne 73.04 313 *e*P **P 16 23 47.1 +0.4**
LPL pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
LPL La Plagne 73.04 313 *e*P **P 16 23 47.1 +0.4**
comp=Z,3.3nm,0.5s,mb4.5
PNL Peninsula 74.16 28 *e*P **P 16 23 53.7 +0.7**
comp=Z,5.5nm,0.5s,mb4.7
YKA Yellowknife Ar 80.31 18 P **P 16 24 27.6 +0.1**
comp=Z,0.6nm,0.7s,mb3.6,baz=330,slow=6.1,SNR=3.6
TORD Torodi Ar. Bea 94.06 288 P **P 16 25 34.8 -0.9**
comp=Z,0.3nm,0.7s,mb3.8,baz=54,slow=3.7,SNR=3.5
TORD LR LR 17 09 55.8
comp=Z,707nm,21.1s,baz=25,slow=37

IDC 30 16:44:11.2±7.6, 11°.08S×167°.65E, h0km, mb3.6/3, mb1 3.7/3, mb1mx3.5/16, mbtmp3.6/3, Error ellipse: s-maj=228.8km s-min=52.1km az=124.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**33.23**	**251**	P	P	16 50 51.0	+0.8
	0.1nm,0.3s,baz=80,slow=8.7,SNR=4.6						
ASAR	**Alice Springs**	**34.45**	**244**	P	P	16 51 00.2	-0.7
	0.2nm,0.5s,baz=73,slow=9.4,SNR=9.8						
MKAR	**Makanchi Array**	**94.83**	**317**	P	P	16 57 35.1	+0.1
	0.7nm,0.5s,baz=93,slow=5.8,SNR=9.2						

IDC 30 16:49:32.1±10.0, 10°.98N×92°.27E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/23, mbtmp3.5/3, Error ellipse: s-maj=570.8km s-min=28.1km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.68**	**349**	P	P	16 56 40.6	0.0
	0.5nm,0.5s,baz=168,slow=8.7,SNR=5.9						
WRA	**Warramunga Arr**	**51.57**	**126**	P	P	16 58 40.3	-0.1
	0.3nm,0.3s,baz=308,slow=7.9,SNR=14						
ASAR	**Alice Springs**	**53.32**	**131**	P	P	16 58 53.4	+0.1
	0.2nm,0.6s,baz=304,slow=7.6,SNR=6.5						

*IDC **30** 16:51:33.6±1.2, 35°.67N×88°.33E, h0km, mb3.5/4, mb1 3.6/8, mb1mx3.5/26, mbtmp3.5/8, ML3.2/4, MS3.0/3, Ms1 3.0/3, ms1mx2.7/20, Error ellipse: s-maj=49.2km s-min=18.6km az=56.0*
*ISCJB **30** 16:51:33.3±9.1, 35°.8N±0°.2×88°.3E±0°.1, h10km±59km, mb3.5/4, Error ellipse: s-maj=32.3km s-min=14.0km az=15.3*
*NEIC **30** 16:51:35.3±0.9, 35°.79N×88°.36E, h10km, mb3.4/1, Error ellipse: s-maj=19.0km s-min=11.3km az=225.0*
*BJI **30** 16:51:35.8, 35°.93N×88°.39E, h9km, mb3.4/1, ML3.8/2, Ms3.8/1, Ms7 3.6/1*
ISC 30 16:51:39.2±2.1, 35°.8N±0°.2×88°.3E±0°.1, h37km±20km, n12, σ1°.03/12, mb3.5/4, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTA	**Gaotai**	**9.83**	**65**	*e*P	**Pn**	**16 53 59.0**	**+1.1**
GTA				pP		16 54 03.5	
GTA				sP		16 54 06.0	
GTA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MK31	**Makanchi Array**	**11.84**	**340**	*e*P	**Pn**	**16 54 23.7**	**-1.7**
MKAR	**Makanchi Array**	**11.84**	**340**	Pn	**Pn**	**16 54 23.8**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=149,slow=13,SNR=16						
AAK	**Ala-Archa**	**12.65**	**307**	Pn	**Pn**	**16 54 37.1**	**+0.6**
	comp=Z,0.0nm,0.3s,baz=141,slow=14,SNR=3.6						
AAK				LR	LR	17 00 05.9	
	comp=Z,94nm,19.4s,baz=181,slow=40						
EKS2	**Erkin-Say**	**13.13**	**306**	*e*P	**Pn**	**16 54 44.1**	**+1.0**
	comp=Z,5.1nm,1.1s						
KURK	**Kurchatov**	**16.43**	**338**	P	**Pn**	**16 55 26.5**	**-0.3**
	comp=Z,3.0nm,1.0s						
SONM	**Songino Array**	**18.01**	**43**	P	**Pn**	**16 55 47.2**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=227,slow=12,SNR=5.2						
SONM				LR	LR	17 03 16.2	
	comp=Z,57nm,20.7s,baz=169,slow=39						
ZALV	**Zalesovo Beam**	**18.28**	**353**	P	**Pn**	**16 55 49.0**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=179,slow=12,SNR=3.8						
ZALV				LR	LR	17 03 19.3	
	comp=Z,31nm,18.8s,baz=228,slow=38						
BVAR	**Borovoye Array**	**21.31**	**329**	P	**P**	**16 56 23.9**	**+1.3**
	comp=Z,1.0nm,0.7s,mb3.2,baz=137,slow=14,SNR=5.8						
FINES	**FINESS Array B**	**46.11**	**324**	P	**P**	**17 00 00.4**	**+1.0**
	comp=Z,1.2nm,0.9s,mb3.8,baz=96,slow=12,SNR=2.5						
WRA	**Warramunga Arr**	**70.56**	**134**	P	**P**	**17 02 50.0**	**-0.6**
	comp=Z,0.6nm,1.1s,mb3.5,baz=324,slow=6.7,SNR=3.8						
ASAR	**Alice Springs**	**73.24**	**137**	P	**P**	**17 03 05.5**	**-1.1**
	comp=Z,0.4nm,1.0s,mb3.3,baz=310,slow=4.7,SNR=3.3						

IDC 30 17:00:49.9±4.9, 15°.72S×175°.90W, h0km, mb4.3/3, mb1 4.4/3, mb1mx3.8/16, mbtmp4.3/3, Error ellipse: s-maj=163.8km s-min=98.3km az=154.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.80**	**240**	P	P	17 08 41.1	-0.3
	3.6nm,1.0s,baz=76,slow=4.2,SNR=5.7						
WRA	**Warramunga Arr**	**47.43**	**257**	P	P	17 09 26.8	+0.2
	0.9nm,0.4s,baz=92,slow=7.3,SNR=49						
ASAR	**Alice Springs**	**47.73**	**252**	P	P	17 09 28.7	-0.1
	6.4nm,0.7s,baz=86,slow=8.5,SNR=195						
ASAR				PcP	PcP	17 10 58.0	-0.2
	0.3nm,0.4s,baz=106,slow=3.7,SNR=5.3						

*IDC **30** 17:18:10.1±0.4, 58°.14S×21°.70W, h0km, mb4.9/19, mb1 4.9/19, mb1mx4.8/23, mbtmp4.9/19, MS4.3/17, Ms1 4.3/17, ms1mx4.3/19, Error ellipse: s-maj=15.6km s-min=12.8km az=179.0*
*ISCJB **30** 17:18:10.2±0.3, 58°.14S±0°.06×21°.6W±0°.1, h10km, mb4.9/27, MS4.3/17, Error ellipse: s-maj=10.0km s-min=8.4km az=143.8*
*BJI **30** 17:18:13.9, 58°.10S×21°.70W, h32km*
*GCMT **30** 17:18:14.7±0.3, 58°.37S×21°.85W, h21km±1km, MW5.1, Moment Tensor Solution. s26,c35; s74,c107; Moment tensor: Scale 10^{16}Nm; M_{rr}2.48±.27; $M_{\theta\theta}$-6.00±.23; $M_{\phi\phi}$3.52±.21; $M_{r\theta}$0.95±.35; $M_{\theta\phi}$3.11±.16; $M_{\phi r}$-2.08±.43; Best double couple: $M_0$6.30000×10^{16} NP1:ϕ_s245.00000°, δ61.00000°, λ17.00000°. NP2:ϕ_s146.00000°, δ75.00000°, λ150.00000°. Principal axes: T 5.4900, Plg31.0000°, Azm102.0000°; N 1.6700, Plg57.0000°, Azm302.0000°; P -7.1700, Plg9.0000°, Azm198.0000°; Data Used: II IU IC G CN.*
*NEIC **30** 17:18:15.0±4.4, 58°.15S×21°.70W, h33km±30km, mb5.2/9 Error ellipse: s-maj=9.6km s-min=8.8km az=169.0*
ISC 30 17:18:12.1±0.3, 58°.16S±0°.06×21°.6W±0°.1, h10km, n83, σ1°.07/36, mb4.9/26, MS4.3/17, 2C, East of South Sandwich Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.75**	**161**	*e*	**Pn**	**17 21 26.0**	**-0.7**
MAIT	**Maitri**	**18.79**	**146**	*e*P	**Pn**	**17 22 31.6**	**0.0**
PMSA	**Palmer Station**	**20.96**	**234**	P	**P**	**17 22 52.3**	**-2.4**
	54nm,1.2s,baz=151,slow=19,SNR=2.0						
PMSA				LR	LR	17 28 40.3	
	comp=Z,516nm,20.7s,MS3.9,baz=198,slow=30						
USHA	**Ushuaia**	**25.64**	**257**	P	**P**	**17 23 38.9**	**-2.5**
	18nm,0.8s,mb4.6,baz=50,slow=12,SNR=5.7						
USHA				LR	LR	17 31 23.2	
	comp=Z,851nm,22.0s,MS4.2,baz=86,slow=31						
SYO	**Syowa Base**	**28.01**	**138**‖	*e*P	**P**	**17 24 01.0**	**-1.6**
SYO	**Syowa Base**	**28.01**	**138**‖	*e*P	**P**	**17 24 07.5**	**+4.9**
QSPA	**South Pole Qui**	**32.09**	**180**	P	**P**	**17 24 39.6**	**+1.1**
	31nm,1.1s,mb5.1,baz=208,slow=3.4,SNR=62						
QSPA				LR	LR	17 36 36.3	
	comp=Z,390nm,19.1s,MS4.1,baz=19,slow=34						
QSPA	**South Pole Qui**	**32.09**	**180**	P	**P**	**17 24 39.6**	**+1.1**
QSPA				LR	LR	17 36 36.4	
TRQA	**Tornquist**	**32.91**	**290**	*e*P	**P**	**17 24 45.8**	**-0.4**
PLCA	**Paso Flores**	**35.32**	**278**	P	**P**	**17 25 07.3**	**+0.2**
	36nm,0.9s,mb5.3,baz=149,slow=8.2,SNR=29						
PLCA				LR	LR	17 39 26.1	
	comp=Z,296nm,18.6s,MS4.1,baz=115,slow=36						
MAW	**Mawson**	**36.62**	**140**	P	**P**	**17 25 17.4**	**-0.4**
	17nm,1.0s,mb4.8,baz=235,slow=9.1,SNR=4.2						
MAW				LR	LR	17 38 22.0	
	comp=Z,428nm,19.2s,MS4.2,baz=256,slow=33						
SUR	**Sutherland**	**38.47**	**67**	P	**P**	**17 25 34.8**	**+0.8**
	6.7nm,0.9s,mb4.4,baz=234,slow=18,SNR=5.4						
SUR				LR	LR	17 37 02.1	
	comp=Z,419nm,18.9s,MS4.3,baz=227,slow=29						
CPUP	**Villa Florida**	**40.50**	**306**	P	**P**	**17 25 50.4**	**-0.4**
	28nm,0.9s,mb5.0,baz=134,slow=7.2,SNR=46						
CPUP				LR	LR	17 39 44.2	
	comp=Z,215nm,19.5s,MS4.0,baz=138,slow=32						
CPUP	**Villa Florida**	**40.50**	**306**	P	**P**	**17 25 50.4**	**-0.4**
CPUP				LR	LR	17 39 44.2	
CFAA	**Coronel Fontan**	**41.15**	**290**	P	**P**	**17 25 55.6**	**-0.6**
	1.8nm,0.7s,mb3.8,baz=151,slow=7.6,SNR=25						
BOSA	**Boshof**	**43.74**	**68**	P	**P**	**17 26 17.6**	**+0.3**
	15nm,0.7s,mb4.8,baz=203,slow=8.6,SNR=26						
BOSA				LR	LR	17 40 42.2	
	comp=Z,359nm,19.2s,MS4.3,baz=216,slow=31						
SBA	**Scott Base**	**44.15**	**183**	*e*P	**P**	**17 26 21.6**	**+1.6**
	33nm,1.3s,mb4.9						
LBTB	**Lobatse**	**46.91**	**66**	P	**P**	**17 26 42.4**	**-0.1**
	25nm,1.1s,mb5.1,baz=221,slow=8.5,SNR=18						
TSUM	**Tsumeb**	**48.29**	**53**	P	**P**	**17 26 52.8**	**-0.5**
	2.7nm,0.4s,mb4.6,baz=176,slow=5.4,SNR=11						
TSUM				LR	LR	17 42 37.6	
	comp=Z,395nm,19.5s,MS4.4,baz=212,slow=30						
CASY	**Casey**	**50.84**	**157**	*e*P	**P**	**17 27 12.7**	**+0.5**
CASY	**Casey**	**50.84**	**157**	*e*P	**P**	**17 27 12.9**	**+0.7**
	36nm,1.0s,mb5.3						
LPAZ	**La Paz**	**54.07**	**301**	P	**P**	**17 27 37.8**	**+1.2**
	25nm,0.7s,mb5.3,baz=169,slow=5.8,SNR=52						
LPAZ				LR	LR	17 49 48.3	
	comp=Z,136nm,18.8s,MS4.0,baz=290,slow=35						
LPAZ	**La Paz**	**54.07**	**301**	P	**P**	**17 27 37.8**	**+1.2**
LPAZ				LR	LR	17 49 48.3	
LSZ	**Lusaka**	**56.49**	**62**	*e*P	**P**	**17 27 53.9**	**-0.3**
	14nm,0.8s,mb5.0						
NNA	**Nana**	**61.90**	**294**	*e*P	**P**	**17 28 34.3**	**+2.7**
	79nm,1.4s,mb5.7						
LIC	**Lamto**	**65.56**	**18**	*e*P	**P**	**17 28 55.1**	**-0.6**
	32nm,0.8s,mb5.4						
KIC	**Kosan Boka**	**65.74**	**18**	*e*P	**P**	**17 28 56.1**	**-0.7**
	20nm,0.9s,mb5.2						
TIC	**Toumodi**	**65.97**	**18**	*e*P	**P**	**17 28 57.5**	**-0.8**
	12nm,0.2s,mb5.6						
DBIC	**Dimbokro**	**66.03**	**18**	P	**P**	**17 28 57.1**	**-1.5**
	7.4nm,0.8s,mb4.8,baz=132,slow=8.6,SNR=8.2						
DBIC				LR	LR	17 50 43.8	
	comp=Z,344nm,20.6s,MS4.5,baz=168,slow=30						
KMBO	**Kilima Mbogo**	**73.12**	**63**	LR	LR	17 59 07.0	
	comp=Z,480nm,18.6s,MS4.8,baz=255,slow=34						
OTAV	**Otavalo**	**73.34**	**299**	*e*P	**P**	**17 29 45.7**	**+1.9**
	35nm,1.3s,mb5.1						
TORD	**Torodi Ar. Bea**	**73.59**	**24**	P	**P**	**17 29 44.9**	**-0.2**
	15nm,0.7s,mb5.0,baz=203,slow=6.1,SNR=93						
TORD				LR	LR	17 56 42.8	
	comp=Z,165nm,18.4s,MS4.3,baz=170,slow=31						
ROSC	**El Rosal**	**75.59**	**305**	P	**P**	**17 29 57.4**	**+0.5**
	3.4nm,0.3s,mb4.7,baz=263,slow=23,SNR=5.4						
RPZ	**Rata Peaks**	**77.94**	**189**	P	**P**	**17 30 10.3**	**+0.5**
	6.2nm,0.8s,mb4.6,baz=72,slow=13,SNR=1.9						
RKT	**Rikitea**	**82.08**	**239**	*e*LR	LR	17 56 19.5	
	373nm,27.2s						
TAM	**Tamanrasset**	**83.76**	**25**	*e*P	**P**	**17 30 42.8**	**+1.9**
	4.7nm,0.9s,mb4.6						
TBI	**Tubuai**	**87.97**	**227**	*e*LR	LR	17 59 07.8	
	191nm,25.5s						
STKA	**Stephens Creek**	**89.21**	**166**	P	**P**	**17 31 08.2**	**+0.4**
	7.1nm,0.8s,mb5.0,baz=180,slow=6.2,SNR=5.4						
STKA				LR	LR	18 08 04.0	
	comp=Z,431nm,18.1s,MS4.9,baz=319,slow=34						
PPT	**Papeete**	**93.24**	**229**	*e*LR	LR	18 01 32.4	
	274nm,23.0s						
PPT	**Papeete**	**93.24**	**229**	LR	LR	18 03 00.7	
	comp=Z,261nm,19.4s,MS4.7,baz=146,slow=29						
ASAR	**Alice Springs**	**95.97**	**158**	P	**P**	**17 31 38.4**	**-0.8**
	3.1nm,0.9s,mb4.7,baz=203,slow=4.4,SNR=18						
TAOE	**Nuku Hiva Isla**	**96.92**	**241**	*e*LR	LR	18 03 11.9	
	341nm,22.3s						
KEST	**Kesra**	**97.08**	**25**	LR	LR	18 14 01.8	
	comp=Z,67nm,18.2s,MS4.2,baz=319,slow=34						
ESDC	**Sonseca Array**	**98.59**	**14**	LR	LR	18 13 49.4	
	comp=Z,58nm,20.1s,MS4.1,baz=180,slow=34						
WRA	**Warramunga Arr**	**99.67**	**157**	P	Pdif	17 31 53.9	-2.1
	1.3nm,0.9s,baz=196,slow=3.8,SNR=6.4						
BRTR	**Keskin Array B**	**107.87**	**42**	PP	PP	17 36 55.6	-5.5
	0.8nm,0.8s,baz=225,slow=3.9,SNR=3.8						
CM31	**Chiang Mai Arr**	**121.52**	**107**	*e*P	PKPdf	17 37 05.0	-0.4
CMAR	**Chiang Mai Arr**	**121.52**	**107**	PKP	PKPdf	17 37 05.1	-0.4
	6.0nm,0.8s,baz=234,slow=3.6,SNR=41						
DMN	**Daman**	**121.76**	**88**	*e*P	PKPdf	17 37 04.6	-1.1
	19nm,0.8s						
PKIN	**Phulchoki**	**121.89**	**88**	*e*P	PKPdf	17 37 04.6	-1.3
	15nm,0.8s						
PKI	**Pulchoki**	**121.89**	**88**	*e*P	PKPdf	17 37 04.8	-1.2
	29nm,0.9s						
MSU	**Marysvale**	**121.99**	**292**	*e*P	PKPdf	17 37 05.8	+0.1
KKN	**Kakani**	**122.00**	**88**	*e*P	PKPdf	17 37 04.2	-2.0
	20nm,0.8s						
ODAN	**Odare**	**122.37**	**91**	*e*P	PKPdf	17 37 06.2	-0.7
	18nm,0.8s						
GUN	**Gumba**	**122.41**	**89**	*e*P	PKPdf	17 37 06.2	-0.7
	46nm,0.8s						
TAPN	**Taplejung**	**122.94**	**91**	*e*P	PKPdf	17 37 06.8	-1.2
	15nm,0.8s						
SHL	**Shillong**	**123.71**	**95**	*e*PKP	PKPdf	17 37 10.0	+0.5
PDAR	**Pinedale Array**	**124.02**	**297**	PKP	PKPdf	17 37 08.4	-1.1
	0.5nm,0.6s,baz=107,slow=5.0,SNR=4.0						
HWUT	**Hardware Ranch**	**124.08**	**295**	*e*P	PKPdf	17 37 09.0	-0.7
FINES	**FINESS Array B**	**124.91**	**26**	PKP	PKPdf	17 37 09.4	-1.2
	1.6nm,0.8s,baz=153,slow=2.1,SNR=4.9						
NVAR	**Mina Array Bea**	**124.97**	**288**	PKP	PKPdf	17 37 12.1	+0.6
	0.8nm,0.8s,baz=142,slow=3.6,SNR=5.4						
KSH	**Kashi**	**126.28**	**72**	*e*PKP	PKPdf	17 37 13.0	-1.0
DLMT	**Dillon**	**127.42**	**297**	*e*P	PKPdf	17 37 16.5	+0.6
EKS2	**Erkin-Say**	**127.55**	**68**	*e*P	PKPdf	17 37 15.1	-1.1
CHMT	**Chamberlain Mo**	**128.87**	**298**	*e*P	PKPdf	17 37 18.7	+0.1
BMO	**Blue Mountains**	**129.29**	**294**	*e*P	PKPdf	17 37 19.1	-0.4
ARCES	**ARCESS Array B**	**131.83**	**20**	PKP	PKPdf	17 37 22.8	-0.8
	1.3nm,0.6s,baz=223,slow=2.5,SNR=11						
BVAR	**Borovoye Array**	**133.40**	**56**	PKP	PKPdf	17 37 26.7	-0.4
	1.5nm,0.6s,baz=243,slow=1.7,SNR=9.6						
MK31	**Makanchi Array**	**134.73**	**70**	*e*P	PKPdf	17 37 27.1	-2.6
MKAR	**Makanchi Array**	**134.73**	**70**	PKP	PKPdf	17 37 28.5	-1.3
	2.1nm,0.8s,baz=262,slow=3.7,SNR=15						
LZH	**Lanzhou**	**138.29**	**98**	*e*PKP	PKPdf	17 37 37.0	+0.3
LZH				sPKP		17 37 45.0	
GTA	**Gaotai**	**138.63**	**91**	*e*PKP	PKPdf	17 37 31.5	-5.7
XAN	**Xi'an**	**139.35**	**104**	PKP	PKPdf	17 37 38.0	-0.7
ZALV	**Zalesovo Beam**	**140.60**	**63**	PKhKP		17 37 31.0	
	1.4nm,0.6s,baz=261,slow=3.0,SNR=7.3						
ZALV				PKP	PKPdf	17 37 39.0	-1.2
	1.3nm,0.7s,baz=256,slow=2.6,SNR=5.6						
BTO	**Baotou**	**144.89**	**99**	*e*PKP	PKPdf	17 37 46.5	-1.9
HHC	**Hu-ho-hao-te**	**145.87**	**100**	*e*PKPbc	PKPbc	17 37 51.0	+0.3
BJI	**Beijing**	**147.66**	**105**	PKPbc	PKPbc	17 37 55.0	-0.9
SONM	**Songino Array**	**147.85**	**86**	PKP	PKPdf	17 37 52.2	-0.9
	18nm,0.9s,baz=192,slow=4.4,SNR=74						
SONM				PKPbc	PKPbc	17 37 55.6	-0.5
	18nm,0.9s,baz=222,slow=3.2,SNR=74						
ULN	**Ulaanbaatar**	**148.21**	**86**	*e*PKPbc	PKPbc	17 37 55.6	-1.4
INK	**Inuvik**	**149.38**	**317**	PKPbc	PKPbc	17 37 56.6	-2.8
	8.7nm,0.5s,baz=206,slow=9.0,SNR=6.6						
KSRS	**Korea Array**	**151.30**	**123**	PKPbc	PKPbc	17 38 04.6	-0.4
	6.8nm,0.8s,baz=207,slow=2.1,SNR=29						
KSRS				PKPab	PKPab	17 38 12.9	-0.2
	2.6nm,0.8s,baz=216,slow=1.8,SNR=5.8						
MJAR	**Matsushiro Arr**	**154.62**	**140**	PKPbc	PKPbc	17 38 11.5	-0.8
	0.9nm,0.7s,baz=147,slow=1.4,SNR=5.5						
MJAR				PKPab	PKPab	17 38 26.7	-0.4
	3.8nm,1.0s,baz=200,slow=5.1,SNR=7.4						
MJAR	**Matsushiro Arr**	**154.62**	**140**	PKPbc	PKPbc	17 38 11.5	-0.8
MJAR				PKPab	PKPab	17 38 26.7	-0.4

*BJI **30** 17:34:48.6, 58°.70N×137°.50W, h10km, mB4.8/11, mb4.7/14, Ms4.3/4, Ms7 3.9/5*
*IDC **30** 17:34:49.9±0.7, 58°.92N×137°.46W, h0km, mb4.0/13, mb1 4.2/18, mb1mx4.0/29, mbtmp4.1/18, ML4.0/5, MS3.4/6, Ms1 3.4/6, ms1mx3.0/35, Error ellipse: s-maj=16.1km s-min=10.4km az=18.0*
*NEIC **30** 17:34:50.6, 58°.72N×137°.49W, h1km, mb4.0/20, ML4.5(PGC), ML4.4(AEIC), ML4.4(PMR), After PGC.*
*PGC **30** 17:34:51.

COLA	**College**	**7.79 326**	P	**Pn**	**17 36 44.9 +0.3**
KDAK	**Kodiak Island**	**7.98 269**	Pn	**Pn**	**17 36 45.0 -2.2**
	4.7nm,0.3s,baz=82,slow=8.6,SNR=28				
KDAK			Sn	**Sn**	**17 38 12.3 -5.7**
	baz=287,slow=19,SNR=3.7				
KDAK	**Kodiak Island**	**7.98 269**	P	**Pn**	**17 36 45.5 -1.7**
PPLA	**Purkeypile**	**8.23 306**	P	**Pn**	**17 36 51.4 +0.7**
BPAW	**Bear Paw Mtn.**	**8.33 315**	P	**Pn**	**17 36 52.1 +0.1**
OHAK	**Old Harbor**	**8.49 266**	P	**Pn**	**17 36 52.4 -1.9**
CHUM	**Lake Minchumin**	**8.72 312**	P	**Pn**	**17 36 57.6 +0.3**
BM3	**Burnt Mountain**	**9.22 343**	P	**Pn**	**17 37 05.2 +1.1**
SVW2	**Sparrevohn**	**9.32 292**	*e*P	**Pn**	**17 37 03.2 -2.4**
INK	**Inuvik**	**9.72 9**	Pn	**Pn**	**17 37 10.8 -0.2**
	0.9nm,0.3s,baz=195,slow=15,SNR=18				
INK			Sn	**Sn**	**17 38 58.8 -1.8**
	0.9nm,0.3s,baz=169,slow=15,SNR=3.1				
INK			Lg		17 39 54.6
	baz=262,slow=28,SNR=5.3				
INK			LR	LR	17 40 31.4
	comp=Z,92nm,20.8s,baz=223,slow=36				
INK	**Inuvik**	**9.72 9**	*e*Pn	**Pn**	**17 37 11.5 +0.5**
TT01	**Tatalina**	**9.89 302**	P	**Pn**	**17 37 12.7 -0.7**
TTA	**Tatalina**	**9.89 303**	*e*P	**Pn**	**17 37 12.3 -1.1**
COLD	**Coldfoot**	**10.20 331**	P	**Pn**	**17 37 18.5 +0.9**
IM3	**Indian Mountai**	**10.38 321**	P	**Pn**	**17 37 20.6 +0.6**
YKA	**Yellowknife Ar**	**11.84 62**	Pn	**Pn**	**17 37 35.2 -4.7**
	0.4nm,0.3s,baz=262,slow=12,SNR=9.4				
YKA			Lg		17 40 58.9
	0.1nm,0.3s,baz=255,slow=28,SNR=5.6				
YKA	**Yellowknife Ar**	**11.84 62**	Pn	**Pn**	**17 37 35.2 -4.8**
YKA			Lg		17 40 58.9
SDPT	**Sand Point**	**12.91 264**	*e*Pn	**Pn**	**17 37 54.7 +0.1**
	30nm,0.5s				
EDM	**Edmonton**	**14.60 102**	*e*Pn	**Pn**	**17 38 16.9 -0.8**
HUMO	**Hull Mountain**	**18.59 144**	*e*Pn	**Pn**	**17 39 09.0 +0.2**
	2.0nm,0.8s				
BMO	**Blue Mountains**	**18.64 130**	P	**Pn**	**17 39 09.6 +0.2**
	3.6nm,1.2s				
CHMT	**Chamberlain Mo**	**18.77 119**	*e*P	**Pn**	**17 39 12.4 +1.5**
	4.3nm,1.0s				
YBH	**Yreka Blue Hor**	**19.46 145**	P	**Pn**	**17 39 20.2 +0.9**
	0.2nm,0.3s,baz=347,slow=3.9,SNR=7.0				
YBH			LR	LR	17 45 46.6
	comp=Z,145nm,20.3s,baz=329,slow=34				
YBH	**Yreka Blue Hor**	**19.46 145**	*e*P	**Pn**	**17 39 20.0 +0.7**
	5.2nm,1.1s				
EGMT	**Eagleton**	**19.62 111**	*e*P	**Pn**	**17 39 20.3 -0.9**
	10nm,1.0s				
FFC	**Flin Flon**	**19.77 86**	*e*P	**Pn**	**17 39 20.8 -2.1**
	5.1nm,0.8s				
MOD	**Modoc**	**20.08 140**	*e*P	**P**	**17 39 26.5 +1.6**
	6.3nm,0.9s				
MCMT	**McKenzie Canyo**	**20.55 122**	*e*P	**P**	**17 39 32.1 +2.1**
	1.5nm,0.9s				
WDC	**Whiskeytown Da**	**20.57 146**	*e*P	**P**	**17 39 31.4 +1.2**
	6.2nm,0.9s				
HLID	**Hailey**	**20.89 127**	*e*P	**P**	**17 39 35.5 +1.8**
	2.8nm,0.8s				
IMW	**Indian Meadow**	**22.12 121**	*e*P	**P**	**17 39 49.6 +2.7**
	8.7nm,1.0s,mb4.1				
RES	**Resolute Bay**	**22.36 28**	P	**P**	**17 39 47.5 -1.7**
	9.2nm,1.1s,mb4.1,baz=252,slow=11,SNR=8.1				
RES			LR	LR	17 49 11.4
	comp=Z,128nm,18.7s,MS3.4,baz=271,slow=39				
RES	**Resolute Bay**	**22.36 28**	*e*P	**P**	**17 39 47.7 -1.6**
	18nm,1.1s,mb4.4				
TPAW	**Teton Pass**	**22.44 121**	*e*P	**P**	**17 39 52.0 +1.7**
	8.9nm,1.1s,mb4.1				
PDAR	**Pinedale Array**	**23.64 120**	P	**P**	**17 40 04.5 +1.7**
	0.6nm,0.7s,mb3.2,baz=325,slow=9.0,SNR=4.7				
NVAR	**Mina Array Bea**	**23.86 140**	P	**P**	**17 40 07.5 +2.5**
	3.1nm,0.9s,mb3.8,baz=313,slow=8.1,SNR=15				
ULM	**Lac du Bonnet**	**25.29 91**	P	**P**	**17 40 18.6 +0.7**
	5.0nm,0.8s,mb4.3,baz=316,slow=6.4,SNR=2.8				
MSU	**Marysvale**	**26.05 130**	*e*P	**P**	**17 40 22.9 -1.9**
	3.8nm,1.2s,mb3.9				
WMOK	**Wichita Mounta**	**35.06 116**	*e*P	**P**	**17 41 44.6 +0.1**
	3.8nm,1.0s,mb4.3				
SCHQ	**Schefferville**	**37.27 64**	LR	LR	17 57 47.6
	comp=Z,138nm,18.0s,MS3.8,baz=97,slow=37				
MIAR	**Mount Ida**	**37.71 110**	P	**P**	**17 42 06.6 -0.6**
	14nm,1.4s,mb4.5				
CN2	**Changchun**	**57.11 301**	*e*P	**P**	**17 44 39.5 +1.6**
FINES	**FINESS Array B**	**59.42 9**	P	**P**	**17 44 52.6 -1.2**
	0.8nm,0.6s,mb4.0,baz=354,slow=11,SNR=3.2				
KSRS	**Korea Array**	**61.03 295**	P	**P**	**17 45 03.6 -1.5**
	1.5nm,0.7s,mb4.2,baz=28,slow=8.0,SNR=7.2				
KSRS			LR	LR	18 11 24.3
	comp=Z,19nm,21.5s,MS3.2,baz=230,slow=36				
ULN	**Ulaanbaatar**	**61.26 316**	*e*P	**P**	**17 45 07.1 +0.5**
	4.8nm,0.8s,mb4.7				
SONM	**Songino Array**	**61.52 316**	P	**P**	**17 45 09.3 +0.9**
	3.0nm,0.8s,mb4.6,baz=36,slow=10,SNR=21				
ZAA0	**Zalesovo Array**	**62.53 333**	*e*P	**P**	**17 45 13.7 -1.3**
ZALV	**Zalesovo Beam**	**62.53 333**	P	**P**	**17 45 13.2 -1.8**
	3.5nm,0.7s,mb4.6,baz=18,slow=6.8,SNR=18				
ARU	**Arti**	**64.41 350**	*e*P	**P**	**17 45 26.2 -1.2**
	5.4nm,0.8s,mb4.8				
HHC	**Hu-ho-hao-te**	**65.44 309**	*e*P	**P**	**17 45 33.0 -1.4**
HHC			PcP	PcP	17 46 06.0 -0.4
HHC			PP	PP	17 47 58.3 +0.5
HHC			ScP		17 50 09.0
HHC			S	S	17 54 15.3 -4.3
HHC			SKS		17 55 25.3
HHC			SS	SS	17 58 29.5 -2.4
HHC			pmax	pmax	
	comp=Z,63nm,6.8s				
HHC			LR	LR	
	comp=N,95nm,18.0s,MS4.1				
HHC			LR	LR	
	comp=E,88nm,20.4s,MS4.1				
HHC			LR	LR	
	comp=Z,87nm,21.6s,MS3.9				
BVAR	**Borovoye Array**	**66.26 342**	P	**P**	**17 45 38.7 -0.8**
	comp=Z,2.3nm,0.7s,mb4.5,baz=1.0,slow=4.7,SNR=15				
MK31	**Makanchi Array**	**69.78 332**	*e*P	**P**	**17 45 59.1 -2.5**
MKAR	**Makanchi Array**	**69.78 332**	P	**P**	**17 46 00.4 -1.3**
	comp=Z,1.2nm,0.7s,mb4.1,baz=47,slow=6.9,SNR=15				
AKASG	**Malin Array Be**	**70.33 9**	P	**P**	**17 46 03.9 -1.1**
	comp=Z,1.7nm,0.5s,mb4.4,baz=352,slow=6.0,SNR=14				
WMQ	**Urumqi**	**71.11 327**	*e*P	**P**	**17 46 12.0 +2.1**
GTA	**Gaotai**	**71.19 316**	*e*P	**P**	**17 46 10.8 +0.4**
GTA			pP		17 46 15.3
GTA			sP	sP	17 46 18.8 +8.2
GTA			pmax	pmax	
	comp=Z,4.0nm,0.8s,mb4.6				
LZH	**Lanzhou**	**72.61 312**	*e*P	**P**	**17 46 18.0 -1.0**
LZH			pP		17 46 25.0
LZH			sP	sP	17 46 27.3 +8.1
LZH			pmax	pmax	
	comp=Z,18nm,1.6s,mb5.0				
ESDC	**Sonseca Array**	**74.59 35**	P	**P**	**17 46 30.4 -0.2**
	comp=Z,0.2nm,0.3s,mb3.6,baz=339,slow=6.1,SNR=4.4				
TKM2	**Tokmak 2**	**74.98 335**	*e*P	**P**	**17 46 32.6 -0.2**
	comp=Z,3.8nm,1.0s,mb4.4				
EKS2	**Erkin-Say**	**75.62 337**	*e*P	**P**	**17 46 36.6 +0.2**
	comp=Z,9.4nm,0.8s,mb5.0				
CD2	**Chengdu**	**77.19 309**	*e*P	**P**	**17 46 45.8 +0.2**
CD2			pmax	pmax	
	comp=Z,10.0nm,0.8s,mb5.0				
CD2			pmax	pmax	
	comp=Z,20nm,5.2s				
KSH	**Kashi**	**78.15 334**	*e*P	**P**	**17 46 53.0 +2.2**
KSH			pP		17 46 57.8
KSH			sP	sP	17 47 00.3 +9.3
KSH			PcP	PcP	17 47 02.8 +2.4
KSH			PP	PP	17 49 52.5 +6.1
KSH			S	S	17 56 47.0 +1.1
KSH			SKS		17 57 02.3
KSH			ScS	ScS	17 57 09.8 -1.8
KSH			SS	SS	18 01 52.8 +6.7
KSH			pmax	pmax	
	comp=Z,7.0nm,1.2s,mb4.7				
KSH			pmax	pmax	
	comp=Z,68nm,5.5s				
KSH			LR	LR	
	comp=N,18nm,3.0s				
KSH			LR	LR	
	comp=E,13nm,3.2s				
KSH			LR	LR	
	comp=Z,45nm,4.2s				
GYA	**Guiyang**	**79.90 305**	P	**P**	**17 47 01.5 +0.9**
GYA			pmax	pmax	
	comp=Z,10.0nm,1.0s,mb4.7				
CMAR	**Chiang Mai Arr**	**90.23 308**	P	**P**	**17 47 52.1 -0.4**
	comp=Z,2.4nm,0.9s,mb4.4,baz=8.5,slow=5.1,SNR=14				
BOSA	**Boshof**	**147.58 29**	PKPbc	PKPbc	17 54 34.5 -1.2
	comp=Z,1.5nm,0.5s,baz=356,slow=11,SNR=3.9				

JMA 30 17:47:24.6±0.2, 38°.45N×144°.41E, h54km, M3.7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.23 287**		P	Pn	17 48 00.4	+1.3
OFUJ				*e*S	Sn	17 48 27.3	+1.8
MIYJ	**Miyakonagasawa**	**2.31 300**		P	Pn	17 48 01.1	+0.9
MIYJ				S	Sn	17 48 27.7	+0.3
JIO	**Ouri**	**2.40 271**		P	Pn	17 48 02.5	+1.0
JIO				*e*S	Sn	17 48 30.4	+0.7
JMK	**Ichinoseki**	**2.55 282**		P	Pn	17 48 05.0	+1.6
JMK				S	Sn	17 48 34.7	+1.5
JOT	**Ohata**	**3.91 320**		P	Pn	17 48 22.9	+0.9
JOT				*e*S	Sn	17 49 04.9	-1.7
JCH	**Churui**	**4.24 349**		P	Pn	17 48 25.2	-1.3
JCH				*e*S	Sn	17 49 11.4	-3.3
JKB	**Kayabe**	**4.30 324**		P	Pn	17 48 28.7	+1.3
JKB				*e*S	Sn	17 49 15.2	-1.0
NEM2	**Nemuro 2**	**5.01 11**		P	Pn	17 48 33.9	-3.3
NEM2				*e*S	Sn	17 49 27.0	-6.8
JRY	**Ryogami san**	**5.02 243**		P	Pn	17 48 38.3	+1.0
JRY				*e*S	Sn	17 49 34.0	0.0
JOSM	**Okushiri--Mats**	**5.24 315**		P	Pn	17 48 41.3	+1.1
JOSM				*e*S	Sn	17 49 37.5	-1.7
MAT	**Matsushiro**	**5.29 251**		P	Pn	17 48 44.0	+3.0
JOD2	**Odawara 2**	**5.32 235**		*e*S	Sn	17 49 40.1	-1.3
JTKR	**Abashiri--Toko**	**5.53 356**		P	Pn	17 48 43.0	-1.3
JTKR				*e*S	Sn	17 49 41.4	-5.0

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*NEIC **30** 18:03:12.5, 58°.75N×137°.50W, h1km, ML3.5(PGC), ML3.5(AEIC), After PGC.*

PGC 30 18:03:13.3±1.7, 58°.81N×137°.48W, h1km, ML3.7(NEIC), **16D, 127km Ese of Yakutat, Ak Southeastern Alaska, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLBC	**Pleasant Camp**	**0.87**	**41**	⇓P	Pg	18 03 29.0	-0.9
PLBC				S	Sg	18 03 41.0	-0.1
PLBC	**Pleasant Camp**	**0.87**	**41**	⇓P	Pg	18 03 29.0	-0.9
PLBC				⇓S	Sg	18 03 41.0	-0.1
SKAG	**Skagway**	**1.29**	**58**	P	Pg	18 03 36.2	-1.7
SKAG				S	Sg	18 03 53.6	-0.9
PNL	**Peninsula**	**1.31**	**312**	P	Pg	18 03 35.6	-2.8
PNL				S	Sg	18 03 54.7	-0.7
YKU2	**Yakutat**	**1.33**	**303**	*e*Pn	Pn	18 03 37.1	-1.9
BESE	**Bessie Mountai**	**1.39**	**98**	P	Pn	18 03 37.0	-2.7
HYT	**Haines Junctio**	**2.03**	**360**	⇓Pn	Pn	18 03 47.8	-0.7
HYT				⇓Sg	Sg	18 04 15.9	-2.4
HYT	**Haines Junctio**	**2.03**	**360**	⇓Pn	Pn	18 03 47.8	-0.7
HYT				⇑Sg	Sg	18 04 15.9	-2.4
SIT	**Sitka**	**2.10**	**146**	P	Pn	18 03 46.2	-3.2
SIT				S	Sn	18 04 12.9	-3.1
WHY	**Whitehorse**	**2.28**	**34**	P	Pn	18 03 51.4	-0.5
WHY	**Whitehorse**	**2.28**	**34**	⇑Pn	Pn	18 03 52.0	0.0
WHY				⇑Pg	Pg	18 03 53.9	-3.0
WHY				⇓Sg	Sg	18 04 24.6	-1.7
DLBC	**Dease Lake**	**3.91**	**92**	*e*Pn	Pn	18 04 12.6	-1.8
DLBC	**Dease Lake**	**3.91**	**92**	⇓Pn	Pn	18 04 13.6	-0.8
DLBC				⇑Pg	Pg	18 04 23.2	-4.9
DLBC				⇓Sg	Sg	18 05 13.5	-5.3
CRAG	**Craig**	**4.10**	**143**	Pn	Pn	18 04 20.7	+3.7
BMRM	**Bremner River**	**4.20**	**304**	P	Pn	18 04 17.2	-1.0
DIV	**Divide**	**4.78**	**303**	Pn	Pn	18 04 26.3	+0.1
MENT	**Mentasta**	**5.15**	**326**	*e*Pn	Pn	18 04 31.3	0.0
DAWY	**Dawson**	**5.36**	**351**	P	Pn	18 04 34.0	-0.2
DAWY	**Dawson**	**5.36**	**351**	⇓Pn	Pn	18 04 33.9	-0.3
NDB	**Naden**	**5.47**	**151**	⇓Pn	Pn	18 04 33.1	-2.7
SML	**Sawmill**	**6.18**	**304**	P	Pn	18 04 44.9	-0.6
EGAK	**Eagle**	**6.24**	**345**	*e*Pn	Pn	18 04 45.7	-0.6
	8.2nm,0.2s						
RND	**Reindeer**	**7.18**	**315**	P	Pn	18 04 58.8	-0.4
TRF	**Thorofare Moun**	**7.75**	**312**	P	Pn	18 05 06.8	-0.2
PPLA	**Purkeypile**	**8.26**	**306**	P	Pn	18 05 12.1	-2.0
OHAK	**Old Harbor**	**8.54**	**266**	P	Pn	18 05 14.0	-3.9
BM3	**Burnt Mountain**	**9.22**	**343**	P	Pn	18 05 26.4	-0.7

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*BJI **30** 18:05:10.0, 58°.80N×137°.50W, h10km, mB4.4/3, mb4.8/5*
*ISCJB **30** 18:05:12.8±0.4, 58°.84N±0°.04×137°.61W±0°.05, h10km, mb4.7/3, Error ellipse: s-maj=5.2km s-min=4.0km az=176.2*
*PGC **30** 18:05:13.7±0.1, 58°.77N×137°.54W, h1km, ML4.2/4, 125km Ese of Yakutat, Ak Southeastern Alaska*
*NEIC **30** 18:05:13.7, 58°.77N×137°.54W, h1km, ML4.2(PGC), ML3.9(AEIC), After PGC.*

ISC 30 18:05:14.2±0.4, 58°.83N±0°.03×137°.49W±0°.05, h10km, n36, σ1°.17/49, mb4.7/3, 1C-5D, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLBC	**Pleasant Camp**	**0.86**	**42**	⇓P	**Pg**	**18 05 30.1**	**-0.6**
PLBC				S	**Sg**	**18 05 42.2**	**+0.4**
PLBC	**Pleasant Camp**	**0.86**	**42**	⇓P	**Pg**	**18 05 30.1**	**-0.6**
PLBC				⇓S	**Sg**	**18 05 42.2**	**+0.4**
SKAG	**Skagway**	**1.28**	**59**	P	**Pn**	**18 05 37.2**	**-0.9**
SKAG				S	**Sb**	**18 05 54.4**	**-0.5**
PNL	**Peninsula**	**1.29**	**311**	P	**Pn**	**18 05 36.6**	**-1.7**
PNL				S	**Sb**	**18 05 55.1**	**-0.2**
YKU2	**Yakutat**	**1.32**	**302**	*e*Pn	**Pn**	**18 05 37.8**	**-0.8**
BESE	**Bessie Mountai**	**1.40**	**99**	P	**Pn**	**18 05 38.1**	**-1.6**
HYT	**Haines Junctio**	**2.00**	**360**	⇑Pn	**Pn**	**18 05 49.0**	**+1.0**
HYT				Sg	**Sg**	**18 06 17.4**	**-1.2**
HYT	**Haines Junctio**	**2.00**	**360**	⇑Pn	**Pn**	**18 05 49.0**	**+1.0**
HYT				⇑Sg	**Sg**	**18 06 17.4**	**-1.2**
SIT	**Sitka**	**2.12**	**146**	P	**Pn**	**18 05 50.3**	**+0.7**
SIT				S	**Sn**	**18 06 17.2**	**+1.3**
WHY	**Whitehorse**	**2.26**	**35**	P	**Pn**	**18 05 52.4**	**+0.8**
WHY				S	**Sn**	**18 06 21.2**	**+1.7**
WHY	**Whitehorse**	**2.26**	**35**	⇓Pn	**Pn**	**18 05 53.1**	**+1.5**
WHY				⇑Pg	**Pg**	**18 05 55.0**	**-2.6**
WHY				⇑Sg	**Sg**	**18 06 26.0**	**-0.9**
DLBC	**Dease Lake**	**3.92**	**93**	Pn	**Pn**	**18 06 10.1**	**-4.3**
DLBC				*e*Pg	**Pg**	**18 06 24.5**	**-4.8**
DLBC	**Dease Lake**	**3.92**	**93**	⇑Pn	**Pn**	**18 06 14.7**	**+0.3**
DLBC				⇑Pg	**Pg**	**18 06 24.4**	**-4.9**
DLBC				⇓Sg	**Sg**	**18 07 14.7**	**-5.2**
BMRM	**Bremner River**	**4.18**	**304**	*e*Pn	**Pn**	**18 06 18.4**	**+0.4**
DIV	**Divide**	**4.76**	**303**	Pn	**Pn**	**18 06 26.3**	**+0.4**
DAWY	**Dawson**	**5.33**	**351**	*e*Pn	**Pn**	**18 06 35.5**	**+1.7**
SML	**Sawmill**	**6.16**	**304**	P	**Pn**	**18 06 45.9**	**+0.8**
PMR	**Palmer**	**6.43**	**300**	Pn	**Pn**	**18 06 48.2**	**-0.6**
RC01	**Rabbit Creek A**	**6.56**	**295**	*e*Pn	**Pn**	**18 06 51.1**	**+0.6**
	14nm,0.7s						
RND	**Reindeer**	**7.16**	**315**	P	**Pn**	**18 07 00.2**	**+1.3**
MCK	**McKinley**	**7.38**	**317**	*e*Pn	**Pn**	**18 07 03.9**	**+2.0**
	8.4nm,0.4s						
TRF	**Thorofare Moun**	**7.73**	**312**	P	**Pn**	**18 07 07.9**	**+1.2**
KDAK	**Kodiak Island**	**8.02**	**269**	P	**Pn**	**18 07 09.6**	**-1.1**
PPLA	**Purkeypile**	**8.25**	**306**	*e*Pn	**Pn**	**18 07 14.7**	**+1.0**
	13nm,0.7s						
BPAW	**Bear Paw Mtn.**	**8.34**	**315**	P	**Pn**	**18 07 15.6**	**+0.6**
OHAK	**Old Harbor**	**8.54**	**266**	P	**Pn**	**18 07 15.0**	**-2.8**
CHUM	**Lake Minchumin**	**8.73**	**312**	P	**Pn**	**18 07 20.6**	**+0.3**
BM3	**Burnt Mountain**	**9.20**	**343**	P	**Pn**	**18 07 27.4**	**+0.7**
SVW2	**Sparrevohn**	**9.35**	**292**	*e*Pn	**Pn**	**18 07 27.4**	**-1.4**
INK	**Inuvik**	**9.68**	**9**	*e*Pn	**Pn**	**18 07 34.4**	**+1.1**
	7.2nm,0.9s						
TTA	**Tatalina**	**9.91**	**302**	*e*Pn	**Pn**	**18 07 35.2**	**-1.2**
	4.2nm,0.5s						
CN2	**Changchun**	**57.13**	**301**	*e*P	**P**	**18 15 00.8**	**+0.3**
BJI	**Beijing**	**64.22**	**305**	P	**P**	**18 15 47.3**	**-1.6**
BJI				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
WMQ	**Urumqi**	**71.10**	**327**	*e*P	**P**	**18 16 34.0**	**+1.7**
CD2	**Chengdu**	**77.20**	**309**	*e*P	**P**	**18 17 07.0**	**-1.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
CD2				pmax	pmax		
	comp=Z,20nm,4.2s						
GYA	**Guiyang**	**79.91**	**305**	P	**P**	**18 17 22.0**	**-1.1**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						

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*IDC **30** 18:11:03.9±0.8, 30°.96N×103°.62E, h0km, mb3.7/8, mb1 3.9/10, mb1mx3.7/25, mbtmp3.7/10, ML3.3/1, MS3.3/1, Ms1 3.3/1, ms1mx2.4/36, Error ellipse: s-maj=34.3km s-min=15.9km az=59.0*
*ISCJB **30** 18:11:03.4±0.4, 30°.84N±0°.03×103°.56E±0°.06, h10km, mb3.8/9, Error ellipse: s-maj=7.6km s-min=4.5km az=14.0*
*NEIC **30** 18:11:05.7±0.5, 30°.93N×103°.60E, h10km, mb4.0/2, Error ellipse: s-maj=17.7km s-min=7.6km az=73.0*
*BJI **30** 18:11:06.0, 30°.80N×103°.63E, h11km, mb4.2/2, ML3.8/20, Ms3.6/6, Ms7 3.6/6*

ISC 30 18:11:05.7±0.4, 30°.94N±0°.04×103°.51E±0°.05, h10km, n25, σ0°.96/32, mb3.8/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.21**	**97**	Pg	**Pg**	**18 11 11.8**	**+1.7**
CD2				Sg	**Sg**	**18 11 17.5**	**+4.4**
CD2				smax			
	comp=N,43μm,0.5s						
CD2				smax			
	comp=E,52μm,0.6s						
LZH	**Lanzhou**	**5.14**	**3**	*e*Pn	**Pn**	**18 12 28.3**	**+5.6**
LZH				Pg	**Pb**	**18 12 39.5**	**+3.8**
LZH				Sn	**Sn**	**18 13 26.3**	**+4.2**
LZH				Sg	**Sg**	**18 13 45.0**	**-5.8**
LZH				smax			
	comp=N,55nm,0.8s						
LZH				smax			
	comp=E,120nm,1.1s						
LZH				LR	LR		
	comp=E,330nm,5.9s						
LZH				LR	LR		
	comp=Z,400nm,6.6s						
XAN	**Xi'an**	**5.52**	**54**	Pn	**Pn**	**18 12 28.0**	**+0.1**
XAN				Sn	**Sn**	**18 13 32.5**	**+1.1**
XAN				Sg	**Sg**	**18 14 00.5**	**-2.3**
XAN				smax			
	comp=N,160nm,0.8s						
XAN				smax			
	comp=E,67nm,0.9s						
XAN				LR	LR		
	comp=N,280nm,10.5s						
XAN				LR	LR		
	comp=E,69nm,9.9s						
XAN				LR	LR		
	comp=Z,56nm,10.0s						
KMI	**Kunming**	**5.83**	**187**	Pn	**Pn**	**18 12 32.0**	**-0.2**
KMI				Sn	**Sn**	**18 13 39.0**	**-0.1**
KMI				Sg	**Sg**	**18 14 13.3**	**+0.4**
KMI				smax			
	comp=N,45nm,1.5s						
KMI				smax			
	comp=E,34nm,1.9s						
CMAR	**Chiang Mai Arr**	**13.10**	**199**	Pn	**Pn**	**18 14 12.3**	**+0.5**
	baz=2.6,slow=11,SNR=5.9						
PKI	**Pulchoki**	**16.15**	**263**	*e*Pn	**Pn**	**18 14 51.9**	**-0.9**
	comp=E,7.4nm,0.4s						
PKIN	**Phulchoki**	**16.16**	**263**	*e*Pn	**Pn**	**18 14 52.0**	**-0.9**
	comp=E,16nm,0.7s						
KKN	**Kakani**	**16.20**	**263**	*e*Pn	**Pn**	**18 14 54.6**	**+1.2**
	comp=E,12nm,0.5s						
DMN	**Daman**	**16.40**	**263**	*e*Pn	**Pn**	**18 14 54.5**	**-1.5**
	comp=E,5.6nm,0.6s						
SONM	**Songino Array**	**17.02**	**7**	Pn	**Pn**	**18 15 04.0**	**+0.4**
	comp=E,0.1nm,0.3s,baz=185,slow=12,SNR=3.1						
KSRS	**Korea Array**	**21.18**	**66**	P	**P**	**18 15 49.2**	**-2.0**
	comp=E,1.5nm,0.5s,mb3.6,baz=248,slow=9.9,SNR=8.2						
MK31	**Makanchi Array**	**22.78**	**320**	*e*P	**P**	**18 16 08.4**	**+0.3**
MKAR	**Makanchi Array**	**22.78**	**320**	P	**P**	**18 16 08.6**	**+0.5**
	comp=E,0.6nm,0.6s,mb3.2,baz=133,slow=5.3,SNR=9.4						
MKAR				LR	LR	18 26 43.9	
	comp=E,66nm,19.5s,baz=242,slow=41						
ZAA0	**Zalesovo Array**	**26.65**	**335**	*e*P	**P**	**18 16 45.0**	**+0.6**
ZALV	**Zalesovo Beam**	**26.65**	**335**	P	**P**	**18 16 44.9**	**+0.5**
	comp=E,1.4nm,0.6s,mb3.7,baz=130,slow=9.5,SNR=7.4						
ZALV	**Zalesovo Beam**	**26.65**	**335**	P	**P**	**18 16 44.9**	**+0.5**
KURK	**Kurchatov**	**27.08**	**324**	P	**P**	**18 16 48.1**	**-0.1**
	comp=E,1.0nm,0.8s,mb3.4,baz=130,slow=9.6,SNR=7.7						
KURK	**Kurchatov**	**27.08**	**324**	*e*P	**P**	**18 16 50.1**	**+1.8**
	comp=E,1.3nm,0.7s,mb3.6						
BVAR	**Borovoye Array**	**32.61**	**322**	PcP	PcP	18 20 23.1	-0.1
	comp=E,0.7nm,0.7s,baz=140,slow=4.8,SNR=4.6						
FINES	**FINESS Array B**	**57.42**	**326**	P	**P**	**18 20 53.9**	**-0.3**
	comp=E,0.7nm,0.4s,mb4.0,baz=93,slow=7.6,SNR=6.6						
WRAB	**Tennant Creek**	**58.62**	**146**	*e*P	**P**	**18 21 02.8**	**-0.2**
	comp=E,1.8nm,0.6s,mb4.3						
WRA	**Warramunga Arr**	**58.62**	**146**	P	**P**	**18 21 02.6**	**-0.4**
	comp=E,1.5nm,0.4s,mb4.3,baz=337,slow=7.6,SNR=59						
ASAR	**Alice Springs**	**61.62**	**148**	P	**P**	**18 21 23.4**	**-0.1**
	comp=E,0.3nm,0.4s,mb3.7,baz=330,slow=7.1,SNR=23						
NOA	**NORSAR Array B**	**64.53**	**327**	P	**P**	**18 21 42.0**	**-0.4**
	comp=E,0.6nm,0.6s,mb3.8,baz=265,slow=3.2,SNR=3.5						
NOA	**NORSAR Array B**	**64.53**	**327**	P	**P**	**18 21 42.0**	**-0.4**

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*PGC **30** 18:12:49.3±1.5, 58°.78N×137°.48W, h1km, ML3.9/5, 128km Ese of Yakutat, Ak Southeastern Alaska*

**NEIC 30 18:12

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.88**	**65**	*e*P	**Pg**	**18 13 24.8**	**+1.9**
L22A	**Ellis Ranch, M**	**1.97**	**209**	⇑P	**Pn**	**18 13 40.4**	**-0.2**
	baz=2.0,SNR=470						
L22A				⇑S	**Sn**	**18 14 05.7**	**-0.3**
	baz=2.0						
L21A	**Rawlins**	**2.42**	**223**	⇑P	**Pn**	**18 13 46.8**	**-0.1**
	baz=2.5						
L21A				⇑S	**Sn**	**18 14 17.5**	**+0.3**
	baz=2.5						
PHWY	**Pilot Hill**	**2.47**	**185**	*e*Pn	**Pn**	**18 13 45.8**	**-1.7**
RWWY	**Rawlins**	**2.56**	**217**	*e*P	**Pn**	**18 13 49.4**	**+0.5**
K20A	**Yellowstone Ra**	**2.58**	**246**	⇑P	**Pn**	**18 13 49.2**	**+0.2**
	baz=2.6,SNR=22						
K20A				⇓S	**Sn**	**18 14 22.1**	**+1.1**
	baz=2.6						
M21A	**Separation Pea**	**2.70**	**218**	⇑P	**Pn**	**18 13 50.9**	**+0.2**
	baz=2.7,SNR=205						
M21A				⇓S	**Sn**	**18 14 25.0**	**+0.9**
	baz=2.7						
K19A	**Absolon Red Bu**	**2.85**	**252**	⇓P	**Pn**	**18 13 52.8**	**0.0**
	baz=2.9						
K19A				⇑S	**Sn**	**18 14 28.9**	**+1.1**
	baz=2.9						
L20A	**Wamsutter**	**2.92**	**234**	⇓P	**Pn**	**18 13 54.3**	**+0.6**
	baz=3.0,SNR=34						
LAO	**LASA Array**	**3.02**	**346**	*e*Pn	**Pn**	**18 13 54.9**	**-0.3**
N22A	**Wattenberg Ran**	**3.11**	**199**	⇓P	**Pn**	**18 13 56.2**	**-0.1**
	baz=3.1,SNR=23						
M20A	**Sweetwater, Wa**	**3.19**	**226**	P	**Pn**	**18 13 58.0**	**+0.6**
	baz=3.2,SNR=69						
RLMT	**Red Lodge**	**3.25**	**296**	*e*P	**Pn**	**18 13 57.7**	**-0.4**
RLMT	**Red Lodge**	**3.25**	**296**	⇑P	**Pn**	**18 13 57.9**	**-0.2**
	baz=3.3						
PDAR	**Pinedale Array**	**3.37**	**254**	Pn	**Pn**	**18 13 59.4**	**-0.4**
	5.9nm,0.3s,baz=73,slow=15,SNR=36						
PDAR				Lg		18 14 42.6	
	16nm,0.3s,baz=70,slow=29,SNR=9.3						
BW06	**Boulder Array**	**3.37**	**254**	*e*P	**Pn**	**18 13 59.1**	**-0.7**
BW06	**Boulder Array**	**3.37**	**254**	⇓P	**Pn**	**18 13 59.3**	**-0.5**
	baz=3.4						
I18A	**Diamond G Ranc**	**3.38**	**271**	⇑P	**Pn**	**18 14 00.5**	**+0.5**
	baz=3.4						
N21A	**Black Mountain**	**3.47**	**211**	⇑P	**Pn**	**18 14 02.0**	**+0.7**
	baz=3.5,SNR=27						
L19A	**Farson**	**3.50**	**243**	⇑P	**Pn**	**18 14 01.6**	**-0.2**
	baz=3.6,SNR=21						
G18A	**Lazy EL Ranch,**	**3.52**	**298**	⇑P	**Pn**	**18 14 01.8**	**-0.1**
	baz=3.6						
G18A				⇑S	**Sn**	**18 14 45.4**	**+1.2**
	baz=3.6						
J18A	**Kendall Valley**	**3.58**	**263**	⇓P	**Pn**	**18 14 03.2**	**+0.4**
	baz=3.6						
OGNE	**Ogallala**	**3.64**	**140**	*e*P	**Pn**	**18 14 05.6**	**+2.0**
M19A	**Rock Springs**	**3.72**	**234**	⇑P	**Pn**	**18 14 04.8**	**+0.1**
	baz=3.8						
N20A	**Spence Gulch,**	**3.72**	**219**	⇑P	**Pn**	**18 14 04.7**	**0.0**
	baz=3.8,SNR=7.6						
K18A	**Toltan Ranch,**	**3.75**	**254**	⇑P	**Pn**	**18 14 05.4**	**+0.3**
	baz=3.8						
GCMT	**Greycliff**	**3.80**	**304**	*e*P	**Pn**	**18 14 05.4**	**-0.4**
LKWY	**Lake**	**3.86**	**284**	*e*Pn	**Pn**	**18 14 08.0**	**+1.3**
F18A	**Big Timber**	**3.89**	**305**	⇑P	**Pn**	**18 14 07.2**	**+0.2**
	baz=3.9						
LOHW	**Long Hollow**	**3.96**	**270**	*e*Pn	**Pn**	**18 14 08.8**	**+0.8**
ISCO	**Idaho Springs**	**3.97**	**185**	*e*Pn	**Pn**	**18 14 09.1**	**+0.9**
L18A	**Fontenelle, Gr**	**4.03**	**245**	⇓P	**Pn**	**18 14 08.8**	**-0.2**
	baz=4.1						
SNOW	**Snow King Moun**	**4.08**	**268**	*e*Pn	**Pn**	**18 14 10.5**	**+0.9**
N19A	**John Jarvie Ra**	**4.14**	**228**	⇓P	**Pn**	**18 14 09.4**	**-1.0**
	baz=4.2,SNR=9.7						
N19A				⇑Sb	**Sb**	**18 15 14.1**	**+3.9**
	baz=4.2						
YFT	**Old Faithful**	**4.15**	**282**	Pn	**Pn**	**18 14 13.2**	**+2.5**
REDW	**Red Top Meadow**	**4.16**	**266**	Pn	**Pn**	**18 14 11.7**	**+0.9**
IMW	**Indian Meadow**	**4.19**	**274**	*e*Pn	**Pn**	**18 14 11.8**	**+0.7**
TPAW	**Teton Pass**	**4.22**	**268**	*e*Pn	**Pn**	**18 14 11.2**	**-0.3**
G17A	**Pierce Place,**	**4.29**	**293**	⇓P	**Pn**	**18 14 12.5**	**0.0**
	baz=4.3						
G17A				⇑Sb	**Sb**	**18 15 18.8**	**+4.3**
	baz=4.3						
O20A	**White River Ci**	**4.29**	**214**	⇓P	**Pn**	**18 14 12.5**	**-0.1**
	baz=4.3						
P25A	**Willow Gulch B**	**4.31**	**170**	⇑P	**Pn**	**18 14 13.5**	**+0.8**
	baz=4.3						
M18A	**Lyman**	**4.31**	**239**	⇑Pb	**Pb**	**18 14 23.1**	**+0.4**
	baz=4.4						
M18A				⇓Sb	**Sb**	**18 15 19.7**	**+4.5**
	baz=4.4						
N18A	**Larsen Ranch,**	**4.35**	**232**	⇑P	**Pn**	**18 14 13.0**	**-0.4**
	baz=4.4,SNR=13						
E18A	**Harlowton**	**4.38**	**311**	⇓P	**Pn**	**18 14 13.9**	**+0.1**
	baz=4.4						
AHID	**Auburn Hatcher**	**4.46**	**259**	*e*P	**Pb**	**18 14 25.9**	**+0.8**
F17A	**Fitzpatrick Pl**	**4.47**	**301**	⇓P	**Pn**	**18 14 14.9**	**-0.1**
	baz=4.5						
F17A				⇓S	**Sn**	**18 15 08.5**	**+0.9**
	baz=4.5						
RRI2	**Red Ridge**	**4.50**	**267**	*e*Pn	**Pn**	**18 14 15.2**	**-0.2**
L17A	**Cokeville**	**4.52**	**250**	⇑P	**Pn**	**18 14 15.7**	**0.0**
	baz=4.6						
O19A	**Miners Draw (B**	**4.55**	**222**	⇓P	**Pn**	**18 14 16.0**	**-0.1**
	baz=4.6						
P21A	**Newcastle**	**4.57**	**243**	⇓Pb	**Pb**	**18 14 27.0**	**-0.1**
	baz=4.6						
M17A	**Scullys Gap (B**	**4.67**	**243**	⇓P	**Pn**	**18 14 17.1**	**-0.6**
	baz=4.7						
J16A	**Bone**	**4.72**	**266**	⇑P	**Pn**	**18 14 18.3**	**-0.1**
	baz=4.8						
D18A	**Linhart Farms,**	**4.74**	**318**	⇑P	**Pn**	**18 14 18.8**	**+0.1**
	baz=4.8						
D18A				⇓S	**Sn**	**18 15 15.3**	**+0.9**
	baz=4.8						
DGMT	**Dagmar**	**4.76**	**8**	*e*Pn	**Pn**	**18 14 20.3**	**+1.4**
SMCO	**Snowmass**	**4.78**	**197**	Pn	**Pn**	**18 14 20.7**	**+1.5**
E17A	**Martinsdale**	**4.86**	**306**	⇑P	**Pn**	**18 14 20.7**	**+0.4**
	baz=4.9						
E17A				⇑Sb	**Sb**	**18 15 35.6**	**+4.7**
	baz=4.9						
L16A	**Fish Haven**	**4.93**	**251**	⇓P	**Pn**	**18 14 21.4**	**+0.1**
	baz=5.0,SNR=9.5						
L16A				⇑Sb	**Sb**	**18 15 37.9**	**+4.8**
	baz=5.0						
G16A	**Moss Hill, Enn**	**4.98**	**289**	⇓P	**Pn**	**18 14 21.6**	**-0.4**
	baz=5.0						
BOZ	**Bozeman (W)**	**4.99**	**294**	*e*Pn	**Pn**	**18 14 20.2**	**-1.9**
BOZ	**Bozeman (W)**	**4.99**	**294**	⇓P	**Pn**	**18 14 22.1**	**0.0**
	baz=5.0						
P19A	**Cripple Cowboy**	**5.02**	**216**	⇑P	**Pn**	**18 14 22.8**	**+0.2**
	baz=5.1						
O18A	**Roosevelt**	**5.03**	**228**	⇓P	**Pn**	**18 14 22.9**	**+0.3**
	baz=5.1						
D17A	**Six Diamond Ra**	**5.16**	**313**	⇑P	**Pn**	**18 14 24.2**	**-0.4**
	baz=5.2						
HWUT	**Hardware Ranch**	**5.19**	**248**	*e*Pn	**Pn**	**18 14 22.2**	**-2.7**
	24nm,0.4s						
EGMT	**Eagleton**	**5.34**	**325**	*e*P	**Pn**	**18 14 25.9**	**-1.0**
	26nm,0.6s						
EGMT	**Eagleton**	**5.34**	**325**	⇓P	**Pn**	**18 14 26.3**	**-0.6**
	baz=5.4						
Q20A	**Ridgley Place,**	**5.35**	**207**	⇓Sb	**Sb**	**18 15 49.7**	**+4.6**
	baz=5.4						
E16A	**East Helena**	**5.38**	**303**	⇓P	**Pn**	**18 14 27.3**	**-0.3**
	baz=5.4						
N16A	**Rees Ranch, Co**	**5.47**	**241**	⇑P	**Pn**	**18 14 29.0**	**+0.3**
	baz=5.5						
O17A	**Robinson Place**	**5.48**	**231**	⇑P	**Pn**	**18 14 28.9**	**+0.1**
	baz=5.5,SNR=18						
C17A	**Wharram Farm,**	**5.52**	**317**	⇓P	**Pn**	**18 14 29.0**	**-0.4**
	baz=5.6						
C17A				⇓Sb	**Sb**	**18 15 55.1**	**+5.2**
	baz=5.6						
DLMT	**Dillon**	**5.55**	**289**	*e*Pn	**Pn**	**18 14 29.4**	**-0.5**
	4.1nm,0.4s						
HRY	**Holter Researc**	**5.56**	**304**	*e*Pn	**Pn**	**18 14 29.8**	**-0.2**
	17nm,0.5s						
D16A	**Dana Ranch, Ca**	**5.57**	**308**	⇑P	**Pn**	**18 14 29.7**	**-0.3**
	baz=5.6						
D16A				⇑Sb	**Sb**	**18 15 56.2**	**+4.9**
	baz=5.6						
LRM	**Limekiln Ridge**	**5.59**	**294**	*e*Pn	**Pn**	**18 14 30.6**	**+0.2**
	19nm,0.4s						
P18A	**Preston Nutter**	**5.62**	**224**	⇑P	**Pn**	**18 14 30.5**	**-0.3**
	baz=5.7,SNR=23						
MCMT	**McKenzie Canyo**	**5.63**	**284**	Pn	**Pn**	**18 14 31.3**	**+0.4**
	2.3nm,0.3s						
DAU	**Daniels Canyon**	**5.64**	**236**	*e*Pn	**Pn**	**18 14 30.6**	**-0.5**
	14nm,0.4s						
JLU	**Jordanelle**	**5.64**	**238**	*e*P	**Pn**	**18 14 30.5**	**-0.6**
	8.0nm,0.6s						
M15A	**Larsen Ranch,**	**5.85**	**249**	P	**Pn**	**18 14 34.6**	**+0.7**
	baz=5.9,SNR=8.2						
HVU	**Hansel Valley**	**5.95**	**253**	*e*Pn	**Pn**	**18 14 34.9**	**-0.4**
	7.8nm,0.6s						
Q18A	**Rafter H Ranch**	**5.97**	**220**	⇑P	**Pn**	**18 14 35.1**	**-0.6**
	baz=6.0						
P17A	**Butcher Ranch,**	**5.99**	**226**	⇓P	**Pn**	**18 14 36.0**	**+0.2**
	baz=6.0						
SDCO	**Great Sand Dun**	**6.01**	**183**	*e*Pn	**Pn**	**18 14 36.3**	**+0.1**
	3.1nm,0.6s						
PV04	**Paradox Valley**	**6.06**	**209**	*e*Pn	**Pn**	**18 14 36.0**	**-0.9**
C16A	**Fuhringer Ranc**	**6.13**	**314**	⇑P	**Pn**	**18 14 36.8**	**-1.0**
	baz=6.2						
D15A	**Lincoln**	**6.14**	**305**	⇑P	**Pn**	**18 14 37.7**	**-0.1**
	baz=6.2						
SRU	**San Rafael**	**6.15**	**223**	*e*Pn	**Pn**	**18 14 36.9**	**-1.2**
	17nm,0.4s						
SRU	**San Rafael**	**6.15**	**223**	⇑P	**Pn**	**18 14 37.4**	**-0.7**
	baz=6.2,SNR=23						
N15A	**Stansbury Isla**	**6.17**	**245**	⇑P	**Pn**	**18 14 38.6**	**+0.3**
	baz=6.2						
ECSD	**EROS Data Cent**	**6.18**	**87**	*e*Pn	**Pn**	**18 14 39.6**	**+1.1**
	6.8nm,0.4s						
PV01	**Paradox Valley**	**6.19**	**206**	*e*Pn	**Pn**	**18 14 39.1**	**+0.5**
	704nm,0.7s						
TMUT	**Trail Mountain**	**6.37**	**228**	*e*Pn	**Pn**	**18 14 40.3**	**-0.7**
	11nm,0.4s						
NLU	**North Lily Min**	**6.42**	**236**	*e*Pn	**Pn**	**18 14 39.8**	**-1.9**
	2.6nm,0.4s						
M14A	**Sheep Mountain**	**6.45**	**252**	⇓P	**Pn**	**18 14 41.9**	**-0.3**
	baz=6.5						
R18A	**Canyonlands Na**	**6.45**	**215**	⇓P	**Pn**	**18 14 41.6**	**-0.6**
	baz=6.5,SNR=35						
BGU	**Big Grassy Mou**	**6.49**	**247**	*e*Pn	**Pn**	**18 14 43.2**	**+0.5**
	7.2nm,0.8s						
CHMT	**Chamberlain Mo**	**6.52**	**302**	*e*Pn	**Pn**	**18 14 42.5**	**-0.6**
	3.0nm,0.4s						
Q16A	**Castle Valley**	**6.63**	**225**	⇓P	**Pn**	**18 14 44.3**	**-0.3**
	baz=6.7						
DUG	**Dugway**	**6.73**	**241**	⇓P	**Pn**	**18 14 45.5**	**-0.5**
	baz=6.8						
D14A	**Greenough**	**6.75**	**302**	⇓P	**Pn**	**18 14 45.7**	**-0.6**
	baz=6.8						
R17A	**Hanksville Air**	**6.79**	**220**	⇓P	**Pn**	**18 14 46.0**	**-0.8**
	baz=6.8,SNR=12						
B15A	**Bradely Ranch,**	**6.88**	**314**	⇓P	**Pn**	**18 14 47.1**	**-0.9**
	baz=6.9						
MVCO	**Mesa Verde**	**7.02**	**202**	*e*Pn	**Pn**	**18 14 51.8**	**+1.7**
	2.6nm,0.4s						
S18A	**Hurst Farm, Bl**	**7.09**	**213**	⇑P	**Pn**	**18 14 50.6**	**-0.4**
	baz=7.1,SNR=15						
P14A	**Drum Mountains**	**7.24**	**238**	⇓P	**Pn**	**18 14 52.9**	**-0.1**
	baz=7.3						
R16A	**Teasdale**	**7.27**	**223**	⇑P	**Pn**	**18 14 53.1**	**-0.3**
	baz=7.3						
D13A	**Huson**	**7.35**	**300**	⇑P	**Pn**	**18 14 53.9**	**-0.6**
	baz=7.4						
MSU	**Marysvale**	**7.45**	**228**	*e*Pn	**Pn**	**18 14 55.4**	**-0.6**
	7.0nm,0.7s						
S17A	**Black Ridge (B**	**7.47**	**217**	⇑P	**Pn**	**18 14 55.7**	**-0.5**
	baz=7.5,SNR=19						
M12A	**Wells**	**7.58**	**255**	⇓P	**Pn**	**18 14 57.1**	**-0.5**
	baz=7.6						
Q14A	**Sevier Lake (B**	**7.75**	**235**	⇑P	**Pn**	**18 14 59.8**	**-0.2**
	baz=7.8						
N12A	**Clover Valley,**	**7.88**	**252**	*e*Pn	**Pn**	**18 15 01.2**	**-0.6**
	3.5nm,0.6s						
N12A	**Clover Valley,**	**7.88**	**252**	⇑P	**Pn**	**18 15 01.7**	**-0.1**
	baz=7.9						
AGMN	**Agassiz Nation**	**7.90**	**52**	*e*Pg	**Pg**	**18 15 31.3**	**-5.9**
	11nm,0.4s						
P13A	**Bates Ranch, G**	**7.91**	**240**	⇑P	**Pn**	**18 15 02.4**	**+0.1**
	baz=8.0						
T17A	**Navajo Res., N**	**8.01**	**214**	⇓P	**Pn**	**18 15 03.4**	**-0.3**
	baz=8.1,SNR=8.9						
ARUT	**Antelope Range**	**8.66**	**229**	*e*Pn	**Pn**	**18 15 11.5**	**-1.0**
	5.4nm,0.6s						
ULM	**Lac du Bonnet**	**9.07**	**41**	Pn	**Pn**	**18 15 17.4**	**-0.7**
ULM				Pg	**Pg**	**18 15 51.3**	**-8.3**
ULM				Lg		18 17 51.5	
ULM	**Lac du Bonnet**	**9.07**	**41**	Pn	**Pn**	**18 15 17.4**	**-0.7**
	0.6nm,0.3s,baz=226,slow=9.7,SNR=2.7						
ULM				Pg	**Pg**	**18 15 51.3**	**-8.3**
	1.0nm,0.3s,baz=221,slow=16,SNR=3.3						
ULM				Lg		18 17 51.5	
	0.6nm,0.3s,baz=142,slow=19,SNR=2.6						
WUAZ	**Wupatki**	**9.53**	**212**	Pn	**Pn**	**18 15 23.7**	**-0.7**
	7.0nm,0.6s						
TXAR	**Lajitas Array**	**14.45**	**175**	Pn	**Pn**	**18 16 39.2**	**+7.4**
	0.0nm,0.3s,baz=5.5,slow=12,SNR=3.2						
TXAR				Pg	Pn	18 17 36.8	+65
	0.1nm,0.3s,baz=1.3,slow=15,SNR=5.7						
TXAR				Lg		18 20 43.8	
	0.1nm,0.3s,baz=347,slow=20,SNR=3.8						
ARCES	**ARCESS Array B**	**61.37**	**18**	P	**P**	**18 23 22.8**	**-0.3**
	2.7nm,1.0s,mb4.3,baz=330,slow=7.0,SNR=6.6						
ZALV	**Zalesovo Beam**	**82.30**	**354**	P	**P**	**18 25 28.0**	**-1.1**
	0.4nm,0.5s,mb3.8,baz=354,slow=7.4,SNR=4.0						
SONM	**Songino Array**	**84.65**	**339**	P	**P**	**18 25 41.2**	**-0.1**
	0.4nm,0.6s,mb3.8,baz=10.0,slow=2.8,SNR=2.8						
MKAR	**Makanchi Array**	**89.59**	**355**	P	**P**	**18 26 05.2**	**-0.1**
	0.5nm,0.7s,mb3.9,baz=356,slow=5.0,SNR=5.7						

IDC 30 18:16:00.6±12.0, 11°.10N×91°.78E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.1/23, mbtmp3.2/3, Error ellipse: s-maj=659.4km s-min=27.7km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.47**	**349**	P	P	18 23 07.3	0.0
	0.1nm,0.5s,baz=175,slow=9.0,SNR=2.7						
WRA	**Warramunga Arr**	**52.03**	**126**	P	P	18 25 12.3	+0.1
	0.2nm,0.3s,baz=301,slow=10.0,SNR=8.7						
ASAR	**Alice Springs**	**53.76**	**130**	P	P	18 25 24.9	-0.1
	0.3nm,0.9s,baz=307,slow=7.9,SNR=5.4						

RSPR 30 18:16:54.8, 17°.85N×65°.71W, h11km, MD2.9/3, MD2.9/3, 16C-6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTP	**Monte Pirata**	**0.29**	**31**	⇓*i*P	Pg	18 17 00.5	-0.1
MTP	**Monte Pirata**	**0.29**	**31**	*e*S	Sg	18 17 05.0	+0.4
MTP	**Monte Pirata**	**0.29**	**31**	⇑*e*P	Pg	18 17 00.6	0.0
MTP	**Monte Pirata**	**0.29**	**31**	⇓*i*P	Pg	18 17 00.5	-0.1
MTP	**Monte Pirata**	**0.29**	**31**	⇑*e*P	Pg	18 17 00.6	0.0
MTP				*e*S	Sg	18 17 05.1	+0.5
MTP				*e*S	Sg	18 17 05.5	+0.9
HUMP	**Col San Antoni**	**0.32**	**336**	⇑*i*P	Pg	18 17 01.2	0.0
HUMP	**Col San Antoni**	**0.32**	**336**	*e*S	Sg	18 17 06.3	+0.8
HUMP	**Col San Antoni**	**0.32**	**336**	⇑*e*P	Pg	18 17 01.2	-0.1
HUMP	**Col San Antoni**	**0.32**	**336**	⇑*e*P	Pg	18 17 01.2	-0.1
HUMP	**Col San Antoni**	**0.32**	**336**	⇑*i*P	Pg	18 17 01.2	0.0
HUMP				*e*S	Sg	18 17 06.3	+0.8
HUMP				*e*S	Sg	18 17 06.4	+0.8
CBYP	**Canovanas**	**0.44**	**342**	⇓*e*P	Pg	18 17 03.1	-0.4
CBYP	**Canovanas**	**0.44**	**342**	⇑*e*P	Pg	18 17 03.2	-0.3
CBYP				*e*S	Sg	18 17 10.3	+0.9
CBYP	**Canovanas**	**0.44**	**342**	⇓*e*P	Pg	18 17 03.1	-0.4
CBYP	**Canovanas**	**0.44**	**342**	⇑*e*P	Pg	18 17 03.2	-0.3
CBYP				*e*S	Sg	18 17 09.9	+0.5
CBYP				*e*S	Sg	18 17 10.3	+0.9
SJG	**San Juan**	**0.49**	**302**	⇑*e*P	Pg	18 17 03.9	-0.6
SJG	**San Juan**	**0.49**	**302**	⇑*e*P	Pg	18 17 03.7	-0.8
SJG	**San Juan**	**0.49**	**302**	⇑*e*P	Pg	18 17 03.8	-0.7
SJG				*e*S	Sg	18 17 11.3	+0.4
SJG	**San Juan**	**0.49**	**302**	⇓*e*P	Pg	18 17 03.8	-0.6
SJG				*e*S	Sg	18 17 11.1	+0.1
SJG	**San Juan**	**0.49**	**302**	⇑*e*P	Pg	18 17 03.7	-0.8
SJG	**San Juan**	**0.49**	**302**	⇑*e*P	Pg	18 17 03.8	-0.7
SJG	**San Juan**	**0.49**	**302**	⇓*e*P	Pg	18 17 03.8	-0.6
SJG	**San Juan**	**0.49**	**302**	⇑*e*P	Pg	18 17 03.9	-0.6
SJG				*e*S	Sg	18 17 11.1	+0.1
SJG				*e*S	Sg	18 17 11.3	+0.4
SJG				*e*S	Sg	18 17 11.5	+0.5
STVI	**Saint Thomas**	**0.88**	**55**	⇑*i*P	Pg	18 17 10.0	-1.7
STVI	**Saint Thomas**	**0.88**	**55**	*e*S	Sg	18 17 21.5	-1.6
STVI	**Saint Thomas**	**0.88**	**55**	⇑*e*P	Pg	18 17 10.0	-1.7
STVI	**Saint Thomas**	**0.88**	**55**	⇑*i*P	Pg	18 17 10.1	-1.6
STVI	**Saint Thomas**	**0.88**	**55**	⇑*e*P	Pg	18 17 10.2	-1.5
STVI				*e*S	Sg	18 17 21.5	-1.6
STVI				*e*S	Sg	18 17 21.9	-1.2

MAN 30 18:25:33, 7°.37N×124°.53E, h33km, mb4.2, ML3.0, MS2.8, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.32**	**243**	*e*P	Pb	18 25 43.7	+2.7
CTBH				*i* S	Sb	18 25 49.7	+3.3
BUKP	**Musuan**	**0.73**	**46**	*e*P	Pn	18 25 48.4	+1.4
BUKP				*e*S	Sn	18 25 55.3	-1.7
CGP	**Cagayan de Oro**	**1.09**	**8**	⇓*e*P	Pn	18 25 52.7	+0.7
CGP				*e*S	Sn	18 26 07.2	+1.2
PAGZ	**Pagadian**	**1.24**	**293**	*e*P	Pn	18 25 56.0	+2.0
PAGZ				*e*S	Sn	18 26 10.0	+0.4

IDC 30 18:25:50.8±8.6, 10°.20N×90°.71E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.1/23, mbtmp3.2/3, Error ellipse: s-maj=420.4km s-min=30.8km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**37.17**	**350**	P	P	18 33 03.3	-0.2
	0.3nm,0.6s,baz=165,slow=7.4,SNR=4.5						
WRA	**Warramunga Arr**	**52.36**	**125**	P	P	18 35 04.8	-0.2
	0.2nm,0.6s,baz=302,slow=9.8,SNR=4.6						
ASAR	**Alice Springs**	**54.00**	**129**	P	P	18 35 17.4	+0.4
	0.8nm,1.2s,baz=306,slow=7.9,SNR=3.2						

*ISCJB **30** 18:26:22.4±0.3, 58°.74N±0°.03×137°.63W±0°.05, h10km, mb3.8/12, Error ellipse: s-maj=4.9km s-min=3.5km az=25.8*

*IDC **30** 18:26:23.2±0.8, 58°.89N×137°.46W, h0km, mb3.8/10, mb1 3.9/15, mb1mx3.8/30, mbtmp3.8/15, ML3.4/4, MS3.4/3, Ms1 3.4/3, ms1mx2.8/39, Error ellipse: s-maj=19.0km s-min=11.7km az=29.0*

*NEIC **30** 18:26:24.2, 58°.71N×137°.43W, h1km, mb3.7/7, ML4.1(PGC), ML4.0(AEIC), ML4.0(PMR), After PGC.*

*PGC **30** 18:26:24.8±0.1, 58°.73N×137°.43W, h1km, Mb3.7(NEIC), 133km west of Haines, Ak Southeastern Alaska*

ISC 30 18:26:24.2±0.3, 58°.77N±0°.03×137°.46W±0°.05, h10km, n63, σ1°.21/74, mb3.8/12, 1C-5D, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLBC	**Pleasant Camp**	**0.89**	**39**	⇑P	**Pg**	**18 26 40.9**	**-0.5**
PLBC				S	**Sg**	**18 26 53.3**	**+0.3**
PLBC	**Pleasant Camp**	**0.89**	**39**	⇑P	**Pg**	**18 26 40.9**	**-0.5**
PLBC				⇑S	**Sg**	**18 26 53.3**	**+0.3**
SKAG	**Skagway**	**1.30**	**57**	P	**Pn**	**18 26 47.8**	**-0.5**
PNL	**Peninsula**	**1.34**	**313**	P	**Pn**	**18 26 47.4**	**-1.6**
PNL				S	**Sb**	**18 27 06.5**	**-0.2**
YKU2	**Yakutat**	**1.36**	**304**	*e*P	**Pn**	**18 26 49.2**	**0.0**
BESE	**Bessie Mountai**	**1.38**	**97**	P	**Pn**	**18 26 48.6**	**-0.8**
BESE				S	**Sb**	**18 27 06.8**	**-0.7**
SIT	**Sitka**	**2.06**	**145**	*e*P	**Pn**	**18 26 56.9**	**-1.9**
HYT	**Haines Junctio**	**2.06**	**359**	⇓Pn	**Pn**	**18 26 59.6**	**+0.7**
HYT				Sg	**Sg**	**18 27 29.1**	**-1.4**
HYT	**Haines Junctio**	**2.06**	**359**	⇓Pn	**Pn**	**18 26 59.6**	**+0.7**
HYT				⇑Sg	**Sg**	**18 27 29.1**	**-1.4**
WHY	**Whitehorse**	**2.31**	**33**	P	**Pn**	**18 27 02.5**	**+0.3**
WHY				S	**Sn**	**18 27 33.0**	**+2.5**
WHY	**Whitehorse**	**2.31**	**33**	⇓Pn	**Pn**	**18 27 02.8**	**+0.7**
WHY				⇓Pg	**Pg**	**18 27 05.8**	**-2.6**
WHY				⇑Sg	**Sg**	**18 27 36.8**	**-1.4**
DLBC	**Dease Lake**	**3.91**	**92**	Pn	**Pn**	**18 27 24.8**	**+0.6**
	2.3nm,0.3s,baz=296,slow=9.1,SNR=21						
DLBC				Pg	**Pg**	**18 27 34.1**	**-4.8**
	11nm,0.3s,baz=280,slow=14,SNR=50						
DLBC				Lg		18 28 24.5	
	50nm,0.3s,baz=194,slow=22,SNR=10						
DLBC				LR	LR	18 29 08.2	
	comp=Z,322nm,18.7s,baz=240,slow=42						
DLBC	**Dease Lake**	**3.91**	**92**	P

0.4nm,0.3s,mb3.8,baz=347,slow=5.6,SNR=3.1
CMAR Chiang Mai Arr 90.29 308 P P 18 39 25.8 +0.6
1.4nm,0.9s,mb4.3,baz=8.9,slow=5.5,SNR=8.4

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*ISCJB **30** 18:32:52.6±0.3,59°.88N±0°.04×152°.87W±0°.08, h117km±4km, mb4.0/8, Error ellipse: s-maj=6.9km s-min=5.0km az=37.7*
*IDC **30** 18:32:53.2±2.7,59°.84N×152°.91W, h103km±40km, mb3.8/7, mb1 3.8/12, mb1mx3.5/30, mbtmp3.7/12, Error ellipse: s-maj=39.2km s-min=15.7km az=141.0*
*NEIC **30** 18:32:54.9,59°.86N×152°.82W, h109km, MG3.7(AEIC), After AEIC.*
ISC 30 18:32:53.9±0.3,59°.88N±0°.04×152°.87W±0°.08, h109km±4km,n58,σ0$72/61,mb4.0/8,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUL	**Augustine Lava**	**0.57**	**210**	P	**Pn**	**18 33 11.8**	**+0.6**
AUL				S	**Sn**	**18 33 25.1**	**+1.0**
RSO	**Redoubt South**	**0.59**	**5**	*i* Pg	**Pn**	**18 33 11.9**	**+0.6**
SLKM	**Skilak Lake**	**1.47**	**63**	P	**Pn**	**18 33 20.2**	**0.0**
SEW	**Seward**	**1.73**	**81**	P	**Pn**	**18 33 23.3**	**-0.1**
SVW2	**Sparrevohn**	**1.82**	**314**	P	**Pn**	**18 33 24.6**	**+0.1**
FIB	**Fire Island**	**1.86**	**45**	P	**Pn**	**18 33 25.9**	**+1.0**
RC01	**Rabbit Creek A**	**1.97**	**51**	P	**Pn**	**18 33 26.3**	**-0.1**
KDAK	**Kodiak Island**	**2.10**	**176**	P	**Pn**	**18 33 27.4**	**-0.7**
	29nm,0.3s,baz=32,slow=8.1,SNR=92						
KDAK				S	**Sn**	**18 33 52.8**	**-1.5**
	47nm,0.3s,baz=27,slow=9.3,SNR=30						
KDAK	**Kodiak Island**	**2.10**	**176**	P	**Pn**	**18 33 27.4**	**-0.7**
KDAK				S	**Sn**	**18 33 53.2**	**-1.1**
SKT	**Skwentna**	**2.21**	**17**	P	**Pn**	**18 33 29.6**	**+0.2**
PMR	**Palmer**	**2.52**	**45**	*e*P	**Pn**	**18 33 32.8**	**-0.6**
KNK	**Knik Glacier**	**2.66**	**53**	P	**Pn**	**18 33 34.7**	**-0.6**
OHAK	**Old Harbor**	**2.67**	**185**	P	**Pn**	**18 33 34.6**	**-0.9**
GHO	**Glory Hole Cre**	**2.71**	**44**	P	**Pn**	**18 33 35.3**	**-0.6**
SML	**Sawmill**	**2.95**	**47**	P	**Pn**	**18 33 38.4**	**-0.6**
PPLA	**Purkeypile**	**3.05**	**6**	P	**Pn**	**18 33 41.5**	**+1.1**
MID	**Middleton Isla**	**3.34**	**95**	P	**Pn**	**18 33 44.5**	**+0.1**
TT01	**Tatalina**	**3.40**	**335**	P	**Pn**	**18 33 45.0**	**0.0**
TTA	**Tatalina**	**3.42**	**335**	P	**Pn**	**18 33 45.2**	**-0.1**
EYAK	**Cordova Ski Ar**	**3.62**	**76**	P	**Pn**	**18 33 48.3**	**+0.4**
DIV	**Divide**	**3.73**	**67**	P	**Pn**	**18 33 50.2**	**+0.8**
TRF	**Thorofare Moun**	**3.79**	**18**	P	**Pn**	**18 33 50.1**	**-0.2**
RND	**Reindeer**	**4.03**	**27**	P	**Pn**	**18 33 53.2**	**-0.2**
CHUM	**Lake Minchumin**	**4.03**	**3**	P	**Pn**	**18 33 53.6**	**+0.1**
BMRM	**Bremner River**	**4.24**	**71**	P	**Pn**	**18 33 56.5**	**+0.2**
MCK	**McKinley**	**4.30**	**24**	P	**Pn**	**18 33 57.3**	**+0.3**
BPAW	**Bear Paw Mtn.**	**4.33**	**11**	P	**Pn**	**18 33 56.8**	**-0.7**
CHGN	**Chignik**	**4.64**	**222**	*e*Pn	**Pn**	**18 34 01.4**	**-0.3**
PAX	**Paxson**	**4.72**	**46**	P	**Pn**	**18 34 02.9**	**+0.2**
COLA	**College**	**5.53**	**23**	P	**Pn**	**18 34 13.2**	**-0.4**
DOT	**Dot Lake**	**5.64**	**44**	P	**Pn**	**18 34 14.9**	**-0.3**
SDPT	**Sand Point**	**6.11**	**225**	P	**Pn**	**18 34 22.2**	**+0.7**
IM3	**Indian Mountai**	**6.14**	**357**	P	**Pn**	**18 34 21.8**	**-0.2**
BCA3	**Beaver Creek A**	**6.20**	**54**	P	**Pn**	**18 34 22.4**	**-0.4**
PNL	**Peninsula**	**6.81**	**86**	P	**Pn**	**18 34 30.9**	**-0.1**
EGAK	**Eagle**	**7.33**	**43**	P	**Pn**	**18 34 37.4**	**-0.8**
COLD	**Coldfoot**	**7.47**	**8**	P	**Pn**	**18 34 39.5**	**-0.5**
BM3	**Burnt Mountain**	**8.41**	**22**	P	**Pn**	**18 34 52.0**	**-0.6**
SKAG	**Skagway**	**8.89**	**85**	*e*P	**Pn**	**18 35 01.1**	**+1.9**
WHY	**Whitehorse**	**8.97**	**77**	P	**Pn**	**18 34 59.9**	**-0.5**
DLBC	**Dease Lake**	**11.80**	**87**	P	**Pn**	**18 35 40.0**	**+1.6**
	2.4nm,0.3s,baz=282,slow=15,SNR=17						
DLBC	**Dease Lake**	**11.80**	**87**	*e*Pn	**Pn**	**18 35 39.9**	**+1.6**
INK	**Inuvik**	**11.90**	**37**	P	**Pn**	**18 35 38.7**	**-0.9**
	0.2nm,0.3s,baz=236,slow=19,SNR=5.1						
INK	**Inuvik**	**11.90**	**37**	P	**Pn**	**18 35 38.7**	**-0.9**
YKA	**Yellowknife Ar**	**18.44**	**65**	P	**P**	**18 37 01.4**	**+0.9**
	0.4nm,0.3s,baz=277,slow=9.8,SNR=10						
YKA	**Yellowknife Ar**	**18.44**	**65**	P	**P**	**18 37 01.4**	**+0.9**
FX1	**Attu Island--F**	**19.89**	**264**	P	**P**	**18 37 14.8**	**-1.4**
	1.0nm,0.3s,baz=79,slow=5.2,SNR=5.0						
RES	**Resolute Bay**	**25.38**	**32**	P	**P**	**18 38 09.5**	**-0.8**
	0.8nm,0.3s,mb3.6,baz=307,slow=8.6,SNR=4.1						
KSRS	**Korea Array**	**53.27**	**283**	P	**P**	**18 42 01.8**	**+0.8**
	2.3nm,0.8s,mb4.2,baz=35,slow=6.8,SNR=9.3						
SONM	**Songino Array**	**54.92**	**306**	P	**P**	**18 42 14.1**	**+1.3**
	2.6nm,0.9s,mb4.3,baz=44,slow=6.4,SNR=16						
ZALV	**Zalesovo Beam**	**57.52**	**324**	P	**P**	**18 42 31.4**	**+0.2**
	3.4nm,0.7s,mb4.5,baz=31,slow=8.1,SNR=14						
BVAR	**Borovoye Array**	**62.21**	**332**	P	**P**	**18 43 03.1**	**-0.2**
	1.9nm,0.7s,mb4.3,baz=53,slow=7.6,SNR=14						
GTA	**Gaotai**	**64.55**	**305**	*e*P	**P**	**18 43 19.5**	**+0.6**
GTA				pP	pP	18 43 24.0	-22
GTA				sP	sP	18 43 26.8	-31
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.0						
MKAR	**Makanchi Array**	**64.57**	**321**	P	**P**	**18 43 18.5**	**-0.4**
	comp=Z,0.9nm,0.6s,mb3.8,baz=41,slow=6.9,SNR=12						
MKAR	**Makanchi Array**	**64.57**	**321**	P	**P**	**18 43 18.5**	**-0.4**
WMQ	**Urumqi**	**65.40**	**316**	*e*P	**P**	**18 43 26.0**	**+1.7**
CD2	**Chengdu**	**70.06**	**297**	*e*P	**P**	**18 43 53.3**	**-0.4**
CD2				pP	pP	18 44 18.8	-2.2
CD2				sP	sP	18 44 31.3	-1.5
CD2				PP	PP	18 46 31.0	+1.4
CD2				S	S	18 52 53.5	-2.0
CD2				sS	sS	18 53 38.3	-4.0
CD2				SS	SS	18 57 25.3	-0.9
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CD2				pmax	pmax		
	comp=Z,40nm,4.2s						
CD2				LR	LR		
	comp=E,130nm,22.8s						
CD2				LR	LR		
	comp=Z,120nm,14.4s						
CMAR	**Chiang Mai Arr**	**82.98**	**295**	P	**P**	**18 45 05.8**	**-0.9**
	comp=Z,0.5nm,0.7s,mb3.5,baz=12,slow=5.0,SNR=4.3						

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*IDC **30** 18:48:26.1±2.0, 14°.20N×93°.20W, h0km, mb3.9/5, mb1 4.2/8, mb1mx3.9/24, mbtmp3.9/8, ML3.8/3, MS3.4/7, Ms1 3.5/7, ms1mx3.2/25, Error ellipse: s-maj=39.4km s-min=17.9km az=6.0*
*MEX **30** 18:48:27.5±0.6, 14°.00N×93°.42W, h17km±49km, MD4.6*
*NEIC **30** 18:48:27.3±1.1, 14°.20N×93°.04W, h10km, mb4.2/10, Error ellipse: s-maj=18.3km s-min=16.3km az=198.0*
*ISCJB **30** 18:48:29.2±0.7, 14°.17N±0°.06×93°.31W±0°.04, h33km, mb4.0/12, MS3.4/6, Error ellipse: s-maj=9.3km s-min=5.2km az=23.7*
*CASC **30** 18:48:50.5±1.8, 14°.45N×91°.73W, h27km±11km, MD4.0*
ISC 30 18:48:31.9±0.7,14°.25N±0°.06×93°.18W±0°.05,h35km,n42, σ1$14/40,mb4.0/12,MS3.4/6,1C,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.10**	**53**	*e*P	**Pn**	**18 48 49.4**	**-1.5**
THIG				*e*S	**Sn**	**18 49 06.4**	**+1.5**
PCIG		**1.45**	**359**	*e*P	**Pn**	**18 48 53.2**	**-2.5**
PCIG				*e*S	**Sn**	**18 49 12.7**	**-0.7**
JAT	**Jato**	**1.50**	**87⇑**	*e*P	**Pn**	**18 48 56.4**	**+0.1**
TP2	**Tecpan 2**	**2.16**	**75**	*e*P	**Pn**	**18 49 06.0**	**+0.6**
FUG	**Fuego 3**	**2.28**	**85**	*e*P	**Pn**	**18 49 06.0**	**-1.0**
TGIG		**2.52**	**1**	*e*P	**Pn**	**18 49 09.5**	**-0.9**
TGIG				*e*S	**Sn**	**18 49 41.4**	**+1.6**
IXG	**Ixpaco**	**2.65**	**91**	*e*P	**Pn**	**18 49 11.7**	**-0.3**
APG	**El Apazote**	**2.74**	**74**	Pn	**Pn**	**18 49 13.4**	**+0.1**
	16nm,0.3s,baz=233,slow=5.8,SNR=106						
APG				Lg		18 49 53.6	
	38nm,0.3s,baz=282,slow=16,SNR=3.7						
NBG	**Las Nubes**	**2.77**	**83**	*e*P	**Pn**	**18 49 15.0**	**+1.2**
HUIG	**Huatulco**	**3.21**	**299**	*e*P	**Pn**	**18 49 13.3**	**-6.5**
HUIG				*e*S	**Sn**	**18 49 50.3**	**-6.5**
CMIG	**Matias Romero**	**3.27**	**330**	Pn	**Pn**	**18 49 18.9**	**-1.8**
	9.4nm,0.3s,baz=140,slow=11,SNR=57						
CMIG				Sn	**Sn**	**18 49 59.4**	**+1.0**
	20nm,0.3s,baz=147,slow=5.9,SNR=5.3						
MRL	**Marmol**	**3.48**	**76**	*e*P	**Pn**	**18 49 24.2**	**+0.7**
VHO	**Vista Hermosa**	**4.43**	**310**	*e*P	**Pn**	**18 49 31.6**	**-5.0**
VHO				*e*S	**Sn**	**18 50 22.4**	**-4.6**
TEIG	**Tepich**	**7.57**	**38**	*e*Pn	**Pn**	**18 50 17.8**	**-2.0**
	62nm,0.4s						
HKT	**Hockley**	**15.82**	**352**	*e*P	**Pn**	**18 52 09.1**	**-2.9**
	25nm,1.6s						
TXAR	**Lajitas Array**	**17.88**	**329**	P	**Pn**	**18 52 37.1**	**-0.7**
	0.1nm,0.3s,baz=157,slow=14,SNR=14						
TXAR				LR	LR	19 00 02.9	
	comp=Z,64nm,18.4s,baz=180,slow=39						
MIAR	**Mount Ida**	**20.21**	**359**	*e*P	**P**	**18 53 06.6**	**+2.7**
	14nm,1.0s						
GDL2	**Guadalupe Moun**	**20.59**	**332**	*e*P	**P**	**18 53 08.4**	**+0.6**
MNTX	**Cornudas Mount**	**20.66**	**329**	*e*P	**P**	**18 53 08.5**	**-0.1**
	3.8nm,0.9s						
WMOK	**Wichita Mounta**	**21.02**	**347**	*e*P	**P**	**18 53 13.0**	**+0.5**
	1.8nm,0.6s,mb3.6						
AMTX	**Amarillo**	**21.93**	**341**	*e*P	**P**	**18 53 21.4**	**-0.9**
	17nm,0.7s,mb4.6						
TKL	**Tuckaleechee C**	**22.94**	**20**	LR	LR	19 04 10.3	
	comp=Z,111nm,19.5s,MS3.3,baz=237,slow=41						
BNM	**Barren Site**	**23.26**	**331**	*e*P	**P**	**18 53 37.8**	**+1.4**
	4.9nm,1.0s,mb3.9						
LAZ	**Ladron**	**23.71**	**330**	*e*P	**P**	**18 53 42.3**	**+1.7**
TUC	**Tucson**	**24.12**	**321**	*e*P	**P**	**18 53 45.5**	**+1.1**
	5.4nm,1.1s,mb3.9						
ATAH	**Atahualpa**	**25.82**	**144**	LR	LR	19 01 58.4	
	comp=Z,57nm,20.6s,MS3.1,baz=236,slow=32						
SDCO	**Great Sand Dun**	**25.84**	**337**	*e*P	**P**	**18 54 00.4**	**+0.3**
	6.9nm,1.4s,mb4.0						
PV01	**Paradox Valley**	**27.43**	**333**	P	**P**	**18 54 15.8**	**+1.5**
PDAR	**Pinedale Array**	**31.73**	**337**	P	**P**	**18 54 52.5**	**0.0**
	0.4nm,0.8s,mb3.3,baz=132,slow=8.8,SNR=4.2						
ELK	**Elko**	**32.67**	**328**	P	**P**	**18 55 01.3**	**+0.5**
	0.4nm,0.3s,mb3.8,baz=27,slow=22,SNR=3.7						
ELK	**Elko**	**32.67**	**328**	P	**P**	**18 55 01.3**	**+0.5**
REDW	**Red Top Meadow**	**32.74**	**336**	*e*P	**P**	**18 55 00.8**	**-0.5**
	4.8nm,1.0s,mb4.4						
NVAR	**Mina Array Bea**	**32.77**	**322**	P	**P**	**18 55 01.8**	**+0.1**
	1.5nm,0.9s,mb3.9,baz=152,slow=10,SNR=7.9						
ULM	**Lac du Bonnet**	**35.97**	**357**	LR	LR	19 14 50.2	
	comp=Z,56nm,18.8s,MS3.4,baz=195,slow=44						
LPAZ	**La Paz**	**39.15**	**140**	LR	LR	19 10 11.6	
	comp=Z,37nm,19.4s,MS3.2,baz=225,slow=33						
SCHQ	**Schefferville**	**45.40**	**21**	LR	LR	19 16 48.1	
	comp=Z,122nm,18.2s,MS3.9,baz=205,slow=38						
YKA	**Yellowknife Ar**	**50.53**	**347**	P	**P**	**18 57 26.0**	**-0.5**
	4.1nm,0.8s,mb4.4,baz=150,slow=7.6,SNR=8.4						
INK	**Inuvik**	**59.88**	**344**	*e*P	**P**	**18 58 33.3**	**-0.5**
	5.1nm,1.1s,mb4.5						
RES	**Resolute Bay**	**60.44**	**359**	P	**P**	**18 58 36.6**	**-1.0**
	1.7nm,0.6s,mb4.2,baz=180,slow=13,SNR=3.0						
NOA	**NORSAR Array B**	**84.47**	**28**	LR	LR	19 36 44.6	
	comp=Z,37nm,18.7s,MS3.8,baz=290,slow=34						
WRA	**Warramunga Arr**	**134.34**	**256**	PKP	PKPdf	19 07 45.8	-1.2
	0.5nm,0.8s,baz=88,slow=2.5,SNR=4.1						
CMAR	**Chiang Mai Arr**	**145.38**	**339**	PKPbc	PKPbc	19 08 06.2	-0.7
	1.8nm,0.8s,baz=341,slow=3.7,SNR=14						

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*IDC **30** 18:50:01.8±0.8, 9°.10S×157°.98E, h0km, mb4.4/13, mb1 4.5/14, mb1mx4.4/18, mbtmp4.4/14, ML3.8/1, MS3.7/4, Ms1 3.7/4, ms1mx3.2/21, Error ellipse: s-maj=23.0km s-min=17.6km az=122.0*
*BJI **30** 18:50:03.7, 8°.39S×158°.77E, h15km, mB4.9/4, mb4.6/8*
*NEIC **30** 18:50:06.7±0.4, 9°.18S×157°.99E, h35km, mb4.8/8, Error ellipse: s-maj=11.6km s-min=7.1km az=138.0*
*ISCJB **30** 18:50:06.8±2.4, 9°.0S±0°.1×157°.77E±0°.07, h40km±23km, mb4.5/21, MS3.7/4, Error ellipse: s-maj=18.7km s-min=9.8km az=155.0*
ISC 30 18:50:09.3±1.8,9°.1S±0°.1×157°.83E±0°.07,h50km±19km, n37,σ0$96/37,mb4.5/21,MS3.7/4,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.12**	**100**	Pn	**Pn**	**18 50 35.7**	**-6.6**
	62nm,0.3s,baz=240,slow=3.1,SNR=36						
HNR				Sn	**Sn**	**18 51 07.6**	**0.0**
	179nm,0.3s,baz=89,slow=23,SNR=5.7						
COEN	**Coen**	**15.16**	**250**	*e*P	**Pn**	**18 53 43.2**	**+2.9**
COEN	**Coen**	**15.16**	**250**	*e*P	**Pn**	**18 53 39.3**	**-1.0**
	559nm,1.5s						
CTA	**Charters Tower**	**15.66**	**224**	*e*P	**Pn**	**18 53 44.7**	**-2.1**
	6.5nm,1.7s						
CTA	**Charters Tower**	**15.66**	**224**	Pn	**Pn**	**18 53 44.8**	**-2.0**
	0.2nm,0.3s,baz=63,slow=14,SNR=6.9						
CTAO	**Charters Tower**	**15.66**	**224**	*e*P	**Pn**	**18 53 44.0**	**-2.8**
	27nm,1.4s						
MTSU	**Mount Surprise**	**15.92**	**234**	*e*P	**Pn**	**18 53 55.6**	**+5.5**
	108nm,1.2s						
ARMA	**Armidale**	**22.03**	**194**	*e*P	**P**	**18 55 01.8**	**+2.2**
WRAB	**Tennant Creek**	**25.13**	**242**	*e*P	**P**	**18 55 30.0**	**+0.1**
	16nm,1.0s,mb4.5						
WRA	**Warramunga Arr**	**25.15**	**242**	P	**P**	**18 55 30.1**	**0.0**
	8.1nm,0.8s,mb4.3,baz=67,slow=9.5,SNR=48						
KAKA	**Kakadu**	**25.19**	**259**	*e*P	**P**	**18 55 25.7**	**-4.7**
	13nm,0.8s,mb4.5						
KAKA	**Kakadu**	**25.19**	**259**	*e*P	**P**	**18 55 30.2**	**-0.2**
	89nm,1.1s,mb5.2						
ASAR	**Alice Springs**	**27.10**	**235**	P	**P**	**18 55 46.6**	**-1.0**
	3.0nm,0.8s,mb3.9,baz=68,slow=8.6,SNR=22						
STKA	**Stephens Creek**	**27.25**	**211**	*e*P	**P**	**18 55 51.0**	**+2.1**
	14nm,0.8s,mb4.5						
STKA	**Stephens Creek**	**27.25**	**211**	P	**P**	**18 55 49.1**	**+0.3**
	15nm,1.0s,mb4.5,baz=34,slow=11,SNR=7.7						
STKA				LR	LR	19 06 06.8	
	comp=Z,240nm,20.0s,MS3.8,baz=25,slow=35						
STKA	**Stephens Creek**	**27.25**	**211**	*e*P	**P**	**18 55 48.8**	**-0.1**
STKA				LR	LR	19 06 06.8	
YHNB	**Yeheng**	**48.86**	**314**	*e*P	**P**	**18 58 50.1**	**-0.1**
	13nm,1.0s,mb4.9						
KSRS	**Korea Array**	**54.08**	**331**	P	**P**	**18 59 30.4**	**+1.4**
	3.9nm,1.1s,mb4.2,baz=145,slow=9.3,SNR=10						
PETK	**Petropavlovsk-**	**61.92**	**360**	P	**P**	**19 00 23.4**	**-0.1**
	10nm,0.9s,mb5.0,baz=141,slow=7.3,SNR=7.9						
PETK				LR	LR	19 23 08.2	
	comp=Z,63nm,19.1s,MS3.8,baz=327,slow=32						
CMAR	**Chiang Mai Arr**	**64.20**	**295**	P	**P**	**19 00 40.1**	**+0.7**
	5.5nm,0.9s,mb4.6,baz=120,slow=4.8,SNR=29						
CMAR				LR	LR	19 27 18.4	
	comp=Z,18nm,18.0s,MS3.3,baz=190,slow=35						
CASY	**Casey**	**65.54**	**199**	*e*P	**P**	**19 00 46.4**	**-0.9**
LZH	**Lanzhou**	**67.75**	**315**	*e*P	**P**	**19 01 06.0**	**+4.1**
LZH				pP	pP	19 01 11.3	-4.7
LZH				sP	sP	19 01 13.8	-7.8
LZH				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.9						
GTA	**Gaotai**	**72.16**	**316**	*e*P	**P**	**19 01 33.3**	**+4.4**
GTA				pP	pP	19 01 37.8	-5.3
GTA				sP	sP	19 01 41.0	-7.7
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.9						
SONM	**Songino Array**	**72.58**	**326**	P	**P**	**19 01 32.8**	**+1.5**
	comp=Z,2.4nm,0.8s,mb4.2,baz=121,slow=5.7,SNR=10.0						
SHL	**Shillong**	**72.75**	**300**	*e*PKP	**P**	**19 01 38.0**	**+5.2**
SVW2	**Sparrevohn**	**78.87**	**21**	*e*P	**P**	**19 02 06.7**	**-0.2**
TTA	**Tatalina**	**79.98**	**20**	*e*P	**P**	**19 02 12.7**	**-0.2**
	comp=Z,6.4nm,1.2s,mb4.4						
QSPA	**South Pole Qui**	**80.93**	**180**	LR	LR	19 37 08.2	
	comp=Z,55nm,18.4s,MS3.9,baz=36,slow=35						
MCK	**McKinley**	**82.94**	**21**	*e*P	**P**	**19 02 27.4**	**-1.1**
	comp=Z,18nm,1.1s,mb5.0						
MAW	**Mawson**	**83.58**	**203**	P	**P**	**19 02 32.3**	**+0.4**
	comp=Z,2.6nm,0.9s,mb4.3,baz=22,slow=11,SNR=3.1						
EGAK	**Eagle**	**86.34**	**22**	*e*P	**P**	**19 02 45.6**	**-0.1**
	comp=Z,4.7nm,1.0s,mb4.7						
MK31	**Makanchi Array**	**86.80**	**318**	*e*P	**P**	**19 02 48.3**	**-0.1**
MKAR	**Makanchi Array**	**86.80**	**318**	P	**P**	**19 02 48.2**	**-0.1**
	comp=Z,2.5nm,0.8s,mb4.5,baz=101,slow=6.3,SNR=16						
ZALV	**Zalesovo Beam**	**87.45**	**326**	P	**P**	**19 02 51.0**	**-0.4**
	comp=Z,0.5nm,0.3s,mb4.2,baz=93,slow=7.4,SNR=5.1						
KURK	**Kurchatov**	**90.18**	**321**	P	**P**	**19 03 04.1**	**-0.1**
	comp=Z,0.6nm,0.8s,mb4.0,baz=110,slow=3.0,SNR=5.2						
NVAR	**Mina Array Bea**	**90.80**	**51**	P	**P**	**19 03 07.9**	**+0.5**
	comp=Z,3.3nm,1.0s,mb4.6,baz=239,slow=6.7,SNR=15						
BVAR	**Borovoye Array**	**95.62**	**323**	P	**P**	**19 03 27.7**	**-1.6**
	comp=Z,1.3nm,0.8s,mb4.4,baz=100,slow=6.2,SNR=8.4						

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*NEIC **30** 19:00:35.7, 58°.80N×137°.59W, h1km, ML2.7(PGC), ML2.5(AEIC), After PGC.*
PGC 30 19:00:35.7±0.1,58°.80N×137°.59W,h1km,ML2.7/4,7D, 122km Ese of Yakutat, Ak Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLBC	**Pleasant Camp**	**0.92**	**43**	⇓P	Pg	19 00 52.1	-1.1
PLBC				S	Sg	19 01 04.1	-1.0
PLBC	**Pleasant Camp**	**0.92**	**43**	⇓P	Pg	19 00 52.1	-1.1
PLBC				⇑S	Sg	19 01 04.1	-1.0
PNL	**Peninsula**	**1.28**	**314**	P	Pg	19 00 58.7	-1.5
PNL				S	Sg	19 01 18.2	+1.4
SKAG	**Skagway**	**1.34**	**59**	P	Pg	19 00 59.4	-2.0
SKAG				S	Sg	19 01 16.6	-2.2
BESE	**Bessie Mountai**	**1.44**	**97**	P	Pn	19 01 00.4	-2.6
HYT	**Haines Junctio**	**2.04**	**1**	⇓Pn	Pn	19 01 10.7	-0.4
HYT				Sg	Sg	19 01 39.1	-2.0
HYT	**Haines Junctio**	**2.04**	**1**	⇓Pn	Pn	19 01 10.7	-0.4
HYT				⇓Pg	Pg	19 01 11.8	-2.9
HYT				⇓Sg	Sg	19 01 39.1	-2.0
SIT	**Sitka**	**2.12**	**144**	P	Pn	19 01 11.4	-0.8
SIT				S	Sn	19 01 39.6	+0.4
WHY	**Whitehorse**	**2.32**	**35**	P	Pn	19 01 14.8	-0.1
WHY	**Whitehorse**	**2.32**	**35**	⇓Pn	Pn	19 01 14.8	-0.2
WHY				⇑Pg	Pg	19 01 16.9	-3.2
WHY				⇑Sg	Sg	19 01 47.7	-2.4
DLBC	**Dease Lake**	**3.97**	**92**	⇑Sg	Sg	19 02 38.0	-5.1
DAWY	**Dawson**	**5.36**	**351**	*e*P	Pn	19 01 56.4	-0.3

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*IDC **30** 19:06:11.3±1.9, 4°.87N×125°.44E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/22, mbtmp3.4/4, Error ellipse: s-maj=120.0km s-min=23.3km az=68.0*
*ISCJB **30** 19:06:30.7±0.9, 4°.7N±0°.1×125°.5E±0°.3, h196km±13km, mb3.3/4, Error ellipse: s-maj=45.8km s-min=21.3km az=164.1*
*MAN **30** 19:06:52, 6°.09N×125°.74E, h32km, mb4.8, ML3.7, MS3.7*
ISC 30 19:06:31.7±0.9,4°.7N±0°.2×125°.6E±0°.3,h188km±14km,n7, σ0$41/10,mb3.4/4,1C,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**1.48**	**336⇑**	*i* P	**Pn**	**19 07 04.3**	**+0.1**
GSPH				*i* S	**Sn**	**19 07 29.1**	**-0.3**
MATI	**Mati**	**2.31**	**17**	*e*P	**Pn**	**19 07 12.6**	**-0.2**
MATI				*e*S	**Sn**	**19 07 23.4**	**-21**
BUKP	**Musuan**	**3.17**	**351**	*e*P	**Pn**	**19 07 23.5**	**+0.7**
BUKP				*e*S	**Sn**	**19 07 39.8**	**-23**
FITZ	**Fitzroy Crossi**	**22.68**	**180**	P	**P**	**19 11 17.6**	**+0.3**
	1.0nm,0.5s,mb3.5,baz=330,slow=8.1,SNR=8.1						
WRA	**Warramunga Arr**	**25.99**	**161**	P	**P**	**19 11 46.6**	**-0.6**
	0.2nm,0.3s,mb3.3,baz=337,slow=10,SNR=9.8						
ASAR	**Alice Springs**	**29.37**	**164**	P	**P**	**19 12 17.7**	**+0.4**
	0.2nm,0.3s,mb3.3,baz=341,slow=6.9,SNR=26						
MKAR	**Makanchi Array**	**56.08**	**325**	P	**P**	**19 15 50.9**	**-0.3**
	0.3nm,0.5s,mb3.4,baz=118,slow=7.7,SNR=8.8						

KRSC 30 19:39:18.1±0.8,53°.82N×160°.74E,h20km±15km,ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KII	**Karymskiy**	**0.79**	**286**	*i* P	Pb	19 39 33.4	+0.2
KII				*i* S	Sb	19 39 44.0	+0.5
SPN	**Mys Shipunski**	**0.84**	**211**	*i* P	Pb	19 39 33.4	-0.6
SPN				*i* S	Sb	19 39 44.0	-0.8
MKZ	**Mys Kozlova**	**0.94**	**38**	P	Pb	19 39 34.7	-1.0
MKZ				*i* S	Sb	19 39 46.4	-1.3
NLC	**Nalytchevo**	**1.06**	**233**	*e*P	Pb	19 39 36.8	-0.9
NLC				*i* S	Sb	19 39 49.9	-1.1
AVH	**Avacha**	**1.32**	**246**	*i* P	Pn	19 39 41.6	+0.3
AVH				*i* S	Sn	19 39 58.4	+0.1
PET	**Petropavlovsk**	**1.48**	**238**	P	Pn	19 39 43.1	-0.5
PET				*i* S	Sn	19 40 00.9	-1.4
GNL	**Ganaly**	**1.67**	**267**	P	Pn	19 39 47.0	+0.9
GNL				*i* S	Sn	19 40 07.9	+1.1
KMNR	**Kamenistaya**	**1.96**	**352**	*e*P	Pn	19 39 50.7	+0.5
KPT	**Kopyto**	**2.17**	**352**	P	Pn	19 39 53.6	+0.6
SRDR	**Sredinnyy**	**2.57**	**347**	P	Pn

3.9nm,0.3s,mb4.4,baz=333,slow=10.0,SNR=99
WRA S **S** **19 55 35.5 -1.3**
0.3nm,0.6s,baz=338,slow=15,SNR=3.0
WRA ScP ScP 19 57 34.8 +7.1
0.5nm,0.8s,baz=340,slow=3.0,SNR=4.8
CMAR Chiang Mai Arr 27.45 303 P **P** **19 51 52.0 -0.5**
0.6nm,0.7s,mb3.2,baz=113,slow=7.0,SNR=5.1
ASAR Alice Springs 29.79 160 P **P** **19 52 13.1 +0.6**
2.5nm,0.4s,mb4.1,baz=339,slow=7.1,SNR=102
ASAR ScP ScP 19 57 44.5 +6.6
0.6nm,0.6s,baz=339,slow=2.8,SNR=7.8
NWAO Narrogin (SRO) 37.51 188 P **P** **19 53 17.4 +0.8**
7.6nm,0.9s,mb4.1,baz=37,slow=8.8,SNR=5.5
NWAO Narrogin (SRO) 37.51 188 *eP* **P** **19 53 17.4 +0.8**
4.7nm,0.7s,mb4.0
STKA Stephens Creek 40.12 155 P **P** **19 53 39.2 +1.7**
1.6nm,0.3s,mb3.9,baz=337,slow=8.5,SNR=11
SONM Songino Array 45.62 344 P **P** **19 54 19.9 +0.1**
0.9nm,0.7s,mb3.2,baz=161,slow=8.9,SNR=9.2
MKAR Makanchi Array 55.00 327 P **P** **19 55 28.2 +0.4**
2.0nm,0.3s,mb3.8,baz=120,slow=7.8,SNR=30
ZALV Zalesovo Beam 58.42 335 P **P** **19 55 50.3 -0.6**
0.6nm,0.3s,mb3.2,baz=146,slow=7.7,SNR=4.1
KURK Kurchatov 59.29 329 *eP* **P** **19 55 57.0 +0.2**
4.6nm,0.8s,mb3.7
BVAR Borovoye Array 64.84 328 P **P** **19 56 32.5 0.0**
0.7nm,0.6s,mb3.2,baz=120,slow=8.8,SNR=6.4
FINES FINESS Array B 89.55 332 P **P** **19 58 45.3 -0.1**
0.7nm,0.5s,mb3.7,baz=24,slow=11,SNR=2.9

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*CSEM **30** 19:53:49.5±0.2,38°.19N×21°.54E,h20km,MD3.3,Error ellipse: s-maj=5.1km s-min=4.2km az=159.0*
*THE **30** 19:53:49.4,38°.15N×21°.55E,h11km±1km,ML3.2/7,Error ellipse: s-maj=1.7km s-min=0.5km az=357.0*
*NEIC **30** 19:53:49.2,37°.93N×21°.50E,h8km,ML2.8(ATH),After ATH.*
*ATH **30** 19:53:49.5,38°.17N×21°.54E,h20km±1km,MD3.3/15*
*ISCJB **30** 19:53:49.6±0.4,38°.16N±0°.02×21°.55E±0°.02,h8km±5km, Error ellipse: s-maj=4.0km s-min=3.0km az=165.0*
ISC 30 19:53:50.2±0.4,38°.17N±0°.02×21°.56E±0°.02,h11km±4km, n56,σ0°93/89,2D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.13**	**214**	P	**Pg**	**19 53 53.2**	**-0.1**
RLS	**Riolos of Patr**	**0.13**	**214**	‖ *i*PB	**Pg**	**19 53 53.8**	**+0.5**
RLS				*e*SB	**Sg**	19 53 57.2	+1.8
RLS	**Riolos of Patr**	**0.13**	**214**	P	**Pg**	**19 53 53.2**	**-0.1**
RLS	**Riolos of Patr**	**0.13**	**214**	‖ *i*Pb	**Pg**	**19 53 53.8**	**+0.5**
RLS				*e*Sb	**Sg**	19 53 57.2	+1.8
UPR	**University Cam**	**0.22**	**57**	*e*PB	**Pg**	**19 53 54.8**	**0.0**
UPR				*e*SB	**Sg**	19 53 59.4	+1.6
UPR	**University Cam**	**0.22**	**57**	*e*Pb	**Pg**	**19 53 54.8**	**0.0**
UPR				*e*Sb	**Sg**	19 53 59.4	+1.6
LAKA	**Lakka**	**0.34**	**77**	P	**Pg**	**19 53 56.5**	**-0.5**
LAKA				S	**Sg**	19 54 01.8	+0.2
LAKA	**Lakka**	**0.34**	**77**	P	**Pg**	**19 53 56.5**	**-0.5**
LAKA				S	**Sg**	19 54 01.8	+0.2
EFP	**Efpalio**	**0.38**	**46**	P	**Pg**	**19 53 57.0**	**-0.7**
EFP				S	**Sg**	19 54 03.3	+0.5
EFP	**Efpalio**	**0.38**	**46**	*e*PB	**Pg**	**19 53 57.0**	**-0.7**
EFP				*e*SB	**Sg**	19 54 02.8	0.0
EFP	**Efpalio**	**0.38**	**46**	P	**Pg**	**19 53 57.0**	**-0.7**
EFP				*e*Sb	**Sg**	19 54 02.8	0.0
EFP				S	**Sg**	19 54 03.3	+0.5
TRIZ	**Trizonia**	**0.45**	**64**	P	**Pg**	**19 53 58.2**	**-0.9**
TRIZ				S	**Sg**	19 54 05.5	+0.4
TRIZ	**Trizonia**	**0.45**	**64**	P	**Pg**	**19 53 58.2**	**-0.9**
TRIZ				S	**Sg**	19 54 05.5	+0.4
KALE	**Kalithea**	**0.51**	**64**	P	**Pg**	**19 53 59.1**	**-1.1**
KALE				S	**Sg**	19 54 07.3	+0.3
KALE	**Kalithea**	**0.51**	**64**	P	**Pg**	**19 53 59.1**	**-1.1**
KALE				S	**Sg**	19 54 07.3	+0.3
KFL	**Anninata**	**0.61**	**265**	P	**Pg**	**19 54 01.2**	**-0.8**
KFL				S	**Sg**	19 54 10.1	+0.1
GUR	**Goura**	**0.66**	**110**	P	**Pg**	**19 54 01.6**	**-1.4**
GUR				S	**Sg**	19 54 12.0	+0.3
GUR	**Goura**	**0.66**	**110**	*e*PB	**Pg**	**19 54 02.0**	**-1.0**
GUR				*e*SN	**Sg**	19 54 12.3	+0.6
GUR	**Goura**	**0.66**	**110**	P	**Pg**	**19 54 01.6**	**-1.4**
GUR	**Goura**	**0.66**	**110**	*e*Pb	**Pg**	**19 54 02.0**	**-1.0**
GUR				S	**Sg**	19 54 12.0	+0.3
GUR				*e*Sn	**Sg**	19 54 12.3	+0.6
VLS	**Valsamata**	**0.76**	**271**	P	**Pg**	**19 54 03.0**	**-1.9**
VLS	**Valsamata**	**0.76**	**271**	P	**Pg**	**19 54 03.4**	**-1.5**
VLS	**Valsamata**	**0.76**	**271**	*e*PN	**Pg**	**19 54 03.5**	**-1.4**
VLS				*e*SN	**Sg**	19 54 15.4	+0.5
VLS	**Valsamata**	**0.76**	**271**	P	**Pg**	**19 54 03.4**	**-1.5**
VLS				*e*Sn	**Sg**	19 54 15.4	+0.5
EVR	**Evrytania**	**0.78**	**15**	P	**Pg**	**19 54 07.1**	**+1.9**
EVR	**Evrytania**	**0.78**	**15**	*e*PN	**Pg**	**19 54 04.5**	**-0.7**
EVR				*e*SN	**Sg**	19 54 15.9	+0.5
EVR	**Evrytania**	**0.78**	**15**	*e*Pn	**Pg**	**19 54 04.5**	**-0.7**
EVR	**Evrytania**	**0.78**	**15**	P	**Pg**	**19 54 07.1**	**+1.9**
EVR				*e*Sn	**Sg**	19 54 15.9	+0.5
DSF	**Desfina**	**0.80**	**72**	P	**Pg**	**19 54 03.8**	**-1.9**
DSF				S	**Sg**	19 54 16.1	-0.1
DSF	**Desfina**	**0.80**	**72**	P	**Pg**	**19 54 03.8**	**-1.9**
DSF				S	**Sg**	19 54 16.1	-0.1
LKD2	**Lefkada island**	**0.94**	**312**	P	**Pg**	**19 54 06.6**	**-1.7**
LKD2				S	**Sg**	19 54 21.4	+0.8
LKD2	**Lefkada island**	**0.94**	**312**	P	**Pg**	**19 54 06.6**	**-1.7**
LKD2				S	**Sg**	19 54 21.4	+0.8
ITM	**Ithomi**	**1.03**	**163**	*e*PN	**Pg**	**19 54 09.3**	**-0.6**
ITM				*e*SN	**Sg**	19 54 24.2	+0.9
ITM	**Ithomi**	**1.03**	**163**	*e*Pn	**Pg**	**19 54 09.3**	**-0.6**
ITM				*e*Sn	**Sg**	19 54 24.3	+1.0
VLX	**Vlachokerasia**	**1.03**	**140**	*e*PN	**Pg**	**19 54 09.6**	**-0.4**
VLX	**Vlachokerasia**	**1.03**	**140**	*e*Pn	**Pg**	**19 54 09.6**	**-0.4**
AGG	**Agios Georgios**	**1.05**	**35**	P	**Pg**	**19 54 11.5**	**+1.1**
AGG	**Agios Georgios**	**1.05**	**35**	*e*PN	**Pg**	**19 54 10.0**	**-0.4**
AGG				*e*SN	**Sg**	19 54 23.9	-0.2
AGG	**Agios Georgios**	**1.05**	**35**	*e*Pn	**Pg**	**19 54 10.0**	**-0.4**
AGG	**Agios Georgios**	**1.05**	**35**	P	**Pg**	**19 54 11.5**	**+1.1**
AGG				*e*Sn	**Sg**	19 54 23.9	-0.2
LTK	**Loutraki**	**1.12**	**97**	P	**Pg**	**19 54 10.5**	**-1.3**
LTK				S	**Sg**	19 54 26.6	+0.2
LTK	**Loutraki**	**1.12**	**97**	*e*PN	**Pg**	**19 54 10.5**	**-1.3**
LTK	**Loutraki**	**1.12**	**97**	P	**Pg**	**19 54 10.5**	**-1.3**
LTK				S	**Sg**	19 54 26.6	+0.2
LKR	**Lokris**	**1.23**	**66**	P	**Pn**	**19 54 14.9**	**+1.5**
LKR	**Lokris**	**1.23**	**66**	*e*PN	**Pn**	**19 54 12.4**	**-1.0**
LKR	**Lokris**	**1.23**	**66**	*e*Pn	**Pn**	**19 54 12.4**	**-1.0**
LKR	**Lokris**	**1.23**	**66**	P	**Pn**	**19 54 14.9**	**+1.5**
PYL	**PYLOS**	**1.27**	**173**	*e*PN	**Pn**	**19 54 14.4**	**+0.5**
PYL	**PYLOS**	**1.27**	**173**	*e*Pn	**Pn**	**19 54 14.4**	**+0.5**
THL	**Klokotos Trika**	**1.44**	**14**	*e*PN	**Pn**	**19 54 17.2**	**+0.9**
DID	**Didima**	**1.48**	**116**	*e*PN	**Pn**	**19 54 17.2**	**+0.4**
DID	**Didima**	**1.48**	**116**	*e*Pn	**Pn**	**19 54 17.2**	**+0.4**
JAN	**Janina**	**1.59**	**340**	*e*PN	**Pn**	**19 54 18.1**	**-0.2**
JAN	**Janina**	**1.59**	**340**	*e*Pn	**Pn**	**19 54 18.1**	**-0.2**
XOR	**Xorichti**	**1.75**	**46**	P	**Pn**	**19 54 22.3**	**+1.8**
XOR	**Xorichti**	**1.75**	**46**	P	**Pn**	**19 54 22.3**	**+1.8**

DHMR 30 20:01:41.5±0.9,11°.93N×43°.71E,h9km±22km,ML3.5, 1C-1D,Ethiopia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UDYN	**Al 'Udayn**	**2.04**	**7**	‖ *i*P	Pn	20 02 17.2	+1.2
UDYN				*i* S	Sn	20 02 44.5	+2.8
UDYN				AML	AML	20 02 54.0	
	comp=Z,334nm,0.5s						
DHBB	**Dhamar BB**	**2.71**	**14**	*i* P	Pn	20 02 28.1	+2.8
DHBB				*i* S	Sn	20 03 05.1	+6.9
BDHA	**Al Bayda'**	**2.72**	**41**	‖ *i*P	Pn	20 02 28.9	+3.5
BDHA				*i* S	Sn	20 03 04.6	+6.1
BDHA				AML	AML	20 03 22.4	
	comp=N,370nm,0.6s						

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*IPEC **30** 20:09:23.7±0.3,51°.63N×16°.21E,h0km,ML2.0/4,Error ellipse: s-maj=2.0km s-min=1.6km az=39.0*
*CSEM **30** 20:09:24.4±0.3,51°.56N×16°.15E,h2km,ML3.0/8,Error ellipse: s-maj=4.9km s-min=4.0km az=11.0*
*PRU **30** 20:09:26.2,51°.50N×16°.14E,h0km*
WAR 30 20:09:26.2,51°.53N×16°.09E,ML2.4,Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.70**	**169**	*e*Pg	Pg	20 09 39.0	-0.6
KSP				*e*Sg	Sg	20 09 48.8	+0.2
KSP	**Ksiaz**	**0.70**	**169**	*i* Pg	Pg	20 09 39.0	-0.6
KSP				*e*Sg	Sg	20 09 48.3	-0.3
KSP	**Ksiaz**	**0.70**	**169**	*e*Pg	Pg	20 09 38.8	-0.8
	baz=356						
KSP				*e*Sg	Sg	20 09 48.3	-0.3
UPC	**Upice**	**1.02**	**183**	*e*PG	Pg	20 09 45.0	-0.8
UPC	**Upice**	**1.02**	**183**	Pg	Pg	20 09 45.0	-0.8
DPC	**Dobruska-Polom**	**1.19**	**173**	*e*PG	Pg	20 09 47.8	-1.2
DPC				*e*SG	Sg	20 10 03.4	-1.0
	comp=Z,18nm,0.3s						
DPC	**Dobruska-Polom**	**1.19**	**173**	Pg	Pg	20 09 47.8	-1.2
DPC				*e*Sg	Sg	20 10 03.9	-0.5
	baz=357						
PVCC	**Panska Ves**	**1.39**	**224**	*e*PG	Pg	20 09 52.0	-0.8
PVCC	**Panska Ves**	**1.39**	**224**	*e*Pn	Pn	20 09 51.9	-0.9
PVCC	baz=42						
				*e*Sg	Sg	20 10 11.2	+0.5
PVCC	baz=42						
BRG	**Berggiesshubel**	**1.50**	**245**	PN	Pn	20 09 53.9	-0.4
BRG				PG	Pg	20 09 54.5	-0.4
BRG				SG	Sg	20 10 14.1	-0.3
	comp=Z,25nm,0.3s						
PRU	**Pruhonice**	**1.83**	**213**	*e*PG	Pg	20 09 59.3	-1.9
PRU				*e*SG	Sg	20 10 24.1	-0.8
	comp=Z,17nm,0.3s						
PRU	**Pruhonice**	**1.83**	**213**	Pg	Pg	20 09 59.3	-1.9
PRU				Sg	Sg	20 10 24.1	-0.8
	comp=Z,17nm,0.3s						
CLL	**Collm**	**1.94**	**265**	*e*Pn	Pn	20 09 59.0	-1.4
CLL				*e*Pg	Pg	20 10 02.0	-1.4
CLL				*e*		20 10 06.0	
CLL				*i* Sg	Sg	20 10 27.0	-1.6
	comp=Z,19nm,0.7s						
MORC	**Moravsky Berou**	**1.98**	**152**	*e*Pn	Pn	20 09 59.5	-1.5
	baz=336						
MORC				*e*Sg	Sg	20 10 27.7	-2.2
	comp=Z,11nm,0.3s,baz=336						
OKC	**Ostrava-Krasne**	**2.14**	**141**	*e*PG	Pg	20 10 05.4	-1.8
OKC				*e*SG	Sg	20 10 32.4	-2.6
	comp=Z,15nm,0.5s						
OKC	**Ostrava-Krasne**	**2.14**	**141**	Pg	Pg	20 10 05.4	-1.8
OKC				Sg	Sg	20 10 32.4	-2.6
	comp=Z,15nm,0.5s						
VRAC	**Vranov**	**2.25**	**172**	*e*Pn	Pn	20 10 03.6	-1.0
	baz=354						
VRAC				*e*Sg	Sg	20 10 37.0	-1.4
	comp=Z,5.4nm,0.3s,baz=354						
KRUC	**Moravsky**	**2.48**	**175**	*e*Pn	Pn	20 10 06.7	-1.1
	baz=357						
KRUC				*e*Sg	Sg	20 10 44.3	-1.5
	comp=Z,3.5nm,0.2s,baz=357						
NKC	**Novy Kostel**	**2.65**	**242**	*e*PN	Pn	20 10 09.4	-0.7
NKC				*e*PG	Pg	20 10 16.0	-0.9
NKC				*e*SG	Sg	20 10 52.3	+1.2
	comp=Z,30nm,0.3s						
NKC	**Novy Kostel**	**2.65**	**242**	Pn	Pn	20 10 09.4	-0.7
NKC	**Novy Kostel**	**2.65**	**242**	Pg	Pg	20 10 16.0	-0.9
NKC				Sg	Sg	20 10 52.3	+1.2
	comp=Z,30nm,0.3s						
OJC	**Ojcow**	**2.69**	**118**	*e*Pg	Pg	20 10 15.3	-2.5
OJC				*e*Sg	Sg	20 10 50.5	-2.1
OJC	**Ojcow**	**2.69**	**118**	*e*Pg	Pg	20 10 15.3	-2.5
OJC				*e*Sg	Sg	20 10 50.5	-2.1
JAVC	**Velka Javorina**	**2.86**	**159**	*e*Pn	Pn	20 10 13.8	+0.8
JAVC				*e*Sg	Sg	20 10 58.0	-0.1
	comp=Z,7.1nm,0.7s						
KHC	**Kasperske Hory**	**2.89**	**215**	*e*PN	Pn	20 10 12.9	-0.5
KHC				*e*PG	Pg	20 10 19.3	-2.3
KHC				*e*SN	Sn	20 10 48.6	-0.2
KHC				*e*SG	Sg	20 10 57.2	-1.8
	comp=Z,3.7nm,0.3s						
KHC	**Kasperske Hory**	**2.89**	**215**	Pn	Pn	20 10 12.9	-0.5
KHC	**Kasperske Hory**	**2.89**	**215**	Pg	Pg	20 10 19.3	-2.3
KHC				Sn	Sn	20 10 48.6	-0.2
KHC				Sg	Sg	20 10 57.2	-1.8
	comp=Z,3.7nm,0.3s						
MOX	**Moxa**	**2.96**	**254**	*e*PG	Pg	20 10 22.3	-0.5
MOX				*e*SG	Sg	20 11 01.0	-0.1
SMOL	**Smolenice**	**3.14**	**163**	*e*PG	Pg	20 10 27.1	+0.7
SMOL				*e*SG	Sg	20 11 06.6	-0.4
VYHS	**Vyhne**	**3.52**	**149**	*e*PN	Pn	20 10 15.1	-7.0
VYHS				*e*SG	Sg	20 11 15.9	-3.3
BSD	**Bornholm Skovb**	**3.66**	**349**	*i* P	Pn	20 10 21.2	-2.8
BSD				*i* S	Sn	20 11 01.2	-6.6
BSD				*i* LG		20 11 03.7	
BSD	**Bornholm Skovb**	**3.66**	**349**	*i* P	Pn	20 10 21.2	-2.8
BSD				*i* S	Sn	20 11 01.2	-6.6
STHS	**Stebnicka Huta**	**3.92**	**121**	*e*	Px	20 10 41.0	
STHS				*e*	Sg	20 11 29.5	-2.4
CRVS	**Cervenica-Dubn**	**4.34**	**125**	*e*	Pn	20 10 29.5	-3.8
CRVS	**Cervenica-Dubn**	**4.34**	**125**	*e*Pn	Pn	20 10 29.5	-3.8

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*IDC **30** 20:39:08.3±1.9,5°.96S×104°.19E,h0km,mb3.8/9, mb1 3.9/9,mb1mx3.7/21,mbtmp3.8/9,Error ellipse: s-maj=96.7km s-min=17.1km az=53.0*
*NEIC **30** 20:39:13.9±1.2,5°.88S×104°.33E,h35km,mb4.3/1,Error ellipse: s-maj=66.7km s-min=11.2km az=53.0*
*ISCJB **30** 20:39:15.8±1.0,6°.12S±0°.08×104°.09E±0°.09,h81km±8km, mb3.8/10,Error ellipse: s-maj=18.4km s-min=6.9km az=136.1*
*DJA **30** 20:39:16,6°.15S×104°.11E,h26km,MLv4.1/10*
ISC 30 20:39:16.9±1.0,6°.12S±0°.07×104°.09E±0°.08,h69km±8km, n28,σ1°06/30,mb3.8/10,Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LWLI	**Liwa**	**1.09**	**359**	P	**Pn**	**20 39 35.9**	**-0.6**
BLSI	**Bandar Lampung**	**1.37**	**57**	P	**Pn**	**20 39 39.0**	**-1.1**
BLSI				S	**Sn**	**20 39 57.5**	**-0.1**
KLI	**Kotabumi**	**1.46**	**32**	P	**Pn**	**20 39 42.1**	**+0.8**
KLI				S	**Sn**	**20 40 00.7**	**+1.0**
KLSI		**1.56**	**24**	P	**Pn**	**20 39 43.1**	**+0.5**
MDSI	**Maura Dua**	**1.62**	**3**	P	**Pn**	**20 39 43.6**	**+0.1**
RBSI	**Rajabasa**	**1.67**	**81**	P	**Pn**	**20 39 43.0**	**-1.0**
CGJI	**Cibinong**	**1.67**	**107**	P	**Pn**	**20 39 42.2**	**-1.9**
CGJI				S	**Sn**	**20 40 03.0**	**-1.7**
MNAI	**Manna**	**2.08**	**327**	P	**Pn**	**20 39 49.7**	**+0.1**
TNG	**Tangerang**	**2.54**	**91**	P	**Pn**	**20 39 55.9**	**0.0**
TNG	**Tangerang**	**2.54**	**91**	P	**Pn**	**20 39 56.0**	**+0.1**
SKJI	**Sukabumi**	**2.61**	**110**	P	**Pn**	**20 39 56.7**	**0.0**
CBJI	**Citeko**	**2.76**	**96**	P	**Pn**	**20 40 03.1**	**+4.3**
KSI	**Kapahiang**	**2.87**	**329**	P	**Pn**	**20 40 00.9**	**+0.6**
LEM	**Lembang**	**3.58**	**102**	P	**Pn**	**20 40 11.8**	**+1.8**
YOGI	**Yogyakarta**	**6.39**	**106**	P	**Pn**	**20 40 49.8**	**+1.4**
UGM	**Wanagama**	**6.63**	**106**	P	**Pn**	**20 40 52.7**	**+0.9**
CMAR	**Chiang Mai Arr**	**24.94**	**348**	P	**P**	**20 44 32.1**	**-1.7**
	0.9nm,0.6s,mb3.4,baz=184,slow=9.3,SNR=9.0						
WRA	**Warramunga Arr**	**32.44**	**118**	P	**P**	**20 45 40.0**	**-0.7**
	0.3nm,0.8s,mb3.0,baz=301,slow=11,SNR=4.5						
WRAB	**Tennant Creek**	**32.44**	**118**	P	**P**	**20 45 43.1**	**+2.4**
	5.8nm,1.3s,mb4.2						
ASAR	**Alice Springs**	**33.56**	**124**	P	**P**	**20 45 50.8**	**+0.3**
	0.3nm,0.8s,mb3.2,baz=302,slow=7.8,SNR=3.2						
STKA	**Stephens Creek**	**43.39**	**131**	P	**P**	**20 47 12.7**	**0.0**
	3.7nm,0.9s,mb4.1,baz=319,slow=22,SNR=3.6						
SONM	**Songino Array**	**53.76**	**2**	P	**P**	**20 48 32.2**	**+0.2**
	0.6nm,0.4s,mb4.0,baz=175,slow=9.8,SNR=10						
MK31	**Makanchi Array**	**56.12**	**342**	*eP*	**P**	**20 48 48.4**	**-0.7**
MKAR	**Makanchi Array**	**56.12**	**342**	P	**P**	**20 48 48.8**	**-0.3**
	1.8nm,0.6s,mb4.3,baz=143,slow=8.8,SNR=23						
ZALV	**Zalesovo Beam**	**62.00**	**347**	P	**P**	**20 49 28.6**	**-1.0**
	1.4nm,0.6s,mb4.2,baz=143,slow=4.7,SNR=9.6						
BVAR	**Borovoye Array**	**65.46**	**338**	P	**P**	**20 49 51.6**	**-0.8**
	0.3nm,0.4s,mb3.5,baz=136,slow=9.3,SNR=3.7						
FINES	**FINESS Array B**	**89.63**	**332**	P	**P**	**20 52 09.0**	**+2.2**
	0.6nm,0.7s,mb3.8,baz=126,slow=9.7,SNR=4.2						
TXAR	**Lajitas Array**	**145.08**	**45**	PKP	PKPdf	20 58 47.7	+0.6
	1.4nm,0.7s,baz=269,slow=1.4,SNR=12						
TXAR	**Lajitas Array**	**145.08**	**45**	PKP	PKPdf	20 58 47.7	+0.6

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*CSEM **30** 21:11:04.7±0.2,77°.04N×18°.49E,h2km,ML2.0,Error ellipse: s-maj=10.1km s-min=3.4km az=53.0*
*NAO **30** 21:11:05.1±1.1,77°.04N×18°.63E,ML2.0*
*BER **30** 21:11:08.6±2.8,77°.10N×18°.79E,h23km±29km,MD2.9, ML2.1,ML2.0(NAO)*

ISC 30 21:11:05.7±0.8,77°.14N±0°.06×18°.9E±0°.2,h11km±12km, n11,σ0°49/16,Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSP	**Hornsund**	**0.75**	**262**	*eP*	**Pg**	**21 11 20.3**	**+0.1**
HSP				*e*S	**Sg**	**21 11 30.2**	**+0.2**
SPA0	**Spitsbergen Ar**	**1.17**	**334**	Pg	**Pg**	**21 11 28.8**	**+0.6**
	baz=149,slow=18						
SPA0				Lg		21 11 44.8	
	baz=157,slow=37						
SPA0	**Spitsbergen Ar**	**1.17**	**334**	Pg	**Pg**	**21 11 28.8**	**+0.6**
	SNR=258						
SPA0				Lg		21 11 44.8	
	SNR=0.3						
HOPEN	**Hopen**	**1.55**	**111**	*e*Sg	**Sg**	**21 11 55.5**	**+0.1**
HOPEN				AML	AML	21 11 59.2	
	comp=Z,39nm,0.2s						
HOPEN	**Hopen**	**1.55**	**111**	*e*Sg	**Sg**	**21 11 55.5**	**+0.1**
	comp=Z,39nm,0.2s,SNR=93						
KBS	**Kingsbay**	**2.30**	**325**	Pn	**Pn**	**21 11 44.2**	**+0.7**
KBS				Pg	**Pg**	**21 11 49.1**	**-0.6**
KBS				Lg		21 12 18.1	
KBS	**Kingsbay**	**2.30**	**325**	*eP*	**Pn**	**21 11 44.1**	**+0.6**
KBS				*e*Sg	**Sg**	**21 12 19.0**	**-0.5**
KBS				AML	AML	21 12 28.9	
	comp=Z,27nm,0.2s						
KBS	**Kingsbay**	**2.30**	**325**	Pn	**Pn**	**21 11 44.2**	**+0.7**
KBS	**Kingsbay**	**2.30**	**325**	Pg	**Pg**	**21 11 49.1**	**-0.6**
KBS				Lg		21 12 18.1	
KBS				*e*Sg	**Sg**	**21 12 19.0**	**-0.5**
	comp=Z,27nm,0.2s,SNR=92						
ARA0	**ARCESS Array S**	**7.87**	**163**	Pn	**Pn**	**21 12 59.4**	**-0.5**
	baz=351,slow=12						
ARA0				Sn	**Sn**	**21 14 22.6**	**-6.3**
	baz=0.7,slow=22						
ARA0	**ARCESS Array S**	**7.87**	**163**	Pn	**Pn**	**21 12 59.3**	**-0.6**
	SNR=5.4						

DJA 30 21:48:08,0°.28N×98°.46E,h10km,MLv4.0/9,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**1.23**	**65**	P	Pn	21 48 25.9	-5.4
MNSI				S	Sb	21 48 39.4	-7.9
SISI	**Saibi**	**1.71**	**158**	P	Pn	21 48 37.3	-0.7
PPI	**Padang Panjang**	**2.07**	**111**	P	Pn	21 48 42.4	-0.4
PPI				S	Sn	21 49 08.0	-0.7
PDSI	**Padang**	**2.33**	**121**	P	Pn	21 48 48.5	+2.1
PDSI				S	Sn	21 49 16.7	+1.7
BKNI	**Bangkinang**	**2.58**	**89**	P	Pn	21 48 51.6	+1.7
BKNI				S	Sn	21 49 24.6	+3.3
SDSI	**Sungai Dareh**	**3.20**	**112**	P	Pn	21 49 03.6	+5.2
TPTI		**3.23**	**337**	P	Pn	21 48 57.7	-1.0
TPTI				S	Sn	21 49 41.4	+4.2
RGRI	**Rengat**	**3.92**	**99**	P	Pn	21 49 09.3	+0.9
IPM	**Ipoh**	**4.90**	**32**	P	Pn	21 49 19.8	-1.9
KULM	**Kulim**	**5.44**	**24**	P	Pn	21 49 28.7	-0.5
	0.1nm1μm8.9nm,1.0s						
MYKOM	**Kota Tinggi**	**5.59**	**74**	P	Pn	21 49 29.0	-2.3
KLI	**Kotabumi**	**8.18**	**129**	P	Pn	21 50 02.8	-4.1

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*IDC **30** 21:48:25.6±1.1,1°.81N×126°.32E,h0km,mb4.0/6, mb1 4.1/7,mb1mx3.8/20,mbtmp4.0/7,ML3.7/1,Error ellipse: s-maj=112.0km s-min=16.3km az=69.0*
*NEIC **30** 21:48:32.4±1.6,1°.84N×126°.60E,h58km±15km,mb4.3/6, Error ellipse: s-maj=23.9km s-min=6.1km az=61.0*
*ISCJB **30** 21:48:32.5±0.9,1°.79N±0°.07×126°.49E±0°.06,h74km±9km, mb4.0/10,Error ellipse: s-maj=12.9km s-min=7.4km az=40.1*
*DJA **30** 21:48:34,1°.65N×126°.33E,h10km,MLv4.2/7*
ISC 30 21:48:34.1±0.8,1°.75N±0°.07×126°.48E±0°.06,h71km±8km, n33,σ1°15/35,mb4.0/10,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.32**	**137**	P	**Pn**	**21 48 56.2**	**-0.5**
TNTI				S	**Sn**	**21 49 19.1**	**+5.4**
MNI	**Manado**	**1.66**	**260**	P	**Pn**	**21 48 59.7**	**-1.6**
MNI				S	**Sn**	**21 49 20.2**	**-1.7**
KMSI	**Cibinong**	**2.75**	**245**	P	**Pn**	**21 49 16.5**	**+0.5**
LUWI	**Luwuk**	**4.63**	**233**	P	**Pn**	**21 49 44.0**	**+2.4**
MRSI	**Marisa**	**4.71**	**254**	P	**Pn**	**21 49 44.3**	**+1.6**
NLAI	**Namlea**	**4.99**	**173**	P	**Pn**	**21 49 47.2**	**+0.6**
APSI	**Ampana**	**5.50**	**241**	P	**Pn**	**21 49 56.5**	**+3.0**
	0.3nm6μm90nm,1.6s						
KDI	**Kendari**	**6.85**	**214**	P	**Pn**	**21 50 11.4**	**-0.6**
	0.1nm25nm,0.8s						
**TTSI

FITZ	Fitzroy Crossi	12.23 194	P		P	22 32 39.1	+0.3
	0.2nm,0.3s,baz=14,slow=8.3,SNR=6.6						
FITZ	Fitzroy Crossi	12.23 194	eP		P	22 32 37.9	-0.9
WRAB	Tennant Creek	14.73 159	eP		P	22 33 06.7	+0.4
	4.8nm,0.5s						
WRA	Warramunga Arr	14.73 159	P		P	22 33 06.6	+0.2
	1.3nm,0.3s,baz=335,slow=12,SNR=54						
WRA			S		S	22 35 45.8	+0.6
	0.1nm,0.3s,baz=347,slow=22,SNR=4.6						
WRA	Warramunga Arr	14.73 159	P		P	22 33 06.6	+0.3
WRA			S		S	22 35 45.8	+0.6
ASAR	Alice Springs	18.09 165	P		P	22 33 42.1	-0.4
	0.5nm,0.3s,baz=344,slow=12,SNR=21						
COCO	West Island	32.02 257	P		P	22 35 49.5	-0.3
CHTO	Chiang Mai	38.45 311	eP		P	22 36 43.5	-0.5
PALK	Pallekele	49.73 285	eP		P	22 38 13.4	+0.6
	8.7nm,0.8s,mb4.0						
MCQ	Macquarie Isla	53.99 159	eP		P	22 38 42.6	-0.6
TLY	Talaya	61.51 343	P		P	22 39 35.3	+0.4
MK31	Makanchi Array	66.85 327	eP		P	22 40 10.3	+0.8
MKAR	Makanchi Array	66.85 327	P		P	22 40 09.8	+0.3
	0.2nm,0.4s,mb3.2,baz=111,slow=7.9,SNR=6.6						
MKAR	Makanchi Array	66.85 327	P		P	22 40 09.8	+0.3
YAK	Yakutsk	68.01 0	eP		P	22 40 15.8	-0.5
UCH	Uchtor	68.88 320	P		P	22 40 22.7	+0.6
ZALV	Zalesovo Beam	70.29 334	P		P	22 40 30.5	+0.1
	0.4nm,0.4s,mb3.5,baz=124,slow=5.4,SNR=2.7						
ZALV	Zalesovo Beam	70.29 334	P		P	22 40 30.5	+0.1
KURK	Kurchatov	71.16 329	eP		P	22 40 35.6	-0.1
	0.5nm,0.4s,mb3.6						
MAW	Mawson	75.25 201	P		P	22 40 58.5	-0.7
BILL	Bilibino	78.61 14	P		P	22 41 16.9	-0.7

*ISCJB **30** 22:46:29.4±1.7, 19°.72N±0°.06×146°.1E±0°.2, h82km±15km, mb4.0/15, Error ellipse: s-maj=24.3km s-min=10.1km az=176.0*

*IDC **30** 22:46:31.3±3.0, 19°.66N×146°.04E, h83km±26km, mb3.7/11, mb1 3.9/14, mb1mx3.7/27, mbtmp3.8/14, MS2.9/2, Ms1 2.9/2, ms1mx2.4/23, Error ellipse: s-maj=37.9km s-min=13.3km az=83.0*

*NEIC **30** 22:46:32.2±1.1, 19°.68N×146°.03E, h93km±11km, mb4.2/6, Error ellipse: s-maj=13.0km s-min=6.4km az=87.0*

ISC 30 22:46:31.0±1.4, 19°.71N±0°.06×146°.0E±0°.2, h80km±13km, n28, σ0°66/28, mb4.0/15, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	6.19	191	P	Pn	22 48 01.0	+1.2
GUMO				LR	LR	22 50 17.2	
	comp=Z,73nm,20.7s,slow=37						
CBIJ	Chichi jima	8.15	335	P	Pn	22 48 26.0	-0.6
	13nm,0.3s,baz=284,slow=21,SNR=6.1						
CBIJ				S	Sn	22 49 51.8	-5.4
	7.5nm,0.3s,baz=288,slow=20,SNR=3.5						
MJAR	Matsushiro Arr	18.12	339	P	Pn	22 50 36.4	-0.9
	0.4nm,0.3s,baz=167,slow=11,SNR=4.5						
MAJO	Matsushiro	18.12	339	eP	Pn	22 50 37.1	-0.2
	4.5nm,0.4s						
YHNB	Yeheng	23.35	287	P	P	22 51 32.3	-0.1
KSRS	Korea Array	23.70	322	P	P	22 51 37.0	+1.4
	1.2nm,0.7s,mb3.3,baz=150,slow=7.7,SNR=5.3						
YSS	Yuzh-Sakhalins	27.30	355	P	P	22 52 07.9	-0.1
FX1	Attu Island--F	39.21	26	LR	LR	23 07 35.8	
	comp=Z,29nm,19.2s,baz=202,slow=32						
WRAB	Tennant Creek	41.03	197	eP	P	22 54 06.3	-0.3
	2.1nm,0.4s,mb4.3						
WRA	Warramunga Arr	41.04	197	P	P	22 54 05.4	-1.3
	1.7nm,0.5s,mb4.2,baz=11,slow=8.6,SNR=21						
SONM	Songino Array	42.56	321	P	P	22 54 19.6	+0.7
	0.3nm,0.3s,mb3.5,baz=123,slow=7.8,SNR=2.6						
FITZ	Fitzroy Crossi	42.58	209	P	P	22 54 19.1	-0.2
	1.5nm,0.6s,mb3.9,baz=23,slow=9.4,SNR=8.6						
CHTO	Chiang Mai	44.35	277	P	P	22 54 33.4	-0.3
ASAR	Alice Springs	44.71	196	P	P	22 54 35.7	-0.6
	0.6nm,0.6s,mb3.5,baz=21,slow=8.4,SNR=7.3						
ZALV	Zalesovo Beam	57.41	322	P	P	22 56 11.1	-0.1
	1.1nm,0.6s,mb4.0,baz=98,slow=9.1,SNR=6.6						
MKAR	Makanchi Array	58.00	313	P	P	22 56 16.2	+0.8
	1.1nm,0.6s,mb4.1,baz=91,slow=9.3,SNR=15						
KURK	Kurchatov	60.74	318	P	P	22 56 34.9	+0.7
	1.8nm,0.7s,mb4.2,baz=94,slow=7.7,SNR=8.3						
KURK	Kurchatov	60.74	318	eP	P	22 56 34.6	+0.5
	1.0nm,0.4s,mb4.2						
PMR	Palmer	60.92	30	eP	P	22 56 34.8	-0.5
TKM2	Tokmak 2	62.66	309	eP	P	22 56 48.1	+0.8
	0.9nm,0.4s,mb4.0						
EKS2	Erkin-Say	64.02	309	P	P	22 56 56.1	-0.2
BVAR	Borovoye Array	65.90	320	P	P	22 57 08.6	+0.4
	2.6nm,0.5s,mb4.3,baz=90,slow=7.6,SNR=23						
BRVK	Borovoye	65.97	320	eP	P	22 57 08.4	-0.3
	1.2nm,0.6s,mb3.9						
KBL	Kabul	68.64	300	eP	P	22 57 25.7	-0.2
	1.7nm,0.4s,mb4.2						
ARU	Arti	72.43	324	P	P	22 57 48.4	-0.2
NVAR	Mina Array Bea	82.27	52	P	P	22 58 44.9	+1.0
	0.9nm,0.7s,mb3.7,baz=260,slow=5.7,SNR=5.0						
NVAR	Mina Array Bea	82.27	52	P	P	22 58 44.9	+1.0
FINES	FINESS Array B	86.10	335	P	P	22 59 02.2	-0.6
	0.7nm,0.4s,mb4.0,baz=76,slow=4.8,SNR=9.0						

*BJI **30** 22:49:56.9, 37°.30N×114°.30W, h10km, mB5.0/4, mb5.1/4, Ms4.7/1, Ms7 4.2/1*

*NEIC **30** 22:49:59.0, 37°.34N×114°.32W, h5km, ML4.2(REN), After REN.*

NEIC Felt at Caliente.

*ISCJB **30** 22:49:58.6±0.1, 37°.36N±0°.01×114°.34W±0°.01, h10km, Error ellipse: s-maj=1.6km s-min=1.4km az=18.1*

ISC 30 22:49:59.3±0.1, 37°.340N±0°.009×114°.35W±0°.01, h10km, n110, σ1°92/216, 42C-54D, Southern Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
S13A	Holt Ranch, En	0.46	58	P	Pg	22 50 07.5	-0.7
	baz=0.4,SNR=255						
S13A				⇓S	Sg	22 50 13.4	-0.9
	baz=0.4						
T13A	Saint George	0.47	132	⇑P	Pg	22 50 08.1	-0.4
	baz=0.5,SNR=1000						
T13A				⇑S	Sg	22 50 14.4	-0.5
	baz=0.5						
S12A	Delamar Landin	0.48	304	⇑P	Pg	22 50 08.5	-0.2
	baz=0.5						
S12A				⇓S	Sg	22 50 15.3	+0.3
	baz=0.5						
T11A	Corn Creek, Al	0.70	262	⇑P	Pg	22 50 12.6	-0.3
	baz=0.7						
T11A				⇑S	Sg	22 50 22.4	+0.3
	baz=0.7						
CCUT	Cedar City	0.81	75	ePg	Pg	22 50 15.4	+0.4
CCUT				eSg	Sg	22 50 24.8	-0.7
ARUT	Antelope Range	0.85	58	eP	Pg	22 50 14.7	-0.9
ARUT				eS	Sg	22 50 25.9	-0.8
U12A	Valley of Fire	0.92	190	⇑P	Pg	22 50 16.3	-0.6
	baz=0.9,SNR=169						
U12A				⇓S	Sg	22 50 28.8	-0.1
	baz=0.9						
U13A	Pakoon Wash	0.97	162	⇓P	Pg	22 50 17.2	-0.8
	baz=1.0,SNR=1000						
U13A				⇑S	Sg	22 50 29.9	-0.7
	baz=1.0						
R12A	Pony Springs,	1.01	348	P	Pg	22 50 18.0	-0.7
	baz=1.0,SNR=441						
R12A				⇑S	Sg	22 50 30.7	-1.1
	baz=1.0						
S14A	Cedar City	1.03	66	⇓P	Pg	22 50 17.9	-1.2
	baz=1.0,SNR=54						
S14A				⇓S	Sg	22 50 31.6	-0.8
	baz=1.0						
T14A	Hurricane	1.05	105	P	Pg	22 50 18.2	-1.2
	baz=1.0,SNR=284						
T14A				⇑S	Sg	22 50 31.6	-1.4
	baz=1.0						
S11A	Rachel	1.16	286	⇑P	Pb	22 50 20.9	-0.4
	baz=1.2						
S11A				⇓S	Sb	22 50 36.5	+0.1
	baz=1.2						
U11A	Corn Creek	1.24	223	⇑P	Pn	22 50 22.6	-0.1
	baz=1.3						
U11A				⇓S	Sb	22 50 38.5	-0.2
	baz=1.3						
U14A	Mt Trumbull	1.31	134	P	Pn	22 50 23.2	-0.5
	baz=1.3,SNR=1000						
R11A	Troy Canyon, C	1.41	316	⇑P	Pn	22 50 24.2	-0.7
	baz=1.4,SNR=1000						
R11A				⇑S	Sn	22 50 43.5	0.0
	baz=1.4						
R14A	James Farms, M	1.42	47	⇑P	Pn	22 50 25.0	-0.1
	baz=1.4,SNR=28						
R14A				⇑Sb	Sb	22 50 44.7	+0.7
	baz=1.4						
V13A	Grand Canyon W	1.51	169	P	Pn	22 50 26.3	-0.1
	baz=1.5,SNR=1000						
V13A				⇓S	Sn	22 50 46.1	-0.1
	baz=1.5						
T15A	Red Dirt Ranch	1.60	101	⇑P	Pn	22 50 27.6	0.0
	baz=1.6,SNR=485						
T15A				⇓S	Sn	22 50 48.2	-0.2
	baz=1.6						
S15A	Panguitch	1.61	77	⇓P	Pn	22 50 27.7	-0.1
	baz=1.6,SNR=45						
S15A				⇓Sb	Sb	22 50 50.5	+0.9
	baz=1.6						
Q13A	Wheeler Ranch,	1.63	9	⇓P	Pn	22 50 27.6	-0.5
	baz=1.6,SNR=17						
Q13A				⇑Sb	Sb	22 50 50.9	+0.8
	baz=1.6						
V12A	Nelson	1.66	194	⇓P	Pn	22 50 28.3	-0.2
	baz=1.7,SNR=376						
V12A				⇑S	Sn	22 50 49.7	-0.1
	baz=1.7						
V11A	Goodsprings	1.73	211	⇑P	Pn	22 50 29.4	0.0
	baz=1.7,SNR=531						
V11A				⇓Sb	Sb	22 50 53.7	+0.6
	baz=1.7						
Q12A	Willow Creek R	1.74	348	⇑P	Pn	22 50 29.3	-0.3
	baz=1.8,SNR=140						
Q12A				⇓Sb	Sb	22 50 54.3	+1.1
	baz=1.8						
R10A	Warm Springs	1.81	302	⇓P	Pn	22 50 30.3	-0.3
	baz=1.8,SNR=50						
R10A				⇑Sb	Sb	22 50 55.8	+0.5
	baz=1.8						
Q11A	Duckwater	1.82	326	⇓P	Pn	22 50 30.1	-0.6
	baz=1.8,SNR=50						
Q11A				⇑S	Sn	22 50 53.9	+0.1
	baz=1.8						
U10A	Ash Meadows, A	1.84	241	⇓P	Pn	22 50 31.1	+0.3
	baz=1.9,SNR=20						
U10A				⇑Sb	Sb	22 50 57.1	+1.1
	baz=1.9						
Q14A	Sevier Lake (B	1.85	27	P	Pn	22 50 30.9	-0.1
	baz=1.8,SNR=166						
Q14A				⇑Sb	Sb	22 50 56.8	+0.4
	baz=1.8						
R15A	Junction	1.86	61	⇓P	Pn	22 50 31.5	+0.4
	baz=1.8,SNR=18						
R15A				⇓Sb	Sb	22 50 57.6	+1.0
	baz=1.8						
S10A	Tonopah Range,	1.88	289	⇓P	Pn	22 50 30.9	-0.5
	baz=1.9,SNR=22						
S10A				⇓Sb	Sb	22 50 58.3	+1.2
	baz=1.9						
U15A	North Rim	1.88	118	⇓P	Pn	22 50 32.1	+0.6
	baz=1.9,SNR=1000						
U15A				⇑S	Sn	22 50 55.9	+0.6
	baz=1.9						
V14A	Boquillas Ranc	1.98	149	⇓P	Pn	22 50 33.1	+0.4
	baz=2.0,SNR=944						
V14A				⇓S	Sn	22 50 58.3	+0.7
	baz=2.0						
MSU	Marysvale	2.08	55	ePn	Pn	22 50 36.9	+2.8
MSU				eSn	Sn	22 51 03.4	+3.3
W12A	Cal Nev Ari	2.08	192	⇓P	Pn	22 50 34.1	-0.1
	baz=2.1,SNR=9.0						
W12A				⇓S	Sn	22 50 59.7	-0.4
	baz=2.1						
SHOC	Shoshone	2.12	228	⇓Sb	Sb	22 51 05.4	+1.3
	baz=2.1						
P13A	Bates Ranch, G	2.13	7	⇑P	Pn	22 50 34.7	-0.2
	baz=2.1,SNR=50						
P13A				⇓Sb	Sb	22 51 05.7	+1.3
	baz=2.1						
P12A	McGill	2.17	348	⇑P	Pn	22 50 35.5	0.0
	baz=2.2,SNR=16						
P12A				⇓Sb	Sb	22 51 07.3	+1.6
	baz=2.2						
FURC	Furnace Creek,	2.19	247	⇓P	Pn	22 50 35.9	+0.1
	baz=2.2,SNR=11						
Q10A	Clear Creek Ra	2.20	313	⇓P	Pn	22 50 35.4	-0.4
	baz=2.2,SNR=12						
Q10A				⇓S	Sn	22 51 03.0	0.0
	baz=2.2						
S16A	Weppner Ranch,	2.22	79	⇓P	Pn	22 50 36.9	+0.8
	baz=2.2,SNR=15						
S16A				⇑Sb	Sb	22 51 08.2	+1.2
	baz=2.2						
W13A	Hualapai Mount	2.27	170	P	Pn	22 50 36.6	-0.2
	baz=2.3,SNR=9.9						
W13A				⇑Sb	Sb	22 51 09.5	+1.1
	baz=2.3						
Q15A	Fillmore	2.27	43	⇓Pb	Pb	22 50 39.3	-1.0
	baz=2.3						
Q15A				⇓Sb	Sb	22 51 09.9	+1.5
	baz=2.3						
TUQ	Turquoise Moun	2.29	214	⇓P	Pn	22 50 37.0	-0.1
	baz=2.3,SNR=11						
TUQ				⇓Sb	Sb	22 51 10.1	+1.1
	baz=2.3						
T16A	Glen Canyon Da	2.30	98	⇓P	Pn	22 50 37.9	+0.7
	baz=2.3,SNR=46						
T16A				⇓Sb	Sb	22 51 09.8	+0.5
	baz=2.3						
V15A	Kaibab Nationa	2.32	130	⇓P	Pn	22 50 38.2	+0.7
	baz=2.3,SNR=187						
V15A				⇑Sb	Sb	22 51 10.0	+0.2
	baz=2.3						
LDFC	Landfair	2.34	196	ePn	Pn	22 50 37.0	-0.8
LDFC				ePg	Pg	22 50 43.2	-1.0
LDFC				eS	Sn	22 51 13.4	+6.9
W14A	Seligman	2.36	154	⇓Pb	Pb	22 50 41.7	-0.1
	baz=2.3						
W14A				⇓Sb	Sb	22 51 11.9	+1.0
	baz=2.3						
P14A	Drum Mountains	2.46	24	P	Pn	22 50 39.2	-0.2
	baz=2.5,SNR=18						
P11A	Circle Ranch,	2.47	334	⇑P	Pn	22 50 39.8	+0.2
	baz=2.5						
W15A	Williams	2.73	141	⇓Pb	Pb	22 50 48.3	+0.1
	baz=2.7						
GMRC	Granite Mounta	2.77	203	P	Pn	22 50 43.3	-0.4
	baz=2.8,SNR=60						
P10A	Eureka	2.82	325	⇑P	Pn	22 50 44.5	+0.2
	baz=2.8						
MPMC	Manual Prospec	2.83	244	⇑P	Pn	22 50 44.3	-0.2
	baz=2.8,SNR=29						
S17A	Black Ridge (B	2.83	83	⇑P	Pn	22 50 45.3	+0.7
	baz=2.8						
GSC	Goldstone	2.84	225	ePn	Pn	22 50 45.0	+0.2
GSC				ePg	Pg	22 50 51.4	-2.4
GSC				eSb	Sb	22 51 27.9	+2.9
O12A	Currie	2.94	354	P	Pn	22 50 45.5	-0.5
	baz=3.0,SNR=18						
HEC	Hector,Ludlow	2.98	213	⇓P	Pn	22 50 46.2	-0.3
	baz=3.0,SNR=17						
WUAZ	Wupatki	3.01	126	ePn	Pn	22 50 47.4	+0.4
WUAZ				ePg	Pg	22 50 56.5	-0.5
WUAZ				eS	Sg	22 51 30.4	-5.5
DUG	Dugway	3.09	22	ePn	Pn	22 50 51.2	+3.1
DUG				eSg	Sg	22 51 38.4	-0.3
X14A	Yava	3.10	157	⇓P	Pn	22 50 48.5	+0.3
	baz=3.1,SNR=10						
TMUT	Trail Mountain	3.15	51	ePn	Pn	22 50 50.9	+2.0
TMUT				ePg	Pg	22 50 56.8	-2.8
TMUT				eS	Sg	22 51 40.9	+0.5
NLU	North Lily Min	3.16	34	ePn	Pn	22 50 50.1	+1.1
NLU				ePg	Pg	22 50 59.4	-0.4
NLU				eS	Sg	22 51 38.7	-2.1
IRM	Iron Mountain	3.24	192	P	Pn	22 50 49.9	-0.3
	baz=3.2,SNR=33						
V17A	Tonalea, Kykot	3.34	120	⇓P	Pn	22 50 52.1	+0.6
	baz=3.3						
O10A	Cortez Mining,	3.39	331	⇓P	Pn	22 50 52.2	0.0
	baz=3.4						
MPU	Maple Canyon	3.41	38	ePn	Pn	22 50 53.0	+0.5
MPU				ePg	Pg	22 51 05.0	+0.3
MPU				eS	Sg	22 51 47.4	-1.5
ELK	Elko	3.47	349	ePn	Pn	22 50 53.0	-0.3
ELK				ePg	Pg	22 51 04.6	-1.1
ELK				eS	Sg	22 51 44.1	-6.6
S18A	Hurst Farm, Bl	3.48	83	⇓P	Pn	22 50 54.1	+0.6
	baz=3.4,SNR=9.6						
SRU	San Rafael	3.49	58	⇓P	Pn	22 50 54.4	+0.8
	baz=3.5						
SRU	San Rafael	3.49	58	ePn	Pn	22 50 53.8	+0.1
SRU				ePg	Pg	22 51 04.4	-1.8
SRU				eS	Sg	22 51 50.9	-0.5
N13A	Wendover, West	3.51	2	⇑P	Pn	22 50 53.1	-0.8
	baz=3.5						
N13A	Wendover, West	3.51	2	ePn	Pn	22 50 53.1	-0.9
N13A				ePg	Pg	22 51 05.7	-0.8
N13A				eS	Sg	22 51 50.7	-1.4
Y13A	Salome	3.54	173	⇓Pn	Pn	22 50 54.0	-0.4
	baz=3.5						
N12A	Clover Valley,	3.55	351	P	Pn	22 50 54.1	-0.3
	baz=3.6,SNR=13						
N12A	Clover Valley,	3.55	351	ePn	Pn	22 50 54.2	-0.2
N12A				ePg	Pg	22 51 07.9	+0.6
N12A				eS	Sg	22 51 54.1	+0.9
BELC	Belle Mtn. Jos	3.59	202	⇑P	Pn	22 50 55.0	0.0
	baz=3.6,SNR=12						
ISA	Isabella	3.72	245	ePn	Pn	22 50 57.2	+0.4
ISA				ePg	Pg	22 51 09.2	-1.4
ISA				eSn	Sn	22 51 42.0	+1.3
BGU	Big Grassy Mou	3.72	16	ePn	Pn	22 50 57.6	+0.8
BGU				ePg	Pg	22 51 10.9	+0.3
BGU				eS	Sg	22 51 55.6	-3.3
NOQ	North Oquirrh	3.73	27	ePn	Pn	22 50 59.0	+2.0
NOQ				ePg	Pg	22 51 11.3	+0.5
NOQ				eS	Sg	22 51 59.1	-0.2
Y15A	Casa Rosa Ranc	3.76	154	⇑P	Pn	22 50 57.4	+0.2
	baz=3.7,SNR=19						
BMN	Battle Mountai	3.82	325	ePn	Pn	22 50 58.7	+0.6
BMN				ePg	Pg	22 51 11.1	-1.3
BMN				eS	Sg	22 52 00.1	-1.7
DAU	Daniels Canyon	3.90	37	ePn	Pn	22 51 00.6	+1.3
DAU				ePg	Pg	22 51 12.4	-1.7
DAU				eS	Sg	22 52 03.3	-1.3
CTU	Camp Tracy	3.91	30	ePn	Pn	22 51 00.8	+1.4
CTU				ePg	Pg	22 51 16.4	+2.2
CTU				eS	Sg	22 52 02.0	-2.9
JLU	Jordanelle	3.96	34	ePn	Pn	22 51 00.3	+0.2
JLU				ePg	Pg	22 51 15.1	-0.1
JLU				eS	Sn	22 51 47.0	+0.4
M13A	Montello	4.02	2	ePn	Pn	22 51 02.6	+1.8
M13A				ePg	Pg	22 51 13.8	-2.4
M13A				eS	Sg	22 52 06.0	-2.3
M12A	Wells	4.09	354	P	Pn	22 51 01.5	-0.4
	baz=4.1,SNR=6.8						
PFO	Pinyon Flat Ob	4.10	205	⇓P	Pn	22 51 02.0	0.0
	baz=4.1,SNR=7.4						
PFO	Pinyon Flat Ob	4.10	205	ePn	Pn	22 51 01.8	-0.2
PFO				ePg	Pg	22 51 16.0	-1.8
PFO				eS	Sg	22 52 08.8	-2.2
Z14A	Wintersburg	4.13	163	⇓P	Pn	22 51 02.5	+0.1
	baz=4.1,SNR=9.1						
Z13A	Yuma Proving G	4.17	172	⇑P	Pn	22 51 03.2	+0.3
	baz=4.2,SNR=79						
SPUT	South Promonto	4.23	20	ePn	Pn	22 51 05.4	+1.6
SPUT				ePg	Pg	22 51 21.4	+1.1
SPUT				eS	Sg	22 52 13.4	-1.6
GLA	Glamis	4.30	185	ePn	Pn	22 51 03.1	-1.6
GLA				ePg	Pg	22 51 21.3	-0.3
GLA				eS	Sg	22 52 13.7	-3.5
MWC	Mount Wilson	4.33	225	ePn	Pn	22 51 04.9	-0.3
MWC				ePg	Pg	22 51 22.4	+0.2
MWC				eS	Sg	22 52 16.8	-1.6
PV04	Paradox Valley	4.43	75	ePn	Pn	22 51 08.3	+1.7
PV04				ePg	Pg	22 51 20.0	-4.2
PV04				eS	Sg	22 52 13.1	-8.5
HVU	Hansel Valley	4.60	15	ePn	Pn	22 51 10.1	+1.2
HVU				ePg	Pg	22 51 27.1	-0.2
HVU				eS	Sg	22 52 25.7	-1.1
PV01	Paradox Valley	4.65	78	ePn	Pn	22 51 09.8	+0.3
PV01				ePg	Pg	22 51 28.8	+0.4
PV01				eS	Sg	22 52 23.5	-5.0
MVCO	Mesa Verde	4.67	90	ePn	Pn	22 51 10.7	+0.9
MVCO				ePg	Pg	22 51 24.0	-4.6
MVCO				eS	Sg	22 52 24.7	-4.4
MONP	Monument Peak	4.75	202	⇑P	Pn	22 51 11.2	+0.2
	baz=4.8,SNR=13						
HWUT	Hardware Ranch	4.77	26	ePn	Pn	22 51 11.8	+0.6
HWUT				ePg	Pg	22 51 32.2	+1.5
HWUT				eS	Sg	22 52 29.1	-3.5
CMB	Columbia Colle	4.84	280	ePn	Pn	22 51 13.5	+1.3
CMB				ePg	Pg	22 51 32.3	+0.3
CMB				eS	Sg	22 52 30.6	-4.1
L11A	Cat Creek Ranc	4.94	348	⇑P	Pn	22 51 14.2	+0.6
	baz=5.0,SNR=19						
L10A	Juniper Basin	5.01	342	⇑P	Pn	22 51 15.6	+1.2
	baz=5.0,SNR=8.1						
BAR	Barrett	5.03	203	ePn	Pn	22 51 15.4	+0.6
	13nm,0.4s						
BAR				Pg	Pg	22 51 32.5	-3.0
K11A	Parker Ranch,	5.58	347	⇑P	Pn	22 51 23.4	+1.1
	baz=5.6,SNR=12						
TUC	Tucson	5.81	149	ePn	Pn	22 51 26.7	+1.2
TUC				ePg	Pg	22 51 48.7	-1.9
TUC				eS	Sg	22 53 00.4	-5.4
HLID	Hailey	6.22	360	ePn	Pn	22 51 32.4	+1.3
HLID				ePg	Pg	22 51 53.2	-5.1
HLID				eS	Sg	22 53 12.7	-6.1
MOD	Modoc	6.47	317	ePn	Pn	22 51 35.9	+1.4
MOD				ePg	Pg	22 52 00.4	-2.8
MOD				S	Sg	22 53 26.5	-0.5
BMO	Blue Mountains	7.83	344	Pn	Pn	22 51 54.9	+1.7
CN2	Changchun	82.75	321	eP	P	23 02 21.0	-2.3
HHC	Hu-ho-hao-te	91.56	327	eP	P	23 03 04.0	-2.3
HHC				PP	PP	23 06 43.0	-0.5
HHC				SKS		23 13 36.0	
HHC				S	S	23 14 01.0	-5.2
HHC				SS	SS	23 20 10.8	-0.2
HHC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,72nm,5.3s						
HHC				LR	LR		
	comp=N,130nm,20.4s						
HHC				LR	LR		
	comp=E,75nm,19.2s						
HHC				LR	LR		
	comp=Z,93nm,19.2s						
WMQ	Urumqi	96.78	344	eP	P	23 03 32.0	+1.9

*ISCJB **30** 22:55:50.3±0.5, 35°.84N±0°.03×140°.02E±0°.06, h91km±3km, mb3.6/5, Error ellipse: s-maj=8.3km s-min=4.7km az=150.5*

*IDC **30** 22:55:51.3±3.0, 35°.83N×140°.08E, h83

JIM2	**Oshima 3**	**1.22**	**203**	⇑P	**Pn**	**22 56 12.5**	**-0.9**
JIM2				*e*S	**Sn**	**22 56 28.6**	**-1.3**
JYN	**Shimob**	**1.25**	**254**	P	**Pn**	**22 56 13.6**	**0.0**
JYN				S	**Sn**	**22 56 29.9**	**-0.5**
BSO1	**Boso 1**	**1.43**	**146**	P	**Pn**	**22 56 15.7**	**-0.2**
BSO1				S	**Sn**	**22 56 35.1**	**+0.7**
MJAR	**Matsushiro Arr**	**1.62**	**296**	P	**Pn**	**22 56 18.1**	**-0.2**
	17nm,0.3s,baz=105,slow=7.6,SNR=101						
MJAR				S	**Sn**	**22 56 39.4**	**+0.6**
	10nm,0.3s,baz=114,slow=27,SNR=10.0						
MAJO	**Matsushiro**	**1.62**	**296**	*e*Pn	**Pn**	**22 56 18.6**	**+0.3**
MAJO				*e*Sn	**Sn**	**22 56 39.1**	**+0.3**
MAT	**Matsushiro**	**1.62**	**296**	P	**Pn**	**22 56 18.3**	**-0.1**
MAT				S	**Sn**	**22 56 40.1**	**+1.3**
MAT	**Matsushiro**	**1.62**	**296**	P	**Pn**	**22 56 18.6**	**+0.2**
MAT				*e*S	**Sn**	**22 56 40.3**	**+1.5**
JHJ	**Hachijo jima 2**	**2.73**	**184**	P	**Pn**	**22 56 33.6**	**+0.5**
	40nm,0.3s,baz=87,slow=21,SNR=13						
JHJ				S	**Sn**	**22 57 05.2**	**0.0**
	95nm,0.3s,baz=86,slow=23,SNR=9.2						
TLY	**Talaya**	**30.28**	**313**	P	**P**	**23 01 54.3**	**-0.1**
ZALV	**Zalesovo Beam**	**41.90**	**313**	P	**P**	**23 03 33.2**	**0.0**
	0.5nm,0.5s,mb3.5,baz=81,slow=9.2,SNR=3.0						
MKAR	**Makanchi Array**	**43.80**	**303**	P	**P**	**23 03 48.7**	**0.0**
	0.6nm,0.7s,mb3.5,baz=98,slow=9.1,SNR=6.4						
KURK	**Kurchatov**	**45.79**	**309**	*e*P	**P**	**23 04 03.6**	**-0.8**
	0.9nm,0.6s,mb3.7						
TKM2	**Tokmak 2**	**49.21**	**299**	*e*P	**P**	**23 04 31.1**	**+0.1**
FITZ	**Fitzroy Crossi**	**55.35**	**197**	*e*P	**P**	**23 05 16.3**	**-0.4**
	0.6nm,0.8s,mb3.7						
WRAB	**Tennant Creek**	**55.73**	**186**	P	**P**	**23 05 19.8**	**+0.4**
WRA	**Warramunga Arr**	**55.74**	**186**	P	**P**	**23 05 19.8**	**+0.4**
	0.4nm,0.3s,mb3.9,baz=0.8,slow=7.6,SNR=6.2						
WRA	**Warramunga Arr**	**55.74**	**186**	P	**P**	**23 05 19.8**	**+0.4**
ARU	**Arti**	**56.51**	**319**	P	**P**	**23 05 24.9**	**+0.4**

MEX 30 23:15:33.8±1.0, **17°.85N**×**95°.65W, h125**km±24km, **MD3.9, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.29**	**233**	*e*P	Pn	23 15 57.5	-1.8
VHO				*e*S	Sn	23 16 17.9	-0.7
UTMO	**Huajuapan**	**2.05**	**270**	*i* P	Pn	23 16 07.6	-0.6
UTMO				*i* S	Sn	23 16 32.4	-2.1
HUIG	**Huatulco**	**2.12**	**192**	*i* P	Pn	23 16 08.0	-1.0
HUIG				*i* S	Sn	23 16 33.6	-2.3
TGIG		**2.64**	**113**	*i* P	Pn	23 16 15.2	-0.4
TGIG				*i* S	Sn	23 16 45.5	-2.2
PNIG	**Pinotepa**	**2.78**	**239**	*i* P	Pn	23 16 17.8	+0.4
PNIG				*i* S	Sn	23 16 50.1	-0.9
PCIG		**3.16**	**132**	*i* P	Pn	23 16 20.9	-1.4
PCIG				*i* S	Sn	23 16 58.5	-1.2

CSEM ***30*** *23:30:25.8±0.2, 37°.85N×21°.37E, h20km, MD3.3, Error ellipse: s-maj=4.3km s-min=3.3km az=88.0*
ISCJB ***30*** *23:30:25.8±0.5, 37°.84N±0°.02×21°.38E±0°.03, h10km, Error ellipse: s-maj=3.7km s-min=3.5km az=147.1*
THE ***30*** *23:30:26.1, 37°.86N×21°.39E, h12km±1km, ML2.8/7, Error ellipse: s-maj=1.4km s-min=0.5km az=350.0*
ATH ***30*** *23:30:26.1, 37°.85N×21°.38E, h16km±2km, MD3.3/14*
NEIC ***30*** *23:30:26.1, 37°.85N×21°.38E, h16km, MD3.3(ATH), After ATH.*

ISC 30 23:30:26.2±0.6, **37°.84N**±0°.03×**21°.37E**±0°.03, **h1**km±7km, **n50**, σ0s.81/78, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.23**	**19**	*e*Pb	**Pg**	**23 30 31.5**	**+0.9**
RLS				*e*Sb	**Sg**	**23 30 35.1**	**+1.5**
RLS	**Riolos of Patr**	**0.23**	**19**	*e*PB	**Pg**	**23 30 31.5**	**+0.9**
RLS				*e*SB	**Sg**	**23 30 35.1**	**+1.5**
RLS	**Riolos of Patr**	**0.23**	**19**	*e*Pb	**Pg**	**23 30 31.5**	**+0.9**
RLS				*e*Sb	**Sg**	**23 30 35.1**	**+1.5**
KFL	**Anninata**	**0.53**	**300**	P	**Pg**	**23 30 36.9**	**+0.5**
UPR	**University Cam**	**0.55**	**37**	*e*PN	**Pg**	**23 30 36.6**	**-0.2**
UPR				*e*SN	**Sg**	**23 30 44.5**	**+0.6**
UPR	**University Cam**	**0.55**	**37**	*e*Pn	**Pg**	**23 30 36.6**	**-0.2**
LAKA	**Lakka**	**0.62**	**50**	P	**Pg**	**23 30 37.7**	**-0.5**
LAKA				S	**Sg**	**23 30 46.6**	**+0.3**
LAKA	**Lakka**	**0.62**	**50**	P	**Pg**	**23 30 37.7**	**-0.5**
LAKA				S	**Sg**	**23 30 46.6**	**+0.3**
VLS	**Valsamata**	**0.70**	**299**	*e*Pb	**Pg**	**23 30 39.4**	**-0.3**
VLS				*e*Sn	**Sg**	**23 30 50.7**	**+1.9**
VLS	**Valsamata**	**0.70**	**299**	P	**Pg**	**23 30 39.3**	**-0.4**
VLS	**Valsamata**	**0.70**	**299**	*e*PB	**Pg**	**23 30 39.4**	**-0.3**
VLS				*e*SN	**Sg**	**23 30 50.7**	**+1.9**
VLS	**Valsamata**	**0.70**	**299**	P	**Pg**	**23 30 39.3**	**-0.4**
VLS				*e*Sn	**Sg**	**23 30 50.7**	**+1.9**
EFP	**Efpalio**	**0.72**	**36**	P	**Pg**	**23 30 39.3**	**-0.8**
EFP				S	**Sg**	**23 30 49.9**	**+0.5**
EFP	**Efpalio**	**0.72**	**36**	*e*PB	**Pg**	**23 30 39.2**	**-0.9**
EFP				*e*SN	**Sg**	**23 30 49.8**	**+0.4**
EFP	**Efpalio**	**0.72**	**36**	P	**Pg**	**23 30 39.3**	**-0.8**
EFP				*e*Sn	**Sg**	**23 30 49.8**	**+0.4**
TRIZ	**Trizonia**	**0.76**	**46**	P	**Pg**	**23 30 39.9**	**-0.9**
TRIZ				S	**Sg**	**23 30 50.8**	**+0.1**
TRIZ	**Trizonia**	**0.76**	**46**	P	**Pg**	**23 30 39.9**	**-0.9**
TRIZ				S	**Sg**	**23 30 50.8**	**+0.1**
GUR	**Goura**	**0.78**	**83**	P	**Pg**	**23 30 40.3**	**-0.8**
GUR				S	**Sg**	**23 30 51.9**	**+0.8**
GUR	**Goura**	**0.78**	**83**	*e*PB	**Pg**	**23 30 40.3**	**-0.8**
GUR				*e*SN	**Sg**	**23 30 51.9**	**+0.8**
GUR	**Goura**	**0.78**	**83**	P	**Pg**	**23 30 40.3**	**-0.8**
GUR				S	**Sg**	**23 30 51.9**	**+0.8**
ITM	**Ithomi**	**0.80**	**146**	*e*Pn	**Pg**	**23 30 41.7**	**+0.2**
ITM				*e*Sn	**Sg**	**23 30 52.7**	**+0.9**
ITM	**Ithomi**	**0.80**	**146**	P	**Pg**	**23 30 41.2**	**-0.3**
ITM	**Ithomi**	**0.80**	**146**	*e*PN	**Pg**	**23 30 41.7**	**+0.2**
ITM				*e*SN	**Sg**	**23 30 52.7**	**+0.9**
ITM	**Ithomi**	**0.80**	**146**	P	**Pg**	**23 30 41.2**	**-0.3**
ITM	**Ithomi**	**0.80**	**146**	*e*Pn	**Pg**	**23 30 41.7**	**+0.2**
ITM				*e*Sn	**Sg**	**23 30 52.7**	**+0.9**
KALE	**Kalithea**	**0.82**	**48**	P	**Pg**	**23 30 40.9**	**-1.0**
KALE				S	**Sg**	**23 30 52.6**	**+0.1**
KALE	**Kalithea**	**0.82**	**48**	P	**Pg**	**23 30 40.9**	**-1.0**
KALE				S	**Sg**	**23 30 52.6**	**+0.1**
VLX	**Vlachokerasia**	**0.93**	**120**	P	**Pg**	**23 30 43.8**	**-0.2**
VLX				S	**Sg**	**23 30 57.6**	**+1.5**
VLX	**Vlachokerasia**	**0.93**	**120**	*e*PN	**Pg**	**23 30 44.1**	**+0.1**
VLX				*e*SN	**Sg**	**23 30 56.7**	**+0.6**
VLX	**Vlachokerasia**	**0.93**	**120**	P	**Pg**	**23 30 43.8**	**-0.2**
VLX	**Vlachokerasia**	**0.93**	**120**	*e*Pn	**Pg**	**23 30 44.1**	**+0.1**
VLX				*e*Sn	**Sg**	**23 30 56.7**	**+0.6**
VLX				S	**Sg**	**23 30 57.6**	**+1.5**
PYL	**PYLOS**	**0.99**	**162**	P	**Pg**	**23 30 44.6**	**-0.6**
PYL	**PYLOS**	**0.99**	**162**	*e*PB	**Pg**	**23 30 44.0**	**-1.2**
PYL	**PYLOS**	**0.99**	**162**	*e*Pb	**Pg**	**23 30 44.0**	**-1.2**
PYL	**PYLOS**	**0.99**	**162**	P	**Pg**	**23 30 44.6**	**-0.6**
DSF	**Desfina**	**1.07**	**58**	P	**Pg**	**23 30 45.3**	**-1.5**
DSF				S	**Sg**	**23 31 01.1**	**+0.3**
DSF	**Desfina**	**1.07**	**58**	P	**Pg**	**23 30 45.3**	**-1.5**
DSF				S	**Sg**	**23 31 01.1**	**+0.3**
LKD2	**Lefkada island**	**1.10**	**330**	P	**Pg**	**23 30 46.2**	**-1.1**
LKD2	**Lefkada island**	**1.10**	**330**	P	**Pg**	**23 30 46.2**	**-1.1**
EVR	**Evrytania**	**1.13**	**18**	*e*Pb	**Pg**	**23 30 46.6**	**-1.2**
EVR	**Evrytania**	**1.13**	**18**	*e*PB	**Pg**	**23 30 46.6**	**-1.2**
EVR	**Evrytania**	**1.13**	**18**	*e*Pb	**Pg**	**23 30 46.6**	**-1.2**
LTK	**Loutraki**	**1.27**	**81**	*e*PN	**Pn**	**23 30 51.2**	**0.0**
AGG	**Agios Georgios**	**1.40**	**32**	*e*Pn	**Pn**	**23 30 52.2**	**-0.7**
AGG	**Agios Georgios**	**1.40**	**32**	*e*PN	**Pn**	**23 30 52.2**	**-0.7**
AGG	**Agios Georgios**	**1.40**	**32**	*e*Pn	**Pn**	**23 30 52.2**	**-0.7**
LKR	**Lokris**	**1.52**	**57**	*e*Pn	**Pn**	**23 30 54.7**	**+0.2**
LKR	**Lokris**	**1.52**	**57**	*e*PN	**Pn**	**23 30 54.7**	**+0.2**
DID	**Didima**	**1.52**	**102**	*e*PN	**Pn**	**23 30 55.0**	**+0.5**
THL	**Klokotos Trika**	**1.79**	**16**	*e*PN	**Pn**	**23 30 58.6**	**+0.3**

ISC Computed Locations for June 2008

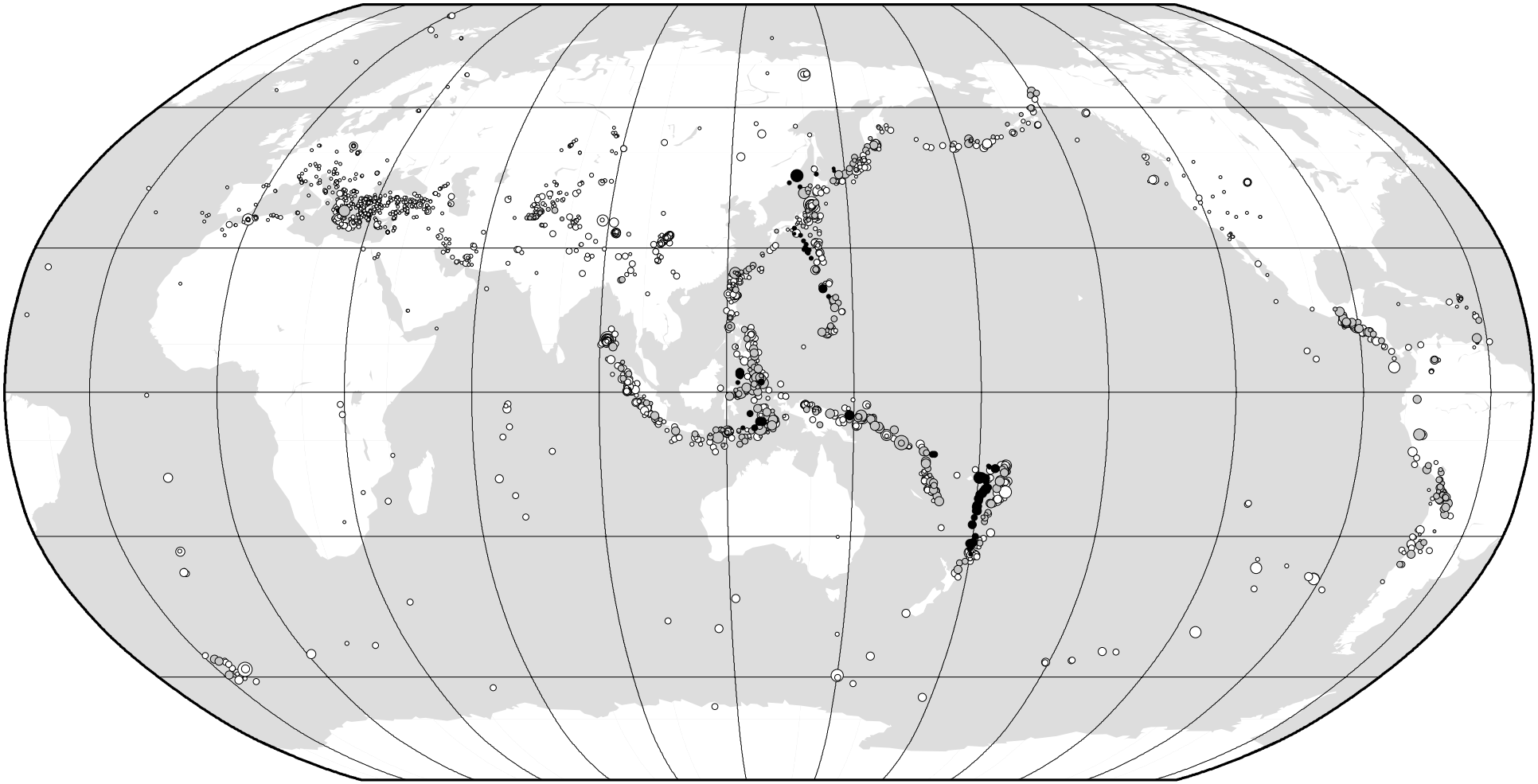

Depth (km)	0-70	70-300	>300
M=8			
M=6.5			
M=4			

Robinson Projection, centred on 0˚N,130˚E

3044 Events